



Voltage Variable PIN Diode Attenuator, 0 to 60 dB, 6 GHz to 12 GHz, SMA, 15-Pin D-Subminiature Control

TECHNICAL DATA SHEET

PE70A2002

The PE70A2002 Voltage Variable PIN Diode Attenuator exhibits broadband frequency coverage from 6 GHz to 12 GHz. The highly linear design features exceptional performance that includes an attenuation range of 0 to 60 dB, typical flatness of +/- 1 dB, and excellent VSWR of 2.0:1 max over all attenuation levels. Insertion loss is less than 2.8 dB and switching speed is less than 500 nsec. The rugged coaxial package assembly uses field replaceable SMA connectors along with a 15 pin Micro D female DC power/control connector that includes a mating connector. Operational temperature is rated for -55°C to +85°C, and the design is guaranteed to meet MIL-STD-202 environmental test conditions that includes Humidity, Temperature Cycle, Shock, and Vibration.

Features

- Analog Controlled 60 dB Pin Diode Attenuator
- 6 GHz to 12 GHz Frequency Range
- Insertion Loss 2.8 dB Max
- VSWR 2.0:1 Max
- Input Power 20 dBm Operating
- Input Power 30 dBm Survival
- Switching Time 500 nsec
- Removeable SMA Female Connectors
- 15 Pin Micro-D Female Power/Control Connector

Applications

- Electronic Warfare
- Test & Measurement
- Military & Space
- Radar
- Military Communications Systems

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

Description	Minimum	Typical	Maximum	Units
Frequency Range	6		12	GHz
Mean Attenuation Range	0		60	dB
Insertion Loss			2.8	dB
VSWR			2:1	
Power Rating		+20		dBm
Survival Power Rating			+30	dBm
Attenuation Flatness				
10 dB		±0.7		dB
20 dB		±1		dB
40 dB		±1.5		dB
60 dB		±1.6		dB
Switching Time			500	ns
Analog Control		10		dB/Volt
Control	0		6	Volts
DC Power Supply				

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Voltage Variable PIN Diode Attenuator, 0 to 60 dB, 6 GHz to 12 GHz, SMA, 15-Pin D-Subminiature Control PE70A2002](#)

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12 to 15 VDC	125	mA
-12 to -15 VDC	50	mA

Mechanical Specifications

Size

Length	2 in [50.8 mm]
Width	1.8 in [45.72 mm]
Height	0.5 in [12.7 mm]
Weight	0.151 lbs [68.49 g]
Input Connector	Field Replaceable SMA Female
Output Connector	Field Replaceable SMA Female
Power and Control	15-Pin D-Subminiatur

Environmental Specifications

Temperature

Operating Range	-55 to +85 deg C
Storage Range	-65 to +125 deg C

Humidity	MIL-STD-202F, METHOD 103B COND. B
Shock	MIL-STD-202F, METHOD 213B COND. B
Vibration	MIL-STD-202F, METHOD 204D COND. B
Altitude	MIL-STD-202F, METHOD 105C COND. B
Temperature Cycle	MIL-STD-202F, METHOD 107D COND. A
Salt Spray	MIL-STD-202F, METHOD 105C COND. B

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

Plotted and Other Data

Notes:

- Values at +25 °C, sea level
- ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.

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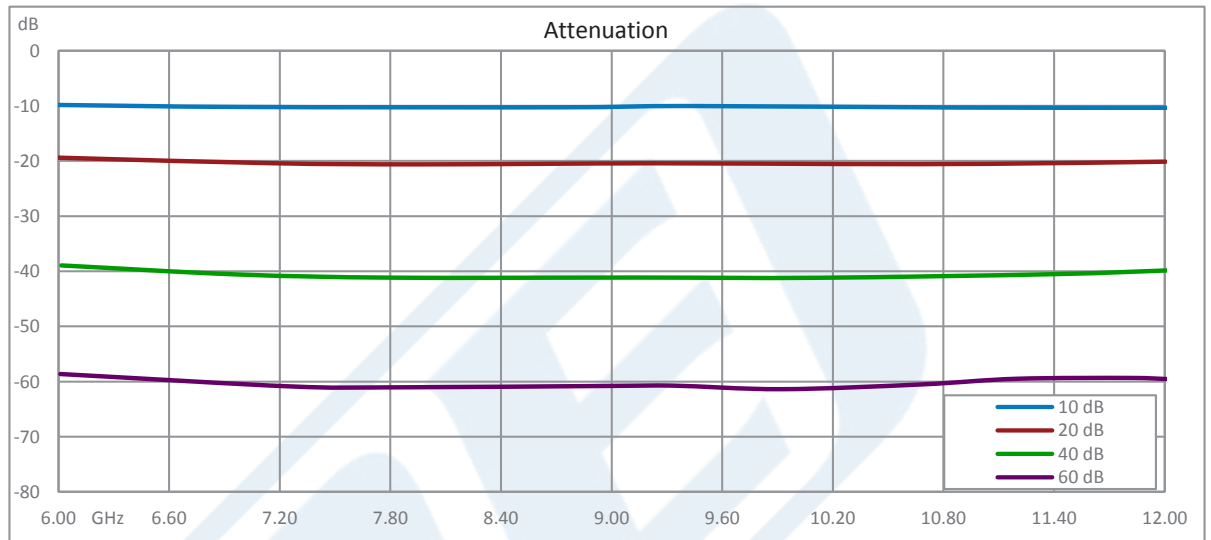
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Performance Data



