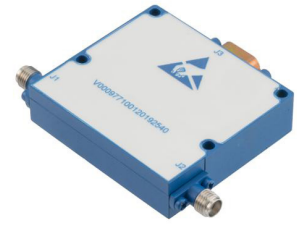


0 to 60 dB 8 Bit Programmable TTL Controlled Step Attenuator With a 0.25 dB Step SMA Female To SMA Female From 30 MHz To 6 GHz



SDA-060-060-0025-SMA

Features

- 8 Bit Programmable 60 dB Pin Diode Attenuator
- 0.03 GHz to 6 GHz Frequency Range
- 60 dB Attenuation Range
- Step Resolution of 0.25 dB
- Insertion Loss 4 dB Max
- RF Connectors are SMA Female
- 15 Pin Micro-D Female Connector

Applications

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

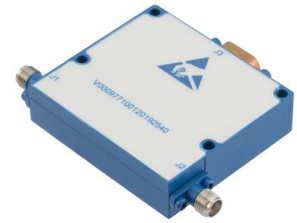
Description

The SDA-060-060-0025-SMA is a 8 Bit Programmable 60 dB Pin Diode Attenuator with Step Resolution as Low as 0.25 dB over the Operating Frequency Range from 0.03 GHz to 6 GHz. The RF Input/Output Connectors are SMA Female. Along with a 15 Pin Micro-D Female Control Socket. The unit is shipped with a Micro-D Mating Connector.

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

Description	Min	Typ	Max	Unit
Frequency Range	0.03		6	GHz
Impedance		50		Ohms
Attenuation Range	0		60	dB
Insertion Loss			4	dB
Return Loss			-8.5	dB
VSWR			2.2:1	
Power Rating			20	dBm
Survival Power Average -40 to +85 deg C				
Attenuation Flatness				
@ 10 dB		±1		dB
@ 20 dB		±1.5		dB
@ 40 dB		±3		dB
@ 60 dB		±5		dB
Accuracy of Attenuation				
0 dB to 30 dB		±1		dB
30 dB to 50 dB		±1.3		dB
50 dB to 60 dB		±1.5		dB
Step Size	0.25			dB
Switching Time		50		us
DC Voltage	10.8	±12	13.2	Volts
DC Current		155		mA
Control Bits		8		Bits

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To SMA Female From 30 MHz To 6 GHz



SDA-060-060-0025-SMA

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

Description	Min	Typ	Max	Unit
Logic Input "0" (Bit Off)	-0.3		0.8	Volts
Logic Input "1" (Bit On)	2		5	Volts

Mechanical Specifications

Size

Length	2 in [50.8 mm]
Width	1.8 in [45.72 mm]
Height	0.5 in [12.7 mm]
Weight	0.0145 lbs [6.58 g]
Connector 1	SMA Female
Connector 2	SMA Female

Environmental Specifications

Temperature

Operating Range	-40 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:

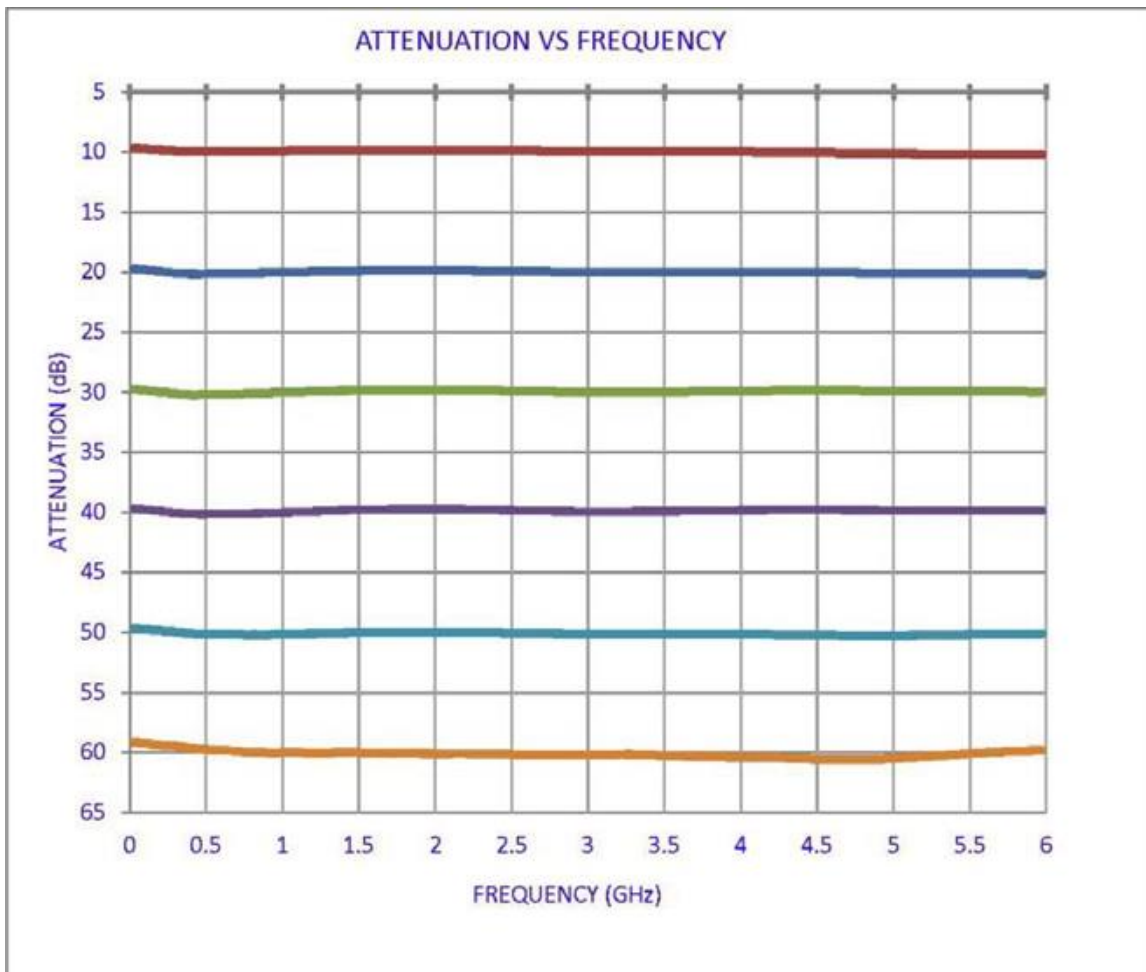
- Values at 25 °C, sea level
- ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.

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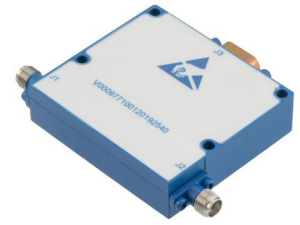


