



TTL Controlled Programmable Attenuator, 63 dB, from 100 MHz to 18 GHz, 0.5 dB Steps, SMA Female

TECHNICAL DATA SHEET

PE70A8007

The PE70A8007 is a wide band 7 Bit Solid State Programmable Attenuator which operates over the frequency range of 100 MHz to 18 GHz. The 50 ohm design supports TTL control logic and 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 31.5 dB. Insertion loss is 4 dB typical with a maximum RF input power of +25 dBm. Additional typical performance includes +/- 0.6 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 10 pin male connector s°cket for DC and TTL controls. A mating DC cable connector plug assembly (model PE3C4220-24) is available in st°ck as an accessory.

Features

- Wide band 7 Bit Solid State Programmable Attenuator
- Frequency Range 100 MHz to 18 GHz
- Attenuation Range: 0 to 63 dB in 0.5 dB steps
- Attenuation Steps: 0.5, 1, 2, 4, 8, 16, 31.5 dB
- Insertion Loss 4 dB typ
- Attenuation Accuracy +/- 0.6 dB typ
- Switching Speed 0.35 microseconds typ
- Max RF Input Power +25 dBm
- DC Voltage +5 Vdc
- DC Current 2 mA typ
- 50 Ohm Design
- -40°C to +85°C Operating Temperature
- SMA Female Connectors
- 10 Pin Male 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	0.1		18	GHz
Mean Attenuation Range	0		63	dB
Insertion Loss		4	7	dB
VSWR		<1.6:1	2:1	
DC Voltage		+5		Vdc
DC Current		2		mA
Accuracy of Attenuation				dB
0.5 dB to 3.5 dB		±0.25		dB
4 dB to 14.5 dB		±0.5		dB
15 dB to 31.5 dB		±0.75		dB
32 dB to 63 dB		±0.1		dB
TTL Low for Thru Path		+0 to +0.8		Vdc
TTL High for Attenuation		+2 to +5		Vdc
Step Size	1			dB

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [TTL Controlled Programmable Attenuator, 63 dB, from 100 MHz to 18 GHz, 0.5 dB Steps, SMA Female PE70A8007](#)



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Switching Time	350	1,000	ns
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	0.1 to 0.1	0.1 to 3	3 to 6	6 to 12.4	12.4 to 18	GHz
Insertion Loss, Typ	2	2.7	3.2	4.5	6.4	dB

Electrical Specification Notes:
0.5, 1, 2, 4, 8, 16, and 31.5 dB bit Attenuation Steps

Mechanical Specifications
Size

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:

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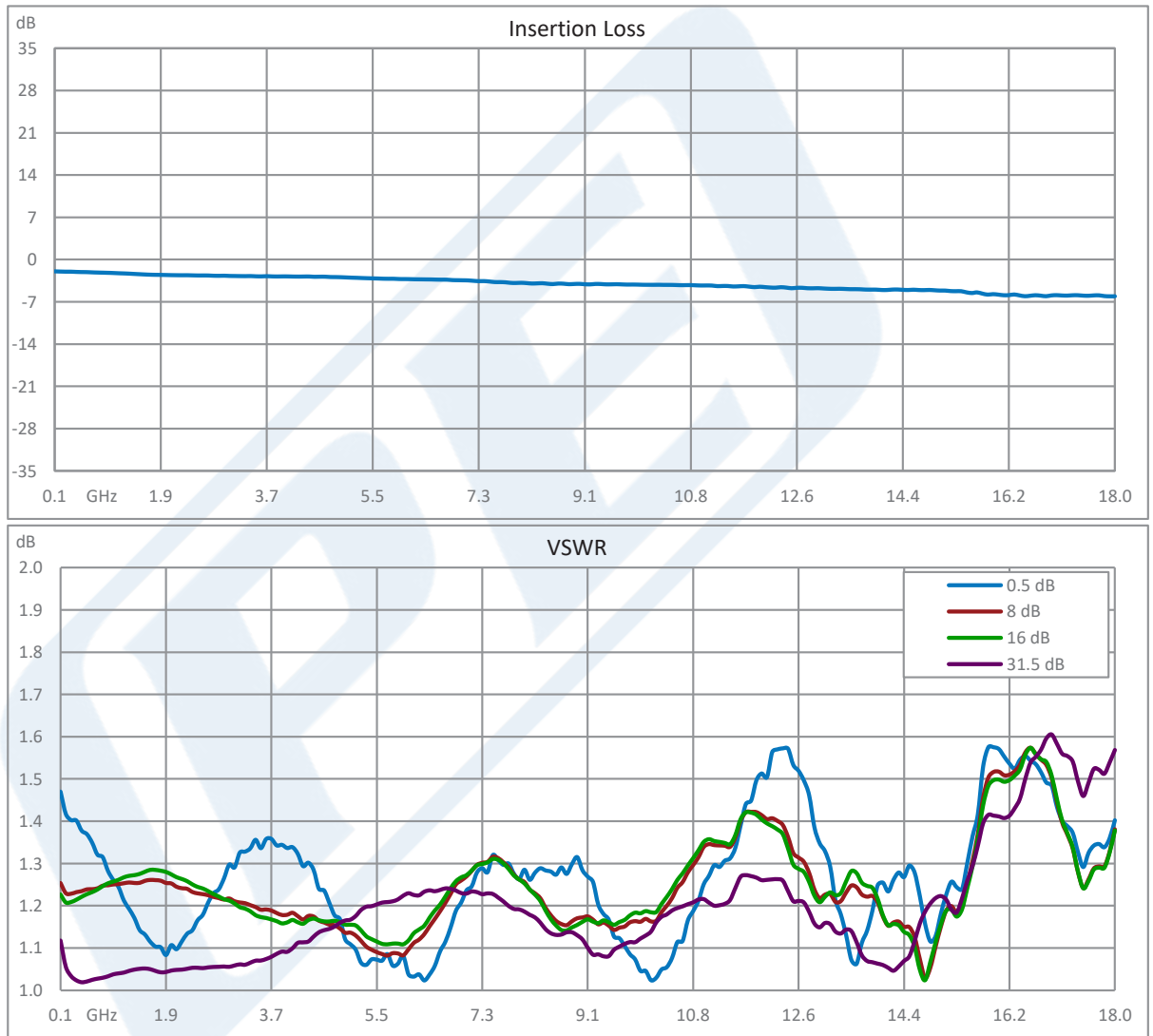


