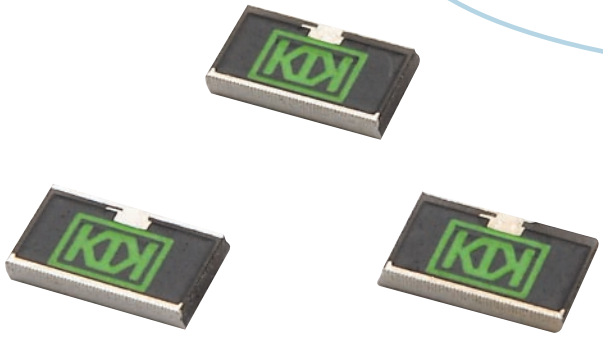
A3RS91.1
High Power Chip Termination
100 Watts

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
- Hi-performance, thin film element
- Power Handling of 100 Watts
- New adhesion process results in improved terminal strength
- On-chip matching network improves frequency performance over the DC-3 GHz frequency range



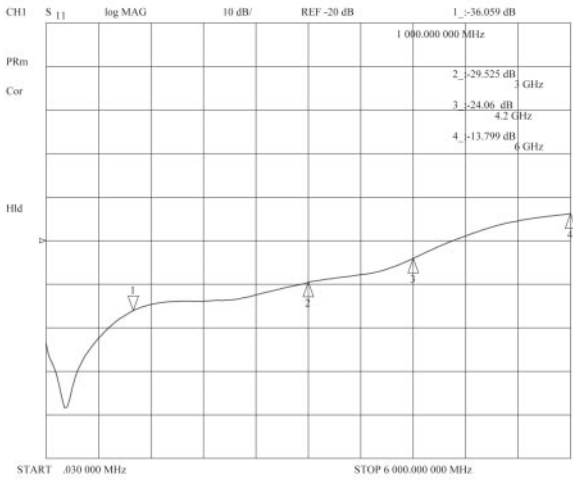
SPECIFICATIONS

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

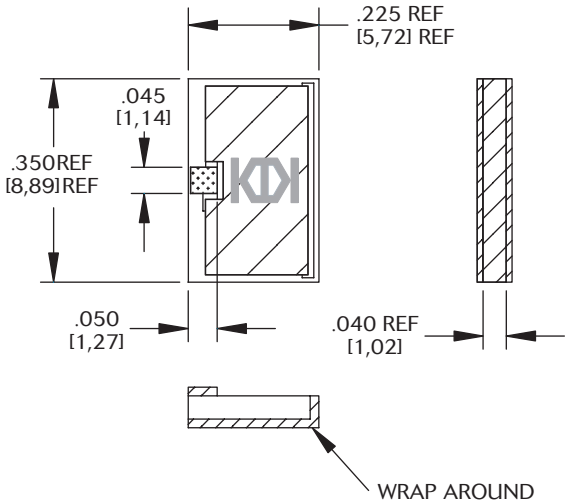
** Refer to average power derating curve chart.*

TYPICAL PERFORMANCE

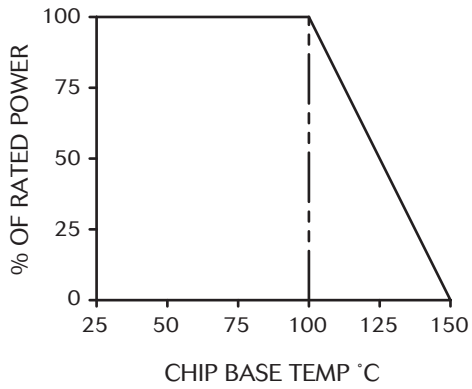
A3RS91.1



PHYSICAL DIMENSIONS



AVERAGE POWER DERATING CURVE



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

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ISO 9001 REGISTERED FIRM

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

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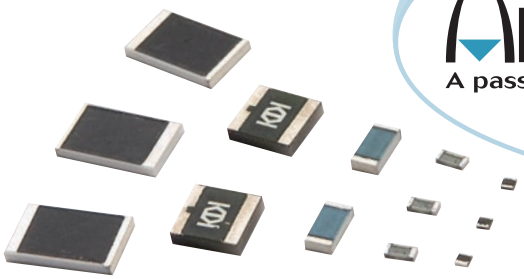
GENERAL INFORMATION

When mounted on an appropriate heat sink, these chip devices provide high power dissipation in terminations and as balancing resistors in Wilkenson power divider networks. Laser trimming provides maximum peak and average R.F. 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 (if required)				
		Size			
			Terminal type (X, W or G)		
				Ohmic Value (Note 1)	

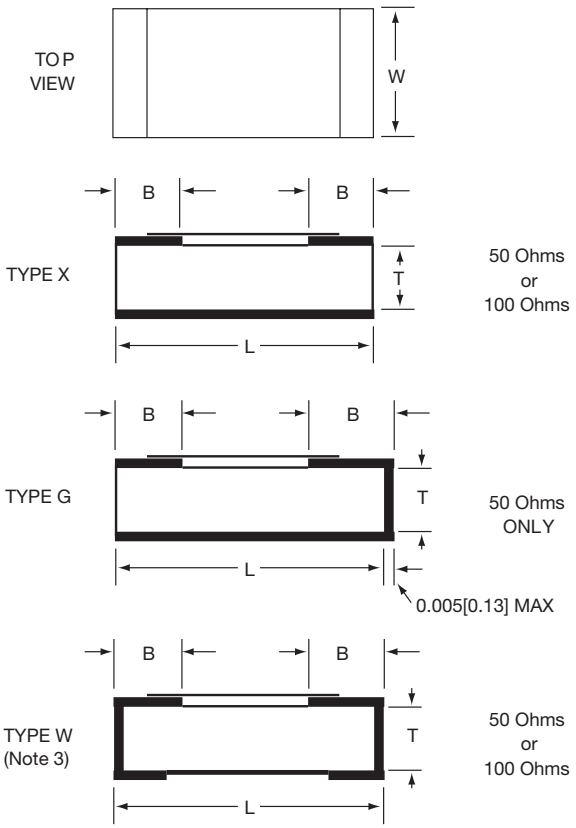
Tolerance Key
F = 1%
G = 2%
J = 5% (Standard)

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.

Physical Dimensions



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 (RØ) 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.*

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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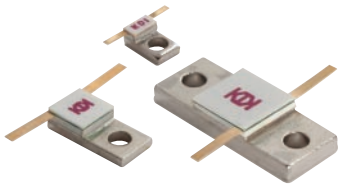
ISO 9001 REGISTERED FIRM

SERIES PPA
ATTENUATORS
High Power – DC-4GHz

The Aeroflex/KDI PPA Series of attenuators utilize a Beryllium Oxide chip and thin film technology to provide devices which can dissipate up to 100 watts of R.F. 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.



