



## TTL Controlled Programmable Attenuator, 95 dB, from 200 MHz to 8 GHz, 1 dB Steps, SMA Female

### TECHNICAL DATA SHEET

PE70A8006

The PE70A8006 is a broadband 7 Bit Solid State Programmable Attenuator which operates over the frequency range of 200 MHz to 8000 MHz. The 50 ohm design supports TTL control logic and has an attenuation range that covers 0 to 95 dB in 1 dB steps. Attenuation steps are 1, 2, 4, 8, 16, and 32 dB. Insertion loss is 5 dB typical with a maximum RF input power of +25 dBm. Additional typical performance includes +/- 0.7 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 st<sup>o</sup>Ck as an accessory.

#### Features

- Broadband 7 Bit Solid State Programmable Attenuator
- Frequency Range 100 MHz to 8 GHz
- Attenuation Range: 0 to 95 dB in 1 dB steps
- Attenuation Steps: 1, 2, 4, 8, 16, 32 and 32 dB
- Insertion Loss 5 dB typ
- Attenuation Accuracy +/- 0.7 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	0.2		8	GHz
Impedance		50		Ohms
Mean Attenuation Range	0		95	dB
Insertion Loss		5	7	dB
Input VSWR		1.6:1	2:1	
DC Voltage		+5		Vdc
DC Current		2		mA
Accuracy of Attenuation				dB
1 dB to 7 dB		±0.5		dB
8 dB to 15 dB		±0.6		dB
16 dB to 31 dB		±0.75		dB
32 dB to 95 dB		±1		dB
TTL Low for Thru Path		+0 to +0.8		Vdc
TTL High for Attenuation		+2 to +5		Vdc

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, 95 dB, from 200 MHz to 8 GHz, 1 dB Steps, SMA Female PE70A8006](#)



TTL Controlled Programmable Attenuator, 95 dB, from 200 MHz to 8 GHz, 1 dB Steps, SMA Female

TECHNICAL DATA SHEET

PE70A8006

Step Size	1			dB
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	0.2 to 0.2	0.2 to 4	4 to 8			GHz
Insertion Loss, Typ	4.1	5	6			dB

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

Mechanical Specifications  
Size

Weight	0.25 lbs [113.4 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: [TTL Controlled Programmable Attenuator, 95 dB, from 200 MHz to 8 GHz, 1 dB Steps, SMA Female PE70A8006](#)