SDA-060-060-0025-SMA

Typical Performance Data

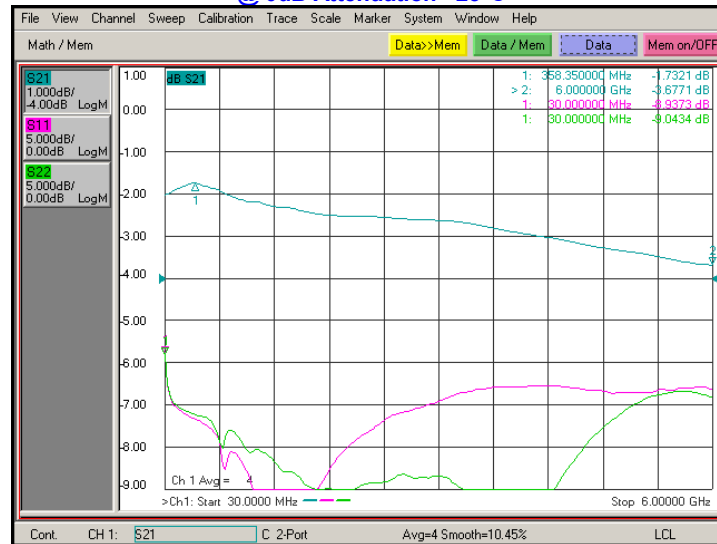


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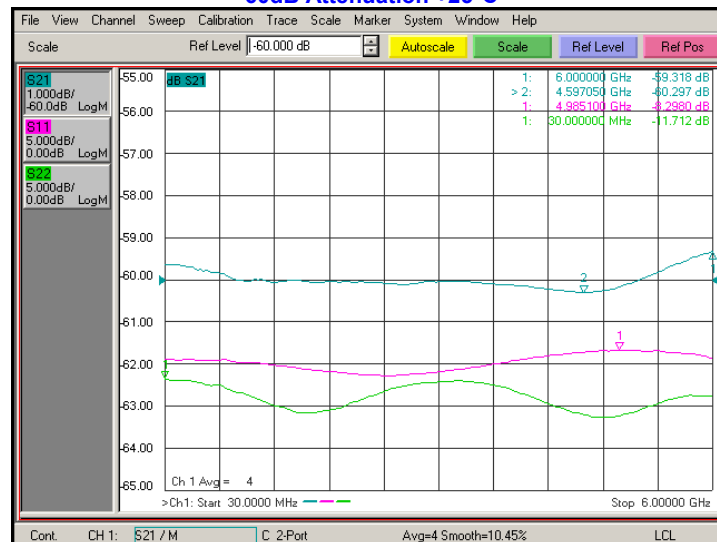


SDA-060-060-0025-SMA

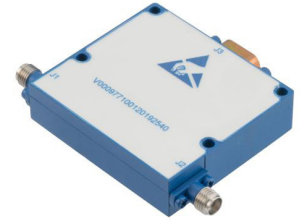
**Insertion Loss and VSWR
@ 0dB Attenuation +25°C**