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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

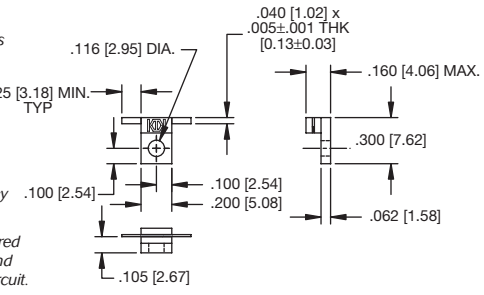
Model	Attenuation[1] 1 dB Increments (dB)	Frequency[1] Range	Input Power (Watts)	Attenuation Accuracy (1) (dB) dB	DC-1 GHz	1-2.5 GHz	2.5-4 GHz	VSWR (Typical)[2]
PPA 10	1-20	DC-4 GHz	10	1-10 11-20	±0.5 ±1.0	±0.5 ±2.0	±1.0 ±3.0	1.3:1
PPA 20	1-20	DC-4 GHz	20	1-5 6-9 10-15 16-20	±0.5 ±0.5 ±0.75 ±1.0	±0.5 ±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

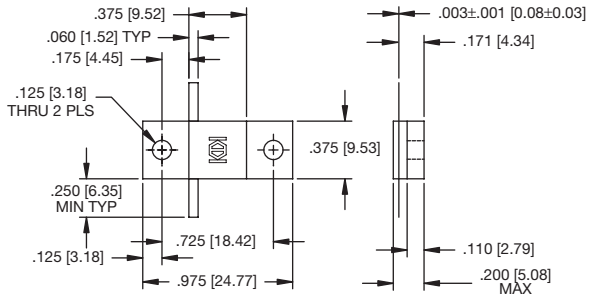
NOTES

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.*

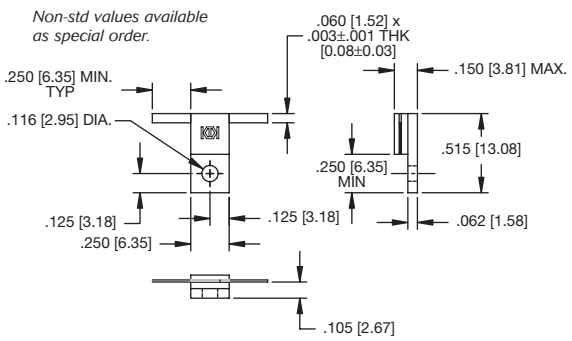
Non-std values available as special order.



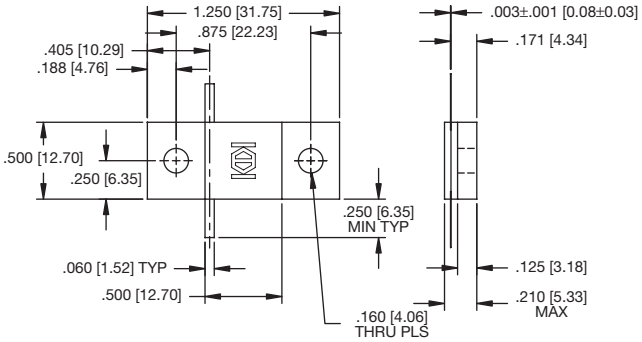
PPA10 OUTLINE



PPA50 OUTLINE



PPA20 OUTLINE



PPA100 OUTLINE

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

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SERIES PMS, PPR, PPT
RESISTORS & TERMINATIONS

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

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A passion for performance.

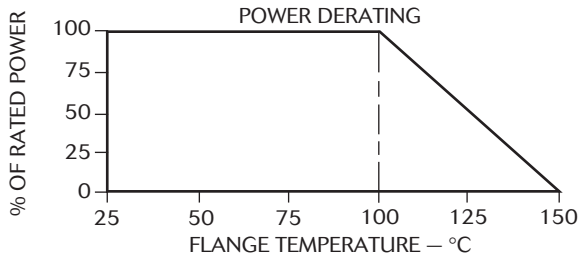
GENERAL INFORMATION

These high power devices are designed to dissipate power in R.F. 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.

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

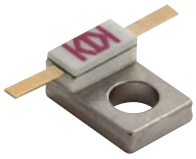
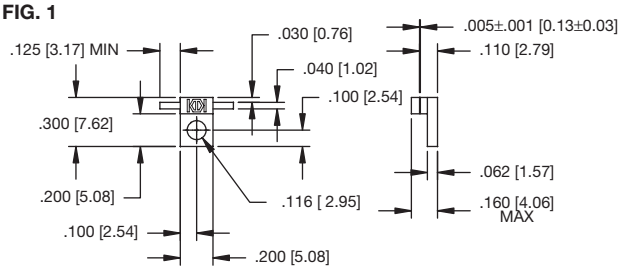
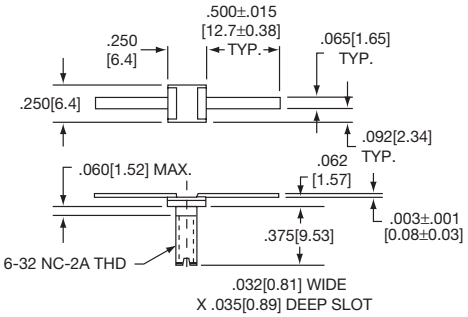
Resistive Element	Thin Film and Thick Film*
Substrate	Beryllium Oxide Ceramic
Cover	Alumina Ceramic
Mounting Flange	Copper,Nickel Plated per QQ-N-290
Tab	Beryllium Copper,Gold Plated per MIL-G-45204

** 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
PMS-100 & PMS-200*	DC-2.0 GHz	20	1.25:1 –DC-2.0 GHz	1.2	2
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	3
PPT515-30-4	DC-4.0 GHz	30	1.20:1 –DC-4 GHz	1.2	4
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	5
PPR & PPT 800-40-3	DC-4.0 GHz	40	1.25:1 –DC-4.0 GHz	1.4	6
PPT800-100A	DC-2.0 GHz	100	1.25:1 –DC-2.0 GHz	1.4	7
PPR & PPT 870-150-3*	DC-1.0 GHz	150	1.20:1 –DC-500 MHz 1.35:1 –500-1000 MHz	3.5	8
PPR & PPT 975-250-3	DC-1.0 GHz	250	1.25:1 –DC-500 MHz 1.35:1 –500-1000 MHz	5.0	9
PPR & PPT 1250-400	DC-500 MHz	400	1.50:1 –DC-500 MHz	7.0	10
PPR &PPT 1900-800	DC-500 MHz	650	1.25:1 –DC-200 MHz 1.50:1 –200-500 MHz	10.2	11

