

DESCRIPTION

The HVA series broadband PIN diode attenuators cover the waveguide bands from 18 - 110 GHz. The attenuators are available for applications requiring variations in power levels using a control voltage. A 0 to + 5 V tuning range is used to control the attenuation level. This design utilizes a low loss finline structure with beam lead diodes for minimum insertion loss and optimum attenuation flatness.

Superior performance in a compact size are features of this design. Full waveguide bands are covered up to 60 GHz.

Attenuation level and bandwidth can be customized for individual applications. The table of specifications lists the standard unit for each band.



Applications

Attenuators
AM Modulators
General RF Attenuation
Test Sets
Range Simulators

Features

Attenuation Options
18 - 110 GHz Bands
Compact Design
Low Loss
Attenuation Flatness

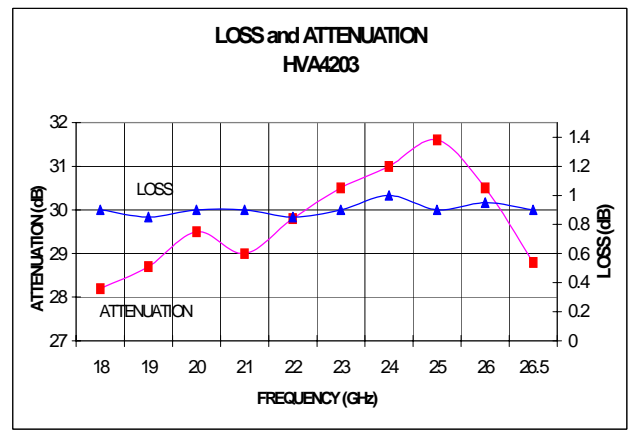
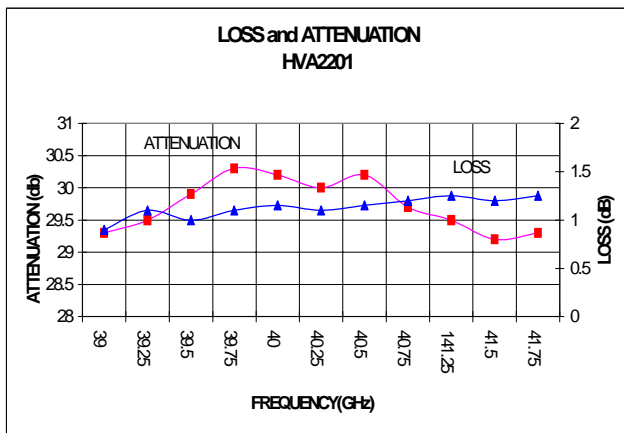
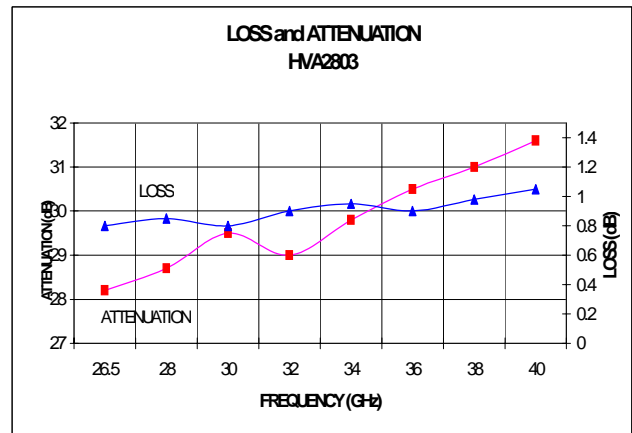
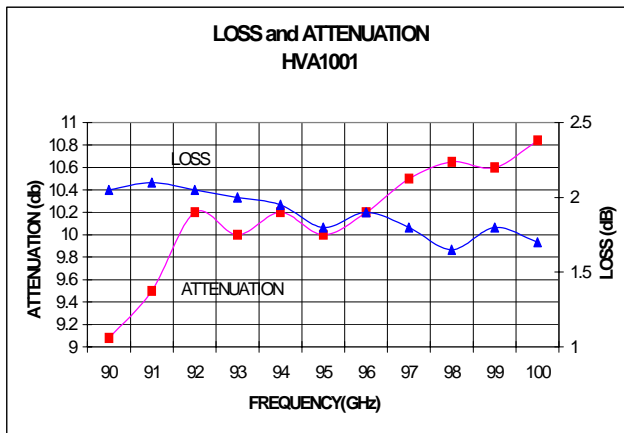
Specifications @ 35°C T_{CASE}; Specifications subject to change w/o notice.

