

12 dB Fixed Attenuator SMA Male (Plug) to SMA Female (Jack) Up to 18 GHz Rated to 2 Watts, Passivated Stainless Steel Body, 1.35 VSWR



SA18H-12

Features

- DC to 18 GHz Frequency Range
- Attenuation 12±1 dB
- Max Power 2 Watts (CW)
- VSWR < 1.35:1

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 SA18H-12 is a 12 dB Fixed Attenuator that operates from DC to 18 GHz and is rated to 2 Watts. The versatile coaxial package uses SMA male to SMA female connectors.

Electrical Specifications

| Description | Minimum | Typical | Maximum | Units |
|------------------------------------|---------|---------|---------|-------|
| Frequency Range | DC | | 18 | GHz |
| Impedance | | 50 | | Ohms |
| Nominal Attenuation | | 12 | | dB |
| Attenuation Accuracy | | 0.5 | | dB |
| VSWR | | | 1.35:1 | |
| Input Power, CW | | | 2 | Watts |
| derated linearly to 0.2W at +125°C | | | | |
| Input Power, Peak | | | 500 | Watts |
| 5µs pulse, 0.05% duty cycle | | | | |

Specifications by Frequency

| Description | F1 | F2 | F3 | F4 | F5 | Units |
|-----------------|---------|-----------|------------|----|----|-------|
| Frequency Range | DC to 6 | 6 to 12.4 | 12.4 to 18 | | | GHz |
| VSWR, Max | 1.15:1 | 1.25:1 | 1.35:1 | | | |

Mechanical Specifications

Size

| | |
|----------------|---------------------|
| Length | 0.86 in [21.84 mm] |
| Width/Diameter | 0.312 in [7.92 mm] |
| Height | 0 in [0 mm] |
| Weight | 0.0145 lbs [6.58 g] |

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SA18H-12

| | |
|---------------------------|----------------------------|
| Body Material and Plating | Passivated Stainless Steel |
| Configuration | |
| Design | Fixed |
| Package Style | Connectorized Module |

Connectors

| Description | Connector 1 | Connector 2 |
|------------------------------|----------------------------|----------------------------|
| Type | SMA Male | SMA Female |
| Connector Specification | MIL-STD-348 | MIL-STD-348 |
| Contact Material and Plating | Beryllium Copper, Gold | Beryllium Copper, Gold |
| Body Material and Plating | Passivated Stainless Steel | Passivated Stainless Steel |

Mechanical Specification Notes:
Connector interface in accordance with MIL-STD-348 and MIL-PRF-39012.

Environmental Specifications

| | |
|-----------------|-------------------|
| Temperature | |
| Operating Range | -54 to +125 deg C |

