

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 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	Min	Typ	Max	Unit
Frequency Range	0.5		18	GHz
Mean Attenuation Range	0		60	dB
Insertion Loss				
0.5 to 12		3.5	4.5	dB
12 to 18			5.2	dB
VSWR		2:1	2.2:1	
Power Rating			+20	dBm
Power Rating (0.3 GHz or BELOW)			+10	dBm
Survival Power Rating			+30	dBm
Survival Power Rating (0.3 GHz or BELOW)			+27	dBm
Attenuation Flatness				
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
Analog Control		10		dB/Volt
DC Power Supply				
to 12 VDC		210	250	mA
to -12 VDC		30	50	mA

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



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

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Environmental Specifications

Temperature

Operating Range -55 to +95 deg C
Storage Range -65 to +125 deg C

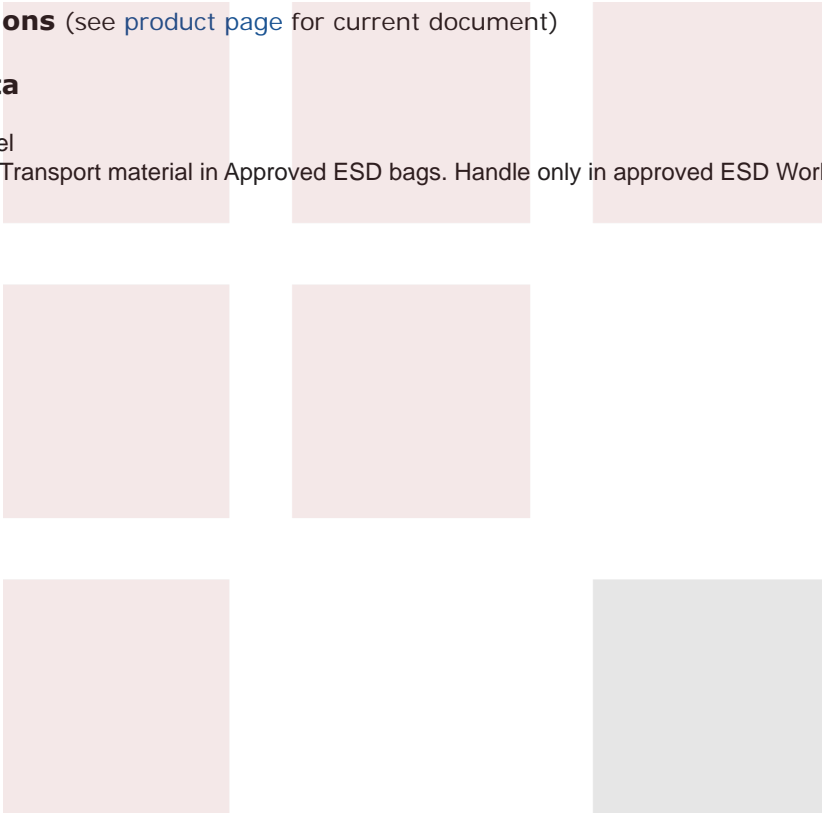
Humidity MIL-STD-202F, METHOD 103B COND. B
Shock MIL-STD-202F, METHOD 213B COND. B
Vibration MIL-STD-202F, METHOD 204D COND. B
Altitude MIL-STD-202F, METHOD 105C COND. B
Temperature Cycle MIL-STD-202F, METHOD 107D COND. A
Salt Spray MIL-STD-202F, METHOD 105C COND. B

