

## Hermetically Sealed Dual Junction Isolator 2.35GHz-2.4GHz



### Product Description

RFLI-316-1-2375M-H is a hermetically sealed dual junction isolator with a frequency range of 2.35 to 2.4GHz.

The isolator has a typical isolation of 55dB. The typical insertion loss is 0.5dB.

The isolator input and output connectors are SMA-Female.

### Features

- High power handling up to 60W
- Wide band operation
- High isolation within operational band
- Low Insertion Loss
- Stable performance over temperature
- High peak to average handling capability
- All specifications can be modified upon request

### Typical Applications

- Wireless Infrastructure
- Military and Aerospace Applications
- Test Instrumentation
- Radar Systems
- 5G Wireless Communications
- Microwave Radio Systems
- TR Modules
- Research and Development
- Cellular Base Stations

### Electrical Specifications ( $T_A=+25^{\circ}\text{C}$ )

| Parameter                 | Min.                               | Typ.       | Max. | Units    |
|---------------------------|------------------------------------|------------|------|----------|
| Frequency Range           | 2.35                               |            | 2.4  | GHz      |
| Insertion Loss            |                                    | 0.5        | 0.7  | dB       |
| Isolation                 | 48                                 | 55         |      | dB       |
| VSWR                      |                                    | 1.15       | 1.25 | :1       |
| Forward Power (CW)        |                                    |            | 60   | W        |
| Reverse Power (CW)        |                                    |            | 10   | W        |
| Rotation                  |                                    | Clockwise  |      |          |
| Input / Output Connectors |                                    | SMA-Female |      |          |
| Weight                    |                                    | 0.289 Max. |      | lbs      |
| Impedance                 |                                    | 50         |      | $\Omega$ |
| Package                   | Hermetically Sealed (Laser Welded) |            |      |          |

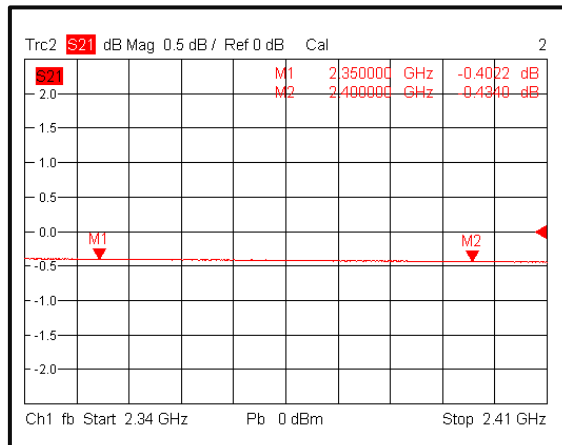
## Environmental Specifications and Test Standards

| Parameter                         | Description                                                                                                                                                                                                     |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operational Temperature           | -20°C to +70°C<br>(Case Temperature)                                                                                                                                                                            |
| Storage Temperature               | -40°C to +85°C                                                                                                                                                                                                  |
| Thermal Shock                     | -10°C → +60°C<br>(5 Cycles / 10 hours)                                                                                                                                                                          |
| **Random Vibration                | MIL-STD-202G<br>Table 214-I, Test Condition Letter C<br>1.5 Hours Per Axis                                                                                                                                      |
| Shock                             | 1. Weight >20g, 50g half sine wave for 11ms, Speed variation 3.44m/s<br>2. Weight <=20g, 100g Half sine wave for 6ms, Speed variation 3.75m/s<br>3. Total 18 times (6 directions, 3 repetitions per direction). |
| Altitude                          | Standard: 30,000 Ft (Epoxy Sealed Controlled Environment)<br>Optional: Hermetically Sealed (60,000 ft. 1.0 PSI min)                                                                                             |
| Hermetically Sealed<br>(Optional) | MIL-STD-883 (For Hermetically Sealed Units)                                                                                                                                                                     |

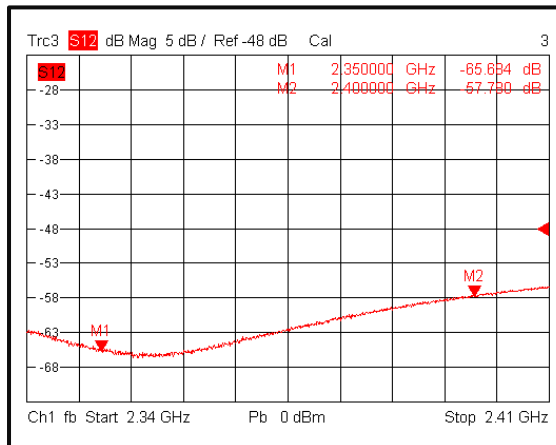
\*\*For vibration testing details please see additional information section.

