

RF, MICROWAVE AND MILLIMETER WAVE
Coaxial Connectors, Adapters, Tools and Accessories

M/A-COM's expertise spans the spectrum...

dc through millimeter wave

At M/A-COM, core technologies include material fabrication and processing, circuit design and high volume production.

Materials expertise includes silicon and gallium arsenide. Circuit design capability encompasses passive transmission line circuits through complex integrated circuits in monolithics and hybrid technologies. The latest high volume production techniques are applied to wafers, chips and integrated circuits. This combined with our extensive packaging experience in ceramics and plastics, provides dramatic cost efficiencies.

You'll find our products in commercial applications like cellular telephones, wireless LAN's, advanced automotive electronics, and satellite and navigation systems. You'll find us in defense applications too, like radars, missile systems, EW and surveillance. You'll find M/A-COM wherever RF, microwave or millimeter wave expertise and quality manufacturing is critical.

Semiconductors

- Diodes
- Silicon and GaAs Wafers
- Transistors
- MMIC/HMIC™/GMIC™

Control Components

- PIN Diode/GaAsFET
Switches
Attenuators
Phase Shifters
Limiters
- E/M Switches
- Receiver Protectors

Sources

- VCO
- Gunn
- Transceivers
- Transistor
- Synthesizers
- YIG Tuned

Amplifiers

- Low Noise
- Small Signal
- Linearized/Power
- Gain Blocks

Receiver Components

- Mixers
- LNA's
- Log IF Amps
- Discriminators
- Detectors
- DLVA's

Antennas

- Horns
- Slot
- GPS
- CNI
- Feeds
- Spirals
- ECM
- Wireless

Passive Components

- Isolators
- Circulators
- Filters
- Waveguide Ferrite
- Couplers
- Dividers
- Transformers
- Attenuators
- Terminations
- Rotary Joint

Integrated Assemblies

- RF, Microwave and Millimeter Wave

Cable Assemblies

- High Performance
- CNI
- EW
- Delay Lines
- Test/Instrument

Connectors

- Standard
- Miniature
- Microminiature
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- Surface Mount
- Millimeter Wave

GaAs Materials

- Substrates
- Wafers
- Bulk

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How to Order:

Please specify M/A-COM part number and description of items. If special features are required, describe completely, and a special part number will be assigned at our plant. Place your order with the factory, M/A-COM field office, or authorized distributor.

Terms:

Net 30 days. F.O.B. our plant.

Specifications:

Specifications may change or products may be discontinued at M/A-COM discretion without prior notice.

Warranty:

M/A-COM warrants products of its manufacture to be free from defects in material and workmanship under conditions of normal use. If within one year after delivery to the original owner and after prepaid return by the original owner, any M/A-COM product is found to be defective, M/A-COM shall, at its option, repair or replace said defective unit. This warranty does not apply to products which have been disassembled, modified or subjected to conditions exceeding the applicable specifications or ratings. M/A-COM reserves the right to make design changes without notice on any of its products without any obligation to make the same or similar changes to units previously purchased. In no event does M/A-COM assume liability for installation labor or for consequential damages. This warranty is the extent for the obligation or liability assumed by M/A-COM with respect to its products, and no other warranty or guarantee is either expressed or implied.

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M/A-COM, Inc.

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Capabilities and Facilities

M/A-COM has been a leading manufacturer of microwave connectors for more than three decades.

Our commitment to quality is evident in every product and service we provide. Our engineering staff enjoy worldwide recognition as leaders in technological innovation.

Our commitment to excellence as a manufacturer is reflected in our modern state-of-the-art facilities and our highly skilled, specialized workforce.

When you contact M/A-COM you will find a highly trained Sales and Applications Engineering staff eager to support your needs.

M/A-COM's products are marketed worldwide through a comprehensive network of M/A-COM Field Sales offices and representatives. Our authorized distributors inventory millions of dollars worth of products for immediate delivery.

Capabilities and Facilities

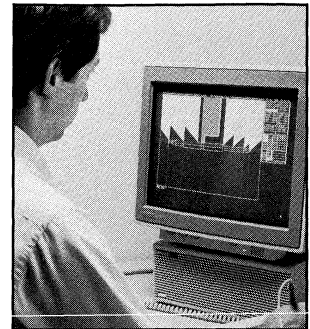
Specialized microwave connectors, as well as standard catalog connectors, are developed by a fully staffed engineering department supported by the latest automated design equipment.

The vertically integrated state-of-the-art facility has the capability to produce the industry's broadest line of microwave connectors, covering the frequency spectrum from dc to 50 GHz.

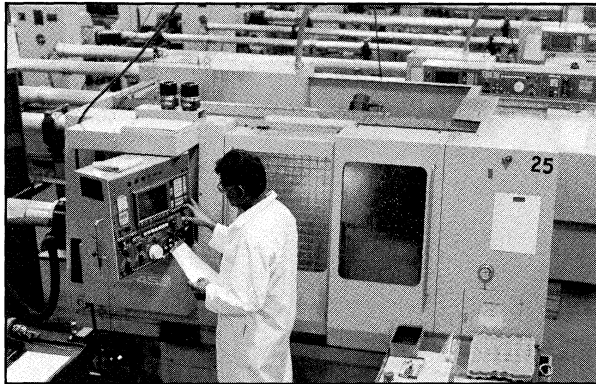
Vertical integration provides complete in-house control of every operation from design and development to fabrication, assembly and test. This capability enables M/A-COM to produce a range of low-cost, high quality products for commercial applications through High Reliability products produced to withstand the severe environmental conditions associated with space flight.



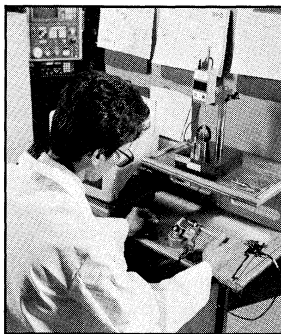
Computer Aided Design (CAD) provides quick response to customers' specialized requirements



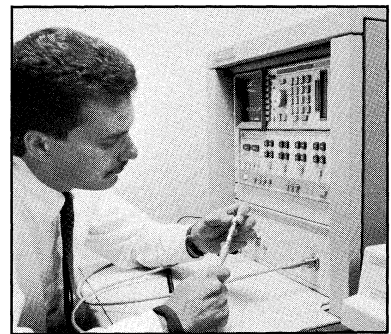
Computer Aided Manufacturing (CAM) supports operations of Machine Shop Technical Center



Computer Numerically Controlled (CNC) Turning Center



Statistical Process Control (SPC) Station



Latest generation microwave test equipment performs precise measurements to 50 GHz.

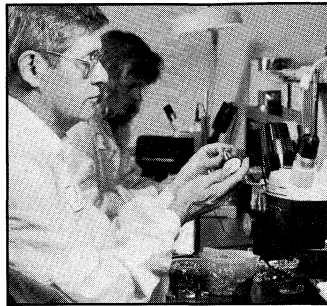
Capabilities and Facilities



Laser Welding Station

R&D/Engineering

The sophistication of present-day microwave systems places an ever-increasing demand on engineering for the definition and mechanization of state-of-the-art techniques and products. M/A-COM's fully staffed engineering and design department is constantly engaged in the development of new products as well as improvements on present products. The efforts of the engineering department are augmented by advanced computer-aided design techniques to achieve optimum designs and to satisfy the need for quick response to customers' special engineering requirements.



In-Process Verification



Thermal Deburring

MIL-SPEC Approvals

Microwave connectors manufactured by M/A-COM have been used on various high reliability programs including military and commercial applications. The stringent testing required for these programs qualifies our products under a variety of military specifications.

QPL Approved
Microwave Connectors
Microwave Connectors
Adapters

MIL-C-39012
MIL-C-83517
MIL-A-55339

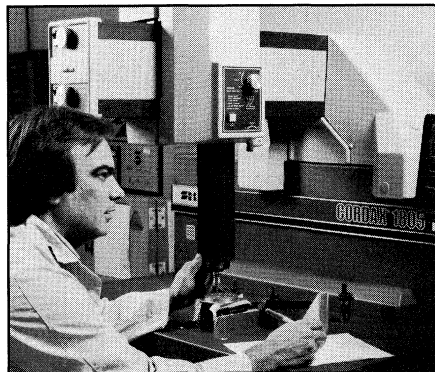
D.E.S.C Approved
OSP (BMA) Connectors
Adapters

85071, 85072,
85073, 85074
8501814, 8503812
8604412

M/A-COM's reputation has been achieved by consistently solving difficult technical problems. The goal of producing a proven, dependable product which is capable of operating within specifications under a variety of adverse conditions has been proven by an impressive list of successes. M/A-COM's achievements in the field of advanced microwave connectors include products on board virtually every major aerospace vehicle.

Superior electrical performance from micro-wave connectors is highly dependent upon mechanical accuracy in the machining of individual piece parts. Accordingly, the plant is equipped with the latest computer-controlled production machinery.

All M/A-COM products are assembled to established standards to assure the highest level of electrical and mechanical integrity. Statistical Process Control (SPC) and computerized analysis of automated data form the foundation of a program of Total Quality Management (TQM).



Computerized Coordinate Measurement System

M/A-COM, Inc.

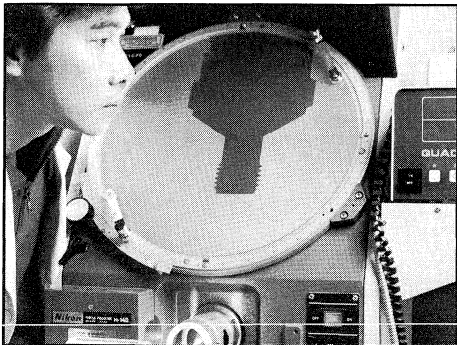
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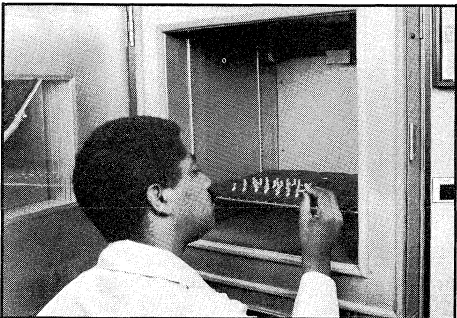
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Capabilities and Facilities



Optical Comparator



Humidity Chamber

Environmental Test Laboratory

Typical environmental testing follows the format established by military standards or customer approved procedures.

In-house capabilities, testing to MIL-STD-202, MIL-STD-810, and MIL-STD-883 are maintained.

Following is a partial listing of environmental test capabilities:

| | |
|----------------------------------|---------------------------------|
| Thermal Shock: | -70° C to +200° C |
| Humidity Chamber: | -20° C to +165° C, 20-98% rh |
| Temperature Chamber: | -65° C to +250° C |
| Altitude (100,000 ft.) | -73° C to +177° C |
| Gross Leak: | +14° C to +130° C |
| Corrosion: | 95 + 2° F @ 5% sol. |
| Vibration: | |
| General Purpose | 400 ft.lbs., .75" displ. |
| Head: | |
| Sine Vibration: | 5 Hz to 2000 Hz |
| Random Vibration: | 6 Hz to 2000 Hz |
| Mechanical Shock: | Max. vel. 520 in./sec. |
| RF Hi-POT: | 00 to 1.5 KV, 5.08 MHz |
| Corona: | 1 KVAC at 1 KVA |
| Dielectric Withstanding Voltage: | 0-5 KV, AC or DC |

Reliability and Control

The Reliability and Quality Control department of M/A-COM has been developed to provide an effective and economical system that works in conjunction with the administrative, technical and manufacturing areas of the organization.

The quality assurance program, which has been developed in accordance with MIL-I-45208, along with the select requirements of MIL-Q-9858 and including a calibration system per MIL-STD-45662, provides a well directed and documented approach to all elements which affect product quality.

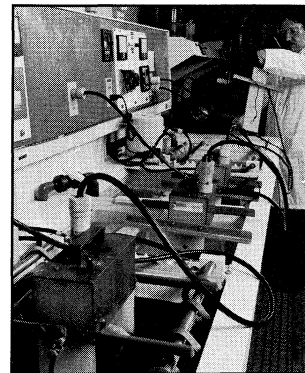
The quality assurance system controls the work operations and manufacturing process through initial contract planning and work instructions, covering all phases of manufacturing such as purchasing, material handling, machining, fabrication, processing, testing and shipping.

An effective data collection system provides for a thorough review of inspection and manufacturing records, and triggers a timely and effective program for the issuance of corrective actions and the generation of quality cost data. This information is used by the administrative functions in the organization as a basis for management actions and the control of overall operations.

The reliability program has been developed using applicable portions of MIL-STD-785 to provide reliability involvement throughout the design, development and production functions of the organization. It is a planned program, integrated with the other organization activities, to permit the most economical achievement of the overall program objectives. The reliability program provides plans, procedures, schedules and controls for the various engineering and manufacturing operations performed within the organization.



Vacuum Furnace



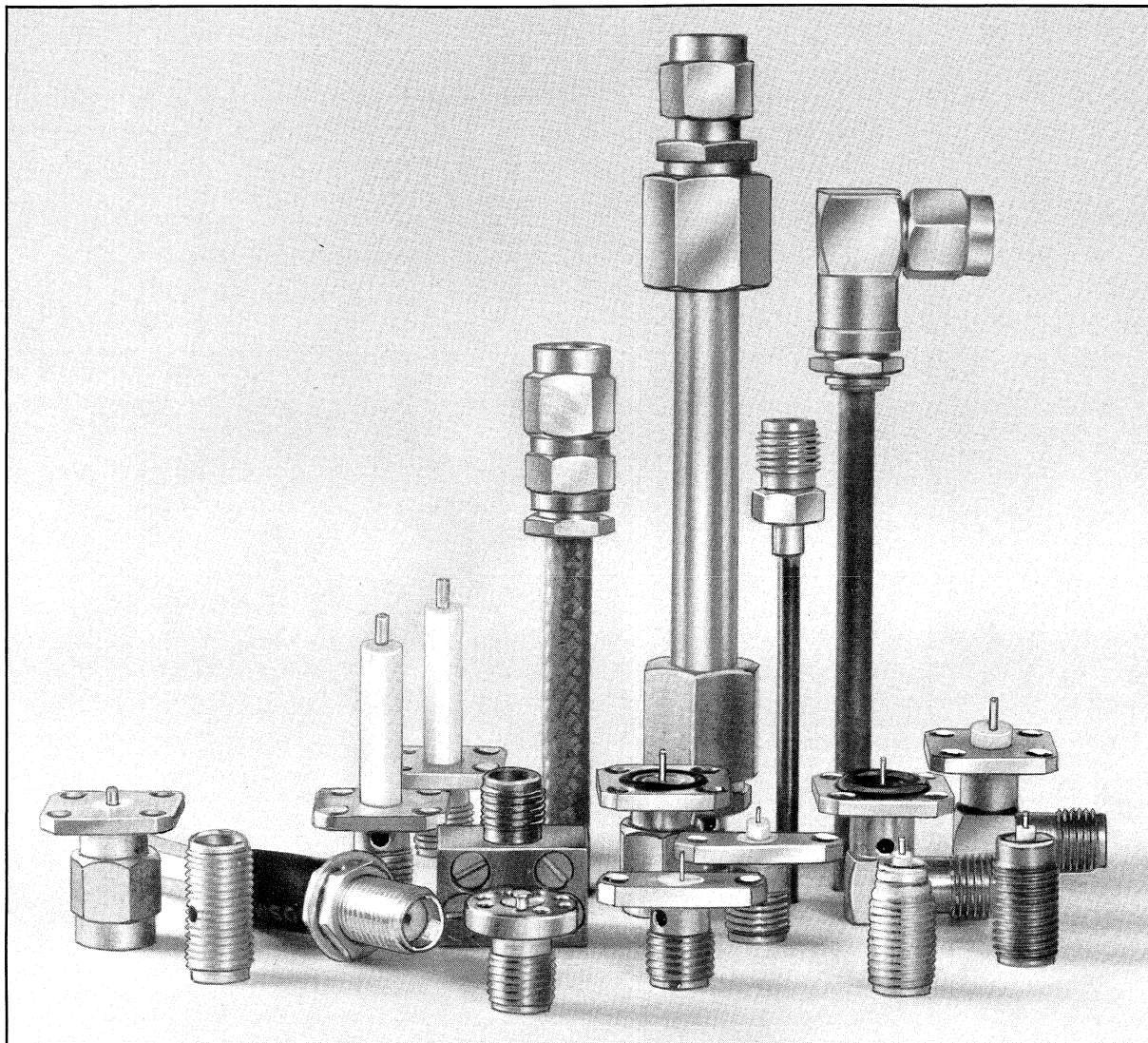
In-House Plating

The reliability criteria used are designed to be consistent throughout manufacturing to provide the most reliable end product achievable within the restrictions of the complexity of the design, the severity of the program requirements, and the manufacturing techniques.

The division maintains an excellent calibration and electrical test department to provide support and assistance in performing calibration, maintenance and electrical testing to meet general and specific program requirements.

OSM (SMA)

Miniature Coaxial Connectors



The OSM® or SMA series connector was developed to fill the need for a semi-precision, 3mm high frequency connector with repeatable electrical performance from dc-18 GHz and beyond. These moderately priced subminiature connectors are ideal for use in microwave as well as low frequency applications where size, performance and cost are critical considerations.

OSM is a registered trademark of M/A-COM

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Upper Operating Frequency

The relatively small size and low VSWR of the OSM connector, compared to other commonly used microwave connectors, has contributed measurably to the miniaturization of microwave components and assemblies. Most OSM connectors allow operation at all frequencies through 25.0 GHz. The OSM extended frequency series allow operation through 27.0 GHz.

Construction

Choice of materials is an important consideration. All shell and body parts are made of stainless steel for ruggedness and long life. The dielectric is solid PTFE fluorocarbon. The center contacts are made of beryllium copper, gold plated. Dielectric and center contact capturing (when used) is consistent with obtaining low VSWR.

The resulting connector is mechanically very rugged and durable. It has been found to be relatively free of noise under severe vibration, and has been used on operating equipment subjected to shock of 70,000 g.

The housings on standard OSM connector models are available in either passivated stainless or gold plated finish. The passivated stainless finish connectors also exhibit exceptional characteristics to withstand severe environments such as salt spray, humidity and moisture resistance. The passivated finish complements most components, instruments and systems.

Power Rating

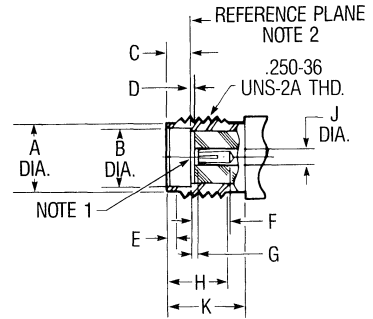
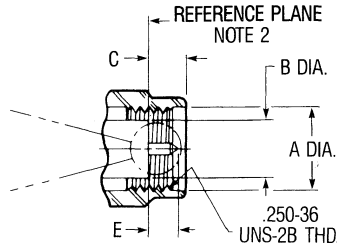
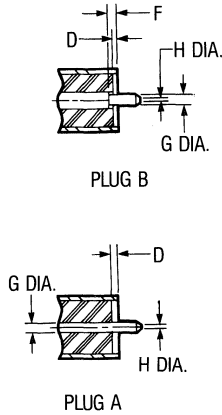
The maximum peak power is determined by voltage breakdown. At sea-level conditions the OSM connector as described in the interface mating dimension drawing, should satisfactorily handle 20kW peak pulse power, used on .141-inch semi-rigid cable. For all-altitude operation, with critical altitude occurring somewhere around 70,000 ft., peak power should be derated by a factor of approximately 20. It is important to note that in considering high peak power application, the connector/cable attachment is equally as important as the connector mating interface.

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OSM (SMA)

Interface Mating Dimensions



PLUG

| Letter | Inches (Millimeters) ³ | |
|--------|-----------------------------------|--------------|
| | Minimum | Maximum |
| A | .250 (6.35) | - |
| B | - | .1808 (4.59) |
| C | - | .135 (3.43) |
| D | .000 (0.00) | .007 (0.25) |
| E | - | .100 (2.54) |
| F | .000 (0.00) | .010 (0.25) |
| G | .0355 (0.90) | .0370 (0.94) |
| H | .000 (0.00) | .015 (0.38) |

JACK

| Letter | Inches (Millimeters) ³ | |
|--------|-----------------------------------|-------------|
| | Minimum | Maximum |
| A | .208 (5.28) | .216 (5.49) |
| B | .1810 (4.60) | - |
| C | .075 (1.91) | .078 (1.98) |
| D | .000 (0.00) | .007 (0.25) |
| E | .015 (0.38) | .045 (1.43) |
| F | .115 (2.92) | - |
| G | .000 (0.00) | .010 (0.25) |
| H | .170 (4.32) | - |
| J | .049 (1.24) | .051 (1.30) |
| K | .218 (5.54) | - |

+ .0010
- .0005

1. ID to meet VSWR and contact resistance when mated with .036 (0.51 mm) dia. pin.
2. When fully engaged, the two reference planes must coincide with metal to metal contact.
3. Metric equivalents (to the nearest 0.01mm) are given for general information only.

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| Requirement | MIL-C-39012 Applicable Paragraph | Detail |
|-------------|-------------------------------------|--------|
|-------------|-------------------------------------|--------|

General

| | | |
|----------|-------|---|
| Material | 3.3 | Steel corrosion resistant per ASTM-A-582 and ASTM-A-484, Type 303. Beryllium copper per ASTM B 196. PTFE Fluorocarbon per ASTM-D-1457. |
| Finish | 3.3.1 | Center contacts shall be gold plated to a min. thickness of .00005 inch in accordance with MIL-G-45204, Typ I, Grade C. All other metal parts shall be finished as to provide a connector which meets the corrosion requirements. |
| Design | 3.4 | The design shall be such that the outline shown in this catalog and the interface dimensions of MIL-STD-348A are met. |

Electrical

| | | |
|---------------------------------|------|---|
| Insulation Resistance | 3.11 | The insulation resistance shall not be less than 10,000 megohms. |
| Corona Level | 3.22 | Refer to applicable military slash sheet or consult factory. |
| Dielectric Withstanding Voltage | 3.17 | Refer to applicable military slash sheet or consult factory. |
| RF High Potential | 3.23 | Refer to applicable military slash sheet or consult factory. |
| Contact Resistance | 3.16 | Refer to applicable military slash sheet or consult factory. |
| VSWR | 3.14 | Refer to applicable military slash sheet or consult factory. Frequency range dependent on cable used. |
| RF Leakage | 3.26 | Refer to applicable military slash sheet or consult factory. |
| Insertion Loss | 3.27 | Refer to applicable military slash sheet or consult factory. Frequency range dependent on cable used. |

Mechanical

| | | |
|---------------------------|-------|--|
| Force to Engage | 3.5.1 | The torque required to engage and disengage shall not exceed 2 in.-lbs. The longitudinal force is not applicable. |
| Coupling Nut Retention | 3.25 | 60 lbs. min. Applicable for plug connectors only. |
| Coupling Proof Torque | 3.6 | 15 in.-lbs. min. Applicable for plug connectors only. |
| Cable Retention | 3.24 | Refer to applicable military slash sheet or consult factory. |
| Mating Characteristics | 3.7 | Applicable to jack connectors only. Reference MIL-STD-348A for dimensions; oversize test pin .0375 min. dia., .030-.045 deep, insertion force 3 lbs. max. with .0370 min. dia. pin, withdrawal force 1 oz. min. with .0355 max. dia. pin. |
| Connector Durability | 3.15 | The connector to be tested and its mating connector shall be subjected to 500 insertion and withdrawal cycles at 12 cycles per minute max. The connector shall show no evidence of mechanical failure and shall meet the mating characteristic requirements. |
| Recommended Mating Torque | — | 7 to 10 in.-lbs. |

Environmental

| | | |
|------------------------|------|---|
| Vibration | 3.18 | Specification MIL-STD-202, method 204, test condition D. |
| Shock | 3.19 | Specification MIL-STD-202, method 213, test condition I. |
| Thermal Shock | 3.20 | Refer to applicable military slash sheet or consult factory. |
| Corrosion (Salt Spray) | 3.13 | Specification MIL-STD-202, method 101, test condition B. |
| Moisture Resistance | 3.21 | Specification MIL-STD-202, method 106. No measurements at high humidity. Insulation resistance shall be at least 200 megohms within 5 minutes of removal from humidity. |

| Connector Type | Cable | Frequency Max. (GHz) | VSWR x (fGHz) | Contact Resistance (milliohms max.) | | Insulation Resistance (megohms min.) | Dielectric Withstanding Voltage (Volts RMS) | Corona Extinction Voltage at 70,000 Ft. (V RMS min.) | RF Transmission Loss | RF High Potential at 5 MHz (V RMS) | RF Leakage (dB min.) |
|--|------------------------------------|----------------------|---------------|-------------------------------------|---------------|--------------------------------------|---|--|----------------------|------------------------------------|----------------------|
| | | | | Center Contact | Outer Contact | | | | | | |
| Straight Cable Plug without Contact 2001 Series | RG-402 (.141) | Note 1 | 1.02 + .005 | N/A | 2.0 | 10,000 | N/A | 250 | N/A | 670 | (-90-fGHz) |
| Straight Cable Plugs & Jacks Solder Attachment 2001, 2002, 2004, 2006, 2031, 2032, 2034 Series | RG-405 (.085) | 18.0 | 1.05 + .005 | 2.0 | 2.0 | 10,000 | 1000 | 250 | .03 √f (GHz) | 670 | (-90-fGHz) |
| | RG-402 (.141) | 18.0 | 1.05 + .005 | 2.0 | 2.0 | 10,000 | 1500 | 375 | .03 √f (GHz) | 1000 | (-90-fGHz) |
| | .141 Microporous | 18.0 | 1.05 + .005 | 2.0 | 2.0 | 10,000 | 1500 | 375 | .03 √f (GHz) | 1000 | (-90-fGHz) |
| | RG-401 (.250) | 18.0 | 1.07 + .007 | 2.0 | 2.0 | 10,000 | 1500 | 375 | .03 √f (GHz) | 1000 | (-90-fGHz) |
| | RG-174, 188, 316 | Note 1 | 1.15 + .01 | 2.0 | 2.0 | 10,000 | 750 | 190 | .06 √f (GHz) | 500 | (-60-fGHz) |
| Straight Cable Plugs & Jacks Solder Clamp Attachment 2001, 2002, 2004, 2006 Series | RG-405 (.085) | 12.4 | 1.10 + .015 | 2.0 | 2.0 | 10,000 | 1000 | 250 | .03 √f (GHz) | 670 | (-90-fGHz) |
| | RG-402 (.141) | 12.4 | 1.07 + .01 | 2.0 | 2.0 | 10,000 | 1500 | 375 | .03 √f (GHz) | 1000 | (-90-fGHz) |
| Straight Cable Plugs & Jacks Clamp Attachment 2001, 2002, 2004, 2006 Series | RG-55, 58, 141, 142, 223, 400 | Note 1 | 1.10 + .005 | 2.0 | 2.0 | 10,000 | 1000 | 250 | .06 √f (GHz) | 670 | (-60-fGHz) |
| | RG-174, 188, 316 | Note 1 | 1.15 + .01 | 2.0 | 2.0 | 10,000 | 750 | 190 | .06 √f (GHz) | 500 | (-60-fGHz) |
| | RG-180, 195 | Note 1 | - | 2.0 | 2.0 | 10,000 | 750 | 190 | - | 500 | (-60-fGHz) |
| Straight Cable Plugs & Jacks Crimp Attachment 2031, 2032, 2034, 2036 Series | RG-55, 142, 223, 400 | Note 1 | 1.10 + .005 | 2.0 | 2.0 | 10,000 | 1000 | 250 | .06 √f (GHz) | 670 | (-60-fGHz) |
| | RG-58, 141, 303 | Note 1 | 1.10 + .005 | 2.0 | 2.0 | 10,000 | 1000 | 250 | .06 √f (GHz) | 670 | (-60-fGHz) |
| | RG-174, 188, 316 | Note 1 | 1.15 + .01 | 2.0 | 2.0 | 10,000 | 750 | 190 | .06 √f (GHz) | 500 | (-60-fGHz) |
| | RG-180, 195 | Note 1 | - | 2.0 | 2.0 | 10,000 | 750 | 190 | - | 500 | (-60-fGHz) |
| | RG-178, 196 | Note 1 | 1.2 + .02 | 2.0 | 2.0 | 10,000 | 500 | 125 | .06 √f (GHz) | 335 | (-60-fGHz) |
| Straight Cable Plugs & Jacks Compression Clamp Attachment 2001, 2002 Series | RG-401 (.250) | 18.0 | 1.07 + .01 | 2.0 | 2.0 | 10,000 | 1500 | 375 | .05 √f (GHz) | 1000 | -70 dB min. |
| | .250 Microporous | 18.0 | 1.07 + .01 | 2.0 | 2.0 | 10,000 | 1500 | 375 | .05 √f (GHz) | 1000 | -70 dB min. |
| | .250 3 Spline | 18.0 | 1.07 + .01 | 2.0 | 2.0 | 10,000 | 1500 | 375 | .05 √f (GHz) | 1000 | -70 dB min. |
| | .250 5 Spline | 18.0 | 1.07 + .01 | 2.0 | 2.0 | 10,000 | 1500 | 375 | .05 √f (GHz) | 1000 | -70 dB min. |
| Right Angle Cable Plugs Solder Attachment 2007, 2037 Series | RG-405 (.085) | 12.4 | 1.18 + .015 | 2.0 | 2.0 | 10,000 | 1000 | 250 | .04 √f (GHz) | 670 | (-90-fGHz) |
| | RG-405 (.085) | 18.0 | 1.18 + .015 | 2.0 | 2.0 | 10,000 | 1000 | 250 | .04 √f (GHz) | 670 | (-90-fGHz) |
| | RG-402 (.141) | 12.4 | 1.15 + .015 | 2.0 | 2.0 | 10,000 | 1500 | 325 | .04 √f (GHz) | 1000 | (-90-fGHz) |
| | RG-402 (.141) | 18.0 | 1.10 + .010 | 2.0 | 2.0 | 10,000 | 1500 | 250 | .05 √f (GHz) | 1000 | (-90-fGHz) |
| | RG-55, 58, 141, 142, 223, 303, 400 | Note 1 | 1.15 + .01 | 2.0 | 2.0 | 10,000 | 1000 | 250 | .07 √f (GHz) | 670 | (-60-fGHz) |
| Right Angle Cable Plugs Crimp Attachment 2037 Series | RG-174, 188, 316 | Note 1 | 1.15 + .02 | 2.0 | 2.0 | 10,000 | 750 | 190 | .07 √f (GHz) | 500 | (-60-fGHz) |
| | RG-55, 142, 223, 400 | Note 1 | 1.15 + .02 | 2.0 | 2.0 | 10,000 | 1000 | 250 | .07 √f (GHz) | 670 | (-60-fGHz) |
| | RG-58, 141, 303 | Note 1 | 1.15 + .02 | 2.0 | 2.0 | 10,000 | 1000 | 250 | .07 √f (GHz) | 670 | (-60-fGHz) |
| | RG-174, 188, 316 | Note 1 | 1.18 + .02 | 2.0 | 2.0 | 10,000 | 750 | 190 | .07 √f (GHz) | 500 | (-60-fGHz) |
| | RG-180, 195 | Note 1 | - | 2.0 | 2.0 | 10,000 | 750 | 190 | - | 500 | (-60-fGHz) |
| Right Angle Cable Plugs Clamp Attachment 2007 Series | RG-178, 196 | Note 1 | 1.25 + .025 | 2.0 | 2.0 | 10,000 | 500 | 125 | .07 √f (GHz) | 335 | (-60-fGHz) |
| | RG-55, 58, 141, 142, 223, 303 | Note 1 | 1.10 + .005 | 2.0 | 2.0 | 10,000 | 1000 | 250 | .08 √f (GHz) | 670 | (-60-fGHz) |
| | RG-174, 188, 316 | Note 1 | 1.15 + .01 | 2.0 | 2.0 | 10,000 | 750 | 190 | .08 √f (GHz) | 500 | (-60-fGHz) |
| Flange Mount Plugs & Jacks Panel or Bulkhead Mount 2052, 2051 Series | RG-180, 195 | Note 1 | - | 2.0 | 2.0 | 10,000 | 750 | 190 | - | 500 | (-60-fGHz) |
| | Non-Captured | 18.0 | 1.03 + .004 | 2.0 | 2.0 | 10,000 | 1000 | 250 | .03 √f (GHz) | 670 | (-100-fGHz) |
| | Epoxy Captured | 18.0 | 1.05 + .005 | 2.0 | 2.0 | 10,000 | 1000 | 250 | .03 √f (GHz) | 670 | (-60-fGHz) |
| Bulkhead Feedthrough Jacks 2056, 2058 Series | Mechanical Capture | 18.0 | 1.04 + .004 | 2.0 | 2.0 | 10,000 | 1000 | 250 | .03 √f (GHz) | 670 | (-100-fGHz) |
| | Epoxy Captured | 18.0 | 1.07 + .010 | 2.0 | 2.0 | 10,000 | 1000 | 250 | .04 √f (GHz) | 670 | (-60-fGHz) |
| Right Angle Flange Mount Jacks 2054 Series | Mechanical Capture | 18.0 | 1.07 + .010 | 2.0 | 2.0 | 10,000 | 1000 | 250 | .04 √f (GHz) | 670 | (-100-fGHz) |
| | N/A | 18.0 | 1.07 + .015 | 2.0 | 2.0 | 10,000 | 1000 | 250 | .08 √f (GHz) | 670 | (-90-fGHz) |
| Printed Circuit Board Mount Straight Terminal 2062 Series | N/A | 12.4 | 1.15 + .015 | 2.0 | 2.0 | 10,000 | 1000 | 250 | .08 √f (GHz) | 670 | (-90-fGHz) |
| | N/A | 18.0 | N/A | 2.0 | 2.0 | 10,000 | 1000 | 250 | N/A | 670 | N/A |
| Right Angle Printed Circuit 2064 Series | N/A | 12.4 | N/A | 2.0 | 2.0 | 10,000 | 1000 | 250 | N/A | 670 | N/A |
| End Launch Stripline Circuit 2070, 2071 Series | N/A | 18.0 | 1.05 + .005 | 2.0 | 2.0 | 10,000 | 1000 | 250 | .03 √f (GHz) | 670 | (-60-fGHz) |
| Surface Launch Stripline Circuit 2066, 2067 Series | N/A | 18.0 | 1.05 + .005 | 2.0 | 2.0 | 10,000 | 1000 | 250 | .03 √f (GHz) | 670 | (-60-fGHz) |
| Right Angle Surface Launch Stripline Circuit 2068 Series | N/A | 12.4 | 1.15 + .015 | 2.0 | 2.0 | 10,000 | 1000 | 250 | .08 √f (GHz) | 670 | (-60-fGHz) |
| | N/A | 18.0 | 1.07 + .015 | 2.0 | 2.0 | 10,000 | 1000 | 250 | .08 √f (GHz) | 670 | (-60-fGHz) |

Note 1: Maximum operating frequency of cable per MIL-C-17.
 2: Specifications do not apply to hermetic or compression crimp connectors.

OSM (SMA)

For Semi-Rigid Cable

OSM Miniature connectors for semi-rigid cable represent the industry's largest selection of custom and standard products for RF and microwave applications using semi-rigid cable. Connectors are available for all cable sizes.

The direct solder attachment produces highly reliable high performance cable assemblies especially suited for microwave system applications. The solder attachment is suitable for applications ranging from lab work to full scale mechanized production.

There are four basic approaches to the OSM designs. Connectors such as the 2001-5009-02, 2001-5032-02 and 2001-5119-02 are provided with separate solder-on contacts of gold plated beryllium copper. Center contact attachment to the cable inner conductor is made prior to cable attachment. This contact then provides a highly reliable wear resistant center conductor for applications where repeated matings will occur. For connectors such as the 2001-7585-02, 2002-7541-00 and 2004-7585-00, a

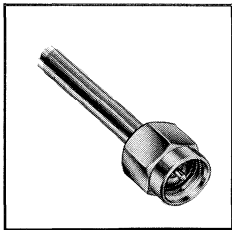
heat treated spring finger socket receptacle contact is mechanically captured to the connector assembly allowing the user to point the inner conductor of the cable and plug it into a wear resistant center contact of the connector. Connectors such as the 2001-7941-02, 2001-5025-02 and 2001-5031-02 utilize the trimmed and pointed cable inner conductor as the connector center contact pin.

In addition, there is a complete series of solderless compression crimp connectors where attachment to the outer jacket of the cable is accomplished using unique crimp tools.

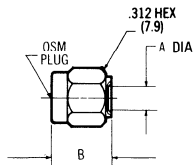
All connectors supplied with center contacts are supported by a PTFE fluorocarbon dielectric.

All plug connectors can be provided with a variety of coupling nut arrangements including retractable, low profile and wire lock styles.

.085 and .141 Dia. • Direct Solder Attachment

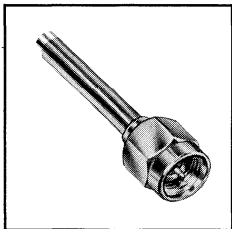


Straight Cable Plug

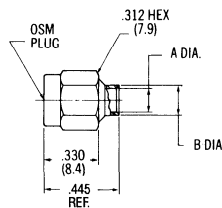


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|------------------|--|-------------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 2001-7941-02 Without Contact | 2001-5009-02 With Contact |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .330 Ref. (8.4) | .440 Ref. (11.2) |

Finish: Housing is gold plated in all cases. Coupling nut is passivated stainless steel. For gold plated coupling nut, change the part number suffix from -02 to -00.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.



Straight Cable Plug

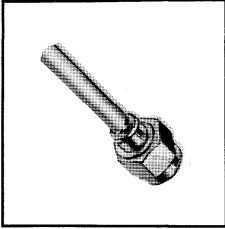


| Cable | RG 402/U (.141) | RG 405/U (.085) | RG 405/U (.085) |
|------------------|--|-------------------------------------|--|
| Cable Dielectric | Solid PTFE | Solid PTFE | Solid PTFE |
| Part Number | 2001-5031-02 Without Contact | 2001-5032-02 With Contact | 2001-7585-02 With Mechanically Captured Contact |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .180 Ref. (4.6) | .120 Ref. (3.0) | .120 Ref. (3.0) |

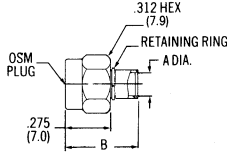
Finish: Housing is gold plated in all cases. Coupling nut is passivated stainless steel. For gold plated coupling nut, change the part number suffix from -02 to -00.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

OSM (SMA) For Semi-Rigid Cable

.085 and .141 Dia. • Direct Solder Attachment

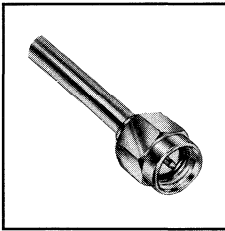


**Straight Cable Plug
Retractable Coupling Nut**

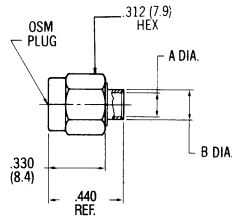


| Cable | RG 402/U (.141) | RG 402/U (.141) | RG 405/U (.085) |
|------------------|--|--|-------------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE | Solid PTFE |
| Part Number | 2001-5025-02 Without Contact | 2001-5068-02 Without Contact | 2001-5119-02 With Contact |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .440 Ref. (11.2) | .330 Ref. (8.4) | .530 Ref. (13.5) |

Finish: Housing is gold plated in all cases. Coupling nut is passivated stainless steel. For gold plated coupling nut, change the part number suffix from -02 to -00.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

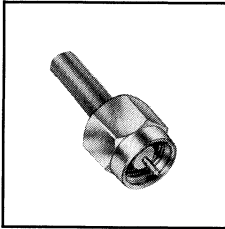


**Straight Cable Plug
With Center Contact**

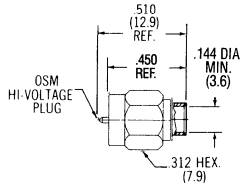


| Cable | RG 402/U (.141) | .141 | RG 405/U (.085) |
|------------------|--------------------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Microporous PTFE | Solid PTFE |
| Part Number | 2001-5003-02 | 2001-7943-02 | 2001-7985-02 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .180 (4.6) | .180 Ref. (4.6) | .120 Ref. (3.0) |

Finish: Passivated stainless steel. For gold plated coupling nut, change the Part Number suffix from -02 to -00.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.



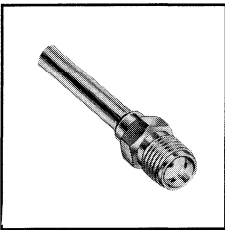
**Straight Cable Plug
High Voltage**



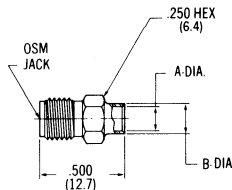
| Cable | RG 402/U (.141) |
|------------------|---------------------|
| Cable Dielectric | Solid PTFE |
| Part Number | 2001-5246-00 |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

Interface does not conform to catalog dimensions or MIL-STD-348



Straight Cable Jack

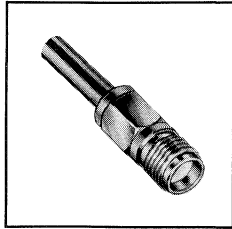


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|------------------|---|---|
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 2002-5015-00 With Contact | 2002-5016-00 With Contact |
| | 2002-7541-00 With Mechanically Captured Contact | 2002-7585-00 With Mechanically Captured Contact |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .180 Ref. (4.6) | .120 Ref. (3.0) |

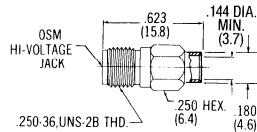
Finish: Gold plate.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

* Overall length of 2002-7585-00 is .625

.085 and .141 Dia. • Direct Solder Attachment

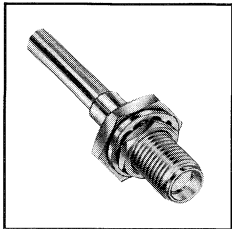


Straight Cable Jack
High Voltage

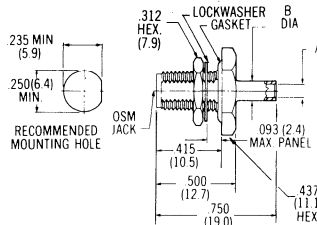


| | |
|------------------|---------------------|
| Cable | RG 402/U (.141) |
| Cable Dielectric | Solid PTFE |
| Part Number | 2002-5070-00 |

Finish: Gold plate.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.
Interface does not conform to catalog dimensions or MIL-STD-348

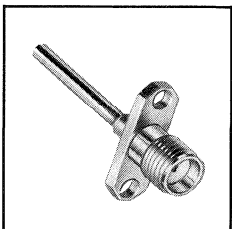


Bulkhead Feedthrough Cable Jack

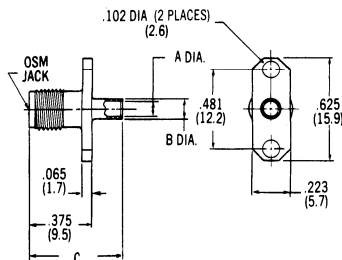


| | | |
|------------------|--|--|
| Cable | RG 402/U (.141) | RG 405/U (.085) |
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 2004-7941-00 2004-7541-00 With Mechanically Captured Contact | 2004-7985-00 2004-7585-00 With Mechanically Captured Contact |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .180 (4.6) | .120 (3.0) |

Finish: Gold plate.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

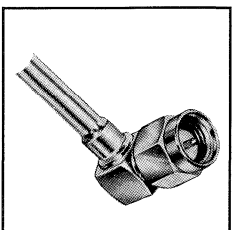


Flange Mount Cable Jack

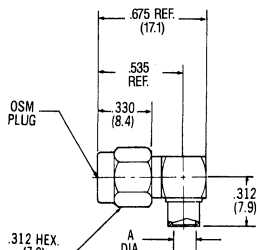


| | | |
|------------------|--------------------------------|--------------------------------|
| Cable | RG 402/U (.141) | RG 405/U (.085) |
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 2006-5013-00 | 2006-5010-00 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .180 (4.6) | .120 (3.0) |
| Dim. C | .560 (14.2) | .500 (12.7) |

Finish: Gold plate.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.



Right Angle Cable Plug*
DC-12.4 GHz



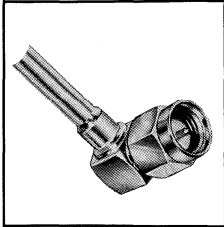
| | | |
|------------------|--------------------------------|--------------------------------|
| Cable | RG 402/U (.141) | RG 405/U (.085) |
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 2007-7941-02 | 2007-7985-02 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |

Finish: Housing is gold plated in all cases. Coupling nut is passivated stainless steel. For gold plated coupling nut, change the part number suffix from -02 to -00.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.
*Contact captivation per U.S. patent number 3,292,117.

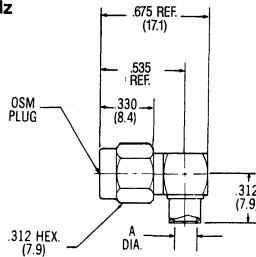
OSM (SMA)

For Semi-Rigid Cable

.085 and .141 Dia. • Direct Solder Attachment

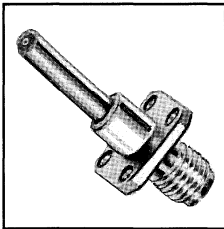


Right Angle Cable Plug*
DC-18.0 GHz

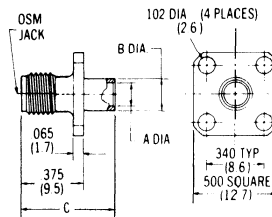


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 2007-5054-02 | 2007-5055-02 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |

Finish: Housing is gold plated in all cases. Coupling nut is passivated stainless steel. For gold plated coupling nut, change the part number suffix from -02 to -00.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.
*Contact captivation per U.S. patent number 3,292,117.



Flange Mount Cable Jack

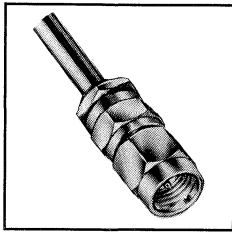


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 2006-7941-00 | 2006-5012-00 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .180 (4.6) | .120 (3.0) |
| Dim. C | .560 (14.2) | .500 (12.7) |

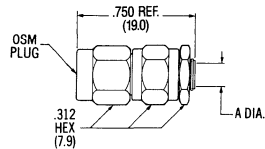
Finish: Gold plate.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

The solder clamp attachment is a field replaceable solder type attachment to an inside bushing which will allow cable rotation and locking in any angular position. This provides for simple cable attachment with packaging flexibility.

.085 and .141 Dia. • Solder Clamp Attachment

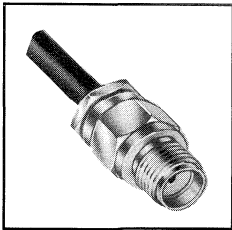


Straight Cable Plug
DC-12.4 GHz

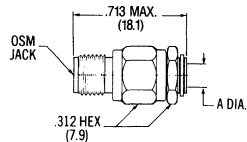


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 2001-7841-02 | 2001-7885-02 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |

Finish: Passivated stainless steel. For gold plate, change the part number suffix from -02 to -00. The solder sleeve is gold plated in all cases. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

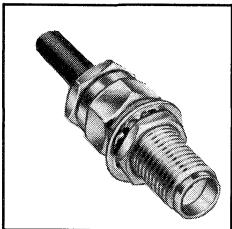


Straight Cable Jack
DC-12.4 GHz

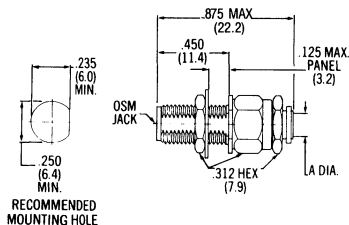


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 2002-7841-02 | 2002-7885-02 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |

Finish: Passivated stainless steel. For gold plate, change the part number suffix from -02 to -00. The solder sleeve is gold plated in all cases. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.



Bulkhead Feedthrough Cable Jack
DC-12.4 GHz



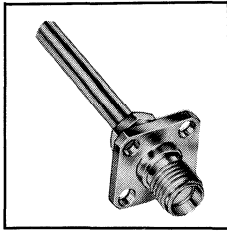
| Cable | RG 402/U (.141) | RG 405/U (.085) |
|------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 2004-7841-02 | 2004-7885-02 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |

Finish: Passivated stainless steel. For gold plate, change the part number suffix from -02 to -00. The solder sleeve is gold plated in all cases. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

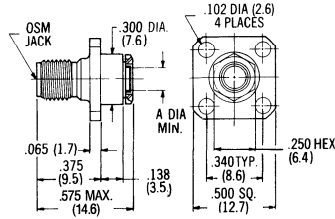
OSM (SMA)

For Semi-Rigid Cable

.085 and .141 Dia. • Solder Clamp Attachment



Flange Mount Cable Jack
DC-12.4 GHz



| Cable | RG 402/U (.141) | RG 405/U (.085) |
|------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 2006-5006-02 | 2006-5084-02 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |

Finish: Passivated stainless steel. For gold plate, change the part number suffix from -02 to -00. The solder sleeve is gold plated in all cases. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

OSM (SMA)

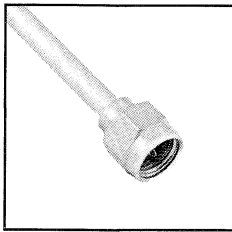
For Semi-Rigid Cable

OSM Solderless Compression Crimp Connectors for semi-rigid cable meet high performance requirements for microwave and other applications. OSM Solderless Compression Crimp Connectors are available for use on RG 405/U (.085 dia.) and RG 402/U (.141 dia.) semi-rigid cables.

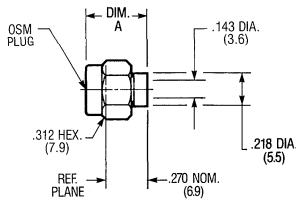
The Compression Crimp attachment meets high performance requirements for microwave system

applications. The cable attachment is permanent and highly reliable. The cable center conductor of the straight cable plug without center contact, suitably pointed, is used as the center contact pin. All other compression crimp connectors have integral captured center contacts of gold plated beryllium copper supported by a PTFE fluorocarbon dielectric.

.085 and .141 • Solderless Cable Attachment

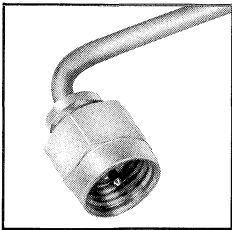


**Straight Cable Plug
Without Center Contact**

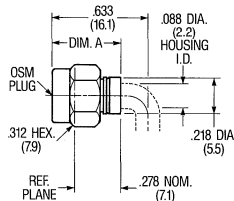


| | | |
|-------------|---------------------|---------------------------------|
| Cable | RG 402/U (.141) | |
| Part Number | 2001-7641-02 | |
| Dim. A | Before Crimping | Inches (mm) .530 Max. (13.5) |
| | After Crimping | .392 Max. (10.0) |

Finish: Passivated stainless steel.
Wire lock hole or retractable coupling nut design available. Consult factory.
All outline drawings show after crimping configurations.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.



**Straight Cable Plug
With Center Contact**

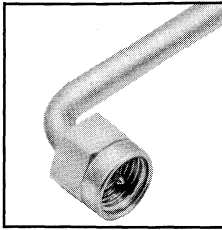


| | | |
|-------------|---------------------|---------------------------------|
| Cable | RG 405/U (.085) | |
| Part Number | 2001-5385-02 | |
| Dim. A | Before Crimping | Inches (mm) .488 Max. (12.4) |
| | After Crimping | .392 Max. (10.0) |

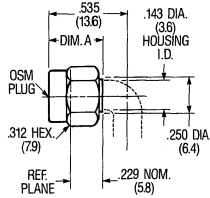
Finish: Passivated stainless steel.
Wire lock hole or retractable coupling nut design available. Consult factory.
All outline drawings show after crimping configurations.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

OSM (SMA) For Semi-Rigid Cable

Low Profile • .085 and .141 • Solderless Cable Attachment

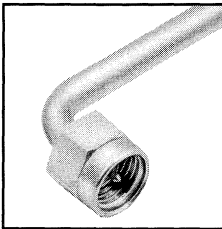


**Straight Cable Plug
Without Center Contact**

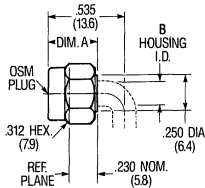


| | | |
|-------------|---------------------|--------------------------------|
| Cable | RG 402/U (.141) | |
| Part Number | 2001-5363-02 | |
| Dim. A | Before Crimping | Inches (mm) .355 Max. (9.0) |
| | After Crimping | .355 Max. (9.0) |

Finish: Passivated stainless steel.
Wire lock hole coupling nut design available.
Consult factory.
All outline drawings show after crimping configurations.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.



**Straight Cable Plug
With Center Contact**



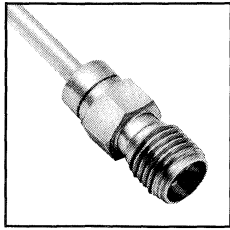
| | | | |
|-------------|---------------------|--------------------------------|--------------------------------|
| Cable | RG 402/U (.141) | RG 405/U (.085) | |
| Part Number | 2001-5395-02 | 2001-5443-02 | |
| Dim. A | Before Crimping | Inches (mm) .355 Max. (9.0) | Inches (mm) .355 Max. (9.0) |
| | After Crimping | .355 Max. (9.0) | .355 Max. (9.0) |
| Dim. B | .143 (3.6) | .088 (2.2) | |

Finish: Passivated stainless steel.
Wire lock hole coupling nut design available. Consult factory.
All outline drawings show after crimping configurations.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

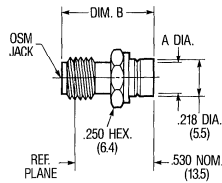
OSM (SMA)

For Semi-Rigid Cable

.085 and .141 • Solderless Cable Attachment

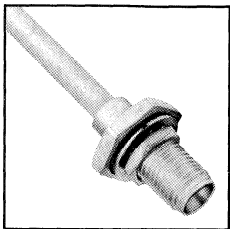


Straight Cable Jack

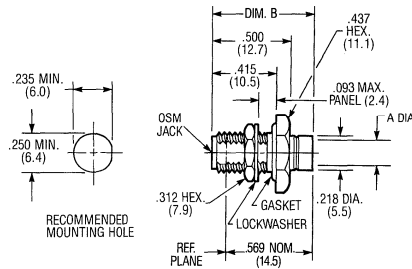


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|-------------|---------------------------|---------------------------|
| Part Number | 2002-7641-02 | 2002-7685-02 |
| Dim. A | Inches (mm) .143 (3.6) | Inches (mm) .088 (2.2) |
| Dim. B | Before Crimping | .755 Max. (19.2) |
| | After Crimping | .615 Max. (15.6) |

Finish: Passivated stainless steel.
All outline drawings show after crimping configurations.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

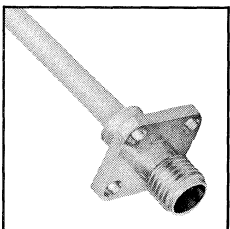


Bulkhead Feedthrough Cable Jack

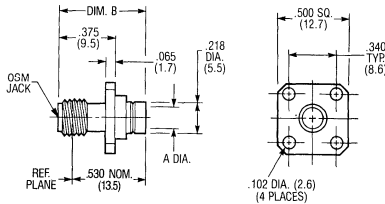


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|-------------|---------------------------|---------------------------|
| Part Number | 2004-7641-02 | 2004-7685-02 |
| Dim. A | Inches (mm) .143 (3.6) | Inches (mm) .088 (2.2) |
| Dim. B | Before Crimping | .795 Max. (20.2) |
| | After Crimping | .657 Max. (16.7) |

Finish: Passivated stainless steel.
All outline drawings show after crimping configurations.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

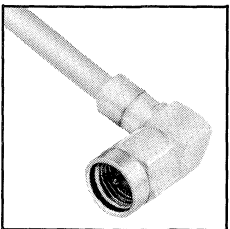


Flange Mount Cable Jack

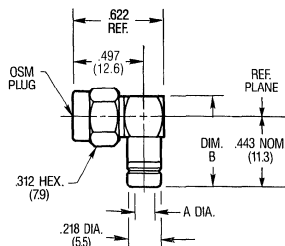


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|-------------|---------------------------|---------------------------|
| Part Number | 2006-7641-02 | 2006-7685-02 |
| Dim. A | Inches (mm) .143 (3.6) | Inches (mm) .088 (2.2) |
| Dim. B | Before Crimping | .755 Max. (19.2) |
| | After Crimping | .615 Max. (15.6) |

Finish: Passivated stainless steel.
All outline drawings show after crimping configurations.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.



Right Angle Cable Plug



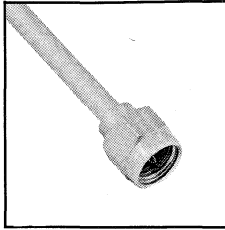
| Cable | RG 402/U (.141) | RG 405/U (.085) |
|-------------|---|---|
| Part Number | 2007-7641-02 2007-5100-02 (w/Safety Wire Holes) | 2007-7685-02 2007-5101-02 (w/Safety Wire Holes) |
| Dim. A | Inches (mm) .143 (3.6) | Inches (mm) .088 (2.2) |
| Dim. B | Before Crimping | .720 Max. (18.3) |
| | After Crimping | .573 Max. (14.6) |

Finish: Passivated stainless steel.
All outline drawings show after crimping configurations.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

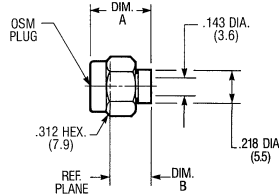
OSM (SMA)

MIL-C-39012 For Semi-Rigid Cable

.085 and .141 • Solderless Cable Attachment

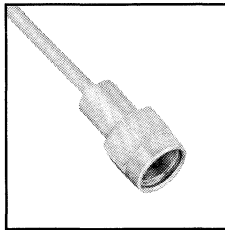


Straight Cable Plug
Without Center Contact
MIL-C-39012/92

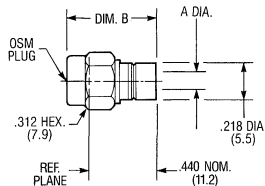


| Cable | | RG 402/U (.141) | | | |
|--------------------------------------|-----------------|-----------------|------------------|--------------|------------------|
| Category | | B | | F | |
| MIL-C-39012/92 | | B3101 | | -3301 | |
| QPL P/N | | 2001-8931-92 | | 2001-8301-92 | |
| MIL-C-39012/92 (w/Safety Wire Holes) | | B3001 | | -3201 | |
| QPL P/N (w/Safety Wire Holes) | | 2001-8921-92 | | 2001-8201-92 | |
| Dim. A | Before Crimping | Inches (mm) | .530 Max. (13.5) | Inches (mm) | .530 Max. (13.5) |
| | After Crimping | | .392 Max. (10.0) | | .406 Max. (10.3) |
| Dim. B | | | .270 Nom. (6.9) | | .281 Nom. (7.1) |

Finish: Military QPL units are finished in accordance with MIL-C-39012. The standard finish is passivated stainless steel. All outline drawings show after crimping configurations. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section. Refer to QPL section for category definitions.



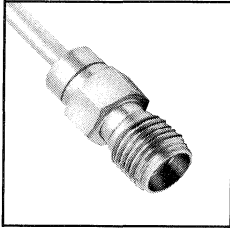
Straight Cable Plug
MIL-C-39012/79



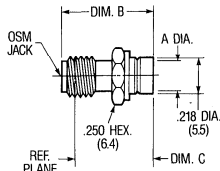
| Cable | | RG 402/U (.141) | | RG 405/U (.085) | |
|--------------------------------------|-----------------|------------------|------------------|------------------|------------------|
| Category | | B | F | B | F |
| MIL-C-39012/79 | | B3104 | -3308 | B3103 | -3307 |
| QPL P/N | | 2001-8304-92 | 2001-8308-92 | 2001-8303-92 | 2001-8307-92 |
| MIL-C-39012/79 (w/Safety Wire Holes) | | B3004 | -3208 | B3003 | -3207 |
| QPL P/N (w/Safety Wire Holes) | | 2001-8204-92 | 2001-8208-92 | 2001-8203-92 | 2001-8207-92 |
| Dim. A | | Inches | .143 | Inches | .088 |
| | | (mm) | (3.6) | (mm) | (2.2) |
| Dim. B | Before Crimping | .690 Max. (17.5) | .690 Max. (17.5) | .690 Max. (17.5) | .690 Max. (17.5) |
| | After Crimping | .568 Max. (14.4) | .568 Max. (14.4) | .568 Max. (14.4) | .568 Max. (14.4) |

Finish: Military QPL units are finished in accordance with MIL-C-39012. The standard finish is passivated stainless steel. All outline drawings show after crimping configurations. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section. Refer to QPL section for category definitions.

.085 and .141 • Solderless Cable Attachment



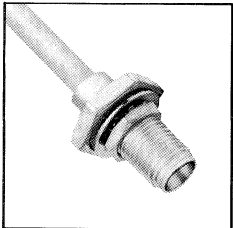
Straight Cable Jack
MIL-C-39012/81



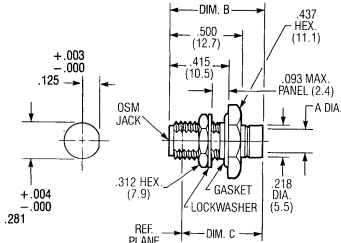
| Cable | | RG 402/U (.141) | | RG 405/U (.085) | |
|----------------|-----------------|------------------|------------------|------------------|------------------|
| Category | | B | F | B | F |
| MIL-C-39012/81 | | B3004 | -3208 | B3003 | -3207 |
| QPL P/N | | 2002-8204-92 | 2002-8208-92 | 2002-8203-92 | 2002-8207-92 |
| Dim. A | | Inches .143 | (mm) (3.6) | Inches .088 | (mm) (2.2) |
| Dim. B | Before Crimping | .755 Max. (19.2) | .755 Max. (19.2) | .755 Max. (19.2) | .755 Max. (19.2) |
| | After Crimping | .615 Max. (15.6) | .620 Max. (15.7) | .615 Max. (15.6) | .620 Max. (15.7) |
| Dim. C | | .530 Nom. (13.5) | .535 Nom. (13.6) | .530 Nom. (13.5) | .535 Nom. (13.6) |

Finish: Military QPL units are finished in accordance with MIL-C-39012. The standard finish is passivated stainless steel.

All outline drawings show after crimping configurations.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.
Refer to QPL section for category definitions.



Bulkhead Feedthrough Cable Jack
MIL-C-39012/83

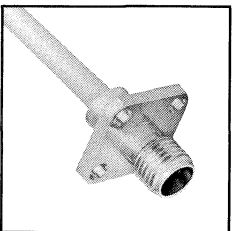


RECOMMENDED MOUNTING HOLE

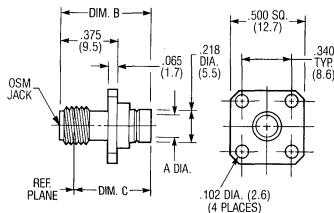
| Cable | | RG 402/U (.141) | | RG 405/U (.085) | |
|----------------|-----------------|------------------|------------------|------------------|------------------|
| Category | | B | F | B | F |
| MIL-C-39012/83 | | B3004 | -3208 | B3003 | -3207 |
| QPL P/N | | 2004-8204-92 | 2004-8208-92 | 2004-8203-92 | 2004-8207-92 |
| Dim. A | | Inches .143 | (mm) (3.6) | Inches .088 | (mm) (2.2) |
| Dim. B | Before Crimping | .795 Max. (20.2) | .725 Max. (18.4) | .795 Max. (20.2) | .725 Max. (18.4) |
| | After Crimping | .657 Max. (16.7) | .620 Max. (15.7) | .657 Max. (16.7) | .620 Max. (15.7) |
| Dim. C | | .569 Nom. (14.5) | .529 Nom. (13.4) | .569 Nom. (14.5) | .529 Nom. (13.4) |

Finish: Military QPL units are finished in accordance with MIL-C-39012. The standard finish is passivated stainless steel.

All outline drawings show after crimping configurations.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.
Refer to QPL section for category definitions.



Flange Mount Cable Jack
MIL-C-39012/82



| Cable | | RG 402/U (.141) | | RG 405/U (.085) | |
|----------------|-----------------|------------------|------------------|------------------|------------------|
| Category | | B | F | B | F |
| MIL-C-39012/82 | | B3004 | -3208 | B3003 | -3207 |
| QPL P/N | | 2006-8204-92 | 2006-8208-92 | 2006-8203-92 | 2006-8207-92 |
| Dim. A | | Inches .143 | (mm) (3.6) | Inches .088 | (mm) (2.2) |
| Dim. B | Before Crimping | .755 Max. (19.2) | .755 Max. (19.2) | .755 Max. (19.2) | .755 Max. (19.2) |
| | After Crimping | .615 Max. (15.6) | .620 Max. (15.7) | .615 Max. (15.6) | .620 Max. (15.7) |
| Dim. C | | .530 Nom. (13.5) | .535 Nom. (13.6) | .530 Nom. (13.5) | .535 Nom. (13.6) |

Finish: Military QPL units are finished in accordance with MIL-C-39012. The standard finish is passivated stainless steel.

All outline drawings show after crimping configurations.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.
Refer to QPL section for category definitions.

OSM (SMA)

For Semi-Rigid Cable

These connectors are available for solid PTFE, foam polyethylene, microporous PTFE and spline coaxial cables.

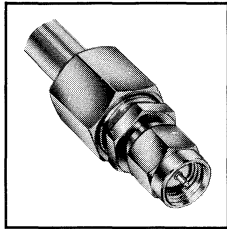
This series is ideal for medium power low loss applications through 18.0 GHz.

Two cable to connector attachment designs are available in this series. The standard compression clamp features reusable design structure and requires only typical laboratory assembly tools. The press clamp design provides permanent installation and requires a special assembly tool. This press clamp assembly provides greater reliability under severe thermal and mechanical environments with copper clad cable.

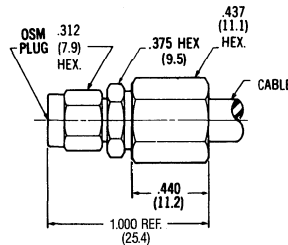
The housing and coupling nut are made of durable and corrosion resistant stainless steel. The center contact is made of heat-treated beryllium copper, is gold plated and supported by a PTFE fluorocarbon dielectric. The housing and coupling nut of these standard units have stainless steel finish.

In this series, the center contacts are soldered to the center conductor of the coaxial cable, except when using spline cable. On the spline version, the captured center contact plugs into the I.D. of the cable center conductor.

.250 Dia. • Clamp Attachment

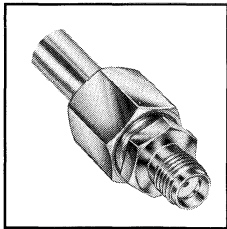


Straight Cable Plug

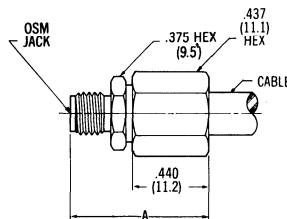


| Compression Clamp Attachment | |
|------------------------------|---------------------------|
| Part Number | Cable .250 Dia. |
| 2001-7750-02 | Solid PTFE |
| 2001-7752-02 | Microporous PTFE and Foam |
| 2001-7613-02 | 3 Spline PTFE |
| 2001-7615-02 | 5 Spline PTFE |

Finish: Passivated stainless steel.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.
Press clamp attachment available.



Straight Cable Jack



| Part Number | Dim. A | Cable .250 Dia. |
|---------------------|---------------------------------|---------------------------|
| 2002-7750-02 | Inches (mm) .865 Ref. (22.0) | Solid PTFE |
| 2002-7752-02 | .865 Ref. (22.0) | Microporous PTFE and Foam |
| 2002-7613-02 | .917 Ref. (23.3) | 3 Spline PTFE |
| 2002-7615-02 | .917 Ref. (23.3) | 5 Spline PTFE |

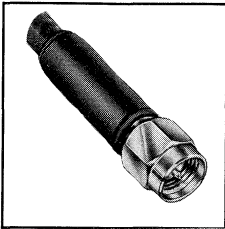
Finish: Passivated stainless steel.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.
Bulkhead feedthrough cable jack, compression clamp and press clamp attachment available.

OSM Miniature Coaxial Connectors for flexible cable are designed for use on medium (e.g. RG-142B/U) and smaller size flexible cable. Flexible cable assemblies can be utilized in areas where semi-rigid cable is not required but high cable flexibility is needed. Designs exist for nearly all styles of connector terminated in most flexible cable types including double braided, foil barrier and other high performance cables. Many 75 ohm cable termination styles are also available, some with stock delivery.

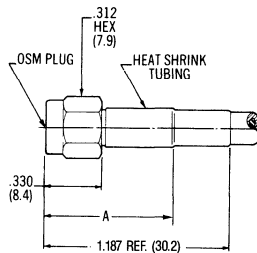
Electrical performance of the connectors tend to be limited only to the performance of the cable being terminated onto by the OSM connectors.

All connectors have solder-on center contacts. Connector housing to cable braid attachment is available in solder, crimp and clamp attachments.

Flexible Cable • Solder Attachment

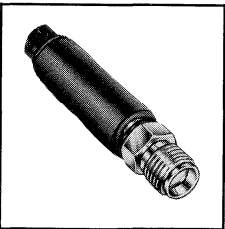


Straight Cable Plug

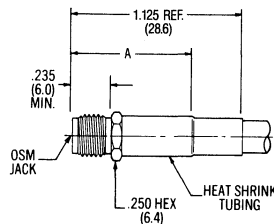


| | | |
|-------------|--------------------------------------|---------------------------------|
| Cable | RG 55/U, 58, 141, 142, 223, 303, 400 | RG 174/U, 188, 316 |
| Part Number | 2031-5002-02 | 2031-5003-02 |
| Dim. A | Inches (mm) .775 Ref. (19.7) | Inches (mm) .690 Ref. (17.5) |

Finish: Housing is gold plated in all cases. Coupling nut is passivated stainless steel. For gold plated coupling nut, change the part number suffix from -02 to -00.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

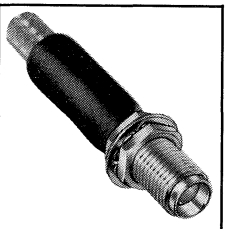


Straight Cable Jack

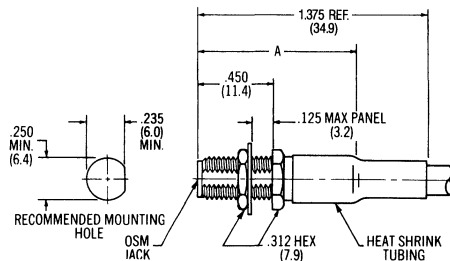


| | | |
|-------------|--------------------------------------|---------------------------------|
| Cable | RG 55/U, 58, 141, 142, 223, 303, 400 | RG 174/U, 188, 316 |
| Part Number | 2032-5002-00 | 2032-5004-00 |
| Dim. A | Inches (mm) .730 Ref. (18.5) | Inches (mm) .700 Ref. (16.9) |

Finish: Gold plate.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.



Bulkhead Feedthrough Cable Jack



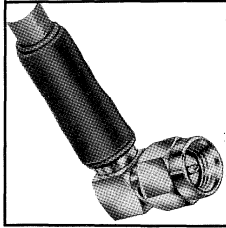
| | | |
|-------------|--------------------------------------|---------------------------------|
| Cable | RG 55/U, 58, 141, 142, 223, 303, 400 | RG 174/U, 188, 316 |
| Part Number | 2034-5007-00 | 2034-5008-00 |
| Dim. A | Inches (mm) .945 Ref. (24.0) | Inches (mm) .825 Ref. (21.0) |

Finish: Gold plate.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

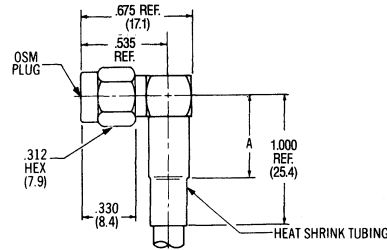
OSM (SMA)

For Flexible Cable

Flexible Cable • Solder Attachment



Right Angle Cable Plug*



| | | |
|-------------|--------------------------------------|---------------------------------|
| Cable | RG 55/U, 58, 141, 142, 223, 303, 400 | RG 174/U, 188, 316 |
| Part Number | 2037-5005-02 | 2037-5006-02 |
| Dim. A | Inches (mm) .630 Ref. (16.0) | Inches (mm) .440 Ref. (11.2) |

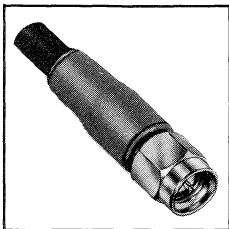
Finish: Housing is gold plated in all cases. Coupling nut is passivated stainless steel. For gold plated coupling nut, change the part number suffix from -02 to -00.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.
*Contact captivation per U.S. patent number 3,292,117.

OSM (SMA)

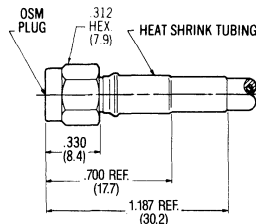
For Flexible Cable

Connector housing to cable braid is crimp attached for rapid production assembly. A special crimping tool is required. Center contact is solder attached.

Flexible Cable • Crimp Attachment

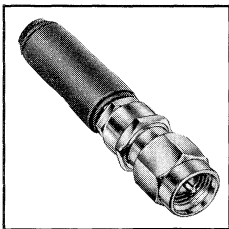


**Straight Cable Plug
Non-Captured Contact**

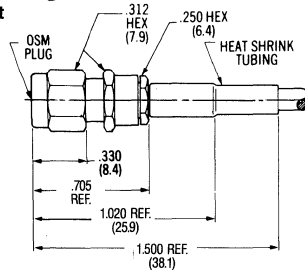


| Part Number | Cable |
|---------------------|--------------------------|
| 2031-5005-02 | RG 55/U 142, 223, 400 |
| 2031-5055-02 | RG 58/U 141, 303 |
| 2031-5006-02 | RG 174/U 188, 316 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

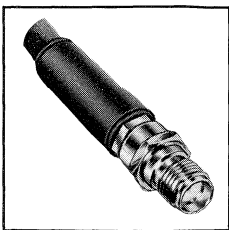


**Straight Cable Plug
Captured Contact**

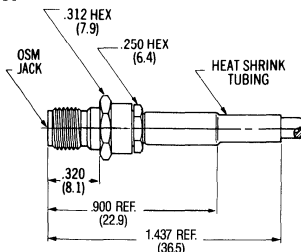


| Part Number | Cable |
|---------------------|--------------------------|
| 2031-5011-02 | RG 55/U 142, 223, 400 |
| 2031-5056-02 | RG 58/U 141, 303 |
| 2031-5012-02 | RG 174/U 188, 316 |
| 2031-5013-02 | RG 180/U 195 |
| 2031-5102-02 | RG 178/U 196 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.



**Straight Cable Jack
Captured Contact**

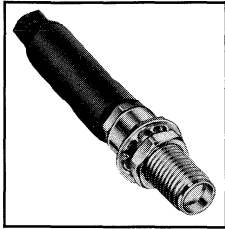


| Part Number | Cable |
|---------------------|--------------------------|
| 2032-5007-02 | RG 55/U 142, 223, 400 |
| 2032-5021-02 | RG 58/U 141, 303 |
| 2032-5003-02 | RG 174/U 188, 316 |
| 2032-5010-02 | RG 180/U 195 |
| 2032-5026-02 | RG 178/U 196 |

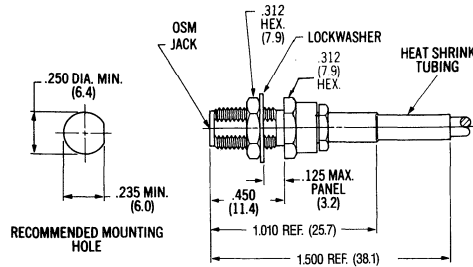
Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

OSM (SMA) For Flexible Cable

Flexible Cable • Crimp Attachment

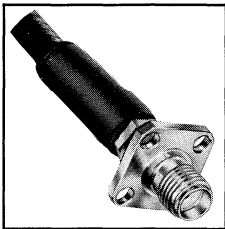


Bulkhead Feedthrough Cable Jack

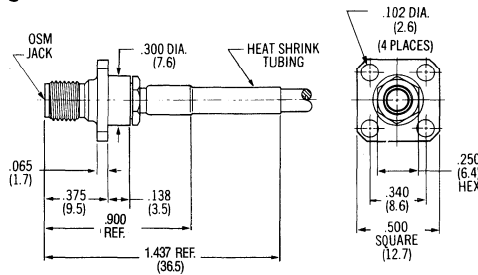


| Captured Center Contact | |
|-------------------------|------------------------|
| Part Number | Cable |
| 2034-5004-02 | RG 55/U, 142, 223, 400 |
| 2034-5023-02 | RG 303/U, 58, 141 |
| 2034-5005-02 | RG 188/U, 316, 174 |
| 2034-5006-02 | RG 180/U, 195 |
| 2034-5031-02 | RG 178/U, 196 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

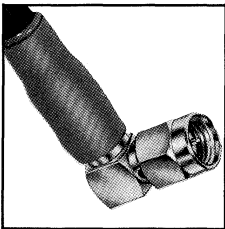


Flange Mount Cable Jack

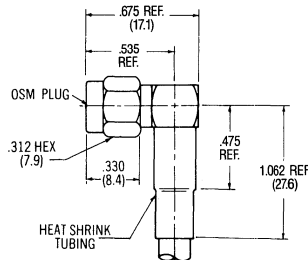


| Captured Center Contact | |
|-------------------------|------------------------|
| Part Number | Cable |
| 2036-5003-02 | RG 55/U, 142, 223, 400 |
| 2036-5014-02 | RG 303/U, 58, 141 |
| 2036-5004-02 | RG 188/U, 316, 174 |
| 2036-5005-02 | RG 180/U, 195 |
| 2036-5016-02 | RG 178/U, 196 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.



**Right Angle Cable Plug
DC-12.4 GHz**



| Captured Center Contact* | |
|--------------------------|------------------------|
| Part Number | Cable |
| 2037-5007-02 | RG 55/U, 142, 223, 400 |
| 2037-5056-02 | RG 303/U, 58, 141 |
| 2037-5008-02 | RG 188/U, 316, 174 |
| 2037-5009-02 | RG 180/U, 195 |
| 2037-5100-02 | RG 178/U, 196 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section. *Contact captivation per U.S. patent number 3,292,117.



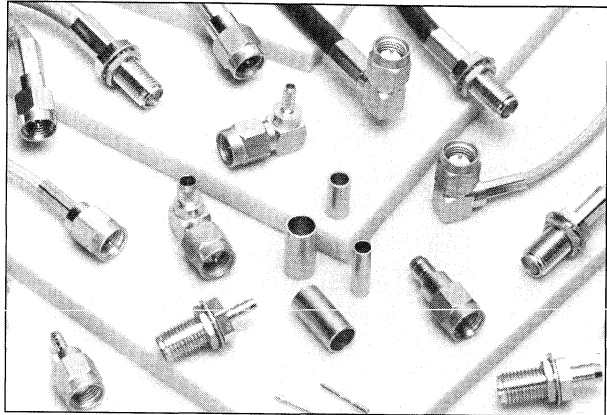
3-Piece SMA (OSM[®]) Connectors Reduce Installation Time

- Reliable stainless steel construction
- Fewer parts facilitate assembly
- Fully crimpable
- Axially captured

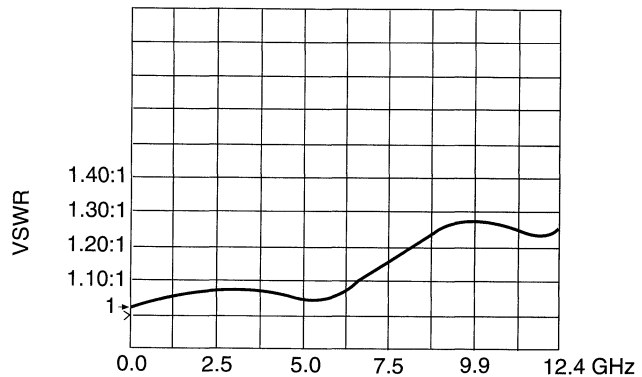
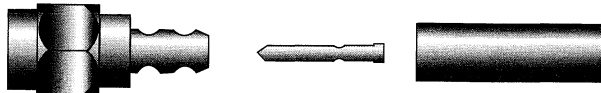
The M/A-COM 3-Piece SMA cable connector series has been designed to facilitate high volume cable assembly manufacturing. Standard configurations include straight cable plug, right angle cable plug and bulkhead cable jack. Fewer piece parts and a fully crimpable design translate into lower total installed costs for users. The crimped outer ferrule features fast, consistent and reliable cable attachment with excellent cable retention. Industry standard pneumatic crimp tooling can be utilized for high volume terminations. Extended length ferrules provide added strain relief characteristics and eliminate the need for a supplementary shrink boot. Center contacts can be either crimped or soldered, offering enhanced flexibility for both manufacturing and application needs. These SMA connectors are available for all popular RG/U cables including 55, 58, 141, 142, 174, 179, 187, 188, 223, 303, 316, 400 and double braided RD-316. Bulk packaging is available.

Passivated stainless steel construction and SPC controlled manufacturing provide excellent repeatable performance. Axially captured center contacts enhance mechanical reliability and ensure uncompromised electrical performance. Right angle plugs utilize a unique one piece housing construction for mechanical integrity.

For SMA cable assembly requirements, M/A-COM's 3-Piece SMA connectors feature excellent performance and value at a lower installed cost. Ease of assembly, high quality design and competitive prices make M/A-COM's 3-Piece SMA connectors an ideal solution for applications in telecom, datacom or test & measurement. Contact a local M/A-COM sales office or authorized distributor for qualification samples.



Typical 3-Piece SMA Design



Typical VSWR for 3-Piece SMA Straight Cable Plug
Part Number 2831-7316-02

OSM is a registered trademark of M/A-COM, Inc.

SMA (OSM[®]) Specifications - 3-Piece SMA

| Requirement | Detail |
|-------------|--------|
|-------------|--------|

General

| | |
|----------|--|
| Material | Steel, corrosion resistant per ASTM-A-582 and ASTM-A-484, Type 303. Beryllium copper per ASTM-B-196. PTFE Fluorocarbon per MIL-P-19468 and ASTM-D-1457. |
| Finish | Center Contacts shall be gold plated (MIL-G-45204) over nickel plate (QQ-N-290). Housing and mounting hardware are passivated per ASTM-A-380. Crimp ferrules are nickel plated per QQ-N-290. |
| Design | The design shall be such that the outline shown in this catalog and the interface dimensions of MIL-STD-348 are met. |

Electrical

| | |
|-------------------|--|
| Frequency | dc-12.4 GHz or maximum operating frequency of cable per MIL-C-17 |
| Nominal Impedance | 50 ohms |

| Connector Type | Cable | VSWR (Max.) | Contact Resistance (milliohms max.) | | Insulation Resistance (megohms min.) | Dielectric Withstanding Voltage (VRMS) | Corona Extinction Voltage at 70,000 Ft. (VRMS min.) | RF Transmission Loss | RF High Potential at 5 MHz (VRMS) | RF Leakage (dB min.) |
|--|------------------------------------|-------------|-------------------------------------|---------------|--------------------------------------|--|---|----------------------|-----------------------------------|----------------------|
| | | | Center Contact | Outer Contact | | | | | | |
| Straight Cable Plugs & Jacks Crimp Attachment | RG-55, 142, 223, 400 | 1.30 | 2.0 | 2.0 | 10,000 | 1000 | 250 | $.06\sqrt{f}$ (GHz) | 670 | -(60-fGHz) |
| | RG-58, 141, 303 | 1.30 | 2.0 | 2.0 | 10,000 | 1000 | 250 | $.06\sqrt{f}$ (GHz) | 670 | -(60-fGHz) |
| 2831, 2834 Series | RG-174,179,187,188,316, RD-316 | 1.30 | 2.0 | 2.0 | 10,000 | 750 | 190 | $.06\sqrt{f}$ (GHz) | 500 | -(60-fGHz) |
| Right Angle Cable Plugs Crimp Attachment | RG-55, 142, 223, 400 | 1.40 | 2.0 | 2.0 | 10,000 | 1000 | 250 | $.07\sqrt{f}$ (GHz) | 670 | -(60-fGHz) |
| | RG-58, 141, 303 | 1.40 | 2.0 | 2.0 | 10,000 | 1000 | 250 | $.07\sqrt{f}$ (GHz) | 670 | -(60-fGHz) |
| 2837 Series | RG-174, 179, 187, 188, 316, RD-316 | 1.40 | 2.0 | 2.0 | 10,000 | 750 | 190 | $.07\sqrt{f}$ (GHz) | 500 | -(60-fGHz) |

Mechanical

| | |
|---------------------------|--|
| Force to Engage | The torque required to engage and disengage shall not exceed 2 in.-lbs. The longitudinal force is not applicable. |
| Coupling Nut Retention | 60 lbs. min. Applicable for plug connectors only. |
| Coupling Proof Torque | 15 in.-lbs. min. Applicable for plug connectors only. |
| Mating Characteristics | Applicable to jack connectors only. Reference MIL-STD-348 for dimensions: oversize test pin .0375 min. dia., .030 to .045 deep, insertion force 3 lbs. max. with .0370 min. dia. pin, withdrawal force 1 oz. min. with .0355 max. dia. pin. |
| Connector Durability | The connector to be tested and its mating connector shall be subjected to 500 insertion and withdrawal cycles at 12 cycles per minute max. The connector shall show no evidence of mechanical failure and shall meet the mating characteristic requirements. |
| Recommended Mating Torque | 7 to 10 in.-lbs. |

Environmental

| | |
|------------------------|--|
| Vibration | Specification MIL-STD-202, method 204, test condition D. |
| Shock | Specification MIL-STD-202, method 213, test condition I. |
| Thermal Shock | Specification MIL-STD-202, method 107, test condition B. |
| Corrosion (Salt Spray) | Specification MIL-STD-202, method 101, test condition B. |
| Moisture Resistance | Specification MIL-STD-202, method 106. |
| Temperature Rating | -65°C to +165°C |

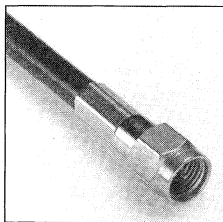
Cable Retention

| Cable Type | (lbs. min.) | |
|------------------------------------|--------------|--------------|
| | Single Braid | Double Braid |
| RG-174, 179, 187, 188, 316, RD-316 | 20 | 25 |
| RG-55, 58, 141, 142, 303, 223, 400 | 40 | 45 |

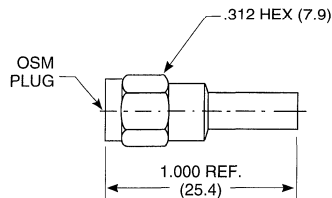
M/A-COM has design control and all data contained herein is subject to change without notice.

SMA (OSM)[®] 3-Piece SMA For Flexible Cable

Flexible Cable • Crimp Attachment

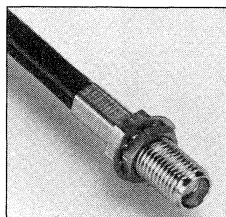


Straight Cable Plug
Captured Contact

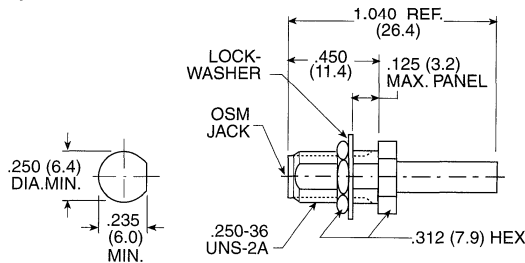


| Part Number | Cable |
|--------------|------------------------------|
| 2831-7388-02 | RG-174/U, 179, 187, 188, 316 |
| 2831-7316-02 | RD-316 Double Braid |
| 2831-7358-02 | RG-58/U, 141, 303 |
| 2831-7341-02 | RG-55/U, 142, 223, 400 |

Finish: Passivated stainless steel



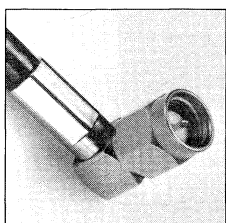
Bulkhead Feedthrough Cable Jack
Captured Contact



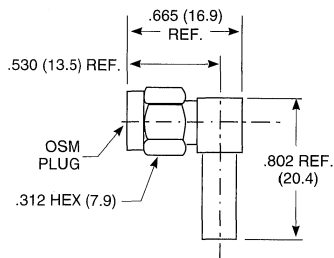
RECOMMENDED
MOUNTING HOLE

| Part Number | Cable |
|--------------|------------------------------|
| 2834-7388-02 | RG-174/U, 179, 187, 188, 316 |
| 2834-7316-02 | RD-316 Double Braid |
| 2834-7358-02 | RG-58/U, 141, 303 |
| 2834-7341-02 | RG-55/U, 142, 223, 400 |

Finish: Passivated stainless steel



Right Angle Cable Plug
Captured Contact



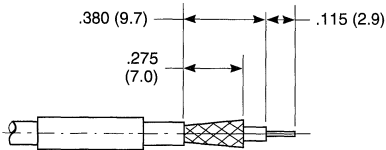
| Part Number | Cable |
|--------------|------------------------------|
| 2837-7388-02 | RG-174/U, 179, 187, 188, 316 |
| 2837-7316-02 | RD-316 Double Braid |
| 2837-7358-02 | RG-58/U, 141, 303 |
| 2837-7341-02 | RG-55/U, 142, 223, 400 |

Finish: Passivated stainless steel

Dimensions are in decimal inches, metric equivalents (to the nearest 0.1mm) are given for general information only.

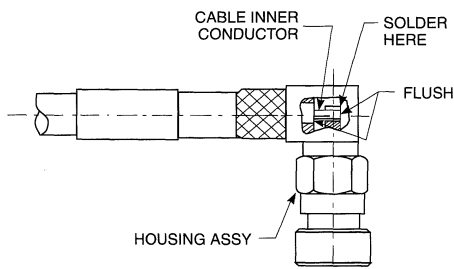
SMA (OSM)[®]

3-Piece SMA Typical Assembly Procedure for Right Angle Plug Connectors



1. Slide crimp sleeve over cable, trim cable to dimensions shown and tin the inner conductor.

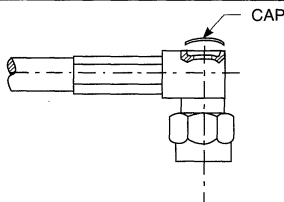
NOTE: Be careful not to nick the braid or center conductor.



2. Place locator tool onto the housing assembly. (Recommended for maintaining correct interface dimensions).

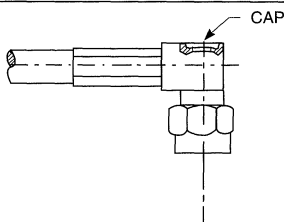
Insert the cable into back end of the housing assembly as shown, nesting the cable center conductor into the connector center conductor slot as shown.

Solder cable center conductor to center contact as shown.



3. Slide crimp sleeve over the braid and crimp using the proper die cavity for the cable being used. (See table below for proper die cavity.)

Remove locator tool from housing assembly if being used.



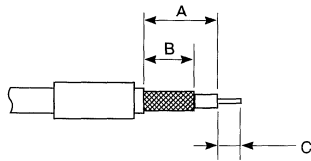
4. Insert cap into housing opening as shown and press flat using a .181 (4.5 mm) dia. punch.

Option: Solder or epoxy cap into place being careful to avoid leakage into the housing assembly.

| Hex Size | Cable Type |
|----------|------------------------------------|
| .128 | RG-174, 179, 187, 188, 316 |
| .213 | RG-55, 58, 141, 142, 223, 303, 400 |
| .151 | RD-316 |

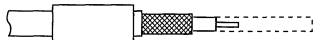
SMA (OSM)[®]

3-Piece SMA Typical Assembly Procedure for Straight Plug & Bulkhead Jack Connectors



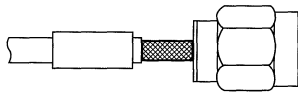
1. Slide crimp sleeve over cable, and trim cable to proper dimensions as shown in chart.

NOTE: Be careful not to nick the braid or center conductor.

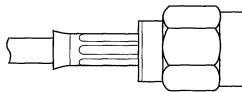


2. Solder center contact onto center conductor of the cable as shown.

Option: Crimp center contact. See Notes 1 and 2 below.



3. Insert prepared cable into the housing until center contact snaps into place. Place cable braid over back end of the housing.



4. Slide crimp sleeve over cable braid and crimp using the proper die cavity for the cable being used. (See table below for proper die cavity.)

A plug body is shown, but these instructions are relevant to both plugs and jacks.

| 3-Piece SMA Connector Type | Cable Strip Dimensions ($\pm .005$) | | |
|----------------------------|---------------------------------------|------|------|
| | A | B | C |
| Plug | .315 | .275 | .085 |
| Jack | .325 | .275 | .085 |

| Hex Size | Cable Type |
|-----------------------------|--------------------------------------|
| .128 | RG-174, 179, 187, 188, 316 |
| .213 | RG-55/U, 58, 141, 142, 223, 303, 400 |
| .151 | RD-316 |
| For Center Contact Crimping | |
| .042 | All Cable Types |

NOTES:

1. For center contact crimping, use Hex Die 2598-5380-54 in the Econo-Crimp tool or use Hex Die 2598-5379-54 in the Hex Crimp Tool.
2. Crimping of solid center conductor cable is not recommended.

TOOLS

Hex Crimp Assembly Tools for 3-Piece SMA

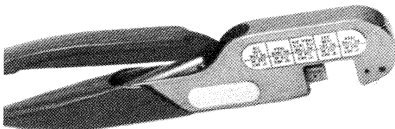
Hex Crimp Tool



Die Change Tool



Hex Die

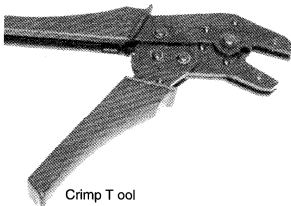


Crimp Tool

| Description | Part Number | Model Number |
|-----------------|--------------|--------------|
| Crimp Frame | 5698-5014-54 | T-4718 |
| Die Change Tool | 5698-5017-54 | T-4703 |

| Hex Die Part Number | Die Cavity | Hex Size ±.003 | For Use With RG/U Cable |
|------------------------------------|------------|----------------|--------------------------------------|
| 5698-5015-54 | A | .105 | 178B & 196A |
| | B | .213 | 55B, 58C, 141A, 142B, 223, 303 & 400 |
| | C | .128 | 174, 174B, 179, 187A, 188A & 316 |
| 2598-5379-54 | — | — | — |
| 2098-0323-54 | — | .151 | RD-316 |
| For Center Contact Crimping | | | |
| 2598-5379-54 | — | .042 | — |

Econo-Crimp Tool



Crimp Tool



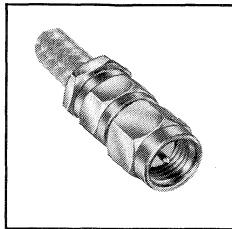
Hex Die

| Description | Part Number |
|-------------|--------------|
| Crimp Frame | 2598-5006-54 |

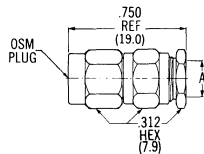
| Hex Die Part Number | Die Cavity | Hex Size ±.003 | For Use With RG/U Cable |
|---------------------|------------------------------------|----------------|--------------------------------------|
| 2598-5007-54 | A | .105 | 178B & 196A |
| | B | .213 | 55B, 58C, 141A, 142B, 223, 303 & 400 |
| | C | .128 | 174, 174B, 179, 187A, 188A & 316 |
| 2598-5380-54 | — | .151 | RD-316 |
| | For Center Contact Crimping | | |
| — | — | .042 | — |

This series of cable clamp attachment connectors is the commercial alternate to the SMA type connectors to flexible cable per MIL-C-39012 Category A Field Replaceable units (no special tools required).

Flexible Cable • Clamp Attachment

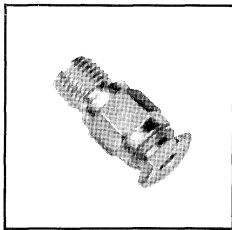


**Straight Cable Plug
Captured Contact**

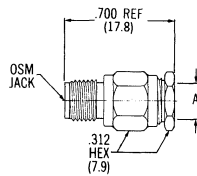


| Cable | RG 55/U, 58, 141, 142, 223, 303 | RG 174/U, 188, 316 | RG 180/U, 195 |
|-------------|------------------------------------|--------------------------------|--------------------------------|
| Part Number | 2001-7141-02 | 2001-7188-02 | 2001-7195-02 |
| Dim. A | Inches (mm) .220 Dia. (5.6) | Inches (mm) .116 Dia. (2.9) | Inches (mm) .160 Dia. (4.1) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

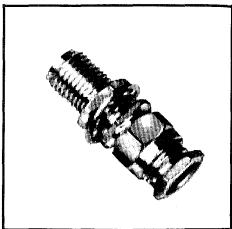


**Straight Cable Jack
Captured Contact**

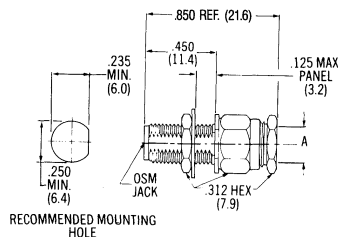


| Cable | RG 55/U, 58, 141, 142, 223, 303 | RG 174/U, 188, 316 | RG 180/U, 195 |
|-------------|------------------------------------|--------------------------------|--------------------------------|
| Part Number | 2002-7141-02 | 2002-7188-02 | 2002-7195-02 |
| Dim. A | Inches (mm) .220 Dia. (5.6) | Inches (mm) .116 Dia. (2.9) | Inches (mm) .160 Dia. (4.1) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.



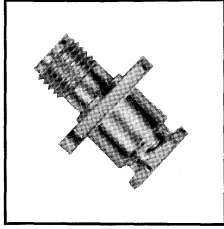
**Bulkhead Feedthrough Cable Jack
Captured Contact**



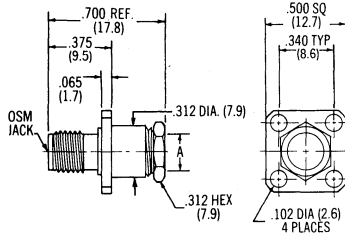
| Cable | RG 55/U, 58, 141, 142, 223, 303 | RG 174/U, 188, 316 | RG 180/U, 195 |
|-------------|------------------------------------|--------------------------------|--------------------------------|
| Part Number | 2004-7141-02 | 2004-7188-02 | 2004-7195-02 |
| Dim. A | Inches (mm) .220 Dia. (5.6) | Inches (mm) .116 Dia. (2.9) | Inches (mm) .160 Dia. (4.1) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

Flexible Cable • Clamp Attachment

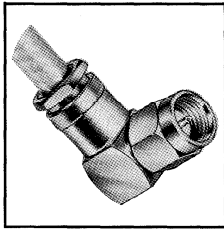


**Flange Mount Cable Jack
Captured Contact**

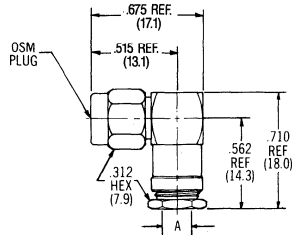


| Cable | RG 55/U, 58, 141, 142, 223, 303 | RG 174/U, 188, 316 | RG 180/U, 195 |
|-------------|------------------------------------|--------------------------------|--------------------------------|
| Part Number | 2006-7141-02 | 2006-7188-02 | 2006-7195-02 |
| Dim. A | Inches (mm) .220 Dia. (5.6) | Inches (mm) .116 Dia. (2.9) | Inches (mm) .160 Dia. (4.1) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.



**Right Angle Cable Plug*
DC-12.4 GHz**



| Cable | RG 55/U, 58, 141, 142, 223, 303 | RG 174/U, 188, 316 | RG 180/U, 195 |
|-------------|------------------------------------|--------------------------------|--------------------------------|
| Part Number | 2007-7141-02 | 2007-7188-02 | 2007-7195-02 |
| Dim. A | Inches (mm) .220 Dia. (5.6) | Inches (mm) .116 Dia. (2.9) | Inches (mm) .160 Dia. (4.1) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.
*Contact captivation per U.S. patent number 3,292,117.

M/A-COM understands how to get state-of-the-art performance from microwave circuits and how to get that performance to the outside world in the most efficient manner using OSM Panel and Bulkhead Mount Connectors.

These highly ruggedized stainless steel connectors are capable of hundreds of matings with no degradation in performance.

For component and system panels, cavities, waveguide and strip transmission lines, there are an infinite number of mounting and contact termination treatments possible. Stock availability exists for more styles than any other supplier.

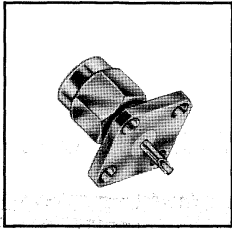
Flange mount, front panel, and through panel attachment styles are available in a number of sizes and hole patterns in both

straight and right angle configurations. Most styles are also available as hermetically sealed units.

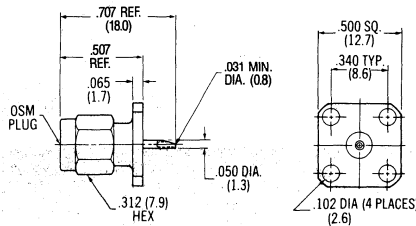
Center contact configuration of any of the standard series can also be supplied with any housing. Most OSM receptacle connectors are manufactured using a patented contact capture technique unsurpassed in terms of axial and radial contact retention. Most designs can also be supplied with non-captured center contacts.

OSM right angle connectors utilize laser welding for contact attachment which has been proven to be the most reliable technique under the most hostile environments. Housings are machined from stainless steel and right angle bodies are hard brazed. This allows for much tighter tolerancing for more precise and predictable installations.

Solder Pot Terminal

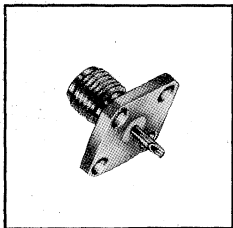


Flange Mount Plug Receptacle

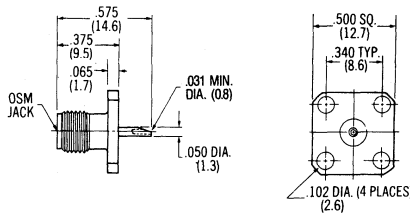


| | |
|---|--------------|
| Captured Center Contact* Solder Pot Terminal | |
| Part Number | 2051-0000-02 |
| Mechanically Captured Contact | |
| Part Number | 2051-1900-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.

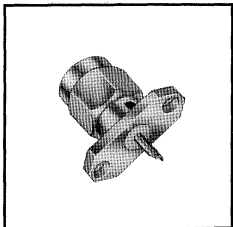


Flange Mount Jack Receptacle

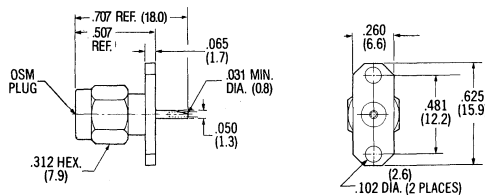


| | |
|---|--------------|
| Captured Center Contact* Solder Pot Terminal | |
| Part Number | 2052-0000-02 |
| Mechanically Captured Contact | |
| Part Number | 2052-1900-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.



Flange Mount Plug Receptacle



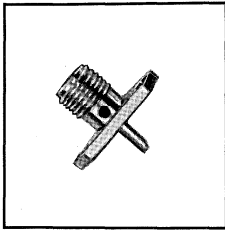
| | |
|---|--------------|
| Captured Center Contact* Solder Pot Terminal | |
| Part Number | 2051-1350-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.

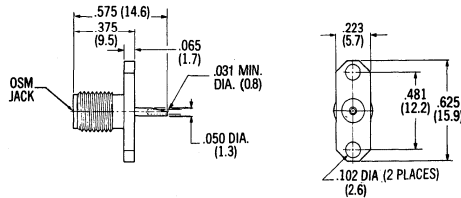
OSM (SMA)

Panel Mount Receptacles

Solder Pot Terminal

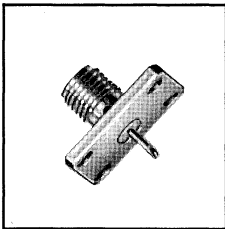


Flange Mount Jack Receptacle

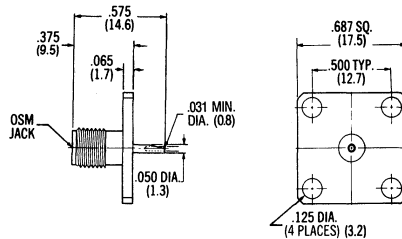


| | |
|---|---------------------|
| Captured Center Contact* Solder Pot Terminal | |
| Part Number | 2052-1350-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.

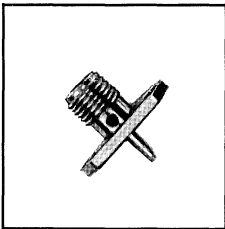


Flange Mount Jack Receptacle

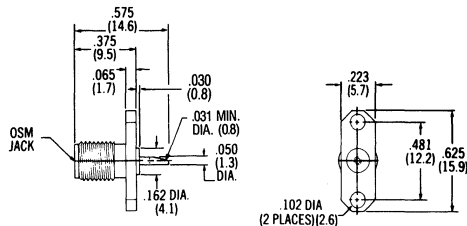


| | |
|---|---------------------|
| Captured Center Contact* Solder Pot Terminal | |
| Part Number | 2052-5085-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Also available with 1.000 sq. (25.4) flange.
*Contact captivation per U.S. patent number 3,292,117.

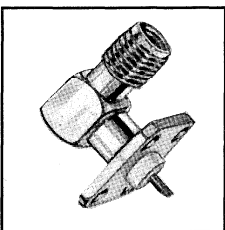


Flange Mount Jack Receptacle

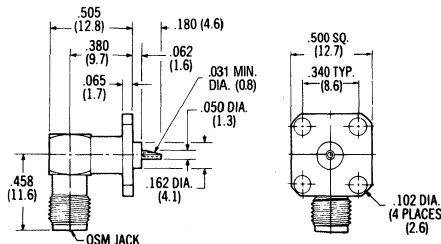


| | |
|---|---------------------|
| Captured Center Contact* Solder Pot Terminal | |
| Part Number | 2052-1300-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.



Flange Mount Right Angle Jack Receptacle

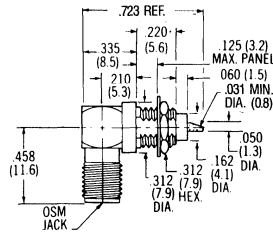
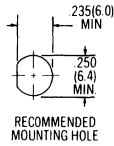
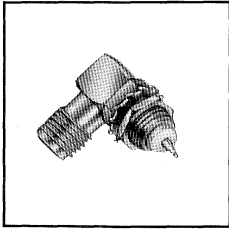


| | |
|--|---------------------|
| Captured Center Contact Solder Pot Terminal | |
| Part Number | 2054-0000-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

Solder Pot Terminal

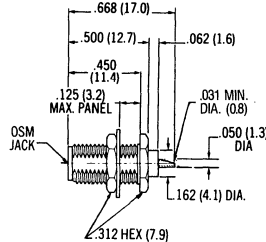
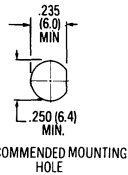
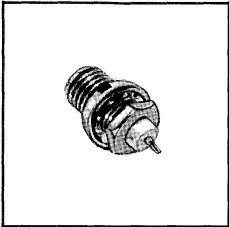
Bulkhead Feedthrough Right Angle Jack Receptacle



| | |
|--|---------------------|
| Captured Center Contact Solder Pot Terminal | |
| Part Number | 2060-0000-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

Bulkhead Feedthrough Jack Receptacle

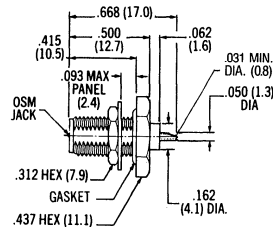
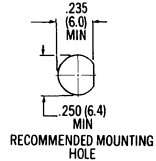
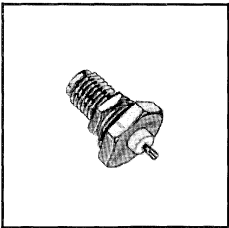


| | |
|--|---------------------|
| Captured Center Contact* Solder Pot Terminal Rear Mount | |
| Part Number | 2056-0000-02 |
| Mechanically Captured Contact | |
| Part Number | 2056-1900-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

*Contact captivation per U.S. patent number 3,292,117.

Bulkhead Feedthrough Jack Receptacle

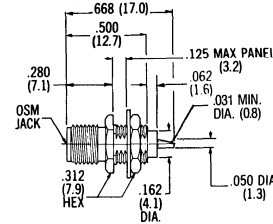
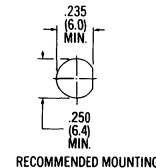
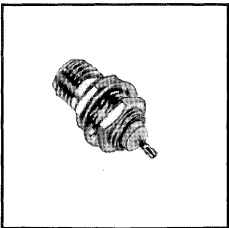


| | |
|--|---------------------|
| Captured Center Contact* Solder Pot Terminal Rear Mount | |
| Part Number | 2056-1100-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

*Contact captivation per U.S. patent number 3,292,117.

Bulkhead Feedthrough Jack Receptacle



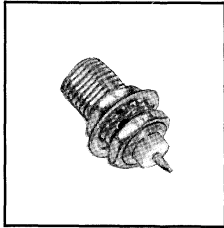
| | |
|---|---------------------|
| Captured Center Contact* Solder Pot Terminal Front Mount | |
| Part Number | 2058-0000-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

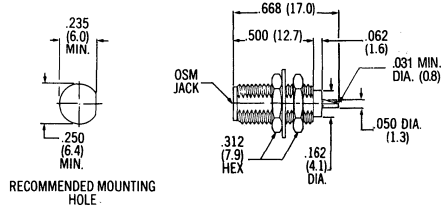
*Contact captivation per U.S. patent number 3,292,117.

OSM (SMA)

Bulkhead Mount • Solder Pot Terminal



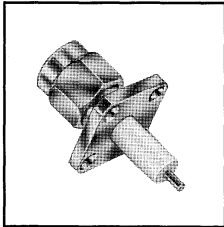
Bulkhead Feedthrough Jack Receptacle



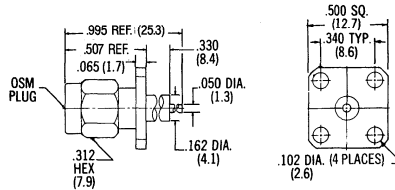
| | |
|---|---------------------|
| Captured Center Contact* Solder Pot Terminal | |
| Part Number | 2056-5006-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.

Panel Mount • Straight Terminal

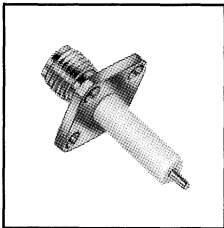


Flange Mount Plug Receptacle

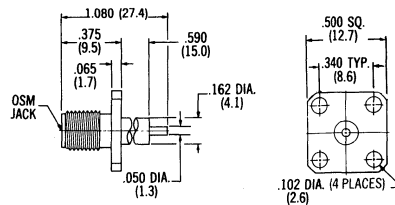


| | |
|--|---------------------|
| Non-Captured Center Contact Straight Terminal | |
| Part Number | 2051-1200-02 |
| Captured Center Contact* Straight Terminal | |
| Part Number | 2051-1201-02 |
| Mechanically Captured Contact | |
| Part Number | 2051-1901-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.

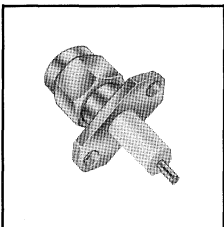


Flange Mount Jack Receptacle

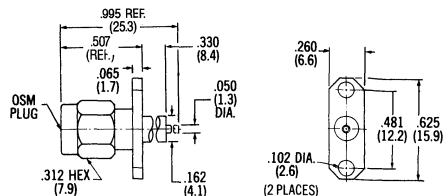


| | |
|--|---------------------|
| Non-Captured Center Contact Straight Terminal | |
| Part Number | 2052-1200-02 |
| Captured Center Contact* Straight Terminal | |
| Part Number | 2052-1201-02 |
| Mechanically Captured Contact | |
| Part Number | 2052-1901-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.



Flange Mount Plug Receptacle

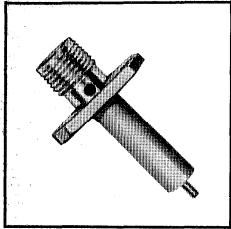


| | |
|--|---------------------|
| Non-Captured Center Contact Straight Terminal | |
| Part Number | 2051-1351-02 |
| Captured Center Contact* Straight Terminal | |
| Part Number | 2051-1352-02 |

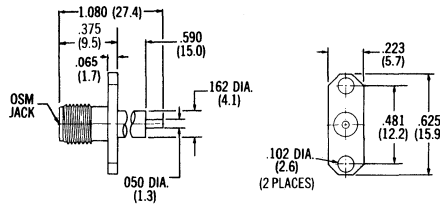
Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.

OSM (SMA)

Panel Mount • Straight Terminal



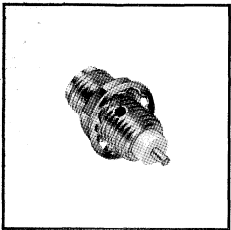
Flange Mount Jack Receptacle



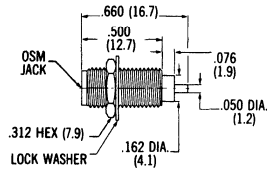
| | |
|--|---------------------|
| Non-Captured Center Contact Straight Terminal | |
| Part Number | 2052-1351-02 |
| Captured Center Contact* Straight Terminal | |
| Part Number | 2052-1352-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.

Bulkhead Mount • Straight Terminal

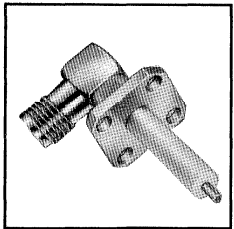


Bulkhead Feedthrough Jack Receptacle

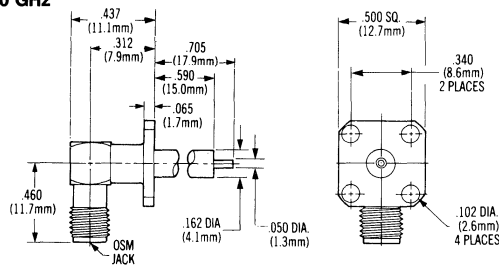


| | |
|---|---------------------|
| Captured Center Contact* Straight Terminal | |
| Part Number | 2058-5029-02 |
| Mechanically Captured Contact | |
| Part Number | 2058-5428-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.

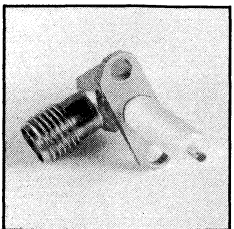


**Right Angle Jack Receptacle
DC - 18.0 GHz**

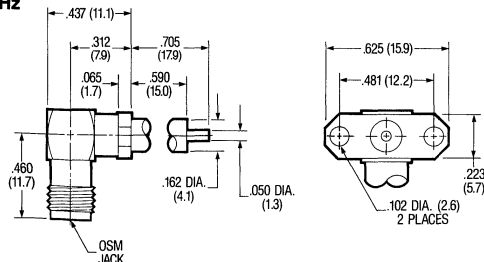


| | |
|--|---------------------|
| Captured Center Contact Straight Terminal | |
| Part Number | 2054-1231-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.



**Right Angle Jack Receptacle
DC - 18.0 GHz**



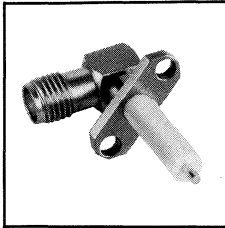
| | |
|--|---------------------|
| Captured Center Contact Straight Terminal | |
| Part Number | 2054-1241-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

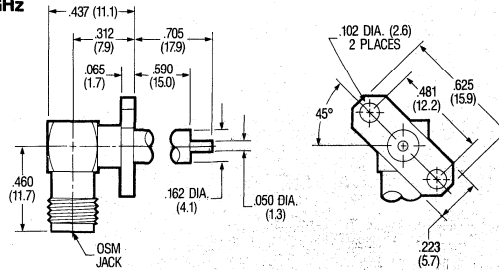
OSM (SMA)

Panel Mount Receptacles

Straight Terminal

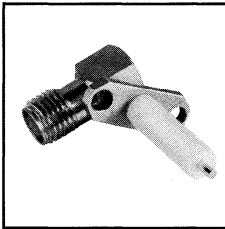


Right Angle Flange Mount Jack Receptacle
dc - 18.0 GHz

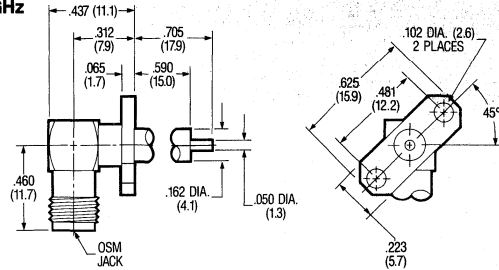


| | |
|--|---------------------|
| Captured Center Contact Straight Terminal | |
| Part Number | 2054-1251-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

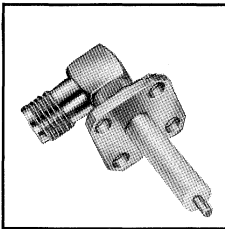


Right Angle Flange Mount Jack Receptacle
dc - 18.0 GHz

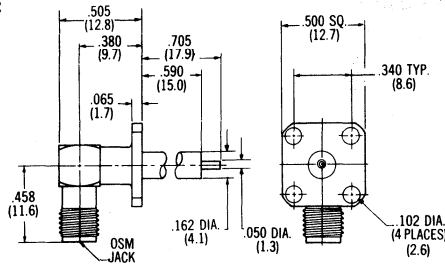


| | |
|--|---------------------|
| Captured Center Contact Straight Terminal | |
| Part Number | 2054-1261-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.



Right Angle Flange Mount Jack Receptacle
dc - 12.4 GHz



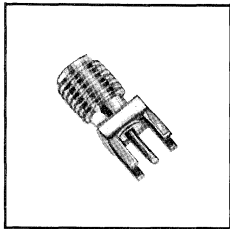
| | |
|--|---------------------|
| Captured Center Contact Straight Terminal | |
| Part Number | 2054-1201-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

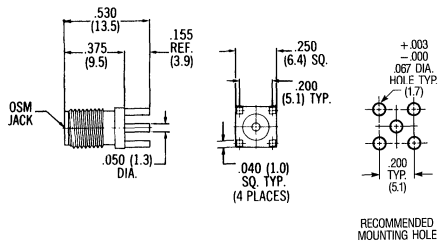
OSM (SMA)

Panel Mount Receptacles

Printed Circuit Boards

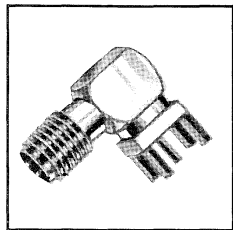


Straight Jack

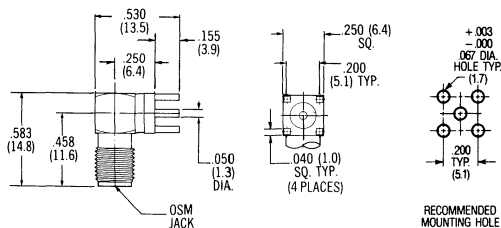


| | |
|--|---------------------|
| Captured Center Contact Straight Terminal | |
| Part Number | 2062-0000-00 |

Finish: Gold plate.



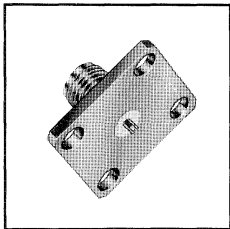
Right Angle Jack



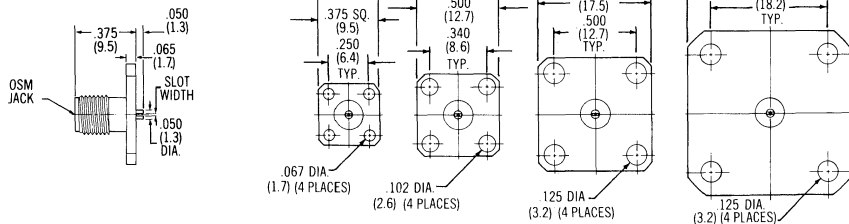
| | |
|--|---------------------|
| Captured Center Contact Straight Terminal | |
| Part Number | 2064-0000-00 |

Finish: Gold plate.

Slot Terminal



Flange Mount Jack Receptacle



| Captured Center Contact* Slot Terminal | | | | | |
|---|-------------------------|-----------------|---------------------|-------------------------|-----------------|
| Part Number | Slot Width +.003/- .001 | Flange Size Sq. | Part Number | Slot Width +.003/- .001 | Flange Size Sq. |
| | Inches (mm) | Inches (mm) | | Inches (mm) | Inches (mm) |
| 2052-1600-02 | .012 (0.3) | .375 (9.5) | 2052-1620-02 | .012 (0.3) | .687 (17.5) |
| 2052-1602-02 | .018 (0.5) | | 2052-1622-02 | .018 (0.5) | |
| 2052-1604-02 | .028 (0.7) | | 2052-1624-02 | .028 (0.7) | |
| 2052-1606-02 | .036 (0.9) | | 2052-1626-02 | .036 (0.9) | |
| 2052-1610-02 | .012 (0.3) | .500 (12.7) | 2052-1640-02 | .012 (0.3) | 1.000 (25.4) |
| 2052-1612-02 | .018 (0.5) | | 2052-1642-02 | .018 (0.5) | |
| 2052-1614-02 | .028 (0.7) | | 2052-1644-02 | .028 (0.7) | |
| 2052-1616-02 | .036 (0.9) | | 2052-1646-02 | .036 (0.9) | |

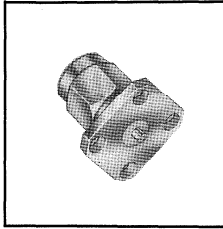
Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

*Contact captivation per U.S. patent number 3,292,117. For non-captured version, change the sixth digit in the part number from "6" to "7".

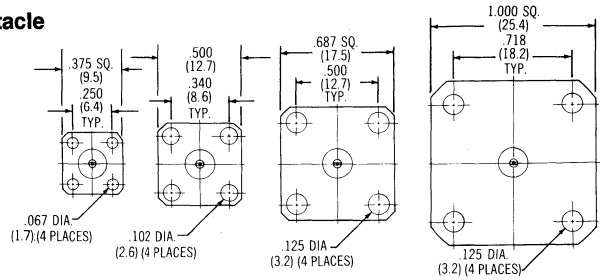
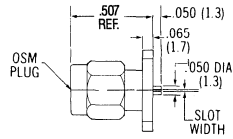
OSM (SMA)

Panel Mount Receptacles

Slot Terminal

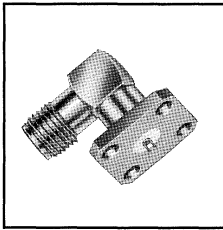


Flange Mount Plug Receptacle

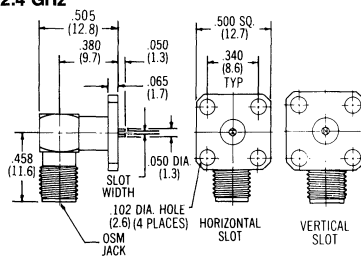


| Captured Center Contact* Slot Terminal | | | | | |
|---|---------------------------|-----------------|--------------|---------------------------|-----------------|
| Part Number | Slot Width +.003/-.001 | Flange Size Sq. | Part Number | Slot Width +.003/-.001 | Flange Size Sq. |
| 2051-1600-02 | Inches (mm) .012 (0.3) | .375 (9.5) | 2051-1620-02 | Inches (mm) .012 (0.3) | .687 (17.5) |
| 2051-1602-02 | .018 (0.5) | | 2051-1622-02 | .018 (0.5) | |
| 2051-1604-02 | .028 (0.7) | | 2051-1624-02 | .028 (0.7) | |
| 2051-1606-02 | .036 (0.9) | | 2051-1626-02 | .036 (0.9) | |
| 2051-1610-02 | .012 (0.3) | .500 (12.7) | 2051-1640-02 | .012 (0.3) | 1.000 (25.4) |
| 2051-1612-02 | .018 (0.5) | | 2051-1642-02 | .018 (0.5) | |
| 2051-1614-02 | .028 (0.7) | | 2051-1644-02 | .028 (0.7) | |
| 2051-1616-02 | .036 (0.9) | | 2051-1646-02 | .036 (0.9) | |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117. For non-captured version, change the sixth digit in the part number from "6" to "7".

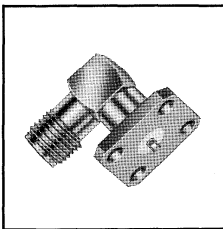


Right Angle Flange Mount Jack Receptacle
dc - 12.4 GHz

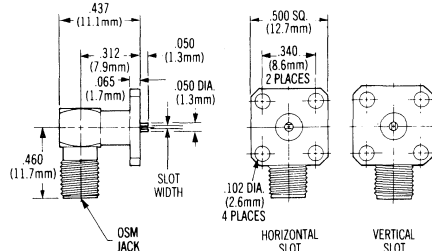


| Part Number | Slot Width +.003/-.001 | Slot Position |
|--------------|---------------------------|---------------|
| 2054-1610-02 | Inches (mm) .012 (0.3) | Horizontal |
| 2054-1612-02 | .018 (0.5) | |
| 2054-1614-02 | .028 (0.7) | |
| 2054-1616-02 | .036 (0.9) | |
| 2054-1611-02 | .012 (0.3) | Vertical |
| 2054-1613-02 | .018 (0.5) | |
| 2054-1615-02 | .028 (0.7) | |
| 2054-1617-02 | .036 (0.9) | |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.



Right Angle Flange Mount Jack Receptacle
dc - 18.0 GHz



| Part Number | Slot Width +.003/-.001 | Slot Position |
|--------------|---------------------------|---------------|
| 2054-1690-02 | Inches (mm) .012 (0.3) | Horizontal |
| 2054-1692-02 | .018 (0.5) | |
| 2054-1694-02 | .028 (0.7) | |
| 2054-1696-02 | .036 (0.9) | Vertical |
| 2054-1691-02 | .012 (0.3) | |
| 2054-1693-02 | .018 (0.5) | |
| 2054-1695-02 | .028 (0.7) | |
| 2054-1697-02 | .036 (0.9) | |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Mechanical dimension replacement for swept right angle.

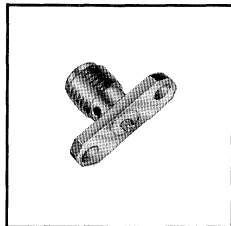
M/A-COM, Inc.

41

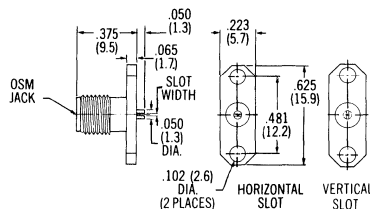
OSM (SMA)

Panel Mount Receptacles

Slot Terminal

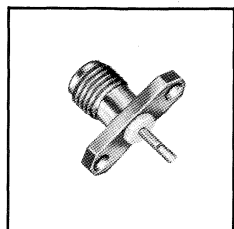


Flange Mount Jack Receptacle

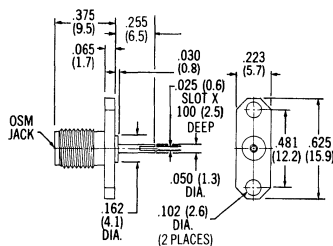


| Captured Center Contact* Slot Terminal | | |
|---|------------------------------|---------------|
| Part Number | Slot Width $\pm .003/- .001$ | Slot Position |
| | Inches (mm) | |
| 2052-1650-02 | .012 (0.3) | Horizontal |
| 2052-1651-02 | .012 (0.3) | Vertical |
| 2052-1652-02 | .018 (0.5) | Horizontal |
| 2052-1653-02 | .018 (0.5) | Vertical |
| 2052-1654-02 | .028 (0.7) | Horizontal |
| 2052-1656-02 | .036 (0.9) | Horizontal |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117. For non-captured version, change the sixth digit in the part number from "6" to "7".



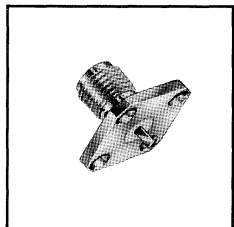
Flange Mount Jack Receptacle



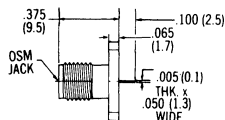
| Non-Captured Center Contact Slot Terminal | |
|--|---------------------|
| Part Number | 2052-1301-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

Tab Terminal

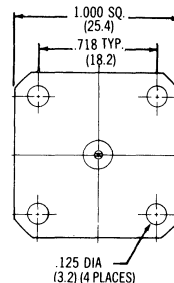
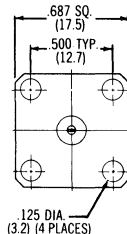
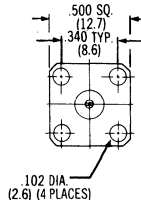
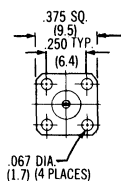


Flange Mount Jack Receptacle



| Captured Center Contact* Tab Terminal | | | |
|--|-----------------|---------------------|-----------------|
| Part Number | Flange Size Sq. | Part Number | Flange Size Sq. |
| | Inches (mm) | | Inches (mm) |
| 2052-1608-02 | .375 (9.5) | 2052-1628-02 | .687 (17.5) |
| 2052-1618-02 | .500 (12.7) | 2052-1648-02 | 1.000 (25.4) |

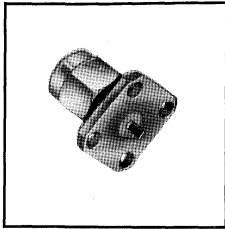
Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117. For non-captured version, change the sixth digit in the part number from "6" to "7".



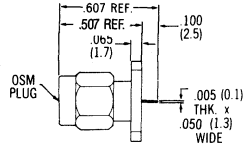
OSM (SMA)

Panel Mount Receptacles

Tab Terminal

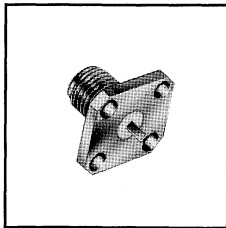
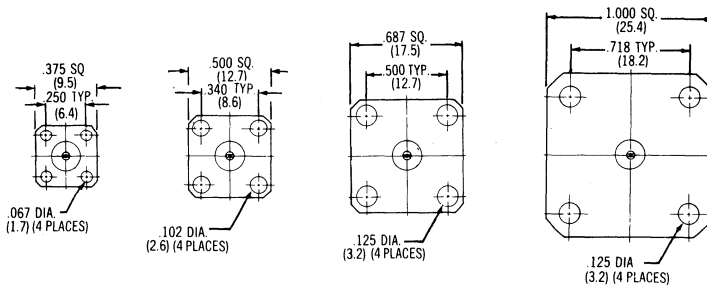


Flange Mount Plug Receptacle

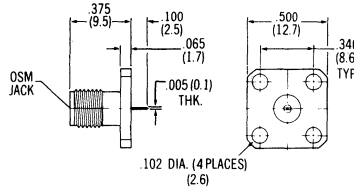


| Captured Center Contact* Tab Terminal | | | |
|--|------------------------------|---------------------|----------------------------|
| Part Number | Flange Size Sq. | Part Number | Flange Size Sq. |
| 2051-1608-02 | Inches .375 (mm) (9.5) | 2051-1628-02 | Inches (mm) .687 (17.5) |
| 2051-1618-02 | .500 (12.7) | 2051-1648-02 | 1.000 (25.4) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117. For non-captured version, change the sixth digit in the part number from "6" to "7"

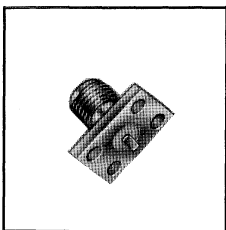


Flange Mount Jack Receptacle
.020 Wide Tab

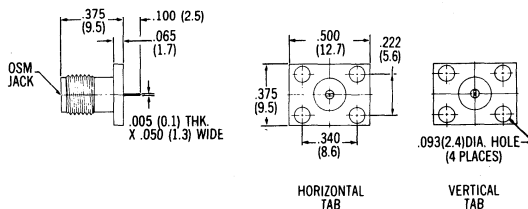


| Non-Captured Center Contact Tab Terminal | |
|---|---------------------|
| Part Number | 2052-0041-02 |
| Captured Center Contact* Tab Terminal | |
| Part Number | 2052-5636-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.



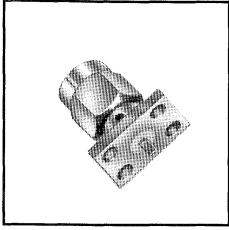
Flange Mount Jack Receptacle



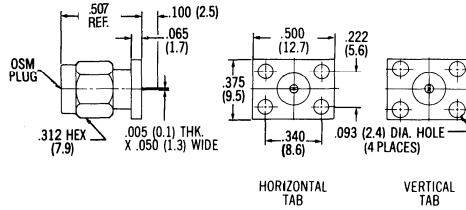
| Captured Center Contact* Tab Terminal | |
|--|--------------|
| Part Number | Tab Position |
| 2052-1688-02 | Horizontal |
| 2052-1689-02 | Vertical |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117. For non-captured version, change the sixth digit in the part number from "6" to "7".

Tab Terminal

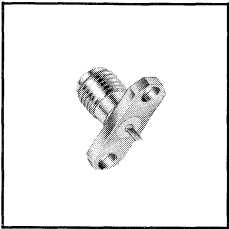


Flange Mount Plug Receptacle

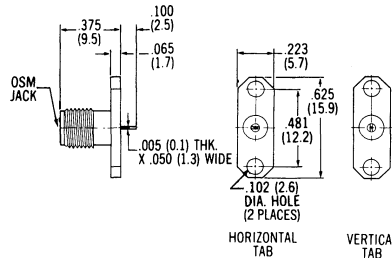


| Captured Center Contact* Tab Terminal | |
|--|--------------|
| Part Number | Tab Position |
| 2051-1688-02 | Horizontal |
| 2051-1689-02 | Vertical |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117. For non-captured version, change the sixth digit in the part number from "6" to "7".

