

Ultra Wide Band Coaxial Circulator 220MHz-450MHz



Note: The photo is for illustration purposes only. Please refer to outline drawing.

Product Description

RFLC101M22M45 is an ultra wide band coaxial circulator with a frequency range of 220 to 450MHz.

The circulator has a typical isolation of 16dB. The maximum insertion loss is 1.5dB.

The circulator input and output connectors are SMA-Female or N-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°C)

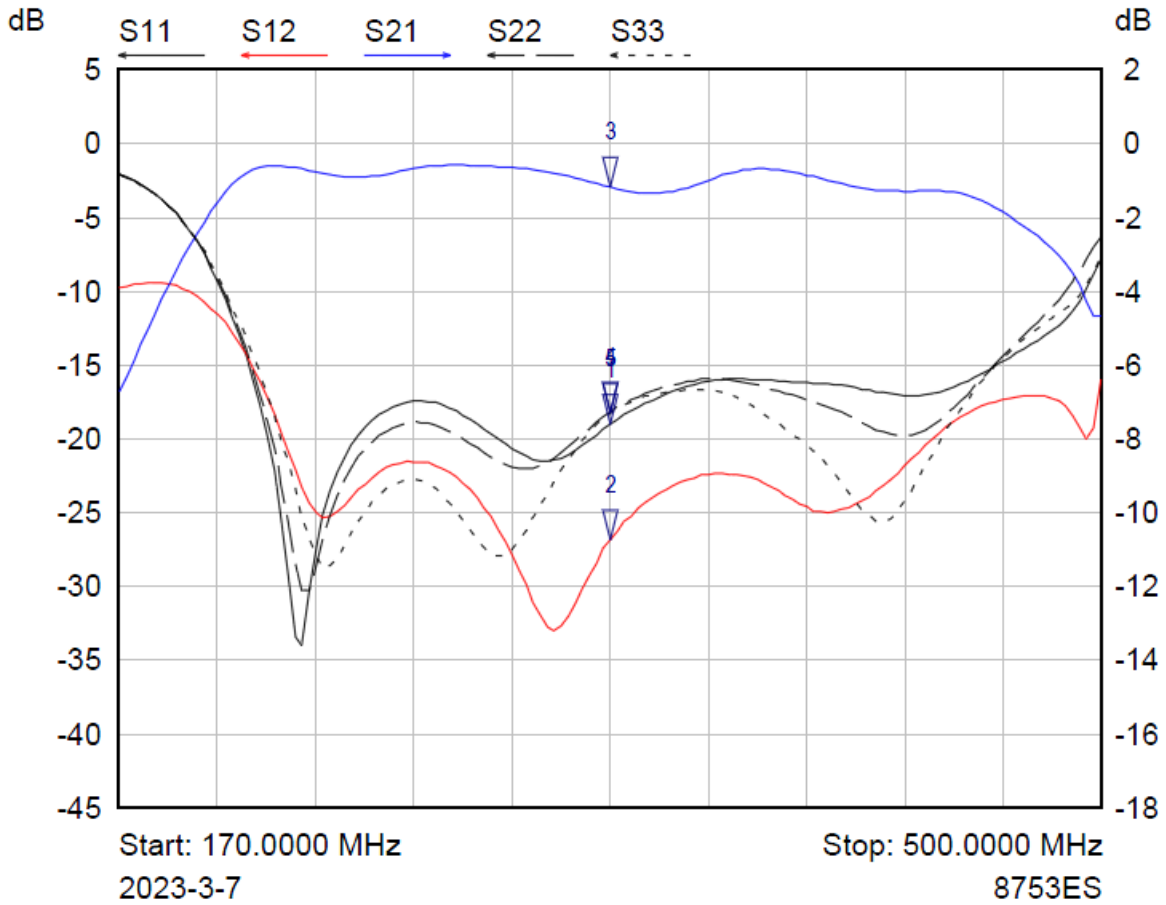
Parameter	Min	Typ	Max	Units
Frequency Range		220 – 450		MHz
Insertion Loss		1.4	1.5	dB
Isolation	15	16		dB
VSWR		1.37	1.43	:1
Forward Power			100	W
Rotation		Clockwise (Standard) Counter Clockwise (Upon Request)		
Input / Output Connectors		RFLC101M22M45S (SMA-Female) RFLC101M22M45N (N-Female)		
Impedance		50		Ω

Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-20°C to +70°C (Case Temperature)
Storage Temperature	-50°C to +105°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)

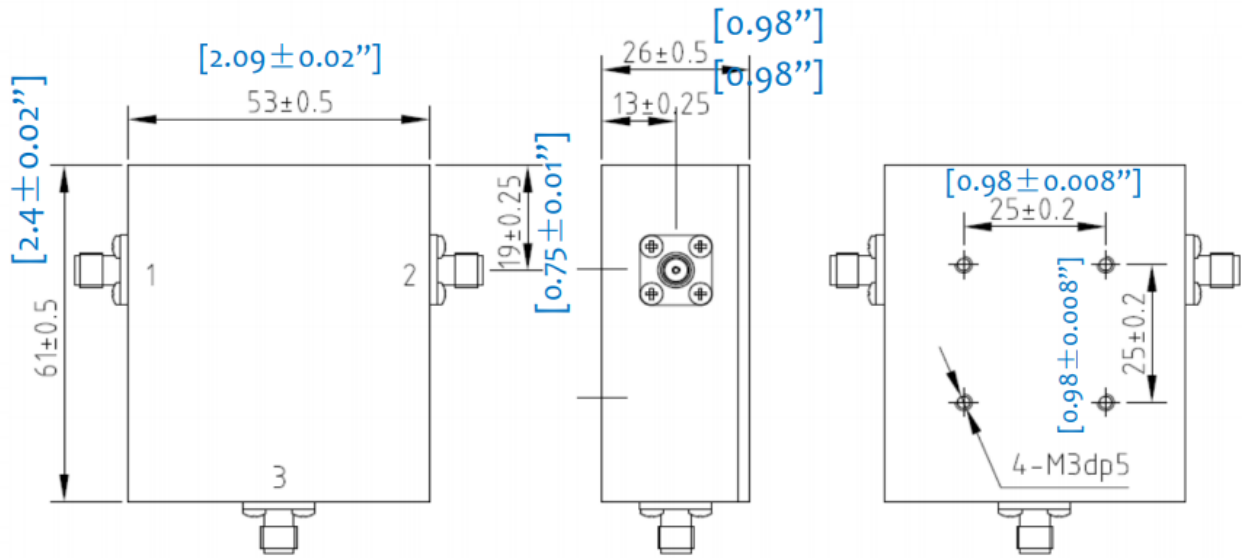
*For vibration testing details please see additional information section.

Typical Performance Plots



Mkr	Trace	X-Axis	Value	Notes
1 ▾	S11	335.0000 MHz	-18.98 dB	
2 ▾	S12	335.0000 MHz	-26.81 dB	
3 ▾	S21	335.0000 MHz	-1.18 dB	
4 ▾	S22	335.0000 MHz	-18.17 dB	
5 ▾	S33	335.0000 MHz	-18.28 dB	

Outline Drawing



SMA-Female Shown

Notes:

1. Package Material: Aluminum Alloy
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	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
RFLC101M22M45	Connectors SMA-Female or N-Female	220MHz-450MHz Coaxial Circulator

Important Notice

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