

Wide Band Coaxial Isolator 450MHz-550MHz



Note: Photo is for illustration only.
Please refer to the outline drawing.

Product Description

RFLI101M450M550 is a wide band coaxial isolator with a frequency range of 450 to 550MHz.

The isolator has a minimum isolation of 20dB. The maximum insertion loss is 0.5dB.

The isolator input and output connectors are SMA-Female and N-Female.

Features

- High power handling up to 10W
- High isolation within operational band
- Low Insertion Loss
- Stable performance over temperature

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

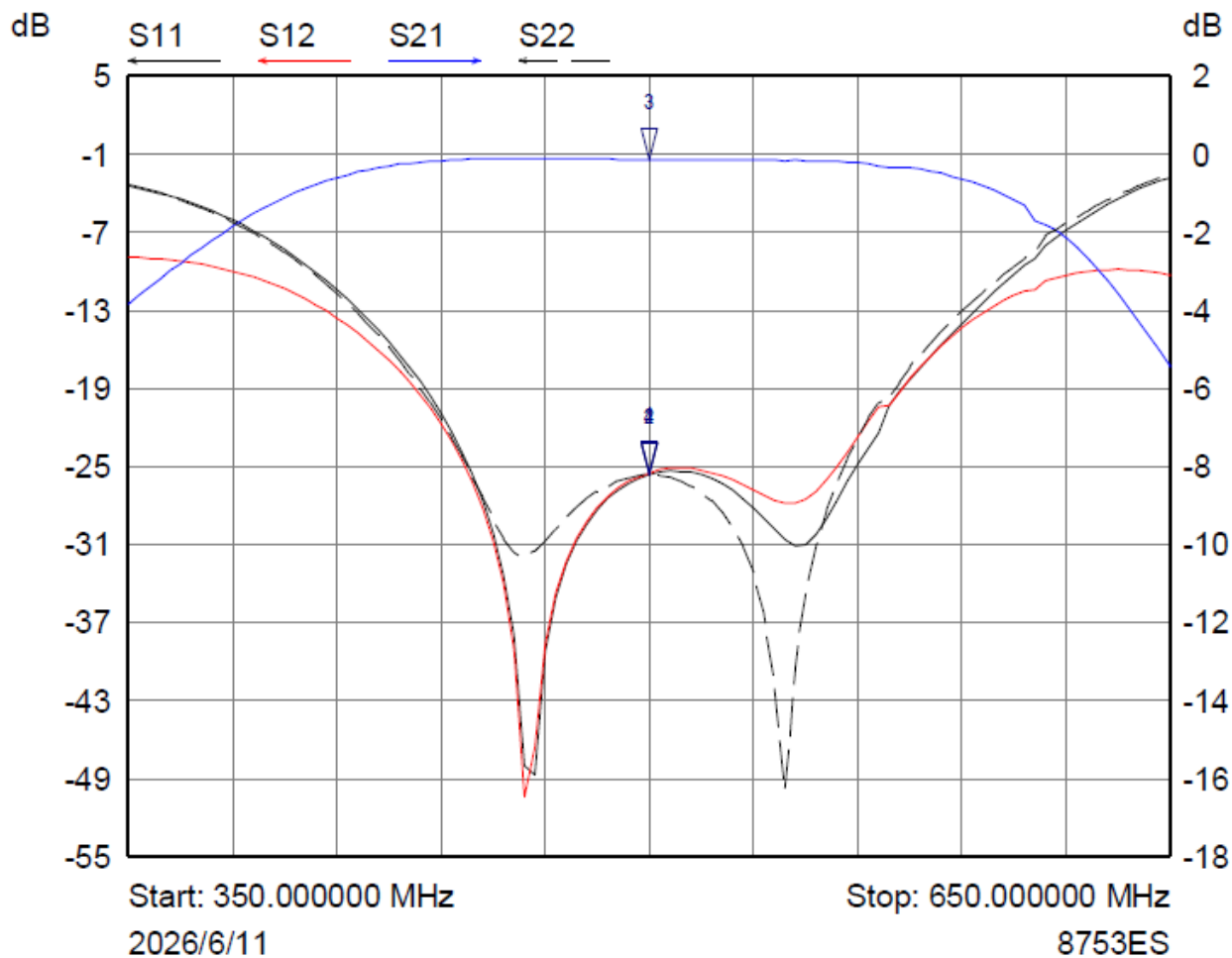
Parameter	Min.	Typ.	Max.	Units
Frequency Range	450		550	MHz
Insertion Loss			0.5	dB
Isolation	20			dB
VSWR			1.25	:1
Forward Power (CW)			10	W
Reverse Power (CW)			1	W
Weight		/ Max.		lbs
Impedance		50		Ω
Rotation		Clockwise (Standard) Counter Clockwise (upon request)		
Input / Output Connectors		RFLI101M450M550S – SMA-Female RFLI101M450M550N – N-Female		

Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-20°C to +60°C (Case Temperature)
Storage Temperature	-40°C to +85°C
Thermal Shock	-20°C → +60°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)

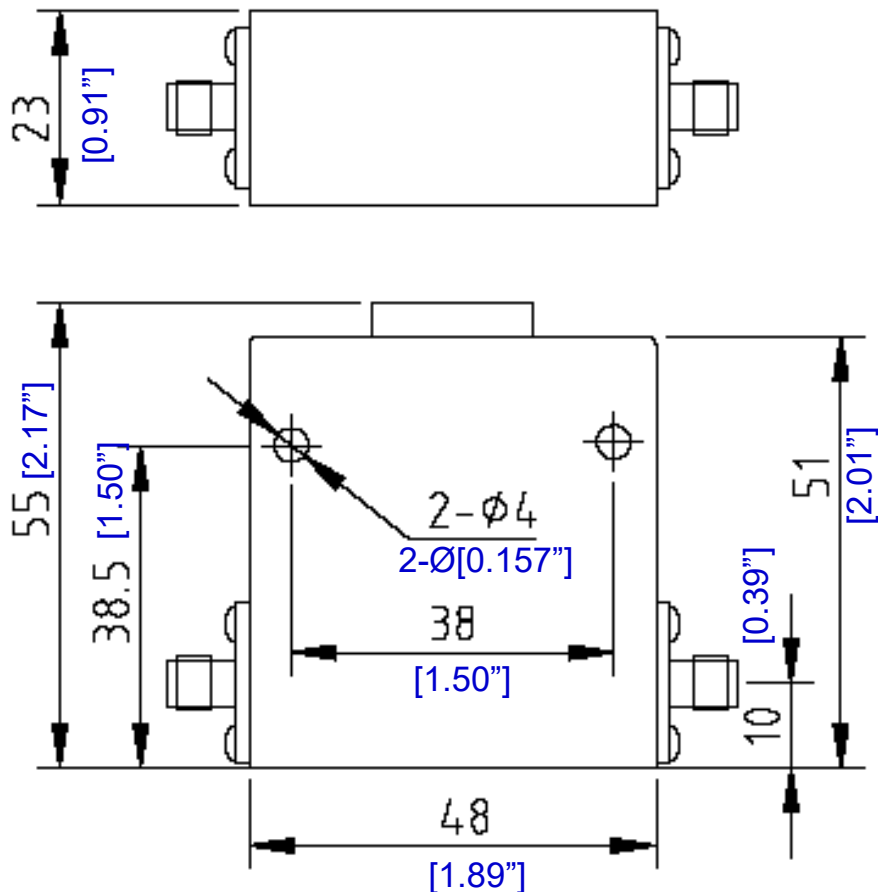
**For vibration testing details please see additional information section.

Typical Performance Plots



Mkr	Trace	X-Axis	Value	Notes
1 ▾	S12	500.000000 MHz	-25.4558 dB	
2 ▾	S11	500.000000 MHz	-25.5970 dB	
3 ▾	S21	500.000000 MHz	-0.1294 dB	
4 ▾	S22	500.000000 MHz	-25.6457 dB	

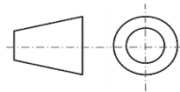
Outline Drawing



SMA Version Shown

Notes:

1. Package Material: Aluminum Alloy
2. Finish: Nickel Plated
3. All dimensions are in millimeters [inches]
4. Outline Tolerances ± 0.5 [0.02], Mounting Hole Tolerances ± 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

Random Vibration Test Standard

https://www.rflambda.com/pdf/rflambda_random_vibration_MIL-STD-202G.pdf

Webpage

Ordering Information

Part Number	Modification	Description
RFLI101M450M550	Standard	450MHz-550MHz Coaxial Isolator

Important Notice

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