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Performance Data



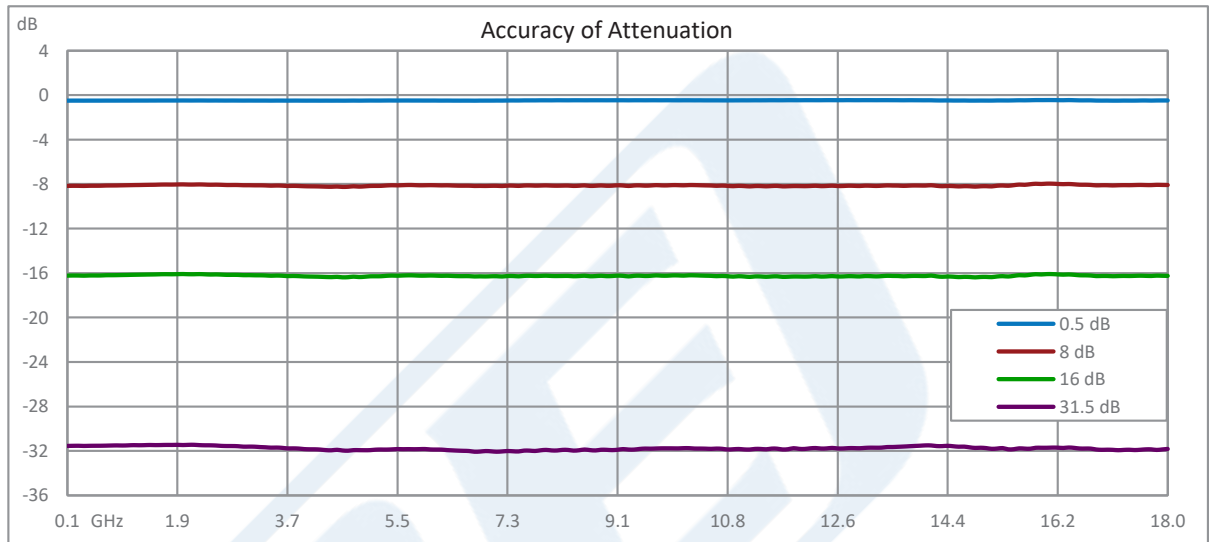
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TTL Controlled Programmable Attenuator, 63 dB, from 100 MHz to 18 GHz, 0.5 dB Steps, SMA Female from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% 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: [TTL Controlled Programmable Attenuator, 63 dB, from 100 MHz to 18 GHz, 0.5 dB Steps, SMA Female PE70A8007](https://www.pasternack.com/63db-relay-controlled-sma-female-sma-female-24-watts-attenuator-pe70a8007-p.aspx)