Typical Performance Plots

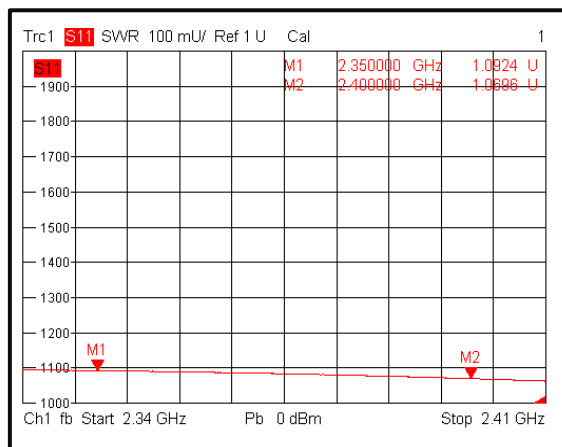
Insertion Loss



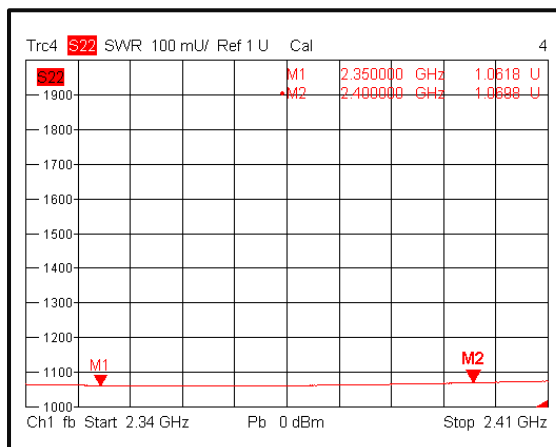
Isolation



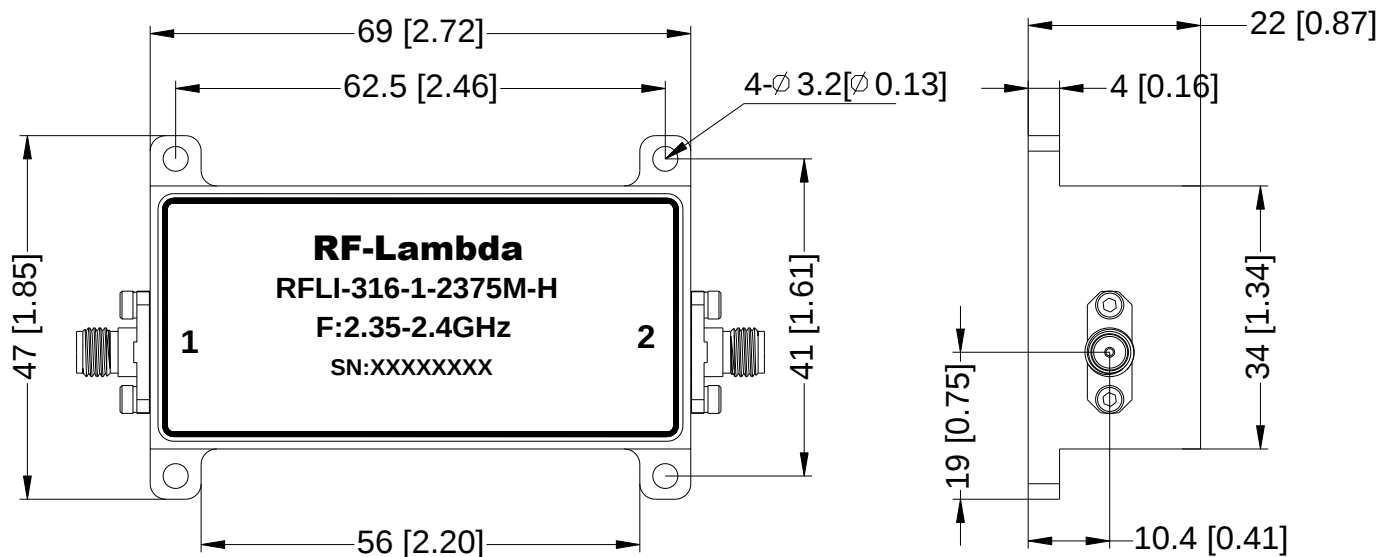
VSWR 1



VSWR 2

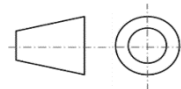


## Outline Drawing



### Notes:

1. Package Material: Aluminum
2. Finish: Nickel Plated
3. All dimensions are in millimeters [inches].
4. Outline Tolerances  $\pm 0.5$  [0.02], Mounting Hole Tolerances  $\pm 0.2$  [0.008] unless otherwise specified.
5. Standard torque wrench must be used to secure RF connectors.



### Additional Information

#### Documentation

Connector Torque Specifications

[https://www.rflambda.com/pdf/Torque\\_Specifications.pdf](https://www.rflambda.com/pdf/Torque_Specifications.pdf)

Random Vibration Test Standard

[https://www.rflambda.com/pdf/rflambda\\_random\\_vibration\\_MIL-STD-202G.pdf](https://www.rflambda.com/pdf/rflambda_random_vibration_MIL-STD-202G.pdf)

#### Webpage

Ordering Information

| Part Number        | Modification | Description                                                          |
|--------------------|--------------|----------------------------------------------------------------------|
| RFLI-316-1-2375M-H | Standard     | 2.35GHz-2.4GHz Hermetically Sealed<br>Dual Junction Coaxial Isolator |

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