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

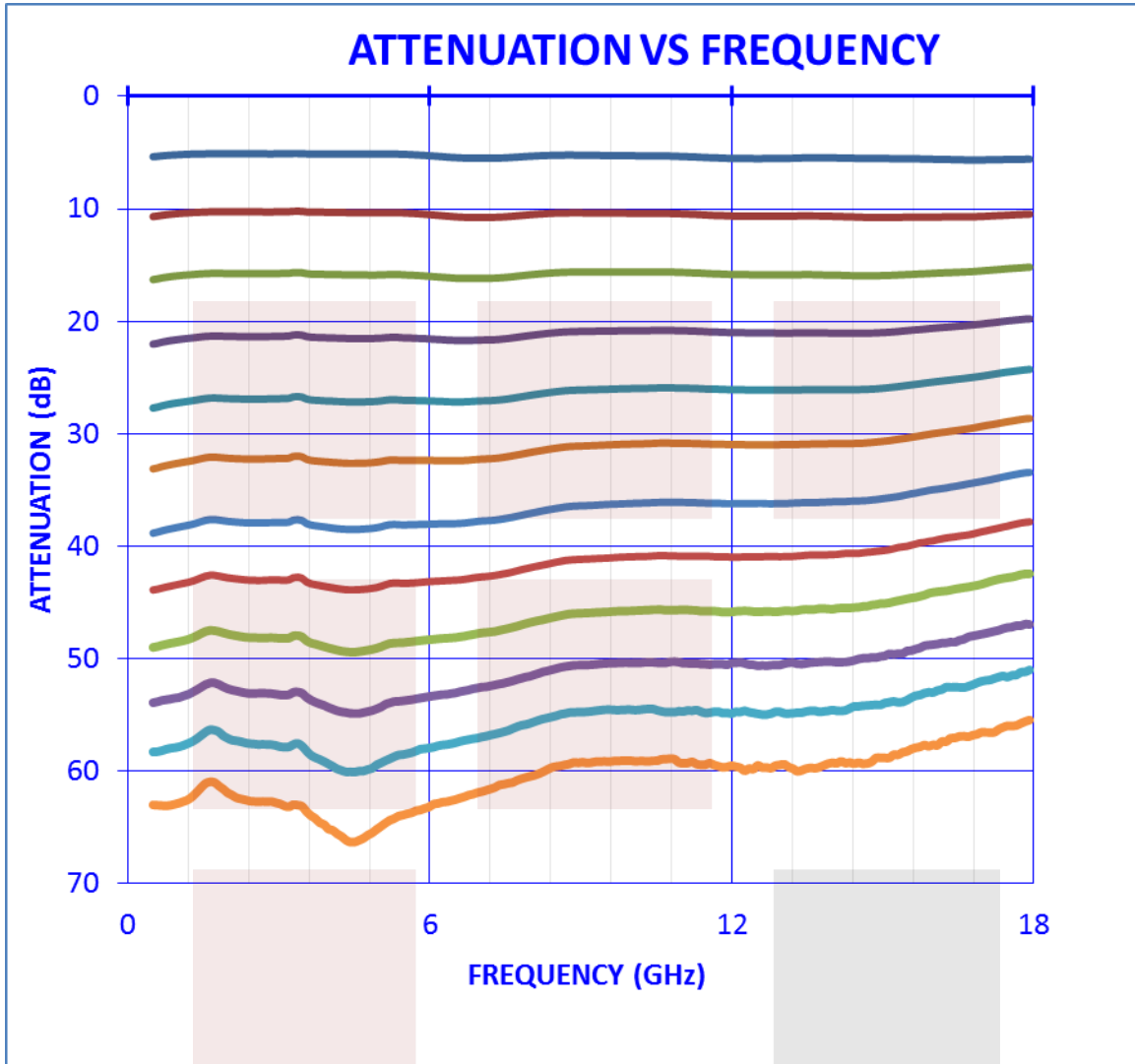
Plotted and Other Data

Notes:

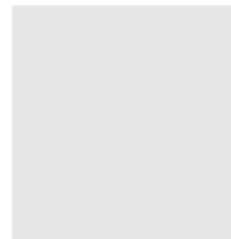