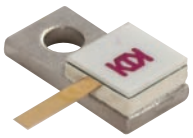
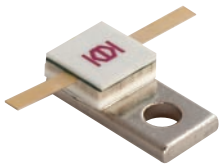
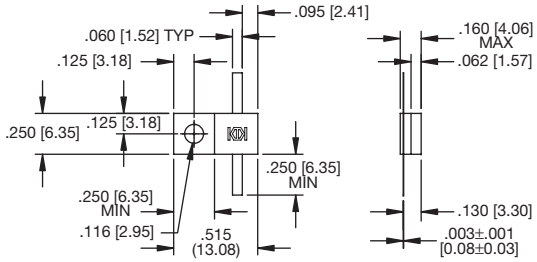
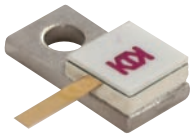
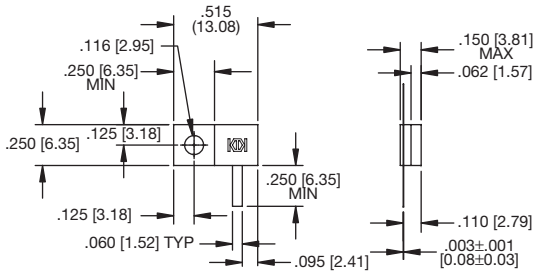
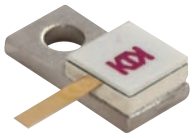
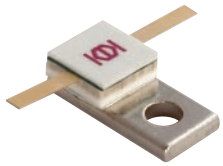
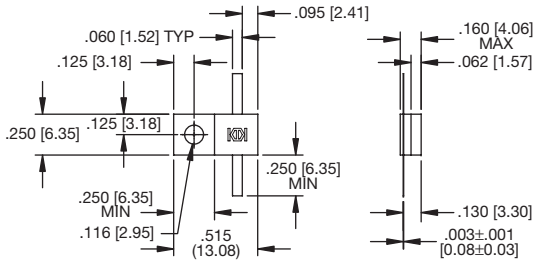
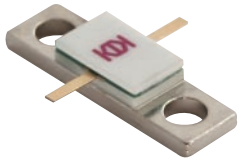
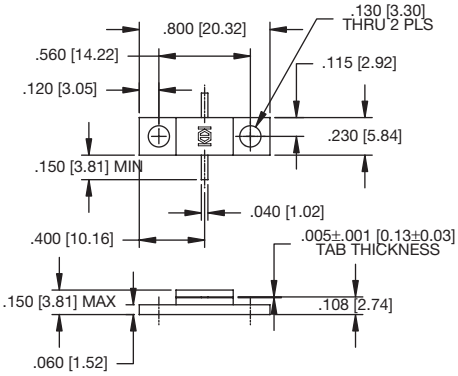
PHYSICAL DIMENSIONS

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**
		
PMS 100 — 20 WATTS Stud Mounted	**PMS 200** — 20 WATTS Stud Mounted	**FIG. 2**
		

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

SERIES PMS, PPR, PPT
RESISTORS & TERMINATIONS

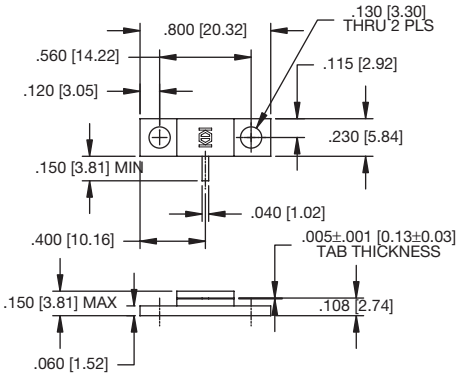
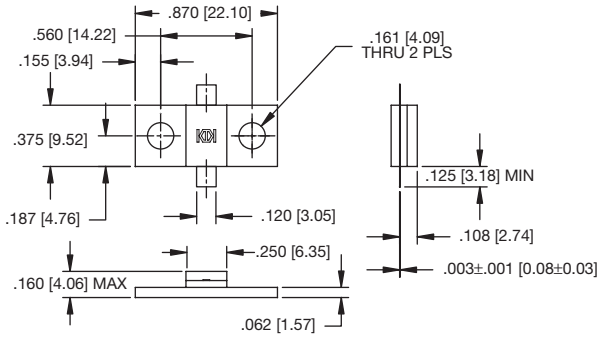
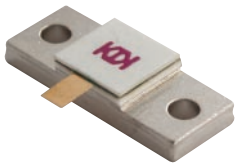
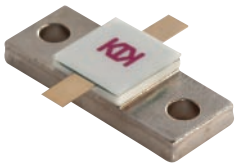
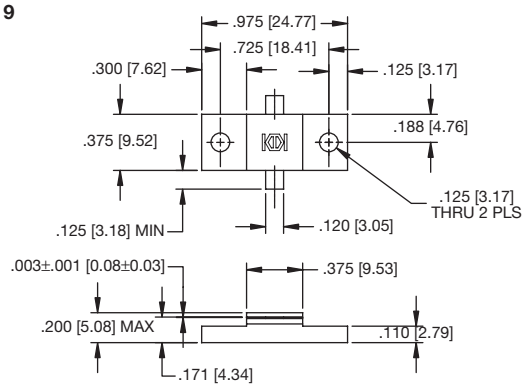
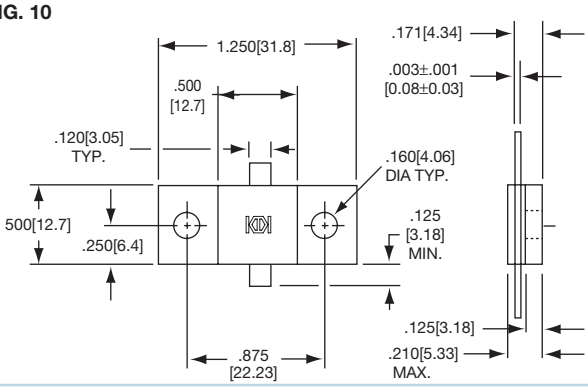
PHYSICAL DIMENSIONS

TERMINATIONS (PPT) SERIES	RESISTORS (PPR) SERIES	FIGURES
PPT 515-20-3 — 20 WATTS Flange Mounted 	**PPR 515-20-3** — 20 WATTS Flange Mounted 	**FIG. 3** 
PPT 515-30-4 — 30 WATTS Flange Mounted 	***Offered as a Termination Only!***	**FIG. 4** 
PPT 515-30 — 30 WATTS Flange Mounted 	**PPR 515-30** — 30 WATTS Flange Mounted 	**FIG. 5** 
PPT 800-40-3 — 40 WATTS Flange Mounted 	**PPR 800-40-3** — 40 WATTS Flange Mounted 	**FIG. 6** 

