api technologies corp.
› INMET


A solution minded, performance driven, and customer focused global supplier of passive RF and Microwave components.

# RF & Microwave Components

## Short Form Catalog

# Table of Contents



## How to use this catalog:

This catalog is designed to give you a general description of the broad selection of products manufactured by Inmet. When used in conjunction with our website, you can view, print or download detailed data sheets for each product in PDF format. Each sheet contains an outline drawing, electrical and mechanical specifications, as well as part number examples. It's easy:

1. Simply log on to **www.inmet.apitech.com**.
2. At the center of the home page under Inmet Products you may select "toggle all" to see all subgroupings within each product family.
3. You can select the product subgroup of interest and by selecting one, you will be directed to a landing page for all models within this subgroup.
4. You may also search by model number by using the search function on the home page.
5. From here you can download a Product Data Sheet for the selected item, or you may request a quote by clicking the "Quote" button next to the model number.

***Catalog Notes***

*The 2.9mm products shown herein are in fact 2.92mm components. Inmet has elected to use 2.9mm as a "shorthand" designation for the 2.92mm standard.*

*Components with SMP connectors will also mate with GPO™ products; and the SMPM products mate with GPPO™ components.*

*The trademarks of "GPO™" and "GPPO™" appearing in this catalog are trademarks of Coming Gilbert Inc.*

### RoHS 2 Statement

All catalog products shipped after January 2013 conform to the requirements as specified in the Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 and related Annex and Amendments on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS). All catalog products shipped between July 2006 and January 2013 conformed to Directive 2002/95/EC.

The information presented on this website is believed to be accurate, reliable and is a result of review of numerous sources including vendor submitted data sheets and certifications.

***Notes***:

1. Equalizers are not considered standard catalog products for the purpose of this statement.
2. Some equalizer products may already be RoHS compliant. Please direct any questions to Inmetsales@apitech.com
3. Surface Mount products are available with RoHS compliant and non RoHS compliant terminations. Please refer to product specific data sheets.

# A Word About API Technologies / Inmet


Manufacturer and designer of wireless and microwave components, Inmet's custom design capabilities have generated a substantial number of innovative microwave and wireless components for many markets and programs for more than 40 years.

As product development is a core value, Inmet will continue to demonstrate its talent for tackling new design tasks. Unusual customer specifications which require Inmet engineering to build custom components enable Inmet to stay ahead in wireless technology by designing, creating, testing and delivering products to be used in 2G, 3G, 4G and 5G systems and beyond.

Enthusiastic reaction to Inmet's total commitment to quality, selection, and just-in-time delivery of precision-made microwave and wireless components has resulted in Inmet's "preferred supplier" designation by many buyers. With notable success in advancing new products, the company's widely known lineup of off-the-shelf products is relied upon by its many customers.

Coaxial components in the DC to 65 GHz frequency range with power levels from 1 to 300 Watts, enhance Inmet's vision to become the world's number one source for coaxial attenuators. The company offers over 3,000 variations of coaxial products including:

- Coaxial Attenuators (1-300 Watt, DC-50 GHz)
- Adapters (In-series and Between Series, DC-65 GHz)
- DC Blocks (Inner, Outer, Inner/Outer Designs up to 40 GHz)
- Equalizers (High Performance, DC-40 GHz)
- Short and Open Circuits (DC-18 GHz)
- Terminations (1-300 Watts, DC-50 GHz)
- Power Dividers, (DC-26.5 GHz)
- Bias Tees (General Purpose, High Power, Broadband)
- Powerfilm Surface Mount Products (DC-27 GHz)

Inmet also designs and manufactures multicomponent hybrid products such as "between series attenuators," combination" DC block/attenuators," and "by-pass attenuators." Today, Inmet is a leader in reducing the costs of components while maintaining "first class performance."

In addition, many products are available through Inmet's distributors. See website www.inmet.apitech.com/inmet/distributors. By increasing your efficiency and profitability through our total commitment to service, support, quality, delivery, low prices and innovation, Inmet ensures your success . . . which in turn becomes Inmet's success as well.

## Model A/AH
## SMA 2 Watt
SHORT: 0.86″
Nominal Length

**Models 2A, 6A, 18A, 23A**
**2AH, 6AH, 18AH, 23AH**

Frequency Range..... DC to 23GHz
Available Values ..... 0-10, 12, 15, 20, 30dB
Accuracy of Attenuation:
0 through 6dB..... ±0.3dB maximum
7 through 20dB ..... ±0.5dB maximum
21 through 30dB..... ±0.75dB maximum
VSWR:
DC to 4GHz ..... 1.15:1 maximum
4GHz to 8GHz..... 1.20:1 maximum
8GHz to 12.4GHz..... 1.25:1 maximum
12.4GHz to 18GHz. ..... 1.35:1 maximum
18GHz to 23GHz..... 1.40:1 maximum

**Overall length in inches**

| | 0-12dB | 13-30dB |
|---|---|---|
| M/F | .86 ± .03 | .99 ± .03 |
| M/M | .98 ± .03 | 1.11 ± .03 |
| F/F | .87 ± .03 | 1.00 ± .03 |

Complete Specification Sheet Available

## Model C
## SMA 2 Watt
SHORTER: 0.76″
Nominal Length

**Models 2C, 6C, 18C**

Frequency Range..... DC to 18GHz
Available Values ..... 0-10, 12, 15, 20, 30dB
Accuracy of Attenuation:
0 through 6dB..... ±0.3dB maximum
7 through 20dB ..... ±0.5dB maximum
21 through 30dB..... ±0.75dB maximum
VSWR:
DC to 4GHz ..... 1.15:1 maximum
4GHz to 8GHz..... 1.20:1 maximum
8GHz to 12.4GHz..... 1.25:1 maximum
12.4GHz to 18GHz..... 1.35:1 maximum

**Overall length in inches**

| | 0-12dB | 13-30dB |
|---|---|---|
| M/F | .76 ± .03 | .89 ± .03 |

Complete Specification Sheet Available

## Model DH
## SMA 2 Watt
SHORTEST: 0.70″
Nominal Length

**Models 2DH, 6DH, 18DH, 23DH**

Frequency Range..... DC to 23GHz
Available Values ..... 0-10, 12, 15, 20, 30, 40dB
Accuracy of Attenuation:
0 through 6dB..... ±0.3dB maximum
7 through 19dB ..... ±0.5dB maximum
20 through 30dB..... ±0.7dB maximum
31 through 35dB..... ±1.0dB maximum
36 through 40dB..... ±1.5dB maximum
VSWR:
DC to 4GHz ..... 1.15:1 maximum
4GHz to 8GHz..... 1.20:1 maximum
8GHz to 12.4GHz..... 1.25:1 maximum
12.4GHz to 23GHz..... 1.35:1 maximum

**Overall length in inches**

| | 0-20dB | 21-40dB |
|---|---|---|
| M/F | .70 ± .03 | .83 ± .03 |
| M/M | .76 ± .03 | .89 ± .03 |
| F/F | .64 ± .03 | .77 ± .03 |

Complete Specification Sheet Available

## Model AS398
## SMA 1 Watt

**Model AS398**

Frequency Range..... DC to 3 GHz
Available Values ..... 1-10, 12, 15, 20, 30dB
Accuracy of Attenuation:
1 through 10,12,15,20dB ..... ±0.3dB maximum
30dB ..... ±0.5dB maximum VSWR:
DC to 3 Ghz..... 1.20:1 maximum

**Overall length in inches**

| | 1-20dB | 30dB |
|---|---|---|
| M/F | .83 ± .05 | 1.02 ± .05 |

Complete Specification Sheet Available

## Model AHC
## SMA 2 Watt

**Model AHC**

Frequency Range..... DC to 6 GHz
Available Values ..... 0-10, 12, 15, 20, 30, 40dB
Accuracy of Attenuation:
1 through 10dB ..... ±0.5dB maximum
12, 15, 20dB ..... ±0.7dB maximum
30dB ..... ±0.9dB maximum
40dB ..... ±1.5dB maximum
VSWR:
DC to 6 Ghz..... 1.20:1 maximum

**Overall length in inches**

| | 0-12,15 & 20dB | 30 & 40dB |
|---|---|---|
| M/F | .86 ± .03 | .97 ± .03 |

Complete Specification Sheet Available

## 9000 Series
General Purpose
18GHz SMA Attenuators

**Models 9023, 9024, 9025 (2 Watts)**

Available Values .....0-10, 12, 15, 20, 30, 40, 50, 60dB
Accuracy of Attenuation:
0 through 12dB ..... ±0.75dB maximum
13 through 20dB..... ±1.00dB maximum
21 through 40dB..... ±1.50dB maximum
41 through 60dB..... ±2.00dB maximum

**Models 9026 through 9031 (2 Watts)**

Available Values ..... 0-10, 12, 15, 20, 30dB
Accuracy of Attenuation:
0 through 12dB ..... ±0.75dB maximum
13 through 20dB..... ±1.00dB maximum
21 through 30dB..... ±1.50dB maximum
VSWR: (All Models)
DC to 4GHz ..... 1.20:1 maximum
4GHz to 12.4GHz..... 1.40:1 maximum
12.4GHz to 18GHz..... 1.60:1 maximum

**Overall length in inches**

| | | 0-30&40dB | 31-60dB (except 40) |
|---|---|---|---|
| 9023 | M/F no hex | 1.21±.03 | 1.49±.03 |
| 9024 | M/M no hex | 1.33±.03 | 1.62±.03 |
| 9025 | F/F no hex | 1.06±.03 | 1.35±.03 |
| | | 0-12 dB | 13-30dB |
| 9026 | M/F no hex | .86±.03 | .99±.03 |
| 9027 | M/M no hex | .98±.03 | 1.11±.03 |
| 9028 | F/F no hex | .87±.03 | 1.00±.03 |
| 9029 | M/F w/hex | .86±.03 | .99±.03 |
| 9030 | M/M w/hex | .98±.03 | 1.11±.03 |
| 9031 | F/F w/hex | .87±.03 | 1.00±.03 |

Complete Specification Sheets Available

## Model B
## SMA 2 Watt

1.21″
Nominal Length

**Models 2B, 6B, 18B**
Frequency Range.....DC to 18GHz
Available Values.. ..... 0-10, 12, 15, 20, 30, 40, 50, 60dB
Accuracy of Attenuation:
0 through 6dB.....±0.3dB maximum
7 through 20dB .....±0.5dB maximum
21 through 30dB.....±0.75dB maximum
31 through 60dB.....±1.50dB maximum
VSWR:
DC to 4GHz .....1.15:1 maximum
4GHz to 8GHz.....1.20:1 maximum
8GHz to 12.4GHz.....1.25:1 maximum
12.4GHz to 18GHz .....1.35:1 maximum

**Overall length in inches**

| | 0-30 & 40dB | 31-60dB |
|---|---|---|
| M/F | 1.21 ± .03 | 1.49 ± .03 |
| M/M | 1.33 ± .03 | 1.62 ± .03 |
| F/F | 1.06 ± .03 | 1.35 ± .03 |

Complete Specification Sheet Available

## High Frequency
## 2.9mm Series

DC-26.5 GHz

**MODELS 26A AND 26AH (2 Watts)**
Frequency Range..... DC to 26.5GHz
Available Values .....0, 3, 6, 10, 20, 30dB
VSWR:
DC to 18GHz.....1.30:1 maximum
18GHz to 26.5GHz. .....1.40:1 maximum

**Overall length in inches**

| 26.5GHz | 0-12dB | 13-30dB |
|---|---|---|
| M/F | .88 ± .05 | 1.01 ± .05 |

Complete Specification Sheet Available

## High Frequency
## 2.9mm Series

DC-40 GHz

**MODELS 40A, 40AH (0.5 Watt)**
Frequency Range.....DC to 40GHz
Available Values .....0, 3, 6, 10, 20, 30dB VSWR:
DC to 18GHz.....1.30:1 maximum
18GHz to 40GHz.....1.40:1 maximum
**MODELS 40A2W, 40AH2W (2 Watts)**
Frequency Range.....DC to 40GHz
Available Values .....3, 6, 10, 20, 30dB VSWR:
DC to 18GHz.....1.30:1 maximum
18GHz to 40GHz.....1.40:1 maximum

**Overall length in inches**

| 40GHz | 0-30dB | |
|---|---|---|
| M/F | .88 ± .05 | |

Complete Specification Sheet Available

## High Frequency
## 2.4mm & 1.85mmSeries

DC-50 GHz

**Models 40EH and 50EH - 2.4mm (0.5 Watt)**
Frequency Range.....DC to 50GHz
Available Values .....0, 3, 6, 10, 20, 30dB
Accuracy of Attenuation:
**DC - 26.5 GHz**
0 through 10dB. .....±0.5dB maximum
20 & 30dB .....±0.75dB maximum
**26.5 - 40 GHz**
0 through 10dB .....±1.0dB maximum
20 & 30dB .....±1.25dB maximum
**40 - 50 GHz**
0 through 10dB .....±1.5dB maximum
20 & 30dB .....±2.0dB maximum VSWR:
DC to 26.5 GHz .....1.35:1 maximum
26.5 to 40 GHz .....1.60:1 maximum
40 to 50 GHz.....1.75:1 maximum

**Models 50V - 1.85mm (2 Watts)**
Frequency Range.....DC to 50GHz
Available Values .....3, 6, 10dB

Complete Specification Sheet Available

## SMP, GPO™
## Series

DC-26.5 GHz

**Models 18G, 18P (2 Watts)**
Frequency Range.....DC to 18GHz
Available Values ..... 0-10, 12, 15, 20 and 30dB
Accuracy of Attenuation:
0 through 6dB.....±0.4dB maximum
7 through 12dB .....±0.6dB maximum
20 and 30dB .....±0.8dB maximum VSWR:
DC to 8GHz .....1.25:1 maximum
8GHz to 18GHz.....1.35:1 maximum

**Models 26G, 26P (2 Watts)**
Frequency Range..... DC to 26.5GHz
Available Values .....0, 3, 6, 10, 20 and 30dB
Accuracy of Attenuation:
DC-26.5GHz
0-4 and 6dB.....±0.6dB maximum
10dB .....±0.8dB maximum
20 and 30dB .....±1.2dB maximum VSWR:
DC to 26.5GHz .....1.45:1 maximum

Note: GPO™ and SMP male connectors are available in full and limited detent.

Complete Specification Sheet Available

## SMPM
## Series

DC-26.5 GHz

**MODELS 6MP and 18MP (2 Watts)**
Frequency Range.....DC to 18GHz
Available Values .....0-10,12, 15, 20, 30dB VSWR:
DC to 18GHz.....1.35:1 maximum

**MODEL 26MP (2 Watts)**
Frequency Range..... DC to 26.5GHz
Available Values .....3, 6, 10, 20, 30dB VSWR:
DC to 18GHz.....1.35:1 maximum
18 to 26.5GHz .....1.50:1 maximum

**Overall length in inches**

| 18GHz | 0-15, 20 dB | 30 dB |
|---|---|---|
| M/F | .61 ± .05 | .74 ± .05 |
| M/M | .61 ± .05 | .74 ± .05 |
| F/F | .61 ± .05 | .74 ± .05 |

Complete Specification Sheet Available

# Attenuator Reference Guide

## TNC Series

2 Watts

**Model 9042 & 9036 (Nickel Plated Brass)**
Frequency Range..... DC to 12.4GHz
Available Values ..... 0-10, 12, 15, 20, 30 & 40dB

**Models 18T (Stainless Steel)**
Frequency Range.....DC to 18GHz
Available Values .....0-10, 12, 15, 20, 30, 40, 50, 60dB
Accuracy of Attenuation:
0 through 6dB.....±0.3dB maximum
7 through 20dB .....±0.5dB maximum
30dB ..... ±0.75dB maximum
40dB .....±1.0dB maximum
50 & 60dB .....±1.50dB maximum* VSWR:
DC to 4GHz .....1.15:1 maximum
4GHz to 8GHz.....1.20:1 maximum
8GHz to 12.4GHz.....1.25:1 maximum
12.4GHz to 18GHz.....1.35:1 maximum*

*18T only

Complete Specification Sheet Available

## N Series

(50 and 75 Ohms)

**50 Ohms**
**Nickel Plated Brass**
**Models 9070 (2 Watts)**
Frequency Range..... DC to 6GHz
Available Values ..... 10, 12, 15, 20, 30, and 40 dB
VSWR:
DC to 2GHz .....1.25:1 maximum

**Models 2N, 6N, 18N (Stainless Steel) (2 Watts)**
Frequency Range.....DC to 18GHz
Available Values .....0-10, 12, 15, 20, 30, 40, 50 and 60dB
VSWR:
DC to 4GHz .....1.15:1 maximum
4GHz to 8GHz.....1.20:1 maximum
8GHz to 12.4GHz.....1.25:1 maximum
12.4GHz to 18GHz.....1.35:1 maximum

**75 Ohms**
**Model 4N-XX/75 (2 Watts)**
Frequency Range..... DC to 4GHz
Available Values ..... 1, 2, 3, 6,10, 20 and 30dB
VSWR.....1.30:1 maximum

Complete Specification Sheet Available

## BNC Series

(50 and 75 Ohms)

**50 Ohms**
**Model 9033 (2 Watts)**
Frequency Range..... DC to 4 GHz
Available Values .....0-10, 12, 15, 20, 30dB VSWR:
DC to 4GHz .....1.25:1 maximum

**Model 9014 (2 Watts)**
Frequency Range..... DC to 4 GHz
Available Values ..... 40, 50 & 60 dB VSWR:
DC to 4 GHz .....1.25:1 maximum

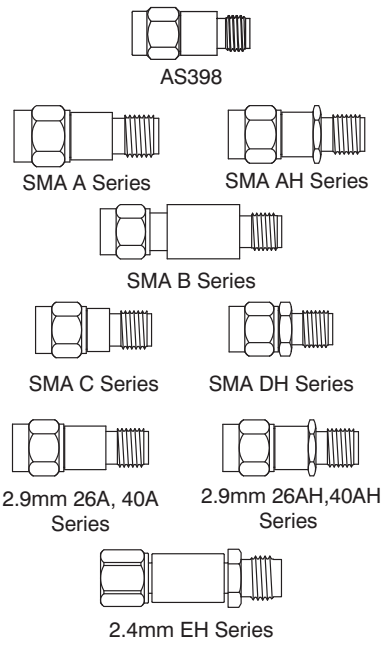
**Model 2051 (2 Watts)**
Frequency Range..... DC to 12.4 GHz
Available Values .....3, 6, 10, 20 & 30dB VSWR:
DC to 4GHz .....1.25:1 maximum
4GHz to 8GHz.....1.30:1 maximum
8GHz to 12.4GHz.....1.35:1 maximum

**75 Ohms**
**Model 9033-XX/75 (2 Watts)**
Frequency Range..... DC to 4GHz
Available Values .....0, 3, 6, 10, 20 & 30dB VSWR:
DC to 1GHz .....1.10:1 maximum
1GHz to 2GHz.....1.20:1 maximum
2GHz to 4GHz.....1.35:1 maximum

Complete Specification Sheet Available

| MODEL NO. | FREQ. (GHz) | CONNECTOR | VSWR ATTN (dB) |
|---|---|---|---|
| **0.5 Watt, 1 Watt and 2 Watt Attenuators** | | | |
| AS398 (1 Watt) | 3 | SMA-M/F | 1.20:1 1-10,12,15,20,30 |
| AHC | 6 | SMA-M/F | 1.20:1 1-10,12,15,20,30,40 |
| FHC | 6 | SMA-M/F | 1.20:1 1-10,12,15,20,30,40 |
| 9026, (Style A) | 18 | SMA-M/F | 1.60:1 0-10,12,15,20,30 |
| 9029, (Style AH) | 18 | SMA-M/F | 1.60:1 0-10,12,15,20,30 |
| 9023, (Style B) | 18 | SMA-M/F | 1.60:1 0-10,12,15,20,30,40,50,60 |
| 2A, 2AH | 2.5 | SMA-M/F, M/M, F/F | 1.15:1 0-10,12,15,20,30,40 |
| 2DH | 2.5 | SMA-M/F, M/M, F/F | 1.15:1 0-10,12,15,20,30,40 |
| 6A, 6AH, 6FH | 6 | SMA-M/F, M/M, F/F | 1.20:1 0-10,12,15,20,30,40 |
| 6B | 6 | SMA-M/F, M/M, F/F | 1.20:1 0-10,12,15,20,30,40,50,60 |
| 6C | 6 | SMA-M/F | 1.20:1 0-10,12,15,20,30 |
| 6DH | 6 | SMA-M/F, M/M, F/F | 1.20:1 0-10,12,15,20,30,40 |
| 18A, 18AH, 18FH | 18 | SMA-M/F, M/M, F/F | 1.35:1 0-10,12,15,20,30,40 |
| 18B | 18 | SMA-M/F, M/M, F/F | 1.35:1 0-10,12,15,20,30,40,50,60 |
| 18C | 18 | SMA-M/F | 1.35:1 0-10,12,15,20,30 |
| 18DH | 18 | SMA-M/F, M/M, F/F | 1.35:1 0-10,12,15,20,30,40 |
| 23A, 23AH | 23 | SMA-M/F, M/M, F/F | 1.40:1 0-10,12,15,20,30,40 |
| 23DH | 23 | SMA-M/F, M/M, F/F | 1.35:1 0-10,12,15,20,30 |
| 26A, 26AH | 26.5 | 2.9mm-M/F | 1.40:1 0,3,6,10,20,30 |
| 40A, 40AH (0.5W) | 40 | 2.9mm-M/F | 1.40:1 0,3,6,10,20,30 |
| 40A2W, 40AH2W | 40 | 2.9mm-M/F | 1.40:1 3,6,10,20,30 |
| 40EH (0.5W) | 40 | 2.4mm-M/F | 1.60:1 0,3,6,10,20,30 |
| 50EH (0.5W) | 50 | 2.4mm-M/F | 1.75:1 0,3,6,10,20,30 |
| 50V | 50 | 1.85mm-M/F | 1.75:1 3,6,10,20,30 |
| 50EH1W | 50 | 2.4mm-M/F | 1.75:1 3,6,10,20,30 |

