

6 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



**FMAT7702-6**

**Features**

- Cryogenic Operating Temperature Range -265.15 to 125Deg °C
- Bidirectional
- DC to 18 GHz Range
- Attenuation 6 +/- 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 6 dB Fixed Attenuator FMAT7702-6 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		6		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

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## FMAT7702-6

### 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

6 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.

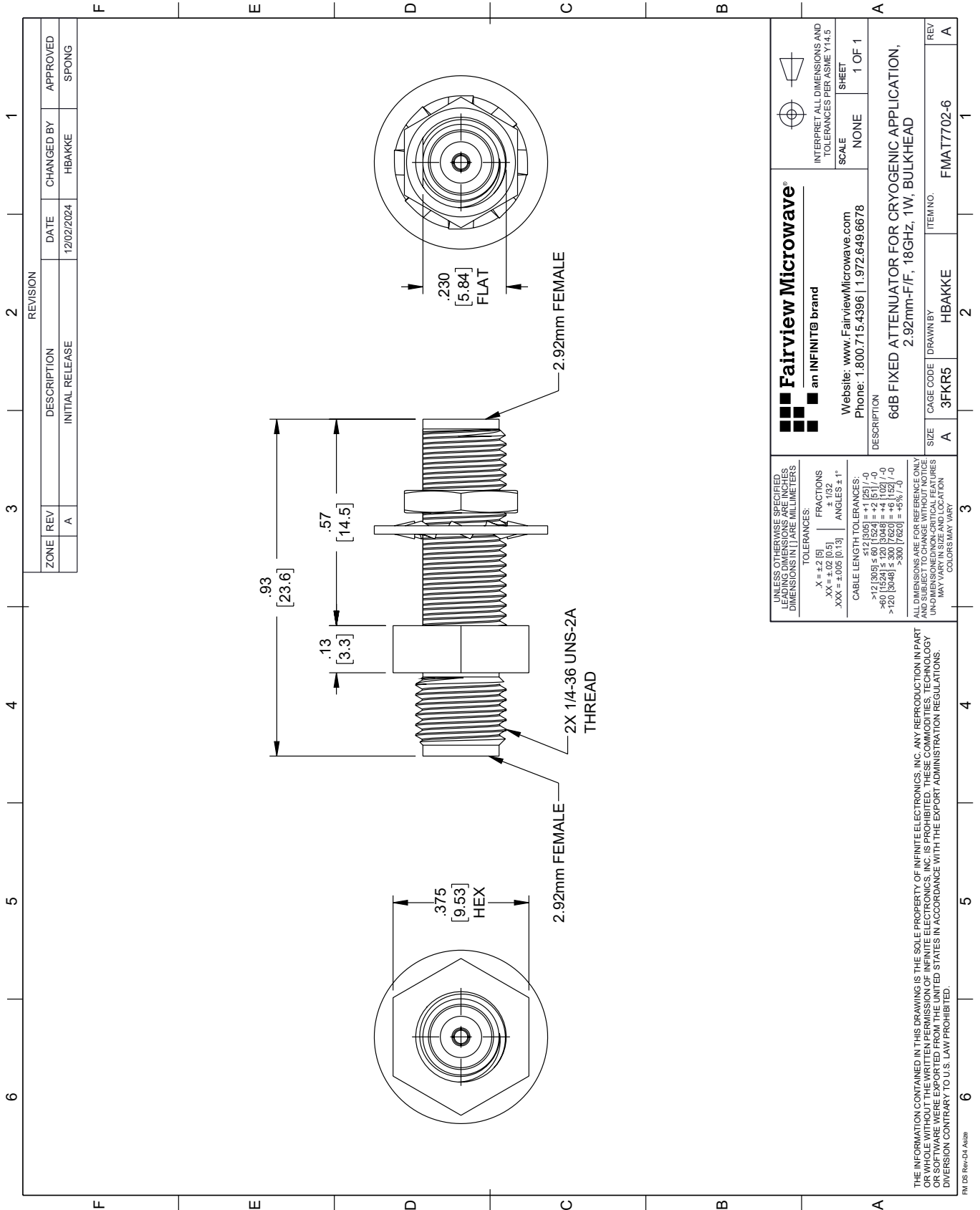
For additional information on this product, please click the following link: [6 dB Fixed Attenuator Bulkhead for Cryogenic Application, 2.92mm female to 2.92mm Female, DC to 18 GHz Rated to 1 W Copper Gold Plated Body FMAT7702-6](#)

URL: <https://www.fairviewmicrowave.com/6db-fixed-attenuator-2.92mm-female-2.92mm-female-1-watt-fmat7702-6-p.aspx>

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# FMAT7702-6 CAD Drawing

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

 <b>Fairview Microwave</b> an INFINIT® brand		Website: <a href="http://www.FairviewMicrowave.com">www.FairviewMicrowave.com</a> Phone: 1.800.715.4396   1.972.649.6678	INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5 SCALE: NONE SHEET: 1 OF 1
DESCRIPTION <b>6dB FIXED ATTENUATOR FOR CRYOGENIC APPLICATION, 2.92mm-F/F, 18GHz, 1W, BULKHEAD</b>			
SIZE	CAGE CODE	DRAWN BY	ITEM NO.
A	3FKR5	HBAKKE	FMAT7702-6

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] = ±5% / -0

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

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