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

SERIES PMS, PPR, PPT
RESISTORS & TERMINATIONS

PHYSICAL DIMENSIONS

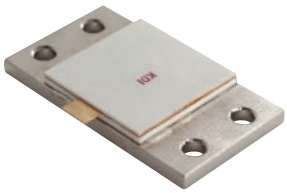
TERMINATIONS (PPT) SERIES	RESISTORS (PPR) SERIES	FIGURES
PPT 800-100A — 100 WATTS Flange Mounted 	***Offered as a Termination Only!***	**FIG. 7** 
PPT 870-150-3 — 150 WATTS Flange Mounted 	**PPR 870-150-3** — 150 WATTS Flange Mounted 	**FIG. 8** 
PPT 975-250-3 — 250 WATTS Flange Mounted 	**PPR 975-250-3** — 250 WATTS Flange Mounted 	**FIG. 9** 
PPT 1250-400 — 400 WATTS Flange Mounted 	**PPR 1250-400** — 400 WATTS Flange Mounted 	**FIG. 10** 

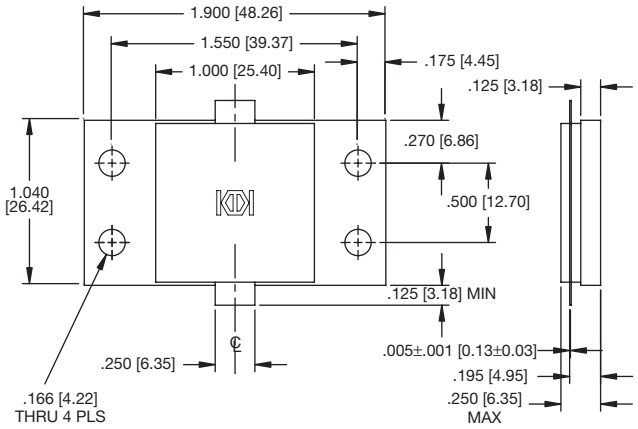
KEY: Inches [Millimeters] .XX ±.03 .XXX ±.010 [.X ±0.8 .XX ±0.25]

SERIES PMS, 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. 11**





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

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SERIES PCL
TERMINATIONS
Cartridge – DC-18 GHz

GENERAL INFORMATION

Aeroflex/KDI Cartridge Terminations are miniature, space saving models with high power capability to 15 watts.

The PCL Series incorporates an alignment slot to assist in accurate positioning when soldering to a stripline or microstrip circuit.

PCL SERIES FEATURES

- Alignment Slot
- Weight less than 2 grams
- Space Saver-Compact size

MATERIALS

Housing: Copper, Nickel Plated per QQ-N-290

Tab: Beryllium Copper, Gold Plated per MIL-G-45204

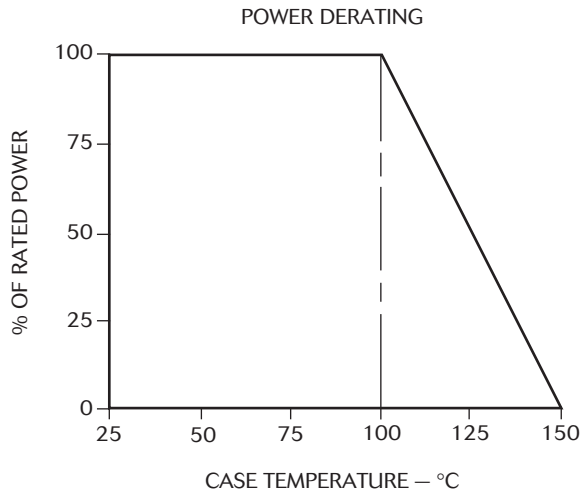
NOTE

1. VSWR as measured in a 50 ohm stripline circuit.

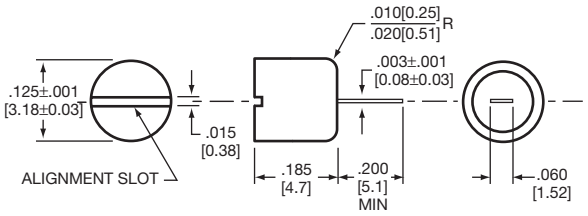
PERFORMANCE SPECIFICATIONS

Part Number	Input Frequency Range	Power (Watts)	VSWR (Typical)(1)
PCL3-125-3	DC-18 GHz	3	DC-4 GHz—1.10:1 4-8 GHz—1.20:1 8-12.4 GHz—1.30:1 12.4-18 GHz—1.50:1
PCL15-250-1	DC-12.4 GHz	15	DC-4 GHz—1.10:1 4-8 GHz—1.20:1 8-12.4 GHz—1.30:1

