

## Ultra Wide Band Coaxial Isolator 1.7GHz - 2.5GHz



### Product Description

RFLI316G17G25 is an ultra wide band coaxial isolator with a frequency range of 1.7 to 2.5GHz.

The Isolator has a typical isolation of 40dB. The maximum insertion loss is 1.0dB.

The operating temperature of this product is from -20 to +70°C

### Features

- High power handling up to 30W
- Wide band operation
- High isolation within operational band
- Low Insertion Loss

### 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

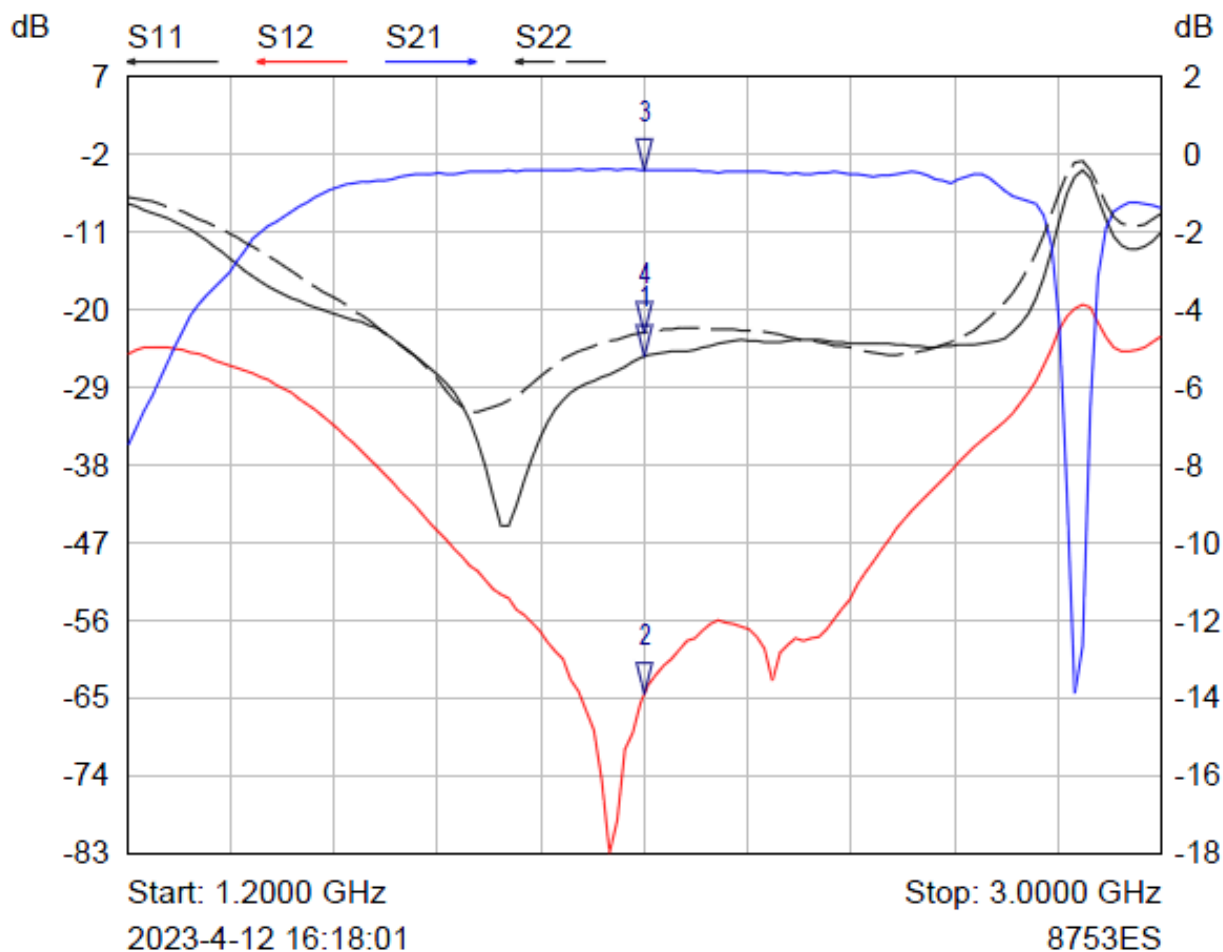
### Electrical Specifications(T<sub>A</sub>=25°C)

