

20 dB Fixed Attenuator N Male To N Female Up To 3 GHz Rated To 100 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 SA3N1007-20 is a 20 dB Fixed Attenuator that operates from DC to 3 GHz and is rated to 100 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:

- Bidirectional
- DC to 3 GHz Frequency Range
- Attenuation 20±0.6 dB
- Max Power 100 Watts (CW)
- VSWR < 1.4:1

Applications:

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

Electrical Specifications

| Description | Min | Typ | Max | Units |
|---|-----|-----|-------|--------|
| Frequency Range | DC | | 3 | GHz |
| Impedance | | 50 | | Ohms |
| Nominal Attenuation | | 20 | | dB |
| Attenuation Accuracy | | 0.6 | | dB |
| VSWR | | | 1.4:1 | |
| Passive Intermodulation | | | -100 | dBc |
| Input Power, CW derated linearly to 10W @125°C | | | 100 | Watts |
| Input Power, Peak 5µs pulse, 5% duty cycle | | | 10 | 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

| | |
|---------------------------|----------------------------------|
| Size | |
| Length | 9.06 in [230.12 mm] |
| Width/Diameter | 3.15 in [80.01 mm] |
| Height | 2.36 in [59.94 mm] |
| Weight | 3.8995 lbs [1.77 kg] |
| Body Material and Plating | Black Anodized Aluminum Heatsink |

Configuration

| | |
|---------------|----------------------|
| Design | Fixed, Bidirectional |
| Package Style | Connectorized |

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Connectors

| Description | Connector 1 | Connector 2 |
|------------------------------------|---------------|------------------------|
| Type | N Male | N 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

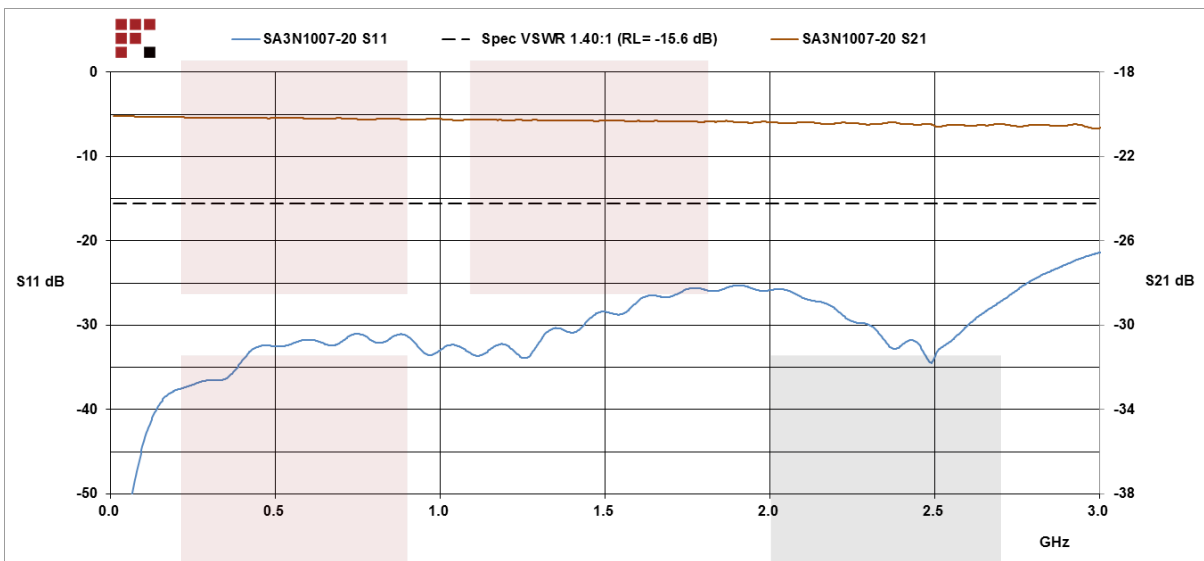
Operating Range -55 to +125 deg C

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

Plotted and Other Data

Notes:

Typical Performance Data



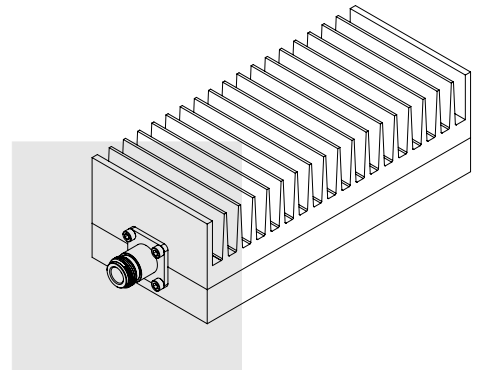
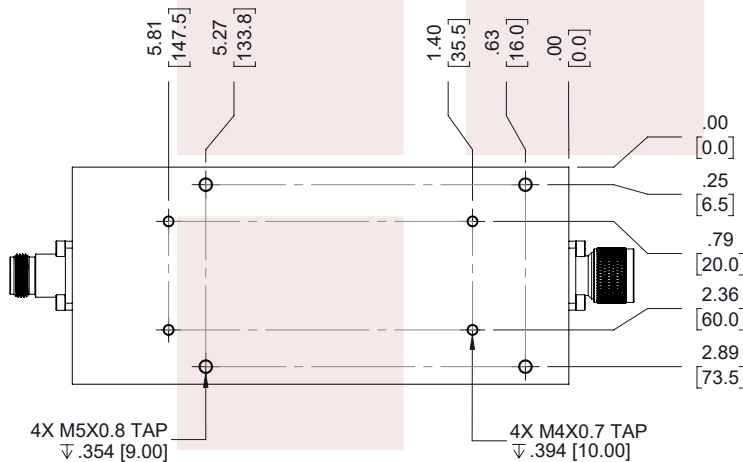
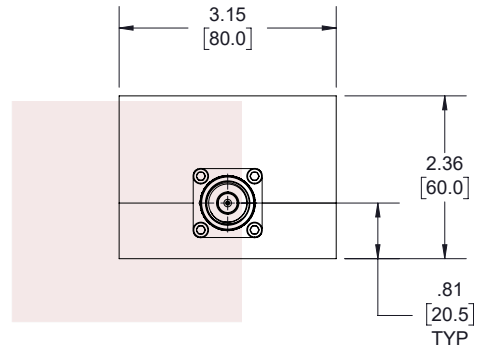
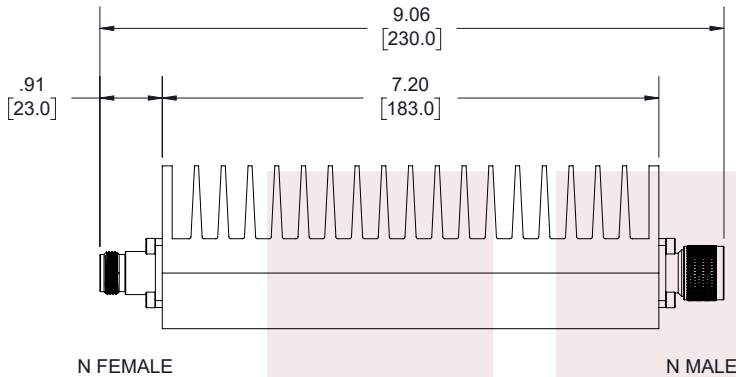
20 dB Fixed Attenuator N Male To N Female Up To 3 GHz Rated To 100 Watts With Black Aluminum Heatsink Body from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. 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 Up To 3 GHz Rated To 100 Watts With Black Aluminum Heatsink Body SA3N1007-20](#)

URL: <https://www.fairviewmicrowave.com/20db-fixed-attenuator-n-male-n-female-100-watts-sa3n1007-20-p.aspx>

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| REVISIONS | | | |
|-----------|-----------------|----------|----------|
| REV. | DESCRIPTION | DATE | APPROVED |
| A | PCR SA3N1007-XX | 5/8/2020 | S.PONG |



LABEL:

FAIRVIEW MICROWAVE
SA3N1007-20
D/C: YYWW

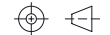
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TITLE
20 dB Fixed Attenuator N Male To N Female Up To 3 GHz Rated To 100 Watts With Black Aluminum Heatsink Body

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

| TOLERANCES: | | CABLE LENGTH (L) TOLERANCES: | |
|--------------------|------------------|---|--|
| .X = ±.2 [5.08] | FRACTIONS ± 1/32 | L ≤ 12 [305] = +1 [25] / -0 | |
| .XX = ±.02 [.51] | ANGLES ± 1° | 12 [305] < L ≤ 60 [1524] = +2 [51] / -0 | |
| .XXX = ±.005 [.13] | | 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 | CAGE CODE | DRAWN BY | ITEM NO. | REV |
|------|-----------|----------|-------------|-----|
| A | 3FKR5 | K.DANG | SA3N1007-20 | A |

T-Rev.D