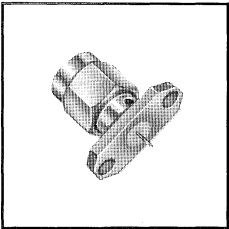


Flange Mount Jack Receptacle

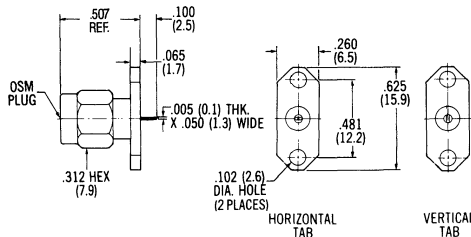


| Captured Center Contact* Tab Terminal | |
|--|--------------|
| Part Number | Tab Position |
| 2052-1658-02 | Horizontal |
| 2052-1659-02 | Vertical |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117. For non-captured version, change the sixth digit in the part number from "6" to "7".



Flange Mount Plug Receptacle



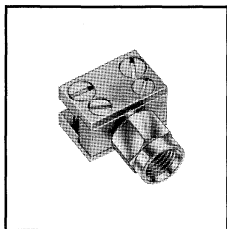
| Captured Center Contact* Tab Terminal | |
|--|--------------|
| Part Number | Tab Position |
| 2051-1658-02 | Horizontal |
| 2051-1659-02 | Vertical |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117. For non-captured version, change the sixth digit in the part number from "6" to "7".

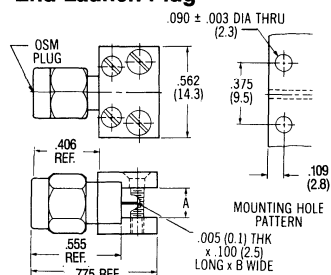
OSM (SMA)

For Strip Transmission Line Circuits

Where launching directly to stripline circuits is required, the OSM (SMA) stripline series is the optimum choice. Launching can be accomplished on the end or surface of a circuit board with contact terminations designed to match the electrical performance of most popular ground plane spacing and circuit line widths. Units are available with both non-captured and M/A-COM patented capture techniques.



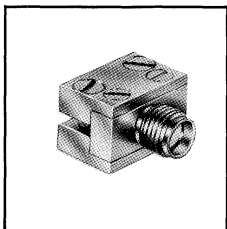
End Launch Plug



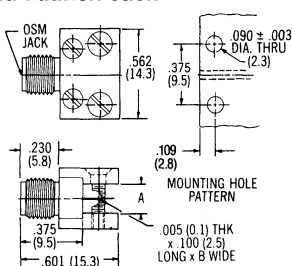
Captured Center Contact* Tab Terminal

| Stripline Size | 1/16 | | 1/8 | | 1/4 | |
|----------------|--------------|-------|--------------|-------|--------------|-------|
| Part Number | 2071-5017-02 | | 2071-5018-02 | | 2071-5019-02 | |
| Dim. A | Inches | (mm) | Inches | (mm) | Inches | (mm) |
| | .062 | (1.6) | .125 | (3.2) | .250 | (6.4) |
| Dim. B | .025 (0.6) | | .050 (1.3) | | .050 (1.3) | |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to 00.
* Contact captivation per U.S. patent number 3,292,117.



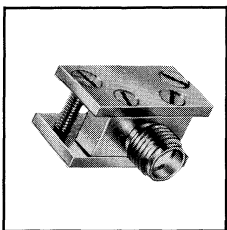
End Launch Jack



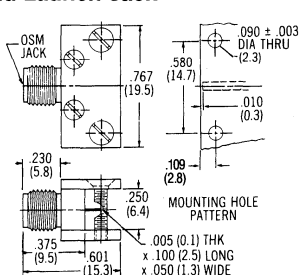
Captured Center Contact* Tab Terminal

| Stripline Size | 1/16 | | 1/8 | | 1/4 | |
|----------------|--------------|-------|--------------|-------|--------------|-------|
| Part Number | 2070-5029-02 | | 2070-5068-02 | | 2070-5069-02 | |
| Dim. A | Inches | (mm) | Inches | (mm) | Inches | (mm) |
| | .062 | (1.6) | .125 | (3.2) | .250 | (6.4) |
| Dim. B | .025 (0.6) | | .050 (1.3) | | .050 (1.3) | |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to 00.
* Contact captivation per U.S. patent number 3,292,117.



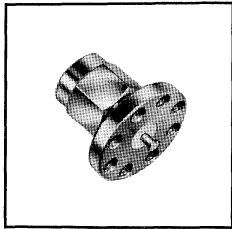
End Launch Jack



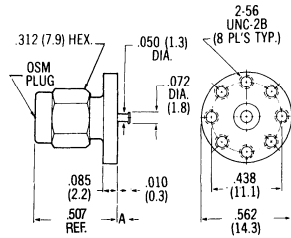
Captured Center Contact* Tab Terminal

| Stripline Size | 1/4 |
|----------------|--------------|
| Part Number | 2070-5009-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to 00.
* Contact captivation per U.S. patent number 3,292,117.

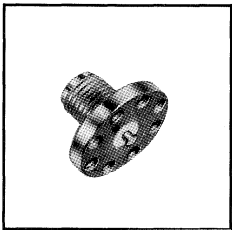


Surface Launch Plug

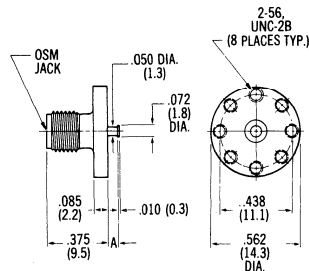


| Non-Captured Center Contact* Turret Terminal | | | | | | |
|---|--------------|-------|--------------|-------|--------------|-------|
| Stripline Size | 1/16 | | 1/8 | | 1/4 | |
| Part Number | 2067-1401-02 | | 2067-1402-02 | | 2067-1403-02 | |
| Dim. A | Inches | (mm) | Inches | (mm) | Inches | (mm) |
| | .031 | (0.8) | .063 | (1.6) | .125 | (3.2) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to 00.
* Captured contact designs available with plug-in turret terminal. Contact factory for details.

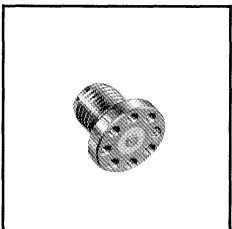


Surface Launch Jack

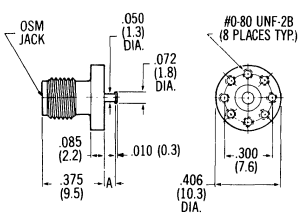


| Non-Captured Center Contact* Turret Terminal | | | | | | |
|---|--------------|-------|--------------|-------|--------------|-------|
| Stripline Size | 1/16 | | 1/8 | | 1/4 | |
| Part Number | 2066-1401-02 | | 2066-1402-02 | | 2066-1403-02 | |
| Dim. A | Inches | (mm) | Inches | (mm) | Inches | (mm) |
| | .031 | (0.8) | .063 | (1.6) | .125 | (3.2) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to 00.
* Captured contact designs available with plug-in turret terminal. Contact factory for details.



Surface Launch Jack

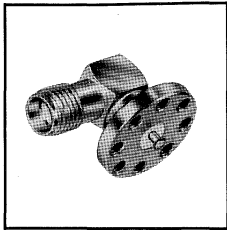


| Non-Captured Center Contact* Turret Terminal | | | | | | |
|---|--------------|-------|--------------|-------|--------------|-------|
| Stripline Size | 1/16 | | 1/8 | | 1/4 | |
| Part Number | 2066-1321-02 | | 2066-1322-02 | | 2066-1323-02 | |
| Dim. A | Inches | (mm) | Inches | (mm) | Inches | (mm) |
| | .031 | (0.8) | .063 | (1.6) | .125 | (3.2) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to 00.
* Captured contact designs available with plug-in turret terminal. Contact factory for details.

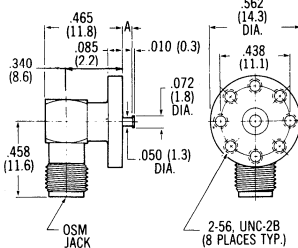
OSM (SMA)

For Strip Transmission Line Circuits



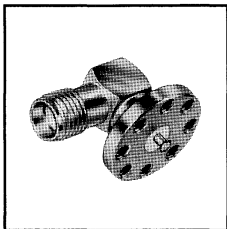
Surface Launch Right Angle Jack

dc - 12.4 GHz



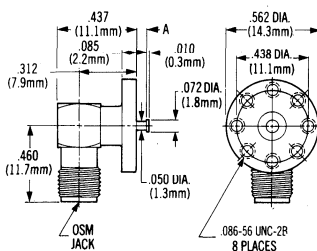
| Captured Center Contact Plug-In Turret Terminal | | | | | | |
|---|---------------------|-------|---------------------|-------|---------------------|-------|
| Stripline Size | 1/16 | | 1/8 | | 1/4 | |
| Part Number | 2068-5157-02 | | 2068-5156-02 | | 2068-5158-02 | |
| Dim. A | Inches | (mm) | Inches | (mm) | Inches | (mm) |
| | .031 | (0.8) | .063 | (1.6) | .125 | (3.2) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to 00.



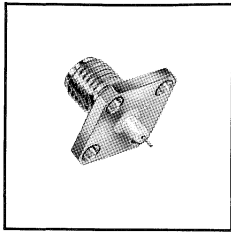
Surface Launch Right Angle Jack

dc - 18.0 GHz

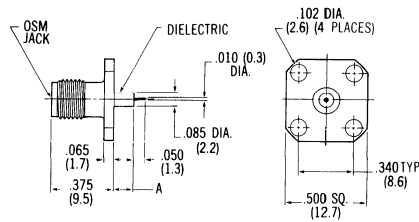


| Captured Center Contact Plug-In Turret Terminal | | | | | | |
|---|---------------------|-------|---------------------|-------|---------------------|-------|
| Stripline Size | 1/16 | | 1/8 | | 1/4 | |
| Part Number | 2068-1431-02 | | 2068-1432-02 | | 2068-1433-02 | |
| Dim. A | Inches | (mm) | Inches | (mm) | Inches | (mm) |
| | .031 | (0.8) | .063 | (1.6) | .125 | (3.2) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to 00.

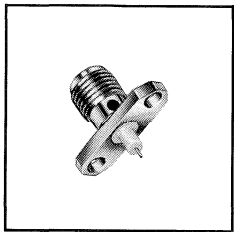


Flange Mount Jack Receptacle

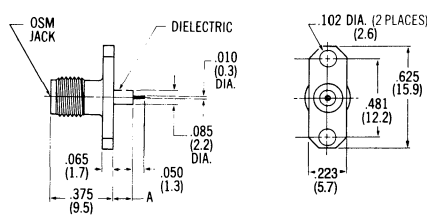


| Captured Center Contact* Straight Terminal | | | | |
|---|--------------|-------|--------------|-------|
| Part Number | 2052-1215-02 | | 2052-1216-02 | |
| Dim. A | Inches | (mm) | Inches | (mm) |
| | .125 | (3.2) | .057 | (1.4) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to 00.
* Contact captivation per U.S. patent number 3,292,117.

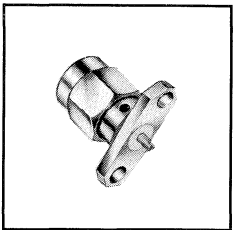


Flange Mount Jack Receptacle

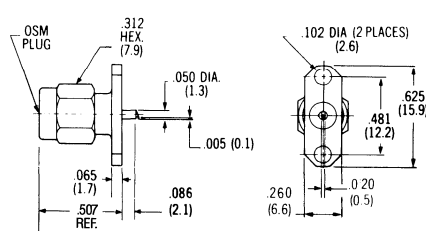


| Captured Center Contact* Straight Terminal | | | | |
|---|--------------|-------|--------------|-------|
| Part Number | 2052-5674-02 | | 2052-5675-02 | |
| Dim. A | Inches | (mm) | Inches | (mm) |
| | .125 | (3.2) | .057 | (1.4) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to 00.
* Contact captivation per U.S. patent number 3,292,117.

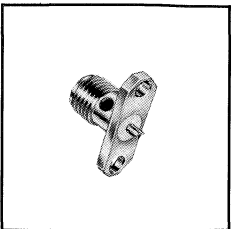


Flange Mount Plug Receptacle

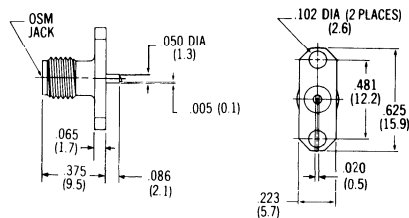


| Captured Center Contact* Solderless Compression Terminal | |
|---|--------------|
| Part Number | 2051-5161-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to 00.
* Contact captivation per U.S. patent number 3,292,117.



Flange Mount Jack Receptacle

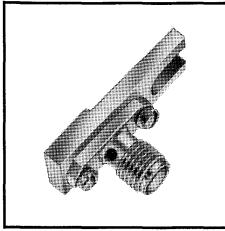


| Captured Center Contact* Solderless Compression Terminal | |
|---|--------------|
| Part Number | 2052-5277-02 |

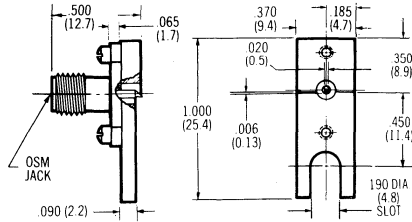
Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to 00.
* Contact captivation per U.S. patent number 3,292,117.

OSM (SMA)

For Microstrip Transmission Line Circuits

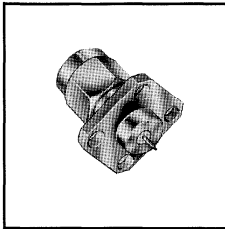


Jack Connector & Mounting Plate Assembly
MIC Test Fixture

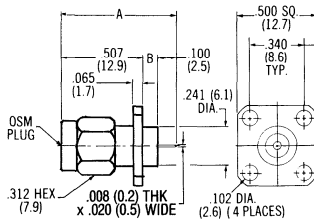


| | |
|-------------|---------------------|
| Part Number | 2052-5416-00 |
|-------------|---------------------|

Finish: Connector passivated stainless steel, base plate 6061 irridited aluminum.

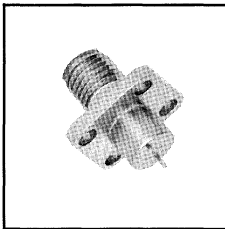


Flange Mount Plug Receptacle

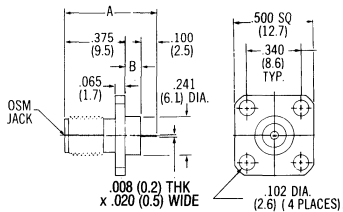


| Captured Center Contact* Tab Terminal | | | | | | |
|--|--------------|--------|--------------|--------|--------------|--------|
| Part Number | 2051-1131-00 | | 2051-1132-00 | | 2051-1133-00 | |
| Dim. A | Inches | (mm) | Inches | (mm) | Inches | (mm) |
| | .700 Ref. | (17.8) | .732 Ref. | (18.6) | .794 Ref. | (20.2) |
| Dim. B | .093 | (2.4) | .125 | (3.2) | .187 | (4.8) |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to 02.
* Contact captivation per U.S. patent number 3,292,117.

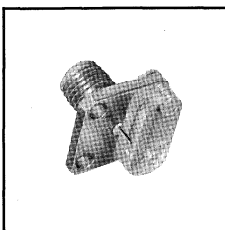


Flange Mount Jack Receptacle

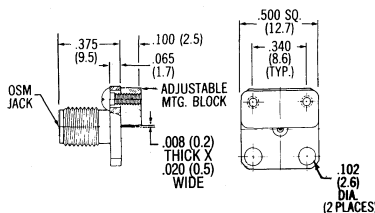


| Captured Center Contact* Tab Terminal | | | | | | |
|--|--------------|--------|--------------|--------|--------------|--------|
| Part Number | 2052-1131-00 | | 2052-1132-00 | | 2052-1133-00 | |
| Dim. A | Inches | (mm) | Inches | (mm) | Inches | (mm) |
| | .568 Ref. | (14.5) | .600 Ref. | (15.2) | .662 Ref. | (16.8) |
| Dim. B | .093 | (2.4) | .125 | (3.2) | .187 | (4.8) |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to 02.
* Contact captivation per U.S. patent number 3,292,117.

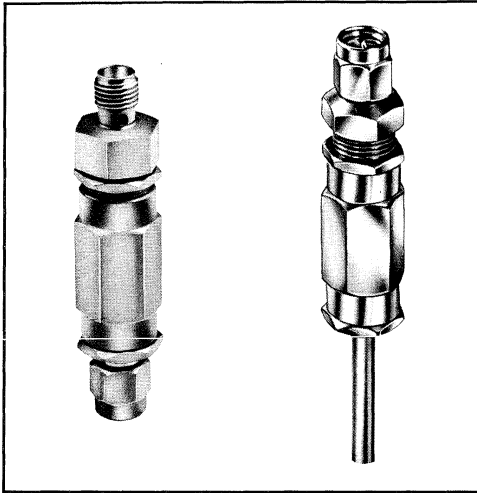


Flange Mount Jack Receptacle

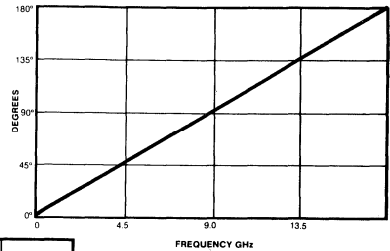


| Captured Center Contact* Tab Terminal | |
|--|---------------------|
| Part Number | 2052-1130-00 |

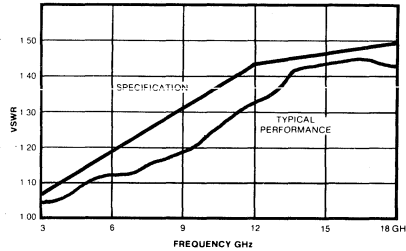
Finish: Connector gold plate, mounting block clear polystyrene. For passivated stainless steel connector, change the Part Number suffix from -00 to 02.
* Contact captivation per U.S. patent number 3,292,117.



ADJUSTMENT RANGE OF STANDARD PHASE TRIMMERS

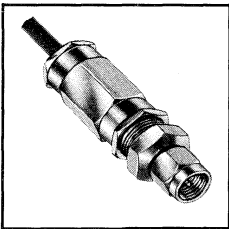


PART NUMBER 2001-5190-02
 VSWR: 1.06 + .02/GHz .5-12.4 GHz
 1.3 + .01/GHz 12.4-18.0 GHz

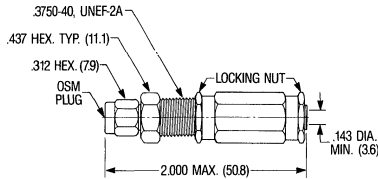


These coaxial phase trimmers are designed and manufactured to provide precise, continuously adjustable changes in line length from 500 MHz to 18 GHz. The gold plated, heat treated beryllium copper spring fingers on both the inner and outer contact assure smooth adjustment without spurious electrical discontinuities across the

frequency band. Spring loading of the threads minimizes backlash and assures the setting will not be altered when locking mechanisms are secured. The connectors, housing and/or cable attachment are made of stainless steel for strength and reliability.

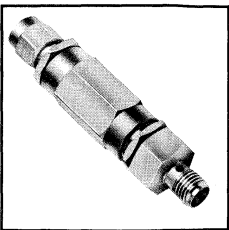


Plug to .141 Semi-Rigid Cable

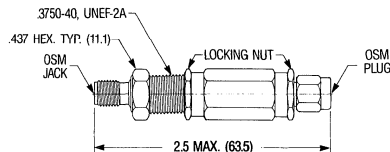


| | |
|--|--------------|
| Captured Center Contact* 5 - 8.0 GHz | |
| Part Number | 2001-5190-02 |
| Captured Center Contact* 8.0 - 18.0 GHz | |
| Part Number | 2001-5231-02 |

Finish: Passivated stainless steel. For gold plate, change the Part number suffix from -02 to -00.
 * Contact captivation per U.S. patent number 3,292,117.



Jack to Plug



| | |
|--|--------------|
| Captured Center Contact* 5 - 8.0 GHz | |
| Part Number | 2082-5809-02 |
| Captured Center Contact* 8.0 - 18.0 GHz | |
| Part Number | 2082-5810-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
 * Contact captivation per U.S. patent number 3,292,117.

OSM (SMA)

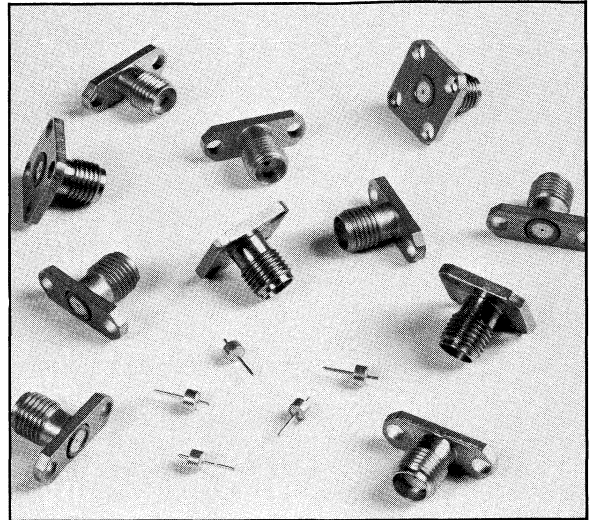
Field Replaceable Hermetic Launchers With Drop-in Seals

Drop-in circuit packaging and other microwave integrated circuits with process conditioning requirements, such as MIL-M-38510 and MIL-STD-883, have made the field replaceable hermetic connector an essential element of interconnect design and application. The ability to replace a damaged connector without violating the hermetic enclosure or circuit makes this a valuable design alternative.

The field replaceable features a drop-in glass seal which is external to the connector body. This seal is soldered or brazed into the package housing. Another option when using kovar or stainless steel packages is to directly fuse the seal into the package, using the housing wall as the outer conductor.

To protect against EMI/RFI leakage, many of the connectors are designed with a silver loaded elastomer gasket. In addition, the standard units feature a mechanically captured center contact which will exhibit lower EMI/RFI leakage than epoxy captured units.

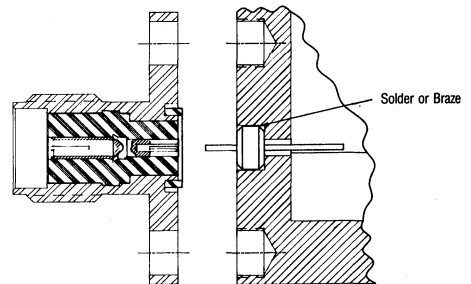
Connectors are available to accept .012, .015, .018 and .020 inch hermetic seal pins, as well as a .036 inch contact pin. The choice of pin diameter will typically depend on the dimensions and material of the microstrip line to which the pin is being launched. A variety of flange and panel feedthrough designs are available.



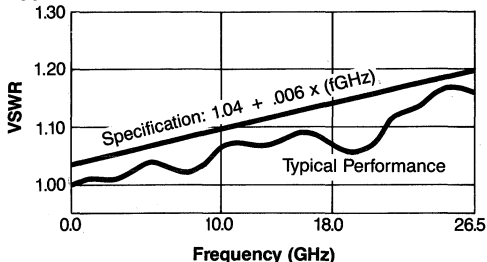
Field Replaceable Electrical Performance

| | VSWR to 18 GHz | RF Leakage (dB) (mechanical captivation) |
|--------------------|-------------------|--|
| Connector Only | 1.04 + .006f | -(70 - fGHz) |
| Seal Only | 1.02 + .003f | |
| Connector and Seal | 1.06 + .01f | |

Field Replaceable Drop-In Seal (Solder/Braze-in Seal)



Typical Performance



See Appendix for additional information on Hermetic Launchers.

M/A-COM, Inc.

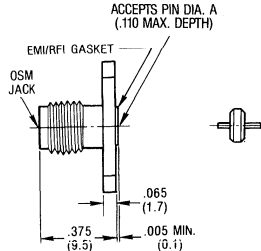
51

North America: Tel. (800) 366-2266
Fax (800) 618-8883

■ Asia/Pacific: Tel. +81 (03) 3226-1671
Fax +81 (03) 3226-1451

■ Europe: Tel. +44 (1344) 869 595
Fax +44 (1344) 300 020

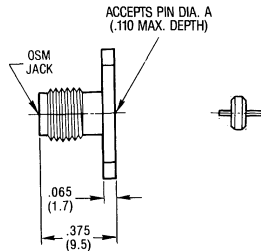
Jack Receptacle With EMI/RFI Gasket



| Part Number | | Flange Type | Accepts Pin Dia. A | Mounting Hole Detail |
|----------------|--------------------|-------------|--------------------|----------------------|
| Connector Only | Connector and Seal | | | |
| 2052-3350-02 | 2052-3351-02 | I | .012 | E |
| 2052-3500-02 | 2052-3506-02 | I | .015 | E |
| 2052-3352-02 | 2052-3353-02 | I | .018 | F |
| 2052-3393-02 | 2052-3507-02 | II | .012 | I |
| 2052-3501-02 | 2052-3508-02 | II | .015 | I |
| 2052-3375-02 | 2052-3509-02 | II | .018 | J |
| 2052-3354-02 | 2052-3355-02 | III | .012 | C |
| 2052-3502-02 | 2052-3510-02 | III | .015 | C |
| 2052-3356-02 | 2052-3357-02 | III | .018 | D |
| 2052-3399-02 | 2052-3511-02 | IV | .012 | K |
| 2052-3503-02 | 2052-3512-02 | IV | .015 | K |
| 2052-3400-02 | 2052-3513-02 | IV | .018 | L |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00. Refer to Recommended Mounting Hole Details at the end of this section. Refer to recommended assembly tools in Tool Section.

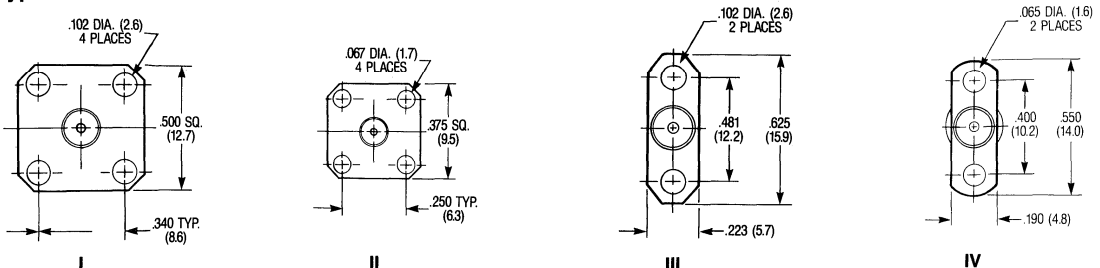
Jack Receptacle Without EMI/RFI Gasket



| Part Number | | Flange Type | Accepts Pin Dia. A | Mounting Hole Detail |
|----------------|--------------------|-------------|--------------------|----------------------|
| Connector Only | Connector and Seal | | | |
| 2052-3362-02 | 2052-3326-02 | I | .020 | G |
| 2052-3358-02 | 2052-3337-02* | I | .036* | - |
| 2052-3363-02 | 2052-3324-02 | III | .020 | A |
| 2052-3359-02 | 2052-3325-02* | III | .036* | - |
| 2052-0434-02** | 2052-0435-02** | III | .020 | A |

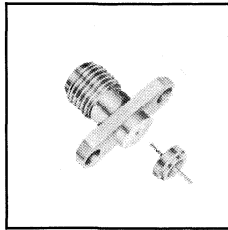
Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00. * Provided with sliding contact Part Number 2098-3252-01 in place of seal. ** Epoxy captivated center contact per U.S. patent number 3,292,117. Refer to Recommended Mounting Hole Details at the end of this section. Refer to recommended assembly tools in Tool Section.

Flange Types

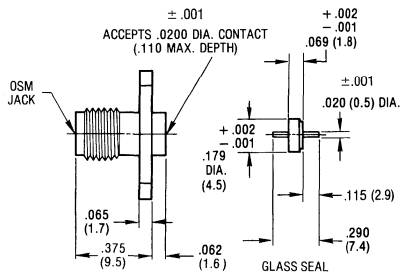


OSM (SMA)

Hermetic Launchers

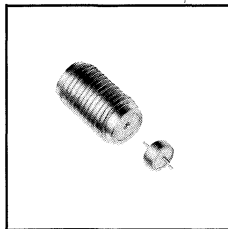


Field Replaceable Jack Receptacle With Self-Locating Seal

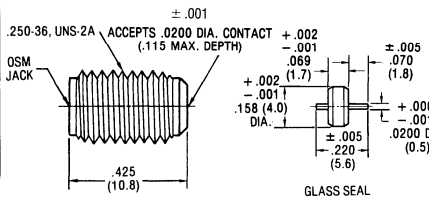


| | |
|-------------|---------------------|
| Part Number | 2052-0207-00 |
|-------------|---------------------|

Uses self-locating glass seal part number 2098-3347-94.
Epoxy captivated center contact per U.S. patent number 3,292,117.
Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02.
Refer to Recommended Mounting Hole Detail B at the end of this section.
Refer to recommended assembly tools in Tool Section.

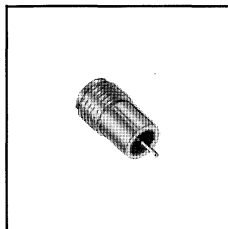


Field Replaceable Panel Feedthrough Jack Receptacle

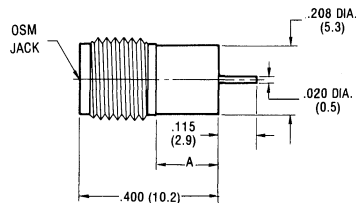


| Mechanical Center Contact Captivation | | | |
|---------------------------------------|---------------------|---------------------|----------------------|
| | Connector Only | Connector and Seal | Mounting Hole Detail |
| Part Number | 2058-5328-02 | 2058-5329-02 | H |
| Epoxy Center Contact Captivation* | | | |
| Part Number | 2058-3472-02 | 2058-3473-02 | H |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
* Epoxy captivated center contact per U.S. patent number 3,292,117.
Refer to Recommended Mounting Hole Details at the end of this section.
Refer to recommended assembly tools in Tool Section.



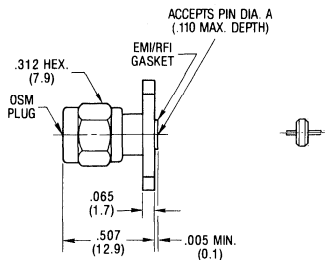
Non-Field Replaceable Panel Feedthrough Jack Receptacle



| VSWR (GHz): 1.05 + .01fGHz RF Leakage (dB): -(100 - fGHz) | | | | | |
|--|---------------------|-------|---------------------|-------|---------------------|
| Part Number | 2058-3121-00 | | 2058-3122-00 | | 2058-3123-00 |
| Dim. A | Inches | (mm) | Inches | (mm) | Inches (mm) |
| | .093 | (2.4) | .125 | (3.2) | .187 (4.8) |

Finish: Gold plate.

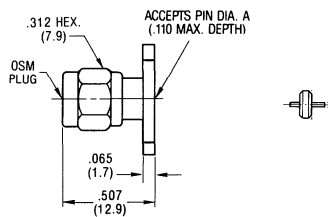
Plug Receptacle With EMI/RFI Gasket



| Part Number | | Flange Type | Accepts Pin Dia. A | Mounting Hole Detail |
|----------------|--------------------|-------------|--------------------|----------------------|
| Connector Only | Connector and Seal | | | |
| 2051-3350-02 | 2051-3351-02 | I | .012 | E |
| 2051-3352-02 | 2051-3353-02 | I | .018 | F |
| 2051-3354-02 | 2051-3355-02 | II | .012 | C |
| 2051-3356-02 | 2051-3357-02 | II | .018 | D |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00. Refer to Recommended Mounting Hole Details at the end of this section. Refer to recommended assembly tools in Tool Section.

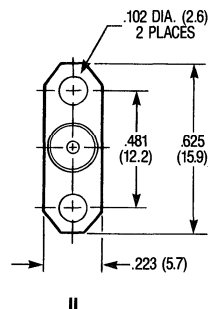
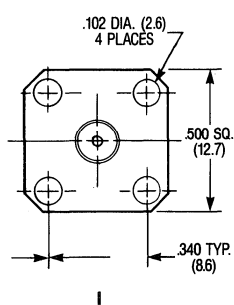
Plug Receptacle Without EMI/RFI Gasket



| Part Number | | Flange Type | Accepts Pin Dia. A | Mounting Hole Detail |
|----------------|--------------------|-------------|--------------------|----------------------|
| Connector Only | Connector and Seal | | | |
| 2051-3362-02 | 2051-3326-02 | I | .020 | G |
| 2051-3358-02 | 2051-3327-02 | I | .036* | - |
| 2051-3363-02 | 2051-3324-02 | II | .020 | A |
| 2051-3359-02 | 2051-3325-02 | II | .036* | - |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00. * Uses sliding contact Part Number 2098-3252-01 (non-hermetic). Refer to Recommended Mounting Hole Details at the end of this section. Refer to recommended assembly tools in Tool Section.

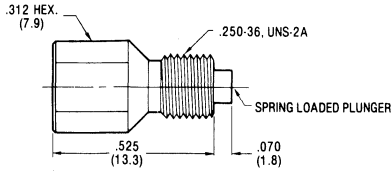
Flange Types



OSM (SMA)

Field Replaceable Hermetic Launcher Accessories

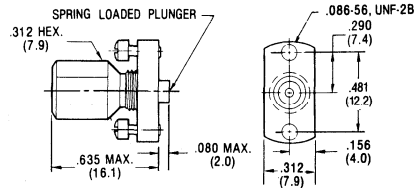
Panel Mount Soldering Fixture



Part Number **2098-5614-54**

Tool for fixturing hermetic seal of panel mount receptacle while soldering into MIC panel.

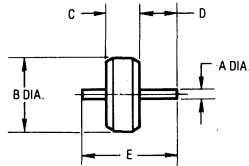
Flange Mount Soldering Fixture



Part Number **2098-5615-54**

Tool for fixturing hermetic seal of flange mount receptacle while soldering into MIC package.

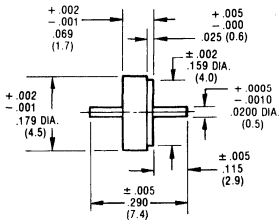
Braze/Solder-In Thermally Matched Hermetic Seals



| Part Number | Dimensions (Inches) | | | | |
|---------------------|---------------------|------|------|------|------|
| | A (Nom.) | B | C | D | E |
| 2098-3250-94 | .012 | .100 | .063 | .180 | .315 |
| 2098-3441-94 | .015 | .100 | .063 | .180 | .315 |
| 2098-3251-94 | .018 | .112 | .063 | .180 | .315 |
| 2098-3322-94 | .020 | .157 | .060 | .060 | .190 |
| 2098-0294-00 | .020 | .158 | .069 | .070 | .220 |
| 2098-3323-94 | .020 | .158 | .069 | .229 | .375 |

Consult the factory for additional seals not listed.

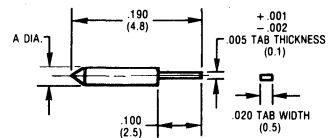
Self-Locating Glass Seal



Part Number **2098-3347-94**

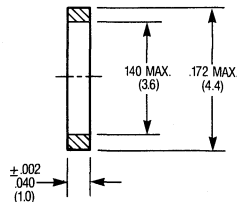
Outer ring and center pin are gold plated.

Field Replaceable Contact For Use With Connectors Without Seals



| Part Number | Dim. A |
|---------------------|--------------------|
| 2098-3253-01 | + .0010 - .0005 |
| 2098-3252-01 | .020 |
| 2098-3252-01 | .036 |

EMI/RFI Gasket

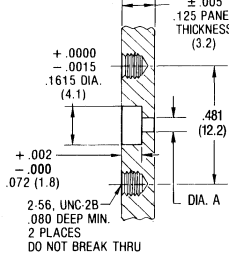


Part Number **2098-3333-54**

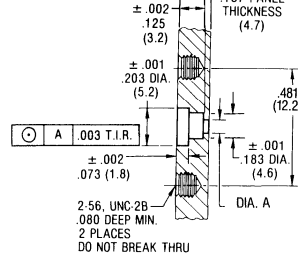
Consult appropriate Assembly Procedure for complete mounting procedure.

| Pin Dia. | Dia. A |
|----------|--------|
| .012 | .027 |
| .015 | .034 |
| .018 | .041 |
| .020 | .046 |

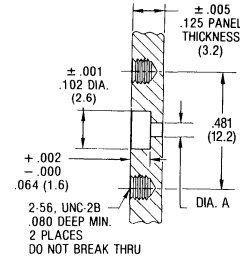
Detail A



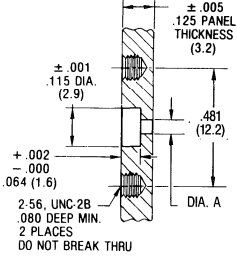
Detail B



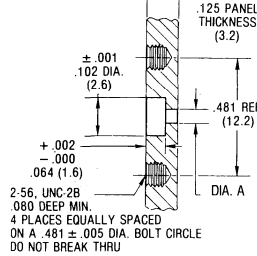
Detail C



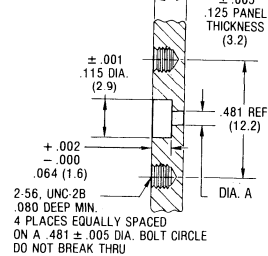
Detail D



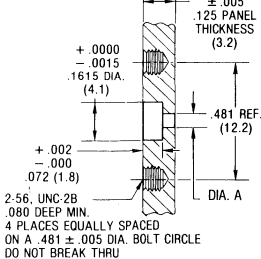
Detail E



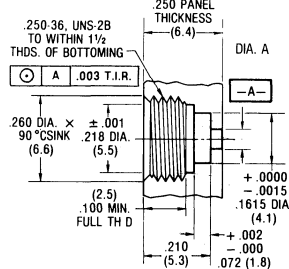
Detail F



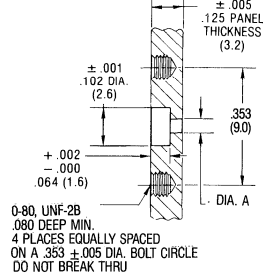
Detail G



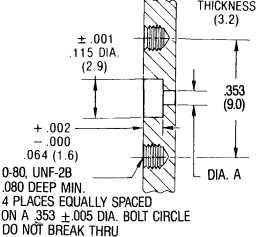
Detail H



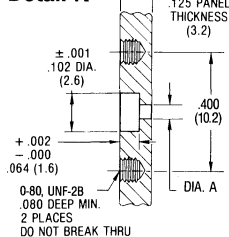
Detail I



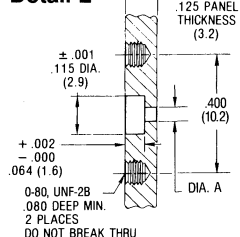
Detail J



Detail K



Detail L



OSM (SMA)

Hermetic Panel Feedthrough

With Metal-to-Metal Seal (Spark Plugs)

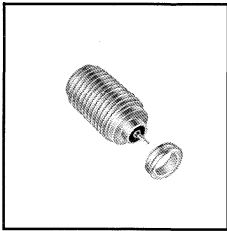
Hermetic panel feedthrough connectors feature an internal hermetic glass seal and a metal-to-metal hermetic seal between the connector and package. Connectors utilizing metal-to-metal seals are commonly referred to as spark plugs because they achieve this seal simply by being torqued into place in a manner similar to an automotive spark plug.

M/A-COM offers four types of metal-to-metal seals: rigid gasket, compressible gasket, knife edge gasket and formable gasket. The rigid gasket is made of stainless steel and is recommended for hard metal packages (i.e. kovar and steel) or aluminum packages with a wall thickness of .080 inch or greater. The compressible

gasket is made of kovar material and is designed to work well on aluminum as well as other materials. The formable gasket is made of copper. With this gasket the connector can be re-installed several times without damage to the package housing. The knife edge design incorporates the gasket as an integral part of the connector body. This version is one piece construction without a separate seal gasket.

Also available from M/A-COM is a replaceable two-piece panel feedthrough spark plug connector. With this design, the inner piece can remain intact and hermeticity maintained while the outer half can be removed and replaced. This is an important feature should the outer threads become damaged through mishandling.

Jack Receptacle



| Part Number | Gasket Type | Dimensions | | | | Figure | VSWR (GHz) | RF Leakage (dB) |
|--------------|-------------|------------|------|------|------|--------|-------------|-----------------|
| | | A | B | C | D | | | |
| 2058-5119-00 | Rigid | .451 | .080 | .040 | .250 | 1 | 1.04 +.009f | -(100 - fGHz) |
| 2058-3317-00 | Rigid | .451 | .058 | .040 | .250 | 1 | | |
| 2058-5278-00 | Rigid | .451 | .120 | .040 | .250 | 1 | | |
| 2058-5392-00 | Rigid | .451 | .150 | .040 | .250 | 1 | | |
| 2058-3394-00 | Rigid | .451 | .120 | .080 | .290 | 1 | | |
| 2058-5397-00 | Rigid | .451 | .180 | .080 | .290 | 1 | | |
| 2058-3256-00 | Rigid | .451 | .480 | .440 | .625 | 1 | | |
| 2058-5352-00 | Rigid | .585 | .080 | .040 | .250 | 1 | | |
| 2058-3250-00 | Rigid | 1.080 | .058 | .040 | .250 | 1 | | |
| 2058-3401-00 | Compression | .451 | .058 | .040 | .250 | 1 | | |
| 2058-3415-00 | Compression | .451 | .080 | .040 | .250 | 1 | | |
| 2058-5126-00 | Formable | .451 | .080 | .040 | .250 | 2 | | |
| 2058-5219-00 | Knife Edge | .451 | .080 | .040 | .250 | 3 | | |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02. For nickel plate, change the Part Number suffix to -10.
Installation Thermal Limit: 250°C.
Refer to recommended assembly tools in Tool Section.

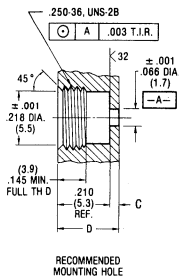
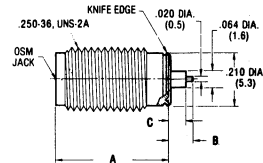
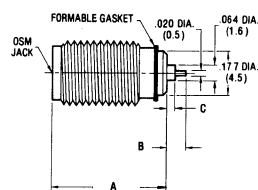
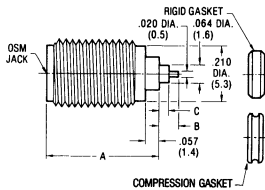


Fig. 1

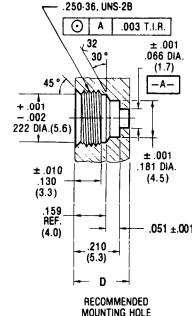


Fig. 2

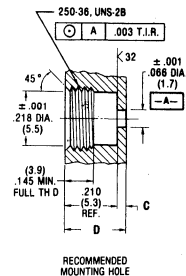
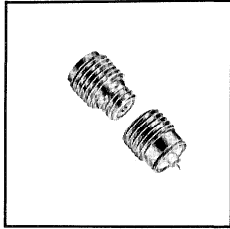
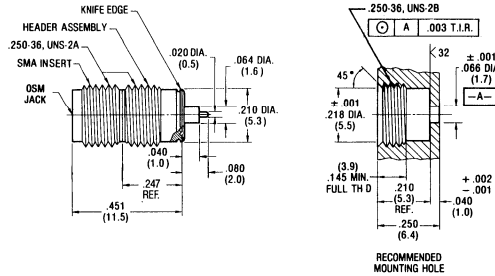


Fig. 3

M/A-COM, Inc.

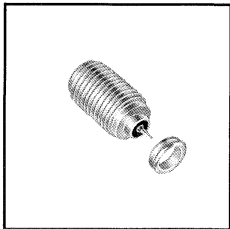


Two-Piece Jack Receptacle

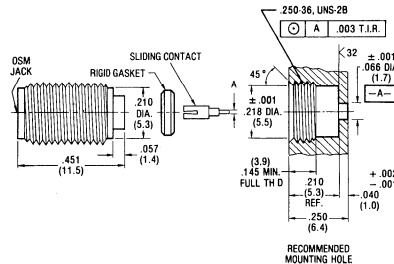


| | |
|---|---------------------|
| Field Replaceable VSWR (GHz): 1.04 + .009f RF Leakage (dB): -(100 - fGHz) | |
| Part Number | 2058-3333-00 |

Connector interface can be replaced without loss of package hermeticity.
Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02. For nickel plate, change the Part Number suffix to -10. For gold plated header and passivated stainless steel replaceable SMA insert, change the Part Number suffix to -01.
Installation Thermal Limit: 250°C.
Refer to recommended assembly tools in Tool Section.

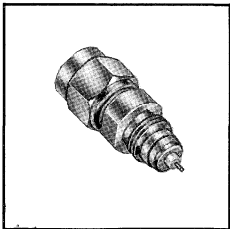


Jack Receptacle With Sliding Contact

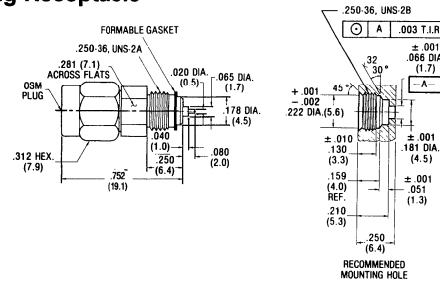


| | | |
|---|---------------------|------------------------|
| Rigid Gasket Seal VSWR (GHz): 1.04 + .009f RF Leakage (dB): -(100 - fGHz) | | Dim. A |
| Part Number | 2058-5269-00 | .020 Dia. Pin |
| | 2058-5305-00 | .020W x .006 Thick Tab |

Recommended for applications where the MIC package is subject to extremes of temperature variations.
Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02. For nickel plate, change the Part Number suffix to -10.
Installation Thermal Limit: 250°C.
Refer to recommended assembly tools in Tool Section.



Plug Receptacle

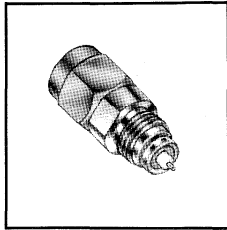


| | |
|---|---------------------|
| Formable Gasket VSWR (GHz): 1.04 + .009f RF Leakage (dB): -(100 - fGHz) | |
| Part Number | 2057-5036-00 |

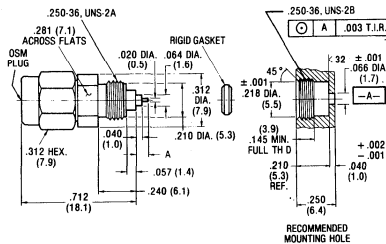
Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02. For nickel plate, change the Part Number suffix to -10.
Installation Thermal Limit: 250°C.
Refer to recommended assembly tools in Tool Section.

OSM (SMA)

Hermetic Panel Feedthrough With Metal-to-Metal Seal (Spark Plugs)

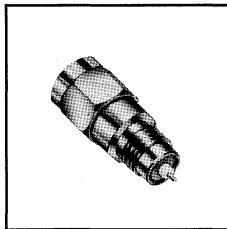


Plug Receptacle

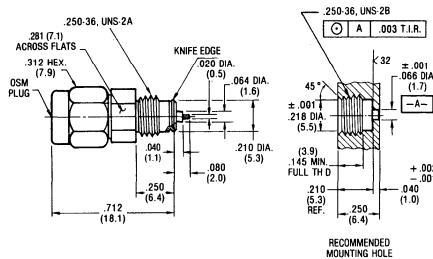


| | | |
|---|---------------------|---------------------------|
| Rigid Gasket Seal VSWR (GHz): 1.04 + .009f RF Leakage (dB): -(100 - fGHz) | | Dim. A |
| Part Number | 2057-5119-00 | Inches (mm) .080 (2.0) |
| | 2057-3221-00 | .058 (1.5) |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02. For nickel plate, change the Part Number suffix to -10.
Installation Thermal Limit: 250°C.
Refer to recommended assembly tools in Tool Section.

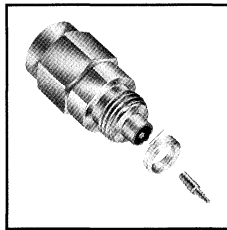


Plug Receptacle

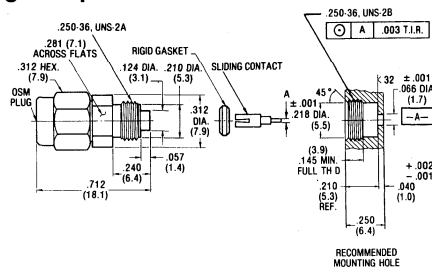


| | | |
|---|---------------------|--|
| Knife Edge Seal VSWR (GHz): 1.04 + .009f RF Leakage (dB): -(100 - fGHz) | | |
| Part Number | 2057-5035-00 | |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02. For nickel plate, change the Part Number suffix to -10.
Installation Thermal Limit: 250°C.
Refer to recommended assembly tools in Tool Section.



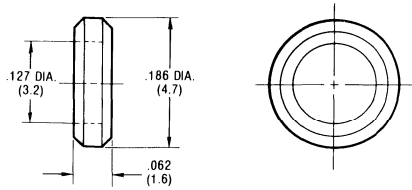
Plug Receptacle



| | | |
|---|---------------------|------------------------|
| Rigid Gasket Seal VSWR (GHz): 1.04 + .009f RF Leakage (dB): -(100 - fGHz) | | Dim. A |
| Part Number | 2057-3217-00 | .020 Dia. Pin |
| | 2057-3233-00 | .020W x .006 Thick Tab |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02. For nickel plate, change the Part Number suffix to -10.
Installation Thermal Limit: 250°C.
Refer to recommended assembly tools in Tool Section.

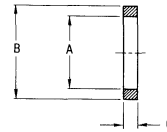
Rigid Gasket



| | |
|-------------|---------------------|
| Part Number | 2098-3213-94 |
|-------------|---------------------|

Gasket for rigid gasket connector types.

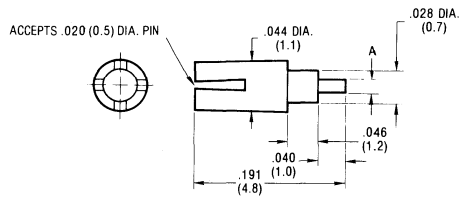
Formable Gasket



| Part Number | Dim. A | | Dim. B | | Dim. C | |
|---------------------|--------|-------|--------|-------|--------|-------|
| | Inches | (mm) | Inches | (mm) | Inches | (mm) |
| 2098-3303-09 | .179 | (4.6) | .215 | (5.4) | .015 | (0.4) |
| 1098-3201-09 | .119 | (3.0) | .155 | (3.9) | .010 | (0.3) |

Gasket for formable gasket connector types.

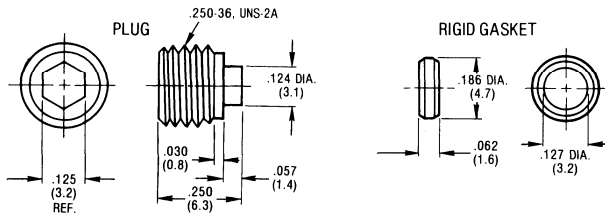
Sliding Contact



| Part Number | Dim. A |
|---------------------|-----------------------|
| 2098-3236-01 | .020 Dia. Pin |
| 2098-3235-01 | .020W x .006 Thk. Tab |

Contact for sliding pin connector types.

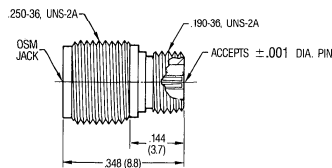
Seal Plug With Gasket



| | |
|-------------|---------------------|
| Part Number | 2098-0544-10 |
|-------------|---------------------|

Used to seal unused ports or a gas fill hole in MIC packages. This plug mounts in the same hole as the rigid gasket and knife edge type connectors.

Replaceable SMA Insert For Part Number 2058-3333-00



| | |
|-------------|---------------------|
| Part Number | 2098-0967-02 |
|-------------|---------------------|

Finish: Passivated stainless steel, for gold plate, change the Part Number suffix from -02 to -00.

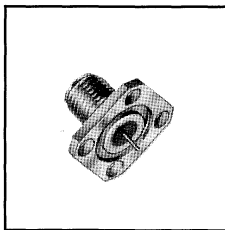
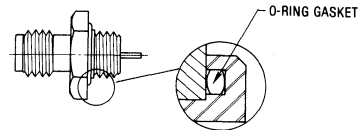
OSM (SMA)

O-Ring Gasket Hermetic Seal

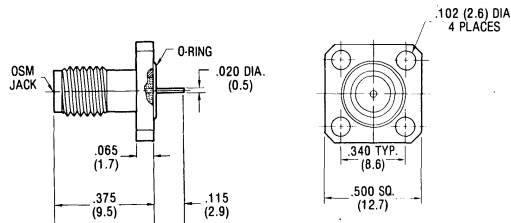
Hermetic coaxial RF connectors using an elastomer gasket to seal to the housing are available in a wide variety of configurations. This gasketing method is particularly useful in applications where the connector may have to be removed and re-installed several times. The elastomer o-ring gasket requires only enough pressure to compress to achieve a seal to a machined surface. These types of seals are generally used where environmental exposure is not severe since changes in the elastomer material can occur over long periods of time.

All units in this group are manufactured with a direct fused glass seal to the stainless steel housing rather than

brazing or soldering. The center contact is soldered to the seal pin with a solder that is eutectic at 221°C in standard versions.

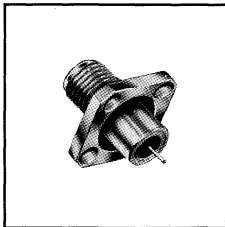


Flange Mount Jack Receptacle

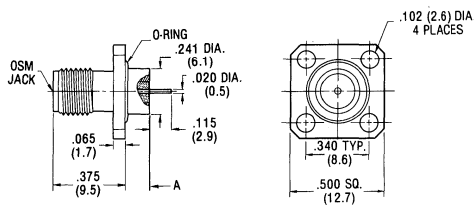


| |
|---------------------------------|
| VSWR (GHz): 1.05 + .01f |
| RF Leakage (dB): -(70 - fGHz) |
| Part Number 2052-3100-00 |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02. On passivated versions, pins are pre-tinned using Sn60 solder.

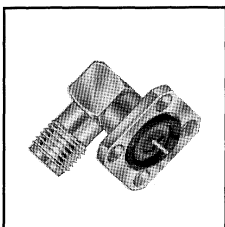


Flange Mount Jack Receptacle

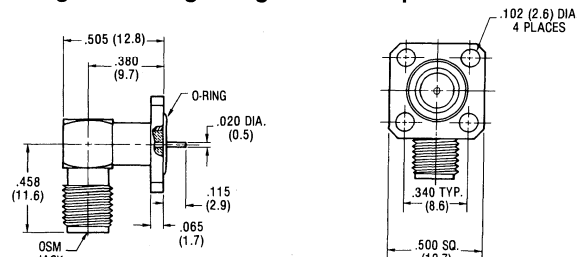


| | | |
|-------------------------------|---------------------|------------|
| VSWR (GHz): 1.05 + .01f | Dim. A | |
| RF Leakage (dB): -(70 - fGHz) | Inches | (mm) |
| Part Number | 2052-3121-00 | .089 (2.3) |
| | 2052-3122-00 | .121 (3.1) |
| | 2052-3123-00 | .183 (4.6) |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02. On passivated versions, pins are pre-tinned using Sn60 solder.

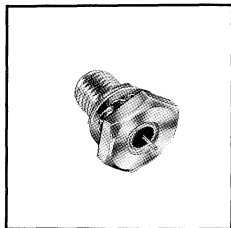


Flange Mount Right Angle Jack Receptacle

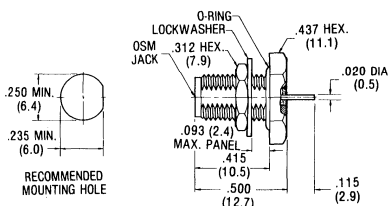


| |
|---------------------------------|
| VSWR (GHz): 1.15 + .015f |
| RF Leakage (dB): -(70 - fGHz) |
| Part Number 2054-3100-00 |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02. On passivated versions, pins are pre-tinned using Sn60 solder.

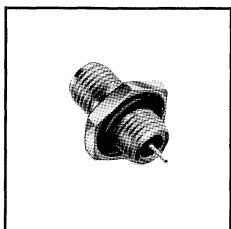


Rear Mount Bulkhead Feedthrough Jack Receptacle

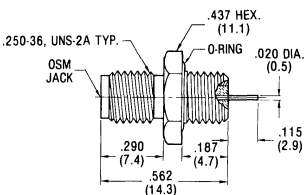


| | |
|-------------------------------|---------------------|
| VSWR (GHz): 1.05 + .01f | |
| RF Leakage (dB): -(70 - fGHz) | |
| Part Number | 2056-3100-00 |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02. On passivated versions, pins are pre-tinned using Sn60 solder.

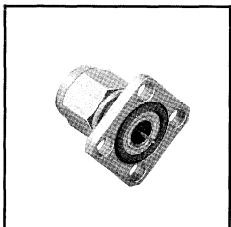


Front Mount Bulkhead Feedthrough Jack Receptacle

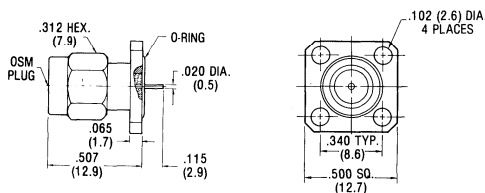


| | |
|-------------------------------|---------------------|
| VSWR (GHz): 1.05 + .01f | |
| RF Leakage (dB): -(70 - fGHz) | |
| Part Number | 2058-3100-00 |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02. On passivated versions, pins are pre-tinned using Sn60 solder.



Flange Mount Plug Receptacle

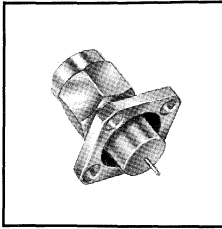


| | |
|-------------------------------|---------------------|
| VSWR (GHz): 1.05 + .01f | |
| RF Leakage (dB): -(70 - fGHz) | |
| Part Number | 2051-3100-00 |

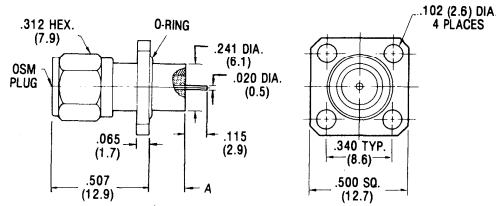
Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02. On passivated versions, pins are pre-tinned using Sn60 solder.

OSM (SMA)

O-Ring Gasket Hermetic Seal

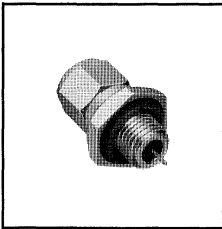


Flange Mount Plug Receptacle

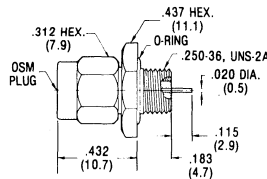


| | | | |
|--|---------------------|--------|-------|
| VSWR (GHz): 1.05 + .01f RF Leakage (dB): -(70 - fGHz) | | Dim. A | |
| Part Number | 2051-3121-00 | Inches | (mm) |
| | 2051-3122-00 | .089 | (2.3) |
| | 2051-3123-00 | .121 | (3.1) |
| | | .183 | (4.6) |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02. On passivated versions, pins are pre-tinned using Sn60 solder.



Front Mount Bulkhead Feedthrough Plug Receptacle

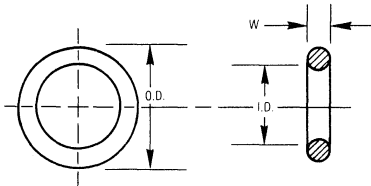


| | |
|--|---------------------|
| VSWR (GHz): 1.05 + .01f RF Leakage (dB): -(70 - fGHz) | |
| Part Number | 2057-3100-00 |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02. On passivated versions, pins are pre-tinned using Sn60 solder.

Selection Guides

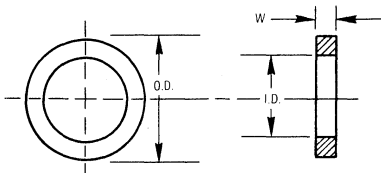
O-Ring (Elastomer)



| Part Number | Actual Size (Inches) | | | | | Fractional Reference | | |
|---------------------|----------------------|-------|------|-------|------------------|----------------------|-------|-------|
| | I.D. | ±Tol. | W. | ±Tol. | Mean O.D. (Ref.) | I.D. | O.D. | W. |
| 2098-3300-54 | .146 | .005 | .031 | .005 | .203 | 9/64 | 13/64 | 1/32 |
| 2098-3327-54 | .204 | .005 | .070 | .005 | .344 | 13/64 | 11/32 | 1/16 |
| 1098-3205-54 | .208 | .005 | .030 | .005 | .266 | 7/32 | 17/64 | 1/32 |
| 2098-3328-54 | .239 | .005 | .051 | .005 | .341 | 15/64 | 11/32 | 1/2 |
| 2098-3326-54 | .239 | .005 | .070 | .005 | .375 | 1/4 | 3/8 | 1/16 |
| 2098-3307-54 | .245 | .005 | .045 | .005 | .335 | 1/4 | 21/64 | 3/64 |
| 2098-3325-54 | .275 | .005 | .040 | .005 | .355 | 9/32 | 23/64 | 13/32 |
| 2098-3265-54 | .301 | .005 | .070 | .005 | .438 | 5/16 | 7/16 | 1/16 |

Additional o-rings available. Consult factory.

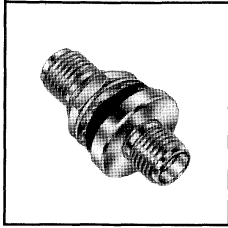
Gasket



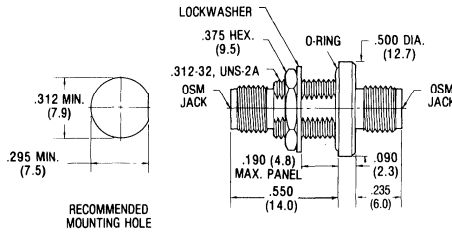
| Part Number | Actual Size (Inches) | | | | | | Fractional Reference | | |
|---------------------|----------------------|-------|------|-------|------|------------------|----------------------|-------|------|
| | I.D. | ±Tol. | W. | ±Tol. | O.D. | ±Tol. | I.D. | O.D. | W. |
| 1098-3204-54 | .125 | .003 | .025 | .003 | .196 | + .002 - .003 | 1/8 | 13/64 | 1/32 |
| 2098-3282-54 | .173 | .002 | .025 | .002 | .234 | .002 | 11/64 | 15/64 | 1/32 |
| 1098-3203-54 | .250 | .005 | .062 | .005 | .375 | .005 | 1/4 | 3/8 | 5/8 |

Additional gaskets available. Consult factory.

Bulkhead Feedthrough Adapters

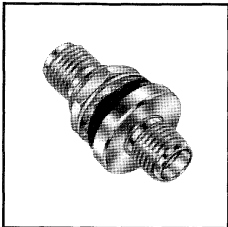


Jack to Jack

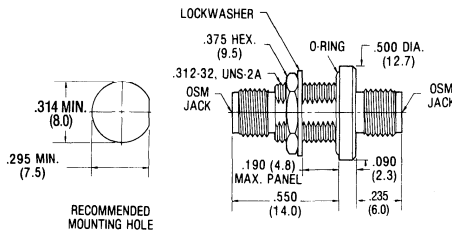


| | |
|--------------------------------|---------------------|
| VSWR (GHz): 1.10 + .01f | |
| RF Leakage (dB): -(100 - fGHz) | |
| Part Number | 2084-1100-00 |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02.



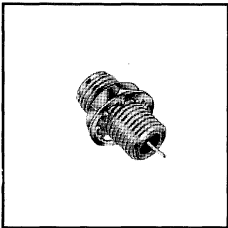
Jack to Jack



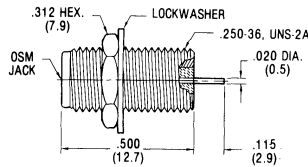
| | |
|--------------------------------|---------------------|
| MIL-A-55339/28-30001 | |
| DC - 12.4 GHz | |
| VSWR (GHz): 1.10 + .015f | |
| RF Leakage (dB): -(100 - fGHz) | |
| Part Number | 2084-8001-90 |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -90 to -92.

Panel Feedthrough



Jack Receptacle



| | |
|--------------------------------|---------------------|
| VSWR (GHz): 1.05 + .01f | |
| RF Leakage (dB): -(100 - fGHz) | |
| Part Number | 2058-5027-00 |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02. On passivated versions, pins are pre-tinned using Sn60 solder.

OSM (SMA)

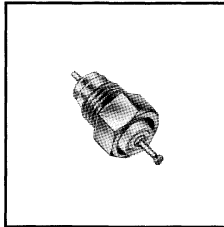
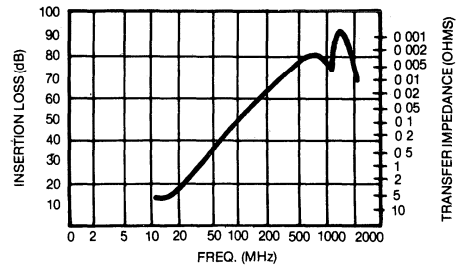
Filter Connectors

Specifications

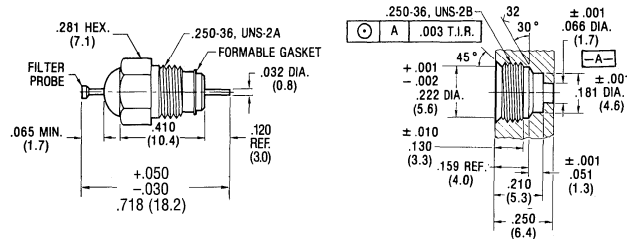
| | |
|--------------------------------------|---|
| Minimum Attenuation: | 45 dB from 200 MHz to 2000 MHz over the temperature range of -55°C to +125°C. |
| Capacitance: | 1000pf minimum @ 1KHz .5 to 5 volts rms 25°C. |
| Working Voltage: | 200 Vdc |
| Dielectric Strength: | 600 Vdc for 1 sec. (50ma max. charging current) |
| Operating Temperature Range: | -55°C to +125°C. |
| Insulation Resistance: | 10K megohms min. at 100 Vdc. 50ma max. charging current, 25°C. |
| DC Resistance: | 0.01 ohm max. |
| DC and low frequency current: | 5 amperes max. |
| RF Current: | 0.25 amperes max. |
| Life Test: | 1000 hours @ 400 Vdc at 125°C. After life IR shall be 1000 megohms minimum. |

Typical Attenuation Characteristics

Measured at +25°C.

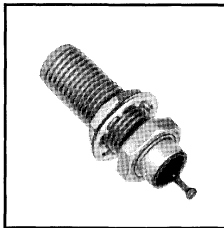


Bulkhead Feedthrough Jack

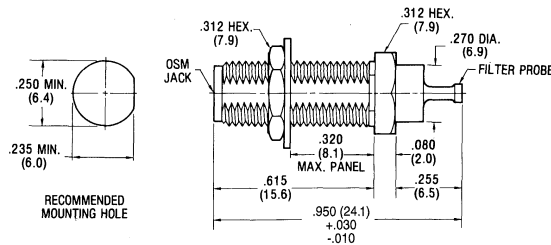


Part Number **9056-5005-00**

Finish: Gold plate.



Bulkhead Feedthrough Jack



Part Number **2056-6200-00**

Finish: Gold plate.
Plug version available. Order Part Number 2057-6200-00.

OSM (SMA)

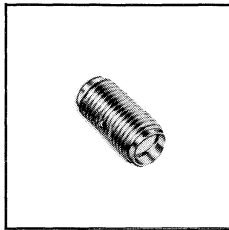
In-Series Adapters

OSM In-Series Adapters are used to join various combinations of OSM connectors, and also to feed circuits through bulkheads and panels with single-hole mounting. All have captured center contacts.

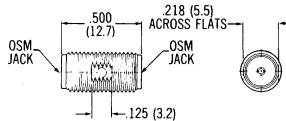
Right angle in-series adapters are manufactured using laser welded center contacts and hard brazed housing

sub-assemblies. This approach is used because of the tighter tolerances possible with machined housings and contacts, guaranteeing tighter interface tolerances than required by MIL-C-39012.

All center contacts are designed to withstand hundreds of mating cycles.



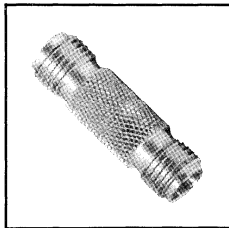
Jack to Jack Adapter



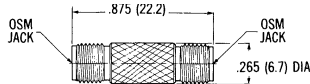
| | |
|-------------------------------|---------------------|
| DC-18.0 GHz* | |
| Max. VSWR 1.05 + .005fGHz | |
| Part Number | 2080-0000-02 |
| Mechanically Captured Contact | |
| Part Number | 2080-1900-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

*Contact captivation per U.S. patent number 3,292,117.



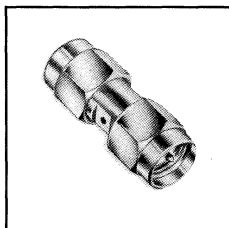
Jack to Jack Adapter With Knurl



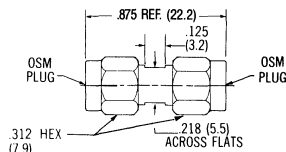
| | |
|---------------------------|---------------------|
| DC-18.0 GHz* | |
| Max. VSWR 1.05 + .005fGHz | |
| Part Number | 2080-5055-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

*Contact captivation per U.S. patent number 3,292,117.



Plug to Plug Adapter



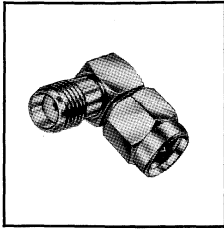
| | |
|-------------------------------|---------------------|
| DC-18.0 GHz* | |
| Max. VSWR 1.05 + .005fGHz | |
| Part Number | 2081-0000-02 |
| Mechanically Captured Contact | |
| Part Number | 2081-1900-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

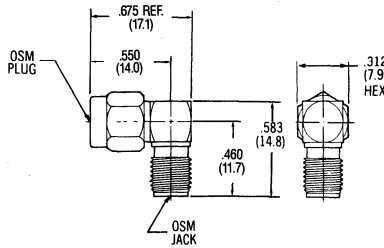
*Contact captivation per U.S. patent number 3,292,117.

OSM (SMA)

In-Series Adapters

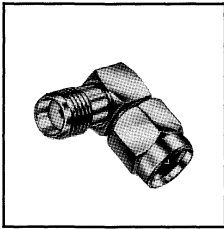


Plug to Jack Adapter Right Angle

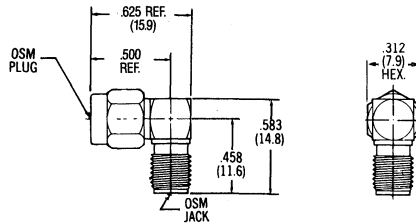


| | |
|-------------|---------------------|
| DC-18.0 GHz | |
| Part Number | 2088-1230-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

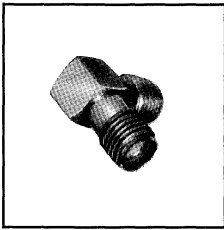


Plug to Jack Adapter Right Angle

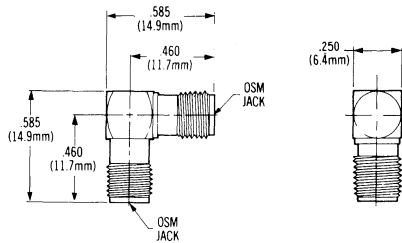


| | |
|-------------|---------------------|
| DC-12.4 GHz | |
| Part Number | 2088-0000-02 |
| DC-18.0 GHz | |
| Part Number | 2088-5013-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

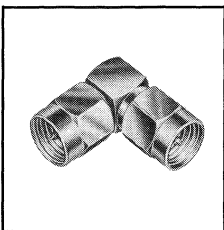


Jack to Jack Adapter Right Angle

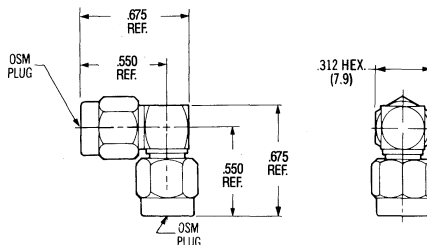


| | |
|-------------|---------------------|
| DC-12.4 GHz | |
| Part Number | 2086-0000-02 |
| DC-18.0 GHz | |
| Part Number | 2086-1230-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

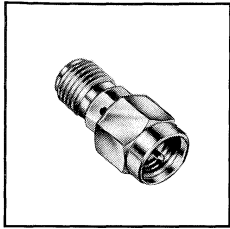


Plug to Plug Adapter Right Angle

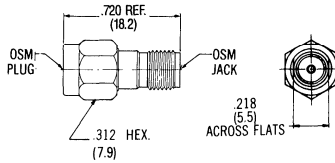


| | |
|-------------|---------------------|
| DC-18.0 GHz | |
| Part Number | 2087-1230-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

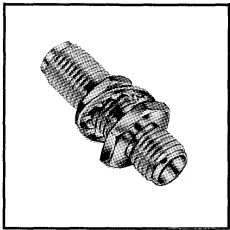


**Plug to Jack Adapter
Connector Saver**

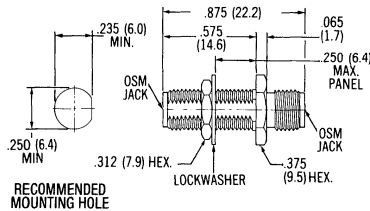


| | |
|---------------------------|---------------------|
| DC-18.0 GHz | |
| Max. VSWR 1.05 + .005fGHz | |
| Part Number | 2082-5133-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.

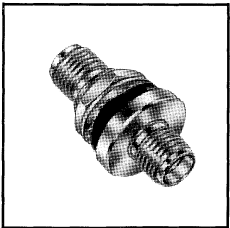


Jack to Jack Adapter Bulkhead Feedthrough

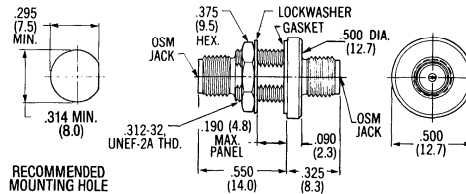


| | |
|-------------------------------|---------------------|
| DC-18.0 GHz* | |
| Max. VSWR 1.05 + .005fGHz | |
| Part Number | 2084-0000-02 |
| Mechanically Captured Contact | |
| Part Number | 2084-1900-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.

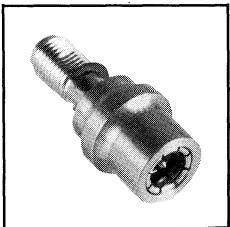


**Jack to Jack Adapter Bulkhead Feedthrough
Hermetic Seal**

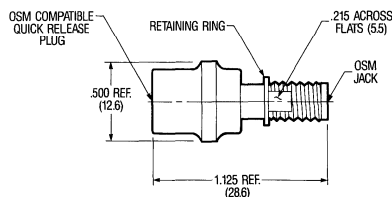


| | |
|---------------------------|---------------------|
| DC-18.0 GHz | |
| Max. VSWR 1.10 + .010fGHz | |
| Part Number | 2084-1100-00 |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02.



Plug to Jack Quick Release Test Adapter



| | |
|------------------------------|---------------------|
| DC-18.0 GHz | |
| Max. VSWR 1.07 + .007 x fGHz | |
| Part Number | 2082-2249-02 |

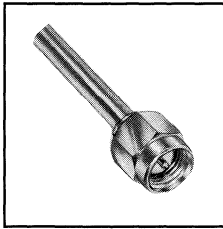
Finish: Passivated stainless steel.

OSM (SMA)

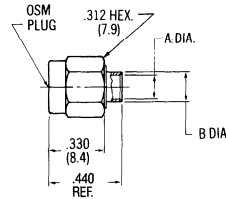
For Semi-Rigid Cable • 27.0 GHz

The extended frequency OSM allows coaxial system operation completely through 27.0 GHz. This extended frequency range design is higher order mode free. This series mates with the standard OSM (SMA) series and maintains the same mechanical features; that is, stainless steel housing and coupling nut, solid PTFE Fluorocarbon dielectric, and gold plated beryllium copper center contact.

.085 and .141 Dia. • Direct Solder Attachment

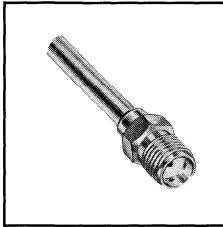


Straight Cable Plug

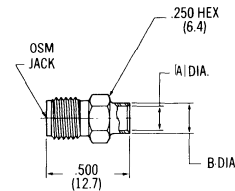


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 2701-7941-00 | 2701-7985-00 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .180 (4.6) | .120 (3.0) |

Finish: Gold plate. For passivated stainless steel coupling nut, change the Part Number suffix from -00 to -02. Inner housing that is soldered to cable is gold plated.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

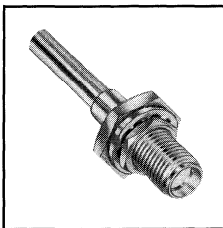


Straight Cable Jack

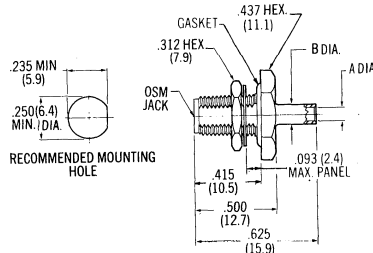


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 2702-7941-00 | 2702-7985-00 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .180 (4.6) | .120 (3.0) |

Finish: Gold plate.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.



Bulkhead Feedthrough Cable Jack

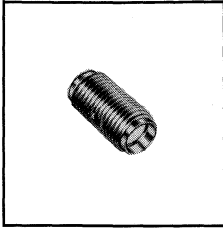


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 2704-7941-00 | 2704-7985-00 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .180 (4.6) | .120 (3.0) |

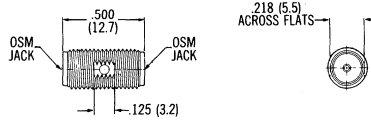
Finish: Gold plate.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

OSM (SMA)

In-Series Adapters • 27.0 GHz

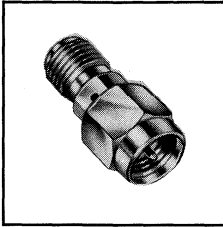


Jack to Jack Adapter

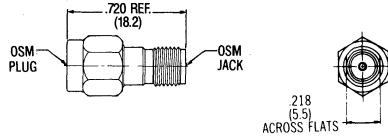


| | |
|---------------------------|---------------------|
| DC-27.0 GHz | |
| Max. VSWR 1.05 + .005fGHz | |
| Part Number | 2780-0000-00 |

Finish: Gold plate. For passivated stainless steel, change the suffix -00 to -02 in the part number.

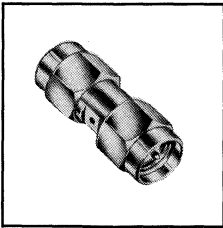


Plug to Jack Adapter Connector Saver

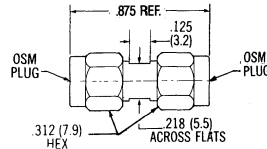


| | |
|---------------------------|---------------------|
| DC-27.0 GHz | |
| Max. VSWR 1.05 + .005fGHz | |
| Part Number | 2782-0000-00 |

Finish: Gold plate. For passivated stainless steel, change the suffix -00 to -02 in the part number.



Plug to Plug Adapter

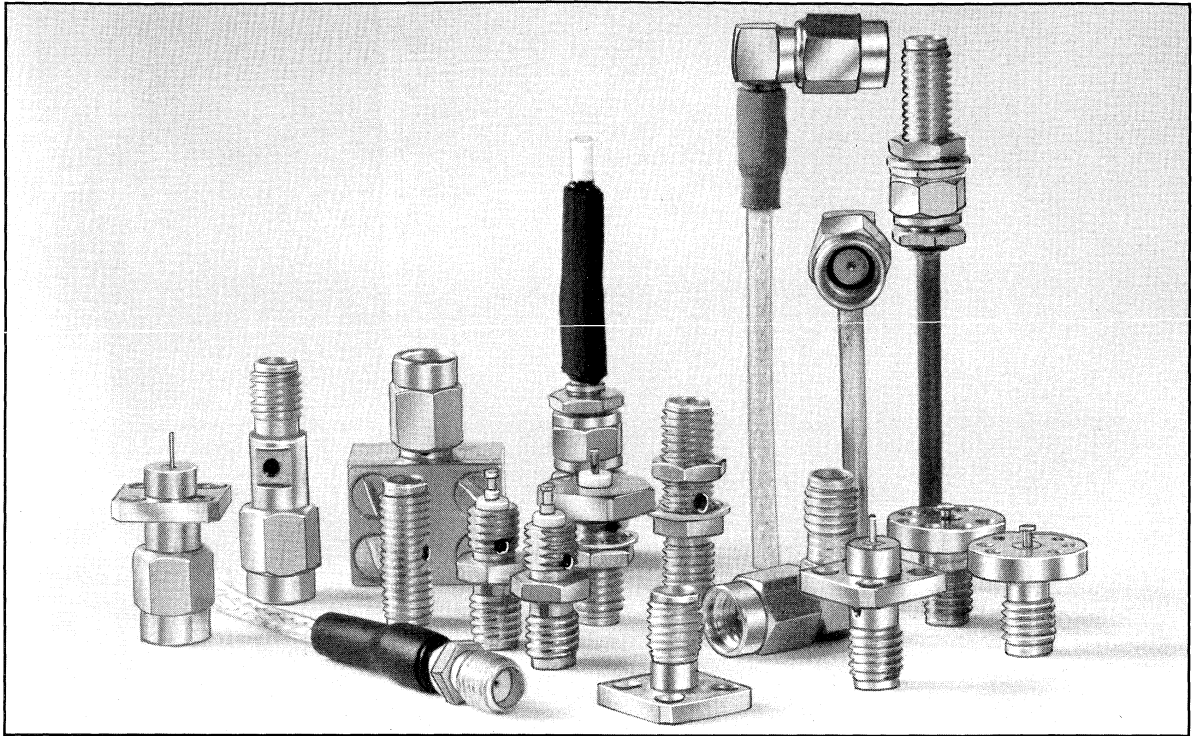


| | |
|---------------------------|---------------------|
| DC-27.0 GHz | |
| Max. VSWR 1.05 + .005fGHz | |
| Part Number | 2781-0000-00 |

Finish: Gold plate. For passivated stainless steel, change the suffix -00 to -02 in the part number.

OSSM (SSMA)

Subminiature Coaxial Connectors



The success of the OSM (SMA) connector created a need for a smaller version for reduced packaging requirements. The OSSM (SSMA) series was designed to a size compatible with smaller diameter semi-rigid cable. The coupling thread is 10-36 UNS thread.

Design and Construction

As with the OSM series, all shell and body parts are made of stainless steel for ruggedness and long life. The dielectric is solid PTFE fluorocarbon. The center contacts are made of beryllium copper, gold plated.

Types

OSSM connectors are available for both semi-rigid and flexible coaxial cable. Panel and bulkhead mount, strip transmission line type, microstrip transmission type and hermetically sealed connectors and in-series adapters give designers complete flexibility for component and system design.

Upper Operating Frequency Limits

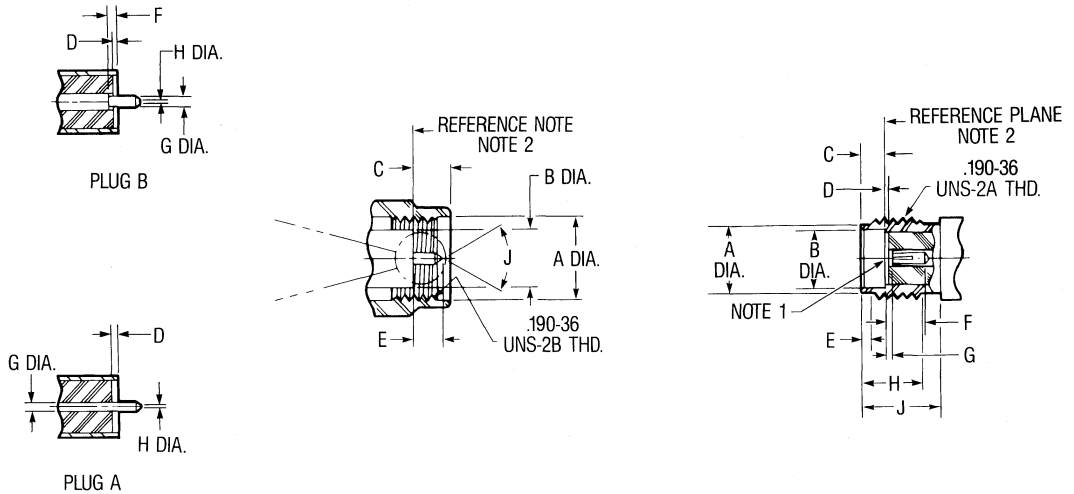
The standard OSSM series allows operation to 38.0 GHz. The extended frequency OSSM series allows high order mode free operation beyond 40.0 GHz. The extended frequency series directly mates with the standard OSSM series with minimum discontinuity.

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OSSM (SSMA)

Interface Mating Dimensions



PLUG

| Letter | Inches (Millimeters) ³ | |
|--------|-----------------------------------|---------------|
| | Minimum | Maximum |
| A | .196 (4.98) | .202 (5.13) |
| B | .124 (3.15) | .1268 (3.221) |
| C | .100 (2.54) | .133 (3.38) |
| D | .000 (0.00) | .007 (0.25) |
| E | .050 (1.27) | .065 (1.65) |
| F | .000 (0.00) | .010 (0.25) |
| G | .0195 (0.495) | .0208 (0.528) |
| H | .000 (0.00) | .010 (0.25) |
| J | 70° | 95° |

JACK

| Letter | Inches (Millimeters) ³ | |
|--------|-----------------------------------|-------------|
| | Minimum | Maximum |
| A | .153 (3.89) | .160 (4.06) |
| B | .127 (3.23) | .130 (3.30) |
| C | .075 (1.91) | .077 (1.96) |
| D | .000 (0.00) | .007 (0.25) |
| E | .020 (0.51) | .040 (1.02) |
| F | .075 (1.91) | - |
| G | .000 (0.00) | .010 (0.25) |
| H | .190 (4.83) | .210 (5.33) |
| J | .230 (5.84) | - |

+ .0008 + .0203
- .0005 - .0127

1. ID to meet VSWR and contact resistance when mated with .020 (0.51 mm) dia. pin.
2. When fully engaged, the two reference planes must coincide with metal to metal contact.
3. Metric equivalents (to the nearest 0.01mm) are given for general information only.

| Requirement | MIL-C-39012 Applicable Paragraph | Detail |
|-------------|-------------------------------------|--------|
|-------------|-------------------------------------|--------|

General

| | | |
|----------|-------|---|
| Material | 3.3 | Steel corrosion resistant per ASTM-A-582 and ASTM-A-484, Type 303. Beryllium copper per ASTM B 196. PTFE Fluorocarbon per ASTM-D-1457. |
| Finish | 3.3.1 | Center contacts shall be gold plated to a min. thickness of .00005 inch in accordance with MIL-G-45204, Typ I, Grade C. All other metal parts shall be finished as to provide a connector which meets the corrosion requirements. |
| Design | 3.4 | The design shall be such that the outline shown in this catalog and the interface dimensions of MIL-STD-348A are met. |

Electrical

| | | |
|---------------------------------|------|---|
| Insulation Resistance | 3.11 | The insulation resistance shall not be less than 5,000 megohms. |
| Corona Level | 3.22 | The connector shall not exhibit breakdown when the voltage is 190 volts rms at 70,000 ft. |
| Dielectric Withstanding Voltage | 3.17 | The magnitude of the test voltage shall be 750 volts rms at sea level. |
| RF High Potential | 3.23 | The withstanding voltage is 500 volts rms at 5 MHz. Leakage current is not applicable. |
| Contact Resistance | 3.16 | Center contact resistance: 2 milliohms max. Outer contact resistance: 2 milliohms max. |
| VSWR | 3.14 | Refer to applicable military slash sheet or consult factory. Frequency range dependent on cable used. |
| RF Leakage | 3.26 | Refer to applicable military slash sheet or consult factory. |
| Insertion Loss | 3.27 | Refer to applicable military slash sheet or consult factory. Frequency range dependent on cable used. |

Mechanical

| | | |
|---------------------------|-------|--|
| Force to Engage | 3.5.1 | The torque required to engage and disengage shall not exceed 2 in.-lbs. The longitudinal force is not applicable. |
| Coupling Nut Retention | 3.25 | 60 lbs. min. Applicable for plug connectors only. |
| Coupling Proof Torque | 3.6 | 5 in.-lbs. min. Applicable for plug connectors only. |
| Cable Retention | 3.24 | Refer to applicable military slash sheet or consult factory. |
| Mating Characteristics | 3.7 | Applicable to jack connectors only. Reference MIL-STD-348A for dimensions; oversize pin .021 min. dia., .045 deep; insertion force 3 lbs. max. with .0208 min. dia. pin; withdrawal force 1 oz. min. with .0195 max. dia. pin. |
| Connector Durability | 3.15 | The connector to be tested and its mating connector shall be subjected to 500 insertion and withdrawal cycles at 12 cycles per minute max. The connector shall show no evidence of mechanical failure and shall meet the mating characteristic requirements. |
| Recommended Mating Torque | — | 5 in.-lbs. |

Environmental

| | | |
|------------------------|------|---|
| Vibration | 3.18 | Specification MIL-STD-202, method 204, test condition D. |
| Shock | 3.19 | Specification MIL-STD-202, method 213, test condition I. |
| Thermal Shock | 3.20 | Refer to applicable military slash sheet or consult factory. |
| Corrosion (Salt Spray) | 3.13 | Specification MIL-STD-202, method 101, test condition B. |
| Moisture Resistance | 3.21 | Specification MIL-STD-202, method 106. No measurements at high humidity. Insulation resistance shall be at least 200 megohms within 5 minutes of removal from humidity. |

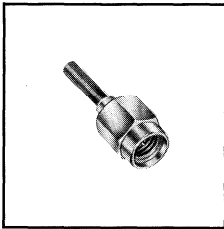
OSSM (SSMA)

For Semi-Rigid Cable

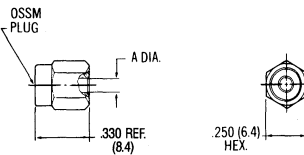
OSSM Subminiature connectors for semi-rigid cable meet performance requirements for microwave and other applications where reduced size and higher packaging density is important. The OSSM series can operate with excellent electrical characteristics at all frequencies up to 38 GHz. High frequency 40.0 GHz series is available.

OSSM connectors are available for use on .085 O.D. and other sizes of semi-rigid cable. Connectors for use with .070 and .047 inch diameter semi-rigid cable are also available. Contact factory for details.

.085 Dia. Direct Solder Attachment

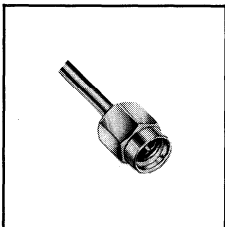


**Straight Cable Plug
Without Center Contact
DC-40.0 GHz**

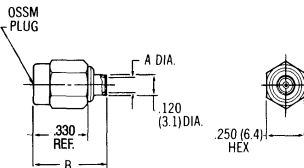


| | |
|------------------|---------------------------------|
| Cable | RG 405/U (.085) |
| Cable Dielectric | Solid PTFE |
| Part Number | 1001-7985-02 |
| Dim. A | Inches (mm) .0875 Min. (2.2) |

Finish: Passivated stainless steel. For gold plated coupling nut, change the Part Number suffix from -02 to -00. Inner housing that is soldered to cable is gold plated. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

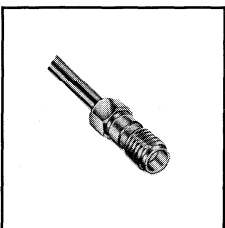


**Straight Cable Plug
With Center Contact**

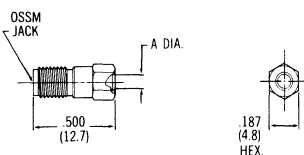


| | |
|------------------|---------------------------------|
| Cable | RG 405/U (.085) |
| Cable Dielectric | Solid PTFE |
| Part Number | 1001-5004-02 |
| Dim. A | Inches (mm) .0875 Min. (2.2) |
| Dim. B | .447 Ref. (11.4) |

Finish: Passivated stainless steel. For gold plated coupling nut, change the Part Number suffix from -02 to -00. Inner housing that is soldered to cable is gold plated. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.



**Straight Cable Jack
With Center Contact**



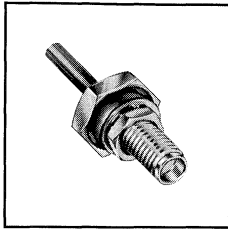
| | |
|------------------|---------------------------------|
| Cable | RG 405/U (.085) |
| Cable Dielectric | Solid PTFE |
| Part Number | 1002-7985-00 |
| Dim. A | Inches (mm) .0875 Min. (2.2) |

Finish: Gold plate. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

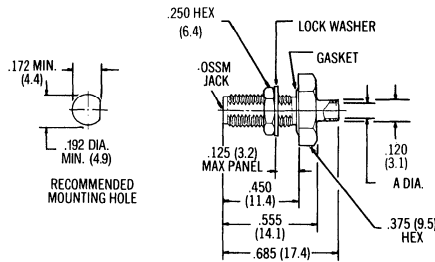
OSSM (SSMA)

For Semi-Rigid Cable

.085 Dia. • Direct Solder Attachment

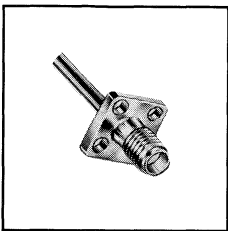


Bulkhead Feedthrough Cable Jack

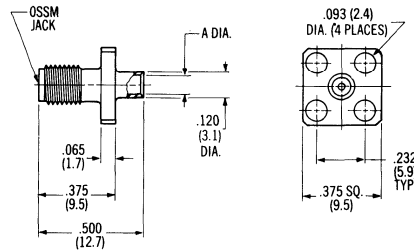


| | |
|------------------|---------------------------------|
| Cable | RG 405/U (.085) |
| Cable Dielectric | Solid PTFE |
| Part Number | 1004-7985-00 |
| Dim. A | Inches (mm) .0875 Min. (2.2) |

Finish: Gold plate. Inner housing that is soldered to cable is gold plated. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

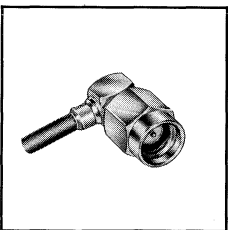


Flange Mount Cable Jack

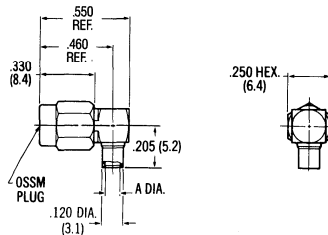


| | |
|------------------|---------------------------------|
| Cable | RG 405/U (.085) |
| Cable Dielectric | Solid PTFE |
| Part Number | 1006-7985-00 |
| Dim. A | Inches (mm) .0875 Min. (2.2) |

Finish: Gold plate. Inner housing that is soldered to cable is gold plated. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.



Right Angle Cable Plug*



| | |
|------------------|---------------------------------|
| Cable | RG 405/U (.085) |
| Cable Dielectric | Solid PTFE |
| Part Number | 1007-7985-02 |
| Dim. A | Inches (mm) .0875 Min. (2.2) |

Finish: Passivated stainless steel. For gold plated coupling nut, change the Part Number suffix from -02 to -00. Inner housing that is soldered to cable is gold plated. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section. *Contact captivation per U.S. patent number 3,292,117.

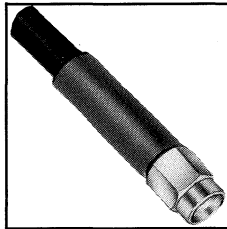
OSSM (SSMA)

For Flexible Cable

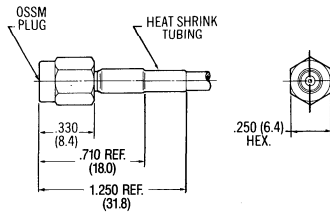
OSSM (SSMA) subminiature coaxial connectors for flexible cable are designed for use on small size (e.g. RG-196A/U and RG-316/U) flexible cable. Flexible cable

assemblies can be utilized in areas where the high performance of semi-rigid cable is not required but high cable flexibility is needed.

Flexible Cable • Solder Attachment

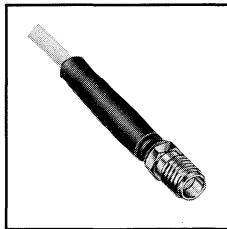


Straight Cable Plug

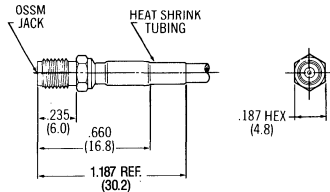


| Non-Captured Contact | | |
|----------------------|---------------------|------------------------------------|
| Cable | RG 178/U, 196 | RG 174/U, 179, 187, 188, 316 |
| Part Number | 1031-5001-02 | 1031-5002-02 |

Finish: Passivated stainless steel. For gold plated coupling nut, change the Part Number suffix from -02 to -00. Inner housing that is soldered to cable is gold plated. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

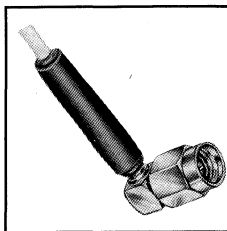


Straight Cable Jack

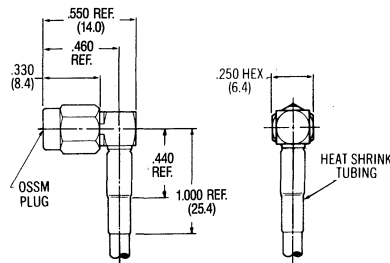


| Non-Captured Contact | | |
|----------------------|---------------------|------------------------------------|
| Cable | RG 178/U, 196 | RG 174/U, 179, 187, 188, 316 |
| Part Number | 1032-5001-00 | 1032-5002-00 |

Finish: Gold plated. Inner housing that is soldered to cable is gold plated. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.



Right Angle Cable Plug



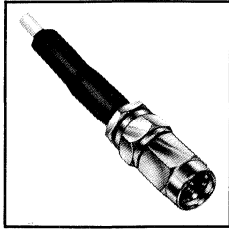
| Captured Contact* | | |
|-------------------|---------------------|------------------------------------|
| Cable | RG 178/U, 196 | RG 174/U, 179, 187, 188, 316 |
| Part Number | 1037-5001-02 | 1037-5002-02 |

Finish: Passivated stainless steel. For gold plated coupling nut, change the Part Number suffix from -02 to -00. Inner housing that is soldered to cable is gold plated. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section. *Contact captivation per U.S. patent number 3,292,117.

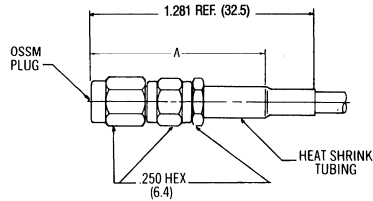
OSSM (SSMA)

For Flexible Cable

Flexible Cable • Crimp Attachment

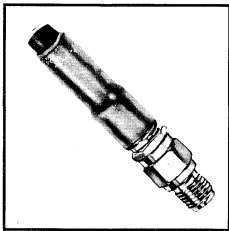


Straight Cable Plug

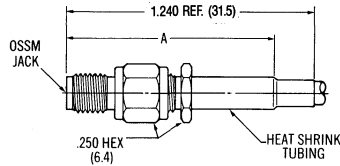


| Captured Contact | | | |
|------------------|---------------------------------|------------------------------------|--|
| Cable | RG 178/U, 196 | RG 174/U, 179, 187, 188, 316 | |
| Part Number | 1031-7196-02 | 1031-7188-02 | |
| Dim. A | Inches (mm) .937 REF. (23.8) | Inches (mm) 1.062 REF. (27.0) | |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

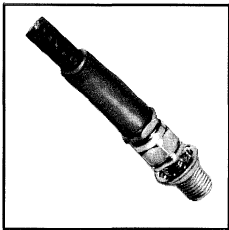


Straight Cable Jack

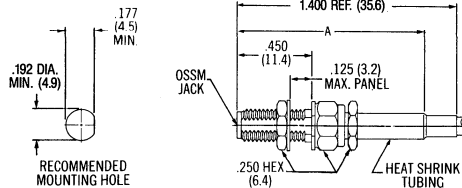


| Captured Contact | | | |
|------------------|---------------------------------|------------------------------------|--|
| Cable | RG 178/U, 196 | RG 174/U, 179, 187, 188, 316 | |
| Part Number | 1032-7196-02 | 1032-7188-02 | |
| Dim. A | Inches (mm) .900 REF. (22.9) | Inches (mm) 1.025 REF. (26.0) | |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

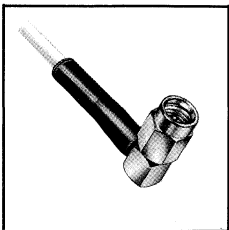


Bulkhead Feedthrough Cable Jack

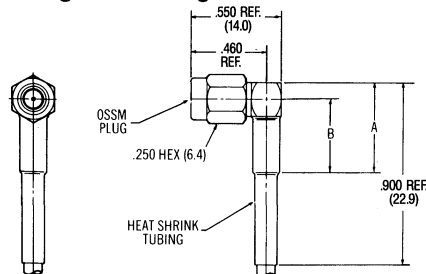


| Captured Contact | | | |
|------------------|----------------------------------|------------------------------------|--|
| Cable | RG 178/U, 196 | RG 174/U, 179, 187, 188, 316 | |
| Part Number | 1034-7196-02 | 1034-7188-02 | |
| Dim. A | Inches (mm) 1.050 REF. (26.7) | Inches (mm) 1.180 REF. (30.0) | |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00. Inner housing that is soldered to cable is gold plated. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.



Right Angle Cable Plug



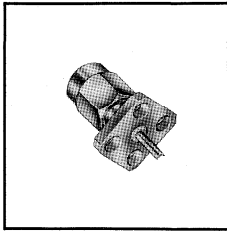
| Captured Contact | | | |
|------------------|---------------------------------|------------------------------------|--|
| Cable | RG 178/U, 196 | RG 174/U, 179, 187, 188, 316 | |
| Part Number | 1037-7196-02 | 1037-7188-02 | |
| Dim. A | Inches (mm) .500 REF. (12.7) | Inches (mm) .625 REF. (15.9) | |
| Dim. B | .400 REF. (10.2) | .525 REF. (13.3) | |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

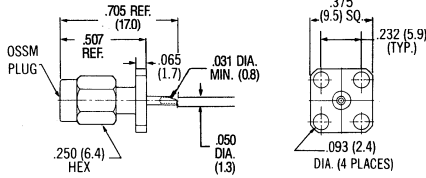
OSSM (SSMA)

Panel Mount Receptacles

Solder Pot Terminal

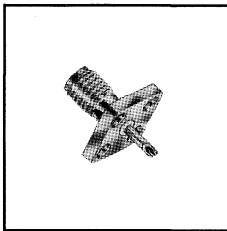


Flange Mount Plug Receptacle

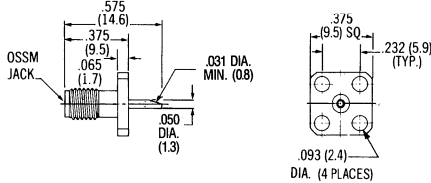


| | |
|---|--------------|
| Captured Center Contact* Solder Pot Terminal | |
| Part Number | 1051-0000-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.

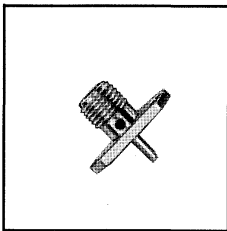


Flange Mount Jack Receptacle

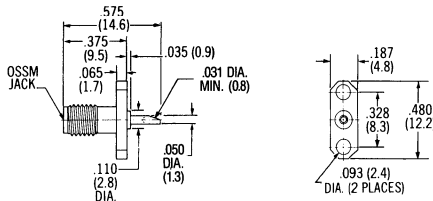


| | |
|---|--------------|
| Captured Center Contact* Solder Pot Terminal | |
| Part Number | 1052-0000-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.

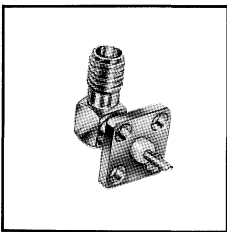


Flange Mount Jack Receptacle

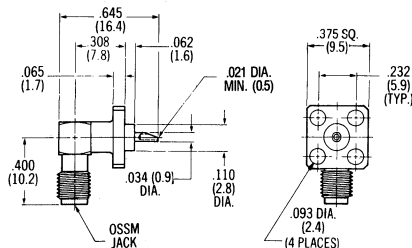


| | |
|---|--------------|
| Captured Center Contact* Solder Pot Terminal | |
| Part Number | 1052-1300-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.



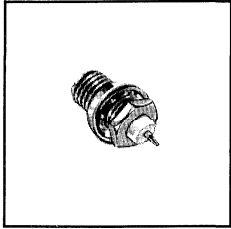
Flange Mount Jack Receptacle



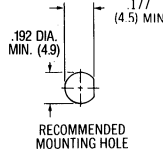
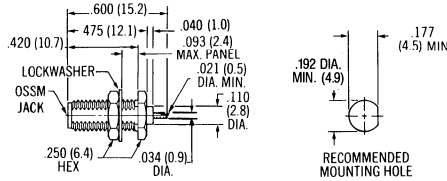
| | |
|--|--------------|
| Captured Center Contact Solder Pot Terminal | |
| Part Number | 1054-5005-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

Solder Pot Terminal

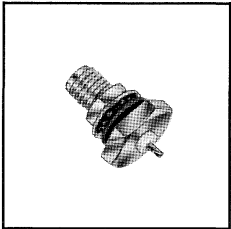


Bulkhead Feedthrough Jack Receptacle

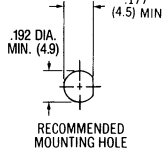
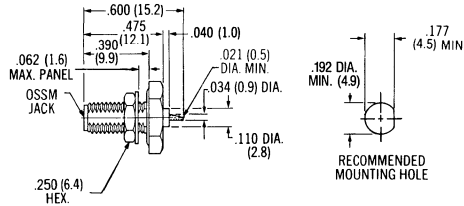


| | |
|---|---------------------|
| Captured Center Contact* Solder Pot Terminal Rear Mount | |
| Part Number | 1056-0000-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.



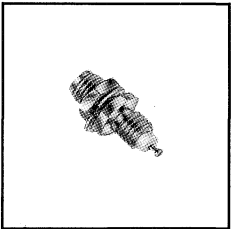
Bulkhead Feedthrough Jack Receptacle



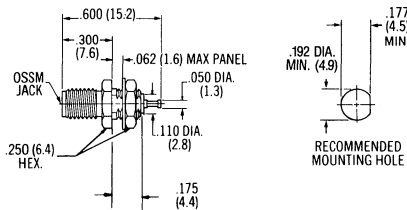
| | |
|--|---------------------|
| Captured Center Contact* Solder Pot Terminal (With "O" Ring) Rear Mount | |
| Part Number | 1056-1100-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.

Turret Terminal



Bulkhead Feedthrough Jack Receptacle



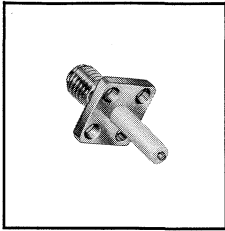
| | |
|--|---------------------|
| Captured Center Contact* Turret Terminal Front Mount | |
| Part Number | 1058-0000-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.

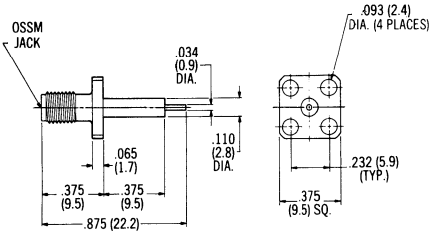
OSSM (SSMA)

Panel Mount Receptacles

Straight Terminal

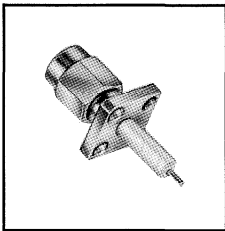


Flange Mount Jack Receptacle

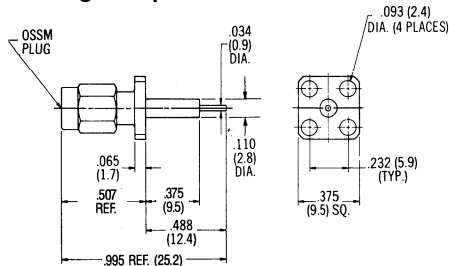


| | |
|---|---------------------|
| Non-Captured Center Contact Straight Terminal | |
| Part Number | 1052-1200-02 |
| Captured Center Contact* Straight Terminal | |
| Part Number | 1052-1201-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.



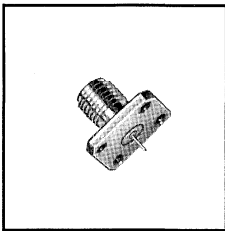
Flange Mount Plug Receptacle



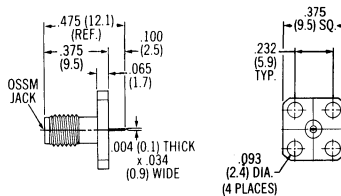
| | |
|---|---------------------|
| Non-Captured Center Contact Straight Terminal | |
| Part Number | 1051-1200-02 |
| Captured Center Contact* Straight Terminal | |
| Part Number | 1051-1201-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.

Tab Terminal

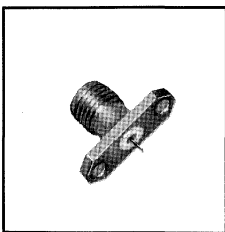


Flange Mount Jack Receptacle

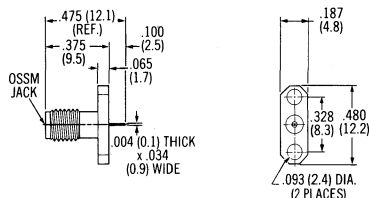


| | |
|--|---------------------|
| Non-Captured Center Contact Tab Terminal | |
| Part Number | 1052-5004-02 |
| Captured Center Contact* Tab Terminal | |
| Part Number | 1052-5005-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.



Flange Mount Jack Receptacle

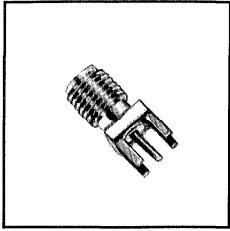


| | |
|--|---------------------|
| Non-Captured Center Contact Tab Terminal | |
| Part Number | 1052-1302-02 |
| Captured Center Contact* Tab Terminal | |
| Part Number | 1052-1303-02 |

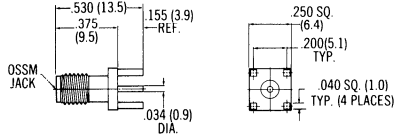
Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.

OSSM (SSMA)

Printed Circuit Boards

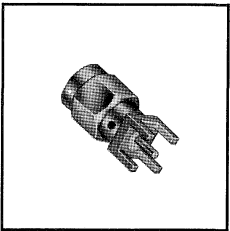


Straight Jack

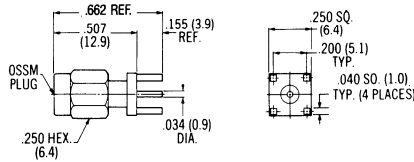


| | |
|--|---------------------|
| Captured Center Contact Straight Terminal | |
| Part Number | 1062-0000-00 |

Finish: Gold plate.

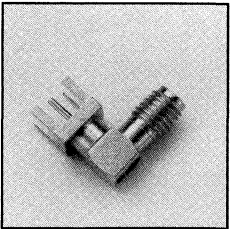


Straight Plug

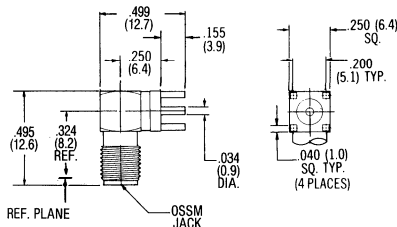


| | |
|--|---------------------|
| Captured Center Contact Straight Terminal | |
| Part Number | 1063-0000-00 |

Finish: Gold plate.



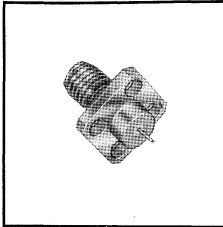
Right Angle Jack



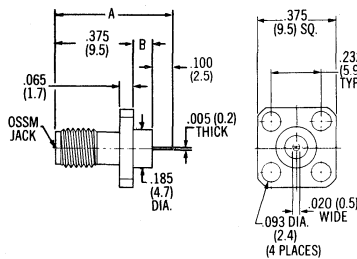
| | |
|--|---------------------|
| Captured Center Contact Straight Terminal | |
| Part Number | 1064-0000-00 |

OSSM (SSMA)

Microstrip Transmission Line Circuits

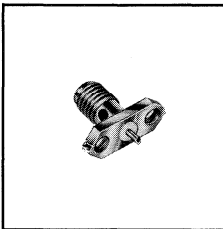


Flange Mount Jack

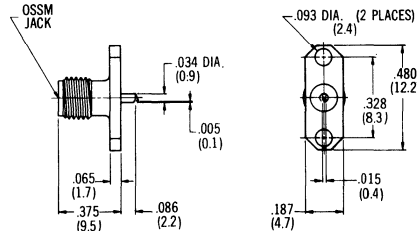


| Captured Center Contact* Tab Terminal | | | | | | |
|--|--------------|--------|--------------|--------|--------------|--------|
| Part Number | 1052-1131-00 | | 1052-1132-00 | | 1052-1133-00 | |
| Dim. A | Inches | (mm) | Inches | (mm) | Inches | (mm) |
| | .568 REF. | (14.5) | .600 REF. | (15.2) | .662 REF. | (16.8) |
| Dim. B | .093 REF. | (2.4) | .125 REF. | (3.2) | .187 | (4.8) |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to 02.
*Contact captivation per U.S. patent number 3,292,117.



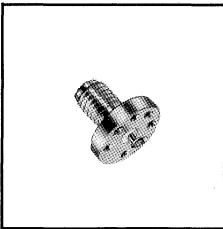
Flange Mount Jack



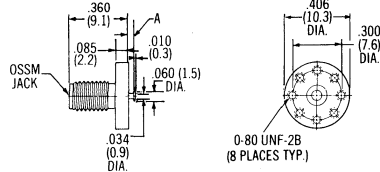
| Captured Center Contact* Solderless Compression Terminal | |
|---|--------------|
| Part Number | 1052-5013-00 |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to 02.
*Contact captivation per U.S. patent number 3,292,117.

Surface Launch Use On Strip Transmission Line Circuits



Surface Launch Jack

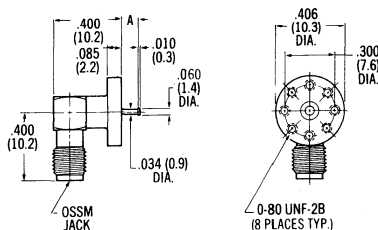


| Non-Captured Center Contact Turret Terminal | | |
|--|--------------|--------------|
| Stripline Size | 1/16 | 1/8 |
| Part Number | 1066-1321-00 | 1066-1322-00 |
| Dim. A | Inches (mm) | Inches (mm) |
| | .031 (0.8) | .063 (1.6) |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to 02.



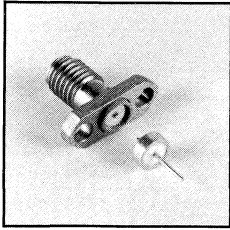
Surface Launch Right Angle Jack



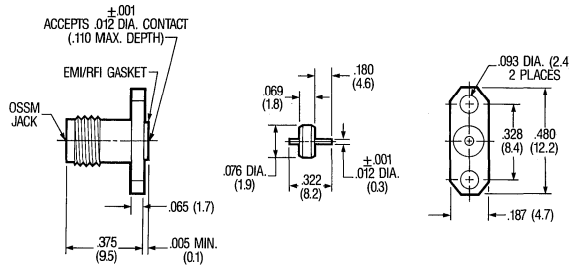
| Plug In Turret Terminal | | |
|----------------------------|--------------|--------------|
| Stripline Size | 1/16 | 1/8 |
| Part Number | 1068-1321-00 | 1068-1322-00 |
| Dim. A | Inches (mm) | Inches (mm) |
| | .031 (0.8) | .063 (1.6) |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to 02.

Metal-To-Metal Hermetic Seal

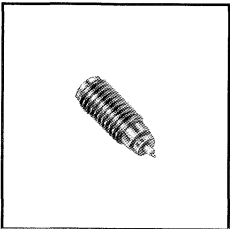


Jack Receptacle With EMI/RFI Gasket

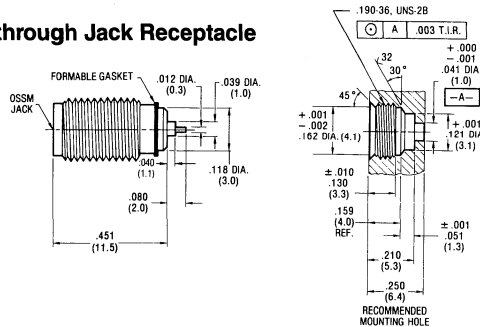


| | |
|--|---------------------|
| Field Replaceable Solder and Braze-In VSWR (GHz): 1.07 + .011f RF Leakage (dB): -(100 - fGHz) | |
| Part Number | 1052-3355-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Refer to recommended assembly tools in Tool Section.

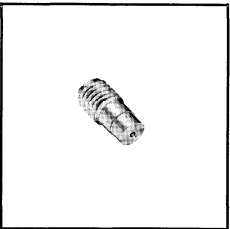


Feedthrough Jack Receptacle

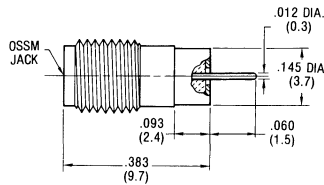


| | |
|--|---------------------|
| Formable Gasket VSWR (GHz): 1.05 + .01f RF Leakage (dB): -(100 - fGHz) | |
| Part Number | 1058-5014-00 |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02. For nickel plate, change the suffix from -00 to -10.
Installation Thermal Limit: 250°C.
Refer to recommended assembly tools in Tool Section.

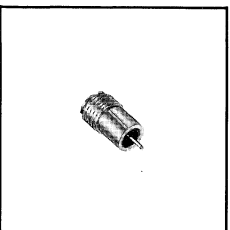


Feedthrough Jack Receptacle

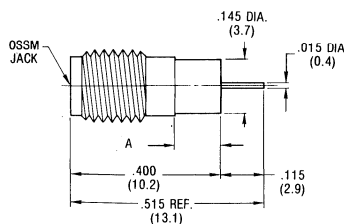


| | |
|---|---------------------|
| Solder and Braze-In VSWR (GHz): 1.05 + .014f RF Leakage (dB): -(100 - fGHz) | |
| Part Number | 1058-3203-00 |

Finish: Gold plate.
This unit has a unique self-matching compensation step, allowing direct attachment to the substrate, resulting in minimal package size.



Panel Feedthrough Jack Receptacle



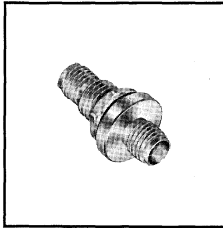
| Solder and Braze-In VSWR (GHz): 1.05 + .014f RF Leakage (dB): -(70 - fGHz) | |
|--|---------------------------|
| Part Number | Dimension A |
| 1058-3121-00 | Inches (mm) .093 (2.4) |
| 1058-3122-00 | .125 (3.2) |
| 1058-3123-00 | .187 (4.8) |

Finish: Gold plate.

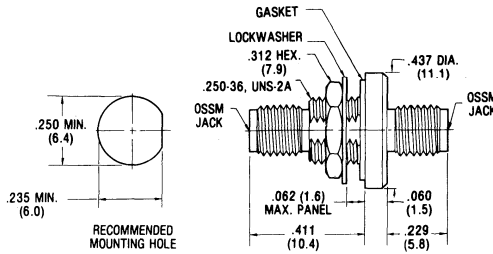
OSSM (SSMA)

Hermetically Sealed

Panel Feedthrough Hermetic Adapter



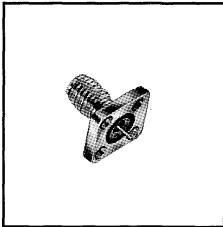
Jack to Jack



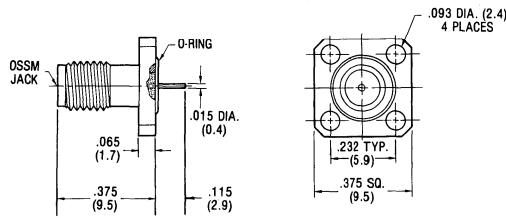
| | |
|------------------|---------------------|
| VSWR (GHz): | 1.10 + .01f |
| RF Leakage (dB): | -(100 - fGHz) |
| Part Number | 1084-1100-00 |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02.

O-Ring Gasket Hermetic Seal

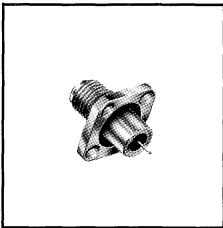


Flange Mount Jack Receptacle

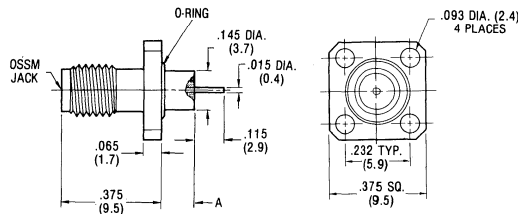


| | |
|------------------|---------------------|
| VSWR (GHz): | 1.05 + .014f |
| RF Leakage (dB): | -(70 - fGHz) |
| Part Number | 1052-3100-00 |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02. On passivated versions (-02), pins are pre-tinned using Sn60 solder.

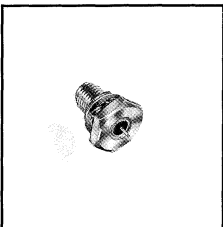


Flange Mount Jack Receptacle

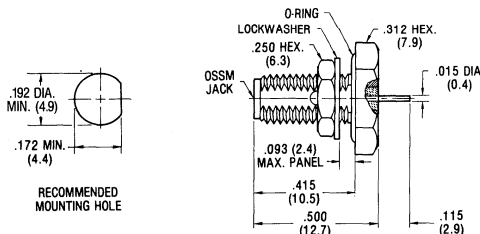


| | |
|---------------------|--------------|
| VSWR (GHz): | 1.05 + .01f |
| RF Leakage (dB): | -(70 - fGHz) |
| Part Number | Dimension A |
| 1052-3121-00 | .093 (2.4) |
| 1052-3122-00 | .125 (3.2) |
| 1052-3123-00 | .187 (4.8) |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02. On passivated versions (-02), pins are pre-tinned using Sn60 solder.



Rear Mount Jack Receptacle



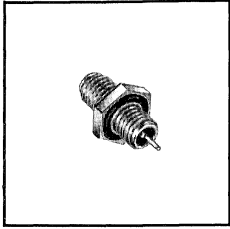
| | |
|------------------|---------------------|
| VSWR (GHz): | 1.05 + .014f |
| RF Leakage (dB): | -(70 - fGHz) |
| Part Number | 1056-3100-00 |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02. On passivated versions (-02), pins are pre-tinned using Sn60 solder.

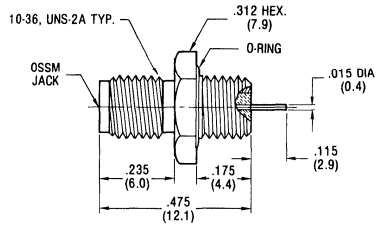
OSSM (SSMA)

Hermetically Sealed

O-Ring Gasket Hermetic Seal

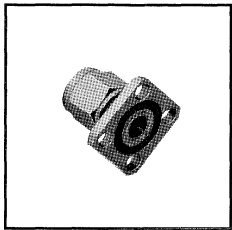


Bulkhead Feedthrough Front Mount Jack Receptacle

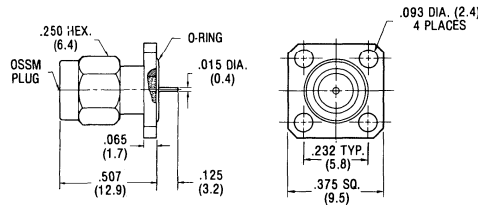


| | |
|-------------------------------|---------------------|
| VSWR (GHz): 1.05 + .01f | |
| RF Leakage (dB): -(70 - fGHz) | |
| Part Number | 1058-3100-00 |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02. On passivated versions (-02), pins are pre-tinned using Sn60 solder.



Flange Mount Plug Receptacle

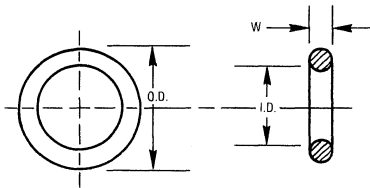


| | |
|-------------------------------|---------------------|
| VSWR (GHz): 1.05 + .01f | |
| RF Leakage (dB): -(70 - fGHz) | |
| Part Number | 1051-3100-00 |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02. On passivated versions (-02), pins are pre-tinned using Sn60 solder.

Selection Guides

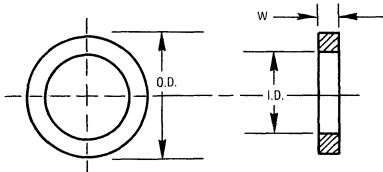
O-Ring (Elastomer)



| Part Number | Actual Size (Inches) | | | | | Fractional Reference | | |
|---------------------|----------------------|-------|------|-------|------------------|----------------------|-------|-------|
| | I.D. | ±Tol. | W. | ±Tol. | Mean O.D. (Ref.) | I.D. | O.D. | W. |
| 2098-3300-54 | .146 | .005 | .031 | .005 | .203 | 9/64 | 13/64 | 1/32 |
| 2098-3327-54 | .204 | .005 | .070 | .005 | .344 | 13/64 | 11/32 | 1/16 |
| 1098-3205-54 | .208 | .005 | .030 | .005 | .266 | 7/32 | 17/64 | 1/32 |
| 2098-3328-54 | .239 | .005 | .051 | .005 | .341 | 15/64 | 11/32 | 1/2 |
| 2098-3326-54 | .239 | .005 | .070 | .005 | .375 | 1/4 | 3/8 | 1/16 |
| 2098-3307-54 | .245 | .005 | .045 | .005 | .335 | 1/4 | 21/64 | 3/64 |
| 2098-3325-54 | .275 | .005 | .040 | .005 | .355 | 9/32 | 23/64 | 13/32 |
| 2098-3265-54 | .301 | .005 | .070 | .005 | .438 | 5/16 | 7/16 | 1/16 |

Additional o-rings available. Consult factory.

Gasket

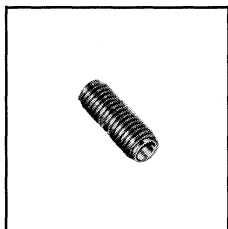


| Part Number | Actual Size (Inches) | | | | | Fractional Reference | | | |
|---------------------|----------------------|-------|------|-------|------|----------------------|-------|-------|------|
| | I.D. | ±Tol. | W. | ±Tol. | O.D. | ±Tol. | I.D. | O.D. | W. |
| 1098-3204-54 | .125 | .003 | .025 | .003 | .196 | + .002 - .003 | 1/8 | 13/64 | 1/32 |
| 2098-3282-54 | .173 | .002 | .025 | .002 | .234 | .002 | 11/64 | 15/64 | 1/32 |
| 1098-3203-54 | .250 | .005 | .062 | .005 | .375 | .005 | 1/4 | 3/8 | 5/8 |

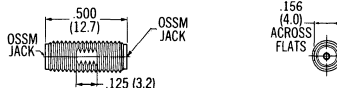
Additional gaskets available. Consult factory.

OSSM (SSMA) In-Series Adapters

OSSM (SSMA) in-series adapters are used to join various combinations of SSMA connectors and also to feed circuits through bulkheads and panels with single-hole mounting. All have captured center contacts.

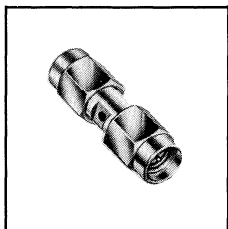


Jack to Jack Adapter

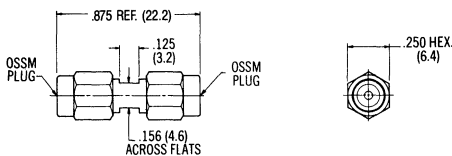


| | |
|-------------|---------------------|
| Part Number | 1080-0000-02 |
|-------------|---------------------|

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Contact captivation per U.S. patent 3,292,117.

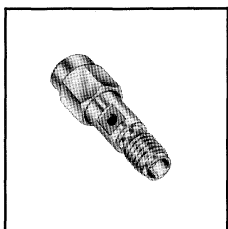


Plug to Plug Adapter

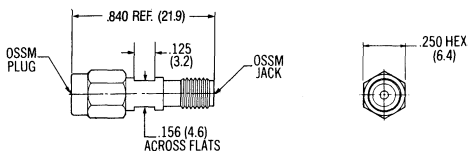


| | |
|-------------|---------------------|
| Part Number | 1081-0000-02 |
|-------------|---------------------|

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Contact captivation per U.S. patent 3,292,117.



**Plug to Jack Adapter
(Connector Saver)**

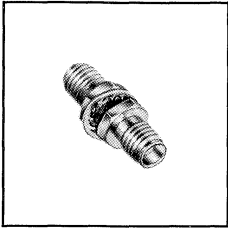


| | |
|-------------|---------------------|
| Part Number | 1082-0000-02 |
|-------------|---------------------|

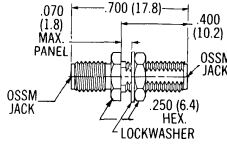
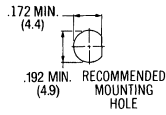
Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Contact captivation per U.S. patent 3,292,117.

OSSM (SSMA)

In-Series Adapters

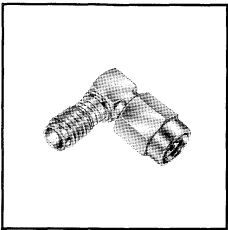


Bulkhead Mount Jack to Jack Adapter

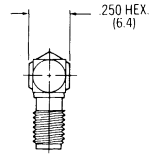
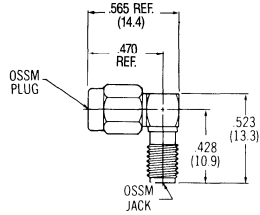


| | |
|-------------|---------------------|
| Part Number | 1084-0000-02 |
|-------------|---------------------|

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Contact captivation per U.S. patent 3,292,117.



Right Angle Plug to Jack Adapter



| | |
|-------------|---------------------|
| Part Number | 1088-0000-02 |
|-------------|---------------------|

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

OSSM (SSMA)

High Frequency For Semi-Rigid Cable

These OSSM connectors operate from dc to 40 GHz. The mating interface is identical to the popular OSSM standard. The internal design has been modified to eliminate the propagation of higher order modes below 40 GHz. The standard OSSM connectors will mate with these connectors with minimum discontinuity. The center contact is supported along its entire length by PTFE fluorocarbon dielectric.

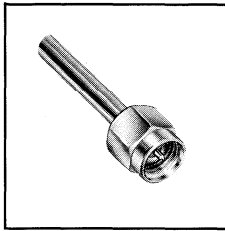
Male connectors are available in both the cable adapter type, where the center conductor of the cable is the center contact of the connector, and the solder on center contact type.

The connector construction is identical to the OSSM series which has a .190-36 UNS thread, stainless steel body and/or nut, and beryllium copper heat treated center conductors which are gold plated. Applications include stripline, microstrip, semi-rigid cables, waveguide adapters, IC packages, systems, components, etc.

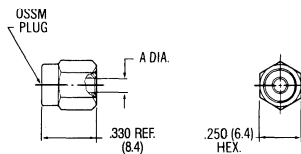
Specifications

| | |
|------------------------------|---------------------------------------|
| Nominal Impedance: | 50 ohms |
| Frequency Range: | dc to 40 GHz |
| Voltage Standing Wave Ratio: | 1.07 + .010 f (GHz) |
| Insertion Loss: | .04 × √f (GHz) = dB max. |
| Voltage Rating: | 250 volts RMS max. working voltage |

.085 and .070 Dia. • Direct Solder Attachment

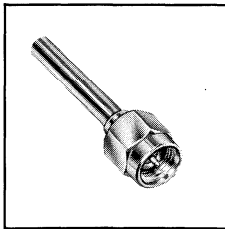


**Straight Cable Plug
Without Center Contact**

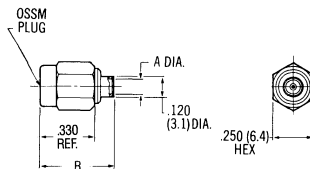


| | |
|------------------|---------------------------------|
| Cable | RG 405/U (.085) |
| Cable Dielectric | Solid PTFE |
| Part Number | 1001-7985-00 |
| Dim. A | Inches (mm) .0875 Min. (2.2) |

Finish: Gold plate. For passivated stainless steel coupling nut, change the Part Number suffix from -00 to -02. Inner housing that is soldered to cable is gold plated. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

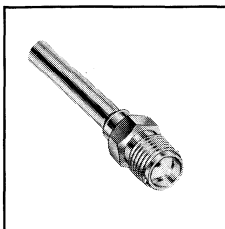


**Straight Cable Plug
Center Contact**

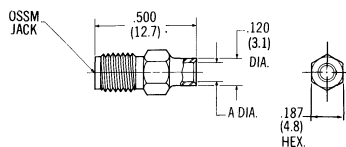


| | | |
|------------------|---------------------------------|--------------------------------|
| Cable | RG 405/U (.085) | .070 Dia. |
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 1401-7985-00 | 1401-7970-00 |
| Dim. A | Inches (mm) .0875 Min. (2.2) | Inches (mm) .072 Min. (1.8) |
| Dim. B | .447 Ref. (11.4) | .425 Ref. (10.8) |

Finish: Gold plate. For passivated stainless steel coupling nut, change the Part Number suffix from -00 to -02. Inner housing that is soldered to cable is gold plated. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.



