

## 20 dB Fixed Attenuator N Male (Plug) to N Female (Jack) Up to 3 GHz Rated to 50 Watts, Heatsink Body, 1.15 VSWR



### SA3N512-20

#### Features

- Bidirectional
- DC to 3 GHz Frequency Range
- Attenuation 20±1.5 dB
- Max Power 50 Watts (CW)
- VSWR < 1.15:1

#### 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 SA3N512-20 is a 20 dB Fixed Attenuator that operates from DC to 3 GHz and is rated to 50 Watts. The versatile coaxial package uses 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		1.5		dB
VSWR			1.15:1	
Passive Intermodulation			-100	dBc
Input Power, CW			50	Watts
derated linearly to 5W @125°C				
Input Power, Peak			5	kWatts
5µs pulse, 1% duty cycle				

#### 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

##### Size

Length	4.41 in [112.01 mm]
Width/Diameter	1.77 in [44.96 mm]
Height	0 in [0 mm]
Weight	0.5225 lbs [237 g]

20 dB Fixed Attenuator N Male (Plug) to N Female (Jack) Up to 3 GHz Rated to 50 Watts, Heatsink Body, 1.15 VSWR



## SA3N512-20

Body Material and Plating	Black Anodized Aluminum Heatsink
<b>Configuration</b>	
Design	Fixed, Bidirectional
Package Style	Connectorized

### Connectors

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

### Environmental Specifications

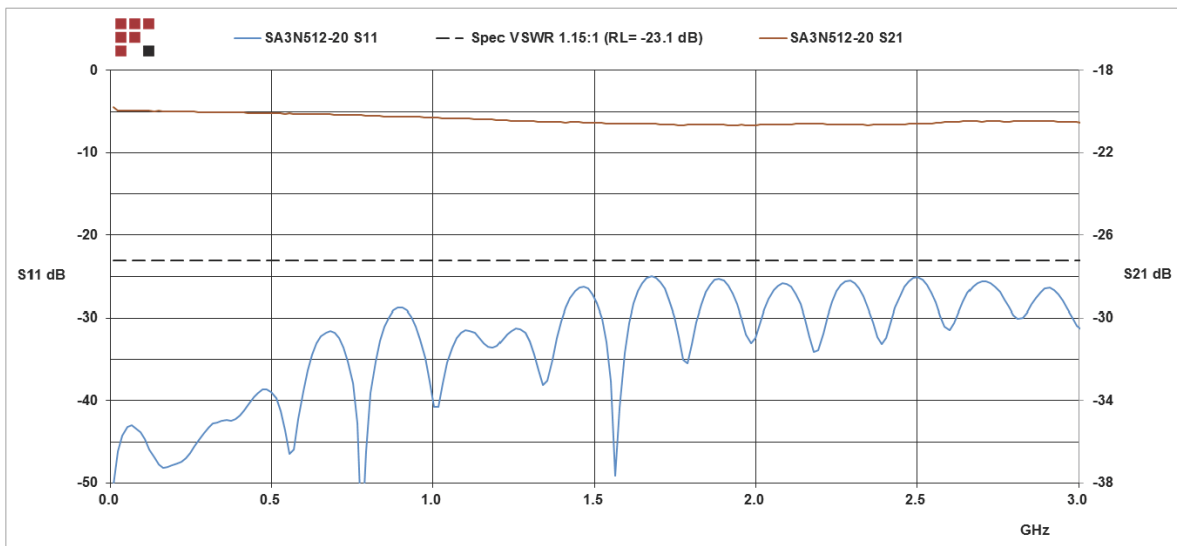
<b>Temperature</b>	
Operating Range	-55 to +125 deg C

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

### Plotted and Other Data

Notes:

### Typical Performance Data



20 dB Fixed Attenuator N Male (Plug) to N Female (Jack) Up to 3 GHz Rated to 50 Watts, Heatsink Body, 1.15 VSWR



