

USB Controlled Programmable Attenuator, 95 dB, from 200 MHz to 6 GHz, 1 dB Steps, SMA Female

PE70A3902



Features

- 7 Bit Programmable Attenuator
- 200 to 6000 MHz Bandwidth
- 0-95 dB attenuation
- 1 dB Step Size
- 50 Ohms
- Switching Speed: 4 microseconds max
- Insertion Loss: 8.3 dB max
- Attenuation Accuracy: +/-1.0 dB typ
- DC Bias: +5 Vdc @ 2 mA
- SMA female connectors
- GUI software downloadable onto a PC via a USB stick (included)
- 6' USB A to USB MINI-B cable included

Applications

- Electronic Warfare
- Electronic Countermeasures
- Microwave Radio
- VSAT
- Radar
- Fiber Optic
- Space Systems
- Test Instrumentation
- Telecom Infrastructure

Description

The PE70A3902 is a USB Controlled Programmable Attenuator which operates over the frequency range of 200 MHz to 6000 MHz. The solid state design supports a USB interface and MS .NET 4.0+ framework. GUI software is downloadable onto a PC via a USB stick that's included. The module is command controlled by the PC interface using a USB cable. The PE70A3902 has an attenuation range that covers 0 to 95 dB in 1 dB steps. Attenuation steps are 1, 2, 4, 8, 16, 32, and 32 dB bit steps. Insertion loss is 8 dB maximum with a maximum operating RF input power +27 dBm. Additional typical performance includes +/- 1.0 dB attenuation accuracy and switching speed of 4 microseconds. The DC supply is +5 Vdc @ 2 mA. The compact and rugged package design supports SMA female RF input/output connectors, and a USB MINI-B connector for DC and serial controls. A 6 ft USB A to USB MINI-B cable is included. The PE70A3902 has an operational temperature range of -40°C to +85°C.

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

Description	Min	Typ	Max	Unit
Frequency Range	0.2		6	GHz
Impedance		50		Ohms
Attenuation Range	0		95	dB
Insertion Loss			8.3	dB
VSWR			2:1	
Survival Power Average -40 to +85 deg C			+33	dBm
Power Handling Capacity			+27	dBm
Accuracy of Attenuation				
1 dB to 7 dB		±0.5		dB
8 dB to 11 dB		±1		dB
12 dB to 95 dB is ±1.25 dB or 4% whichever is greater				
Step Size		1		dB
Switching Time		4		us

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

Description	Min	Typ	Max	Unit
Logic Input "0" (Bit Off)	0			
Logic Input "1" (Bit On)	5			

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	0.2-0.2	0.2-0.5	0.5-0.7	0.7-2	2-6	GHz
Insertion Loss, Typ	3.3	3.5	3.6	4.4	7.9	dB

Electrical Specification Notes:

1, 2, 4, 8, 16, 32, and 32 dB bit Steps

Mechanical Specifications

Size

Length	0.02 in [0.51 mm]
Width	8.7 in [220.98 mm]
Height	6.1 in [154.94 mm]
Weight	0.404 lbs [183.25 g]
Connector 1	SMA Female
Connector 2	SMA Female

Environmental Specifications

Temperature

Operating Range	-40 to +85 deg C
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Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