Straight Cable Jack

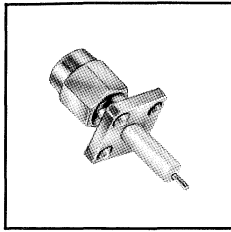


| | | |
|------------------|---------------------------------|--------------------------------|
| Cable | RG 405/U (.085) | .070 Dia. |
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 1402-7985-00 | 1402-7970-00 |
| Dim. A | Inches (mm) .0875 Min. (2.2) | Inches (mm) .072 Min. (1.8) |

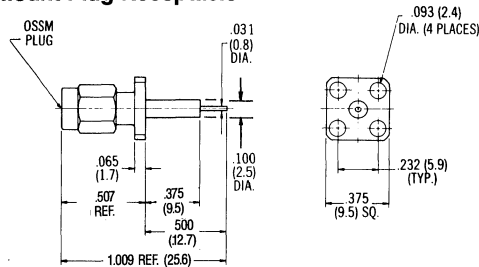
Finish: Gold plate. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

OSSM (SSMA) High Frequency

Panel Mount • Straight Terminal

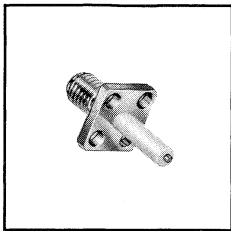


Flange Mount Plug Receptacle

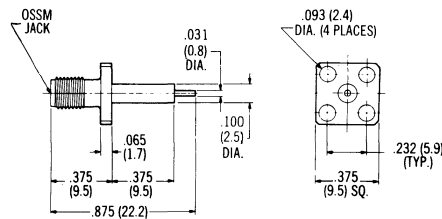


| | |
|-----------------------------|--------------|
| Non-Captured Center Contact | |
| Part Number | 1451-1200-02 |
| Captured Center Contact* | |
| Part Number | 1451-1201-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
* Contact captivation per U.S. patent number 3,292,117.



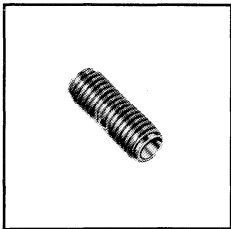
Flange Mount Jack Receptacle



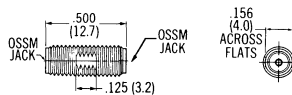
| | |
|-----------------------------|--------------|
| Non-Captured Center Contact | |
| Part Number | 1452-1200-02 |
| Captured Center Contact* | |
| Part Number | 1452-1201-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
* Contact captivation per U.S. patent number 3,292,117.

In-Series Adapters

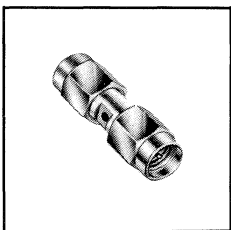


Jack to Jack Adapter

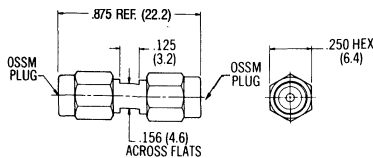


| | |
|-------------|--------------|
| Part Number | 1480-0000-02 |
|-------------|--------------|

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
* Contact captivation per U.S. patent number 3,292,117.

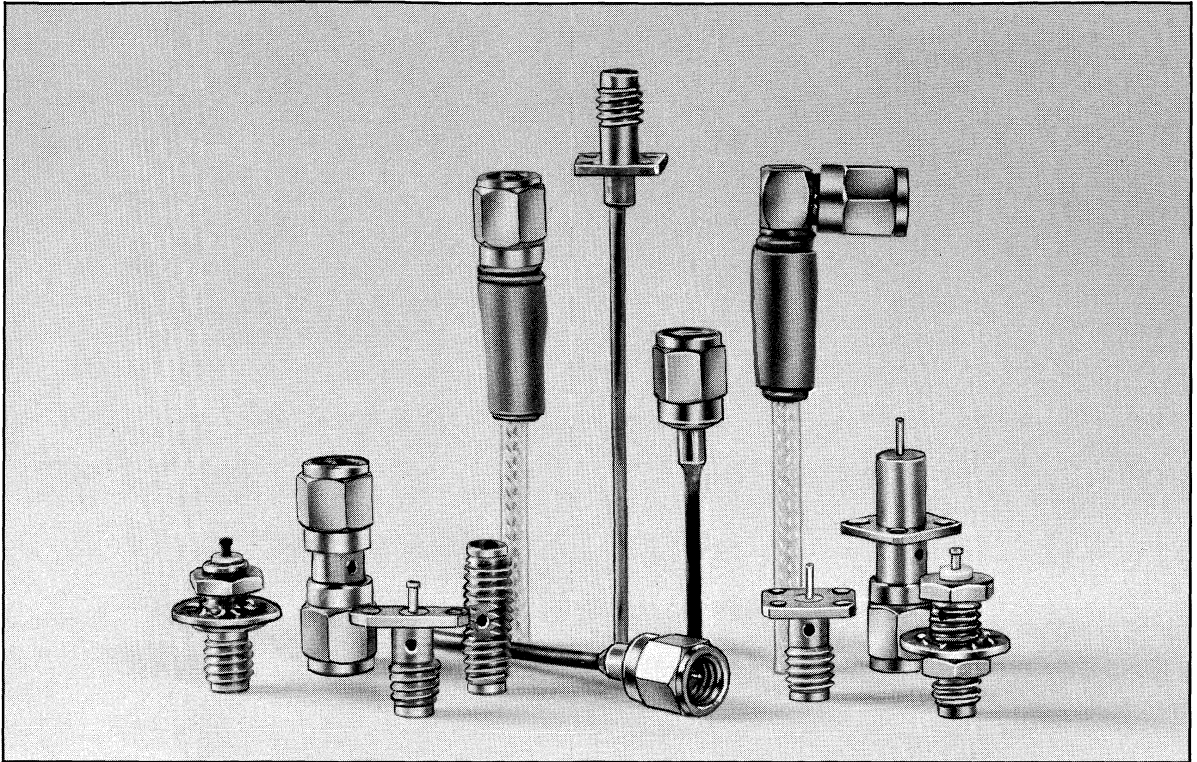


Plug to Plug Adapter



| | |
|-------------|--------------|
| Part Number | 1481-0000-02 |
|-------------|--------------|

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
* Contact captivation per U.S. patent number 3,292,117.



The microminiature series has been developed to meet the increasing demand for smaller connector size. This series is small, but still very rugged for its relative size.

The interface mating design insures precise outer shell alignment before engagement of the inner contacts. The OSMM series is compatible with smaller diameter semi-rigid cable.

Design and Construction:

All shell and body parts are made of stainless steel for ruggedness and long life. The dielectric is PTFE fluorocarbon. The center contacts are made of beryllium copper, gold plated. The coupling thread is .138-40 UNF thread.

Types:

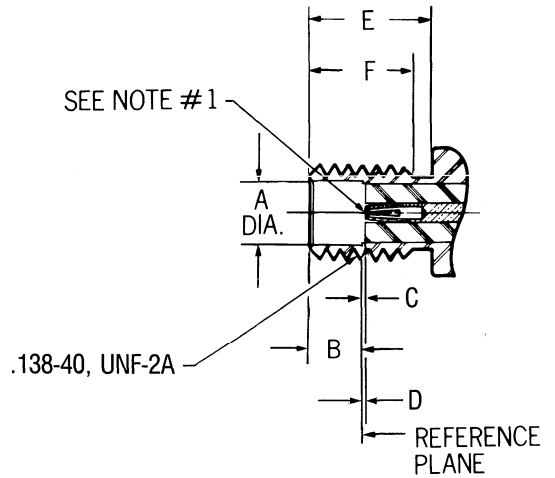
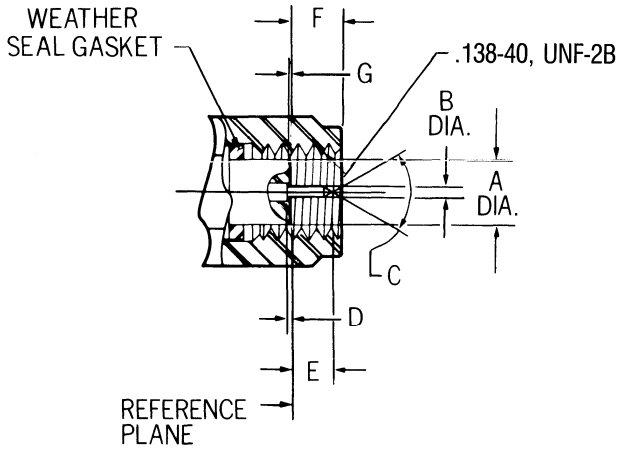
The OSMM series connectors are available for appropriate size semi-rigid and flexible coaxial cables. Panel and bulkhead mount are also available to provide complete flexibility to component and system design.

Application:

Typical applications include requirements from low RF to high microwave frequencies. The higher order modeing for this series is above 45.0 GHz, but the primary feature is the microminiature size.

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| Straight Terminal | |
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PLUG

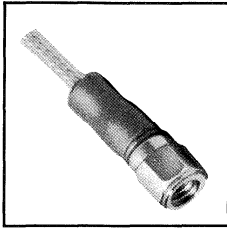
| Letter | Inches (Millimeters) ³ | |
|--------|-----------------------------------|--------------|
| | Minimum | Maximum |
| A | .0930 (2.36) | .0946 (2.43) |
| B | .0150 (0.38) | .0163 (0.42) |
| C | 60° | 90° |
| D | .000 (0.00) | .010 (0.25) |
| E | .055 (1.40) | .070 (1.78) |
| F | .065 (1.65) | .099 (2.29) |
| G | .000 (0.00) | .010 (0.25) |

JACK

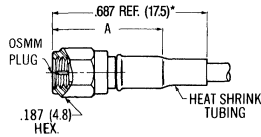
| Letter | Inches (Millimeters) ³ | |
|--------|-----------------------------------|-------------|
| | Minimum | Maximum |
| A | .096 (2.44) | .097 (2.46) |
| B | .078 (1.98) | .082 (2.08) |
| C | .000 (0.00) | .010 (0.25) |
| D | .000 (0.00) | .010 (0.25) |
| E | .175 (4.45) | - |
| F | .140 (3.56) | - |

1. ID to meet VSWR and contact resistance when mated with .0155 (+.0008/- .0005) (0.0394 mm) dia. pin.
 2. When fully engaged, the two reference planes must coincide with metal to metal contact.
 3. Metric equivalents (to the nearest 0.01mm) are given for general information only.

| Requirement | MIL-C-39012 Applicable Paragraph | Detail |
|---------------------------------|-------------------------------------|--|
| General | | |
| Material | 3.3 | Steel corrosion resistant per ASTM-A-582 and ASTM-A-484, Type 303. Beryllium copper per ASTM B 196. PTFE Fluorocarbon per ASTM-D-1457. |
| Finish | 3.3.1 | Center contacts shall be gold plated to a min. thickness of .00005 inch in accordance with MIL-G-45204, Typ I, Grade C. All other metal parts shall be finished as to provide a connector which meets the corrosion requirements. |
| Design | 3.4 | The design shall be such that the outline shown in this catalog and the interface dimensions of MIL-STD-348A are met. |
| Electrical | | |
| Insulation Resistance | 3.11 | The insulation resistance shall not be less than 5,000 megohms. |
| Corona Level | 3.22 | The connector shall not exhibit breakdown when the voltage is 150 volts rms at 70,000 ft. |
| Dielectric Withstanding Voltage | 3.17 | The magnitude of the test voltage shall be 500 volts rms at sea level. |
| RF High Potential | 3.23 | The withstanding voltage is 375 volts rms at 5 MHz. Leakage current is not applicable. |
| Contact Resistance | 3.16 | Center contact resistance: 3.5 milliohms max. Outer contact resistance: 2.8 milliohms max. |
| VSWR | 3.14 | No military slash sheet applies. Consult factory. Frequency range dependent on cable used. |
| RF Leakage | 3.26 | No military slash sheet applies. Consult factory. |
| Insertion Loss | 3.27 | No military slash sheet applies. Consult factory. Frequency range dependent on cable used. |
| Mechanical | | |
| Force to Engage | 3.5.1 | The torque required to engage and disengage shall not exceed 1 in.-lbs. The longitudinal force is not applicable. |
| Coupling Nut Retention | 3.25 | 40 lbs. min. Applicable for plug connectors only. |
| Coupling Proof Torque | 3.6 | 4 in.-lbs. min. Applicable for plug connectors only. |
| Cable Retention | 3.24 | No military slash sheet applies. Consult factory. |
| Mating Characteristics | 3.7 | Applicable to jack connectors only. Oversize pin .0165 min. dia., .045 deep; insertion force 3 lbs. max. with .0163 min. dia. pin; withdrawal force 0.5 oz. min. with .015 max. dia. pin. |
| Connector Durability | 3.15 | The connector to be tested and its mating connector shall be subjected to 500 insertion and withdrawal cycles at 12 cycles per minute max. The connector shall show no evidence of mechanical failure and shall meet the mating characteristic requirements. |
| Recommended Mating Torque | — | 2 in.-lbs. |
| Environmental | | |
| Vibration | 3.18 | Specification MIL-STD-202, method 204, test condition D. |
| Shock | 3.19 | Specification MIL-STD-202, method 213, test condition I. |
| Thermal Shock | 3.20 | No military slash sheet applies. Consult factory. |
| Corrosion (Salt Spray) | 3.13 | Specification MIL-STD-202, method 101, test condition B. |
| Moisture Resistance | 3.21 | Specification MIL-STD-202, method 106. No measurements at high humidity. Insulation resistance shall be at least 200 megohms within 5 minutes of removal from humidity. |

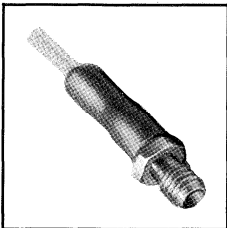


Straight Cable Plug

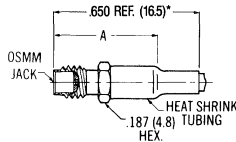


| Cable | RG 196/U Flexible | .034 Dia.* Semi-Rigid | .047 Dia.* Semi Rigid |
|-------------|---------------------------------|--------------------------------|--------------------------------|
| Attachment | Crimp | Direct Solder | Direct Solder |
| Part Number | 4031-7196-00 | 4001-7934-00 | 4001-7947-00 |
| Dim. A | Inches (mm) .450 Ref. (11.4) | Inches (mm) .360 Ref. (9.2) | Inches (mm) .360 Ref. (9.2) |

* Semi-rigid versions do not use heat shrink tubing.
Finish: Gold plate. For passivated stainless steel coupling nut, change the Part Number suffix from -00 to -02.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

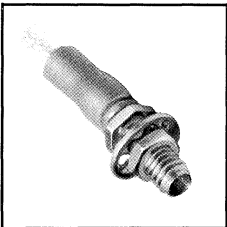


Straight Cable Jack

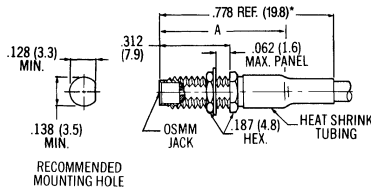


| Cable | RG 196/U Flexible | .034 Dia.* Semi-Rigid | .047 Dia.* Semi Rigid |
|-------------|---------------------------------|--------------------------------|--------------------------------|
| Attachment | Crimp | Direct Solder | Direct Solder |
| Part Number | 4032-7196-00 | 4002-7934-00 | 4002-7947-00 |
| Dim. A | Inches (mm) .437 Ref. (11.1) | Inches (mm) .330 Ref. (8.4) | Inches (mm) .330 Ref. (8.4) |

* Semi-rigid versions do not use heat shrink tubing.
Finish: Gold plate.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

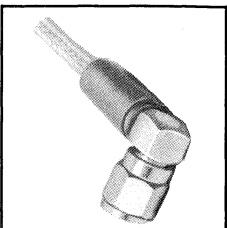


Bulkhead Feedthrough Cable Jack

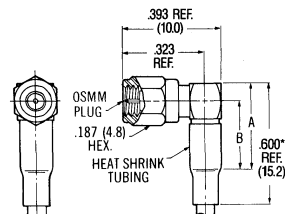


| Cable | RG 196/U Flexible | .034 Dia.* Semi-Rigid | .047 Dia.* Semi Rigid |
|-------------|---------------------------------|---------------------------------|---------------------------------|
| Attachment | Crimp | Direct Solder | Direct Solder |
| Part Number | 4034-7196-00 | 4004-7934-00 | 4004-7947-00 |
| Dim. A | Inches (mm) .565 Ref. (14.4) | Inches (mm) .458 Ref. (11.6) | Inches (mm) .458 Ref. (11.6) |

* Semi-rigid versions do not use heat shrink tubing.
Finish: Gold plate.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

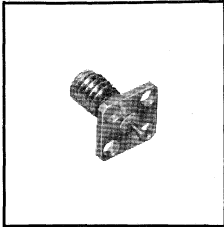


Right Angle Cable Plug

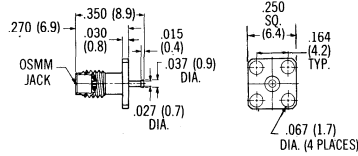


| Cable | RG 196/U Flexible | .034 Dia.* Semi-Rigid | .047 Dia.* Semi Rigid |
|-------------|--------------------------------|--------------------------------|--------------------------------|
| Attachment | Crimp | Direct Solder | Direct Solder |
| Part Number | 4037-7196-00 | 4007-7934-00 | 4007-7947-00 |
| Dim. A | Inches (mm) .363 Ref. (9.2) | Inches (mm) .256 Ref. (6.5) | Inches (mm) .256 Ref. (6.5) |
| Dim. B | .285 Ref. (7.2) | .178 Ref. (4.5) | .178 Ref. (4.5) |

* Semi-rigid versions do not use heat shrink tubing.
Finish: Gold plate. For passivated stainless steel coupling nut, change the Part Number suffix from -00 to -02.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

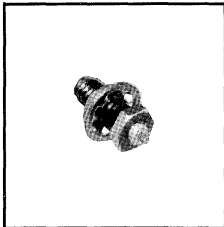


Flange Mount Jack

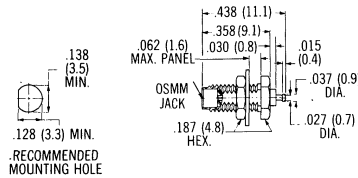


| | |
|---|---------------------|
| Captured Center Contact* Turret Terminal | |
| Part Number | 4052-0000-00 |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02.
* Contact captivation per U.S. patent number 3,292,117.

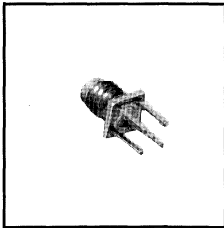


Bulkhead Feedthrough Jack

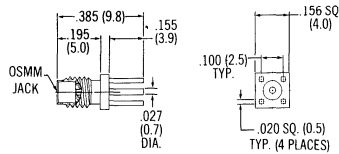


| | |
|---|---------------------|
| Captured Center Contact* Turret Terminal Rear Mount | |
| Part Number | 4056-0000-00 |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02.
* Contact captivation per U.S. patent number 3,292,117.

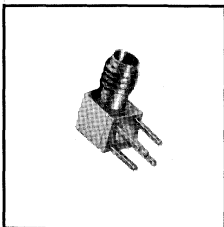


Printed Circuit Board Straight Jack

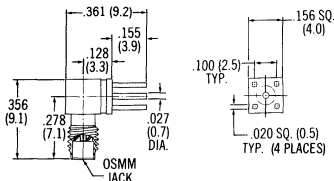


| | |
|---|---------------------|
| Captured Center Contact* Straight Terminal | |
| Part Number | 4062-0000-00 |

Finish: Gold plate.
* Contact captivation per U.S. patent number 3,292,117.



Printed Circuit Board Right Angle Jack



| | |
|--|---------------------|
| Captured Center Contact Straight Terminal | |
| Part Number | 4064-0000-00 |

Finish: Gold plate. For passivated stainless steel, change the Part Number suffix from -00 to -02.

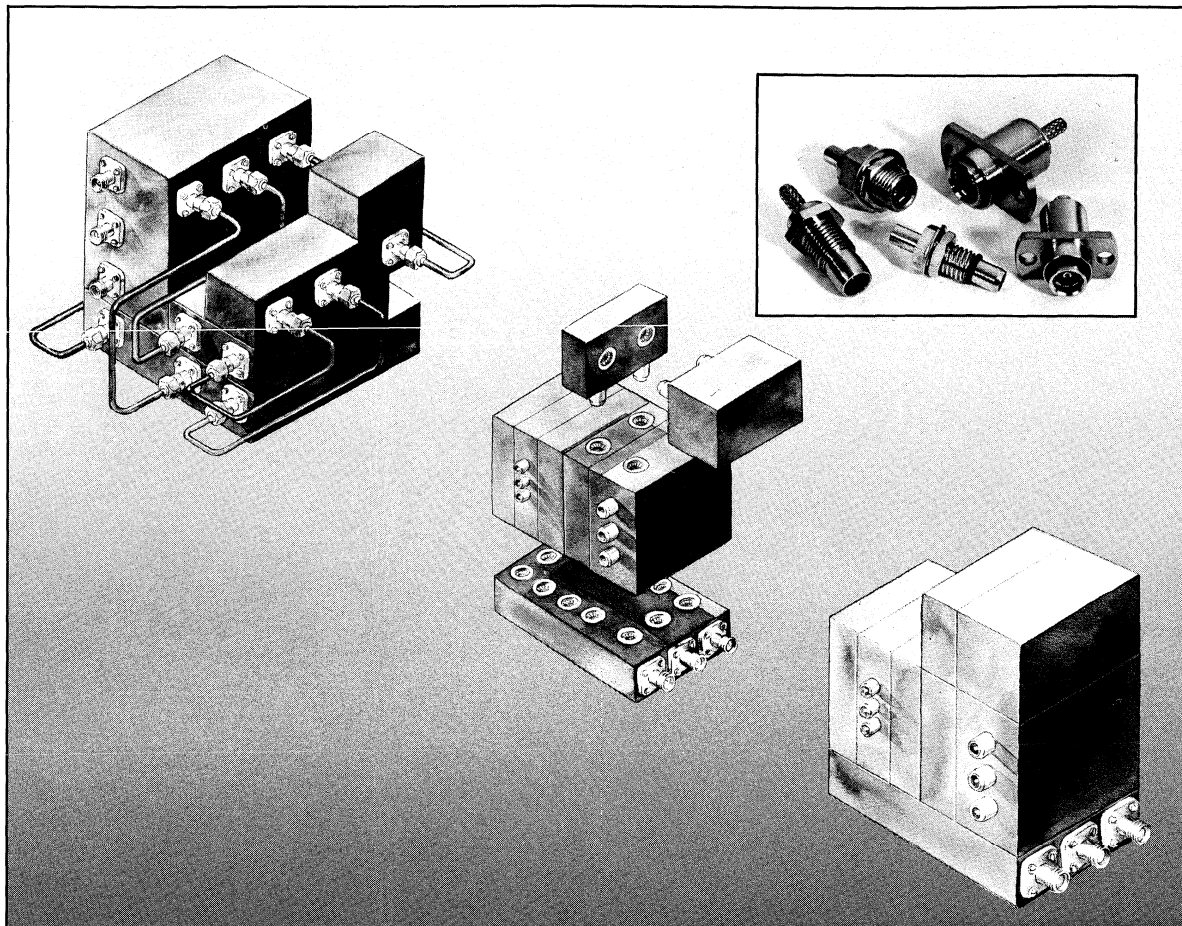


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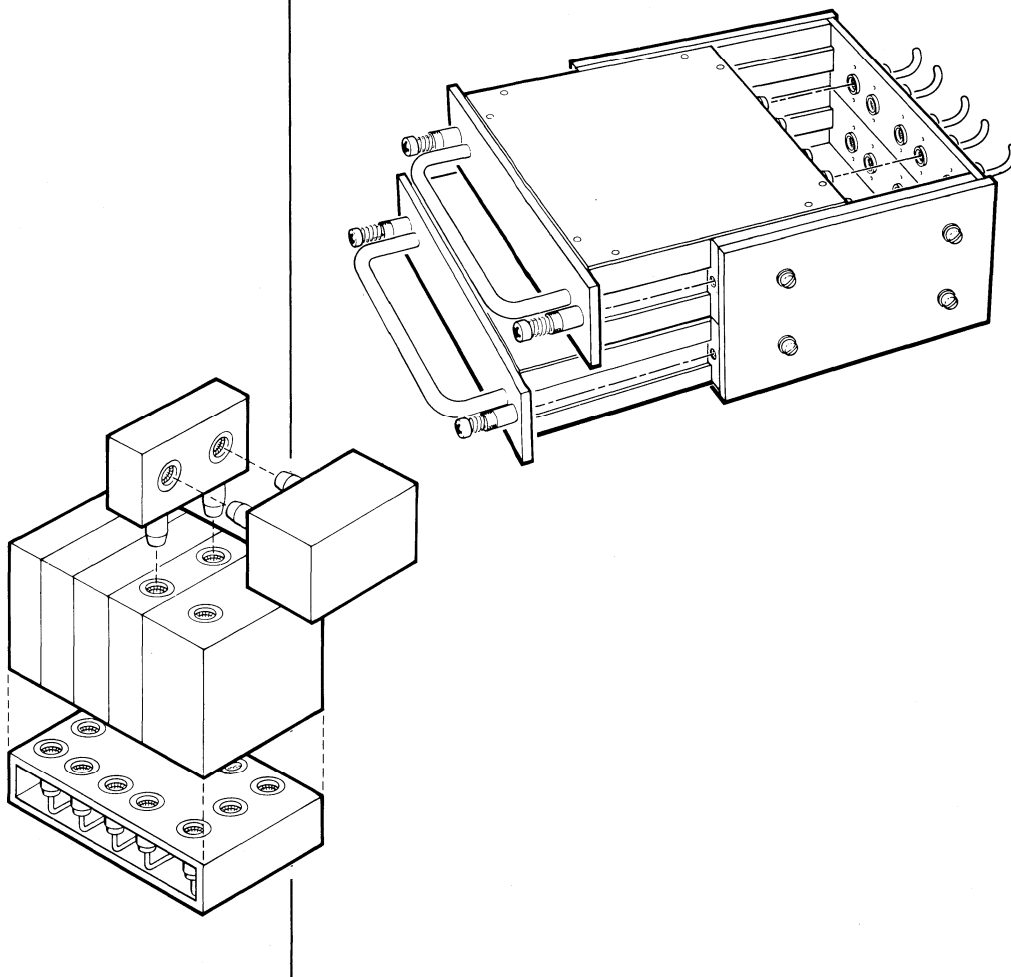
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Technology and Applications

OSP blind mate connectors from M/A-COM can be used to solve a wide variety of RF and microwave interconnect problems. When using OSP blind mates, careful consideration must be given to choosing the right connectors for the application and in specifying such mounting features as:

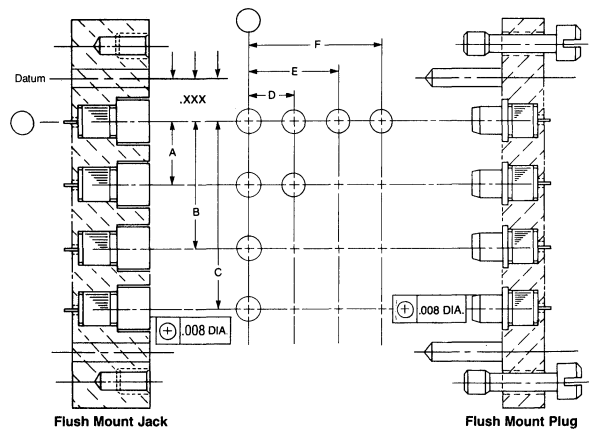
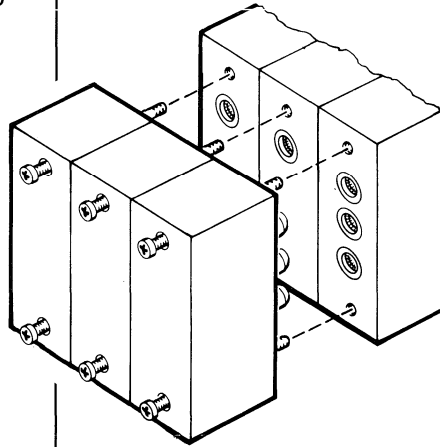
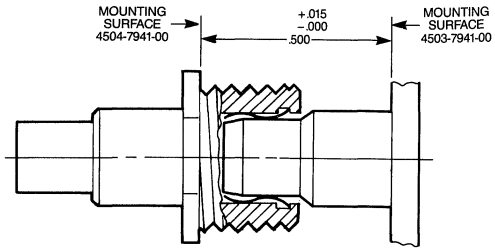
- Connector-to-connector fixed and float tolerances
- Mating forces and float mount spring loading
- Connector density in multiple connector arrays
- Panel deflection

The following section is intended to be a design aide for many typical applications and to help get optimum performance out of OSP and OSSP blind mate connectors. M/A-COM design and applications engineering group is always available to assist the designer during the development phase.



Module to Module Module to Motherboard

For applications such as modularized MIC to MIC packages, rigid mount hermetic and non-hermetic OSP connectors are recommended because space is usually at a premium and relatively tight tolerances can be held. In using rigid mount OSP connectors, the axial and radial float tolerance of the OSP interface is used to accommodate misalignment. Tolerance considerations for an array of rigid mount OSP's is illustrated below. Also shown is a typical method of interlocking modules using jack screws.



A and D = .325 MIN.

Misalignment Tolerances

Axial:

The OSP and OSSP blind mate interfaces can accommodate axial misalignment. The recommended design limits and maximum allowable separation for each type are given in the following table:

| Interface | Maximum Separation | Recommended Design Limit |
|-----------|--------------------|--------------------------|
| OSP | .030 | .015 |
| OSSP | .020 | .010 |

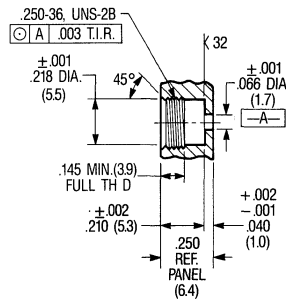
Radial:

Fixed mount blind mates can tolerate a certain degree of radial misalignment without electrical or mechanical performance degradation. The following table gives the design limits for each connector type:

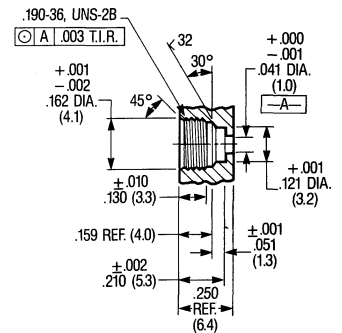
| Interface | True Position Mounting Hole Centerline Tolerance | Total Connector Misalignment* |
|-----------|--|-------------------------------|
| OSP | .003 | .008 |
| OSSP | .002 | .0040 |

*Per mated pair in any direction.

Hermetic Mounting Detail



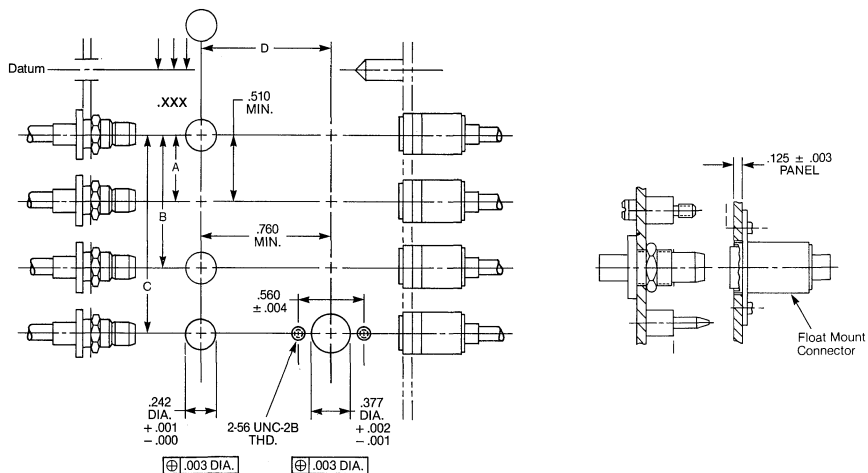
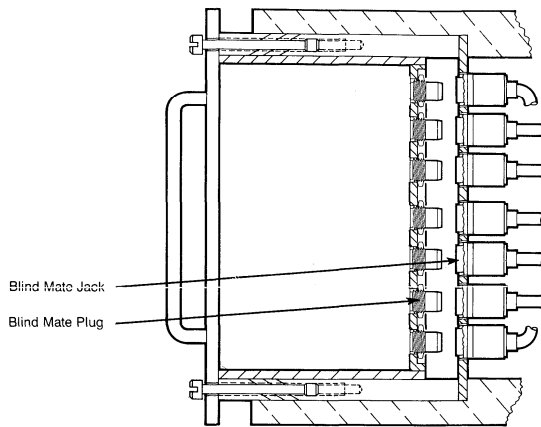
OSP Plug Launcher



OSSP Plug Launcher

Rack and Panel Module to Motherboard

Many multiple mate applications, such as rack and panel, require a large amount of axial and radial misalignment tolerance. The OSP and OSSP float mount jack connectors are ideally suited for these situations since they have an external float mechanism in addition to the normal misalignment tolerance of the blind mate interface.



Misalignment Tolerances

Axial:

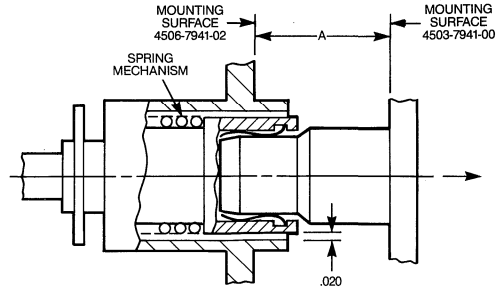
The float mount design can accommodate a maximum of .050 inch of longitudinal misalignment (mounting surface to mounting surface) as long as a .010 inch minimum preload condition is met.

Radial:

The floating connector will accommodate $\pm .020$ radial misalignment with mounting hole centerline dimensioned from a pre-designated datum of $\text{Ⓜ} .006 \text{ DIA.}$. The radial tolerance accommodates mating package misalignment and mounting hole tolerance.

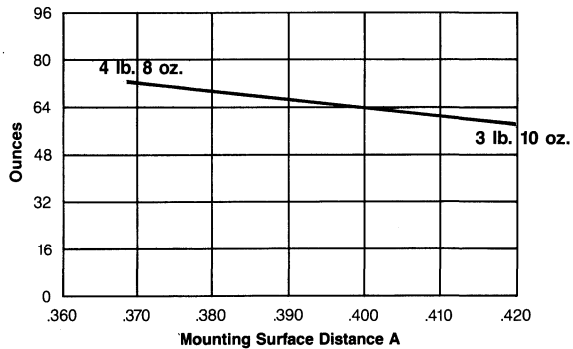
The float mounted OSP and OSSP connectors introduce some new design aspects which must be considered at the development stage in order to take full advantage of the float features.

Spring Load Forces



Misalignment tolerance is obtained from a spring mechanism which separates the connector interface from the flange housing and allows it to float. As the springs work to align mating connectors, the forces are transmitted to the mounting panel. The force generated by several connectors can be considerable under extreme mismatch conditions and could cause bowing of the mounting panels if they are not supported properly. Typical forces on a mated pair at extremes is illustrated below.

Spring Load Force*



*Consult factory for designs with greater spring force.

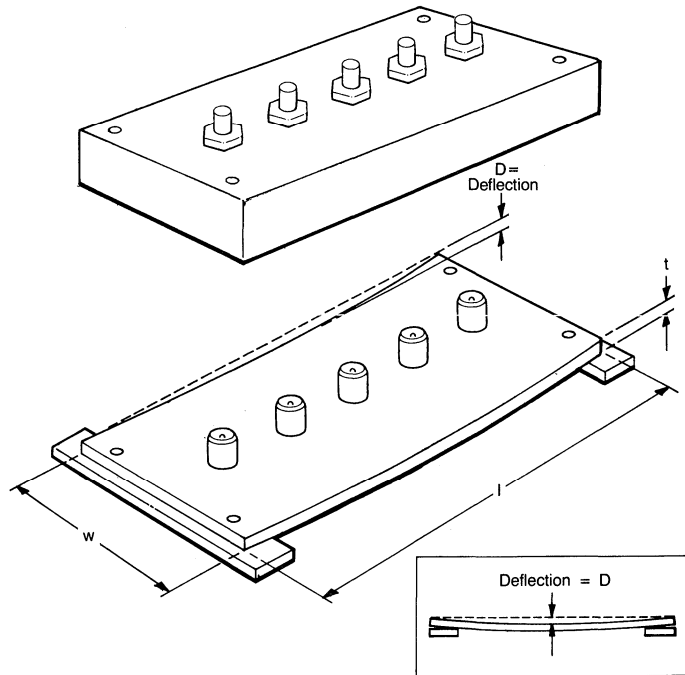
Recommended Preload:

When using connectors as depicted above, it is necessary that the connector mounting surface "A" be .419 maximum. Consult factory for other connector combinations.

Cables

OSP blind mate connectors are available in both flexible and semi-rigid cable types. If an application requires semi-rigid cable it is recommended that a service loop be used to facilitate the float features of the connector.

When mounting several OSP or OSSP blind mate connectors on a plate or panel, such as in a module-to-motherboard or rack and panel application, the design must take into account the interface mating forces to engage the connectors, and the spring preload forces in floating mount cases. If this is not done, distortion of mounting plates and panels can occur which will prevent proper mating of the connectors and degrade performance. A technique that can be used to approximate the amount of distortion or bowing is to consider the panel as a beam under deflection. Two typical examples using float and fixed mount OSP's on aluminum panels are given.



Reference Data:

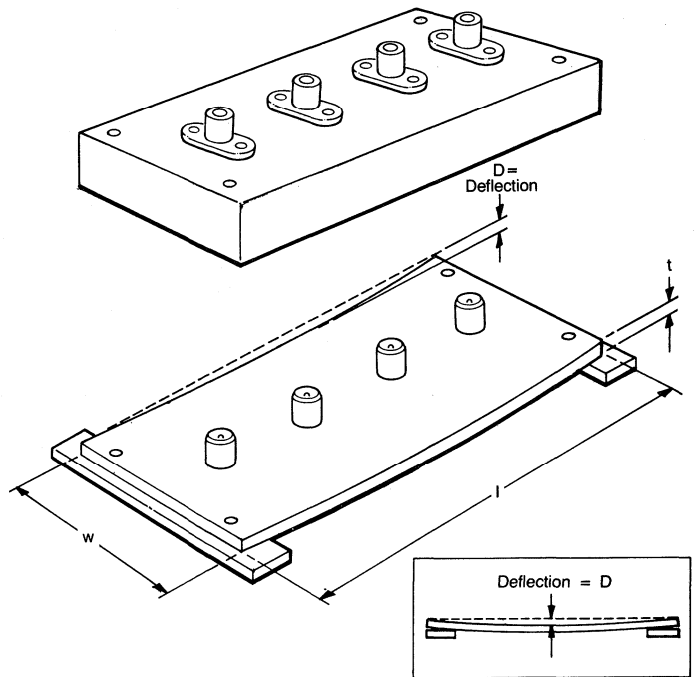
| | |
|------------------------|-------------------------------------|
| Material: | 6061T6 Aluminum |
| Modulus of Elasticity: | $E = 10 \times 10^6$ PSI |
| Ultimate Strength: | $U = 45,000$ PSI |
| Yield Strength: | $S = 40,000$ PSI |
| Deflection: | $D = \frac{Fl^3}{384 EI}$ in inches |
| Moment of a Beam: | $I = \frac{wt^3}{12}$ |

Fixed Mount Connector Example:

- 5 fixed mount OSPs with 2.5 lbs. mating for each ($F = 12.5$ lbs.)
- Aluminum mounting plate 6061T6
.090 inch thick (t) X .750 inch wide (w) X 3.00 inch long (l)

$$I = \frac{(.75)(.09)^3}{12} = 4.56 \times 10^{-5} \text{ inch}^4$$

$$D = \frac{(12.5)(3.00)^3}{(384)(10 \times 10^6)(4.56 \times 10^{-5})} = .0019 \text{ inch}$$



Reference Data:

| | |
|------------------------|-------------------------------------|
| Material: | 6061T6 Aluminum |
| Modulus of Elasticity: | $E = 10 \times 10^6$ PSI |
| Ultimate Strength: | $U = 45,000$ PSI |
| Yield Strength: | $S = 40,000$ PSI |
| Deflection: | $D = \frac{Fl^3}{384 EI}$ in inches |
| Moment of a Beam: | $I = \frac{wt^3}{12}$ |

Float Mount Connector Example:

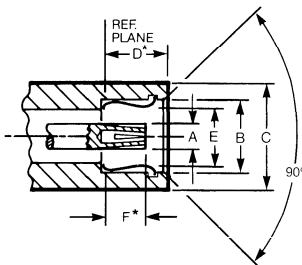
- 4 float mount OSPs with a maximum compressive load of 4 lbs., 8 oz. each ($F = 18$ lbs.)
- Aluminum mounting plate 6061T6
.090 inch thick (t) X .750 inch wide (w) x 2.00 inch long (l)

$$I = 4.56 \times 10^{-5} \text{ inch}^4$$

$$D = \frac{(18)(2.00)^3}{(384)(10 \times 10^6)(4.56 \times 10^{-5})} = .00082 \text{ inch}$$

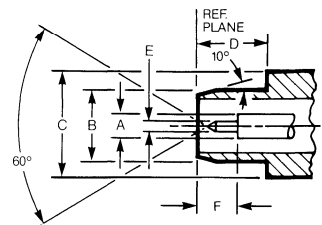
The connector interface, specifically designed for multiple interconnects, maintains reliable performance over the typical mechanical tolerance required in cost effective packaging.

The interface test data shows excellent performance is maintained with mating gaps up to .015 inch.



JACK

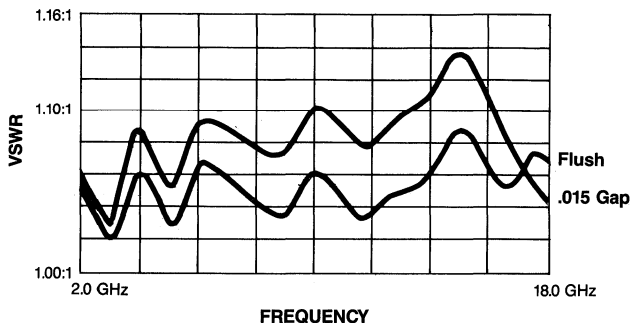
| Letter | Inches (Millimeters) |
|--------|----------------------|
| A | .070 (1.78) Nom. |
| B | .225 (5.72) Min. |
| C | .300 (7.62) Ref. |
| D | .197 (5.00) Nom.* |
| E | .200 (5.08) Max. |
| F | .127 (3.23) Max.* |



PLUG

| Letter | Inches (Millimeters) |
|--------|----------------------|
| A | .070 (1.78) Nom. |
| B | .210 (5.33) Nom. |
| C | .300 (7.62) Ref. |
| D | .199 (5.05) Min. |
| E | .036 (0.91) Nom. |
| F | .128 (3.25) Min. |

*With spring bottomed.
Metric equivalents (to the nearest 0.01mm) are given for general information only.



The specifications given refer specifically to mated pair of Part Number 4504-7941-00 and 4503-7941-00 (RG-402) and 4504-7985-00 and 4503-7985-00 (RG-405). Specifications on other connectors are available from the company on request.

The general electrical, mechanical and environmental specifications in the following table are recommended for procurement documents or drawings.

Engineering Data

Impedance: 50 ohms
 Frequency: dc to 22.0 GHz
 Temperature Rating: -65° to +125° C

Electrical

| | RG 402 (.141) Semi-Rigid | RG 405 (.085) Semi-Rigid |
|--|--|-------------------------------------|
| VSWR: | | |
| dc - 18.0 GHz | 1.02 + .005f (GHz) | 1.05 + .005f (GHz) |
| 18.0 - 22.0 GHz | 1.02 + .008f (GHz) | 1.05 + .009f (GHz) |
| RF Transmission Loss: | .03x \sqrt{f} (GHz) | .03x \sqrt{f} (GHz) |
| Insulation Resistance: | 5,000 megohms min. | 5,000 megohms min. |
| Contact Resistance: | | |
| Center Contact: | 2.0 milliohms max. | 2.0 milliohms max. |
| Outer Contact: | 2.0 milliohms max. | 2.0 milliohms max. |
| Outer Contact to Cable: | 0.5 milliohms max. | 0.5 milliohms max. |
| Dielectric Withstanding Voltage: | 1500 volts RMS | 1000 volts RMS |
| Corona Extinction Voltage at 70,000 Ft.: | 375 volts min. | 335 volts min. |
| RF High Potential at 5 MHz: | 1,000 volts RMS | 670 volts RMS |
| RF Leakage Interface Only: | - (90-fGHz) dB min. (fully mated) | - (90-fGHz) dB min. (fully mated) |
| Power Handling: | 300W at 3 GHz (sea level) and room temperature | |

Environmental

Corrosion: Method 101, Condition B, MIL-STD-202
 Vibration: Method 204, Condition D, 20G's, MIL-STD-202
 Shock: Method 213, Condition I, 100G's, MIL-STD-202
 Temperature Cycling: Method 107, Condition B, MIL-STD-202
 Moisture Resistance: Method 106, MIL-STD-202

Material

Housing: Corrosion resistant steel Type 303 (stainless) per ASTM A484 and A582
 Center Contact: Beryllium copper per ASTM-B-196
 Dielectric: TFE fluorocarbon per ASTM-D-1457
 Gasket (O'Ring): MIL-P-25732

Mechanical

Force to Engage: 3 pounds max.
 Force to Disengage: 1.5 pounds max.
 Center Contact Retention: 6 pounds min.
 Durability: 5,000 Cycles
 Radial Misalignment:
 Rigid Mount: ± .004 inch
 Float Mount: ± .020 inch

Mating Characteristics

| | | |
|------------------------|---|--|
| Jack Connector: | | |
| Center Contact Socket: | Oversize test Pin: .0372 + .0001 inch dia. Test Pin Finish: 16 micro inch Insertion Depth: .030/.045 Number of Insertions: 3 | |
| Insertion Force: | Test Pin: .0370 + .0001 inch dia. Test Pin Finish: 16 micro inch Insertion Depth: .050/.075 Insertion Force: 3 pounds max. | |
| Withdrawal Force: | Test Pin: .0355 - .0001 inch dia. Test Pin Finish: 16 micro inch Insertion Depth: .050/.075 Withdrawal: 1 ounce min. | |

Finish

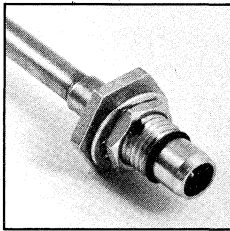
Center Contact: Gold plate per MIL-G-45204, Type II, Class 1 over copper plate per MIL-C-14550
 Housing: Gold plate per MIL-G-45204, Typ II, Class 0 over nickel plate per QQ-N-290, Class 2 or passivate per ASTM-A380

**All dimensions shown are nominal.
 Contact the factory for specific tolerances.**

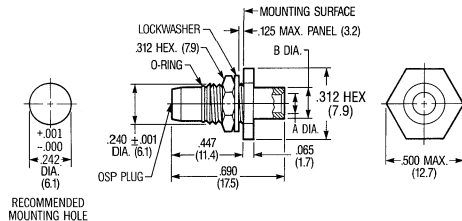
OSP miniature connectors for semi-rigid cable meet high performance requirements for microwave multiple interconnects. Standard units are available in bulkhead or panel mount designs for either direct solder or OSCC solderless compression crimp attachment. Complete tooling for both versions is located in the Tool Section of this catalog.

Jack connectors are available in either float or rigid mount. Rigid mount units will function to specifications up to $\pm .004$ inch (.10mm) radial misalignment with the mating plug connector. Applications requiring greater than $\pm .004$ inch (.10mm) radial misalignment can use either the float design or floating connector plates with guide pins.

.085 and .141 Dia. • Direct Solder Attachment

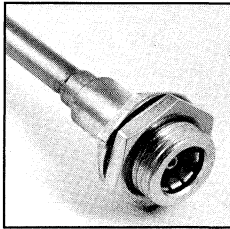


Bulkhead Feedthrough Cable Plug Rear Mount

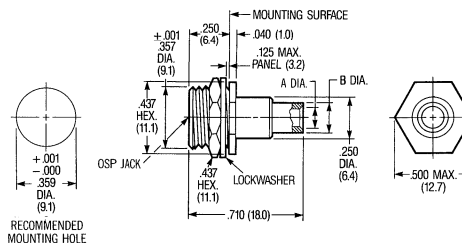


| Cable | RG-402/U (.141) | RG-405/U (.085) |
|-------------------------------------|----------------------------------|----------------------------------|
| Part Number | 4503-7941-00 | 4503-7985-00 |
| DESC Drawing Omni Part Number | 85072ZSGA 4503-5022-00 | 85072ZSGB 4503-5023-00 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .180 (4.6) | .120 (3.0) |

Finish: Housing that is soldered to cable outer conductor is gold plated. Refer to recommended assembly tools in Tool Section.

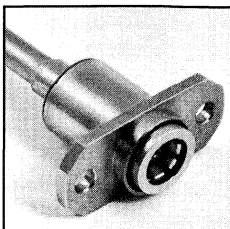


Bulkhead Feedthrough Cable Jack Rigid Rear Mount

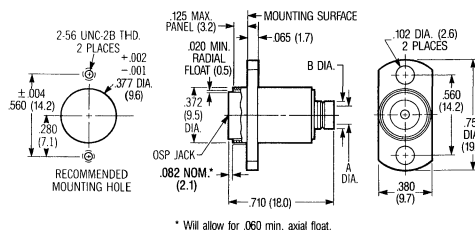


| Cable | RG-402/U (.141) | RG-405/U (.085) |
|-------------|--------------------------------|--------------------------------|
| Part Number | 4504-7941-00 | 4504-7985-00 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .180 (4.6) | .120 (3.0) |

Finish: Housing that is soldered to cable outer conductor is gold plated. Refer to recommended assembly tools in Tool Section.



Flange Mount Cable Jack Floating Rear Mount



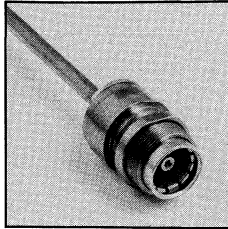
| Cable | RG-402/U (.141) | RG-405/U (.085) |
|-------------------------------------|----------------------------------|----------------------------------|
| Part Number | 4506-7941-02 | 4506-7985-02 |
| DESC Drawing Omni Part Number | 85071ZSGA 4506-5015-02 | 85071ZSGB 4506-5016-02 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .180 (4.6) | .120 (3.0) |

Finish: Inner housing that is soldered to cable is gold plated. Outer housing is passivated stainless steel. Refer to recommended assembly tools in Tool Section. When using semi-rigid cable, it is recommended that a service loop be used to facilitate the float features of the connector.

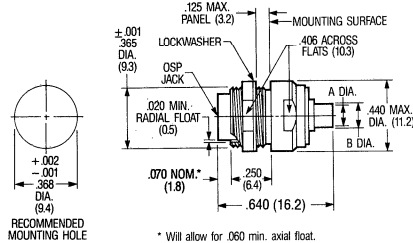


Miniature • Modular Blind Mate Connectors For Semi-Rigid Cable

085 and .141 Dia. • Direct Solder Attachment

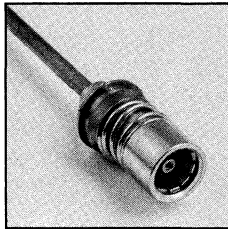


Low Profile – Bulkhead Feedthrough Cable Jack – Floating Rear Mount

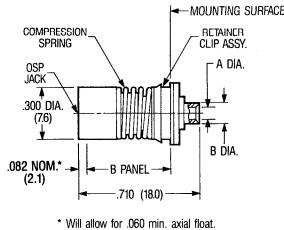


| Cable | RG-402/U (.141) | RG-405/U (.085) |
|-------------|--------------------------------|--------------------------------|
| Part Number | 4522-7941-02 | 4522-7985-02 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .180 (4.6) | .120 (3.0) |

Finish: Inner housing that is soldered to cable is gold plated. Outer housing is passivated stainless steel. Refer to recommended assembly tools in Tool Section. When using semi-rigid cable, it is recommended that a service loop be used to facilitate the float features of the connector.



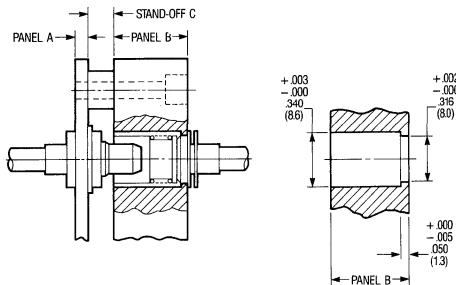
Low Profile – Panel Feedthrough Cable Jack – Floating Rear Mount



| Cable | RG-402/U (.141) | RG-405/U (.085) |
|-------------|--------------------------------|--------------------------------|
| Part Number | 4510-7941-00 | 4510-7985-00 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .180 (4.6) | .120 (3.0) |

Finish: Housing that is soldered to cable outer conductor is gold plated. Refer to recommended assembly tools in Tool Section. Recommended removal tool part number 4598-5015-54 is described in Tool Section. When using semi-rigid cable, it is recommended that a service loop be used to facilitate the float features of the connector.

Recommended Mounting Detail

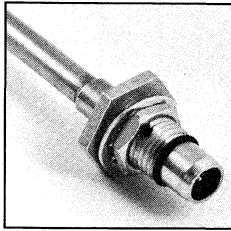


| Panel A ±.003 | Panel B ±.003 | Stand-Off C -.000 |
|---------------|---------------|-------------------|
| Inches (mm) | Inches (mm) | Inches (mm) |
| .090 (2.3) | .375 (9.5) | .285 (7.2) |
| .090 (2.3) | .438 (11.1) | .222 (5.6) |
| .090 (2.3) | .500 (12.7) | .160 (4.1) |
| .125 (3.2) | .375 (9.5) | .250 (6.4) |
| .125 (3.2) | .438 (11.1) | .187 (4.7) |
| .125 (3.2) | .500 (12.7) | .125 (3.2) |

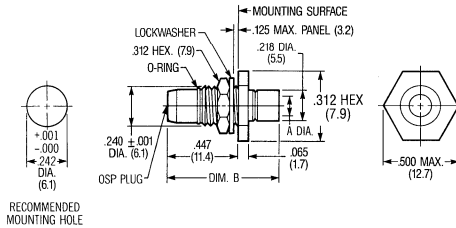
The OSCC Solderless Compression Crimp attachment meets high performance requirements for microwave system applications. The cable attachment is permanent and highly reliable.

Ease of assembly permits users unskilled in soldering techniques to rapidly produce cable assemblies with consistently excellent mechanical and electrical performance.

.085 and .141 Dia. • OSCC Solderless Compression Crimp Attachment

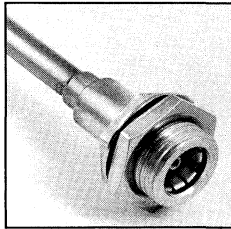


**Bulkhead Feedthrough Cable Plug
Fixed Rear Mount**

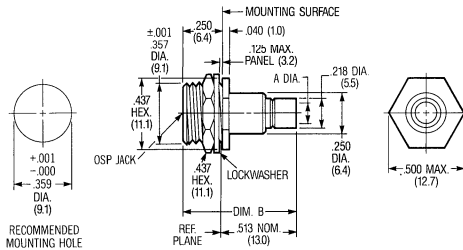


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|-------------|---------------------|---------------------|
| Part Number | 4503-7641-02 | 4503-7685-02 |
| Dim. A | Inches (mm) | Inches (mm) |
| | .143 (3.6) | .088 (2.2) |
| Dim. B | Before Crimping | .782 Ref. (19.8) |
| | After Crimping | .677 Max. (17.2) |

Outline drawing shows after crimp dimensions.
Finish: Passivated stainless steel.
Refer to recommended assembly tools in Tool Section.

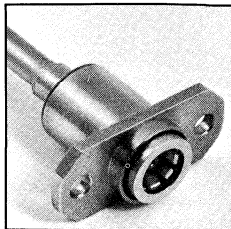


**Bulkhead Feedthrough Cable Jack
Fixed Rear Mount**

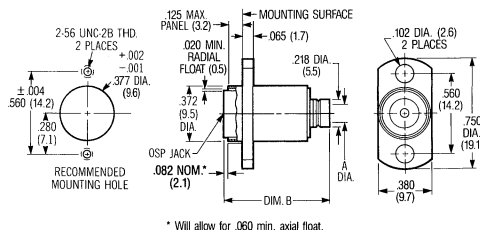


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|-------------|---------------------|---------------------|
| Part Number | 4504-7641-02 | 4504-7685-02 |
| Dim. A | Inches (mm) | Inches (mm) |
| | .143 (3.6) | .088 (2.2) |
| Dim. B | Before Crimping | .830 Ref. (21.1) |
| | After Crimping | .715 Max. (18.2) |

Outline drawing shows after crimp dimensions.
Finish: Passivated stainless steel.
Refer to recommended assembly tools in Tool Section.



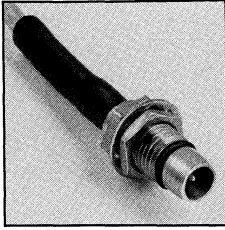
**Flange Mount Cable Jack
Floating Rear Mount**



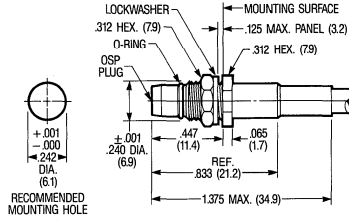
| Cable | RG 402/U (.141) | RG 405/U (.085) |
|-------------|---------------------|---------------------|
| Part Number | 4506-7641-02 | 4506-7685-02 |
| Dim. A | Inches (mm) | Inches (mm) |
| | .143 (3.6) | .088 (2.2) |
| Dim. B | Before Crimping | .891 Ref. (22.6) |
| | After Crimping | .780 Max. (19.8) |

Outline drawing shows after crimp dimensions.
Finish: Passivated stainless steel.
Refer to recommended assembly tools in Tool Section.
When using semi-rigid cable, it is recommended that a service loop be used to facilitate the float features of the connector.

Flexible Cable • Crimp Attachment

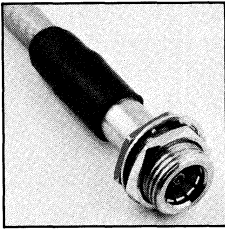


**Bulkhead Feedthrough Cable Plug
Rear Mount**

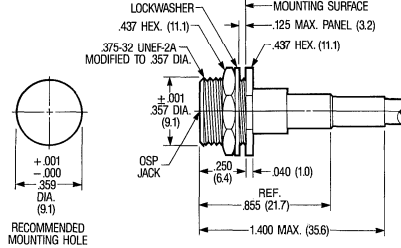


| | | |
|-------------------------------------|----------------------------------|----------------------------------|
| Cable | RG 55/U, 142 223, 400 | RG 174/U, 179 187, 188, 316 |
| Part Number | 4533-7341-02 | 4533-7388-02 |
| DESC Drawing Omni Part Number | 85074ZSGB 4533-5008-02 | 85074ZSGA 4533-5007-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Refer to recommended assembly tools in Tool Section.

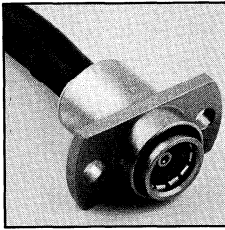


**Bulkhead Feedthrough Cable Jack
Rigid Rear Mount**

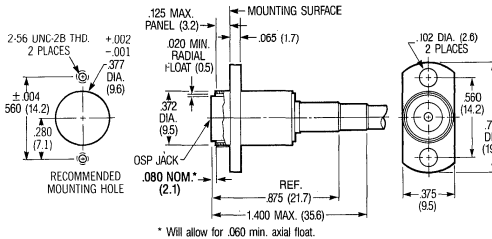


| | | |
|-------------|--------------------------|--------------------------------|
| Cable | RG 55/U, 142 223, 400 | RG 174/U, 179 187, 188, 316 |
| Part Number | 4534-7341-02 | 4534-7388-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Refer to recommended assembly tools in Tool Section.

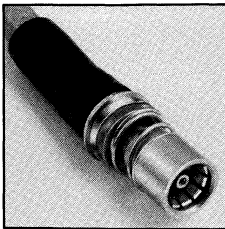


**Flange Mount Cable Jack
Floating Rear Mount**

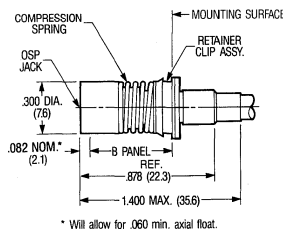


| | | |
|-------------------------------------|----------------------------------|----------------------------------|
| Cable | RG 55/U, 142 223, 400 | RG 174/U, 179 187, 188, 316 |
| Part Number | 4536-7341-02 | 4536-7388-02 |
| DESC Drawing Omni Part Number | 85073ZSGB 4536-5008-02 | 85073ZSGA 4536-5007-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Refer to recommended assembly tools in Tool Section.



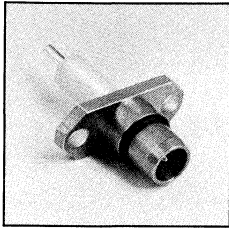
**Low Profile - Panel Feedthrough
Cable Jack - Rear Mount**



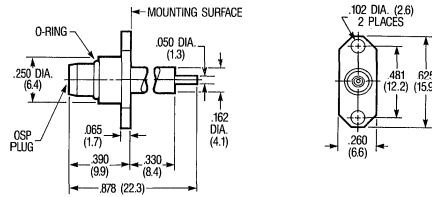
| | | |
|-------------|--------------------------|--------------------------------|
| Cable | RG 55/U, 142 223, 400 | RG 174/U, 179 187, 188, 316 |
| Part Number | 4540-7341-02 | 4540-7388-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Refer to recommended assembly tools in Tool Section.
Refer to Recommended Mounting Hole Detail for Semi-Rigid Cable Low Profile Feedthrough Cable Jack.
Recommended removal tool part number 4598-5015-54 is described in Tool Section.

Straight Terminal

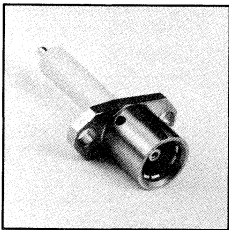


2-Hole Flange Mount Plug Receptacle

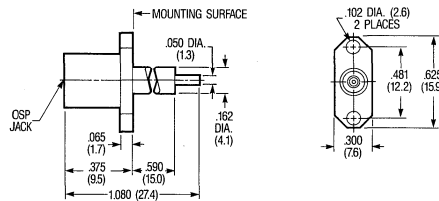


| | |
|-------------|---------------------|
| Part Number | 4551-1352-02 |
|-------------|---------------------|

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

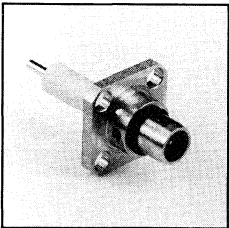


2-Hole Flange Mount Jack Receptacle

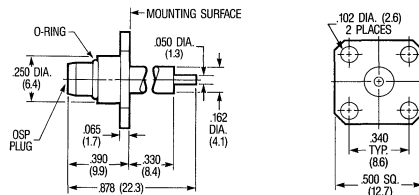


| | |
|-------------|---------------------|
| Part Number | 4552-1352-02 |
|-------------|---------------------|

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

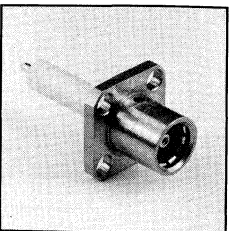


4-Hole Flange Mount Plug Receptacle

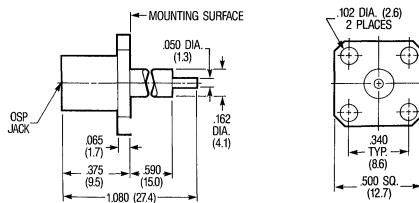


| | |
|-------------|---------------------|
| Part Number | 4551-1201-02 |
|-------------|---------------------|

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.



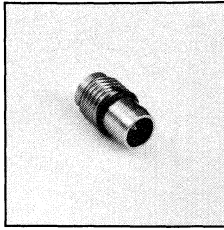
4-Hole Flange Mount Jack Receptacle



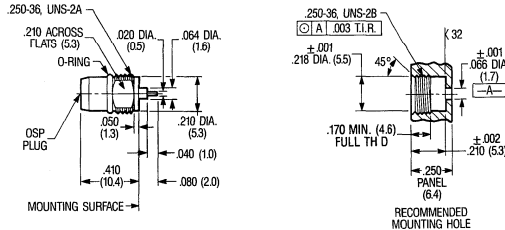
| | |
|-------------|---------------------|
| Part Number | 4552-1201-02 |
|-------------|---------------------|

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

Non-Hermetic • Straight Terminal

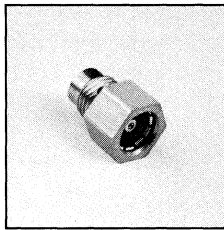


Threaded Installation – Panel Feedthrough Plug Receptacle

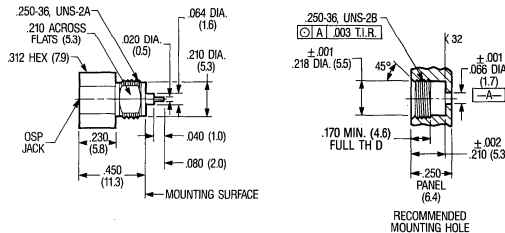


| | |
|-------------|--------------|
| Part Number | 4557-5009-02 |
|-------------|--------------|

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

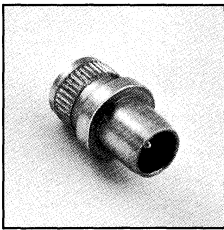


Threaded Installation – Panel Feedthrough Jack Receptacle

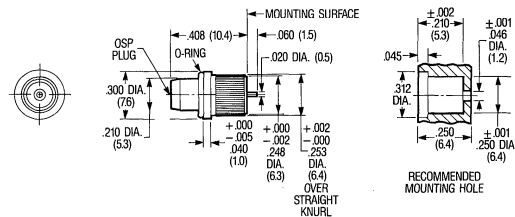


| | |
|-------------|--------------|
| Part Number | 4558-5009-02 |
|-------------|--------------|

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

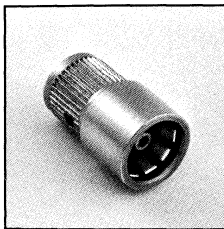


Press-Fit Installation – Panel Feedthrough Plug Receptacle

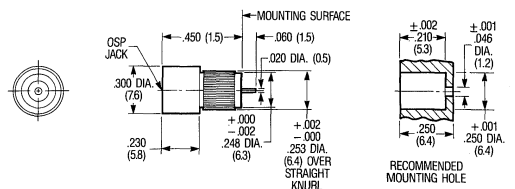


| | |
|-------------|--------------|
| Part Number | 4557-1154-02 |
|-------------|--------------|

Finish: Passivated stainless steel.



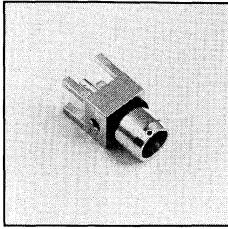
Press-Fit Installation – Panel Feedthrough Jack Receptacle



| | |
|-------------|--------------|
| Part Number | 4558-1154-02 |
|-------------|--------------|

Finish: Passivated stainless steel.

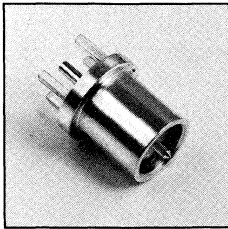
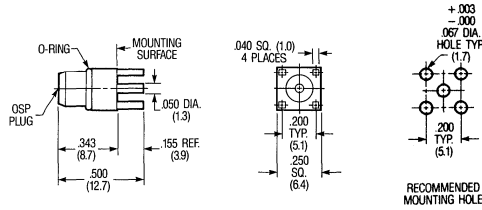
Straight Terminal • Printed Circuit Board



Straight Plug Receptacle – Captured Contact

| | |
|-------------|---------------------|
| Part Number | 4563-0000-00 |
|-------------|---------------------|

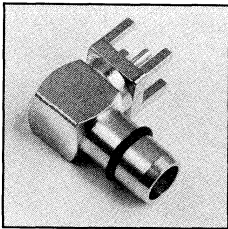
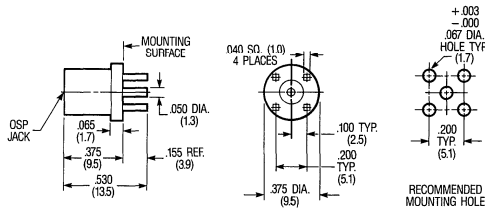
Finish: Gold plate.



Straight Jack Receptacle – Captured Contact

| | |
|-------------|---------------------|
| Part Number | 4562-0000-00 |
|-------------|---------------------|

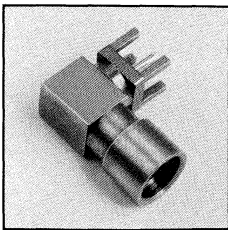
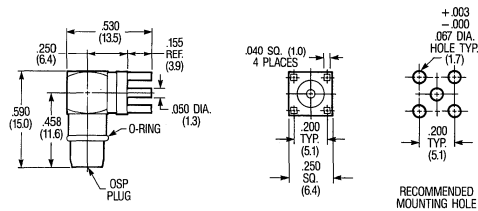
Finish: Gold plate.



Right Angle Plug Receptacle – Captured Contact

| | |
|-------------|---------------------|
| Part Number | 4565-0000-00 |
|-------------|---------------------|

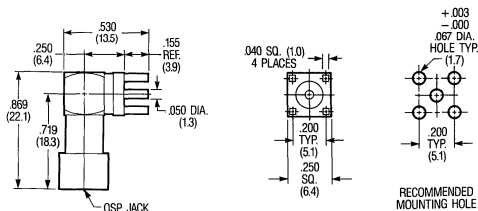
Finish: Gold plate.



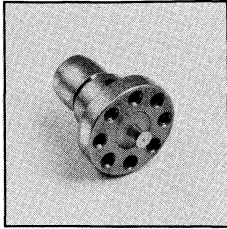
Right Angle Jack Receptacle – Captured Contact

| | |
|-------------|---------------------|
| Part Number | 4564-0000-00 |
|-------------|---------------------|

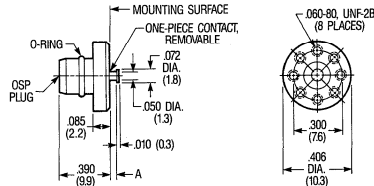
Finish: Gold plate.



Surface Launch • Turret Terminal

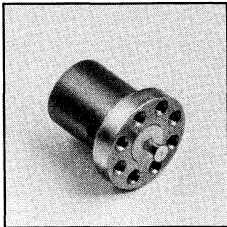


**Surface Launch Plug
Non-Captured Contact**

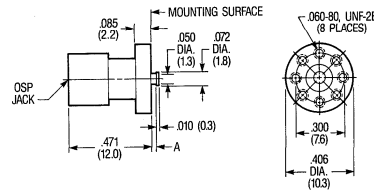


| Ground Plane Spacing | 1/16 | 1/8 | 1/4 |
|----------------------|---------------------------|---------------------------|---------------------------|
| Part Number | 4567-1321-02 | 4567-1322-02 | 4567-1323-02 |
| Dim. A | Inches (mm) .031 (0.8) | Inches (mm) .063 (1.6) | Inches (mm) .125 (3.2) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.



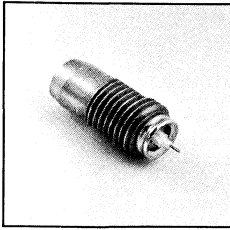
**Surface Launch Jack
Captured Contact**



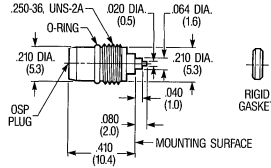
| Ground Plane Spacing | 1/16 | 1/8 | 1/4 |
|----------------------|---------------------------|---------------------------|---------------------------|
| Part Number | 4566-1321-02 | 4566-1322-02 | 4566-1323-02 |
| Dim. A | Inches (mm) .031 (0.8) | Inches (mm) .063 (1.6) | Inches (mm) .125 (3.2) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

Metal-To-Metal Hermetic Seal

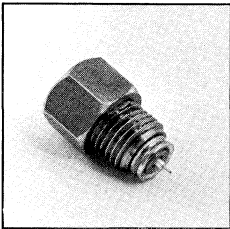


Rigid Gasket Seal – Panel Feedthrough Plug Receptacle

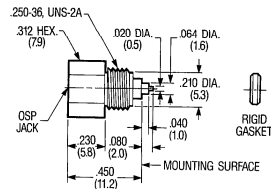


| | |
|-----------------|---------------------|
| Part Number | 4557-5119-02 |
| VSWR (GHz) | 1.04 + .009f |
| RF Leakage (dB) | -(90-fGHz) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Installation Thermal Limit: 250° C.
Recommended Mounting Hole Detail A follows at end of OSP Hermetic Section.
Refer to recommended assembly tools in Tool Section.



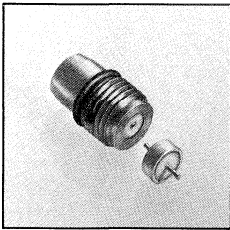
Rigid Gasket Seal – Panel Feedthrough Jack Receptacle



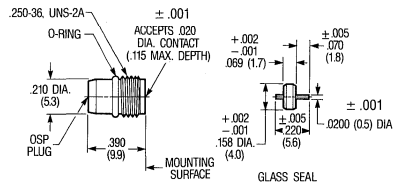
| | |
|-----------------|---------------------|
| Part Number | 4558-5119-02 |
| VSWR (GHz) | 1.04 + .009f |
| RF Leakage (dB) | -(90-fGHz) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Installation Thermal Limit: 250° C.
Recommended Mounting Hole Detail A follows at end of OSP Hermetic Section.
Refer to recommended assembly tools in Tool Section.

Field Replaceable • Solder and Braze-In Hermetic Seal

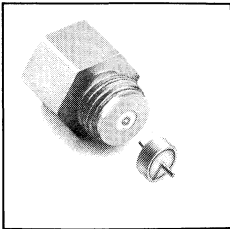


Panel Feedthrough Plug Receptacle

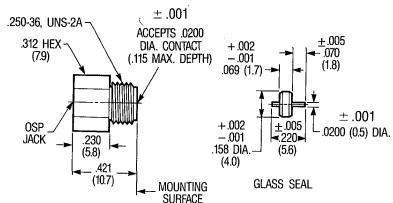


| | | | |
|-----------------|---------------------|---------------------|---------------------|
| Part Number | 4557-5329-02 | 2098-0294-00 | 4557-5328-02 |
| | Connector and Seal | Seal Only | Connector Only |
| VSWR (GHz) | 1.06 + .01f | 1.02 + .003f | 1.04 + .006f |
| RF Leakage (dB) | -(90-fGHz) | -(90-fGHz) | -(90-fGHz) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Recommended Mounting Detail B or E follows at end of OSP Hermetic Section.
Refer to recommended assembly tools in Tool Section.



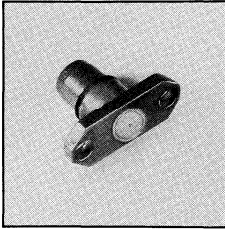
Panel Feedthrough Jack Receptacle



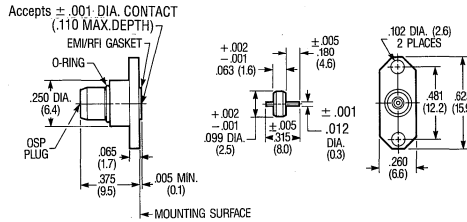
| | | | |
|-----------------|---------------------|---------------------|---------------------|
| Part Number | 4558-5329-02 | 2098-0294-00 | 4558-5328-02 |
| | Connector and Seal | Seal Only | Connector Only |
| VSWR (GHz) | 1.06 + .01f | 1.02 + .003f | 1.04 + .006f |
| RF Leakage (dB) | -(90-fGHz) | -(90-fGHz) | -(90-fGHz) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Recommended Mounting Detail B or E follows at end of OSP Hermetic Section.
Refer to recommended assembly tools in Tool Section.

Field Replaceable • Solder and Braze-In Hermetic Seal

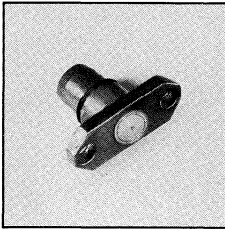


**2-Hole Flange Mount Plug Receptacle
With EMI/RFI Gasket – .012 Dia. Contact**

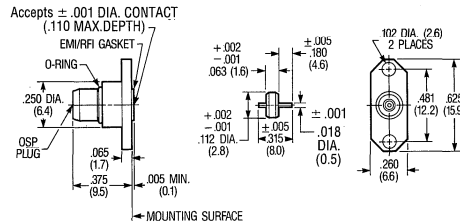


| Part Number | 4551-3355-02 Connector and Seal | 2098-3250-94 Seal Only | 4551-3354-02 Connector Only |
|--------------------|---------------------------------------|---------------------------|-----------------------------------|
| VSWR (GHz) | 1.06 + .01f | 1.02 + .003f | 1.04 + .006f |
| RF Leakage (dB) | – (90-fGHz) | – (90-fGHz) | – (90-fGHz) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Recommended Mounting Detail C follows at end of OSP Hermetic Section.
Refer to recommended assembly tools in Tool Section.

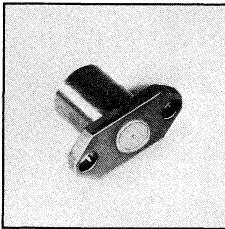


**2-Hole Flange Mount Plug Receptacle
With EMI/RFI Gasket – .018 Dia. Contact**

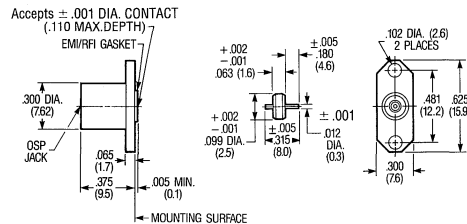


| Part Number | 4551-3357-02 Connector and Seal | 2098-3251-94 Seal Only | 4551-3356-02 Connector Only |
|--------------------|---------------------------------------|---------------------------|-----------------------------------|
| VSWR (GHz) | 1.06 + .01f | 1.02 + .003f | 1.04 + .006f |
| RF Leakage (dB) | – (90-fGHz) | – (90-fGHz) | – (90-fGHz) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Recommended Mounting Detail D follows at end of OSP Hermetic Section.
Refer to recommended assembly tools in Tool Section.

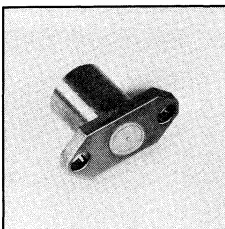


**2-Hole Flange Mount Jack Receptacle
With EMI/RFI Gasket – .012 Dia. Contact**

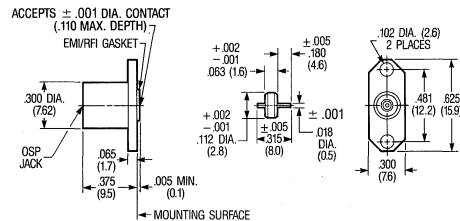


| Part Number | 4552-3355-02 Connector and Seal | 2098-3250-94 Seal Only | 4552-3354-02 Connector Only |
|--------------------|---------------------------------------|---------------------------|-----------------------------------|
| VSWR (GHz) | 1.06 + .01f | 1.02 + .003f | 1.04 + .006f |
| RF Leakage (dB) | – (90-fGHz) | – (90-fGHz) | – (90-fGHz) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Recommended Mounting Detail C follows at end of OSP Hermetic Section.
Refer to recommended assembly tools in Tool Section.



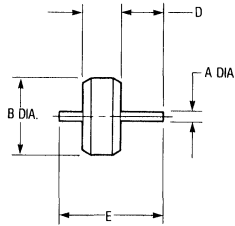
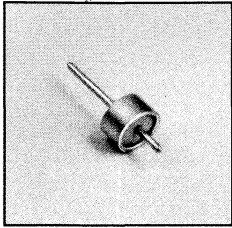
**2-Hole Flange Mount Jack Receptacle
With EMI/RFI Gasket – .018 Dia. Contact**



| Part Number | 4552-3357-02 Connector and Seal | 2098-3251-94 Seal Only | 4552-3356-02 Connector Only |
|--------------------|---------------------------------------|---------------------------|-----------------------------------|
| VSWR (GHz) | 1.06 + .01f | 1.02 + .003f | 1.04 + .006f |
| RF Leakage (dB) | – (90-fGHz) | – (90-fGHz) | – (90-fGHz) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Recommended Mounting Detail D follows at end of OSP Hermetic Section.
Refer to recommended assembly tools in Tool Section.

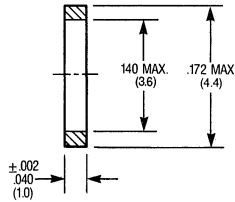
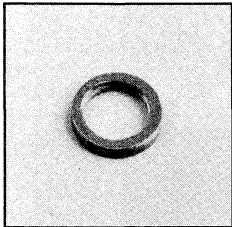
Solder-In Thermally Matched Hermetic Seals



| Part Number | 2098-3250-94 | 2098-3251-94 | 2098-0294-00 |
|-------------------------|---------------------------|---------------------------|---------------------------|
| A Dim. Nom. | Inches (mm) .012 (0.3) | Inches (mm) .018 (0.5) | Inches (mm) .020 (0.5) |
| B Dim. $+002$ -001 | .099 (2.5) | .112 (2.8) | .158 (4.0) |
| C Dim. $+002$ -001 | .063 (1.6) | .063 (1.6) | .069 (1.7) |
| D Dim. ± 005 | .180 (4.6) | .180 (4.6) | .070 (1.8) |
| E Dim. ± 005 | .315 (8.0) | .315 (8.0) | .220 (5.6) |

Consult the factory for additional seals not listed.

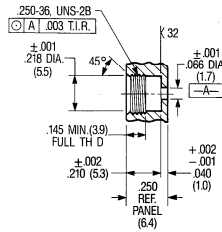
EMI/RFI Gasket



| | |
|-------------|--------------|
| Part Number | 2098-3333-54 |
|-------------|--------------|

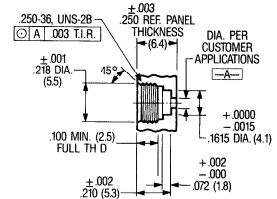
Recommended Mounting Hole Detail

Detail A*

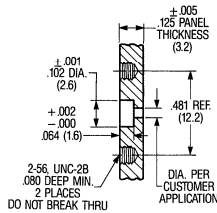


*Consult appropriate Assembly Procedure for complete mounting details.

Detail B* (.250 Panel Thickness)

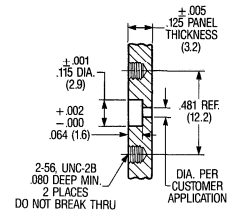


Detail C*

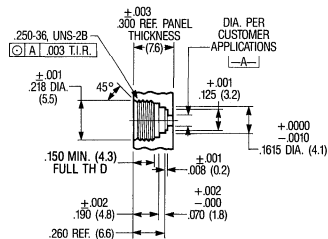


*Consult appropriate Assembly Procedure for complete mounting details.

Detail D*



Detail E*



*Consult appropriate Assembly Procedure for complete mounting details.

OSP Miniature Calibration Kit

Part Number **4598-4015-54**

Calibration Kits are designed to be used with most Automatic Network Analyzer (ANA) Systems. It is intended to reduce measurement uncertainties for ANA Systems capable of performing an open/short average for reflection measurements, and test path normalization for transmission measurements. All kits include fixtures and calibration instructions usable with Scalar Network Analyzers.

For calibration kits with sliding load, order part number **4598-4016-54**.



Part Number **4511-6111-00**
OSP Plug Termination
VSWR: dc-18 GHz, 1.10:1



Part Number **4512-6111-00**
OSP Jack Termination
VSWR: dc-18 GHz, 1.10:1



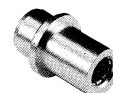
Part Number **4511-1314-00**
OSP Plug Short Circuit Termination



Part Number **4512-1314-00**
OSP Jack Short Circuit Termination



Part Number **4511-1315-00**
OSP Plug Open Circuit Termination



Part Number **4512-1315-00**
OSP Jack Open Circuit Termination



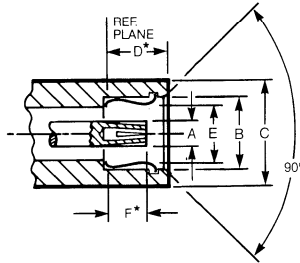
Part Number **4581-2700-05**
OSP Plug to 7mm Adapter



Part Number **4582-2700-05**
OSP Jack to 7mm Adapter

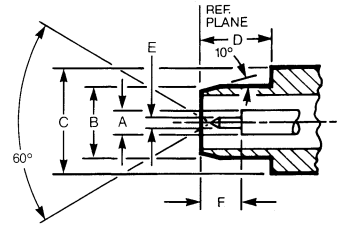
The connector interface, specifically designed for multiple interconnects, maintains reliable performance over the typical mechanical tolerance required in cost effective packaging.

The interface test data shows excellent performance is maintained with mating gaps up to .015 inch.



JACK

| Letter | Inches (Millimeters) |
|--------|----------------------|
| A | .048 (1.22) Nom. |
| B | .154 (3.91) Min. |
| C | .210 (5.33) Ref. |
| D | .197 (5.00) Nom.* |
| E | .132 (3.35) Max. |
| F | .127 (3.23) Max.* |



PLUG

| Letter | Inches (Millimeters) |
|--------|----------------------|
| A | .048 (1.22) Nom. |
| B | .140 (3.56) Nom. |
| C | .210 (5.33) Ref. |
| D | .199 (5.00) Min. |
| E | .020 (0.51) Nom. |
| F | .128 (3.25) Min. |

*With spring bottomed.
Metric equivalents (to the nearest 0.01mm) are given for general information only.

The specifications given refer specifically to mated pair of Part Number 4704-7985-00 and 4703-7985-00 (RG-405). Specifications on other connectors are available from the company on request.

The general electrical, mechanical and environmental specifications in the following table are recommended for procurement documents or drawings.

Engineering Data

Impedance: 50 ohms
Frequency: dc to 28.0 GHz
Temperature Rating: -65° to +125°C

Electrical

VSWR: 1.05 + .01f(GHz)
RF Transmission Loss: .040 x \sqrt{f} (GHz)
Insulation Resistance: 5,000 megohms min.
Contact Resistance:
Center Contact: 6 milliohms max.
Outer Contact: 3 milliohms max.
Outer Contact to Cable: 0.5 milliohms max.
Dielectric Withstanding Voltage: 675 volts RMS
Corona Extinction Voltage 70,000 Ft.: 250 volts RMS
RF High Potential 5 MHz: 675 volts RMS
RF Leakage Interface Only: -(90-fGHz) dB min. (fully mated)
Power Handling: 300W at 3 GHz (sea level) and room temperature

RG-405 (.085) Semi-Rigid

Environmental

Corrosion: Method 101, Condition B, MIL-STD-202
Vibration: Method 204, Condition D, 20G's, MIL-STD-202
Shock: Method 213, Condition I, 100G's, MIL-STD-202
Temperature Cycling: Method 107, Condition B, MIL-STD-202
Moisture Resistance: Method 106, MIL-STD-202

Material

Housing: Corrosion resistant steel Type 303 (stainless) per ASTM A484 and A582
Center Contact: Beryllium copper per ASTM-B-196
Dielectric: TFE fluorocarbon per ASTM-D-1457
Gasket (O' Ring): MIL-P-25732

Mechanical

Force to Engage: 3 pounds max.
Force to Disengage: 1.5 pounds max.
Center Contact Retention: 4 pounds min.
Durability: 1,000 cycles
Radial Misalignment:
Rigid Mount: ±.0025 inch
Float Mount: ±.020 inch
Mating Characteristics
Jack Connector:
Center Contact Socket: Oversize test Pin: .0210 +.0001 inch dia.
Test Pin Finish: 16 micro inch max.
Insertion Depth: .030/.045
Number of Insertions: 3
Insertion Force: Test Pin: .0208 +.0001 inch dia.
Test Pin Finish: 16 micro inch max.
Insertion Force: 3 pounds
Withdrawal Force: Test Pin: .0195 -.0001 inch dia.
Test Pin Finish: 16 micro inch max.
Insertion Depth: .050/.075
Withdrawal: 1/2 ounce min.

Finish

Center Contact: Gold plate per MIL-G-45204, Typ II, Class 0 over nickel plate per QQ-N-290, Class 2 or passivate per ASTM-A380
Housing: Gold plate per MIL-G-45204, Typ II, Class 0 over nickel plate per QQ-N-290, Class 2 or passivate per ASTM-A380

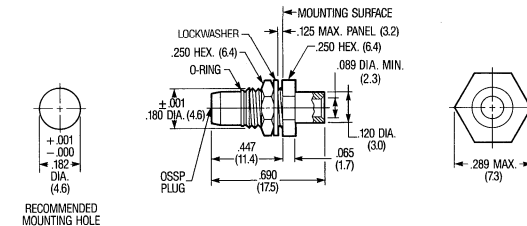
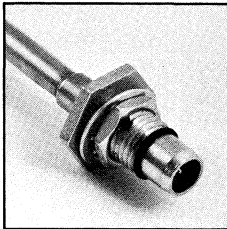
All dimensions shown are nominal.
Contact the factory for specific tolerances.

OSSP connectors are a subminiature version of the OSP blind mate series. Connectors in this series incorporate the design elements of the OSP interface including the float and mismatch features. OSSP blind mates are about 40% smaller than OSP's and are designed to be used in applications where space is at a premium.

A complete family of OSSP connectors and adapters is available including cable connectors, fixed and float mount panel connectors and hermetic connectors. Rigid mount units will function to specifications up to $\pm .0025$ inch (.06mm) radial misalignment with the mating plug connector. Applications requiring greater than $\pm .0025$ inch (.06mm) radial misalignment can use either the float design or floating connector plates with guide pins.

.085 Dia. • Direct Solder Attachment

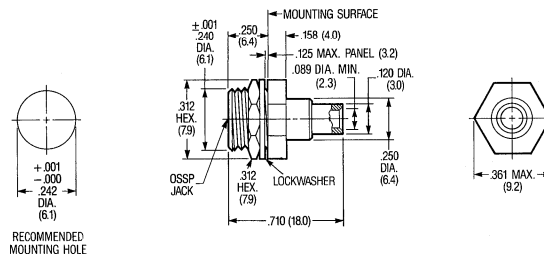
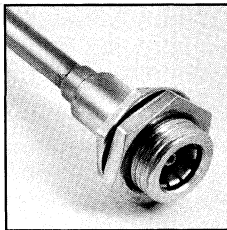
Bulkhead Feedthrough Cable Plug – Rear Mount



| | |
|-------------|-----------------|
| Cable | RG-405/U (.085) |
| Part Number | 4703-7985-00 |

Finish: Housing that is soldered to cable outer conductor is gold plated. Refer to recommended assembly tools in Tool Section.

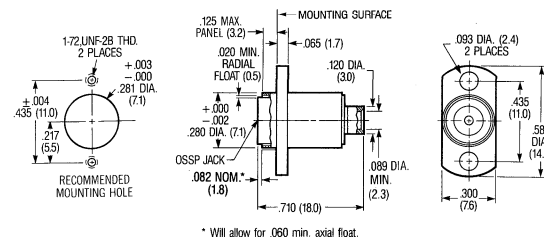
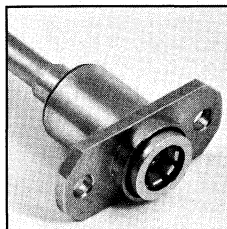
Bulkhead Feedthrough Cable Jack – Rigid Rear Mount



| | |
|-------------|-----------------|
| Cable | RG-405/U (.085) |
| Part Number | 4704-7985-00 |

Finish: Housing that is soldered to cable outer conductor is gold plated. Refer to recommended assembly tools in Tool Section.

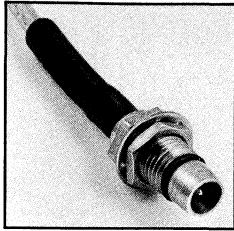
Flange Mount Cable Jack – Floating Rear Mount



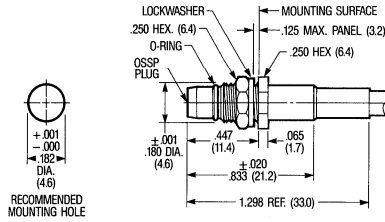
| | |
|-------------|-----------------|
| Cable | RG-405/U (.085) |
| Part Number | 4706-7985-02 |

Finish: Inner housing that is soldered to cable is gold plated. Outer housing is passivated stainless steel. Refer to recommended assembly tools in Tool Section. When using semi-rigid cable, it is recommended that a service loop be used to facilitate the float features of the connector.

Flexible Cable • Crimp Attachment

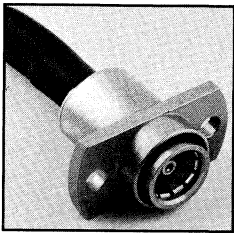


Bulkhead Feedthrough Cable Plug – Rear Mount

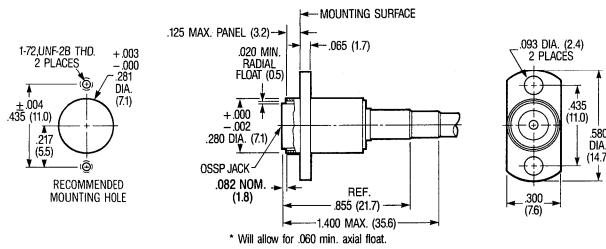


| | |
|-------------|--------------------------------------|
| Cable | RG-188/U, 316 Double Braided Only |
| Part Number | 4733-7316-02 |

Finish: Passivated stainless steel. For gold plate, change the part number suffix from -02 to -00.
Refer to recommended assembly tools in Tool Section.



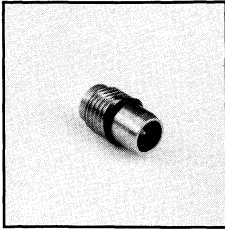
Flange Mount Cable Jack – Floating Rear Mount



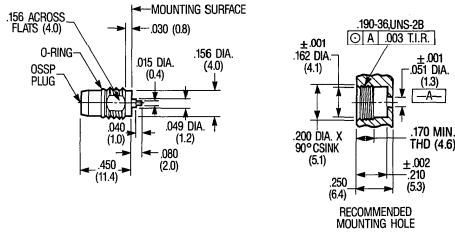
| | |
|-------------|--------------------------------------|
| Cable | RG-188/U, 316 Double Braided Only |
| Part Number | 4736-7316-02 |

Finish: Passivated stainless steel. For gold plate, change the part number suffix from -02 to -00.
Refer to recommended assembly tools in Tool Section.

Non-Hermetic • Straight Terminal

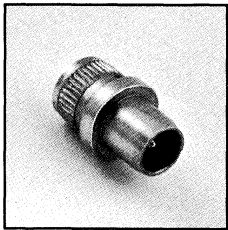


Threaded Installation – Panel Feedthrough Plug Receptacle

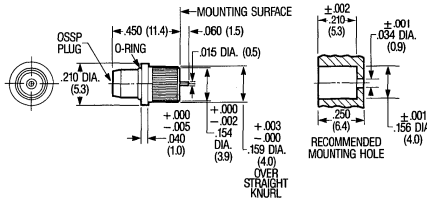


| | |
|-------------|---------------------|
| Part Number | 4757-5006-02 |
|-------------|---------------------|

Finish: Passivated stainless steel. For gold plate, change the part number suffix from -02 to -00.

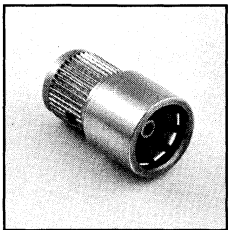


Press-Fit Installation – Panel Feedthrough Plug Receptacle

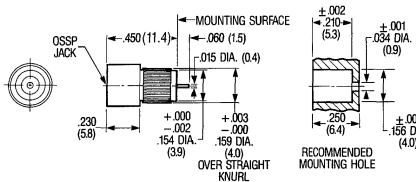


| | |
|-------------|---------------------|
| Part Number | 4757-1154-02 |
|-------------|---------------------|

Finish: Passivated stainless steel. For gold plate, change the part number suffix from -02 to -00.



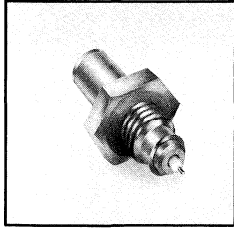
Press-Fit Installation – Panel Feedthrough Jack Receptacle



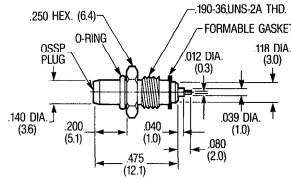
| | |
|-------------|---------------------|
| Part Number | 4758-1154-02 |
|-------------|---------------------|

Finish: Passivated stainless steel. For gold plate, change the part number suffix from -02 to -00.

Metal-To-Metal Hermetic Seal

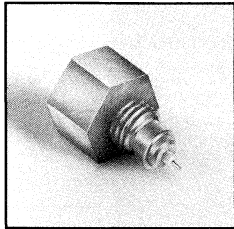


Formable Gasket – Panel Feedthrough Plug Receptacle

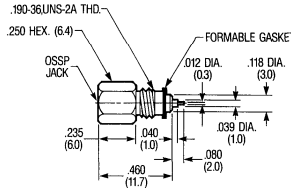


| | |
|-----------------|---------------------|
| Part Number | 4757-5014-00 |
| VSWR (GHz) | 1.06 + .01f |
| RF Leakage (dB) | -(85-fGHz) |

Finish: Gold plate.
Recommended Mounting Hole Detail A follows at end of OSSP Hermetic Section.
Refer to recommended assembly tools in Tool Section.



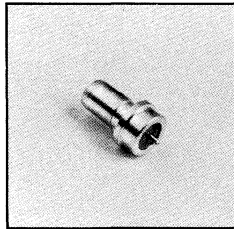
Formable Gasket – Panel Feedthrough Jack Receptacle



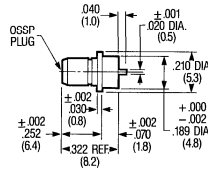
| | |
|-----------------|---------------------|
| Part Number | 4758-5014-00 |
| VSWR (GHz) | 1.06 + .01f |
| RF Leakage (dB) | -(85-fGHz) |

Finish: Gold plate.
Recommended Mounting Hole Detail A follows at end of OSSP Hermetic Section.
Refer to recommended assembly tools in Tool Section.

Solder and Braze-In Hermetic Seal



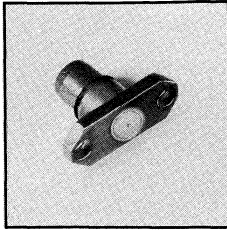
Panel Feedthrough Plug Receptacle



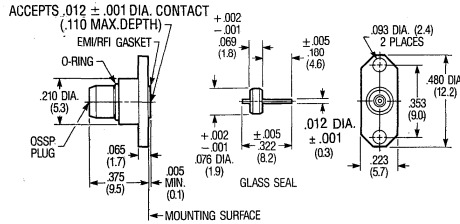
| | |
|-----------------|---------------------|
| Part Number | 4757-3204-00 |
| VSWR (GHz) | 1.06 + .01f |
| RF Leakage (dB) | -(85-fGHz) |

Finish: Gold plate.

Field Replaceable • Solder and Braze-In Hermetic Seal

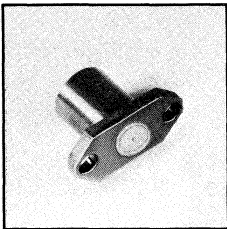


**2-Hole Flange Mount Plug Receptacle
With EMI/RFI Gasket**

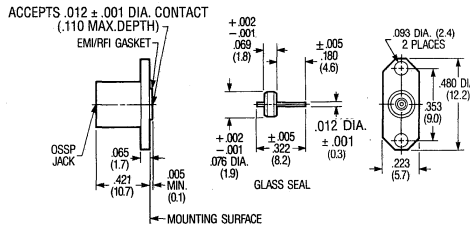


| Part Number | 4751-3355-02 Connector and Seal | 2098-3364-94 Seal Only | 4751-3354-02 Connector Only |
|--------------------|---------------------------------------|---------------------------|-----------------------------------|
| VSWR (GHz) | 1.06 + .01f | 1.02 + .003f | 1.04 + .006f |
| RF Leakage (dB) | -(85-fGHz) | -(85-fGHz) | -(85-fGHz) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Recommended Mounting Detail B follows at end of OSSP Hermetic Section.
Refer to recommended assembly tools in Tool Section.

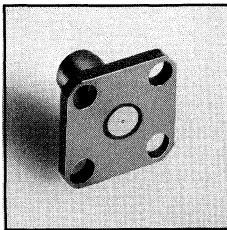


**2-Hole Flange Mount Jack Receptacle
With EMI/RFI Gasket**

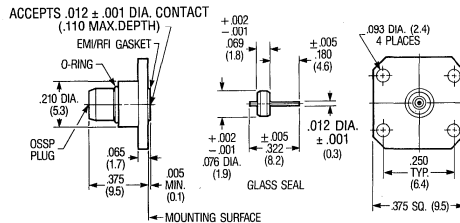


| Part Number | 4752-3355-02 Connector and Seal | 2098-3364-94 Seal Only | 4752-3354-02 Connector Only |
|--------------------|---------------------------------------|---------------------------|-----------------------------------|
| VSWR (GHz) | 1.06 + .01f | 1.02 + .003f | 1.04 + .006f |
| RF Leakage (dB) | -(85-fGHz) | -(85-fGHz) | -(85-fGHz) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Recommended Mounting Detail B follows at end of OSSP Hermetic Section.
Refer to recommended assembly tools in Tool Section.

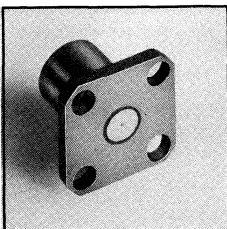


**4-Hole Flange Mount Plug Receptacle
With EMI/RFI Gasket**

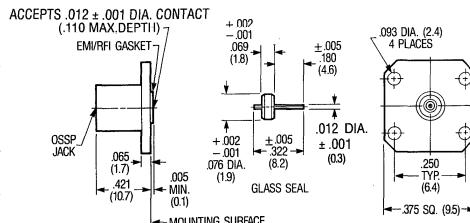


| Part Number | 4751-3351-02 Connector and Seal | 2098-3364-94 Seal Only | 4751-3350-02 Connector Only |
|--------------------|---------------------------------------|---------------------------|-----------------------------------|
| VSWR (GHz) | 1.06 + .01f | 1.02 + .003f | 1.04 + .006f |
| RF Leakage (dB) | -(85-fGHz) | -(85-fGHz) | -(85-fGHz) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Recommended Mounting Detail C follows at end of OSSP Hermetic Section.
Refer to recommended assembly tools in Tool Section.



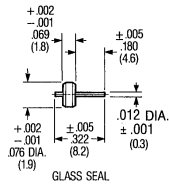
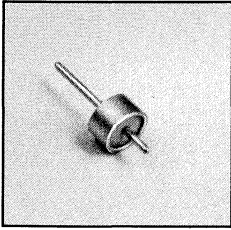
**4-Hole Flange Mount Jack Receptacle
With EMI/RFI Gasket**



| Part Number | 4752-3351-02 Connector and Seal | 2098-3364-94 Seal Only | 4752-3350-02 Connector Only |
|--------------------|---------------------------------------|---------------------------|-----------------------------------|
| VSWR (GHz) | 1.06 + .01f | 1.02 + .003f | 1.04 + .006f |
| RF Leakage (dB) | -(85-fGHz) | -(85-fGHz) | -(85-fGHz) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Recommended Mounting Detail C follows at end of OSSP Hermetic Section.
Refer to recommended assembly tools in Tool Section.

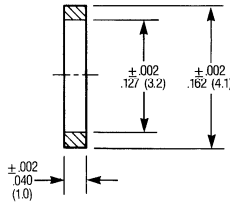
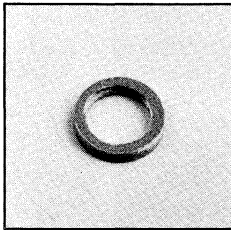
Solder-In Thermally Matched Hermetic Seal



| | |
|-------------|--------------|
| Part Number | 2098-3364-94 |
|-------------|--------------|

Consult the factory for additional seals not listed.

EMI/RFI Gasket



| | |
|-------------|--------------|
| Part Number | 1098-3230-54 |
|-------------|--------------|

OSSP Subminiature Calibration Kit

Part Number **4798-4009-54**

Calibration Kits are designed to be used with most Automatic Network Analyzer (ANA) Systems. It is intended to reduce measurement uncertainties for ANA Systems capable of performing an open/short average for reflection measurements, and test path normalization for transmission measurements. All kits include fixtures and calibration instructions usable with Scalar Network Analyzers.



Part Number **4701-6112-00**
OSSP Plug Termination
VSWR: dc-4 GHz, 1.05:1
4-12.4 GHz, 1.15:1
12.4-18 GHz, 1.20:1



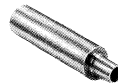
Part Number **4702-6112-00**
OSSP Jack Termination
VSWR: dc-4 GHz, 1.05:1
4-12.4 GHz, 1.15:1
12.4-18 GHz, 1.20:1



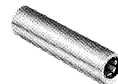
Part Number **4721-1314-00**
OSSP Plug Short Circuit Termination



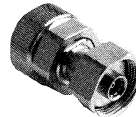
Part Number **4720-1314-00**
OSSP Jack Short Circuit Termination



Part Number **4721-1315-00**
OSSP Plug Open Circuit Termination



Part Number **4720-1315-00**
OSSP Jack Open Circuit Termination



Part Number **4781-2700-05**
OSSP Plug to 7mm Adapter



Part Number **4782-2700-05**
OSSP Jack to 7mm Adapter



OSMP Microminiature Push-On Coaxial Connectors

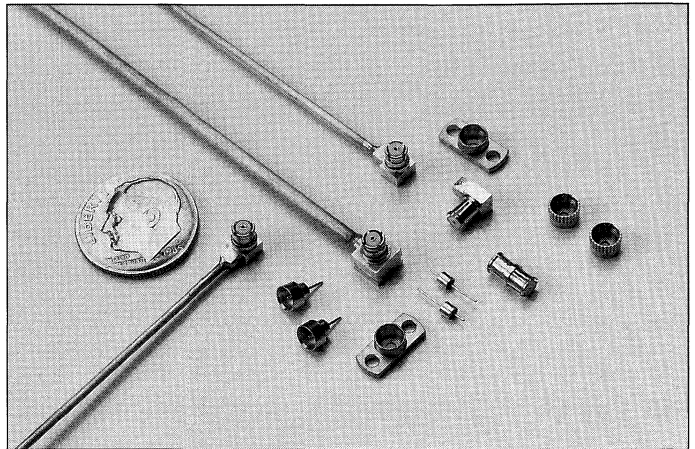
- Intermateable with Gilbert GPO™ Series
- DESC approved
- Enhanced performance features
- Simplified Assembly

M/A-COM's OSMP microminiature push-on coaxial connectors provide solutions for today's modular designs with denser packaging requirements. The extremely small size of the OSMP offers a versatile solution for high density packaging allowing connector center-to-center spacing of 0.170". The push-on interface facilitates easier assembly and test with a positive snap-in feature to indicate a fully mated connection. The rugged OSMP interface can withstand harsh environments of mechanical shock and vibration, typically found in military or aerospace related applications. M/A-COM's OSMP connector interface is the standard used by Defense Electronics Supply Center (DESC) to generate the SMP push-on connector series.

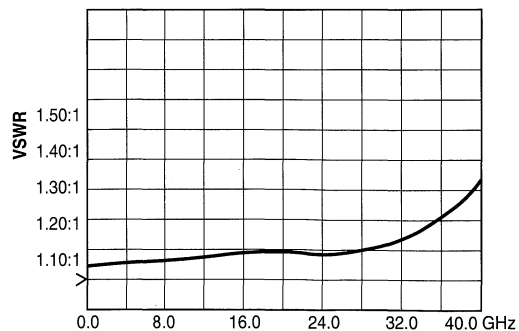
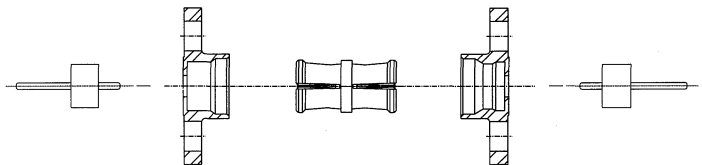
OSMP connectors can be your design solution for mechanical packaging and frequency response. The OSMP interface provides 0.020" of radial misalignment for critical blindmate applications. Mating forces are strictly controlled to ensure reliable connections per mated pair or when simultaneously mating multiple connectors. Cable jacks include an anti-rocking ring to ensure reliable mechanical performance regardless of the operating environment. OSMP connectors offer enhanced broadband VSWR performance of 1.15:1 max thru 26GHz and 1.40:1 max thru 40GHz.

Standard design OSMP configurations include cable connectors, straight and right angle, for 0.047 and 0.085 semi-rigid cable, full detent, limited detent and smooth bore mating shrouds that can be bulk-head or flange mounted and glass feedthroughs for coax to circuit launchers. In-series adapters for module to module intermating and between series adapters for integrating or testing systems or components parameters.

OSMP connectors are an ideal solution for upgrading existing systems or creating new high density designs for next generation RF packaging. Years of design experience has made M/A-COM an industry leader in blindmate modular interconnect technology. Call your local M/A-COM Sales Office or authorized Distributor for more information or samples of our new OSMP series.



OSMP Shroud and Jack to Jack Adapter Assembly



**Typical VSWR for OSMP Jack to Jack Adapter
Part Numbers 2980-0000-62 and 2998-5001-02**

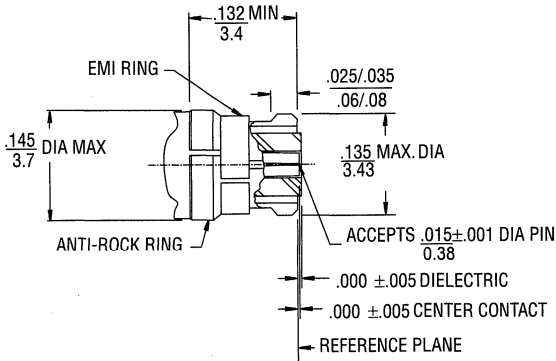
OSMP Specifications

| Requirement | Detail |
|---------------------------------|---|
| General | |
| Materials and Finishes | |
| Housings and Center Contacts | Beryllium Copper per ASTM-B-196; gold plate over nickel plate |
| Dielectric | PTFE Fluorocarbon per ASTM-D-1457 |
| Shrouds | Stainless steel per ASTM-A582 Type 303; passivate per ASTM-A380 |
| Hermetic Seal | Glass bead |
| Electrical | |
| Frequency Range | dc - 40.0 GHz |
| VSWR | 1.10:1 Maximum dc - 23.0 GHz 1.15:1 Maximum 23.0 - 26.0 GHz 1.40:1 Maximum 26.0 - 40.0 GHz |
| Voltage Rating | 335 VRMS maximum at sea level |
| Insertion Loss | 0.10 \sqrt{f} (GHz) maximum |
| Insulation Resistance | 5000 megohms minimum |
| Dielectric Withstanding Voltage | 500 volts (VRMS minimum) |
| RF High Potential | 325 volts (VRMS minimum) @ 5 MHz |
| Impedance | 50 ohms nominal |
| RF Leakage | -80dB to 3 GHz, -65dB from 3 to 26.5 dB minimum |
| Contact Resistance | Initial center contact 6.0 milliohms maximum Outer contact 2.0 milliohms maximum |
| Mechanical | |
| Durability | 100 mating cycles minimum |
| Radial Misalignment | ±0.020 minimum |
| Axial Misalignment | .000/.010 |
| Force to Engage | full detent 10.0 lbs. maximum half detent 5.0 lbs. maximum smooth bore 2.0 lbs. maximum |
| Force to Disengage | full detent 2.0 lbs. minimum half detent 1.5 lbs. minimum smooth bore 0.5 lbs. minimum |
| Center Contact Retention | 1.5 lbs. minimum axial force |
| Environmental | |
| Operating Temperature | -65°C to +165°C |
| Vibration | per MIL-STD-202, method 204, test condition D |
| Shock | per MIL-STD-202, method 213, test condition I |
| Thermal Shock | per MIL-STD-202, method 107, test condition B |
| Moisture Resistance | per MIL-STD-202 method 106, except step 7b shall be omitted. Resistance shall be 200 megohm within 5 minutes after removal from humidity. |

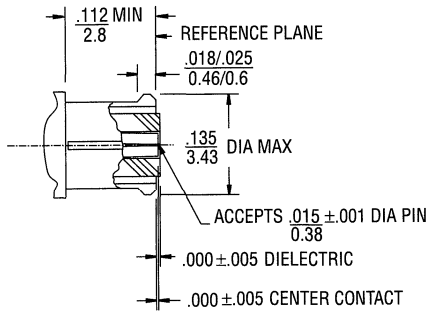
Note: Specifications apply to 2980-0000-62. Performance may vary depending on connector selected.

OSMP Interface Dimensions

Jack

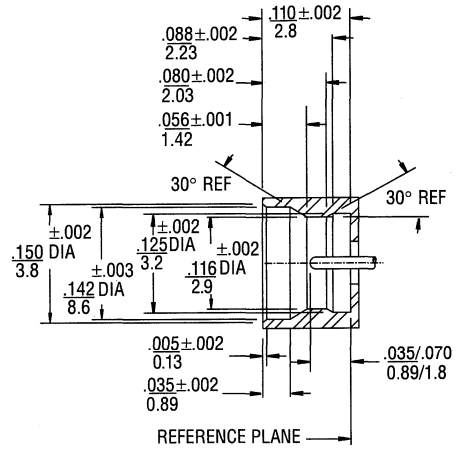


BULLET

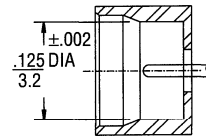


Shroud

FULL DETENT



SMOOTH BORE



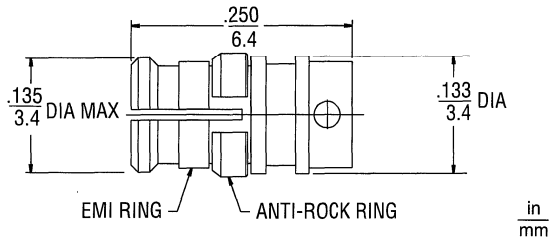
inch
mm

Note: The U.S. Government (DESC) has determined that the above specified interface dimensions are interchangeable and intermateable with Gilbert GPO™ Series Rf connectors.¹

1. Per DESC drawing numbers 94007 and 94008, series SMP.

OSMP Microminiature Push-On Coaxial Connectors

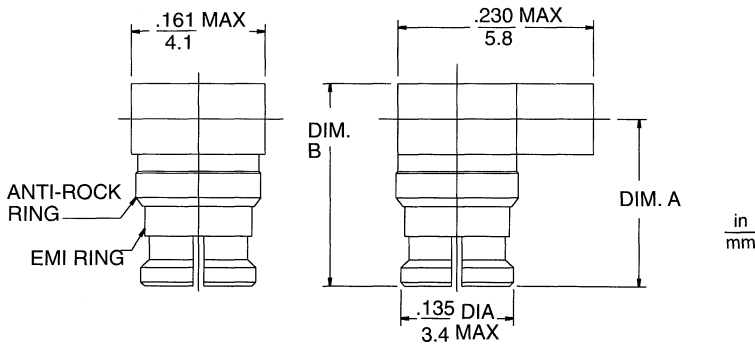
Straight Cable Jack Solder Attachment



| M/A-COM Part Number | DESC Part Number | Cable |
|---------------------|------------------|--------------------------|
| 2902-7947-62 | — | .047 Semi-Rigid |
| 2902-5005-62 | 94008ZCG-2 | |
| 2902-7985-62 | — | .085 Semi-Rigid (RG-405) |
| 2902-5006-62 | 94008ZCG-1 | |

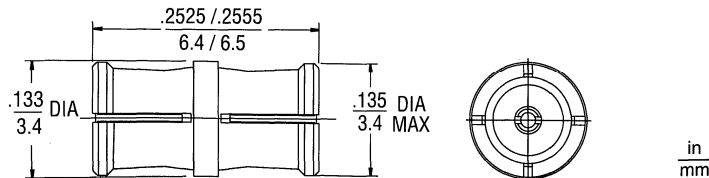
Right Angle Cable Jack Solder Attachment

| M/A-COM Part Number | DESC Part Number | Cable | Dim. A | | Dim. B | |
|---------------------|------------------|--------------------------|--------|-----|--------|-----|
| | | | inches | mm | inches | mm |
| 2908-7947-62 | — | .047 Semi-Rigid | .190 | 4.8 | .230 | 5.8 |
| 2908-5006-62 | 94008ZCG-4 | | | | | |
| 2908-7985-62 | — | .085 Semi-Rigid (RG-405) | .209 | 5.3 | .265 | 6.7 |
| 2908-5007-62 | 94008ZCG-3 | | | | | |

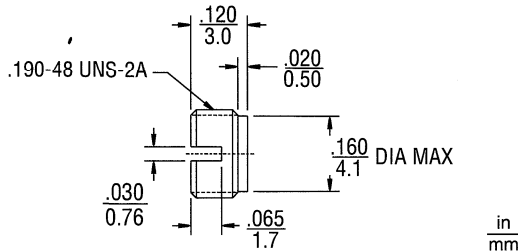


Jack to Jack Adapter (Bullet)

| M/A-COM Part Number | DESC Part Number |
|---------------------|------------------|
| 2980-0000-62 | — |
| 2980-5004-62 | 94007ZCG-1 |



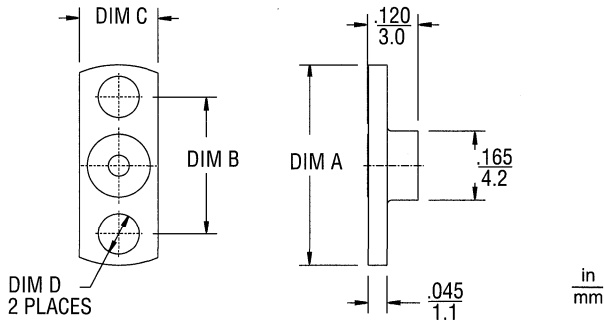
Shroud - Threaded



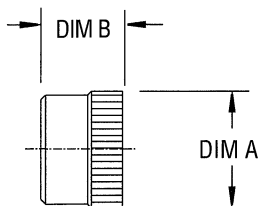
| Full Detent Part Number | Limited Detent Part Number | Smooth Bore Part Number |
|-------------------------|----------------------------|-------------------------|
| 2998-5045-02 | 2998-5043-02 | 2998-5044-02 |

Shroud - 2 Hole Flange Surface Mount

| M/A-COM Full Detent Part Number | DESC Full Detent Part Number | Limited Detent Part Number | Smooth Bore Part Number | Dim A Inch mm | Dim B Inch mm | Dim C Inch mm | Dim D Inch mm |
|---------------------------------|------------------------------|----------------------------|-------------------------|---------------|---------------|---------------|---------------|
| 2998-5001-02 | - | 2998-5028-02 | 2998-5031-02 | .480 12.2 | .328 8.3 | .187 4.7 | .098 2.5 |
| 2998-5039-02 | 94007ZSP-3 | - | - | .480 12.2 | .328 8.3 | .187 4.7 | .098 2.5 |
| 2998-5002-02 | - | 2998-5029-02 | 2998-5032-02 | .625 15.8 | .481 12.2 | .223 5.7 | .102 2.6 |
| 2998-5040-02 | 94007ZSP-4 | - | - | .625 15.8 | .481 12.2 | .223 5.7 | .102 2.6 |
| 2998-5003-02 | - | 2998-5030-02 | 2998-5049-02 | .400 10.2 | .282 7.2 | .165 4.2 | .073 1.9 |
| 2998-5041-02 | 94007ZSP-5 | - | - | .400 10.2 | .282 7.2 | .165 4.2 | .073 1.9 |

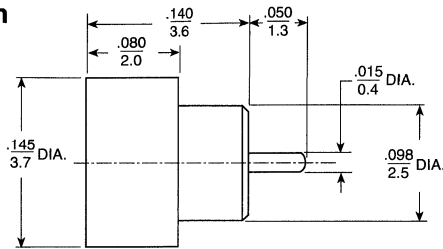


Shroud - Press Fit



| Full Detent Part Number | Limited Detent Part Number | Smooth Bore Part Number | Dim A Inch mm | Dim B Inch mm |
|-------------------------|----------------------------|-------------------------|---------------|---------------|
| 2998-5004-02 | 2998-5033-02 | 2998-5036-02 | .174 4.4 | .120 3.0 |
| 2998-5005-02 | 2998-5034-02 | 2998-5037-02 | .182 4.6 | .115 2.9 |
| 2998-5006-02 | 2998-5035-02 | 2998-5038-02 | .154 3.9 | .080 2.0 |

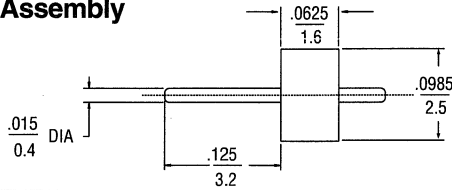
Shroud-Solder-In Hermetic



| Full Detent Part Number | Limited Detent Part Number | Smooth Bore Part Number |
|-------------------------|----------------------------|-------------------------|
| 2998-5054-94 | 2998-5055-94 | 2998-5056-94 |

in
mm

Glass Bead Assembly

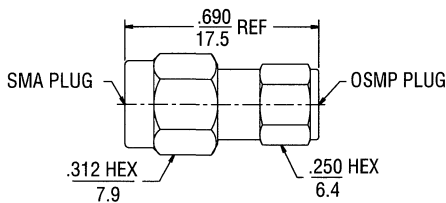


| Part Number |
|--------------|
| 2998-5022-94 |

in
mm

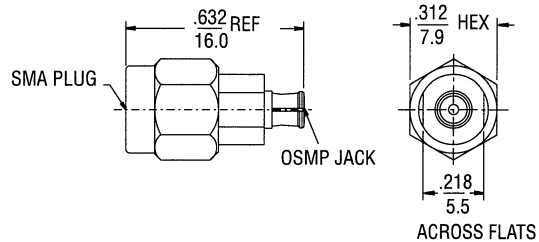
Between Series Adapters

OSMP Plug to SMA Plug



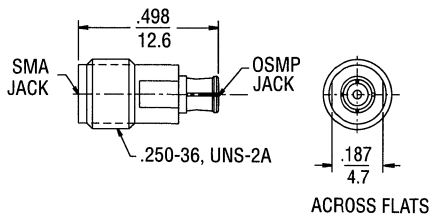
| | |
|-------------|--------------|
| Part Number | 2981-2241-00 |
|-------------|--------------|

OSMP Jack to SMA Plug



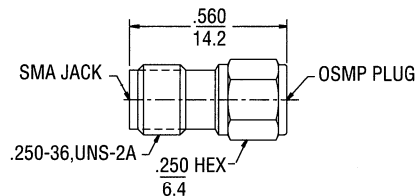
| | |
|-------------|--------------|
| Part Number | 2982-2241-00 |
|-------------|--------------|

OSMP Jack to SMA Jack



| | |
|-------------|--------------|
| Part Number | 2980-2240-00 |
|-------------|--------------|

OSMP Plug to SMA Jack



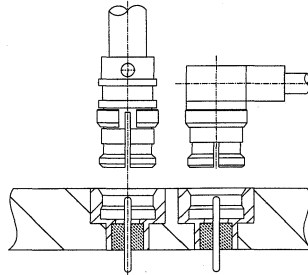
| | |
|-------------|--------------|
| Part Number | 2982-2240-00 |
|-------------|--------------|

in
mm

OSMP Application Notes

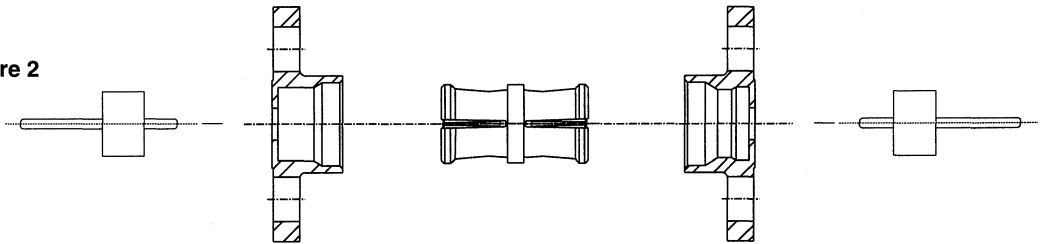
OSMP connectors are designed with maximum packaging density in mind. Their low profile construction allows for module to module flush mounting with a center to center spacing of .170 inches. Connectors are user friendly with simple self contained designs which equates to low installation costs and reduced fabrication time for cable assemblies and circuit packages.

Figure 1



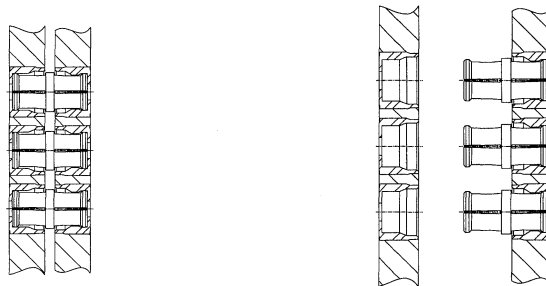
Cable connectors are designed for miniature .047 and .085 semi rigid cables to support density packaging solutions with reduced cross talk of transmission lines and low EMI characteristics. Standard connector configurations are right angle and straight female interface designs, (Fig 1). The right angle connector design requires solder attachment of the cable jacket to connector housing only. Internal assembly is self aligning with a solderless right angle contact junction which facilitates assembly.

Figure 2



Circuit packages will employ bulkhead press-in or solder-in shrouds or if space permits a 2 hole flange mount shroud is available (Fig 2). The shrouds are the coupling mechanism to engage mating connections. The shrouds are used with a glass bead sub-assembly to form the entire coaxial mating interface structure. The glass bead is the internal conductor and the shroud will be the outer conductor. Solder-in shrouds with internal glass beads are available to eliminate the two stage assembly required for separate bead and shroud combination.

Figure 3



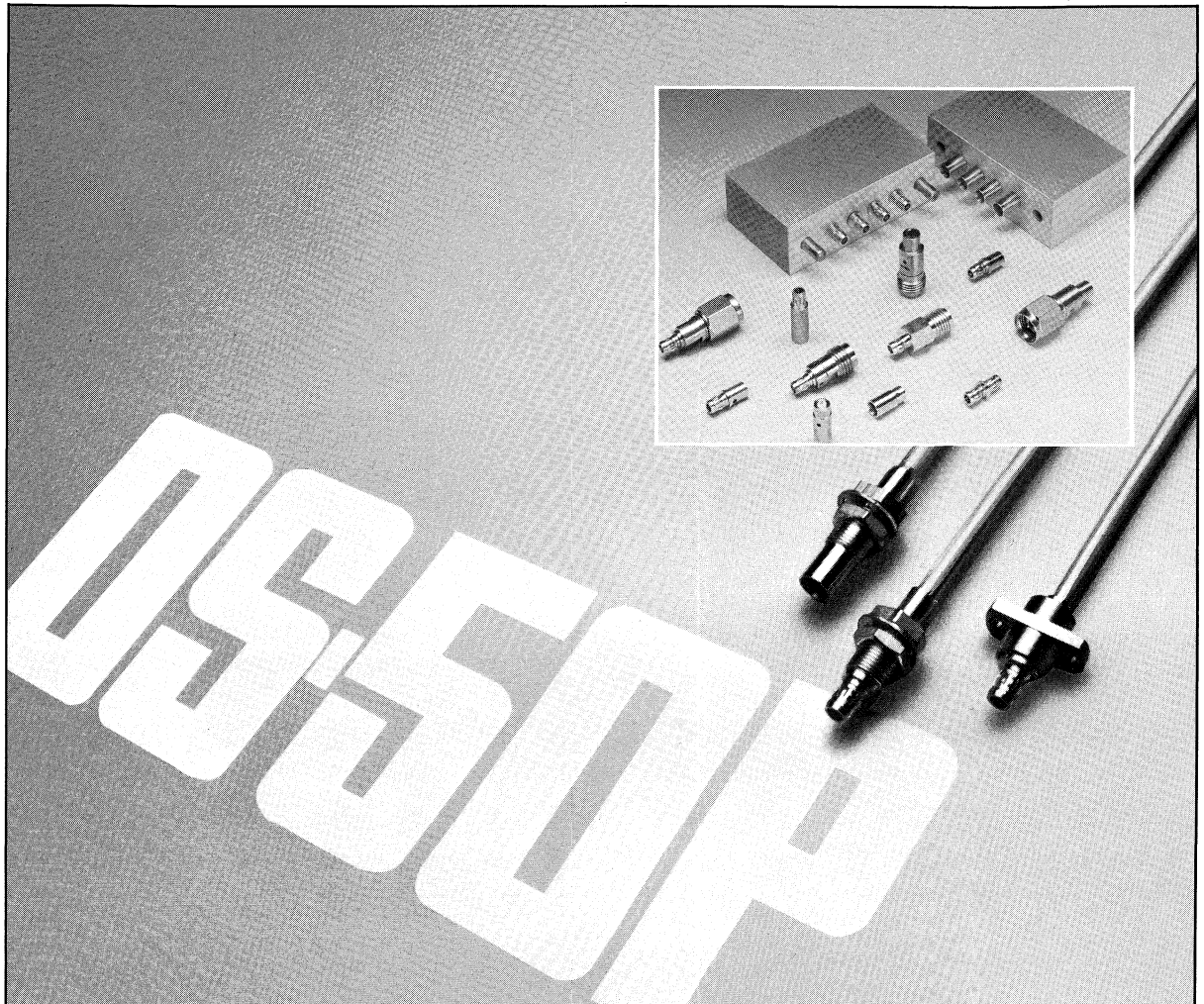
The OSMP push-on interface with smooth bore detent shrouds allows the packaging engineer to mate multiple connectors simultaneously. Modular designed systems can also be constructed using the blindmate concept with full detent and limited detent shrouds where positive locking is required. A full detent shroud offers maximum locking engagement for stationary input interfaces. A limited detent with reduced engagement forces can be utilized for internal modular construction where multiple mates may occur. The basic design of this microminiature series provides for a variety of interface configurations that can be a versatile and reliable design solution.

Competitive Cross Reference List

| Gilbert Engineering Co. Part Number | Connecting Devices Inc. Part Number | M/A-COM Part Number |
|--|--|--------------------------------|
| 00219-105-3 | — | 2980-2240-00 |
| 00219-110-3 | — | 2982-2240-00 |
| 00219-205-3 | — | 2982-2241-00 |
| 00219-210-3 | — | 2981-2241-00 |
| 0119-742-3 | — | 2998-5049-02 |
| 0119-802-3 | — | 2998-5036-02 |
| 0119-803-3 | — | 2998-5033-02 |
| 0119-820-3 | — | 2998-5038-02 |
| 0119-821-3 | — | 2998-5030-02 |
| 0119-822-3 | — | 2998-5043-02 |
| 0119-823-3 | — | 2998-5044-02 |
| 0119-833-3 | — | 2998-5029-02 |
| 0119-845-1 | — | 2908-7947-62 |
| 0119-925-1 | P651-2CC | 2902-7985-62 |
| 0119-930-1 | P651-1CC | 2902-7947-62 |
| 0119-945-1 | P650-1CC | 2980-0000-62 |
| 0119-946-3 | P670-1SF | 2998-5001-02 |
| 0119-948-3 | P670-2SF | 2998-5002-02 |
| 0119-949-3 | — | 2998-5004-02 |
| 0119-950-3 | P670-3SF | 2998-5003-02 |
| 0119-954-3 | — | 2998-5031-02 |
| 0119-955-3 | P671-2SF | 2998-5032-02 |
| 0119-957-3 | — | 2998-5028-02 |
| 0119-959-3 | — | 2998-5006-02 |
| 0119-960-1 | P652-2CC | 2908-7985-62 |
| 0119-972-3 | — | 2998-5005-02 |
| 0119-994-3 | — | 2998-5045-02 |
| 0270-018-1 | — | 2998-5022-94 |
| — | P671-3SF | 2998-5033-02 |

OS-50P

DC-40 GHz Microminiature Blind Mate Connectors



OS-50P Microminiature Blind Mate Connectors are the newest solution to RF and microwave packaging. The OS-50P brings together OSP blind mate technology and the OS-50 (2.4mm) high frequency interface to produce micro-miniature blind mate connectors that operate dc to 40 GHz.

This blind mate interface, specifically designed for multiple interconnects, maintains reliable performance over the typical mechanical tolerances required in cost effective packaging. They are designed to be used where space is at a premium and high performance characteristics are required.

OS-50P connectors are less than 1/2 the size of SMA connectors. For high density packaging, connector spacing can be as close as .187 inch center-to-center.

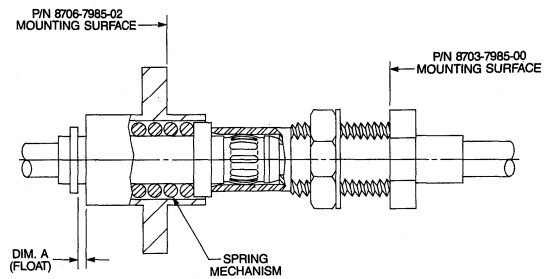
OS-50P is the performance solution to efficient microwave and millimeter wave component and system packaging.

Table of Contents

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| .085 and .047 Dia.-Direct Solder Attachment | |
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| Microstrip Transmission Line Type | 148 |
| Hermetic Sealed Type | 148 |
| Packaging Accessories | |
| In-Series Adapters | 148 |

The float mounted OS-50P connectors introduce some new design aspects which must be considered at the development stage in order to take full advantage of the float features.

Spring Load Forces

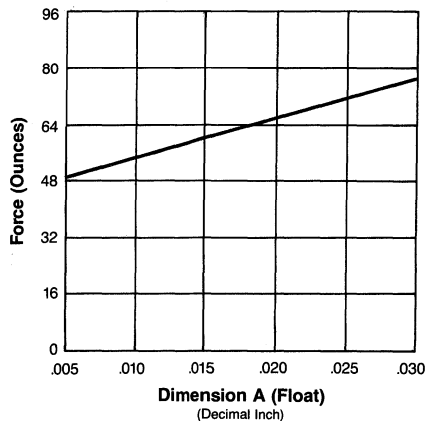


Misalignment tolerance is obtained from a spring mechanism which separates the connector interface from the flange housing and allows it to float. As the springs work to align mating connectors, the forces are transmitted to the mounting panel. The force generated by several connectors can be considerable under extreme mismatch conditions and could cause bowing of the mounting panels if they are not supported properly. Typical forces on a mated pair at extremes is illustrated below.

