

## Voltage Variable PIN Diode Attenuator from 0 to 60 dB 500 MHz to 18 GHz Rated to 0.1 dBm and SMA Solder Pin Control

### SAAM-0518-060-SMA



#### 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

SAAM-0518-060-SMA 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			1	dB
10 dB to 20 dB			1.5	dB
20 dB to 40 dB			2	dB
40 dB to 60 dB			2.5	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			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	0.1281 lbs [58.11 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.

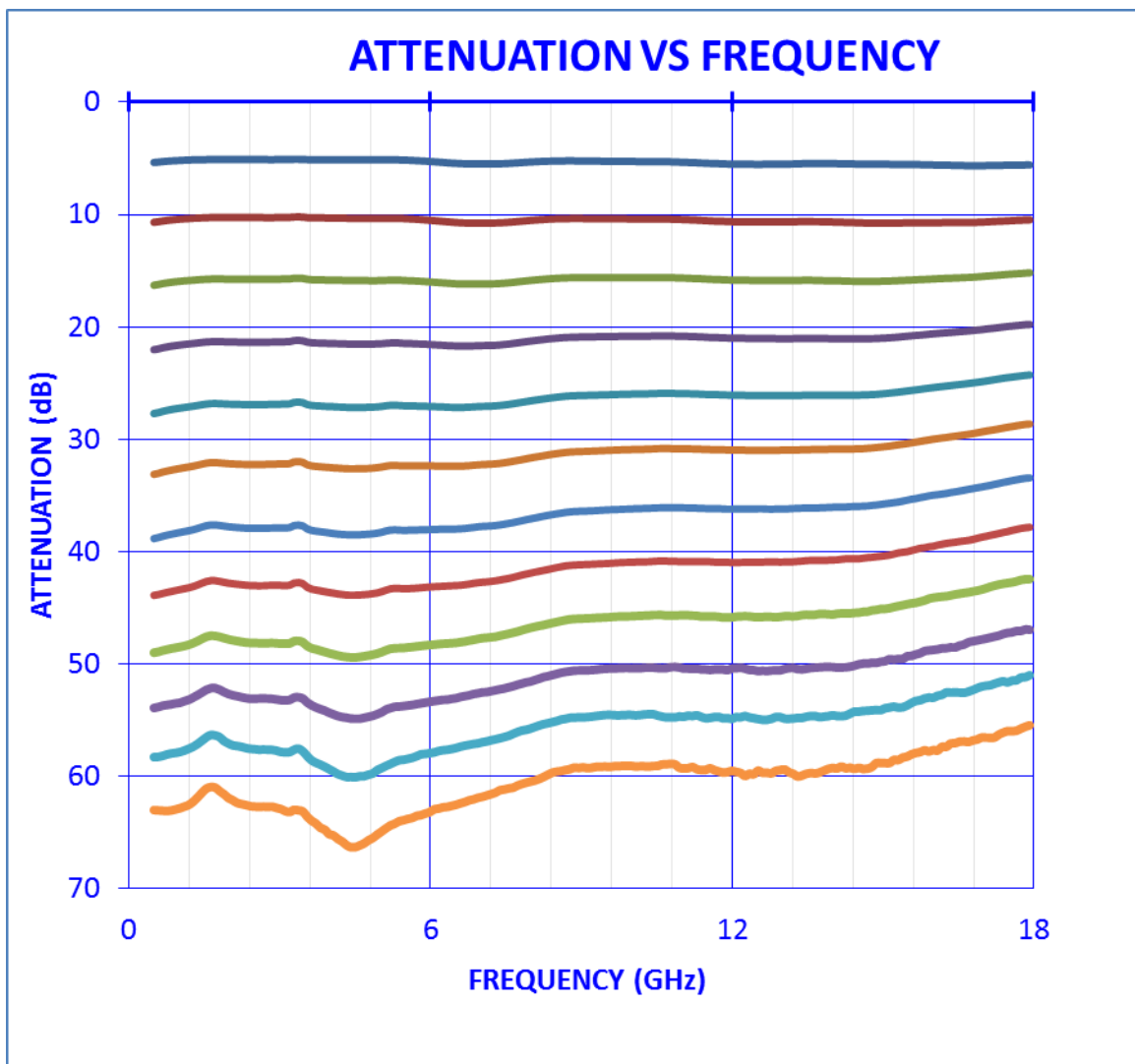
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### Functional Block Diagram

