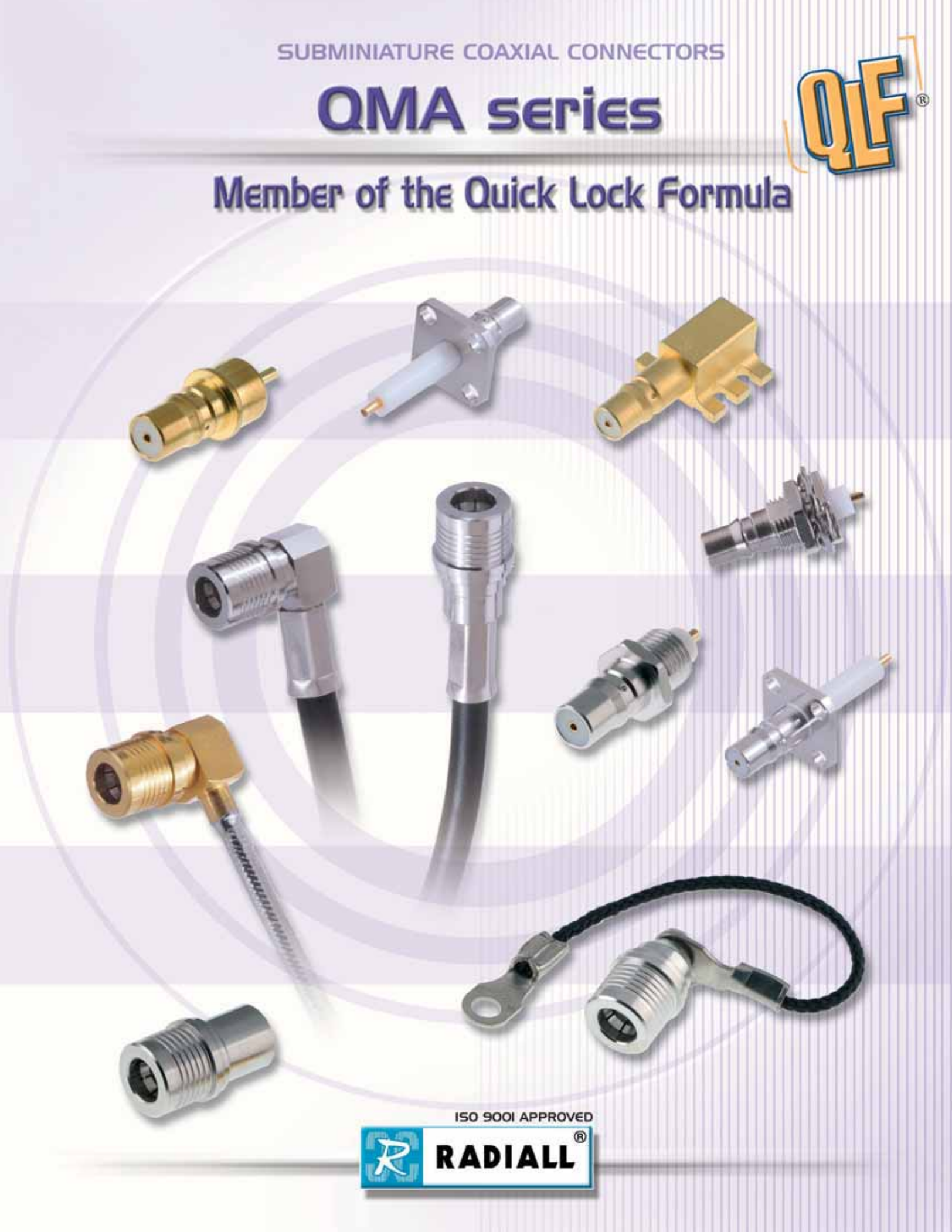
SUBMINIATURE COAXIAL CONNECTORS

QMA series

Member of the Quick Lock Formula



ISO 9001 APPROVED

RADIALL®

COMPANY Profile

Radiall welcomes
Applied Engineering Products (AEP)
as a new member of its group of companies
manufacturer of RF coaxial connectors
and cable assemblies

Founded in 1952 in France, Radiall started as a family owned company making coaxial plugs. Today, Radiall is an international and global manufacturer of interconnect components including ***RF coaxial connectors and cable assemblies****,* ***antennas****,* ***fiber optic components****,* ***microwave components, filter*** *and* ***multipin connectors*** *for the Automotive, Civil Aviation, Defense, Industrial, Medical, Space and Telecommunications.*

RoHS • WEEE • COMPLIANT

QSE (Quality Safety Environment) POLICY

Radiall maintains a quality management system conforming to international standards, including for environmental protection.Our customers' recognition for the quality of our products and the sustainability of our company, demonstrates the efficiency of our quality system.

ISO 9001 Certified
AS/EN/JISQ9100-ISOTS 16949-ISO-14001

CERTIFICATIONS

Certified ISO 9001 since 1994, Radiall has a pro-active policy in terms of conforming to international standards. Today, all Radiall sites are certified to **ISO 9001:2000** and some dedicated activities are AS9100 or TS 16949. Our process approach gives us the tool for continuous improvement in all our activities.

A major step in our environment policy was the **ISO 14001** certification in 2001 of the Voreppe plant. Radiall complies with European directives such as **RoHS** for hazardous substance restrictions and **EuP** for environmentally friendly designs for energy-using products.
Some Radiall product lines are on **MIL, ESA/SCC** Qualified Product Lists.
Radiall is consequently proud to be recognized by leading industrial customers for the quality of its service and products.

A WORLDWIDE ENGINEERING & MANUFACTURING CAPABILITY

With expertise centers and manufacturing locations in 3 continents. Radiall offers its customers, through 13 industrial sites, the proximity they need to obtain the best quality of service and delivery performance. Our facilities feature state of the art equipment for the many technologies involved in the design, manufacturing and assembly of interconnect products. Manufacturing plants based in **China**, **India**, **Tunisia** and **Mexico** give the opportunity to offer Radiall quality at competitive prices.

Technical information and sales contacts are available on: www.radiall.com

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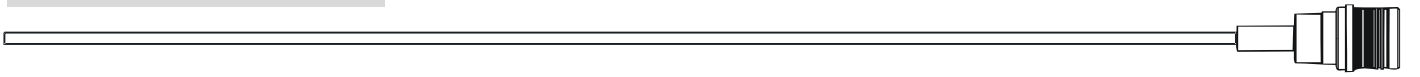


Page

The "Quick Lock Formula®".

QMA and QN connectors, patented products, become some real standard for the RF Telecommunications industry.

The "**QLF**" trademark, **Quick Lock Formula®**, standard applies to **QMA** and QN series and guarantees the full intermateability between suppliers using this trademark. Using QLF certified connectors also guarantees the high level of performance of the RF transmission.

QMA (Quick Lock SMA) and QN connectors (Quick Lock N) enable fast, secured and easy matings with minimum space requirements. The **QMA** and QN series are the perfect alternative to SMA and N connectors in new generation telecommunication systems as well as in many other RF applications.

Cost effective solution

The **QMA** series, Quick Lock Formula® approved, is the new patented innovative **snap-on** generation of brass SMA connectors. With the same interface dimensions, **QMA** connectors have the same high electrical performances as the SMA series with an easier and faster mounting design. **QMA** series offers a cost effective solution for new generations of base stations.

The **QMA** series is designed for DC to 18 GHz. Engagement life is 100 matings, just as standard commercial SMA connectors, with total reliability. They are easy and fast to connect and disconnect.

The new **QMA** series offers a large range of connectors: straight and right angle plugs, bulkhead jacks, flange receptacles, PCB receptacles, adapters ... Models are either full crimp, crimp or solder type for flexible, semi-rigid or conformable cables.

Saving mounting time: 10 times faster!

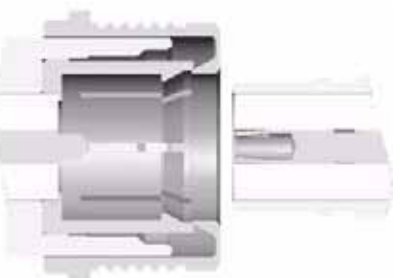
With its snap-on mating system, **QMA** connectors are 10 times quicker to mount than a screw-on SMA. It takes less than 2 seconds to connect **QMA** connectors in field conditions.
Risk in damaging or scratching the panel is limited as no torque wrench is required.

Screw-on connectors: SMA

Snap-on connectors and member of the Quick Lock formula® approved: QMA

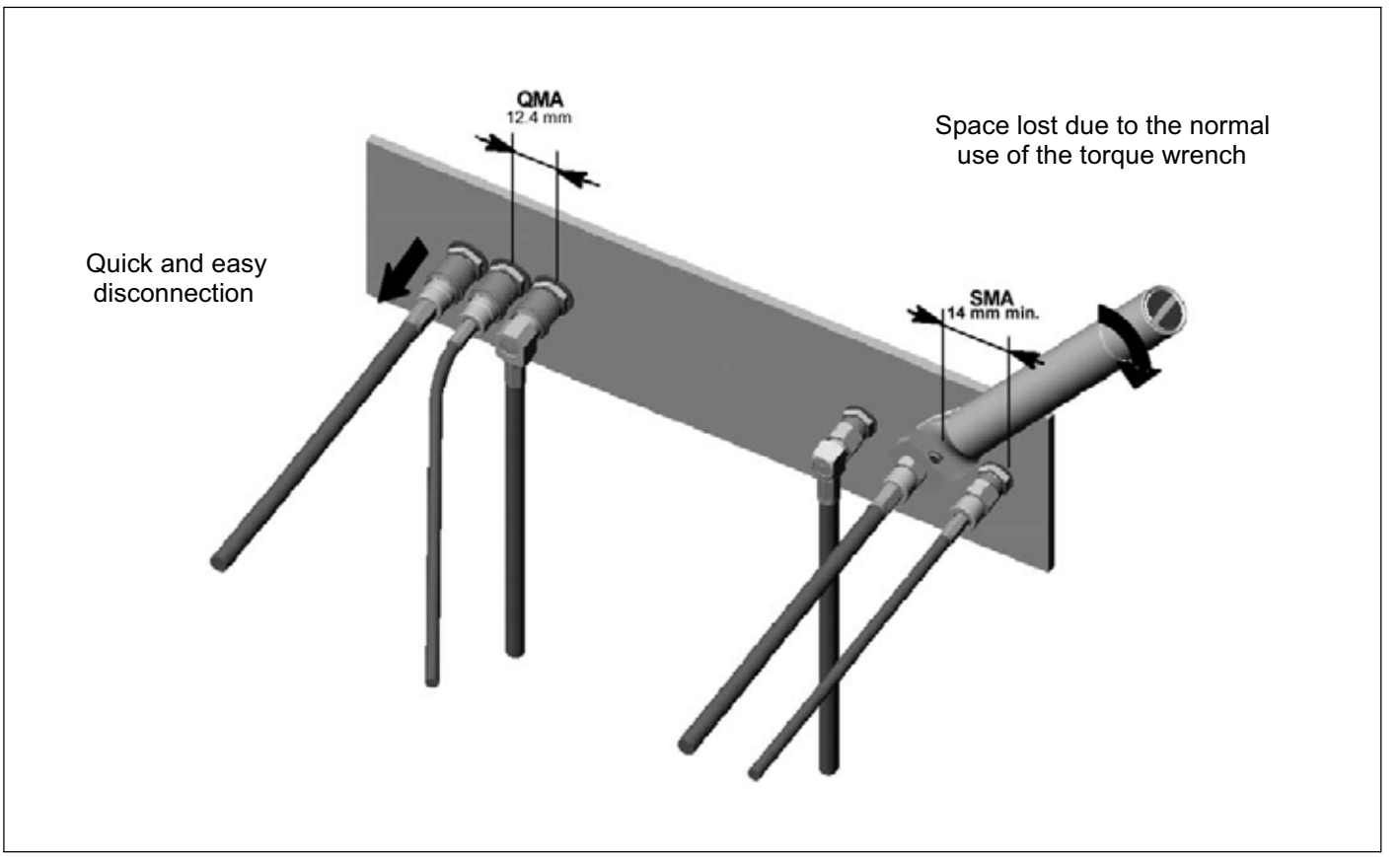
Secure connection: Click!