H=with Hex

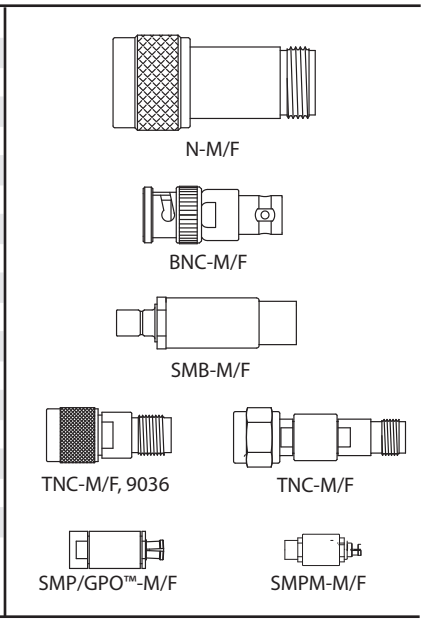



See pages 2 and 3 and above for more detailed specifications. All models 2 Watt unless indicated

## 2 Watt Attenuators, N, BNC, SMB, TNC, GPO™, SMP, SMPM, Reverse Polarity

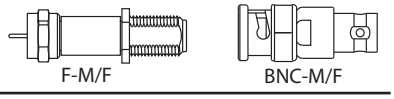
| MODEL NO. | FREQ. (GHz) | CONNECTOR | VSWR | ATTN (dB) |
|---|---|---|---|---|
| 9070 | 6 | N-M/F | 1.25:1 | 1-10,12,15,20,30,40 |
| 2N | 2.5 | N-M/F, M/M, F/F | 1.15:1 | 0-10,12,15,20,30,40,50,60 |
| 6N | 6 | N-M/F, M/M, F/F | 1.20:1 | 0-10,12,15,20,30,40,50,60 |
| 18N | 18 | N-M/F, M/M, F/F | 1.35:1 | 0-10,12,15,20,30,40,50,60 |
| 9033 | 4 | BNC-M/F | 1.25:1 | 0-10,12,15,20,30 |
| 9014 | 4 | BNC-M/F | 1.25:1 | 40,50,60 |
| 2051 | 12.4 | BNC-M/F | 1.35:1 | 3,6,10,20,30 |
| 9056 | 4 | SMB-M/F, M/M, F/F | 1.25:1 | 0-12,15,20,30 |
| 9042 | 2.5 | TNC-M/F | 1.25:1 | 0-10,12,15,20,30,40 |
| 9036 | 12.4 | TNC-M/F | 1.25:1 | 0-10,12,15,20,30,40 |
| 18T | 18 | TNC-M/F, M/M, F/F | 1.35:1 | 0-10,12,15,20,30,40,50,60 |
| 18G | 18 | GPO-M/F, M/M, F/F | 1.35:1 | 0-10,12,15,20,30 |
| 26G | 26.5 | GPO-M/F, M/M, F/F | 1.45:1 | 3,6,10,20,30 |
| 18P | 18 | SMP-M/F, M/M, F/F | 1.35:1 | 0-10,12,15,20,30 |
| 26P | 26.5 | SMP-M/F, M/M, F/F | 1.45:1 | 3,6,10,20,30 |
| 6MP | 6 | SMPM-M/F, M/M, F/F | 1.35:1 | 0-10,12,15,20,30 |
| 18MP | 18 | SMPM-M/F,M/M,F/F | 1.35:1 | 0-10,12,15,20,30 |
| 26MP | 26.5 | SMPM-M/F,M/M,F/F | 1.50:1 | 3,6,10,20,30 |
| 6MD | 6 | 4.3/10-M/F | 1.20:1 | 1-10,12,15,20,30 |

Note: GPO™ and SMP male connectors are available in full and limited detent.



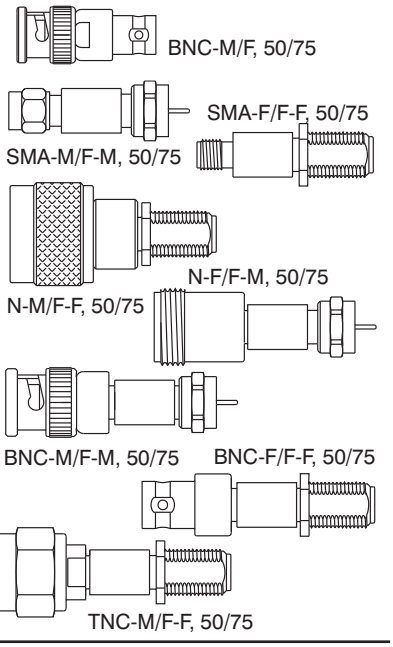

## 2 Watt 75 Ohm Attenuators

| | | | | |
|---|---|---|---|---|
| 3F | 3 | F-M/F | 1.15:1 ... | 3,6,10,15,20,30 |
| 9033-XX/75 | 4 | BNC-M/F | 1.35:1 ... | 0,3,6,10,20,30 |



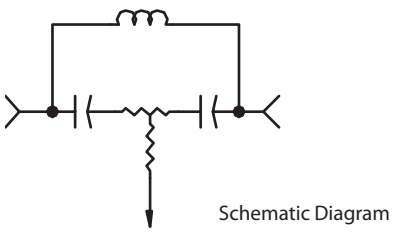

## 1 Watt Impedance Matching Pads (50 to 75 Ohm)

| | | | | |
|---|---|---|---|---|
| 9033-50/75 | 1 | BNC-M/F | 1.20:1 | 5.7 |
| 9033-75/50 | 1 | BNC-M/F | 1.20:1 | 5.7 |
| 9070-50/75 | 3 | N-M/F | 1.35:1 | 5.7 |
| 9070-75/50 | 3 | N-M/F | 1.35:1 | 5.7 |
| 9076-50/75 | 3 | SMA-M/F-F | 1.25:1 | 5.7 |
| 9077-50/75 | 3 | N-M/F-F | 1.25:1 | 5.7 |
| 9078-50/75 | 3 | BNC-M/F-F | 1.25:1 | 5.7 |
| 9079-50/75 | 3 | SMA-F/F-M | 1.25:1 | 5.7 |
| 9080-50/75 | 3 | SMA-M/F-M | 1.25:1 | 5.7 |
| 9082-50/75 | 3 | N-F/F-M | 1.25:1 | 5.7 |
| 9083-50/75 | 3 | N-M/F-M | 1.25:1 | 5.7 |
| 9084-50/75 | 3 | TNC-F/F-M | 1.25:1 | 5.7 |
| 9085-50/75 | 3 | TNC-M/F-M | 1.25:1 | 5.7 |
| 9086-50/75 | 3 | BNC-F/F-M | 1.25:1 | 5.7 |
| 9087-50/75 | 3 | BNC-M/F-M | 1.25:1 | 5.7 |
| 9088-50/75 | 3 | SMA-F/F-F | 1.25:1 | 5.7 |
| 9089-50/75 | 3 | N-F/F-F | 1.25:1 | 5.7 |
| 9090-50/75 | 3 | BNC-F/F-F | 1.25:1 | 5.7 |
| 9091-50/75 | 3 | TNC-M/F-F | 1.25:1 | 5.7 |
| 9092-50/75 | 3 | TNC-F/F-F | 1.25:1 | 5.7 |



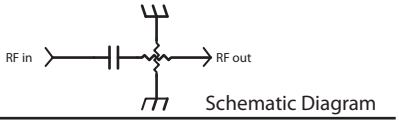

## 2 Watt DC Bias Passing RF Attenuators

| | | | | |
|---|---|---|---|---|
| 9093-N | 0.50-2 N-M/F | 1.35:1 | 4,6,10,15,20,25 | |
| 9093-SMA | 0.50-2 SMA-M/F | 1.35:1 | 4,6,10,15,20,25 | |
| 9093-TNC | 0.50-2 TNC-M/F | 1.35:1 | 4,6,10,15,20,25 | |
| 9093-F | 0.50-2 F-M/F | 75Ω 1 | 45:1 | 3,4,6,7,8,9,10,11,20 |
| 9095-N | 0.05-3 N-M/F | 1.35:1 | 3,4,6,10,15,20,25 | |
| 9095-SMA | 0.05-3 SMA-M/F | 1.35:1 | 3,4,6,10,15,20,25 | |
| 9095-TNC | 0.05-3 TNC-M/F | 1.35:1 | 3,4,6,10,15,20,25 | |

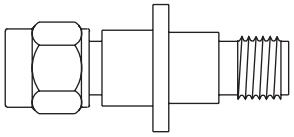


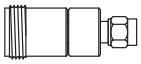
# Attenuator Reference Guide

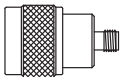
| MODEL NO. | FREQ. (GHz) | CONNECTOR | VSWR | ATTN (dB) |
|---|---|---|---|---|
| **2 Watt DC Blocking Attenuators (Also See DC Block Section, page 19)** | | | | |
| 8516S-XX | 0.01-2 | SMA-M/F | 1.15:1 | 0-10,12, 20 |
| **2 Watt Flange Mount Attenuators** | | | | |
| 2004 | 18 | SMA-M/F | 1.35:1 | 0-10,12,15,20,30 |
| **Adapting Attenuators, Between Series** | | | | |
| 2028 | 18 | N/M-SMA/M | 1.30:1 | 0-10,12,15,20 |
| 2029 | 18 | N/M-SMA/F | 1.30:1 | 0-10,12,15,20 |
| 2030 | 18 | N/F-SMA/M | 1.30:1 | 0-10,12,15,20 |
| 2031 | 18 | N/F-SMA/F | 1.30:1 | 0-10,12,15,20 |
| **Calibrated Attenuator Sets** | | | | |
| 9401 | 18 | N | | 3,6,10,20 |
| 9402 | 12.4 | N | | 3,6,10,20 |
| 9403 | 18 | SMA | (A Style) | 3,6,10,20 |
| 9404 | 12.4 | SMA | (A Style) | 3,6,10,20 |
| 9405 | 18 | N | | 1,3,6,10,20,30 |
| 9406 | 12.4 | N | | 1,3,6,10,20,30 |
| 9407 | 18 | SMA | (A Style) | 1,3,6,10,20,30 |
| 9408 | 12.4 | SMA | (A Style) | 1,3,6,10,20,30 |
| 9477 | 23 | SMA | (AH Style) | 1,3,6,10,20,30 |
| 9473 | 23 | SMA | (DH Style) | 1,3,6,10,20,30 |
| 9411 | 26.5 | 2.9mm | (A Style) | 3,6,10,20 |
| 9412 | 26.5 | 2.9mm | (A Style) | 1,3,6,10,20,30 |
| 9413 (0.5W) | 40 | 2.9mm | (A Style) | 3,6,10,20 |
| 9414 (0.5W) | 40 | 2.9mm | (A Style) | 1,3,6,10,20,30 |
| 9415 (0.5W) | 40 | 2.4mm | (EH Style) | 3,6,10,20 |
| 9416 (0.5W) | 50 | 2.4mm | (EH Style) | 3,6,10,20 |
| **5 Watt Attenuators, Convection Cooled** | | | | |
| 6B5W | 6 | SMA-M/F, M/M, F/F | 1.20:1 | 0-12,15,20,30,40 |
| 18B5W | 18 | SMA-M/F, M/M, F/F | 1.35:1 | 0-10,12,15,20,30,40 |
| 6N5W | 6 | N-M/F, M/M, F/F | 1.20:1 | 0-12,15,20,30,40 |
| 18N5W | 18 | N-M/F, M/M, F/F | 1.35:1 | 0-10,12,15,20,30,40 |
| 2D5W | 2.5 | 7/16 DIN-M/F, M/M, F/F | 1.25:1 | 0-12,15,20,30,40 |
| 7D5W | 7.5 | 7/16 DIN-M/F, M/M, F/F | 1.45:1 | 0-12,15,20,30,40 |
| 4BNC5W | 4 | BNC-M/F, M/M, F/F | 1.25:1 | 0-12,15,20,30,40 |
| 6T5W | 6 | TNC-M/F, M/M, F/F | 1.20:1 | 0-12,15,20,30,40 |
| 18T5W | 18 | TNC-M/F, M/M, F/F | 1.35:1 | 0-10,12,15,20,30,40 |
| 6MD5W | 6 | 4.3/10-M/F | 1.30:1 | 0-10,12,15,20,30,40 |

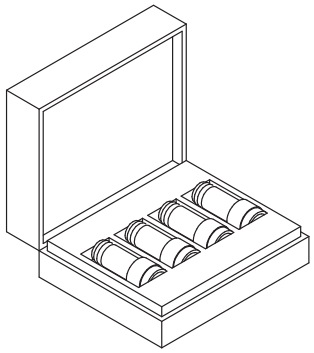


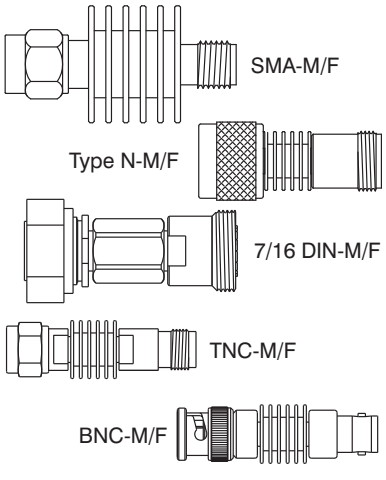
Schematic Diagram



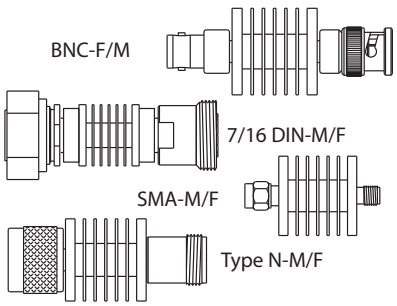

N/F-SMA/M


N/M-SMA/F

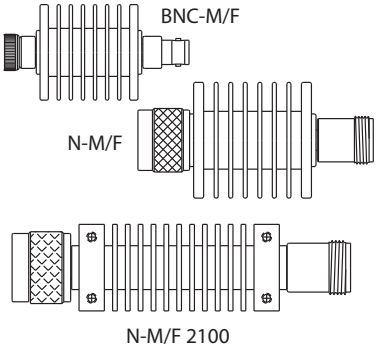

Set 9401



| MODEL NO. | FREQ. (GHz) | CONNECTOR | VSWR | ATTN (dB) |
|---|---|---|---|---|
| **10 Watt Attenuators, Convection Cooled** | | | | |
| 6B10W | 6 | SMA-M/F, M/M, F/F | 1.20:1 | 0-10,12,20,30,40 |
| 18B10W | 18 | SMA-M/F, M/M, F/F | 1.40:1 | 0-10,12,20,30,40 |
| 6N10W | 6 | N-M/F, M/M, F/F | 1.20:1 | 0-10,12,20,30,40 |
| 18N10W | 18 | N-M/F, M/M, F/F | 1.40:1 | 0-10,12,20,30,40 |
| 2D10W | 2.5 | 7/16 DIN, M/F, M/M, F/F | 1.25:1 | 0-10,12,20,30,40 |
| 7D10W | 7.5 | 7/16 DIN-M/F, M/M, F/F | 1.45:1 | 0-10,12,20,30,40 |
| 4BNC10W | 4 | BNC-M/F, M/M, F/F | 1.25:1 | 0-10,12,15,20,30 |
| 6T10W | 6 | TNC-M/F, M/M, F/F | 1.20:1 | 0-10,12,20,30,40 |
| 18T10W | 18 | TNC-M/F, M/M, F/F | 1.40:1 | 0-10,12,20,30,40 |
| 6MD10W | 6 | 4.3/10-M/F | 1.25:1 | 0-10,12,20,30,40 |

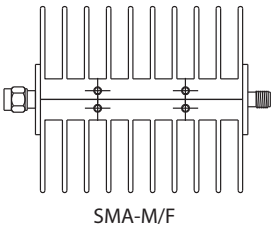



| | | | | |
|---|---|---|---|---|
| **20 Watt Attenuators, Convection Cooled** | | | | |
| 6B20W | 6 | SMA-M/F, M/M, F/F | 1.20:1 | 3,6,10,20,30,40 |
| 18B20W | 18 | SMA-M/F, M/M, F/F | 1.40:1 | 3,6,10,20,30,40 |
| 2099 w/mounting holes | 18 | SMA-M/F, M/M, F/F | 1.40:1 | 3,6,10,20,30,40 |
| 6N20W | 6 | N-M/F, M/M, F/F | 1.20:1 | 3,6,10,20,30,40 |
| 2100 w/mounting holes | 18 | N-M/F, M/M, F/F | 1.40:1 | 3,6,10,20,30,40 |
| 18N20W | 18 | N-M/F, M/M, F/F | 1.40:1 | 3,6,10,20,30,40 |
| 2D20W | 2.5 | 7/16 DIN-M/F, M/M, F/F | 1.25:1 | 3,6,10,20,30,40 |
| 7D20W | 7.5 | 7/16 DIN-M/F, M/M, F/F | 1.45:1 | 3,6,10,20,30,40 |
| 4BNC20W | 4 | BNC-M/F, M/M, F/F | 1.25:1 | 3,6,10,20,30,40 |
| 6T20W | 6 | TNC-M/F, M/M, F/F | 1.20:1 | 3,6,10,20,30,40 |
| 18T20W | 18 | TNC-M/F, M/M, F/F | 1.40:1 | 3,6,10,20,30,40 |
| 6MD20W | 6 | 4.3/10-M/F | 1.25:1 | 3,6,10,20,30,40 |



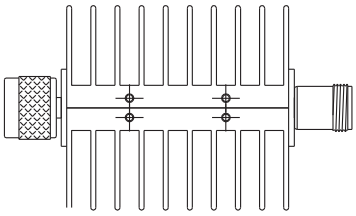

| | | | | |
|---|---|---|---|---|
| **25 Watt Attenuators, Convection Cooled** | | | | |
| 6B25W | 6 | SMA-M/F, M/M, F/F | 1.20:1 | 3,6,10,20,30,40 |
| 18B25W | 18 | SMA-M/F, M/M, F/F | 1.40:1 | 3,6,10,20,30,40 |
| 6N25W | 6 | N-M/F, M/M, F/F | 1.20:1 | 3,6,10,20,30,40 |
| 18N25W | 18 | N-M/F, M/M, F/F | 1.40:1 | 3,6,10,20,30,40 |
| 2D25W | 2.5 | 7/16 DIN-M/F, M/M, F/F | 1.25:1 | 3,6,10,20,30,40 |
| 7D25W | 7.5 | 7/16 DIN-M/F, M/M, F/F | 1.45:1 | 3,6,10,20,30,40 |
| 4BNC25W | 4 | BNC-M/F, M/M, F/F | 1.25:1 | 3,6,10,20,30,40 |
| 6T25W | 6 | TNC-M/F, M/M, F/F | 1.20:1 | 3,6,10,20,30,40 |
| 18T25W | 18 | TNC-M/F, M/M, F/F | 1.40:1 | 3,6,10,20,30,40 |
| 6MD25W | 6 | 4.3/10-M/F | 1.25:1 | 3,6,10,20,30,40 |

Note: Reduced height models available

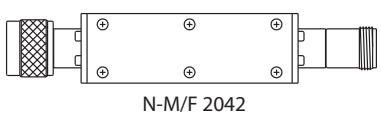



| | | | | |
|---|---|---|---|---|
| **50 Watt Attenuators, Convection Cooled** | | | | |
| 6B50W | 6 | SMA-M/F, M/M, F/F | 1.25:1 | 3,6,10,20,30,40 |
| 18B50W | 18 | SMA-M/F, M/M, F/F | 1.45:1 | 3,6,10,20,30,40 |
| 6N50W | 6 | N-M/F, M/M, F/F | 1.25:1 | 3,6,10,20,30,40 |
| 18N50W | 18 | N-M/F, M/M, F/F | 1.45:1 | 3,6,10,20,30,40 |
| 2D50W | 2.5 | 7/16 DIN-M/F, M/M, F/F | 1.25:1 | 3,6,10,20,30,40 |
| 7D50W | 7.5 | 7/16 DIN-M/F, M/M, F/F | 1.45:1 | 3,6,10,20,30,40 |
| 4BNC50W | 4 | BNC-M/F, M/M, F/F | 1.25:1 | 3,6,10,20,30,40 |
| 6T50W | 6 | TNC-M/F, M/M, F/F | 1.25:1 | 3,6,10,20,30,40 |
| 18T50W | 18 | TNC-M/F, M/M, F/F | 1.45:1 | 3,6,10,20,30,40 |
| 6MD50W | 6 | 4.3/10-M/F | 1.30:1 | 3,6,10,20,30,40 |

Note: Reduced height models available

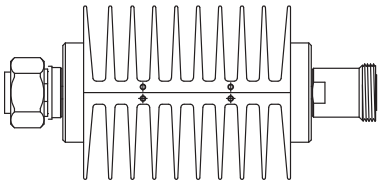



| | | | | |
|---|---|---|---|---|
| **50 Watt Attenuators, Conduction Cooled** | | | | |
| 2042S | 4 | SMA-M/F, M/M, F/F | 1.25:1 | 3,6,10,20,30,40 |
| 9037 | 18 | SMA-M/F, M/M, F/F | 1.45:1 | 3,6,10,20,30,40 |
| 2042 | 4 | N-M/F, M/M, F/F | 1.25:1 | 3,6,10,20,30,40 |
| 2042T | 4 | TNC-M/F, M/M, F/F | 1.25:1 | 3,6,10,20,30,40 |