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

Plotted and Other Data

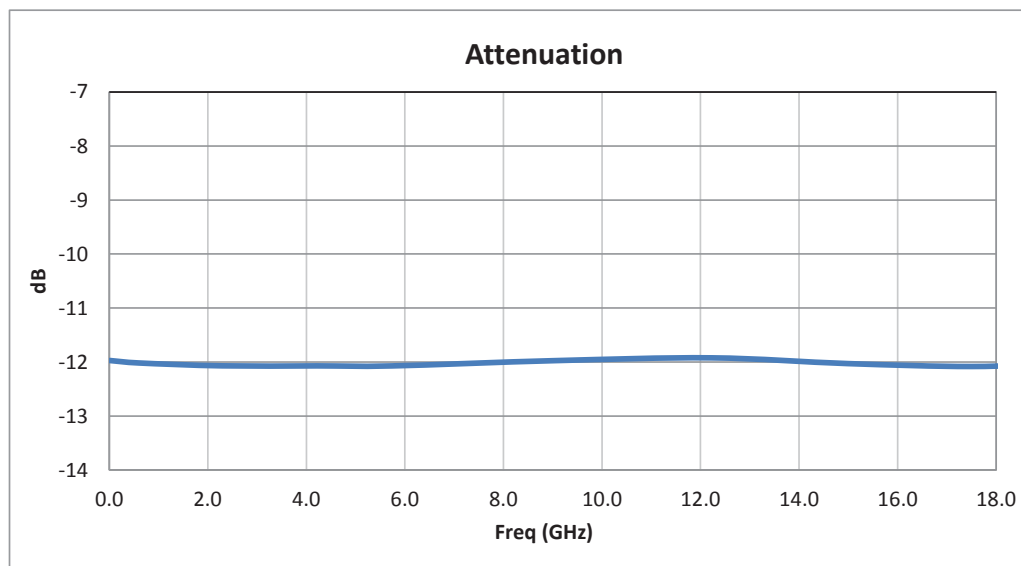
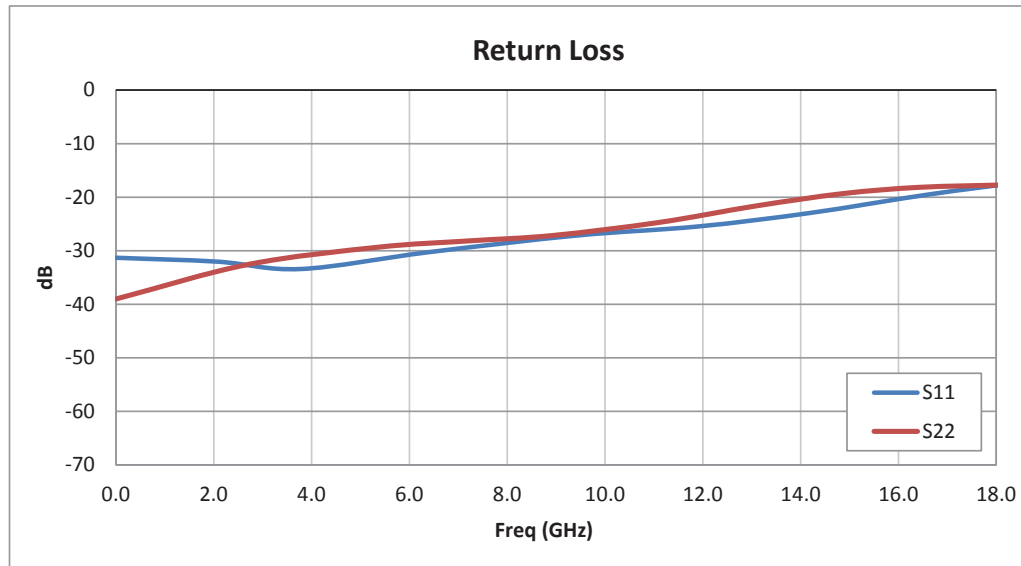
Notes:

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SA18H-12

Typical Performance Data



12 dB Fixed Attenuator SMA Male (Plug) to SMA Female (Jack) Up to 18 GHz Rated to 2 Watts, Passivated Stainless Steel Body, 1.35 VSWR



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12 dB Fixed Attenuator SMA Male (Plug) to SMA Female (Jack) Up to 18 GHz Rated to 2 Watts, Passivated Stainless Steel Body, 1.35 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.