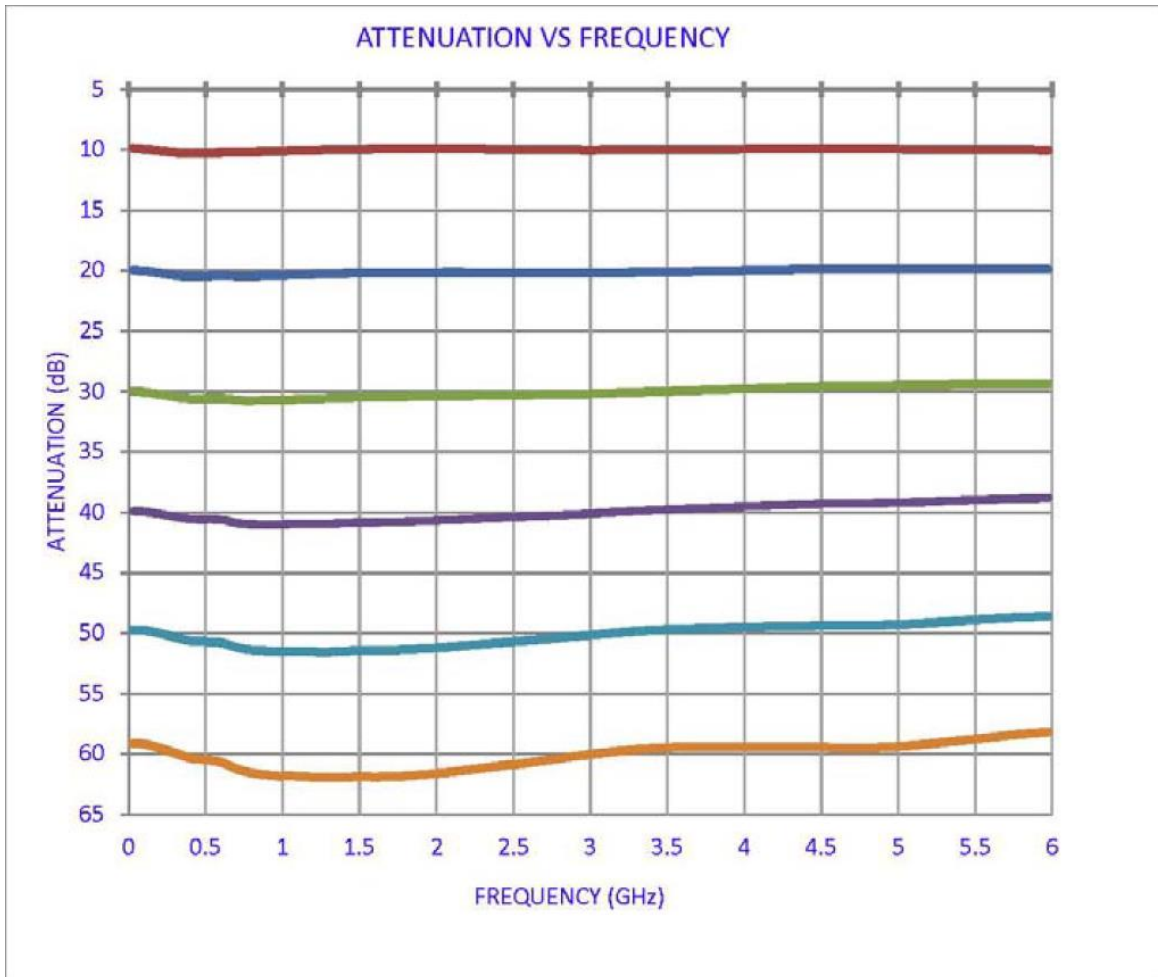
60dB Attenuation +25°C



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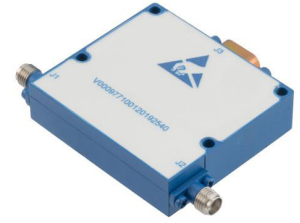