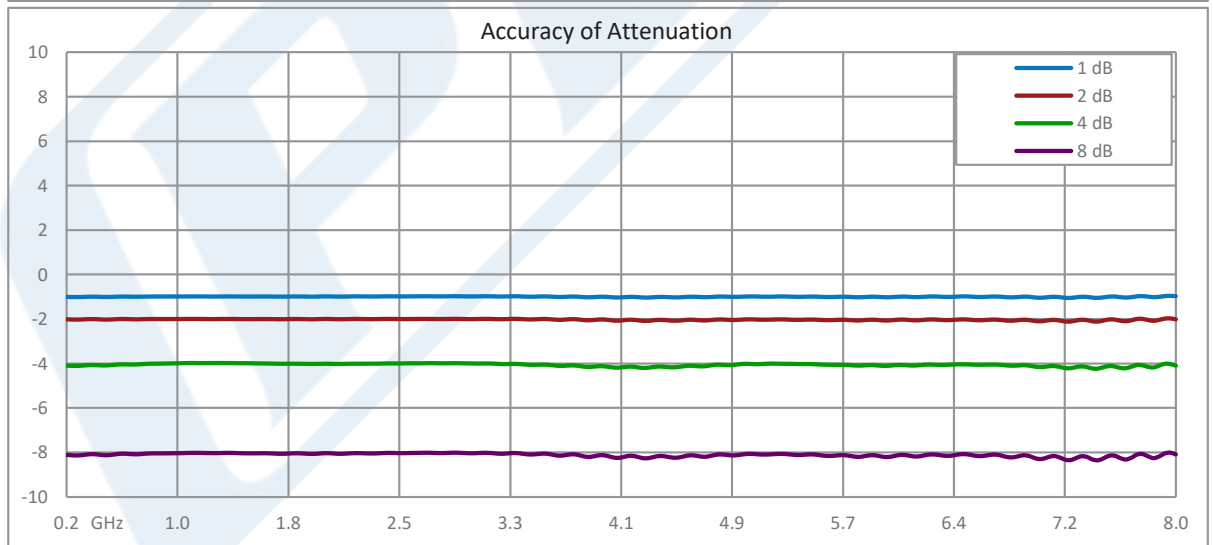
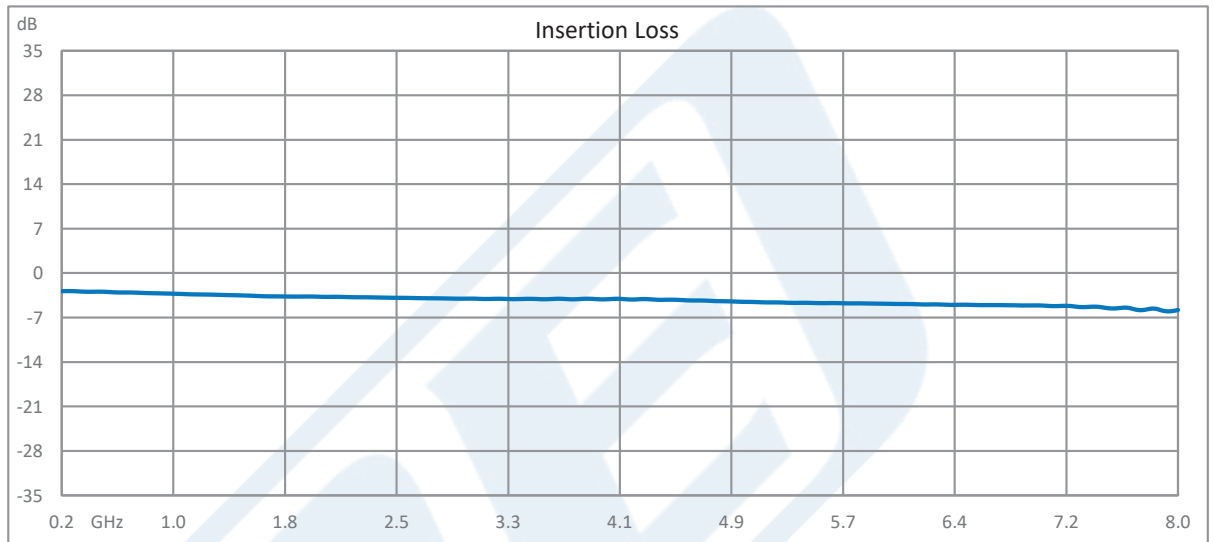


TTL Controlled Programmable Attenuator, 95 dB, from 200 MHz to 8 GHz, 1 dB Steps, SMA Female

