

Voltage Variable PIN Diode Attenuator from 0 to 60 dB
8 GHz to 18 GHz and SMA 15-Pin D-Subminiature Control



SAA-0818-060-SMA

Features

- PIN Attenuator
- 8 GHz to 18 GHz Frequency Range
- 60 dB Attenuation
- 0 - 6 VDC Control Voltage Range
- Removeable SMA Female Connectors

Applications

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

Description

SAA-0818-060-SMA is a 60 dB PIN Diode Attenuator that operates from 8 GHz to 18 GHz. The Input/Output RF Connectors are Removeable SMA Female. The control connector is a 15 Pin Micro D, with a mating connector supplied. The Attenuator has an Insertion Loss of 3.7 dB max, a typical IP1dB of +20 dBm and a survival Power Max of +30 dBm.

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

Description	Minimum	Typical	Maximum	Units
Frequency Range	8		18	GHz
Attenuation Range	0		60	dB
			3.7	dB
VSWR			2:1	
Input at 0.1 dB Compression Point		+20		dBm
Survival Power Rating			+30	dBm
		±0.8		dB
		±1.1		dB
		±1.5		dB
		±1.6		dB
Switching Time			500	ns
Switching Speed			500	ns
Analog Control		10		dB/Volt
Control Voltage	0		6	Volts
DC Power Supply				
-12 to 15 VDC			125	mA
-12 to -15 VDC			50	mA
Attenuation Range	0		60	dB

Mechanical Specifications

Size

Length	2 in [50.8 mm]
Width	1.81 in [45.97 mm]
Height	0.5 in [12.7 mm]

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Weight	0.1725 lbs [78.24 g]
Input Connector	SMA Female
Output Connector	SMA Female
Power and Control	15-Pin D-Subminiatur

Environmental Specifications

Temperature

Operating Range	-55 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
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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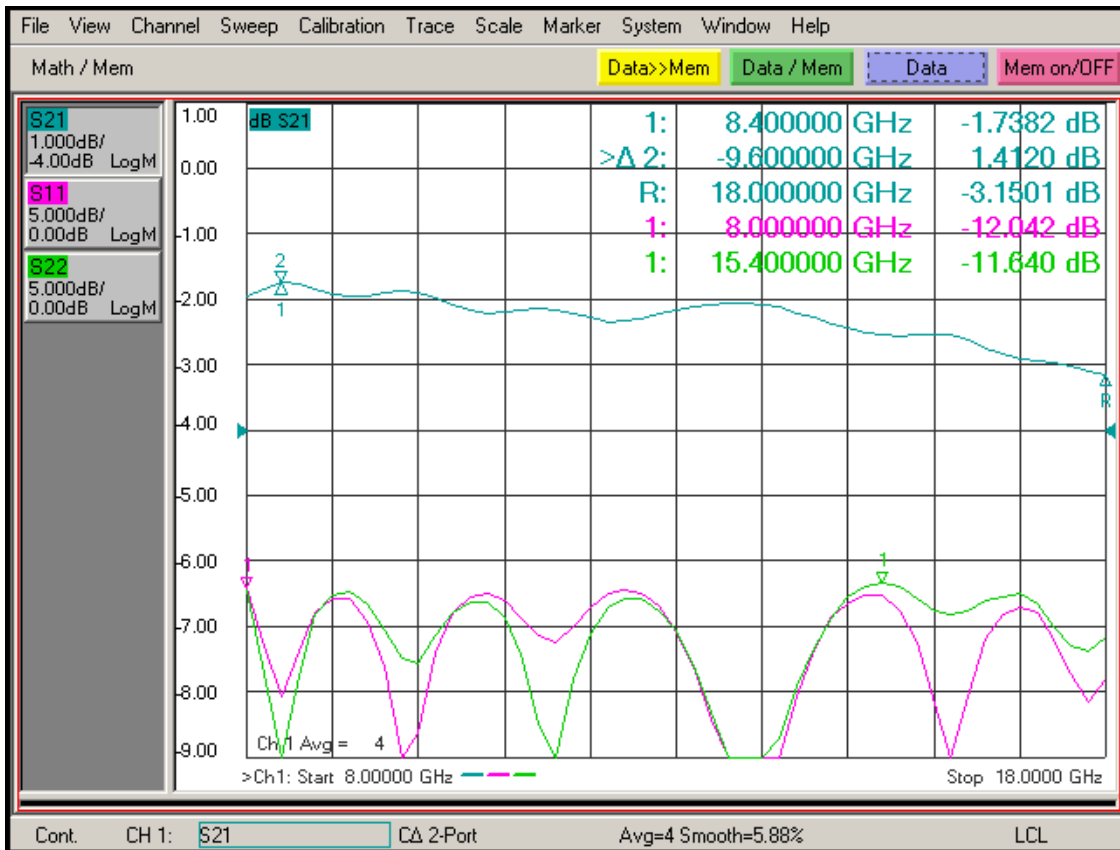