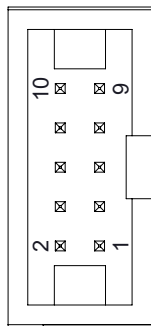
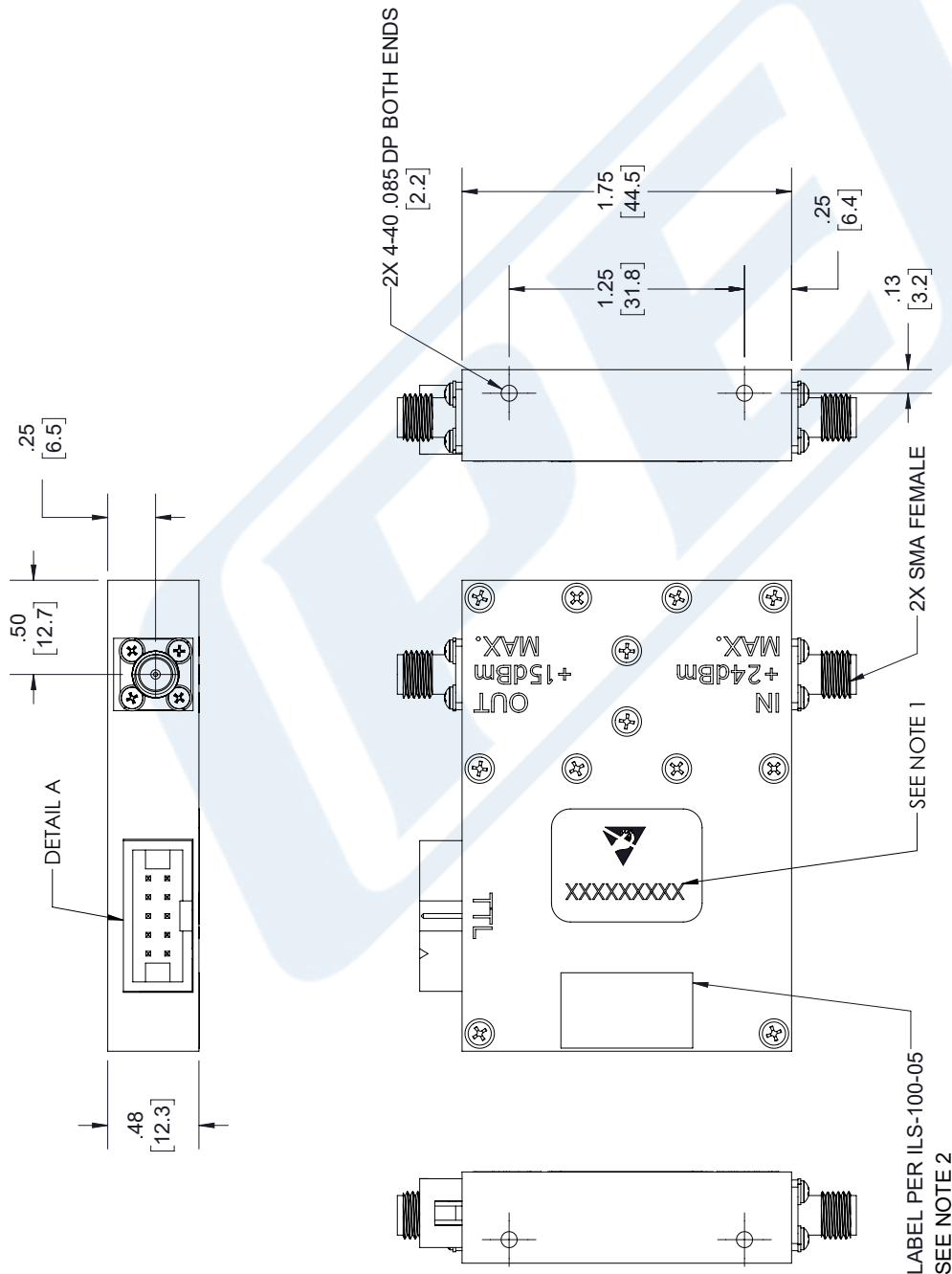
URL: <https://www.pasternack.com/63db-relay-controlled-sma-female-sma-female-24-watts-attenuator-pe70a8007-p.aspx>

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.

PE70A8007 CAD Drawing

TTL Controlled Programmable Attenuator, 63 dB, from 100 MHz to 18 GHz, 0.5 dB Steps, SMA Female

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



PIN	FUNCTION
1	0.5dB TTL CONT.
2	1dB TTL CONT.
3	2dB TTL CONT.
4	4dB TTL CONT.
5	8dB TTL CONT.
6	16dB TTL CONT.
7	31.5dB TTL CONT.
8	NO CONNECTION
9	DC SUPPLY
10	GROUND

THIRD-ANGLE PROJECTION

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SHEET 1 OF 1

SCALE N/A

REV A

ITEM NO. PE70A8007

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

TOLERANCES:

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

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.

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SIZE A CAGE CODE 53919 DRAWN BY MVEERAPPAN

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