AEROFLEX
INMET

RF / Microwave Components

Attenuators
Adapters
Bias Tees
Couplers
DC Blocks
Gain Equalizers
Power Dividers
Terminations
Test Cables

Short Form Catalog

Table of Contents

Company Profile 1
Attenuators 2-8
Impedance Matching Pads 5
Terminations 9-12
iCALIBER Test Cables 13
Adapters 13-17
DC Blocks..... 18-19
Bias Tees 20
Equalizers 21
Power Dividers 22
Directional Couplers, Opens, Shorts, Detectors, Dust Caps 23
How to Order 24
Distribution..... Inside Back Cover

Catalog Notes

The 2.9mm products shown herein are in fact 2.92mm components. Aeroflex / 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 "GPO™" and "GPPO™" appearing in this catalog are trademarks of Corning Gilbert Inc.

How to use this catalog

This catalog is designed to give you a general description of the broad selection of products manufactured by Aeroflex / Inmet. When used in conjunction with our web site, 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.aeroflex.com/inmet.**
2. Select the first item "INMET MODEL SEARCH" in the drop-down menu box at left.
3. Enter the Model Number of the Product you wish to see, and touch enter.
4. In the results box that appears, click on the link under the "Product Page" heading, and you will be directed to web page for the selected item.
5. From here you can download a Product Data Sheet for the selected item, or you may request a quote by clicking on the "Quote" button next to the model number.

RoHS Statement

All standard catalog products designed by Aeroflex / Inmet shipped after July 1, 2006 conform to the requirements as specified in the Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 and related Annex and Amendments on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS). The information presented herein is believed to be accurate, reliable and is a result of review of numerous sources including vendor submitted data sheets and certifications.

Please note:

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@aeroflex.com

A Word About Aeroflex / Inmet

Manufacturer and designer of wireless and microwave components, Aeroflex / Inmet's custom design capabilities have generated a substantial number of innovative microwave and wireless components for many markets and programs for more than 35 years.

As product development is a core value, Aeroflex / 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 systems and beyond.

Enthusiastic reaction to Aeroflex / 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)

Aeroflex / Inmet also designs and manufactures multi-component hybrid products such as "between series attenuators," combination "DC block/attenuators," and "by-pass attenuators." Today, Aeroflex / Inmet is a leader in reducing the costs of components while maintaining "first class performance." On demand inventory features hundreds of off-the-shelf catalog items ready for same-day shipment, or overnight delivery.

In addition, many products are available through Richardson RFPD, or RFMW, Aeroflex / Inmet's 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 Aeroflex / Inmet's success as well.

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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

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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

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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..0-10, 12, 15, 20, 30, 40, 50 and 60dB
Available Values
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)

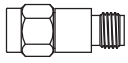
50 Ohms
Model 9033 (2 Watts)
Frequency Range..... DC to 4 GHz
Available Values..... 0-10, 12, 15, 20, 30dB
VSWR:
DC to 4GHz.....1.25:1 maximum
Model 9014 (2 Watts)
Frequency Range .....DC to 4 GHz
Available Values.....40, 50 & 60 dB
VSWR:
DC to 4 GHz.....1.25:1 maximum
Model 2051 (2 Watts)
Frequency 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

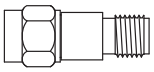
75 Ohms
Model 9033-XX/75 (2 Watts)
Frequency Range..... DC to 4GHz
Available Values..... 0, 3, 6, 10, 20 & 30dB
VSWR:
DC to 1GHz.....1.10:1 maximum
1GHz to 2GHz.....1.20:1 maximum
2GHz to 4GHz.....1.35:1 maximum

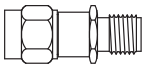
Complete Specification Sheet Available

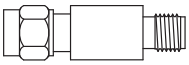
MODEL NO.	FREQ. (GHz)	CONNECTOR	VSWR	ATTN (dB)
0.5 Watt, 1 Watt and 2 Watt Attenuators				
AS398 (1 Watt)	3	SMA-M/F	1.20:1	1-10,12,15,20,30
AHC	6	SMA-M/F	1.20:1	1-10,12,15,20,30
9026, (Style A)	18	SMA-M/F	1.60:1	0-10,12,15,20,30
9029, (Style AH)	18	SMA-M/F	1.60:1	0-10,12,15,20,30
9023, (Style B)	18	SMA-M/F	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
2B	2.5	SMA-M/F, M/M, F/F	1.15:1	0-10,12,15,20,30,40,50,60
2C	2.5	SMA-M/F	1.15:1	0-10,12,15,20,30
2DH	2.5	SMA-M/F, M/M, F/F	1.15:1	0-10,12,15,20,30,40
6A, 6AH	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	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

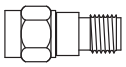
H=with Hex

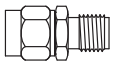

AS398

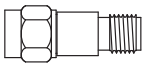

SMA A Series

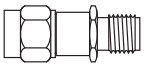

SMA AH Series


SMA B Series


SMA C Series


SMA DH Series


2.9mm 26A, 40A Series


2.9mm 26AH,40AH Series


2.4mm EH Series

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

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Attenuator Reference Guide

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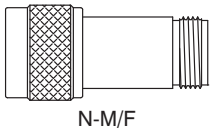
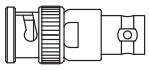
2 Watt Attenuators, N, BNC, SMB, TNC, GPO™, SMP, SMPM

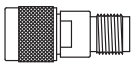
MODEL NO.	FREQ. (GHz)	CONNECTOR	VSWR	ATTN (dB)
9070	6	N-M/F	1.25:1	1-10,12,15,20,30,40
2N	2.5	N-M/F, M/M, F/F	1.15:1	0-10,12,15,20,30,40,50,60
6N	6	N-M/F, M/M, F/F	1.20:1	0-10,12,15,20,30,40,50,60
18N	18	N-M/F, M/M, F/F	1.35:1	0-10,12,15,20,30,40,50,60
9033	4	BNC-M/F	1.25:1	0-10,12,15,20,30
9014	4	BNC-M/F	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

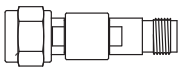
Note: GPO™ and SMP male connectors are available in full and limited detent.

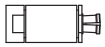

N-M/F


BNC-M/F


SMB-M/F


TNC-M/F, 9036

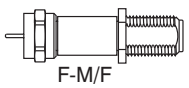

TNC-M/F

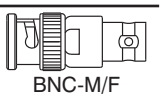

SMP/GPO™-M/F


SMPM-M/F

2 Watt 75 Ohm Attenuators

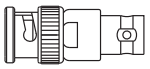
3F	3	F-M/F	1.15:1	3,6,10,15,20,30
9033-XX/75	4	BNC-M/F	1.35:1	0,3,6,10,20,30

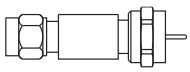

F-M/F


BNC-M/F

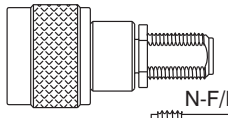
1 Watt Impedance Matching Pads (50 to 75 Ohm)

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

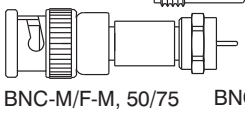

BNC-M/F, 50/75


SMA-F/F-F, 50/75

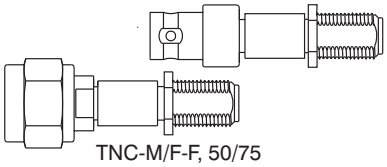
SMA-M/F-M, 50/75


N-F/F-M, 50/75

N-M/F-F, 50/75

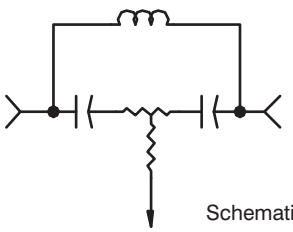

BNC-M/F-M, 50/75

BNC-F/F-F, 50/75


TNC-M/F-F, 50/75

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


Schematic Diagram

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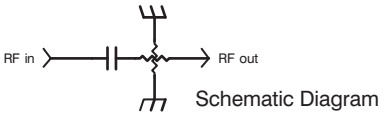
Attenuator Reference Guide

2 Watt DC Blocking Attenuators *(Also See DC Block Section, page 19)*

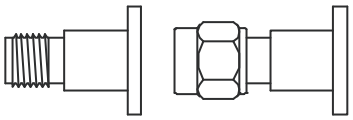
MODEL NO.	FREQ. (GHz)	CONNECTOR	VSWR	ATTN (dB)
8516S-XX	0.01-2	SMA-M/F	1.15:1	0-10,12, 20



Schematic Diagram

2 Watt Flange Mount Attenuators

2004	18	SMA-M/F	1.35:1	0-10,12,15,20,30
2086K	18	2.9mm-F/PIN 4 hole	1.50:1	0-12
2087K	18	2.9mm-M/PIN 4 hole	1.50:1	0-12


Model 2086 Model 2087

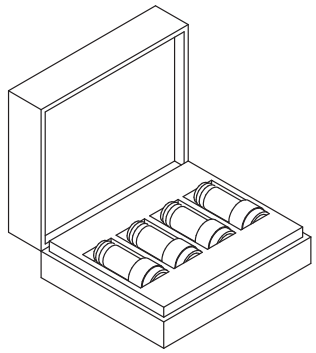
Adapting Attenuators, Between Series

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


N/F-SMA/M N/M-SMA/F

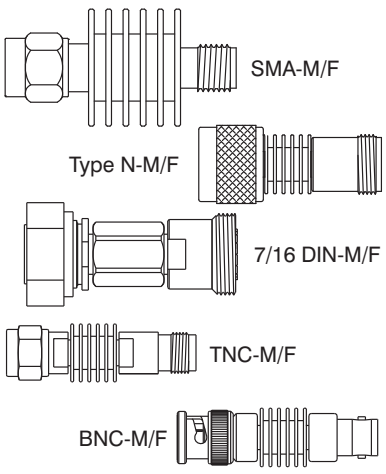
Calibrated Attenuator Sets

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


Set 9401

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



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Attenuator Reference Guide

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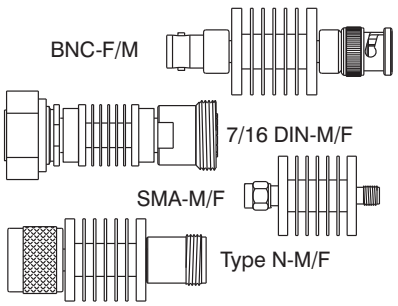
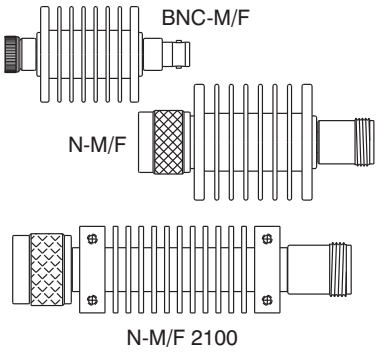
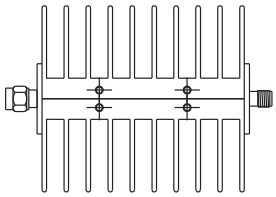
MODEL NO.	FREQ. (GHz)	CONNECTOR	VSWR	ATTN (dB)
10 Watt Attenuators, Convection Cooled				
6B10W	6	SMA-M/F, M/M, F/F	1.20:1	0-10,12,20,30,40
18B10W	18	SMA-M/F, M/M, F/F	1.40:1	0-10,12,20,30,40
6N10W	6	N-M/F, M/M, F/F	1.20:1	0-10,12,20,30,40
18N10W	18	N-M/F, M/M, F/F	1.40:1	0-10,12,20,30,40
2D10W	2.5	7/16 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



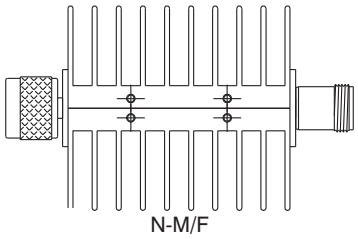
20 Watt Attenuators, Convection Cooled				
6B20W	6	SMA-M/F, M/M, F/F	1.20:1	0,3,6,10,20,30,40
18B20W	18	SMA-M/F, M/M, F/F	1.40:1	0,3,6,10,20,30,40
2099 w/mounting holes	18	SMA-M/F, M/M, F/F	1.40:1	0,3,6,10,20,30,40
6N20W	6	N-M/F, M/M, F/F	1.20:1	0,3,6,10,20,30,40
2100 w/mounting holes	18	N-M/F, M/M, F/F	1.40:1	0,3,6,10,20,30,40
18N20W	18	N-M/F, M/M, F/F	1.40:1	0,3,6,10,20,30,40
2D20W	2.5	7/16 DIN-M/F, M/M, F/F	1.25:1	0,3,6,10,20,30,40
7D20W	7.5	7/16 DIN-M/F, M/M, F/F	1.45:1	0,3,6,10,20,30,40
4BNC20W	4	BNC-M/F, M/M, F/F	1.25:1	0,3,6,10,20,30,40
6T20W	6	TNC-M/F, M/M, F/F	1.20:1	0,3,6,10,20,30,40
18T20W	18	TNC-M/F, M/M, F/F	1.40:1	0,3,6,10,20,30,40



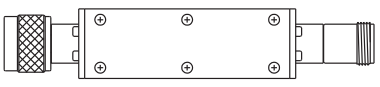
25 Watt Attenuators, Convection Cooled				
6B25W	6	SMA-M/F, M/M, F/F	1.20:1	0,3,6,10,20,30,40
18B25W	18	SMA-M/F, M/M, F/F	1.40:1	0,3,6,10,20,30,40
6N25W	6	N-M/F, M/M, F/F	1.20:1	0,3,6,10,20,30,40
18N25W	18	N-M/F, M/M, F/F	1.40:1	0,3,6,10,20,30,40
2D25W	2.5	7/16 DIN-M/F, M/M, F/F	1.25:1	0,3,6,10,20,30,40
7D25W	7.5	7/16 DIN-M/F, M/M, F/F	1.45:1	0,3,6,10,20,30,40
2BNC25W	2.5	BNC-M/F, M/M, F/F	1.25:1	0,3,6,10,20,30,40
4BNC25W	4	BNC-M/F, M/M, F/F	1.25:1	0,3,6,10,20,30,40
6T25W	6	TNC-M/F, M/M, F/F	1.20:1	0,3,6,10,20,30,40
18T25W	18	TNC-M/F, M/M, F/F	1.40:1	0,3,6,10,20,30,40



50 Watt Attenuators, Convection Cooled				
6B50W	6	SMA-M/F, M/M, F/F	1.25:1	0,3,6,10,20,30,40
18B50W	18	SMA-M/F, M/M, F/F	1.45:1	0,3,6,10,20,30,40
6N50W	6	N-M/F, M/M, F/F	1.25:1	0,3,6,10,20,30,40
18N50W	18	N-M/F, M/M, F/F	1.45:1	0,3,6,10,20,30,40
2D50W	2.5	7/16 DIN-M/F, M/M, F/F	1.25:1	0,3,6,10,20,30,40
7D50W	7.5	7/16 DIN-M/F, M/M, F/F	1.45:1	0,3,6,10,20,30,40
4BNC50W	4	BNC-M/F, M/M, F/F	1.25:1	0,3,6,10,20,30,40
6T50W	6	TNC-M/F, M/M, F/F	1.25:1	0,3,6,10,20,30,40
18T50W	18	TNC-M/F, M/M, F/F	1.45:1	0,3,6,10,20,30,40