Snap-on connection is insured by a chamfer. Moreover, a positive locking system insures a good and secure connection. The disengagement force is lower than the panel tear-off force, preventing from any panel damaging.
QMA connectors have been successfully tested against vibration.



Space-saving

QMA connectors have a lower space requirement since space for the use of a torque wrench is not necessary. The distance between connectors is therefore optimized on the panel.



For very compact assembly in which there is not enough space to disconnect by hand, a very easy to use extraction tool (p.21) is available to disconnect either straight or right angle **QMA** connectors.

Flexibility: 360° rotation

The cabled plug can freely rotate around the jack, which allows more flexibility during the mounting process and eases installation in the equipment.
Moreover, it prevents from any added stress on the cable and any return loss reduction due to cable bending.

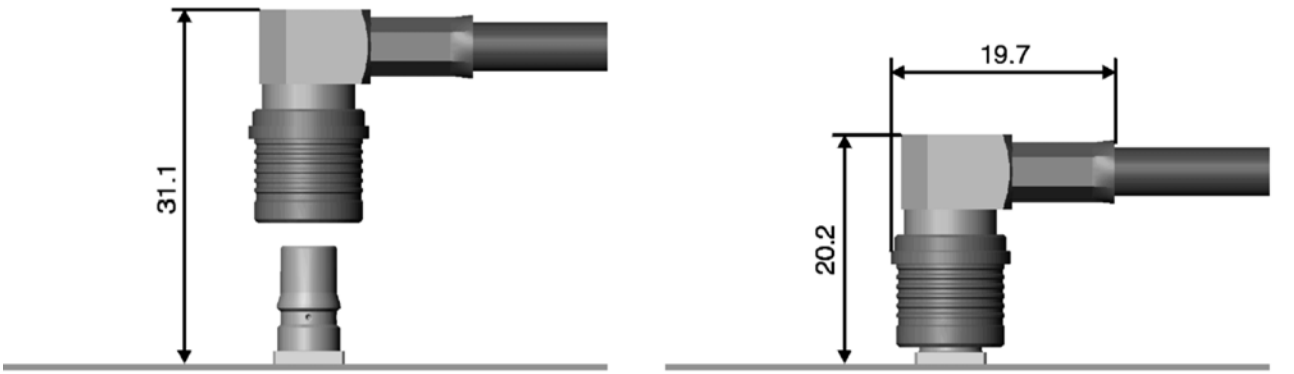
QMA implementation

You can at anytime switch from **SMA** to **QMA** connectors since panel or PCB cut out and crimping tool required are the same.

Packaging

Standard packaging is 100 pieces. Unit packaging is available upon request. SMT receptacles are delivered in tape and reel of 100, 250 or 300 pieces

PROFILE

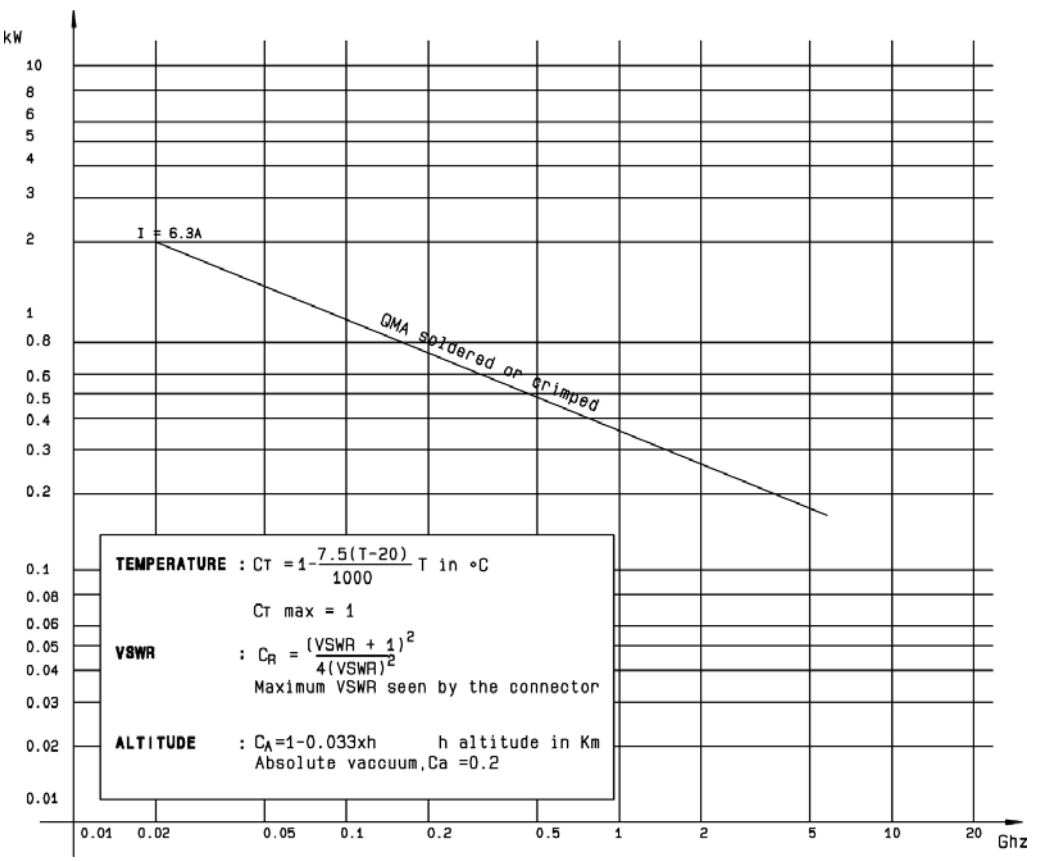


Unmated Mated

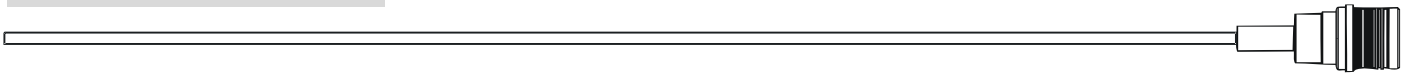
Measure adapters

In order to ease the implementation of **QMA** connectors in new systems, Radiall has developed a full range of **QMA/SMA 3.5** adapters (p.14)

Power range



CHARACTERISTICS



ELECTRICAL CHARACTERISTICS

Impedance		50 Ω
Frequency range		DC - 6 GHz (optimized) DC - 18 GHz (working range)
V.S.W.R. typical		
	DC - 3 GHz	1.06
	3 GHz - 6 GHz	1.12
Max insertion loss		0.25 dB
Insulation resistance		5000 MΩ
Voltage rating		≤500 V RMS 50 Hz, sea level
Dielectric withstanting voltage		1500 V RMS 50 Hz, sea level
Contact resistance		
	center contact	<3 mΩ
	outer contact	<2.5 mΩ
Admissible power @ 2.5 GHz (continuous power)		125 W @ T = 40°C (150 W @ T = 23°C)
Passive Intermodulation		-120 dBc @ 1.8 GHz (2x20W) (static)
RF leakage	DC - 3 GHz	-80 dB min
	3 - 6 GHz	-70 dB min

MECHANICAL CHARACTERISTICS

Mechanical endurance		100 matings
Engagement and disengagement force		
	Engagement	25 N
	Disengagement	20 N
Retention force for interface		>60 N
Cable retention		
	2.6 / 50 S	90 N
	2.6 / 50 D	110 N
	5 / 50 S	180 N
	5 / 50 D	200 N
	5.7 / 50 D	220 N
Distance between connectors: c. to c.		12.4 mm min.
Vibration		40 $m.s^{-2}$ at 500 Hz

ENVIRONMENTAL CHARACTERISTICS

Temperature range	-40, +105°C

MATERIALS

Connector bodies	Brass
Male center contact	Brass
Female center contact	Beryllium copper
Outer contact	Bronze
Other metallic parts	Brass
Insulators	PTFE

PLATING

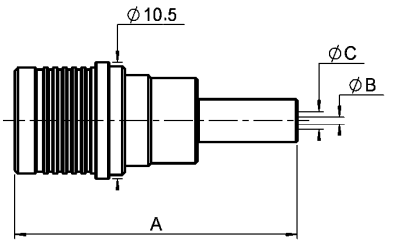
Bodies	BBR*
Solder bodies	BBR*
SMT Bodies	NPGR**
Outer contacts	BBR*
Center contacts	NPGR**

* Bright Bronze Radiall

** Nickel Phosphorous Gold Radiall

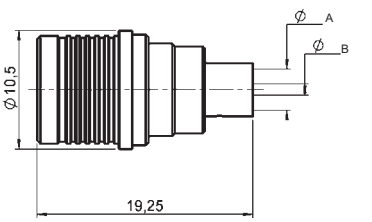
All dimensions are given in mm.

STRAIGHT PLUGS FULL CRIMP TYPE FOR FLEXIBLE CABLES



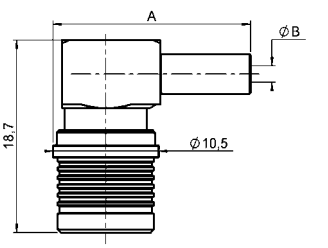
Cable	Part number	Dimensions (mm)			Captive center contact	Assembly instructions	Finish
		A	B	C			
2.6 / 50 S	**R123 071 000**	25.5	0.6	1.61	yes	M01	BBR
2.6 / 50 D	**R123 072 000**	25.5	0.6	1.61	yes	M01	BBR
5 / 50 S	**R123 075 000**	28.5	1.05	3.11	yes	M01	BBR
5 / 50 D	**R123 076 000**	28.5	1.05.	3.11	yes	M01	BBR

STRAIGHT PLUGS SOLDER TYPE FOR SEMI-RIGID CABLES



Cable	Part number	Dimensions (mm)		Captive center contact	Assembly instructions	Finish
		A	B			
.085"	**R123 054 000**	2.275	0.6	yes	M05	BBR
.141"	**R123 055 000**	3.675	1	yes	M05	BBR
.141"	**R123 055 007**	3.675	1	yes	M05	NPGR

RIGHT ANGLE PLUGS CRIMP TYPE FOR FLEXIBLE CABLES

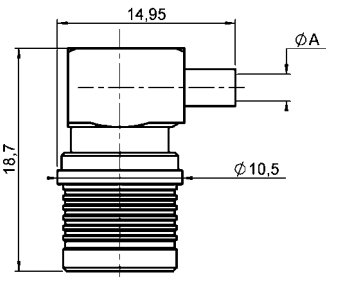


A right angle plug for 5.7 mm dia. cable is also available, please consulte us.

Cable	Part number	Dimensions (mm)		Captive center contact	Assembly instructions	Finish
		A	B			
2.6 / 50 S	**R123 172 000**	19.7	1.61	yes	M02	BBR
2.6 /50 D	**R123 174 000**	19.7	1.61	yes	M02	BBR
5 / 50 S	**R123 175 000**	22.7	3.1	yes	M02	BBR
5 / 50 D	**R123 176 000**	22.7	3.1	yes	M02	BBR

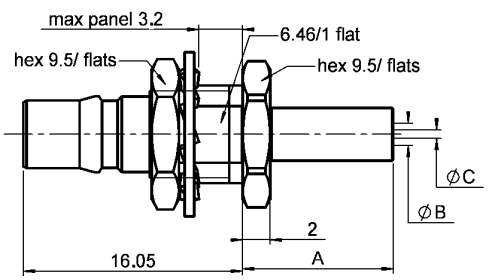
Packaging: 100 pces. For unit packaging, add "W" after the P/N.

