

20 dB Fixed Attenuator N Male to N Female Directional Up to 3 GHz Rated to 500 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 SA3N500-20 is a 20 dB Fixed Attenuator that operates from DC to 3 GHz and is rated to 500 Watts. The versatile coaxial package uses type N male to type N 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
VSWR			1.4:1	
Passive Intermodulation			-100	dBc
Input Power, CW derated linearly to 50W @125°C			500	Watts
Input Power, Peak 5µs pulse, 5% duty cycle			10	kWatts

Electrical Specification Notes:

Typical accuracy of +3.5/-1.5 dB from nominal attenuation.
 Passive intermodulation specified at 910 MHz with two input signals at 935MHz and 960MHz with average carrier power levels of +43dBm each.

Mechanical Specifications

Size

Length	17.2 in [436.88 mm]
Width/Diameter	5.197 in [132 mm]
Height	5.51 in [139.95 mm]
Weight	19.4 lbs [8.8 kg]
Body Material and Plating	Black Anodized Aluminum Heatsink

Configuration

Design	Fixed, Directional
Package Style	Connectorized



Features:

- Directional
- DC to 3 GHz Frequency Range
- Attenuation 20 dB
- Accuracy +3.5/-1.5 dB
- Max Power 500 Watts (CW)
- VSWR < 1.4:1

Applications:

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

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Connectors

Description	Connector 1	Connector 2
Type	N Male	N Female
Contact Material & Plating	Brass, Gold	Beryllium Copper, Gold
Coupling Nut Material & Plating	Brass, Nickel	
Body Material & Plating	Brass, Nickel	Brass, Nickel

Environmental Specifications

Temperature

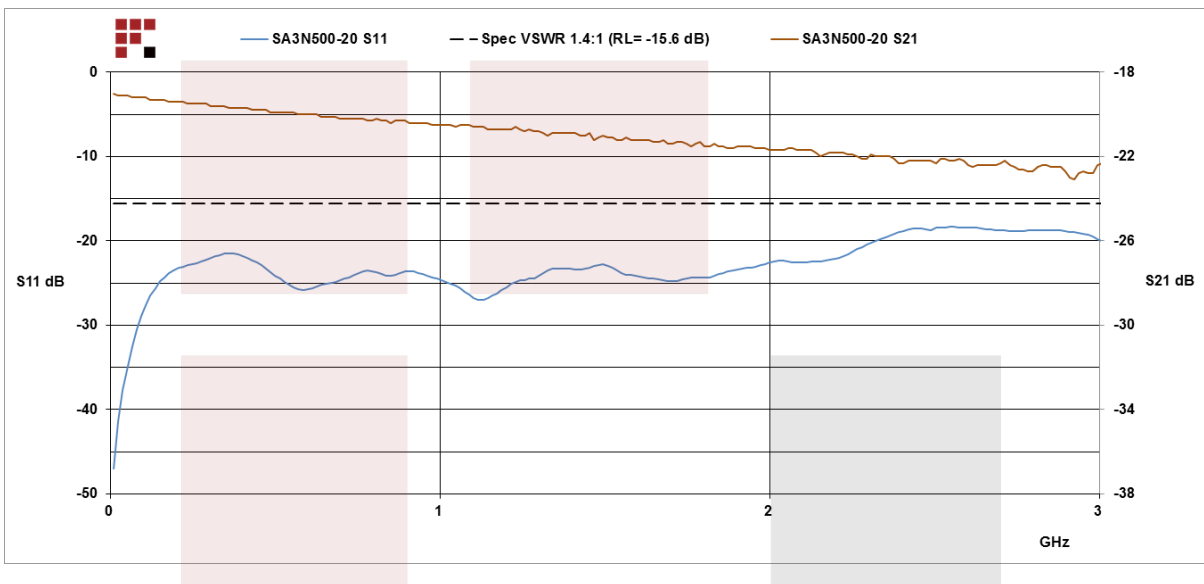
Operating Range -55 to +125 deg C

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

Plotted and Other Data

Notes:

Typical Performance Data



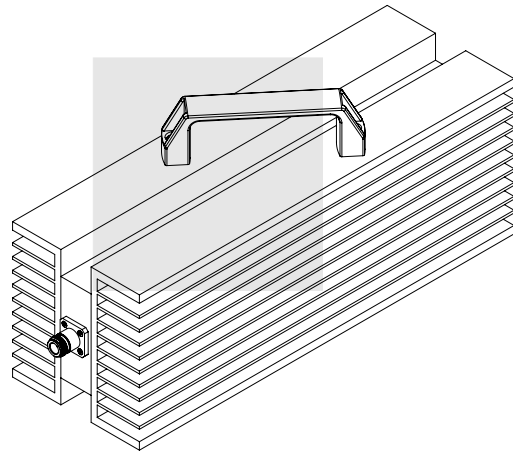
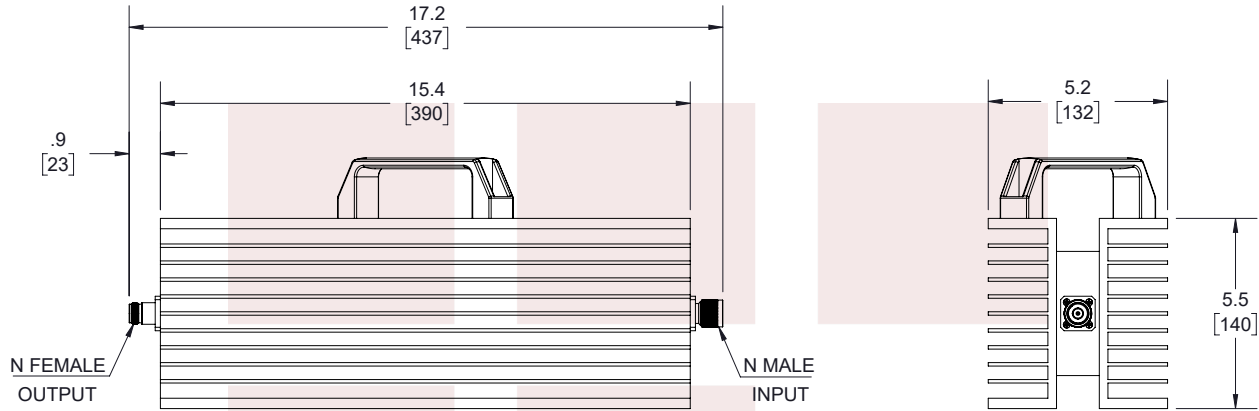
20 dB Fixed Attenuator N Male to N Female Directional Up to 3 GHz Rated to 500 Watts with Black Aluminum Heatsink Body from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [20 dB Fixed Attenuator N Male to N Female Directional Up to 3 GHz Rated to 500 Watts with Black Aluminum Heatsink Body SA3N500-20](#)

URL: <https://www.fairviewmicrowave.com/20db-fixed-attenuator-n-male-n-female-500-watts-sa3n500-20-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 SA3N500-XX 20191111	11/18/19	J.GARCIA



LABEL

FAIRVIEW MICROWAVE
SA3N500-20
D/C: YYWW

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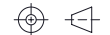
TITLE
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Heatsink Body

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	PART NUMBER SA3N500-20	REV A
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T-Rev.D