Millimeter Wave Products

A Wholly-Owned Subsidiary of Renaissance Electronics Corp.

Series HVA
PIN Diode Attenuators

Revised November 2015

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 fin-line 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

12 Lancaster County Road, Harvard, Massachusetts 01451 Tel: (978) 772-7774 FAX: (978) 772-7775
MMWcomponents@hxi.com
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Specifications @ 35^{0}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)
HVA4203	18.0 – 26.5	42 595/U	Full	1.2	30
HVA3403	22.0 - 33.0	34 595/U	Full	1.6	30
HVA2803	26.5 – 40.0	28 599/U	Full	1.8	30
HVA2203	33.0 – 50.0	22 599/U-M	Full	2.0	30
HVAM1201	71.0—86.0	12 387/U	5GHz	4.5	12
HVAM1201	71.0—86.0	12 387/U	5 GHz	7.0	24

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^{O}C

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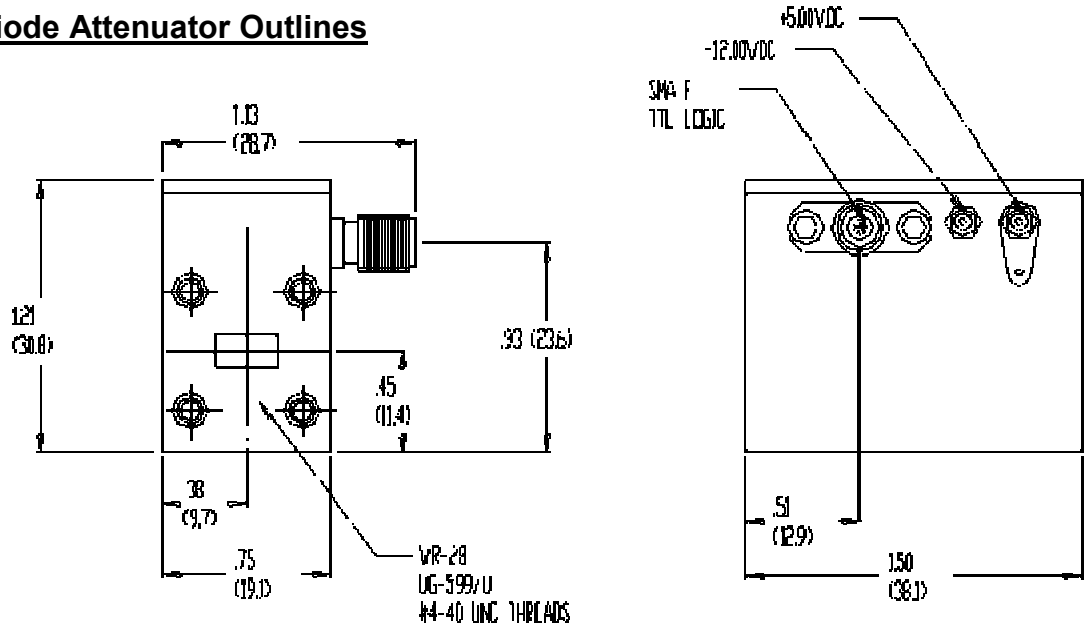
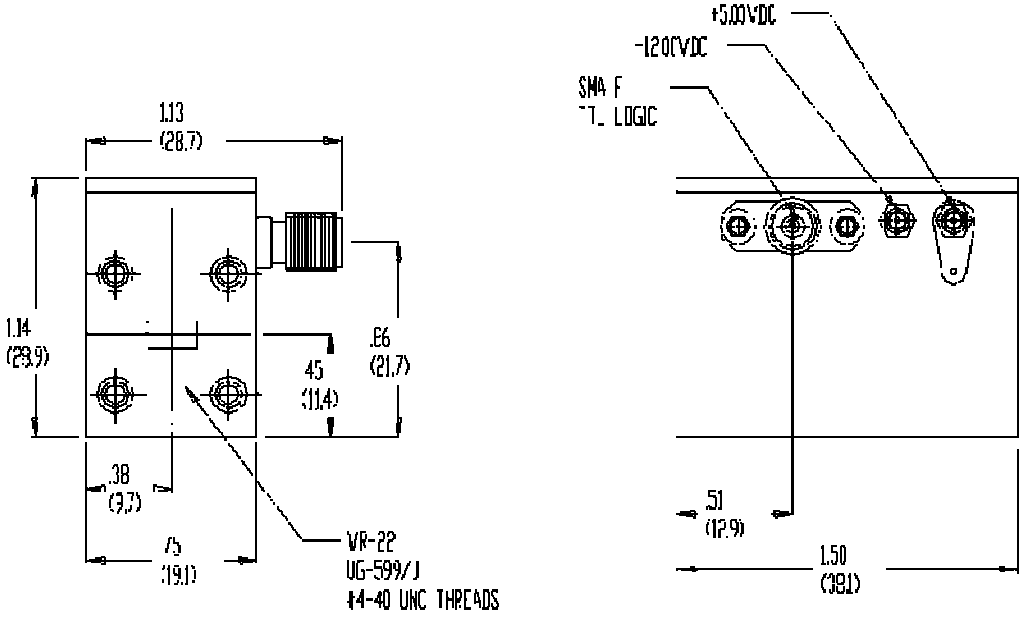
PIN Diode Attenuator Outlines



Ka-Band PIN Diode Attenuator



B-Band (Q-Band) PIN Diode Attenuator

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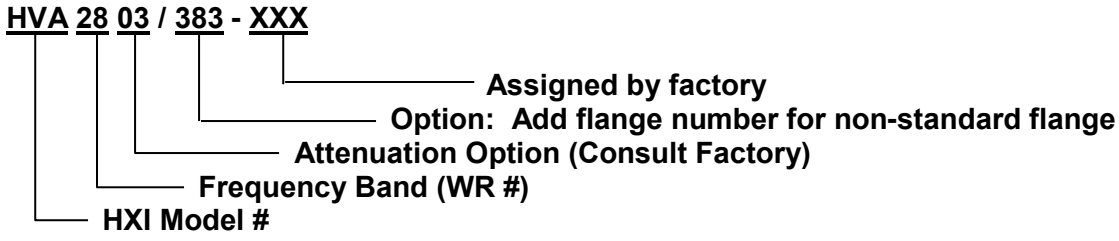
Requesting quotes

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.



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