

## Wide Band Coaxial Isolator 8GHz-12GHz



### Product Description

RFLI601G08G12 is an ultra wide band coaxial isolator with a frequency range of 8 to 12GHz.

The isolator has a typical isolation of 21dB. The maximum insertion loss is 0.5dB. The isolator has good isolation performance.

The isolator input and output connectors are SMA-Female.

### Features

- High power handling up to 10W
- 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           |      | 8-12       |      | GHz      |
| Insertion Loss            |      | 0.40       | 0.50 | dB       |
| Isolation                 | 20   | 21         |      | dB       |
| VSWR                      |      | 1.30       | 1.35 | :1       |
| Forward Power (CW)        |      |            | 10   | W        |
| Reverse Power (CW)        |      |            | 1    | W        |
| Rotation                  |      | Clockwise  |      |          |
| Input / Output Connectors |      | SMA-Female |      |          |
| Weight                    |      | 0.05       |      | lbs      |
| Impedance                 |      | 50         |      | $\Omega$ |

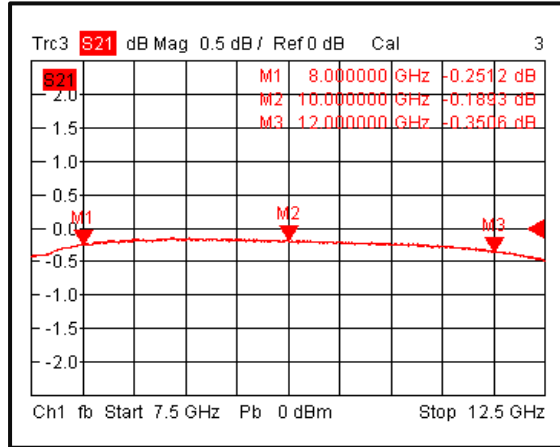
**Environmental Specifications and Test Standards**

| Parameter                         | Description   |
|-----------------------------------|---|
| Operational Temperature           | -20°C to +70°C<br>(Case Temperature)  |
| Storage Temperature               | -40°C to +85°C  |
| Thermal Shock                     | -20°C → +70°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)   |

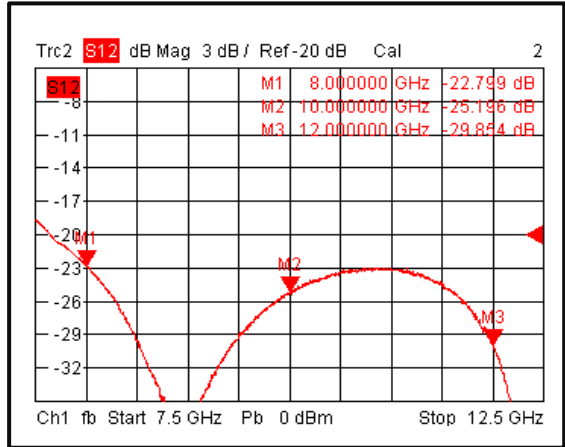
\*\*For vibration testing details please see additional information section.