RIGHT ANGLE PLUGS SOLDER TYPE FOR SEMI-RIGID CABLES



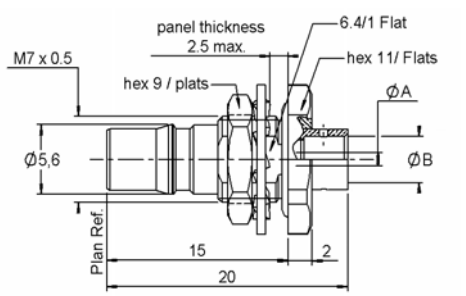
Cable	Part number	Captive center contact	Dimension A (mm)	Assembly instructions	Finish
.085"	**R123 153 000**	yes	2.25	M03	BBR
.085"	**R123 153 003**	yes	2.25	M03	Gold
.085"	**R123 153 007**	yes	2.25	M03	NPGR
.141"	**R123 154 000**	yes	3.7	M03	BBR
.141"	**R123 154 003**	yes	3.7	M03	Gold
.141"	**R123 154 007**	yes	3.7	M03	NPGR

STRAIGHT BULKHEAD JACKS FULL CRIMP TYPE FOR FLEXIBLE CABLES



Cable	Part number	Dimensions (mm)			Captive center contact	Assembly instructions	Panel drilling	Finish
		A	B	C				
2.6 / 50 S	**R123 312 000**	11	0.6	1.61	yes	M01	P02	BBR
2.6 / 50 D	**R123 313 000**	11	0.6	1.61	yes	M01	P02	BBR
5 / 50 S	**R123 314 000**	14	1.05	3.11	yes	M01	P02	BBR
5 / 50 D	**R123 315 000**	14	1.05	3.11	yes	M01	P02	BBR

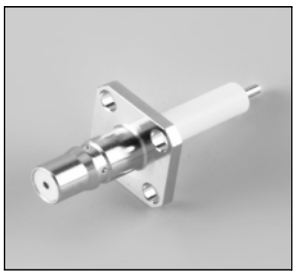
STRAIGHT BULKHEAD JACKS SOLDER TYPE FOR SEMI-RIGID CABLES (panel seal)

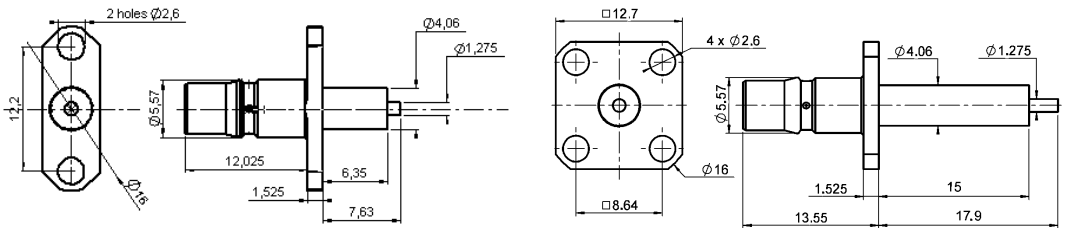


Cable	Part number	Dimensions (mm)		Assembly instructions	Panel drilling	Finish
		A	B			
.085"	**R123 326 003**	0.6	2.25	M05	P02	Gold
.141"	**R123 305 023**	1	3.7	M05	P02	Gold

Packaging: 100 pces. For unit packaging, add "W" after the P/N.

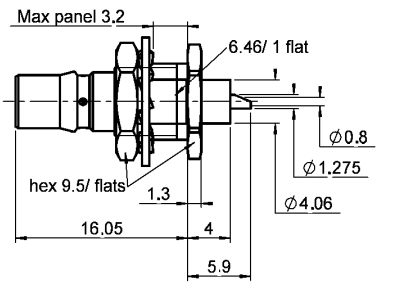
STRAIGHT FLANGE FEMALE RECEPTACLE





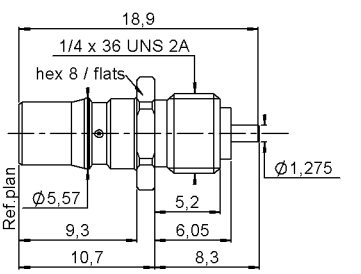
Part number	Fig.	Captive center contact	Panel drilling	Finish
R123 415 000	1	yes	P01	BBR
R123 464 030	2	yes	P04	BBR

STRAIGHT BULKHEAD RECEPTACLE



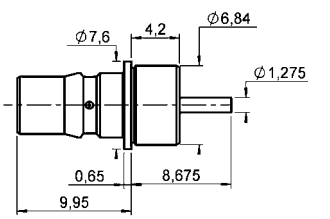
Part number	Captive center contact	Panel drilling	Finish
R123 553 000	yes	P02	BBR

SCREW ON RECEPTACLE (front mount)



Part number	Captive center contact	Panel drilling	Finish
R123 555 030	yes	P06	BBR

PRESS MOUNT RECEPTACLE



Part number	Captive center contact	Panel drilling	Finish
R123 590 027	yes	P05	NPGR

STRAIGHT PCB RECEPTACLES

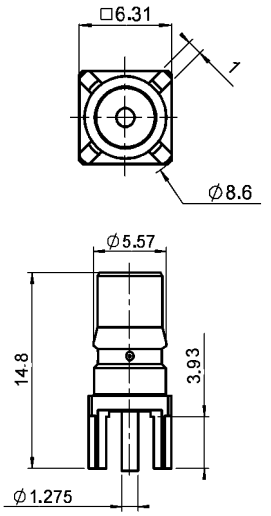


Fig.1

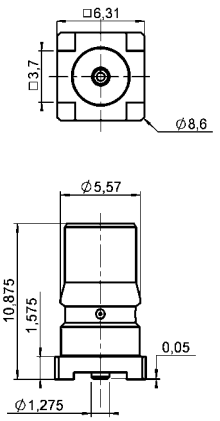
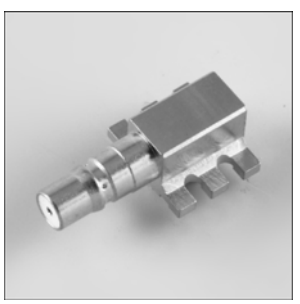


Fig.2

Part number	Fig.	Captive center contact	Finish	Assembly instructions	Panel drilling	Packaging	Note
R123 426 003	1	yes	NPGR		P03	100 / bulk	
R123 426 003W	1	yes	NPGR		P03	1	
R123 427 803	2	yes	NPGR	M04		100 / reel	SMT
R123 427 803W	2	yes	NPGR	M04		1	SMT
R123 427 823	2	yes	NPGR	M04		300 / reel	SMT

RIGHT ANGLE PCB RECEPTACLES



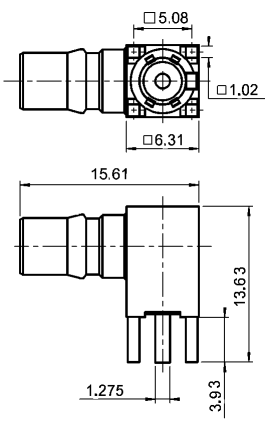
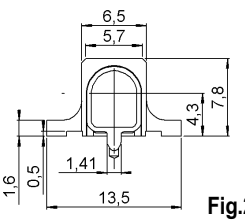
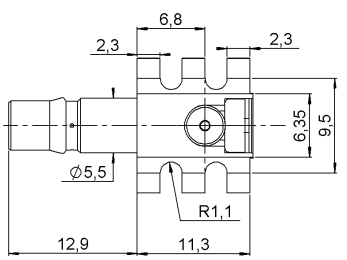


Fig. 1





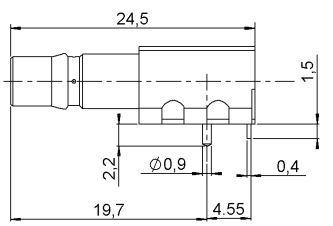
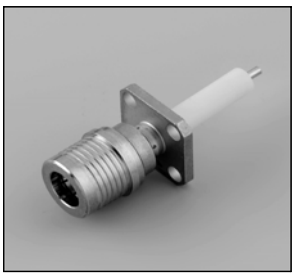


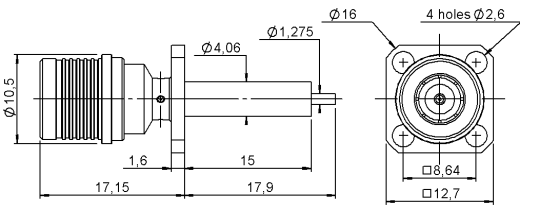
Fig.2

Part number	Fig.	Captive center contact	Finish	Assembly instructions	Panel drilling	Packaging	Note
R123 680 003	1	yes	NPGR		P03	100 / bulk	
R123 680 003W	1	yes	NPGR		P03	1	
R123 682 817	2	yes	NPGR	M04		250 / reel	SMT
R123 682 827	2	yes	NPGR	M04		100 / reel	SMT
R123 682 827W	2	yes	NPGR	M04		1	SMT

Packaging: 100 pces. For unit packaging, add "W" after the P/N.

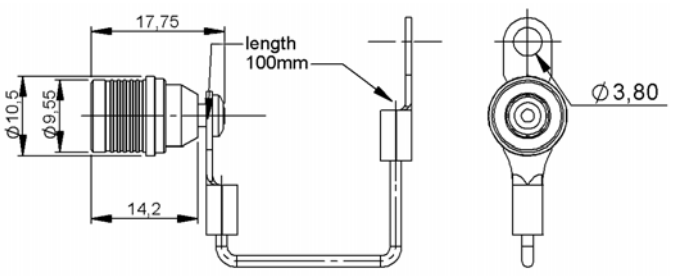
SQUARE FLANGE MALE RECEPTACLE





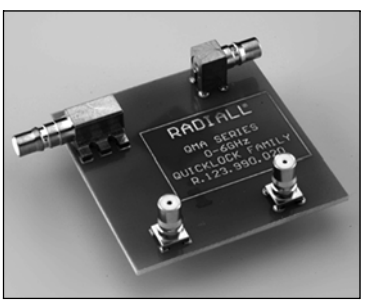
Part number	Captive center contact	Panel drilling	Finish
R123 441 000	yes	P01	BBR

MALE CAP WITH CORD



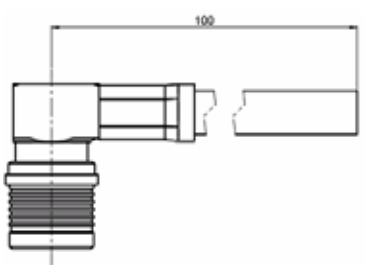
Part number	Finish	Packaging
R123 805 000	BBR	100

DEMONSTRATION BOARD



Part number
R123 990 020W

QMA PIGTAIL



Part number	Description	Length
R284 V01 01 003	R123 176 000 + C291 320 007	10 cm

Packaging: 100 pces. For unit packaging, add "W" after the P/N.

IN SERIES ADAPTERS

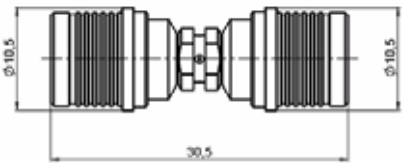


Fig. 1

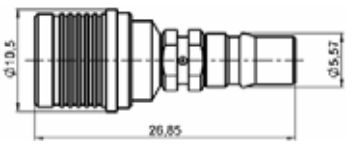


Fig. 2

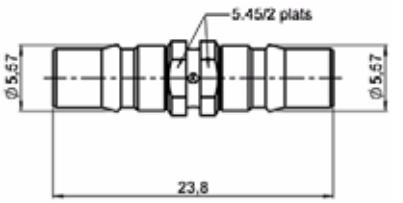


Fig. 3

Part number	Fig.	Captive center contact	Finish	Note
R123 703 000	1	yes	BBR	QMA MALE - QMA MALE
R123 704 000	2	yes	BBR	QMA FEMALE - QMA MALE
R123 705 000	3	yes	BBR	QMA FEMALE - QMA FEMALE

BETWEEN SERIES ADAPTERS QMA/SMA

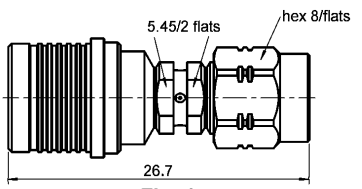


Fig. 1

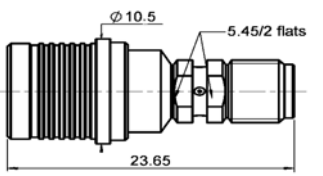


Fig. 2

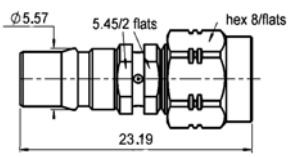


Fig. 3

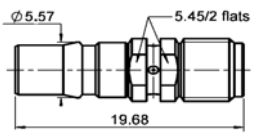


Fig. 4

Part number	Fig.	Captive center contact	Finish	Packaging	Note
R191 910 000	1	yes	BRR	1	QMA MALE - SMA MALE
R191 911 000	2	yes	BBR	1	QMA MALE - SMA FEMALE
R191 912 000	3	yes	BBR	1	QMA FEMALE - SMA MALE
R191 913 000	4	yes	BBR	1	QMA FEMALE - SMA FEMALE

Packaging: 100 pces. For unit packaging, add "W" after the P/N.

