

Wide Band Coaxial Circulator 2GHz-4GHz



Product Description

RFLC-301-4S is a coaxial circulator with a frequency range of 2 to 4GHz.

The circulator has a typical isolation of 17dB. The maximum insertion loss is 0.7dB. The circulator has good isolation performance.

The circulator input and output connectors are SMA Female.

Features

- High power handling up to 100W
- 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 ($T_A=+25^\circ\text{C}$)

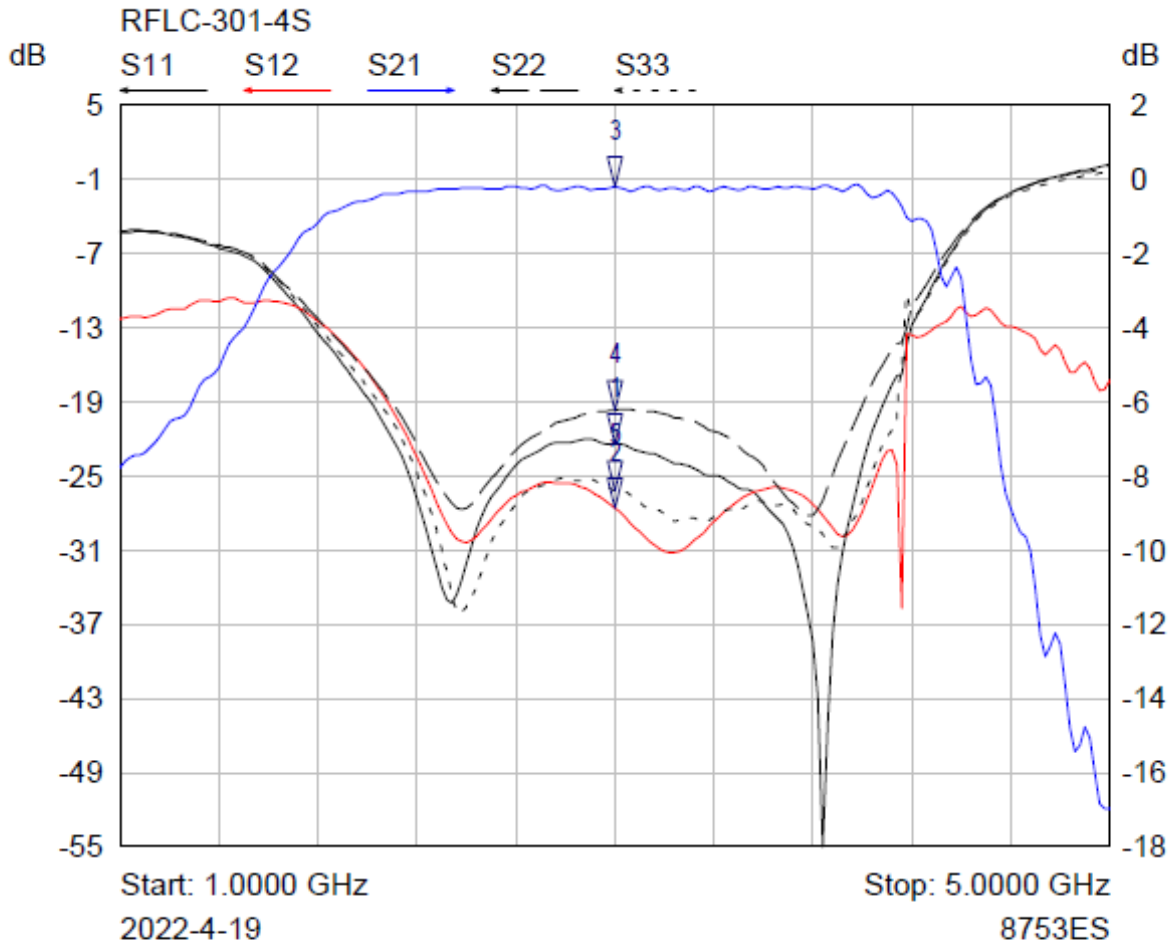
Parameter	Min.	Typ.	Max.	Units
Frequency Range		2 - 4		GHz
Insertion Loss		0.6	0.7	dB
Isolation	15	17		dB
VSWR			1.46	:1
Forward Power (CW)			100	W
Rotation	Counter Clockwise			
Input / Output Connectors	SMA-Female(Input) – SMA-Female(Output)			
Weight		-		lbs
Impedance		50		Ω

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)

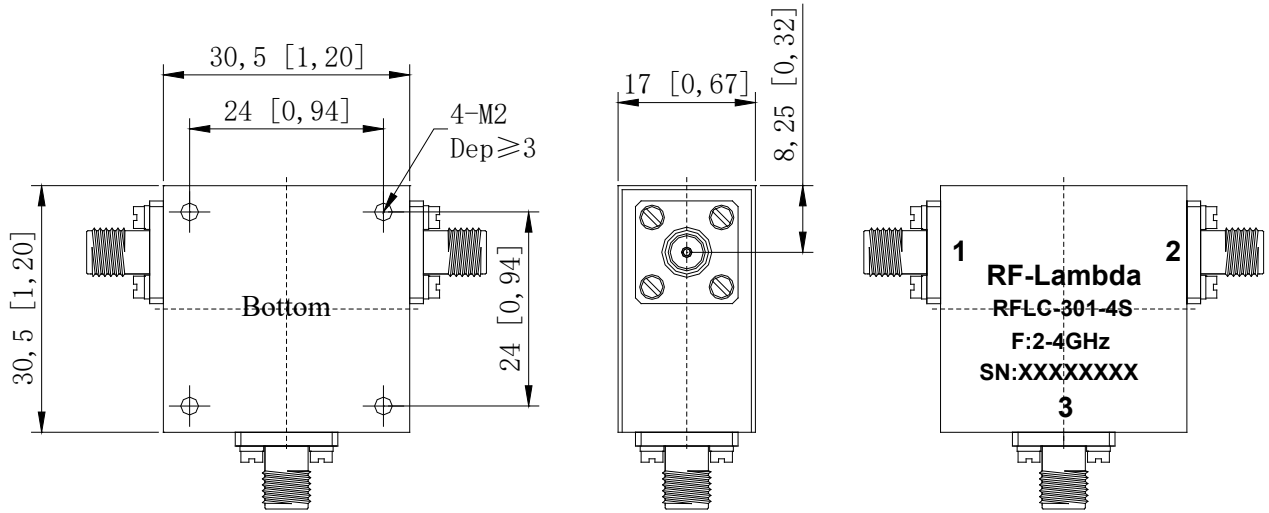
*For vibration testing details please see additional information section.

Typical Performance Plots



Mkr	Trace	X-Axis	Value	Notes
1 ▾	S11	3.0000 GHz	-22.40 dB	
2 ▾	S12	3.0000 GHz	-27.58 dB	
3 ▾	S21	3.0000 GHz	-0.21 dB	
4 ▾	S22	3.0000 GHz	-19.67 dB	
5 ▾	S33	3.0000 GHz	-26.16 dB	

Outline Drawing



Notes:

1. Package Material: Aluminum Alloy
2. Plating: Nickel
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	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
RFLC-301-4S	Standard	2GHz-4GHz Coaxial Circulator

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