SDA-060-060-0025-SMA



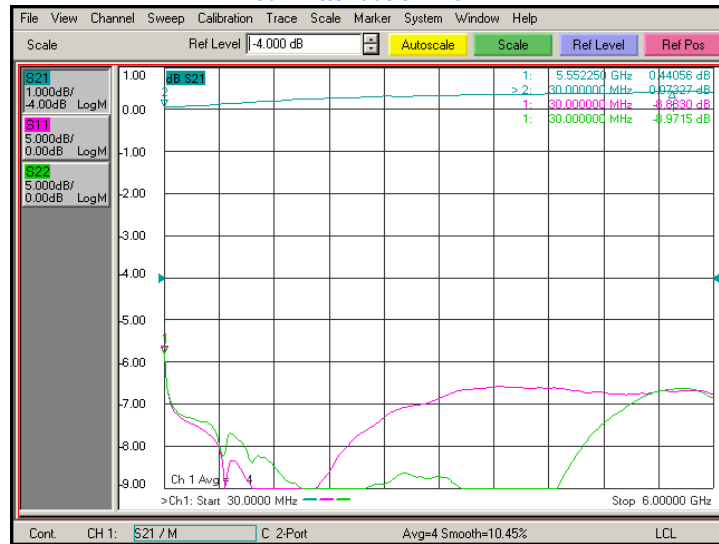
-40°C @ 5dBm

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SDA-060-060-0025-SMA

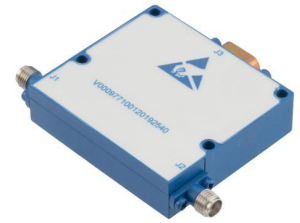
0dB Attenuation -40°C



60dB Attenuation -40°C

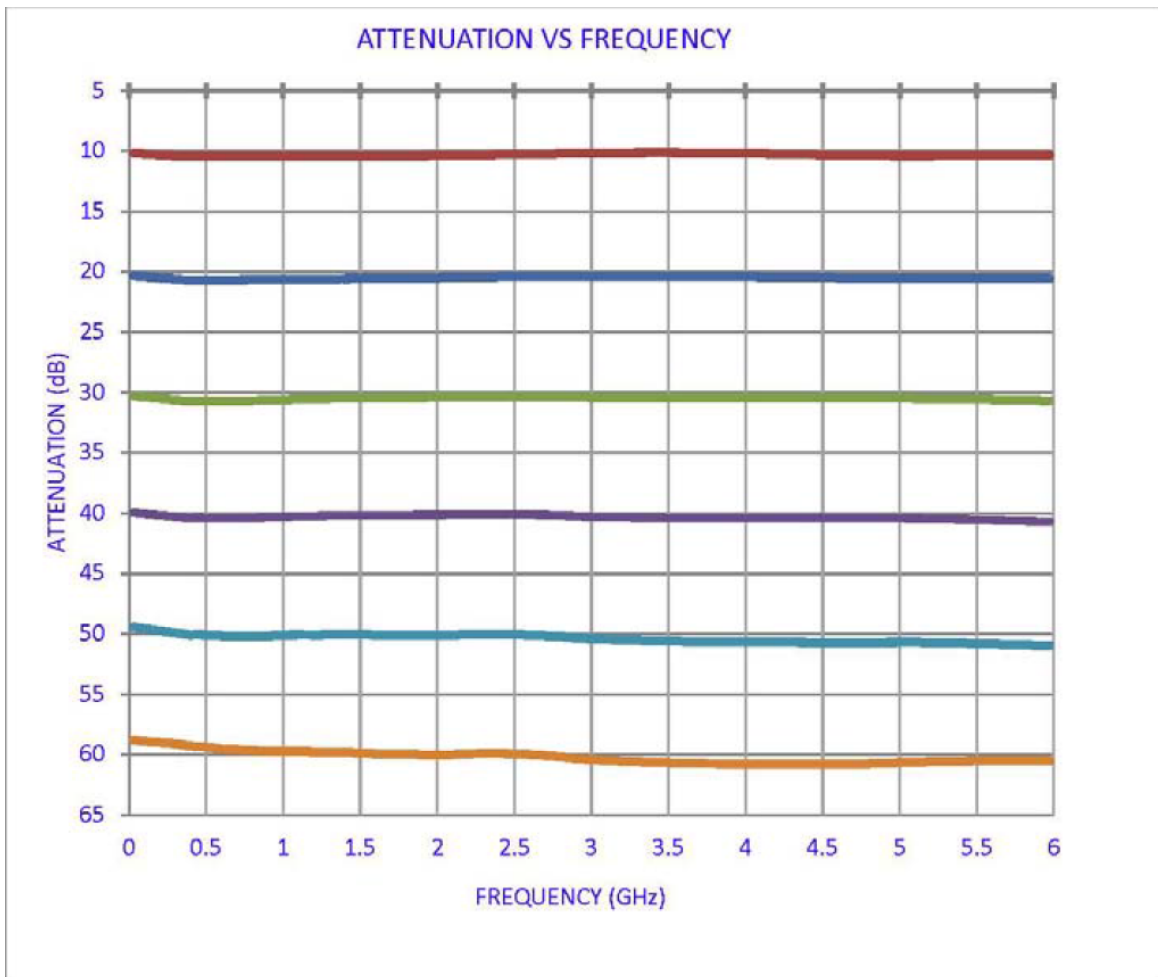


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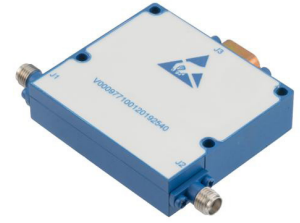