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



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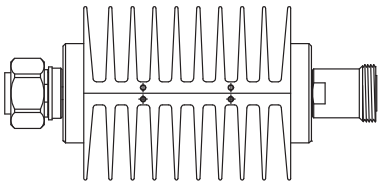
Attenuator Reference Guide

100 Watt Attenuators, Convection Cooled

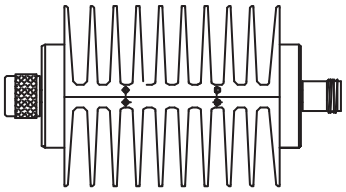
MODEL NO.	FREQ. (GHz)	CONNECTOR	VSWR	ATTN (dB)
2B100W	2.5	SMA-M/F, M/M, F/F	1.35:1	3,6,10,20,30,40
6B100W	6	SMA-M/F, M/M, F/F	1.45:1	3,6,10,20,30,40
2N100W	2.5	N-M/F, M/M, F/F	1.35:1	3,6,10,20,30,40
6N100W	6	N-M/F, M/M, F/F	1.45:1	3,6,10,20,30,40
2D100W	2.5	7/16 DIN-M/F, M/M, F/F	1.35:1	3,6,10,20,30,40
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



7/16 DIN-M/F

150 Watt Attenuators, Convection Cooled

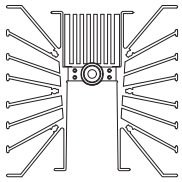
2B150W	2.5	SMA-M/F, M/M, F/F	1.25:1	3,6,10,20,30,40
4B150W	4	SMA-M/F, M/M, F/F	1.35:1	3,6,10,20,30,40
2N150W	2.5	N-M/F, M/M, F/F	1.25:1	3,6,10,20,30,40
4N150W	4	N-M/F, M/M, F/F	1.35:1	3,6,10,20,30,40
2D150W	2.5	7/16 DIN-M/F, M/M, F/F	1.30:1	3,6,10,20,30,40
4D150W	4	7/16 DIN-M/F, M/M, F/F	1.40:1	3,6,10,20,30,40
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

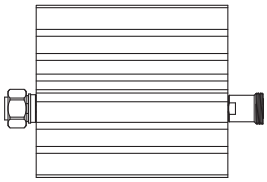
2B200W	2.5	SMA-M/F, M/M, F/F	1.25:1	3,6,10,20,30,40
4B200W	4	SMA-M/F, M/M, F/F	1.50:1	3,6,10,20,30,40
2N200W	2.5	N-M/F, M/M, F/F	1.25:1	3,6,10,20,30,40
4N200W	4	N-M/F, M/M, F/F	1.50:1	3,6,10,20,30,40
2D200W	2.5	7/16 DIN-M/F, M/M, F/F	1.25:1	3,6,10,20,30,40
4D200W	4	7/16 DIN-M/F, M/M, F/F	1.50:1	3,6,10,20,30,40
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

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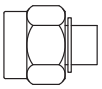
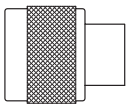
Termination Reference Guide

AEROFLEX INMET

1 and 2 Watt Ultra Low Cost Terminations

MODEL NO.	FREQ. (GHz)	CONNECTOR	VSWR
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
3204A-BNCM	4	BNC-M	1.35:1
3206-TNCM	6	TNC-M	1.30:1


TS398

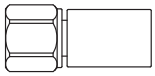

3206-NM

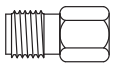
0.5 Watt and 1 Watt Terminations

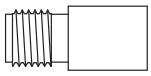
TS060*		6	SMA-M, SMA-F	1.10:1
3016B*		18	SMA-M	1.20:1
TS180*		18	SMA-M, SMA-F	1.20:1
TS260*		26.5	SMA-M, SMA-F	1.25:1
3206-SMARP		6	SMA-M Reverse Polarity	1.20:1
3201-TNCRP		1	TNC-M, Reverse Polarity	1.25:1
TP180M	(1.0W)	18	SMP-M	1.20:1
TMP400	(0.5W)	40	SMPM-F	1.50:1
TMP500	(0.5W)	50	SMPM-F	2.00:1
TG180	(1.0W)	18	GPO-M, GPO-F	1.20:1
TS400*	(0.5W)	40	2.9mm-M, 2.9mm-F	1.20:1
TS400H*	(0.5W)	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

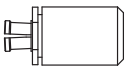
*With chain, add suffix "C" Note: G and P models are full detent, GL and PL models are limited detent
Note: GPO™ and SMP male connectors are available in full and limited detent.

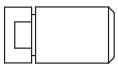

SMA-M


2.4mm-M


SMA-F


2.9mm-F

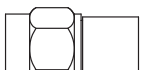

GPO™-F

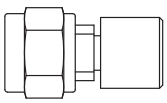

SMP-M

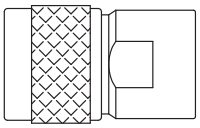
2 Watt Terminations

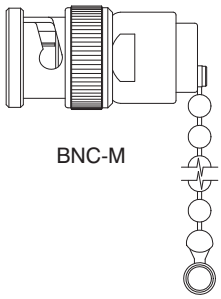
3029*	4	BNC-F		1.15:1
3038*	4	BNC-M		1.20:1
3030*	4	BNC-M		1.15:1
3004-067*	6	SMA-M, SMA-F		1.10:1
3004*	18	SMA-M, SMA-F		1.20:1
3070-067*	6	N-M, N-F	Brass	1.10:1
TN060*	6	N-M, N-F		1.15:1
TN180*	18	N-M, N-F		1.25:1
3018*	18	N-M, N-F	Brass	1.30:1
3070*	18	N-M, N-F	Brass	1.20:1
3101*, 3102*	18	N-M, N-F		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

*With chain, add suffix "C"


SMA-M

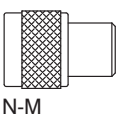

TNC-M

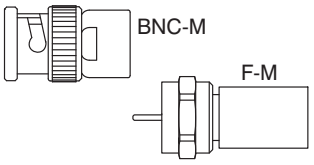

N-M


BNC-M

75 Ohm 1 and 2 Watt Terminations

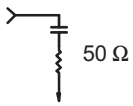
3038/75 (1W)	1	BNC-M	1.10:1
TF030M	3	F-M	1.20:1
TF030F	3	F-F	1.20:1
TN040/75	4	N-M, N-F	1.25:1


N-M



1 Watt DC Blocking Terminations *(Also See DC Block Section, page 19)*

8530S	30 kHz-18	SMA-M, SMA-F	INNER
8530N	30 kHz-18	N-M, N-F	INNER
8530PF	30 kHz-23	SMP-F	INNER
8541-MPF	100 kHz-50	SMPM-F	INNER



Schematic Diagram

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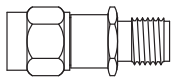
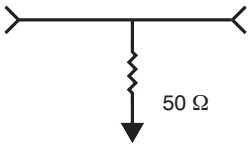
Termination Reference Guide

2 Watt Terminations, Feedthru

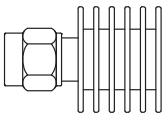
MODEL NO.	FREQ. (GHz)	CONNECTOR	VSWR
3032	0.5	BNC-M/F	1.25:1
3008, 3008H	1	SMA-M/F	1.25:1

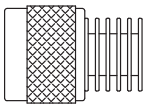

SMA-M/F with Hex

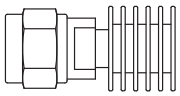


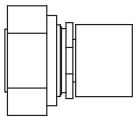
5 Watt Terminations, Convection Cooled

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


SMA-M

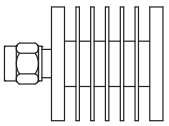

N-M

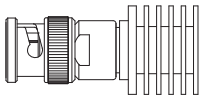

TNC-M

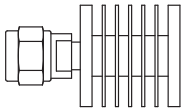

7/16 DIN-M

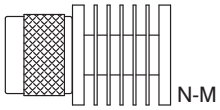
10 Watt Terminations, Convection Cooled

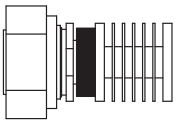
TB040-10W	4	BNC-M, BNC-F	1.25:1
TS060-10W	6	SMA-M, SMA-F	1.20:1
TS180-10W	18	SMA-M, SMA-F	1.40:1
3074	12.4	SMA-M, SMA-F	1.20:1
3093	12.4	N-M, N-F	1.25:1
TN060-10W	6	N-M, N-F	1.25:1
TN180-10W	18	N-M, N-F	1.35:1
TD020-10W	2.5	7/16 DIN-M, 7/16 DIN-F	1.20:1
TD075-10W	7.5	7/16 DIN-M, 7/16 DIN-F	1.30:1
TT060-10W	6	TNC-M, TNC-F	1.20:1
TT180-10W	18	TNC-M, TNC-F	1.40:1


SMA-M


BNC-M

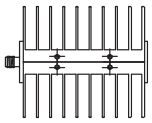

TNC-M

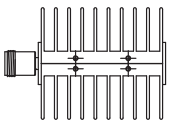

N-M

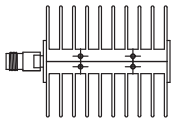

7/16 DIN-M

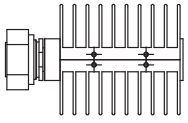
25 Watt Terminations, Convection Cooled

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


SMA-F


N-F


TNC-F


7/16 DIN-M

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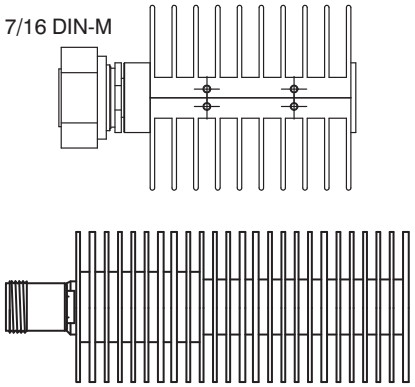
Termination Reference Guide

AEROFLEX INMET

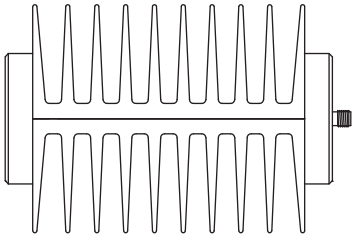
MODEL NO.	FREQ. (GHz)	CONNECTOR	VSWR
40 Watt Termination, Convection Cooled			
3114SX	12.4	SMA-M, SMA-F	1.35:1
50 Watt Terminations, Convection Cooled			
TS060-50W	6	SMA-M, SMA-F	1.25:1
TS180-50W	18	SMA-M, SMA-F	1.45:1
TN060-50W	6	N-M, N-F	1.25:1
3114NX	12.4	N-M, N-F	1.35:1
TN180-50W	18	N-M, N-F	1.45:1
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



Model 3114N-F

100 Watt Terminations, Convection Cooled

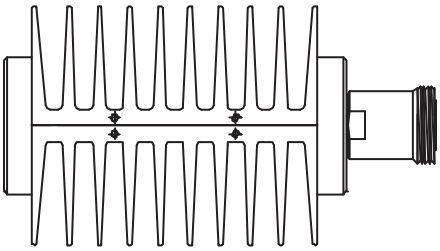
TS020-100W	2.5	SMA-M, SMA-F	1.30:1
TS060-100W	6	SMA-M, SMA-F	1.40:1
TN020-100W	2.5	N-M, N-F	1.30:1
TN060-100W	6	N-M, N-F	1.40:1
TB040-100W	4	BNC-M, BNC-F	1.45:1
TT020-100W	2.5	TNC-M, TNC-F	1.30:1
TT060-100W	6	TNC-M, TNC-F	1.40:1
TD020-100W	2.5	7/16 DIN-M, 7/16 DIN-F	1.35:1
TD060-100W	6	7/16 DIN-M, 7/16 DIN-F	1.45:1



SMA-F

150 Watt Terminations, Convection Cooled

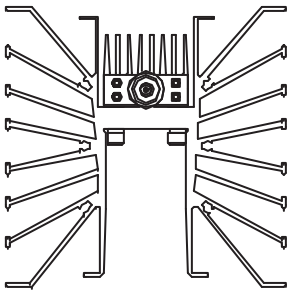
TS020-150W	2.5	SMA-M, SMA-F	1.25:1
TS040-150W	4	SMA-M, SMA-F	1.35:1
TN020-150W	2.5	N-M, N-F	1.25:1
TN040-150W	4	N-M, N-F	1.35:1
TT020-150W	2.5	TNC-M, TNC-F	1.25:1
TT040-150W	4	TNC-M, TNC-F	1.35:1
TD020-150W	2.5	7/16 DIN-M, 7/16 DIN-F	1.30:1
TD040-150W	4	7/16 DIN-M, 7/16 DIN-F	1.40:1



7/16 DIN-F

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

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SERIES PCX HIGH POWER COAXIAL TERMINATIONS, DC TO 6 GHz

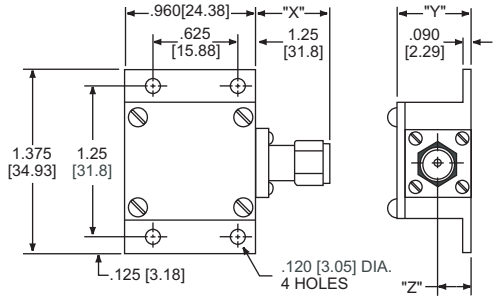
The PCX Series of High Power Terminations are designed to dissipate RF power when mounted to a heat sink or chill plate. Power levels up to 500 Watts in 50 Ohm impedance are available in units with SMA and Type N male or female connectors. High stability thin film resistive elements on beryllium oxide 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	Connector Type	VSWR Typical	Outline
PCX050-F-50 PCX050-M-50	50	DC - 6 GHz	SMA Female SMA Male	DC - 3 GHz: 1.25:1 3 - 6 GHz: 1.35:1	A
PCX050-F-100 PCX050-M-100	100	DC - 3 GHz	SMA Female SMA Male	DC - 3 GHz: 1.25:1	A
PCX050-F-150 PCX050-M-150 PCX100-F-150 PCX100-M-150	150	DC - 2 GHz	SMA Female SMA Male N Female N Male	DC - 1 GHz: 1.15:1 1 - 2 GHz: 1.40:1	B
PCX050-F-250 PCX050-M-250 PCX100-F-250 PCX100-M-250	250	DC - 800 MHz	SMA Female SMA Male N Female N Male	DC - 200 MHz: 1.15:1 200 - 400 MHz: 1.40:1 400 - 800 MHz: 1.30:1	B
PCX100-M-500	500	DC - 200 MHz	N Male	DC - 200 MHz: 1.15:1	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

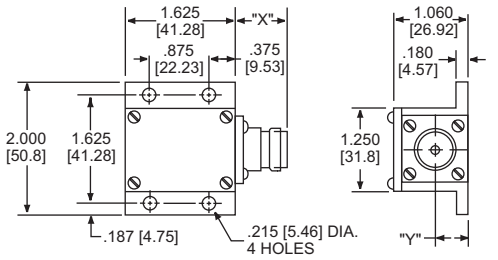
PHYSICAL DIMENSIONS



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, 250	.375 [9.53]	.515 [13.08]
PCX050-M-150, 250	.375 [9.53]	.515 [13.08]
PCX100-F-150, 250, 500	.736 [18.69]	.508 [12.9]
PCX100-M-150, 250, 500	.819 [20.8]	.508 [12.9]

SMA OR N CONNECTORS
150, 250 & 500 WATTS

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

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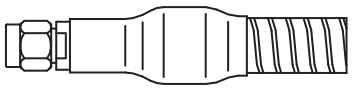
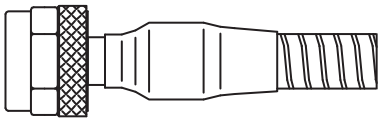
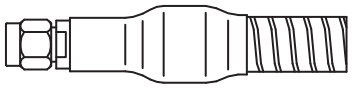
iCALIBER® Test Cables