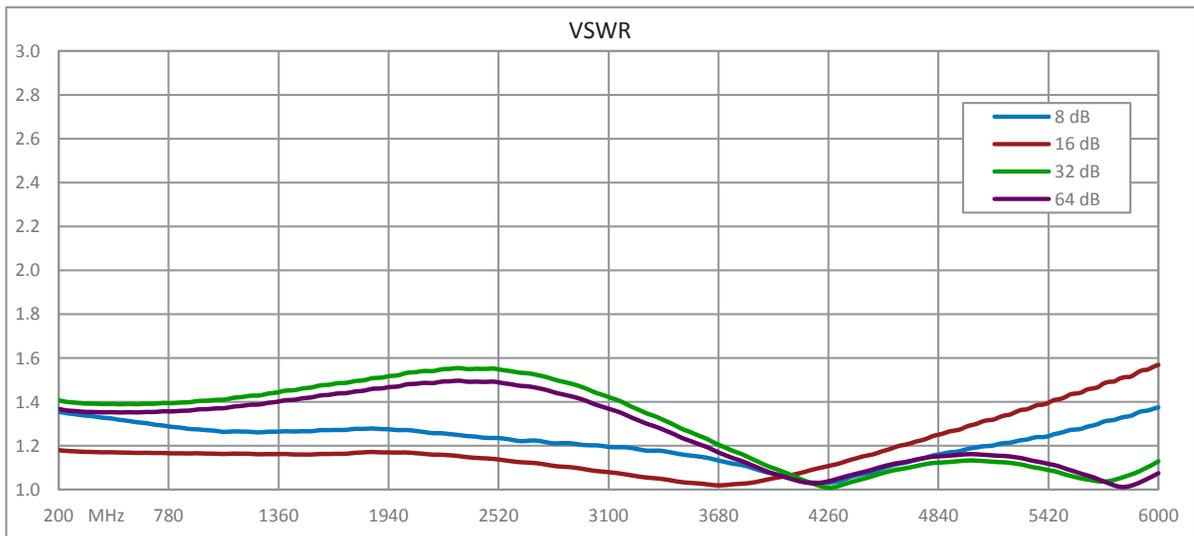
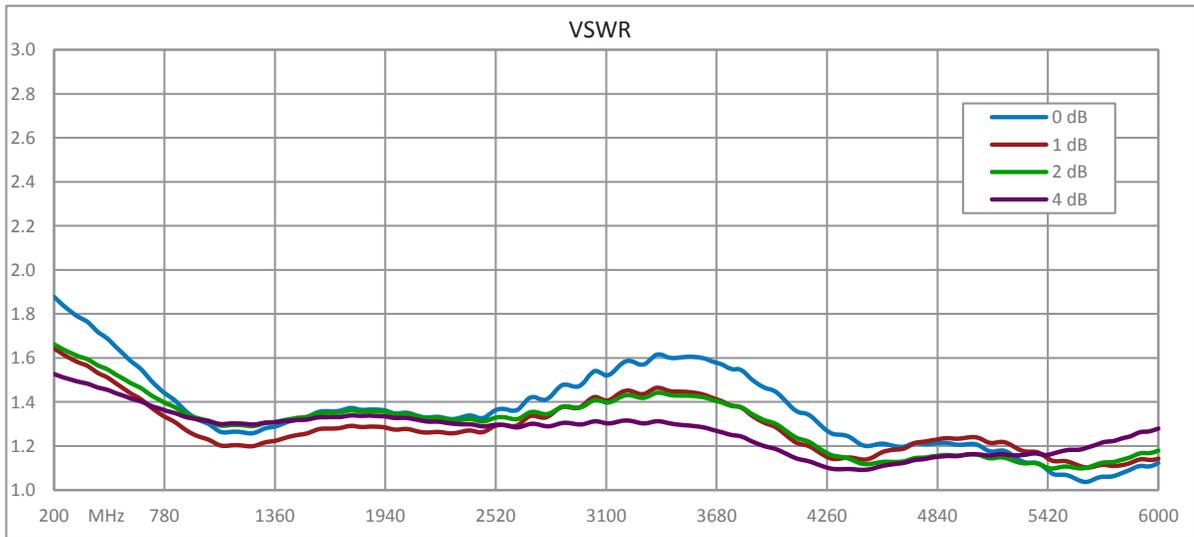
- Values at 25 °C, sea level
- ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.