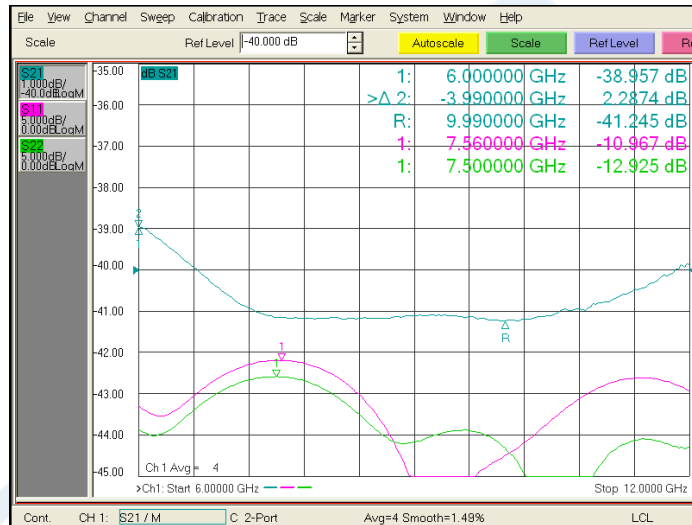
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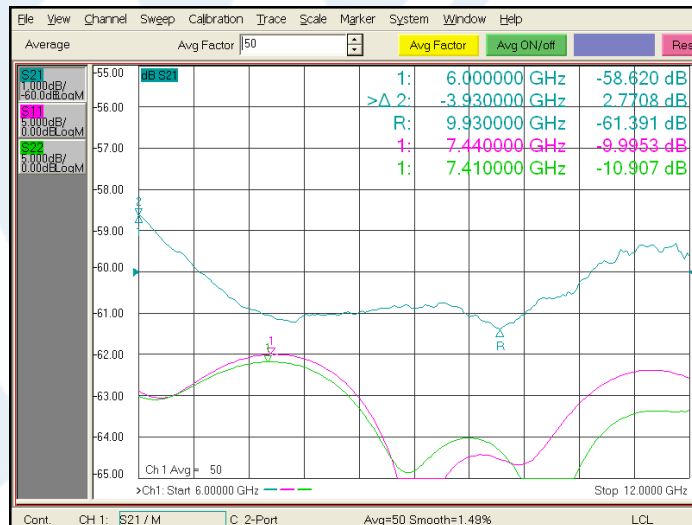
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40dB Attenuation



60dB Attenuation



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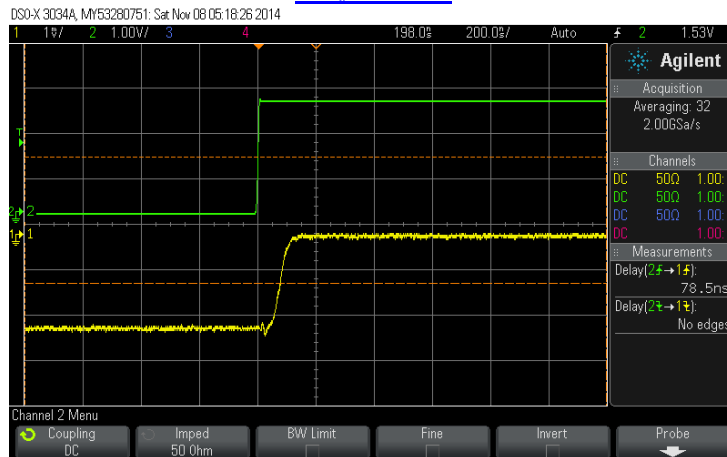


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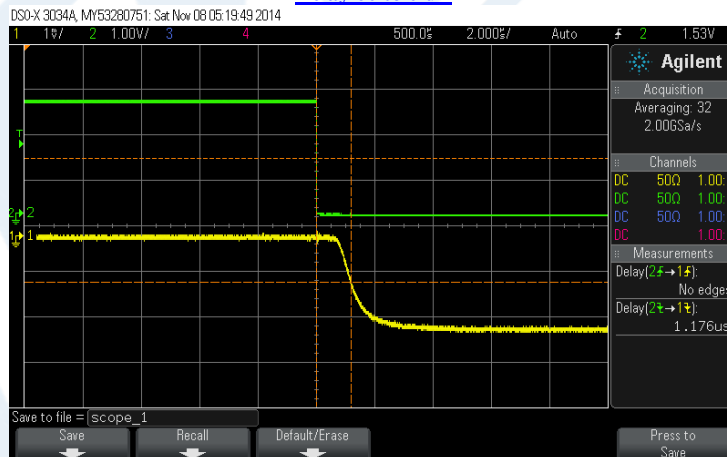
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Delay 0 to 60 dB



Channel 1 (Yellow): RF output
Channel 2 (Green): TTL Input from Signal Generator

Delay 60 to 0 dB



Channel 1 (Yellow): RF output
Channel 2 (Green): TTL Input from Signal Generator

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Voltage Variable PIN Diode Attenuator, 0 to 60 dB, 6 GHz to 12 GHz, SMA, 15-Pin D-Subminiature Control 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.

