

**20 dB Fixed Attenuator SMA Male To SMA Female Up To 4 GHz Rated To 25 Watts With Black Aluminum Heatsink Body**

Fairview Microwave carries a broad selection of fixed attenuators with a wide range of attenuation levels, frequency ranges, and power dissipation ranges. Also known as RF pads, RF microwave attenuators lower the amplitude of a signal (or attenuate) a known amount. These attenuator pads can be used in a wide variety of applications including reducing a signal level to protect measurement equipment or other circuitry, extending the range of power meters and amplifiers, and impedance matching circuits by reducing the VSWR seen by adjacent components. RF attenuators can prevent signal overload in amplifiers, receivers and detectors, adjusting the signal level to a range that is optimal.

Few RF components are as commonly used as fixed coaxial attenuators, and Fairview Microwave carries one of the largest in-stock selections and ships them same day. The SA4S252-20 is a 20 dB Fixed Attenuator that operates from DC to 4 GHz and is rated to 25 Watts. The versatile coaxial package uses SMA male to SMA female connectors and is also REACH and RoHS compliant. The Black Anodized Aluminum Heatsink body allows for efficient heat dissipation under high power usage conditions.

**Electrical Specifications**

Description	Min	Typ	Max	Units
Frequency Range	DC		4	GHz
Impedance		50		Ohms
Nominal Attenuation		20		dB
Attenuation Accuracy		±0.6		dB
VSWR			1.25:1	
Passive Intermodulation			-100	dBc
Input Power, CW derated linearly to 2.5W @ 125°C			25	Watts
Input Power, Peak 5µs pulse, 1.25% duty cycle			1	KWatts

**Electrical Specification Notes:**

Passive intermodulation specified at 910MHz with two input signals at 935MHz and 960MHz with average carrier power levels of +43dBm each.

**Mechanical Specifications**

<b>Size</b>	
Length	3.25 in [82.55 mm]
Width/Diameter	1.5 in [38.1 mm]
Weight	0.198 lbs [89.81 g]
Body Material and Plating	Black Anodized Aluminum Heatsink

**Configuration**

Design	Fixed, Bidirectional
Package Style	Connectorized



**Features:**

- Bidirectional
- DC to 4 GHz Frequency Range
- Attenuation 20±0.6 dB
- Max Power 25 Watts (CW)
- VSWR < 1.25:1

**Applications:**

- Instrumentation
- Precision Measurements
- Prototyping and Characterization
- Production Systems

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**Connectors**

Description	Connector 1	Connector 2
Type	SMA Male	SMA Female
Connection Method	Standard	Standard
Polarity	Standard	Standard
Contact Material & Plating	Brass, Gold	Beryllium Copper, Gold
Contact Plating Spec.	MIL-G-45204	MIL-G-45204
Outer Conductor Material & Plating	Brass, Nickel	Brass, Nickel
Coupling Nut Material & Plating	Brass, Nickel	
Hex Size	5/16 in	
Body Material & Plating	Brass, Nickel	Brass, Nickel