SAA-0818-060-SMA

Functional Block Diagram

Performance Data

Insertion Loss and Return Loss

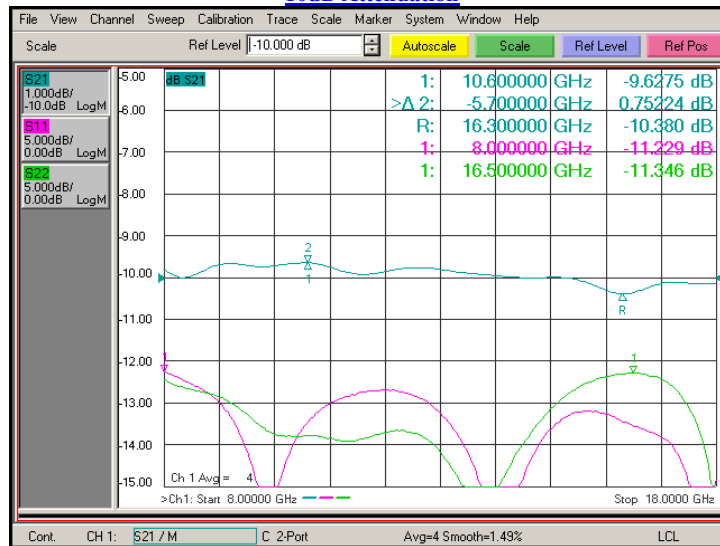


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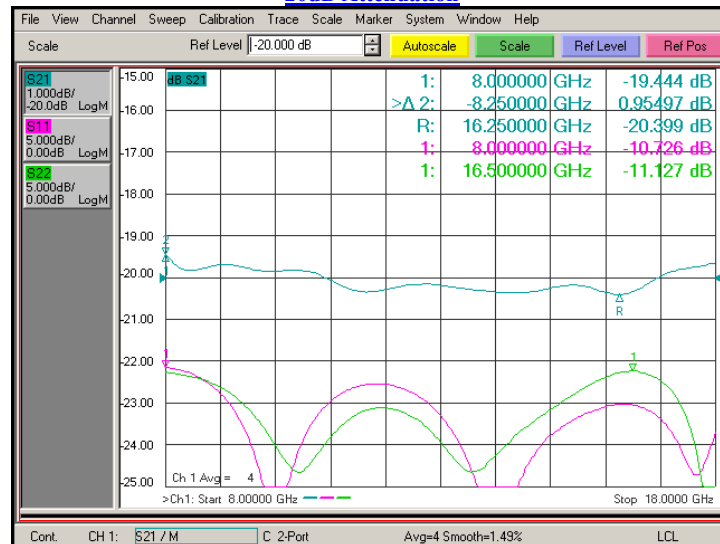


