



30 dB With 5 Bit Programmable TTL Controlled
Attenuator, 2.92mm Female To 2.92mm Female,
1 dB Steps From 100 MHz To 40 GHz

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. The RF Input/Output Connectors are 2.92mm Female. Along with a 15 Pin Micro-D Female Control Socket. The unit is shipped with a Micro-D Mating Connector.

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
- RF Connectors are 2.92mm Female
- 15 Pin Micro-D Female 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	0.1		40	GHz
Mean Attenuation Range	0		30	dB
Insertion Loss		8		dB
Input VSWR		2.5:1		
Power Rating			+24	dBm
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
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: [30 dB With 5 Bit Programmable TTL Controlled Attenuator, 2.92mm Female To 2.92mm Female, 1 dB Steps From 100 MHz To 40 GHz 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	0.14 lbs [63.5 g]
Connector 1	2.92mm Female
Connector 2	2.92mm Female

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 Cycling

MIL-STD-202F, METHOD 107

Salt Spray

MIL-STD-202F, METHOD 105C COND. B

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

Not RoHS Compliant

REACH Compliant 12/17/2014

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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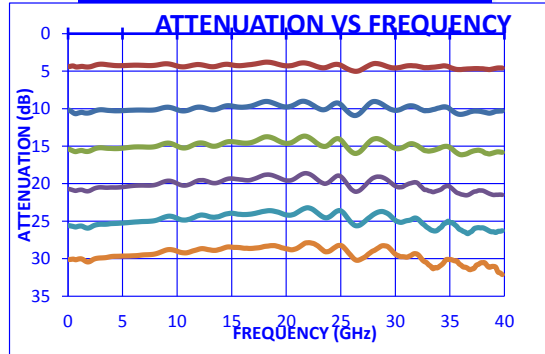
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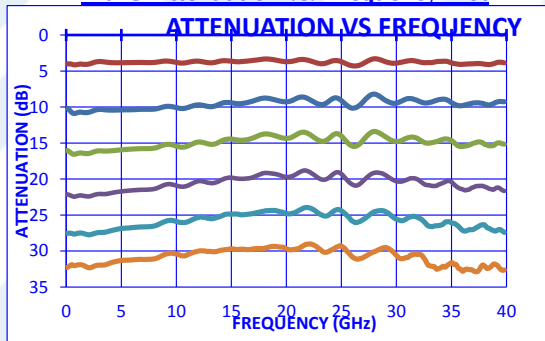
PE70A5002

Performance Data

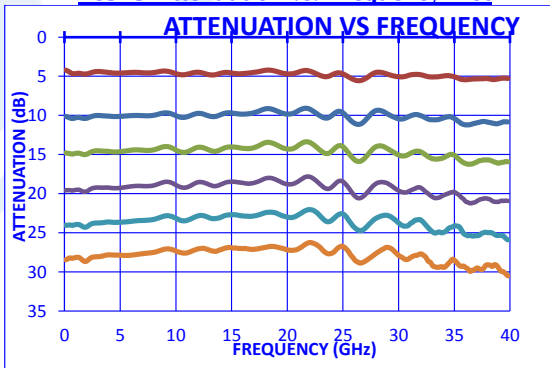
+25°C Attenuation vs. Frequency Plot



-40°C Attenuation vs. Frequency Plot



+85°C Attenuation vs. Frequency Plot



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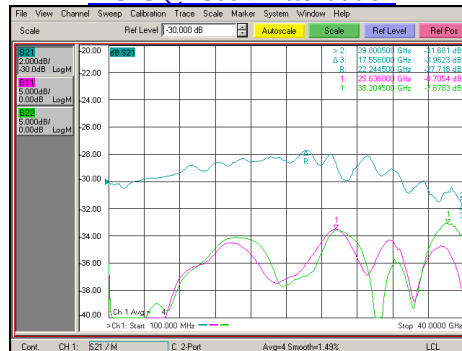


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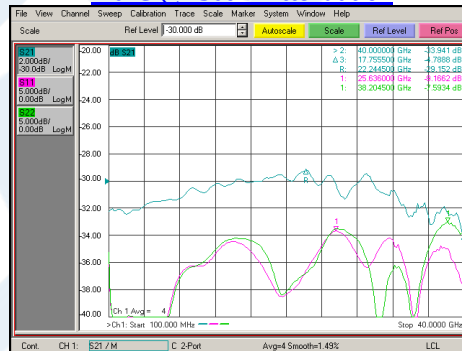
TECHNICAL DATA SHEET

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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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30 dB With 5 Bit Programmable TTL Controlled Attenuator, 2.92mm Female To 2.92mm Female, 1 dB Steps From 100 MHz To 40 GHz from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% 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.

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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:

- 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

FSCM NO. 53919

2233

CAD FILE 111114

SIZE A

2233