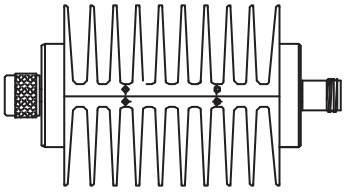
# Attenuator Reference Guide

| MODEL NO. | FREQ. (GHz) | CONNECTOR | VSWR | ATTN (dB) |
|---|---|---|---|---|
| **100 Watt Attenuators, Convection Cooled** | | | | |
| 2B100W | 2.5 | SMA-M/F, M/M, F/F | 1.35:1 | 3,6,10,20,30,40 |
| 6B100W | 6 | SMA-M/F, M/M, F/F | 1.45:1 | 3,6,10,20,30,40 |
| 2N100W | 2.5 | N-M/F, M/M, F/F | 1.35:1 | 3,6,10,20,30,40 |
| 6N100W | 6 | N-M/F, M/M, F/F | 1.45:1 | 3,6,10,20,30,40 |
| 2D100W | 2.5 | 7/16 DIN-M/F, M/M, F/F | 1.35:1 | 3,6,10,20,30,40 |
| 6D100W | 6 | 7/16 DIN-M/F, M/M, F/F | 1.45:1 | 3,6,10,20,30,40 |
| 2BNC100W | 2.5 | BNC-M/F, M/M, F/F | 1.35:1 | 3,6,10,20,30,40 |
| 4BNC100W | 4 | BNC-M/F, M/M, F/F | 1.45:1 | 3,6,10,20,30,40 |
| 2T100W | 2.5 | TNC-M/F, M/M, F/F | 1.35:1 | 3,6,10,20,30,40 |
| 6T100W | 6 | TNC-M/F, M/M, F/F | 1.45:1 | 3,6,10,20,30,40 |
| 6MD100W | 6 | 4.3/10-M/F | 1.40:1 | 3,6,10,20,30,40 |
| Note: Reduced height models available | | | | |



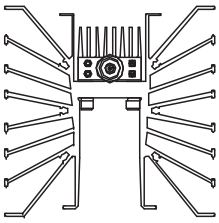
7/16 DIN-M/F

| | | | | |
|---|---|---|---|---|
| **150 Watt Attenuators, Convection Cooled** | | | | |
| 2B150W | 2.5 | SMA-M/F, M/M, F/F | 1.25:1 | 3,6,10,20,30,40 |
| 4B150W | 4 | SMA-M/F, M/M, F/F | 1.35:1 | 3,6,10,20,30,40 |
| 2N150W | 2.5 | N-M/F, M/M, F/F | 1.25:1 | 3,6,10,20,30,40 |
| 4N150W | 4 | N-M/F, M/M, F/F | 1.35:1 | 3,6,10,20,30,40 |
| 2D150W | 2.5 | 7/16 DIN-M/F, M/M, F/F | 1.30:1 | 3,6,10,20,30,40 |
| 4D150W | 4 | 7/16 DIN-M/F, M/M, F/F | 1.40:1 | 3,6,10,20,30,40 |
| 2T150W | 2.5 | TNC-M/F, M/M, F/F | 1.25:1 | 3,6,10,20,30,40 |
| 4T150W | 4 | TNC-M/F, M/M, F/F | 1.35:1 | 3,6,10,20,30,40 |



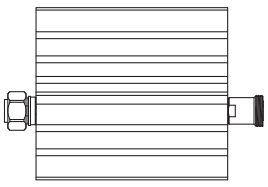
Type N Shown

| | | | | |
|---|---|---|---|---|
| **200 Watt Attenuators, Convection Cooled** | | | | |
| 2B200W | 2.5 | SMA-M/F, M/M, F/F | 1.25:1 | 3,6,10,20,30,40 |
| 4B200W | 4 | SMA-M/F, M/M, F/F | 1.50:1 | 3,6,10,20,30,40 |
| 2N200W | 2.5 | N-M/F, M/M, F/F | 1.25:1 | 3,6,10,20,30,40 |
| 4N200W | 4 | N-M/F, M/M, F/F | 1.50:1 | 3,6,10,20,30,40 |
| 2D200W | 2.5 | 7/16 DIN-M/F, M/M, F/F | 1.25:1 | 3,6,10,20,30,40 |
| 4D200W | 4 | 7/16 DIN-M/F, M/M, F/F | 1.50:1 | 3,6,10,20,30,40 |
| 2T200W | 2.5 | TNC-M/F, M/M, F/F | 1.25:1 | 3,6,10,20,30,40 |
| 4T200W | 4 | TNC-M/F, M/M, F/F | 1.50:1 | 3,6,10,20,30,40 |



Type N

| | | | | |
|---|---|---|---|---|
| **300 Watt Attenuators, Convection Cooled** | | | | |
| 2B300W | 2.5 | SMA-M/F, M/M, F/F | 1.25:1 | 3,6,10,20,30,40 |
| 4B300W | 4 | SMA-M/F, M/M, F/F | 1.50:1 | 3,6,10,20,30,40 |
| 2N300W | 2.5 | N-M/F, M/M, F/F | 1.25:1 | 3,6,10,20,30,40 |
| 4N300W | 4 | N-M/F, M/M, F/F | 1.50:1 | 3,6,10,20,30,40 |
| 2D300W | 2.5 | 7/16 DIN-M/F, M/M, F/F | 1.25:1 | 3,6,10,20,30,40 |
| 4D300W | 4 | 7/16 DIN-M/F, M/M, F/F | 1.50:1 | 3,6,10,20,30,40 |
| 2T300W | 2.5 | TNC-M/F, M/M, F/F | 1.25:1 | 3,6,10,20,30,40 |
| 4T300W | 4 | TNC-M/F, M/M, F/F | 1.50:1 | 3,6,10,20,30,40 |

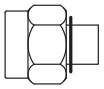


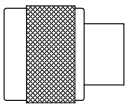
7/16 DIN-M/F

# Termination Reference Guide

api technologies corp. › INMET

| MODEL NO. | FREQ. (GHz) | | CONNECTOR | | VSWR |
|---|---|---|---|---|---|
| **1 and 2 Watt Ultra Low Cost Terminations** | | | | | |
| TS398M | 1W) | 6 | SMA-M | | 1.20:1 |
| 3202-NM | | 2.5 | N-M | | 1.10:1 |
| 3206-NM | | 6 | N-M | | 1.10:1 |

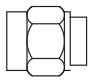

TS398

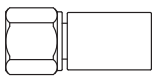

3206-NM

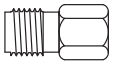
| | | | | | |
|---|---|---|---|---|---|
| **0.5 Watt and 1 Watt Terminations** | | | | | |
| TS060* | | 6 | SMA-M, SMA-F | | 1.10:1 |
| 3016B* | | 18 | SMA-M | | 1.20:1 |
| TS180* | | 18 | SMA-M, SMA-F | | 1.20:1 |
| TS260* | | 26.5 | SMA-M, SMA-F | | 1.25:1 |
| 3206-SMARP | | 6 | SMA-M Reverse Polarity | | 1.20:1 |
| TP180M | (1.0W) | 18 | SMP-M | | 1.20:1 |
| TMP400 | (0.5W) | 40 | SMPM-F | | 1.50:1 |
| TMP500 | (0.5W) | 50 | SMPM-F | | 2.00:1 |
| TG180 | (1.0W) | 18 | GPO-M, GPO-F | | 1.20:1 |
| TS400* | (1.0W) | 40 | 2.9mm-M, 2.9mm-F | | 1.20:1 |
| TS400H* | (1.0W) | 40 | 2.9mm-M, 2.9mm-F | | 1.20:1 |
| TE400* | (0.5W) | 40 | 2.4mm-M, 2.4mm-F | | 1.40:1 |
| TE500* | (0.5W) | 50 | 2.4mm-M, 2.4mm-F | | 1.60:1 |
| TE500*1W | (1.0W) | 50 | 2.4mm-M, 2.4mm-F | | 1.70:1 |

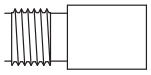
*With chain, add suffix "C" Note: G and P models are full detent, GL and PL models are limited detent

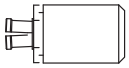
Note: GPO™ and SMP male connectors are available in full and limited detent.

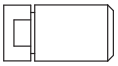

SMA-M


2.4mm-M


SMA-F

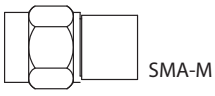

2.9mm-F

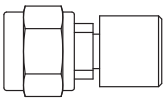

GPO™-F

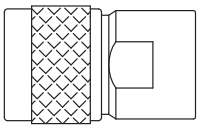

SMP-M

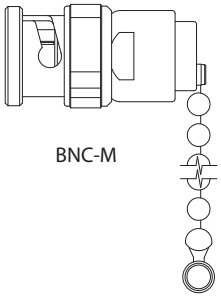
| | | | | | |
|---|---|---|---|---|---|
| **2 Watt Terminations** | | | | | |
| 3029* | | 4 | BNC-F | | 1.15:1 |
| 3038* | | 4 | BNC-M | | 1.20:1 |
| 3030* | | 4 | BNC-M | | 1.15:1 |
| 3004-067* | | 6 | SMA-M, SMA-F | | 1.10:1 |
| 3004* | | 18 | SMA-M, SMA-F | | 1.20:1 |
| TN060* | | 6 | N-M, N-F | | 1.15:1 |
| TN180* | | 18 | N-M, N-F | | 1.25:1 |
| 3018* | | 18 | N-M, N-F | Brass | 1.30:1 |
| 3070* | | 18 | N-M, N-F | Brass | 1.20:1 |
| 3101*, 3102* | | 18 | N-M, N-F | | 1.06:1 |
| TT060* | | 6 | TNC-M, TNC-F | | 1.15:1 |
| 3069* | | 12.4 | TNC-M, TNC-F | Brass | 1.15:1 |
| TT180* | | 18 | TNC-M, TNC-F | | 1.25:1 |
| TE500M-2W | | 50 | 2.4mm-M | | 1.70:1 |

*With chain, add suffix "C"

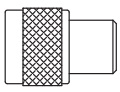

SMA-M

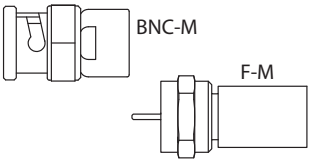

TNC-M


N-M


BNC-M

| | | | | | |
|---|---|---|---|---|---|
| **75 Ohm 1 and 2 Watt Terminations** | | | | | |
| 3038/75 | (1W) | 1 | BNC-M | | 1.10:1 |
| TF030M | | 3 | F-M | | 1.20:1 |
| TF030F | | 3 | F-F | | 1.20:1 |
| TN040/75 | | 4 | N-M, N-F | | 1.25:1 |


N-M


BNC-M

F-M

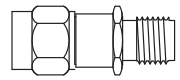
| | | | | |
|---|---|---|---|---|
| **1 Watt DC Blocking Terminations (Also See DC Block Section, page 19)** | | | | |
| 8530S | 30 kHz-18 | SMA-M, SMA-F | | INNER |
| 8530PF | 30 kHz-23 | SMP-F | | INNER |
| 8541-MPF | 100 kHz-50 | SMPM-F | | INNER |

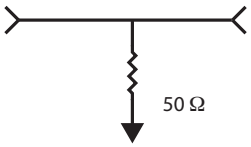

50 Ω

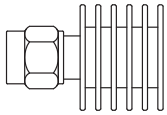
Schematic Diagram

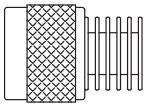
# Termination Reference Guide

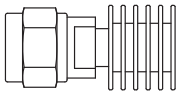
| MODEL NO. | FREQ. (GHz) | CONNECTOR | VSWR |
|---|---|---|---|
| **2 Watt Terminations, Feedthru** | | | |
| 3032 | 0.5 | BNC-M/F | 1.25:1 |
| 3008, 3008H | 1 | SMA-M/F | 1.25:1 |
| **5 Watt Terminations, Convection Cooled** | | | |
| TS060-5W | 6 | SMA-M, SMA-F | 1.15:1 |
| 3073 | 12.4 | SMA-M, SMA-F | 1.20:1 |
| TS180-5W | 18 | SMA-M, SMA-F | 1.25:1 |
| TN060-5W | 6 | N-M, N-F | 1.25:1 |
| 3073N | 12.4 | N-M, N-F | 1.20:1 |
| TN120-5W | 12.4 | N-M, N-F | 1.20:1 |
| TN180-5W | 18 | N-M, N-F | 1.25:1 |
| 3018-5W | 18 | N-M Brass | 1.30:1 |
| TD020-5W | 2.5 | 7/16 DIN-M, 7/16 DIN-F | 1.25:1 |
| TD075-5W | 7.5 | 7/16 DIN-M, 7/16 DIN-F | 1.45:1 |
| 3073D | 7.5 | 7/16 DIN-M, 7/16 DIN-F | 1.45:1 |
| TT060-5W | 6 | TNC-M, TNC-F | 1.15:1 |
| 3073T | 12.4 | TNC-M, TNC-F | 1.20:1 |
| TT180-5W | 18 | TNC-M, TNC-F | 1.25:1 |
| TMD060-5W | 6 | 4.3/10-M, 4.3/10-F | 1.25:1 |
| **10 Watt Terminations, Convection Cooled** | | | |
| TB040-10W | 4 | BNC-M, BNC-F | 1.25:1 |
| TS060-10W | 6 | SMA-M, SMA-F | 1.20:1 |
| TS180-10W | 18 | SMA-M, SMA-F | 1.40:1 |
| 3074 | 12.4 | SMA-M, SMA-F | 1.20:1 |
| 3093 | 12.4 | N-M, N-F | 1.25:1 |
| TN060-10W | 6 | N-M, N-F | 1.25:1 |
| TN180-10W | 18 | N-M, N-F | 1.35:1 |
| TD075-10W | 7.5 | 7/16 DIN-M, 7/16 DIN-F | 1.30:1 |
| TT060-10W | 6 | TNC-M, TNC-F | 1.20:1 |
| TT180-10W | 18 | TNC-M, TNC-F | 1.40:1 |
| TMD060-10W | 6 | 4.3/10-M, 4.3/10-F | 1.25:1 |
| **25 Watt Terminations, Convection Cooled** | | | |
| TS060-25W | 6 | SMA-M, SMA-F | 1.20:1 |
| TS180-25W | 18 | SMA-M, SMA-F | 1.40:1 |
| TN060-25W | 6 | N-M, N-F | 1.20:1 |
| TN180-25W | 18 | N-M, N-F | 1.40:1 |
| TD020-25W | 2.5 | 7/16 DIN-M, 7/16 DIN-F | 1.20:1 |
| TD075-25W | 7.5 | 7/16 DIN-M, 7/16 DIN-F | 1.30:1 |
| 3112-XX | 18 | 7/16 DIN, SMA, TNC, N | 1.50:1 |
| TT060-25W | 6 | TNC-M, TNC-F | 1.20:1 |
| TT180-25W | 18 | TNC-M, TNC-F | 1.40:1 |
| TMD060-25W | 6 | 4.3/10-M, 4.3/10-F | 1.30:1 |

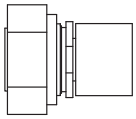

SMA-M/F with Hex

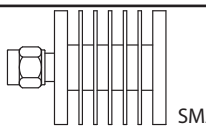


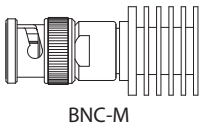


SMA-M

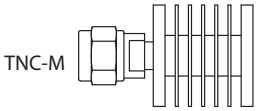

N-M

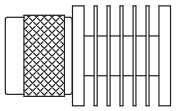

TNC-M

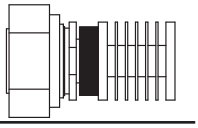

7/16 DIN-M

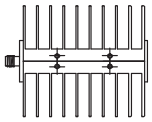

SMA-M

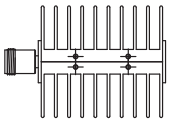

BNC-M

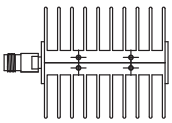

TNC-M

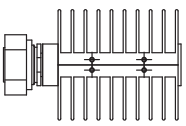

N-M


7/16 DIN-M

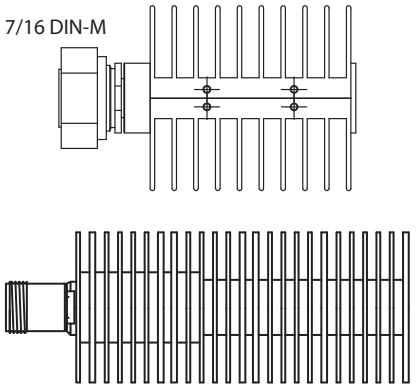

SMA-F


N-F


TNC-F

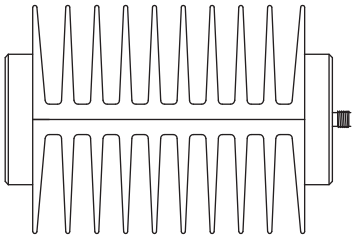

7/16 DIN-M

| MODEL NO. | FREQ. (GHz) | CONNECTOR | VSWR |
|---|---|---|---|
| **40 Watt Termination, Convection Cooled** | | | |
| 3114SX | 12.4 | SMA-M, SMA-F | 1.35:1 |
| **50 Watt Terminations, Convection Cooled** | | | |
| TS060-50W | 6 | SMA-M, SMA-F | 1.25:1 |
| TS180-50W | 18 | SMA-M, SMA-F | 1.45:1 |
| TN060-50W | 6 | N-M, N-F | 1.25:1 |
| 3114NX | 12.4 | N-M, N-F | 1.35:1 |
| TN180-50W | 18 | N-M, N-F | 1.45:1 |
| TB040-50W | 4 | BNC-M, BNC-F | 1.25:1 |
| 3114BX | 4 | BNC-M, BNC-F | 1.25:1 |
| TD020-50W | 2.5 | 7/16 DIN-M, 7/16 DIN-F | 1.25:1 |
| TD075-50W | 7.5 | 7/16 DIN-M, 7/16 DIN-F | 1.45:1 |
| 3114DX | 7.5 | 7/16 DIN-M, 7/16-DIN-F | 1.25:1 |
| TT060-50W | 6 | TNC-M, TNC-F | 1.25:1 |
| TT180-50W | 18 | TNC-M, TNC-F | 1.45:1 |
| 3114TX | 12.4 | TNC-M, TNC-F | 1.35:1 |
| TMD060-50W | 6 | 4.3/10-M, 4.3/10-F | 1.40:1 |

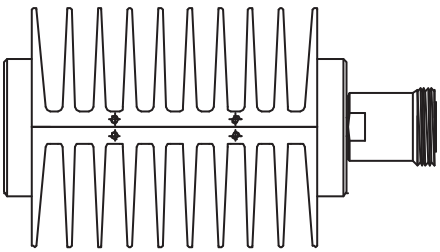


Model 3114N-F

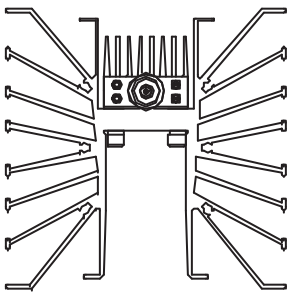
| MODEL NO. | FREQ. (GHz) | CONNECTOR | VSWR |
|---|---|---|---|
| **100 Watt Terminations, Convection Cooled** | | | |
| TS020-100W | 2.5 | SMA-M, SMA-F | 1.30:1 |
| TS060-100W | 6 | SMA-M, SMA-F | 1.40:1 |
| TN020-100W | .5 | N-M, N-F | 1.30:1 |
| TN060-100W | 6 | N-M, N-F | 1.40:1 |
| TB040-100W | 4 | BNC -M, BNC-F | 1.45:1 |
| TT020-100W | 2.5 | TNC -M, TNC-F | 1.30:1 |
| TT060-100W | 6 | TNC -M, TNC-F | 1.40:1 |
| TD020-100W | 2.5 | 7/16 DIN-M, 7/16 DIN-F | 1.35:1 |
| TD060-100W | 6 | 7/16 DIN-M, 7/16 DIN-F | 1.45:1 |
| TMD060-100W | 6 | 4.3/10-M, 4.3/10-F | 1.40:1 |


SMA-F

| MODEL NO. | FREQ. (GHz) | CONNECTOR | VSWR |
|---|---|---|---|
| **150 Watt Terminations, Convection Cooled** | | | |
| TS020-150W | 2.5 | SMA-M, SMA-F | 1.25:1 |
| TS040-150W | 4 | MA-M, SMA-F | 1.35:1 |
| TN020-150W | 2.5 | N-M, N-F | 1.25:1 |
| TN040-150W | 4 | N-M, N-F | 1.35:1 |
| TT020-150W | 2.5 | TNC -M, TNC-F | 1.25:1 |
| TT040-150W | 4 | TNC -M, TNC-F | 1.35:1 |
| TD020-150W | 2.5 | 7/16 DIN-M, 7/16 DIN-F | 1.30:1 |
| TD040-150W | 4 | 7/16 DIN-M, 7/16 DIN-F | 1.40:1 |


7/16 DIN-F

| MODEL NO. | FREQ. (GHz) | CONNECTOR | VSWR |
|---|---|---|---|
| **300 Watt Terminations, Convection Cooled** | | | |
| TS020-300W | 2.5 | SMA-M, SMA-F | 1.30:1 |
| TS040-300W | 4 | SMA-M, SMA-F | 1.35:1 |
| TN020-300W | 2.5 | N-M, N-F | 1.30:1 |
| TN040-300W | 4 | N-M, N-F | 1.35:1 |
| TT020-300W | 2.5 | TNC-M, TNC-F | 1.25:1 |
| TT040-300W | 4 | TNC-M, TNC-F | 1.35:1 |
| TD020-300W | 2.5 | 7/16 DIN-M, 7/16 DIN-F | 1.35:1 |
| TD040-300W | 4 | 7/16 DIN-M, 7/16 DIN-F | 1.35:1 |


Type N

## SERIES PCX HIGH POWER COAXIAL TERMINATIONS, DC TO 6 GHz

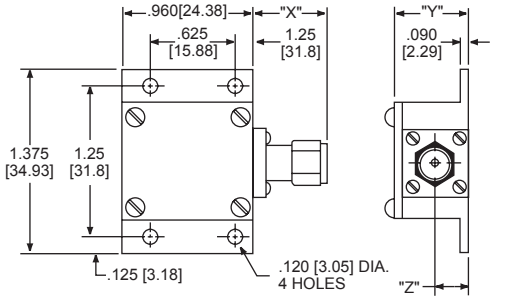
The PCX Series of High PowerTerminations are designed to dissipate RF power when mounted to a heat sink or chill plate. Power levels up to 250 Watts in 50 Ohm impedance are available in units with SMA and Type N male or female connectors. High stability thin film resistive elements on beryllium oxide substrates are used to insure stable VSWR performance over temperature and environmental conditions. Input power ratings are based on case temperature of 85°C maximum.

