



USB Controlled Programmable Attenuator, 63 dB, from 200 MHz to 8 GHz, 0.5 dB Steps, SMA Female

TECHNICAL DATA SHEET

PE70A8010

The PE70A8010 is a 7 Bit USB Controlled Solid State Programmable Attenuator which operates over a broadband frequency range of 200 MHz to 8000 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 PE70A8010 has an attenuation range that covers 0 to 63 dB in 0.5 dB steps. Attenuation steps are 0.5, 1, 2, 4, 8, 16, and 32 dB. Insertion loss is 3 dB typical with a maximum RF input power of +25 dBm. Additional typical performance includes +/- 0.5 dB attenuation accuracy, and switching speed of 0.35 microseconds. 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 7 Bit Solid State Programmable Attenuator
- Frequency Range 200 MHz to 6 GHz
- Attenuation Range: 0 to 63 dB in 0.5 dB steps
- Attenuation Steps: 0.5, 1, 2, 4, 8, 16, 32 dB
- Insertion Loss 3 dB typ
- Attenuation Accuracy +/- 0.5 dB typ
- Switching Speed 0.35 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
- Radar Systems
- Test & Measurement
- Research & Development
- RF Wideband Front Ends
- Microwave Radio Systems

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

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.2		8	GHz
Impedance		50		Ohms
Mean Attenuation Range	0		63	dB
Insertion Loss		3	4.2	dB
VSWR		1.4:1	1.6:1	
DC Voltage		+5		Vdc
DC Current		2		mA
Accuracy of Attenuation				dB
0.5 dB to 6.5 dB		±0.25		dB
7 dB to 14.5 dB		±0.5		dB
15 dB to 63 dB		±1		dB
Step Size	1			dB
Switching Time		350	1,000	ns

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, 63 dB, from 200 MHz to 8 GHz, 0.5 dB Steps, SMA Female PE70A8010](#)



USB Controlled Programmable Attenuator, 63 dB, from
200 MHz to 8 GHz, 0.5 dB Steps, SMA Female

TECHNICAL DATA SHEET

PE70A8010

RF Input Power (Operating- Input Side)	+24	dBm
RF Input Power (Operating-Output Side)	+15	dBm
RF Input Power (No Damage- Input Side)	+25	dBm
RF Input Power (No Damage-Output Side)	+16	dBm

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	0.2 to 0.2	0.2 to 8				GHz
Insertion Loss, Typ	2.1	3.7				dB

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

Mechanical Specifications

Size

Weight	0.35 lbs [158.76 g]
Connector 1	SMA Female
Connector 2	SMA Female

Environmental Specifications

Temperature

Operating Range	-40 to +85 deg C
-----------------	------------------

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

Plotted and Other Data

Notes:

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, 63 dB, from 200 MHz to 8 GHz, 0.5 dB Steps, SMA Female PE70A8010](#)

