

## Wide Band Dual Junction Coaxial Isolator 8GHz-10GHz



### Product Description

RFLI603G08G10S is a wide band dual junction coaxial isolator with a frequency range of 8 to 10GHz.

The isolator has a typical isolation of 41dB. The typical insertion loss is 0.9dB.

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           |      | 8~10                                 |      | GHz      |
| Insertion Loss            |      | 0.9                                  | 1.0  | dB       |
| Isolation                 | 40   | 41                                   |      | dB       |
| VSWR                      |      | 1.2                                  | 1.25 | :1       |
| Forward Power             |      |                                      | 10   | W        |
| Reverse Power             |      |                                      | 2    | W        |
| Rotation                  |      | Clockwise                            |      |          |
| Input / Output Connectors |      | SMA-Female(Input)-SMA-Female(Output) |      |          |
| Weight                    |      | 0.05 Max.                            |      | lbs      |
| Impedance                 |      | 50                                   |      | $\Omega$ |

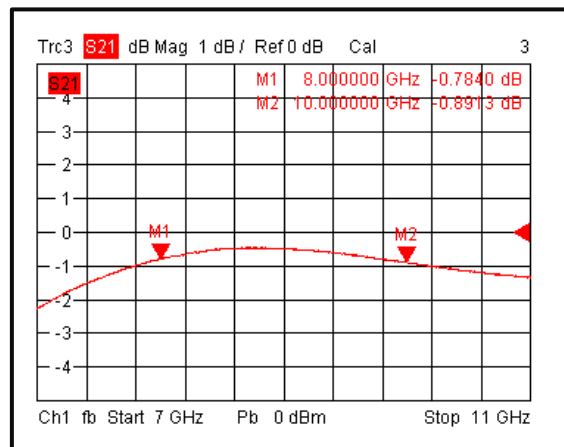
## Environmental Specifications and Test Standards

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

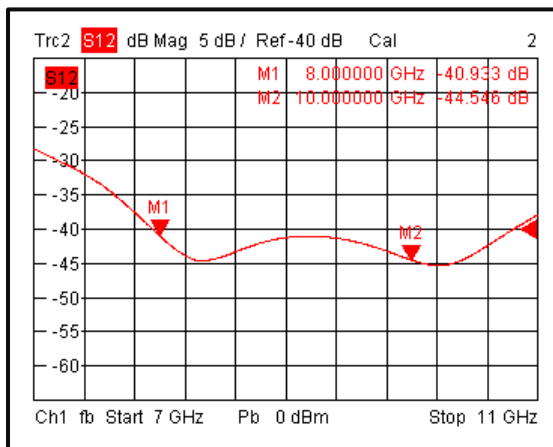
\*\*For vibration testing details please see additional information section.

