30 dB With 10 Bit Programmable TTL Controlled Attenuator, 2.4mm Female To 2.4mm Female, 0.03 dB Steps From 18 GHz To 40 GHz

PE70A6001

Features

- 10 Bit Programmable 30 dB Attenuator
- 18 GHz to 40 GHz Frequency Range
- 30 dB Attenuation Range
- Step Resolution of 0.03 dB
- +10 dBm typ P1dB
- Insertion Loss 6 dB typ
- VSWR 2.5:1 Max
- RF Connectors are 2.4mm Female
- 15 Pin Micro-D Female Connector

Applications

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

Description

The PE70A6001 is 10 Bit Programmable 30 dB Pin Diode Attenuator with Step Resolution as Low as 0.03 dB over the Operating Frequency Range from 18 GHz to 40 GHz. The PE70A6001 is offered in a slim line housing measuring only 0.5" Height. The RF Input/Output Connectors are 2.4mm Female. Along with a 15 Pin Micro-D Female Control Socket. The unit is shipped with a Micro-D Mating Connector. Pasternack also offers a Digital TTL Control module capability in both single and dual formats (PE70A7000 and PE70A7001). This interface module gives Designers the capability to streamline the BIT command control the functions of the PE70A6001 programmable attenuator using a PC computer. Using GUI downloadable software, the module acts as a TTL programmable interface that sends command control BITs to the attenuator.

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

Description	Min	Typ	Max	Unit
Frequency Range	18		40	GHz
Impedance		50		Ohms
Attenuation Range	0		30	dB
VSWR			2.5:1	
Power Rating			24	dBm
Input at 1 dB Compression Point		+15		dBm
Survial Power Average -40 to +85 deg C				
Attenuation Flatness				
@ 30 dB		±1.5		dB
Accuracy of Attenuation				
0 dB to 30 dB		±2		dB
Step Size		0.03		dB
Switching Time			1	
Off Time			0.5	us
DC Voltage			15	
DC Current			100	mA
Control Bits		10		Bits

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

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	0.141 lbs [63.96 g]
Connector 1	2.4mm Female
Connector 2	2.4mm 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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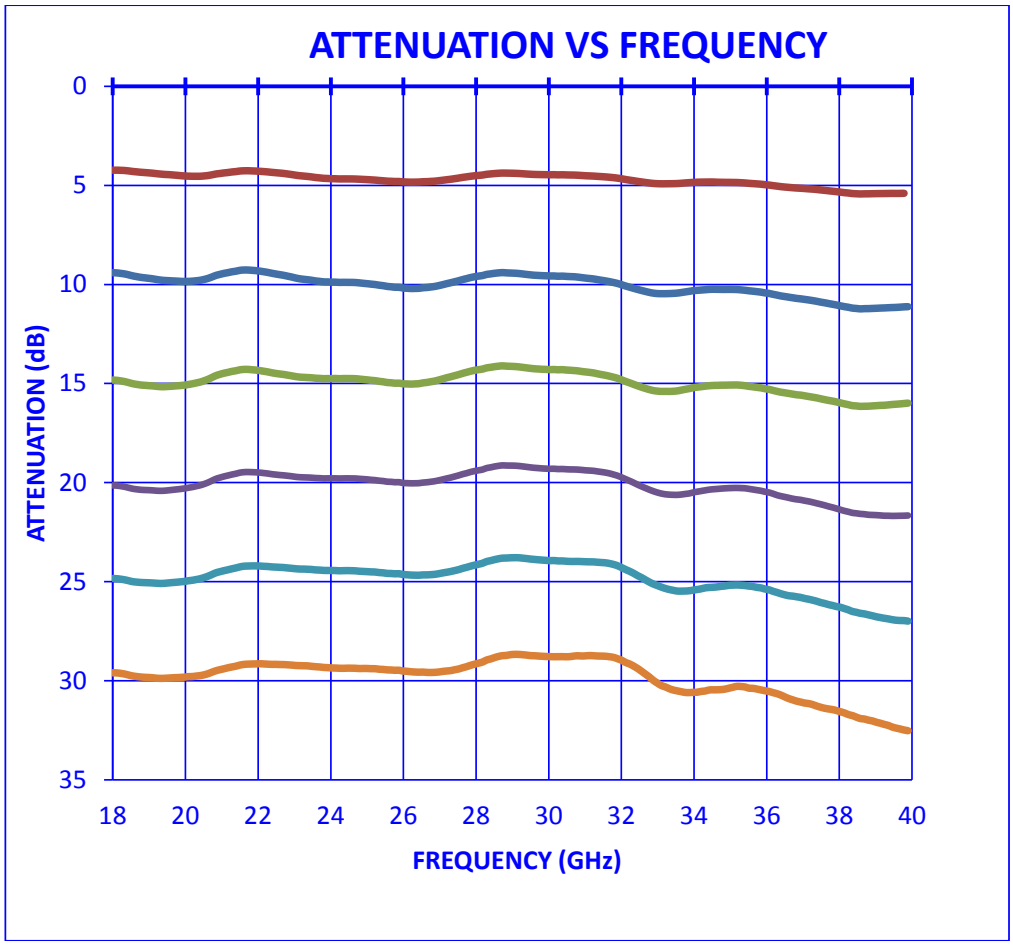
Typical Performance Data

