

Triple Junction Coaxial Circulator 4-8GHz (300MHz BW) 6.7GHz - 7GHz Shown



Note: The photo is for illustration only.
Please refer to the outline drawing.

Product Description

RFLC-407-1 is a coaxial circulator with a frequency range of 4 to 8 GHz with a 300MHz BW. 6.7 to 7GHz shown.

The circulator has a minimum isolation of 50dB. The maximum insertion loss is 0.6dB.

The working temperature of this product is between - 40°C and + 85°C

Features

- High power handling up to 10W
- 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°C)

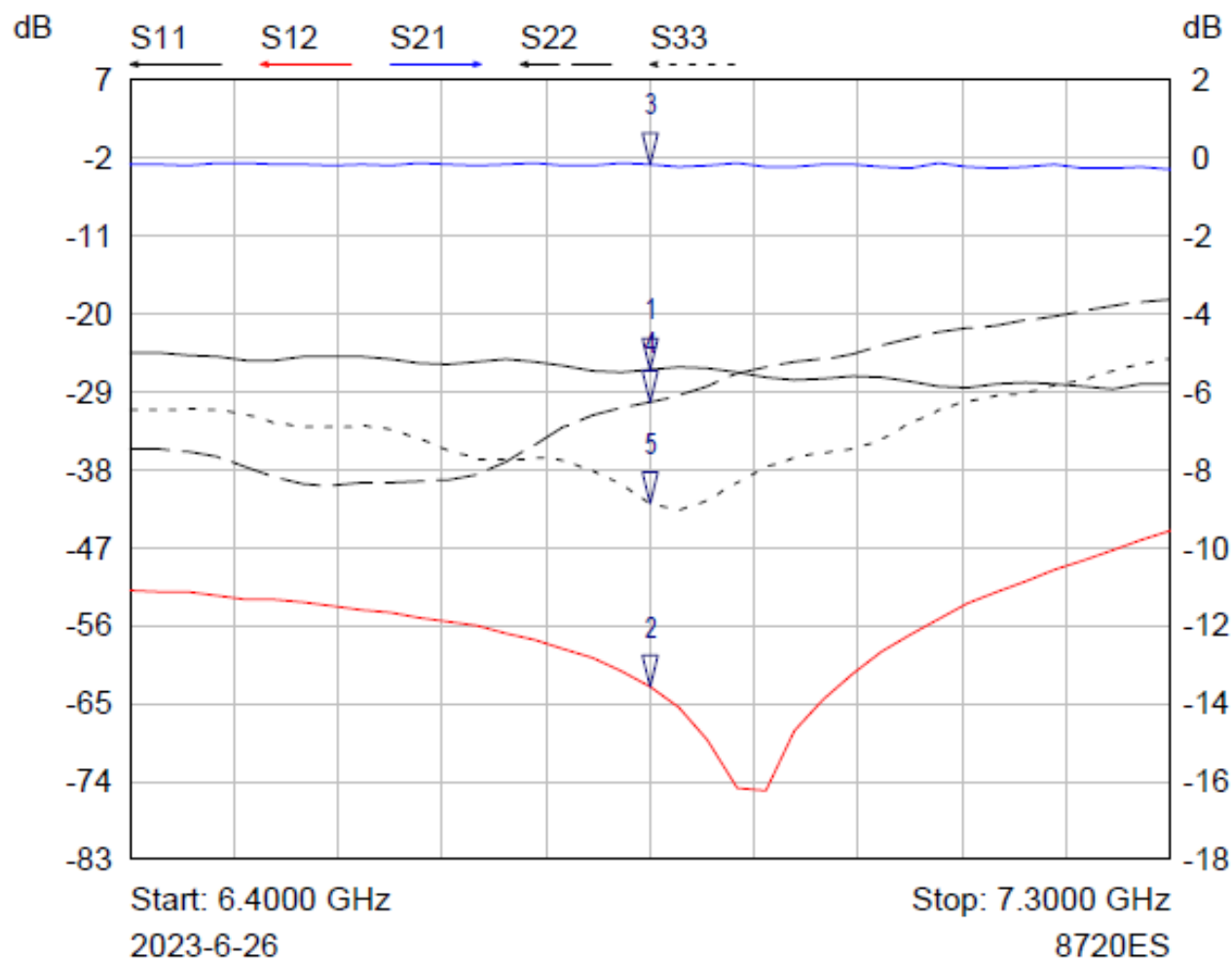
Parameter	Min	Typ	Max	Units
Frequency Range	4-8GHz 300MHz BW (6.7 – 7GHz shown)			GHz
Insertion Loss			0.6	dB
Isolation (1→2 and 2→3)	50			dB
VSWR			1.15	:1
Forward Power (CW)			10	W
Rotation		Clockwise (Standard) Counter Clockwise (Upon Request)		
Input / Output Connectors		L16/N/SMA		
Impedance		50		Ω

Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-10°C to +50°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)

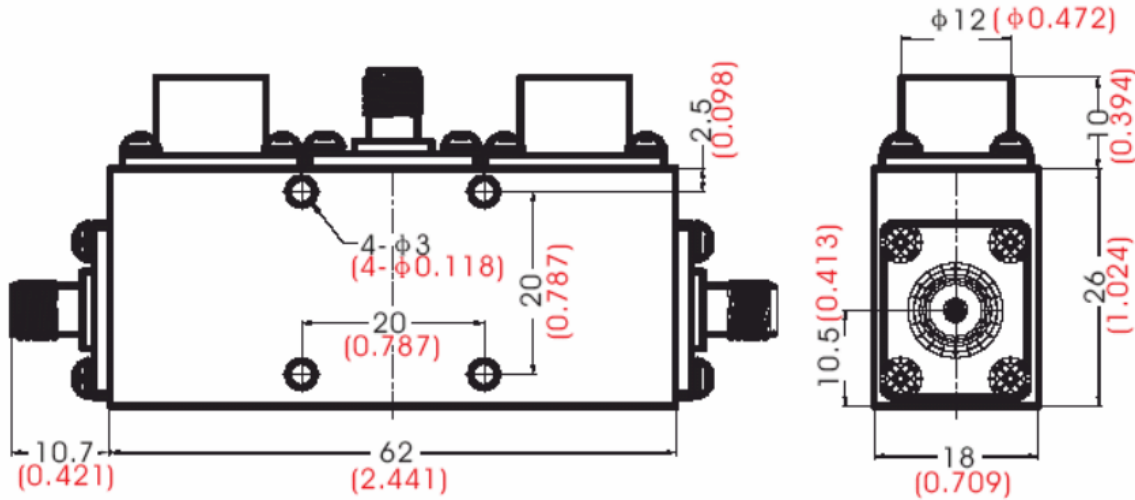
*For vibration testing details please see additional information section.

Typical Performance Plots



Mkr	Trace	X-Axis	Value	Notes
1 ▽	S11	6.8500 GHz	-26.42 dB	
2 ▽	S12	6.8500 GHz	-63.00 dB	
3 ▽	S21	6.8500 GHz	-0.18 dB	
4 ▽	S22	6.8500 GHz	-30.17 dB	
5 ▽	S33	6.8500 GHz	-41.86 dB	

Outline Drawing



Notes:

1. Package Material: Aluminum Alloy
2. Plating: Natural conductive oxidation / Nickel
3. All dimensions are in millimeters [inches].

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-407-1	L16/N/SMA	6.7GHz-7GHz Coaxial Circulator

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