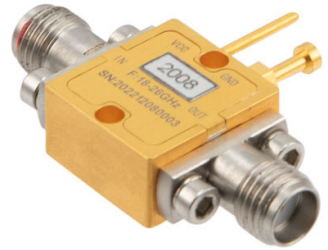


18 GHz to 26 GHz Absorptive Voltage Control Attenuator, 30 dB, Field Replaceable SMA

PE70A2008



Features

- Reflective Voltage Controlled Attenuator
- 18 GHz to 26 GHz
- Attenuation Range 0 to 30 dB typ
- Insertion Loss 1.5 dB- typ
- P0.1 dB Compression Power +30 dBm typ
- Input IP3 43 dBm typ
- Switching Speed < 2.5 usec
- Max RF Input Power +30 dBm
- Control Voltage 0V to 10V
- 50 Ohm Circuit Design uses a Reflective Topology
- Field Replaceable SMA Female RF Connectors
- Solder Pins for DC Control
- Operational Temperature Range -40°C to +85°C
- Rugged and Compact Aluminum Gold Plated Package Design
- Guaranteed Environmental Test Conditions Altitude, Vibration, Humidity, Shock
- Single Control Voltage

Applications

- Test & Measurement
- Military and Commercial Communications
- Military Electronic Systems
- Research & Development

Description

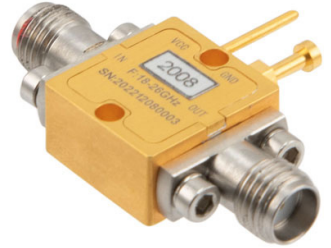
The PE70A2008 is a Reflective Analog Voltage Variable Attenuator module that operates across a frequency range from 18 GHz to 26 GHz and supports a single voltage control of 0V to 10V with 20 mA of DC Current. The 50 ohm circuit design uses a reflective topology and offers an attenuation range from 0 to 30 dB across the full frequency band. Impressive typical performance includes 1.5 dB insertion loss, a P0.1dB compression point of +30 dBm, input IP3 of 43 dBm, switching speed of < 2.5 usec, and a maximum RF input power level of +30 dBm. The low profile miniature pin package is Copper with gold plating and supports field replaceable SMA RF connectors and solder pins for DC control. With the connectors removed, the package can be drop mounted onto a PWB. The module has an operational temperature range from -40°C to +85°C and is guaranteed to meet a series of environmental test conditions for Altitude, Vibration, Humidity, and Shock.

Electrical Specifications (Values at +25°C, sea level)

Description	Minimum	Typical	Maximum	Units
Frequency Range	18		26	GHz
Attenuation Range		30		dB
Insertion Loss		1.5	2.2	dB
VSWR		1.8:1	2:1	
RF Input Power		+30	30	dBm
Input at 0.1 dB Compression Point		+30		dBm
Switching Speed			2.5	us
Control Voltage	0		10	Volts
Impedance		50		Ohms
Input IP3		43		dBm
Attenuation Range		30		dB
IL Temperature Coefficient		0.003		dB/deg C

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Absolute Maximum Rating

Parameter	Rating
Control Voltage	0~ 13V
RF Input power	+30dBm

Mechanical Specifications

Size

Length	0.55 in [13.97 mm]
Width	0.28 in [7.11 mm]
Height	0.51 in [12.95 mm]
Weight	0.05 lbs [22.68 g]
Input Connector	Field Replaceable SMA Female
Output Connector	Field Replaceable SMA Female
Power and Control	Solder Pin

Environmental Specifications

Temperature

Operating Range	-40 to +85 deg C
Storage Range	-50 to +105 deg C
Humidity	100% RH at 35°C, 95% RH at 40°C
Shock	20G for 11 msec half sine wave, 3 axis both directions
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Altitude	30,000 Feet

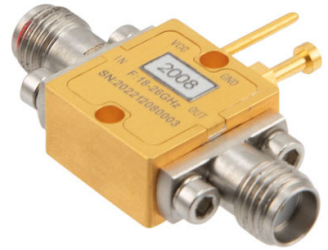
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