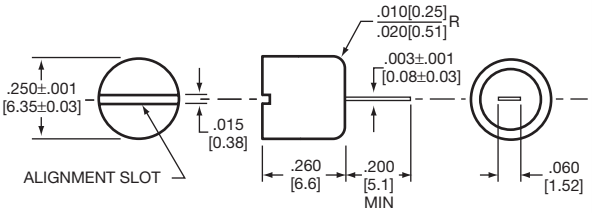
AVERAGE POWER DERATING CURVE



PHYSICAL DIMENSIONS

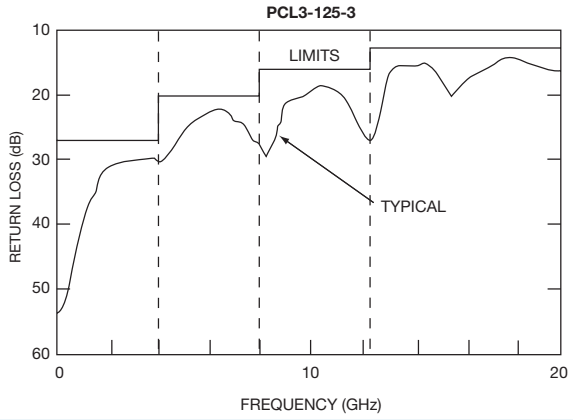


PCL3-125-3 Outline



PCL15-250-1 Outline

TYPICAL PERFORMANCE



AEROFLEX
KDI-RESISTOR PRODUCTS

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

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ISO 9001 REGISTERED FIRM

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

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

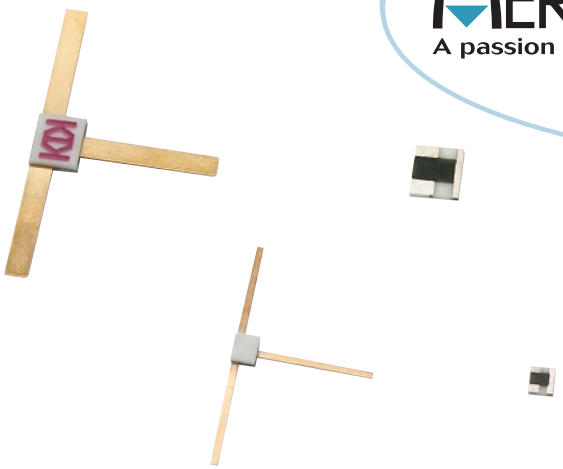
ORDERING INFORMATION
The attenuators listed are available in 1 dB increments from 1 through 20 dB. When ordering, to specify the correct part number for the desired attenuation value, select any of the series listed and add the attenuation value desired to the basic series designation.

Options
L = Lead/Tab (Gold Plated BeCu)
W = Wrap around ground only
F = Wrap around all terminals (flip-chip)
T = Tinned terminals (any terminal type)
G = Gold plated terminals

EXAMPLE:

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

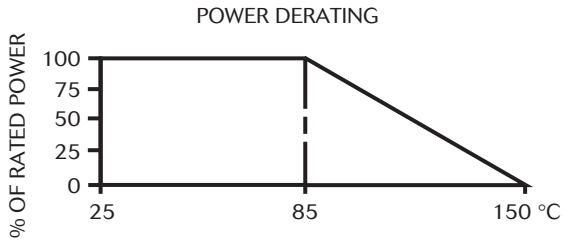
EXAMPLES: PCAW-T3
PCAAF-G3



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.*

PERFORMANCE SPECIFICATIONS

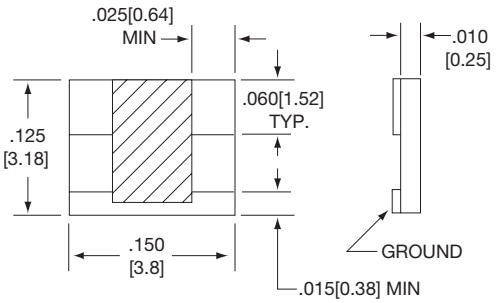
Attenuation Increments (dB) Note 1	Attenuation Accuracy (dB) Note 2				VSWR (Typical) Note 2			
	DC - 4 GHz PCA, PCAA Series	4 - 8 GHz PCA, PCAA Series	8 - 12.4 GHz PCA, PCAA Series	12.4 - 18 GHz PCAA Series Only	DC - 4 GHz PCA, PCAA Series	4 - 8 GHz PCA, PCAA Series	8 - 12.4 GHz PCA, PCAA Series	12.4 - 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]

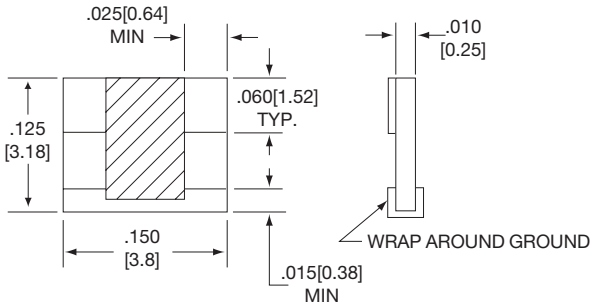
SERIES PCA, PCAA
ATTENUATORS, CHIP
Low Power – DC-18 GHz

PHYSICAL DIMENSIONS

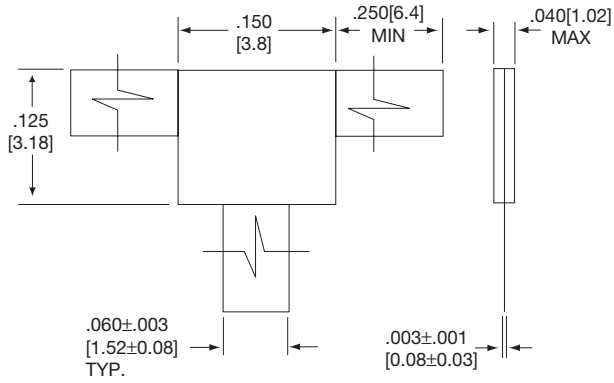
PCA



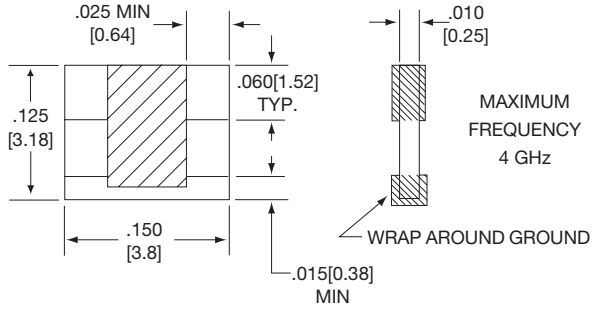
PCAW
(WRAP AROUND GROUND TERMINAL ONLY)



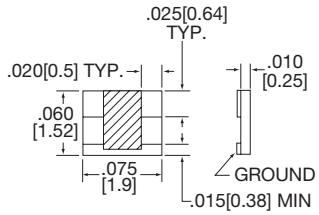
PCAL (LEAD/COVER)



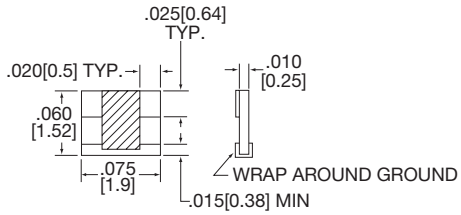
PCAF (WRAP AROUND ALL TERMINALS)



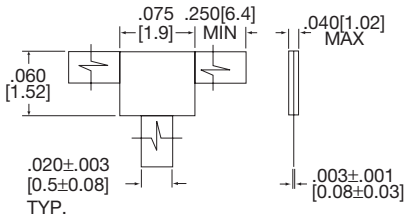
PCAA



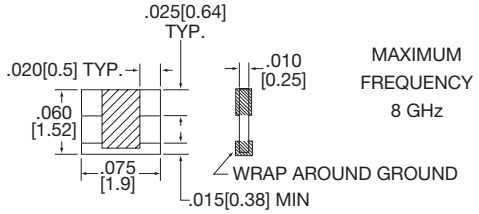
PCAAW
(WRAP AROUND GROUND TERMINAL ONLY)



PCAAL (LEAD/COVER)



PCAAF (WRAP AROUND ALL TERMINALS)



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SERIES ANT, ANR
RESISTORS & TERMINATIONS

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

AEROFLEX
A passion for performance.

