

**0 to 60 dB Voltage Variable Attenuator From 6 GHz To 12 GHz PIN Diode And SMA**

SAA-0812-060-SMA is an Analog Controlled 60 dB Pin Diode Attenuator operating from 6 GHz to 12 GHz, and over a temperature range of -55 Deg C to + 85 Deg C. The Input/Output RF Connectors are Removable SMA Female. The control connector is a 15 Pin Micro D, with a mating connector supplied.

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

Description	Min	Typ	Max	Unit
Frequency Range	6		12	GHz
Mean Attenuation Range	0		60	dB
Insertion Loss			2.8	dB
VSWR			2:1	
Input at 1 dB Compression Point		+20		dBm
Survival Power Rating			+30	dBm
Attenuation Flatness				
10 dB		±0.7		dB
20 dB		±1		dB
40 dB		±1.5		dB
60 dB		±1.6		dB
Switching Time			500	ns
Analog Control		10		dB/Volt
DC Power Supply				
12 to 15 VDC			125	mA
-12 to -15 VDC			50	mA

**Mechanical Specifications**

<b>Size</b>	
Length	2 in [50.8 mm]
Width	1.8 in [45.72 mm]
Height	0.5 in [12.7 mm]
Input Connector	SMA Female
Output Connector	SMA Female

**Environmental Specifications**

**Temperature**

Operating Range	-55 to +85 deg C
Storage Range	-65 to +125 deg C

Environment	MIL-STD-202F, METHOD 107
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



**Features:**

- Analog Controlled 60 dB Pin Diode Attenuator
- 6 GHz to 12 GHz Frequency Range
- Insertion Loss 2.8 dB Max
- VSWR 2.0:1 Max
- Input Power 20 dBm Operating
- Input Power 30 dBm Survival
- Switching Time 500 nsec
- Removeable SMA Female Connectors

**Applications:**

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

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**Compliance Certifications** (visit [www.FairviewMicrowave.com](http://www.FairviewMicrowave.com) for current document)

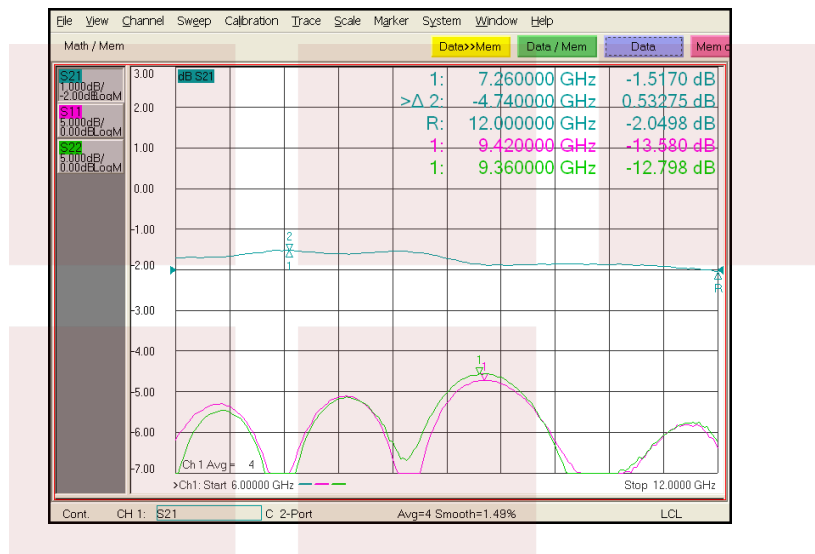
**Plotted and Other Data**

Notes:

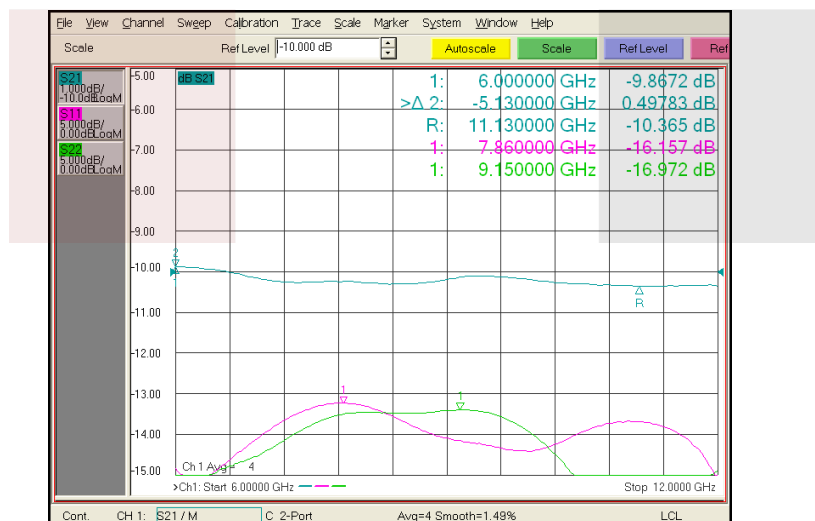
- Values at 25 °C, sea level
- ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.

