



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

TECHNICAL DATA SHEET

PE70A8009

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.

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

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

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.2		6	GHz
Mean Attenuation Range	0		95	dB
Insertion Loss		4.5	8	dB
VSWR		<1.6:1	1.8:1	
DC Voltage		+5		Vdc
DC Current		2		mA
Accuracy of Attenuation				dB
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
Step Size	1			dB
Switching Time		<1	4	us

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](#)



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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 to 0.2	0.2 to 0.8	0.8 to 2	2 to 6		GHz
Insertion Loss, Typ	2.9	3.3	4	7.7		dB

Electrical Specification Notes:
0.5, 1, 2, 4, 8, 16, 32, 32 dB bit Attenuation Steps

Mechanical Specifications

Size

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:

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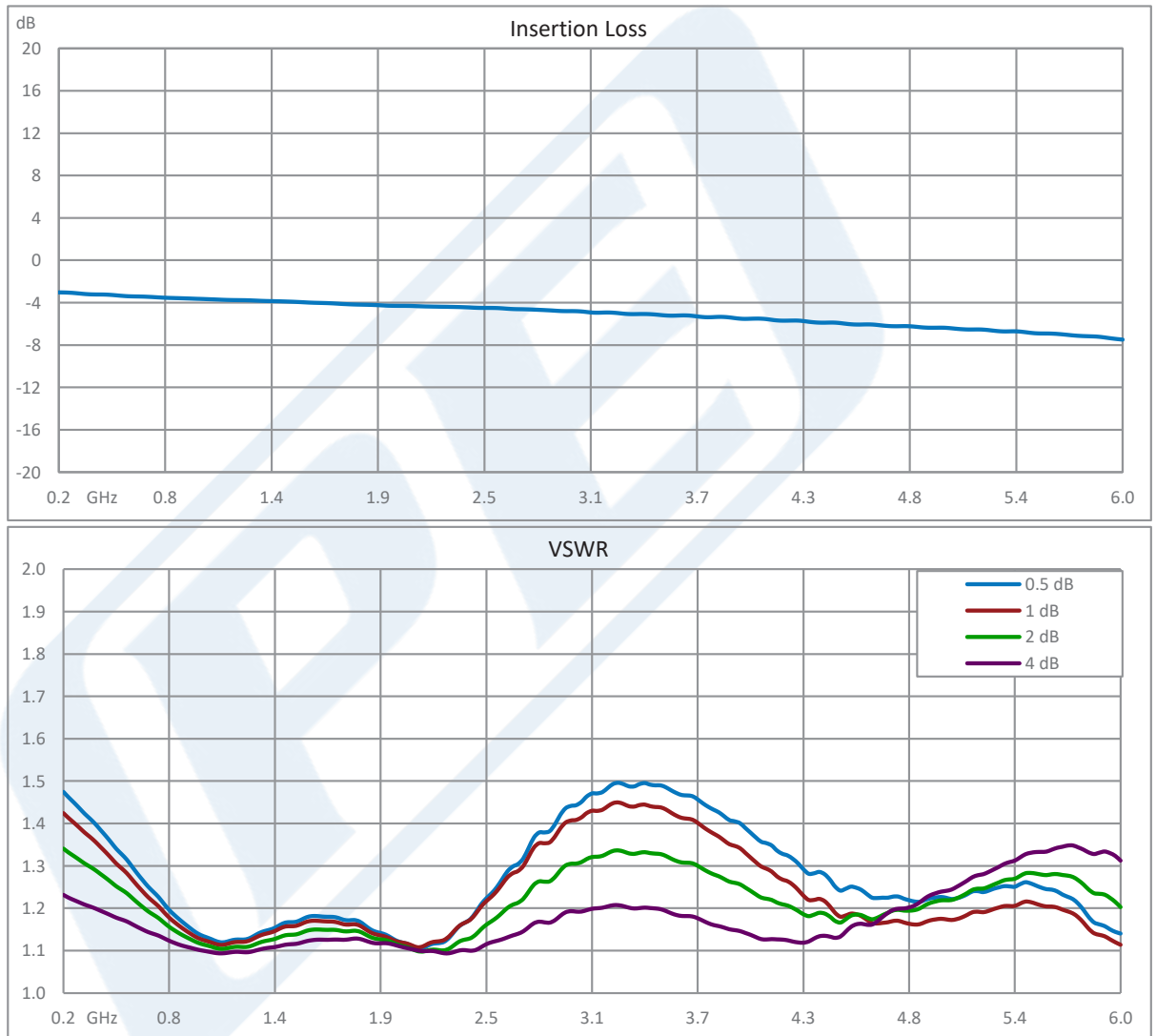