Model	Connector	Frequency	Standard Lengths	Body Style
iCALIBER Test Cables				
ICAL18-SM	SMA-M/M	DC - 18 GHz	2, 3, & 4 feet 1, 1.5 & 2 meters	
ICAL18-NM	N-M/M	DC - 18 GHz	2, 3, & 4 feet 1, 1.5 & 2 meters	
ICAL26-35M	3.5mm-M/M	DC - 26.5 GHz	2, 3, & 4 feet	

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				❸								
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

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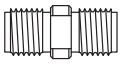
Adapter Reference Guide

CONNECTORS			MODEL NO.	FREQ. (Ghz)	VSWR	DESCRIPTION
SMA In Series Adapters						
F/F with O-Ring Seal			5211-137	3	1.10:1	Bulkhead Feedthru
F/F	M/M	M/F	5010, 5020, 5030	18	1.20:1	
F/F	M/M	M/F	5043, 5044, 5045	18	1.20:1	Gold Plated
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		5061	6	1.30:1	Ultra Low Cost Brass
SMA-M	N-F		5062	6	1.30:1	Ultra Low Cost Brass
SMA-F	N-M		5063	6	1.30:1	Ultra Low Cost Brass
SMA-F	N-F		5064	6	1.30:1	Ultra Low Cost Brass
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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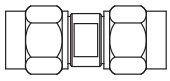
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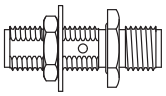
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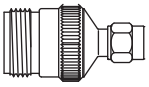
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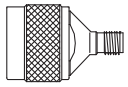
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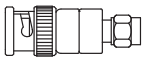
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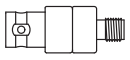
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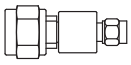
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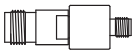
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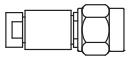
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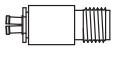
5193

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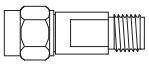
AEROFLEX INMET

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	5185, 5188, 5189	6	1.20:1	Ultra Low Cost, Brass
F/F			5303-067	6	1.07:1	Flange Mount 1" sq.
M/M			5304-067	6	1.07:1	Flange Mount 1" sq.
M/F			5305-067	6	1.07:1	Flange Mount 1" sq.
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-F	SMA-F		5293	12.4	1.20:1	Bulkhead Feedthru
N-F	SMA-F w/O-Ring		5294	12.4	1.20:1	Bulkhead Feedthru
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						
F/F	M/M	M/F	5186, 5187, 5194	6	1.20:1	Ultra Low Cost, Brass
M/F	F/F	M/M	5040, 5041, 5042	18	1.20:1	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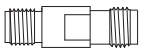
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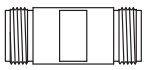
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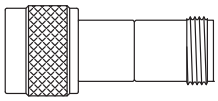
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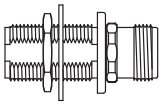
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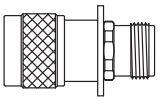
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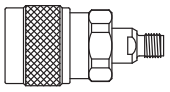
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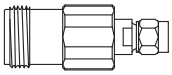
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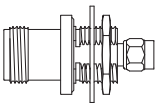
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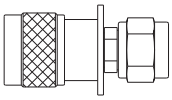
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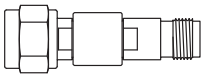
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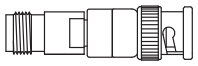
Adapter Reference Guide

CONNECTORS			MODEL NO.	FREQ. (Ghz)	VSWR	DESCRIPTION
TNC Between Series						
TNC-F	SMA-F		5241	18.5	1.30:1	Flange Mount
TNC-F	SMA-F		5349	12	1.30:1	Rt. Angle, 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-M	N-F		5706Q	7.5	1.35:1	Quick Connect
7/16 DIN-M	N-M		5707Q	7.5	1.35:1	Quick Connect
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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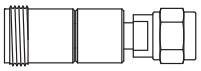
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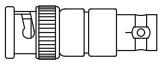
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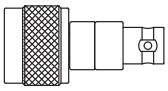
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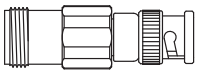
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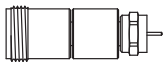
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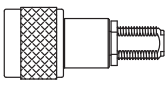
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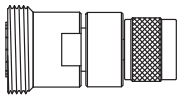
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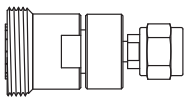
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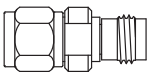
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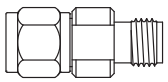
Adapter Reference Guide

AEROFLEX INMET

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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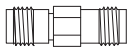

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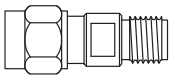

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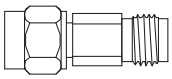

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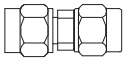

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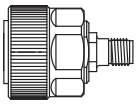

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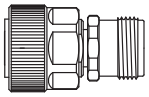

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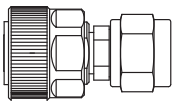

5114

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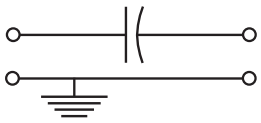
DC Block Reference Guide

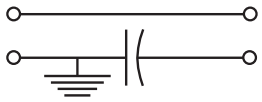
Inmet inner DC blocks have a capacitor in-series with the center conductor which prevents the flow of audio and direct current (DC) frequencies while offering minimum interference to RF signals up to 50GHz. Similarly outer DC blocks have a capacitor in-series with the outer conductor and the inner/outer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

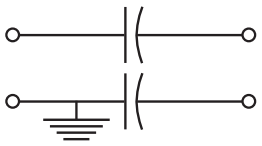
Inner Only



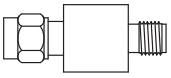
Outer Only



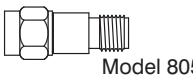
Inner/Outer



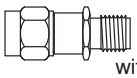
MODEL NO.	FREQ. (GHz)	CONNECTOR	VOLTAGE	BLOCK TYPE
DC Blocks, SMA				
8037	0.01-18	SMA-M/F	200	INNER
8038	0.01-18	SMA-M/F	200	OUTER
8039	0.01-18	SMA-M/F	200	INNER-OUTER
DC Blocks, SMA Microminiature				
8055	0.01-18	SMA-M/F	200	INNER
8055H	0.01-18	SMA-M/F	200	INNER
DC Blocks				
8046	0.01-18	N-M/F	200	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
8063A	7kHz-26.5	2.9mm-F/F	75	INNER
8066A	7kHz-26.5	2.9mm-M/M	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
8143A	0.01-40	2.9mm-M/F	200	INNER/OUTER
8144A	0.01-40	2,9mm-F/F	200	INNER
8145	0.01-40	2.9mm-F/F	200	OUTER
8146A	0.01-40	2.9mm-F/F	200	INNER/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
8100	0.30-2.5	7/16-M/F	100	INNER
DC Blocks, High Voltage				
8529A, AH	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
8550	0.8-2.8	7/16-M/F	3000	INNER



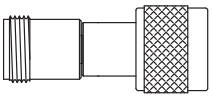
Models 8038 and 8039



Model 8055



with Hex



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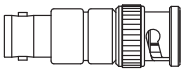
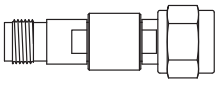
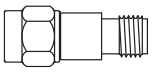


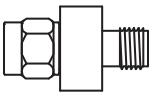
Model 8080



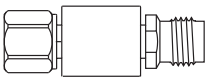
Model 8070



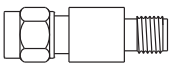
Model 8060A



Model 8142



Model 8179



Model 8532-SI-HV

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DC Block Reference Guide

AEROFLEX INMET

DC Blocks, Broadband

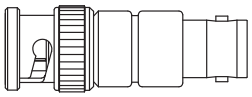
MODEL NO.	FREQ. (GHz)	CONNECTOR	VOLTAGE	BLOCK TYPE
8535	7 kHz-23	SMA-M/F	100	INNER
8535G, 8535GL	7 kHz-26.5	GPO-M/F	50	INNER
8535P, 8535PL	16kHz-26.5	SMP-M/F	50	INNER
8535K, 8535KH	7 kHz-40	2.9mm-M/F	35	INNER
8535E	7 kHz-50	2.4mm-M/F	35	INNER
8535MP	16kHz-50	SMPM-M/F	10	INNER

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

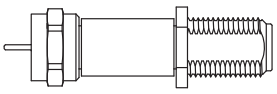
Model 8535E

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



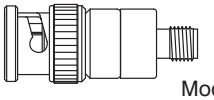
Model 8181



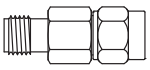
Model 8174

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

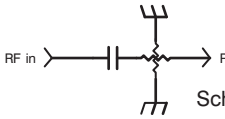


Model 8306

MODEL NO.	FREQ. (GHz)	CONNECTOR	VSWR	ATTN (dB)

2 Watt DC Blocking Attenuators *(Also See Attenuator Section, page 6)*

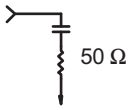
8516S-XX	0.01-2	SMA-M/F	1.15:1	0-10,12,20



Schematic Diagram

1 Watt DC Blocking Terminations (Also see Termination Section, Page 9)

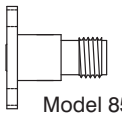
8530S	30 kHz-18	SMA-M, SMA-F	100	INNER
8530N	30 kHz-18	N-M, N-F	100	INNER
8530PF	30 kHz-23	SMP-F	100	INNER
8541-MPF	100 kHz-50	SMPM-F	10	INNER



Schematic Diagram

DC Blocking Connectors *(Accepts *0.009 and 0.012" Dia. Pins)*

8537KF	20 kHz-45	2.9mm-F	25	INNER
8537KM	20 kHz-45	2.9mm-M	25	INNER
8537VF*	25 kHz-50	1.85mm-F	25	INNER
8537VM*	25 kHz-50	1.85mm-M	25	INNER



Model 8537KF

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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

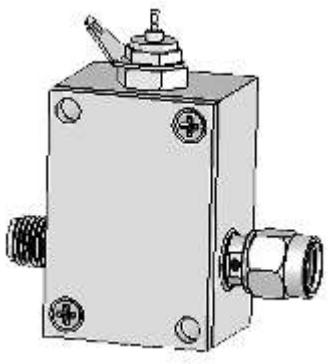
RF Connector Type
- E = 2.4mm
- K = 2.9mm
- N = Type N
- S = SMA
- D = 7/16 DIN
- T = TNC
- B = BNC
- F = F

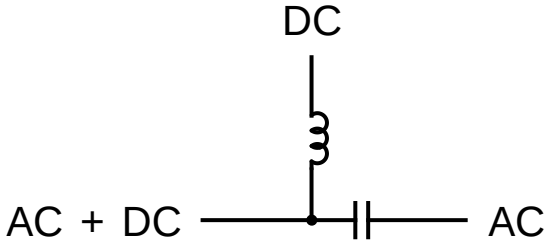
RF Connector Sex
- MF = Male "AC + DC" Connector / Female "AC" Connector
- FF = Both Connectors Female
- MM = Both Connectors Male
- FM = Female "AC + DC" Connector / Male "AC" Connector

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

Frequency

8 8 1 0 E M F 1 - 5 0





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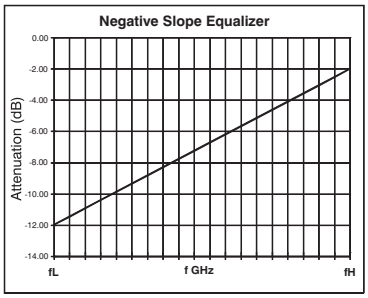
Equalizer Overview

Aeroflex / 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. Features include:

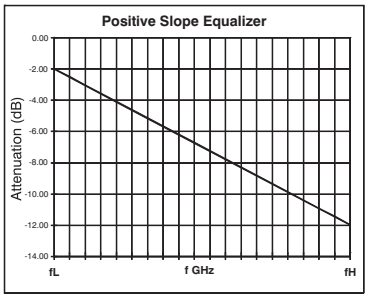
- DC to 40 GHz, high performance
- Broadband or narrowband frequency performance
- Fine grain tuning capability
- Standard connectors: SMA, 2.9mm, N, TNC, SMP, 2.4mm
- Meets MIL-SPEC environmental requirements
- Tubular and rectangular available depending on slope and frequency requirements.

Gain equalizers are passive microwave components that have an insertion loss characteristic that varies as a function of frequency. Aeroflex / Inmet can supply both standard and custom-designed equalizers to meet the needs of commercial and military customers alike. Aeroflex / Inmet has the 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.

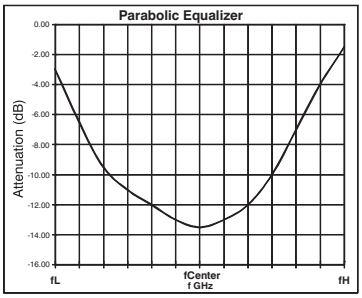
NEGATIVE SLOPE equalizers are typically used for applications to offset the excessive loss of long cable runs at high frequencies. The loss characteristic of the equalizer decreases linearly with frequency.



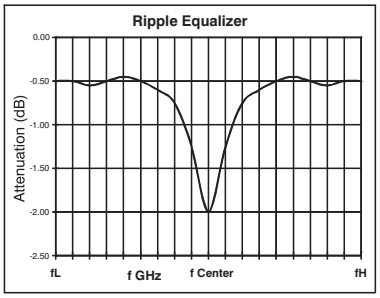
POSITIVE SLOPE equalizers are typically used for applications to offset excessive loss of low frequencies where waveguide transmission characteristics require an equalizer that has increasing attenuation with frequency.



PARABOLIC equalizers are used in applications where a broadband traveling wave tube (TWT) or solid state amplifier (SSA) has mximum 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. Conversely, an inverted parabolic equalizer has decreased attenuation at mid-band and increasing attenuation at band edges.

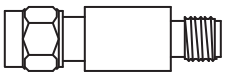


RIPPLE equalizers are used to flatten, gain ripple and spikes in a broadband application. The narrow band attenuation is adjustable in the bands where the ripple or spikes occur and flatten the response in these sub bands.