### Performance Data

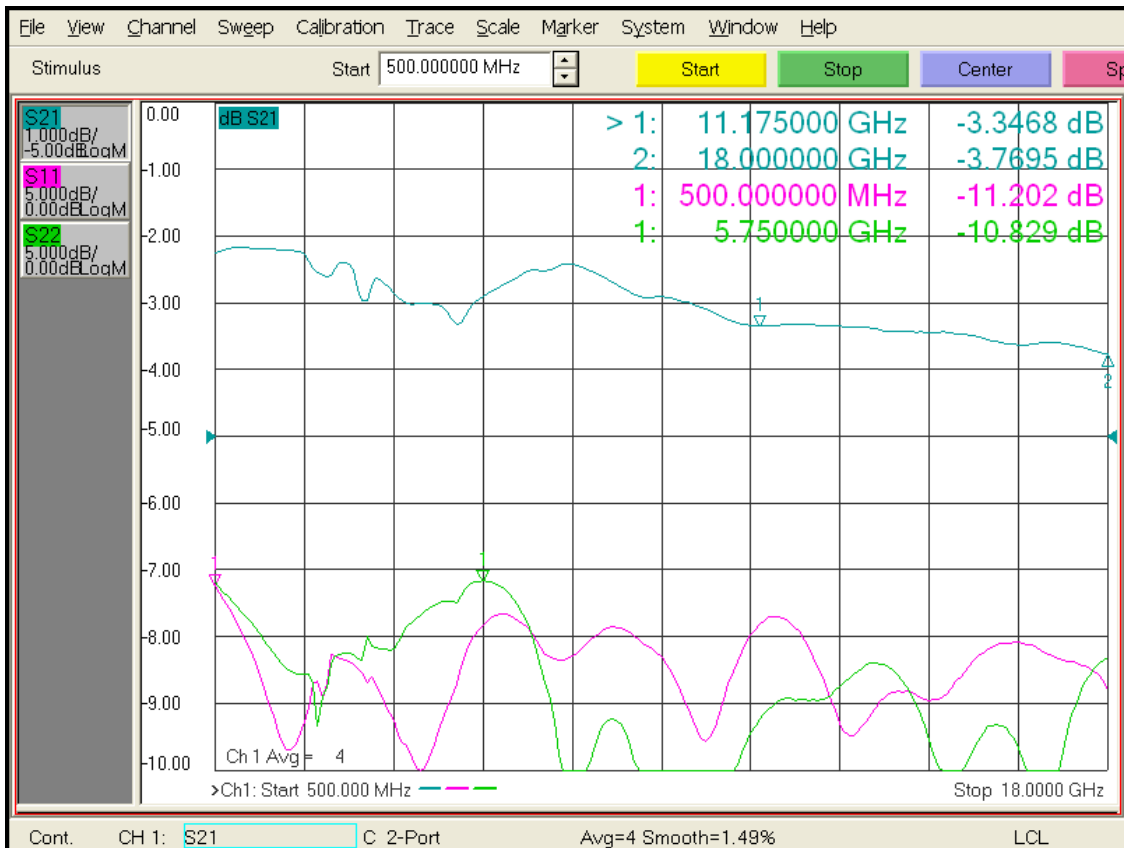


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### Insertion Loss and Return Loss

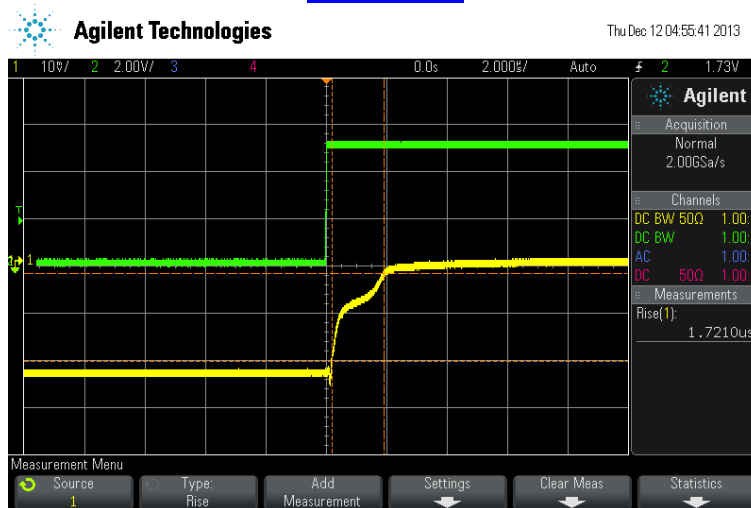


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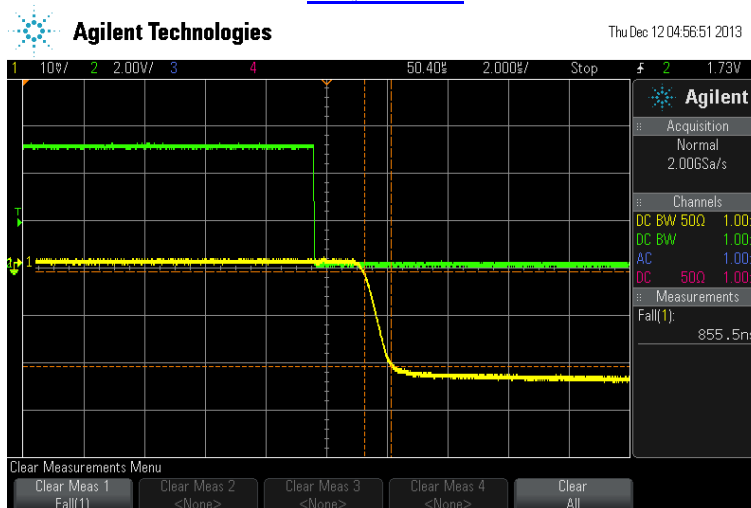
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Delay 0 to 60 dB



