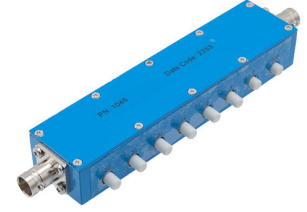


0 to 91 dB Step Attenuator 75 Ohm BNC Female  
To 75 Ohm BNC Female With 1 dB Step Rated To  
2 Watts Up To 2.5 GHz in a Push Button design



## FMAT1046

### Features

- 1, 2, 4, 8, 16, 20, 20, and 20 dB step buttons
- 0 to 91 dB Attenuation
- 7.5 Attenuation Accuracy Maximum
- BNC Female Connectors
- Maximum Power 2 Watts (CW)

### Applications

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

### Description

The FMAT1046 is a Step Attenuator that has 91 dB of total attenuation with 1, 2, 4, 8, 16, 20, 20, and 20 dB push button steps, designed across the frequency range of DC to 2.5 GHz. Select button for desired attenuation level, total attenuation is the sum of all buttons selected. The design is tried and true technology that offers exceptional performance characteristics that include 3 dB maximum insertion loss, and a maximum VSWR of 1.4:1. The design also features excellent attenuation accuracy with 7.5 dB maximum. The Nickel plated Brass package has BNC Female connectors, and operates within the temperature range of -20°C to 85°C.

### Electrical Specifications

| Description   | Minimum | Typical   | Maximum | Units |
|---|---------|---|---------|-------|
| Frequency Range                                     | DC      |   | 2.5     | GHz   |
| Impedance   |         | 75  |         | Ohms  |
| Insertion Loss                                      |         |   | 3       | dB    |
| Attenuation Value                                   |         | 0 to 91   |         | dB    |
| Step Size   |         | 1   |         | dB    |
| Step Type   |         | Push Button   |         |       |
| Accuracy Statement                                  |         | ±0.5dB (1,2,4,8 dB),<br>±1dB (16dB), ±1.5dB<br>(20dB) |         |       |
| Input Power (CW)                                    |         |   | 2       | Watts |
| Input Power, Peak<br>5 μs pulse width 2% duty cycle |         |   | 100     | Watts |
| VSWR  |         |   | 1.4:1   |       |

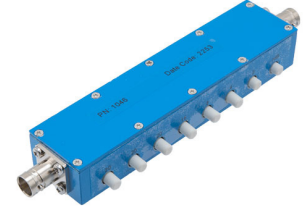
Electrical Specification Notes:  
Attenuation accuracy is by button

### Mechanical Specifications

#### Size

|                           |                      |
|---------------------------|----------------------|
| Length                    | 6.142 in [156.01 mm] |
| Width                     | 0.787 in [19.99 mm]  |
| Height                    | 1.398 in [35.51 mm]  |
| Weight                    | 0.19 lbs [86.18 g]   |
| Body Material and Plating | Aluminum, Paint      |

0 to 91 dB Step Attenuator 75 Ohm BNC Female To 75 Ohm BNC Female With 1 dB Step Rated To 2 Watts Up To 2.5 GHz in a Push Button design



## FMAT1046

### Connectors

| Description                  | Connector 1            | Connector 2            |
|------------------------------|------------------------|------------------------|
| Type                         | BNC Female             | BNC Female             |
| Contact Material and Plating | Beryllium Copper, Gold | Beryllium Copper, Gold |
| Body Material and Plating    | Brass, Nickel          | Brass, Nickel          |

### Environmental Specifications

#### Temperature

Operating Range -20 to 85 deg C

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

### Plotted and Other Data

Notes:

0 to 91 dB Step Attenuator 75 Ohm BNC Female To 75 Ohm BNC Female With 1 dB Step Rated To 2 Watts Up To 2.5 GHz in a Push Button design 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: [0 to 91 dB Step Attenuator 75 Ohm BNC Female To 75 Ohm BNC Female With 1 dB Step Rated To 2 Watts Up To 2.5 GHz in a Push Button design FMAT1046](#)

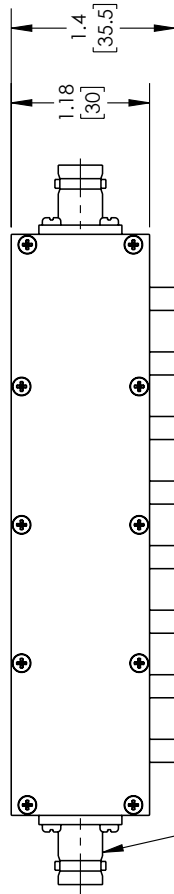
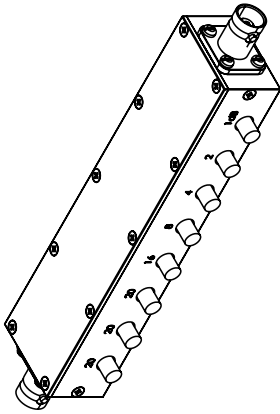
URL: <https://www.fairviewmicrowave.com/91db-step-attenuator-1db-bnc-female-dc-2.5-ghz-2-watts-fmat1046-p.aspx>

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.

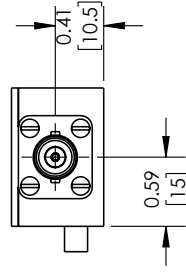
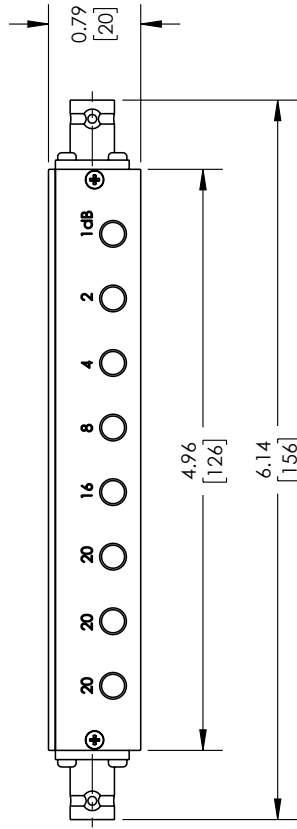
# FMAT1046 CAD Drawing

0 to 91 dB Step Attenuator 75 Ohm BNC Female To 75 Ohm BNC Female With  
1 dB Step Rated To 2 Watts Up To 2.5 GHz in a Push Button design

| REVISIONS |                 |          |
|-----------|-----------------|----------|
| REV.      | DESCRIPTION     | DATE     |
| A         | INITIAL RELEASE | 12/28/22 |
|           |                 | APPROVED |
|           |                 | SPONG    |



2X BNC FEMALE  
CONNECTOR



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TITLE

THIRD-ANGLE PROJECTION  
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DESIGN IN THIS DOCUMENT  
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SHEET 1 OF 1

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

TOLERANCES:  
FRACTIONS  
X ± .2 [5.08]  
XX ± .01 [0.25]  
XXX ± .005 [0.13]  
ANGLES ± 1°

CABLE LENGTH (L) TOLERANCES:  
L ≤ 12 [305] = ±1 [25] / -0  
12 [305] < L ≤ 60 [1524] = +2 [51] / -0  
60 [1524] < L ≤ 120 [3048] = +4 [102] / -0  
120 [3048] < L ≤ 300 [7620] = +6 [152] / -0  
300 [7620] < L = +5%L / -0

SCALE N/A

| SIZE | CAGE CODE | DRAWN BY  | ITEM NO. | REV. |
|------|-----------|-----------|----------|------|
| A    | 3FKR5     | VTHANGARA | FMAT1046 | A    |