

Voltage Variable PIN Diode Attenuator, 0 to 60 dB, 500 MHz to 18 GHz, Rated to 20 dBm, SMA, Solder Pin Control



PE70A2900

Features

- Analog Controlled 60 dB Pin Diode Attenuator
- 0.5 GHz to 18 GHz Frequency Range
- Insertion Loss 5.2 dB Max
- VSWR 2.2:1 Max
- Input Power 20 dBm CW Max Operating
- Input Power 30 dBm CW Max Survival
- SMA Female Replacable Connectors

Applications

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

Description

The PE70A2900 is an Broadband Analog Controlled 60 dB Pin Diode Attenuator/Modulator operating from 0.5 GHz to 18 GHz with a rise and fall time of 3 us maximum, a VSWR of 2.2:1 maximum, and an over temperature range of -55 Deg C to + 95 Deg C. The Input/Output RF Connectors are Field Replaceable SMA Female. The control is an analog voltage that is applied to a CTL pin.

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

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.5		18	GHz
Attenuation Range	0		60	dB
0.5 to 12		3.5	4.5	dB
12 to 18			5.2	dB
VSWR		2:1	2.2:1	
RF Input Power			20	dBm
Power Rating (0.3 GHz or BE-LOW)			10	dBm
Survival Power Rating			+30	dBm
Survival Power Rating (0.3 GHz or BE-LOW)			27	dBm
0 dB 30 dB		±0	2.5	dB
30 dB 40 dB		±3	3.5	dB
40 dB 50 dB		±4	4.5	dB
50 dB 60 dB		±5	5.5	dB
Accuracy of Attenuation				
0 dB to 10 dB			2	dB
10 dB to 20 dB			1	dB
20 dB to 40 dB			1.5	dB
40 dB to 60 dB			2	dB
Switching Time		1.8	3	us
Switching Speed			3	us
Analog Control		10		dB/Volt

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

Description	Minimum	Typical	Maximum	Units
Control Voltage	0		6	Volts
DC Power Supply				
to 12 VDC		210	250	mA
to -12 VDC		30	50	mA
Attenuation Range	0		60	dB

Mechanical Specifications

Size

Length	2 in [50.8 mm]
Width	1.8 in [45.72 mm]
Height	0.5 in [12.7 mm]
Weight	0.129 lbs [58.51 g]
Input Connector	SMA Female
Output Connector	SMA Female
Power and Control	Solder Pin

Environmental Specifications

Temperature

Operating Range	-55 to +95 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 107D COND. A
Salt Spray	MIL-STD-202F, METHOD 105C COND. B

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

Plotted and Other Data

Notes:

- Values at +25 °C, sea level
ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.

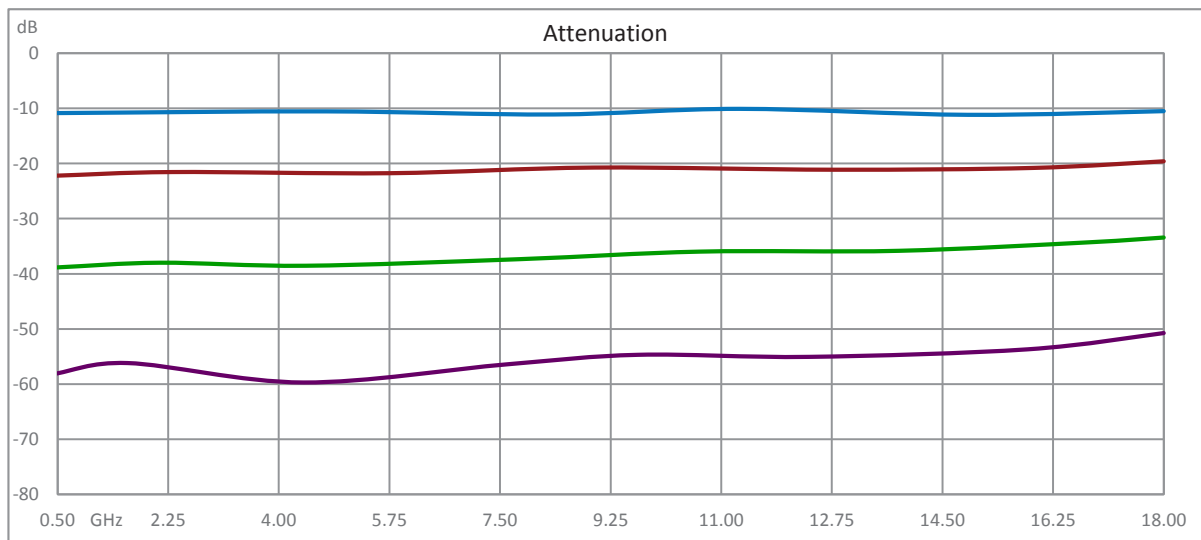
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Functional Block Diagram

