

VHF Dual Junction Circulator 225MHz - 400MHz



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

Product Description

RFLC-116-3 is a VHF dual junction circulator with a frequency range of 225 to 400MHz.

The circulator has a minimum isolation of 36dB. The maximum insertion loss is 1.6dB.

The circulator input and output connectors are N-Female and 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 ($T_A=+25^{\circ}\text{C}$)

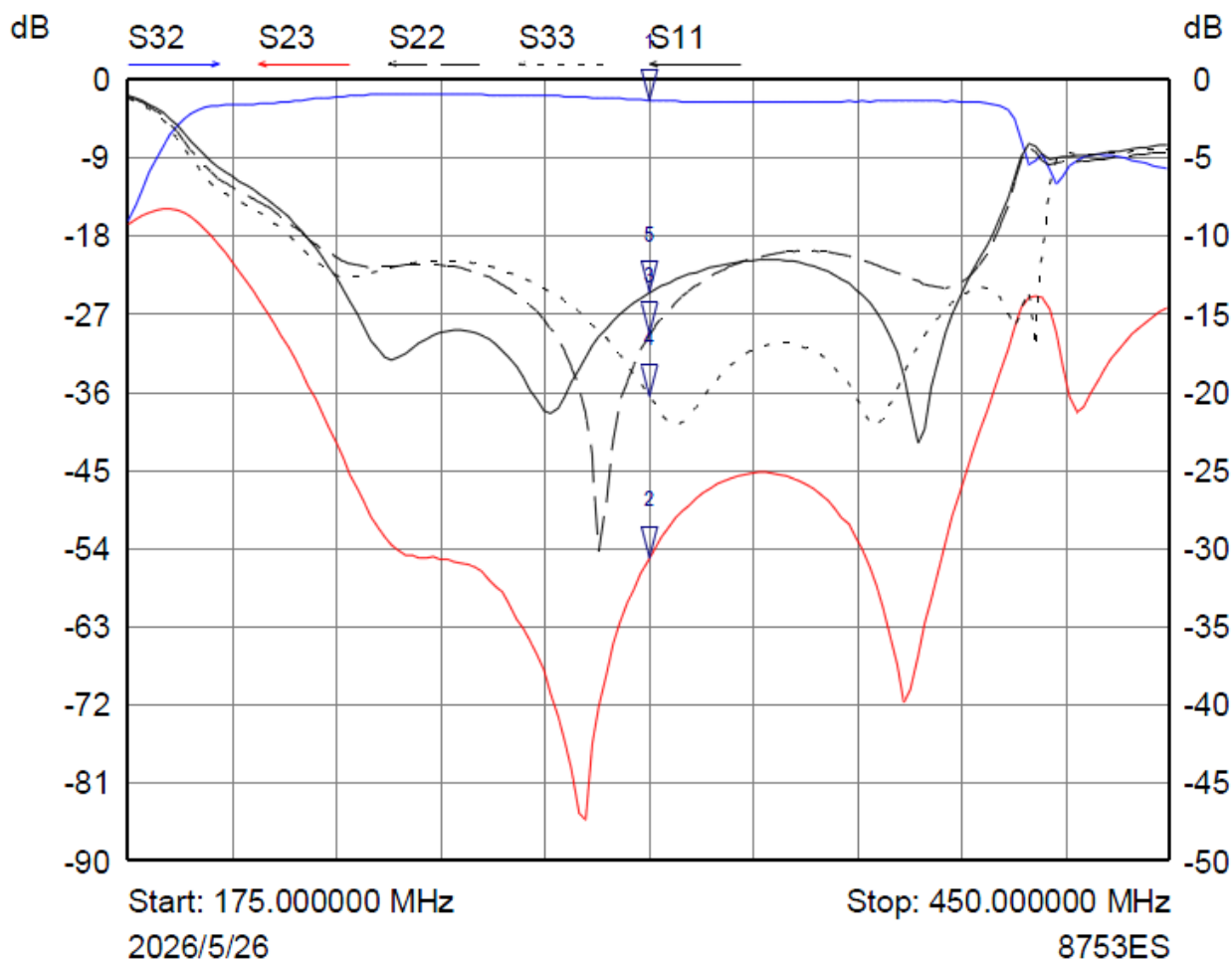
Parameter	Min	Typ	Max	Units
Frequency Range		225-400		MHz
Insertion Loss		1.5	1.6	dB
Isolation	36	38		dB
VSWR		1.25	1.3	:1
Power Handling			100	W
Rotation		Clockwise (Standard) Counter Clockwise (Upon Request)		
Input / Output Connectors		SMA-Female (RFLC-116-3S) N-Female (RFLC-116-3N)		
Impedance		50		Ω

Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	0°C to +55°C (Case Temperature)
Storage Temperature	-40°C to +100°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)

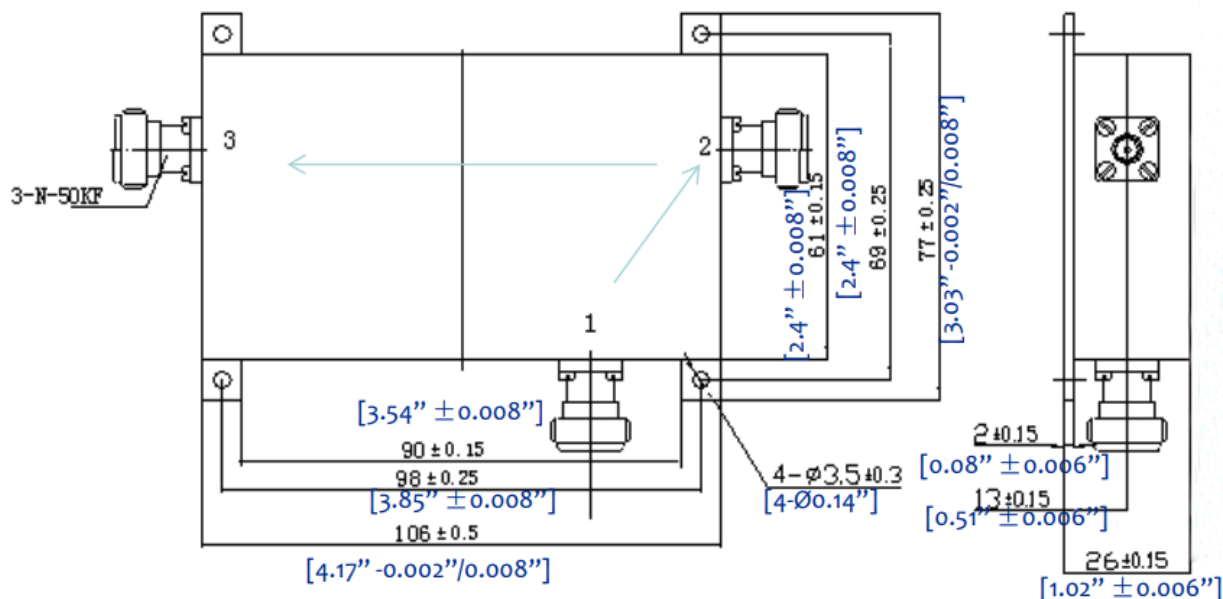
*For vibration testing details please see additional information section.

Typical Performance Plots



Mkr	Trace	X-Axis	Value	Notes
1 ▾	S32	312.500000 MHz	-1.2957 dB	
2 ▾	S23	312.500000 MHz	-54.9314 dB	
3 ▾	S22	312.500000 MHz	-29.2617 dB	
4 ▾	S33	312.500000 MHz	-36.4887 dB	
5 ▾	S11	312.500000 MHz	-24.5077 dB	

Outline Drawing



Notes:

1. Package Material: Aluminum / Copper
2. Finish: Nickel Plated
3. All dimensions are in millimeters [inches].
4. Standard torque wrench must be used to secure RF connectors.

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-116-3S	Connectors SMA-Female	225MHz-400MHz VHF Dual Junction Circulator
RFLC-116-3N	Connectors N-Female	225MHz-400MHz VHF Dual Junction Circulator

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