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Performance Data



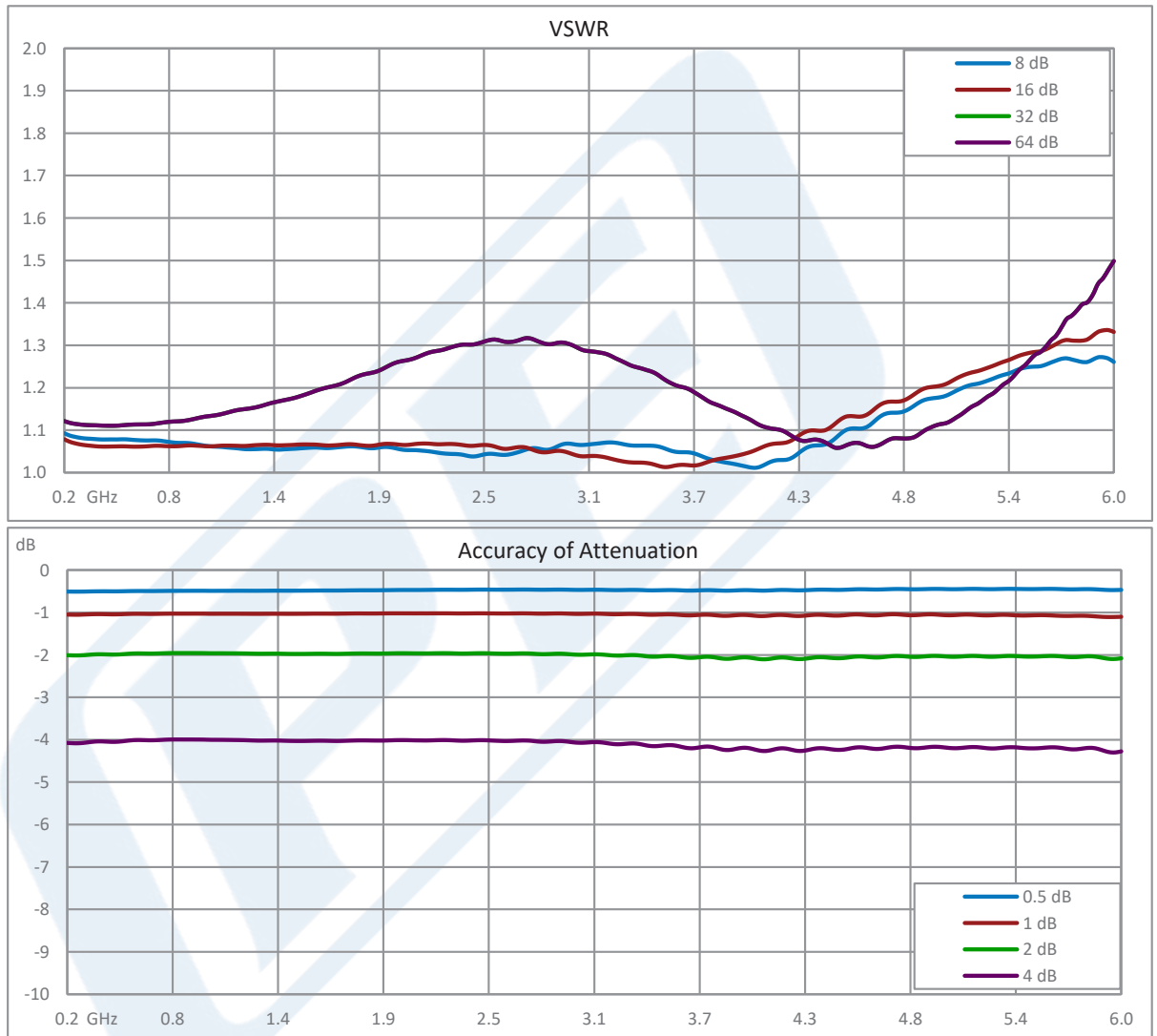
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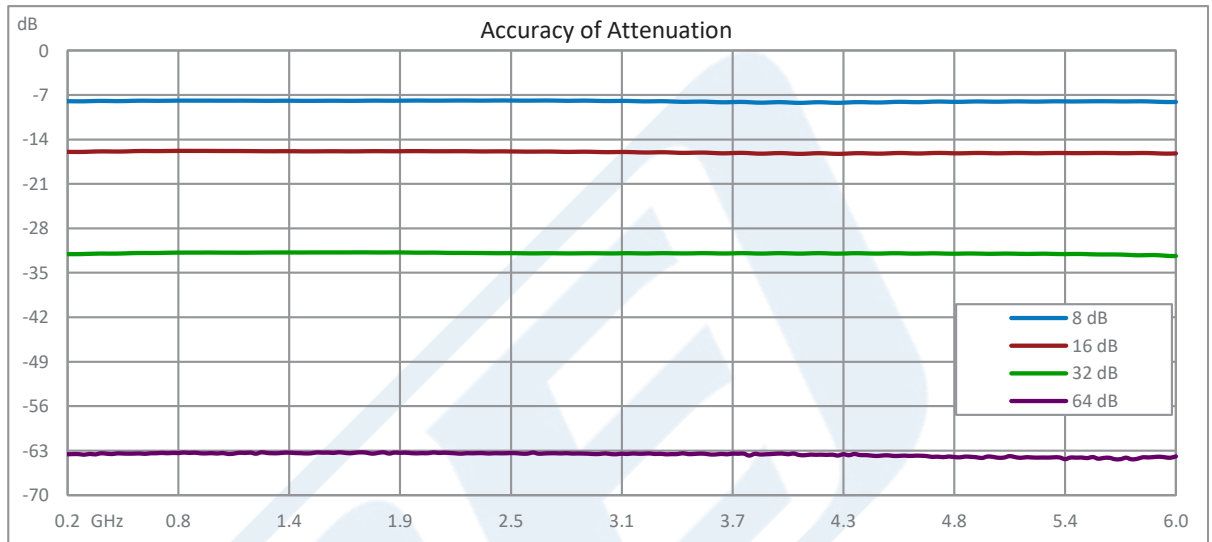
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USB Controlled Programmable Attenuator, 95.5 dB, from 200 MHz to 6 GHz, 0.5 dB Steps, SMA Female from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

