



5 Bit Programmable 30 dB Attenuator 0.1 GHz to
40.0 GHz 8.0 dB IL 1 dB Step 20 dBm P1dB

TECHNICAL DATA SHEET

PE70A5002

The PE70A5002 is a 5 Bit Programmable 30 dB Pin Diode Attenuator with Step Resolution as Low as 1 dB over the Operating Frequency Range from 0.1 GHz to 40 GHz.

Features

- 5 Bit Programmable 30 dB Pin Diode Attenuator
- 0.1 GHz to 40 GHz Frequency Range
- 30 dB Attenuation Range
- Step Resolution of 1 dB
- Insertion Loss 8 dB Typ

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	0.1		40	GHz
Mean Attenuation Range	0		30	dB
Insertion Loss		8		dB
VSWR		2.5:1		
Input at 1 dB Compression Point		+20		dBm
Power Handling Capacity			24 CW	dBm
Accuracy of Attenuation 0 dB to 30 dB		±2.5		dB
Step Size	1			dB
Switching Time				
On Time			1	µs
Off Time			0.5	µs
DC Power Supply @ 50 mA		15		Volts
Logic Input				
Logic "0" (Bit Off)	0		0.8	Volts
Logic "1" (Bit On)	2		5	Volts

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [5 Bit Programmable 30 dB Attenuator 0.1 GHz to 40.0 GHz 8.0 dB IL 1 dB Step 20 dBm P1dB PE70A5002](#)



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Mechanical Specifications

Size

Length	2 in [50.8 mm]
Width	1.8 in [45.72 mm]
Height	0.5 in [12.7 mm]
Weight	0.2 lbs [90.72 g]

Environmental Specifications

Temperature

Operating Range	-50 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 107

Compliance Certifications (visit www.Pasternack.com for current document)

RoHS Compliant

Plotted and Other Data

Notes:

- Values at +25 °C, sea level

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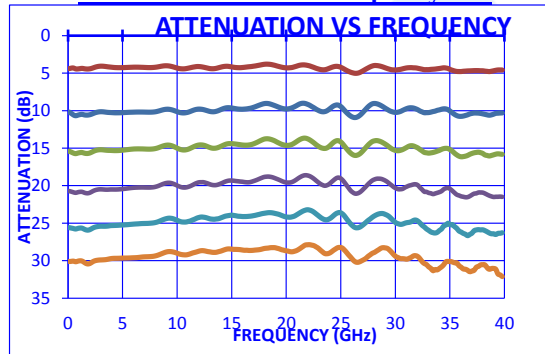
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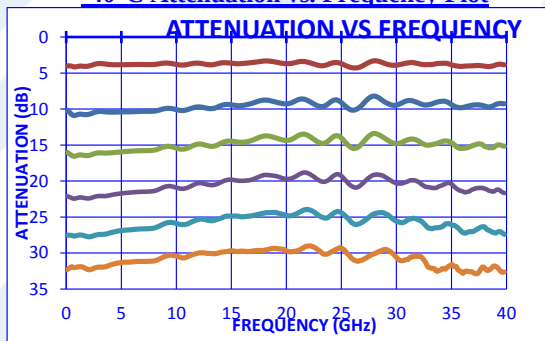
PE70A5002

Performance Data

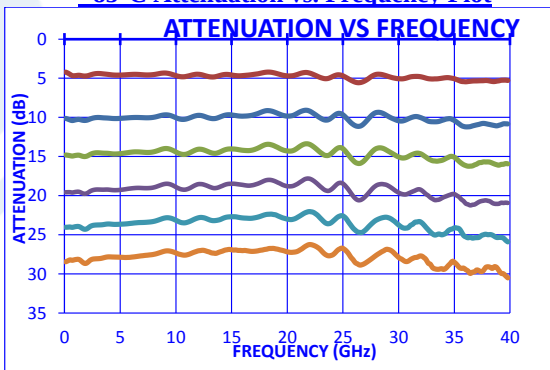
+25°C Attenuation vs. Frequency Plot



-40°C Attenuation vs. Frequency Plot



+85°C Attenuation vs. Frequency Plot



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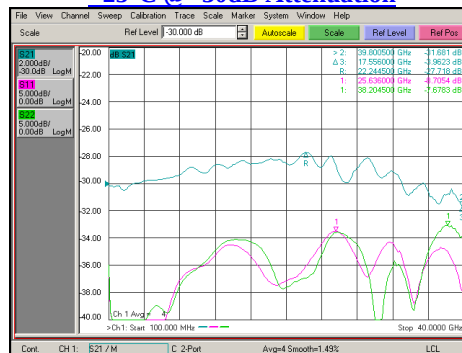


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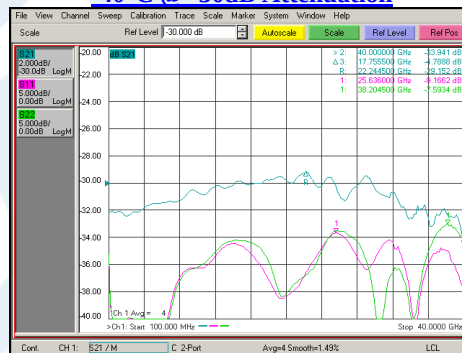
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+25°C @ -30dB Attenuation



