

60 dB With 8 Bit Programmable TTL Controlled
Attenuator, SMA Female To SMA Female,
0.25 dB Steps From 30 MHz To 6 GHz



PE70A5000

Features

- 8 Bit Programmable 60 dB Pin Diode Attenuator
- 0.03 GHz to 6 GHz Frequency Range
- 60 dB Attenuation Range
- Step Resolution of 0.25 dB
- Insertion Loss 4 dB Max
- RF Connectors are SMA Female
- 15 Pin Micro-D Female Connector

Applications

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

Description

The PE70A5000 is a 8 Bit Programmable 60 dB Pin Diode Attenuator with Step Resolution as Low as 0.25 dB over the Operating Frequency Range from 0.03 GHz to 6 GHz. The RF Input/Output Connectors are SMA Female. Along with a 15 Pin Micro-D Female Control Socket. The unit is shipped with a Micro-D Mating Connector.

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

Description	Min	Typ	Max	Unit
Frequency Range	0.03		6	GHz
Impedance		50		Ohms
Attenuation Range	0		60	dB
Insertion Loss			4	dB
Return Loss			-8.5	dB
VSWR			2.2:1	
Power Rating			20	dBm
Survial Power Average -40 to +85 deg C				
Attenuation Flatness				
@ 10 dB		±1		dB
@ 20 dB		±1.5		dB
@ 40 dB		±3		dB
@ 60 dB		±5		dB
Accuracy of Attenuation				
0 dB to 30 dB		±1		dB
30 dB to 50 dB		±1.3		dB
50 dB to 60 dB		±1.5		dB
Step Size	0.25			dB
Switching Time		50		us
DC Voltage	10.8	±12	13.2	Volts
DC Current		155		mA
Control Bits		8		Bits

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Description	Min	Typ	Max	Unit
Logic Input "0" (Bit Off)	-0.3		0.8	Volts
Logic Input "1" (Bit On)	2		5	Volts

Mechanical Specifications

Size

Length	2 in [50.8 mm]
Width	1.8 in [45.72 mm]
Height	0.5 in [12.7 mm]
Weight	0.147 lbs [66.68 g]
Connector 1	SMA Female
Connector 2	SMA Female

Environmental Specifications

Temperature

Operating Range	-40 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
Salt Spray	MIL-STD-202F, METHOD 105C COND. B

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

Plotted and Other Data

Notes:

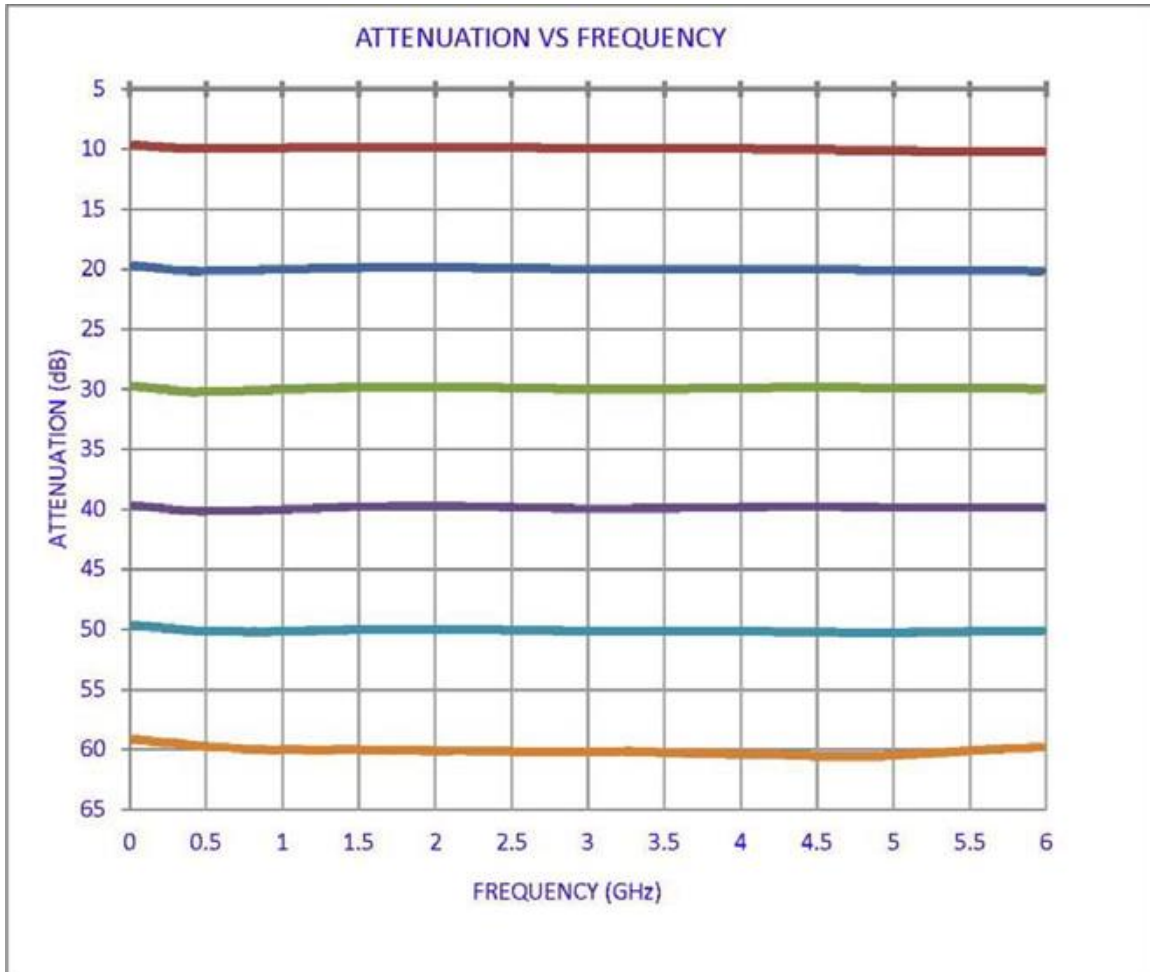
- Values at 25 °C, sea level
- ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.