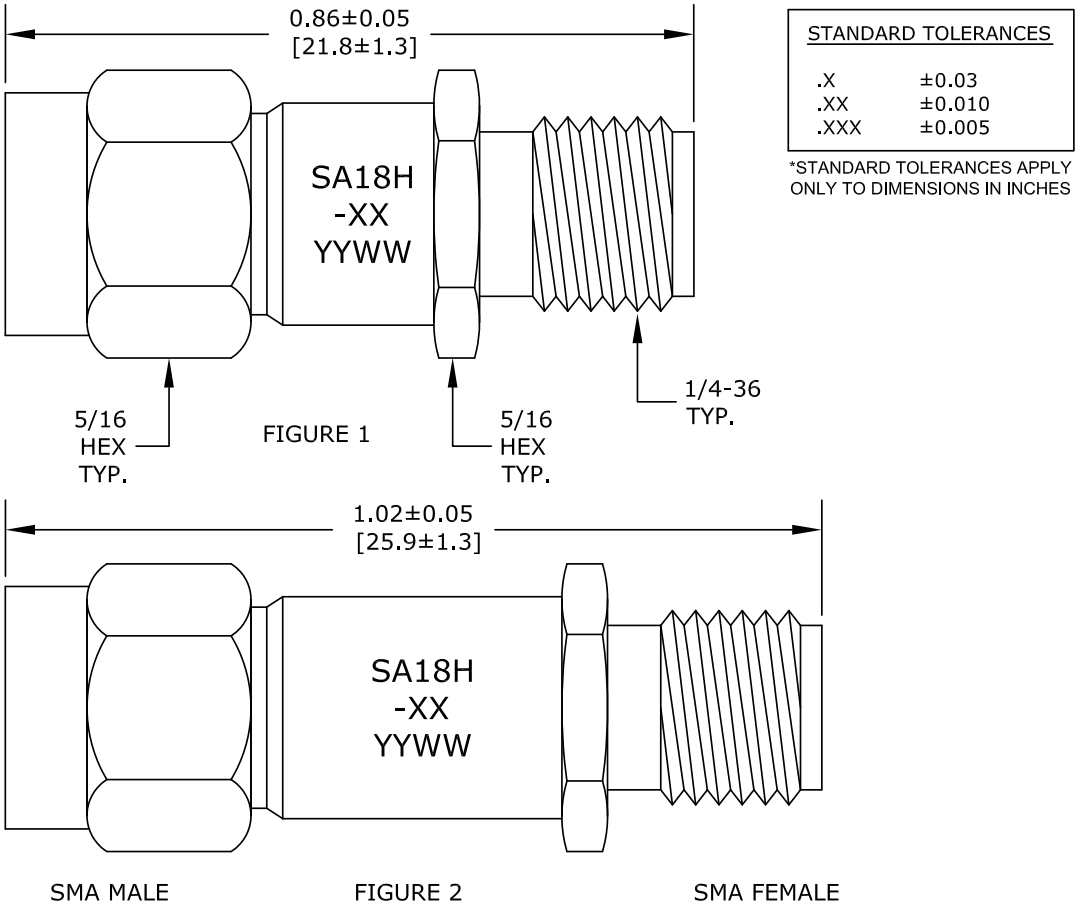
For additional information on this product, please click the following link: [12 dB Fixed Attenuator SMA Male \(Plug\) to SMA Female \(Jack\) Up to 18 GHz Rated to 2 Watts, Passivated Stainless Steel Body, 1.35 VSWR SA18H-12](https://www.fairviewmicrowave.com/12db-fixed-attenuator-sma-male-sma-female-2-watts-sa18h-12-p.aspx)

URL: <https://www.fairviewmicrowave.com/12db-fixed-attenuator-sma-male-sma-female-2-watts-sa18h-12-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.

SA18H-12 CAD Drawing

12 dB Fixed Attenuator SMA Male (Plug) to SMA Female (Jack) Up to 18 GHz
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| P/N | ATTEN. | FIGURE | P/N | ATTEN. | FIGURE | P/N | ATTEN. | FIGURE |
|----------|--------|--------|----------|--------|--------|----------|--------|--------|
| SA18H-00 | 0 dB | 1 | SA18H-08 | 8 dB | 1 | SA18H-16 | 16 dB | 2 |
| SA18H-01 | 1 dB | 1 | SA18H-09 | 9 dB | 1 | SA18H-17 | 17 dB | 2 |
| SA18H-02 | 2 dB | 1 | SA18H-10 | 10 dB | 1 | SA18H-18 | 18 dB | 2 |
| SA18H-03 | 3 dB | 1 | SA18H-11 | 11 dB | 1 | SA18H-19 | 19 dB | 2 |
| SA18H-04 | 4 dB | 1 | SA18H-12 | 12 dB | 1 | SA18H-20 | 20 dB | 2 |
| SA18H-05 | 5 dB | 1 | SA18H-13 | 13 dB | 2 | SA18H-25 | 25 dB | 2 |
| SA18H-06 | 6 dB | 1 | SA18H-14 | 14 dB | 2 | SA18H-30 | 30 dB | 2 |
| SA18H-07 | 7 dB | 1 | SA18H-15 | 15 dB | 2 | | | |

| | | | | | | | | | |
|--|--|--|--|--|---|--------|-----------|-------|------|
| 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 | | | | | DWG NO | | CAGE CODE | | |
| | | | | | SA18H | | 3FKR5 | | |
| | | | | | CAD FILE | 031516 | SHEET | SCALE | N/A |
| | | | | | | | SIZE | A | 3045 |