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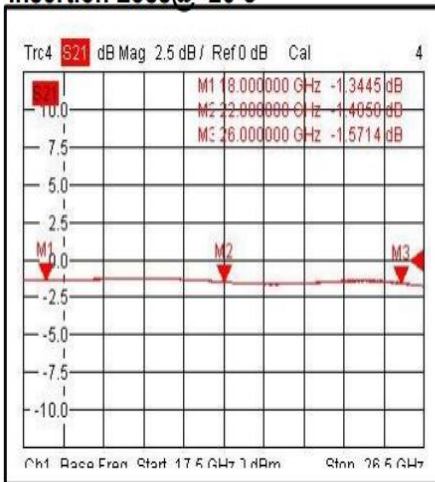
PE70A2008



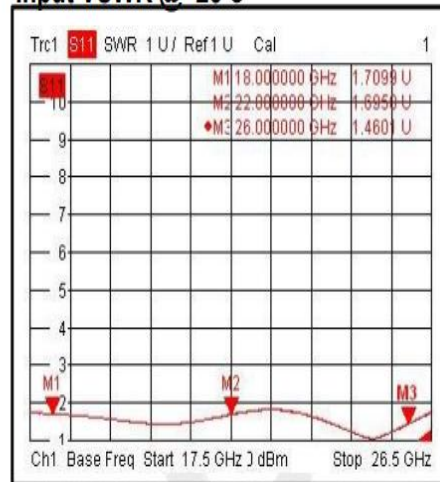
Functional Block Diagram

Performance Data

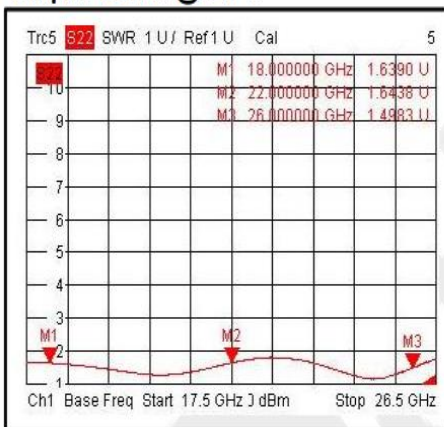
Insertion Loss @+25°C



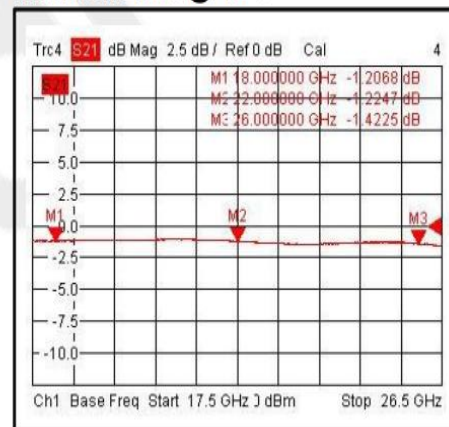
Input VSWR @+25°C



Output VSWR @+25°C

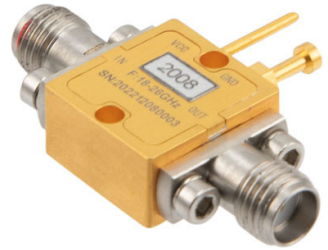


Insertion Loss @-40°C

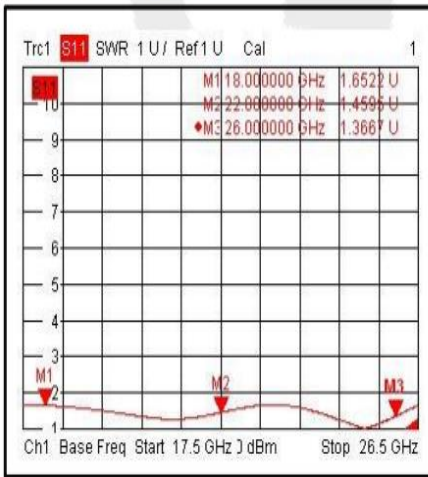


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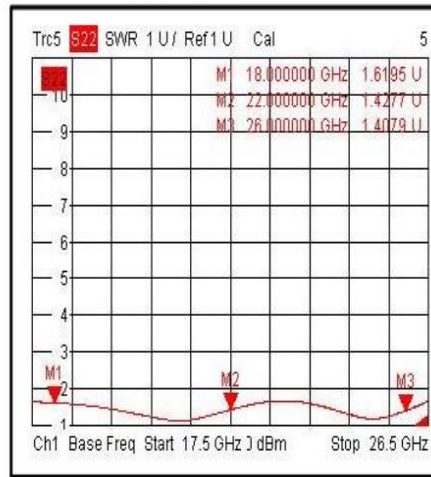
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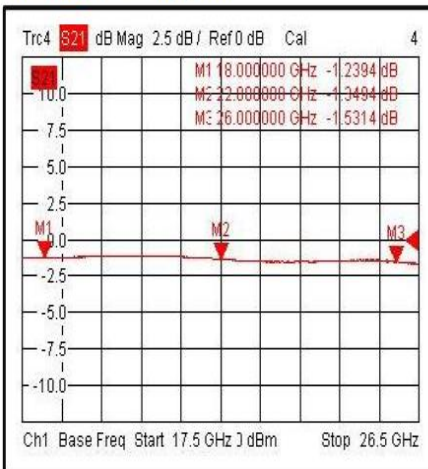
Input VSWR @-40°C