Performance Data

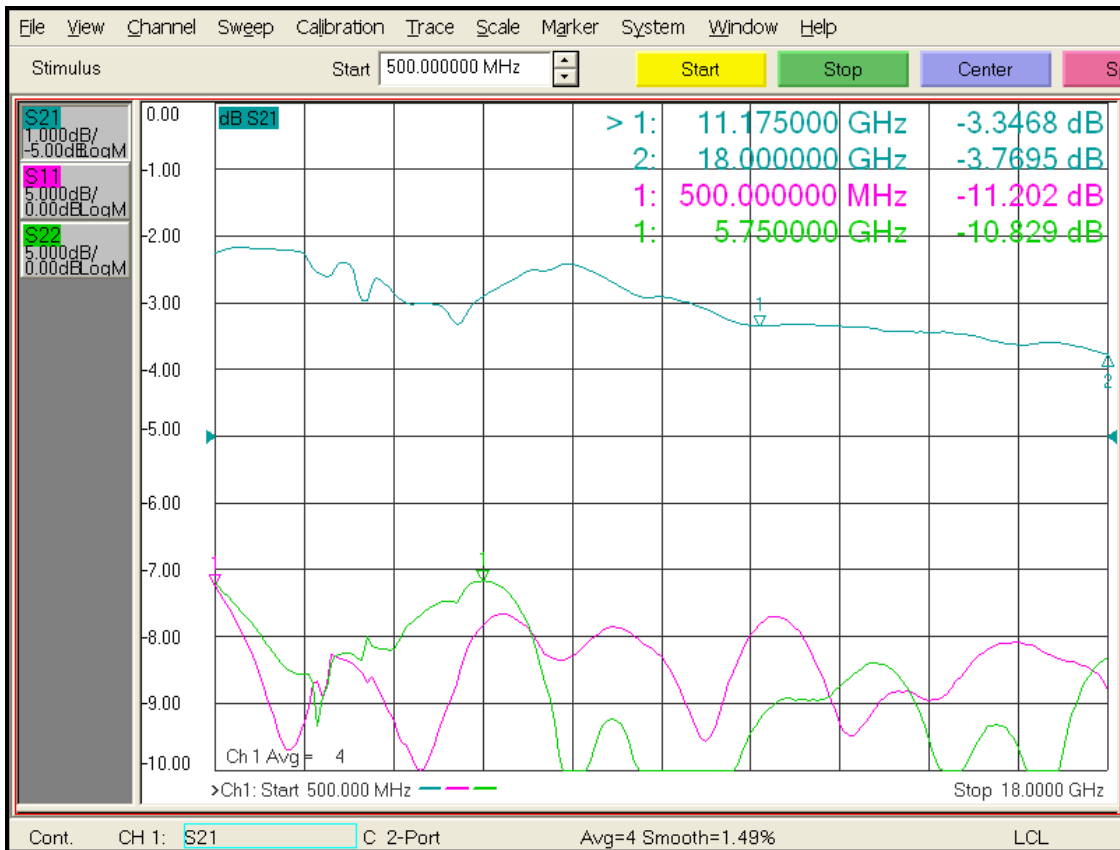


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Insertion Loss and Return Loss

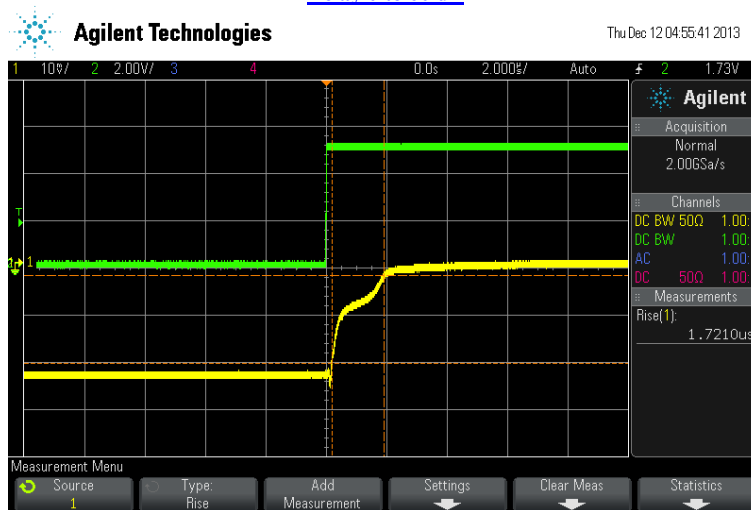


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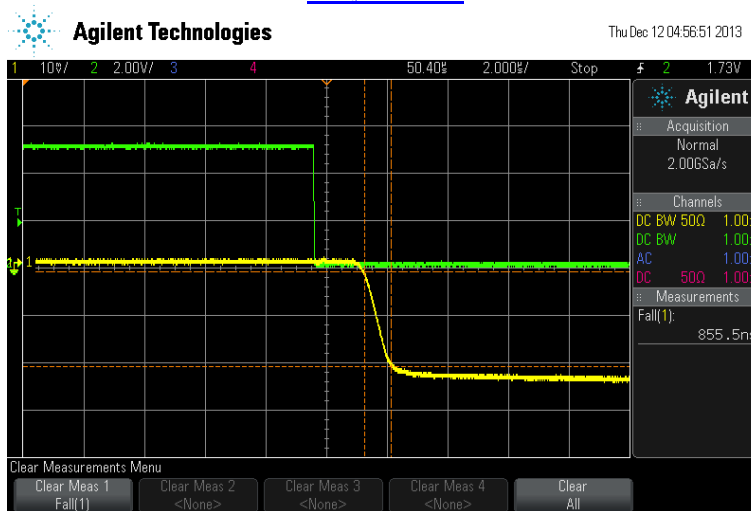


