



10 Bit Programmable 60 dB Attenuator 0.5 GHz to 18.0 GHz 4.5 dB IL 0.06 dB Step 15 dBm P1dB

TECHNICAL DATA SHEET

PE70A6000

The PE70A6000 is a Non-Reflective 10 Bit Programmable 60 dB Pin Diode Attenuator with Step Resolution as Low as 0.06 dB over the Operating Frequency Range from 0.5 GHz to 18 GHz. The PE70A6000 is offered in a slim line housing measuring only 0.5" Height.

Features

- Non-Reflective 10 Bit Programmable 60 dB Pin Diode Attenuator
- 0.5 GHz to 18 GHz Frequency Range
- 60 dB Attenuation Range
- Step Resolution of 0.06 dB
- 1 Watt Average Survival Power
- Insertion Loss 4.5 dB Max
- VSWR 2.0:1 Max

Applications

- Electronic Warfare
- Test & Measurement
- Military & Space
- Radar
- Military Communications Systems

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

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.5		18	GHz
Mean Attenuation Range	0		60	dB
Insertion Loss			4.5	dB
VSWR			2:1	
Survival Power Average			1	dBm
Attenuation Flatness				
@ 20 dB		±1		dB
@ 40 dB		±1.25		dB
@ 60 dB		±3		dB
Accuracy of Attenuation				
0 dB to 20 dB		±1		dB
20 dB to 40 dB		±1.5		dB
40 dB to 60 dB		±2		dB
Step Size	0.06			dB
Switching Time				
On Time			1	µs
Off Time			0.5	µs
DC Power Supply @ 150 mA		15		Volts
Logic Input				

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [10 Bit Programmable 60 dB Attenuator 0.5 GHz to 18.0 GHz 4.5 dB IL 0.06 dB Step 15 dBm P1dB PE70A6000](#)



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Logic "0" (Bit Off)	-0.3	0.8	Volts
Logic "1" (Bit On)	2	5	Volts

Mechanical Specifications

Size

Length	2 in [50.8 mm]
Width	1.8 in [45.72 mm]
Height	0.5 in [12.7 mm]

Environmental Specifications

Temperature

Operating Range	-40 to +85 deg C
Storage Range	-65 to +125 deg C

Humidity	MIL-STD-202F, METHOD 103B COND. B
Shock	MIL-STD-202F, METHOD 213B COND. B
Vibration	MIL-STD-202F, METHOD 204D COND. B
Altitude	MIL-STD-202F, METHOD 105C COND. B
Temperature Cycle	MIL-STD-202F, METHOD 107

Compliance Certifications (visit www.Pasternack.com for current document)

RoHS Compliant

Plotted and Other Data

Notes:

- Values at +25 °C, sea level

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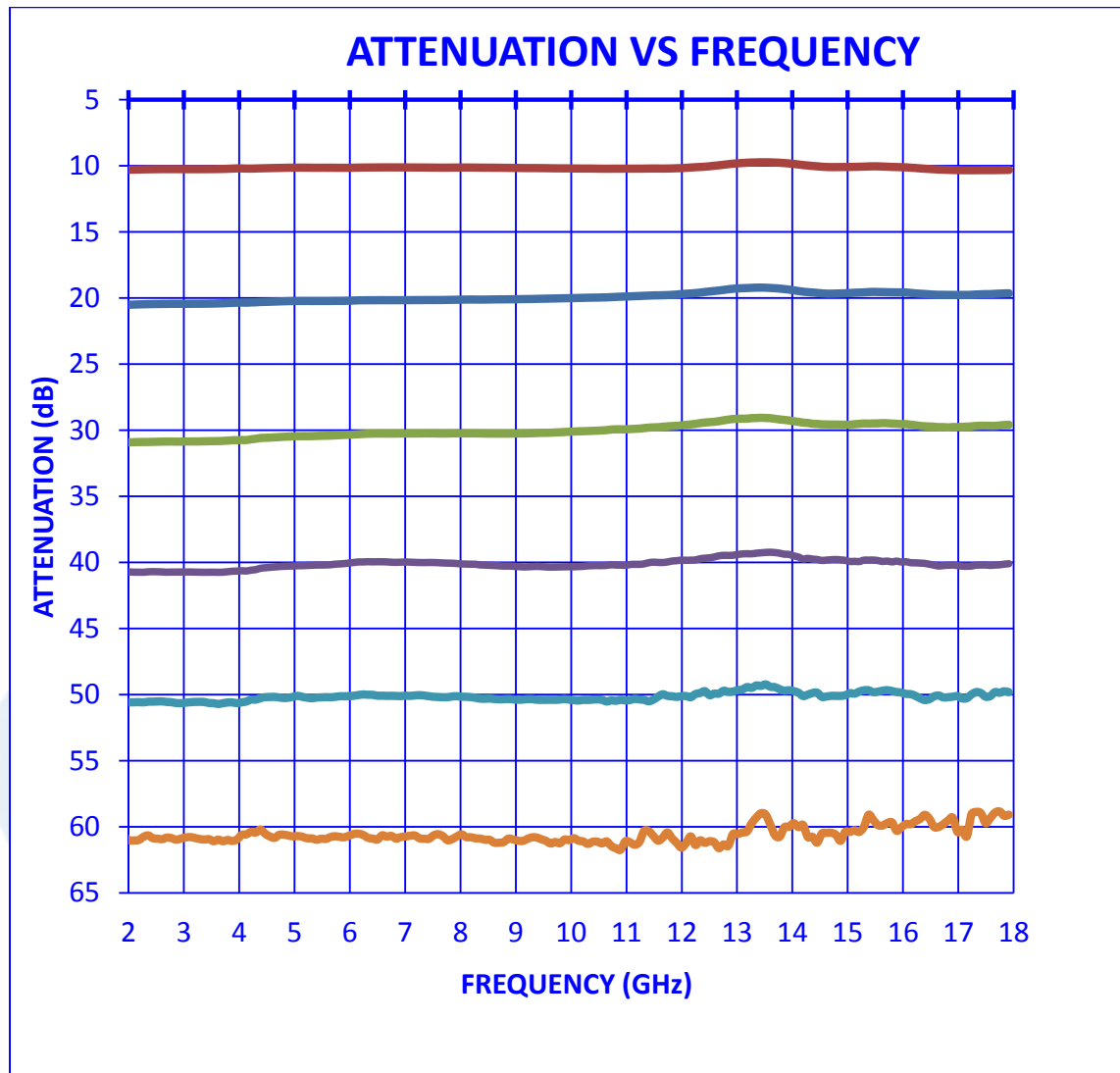


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Performance Data



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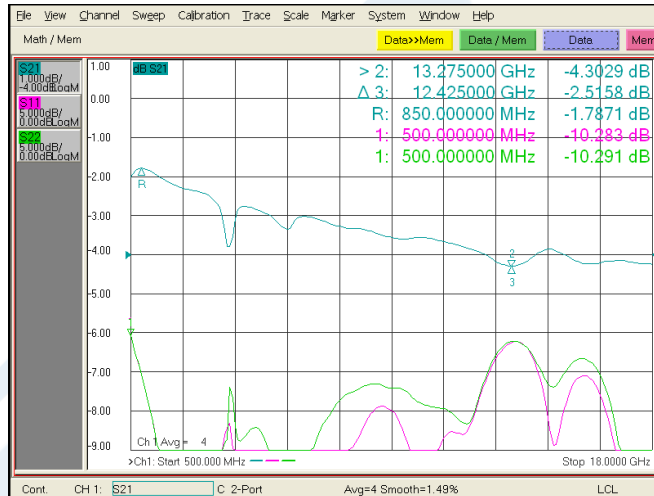


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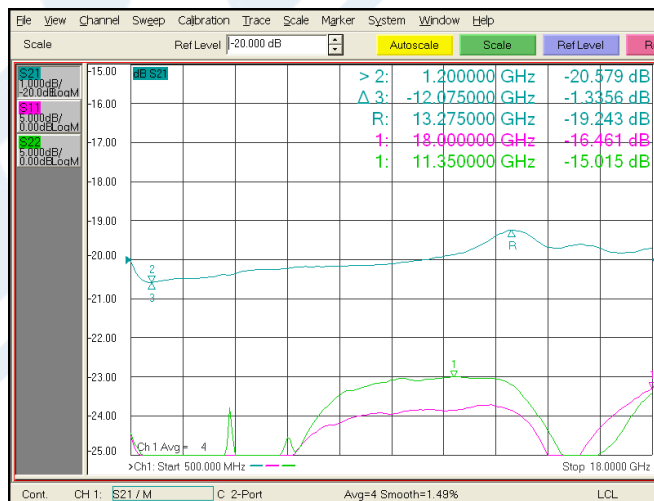
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**Insertion Loss and VSWR
@ 0dB Attenuation**