**Environmental Specifications**

**Temperature**

Operating Range -55 to +125 deg C

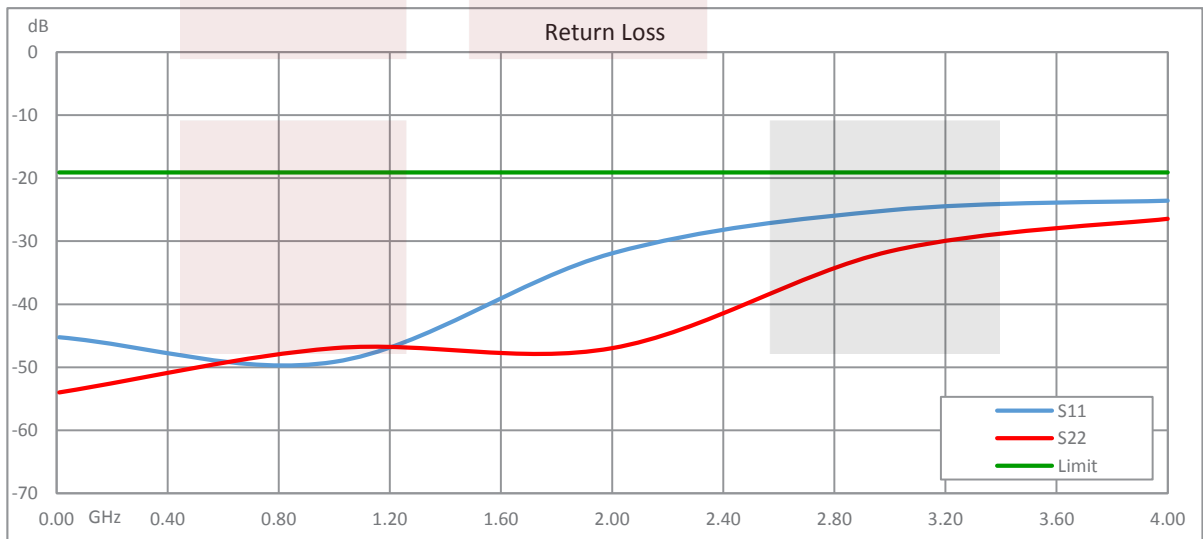
**Compliance Certifications** (visit [www.FairviewMicrowave.com](http://www.FairviewMicrowave.com) for current document)

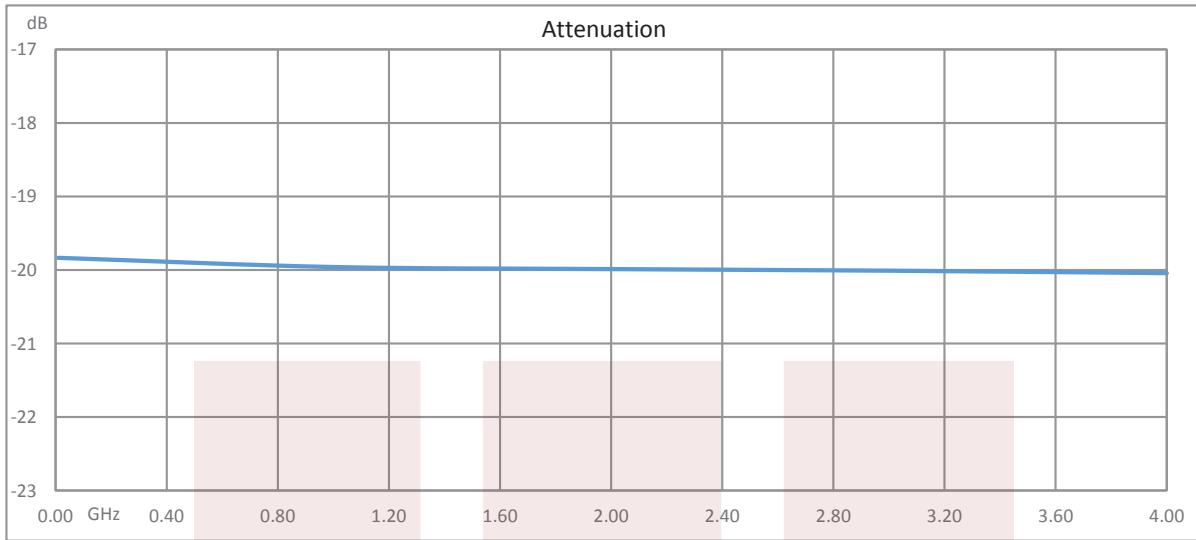
RoHS Compliant Yes  
 REACH Compliant 12/17/2015

**Plotted and Other Data**

Notes:

**Typical Performance Data**



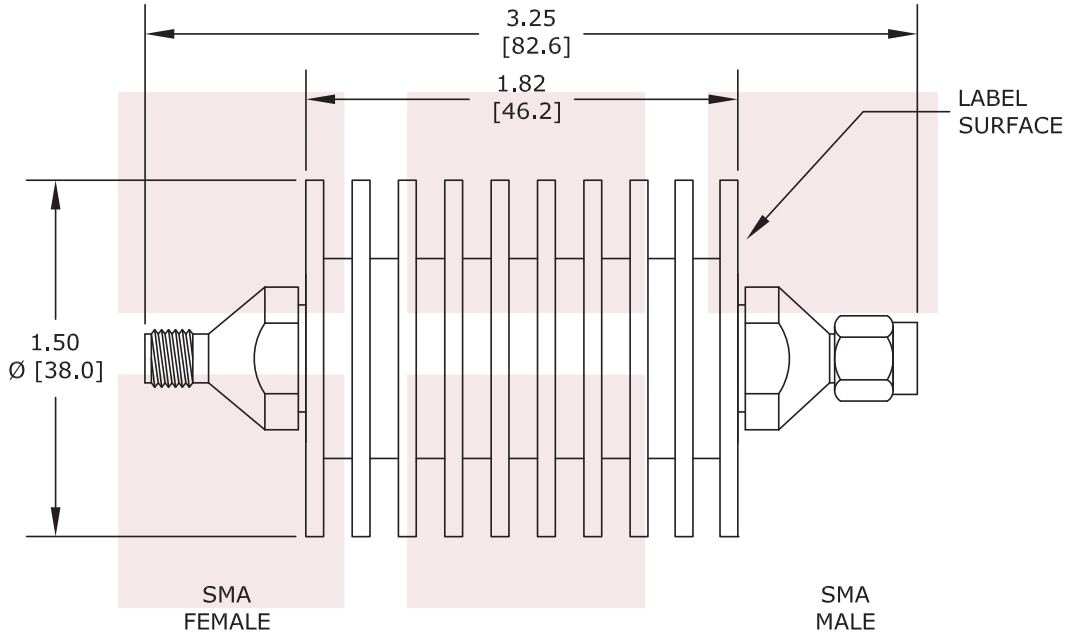


20 dB Fixed Attenuator SMA Male To SMA Female Up To 4 GHz Rated To 25 Watts With Black Aluminum Heatsink Body from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [20 dB Fixed Attenuator SMA Male To SMA Female Up To 4 GHz Rated To 25 Watts With Black Aluminum Heatsink Body SA4S252-20](http://www.fairviewmicrowave.com/20db-fixed-attenuator-sma-male-sma-female-25-watts-sa4s252-20-p.aspx)

URL: <http://www.fairviewmicrowave.com/20db-fixed-attenuator-sma-male-sma-female-25-watts-sa4s252-20-p.aspx>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume any liability arising out of the use of any part or documentation.



P/N	ATTEN.
SA4S252-03	3 dB
SA4S252-06	6 dB
SA4S252-10	10 dB
SA4S252-20	20 dB
SA4S252-30	30 dB
SA4S252-40	40 dB

PN: SA4S252-XX  
 SN: XXXXXXXX  
 BI DIRECTIONAL ATTENUATOR  
 SMA M/F 25W XXdB 4 GHz

LABEL

STANDARD TOLERANCES  
 DIMENSIONS IN INCHES  
 AND TOLERANCE  
 $\pm 0.08\%$

\*STANDARD TOLERANCES APPLY  
 ONLY TO DIMENSIONS IN INCHES

<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 20 dB Fixed Attenuator SMA Male To SMA Female Up To 4 GHz Rated To 25 Watts With Black Aluminum Heatsink Body		DWG NO SA4S252		CAGE CODE 3FKR5	
CAD FILE	032316	SHEET	SCALE	N/A	SIZE A 3045