## SA3N512-20

20 dB Fixed Attenuator N Male (Plug) to N Female (Jack) Up to 3 GHz Rated to 50 Watts, Heatsink Body, 1.15 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 \(Jack\) Up to 3 GHz Rated to 50 Watts, Heatsink Body, 1.15 VSWR SA3N512-20](https://www.fairviewmicrowave.com/20db-fixed-attenuator-n-male-n-female-50-watts-sa3n512-20-p.aspx)

URL: <https://www.fairviewmicrowave.com/20db-fixed-attenuator-n-male-n-female-50-watts-sa3n512-20-p.aspx>

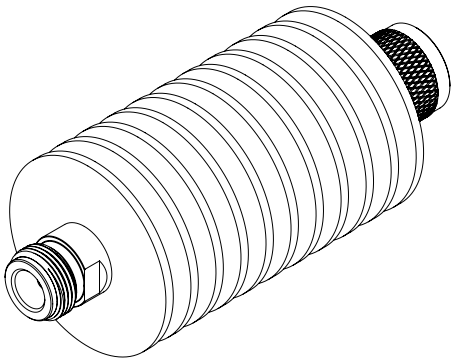
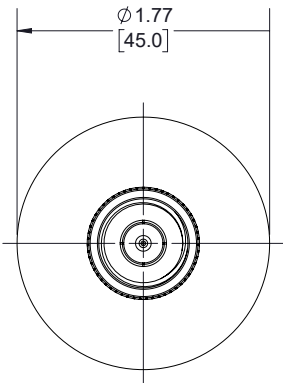
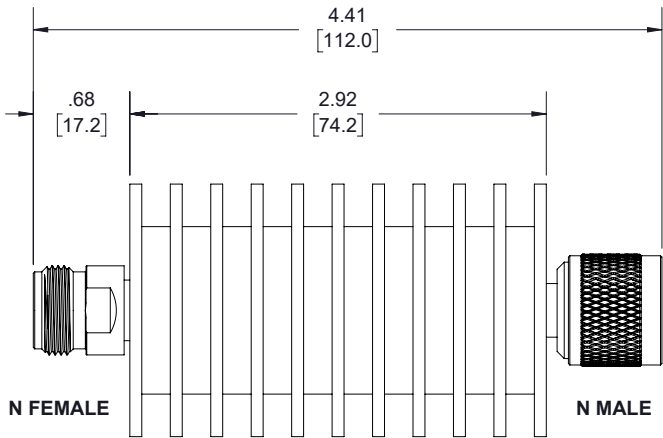
The information contained within this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part in order to implement improvements. Fairview Microwave reserves the right 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 liability arising out of the use of any part or document.

SA3N512-20 CAD Drawing

20 dB Fixed Attenuator N Male (Plug) to N Female (Jack) Up to 3 GHz

Rated to 50 Watts, Heatsink Body, 1.15 VSWR

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PCR SA3N512-XX	5/12/2020	S.PONG



LABEL:

FAIRVIEW MICROWAVE  
SA3N512-20  
D/C: YYWW

THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.



Fairview Microwave<sup>™</sup>  
an INFINITE<sup>®</sup> brand

TITLE

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

TOLERANCES:

.X = ±.2 [5.08] FRACTIONS  
.XX = ±.02 [.51] ± 1/32  
.XXX = ±.005 [.13] ANGLES ± 1°

CABLE LENGTH (L) TOLERANCES:

L ≤ 12 [305] = +1 [25] / -0  
12 [305] < L ≤ 60 [1524] = +2 [51] / -0  
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



THE INFORMATION AND  
DESIGN IN THIS DOCUMENT  
IS THE PROPERTY OF  
FAIRVIEW MICROWAVE CORPORATION.  
ALL RIGHTS RESERVED.

SHEET 1 OF 1

SCALE N/A

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

SIZE	CAGE CODE	DRAWN BY	ITEM NO.	REV
A	3FKR5	K.DANG	SA3N512-20	A

T-Rev.D