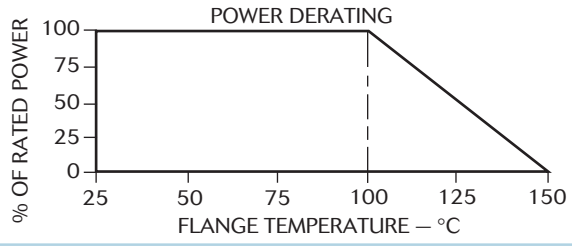
GENERAL INFORMATION

These high power devices are designed to dissipate power in R.F. 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

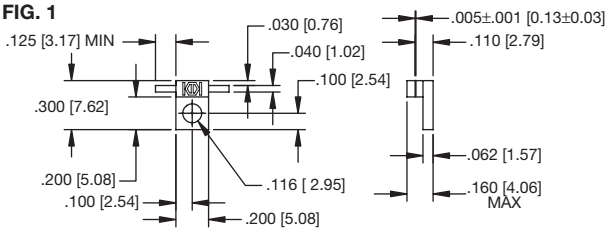
Resistive Element	Thin Film
Substrate	Aluminum Nitride
Cover	Alumina Ceramic
Mounting Flange	Copper, Nickel Plated per QQ-N-290
Tab	Beryllium Copper, Gold Plated per MIL-G-45204

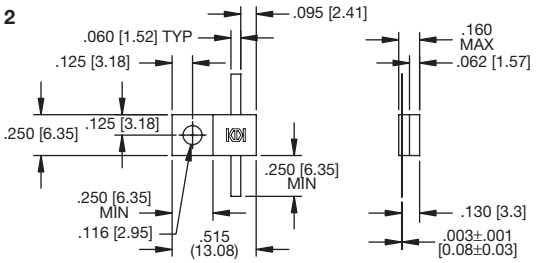
PERFORMANCE SPECIFICATIONS

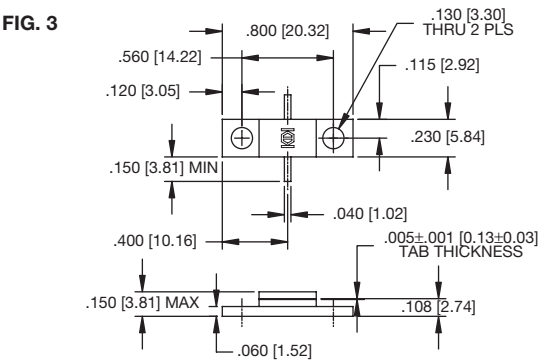
Model	Frequency Range	Input Power (Watts Avg.)	VSWR (Typical) (Note 3)	Capacitance (pF) (Typ.)	Figure No.
ANT & ANR 300-10	DC-4.0 GHz	10	1.25:1	1.0	1
ANT & ANR 515-40	DC-2.5 GHz	40	1.15:1	1.0	2
ANT & ANR 515-80	DC-1.0 GHz	80	1.25:1	1.6	2
ANT & ANR 800-100	DC-2.0 GHz	100	1.25:1	1.4	3
ANT & ANR 870-150	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**



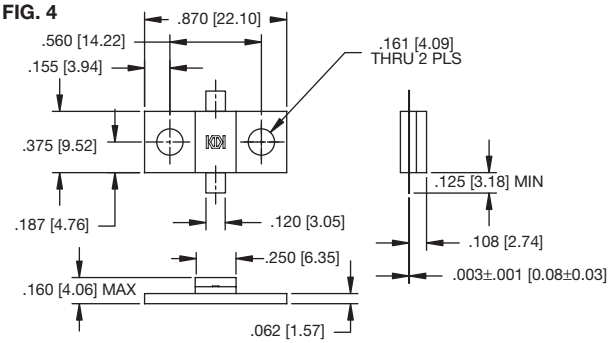
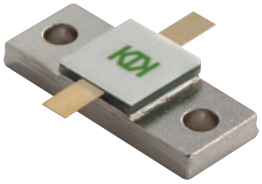
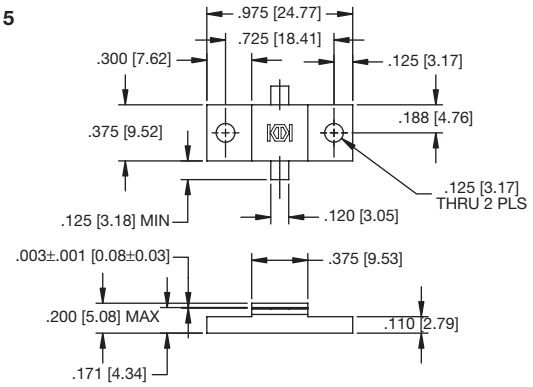
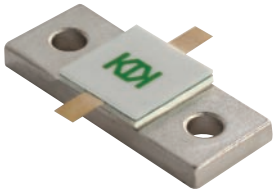
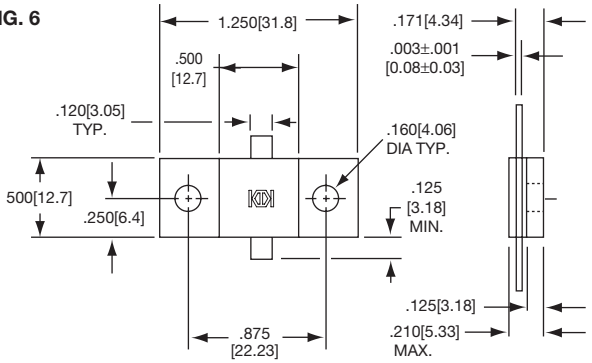
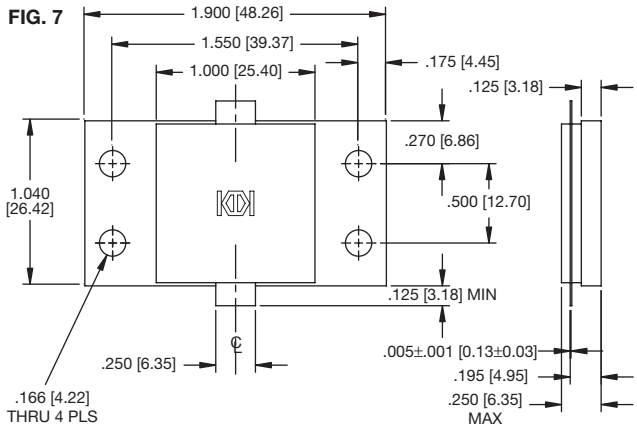