Delay 60 to 0 dB



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

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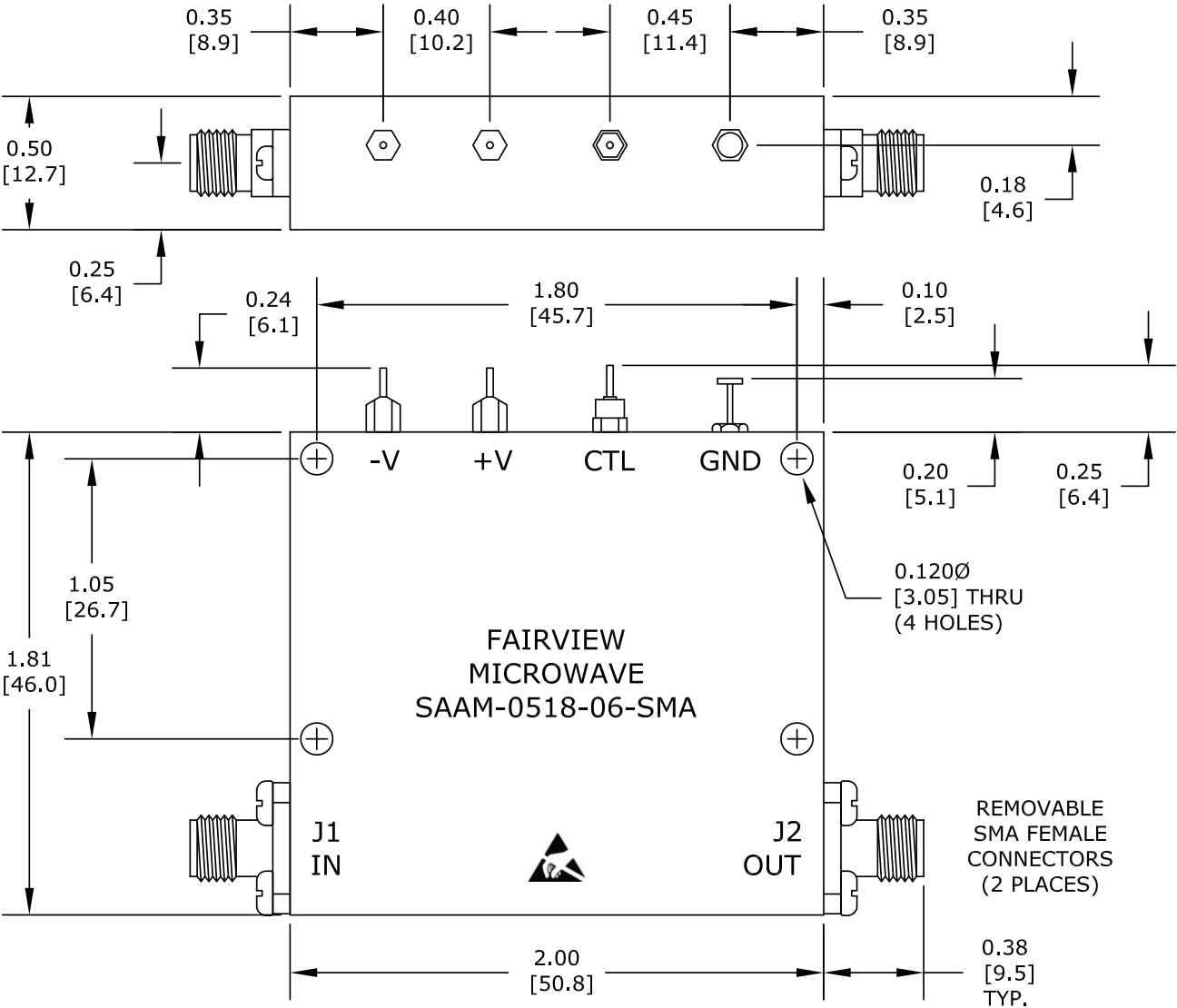
Voltage Variable PIN Diode Attenuator from 0 to 60 dB 500 MHz to 18 GHz Rated to 0.1 dBm and SMA Solder Pin Control from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Voltage Variable PIN Diode Attenuator from 0 to 60 dB 500 MHz to 18 GHz Rated to 0.1 dBm and SMA Solder Pin Control SAAM-0518-060-SMA](https://www.fairviewmicrowave.com/60db-voltage-variable-attenuator-pin-diode-18-ghz-saam-0518-060-sma-p.aspx)

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**SAAM-0518-060-SMA CAD Drawing**  
Voltage Variable PIN Diode Attenuator from 0 to 60 dB 500 MHz to 18 GHz Rated to 0.1 dBm and SMA Solder Pin Control



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TITLE	DWG NO SAAM-0518-060-SMA		CAGE CODE 3FKR5		
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