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+85°C @ 5dBm

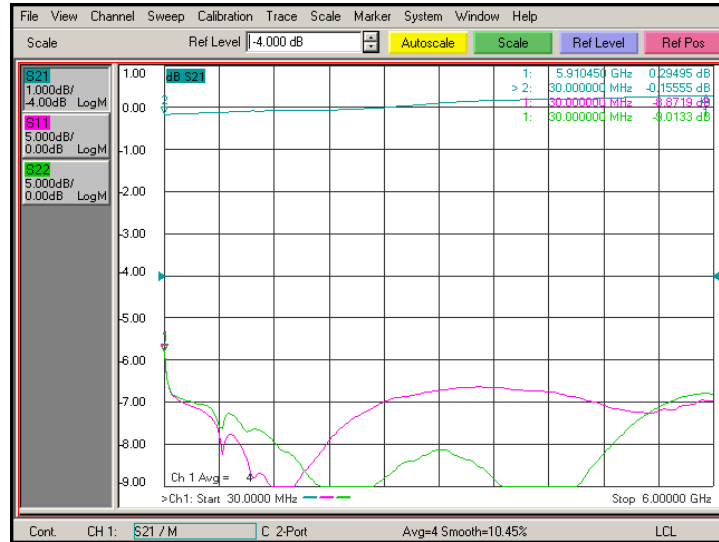


0 to 60 dB 8 Bit Programmable TTL Controlled
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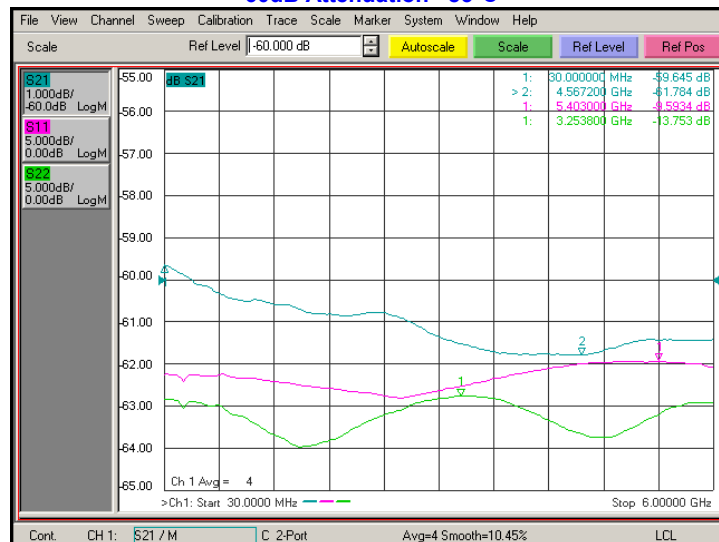


SDA-060-060-0025-SMA

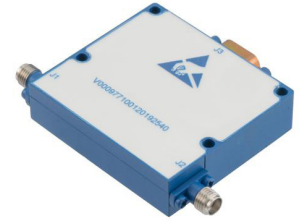
0dB Attenuation +85°C



60dB Attenuation +85°C

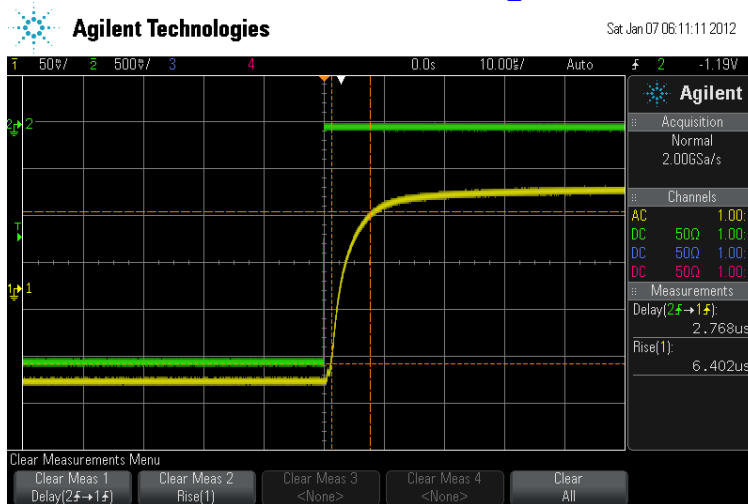


0 to 60 dB 8 Bit Programmable TTL Controlled
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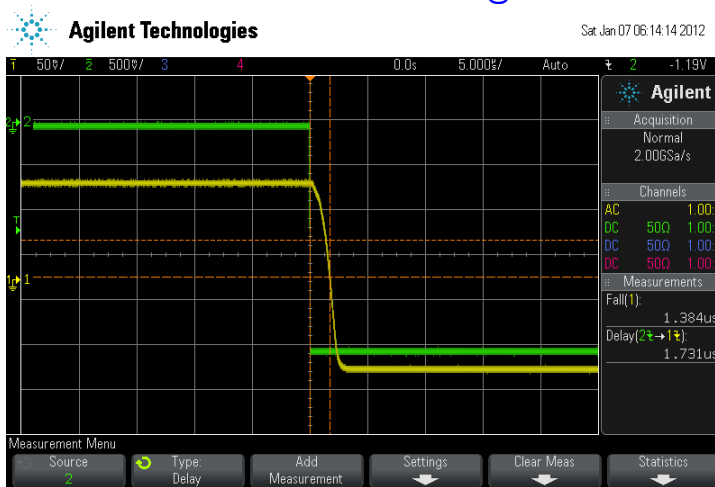


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Delay On
Measured with a Tunnel Diode @ 2GHz