Standard Model Gain Equalizers

MODEL NO.	FREQ. (GHz)	Slope	Connectors
Equalizers (A Selection of Standard Models)			
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

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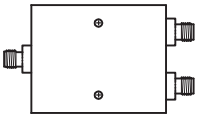
Power Dividers

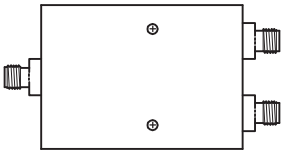
Wilkinson Power Dividers

Model	Connector	Frequency	Insertion Loss Max.	Phase Balance Max.	Isolation Min.
PD0001-S2	SMA	0.5 - 1.0 GHz	0.25 dB	2°	22 dB
PD0102-S2	SMA	1.0 - 2.0 GHz	0.25 dB	3°	22 dB
PD0002-S2	SMA	0.8 - 2.5 GHz	0.40 dB	3°	20 dB
PD0204-S2	SMA	2.0 - 4.0 GHz	0.30 dB	4°	20 dB
PD0004-S2	SMA	0.5 - 4.0 GHz	0.50 dB	4°	20 dB
PD0408-S2	SMA	4.0 - 8.0 GHz	0.35 dB	4°	20 dB
PD0208-S2	SMA	2.0 - 8.0 GHz	0.40 dB	4°	20 dB
PD0818-S2	SMA	8.0 - 18.0 GHz	0.60 dB	5°	20 dB
PD0218-S2	SMA	2.0 - 18.0 GHz	1.00 dB	5°	17 dB
PD0001-S4	SMA	0.5- 1.0 Ghz	0.40 dB	4°	20 dB
PD0102-S4	SMA	1.0 - 2.0 GHz	0.60 dB	4°	20 dB
PD0002-S4	SMA	0.8 - 2.5 GHz	0.70 dB	4°	20 dB
PD0204-S4	SMA	2.0 - 4.0 GHz	0.60 dB	6°	18 dB
PD0208-S4	SMA	2.0 - 8.0 GHz	1.00 dB	4°	18 dB
PD0218-S4	SMA	2.0 -18.0 GHz	1.50 dB	6°	15 dB

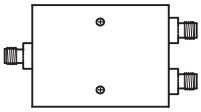
Model PD0001-S2



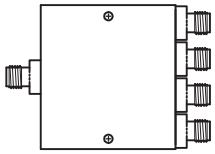
Model PD0102-S2



Model PD0002-S2



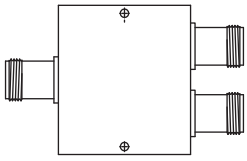
Model PD0204-S2



Model PD0102-S4

Wilkinson Power Dividers, GPS 2-Way, Type N

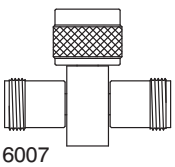
Model	Connector	Frequency	DC Power	DC Resistance (Input to Output)	Isolation Min.
PD1516-N2	Type N	1.5 - 1.6 GHz	12V 2 Amp Max.	0.1 Ohm Max.	22 dB



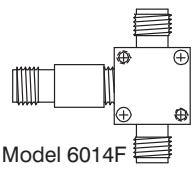
Model PD1516-N2

Resistive Power Dividers

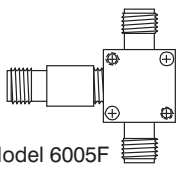
Model	Connector	Frequency	Insertion Loss Max.	Phase Balance Max.	Amplitude Balance Max.
6007-02	Type N	12.4 GHz	6.0dB	±2°	0.4 dB
6007	Type N	18.0 GHz	7.5dB	±3°	0.5 dB
6011-02	Type N	12.4 GHz	6.0dB	±2°	0.4 dB
6011	Type N	18.0 GHz	7.5 dB	±3°	0.5 dB
6019-02	TNC	12.4 GHz	6.0dB	±2°	0.4 dB
6019	TNC	18.0 GHz	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



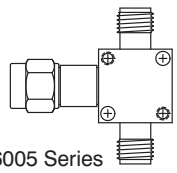
Model 6007



Model 6014F



Model 6005F



6005 Series

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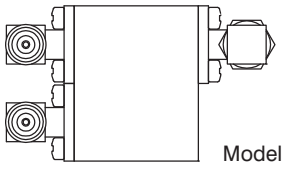
Directional Couplers, Opens & Shorts, Detectors, Dust Caps

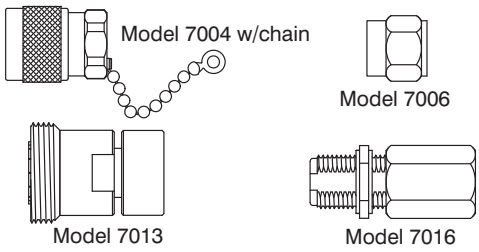
Directional Couplers

MODEL NO.	FREQ. (MHz)	CONNECTOR	Coupling (dB)
6910S	1850-1910	SMA-RT Angle	10
6911S	1850-1910	SMA	10
6910Q	1850-1910	QMA	10
6912S	824-849	SMA	10
6912Q	824-849	QMA	10
6913S	824-849	SMA-RT Angle	10


Model 6910S

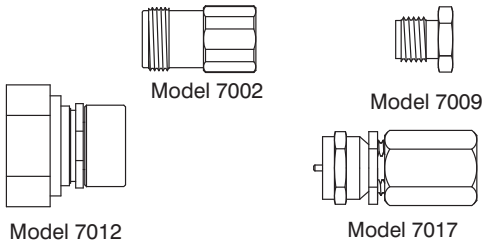
Open Circuits (also available with chain, add suffix "C")

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



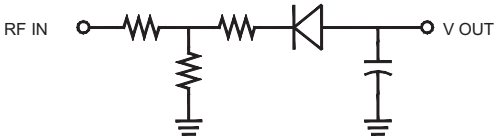
Short Circuits (also available with chain, add suffix "C")

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



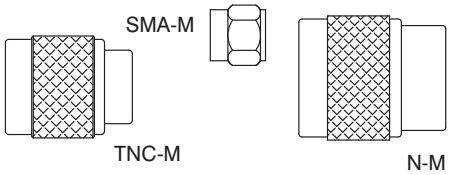
Zero Bias Schottky Detectors

MODEL NO.	FREQ. (GHz)	CONNECTOR	Flatness
4802S	2	SMA-M/F	+/- 0.2 dB TYP.
4804S	4	SMA-M/F	+/- 0.2 dB TYP.



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



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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 Aeroflex / Inmet Sales Repre-sentative 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 for non-standard or special order products.

Address all orders and communications to:
AEROFLEX / INMET INC.
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Ann Arbor, MI 48103 USA

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E-mail: inmetsales@aeroflex.com
Web: www.aeroflex.com/inmet
CAGE Code: 64671

Payment Terms

Terms are net 30 days for customers with estab-lished 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. Aeroflex / 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

Aeroflex / Inmet Corporation warrants each product it manufactures to be free from defects in material and workmanship under normal use and service. Aeroflex / 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 Aeroflex / 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. Aeroflex / Inmet shall not be liable for any direct or consequential injury, loss or damage incurred through the use, or inability to use any Aeroflex / Inmet product.

Returns

When returning a component to our factory, a Return Material Authorization (RMA) number must be obtained from Aeroflex / 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 au-thorization from Aeroflex / Inmet. Any authorized cancel-lation is subject to cancellation charges as determined by Aeroflex / 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 de-termined by Aeroflex / Inmet, cannot be returned for credit.

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

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Aeroflex / 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.

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

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Our passion for performance is defined by three attributes represented by the Icons pictured above: solution-minded, performance-driven and customer-focused.

12/2011

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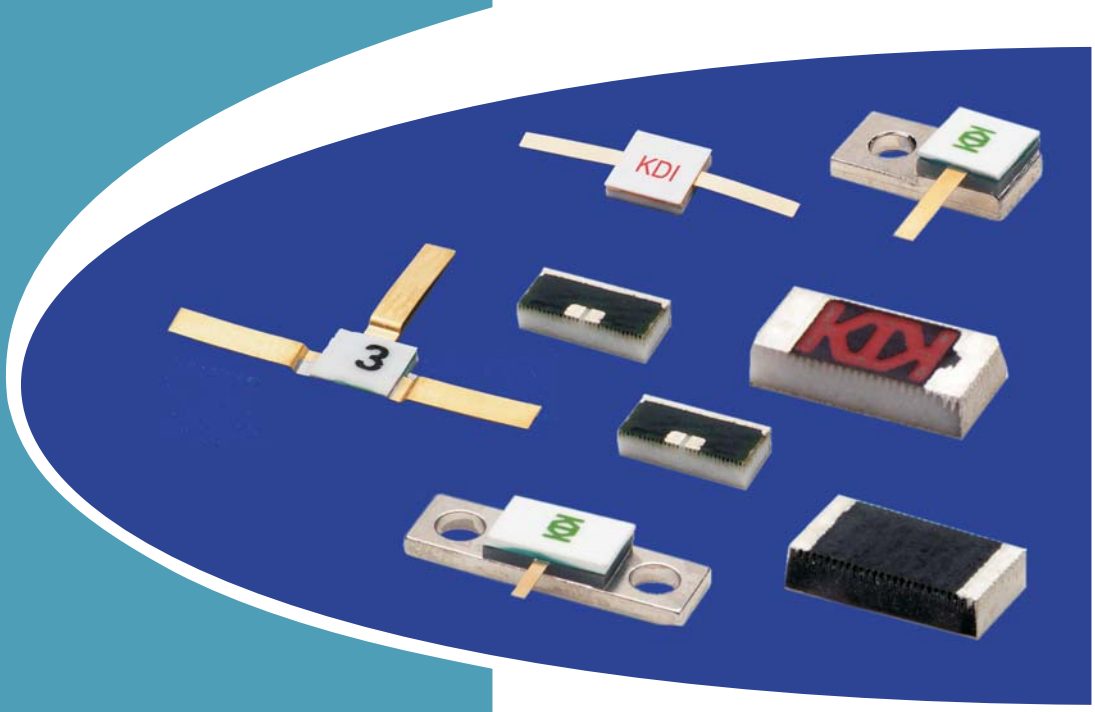
INMET

Surface Mount Solutions

Attenuators
Resistors
Terminations



Surface Mount Solutions

SERIES ANT, ANR
RESISTORS & TERMINATIONS

RoHS Compliant

High Power, Aluminum Nitride, Thin Film, Drop-in – 10-600 Watts, DC-4 GHz

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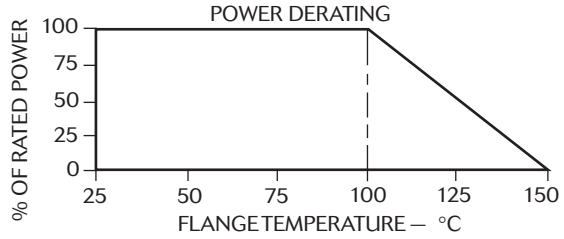
GENERAL INFORMATION

These high power devices are designed to dissipate power in RF circuits when mounted to an appropriate heat sink. The terminations provide a low VSWR under maximum power conditions. The resistor configurations are typically used in "Wilkinson" type power divider networks, or to terminate 3 dB stripline or microstrip hybrids. Aluminum nitride is used for those applications where the use and disposal of beryllium oxide is a concern.

NOTES

1. *Input power ratings are based on flange temperature of 100° C maximum.*
2. *50 and 100 Ohms standard. Other values from 10-500 Ohms available on special order. Contact factory for details. Standard tolerance ±5%. Specify resistance value when ordering.*
3. *VSWR applies to termination style only.*

AVERAGE POWER DERATING CURVE



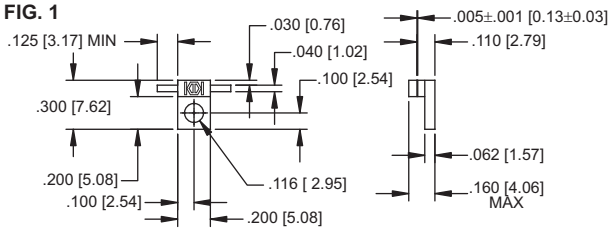
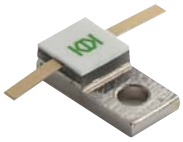
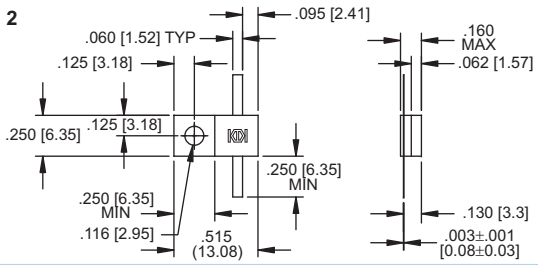
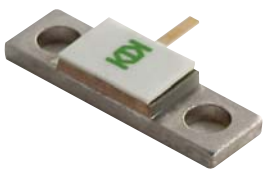
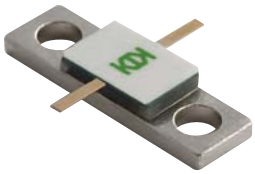
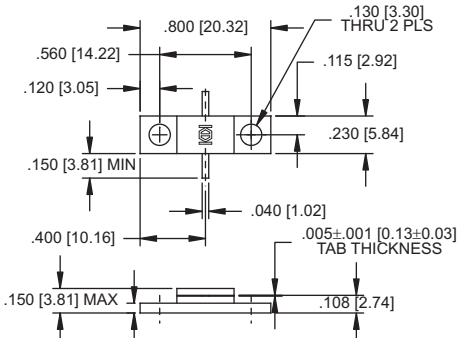
GENERAL SPECIFICATIONS

Resistive Element	Thin Film
Substrate	Aluminum Nitride
Cover	Alumina Ceramic
Mounting Flange	Copper, Nickel Plated per QQ-N-290
Tab	Beryllium Copper, Gold Plated per MIL-G-45204

PERFORMANCE SPECIFICATIONS

Model	Frequency Range	Input Power (Watts Avg.)	VSWR (Typical) (Note 3)	Capacitance (pF) (Typ.)	Figure No.
ANT & ANR 300-10	DC-4.0 GHz	10	1.25:1	1.0	1
ANT & ANR 515-40	DC-2.5 GHz	40	1.15:1	1.0	2
ANT & ANR 515-80	DC-1.0 GHz	80	1.25:1	1.6	2
ANT & ANR 800-100	DC-2.0 GHz	100	1.25:1	1.4	3
ANT & ANR 870-150	DC-2.0 GHz	150	1.25:1	4.5	4
ANT & ANR 975-200	DC-1.0 GHz	200	1.25:1	4.5	5
ANT & ANR 1250-400	DC-500 MHz	400	1.50:1	7.0	6
ANT & ANR 1900-600	DC-500 MHz	600	1.50:1	15.0	7

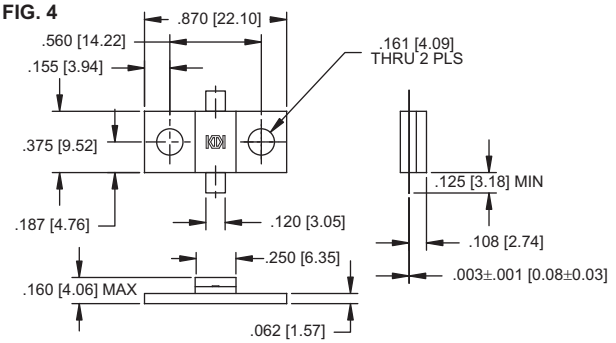
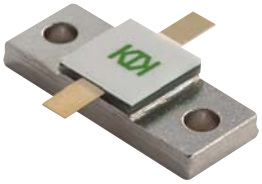
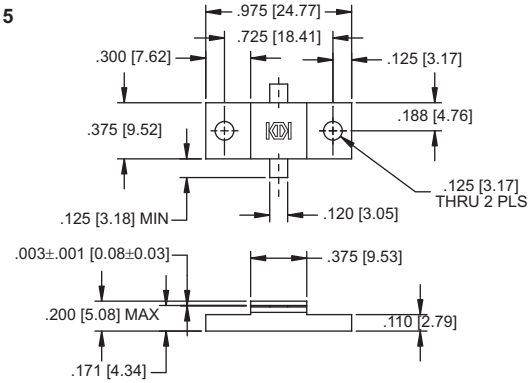
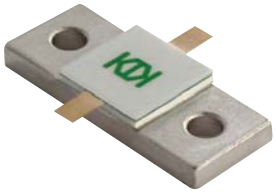
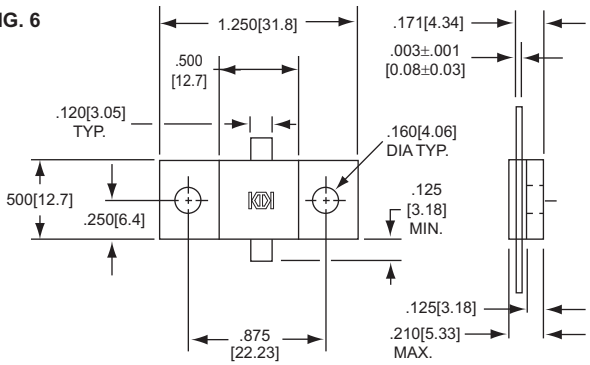
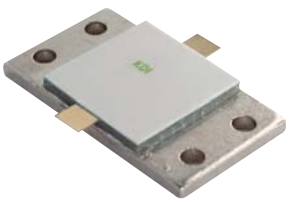
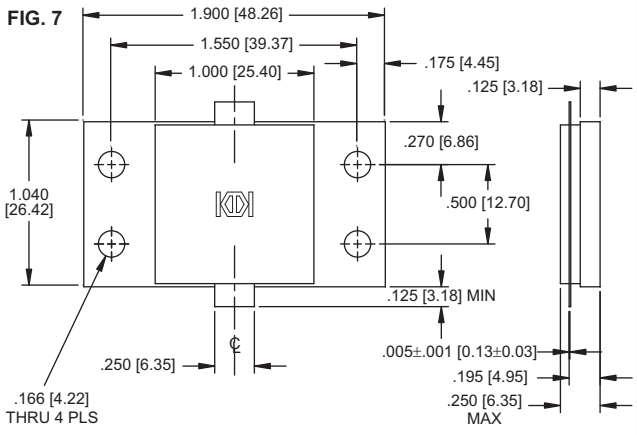
PHYSICAL DIMENSIONS

