

## 0 to 69dB Rotary Step Attenuator, N-type to N-type Female With 1 dB Step Rated to 2 Watts Up to 18GHz



### FMAT7446N-69

#### Features

- 1 dB steps from 0 to 69 dB Attenuation
- Rotary Dial Control
- N Female Connectors
- 0°C to +54°C Operating Temperature
- ±1.5 dB Typical Attenuation Accuracy

#### Applications

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

#### Description

The FMAT7446N-69 is a Step Attenuator that has 69 dB of total attenuation with 1 dB step size and rotary dial design across a frequency range from DC to 18 GHz. The design is tried and true technology that offers exceptional performance characteristics that include 1.5 dB maximum insertion loss, and a maximum VSWR of 1.75:1 at 18 GHz. The design also features excellent attenuation accuracy with ±1.5 dB typical at 18 GHz. The Aluminum package has N Female connectors, and operates within the temperature range of 0°C to 54°C.

#### Electrical Specifications

| Description   | Minimum | Typical | Maximum | Units |
|---|---------|---------|---------|-------|
| Frequency Range                                       | DC      |         | 18      | GHz   |
| Impedance   |         | 50      |         | Ohms  |
| Insertion Loss  |         |         | 1.5     | dB    |
| Attenuation Value                                     |         | 0 to 69 |         | dB    |
| Step Size   |         | 1       |         | dB    |
| Step Type   |         | Rotary  |         |       |
| Input Power (CW)                                      |         |         | 2       | Watts |
| Input Power, Peak<br>5μs Pulse Width, 0.5% Duty Cycle |         |         | 200     | Watts |
| VSWR  |         |         | 1.75:1  |       |

#### Specifications by Frequency

| Description          | F1       | F2 | F3 | F4 | F5 | Units |
|----------------------|----------|----|----|----|----|-------|
| Range                | DC to 18 |    |    |    |    | GHz   |
| Attenuation Accuracy | 1.5      |    |    |    |    | dB    |

Electrical Specification Notes:  
Attenuation Accuracy specification is ±2 dB for any attenuation above 50dB

#### Mechanical Specifications

##### Size

|        |                      |
|--------|----------------------|
| Length | 6.417 in [162.99 mm] |
| Width  | 4.173 in [105.99 mm] |
| Height | 3.268 in [83.01 mm]  |
| Weight | 4.7 lbs [2.13 kg]    |

## 0 to 69dB Rotary Step Attenuator, N-type to N-type Female With 1 dB Step Rated to 2 Watts Up to 18GHz



### FMAT7446N-69

#### Connectors

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

#### Environmental Specifications

##### Temperature

Operating Range 0 to 54 deg C

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

#### Plotted and Other Data

Notes:

0 to 69dB Rotary Step Attenuator, N-type to N-type Female With 1 dB Step Rated to 2 Watts Up to 18GHz 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 69dB Rotary Step Attenuator, N-type to N-type Female With 1 dB Step Rated to 2 Watts Up to 18GHz FMAT7446N-69](#)

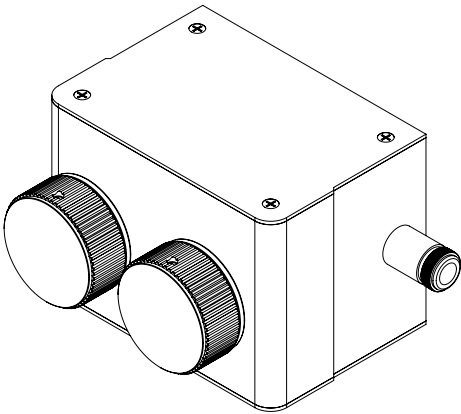
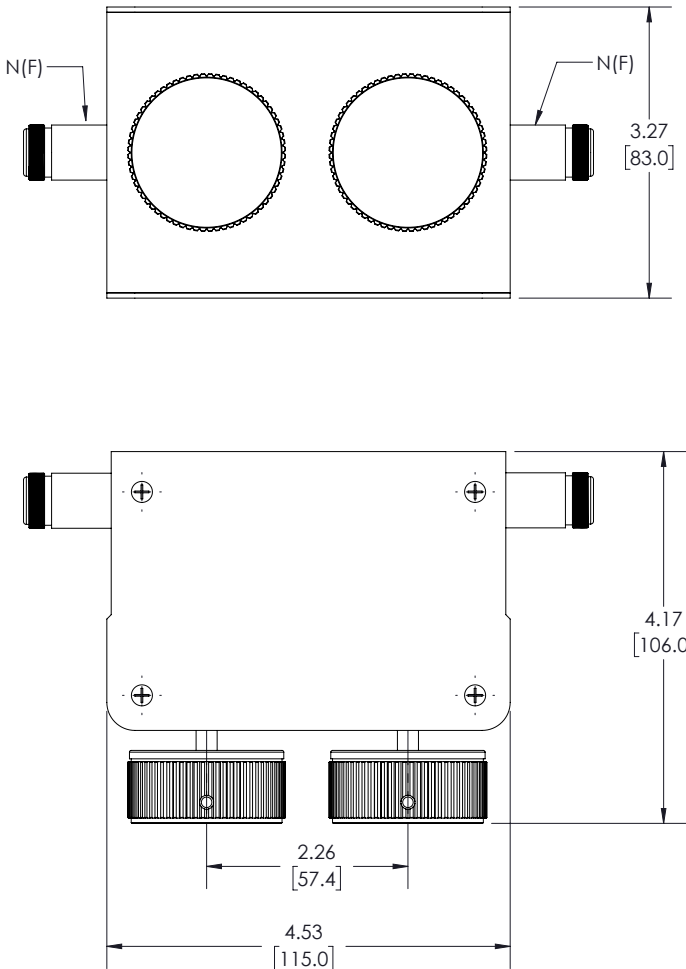
URL: <https://www.fairviewmicrowave.com/69db-step-attenuator-1db-n-female-dc-18-ghz-2-watts-fmat7446n-69-p.aspx>

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.

FMAT7446N-69 CAD Drawing

0 to 69dB Rotary Step Attenuator, N-type to N-type Female With 1 dB Step Rated to 2 Watts Up to 18GHz

| REVISIONS |                 |            |          |
|-----------|-----------------|------------|----------|
| REV.      | DESCRIPTION     | DATE       | APPROVED |
| A         | INITIAL RELEASE | 05/19/2022 | SPONG    |



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.



Fairview Microwave  
an INFINIT brand

TITLE

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

TOLERANCES:

.X = ±.02 [ .51 ]  
.XX = ±.005 [ .13 ]  
FRACTIONS  
± 1/32  
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

THIRD-ANGLE PROJECTION



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

SHEET 1 OF 1

SCALE N/A

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

| SIZE | CAGE CODE | DRAWN BY  | ITEM NO.     | REV |
|------|-----------|-----------|--------------|-----|
| A    | 3FKR5     | PSRINIVAS | FMAT7446N-69 | A   |

T-Rev.D