

**0 to 30 dB 10 Bit Programmable Step Attenuator
With a 0.03 dB Step 2.92mm Female To 2.92mm Fe-
male From 18 GHz To 40 GHz**

The SDA-400-030-0003-K is 10 Bit Programmable 30 dB Pin Diode Attenuator with Step Resolution as Low as 0.03 dB over the Operating Frequency Range from 18 GHz to 40 GHz. The SDA-400-030-0003-K is offered in a slim line housing measuring only 0.5" Height with 2.92mm Female Connectors.

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

Description	Min	Typ	Max	Unit
Frequency Range	18		40	GHz
Mean Attenuation Range	0		30	dB
VSWR			2.5:1	
Power Rating		10		dBm
Survival Power Average -65 to +25 deg C			24	dBm
Attenuation Flatness @ 30 dB		±1.5		dB
Accuracy of Attenuation 0 dB to 30 dB		±2		dB
Step Size	0.03			dB
Switching Time				
On Time			1	µs
Off Time			0.5	µs
DC Power Supply 100 mA		12		Volts
Logic Input				
Logic "0" (Bit Off)	-0.3		0.8	Volts
Logic "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	0.2 lbs [90.72 g]

Environmental Specifications

Temperature	
Operating Range	-40 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:

- 10 Bit Programmable 30 dB Attenuator
- 18 GHz to 40 GHz Frequency Range
- 30 dB Attenuation Range
- Step Resolution of 0.03 dB
- +10 dBm typ P1dB
- Insertion Loss 6 dB typ
- VSWR 2.5:1 Max

Applications:

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

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Compliance Certifications (visit www.FairviewMicrowave.com for current document)
 Not RoHS Compliant

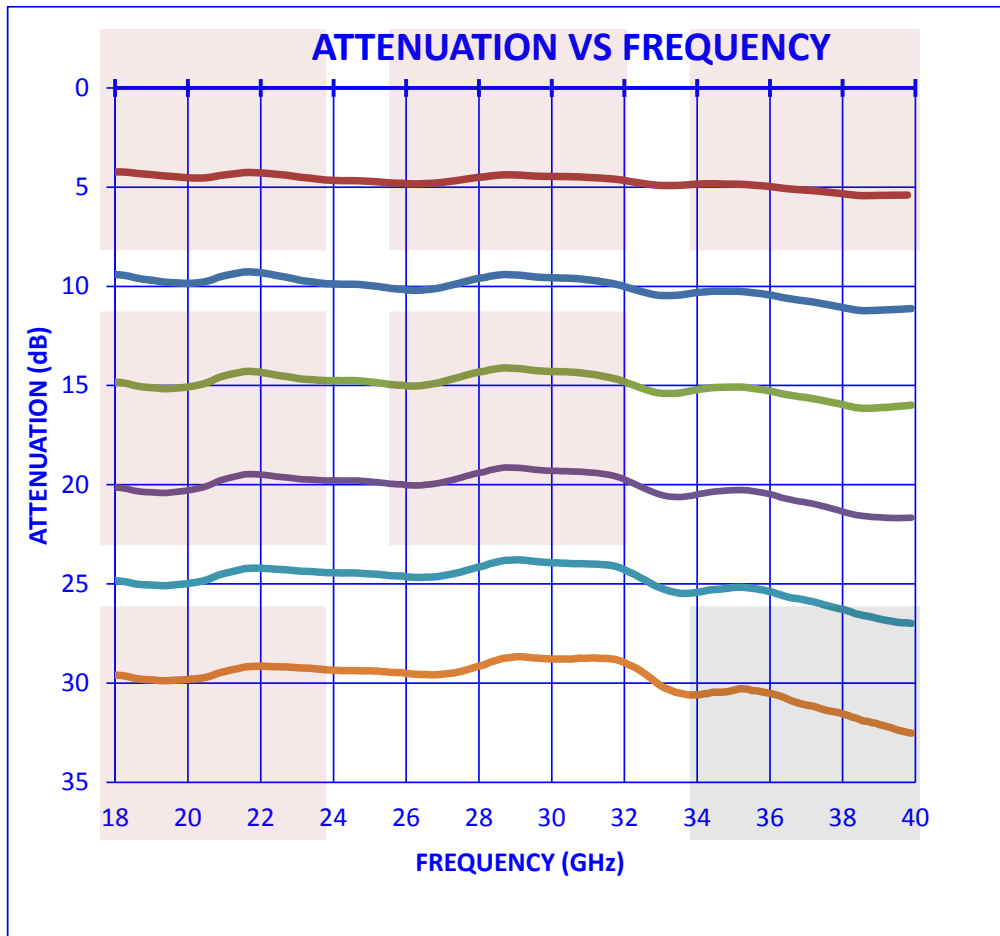
Plotted and Other Data

Notes:

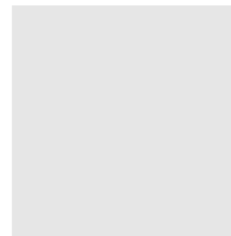
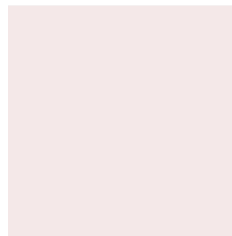
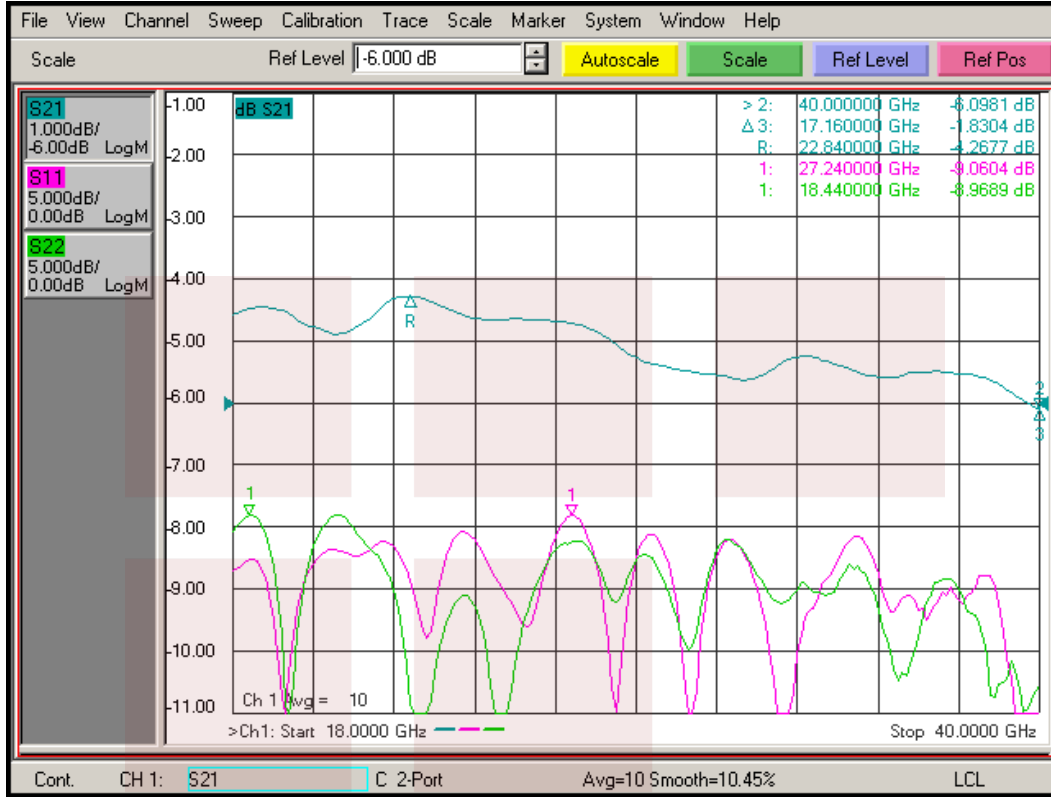
- Values at +25 °C, sea level