Recommended Preload:

When using float mount designs, it is necessary that the connector be longitudinally displaced a minimum of .005 inch. This develops enough force to insure that the connector will mate under extreme radial misalignment. The remainder of the longitudinal float tolerance (.025 inch) can be used for system misalignment.

Spring Load Force

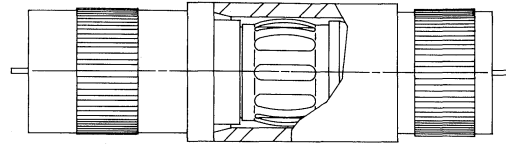


Cables

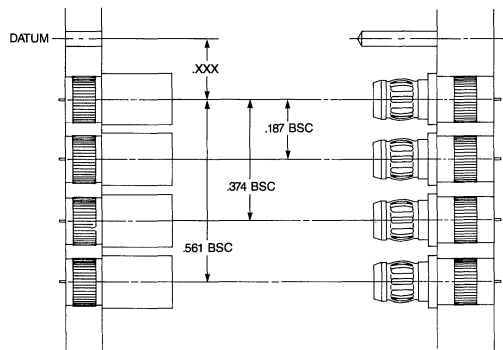
OS-50P blind mate connectors are available for .085 semi-rigid cable. When using semi-rigid cable, it is recommended that a service loop be used to facilitate the float features of the connector.

For applications such as modularized MIC to MIC packages, rigid mount hermetic and non-hermetic OS-50P connectors are recommended as space is usually at a premium and relatively tight tolerances can be held. In using rigid mount OS-50P connectors, the axial and radial float tolerance of the OS-50P interface is used to accommodate misalignment.

When mounting several OS-50P rigid mount connectors, the recommended spacing between connector is .187 inches (4.7mm).



Rigid Mount Stripline Launchers
Part Numbers 8758-1138-00 (Jack)
and 8757-1136-00 (Plug)



All dimensions are shown in decimal inches.
See catalog for individual part number mounting hole detail.

Misalignment Tolerance

Axial:

The OS-50P interface can accommodate .005 inch axial misalignment.

Radial:

The OS-50P interface can accommodate $\pm .003$ inch radial misalignment; therefore, hole location is $\left[\begin{array}{c} \oplus \\ \ominus \end{array} \right] \varnothing .003$ with the basic hole center line dimensioned from the datum.

OS-50P

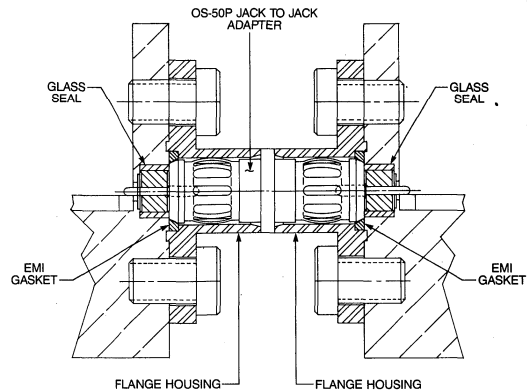
Module to Module Applications and Features

For applications where flush mount packaging is not required, OS-50P jack to jack adapter, part number 8780-0000-00, may be used to interconnect modules.

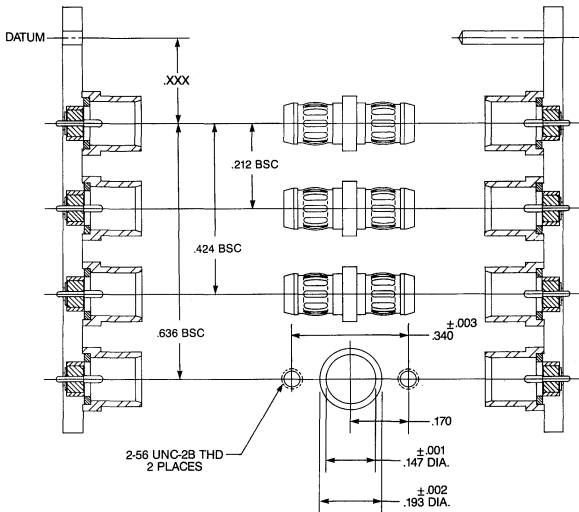
In this application, the OS-50P plug outer conductor detail has been machined into a separate flanged housing. With the addition of the OS-50P hermetic glass seal and EMI/RFI gasket, the OS-50P plug interface is created.

When mated, the shoulder of the OS-50P jack to jack adapter provides the required reference plane to set the OS-50P interface. The shoulder width of .042 inch (1.1mm) and the flange housing protrusion of .170 inch (4.3mm) leads to a module to module spacing of .382 inch (9.7mm).

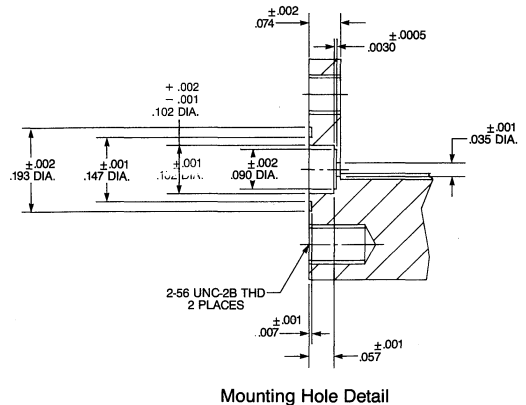
When mounting several OS-50P connectors, the recommended spacing between connectors is .212 inch (5.4mm).



Module to Module Application
Using Part Number 8780-0000-00 Adapter
and 8799-5001-54 Flange Housing,
EMI/RFI Gasket and Hermetic Seal



All dimensions are shown in decimal inches.



Mounting Hole Detail

Misalignment Tolerance

Axial:

The OS-50P interface can accommodate .005 inch axial misalignment.

Radial:

The OS-50P interface can accommodate $\pm .003$ inch radial misalignment; therefore, hole location is $\begin{matrix} \oplus \\ \ominus \end{matrix} \varnothing .0015$ with the basic hole center line dimensioned from the datum.

OS-50P

Flush Mount Module to Module Hermetic

Applications and Features

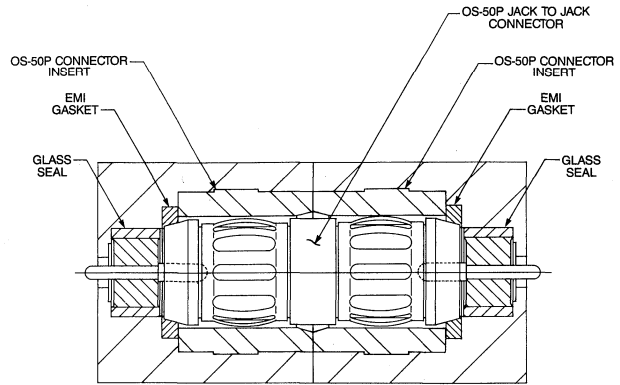
With Press-Fit Mounting Insert

Where space is at a premium and modules are to be interconnected, flush mount module to module hermetic packaging is easily achievable through the use of an OS-50P connector assembly, Part Number 8780-1100-00 and OS-50P flush mount connector insert, Part Number 8798-5007-00.

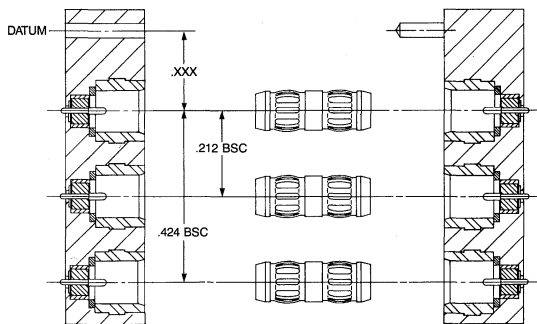
For ease of installation, a press-fit insert containing the machined OS-50P outer conductor detail is available. With the addition of the OS-50P hermetic glass seal and EMI/RFI gasket, the OS-50P plug interface is created.

Flush module-to-module interconnection is achieved through the use of the OS-50P jack to jack connector, Part Number 8780-2870-00. As the OS-50P reference planes are set only by the insert wall dimensioning, the OS-50P jack to jack connector used for flush mount applications cannot be used with any other OS-50P connector configuration.

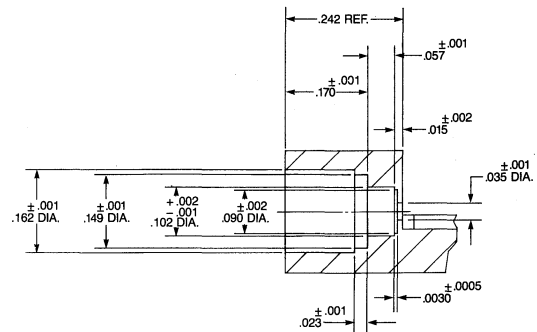
When mounting several OS-50P blind mate connectors, the recommended spacing between connectors is .212 inch (5.4mm).



Flush Mounted Module Application With Press-Fit Mounting Insert
Using Part Number 8780-1100-00
OS-50P Jack to Jack Connector Assembly
and Part Number 8798-5007-00
Press-Fit Mounting Insert



All dimensions are shown in decimal inches.



Mounting Hole Detail

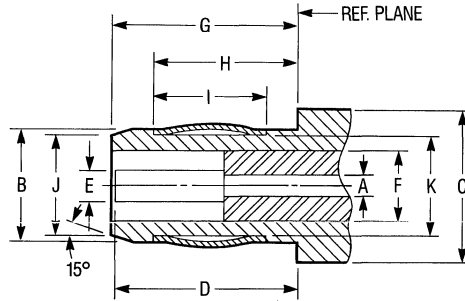
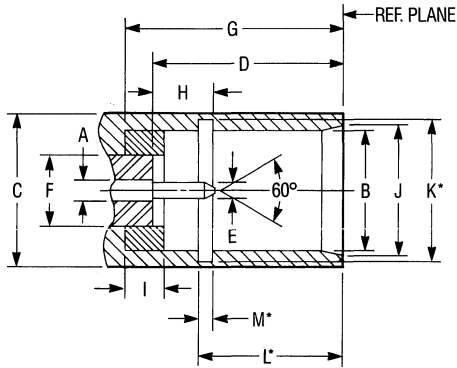
Misalignment Tolerance

Axial:

The OS-50P interface can accommodate .005 inch axial misalignment.

Radial:

The OS-50P interface can accommodate $\pm .003$ inch radial misalignment; therefore, hole location is $\oplus \varnothing .003$ with the basic hole center line dimensioned from the datum.



PLUG

| Letter | Inches (Millimeters) |
|--------|----------------------|
| A | .024 (0.61) Nom. |
| B | .127 (3.23) Nom. |
| C | .160 (4.06) Nom. |
| D | .170 (4.32) Nom. |
| E | .020 (0.51) Nom. |
| F | .078 (1.98) Nom. |
| G | .194 (4.93) Nom. |
| H | .055 (1.40) Nom. |
| I | .035 (0.89) Nom. |
| J | .137 (3.48) Nom. |
| K* | .143 (3.63) Nom. |
| L* | .130 (3.30) Nom. |
| M* | .012 (0.30) Nom. |

*OS-50P plug available with optional internal locking ring. Consult factory.

JACK

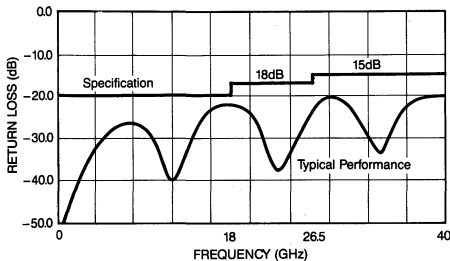
| Letter | Inches (Millimeters) |
|--------|----------------------|
| A | .024 (0.61) Nom. |
| B | .120 (3.05) Nom. |
| C | .160 (4.06) Nom. |
| D | .166 (4.23) Nom. |
| E | .034 (0.86) Nom. |
| F | .078 (1.98) Nom. |
| G | .168 (4.27) Nom. |
| H | .130 (3.30) Nom. |
| I | .102 (2.59) Nom. |
| J | .109 (2.78) Nom. |
| K | .104 (2.64) Nom. |

OS-50P

Specifications

The specifications given refer specifically to a mated pair of Part Number 8704-7985-00 and 8703-7985-00. Specifications on other connectors are available from the company on request.

The general electrical, mechanical and environmental specifications in the following table are recommended for procurement documents or drawings.



Engineering Data

Nominal Impedance: 50 ohms
Frequency: dc to 400 GHz
Temperature Rating: -55° C to +125° C

Electrical

Return Loss (Mated Pair):

RG-405 (.085) Semi-Rigid per MIL-C-17/133

20 dB to 18 GHz
18 dB to 26.5 GHz
15 dB to 40 GHz

RF Transmission Loss:

.040 x \sqrt{f} (GHz)

Insulation Resistance:

5,000 megohms min.

Contact Resistance

Center Contact:

6.0 milliohms max.

Outer Contact:

6.0 milliohms max.

Dielectric Withstanding

Voltage:

500 volts RMS

Corona at 70,000 Ft.:

150 volts RMS

RF Leakage

-(90-fGHz) dB Min.

Interface Only:

(fully mated)

Environmental

Corrosion:

Method 101, Condition B, MIL-STD-202

Vibration:

Method 204, Condition D, 20G's,
MIL-STD-202

Shock:

Method 213, Condition I, 100G's,
MIL-STD-202

Temperature Cycling:

Method 107, Condition B, MIL-STD-202

Moisture Resistance:

Method 106, MIL-STD-202

Material

Housing:

Corrosion resistant steel Type 303
(stainless) per ASTM A484 and A582

Center Contact:

Beryllium copper per ASTM-B-196

Dielectric:

TFE fluorocarbon per ASTM-D-1457

Spring Finger:

Beryllium copper per ASTM-B-196

EMI/RFI Gasket:

Silver filled silicone rubber

Mechanical

Force to Engage:

3 lbs. max.

Force to Disengage:

1.5 lbs. max.

Center Contact Retention:

4 lbs. min.

Durability:

500 cycles

Radial Misalignment

Rigid Mount:

.003 inch max.

Float Mount:

.013 inch max.

Finish

Center Contact:

Gold plate per MIL-G-45204 Type I, Class 1
over copper plate per MIL-C-14550

Housing:

Gold plate per MIL-G-45204, Type II, Class 0
over nickel plate per QQ-N-290, Class 2 or
passivate per ASTM-A380

Spring Finger:

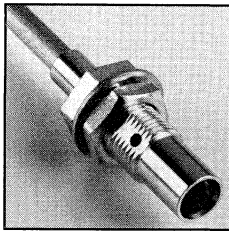
Gold plate per MIL-G-45204, Typ I, Class 1
over nickel plate per QQ-N-290

All dimensions shown are nominal, contact the factory for specific tolerances.

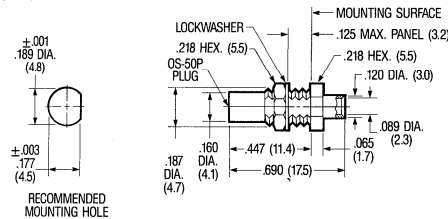
OS-50P Microminiature Blind Mate Connectors for .085 and .047 semi-rigid cable meet high performance requirements for multiple interconnects. Standard units are available in direct solder bulkhead or panel mount designs. Jack connectors are available in either float or rigid mount.

Rigid mount connectors allow up to .003 inch radial misalignment and .005 inch axial misalignment. Float mount connectors can be used in applications that require up to .013 inch radial misalignment and .030 inch axial misalignment. Please refer to Application Notes for assistance in choosing the optimum connector for your design specification.

.085 and .047 Dia. • Direct Solder Attachment

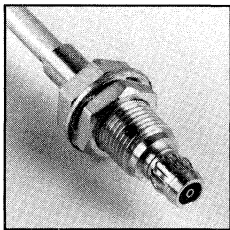


Bulkhead Mount Cable Plug Rear Mount

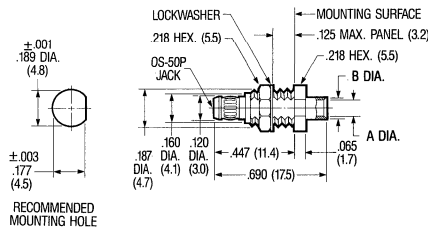


| | |
|-------------|-----------------|
| Cable | RG-405/U (.085) |
| Part Number | 8703-7985-00 |

Finish: Housing that is soldered to cable outer conductor is gold plated. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

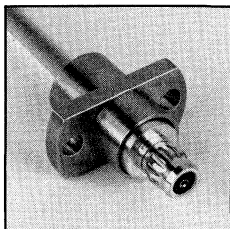


Bulkhead Mount Cable Jack Rigid Rear Mount

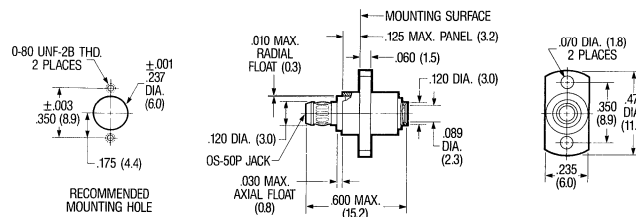


| | | | |
|-------------|-----------------|--------------|-------|
| Cable | RG-405/U (.085) | .047 | |
| Part Number | 8704-7985-00 | 8704-7947-00 | |
| Dim. A | Inches | .089 | .052 |
| | (mm) | (2.3) | (1.3) |
| Dim. B | Inches | .120 | .082 |
| | (mm) | (3.0) | (2.1) |

Finish: Housing that is soldered to cable outer conductor is gold plated. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended tools in Tool Section.



Flange Mount Cable Jack Floating Rear Mount



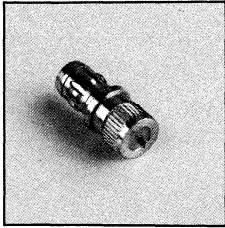
| | |
|-------------|-----------------|
| Cable | RG-405/U (.085) |
| Part Number | 8706-7985-02 |

Finish: Inner housing that is soldered to cable is gold plated. Outer housing is passivated stainless steel. When using semi-rigid cable, it is recommended that a service loop be used to facilitate the float features of this connector. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

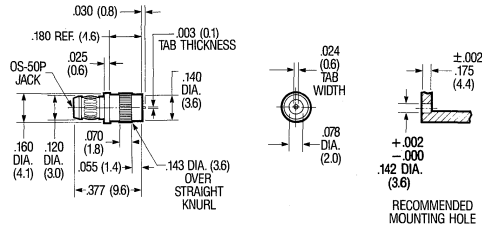
OS-50P

DC-40 GHz • Microminiature Blind Mate For Stripline and Microstrip Circuits

Stripline • Non-Hermetic



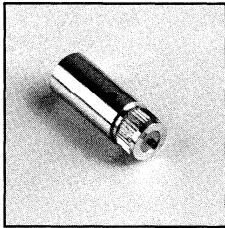
**Press-Fit Installation - Panel Mount
Jack Launcher with Sliding Contact**



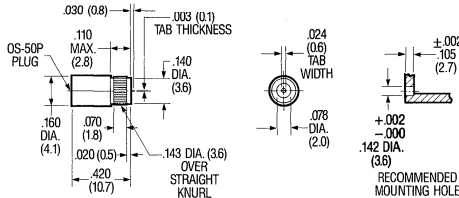
Part Number 8758-1138-00

Suggested Stripline Parameters:
Ground Plane Spacing: .062, .040 inches
Line Width: .049, .031 inches
Dielectric Constant (Er): 2.2
Finish: Gold plated.
Refer to recommended assembly tools in Tool Section

Stripline • Non-Hermetic



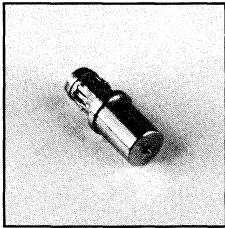
**Press-Fit Installation - Panel Mount
Plug Launcher with Sliding Contact**



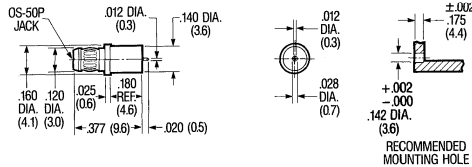
Part Number 8757-1136-00

Suggested Stripline Parameters:
Ground Plane Spacing: .062, .040 inches
Line Width: .049, .031 inches
Dielectric Constant (Er): 2.2
Finish: Gold plated.
Refer to recommended assembly tools in Tool Section.

Microstrip • Non-Hermetic



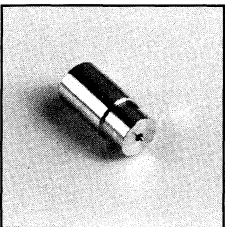
Solder Panel Mount - Jack Launcher



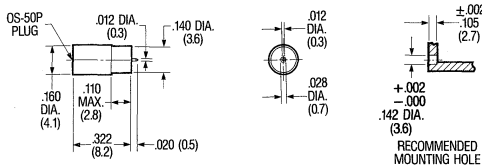
Part Number 8758-1127-00

Suggested Microstrip Parameters:
Material: Alumina, .015, .010 inches thick
Line Width: .014, .0098 inches
Dielectric Constant (Er): 9.8
Finish: Gold plated.
Refer to recommended assembly tools in Tool Section.

Microstrip • Non-Hermetic



Solder Panel Mount - Plug Launcher



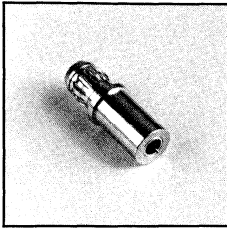
Part Number 8757-1125-00

Suggested Microstrip Parameters:
Material: Alumina, .015, .010 inches thick
Line Width: .014, .0098 inches
Dielectric Constant (Er): 9.8
Finish: Gold plated.
Refer to recommended assembly tools in Tool Section.

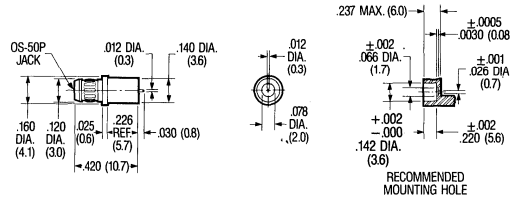
OS-50P

DC-40 GHz • Microminiature Blind Mate

Microstrip • Hermetic



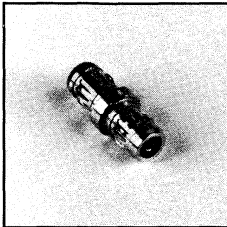
Solder Panel Mount - Hermetic Jack Launcher with Integral Glass Seal



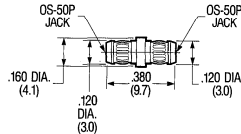
Part Number **8758-3129-00**

Suggested Microstrip Parameters:
 Material: Alumina, .015, .010 inches thick
 Line Width: .014, .0096 inches
 Dielectric Constant (Er): 9.8
 Finish: Gold Plated
 Refer to Application Note for applications and mounting detail.
 Refer to recommended assembly tools in Tool Section.

In-Series Adapter



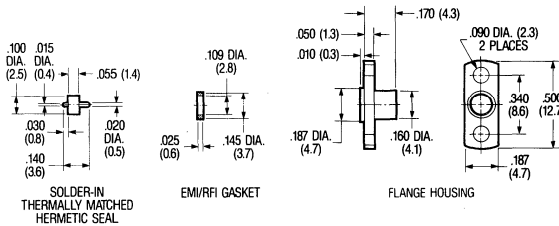
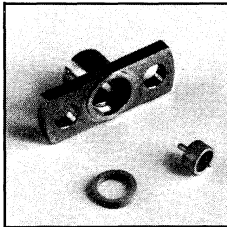
OS-50P Jack to OS-50P Jack Adapter



Part Number **8780-0000-00**

In-series adapter may be used for hermetic module-to-module applications when used in conjunction with Seal, Gasket and Flange Housing shown below.
 Finish: In-Series adapter is gold plated.
 Refer to Application Note for applications and mounting detail.
 Refer to recommended assembly tools in Tool Section.

Hermetic Accessories for Modular Packaging



| Description | Part Number |
|---|---------------------|
| Solder-In Thermally Matched Hermetic Seal | 8798-5002-94 |
| EMI/RFI Gasket | 8798-5003-54 |
| Seal, Gasket, Flange Housing | 8799-5001-54 |

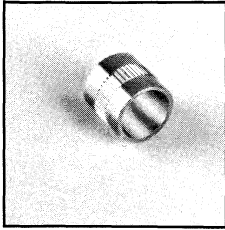
Refer to Application Note for applications and mounting detail.
 Refer to recommended assembly tools in Tool Section.

OS-50P

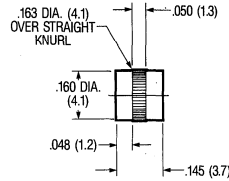
DC-40 GHz • Microminiature Blind Mate

For Flush Mount Packaging

Hermetic Accessories for Modular Packaging



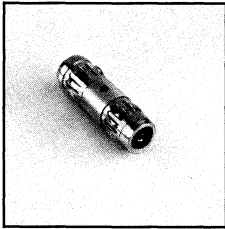
Press-Fit Mounting Insert



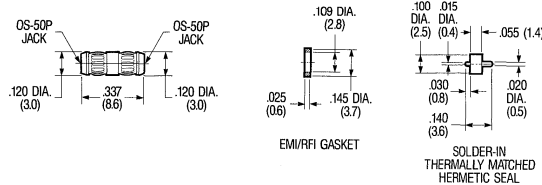
| | |
|-------------|---------------------|
| Part Number | 8798-5007-00 |
|-------------|---------------------|

Refer to Application Note for applications and mounting detail.

Microstrip • Hermetic



OS-50P Jack to OS-50P Jack Connector & Seal Assembly for Flush Mount Packaging

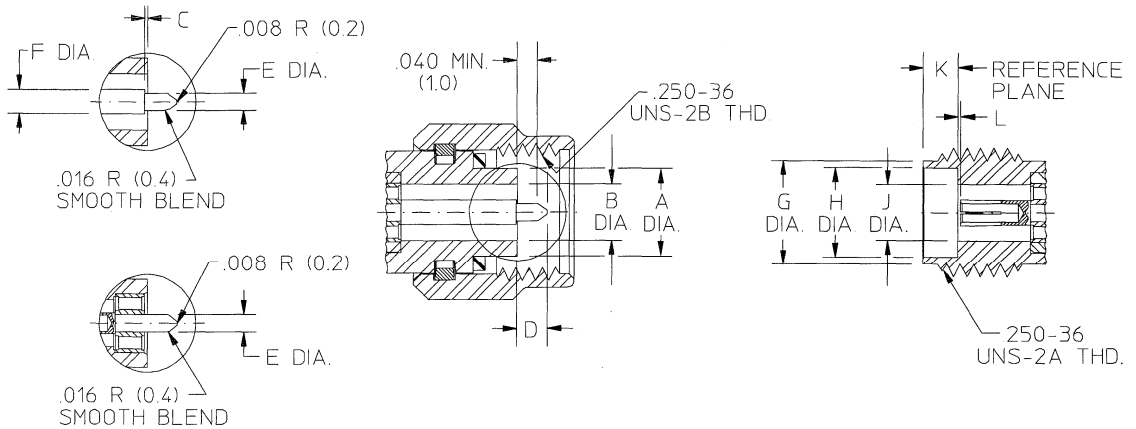


| Description | Part Number |
|---|---------------------|
| Connector Assembly: Seals (2), Gaskets (2), and Connector | 8780-1100-00 |
| Jack to Jack Connector Only | 8780-2870-00 |
| Solder-In Thermally Matched Hermetic Seal Only | 8798-5002-94 |
| EMI/RFI Gasket Only | 8798-5003-54 |

Note: Connector can only be used in flush mount applications. This application requires a connector, 2 seals, and 2 EMI/RFI gaskets.
 Finish: Gold plated.
 Refer to Application Note for applications and mounting detail.
 Refer to recommended assembly tools in Tool Section.

OS-2.9

Interface Mating Dimensions



PLUG

| Letter | Inches (Millimeters) | |
|--------|----------------------|--------------|
| | Minimum | Maximum |
| A | .178 (4.52) | .180 (4.57) |
| B | .114 (2.95) | .116 (2.94) |
| C | .000 (0.00) | .005 (0.13) |
| D | .056 (1.42) | .066 (1.68) |
| E | .0355 (0.90) | .0365 (0.93) |
| F | .0495 (1.26) | .0505 (1.28) |

JACK

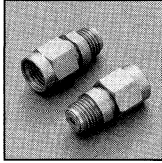
| Letter | Inches (Millimeters) | |
|--------|----------------------|-------------|
| | Minimum | Maximum |
| G | .208 (5.28) | .216 (5.48) |
| H | .182 (4.62) | .184 (4.67) |
| J | .114 (2.90) | .116 (2.95) |
| K | .074 (1.88) | .078 (1.98) |
| L | .000 (0.00) | .005 (0.13) |

OS-2.9 Specifications

| Requirement | Detail |
|--------------------------------|---|
| General | |
| Materials | Steel, corrosion-resistant Type 303 (stainless) per ASTM A484 and A582. Beryllium copper per ASTM-B-196. PPO™ (Polyphenolic Oxide) |
| Finish | Center contacts shall be gold plated per MIL-G-45204 Type II, Class 1 over nickel plate per QQ-N-290. Launcher connector housing shall be passivated per ASTM A380. Cable connector housing at the point of solder attachment shall be gold plated per MIL-G-45204 Type II, Class 1 over nickel plate per QQ-N-290, other areas passivated per ASTM A380. |
| Design | The design shall be such that the outline and interface dimensions shown in this catalog are met. |
| Electrical | |
| Frequency | dc - 40 GHz (usable to 46 GHz) |
| VSWR | 1.05 + .005(f) Max. dc - 40 GHz |
| Insertion Loss | .04 \sqrt{f} (GHz) Max. |
| Mechanical | |
| Coupling Nut Tightening Torque | 8-10 in. lbs. |
| Environmental | |
| Temperature Rating | -55°C to +125°C |

OS-2.9

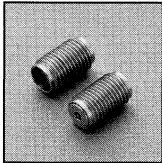
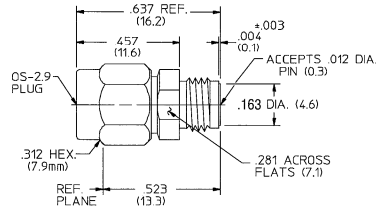
Hermetic Launchers with Captured Center Contacts



Plug Receptacle (Sparkplug)
For Use With Glass Bead or Tab Contact

| | |
|-------------|--------------|
| Part Number | 4857-3577-02 |
|-------------|--------------|

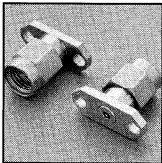
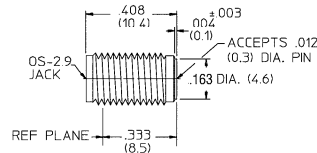
Finish: Passivated stainless steel
Recommended Mounting Hole Detail B.



Jack Receptacle (Sparkplug)
For Use With Glass Bead or Tab Contact

| | |
|-------------|--------------|
| Part Number | 4858-3577-02 |
|-------------|--------------|

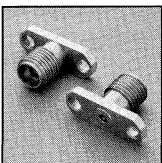
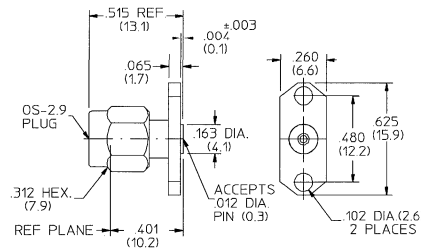
Finish: Passivated stainless steel
Recommended Mounting Hole Detail B.



Flange Mount Plug Receptacle
For Use With Glass Bead or Tab Contact

| | |
|-------------|--------------|
| Part Number | 4851-3575-02 |
|-------------|--------------|

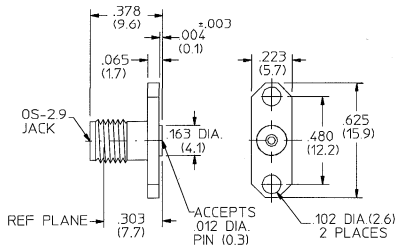
Finish: Passivated stainless steel
Recommended Mounting Hole Detail A.

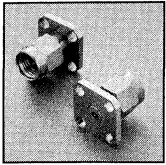


Flange Mount Jack Receptacle
For Use With Glass Bead or Tab Contact

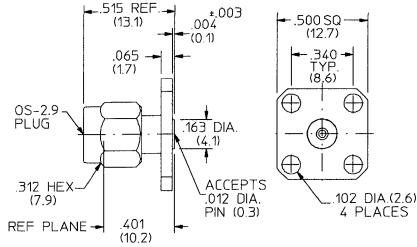
| | |
|-------------|--------------|
| Part Number | 4852-3575-02 |
|-------------|--------------|

Finish: Passivated stainless steel
Recommended Mounting Hole Detail A.



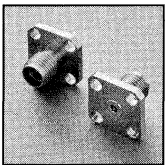


Flange Mount Plug Receptacle For Use With Glass Bead or Tab Contact

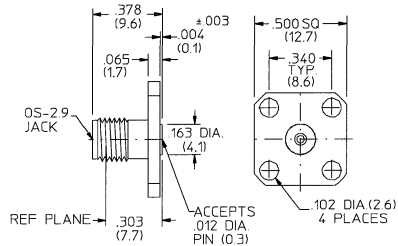


| | |
|-------------|--------------|
| Part Number | 4851-3576-02 |
|-------------|--------------|

Finish: Passivated stainless steel
Recommended Mounting Hole Detail A.



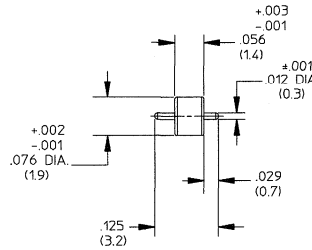
Flange Mount Jack Receptacle For Use With Glass Bead or Tab Contact



| | |
|-------------|--------------|
| Part Number | 4852-3576-02 |
|-------------|--------------|

Finish: Passivated stainless steel
Recommended Mounting Hole Detail A.

Glass Bead For Use With Hermetic Launchers

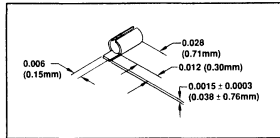


| | |
|-------------|---------------------|
| Part Number | 8598-0294-00 |
|-------------|---------------------|

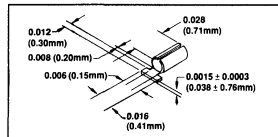
Note: Diameters concentric with $\pm .002$ T.I.R.
Required for installation of all launchers for use with hermetic packages.

Stress Relief Contacts

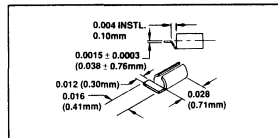
Alumina Microstrip and Coplanar Waveguide



Duroid Microstrip



Duroid Stripline



To relieve stress at the interface of the microcircuit and its connecting coaxial conductor. These contacts simply slide onto the standard glass bead pins. Sold in packages of 25.

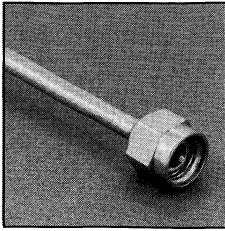
| Description | Part Number |
|---|---------------------|
| Microstrip and Coplanar Waveguide Stress Relief Contacts* | 2598-5295-54 |
| Stripline Stress Relief Contacts* | 2598-5296-54 |
| Microstrip Stress Relief Contacts* | 2598-5297-54 |

*Packages of 25

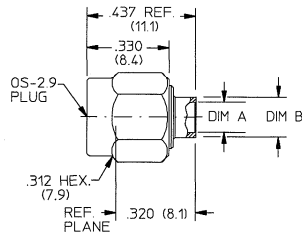
OS-2.9

For Semi-Rigid Cable

Direct Solder Attachment

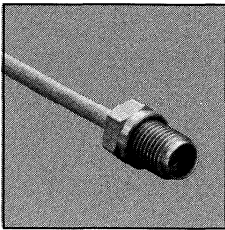


Cable Plug

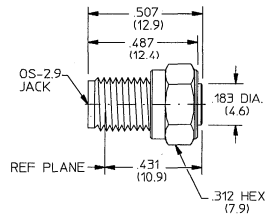


| Part Number | Cable | Dim. A Inches (mm) | Dim. B Inches (mm) |
|---------------------|-----------------|-----------------------|-----------------------|
| 4801-7918-02 | 0.118 | .121 Min. (3.1) | .160 (4.1) |
| 4801-7985-02 | RG 405/U (.085) | .089 Min. (2.3) | .160 (4.1) |

Finish: Passivated stainless steel



Cable Jack



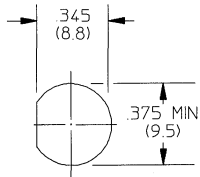
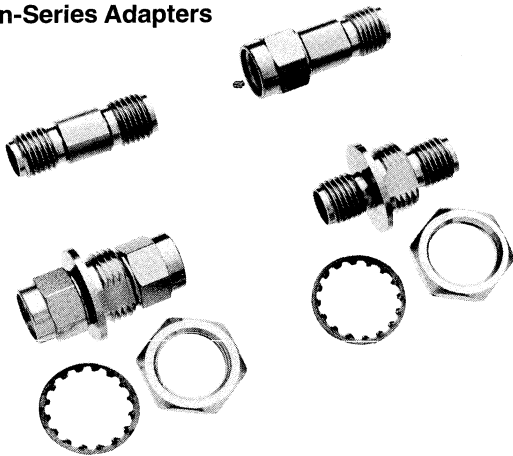
| Captured Center Contact | |
|-------------------------|-----------------|
| Part Number | Cable |
| 4802-7918-02 | 0.118 Inch Dia. |

Finish: Passivated stainless steel

OS-2.9

Adapters

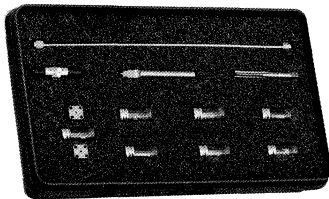
In-Series Adapters



Recommended Bulkhead Mounting Hole

| Description | Part Number |
|---|--------------|
| OS-2.9 Plug to OS-2.9 Plug | 4881-2361-02 |
| OS-2.9 Jack to OS-2.9 Jack | 4880-2362-02 |
| OS-2.9 Plug to OS-2.9 Jack | 4882-2361-02 |
| OS-2.9 Plug to OS-2.9 Plug Bulkhead Feedthrough | 4883-2361-02 |
| OS-2.9 Jack to OS-2.9 Jack Bulkhead Feedthrough | 4884-2362-02 |
| OS-2.9 Plug to OS-2.9 Jack Bulkhead Feedthrough | 4885-2362-02 |

Evaluation Kit

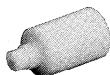


Kit contains: one plug/plug cable assembly, two 4858-3577-02 jack sparkplug launchers, two 4852-3576-02 jack flange sparkplug launchers, five 8598-0294-00 glass beads, one 2598-5286-54 drill and tap set, five 2598-5295-54 microstrip stress relief contacts, five 2598-5296-54 stripline stress relief contacts and all other parts and fixtures required to assemble launchers with or without sliding contacts.

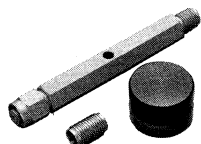
| | |
|-------------|--------------|
| Part Number | 2598-5294-54 |
|-------------|--------------|

OS-2.9 Tools • Accessories

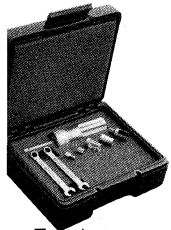
Tools



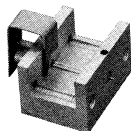
Cable Sleeve Soldering Fixture
(Packages of 10)



Connector Cable
Assembling Fixture



Torquing
Tool Kit



Flange Mount
Soldering Fixture
(Packages of 5)



Drill and Tap



Sparkplug Soldering Fixture
(Packages of 10)

Cable assembly tools for installation of OS-2.9 connectors to 0.118 inch semi-rigid cable.

| Description | Part Number |
|---------------------------------------|--------------|
| Plug Cable Sleeve Soldering Fixtures* | 2598-5290-54 |
| Jack Cable Sleeve Soldering Fixtures* | 2598-5291-54 |
| Cable Assembling Fixture | 2598-5293-54 |

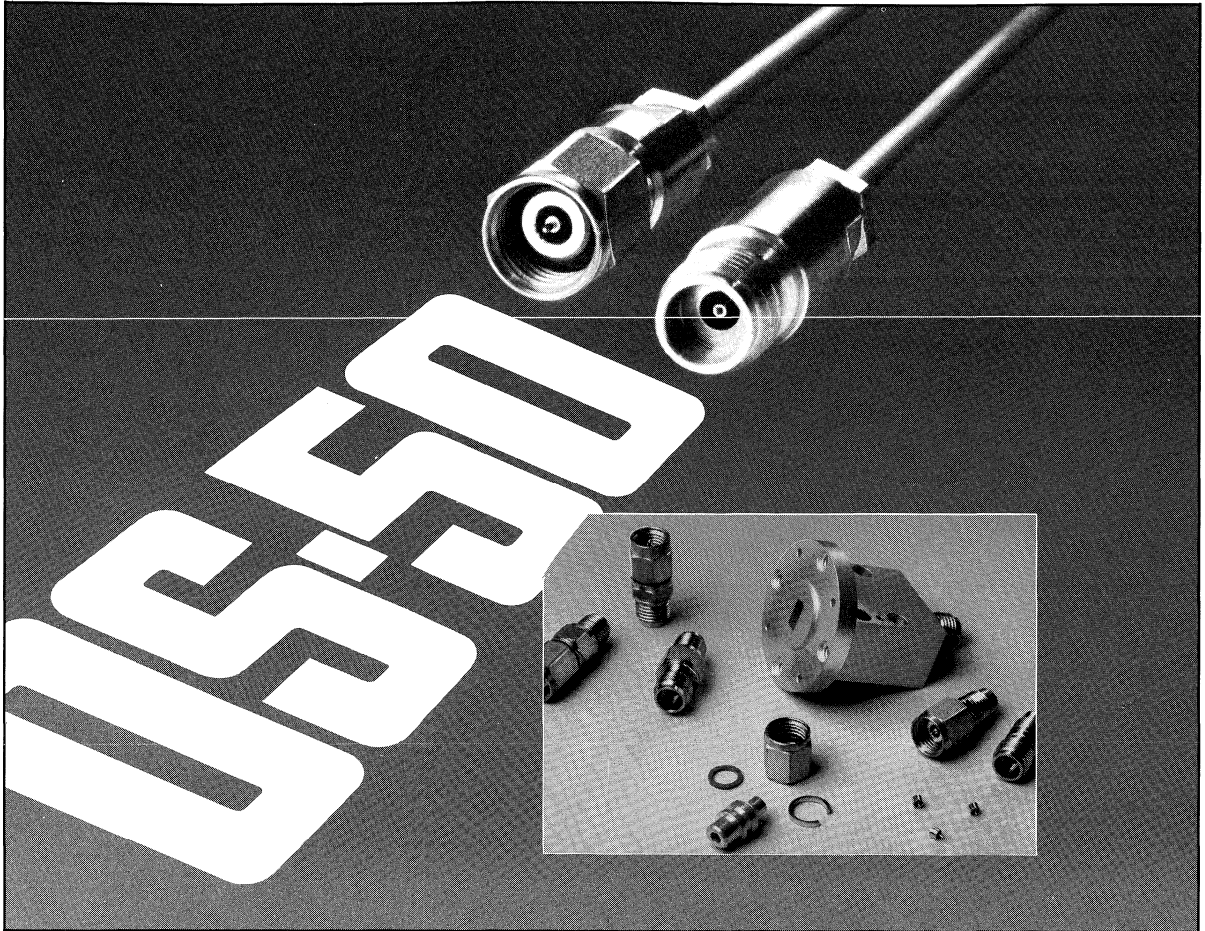
Hermetic assembly tools.

| Description | Part Number |
|----------------------------------|--------------|
| Torquing Tool Kit | 2598-5288-54 |
| Flange Mount Soldering Fixtures* | 2598-5289-54 |
| Sparkplug Soldering Fixtures* | 2598-5285-54 |
| Drill | 2598-5286-54 |
| Tap | 2598-5287-54 |
| Stress Relief Contact Drill | 2598-5292-54 |

*Packaged in multiples listed.

OS-2.4 (OS-50)

DC-50 GHz Coaxial Connectors



In order to support millimeter component and systems development, there is a pressing need for broadband test equipment operating to at least 50 GHz. This equipment requires a high performance coaxial interface capable of reliable mode free operation DC through 50 GHz and one that could achieve NBS traceability. Presently, there are no NBS traceable coaxial connector standards above 18.0 GHz.

The introduction of the OS-50 (2.4mm) interface gives the microwave industry a solution to the broadband coax problem DC through 50 GHz. Implementation of the 2.4mm concept is in the form of three levels or grades: Production/MIL-Spec, Instrumentation and Metrology. Production/MIL-Spec grade connectors are being produced by M/A-COM as a new connector series designated OS-50 intended for industry wide use components, integrated MIC packages and cabling operating broadband up to 50 GHz.

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OS-2.4 (OS-50)

Design Characteristics

Design Criteria for the OS-50 (2.4mm) Connector

The design and development of the OS-50 connector family overcame many of the design limitations of other connector families. The design criteria were:

- Mode free operation DC-50 GHz
- Low VSWR and insertion loss
- Rugged and repeatable mating interface
- NBS traceability
- Meet or exceed MIL-C-39012 requirements
- Low cost

The new connector series is designed around a 2.4mm outer conductor line size with an air dielectric and had TE₁₁ mode threshold above 52 GHz. A comparison of the OS-50 interface with the SMA interface is shown in Figure 2.

Low VSWR and return loss were achieved by selecting the 2.4mm line size and the air dielectric. This allowed for the largest possible center conductor diameter, the lowest conductor losses and minimized the dielectric losses. In addition, using an air dielectric minimized the impedance mismatch at the interface due to line size changes and air gaps between dielectrics. Typical performance for the OS-50 Production/Mil Spec grade interface is shown in Figure 3.

Interface Comparison of OS-50 (2.4mm) and OSM[®] (SMA)

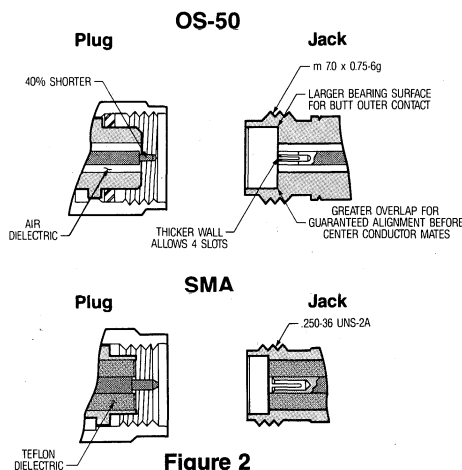
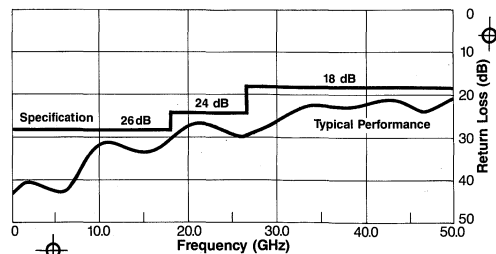


Figure 2

Return Loss Performance OS-50 Interface



Data obtained from a mated pair of OS-50 .085 semi-rigid cable connectors: 8501-7885-02 to 8502-7885-02.

Figure 3

OS-2.4 (OS-50)

Design Characteristics

Mating Features

By foregoing compatibility with existing connector types, a substantial improvement in mechanical reliability and repeatability has been achieved. Though the line size is smaller than an SMA, several design features actually make the interface more rugged and therefore more reliable.

The female center contact design of the OS-50 has a wall thickness nearly twice that of an SMA or K female contact. This allows for a 4 slot design with short slots that is very durable. The outer conductor geometry of the OS-50 interface has much more bearing surface than an SMA which distributes the mating forces over a larger area and cuts down on wear and distortion with repeated connections. Also, the depth of the outer conductor recess on the female OS-50 is deep enough to insure engagement and alignment of the outer conductors before the center conductors engage. See Figure 4. This eliminates damage to the center contacts which is one of the most common failure modes in subminiature connectors.

Since the reference plane of the outer and inner conductors of the interface are coincident and there is an air dielectric, full NBS traceable standards can be developed for calibration purposes. While no MIL-Spec exists as yet for the production grade OS-50 connector series, the construction materials, electrical and environmental specifications will meet or exceed the applicable requirements of MIL-C-39012.

OS-50 Connector Mating Sequence

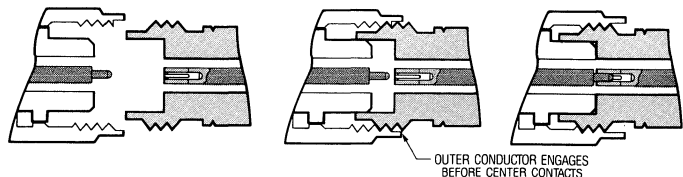
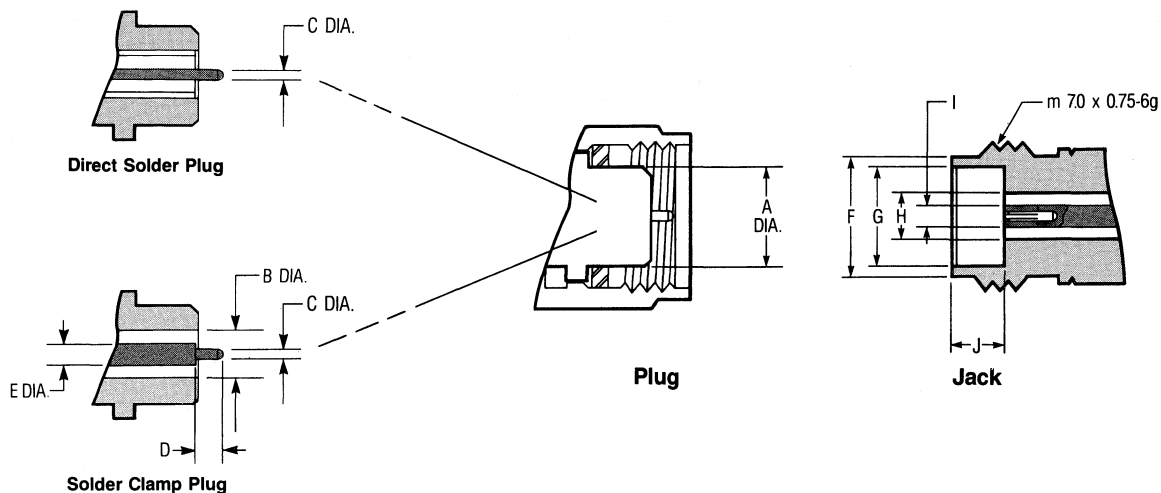


Figure 4

OS-2.4 (OS-50)

Interface Mating Dimensions



| Letter | Dimension Inches (mm) |
|--------|--------------------------|
| A | .187 (4.7) NOM. |
| B | .094 (2.4) NOM. |
| C | .020 (0.5) NOM. |
| D | .055 (1.4) NOM. |
| E | .041 (1.0) NOM. |

| Letter | Dimension Inches (mm) |
|--------|--------------------------|
| F | .230 (5.8) NOM. |
| G | .188 (4.8) NOM. |
| H | .094 (2.4) NOM. |
| I | .041 (1.0) NOM. |
| J | .120 (3.0) NOM. |

NOTES

1. When fully engaged, the two reference planes must coincide with metal to metal contact.
2. Metric equivalents (to the nearest 0.01 mm) are given for general information only and are based on 1 inch = 25.4 millimeters.

OS-2.4 (OS-50) Specifications

The specifications given refer specifically to the mated pair of Part Number 8501-7885-02 and 8502-7885-02 (RG 405). Specifications on other OS-50 products are available from the company on request.

The general electrical, mechanical and environmental specifications in the following table are recommended for procurement documents or drawings.

Electrical M17/133-RG 405 (.085)

| | |
|---|-----------------------------|
| Nominal Impedance: | 50 Ohms |
| Frequency Range: | DC-50.0 GHz |
| Temperature Rating: | -55°C to +125°C |
| VSWR (Mated Pair): | |
| DC-18.0 GHz: | 1.11 Max. |
| 18.0-26.5 GHz: | 1.13 Max. |
| 26.5-50.0 GHz: | 1.29 Max. |
| RF Transmission Loss: | .05x √f(GHz) |
| Insulation Resistance: | 5,000 Megohms Min. |
| Contact Resistance: | |
| Center Contact: | 4.0 Milliohms Max. |
| Outer Contact: | 4.0 Milliohms Max. |
| Dielectric Withstanding Voltage, Sea Level: | 500 Volts RMS |
| Corona at 70,000 ft.: | 150 Volts RMS |
| RF Leakage: | -(90-f(GHz)) dB Fully Mated |

Environmental

| | |
|----------------------|---|
| Corrosion: | Method 101, Condition B, MIL-STD-202 |
| Vibration: | Method 204, Condition D, 20Gs, MIL-STD-202 |
| Shock: | Method 213, Condition I, 100Gs, MIL-STD-202 |
| Temperature Cycling: | Method 107, Condition B, MIL-STD-202 |
| Moisture Resistance: | Method 106, MIL-STD-202 |

Material

| | |
|--------------------|---|
| Housing: | Corrosion resistant steel Type 303 (stainless) per ASTM A484 and A582 |
| Center Contact: | Beryllium Copper per ASTM-B-196 |
| Finish: | |
| On Housing: | Passivated per ASTM-A380 |
| On Center Contact: | Gold plate per MIL-G-45204 Type II, Class 1 over copper plate per MIL-C-14550 |
| Dielectric: | TFE Fluorocarbon per ASTM-D-1457 |

Mechanical

| | |
|------------------------|--|
| Coupling Nut | |
| Retention Force: | Not applicable for jack connectors. For plug connectors, the axial force is 60 lb. min. The torque is 15 in.-lbs. min. |
| Durability: | 500 Cycles Min. |
| Force to Engage: | 2 Inch Pounds |
| Cable Retention: | |
| Axial Force: | 30 lbs. Min. (RG 405) |
| Torque: | 16 in. oz. Min. (RG 405) |
| Coupling Proof Torque: | 15 in. lbs. min. |

OS-2.4 (OS-50)

Evaluation Kits

M/A-COM offers two applications oriented connector evaluation kits for the OS-50 (2.4mm) product line. These kits are designed to provide the engineer with an economical way to evaluate and gain experience with this DC to 50 GHz connector series.

Waveguide to OS-50 Adapters can be ordered separately.

Hermetic Connector Kit Part No. 8598-5006-54

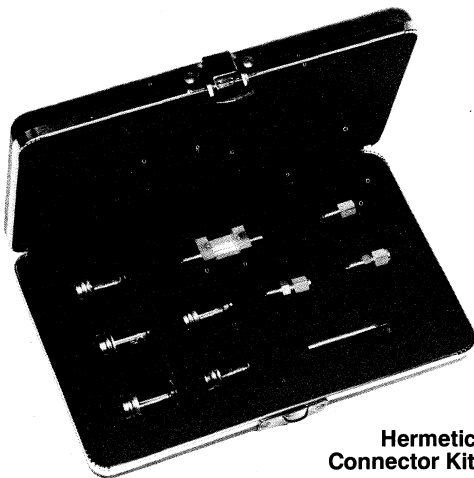
Contents

- OS-50 Glass Seals (5)
- OS-50 Jack Launcher (4)
- OS-50 Plug to K™ Jack Adapter (2)
- Microstrip Test Fixture (1)
- Panel Mount Soldering Fixture (1)
- Step Drill (1)
- Solder Preforms (10)
- Assembly Instructions

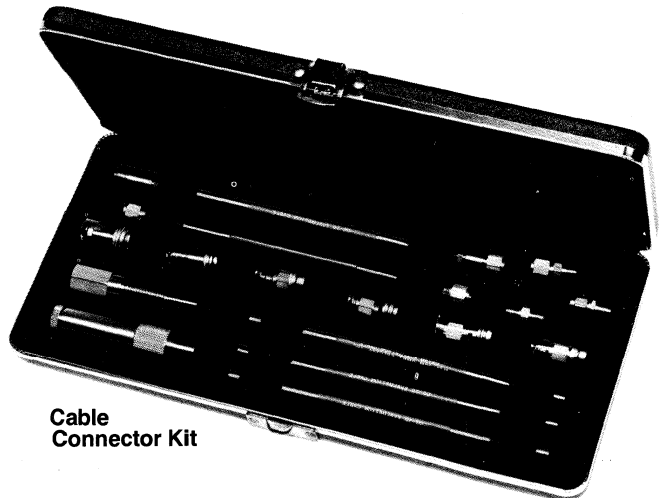
Cable Connector Kit Part No. 8598-5005-54

Contents

- OS-50 Direct Solder Cable Plug Without Center Contact (4)
- OS-50 Cable Plug — Solder Clamp Attachment (1)
- OS-50 Cable Jack — Solder Clamp Attachment (1)
- Cable Assembly with OS-50 Plug/Plug Direct Solder Connectors (1)
- Cable Assembly with OS-50 Plug/Jack Solder Clamp Connectors (1)
- OS-50 Plug to K™ Jack Adapter (1)
- OS-50 Jack to K Plug Adapter (1)
- OS-50 Jack to K Jack Adapter (1)
- Cable Facing Tool (1)
- Interface Locating Tool (1)
- .085 Semi-Rigid Coaxial Cable (3)
- Assembly Instructions



Hermetic
Connector Kit



Cable
Connector Kit

OS-50 is a trademark of M/A-COM
K is a trademark of Wiltron.

M/A-COM, Inc.

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North America: Tel. (800) 366-2266 ■ Asia/Pacific: Tel. +81 (03) 3226-1671 ■ Europe: Tel. +44 (1344) 869 595
Fax (800) 618-8883 Fax +81 (03) 3226-1451 Fax +44 (1344) 300 020

OS-2.4 (OS-50)

DC-50 GHz • For Semi-Rigid Cable

- DC - 50 GHz Performance
- Alternative to Waveguide
- Meets Requirements of MIL-C-39012
- Designed for .085 and .096 inch Semi-Rigid Coaxial Cable
- Interchangeable Plug and Jack Interfaces
- Excellent Electrical Performance

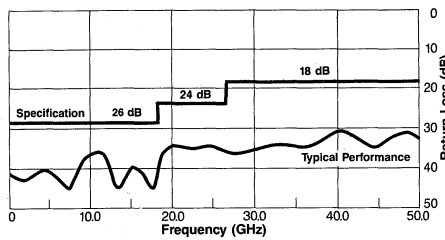
Description

M/A-COM's OS-50 (2.4mm) miniature connectors for semi-rigid cable meet MIL-C-39012 requirements. These connectors exhibit the high performance characteristics required for microwave and millimeter frequency applications. Connectors are available for use on .085 inch cable and the newly developed .096 inch diameter semi-rigid cable which exhibits lower attenuation.

.085 and .096 DIA. Direct Solder and Solder Clamp Attachment

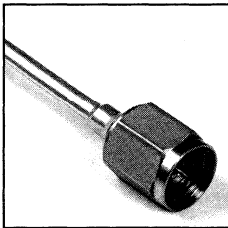
The Direct Solder Cable Connector is a simple and reliable transition from .085 cable to the 2.4mm interface. The cable inner conductor of part number 8501-7985-02, suitably pointed, is used as the connector center contact pin.

The Solder Clamp style connector employs a bushing which is soldered to the cable jacket allowing cable rotation and locking in any angular position.

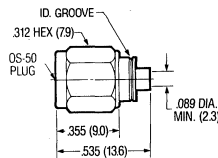


Data obtained from a mated pair of OS-50 .085 semi-rigid cable connectors: 8501-7985-02 and 8502-7885-02.

.085 Dia. • Direct Solder Attachment



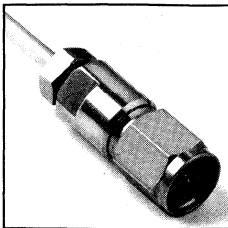
Straight Cable Plug Without Center Contact



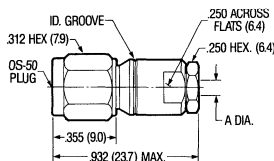
| | |
|-------------|-----------------|
| Cable | RG 405/U (.085) |
| Part Number | 8501-7985-02 |

Finish: Housing is gold plated in all cases. Coupling nut is passivated steel. For gold plated coupling nut, change the part number suffix from -02 to -00. Cable facing tool Part Number 2598-5044-02 is recommended for assembly. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

.085 and .096 Dia. • Solder Clamp Attachment



Straight Cable Plug Captured Center Contact



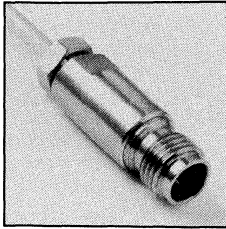
| | | |
|-------------|--------------------------------|--------------------------------|
| Cable | RG 405/U (.085) | .096 |
| Part Number | 8501-7885-02 | 8501-7896-02 |
| Dim. A | Inches (mm) .089 Min. (2.3) | Inches (mm) .099 Min. (2.5) |

Finish: Passivated stainless steel. For gold plate, change the part number suffix from -02 to -00. The solder sleeve is gold plated in all cases. Refer to recommended assembly tools in Tool Section.

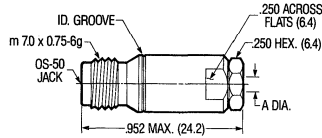
OS-2.4 (OS-50)

DC-50 GHz • For Semi-Rigid Cable

.085 and .096 Dia. • Solder Clamp Attachment

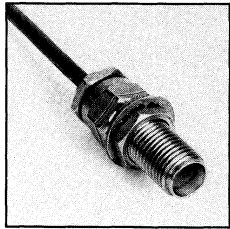


**Straight Cable Jack
Captured Center Contact**

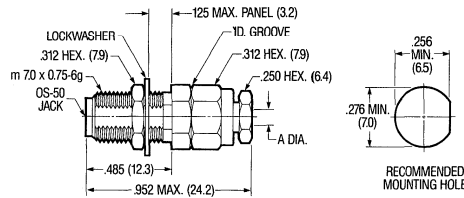


| Cable | RG 405/U (.085) | .096 |
|-------------|--------------------------------|--------------------------------|
| Part Number | 8502-7885-02 | 8502-7896-02 |
| Dim. A | Inches (mm) .089 Min. (2.3) | Inches (mm) .099 Min. (2.5) |

Finish: Passivated stainless steel. For gold plate, change the part number suffix from -02 to -00. The solder sleeve is gold plated in all cases. Refer to recommended assembly tools in Tool Section.



**Bulkhead Feedthrough Cable Jack
Captured Center Contact**



| Cable | RG 405/U (.085) | .096 |
|-------------|--------------------------------|--------------------------------|
| Part Number | 8504-7885-02 | 8504-7896-02 |
| Dim. A | Inches (mm) .089 Min. (2.3) | Inches (mm) .099 Min. (2.5) |

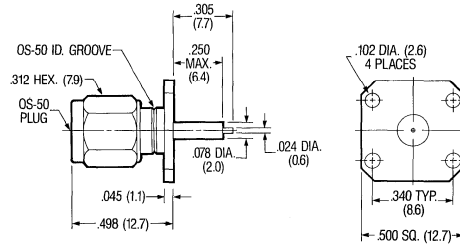
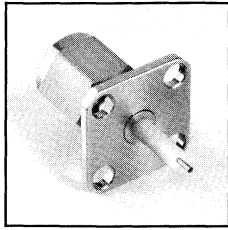
Finish: Passivated stainless steel. For gold plate, change the part number suffix from -02 to -00. The solder sleeve is gold plated in all cases. Refer to recommended assembly tools in Tool Section.

OS-2.4 (OS-50)

DC-50 GHz • Panel Mount

Non-Hermetic • Straight Terminal

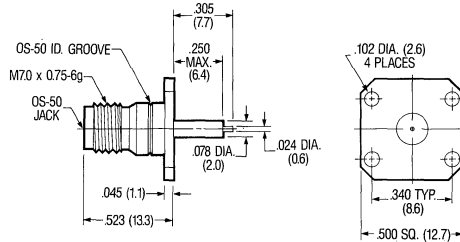
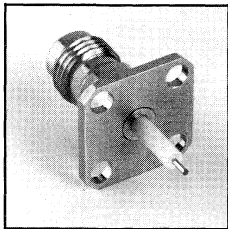
Flange Mount Plug Receptacle



| | |
|-------------------------|--------------|
| Captured Center Contact | |
| Part Number | 8551-1201-02 |

Finish: Passivated stainless steel.

Flange Mount Jack Receptacle



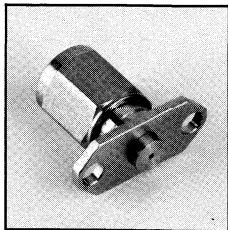
| | |
|-------------------------|--------------|
| Captured Center Contact | |
| Part Number | 8552-1201-02 |

Finish: Passivated stainless steel.

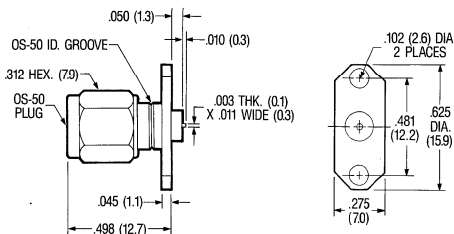
OS-2.4 (OS-50)

DC-50 GHz • For Stripline Circuits

End Launch • Tab Terminal

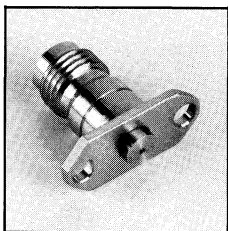


Flange Mount Plug Receptacle

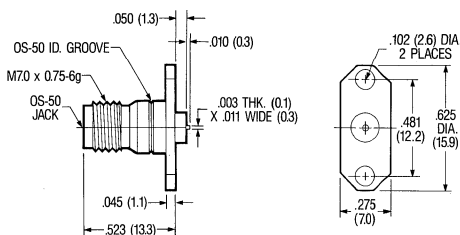


| Captured Center Contact | |
|-------------------------|---------------------|
| Part Number | 8551-5001-02 |

Suggested Stripline Parameters:
 Ground Plane Spacing: .020, .025 inches
 Line Width: .012, .018 inches
 Dielectric Constant (Er): 2.2
 Finish: Passivated stainless steel.
 Recommended Mounting Hole Detail E.

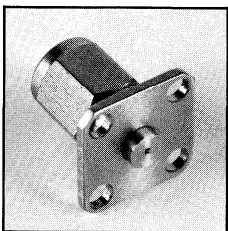


Flange Mount Jack Receptacle

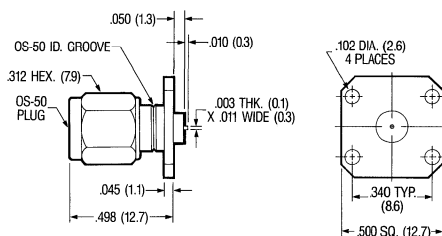


| Captured Center Contact | |
|-------------------------|---------------------|
| Part Number | 8552-5001-02 |

Suggested Stripline Parameters:
 Ground Plane Spacing: .020, .025 inches
 Line Width: .012, .018 inches
 Dielectric Constant (Er): 2.2
 Finish: Passivated stainless steel.
 Recommended Mounting Hole Detail E.

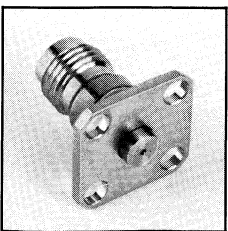


Flange Mount Plug Receptacle

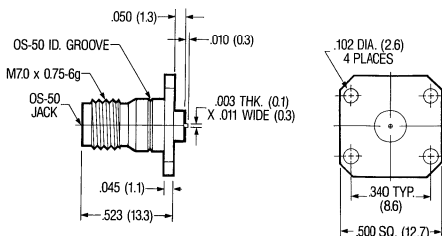


| Captured Center Contact | |
|-------------------------|---------------------|
| Part Number | 8551-5002-02 |

Suggested Stripline Parameters:
 Ground Plane Spacing: .020, .025 inches
 Line Width: .012, .018 inches
 Dielectric Constant (Er): 2.2
 Finish: Passivated stainless steel.
 Recommended Mounting Hole Detail E.



Flange Mount Jack Receptacle



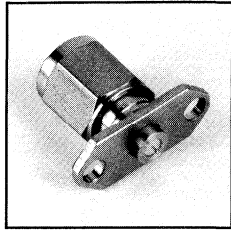
| Captured Center Contact | |
|-------------------------|---------------------|
| Part Number | 8552-5002-02 |

Suggested Stripline Parameters:
 Ground Plane Spacing: .020, .025 inches
 Line Width: .012, .018 inches
 Dielectric Constant (Er): 2.2
 Finish: Passivated stainless steel.
 Recommended Mounting Hole Detail E.

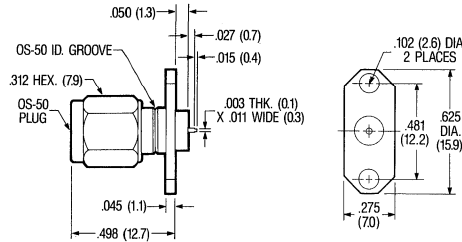
OS-2.4 (OS-50)

DC-50 GHz • For Microstrip Circuits

End Launch • Tab Terminal

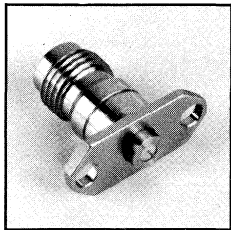


Flange Mount Plug Receptacle

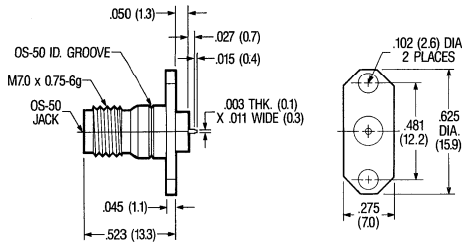


| Captured Center Contact | |
|-------------------------|--------------|
| Part Number | 8552-5003-02 |

Suggested Microstrip Parameters:
 Material: Alumina, .015, .010 inches thick
 Line Width: .014, .0096 inches
 Dielectric: Constant (Er): 9.8
 Finish: Passivated stainless steel.
 Refer to recommended assembly tools in Tool Section.
 Recommended Mounting Hole Detail F.

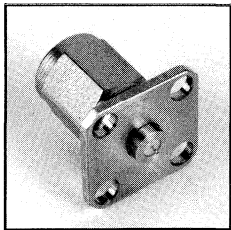


Flange Mount Jack Receptacle

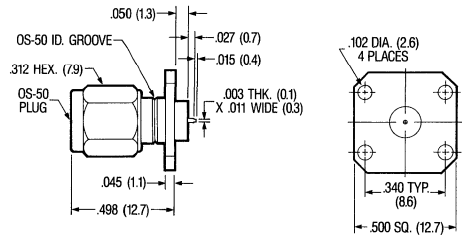


| Captured Center Contact | |
|-------------------------|--------------|
| Part Number | 8552-5003-02 |

Suggested Microstrip Parameters:
 Material: Alumina, .015, .010 inches thick
 Line Width: .014, .0096 inches
 Dielectric: Constant (Er): 9.8
 Finish: Passivated stainless steel.
 Refer to recommended assembly tools in Tool Section.
 Recommended Mounting Hole Detail F.

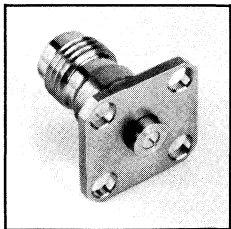


Flange Mount Plug Receptacle

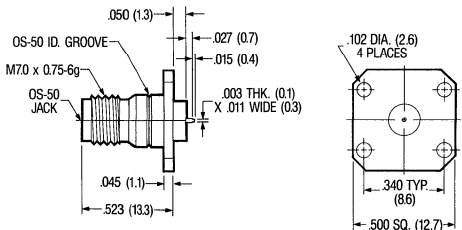


| Captured Center Contact | |
|-------------------------|--------------|
| Part Number | 8551-5004-02 |

Suggested Microstrip Parameters:
 Material: Alumina, .015, .010 inches thick
 Line Width: .014, .0096 inches
 Dielectric: Constant (Er): 9.8
 Finish: Passivated stainless steel.
 Refer to recommended assembly tools in Tool Section.
 Recommended Mounting Hole Detail F.



Flange Mount Jack Receptacle



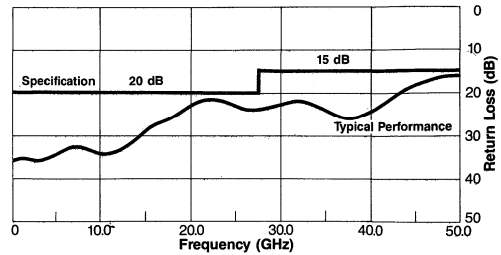
| Captured Center Contact | |
|-------------------------|--------------|
| Part Number | 8552-5004-02 |

Suggested Microstrip Parameters:
 Material: Alumina, .015, .010 inches thick
 Line Width: .014, .0096 inches
 Dielectric: Constant (Er): 9.8
 Finish: Passivated stainless steel.
 Refer to recommended assembly tools in Tool Section.
 Recommended Mounting Hole Detail F.

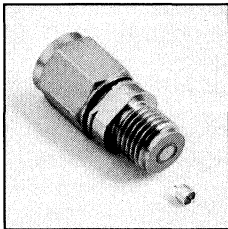
OS-2.4 (OS-50)

DC-50 GHz • Hermetic •
For Microstrip Circuits

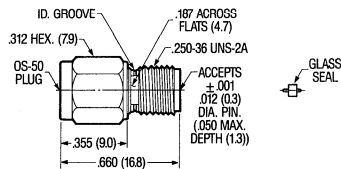
- DC-50 GHz Performance
- Field Replaceable Interface
- Low Loss, Low VSWR, Solder/Braze-In Seal
- Designed for MIC Packaging
- Hermetic Seal Leak Rate:
1×10^{-8} cc/sec.
- Meets Requirements of MIL-C-39012
- Stripline Versions Available



Solder and Braze-In Seal

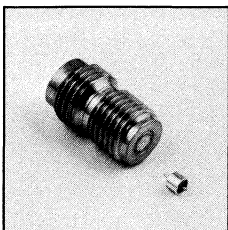


Field Replaceable Panel Feedthrough
Plug Receptacle

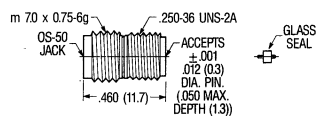


| Part Number | 8557-5329-02 Connector and Seal | 8598-0294-00 Seal Only | 8557-5328-02 Connector Only |
|-------------|---------------------------------------|---------------------------|-----------------------------------|
|-------------|---------------------------------------|---------------------------|-----------------------------------|

Suggested Microstrip Parameters:
Material: Alumina, .015, .010 inches thick
Line Width: .014, .0096 inches
Dielectric: Constant (Er): 9.8
Finish: Passivated stainless steel.
Refer to recommended assembly tools in Tool Section.
Recommended Mounting Hole Detail B.



Field Replaceable Panel Feedthrough
Jack Receptacle



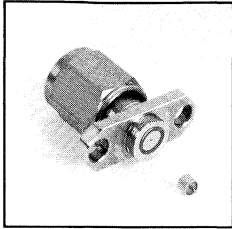
| Part Number | 8558-5329-02 Connector and Seal | 8598-0294-00 Seal Only | 8558-5328-02 Connector Only |
|-------------|---------------------------------------|---------------------------|-----------------------------------|
|-------------|---------------------------------------|---------------------------|-----------------------------------|

Suggested Microstrip Parameters:
Material: Alumina, .015, .010 inches thick
Line Width: .014, .0096 inches
Dielectric: Constant (Er): 9.8
Finish: Passivated stainless steel.
Refer to recommended assembly tools in Tool Section.
Recommended Mounting Hole Detail B.

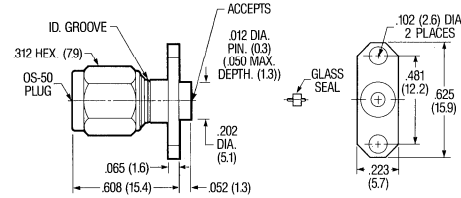
OS-2.4 (OS-50)

DC-50 GHz • Hermetic •
For Microstrip Circuits

Solder and Braze-In Seal

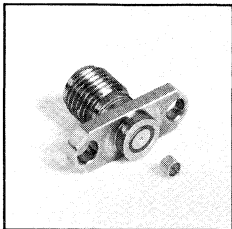


Field Replaceable Two-Hole Flange Mount Plug Receptacle

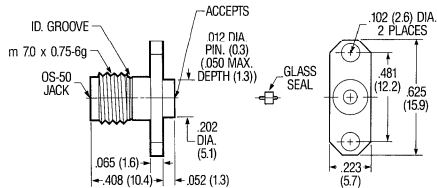


| Part Number | 8551-0207-02 Connector and Seal | 8598-0294-00 Seal Only | 8551-3201-02 Connector Only |
|-------------|---------------------------------------|---------------------------|-----------------------------------|
|-------------|---------------------------------------|---------------------------|-----------------------------------|

Suggested Microstrip Parameters:
Material: Alumina, .015, .010 inches thick
Line Width: .014, .0096 inches
Dielectric: Constant (Er): 9.8
Finish: Passivated stainless steel.
Refer to recommended assembly tools in Tool Section.
Recommended Mounting Hole Detail C.

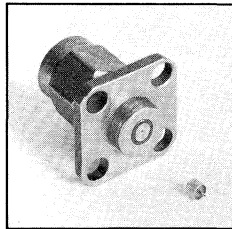


Field Replaceable Two-Hole Flange Mount Jack Receptacle

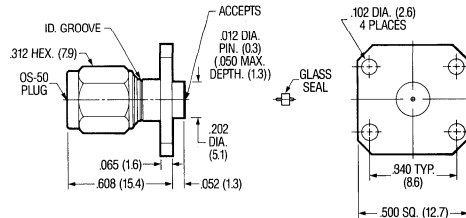


| Part Number | 8552-0207-02 Connector and Seal | 8598-0294-00 Seal Only | 8552-3201-02 Connector Only |
|-------------|---------------------------------------|---------------------------|-----------------------------------|
|-------------|---------------------------------------|---------------------------|-----------------------------------|

Suggested Microstrip Parameters:
Material: Alumina, .015, .010 inches thick
Line Width: .014, .0096 inches
Dielectric: Constant (Er): 9.8
Finish: Passivated stainless steel.
Refer to recommended assembly tools in Tool Section.
Recommended Mounting Hole Detail C.

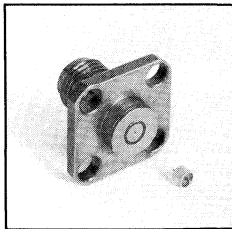


Field Replaceable Four-Hole Flange Mount Plug Receptacle

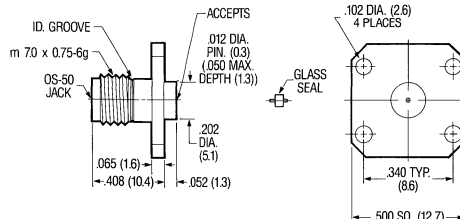


| Part Number | 8551-3202-02 Connector and Seal | 8598-0294-00 Seal Only | 8551-3203-02 Connector Only |
|-------------|---------------------------------------|---------------------------|-----------------------------------|
|-------------|---------------------------------------|---------------------------|-----------------------------------|

Suggested Microstrip Parameters:
Material: Alumina, .015, .010 inches thick
Line Width: .014, .0096 inches
Dielectric: Constant (Er): 9.8
Finish: Passivated stainless steel.
Refer to recommended assembly tools in Tool Section.
Recommended Mounting Hole Detail D.



Field Replaceable Four-Hole Flange Mount Jack Receptacle



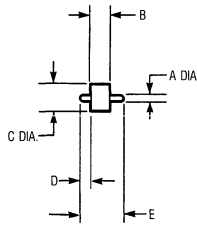
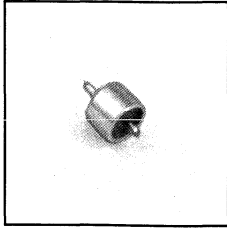
| Part Number | 8552-3202-02 Connector and Seal | 8598-0294-00 Seal Only | 8552-3203-02 Connector Only |
|-------------|---------------------------------------|---------------------------|-----------------------------------|
|-------------|---------------------------------------|---------------------------|-----------------------------------|

Suggested Microstrip Parameters:
Material: Alumina, .015, .010 inches thick
Line Width: .014, .0096 inches
Dielectric: Constant (Er): 9.8
Finish: Passivated stainless steel.
Refer to recommended assembly tools in Tool Section.
Recommended Mounting Hole Detail D.

OS-2.4 (OS-50)

DC-50 GHz • Hermetic Accessories and Mounting Hole Detail

Solder-in Thermally Matched Hermetic Seal

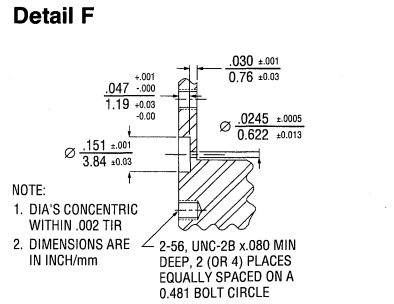
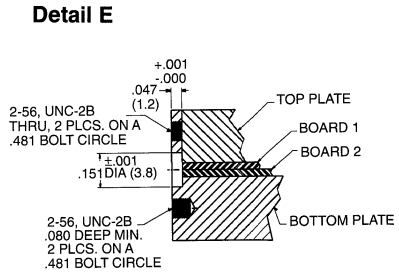
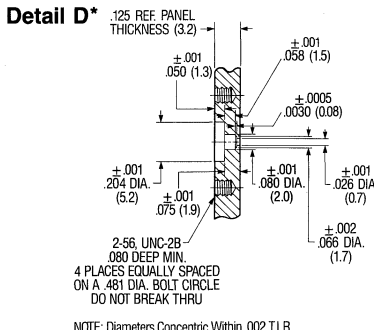
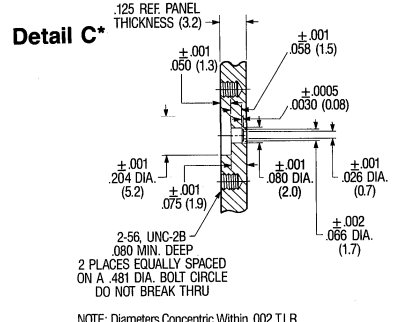
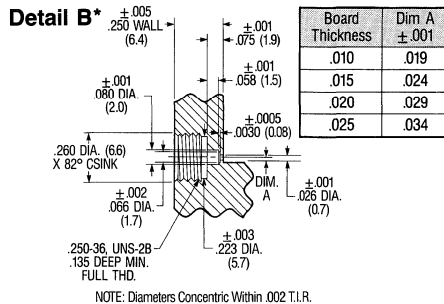
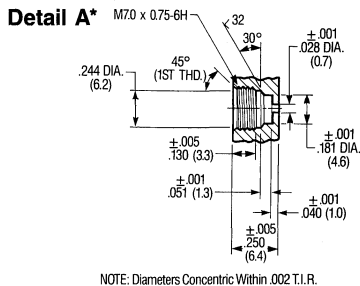


| | |
|---|--|
| A | $\pm .001$ = .012 (0.3) |
| B | $\pm .003$ - .001 = .055 (1.4) |
| C | $\pm .002$ - .001 = .076 DIA. (1.9) |
| D | $\pm .005$ = .029 (0.7) |
| E | $\pm .005$ = .125 (3.1) |

| | |
|-------------|---------------------|
| Part Number | 8598-0294-00 |
|-------------|---------------------|

Note: Diameters Concentric Within .002 T.I.R.

Mounting Hole Detail



*Consult appropriate Assembly Procedure for complete mounting procedure.

OS-2.4 (OS-50)

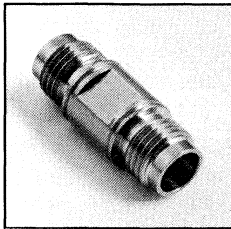
DC-50 GHz • In-Series Adapters

- Low VSWR and Insertion Loss
- Mode-Free 2.4mm Interface
- Meets MIL-A-55339 Requirements where applicable

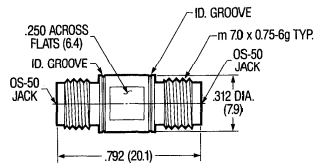
Description

OS-50 adapters provide a convenient transition between the OS-50 (2.4mm) connector series and other microwave series connector types.

These coaxial adapters are designed to meet MIL-A-55339 requirements. The small size, low VSWR and broad frequency coverage permits a wide range of applications for measurement, instrumentation and system use. Consult the factory for special design capabilities.

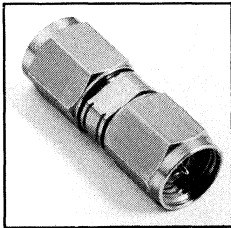


OS-50 Jack to OS-50 Jack

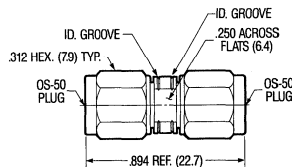


| Part Number | 8580-0000-02 | | |
|-------------|--------------|---------------|---------------|
| Frequency | DC - 18 GHz | 18 - 26.5 GHz | 26.5 - 50 GHz |
| Return Loss | 26dB | 24dB | 18dB |

Finish: Passivated stainless steel.

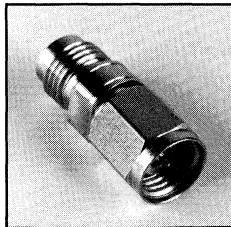


OS-50 Plug to OS-50 Plug

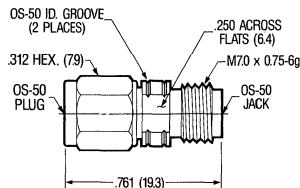


| Part Number | 8581-0000-02 | | |
|-------------|--------------|---------------|---------------|
| Frequency | DC - 18 GHz | 18 - 26.5 GHz | 26.5 - 50 GHz |
| Return Loss | 26dB | 24dB | 18dB |

Finish: Passivated stainless steel.



OS-50 Plug to OS-50 Jack

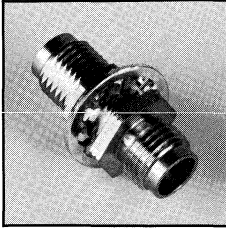


| Part Number | 8582-0000-02 | | |
|-------------|--------------|---------------|---------------|
| Frequency | DC - 18 GHz | 18 - 26.5 GHz | 26.5 - 50 GHz |
| Return Loss | 26dB | 24dB | 18dB |

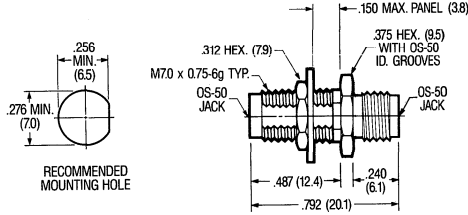
Finish: Passivated stainless steel.

OS-2.4 (OS-50)

DC-50 GHz • In-Series Adapters



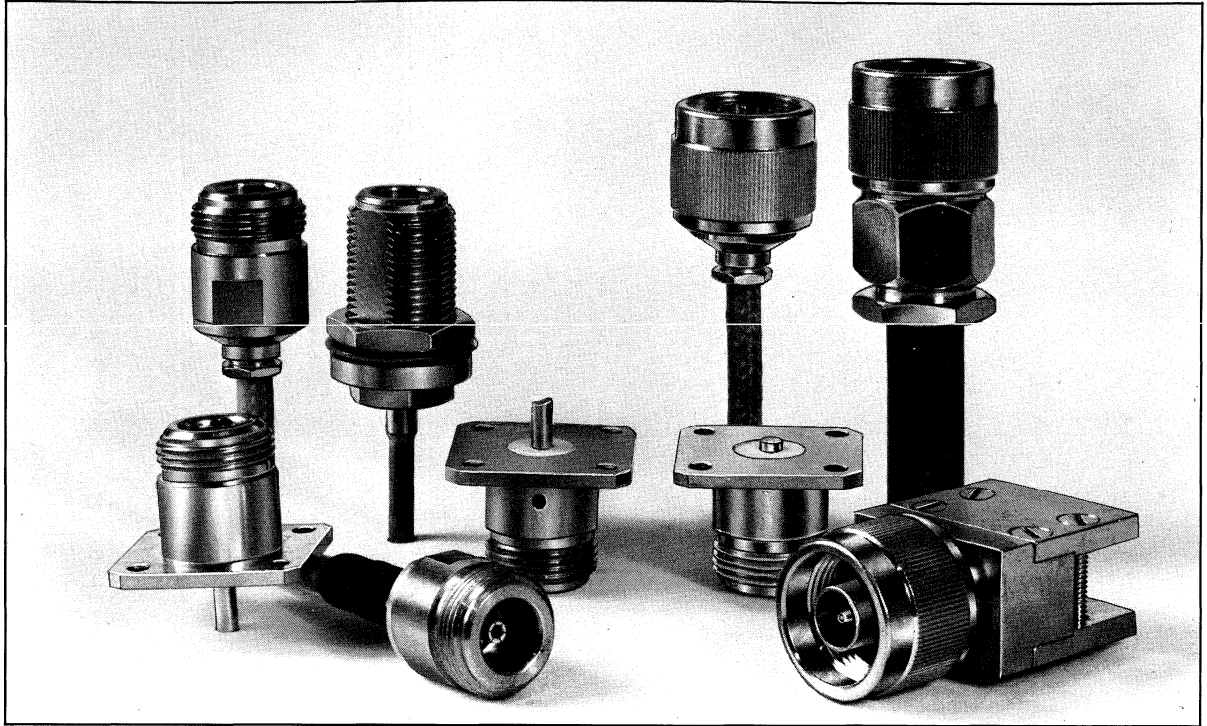
**OS-50 Jack to OS-50 Jack
Bulkhead Feedthrough**



| | | | |
|-------------|--------------|---------------|---------------|
| Part Number | 8584-0000-02 | | |
| Frequency | DC -18 GHz | 18 - 26.5 GHz | 26.5 - 50 GHz |
| Return Loss | 26dB | 24dB | 18dB |

Finish: Passivated stainless steel.

Type N Coaxial Connectors



The Type N Coaxial Connector continues to maintain its popularity for microwave application.

Design and Construction

The outer shell and coupling mechanism are available in stainless steel, nickel plated brass, gold plated beryllium copper, and aluminum. The choice of material is determined by durability, cost and weight. Center contacts are made of gold plated beryllium copper. The dielectric is PTFE fluorocarbon.

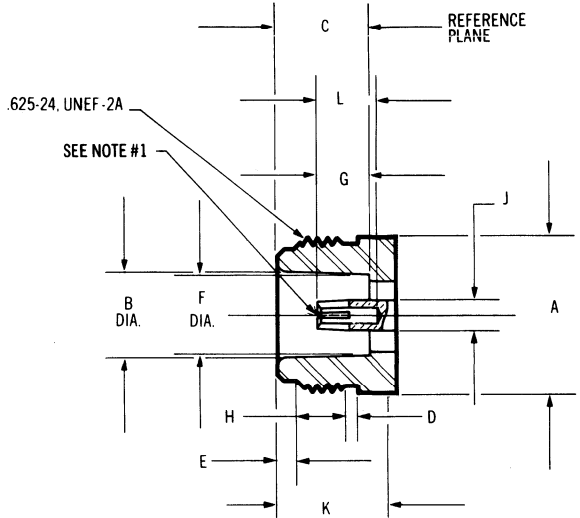
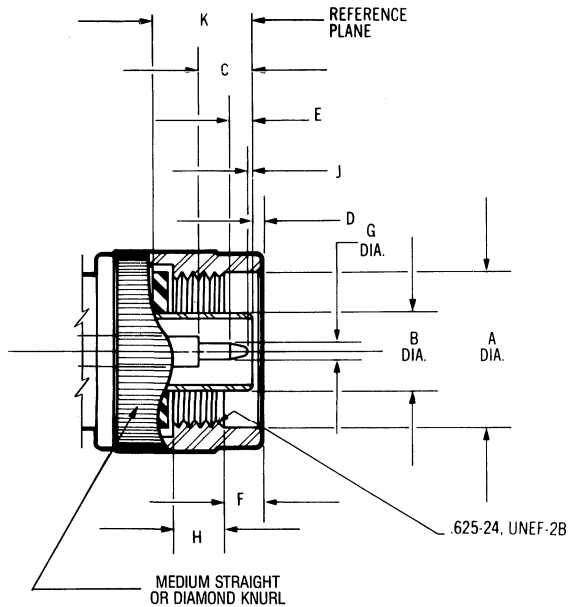
Upper Operating Frequency

The upper operating frequency for this series varies with the designated coaxial cable and internal design. This ranges from 11.0 GHz for larger size coaxial cable, such as RG-214/U, to greater than 18.0 GHz for .141 semi-rigid cable. A complete extended frequency 18.0 GHz version is also available in this catalog. For other types, consult the factory technical staff.

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| In-Series Adapters | |

Type N Interface Mating Dimensions



PLUG

| Letter | Inches (Millimeters) ³ | |
|--------|-----------------------------------|--------------|
| | Minimum | Maximum |
| A | .630 (16.0) | - |
| B | .3130 (7.95) | .3158 (8.03) |
| C | .210 (5.33) | .230 (5.84) |
| D | .016 (0.41) | .060 (1.52) |
| E | .130 (3.30) | .170 (4.32) |
| F | .158 (4.01) | .168 (4.27) |
| G | .063 (1.60) | .066 (1.68) |
| H | .177 (4.49) | - |
| J | .003 (0.08) | - |
| K | .398 (10.11) | .412 (10.46) |

JACK

| Letter | Inches (Millimeters) ³ | |
|--------|-----------------------------------|--------------|
| | Minimum | Maximum |
| A | - | .627 (15.93) |
| B | .336 (8.53) | .344 (8.74) |
| C | .356 (9.04) | .362 (9.19) |
| D | .047 (1.19) | .077 (1.96) |
| E | .047 (1.19) | .077 (1.96) |
| F | .316 (8.03) | .320 (8.13) |
| G | .187 (4.75) | .207 (5.26) |
| H | .172 (4.37) | .202 (5.13) |
| J | .119 (3.02) | .124 (3.15) |
| K | .422 (10.72) | - |
| L | .210 (5.33) | - |

+ .001 +.03
- .002 -.05

1. ID to meet VSWR and contact resistance when mated with .065 (1.65 mm) dia. pin.
2. When fully engaged, the two reference planes must coincide with metal to metal contact.
3. Metric equivalents (to the nearest 0.01mm) are given for general information only.

Type N Specifications

| Requirement | MIL-C-39012 Applicable Paragraph | Detail |
|-------------|-------------------------------------|--------|
|-------------|-------------------------------------|--------|

General

| | | |
|----------|-------|---|
| Material | 3.3 | Brass, half hard per QQ-B-626. Steel, corrosion resistant per ASTM-A-484 and ASTM-A-582, Type 303. Beryllium copper per ASTM-B-196. PTFE Fluorocarbon per ASTM-D-1457. |
| Finish | 3.3.1 | Center contacts shall be gold plated to a min. thickness of .0001 inch in accordance with MIL-G-45204, Type I, Grade C. All other metal parts shall be finished as to provide a connector which meets the corrosion requirements. |
| Design | 3.4 | The design shall be such that the outline and interface dimensions shown in this catalog are met. |

Electrical

| | | |
|---------------------------------|------|---|
| Insulation Resistance | 3.11 | The insulation resistance shall not be less than 5,000 megohms. |
| Corona Level | 3.22 | Refer to applicable military slash sheet or consult factory. |
| Dielectric Withstanding Voltage | 3.17 | Refer to applicable military slash sheet or consult factory. |
| RF High Potential | 3.23 | Refer to applicable military slash sheet or consult factory. |
| Contact Resistance | 3.16 | Refer to applicable military slash sheet or consult factory. |
| VSWR | 3.14 | Refer to applicable military slash sheet or consult factory. Frequency range dependent on cable used. |
| RF Leakage | 3.26 | Refer to applicable military slash sheet or consult factory. |
| Insertion Loss | 3.27 | Refer to applicable military slash sheet or consult factory. Frequency range dependent on cable used. |

Mechanical

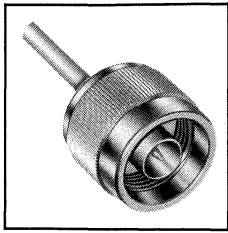
| | | |
|---------------------------|-------|--|
| Force to Engage | 3.5.1 | The torque required to engage and disengage shall not exceed 6 in.-lbs. The longitudinal force is not applicable. |
| Coupling Nut Retention | 3.25 | 100 lbs. min. Applicable for plug connectors only. |
| Coupling Proof Torque | 3.6 | 30 in.-lbs. min. Applicable for plug connectors only. |
| Cable Retention | 3.24 | Refer to applicable military slash sheet or consult factory. |
| Mating Characteristics | 3.7 | Applicable to jack connectors only. Oversize test pin .067 min. dia., .125 deep; insertion force 2 lbs. max. with .0658 min. dia. pin; withdrawal force 2 oz. min. with .0645 max. dia. pin. |
| Connector Durability | 3.15 | The connector to be tested and its mating connector shall be subjected to 500 insertion and withdrawal cycles at 12 cycles per minute max. The connector shall show no evidence of mechanical failure and shall meet the mating characteristic requirements. |
| Recommended Mating Torque | — | 12 to 15 in.-lbs. |

Environmental

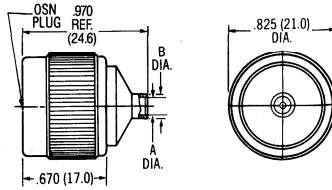
| | | |
|------------------------|------|---|
| Vibration | 3.18 | Specification MIL-STD-202, method 204, test condition B. |
| Shock | 3.19 | Specification MIL-STD-202, method 213, test condition I. |
| Thermal Shock | 3.20 | Refer to applicable military slash sheet or consult factory. |
| Corrosion (Salt Spray) | 3.13 | Specification MIL-STD-202, method 101, test condition B. |
| Moisture Resistance | 3.21 | Specification MIL-STD-202, method 106. No measurements at high humidity. Insulation resistance shall be at least 200 megohms within 5 minutes of removal from humidity. |

Type N For Semi-Rigid Cable

.085 and .141 Dia. • Direct Solder Attachment

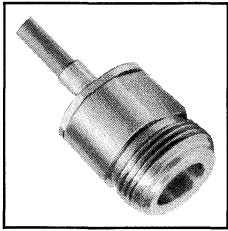


Straight Cable Plug
DC-18.0 GHz

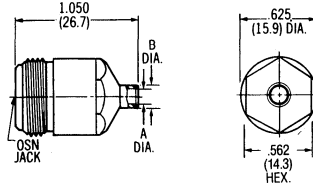


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 3001-7941-00 | 3001-7985-00 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .180 (4.6) | .120 (3.0) |

Finish: Passivated stainless steel. Cable adapter section is gold plated for solder attachment.
.141 Microporous PTFE cable dielectric available. Consult factory. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

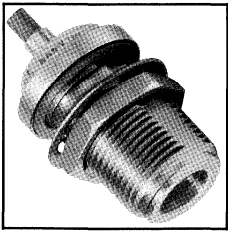


Straight Cable Jack

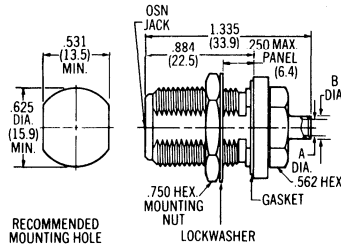


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 3002-7941-00 | 3002-7985-00 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .180 (4.6) | .120 (3.0) |

Finish: Passivated stainless steel. Cable adapter section is gold plated for solder attachment.
.141 Microporous PTFE cable dielectric available. Consult factory. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

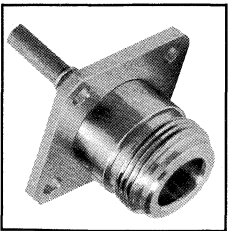


Bulkhead Feedthrough Cable Jack

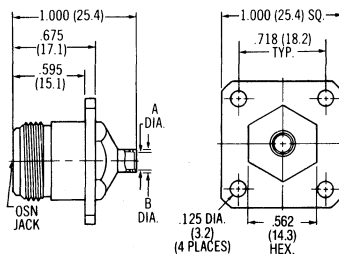


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 3004-7941-00 | 3004-7985-00 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .180 (4.6) | .120 (3.0) |

Finish: Passivated stainless steel. Cable adapter section is gold plated for solder attachment.
.141 Microporous PTFE cable dielectric available. Consult factory. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.



Flange Mount Cable Jack

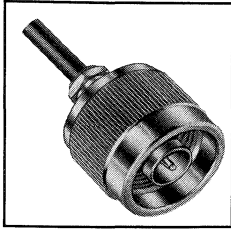


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 3006-7941-00 | 3006-7985-00 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .180 (4.6) | .120 (3.0) |

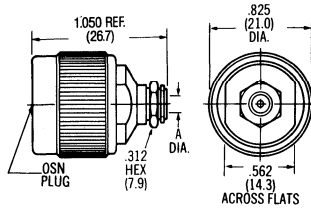
Finish: Passivated stainless steel. Cable adapter section is gold plated for solder attachment.
.141 Microporous PTFE cable dielectric available. Consult factory. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

Type N For Semi-Rigid Cable

.085 and .141 Dia. • Solder Clamp Attachment

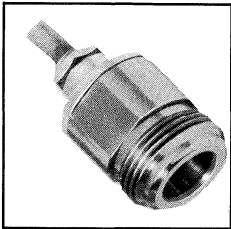


Straight Cable Plug

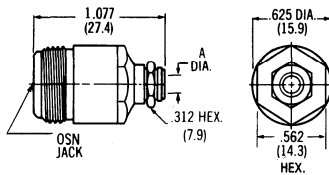


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 3001-7841-00 | 3001-7885-00 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |

Finish: Passivated stainless steel. Cable adapter section is gold plated for solder attachment.
 .141 Microporous PTFE cable dielectric available. Consult factory.
 Refer to Appendix for Coaxial Cable Characteristics.
 Refer to recommended assembly tools in Tool Section.

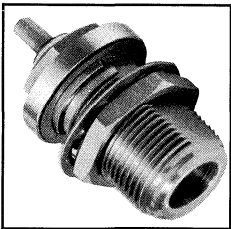


Straight Cable Jack

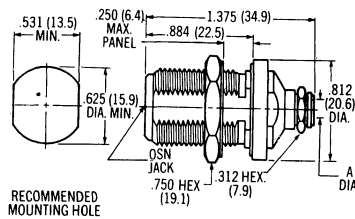


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 3002-7841-00 | 3002-7885-00 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |

Finish: Passivated stainless steel. Cable adapter section is gold plated for solder attachment.
 .141 Microporous PTFE cable dielectric available. Consult factory.
 Refer to Appendix for Coaxial Cable Characteristics.
 Refer to recommended assembly tools in Tool Section.

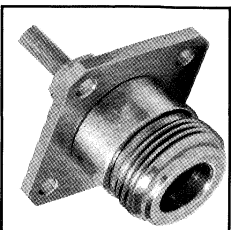


Bulkhead Feedthrough Cable Jack

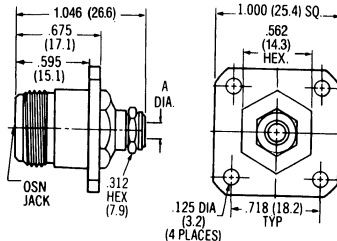


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 3004-7841-00 | 3004-7885-00 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |

Finish: Passivated stainless steel. Cable adapter section is gold plated for solder attachment.
 .141 Microporous PTFE cable dielectric available. Consult factory.
 Refer to Appendix for Coaxial Cable Characteristics.
 Refer to recommended assembly tools in Tool Section.



Flange Mount Cable Jack

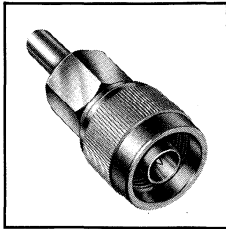


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 3006-7841-00 | 3006-7885-00 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |

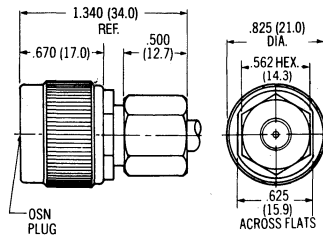
Finish: Passivated stainless steel. Cable adapter section is gold plated for solder attachment.
 .141 Microporous PTFE cable dielectric available. Consult factory.
 Refer to Appendix for Coaxial Cable Characteristics.
 Refer to recommended assembly tools in Tool Section.

Type N For Semi-Rigid Cable

.250 and .325 Dia. • Clamp Attachment

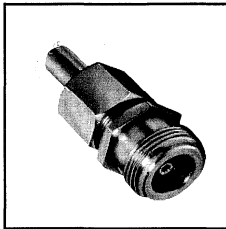


Straight Cable Plug

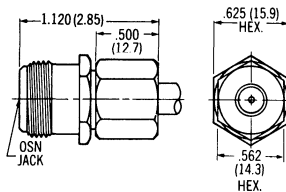


| Cable | RG 401/U (.250) | .250 | .325 |
|------------------------------|---------------------|-------------------------|---------------------|
| Cable Dielectric | Solid PTFE | Microporous PTFE & Foam | Solid PTFE |
| Compression Clamp Attachment | | | |
| Part Number | 3001-7750-02 | 3001-7752-02 | 3001-7725-02 |

Finish: Passivated stainless steel
 Press clamp attachment available. Consult factory.
 Refer to Appendix for Coaxial Cable Characteristics.
 Refer to recommended assembly tools in Tool Section.

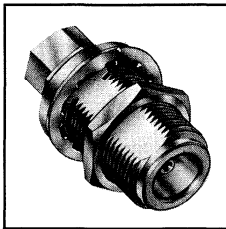


Straight Cable Jack

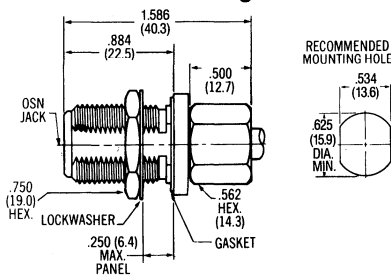


| Cable | RG 401/U (.250) | .250 | .325 |
|------------------------------|---------------------|-------------------------|---------------------|
| Cable Dielectric | Solid PTFE | Microporous PTFE & Foam | Solid PTFE |
| Compression Clamp Attachment | | | |
| Part Number | 3002-7750-02 | 3002-7752-02 | 3002-7725-02 |

Finish: Passivated stainless steel
 Press clamp attachment available. Consult factory.
 Refer to Appendix for Coaxial Cable Characteristics.
 Refer to recommended assembly tools in Tool Section.



Bulkhead Feedthrough Cable Jack



| Cable | RG 401/U (.250) | .250 | .325 |
|------------------------------|---------------------|-------------------------|---------------------|
| Cable Dielectric | Solid PTFE | Microporous PTFE & Foam | Solid PTFE |
| Compression Clamp Attachment | | | |
| Part Number | 3004-7750-02 | 3004-7752-02 | 3004-7725-02 |

Finish: Passivated stainless steel
 Press clamp attachment available. Consult factory.
 Refer to Appendix for Coaxial Cable Characteristics.
 Refer to recommended assembly tools in Tool Section.

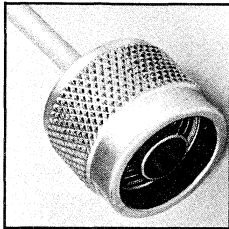
Type N

Solderless Compression Crimp

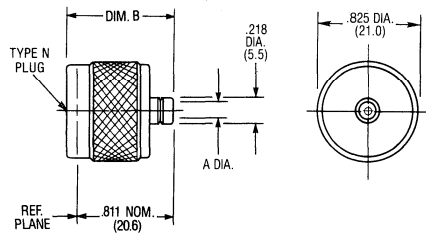
Type N 50 ohm Solderless Compression Crimp Connectors are available for use on RG 402/U (.141 dia.) and RG 405/U (.085 dia.) semi-rigid cables. These completely assembled units feature captured center contacts, durable stainless steel housings and coupling

nuts, and M/A-COM's Solderless Compression Crimp Cable Attachment. The center contact is beryllium copper, gold plated and is supported by a PTFE fluoro carbon dielectric.

.085 and .141 Dia. • Solderless Cable Attachment

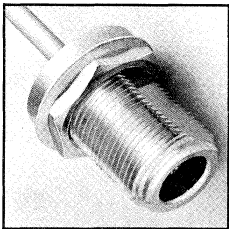


Straight Cable Plug

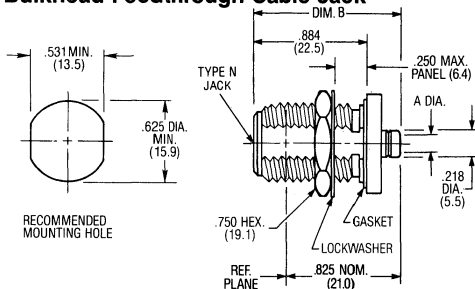


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|-------------|---------------------------|--------------------------------|
| Part Number | 3001-7641-02 | 3001-7685-02 |
| Dim. A | Inches (mm) .143 (3.6) | Inches (mm) .088 Min. (2.2) |
| Dim. B | Before Crimping | .962 Ref. (24.4) |
| | After Crimping | .885 Max. (22.5) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00. Coupling nut is passivated in all cases. All outline drawings show after crimping configurations. Refer to Appendix for Coaxial Cable Characteristics.



Bulkhead Feedthrough Cable Jack



| Cable | RG 402/U (.141) | RG 405/U (.085) |
|-------------|---------------------------|--------------------------------|
| Part Number | 3004-7641-02 | 3004-7685-02 |
| Dim. A | Inches (mm) .143 (3.6) | Inches (mm) .088 Min. (2.2) |
| Dim. B | Before Crimping | 1.304 Ref. (33.1) |
| | After Crimping | 1.190 Max. (30.2) |

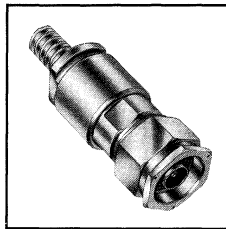
Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00. All outline drawings show after crimping configurations. Refer to Appendix for Coaxial Cable Characteristics.

Type N For High Power • Low Loss Cable

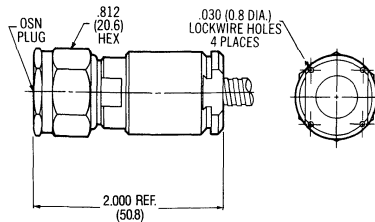
The following OSN connectors have been designed for use with high power low loss semi-rigid coaxial cables of .375 and .500-inch diameters. Each connector body and/or coupling nut is made of aluminum for light weight.

The bodies have an iridited finish while the coupling and clamp nuts are anodized. The solder-on center contact is beryllium copper, gold plated and supported by a PTFE fluorocarbon dielectric.

.375 and .500 Dia. • Semi-Rigid Cable • Clamp Attachment

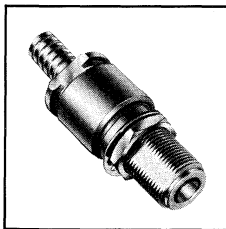


Straight Cable Plug

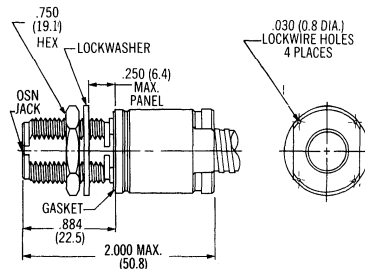


| Cable | .375 | .500 |
|------------------------------|---------------------|---------------------|
| Cable Dielectric | Microporous PTFE | Microporous PTFE |
| Compression Clamp Attachment | | |
| Part Number | 3001-7575-00 | 3001-7500-00 |

Finish: Aluminum. Housing is iridited. Coupling and clamp nuts are anodized.
Press clamp attachment available.
Refer to Appendix for Coaxial Cable Characteristics.



Bulkhead Feedthrough Cable Jack



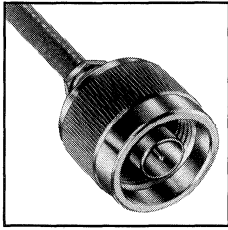
| Cable | .375 | .500 |
|------------------------------|---------------------|---------------------|
| Cable Dielectric | Microporous PTFE | Microporous PTFE |
| Compression Clamp Attachment | | |
| Part Number | 3004-7575-00 | 3004-7500-00 |

Finish: Aluminum. Housing is iridited. Coupling and clamp nuts are anodized.
Press clamp attachment available.
Refer to Appendix for Coaxial Cable Characteristics.

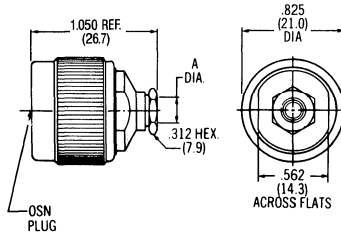
Type N

For Flexible Cable

Flexible Cable • Clamp Attachment

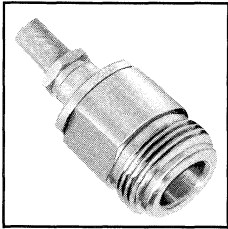


Straight Cable Plug

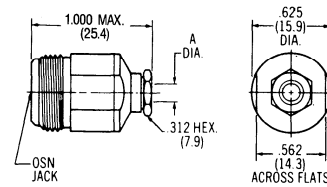


| | | |
|-------------------------|---------------------------------------|------------------------------------|
| Cable | RG 55/U, 58, 141, 142, 223, 303 | RG 174/U, 179, 187, 188, 316 |
| Captured Center Contact | | |
| Part Number | 3001-7341-10 | 3001-7388-10 |
| Dim. A | Inches (mm) .220 (5.6) | Inches (mm) .116 (2.9) |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

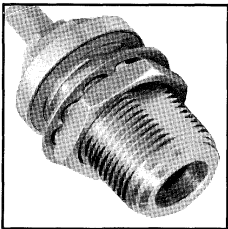


Straight Cable Jack

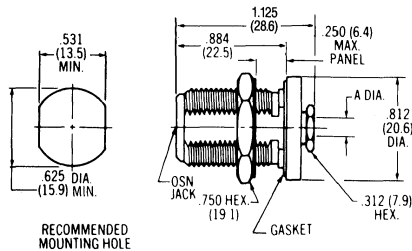


| | | |
|-------------------------|---------------------------------------|------------------------------------|
| Cable | RG 55/U, 58, 141, 142, 223, 303 | RG 174/U, 179, 187, 188, 316 |
| Captured Center Contact | | |
| Part Number | 3002-7341-10 | 3002-7388-10 |
| Dim. A | Inches (mm) .220 (5.6) | Inches (mm) .116 (2.9) |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.



Straight Bulkhead Cable Jack

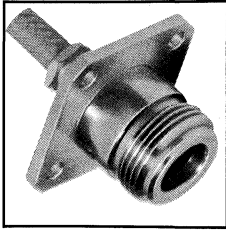


| | | |
|-------------------------|---------------------------------------|------------------------------------|
| Cable | RG 55/U, 58, 141, 142, 223, 303 | RG 174/U, 179, 187, 188, 316 |
| Captured Center Contact | | |
| Part Number | 3004-7341-10 | 3004-7388-10 |
| Dim. A | Inches (mm) .220 (5.6) | Inches (mm) .116 (2.9) |

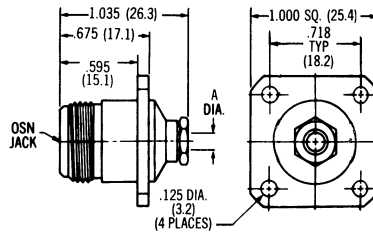
Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

Type N For Flexible Cable

Flexible Cable • Clamp Attachment

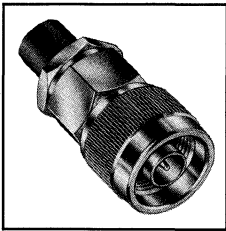


Flange Mount Cable Jack

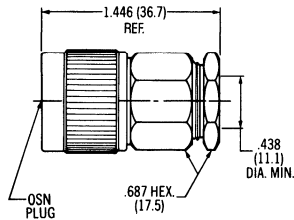


| | | |
|-------------------------|---------------------------------------|------------------------------------|
| Cable | RG 55/U, 58, 141, 142, 223, 303 | RG 174/U, 179, 187, 188, 316 |
| Captured Center Contact | | |
| Part Number | 3006-7341-10 | 3006-7388-10 |
| Dim. A | Inches (mm) .220 (5.6) | Inches (mm) .116 (2.9) |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.



Straight Cable Plug

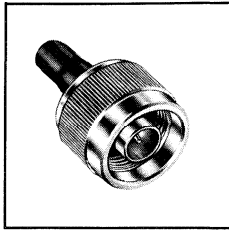


| | |
|-------------|---------------------|
| Cable | RG 214/U, 225 |
| Part Number | 3001-7214-10 |

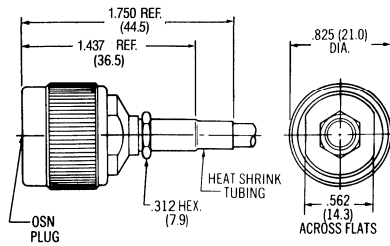
Finish: Nickel plated brass.
Straight cable jack available.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

Type N For Flexible Cable

Flexible Cable • Crimp Attachment

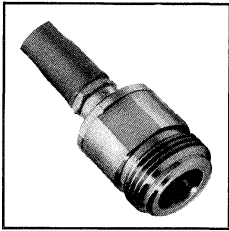


Straight Cable Plug

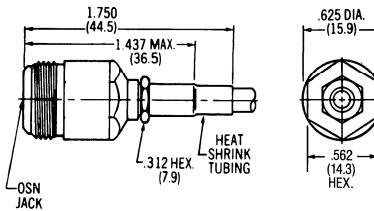


| Cable | RG 58/U, 141, 303 | RG 55/U, 142, 223, 400 | RG 174/U, 179, 187, 188, 316 |
|-------------------------|---------------------|------------------------|------------------------------|
| Captured Center Contact | | | |
| Part Number | 3031-7358-10 | 3031-7341-10 | 3031-7388-10 |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

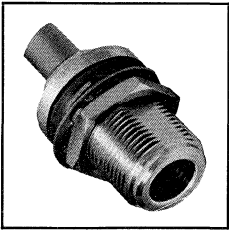


Straight Cable Jack

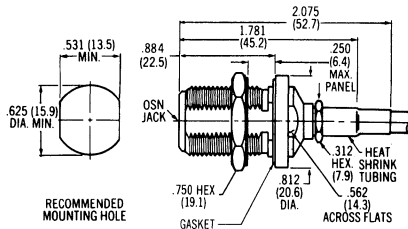


| Cable | RG 58/U, 141, 303 | RG 55/U, 142, 223, 400 | RG 174/U, 179, 187, 188, 316 |
|-------------------------|---------------------|------------------------|------------------------------|
| Captured Center Contact | | | |
| Part Number | 3032-7358-10 | 3032-7341-10 | 3032-7388-10 |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

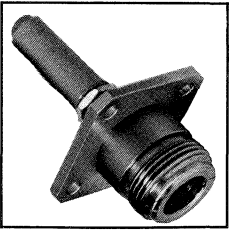


Straight Bulkhead Cable Jack

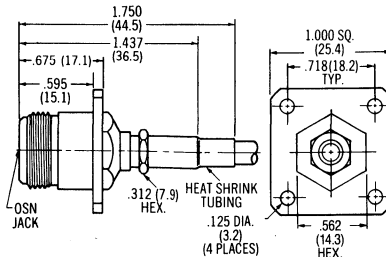


| Cable | RG 58/U, 141, 303 | RG 55/U, 142, 223, 400 | RG 174/U, 179, 187, 188, 316 |
|-------------------------|---------------------|------------------------|------------------------------|
| Captured Center Contact | | | |
| Part Number | 3034-7358-10 | 3034-7341-10 | 3034-7388-10 |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.



Straight Panel Cable Jack

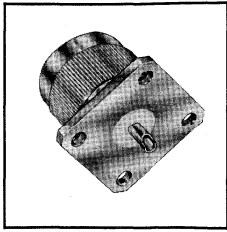


| Cable | RG 58/U, 141, 303 | RG 55/U, 142, 223, 400 | RG 174/U, 179, 187, 188, 316 |
|-------------------------|---------------------|------------------------|------------------------------|
| Captured Center Contact | | | |
| Part Number | 3036-7358-10 | 3036-7341-10 | 3036-7388-10 |

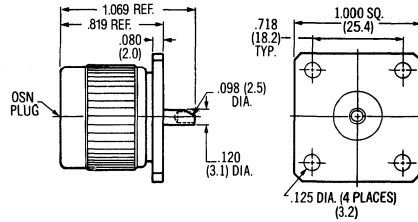
Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

Type N

Panel Mount Receptacles

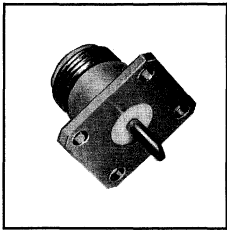


Flange Mount Plug Receptacle

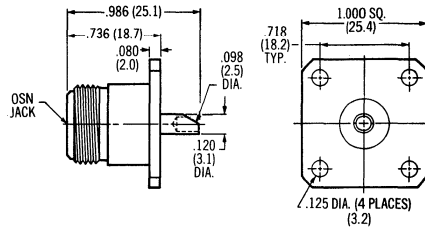


| | |
|---|---------------------|
| Captured Center Contact Solder Terminal* | |
| Part Number | 3051-0000-10 |

Finish: Nickel plated brass.
*Contact captivation per U.S. patent number 3,292,117

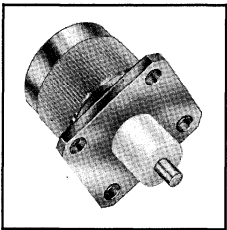


Flange Mount Jack Receptacle

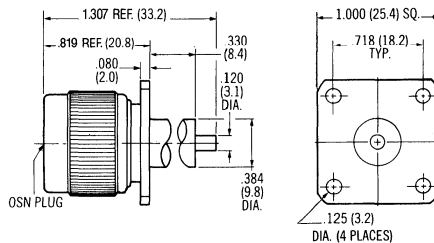


| | |
|---|---------------------|
| Captured Center Contact Solder Pot Terminal* | |
| Part Number | 3052-0000-10 |

Finish: Nickel plated brass.
*Contact captivation per U.S. patent number 3,292,117

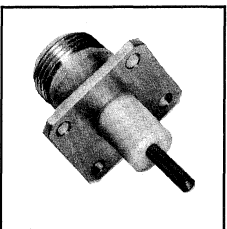


Flange Mount Plug Receptacle

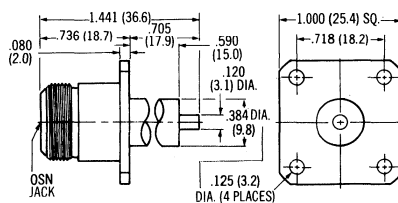


| | |
|--|---------------------|
| Non-Captured Center Contact Straight Terminal | |
| Part Number | 3051-1200-10 |
| Captured Center Contact Straight Terminal* | |
| Part Number | 3051-1201-10 |

Finish: Nickel plated brass.
*Contact captivation per U.S. patent number 3,292,117



Flange Mount Jack Receptacle

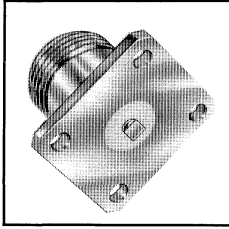


| | |
|--|---------------------|
| Non-Captured Center Contact Straight Terminal | |
| Part Number | 3052-1200-10 |
| Captured Center Contact Straight Terminal* | |
| Part Number | 3052-1201-10 |

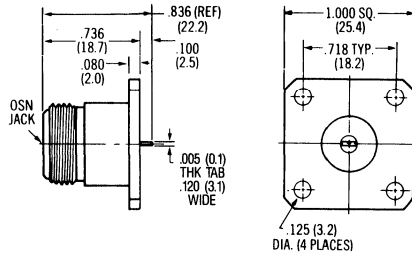
Finish: Nickel plated brass.
*Contact captivation per U.S. patent number 3,292,117

Type N

Panel Mount • Terminals

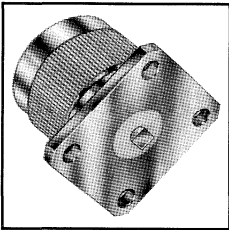


Flange Mount Jack Receptacle

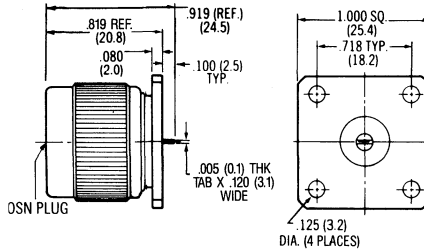


| | |
|--|---------------------|
| Captured Center Contact Tab Terminal* | |
| Part Number | 3052-1648-10 |

Finish: Nickel plated brass.
*Contact captivation per U.S. patent number 3,292,117



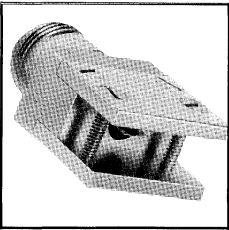
Flange Mount Plug Receptacle



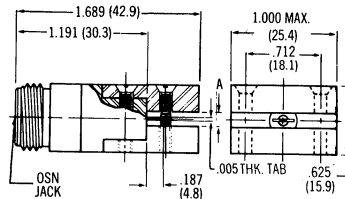
| | |
|--|---------------------|
| Captured Center Contact Tab Terminal* | |
| Part Number | 3051-1648-10 |

Finish: Nickel plated brass.
*Contact captivation per U.S. patent number 3,292,117

End • Surface Launch Use On Strip Transmission Line Circuits

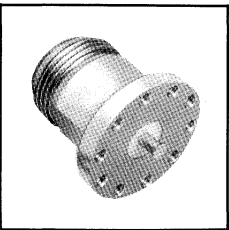


End Launch Jack

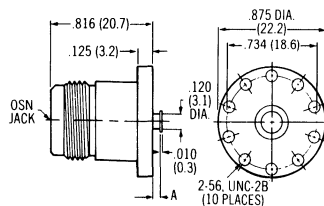


| | | | |
|--|---------------------------|---------------------------|---------------------------|
| Captured Center Contact Tab Terminal* | | | |
| Stripline Size | 1/8 | 1/4 | 3/8 |
| Part Number | 3070-1402-10 | 3070-1403-10 | 3070-1404-10 |
| Dim. A | Inches (mm) .125 (3.2) | Inches (mm) .250 (6.4) | Inches (mm) .375 (9.5) |

Finish: Nickel plated brass.
*Contact captivation per U.S. patent number 3,292,117.



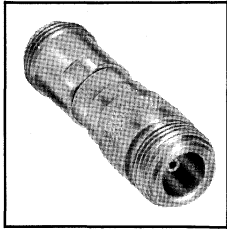
Surface Launch Jack



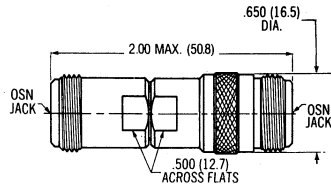
| | | | |
|---|---------------------------|---------------------------|---------------------------|
| Non-Captured Center Contact Turret Terminal* | | | |
| Stripline Size | 1/8 | 1/4 | 3/8 |
| Part Number | 3066-1442-10 | 3066-1443-10 | 3066-1444-10 |
| Dim. A | Inches (mm) .063 (1.6) | Inches (mm) .125 (3.2) | Inches (mm) .187 (4.8) |

Finish: Nickel plated brass.

Type N In-Series Adapters

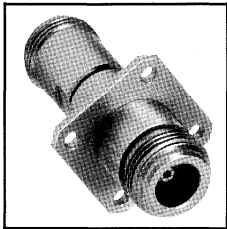


Jack to Jack Adapter

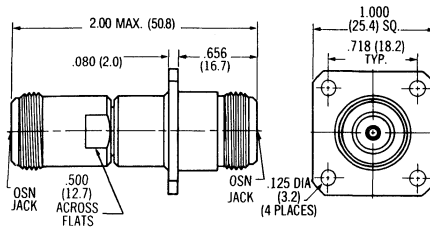


Part Number **3080-0000-00**

Finish: Passivated stainless steel.

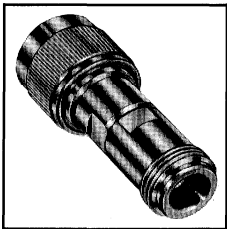


Jack to Jack Adapter Flange Mount

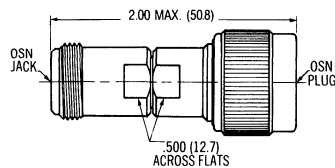


Part Number **3080-2302-00**

Finish: Passivated stainless steel.



Jack to Plug Adapter



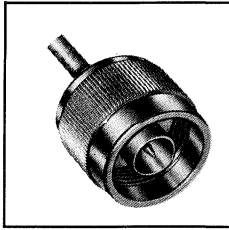
Part Number **3082-0000-00**

Finish: Passivated stainless steel.

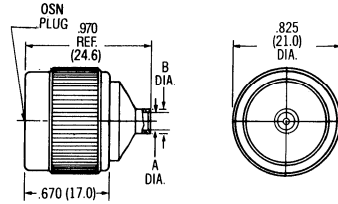
Type N

For Semi-Rigid Cable • 18.0 GHz

Direct Solder Attachment

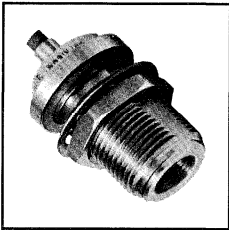


Straight Cable Plug

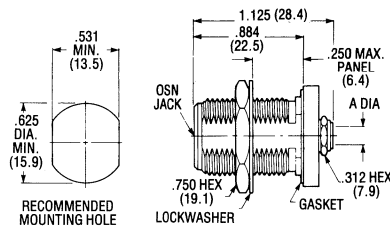


| Cable | RG 402/U (.141) | RG 405/U (.085) | .141 |
|------------------|--------------------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE | Microporous PTFE |
| Part Number | 3001-7941-00 | 3001-7985-00 | 3001-7943-02 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) | Inches (mm) .144 Min. (3.7) |
| Dim. B | .180 (4.6) | .120 (3.0) | .180 (4.6) |

Finish: Housing is stainless steel, gold plated. Coupling nut is passivated stainless steel. Refer to Appendix for Coaxial Cable Characteristics.



Bulkhead Feedthrough Cable Jack



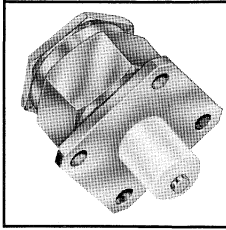
| Cable | RG 402/U (.141) | RG 405/U (.085) | .141 |
|------------------|--------------------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE | Microporous PTFE |
| Part Number | 3604-7841-02 | 3604-7885-02 | 3604-7843-02 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) | Inches (mm) .144 Min. (3.7) |

Finish: Housings and mounting nut are passivated stainless steel. The cable adapter section is gold plated for solder attachment. Refer to Appendix for Coaxial Cable Characteristics.

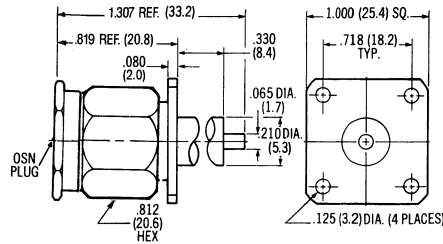
Type N

For Panel Mount • 18.0 GHz

Straight Terminal

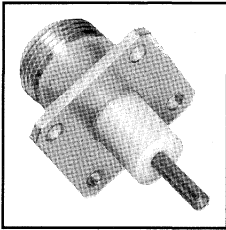


Flange Mount Plug Receptacle

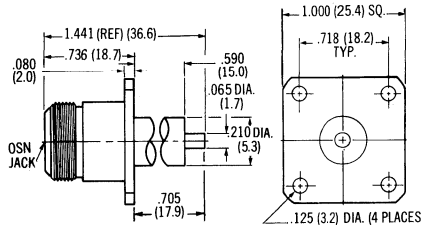


| Captured Center Contact Straight Terminal* | |
|---|---------------------|
| Part Number | 3651-1201-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Refer to Appendix for Coaxial Cable Characteristics.
*Contact captivation per U.S. patent number 3,292,117.



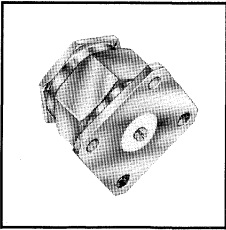
Flange Mount Jack Receptacle



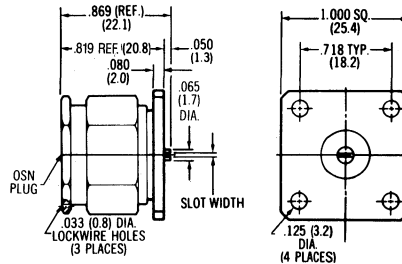
| Captured Center Contact Straight Terminal* | |
|---|---------------------|
| Part Number | 3652-1201-02 |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
Refer to Appendix for Coaxial Cable Characteristics.
*Contact captivation per U.S. patent number 3,292,117.

Slot Terminal

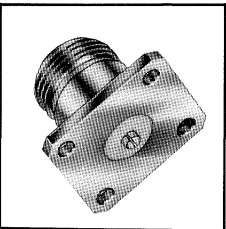


Flange Mount Plug Receptacle

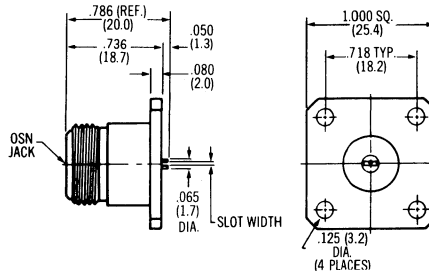


| Captured Center Contact Slot Terminal* | | |
|---|--------------------------------|-------|
| Part Number | Slot Width +003/-001 Inches | (mm) |
| 3651-1640-02 | .012 | (0.3) |
| 3651-1642-02 | .018 | (0.5) |
| 3651-1644-02 | .028 | (0.7) |
| 3651-1646-02 | .036 | (0.9) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.