Typical Performance Plots

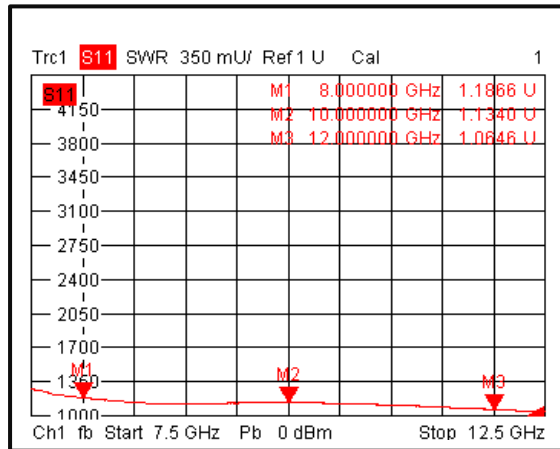
Insertion Loss



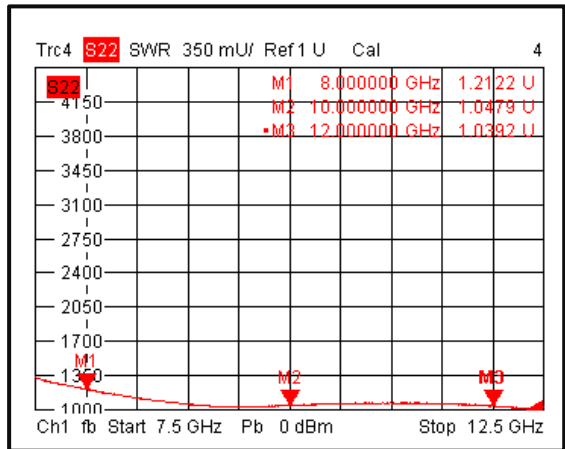
Isolation



VSWR 1

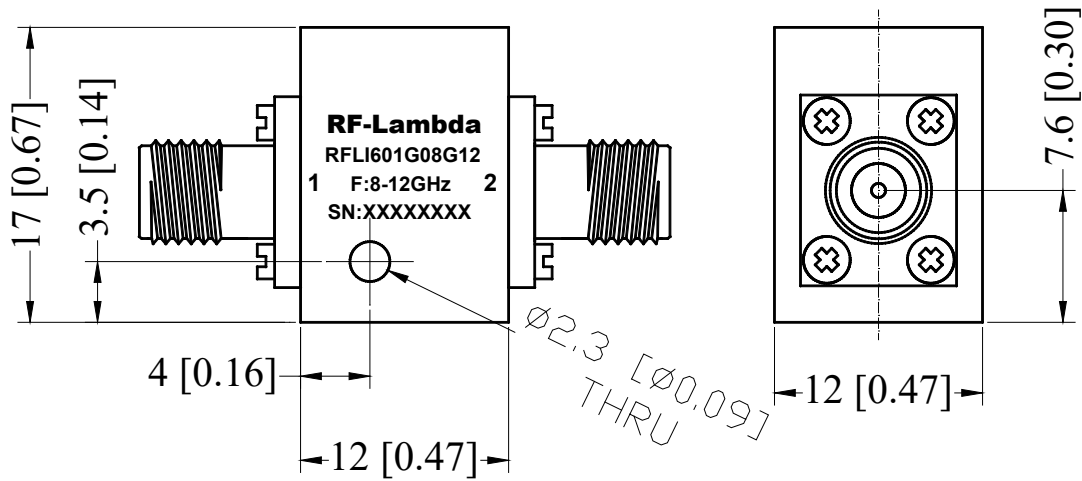


VSWR2



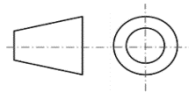
**Outline Drawing**

All dimensions are in millimeters [inches]



Notes:

1. Package Material: Aluminum alloy
2. Finish : Nickel Plated
3. All dimensions are in millimeters [inches]
4. Tolerance  $\pm 0.25(0.01)$ , unless otherwise specified.



Additional Information

| Documentation                   | Webpage   |
|---------------------------------|---|
| Connector Torque Specifications | <a href="https://www.rflambda.com/pdf/Torque_Specifications.pdf">https://www.rflambda.com/pdf/Torque_Specifications.pdf</a>                                   |
| Random Vibration Test Standard  | <a href="https://www.rflambda.com/pdf/rflambda_random_vibration_MIL-STD-202G.pdf">https://www.rflambda.com/pdf/rflambda_random_vibration_MIL-STD-202G.pdf</a> |

**Ordering Information**

| Part Number    | Modification            | Description              |
|----------------|-------------------------|--------------------------|
| RFLI601G08G12  | connectors SMA-Female   | 8-12GHz Coaxial Isolator |
| RFLI601G08G12W | connectors 2.4mm-Female | 8-12GHz Coaxial Isolator |

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