

## 6 dB Fixed Attenuator N Male (Plug) to N Female (Jack) Up to 4 GHz Rated to 25 Watts, Heatsink Body, 1.25 VSWR



### SA4N251-06

#### Features

- Bidirectional
- DC to 4 GHz Frequency Range
- Attenuation  $6 \pm 0.5$  dB
- Max Power 25 Watts (CW)
- VSWR < 1.25:1

#### 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 SA4N251-06 is a 6 dB Fixed Attenuator that operates from DC to 4 GHz and is rated to 25 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      |         | 4       | GHz    |
| Impedance                       |         | 50      |         | Ohms   |
| Nominal Attenuation             |         | 6       |         | dB     |
| Attenuation Accuracy            |         | 0.75    |         | dB     |
| VSWR                            |         |         | 1.25:1  |        |
| Passive Intermodulation         |         |         | -100    | dBc    |
| Input Power, CW                 |         |         | 25      | Watts  |
| derated linearly to 2.5W @125°C |         |         |         |        |
| Input Power, Peak               |         |         | 1       | kWatts |
| 5µs pulse, 2.5% 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         | 3.27 in [83.06 mm]    |
| Width/Diameter | 1.5 in [38.1 mm]      |
| Height         | 0 in [0 mm]           |
| Weight         | 0.2995 lbs [135.85 g] |

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|                           |                                  |
|---------------------------|----------------------------------|
| Body Material and Plating | Black Anodized Aluminum Heatsink |
| Configuration             |                                  |
| 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

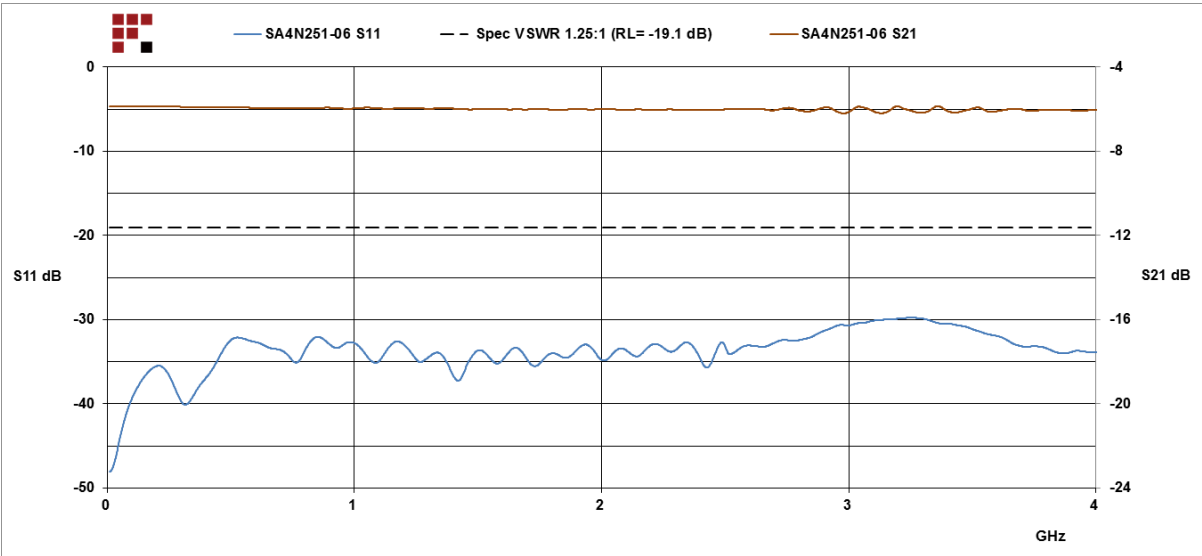
|                 |                   |
|-----------------|-------------------|
| Temperature     |                   |
| Operating Range | -55 to +125 deg C |

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

Plotted and Other Data

Notes:

Typical Performance Data



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6 dB Fixed Attenuator N Male (Plug) to N Female (Jack) Up to 4 GHz Rated to 25 Watts, Heatsink Body, 1.25 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: [6 dB Fixed Attenuator N Male \(Plug\) to N Female \(Jack\) Up to 4 GHz Rated to 25 Watts, Heatsink Body, 1.25 VSWR SA4N251-06](https://www.fairviewmicrowave.com/6db-fixed-attenuator-n-male-n-female-25-watts-sa4n251-06-p.aspx)

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