

Ultra Wide Band Coaxial Circulator 190MHz-230MHz



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

Product Description

RFLC090M19M23 is an ultra wide band coaxial circulator with a frequency range of 190 to 230MHz.

The circulator has a minimum isolation of 20dB. The maximum insertion loss is 0.5dB. The circulator has good isolation performance.

The circulator input and output connectors are SMA-Female.

Features

- High power handling up to 50W
- Wide band operation
- 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 ($T_A=+25^{\circ}\text{C}$)

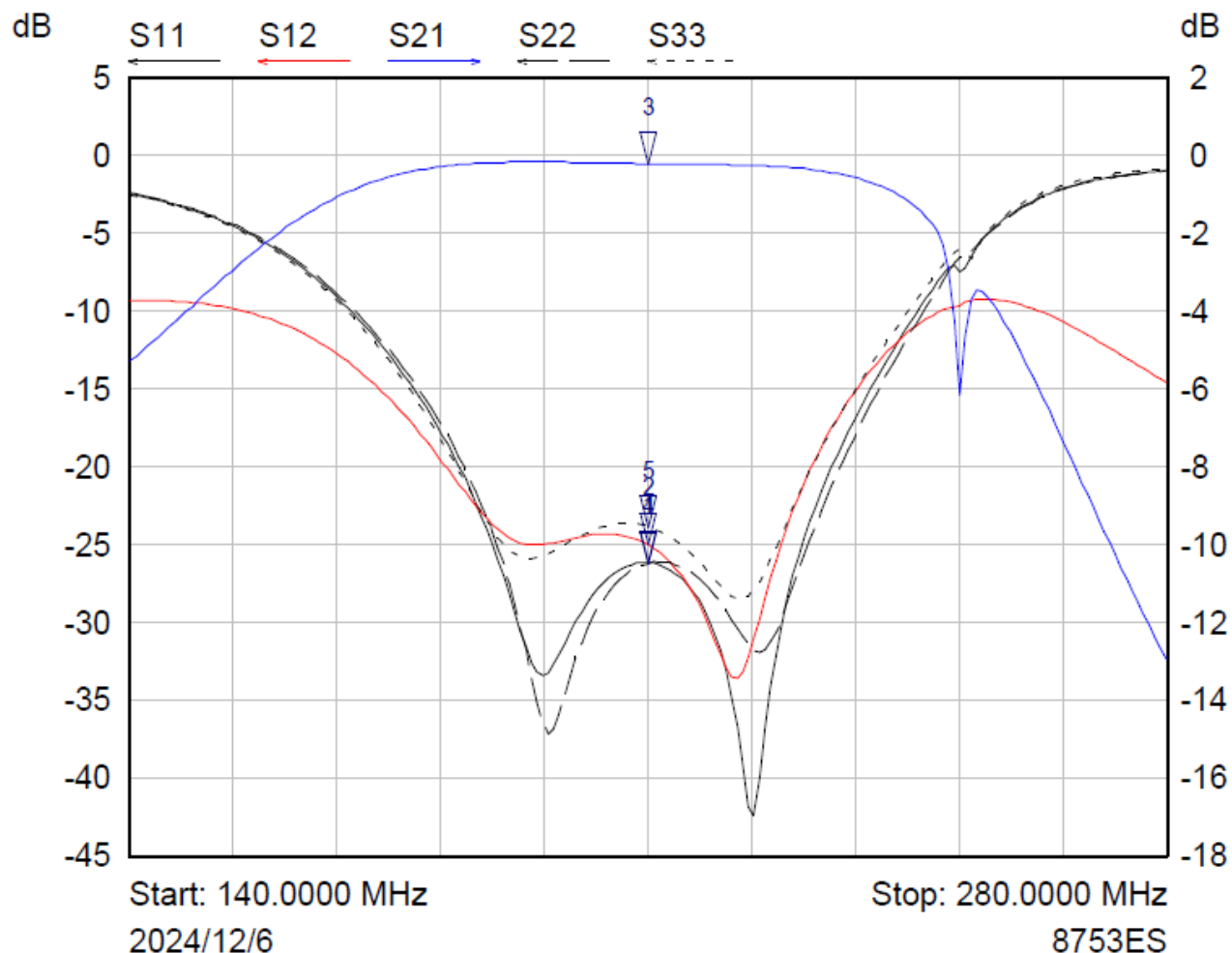
Parameter	Min.	Typ.	Max.	Units
Frequency Range		190-230		MHz
Insertion Loss			0.5	dB
Isolation	20			dB
VSWR			1.25	:1
Forward Power (CW)			50	W
Rotation		Clockwise (Standard)		
Input / Output Connectors		SMA-Female		
Impedance		50		Ω