Attenuation vs. Frequency Plot



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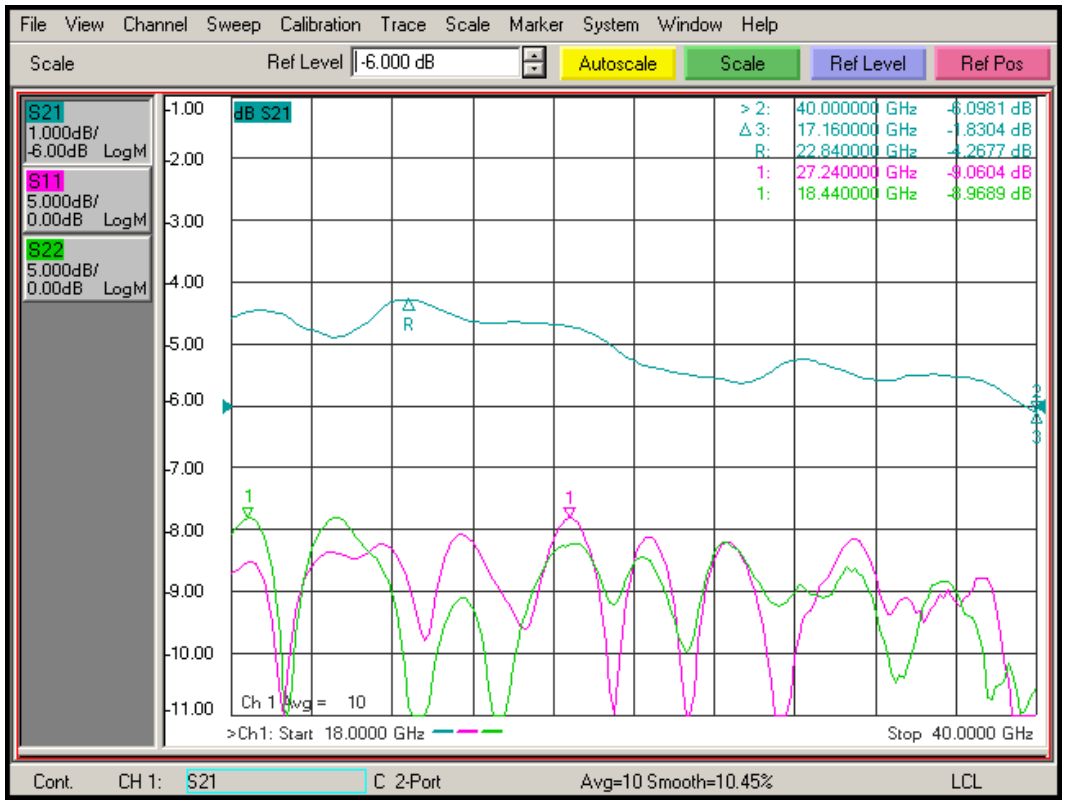
Insertion Loss & Return Loss



