

## 20 dB Fixed Attenuator 7/16 Male To 7/16 Female Up To 3 GHz Rated To 50 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 varieties and ships them same day. The SA3D511-20 is a 20 dB Fixed Attenuator that operates from DC to 3 GHz and is rated to 50 Watts. The versatile coaxial package uses 7/16 DIN male to 7/16 DIN 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		3	GHz
Impedance		50		Ohms
Nominal Attenuation		20		dB
Attenuation Accuracy		0.3		dB
VSWR			1.15:1	
Passive Intermodulation			-100	dBc
Input Power, CW derated linearly to 5W @125°C			50	Watts
Input Power, Peak 5µs pulse, 1% duty cycle			5	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	5.39 in [136.91 mm]
Width/Diameter	1.5 in [38.1 mm]
Weight	0.7605 lbs [344.96 g]
Body Material and Plating	Black Anodized Aluminum Heatsink

#### Configuration

Design	Fixed, Bidirectional
Package Style	Connectorized



### Features:

- Bidirectional
- DC to 3 GHz Frequency Range
- Attenuation 20±0.3 dB
- Max Power 50 Watts (CW)
- VSWR < 1.15:1

### Applications:

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

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**Connectors**

Description	Connector 1	Connector 2
Type	7/16 DIN Male	7/16 DIN Female
Contact Material & Plating	Brass, Gold	Beryllium Copper, Gold
Outer Conductor Material & Plating	Brass, Nickel	Brass, Nickel
Body Material & Plating	Brass, Nickel	Brass, Nickel

**Environmental Specifications**

**Temperature**

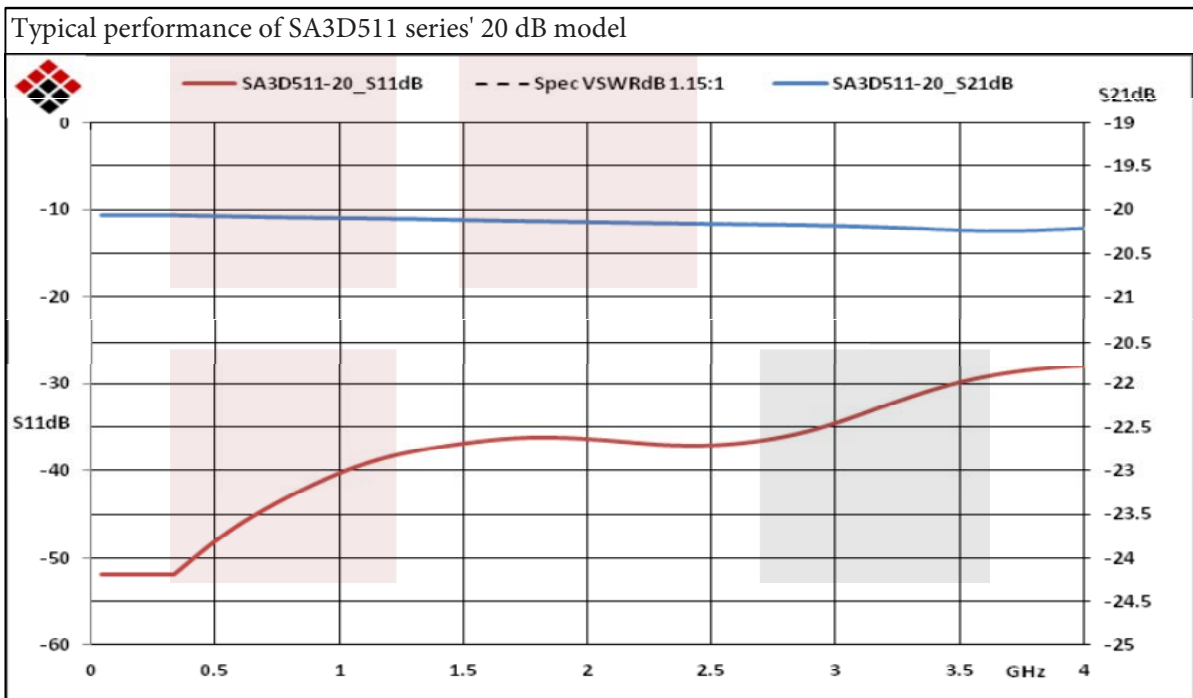
Operating Range -55 to +125 deg C

**Compliance Certifications** (see [product page](#) for current document)

**Plotted and Other Data**

Notes:

Typical Performance Data



20 dB Fixed Attenuator 7/16 Male To 7/16 Female Up To 3 GHz Rated To 50 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 Lewisville, Texas. Fairview Microwave is RF on-demand.