QMA / SMA 3.5

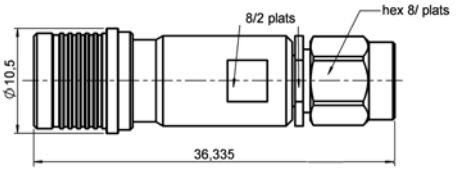


Fig. 1

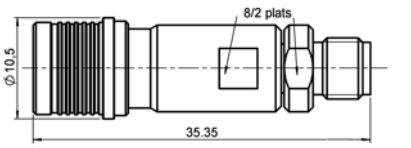


Fig. 2

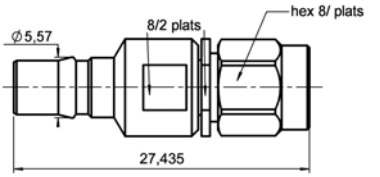


Fig. 3

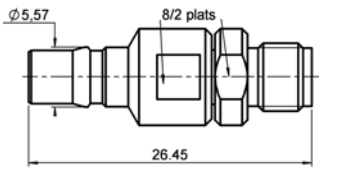


Fig. 4

Part number	Fig.	Finish	Packaging	Note
R191 914 700	1	passivated	1	QMA MALE - SMA 3.5 MALE
R191 915 700	2	passivated	1	QMA MALE - SMA 3.5 FEMALE
R191 916 700	3	passivated	1	QMA FEMALE - SMA 3.5 MALE
R191 917 700	4	passivated	1	QMA FEMALE - SMA 3.5 FEMALE

QMA / N

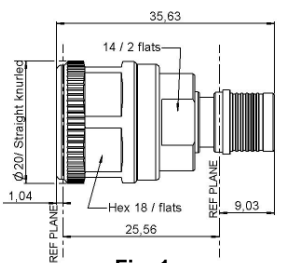


Fig. 1

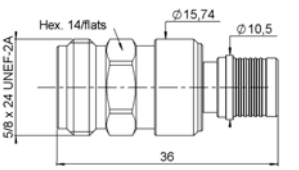


Fig. 2

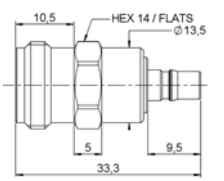


Fig. 3

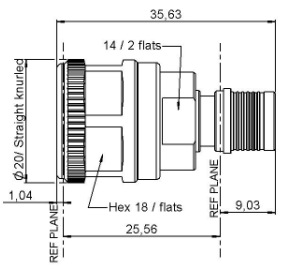
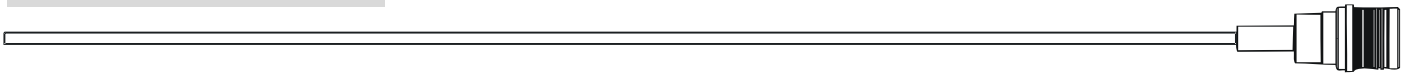


Fig. 4

Part number	Fig.	Finish	Packaging	Note
R191 762 000	1	BBR	1	QMA FEMALE - N MALE
R191 763 000	2	BBR	1	QMA MALE - N FEMALE
R191 764 000	3	BBR	1	QMA FEMALE - N FEMALE
R191 765 000	4	BBR	1	QMA MALE - N MALE



QMA calibration process

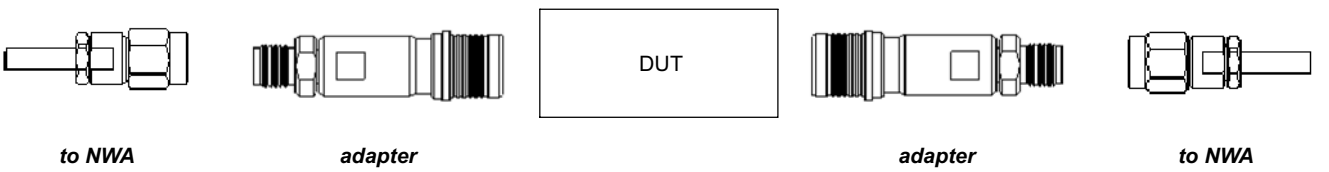
To calibrate your module equipped with QMA connectors and measure VSWR, Radiall recommends to use the following process:

1 - Calibration with SMA 3.5 to SMA 3.5 calibration adapters and a SMA calibration kit.

SMA 3.5/SMA 3.5 adapters : **R127 973 001** M/M **R127 974 001** M/F **R127 975 001** F/F

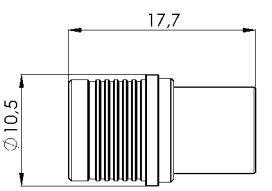
2 - Exchange of the calibration adapter with the required QMA adapters

QMA/SMA 3.5 adapters: **R191 914 700** QMA M/SMA 3.5 M **R191 915 700** QMA M/SMA 3.5 F
R191 916 700 QMA F/SMA 3.5 M **R191 917 700** QMA F/SMA 3.5 F



SMA 3.5/SMA 3.5 adapters and QMA/SMA 3.5 adapters have the same electrical length and the same return loss and this allows an accurate measure.

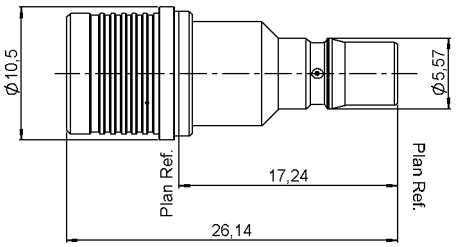
LOW POWER TERMINATION



Part number	Frequency range (GHz)	V.S.W.R (max)		Power (W)		Impedance (Ω)	Type	Weight (g)
		DC - 1	1 - 2.5	avg.	peak			
R404 114 000	DC - 2.5	≤ 1.08	≤ 1.20	1	100	50+/-5%	male	5

Packaging : unit.

MINIATURE COAXIAL ATTENUATORS QMA 1 WATT



Part number	Frequency range (*GHz*)	Attenuation (*dB*)			V.S.W.R.		Power (*W*)
		Nom	Deviation				
			DC - 2	2 - 3	DC - 2	2 - 3	peak
R411 700 124	DC - 3	0	± 0.3	± 0.5	≤ 1.20	≤ 1.30	100
R411 701 124	DC - 3	1	± 0.3	± 0.5	≤ 1.20	≤ 1.30	100
R411 702 124	DC - 3	2	± 0.3	± 0.5	≤ 1.20	≤ 1.30	100
R411 703 124	DC - 3	3	± 0.3	± 0.5	≤ 1.20	≤ 1.30	100
R411 704 124	DC - 3	4	± 0.3	± 0.5	≤ 1.20	≤ 1.30	100
R411 705 124	DC - 3	5	± 0.3	± 0.5	≤ 1.20	≤ 1.30	100
R411 706 124	DC - 3	6	± 0.3	± 0.5	≤ 1.20	≤ 1.30	100
R411 707 124	DC - 3	7	± 0.5	± 0.5	≤ 1.20	≤ 1.30	100
R411 708 124	DC - 3	8	± 0.5	± 0.5	≤ 1.20	≤ 1.30	100
R411 709 124	DC - 3	9	± 0.5	± 0.5	≤ 1.20	≤ 1.30	100
R411 710 124	DC - 3	10	± 0.5	± 0.5	≤ 1.20	≤ 1.30	100
R411 711 124	DC - 3	11	± 0.5	± 0.5	≤ 1.20	≤ 1.30	100
R411 712 124	DC - 3	12	± 0.5	± 0.5	≤ 1.20	≤ 1.30	100
R411 713 124	DC - 3	13	± 0.5	± 0.5	≤ 1.20	≤ 1.30	100
R411 714 124	DC - 3	14	± 0.5	± 0.5	≤ 1.20	≤ 1.30	100
R411 715 124	DC - 3	15	± 0.5	± 0.5	≤ 1.20	≤ 1.30	100
R411 716 124	DC - 3	16	± 0.7	± 0.7	≤ 1.20	≤ 1.30	100
R411 717 124	DC - 3	17	± 0.7	± 0.7	≤ 1.20	≤ 1.30	100
R411 718 124	DC - 3	18	± 0.7	± 0.7	≤ 1.20	≤ 1.30	100
R411 719 124	DC - 3	19	± 0.7	± 0.7	≤ 1.20	≤ 1.30	100
R411 720 124	DC - 3	20	± 0.7	± 0.7	≤ 1.20	≤ 1.30	100

DC BLOCK QMA

Part number	Frequency range (GHz)	Impedance (Ω)	V.S.W.R	Average power at 25°C (W)	Peak power at 25°C (W)	DC voltage max (V)
R443 191 000	0.01 - 3	50	≤ 1.20	10	150	60

GENERAL SPECIFICATIONS - RF PERFORMANCES COAXIAL SWITCHES

Impedance	50 Ω	
Frequency range	DC - 6 GHz	
	DC - 3 GHz	3 - 6 GHz
V.S.W.R (maw)	1.20	1.30
Insertion loss (max)	0.20 dB	0.30 dB
Isolation (min)	80 dB	70 dB
Average power *	120 W	80 W
Actuator terminals	Solder pins (250°C max./30sec)	
Construction	splashproof	
Operating temperature range	-40, +85°C	
Storage temperature range	-55, +85°C	

*average power at 25°C for RF path

GENERAL SPECIFICATIONS - ADDITIONAL SPECIFICATIONS S.P.DT SWITCHES

Life	2.500.000 cycles
Switching time (nominal voltage ; 25°C)	10 ms
Weight (max)	45 g

QMA S.P.D.T. SWITCHES

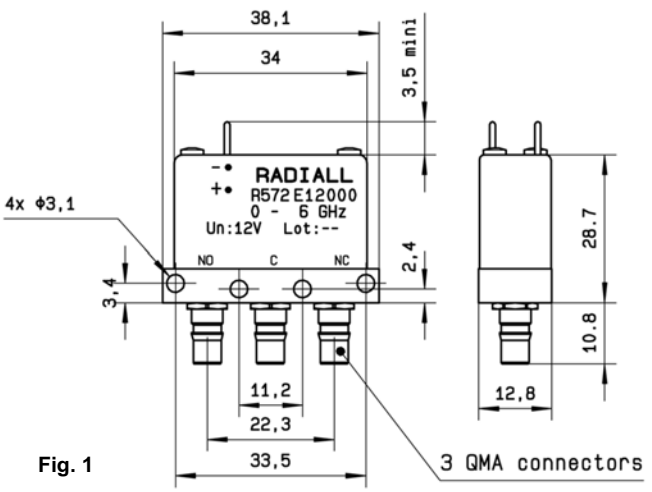


Fig. 1

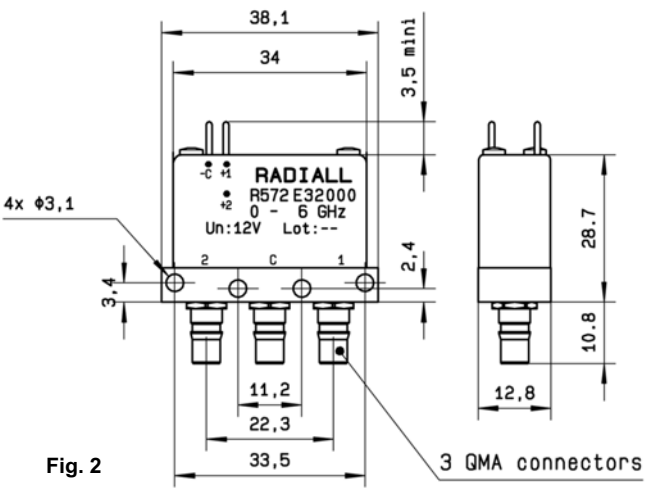


Fig. 2

Part number	Fig.	Actuator	Nominal current at 25°C (±10%) *mA*	Actuator voltage (nominal) *Vcc*
R572 E12 000	1	Failsafe	160	12 (10.2 to 13)
R572 E13 000			65	28 (24 to 30)
R572 E32 000	2	Latching	210	12 (10.2 to 13) negative common
R572 E33 000			80	28 (24 to 30) negative common