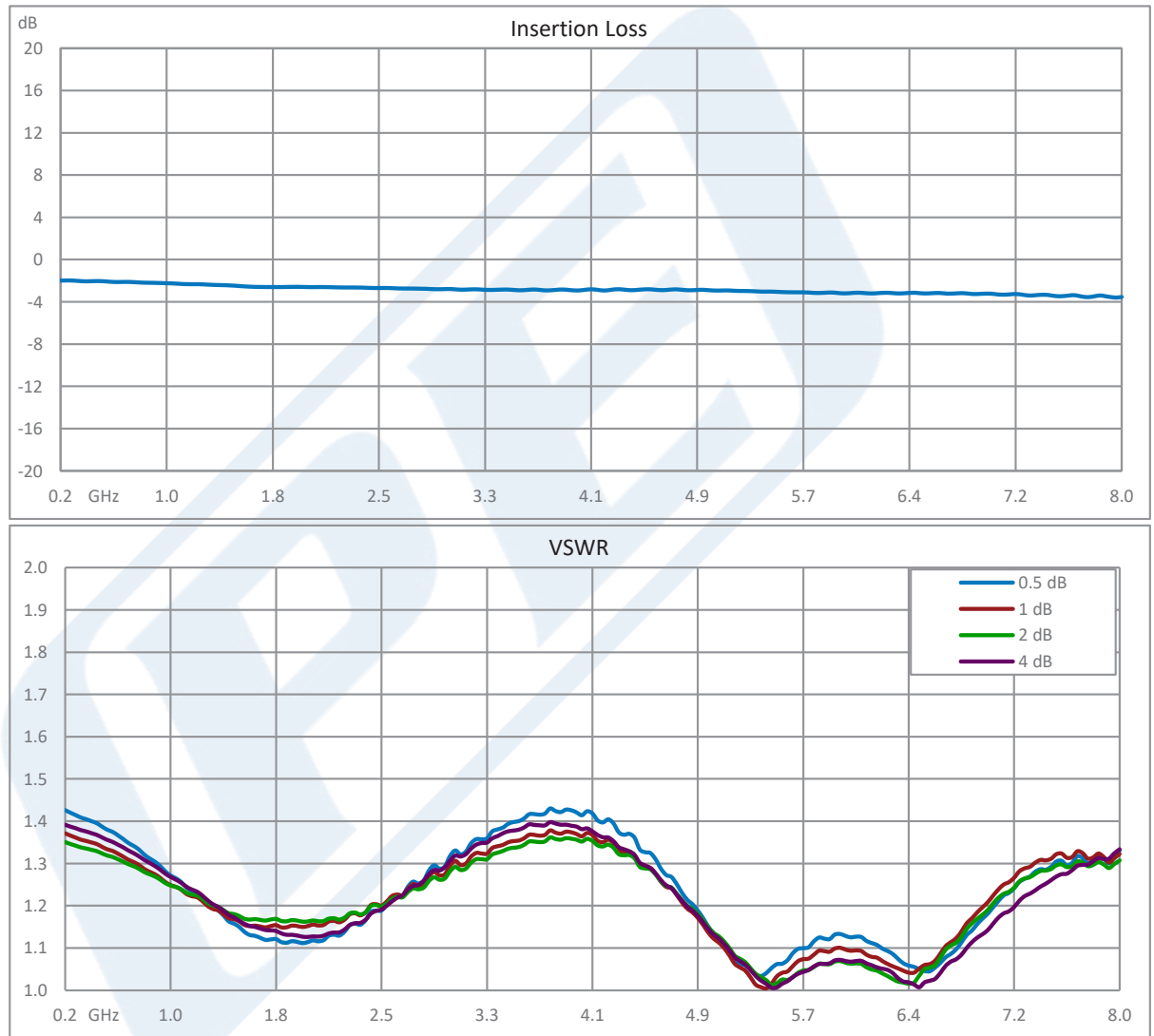


USB Controlled Programmable Attenuator, 63 dB, from
200 MHz to 8 GHz, 0.5 dB Steps, SMA Female