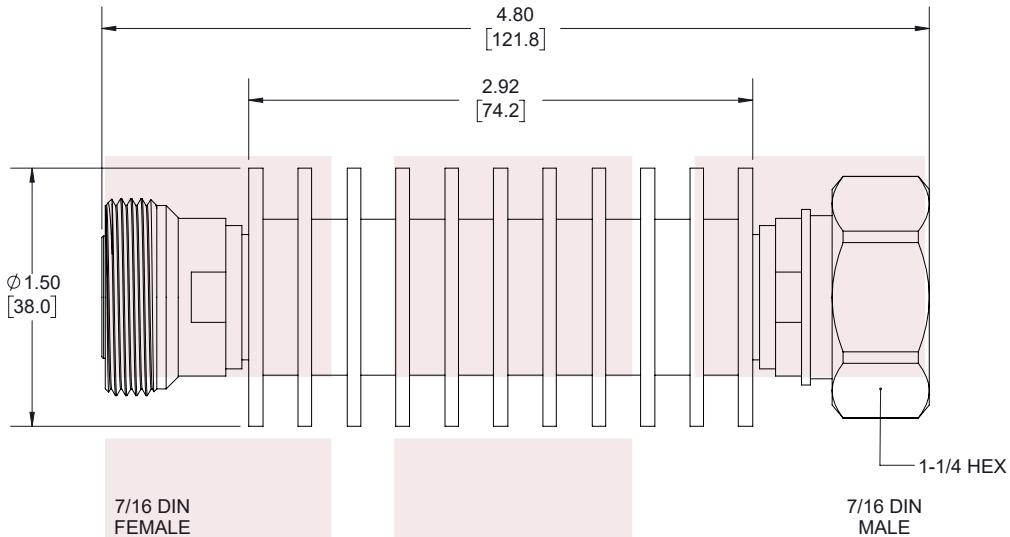
For additional information on this product, please click the following link: [20 dB Fixed Attenuator 7/16 Male To 7/16 Female Up To 3 GHz Rated To 50 Watts With Black Aluminum Heatsink Body SA3D511-20](#)

URL: <https://www.fairviewmicrowave.com/20db-fixed-attenuator-7-16-male-7-16-female-50-watts-sa3d511-20-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.

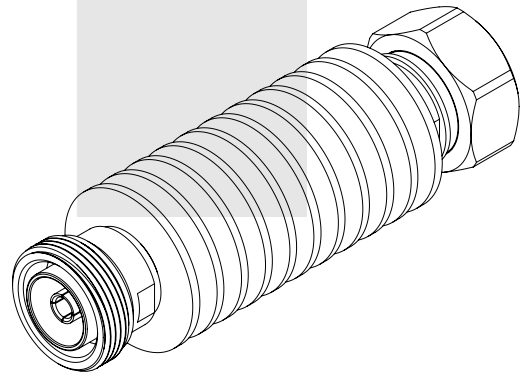


REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PCR SA3D511-XX	3/4/2020	M.MILLER



**LABEL**

PN: SA3D511-20  
SN: XXXXXXXX  
BIDIRECTIONAL ATTENUATOR  
7/16 M/F 50W 20dB DC 3GHz



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TITLE  
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UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES  
DIMENSIONS IN [ ] ARE MILLIMETERS

TOLERANCES: CABLE LENGTH (L) TOLERANCES:

.X = ±.2 [5.08]	FRACTIONS	L ≤ 12 [305] = +1 [25] / -0
.XX = ±.02 [.51]	± 1/32	12 [305] < L ≤ 60 [1524] = +2 [51] / -0
.XXX = ±.005 [.13]	ANGLES ± 1°	60 [1524] < L ≤ 120 [3048] = +4 [102] / -0
		120 [3048] < L ≤ 300 [7620] = +6 [152] / -0
		300 [7620] < L = +5%L / -0

THIRD-ANGLE PROJECTION



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SHEET 1 OF 1

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

SCALE N/A

SIZE A	CAGE CODE 3FKR5	DRAWN BY K.DANG	ITEM NO. SA3D511-20	REV A
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T-Rev.D