GENERAL SPECIFICATIONS - ADDITIONAL SPECIFICATIONS D.P.D.T SWITCHES

Life	2.500.000 cycles
Switching time (nominal voltage ; 25°C)	15 ms
Weight (max)	85 g

QMA D.P.D.T. SWITCHES

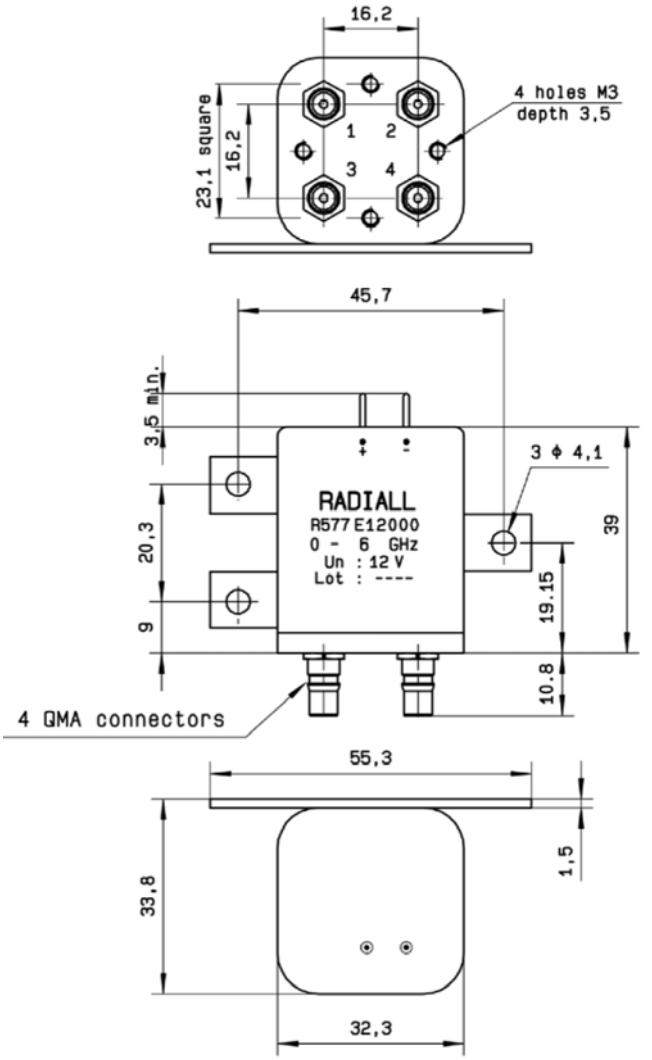


Fig. 1

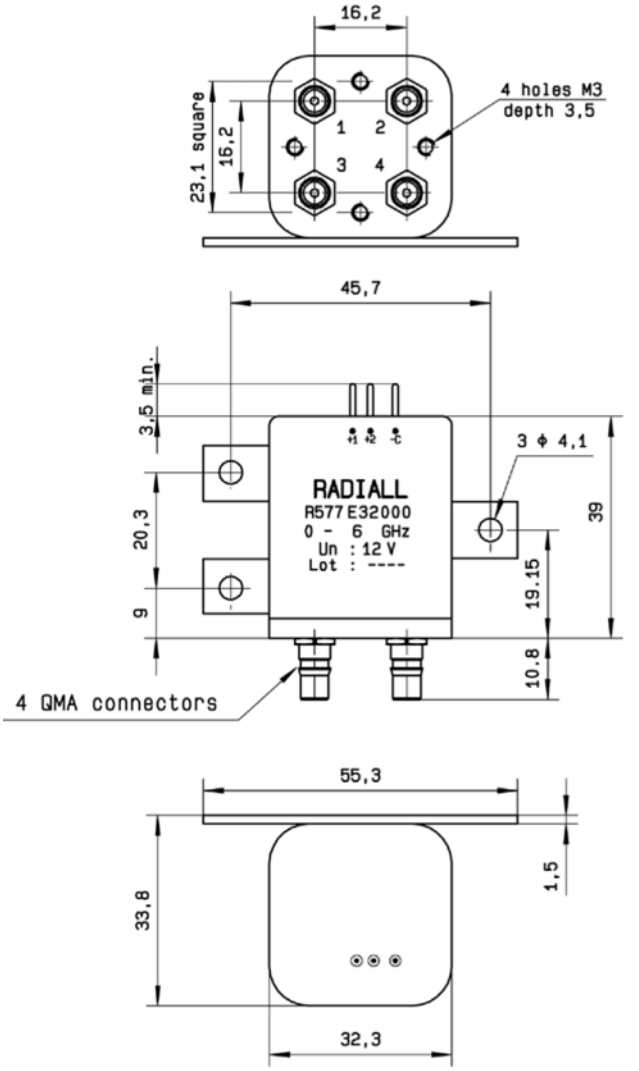


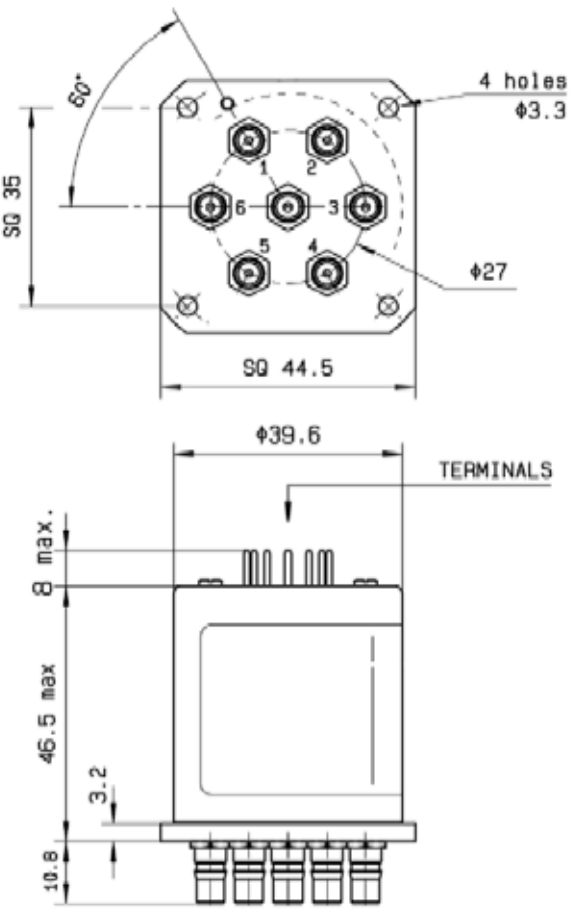
Fig. 2

Part number	Fig.	Actuator	Nominal current at 25°C (±10%) *mA*	Actuator voltage (nominal) *Vcc*
R577 E12 000	1	Failsafe	340	12 (10.2 to 13)
R577 E13 000			140	28 (24 to 30)
R577 E32 000	2	Latching	320	12 (10.2 to 13) negative common
R577 E33 000			125	28 (24 to 30) negative common

GENERAL SPECIFICATIONS - ADDITIONAL SPECIFICATIONS S.P.n.T SWITCHES

Life	500.000 cycles per position
Switching time (nominal voltage ; 25°C)	15 ms
Weight (max)	180 g

QMA S.P.n.T. SWITCHES



Part number	Actuator	Nominal current at 25°C (±10%) *mA*	Actuator voltage (nominal) *Vcc*
R573 E02 600	Normally Open	250	12 (10.2 to 13) negative common
R573 E03 600		102	28 (24 to 30) negative common
R573 E22 600	Latching	320 / reset : 1920 *	12 (10.2 to 13) negative common
R573 E23 600		125 / reset : 750 *	28 (24 to 30) negative common

* reset : supply voltage time 1 sec max/duty cycle 20 %

Joule effect soldering device

Compliant with European standard n° 89/336/CEE and 73/23/CEE (electromagnetic compatibility and low voltage)

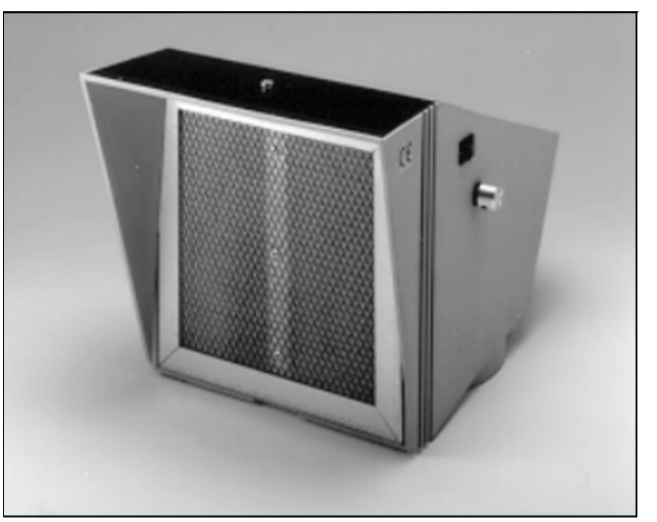
It allows to solder :

- center contacts and bodies to semi-rigid cables,
- center contacts to flexible cables,
- solder pot receptacles.

P/N of the soldering device: **R282 800 000**.

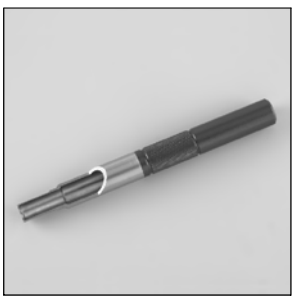
Please, ask for our leaflet about Joule effect soldering device **D1 035 DE**.

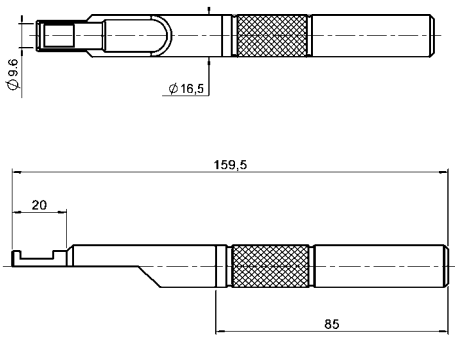
Radiall recommends to always carry out soldering operations in well ventilated areas and to make use of use of fume extraction equipment.
Our fume extraction device complies also with European standards n° 89/336/CEE, 89/392/CEE and 73/23/CEE.Its flow is adjustable up to 240 m^3/h and it uses active coal filter.
P/N of the fume extraction device: **R282 803 000**.



Fume extraction device

EXTRACTION TOOL (optional for high density applications)

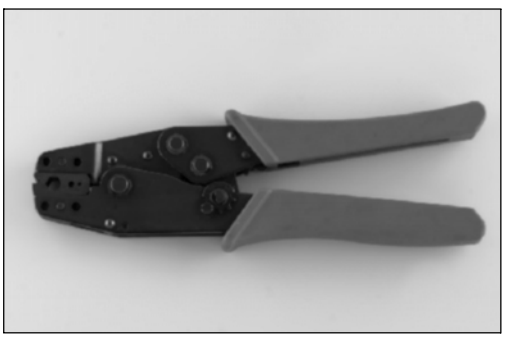




Part number
R282 868 230

This tool can be used with either straight or right angle connectors.

CRIMP TOOLS (DIES INCLUDED)



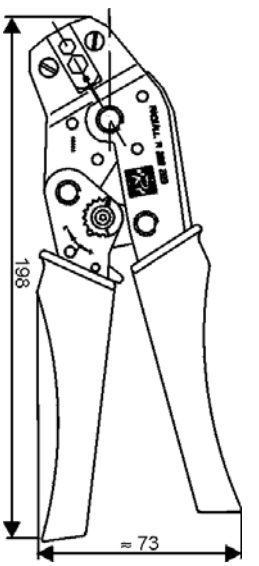


Fig. 1

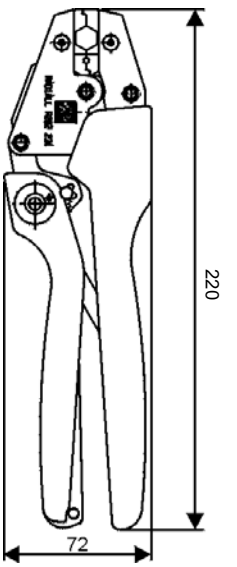


Fig. 2

Part number	Fig.	Cable group	Color of handles			
R282 211 000	1	2 / 50 S - 2.6 / 50 S	red	4.52 (1.78)	3.25 (1.28)	2.67 (.105)
R282 223 000	1	5 / 50 S - 5 / 50 D	orange	6.48 (.255)	5.41 (.213)	1.73 (.068)
R282 271 000	2	2.6 / 50 D	black	3.84 (.131)	3.25 (.128)	0.72* (.28)

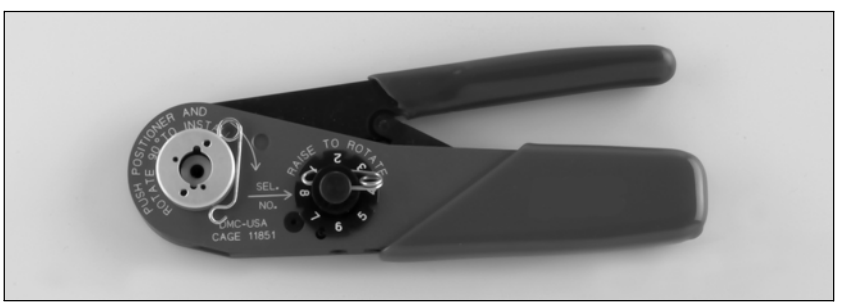
* Square crimping print.