Part Number	Frequency (GHz)	WG / Flange (WR# / UG#)	Maximum Bandwidth	Insertion Loss (dB)	Isolation (dB)	Attenuation Flatness (± dB)
HVA4203	18.0 – 26.5	42 595/U	Full	1.2	30	1.5
HVA3403	22.0 - 33.0	34 595/U	Full	1.6	30	1.5
HVA2803	26.5 – 40.0	28 599/U	Full	1.8	30	1.5
HVA2203	33.0 – 50.0	22 599/U-M	Full	2.0	30	1.7
HVA1903	40.0 – 60.0	19 599/U-M	Full	2.5	25	2.0
HVA1502	50.0 – 75.0	15 385/U	10 GHz	3.0	20	2.0
HVA1202	60.0 – 90.0	12 387/U	10 GHz	3.5	18	2.0
HVA1002	75.0 – 110.0	10 387/U-M	10 GHz	3.5	15	2.0

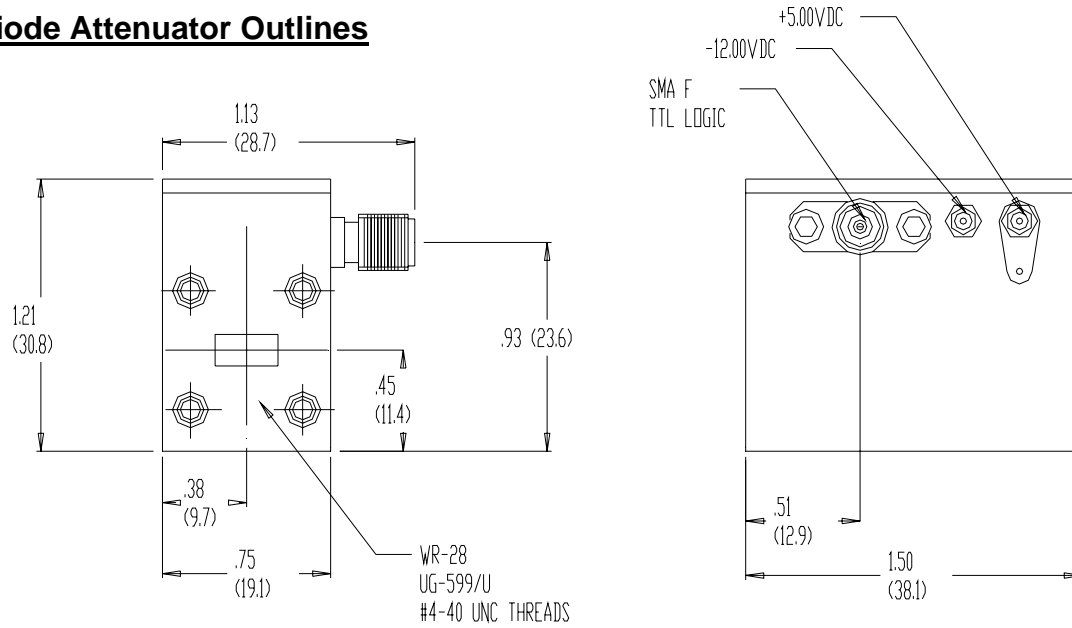
General Specifications

Bias	± 15.00 VDC @ ± 20 ma
Control Voltage	0 to + 5.00 V
VSWR Low Loss State	2:1 typical
VSWR @ Full Attenuation State	3.5: typical
Switching Speed (10 - 90%)	500 ns
Maximum RF Power	Spec compliant to 100 mW Operates to 500 mW without damage
Operating Temperature	0 to +60°C