20dB Attenuation



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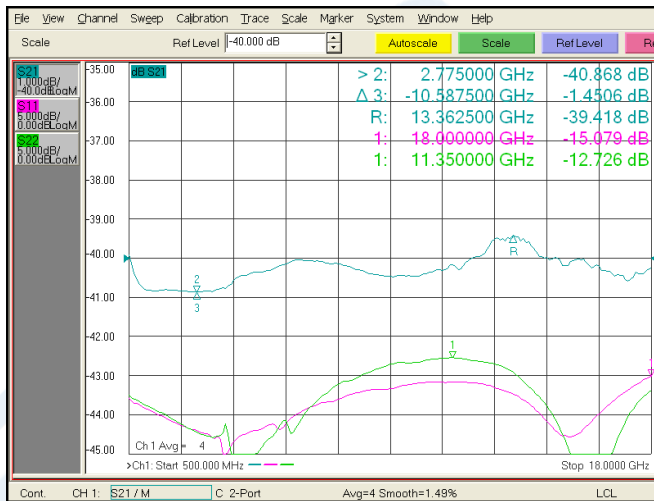




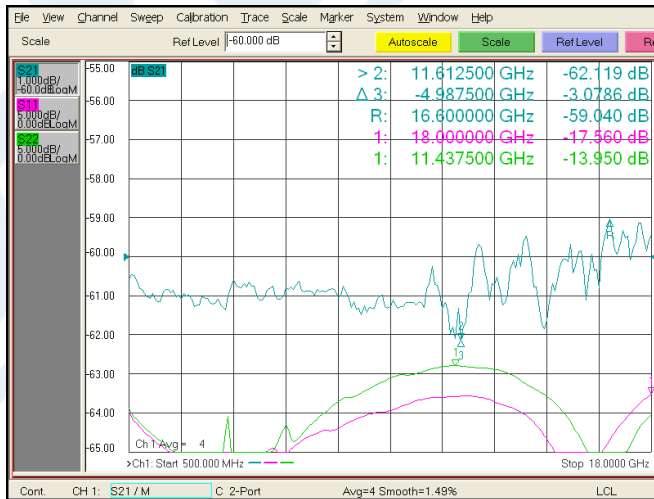
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40dB Attenuation



60dB Attenuation



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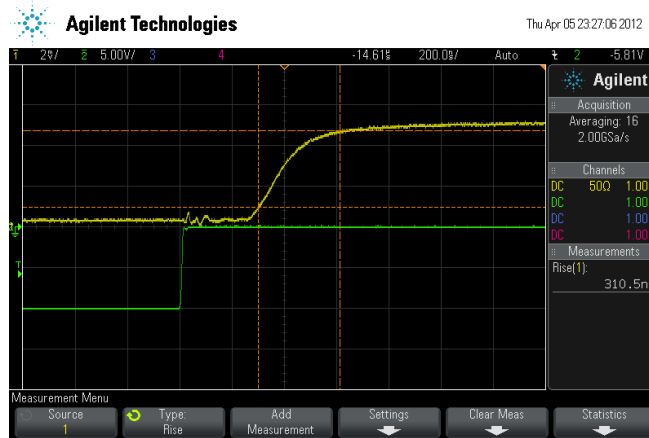


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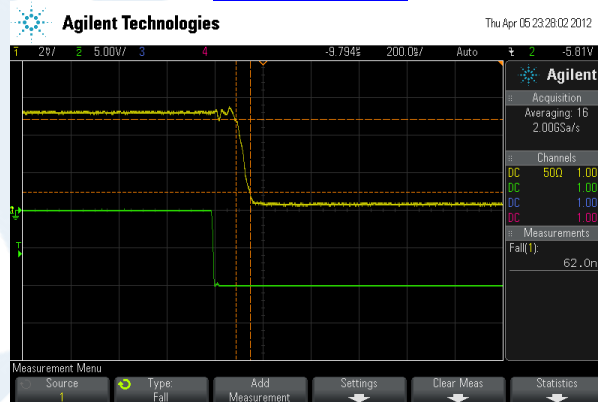
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Delay On
Measured with a Tunnel Diode @ 10GHz
Power Level +5dBm



Channel 1 (Yellow): Tunnel Diode output
Channel 2 (Green): TTL Input from Signal Generator

