

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



### PE70A8007

#### 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

#### Description

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 socket for DC and TTL controls. A mating DC cable connector plug assembly (model PE3C4220-24) is available in stCk as an accessory.

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

Description	Min	Typ	Max	Unit
Frequency Range	0.1		18	GHz
Impedance		50		Ohms
Attenuation Range	0		63	dB
Insertion Loss		4	7	dB
VSWR		1.6:1	2:1	
Survial Power Average -40 to +85 deg C				
DC Voltage		+5		Vdc
DC Current	2			mA
Accuracy of Attenuation				
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

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



## PE70A8007

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

Description	Min	Typ	Max	Unit
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
Logic Input "0" (Bit Off)	0		0.8	Volts
Logic Input "1" (Bit On)	2		5	Volts

### Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	0.1-0.1	0.1-3	3-6	6-12.4	12.4-18	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	
Length	0 in [0 mm]
Width	0 in [0 mm]
Height	0 in [0 mm]
Weight	0.15 lbs [68.04 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

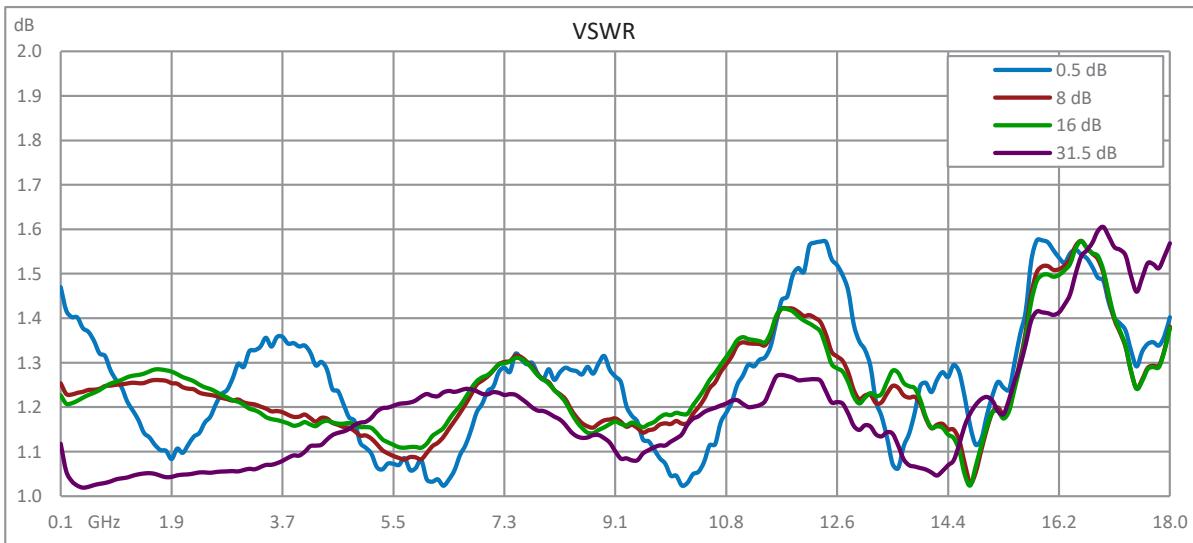
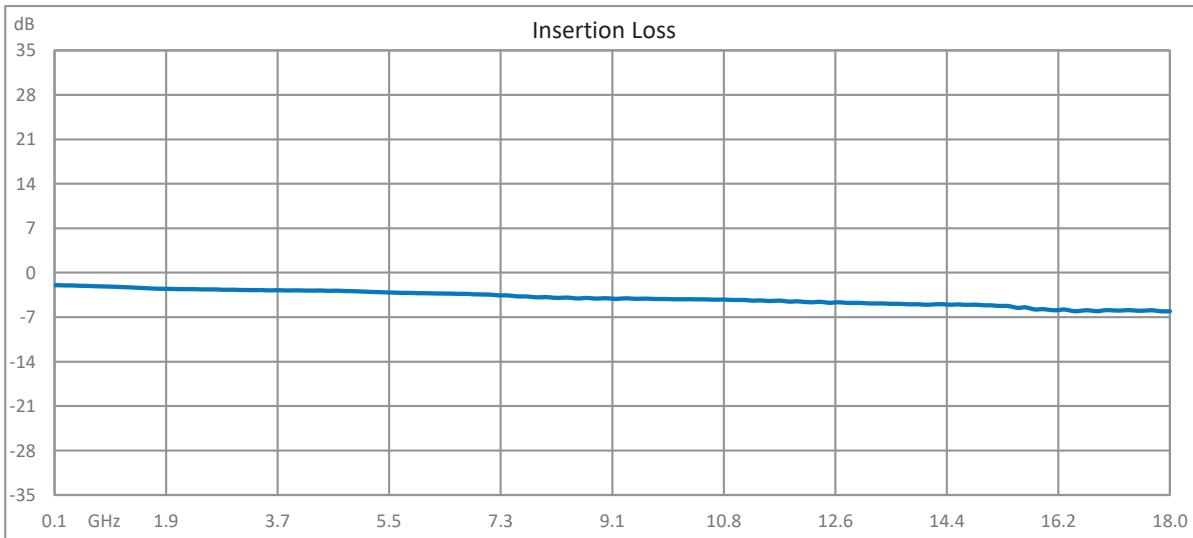
Notes:  
• Values at 25 °C, sea level

