

20 dB Fixed Attenuator BNC Male (Plug) to  
BNC Female (Jack) Up to 6 GHz Rated to  
10 Watts, Heatsink Body, 1.3 VSWR



## SA6B10W-20

### Features

- Bidirectional
- DC to 6 GHz Frequency Range
- Attenuation 20±1 dB
- Max Power 10 Watts (CW)
- VSWR < 1.3:1

### 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 SA6B10W-20 is a 20 dB Fixed Attenuator that operates from DC to 6 GHz and is rated to 10 Watts. The versatile coaxial package uses BNC male to BNC 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      |         | 6       | GHz    |
| Impedance                        |         | 50      |         | Ohms   |
| Nominal Attenuation              |         | 20      |         | dB     |
| Attenuation Accuracy             |         | 1       |         | dB     |
| VSWR                             |         |         | 1.3:1   |        |
| Input Power, CW                  |         |         | 10      | Watts  |
| derated linearly to 1W at +125°C |         |         |         |        |
| Input Power, Peak                |         |         | 1       | kWatts |
| 5µs pulse, 0.5% duty cycle       |         |         |         |        |

Electrical Specification Notes:

Power Sensitivity: 0.005 dB/dB/W max./Temperature coefficient: 0.0004 dB/dB/°C max.

### Mechanical Specifications

#### Size

|                           |                                  |
|---------------------------|----------------------------------|
| Length                    | 2.64 in [67.06 mm]               |
| Width/Diameter            | 0.63 in [16 mm]                  |
| Height                    | 0 in [0 mm]                      |
| Weight                    | 0.0895 lbs [40.6 g]              |
| Body Material and Plating | Black Anodized Aluminum Heatsink |

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Configuration

Design  
Package Style

Fixed, Bidirectional  
Connectorized Module

Connectors

| Description                  | Connector 1            | Connector 2            |
|------------------------------|------------------------|------------------------|
| Type                         | BNC Male               | BNC Female             |
| Contact Material and Plating | Beryllium Copper, Gold | Beryllium Copper, Gold |
| Body Material and Plating    | Brass, Nickel          | Brass, Nickel          |

Mechanical Specification Notes:  
Connectors mate nondestructively with MIL-PRF-39012 connectors.

Environmental Specifications

Temperature  
Operating Range

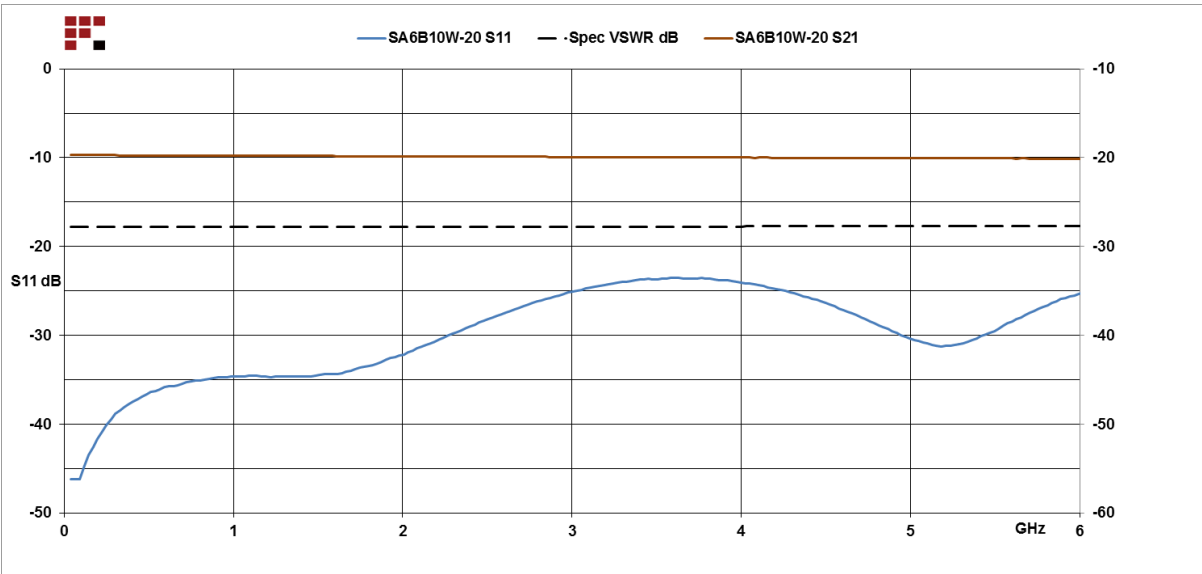
-55 to +125 deg C

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

Plotted and Other Data

Notes:

Typical Performance Data



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20 dB Fixed Attenuator BNC Male (Plug) to BNC Female (Jack) Up to 6 GHz Rated to 10 Watts, Heatsink Body, 1.3 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.

