

## 20 dB Fixed Attenuator N Male (Plug) to N Female (Jack) Directional Up to 3 GHz Rated to 500 Watts, Heatsink Body, 1.4 VSWR

### SA3N500-20



#### 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

#### Description

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. The Black Anodized Aluminum Heatsink body allows for efficient heat dissipation under high power usage conditions.

#### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		3	GHz
Impedance		50		Ohms
Nominal Attenuation		20		dB
Attenuation Accuracy			±1.75	dB
VSWR			1.4:1	
Passive Intermodulation			-100	dBc
Input Power, CW			500	Watts
derated linearly to 50W @125°C				
Input Power, Peak			10	kWatts
5µs pulse, 5% duty cycle				

#### 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]

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Body Material and Plating	Black Anodized Aluminum Heatsink
Configuration	
Design	Fixed, Directional
Package Style	Connectorized

Connectors

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

Environmental Specifications

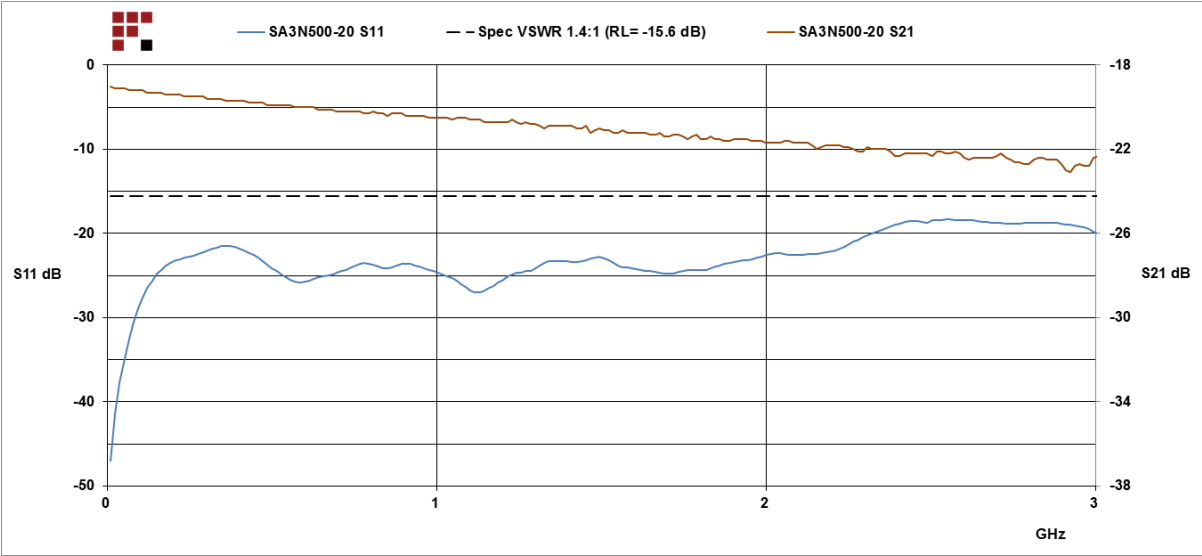
Temperature	
Operating Range	-55 to +125 deg C

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

Plotted and Other Data

Notes:

Typical Performance Data



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20 dB Fixed Attenuator N Male (Plug) to N Female (Jack) Directional Up to 3 GHz Rated to 500 Watts, Heatsink Body, 1.4 VSWR 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 \(Plug\) to N Female \(Jack\) Directional Up to 3 GHz Rated to 500 Watts, Heatsink Body, 1.4 VSWR SA3N500-20](https://www.fairviewmicrowave.com/20db-fixed-attenuator-n-male-n-female-500-watts-sa3n500-20-p.aspx)

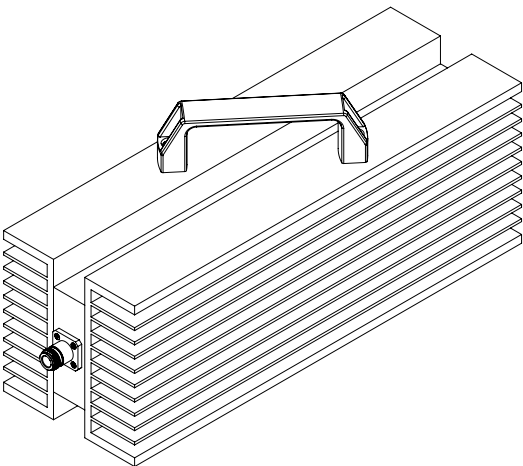
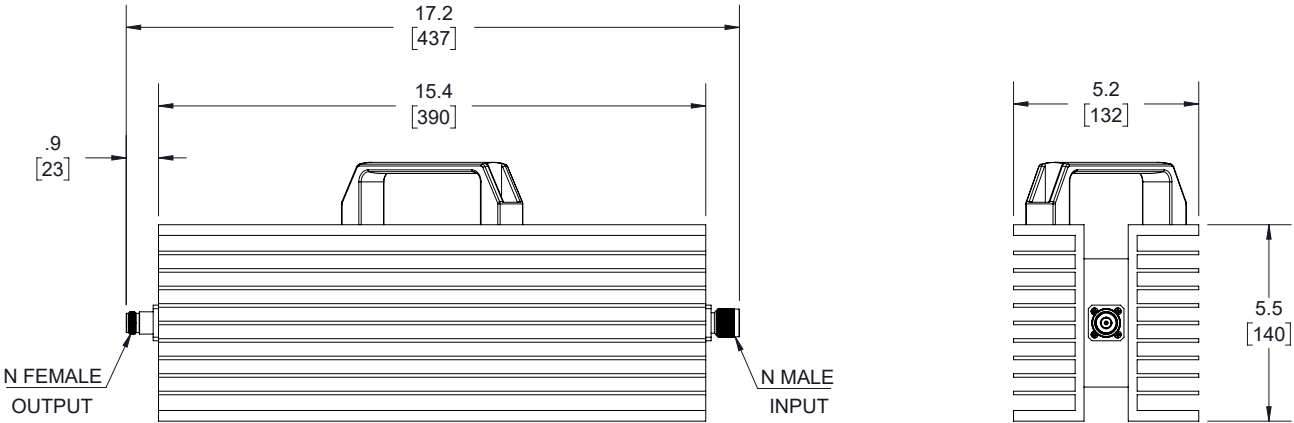
URL: <https://www.fairviewmicrowave.com/20db-fixed-attenuator-n-male-n-female-500-watts-sa3n500-20-p.aspx>

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SA3N500-20 CAD Drawing

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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

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [ ] ARE MILLIMETERS		THIRD-ANGLE PROJECTION	
TOLERANCES:		CABLE LENGTH (L) TOLERANCES:	
.X = ±.2 [5.08]	FRACTIONS	L ≤ 12 [305] = +1 [25] / -0	 THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF FAIRVIEW MICROWAVE CORPORATION. ALL RIGHTS RESERVED.
.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	
ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.			SHEET 1 OF 1
			SCALE N/A
SIZE A	CAGE CODE 3FKR5	DRAWN BY K.DANG	PART NUMBER SA3N500-20
			REV A

T-Rev.D