TERMINATIONS (ANT) SERIES	RESISTORS (ANR) SERIES	FIGURES
ANT 300-10 — 10 WATTS Flange Mounted 	**ANR 300-10** — 10 WATTS Flange Mounted 	**FIG. 1** 
ANT 515-40 — 40 WATTS **ANT 515-80** — 80 WATTS Flange Mounted 	**ANR 515-40** — 40 WATTS **ANR 515-80** — 80 WATTS Flange Mounted 	**FIG. 2** 
ANT 800-100 — 100 WATTS Flange Mounted 	**ANR 800-100** — 100 WATTS Flange Mounted 	**FIG. 3** 

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

SERIES ANT, ANR
RESISTORS & TERMINATIONS

PHYSICAL DIMENSIONS

TERMINATIONS (ANT) SERIES	RESISTORS (ANR) SERIES	FIGURES
ANT 870-150 — 150 WATTS Flange Mounted	**ANR 870-150** — 150 WATTS Flange Mounted	**FIG. 4**
		
ANT 975-200 — 200 WATTS Flange Mounted	**ANR 975-200** — 200 WATTS Flange Mounted	**FIG. 5**
		
ANT 1250-400 — 400 WATTS Flange Mounted	**ANR 1250-400** — 400 WATTS Flange Mounted	**FIG. 6**
		
ANT 1900-600 — 600 WATTS Flange Mounted	**ANR 1900-600** — 600 WATTS Flange Mounted	**FIG. 7**
		

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

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A3RS91.1
High Power Chip Termination
100 Watts

RoHS Compliant

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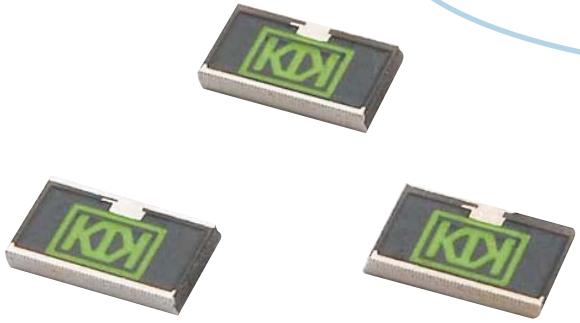
When properly mounted on an appropriate heat sink, this chip device provides high power dissipation capabilities. Ideal for ferrite isolator applications, the improved thin film design technology and laser trimming provide proven RF power capabilities to meet the demands of today's CDMA and WCDMA system requirements. Aluminum Nitride is featured for those applications where the use and disposal of Beryllium oxide is a concern.

- Environmentally friendly AIN substrate
- High performance, thin film element
- Power 100 Watts
- New adhesion process results in improved terminal strength
- On-chip matching network improves frequency performance over the DC-3 GHz frequency range

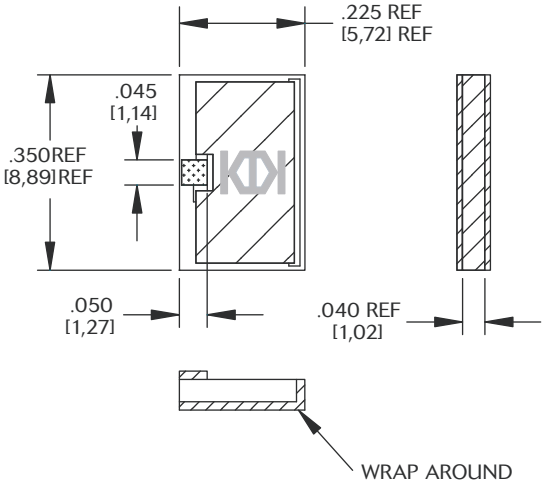


SPECIFICATIONS

Parameters	Specifications
Frequency Range	DC to 3 GHz
Power	100 Watts*
VSWR	1.10:1 max
Resistance	50 Ohms +/- 5%
Operating Temperature	-55 °C to 150 °C
Substrate	Aluminum Nitride

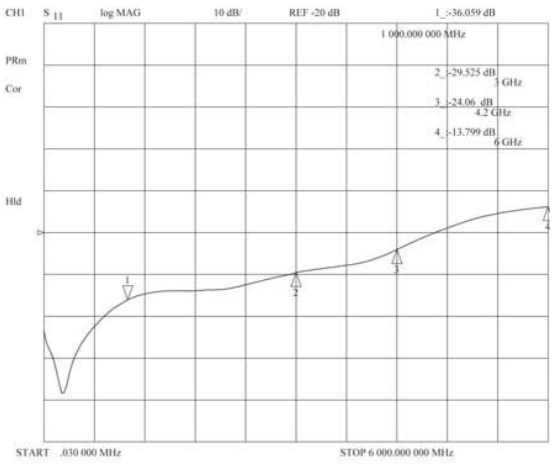
* Refer to average power derating curve chart.

PHYSICAL DIMENSIONS

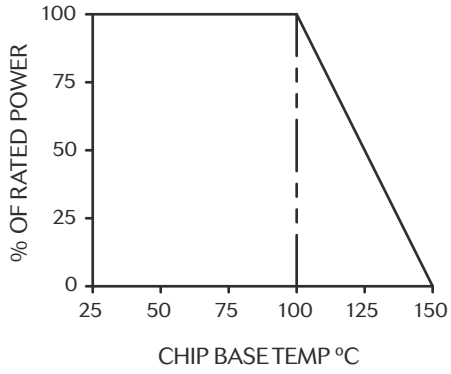


TYPICAL PERFORMANCE

A3RS91.1



AVERAGE POWER DERATING CURVE



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SERIES ANC
RESISTORS, TERMINATIONS
High Power Chip, Aluminum Nitride – 50 & 100 Ohms

RoHS Compliant

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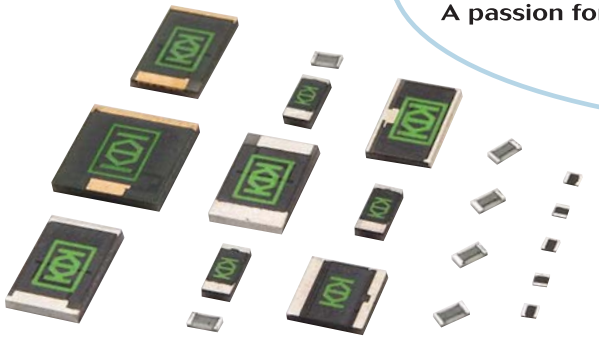
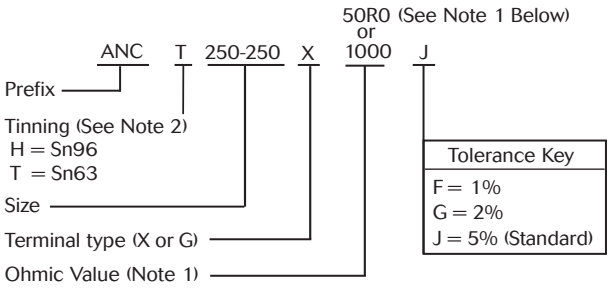
GENERAL INFORMATION

When mounted on an appropriate heat sink, these chip devices provide high power dissipation in terminations and as balancing resistors in Wilkinson power divider networks. Laser trimming provides maximum RF power capability. Aluminum nitride is used for those applications where the use and disposal of beryllium oxide is a concern.



ORDERING INFORMATION

EXAMPLE: Typical Model No.

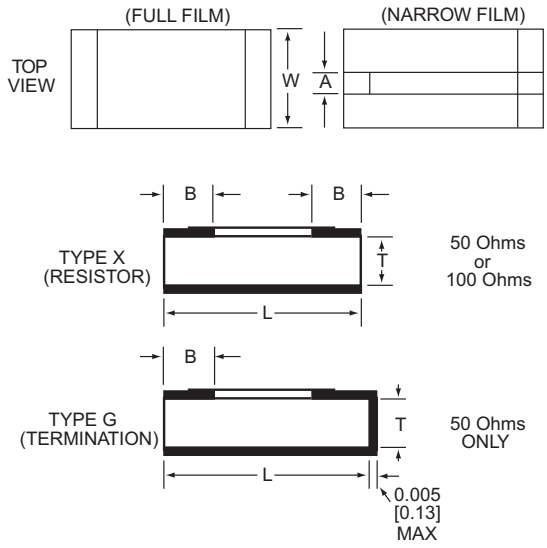


NOTES

1. *Resistance value is expressed using military 4-digit call-out.*
   50R0 = 50 Ohms
   1000 = 100 Ohms

   Other values from 10–500 Ohms may be available as special order. Contact factory for availability.
2. *Tinning with Sn96 "Lead Free" high temperature solder will maintain RoHS compliance.*

PHYSICAL DIMENSIONS



GENERAL SPECIFICATIONS

Solderable Terminals	Electroplated Silver over Nickel
Substrate	Aluminum Nitride
Resistive Element	Thin Film

PERFORMANCE SPECIFICATIONS

Model Prefix	W in	W [mm]	L in	L [mm]	T in	T [mm]	A in	A [mm]	B in	B [mm]	Capacitance (pF) Typical	Termination VSWR Typical	Power CW	FREQ. GHz
ANC 50-50	0.050	[1,27]	0.050	[1,27]	0.010	[0,25]	N/A		0.010	[0,25]	0.5	1.25	5	DC-4.0
ANC 50-100	0.050	[1,27]	0.100	[2,5]	0.010	[0,25]	N/A		0.020	[0,51]	1.0	1.25	10	DC-2.0
ANC 100-200	0.100	[2,5]	0.200	[5,1]	0.040	[1,02]	N/A		0.030	[0,76]	1.0	1.25	10	DC-4.0
ANC 200-200	0.200	[5,1]	0.200	[5,1]	0.040	[1,02]	0.085	[2,2]	0.040	[1,02]	1.2	1.25	30	DC-4.0
ANC 250-250-40	0.250	[6,4]	0.250	[6,4]	0.040	[1,02]	0.085	[2,2]	0.050	[1,27]	1.0	1.15	40	DC-2.5
ANC 250-250-80	0.250	[6,4]	0.250	[6,4]	0.040	[1,02]	N/A		0.050	[1,27]	1.6	1.25	80	DC-1.0
ANC 250-375	0.250	[6,4]	0.375	[9,5]	0.040	[1,02]	N/A		0.050	[1,27]	4.5	1.25	125	DC-1.0
ANC 350-225	0.350	[8,9]	0.225	[5,7]	0.040	[1,02]	0.045	[1,14]	0.050	[1,27]	1.4	1.25	100	DC-2.0
ANC 375-375	0.375	[9,5]	0.375	[9,5]	0.040	[1,02]	0.250	[6,4]	0.050	[1,27]	4.5	1.25	200	DC-1.0

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

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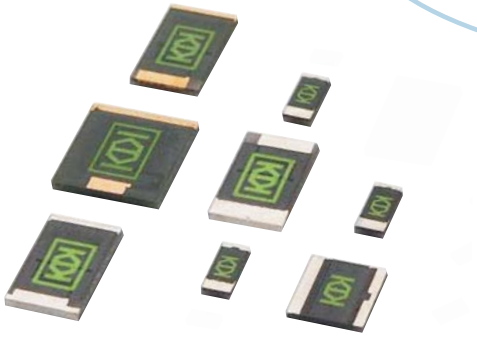
SERIES KAC
Surface Mount Terminations (SMT)
High Power, Aluminum Nitride (AlN), 10 - 150 Watts

RoHS Compliant

AEROFLEX
A passion for performance.

GENERAL INFORMATION

Aeroflex / Inmet's series of High Power Surface Mount Terminations are ideal for high frequency applications where small size and low costs are an important design criteria. The ability of these chips to be directly mounted to the PC Board eliminates the need for expensive mounting flanges and input tabs. Large solderable surface areas on the bottom of the chips allows for higher power dissipation in smaller sizes. All KAC series chips are manufactured using environmentally friendly Aluminum Nitride ceramic and are classified as RoHS compliant.



ORDERING INFORMATION

EXAMPLE: Typical Model No.

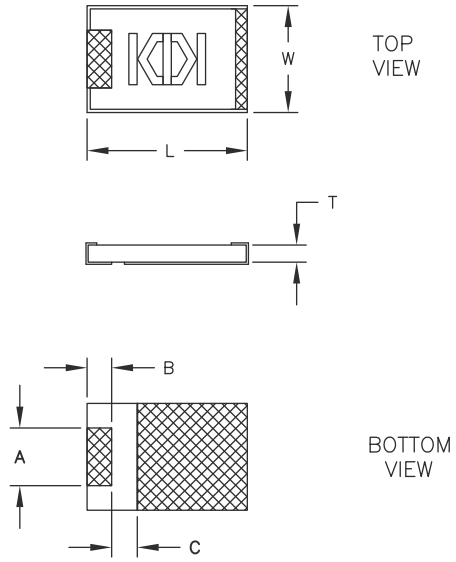
KAC T 100-200A Z 50R0 G

- KAC — Prefix
- T — Tinning (Optional) H = Sn96, T = Sn63
- 100-200A — Size
- Z — Terminal type
- 50R0 — Ohmic Value
- G — Tolerance, G = 2% (Standard)

NOTE

Tinning with Sn96 "Lead Free" high temperature solder will maintain RoHS compliance.