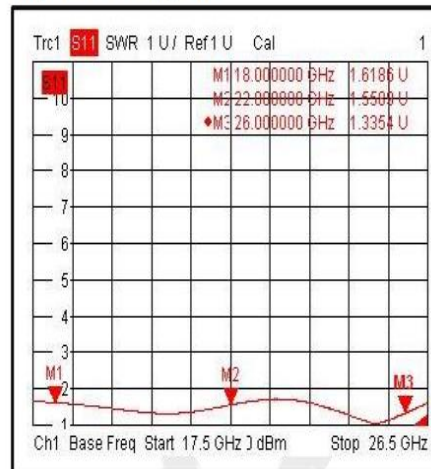
Output VSWR @-40°C



Insertion Loss @+85°C

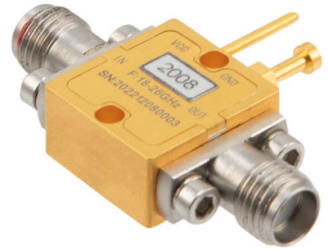


Input VSWR @+85°C

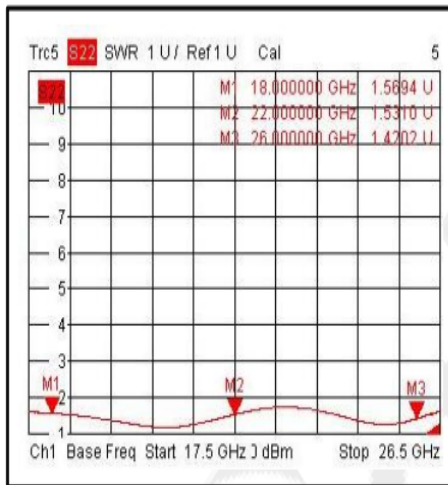


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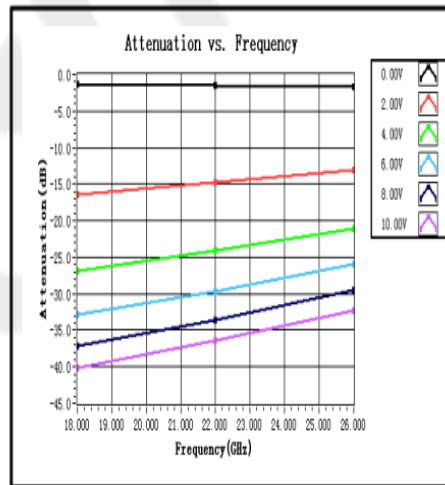
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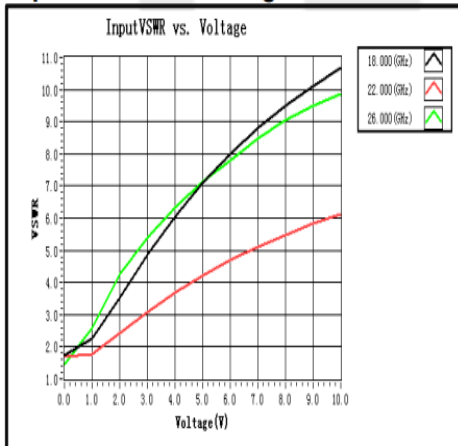
Output VSWR @+85°C