KEY: Inches [Millimeters] .XX ±.03 .XXX ±.010 [.X ±0.8 .XX ±0.25]

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** 

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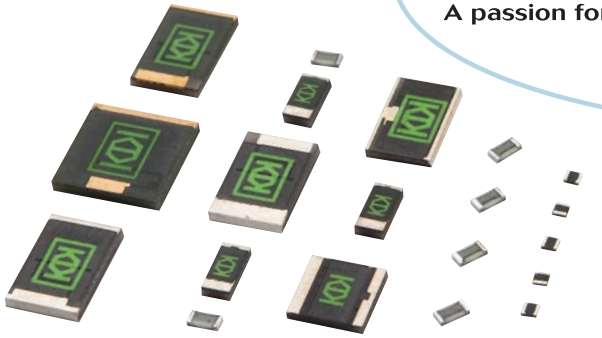
SERIES ANC
RESISTORS, TERMINATIONS
High Power Chip, Aluminum Nitride – 50 & 100 Ohms

AEROFLEX
A passion for performance.

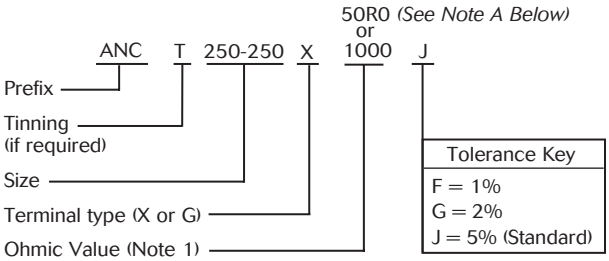
GENERAL INFORMATION

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 R.F. 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.

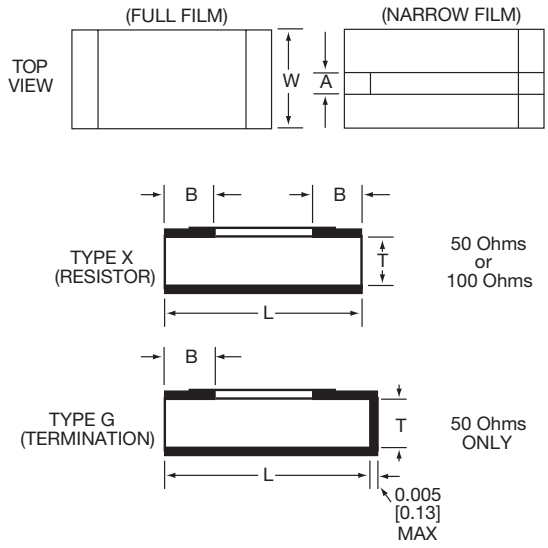


NOTE A

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.

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 PST
TERMINATIONS
Pill Shape – DC-18 GHz

GENERAL INFORMATION

KDI's series of Pill Shape Terminations feature a superior resilient spring design which provides maximum electrical efficiency as a result of its mechanical integrity. Unlike other designs that have a single contact or mounting point, this foolproof beryllium copper resilient spring employs eight individual spring contact points; thus assuring electrical and mechanical performance at all times. Devices are 100% RF tested through 18 GHz and this package offers excellent protection from moisture.

GENERAL SPECIFICATIONS

Frequency	DC-18 GHz
Impedance	50 Ohms
Operating Temperature	–55 to +150°C
Substrate	Alumina (1W) BeO Ceramic (3W)
Resistive Element	Proprietary Thin Film

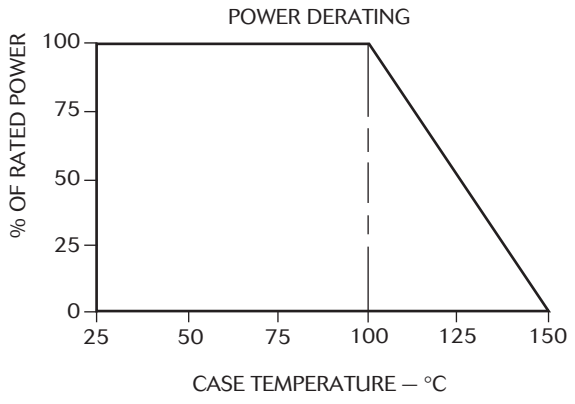
RESILIENT PILLSHAPE TERMINATIONS

Part Number	Frequency Range	Input Power (Watts)	VSWR (Typical)(1)
PST-1	DC-18 GHz	1	DC-8 GHz–1.20:1 8-12.4 GHz–1.35:1 12.4-18 GHz–1.50:1
PST-2	DC-18 GHz	3	DC-8 GHz–1.20:1 8-12.4 GHz–1.35:1 12.4-18 GHz–1.50:1

NON-RESILIENT PILLSHAPE TERMINATIONS

Part Number	Frequency Range	Input Power (Watts)	VSWR (Typical)(1)
PST-62	DC-18 GHz	1	DC-8 GHz–1.30:1 8-12.4 GHz–1.35:1 12.4-18 GHz–1.70:1
PST-125	DC-18 GHz	3	DC-8 GHz–1.20:1 8-12.4 GHz–1.35:1 12.4-18 GHz–1.50:1

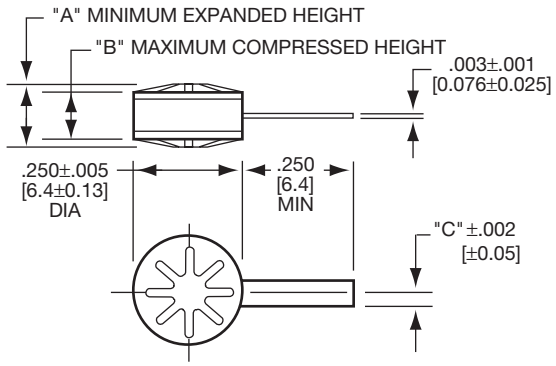
AVERAGE POWER DERATING CURVE



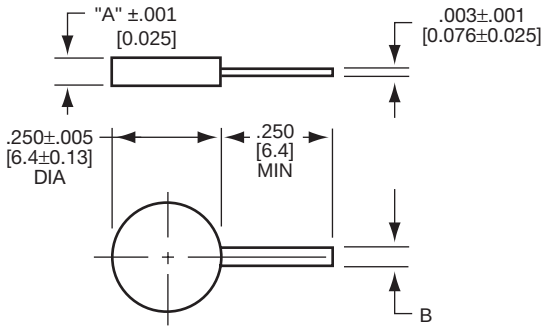
NOTE

1. VSWR as measured in 50 Ohm stripline circuit.

PHYSICAL DIMENSIONS



MODEL	"A"	"B"	"C"
PST-1	.135[3.43]	.121[3.07]	.060[1.52]
PST-2	.135[3.43]	.121[3.07]	.060[1.52]



MODEL	"A"	"B"
PST-62	.062[1.575]	.030[0.76]
PST-125	.125[3.18]	.060[1.52]

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

AEROFLEX
KDI-RESISTOR PRODUCTS

60 South Jefferson Road, Whippany, NJ 07981
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ISO 9001 REGISTERED FIRM

SERIES PSA
ATTENUATORS
Pill, Drop-in – DC-12.4 GHz

AEROFLEX
A passion for performance.