| Parameter          | Min | Typ                                                      | Max  | Units |
|--------------------|-----|----------------------------------------------------------|------|-------|
| Frequency Range    |     | 1.7 – 2.5                                                |      | GHz   |
| Insertion Loss     |     |                                                          | 1    | dB    |
| Reverse Isolation  | 40  |                                                          |      | dB    |
| VSWR               |     |                                                          | 1.25 | :1    |
| Forward Power (CW) |     |                                                          | 30   | W     |
| Reverse Power (CW) |     |                                                          | 10   | W     |
| Rotation           |     | Clockwise (Standard)<br>Counter Clockwise (upon request) |      |       |
| Connectors         |     | RFLI316G17G25S – SMA-Female<br>RFLI316G17G25N – N-Female |      |       |
| Impedance          |     | 50                                                       |      | Ω     |

## 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)                                                                                                                                                                     |

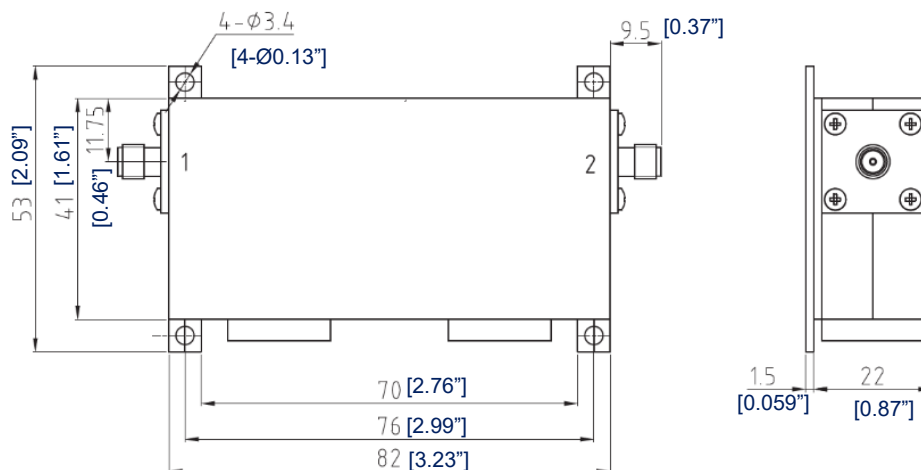
Typical Performance Plots



| Mkr | Trace | X-Axis     | Value     | Notes |
|-----|-------|------------|-----------|-------|
| 1 ▽ | S11   | 2.1000 GHz | -25.44 dB |       |
| 2 ▽ | S12   | 2.1000 GHz | -64.58 dB |       |
| 3 ▽ | S21   | 2.1000 GHz | -0.40 dB  |       |
| 4 ▽ | S22   | 2.1000 GHz | -22.56 dB |       |

**Outline Drawing**

SMA Version Shown



Notes:

1. Package Material: Iron
2. Finish: Nickel Plated
3. All dimensions are in millimeters [inches].
4. Standard torque wrench must be used to secure RF connectors.

Additional Information

| Documentation                   | Webpage                                                                                                                                                       |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ESD Policy                      | <a href="https://rflambda.com/pdf/rflambda_esd_control.pdf">https://rflambda.com/pdf/rflambda_esd_control.pdf</a>                                             |
| 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                    |
|----------------|-----------------------|--------------------------------|
| RFLI316G17G25S | Connectors SMA-Female | 1.7GHz-2.5GHz Coaxial Isolator |
| RFLI316G17G25N | Connectors N-Female   | 1.7GHz-2.5GHz Coaxial Isolator |

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