

3 dB Fixed Attenuator 1.85mm Male (Plug) to 1.85mm Female (Jack) Up to 65 GHz Rated to 1 Watt, Passivated Stainless Steel Body, 1.65 VSWR



SA6510-03

Features

- DC to 65 GHz Frequency Range
- Attenuation 3±1.5 dB
- Max Power 1 Watt (CW)
- VSWR < 1.65:1

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 SA6510-03 is a 3 dB Fixed Attenuator that operates from DC to 65 GHz and is rated to 1 Watt. The versatile coaxial package uses 1.85mm male to 1.85mm female connectors.

Electrical Specifications

| Description | Minimum | Typical | Maximum | Units |
|------------------------------------|---------|---------|---------|-------|
| Frequency Range | DC | | 65 | GHz |
| Impedance | | 50 | | Ohms |
| Nominal Attenuation | | 3 | | dB |
| VSWR | | | 1.65:1 | |
| Input Power, CW | | | 1 | Watt |
| derated linearly to 0.1W at +100°C | | | | |

Specifications by Frequency

| Description | F1 | F2 | F3 | F4 | F5 | Units |
|---------------------------|----------|----------|----------|----|----|-------|
| Frequency Range | DC to 18 | 18 to 40 | 40 to 65 | | | GHz |
| VSWR, Max | 1.35:1 | 1.55:1 | 1.65:1 | | | |
| Attenuation Accuracy, Typ | 1 | 1 | 1.5 | | | dB |

Mechanical Specifications

Size

| | |
|---------------------------|----------------------------|
| Length | 0.88 in [22.35 mm] |
| Width/Diameter | 0.312 in [7.92 mm] |
| Height | 0 in [0 mm] |
| Weight | 0.0164 lbs [7.44 g] |
| Body Material and Plating | Passivated Stainless Steel |

3 dB Fixed Attenuator 1.85mm Male (Plug) to 1.85mm Female (Jack) Up to 65 GHz Rated to 1 Watt, Passivated Stainless Steel Body, 1.65 VSWR



SA6510-03

Configuration

Design Fixed
Package Style Connectorized Module

Connectors

| Description | Connector 1 | Connector 2 |
|-----------------------------------|----------------------------|----------------------------|
| Type | 1.85mm Male | 1.85mm Female |
| Contact Material and Plating | Beryllium Copper, Gold | Beryllium Copper, Gold |
| Contact Plating Specification | MIL-PRF-39012 | MIL-PRF-39012 |
| Dielectric Type | Teflon | Teflon |
| Coupling Nut Material and Plating | Passivated Stainless Steel | |
| Body Material and Plating | Passivated Stainless Steel | Passivated Stainless Steel |

Environmental Specifications

Temperature

Operating Range -55 to +100 deg C

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

Plotted and Other Data

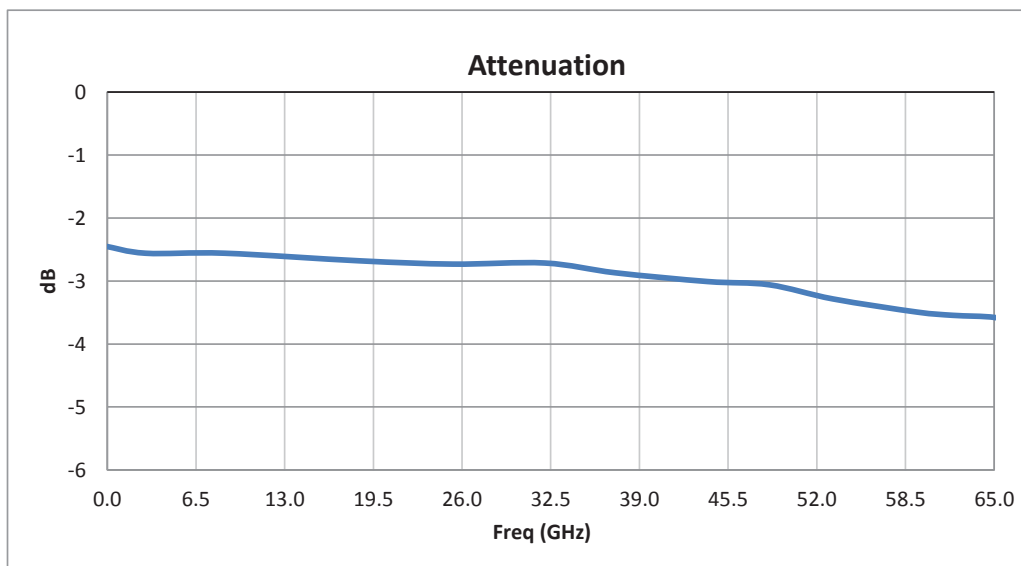
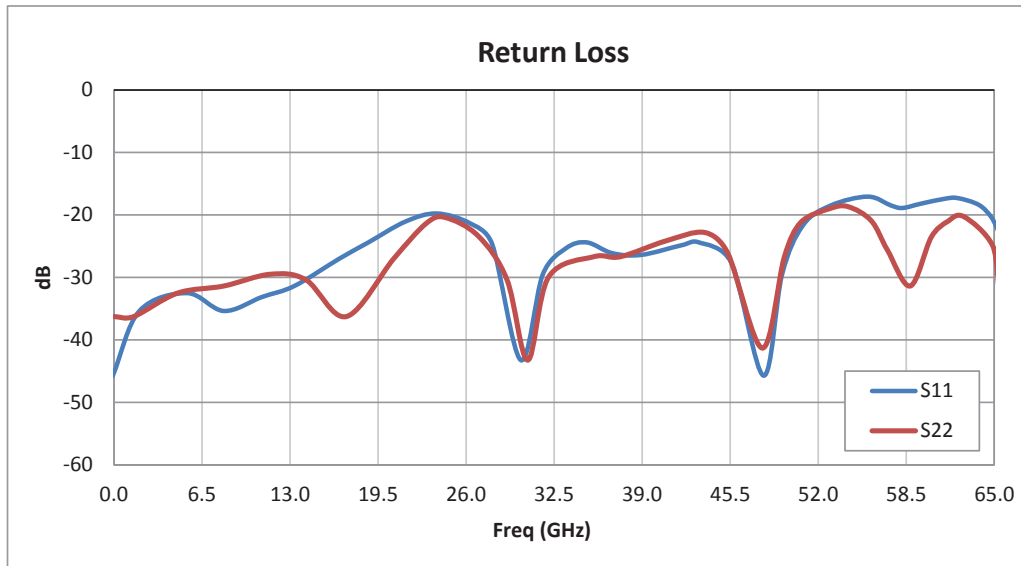
Notes:

3 dB Fixed Attenuator 1.85mm Male (Plug) to 1.85mm Female (Jack) Up to 65 GHz Rated to 1 Watt, Passivated Stainless Steel Body, 1.65 VSWR



SA6510-03

Typical Performance Data



3 dB Fixed Attenuator 1.85mm Male (Plug) to 1.85mm Female (Jack) Up to 65 GHz Rated to 1 Watt, Passivated Stainless Steel Body, 1.65 VSWR



SA6510-03

3 dB Fixed Attenuator 1.85mm Male (Plug) to 1.85mm Female (Jack) Up to 65 GHz Rated to 1 Watt, Passivated Stainless Steel Body, 1.65 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: [3 dB Fixed Attenuator 1.85mm Male \(Plug\) to 1.85mm Female \(Jack\) Up to 65 GHz Rated to 1 Watt, Passivated Stainless Steel Body, 1.65 VSWR SA6510-03](https://www.fairviewmicrowave.com/3db-fixed-attenuator-1.85mm-male-1.85mm-female-1-watt-sa6510-03-p.aspx)

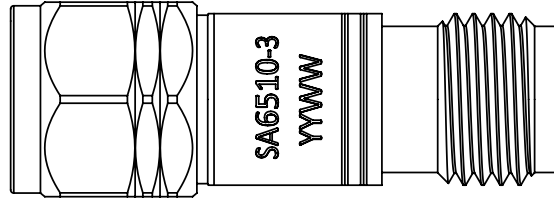
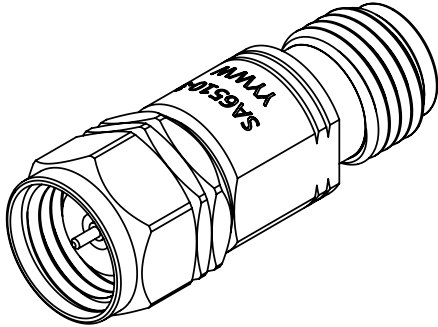
URL: <https://www.fairviewmicrowave.com/3db-fixed-attenuator-1.85mm-male-1.85mm-female-1-watt-sa6510-03-p.aspx>

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.

SA6510-03 CAD Drawing

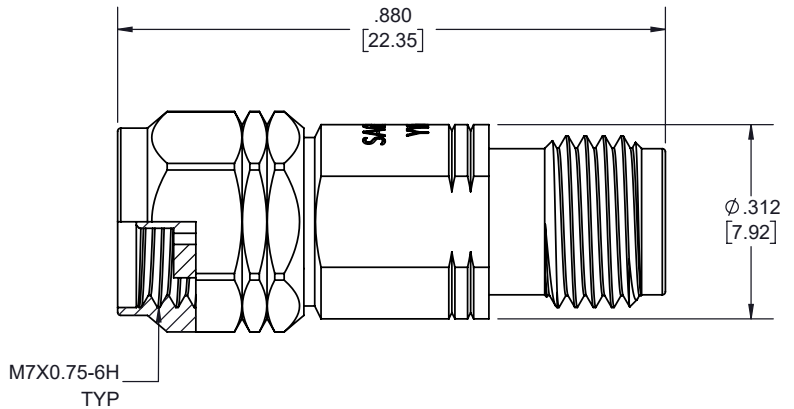
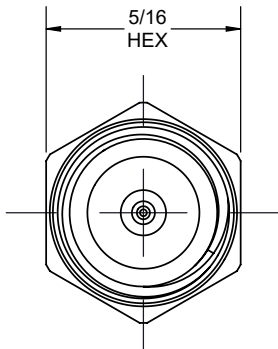
3 dB Fixed Attenuator 1.85mm Male (Plug) to 1.85mm Female (Jack) Up to 65 GHz
 Rated to 1 Watt, Passivated Stainless Steel Body, 1.65 VSWR

| REVISIONS | | | | |
|-----------|---------------------|----------|----------|---------|
| REV. | DESCRIPTION | DATE | APPROVED | |
| B | PE7403-10 SA6510-10 | 20220429 | 6/7/2022 | S. PONG |



1.85mm MALE

1.85mm FEMALE



THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.



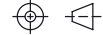
TITLE

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

TOLERANCES: FRACTIONS: CABLE LENGTH (L) TOLERANCES:

| | | |
|--------------------|-------------|---|
| .X = ±.2 [5.08] | FRACTIONS | L ≤ 12 [305] = +1 [25] / -0 |
| .XX = ±.02 [.51] | ± 1/32 | 12 [305] < L ≤ 60 [1524] = +2 [51] / -0 |
| .XXX = ±.005 [.13] | ANGLES ± 1° | 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



THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF FAIRVIEW MICROWAVE CORPORATION. ALL RIGHTS RESERVED.

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 | SA6510-3 | B |

T-Rev.D