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Typical Performance Data

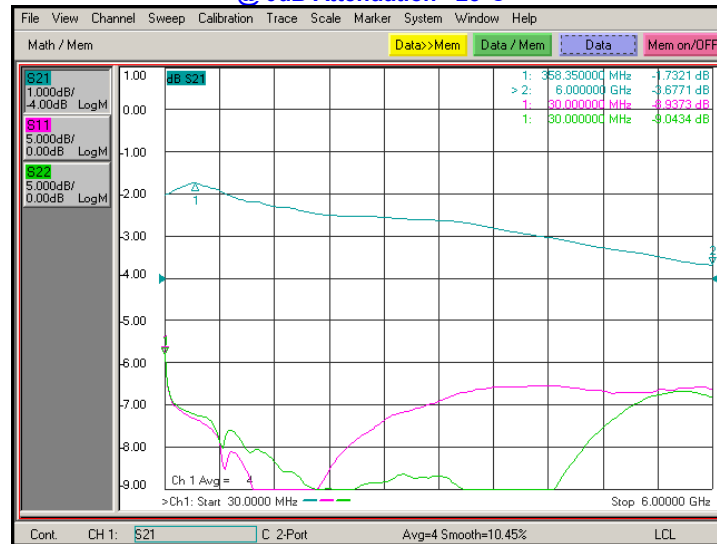


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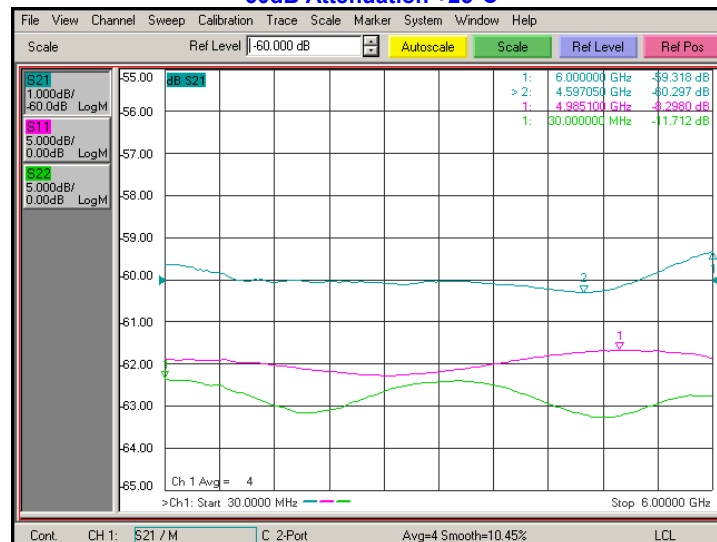


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Insertion Loss and VSWR @ 0dB Attenuation +25°C