MIL CRIMP TOOL (M22520/5-01) R282 293 000 (DIES NOT INCLUDED)

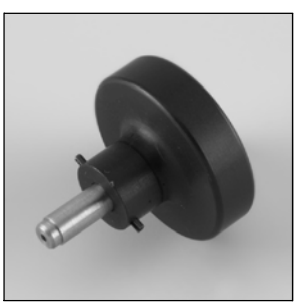
DIES

Part number	Cable group		
R282 235 003	2.6 / 50 S	3.25 (.128)	2.67 (.105)
R282 235 011	5 / 50 S - 5 / 50 D	5.41 (.213)	1.73 (.068)
R282 235 037	2.6 / 50 D	3.84 (.131)	2.67 (.105)

CRIMP TOOL FOR CENTER CONTACT R282 281 000



POSITIONER FOR CENTER CRIMP TOOL



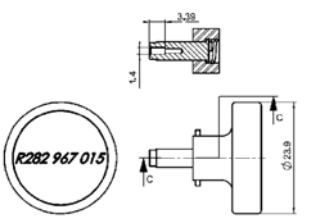


Fig. 1

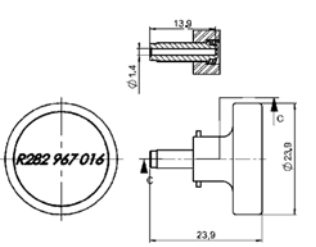
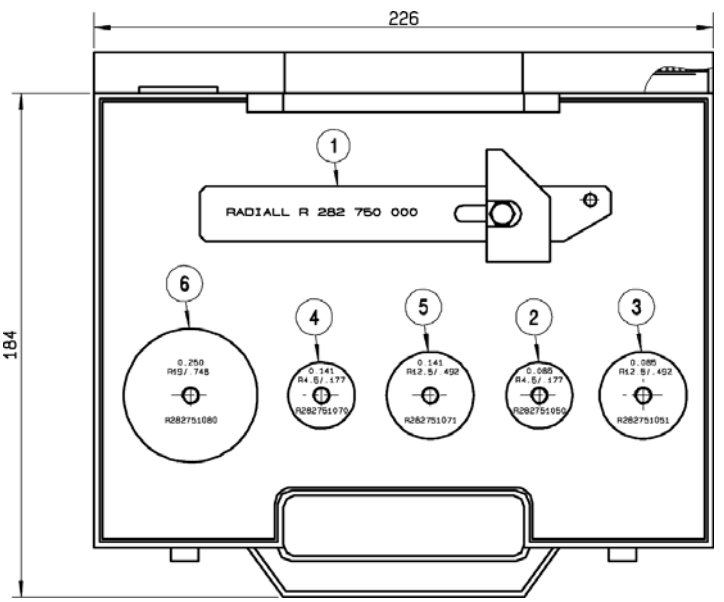


Fig.2

Part number	Fig
R282 967 015	1
R282 967 016	2

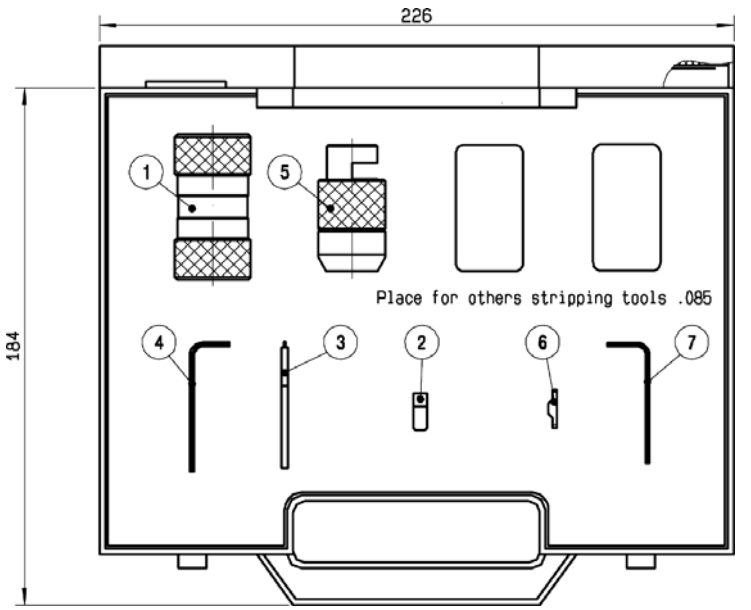
BENDING KIT FOR SEMI-RIGID CABLES .085" / .141" / .250"



		Part number	R282 102 000	
1	-	**R282 750 000**	Bending tool	
2	-	**R282 751 050**	Bending gauge	.085"
3	-	**R282 751 051**	Bending gauge	.085"
4	-	**R282 751 070**	Bending gauge	.141"
5	-	**R282 751 071**	Bending gauge	.141"
6	-	**R282 751 080**	Bending gauge	.250"

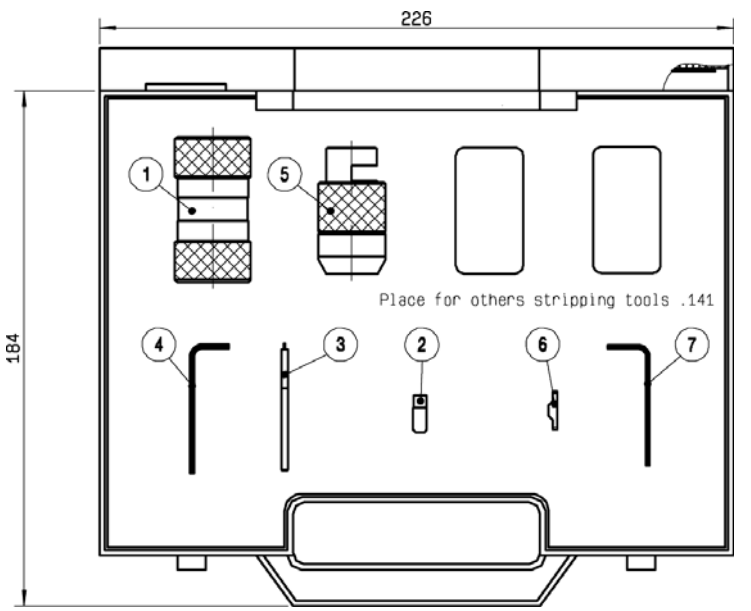
Inside the box, every part number can be ordered separately.

STRIPPING (3.17mm) + CONING KIT FOR SEMI-RIGID CABLE .085"



		Part number	R282 114 125
1	-	**R282 051 000**	Stripping tool . 085"
2	-	**R282 055 000**	Replacement stripping blade
3	-	**R282 864 110**	Blade installation gauge .085"
4	-	**R282 344 150**	1.5 mm across flats male hex key
5	-	**R282 063 000**	Coning and length-setting tool 3.17 mm long on .085"
6	-	**R282 056 085**	Replacement coning blade
7	-	**R282 344 127**	1.27 mm across flats male hex key

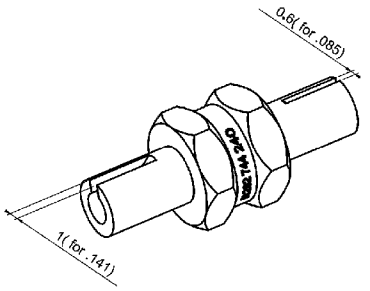
STRIPPING (3.17mm) + CONING KIT FOR SEMI-RIGID CABLE .141"

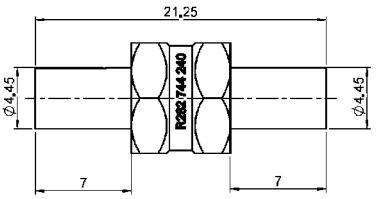


		Part number	R282 114 165
1	-	**R282 053 000**	Stripping tool .141"
2	-	**R282 055 000**	Replacement stripping blade
3	-	**R282 864 120**	Blade installation gauge .141""
4	-	**R282 344 150**	1.5 mm across flats male hex key
5	-	**R282 067 000**	Coning and length-setting tool 3.17 mm long on .141"
6	-	**R282 056 118**	Replacement coning blade
7	-	**R282 344 127**	1.27 mm across flats male hex key

Inside the box, every part number can be ordered separately.

POSITIONER FOR RIGHT ANGLE PLUGS FOR SEMI-RIGID CABLES

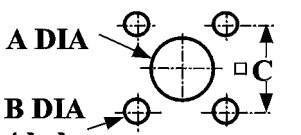




Part number
R282 744 240

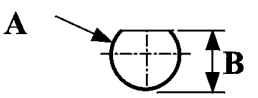
PANEL DRILLING

P01



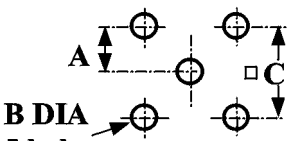
	mm	
	Maxi	mini
A	4.2	4.1
B	2.7	2.6
C	8.69	8.59

P02



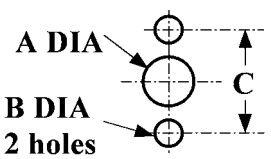
	mm	
	Maxi	mini
A	7.3	7.2
B	6.65	6.5

P03



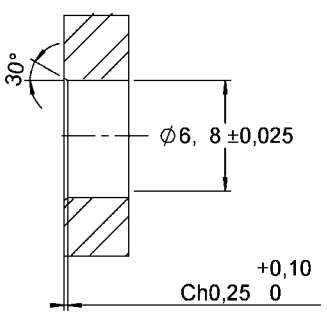
	mm	
	Maxi	mini
A	2.59	2.49
B	1.7	1.6
C	5.13	5.03

P04

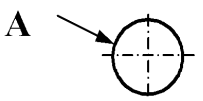


	mm	
	Maxi	mini
A	4.2	4.1
B	2.65	2.6
C	12.25	12.15

P05

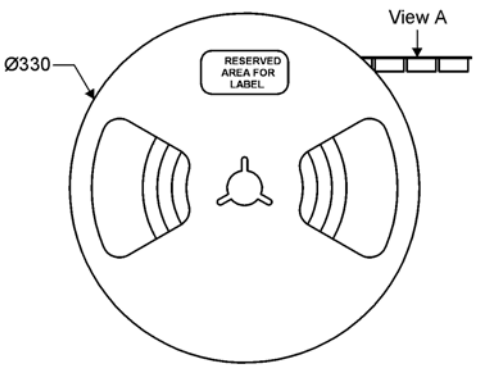


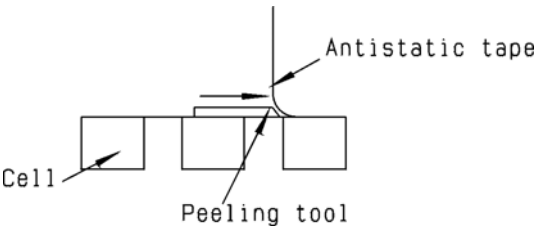
P06



A	¼-36-UNS-2B

TAPE AND REEL





ACCORDING TO IEC 286-3 STANDARD

MATERIALS

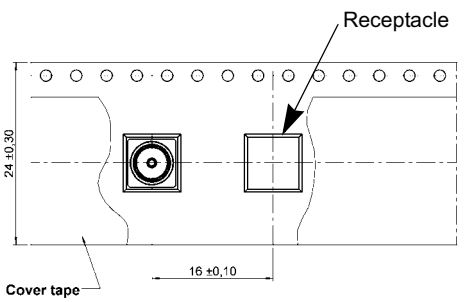
Reel: polyester

Carrier tape: antistatic PETG (polyester)

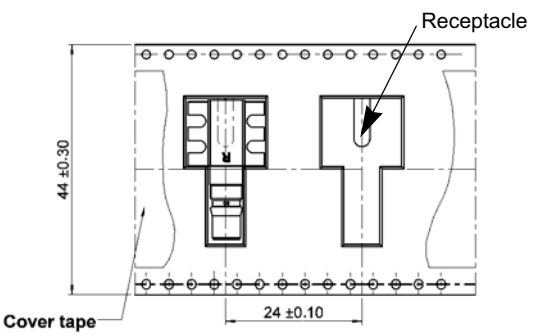
Cover tape: polyester.