PHYSICAL DIMENSIONS



GENERAL SPECIFICATIONS

Substrate	Aluminum Nitride
Solderable Terminals	Electroplated Silver over Nickel
Resistive Element	Proprietary Thick Film
Operating Temperature	-55 to +150°C
Impedance (Nominal)	50 Ohms

PERFORMANCE SPECIFICATIONS

Model Prefix	W in	W (mm)	L in	L (mm)	T in	T (mm)	A in	A (mm)	B in	B (mm)	C in	C (mm)	VSWR	Power CW	Frequency GHz
KAC 60 – 120A	0.060	(1,52)	0.120	(3,05)	0.025	(0,64)	0.054	(1,37)	0.026	(0,66)	0.013	(0,33)	1.25	10	DC – 4.0
KAC 100 – 200A	0.100	(2,5)	0.200	(5,1)	0.040	(1,02)	0.050	(1.27)	0.025	(0,64)	0.035	(0,89)	1.25	20	DC – 2.5
KAC 250 – 250A	0.250	(6,4)	0.250	(6,4)	0.040	(1,02)	0.040	(1,02)	0.043	(1,09)	0.020	(0,51)	1.25	75	DC – 4.0
KAC 250 – 375A	0.250	(6,4)	0.375	(9,5)	0.040	(1,02)	0.135	(3,43)	0.058	(1,47)	0.060	(1,52)	1.25	100	DC – 3.0
KAC 375 – 375A	0.375	(9,5)	0.375	(9,5)	0.040	(1,02)	0.125	(3,18)	0.057	(1,48)	0.030	(0,76)	1.25	150	DC – 3.0

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

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SERIES PCX
HIGH POWER COAXIAL TERMINATIONS
DC to 6 GHz

RoHS Compliant

AEROFLEX
A passion for performance.

GENERAL INFORMATION

The PCX Series High Power Terminations are designed to dissipate RF power when mounted to a heat sink or chill plate. Power levels up to 500 watts in 50 ohm impedance are available in units with SMA or 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.

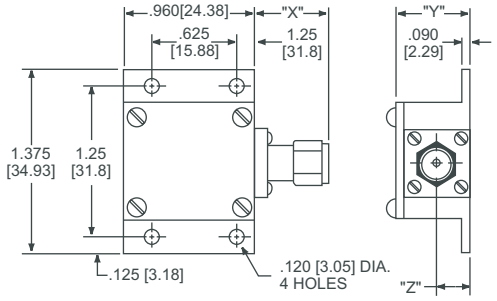
NOTES

1. *Input power ratings based on case temperature of 85°C maximum.*
2. *Connectors: SMA - Stainless Steel Passivated per MIL-C-39012, Type N - Nickel Plated Brass per MIL-C-39012*
3. *Housing: Copper, Nickel Plated per QQ-N-290*

PERFORMANCE SPECIFICATIONS

Part Number	Input Power (Watts) (Note 1)	Frequency Range	Connector Type (Note 2)	VSWR (Typical)	Outline
PCX050-F-50 PCX050-M-50	50	DC - 6 GHz	SMA Female SMA Male	DC-3 GHz: 1.25:1 3 - 6 GHz: 1.35:1	A
PCX050-F-100 PCX050-M-100	100	DC - 3 GHz	SMA Female SMA Male	DC- 3 GHz: 1.25:1	A
PCX050-F-150 PCX050-M-150 PCX100-F-150 PCX100-M-150	150	DC - 2 GHz	SMA Female SMA Male N Female N Male	DC - 1 GHz: 1.15:1 1 - 2 GHz: 1.40:1	B
PCX050-F-250 PCX050-M-250 PCX100-F-250 PCX100-M-250	250	DC -800 MHz	SMA Female SMA Male N Female N Male	DC - 200 MHz: 1.15:1 200 - 400 MHz: 1.40:1 400-800 MHz: 1.30:1	B
PCX100-M-500	500	DC - 200 MHz	N Male	DC - 200 MHz: 1.15:1	B

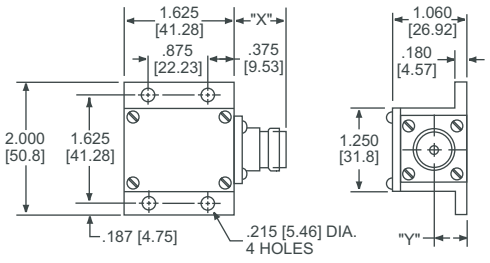
PHYSICAL DIMENSIONS



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, 250	[9.53] [13.08]	.375	.515
PCX050-M-150, 250	[9.53] [13.08]	.375	.515
PCX100-F-150, 250, 500	[18.69] [12.9]	.736	.508
PCX100-M-150, 250, 500	[20.8] [12.9]	.819	.508

SMA OR N CONNECTORS
150, 250 & 500 WATTS

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

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SERIES PPC, NPC
RESISTORS, TERMINATIONS
High Power Chip – 50 & 100 Ohms

RoHS Compliant

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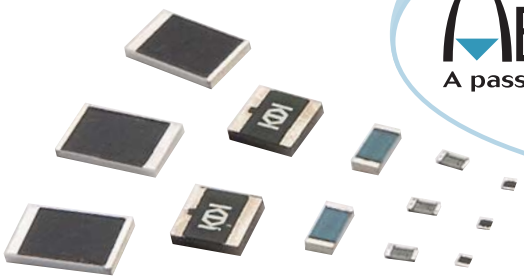
A passion for performance.

GENERAL INFORMATION

When mounted on an appropriate heat sink, these chip devices provide high power dissipation in terminations and as balancing resistors in Wilkinson power divider networks. Laser trimming provides maximum peak and average RF power capability.



ORDERING INFORMATION

EXAMPLE: Typical Model No.

PPC or NPC | T | 25-50 | X | 50R0 (See Note A Below) or 1000 | J

- Prefix
- Tinning (see Note 4)
  - H = Sn96
  - T = Sn63
- Size
- Terminal type (X, W or G)
- Ohmic Value (Note A)

Tolerance Key
F = 1%
G = 2%
J = 5% (Standard)

NOTE A

Resistance value is expressed using military 4-digit call-out.
50R0 = 50 Ohms
1000 = 100 Ohms

Other values from 10–500 Ohms may be available as special order.
Contact factory for availability.

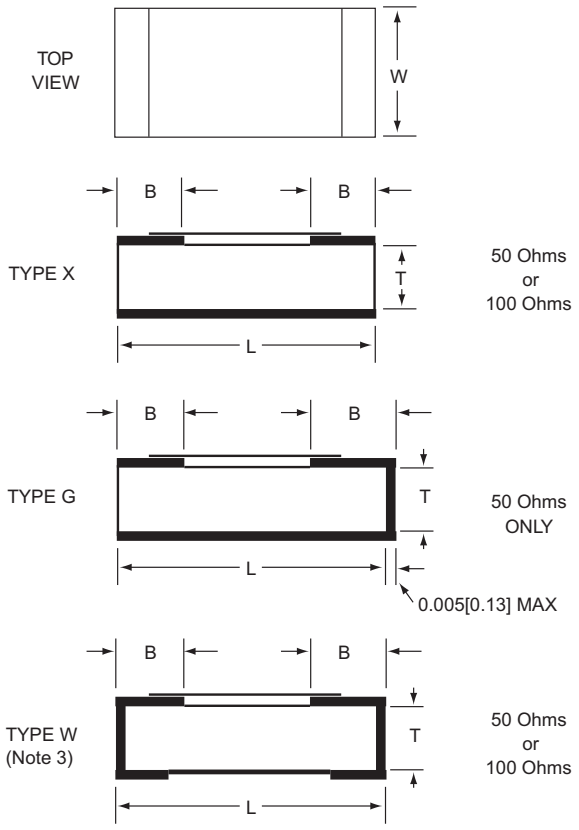
GENERAL SPECIFICATIONS

Solderable Terminals	Electroplated Silver over Nickel (PPC) Gold over Nickel alloy (NPC)
Substrate	Beryllium Oxide Ceramic
Resistive Element	Thin Film and Thick Film*

NOTES

1. *The "L" and "T" dimensions are for the substrate only and do not include terminal thickness or optional tinning thickness.*
2. *Thermal Resistance (Rº) is measured in °C/W between resistive film and mounting surface.*
3. *The CW power rating is based on maximum film temperature of +150°C and with maximum heatsink temperature of +100°C. Power is based on infinite and ideal heatsink. Type "W" termination style does not have full back plane metallization and typically handles 1/10 the rated power.*
4. *Tinnning with Sn96 "Lead Free" high temperature solder will maintain RoHS compliance.*

Physical Dimensions



PERFORMANCE SPECIFICATIONS

Model Prefix	W in	W [mm]	L (Note 1) in	L [mm]	T (Note 1) in	T [mm]	B in	B [mm]	Capacitance (pF) Typical	RØ° C/W Max. (Note 2)	C/W Power	Freq. GHz (**)
*PPC 100-200A	0.100	[2,5]	0.200	[5,1]	0.040	[1,02]	0.030	[0,76]	0.8	0.80	20W	DC-4.0
*PPC 250-250A	0.250	[6,4]	0.250	[6,4]	0.040	[1,02]	0.050	[1,27]	1.2	0.30	40W	DC-2.5
*PPC 250-375A	0.250	[6,4]	0.375	[9,53]	0.040	[1,02]	0.050	[1,27]	3.5	0.15	150W	DC-1.0
NPC 25-50	0.025	[0,64]	0.050	[1,27]	0.010	[0,25]	0.012	[0,305]	0.3	3.90	3W	DC-12.4
*NPC 50-50	0.050	[1,27]	0.050	[1,27]	0.010	[0,25]	0.012	[0,305]	0.5	1.90	5W	DC-10
*NPC 50-100	0.050	[1,27]	0.100	[2,5]	0.010	[0,25]	0.017	[0,43]	1.0	0.72	10W	DC-4.0
NPC 75-150	0.075	[1,91]	0.150	[3,8]	0.010	[0,25]	0.020	[0,51]	1.8	0.29	15W	DC-4.0

** Low cost thick film models available on these sizes. Consult factory for specifications.*

*** Typical VSWR for all terminations is 1.25:1*

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

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SERIES PPA
ATTENUATORS
High Power – DC-4 GHz

RoHS Compliant

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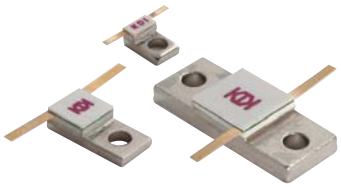
A passion for performance.

The Aeroflex/Inmet PPA Series of attenuators utilize a Beryllium Oxide chip and thin film technology to provide devices which can dissipate up to 100 Watts of RF power. The PPA series must be thermally bonded to a heat sink, using the mounting holes provided, in order to operate within the temperature rating indicated. The flange temperatures must not exceed 100°C under rated power conditions.



ORDERING INFORMATION

The Power Attenuators listed are available in 1 dB increments from 1 thru 20 dB. Specify by selecting any of the series listed and add the attenuation value desired to the basic series designation. (See Note 3)

EXAMPLE:

PPA 20-10

Basic Series PPA — Power — Desired dB Value

GENERAL SPECIFICATIONS

Impedance	50 Ohms
Operating Temp.	–55 °C to +150°C
Attenuation Stability	0.0001 dB/dB/°C
Substrate	Beryllium Oxide Ceramic
Resistive Element	Proprietary Thin Film
Flange	Copper, Nickel Plated per QQ-N-290
Tabs	Beryllium Copper, Gold Plated per MIL-G-45204
Cover	Alumina Ceramic

PERFORMANCE SPECIFICATIONS

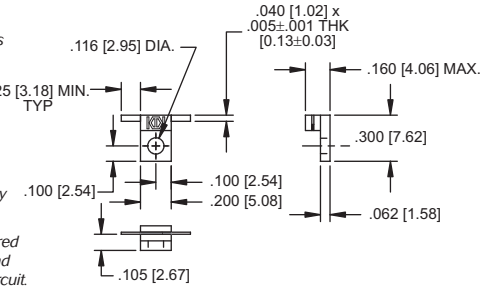
Model	Attenuation(1) 1 dB Increments (dB)	Frequency(1) Range	Input Power (Watts)	Attenuation Accuracy (1) (dB) dB	DC-1 GHz	1-2.5 GHz	2.5-4 GHz	VSWR (Typical)2
PPA 10 11-20	1-20	DC-4 GHz	10	1-10	±0.5 ±1.0	±0.5 ±2.0	±1.0 ±3.0	1.3:1
PPA 20 6-9 10-15 16-20	1-20	DC-4 GHz	20	1-5	±0.5 ±0.5 ±0.75 ±1.0	±0.5 ±0.5 ±1.0 ±2.0	±0.5 ±1.0 ±1.5 ±3.0	1.15:1 – DC-1.0 GHz 1.35:1 – 1.0-2.5 GHz 1.50:1 – 2.5-4.0 GHz
PPA 50	1-20	DC-1 GHz	50	±0.3 DC-500 MHz ±0.5 500 MHz-1 GHz				1.25:1 – DC-500 MHz 1.50:1 – 500 MHz–1 GHz
PPA 100	1-20	DC-500 MHz	100	±0.5				1.25:1 – DC-200 MHz 1.50:1 – 200-500 MHz

PHYSICAL DIMENSIONS

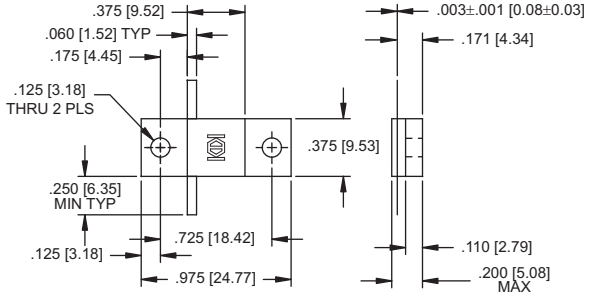
NOTES

1. *Custom products are available at higher frequencies with optimized VSWR and attenuation accuracy over narrow frequency bandwidths.*
2. *VSWR as measured in a 0.125" ground plane stripline circuit.*
3. *Standard values 1, 2, 3, 4, 5, 6, 10, 20 dB.*

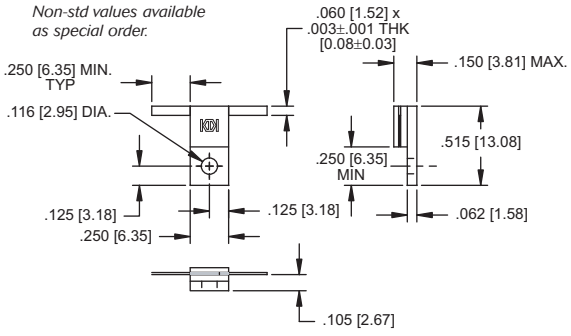
   Non-std values available as special order.



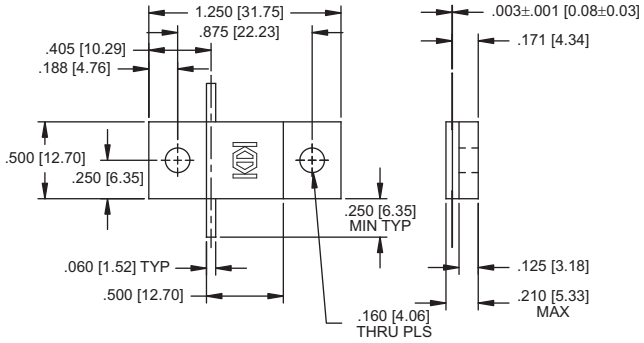
PPA10 OUTLINE



PPA50 OUTLINE



PPA20 OUTLINE



PPA100 OUTLINE

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

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SERIES PCA, PCAA
ATTENUATORS, CHIP
Low Power – DC-18 GHz

RoHS Compliant

AEROFLEX
A passion for performance.

FEATURES
- Laser Trimmed
- Temperature Stable

GENERAL INFORMATION
The PCA and PCAA Series consists of a laser trimmed distributed thin film element on an alumina ceramic substrate with solderable terminals. Two sizes are available. The PCA size operates to 12.4 GHz and the PCAA size operates to 18.0 GHz. Both sizes are available with leads and wrap around conductors for ease of installation. The PCAF and PCAAF options are designed for "flip-chip" application in lower frequency circuits.

