

Wide Band Coaxial Circulator 500MHz-700MHz



Product Description

RFLC101M50M70 is a wide band coaxial circulator with a frequency range of 500 to 700MHz.

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

The circulator input and output connectors are SMA-Female.

Features

- High power handling up to 100W
- 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 ($T_A=+25^\circ\text{C}$)

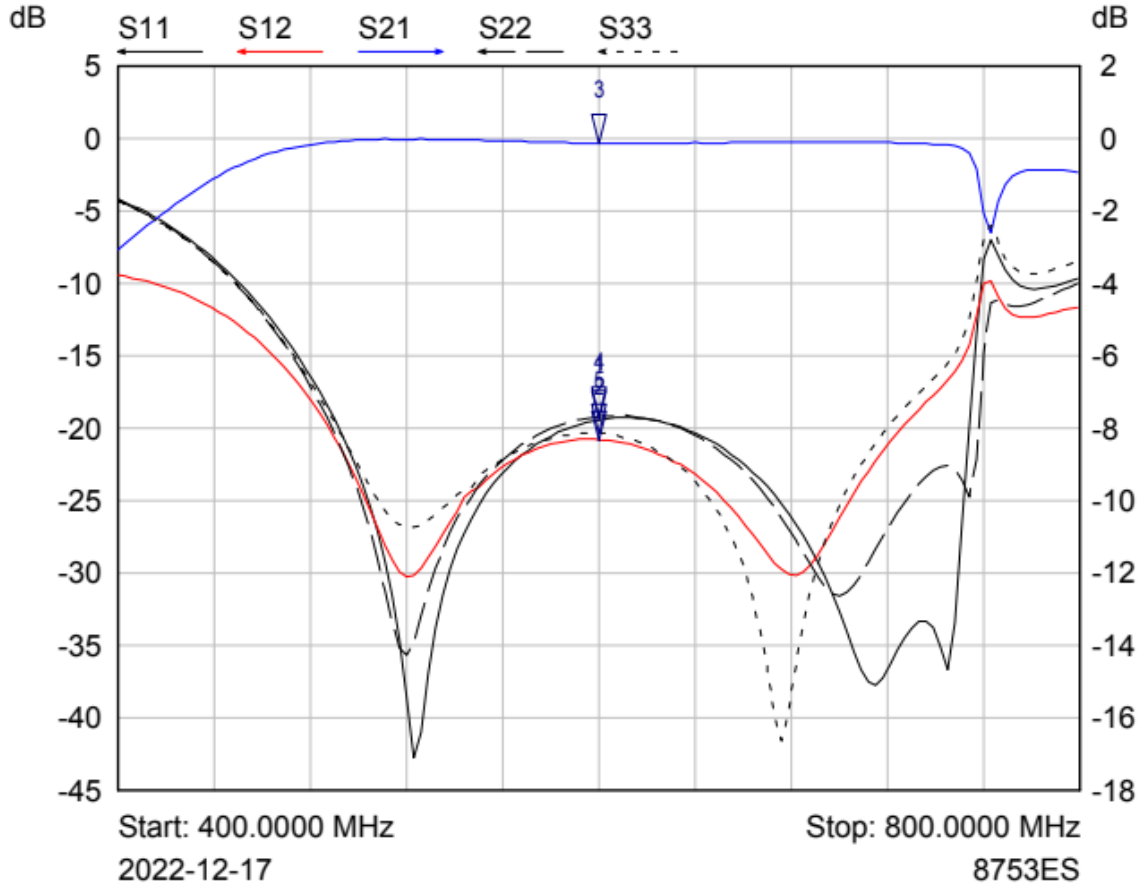
Parameter	Min.	Typ.	Max.	Units
Frequency Range		500 - 700		MHz
Insertion Loss			0.5	dB
Isolation	18			dB
VSWR			1.33	:1
Power Handling (CW)			100	W
Rotation		Clockwise (Standard) Count Clockwise (upon request)		
Input / Output Connectors		SMA-Female(Input) – SMA-Female(Output)		
Weight		0.13		lbs.
Impedance		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	-20°C → +70°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)

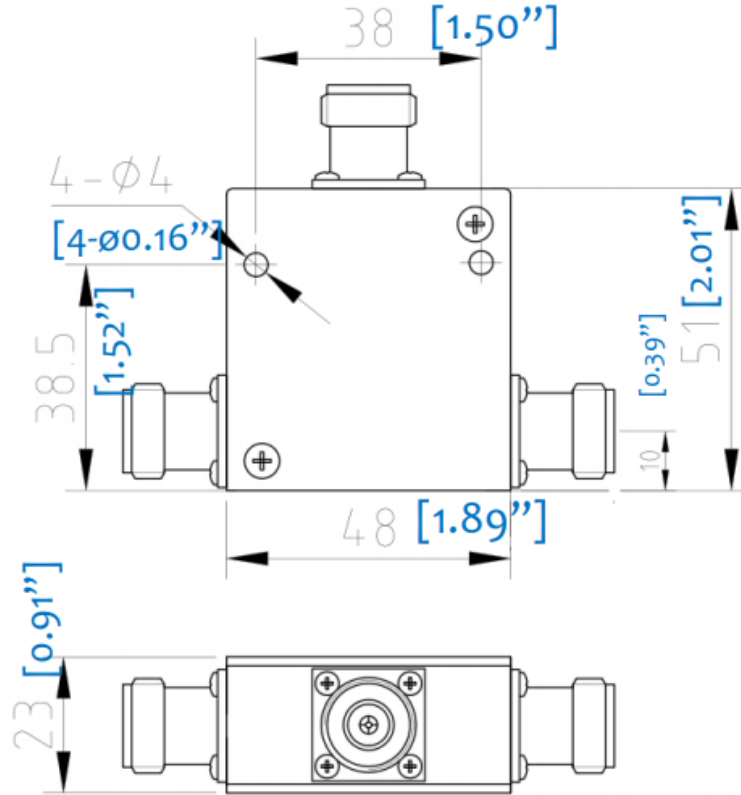
*For vibration testing details please see additional information section.

Typical Performance Plots



Mkr	Trace	X-Axis	Value	Notes
1 ▾	S11	600.0000 MHz	-19.42 dB	
2 ▾	S12	600.0000 MHz	-20.81 dB	
3 ▾	S21	600.0000 MHz	-0.14 dB	
4 ▾	S22	600.0000 MHz	-19.18 dB	
5 ▾	S33	600.0000 MHz	-20.37 dB	

Outline Drawing



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

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
RFLC101M50M70	Standard	500MHz-700MHz Coaxial Circulator

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