Flange Mount Jack Receptacle

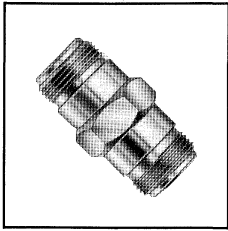


| Captured Center Contact Slot Terminal* | | |
|---|--------------------------------|-------|
| Part Number | Slot Width +003/-001 Inches | (mm) |
| 3652-1640-02 | .012 | (0.3) |
| 3652-1642-02 | .018 | (0.5) |
| 3652-1644-02 | .028 | (0.7) |
| 3652-1646-02 | .036 | (0.9) |

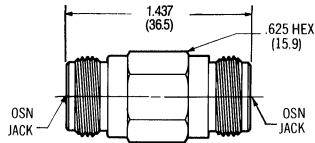
Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
*Contact captivation per U.S. patent number 3,292,117.

Type N

In Series Adapters • 18.0 GHz

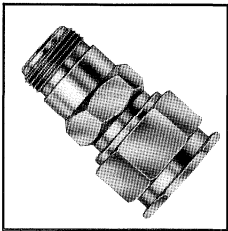


Jack to Jack Adapter

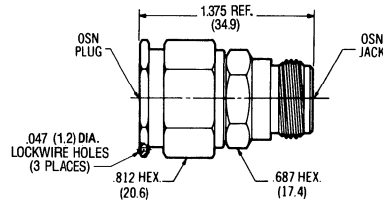


Part Number **3680-0000-02**

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

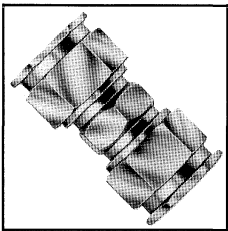


Plug to Jack Adapter

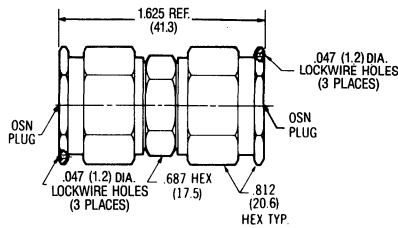


Part Number **3682-0000-02**

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.

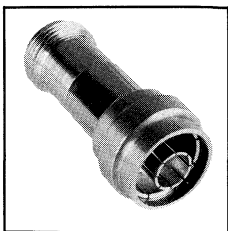


Plug to Plug Adapter

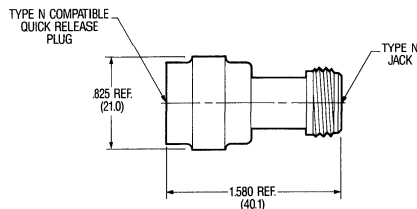


Part Number **3681-0000-02**

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.



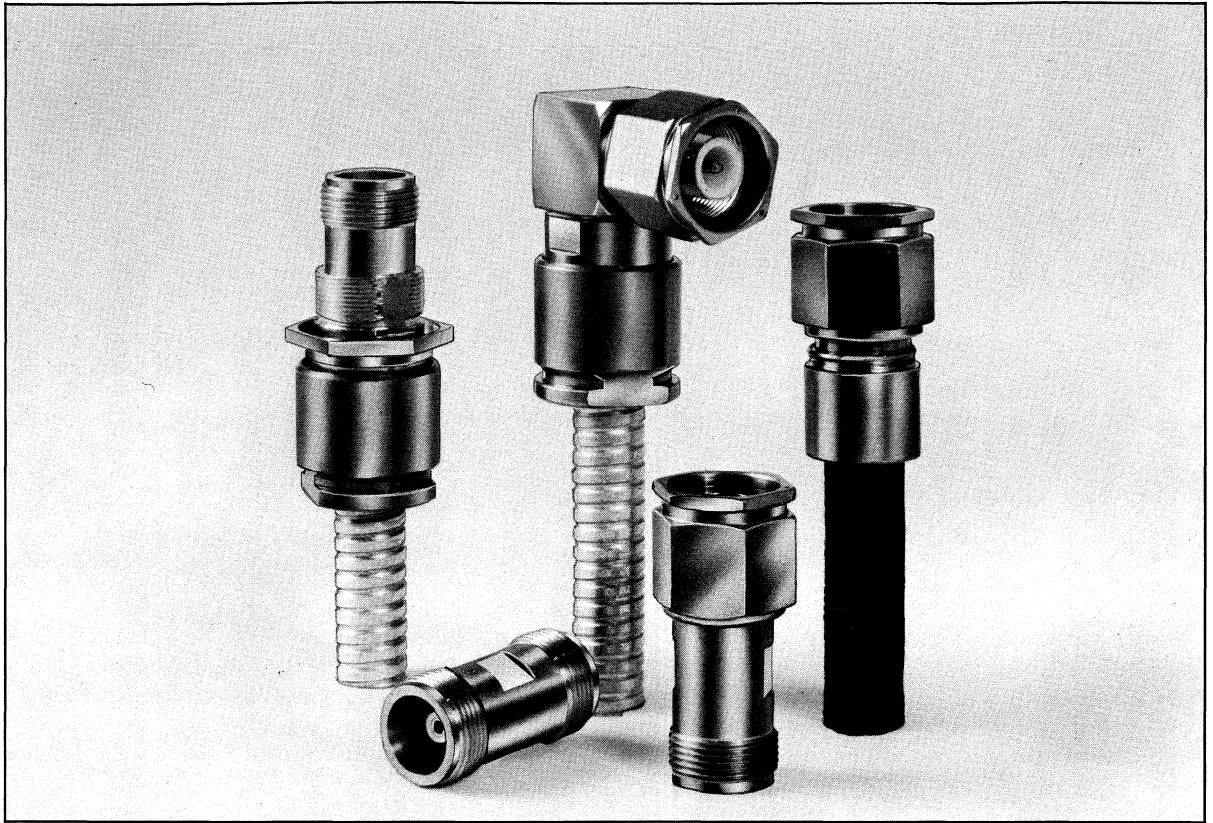
Plug to Jack Quick Release Test Adapter



Part Number **3682-2305-10**

Finish: Nickel plated brass.





The standard type SC connectors are popular due to the increasing demand for high power, low VSWR, low loss systems requirements. The series has been designated as the OSSC series. The basic design utilizes a hexagonal coupling nut for proper and reliable installation torque, and solid outer conductor to insure low noise and low VSWR performance. The OSSC series provides superior performance and mates to the type SC standards of MIL-C-39012.

Design and Construction

The outer shell and body parts are made of high strength aluminum, for light weight, or stainless steel for ruggedness and durability. The dielectric is PTFE fluorocarbon. The contacts are made of beryllium copper, gold plated.

Types

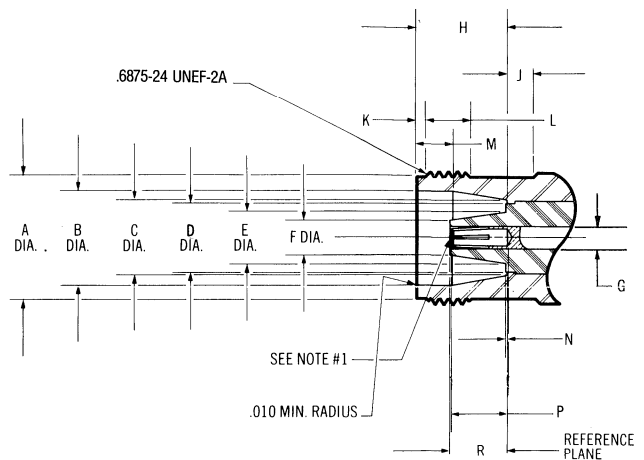
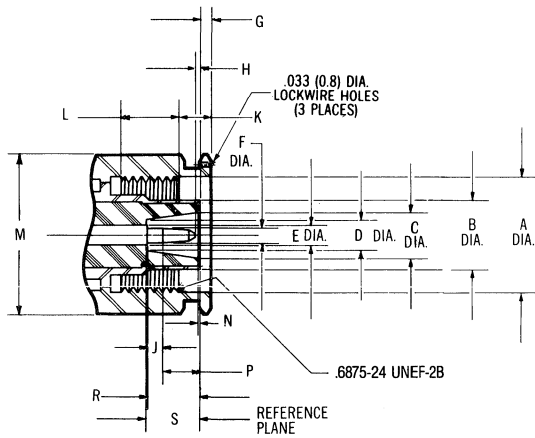
The OSSC series is limited to high performance versions such as connectors for high power, low loss cables. For other types, the factory should be contacted.

Application

The OSSC series has been designed for high power, low loss E-W system applications. Durability and reliability are of utmost importance in high power systems, where catastrophic failures must be avoided. The low VSWR which results in properly assembled connectors also minimizes voltage breakdown. The low VSWR keeps to the minimum voltage peaks associated with reflected energy.

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| Clamp Attachment | |
| Flexible Cable | 197 |
| Crimp Attachment | |



PLUG

| Letter | Inches (Millimeters) ³ | |
|--------|-----------------------------------|--------------|
| | Minimum | Maximum |
| A | .690 (17.53) | - |
| B | .407 (10.33) | .409 (10.39) |
| C | .276 (7.0) | - |
| D | .194 (4.93) | - |
| E | .119 (3.02) | .124 (3.15) |
| F | .090 (2.29) | .092 (2.34) |
| G | .025 (0.63) | .085 (2.16) |
| H | .003 (0.08) | .040 (1.02) |
| J | .093 (2.36) | - |
| K | .213 (5.41) | .223 (5.92) |
| L | .250 (6.35) | - |
| M | - | .813 (20.65) |
| N | .007 (0.18) | - |
| P | .191 (4.85) | .251 (6.38) |
| R | .307 (7.80) | .337 (8.56) |
| S | .309 (7.85) | - |

JACK

| Letter | Inches (Millimeters) ³ | |
|--------|-----------------------------------|--------------|
| | Minimum | Maximum |
| A | - | .630 (16.00) |
| B | .482 (12.24) | .498 (12.65) |
| C | .411 (10.44) | .415 (10.54) |
| D | - | .374 (9.50) |
| E | - | .272 (6.91) |
| F | - | .190 (4.83) |
| G | .119 (3.02) | .124 (3.15) |
| H | .491 (12.47) | .495 (12.57) |
| J | .140 (3.56) | - |
| K | .047 (1.19) | .077 (1.96) |
| L | .250 (6.35) | - |
| M | .190 (4.83) | .200 (5.08) |
| N | - | .007 (0.18) |
| P | .273 (6.93) | .303 (7.70) |
| R | - | .309 (7.85) |

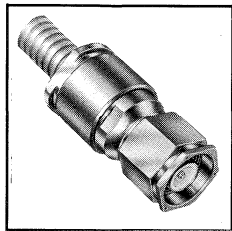
1. ID to meet VSWR and contact resistance when mated with $.091 \pm .001$ (2.31 \pm .0254mm) dia. pin.
2. When fully engaged, the two reference planes must coincide with metal to metal contact.
3. Metric equivalents (to the nearest 0.01mm) are given for general information only.

| Requirement | MIL-C-39012 Applicable Paragraph | Detail |
|---------------------------------|-------------------------------------|--|
| General | | |
| Material | 3.3 | Aluminum Alloy type 6061-7T per QQ-A-200/B. Beryllium copper per ASTM-B-196. PTFE Fluorocarbon per ASTM-D-1457. |
| Finish | 3.3.1 | Center contacts shall be gold plated to a min. thickness of .0001 inch in accordance with MIL-G-45204, Type I, Grade C. All other metal parts shall be finished as to provide a connector which meets the corrosion requirements. |
| Design | 3.4 | The design shall be such that the outline shown in this catalog and the interface dimensions of MIL-STD-348A are met. |
| Electrical | | |
| Insulation Resistance | 3.11 | The insulation resistance shall not be less than 5,000 megohms. |
| Corona Level | 3.22 | The connector shall not exhibit breakdown when the voltage is 750 volts rms at 70,000 ft. |
| Dielectric Withstanding Voltage | 3.17 | Refer to applicable military slash sheet or consult factory. |
| RF High Potential | 3.23 | The withstanding voltage is 2,500 volts rms at 5 MHz. Leakage current is not applicable. |
| Contact Resistance | 3.16 | Center contact resistance: 1.5 milliohms max. Outer contact resistance: 1.5 milliohms max. |
| VSWR | 3.14 | Refer to applicable military slash sheet or consult factory. Frequency range dependent on cable used. |
| RF Leakage | 3.26 | Refer to applicable military slash sheet or consult factory. |
| Insertion Loss | 3.27 | Refer to applicable military slash sheet or consult factory. Frequency range dependent on cable used. |
| Mechanical | | |
| Force to Engage | 3.5.1 | The torque required to engage and disengage shall not exceed 3 in.-lbs. The longitudinal force is not applicable. |
| Coupling Nut Retention | 3.25 | 100 lbs. min. Applicable for plug connectors only. |
| Coupling Proof Torque | 3.6 | 15 in.-lbs. min. Applicable for plug connectors only. |
| Cable Retention | 3.24 | Refer to applicable military slash sheet or consult factory. |
| Mating Characteristics | 3.7 | Applicable to jack connectors only. Reference MIL-STD-348 for dimensions; oversize test pin .093 min. dia., .125 deep; insertion force 2 lbs. max. with .092 min. dia. pin; withdrawal force 2 oz. min. with .090 max. dia. pin. |
| Connector Durability | 3.15 | The connector to be tested and its mating connector shall be subjected to 500 insertion and withdrawal cycles at 12 cycles per minute max. The connector shall show no evidence of mechanical failure and shall meet the mating characteristic requirements. |
| Recommended Mating Torque | — | 12 to 15 in.-lbs. |
| Environmental | | |
| Vibration | 3.18 | Specification MIL-STD-202, method 204, test condition B. |
| Shock | 3.19 | Specification MIL-STD-202, method 213, test condition I. |
| Thermal Shock | 3.20 | Refer to applicable military slash sheet or consult factory. |
| Corrosion (Salt Spray) | 3.13 | Specification MIL-STD-202, method 101, test condition B. |
| Moisture Resistance | 3.21 | Specification MIL-STD-202, method 106. No measurements at high humidity. Insulation resistance shall be at least 200 megohms within 5 minutes of removal from humidity. |

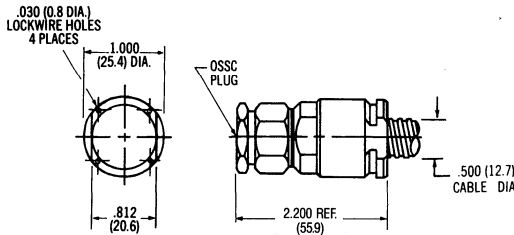
These OSSC connectors have been designed for use with high power low loss semi-rigid coaxial cable of .500-inch diameters. Each connector body and/or coupling nut is made of aluminum for light weight. The

bodies have an iridited finish while the coupling and clamp nuts are anodized. The solder-on center is beryllium copper, gold plated and supported by a PTFE fluorocarbon dielectric.

Semi-Rigid Cable • Clamp Attachment

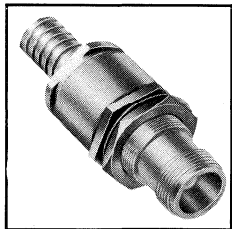


Straight Cable Plug

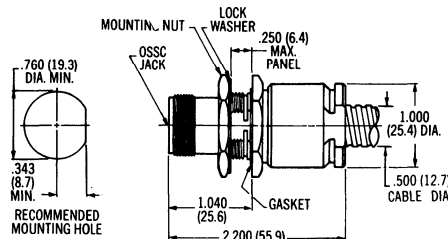


| | |
|------------------------------|---------------------|
| Cable | .500 |
| Cable Dielectric | Microporous PTFE |
| Compression Clamp Attachment | |
| Part Number | 3401-7500-00 |

Finish: Aluminum. Housing is iridited. Coupling and clamp nut are anodized.
Press clamp attachment available.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

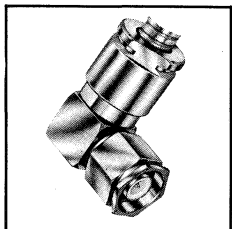


Bulkhead Feedthrough Cable Jack

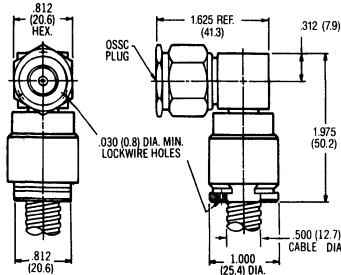


| | |
|------------------------------|---------------------|
| Cable | .500 |
| Cable Dielectric | Microporous PTFE |
| Compression Clamp Attachment | |
| Part Number | 3404-7500-00 |

Finish: Aluminum. Housing is iridited. Coupling and clamp nut are anodized.
Press clamp attachment available.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.



Right Angle Cable Plug



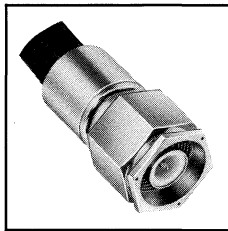
| | |
|------------------------------|---------------------|
| Cable | .500 |
| Cable Dielectric | Microporous PTFE |
| Compression Clamp Attachment | |
| Part Number | 3407-7500-00 |

Finish: Aluminum. Housing is iridited. Coupling and clamp nut are anodized.
Press clamp attachment available.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

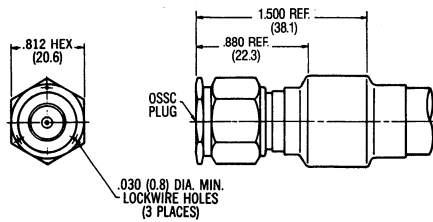
The following SC Type Connectors have been designed for use with high power low loss flexible cable of .545-inch diameter. Each connector body and coupling

nut is made of stainless steel for rugged connector applications. The center contact is beryllium copper, gold plated and supported by a PTFE fluoro carbon dielectric.

Flexible Cable • Crimp Attachment

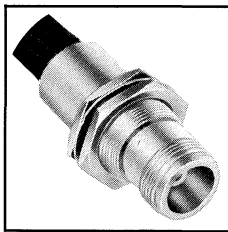


Straight Cable Plug

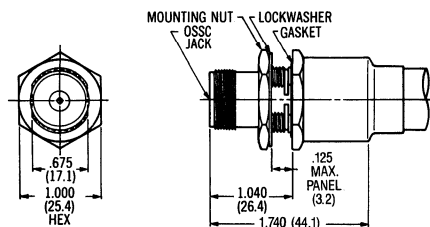


| | |
|------------------|---------------------|
| Cable | .545 |
| Cable Dielectric | Perforated |
| Part Number | 3401-7545-00 |

Finish: Passivated stainless steel.
Refer to Appendix for Coaxial Cable Characteristics

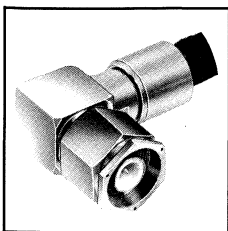


Bulkhead Feedthrough Cable Jack

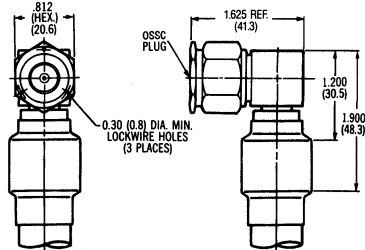


| | |
|------------------|---------------------|
| Cable | .545 |
| Cable Dielectric | Perforated |
| Part Number | 3404-7545-00 |

Finish: Passivated stainless steel.
Refer to Appendix for Coaxial Cable Characteristics

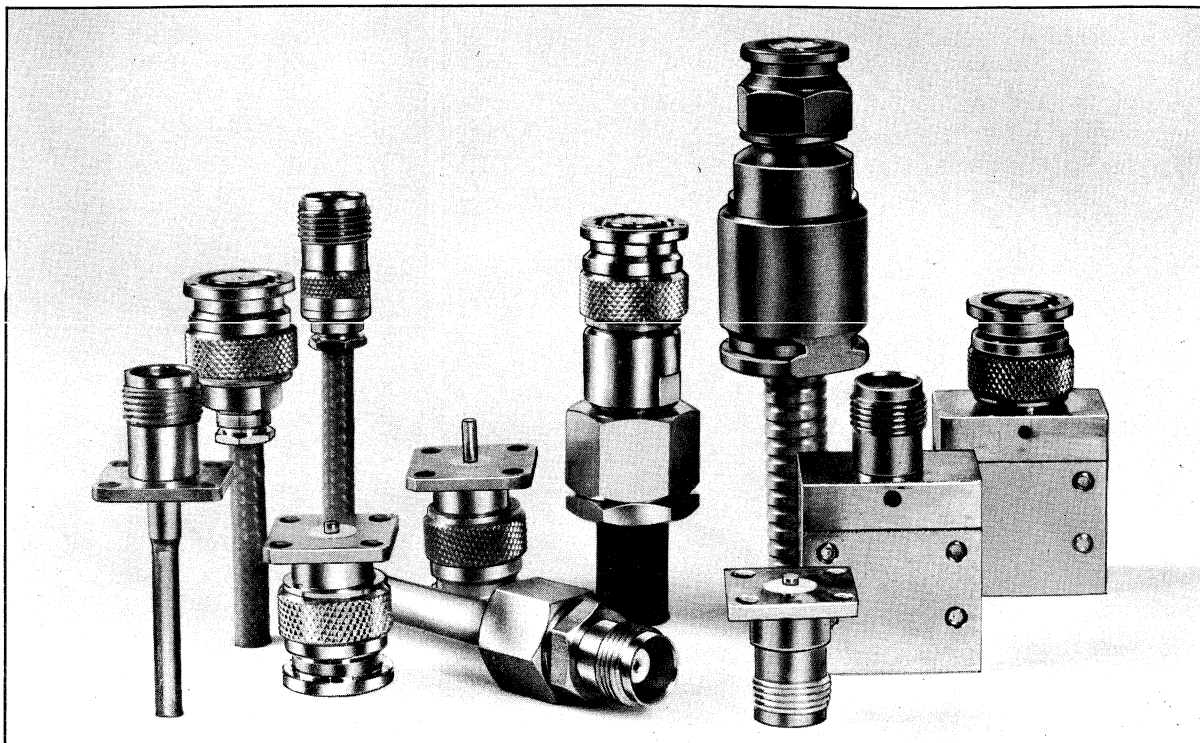


Right Angle Cable Plug



| | |
|------------------|---------------------|
| Cable | .545 |
| Cable Dielectric | Perforated |
| Part Number | 3407-7545-00 |

Finish: Passivated stainless steel.
Refer to Appendix for Coaxial Cable Characteristics



The TNC Coaxial Connector Series with improved performance conforms to the interface standard of MIL-C-39012.

Design and Construction

The outer shell and coupling mechanism are available in stainless steel, nickel plated brass, gold plated beryllium copper, and aluminum. The choice of material is determined by application, durability, cost and weight. The center contact is made of gold plated beryllium copper. The dielectric is PTFE fluorocarbon.

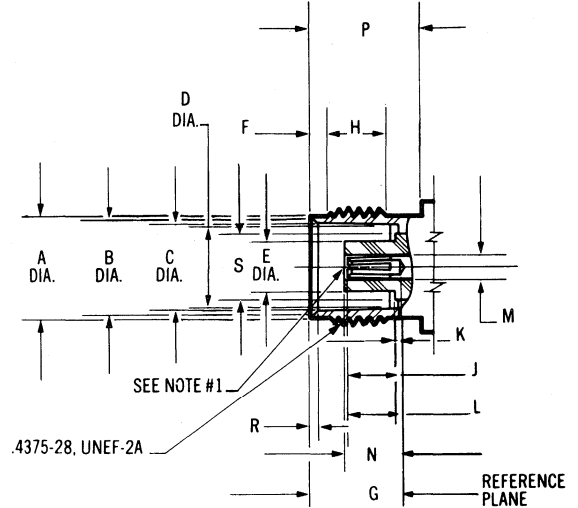
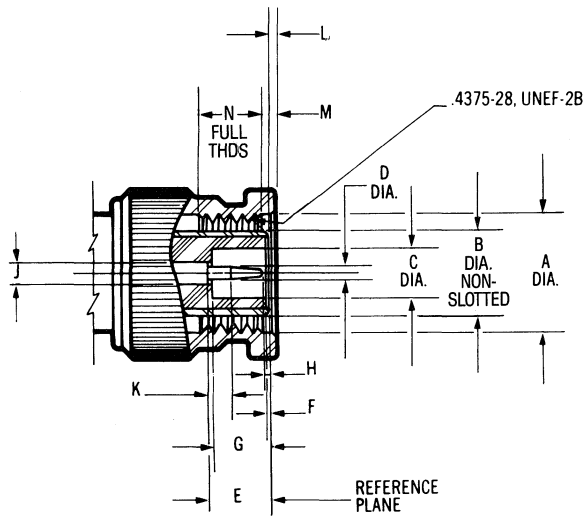
Upper Operating Frequency

The upper operating frequency for the standard TNC series is 150 GHz. 180 GHz extended frequency range series is also available in this catalog. The 180 GHz series is a modified design which, while conforming to MIL-C-39012 interface standard, is also designed to be free of higher order mode resonance.

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| .085 and .141 Diameter-Solder Clamp Attachment | |
| .250 and .325 Diameter-Clamp Attachment | |
| .085 and .141 Diameter-Solderless Compression Crimp Attachment | |
| .375 and .500 Diameter-Clamp Attachment | |
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| Semi-Rigid Cable Type | |
| Direct Solder Attachment | |
| Solder Clamp Attachment | |
| Flexible Cable Type | |
| Clamp Attachment | |
| Crimp Attachment | |



PLUG

| Letter | Inches (Millimeters) ³ | |
|--------|-----------------------------------|-------------|
| | Minimum | Maximum |
| A | .440 (11.18) | - |
| B | - | .318 (8.08) |
| C | .190 (4.83) | - |
| D | .052 (1.32) | .054 (1.37) |
| E | .210 (5.33) | .230 (5.84) |
| F | .006 (0.15) | - |
| G | .208 (5.28) | .228 (5.79) |
| H | .003 (0.08) | .040 (1.02) |
| J | .081 (2.06) | .087 (2.21) |
| K | .078 (1.98) | - |
| L | - | .078 (1.98) |
| M | .063 (1.60) | - |
| N | .156 (3.96) | - |
| P | - | .025 (0.64) |

JACK

| Letter | Inches (Millimeters) ³ | |
|--------|-----------------------------------|-------------|
| | Minimum | Maximum |
| A | .378 (9.60) | .381 (9.68) |
| B | .346 (8.79) | .356 (9.04) |
| C | .327 (8.31) | .333 (8.46) |
| D | .319 (8.10) | .321 (8.15) |
| E | - | .186 (4.72) |
| F | .068 (1.73) | .088 (2.24) |
| G | .327 (8.30) | .335 (8.51) |
| H | .187 (4.75) | - |
| J | .186 (4.72) | .206 (5.23) |
| K | - | .006 (0.15) |
| L | .195 (4.95) | - |
| M | .081 (2.06) | .087 (2.21) |
| N | .188 (4.78) | .208 (5.28) |
| P | .414 (10.52) | - |
| R | .015 (0.38) | .030 (0.77) |
| S | - | .256 (6.50) |

1. ID to meet VSWR and contact resistance when mated with .053 ± .001 (1.3462 ± .0254mm) dia. pin.
2. When fully engaged, the two reference planes must coincide with metal to metal contact.
3. Metric equivalents (to the nearest 0.01mm) are given for general information only.

| Requirement | MIL-C-39012 Applicable Paragraph | Detail |
|---------------------------------|-------------------------------------|--|
| General | | |
| Material | 3.33 | Brass, half hard per QQ-B-626. Steel, corrosion resistant per ASTM-A-484 and ASTM-A-582, Type 303. Beryllium copper per ASTM-B-196. PTFE Fluorocarbon per ASTM-D-1457. |
| Finish | 3.31 | Center contacts shall be gold plated to a min. thickness of .0001 inch in accordance with MIL-G-45204, Type I, Grade C. All other metal parts shall be finished as to provide a connector which meets the corrosion requirements. |
| Design | 3.4 | The design shall be such that the outline shown in this catalog and the interface dimensions of MIL-STD-348A are met for 15 GHz design only. |
| Electrical | | |
| Insulation Resistance | 3.11 | The insulation resistance shall not be less than 5,000 megohms. |
| Corona Level | 3.22 | The connector shall not exhibit breakdown when the voltage is 375 volts rms at 70,000 ft. |
| Dielectric Withstanding Voltage | 3.17 | The magnitude of the test voltage shall be 1500 volts rms at sea level. |
| RF High Potential | 3.23 | The withstanding voltage is 1,000 volts rms at 5 MHz. Leakage current is not applicable. |
| Contact Resistance | 3.16 | Refer to applicable military slash sheet or consult factory. |
| VSWR | 3.14 | Refer to applicable military slash sheet or consult factory. Frequency range dependent on cable used. |
| RF Leakage | 3.26 | Refer to applicable military slash sheet or consult factory. |
| Insertion Loss | 3.27 | Refer to applicable military slash sheet or consult factory. Frequency range dependent on cable used. |
| Mechanical | | |
| Force to Engage | 3.51 | The torque required to engage and disengage shall not exceed 2 in.-lbs. The longitudinal force is not applicable. |
| Coupling Nut Retention | 3.25 | 100 lbs. min. Applicable for plug connectors only. |
| Coupling Proof Torque | 3.6 | 15 in.-lbs. min. Applicable for plug connectors only. |
| Cable Retention | 3.24 | Refer to applicable military slash sheet or consult factory. |
| Mating Characteristics | 3.7 | Applicable to jack connectors only. Reference MIL-STD-348A for dimensions; oversize test pin .055 min. dia., .125 deep; insertion force 2 lbs. max. with .054 min. dia. pin; withdrawal force 2 oz. min. with .052 max. dia. pin. |
| Connector Durability | 3.15 | The connector to be tested and its mating connector shall be subjected to 500 insertion and withdrawal cycles at 12 cycles per minute max. The connector shall show no evidence of mechanical failure and shall meet the mating characteristic requirements. |
| Recommended Mating Torque | — | 12 to 15 in.-lbs. |
| Environmental | | |
| Vibration | 3.18 | Specification MIL-STD-202, method 204, test condition B. |
| Shock | 3.19 | Specification MIL-STD-202, method 213, test condition I. |
| Thermal Shock | 3.20 | Refer to applicable military slash sheet or consult factory. |
| Corrosion (Salt Spray) | 3.13 | Specification MIL-STD-202, method 101, test condition B. |
| Moisture Resistance | 3.21 | Specification MIL-STD-202, method 106. No measurements at high humidity. Insulation resistance shall be at least 200 megohms within 5 minutes of removal from humidity. |

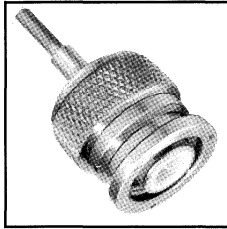
TNC For Semi-Rigid Cable

TNC series 50 ohm Connectors for semi-rigid cable are highly reliable, low VSWR connectors for use on .085-inch, .141-inch, .250-inch and .325-inch semi-rigid cables.

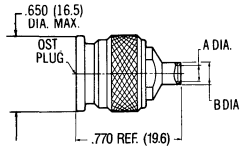
Each connector body and/or coupling nut is made of stainless steel for long life. The solder-on center contact is beryllium copper, gold plated and supported by a PTFE fluorocarbon dielectric.

These TNC Series Cable Connectors are designed to provide improved electrical performance when mated with TNC type connectors with interface dimensions per MIL-C-39012.

.085 and .141 Dia. • Direct Solder Attachment

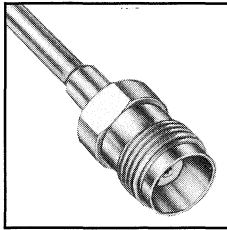


Straight Cable Plug

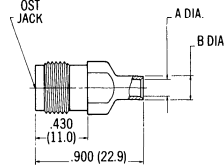


| Cable | RG 402/U (.141) | RG 405/U (.085) | .141 |
|------------------|--------------------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE | Microporous PTFE |
| Part Number | 3101-7941-00 | 3101-7985-00 | 3101-7943-02 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) | Inches (mm) .144 Min. (3.7) |
| Dim. B | .180 (4.6) | .120 (3.0) | .180 (4.6) |

Finish: Housing is stainless steel, gold plated. Coupling nut is passivated stainless steel. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

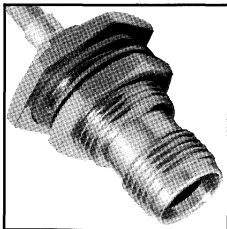


Straight Cable Jack

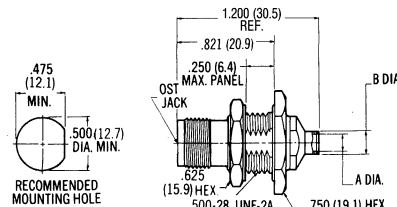


| Cable | RG 402/U (.141) | RG 405/U (.085) | .141 |
|------------------|--------------------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE | Microporous PTFE |
| Part Number | 3102-7941-00 | 3102-7985-00 | 3102-7943-02 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) | Inches (mm) .144 Min. (3.7) |
| Dim. B | .180 (4.6) | .120 (3.0) | .180 (4.6) |

Finish: Housing soldered to the cable outer conductor is gold plated. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.



Bulkhead Feedthrough Cable Jack

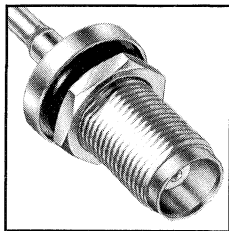


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 3104-7941-00 | 3104-7985-00 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .180 (4.6) | .120 (3.0) |

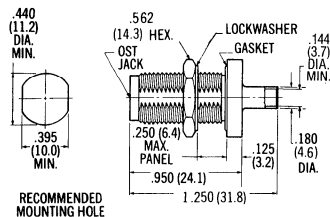
Finish: Housing and coupling nut are passivated stainless steel. The cable adapter section is gold plated for solder attachment. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

TNC For Semi-Rigid Cable

.085 and .141 Dia. • Direct Solder Attachment



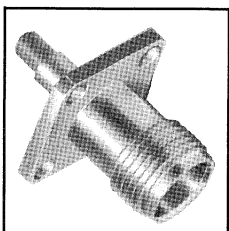
Bulkhead Feedthrough Cable Jack



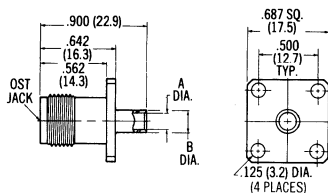
RECOMMENDED MOUNTING HOLE

| | | |
|------------------|---------------------|---------------------|
| Cable | RG 402/U (.141) | .141 |
| Cable Dielectric | Solid PTFE | Microporous PTFE |
| Part Number | 3104-5068-00 | 3104-7943-00 |

Finish: Housing soldered to the cable outer conductor is gold plated.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.



Flange Mount Cable Jack



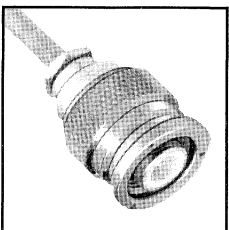
| | | |
|------------------|--------------------------------|--------------------------------|
| Cable | RG 402/U (.141) | RG 405/U (.085) |
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 3106-7941-00 | 3106-7985-00 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .180 (4.6) | .120 (3.0) |

Finish: Housing soldered to the cable outer conductor is gold plated.
.141 Microporous PTFE cable dielectric available. Consult factory.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

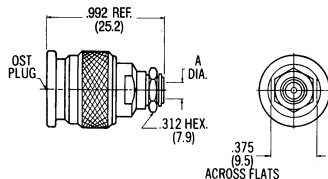
The Solder Clamp Attachment is a solder type attachment to an inside bushing which will allow cable rotation and

locking in any angular position. This provides for simple cable attachment with packaging flexibility.

.085 and .141 Dia. • Solder Clamp Attachment

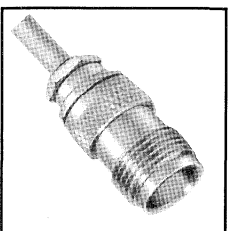


Straight Cable Plug

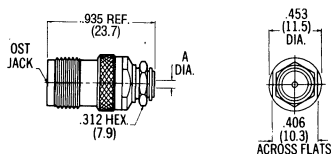


| | | |
|------------------|--------------------------------|--------------------------------|
| Cable | RG 402/U (.141) | RG 405/U (.085) |
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 3101-7841-00 | 3101-7885-00 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |

Finish: Housing and coupling nut are passivated stainless steel. The cable adapter section is gold plated for solder attachment.
.141 Microporous PTFE cable dielectric available. Consult factory.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.



Straight Cable Jack

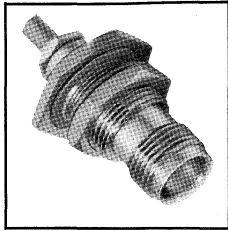


| | | |
|------------------|--------------------------------|--------------------------------|
| Cable | RG 402/U (.141) | RG 405/U (.085) |
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 3102-7841-00 | 3102-7885-00 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |

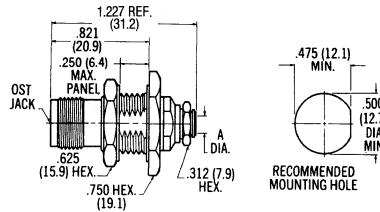
Finish: Housing and coupling nut are passivated stainless steel. The cable adapter section is gold plated for solder attachment.
.141 Microporous PTFE cable dielectric available. Consult factory.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

TNC For Semi-Rigid Cable

.085 and .141 Dia. • Solder Clamp Attachment

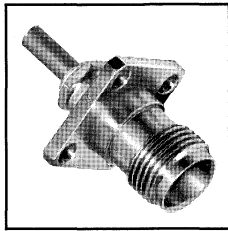


Bulkhead Feedthrough Cable Jack

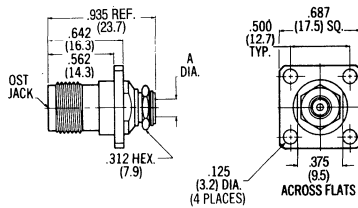


| | | |
|------------------|--------------------------------|---------------------------------|
| Cable | RG 402/U (.141) | RG 405/U (.085) |
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 3104-7841-00 | 3104-7885-00 |
| Dim. A | Inches (mm) .142 Min. (3.6) | Inches (mm) .0875 Min. (2.2) |

Finish: Housing and coupling nut are passivated stainless steel. The cable adapter section is gold plated for solder attachment.
 .141 Microporous PTFE cable dielectric available. Consult factory.
 Refer to Appendix for Coaxial Cable Characteristics.
 Refer to recommended assembly tools in Tool Section.



Flange Mount Cable Jack



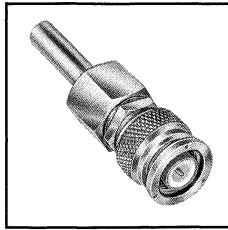
| | | |
|------------------|--------------------------------|---------------------------------|
| Cable | RG 402/U (.141) | RG 405/U (.085) |
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 3106-7841-00 | 3106-7885-00 |
| Dim. A | Inches (mm) .142 Min. (3.6) | Inches (mm) .0875 Min. (2.2) |

Finish: Housing and coupling nut are passivated stainless steel. The cable adapter section is gold plated for solder attachment.
 .141 Microporous PTFE cable dielectric available. Consult factory.
 Refer to Appendix for Coaxial Cable Characteristics.
 Refer to recommended assembly tools in Tool Section.

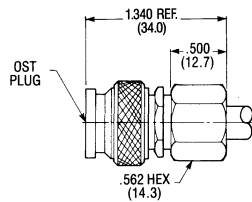
The Compression Clamp Attachment provides a quick and easy solderless cable outer jacket attachment utilizing

standard laboratory hand tools. This provides simple cable attachment for laboratory and prototype application.

.250 and .325 Dia. • Clamp Attachment

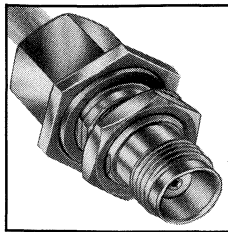


Straight Cable Plug

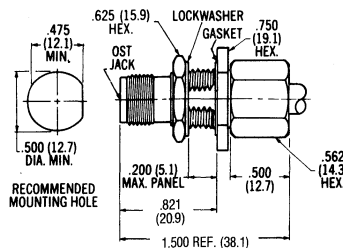


| | | | |
|------------------------------|---------------------|-------------------------|---------------------|
| Cable | RG 401/U (.250) | .250 | .325 |
| Cable Dielectric | Solid PTFE | Microporous PTFE & Foam | Solid PTFE |
| Compression Clamp Attachment | | | |
| Part Number | 3101-7750-00 | 3101-7752-02 | 3101-7725-02 |

Finish: Passivated stainless steel
 Press clamp attachment available. Consult factory.
 Refer to Appendix for Coaxial Cable Characteristics.
 Refer to recommended assembly tools in Tool Section.



Bulkhead Feedthrough Jack



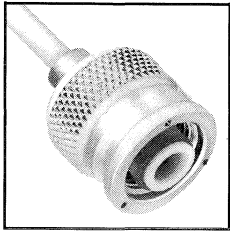
| | | | |
|------------------------------|---------------------|-------------------------|---------------------|
| Cable | RG 401/U (.250) | .250 | .325 |
| Cable Dielectric | Solid PTFE | Microporous PTFE & Foam | Solid PTFE |
| Compression Clamp Attachment | | | |
| Part Number | 3104-7750-00 | 3104-7752-02 | 3104-7725-02 |

Finish: Passivated stainless steel
 Press clamp attachment available. Consult factory.
 Refer to Appendix for Coaxial Cable Characteristics.
 Refer to recommended assembly tools in Tool Section.

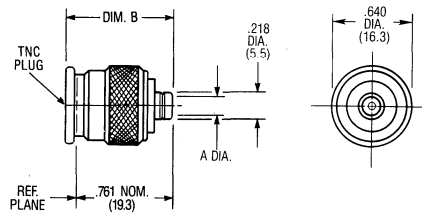
TNC 50 ohm Solderless Compression Crimp Connectors are available for use on RG 402/U (.141 dia.) and RG 405/U (.085 dia.) semi-rigid cables. These completely assembled units feature captured center contacts, durable

stainless steel housings and coupling nuts, and M/A-COM'S Solderless Compression Crimp Cable Attachment. The center contact is beryllium copper, gold plated and is supported by a PTFE flourocarbon dielectric.

.085 and .141 Solderless Cable Attachment

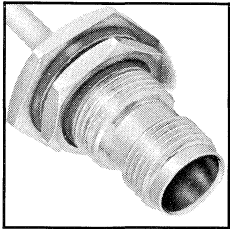


Straight Cable Plug

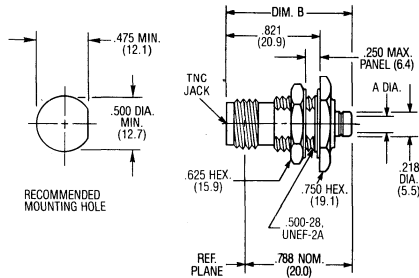


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|-------------|---------------------------|--------------------------------|
| Part Number | 3101-7641-02 | 3101-7685-02 |
| Dim. A | Inches (mm) .143 (3.6) | Inches (mm) .088 Min. (2.2) |
| Dim. B | Before Crimping | .923 Max. (23.4) |
| | After Crimping | .780 Max. (19.8) |

Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00. Coupling nut is passivated in all cases. All outline drawings show after crimping configurations. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.



Bulkhead Feedthrough Cable Jack



| Cable | RG 402/U (.141) | RG 405/U (.085) |
|-------------|---------------------------|--------------------------------|
| Part Number | 3104-7641-02 | 3104-7685-02 |
| Dim. A | Inches (mm) .143 (3.6) | Inches (mm) .088 Min. (2.2) |
| Dim. B | Before Crimping | 1.269 Max. (32.2) |
| | After Crimping | 1.125 Max. (28.6) |

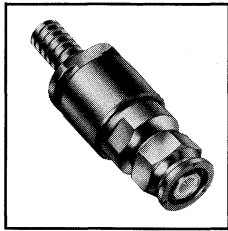
Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00. All outline drawings show after crimping configurations. Refer to Appendix for Coaxial Cable Characteristics. Refer to recommended assembly tools in Tool Section.

TNC

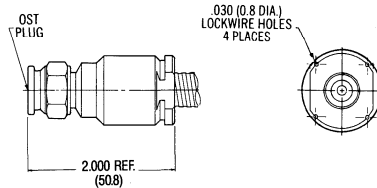
For High Power • Low Loss Cable

The TNC connectors have been designed for use with high power low loss semi-rigid coaxial cable of .375 and .500-inch diameters. Each connector body and/or coupling nut is made of aluminum for light weight. The

bodies have an iridited finish while the coupling and clamp nuts are anodized. The solder-on center contact is beryllium copper, gold plated and supported by a PTFE fluoro carbon dielectric.



Straight Cable Plug

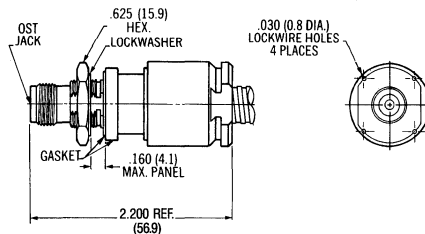


| Cable | .375 | .500 |
|------------------------------|---------------------|---------------------|
| Cable Dielectric | Microporous PTFE | Microporous PTFE |
| Compression Clamp Attachment | | |
| Part Number | 3101-7575-00 | 3101-7500-00 |

Finish: Aluminum. Housing is iridited. Coupling and clamp nuts are anodized.
Press clamp attachment available.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.



Bulkhead Feedthrough Cable Jack



| Cable | .375 | .500 |
|------------------------------|---------------------|---------------------|
| Cable Dielectric | Microporous PTFE | Microporous PTFE |
| Compression Clamp Attachment | | |
| Part Number | 3104-7575-00 | 3104-7500-00 |

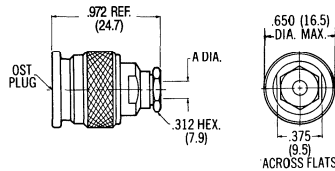
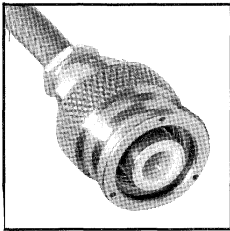
Finish: Aluminum. Housing is iridited. Coupling and clamp nuts are anodized.
Press clamp attachment available.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

M/A-COM's TNC series connectors feature constant 50 ohm impedance with low VSWR values. These connectors are ideally suited for terminating most popular flexible cables. Clamp attachment provides a quick and easy

solderless method of attachment for the outer conductor using standard connector assembly tools. The solder-on center contact is beryllium copper, gold plated and supported by a PTFE fluorocarbon dielectric.

Flexible Cable • Clamp Attachment

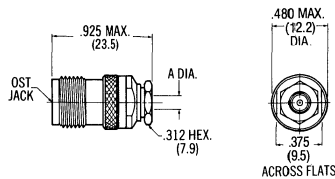
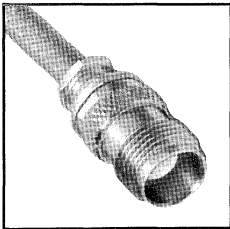
Straight Cable Plug



| Cable | RG 55/U, 58, 141, 142, 223, 303 | RG 174/U, 179, 187, 188, 316 |
|-------------------------|---------------------------------------|------------------------------------|
| Captured Center Contact | | |
| Part Number | 3101-7341-10 | 3101-7388-10 |
| Dim. A | Inches (mm) .220 (5.6) | Inches (mm) .116 (2.9) |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

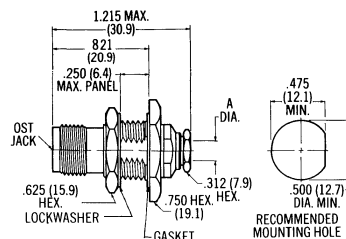
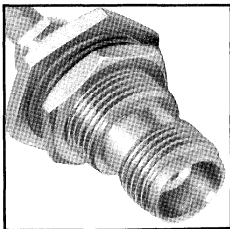
Straight Cable Jack



| Cable | RG 55/U, 58, 141, 142, 223, 303 | RG 174/U, 179, 187, 188, 316 |
|-------------------------|---------------------------------------|------------------------------------|
| Captured Center Contact | | |
| Part Number | 3102-7341-10 | 3102-7388-10 |
| Dim. A | Inches (mm) .220 (5.6) | Inches (mm) .116 (2.9) |

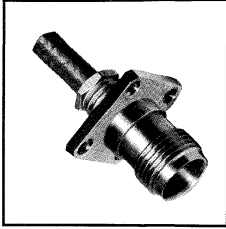
Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

Bulkhead Feedthrough Cable Jack

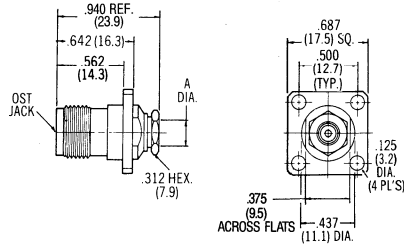


| Cable | RG 55/U, 58, 141, 142, 223, 303 | RG 174/U, 179, 187, 188, 316 |
|-------------------------|---------------------------------------|------------------------------------|
| Captured Center Contact | | |
| Part Number | 3104-7341-10 | 3104-7388-10 |
| Dim. A | Inches (mm) .220 (5.6) | Inches (mm) .116 (2.9) |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

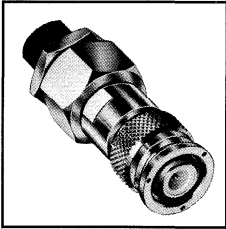


Flange Mount Cable Jack

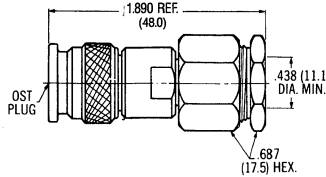


| Cable | RG 55/U, 58, 141, 142, 223, 303 | RG 174/U, 179, 187, 188, 316 |
|-------------------------|---------------------------------|------------------------------|
| Captured Center Contact | | |
| Part Number | 3106-7341-10 | 3106-7388-10 |
| Dim. A | Inches (mm) .220 (5.6) | Inches (mm) .116 (2.9) |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

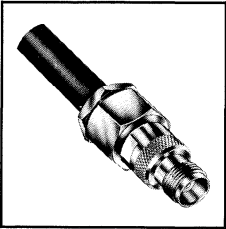


Straight Cable Plug

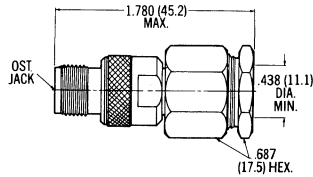


| Cable | RG 214/U, 225, 393 |
|-------------|---------------------|
| Part Number | 3101-7214-10 |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.



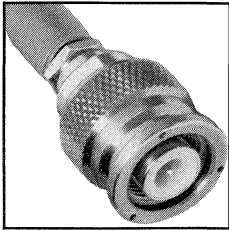
Straight Cable Jack



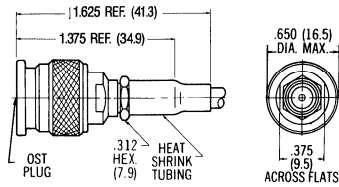
| Cable | RG 214/U, 225, 393 |
|-------------|---------------------|
| Part Number | 3102-7214-10 |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

Flexible Cable • Crimp Attachment

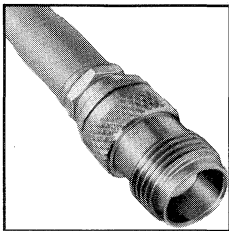


Straight Cable Plug

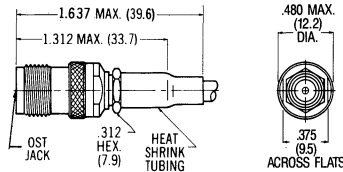


| Cable | RG 58/U, 141, 303 | RG 55/U, 142, 223, 400 | RG 174/U, 179, 187, 188, 316 |
|-------------------------|---------------------|------------------------|------------------------------|
| Captured Center Contact | | | |
| Part Number | 3131-7358-10 | 3131-7341-10 | 3131-7388-10 |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

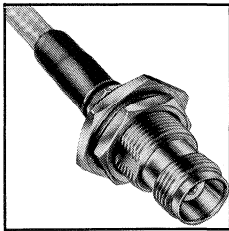


Straight Cable Jack

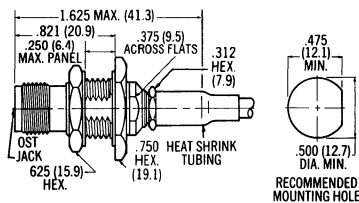


| Cable | RG 58/U, 141, 303 | RG 55/U, 142, 223, 400 | RG 174/U, 179, 187, 188, 316 |
|-------------------------|---------------------|------------------------|------------------------------|
| Captured Center Contact | | | |
| Part Number | 3132-7358-10 | 3132-7341-10 | 3132-7388-10 |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

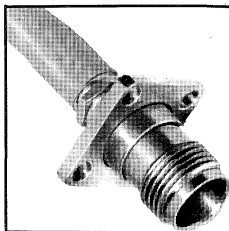


Bulkhead Feedthrough Cable Jack

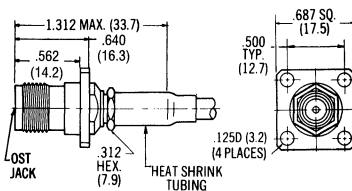


| Cable | RG 58/U, 141, 303 | RG 55/U, 142, 223, 400 | RG 174/U, 179, 187, 188, 316 |
|-------------------------|---------------------|------------------------|------------------------------|
| Captured Center Contact | | | |
| Part Number | 3134-7358-10 | 3134-7341-10 | 3134-7388-10 |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

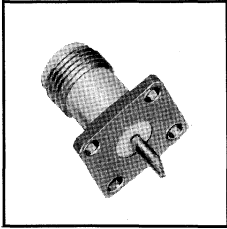


Flange Mount Cable Jack

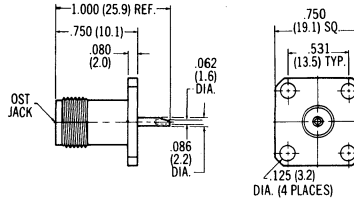


| Cable | RG 58/U, 141, 303 | RG 55/U, 142, 223, 400 | RG 174/U, 179, 187, 188, 316 |
|-------------------------|---------------------|------------------------|------------------------------|
| Captured Center Contact | | | |
| Part Number | 3136-7358-10 | 3136-7341-10 | 3136-7388-10 |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

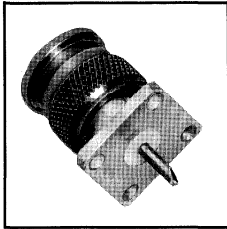


Flange Mount Jack Receptacle

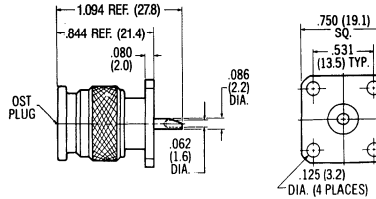


| | |
|---|---------------------|
| Captured Center Contact Solder Pot Terminal | |
| Part Number | 3152-0000-10 |

Finish: Nickel plated brass.

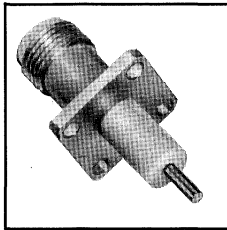


Flange Mount Plug Receptacle

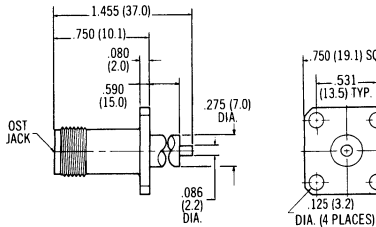


| | |
|---|---------------------|
| Captured Center Contact Solder Terminal | |
| Part Number | 3151-0000-10 |

Finish: Nickel plated brass.

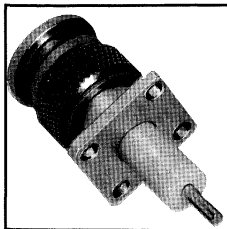


Flange Mount Jack Receptacle

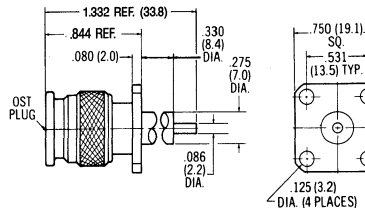


| | |
|---|---------------------|
| Non-Captured Center Contact Straight Terminal | |
| Part Number | 3152-1200-10 |
| Captured Center Contact Straight Terminal | |
| Part Number | 3152-1201-10 |

Finish: Nickel plated brass.



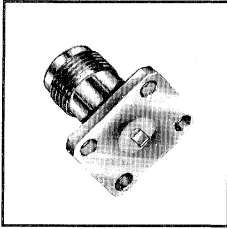
Flange Mount Plug Receptacle



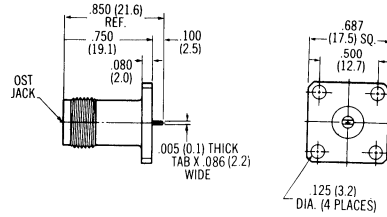
| | |
|---|---------------------|
| Non-Captured Center Contact Straight Terminal | |
| Part Number | 3151-1200-10 |
| Captured Center Contact Straight Terminal | |
| Part Number | 3151-1201-10 |

Finish: Nickel plated brass.

Panel Mount Receptacle



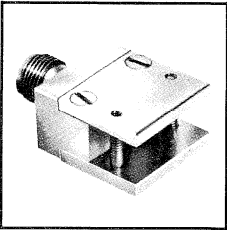
Flange Mount Jack Receptacle



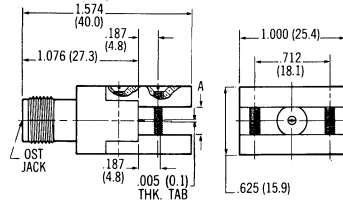
| | |
|--------------------------------------|---------------------|
| Captured Center Contact Tab Terminal | |
| Part Number | 3152-1628-10 |

Finish: Nickel plated brass.

End • Surface Launch For Use On Stripline Circuits

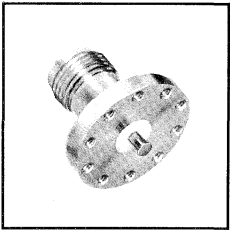


End Launch Jack

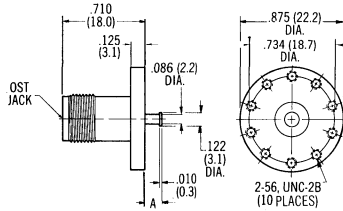


| | | | | |
|--------------------------------------|---------------------------|---------------------------|---------------------------|--|
| Captured Center Contact Tab Terminal | | | | |
| Stripline Size | 1/8 | 1/4 | 3/8 | |
| Part Number | 3170-1402-10 | 3170-1403-10 | 3170-1404-10 | |
| Dim. A | Inches (mm) .125 (3.2) | Inches (mm) .250 (6.4) | Inches (mm) .375 (9.5) | |

Finish: Nickel plated brass.
End Launch plug available.

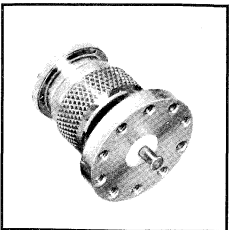


Surface Launch Jack

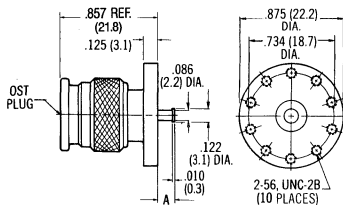


| | | | | |
|---|---------------------------|---------------------------|---------------------------|--|
| Non-Captured Center Contact Turret Terminal | | | | |
| Stripline Size | 1/8 | 1/4 | 3/8 | |
| Part Number | 3166-1442-10 | 3166-1443-10 | 3166-1444-10 | |
| Dim. A | Inches (mm) .063 (1.6) | Inches (mm) .125 (3.2) | Inches (mm) .187 (4.8) | |

Finish: Nickel plated brass.



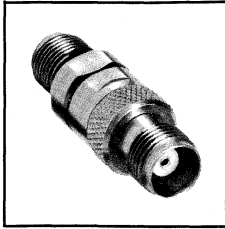
Surface Launch Plug



| | | | | |
|---|---------------------------|---------------------------|---------------------------|--|
| Non-Captured Center Contact Turret Terminal | | | | |
| Stripline Size | 1/8 | 1/4 | 3/8 | |
| Part Number | 3167-1442-10 | 3167-1443-10 | 3167-1444-10 | |
| Dim. A | Inches (mm) .063 (1.6) | Inches (mm) .125 (3.2) | Inches (mm) .187 (4.8) | |

Finish: Nickel plated brass.

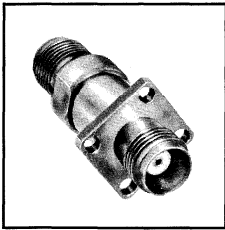
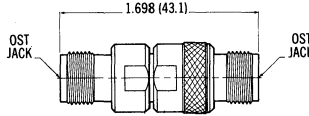
TNC In-Series Adapters



Jack to Jack Adapter

Part Number **3180-0000-00**

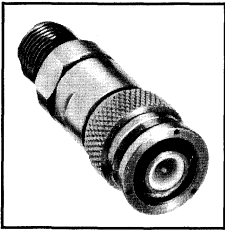
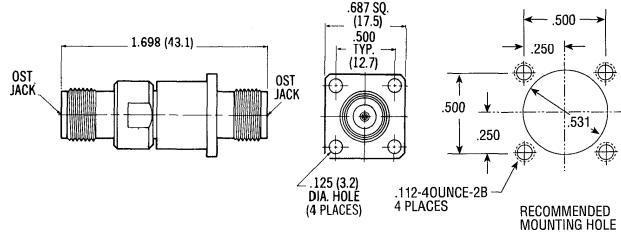
Finish: Passivated stainless steel.



Jack to Jack Adapter Flange Mount

Part Number **3180-2312-00**

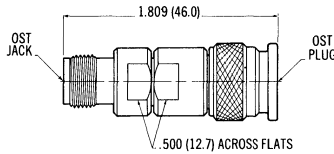
Finish: Passivated stainless steel.

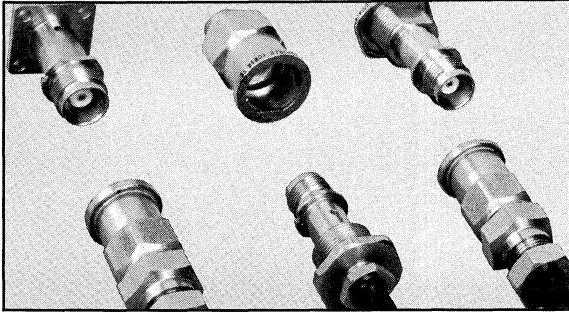


Jack to Plug Adapter

Part Number **3182-0000-00**

Finish: Passivated stainless steel.





For applications where cross mating of connectors can cause catastrophic failure, M/A-COM Interconnect Division has designed a fool-proof series of "keyed" connector products. A complete line of keyed TNC designs are available.

In principle, each interconnect is defined as a mated pair designed to mate only with each other. Typically, twenty-four different keying schemes are available for each part number. Keying is integral to the connector housing and coupling nut.

The interface of the connector is still fully compatible with MIL-C-39012.

The mated pair in Figure 1 illustrates the concept behind keying arrangements. Using machined flats, grooves and posts in both the coupling nut and housing permits twenty-four different keying arrangements. Examples of how each mated pair is specified for both the plug and jack are shown in Figures 2 and 3.

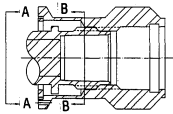


Figure 1

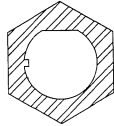
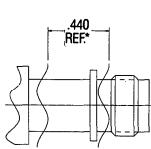


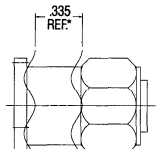
Figure 2



Figure 3



Jack



Plug

| Available Key Combinations | | | | | |
|----------------------------|------------|-------------------|-----|------------|-------------------|
| No. | Jack Angle | Mating Plug Angle | No. | Jack Angle | Mating Plug Angle |
| 1 | 42° | 318° | 13 | 186° | 174° |
| 2 | 54° | 306° | 14 | 198° | 162° |
| 3 | 66° | 294° | 15 | 210° | 150° |
| 4 | 78° | 282° | 16 | 222° | 138° |
| 5 | 90° | 270° | 17 | 234° | 126° |
| 6 | 102° | 258° | 18 | 246° | 114° |
| 7 | 114° | 246° | 19 | 258° | 102° |
| 8 | 126° | 234° | 20 | 270° | 90° |
| 9 | 138° | 222° | 21 | 282° | 78° |
| 10 | 150° | 210° | 22 | 294° | 66° |
| 11 | 162° | 198° | 23 | 306° | 54° |
| 12 | 174° | 186° | 24 | 318° | 42° |

*In order not to interfere with the standard MIL-C-39012 interface, a fixed additional length must be incorporated into the housing and coupling of the connector chosen.

Designs are available for any of the TNC family of connectors. Due to the number of combinations possible, consult the factory for specific part numbers and design

assistance. Standard designs are available for the following series of connectors. You should refer to other sections of this catalog for detailed characteristics of each connector series.

Plugs

| Part No. | Description |
|-----------|------------------------------|
| 3101-XXXX | Straight Cable Direct Solder |
| 3101-XXXX | Straight Cable Solder Clamp |
| 3101-XXXX | Flexible Cable Clamp |
| 3131-XXXX | Flexible Cable Crimp |
| 3151-XXXX | Flange Mount |

Jacks

| Part No. | Description |
|-----------|-----------------------------------|
| 3104-XXXX | Bulkhead Cable Direct Solder |
| 3104-XXXX | Bulkhead Cable Solder Clamp |
| 3106-XXXX | Flange Mount Solder Clamp |
| 3104-XXXX | Bulkhead Flexible Cable Clamp |
| 3134-XXXX | Bulkhead Flexible Cable Crimp |
| 3136-XXXX | Flange Mount Flexible Cable Crimp |
| 3152-XXXX | Flange Mount |



M/A-COM Interconnect's BNC connectors are designed with tight impedance control, reliable RF performance but still comply with the BNC interface standards of MIL-C-39012.

Design and Construction

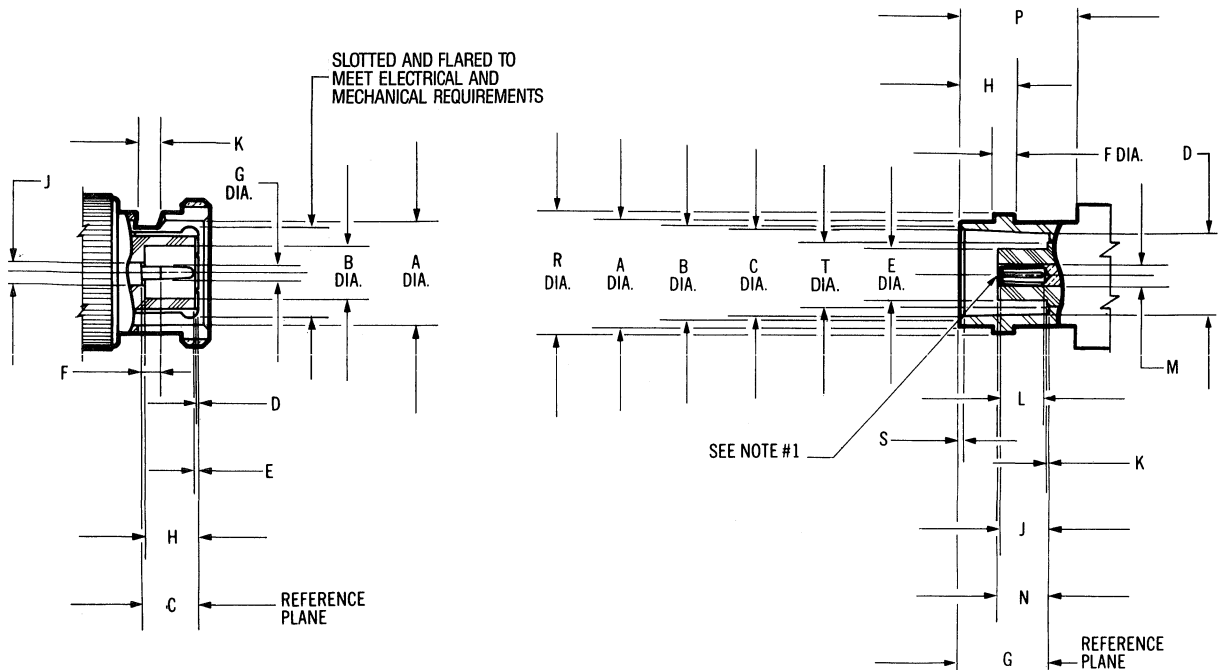
Outer shell and body parts are of nickel plated brass. The dielectric is PTFE fluorocarbon. The center contacts are made of beryllium copper, gold plated. Other materials are available on special request.

Types

The BNC series connectors are available in semi-rigid coaxial cable, flexible coaxial cable, panel mount receptacles, and in-series adapters.

Table of Contents

| | |
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| BNC Interface Mating Dimensions Specifications | 214 |
| Semi-Rigid Cable Type | 215 |
| .085 and .141 Diameter-Direct Solder Attachment | 216 |
| Flexible Cable Type | 217 |
| Clamp Attachment | |
| Crimp Attachment | |
| Panel Mount Receptacles | 219 |
| Solder Pot Terminal | |
| Straight Terminal | |
| In-Series Adapters | 220 |



PLUG

| Letter | Inches (Millimeters) ³ | |
|--------|-----------------------------------|-------------|
| | Minimum | Maximum |
| A | .385 (9.78) | .390 (9.91) |
| B | .190 (4.83) | - |
| C | .210 (5.33) | .230 (5.8) |
| D | .006 (0.15) | .018 (0.46) |
| E | .003 (0.08) | - |
| F | .078 (2.00) | - |
| G | .052 (1.32) | .054 (1.37) |
| H | .208 (5.28) | .228 (5.79) |
| J | .081 (2.06) | .087 (2.21) |
| K | .091 (2.31) | .097 (2.46) |

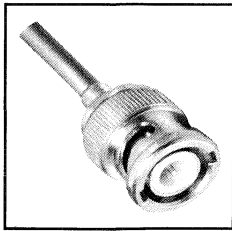
JACK

| Letter | Inches (Millimeters) ³ | |
|--------|-----------------------------------|--------------|
| | Minimum | Maximum |
| A | .378 (9.60) | - |
| B | .346 (8.80) | .356 (9.04) |
| C | .327 (8.31) | .333 (8.46) |
| D | .319 (8.10) | .321 (8.15) |
| E | - | .186 (4.72) |
| F | .075 (1.91) | .081 (2.06) |
| G | .329 (8.36) | .335 (8.50) |
| H | .204 (5.18) | .208 (5.28) |
| J | .186 (4.7) | .206 (5.23) |
| K | - | .006 (0.15) |
| L | .195 (4.95) | - |
| M | .081 (2.06) | .087 (2.21) |
| N | .188 (4.80) | .208 (5.28) |
| P | .414 (10.52) | - |
| R | .432 (10.97) | .436 (11.07) |
| S | .015 (0.38) | .030 (0.76) |
| T | - | .256 (6.50) |

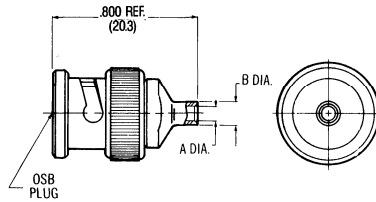
1. ID to meet VSWR, contact resistance and insertion withdrawal forces when mated with .053 ± .001 (1.34 ± .02mm) dia. pin.
2. When fully engaged, the two reference planes must coincide with metal to metal contact.
3. Metric equivalents (to the nearest 0.01mm) are given for general information only.

| Requirement | MIL-C-39012 Applicable Paragraph | Detail |
|---------------------------------|-------------------------------------|--|
| General | | |
| Material | 3.3 | Brass, half hard per QQ-B-626. Beryllium copper per ASTM-B-196. PTFE Fluorocarbon per ASTM-D-1457. |
| Finish | 3.3.1 | Center contacts shall be gold plated to a min. thickness of .0001 inch in accordance with MIL-G-45204, Type I, Grade C. All other metal parts shall be finished as to provide a connector which meets the corrosion requirements. |
| Design | 3.4 | The design shall be such that the outline and interface dimensions shown in this catalog are met. |
| Electrical | | |
| Insulation Resistance | 3.11 | The insulation resistance shall not be less than 5,000 megohms. |
| Corona Level | 3.22 | The connector shall not exhibit breakdown when the voltage is 375 volts rms at 70,000 ft. |
| Dielectric Withstanding Voltage | 3.17 | The magnitude of the test voltage shall be 1500 volts rms at sea level. |
| RF High Potential | 3.23 | The withstanding voltage is 1,000 volts rms at 5 MHz. Leakage current is not applicable. |
| Contact Resistance | 3.16 | Refer to applicable military slash sheet or consult factory. |
| VSWR | 3.14 | Refer to applicable military slash sheet or consult factory. Frequency range dependent on cable used. |
| RF Leakage | 3.26 | Refer to applicable military slash sheet or consult factory. |
| Insertion Loss | 3.27 | Refer to applicable military slash sheet or consult factory. Frequency range dependent on cable used. |
| Mechanical | | |
| Force to Engage | 3.5.1 | The torque required to engage and disengage shall not exceed 2.5 in.-lbs. The longitudinal force shall not exceed 3 lbs. |
| Coupling Nut Retention | 3.25 | 100 lbs. min. Applicable for plug connectors only. |
| Coupling Proof Torque | — | Not applicable. |
| Cable Retention | 3.24 | Refer to applicable military slash sheet or consult factory. |
| Mating Characteristics | 3.7 | Applicable to jack connectors only. Oversize test pin .055 min. dia., .125 deep; insertion force 2 lbs. max. with .054 min. dia. pin; withdrawal force 1 oz. min. with .052 max. dia. pin. |
| Connector Durability | 3.15 | The connector to be tested and its mating connector shall be subjected to 500 insertion and withdrawal cycles at 12 cycles per minute max. The connector shall show no evidence of mechanical failure and shall meet the mating characteristic requirements. |
| Recommended Mating Torque | — | Not applicable. |
| Environmental | | |
| Vibration | 3.18 | Specification MIL-STD-202, method 204, test condition B. |
| Shock | 3.19 | Specification MIL-STD-202, method 213, test condition G. |
| Thermal Shock | 3.20 | Refer to applicable military slash sheet or consult factory. |
| Corrosion (Salt Spray) | 3.13 | Specification MIL-STD-202, method 101, test condition B. |
| Moisture Resistance | 3.21 | Specification MIL-STD-202, method 106. No measurements at high humidity. Insulation resistance shall be at least 200 megohms within 5 minutes of removal from humidity. |

.085 and .141 Dia. • Direct Solder Attachment

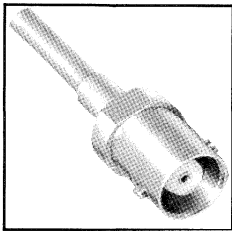


Straight Cable Plug

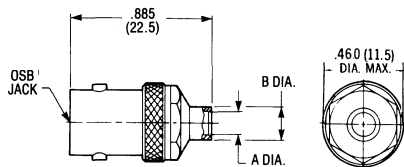


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 3201-7941-10 | 3201-7985-10 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .180 (4.6) | .120 (3.0) |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

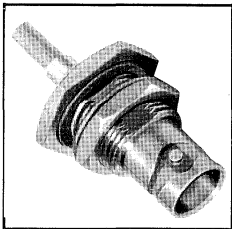


Straight Cable Jack

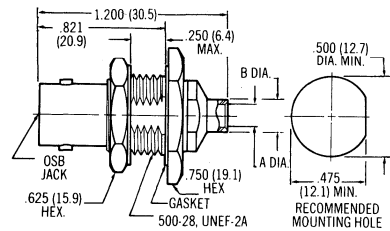


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 3202-7941-10 | 3202-7985-10 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .180 (4.6) | .120 (3.0) |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

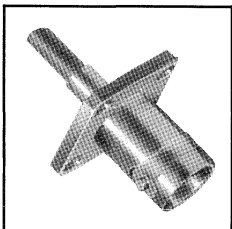


Bulkhead Feedthrough Cable Jack

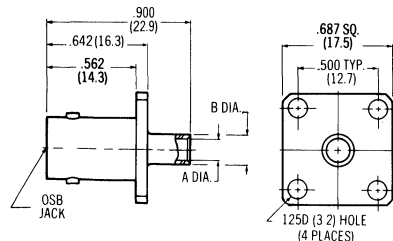


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 3204-7941-10 | 3204-7985-10 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .180 (4.6) | .120 (3.0) |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.



Flange Mount Cable Jack

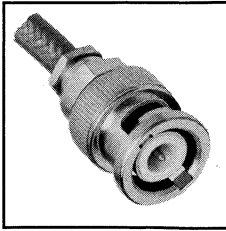


| Cable | RG 402/U (.141) | RG 405/U (.085) |
|------------------|--------------------------------|--------------------------------|
| Cable Dielectric | Solid PTFE | Solid PTFE |
| Part Number | 3206-7941-10 | 3206-7985-10 |
| Dim. A | Inches (mm) .144 Min. (3.7) | Inches (mm) .089 Min. (2.3) |
| Dim. B | .180 (4.6) | .120 (3.0) |

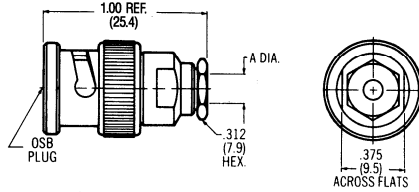
Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

BNC For Flexible Cable

Flexible Cable • Clamp Attachment

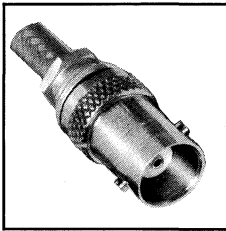


Straight Cable Plug

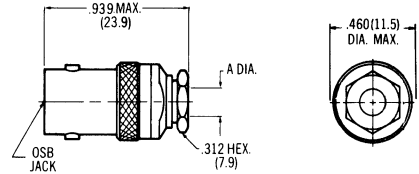


| Cable | RG 55/U, 58, 141, 142, 223, 303 | RG 174/U, 179, 187, 188, 316 |
|-------------------------|---------------------------------------|------------------------------------|
| Captured Center Contact | | |
| Part Number | 3201-7341-10 | 3201-7388-10 |
| Dim. A | Inches (mm) .220 (5.6) | Inches (mm) .116 (2.9) |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

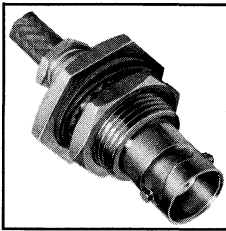


Straight Cable Jack

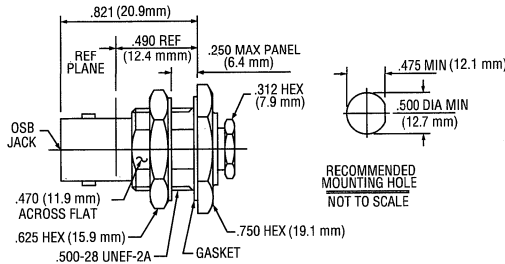


| Cable | RG 55/U, 58, 141, 142, 223, 303 | RG 174/U, 179, 187, 188, 316 |
|-------------------------|---------------------------------------|------------------------------------|
| Captured Center Contact | | |
| Part Number | 3202-7341-10 | 3202-7388-10 |
| Dim. A | Inches (mm) .220 (5.6) | Inches (mm) .116 (2.9) |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

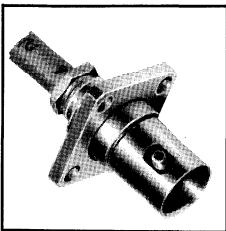


Bulkhead Feedthrough Cable Jack

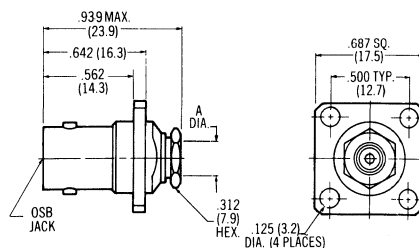


| Cable | RG 55/U, 58, 141, 142, 223, 303 | RG 174/U, 179, 187, 188, 316 |
|-------------------------|---------------------------------------|------------------------------------|
| Captured Center Contact | | |
| Part Number | 3204-7341-10 | 3204-7388-10 |
| Dim. A | Inches (mm) .220 (5.6) | Inches (mm) .116 (2.9) |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.



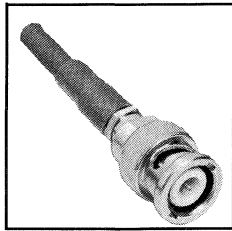
Flange Mount Cable Jack



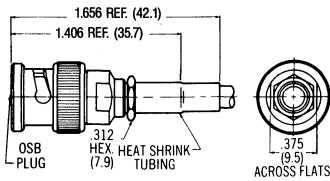
| Cable | RG 55/U, 58, 141, 142, 223, 303 | RG 174/U, 179, 187, 188, 316 |
|-------------------------|---------------------------------------|------------------------------------|
| Captured Center Contact | | |
| Part Number | 3206-7341-10 | 3206-7388-10 |
| Dim. A | Inches (mm) .220 (5.6) | Inches (mm) .116 (2.9) |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

Flexible Cable • Crimp Attachment



Straight Cable Plug

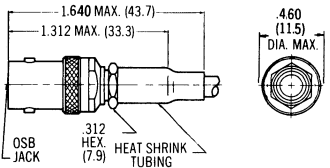


| Cable | RG 58/U, 141, 303 | RG 55/U, 142, 223, 400 | RG 174/U, 179 187, 188 316 |
|-------------------------|---------------------|------------------------|----------------------------|
| Captured Center Contact | | | |
| Part Number | 3231-7358-10 | 3231-7341-10 | 3231-7388-10 |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

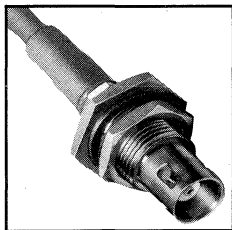


Straight Cable Jack

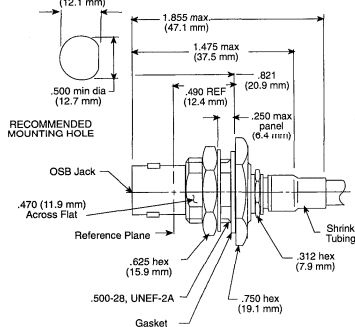


| Cable | RG 58/U, 141, 303 | RG 55/U, 142, 223, 400 | RG 174/U, 179 187, 188 316 |
|-------------------------|---------------------|------------------------|----------------------------|
| Captured Center Contact | | | |
| Part Number | 3232-7358-10 | 3232-7341-10 | 3232-7388-10 |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

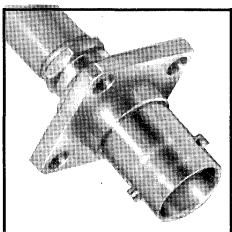


Bulkhead Feedthrough Cable Jack

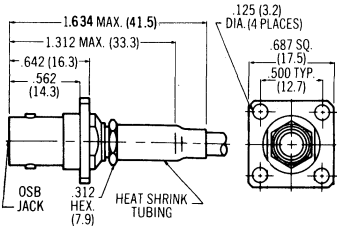


| Cable | RG 58/U, 141, 303 | RG 55/U, 142, 223, 400 | RG 174/U, 179 187, 188 316 |
|-------------------------|---------------------|------------------------|----------------------------|
| Captured Center Contact | | | |
| Part Number | 3234-7358-10 | 3234-7341-10 | 3234-7388-10 |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

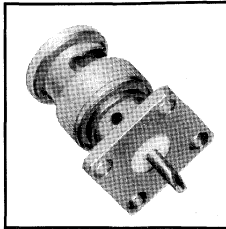


Flange Mount Cable Jack

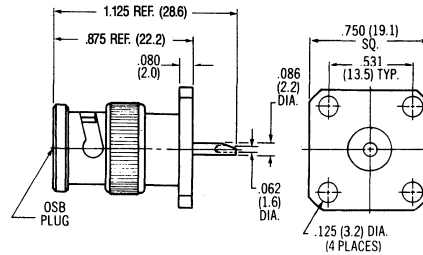


| Cable | RG 58/U, 141, 303 | RG 55/U, 142, 223, 400 | RG 174/U, 179 187, 188 316 |
|-------------------------|---------------------|------------------------|----------------------------|
| Captured Center Contact | | | |
| Part Number | 3236-7358-10 | 3236-7341-10 | 3236-7388-10 |

Finish: Nickel plated brass.
Refer to Appendix for Coaxial Cable Characteristics.
Refer to recommended assembly tools in Tool Section.

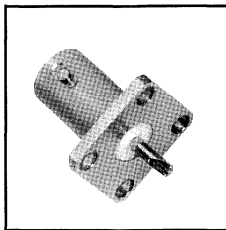


Flange Mount Plug Receptacle

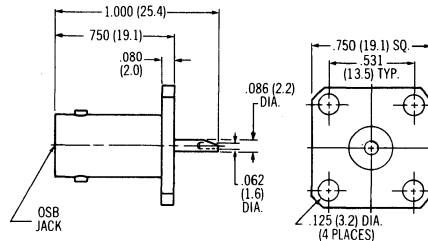


| | |
|--|---------------------|
| Captured Center Contact Solder Pot Terminal | |
| Part Number | 3251-0000-10 |

Finish: Nickel plated brass.

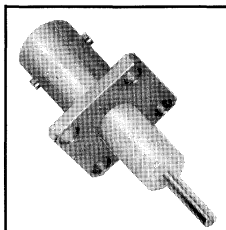


Flange Mount Jack Receptacle

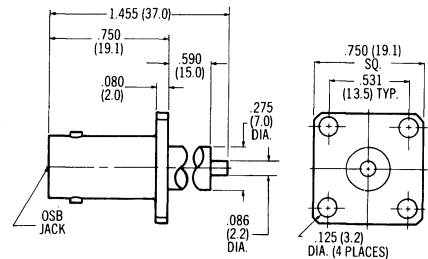


| | |
|--|---------------------|
| Captured Center Contact Solder Pot Terminal | |
| Part Number | 3252-0000-10 |

Finish: Nickel plated brass.



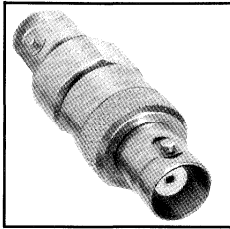
Flange Mount Jack Receptacle



| | |
|--|---------------------|
| Non-Captured Center Contact Straight Terminal | |
| Part Number | 3252-1200-10 |

| | |
|--|---------------------|
| Captured Center Contact Straight Terminal | |
| Part Number | 3252-1201-10 |

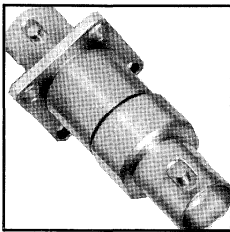
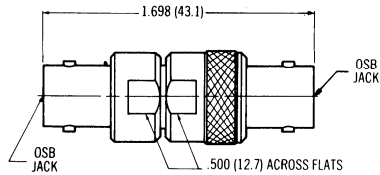
Finish: Nickel plated brass.



Jack to Jack Adapter

| | |
|-------------|---------------------|
| Part Number | 3280-0000-10 |
|-------------|---------------------|

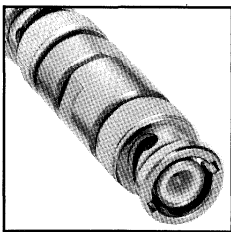
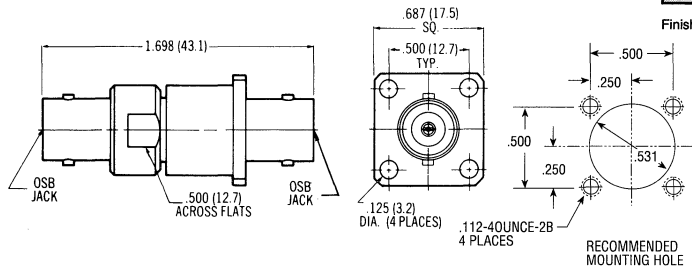
Finish: Nickel plated brass.



Jack to Jack Adapter Flange Mount

| | |
|-------------|---------------------|
| Part Number | 3280-2322-10 |
|-------------|---------------------|

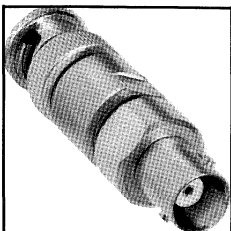
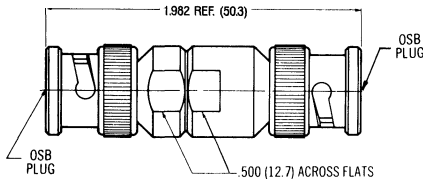
Finish: Nickel plated brass.



Plug to Plug Adapter

| | |
|-------------|---------------------|
| Part Number | 3281-0000-10 |
|-------------|---------------------|

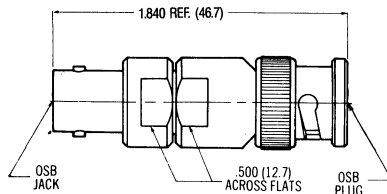
Finish: Nickel plated brass.



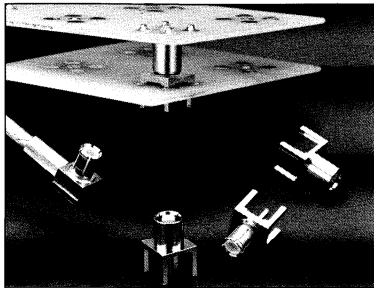
Jack to Plug Adapter

| | |
|-------------|---------------------|
| Part Number | 3282-0000-10 |
|-------------|---------------------|

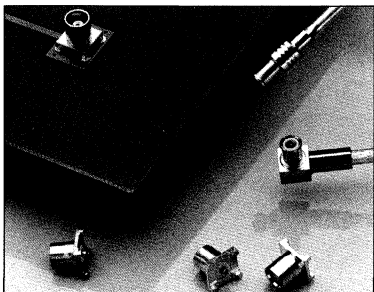
Finish: Nickel plated brass.



OSX Microminiature Snap-On Connectors and Adapters



Board-to-Board

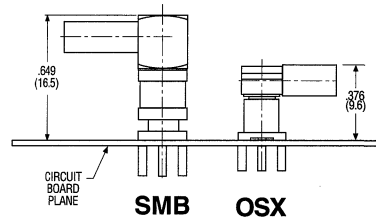


Surface Mount

OSX subminiature snap-on connectors from M/A-COM are an excellent blend of size, weight, durability and performance for applications such as GPS, automotive and wireless communications. OSX connectors are 30% smaller than standard SMB connectors and offer the user more densely packaged coaxial connections. While the overall diameter has been reduced, OSX connectors use center contacts and dielectrics dimensionally similar to field tested MIL-C-39012 SMB connectors yielding excellent performance and durability.

In addition to flexible and semi-rigid cable connectors, OSX is available as printed circuit board receptacles for both board-to-board and surface mount applications. A mated pair of board-to-board connectors yield 7.11 mm (0.28 inch) nominal separation between the printed circuit boards and still provide .254 mm (0.010 inch) stand-off per connector for optimum board cleaning. OSX surface mount connectors meet new requirements for denser PCB packaging and lower installed costs. These subminiature snap-on connectors withstand the harsh environment of infrared reflow, convection and vapor phase soldering and provide .254 mm (0.010 inch) stand-off.

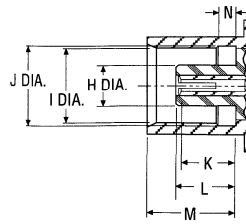
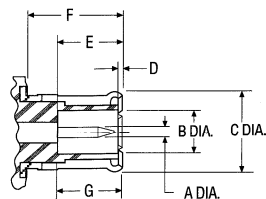
By offering so many features in such a small connector, M/A-COM's OSX connectors are sure to fit most applications where space, weight, size, performance and ease of assembly are required. Contact the factory with your specific requirements.



Typical Mated Height Comparison

PLUG

| Letter | Millimeters (Inches) | |
|--------|----------------------|--------------|
| | Minimum | Maximum |
| A | 0.48 (.0189) | 0.53 (.0208) |
| B | 2.00 (.0788) | 2.07 (.0815) |
| C | 3.66 (.144) | 3.76 (.148) |
| D | 0.00 (.000) | 0.30 (.0118) |
| E | 2.80 (.111) | 3.20 (.125) |
| F | 4.15 (.164) | — |
| G | 2.80 (.111) | 3.20 (.125) |



JACK

| Letter | Millimeters (Inches) | |
|--------|----------------------|--------------|
| | Minimum | Maximum |
| H | 1.85 (.073) | 1.98 (.077) |
| I | 3.42 (.135) | 3.48 (.137) |
| J | 3.60 (.142) | 3.75 (.147) |
| K | 2.30 (.091) | 2.80 (.110) |
| L | 2.60 (.103) | 2.80 (.110) |
| M | 4.00 (.158) | 4.12 (.162) |
| N | 0.75 (.0296) | 0.85 (.0334) |

| Requirement | Detail |
|-------------|--------|
|-------------|--------|

General

| | |
|-----------|--|
| Materials | Brass per QQ-B626, Comp. 360, half hard. Beryllium copper per ASTM-B-196. PTFE fluorocarbon per ASTM-D-1457. |
| Finish | Center Contacts: Gold-plated (MIL-G-45204) over nickel plate (QQ-N-290) Outer Contacts: Gold plated (MIL-G-45204) Housings: Nickel plated (QQ-N-290) All other metal parts shall be furnished so as to provide a connector which meets corrosion requirements. For different platings, contact the factory. |
| Design | The design shall be such that the outline and interface dimensions shown in this catalog are met. |

Electrical

| | |
|---------------------------------|--|
| Frequency | dc-6 GHz |
| Nominal Impedance | 50 ohms |
| Voltage Rating | 335 Volts (VRMS Maximum) @ Sea Level |
| VSWR | 1.25:1 Maximum @ 4 GHz 1.35:1 Maximum @ 6 GHz |
| Insulation Resistance | 10,000 Megohms Minimum |
| Insertion Loss | .1 dB Maximum/1000 MHz |
| Dielectric Withstanding Voltage | 1000 Volts (VRMS Minimum) @ Sea Level |
| Contact Resistance | 5.0 Milliohms Maximum |
| Center Contact | 1.0 Milliohms Maximum |
| Outer Contact | |
| Corona 70,000 ft. | 250 Volts (VRMS Minimum) |
| RF High Potential @ Sea Level | 670 Volts (VRMS Minimum) @ MHz |
| Contact Current | 1.5 ADC Max |

Mechanical

| | |
|----------------------|--|
| Force to Engage | 3.4 lbs. Maximum |
| Force to Disengage | 1.77 lbs. Minimum |
| Contact Captivation | Designed to maintain OSX interface when mating. |
| Connector Durability | 500 insertion and withdrawal cycles at 12 cycles per minute maximum. |

Environmental

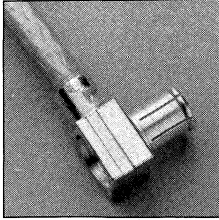
| | |
|---------------------|--|
| Temperature Rating | -65°C + 165°C |
| Vibration | MIL-STD-202, Method 204, Condition B |
| Shock | MIL-STD-202, Method 213, Condition A |
| Moisture Resistance | MIL-STD-202, Method 106 |
| Corrosion | MIL-STD-202, Method 101, Condition B, 48 Hours |
| Thermal Shock | MIL-STD-202, Method 107, Condition B |

Performance data typical of 5837-5003-10. Performance for other connectors will vary.
M/A-COM has design control and all data contained herein is subject to change without notice. Contact the factory for specifications on other connector types.

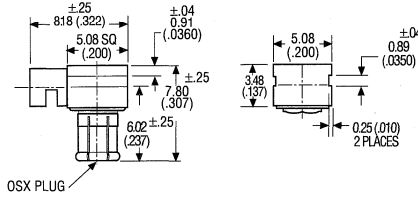
Flexible Cables

| Cable Type | RG-58/U | RG-174/U | RG-178/U | RG-188/U | RG-196/U | RG-316/U | |
|------------------|------------------|-----------|-----------|-----------|------------|-----------|------------|
| Impedance (ohms) | 50 | 50 | 50 | 50 | 50 | 50 | |
| (Dia.) (mm) | Jacket | 5.05 Max | 2.67 Max | 1.91 Max | 2.79 Max. | 2.03 Max. | 2.59 Max. |
| | Outer Conductor | 3.81 Max. | 2.24 Max. | 1.37 Max. | 2.06 Max. | 1.37 Max. | 2.06 Max. |
| | Dielectric Core | 3.05 Max. | 1.60 Max. | .86 ± .05 | 1.52 ± .08 | .86 ± .05 | 1.52 ± .08 |
| | Center Conductor | .81 Nom. | .51 Nom. | .31 Nom. | .51 Nom. | .31 Nom. | .31 Nom. |
| Cable Retention | 30 lbs. | 20 lbs. | 10 lbs. | 20 lbs. | 10 lbs. | 20 lbs. | |

Solder Attachment



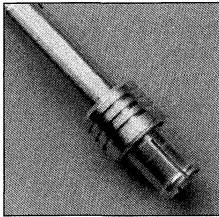
Right Angle Cable Plug



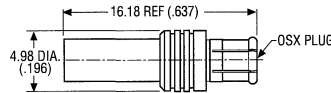
| Captured Center Contact | |
|-------------------------|------------------------|
| Part Number | Cable |
| 5807-5001-09 | RG-174/U, 188/U, 316/U |

Finish: Gold plated

Full Crimp Attachment



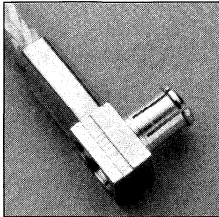
Straight Cable Plug



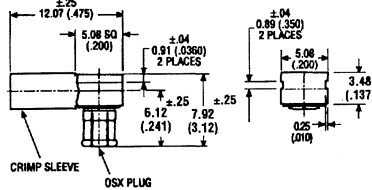
| Captured Center Contact | |
|-----------------------------|------------------------|
| Part Number | Cable |
| 5831-5001-10 | RG-174/U, 188/U, 316/U |
| Non-Captured Center Contact | |
| Part Number | Cable |
| 5831-5002-10 | RG-178/U, 196/U |
| 5831-5003-10 | RG-174/U, 188/U, 316/U |

Finish: Nickel plated.
Crimp center contact and outer ferrule.
Econo-Crimp Tool Part Number 2598-5314-54 are recommended for assembly.

Crimp Attachment



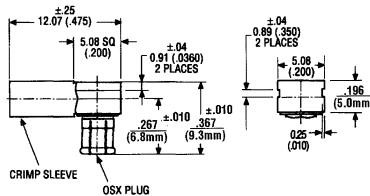
Right Angle Cable Plug



| Captured Center Contact | |
|---------------------------|-------------------------------------|
| Part Number | Cable |
| 5837-5002-10 ¹ | RG-178/U, 196/U |
| 5837-5003-10 ¹ | RG-188/U, 316/U, RG-179/U, RG-187/U |
| 5837-5006-10 ¹ | RG-58/U |
| 5837-5010-10 ² | RD-316/U – Double-Shielded 316 |

¹ Finish: Nickel plated.

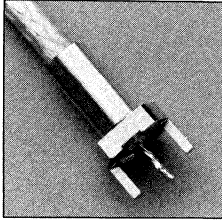
² Finish: Gold plated.



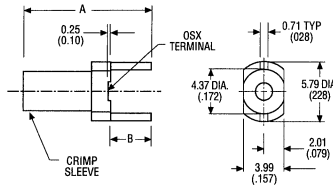
| Captured Center Contact | |
|---------------------------|---------|
| Part Number | Cable |
| 5837-5006-10 ¹ | RG-58/U |

¹ Finish: Nickel plated.

Crimp Attachment • Printed Circuit Board



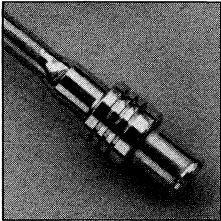
Straight Cable Terminal
Without Center Contact



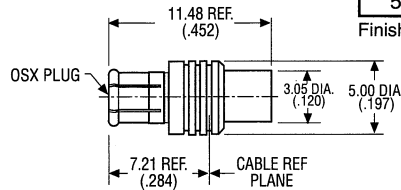
| Cable | RG-174/U, 188/U, 316/U | | RG-178, 196/U | |
|--------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Part Number | 5818-5002-10 | 5818-5003-10 | 5818-5004-10 | 5818-5005-10 |
| Dim. A | mm (Inches) 11.76 (.463) | mm (Inches) 10.74 (.423) | mm (Inches) 12.01 (.473) | mm (Inches) 11.00 (.433) |
| Dim. B | 3.94 (.155) | 2.92 (.115) | 3.94 (.155) | 2.92 (.115) |

Finish: Nickel plated.

.085 Dia. • Direct Solder Attachment

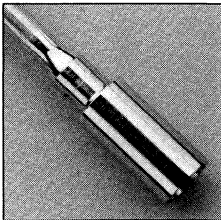


Straight Cable Plug

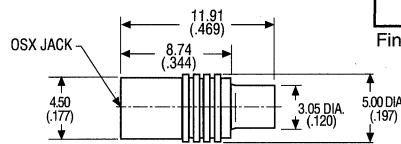


| With Contact | |
|--------------|-------------------------------------|
| Part Number | Cable |
| 5801-7985-09 | RG-179/U, RG-187/U, RG-405/U (.085) |

Finish: Gold plated.



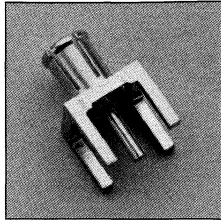
Straight Cable Jack



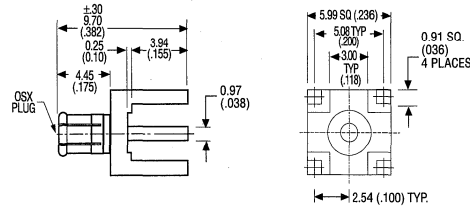
| With Contact | |
|--------------|-------------------------------------|
| Part Number | Cable |
| 5802-7985-09 | RG-179/U, RG-187/U, RG-405/U (.085) |

Finish: Gold plated.

Straight Terminal • Printed Circuit Board

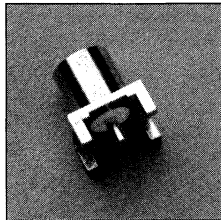


Straight Plug Receptacle

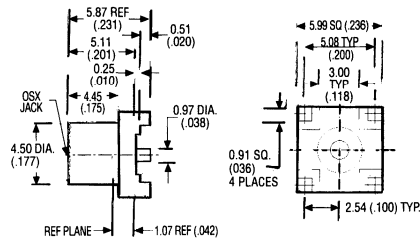


| | |
|--------------------|--------------|
| Part Number | 5863-0000-10 |
|--------------------|--------------|

Finish: Nickel plated.

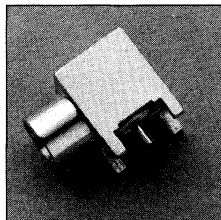


Straight Jack Receptacle

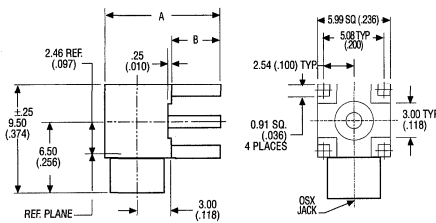


| Captured Center Contact | | | |
|-------------------------|--------------|--------------|--------------|
| Part Number | 5862-5002-10 | 5862-5003-10 | 5862-5004-10 |
| Dim. A | mm (Inches) | mm (Inches) | mm (Inches) |
| Dim. B | 2.92 (.115) | 3.94 (.155) | 1.73 (.068) |

Finish: Nickel plated.



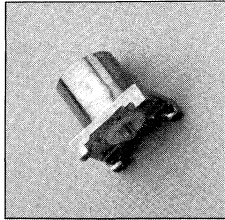
Right Angle Jack Receptacle



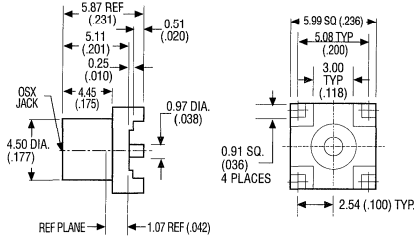
| Captured Center Contact | | | |
|-------------------------|--------------|--------------|--------------|
| Part Number | 5864-5001-10 | 5864-5002-10 | 5864-5003-10 |
| Dim. A | mm (Inches) | mm (Inches) | mm (Inches) |
| Dim. B | 3.94 (.155) | 1.73 (.068) | 2.92 (.115) |

Finish: Nickel plated.

Surface Mount • Straight Terminal



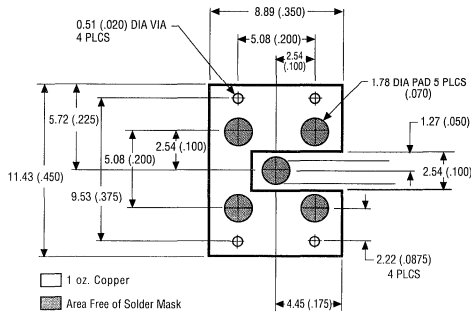
Straight Jack Receptacle



| | |
|--------------------|---------------------------|
| Part Number | 5862-5007-13 |
| Part Number | 5899-5004-54 ¹ |

Finish: Tin lead plated.
¹Tape and Reel packaging. 900 connectors per reel (carrier width 16mm, carrier pitch 12mm)

Recommended Mounting Pattern for Microstrip Line



Notes:

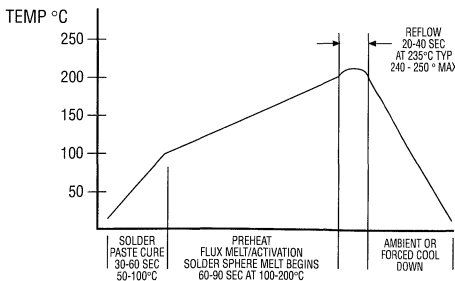
1. Printed wiring board material: glass epoxy FR-4 or similar; relative permittivity: 4.8, 1 oz. copper clad both sides.
2. These dimensions valid for 1.58 (.062) board thickness.
3. Decimal inch equivalents are shown in parentheses for general information only.

Part number 5862-5007-13 is designed for surface mounting using infrared and vapor phase solder techniques. Connector materials used include brass housings and teflon dielectric support bushings which are compatible with infrared and vapor phase soldering limits of 215°C.

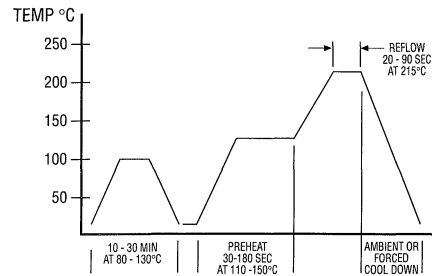
The infrared soldering method should employ a convection heating feature because of the shrouded center contact which is inherent to the OSX straight coaxial connector design. (Manual soldering techniques are not recommended because of the physical connector housing-to-board spacing of 1.29mm (.051 inches).)

The solder paste selection for reflow soldering techniques is generally a function of components used on printed wire board assembly. The metal content of the paste, for screening-stencil applications, is generally 85-90% by weight. Nozzle dispensing techniques will have a slightly lower content. Solder paste thickness of 0.15mm (.006 inches) to 0.25mm (.010 inches) is recommended. Standard electrical grade solders such as 63/37 (183°C), 60/40 (190°C) and 62/36/2 (189°C) are used for most applications. These types of solder employ a mild rosin/resin flux.

Typical reflow temperature profiles:

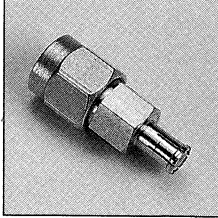


Typical Infrared and Convection Heating/Soldering Profile



Typical Vapor Phase Heating/Soldering Profile

Between-Series Adapters



| Part Number | Description |
|--------------|----------------------|
| 5880-2240-00 | OSX Jack to SMA Jack |
| 5881-2241-00 | OSX Plug to SMA Plug |
| 5882-2240-00 | OSX Plug to SMA Jack |
| 5882-2241-00 | OSX Jack to SMA Plug |

Consult factory for complete specifications.

Econo-Crimp Assembly Kit

Part Number 2598-5005-54



The kit contains:

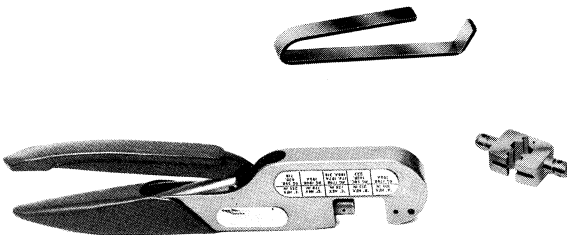
| Description | Part Number |
|-------------|--------------|
| Crimp Tool | 2598-5006-54 |
| Crimp Die | 2598-5007-54 |

All tools may be purchased separately.

| Crimp Die Part Number | Die | Size | For Use With RG/U Cable |
|-----------------------|-----|----------------|-------------------------|
| 2598-5007-54 | A | 2.67±.08 Hex | 178B & 196A |
| | C | 3.25 ± .08 Hex | 188A & 316 |

MIL-C-225220/10-01 Type Hex Crimp Kit

Part Number 2098-0105-54



The kit contains:

| Description | Part Number |
|-----------------|--------------|
| Crimp Tool | 5698-5014-54 |
| Die Change Tool | 5698-5017-54 |
| Crimp Die | 5698-5015-54 |

All tools may be purchased separately.

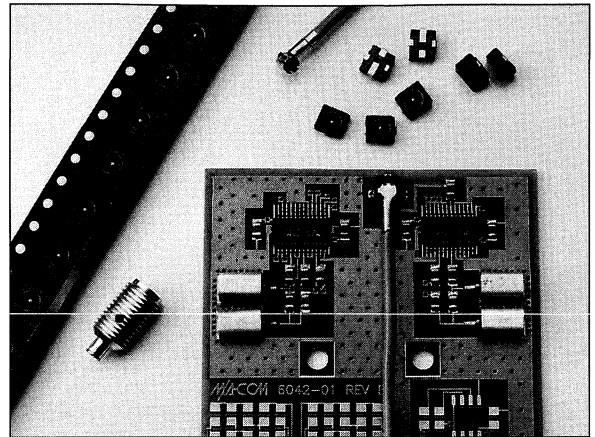
| Crimp Die Part Number | Die | Hex Size ±.08 | For use With RG/U Cable |
|-----------------------|-----|---------------|-------------------------|
| 5698-5015-54 | A | 2.67 | 178B & 196A |
| | C | 3.25 | 174, 188A & 316 |
| 2098-0323-54 | — | 3.84 | 316 Double Braid |

OSMT™ Interconnect System Surface Mount Coaxial Connectors

M/A-COM's OSMT Interconnect System is designed to meet the growing demand for surface mount RF connector technology. The OSMT occupies less printed circuit board (PCB) real estate than conventional through hole coaxial connectors. An innovative microstrip mounting pattern and plug receptacle design ensure reliable grounding and PCB retention characteristics. The OSMT Interconnect System also allows closer PCB pitch/spacing, standing a mere 4.2mm (fully mated height) off the board. A new higher cable retention plug receptacle has been added to the OSMT product family. This new design addresses applications where force is applied to the mated connector interface as a result of cable flexure between boards or around other PCB components.

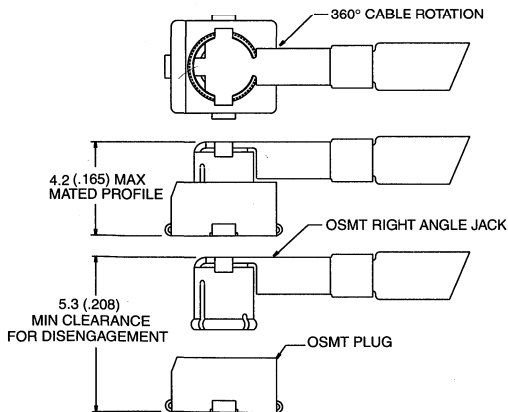
These enhancements and features have been built into the OSMT design to provide the performance of much larger industry standard connectors. The OSMT Interconnect System consistently achieves broad band electrical performance through 6 GHz with a maximum VSWR of 1.20:1 at 2 GHz and 1.40:1 at 6 GHz. This broad band performance establishes a reliable interface that can be utilized for future system upgrades without concerns for performance degradation.

The OSMT plug receptacle is designed for high volume assembly using surface mount technology and is available in tape and reel packaging for automated pick and place board assembly. The mating cable jack is available terminated to a specially designed coax cable as either a pigtail, jumper or standard interseries connector assembly to meet your needs.

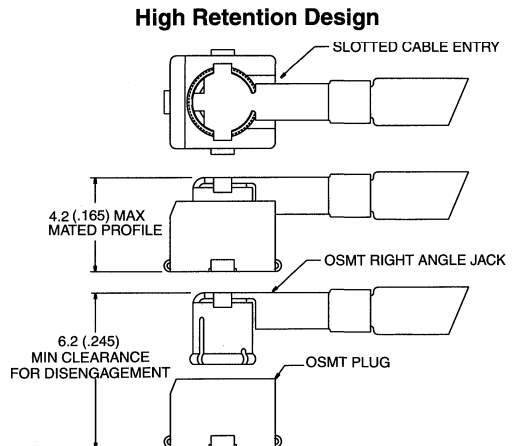


Specially designed engage/disengage tooling is available to ensure proper alignment of the OSMT interface during assembly. The new higher retention plug receptacle can be hand engaged as a result of a unique lead-in chamfer design which also aligns the contacts prior to mating to ensure mechanical integrity. Interface durability is rated at 100 mating cycles.

M/A-COM's OSMT Interconnect System is ideal for surface mount applications in telecommunications, GPS, consumer and automotive electronics. The OSMT provides versatile RF solutions for next generation interconnect needs. Please call your local Sales or Distribution office for additional information and qualification samples today.



| | |
|--------------------|---------------------|
| Part Number | 2367-0000-54 |
|--------------------|---------------------|



| | |
|--------------------|---------------------|
| Part Number | 2367-5006-54 |
|--------------------|---------------------|

Decimal inch equivalents are shown in parentheses for general information only.

OSMT Specifications

| Requirement | Detail |
|-------------|--------|
|-------------|--------|

General

| | | | |
|-----------------|--|-----------------------|--|
| Materials | | | |
| OSMT Plug | Housing: | Polyphenylene Sulfide | |
| | Contacts: | Copper alloy | |
| OSMT Cable Jack | Outer Contact: | Beryllium Copper | |
| | Inner Contact: | Beryllium Copper | |
| | Dielectric: | Polypropylene, GF | |
| Finish | Plug and cable jack - Contacts: Gold plate over nickel plate | | |

Electrical

| | |
|--------------------------------------|--|
| Frequency | dc - 6 GHz |
| Nominal Impedance | 50 ohms |
| Voltage Rating | 250 Volts (VRMS Maximum) @ Sea Level |
| VSWR (Mated Connectors Only) | 1.20:1 Maximum @ 2 GHz 1.40:1 Maximum @ 6 GHz |
| Insulation Resistance | 1000 Megohms Minimum |
| Dielectric Withstanding Voltage | 500 Volts (VRMS Minimum) @ Sea Level |
| Contact Resistance (Connectors Only) | |
| Center Contact | 15 milliohms Maximum |
| Outer Contact | 10 milliohms Maximum |
| Insertion Loss (Connectors Only) | .15dB Max. @ 6 GHz |

Mechanical

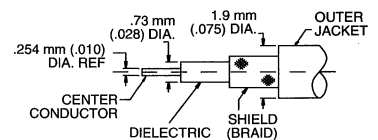
| | |
|----------------------------|-------------------------------|
| Connector Durability | 100 mating cycles |
| Tape/Reel Packaging (Plug) | 12mm per EIA-481 |
| Force to Engage | 4.0 lbs. Max. (2.5 lbs. typ.) |
| Force to Disengage | 4.5 lbs. Max. (3.0 lbs. typ.) |

Environmental

| | |
|---------------------------------|---|
| Temperature Rating (Mated Pair) | PVC Flexible Cable: -40°C (-40°F) to +105°C (221°F) FEP Flexible Cable: -40°C (-40°F) to +125°C (257°F) |
| Resistance to Solder Heat | Infrared, convection and vapor phase solderable (plug only). Maximum reflow time/temperature not to exceed 260°C for 3 minutes. |

Cable Specifications¹

| Materials | PVC Flexible Cable (105°C) | FEP Flexible Cable (200°C) |
|--|--|--|
| Jacket: | Polyvinyl Chloride | Fluorinated Ethylene Propylene |
| Shield: | Silver Plated Copper Wire, 38 AWG, 90% Min. Coverage | Silver Plated Copper Wire, 38 AWG, 90% Min. Coverage |
| Dielectric: | PFA or FEP | PFA or FEP |
| Center Conductor: | Silver Plated Copper Clad Steel, 30 AWG | Silver Plated Copper Clad Steel, 30 AWG |
| Minimum Bend Radius | 9.5mm (.375 inch) | 9.5mm (.375 inch) |
| Insertion Loss (PVC and FEP Cable Only) | 0.4 dB/ft., 1.3d B/m @ 500 MHz 0.6 dB/ft., 2.0 dB/m @ 1 GHz 0.9 dB/ft., 3.0 dB/m @ 2 GHz | 1.3 dB/ft., 4.3 dB/m @ 4 GHz 1.7 dB/ft., 5.6 dB/m @ 6 GHz |
| Center Conductor Resistance (PVC and FEP Cable Only) | .26 Ohms per foot average. | |



1. M/A-COM has design control and all data contained herein is subject to change without notice.

Decimal inch equivalents are shown in parentheses for general information only.

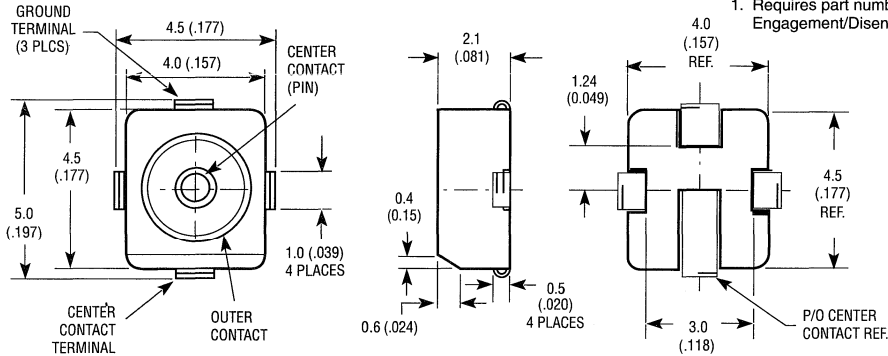
OSMT Surface Mount Coaxial Connectors

Straight SMT PCB Mount Plug Receptacles

Multi-directional cable entry, 360° rotation. Recommended for use in passive cable applications or with supplementary cable tie-downs.

| Part Number | Packaging | Quantity |
|--------------|---------------------------------|--------------------|
| 2367-0000-54 | Bulk | customer specified |
| 2367-5001-54 | 178mm (7.0 inches) Dia. Taping | 800 pcs/reel |
| 2367-5002-54 | 330mm (13.3 inches) Dia. Taping | 3000 pcs/reel |

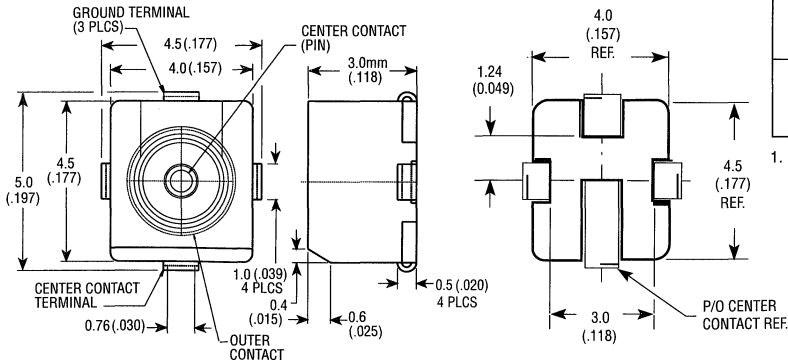
1. Requires part number 2598-5342-54 Engagement/Disengagement Tool.



Slotted single direction cable entry. Recommended for use in applications where bending forces may be applied to the cable.

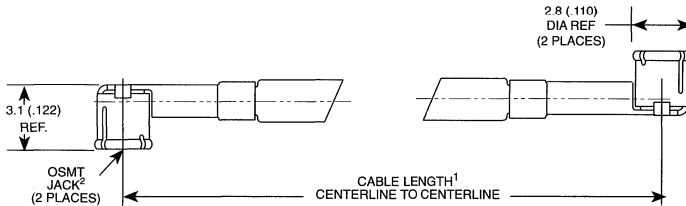
| Part Number | Packaging | Quantity |
|--------------|---------------------------------|--------------------|
| 2367-5006-54 | Bulk | customer specified |
| 2367-5015-54 | 178mm (7.0 inches) Dia. Taping | 600 pcs/reel |
| 2367-5016-54 | 330mm (13.3 inches) Dia. Taping | 2500 pcs/reel |

1. Requires part number 2598-5401-54 Disengagement Tool. Engagement requires no tooling.



OSMT Surface Mount Coaxial Connectors

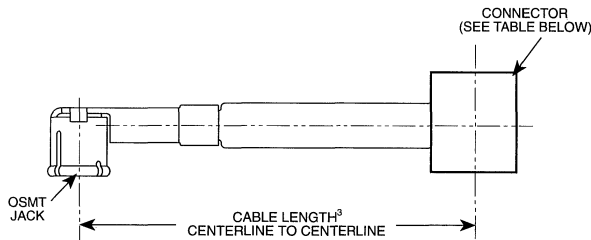
Right Angle Jack to Jack Cable Assembly 180° Offset



| Part Number¹ | | Cable Length³ | |
|----------------------------|----------------------------|---------------|----------|
| PVC Flexible Cable (105°C) | FEP Flexible Cable (200°C) | mm | (Inches) |
| 9950-3100-23 | 9952-3100-23 | 100 | (4) |
| 9950-3200-23 | 9952-3200-23 | 200 | (8) |
| 9950-3305-23 | 9952-3305-23 | 305 | (12) |

1. Consult factory for non-standard cable lengths.
2. Connector centerlines align 180° ± 30° as shown.
3. Cable length tolerance: 50-2000mm: ± (2mm +1% of cable length)

Inter-Series Cable Assemblies



| Part Number¹ | | Cable Length² | |
|----------------------------|----------------------------|---------------|----------|
| PVC Flexible Cable (105°C) | FEP Flexible Cable (200°C) | mm | (Inches) |
| 9950-4100-XX | 9952-4100-XX | 100 | (4) |
| 9950-4200-XX | 9952-4200-XX | 200 | (8) |
| 9950-4305-XX | 9952-4305-XX | 305 | (12) |

1. To order, replace XX in part number with appropriate digits from table indicating connector choice.
2. Connectors are randomly aligned.
3. Consult factory for non-standard cable lengths.
Cable length tolerance: 50-2000mm: ± (2mm +1% of cable length)

| Description | -XX¹ |
|---|------|
| SMA Straight Plug (Male) Crimp to OSMT Right Angle Jack | 01 |
| SMA Straight Jack (Female) Crimp to OSMT Right Angle Jack | 02 |
| SMA Bulkhead Feedthrough Jack (Female) Crimp to OSMT Right Angle Jack | 03 |
| SMA Flange Mount Jack (Female) Crimp to OSMT Right Angle Jack | 04 |
| SMB Straight Jack (Male) Clamp to OSMT Right Angle Jack | 05 |
| SMB Straight Jack (Male) Crimp to OSMT Right Angle Jack | 06 |
| SMB Straight Plug (Female) Clamp to OSMT Right Angle Jack | 07 |
| SMB Straight Plug (Female) Crimp to OSMT Right Angle Jack | 08 |
| SMB Bulkhead Feedthrough Jack (Male) Clamp to OSMT Right Angle Jack | 09 |
| SMB Bulkhead Feedthrough Jack (Male) Crimp to OSMT Right Angle Jack | 10 |

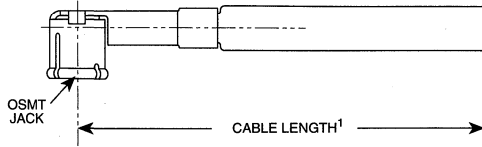
| Description | -XX¹ |
|---|------|
| SMC Straight Plug (Female) Clamp to OSMT Right Angle Jack | 11 |
| SMC Straight Plug (Female) Crimp to OSMT Right Angle Jack | 12 |
| SMC Bulkhead Feedthrough Jack (Male) Clamp to OSMT Right Angle Jack | 13 |
| SMC Bulkhead Feedthrough Jack (Male) Crimp to OSMT Right Angle Jack | 14 |
| OSX Straight Plug (Male) Crimp to OSMT Right Angle Jack | 15 |
| OSX Right Angle Plug (Male) Crimp to OSMT Right Angle Jack | 16 |
| BNC Straight Plug (Male) Crimp to OSMT Right Angle Jack | 17 |
| TNC Straight Plug (Male) Crimp to OSMT Right Angle Jack | 18 |
| TNC Bulkhead Feedthrough Jack (Female) Crimp to OSMT Right Angle Jack | 19 |

Finish: SMA, Passivated stainless steel; SMB and SMC, gold plate; OSX, TNC and BNC; nickel plate.
Connectors listed above are standard M/A-COM products and have not been impedance matched to the OSMT cable.

Decimal inch equivalents are shown in parentheses for general information only.

OSMT Connectors and Tools

Right Angle Jack Cable Pigtail

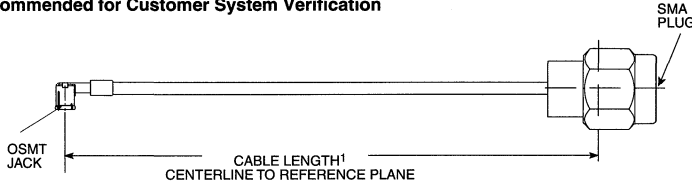


Note: To avoid damaging the cable, minimize time at temperature while soldering and/or heat shrinking connector to the cable.

| Part Number | | Cable Length¹ | |
|----------------------------|----------------------------|---------------|----------|
| PVC Flexible Cable (105°C) | FEP Flexible Cable (200°C) | mm | (Inches) |
| 9950-2100-23 | 9952-2100-23 | 100 | (4) |
| 9950-2200-23 | 9952-2200-23 | 200 | (8) |
| 9950-2305-23 | 9952-2305-23 | 305 | (12) |

1. Consult factory for non-standard cable lengths.
Cable length tolerance: 50-2000mm: ± (2mm +1% of cable length)

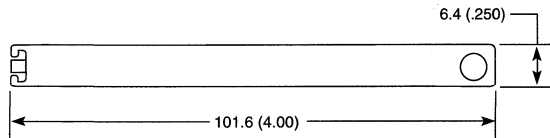
SMA Straight Plug (Male) to OSMT Right Angle Jack Recommended for Customer System Verification



Finish: SMA, Passivated stainless steel body and gold plated center contact.

| Part Number | Cable Length¹ |
|--------------|---------------|
| 9950-4200-01 | 200mm (8 in.) |

Engagement/Disengagement Tool



| Part Number | 2598-5342-54 |
|-------------|--------------|
|-------------|--------------|

See Application Notes for instructions.
For use with 2637-0000-54

Disengagement Tool



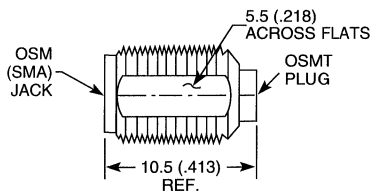
| Part Number | 2598-5401-54 |
|-------------|--------------|
|-------------|--------------|

See Application Notes for instructions.
For use with 2637-5006-54

Decimal inch equivalents are shown in parentheses for general information only.

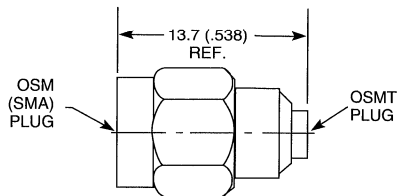
OSMT Adapters

OSMT Plug to SMA Jack Adapter



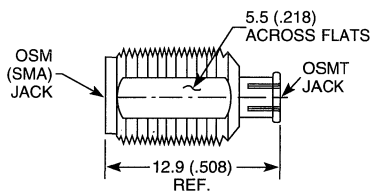
| | |
|-------------|--------------|
| Part Number | 2382-2240-00 |
|-------------|--------------|

OSMT Plug to SMA Plug Adapter



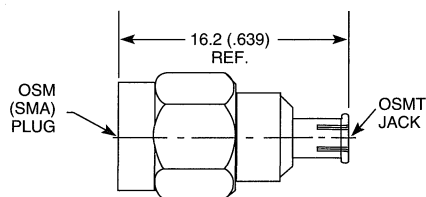
| | |
|-------------|--------------|
| Part Number | 2381-2241-00 |
|-------------|--------------|

OSMT Jack to SMA Jack Adapter



| | |
|-------------|--------------|
| Part Number | 2380-2240-00 |
|-------------|--------------|

OSMT Jack to SMA Plug



| | |
|-------------|--------------|
| Part Number | 2382-2241-00 |
|-------------|--------------|

Decimal inch equivalents are shown in parentheses for general information only.

Packaging

- Bulk Packed or Packaged in Plastic Carrier Tape on a Reel
- Available on 178mm/800 pc or 300mm/3000 pc Plastic Reel
- Sealed Plastic Carrier Tape in Accordance with EIA-481-1
- Conductive Anti-static Tape Material To Prevent Static Charge Entry to Electronic Assembly or Equipment
- Recommended Storage Temperature of Plastic Carrier Tape: 40°C (140°F), 50% Relative Humidity Max.

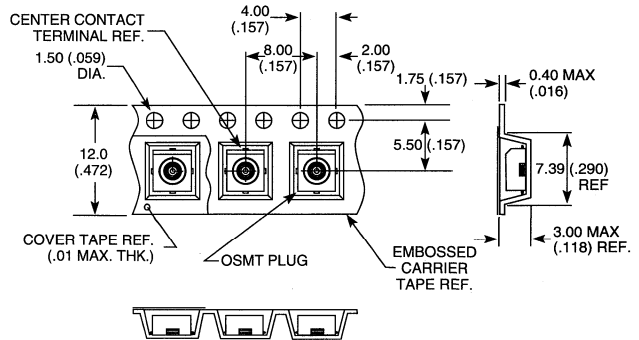


Figure 1
OSMT Surface Mount Plug Receptacle
Tape Package Detail Dimensions and Orientation

Automatic Placement

The OSMT surface mount plug receptacle is compatible with automatic placement equipment utilizing pneumatic (vacuum) part pick-up. Vacuum nozzle configuration can vary. Typical configurations follow:

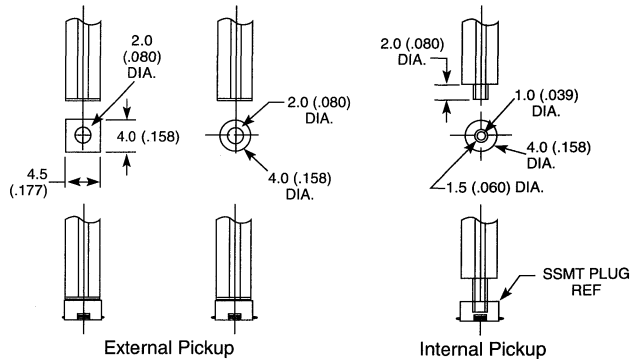


Figure 2
Typical Pneumatic Nozzle

Nozzle vacuum should be 15-30 inch Hg.
Component placement pressure should not exceed 400g.
Internal pick-up recommended for use with plug receptacle 2367-5006-54

Decimal inch equivalents are shown in parentheses for general information only.

Automatic Placement cont'd.

Alignment/centering grippers should contact sides of plug above contact leads as shown below:

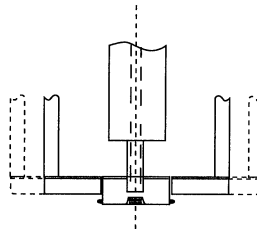


Figure 3
Typical Alignment/Centering Grippers

Alignment/centering gripper pressure should not exceed 400g.

OSMT plug receptacles are designed for reflow soldering processes, however excellent results can still be achieved using manual soldering. Flow (wave) soldering is not appropriate for this device.

The type of solder paste selected for reflow soldering is generally a function of many factors relative to the overall system (PWA*) design. Most applications will use common electronic grade solders such as: 63/37, 60/40 or 62/36/2 with mild rosin/resin fluxes. Metal content of the paste for screen and/or stencil applications is generally 85-90% by weight, slightly lower for nozzle dispensing applications.

When screening or stenciling, solder paste thickness of .15mm (.006 inch) to .25mm (.010 inch) is recommended.

OSMT plug receptacles can be reflow soldered using infrared (IR), convection or vapor phase (VP) heating equipment. It is recommended that peak reflow temperature be approximately 10-30°C (20-55°F) above solder liquidus temperature. Typical reflow temperature profiles are shown below:

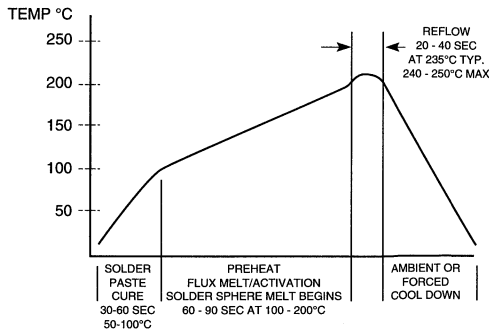


Figure 4
Typical Infrared and Convection Heating/Soldering Profile

* Printed Wiring Assembly

Decimal inch equivalents are shown in parentheses for general information only.

Soldering

Soldering cont'd.

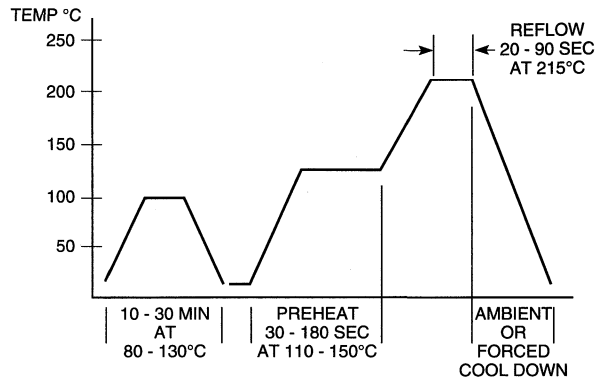


Figure 5
Typical Vapor Phase Heating/Soldering Profile

Post-Solder Cleaning

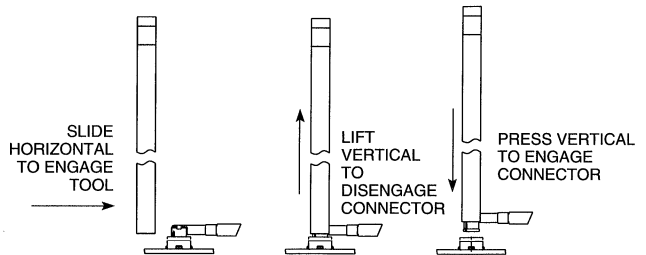
A 15-40 watt max. fine point tip soldering iron is recommended for manual soldering. Soldering iron tip temperature should not exceed 350-370°C. Lengthy application of heat and/or direct contact of the iron tip with the plastic housing should be avoided. The flux core solder (i.e.; 63/37 RMA, 62/36/2 RMA) is recommended. The center contact pad reflows easiest because of relatively low thermal mass, therefore, the center contact lead should be soldered first to minimize connector "skating".