## PERFORMANCE SPECIFICATIONS

| Part Number | Input Power (Watts) | Frequency Range | ConnectorType | VSWR Typical | Outline |
|---|---|---|---|---|---|
| PCX050-F-50<br>PCX050-M-50 | 50 | DC - 6 GHz | SMA Female<br>SMA Male | DC - 3 GHz: 1.25:1<br>3 - 6 GHz: 1.35:1 | A |
| PCX050-F-100<br>PCX050-M-100 | 100 | DC - 3 GHz | SMA Female<br>SMA Male | DC - 3 GHz: 1.25:1 | A |
| PCX050-F-150<br>PCX100-F-150 | 150 | DC - 2 GHz | SMA Female<br>N Female | DC - 1 GHz: 1.15:1<br>1 - 2 GHz: 1.40:1 | B |
| PCX100-F-250 | 250 | DC-800 MHz | N Female | 400 - 800 MHz: 1.30:1 | B |

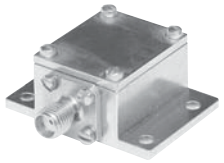
*SMA Connectors are Stainless Steel Passivated per MIL-C-39012, Type N Connectors are Nickel Plated Brass per MIL-C-39012*
*Housings are Copper, Nickel Plated Brass per MIL QQ-N-290*

## PHYSICAL DIMENSIONS

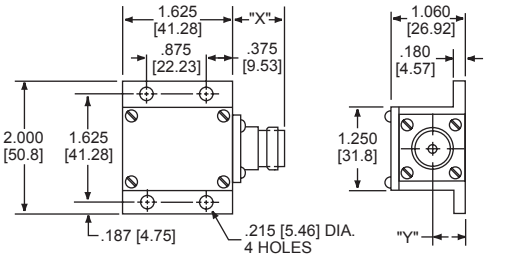



**OUTLINE A (Shown with SMA)**

| MODEL | "X" | "Y" | "Z" |
|---|---|---|---|
| PCX050-F-50 | .375 [9.53] | .560 [14.22] | .260 [6.60] |
| PCX050-M-50 | .507 [12.88] | .560 [14.22] | .260 [6.60] |
| PCX050-F-100 | .375 [9.53] | .560 [14.22] | .260 [6.60] |
| PCX050-M-100 | .507 [12.88] | .560 [14.22] | .260 [6.60] |



SMA 50 & 100 WATTS




**OUTLINE B (Shown with TYPE N)**

| MODEL | "X" | "Y" |
|---|---|---|
| PCX050-F-150 | .375 [9.53] | .515 [13.08] |
| PCX100-F-150, 250 | .736 [18.69] | .508 [12.9] |

SMA OR N CONNECTORS
150 & 250 WATTS

KEY: Inches [Millimeters] .XX ±.03 .XXX ±.010 [.X ±0.8 .XX ±0.25]

# Adapter Reference Guide

| Connector | F | 7/16 | BNC | N | TNC | 7mm | SMA | 3.5mm | 2.9mm | GPO™/SMP | 2.4mm | 1.85mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| F | ❶ | | ❶❷ | ❶❷ | ❷ | | ❷ | | | | | |
| 7/16 | | | | | | | | | | | | |
| BNC | ❶❷ | | | | | | | | | | | |
| N | ❶❷ | ❸ | | | | | ❸ | | | | | |
| TNC | ❷ | | | | | | | | | | | |
| 7mm | | | | | | | | | | | | |
| SMA | ❷ | | | ❸ | | | ❸ | | | | | |
| 3.5mm | | | | | | | | | | | | |
| 2.9mm | | | | | | | | | | | | |
| GPO™/SMP | | | | | | | | | | | | |
| 2.4mm | | | | | | | | | | | | |
| 1.85mm | | | | | | | | | | | | |

**Highlighted squares denote available connector configurations**

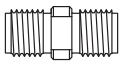
❶ *Adapter, 75 Ω both sides (page 16)*

❷ *Impedance Matching Pad where F connector only is 75 Ω (page 5)*

❸ Also available with Quick Connect Option

# Adapter Reference Guide

| CONNECTORS | | | MODEL NO. | FREQ. (GHz) | VSWR | DESCRIPTION |
|---|---|---|---|---|---|---|
| **SMA In Series Adapters** | | | | | | |
| F/F | M/M | M/F | 5010, 5020, 5030 | 18 | 1.20:1 | |
| M/F | | | 5030Q | 18 | 1.25:1 | Quick Connect |
| F/F | | | 5313 | 18 | 1.25:1 | Flange Mount, 0.5" Sq |
| M/F | M/M | F/F | 5311A, 5312A, 5313A | 18 | 1.20:1 | Flange Mount, 0.5" Sq. |
| F/F with O-Ring Seal | | | 5211 | 18 | 1.15:1 | Bulkhead Feedthru |
| F/F (Au is Gold Plated) | | | 5205, 5205/Au | 18 | 1.15:1 | Bulkhead Feedthru |
| F/F | M/M | M/F | 5163, 5164, 5165 | 26.5 | 1.20:1 | |
| F/F with O-Ring Seal | | | 5218 | 26.5 | 1.30:1 | Bulkhead Feedthru |
| **SMA Between Series Adapters** | | | | | | |
| SMA-M | N-M | | 5056 | 18 | 1.25:1 | Short Profile |
| SMA-M | N-F | | 5057 | 18 | 1.25:1 | Short Profile |
| SMA-F | N-F | | 5058 | 18 | 1.25:1 | Short Profile |
| SMA-F | N-M | | 5059 | 18 | 1.25:1 | Short Profile |
| SMA-M | N-M | | 5106 | 18 | 1.12:1 | Precision |
| SMA-M | N-F | | 5107 | 18 | 1.12:1 | Precision |
| SMA-F | N-M | | 5108 | 18 | 1.12:1 | Precision |
| SMA-F | N-F | | 5109 | 18 | 1.12:1 | Precision |
| SMA-M | N-F | | 5057Q | 18 | 1.30:1 | Quick Connect |
| SMA-M | N-M | | 5306 | 18 | 1.12:1 | Flange Mount 1" Sq. |
| SMA-M | N-F | | 5307 | 18 | 1.12:1 | Flange Mount 1" Sq. |
| SMA-F | N-M | | 5308 | 18 | 1.12:1 | Flange Mount 1" Sq. |
| SMA-F | N-F | | 5309 | 18 | 1.12:1 | Flange Mount 1" Sq. |
| SMA-F | N-F | | 5209 | 18 | 1.20:1 | Bulkhead Feedthru |
| SMA-M | N-F | | 5210 | 18 | 1.20:1 | Bulkhead Feedthru |
| SMA-F | N-F w/ O-Ring Seal | | 5212 | 18 | 1.20:1 | Bulkhead Feedthru |
| SMA-M | N-F w/ O-Ring Seal | | 5213 | 18 | 1.20:1 | Bulkhead Feedthru |
| SMA-M | BNC-M | | 5011 | 8 | 1.25:1 | |
| SMA-M | BNC-F | | 5012 | 8 | 1.25:1 | |
| SMA-F | BNC-M | | 5013 | 8 | 1.25:1 | |
| SMA-F | BNC-F | | 5014 | 8 | 1.25:1 | |
| SMA-M | TNC-M | | 5015 | 18 | 1.25:1 | |
| SMA-M | TNC-F | | 5016 | 18 | 1.25:1 | |
| SMA-F | TNC-M | | 5017 | 18 | 1.25:1 | |
| SMA-F | TNC-F | | 5018 | 18 | 1.25:1 | |
| SMA-M | GPO-M | | 5190G | 18 | 1.20:1 | Full Detent |
| SMA-M | GPO-M | | 5190GL | 18 | 1.20:1 | Limited Detent |
| SMA-F | GPO-M | | 5191G | 18 | 1.20:1 | Full Detent |
| SMA-F | GPO-M | | 5191GL | 18 | 1.20:1 | Limited Detent |
| SMA-M | GPO-F | | 5192G | 18 | 1.20:1 | |
| SMA-F | GPO-F | | 5193G | 18 | 1.20:1 | |
| SMA-M | SMP-M | | 5190P | 18 | 1.20:1 | Full Detent |
| SMA-M | SMP-M | | 5190PL | 18 | 1.20:1 | Limited Detent |
| SMA-F | SMP-M | | 5191P | 18 | 1.20:1 | Full Detent |
| SMA-F | SMP-M | | 5191PL | 18 | 1.20:1 | Limited Detent |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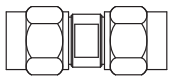
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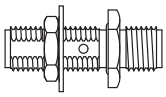
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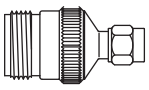
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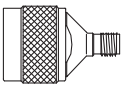
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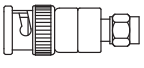
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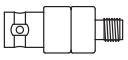
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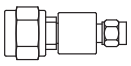
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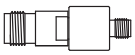
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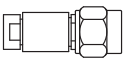
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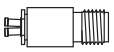
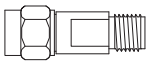

5193

# Adapter Reference Guide

| CONNECTORS | | | MODEL NO. | FREQ. (GHz) | VSWR | DESCRIPTION |
|---|---|---|---|---|---|---|
| **SMA Between Series Adapters, Continued** | | | | | | |
| SMA-M | SMP-F | | 5192P | 18 | 1.20:1 | |
| SMA-F | SMP-F | | 5193P | 18 | 1.20:1 | |
| SMA-M | 3.5mm-M | | 5246 | 18 | 1.25:1 | |
| SMA-M | 3.5mm-F | | 5247 | 18 | 1.25:1 | |
| SMA-F | 3.5mm-M | | 5248 | 18 | 1.25:1 | |
| SMA-F | 3.5mm-F | | 5249 | 18 | 1.25:1 | |
| SMA-F | 1.85mm-M | | 5250 | 18 | 1.30:1 | |
| SMA-M | 1.85mm-M | | 5251 | 18 | 1.30:1 | |
| SMA-M | 1.85mm-F | | 5252 | 18 | 1.30:1 | |
| SMA-F | 1.85mm-F | | 5253 | 18 | 1.30:1 | |
| **TYPE N In Series** | | | | | | |
| F/F | M/M | M/F | 5003, 5004, 5005 | 18 | 1.25:1 | |
| F/F | M/M | M/F | 5103, 5104, 5105 | 18 | 1.12:1 | Precision |
| F/F | | | 5208 | 18 | 1.15:1 | Bulkhead Feedthru |
| F/F with O-Ring Seal | | | 5215 | 18 | 1.15:1 | Bulkhead Feedthru |
| F/F | M/M | M/F | 5303, 5304, 5305 | 18 | 1.12:1 | Flange Mount 1″ sq. |
| **TYPE N Between Series** | | | | | | |
| N-M | TNC-M | | 5326 | 18 | 1.12:1 | Flange Mount 1″ sq. |
| N-M | TNC-F | | 5327 | 18 | 1.12:1 | Flange Mount 1″ sq. |
| N-F | TNC-M | | 5328 | 18 | 1.12:1 | Flange Mount 1″ sq. |
| N-F | TNC-F | | 5329 | 18 | 1.12:1 | Flange Mount 1″ sq. |
| N-M | BNC-M | | 5330 | 8 | 1.20:1 | Flange Mount 1″ sq. |
| N-M | BNC-F | | 5331 | 8 | 1.20:1 | Flange Mount 1″ sq. |
| N-F | BNC-M | | 5332 | 8 | 1.20:1 | Flange Mount 1″ sq. |
| N-F | BNC-F | | 5333 | 8 | 1.20:1 | Flange Mount 1″ sq. |
| N-F | 2.4mm-M | | 5155 | 18 | 1.15:1 | |
| N-F | 2.4mm-F | | 5156 | 18 | 1.15:1 | |
| N-M | 2.4mm-M | | 5157 | 18 | 1.15:1 | |
| N-M | 2.4mm-F | | 5158 | 18 | 1.15:1 | |
| N-M | 2.9mm-M | | 5166 | 18 | 1.15:1 | |
| N-F | 2.9mm-F | | 5167 | 18 | 1.15:1 | |
| N-M | 2.9mm-F | | 5168 | 18 | 1.15:1 | |
| N-F | 2.9mm-M | | 5169 | 18 | 1.15:1 | |
| N-M | 3.5mm-M | | 5144 | 18 | 1.12:1 | |
| N-M | 3.5mm-F | | 5145 | 18 | 1.12:1 | |
| N-F | 3.5mm-M | | 5146 | 18 | 1.12:1 | |
| N-F | 3.5mm-F | | 5147 | 18 | 1.12:1 | |
| N-M | 1.85mm-M | | 5242 | 18 | 1.25:1 | |
| N-F | 1.85mm-M | | 5243 | 18 | 1.25:1 | |
| N-M | 1.85mm-F | | 5244 | 18 | 1.25:1 | |
| N-F | 1.85mm-F | | 5245 | 18 | 1.25:1 | |
| N-M | SMA-F | | 5206 | 18 | 1.30:1 | Bulkhead Feedthru |
| N-F | SMA-F | | 5203 | 18 | 1.12:1 | Bulkhead Feedthru |
| N-F | SMA-M | | 5207 | 18 | 1.12:1 | Bulkhead Feedthru |
| N-F | SMA-M w/ O-Ring | | 5216 | 18 | 1.12:1 | Bulkhead Feedthru |
| N-F | SMA-F w/ O-Ring | | 5217 | 18 | 1.12:1 | Bulkhead Feedthru |
| **TNC In Series** | | | | | | |
| M/F | F/F | M/M | 5040, 5041, 5042 | 18 | 1.20:1 | |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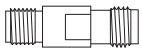
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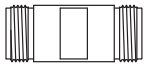
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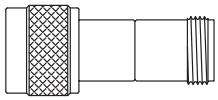
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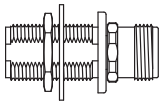
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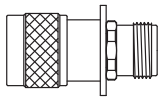
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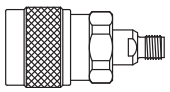
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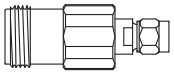
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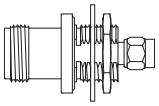
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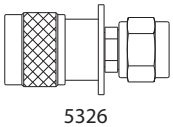
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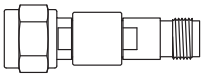
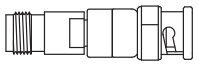

5040

# Adapter Reference Guide

| CONNECTORS | | | MODEL NO. | FREQ. (GHz) | VSWR | DESCRIPTION |
|---|---|---|---|---|---|---|
| **TNC Between Series** | | | | | | |
| TNC-F | SMA-F | | 5241 | 18.5 | 1.30:1 | Flange Mount |
| TNC-M | BNC-M | | 5034 | 8 | 1.30:1 | |
| TNC-F | BNC-M | | 5035 | 8 | 1.30:1 | |
| TNC-M | BNC-F | | 5036 | 8 | 1.30:1 | |
| TNC-F | BNC-F | | 5037 | 8 | 1.30:1 | |
| TNC-M | N-F | | 5026 | 18 | 1.25:1 | |
| TNC-F | N-F | | 5027 | 18 | 1.25:1 | |
| TNC-M | N-M | | 5028 | 18 | 1.25:1 | |
| TNC-F | N-M | | 5029 | 18 | 1.25:1 | |
| TNC-M | N-M | | 5126 | 18 | 1.12:1 | Precision |
| TNC-F | N-M | | 5127 | 18 | 1.12:1 | Precision |
| TNC-M | N-F | | 5128 | 18 | 1.12:1 | Precision |
| TNC-F | N-F | | 5129 | 18 | 1.12:1 | Precision |
| **BNC In Series** | | | | | | |
| M/F | F/F | M/M | 5031, 5032, 5033 | 8 | 1.25:1 | |
| M/F | F/F | M/M | 5087, 5088, 5089 | 3 | 1.30:1 | 75 Ω |
| **BNC Between Series** | | | | | | |
| BNC-M | N-M | | 5021 | 8 | 1.30:1 | |
| BNC-F | N-M | | 5022 | 8 | 1.30:1 | |
| BNC-M | N-F | | 5023 | 8 | 1.30:1 | |
| BNC-F | N-F | | 5024 | 8 | 1.30:1 | |
| BNC-M | N-M | | 5130 | 8 | 1.15:1 | Precision |
| BNC-F | N-M | | 5131 | 8 | 1.15:1 | Precision |
| BNC-M | N-F | | 5132 | 8 | 1.15:1 | Precision |
| BNC-F | N-F | | 5133 | 8 | 1.15:1 | Precision |
| **TYPE F In Series** | | | | | | |
| M/F | M/M | F/F | 5230, 5231, 5232 | 3 | 1.30:1 | 75 Ω |
| **TYPE F Between Series** | | | | | | |
| F-M | N-M | | 5195 | 3 | 1.30:1 | 75 Ω Both Sides |
| F-M | N-F | | 5196 | 3 | 1.30:1 | 75 Ω Both Sides |
| F-F | N-M | | 5197 | 3 | 1.30:1 | 75 Ω Both Sides |
| F-F | N-F | | 5198 | 3 | 1.30:1 | 75 Ω Both Sides |
| F-M | BNC-M | | 5070 | 3 | 1.30:1 | 75 Ω Both Sides |
| F-M | BNC-F | | 5071 | 3 | 1.30:1 | 75 Ω Both Sides |
| F-F | BNC-M | | 5072 | 3 | 1.30:1 | 75 Ω Both Sides |
| F-F | BNC-F | | 5073 | 3 | 1.30:1 | 75 Ω Both Sides |
| **7/16 DIN In Series** | | | | | | |
| F/F | M/M | M/F | 5701, 5702, 5703 | 7.5 | 1.35:1 | |
| **7/16 DIN Between Series** | | | | | | |
| 7/16 DIN-F | N-F | | 5704 | 7.5 | 1.35:1 | |
| 7/16 DIN-F | N-M | | 5705 | 7.5 | 1.35:1 | |
| 7/16 DIN-M | N-F | | 5706 | 7.5 | 1.35:1 | |
| 7/16 DIN-M | N-M | | 5707 | 7.5 | 1.35:1 | |
| 7/16 DIN-F | TNC-F | | 5708 | 7.5 | 1.35:1 | |
| 7/16 DIN-F | TNC-M | | 5709 | 7.5 | 1.35:1 | |
| 7/16 DIN-M | TNC-F | | 5710 | 7.5 | 1.35:1 | |
| 7/16 DIN-M | TNC-M | | 5711 | 7.5 | 1.35:1 | |
| **1.85mm In Series** | | | | | | |
| F/F | M/M | M/F | 5173, 5174, 5175 | 65 | 1.40:1 | |
| M/F | | | 5292 | 65 | 1.50:1 | Bulkhead Feedthru |
| F/F with O-Ring Seal | | | 5289 | 65 | 1.40:1 | Bulkhead Feedthru |
| F/F without O-Ring Seal | | | 5290 | 65 | 1.40:1 | Bulkhead Feedthru |
| **2.4mm In Series** | | | | | | |
| F/F | M/M | M/F | 5148, 5149, 5150 | 50 | 1.30:1 | |
| F/F with O-Ring Seal | | | 5221 | 50 | 1.35:1 | Bulkhead Feedthru |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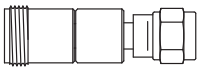
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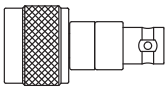
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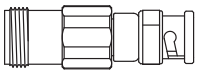
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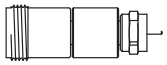
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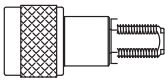
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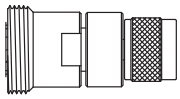
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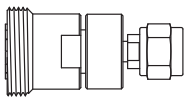
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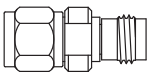
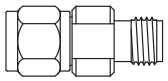