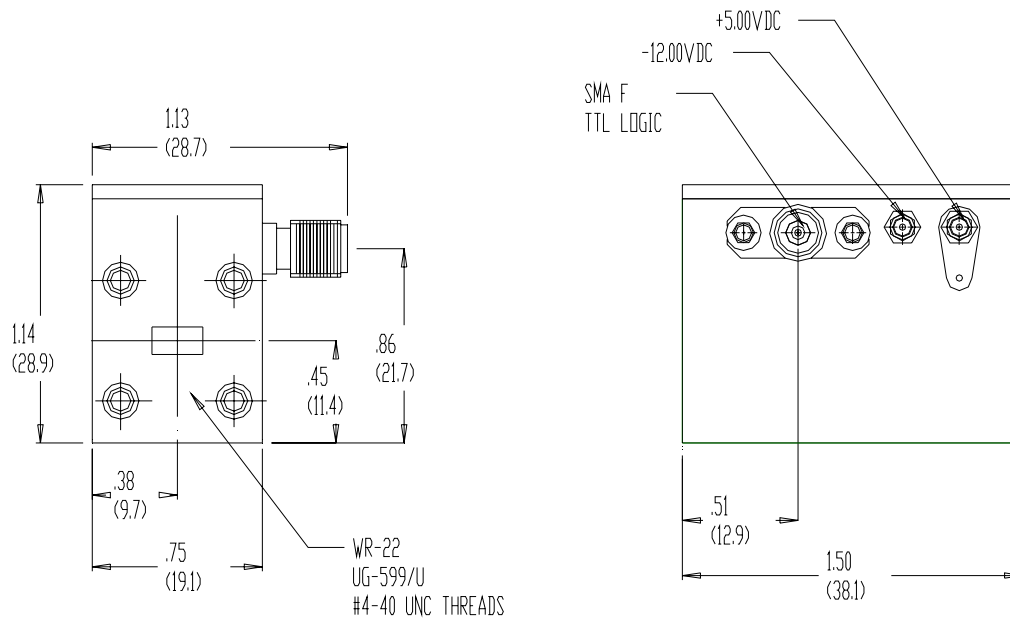
Typical Data for HVA PIN Diode Attenuators



PIN Diode Attenuator Outlines

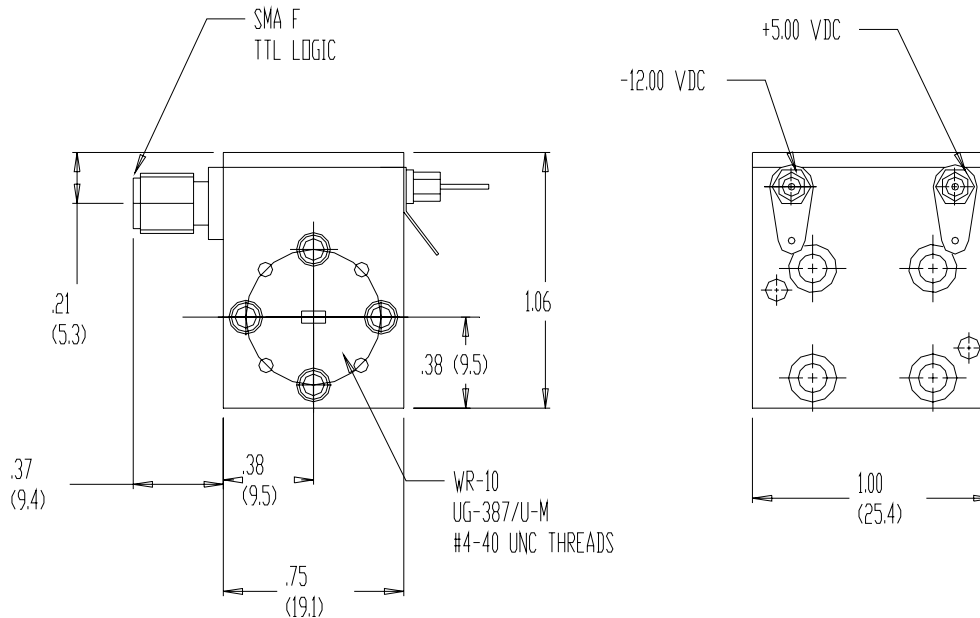


Ka-Band PIN Diode Attenuator



B-Band (Q-Band) PIN Diode Attenuator

PIN Diode Attenuator Outlines



W-Band PIN Diode Attenuator

Requesting quotes

When requesting a quote for HVA PIN Diode Attenuators, please specify required frequency range, isolation level and any other required specifications. HVA attenuators are built to order and will be optimized for the bandwidth specified by the customer. The part number guide below can also be used as a reference for requesting quotes.

HVA 28 03 / 383 - XXX