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Delay 0 to 60 dB



Delay 60 to 0 dB



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

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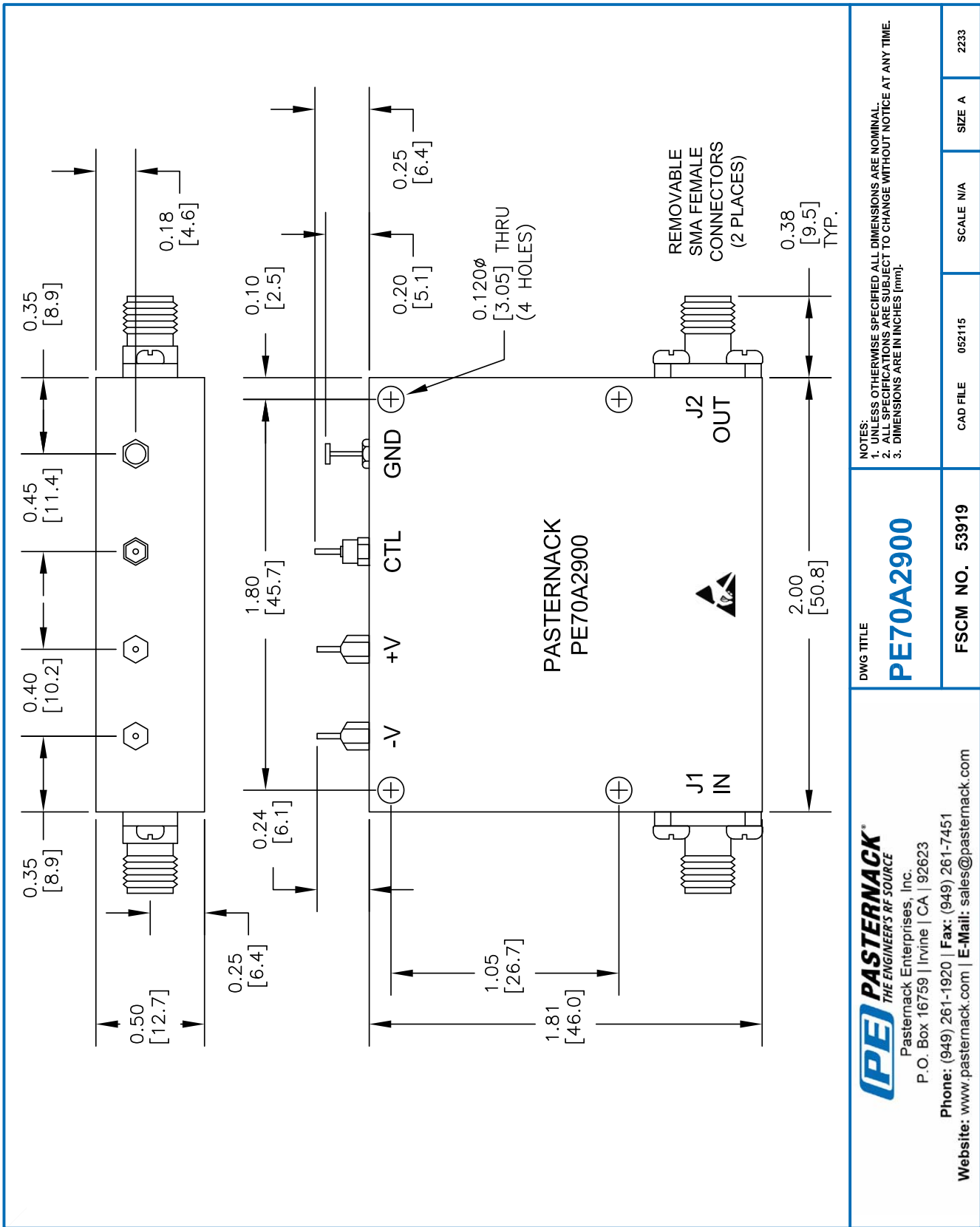
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Voltage Variable PIN Diode Attenuator, 0 to 60 dB, 500 MHz to 18 GHz, Rated to 20 dBm, SMA, Solder Pin Control PE70A2900](#)

URL: <https://www.pasternack.com/60db-voltage-variable-attenuator-pin-diode-18-ghz-sma-pe70a2900-p.aspx>

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PE70A2900 CAD Drawing

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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).

DWG TITLE
PE70A2900

FSCM NO. 53919

CAD FILE 052115

SCALE N/A

SIZE A

2233

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