**Typical Performance Data**

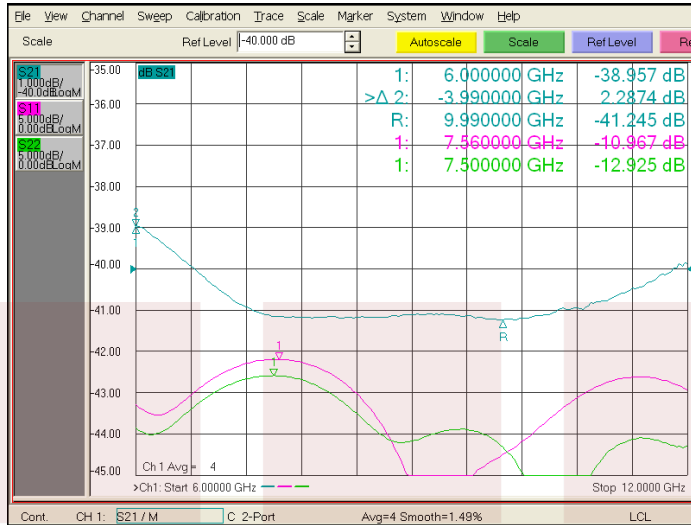
**Insertion Loss and VSWR**



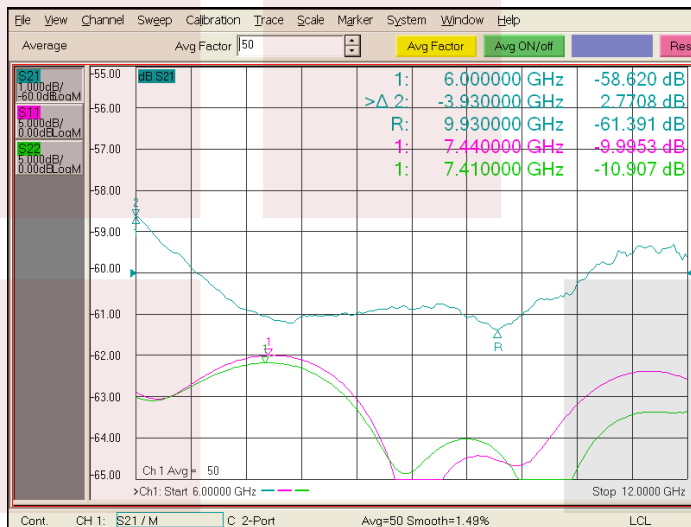
**10dB Attenuation**



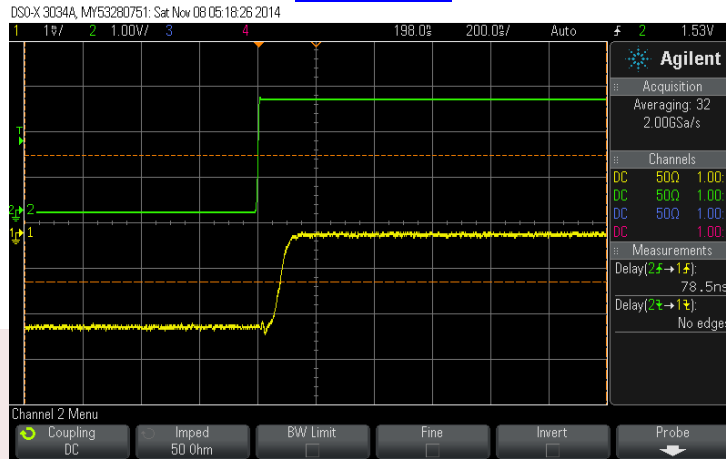
**40dB Attenuation**



**60dB Attenuation**

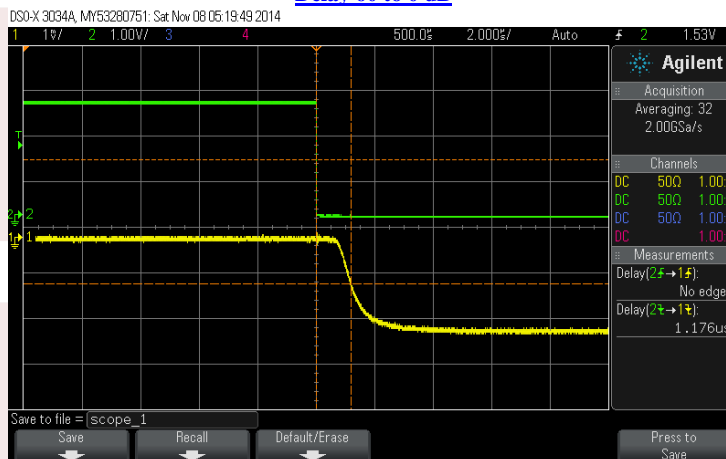


Delay 0 to 60 dB



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

Delay 60 to 0 dB



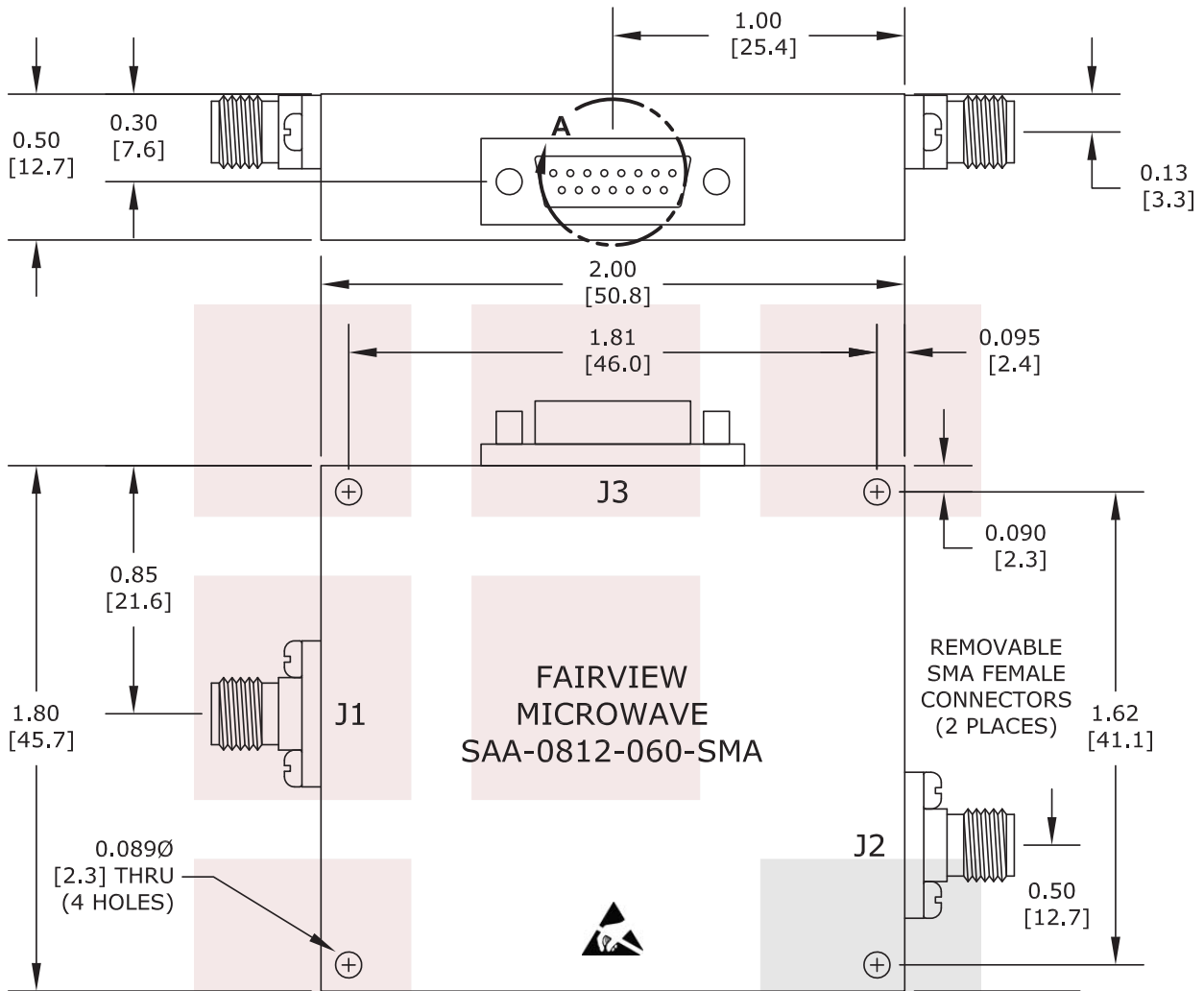
**Channel 1 (Yellow): RF output**  
**Channel 2 (Green): TTL Input from Signal Generator**

0 to 60 dB Voltage Variable Attenuator From 6 GHz To 12 GHz PIN Diode And SMA 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: [0 to 60 dB Voltage Variable Attenuator From 6 GHz To 12 GHz PIN Diode And SMA SAA-0812-060-SMA](http://www.fairviewmicrowave.com/60db-voltage-variable-attenuator-pin-diode-12-ghz-saa-0812-060-sma)

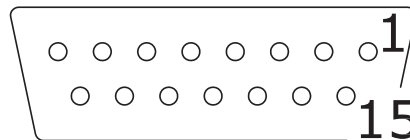
URL: <http://www.fairviewmicrowave.com/60db-voltage-variable-attenuator-pin-diode-12-ghz-saa-0812-060-sma-p.aspx>

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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**

<b>FAIRVIEW MICROWAVE INC.</b> 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 0 to 60 dB Voltage Variable Attenuator From 6 GHz To 12 GHz PIN Diode And SMA		DWG NO SAA-0812-060-SMA	CAGE CODE 3FKR5		
CAD FILE	051815	SHEET	SCALE	N/A	SIZE A 2233