PCA & PCAA SERIES DATA
- Substrate: 96% Alumina
- Solderable Terminals: Electroplated Silver over Nickel
- Resistive Element: Proprietary Thin Film
- Wrap around Ground Terminal available, "W" option
- Wrap around-all terminals—"F" option
- Standard values 1, 2, 3, 4, 5, 6, 10, 20 dB
- Non-std. values available as special order

ORDERING INFORMATION
The attenuators listed are available in 1 dB increments from 1 through 20 dB. When ordering, to specify the correct part number for the desired attenuation value, select any of the series listed and add the attenuation value desired to the basic series designation.

Options (Note 4)

L = Lead/Tab (Gold Plated BeCu)

W = Wrap around ground only

F = Wrap around all terminals (flip-chip)

T = Tinned terminals (any terminal type) Sn63

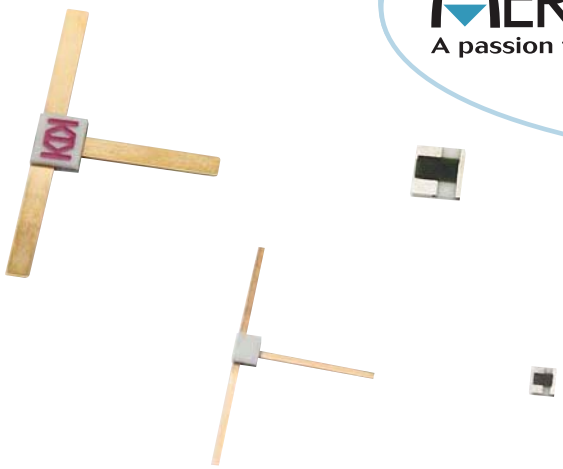
H = Tinned terminals (any terminal type) Sn96

G = Gold plated terminals

EXAMPLE:

PCA or PCAA	(x)	——	(x)	
Basic Series	Option(s) L W F		Option(s) T H G	dB Value

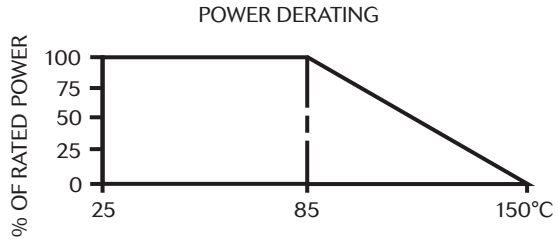
EXAMPLES: PCAW-T3
PCAAF-G3



GENERAL SPECIFICATIONS

Impedance	50 Ohms
Operating Temperature	–55°C to +150°C
Attenuation Stability	0.0001 dB/dB/°C

AVERAGE POWER DERATING CURVE



NOTES

1. Performance of other dB values vary dependent on attenuation. Contact factory for specifications for fractional dB values.
2. Performance is based on device mounted in matched 50 Ohm line.
3. Rated power 1.5 Watts input PCA, 100 mw PCAA.
4. Tinning with Sn96 "Lead Free" high temperature solder will maintain RoHS compliance.

PERFORMANCE SPECIFICATIONS

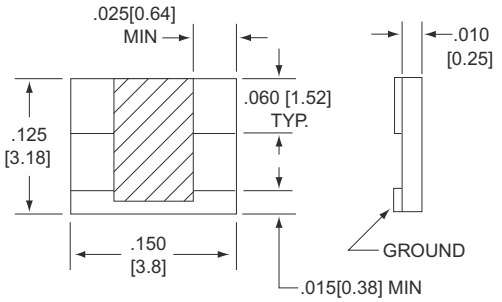
Increments (dB) Note 1	Attenuation Accuracy (dB) Note 2				VSWR (Typical) Note 2			
	DC - 4 GHz PCA, PCAA Series	4 - 8 GHz PCA, PCAA Series	8 - 12.4 GHz PCA, PCAA Series	12.4 - 18 GHz PCAA Series Only	DC - 4 GHz PCA, PCAA Series	4 - 8 GHz PCA, PCAA Series	8 - 12.4 GHz PCA, PCAA Series	12.4 - 18 GHz PCAA Series Only
1 - 3	± 0.5	± 0.5	± 0.5	± 0.5	1.25	1.35	1.50	1.50
4 - 6	± 0.5	± 0.5	± 0.5	± 0.75	1.25	1.35	1.50	1.50
7 - 10	± 0.5	± 0.5	± 0.75	± 1.0	1.25	1.35	1.50	1.50
11 - 15	±0.75	+0.5 -3.0	+0.5 -4.0	–	1.25	1.35	1.50	–
16 - 20	± 1.0	+0.5 -4.0	–	–	1.25	1.35	–	–

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

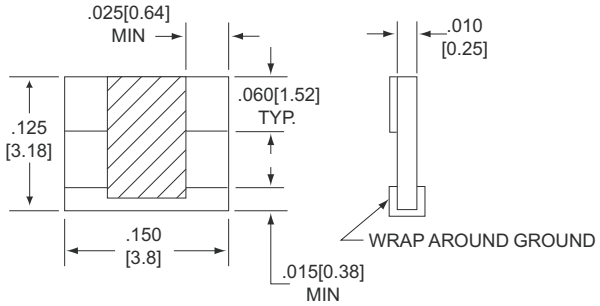
SERIES PCA, PCAA
ATTENUATORS, CHIP
Low Power – DC-18 GHz

PHYSICAL DIMENSIONS

PCA



PCAW
(WRAP AROUND GROUND TERMINAL ONLY)



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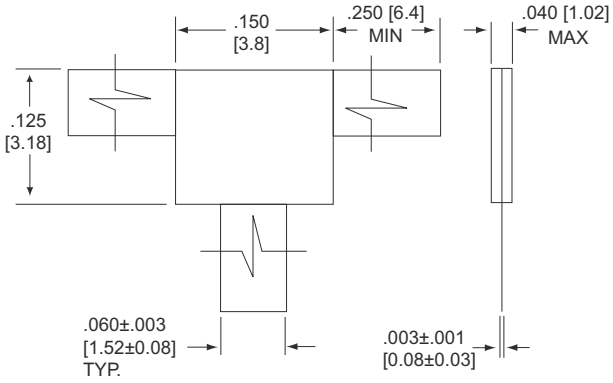

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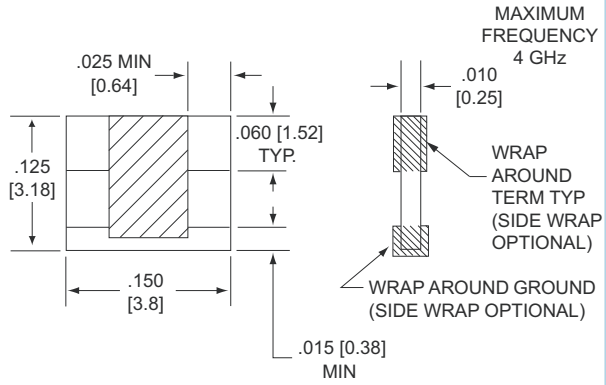
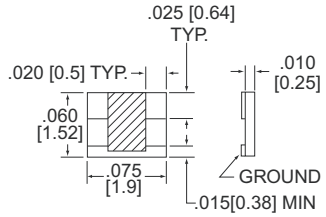


PCAA



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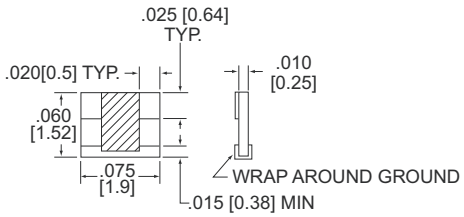
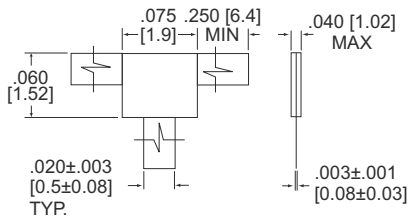
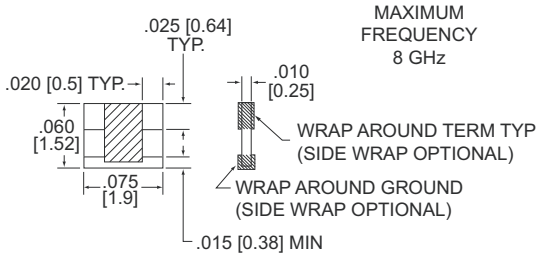


PCAAL (LEAD/COVER)



PCAAF (WRAP AROUND ALL TERMINALS)



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

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SERIES PPR, PPT
RESISTORS & TERMINATIONS

High Power, Thin Film, Drop-in – 10-650 Watts, DC-4 GHz

RoHS Compliant

AEROFLEX
A passion for performance.

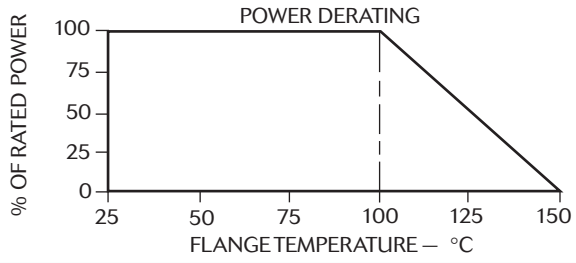
GENERAL INFORMATION

These high power devices are designed to dissipate power in RFcircuits when mounted to an appropriate heat sink. The terminations provide a low VSWR under maximum power conditions. The resistor configurations are typically used in "Wilkinson" type power divider networks, or to terminate 3 dB stripline or microstrip hybrids.

NOTES

1. *Input power ratings are based on flange temperature of 100° C maximum.*
2. *50 and 100 Ohms standard. Other values from 10-500 Ohms available on special order. Contact factory for details. Standard tolerance ±5%. Specify resistance value when ordering.*
3. *VSWR applies to termination style only.*

AVERAGE POWER DERATING CURVE



GENERAL SPECIFICATIONS

Resistive Element	Thin Film and Thick Film*
Substrate	Beryllium Oxide Ceramic
Cover	Alumina Ceramic
Mounting Flange	Copper,Nickel Plated per QQ-N-290
Tab	Beryllium Copper,Gold Plated per MIL-G-45204

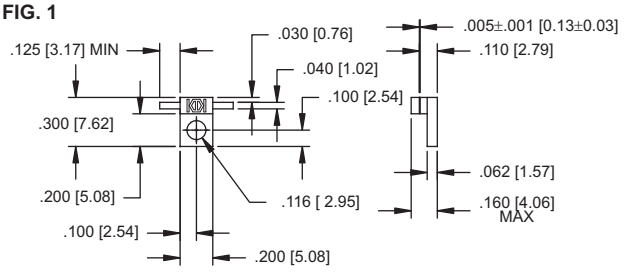
* Low cost thick film models available on some sizes.Consult Factory for specifications.

PERFORMANCE SPECIFICATIONS

Model	Frequency Range	Input Power (Watts Avg.)	VSWR (Typical) (Note 3)	Capacitance (pF) (Typ.)	Figure No.
PPR & PPT 300-10-3*	DC-4.0 GHz	10	1.35:1 –DC-4.0 GHz	0.8	1
PPR & PPT 515-20-3*	DC-2.0 GHz	20	1.10:1 –DC-1.0 GHz 1.25:1 –1.0-2.0 GHz	0.8	2
PPT 515-30-4	DC-4.0 GHz	30	1.20:1 –DC-40 GHz	1.2	3
PPR & PPT 515-30*	DC-2.0 GHz	30	1.10:1 –DC-1.0 GHz 1.25:1 –1.0-2.0 GHz	0.8	4
PPR & PPT 800-40-3	DC-4.0 GHz	40	1.25:1 –DC-4.0 GHz	1.4	5
PPT 800-100A	DC-2.0 GHz	100	1.25:1 –DC-2.0 GHz	1.4	6
PPR & PPT 870-150-3*	DC-1.0 GHz	150	1.20:1 –DC-500 MHz 1.35:1 –500-1000 MHz	3.5	7
PPR & PPT 975-250-3	DC-1.0 GHz	250	1.25:1 –DC-500 MHz 1.35:1 –500-1000 MHz	5.0	8
PPR & PPT 1250-400	DC-500 MHz	400	1.50:1 –DC-500 MHz	7.0	9
PPR &PPT 1900-800	DC-500 MHz	650	1.25:1 –DC-200 MHz 1.50:1 –200-500 MHz	10.2	10

PHYSICAL DIMENSIONS

TERMINATIONS (PPT) SERIES	RESISTORS (PPR) SERIES	FIGURES
PPT 300-10-3 — 10 WATTS Flange Mounted	**PPR 300-10-3** — 10 WATTS Flange Mounted	**FIG. 1**



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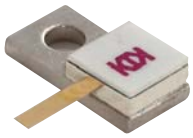
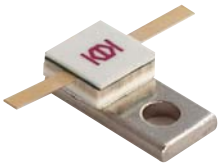
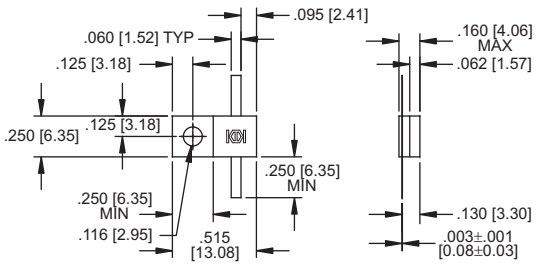
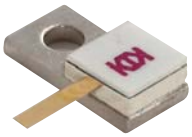
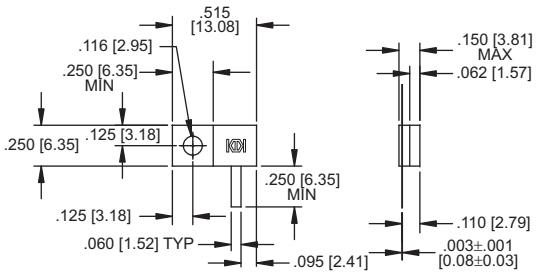
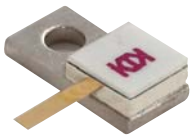
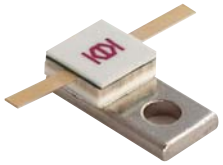
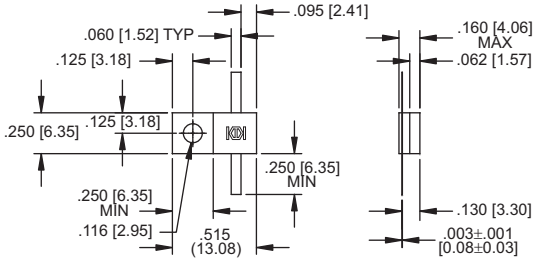
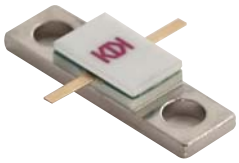
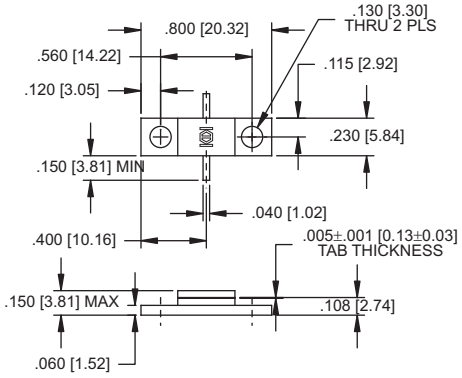
SERIES PPR, PPT
RESISTORS & TERMINATIONS