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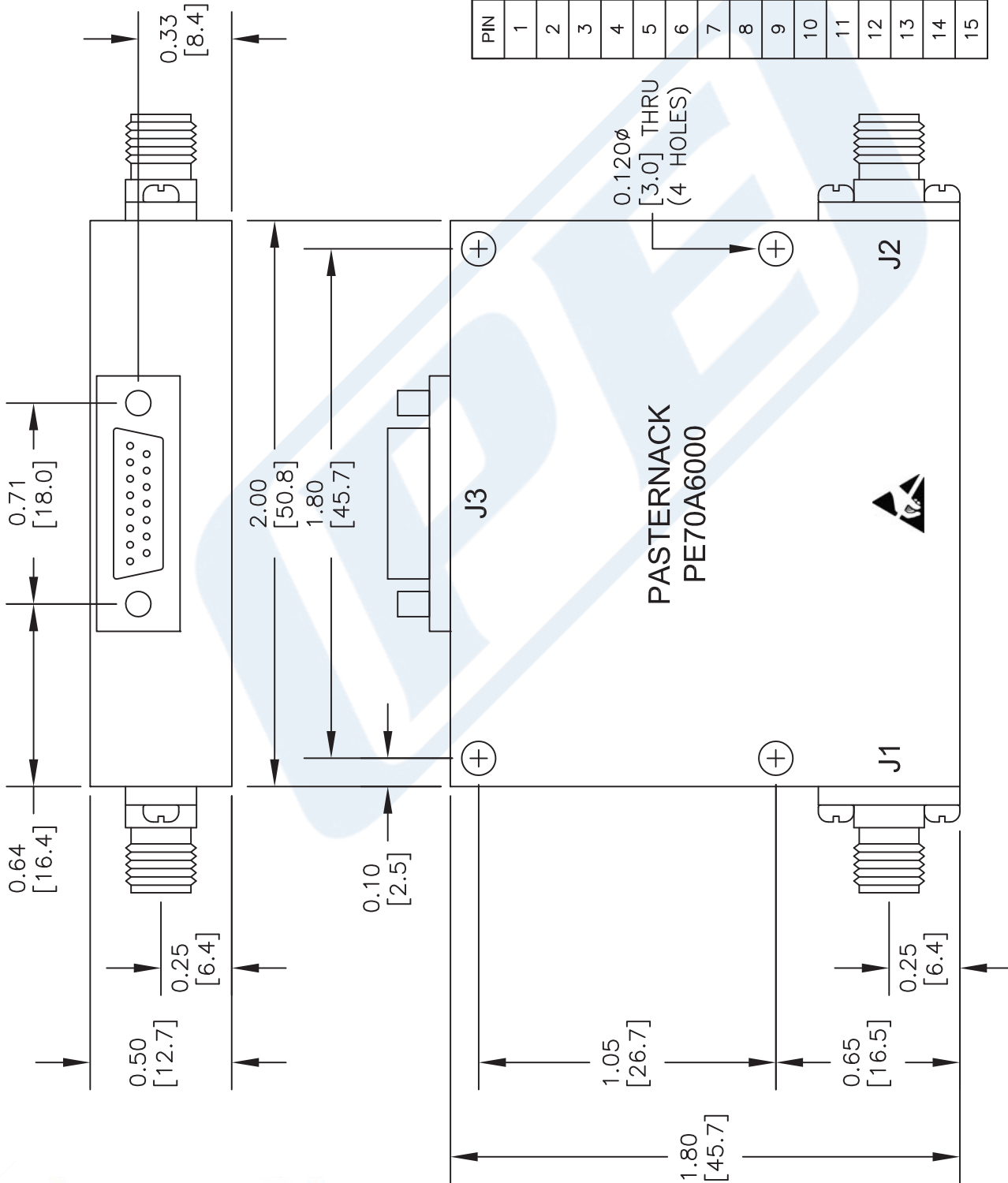
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PE70A6000 CAD Drawing

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PIN	DESCRIPTION
1	2 dB
2	1 dB
3	0.5 dB
4	0.25 dB
5	GROUND
6	0.13 dB
7	0.06 dB (LSB)
8	GND
9	NO CONNECTION
10	NO CONNECTION
11	+12 VDC
12	32 dB (MSB)
13	16 dB
14	8 dB
15	4 dB

DWG TITLE

PE70A6000

NOTES:
1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
3. DIMENSIONS ARE IN INCHES [mm].

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FSCM NO. 53919

CAD FILE 052714

SCALE N/A

SIZE A

150