TECHNICAL DATA SHEET

PE70A8006

Performance Data



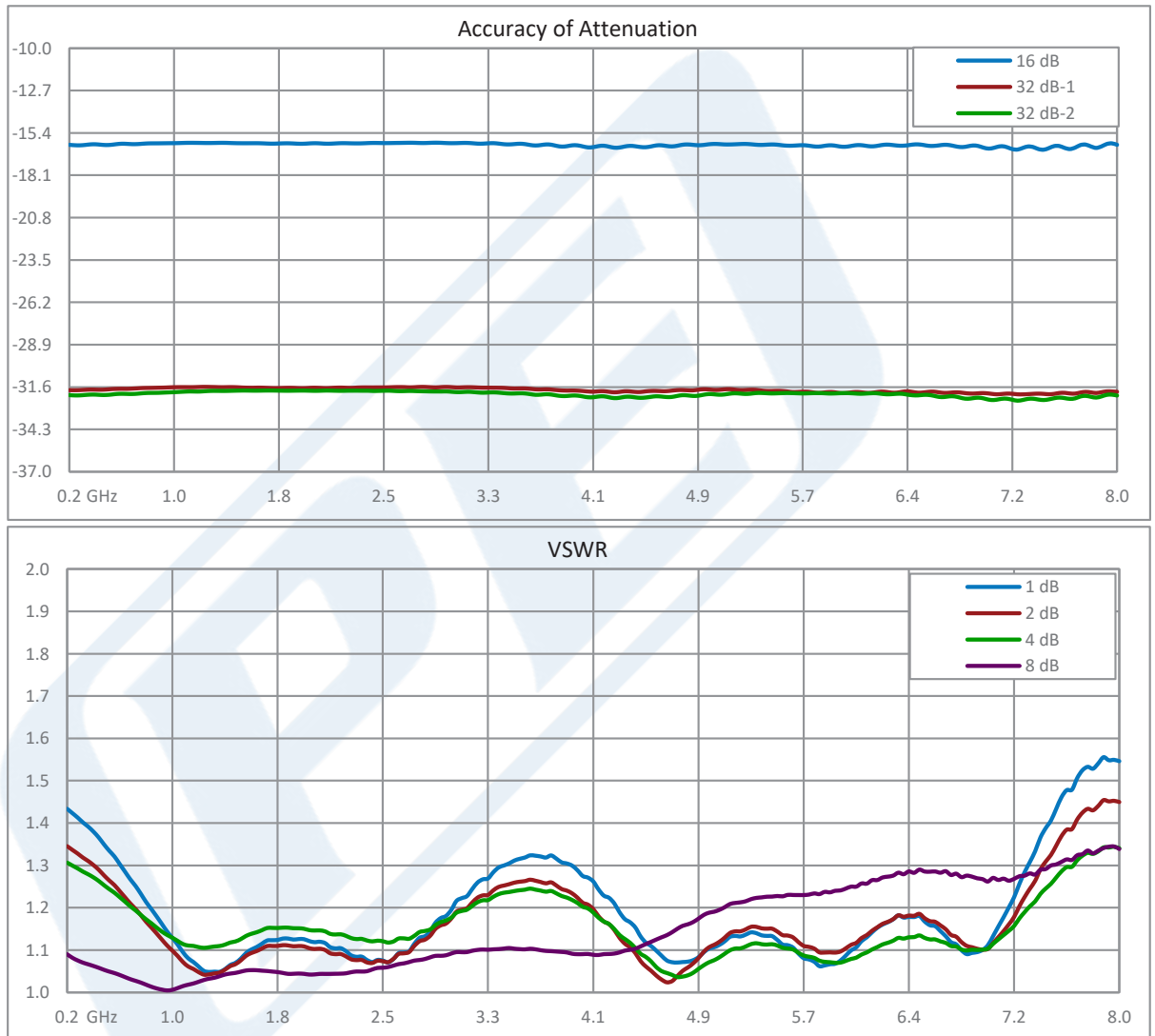
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [TTL Controlled Programmable Attenuator, 95 dB, from 200 MHz to 8 GHz, 1 dB Steps, SMA Female PE70A8006](#)



TTL Controlled Programmable Attenuator, 95 dB, from 200 MHz to 8 GHz, 1 dB Steps, SMA Female