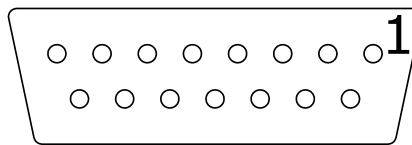
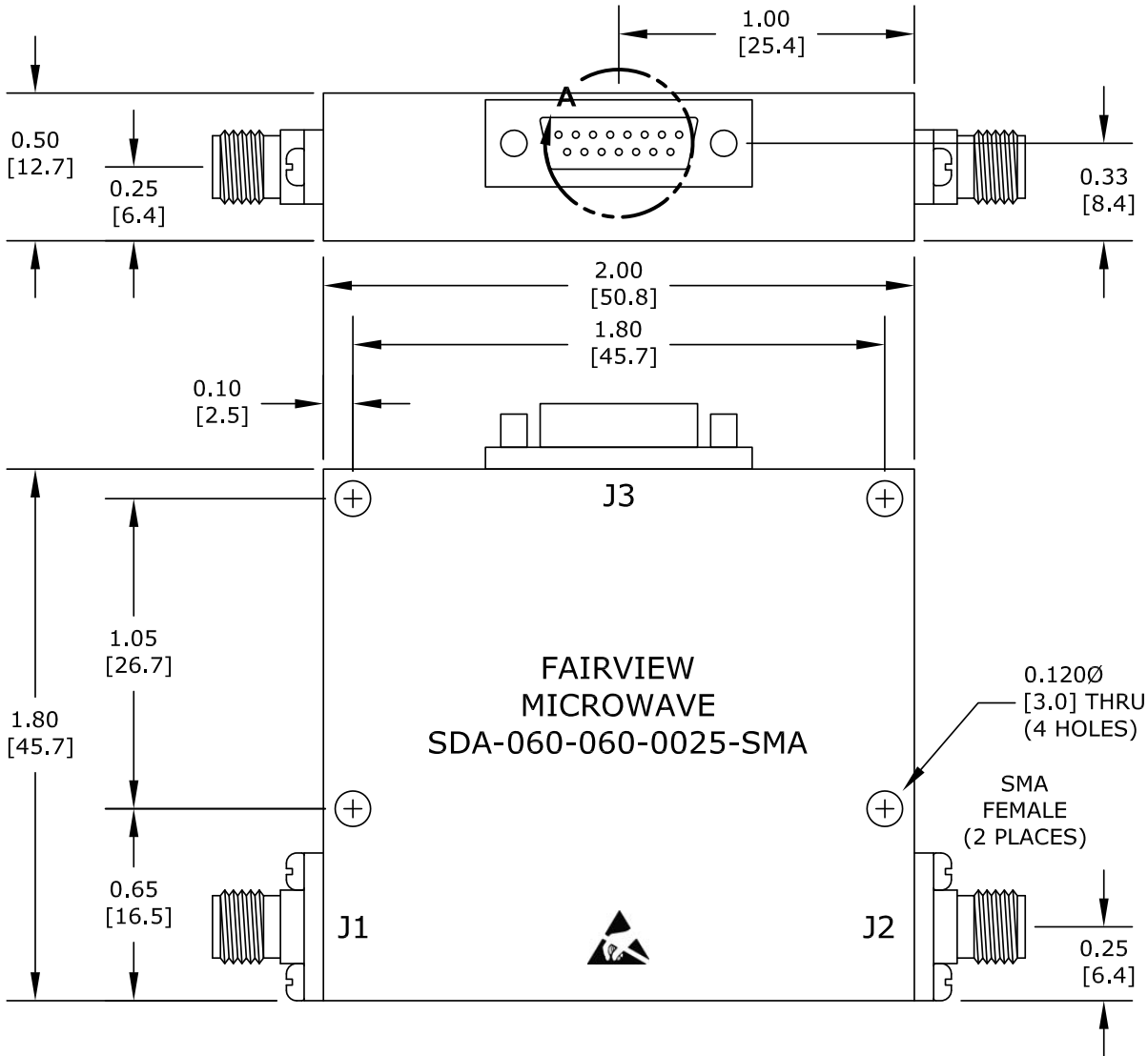
Delay Off
Measured with a Tunnel Diode @ 2GHz



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

SDA-060-060-0025-SMA CAD Drawing

0 to 60 dB 8 Bit Programmable TTL Controlled Step Attenuator With a 0.25 dB Step
SMA Female To SMA Female From 30 MHz To 6 GHz



View A

PIN	DESCRIPTION
1	2 dB
2	1 dB
3	0.5 dB
4	0.25 dB (LSB)
5	GND
6	NO CONNECTION
7	NO CONNECTION
8	GND
9	NO CONNECTION
10	NO CONNECTION
11	+12 VDC
12	32 dB (MSB)
13	16 dB
14	8 dB
15	4 dB

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	SDA-060-060-0025-SMA		CAGE CODE		3FKR5	
	CAD FILE	052715	SHEET	SCALE	N/A	SIZE	A 2233