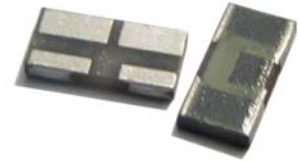


# V Series Surface Mount Thick Film Attenuator on AlN

The V Series surface mount thick film on Aluminum Nitride attenuators are compact, high performance devices especially suited to high power RF and microwave applications. IMS design principles assure a proper balance between a well behaved frequency response and optimal thermal performance for our attenuators, whose architecture maximizes allowable dissipated power for the upper dB levels.



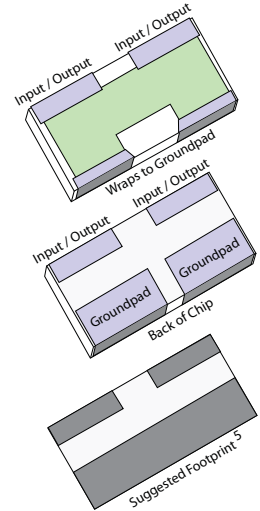
## V Series

Part	Dimensions	Power Rating <sup>1</sup>
<b>VGX-2010</b>	0.197" X 0.097" X 0.035" Max	20W
<b>VGX-3725</b>	0.375" X 0.250" X 0.035" Max	90W

## V Series Specifications

Value Range:	0dB, 1dB to 30dB
Standard Impedance:	50Ω Nominal
VSWR (Max):	1.6:1 up to 6 GHz <sup>2</sup>
DC Attenuation Stability:	.0001 dB/ dB/ deg. C <sup>3</sup>
Operating Temperature:	-55 deg. C to 150 deg. C
Nominal Thermal Resistance: <sup>4</sup>	~2.5°C/ W (2010), ~0.6°C/ W (3725)
Architecture:	Thick Film on Aluminum Nitride
Attachment:	Solder or Epoxy

### WA Style



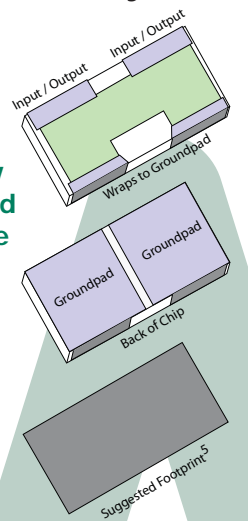
For other impedances, values, substrate thicknesses, sizes or power levels, consult the factory.

### Attenuation Accuracy (DC)

Increment (dB)	Accuracy
0, 1 - 3	+/- 0.2dB
3.5 - 13	+/- 0.3dB
13.5 - 30	+/- 0.5dB

Proper use of RF principles at the circuit level will allow acceptable thermal and electrical performance up to 10 GHz.

### SG Style



## Ordering Information

SAMPLE P/N: VG3-2010WA02D5

Prefix for AlN attenuators

Substrate Thickness:  
G - 0.025"

Termination Metallization:  
3 - PtAg  
C - PtAg w/ Solder

Case Size:  
2010 3725

dB Increment  
(D0 denotes whole value)  
-OR-  
(D5 denotes whole value + .5dB,  
available up to 16.5dB)  
Note: 0.5dB Unavailable

dB Whole Value (00-30)

Termination Style:  
WA - Wraparound  
SG - Single Wrap to Ground (2010 only)

- 1 Baseplate maintained at or below 100°C
- 2 Mounted in a matched continuous, 50Ω microstrip system
- 3 Based on TCR and resistor tolerance at DC
- 4 Based on a max power, max film temp. of 150°C and baseplate temp. of 100°C
- 5 Groundpads must be shorted during assembly

To  
**30dB**

To  
**0.2dB**  
Accuracy

To  
**90W**  
Rated Power

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