5150

# Adapter Reference Guide

| CONNECTORS | | | MODEL NO. | FREQ. (GHz) | VSWR | DESCRIPTION |
|---|---|---|---|---|---|---|
| **2.4mm Between Series** | | | | | | |
| 2.4mm-M | SMA-M | | 5080 | 26.5 | 1.20:1 | |
| 2.4mm-F | SMA-M | | 5081 | 26.5 | 1.20:1 | |
| 2.4mm-M | SMA-F | | 5082 | 26.5 | 1.20:1 | |
| 2.4mm-F | SMA-F | | 5083 | 26.5 | 1.20:1 | |
| 2.4mm-M | 3.5mm-M | | 5065 | 34 | 1.25:1 | |
| 2.4mm-M | 3.5mm-F | | 5066 | 34 | 1.25:1 | |
| 2.4mm-F | 3.5mm-M | | 5067 | 34 | 1.25:1 | |
| 2.4mm-F | 3.5mm-F | | 5068 | 34 | 1.25:1 | |
| 2.4mm-F | 2.9mm-F | | 5151 | 40 | 1.30:1 | |
| 2.4mm-F | 2.9mm-M | | 5152 | 40 | 1.30:1 | |
| 2.4mm-M | 2.9mm-F | | 5153 | 40 | 1.30:1 | |
| 2.4mm-M | 2.9mm-M | | 5154 | 40 | 1.30:1 | |
| 2.4mm-M | 1.85mm-M | | 5075 | 50 | 1.35:1 | |
| 2.4mm-M | 1.85mm-F | | 5076 | 50 | 1.35:1 | |
| 2.4mm-F | 1.85mm-M | | 5077 | 50 | 1.35:1 | |
| 2.4mm-F | 1.85mm-F | | 5078 | 50 | 1.35:1 | |
| **2.9mm In Series** | | | | | | |
| F/F | M/M | M/F | 5160, 5161, 5162 | 26.5 | 1.15:1 | |
| F/F | | | 5338 | 26.5 | 1.25:1 | Flange Mount, 0.5" sq. |
| F/F | M/M | M/F | 5170, 5171, 5172 | 40 | 1.30:1 | |
| F/F with O-Ring Seal | | | 5214 | 40 | 1.30:1 | Bulkhead Feedthru |
| M/F | | | 5223 | 40 | 1.35:1 | Bulkhead Feedthru |
| F/F | | | 5344 | 40 | 1.35:1 | Flange Mount, 0.5" sq. |
| **2.9mm Between Series** | | | | | | |
| 2.9mm-M | SMA-M | | 5262 | 26.5 | 1.25:1 | |
| 2.9mm-M | SMA-F | | 5263 | 26.5 | 1.25:1 | |
| 2.9mm-F | SMA-M | | 5264 | 26.5 | 1.25:1 | |
| 2.9mm-F | SMA-F | | 5265 | 26.5 | 1.25:1 | |
| 2.9mm-F | 3.5mm-F | | 5266 | 34 | 1.25:1 | |
| 2.9mm-F | 3.5mm-M | | 5267 | 34 | 1.25:1 | |
| 2.9mm-M | 3.5mm-F | | 5268 | 34 | 1.25:1 | |
| 2.9mm-M | 3.5mm-M | | 5269 | 34 | 1.25:1 | |
| 2.9mm-M | 1.85mm-M | | 5258 | 40 | 1.40:1 | |
| 2.9mm-M | 1.85mm-F | | 5259 | 40 | 1.40:1 | |
| 2.9mm-F | 1.85mm-M | | 5260 | 40 | 1.40:1 | |
| 2.9mm-F | 1.85mm-F | | 5261 | 40 | 1.40:1 | |
| 2.9mm-F | 2.4mm-F w/ O-Ring | | 5237 | 40 | 1.35:1 | Bulkhead Feedthru |
| **3.5mm In Series** | | | | | | |
| M/F | M/M | F/F | 5084, 5085, 5086 | 34 | 1.25:1 | |
| **3.5mm Between Series** | | | | | | |
| 3.5mm-F | 1.85mm-M | | 5254 | 34 | 1.30:1 | |
| 3.5mm-M | 1.85mm-F | | 5255 | 34 | 1.30:1 | |
| 3.5mm-F | 1.85mm-F | | 5256 | 34 | 1.30:1 | |
| 3.5mm-M | 1.85mm-M | | 5257 | 34 | 1.30:1 | |
| **7mm Between Series** | | | | | | |
| 7mm | SMA-M | | 5110 | 18 | 1.12:1 | |
| 7mm | SMA-F | | 5111 | 18 | 1.12:1 | |
| 7mm | N-M | | 5112 | 18 | 1.12:1 | |
| 7mm | N-F | | 5113 | 18 | 1.12:1 | |
| 7mm | TNC-M | | 5114 | 18 | 1.12:1 | |
| 7mm | TNC-F | | 5115 | 18 | 1.12:1 | |
| 7mm | 3.5mm-M | | 5140 | 18 | 1.08:1 | |
| 7mm | 3.5mm-F | | 5141 | 18 | 1.08:1 | |
| 7mm | 2.4mm-M | | 5181 | 18 | 1.10:1 | |
| 7mm | 2.4mm-F | | 5182 | 18 | 1.10:1 | |
| 7mm | 2.9mm-M | | 5183 | 18 | 1.10:1 | |
| 7mm | 2.9mm-F | | 5184 | 18 | 1.10:1 | |
| 7mm | SMA-M | | 5314 | 18 | 1.12:1 | Flange Mount 1" sq. |
| 7mm | SMA-F | | 5315 | 18 | 1.12:1 | Flange Mount 1" sq. |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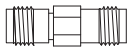
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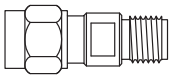
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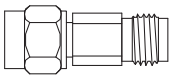
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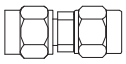
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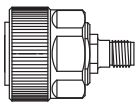
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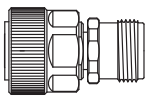
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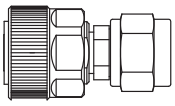
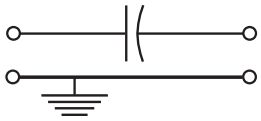

5114

# DC Block Reference Guide

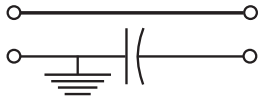
Inmet inner DC blocks have a capacitor in-series with the center conductor which prevents the flow of audio and direct current (DC) frequencies while offering minimum interference to RF signals up to 50GHz. Similarly outer DC blocks have a capacitor in-series with the outer conductor and the inner/outer types have capacitors in-series with both inner and outer conductors.

Insulation material on the outer DC blocks is a PEEK shell. Applications include ground loop elimination, signal source modulation leakage suppression, system signal-to-noise ratio improvement, test setup isolation and other situations where undesired DC or audio current flows in the system.

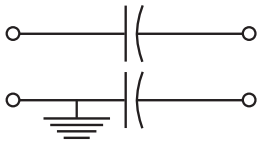
**Inner Only**



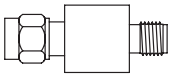
**Outer Only**



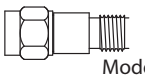
**Inner/Outer**



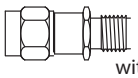
| MODEL NO. | FREQ. (GHz) | CONNECTOR | VOLTAGE | BLOCK TYPE |
|---|---|---|---|---|
| **DC Blocks, SMA** | | | | |
| 8037 | 0.01-18 | SMA-M/F | 200 | INNER |
| 8038 | 0.01-18 | SMA-M/F | 200 | OUTER |
| 8039 | 0.01-18 | SMA-M/F | 200 | INNER-OUTER |
| **DC Blocks, SMA Microminiature** | | | | |
| 8055 | 0.01-18 | SMA-M/F | 200 | INNER |
| 8055H | 0.01-18 | SMA-M/F | 200 | INNER |
| **DC Blocks** | | | | |
| 8046 | 0.01-18 | N-M/F | 200 | INNER |
| 8047 | 0.01-18 | N-M/F | 200 | OUTER |
| 8048 | 0.01-18 | N-M/F | 200 | INNER/OUTER |
| 8080 | 0.01-4 | BNC-M/F | 200 | INNER |
| 8081 | 0.01-4 | BNC-M/F | 200 | OUTER |
| 8082 | 0.01-4 | BNC-M/F | 200 | INNER/OUTER |
| 8070 | 0.01-18 | TNC-M/F | 200 | INNER |
| 8071 | 0.01-18 | TNC-M/F | 200 | OUTER |
| 8072 | 0.01-18 | TNC-M/F | 200 | INNER/OUTER |
| 8060A | 7kHz-26.5 | 2.9mm-M/F | 75 | INNER |
| 8061 | 0.01-26.5 | 2.9mm-M/F | 200 | OUTER |
| 8062A | 0.01-26.5 | 2.9mm-M/F | 200 | INNER/OUTER |
| 8141A | 0.01-40 | 2.9mm-M/F | 200 | INNER |
| 8142 | 0.01-40 | 2.9mm-M/F | 200 | OUTER |
| 8177 | 0.01-50 | 2.4mm-M/F | 75 | INNER |
| 8178 | 0.01-50 | 2.4mm-M/F | 75 | OUTER |
| 8179 | 0.01-50 | 2.4mm-M/F | 75 | INNER/OUTER |
| **DC Blocks, High Voltage** | | | | |
| 8529A | 0.1-4 | SMA-M/F | 900 | INNER |
| 8532-SI-HV | 0.1-18 | SMA-M/F | 950 | INNER |
| 8532-NI-HV | 0.1-18 | N-M/F | 950 | INNER |
| 8532-TI-HV | 0.1-18 | TNC-M/F | 950 | INNER |



Models 8038 and 8039



Model 8055



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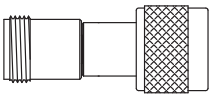
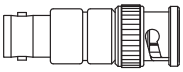
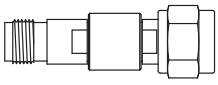


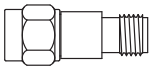
Model 8046



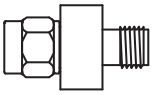
Model 8080



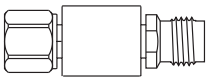
Model 8070



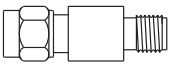
Model 8060A



Model 8142



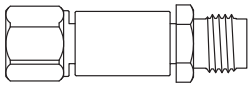
Model 8179



Model 8532-SI-HV

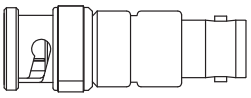
| MODEL NO. | FREQ. (GHz) | CONNECTOR | VOLTAGE | BLOCK TYPE |
|---|---|---|---|---|
| **DC Blocks, Broadband** | | | | |
| 8535 | 7 kHz-23 | SMA-M/F | 100 | INNER |
| 8535G, 8535GL | 7 kHz-26.5 | GPO-M/F | 50 | INNER |
| 8535P, 8535PL | 16kHz-26.5 | SMP-M/F | 50 | INNER |
| 8535K, 8535KH | 7 kHz-40 | 2.9mm-M/F | 35 | INNER |
| 8535E | 7 kHz-50 | 2.4mm-M/F | 35 | INNER |
| 8535MP | 16kHz-50 | SMPM-M/F | 10 | INNER |

Note: GPO™ and SMP male connectors are available in full and limited detent.

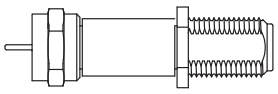


Model 8535E

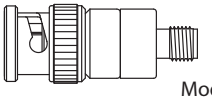
| | | | | |
|---|---|---|---|---|
| **75 Ohm DC Blocks, In Series** | | | | |
| 8174 | 0.01-2 | F-M/F | 200 | INNER |
| 8175 | 0.01-2 | F-M/F | 200 | OUTER |
| 8176 | 0.01-2 | F-M/F | 200 | INNER-OUTER |
| 8184 | 0.1-4 | N-M/F | 200 | INNER |
| 8185 | 0.1-4 | N-M/F | 200 | OUTER |
| 8186 | 0.1-4 | N-M/F | 200 | INNER/OUTER |
| 8181 | 0.1-4 | BNC-M/F | 200 | INNER |
| 8182 | 0.1-4 | BNC-M/F | 200 | OUTER |
| 8183 | 0.1-4 | BNC-M/F | 200 | INNER/OUTER |



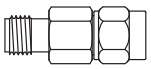
Model 8181
Model 8174



| | | | | |
|---|---|---|---|---|
| **DC Blocks, Between Series** | | | | |
| 8313 | 0.01-4 | BNC-M/SMA-F | 100 | INNER |
| 8301 | 0.01-18 | N-M/SMA-M | 200 | INNER |
| 8302 | 0.01-18 | N-M/SMA-F | 200 | INNER |
| 8303 | 0.01-18 | N-F/SMA-M | 200 | INNER |
| 8304 | 0.01-18 | N-F/SMA-F | 200 | INNER |
| 8306 | 0.01-40 | 2.4mm-M/2.9mm-F | 200 | INNER |
| 8309 | 0.01-40 | 2.4mm-F/2.9mm-M | 200 | INNER |
| 8180 | 0.01-40 | 2.4mm-F/2.9mm-F | 200 | INNER |

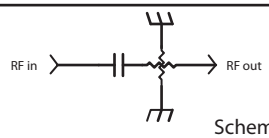


Model 8313



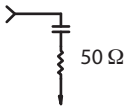
Model 8306

| MODEL NO. | FREQ. (GHz) | CONNECTOR | VSWR | ATTN (dB) |
|---|---|---|---|---|
| **2 Watt DC Blocking Attenuators (Also See Attenuator Section, page 6)** | | | | |
| 8516S-XX | 0.01-2 | SMA-M/F | 1.15:1 | 0-10,12,20 |




Schematic Diagram

| | | | | |
|---|---|---|---|---|
| **1 Watt DC Blocking Terminations (Also see Termination Section, Page 9)** | | | | |
| 8530S | 30 kHz-18 | SMA-M, SMA-F | 100 | INNER |
| 8530N | 30 kHz-18 | N-M, N-F | 100 | INNER |
| 8530PF | 30 kHz-23 | SMP-F | 100 | INNER |
| 8541-MPF | 100 kHz-50 | SMPM-F | 10 | INNER |




Schematic Diagram

# Bias Tee Reference Guide

| MODEL NO. | FREQ. (GHz) | CONN. | CURRENT (Max.) | VOLTAGE (Max.) |
|---|---|---|---|---|
| **General Purpose and High Power Bias Tees** | | | | |
| 8800SMF1-02 | .01-2.5 | SMA-M/F | 2.5A | 100V |
| 8800SMF1-04 | .01-4 | SMA-M/F | 2.5A | 100V |
| 8800SMF1-06 | .01-6 | SMA-M/F | 2.5A | 100V |
| 8800SMF1-09 | .01-9 | SMA-M/F | 2.5A | 100V |
| 8800SMF1-12 | .01-12.4 | SMA-M/F | 2.5A | 100V |
| 8800NMF1-02 | .01-2.5 | N-M/F | 2.5A | 100V |
| 8800NMF1-04 | .01-4 | N-M/F | 2.5A | 100V |
| 8800NMF1-06 | .01-6 | N-M/F | 2.5A | 100V |
| 8800NMF1-09 | .01-9 | N-MF | 2.5A | 100V |
| 8800NMF1-12 | .01-12.4 | N-M/F | 2.5A | 100V |
| 8800DMF1-02 | .01-2.5 | 7/16-M/F | 2.5A | 100V |
| 8800DMF1-04 | .01-4 | 7/16 DIN-M/F | 2.5A | 100V |
| 8800DMF1-06 | .01-6 | 7/16-M/F | 2.5A | 100V |
| 8800DMF1-07 | .01-7.5 | 7/16-M/F | 2.5A | 100V |
| **High Current Bias Tees** | | | | |
| 8820SMF1-02 | .5-2.5 | SMA-M/F | 7.0A | 100V |
| 8820SMF1-06 | 1.0-6.0 | SMA-M/F | 7.0A | 100V |
| 8820NMF1-02 | .5-2.5 | N-M/F | 7.0A | 100V |
| 8820DMF1-02 | .5-2.5 | 7/16-DIN-M/F | 7.0A | 100V |
| 8821DMF1-02* | .5-2.5 | 7/16-DIN-M/F | 7.0A | 100V |
| **Pulsed Bias Tees** | | | | |
| 8860SMF2-02 | .03-2.5 | SMA-M/F | 3.0A | 100V |
| 8860SMF2-06 | .03-6 | SMA-M/F | 3.0A | 100V |
| 8860SMF2-09 | .03-9 | SMA-M/F | 3.0A | 100V |
| 8860SMF2-12 | .03-12 | SMA-M/F | 3.0A | 100V |
| **75 Ohm Bias Tees** | | | | |
| 8875NMF1-03 | .01-3 | N-M/F | 2.5A | 100V |
| 8875FMF1-03 | .01-3 | F-M/F | 2.5A | 100V |
| **Broadband Bias Tees** | | | | |
| 8810SMF2-12 | 50 kHz-12.4 | SMA-M/F | 750mA | 25V |
| 8810SMF2-18 | 50 kHz-18 | SMA-M/F | 750mA | 25V |
| 8810SMF2-26 | 50 kHz-26.5 | SMA-M/F | 750mA | 25V |
| 8810KMF2-26 | 50 kHz-26.5 | 2.9mm-M/F | 750mA | 25V |
| 8810KMF2-40 | 50 kHz-40 | 2.9mm-M/F | 150mA | 25V |
| 8812KMF2-26 | 12 kHz-26.5 | 2.9mm-M/F | 150mA | 16V |
| 8812KMF2-40 | 12 kHz-40 | 2.9mm-M/F | 150mA | 16V |
| 8810EMF2-50 | 50 kHz-50 | 2.4mm-M/F | 150mA | 25V |

*Environmentally Sealed

## Bias Tee Numbering System

88 = Bias Tee Product Family

Product Series
- 00 = General Purpose Series
- 10 = Broadband Series
- 20 = High Power Series
- 21 = Environmentally Sealed
- 60 = Pulsed Bias Tees
- 75 = 75 Ohm

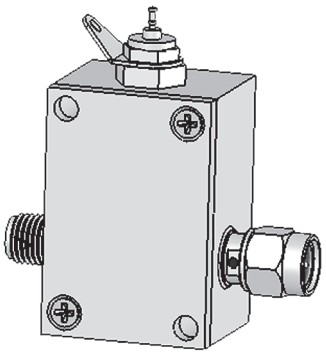
RF Connector Type
- E = 2.4mm
- K = 2.9mm
- N = Type N
- S = SMA
- D = 7/16 DIN
- T = TNC
- B = BNC
- F = F

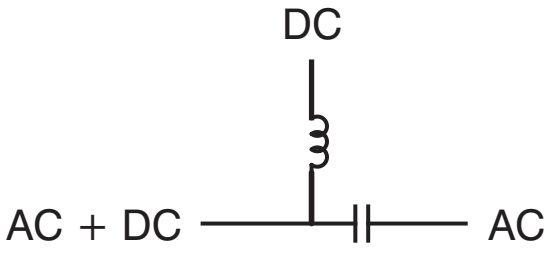
RF Connector Sex
- MF = Male "AC+DC" Connector, Female "AC" Connector
- FF = Both Connectors Female
- MM = Both Connectors Male
- FM = Female "AC+DC" Connector, Male "AC" Connector

DC Connector Type
- 1 = Solder Post
- 2 = SMA Female
- 3 = BNC Female
- 4 = F Type Female

Frequency

**881 0 EM F 1-50**





# Equalizer Overview

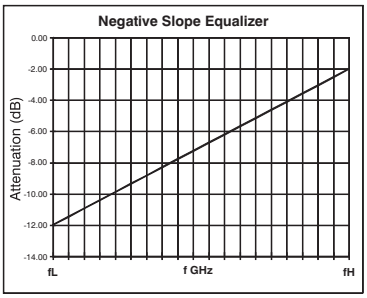
Inmet Gain Equalizers offer simple solutions to your system slope problems. Negative, Positive, Parabolic or Fine Grain Ripple slope units can be built to meet your desired performance parameters in the DC-40 GHz frequency range. Gain equalizers are passive microwave components that have an insertion loss characteristic that varies as a function of frequency. Inmet can supply both standard and custom-designed equalizers to meet the needs of commercial and military customers alike. We have engineering staff devoted exclusively to this product line and can supply designs that precisely define a preset loss characteristic (fixed equalizers) or with the ability to be loss-adjusted to custom-fit the particular variable requirements needed to field-tune a system. Each equalizer application has an insertion loss characteristic and package configuration that is unique. Equalizers can be custom made to meet the desired performance parameters and package configurations for each application.

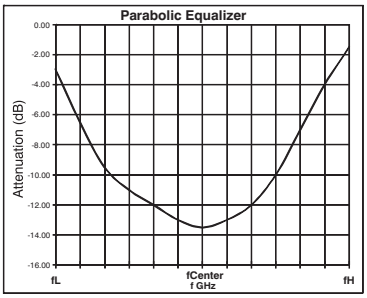
**NEGATIVE SLOPE** equalizers are typically used for applications to offset the excessive loss of long cable runs at high fre-quencies. The loss characteristic of the equalizer decreases linearly with frequency.

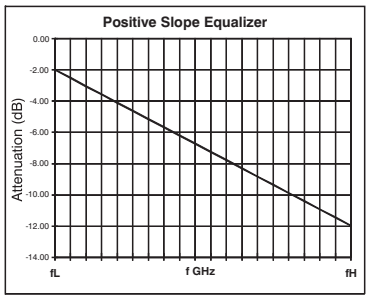
**POSITIVE SLOPE** equalizers are typically used for applications to offset excessive loss of low frequencies where waveguide transmission characteristics require an equalizer that has increasing attenuation with frequency.

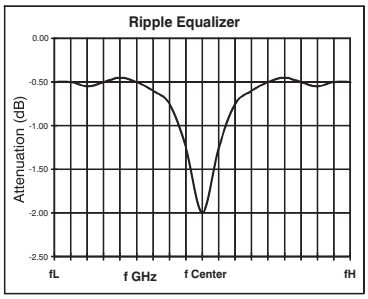
**PARABOLIC** equalizers are used in applications where a broadband traveling wave tube (TWT) or solid state amplifier (SSA) has maximum gain at or near the center of the frequency band. The characteristics of the equalizer require maximum attenuation at mid-band and decreasing attenuation at band edges.

**RIPPLE** equalizers are used to flatten gain ripple and spikes in a broadband application. The narrow band attenuation is adjustable in the bands where the ripple or spikes occur and flatten the response in these sub bands.



