

## Ultra Wide Band Coaxial Circulator 200MHz-250MHz



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

### Product Description

RFLC090M20M25 is a coaxial circulator with a frequency range of 200 to 250MHz.

The circulator has a typical isolation of 20dB. The maximum insertion loss is 0.6dB. 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<sub>A</sub>=+25°C)

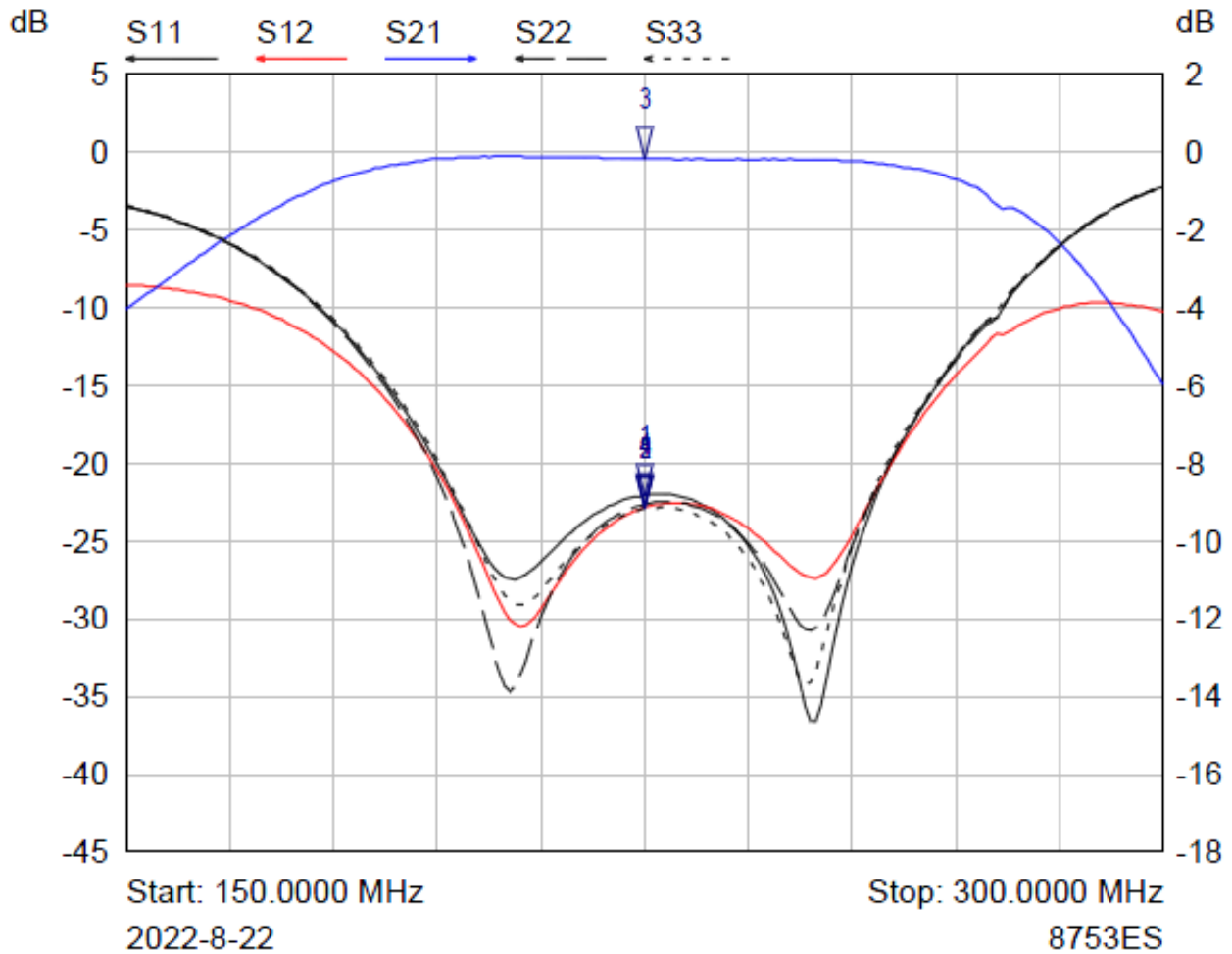
Parameter	Min.	Typ.	Max.	Units
Frequency Range	200		250	MHz
Insertion Loss		0.40	0.6	dB
Isolation	19	20		dB
VSWR		1.25	1.30	:1
Forward Power (CW)			50	W
Rotation	Counter Clockwise			
Input / Output Connectors	SMA-Female(Input) – SMA-Female(Output)			
Weight		-		lbs
Impedance		50		Ω

