

USB Controlled Programmable Attenuator, 95.5 dB, from 200 MHz to 6 GHz, 0.5 dB Steps, SMA Female



PE70A8009

Features

- USB Controlled 8 Bit Solid State Programmable Attenuator
- Frequency Range 200 MHz to 6 GHz
- Attenuation Range: 0 to 95.5 dB in 0.5 dB steps
- Attenuation Steps: 0.5, 1, 2, 4, 8, 16, 32, 32 dB
- Insertion Loss 4.5 dB typ
- Attenuation Accuracy +/- 0.75 dB typ
- Switching Speed < 1 microseconds typ
- Max RF Input Power +33 dBm
- DC Voltage +5 Vdc
- DC Current 2 mA typ
- 50 Ohm Design
- -40°C to +85°C Operating Temperature
- SMA Female Connectors
- USB Mini-B connector for DC and TTL controls
- Rugged Mil Grade Package Design

Applications

- Military & Commercial Communication Systems
- Microwave Radio Systems
- Radar Systems
- Test & Measurement
- Research & Development
- RF Wideband Front Ends

Description

The PE70A8009 is an 8 Bit USB Controlled Solid State Programmable Attenuator which operates over a broadband frequency range of 200 MHz to 6000 MHz. The 50 ohm solid state design supports a USB interface and MS .NET 4.0+ framework. A downloadable USB test software manual is available. The PE70A8009 has an attenuation range that covers 0 to 95.5 dB in 0.5 dB steps. Attenuation steps are 0.5, 1, 2, 4, 8, 16, 32, and 32 dB. Insertion loss is 4.5 dB typical with a maximum RF input power of +33 dBm. Additional typical performance includes +/- 0.75 dB attenuation accuracy, and switching speed < 1 microsecond. Operational temperature range is -40°C to +85°C, and the DC supply is +5 Vdc @ 2 mA nominal. The compact and rugged package design supports SMA female RF input/output connectors, and a USB Mini-B connector for DC and TTL controls. A 6' USB A to USB Mini-B cable is included.

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		4.5	8	dB
VSWR		1.6:1	1.8:1	
Survival Power Average -40 to +85 deg C				
DC Voltage		+5		Vdc
DC Current	2			mA
Accuracy of Attenuation				
0.5 dB to 7.5 dB		±0.5		dB
8 dB to 15.5 dB		±0.75		dB
16 dB to 95.5 dB		±0.1		dB
TTL Low for Thru Path				Vdc
TTL High for Attenuation				Vdc
Step Size		1		dB
Switching Time		1	4,000	us

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

Description	Min	Typ	Max	Unit
RF Input Power (Operating- Input Side)			27	dBm
RF Input Power (No Damage- Input Side)			33	dBm

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	0.2-0.2	0.2-0.8	0.8-2	2-6		GHz
Insertion Loss, Typ	2.9	3.3	4	7.7		dB

Electrical Specification Notes:

0.5, 1, 2, 4, 8, 16, and 32 dB bit Attenuation Steps

Mechanical Specifications

Size

Length	0 in [0 mm]
Width	0 in [0 mm]
Height	0 in [0 mm]
Weight	0.4 lbs [181.44 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:

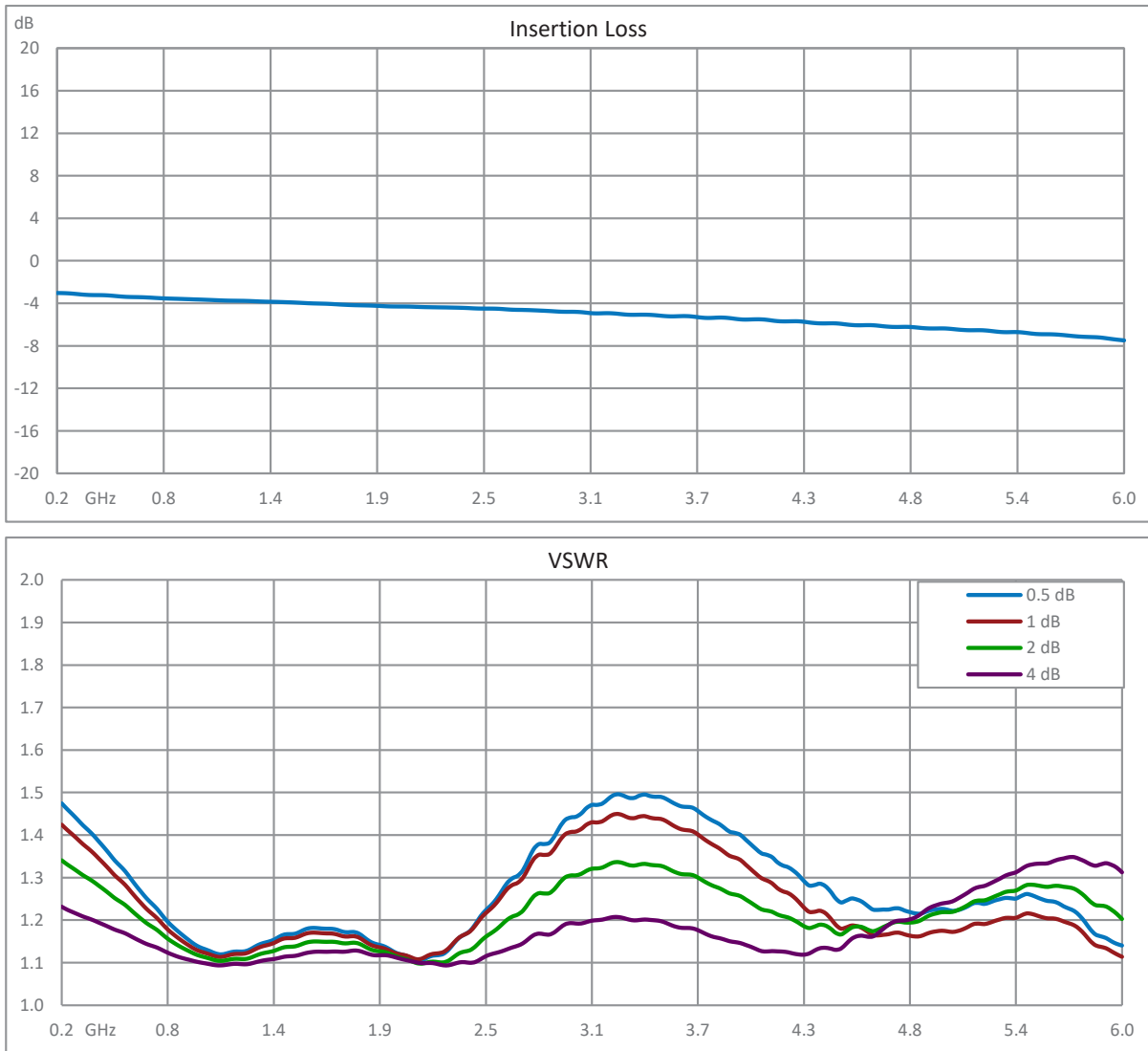
- Values at 25 °C, sea level

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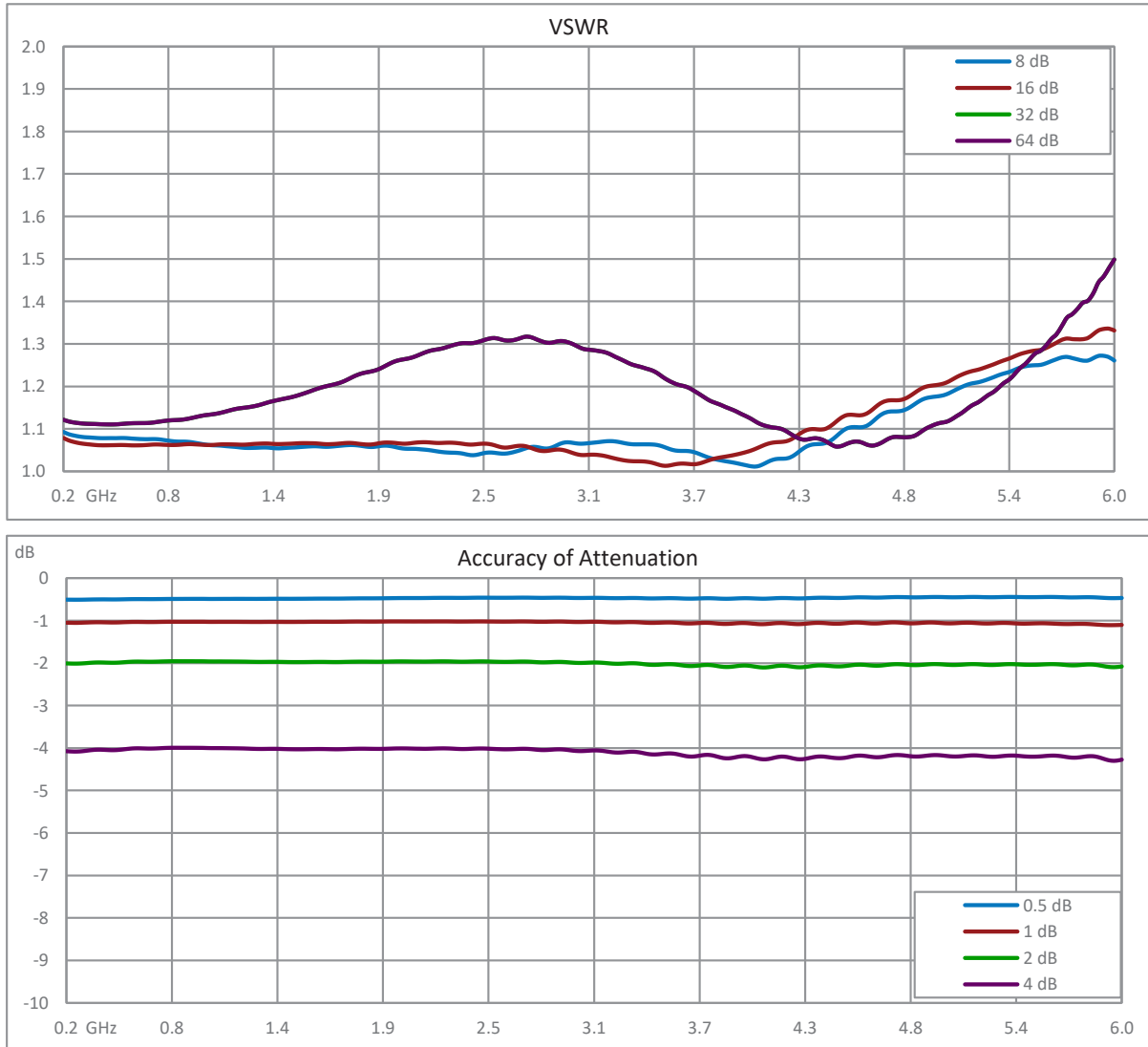
Typical Performance Data



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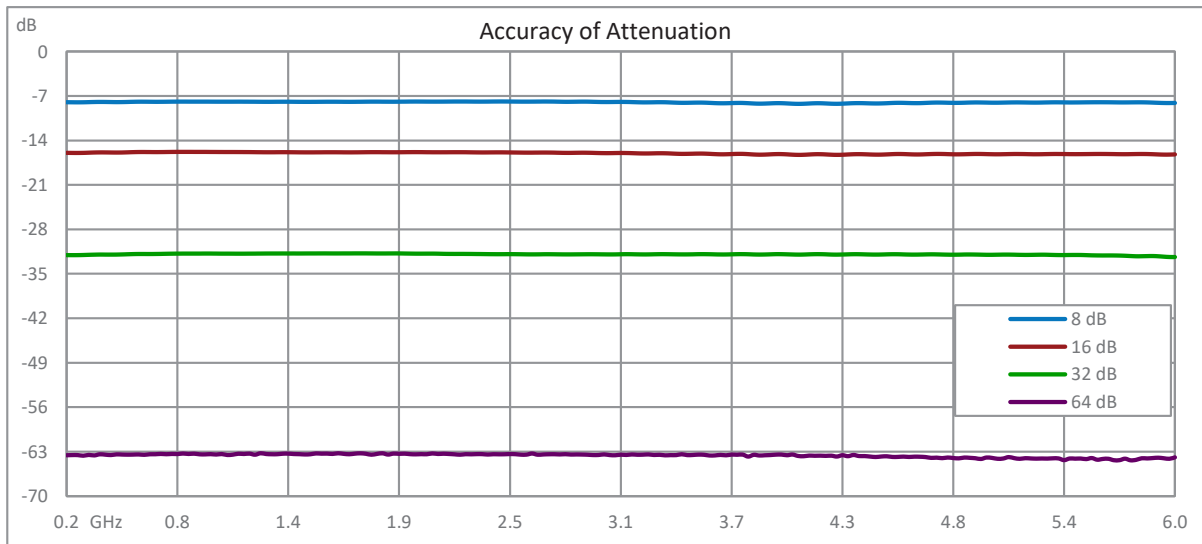
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Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [USB Controlled Programmable Attenuator, 95.5 dB, from 200 MHz to 6 GHz, 0.5 dB Steps, SMA Female PE70A8009](https://www.pasternack.com/95db-relay-controlled-sma-female-sma-female-27-watts-attenuator-pe70a8009-p.aspx)

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PE70A8009 CAD Drawing

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