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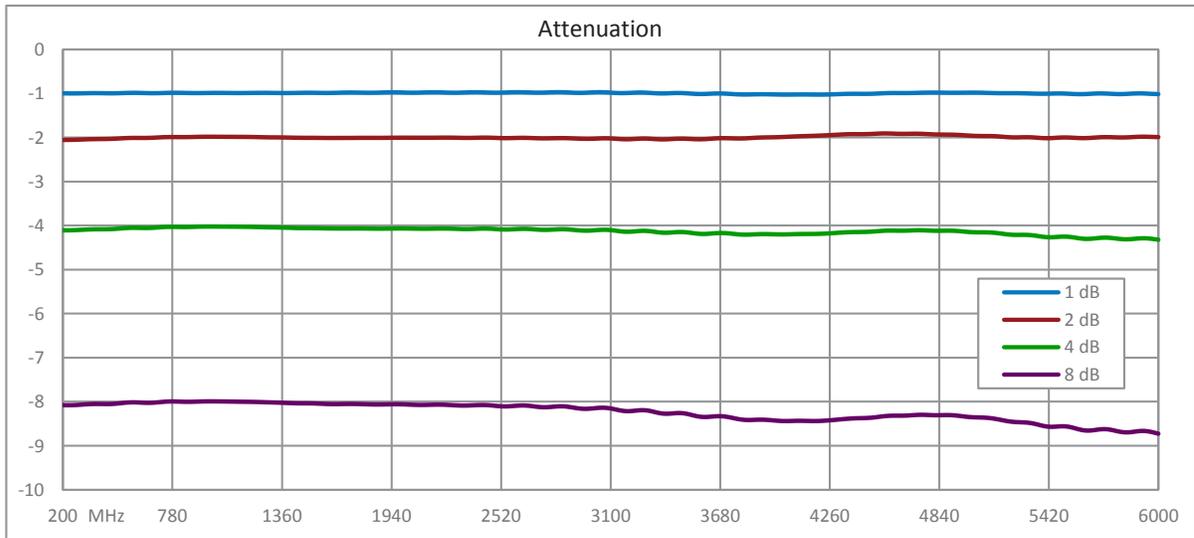
Typical Performance Data



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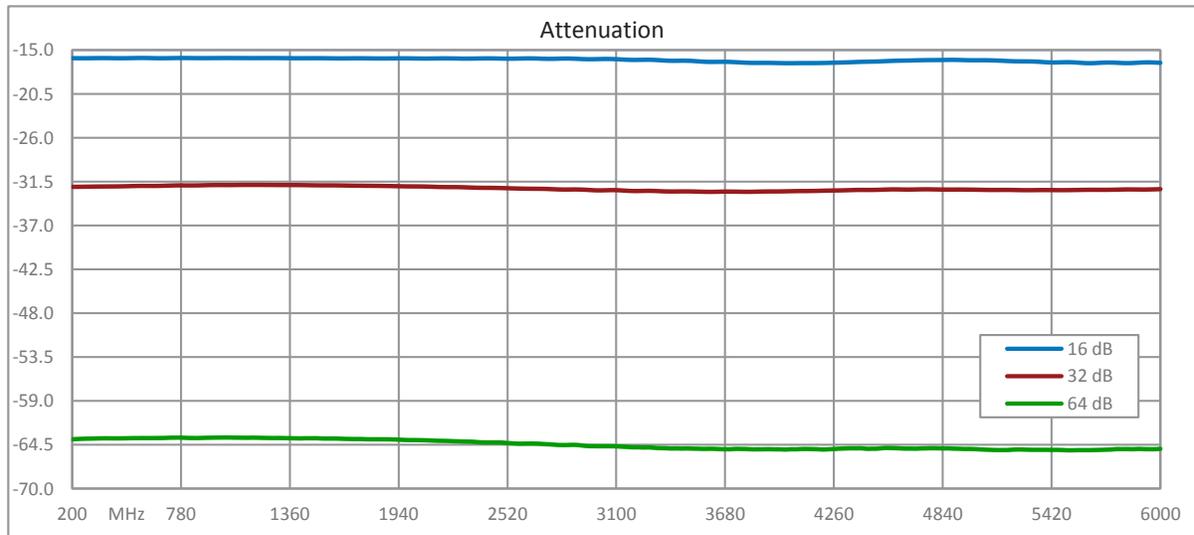
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Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [USB Controlled Programmable Attenuator, 95 dB, from 200 MHz to 6 GHz, 1 dB Steps, SMA Female PE70A3902](https://www.pasternack.com/95db-usb-controlled-sma-female-sma-female-0-watts-attenuator-pe70a3902-p.aspx)

URL: <https://www.pasternack.com/95db-usb-controlled-sma-female-sma-female-0-watts-attenuator-pe70a3902-p.aspx>

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PE70A3902 CAD Drawing

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