

Narrow Band Coaxial Circulator 2.145GHz - 2.345GHz



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

Product Description

RFLC-301-1-2245M is a coaxial circulator with a frequency range of 2.145 to 2.345GHz.

The circulator has a typical isolation of 25dB. The maximum insertion loss is 0.4dB.

The circulator input and output connectors are SMA.

Features

- High power handling up to 100W
- Wide band operation
- High isolation within operational band
- Low Insertion Loss
- Stable performance over temperature
- All specifications can be modified upon request

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)

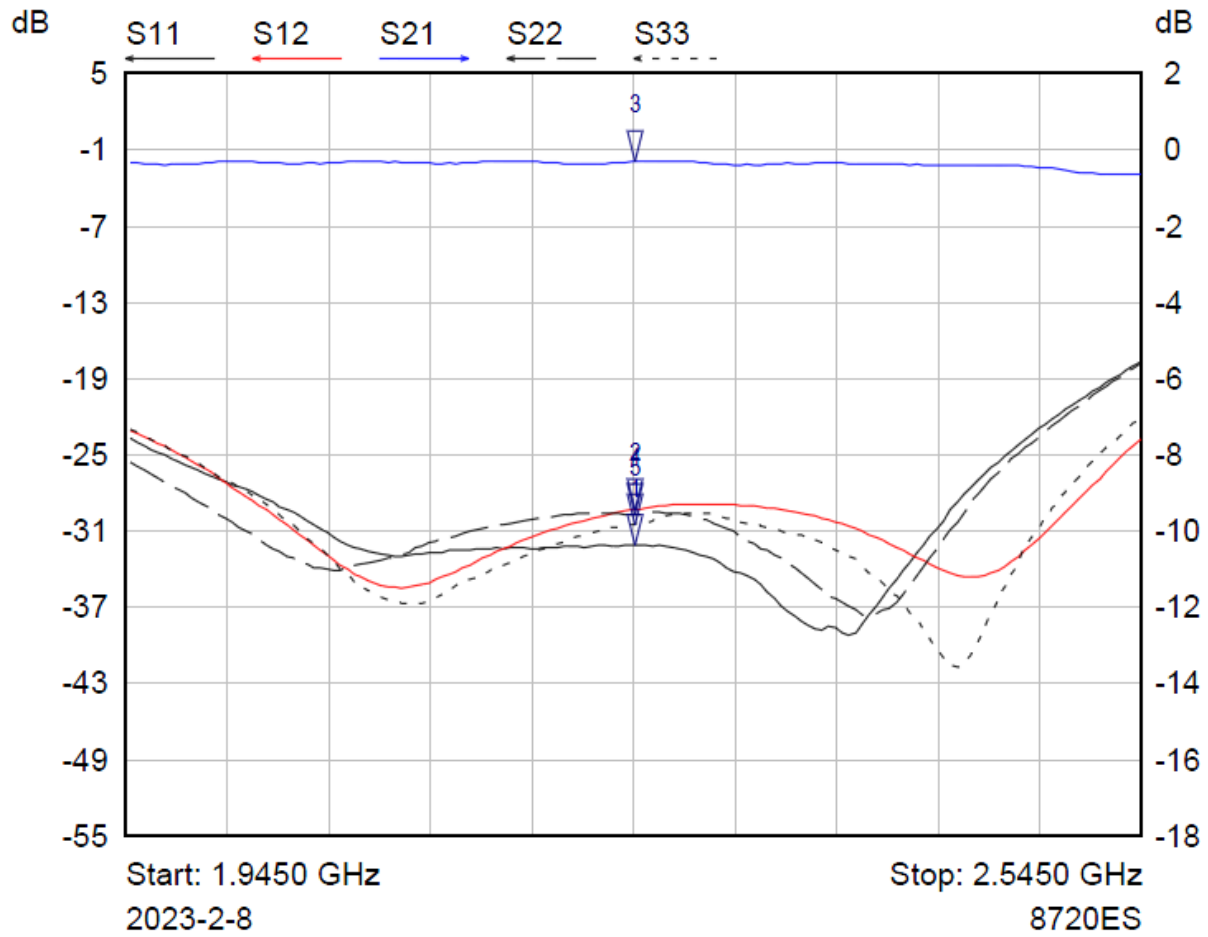
Parameter	Min.	Typ.	Max.	Units
Frequency Range		2.145 – 2.345		GHz
Insertion Loss		0.35	0.4	dB
Reverse Isolation	23	25		dB
VSWR		1.1	1.15	:1
Average Power			100	W
Rotation		Clockwise (Standard) Counter Clockwise (Upon Request)		
Input / Output Connectors		SMA		
Weight		0.157 Max.		lbs
Impedance		50		Ω

Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-40°C to +70°C (Case Temperature)
Storage Temperature	-40°C to +85°C
Thermal Shock	-40°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)

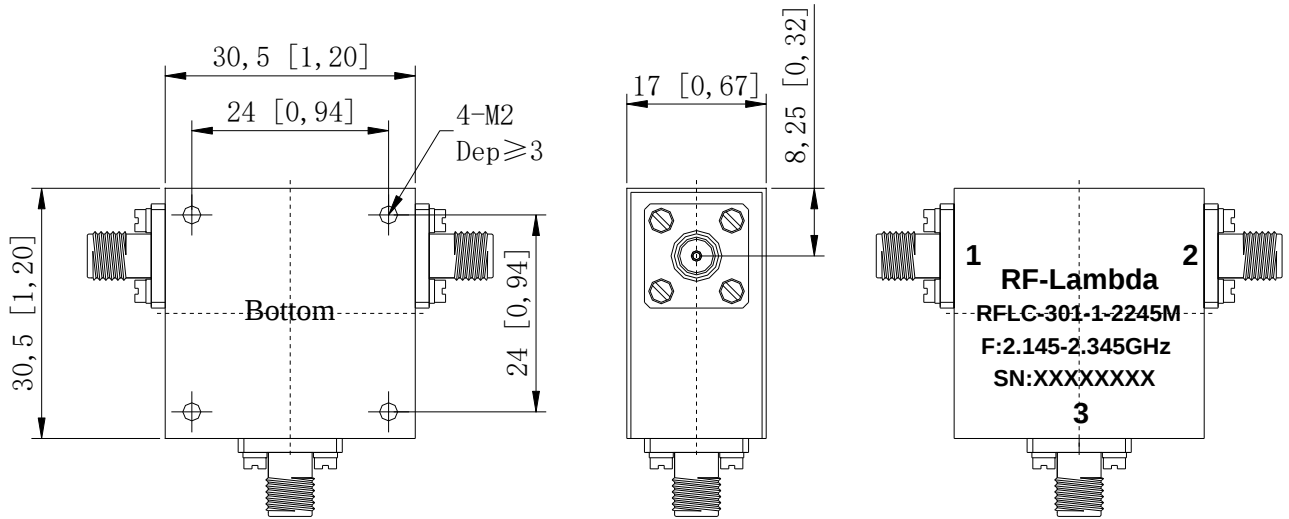
*For vibration testing details please see additional information section.

Typical Performance Plots



Mkr	Trace	X-Axis	Value	Notes
1 ▽	S11	2.2458 GHz	-32.13 dB	
2 ▽	S12	2.2458 GHz	-29.31 dB	
3 ▽	S21	2.2458 GHz	-0.31 dB	
4 ▽	S22	2.2458 GHz	-29.67 dB	
5 ▽	S33	2.2458 GHz	-30.48 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 Hole Tolerances ± 0.2 [0.008] 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
RFLC-301-1-2245M	Connectors SMA	2.145GHz-2.345Hz Coaxial Circulator

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