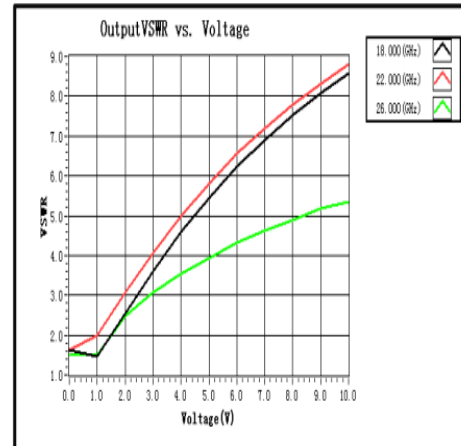
Attenuation vs. Frequency



Input VSWR vs. Voltage

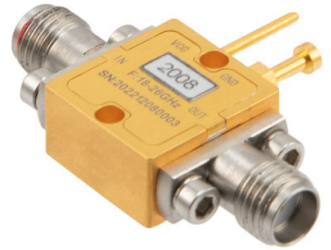


Output VSWR vs. Voltage

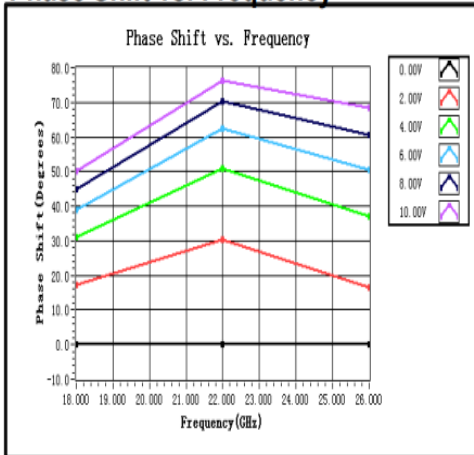


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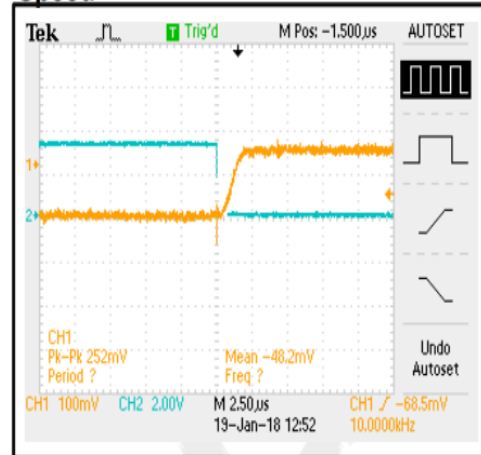
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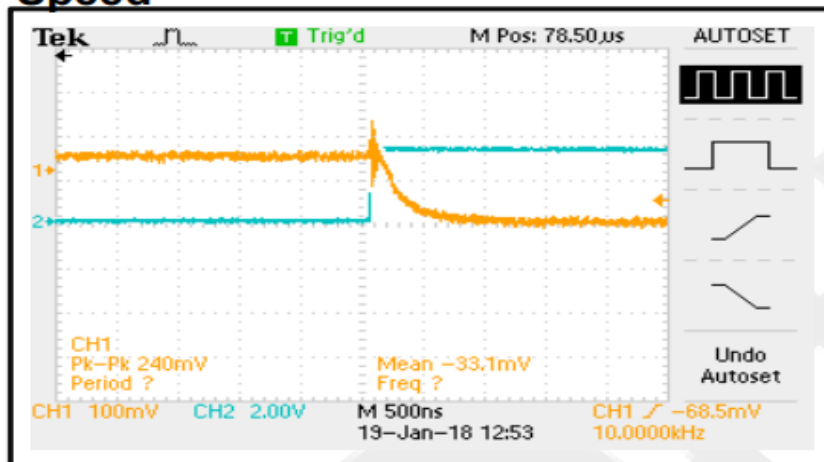
Phase Shift vs. Frequency



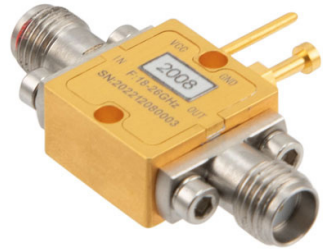
Speed



Speed



18 GHz to 26 GHz Absorptive Voltage Control Attenuator, 30 dB, Field Replaceable SMA



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18 GHz to 26 GHz Absorptive Voltage Control Attenuator, 30 dB, Field Replaceable SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [18 GHz to 26 GHz Absorptive Voltage Control Attenuator, 30 dB, Field Replaceable SMA PE70A2008](#)

URL: <https://www.pasternack.com/30db-voltage-variable-30-dbm-attenuator-pin-diode-26-ghz-sma-pe70a2008-p.aspx>

The information contained within this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part in order to implement improvements. Pasternack Enterprises reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack Enterprises does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack Enterprises does not assume liability arising out of the use of any part or document.

PE70A2008 CAD Drawing

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