PHYSICAL DIMENSIONS

TERMINATIONS (PPT) SERIES	RESISTORS (PPR) SERIES	FIGURES
PPT 515-20-3 — 20 WATTS Flange Mounted 	**PPR 515-20-3** — 20 WATTS Flange Mounted 	**FIG. 2** 
PPT 515-30-4 — 30 WATTS Flange Mounted 	***Offered as a Termination Only!***	**FIG. 3** 
PPT 515-30 — 30 WATTS Flange Mounted 	**PPR 515-30** — 30 WATTS Flange Mounted 	**FIG. 4** 
PPT 800-40-3 — 40 WATTS Flange Mounted 	**PPR 800-40-3** — 40 WATTS Flange Mounted 	**FIG. 5** 

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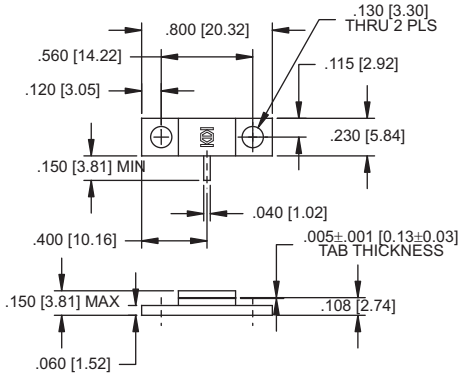
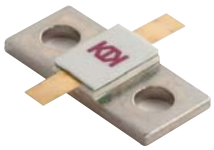
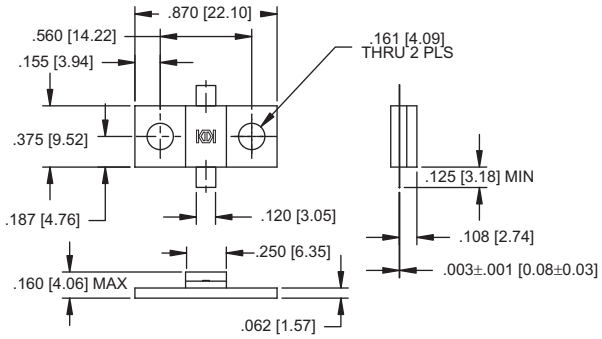
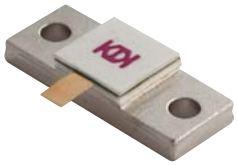
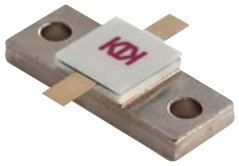
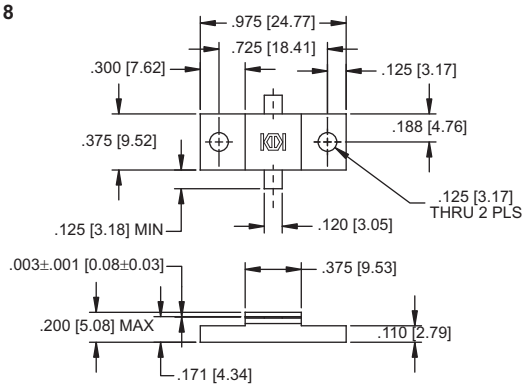
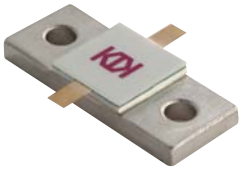
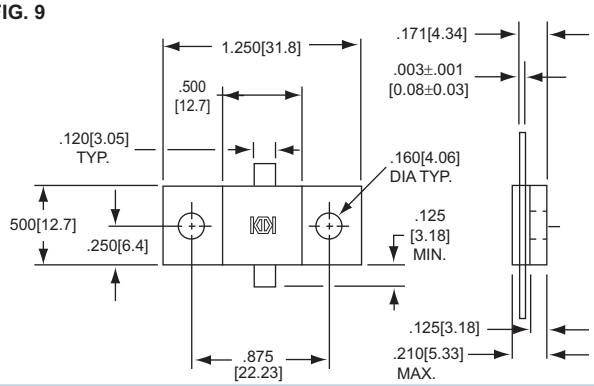
SERIES PPR, PPT
RESISTORS & TERMINATIONS

PHYSICAL DIMENSIONS

TERMINATIONS (PPT) SERIES	RESISTORS (PPR) SERIES	FIGURES
PPT 800-100A — 100 WATTS Flange Mounted 	***Offered as a Termination Only!***	**FIG. 6** 
PPT 870-150-3 — 150 WATTS Flange Mounted 	**PPR 870-150-3** — 150 WATTS Flange Mounted 	**FIG. 7** 
PPT 975-250-3 — 250 WATTS Flange Mounted 	**PPR 975-250-3** — 250 WATTS Flange Mounted 	**FIG. 8** 
PPT 1250-400 — 400 WATTS Flange Mounted 	**PPR 1250-400** — 400 WATTS Flange Mounted 	**FIG. 9** 

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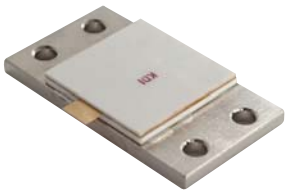
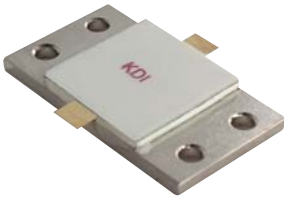
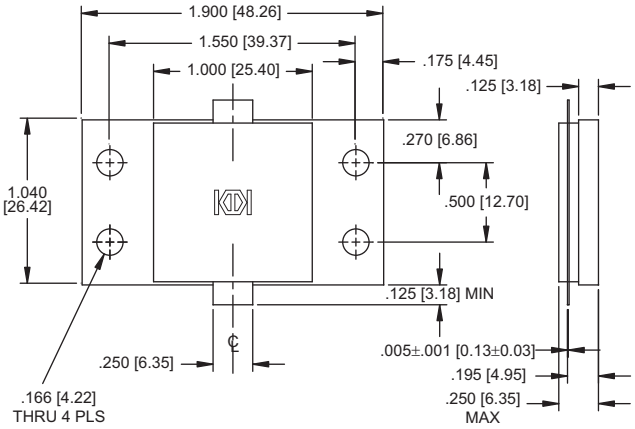
SERIES PPR, PPT
RESISTORS & TERMINATIONS

PHYSICAL DIMENSIONS

TERMINATIONS (PPT) SERIES	RESISTORS (PPR) SERIES	FIGURES
PPT 1900-800 — 650 WATTS Flange Mounted	**PPR 1900-800** — 650 WATTS Flange Mounted	**FIG. 10**







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Mounting Application Notes

Mounting of High Power Flange Devices

When mounting High Power Flange Devices in a circuit, there are several key issues that should be taken into account.

Heat Sink Design
The heat sink the device is mounted to must be designed to maintain the temperature (design) while it is dissipating the power (heat) given it by the device. (The derating specifications are given in the applicable data sheets.)

Flatness of mating surfaces
Flatness of the heat sink and of the mounting area of the device (flange) should be 0.001″ maximum. The idea is to have the best possible contact between the heat sink and the device.

Thermal Compound
To fill any microscopic voids or air gaps the use of thermal compound is recommended to a thickness of 0.002″ maximum.

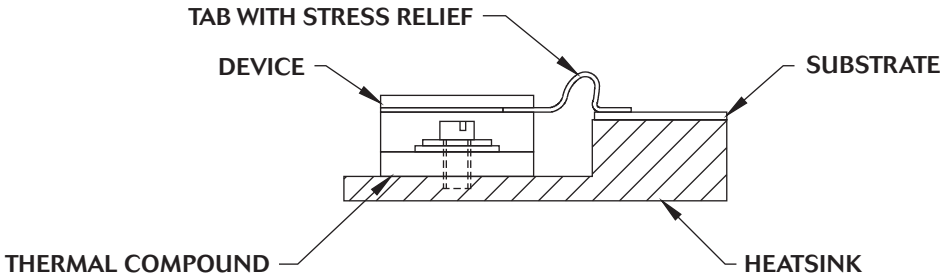
Stress Relief on Tab
Although it is not always possible in High Frequency applications a small loop for stress relief on the solder tab is recommended. This reduces any mechanical stress on the joints.

Apply a small amount of thermal compound to the mounting area of the flange of the device. Spread it completely on the flange using a razor blade or other smooth tool. When seating the device, align the tab/tabs over the corresponding area on the circuit board. Screw down the device using the recommended torque for the appropriate screw size in the table below. Aeroflex / Inmet recommends the use of a lock washer and a flat washer in the installation. See Figure 1

Thread Size	Torque Setting
2-56	4 inch-pounds
4-40	6 inch pounds
6-32	8 inch pounds
8-32	12 inch pounds
10-32	18 inch pounds

Solder the tab/tabs using SN63 (179° C eutectic) solder and a small amount of RMA flux. After all the solder is complete all of the flux must now be removed using a cleaning agent.

Figure 1: High Power Flange Device Mounting



Mounting of Chip Devices

This application note covers the recommended mounting techniques for the proper conduction cooling and RF performance of a surface mounted (flangeless) chip attenuator, termination or resistor.

Initial Considerations
There are two primary considerations for a surface mounted power device; Power Dissipation and RF Performance. In order to remove the dissipated power from this type chip they must be provided with adequate conductive cooling. This will prevent excessive chip temperatures leading to damage and early failure of the device. RF performance is also dependent on proper mounting. Since these devices are being mounted to a circuit board, inductance to ground is introduced by the vias to the ground plane. To reduce this effect and lower the thermal resistance between the component and ground plane, the following items are recommended:

1. Maximize the use of thermally conductive vias around and under the device.
2. Use of heavy copper cladding (2 oz.) on the circuit board as a heat spreader.

Solders
Aeroflex / Inmet recommends the use of the solders in the chart below when installing a surface mount chip. Also listed are recommended platings for the heatsink/baseplate that a device might be mounted to instead of a circuit board.

Mounting
The first step when mounting a chip device to the circuit board is to determine the proper size and location of the solder pads. Aeroflex / Inmet recommends providing pads that are 0.010″ to 0.020″ over the device's termination size and are centered on the axis of the chip. This allows for self-centering of the chip and a proper solder fillet formation. Skewing and "tombstoning" can occur if this is not followed. See Figure 2

Preparation

1. Before any solder attachment, parts and circuit boards must be free of any oils or dirt. Isopropyl alcohol can be used for this task.
2. Apply a small amount of RMA flux (MIL-F-14256) to the areas to be soldered.
3. SN63 solder is generally recommended for use. This may be a preform, solder paste or wire. If preforms are used, select a size that is 0.005"to 0.010" larger than the size of the pad.
4. When soldering is complete the circuit board must be cleaned to remove any flux residue. This can be done in an ultrasonic cleaner or vapor degreaser. Flux manufacturers have recommended solvents or cleaning solutions for their products.

Pretinning

Pretinning can be done with either a solder pot or by depositing and reflowing solder on the device. (Aeroflex-Inmet can supply pretinned devices, SN63 or SN96).

Tabs

When attaching tabs to a device we recommend using SN96 (221° C) to attach the tab to the chip. Then, solder the tab to the circuit board using SN63 (183 ° C).

Wire Bonding

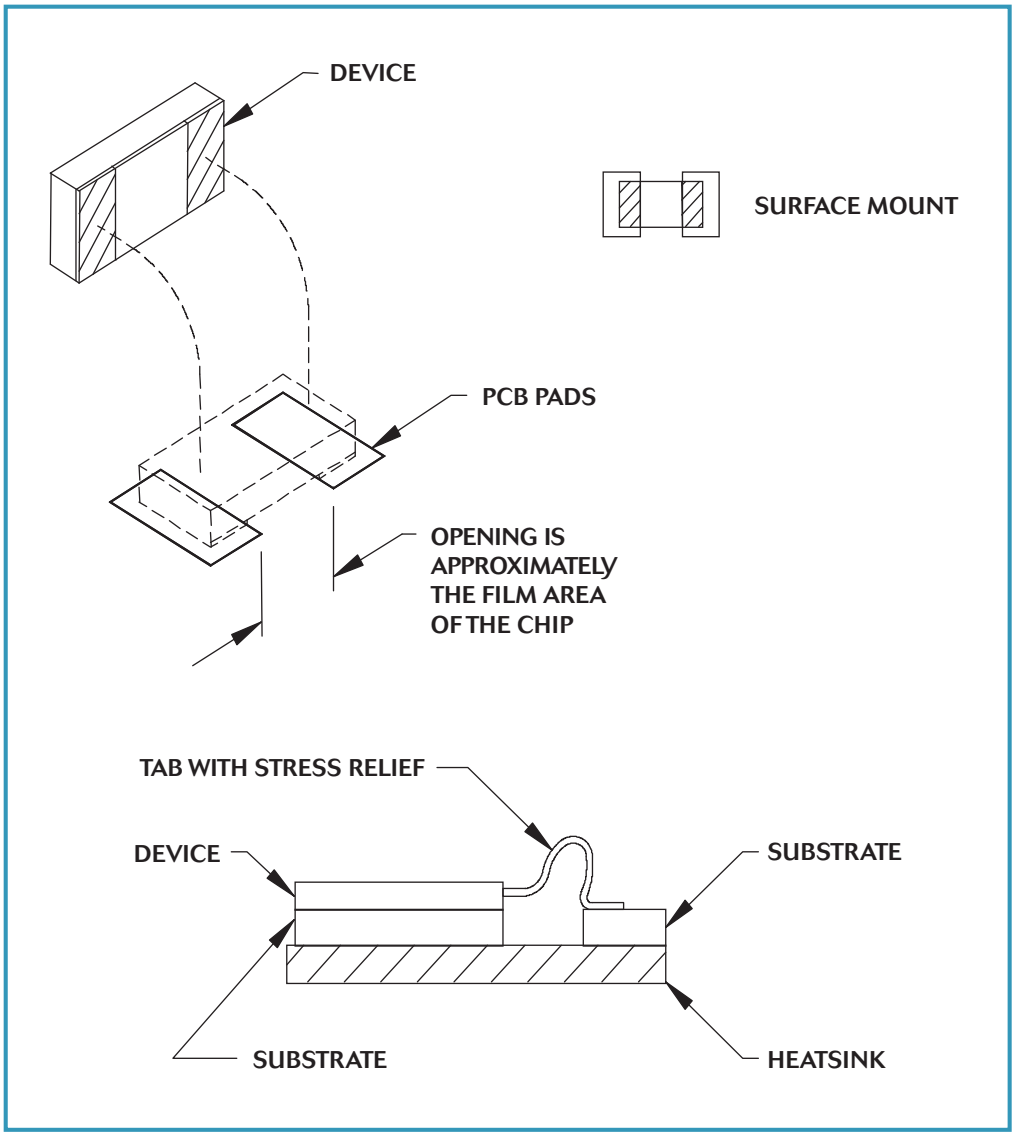
Attach the device to the circuit board using solder as described above. Clean and remove any flux residues. Ultrasonically bond wire or ribbon to gold termination pads using a wedge or ball bonder. NOTE: Gold plated chips are required for this method.

Tuning

Maximum VSWR, as specified on the data sheet, can be achieved without additional tuning. Lower VSWR can be achieved with stub or lumped element tuning. However, this can result in a narrower useable bandwidth.

Solder Type	Liquidous Temp. (degrees C.)	Recommended Platings for Heatsink/Baseplates
SN63	183 eutectic	Nickel, Silver
SN96	221 eutectic	Nickel, Silver
80Au/20Sn	280 eutectic	Gold over Nickel

Figure 2: Proper Mounting Techniques



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