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10dB Attenuation



20dB Attenuation

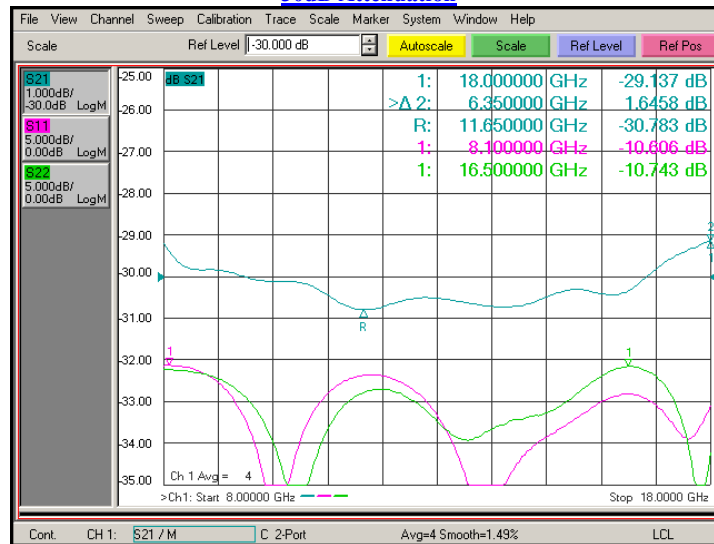


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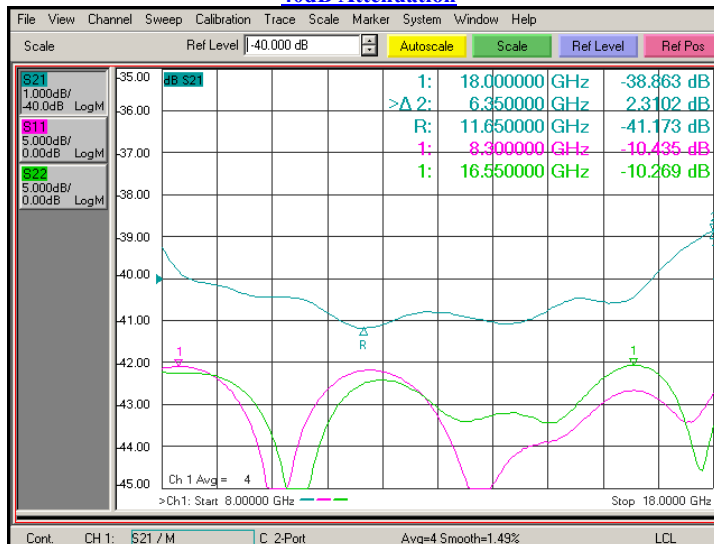


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30dB Attenuation



40dB Attenuation

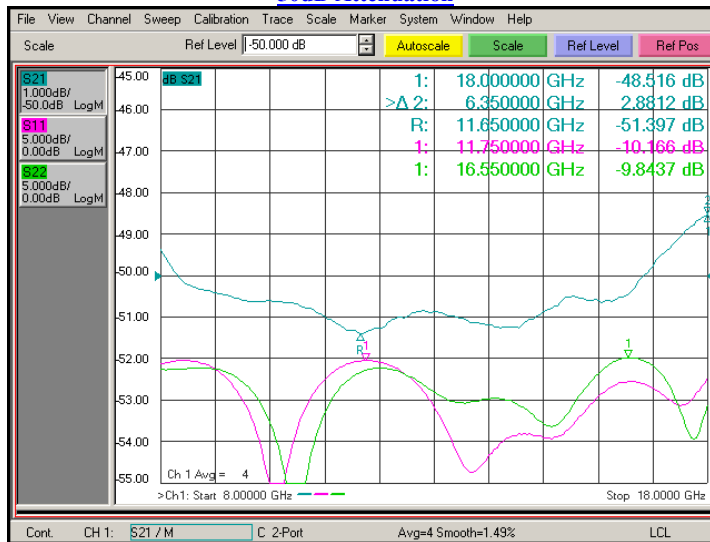


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50dB Attenuation



60dB Attenuation



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Voltage Variable PIN Diode Attenuator from 0 to 60 dB 8 GHz to 18 GHz and SMA 15-Pin D-Subminiature 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.

