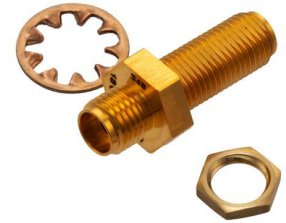


3 dB Fixed Attenuator Bulkhead for Cryogenic Application, 2.92mm female to 2.92mm Female, DC to 18 GHz Rated to 1 W Copper Gold Plated Body



FMAT7702-3

Features

- Cryogenic Operating Temperature Range -265.15 to 125Deg °C
- Bidirectional
- DC to 18 GHz Range
- Attenuation 3 +/- 0.75dB
- 1 Watt Average Input Power
- VSWR <1.35:1

Applications

- Quantum Computing
- Precision Measurements
- Instrumentation
- Prototyping and Characterization

Description

Fairview Microwave carries a wide range of fixed attenuators with a broad selection of attenuation levels, frequency ranges, and power dissipation ranges. RF microwave attenuators (also known as RF pads) lower the amplitude of a signal (attenuate) a known amount and can be used in a wide variety of applications. These attenuator pads are used when a signal needs to be reduced to protect measurement equipment or other circuitry, to extend the range of power meters and amplifiers, and to impedance match 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 3 dB Fixed Attenuator FMAT7702-3 is rated to 1 Watt and operates from DC to 18 GHz. The versatile coaxial package uses 2.92mm female to 2.92mm female connectors. The FMAT7702 series are specially designed and manufactured for cryogenic applications with RF performances guaranteed at 4 kelvin.

Electrical Specifications

| Description | Minimum | Typical | Maximum | Units |
|----------------------|---------|---------|---------|-------|
| Frequency Range | DC | | 18 | GHz |
| Impedance | | 50 | | Ohms |
| Nominal Attenuation | | 3 | | dB |
| Attenuation Accuracy | | | ±0.75 | dB |
| VSWR | | 1.25:1 | 1.35:1 | |
| Input Power, CW | | | 1 | Watt |

Mechanical Specifications

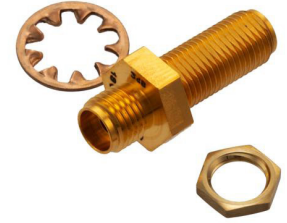
Size

| | |
|---------------------------|--------------------|
| Length | 0.93 in [23.62 mm] |
| Width/Diameter | 0.38 in [9.65 mm] |
| Height | 0.38 in [9.65 mm] |
| Weight | 0.03 lbs [13.61 g] |
| Body Material and Plating | Copper, Gold |

Configuration

| | |
|--------|----------------------|
| Design | Fixed, Bidirectional |
|--------|----------------------|

3 dB Fixed Attenuator Bulkhead for Cryogenic Application, 2.92mm female to 2.92mm Female, DC to 18 GHz Rated to 1 W Copper Gold Plated Body



FMAT7702-3

Connectors

| Description | Connector 1 | Connector 2 |
|------------------------------|------------------------|------------------------|
| Type | 2.92mm Female | 2.92mm Female |
| Contact Material and Plating | Beryllium Copper, Gold | Beryllium Copper, Gold |
| Torque | 7 in-lbs 0.79 Nm | 7 in-lbs 0.79 Nm |

Environmental Specifications

Temperature

Operating Range -269.15 to +125 deg C

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

Plotted and Other Data

Notes:

Typical Performance Data

3 dB Fixed Attenuator Bulkhead for Cryogenic Application, 2.92mm female to 2.92mm Female, DC to 18 GHz Rated to 1 W Copper Gold Plated 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.