Typical Performance Plots

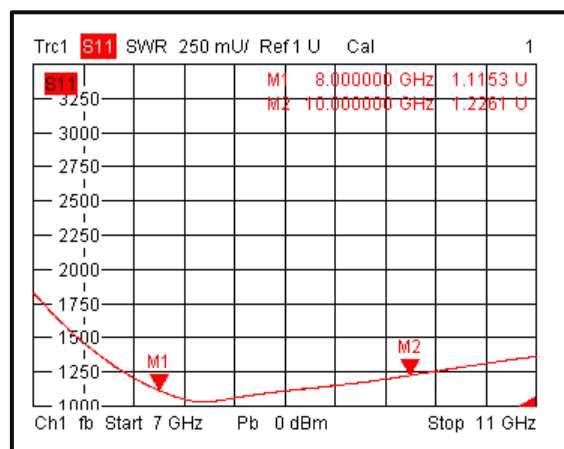
Insertion Loss



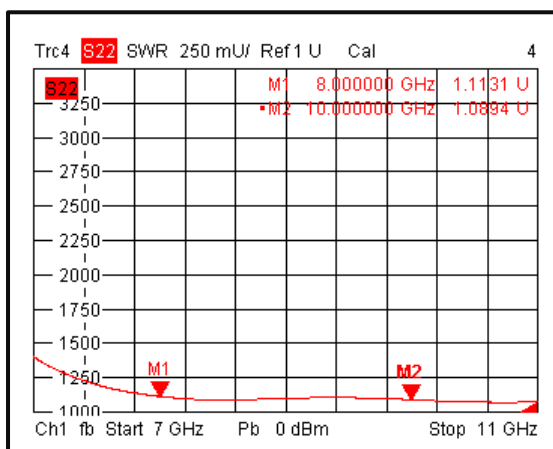
Isolation



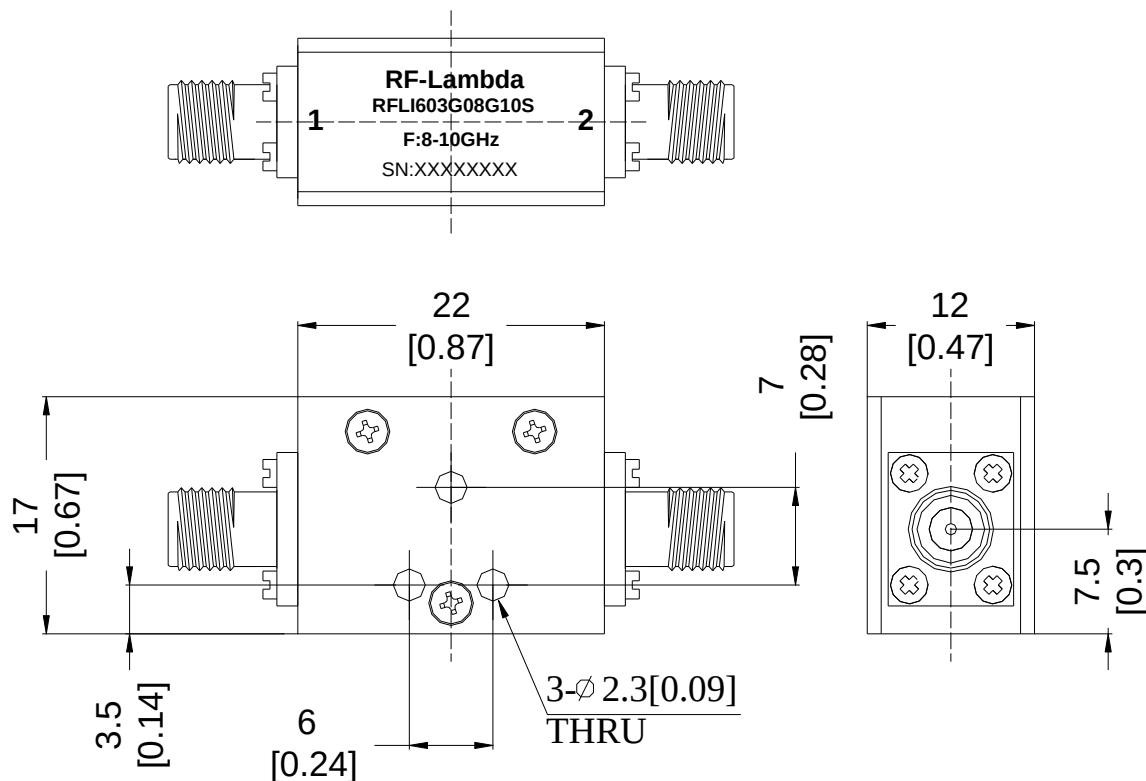
VSWR 1



VSWR2

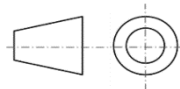


Outline Drawing



Notes:

1. Package Material: Aluminum Alloy
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                 |
|----------------|--------------|-----------------------------|
| RFLI603G08G10S | Standard     | 8GHz-10GHz Coaxial Isolator |

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