View A

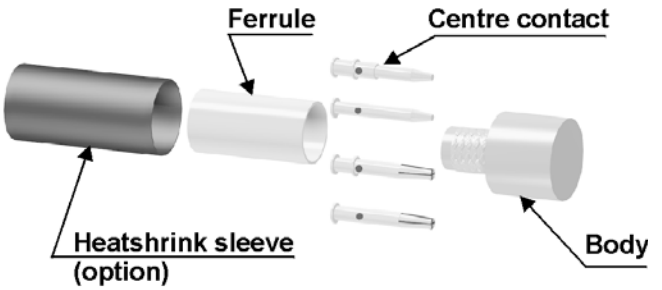
R123 427 803
R123 427 823



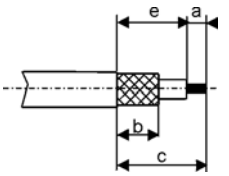
R123 682 827



M 01



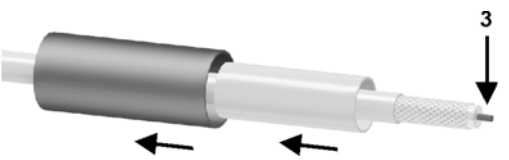
STRIPPING DIMENSIONS



Part number	Stripping length (mm)				Hex. dim.	Ferrule		Center contact
	a	b	c	e		Standard crimp tools dies included	MIL standard R282 293 000 (M22520/5-01+ dies	Crimp tool R282 281 000 + positioner
R123 071 000	3	6.3	10.8	7.8	3.25	R282 211 000	R282 235 003 (M22520/5-03)	R282 967 015 Selection N°5
R123 072 000					3.84	R282 271 000	R282 235 037 (M22520/5-37)	R282 967 015 Selection N°5
R123 075 000 **R123 076 000**					5.41	R282 223 000	R282 235 011 (M22520/5-11)	R282 967 015 Selection N°7
R123 312 000	2.8	6.5	11	8.2	3.25	R282 211 000	R282 235 003 (M22520/5-03)	R282 967 016 Selection N°5
R123 313 000					3.84	R282 271 000	R282 235 037 (M22520/5-37)	R282 967 016 Selection N°5
R123 314 000 **R123 315 000**					5.41	R282 223 000	R282 235 011 (M22520/5-11)	R282 967 016 Selection N°7

1

Slide the heatshrink sleeve onto the cable (Option).
Slide the ferrule onto the cable.
Strip the cable.

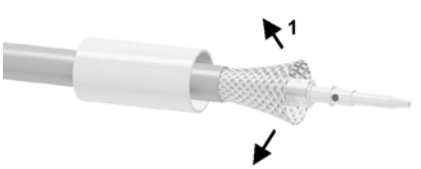


2

Slide the centre on until it bottoms against the cable dielectric.
Crimp the centre contact with crimping tool.

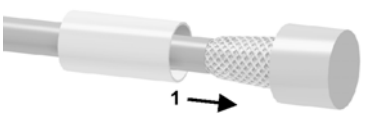
3

Fan the braid.



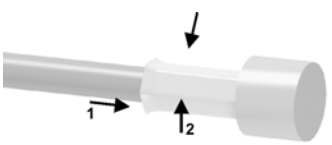
4

Slide the cable into the body until it bottoms against insulator.



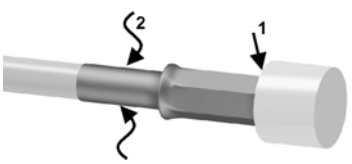
5

Slide the ferrule over the braid.
Crimp the ferrule with crimping tool.

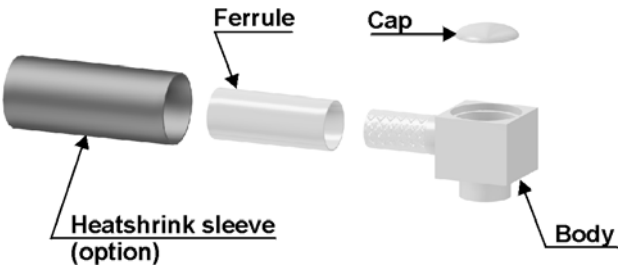


6

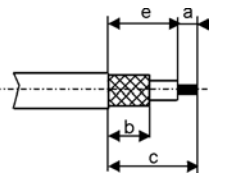
Cut the excess of braid if necessary.
Slide the sleeve over the ferrule and heatshrink it in place (Option)



M 02



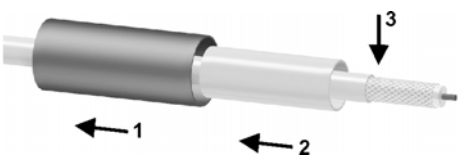
STRIPPING DIMENSIONS



Part number	Stripping length (mm)				Hex. dim.	Ferrule	
	a	b	c	e		Standard crimp tools dies included	MIL standard R282 293 000 (M22520/5-01) dies
R123 172 000	2	7	13	11	3.25	R282 211 000	R282 235 003 (M22520/5-03)
R123 174 000					3.84	R282 271 000	R282 235 037 (M22520/5-37)
R123 175 000 **R123 176 000**					5.41	R282 223 000	R282 235 011 (M22520/5-11)

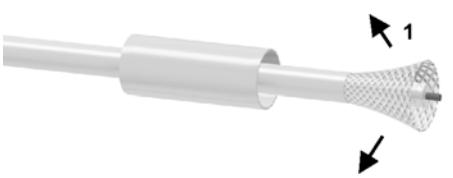
1

Slide the heatshrink sleeve onto the cable (Option).
Slide the ferrule onto the cable.
Strip the cable.



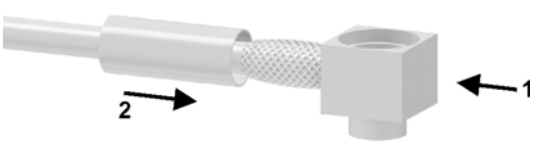
2

Fan the braid.



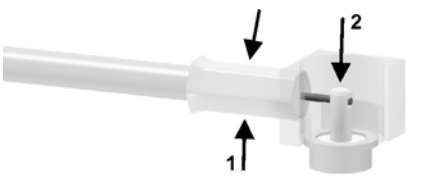
3

Push the connector body under the braid.
Slide the ferrule over the braid.



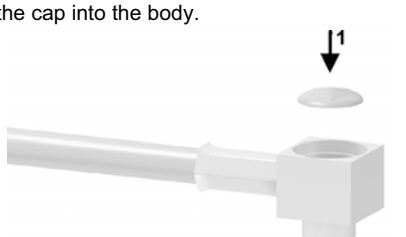
4

Crimp the ferrule with crimping tool.
Solder the inner conductor.



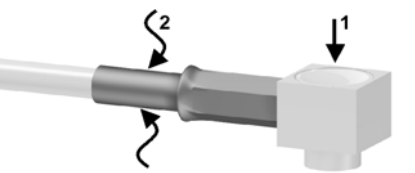
5

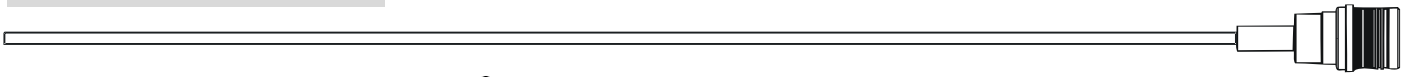
Place the cap into the body.



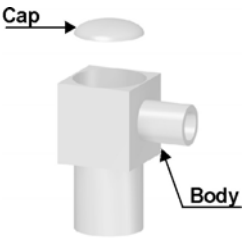
6

Press on the ca flush or slightly below the surface of the body assembly.
Slide the sleeve over the ferrule and heatshrink it in place (Option).

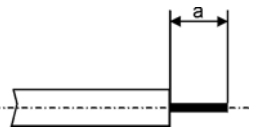




M 03



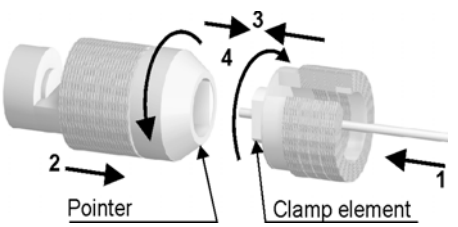
STRIPPING DIMENSIONS



Part number	Stripping length (mm) a	Stripping tool	Pointer	Assembly jig	Positioner
R123 153 000	3.17	R282 051 000	R282 063 000	R282 740 000	R282 744 240
R123 153 003					
R123 153 007					
R123 154 000		R282 053 000	R282 067 000		R282 744 220
R123 154 003					
R123 154 007					

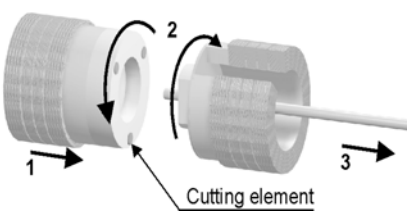
1

Insert the cable into the clamping element.
Present the pointer in front of the clamping element.
Push the cable until it stops, while holding the clamping element pushed on the hollow part of the pointer.
Turn the clamping part until the release of the pointer.



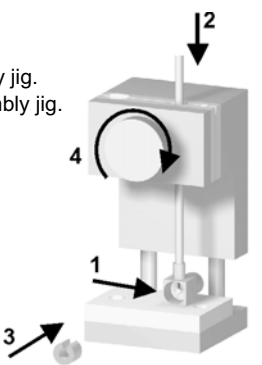
2

Present the cutting element in front of the cutting element.
Push and turn both elements, back part opposite to the front part.
Once they reach the stop, pull without revolving.



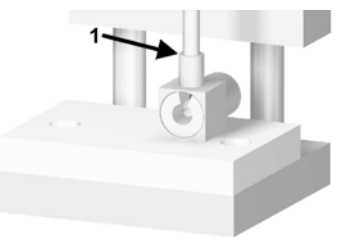
3

Insert the cable into the body.
Secure the positioner into the assembly jig.
Place the sub-assembly into the assembly jig.
Tighten.



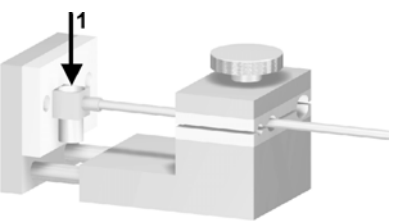
4

Put three rings of solder around the cable.
Solder the body onto the cable.



5

After cooling, remove the assembly from the jig.
Remove the positioner.
Solder the inner conductor



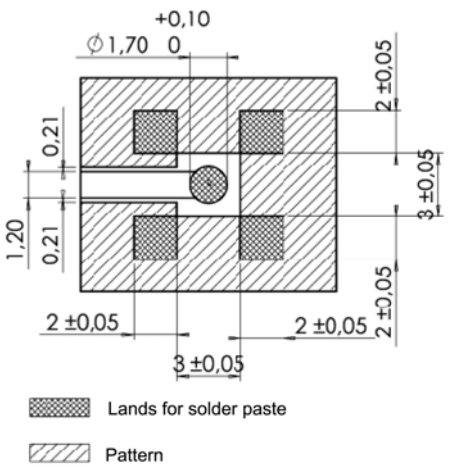
6

Place the cap into the body.
Press on the cap flush or slightly below the surface of the body assembly.

