

Ultra Wide Band Coaxial Circulator 300MHz - 500MHz



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

Product Description

RFLC101M30M50 is an ultra wide band coaxial circulator with a frequency range of 300 to 500MHz.

The circulator has a typical isolation of 18dB. The maximum insertion loss is 1.0dB.

The operating temperature of this product is within -20 to +75°C

Features

- High power handling up to 50W
- 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

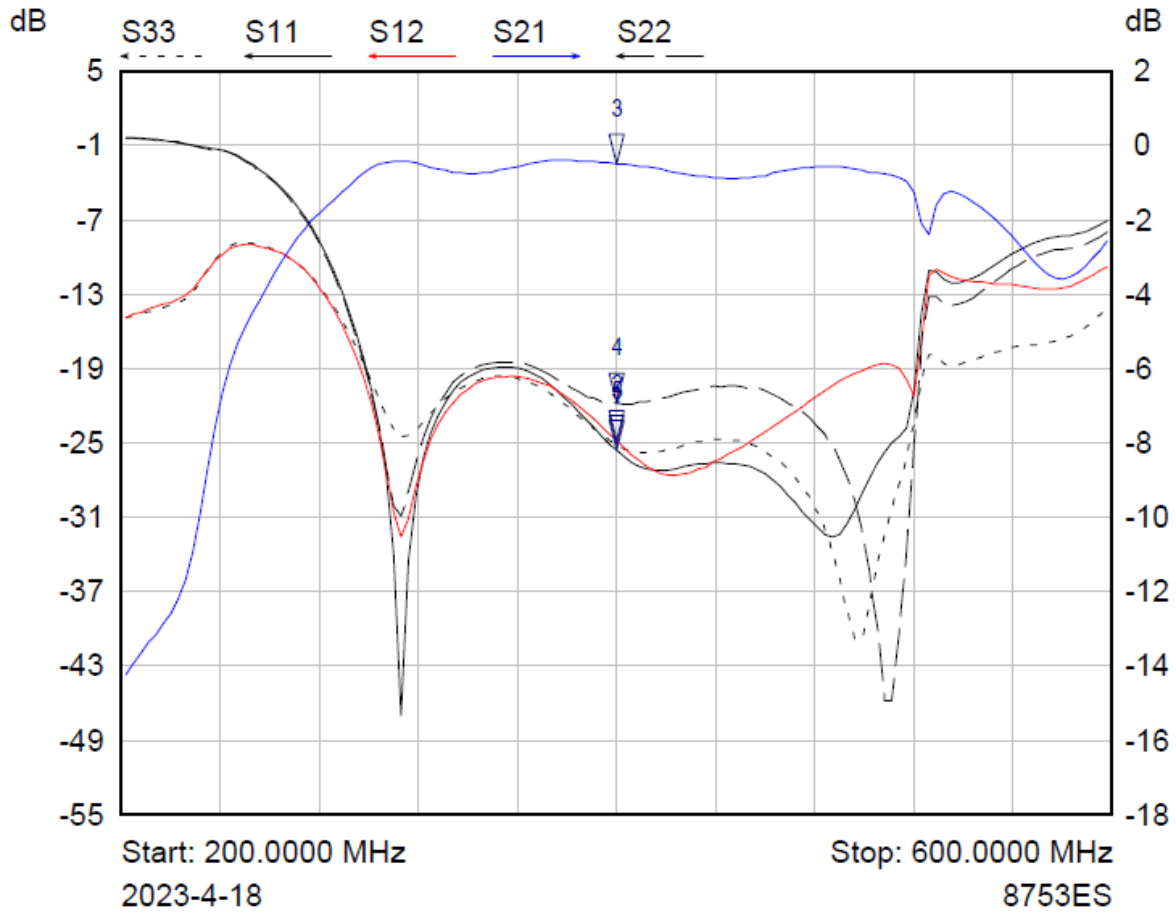
Electrical Specifications($T_A=25^\circ\text{C}$)