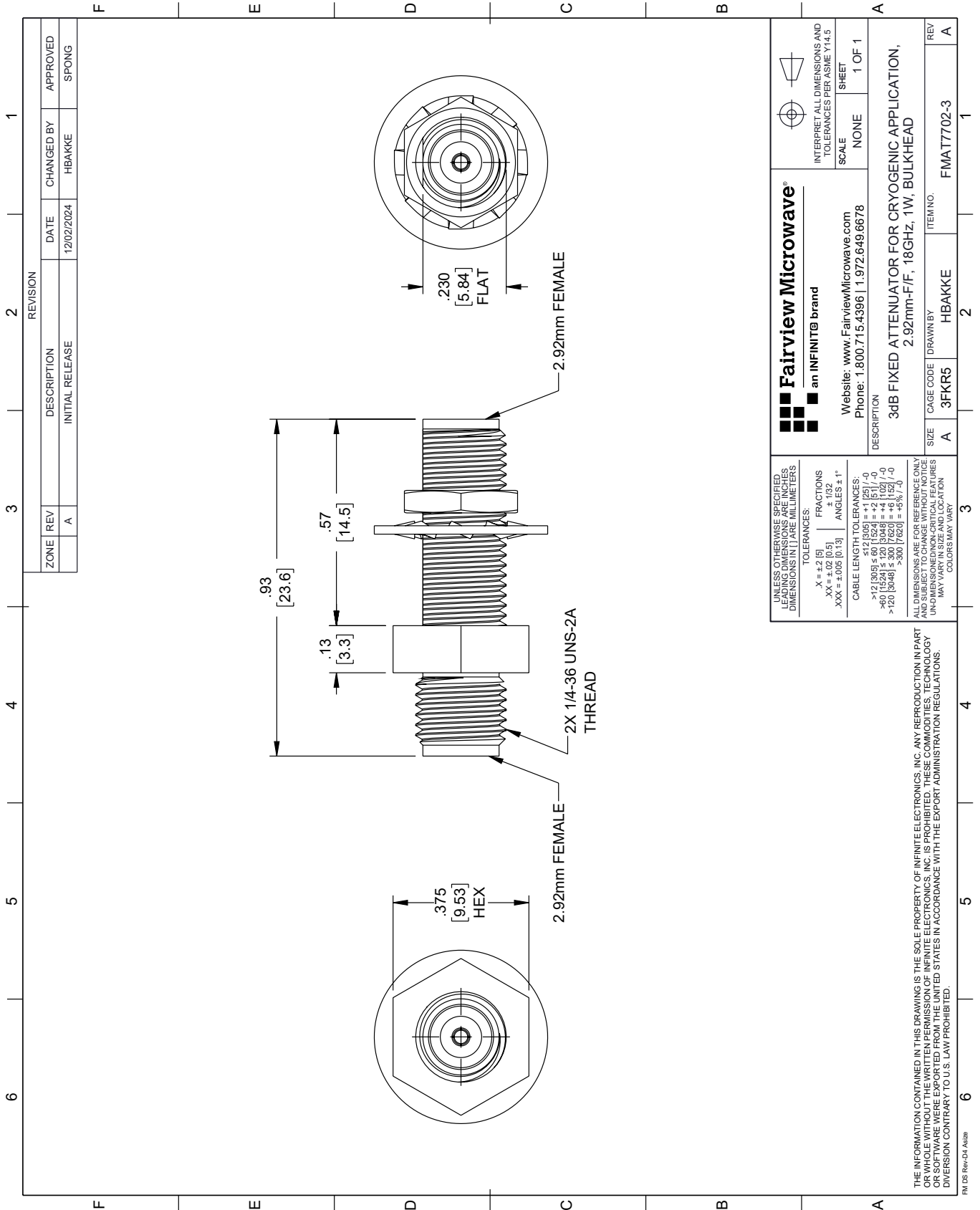
For additional information on this product, please click the following link: [3 dB Fixed Attenuator Bulkhead for Cryogenic Application, 2.92mm female to 2.92mm Female, DC to 18 GHz Rated to 1 W Copper Gold Plated Body FMAT7702-3](#)

URL: <https://www.fairviewmicrowave.com/3db-fixed-attenuator-2.92mm-female-2.92mm-female-1-watt-fmat7702-3-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.

FMAT7702-3 CAD Drawing

3 dB Fixed Attenuator Bulkhead for Cryogenic Application, 2.92mm female to 2.92mm Female, DC to 18 GHz Rated to 1 W Copper Gold Plated Body



| REVISION | | DATE | CHANGED BY | APPROVED | |
|----------|-----|-----------------|------------|------------|----------|
| ZONE | REV | DESCRIPTION | DATE | CHANGED BY | APPROVED |
| | A | INITIAL RELEASE | 12/02/2024 | HBAKKE | SPONG |

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Phone: 1.800.715.4396 | 1.972.649.6678

UNLESS OTHERWISE SPECIFIED, LEADING DIMENSIONS ARE IN INCHES AND DIMENSIONS IN [] ARE MILLIMETERS.

TOLERANCES:
 .X = ±.2 [5] FRACTIONS ± 1/32
 .XX = ±.02 [0.5] ANGLES ± 1°
 .XXX = ±.005 [0.13]

CABLE LENGTH TOLERANCES:
 >12 [305] ≤ 60 [1524] = ±.1 [25] / -0
 >60 [1524] ≤ 120 [3048] = ±.4 [102] / -0
 >120 [3048] ≤ 300 [7620] = ±.6 [15] / -0

ALL DIMENSIONS ARE FOR REFERENCE ONLY. UNDIMENSIONED NON-CRITICAL FEATURES MAY VARY IN SIZE AND LOCATION. COLORS MAY VARY.

INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5
SCALE NONE SHEET 1 OF 1

DESCRIPTION: 3dB FIXED ATTENUATOR FOR CRYOGENIC APPLICATION, 2.92mm-F/F, 18GHz, 1W, BULKHEAD

| | | | |
|------|-----------|----------|------------|
| SIZE | CAGE CODE | DRAWN BY | ITEM NO. |
| A | 3FKR5 | HBAKKE | FMAT7702-3 |

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FM DS Rev-D4 Alt2b