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



## PE70A8007

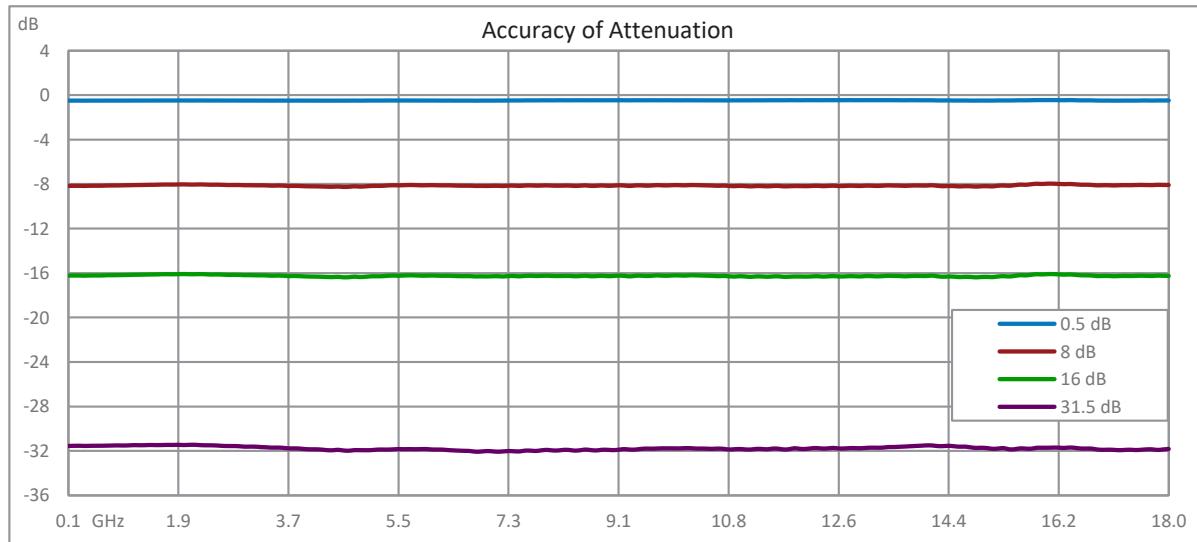
### Typical Performance Data



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



### PE70A8007



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](#)

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

The information contained within 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 Enterprises reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack Enterprises does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack Enterprises does not assume liability arising out of the use of any part or document.

# PE70A8007 CAD Drawing

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