TECHNICAL DATA SHEET

PE70A8006



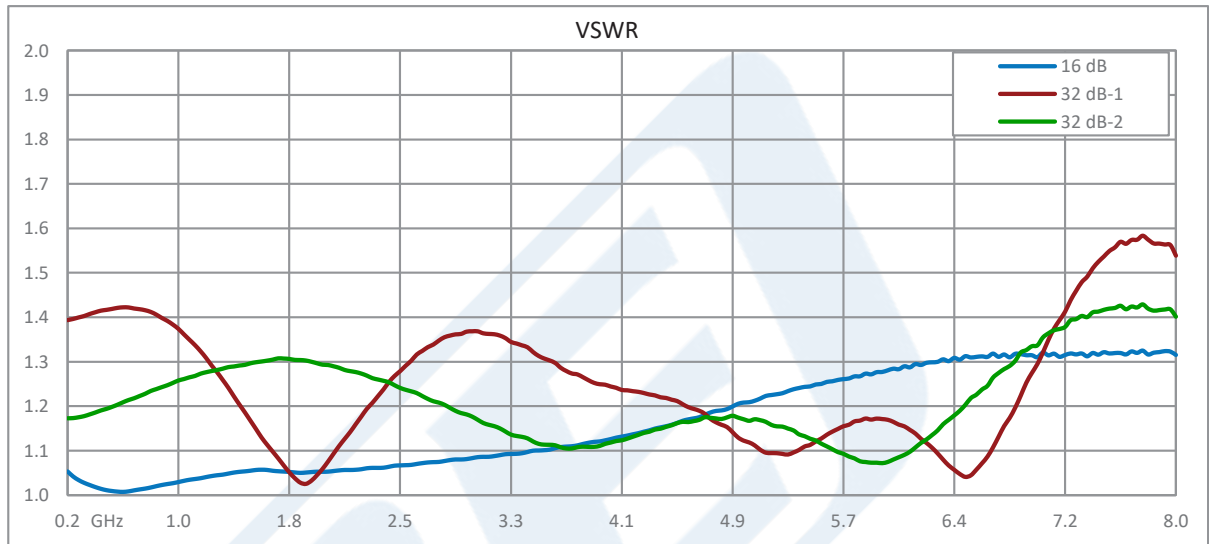
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [TTL Controlled Programmable Attenuator, 95 dB, from 200 MHz to 8 GHz, 1 dB Steps, SMA Female PE70A8006](#)



TTL Controlled Programmable Attenuator, 95 dB, from  
200 MHz to 8 GHz, 1 dB Steps, SMA Female

TECHNICAL DATA SHEET

PE70A8006



TTL Controlled Programmable Attenuator, 95 dB, from 200 MHz to 8 GHz, 1 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, 95 dB, from 200 MHz to 8 GHz, 1 dB Steps, SMA Female PE70A8006](https://www.pasternack.com/95db-relay-controlled-sma-female-sma-female-24-watts-attenuator-pe70a8006-p.aspx)

