Ultra Wide Band Coaxial Circulator
1 - 2GHz

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

Product Description

RFLC-100-1 is an ultra wide band coaxial circulator with a frequency range of 1 to 2GHz.

The circulator has a typical isolation of 17dB. The maximum insertion loss is 1.0dB.

The circulators connectors are N-Female and 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=+25ºC)

Parameter	Min	Typ	Max	Units
Frequency Range		1 – 2		GHz
Insertion Loss		0.9	1.0	dB
Isolation	17	18		dB
VSWR		1.30	1.33	:1
Forward Power (CW)			50	W
Rotation		Clockwise (Standard) Counter Clockwise (Upon Request)		
Input / Output Connectors		RFLC-100-1S (SMA–Female) RFLC-100-1N (N–Female)		
Impedance		50		Ω

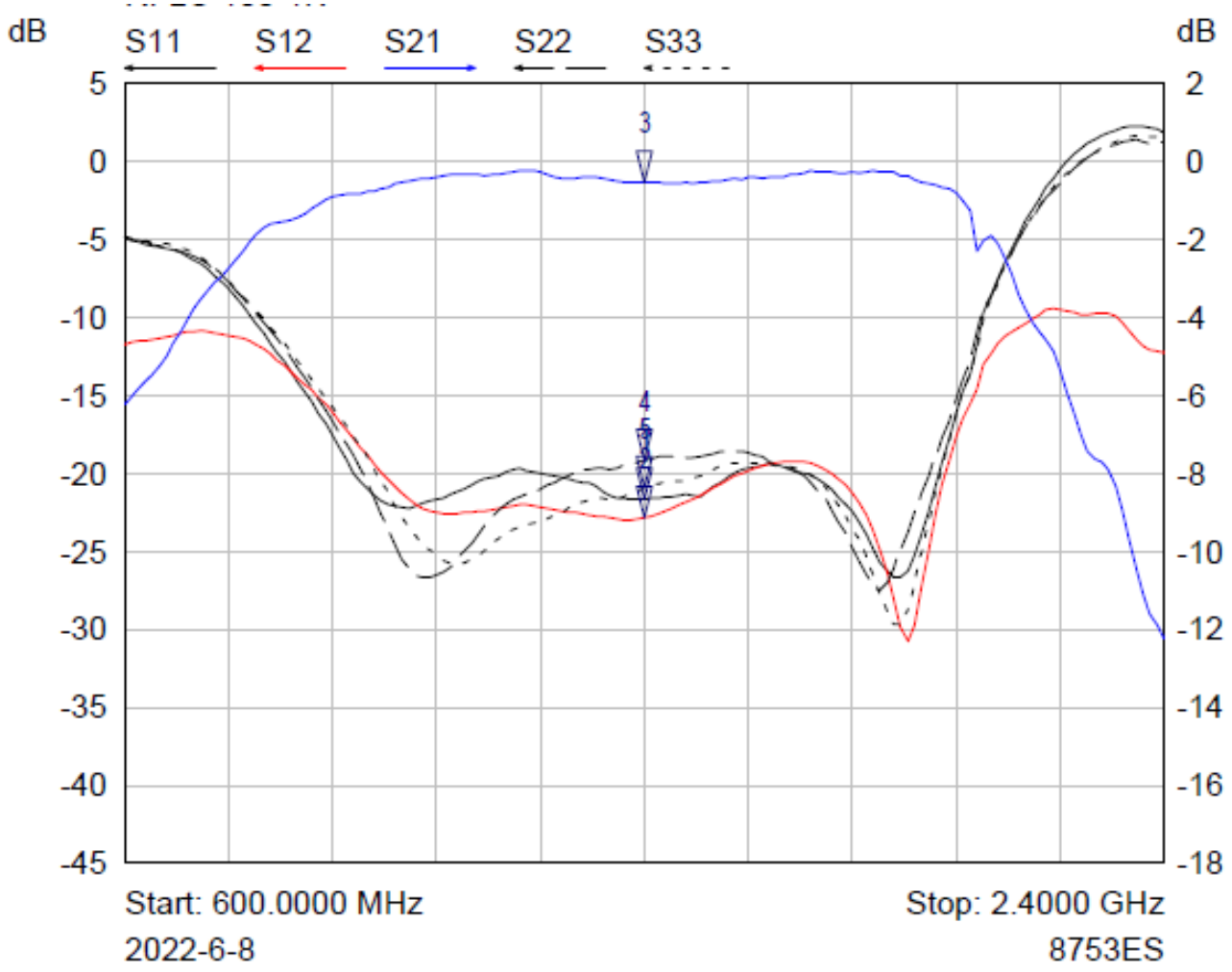
RF-LAMBDA USA LLC: www.rflambda.com
Sales: sales@rflambda.com Technical: support@rflambda.com

Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-10ºC to +50ºC (Case Temperature)
Storage Temperature	-40ºC to +85ºC
Thermal Shock	-40ºC → +85ºC (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.