**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	-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)

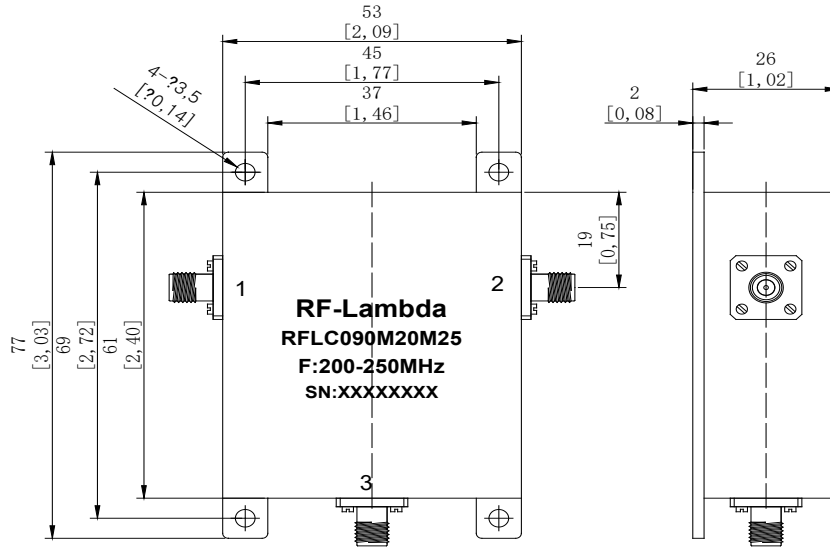
\*For vibration testing details please see additional information section.

Typical Performance Plots



Mkr	Trace	X-Axis	Value	Notes
1 ▾	S11	225.0000 MHz	-22.06 dB	
2 ▾	S12	225.0000 MHz	-22.87 dB	
3 ▾	S21	225.0000 MHz	-0.18 dB	
4 ▾	S22	225.0000 MHz	-22.64 dB	
5 ▾	S33	225.0000 MHz	-22.95 dB	

**Outline Drawing**



**Notes:**

1. Package Material: Aluminum Alloy
2. Finish: Nickel Plated
3. All dimensions are in millimeters [inches].
4. Outline Tolerances  $\pm 0.5$  [0.02], Mounting Hole Tolerances  $\pm 0.2$  [0.008] unless otherwise specified.

**Additional Information**

Documentation	Webpage
ESD Policy	<a href="https://rflambda.com/pdf/rflambda_esd_control.pdf">https://rflambda.com/pdf/rflambda_esd_control.pdf</a>
Connector Torque Specifications	<a href="https://www.rflambda.com/pdf/Torque_Specifications.pdf">https://www.rflambda.com/pdf/Torque_Specifications.pdf</a>
Random Vibration Test Standard	<a href="https://www.rflambda.com/pdf/rflambda_random_vibration_MIL-STD-202G.pdf">https://www.rflambda.com/pdf/rflambda_random_vibration_MIL-STD-202G.pdf</a>

**Ordering Information**

Part Number	Modification	Description
RFLC090M20M25	Standard	200MHz-250MHz Coaxial Circulator

**Important Notice**

The information contained herein is believed to be reliable. RF-Lambda makes no warranties regarding the information contained herein. RF-Lambda assumes no responsibility or liability whatsoever for any of the information contained herein. RF-Lambda assumes no responsibility or liability whatsoever for the use of the information contained herein. The information contained herein is provided "AS IS, WHERE IS" and with all faults, and the entire risk associated with such information is entirely with the user. All information contained herein is subject to change without notice. Customers should obtain and verify the latest relevant information before placing orders for RF-Lambda products. The information contained herein or any use of such information does not grant, explicitly or implicitly, to any party any patent rights, licenses, or any other intellectual property rights, whether with regard to such information itself or anything described by such information. RF-Lambda products are not warranted or authorized for use as critical components in medical, life-saving, or life sustaining applications, or other applications where a failure would reasonably be expected to cause severe personal injury or death.