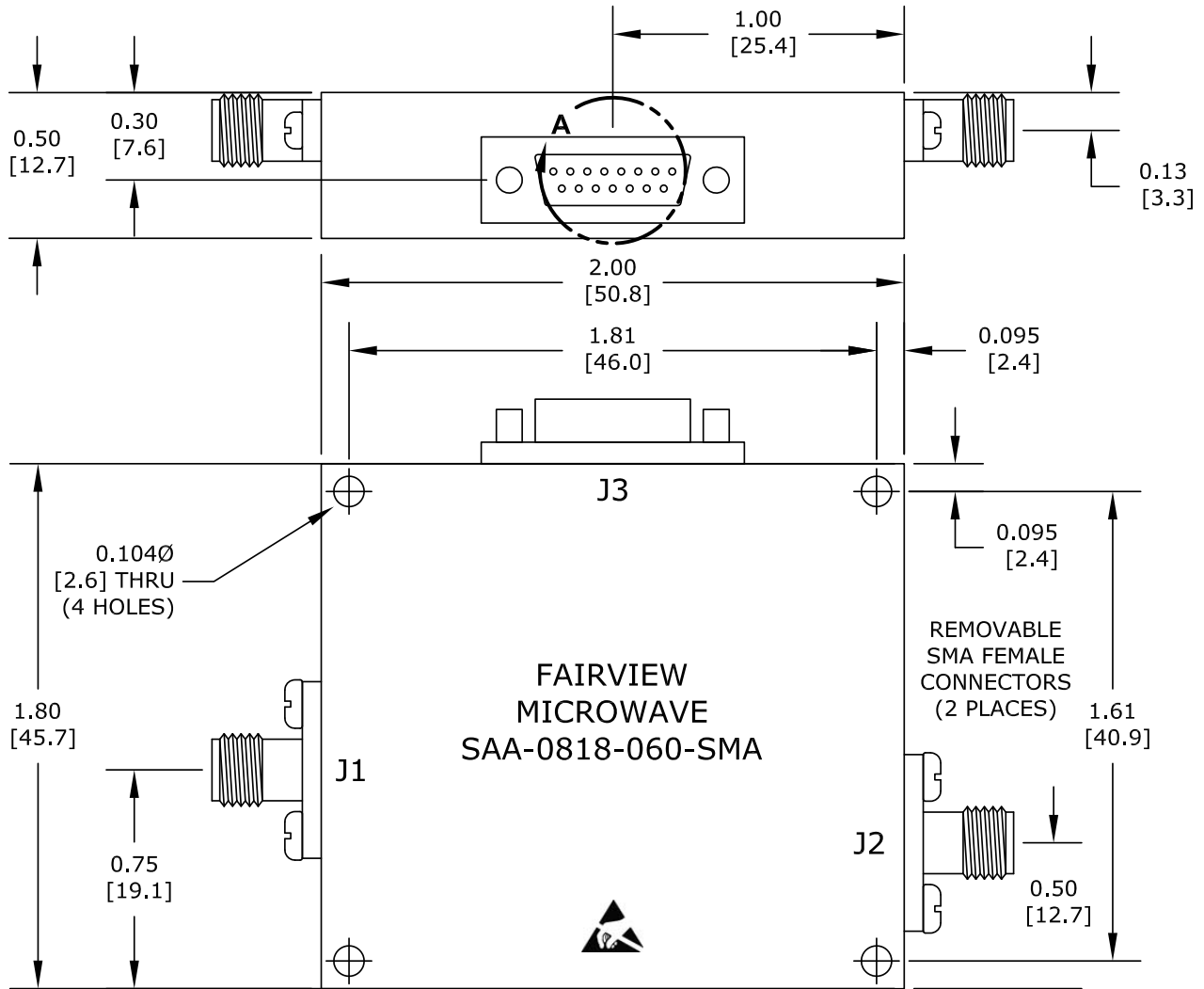
For additional information on this product, please click the following link: [Voltage Variable PIN Diode Attenuator from 0 to 60 dB 8 GHz to 18 GHz and SMA 15-Pin D-Subminiature Control SAA-0818-060-SMA](#)

URL: <https://www.fairviewmicrowave.com/60db-voltage-variable-attenuator-pin-diode-18-ghz-saa-0818-060-sma-p.aspx>

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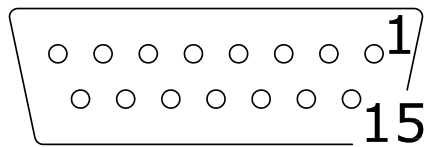
SAA-0818-060-SMA CAD Drawing

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PIN	DESCRIPTION	PIN	DESCRIPTION
1	NO CONNECTION	9	NO CONNECTION
2	NO CONNECTION	10	NO CONNECTION
3	ANALOG INPUT	11	NO CONNECTION
4	GROUND	12	NO CONNECTION
5	NO CONNECTION	13	+12 OR +15 VDC
6	NO CONNECTION	14	-12 OR -15 VDC
7	NO CONNECTION	15	NO CONNECTION
8	NO CONNECTION		

15 PIN MICRO-D FEMALE
(MATING CONNECTOR SUPPLIED)



View A

FAIRVIEW MICROWAVE INC. ALLEN, TX 75013 WWW.FAIRVIEWMICROWAVE.COM		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].			
TITLE		DWG NO SAA-0818-060-SMA	CAGE CODE 3FKR5		
CAD FILE	051815	SHEET	SCALE	N/A	SIZE A 2233