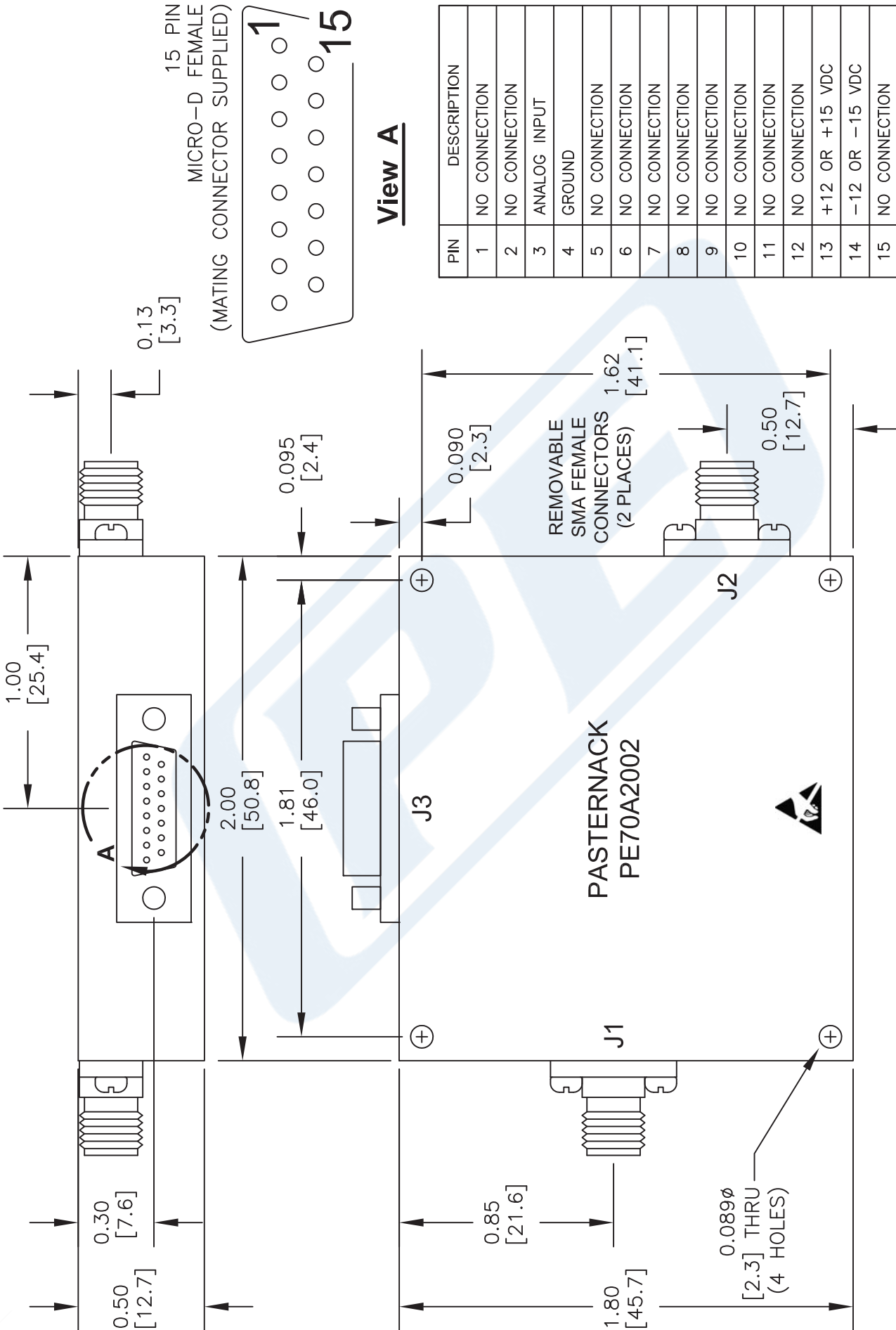
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements.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

PE70A2002 CAD Drawing

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NOTES:
 1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
 2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
 3. DIMENSIONS ARE IN INCHES [mm].

DWG TITLE
PE70A2002

FSCM NO. 53919

CAD FILE 051815

SCALE N/A

SIZE A

2233

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 THE ENGINEER'S RF SOURCE

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