

## 6 dB Fixed Attenuator, 1.0 mm Male to 1.0 mm Female Up to 110 GHz Rated to 0.2 Watts

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 FMAT7450-6 is rated to 0.2 Watts and operates from DC to 110 GHz. The versatile coaxial package uses 1.0 mm (W1) male to 1.0 mm (W1) female connectors.

### Electrical Specifications

| Description          | Min | Typ | Max   | Units |
|----------------------|-----|-----|-------|-------|
| Frequency Range      | DC  |     | 110   | GHz   |
| Impedance            |     | 50  |       | Ohms  |
| Nominal Attenuation  |     | 6   |       | dB    |
| Attenuation Accuracy |     |     | ±1.5  | dB    |
| VSWR                 |     |     | 1.9:1 |       |
| Input Power, CW      |     |     | 0.2   | Watts |

### Specifications by Frequency

| Description           | F1       | F2       | F3        | F4         | F5 | Units |
|-----------------------|----------|----------|-----------|------------|----|-------|
| Frequency Range       | DC to 15 | 15 to 50 | 50 to 105 | 105 to 110 |    | GHz   |
| VSWR, Max             | 1.2:1    | 1.4:1    | 1.7:1     | 1.9:1      |    |       |
| Attenuation Acc., Max | ±1       | ±1.5     | ±1.5      | ±1.5       |    | dB    |

### Mechanical Specifications

#### Size

|                |                    |
|----------------|--------------------|
| Length         | 1.1 in [27.94 mm]  |
| Width/Diameter | 0.433 in [11 mm]   |
| Height         | 0.433 in [11 mm]   |
| Weight         | 0.04 lbs [18.14 g] |

#### Configuration

|               |               |
|---------------|---------------|
| Design        | Fixed         |
| Package Style | Connectorized |

#### Connectors

| Description | Connector 1  | Connector 2 |
|-------------|--------------|-------------|
| Type        | 1.0mm Female | 1.0mm Male  |



### Features:

- DC to 110 GHz Frequency Range
- 1.0 mm (W1) Connectorized Design
- Attenuation 6 dB
- Max Power 0.2 Watts (CW)
- Typical VSWR of 1.4:1

### Applications:

- Instrumentation
- Precision Measurements
- Prototyping and Characterization
- Production Systems

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**Environmental Specifications**

**Temperature**

Operating Range +0 to +70 deg C  
Storage Range -55 to +125 deg C

Humidity 95% at 40 °C, 96 hours, Test 103B, Condition B  
Shock 100 Gn peak sawtooth, method 213, Condition B

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

**Plotted and Other Data**

Notes:

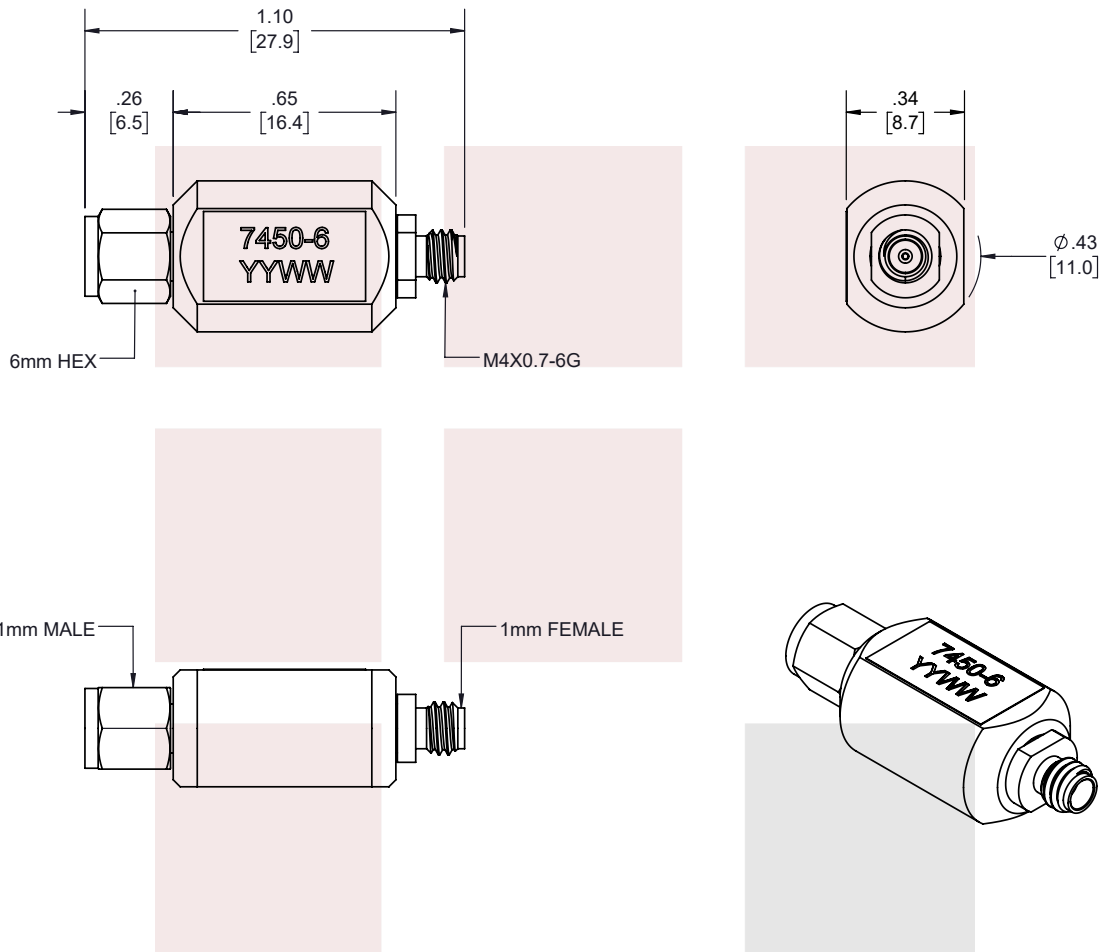
6 dB Fixed Attenuator, 1.0 mm Male to 1.0 mm Female Up to 110 GHz Rated to 0.2 Watts from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [6 dB Fixed Attenuator, 1.0 mm Male to 1.0 mm Female Up to 110 GHz Rated to 0.2 Watts FMAT7450-6](#)

URL: <https://www.fairviewmicrowave.com/6db-fixed-attenuator-1.0mm-female-1.0mm-male-0.2-watts-fmat7450-6-p.aspx>

The information contained in 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 any liability arising out of the use of any part or documentation.

| REVISIONS |                 |          |          |
|-----------|-----------------|----------|----------|
| REV.      | DESCRIPTION     | DATE     | APPROVED |
| A         | INITIAL RELEASE | 8/1/2022 | S. PONG  |



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

TOLERANCES: 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



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SHEET 1 OF 1

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

SCALE N/A

|           |                    |                    |                        |          |
|-----------|--------------------|--------------------|------------------------|----------|
| SIZE<br>A | CAGE CODE<br>3FKR5 | DRAWN BY<br>K.DANG | ITEM NO.<br>FMAT7450-6 | REV<br>A |
|-----------|--------------------|--------------------|------------------------|----------|

T-Rev.D