TECHNICAL DATA SHEET

PE70A8010

Performance Data



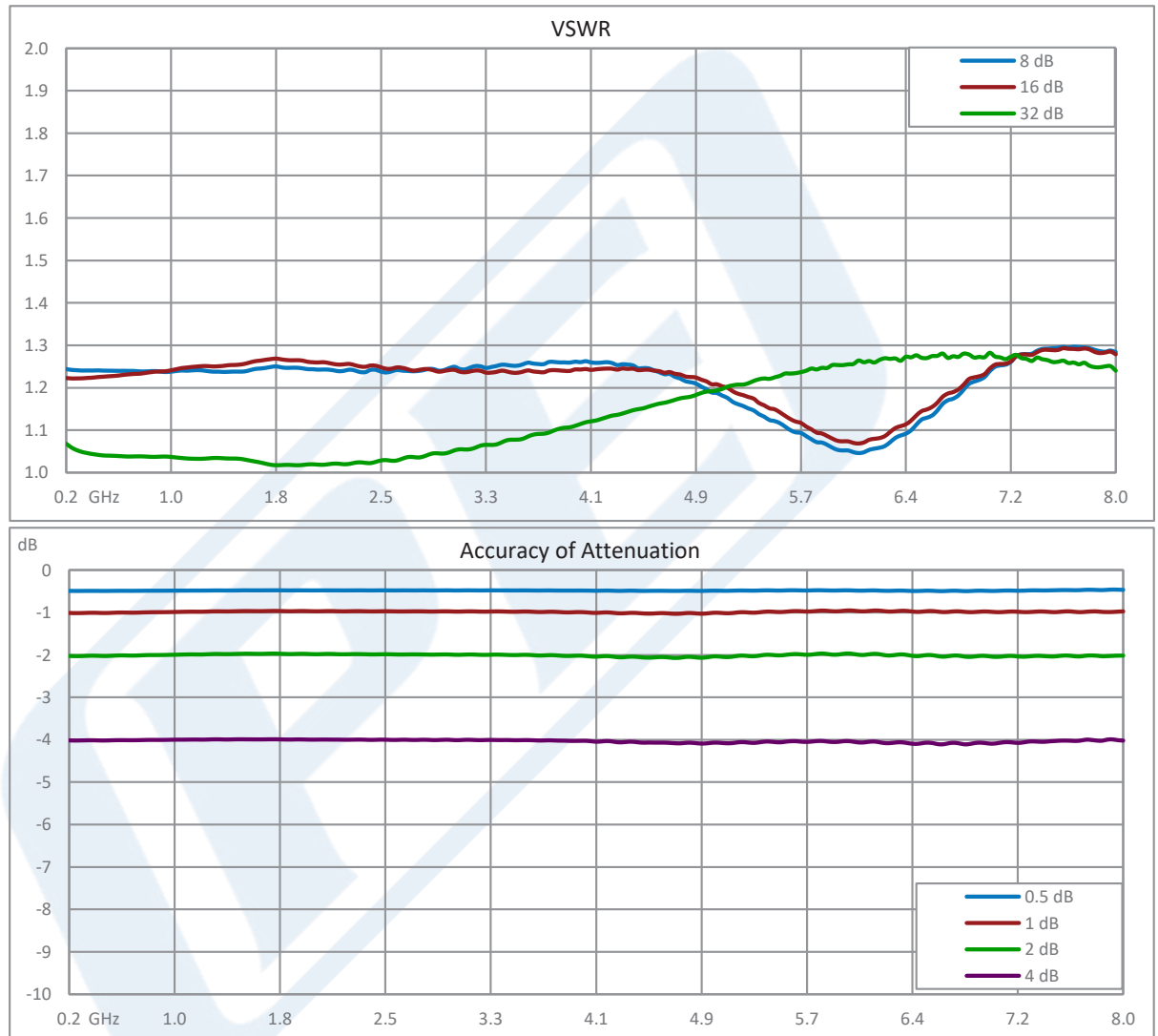
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [USB Controlled Programmable Attenuator, 63 dB, from 200 MHz to 8 GHz, 0.5 dB Steps, SMA Female PE70A8010](#)



USB Controlled Programmable Attenuator, 63 dB, from
200 MHz to 8 GHz, 0.5 dB Steps, SMA Female

