

Wide Band Coaxial Isolator 500MHz - 700MHz



Product Description

The RFLI101M50M70 is a wide band coaxial Isolator with a frequency range of 500 to 700MHz.

The Isolator has a typical isolation of 18dB. The maximum insertion loss is 0.5dB.

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

Features

- High power handling up to 50W
- 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

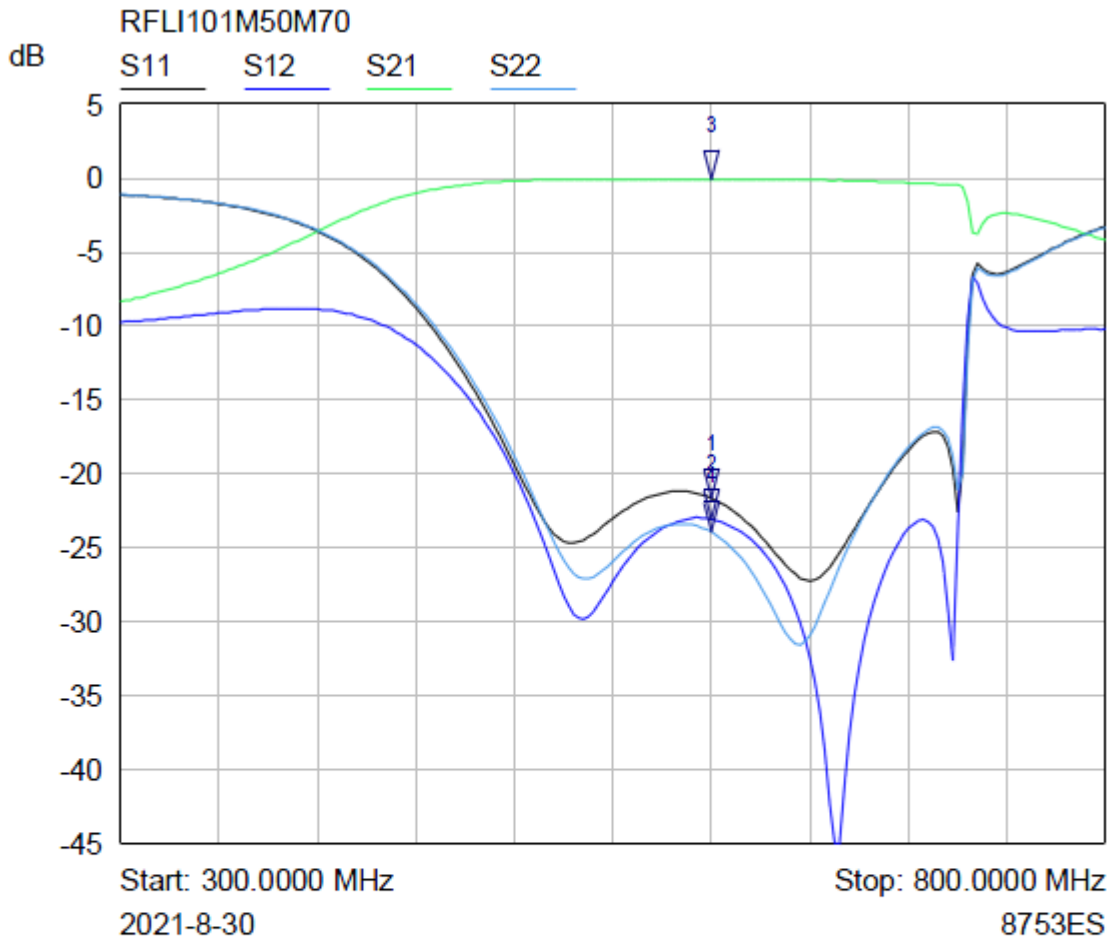
Electrical Specifications(T_A=25°C)

| Parameter | Min | Typ | Max | Units |
|---------------------------|-----|------------|------|--------|
| Frequency Range | | 500-700 | | MHz |
| Insertion Loss | | 0.40 | 0.5 | dB |
| Isolation | 18 | 20 | | dB |
| VSWR | | 1.23 | 1.33 | :1 |
| Forward Power (CW) | | | 50 | W |
| Reverse Power (CW) | | | 10 | W |
| Rotation | | Clockwise | | |
| Input / Output Connectors | | SMA-Female | | |
| Weight | | 8.47 | | Ounces |
| Impedance | | 50 | | Ω |