OSMT plug receptacles can withstand most electronics grade cleaning agents including: high temperature water/aqueous cleaners, ethanol, methanol, MEK, acetone, 1,1,1-trichloroethane, trichloroethylene, perchloroethylene, chloroflouro-carbon (CFC) solvents, isopropanol, dichlorofluoroethane, and blends. The OSMT cable jacket can also withstand mild exposure to the above listed cleaning agents.

Decimal inch equivalents are shown in parentheses for general information only.

Engagement/Disengagement Tool

Part Number 2598-5342-54



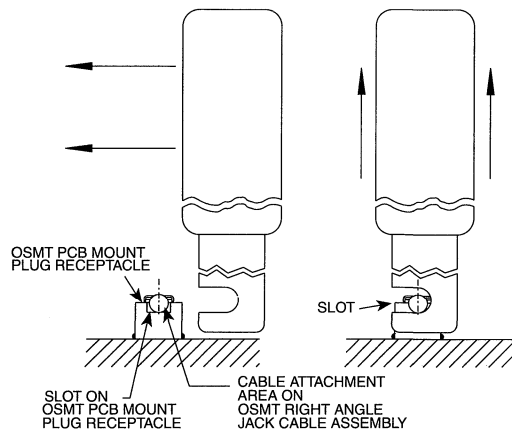
Note: Use Engagement/Disengagement Tool during mating to assure proper plug to jack alignment.

Figure 6

Use of Engagement/Disengagement Tool

Disengagement Tool

Part Number 2598-5401-54



Instructions:

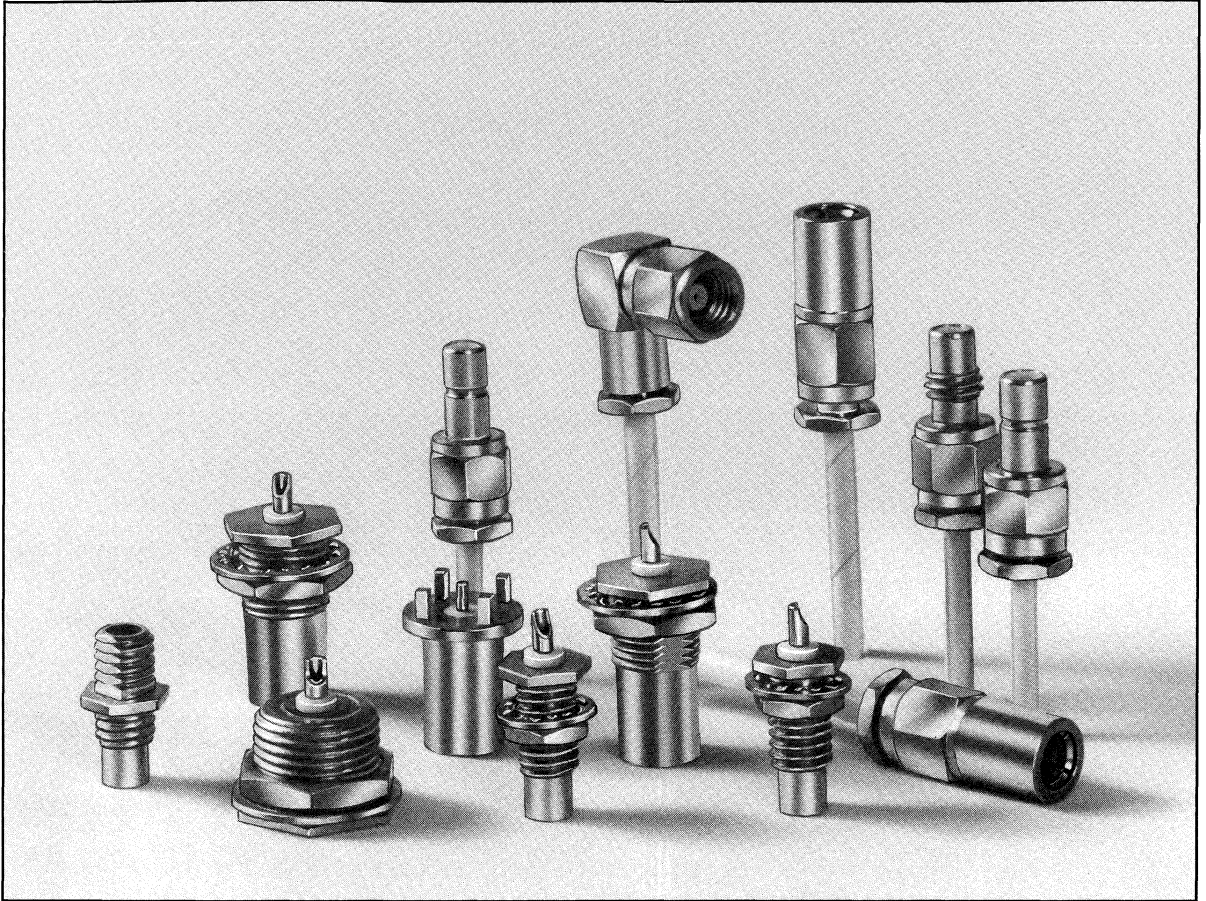
1. Slide slot in disengagement tool onto cable attachment area of OSMT cable assembly as shown.
2. Pull disengagement tool in a vertical direction until OSMT right angle jack releases from the OSMT plug receptacle.

Note: After manual engagement, insure the right angle cable jack is fully bottomed by applying light pressure to the top surface.

Figure 7

Use of Disengagement Tool

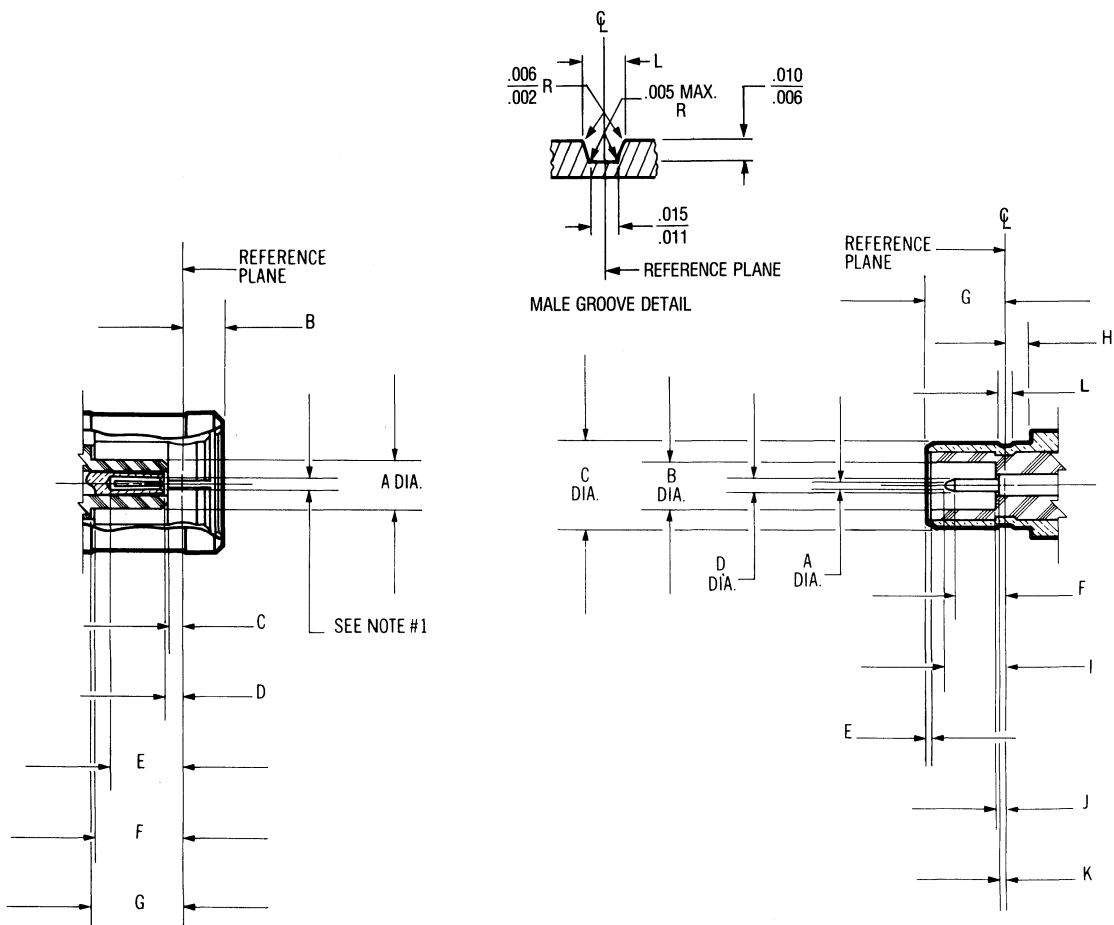
Decimal inch equivalents are shown in parentheses for general information only.



M/A-COM's line of SMB connectors offers an inexpensive alternative in miniature RF Interconnects where packaging density is critical. M/A-COM applies many of the same design standards of their highly reliable OSM (SMA) series to the SMB series. For instance, M/A-COM uses only beryllium copper center contacts for increased durability.

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FEMALE

| Letter | Inches (Millimeters) ² | |
|--------|-----------------------------------|-------------|
| | Minimum | Maximum |
| A | - | .081 (2.06) |
| B | - | .064 (1.63) |
| C | .007 (0.18) | - |
| D | .007 (0.18) | .037 (0.94) |
| E | .117 (2.97) | - |
| F | .141 (3.58) | - |
| G | .141 (3.58) | - |

MALE

| Letter | Inches (Millimeters) ² | |
|--------|-----------------------------------|-------------|
| | Minimum | Maximum |
| A | - | .010 (0.25) |
| B | .082 (2.08) | .085 (2.16) |
| C | - | .146 (3.71) |
| D | .019 (0.48) | .021 (0.53) |
| E | .000 (0.00) | - |
| F | .052 (1.32) | - |
| G | .131 (3.33) | .141 (3.58) |
| H | .065 (1.65) | - |
| I | - | .117 (2.97) |
| J | - | .007 (0.18) |
| K | - | .007 (0.18) |
| L | .027 (0.69) | .037 (0.94) |

1. ID to meet VSWR and contact resistance when mated with .020 ± .001 (.508 ± .0254mm) dia. pin.
 2. Metric equivalents (to the nearest 0.01mm) are given for general information only.

| Requirement | Detail |
|-------------|--------|
|-------------|--------|

General

| | |
|----------|---|
| Material | Brass per QQ-B-626, Comp. 360, half hard. Beryllium copper per ASTM-B-196 PTFE fluorocarbon per ASTM-D-1457. |
| Finish | Center contacts shall be gold plated to a min. thickness of .0001 inch in accordance with MIL-G-45204, Type I, Grade C. All other metal parts shall be finished as to provide a connector which meets the corrosion requirements. |
| Design | The design shall be such that the outline and interface dimensions shown in this catalog are met. |

Electrical

| | |
|---|--|
| Frequency | dc to 4 GHz. |
| Insulation Resistance | 1,000 megohms min. |
| Corona Level at 70,000 ft. | RG 178 cable or equivalent 185 volts min. RG 316 cable or equivalent 250 volts min. |
| Dielectric Withstanding Voltage At Sea Level | Straight connector, non-cabled, 1,000 volts. RG 178 cable or equivalent 750 volts. RG 316 cable or equivalent 1,000 volts. |
| RF High Potential at 5 MHz | Straight connector, solder pot, 600 volts RMS. RG 178 cable or equivalent 500 volts RMS. RG 316 cable or equivalent 700 volts RMS. |
| Voltage Rating | Sea Level 70,000 Ft. Straight connector, non-cabled 335 volts 85 volts. RG 178 cable or equivalent 250 volts 60 volts. RG 316 cable or equivalent 335 volts 85 volts. |
| Center Contact Resistance | Straight connector 6.0 milliohms. Right angle connector 12.0 milliohms. |
| VSWR | Straight connector RG 178 cable or equivalent 1.20 + .04f(GHz). Straight connector RG 316 cable or equivalent 1.15 + .04f(GHz). Right angle connector RG 178 cable or equivalent 1.35 + .06f(GHz). Right angle connector RG 316 cable or equivalent 1.25 + .04f(GHz). |
| Insertion Loss | Straight cable connector .30 dB max. at 1.5 GHz. Right angle cable connector .60 dB max. at 1.5 GHz. |

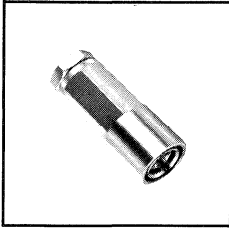
Mechanical

| | |
|------------------------|--|
| Force to Engage | The torque requirement to engage and disengage is not applicable. Longitudinal force is 14 lbs. max. |
| Mating Characteristics | Applicable to female connectors only. Oversize test pin .021 min. dia., .045 deep; insertion force 2.5 lbs. max. with .021 min. dia. pin; withdrawal force 1 oz. min. with .019 max. dia. pin. |
| Connector Durability | 500 insertion and withdrawal cycles at 12 cycles per minute max. |

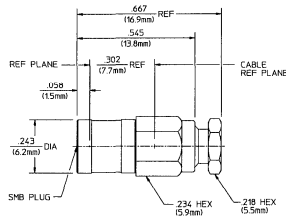
Environmental

| | |
|------------------------|--|
| Temperature Range | -65°C to +165°C. |
| Vibration | Per MIL-STD-202, method 204, test condition D. |
| Shock | Per MIL-STD-202, method 213, test condition B. |
| Corrosion (Salt Spray) | Per MIL-STD-202, method 101, test condition B. |

Clamp Attachment

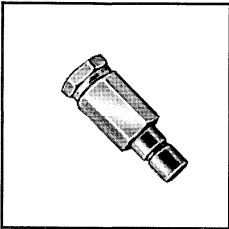


Straight Cable Plug

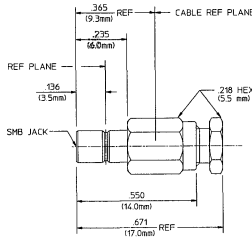


| Captured Center Contact | | |
|-------------------------|---------------------|---------------------|
| Cable | RG174/U, 188, 316 | RG 178/U, 196 |
| Part Number | 5101-5007-09 | 5101-5016-09 |

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.
Refer to Appendix for Coaxial Cable Characteristics

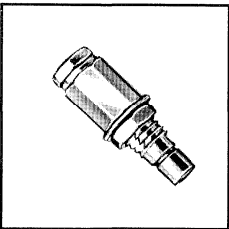


Straight Cable Jack

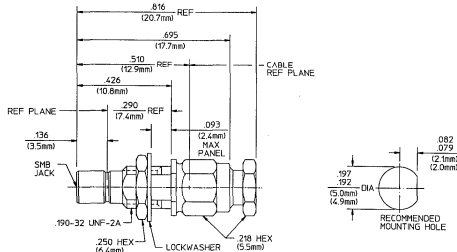


| Captured Center Contact | | |
|-------------------------|---------------------|---------------------|
| Cable | RG174/U, 188, 316 | RG/178/U, 196 |
| Part Number | 5102-5004-09 | 5102-5005-09 |

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.
Refer to Appendix for Coaxial Cable Characteristics

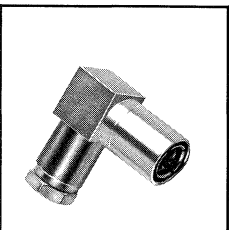


Bulkhead Feedthrough Cable Jack

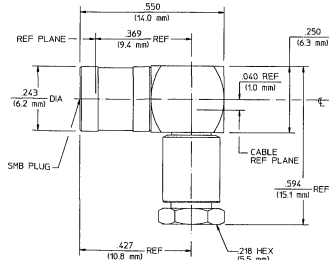


| Captured Center Contact | | |
|-------------------------|---------------------|---------------------|
| Cable | RG174/U, 188, 316 | RG/178/U, 196 |
| Part Number | 5104-5003-09 | 5104-5011-09 |

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.
Refer to Appendix for Coaxial Cable Characteristics



Right Angle Cable Plug

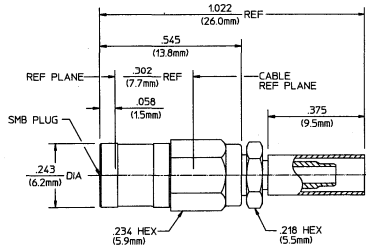
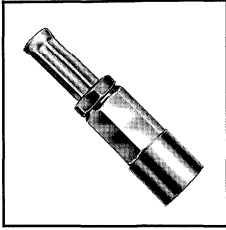


| Captured Center Contact | | |
|-------------------------|---------------------|---------------------|
| Cable | RG174/U, 188, 316 | RG/178/U, 196 |
| Part Number | 5107-5001-09 | 5107-5006-09 |

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.
Refer to Appendix for Coaxial Cable Characteristics

SMB For Flexible Cable

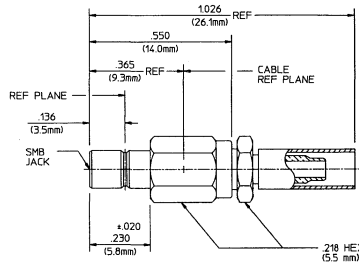
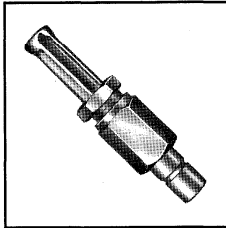
Crimp Attachment Straight Cable Plug



| Captured Center Contact | | |
|-------------------------|-------------------|---------------|
| Cable | RG174/U, 188, 316 | RG/178/U, 196 |
| Part Number | 5131-5007-09 | 5131-5011-09 |

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.
Refer to Appendix for Coaxial Cable Characteristics

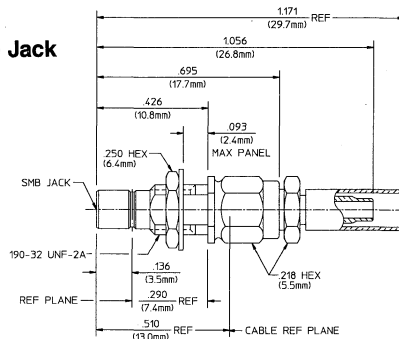
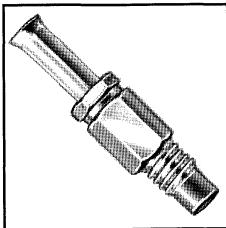
Straight Cable Jack



| Captured Center Contact | | |
|-------------------------|-------------------|---------------|
| Cable | RG174/U, 188, 316 | RG/178/U, 196 |
| Part Number | 5132-5001-09 | 5132-5003-09 |

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.
Refer to Appendix for Coaxial Cable Characteristics

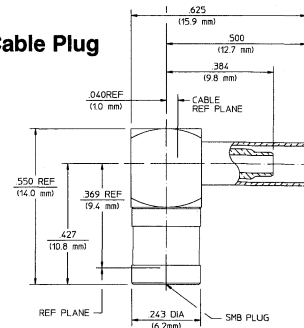
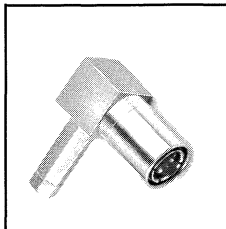
Bulkhead Feedthrough Cable Jack



| Captured Center Contact | | |
|-------------------------|-------------------|---------------|
| Cable | RG174/U, 188, 316 | RG/178/U, 196 |
| Part Number | 5134-5002-09 | 5134-7196-09 |

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.
Refer to Appendix for Coaxial Cable Characteristics

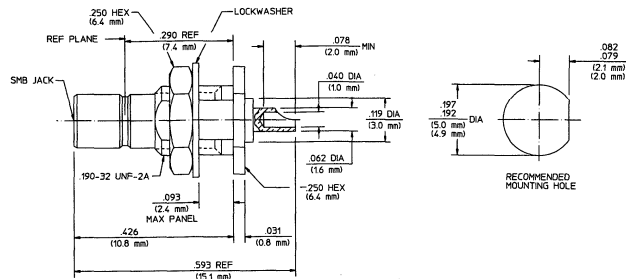
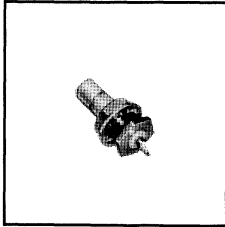
Right Angle Cable Plug



| Captured Center Contact | | |
|-------------------------|-------------------|---------------|
| Cable | RG174/U, 188, 316 | RG/178/U, 196 |
| Part Number | 5137-5010-09 | 5137-5011-09 |

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.
Refer to Appendix for Coaxial Cable Characteristics

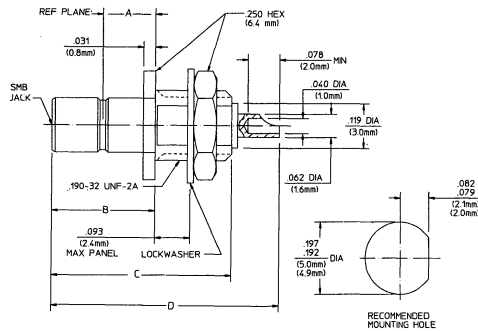
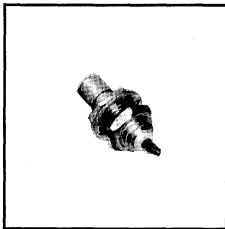
Rear Mount Bulkhead Feedthrough Jack Receptacle



| | |
|--|---------------------|
| Captured Center Contact Solder Pot Terminal | |
| Part Number | 5156-0000-09 |

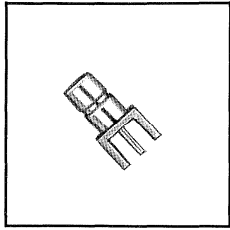
Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.

Front Mount Bulkhead Feedthrough Jack Receptacle

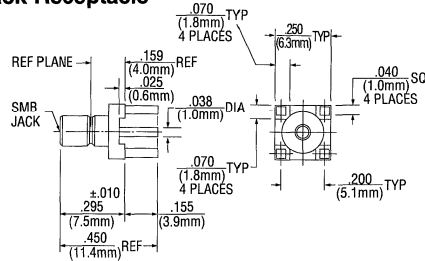


| | | | |
|--|--------------------------------|--------------------------------|--|
| Captured Center Contact Solder Pot Terminal | | | |
| Part Number | 5158-5010-09 | 5158-0000-09 | |
| Dim. A | Inches (mm) .138 Ref. (3.5) | Inches (mm) .110 Ref. (2.8) | |
| Dim. B | .274 (7.0) | .244 (6.2) | |
| Dim. C | .480 (12.2) | .457 (11.6) | |
| Dim. D | .609 Ref. (15.5) | .593 Ref. (15.1) | |

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.

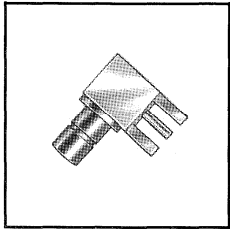


Straight Jack Receptacle

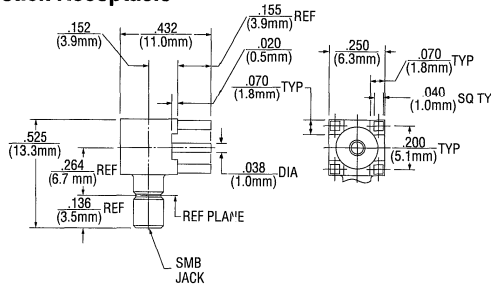


| | |
|-------------|--------------|
| Part Number | 5162-5013-09 |
|-------------|--------------|

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.

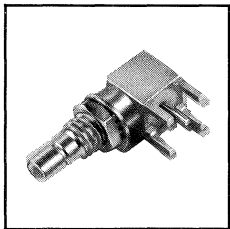


Right Angle Jack Receptacle

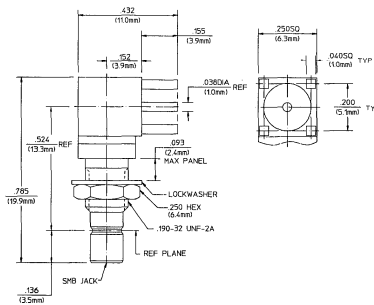


| | |
|-------------|--------------|
| Part Number | 5164-5003-09 |
|-------------|--------------|

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.



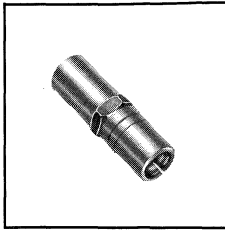
Right Angle Bulkhead Feedthrough Jack Receptacle



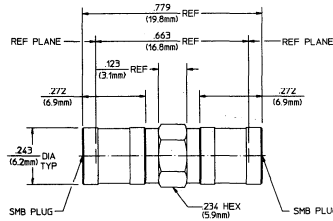
| | |
|-------------|--------------|
| Part Number | 5164-5011-09 |
|-------------|--------------|

Finish: Gold plate. For tin lead, change the Part number from -09 to -13.

SMB In-Series Adapters

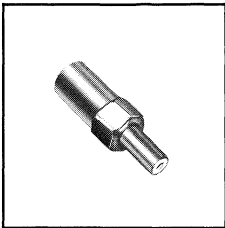


Plug to Plug

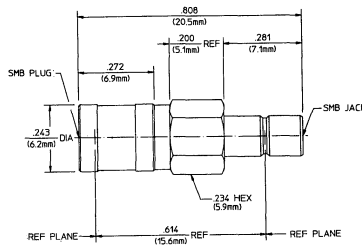


Part Number 5181-0000-09

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.

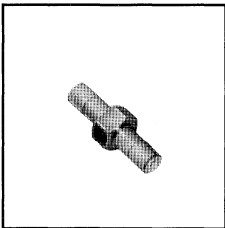


Plug to Jack

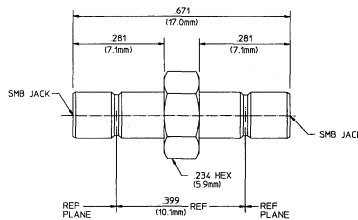


Part Number 5182-0000-09

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.

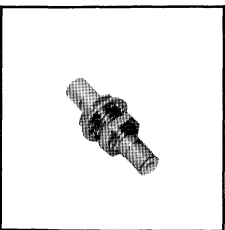


Jack to Jack

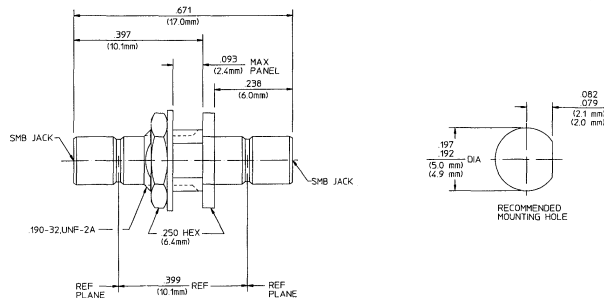


Part Number 5180-0000-09

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.



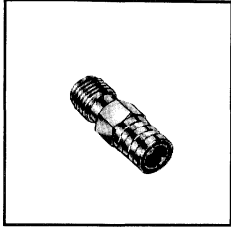
Bulkhead Feedthrough Jack to Jack



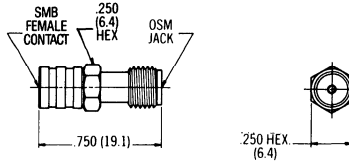
Part Number 5184-0000-09

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.

SMB to OSM(SMA)

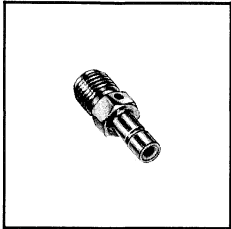


SMB Plug to OSM Jack

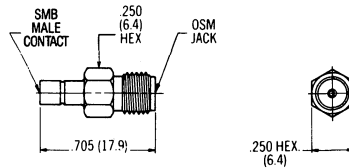


Part Number 5182-2240-00

Finish: Passivated stainless steel.

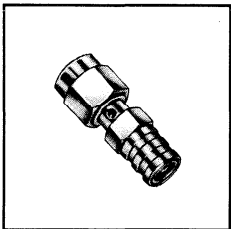


SMB Jack to OSM Jack

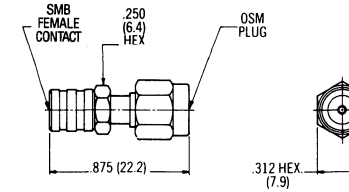


Part Number 5180-2240-00

Finish: Passivated stainless steel.

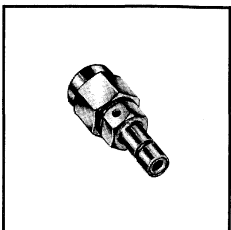


SMB Plug to OSM Plug

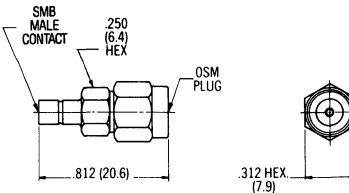


Part Number 5181-2241-00

Finish: Passivated stainless steel.



SMB Jack to OSM Plug

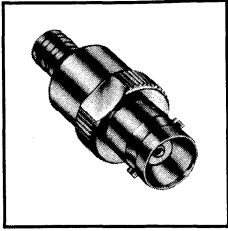


Part Number 5182-2241-00

Finish: Passivated stainless steel.

SMB Between-Series Adapters

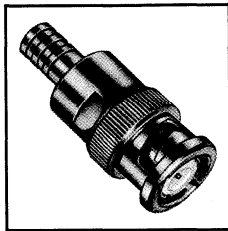
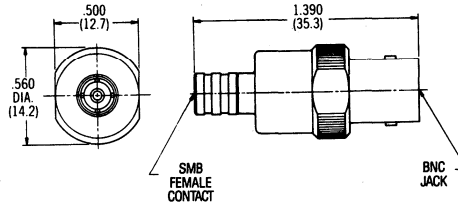
SMB to BNC



SMB Plug to BNC Jack

Part Number 3282-2223-00

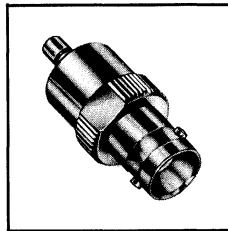
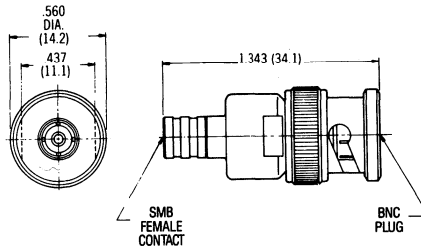
Finish: BNC: Nickel plated brass,
SMB: Passivated stainless steel



SMB Plug to BNC Plug

Part Number 3281-2223-00

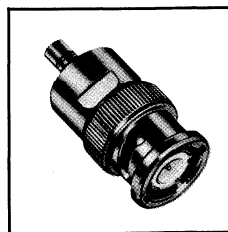
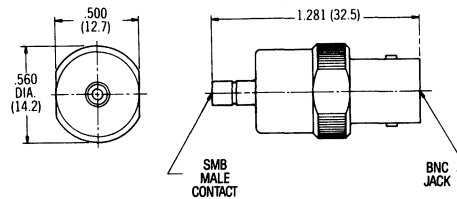
Finish: BNC: Nickel plated brass,
SMB: Passivated stainless steel



SMB Jack to BNC Jack

Part Number 3280-2224-00

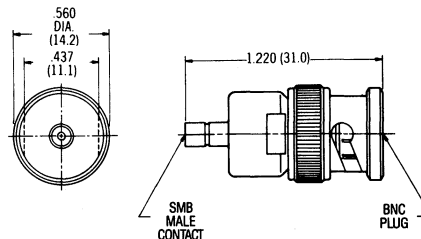
Finish: BNC: Nickel plated brass,
SMB: Passivated stainless steel

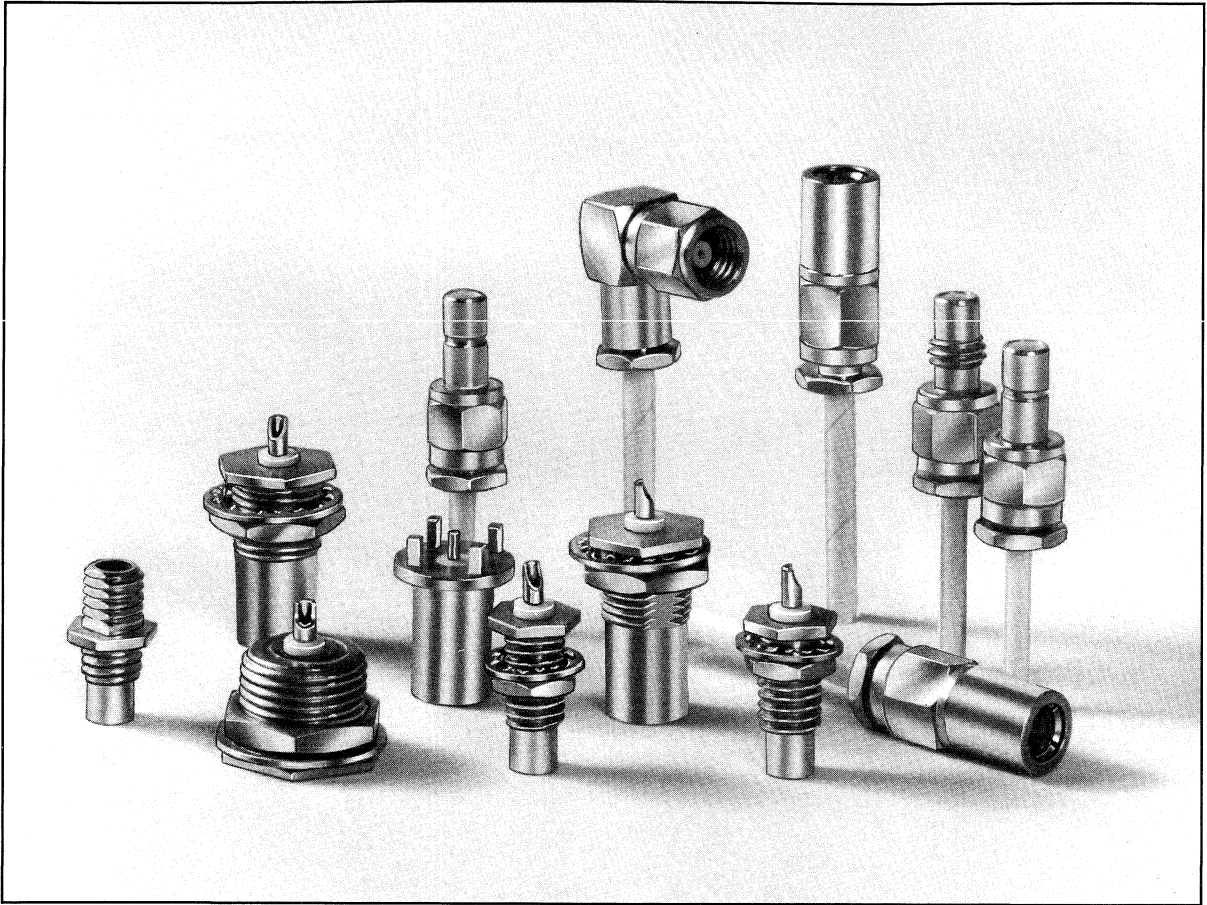


SMB Jack to BNC Plug

Part Number 3282-2224-00

Finish: BNC: Nickel plated brass,
SMB: Passivated stainless steel

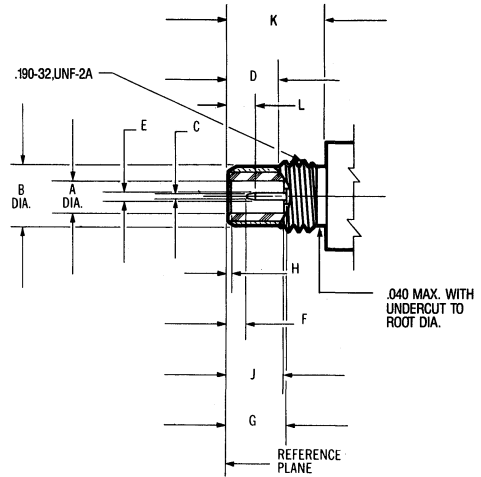
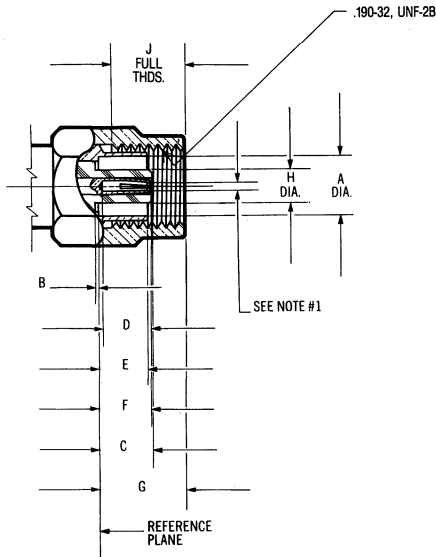




M/A-COM's line of SMC connectors offers an inexpensive alternative in miniature RF interconnects where packaging density is critical. M/A-COM applies many of the same design standards of their highly reliable OSM (SMA) series to the SMC series. For instance, M/A-COM uses only beryllium copper center contacts for increased durability.

Table of Contents

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FEMALE

| Letter | Inches (Millimeters) ³ | |
|--------|-----------------------------------|-------------|
| | Minimum | Maximum |
| A | .147 (3.73) | - |
| B | .000 (0.00) | - |
| C | - | .134 (3.40) |
| D | .110 (2.79) | - |
| E | - | .122 (3.10) |
| F | - | .134 (3.40) |
| G | - | .233 (5.92) |
| H | - | .081 (2.06) |
| J | .110 (2.79) | - |

MALE

| Letter | Inches (Millimeters) ³ | |
|--------|-----------------------------------|-------------|
| | Minimum | Maximum |
| A | .082 (2.08) | - |
| B | - | .146 (3.71) |
| C | - | .010 (0.25) |
| D | .123 (3.12) | .133 (3.38) |
| E | .019 (0.48) | .021 (0.53) |
| F | .024 (0.61) | - |
| G | .134 (3.40) | - |
| H | .000 (0.00) | - |
| J | .134 (3.40) | - |
| K | .234 (5.94) | - |
| L | - | .084 (2.13) |

1. ID to meet VSWR and contact resistance when mated with $.020 \pm .001$ ($.508 \pm .0254$ mm) dia. pin.
 2. When fully engaged, the two reference planes must coincide with metal to metal contact.
 3. Metric equivalents (to the nearest 0.01mm) are given for general information only.



Specifications

| Requirement | Detail |
|-------------|--------|
|-------------|--------|

General

| | |
|----------|---|
| Material | Brass per QQ-B-626, Comp. 360, half hard. Beryllium copper per ASTM-B-196 PTFE flouorocarbon per ASTM-D-1457. |
| Finish | Center contacts shall be gold plated to a min. thickness of .0001 inch in accordance with MIL-G-45204, Type I, Grade C. All other metal parts shall be finished as to provide a connector which meets the corrosion requirements. |
| Design | The design shall be such that the outline and interface dimensions shown in this catalog are met. |

Electrical

| | | | |
|---|--|------------|-----------|
| Frequency | dc to 10 GHz. | | |
| Insulation Resistance | 1,000 megohms min. | | |
| Corona Level at 70,000 ft. | RG 178 cable or equivalent 185 volts min. RG 316 cable or equivalent 250 volts min. | | |
| Dielectric Withstanding Voltage At Sea Level | Straight connector, non-cabled, 1,000 volts. RG 178 cable or equivalent 750 volts. RG 316 cable or equivalent 1,000 volts. | | |
| RF High Potential at 5 MHz | Straight connector, solder pot, 600 volts RMS. RG 178 cable or equivalent 500 volts RMS. RG 316 cable or equivalent 700 volts RMS. | | |
| Voltage Rating | Sea Level | 70,000 Ft. | |
| | Straight connector, non-cabled | 335 volts | 85 volts. |
| | RG 178 cable or equivalent | 250 volts | 60 volts. |
| | RG 316 cable or equivalent | 335 volts | 85 volts. |
| Center Contact Resistance | Straight connector 6.0 milliohms. Right angle connector 12.0 milliohms. | | |
| VSWR | Straight connector RG 178 cable or equivalent 1.20 + .04f(GHz). Straight connector RG 316 cable or equivalent 1.15 + .04f(GHz). Right angle connector RG 178 cable or equivalent 1.35 + .06f(GHz). Right angle connector RG 316 cable or equivalent 1.25 + .04f(GHz). | | |
| Insertion Loss | Straight cable connector .25 dB max. at 4 GHz. Right angle cable connector .50 dB max. at 4 GHz. | | |

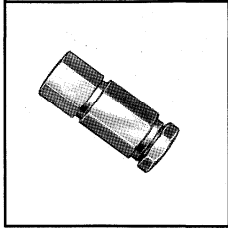
Mechanical

| | |
|---------------------------|---|
| Force to Engage | 16 in.-ozs. max. to engage and disengage. Longitudinal force is not applicable. |
| Coupling Nut Retention | 35 lbs. min. Applicable to female connectors only. |
| Coupling Proof Torque | 100 in.-ozs. Applicable to female connectors only. |
| Mating Characteristics | Applicable to female connectors only. Oversize test pin .0215 min. dia., .050 deep; insertion force 2.5 lbs. max. with .021 min. dia. pin; withdrawal force 1 oz. min. with .019 max. dia. pin. |
| Connector Durability | 500 insertion and withdrawal cycles at 12 cycles per minute max. |
| Recommended Mating Torque | 30-50 in.-ozs. |

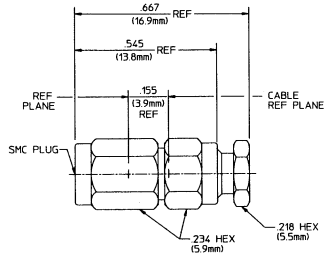
Environmental

| | |
|------------------------|--|
| Temperature Range | -65°C to +165°C. |
| Vibration | Per MIL-STD-202, method 204, test condition D. |
| Shock | Per MIL-STD-202, method 213, test condition C. |
| Corrosion (Salt Spray) | Per MIL-STD-202, method 101, test condition B. |

Clamp Attachment

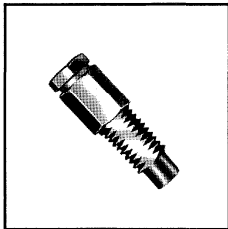


Straight Cable Plug

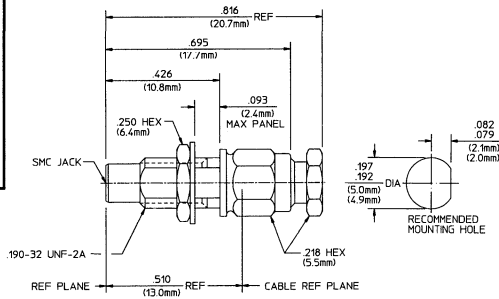


| Captured Center Contact | | |
|-------------------------|-------------------|---------------|
| Cable | RG174/U, 188, 316 | RG 178/U, 196 |
| Part Number | 5001-5015-09 | 5001-5027-09 |

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.
Refer to Appendix for Coaxial Cable Characteristics

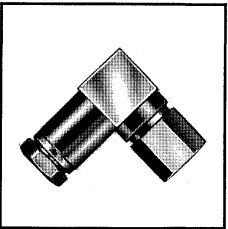


Bulkhead Feedthrough Cable Jack

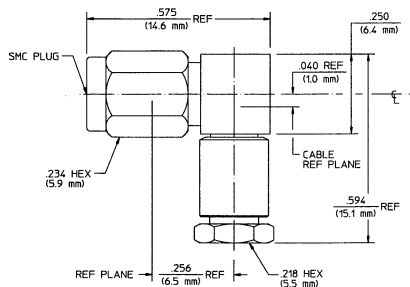


| Captured Center Contact | | |
|-------------------------|-------------------|---------------|
| Cable | RG174/U, 188, 316 | RG 178/U, 196 |
| Part Number | 5004-5005-09 | 5004-5012-09 |

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.
Refer to Appendix for Coaxial Cable Characteristics



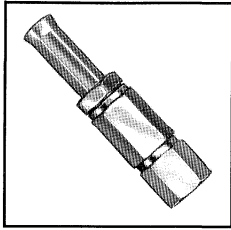
Right Angle Cable Plug



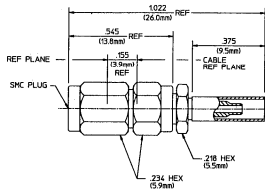
| Captured Center Contact | | |
|-------------------------|-------------------|---------------|
| Cable | RG174/U, 188, 316 | RG 178/U, 196 |
| Part Number | 5007-5008-09 | 5007-5016-09 |

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.
Refer to Appendix for Coaxial Cable Characteristics

Crimp Attachment

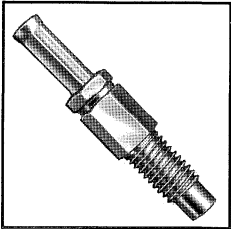


Straight Cable Plug

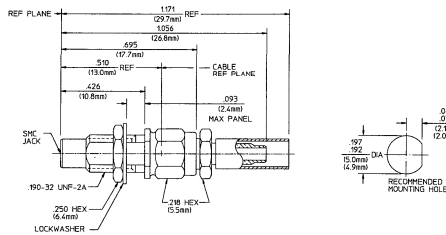


| Captured Center Contact | | |
|-------------------------|---------------------|---------------------|
| Cable | RG174/U, 188, 316 | RG 178/U, 196 |
| Part Number | 5031-5014-09 | 5031-5007-09 |

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.
Refer to Appendix for Coaxial Cable Characteristics

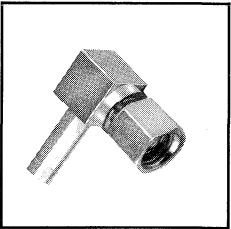


Bulkhead Feedthrough Cable Jack

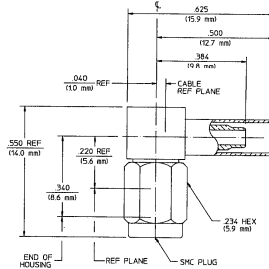


| Captured Center Contact | | |
|-------------------------|---------------------|---------------------|
| Cable | RG174/U, 188, 316 | RG 178/U, 196 |
| Part Number | 5034-5006-09 | 5034-5005-09 |

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.
Refer to Appendix for Coaxial Cable Characteristics



Right Angle Cable Plug

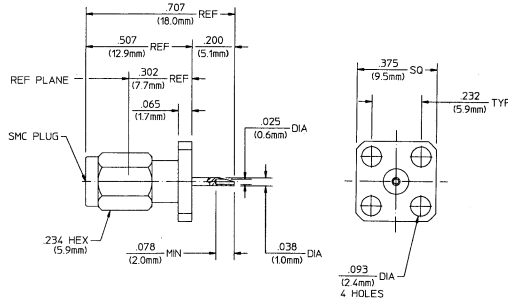
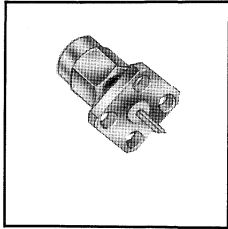


| Captured Center Contact | | |
|-------------------------|---------------------|---------------------|
| Cable | RG174/U, 188, 316 | RG 178/U, 196 |
| Part Number | 5037-7188-09 | 5037-7196-09 |

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.
Refer to Appendix for Coaxial Cable Characteristics

SMC Panel Mount Receptacles

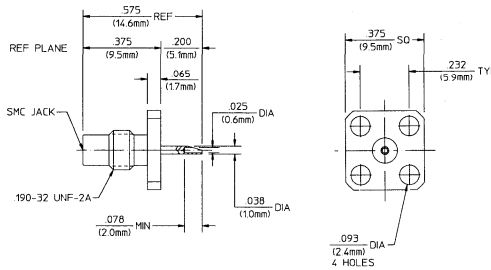
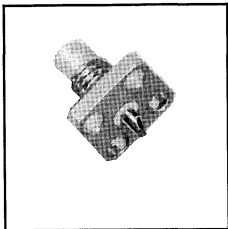
Flange Mount Plug Receptacle



| | |
|---|--------------|
| Captured Center Contact Solder Pot Terminal | |
| Part Number | 5051-0000-09 |

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.

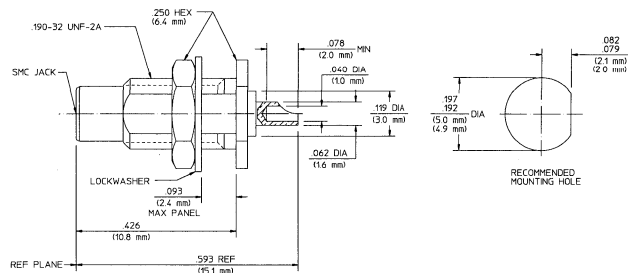
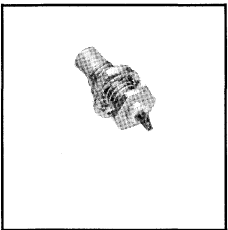
Flange Mount Jack Receptacle



| | |
|---|--------------|
| Captured Center Contact Solder Pot Terminal | |
| Part Number | 5052-0000-09 |

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.

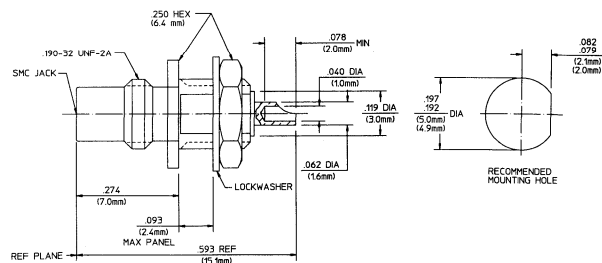
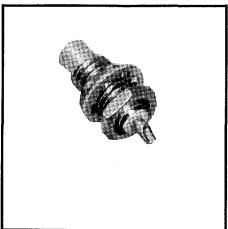
Rear Mount Bulkhead Feedthrough Jack Receptacle



| | |
|---|--------------|
| Captured Center Contact Solder Pot Terminal | |
| Part Number | 5056-0000-09 |

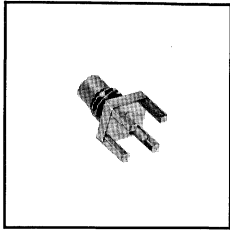
Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.

Front Mount Bulkhead Feedthrough Jack Receptacle

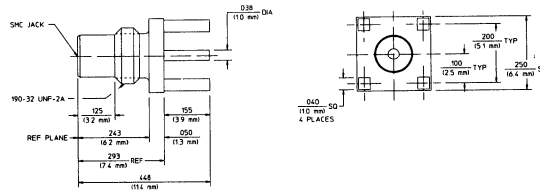


| | |
|---|--------------|
| Captured Center Contact Solder Pot Terminal | |
| Part Number | 5058-0000-09 |

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.

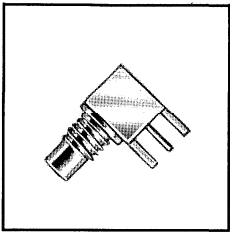


Straight Jack Receptacle

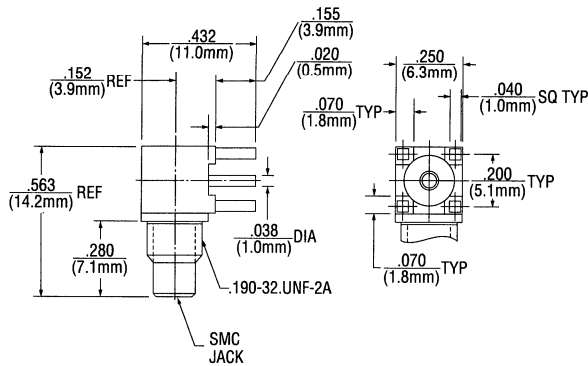


Part Number **5062-5003-09**

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.



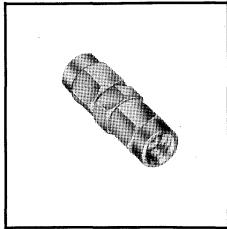
Right Angle Jack Receptacle



Part Number **5064-5003-09**

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.

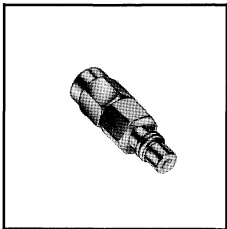
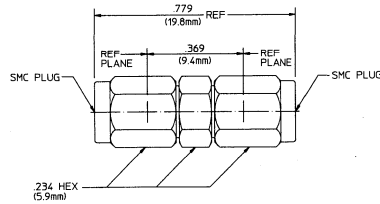
SMC In-Series Adapters



Plug to Plug

Part Number **5081-0000-09**

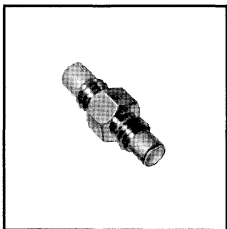
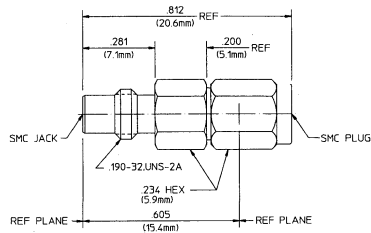
Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.



Plug to Jack

Part Number **5082-0000-09**

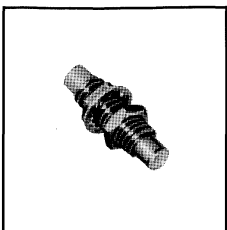
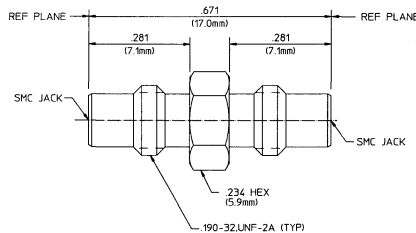
Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.



Jack to Jack

Part Number **5080-0000-09**

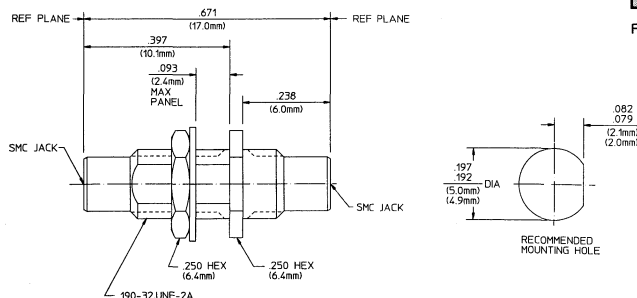
Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.



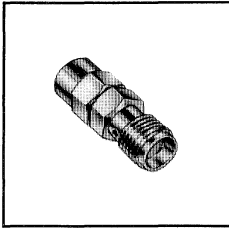
Bulkhead Feedthrough Jack to Jack

Part Number **5084-0000-09**

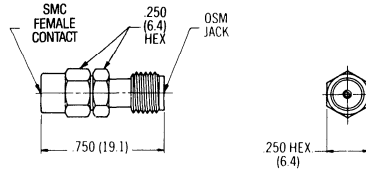
Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.



SMC to OSM(SMA)

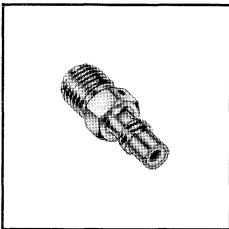


SMC Plug to OSM Jack

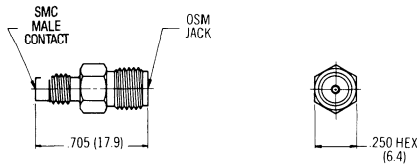


| | |
|---------------------------|---------------------|
| DC-10.0 GHz | |
| Max. VSWR 1.04 + .007fGHz | |
| Part Number | 5082-2240-00 |

Finish: Passivated stainless steel.

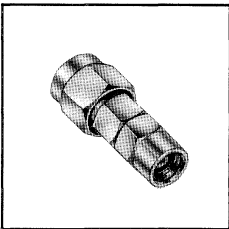


SMC Jack to OSM Jack

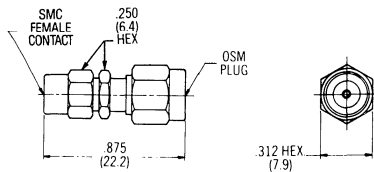


| | |
|---------------------------|---------------------|
| DC-10.0 GHz | |
| Max. VSWR 1.04 + .007fGHz | |
| Part Number | 5080-2240-00 |

Finish: Passivated stainless steel.

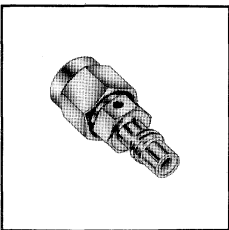


SMC Plug to OSM Plug

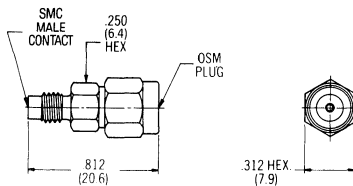


| | |
|---------------------------|---------------------|
| DC-10.0 GHz | |
| Max. VSWR 1.03 + .007fGHz | |
| Part Number | 5081-2241-00 |

Finish: Passivated stainless steel.



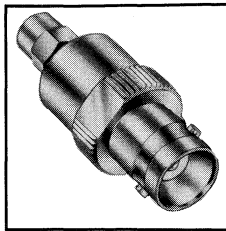
SMC Jack to OSM Plug



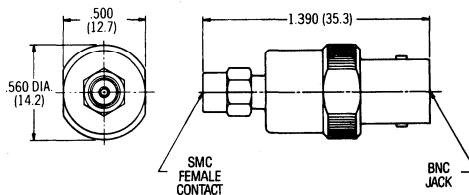
| | |
|---------------------------|---------------------|
| DC-10.0 GHz | |
| Max. VSWR 1.03 + .007fGHz | |
| Part Number | 5082-2241-00 |

Finish: Passivated stainless steel.

SMC to BNC

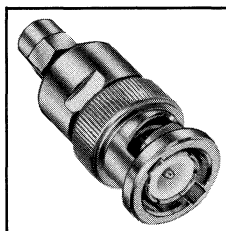


SMC Plug to BNC Jack

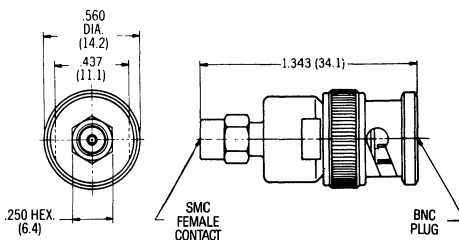


Part Number 3282-2221-00

Finish: BNC: Nickel plated brass,
SMC: Passivated stainless steel

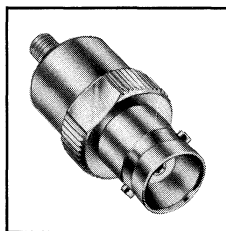


SMC Plug to BNC Plug

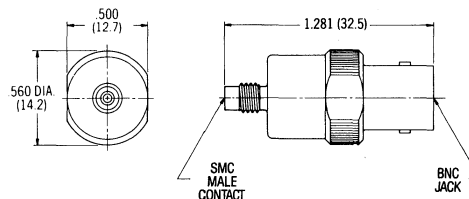


Part Number 3281-2221-00

Finish: BNC: Nickel plated brass,
SMC: Passivated stainless steel

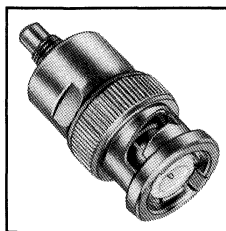


SMC Jack to BNC Jack

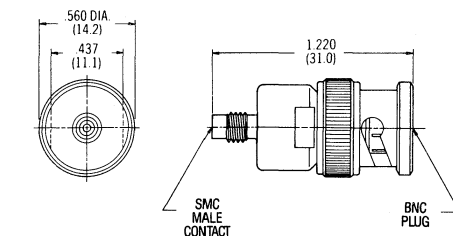


Part Number 3280-2222-00

Finish: BNC: Nickel plated brass,
SMC: Passivated stainless steel



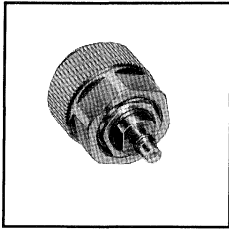
SMC Jack to BNC Plug



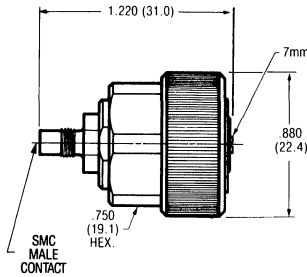
Part Number 3282-2222-00

Finish: BNC: Nickel plated brass,
SMC: Passivated stainless steel

SMC to 7mm

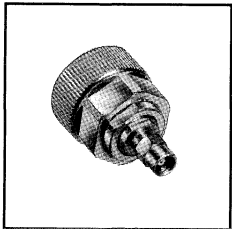


SMC Jack to 7mm

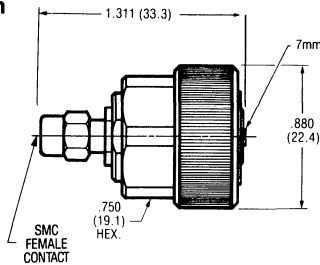


| | |
|----------------------------|---------------------|
| DC-12.4 GHz | |
| Max. VSWR 1.015 + .004fGHz | |
| Part Number | 5082-2700-00 |
| Full Fluted Connector | |
| Part Number | 7482-2222-00 |

Conforms to the mechanical and electrical requirements of the Standard Test Connector MIL-C-39012/B Amendment 1.
Standard 7mm contact is 4 slotted. Consult factory for 6 slotted version used with HP8510 test equipment.
Finish: 7mm: Electropolished stainless steel,
SMC: Passivated stainless steel



SMC Plug to 7mm

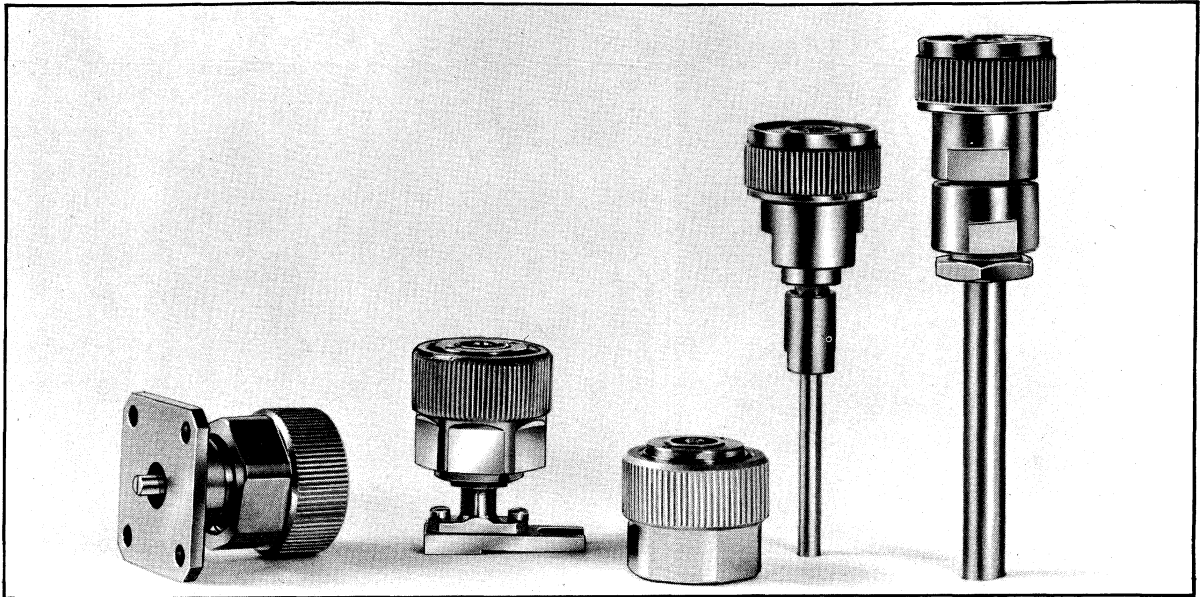


| | |
|----------------------------|---------------------|
| DC-12.4 GHz | |
| Max. VSWR 1.015 + .004fGHz | |
| Part Number | 5081-2700-00 |
| Full Fluted Connector | |
| Part Number | 7481-2221-00 |

Conforms to the mechanical and electrical requirements of the Standard Test Connector MIL-C-39012/B Amendment 1.
Standard 7mm contact is 4 slotted. Consult factory for 6 slotted version used with HP8510 test equipment.
Finish: 7mm: Electropolished stainless steel,
SMC: Passivated stainless steel

7mm

Precision Coaxial Connectors



The 7 mm Precision Hermaphrodite Coaxial Connectors are made available for laboratory instrumentation use. The construction is resonance free through 18.0 GHz.

An economical sexed version is also made available using threaded outer plug and jack configuration. This version will mate directly to the hermaphroditic types without degradation of performance. These are available to attach to .141, .250 and .325 inch diameter semi-rigid cables, and to RG-214/U and RG-142B/U flexible cables.

ELECTRICAL PERFORMANCE

IMPEDANCE: 50 Ohms
 FREQUENCY RANGE: 0-18 GHz
 VSWR: 1.003 + .002 (f)GHz (see curve)

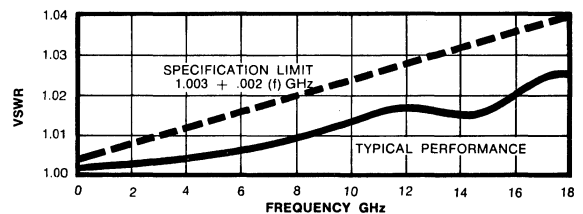
TEMPERATURE RANGE: -55°C to +85°C

DESIGN AND CONSTRUCTION

The outer shell and coupling mechanisms are made of polished stainless steel. The inner contact is made of gold plated beryllium copper. A special resonance free to 18.0 GHz supporting bead is used to capture the center contact.

ASSEMBLY TOOL

Optional assembly tool, part number 7098-5001, may be ordered separately for assembly convenience.

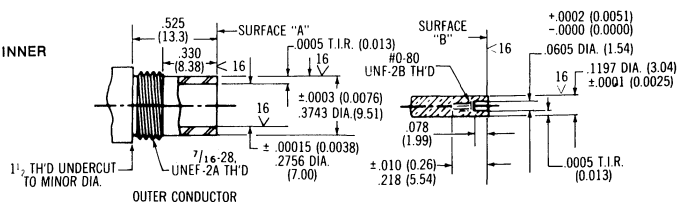


PREPARATION TO MATING SECTION:

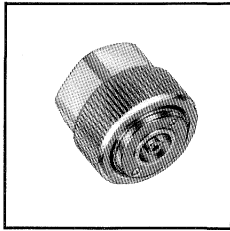
STRICT ADHERENCE TO THE DIMENSIONS SHOWN FOR OUTER AND INNER CONDUCTORS IS A REQUIREMENT FOR PRECISION PERFORMANCE.

NOTES:

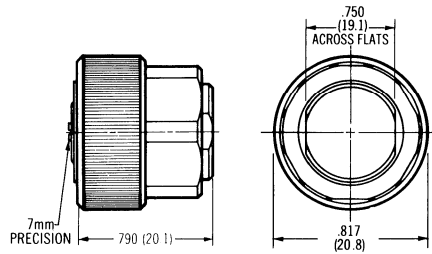
- Surface "A" to be perpendicular to .2756 and .3743 diameters within .0005 T.I.R.
- Surface "B" to be perpendicular to .1197 and .0605 diameters within .0005 T.I.R.
- Surface "B" to be flush to .0005 below face of outer conductor surface "A"



7mm



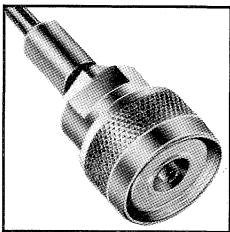
7mm Precision Connector (Hermaphrodite)



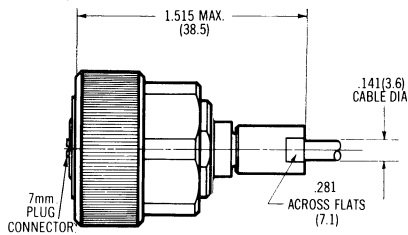
| | |
|-------------|---------------------|
| Part Number | 7000-0000-00 |
|-------------|---------------------|

Finish: Polished stainless steel.

For Semi-Rigid Cable • Clamp Attachment

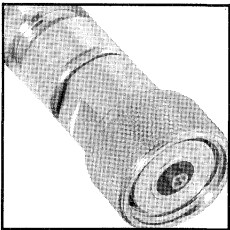


Straight Cable Plug

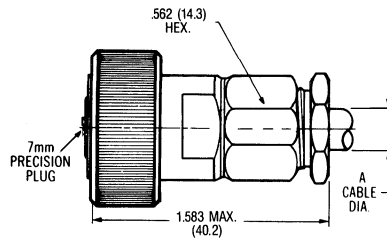


| | |
|------------------|---------------------|
| Cable | RG 402/U (.141) |
| Cable Dielectric | Solid TFE |
| Part Number | 7301-5038-02 |

Finish: Polished stainless steel.
Flexible cable connectors available.
Refer to recommended assembly tools in Tool Section.



Straight Cable Plug

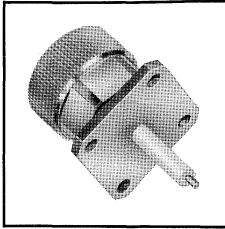


| | | |
|------------------|---------------------------|---------------------------|
| Cable | RG 401/U (.250) | .325 |
| Cable Dielectric | Solid TFE | Solid TFE |
| Part Number | 7301-7650-00 | 7301-7625-00 |
| Dim. A | Inches (mm) .250 (6.3) | Inches (mm) .325 (8.3) |

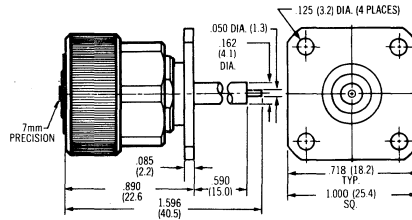
Finish: Polished stainless steel.
Flexible cable connectors available.
Refer to recommended assembly tools in Tool Section.

7mm Panel Mount Receptacles

Panel Mount • Straight Terminal

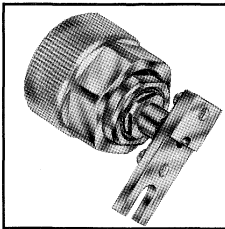


Flange Mount Receptacle

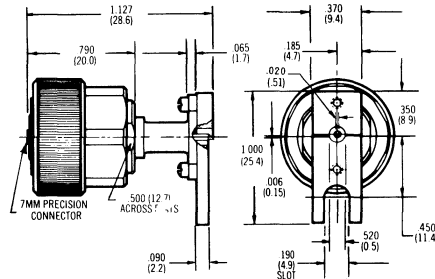


| | |
|-------------|--------------|
| Part Number | 7052-1201-00 |
|-------------|--------------|

Finish: Polished stainless steel.



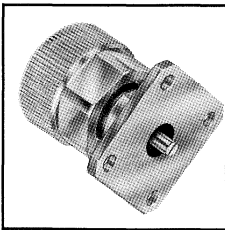
7mm Adapter to MIC Fixture



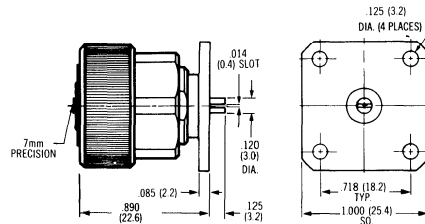
| | |
|-------------|--------------|
| Part Number | 7052-5013-00 |
|-------------|--------------|

Finish: Polished stainless steel.

Panel Mount • Slot Terminal



Flange Mount Receptacle



| | |
|-------------|--------------|
| Part Number | 7052-5005-00 |
|-------------|--------------|

Finish: Polished stainless steel.

BETWEEN SERIES COAXIAL ADAPTERS



Between-Series Adapters

Table of Contents and Adapter Selection Guide

To use this guide, select the adapter combination of your choice in the horizontal and vertical columns and follow them to their intersecting point which will list their page number(s).

| | SMA (OSM) | SSMA (OSSM) | OSMM Micro-Miniature | Type N | TNC | BNC | SMB | 7mm Std. Body | 7mm Fluted Body | OS-2.4 (OS50) | OS-2.9 K™ | SMC | SMP | OS-50P |
|-------------------------|-----------|-------------|----------------------|---------|---------|---------|-----|---------------|-----------------|---------------|-----------|-----|-----|---------|
| SMA (OSM) | 66,68 | 272 | 275 | 267,268 | 269,270 | 270,271 | 273 | 295,296 | 295,296 | • | • | 271 | • | • |
| SSMA (OSSM) | 272 | 87,88,90 | • | 276 | • | 277 | • | 287 | 297 | • | • | • | • | • |
| OSMM Micro-Miniature | 275 | • | – | • | • | • | • | • | • | • | • | • | • | • |
| Type N | 267,268 | 276 | • | 189,192 | 283 | 278 | • | 297 | 297 | • | • | • | • | • |
| Type N DC-18.0 GHz | 267,268 | • | • | • | • | • | • | 297 | 297 | • | • | • | • | • |
| TNC | 269,270 | • | • | 273 | 211 | 279 | • | 298 | 298 | • | • | • | • | • |
| TNC DC-18.0 GHz | 269,270 | • | • | • | • | • | • | 297 | 297 | • | • | • | • | • |
| BNC | 270,271 | • | • | 277 | 278 | 220 | 280 | 299 | 299 | • | • | 281 | • | • |
| OSP (BMA) Blind Mate | 285,287 | 288 | 288 | • | • | • | • | 290 | 290 | • | • | • | • | • |
| OSSP Blind Mate | 288,286 | • | • | • | • | • | • | 283 | • | • | • | • | • | • |
| SMB | 270,248 | • | • | • | • | 280,248 | 247 | • | • | • | • | • | • | • |
| SMC | 274,258 | • | • | • | • | 281,258 | • | 299 | 299,260 | • | • | 257 | • | • |
| SC | • | • | • | 284 | • | • | • | 290 | 290 | • | • | • | • | • |
| 7mm | 295,296 | 297 | • | 247 | 298 | 299 | • | – | – | 301 | • | 299 | • | • |
| 3.5mm | • | • | • | • | • | • | • | 302 | 302 | 303 | • | • | • | • |
| OS-2.4 (OS-50) | • | 293 | • | • | • | • | • | 301 | • | 174,175 | 289 | • | • | • |
| OS-2.9 K™ | • | • | • | • | • | • | • | • | • | 292 | 158 | • | • | • |
| OS-50P | 290 | • | • | • | • | • | • | • | • | 291 | • | • | • | 148,149 |
| OMQ | – | • | • | • | • | 282 | • | • | • | • | • | • | • | • |
| OSQ | – | • | • | • | • | 282 | • | • | • | • | • | • | • | • |
| SMP | 134 | • | • | • | • | • | • | • | • | • | • | • | 132 | • |
| OSX | 227 | • | • | • | • | • | • | • | • | • | • | • | • | • |
| OSMT | 234 | • | • | • | • | • | • | • | • | • | • | • | • | • |

*Non-standard items. Contact factory for details.
Consult the factory for special design capability.

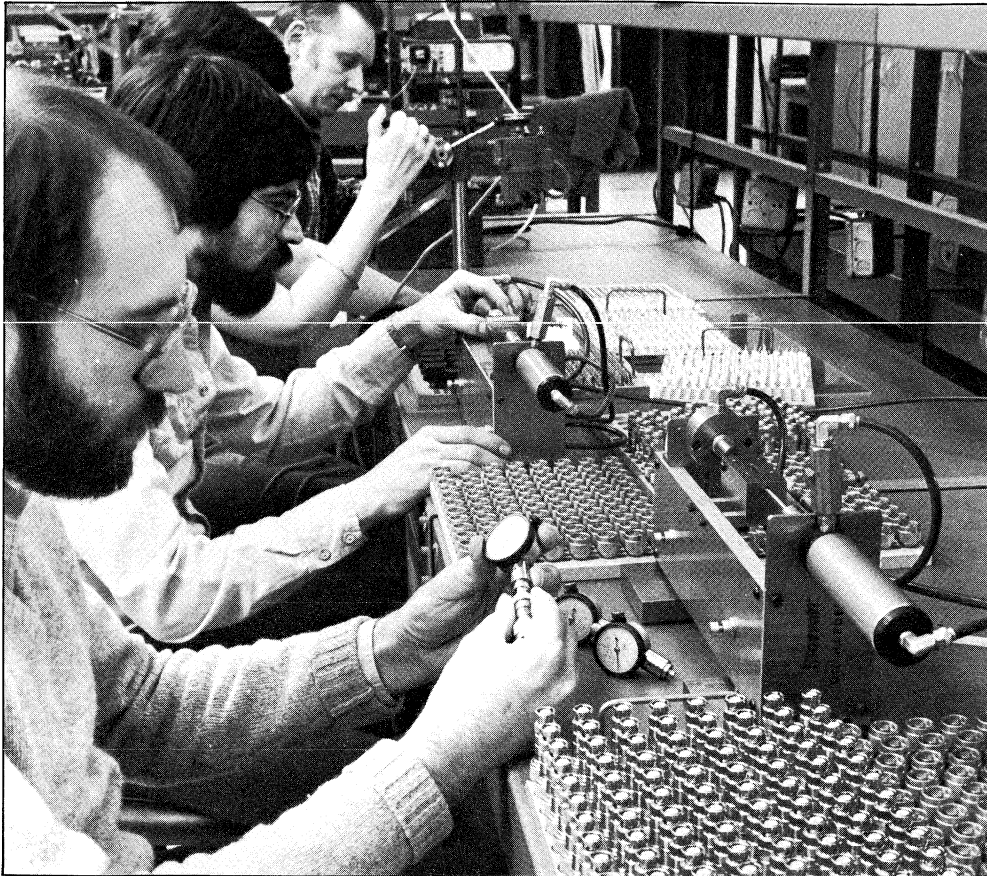
OS-2.9 is a K Connector equivalent built under license from the Wilton Company, Morgan Hill, CA

M/A-COM, Inc.

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North America: Tel. (800) 366-2266 ■ Asia/Pacific: Tel. +81 (03) 3226-1671 ■ Europe: Tel. +44 (1344) 869 595
Fax (800) 618-8883 Fax +81 (03) 3226-1451 Fax +44 (1344) 300 020

Between-Series Adapters



M/A-COM's Between-Series Coaxial Transmission Line Adapters provide convenient transitions between all popular series coaxial connectors. The adapter design provides a minimum length consistent with good electrical performance. The small size, low VSWR, and broad frequency coverage permits a wide range of applications in both measurement and systems use.

DESIGN AND CONSTRUCTION

The standard units are constructed of stainless steel with passivated finish, nickel plated brass, and gold plated brass. The material and plating is to be consistent with the basic connector series. All dielectrics are TFE fluorocarbon. The center contacts are made of beryllium copper, gold plated.

TYPES

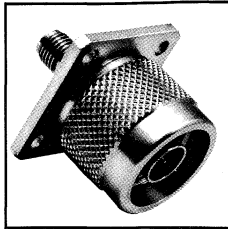
The straight in-line adapters are available in all combinations of plug and jack (male and female) configurations. Also, popular panel mount versions are cataloged. For special modifications and hermetic seal version, consult the factory.

APPLICATION

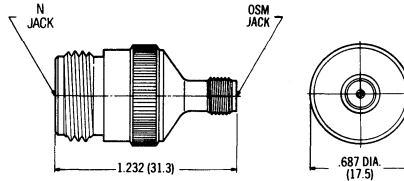
The major application is the requirement for a low VSWR, compact transition in both test system and operating systems. Many panel mount and bulkhead mount versions are available so the designer can use small size connectors for internal design, but adapt to a larger rugged version for external connection.

Between-Series Adapters

Type N to OSM(SMA)

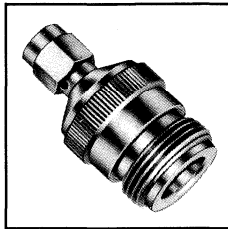


N Jack to OSM Jack

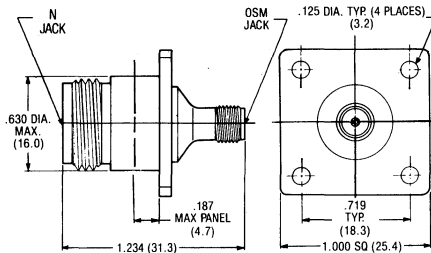


| | |
|----------------------------|---------------------------|
| DC-12.4 GHz | Max. VSWR 1.06 + .005fGHz |
| 12.4-15.0 GHz | Max. VSWR .83 + .023fGHz |
| Part Number | 3080-2240-00 |
| High Frequency to 18.0 GHz | Max. VSWR .83 + .023fGHz |
| Part Number | 3680-2240-00 |

Finish: Passivated stainless steel.

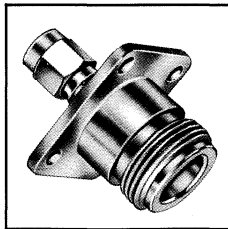


Flange Mount - N Jack to OSM Jack

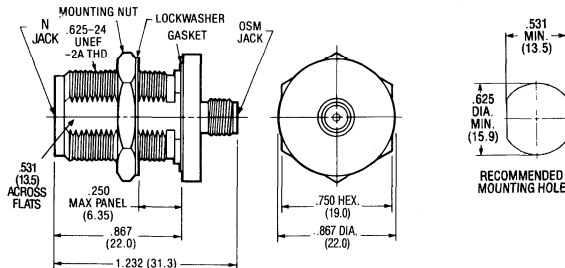


| | |
|----------------------------|---------------------------|
| DC-12.4 GHz | Max. VSWR 1.06 + .005fGHz |
| 12.4-15.0 GHz | Max. VSWR .83 + .023fGHz |
| Part Number | 3080-2242-00 |
| High Frequency to 18.0 GHz | Max. VSWR .83 + .023fGHz |
| Part Number | 3680-2242-00 |

Finish: Passivated stainless steel.

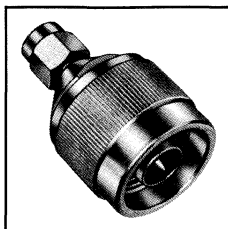


Bulkhead Mount - N Jack to OSM Jack With Gasket

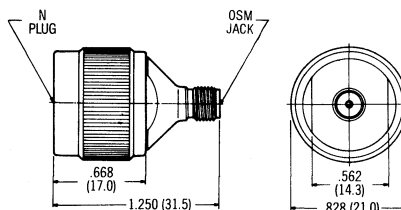


| | |
|----------------------------|---------------------------|
| DC-12.4 GHz | Max. VSWR 1.06 + .005fGHz |
| 12.4-15.0 GHz | Max. VSWR .83 + .023fGHz |
| Part Number | 3084-2240-00 |
| High Frequency to 18.0 GHz | Max. VSWR .83 + .023fGHz |
| Part Number | 3684-2240-00 |

Finish: Passivated stainless steel.
See Recommended Mounting Hole Detail for part number 3004-7941-00.



N Plug to OSM Jack

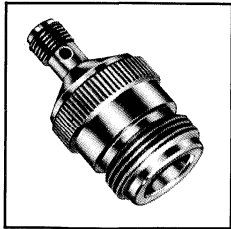


| | |
|---------------|---------------------------|
| DC-12.4 GHz | Max. VSWR 1.06 + .005fGHz |
| 12.4-18.0 GHz | Max. VSWR .83 + .023fGHz |
| Part Number | 3082-2240-00 |

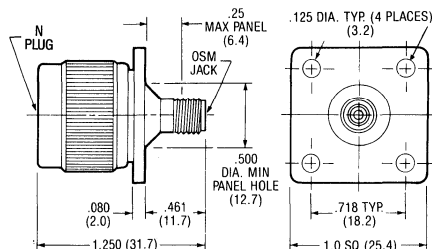
Finish: Passivated stainless steel.

Between-Series Adapters

Type N to OSM(SMA)

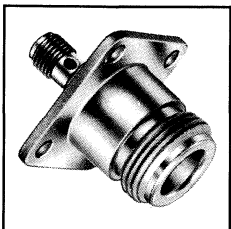


Flange Mount - N Plug to OSM Jack

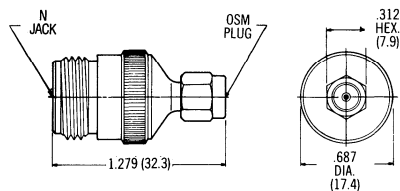


| |
|--|
| DC-12.4 GHz Max. VSWR 1.06 + .005fGHz |
| 12.4-15.0 GHz Max. VSWR .83 + .023fGHz |
| Part Number 3082-2242-00 |
| High Frequency to 18.0 GHz Max. VSWR .83 + .023fGHz |
| Part Number 3682-2242-00* |

Finish: Passivated stainless steel.
*Supplied with Type N hexed coupling nut.
Torque wrench Part Number 2598-5026-54 recommended for installation.

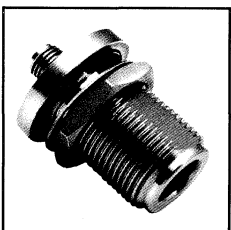


N Jack to OSM Plug

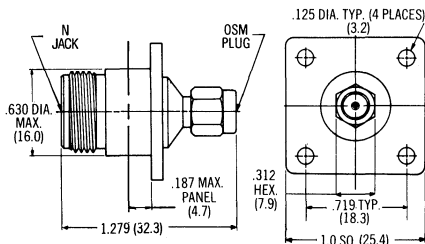


| |
|--|
| DC-12.4 GHz Max. VSWR 1.05 + .005fGHz |
| 12.4-15.0 GHz Max. VSWR .83 + .023fGHz |
| Part Number 3082-2241-00 |
| High Frequency to 18.0 GHz Max. VSWR .83 + .023fGHz |
| Part Number 3682-2241-00 |

Finish: Passivated stainless steel.

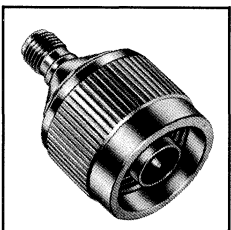


Flange Mount - N Jack to OSM Plug

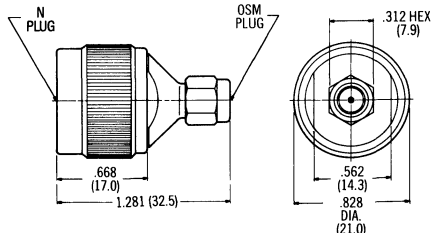


| |
|--|
| DC-12.4 GHz Max. VSWR 1.05 + .005fGHz |
| 12.4-15.0 GHz Max. VSWR .83 + .023fGHz |
| Part Number 3082-2243-00 |
| High Frequency to 18.0 GHz Max. VSWR .83 + .023fGHz |
| Part Number 3682-2243-00 |

Finish: Passivated stainless steel.



N Plug to OSM Plug

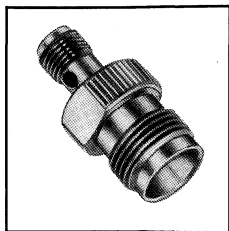


| |
|---|
| DC-12.4 GHz Max. VSWR 1.05 + .005fGHz |
| 12.4-18.0 GHz Max. VSWR .83 + .023fGHz |
| Part Number 3081-2241-00 |

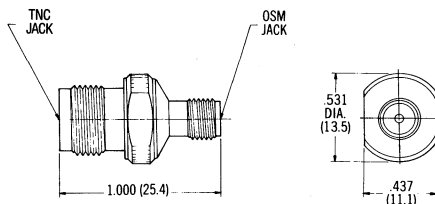
Finish: Passivated stainless steel.

Between-Series Adapters

TNC to OSM(SMA)

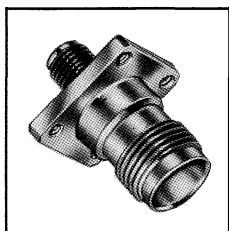


TNC Jack to OSM Jack

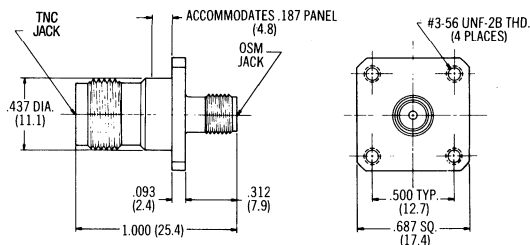


| | |
|--|---------------------|
| DC - 15.0 GHz Max. VSWR 1.07 + .015fGHz | |
| Part Number | 3180-2240-00 |
| Mode Free to 18.0 GHz Max. VSWR 1.07 + .015fGHz | |
| Type A TNC Interface | |
| Part Number | 4180-2240-00 |

Type A TNC Interface per MIL-STD-348
Fig. 3133 (male) and 3134 (female).
Finish: Passivated stainless steel.

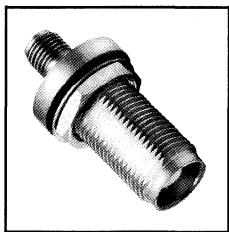


Flange Mount - TNC Jack to OSM Jack

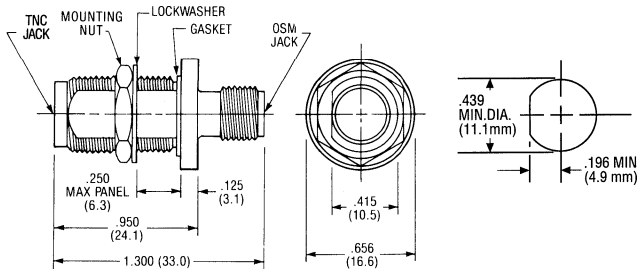


| | |
|--|---------------------|
| DC - 15.0 GHz Max. VSWR 1.07 + .015fGHz | |
| Part Number | 3180-2242-00 |
| Mode Free to 18.0 GHz Max. VSWR 1.07 + .015fGHz | |
| Type A TNC Interface | |
| Part Number | 4180-2242-00 |

Type A TNC Interface per MIL-STD-348
Fig. 3133 (male) and 3134 (female).
Finish: Passivated stainless steel.

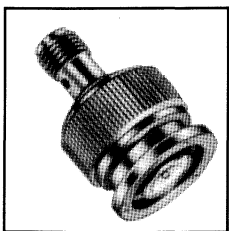


Bulkhead Mount - TNC Jack to OSM Jack

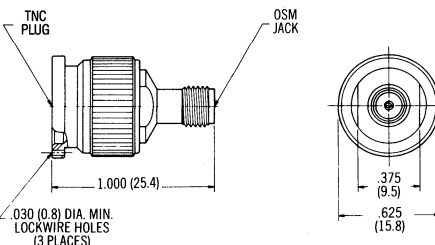


| | |
|--|---------------------|
| DC - 15.0 GHz Max. VSWR 1.07 + .015fGHz | |
| Part Number | 3184-2240-00 |
| Mode Free to 18.0 GHz Max. VSWR 1.07 + .015fGHz | |
| Type A TNC Interface | |
| Part Number | 4184-2240-00 |

Type A TNC Interface per MIL-STD-348
Fig. 3133 (male) and 3134 (female).
Finish: Passivated stainless steel.



TNC Plug to OSM Jack

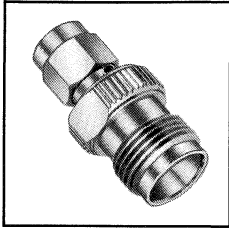


| | |
|--|---------------------|
| DC - 15.0 GHz Max. VSWR 1.07 + .015fGHz | |
| Part Number | 3182-2240-00 |
| Mode Free to 18.0 GHz Max. VSWR 1.07 + .015fGHz | |
| Type A TNC Interface | |
| Part Number | 4182-2240-00 |

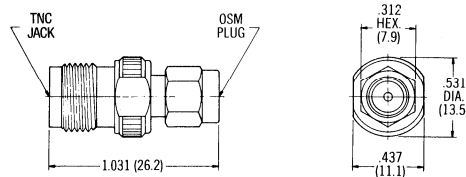
Type A TNC Interface per MIL-STD-348
Fig. 3133 (male) and 3134 (female).
Finish: Passivated stainless steel.
*Supplied with TNC hexed coupling nut.
*Torque wrench Part Number 2598-5298-54
recommended for installation.

Between-Series Adapters

TNC to OSM(SMA)

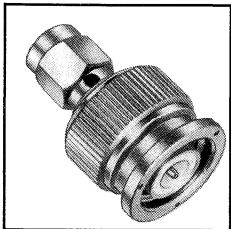


TNC Jack to OSM Plug

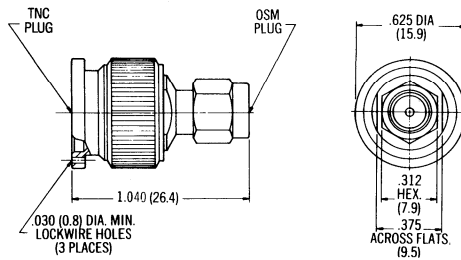


| | |
|---------------------------|---------------------|
| DC - 15.0 GHz | |
| Max. VSWR 1.07 + .015fGHz | |
| Part Number | 3182-2241-00 |
| Mode Free to 18.0 GHz | |
| Max. VSWR 1.07 + .015fGHz | |
| Type A TNC Interface | |
| Part Number | 4182-2241-00 |

Type A TNC Interface per MIL-STD-348 Fig. 313.3 (male) and 313.4 (female).
Finish: Passivated stainless steel.



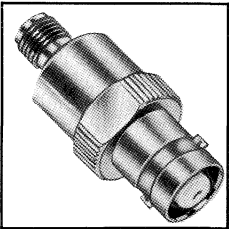
TNC Plug to OSM Plug



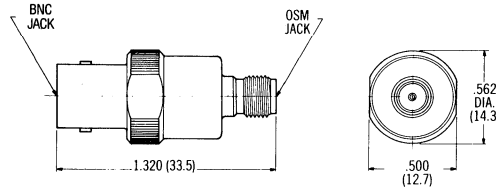
| | |
|---------------------------|---------------------|
| DC - 15.0 GHz | |
| Max. VSWR 1.07 + .015fGHz | |
| Part Number | 3181-2241-00 |
| Mode Free to 18.0 GHz | |
| Max. VSWR 1.07 + .015fGHz | |
| Type A TNC Interface | |
| Part Number | 4181-2241-00 |

Type A TNC Interface per MIL-STD-348 Fig. 313.3 (male) and 313.4 (female).
Finish: Passivated stainless steel.
*Supplied with TNC hexed coupling nut.
Torque wrench Part Number 2598-5027-54 recommended for installation.

BNC to OSM(SMA)

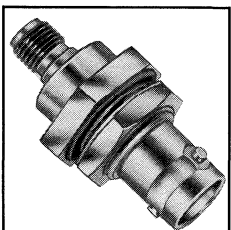


BNC Jack to OSM Jack

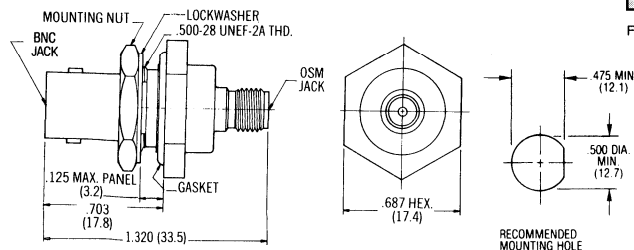


| | |
|-------------|---------------------|
| Part Number | 3280-2240-00 |
|-------------|---------------------|

Finish: BNC: Nickel plated brass,
OSM: Passivated stainless steel



Bulkhead Mount - BNC Jack to OSM Jack with Gasket



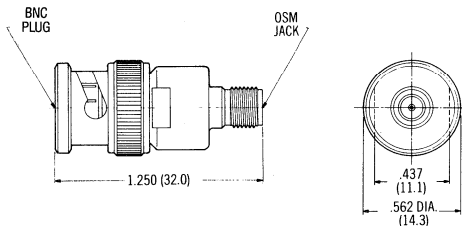
| | |
|-------------|---------------------|
| Part Number | 3284-2240-00 |
|-------------|---------------------|

Finish: BNC: Nickel plated brass,
OSM: Passivated stainless steel

Between-Series Adapters

BNC to OSM(SMA)

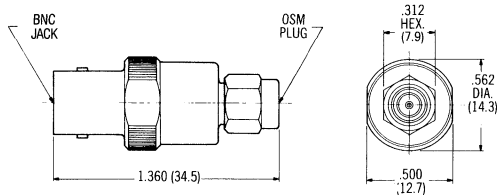
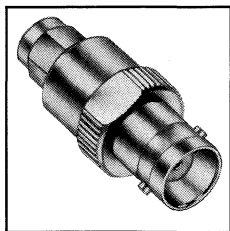
BNC Plug to OSM Jack



Part Number **3282-2240-00**

Finish: BNC: Nickel plated brass,
OSM: Passivated stainless steel

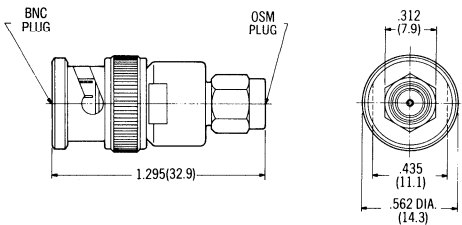
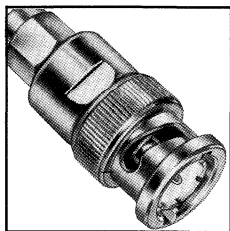
BNC Jack to OSM Plug



Part Number **3282-2241-00**

Finish: BNC: Nickel plated brass,
OSM: Passivated stainless steel

BNC Plug to OSM Plug

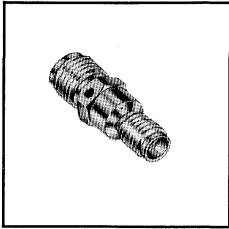


Part Number **3281-2241-00**

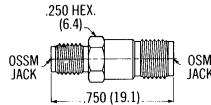
Finish: BNC: Nickel plated brass,
OSM: Passivated stainless steel

Between-Series Adapters

OSSM to OSM(SMA)

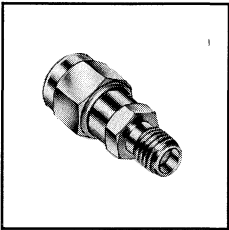


OSSM Jack to OSM Jack

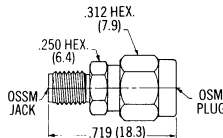


| |
|---------------------------------|
| DC-12.4 GHz |
| Max. VSWR 1.06 + .009fGHz |
| 12.4-25.0 GHz |
| Max. VSWR 1.05 + .01fGHz |
| Part Number 2080-2202-00 |

Finish: Gold plated stainless steel.

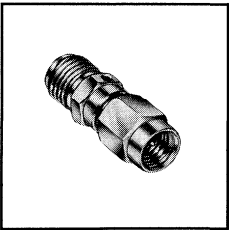


OSSM Jack to OSM Plug

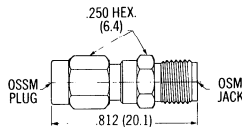


| |
|---------------------------------|
| DC-12.4 GHz |
| Max. VSWR 1.06 + .009fGHz |
| 12.4-25.0 GHz |
| Max. VSWR 1.05 + .01fGHz |
| Part Number 2082-2202-00 |

Finish: Gold plated stainless steel.

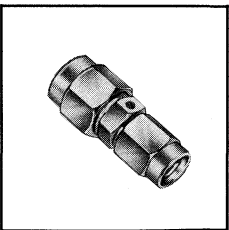


OSSM Plug to OSM Jack

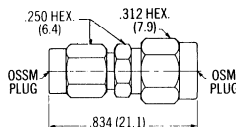


| |
|---------------------------------|
| DC-12.4 GHz |
| Max. VSWR 1.06 + .009fGHz |
| 12.4-25.0 GHz |
| Max. VSWR 1.05 + .01fGHz |
| Part Number 2082-2201-00 |

Finish: Gold plated stainless steel.



OSSM Plug to OSM Plug

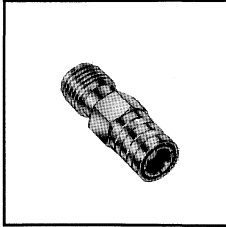


| |
|---------------------------------|
| DC-12.4 GHz |
| Max. VSWR 1.06 + .009fGHz |
| 12.4-25.0 GHz |
| Max. VSWR 1.05 + .01fGHz |
| Part Number 2081-2201-00 |

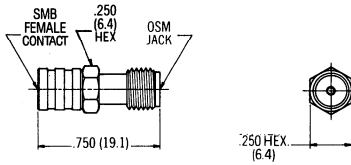
Finish: Gold plated stainless steel.

Between-Series Adapters

SMB to OSM(SMA)

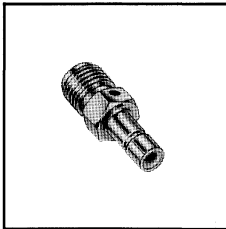


SMB Plug to OSM Jack

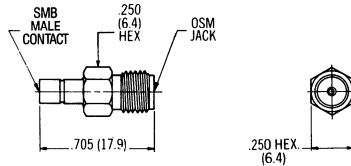


| | |
|-------------|---------------------|
| Part Number | 5182-2240-00 |
|-------------|---------------------|

Finish: Passivated stainless steel.

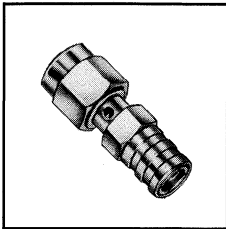


SMB Jack to OSM Jack

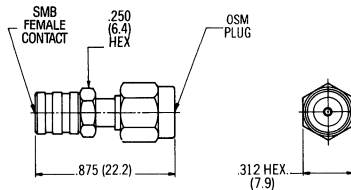


| | |
|-------------|---------------------|
| Part Number | 5180-2240-00 |
|-------------|---------------------|

Finish: Passivated stainless steel.

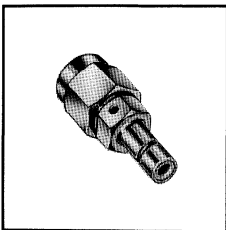


SMB Plug to OSM Plug

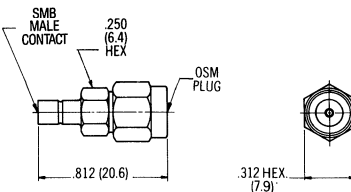


| | |
|-------------|---------------------|
| Part Number | 5181-2241-00 |
|-------------|---------------------|

Finish: Passivated stainless steel.



SMB Jack to OSM Plug

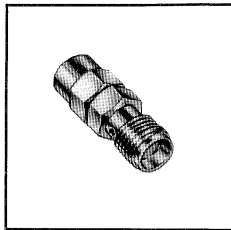


| | |
|-------------|---------------------|
| Part Number | 5182-2241-00 |
|-------------|---------------------|

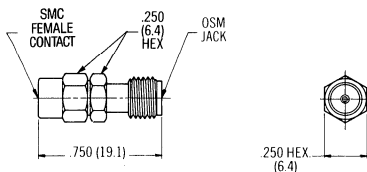
Finish: Passivated stainless steel.

Between-Series Adapters

SMC to OSM(SMA)

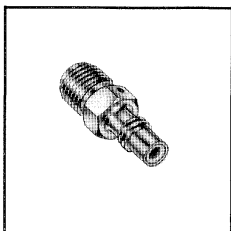


SMC Plug to OSM Jack

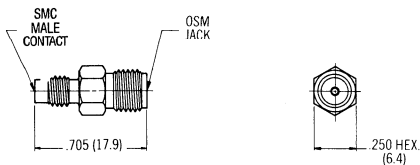


| | |
|---------------------------|---------------------|
| DC-10.0 GHz | |
| Max. VSWR 1.04 + .007fGHz | |
| Part Number | 5082-2240-00 |

Finish: Passivated stainless steel.

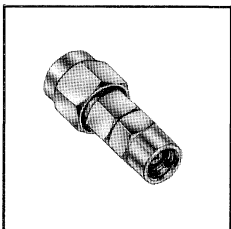


SMC Jack to OSM Jack

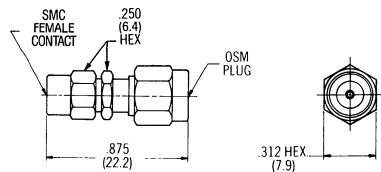


| | |
|---------------------------|---------------------|
| DC-10.0 GHz | |
| Max. VSWR 1.04 + .007fGHz | |
| Part Number | 5080-2240-00 |

Finish: Passivated stainless steel.

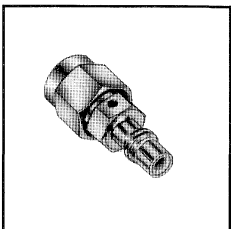


SMC Plug to OSM Plug

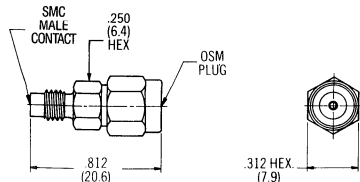


| | |
|---------------------------|---------------------|
| DC-10.0 GHz | |
| Max. VSWR 1.03 + .007fGHz | |
| Part Number | 5081-2241-00 |

Finish: Passivated stainless steel.



SMC Jack to OSM Plug



| | |
|---------------------------|---------------------|
| DC-10.0 GHz | |
| Max. VSWR 1.03 + .007fGHz | |
| Part Number | 5082-2241-00 |

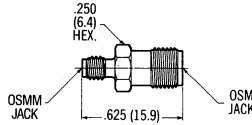
Finish: Passivated stainless steel.

Between-Series Adapters

OSMM to OSM(SMA)

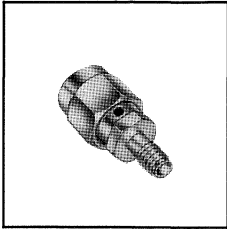


OSMM Jack to OSM Jack

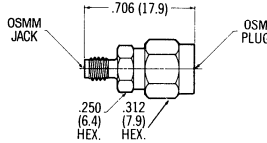


Part Number **2080-2212-00**

Finish: Gold plated stainless steel.

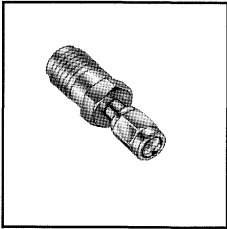


OSMM Jack to OSM Plug

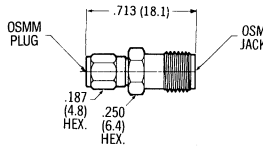


Part Number **2082-2212-00**

Finish: Gold plated stainless steel.

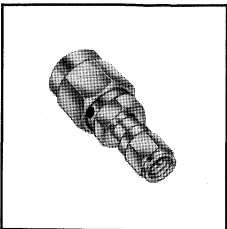


OSMM Plug to OSM Jack

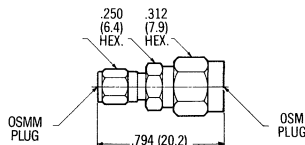


Part Number **2082-2211-00**

Finish: Gold plated stainless steel.



OSMM Plug to OSM Plug

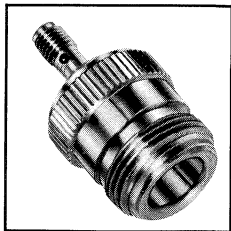


Part Number **2081-2211-00**

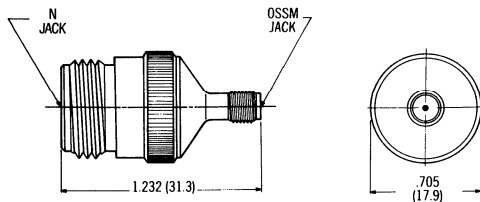
Finish: Gold plated stainless steel.

Between-Series Adapters

Type N to OSSM(SSMA)

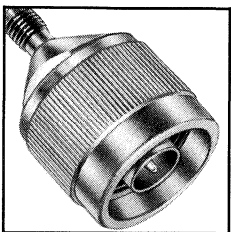


N Jack to OSSM Jack

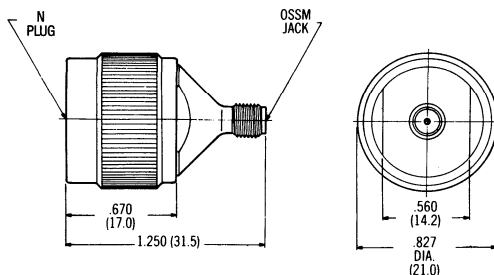


| | |
|---------------------------|---------------------|
| DC-12.4 GHz | |
| Max. VSWR 1.09 + .009fGHz | |
| Part Number | 3080-2202-00 |

Finish: Passivated stainless steel.

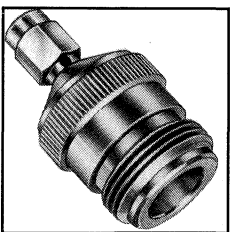


N Plug to OSSM Jack

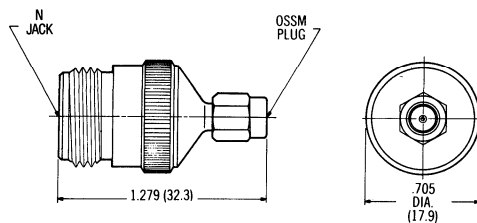


| | |
|---------------------------|---------------------|
| DC-12.4 GHz | |
| Max. VSWR 1.09 + .009fGHz | |
| Part Number | 3082-2202-00 |

Finish: Passivated stainless steel.

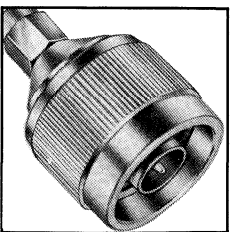


N Jack to OSSM Plug

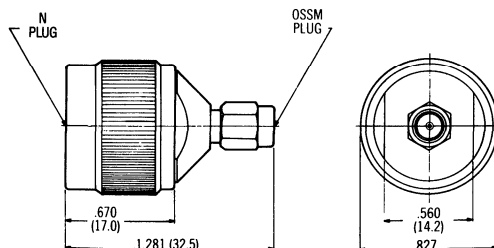


| | |
|---------------------------|---------------------|
| DC-12.4 GHz | |
| Max. VSWR 1.09 + .009fGHz | |
| Part Number | 3082-2201-00 |

Finish: Passivated stainless steel.



N Plug to OSSM Plug

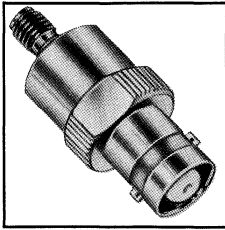


| | |
|---------------------------|---------------------|
| DC-12.4 GHz | |
| Max. VSWR 1.09 + .009fGHz | |
| Part Number | 3081-2201-00 |

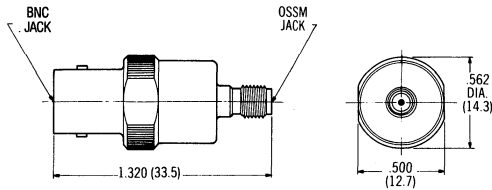
Finish: Passivated stainless steel.

Between-Series Adapters

BNC to OSSM(SSMA)

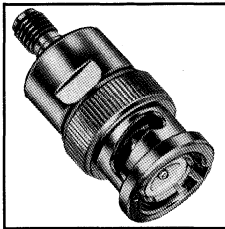


BNC Jack to OSSM Jack

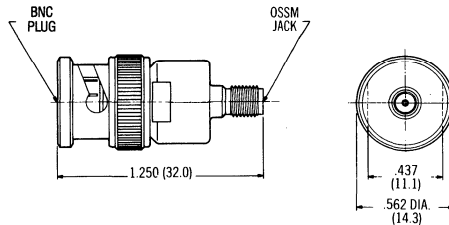


Part Number **3280-2202-00**

Finish: BNC: Nickel plated brass,
OSSM: Passivated stainless steel

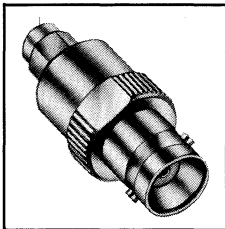


BNC Plug to OSSM Jack

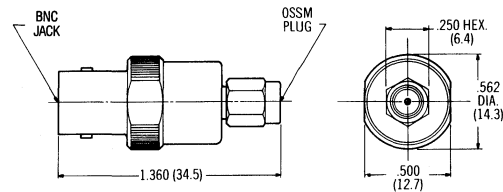


Part Number **3282-2202-00**

Finish: BNC: Nickel plated brass,
OSSM: Passivated stainless steel

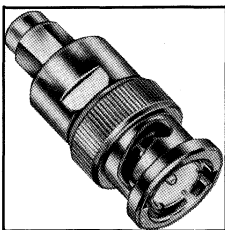


BNC Jack to OSSM Plug

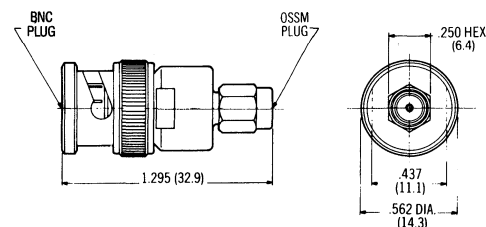


Part Number **3282-2201-00**

Finish: BNC: Nickel plated brass,
OSSM: Passivated stainless steel



BNC Plug to OSSM Plug

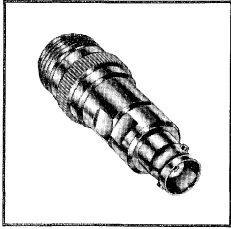


Part Number **3281-2201-00**

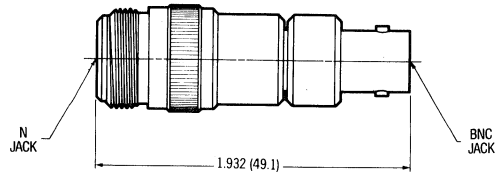
Finish: BNC: Nickel plated brass,
OSSM: Passivated stainless steel

Between-Series Adapters

Type N to BNC

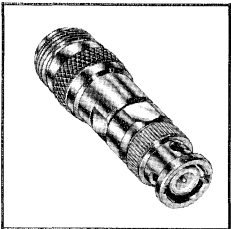


N Jack to BNC Jack

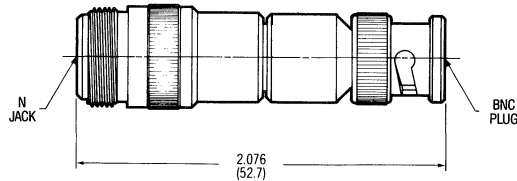


| | |
|-------------|---------------------|
| Part Number | 3080-2320-00 |
|-------------|---------------------|

Finish: BNC: Nickel plated brass,
N: Passivated stainless steel

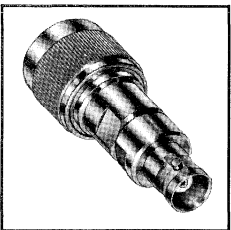


N Jack to BNC Plug

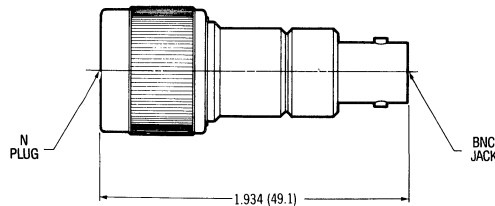


| | |
|-------------|---------------------|
| Part Number | 3082-2321-00 |
|-------------|---------------------|

Finish: BNC: Nickel plated brass,
N: Passivated stainless steel

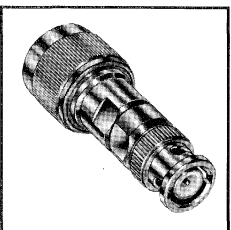


N Plug to BNC Jack

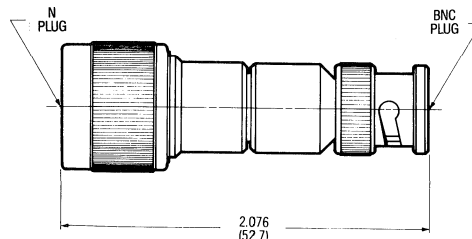


| | |
|-------------|---------------------|
| Part Number | 3082-2320-00 |
|-------------|---------------------|

Finish: BNC: Nickel plated brass,
N: Passivated stainless steel



N Plug to BNC Plug

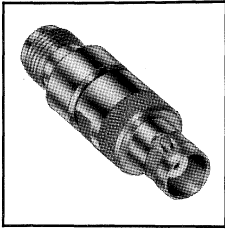


| | |
|-------------|---------------------|
| Part Number | 3081-2321-00 |
|-------------|---------------------|

Finish: BNC: Nickel plated brass,
N: Passivated stainless steel

Between-Series Adapters

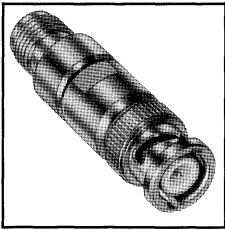
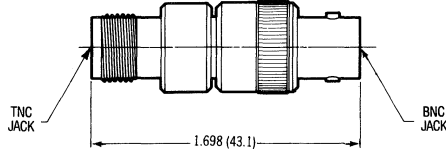
TNC to BNC



TNC Jack to BNC Jack

| | |
|-------------|---------------------|
| Part Number | 3180-2320-00 |
|-------------|---------------------|

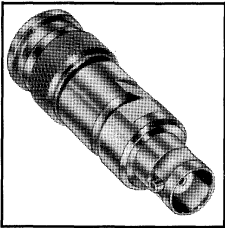
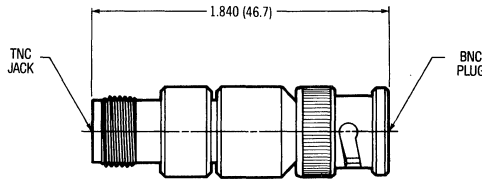
Finish: BNC: Nickel plated brass,
TNC: Passivated stainless steel



TNC Jack to BNC Plug

| | |
|-------------|---------------------|
| Part Number | 3182-2321-00 |
|-------------|---------------------|

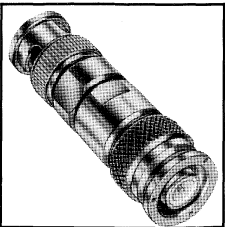
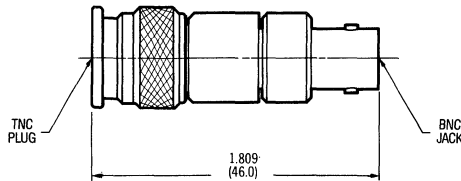
Finish: BNC: Nickel plated brass,
TNC: Passivated stainless steel



TNC Plug to BNC Jack

| | |
|-------------|---------------------|
| Part Number | 3182-2320-00 |
|-------------|---------------------|

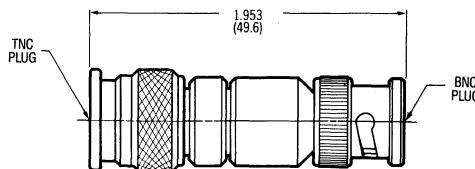
Finish: BNC: Nickel plated brass,
TNC: Passivated stainless steel



TNC Plug to BNC Plug

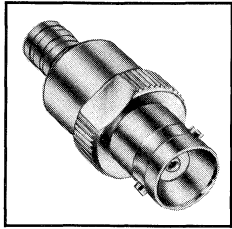
| | |
|-------------|---------------------|
| Part Number | 3181-2321-00 |
|-------------|---------------------|

Finish: BNC: Nickel plated brass,
TNC: Passivated stainless steel

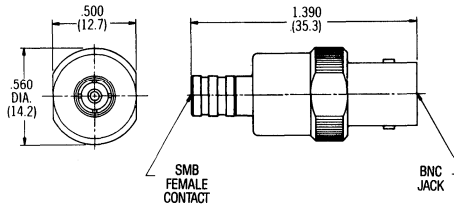


Between-Series Adapters

SMB to BNC

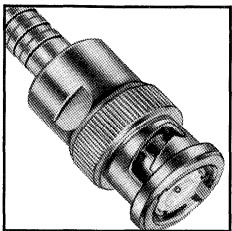


SMB Plug to BNC Jack

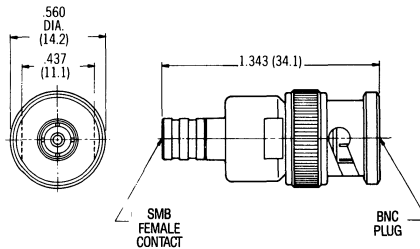


Part Number **3282-2223-00**

Finish: BNC: Nickel plated brass,
SMB: Passivated stainless steel

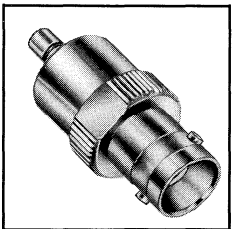


SMB Plug to BNC Plug

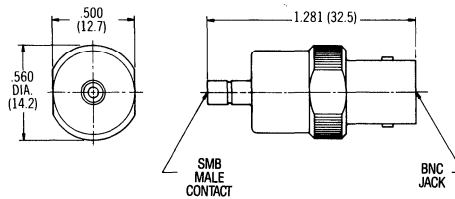


Part Number **3281-2223-00**

Finish: BNC: Nickel plated brass,
SMB: Passivated stainless steel

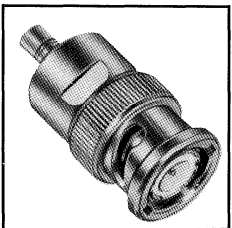


SMB Jack to BNC Jack

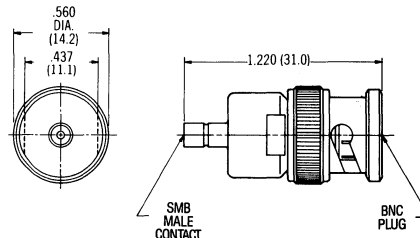


Part Number **3280-2224-00**

Finish: BNC: Nickel plated brass,
SMB: Passivated stainless steel



SMB Jack to BNC Plug

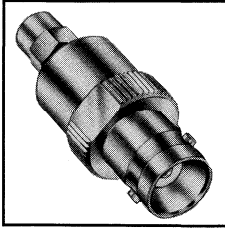


Part Number **3282-2224-00**

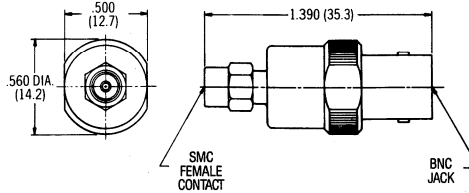
Finish: BNC: Nickel plated brass,
SMB: Passivated stainless steel

Between-Series Adapters

SMC to BNC

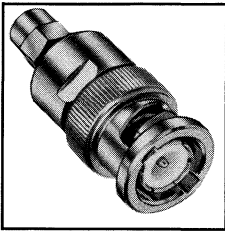


SMC Plug to BNC Jack

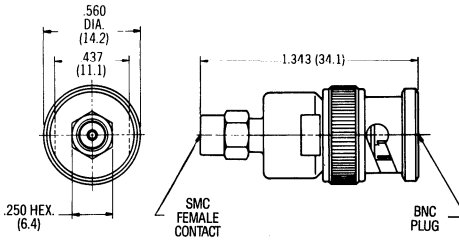


| | |
|-------------|---------------------|
| Part Number | 3282-2221-00 |
|-------------|---------------------|

Finish: BNC: Nickel plated brass,
SMC: Passivated stainless steel

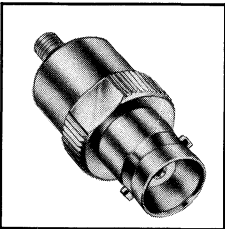


SMC Plug to BNC Plug

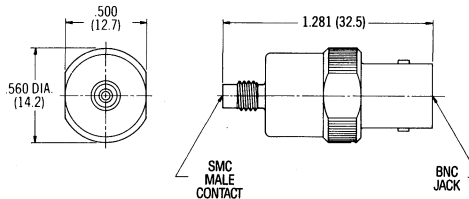


| | |
|-------------|---------------------|
| Part Number | 3281-2221-00 |
|-------------|---------------------|

Finish: BNC: Nickel plated brass,
SMC: Passivated stainless steel



SMC Jack to BNC Jack

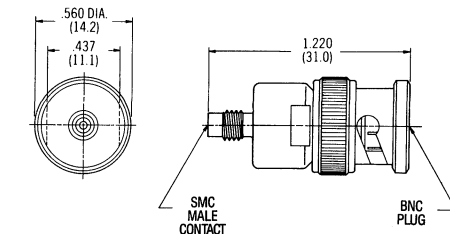


| | |
|-------------|---------------------|
| Part Number | 3280-2222-00 |
|-------------|---------------------|

Finish: BNC: Nickel plated brass,
SMC: Passivated stainless steel



SMC Jack to BNC Plug

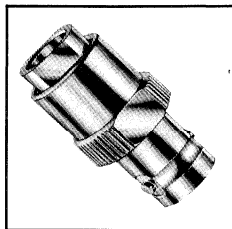


| | |
|-------------|---------------------|
| Part Number | 3282-2222-00 |
|-------------|---------------------|

Finish: BNC: Nickel plated brass,
SMC: Passivated stainless steel

Between-Series Adapters

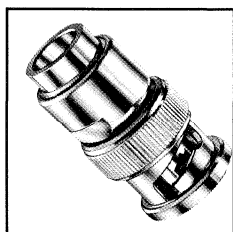
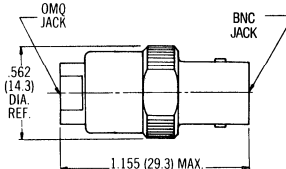
OMQ to BNC



OMQ Jack to BNC Jack

| | |
|-------------|---------------------|
| Part Number | 5680-2320-00 |
|-------------|---------------------|

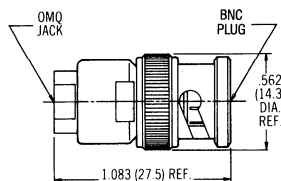
Finish: Nickel plated brass



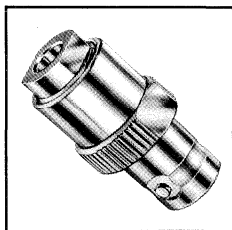
OMQ Jack to BNC Plug

| | |
|-------------|---------------------|
| Part Number | 5682-2321-00 |
|-------------|---------------------|

Finish: Nickel plated brass



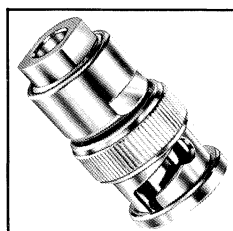
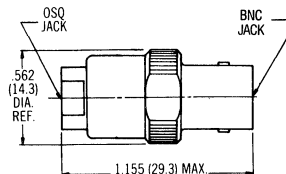
OSQ to BNC



OSQ Jack to BNC Jack

| | |
|-------------|---------------------|
| Part Number | 5780-2320-00 |
|-------------|---------------------|

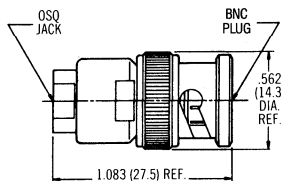
Finish: Nickel plated brass



OSQ Jack to BNC Plug

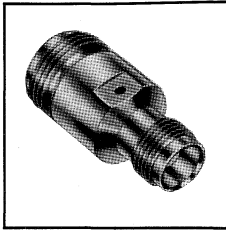
| | |
|-------------|---------------------|
| Part Number | 5782-2321-00 |
|-------------|---------------------|

Finish: Nickel plated brass

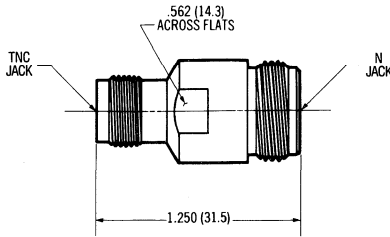


Between-Series Adapters

TNC to Type N

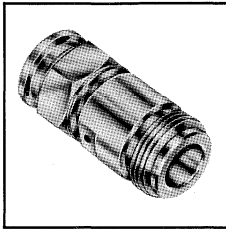


TNC Jack to N Jack

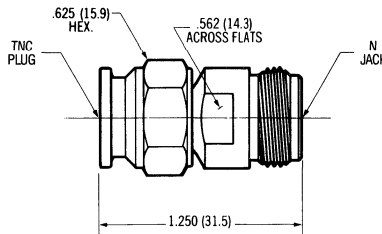


Part Number **3680-2310-02**

Finish: Passivated stainless steel.

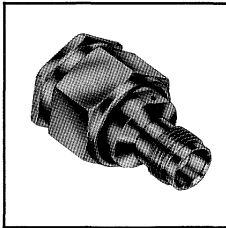


TNC Plug to N Jack

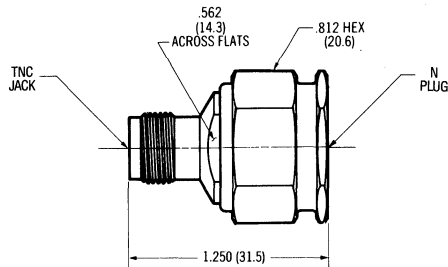


Part Number **3682-2311-02**

Finish: Passivated stainless steel.

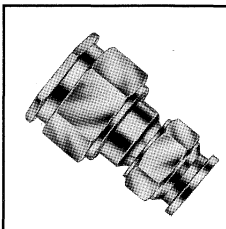


TNC Jack to N Plug

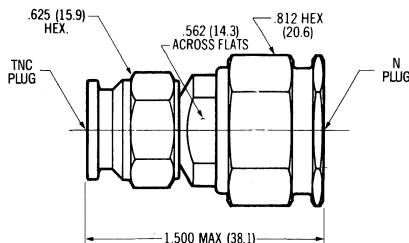


Part Number **3682-2310-02**

Finish: Passivated stainless steel.



TNC Plug to N Plug

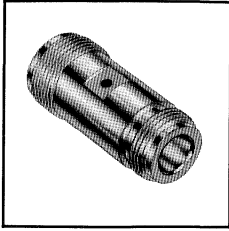


Part Number **3681-2311-02**

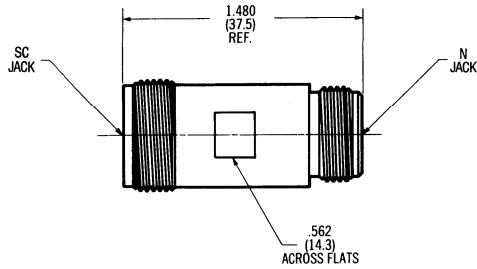
Finish: Passivated stainless steel.

Between-Series Adapters

SC to Type N

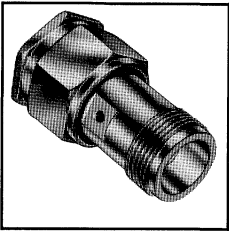


SC Jack to N Jack

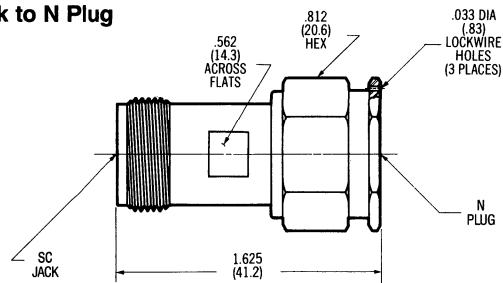


Part Number **3080-5007-02**

Finish: Passivated stainless steel.

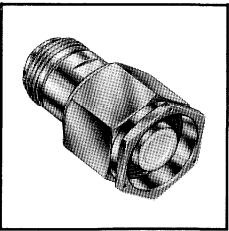


SC Jack to N Plug

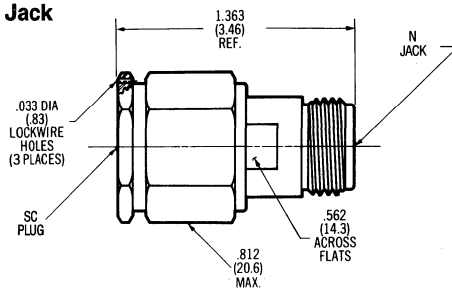


Part Number **3082-5014-02**

Finish: Passivated stainless steel.

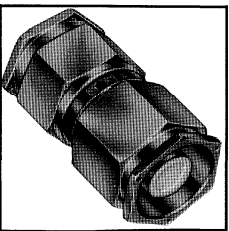


SC Plug to N Jack

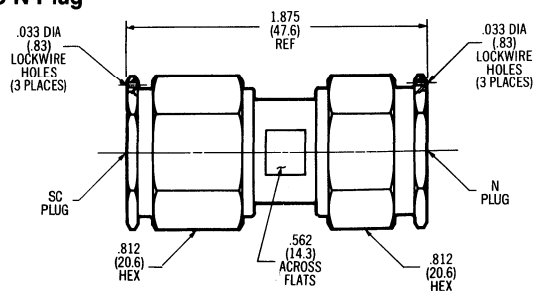


Part Number **3082-5012-02**

Finish: Passivated stainless steel.



SC Plug to N Plug

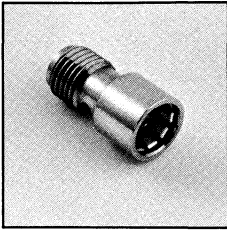


Part Number **3081-5008-02**

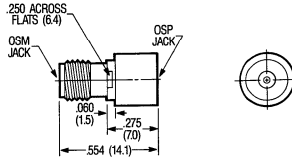
Finish: Passivated stainless steel.

Between-Series Adapters

OSP(BMA) to OSM(SMA)

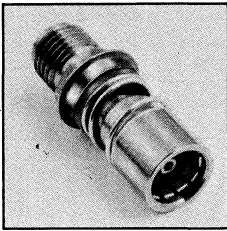


OSM Jack To OSP Jack

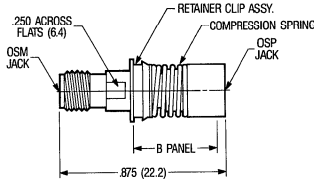


| | |
|---------------------------|---------------------|
| DC-18.0 GHz | |
| Max. VSWR 1.05 + .005fGHz | |
| Part Number | 4580-2240-02 |

Finish: Passivated stainless steel.



