

High Power Circulator 1GHz-1.1GHz



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

Product Description

RFC216-500-1050M is a wide band coaxial circulator with a frequency range of 1 to 1.1GHz.

The circulator has a typical isolation of 20dB. The maximum insertion loss is 0.5dB.

The circulator input and output connectors are N-Female.

Features

- High power handling up to 500W
- 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 ($T_A=+25^{\circ}\text{C}$)

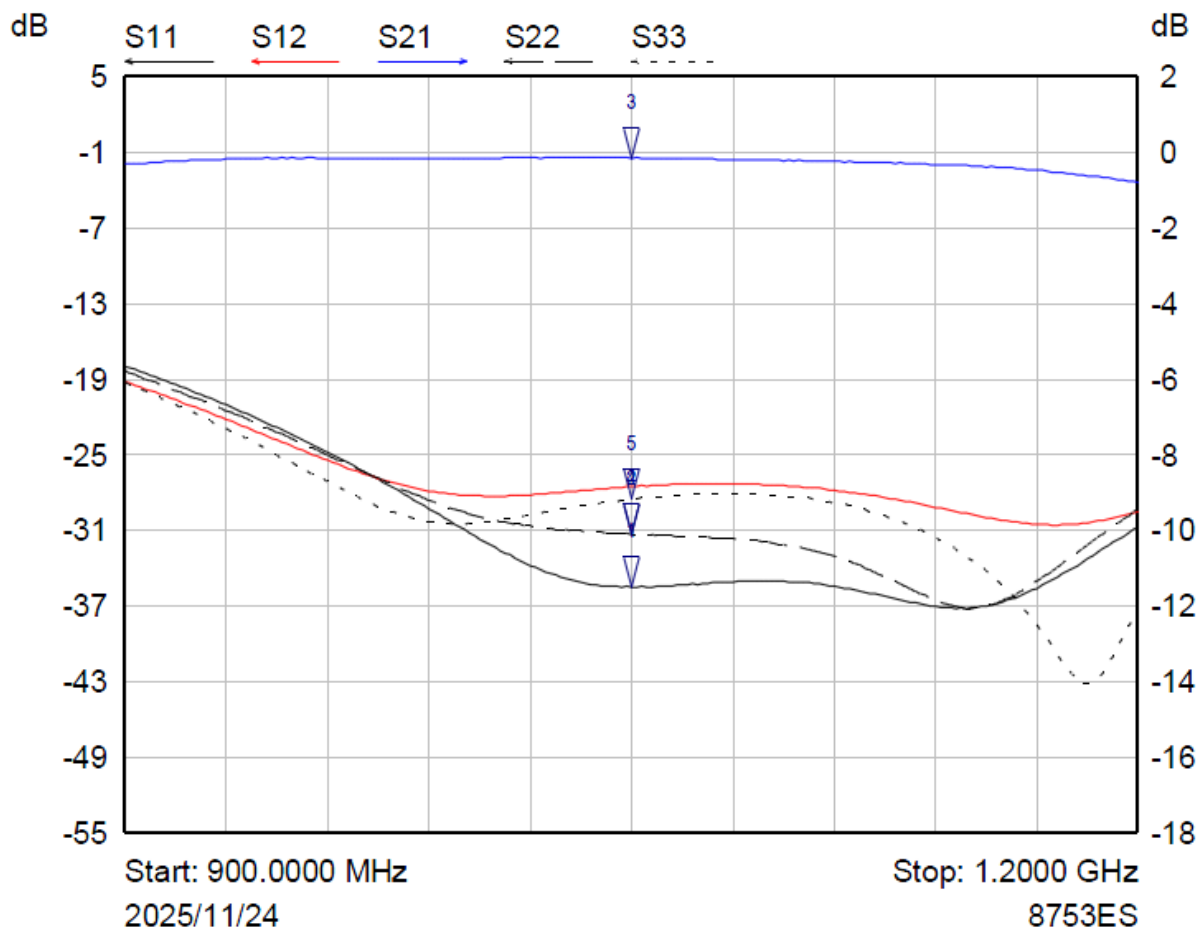
Parameter		Min.	Typ.	Max.	Units
Frequency Range			1 - 1.1		GHz
Insertion Loss				0.50	dB
Reverse Isolation		20			dB
VSWR				1.25	:1
Power Handling	Average Power			500	W
	Peak Power (10% Duty Cycle, 1 us Pulse Width)			4000	W
Rotation			Clockwise		
Input / Output Connectors			N-Female		
Impedance			50		Ω

Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-40°C to +85°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)

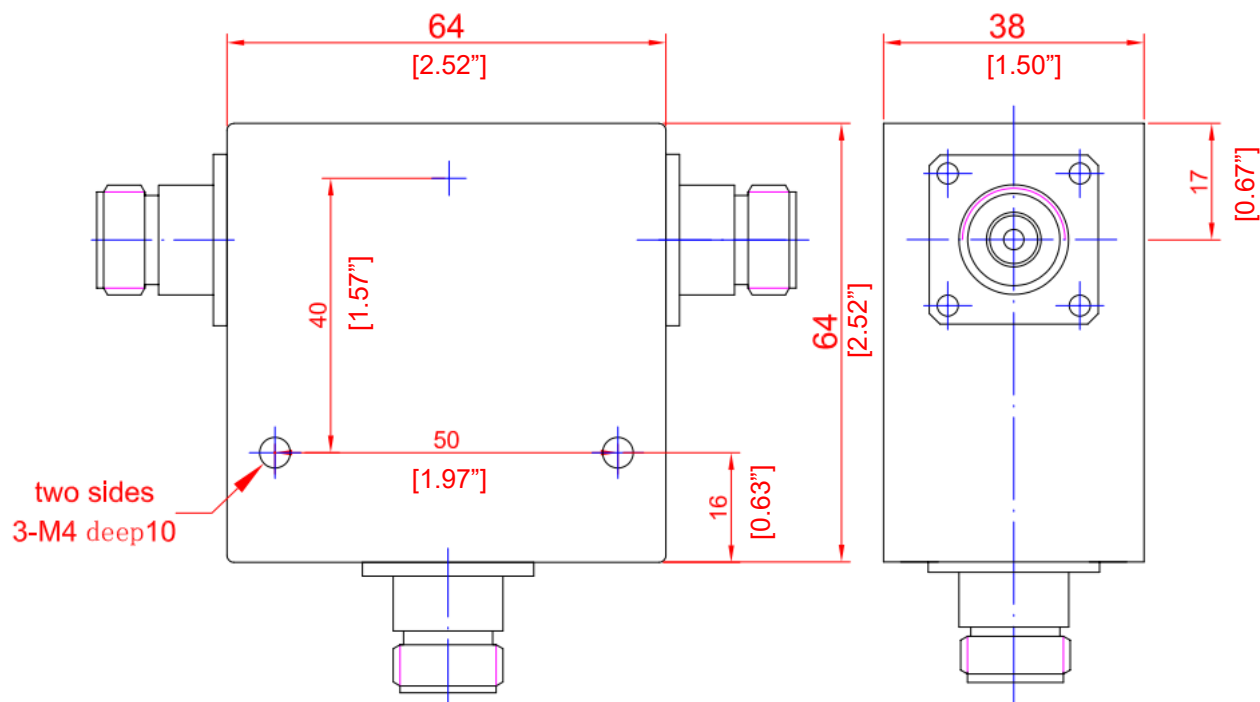
*For vibration testing details please see additional information section.

Typical Performance Plots



Mkr	Trace	X-Axis	Value	Notes
1 ▾	S11	1.0500 GHz	-35.49 dB	
2 ▾	S22	1.0500 GHz	-31.28 dB	
3 ▾	S21	1.0500 GHz	-0.15 dB	
4 ▾	S22	1.0500 GHz	-31.28 dB	
5 ▾	S33	1.0500 GHz	-28.50 dB	

Outline Drawing



Notes:

1. Package Material: Aluminum alloy/ Copper
2. Finish: Nickel Plated
3. All dimensions are in millimeters [inches].
4. Tolerance ± 0.25 [0.01], unless otherwise specified.

Additional Information

Documentation

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

Webpage

Ordering Information

Part Number	Modification	Description
RFC216-500-1050M	Connectors N-Female	1GHz-1.1GHz High Power Circulator

Important Notice

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