-40°C @ -30dB Attenuation



+85°C @ -30dB Attenuation



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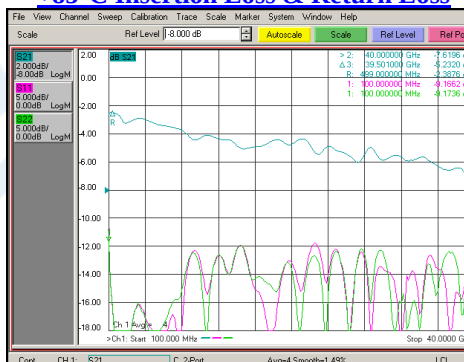
+25°C Insertion Loss & Return Loss



-40°C Insertion Loss & Return Loss



+85°C Insertion Loss & Return Loss



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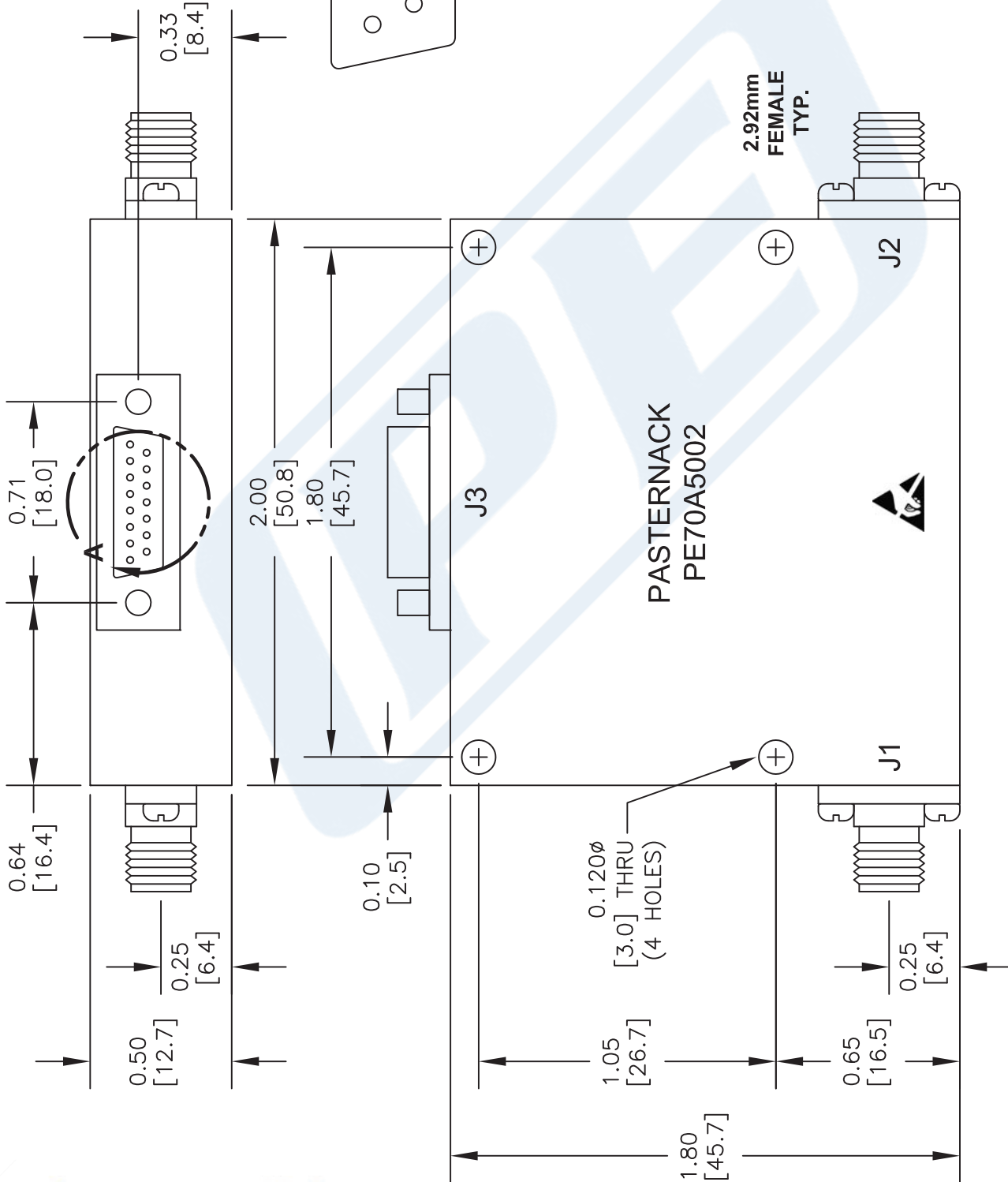
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. 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.

PE70A5002 CAD Drawing

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View A

PIN	DESCRIPTION
1	1dB
2	NO CONNECTION
3	NO CONNECTION
4	NO CONNECTION
5	GND
6	NO CONNECTION
7	NO CONNECTION
8	GND
9	NO CONNECTION
10	NO CONNECTION
11	+15VDC
12	16dB
13	8dB
14	4dB
15	2dB

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

PE70A5002

PE PASTERNAK®
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FSCM NO. 53919

CAD FILE 111114

SCALE N/A

SIZE A

2233