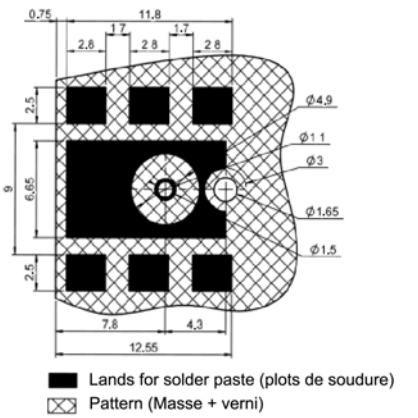
M 04

Receptacle soldering pattern :

Part number
R123 427 803
R123 427 803W
R123 427 823

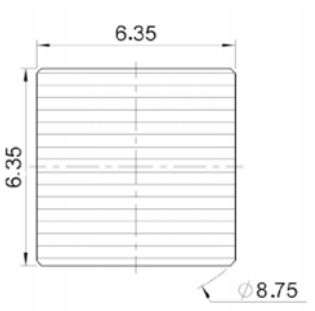


Part number
R123 682 817
R123 682 827
R123 682 827W

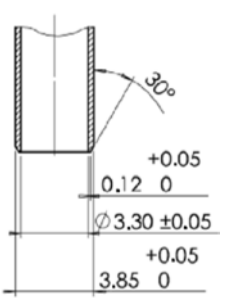


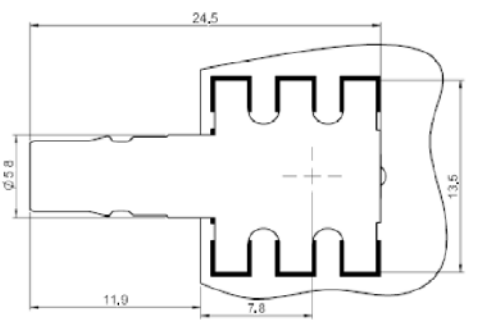
COPLANAR LINE : Pattern and signal are on the same side. Thickness of PCB = 1.6 mm.
The material of PCB is the glass epoxy resin (Er = 4.8). The solder paste should be printed except for the land pattern on the PCB.

Video shadow :



Vaccum nozzle dimensions:





M 04

1

Deposit solder paste 'Sn95 Ag4 Cu0.5' on mounting zone by screen printing application. We recommend a low residue flux. We advise a thickness of 150 micromm (5.850 microinch). Verify that the edges of the zone are clean.

2

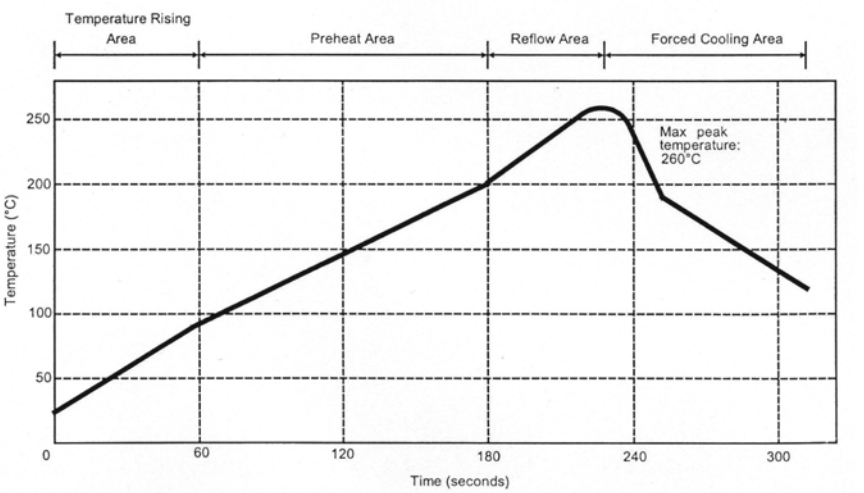
Placement of the receptacle on the mounting zone with an automatic machine of 'pick and place' machine.
Video camera is prefered to check the positioning of the component.
Adhesive agents are forbidden on the receptacle.

3

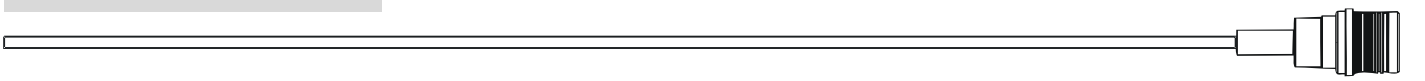
Soldering by infra-red reflow.
We give hereafter, the typical profile to use.

4

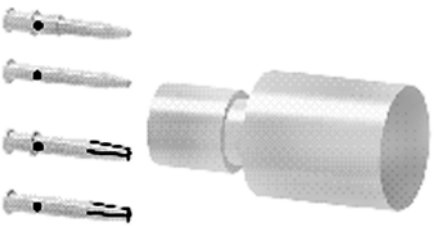
Cleaning of printed circuit boards.



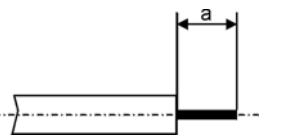
Parameter	Value	Unit
Temperature rising Area	1 - 4	°C/sec
Max Peak Temperature	260	°C
Max dwell time @260°C	10	sec
Min dwell time @235°C	20	sec
Max dwell time @235°C	60	sec
Temperature drop in cooloing Area	-1 to -4	°C/sec
Max dwell time above 100°C	420	sec



M05



STRIPPING DIMENSIONS

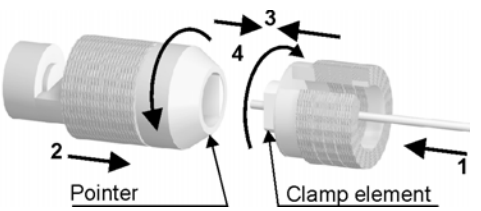


We recommend a thermal preconditionning cable

Part number	Stripping length (mm)a	Stripping tool	Pointer	Assembly jig	Positioner	Control gauje
R123 054 000	3.17	R282 051 000	R282 063 000	R282 740 000	R282 744 220	R282 862 090
R123 055 000 **R123 055 007**		R282 053 000	R282 067 000			R282 862 070
R123 305 023	4.5		R282 066 010			R282 862 070 R282 862 090
R123 326 003	3.17	R282 051 000	R282 063 000			R282 862 090

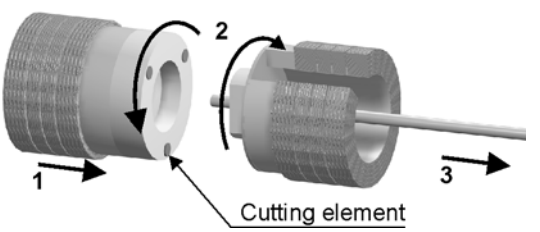
1

Insert the cable into the clamping element.
Present the pointer in front of the clamping element.
Push the cable until it stops, while holding the clamping element pushed on the hollow part of the pointer.
Turn the clamping part until the release of the pointer.



2

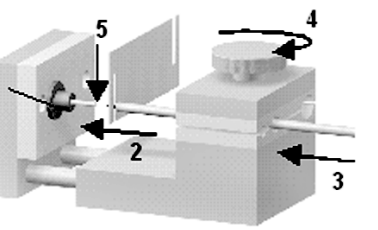
Present the cutting element in front of the cutting element.
Push and turn both elements, back part opposite to the front part.
Once they reach the stop, pull without revolving.



3

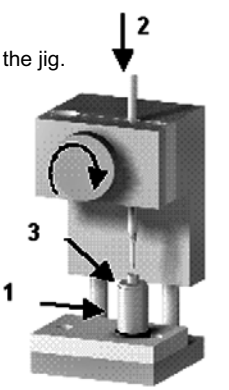
Mount the positioner A.
Slide the centre contact into the positioner A.
Insert the solder gauge between the centre contact and the cable.
Tighten
Solder the contact

1 - Positioner A

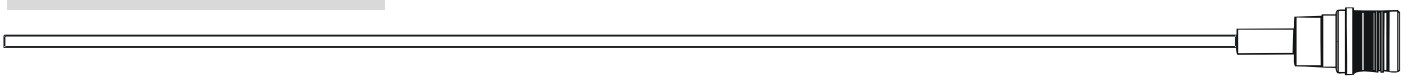


4

After cooling, remove the assembly from the jig.
Positioning the connector onto the assembly jig.
Slide the cable into the connector until it bottoms against the insulator
Tighten.
Put three rings of solder around the cable and solder.
After cooling, remove the assembly from the jig.



INDEX RADIALL PART NUMBERS



INDEX RADIALL PART NUMBERS

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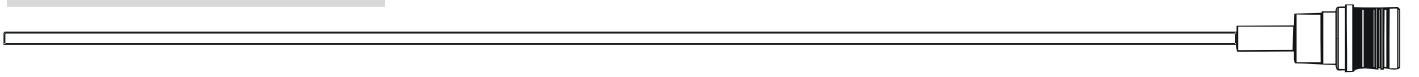

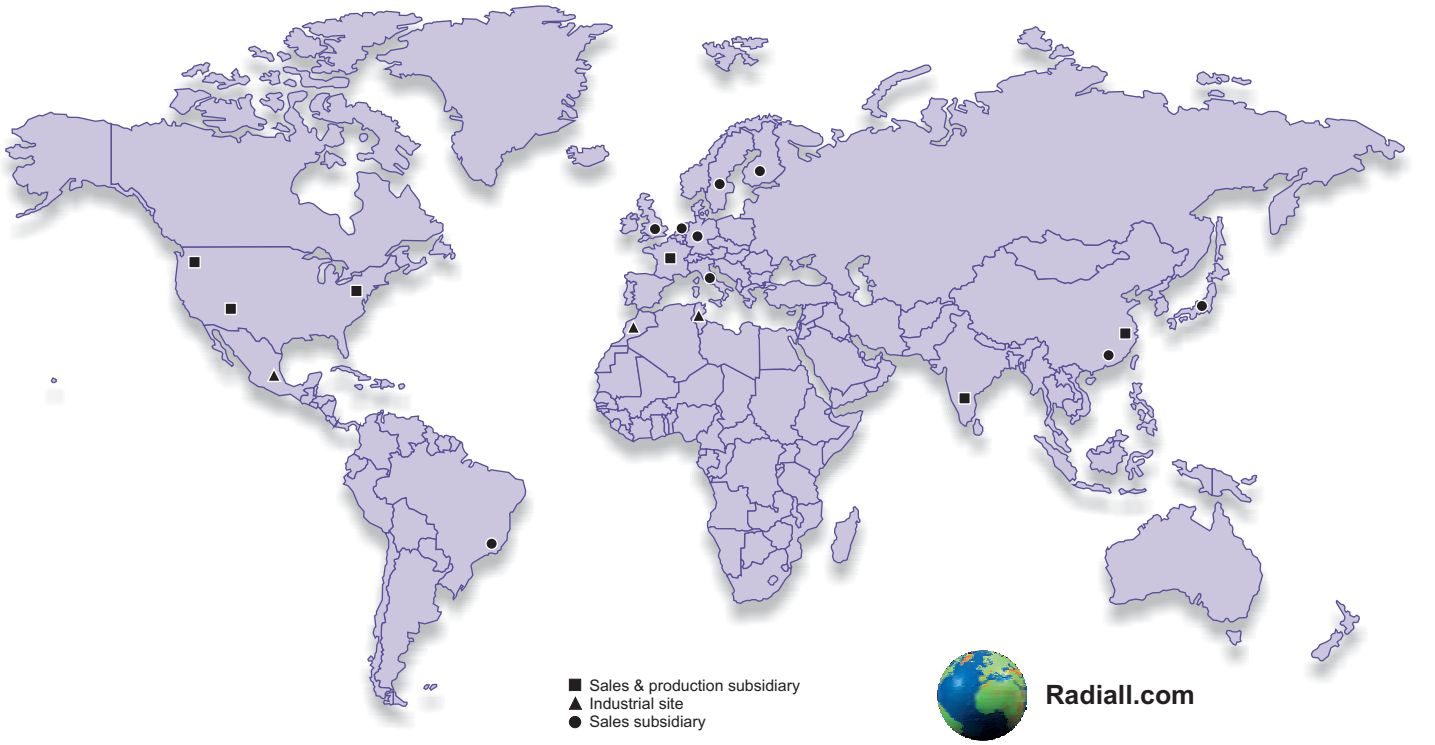

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