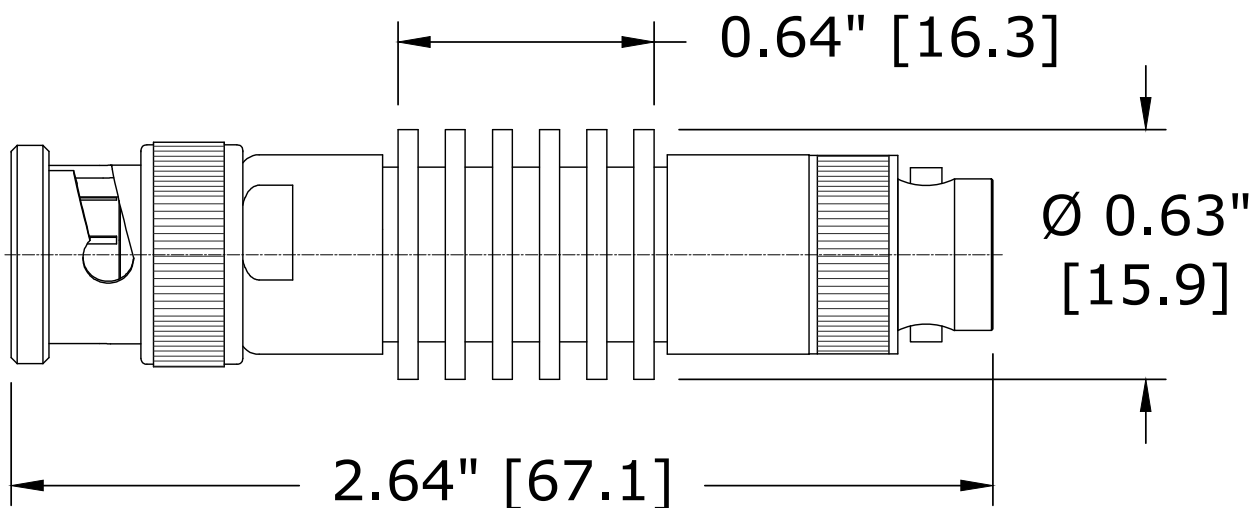
For additional information on this product, please click the following link: [20 dB Fixed Attenuator BNC Male \(Plug\) to BNC Female \(Jack\) Up to 6 GHz Rated to 10 Watts, Heatsink Body, 1.3 VSWR SA6B10W-20](https://www.fairviewmicrowave.com/20db-fixed-attenuator-bnc-male-bnc-female-10-watts-sa6b10w-20-p.aspx)

URL: <https://www.fairviewmicrowave.com/20db-fixed-attenuator-bnc-male-bnc-female-10-watts-sa6b10w-20-p.aspx>

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SA6B10W-20 CAD Drawing

20 dB Fixed Attenuator BNC Male (Plug) to BNC Female (Jack) Up to  
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BNC MALE

BNC FEMALE

|                                                                      |            |                                                                                                                                                                                     |           |           |             |
|----------------------------------------------------------------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|-------------|
| FAIRVIEW MICROWAVE INC.<br>ALLEN, TX 75013 WWW.FAIRVIEWMICROWAVE.COM |            | NOTES:<br>1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.<br>2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.<br>3. DIMENSIONS ARE IN INCHES [mm]. |           |           |             |
| TITLE                                                                | DWG NO     |                                                                                                                                                                                     | CAGE CODE |           |             |
|                                                                      | SA6B10W-20 |                                                                                                                                                                                     | 3FKR5     |           |             |
| CAD FILE 011415                                                      |            | SHEET                                                                                                                                                                               |           | SCALE N/A | SIZE A 5568 |