TECHNICAL DATA SHEET

PE70A8010



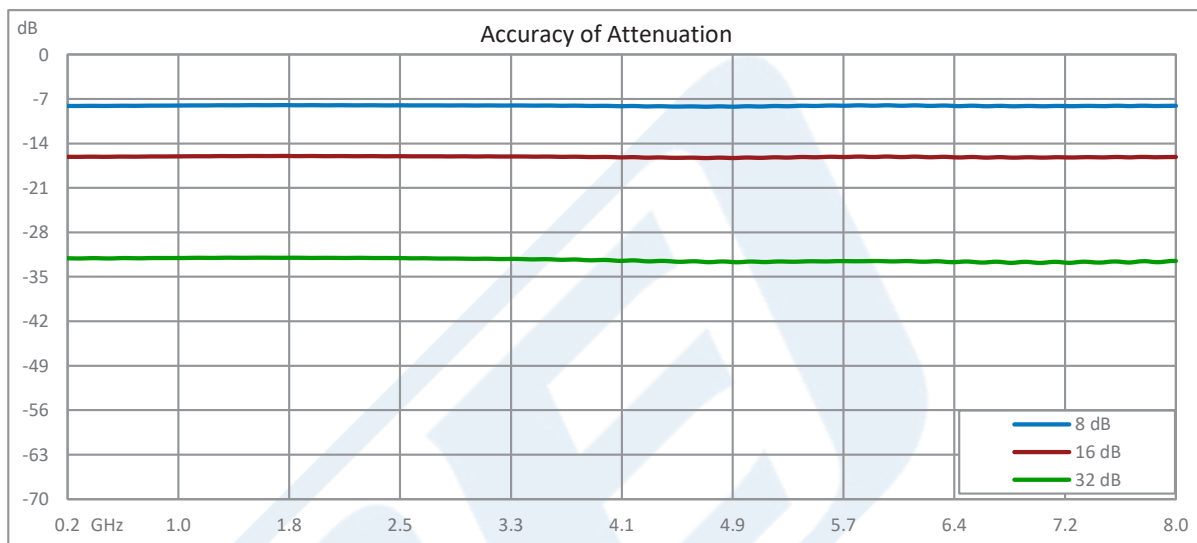
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [USB Controlled Programmable Attenuator, 63 dB, from 200 MHz to 8 GHz, 0.5 dB Steps, SMA Female PE70A8010](#)



USB Controlled Programmable Attenuator, 63 dB, from
200 MHz to 8 GHz, 0.5 dB Steps, SMA Female

TECHNICAL DATA SHEET

PE70A8010



USB Controlled Programmable Attenuator, 63 dB, from 200 MHz to 8 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.

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, 63 dB, from 200 MHz to 8 GHz, 0.5 dB Steps, SMA Female PE70A8010](https://www.pasternack.com/63db-relay-controlled-sma-female-sma-female-24-watts-attenuator-pe70a8010-p.aspx)