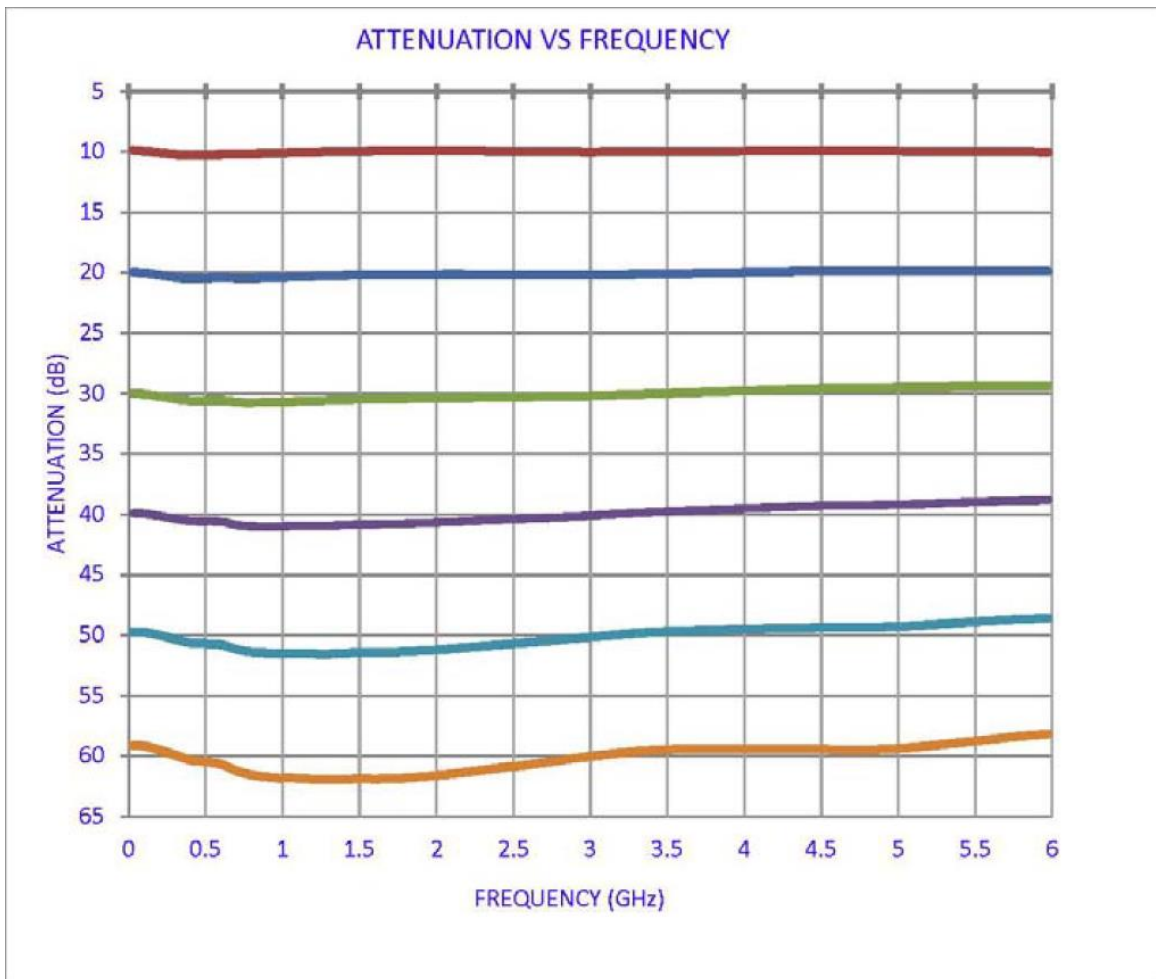
60dB Attenuation +25°C



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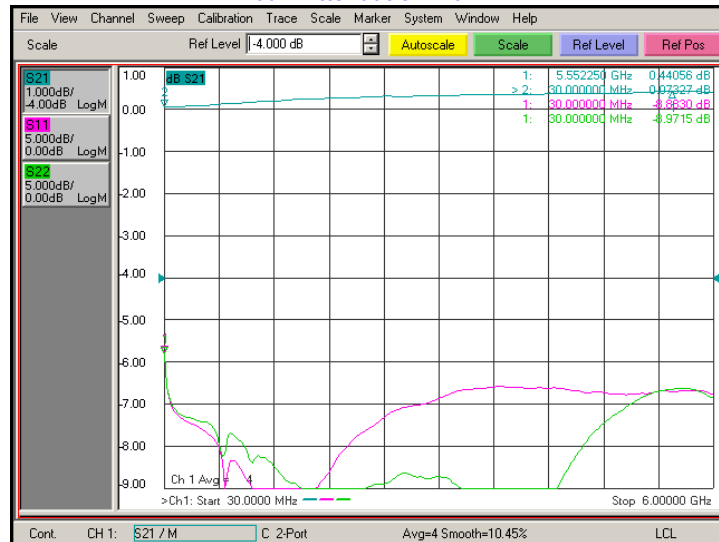
-40°C @ 5dBm