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)

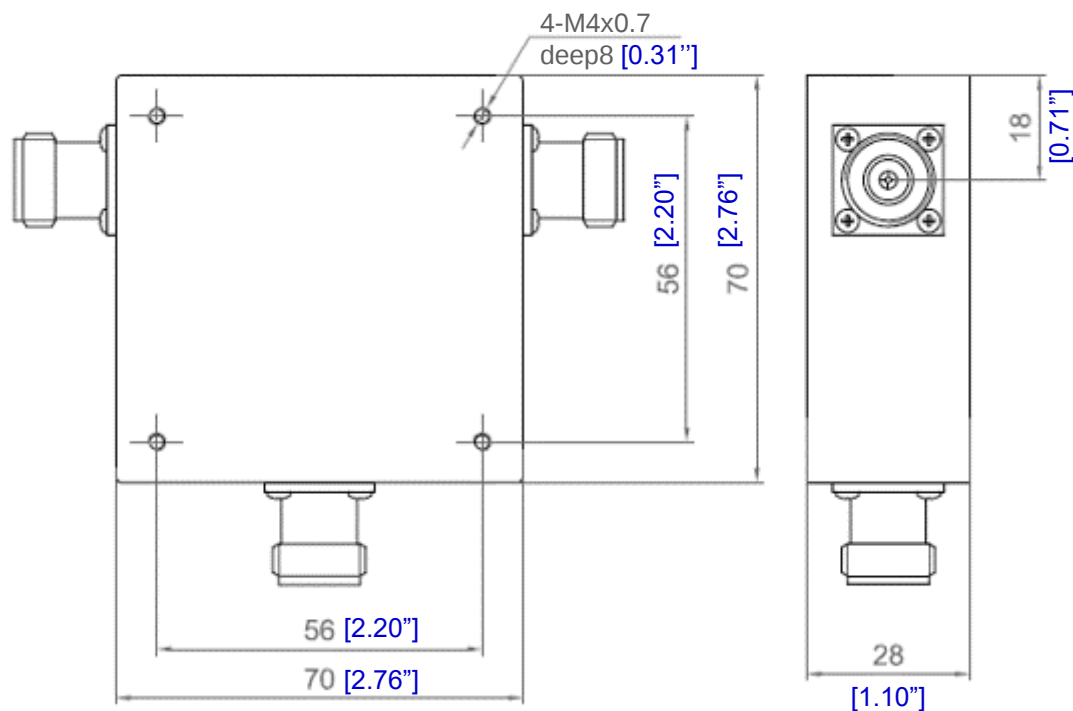
*For vibration testing details please see additional information section.

Typical Performance Plots



Mkr	Trace	X-Axis	Value
1 ▽	S11	210.0000 MHz	-26.17 dB
2 ▽	S12	210.0000 MHz	-25.02 dB
3 ▽	S21	210.0000 MHz	-0.22 dB
4 ▽	S22	210.0000 MHz	-26.22 dB
5 ▽	S33	210.0000 MHz	-23.88 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 Holes Tolerances ± 0.2 (0.008) .unless otherwise specified
5. 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
RFLC090M19M23	Standard	190MHz-230MHz Coaxial Circulator

Important Notice

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