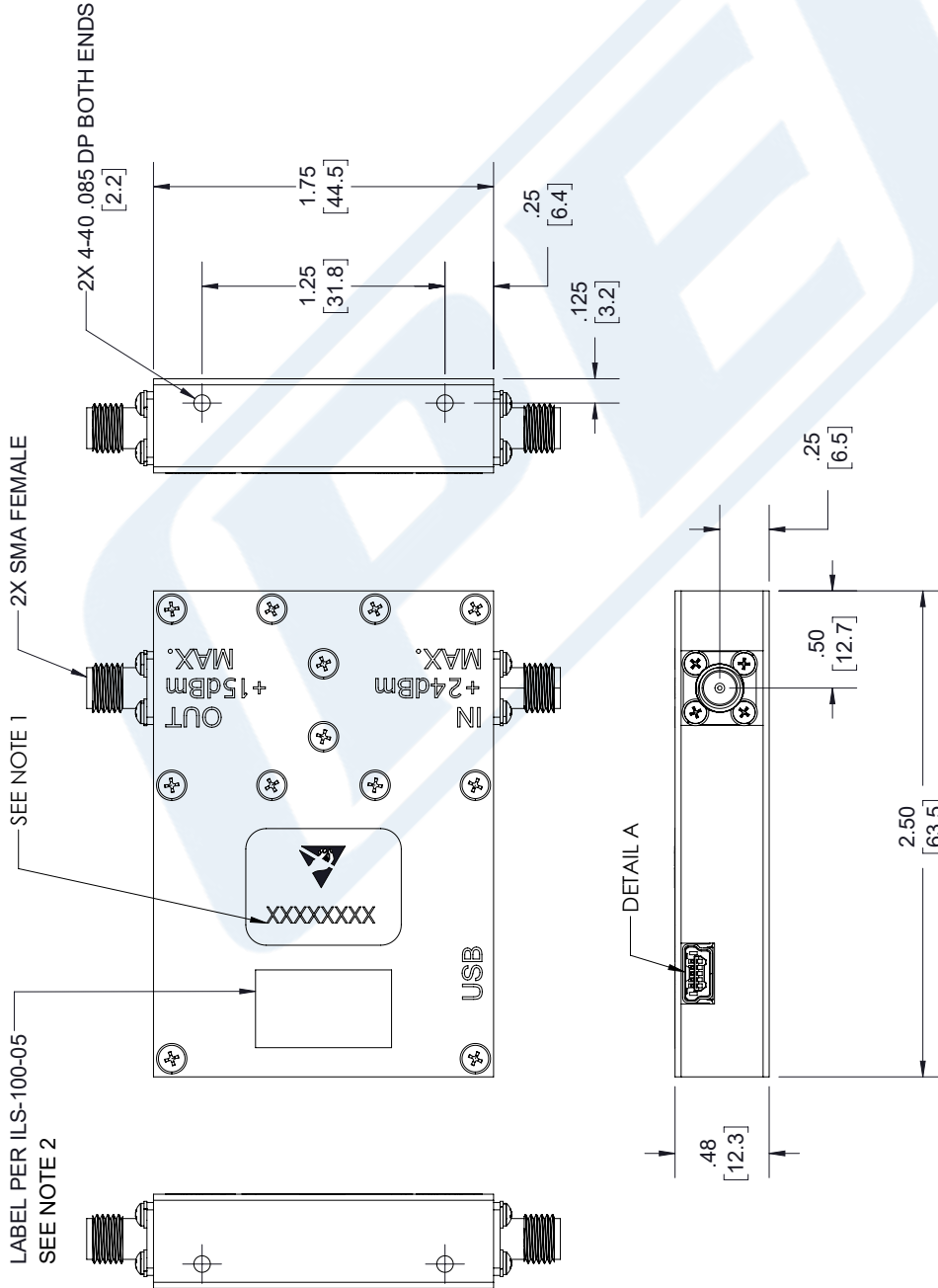
URL: <https://www.pasternack.com/63db-relay-controlled-sma-female-sma-female-24-watts-attenuator-pe70a8010-p.aspx>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

PE70A8010 CAD Drawing

USB Controlled Programmable Attenuator, 63 dB, from
200 MHz to 8 GHz, 0.5 dB Steps, SMA Female

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



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

TOLERANCES:

SIZE	FRACTIONS	ANGLES
.X = ±.2	[.08]	±.1/32
.XX = ±.02	[.51]	±.1/32
.XXX = ±.005	[.13]	±.1/32

CABLE LENGTH (L) TOLERANCES:

L	TOLERANCE
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

THE INFORMATION AND
DESIGN IN THIS DOCUMENT
IS THE PROPERTY OF
PASTERNAK CORPORATION
ALL RIGHTS RESERVED.

SHEET 1 OF 1

SCALE N/A

PASTERNAK
an INFINITI brand

Pasternack Enterprises, Inc.
P.O. Box 16759, Irvine, CA 92623.
Phone: 1.949.261.1920 | 1.866.727.8376
Fax: 1.949.261.7451
Website: www.pasternack.com
E-mail: sales@pasternack.com

ITEM NO. PE70A8010

REV A

NOTES:

- SERIAL NUMBER AND DATE CODE ARE COMBINED. EX: 202008280001.
- LABEL PER ILS-100-05. FOR INTERNAL REFERENCE ONLY.
LABEL LOCATION SHOULD BE SAME AS SHOWN.

THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE
WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.