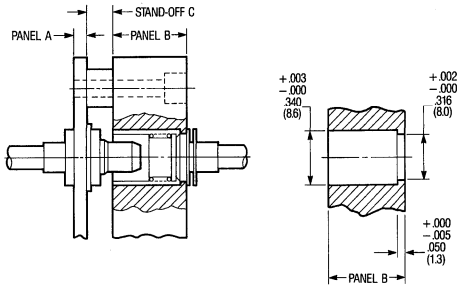
Floating Panel Mount - OSM Jack To OSP Jack



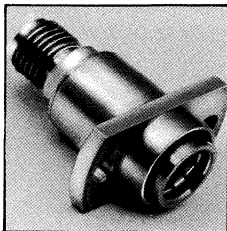
| | |
|---------------------------|---------------------|
| DC-18.0 GHz | |
| Max. VSWR 1.05 + .005fGHz | |
| Part Number | 4583-2240-02 |

Recommended removal tool:
Part Number: 4598-5015-54
Finish: Passivated stainless steel.

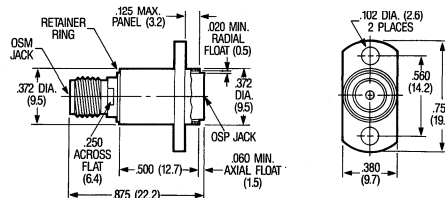
Recommended Mounting Detail



| Panel A ±.003 | Panel B ±.003 | Stand-Off C - .000 | + .050 |
|---------------|---------------|--------------------|-------------|
| Inches (mm) | Inches (mm) | Inches (mm) | Inches (mm) |
| .090 (2.3) | .375 (9.5) | .285 (7.2) | |
| .090 (2.3) | .438 (11.1) | .222 (5.6) | |
| .090 (2.3) | .500 (12.7) | .160 (4.1) | |
| .125 (3.2) | .375 (9.5) | .250 (6.4) | |
| .125 (3.2) | .438 (11.1) | .187 (4.7) | |
| .125 (3.2) | .500 (12.7) | .125 (3.2) | |



Floating Flange Mount - OSM Jack to OSP Jack

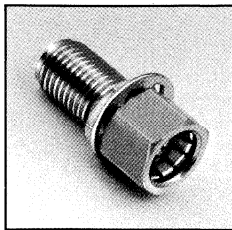


| | |
|---------------------------|---------------------|
| DC-18.0 GHz | |
| Max. VSWR 1.05 + .005fGHz | |
| Part Number | 4584-2242-02 |

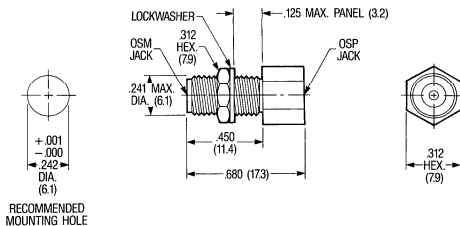
Finish: Passivated stainless steel.

Between-Series Adapters

OSP(BMA) to OSM(SMA)

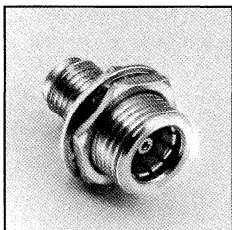


Bulkhead Mount – OSM Jack To OSP Jack

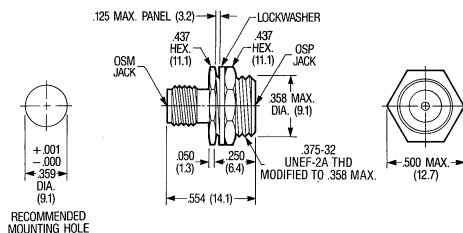


| | |
|--|---------------------|
| DC-18.0 GHz Max. VSWR 1.05 + .005fGHz | |
| Part Number | 4584-2244-02 |

Finish: Passivated stainless steel.

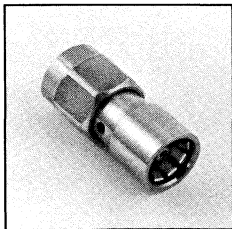


Bulkhead Mount – OSM Jack To OSP Jack

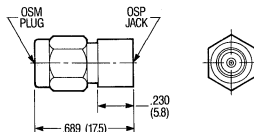


| | |
|--|---------------------|
| DC-18.0 GHz Max. VSWR 1.05 + .005fGHz | |
| Part Number | 4584-2240-02 |

Finish: Passivated stainless steel.

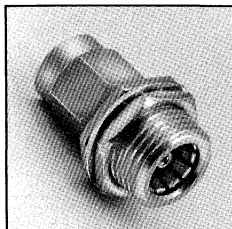


OSM Plug To OSP Jack

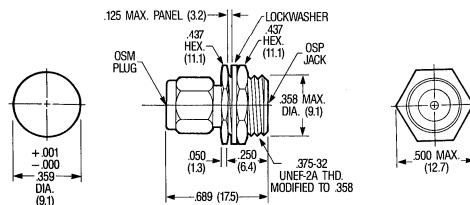


| | |
|--|---------------------|
| DC-18.0 GHz Max. VSWR 1.05 + .005fGHz | |
| Part Number | 4582-2241-02 |

Finish: Passivated stainless steel.



Bulkhead Mount – OSM Plug To OSP Jack

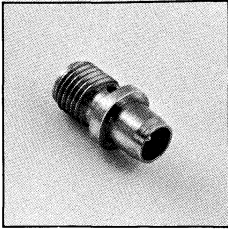


| | |
|--|---------------------|
| DC-18.0 GHz Max. VSWR 1.05 + .005fGHz | |
| Part Number | 4585-2241-02 |

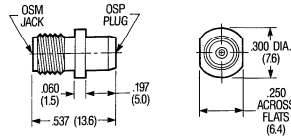
Finish: Passivated stainless steel.

Between-Series Adapters

OSP(BMA) to OSM(SMA)

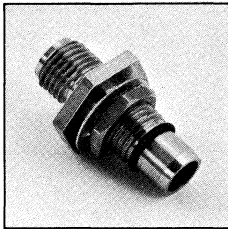


OSM Jack To OSP Plug

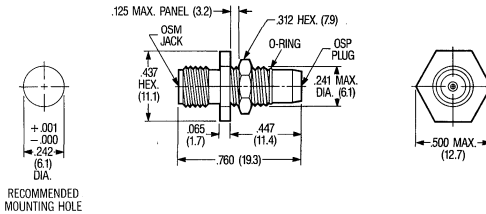


| | |
|---------------------------|---------------------|
| DC-18.0 GHz | |
| Max. VSWR 1.05 + .005fGHz | |
| Part Number | 4582-2240-02 |

Finish: Passivated stainless steel.

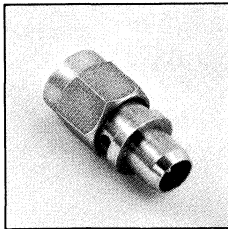


Bulkhead Mount - OSM Jack To OSP Plug

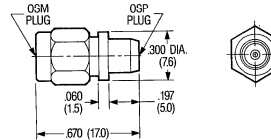


| | |
|---------------------------|---------------------|
| DC-18.0 GHz | |
| Max. VSWR 1.05 + .005fGHz | |
| Part Number | 4585-2240-02 |

Finish: Passivated stainless steel.

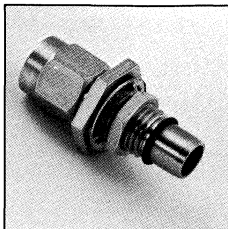


OSM Plug To OSP Plug

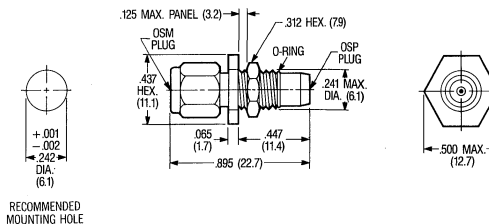


| | |
|---------------------------|---------------------|
| DC-18.0 GHz | |
| Max. VSWR 1.05 + .005fGHz | |
| Part Number | 4581-2241-02 |

Finish: Passivated stainless steel.
Bulkhead version available.
Order part number 4782-2244-02.



Bulkhead Mount - OSM Plug To OSP Plug

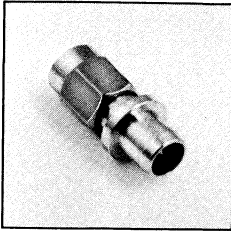


| | |
|---------------------------|---------------------|
| DC-18.0 GHz | |
| Max. VSWR 1.05 + .005fGHz | |
| Part Number | 4583-2241-02 |

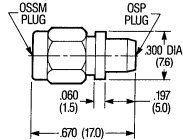
Finish: Passivated stainless steel.

Between-Series Adapters

OSP(BMA) to OSSM(SSMA)



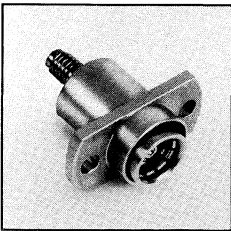
OSSM Plug To OSP Plug



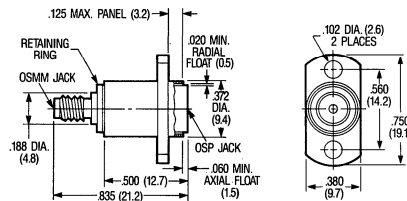
| | |
|---------------------------|---------------------|
| DC-12.4 GHz | |
| Max. VSWR 1.06 + .009fGHz | |
| 12.4-22.0 GHz | |
| Max. VSWR 1.05 + .01fGHz | |
| Part Number | 4581-2211-02 |

Finish: Passivated stainless steel.

OSP(BMA) to OSMM Microminiature



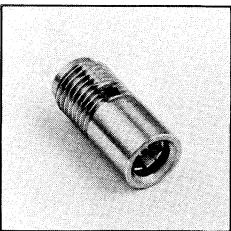
Floating Mount - OSMM Jack To OSP Jack



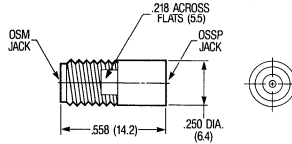
| | |
|--------------------------|---------------------|
| DC-18.0 GHz | |
| Max. VSWR 1.15 + .01fGHz | |
| Part Number | 4584-2212-02 |

Finish: Passivated stainless steel.

OSSP to OSM(SMA)

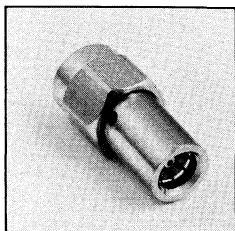


OSM Jack To OSSP Jack

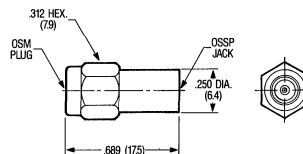


| | |
|---------------------------|---------------------|
| DC-18.0 GHz | |
| Max. VSWR 1.05 + .010fGHz | |
| Part Number | 4780-2240-02 |

Finish: Passivated stainless steel.



OSM Plug To OSSP Jack

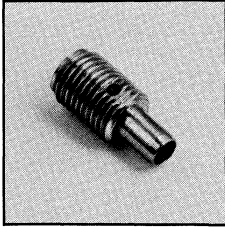


| | |
|---------------------------|---------------------|
| DC-18.0 GHz | |
| Max. VSWR 1.05 + .010fGHz | |
| Part Number | 4782-2241-02 |

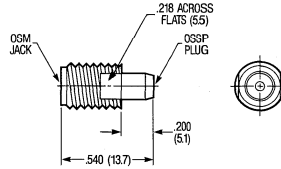
Finish: Passivated stainless steel.

Between-Series Adapters

OSSP to OSM(SMA)

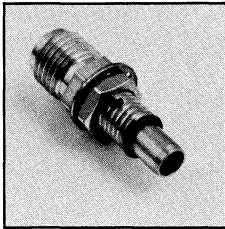


OSM Jack to OSSP Plug

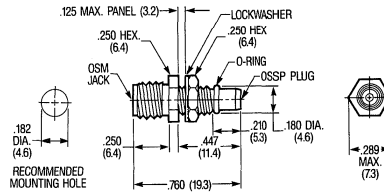


| | |
|---------------------------|---------------------|
| DC-18.0 GHz | |
| Max. VSWR 1.05 + .010fGHz | |
| Part Number | 4782-2240-02 |

Finish: Passivated stainless steel.

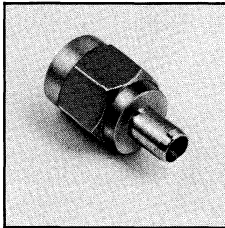


Bulkhead Mount - OSM Jack to OSSP Plug

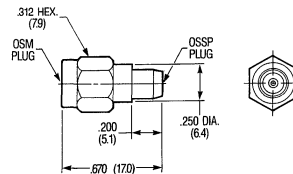


| | |
|---------------------------|---------------------|
| DC-18.0 GHz | |
| Max. VSWR 1.05 + .010fGHz | |
| Part Number | 4785-2240-02 |

Finish: Passivated stainless steel.

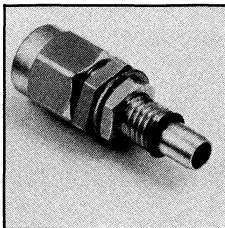


OSM Plug to OSSP Plug

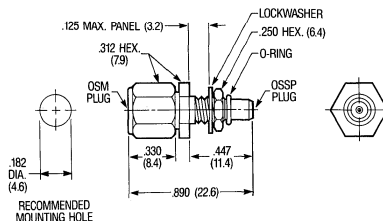


| | |
|---------------------------|---------------------|
| DC-18.0 GHz | |
| Max. VSWR 1.05 + .010fGHz | |
| Part Number | 4781-2241-02 |

Finish: Passivated stainless steel.



Bulkhead Mount - OSM Plug to OSSP Plug

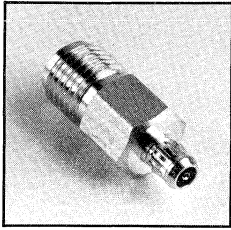


| | |
|---------------------------|---------------------|
| DC-18.0 GHz | |
| Max. VSWR 1.05 + .010fGHz | |
| Part Number | 4783-2241-02 |

Finish: Passivated stainless steel.

Between-Series Adapters

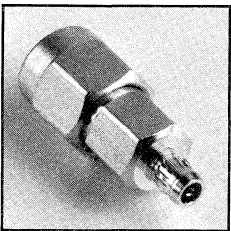
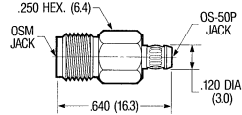
OS-50P to OSM(SMA)



OSM(SMA) Jack to OS-50P Microminiature Blind Mate Jack

| | |
|-------------|---------------------|
| Part Number | 8780-2200-00 |
|-------------|---------------------|

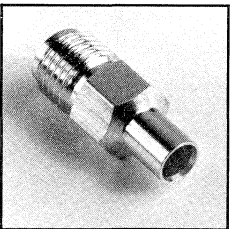
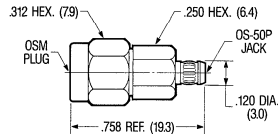
Finish: Gold plated.



OSM(SMA) Plug to OS-50P Microminiature Blind Mate Jack

| | |
|-------------|---------------------|
| Part Number | 8782-2201-00 |
|-------------|---------------------|

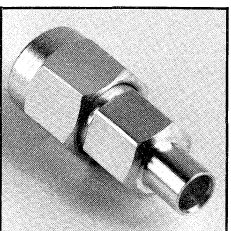
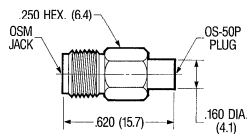
Finish: Gold plated.



OSM(SMA) Jack to OS-50P Microminiature Blind Mate Plug

| | |
|-------------|---------------------|
| Part Number | 8782-2200-00 |
|-------------|---------------------|

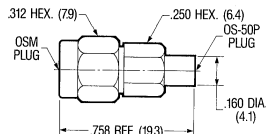
Finish: Gold plated.



OSM(SMA) Plug to OS-50P Microminiature Blind Mate Plug

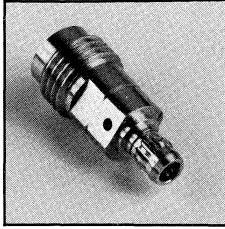
| | |
|-------------|---------------------|
| Part Number | 8781-2201-00 |
|-------------|---------------------|

Finish: Gold plated.



Between-Series Adapters

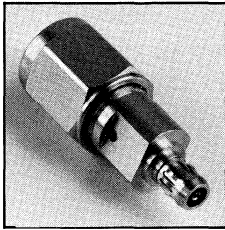
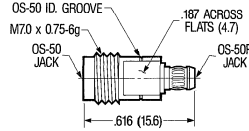
OS-50P to OS-2.4 (OS-50, 2.4mm)



OS-2.4 Jack to OS-50P Microminiature Blind Mate Jack

| | |
|-------------|--------------|
| Part Number | 8780-2850-02 |
|-------------|--------------|

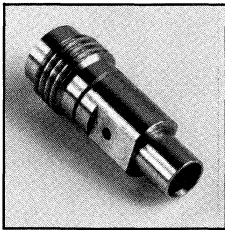
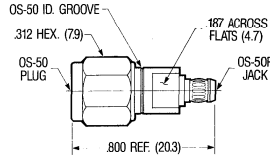
Finish: Passivated stainless steel.



OS-2.4 Plug to OS-50P Microminiature Blind Mate Jack

| | |
|-------------|--------------|
| Part Number | 8782-2851-02 |
|-------------|--------------|

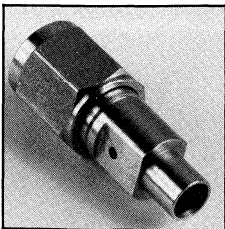
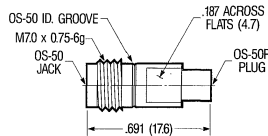
Finish: Passivated stainless steel.



OS-2.4 Jack to OS-50P Microminiature Blind Mate Plug

| | |
|-------------|--------------|
| Part Number | 8782-2850-02 |
|-------------|--------------|

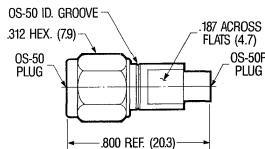
Finish: Passivated stainless steel.



OS-2.4 Plug to OS-50P Microminiature Blind Mate Plug

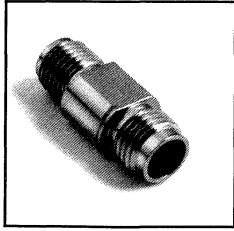
| | |
|-------------|--------------|
| Part Number | 8781-2851-02 |
|-------------|--------------|

Finish: Passivated stainless steel.

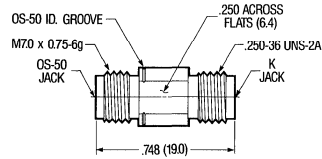


Between-Series Adapters

OS-2.4 (OS-50, 2.4mm) to OS-2.9* (2.92mm)

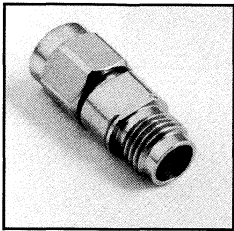


OS-2.4 Jack to OS-2.9 Jack

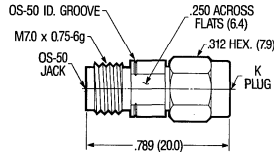


| | | | |
|-------------|--------------|---------------|---------------|
| Part Number | 8580-2361-02 | | |
| Frequency | DC -18 GHz | 18 - 26.5 GHz | 26.5 - 40 GHz |
| Return Loss | 26dB | 24dB | 18dB |

Finish: Passivated stainless steel

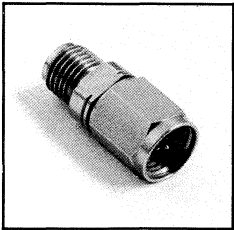


OS-2.4 Jack to OS-2.9 Plug

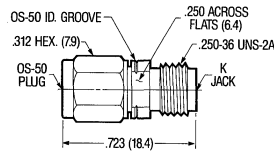


| | | | |
|-------------|--------------|---------------|---------------|
| Part Number | 8582-2361-02 | | |
| Frequency | DC -18 GHz | 18 - 26.5 GHz | 26.5 - 40 GHz |
| Return Loss | 26dB | 24dB | 18dB |

Finish: Passivated stainless steel

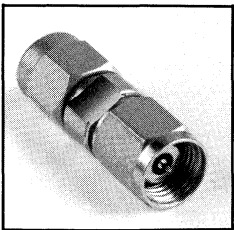


OS-2.4 Plug to OS-2.9 Jack

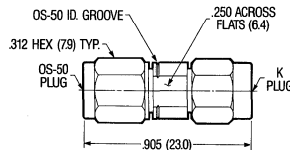


| | | | |
|-------------|--------------|---------------|---------------|
| Part Number | 8582-2362-02 | | |
| Frequency | DC -18 GHz | 18 - 26.5 GHz | 26.5 - 40 GHz |
| Return Loss | 26dB | 24dB | 18dB |

Finish: Passivated stainless steel



OS-2.4 Plug to OS-2.9 Plug



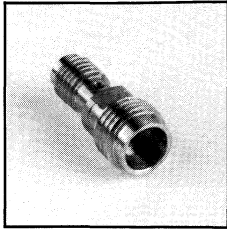
| | | | |
|-------------|--------------|---------------|---------------|
| Part Number | 8581-2361-02 | | |
| Frequency | DC -18 GHz | 18 - 26.5 GHz | 26.5 - 40 GHz |
| Return Loss | 26dB | 24dB | 18dB |

Finish: Passivated stainless steel.

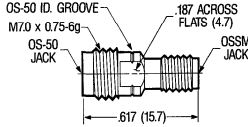
*OS-2.9 is a K Connector equivalent built under license from the Wilton Company, Morgan Hill, CA.

Between-Series Adapters

OS-2.4 (OS-50, 2.4mm) to OSSM (SSMA)

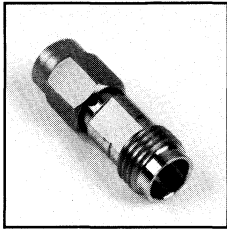


OS-2.4 Jack to OSSM Jack

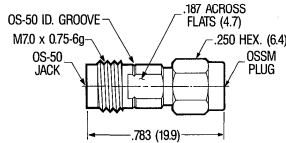


| | | | |
|-------------|---------------------|---------------|---------------|
| Part Number | 8580-2140-02 | | |
| Frequency | DC -18 GHz | 18 - 26.5 GHz | 26.5 - 40 GHz |
| Return Loss | 19dB | 17dB | 15dB |

Finish: Passivated stainless steel.

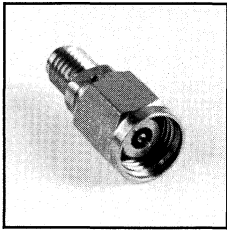


OS-2.4 Jack to OSSM Plug

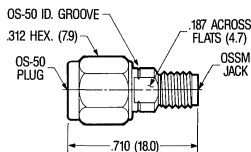


| | | | |
|-------------|---------------------|---------------|---------------|
| Part Number | 8582-2141-02 | | |
| Frequency | DC -18 GHz | 18 - 26.5 GHz | 26.5 - 40 GHz |
| Return Loss | 19dB | 17dB | 15dB |

Finish: Passivated stainless steel.

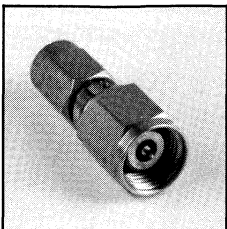


OS-2.4 Plug to OSSM Jack

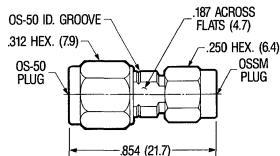


| | | | |
|-------------|---------------------|---------------|---------------|
| Part Number | 8582-2140-02 | | |
| Frequency | DC -18 GHz | 18 - 26.5 GHz | 26.5 - 40 GHz |
| Return Loss | 19dB | 17dB | 15dB |

Finish: Passivated stainless steel.



OS-2.4 Plug to OSSM Plug



| | | | |
|-------------|---------------------|---------------|---------------|
| Part Number | 8581-2141-02 | | |
| Frequency | DC -18 GHz | 18 - 26.5 GHz | 26.5 - 40 GHz |
| Return Loss | 19dB | 17dB | 15dB |

Finish: Passivated stainless steel.

PRECISION COAXIAL ADAPTERS



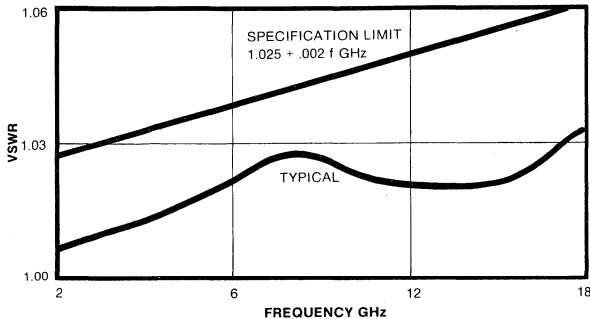
Precision Adapters

OSM(SMA) to 7mm

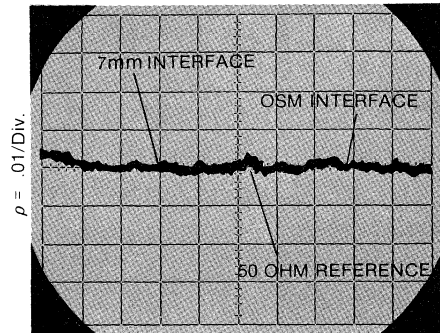
Adapter Part Numbers 2082-2700-00 and 2081-2700-00 provide a means of adapting from 7mm equipped precision test instrumentation to devices and components using OSM connectors.

The option of full fluted body style aids in inhibiting over-torquing of the connector between the two 7mm connectors, thus providing longer useful life while maintaining precision interfaces.

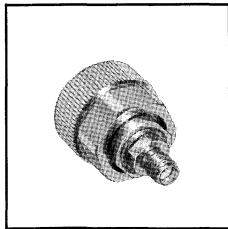
TYPICAL PERFORMANCE OF 2082-2700-00 and 2081-2700-00 ADAPTERS



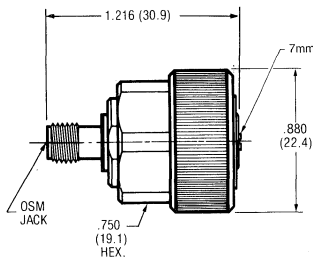
ADAPTERS 30 Picosecond Risetime Pulse TDR Trace



.200-inch/Div.

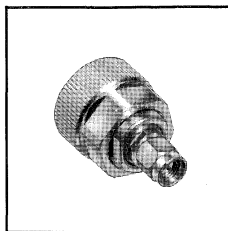


OSM Jack to 7mm

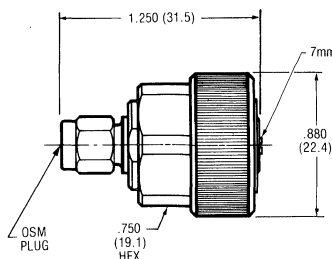


| | |
|----------------------------|---------------------|
| DC - 18.0 GHz | |
| Max. VSWR 1.025 + .002fGHz | |
| Part Number | 2082-2700-00 |
| Full Fluted Connector | |
| Part Number | 7482-2240-00 |
| DC - 12.0 GHz | |
| Part Number | 7082-2240-04 |

Conforms to the mechanical and electrical requirements of the Standard Test Connector MIL-C-39012/B Amendment 1.
Finish: 7mm: Electropolished stainless steel, OSM: Passivated stainless steel



OSM Plug to 7mm

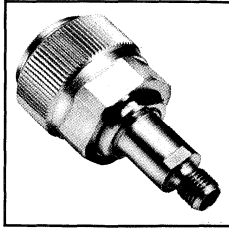


| | |
|----------------------------|---------------------|
| DC - 18.0 GHz | |
| Max. VSWR 1.025 + .002fGHz | |
| Part Number | 2081-2700-00 |
| Full Fluted Connector | |
| Part Number | 7481-2241-00 |
| DC - 12.0 GHz | |
| Part Number | 7081-2241-04 |

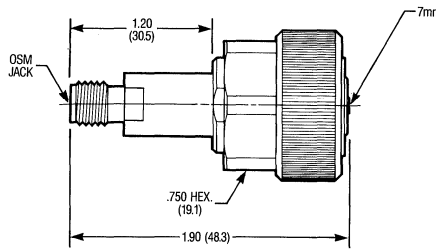
Conforms to the mechanical and electrical requirements of the Standard Test Connector MIL-C-39012/B Amendment 1.
Finish: 7mm: Electropolished stainless steel, OSM: Passivated stainless steel

Precision Adapters

OSM(SMA) to 7mm

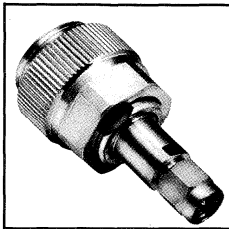


Long Neck - OSM Jack to 7mm

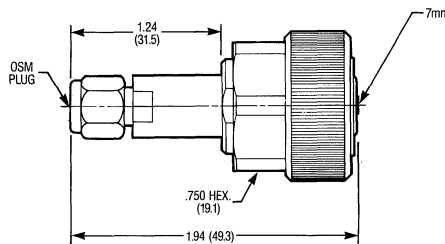


| | |
|--|---------------------|
| DC - 18.0 GHz Max. VSWR 1.025 + .0025fGHz | |
| Part Number | 7082-2240-03 |
| Full Fluted Connector | |
| Part Number | 7482-2240-03 |

Conforms to the mechanical and electrical requirements of the Standard Test Connector MIL-C-39012/B Amendment 1.
Finish: 7mm: Electropolished stainless steel,
OSM: Passivated stainless steel

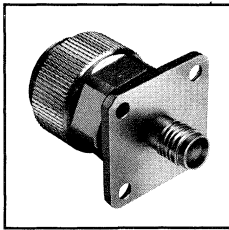


Long Neck - OSM Plug to 7mm

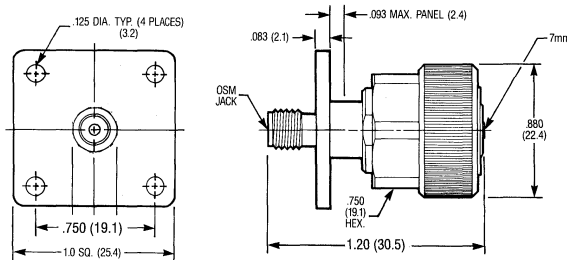


| | |
|--|---------------------|
| DC - 18.0 GHz Max. VSWR 1.025 + .0025fGHz | |
| Part Number | 7081-2241-03 |
| Full Fluted Connector | |
| Part Number | 7481-2241-03 |

Conforms to the mechanical and electrical requirements of the Standard Test Connector MIL-C-39012/B Amendment 1.
Finish: 7mm: Electropolished stainless steel,
OSM: Passivated stainless steel



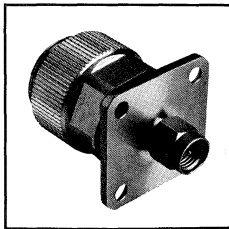
Flange Mount - OSM Jack to 7mm



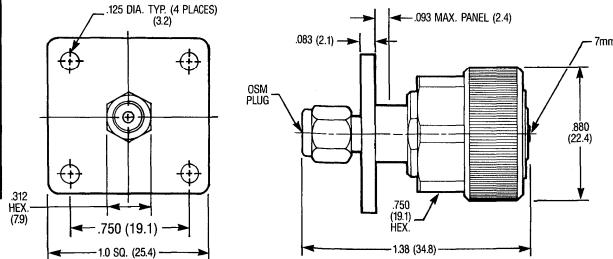
| | |
|---|---------------------|
| DC - 18.0 GHz Max. VSWR 1.025 + .002fGHz | |
| Part Number | 7082-2242-00 |
| Full Fluted Connector | |
| Part Number | 2096-2701-00 |

Conforms to the mechanical and electrical requirements of the Standard Test Connector MIL-C-39012/B Amendment 1.
Finish: 7mm: Electropolished stainless steel,
OSM: Passivated stainless steel

Mounting hole .900 dia. minimum



Flange Mount - OSM Plug to 7mm



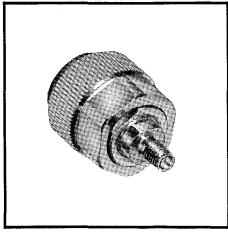
| | |
|---|---------------------|
| DC - 18.0 GHz Max. VSWR 1.025 + .002fGHz | |
| Part Number | 7082-2243-00 |
| Full Fluted Connector | |
| Part Number | 2095-2701-00 |

Conforms to the mechanical and electrical requirements of the Standard Test Connector MIL-C-39012/B Amendment 1.
Finish: 7mm: Electropolished stainless steel,
OSM: Passivated stainless steel

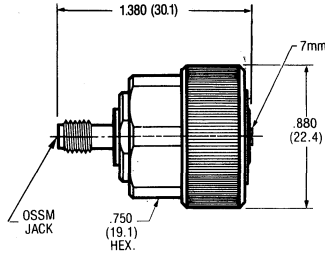
Mounting hole .900 dia. minimum

Precision Adapters

OSSM(SSMA) to 7mm

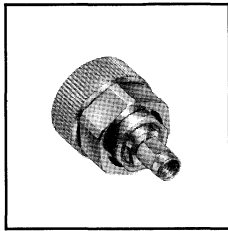


OSSM Jack to 7mm

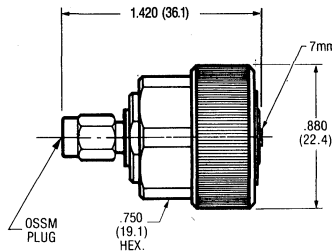


| | |
|--|---------------------|
| DC - 18.0 GHz Max. VSWR 1.03 + .003fGHz | |
| Part Number | 1082-2700-00 |
| Full Fluted Connector | |
| Part Number | 1082-2701-00 |

Finish: 7mm: Electropolished stainless steel,
OSSM: Passivated stainless steel



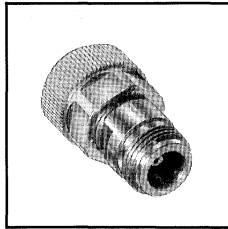
OSSM Plug to 7mm



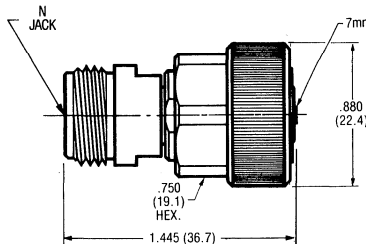
| | |
|--|---------------------|
| DC - 18.0 GHz Max. VSWR 1.03 + .003fGHz | |
| Part Number | 1081-2700-00 |
| Full Fluted Connector | |
| Part Number | 1081-2701-00 |

Finish: 7mm: Electropolished stainless steel,
OSSM: Passivated stainless steel

Type N to 7mm



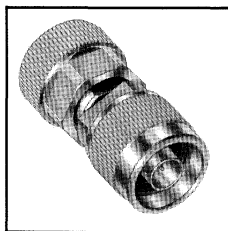
N Jack to 7mm



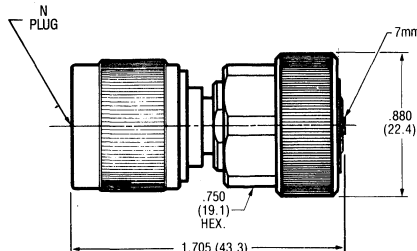
| | |
|--|---------------------|
| DC - 18.0 GHz Max. VSWR 1.015 + .0025fGHz | |
| Part Number | 7082-2300-00 |
| Full Fluted Connector | |
| Part Number | 7482-2300-00 |
| DC - 18.0 GHz Max. VSWR 1.03 + .002fGHz | |
| Part Number | 7082-5004-00 |
| Full Fluted Connector | |
| Part Number | 7482-5004-00 |

Conforms to the mechanical and electrical requirements
of the Standard Test Connector MIL-C-39012/B
Amendment 1.

Finish: 7mm: Electropolished stainless steel,
N: Passivated stainless steel



N Plug to 7mm



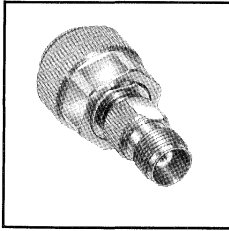
| | |
|--|---------------------|
| DC - 18.0 GHz Max. VSWR 1.015 + .0025fGHz | |
| Part Number | 7081-2301-00 |
| Full Fluted Connector | |
| Part Number | 7481-2301-00 |
| DC - 18.0 GHz Max. VSWR 1.03 + .002fGHz | |
| Part Number | 7081-5008-00 |
| Full Fluted Connector | |
| Part Number | 7481-5008-00 |

Conforms to the mechanical and electrical requirements
of the Standard Test Connector MIL-C-39012/B
Amendment 1.

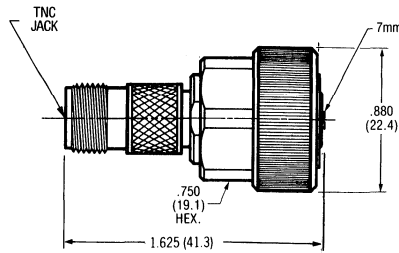
Finish: 7mm: Electropolished stainless steel,
N: Passivated stainless steel

Precision Adapters

TNC to 7mm

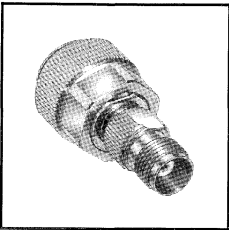


TNC Jack to 7mm

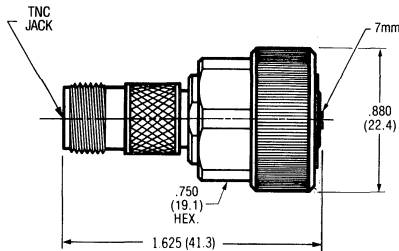


| | |
|---------------------------|---------------------|
| DC - 16.0 GHz | |
| Max. VSWR 1.02 + .006fGHz | |
| Part Number | 7082-2310-00 |
| Full Fluted Connector | |
| Part Number | 7482-2310-00 |
| DC - 16.0 GHz | |
| Max. VSWR 1.02 + .003fGHz | |
| Part Number | 7082-5005-00 |
| Full Fluted Connector | |
| Part Number | 7482-5005-00 |

Conforms to the mechanical and electrical requirements of the Standard Test Connector MIL-C-39012/B Amendment 1.
Finish: 7mm: Electropolished stainless steel, TNC: Passivated stainless steel



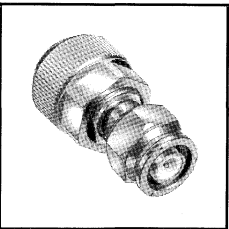
TNC Jack to 7mm - Mode Free to 18 GHz



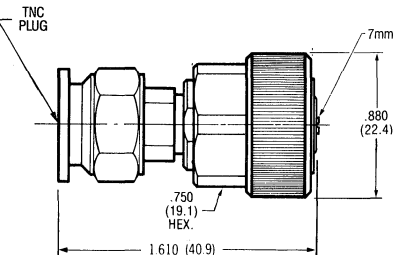
| | |
|----------------------|---------------------|
| Max. VSWR | |
| DC-4GHz 1.04:1 | |
| 4-12.4GHz 1.09:1 | |
| 12.4-18GHz 1.13:1 | |
| Part Number | 7082-5016-00 |
| Type A TNC Interface | |
| Part Number | 7082-2410-00 |

Conforms to the mechanical and electrical requirements of the Standard Test Connector MIL-C-39012/B Amendment 1.

Type A TNC interface per MIL-STD-348 Fig. 313.3 (male) and 313.4 (female).
Finish: 7mm: Electropolished stainless steel, TNC: Passivated stainless steel



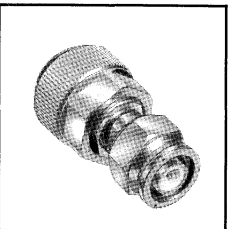
TNC Plug to 7mm



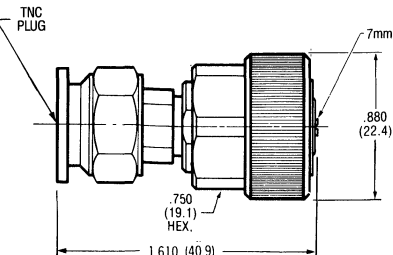
| | |
|---------------------------|---------------------|
| DC - 16.0 GHz | |
| Max. VSWR 1.02 + .006fGHz | |
| Part Number | 7081-2311-00 |
| Full Fluted Connector | |
| Part Number | 7481-2311-00 |
| DC - 16.0 GHz | |
| Max. VSWR 1.02 + .003fGHz | |
| Part Number | 7081-5009-00 |
| Full Fluted Connector | |
| Part Number | 7481-5009-00 |

Conforms to the mechanical and electrical requirements of the Standard Test Connector MIL-C-39012/B Amendment 1.

Finish: 7mm: Electropolished stainless steel, TNC: Passivated stainless steel



TNC Plug to 7mm - Mode Free to 18 GHz



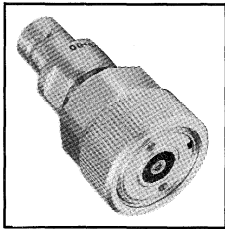
| | |
|----------------------|---------------------|
| Max. VSWR | |
| DC-4GHz 1.04:1 | |
| 4-12.4GHz 1.09:1 | |
| 12.4-18GHz 1.13:1 | |
| Part Number | 7081-5022-00 |
| Type A TNC Interface | |
| Part Number | 7081-2141-00 |

Conforms to the mechanical and electrical requirements of the Standard Test Connector MIL-C-39012/B Amendment 1.

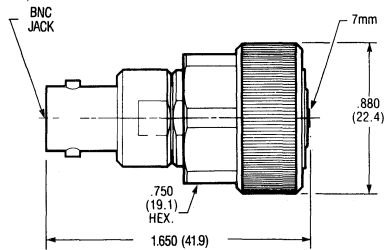
Type A TNC interface per MIL-STD-348 Fig. 313.3 (male) and 313.4 (female).
Finish: 7mm: Electropolished stainless steel, TNC: Passivated stainless steel

Precision Adapters

BNC to 7mm

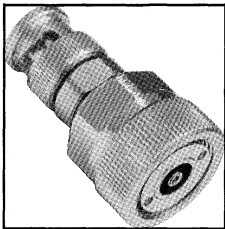


BNC Jack to 7mm

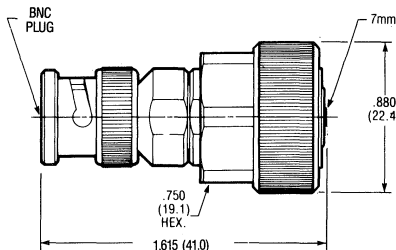


| | |
|---|---------------------|
| DC-4.0 GHz Max. VSWR 1.12 + .007fGHz | |
| Part Number | 7082-2320-00 |
| Full Fluted Connector | |
| Part Number | 7482-2320-00 |

Finish: 7mm: Electropolished stainless steel,
BNC: nickel plated brass



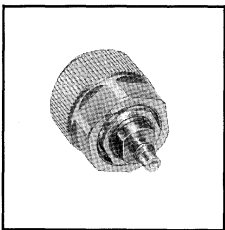
BNC Plug to 7mm



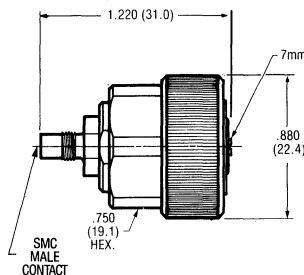
| | |
|---|---------------------|
| DC-4.0 GHz Max. VSWR 1.12 + .007fGHz | |
| Part Number | 7081-2321-00 |
| Full Fluted Connector | |
| Part Number | 7481-2321-00 |

Finish: 7mm: Electropolished stainless steel,
BNC: nickel plated brass

SMC to 7mm

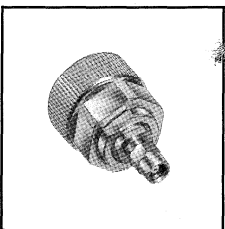


SMC Jack to 7mm

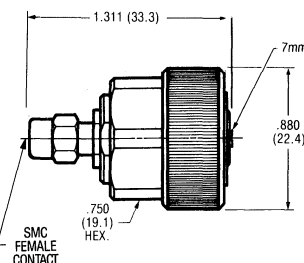


| | |
|---|---------------------|
| DC-12.4 GHz Max. VSWR 1.015 + .004fGHz | |
| Part Number | 5082-2700-00 |
| Full Fluted Connector | |
| Part Number | 7482-2222-00 |

Conforms to the mechanical and electrical requirements
of the Standard Test Connector MIL-C-39012/B
Amendment 1.
Finish: 7mm: Electropolished stainless steel,
SMC: Passivated stainless steel



SMC Plug to 7mm

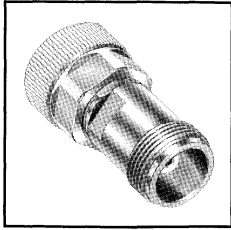


| | |
|---|---------------------|
| DC-12.4 GHz Max. VSWR 1.015 + .004fGHz | |
| Part Number | 5081-2700-00 |
| Full Fluted Connector | |
| Part Number | 7481-2221-00 |

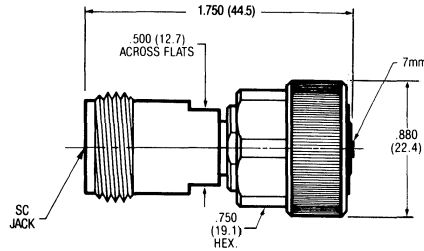
Conforms to the mechanical and electrical requirements
of the Standard Test Connector MIL-C-39012/B
Amendment 1.
Finish: 7mm: Electropolished stainless steel,
SMC: Passivated stainless steel

Precision Adapters

SC to 7mm

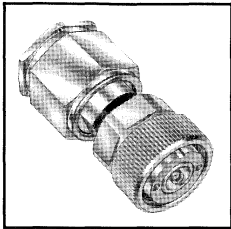


SC Jack to 7mm

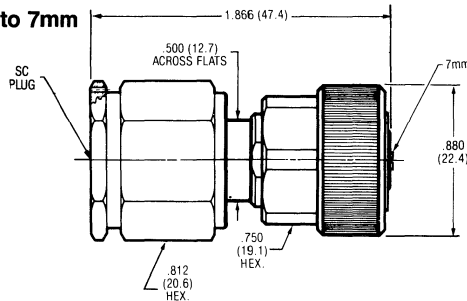


| | |
|---|---------------------|
| DC-11.0 GHz Max. VSWR 1.015 + .005fGHz | |
| Part Number | 7082-2340-00 |
| Full Fluted Connector | |
| Part Number | 7482-2340-00 |

Conforms to the mechanical and electrical requirements of the Standard Test Connector MIL-C-39012/B Amendment 1.
Finish: 7mm: Electropolished stainless steel, SC: Passivated stainless steel



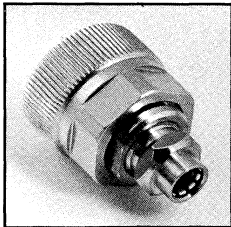
SC Plug to 7mm



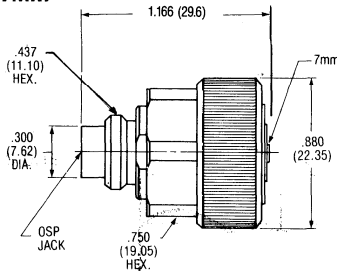
| | |
|---|---------------------|
| DC-11.0 GHz Max. VSWR 1.015 + .005fGHz | |
| Part Number | 7081-2341-00 |
| Full Fluted Connector | |
| Part Number | 7481-2341-00 |

Conforms to the mechanical and electrical requirements of the Standard Test Connector MIL-C-39012/B Amendment 1.
Finish: 7mm: Electropolished stainless steel, SC: Passivated stainless steel

OSP(BMA) to 7mm

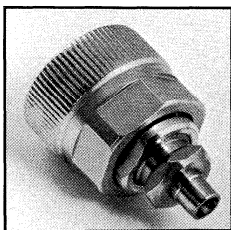


OSP Jack to 7mm

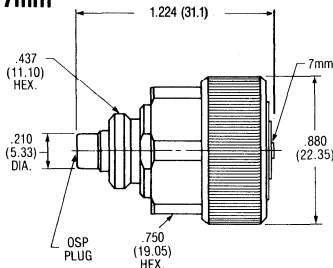


| | |
|---|---------------------|
| DC-18.0 GHz Max. VSWR 1.03 + .004fGHz | |
| Part Number | 4582-2700-00 |
| DC-18.0 GHz Max. VSWR 1.03 + .004fGHz Full Fluted Connector | |
| Part Number | 4582-2701-02 |

Finish: 7mm: Electropolished stainless steel, OSP: Passivated stainless steel



OSP Plug to 7mm

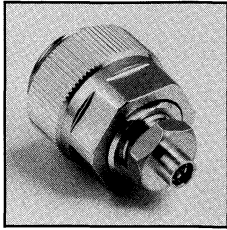


| | |
|---|---------------------|
| DC-18.0 GHz Max. VSWR 1.03 + .004fGHz | |
| Part Number | 4581-2700-00 |
| DC-18.0 GHz Max. VSWR 1.03 + .004fGHz Full Fluted Connector | |
| Part Number | 4581-2701-02 |

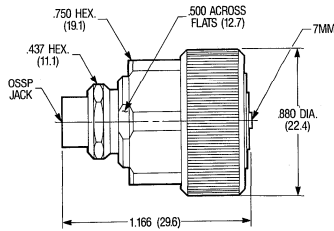
Finish: 7mm: Electropolished stainless steel, OSP: Passivated stainless steel

Precision Adapters

OSSP to 7mm

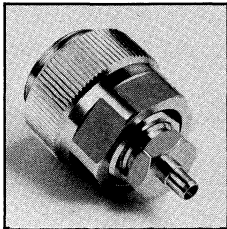


OSSP Jack to 7mm

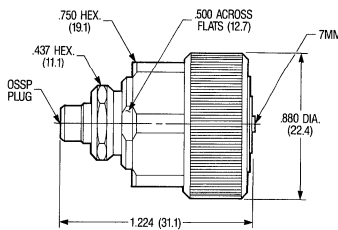


| | |
|-------------|---------------------|
| Part Number | 4782-2700-00 |
|-------------|---------------------|

Finish: 7mm: Electropolished stainless steel,
OSSP: Passivated stainless steel



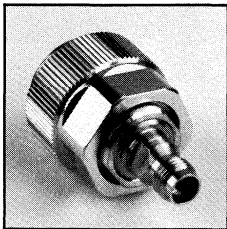
OSSP Plug to 7mm



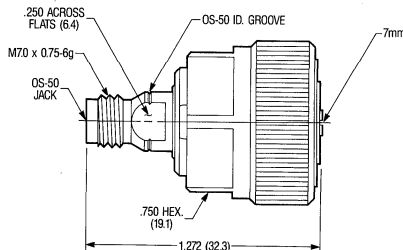
| | |
|-------------|---------------------|
| Part Number | 4781-2700-00 |
|-------------|---------------------|

Finish: 7mm: Electropolished stainless steel,
OSSP: Passivated stainless steel

OS-50(2.4mm) to 7mm



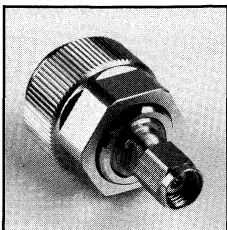
OS-50 Jack to 7mm



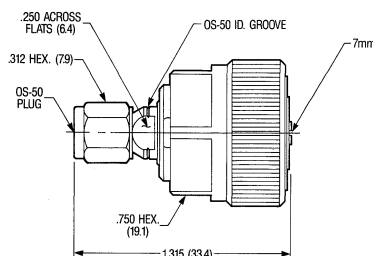
| | |
|-------------|---------------------|
| Part Number | 8582-2700-00 |
|-------------|---------------------|

| | |
|-------------|---------------|
| Frequency | DC - 18.0 GHz |
| Return Loss | 28dB |

Finish: 7mm: Electropolished stainless steel,
OS-50: Passivated stainless steel



OS-50 Plug to 7mm



| | |
|-------------|---------------------|
| Part Number | 8581-2700-00 |
|-------------|---------------------|

| | |
|-------------|---------------|
| Frequency | DC - 18.0 GHz |
| Return Loss | 28dB |

Finish: 7mm: Electropolished stainless steel,
OS-50: Passivated stainless steel

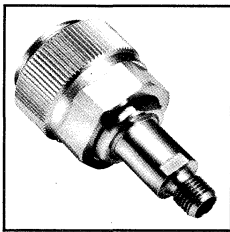
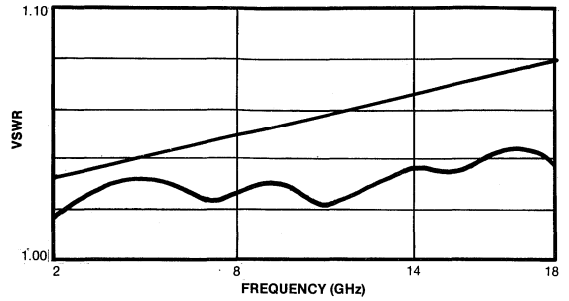
Precision Adapters

7mm to 3.5mm

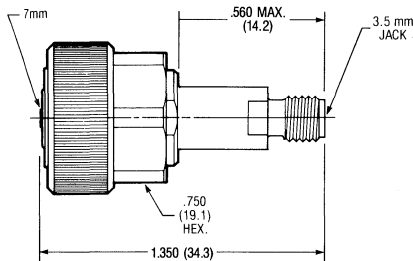
3.5mm to 7mm precision coaxial adapters are designed for use with precision test instrumentation and test components.

As an added design feature, the 3.5mm connector is directly compatible with SMA (3mm) connector interfaces. This allows the adapter to be used with both 3mm and 3.5mm test applications. The 3.5mm design uses an air dielectric which improves measurement repeatability and allows for a longer connector life.

TYPICAL PERFORMANCE:
PART NUMBERS 3581-2700-00 and 3582-2700-00

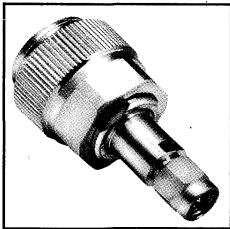


7mm to 3.5mm Jack

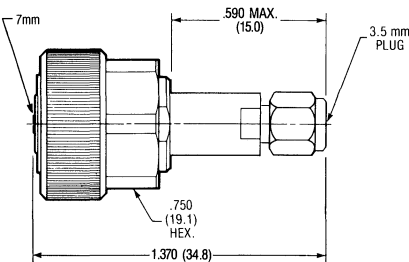


| | |
|----------------------------|---------------------|
| DC - 18.0 GHz | |
| Max. VSWR 1.024 + .003fGHz | |
| Part Number | 3582-2700-00 |
| Full Fluted Connector | |
| Part Number | 7084-2700-00 |

Finish: 7mm: Electropolished stainless steel,
3.5mm: Passivated stainless steel



7mm to 3.5mm Plug

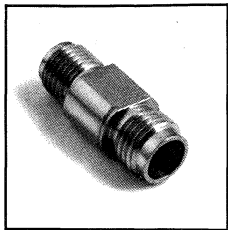


| | |
|----------------------------|---------------------|
| DC - 18.0 GHz | |
| Max. VSWR 1.024 + .003fGHz | |
| Part Number | 3581-2700-00 |
| Full Fluted Connector | |
| Part Number | 7085-2700-00 |

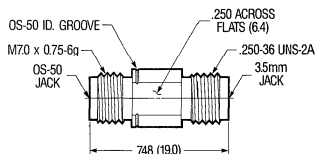
Finish: 7mm: Electropolished stainless steel,
3.5mm: Passivated stainless steel

Precision Adapters

OS-50(2.4mm) to 3.5mm

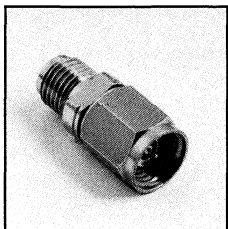


OS-50 Jack to 3.5mm Jack

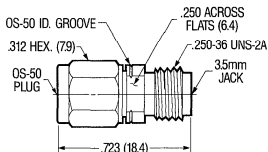


| | | |
|-------------|---------------------|-------------|
| Part Number | 8580-2352-02 | |
| Frequency | DC - 18.0 GHz | 18 - 26 GHz |
| Return Loss | 26dB | 24dB |

Finish: Passivated stainless steel.

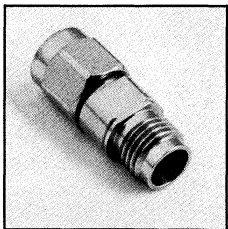


OS-50 Plug to 3.5mm Jack

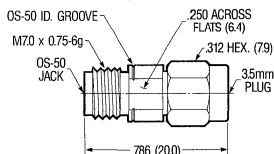


| | | |
|-------------|---------------------|-------------|
| Part Number | 8582-2352-02 | |
| Frequency | DC - 18.0 GHz | 18 - 26 GHz |
| Return Loss | 26dB | 24dB |

Finish: Passivated stainless steel.

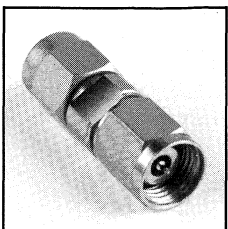


OS-50 Jack to 3.5mm Plug

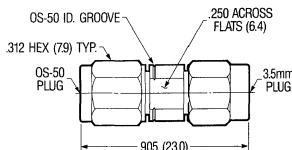


| | | |
|-------------|---------------------|-------------|
| Part Number | 8582-2351-02 | |
| Frequency | DC - 18.0 GHz | 18 - 26 GHz |
| Return Loss | 26dB | 24dB |

Finish: Passivated stainless steel.



OS-50 Plug to 3.5mm Plug

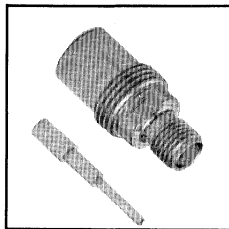


| | | |
|-------------|---------------------|-------------|
| Part Number | 8581-2351-02 | |
| Frequency | DC - 18.0 GHz | 18 - 26 GHz |
| Return Loss | 26dB | 24dB |

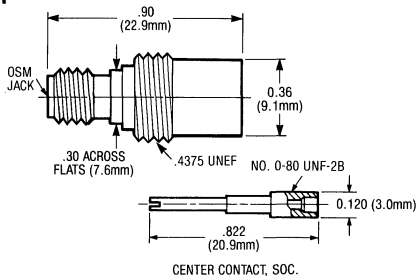
Finish: Passivated stainless steel.

Precision Adapters

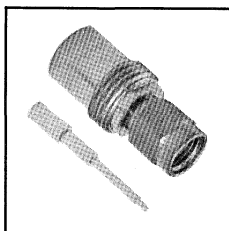
7mm Adapter Repair Kits



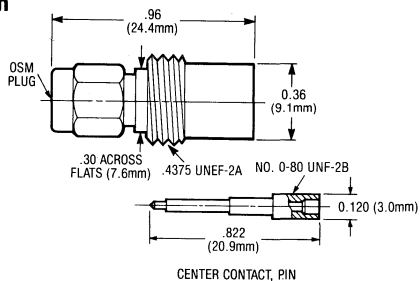
OSM Jack to 7mm



| | |
|-------------------|---------------------|
| OSM Jack Assembly | |
| Part Number | 7099-6202-02 |



OSM Plug to 7mm



| | |
|-------------------|---------------------|
| OSM Plug Assembly | |
| Part Number | 7099-6201-02 |

M/A-COM now offers a complete line of 7mm Precision Adapter Repair Kits. The table below lists additional standard part numbers and descriptions. If you require a repair kit that is not listed, contact the factory for part number and availability.



| Description | Part Number | |
|------------------------|---------------|--------------|
| | Female (Jack) | Male (Plug) |
| SMA/OSM® to 7mm | 7099-6202-02 | 7099-6201-02 |
| Long Neck SMA to 7mm | 7099-6204-02 | 7099-6203-02 |
| 3.5mm to 7mm | 7099-6352-02 | 7099-6351-02 |
| Type N to 7mm | 7099-6302-02 | 7099-6301-02 |
| TNC to 7mm | 7099-6312-02 | 7099-6311-02 |
| Mode Free TNC to 7mm | 7099-6372-02 | 7099-6371-02 |
| SSMA/OSSM® to 7mm | 7099-6102-02 | 7099-6101-02 |
| OSP™ Blind Mate to 7mm | 7099-6452-02 | 7099-6451-02 |
| OSSP Blind Mate to 7mm | 7099-6472-02 | 7099-6471-02 |

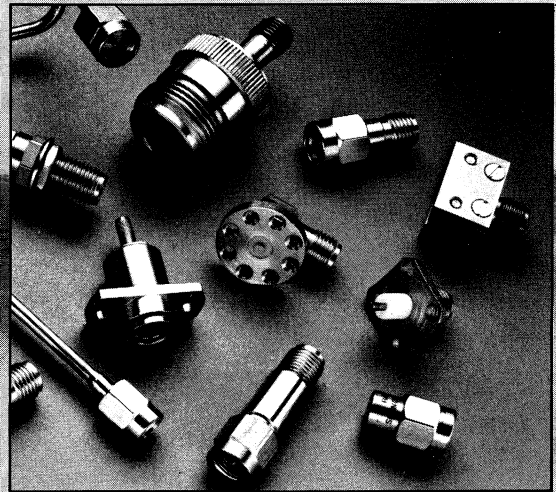
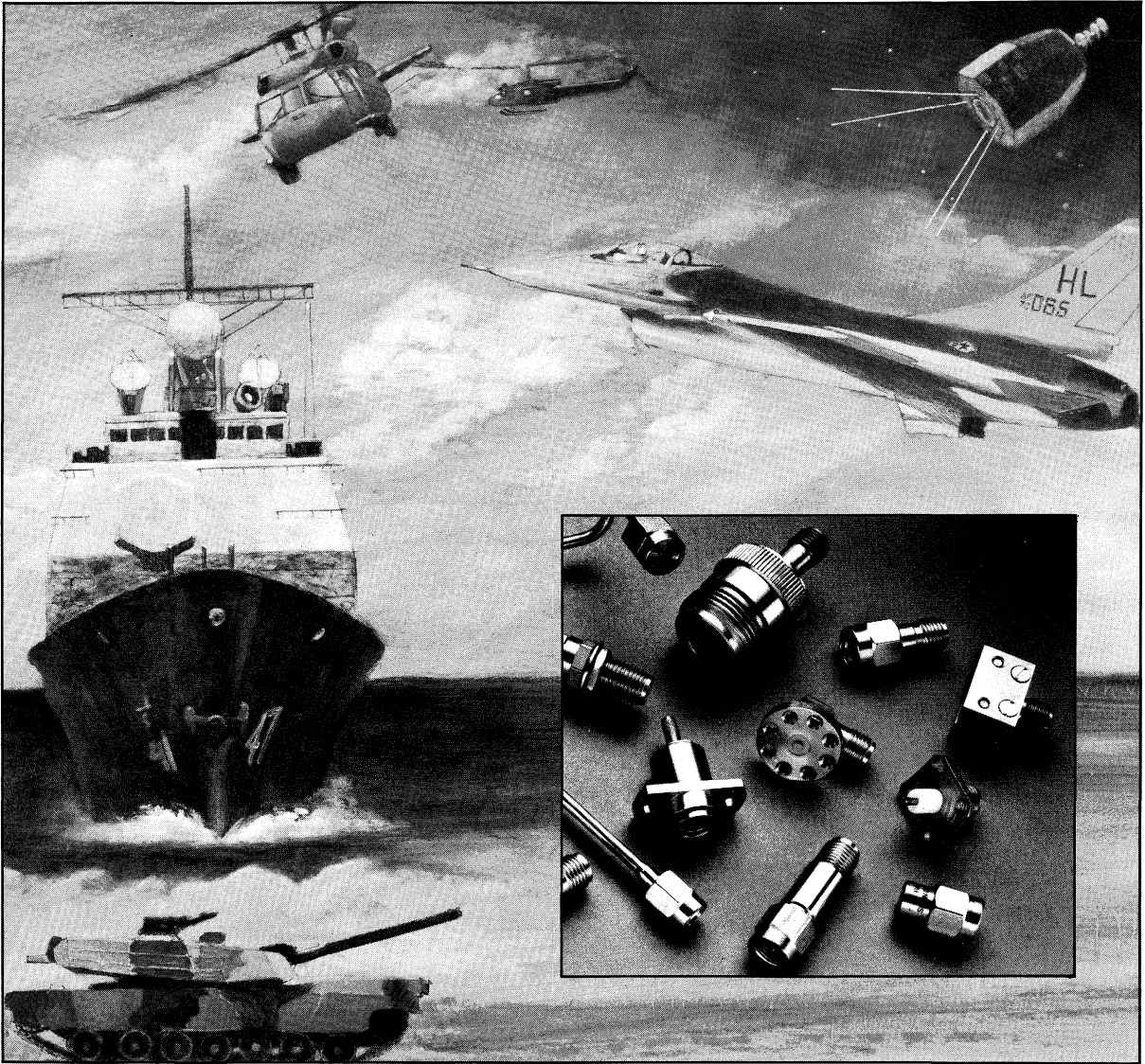


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| QPL Approved Products | | SMA (OSM) Connectors | 331 |
| MIL-C-39012 SMA (OSM) Connectors | 307 | SSMA (OSSM) Connectors | 332 |
| MIL-A-55339 In-Series Adapters | 323 | BMA (OSP) Blind Mate Connectors | 333 |
| MIL-C-83517 SMA (OSM) Receptacles | 324 | Between-Series Adapters | 334 |

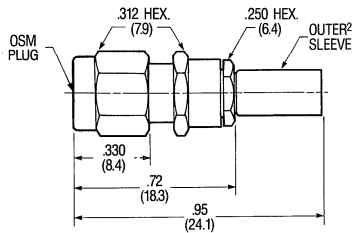
Definition of Categories

- Category A Flexible Cable**
Field serviceable, no special tools required to assemble. Standard wrenches, soldering equipment, pliers, etc., are not defined as special tools. Captured center contact.
- Category B Flexible & Semi-Rigid Cable**
Non-field replaceable, special tools may be required. These connectors may be used for original installations. Field replacement is intended to be made by Category A or C connectors. Will not be stocked or procured by the Government. Captured and non-captured center contacts.
- Category C Flexible Cable**
Field replaceable. Requires crimp tool and specified cable stripping dimensions. Captured center contact. Recommended crimp tool kit: M/A-COM Part Number 2098-0105-54.
- Category D Flexible Cable**
Field replaceable. Requires crimp tool for center contact and outer ferrule; specified cable stripping dimensions (same as Category C) and defined piece parts. Captured center contact. Recommended crimp tool kit: M/A-COM Part Number 2098-0105-54.
- Category E Semi-Rigid Cable**
Field replaceable. Requires specified cable stripping dimensions. Captured and non-captured center contacts. Uses standard tool kit T-200/500 M/A-COM Part Number 2098-5066-54.
- Category F Semi-Rigid Cable**
Field replaceable. Requires crimp tool and specified cable stripping dimensions. Captured center contact. Recommended crimp tool kit: M/A-COM Part Number 2598-5200-54.

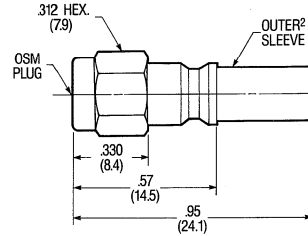
Applicable Cable

- I. RG 178/U
- II. RG 174/U, 316
- III. RG 122/U
- IV. RG 58/U, 142, 223
- V. RG 303/U
- VI. RG 58/U
- VII. RG 142/U
- VIII. RG 223/U
- IX. RG 142/U, 223
- X. RG 58/U, 303
- XI. RG 142/U, 400
- XII. RG 405/U (.085 semi rigid)
- XIII. RG 402/U (.141 semi-rigid)
- XIV. RG 179/U
- XV. RG 174/U, 187, 188, 316
- XVI. RG 55/U, 187, 188, 316
- XVII. RG 55/U, 142, 223, 400

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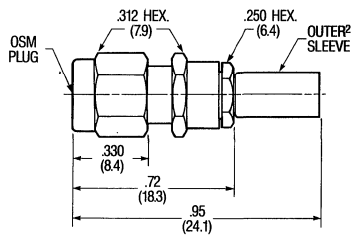


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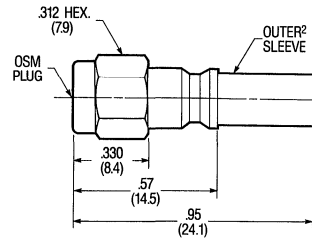
| Military Part Number | M/A-COM Part Number | Outline | Assembly Procedure | Category ² | Cable | Commercial Alternate |
|----------------------|---------------------------|---------|--------------------|-----------------------|-------|----------------------|
| -3006 | 2031-8006-92 ¹ | 5 | 20-510 | A | I | — |
| -3007 | 2031-8007-92 ¹ | 5 | 20-510 | A | II | — |
| -3008 | 2031-8008-92 ¹ | 6 | 20-511 | A | III | — |
| -3009 | 2031-8009-92 ¹ | 6 | 20-511 | A | IV | — |
| -3010 | 2031-8010-92 ¹ | 6 | 20-511 | A | V | — |
| B3011 | 2031-8011-92 | 5 | 20-512 | B | I | 2031-5102 |
| B3012 | 2031-8012-92 | 6 | 20-513 | B | II | 2031-5012 |
| B3013 | 2031-8013-92 | 6 | 20-516 | B | III | — |
| B3014 | 2031-8014-92 | 6 | 20-513 | B | VI | 2031-5055 |
| B3015 | 2031-8015-92 | 6 | 20-513 | B | VII | 2031-5005 |
| B3016 | 2031-8016-92 | 6 | 20-513 | B | VIII | 2031-5005 |
| B3017 | 2031-8017-92 | 6 | 20-513 | B | V | 2031-5055 |
| B3018 | 2031-8018-92 | 5 | 20-512 | B | I | 2031-5102 |
| B3019 | 2031-8019-92 | 5 | 20-512 | B | II | 2031-5012 |
| B3020 | 2031-8020-92 | 6 | 20-514 | B | III | — |
| B3021 | 2031-8021-92 | 6 | 20-514 | B | VI | 2031-5056 |
| B3022 | 2031-8022-92 | 6 | 20-514 | B | VII | 2031-5011 |
| B3023 | 2031-8023-92 | 6 | 20-514 | B | VIII | 2031-5011 |
| B3024 | 2031-8024-92 | 6 | 20-514 | B | V | 2031-5056 |
| -3025 | 2031-8025-92 | 5 | 20-517 | C | I | 2031-5102 |
| -3026 | 2031-8026-92 | 5 | 20-517 | C | II | 2031-5012 |
| -3027 | 2031-8027-92 | 6 | 20-514 | C | III | — |
| -3028 | 2031-8028-92 | 6 | 20-514 | C | IX | 2031-5011 |
| -3029 | 2031-8029-92 | 6 | 20-514 | C | X | 2031-5056 |

1. Coupling nut is passivated; connector housing is gold plated for soldering of cable outer conductor (MIL-C-39012/55D Amendment 1, Note 9).

MIL-C-39012/55



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| Military Part Number | M/A-COM Part Number | Outline | Assembly Procedure | Category ² | Cable | Commercial Alternate |
|----------------------|---------------------------|---------|--------------------|-----------------------|-------|----------------------|
| *-3106 | 2031-8106-92 ¹ | 5 | 20-510 | A | I | — |
| *-3107 | 2031-8107-92 ¹ | 5 | 20-510 | A | II | — |
| *-3108 | 2031-8108-92 ¹ | 6 | 20-511 | A | III | — |
| *-3109 | 2031-8109-92 ¹ | 6 | 20-511 | A | IV | — |
| *-3110 | 2031-8110-92 ¹ | 6 | 20-511 | A | V | — |
| *B3111 | 2031-8111-92 | 5 | 20-512 | B | I | 2031-5102 |
| *B3112 | 2031-8112-92 | 6 | 20-513 | B | II | 2031-5012 |
| *B3113 | 2031-8113-92 | 6 | 20-516 | B | III | — |
| *B3114 | 2031-8114-92 | 6 | 20-513 | B | VI | 2031-5055 |
| *B3115 | 2031-8115-92 | 6 | 20-513 | B | VII | 2031-5005 |
| *B3116 | 2031-8116-92 | 6 | 20-513 | B | VIII | 2031-5005 |
| *B3117 | 2031-8117-92 | 6 | 20-513 | B | V | 2031-5055 |
| *B3118 | 2031-8118-92 | 5 | 20-512 | B | I | 2031-5102 |
| *B3119 | 2031-8119-92 | 5 | 20-512 | B | II | 2031-5012 |
| *B3120 | 2031-8120-92 | 6 | 20-514 | B | III | — |
| *B3121 | 2031-8121-92 | 6 | 20-514 | B | VI | 2031-5056 |
| *B3122 | 2031-8122-92 | 6 | 20-514 | B | VII | 2031-5011 |
| *B3123 | 2031-8123-92 | 6 | 20-514 | B | VIII | 2031-5011 |
| *B3124 | 2031-8124-92 | 6 | 20-514 | B | V | 2031-5056 |
| *-3125 | 2031-8125-92 | 5 | 20-517 | C | I | 2031-5102 |
| *-3126 | 2031-8126-92 | 5 | 20-517 | C | II | 2031-5012 |
| *-3127 | 2031-8127-92 | 6 | 20-514 | C | III | — |
| *-3128 | 2031-8128-92 | 6 | 20-514 | C | IX | 2031-5011 |
| *-3129 | 2031-8129-92 | 6 | 20-514 | C | X | 2031-5056 |
| -3502 | 2031-8052-92 | 6 | 20-515 | D | XI | 2031-5011 |
| *-3602 | 2031-8162-92 | 6 | 20-515 | D | XI | 2031-5011 |

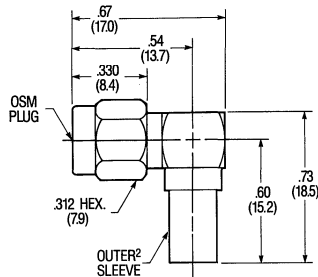
* No safety wire holes.

1. Coupling nut is passivated; connector housing is gold plated for soldering of cable outer conductor (MIL-C-39012/55D Amendment 1, Note 9).

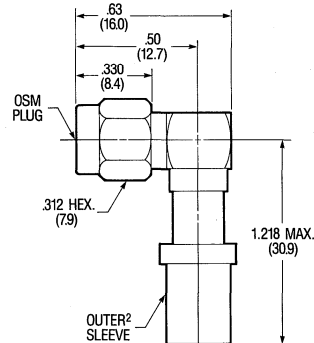
2. Category A: solder sleeve; Categories B, C and D: crimp sleeve.

See Appendix for description of interface, categories and cable types.

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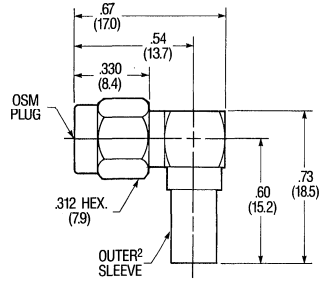
| Military Part Number | M/A-COM Part Number | Outline | Assembly Procedure | Category ² | Cable | Commercial Alternate |
|----------------------|---------------------------|---------|--------------------|-----------------------|-------|----------------------|
| -3006 | 2037-8006-92 ¹ | 7 | 20-518 | A | I | — |
| -3007 | 2037-8007-92 ¹ | 7 | 20-519 | A | II | 2037-5006 |
| -3008 | 2037-8008-92 ¹ | 7 | 20-518 | A | III | — |
| -3009 | 2037-8009-92 ¹ | 7 | 20-519 | A | IV | 2037-5005 |
| -3010 | 2037-8010-92 ¹ | 7 | 20-519 | A | V | 2037-5005 |
| B3011 | 2037-8011-92 | 7 | 20-520 | B | I | 2037-5100 |
| B3012 | 2037-8012-92 | 7 | 20-520 | B | II | 2037-5008 |
| B3013 | 2037-8013-92 | 7 | 20-520 | B | III | — |
| B3014 | 2037-8014-92 | 7 | 20-520 | B | VI | 2037-5056 |
| B3015 | 2037-8015-92 | 7 | 20-520 | B | VII | 2037-5007 |
| B3016 | 2037-8016-92 | 7 | 20-520 | B | VIII | 2037-5007 |
| B3017 | 2037-8017-92 | 7 | 20-520 | B | V | 2037-5056 |
| B3018 | 2037-8018-92 | 7 | 20-520 | B | I | 2037-5100 |
| B3019 | 2037-8019-92 | 7 | 20-520 | B | II | 2037-5008 |
| B3020 | 2037-8020-92 | 7 | 20-520 | B | III | — |
| B3021 | 2037-8021-92 | 7 | 20-520 | B | VI | 2037-5056 |
| B3022 | 2037-8022-92 | 7 | 20-520 | B | VII | 2037-5007 |
| B3023 | 2037-8023-92 | 7 | 20-520 | B | VIII | 2037-5007 |
| B3024 | 2037-8024-92 | 7 | 20-520 | B | V | 2037-5056 |
| -3025 | 2037-8025-92 | 7 | 20-584 | C | I | 2037-5100 |
| -3026 | 2037-8026-92 | 7 | 20-584 | C | II | 2037-5008 |
| -3027 | 2037-8027-92 | 7 | 20-584 | C | III | — |
| -3028 | 2037-8028-92 | 7 | 20-584 | C | IX | 2037-5007 |
| -3029 | 2037-8029-92 | 7 | 20-584 | C | X | 2037-5056 |

1. Coupling nut is passivated; connector housing is gold plated for soldering of cable outer conductor (MIL-C-39012/56C Amendment 1, Note 9).

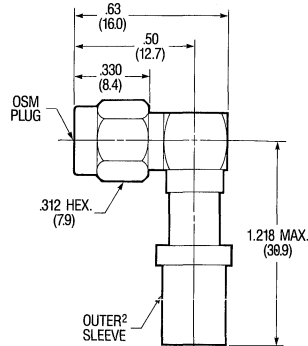
2. Category A: solder sleeve; Categories B, C and D: crimp sleeve.

See Appendix for description of interface, categories and cable types.

MIL-C-39012/56



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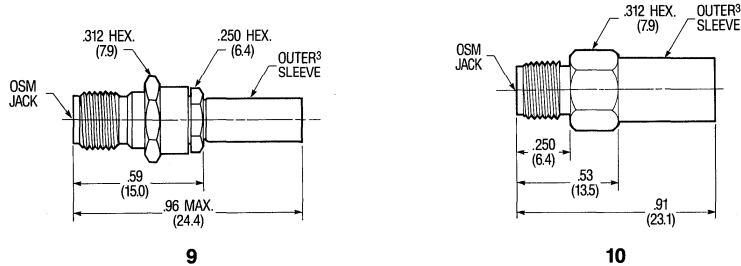
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| Military Part Number | M/A-COM Part Number | Outline | Assembly Procedure | Category ² | Cable | Commercial Alternate |
|----------------------|---------------------------|---------|--------------------|-----------------------|-------|----------------------|
| *-3106 | 2037-8106-92 ¹ | 7 | 20-518 | A | I | — |
| *-3107 | 2037-8107-92 ¹ | 7 | 20-519 | A | II | 2037-5006 |
| *-3108 | 2037-8108-92 ¹ | 7 | 20-518 | A | III | — |
| *-3109 | 2037-8109-92 ¹ | 7 | 20-519 | A | IV | 2037-5005 |
| *-3110 | 2037-8110-92 ¹ | 7 | 20-519 | A | V | 2037-5005 |
| *B3111 | 2037-8111-92 | 7 | 20-520 | B | I | 2037-5100 |
| *B3112 | 2037-8112-92 | 7 | 20-520 | B | II | 2037-5008 |
| *B3113 | 2037-8113-92 | 7 | 20-520 | B | III | — |
| *B3114 | 2037-8114-92 | 7 | 20-520 | B | VI | 2037-5056 |
| *B3115 | 2037-8115-92 | 7 | 20-520 | B | VII | 2037-5007 |
| *B3116 | 2037-8116-92 | 7 | 20-520 | B | VIII | 2037-5007 |
| *B3117 | 2037-8117-92 | 7 | 20-520 | B | V | 2037-5056 |
| *B3118 | 2037-8118-92 | 7 | 20-520 | B | I | 2037-5100 |
| *B3119 | 2037-8119-92 | 7 | 20-520 | B | II | 2037-5008 |
| *B3120 | 2037-8120-92 | 7 | 20-520 | B | III | — |
| *B3121 | 2037-8121-92 | 7 | 20-520 | B | VI | 2037-5056 |
| *B3122 | 2037-8122-92 | 7 | 20-520 | B | VII | 2037-5007 |
| *B3123 | 2037-8123-92 | 7 | 20-520 | B | VIII | 2037-5007 |
| *B3124 | 2037-8124-92 | 7 | 20-520 | B | V | 2037-5056 |
| *-3125 | 2037-8125-92 | 7 | 20-584 | C | I | 2037-5100 |
| *-3126 | 2037-8126-92 | 7 | 20-584 | C | II | 2037-5008 |
| *-3127 | 2037-8127-92 | 7 | 20-584 | C | III | — |
| *-3128 | 2037-8128-92 | 7 | 20-584 | C | IX | 2037-5007 |
| *-3129 | 2037-8129-92 | 7 | 20-584 | C | X | 2037-5056 |
| -3502 | 2037-8052-92 | 8 | 20-522 | D | XI | 2037-5007 |
| *-3602 | 2037-8162-92 | 8 | 20-522 | D | XI | 2037-5007 |

* No safety wire holes.

1. Coupling nut is passivated; connector housing is gold plated for soldering of cable outer conductor (MIL-C-39012/56C Amendment 1, Note 9).

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| Military Part Number | M/A-COM Part Number | Outline | Assembly Procedure | Category ³ | Cable | Commercial Alternate |
|----------------------|---------------------------|---------|--------------------|-----------------------|-------|----------------------|
| -3006 | 2032-8006-92 ¹ | 9 | 20-524 | A | I | --- |
| -3007 | 2032-8007-92 ¹ | 9 | 20-524 | A | II | --- |
| -3008 | 2032-8008-90 ² | 10 | 20-525 | A | III | --- |
| -3009 | 2032-8009-90 ² | 10 | 20-525 | A | IV | --- |
| -3010 | 2032-8010-90 ² | 10 | 20-525 | A | V | --- |
| B3011 | 2032-8011-92 | 9 | 20-526 | B | I | 2032-5026 |
| B3012 | 2032-8012-92 | 9 | 20-526 | B | II | 2032-5003 |
| B3013 | 2032-8013-92 | 10 | 20-527 | B | III | --- |
| B3014 | 2032-8014-92 | 10 | 20-527 | B | VI | 2032-5021 |
| B3015 | 2032-8015-92 | 10 | 20-527 | B | VII | 2032-5007 |
| B3016 | 2032-8016-92 | 10 | 20-527 | B | VIII | 2032-5007 |
| B3017 | 2032-8017-92 | 10 | 20-527 | B | V | 2032-5021 |
| B3018 | 2032-8018-92 | 10 | 20-526 | B | I | 2032-5026 |
| B3019 | 2032-8019-92 | 10 | 20-526 | B | II | 2032-5003 |
| B3020 | 2032-8020-92 | 9 | 20-528 | B | III | --- |
| B3021 | 2032-8021-92 | 9 | 20-528 | B | VI | 2032-5021 |
| B3022 | 2032-8022-92 | 9 | 20-528 | B | VII | 2032-5007 |
| B3023 | 2032-8023-92 | 9 | 20-528 | B | VIII | 2032-5007 |
| B3024 | 2032-8024-92 | 9 | 20-528 | B | V | 2032-5021 |
| -3025 | 2032-8025-92 | 9 | 20-523 | C | I | 2032-5026 |
| -3026 | 2032-8026-92 | 9 | 20-523 | C | II | 2032-5003 |
| -3027 | 2032-8027-92 | 10 | 20-528 | C | III | --- |
| -3028 | 2032-8028-92 | 10 | 20-528 | C | IX | 2032-5007 |
| -3029 | 2032-8029-92 | 10 | 20-528 | C | X | 2032-5021 |
| -3502 | 2032-8052-92 | 10 | 20-529 | D | XI | 2032-5007 |

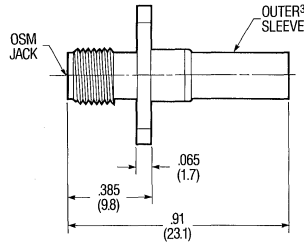
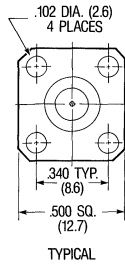
1. Solder sleeve to be gold plated, all other stainless steel parts passivated (MIL-C-39012/57D Amendment 1, Note 8).

2. Housing to be gold plated (MIL-C-39012/57D Amendment 1, Note 8).

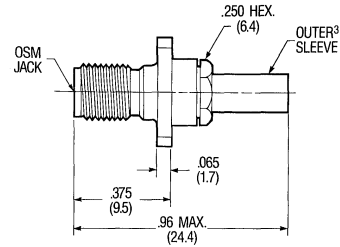
3. Category A: solder sleeve; Categories B, C and D: crimp sleeve.

See Appendix for description of interface, categories and cable types.

MIL-C-39012/58



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| Military Part Number | M/A-COM Part Number | Outline | Assembly Procedure | Category ³ | Cable | Commercial Alternate |
|----------------------|---------------------------|---------|--------------------|-----------------------|-------|----------------------|
| -3006 | 2036-8006-92 ¹ | 12 | 20-530 | A | I | — |
| -3007 | 2036-8007-92 ¹ | 12 | 20-530 | A | II | — |
| -3008 | 2036-8008-90 ² | 11 | 20-531 | A | III | — |
| -3009 | 2036-8009-90 ² | 11 | 20-531 | A | IV | — |
| -3010 | 2036-8010-90 ² | 11 | 20-531 | A | V | — |
| <hr/> | | | | | | |
| B3011 | 2036-8011-92 | 12 | 20-532 | B | I | 2036-5016 |
| B3012 | 2036-8012-92 | 12 | 20-532 | B | II | 2036-5004 |
| B3013 | 2036-8013-92 | 11 | 20-533 | B | III | — |
| B3014 | 2036-8014-92 | 11 | 20-533 | B | VI | 2036-5014 |
| B3015 | 2036-8015-92 | 11 | 20-533 | B | VII | 2036-5003 |
| <hr/> | | | | | | |
| B3016 | 2036-8016-92 | 11 | 20-533 | B | VIII | 2036-5003 |
| B3017 | 2036-8017-92 | 11 | 20-533 | B | V | 2036-5014 |
| B3018 | 2036-8018-92 | 12 | 20-532 | B | I | 2036-5016 |
| B3019 | 2036-8019-92 | 12 | 20-532 | B | II | 2036-5004 |
| B3020 | 2036-8020-92 | 11 | 20-534 | B | III | — |
| <hr/> | | | | | | |
| B3021 | 2036-8021-92 | 11 | 20-534 | B | VI | 2036-5014 |
| B3022 | 2036-8022-92 | 11 | 20-534 | B | VII | 2036-5003 |
| B3023 | 2036-8023-92 | 11 | 20-534 | B | VIII | 2036-5003 |
| B3024 | 2036-8024-92 | 11 | 20-534 | B | V | 2036-5014 |
| -3025 | 2036-8025-92 | 12 | 20-542 | C | I | 2036-5016 |
| <hr/> | | | | | | |
| -3026 | 2036-8026-92 | 12 | 20-542 | C | II | 2036-5004 |
| -3027 | 2036-8027-92 | 11 | 20-534 | C | III | — |
| -3028 | 2036-8028-92 | 11 | 20-534 | C | IX | 2036-5003 |
| -3029 | 2036-8029-92 | 11 | 20-534 | C | X | 2036-5014 |
| -3502 | 2036-8052-92 | 11 | 20-535 | D | XI | 2036-5003 |

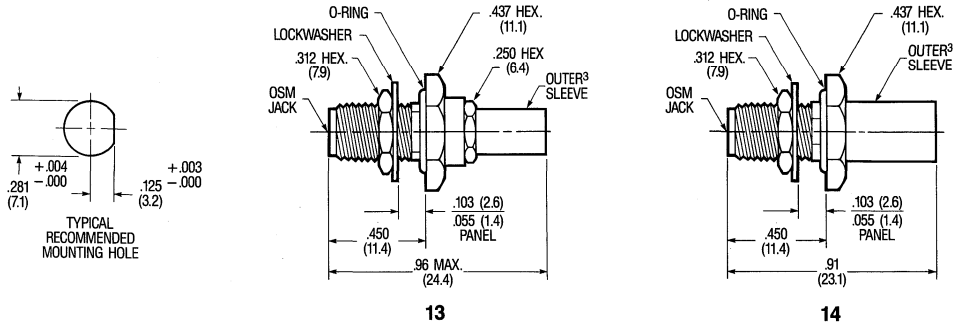
1. Solder sleeve to be gold plated, all other stainless steel parts passivated (MIL-C-39012/58D Amendment 1, Note 8).

2. Housing to be gold plated (MIL-C-39012/58D Amendment 1, Note 8).

3. Category A: solder sleeve; Categories B, C and D: crimp sleeve.

See Appendix for description of interface, categories and cable types.

MIL-C-39012/59



| Military Part Number | M/A-COM Part Number | Outline | Assembly Procedure | Category ³ | Cable | Commercial Alternate |
|----------------------|---------------------------|---------|--------------------|-----------------------|-------|----------------------|
| -3006 | 2034-8006-92 ¹ | 13 | 20-536 | A | I | — |
| -3007 | 2034-8007-92 ¹ | 13 | 20-536 | A | II | — |
| -3008 | 2034-8008-90 ² | 14 | 20-537 | A | III | — |
| -3009 | 2034-8009-90 ² | 14 | 20-537 | A | IV | — |
| -3010 | 2034-8010-90 ² | 14 | 20-537 | A | V | — |
| B3011 | 2034-8011-92 | 13 | 20-538 | B | I | 2034-5031 |
| B3012 | 2034-8012-92 | 13 | 20-538 | B | II | 2034-5005 |
| B3013 | 2034-8013-92 | 14 | 20-539 | B | III | — |
| B3014 | 2034-8014-92 | 14 | 20-539 | B | VI | 2034-5023 |
| B3015 | 2034-8015-92 | 14 | 20-539 | B | VII | 2034-5004 |
| B3016 | 2034-8016-92 | 14 | 20-539 | B | VIII | 2034-5004 |
| B3017 | 2034-8017-92 | 14 | 20-539 | B | V | 2034-5023 |
| B3018 | 2034-8018-92 | 13 | 20-538 | B | I | 2034-5031 |
| B3019 | 2034-8019-92 | 13 | 20-538 | B | II | 2034-5005 |
| B3020 | 2034-8020-92 | 14 | 20-540 | B | III | — |
| B3021 | 2034-8021-92 | 14 | 20-540 | B | VI | 2034-5023 |
| B3022 | 2034-8022-92 | 14 | 20-540 | B | VII | 2034-5004 |
| B3023 | 2034-8023-92 | 14 | 20-540 | B | VIII | 2034-5004 |
| B3024 | 2034-8024-92 | 14 | 20-540 | B | V | 2034-5023 |
| -3025 | 2034-8025-92 | 13 | 20-538 | C | I | 2034-5031 |
| -3026 | 2034-8026-92 | 13 | 20-538 | C | II | 2034-5005 |
| -3027 | 2034-8027-92 | 14 | 20-540 | C | III | — |
| -3028 | 2034-8028-92 | 14 | 20-540 | C | IX | 2034-5004 |
| -3029 | 2034-8029-92 | 14 | 20-540 | C | X | 2034-5023 |
| -3502 | 2034-8052-92 | 14 | 20-541 | D | XI | 2034-5004 |

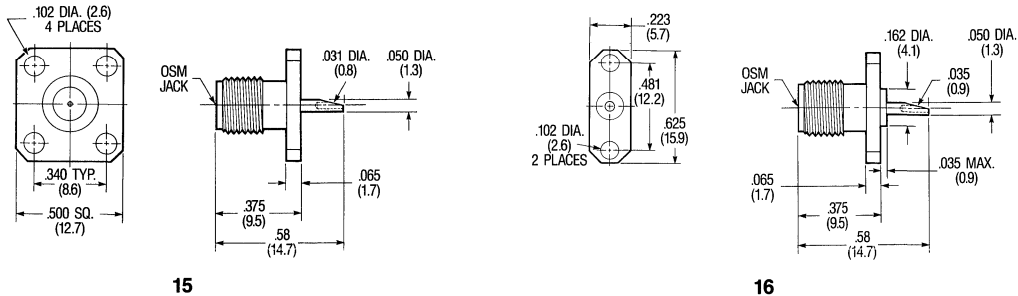
1. Solder sleeve to be gold plated, all other stainless steel parts passivated (MIL-C-39012/59D Amendment 1, Note 8).

2. Housing to be gold plated (MIL-C-39012/59D Amendment 1, Note 8).

3. Category A: solder sleeve; Categories B, C and D: crimp sleeve.

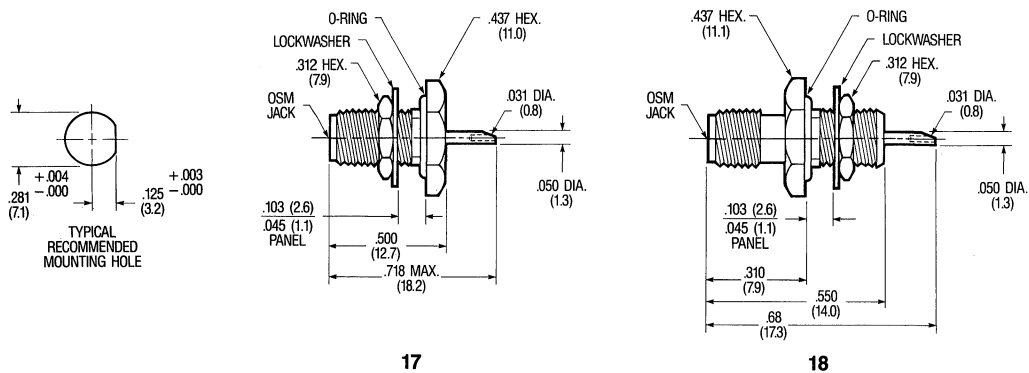
See Appendix for description of interface, categories and cable types.

MIL-C-39012/60



| Military Part Number | M/A-COM Part Number | Outline | Assembly Procedure | Category | Cable | Commercial Alternate |
|----------------------|---------------------|---------|--------------------|----------|-------|----------------------|
| -3001 | 2052-8001-92 | 15 | — | — | — | 2052-0000 |
| -3002 | 2052-8002-92 | 16 | — | — | — | 2052-1300 |

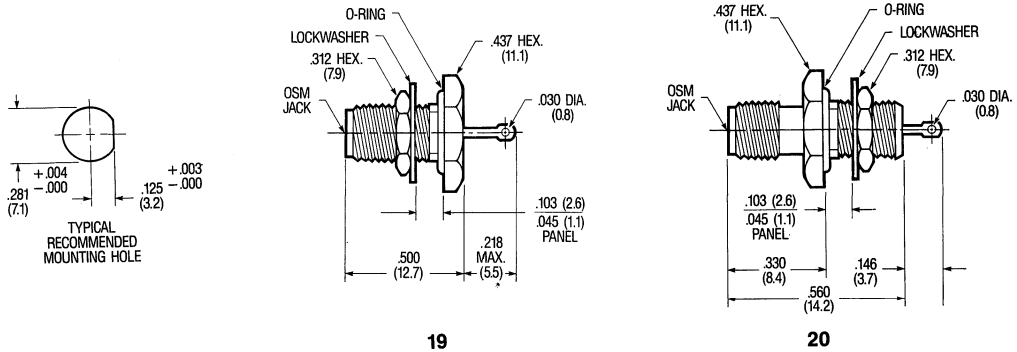
MIL-C-39012/61



| Military Part Number | M/A-COM Part Number | Outline | Assembly Procedure | Category | Cable | Commercial Alternate |
|----------------------|---------------------|---------|--------------------|----------|-------|----------------------|
| -3001 | 2056-8011-92 | 17 | — | — | — | 2056-1100 |
| -3002 | 2058-8012-92 | 18 | — | — | — | 2058-0000 |

See Appendix for description of interface.

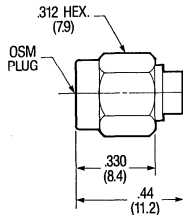
MIL-C-39012/62 (Hermetically Sealed)



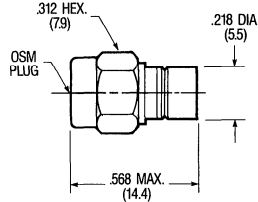
| Military Part Number | M/A-COM Part Number | Outline | Assembly Procedure | Category | Cable | Commercial Alternate |
|----------------------|---------------------|---------|--------------------|----------|-------|----------------------|
| -3001 | 2056-8001-92 | 19 | — | — | — | 2056-3000 |
| -3002 | 2058-8002-92 | 20 | — | — | — | 2058-3000 |

See Appendix for description of interface.

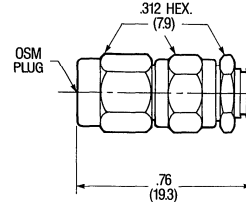
MIL-C-39012/79



21



22



23

| Military Part Number | M/A-COM Part Number | Outline | Assembly Procedure | Category | Cable | Commercial Alternate |
|----------------------|---------------------------|-----------------|--------------------|----------|-------|----------------------|
| B3001 | 2001-8001-92 | 21 | 20-543 | B | XII | 2001-5032 |
| B3002 | 2001-8002-92 | 21 | 20-544 | B | XIII | 2001-5003 |
| B3003 | 2001-8003-92 | 23 | 20-545 | B | XII | 2001-7885 |
| B3003 | 2001-8203-92 ¹ | 22 | 20-574 | B | XII | 2001-5342 |
| B3003 | 2001-8991-92 | 22 ² | 20-583 | B | XII | 2001-5385-02 |
| B3004 | 2001-8004-92 | 23 | 20-546 | B | XIII | 2001-7841 |
| B3004 | 2001-8204-92 ¹ | 22 | 20-565 | B | XIII | 2001-5341 |
| -3007 | 2001-8007-92 | 23 | 20-545 | E | XII | 2001-7885 |
| -3008 | 2001-8008-92 | 23 | 20-546 | E | XIII | 2001-7841 |
| *B3101 | 2001-8101-92 | 21 | 20-543 | B | XII | 2001-5032 |
| *B3102 | 2001-8102-92 | 21 | 20-544 | B | XIII | 2001-5003 |
| *B3103 | 2001-8103-92 | 23 | 20-545 | B | XII | 2001-7885 |
| *B3103 | 2001-8303-92 ¹ | 22 | 20-574 | B | XII | 2001-7685 |
| *B3103 | 2001-8981-92 | 22 ² | 20-583 | B | XII | 2001-5385-02 |
| *B3104 | 2001-8104-92 | 23 | 20-546 | B | XIII | 2001-7841 |
| *B3104 | 2001-8304-92 ¹ | 22 | 20-565 | B | XIII | 2001-7642 |
| *-3107 | 2001-8107-92 | 23 | 20-545 | E | XII | 2001-7885 |
| *-3108 | 2001-8108-92 | 23 | 20-546 | E | XIII | 2001-7841 |
| -3207 | 2001-8207-92 ¹ | 22 | 20-575 | F | XII | 2001-5342 |
| -3208 | 2001-8208-92 ¹ | 22 | 20-576 | F | XIII | 2001-5341 |
| *-3307 | 2001-8307-92 ¹ | 22 | 20-575 | F | XII | 2001-7685 |
| *-3308 | 2001-8308-92 ¹ | 22 | 20-576 | F | XIII | 2001-7642 |
| -3311 | 2001-8311-92 | 22 | 20-588 | F | XII | 2001-5385 |

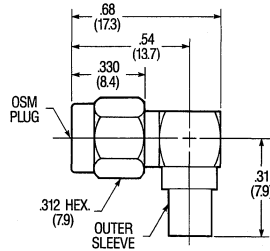
* No safety wire holes.

1. OSCC Solderless Compression Crimp version.

2. Low profile version; overall length .393 max. (10.0).

See Appendix for description of interface, categories and cable types.

MIL-C-39012/80

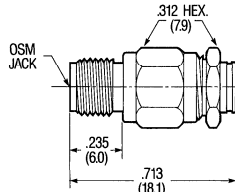
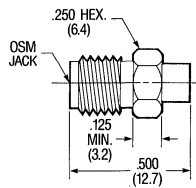


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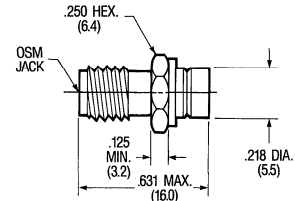
| Military Part Number | M/A-COM Part Number | Outline | Assembly Procedure | Category | Cable | Commercial Alternate |
|----------------------|---------------------|---------|--------------------|----------|-------|----------------------|
| B3001 | 2007-8001-92 | 24 | 20-547 | B | XII | 2007-5055 |
| B3002 | 2007-8002-92 | 24 | 20-548 | B | XIII | 2007-5054 |
| B3003 | 2007-8003-92 | 24 | 20-547 | B | XII | — |
| B3004 | 2007-8004-92 | 24 | 20-548 | B | XIII | — |
| -3005 | 2007-8005-92 | 24 | 20-562 | E | XII | 2007-5055 |
| -3006 | 2007-8006-92 | 24 | 20-563 | E | XIII | 2007-5054 |
| -3007 | 2007-8007-92 | 24 | 20-562 | E | XII | 2007-5055 |
| -3008 | 2007-8008-92 | 24 | 20-563 | E | XIII | 2007-5054 |
| *B3101 | 2007-8101-92 | 24 | 20-547 | B | XII | 2007-5055 |
| *B3102 | 2007-8102-92 | 24 | 20-548 | B | XIII | 2007-5054 |
| *B3103 | 2007-8103-92 | 24 | 20-547 | B | XII | 2007-5055 |
| *B3104 | 2007-8104-92 | 24 | 20-548 | B | XIII | 2007-5054 |
| *-3105 | 2007-8105-92 | 24 | 20-562 | E | XII | 2007-5055 |
| *-3106 | 2007-8106-92 | 24 | 20-563 | E | XIII | 2007-5054 |
| *-3107 | 2007-8107-92 | 24 | 20-562 | E | XII | 2007-5055 |
| *-3108 | 2007-8108-92 | 24 | 20-563 | E | XIII | 2007-5054 |

* No safety wire holes.
See Appendix for description of interface, categories and cable types.

MIL-C-39012/81



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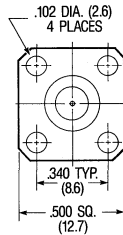


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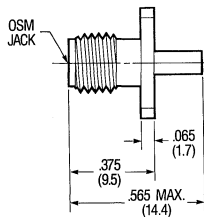
| Military Part Number | M/A-COM Part Number | Outline | Assembly Procedure | Category | Cable | Commercial Alternate |
|----------------------|---------------------------|---------|--------------------|----------|-------|----------------------|
| B3001 | 2002-8001-90 | 25 | 20-549 | B | XII | 2002-5016 |
| B3002 | 2002-8002-90 | 25 | 20-550 | B | XIII | 2002-5015 |
| B3003 | 2002-8003-92 | 26 | 20-551 | B | XII | 2002-7885 |
| B3003 | 2002-8203-92 ¹ | 27 | 20-568 | B | XII | 2002-7685 |
| B3004 | 2002-8004-92 | 26 | 20-552 | B | XIII | 2002-7841 |
| B3004 | 2002-8204-92 ¹ | 27 | 20-569 | B | XIII | 2002-7641 |
| -3005 | 2002-8005-90 | 25 | 20-549 | E | XII | 2002-5016 |
| -3006 | 2002-8006-90 | 25 | 20-550 | E | XIII | 2002-5015 |
| -3007 | 2002-8007-92 | 26 | 20-551 | E | XII | 2002-7885 |
| -3008 | 2002-8008-92 | 26 | 20-552 | E | XIII | 2002-7841 |
| -3207 | 2002-8207-92 ¹ | 27 | 20-577 | F | XII | 2002-7685 |
| -3208 | 2002-8208-92 ¹ | 27 | 20-578 | F | XIII | 2002-7641 |

1. OSCC Solderless Compression Crimp version.
See Appendix for description of interface, categories and cable types.

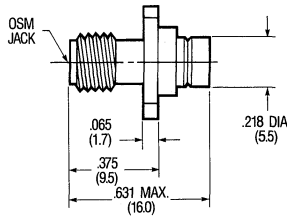
MIL-C-39012/82



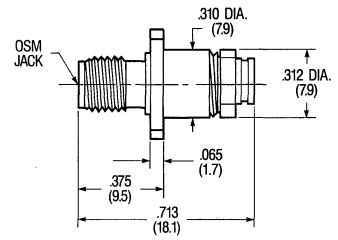
TYPICAL
FLANGE PATTERN



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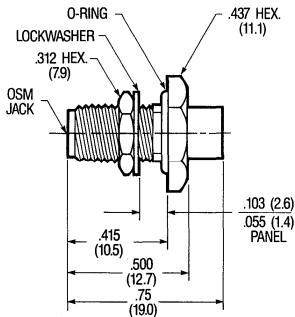
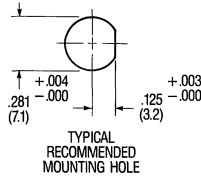


30

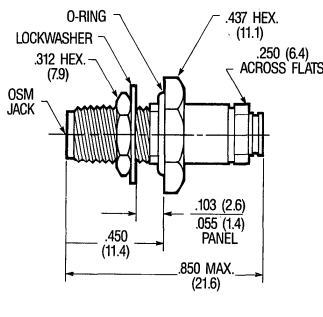
| Military Part Number | M/A-COM Part Number | Outline | Assembly Procedure | Category | Cable | Commercial Alternate |
|----------------------|---------------------------|---------|--------------------|----------|-------|----------------------|
| B3001 | 2006-8001-90 | 28 | 20-553 | B | XII | 2006-5012 |
| B3002 | 2006-8002-90 | 28 | 20-554 | B | XIII | 2006-7941 |
| B3003 | 2006-8003-92 | 30 | 20-555 | B | XII | 2006-7885 |
| B3003 | 2006-8203-92 ¹ | 29 | 20-568 | B | XII | 2006-7685 |
| B3004 | 2006-8004-92 | 30 | 20-556 | B | XIII | 2006-7841 |
| B3004 | 2006-8204-92 ¹ | 29 | 20-569 | B | XIII | 2006-7641 |
| -3005 | 2006-8005-90 | 28 | 20-553 | E | XII | 2006-5012 |
| -3006 | 2006-8006-90 | 28 | 20-554 | E | XIII | 2006-7941 |
| -3007 | 2006-8007-92 | 30 | 20-555 | E | XII | 2006-7885 |
| -3008 | 2006-8008-92 | 30 | 20-556 | E | XIII | 2006-7841 |
| -3207 | 2006-8207-92 ¹ | 29 | 20-577 | F | XII | 2006-7685 |
| -3208 | 2006-8208-92 ¹ | 29 | 20-578 | F | XIII | 2006-7641 |

1. OSCC Solderless Compression Crimp version.
See Appendix for description of interface, categories and cable types.

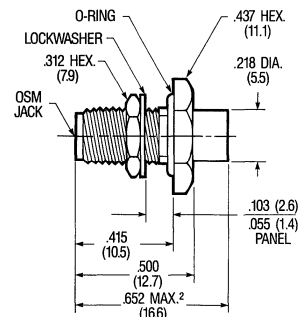
MIL-C-39012/83



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32

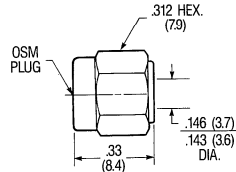


33

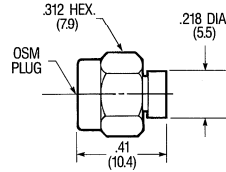
| Military Part Number | M/A-COM Part Number | Outline | Assembly Procedure | Category | Cable | Commercial Alternate |
|-----------------------|------------------------------|---------|--------------------|----------|-------|----------------------|
| B3001 | 2004-8001-90 | 31 | 20-557 | B | XII | 2004-7985 |
| B3002 | 2004-8002-90 | 31 | 20-558 | B | XIII | 2004-7941 |
| B3003 | 2004-8003-92 | 32 | 20-559 | B | XII | 2004-7885 |
| B3003 ¹ | 2004-8203-92 ¹ | 33 | 20-570 | B | XII | 2004-7685 |
| B3004 | 2004-8004-92 | 32 | 20-560 | B | XIII | 2004-7841 |
| B3004 ¹ | 2004-8204-92 ¹ | 33 | 20-571 | B | XIII | 2004-7641 |
| -3005 | 2004-8005-90 | 31 | 20-557 | E | XII | 2004-7985 |
| -3006 | 2004-8006-90 | 31 | 20-558 | E | XIII | 2004-7941 |
| -3007 | 2004-8007-92 | 32 | 20-559 | E | XII | 2004-7885 |
| -3008 | 2004-8008-92 | 32 | 20-560 | E | XIII | 2004-7841 |
| -3207 ^{1, 2} | 2004-8207-92 ^{1, 2} | 33 | 20-579 | F | XII | 2004-7685 |
| -3208 ^{1, 2} | 2004-8208-92 ^{1, 2} | 33 | 20-580 | F | XIII | 2004-7641 |

1. OSCC Solderless Compression Crimp version.
 2. Category F Only: Overall length; .820 Max. (15.7).
 See Appendix for description of interface, categories and cable types.

MIL-C-39012/92



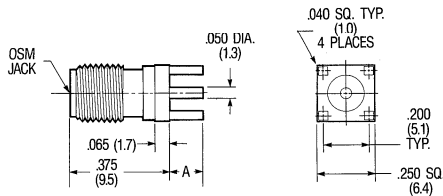
34



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| Military Part Number | M/A-COM Part Number | Outline | Assembly Procedure | Category | Cable | Commercial Alternate |
|----------------------|---------------------------|---------|--------------------|----------|-------|----------------------|
| B3001 | 2001-8901-92 | 34 | 20-561 | B | XIII | 2001-7941 |
| B3001 ¹ | 2001-8921-92 ¹ | 35 | 20-572 | B | XIII | 2001-5340 |
| B3001 ¹ | 2001-8941-92 ¹ | 34 | 20-573 | B | XIII | 2001-5363 |
| *B3101 | 2001-8911-92 | 34 | 20-561 | B | XIII | 2001-7941 |
| *B3101 ¹ | 2001-8931-92 ¹ | 35 | 20-572 | B | XIII | 2001-7641 |
| *B3101 ¹ | 2001-8951-92 ¹ | 34 | 20-573 | B | XIII | 2001-5363 |
| -3201 ¹ | 2001-8201-92 ¹ | 35 | 20-581 | F | XIII | 2001-5340 |
| *-3301 ¹ | 2001-8301-92 ¹ | 35 | 20-581 | F | XIII | 2001-7641 |

MIL-C-39012/93

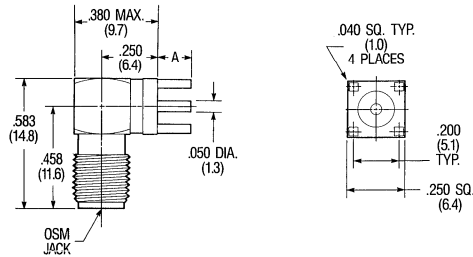


36

| Military Part Number | M/A-COM Part Number | Outline | Dim. A Inches (mm) | Commercial Alternate |
|----------------------|---------------------|---------|--------------------|----------------------|
| -3001 | 2062-8001-90 | 36 | .155 (3.9) | 2062-0000 |
| -3002 | 2062-8002-90 | 36 | .125 (3.2) | — |
| -3003 | 2062-8003-90 | 36 | .093 (2.4) | — |

* No safety wire holes.
1. OSCC Solderless Compression Crimp version.
See Appendix for description of interface, categories and cable types.

MIL-C-39012/94

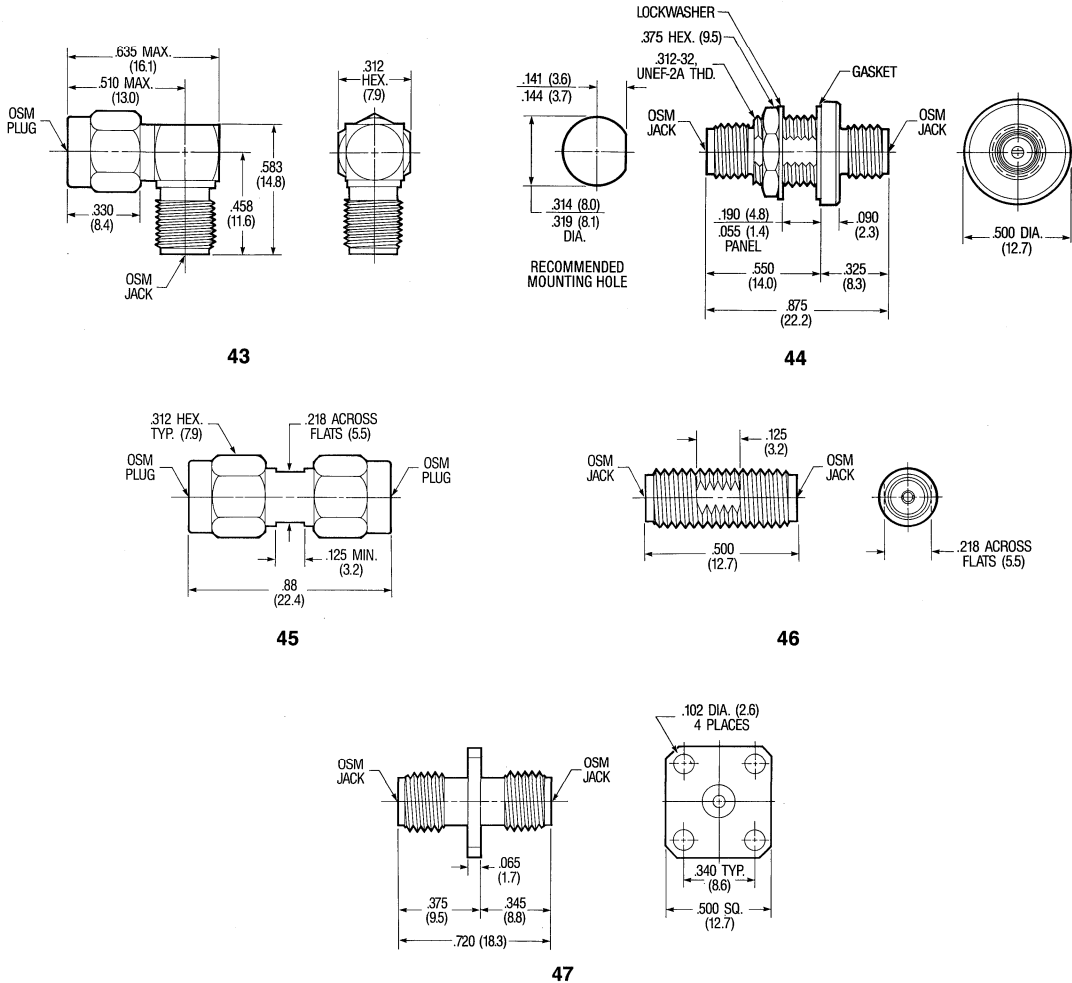


37

| Military Part Number | M/A-COM Part Number | Outline | Dim. A Inches (mm) | Commercial Alternate |
|----------------------|---------------------|---------|--------------------|----------------------|
| -3001 | 2064-8001-90 | 37 | .155 (3.9) | 2064-0000 |
| -3002 | 2064-8002-90 | 37 | .125 (3.2) | --- |
| -3003 | 2064-8003-90 | 37 | .093 (2.4) | --- |

See Appendix for description of interface.

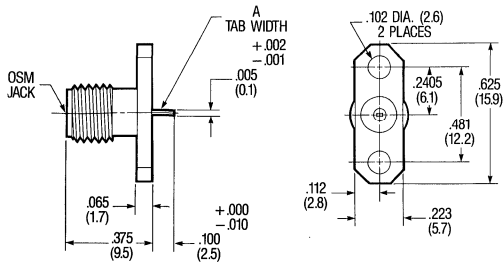
MIL-A-55339



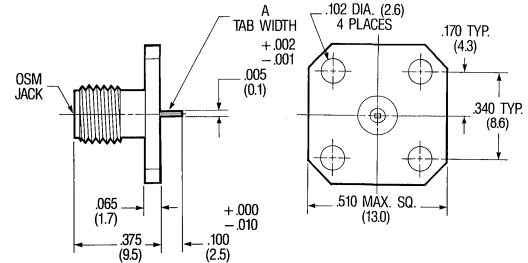
| Military Part Number | Gold Plated M/A-COM Part Number | Passivated M/A-COM Part Number | Outline | Commercial Alternate |
|----------------------|---------------------------------|--------------------------------|---------|----------------------|
| /02-30001 | 2088-8001-90 | 2088-8001-92 | 43 | 2088-0000 |
| /28-30001 | 2084-8001-90 | 2084-8001-92 | 44 | 2084-1100 |
| /28-30002 | 2084-8002-90 | 2084-8002-92 | 47 | — |
| /29-30001 | 2081-8001-90 | 2081-8001-92 | 45 | 2081-0000 |
| */29-30101 | 2081-8101-90 | 2081-8101-92 | 45 | 2081-0000 |
| /31-30001 | 2080-8001-90 | 2080-8001-92 | 46 | 2080-0000 |

* No safety wire holes.

MIL-C-83517/1



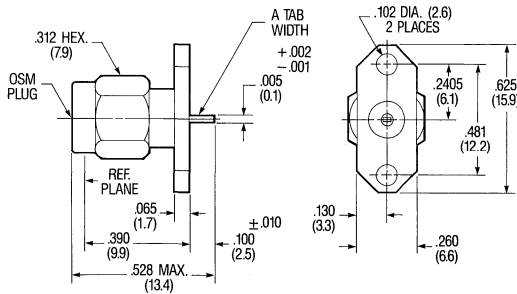
47



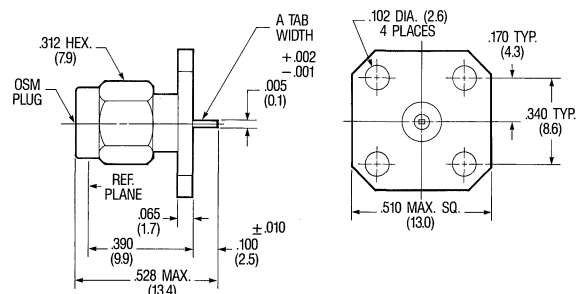
48

| Military Part Number | M/A-COM Part Number | Outline | Dim. A Inches (mm) | Commercial Alternate |
|----------------------|---------------------|---------|--------------------|----------------------|
| -31001 | 2052-8003-92 | 47 | .020 (0.5) ± .002 | — |
| -31002 | 2052-8004-92 | 47 | .050 (1.3) ± .001 | 2052-1658 |
| -31003 | 2052-8005-92 | 48 | .020 (0.5) ± .002 | 2052-5636 |
| -31004 | 2052-8006-92 | 48 | .050 (1.3) ± .001 | 2052-1618 |
| -32001 | 2052-8003-90 | 47 | .020 (0.5) ± .002 | — |
| -32002 | 2052-8004-90 | 47 | .050 (1.3) ± .001 | 2052-1658 |
| -32003 | 2052-8005-90 | 48 | .020 (0.5) ± .002 | 2052-5636 |
| -32004 | 2052-8006-90 | 48 | .050 (1.3) ± .001 | 2052-1618 |

MIL-C-83517/2



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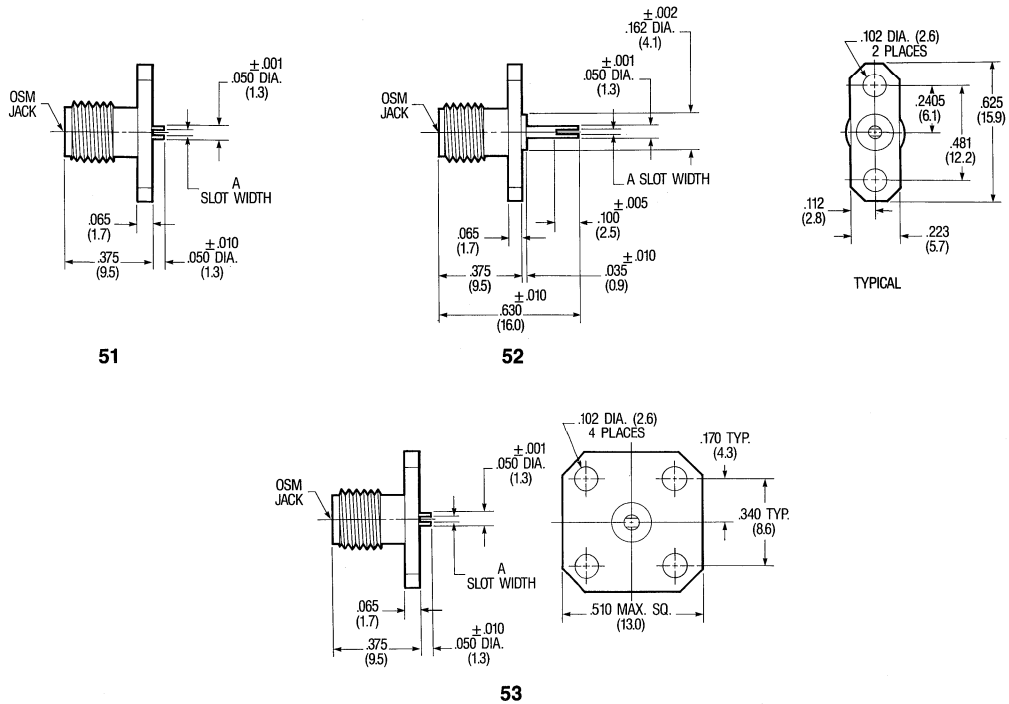


50

| Military Part Number | M/A-COM Part Number | Outline | Dim. A Inches (mm) | Commercial Alternate |
|----------------------|---------------------|---------|--------------------|----------------------|
| -31001 | 2051-8001-92 | 49 | .020 (0.5) ± .002 | — |
| -31002 | 2051-8002-92 | 49 | .050 (1.3) ± .001 | 2051-1658 |
| -31003 | 2051-8003-92 | 50 | .020 (0.5) ± .002 | — |
| -31004 | 2051-8004-92 | 50 | .050 (1.3) ± .001 | 2051-1618 |
| -32001 | 2051-8001-90 | 49 | .020 (0.5) ± .002 | — |
| -32002 | 2051-8002-90 | 49 | .050 (1.3) ± .001 | 2051-1658 |
| -32003 | 2051-8003-90 | 50 | .020 (0.5) ± .002 | — |
| -32004 | 2051-8004-90 | 50 | .050 (1.3) ± .001 | 2051-1618 |

See Appendix for description of interface.

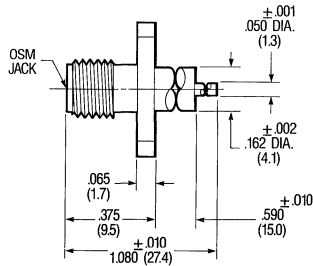
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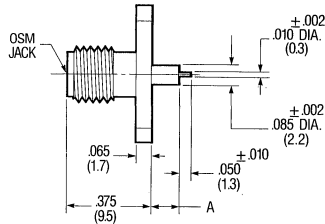
| Military Part Number | M/A-COM Part Number | Outline | Dim. A Inches (mm) | Commercial Alternate |
|----------------------|---------------------|---------|------------------------|----------------------|
| -31001 | 2052-8007-92 | 51 | .012 (0.3) +.003 -.001 | 2052-1650 |
| -31002 | 2052-8008-92 | 51 | .018 (0.5) +.003 -.001 | 2052-1652 |
| -31003 | 2052-8009-92 | 51 | .028 (0.7) +.003 -.001 | 2052-1654 |
| -31004 | 2052-8010-92 | 53 | .012 (0.3) +.003 -.001 | 2052-1610 |
| -31005 | 2052-8011-92 | 53 | .018 (0.5) +.003 -.001 | 2052-1612 |
| -31006 | 2052-8012-92 | 53 | .028 (0.7) +.003 -.001 | 2052-1614 |
| -31007 | 2052-8013-92 | 52 | .025 (0.6) ±.002 | — |
| -32001 | 2052-8007-90 | 51 | .012 (0.3) +.003 -.001 | 2052-1650 |
| -32002 | 2052-8008-90 | 51 | .018 (0.5) +.003 -.001 | 2052-1652 |
| -32003 | 2052-8009-90 | 51 | .028 (0.7) +.003 -.001 | 2052-1654 |
| -32004 | 2052-8010-90 | 53 | .012 (0.3) +.003 -.001 | 2052-1610 |
| -32005 | 2052-8011-90 | 53 | .018 (0.5) +.003 -.001 | 2052-1612 |
| -32006 | 2052-8012-90 | 53 | .028 (0.7) +.003 -.001 | 2052-1614 |
| -32007 | 2052-8013-90 | 52 | .025 (0.6) ±.002 | — |

See Appendix for description of interface.

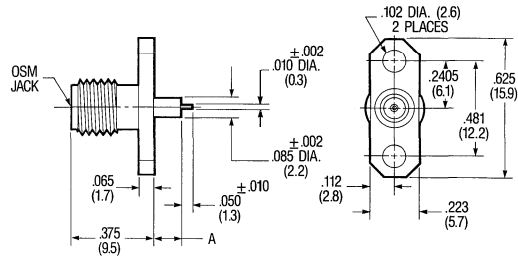
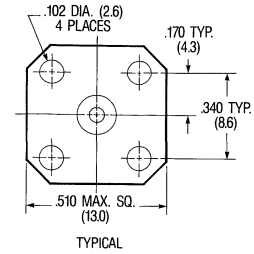
MIL-C-83517/4



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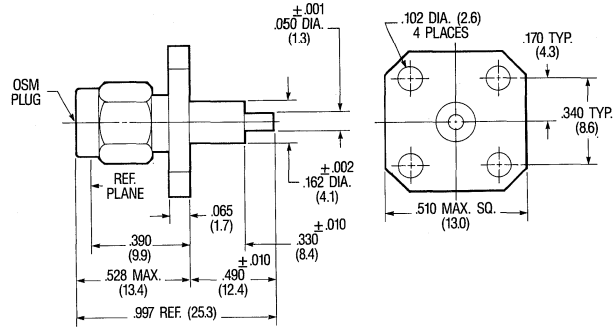


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| Military Part Number | M/A-COM Part Number | Outline | Dim. A Inches (mm) | Commercial Alternate |
|----------------------|---------------------|---------|--------------------|----------------------|
| -31001 | 2052-8014-92 | 56 | .057 (1.4) ± .003 | 2052-5675 |
| -31002 | 2052-8015-92 | 56 | .125 (3.2) ± .003 | 2052-5674 |
| -31003 | 2052-8016-92 | 55 | .057 (1.4) ± .003 | 2052-1216 |
| -31004 | 2052-8017-92 | 55 | .125 (3.2) ± .003 | 2052-1215 |
| -31005 | 2052-8018-92 | 54 | N/A | 2052-1201 |
| -32001 | 2052-8014-90 | 56 | .057 (1.4) ± .003 | 2052-5675 |
| -32002 | 2052-8015-90 | 56 | .125 (3.2) ± .003 | 2052-5674 |
| -32003 | 2052-8016-90 | 55 | .057 (1.4) ± .003 | 2052-1216 |
| -32004 | 2052-8017-90 | 55 | .125 (3.2) ± .003 | 2052-1215 |
| -32005 | 2052-8018-90 | 54 | N/A | 2052-1201 |

See Appendix for description of interface.

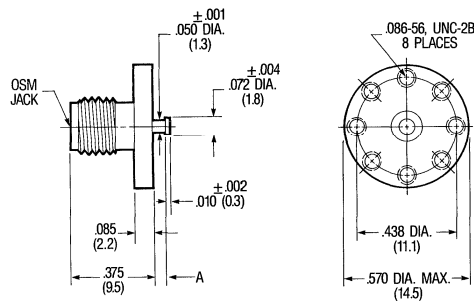
MIL-C-83517/5



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| Military Part Number | M/A-COM Part Number | Outline | Commercial Alternate |
|----------------------|---------------------|---------|----------------------|
| -31001 | 2051-8005-92 | 57 | 2051-1201 |
| -32001 | 2051-8005-90 | 57 | 2051-1201 |

MIL-C-83517/6

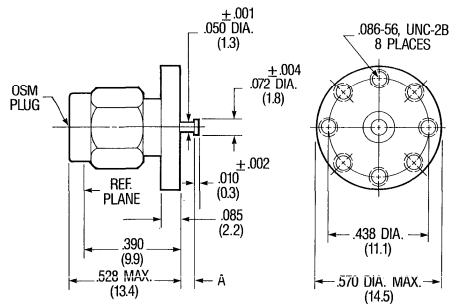


58

| Military Part Number | M/A-COM Part Number | Outline | Dim. A Inches (mm) | Commercial Alternate |
|----------------------|---------------------|---------|--------------------|----------------------|
| -31001 | 2066-8001-92 | 58 | .060 (1.5) ± .003 | 2066-1402 |
| -31002 | 2066-8002-92 | 58 | .120 (3.0) ± .003 | 2066-1403 |
| -32001 | 2066-8001-90 | 58 | .060 (1.5) ± .003 | 2066-1402 |
| -32002 | 2066-8002-90 | 58 | .120 (3.0) ± .003 | 2066-1403 |

See Appendix for description of interface.

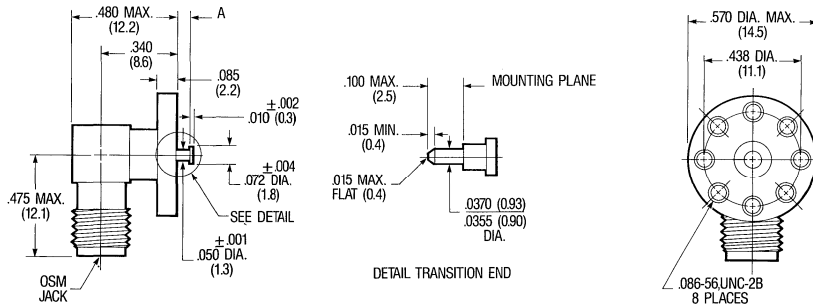
MIL-C-835177



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| Military Part Number | M/A-COM Part Number | Outline | Dim. A Inches (mm) | Commercial Alternate |
|----------------------|---------------------|---------|--------------------|----------------------|
| -31001 | 2067-8001-92 | 59 | .060 (1.5) ± .003 | 2067-1402 |
| -31002 | 2067-8002-92 | 59 | .120 (3.0) ± .003 | 2067-1403 |
| -32001 | 2067-8001-90 | 59 | .060 (1.5) ± .003 | 2067-1402 |
| -32002 | 2067-8002-90 | 59 | .120 (3.0) ± .003 | 2067-1403 |

MIL-C-835178

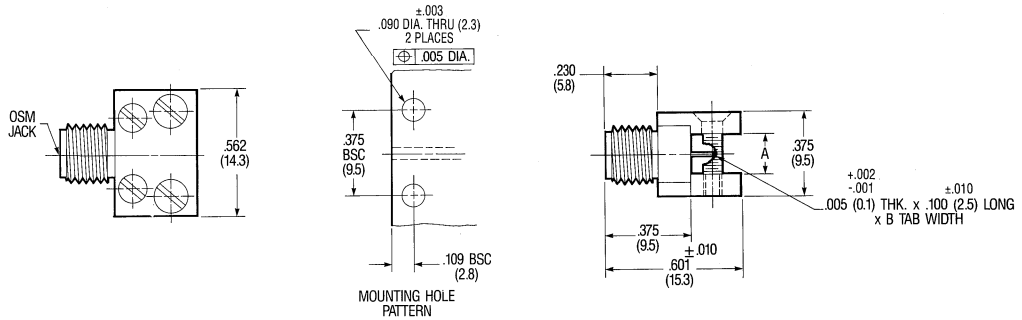


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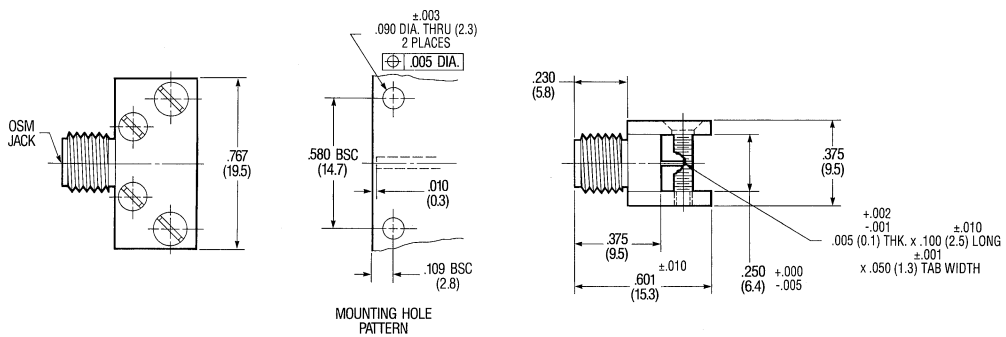
| Military Part Number | M/A-COM Part Number | Outline | Dim. A Inches (mm) | Commercial Alternate |
|----------------------|---------------------|---------|--------------------|----------------------|
| -31001 | 2068-8001-92 | 60 | .060 (1.5) ± .003 | 2068-5156 |
| -31002 | 2068-8002-92 | 60 | .120 (3.0) ± .003 | 2068-5158 |
| -32001 | 2068-8001-90 | 60 | .060 (1.5) ± .003 | 2068-5156 |
| -32002 | 2068-8002-90 | 60 | .120 (3.0) ± .003 | 2068-5158 |

See Appendix for description of interface.

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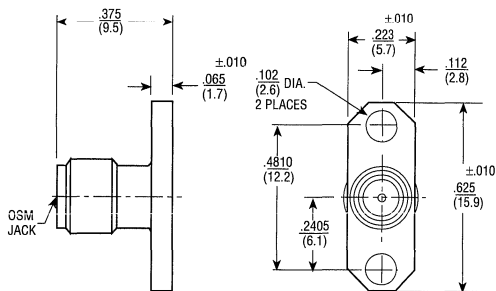


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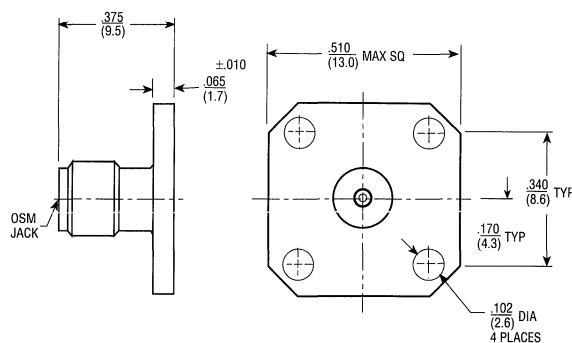
| Military Part Number | M/A-COM Part Number | Outline | Dim. A Inches (mm) | Dim. B Inches (mm) | Commercial Alternate |
|----------------------|---------------------|---------|-----------------------|--------------------|----------------------|
| -31001 | 2070-8001-92 | 61 | .057 (1.4)/.064 (1.6) | .025 (0.6) ± .002 | 2070-5029 |
| -31002 | 2070-8002-92 | 61 | .120 (3.0)/.127 (3.2) | .050 (1.3) ± .001 | 2070-5068 |
| -31003 | 2070-8003-92 | 61 | .245 (6.2)/.250 (6.4) | .050 (1.3) ± .001 | 2070-5069 |
| -31004 | 2070-8004-92 | 62 | N/A | N/A | 2070-5009 |
| -32001 | 2070-8001-90 | 61 | .057 (1.4)/.064 (1.6) | .025 (0.6) ± .002 | 2070-5029 |
| -32002 | 2070-8002-90 | 61 | .120 (3.0)/.127 (3.2) | .050 (1.3) ± .001 | 2070-5068 |
| -32003 | 2070-8003-90 | 61 | .245 (6.2)/.250 (6.4) | .050 (1.3) ± .001 | 2070-5069 |
| -32004 | 2070-8004-90 | 62 | N/A | N/A | 2070-5009 |

See Appendix for description of interface.