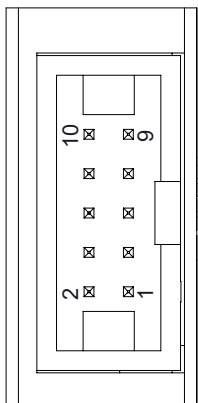
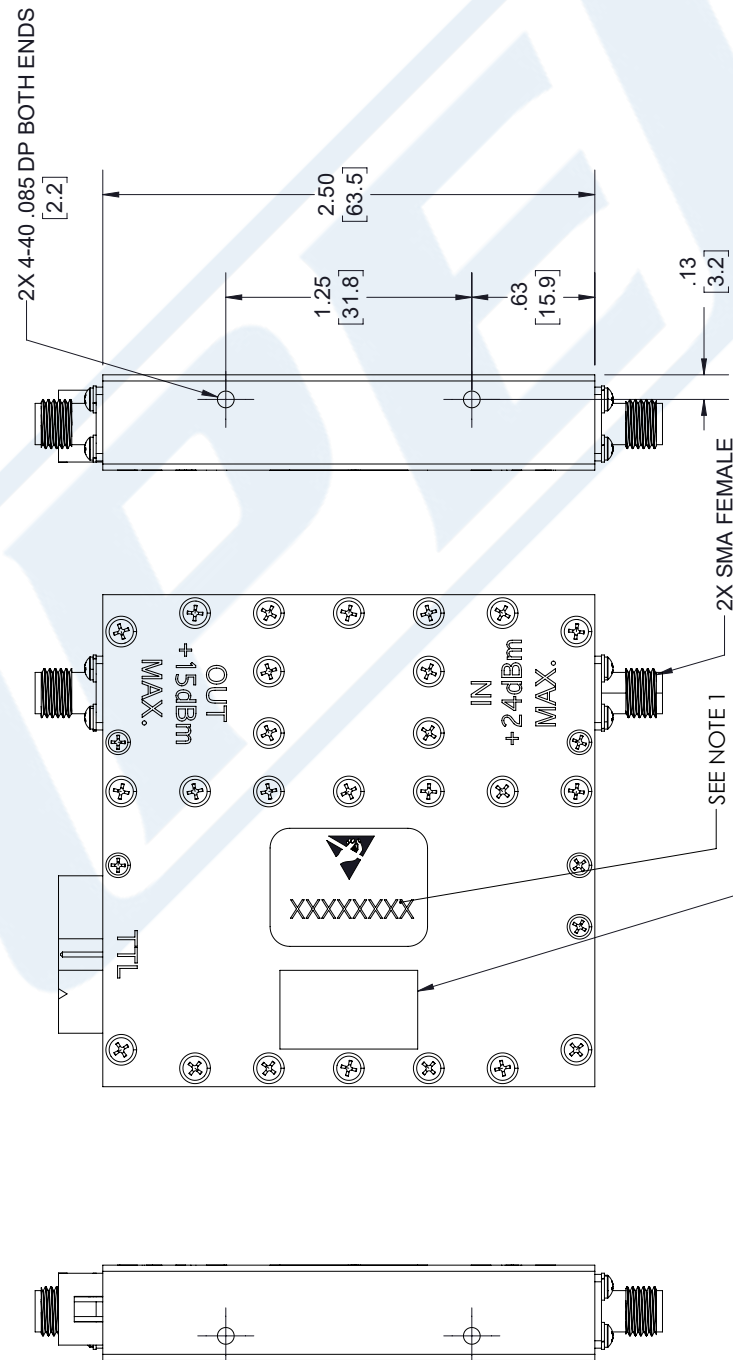
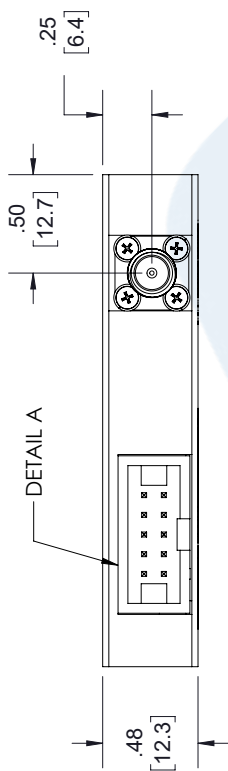
URL: <https://www.pasternack.com/95db-relay-controlled-sma-female-sma-female-24-watts-attenuator-pe70a8006-p.aspx>

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.

# PE70A8006 CAD Drawing

TTL Controlled Programmable Attenuator, 95 dB, from 200 MHz to 8 GHz, 1 dB Steps, SMA Female

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



DETAIL A  
3M #2510-6002-AR  
OR EQUIVALENT

PIN	FUNCTION
1	1dB TTL CONT.
2	2dB TTL CONT.
3	4dB TTL CONT.
4	8dB TTL CONT.
5	16dB TTL CONT.
6	32dB TTL CONT.
7	32dB TTL CONT.
8	NO CONNECTION
9	+5VDC
10	GROUND

**PE PASTERNAK**  
an INFINITI<sup>®</sup> 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

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

---

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

TOLERANCES:

.X = ±.2	[5.08]	FRACTIONS
.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.

SIZE [CAGE CODE] DRAWN BY ITEM NO.

A 53919 MVEERAPPAN PE70A8006

- 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.