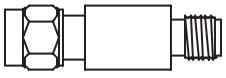




# Standard Model Gain Equalizers

| MODEL NO. | FREQ. (GHz) | Slope | Connectors |
|---|---|---|---|
| **Equalizers (A Selection of Standard Models)** | | | |
| EQ1100 | .5-2 GHz | Negative Slope | SMA |
| EQ1101 | .5-4 GHz | Negative Slope | SMA |
| EQ1102 | 2-8 GHz | Negative Slope | SMA |
| EQ1103 | 4-8 GHz | Negative Slope | SMA |
| EQ1251 | 2-18 GHz | Negative Slope | SMA/TNC/Type N |
| EQ2301 | .5-18 GHz | Negative Slope | SMA/TNC/Type N |
| EQ2400 | 6-18 GHz | Negative Slope | SMA/TNC/Type N |
| EQ2401 | 8-18 GHz | Negative Slope | SMA/TNC/Type N |
| EQ2402 | 2-18 GHz | Positive Slope | SMA/TNC/Type N |

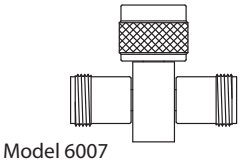


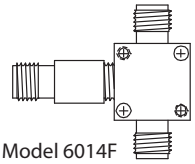
EQ1251-SMA Shown

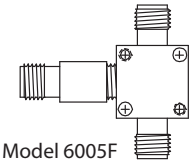
# Power Dividers

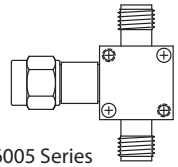
## Resistive Power Dividers

| Model | Connector | Frequency | Insertion Loss Max. | Phase Balance Max. | Amplitude Balance Max. |
|---|---|---|---|---|---|
| 6007-02 | Type N | 12.4 GHz | 6.0dB | ±2° | 0.4 dB |
| 6007 | Type N | 18.0 GHz | 7.5dB | ±3° | 0.5 dB |
| 6011-02 | Type N | 12.4 GHz | 6.0dB | ±2° | 0.4 dB |
| 6011 | Type N | 18.0 GHz | 7.5 dB | ±3° | 0.5 dB |
| 6019-02 | TNC | 12.4 GHz | 6.0dB | ±2° | 0.4 dB |
| 6019 | TNC | 18.0 GHz | 7.5 dB | ±3° | 0.5 dB |
| 6014-03 | SMA | 6.0 GHz | 6.0dB | ±2° | 0.4 dB |
| 6014F-03 | SMA | 6.0 GHz | 6.0dB | ±2° | 0.4 dB |
| 6014-01 | SMA | 12.4 GHz | 6.0dB | ±2° | 0.4 dB |
| 6014F-01 | SMA | 12.4 GHz | 6.0dB | ±2° | 0.4 dB |
| 6014-02 | SMA | 18.0 GHz | 7.5 dB | ±3° | 0.5 dB |
| 6014F-02 | SMA | 18.0 GHz | 7.5 dB | ±3° | 0.5 dB |
| 6005-01 | 2.9mm | 12.4 GHz | 6.0dB | ±2° | 0.4 dB |
| 6005F-01 | 2.9mm | 12.4 GHz | 6.0dB | ±2° | 0.4 dB |
| 6005-02 | 2.9mm | 18.0 GHz | 7.5dB | ±3° | 0.5 dB |
| 6005F-02 | 2.9mm | 18.0 GHz | 7.5dB | ±3° | 0.5 dB |
| 6005-03 | 2.9mm | 26.5 GHz | 8.5dB | ±4° | 1.0 dB |


Model 6007

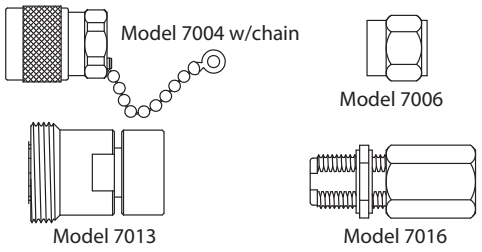

Model 6014F


Model 6005F


6005 Series

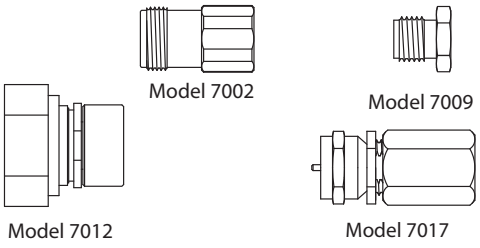
## Open Circuits (also available with chain, add suffix "C")

| MODEL NO. | FREQ. (GHz) | CONNECTOR | |
|---|---|---|---|
| 7004 | 18 | N-M | |
| 7005 | 18 | N-F | |
| 7006 | 18 | SMA-M | |
| 7007 | 18 | SMA-F | |
| 7013 | 7.5 | 7/16 DIN-F | |
| 7014 | 7.5 | 7/16 DIN-M | |
| 7015 | 3 | F-M | 75 Ohm |
| 7016 | 3 | F-F | 75 Ohm |



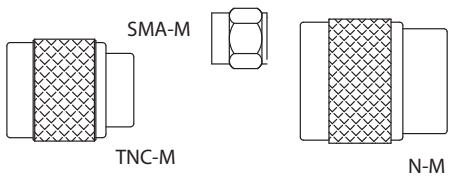

## Short Circuits (also available with chain, add suffix "C")

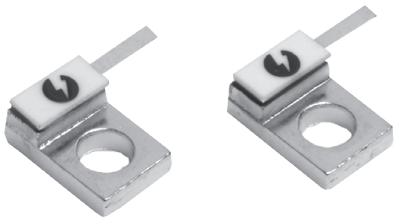
| | | | |
|---|---|---|---|
| 7001 | 18 | N-M | |
| 7002 | 18 | N-F | |
| 7008 | 18 | SMA-M | |
| 7009 | 18 | SMA-F | |
| 7011 | 7.5 | 7/16 DIN-F | |
| 7012 | 7.5 | 7/16 DIN-M | |
| 7017 | 3 | F-M | 75 Ohm |
| 7018 | 3 | F-F | 75 Ohm |




## Dust and Moisture Sealing Caps (also available with chain, add suffix "C")

| MODEL NO. | CONNECTOR |
|---|---|
| 7602 | TNC-M |
| 7603 | SMA-M |
| 7604, 7605 | N-M, N-F |
| 7606 | 2.4mm-M |
| 7607 | SMP-F |





## Flange Terminations
## Up to 1250 Watts, Up to 7 GHz

API Technologies offers a wide selection of Powerfilm flange terminations. These high-power resistive components are designed to safely dissipate power in RF circuits even under maximum power conditions. These components are often used in isolators, Wilkinson power dividers, or to terminate 3 dB stripline or microstrip hybrids. Powerfilm flange terminations with standard values of 50 and 100 ohm are available for frequencies up to 7 GHz and power levels up to 1250 Watts average. Flange sizes vary from 0.3"x 0.2" to 1.9"x 1.0". Other designs are available upon request.

| Power (Watts) | Frequency (GHz) | Ceramic | Film | Width | Length | Height | Figure | Model |
|---|---|---|---|---|---|---|---|---|
| 10 | 4.0 | AlN | Thin | 0.300 | 0.200 | 0.105 | 1 | ANT300-10 |
| 10 | 2.0 | BeO | Thin | 0.300 | 0.200 | 0.105 | 1 | PPT300-10-3 |
| 20 | 2.0 | BeO | Thin | 0.515 | 0.250 | 0.125 | 2 | PPT515-20-3 |
| 25 | 7.0 | AlN | Thin | 0.300 | 0.200 | 0.105 | 1 | 7ANT300-25 |
| 25 | 4.0 | AlN | Thin | 0.300 | 0.200 | 0.105 | 1 | ANT300-25 |
| 25 | 2.3 | AlN | Thick | 0.300 | 0.200 | 0.105 | 1 | KAT300-25 |
| 30 | 6.0 | BeO | Thin | 0.515 | 0.250 | 0.105 | 2 | PPT515-30-4 |
| 30 | 2.0 | BeO | Thin | 0.515 | 0.250 | 0.105 | 2 | PPT515-30 |
| 40 | 4.0 | BeO | Thin | 0.800 | 0.230 | 0.105 | 3 | PPT800-40-3 |
| 40 | 2.5 | AlN | Thin | 0.515 | 0.250 | 0.125 | 2 | ANT515-40 |
| 50 | 2.0 | BeO | Thin | 0.300 | 0.200 | 0.105 | 1 | PPT300-50 |
| 75 | 7.0 | BeO | Thin | 0.515 | 0.250 | 0.125 | 2 | PPT515-75 |
| 80 | 2.0 | BeO | Thin | 0.515 | 0.250 | 0.125 | 2 | PPT515-80 |
| 80 | 1.0 | AlN | Thin | 0.515 | 0.250 | 0.125 | 2 | ANT515-80 |
| 100 | 3.0 | AlN | Thin | 0.800 | 0.230 | 0.105 | 3 | ANT800-100 |
| 100 | 3.0 | AlN | Thick | 0.800 | 0.230 | 0.105 | 3 | KAT800-100 |
| 100 | 3.0 | AlN | Thick | 0.975 | 0.250 | 0.105 | 3 | KAT975-100 |
| 100 | 2.0 | BeO | Thin | 0.800 | 0.230 | 0.105 | 3 | PPT800-100A |
| 125 | 3.0 | AlN | Thick | 0.800 | 0.230 | 0.105 | 3 | KAT800-125 |
| 150 | 4.0 | AlN | Thin | 0.800 | 0.230 | 0.105 | 3 | ANT800-150 |

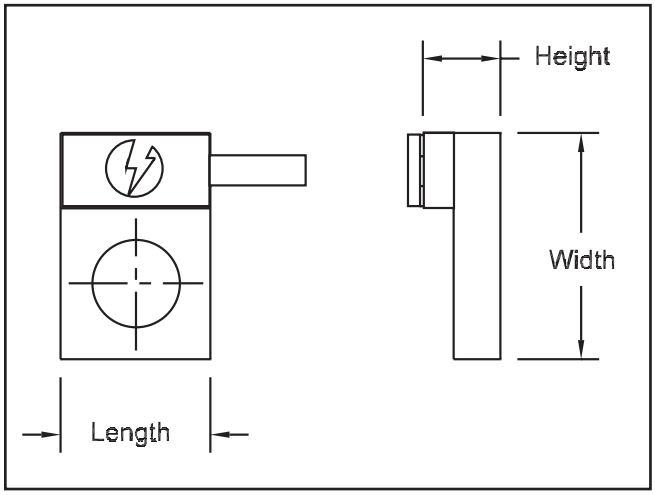



*Figure 1*

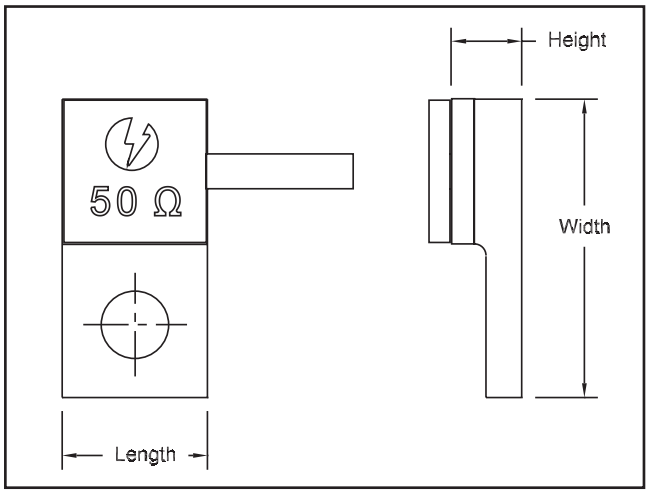



*Figure 2*

| Power (Watts) | Frequency (GHz) | Ceramic | Film | Width | Length | Height | Figure | Model |
|---|---|---|---|---|---|---|---|---|
| 150 | 3.0 | AlN | Thin | 0.870 | 0.375 | 0.105 | 3 | ANT870-150 |
| 150 | 3.0 | AlN | Thin | 0.870 | 0.375 | 0.105 | 3 | ANT870-150LP |
| 150 | 2.7 | AlN | Thick | 0.870 | 0.375 | 0.105 | 3 | KAT870-150 |
| 150 | 1.0 | BeO | Thin | 0.870 | 0.375 | 0.105 | 3 | PPT870-150-3 |
| 200 | 4.0 | BeO | Thin | 0.975 | 0.375 | 0.170 | 3 | PPT975-200LP |
| 200 | 1.0 | AlN | Thin | 0.975 | 0.375 | 0.170 | 3 | ANT975-200 |
| 250 | 3.0 | AlN | Thin | 1.250 | 0.500 | 0.170 | 3 | ANT1250-250LP |
| 250 | 2.7 | AlN | Thin | 0.975 | 0.375 | 0.170 | 3 | ANT975-250 |
| 250 | 1.0 | BeO | Thin | 0.870 | 0.375 | 0.105 | 3 | PPT870-250-3 |
| 250 | 1.0 | BeO | Thin | 0.975 | 0.375 | 0.170 | 3 | PPT975-250-3 |
| 300 | 4.0 | BeO | Thin | 0.975 | 0.375 | 0.170 | 3 | PPT975-300 |
| 300 | 4.0 | BeO | Thin | 0.975 | 0.375 | 0.170 | 3 | PPT975-300LP |
| 400 | 1.0 | AlN | Thin | 1.250 | 0.500 | 0.170 | 3 | ANT1250-400 |
| 400 | 0.4 | BeO | Thin | 1.250 | 0.500 | 0.170 | 3 | PPT1250-400 |
| 500 | 2.0 | BeO | Thick | 1.250 | 0.500 | 0.170 | 3 | TPT1250-500 |
| 500 | 1.5 | BeO | Thin | 1.250 | 0.500 | 0.190 | 3 | PPT1250-500 |
| 600 | 0.5 | AlN | Thin | 1.900 | 1.040 | 0.190 | 4 | ANT1900-600 |
| 600 | 0.4 | BeO | Thin | 1.250 | 0.500 | 0.170 | 3 | PPT1250-600 |
| 800 | 1.0 | AlN | Thick | 1.900 | 1.040 | 0.190 | 4 | KAT1900-800 |
| 800 | 0.4 | BeO | Thin | 1.900 | 1.040 | 0.190 | 4 | PPT1900-800 |
| 1000 | 1.0 | AlN | Thick | 1.900 | 1.040 | 0.190 | 4 | KAT1900-1000 |
| 1250 | 0.4 | BeO | Thick | 1.900 | 1.040 | 0.190 | 4 | TPT1900-1250 |

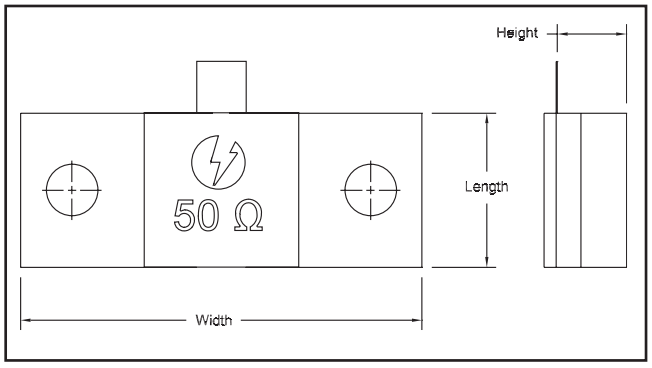



*Figure 3*

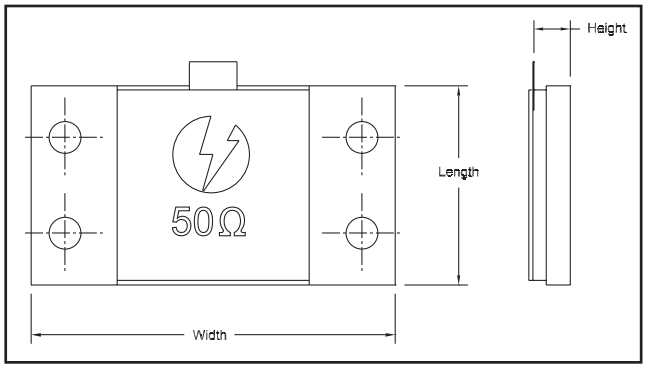



*Figure 4*

## Flange Resistors
## Up to 800 Watts, Up to 4 GHz

Powerfilm flange resistors are used in power generators, attenuators, or stripline and microstrip hybrids. Resistance values from 5 to 300 ohms and tolerances from 1% to 5% are available for frequencies up to 4 GHz and power levels up to 800 Watts. Flange sizes vary from 0.3"x0.2" to 1.9"x1.0". Other designs are available upon request.

| Power (Watts) | Frequency (GHz) | Ceramic | Film | Width | Length | Height | Figure | Model |
|---|---|---|---|---|---|---|---|---|
| 10 | 4.0 | AlN | Thin | 0.300 | 0.200 | 0.105 | 1 | ANR300-10 |
| 20 | 2.0 | BeO | Thin | 0.515 | 0.250 | 0.125 | 2 | PPR515-20-3 |
| 20 | 4.0 | BeO | Thin | 0.300 | 0.200 | 0.105 | 1 | PPR300-20 |
| 25 | 4.0 | AlN | Thin | 0.300 | 0.200 | 0.105 | 1 | ANR300-25 |
| 30 | 2.5 | BeO | Thin | 0.515 | 0.250 | 0.105 | 2 | PPR515-30-4 |
| 40 | 2.5 | AlN | Thin | 0.300 | 0.200 | 0.125 | 2 | ANR515-40 |
| 40 | 4.0 | BeO | Thin | 0.800 | 0.230 | 0.105 | 3 | PPR800-40-3 |
| 50 | 4.0 | BeO | Thin | 0.300 | 0.200 | 0.105 | 1 | PPR300-50 |
| 80 | 1.0 | AlN | Thin | 0.300 | 0.200 | 0.125 | 2 | ANR515-80 |
| 80 | 2.0 | BeO | Thin | 0.515 | 0.250 | 0.125 | 2 | PPR515-80 |
| 100 | 3.0 | AlN | Thin | 0.300 | 0.200 | 0.105 | 3 | ANR800-100 |
| 125 | 2.5 | BeO | Thin | 0.515 | 0.250 | 0.105 | 2 | PPR515-125 |
| 150 | 1.0 | BeO | Thin | 0.870 | 0.250 | 0.105 | 3 | PPR870-150-3 |
| 150 | 3.0 | AlN | Thin | 0.300 | 0.200 | 0.105 | 3 | ANR870-150 |
| 200 | 1.0 | AlN | Thin | 0.300 | 0.200 | 0.170 | 3 | ANR975-200 |
| 250 | 1.0 | BeO | Thin | 0.870 | 0.375 | 0.105 | 3 | PPR870-250 |
| 250 | 1.0 | BeO | Thin | 0.975 | 0.375 | 0.170 | 3 | PPR975-250-3 |
| 400 | 0.5 | BeO | Thin | 1.250 | 0.500 | 0.170 | 3 | PPR1250-400 |
| 400 | 1.0 | AlN | Thin | 1.250 | 0.500 | 0.170 | 3 | ANR1250-400 |
| 600 | 0.5 | AlN | Thin | 1.900 | 1.040 | 0.190 | 4 | ANR1900-600 |
| 650 | 0.5 | BeO | Thin | 1.250 | 0.500 | 0.170 | 3 | PPR1250-650 |
| 800 | 0.4 | BeO | Thin | 1.900 | 1.040 | 0.190 | 4 | PPR1900-800 |

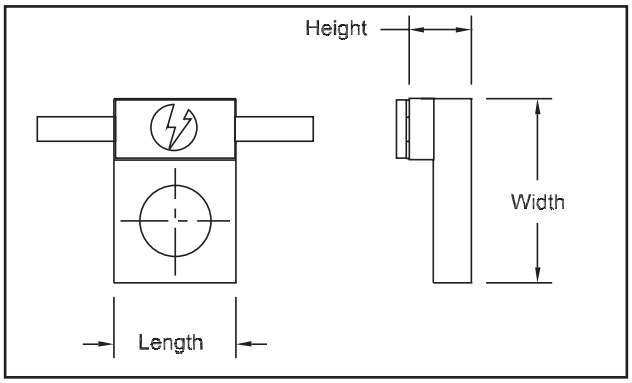



*Figure 1*

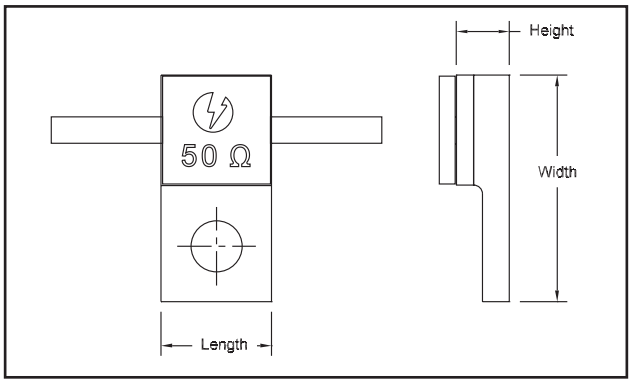



*Figure 2*

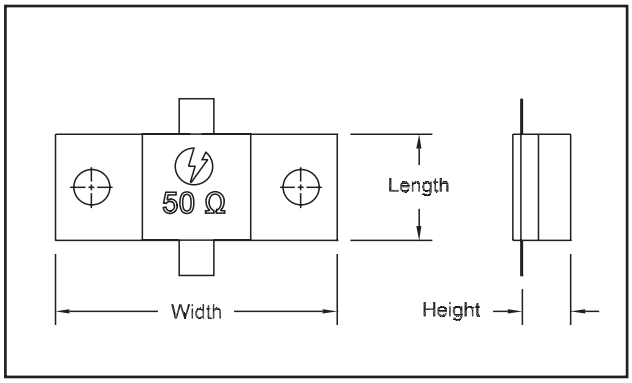



*Figure 3*

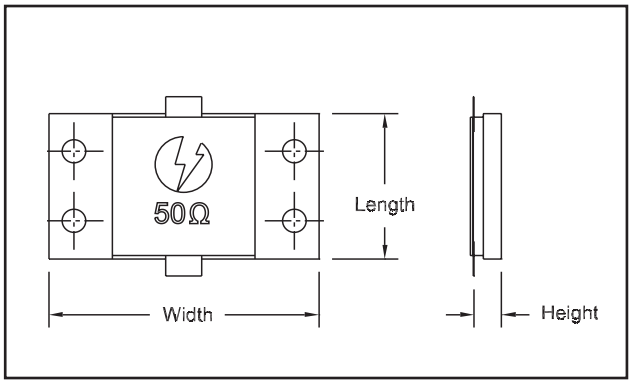



*Figure 4*

## Flange Attenuators
## Up to 250 Watts, Up to 4 GHz

Powerfilm™ flange attenuators are designed to uniformly reduce power of the RF signal while generating only a small reflection even under maximum power conditions. The flange attenuators are often used in high-power amplifiers and as terminating attenuators in isolators where lower-level signal sampling may be required. Standard dB values are 1, 2, 3, 4, 5, 6, 10, 20, and 30 for frequencies up to 4 GHz and power levels up to 250 Watts. Other designs may be available upon request.