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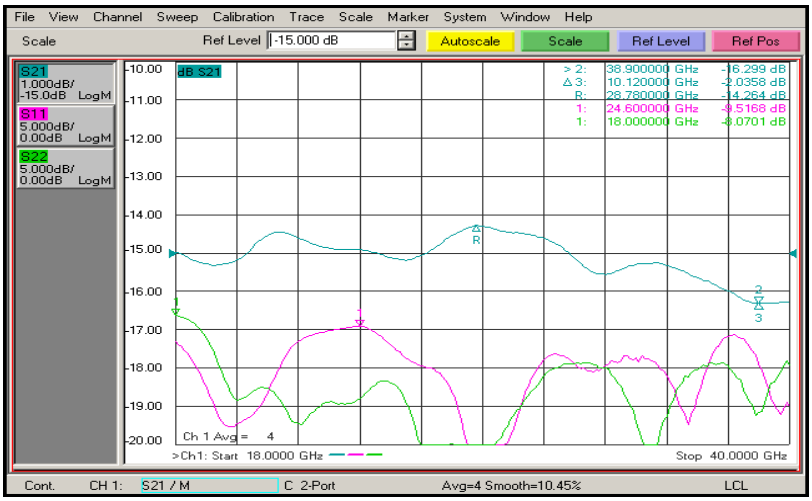
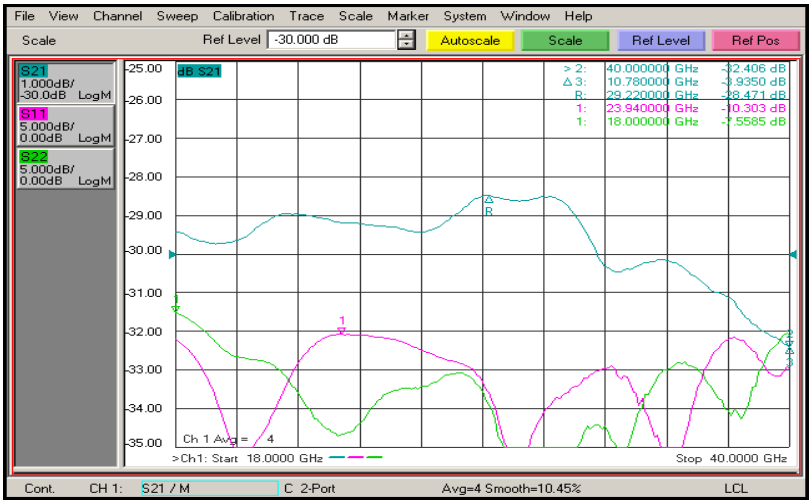
-15dB Attenuation



-30dB Attenuation



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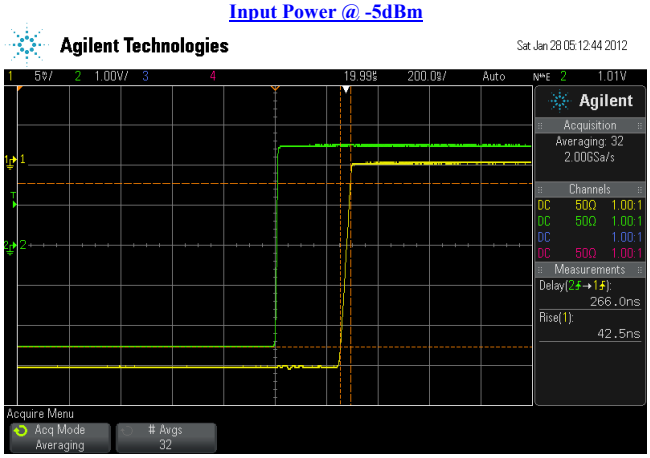
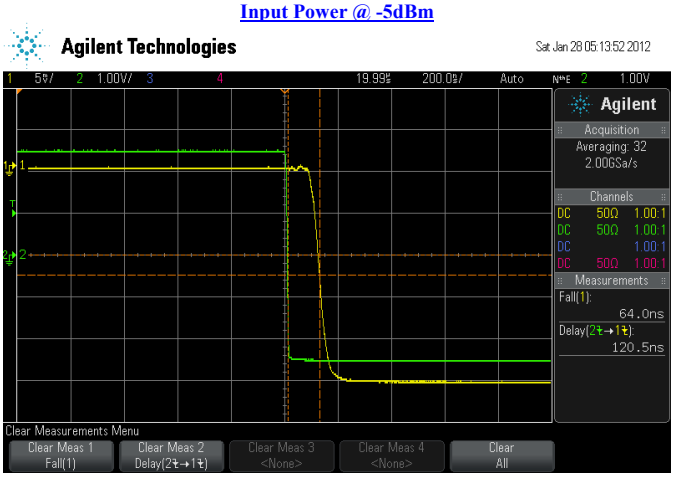
Delay On
Measured with a Tunnel Diode @ 30GHz
Input Power @ -5dBm