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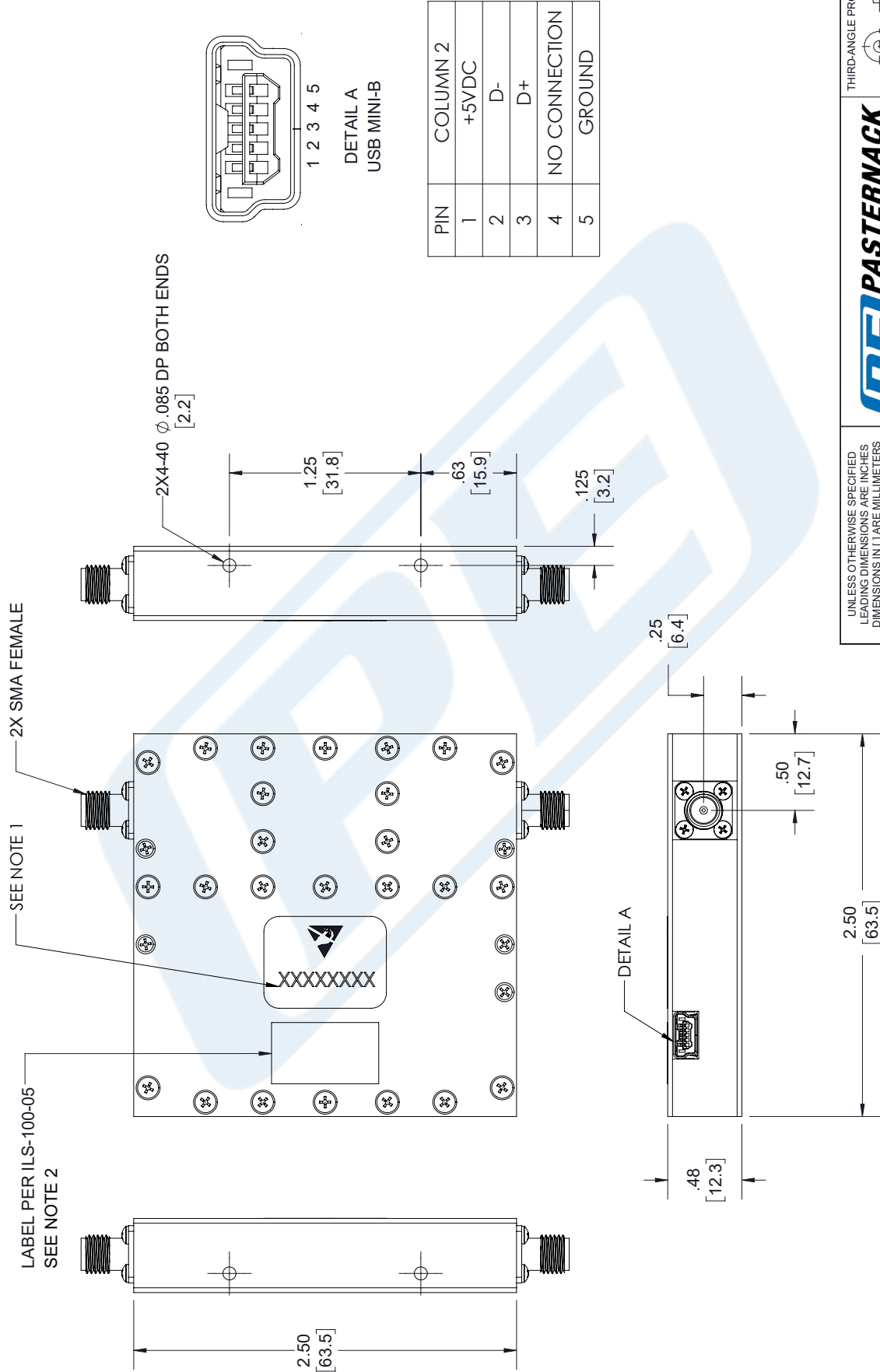
URL: <https://www.pasternack.com/95db-relay-controlled-sma-female-sma-female-27-watts-attenuator-pe70a8009-p.aspx>

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PE70A8009 CAD Drawing

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	14-08-2021	TGALLA



PIN	COLUMN 2
1	+5VDC
2	D-
3	D+
4	NO CONNECTION
5	GROUND

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:

.X = ±.2 [5.08] FRACTIONS ± 1/32
 .XX = ±.02 [.51] ANGLES ± 1°
 .XXX = ±.005 [.13]

CABLE LENGTH (L) TOLERANCES:

L ≤ 12 [305] = +1 [25] / -0
 12 [305] < L ≤ 60 [1524] = +2 [51] / -0
 60 [1524] < L ≤ 120 [3048] = +4 [102] / -0
 120 [3048] < L ≤ 300 [7620] = +6 [152] / -0
 300 [7620] < L = +5%L / -0

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

THIRD-ANGLE PROJECTION

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SCALE N/A

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SIZE	CAGE CODE	DRAWN BY	ITEM NO.
A	53919	MVEERAPPAN	PE70A8009

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