| Power (Watts) | Frequency (GHz) | Ceramic | Film | Width | Length | Height | Figure | Model |
|---|---|---|---|---|---|---|---|---|
| 10 | 4.0 | BeO | Thin | 0.300 | 0.200 | 0.105 | 1 | PPA10 |
| 20 | 4.0 | BeO | Thin | 0.515 | 0.250 | 0.105 | 2 | PPA20 |
| 50 | 1.0 | BeO | Thin | 0.975 | 0.375 | 0.170 | 3 | PPA50 |
| 100 | 0.5 | BeO | Thick | 1.250 | 0.500 | 0.170 | 3 | HPA100 |
| 100 | 0.5 | BeO | Thin | 1.250 | 0.500 | 0.170 | 3 | PPA100 |
| 100 | 2.3 | AlN | Thick | 0.800 | 0.230 | 0.105 | 4 | 2ANA100 |
| 100 | 3.0 | AlN | Thin | 0.830 | 0.250 | 0.105 | 4 | 3ANA100 |
| 150 | 1.9 | AlN | Thick | 1.250 | 0.500 | 0.105 | 4 | 2ANA150 |
| 250 | 1.0 | AlN | Thick | 1.250 | 0.500 | 0.170 | 4 | 1ANA250 |
| 250 | 2.3 | AlN | Thick | 1.250 | 0.500 | 0.170 | 4 | 2ANA250 |

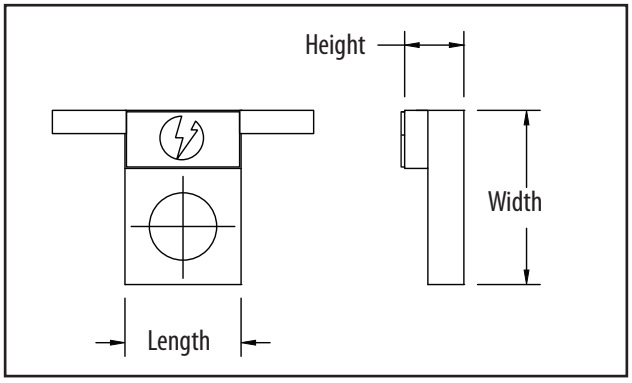



*Figure 1*

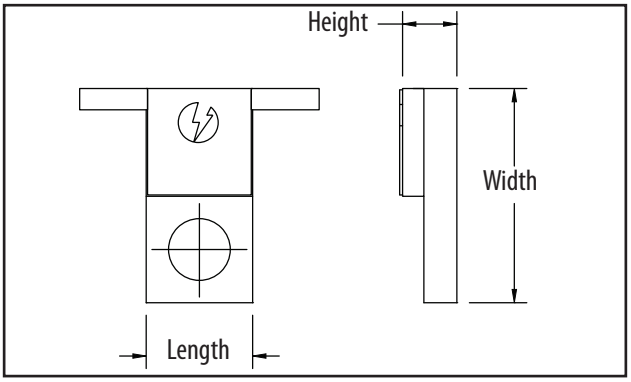



*Figure 2*

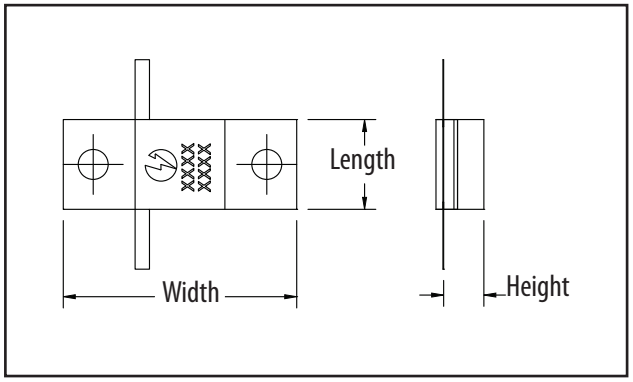



*Figure 3*

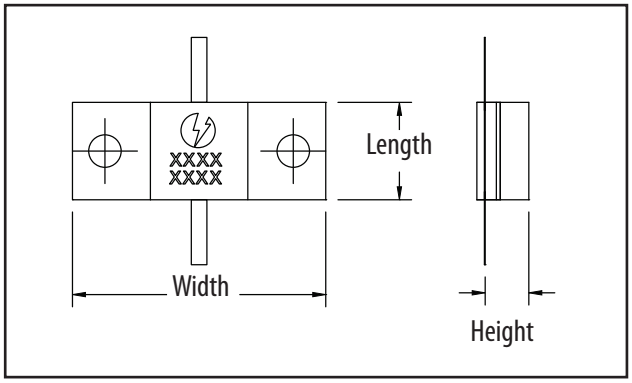
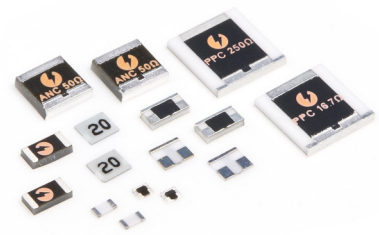



*Figure 4*

# Powerfilm™ Surface Mount Products



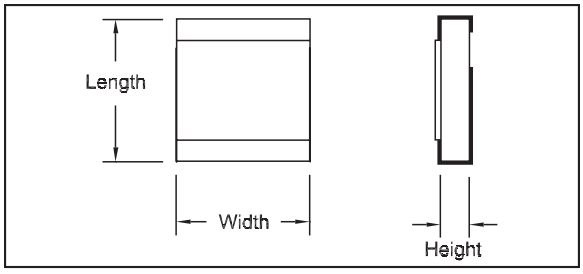
## Chip Terminations
## Up to 300 Watts, Up to 18 GHz

API Technologies offers a wide selection of Powerfilm™ chip terminations. These surface-mount resistive components allow for RF power dissipation in terminations and isolators. Depending on desired specifications, chips are fabricated on BeO, Aluminum Nitride, or Alumina ceramics with either thin or thick resistors. Powerfilm™ chip terminations and resistors with standard values of 50 and 100 ohm are available in wide selection of sizes and with various solder, silver, or gold finish options. Other designs, values and options may be available upon request.

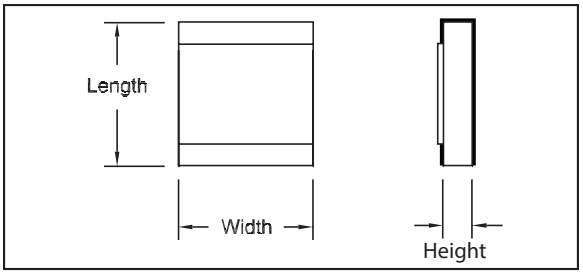
| Power (Watts) | Frequency (GHz) | Ceramic | File | Wrap Option | Finish Option | Width | Length | Height | Model |
|---|---|---|---|---|---|---|---|---|---|
| 3 | 18.0 | BeO | TaN | G | G, N, T, H | 0.020 | 0.040 | 0.010 | NPC20-40 |
| 3 | 12.4 | BeO | TaN | G | G, N, T, H | 0.025 | 0.050 | 0.010 | NPC25-50 |
| 5 | 10.0 | BeO | TaN | G | G, N, T, H | 0.050 | 0.050 | 0.010 | NPC50-50 |
| 5 | 6.0 | AlN | Thin | G | N, T, H | 0.050 | 0.050 | 0.010 | ANC50-50 |
| 10 | 4.0 | AlN | Thick | G, Z | N, T, H | 0.060 | 0.120 | 0.025 | KAC60-120A |
| 10 | 4.0 | BeO | TaN | G | G, N, T, H | 0.050 | 0.100 | 0.010 | NPC50-100 |
| 10 | 12.0 | BeO | TaN | Z | G, N, T, H | 0.030 | 0.060 | 0.010 | 12NPC30-60Z |
| 10 | 2.5 | AlN | Thin | G | N, T, H | 0.050 | 0.050 | 0.010 | ANC50-100 |
| 10 | 2.0 | AlN | Thin | G, Z | N, T, H | 0.100 | 0.200 | 0.040 | ANC100-200 |
| 15 | 4.0 | BeO | TaN | G | G, N, T, H | 0.075 | 0.150 | 0.010 | NPC75-150 |
| 16 | 2.0 | AlN | Thin | Z | N, T, H | 0.250 | 0.250 | 0.040 | ANC250-250B |
| 20 | 12.0 | BeO | TaN | G | G, N, T, H | 0.050 | 0.100 | 0.015 | 12NPC50-100EG |
| 20 | 18.0 | BeO | TaN | G | G, N, T, H | 0.050 | 0.100 | 0.010 | 18NPC50-100G |
| 20 | 4.0 | BeO | Thin | G | N, T, H | 0.100 | 0.200 | 0.040 | PPC100-200A |
| 20 | 2.0 | AlN | Thick | Z | N, T, H | 0.100 | 0.200 | 0.040 | KAC100-200AZ |
| 25 | 7.0 | AlN | Thin | G | N, T, H | 0.100 | 0.200 | 0.040 | ANC100-200AG |
| 30 | 4.0 | AlN | Thin | G | N, T, H | 0.200 | 0.200 | 0.040 | ANC200-200 |
| 30 | 2.3 | AlN | Thick | G | N, T, H | 0.100 | 0.200 | 0.040 | KAC100-200AG |
| 40 | 2.5 | AlN | Thin | G | N, T, H | 0.250 | 0.250 | 0.040 | ANC250-250-40 |
| 40 | 2.5 | BeO | Thin | G | N, T, H | 0.250 | 0.250 | 0.040 | PPC250-250A |
| 75 | 7.0 | BeO | Thin | G | N, T, H | 0.250 | 0.250 | 0.060 | PPC250-250BG1 |
| 75 | 5.0 | AlN | Thick | G, Z | N, T, H | 0.250 | 0.250 | 0.040 | KAC250-250A |
| 80 | 4.0 | AlN | Thin | G | N, T, H | 0.200 | 0.200 | 0.040 | ANC200-200AG |
| 80 | 1.0 | AlN | Thin | G, Z | N, T, H | 0.250 | 0.250 | 0.040 | ANC250-250-80 |
| 100 | 3.0 | AlN | Thick | Z | N, T, H | 0.250 | 0.375 | 0.040 | KAC250-375AZ |
| 100 | 3.0 | AlN | Thin | G | N, T, H | 0.350 | 0.225 | 0.040 | ANC350-225AG2 |
| 150 | 3.0 | AlN | Thick | G | N, T, H | 0.375 | 0.375 | 0.040 | KAC375-250AG |
| 100 | 2.0 | AlN | Thin | G | N, T, H | 0.350 | 0.225 | 0.040 | ANC350-225 |
| 100 | 1.5 | BeO | Thin | G | N, T, H | 0.250 | 0.250 | 0.060 | PPC250-250BG |
| 125 | 3.0 | AlN | Thick | G | N, T, H | 0.350 | 0.225 | 0.040 | KAC350-225AG |
| 150 | 4.0 | AlN | Thin | G | N, T, H | 0.225 | 0.350 | 0.040 | ANC350-225AG |
| 150 | 3.0 | AlN | Thin | G | N, T, H | 0.250 | 0.375 | 0.040 | ANC250-375 |
| 150 | 3.0 | AlN | Thick | G, Z | N, T, H | 0.375 | 0.375 | 0.040 | KAC375-375A |
| 150 | 2.0 | AlN | Thin | Z | N, T, H | 0.375 | 0.375 | 0.040 | ANC375-375 |
| 150 | 1.0 | BeO | Thin | G | N, T, H | 0.250 | 0.375 | 0.040 | PPC250-375A |
| 200 | 2.7 | BeO | Thin | G | N, T, H | 0.250 | 0.375 | 0.040 | PPC250-375AG2 |
| 200 | 1.0 | AlN | Thin | G | N, T, H | 0.375 | 0.375 | 0.040 | ANC375-375 |
| 250 | 2.7 | AlN | Thin | G | N, T, H | 0.375 | 0.375 | 0.040 | ANC375-375AG1 |
| 250 | 2.0 | BeO | Thin | G | N, T, H | 0.375 | 0.375 | 0.040 | PPC375-375AG2 |
| 250 | 1.0 | BeO | Thin | G | N, T, H | 0.375 | 0.375 | 0.040 | PPC375-375AG |
| 300 | 4.0 | BeO | Thin | G | N,T,H, | 0.375 | 0.375 | 0.040 | PPC375-375AG3 |

## Wrap Options

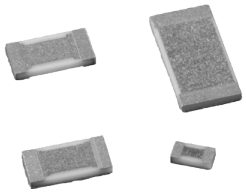
*G Wrap*




*Z Wrap*



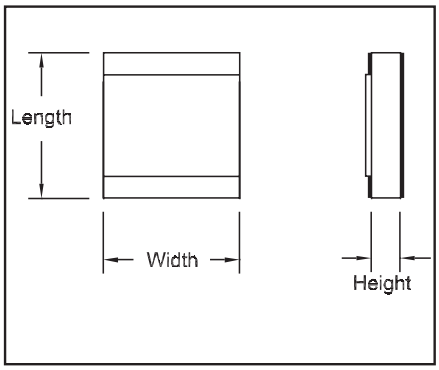
# Powerfilm™ Surface Mount Products



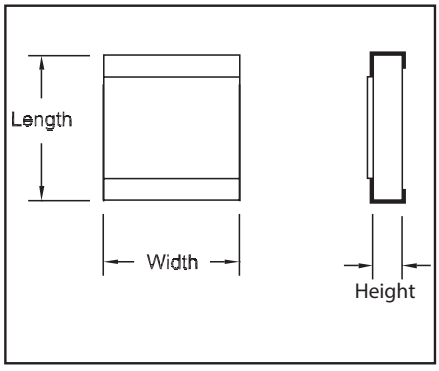
## Chip Resistors
## Up to 250 Watts, Up to 26 GHz

API Inmet offers a wide selection of Powerfilm™ chip resistors. These surface-mount components allow are often used in hybrid attenuators and Wilkinson power dividers. Chip resistors are available with values from 5 to 300 ohm in a wide selection of sizes and finishes. Other designs, values and options may be available upon request.

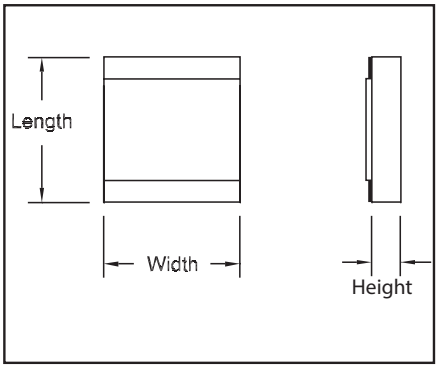
| Power (Watts) | Frequency (GHz) | Ceramic | File | Wrap Option | Finish Option | Width | Length | Height | Model |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 26.0 | BeO | Thick | X, W, S | G, N, T, H | 0.020 | 0.040 | 0.010 | 26TPC20-40 |
| 3 | 18.0 | BeO | TaN | X, W, S | G, N, T, H | 0.020 | 0.040 | 0.010 | NPC20-40 |
| 5 | 4.0 | AlN | Thin | X, W, S | N, T, H | 0.050 | 0.050 | 0.010 | ANC50-50 |
| 5 | 4.0 | Alumina | Thick | X, W, S | N, T, H | 0.050 | 0.050 | 0.010 | PC50-50 |
| 5 | 12.4 | BeO | TaN | X, W, S | G, N, T, H | 0.025 | 0.050 | 0.010 | NPC25-50 |
| 8 | 10.0 | BeO | TaN | X, W, S | G, N, T, H | 0.050 | 0.050 | 0.010 | NPC50-50 |
| 10 | 2.5 | AlN | Thin | X, W, S | N, T, H | 0.050 | 0.050 | 0.010 | ANC50-100 |
| 10 | 4.0 | AlN | Thick | X, S | N, T, H | 0.060 | 0.120 | 0.025 | KAC60-120A |
| 10 | 6.0 | BeO | Thin | X, W, S | N, T, H | 0.050 | 0.100 | 0.025 | PPC50-100D |
| 10 | 8.0 | BeO | Thin | X, S | N, T, H | 0.050 | 0.100 | 0.040 | PPC50-100A |
| 20 | 3.0 | AlN | Thick | X, S | N, T, H | 0.100 | 0.200 | 0.040 | KAC100-200A |
| 20 | 4.0 | AlN | Thin | X, W, S | N, T, H | 0.100 | 0.200 | 0.040 | ANC100-200A |
| 30 | 4.0 | AlN | Thin | X, S | N, T, H | 0.200 | 0.200 | 0.040 | ANC200-200 |
| 25 | 4.0 | BeO | TaN | X, W, S | G, N, T, H | 0.050 | 0.100 | 0.010 | NPC50-100 |
| 40 | 2.5 | AlN | Thin | X, W, S | N, T, H | 0.250 | 0.250 | 0.040 | ANC250-250-40 |
| 50 | 4.0 | BeO | TaN | X, W, S | G, N, T, H | 0.075 | 0.150 | 0.010 | NPC75-150 |
| 60 | 3.0 | BeO | Thin | X | N, T, H | 0.250 | 0.250 | 0.060 | 3PPC250-250B |
| 65 | 4.0 | BeO | Thin | X, W, S | N, T, H | 0.100 | 0.200 | 0.040 | PPC100-200A |
| 75 | 5.0 | AlN | Thick | X, S | N, T, H | 0.250 | 0.250 | 0.040 | KAC250-250A |
| 80 | 1.5 | BeO | Thin | X | N, T, H | 0.250 | 0.250 | 0.060 | PPC250-250B |
| 100 | 2.0 | AlN | Thin | X | N, T, H | 0.350 | 0.225 | 0.040 | ANC350-225 |
| 100 | 3.0 | AlN | Thick | X, S | N, T, H | 0.250 | 0.375 | 0.040 | KAC250-375A |
| 125 | 1.0 | BeO | Thin | X | N, T, H | 0.250 | 0.250 | 0.040 | PPC250-250A |
| 150 | 1.0 | BeO | Thin | X | N, T, H | 0.250 | 0.375 | 0.040 | PPC250-375A |
| 150 | 3.0 | AlN | Thin | X | N, T, H | 0.250 | 0.375 | 0.040 | ANC250-375 |
| 200 | 1.0 | AlN | Thin | X | N, T, H | 0.375 | 0.375 | 0.040 | ANC375-375 |
| 250 | 1.0 | BeO | Thin | X | N, T, H | 0.375 | 0.375 | 0.040 | PPC375-375A |




*X Wrap*




*W Wrap*

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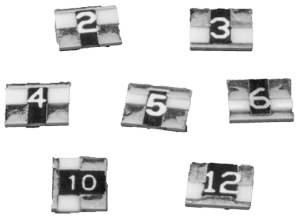



## Chip Attenuators
## Up to 250 Watts, Up to 18 GHz

Powerfilm™ chip attenuators from API Inmet come in two varieties: "Temperature Stable" (standard) and "Temperature Variable" attenuators. The standard attenuators reduce the RF power uniformly at all temperatures while the temperature-variable chips are designed to reduce their attenuation at elevated temperatures to provide optimal response needed in signal- leveling applications. Chip attenuators are used in amplifier circuits, receivers, up/down converters, phase-matched arrays, and switching applications. Depending on desired specifications, chips are fabricated on BeO, Aluminum Nitride, or Alumina ceramics with either thin or thick resistors. Other designs, values and options may be available upon request.