Environmental Specifications and Test Standards

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

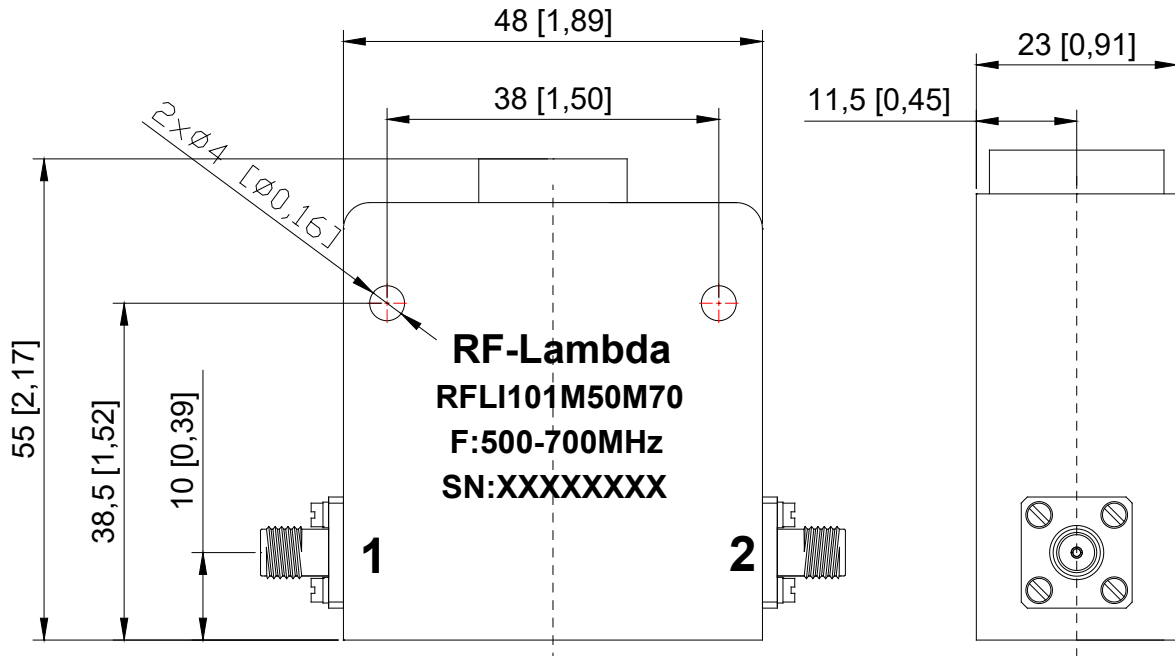
Typical Performance Plots



| Mkr | Trace | X-Axis | Value |
|-----|-------|--------------|-----------|
| 1 ▾ | S11 | 600.0000 MHz | -21.68 dB |
| 2 ▾ | S12 | 600.0000 MHz | -23.09 dB |
| 3 ▾ | S21 | 600.0000 MHz | -0.11 dB |
| 4 ▾ | S22 | 600.0000 MHz | -23.95 dB |

SN:161001

Outline Drawing



Notes:

1. Package Material: Aluminum Alloy / Copper
2. Plating: Nickel
3. All dimensions are in millimeters [inches].

Additional Information

| Documentation | Webpage |
|---------------------------------|---|
| ESD Policy | https://rflambda.com/pdf/rflambda_esd_control.pdf |
| Connector Torque Specifications | https://www.rflambda.com/pdf/Torque_Specifications.pdf |
| Random Vibration Test Standard | https://www.rflambda.com/pdf/rflambda_random_vibration_MIL-STD-202G.pdf |

Ordering Information

| Part Number | Modification | Description |
|---------------|-----------------------|--------------------------------|
| RFLI101M50M70 | SMA Female Connectors | 500MHz-700MHz Coaxial Isolator |

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