

20 dB Fixed Attenuator N Male To N Female Up To 18 GHz Rated To 10 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 SA18N10W-20 is a 20 dB Fixed Attenuator that operates from DC to 18 GHz and is rated to 10 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.



Features:

- DC to 18 GHz Frequency Range
- Attenuation 20±0.7 dB
- Max Power 10 Watts (CW)
- VSWR < 1.35:1

Applications:

- Instrumentation
- Precision measurements
- Prototyping and characterization
- Production systems

Electrical Specifications

| Description | Min | Typ | Max | Units |
|---|-----|------|--------|--------|
| Frequency Range | DC | | 18 | GHz |
| Impedance | | 50 | | Ohms |
| Nominal Attenuation | | 20 | | dB |
| Attenuation Accuracy | | ±0.7 | | dB |
| VSWR | | | 1.35:1 | |
| Input Power, CW rated at +25°C, derated linearly to 0W at +125°C | | | 10 | Watts |
| Input Power, Peak 5µs pulse, 1% duty cycle | | | 1 | KWatts |

Specifications by Frequency

| Description | F1 | F2 | F3 | F4 | F5 | Units |
|-------------|---------|-----------|------------|----|----|-------|
| Range | DC to 8 | 8 to 12.4 | 12.4 to 18 | | | GHz |
| VSWR, Max | 1.2:1 | 1.3:1 | 1.35:1 | | | |

Electrical Specification Notes:
 Values at +25°C, sea level.

Mechanical Specifications

| | |
|---------------------------|----------------------------------|
| Size | |
| Length | 2.62 in [66.55 mm] |
| Width/Diameter | 0.83 in [21.08 mm] |
| Weight | 0.1485 lbs [67.36 g] |
| Body Material and Plating | Black Anodized Aluminum Heatsink |

Configuration

| | |
|--------|-------|
| Design | Fixed |
|--------|-------|

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Package Style

Connectorized Module

Connectors

| Description | Connector 1 | Connector 2 |
|----------------------------|----------------------------|----------------------------|
| Type | N Male | N Female |
| Contact Material & Plating | Beryllium Copper, Gold | Beryllium Copper, Gold |
| Contact Plating Spec. | MIL-G-45204 | MIL-G-45204 |
| Body Material & Plating | Passivated Stainless Steel | Passivated Stainless Steel |