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0dB Attenuation -40°C



60dB Attenuation -40°C

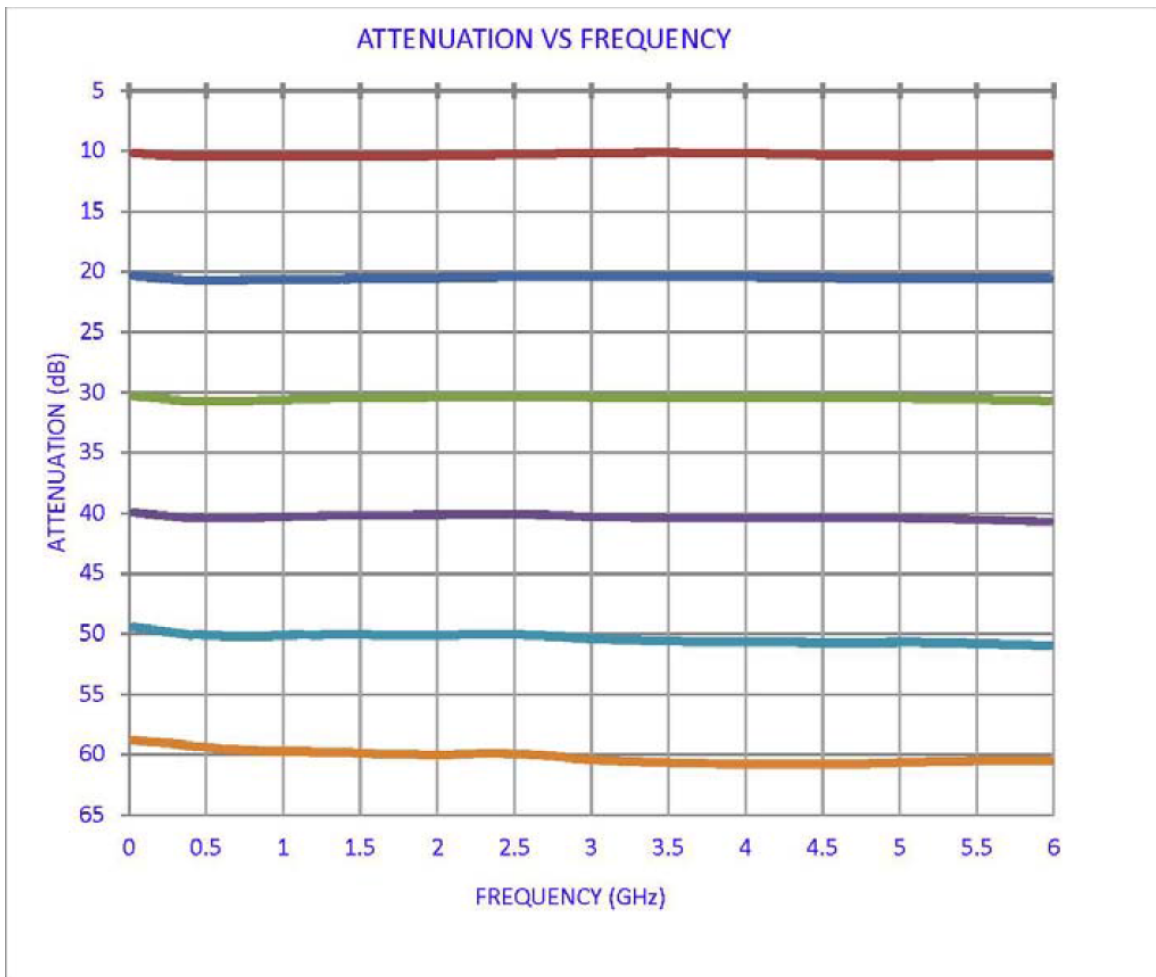


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+85°C @ 5dBm

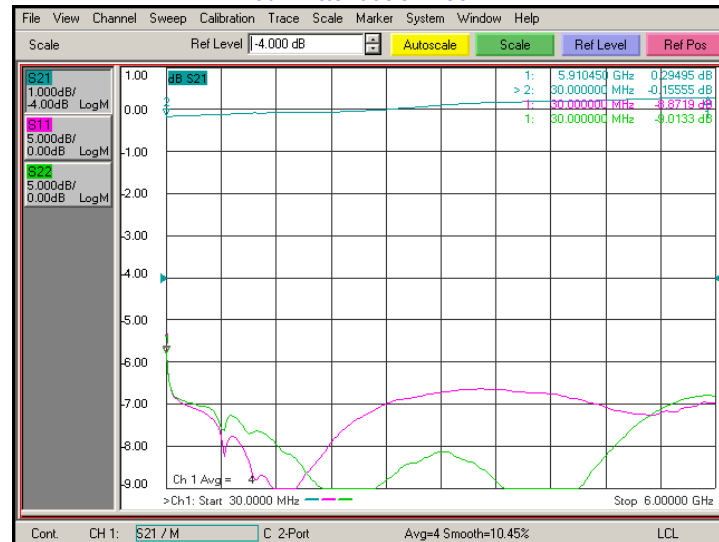


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0dB Attenuation +85°C



60dB Attenuation +85°C

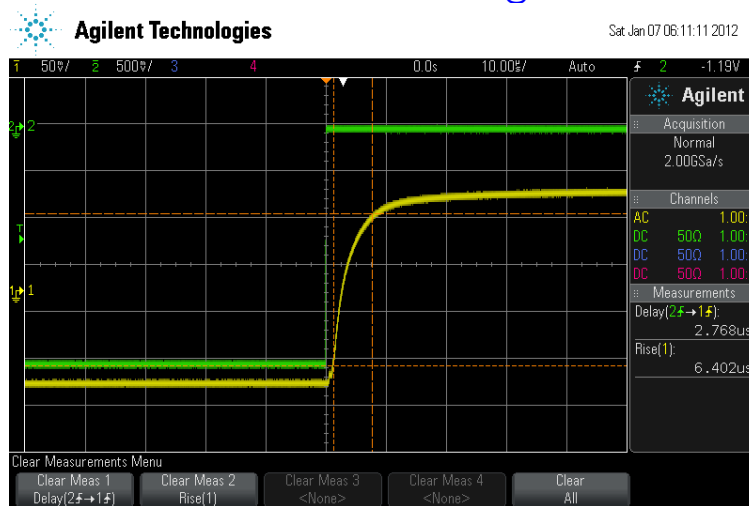


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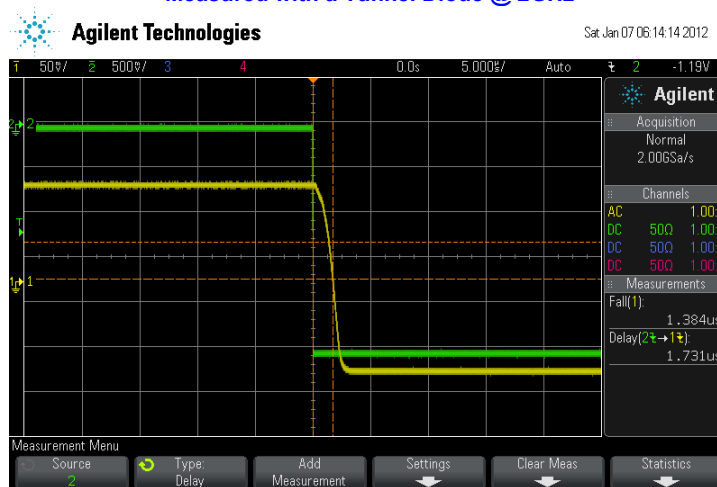


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Delay On
Measured with a Tunnel Diode @ 2GHz



Delay Off
Measured with a Tunnel Diode @ 2GHz



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

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Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [60 dB With 8 Bit Programmable TTL Controlled Attenuator, SMA Female To SMA Female, 0.25 dB Steps From 30 MHz To 6 GHz PE70A5000](https://www.pasternack.com/60db-programmable-sma-female-sma-female-0-watts-attenuator-pe70a5000-p.aspx)

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