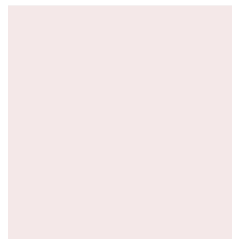
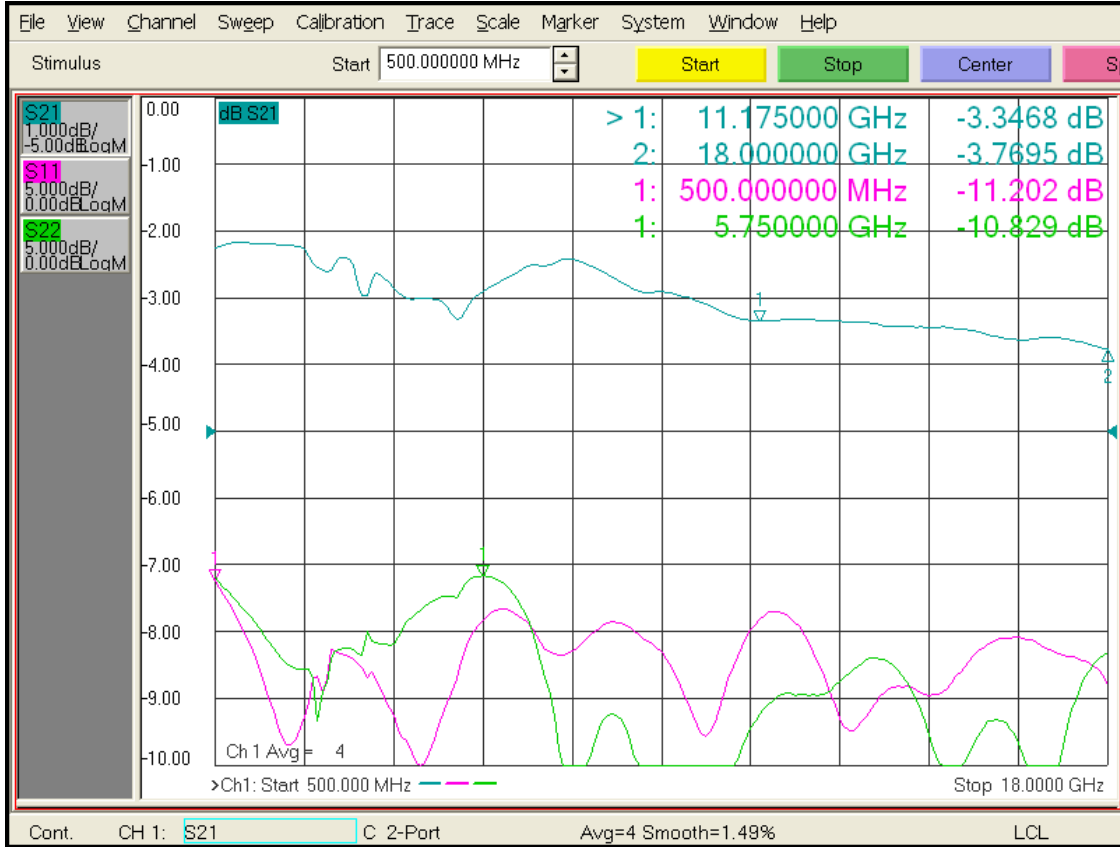
- Values at 25 °C, sea level
- ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.