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

Delay Off
Measured with a Tunnel Diode @ 30GHz
Input Power @ -5dBm



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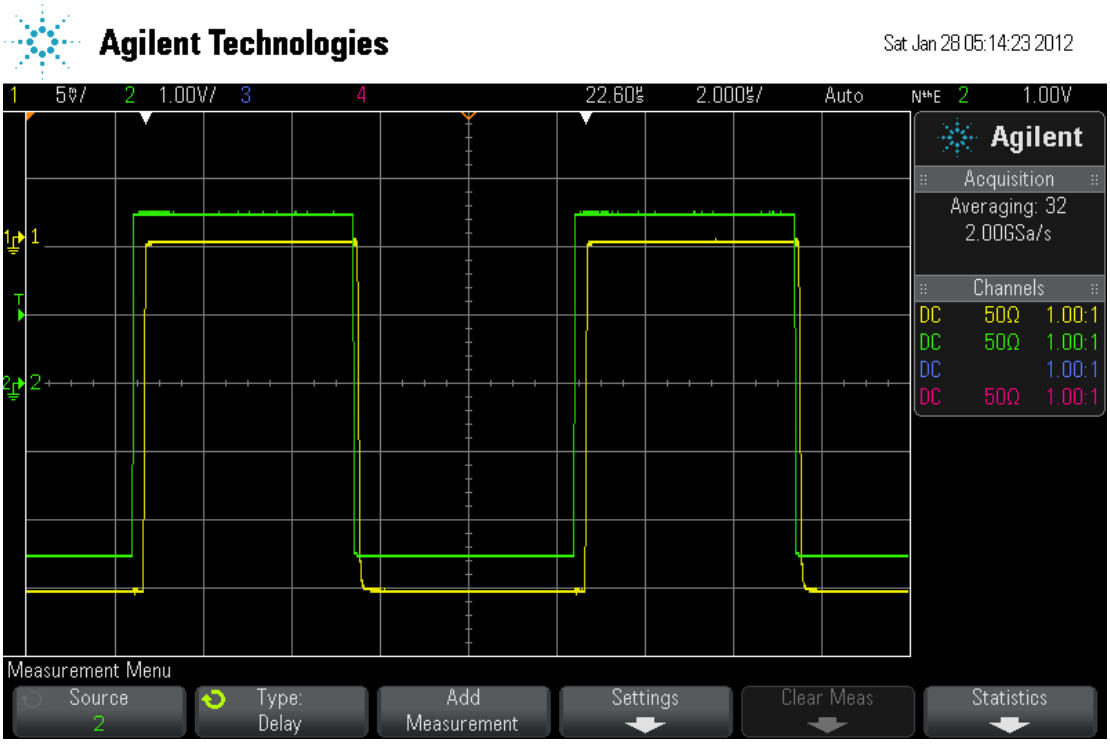
Full Pulse
Measured with a Tunnel Diode @ 30GHz
Input Power @ -5dBm



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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: 30 dB With 10 Bit Programmable TTL Controlled Attenuator, 2.4mm Female To 2.4mm Female, 0.03 dB Steps From 18 GHz To 40 GHz PE70A6001

URL: https://www.pasternack.com/30db-programmable-2.4mm-female-2.4mm-female-0-watts-attenuator-pe70a6001-p.aspx

PE70A6001 CAD Drawing

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