Parameter	Min	Typ	Max	Units
Frequency Range		300 – 500		MHz
Insertion Loss		0.9	1.0	dB
Isolation	18	20		dB
VSWR		1.25	1.29	:1
Forward Power (CW)			50	W
Rotation		Clockwise (Standard) Counter Clockwise (Upon Request)		
Input / Output Connectors		RFLC101M30M50S (SMA–Female) RFLC101M30M50N (N–Female)		
Impedance		50		Ω

Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-20°C to +75°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)

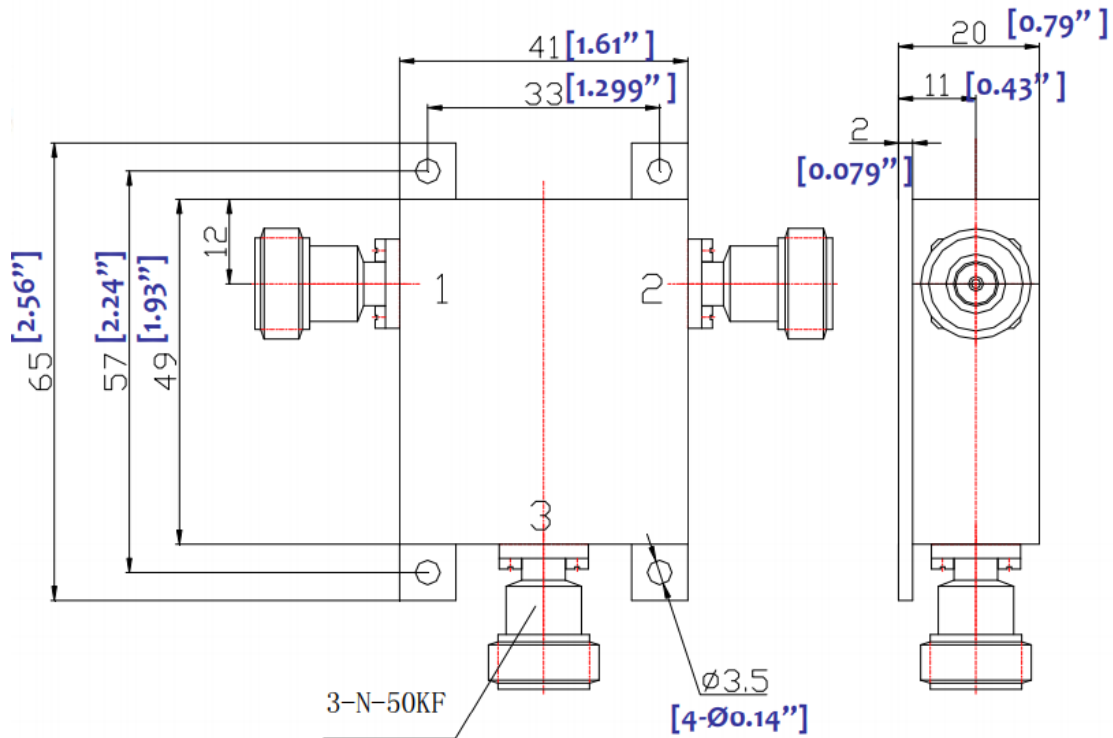
Typical Performance Plots



Mkr	Trace	X-Axis	Value	Notes
1 ▾	S11	400.0000 MHz	-25.62 dB	
2 ▾	S12	400.0000 MHz	-24.85 dB	
3 ▾	S21	400.0000 MHz	-0.49 dB	
4 ▾	S22	400.0000 MHz	-21.81 dB	
5 ▾	S33	400.0000 MHz	-25.20 dB	

Outline Drawing

N-Female Version Shown



Notes:

1. Package Material: Aluminum Alloy
2. Finish: Nickel Plated
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
RFLC101M30M50S	SMA–Female Connectors	300MHz-1300MHz Coaxial Circulator
RFLC101M30M50N	N–Female Connectors	300MHz-1300MHz Coaxial Circulator

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