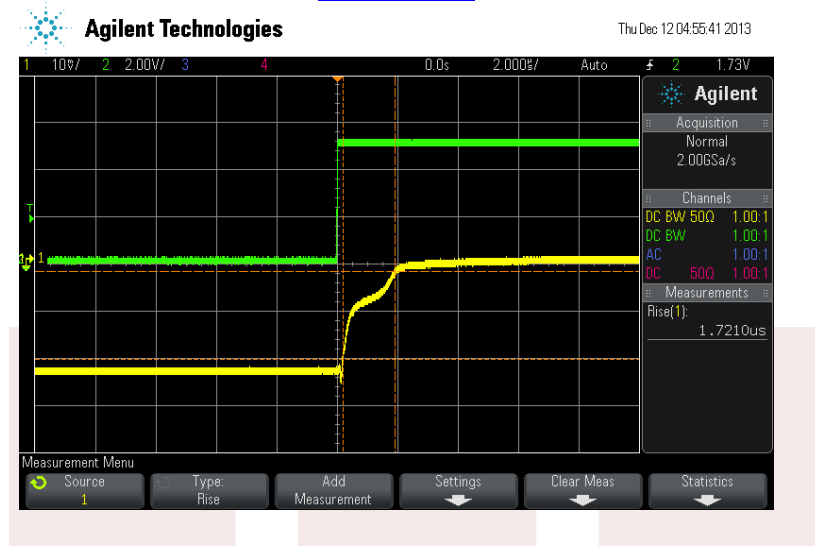
Typical Performance Data



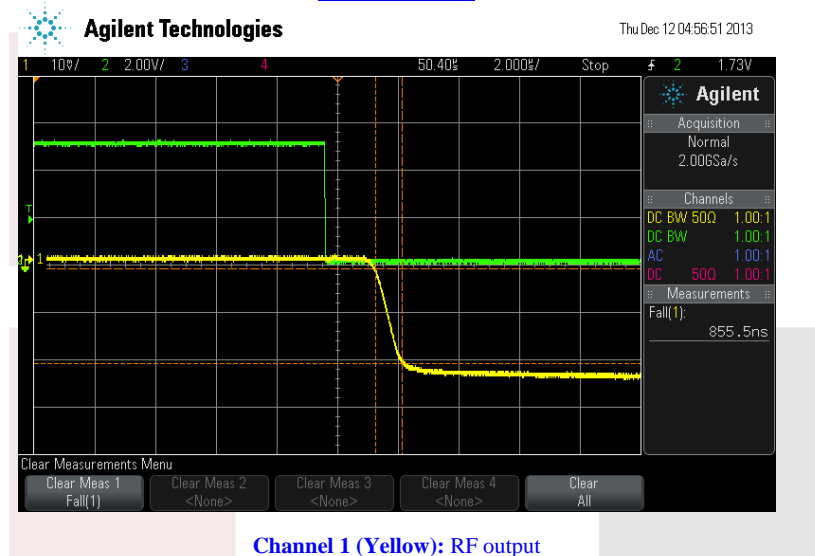
Insertion Loss and Return Loss



Delay 0 to 60 dB



Delay 60 to 0 dB



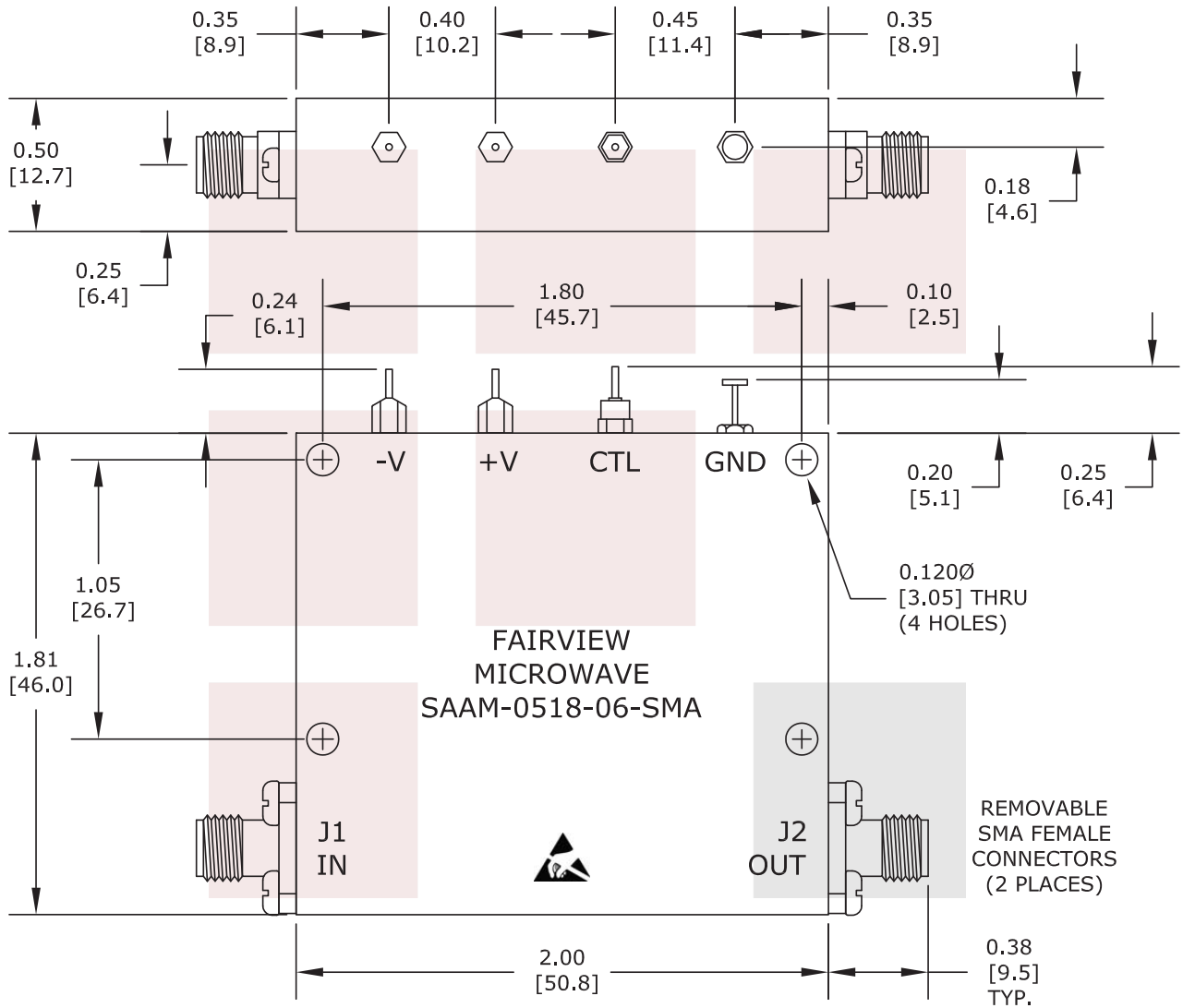
Channel 1 (Yellow): RF output
Channel 2 (Green): TTL Input from Signal Generator

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 Allen, 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)

URL: <https://www.fairviewmicrowave.com/60db-voltage-variable-attenuator-pin-diode-18-ghz-saam-0518-060-sma-p.aspx>

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TITLE 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		DWG NO SAAM-0518-060-SMA		CAGE CODE 3FKR5	
CAD FILE	052215	SHEET	SCALE	N/A	SIZE A 2233