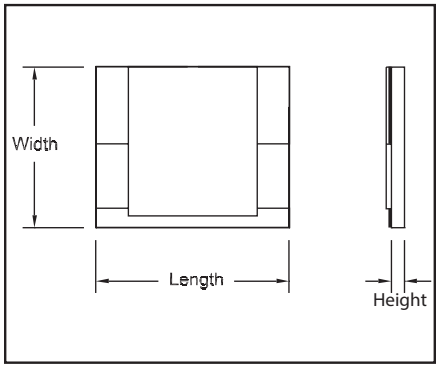
| Power (Watts) | Frequency (GHz) | Ceramic | File | Wrap | Finish Option | Width | Length | Height | Model |
|---|---|---|---|---|---|---|---|---|---|
| 0.75 | 8.0 | Alumina | Thin | F | N, T, H, G | 0.060 | 0.075 | 0.010 | PCAAF |
| 0.75 | 18.0 | Alumina | Thin | Tabbed | G, T, H | 0.060 | 0.075 | 0.040 | PCAAL |
| 0.75 | 18.0 | Alumina | Thin | W | N, T, H, G | 0.060 | 0.075 | 0.010 | PCAAW |
| 0.75 | 18.0 | Alumina | Thin | | N, T, H, G | 0.060 | 0.075 | 0.010 | PCAA |
| 1.5 | 4.0 | Alumina | Thin | F | N, T, H, G | 0.125 | 0.150 | 0.010 | PCAF |
| 1.5 | 12.4 | Alumina | Thin | | N, T, H, G | 0.125 | 0.150 | 0.010 | PCA |
| 1.5 | 12.4 | Alumina | Thin | W | N, T, H, G | 0.125 | 0.150 | 0.010 | PCAW |
| 1.5 | 12.4 | Alumina | Thin | Tabbed | G, T, H | 0.125 | 0.150 | 0.040 | PCAL |
| 10.0 | 4.0 | BeO | Thin | G | N, T, H | 0.100 | 0.200 | 0.040 | KPA10 |
| 20.0 | 4.0 | BeO | Thin | G | N, T, H | 0.250 | 0.250 | 0.040 | KPA20 |
| 50.0 | 1.0 | BeO | Thin | G | N, T, H | 0.375 | 0.375 | 0.040 | KPA50 |
| 100.0 | 0.4 | BeO | Thick | G | N, T, H | 0.500 | 0.500 | 0.040 | TPA100 |
| 100.0 | 0.5 | BeO | Thin | G | N, T, H | 0.500 | 0.500 | 0.040 | KPA100 |
| 100.0 | 2.3 | AlN | Thick | G, Tabbed | N, T, H | 0.350 | 0.225 | 0.040 | 2KNA100 |
| 100.0 | 3.0 | AlN | Thin | G, Tabbed | N, T, H | 0.375 | 0.250 | 0.040 | 3KNA100 |
| 150.0 | 1.9 | AlN | Thick | G, Tabbed | N, T, H | 0.375 | 0.250 | 0.040 | 2KNA150 |
| 250.0 | 1.0 | AlN | Thick | G, Tabbed | N, T, H | 0.375 | 0.375 | 0.040 | 1KNA250 |
| 250.0 | 2.3 | AlN | Thick | G, Tabbed | N, T, H | 0.500 | 0.500 | 0.040 | 2KNA250 |


## Temperature Variable Attenuators
## Up to 18 GHz

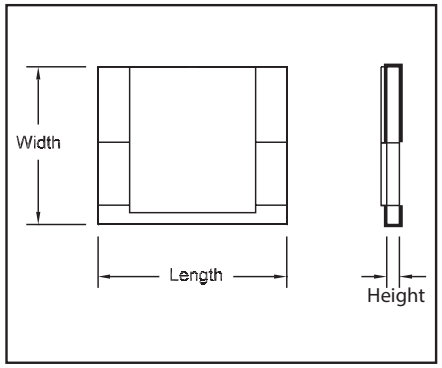
Powerfilm temperature-variable chip attenuators are designed to reduce their attenuation at elevated temperatures to provide optimal response needed in signal-leveling applications. TCA chips are fabricated on Alumina ceramics with proprietary thick resistors. Other designs, values and options may be available upon request.

| Power (Watts) | Frequency (GHz) | Temperature Coefficient of Attenuation | Ceramic | Film | Wraps | Finish Option | Width | Length | Height | Model |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.2 | 18.0 | -0.005 | Alumina | Thick | F | N, T, H | 0.060 | 0.075 | 0.010 | TCAAF-N05 |
| 0.2 | 18.0 | -0.005 | Alumina | Thick | | N, T, H | 0.060 | 0.075 | 0.010 | TCAA-N05 |
| 0.2 | 18.0 | -0.005 | Alumina | Thick | W | N, T, H | 0.060 | 0.075 | 0.010 | TCAAW-N05 |
| 1.5 | 12.0 | -0.005 | Alumina | Thick | F | N, T, H | 0.125 | 0.150 | 0.010 | TCAF-N05 |
| 1.5 | 12.0 | -0.005 | Alumina | Thick | | N, T, H | 0.125 | 0.150 | 0.010 | TCA-N05 |
| 1.5 | 12.0 | -0.005 | Alumina | Thick | W | N, T, H | 0.125 | 0.150 | 0.010 | TCAW-N05 |
| 1.5 | 12.0 | -0.009 | Alumina | Thick | F | N, T, H | 0.125 | 0.150 | 0.010 | TCAF-N09 |
| 1.5 | 12.0 | -0.009 | Alumina | Thick | | N, T, H | 0.125 | 0.150 | 0.010 | TCA-N09 |
| 1.5 | 12.0 | -0.009 | Alumina | Thick | W | N, T, H | 0.125 | 0.150 | 0.010 | TCAW-N09 |

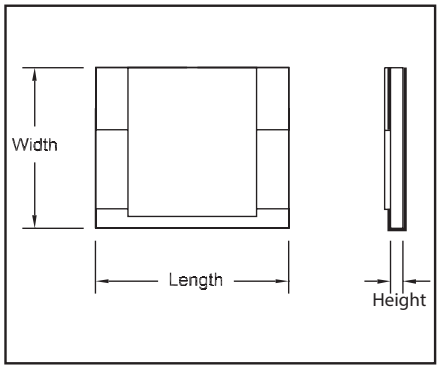
## Attenuator Wraps



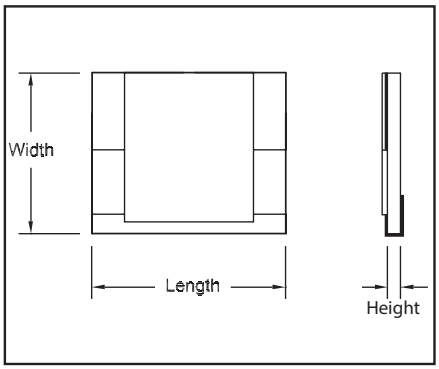

*No Wrap*



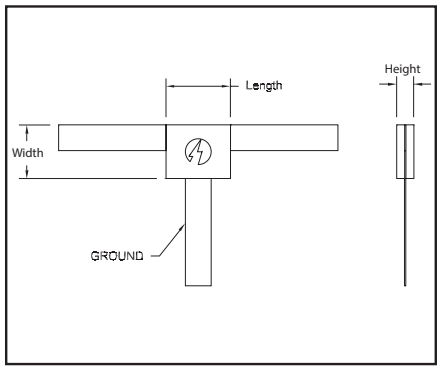

*F Wrap*



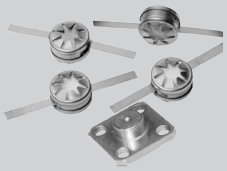

*G Wrap*




*W Wrap*




*Tabbed*



### Pill Terminations and Attenuators for Stripline Applications Up to 10 Watts, Up to 27 GHz

API Inmet Powerfilm™ product line includes a selection of passive resistive components designed for use with stripline circuits. Pill terminations and attenuators with ground compression springs and RF input/output tabs are intended for drop-in insertion into a stripline circuit. The stripline flange termination are commonly used for dissipation of power in stripline couplers and isolators. Stripline products are available for frequencies up to 27 GHz and power levels up to 10 Watts average. Other designs, values and options may be available upon request.

**Pill Terminations**

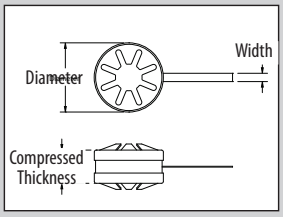
| Power (Watts) | Frequency (GHz) | Ceramic Substrate | Resistor Film | Diameter (Inches) | Width (Inches) | Compressed Thickness (Inches) | Model |
|---|---|---|---|---|---|---|---|
| 1 | 18.0 | BeO | Thin | 0.250 | 0.06 | 0.125 | PST-1 |
| 3 | 18.0 | BeO | Thin | 0.250 | 0.06 | 0.125 | PST-2 |
| 1 | 6.0 | Alumina | Thin | 0.250 | 0.03 | 0.075 | PST-5 |
| 1 | 18.0 | Alumina | Thin | 0.250 | 0.03 | 0.125 | PST-62 |

**Pill Attenuators**

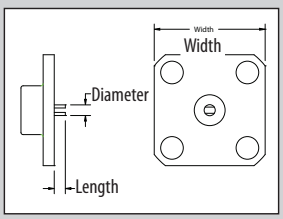
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 18.0 | Alumina | Thin | 0.250 | 0.03 | 0.125 | PST-62 |

**Stripline Flange Terminations**

| | | | | | Diameter | Width | Length | |
|---|---|---|---|---|---|---|---|---|
| ♦ | 1 | 27.0 | Alumina | Thin | 0.050 | 0.500 | 0.050 | PFT500-1W |
| ♦ | 10 | 18.0 | BeO | Thin | 0.050 | 0.500 | 0.050 | PFT500-10W |




*Pill Terminations*




*Stripline Flange Terminations*

# RESISTORS ROD

# DC - 40 GHz CARBON AND THIN FILM

MODELS:

DC–40 GHz Performance / Excellent Uniformity
Minimum Non–Inductive Adjustment / Solderable Terminals

## SPECIFICATIONS:

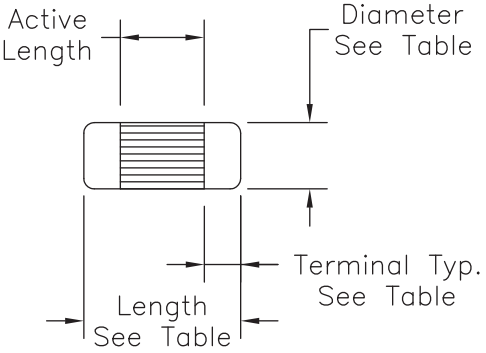
*Electrical:*

Resistance Range ____ 1 – 600 Ohms
Resistance Tolerance ____ ±1% Standard

Power Handling ____ 0.10 – 50 Watts
(Depending upon Size and Heatsinking)
Temperature Coefficient ____ –250 ppm

*Mechanical:*

Substrates ____ Alumina & BeO
Protective Coating ____ Clear High–Temp Silicone Coating
Terminals ____ Solderable Silver finish




| Diameter | Length | Terminal | Active Length | Ceramic | Resistor Film | Model |
|---|---|---|---|---|---|---|
| 0.020 | 0.120 | 0.025 | 0.070 | Alumina | Carbon | RC020-120AL |
| 0.020 | 0.120 | 0.025 | 0.070 | Alumina | Thin | RM020-120AL |
| 0.020 | 0.120 | 0.025 | 0.070 | BeO | Carbon | RC020-120BE |
| 0.030 | 0.120 | 0.025 | 0.070 | Alumina | Carbon | RC030-120AL |
| 0.030 | 0.120 | 0.025 | 0.070 | BeO | Carbon | RC030-120BE |
| 0.040 | 0.090 | 0.025 | 0.040 | Alumina | Carbon | RC040-90AL |
| 0.040 | 0.130 | 0.025 | 0.080 | Alumina | Carbon | RC040-130AL |
| 0.040 | 0.130 | 0.04 | 0.050 | Alumina | Thin | RM040-130AL |
| 0.040 | 0.130 | 0.04 | 0.050 | BeO | Thin | RM040-130BE |
| 0.050 | 0.250 | 0.03 | 0.190 | Alumina | Carbon | RC050-250AL |
| 0.050 | 0.250 | 0.03 | 0.190 | BeO | Carbon | RC050-250BE |
| 0.060 | 0.125 | 0.03 | 0.065 | Alumina | Carbon | RC060-125AL |
| 0.060 | 0.125 | 0.03 | 0.065 | BeO | Carbon | RC060-125BE |
| 0.060 | 0.187 | 0.03 | 0.127 | Alumina | Carbon | RC060-187AL |
| 0.060 | 0.187 | 0.03 | 0.127 | BeO | Carbon | RC060-187BE |
| 0.060 | 0.250 | 0.03 | 0.190 | Alumina | Carbon | RC060-250AL |
| 0.060 | 0.250 | 0.03 | 0.190 | BeO | Carbon | RC060-250BE |
| 0.080 | 0.250 | 0.03 | 0.190 | Alumina | Carbon | RC080-250AL |
| 0.080 | 0.250 | 0.03 | 0.190 | BeO | Carbon | RC080-250BE |
| 0.120 | 0.250 | 0.06 | 0.130 | Alumina | Carbon | RC120-250AL |
| 0.120 | 0.250 | 0.06 | 0.130 | BeO | Carbon | RC120-250BE |
| 0.120 | 0.375 | 0.06 | 0.255 | Alumina | Carbon | RC120-375AL |
| 0.120 | 0.375 | 0.06 | 0.255 | BeO | Carbon | RC120-375BE |
| 0.120 | 0.500 | 0.06 | 0.380 | Alumina | Carbon | RC120-500AL |
| 0.120 | 0.500 | 0.06 | 0.380 | BeO | Carbon | RC120-500BE |
| 0.125 | 0.500 | 0.06 | 0.380 | Alumina | Carbon | RC125-500AL |
| 0.125 | 0.500 | 0.06 | 0.380 | BeO | Carbon | RC125-500BE |
| 0.250 | 0.750 | 0.06 | 0.630 | Alumina | Carbon | RC250-750AL |
| 0.250 | 0.750 | 0.06 | 0.630 | BeO | Carbon | RC250-750BE |
| 0.375 | 0.750 | 0.06 | 0.630 | Alumina | Carbon | RC375-750AL |
| 0.375 | 0.750 | 0.06 | 0.630 | BeO | Carbon | RC375-750BE |

## HOW TO ORDER:

Model Number: RC XXX-YYYMMRRR-1

- XXX: Outer Diameter
- YYY: Length
- MM: Material
  - BE = Beryllium Oxide
  - AL = Alumina
- RRR: Resistance
- 1: ±1% Tolerance

Ordering Examples:

Model Number: RM040–130AL50–5
Thin Film; ø.040 x .130 LG; Alumina; 50 Ohms ±5%

Model Number: RC 250–750BE50–1
Carbon Film; ø.250 x .750 LG; BeO; 50 Ohms ±1%

Model Number: RC 125–500AL75–1
Carbon; ø.125 x .500 LG; Alumina; 75 Ohms ±1%

# RESISTORS STEP-ROD

# DC - 26.5 GHz CARBON FILM

MODELS:

DC–26.5 GHz Performance / Excellent Uniformity
Minimum Non–Inductive Adjustment / Solderable Terminals

## SPECIFICATIONS:

*Electrical:*

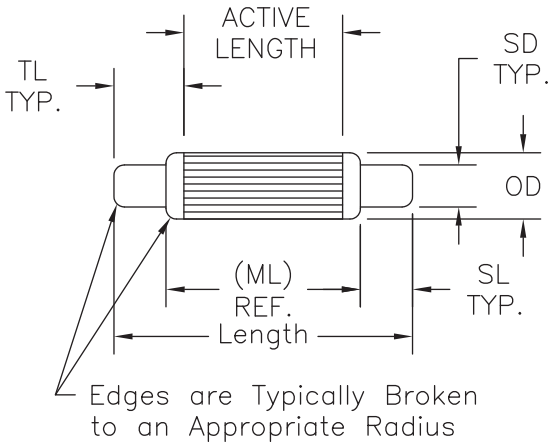
Resistance Range ____ 1 – 600 Ohms
Resistance Tolerance ____ ±1% Standard

Power Handling ____ 0.25 – 50 Watts
(Depending upon Size and Heatsinking)
Temperature Coefficient ____ –250 ppm

*Mechanical:*

Substrates ____ Alumina & BeO
Protective Coating ____ Clear High–Temp Silicone Coating

Terminals ____ Solderable Silver finish




| Diameter | Length | Step Diameter | Terminal | Middle Length | Active | Ceramic | Resistor | Model |
|---|---|---|---|---|---|---|---|---|
| 0.040 | 0.250 | 0.030 | 0.044 | 0.182 | 0.162 | Alumina | Carbon | RSC040-250AL |
| 0.040 | 0.250 | 0.030 | 0.044 | 0.182 | 0.162 | BeO | Carbon | RSC040-250BE |
| 0.050 | 0.250 | 0.041 | 0.052 | 0.168 | 0.146 | Alumina | Carbon | RSC050-250AL |
| 0.050 | 0.250 | 0.041 | 0.052 | 0.168 | 0.146 | BeO | Carbon | RSC050-250BE |
| 0.060 | 0.250 | 0.045 | 0.052 | 0.170 | 0.146 | Alumina | Carbon | RSC060-250AL |
| 0.060 | 0.250 | 0.045 | 0.052 | 0.170 | 0.146 | BeO | Carbon | RSC060-250BE |
| 0.062 | 0.250 | 0.046 | 0.052 | 0.156 | 0.146 | Alumina | Carbon | RSC062-250AL |
| 0.062 | 0.250 | 0.046 | 0.052 | 0.156 | 0.146 | BeO | Carbon | RSC062-250BE |
| 0.120 | 0.250 | 0.093 | 0.08 | 0.126 | 0.090 | Alumina | Carbon | RSC120-250AL |
| 0.120 | 0.250 | 0.093 | 0.08 | 0.126 | 0.090 | BeO | Carbon | RSC120-250BE |
| 0.120 | 0.500 | 0.094 | 0.08 | 0.374 | 0.340 | Alumina | Carbon | RSC120-500AL |
| 0.120 | 0.500 | 0.094 | 0.08 | 0.374 | 0.340 | BeO | Carbon | RSC120-500BE |
| 0.125 | 0.500 | 0.094 | 0.08 | 0.374 | 0.340 | Alumina | Carbon | RSC125-500AL |
| 0.125 | 0.500 | 0.094 | 0.08 | 0.374 | 0.340 | BeO | Carbon | RSC125-500BE |
| 0.250 | 1.000 | 0.187 | 0.145 | 0.754 | 0.710 | Alumina | Carbon | RSC250-1000AL |
| 0.250 | 1.000 | 0.187 | 0.145 | 0.754 | 0.710 | BeO | Carbon | RSC250-1000BE |
| 0.250 | 2.000 | 0.187 | 0.205 | 1.626 | 1.590 | Alumina | Carbon | RSC250-2000AL |
| 0.250 | 2.000 | 0.187 | 0.025 | 1.626 | 1.950 | BeO | Carbon | RSC250-2000BE |

## HOW TO ORDER:

Model Number: RSC XXX–YYYMMRRR–1

- XXX: Outer Diameter
- YYY: Length
- MM: Material
  - BE = Beryllium Oxide
  - AL = Alumina
- RRR: Resistance
- 1: ±1% Tolerance

Ordering Examples:

Model Number: RSC 040–250AL50–1
ø.040 x .250 LG; Alumina; 50 Ohms ±1%

Model Number: RSC 250–1000BE1250–1
ø.250 x 1.000 LG; Beryllium Oxide; 1250 Ohms ±1%

Model Number: RSC 125–500AL75–1
ø.125 x .500 LG; Alumina; 75 Ohms ±1%

# Ordering / General Information

## How to Order

When ordering, state the model number, description of the component and the frequency range as given in the catalog. You may place your order with the factory, Richardson RFPD, RFMW, or the Inmet Sales Representative in your area. Factory orders will be accepted by mail, telephone or other electronic communications pending confirmation on your standard purchase order form. Minimum factory order is $250.00 and subject to change. Quantity minimums may apply or non-standard orspecial order products.

Address all orders and communications to:
INMET INC.
300 Dino Drive
Ann Arbor, MI 48103 USA

Tel.: 888-244-6638 or 734-426-5553
Fax: 734-426-5557
E-mail: inmetsales@apitech.com
Web: www.inmet.apitech.com
CAGE Code: 64671

## Payment Terms

Terms are net 30 days for customers with established credit. All other orders must be prepaid, paid by credit card (VISA, MasterCard and American Express) or C.O.D.

## Shipping

All sales are F.O.B. Ann Arbor, Michigan. Unless specified in your order, orders will be shipped "best way" at the company's discretion. Inmet can only guarantee shipping date. Factory does not assume responsibility for carrier delays and cannot be held responsible for late, lost or damaged shipments. All claims must be filed with the carrier.

## Certificate of Compliance

A Certificate of Compliance is shipped with every order. It is located on the reverse side of the packing slip.

## Warranty

Inmet Corporation warrants each product it manufactures to be free from defects in material and workmanship under normal use and service. Inmet's only obligation under this warranty is to repair or replace, at its factory, any product or part thereof that is returned, with transportation charges prepaid, by the original purchaser within ONE YEAR from the date of shipment.

The foregoing warranty does not apply to, and in Inmet's sole opinion, products that have been subject to improper or inadequate maintenance, unauthorized modifications, misuse, or operation outside the published specifications for the product.

The warranty stated above is the sole and exclusive warranty and is in lieu of all other warranties, expressed or implied, including, but not limited to, any implied warranty or fitness for any particular purpose. Inmet shall not be liable for any direct or consequential injury, loss or damage incurred through the use, or inability to use any Inmet product.

## Returns

When returning a component to our factory, a Return Material Authorization (RMA) number must be obtained from Inmet. When contacting us for an RMA number, please indicate the model number, date of the original purchase, the product lot number and the original invoice number for the purchase. Please also include as much information as possible, including test data, pertaining to the nature of the malfunction or reason for the return and point of contact information for your company.

## Cancellations

Orders placed with Inmet may be cancelled only after authorization from Inmet. Any authorized cancellation is subject to cancellation charges as determined by Inmet. A component returned for credit will be subject to a restocking charge. If more than 6 months has elapsed since original purchase, the item may not be accepted for credit. Nonstandard components as determined by Inmet, cannot be returned for credit.

## Product Changes

Although all information in this catalog is current at the time of release, Inmet continuing Product Improvement Program makes it necessary for Inmet to reserve the right to change specifications without notice.

## Quality Assurance

Inmet's goal is to achieve complete customer satisfaction in the design, quality, delivery, pricing and support of our products. We continue to develop and improve our management systems and manufacturing processes in order to meet this goal.

Inmet's Quality Assurance system is registered to ISO-9001:2105. Our calibration program for inspection and test equipment complies with the requirements of MIL-STD 45662 and ANSI/ NCSLZ540-1.

# API Inmet – Wireless & Microwave Components

## *Innovative Design Solutions for Performance Driven Applications*

API Inmet is a manufacturer and designer of wireless and microwave components. As product development is a core value, Inmet continues to demonstrate its talent for tackling new design tasks. Unusual customer specifications which require Inmet engineering to build custom components enable Inmet to stay ahead in wireless technology by designing, creating, testing and delivering products to be used in 3G, 4G LTE and 5G systems and beyond.

Inmet also designs and manufactures resistive surface mount devices that include both thin film and thick film technology available in chip, leaded, or flange mount packages. These surface mount devices are sold under the Powerfilm™ brand and include legacy designs from the former Aeroflex / KDI-Resistor business unit.

### *Inmet Product Offerings*

- Attenuators
- Adapters
- Bias Tees
- Couplers
- DC Blocks
- Gain Equalizers
- Power Dividers
- Resistors
- Terminations

### *Applications*

- Wireless systems
- Space
- Radar
- Communications
- Industrial
- Commercial
- Laboratory Testing
- Military

Partnering with API Inmet, API Weinschel is a manufacturer of precision RF and microwave technologies and superior quality components and subsystems for wireless, defense, test and measurement, and broadband markets throughout the world.

api technologies corp.

API Technologies Corp. is a trusted provider of RF, microwave, power, electromagnetic and security solutions for high-reliability applications. The company designs, develops, and manufactures electronic components, modules, assemblies, systems and products for technically demanding defense, commercial, industrial and aerospace applications.

While API was founded in 1981, Inmet was acquired in 2015. Inmet's custom design capabilities have been generating a substantial number of innovative microwave and wireless components for use in many markets and programs for more than 40 years.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