FEATURES

- Laser Trimmed
- Temperature Stable
- 100% Tested
- Fixtures Available

GENERAL INFORMATION

The PSA Series attenuators are "pill" devices designed for installation in stripline circuits. The element is a thin film laser trimmed chip, en-capsulated in an epoxy. The resilient spring configuration provides positive ground plane contact, regardless of variations in ground plane spacing tolerances. The PSA Series attenuators are ideal for high-rel applications.

ORDERING INFORMATION

The attenuators are available in 1 dB increments from 1 through 20 dB. Specify desired attenuation value by adding the attenuation value to the basic series designation. *(See note 4)*

EXAMPLE:

PSA – X

Basic Series — dB Value

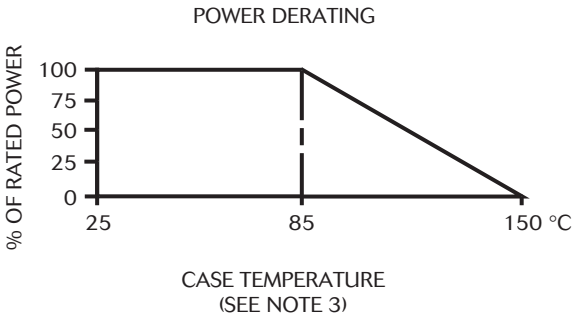
NOTES

1. *Performance of other dB values vary dependent on attenuation. Contact factory for specifications for fractional dB values.*
2. *Performance is typical and based on device mounted in matched 50 ohm line.*
3. *Rated power 1.5 watts input.*
4. *Standard values 1, 2, 3, 4, 5, 6, 10, 20 dB. Non-std values available as special order.*

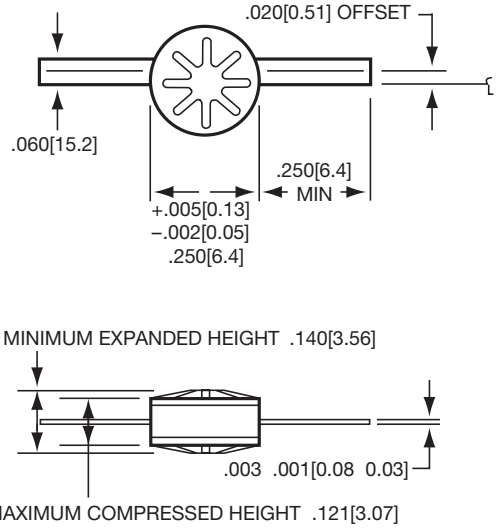
GENERAL SPECIFICATIONS

Impedance	50 ohms
Operating Temperature	-55°C to +150°C
Substrate	96% Alumina
Resistive Element	Proprietary Thin Film
Case, Cap & Tabs	Copper, Gold Plated per MIL-G-45204

AVERAGE POWER DERATING CURVE



PHYSICAL DIMENSIONS



PSA
RESILIENT HOUSING

PERFORMANCE SPECIFICATIONS

Attenuation Increment (dB) Notes 1,4	Attenuation Accuracy (dB) Note 2			VSWR (Typical) Note 2		
	DC-4 GHz	4-8 GHz	8-12.4 GHz	DC-4 GHz	4-8 GHz	8-12.4 GHz
1 -3	±0.5	±0.5	±0.5	1.25	1.35	1.50
4 - 6	±0.5	±0.5	±0.5	1.25	1.35	1.50
7 - 10	±0.5	±0.5	±0.75	1.25	1.35	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 1.25	1.35 1.35	– –

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

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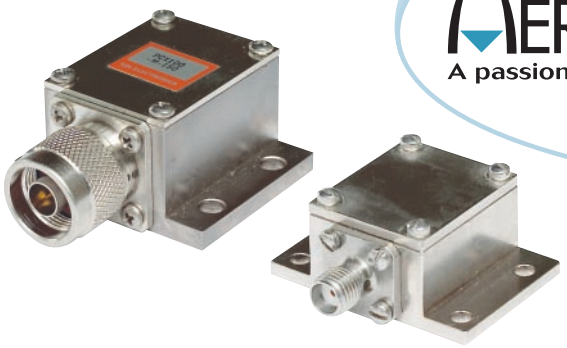
ISO 9001 REGISTERED FIRM

SERIES PCX
HIGH POWER COAXIAL TERMINATIONS
DC to 6 GHz

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.



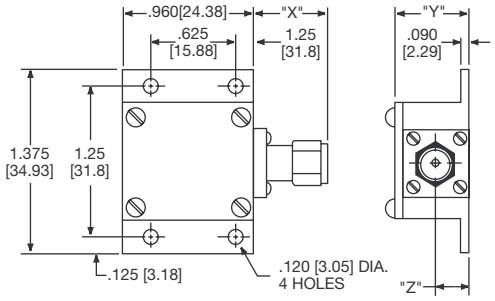
NOTES

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
PCX-050-F-50 PCX-050-M-50	50	DC - 6 GHz	SMA Female SMA Male	DC-3 GHz: 1.25:1 3 - 6 GHz: 1.35:1	A
PCX-050-F-100 PCX-050-M-100	100	DC - 3 GHz	SMA Female SMAMale	DC- 3 GHz: 1.25:1	A
PCX-050-F-150 PCX-050-M-150 PCX-100-F-150 PCX-100-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
PCX-050-F-250 PCX-050-M-250 PCX-100-F-250 PCX-100-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
PCX-100-M-500	500	DC - 200 MHz	N Male	DC - 200 MHz: 1.15:1	B

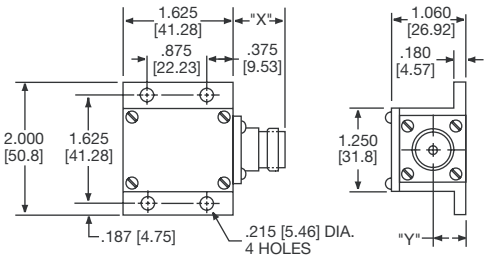
PHYSICAL DIMENSIONS



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	.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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