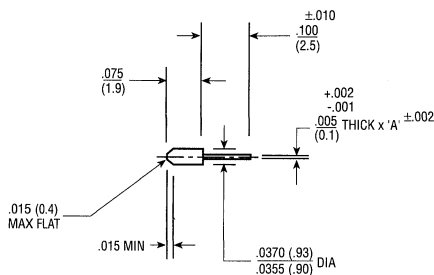
MIL-C-83517/10



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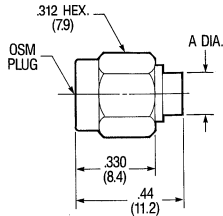
64



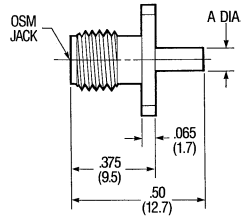
65

| Military Part Number | M/A-COM Part Number | Outline | Dim. A Inches (mm) | Commercial Alternate |
|----------------------|---------------------|---------|--------------------|----------------------|
| -31001 | 2052-8019-92 | 63 | — | 2052-3359 |
| -31003 | 2052-8021-92 | 64 | — | 2052-3358 |
| -31005 | 2052-8023-92 | 63 | 65A | 2052-3325 |
| -31006 | 2052-8024-92 | 63 | 65A | — |
| -31015 | 2052-8033-92 | 64 | 65A | 2052-3358 |
| -31016 | 2052-8034-92 | 64 | 65B | — |
| -32001 | 2052-8019-90 | 63 | — | 2052-3359 |
| -32003 | 2052-8021-90 | 64 | — | 2052-3358 |
| -32005 | 2052-8023-90 | 63 | 65A | 2052-3325 |
| -32006 | 2052-8024-90 | 63 | 65B | — |
| -32015 | 2052-8033-90 | 64 | 65A | 2052-3337 |
| -32016 | 2052-8034-90 | 64 | 65B | — |

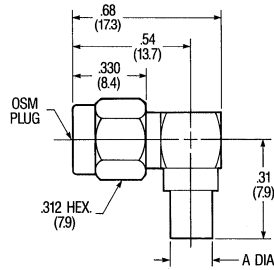
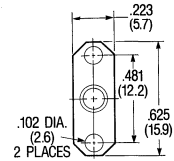
Captured Center Contact



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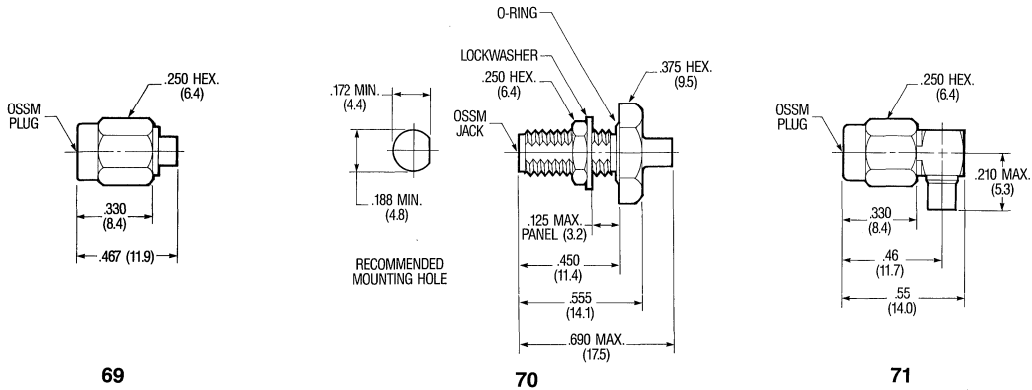


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| DESC Part Number | M/A-COM Part Number | Outline | Dim. A Inches (mm) | Assembly Procedure | Cable | Commercial Alternate |
|------------------|---------------------|---------|--------------------|--------------------|-------|----------------------|
| 84149SSG | 2001-5397-02 | 66 | .180 (4.6) | 20-321 | XIII | 2001-5479 |
| 84149SSG-1 | 2001-5557-02 | 66 | .180 (4.6) | 20-006 | XIII | 2001-5003 |
| 84149SSGA | 2001-5431-02 | 66 | .120 (3.0) | 20-320 | XII | 2001-5471 |
| 84149SSGA-1 | 2001-5558-02 | 66 | .120 (3.0) | 20-007 | XII | 2001-7985 |
| 85022SSG | 2006-5151-00 | 67 | .180 (4.6) | 20-343 | XIII | 2006-5173 |
| 85022SSG-1 | 2006-5192-00 | 67 | .180 (4.6) | 20-009 | XIII | 2006-5013 |
| 85022SSGA | 2006-5150-00 | 67 | .120 (3.0) | 20-709 | XII | 2006-5172 |
| 85022SSGA-1 | 2006-5193-00 | 67 | .120 (3.0) | 20-010 | XII | 2006-5010 |
| 85037SSG | 2007-5115-02 | 68 | .180 (4.6) | 20-017 | XIII | 2007-5054 |
| 85037SSGA | 2007-5116-02 | 68 | .120 (3.0) | 20-344 | XII | 2007-5055 |

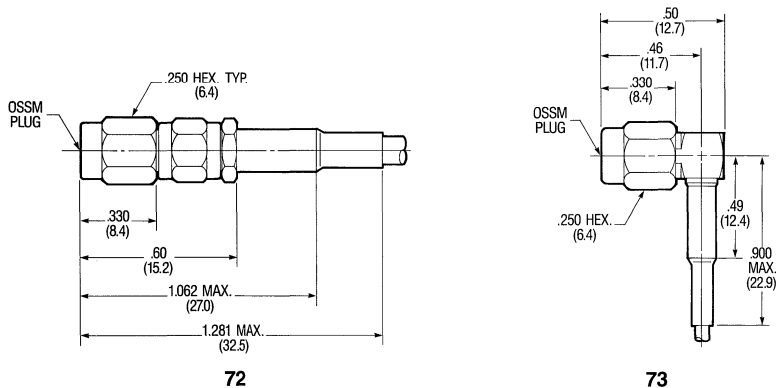
See Appendix for description of interface and cable types.
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Non-Captured Center Contact



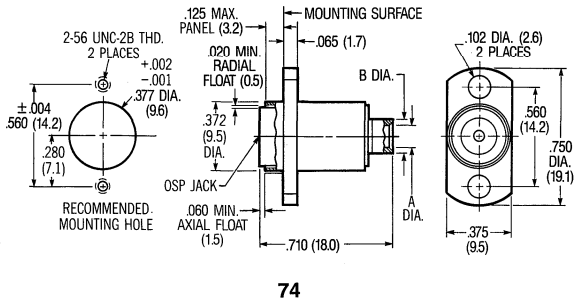
| DESC Part Number | M/A-COM Part Number | Outline | Assembly Procedure | Cable | Commercial Alternate |
|------------------|---------------------|---------|--------------------|-------|----------------------|
| 86116ZSG | 1001-5045-92 | 69 | 10-052 | XII | 1001-5004 |
| 86117ZSG | 1004-5005-90 | 70 | 10-053 | XII | 1004-7985 |
| 86118ZSG | 1007-5015-92 | 71 | 10-054 | XII | 1007-7985 |

Captured Center Contact

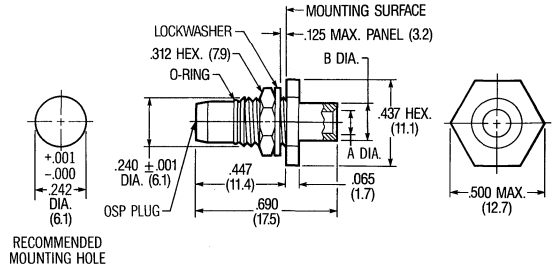


| DESC Part Number | M/A-COM Part Number | Outline | Assembly Procedure | Cable | Commercial Alternate |
|------------------|---------------------|---------|--------------------|---------|----------------------|
| 86119ZSG | 1031-5031-92 | 72 | 10-055 | II, XIV | 1031-7188 |
| 86120ZSG | 1037-5032-92 | 73 | 10-056 | II, XIV | 1037-7188 |

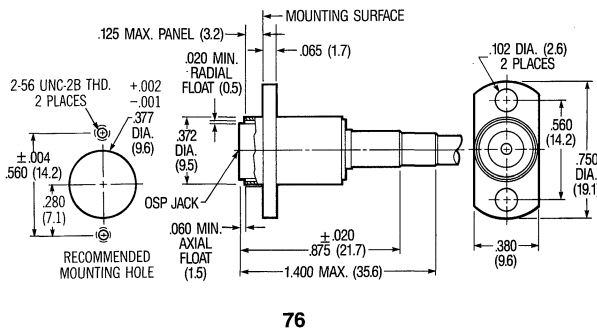
See Appendix for description of interface and cable types.
* Defense Electronics Supply Center, Dayton, Ohio



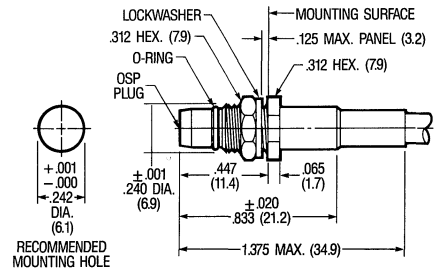
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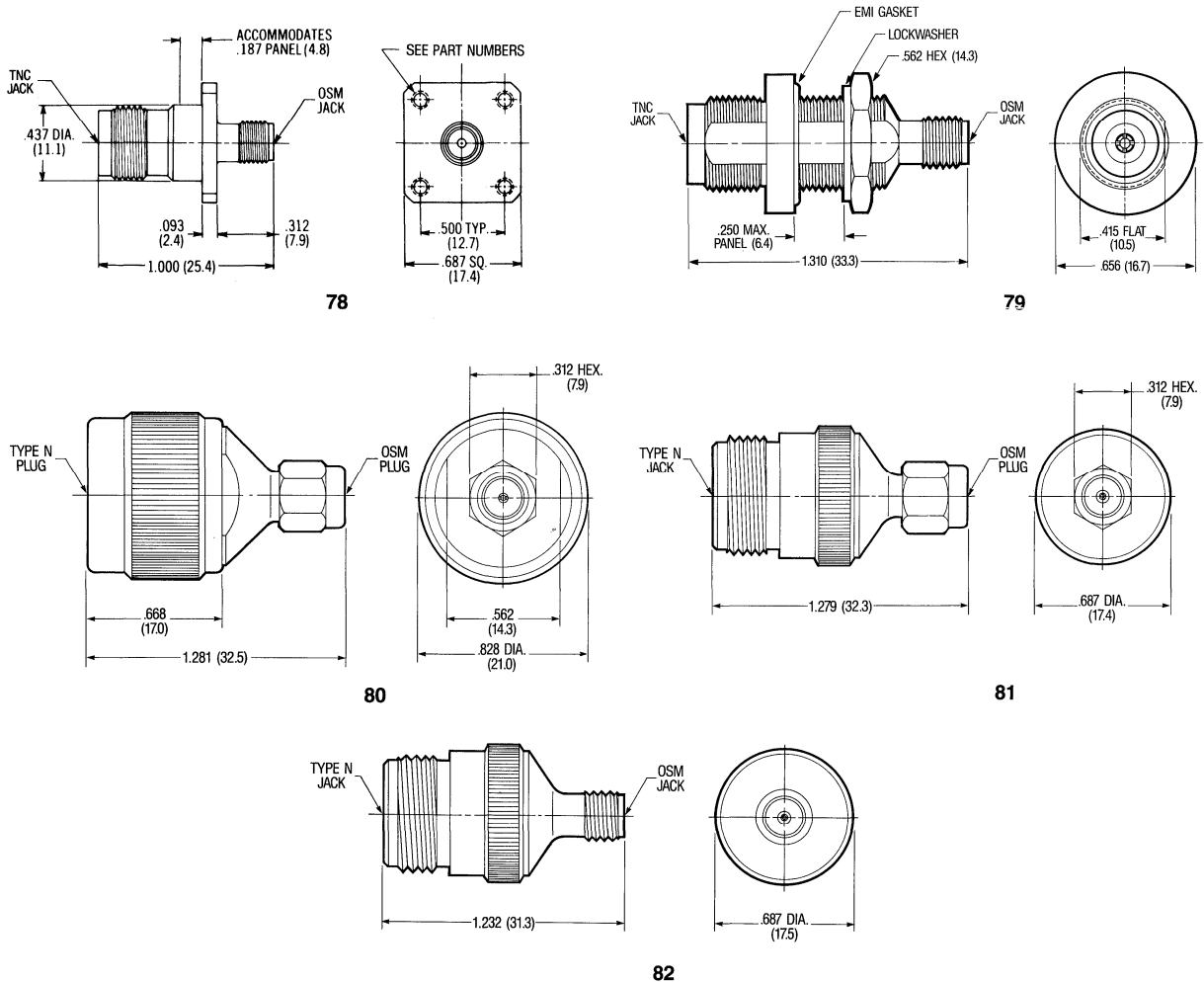
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| DESC Part Number | M/A-COM Part Number | Outline | Assembly Procedure | Cable | Commercial Alternate |
|------------------|---------------------------|---------|--------------------|----------|----------------------|
| 85071ZSGA | 4506-5015-02 ¹ | 74 | 45-002 | XIII | 4506-7941 |
| 85071ZSGB | 4506-5016-02 ¹ | 74 | 45-008 | XII | 4506-7985 |
| 85072ZSGA | 4503-5022-00 ² | 75 | 45-001 | XIII | 4503-7941 |
| 85072ZSGB | 4503-5023-00 ² | 75 | 45-012 | XII | 4503-7985 |
| 85073ZSGA | 4536-5007-02 ³ | 76 | 45-013 | XIV, XVI | 4536-7388 |
| 85073ZSGB | 4536-5008-02 ³ | 76 | 45-014 | XVII | 4536-7341 |
| 85074ZSGA | 4533-5007-02 ³ | 77 | 45-018 | XIV, XV | 4533-7388 |
| 85074ZSGB | 4533-5008-02 ³ | 77 | 45-017 | XVII | 4533-7341 |

1. Finish: Inner housing that is soldered to cable is gold plated. Outer housing is passivated stainless steel.
 2. Finish: Housing that is soldered to cable outer conductor is gold plated.
 3. Finish: Passivated stainless steel. For gold plate, change the Part Number suffix from -02 to -00.
 See Appendix for description of interface and cable types.
 * Defense Electronics Supply Center, Dayton, Ohio

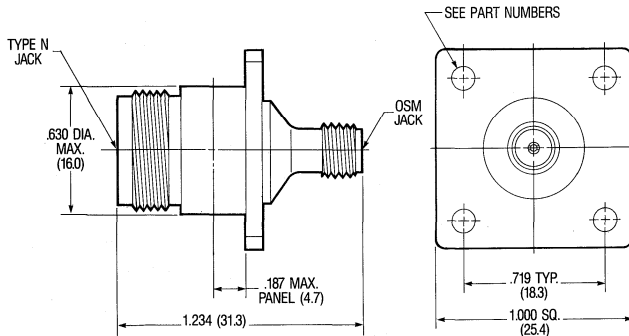


| DESC Part Number | M/A-COM Part Number | Outline | Description |
|--------------------------|---------------------------|---------|-------------------------|
| 8501814FP-1 ¹ | 3180-4034-02 ¹ | 78 | SMA Jack to TNC Jack |
| 8501814FP-2 ² | 3180-4036-02 ² | 78 | SMA Jack to TNC Jack |
| 8501814FP-3 | 3184-4002-02 | 79 | SMA Jack to TNC Jack |
| 8604412SP-1 | 3081-4002-02 | 80 | SMA Plug to Type N Plug |
| 8604412SP-2 | 3082-4022-02 | 81 | SMA Plug to Type N Jack |
| 8604412SP-3 | 3080-4014-02 | 82 | SMA Jack to Type N Jack |

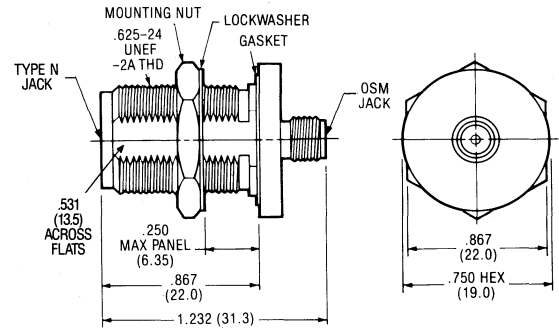
* Defense Electronics Supply Center, Dayton, Ohio.

¹ .125 DIA. TYP (4 PLACES) (3.2)

² Tapped holes to accommodate 3-56 UNF mounting screws.

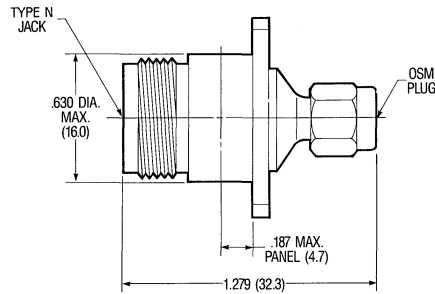


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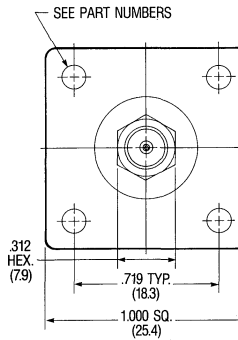


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SEE RECOMMENDED MOUNTING HOLE
DETAIL FOR PART NUMBER 3004-7941-00.



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| DESC Part Number | M/A-COM Part Number | Outline | Description |
|--------------------------|---------------------------|---------|-------------------------|
| 8503812FP-1 ¹ | 3080-4010-02 ¹ | 83 | SMA Jack to Type N Jack |
| 8503812FP-2 ² | 3080-4015-02 ² | 83 | SMA Jack to Type N Jack |
| 8503812FP-3 | 3084-4001-00 | 84 | SMA Jack to Type N Jack |
| 8503812FP-4 ¹ | 3082-4028-02 ¹ | 85 | SMA Plug to Type N Jack |
| 8503812FP-5 ² | 3082-4029-02 ² | 85 | SMA Plug to Type N Jack |
| 8503812FP-6 ¹ | 3080-4019-02 ¹ | 83 | SMA Jack to Type N Jack |
| 8503812FP-7 ² | 3080-4020-02 ² | 83 | SMA Jack to Type N Jack |

* Defense Electronics Supply Center, Dayton, Ohio.

¹ .125 DIA. TYP. (4 PLACES) (3.2)

² Tapped holes to accommodate 3-56 UNF mounting screws.

TOOLS



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M/A-COM, Inc.

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 Fax (800) 618-8883 Fax +81 (03) 3226-1451 Fax +44 (1344) 300 020

TOOLS

Solder Assembly Kits for Semi-Rigid Cable

Both cable and the connector-to-cable attachment are the ultimate limitation on performance of a system which uses well designed connectors. The following tool kits are available for the convenient solder installation of M/A-COM connectors to semi-rigid cable. Connector types include SMA(OSM), SSMA (OSSM), OSMM, TNC series (OST), BNC (OSB) series, N series (OSN), OS-50, OSP and OSSP Blind Mate Series. Instructions for the use of the tools are supplied with each tool kit to simplify assembly and insure repeatable results.

SMA (OSM) Connectors

Kit Part Number **2098-5066-54**
Model Number T-200
NSN 5180-00-460-5262



For installation of SMA (OSM) connectors to .085-inch and .141-inch diameter semi-rigid cable. The kit contains:

| Description | Part Number | Model Number | NSN |
|------------------------|---------------------|--------------|------------------|
| Assy Procedure Manual | 2098-5105-54 | — | — |
| Center Contact Holder | 2098-5221-10 | T-4578 | 5210-00-169-5779 |
| Dielectric Insert Tool | 2098-5215-02 | T-4551 | 5120-00-132-6811 |
| Dielectric Insert Tool | 2098-5214-02 | T-4554 | 5120-00-132-6810 |
| Dielectric Recess Tool | 2098-5217-54 | T-4582 | 5120-00-132-6809 |
| Fixture Sub-Assembly | 2098-5206-54 | T-4567 | — |
| Inserts — .085 (2) | 2098-5208-54 | T-4700-2 | 5120-00-132-6808 |
| Inserts — .141 (2) | 2098-5207-54 | T-4700-1 | 5120-00-132-6807 |
| Locator Tool | 2098-5209-02 | T-4575 | 5220-00-116-2913 |
| Locator Tool | 2098-5210-02 | T-4569 | 5120-00-116-2914 |
| Locator Tool | 2098-5213-02 | T-948 | — |
| Locator Tool | 2098-5218-02 | T-2367 | 5120-00-169-5780 |
| Retainer Ring Pliers | 2098-5216-54 | T-5702 | 5120-00-159-8850 |
| Solder Gage .010 | 2098-5516-02 | T-4562-5 | 5210-00-126-3117 |
| Solder Gage .015 | 2098-5212-02 | T-4562-1 | 5210-00-084-1227 |
| Solder Gage .018 | 2098-5211-02 | T-4562-2 | 5210-00-084-1237 |

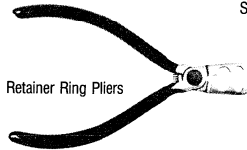
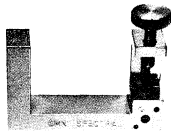
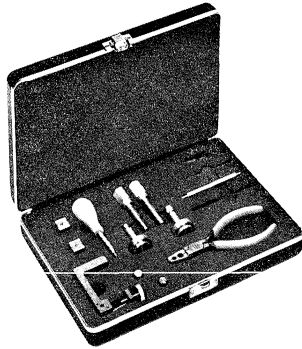
All tools may be purchased separately.

TOOLS

Solder Assembly Kits for Semi-Rigid Cable

SSMA (OSSM) Connectors

Kit Part Number **2098-5270-54**
Model Number T-250



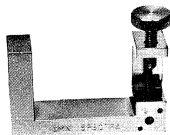
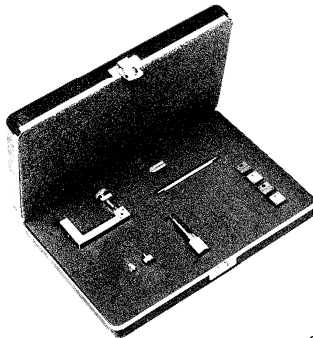
For installation of SSMA (OSSM) connectors to .070-inch and .085-inch diameter semi-rigid cable. The kit contains:

| Description | Part Number | Model Number | NSN |
|------------------------|---------------------|--------------|------------------|
| Assy Procedure Manual | 9098-5105-54 | — | — |
| Center Contact Holder | 2098-5237-10 | T-4579 | — |
| Dielectric Insert Tool | 2098-5233-02 | T-4556 | 5120-00-132-6813 |
| Dielectric Insert Tool | 2098-5234-02 | T-4559 | 5120-00-132-6848 |
| Dielectric Recess Tool | 2098-5235-54 | T-4583 | 5120-01-058-0208 |
| Fixture Sub-Assembly | 2098-5206-54 | T-4567 | — |
| Inserts — .070 (2) | 2098-5831-54 | T-4700-3 | — |
| Inserts — .085 (2) | 2098-5208-54 | T-4700-2 | 5120-00-132-6808 |
| Locator Tool | 2098-5236-02 | T-1888 | 5120-00-116-2918 |
| Locator Tool | 2098-5238-02 | T-2108 | — |
| Locator Tool | 2098-5231-02 | T-4576 | 5120-01-058-0207 |
| Locator Tool | 2098-5232-02 | T-4570 | 5120-00-116-2915 |
| Retainer Ring Pliers | 2098-5216-54 | T-5702 | 5120-00-159-8850 |
| Solder Gage .015 | 2098-5212-02 | T-4562-1 | 5210-00-084-1227 |

All tools may be purchased separately.

OSMM Microminiature Connectors

Kit Part Number **4098-5020-54**



For installation of OSMM connectors to .047-inch and .034-inch diameter semi-rigid cable. The kit contains:

| Description | Part Number | Model Number |
|-----------------------|---------------------|--------------|
| Assy Procedure Manual | 9098-5105-54 | — |
| Center Contact Holder | 4098-5012-10 | — |
| Fixture Sub-Assembly | 2098-5206-54 | T-4567 |
| Inserts — .034 (2) | 2098-5834-54 | T-4700-7 |
| Inserts — .047 (2) | 2098-5797-54 | T-4700-6 |
| Locator Tool | 4098-5014-02 | — |
| Locator Tool | 4098-5015-02 | — |
| Locator Tool | 4098-5016-02 | — |
| Solder Gage .005 | 4098-5013-02 | — |

All tools may be purchased separately.

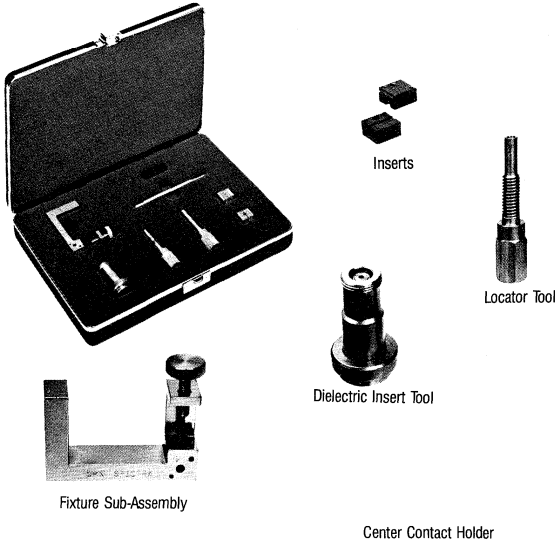
TOOLS

Solder Assembly Kits for Semi-Rigid Cable

N Series Connectors

Kit Part Number **2098-5273-54**
Model Number T-400

For installation of N (OSN) Series connectors to .141-inch and .085-inch diameter semi-rigid cable. This kit contains:



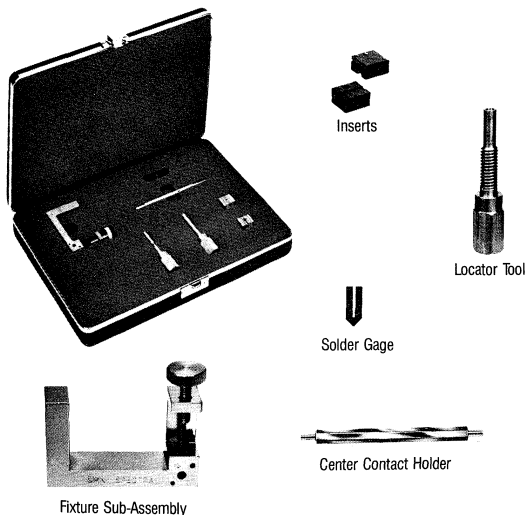
| Description | Part Number | Model Number | NSN |
|------------------------|---------------------|--------------|------------------|
| Assy Procedure Manual | 9098-5105-54 | — | — |
| Center Contact Holder | 2098-5277-10 | T-4581 | 5120-00-132-6853 |
| Dielectric Insert Tool | 2098-5278-02 | T-4584 | 5120-00-132-6816 |
| Fixture Sub-Assembly | 2098-5206-54 | T-4567 | — |
| Inserts — .085 (2) | 2098-5208-54 | T-4700-2 | 5120-00-132-6808 |
| Inserts — .141 (2) | 2098-5207-54 | T-4700-1 | 5120-00-132-6807 |
| Locator Tool | 2098-5276-02 | T-4572 | — |
| Locator Tool | 2098-5275-02 | T-4571 | 5120-00-116-2916 |
| Solder Gage .015 | 2098-5212-02 | T-4562-1 | 5210-00-084-1227 |

All tools may be purchased separately.

TNC Series Connectors

Kit Part Number **2098-5274-54**
Model Number T-450A

For installation of TNC (OST) Series connectors to .141-inch and .085-inch diameter semi-rigid cable. Most BNC (OSB) Series connectors can also be assembled using this kit. See appropriate assembly procedure for specific tooling. This kit contains:



| Description | Part Number | Model Number | NSN |
|-----------------------|---------------------|--------------|------------------|
| Assy Procedure Manual | 9098-5105-54 | — | — |
| Center Contact Holder | 2098-5279-10 | T-4580 | — |
| Fixture Sub-Assembly | 2098-5206-54 | T-4567 | — |
| Inserts — .085 (2) | 2098-5208-54 | T-4700-2 | 5120-00-132-6808 |
| Inserts — .141 (2) | 2098-5207-54 | T-4700-1 | 5120-00-132-6807 |
| Locator Tool | 2098-5282-02 | T-4596 | — |
| Locator Tool | 2098-5283-02 | T-4574 | — |
| Solder Gage .032 | 2098-5281-02 | T-4562-6 | — |

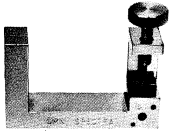
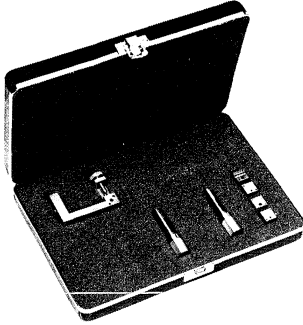
All tools may be purchased separately.

TOOLS

Solder Assembly Kits for Semi-Rigid Cable

OSP Blind Mate Connectors

Kit Part Number 4598-5010-54



Fixture Sub-Assembly



Locator Tool



Inserts

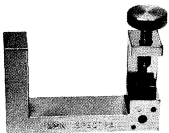
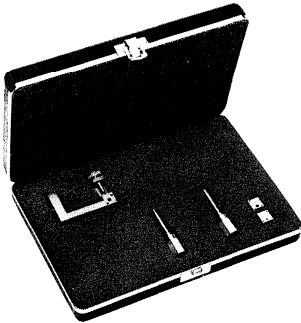
For assembly of OSP connectors to .141-inch and .085-inch diameter semi-rigid cable. This kit contains:

| Description | Part Number | Model Number | NSN |
|-----------------------|--------------|--------------|------------------|
| Assy Procedure Manual | 9098-5105-54 | — | — |
| Fixture Sub-Assembly | 2098-5206-54 | T-4567 | — |
| Inserts — .085 (2) | 2098-5208-54 | T-4700-2 | 5120-00-132-6808 |
| Inserts — .141 (2) | 2098-5207-54 | T-4700-1 | 5120-00-132-6807 |
| Locator Tool | 4598-5005-02 | — | — |
| Locator Tool | 4598-5004-02 | — | — |

All tools may be purchased separately.

OSSP Blind Mate Connectors

Kit Part Number 4798-5006-54



Fixture Sub-Assembly



Locator Tool



Inserts

For assembly of OSSP connectors to .085-inch diameter semi-rigid cable. This kit contains:

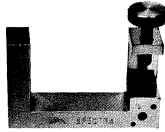
| Description | Part Number | Model Number | NSN |
|-----------------------|--------------|--------------|------------------|
| Assy Procedure Manual | 9098-5105-54 | — | — |
| Fixture Sub-Assembly | 2098-5206-54 | T-4567 | — |
| Inserts — .085 (2) | 2098-5208-54 | T-4700-2 | 5120-01-132-6808 |
| Locator Tool | 4798-5005-02 | — | — |
| Locator Tool | 4798-5004-02 | — | — |

All tools may be purchased separately.

TOOLS

Solder Assembly Tools For Semi-Rigid Cable

OS-50 dc to 50 GHz Connectors



Fixture Sub-Assembly



Locator Tool



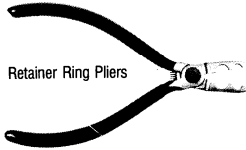
Inserts



Trim Tool



Dielectric Recess Tool



Retainer Ring Pliers

For installation of OS-50 connectors to .085-inch and .096-inch diameter semi-rigid cable. These tools are not available as a kit and must be purchased separately.

| Description | Part Number | Model Number | NSN |
|---|--------------|--------------|------------------|
| Trim Tool for Solder Clamp Attachment Connectors | 2598-5049-02 | — | — |
| Trim Tool for Direct Solder Attachment Connectors | 2598-5044-02 | — | — |
| Dielectric Recess Tool | 2098-5235-54 | T-4583 | 5120-01-058-0208 |
| Fixture Sub-Assembly | 2098-5206-54 | T-4567 | — |
| Inserts — .085 (2) | 2098-5208-54 | T-4200-2 | 5120-00-132-6808 |
| Inserts — .096 (2) | 2598-5053-54 | — | — |
| Locator Tool | 2098-5231-02 | T-4576 | 5120-01-058-0207 |
| Locator Tool | 2598-5110-02 | — | — |
| Retaining Ring Pliers | 2098-5216-54 | T-5702 | 5120-00-159-5580 |

OS-50P dc to 40 GHz Blind Mate Connectors



Fixture Sub-Assembly



Locator Tool

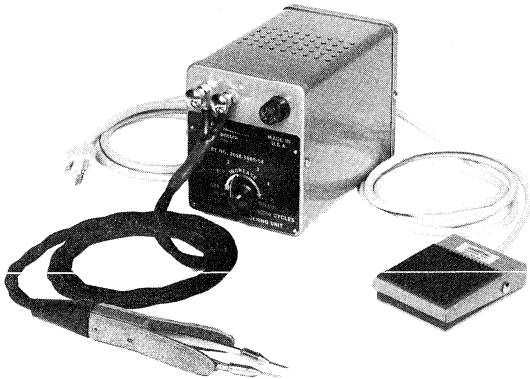


Inserts

For installation of OS-50P microminiature connectors to .085-inch and .047-inch diameter semi-rigid cable. These tools are not available as a kit and must be purchased separately.

| Description | Part Number |
|----------------------|--------------|
| Locator Tool | 2598-5218-54 |
| Locator Tool | 2598-5226-54 |
| Fixture Sub-Assembly | 2098-5206-54 |
| Insert - .085 | 2098-5208-54 |
| Insert - .047 | 2098-5797-54 |

Resistance Soldering Machine



Resistance soldering machines are available where the metals to be soldered are held between a pair of soldering tweezers. When the foot switch is depressed and current is applied to the metals, they experience controlled heating. When the foot switch is released, the heating cycle ceases. The metals become hot from within because of their natural resistance to current that is passing through their mass, providing a more consistent temperature rise.

The tweezers are not heated directly from the application of current, but only through dissipation from already heated metals being soldered. There is never any danger of electrical shock from the tips of either the soldering tweezers or any other part of this machine.

| Part Number | Rating | Volts |
|--------------|-----------|-------|
| 2098-5080-54 | 250 Watts | 110 |
| 2598-5022-54 | 250 Watts | 220 |

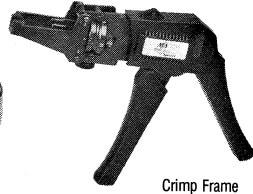
| Replacement Parts | |
|-------------------|------------------------------|
| Part Number | Description |
| 2098-0276-54 | Tips |
| 2098-5760-54 | Soldering Tweezers and Cable |

TOOLS

OSCC Solderless Crimp Assembly Kits For Semi-Rigid Cable

Universal Compression Crimp Tool

Kit Part Number 2598-5200-54



Crimp Frame



Cable Supports



Anvil



Gauge

M/A-COM's Universal Compression Crimp Tool offers the ability to rapidly produce cable assemblies using solderless compression crimp connectors with semi-rigid cables. This universal assembly tool kit will attach SMA, OSP, N and TNC series connectors to .141, .085 and .250-inch cable quickly and consistently with excellent mechanical and electrical results.

The tool kit permits single hand assembly. Anvils and cable supports can be quickly changed. Crimp lengths can be adjusted from .001 to 1.000 in increments of .001. Sharp radius bends in cables are easily accommodated. The kit contains:

| Description | Part Number |
|--------------------|--------------|
| Crimp Frame | 2598-5196-54 |
| Calibration Gauge | 2598-5197-54 |
| .141 Cable Support | 2598-5198-54 |
| .085 Cable Support | 2598-5199-54 |
| SMA Plug Anvil | 2598-5201-54 |
| SMA Jack Anvil | 2598-5202-54 |
| Type N Plug Anvil | 2598-5203-54 |
| Type N Jack Anvil | 2598-5204-54 |
| TNC Plug Anvil | 2598-5205-54 |
| TNC Jack Anvil | 2598-5206-54 |
| OSP Plug Anvil | 2598-5207-54 |
| OSP Jack Anvil | 2598-5208-54 |

All tools may be purchased separately.

TOOLS

OSCC Solderless Crimp Assembly Kits and Accessories for Semi-Rigid Cable

Military Approved Locator Tools



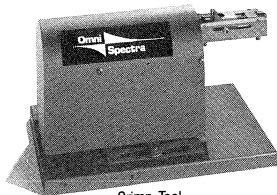
Locator Tool

For use with MIL-C-22520/36-01 approved tool when assembling M/A-COM MIL-Qualified OSCC solderless crimp connectors. These tools are not available as a kit and must be purchased separately.

| Locator Part Number | Military Specification | .141 Cable Connector Part Number | .085 Cable Connector Part Number |
|---------------------|------------------------|--|--|
| 2098-0725-54 | M22520/36-16 | 2001-8201-92 2001-8301-92 | — — |
| 2098-0727-54 | M22520/36-18 | 2001-8208-92 2001-8308-92 | 2001-8207-92 2001-8307-92 |
| 2098-0728-54 | M22520/36-17 | 2002-8208-92 2004-8208-92 2006-8208-92 | 2002-8207-92 2004-8207-92 2006-8207-92 |

Pneumatic Crimp Tool Kit for High Volume Production

Kit Part Number **2598-5117-54★**



Crimp Tool



Anvil

For installation of M/A-COM OSCC solderless crimp connectors to .085-inch and .141-inch diameter cable. The tool is supplied with a removable male quick disconnect fitting attached via a 1/8-inch NPT (National Pipe Thread). It has minimal moving parts and can exert over 400 lbs of crimping power.* Its highly accessible crimping point allows assembly of virtually all prebent cable. This kit contains:

| Description | Part Number |
|---------------------------|---------------------|
| Anvil No. 13 — SMA Plug | 2098-0671-02 |
| Anvil No. 33 — SMA Jack | 2598-5122-02 |
| Assembly Procedure Manual | 9098-5105-54 |
| Crimp Tool | — |

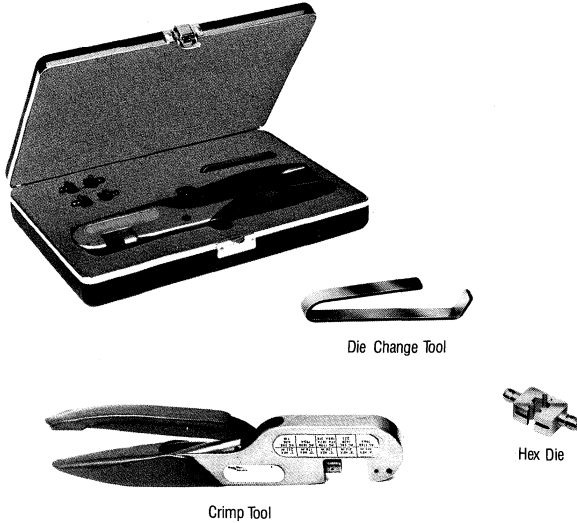
Anvils may be purchased separately.

*Assumes 100 PSI line pressure

TOOLS

MIL-C-22520/10-01 Hex Crimp Assembly Kit for Flexible Cable

MIL-C-22520/10-01 Equivalent Hex Crimp Kit Kit Part Number 2098-0105-54



For military specified applications requiring quick and efficient cable to connector attachment. Five popular hex die sizes are available to crimp the outer cable conductor to connector housings. The kit contains:

| Description | Part Number | Model Number |
|-----------------------|--------------|--------------|
| Assy Procedure Manual | 9098-5105-54 | — |
| Crimp Tool | 5698-5014-54 | T-4718 |
| Die Change Tool | 5698-5017-54 | T-4703 |
| Hex Die — A, B, C | 5698-5015-54 | T-4702-1 |
| Hex Die — D, E | 5698-5016-54 | T-4702-2 |

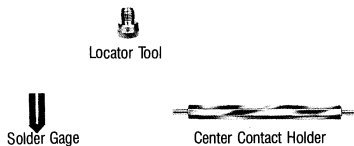
All tools may be purchased separately.
For the assembly of SMA (OSM) connectors, Accessory Kit Part Number 2098-5067-54 is required. For SSMA (OSSM) connectors, Accessory Kit Part Number 2098-5272-54 is required.

A basic instruction sheet, included with the kit, aids in proper die selection.

| Hex Die Part Number | Die | Hex Size $\pm .003$ | For Use With RG/U Cable |
|---------------------|-----|---------------------|---------------------------------------|
| 5698-5015-54 | A | .105 | 178B & 196A |
| | B | .213 | 55B, 58C, 141A, 142B, 223, 303, & 400 |
| | C | .128 | 174, 174B, 179, 187A, 188A, & 316 |
| 5698-5016-54 | D | .178 | 180B, 195A, & 122 |
| | E | .255 | 59, 62A, 71B, 210, & 302 |

| Additional Dies Available | | |
|---------------------------|---------------------|-------------------------|
| Hex Die Part Number | Hex Size $\pm .003$ | For Use With RG/U Cable |
| 2098-0323-54 | .151 | RD316 Double Braid |
| 2098-0370-54 | .118 | RD178 Double Braid |

SMA (OSM) Crimp Tool Accessory Kit Kit Part Number 2098-5067-54 Model Number T-500



For installation of SMA (OSM) connectors to flexible braided cable. Crimp type SMA connectors require Hex Crimp Kit Part Number 2098-0105-54. The kit contains:

| Description | Part Number | Model Number | NSN |
|-----------------------|--------------|--------------|------------------|
| Center Contact Holder | 2098-5221-10 | T-4578 | 5210-00-169-5779 |
| Locator Tool | 2098-5213-02 | T-948 | — |
| Locator Tool | 2098-5218-02 | T-2367 | 5120-00-169-5780 |
| Solder Gage .015 | 2098-5212-02 | T-4562-1 | 5210-00-084-1227 |

All tools may be purchased separately.

SSMA (OSSM) Crimp Tool Accessory Kit Kit Part Number 2098-5272-54 Model Number T-550



For installation of SSMA (OSSM) connectors to flexible braided cable. Crimp type SSMA connectors require Hex Crimp Kit Part Number 2098-0105-54. The kit contains:

| Description | Part Number | Model Number | NSN |
|-----------------------|--------------|--------------|------------------|
| Center Contact Holder | 2098-5237-10 | T-4579 | — |
| Locator Tool | 2098-5236-02 | T-1888 | 5120-00-116-2918 |
| Locator Tool | 2098-5238-02 | T-2108 | — |

All tools may be purchased separately.

TOOLS

Econo-Crimp Assembly Kit for Flexible Cable

Econo-Crimp Assembly Kit Part Number 2598-5005-54★



For quick and efficient cable to connector attachment. Five popular hex die sizes are available to crimp the outer cable conductor to connector housings.

The kit contains:

| Description | Part Number |
|-------------------|---------------------|
| Crimp Tool | 2598-5006-54 |
| Hex Die — A, B, C | 2598-5007-54 |
| Hex Die — D, E | 2598-5008-54 |

All tools may be purchased separately.
For the assembly of SMA (OSM) connectors, Accessory Kit Part Number 2098-5067-54 is required. For SSMA (OSSM) connectors, Accessory Kit Part Number 2098-5272-54 is required.

| Hex Die Part Number | Die | Hex Size ±.003 | For Use With RG/U Cable |
|---------------------|-----|----------------|---------------------------------------|
| 2598-5007-54 | A | .105 | 178B & 196A |
| | B | .213 | 55B, 58C, 141A, 142B, 223, 303, & 400 |
| | C | .128 | 174, 174B, 179, 187A, 188A, & 316 |
| 2598-5008-54 | D | .178 | 180B, 195A, & 122 |
| | E | .255 | 59, 62A, 71B, 210, & 302 |

SMA (OSM) Crimp Tool Accessory Kit

Kit Part Number **2098-5067-54★**
Model Number T-500



For installation of SMA (OSM) connectors to flexible braided cable. Crimp type SMA connectors require Hex Crimp Kit Part Number 2598-5005-54. The kit contains:

| Description | Part Number | Model Number | NSN |
|-----------------------|---------------------|--------------|------------------|
| Center Contact Holder | 2098-5221-10 | T-4578 | 5210-00-169-5779 |
| Locator Tool | 2098-5213-02 | T-948 | — |
| Locator Tool | 2098-5218-02 | T-2367 | 5120-00-169-5780 |
| Solder Gage .015 | 2098-5212-02 | T-4562-1 | 5210-00-084-1227 |

All tools may be purchased separately.

SSMA (OSSM) Crimp Tool Accessory Kit

Kit Part Number **2098-5272-54★**
Model Number T-550



For installation of SSMA (OSSM) connectors to flexible braided cable. Crimp type SSMA connectors require Hex Crimp Kit Part Number 2598-5005-54. The kit contains:

| Description | Part Number | Model Number | NSN |
|-----------------------|---------------------|--------------|------------------|
| Center Contact Holder | 2098-5237-10 | T-4579 | — |
| Locator Tool | 2098-5236-02 | T-1888 | 5120-00-116-2918 |
| Locator Tool | 2098-5238-02 | T-2108 | — |

All tools may be purchased separately.

TOOLS

Hermetic Connector Assembly Tools

Mounting Hole Tooling



Step Reamer Drill



Bottoming Tap

For recommended mounting hole preparation. These tools are not available as a kit and must be purchased separately.

| Description | Part Number |
|--------------------------|--------------|
| OS-50 Step Reamer Drill | 2598-5112-02 |
| OS-50 Step Reamer Drill | 2598-5046-02 |
| OS-50 Step Reamer Drill | 2598-5092-02 |
| OS-50 Step Reamer Drill | 2598-5173-02 |
| OS-50P Step Reamer Drill | 2598-5230-02 |
| OS-50P Step Reamer Drill | 2598-5233-02 |
| Step Reamer Drill | 2098-0442-54 |
| Step Reamer Drill | 2098-0443-54 |
| Bottoming Tap | 2098-5618-54 |

Soldering Fixtures



Flange Mount Soldering Fixture



Panel Mount Soldering Fixture

For fixturing hermetic seal of mounting receptacle while soldering into MIC package. These tools are not available as a kit and must be purchased separately.

| Description | Part Number | Connector Types |
|--------------------------------|--------------|-----------------|
| Panel Mount Soldering Fixture | 2098-5614-54 | SMA, OSP |
| | 2598-5047-54 | OS-50 |
| Flange Mount Soldering Fixture | 2598-5048-54 | OS-50 |
| | 2598-5227-54 | OS-50P* |
| | 2598-5228-54 | OS-50P* |
| | 2598-5237-54 | OS-50P |
| | 2098-5615-54 | SMA, OSP |

Installation Tooling



Torque Tool



Insulator Removal Tool



Torque Wrench

For installation of hermetic connectors. These tools are not available as a kit and must be purchased separately.

| Description | Part Number | Connector Types | Preset Torque |
|------------------------|--------------|-----------------|---------------|
| Torque Tool | 4598-5014-54 | OSP* | 18 in. lbs. |
| | 2098-0248-54 | SMA* | 25 in. lbs. |
| | 1098-3200-54 | SSMA* | 14 in. lbs. |
| | 2598-5111-54 | OS-50* | 18 in. lbs. |
| | 2598-5051-54 | OS-50* | 25 in. lbs. |
| Torque Wrench | 2098-0786-54 | OSP | 30 in. lbs. |
| | 2598-5097-54 | OSP | 18 in. lbs. |
| | 2098-5619-54 | SMA | 30 in. lbs. |
| Insulator Removal Tool | 2098-3334-54 | SMA | N/A |

*Header may be purchased separately.

| Torque Tool Part Number | Header Part Number |
|-------------------------|--------------------|
| 4598-5014-54 | 4598-3200-54 |
| 2098-0248-54 | 2598-5071-54 |
| 1098-3200-54 | 2598-5151-54 |
| 2598-5111-54 | 2598-5193-54 |
| 2598-5051-54 | 2598-5194-54 |

TOOLS

Torque Wrenches

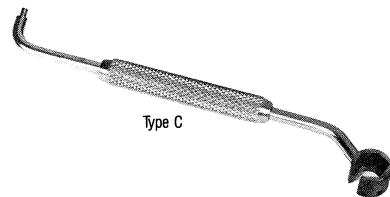
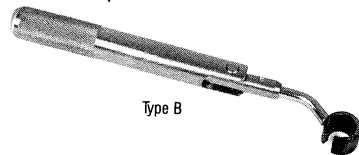
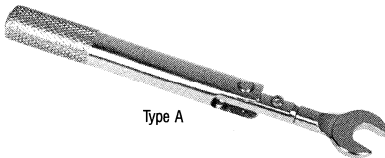
The use of the proper torque wrench helps insure better performance of the connector. Pre-set torque wrenches prevent over or under torque which can damage a connector and therefore an entire system. All M/A-COM Torque Wrenches are pre-set to the recommended tightening torque for each connector type or connector-to-cable assembly application.

Special application torque wrenches and accessories are available upon request.

Special Features:

- Accurate Repeatability
- Interchangeable Wrench Heads
- Pre-set torque indicated by an audible "click"
- Dual Direction Wrench Movement
- Rugged Construction
- Certificate of Calibration Supplied With Each Wrench

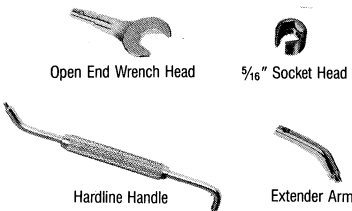
Mini-Torque Wrenches



M/A-COM new Mini-Torque Wrenches are less than 4 1/2" long and are made of high quality tool steel for rugged dependability. Accessories are available to aid in installation or dis-assembly in hard to reach areas.

| Hex Size Inches (mm) | Used For Connector Type | Part Number | Type | Preset Torque |
|-------------------------|----------------------------|----------------|------|------------------|
| 5/16 (7.9) | SMA (OSM) | 2098-0275-54 | A | 8 in. lbs. |
| 5/16 (7.9) | SMA (OSM) | 2098-5641-54 | C | N/A |
| 5/16 (7.9) | SMA (OSM) | 2098-5642-54 | B | 8 in. lbs. |
| 15/64 (5.9) | SMC | 2598-5235-54 | A | 2.6 in. lbs. |
| 1/4 (6.4) | SSMA (OSSM) | 2598-5014-54 | A | 5 in. lbs. |
| 3/16 (4.7) | OSMM | 2598-5024-54 | A | 3 in. lbs. |

Accessories for Mini-Torque Wrenches

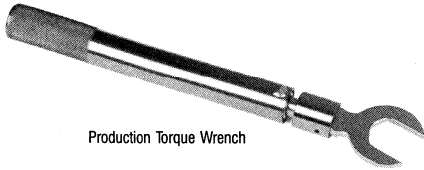


| Description | Part Number |
|--------------------------------|--------------|
| 5/16 Inch Socket Head | 2598-5011-54 |
| Extender Arm | 2598-5013-54 |
| Hardline Handle | 2598-5012-54 |
| 1/4 Inch Open-End Wrench Head | 2098-0296-54 |
| 5/16 Inch Open-End Wrench Head | 2098-0297-54 |

TOOLS

Torque Wrenches 7mm Assembly Kit

Production Torque Wrenches



Production Torque Wrench

M/A-COM Production Torque Wrenches are approximately 7" long and are well balanced for comfortable use when tightening the connector-to-connector interface or connector-to-cable assembly. Replaceable wrench heads are available for use with any of the parts.

Connector-to-Connector (Front End) Assembly

| Hex Size Inches (mm) | Used For Connector Type | Part Number | Preset Torque |
|-------------------------|-------------------------------|---------------------|------------------|
| 13/16 (20.6) | SC/Type N (Hex Nut Design) | 2598-5026-54 | 14 in. lbs. |
| 3/4 (19.1) | 7mm | 7098-5031-54 | 14 in. lbs. |
| 5/8 (15.9) | TNC (Hex Nut Design) | 2598-5027-54 | 14 in. lbs. |
| 9/16 (14.3) | TNC (Hex Nut Design) | 2598-5298-54 | 14 in. lbs. |
| 5/16 (7.9) | SMA (OSM) | 2098-5065-54 | 8 in. lbs. |
| 1/4 (6.4) | SSMA (OSSM) | 2098-5304-54 | 5 in. lbs. |
| 1/4 (6.4) | SMC | 5098-5014-54 | 3 in. lbs. |

Connector-to-Connector (Rear) Assembly

| Hex Size Inches (mm) | Part Number | Preset Torque |
|-------------------------|---------------------|------------------|
| 1/2 (12.7) | 2098-5630-54 | 18 in. lbs. |
| 3/8 (15.9) | 2098-5645-54 | 18 in. lbs. |
| 5/16 (7.9) | 2098-5644-54 | 30 in. lbs. |
| 9/32 (7.1) | 2098-5619-54 | 30 in. lbs. |
| 1/4 (6.4) | 2098-0351-54 | 18 in. lbs. |

Accessories for Production Torque Wrenches



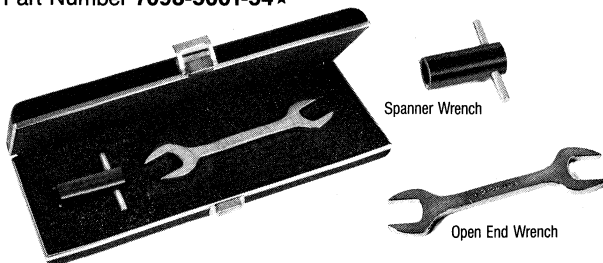
Open End Wrench Head

Replaceable wrench heads are designed to be used with any production wrench while maintaining the original preset torque of that wrench.

| Hex Size Inches (mm) | Part Number |
|-------------------------|---------------------|
| 13/16 (20.6) | 2098-0571-54 |
| 5/8 (15.9) | 2598-5030-54 |
| 1/2 (12.7) | 2598-5029-54 |
| 3/8 (9.5) | 2098-0824-54 |
| 5/16 (7.9) | 2098-0131-54 |
| 9/32 (7.1) | 2098-0347-54 |
| 1/4 (6.4) | 1098-5035-54 |

7mm Assembly Kit

Part Number **7098-5001-54**★



Spanner Wrench

Open End Wrench

For proper maintenance of 7mm precision connectors. The kit contains:

| Description | Part Number |
|---------------------------------|---------------------|
| Open End Wrench 1/2 - 9/16 inch | 7098-5005-54 |
| Spanner Wrench | 7098-5003-54 |

Both tools may be purchased separately.

TOOLS

Cable Preparation Tools

Cable Benders for Semi-Rigid Cable



Cable Bender

| Description | Part Number | Model Number | NSN | Bend Radius* Inches (mm) |
|----------------------------------|---------------------|--------------|------------------|-----------------------------|
| Cable Bender for RG-405/U (.085) | 2098-5287-54 | T-2101 | 5120-00-008-3628 | 1/4 (6.4) 3/8 (9.8) |
| Cable Bender for RG-402/U (.141) | 2098-5286-54 | T-1107 | 5120-00-513-4832 | 3/8 (9.8) 1/2 (12.7) |

*Radius of the bend is measured from the centerline of the cable.

Trimming Tools for Semi-Rigid Cable



Trim Tool

For soldered semi-rigid cable connectors using the cable center conductor as its contact. These tools are optional for most installations but recommended for optimum connector performance.

| Description | Part Number | Model Number | NSN |
|---|---------------------|--------------|------------------|
| Trim Tool for SMA Connectors RG-402/U (.141) | 2098-5222-02 | T-5699 | 5120-00-176-3908 |
| Trim Tool for SSMA Connectors RG-405/U (.085) | 2098-5269-02 | T-5701 | 5120-00-126-3155 |

Tool Kit for Connectors to High Power Low Loss Aluminum Jacketed Semi-Rigid Cable

Kit Part Number **2098-5560-54** ★
Model Number T-4683
NSN 5180-00-116-7558

For installation of SMA (OSM), N (OSN), TNC (OST), and SC connectors to .250-inch, .375-inch and .500-inch high power, low loss aluminum jacketed semi-rigid cable. This kit contains:

| Description | Part Number | Model Number |
|----------------------|---------------------|--------------|
| Cable Adapter (.250) | 2098-5812-02 | T-17508 |
| Cable Adapter (.375) | 2098-5809-02 | T-17297-2 |
| Cable Adapter (.500) | 2098-5808-02 | T-17297-1 |
| Cable Cutter | 2098-5811-54 | T-17349 |
| Solder Gage .007 | 2098-5796-02 | T-4676-8 |
| Solder Gage .024 | 2098-5519-02 | T-4680 |
| Solder Gage .030 | 2098-5795-02 | T-4676-5 |

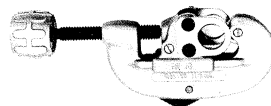
All tools may be purchased separately.



Cable Adapter



Solder Gage

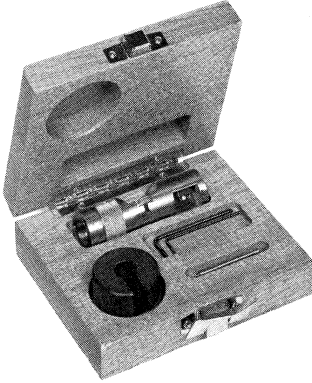


Cable Cutter

TOOLS

Cable Preparation Tools

Manual Trim & Point Tool



M/A-COM now offers a manual tool that performs both trimming and pointing operations. Tools are available for .141-inch and .085-inch diameter semi-rigid cable. These hand-operated tools are ideally suited for engineering, small production runs or field use. They feature tungsten carbide cutters for durability up to 30 times longer than the life of a high speed steel cutter. Replacement cutters are interchangeable and may be purchased separately.

| Tool Part Number | Cable | Trim Length Inches (mm) |
|---------------------|-----------------|----------------------------|
| 2598-5116-54 | RG-402/U (.141) | .085 (2.2) Fixed |
| 2598-5120-54 | RG-405/U (.085) | .070 (1.8) Fixed |
| 2598-5137-54 | RG-402/U (.141) | Adjustable* |
| 2598-5138-54 | RG-405/U (.085) | Adjustable* |

*Adjustable trim length from .050 to .140.

Replacement Cutters

Trimmer: Part Number **2598-5118-54**

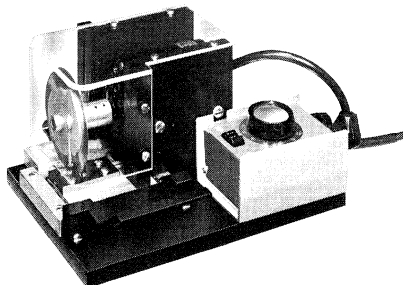
Pointer: Part Number **2598-5119-54**

| Replacement Collets | |
|---------------------|------------------------|
| Part Number | Cable |
| 2598-5145-54 | RG-402/U (.141) |
| 2598-5167-54 | RG-405/U (.085) |

TOOLS

Cable Preparation Tools

Cable Trimmers for Production



M/A-COM cable trimmers are designed for production trimming of RG-402/U (.141) and RG-405/U (.085) coaxial cables in preparation for connector installation. The trimming operation produces an unusually clean, burr-free cut with minimum smear. The length and depth of cut are adjustable. Replacement hardware can be used with either tool.

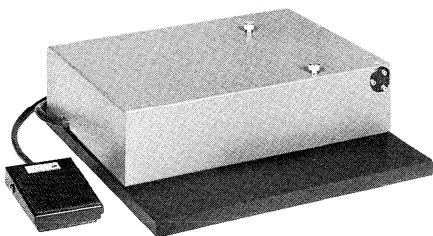
hardware can be used with either tool.

RG-402/U (.141) Part Number **2098-5676-54**
RG-405/U (.085) Part Number **2098-5686-54**

Replacement Hardware

Saw Blade: Part Number **2098-5674-54**
Trim Saw Block (.141): Part Number **2098-5678-54**
Trim Saw Block (.085): Part Number **2098-5679-54**

Cable Pointers for Production



M/A-COM cable pointers are designed to point straight and bent cables and are adjustable for desired center conductor length. The cable pointers cut 90° point on copper as well as copper-clad center conductors.

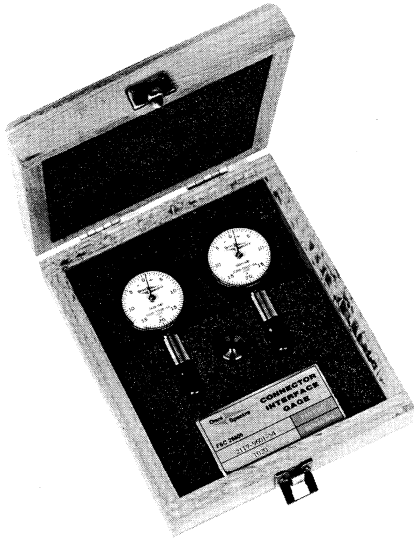
| Part Number | Description | Cable | Replacement Cutter Part Number |
|---------------------|----------------|-----------------|--------------------------------|
| 2098-5675-54 | Single Pointer | RG-402/U (.141) | 2098-5681-54 |
| 2098-5685-54 | Single Pointer | RG-405/U (.085) | |
| 2098-5699-54 | Double Pointer | RG-402/U (.141) | 2598-5113-54 |
| | | RG-405/U (.085) | 2598-5114-54 |

Replacement Hardware

Belts: Part Number **2598-5168-54 (set of 2)**

TOOLS

Interface Inspection Gauges

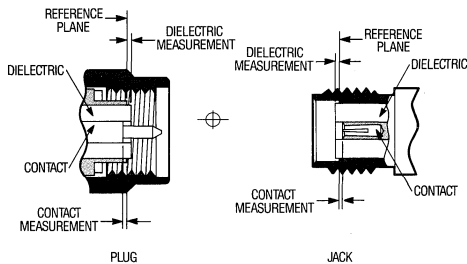


M/A-COM now offers Connector Interface Gauges. They have shock proof and fully jeweled dial indicators. The rugged construction of the dial mechanism minimizes the need for repair or replacement.

The gauge heads are manufactured from a corrosion resistant, hardening stainless steel which is heat treated for longer life. All critical surfaces are ground and lapped for precision fit and superior surface finish. The heads are securely fastened onto the dial indicator ensuring no movement between the gauge head and the dial indicator spindle allowing for precise measurements.

Like the gauge heads, the plungers are specially designed to provide strength and durability.

SMA Interface Example



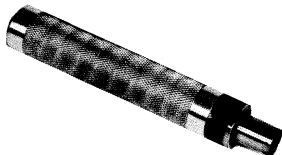
| Connector | Type | Gauge Kit Part Number | Included With Kit | |
|-------------------------------|------|-----------------------|---------------------------|------------------------------|
| | | | Contact Gauge Part Number | Dielectric Gauge Part Number |
| SMA (OSM [®]) | Jack | 2098-5455-54 | 2098-5505-54 | 2098-5506-54 |
| | Plug | 2098-5456-54 | 2098-5507-54 | 2098-5508-54 |
| SSMA (OSSM [®]) | Jack | 1098-5026-54 | 1098-5027-54 | 1098-5028-54 |
| | Plug | 1098-5023-54 | 1098-5024-54 | 1098-5025-54 |
| TNC/BNC | Jack | 3198-5012-54 | 3198-5036-54 | 3198-5037-54 |
| | Plug | 3198-5011-54 | 3198-5034-54 | 3198-5035-54 |
| Type N | Jack | 3098-5201-54 | 3098-5020-54 | — |
| | Plug | | 3098-5019-54 | — |
| SMC | Plug | 5098-5083-54 | 5098-5084-54 | 5098-5085-54 |
| | Jack | 5098-5080-54 | 5098-5081-54 | 5098-5082-54 |
| SMB | Plug | 5198-5032-54 | 5198-5033-54 | 5198-5034-54 |
| | Jack | 5198-5029-54 | 5198-5030-54 | 5198-5031-54 |
| OS-50 [™] (2.4mm) | Jack | 8598-5001-54 | 8598-5003-54 | — |
| | Plug | | 8598-5002-54 | — |
| OSMM Microminiature | Jack | 4098-5032-54 | 4098-5033-54 | 4098-5034-54 |
| | Plug | 4098-5029-54 | 4098-5030-54 | 4098-5031-54 |

Blindmate Panel Mount Removal Tool

Removal Tool for Use With OSP Low Profile Floating Rear Mount Panel Feedthrough Jack

OSP Part Number **4598-5015-54**

OSSP Part Number **4798-5016-54**



FIXED COAXIAL TERMINATIONS

| | |
|---|-----|
| Overview | 355 |
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Termination

Overview

- dc - 12.4, dc - 18, dc - 26.5 and dc - 50 GHz Performance
- Temperature Range : -54° to +125°C
- Average Power: .5 to 10 Watts
- Connectors: OSM, OSSM, Type N, TNC, 7mm, BNC, OS-50, OSP, OSSP and OS-50P
- Meets MIL-E-5400 and MIL-E-16400 Environmental Requirements

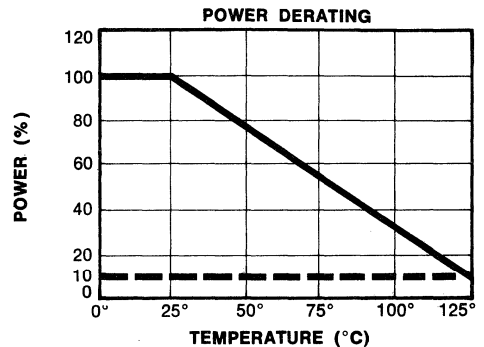
Terminations are power absorbing loads properly matched to the characteristic impedance of a transmission line. M/A-COM offers a complete line of miniature fixed coaxial terminations designed for laboratory, testing and system use. The termination characteristics of primary concern are:

- | | |
|--------------------------------------|-----------|
| a. operating frequency range | d. VSWR |
| b. average power handling capability | e. size |
| c. operating temperature range | f. weight |

All terminations are production tested to ensure proper operation within published specifications. Hence, over-specification by the user is unnecessary.

Catalog OSM terminations are available in a variety of package sizes and connector configurations as shown on the following pages. The resistance elements are aged to ensure stable operation at temperature extremes.

TYPICAL TEMPERATURE DERATING



All OSM standard model terminations are 50 ohms and are derated linearly to 10% power at 125°C. Operating temperature range is -54 to +125°C.

CUSTOM CONSIDERATIONS

In addition to the standard terminations shown on the following pages M/A-COM can supply special units to suit your particular needs.

- Heat sinks for higher power dissipation
- Characteristic impedance other than 50 ohms
- Custom connectors and mounting configurations

OSM (SMA) Plug Terminations

2001/2003 Series

OSM Miniature Plug Terminations are compact, fixed coaxial loads for terminating miniature coaxial lines at frequencies up to 26.5 GHz. Small size and weight and low VSWR allow numerous applications in both measurement and system use.

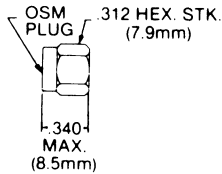


Fig. 1

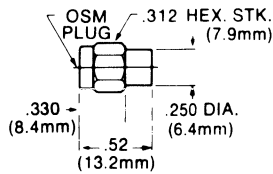


Fig. 2

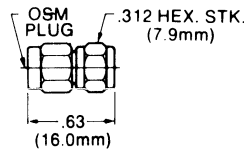
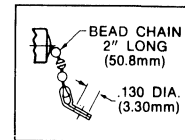


Fig. 3



Ultra Short Plug Terminations

| Part Number | Frequency (GHz) | VSWR dc-4 GHz | VSWR 4-12.4 GHz | VSWR 12.4-18 GHz | VSWR 18-26.5 GHz | Fig. | Power Watts Avg. ¹ |
|--------------|-----------------|---------------|-----------------|------------------|------------------|----------------|-------------------------------|
| 2003-6110-00 | dc - 26.5 | 1.05:1 | 1.10:1 | 1.20:1 | 1.30:1 | 1 | 0.5 |
| 2003-6117-00 | dc - 18.0 | 1.05:1 | 1.05:1 | 1.10:1 | - | 1 | |
| 2003-6111-00 | | 1.10:1 | 1.10:1 | 1.10:1 | - | 1 | |
| 2003-6112-00 | | 1.05:1 | 1.15:1 | 1.20:1 | - | 1 | |
| 2003-6113-00 | | 1.10:1 | 1.20:1 | 1.30:1 | - | 1 | |
| 2003-6115-00 | | 1.10:1 | 1.20:1 | 1.30:1 | - | 1 ⁵ | |
| 2003-6116-00 | dc - 12.4 | 1.05:1 | 1.05:1 | - | - | 1 | |

| Part Number | Frequency (GHz) | VSWR dc-4 GHz | VSWR 4-12.4 GHz | VSWR 12.4-18 GHz | VSWR 18-26.5 GHz | Fig. | Power Watts Avg. ¹ |
|---------------------------|-----------------|--|---------------------|---------------------|------------------|----------------|-------------------------------|
| 2001-6110-00 | dc - 26.5 | 1.05:1 | 1.10:1 | 1.20:1 | 1.30:1 | 2 | 0.5 |
| 2001-6105-00 | dc - 18.0 | 1.05:1 | 1.15:1 | 1.15:1 | - | 3 ⁵ | |
| 2001-6100-00 | | 1.05:1 | 1.15:1 | 1.15:1 | - | 3 | |
| 2001-6101-00 | | 1.05:1 | 1.15:1 | 1.20:1 | - | 2 | |
| 2001-6143-00 | | 1.09:1 ² | 1.17:1 ² | 1.23:1 ² | - | 2 | |
| 2001-6118-00 ⁴ | | 1.05:1 | 1.05:1 | 1.05:1 | - | 2 | |
| 2001-6117-00 | 1.05:1 | 1.05:1 | 1.10:1 | - | 2 | 0.5 | |
| 2001-6111-00 | 1.10:1 | 1.10:1 | 1.10:1 | - | 2 | | |
| 2001-6112-00 | 1.05:1 | 1.15:1 | 1.20:1 | - | 2 | | |
| 2001-6113-00 | 1.10:1 | 1.20:1 | 1.30:1 | - | 2 | | |
| 2001-6115-00 | 1.10:1 | 1.20:1 | 1.30:1 | - | 2 ⁵ | | |
| 2001-6116-00 | dc - 12.4 | 1.05:1 | 1.05:1 | - | - | | 2 |
| 2001-6500-00 | dc - 4.0 | dc-2 1.10:0 ³ 2-4 1.15:1 | - | - | - | | 2 |
| 2001-6501-00 | | dc-2 1.10:1 ³ 2-4 1.15:1 | - | - | - | 2 | 1.0 |

¹ See Derating Curve

² VSWR based on 1.05 + 0.01 f(GHz) Max.

³ Optimized VSWR units available. 1.05:1 to 2.0 GHz and 1.10:1 to 4.0 GHz. Change last two digits of part number to 94.

⁴ Calibrated termination supplied with data identifying actual VSWR values at 2.0, 4.0, 12.4 and 18.0 GHz. Finish is gold.

⁵ With Bead Chain.

Standard finish is gold. For passivated stainless steel, change the part number suffix from -00 to -02. Part Number 2001-6143-00 available in gold only.

OSM (SMA) Jack Terminations

2002/2004 Series

OSM Miniature Jack Coaxial Terminations feature models offering extremely low VSWR at frequencies up to 26.5 GHz. The small size of these models makes them ideal for high-density system application and laboratory use.

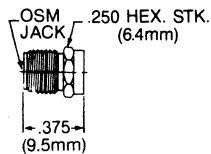


Fig. 1

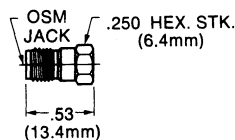


Fig. 2

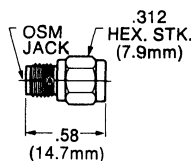
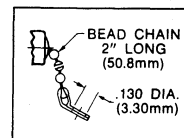


Fig. 3



Ultra Short Jack Terminations

| Part Number | Frequency (GHz) | VSWR dc-4 GHz | VSWR 4-12.4 GHz | VSWR 12.4-18 GHz | VSWR 18-26.5 GHz | Fig. | Power Watts Avg. ¹ |
|--------------|-----------------|---------------|-----------------|------------------|------------------|----------------|-------------------------------|
| 2004-6110-00 | dc - 26.5 | 1.05:1 | 1.10:1 | 1.20:1 | 1.30:1 | 1 | 0.5 |
| 2004-6117-00 | dc - 18.0 | 1.05:1 | 1.05:1 | 1.10:1 | - | 1 | |
| 2004-6111-00 | | 1.10:1 | 1.10:1 | 1.10:1 | - | 1 | |
| 2004-6112-00 | | 1.05:1 | 1.15:1 | 1.20:1 | - | 1 | |
| 2004-6113-00 | | 1.10:1 | 1.20:1 | 1.30:1 | - | 1 | |
| 2004-6115-00 | | 1.10:1 | 1.20:1 | 1.30:1 | - | 1 ⁴ | |
| 2004-6116-00 | | dc - 12.4 | 1.05:1 | 1.05:1 | - | - | |

| Part Number | Frequency (GHz) | VSWR dc-4 GHz | VSWR 4-12.4 GHz | VSWR 12.4-18 GHz | VSWR 18-26.5 GHz | Fig. | Power Watts Avg. ¹ |
|---------------------------|-----------------|--|-----------------|------------------|------------------|----------------|-------------------------------|
| 2002-6110-00 | dc - 26.5 | 1.05:1 | 1.10:1 | 1.20:1 | 1.30:1 | 2 | 0.5 |
| 2002-6105-00 | dc - 18.0 | 1.05:1 | 1.15:1 | 1.15:1 | - | 3 ⁴ | |
| 2002-6100-00 | | 1.05:1 | 1.15:1 | 1.15:1 | - | 3 | |
| 2002-6101-00 | | 1.05:1 | 1.15:1 | 1.20:1 | - | 2 | |
| 2002-6118-00 ³ | | 1.05:1 | 1.05:1 | 1.05:1 | - | 2 | |
| 2002-6117-00 | | 1.05:1 | 1.05:1 | 1.10:1 | - | 2 | |
| 2002-6111-00 | | 1.10:1 | 1.10:1 | 1.10:1 | - | 2 | |
| 2002-6112-00 | | 1.05:1 | 1.15:1 | 1.20:1 | - | 2 | |
| 2002-6113-00 | | 1.10:1 | 1.20:1 | 1.30:1 | - | 2 | |
| 2002-6114-00 | | 1.10:1 | 1.20:1 | 1.30:1 | - | 2 ⁴ | |
| 2002-6116-00 | | dc - 12.4 | 1.05:1 | 1.05:1 | - | - | 2 |
| 2002-6500-00 | dc - 4.0 | dc-2 1.10:0 ² 2-4 1.15:1 | - | - | - | 2 | 0.5 |

¹ See Derating Curve

² Optimized VSWR units available. 1.05:1 to 2.0 GHz and 1.10:1 to 4.0 GHz. Change last two digits of part number to 94.

³ Calibrated termination supplied with data identifying actual VSWR values at 2.0, 4.0, 12.4 and 18.0 GHz. Finish is gold.

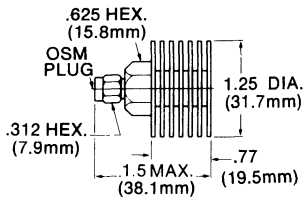
⁴ With Bead Chain.

Standard finish is gold. For passivated stainless steel, change the part number suffix from -00 to -02. Part Number 2002-6118-00 available in gold only.

High Power Terminations and OS-50 (2.4mm) Terminations

2001/8501 Series

High Power Terminations



| PLUG PART NO. | Power Avg. (Watts) | FIG. | VSWR dc-4 GHz | VSWR 4-12.4 GHz | VSWR 12.4-18 GHz |
|---------------|--------------------|------|---------------|-----------------|------------------|
| 2001-6005-00 | 5 | 9 | 1.05:1 | 1.15:1 | 1.25:1 |
| 2001-6010-00 | 10 | 9 | 1.05:1 | 1.15:1 | 1.25:1 |

Connector finish is passivated stainless steel, with stainless coupling nut and black anodized aluminum body.
See Derating Curve.

OS-50 (2.4mm)

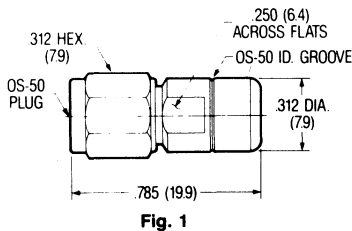


Fig. 1

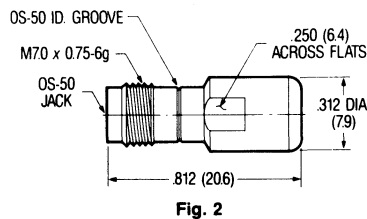


Fig. 2

| Part Number Plug | Fig. | Part Number Jack | Fig. | VSWR dc-18 GHz | VSWR 18-26.5 GHz | VSWR 26.5-50 GHz |
|------------------|------|------------------|------|----------------|------------------|------------------|
| 8501-6119-02 | 1 | 8502-6119-02 | 2 | 1.10 | 1.15 | 1.30 |

Frequency:
dc - 50.0 GHz

Power:
0.5 Watts Average
See Derating Curve

Finish:
Passivated stainless steel

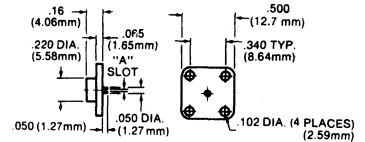
OSM (SMA), OSSM (SSMA) and Type N Terminations

OSM (SMA) Flange Mount

| Part Number | Frequency (GHz) | VSWR (max.) | A Slot |
|--------------|-----------------|---------------------|-------------|
| 2068-6101-00 | dc - 18 | dc to 4 GHz 1.10 | .015 (.4mm) |
| 2068-6102-00 | | 4 to 12.4 GHz 1.20 | .020 (.5mm) |
| 2068-6103-00 | | 12.4 to 18 GHz 1.30 | .030 (.8mm) |

Power:
0.5 Watts Average
See Derating Curve

Weight:
.05 oz. (1.4g)



OSSM (SSMA) Subminiature

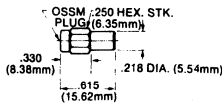


Fig. 1

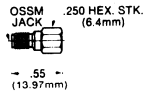
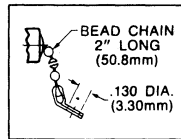


Fig. 2



Power:
0.5 Watts Average
See Derating Curve

Finish:
Standard finish is gold.
For passivated stainless steel, change the part number suffix from -00 to -02.

| Part Number Plug | Fig. | Part Number Jack | Fig. | Frequency (GHz) | VSWR | Weight | |
|------------------|------|------------------|------|-----------------|--------------------|---------------------|---------------|
| | | | | | | Plug | Jack |
| 1001-6113-00 | 1 | 1002-6113-00 | 2 | dc - 18 | dc to 4 GHz 1.10 | .08 oz.(2.3g) | .06 oz.(1.6g) |
| 1001-6115-00 | 1* | 1002-6114-00 | 2* | | 4 to 12.4 GHz 1.15 | 12.4 to 18 GHz 1.25 | .11 oz.(3.0g) |

* With Bead Chain.

Type N

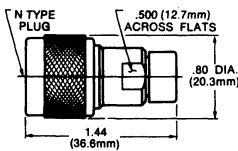


Fig. 1

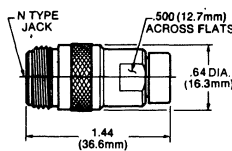


Fig. 2

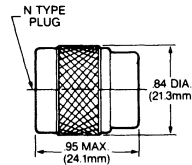
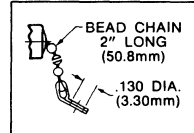


Fig. 3



| Part Number Plug | Fig. | Part Number Jack | Fig. | Frequency (GHz) | VSWR | Weight | |
|------------------|------|------------------|------|-----------------|---------------------|-----------------|----------------|
| | | | | | | Plug | Jack |
| 3001-6113-00 | 1 | 3002-6113-00 | 2 | dc - 12.4 | dc to 8 GHz 1.15 | 1.5 oz.(41.7g) | 1.4 oz.(38.5g) |
| 3001-6121-02 | 3 | - | - | dc - 12.4 | 8 to 12.4 GHz 1.20 | 1.3 oz. (37g) | - |
| 3001-6125-02 | 3* | - | - | | dc to 12.4 GHz 1.15 | 1.3 oz. (37g) | - |
| 3001-6100-00 | 1 | 3002-6100-00 | 2 | dc - 18 | dc to 12.4 GHz 1.15 | 1.5 oz.(41.7g) | 1.4 oz.(38.5g) |
| 3001-1316-00 | 1* | - | - | | dc to 12.4 GHz 1.15 | 1.5 oz. (41.7g) | - |
| 3001-6120-02 | 3 | - | - | | 12.4 to 18 GHz 1.20 | 1.3 oz. (37g) | - |
| 3001-6124-02 | 3* | - | - | | 12.4 to 18 GHz 1.20 | 1.3 oz. (37g) | - |

* With Bead Chain.

Power:
2.0 Watts Average
See Derating Curve

Finish:
Passivated Stainless Steel

Plug Short Circuit Terminations

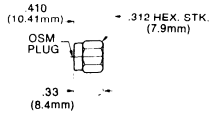


Fig. 1

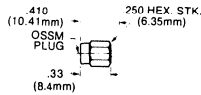


Fig. 2

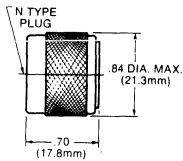


Fig. 3

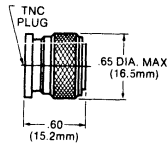


Fig. 4

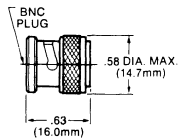
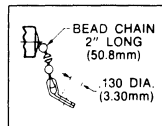


Fig. 5



| Type | Part Number | Fig. | Finish | Weight |
|-------------|----------------|------|--------|-----------------|
| OSM (SMA) | 2021-1314-00 ★ | 1 | 1 | .12 oz. (3.4g) |
| | 2021-1312-00 ★ | 1* | 1 | .13 oz. (3.7g) |
| OSSM (SSMA) | 1021-1314-00 ★ | 2 | 1 | .09 oz. (2.6g) |
| | 1021-1312-00 ★ | 2* | 1 | .1 oz. (2.9g) |
| Type N | 3001-1314-02 ★ | 3 | 2 | .9 oz. (25.2g) |
| | 3001-1312-02 ★ | 3* | 2 | .91 oz. (25.5g) |
| TNC | 3101-1314-02 ★ | 4 | 2 | .5 oz. (14.0g) |
| | 3101-1312-02 ★ | 4* | 2 | .51 oz. (14.3g) |
| BNC | 3201-1314-02 ★ | 5 | 2 | .4 oz. (11.2g) |
| | 3201-1312-02 ★ | 5* | 2 | .41 oz. (11.5g) |

* With Bead Chain.

Finish:

- 1 Gold plated. For passivated stainless steel, change the part number suffix from -00 to -02.
- 2 Passivated stainless steel.

Plug Dust Cap Terminations

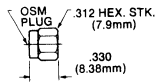


Fig. 1

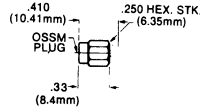


Fig. 2

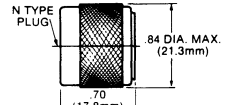


Fig. 3

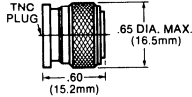


Fig. 4

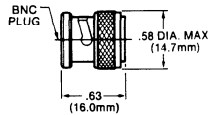
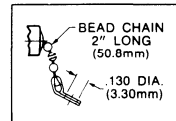


Fig. 5



Standard 2 inch Bead Chain

| Type | Part Number | Fig. | Finish | Weight |
|-------------|--------------|------|--------|-----------------|
| OSM (SMA) | 2021-1311-00 | 1 | 1 | .12 oz. (3.4g) |
| | 2021-1310-00 | 1* | 1 | .13 oz. (3.6g) |
| OSSM (SSMA) | 1021-1311-00 | 2 | 1 | .09 oz. (2.6g) |
| | 1021-1310-00 | 2* | 1 | .1 oz. (2.8g) |
| Type N | 3001-1315-02 | 3 | 2 | .9 oz. (25.7g) |
| | 3001-1310-02 | 3* | 2 | .1 oz. (2.8g) |
| TNC | 3101-1315-02 | 4 | 2 | .5 oz. (14.0g) |
| | 3101-1310-02 | 4* | 2 | .51 oz. (14.3g) |
| BNC | 3201-1315-02 | 5 | 2 | .4 oz. (11.4g) |
| | 3201-1310-02 | 5* | 2 | .41 oz. (11.5g) |

* With Bead Chain.

Finish:

- 1 Gold plated. For passivated stainless steel, change the part number suffix from -00 to -02.
- 2 Passivated stainless steel.

Jack Dust Cap Terminations

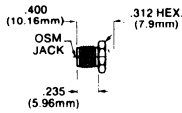


Fig. 1

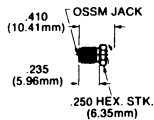


Fig. 2

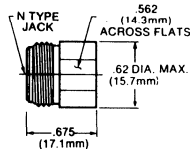


Fig. 3

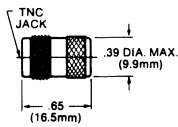


Fig. 4

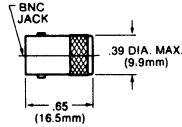
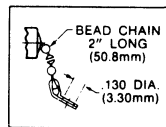


Fig. 5



| Type | Part Number | Fig. | Finish | Weight |
|-------------|---------------------|------|--------|-----------------|
| OSM (SMA) | 2020-1311-00 | 1 | 1 | .08 oz. (2.2g) |
| | 2020-1310-00 | 1* | 1 | .09 oz. (2.6g) |
| OSSM (SSMA) | 1020-1311-00 | 2 | 1 | .07 oz. (2.0g) |
| | 1020-1310-00 | 2* | 1 | .08 oz. (2.2g) |
| Type N | 3002-1315-02 | 3 | 2 | .7 oz. (20.0g) |
| | 3002-1310-02 | 3* | 2 | .71 oz. (20.0g) |
| TNC | 3102-1315-02 | 4 | 2 | .21 oz. (6.0g) |
| | 3102-1310-02 | 4* | 2 | .22 oz. (6.2g) |
| BNC | 3202-1315-02 | 5 | 2 | .21 oz. (6.0g) |
| | 3202-1310-02 | 5* | 2 | .22 oz. (6.2g) |

* With Bead Chain.

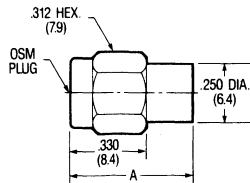
Finish:

- 1 Gold plated. For passivated stainless steel, change the part number suffix from -00 to -02.
- 2 Passivated stainless steel.

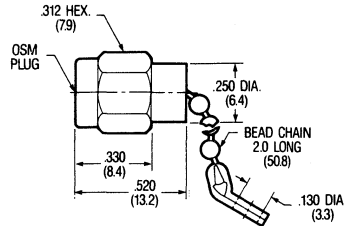
QPL (Dummy Load) Terminations

2001/2002 Series

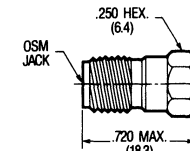
MIL-D-39030/3



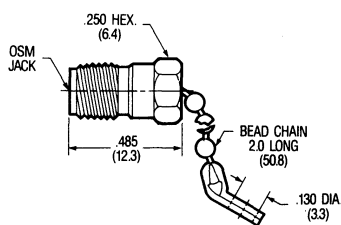
38



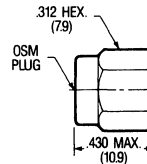
39



40



41



42

| Military Part Number | M/A-COM Part Number | Outline | Dim. A Inches (mm) | | Commercial Alternate |
|----------------------|---------------------|---------|--------------------|--------|----------------------|
| -01 | 2001-4178-00N | 38 | .520 | (13.2) | 2001-6112-00 |
| -02 | 2001-4182-02N | 38 | .520 | (13.2) | 2001-6112-02 |
| -03 | 2001-4173-00N | 39 | — | — | — |
| -04 | 2001-4173-02N | 39 | — | — | — |
| -05 | 2002-4065-00N | 40 | — | — | 2002-6112-00 |
| -06 | 2002-4065-02N | 40 | — | — | 2002-6112-02 |
| -07 | 2002-4066-00N | 41 | — | — | — |
| -08 | 2002-4066-02N | 41 | — | — | — |
| -09 | 2001-4302-00N | 38 | .520 | (13.2) | 2001-6111-00 |
| -10 | 2001-4303-00N | 38 | .520 | (13.2) | — |
| -11 | 2001-4301-00N | 42 | — | — | 2003-6117-00 |
| -12 | 2001-4294-00N | 38 | .550 Max. | (14.0) | 2001-6110-00 |
| -13 | 2001-4304-00N | 39 | — | — | — |
| -15 | 2001-4305-00N | 38 | .520 | (13.2) | 2001-6116-00 |

M/A-COM part number reflects non-screened unit. For screened unit, change "N" to "S"

Appendix



The Appendix section of this catalog is a compilation of useful technical information that has been included for the convenience of our customers.

Customers are encouraged to contact the factory, authorized distributor or local representative for additional information and applications assistance.

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| | Page |
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| Semi-Rigid Coaxial Cable Reference Information | 367 |
| Flexible Coaxial Cable-Connector Selection Guide | 368 |
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Appendix

Semi-Rigid Coaxial Cable-Connector Selection Chart

Selecting the proper cable-connector combination is a task which must be done with end system performance in mind.

The cable is selected on the basis of impedance, attenuation, RF leakage and physical properties such as size.

The connectors are selected on the basis of packaging requirements, durability and impedance match to the selected cable.

The two must reasonably balance each other to achieve desired performance at the proper cost.

The following chart provides a quick cross reference of the standard connectors to popular coaxial cables.

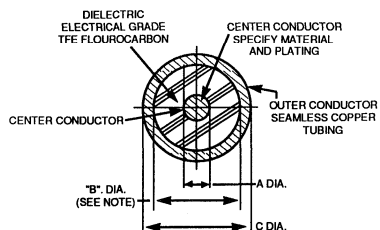
Contact the factory for connectors and cable types not shown.

Semi-Rigid Coaxial Cable

| Cable Diameter | .034 | .047 | .070 | .085 RG 405/U | .096 | .118 | .141 RG 402/U | .141 Microporus | .250 RG 401/U | .250 Microporus & Foam | .250 3 Spline | .250 5 Spline | .325 | .375 Microporus | .500 Microporus |
|------------------------------------|----------------|------|------|------------------|----------------|----------|------------------|--------------------|------------------|------------------------------|---------------------|---------------------|------|--------------------|--------------------|
| Connector Series | Page Number(s) | | | | | | | | | | | | | | |
| Direct Solder Attachment | OSM (SMA) | • | • | • | 10-13, 69 | • | • | 10-13, 69 | 11 | • | • | • | • | • | • |
| | OSSM (SSMA) | • | • | 89 | 75-76, 83 | • | • | • | • | • | • | • | • | • | • |
| | OSMM | 94 | 94 | • | • | • | • | • | • | • | • | • | • | • | • |
| | OSP | • | • | • | 106, 107 | • | • | 106, 107 | • | • | • | • | • | • | • |
| | OSSP | • | • | • | 121 | • | • | • | • | • | • | • | • | • | • |
| | OSMP | • | 132 | • | 132 | • | • | • | • | • | • | • | • | • | • |
| | OS-50P | • | 146 | • | 146 | • | • | • | • | • | • | • | • | • | • |
| | 2.9MM | • | • | • | 157 | • | 157 | • | • | • | • | • | • | • | • |
| | OS-50 | • | • | • | 166, 167 | 166, 167 | • | • | • | • | • | • | • | • | • |
| | Type N | • | • | • | 179, 190 | • | • | 179, 190 | 190 | • | • | • | • | • | • |
| | TNC | • | • | • | 201, -202, 213 | • | • | 201, 202, 213 | 201, 202 | • | • | • | • | • | • |
| | BNC | • | • | • | 216 | • | • | 216 | • | • | • | • | • | • | • |
| Solder Clamp Attachment | OSM (SMA) | • | • | • | 14-15 | • | • | 14-15 | • | • | • | • | • | • | |
| | OS-50 | • | • | • | 167 | 167 | • | • | • | • | • | • | • | • | |
| | Type N | • | • | • | 180 | • | • | 180 | • | • | • | • | • | • | |
| | TNC | • | • | • | 202, 203 | • | • | 202, 203 | • | • | • | • | • | • | |
| USCC: Solderless Compression Crimp | OSM (SMA) | • | • | • | 16-20 | • | • | 16-20 | • | • | • | • | • | • | |
| | OSP | • | • | • | 108 | • | • | 108 | • | • | • | • | • | • | |
| | Type N | • | • | • | 182 | • | • | 182 | • | • | • | • | • | • | |
| | TNC | • | • | • | 204 | • | • | 204 | • | • | • | • | • | • | |
| Clamp Attachment | OSM (SMA) | • | • | • | • | • | • | • | 21 | 21 | 21 | 21 | • | • | |
| | Type N | • | • | • | • | • | • | • | 181 | 181 | • | • | 181 | 183 | |
| | TNC | • | • | • | • | • | • | • | 203 | 203 | • | 203 | 203 | 205 | |
| | SC | • | • | • | • | • | • | • | • | • | • | • | • | • | |
| | 7 mm | • | • | • | • | • | • | 262 | • | 262 | • | • | 262 | • | |

Semi-Rigid Coaxial Typical Dimensions

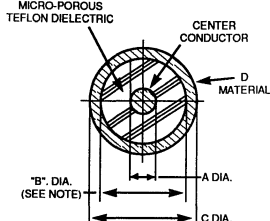
Solid Dielectric Semi-Rigid Cable



| RG# | "A" DIA | "B" DIA. (SEE NOTE) | "C" DIA. |
|--------|-------------------------------------|------------------------|-----------------------------------|
| N/A | .008 ± .0005 | .026 | .034 ± .001 |
| N/A | .0113 ± .0005 | .037 | .047 ± .001 |
| N/A | .0179 ± .0005 | .059 | .070 ± .001 |
| .405/U | .0201 ± .0005 (0.510 ± 0.013mm) | .0658 | .0865 ± .001 (2.197 ± 0.025mm) |
| .402/U | .0359 ± .0005 (0.912 ± 0.013mm) | .1175 | .141 ± .001 (3.581 ± 0.025mm) |
| .401/U | .0641 ± .0005 (1.628 ± 0.013mm) | .2080 | .250 ± .002 (6.350 ± 0.051mm) |
| N/A | 7 X .0312 STRAND (.093 - 2.36mm) | .2850 | .325 ± .002 (8.255 ± 0.051mm) |

Note: Recommended dimension for 50.0 ± 2.0 ohms. All other dimensional tolerances apply.

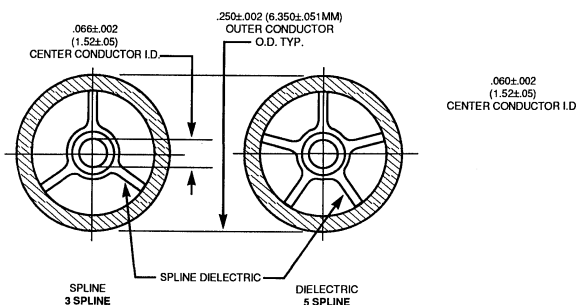
Micro-Porous Dielectric Semi-Rigid Cable



| RG# | "A" DIA. | "B" DIA. (SEE NOTE) | "C" DIA. | "D" MATERIAL |
|-------|--------------------------------|------------------------|--------------------------------|--------------|
| N/A | .043 ± .001 | .116 | .141 ± .001 | COPPER |
| N/A | .074 ± .001 (1.88 ± .025mm) | .210 | .250 ± .002 (6.35 ± .178mm) | ALUMINUM |
| N/A | .114 ± .001 (2.90 ± .025mm) | .327 | .375 ± .007 (9.53 ± .18mm) | ALUMINUM |
| 385/U | .153 ± .001 (3.89 ± .025mm) | .430 | .495 ± .007 (12.57 ± .18mm) | ALUMINUM |

Note: Recommended dimension for 50.0 ± 2.0 ohms. All other dimensional tolerances apply.

Spline Semi-Rigid Cable

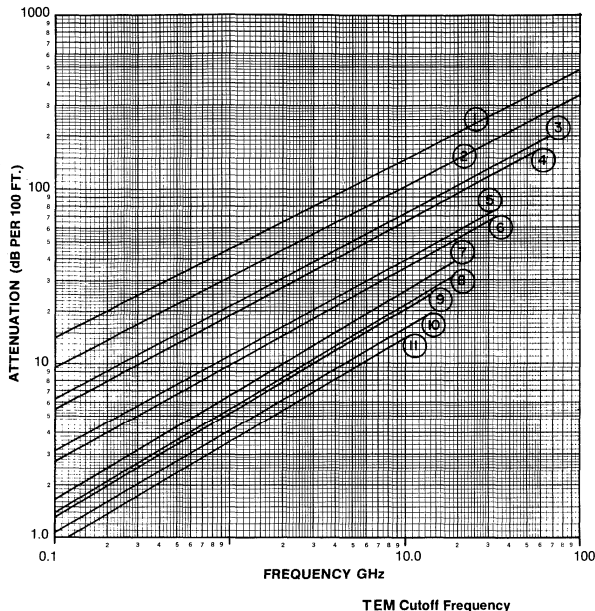


Appendix

Semi-Rigid Coaxial Cable

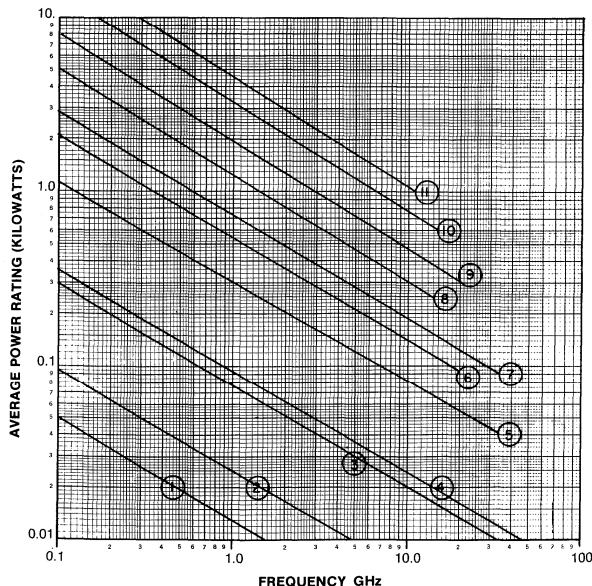
Reference Information

TYPICAL ATTENUATION CHARACTERISTICS OF SEMI-RIGID COAXIAL CABLES



| CODE | CABLE DIA. | TYPE |
|------|------------|--------------|
| 1 | .034 | SEMI-RIGID |
| 2 | .047 | SEMI-RIGID |
| 3 | .070 | SEMI-RIGID |
| 4 | .085 | SEMI-RIGID |
| 5 | .141 | SEMI-RIGID |
| 6 | .141 | MICRO-POROUS |
| 7 | .250 | SEMI-RIGID |
| 8 | .250 | MICRO-POROUS |
| 9 | .325 | SEMI-RIGID |
| 10 | .375 | MICRO-POROUS |
| 11 | .500 | MICRO-POROUS |

TYPICAL POWER RATING CHARACTERISTICS OF SEMI-RIGID COAXIAL CABLES



TYPICAL AVERAGE POWER DERATING FACTORS

| TEMP. °C | DERATING FACTOR | ALTITUDE × 1000 FT. | DERATING FACTOR |
|----------|-----------------|---------------------|-----------------|
| 0 | 1.20 | 0 | 1.0 |
| 40 | 1.0 | 20 | .80 |
| 80 | .80 | 30 | .70 |
| 120 | .60 | 40 | .60 |
| 160 | .40 | 50 | .50 |
| 200 | .20 | 60 | .40 |
| 240 | .05 | 70 | .30 |

EXAMPLE CALCULATION:
 AT 120° C AND 60,000 FT:
 DERATE AVERAGE POWER BY .60 x .40
 OR AVERAGE POWER x .24

Appendix

Flexible Coaxial Cable-Connector Selection Chart

Selecting the proper cable-connector combination is a task which must be done with end system performance in mind.

The cable is selected on the basis of impedance, attenuation, RF leakage and physical properties such as size.

The connectors are selected on the basis of packaging requirements, durability and impedance match to the selected cable.

The two must reasonably balance each other to achieve desired performance at the proper cost.

The following chart provides a quick cross reference of the standard connectors to popular coaxial cables.

Contact the factory for connectors and cable types not shown.

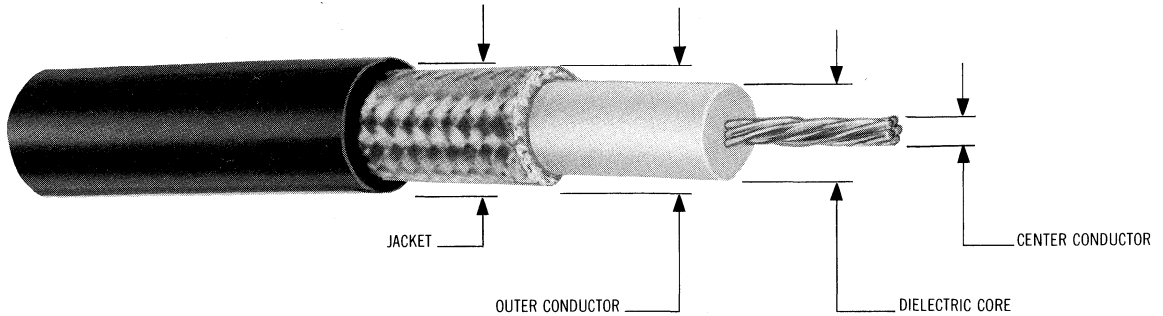
Flexible Coaxial Cable

| Cable Type | | RG55/U | RG58/U | RG141/U | RG142/U | RG174/U | RG178/U | RG179/U | RG180/U | RG187/U | RG188/U | RG195/U | RG196/U | RG214/U | RG223/U | RG225/U | RG303/U | RG316/U | RG400/U | RG316 | |
|--------------------------|-------------|----------------|----------|----------|----------|----------|---------|---------|---------|---------|----------|---------|---------|---------|----------|---------|----------|----------|----------|-------|--|
| Connector Series | | Page Number(s) | | | | | | | | | | | | | | | | | | | |
| Direct Solder Attachment | OSM (SMA) | 22-23 | 22-23 | 22-23 | 22-23 | 22-23 | 24-25 | • | • | • | 22-23 | • | 24-25 | • | 22-23 | • | 22-23 | 22-23 | 22-23 | • | |
| | OSSM (SSMA) | • | • | • | • | 77 | 77 | 77 | • | 77 | 77 | • | 77 | • | • | • | • | 77 | • | • | |
| | OSM (SMA) | 24-25,28 | 24-25,28 | 24-25,28 | 24-25,28 | 24-25,28 | 24-25 | • | 24-25 | • | 24-25,28 | 24-25 | 24-25 | • | 24-25,28 | • | 24-25,28 | 24-25,28 | 24-25,28 | 28 | |
| | OSSM (SSMA) | • | • | • | • | 78 | 78 | 78 | • | 78 | 78 | • | 78 | • | • | • | • | 78 | • | • | |
| | OSMM | • | • | • | • | • | • | • | • | • | • | • | • | 94 | • | • | • | • | • | • | |
| Crimp Attachment | OSP | 109 | • | • | 109 | 109 | • | 109 | • | 109 | 109 | • | • | • | 109 | • | • | 109 | 109 | • | |
| | OSSP | • | • | • | • | • | • | • | • | • | 122* | • | • | • | • | • | • | 122* | • | • | |
| | Type N | 186 | 186 | 186 | 186 | 186 | • | 186 | • | 186 | 186 | • | • | • | 186 | • | 186 | 186 | 186 | • | |
| | TNC | 208 | 208 | 208 | 208 | 208 | • | 208 | • | 208 | 208 | • | • | • | 208 | • | 208 | 208 | 208 | • | |
| | BNC | 218 | 218 | 218 | 218 | 218 | • | 218 | • | 218 | 218 | • | • | • | 218 | • | 218 | 218 | 218 | • | |
| | SMB | • | • | • | • | 243 | 243 | 243 | • | 243 | 243 | • | 243 | • | • | • | • | 243 | • | • | |
| | SMC | • | • | • | • | 254 | 254 | 254 | • | 254 | 254 | • | 254 | • | • | • | • | 254 | • | • | |
| Clamp Attachment | OSM (SMA) | 32-33 | 32-33 | 32-33 | 32-33 | 32-33 | • | • | 32-33 | • | 32-33 | 32-33 | • | • | 32-33 | • | 32-33 | 32-33 | • | • | |
| | Type N | 184-185 | 184-185 | 184-185 | 184-185 | 184-185 | • | 184-185 | • | 184-185 | 184-185 | • | • | 184-185 | 184-185 | 184-185 | 184-185 | 184-185 | • | • | |
| | TNC | 206-207 | 206-207 | 206-207 | 206-207 | 206-207 | • | 206-207 | • | 206-207 | 206-207 | • | • | 206-207 | 206-207 | 206-207 | 206-207 | 206-207 | • | • | |
| | BNC | 217 | 217 | 217 | 217 | 217 | • | 217 | • | 217 | 217 | • | • | • | 217 | • | 217 | 217 | • | • | |
| | SMB | • | • | • | • | 242 | 242 | 242 | • | 242 | 242 | • | 242 | • | • | • | • | 242 | • | • | |
| | SMC | • | • | • | • | 253 | 253 | 253 | • | 253 | 253 | • | 253 | • | • | • | • | 253 | • | • | |

* Double Braid Only

Appendix

Flexible Coaxial Cable Reference Information

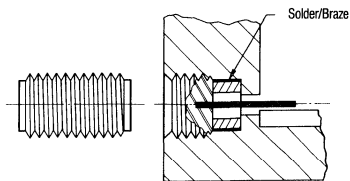


FLEXIBLE CABLES

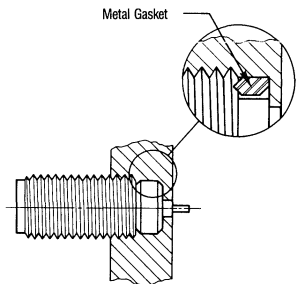
| CABLE TYPE | RG-55/U | RG-58/U | RG-141/U | RG-142/U | RG-174/U | RG-178/U | RG-179/U | RG-180/U | RG-187/U | RG-188/U | RG-195/U | RG-196/U | RG-214/U | RG-223/U | RG-303/U | RG-316/U |
|------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| IMPEDANCE (OHMS) | 53.5 | 50 | 50 | 50 | 50 | 50 | 75 | 95 | 75 | 50 | 95 | 50 | 50 | 50 | 50 | 50 |
| JACKET | .216 MAX | .195±.004 | .190±.005 | .195±.005 | .100±.005 | .075 MAX | .100±.005 | .145 MAX | .110 MAX | .110 MAX | .155 MAX | .080 MAX | .425±.007 | .216 MAX | .170±.005 | .102 MAX |
| OUTER CONDUCTOR | .176 MAX | .150 MAX | .146 MAX | .171 MAX | .088 MAX | .054 MAX | .084 MAX | .124 MAX | .084 MAX | .081 MAX | .124 MAX | .054 MAX | .360 MAX | .176 MAX | .146 MAX | .081 MAX |
| DIELECTRIC CORE | .116±.005 | .116±.004 | .116±.005 | .116±.005 | .060±.003 | .034±.002 | .063±.003 | .102±.003 | .060±.006 | .060±.003 | .102±.003 | .034±.002 | .285±.007 | .116±.004 | .116±.005 | .060±.003 |
| CENTER CONDUCTOR | .032 NOM | .0375 MAX | .039±.001 | .039±.001 | .020 NOM | .012 NOM | .012 NOM | .012 NOM | .012 NOM | .020 NOM | .012 NOM | .012 NOM | .089±.001 | .035±.001 | .039±.001 | .020 NOM |

| RG CABLE | ATTENUATION RATING | | | | | | | POWER RATING | | | | | | |
|----------|----------------------------------|------|------|------|------|--------|--------|---------------------------------|-------|-----|-----|-----|-----|-----|
| | TYP dB/100 FT. AT FREQUENCY, GHz | | | | | | | MAXIMUM WATTS AT FREQUENCY, GHz | | | | | | |
| | .1 | .2 | .4 | 1 | 3 | 5 | 10 | .1 | .2 | .4 | 1 | 3 | 5 | 10 |
| 55 | 4.8 | 7.0 | 10.0 | 16.5 | 30.5 | 46.0 | >100.0 | 480 | 320 | 215 | 120 | 60 | 40 | — |
| 58 | 4.6 | 6.9 | 10.5 | 17.5 | 37.5 | 60.0 | >100.0 | 300 | 200 | 135 | 80 | 40 | 20 | — |
| 141 | 3.9 | 5.6 | 8.0 | 13.5 | 27.0 | 39.0 | 70.0 | 1,700 | 1,200 | 830 | 450 | 220 | 140 | 65 |
| 142 | 3.9 | 5.6 | 8.0 | 13.5 | 27.0 | 39.0 | 70.0 | 1,800 | 1,300 | 800 | 530 | 265 | 175 | 100 |
| 174 | 8.9 | 12.0 | 17.5 | 30.0 | 64.0 | 99.0 | >100.0 | 110 | 80 | 60 | 35 | 15 | 10 | — |
| 178 | 14.0 | 19.0 | 28.0 | 46.0 | 85.0 | >100.0 | >100.0 | 240 | 180 | 120 | 75 | 40 | — | — |
| 179 | 10.0 | 12.5 | 16.0 | 24.0 | 44.0 | 65.0 | >100.0 | 480 | 420 | 320 | 190 | 100 | 73 | — |
| 180 | 5.7 | 7.6 | 10.8 | 17.0 | 35.0 | 50.0 | 88.0 | 800 | 570 | 400 | 240 | 130 | 90 | 50 |
| 187 | 10.0 | 12.5 | 16.0 | 24.0 | 44.0 | 69.0 | >100.0 | 480 | 420 | 320 | 190 | 100 | 73 | — |
| 188 | 11.4 | 14.2 | 16.7 | 31.0 | 60.0 | 82.0 | >100.0 | 400 | 325 | 275 | 150 | 80 | 55 | — |
| 195 | 5.7 | 7.6 | 10.8 | 17.0 | 35.0 | 50.0 | 88.0 | 800 | 570 | 400 | 240 | 130 | 90 | 50 |
| 196 | 14.0 | 19.0 | 28.0 | 46.0 | 85.0 | >100.0 | >100.0 | 240 | 180 | 120 | 75 | 40 | — | — |
| 214 | 2.3 | 3.3 | 5.0 | 8.8 | 18.0 | 27.0 | 45.0 | 780 | 550 | 360 | 200 | 100 | 65 | 40 |
| 223 | 4.8 | 7.0 | 10.0 | 16.5 | 30.5 | 46.0 | >100.0 | 480 | 320 | 215 | 120 | 60 | 40 | — |
| 303 | 3.9 | 5.6 | 8.0 | 13.5 | 27.0 | 39.0 | 70.0 | 1,800 | 1,300 | 900 | 530 | 265 | 175 | 100 |
| 316 | 11.4 | 14.2 | 16.7 | 31.0 | 60.0 | 82.0 | >100.0 | 400 | 325 | 275 | 150 | 80 | 55 | — |

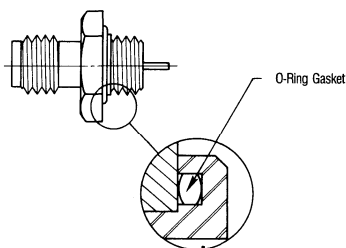
* This information listed is typical. Consult your cable source for further details.



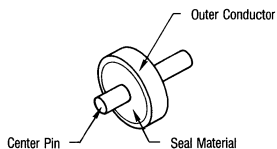
Field Replaceable



Metal-to-Metal



O-Ring



Hermetic Seal

M/A-COM manufactures a broad line of hermetically sealed connectors. These connectors are typically required for RF and microwave components such as amplifiers, switches, mixers, filters and other MIC packaged that use PIN devices. The usual package hermeticity requirement is 1×10^{-6} cc/sec. of helium. M/A-COM's hermetically sealed connectors are specified at 1×10^{-6} cc/sec.

M/A-COM offers three types of hermetically sealed connectors:

Field Replaceable (Solder/Braze-In) Seal

Features an external to connector body glass seal and, therefore, can be removed and replaced without affecting package hermeticity. Hermeticity is dependent on proper installation of the glass seal into the package.

Metal-to-Metal Seal

Spark plug connectors rely on a metal-to-metal seal between the connector and the package housing which is achieved by simply torquing the connector in place.

O-Ring Seal

The o-ring type uses an elastomer gasket to form a seal between the connector and package housing.

Coaxial Hermetic Seals

A typical hermetic connector has a seal made from glass or a ceramic/glass mixture. M/A-COM glass seals use a patented ceramic loaded glass that has a low dielectric loss tangent for optimum performance at microwave frequencies.

Two types of glass seals are manufactured by M/A-COM: thermally matched seals and compression seals. Both types consist of a center conductor pin, seal material (ceramic/glass) and an outer conductor.

In a thermally matched seal, the glass material is specially designed so that its coefficient of thermal expansion is closely matched to the inner and outer conductors, usually kovar. This seal can withstand wide temperature fluctuations and thermal shocks without damage.

The compression seal is formed by using an outer conductor that has a higher coefficient of thermal expansion than the glass/ceramic and center pin. When the seal cools after the fusing process, the outer ring, which contracts at a higher rate, puts the seal and center pin under high compression. This results in a very strong mechanical seal.

The hermetic seal in a connector assembly can be made either by fusing the seal material directly to the center pin and outer body or by manufacturing a separate coaxial seal assembly and soldering or brazing it into the outer body of the connector. All M/A-COM internal connector seals are either brazed or directly fused.

Appendix

Center Contact Captivation Guide

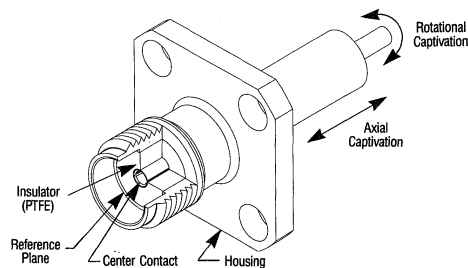
A critical element in the application, selection and design use of RF connectors is the contact capture treatment. As in most design criteria, trade-offs exist so that there is no single optimum design of connectors. M/A-COM has the widest range of designs available and this guide is intended to help you select the best connector for your application. Please contact M/A-COM for more information regarding center contact captivation.

- Since the center contact is supported within the housing solely by the insulator, in order to be effective, the captivation design approach must include all three elements: housing, insulator and center contact.

Center Contact Retention (Captivation)

The center contact must not be displaced from the specified interface dimensions in the uncabled connector by the application of the specified axial and/or rotational forces, in either direction.

Notes: 1. Displacement of the center conductor and insulator is measured with respect to the reference plane.



Typical Performance OSM(SMA) Series

| Fig. | Captivation Method | VSWR | Insertion Loss dB Max. | RF Leakage db Max. | Captivation Displacement Force | |
|------|--|-----------------|------------------------|--------------------|--------------------------------|--------------------------|
| | | | | | Axial Lbs Min. | Rotational Inch Oz. Min. |
| A | Epoxy(1) | 1.05 + .005fGHz | .03 x \sqrt{f} GHz | 60 - fGHz | 10.0 | 4.0 |
| B | Epoxy with Conductive Epoxy Back-Fill(1) | 1.05 + .005fGHz | .03 x \sqrt{f} GHz | 90 - fGHz | 10.0 | 4.0 |
| C | Slotted Double Barb | 1.06 + .006fGHz | .03 x \sqrt{f} GHz | 100 - fGHz | 4.0 6.0(2) | 2.0 |
| D | Compensated Shoulder | 1.04 + .004fGHz | .03 x \sqrt{f} GHz | 100 - fGHz | 10.0 | 0 |
| E | Compensated Single Barb | 1.04 + .004fGHz | .03 x \sqrt{f} GHz | 100 - fGHz | 4.0 6.0(2) | 0 0 |
| F | Compensated Annular Rings | 1.04 + .004fGHz | .03 x \sqrt{f} GHz | 100 - fGHz | 6.0 | 0 |
| G | Hermetically Sealed | 1.04 + .009fGHz | .05 x \sqrt{f} GHz | 100 - fGHz | 6.0 | 0 |
| H | Non-Captivated | 1.03 + .004fGHz | .03 x \sqrt{f} GHz | 100 - fGHz | 0 | 0 |

(1) Contact captivation per U.S. patent number 3,292,117.

(2) In one direction only.

Application Guide

| Contact Termination Type | Application | Captivation Requirement |
|--------------------------------|--|---|
| Tab Slot Pin Flange | P.C. Board Stripline Microstrip | Axial and rotational capture are important to isolate coupling and uncoupling stresses from transmission line elements. |
| Probe | Waveguide to Coaxial Transitions | Axial captivation is usually required, however, rotational capture may not be necessary. |
| Solder Pot Turret Post | Soldered Wire Wire Wrap | Axial and rotational capture are usually required to prevent fatigue of the wire and/or solder. |
| Female Socket | Field Replaceable Solderless Connection | Axial captivation is important to maintain electrical performance, however, rotational capture is typically not required. |
| Threaded Stud/ Hole | Suspended Air Line Mechanical Attachment to Circuit Element | Depending on the specific application, captivation in the axial and rotational planes may or may not be required. |
| Flexible Cable Attachment | - | Axial captivation is typically required. |
| Semi-Rigid Cable Attachment | - | Axial captivation is typically not required. |

Appendix

Captivation Application Guide

- Fig. A** Epoxy captivation offers the most rigid captivation of all. It is ideal for applications where the contact is soldered directly to a circuit element which may be damaged by axial or rotational displacement of the center contact.
- Fig. B** Epoxy captivation with conductive epoxy back-fill preserves all the advantages of epoxy captivation and, in addition, provides a significant improvement in RF leakage.
- Fig. C** Slotted double barb is a variant of the single barb. It provides the rotational captivation required in some applications, however, the electrical performance characteristics degrade at frequencies above 12.4 GHz.
- Fig. D** Compensated shoulder provides the highest axial displacement force of all the mechanical capture designs, however, offers no rotational captivation. This approach is ideal for applications which require mechanical captivation and with which high axial forces, in both directions, might be expected.
- Fig. E** Compensated single barb technique is simple and cost effective, however, the axial displacement force is non-symmetrical: 30% higher in one direction than the other. This configuration should be utilized in applications where axial force is primarily uni-directional and no rotational captivation requirement exists.

- Fig. F** Compensated annular ring captivation provides a symmetrical axial capture and exceptional electrical performance characteristics. This technique is applied in designs where low VSWR is essential at or near the maximum operating frequency and where no rotational captivation requirement exists.
- Fig. G** Many hermetically sealed connector designs provide axial and rotational captivation since the contact is soldered to the pin of the glass-to-metal seal, which is then brazed into the housing.
- Fig. H** Many connector designs provide no contact capture at all. These products typically offer the best electrical performance: lowest VSWR since no perturbation of the characteristic impedance is introduced. These designs also mitigate against the effects of thermally introduced stresses, however, the application of these connectors is limited to configurations where mechanical stress introduced by coupling and uncoupling will not compromise the integrity of the attached circuit elements.

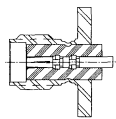


Fig. C

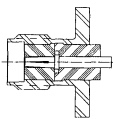


Fig. D

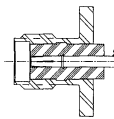


Fig. E

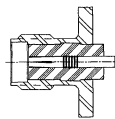


Fig. F

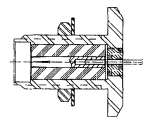


Fig. G

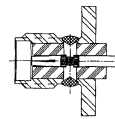


Fig. B

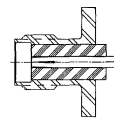


Fig. H

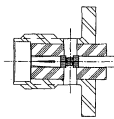


Fig. A

The Effect of VSWR on Transmitted Power

| VSWR | VSWR (dB) | Return Loss (dB) | Trans. Loss (dB) | Volt. Refl. Coeff. | Power Trans. (%) | Power Refl. (%) |
|------|-----------|------------------|------------------|--------------------|------------------|-----------------|
| 1.00 | .0 | <.000 | .00 | 100.0 | .0 | .0 |
| 1.01 | .1 | 46.1 | .000 | .00 | 100.0 | .0 |
| 1.02 | .2 | 40.1 | .000 | .01 | 100.0 | .0 |
| 1.03 | .3 | 36.6 | .001 | .01 | 100.0 | .0 |
| 1.04 | .3 | 34.2 | .002 | .02 | 100.0 | .0 |
| 1.05 | .4 | 32.3 | .003 | .02 | 99.9 | .1 |
| 1.06 | .5 | 30.7 | .004 | .03 | 99.9 | .1 |
| 1.07 | .6 | 29.4 | .005 | .03 | 99.9 | .1 |
| 1.08 | .7 | 28.3 | .006 | .04 | 99.9 | .1 |
| 1.09 | .7 | 27.3 | .008 | .04 | 99.8 | .2 |
| 1.10 | .8 | 26.4 | .010 | .05 | 99.8 | .2 |
| 1.11 | .9 | 25.7 | .012 | .05 | 99.7 | .3 |
| 1.12 | 1.0 | 24.9 | .014 | .06 | 99.7 | .3 |
| 1.13 | 1.1 | 24.3 | .016 | .06 | 99.6 | .4 |
| 1.14 | 1.1 | 23.7 | .019 | .07 | 99.6 | .4 |
| 1.15 | 1.2 | 23.1 | .021 | .07 | 99.5 | .5 |
| 1.16 | 1.3 | 22.6 | .024 | .07 | 99.5 | .5 |
| 1.17 | 1.4 | 22.1 | .027 | .08 | 99.4 | .6 |
| 1.18 | 1.4 | 21.7 | .030 | .08 | 99.3 | .7 |
| 1.19 | 1.5 | 21.2 | .033 | .09 | 99.2 | .8 |
| 1.20 | 1.6 | 20.8 | .036 | .09 | 99.2 | .8 |
| 1.21 | 1.7 | 20.4 | .039 | .10 | 99.1 | .9 |
| 1.22 | 1.7 | 20.1 | .043 | .10 | 99.0 | 1.0 |
| 1.23 | 1.8 | 19.7 | .046 | .10 | 98.9 | 1.1 |
| 1.24 | 1.9 | 19.4 | .050 | .11 | 98.9 | 1.1 |
| 1.25 | 1.9 | 19.1 | .054 | .11 | 98.8 | 1.2 |
| 1.26 | 2.0 | 18.8 | .058 | .12 | 98.7 | 1.3 |
| 1.27 | 2.1 | 18.5 | .062 | .12 | 98.6 | 1.4 |
| 1.28 | 2.1 | 18.2 | .066 | .12 | 98.5 | 1.5 |
| 1.29 | 2.2 | 17.9 | .070 | .13 | 98.4 | 1.6 |
| 1.30 | 2.3 | 17.7 | .075 | .13 | 98.3 | 1.7 |
| 1.32 | 2.4 | 17.2 | .083 | .14 | 98.1 | 1.9 |

| VSWR | VSWR (dB) | Return Loss (dB) | Trans. Loss (dB) | Volt. Refl. Coeff. | Power Trans. (%) | Power Refl. (%) |
|------|-----------|------------------|------------------|--------------------|------------------|-----------------|
| 1.34 | 2.5 | 16.8 | .083 | .15 | 97.9 | 2.1 |
| 1.36 | 2.7 | 16.3 | .102 | .16 | 97.7 | 2.3 |
| 1.38 | 2.8 | 15.9 | .112 | .16 | 97.5 | 2.5 |
| 1.40 | 2.9 | 15.6 | .122 | .17 | 97.2 | 2.8 |
| 1.42 | 3.0 | 15.2 | .133 | .17 | 97.0 | 3.0 |
| 1.44 | 3.2 | 14.9 | .144 | .18 | 96.7 | 3.3 |
| 1.46 | 3.3 | 14.6 | .155 | .19 | 96.5 | 3.5 |
| 1.48 | 3.4 | 14.3 | .166 | .19 | 96.3 | 3.7 |
| 1.50 | 3.5 | 14.0 | .177 | .20 | 96.0 | 4.0 |
| 1.52 | 3.6 | 13.7 | .189 | .21 | 95.7 | 4.3 |
| 1.54 | 3.8 | 13.4 | .201 | .21 | 95.5 | 4.5 |
| 1.56 | 3.9 | 13.2 | .213 | .22 | 95.2 | 4.8 |
| 1.58 | 4.0 | 13.0 | .225 | .22 | 94.9 | 5.1 |
| 1.60 | 4.1 | 12.7 | .238 | .23 | 94.7 | 5.3 |
| 1.62 | 4.2 | 12.5 | .250 | .24 | 94.4 | 5.6 |
| 1.64 | 4.3 | 12.3 | .263 | .24 | 94.1 | 5.9 |
| 1.66 | 4.4 | 12.1 | .276 | .25 | 93.8 | 6.2 |
| 1.68 | 4.5 | 11.9 | .289 | .25 | 93.6 | 6.4 |
| 1.70 | 4.6 | 11.7 | .302 | .26 | 93.3 | 6.7 |
| 1.72 | 4.7 | 11.5 | .315 | .26 | 93.0 | 7.0 |
| 1.74 | 4.8 | 11.4 | .329 | .27 | 92.7 | 7.3 |
| 1.76 | 4.9 | 11.2 | .342 | .28 | 92.4 | 7.6 |
| 1.78 | 5.0 | 11.0 | .356 | .28 | 92.1 | 7.9 |
| 1.80 | 5.1 | 10.9 | .370 | .29 | 91.8 | 8.2 |
| 1.82 | 5.2 | 10.7 | .384 | .29 | 91.5 | 8.5 |
| 1.84 | 5.3 | 10.6 | .398 | .30 | 91.3 | 8.7 |
| 1.86 | 5.4 | 10.4 | .412 | .30 | 91.0 | 9.0 |
| 1.88 | 5.5 | 10.3 | .426 | .31 | 90.7 | 9.3 |
| 1.90 | 5.6 | 10.2 | .440 | .31 | 90.4 | 9.6 |
| 1.92 | 5.7 | 10.0 | .454 | .32 | 90.1 | 9.9 |
| 1.94 | 5.8 | 9.9 | .468 | .32 | 89.8 | 10.2 |
| 1.96 | 5.8 | 9.8 | .483 | .32 | 89.5 | 10.5 |

| VSWR | VSWR (dB) | Return Loss (dB) | Trans. Loss (dB) | Volt. Refl. Coeff. | Power Trans. (%) | Power Refl. (%) |
|-------|-----------|------------------|------------------|--------------------|------------------|-----------------|
| 1.98 | 5.9 | 9.7 | .497 | .33 | 89.2 | 10.8 |
| 2.00 | 6.0 | 9.5 | .512 | .33 | 88.9 | 11.1 |
| 2.50 | 8.0 | 7.4 | .881 | .43 | 81.6 | 18.4 |
| 3.00 | 9.5 | 6.0 | 1.249 | .50 | 75.0 | 25.0 |
| 3.50 | 10.9 | 5.1 | 1.603 | .56 | 69.1 | 30.9 |
| 4.00 | 12.0 | 4.4 | 1.938 | .60 | 64.0 | 36.0 |
| 4.50 | 13.1 | 3.9 | 2.255 | .64 | 59.5 | 40.5 |
| 5.00 | 14.0 | 3.5 | 2.553 | .67 | 55.6 | 44.4 |
| 5.50 | 14.8 | 3.2 | 2.834 | .69 | 52.1 | 47.9 |
| 6.00 | 15.6 | 2.9 | 3.100 | .71 | 49.0 | 51.0 |
| 6.50 | 16.3 | 2.7 | 3.351 | .73 | 46.2 | 53.8 |
| 7.00 | 16.9 | 2.5 | 3.590 | .75 | 43.7 | 56.2 |
| 7.50 | 17.5 | 2.3 | 3.817 | .76 | 41.5 | 58.5 |
| 8.00 | 18.1 | 2.2 | 4.033 | .78 | 39.5 | 60.5 |
| 8.50 | 18.6 | 2.1 | 4.240 | .79 | 37.7 | 62.3 |
| 9.00 | 19.1 | 1.9 | 4.437 | .80 | 36.0 | 64.0 |
| 9.50 | 19.6 | 1.8 | 4.626 | .81 | 34.5 | 65.5 |
| 10.00 | 20.0 | 1.7 | 4.807 | .82 | 33.1 | 66.9 |
| 11.00 | 20.8 | 1.6 | 5.149 | .83 | 30.6 | 69.4 |
| 12.00 | 21.6 | 1.5 | 5.466 | .85 | 28.4 | 71.6 |
| 13.00 | 22.3 | 1.3 | 5.762 | .86 | 26.5 | 73.5 |
| 14.00 | 22.9 | 1.2 | 6.040 | .87 | 24.9 | 75.1 |
| 15.00 | 23.5 | 1.2 | 6.301 | .88 | 23.4 | 76.6 |
| 16.00 | 24.1 | 1.1 | 6.547 | .88 | 22.1 | 77.9 |
| 17.00 | 24.6 | 1.0 | 6.780 | .89 | 21.0 | 79.0 |
| 18.00 | 25.1 | 1.0 | 7.002 | .89 | 19.9 | 80.1 |
| 19.00 | 25.6 | .9 | 7.212 | .90 | 19.0 | 81.0 |
| 20.00 | 26.0 | .9 | 7.413 | .90 | 18.1 | 81.9 |
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| 30.00 | 29.5 | .6 | 9.635 | .94 | 12.5 | 87.5 |

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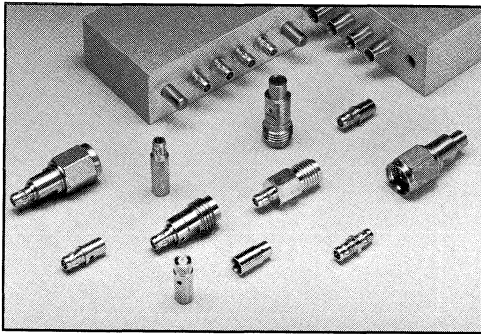
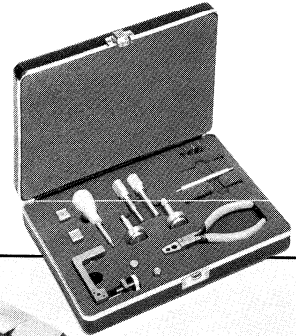
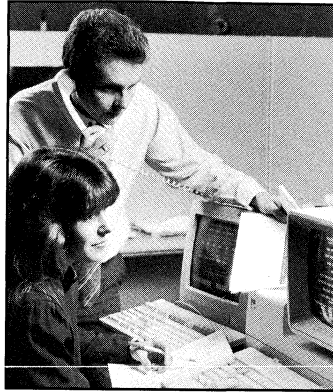
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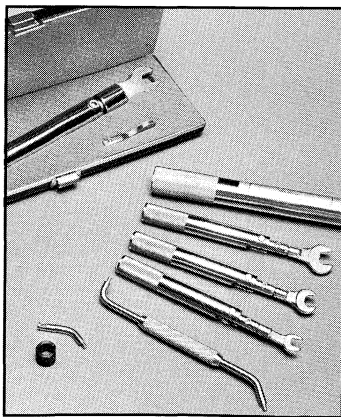
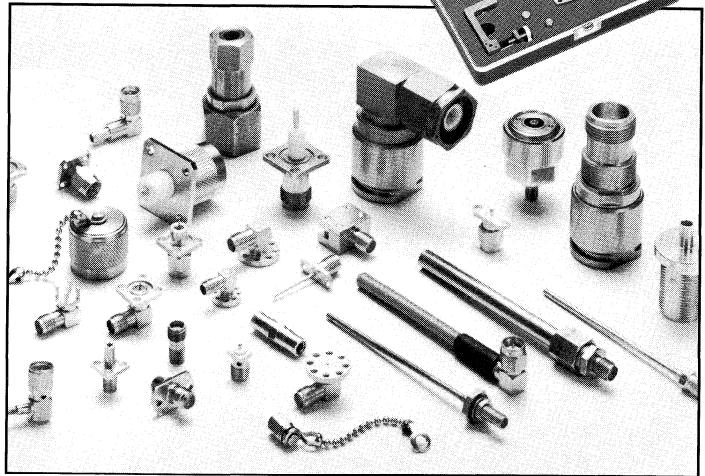
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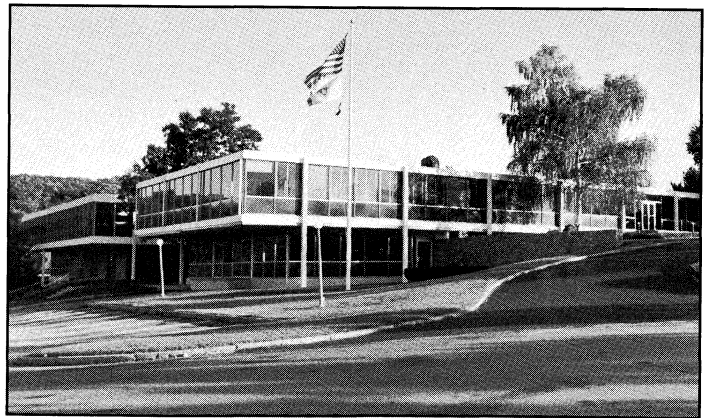
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- Inter Series Adapters
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- OSMT
- OSSP
- OSP/OSP.com
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- QPL Military Qualified
- SC
- SMA
- SMB/SMC
- SSMT
- TNC
- TWINAX
- Type 43
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- Tools & Accessories
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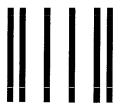
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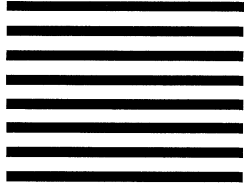
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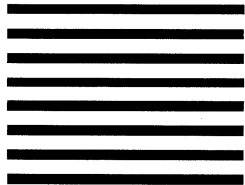
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