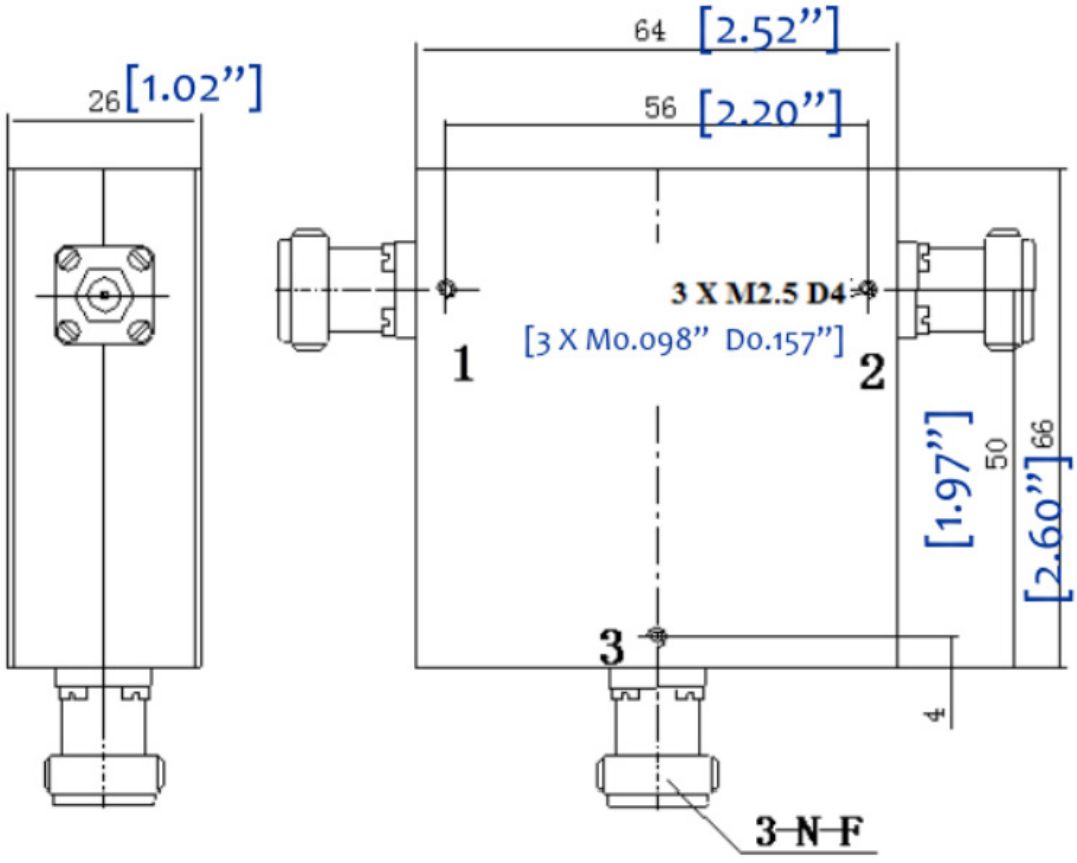
Typical Performance Plots



Mkr	Trace	X-Axis	Value	Notes
1 ▽	S11	1.5000 GHz	-21.63 dB	
2 ▽	S12	1.5000 GHz	-22.84 dB	
3 ▽	S21	1.5000 GHz	-0.53 dB	
4 ▽	S22	1.5000 GHz	-19.18 dB	
5 ▽	S33	1.5000 GHz	-20.94 dB	

Outline Drawing

N-Female Version Shown



Notes:
1. Package Material: Aluminum Alloy
2. Plating: Natural conductive oxidation
3. All dimensions are in millimeters [inches].
4. Tolerance ±0.25 [0.01].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-100-1S	Connectors SMA-Female	1GHz-2GHz Coaxial Circulator
RFLC-100-1N	Connectors N-Female	1GHz-2GHz Coaxial Circulator

RF-LAMBDA USA LLC: www.rflambda.com
Sales: sales@rflambda.com Technical: support@rflambda.com