Typical Performance Data

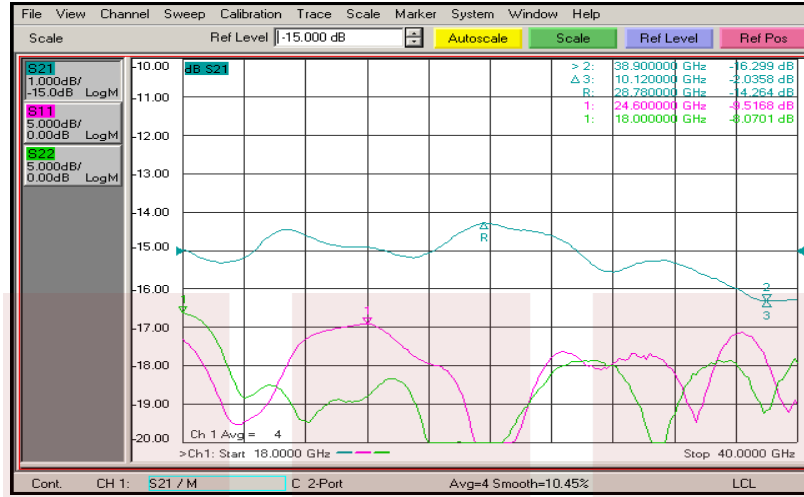
Attenuation vs. Frequency Plot



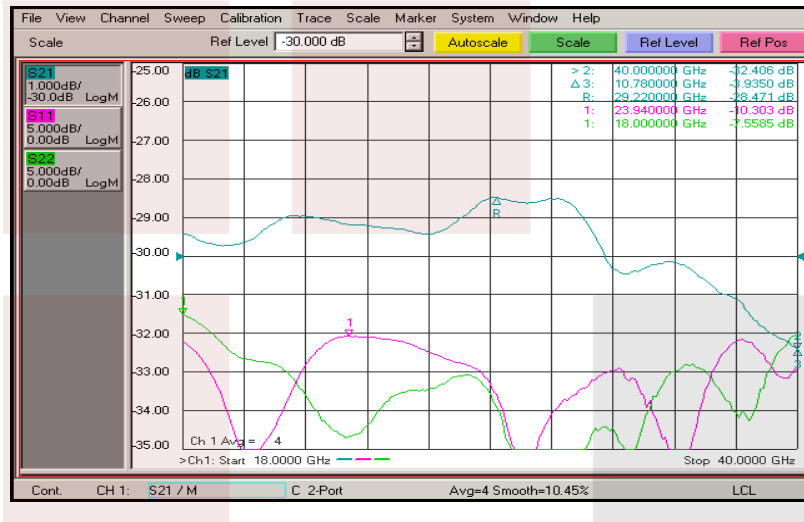
Insertion Loss & Return Loss



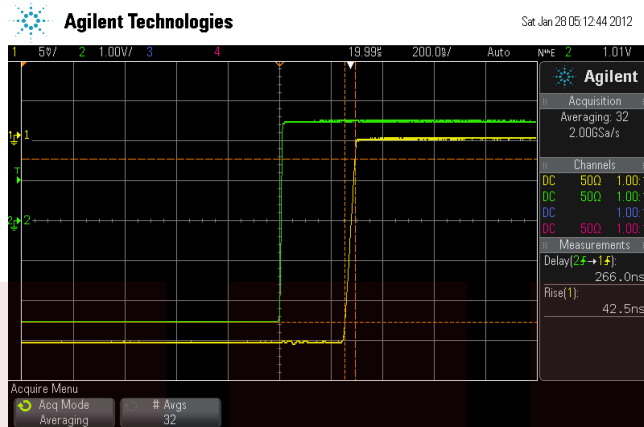
-15dB Attenuation



-30dB Attenuation

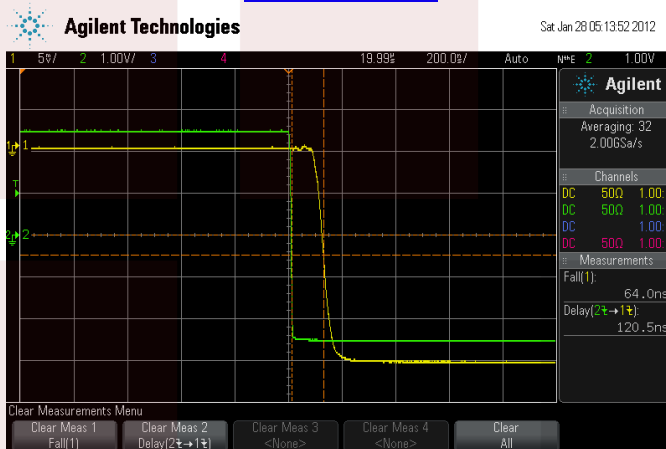


Delay On
Measured with a Tunnel Diode @ 30GHz
Input Power @ -5dBm



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

Delay Off
Measured with a Tunnel Diode @ 30GHz
Input Power @ -5dBm



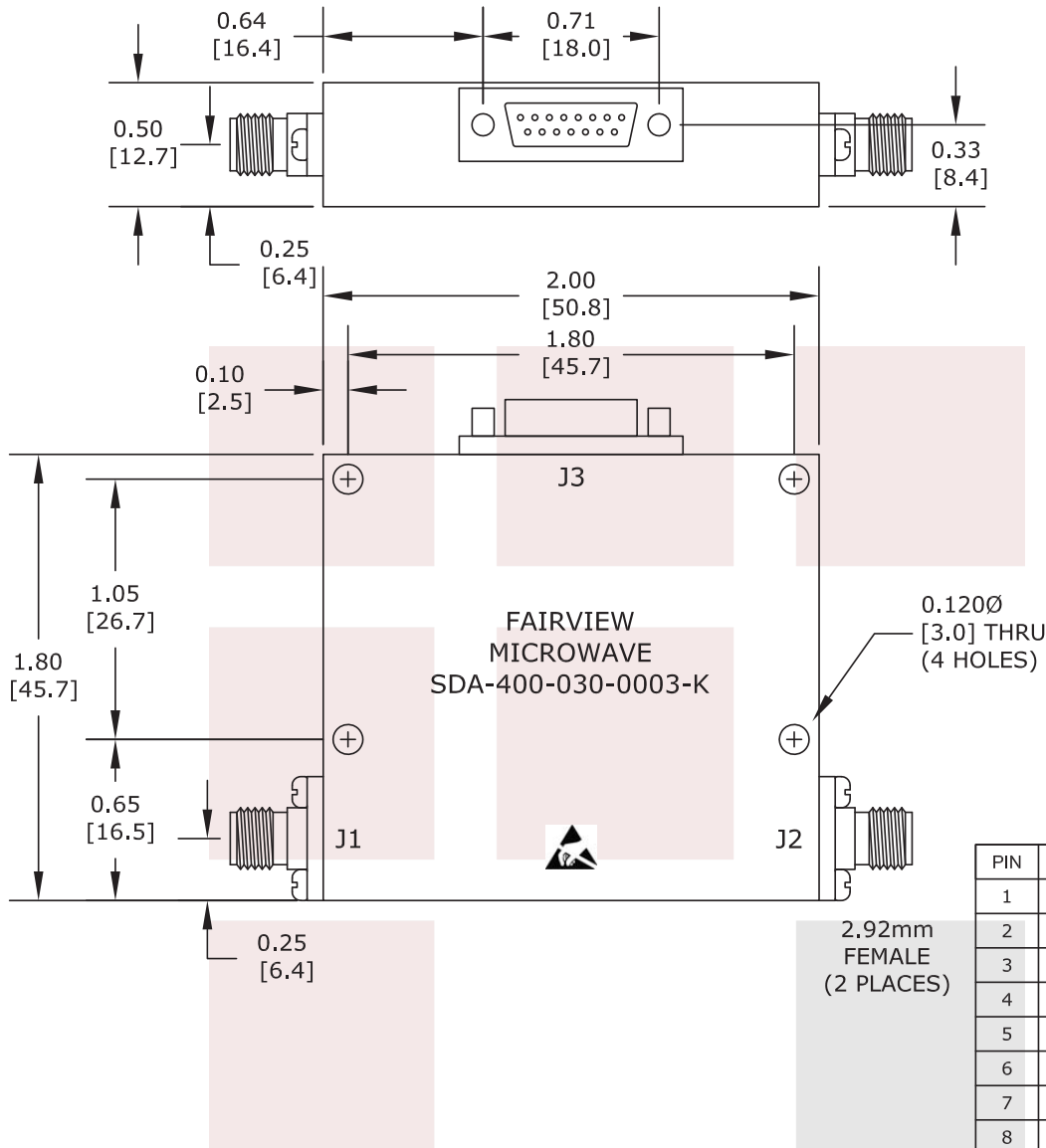
Channel 1 (Yellow): Tunnel Diode output
Channel 2 (Green): TTL Input from Signal Generator

0 to 30 dB 10 Bit Programmable Step Attenuator With a 0.03 dB Step 2.92mm Female To 2.92mm Female From 18 GHz To 40 GHz 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 30 dB 10 Bit Programmable Step Attenuator With a 0.03 dB Step 2.92mm Female To 2.92mm Female From 18 GHz To 40 GHz SDA-400-030-0003-K](http://www.fairviewmicrowave.com/30-db-programmable-step-attenuator-2.92mm-female-sda-400-030-0003-k)

URL: <http://www.fairviewmicrowave.com/30-db-programmable-step-attenuator-2.92mm-female-sda-400-030-0003-k-p.aspx>

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PIN	DESCRIPTION
1	1dB
2	0.5dB
3	0.25dB
4	0.125dB
5	GND
6	0.06dB
7	0.03dB (LSB)
8	GND
9	NO CONNECTION
10	NO CONNECTION
11	+12 VDC
12	16dB (MSB)
13	8dB
14	4dB
15	2dB

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TITLE 0 to 30 dB 10 Bit Programmable Step Attenuator With a 0.03 dB Step 2.92mm Female To 2.92mm Female From 18 GHz To 40 GHz		DWG NO SDA-400-030-0003-K		CAGE CODE 3FKR5	
CAD FILE 032114 SHEET		SCALE N/A SIZE A		150	