Environmental Specifications

Temperature

Operating Range

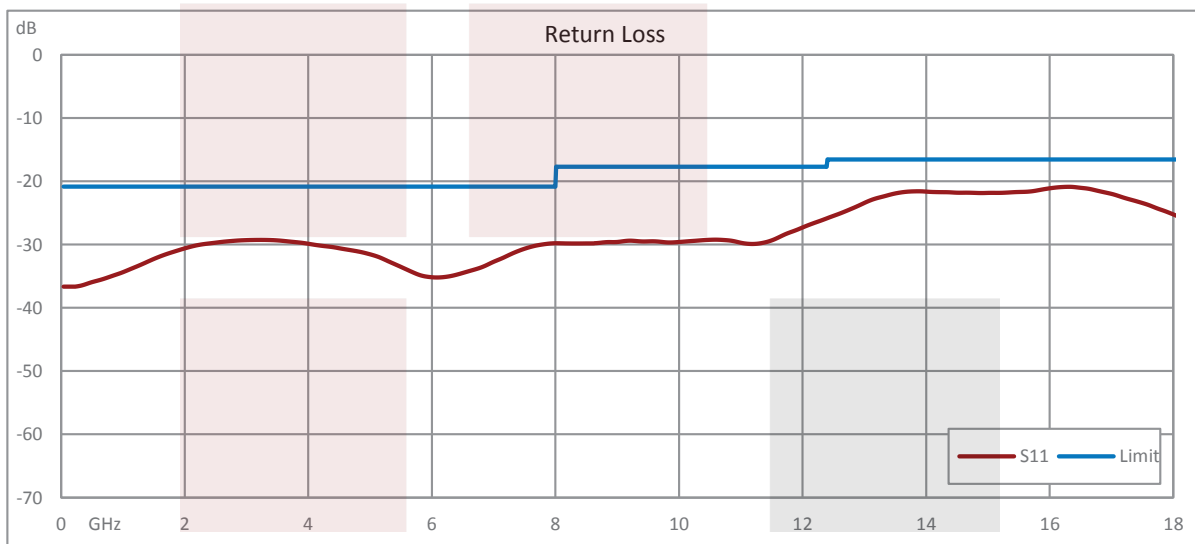
-55 to +125 deg C

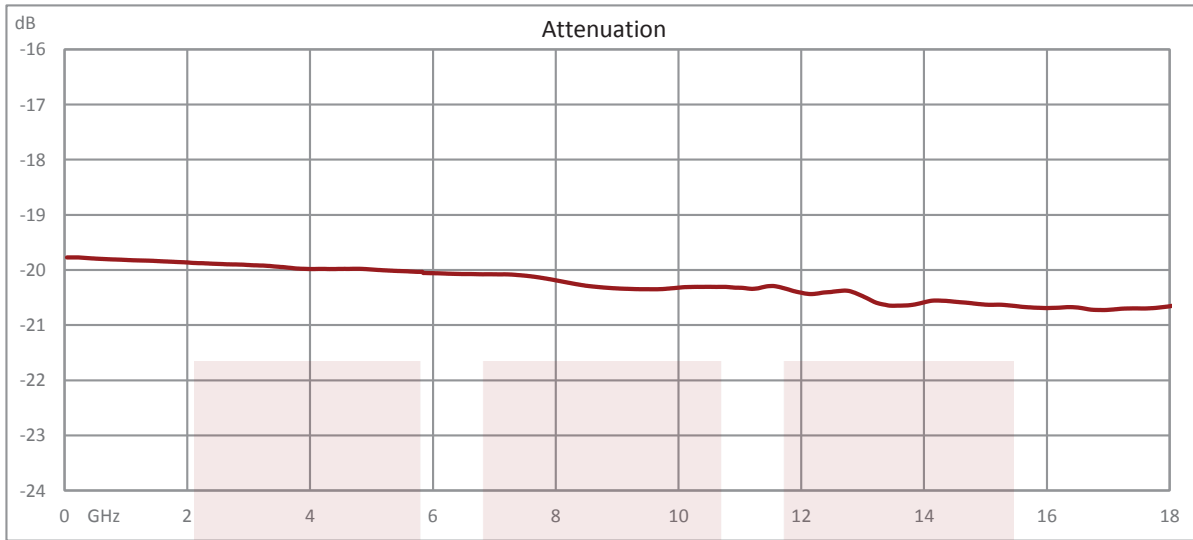
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

Typical Performance Data



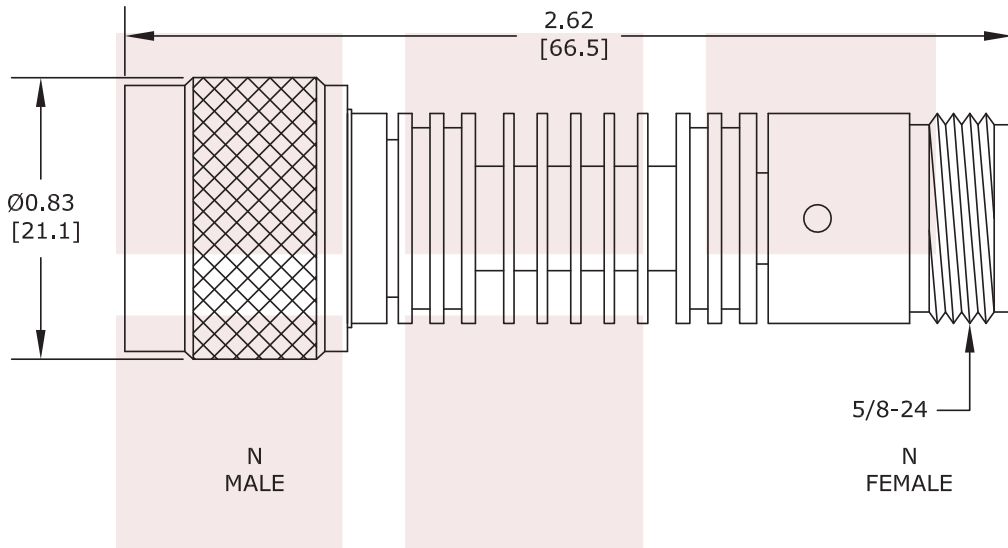


20 dB Fixed Attenuator N Male To N Female Up To 18 GHz Rated To 10 Watts With Black Aluminum Heatsink Body from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [20 dB Fixed Attenuator N Male To N Female Up To 18 GHz Rated To 10 Watts With Black Aluminum Heatsink Body SA18N10W-20](https://www.fairviewmicrowave.com/20db-fixed-attenuator-n-male-n-female-10-watts-sa18n10w-20-p.aspx)

URL: <https://www.fairviewmicrowave.com/20db-fixed-attenuator-n-male-n-female-10-watts-sa18n10w-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. |
|-------------|--------|
| SA18N10W-01 | 1 dB |
| SA18N10W-02 | 2 dB |
| SA18N10W-03 | 3 dB |
| SA18N10W-06 | 6 dB |
| SA18N10W-10 | 10 dB |
| SA18N10W-15 | 15 dB |
| SA18N10W-20 | 20 dB |
| SA18N10W-30 | 30 dB |

| STANDARD TOLERANCES | |
|---------------------|--------|
| DECIMAL | |
| .XX | ±0.01 |
| .XXX | ±0.003 |

*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

| | | | | | |
|---|--------|---|-------|-----------|-------------|
| FAIRVIEW MICROWAVE INC. 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 N Male To N Female Up To 18 GHz Rated To 10 Watts With Black Aluminum Heatsink Body | | DWG NO | | CAGE CODE | |
| | | SA18N10W | | 3FKR5 | |
| CAD FILE | 031816 | SHEET | SCALE | N/A | SIZE A 3045 |