200W Wide Band Circulator
2.98GHz-3.72GHz

Product Description

RFC27-200 is a 200W wide band circulator with a frequency range of 2.98 to 3.72GHz.

The circulator has a minimum isolation of 17dB. The maximum insertion loss is 0.4dB.

The circulator input and output connectors are N-Female.

Features

- High power handling up to 200W
- 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		2.98 - 3.72		GHz
Insertion Loss			0.4	dB
Isolation	17			dB
VSWR			1.33	:1
Forward Power			200	W
Rotation		Clockwise (Standard) Counter Clockwise (Upon Request)		
Input / Output Connectors		N–Female		
Impedance		50		Ω

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Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-20ºC to +70ºC (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.

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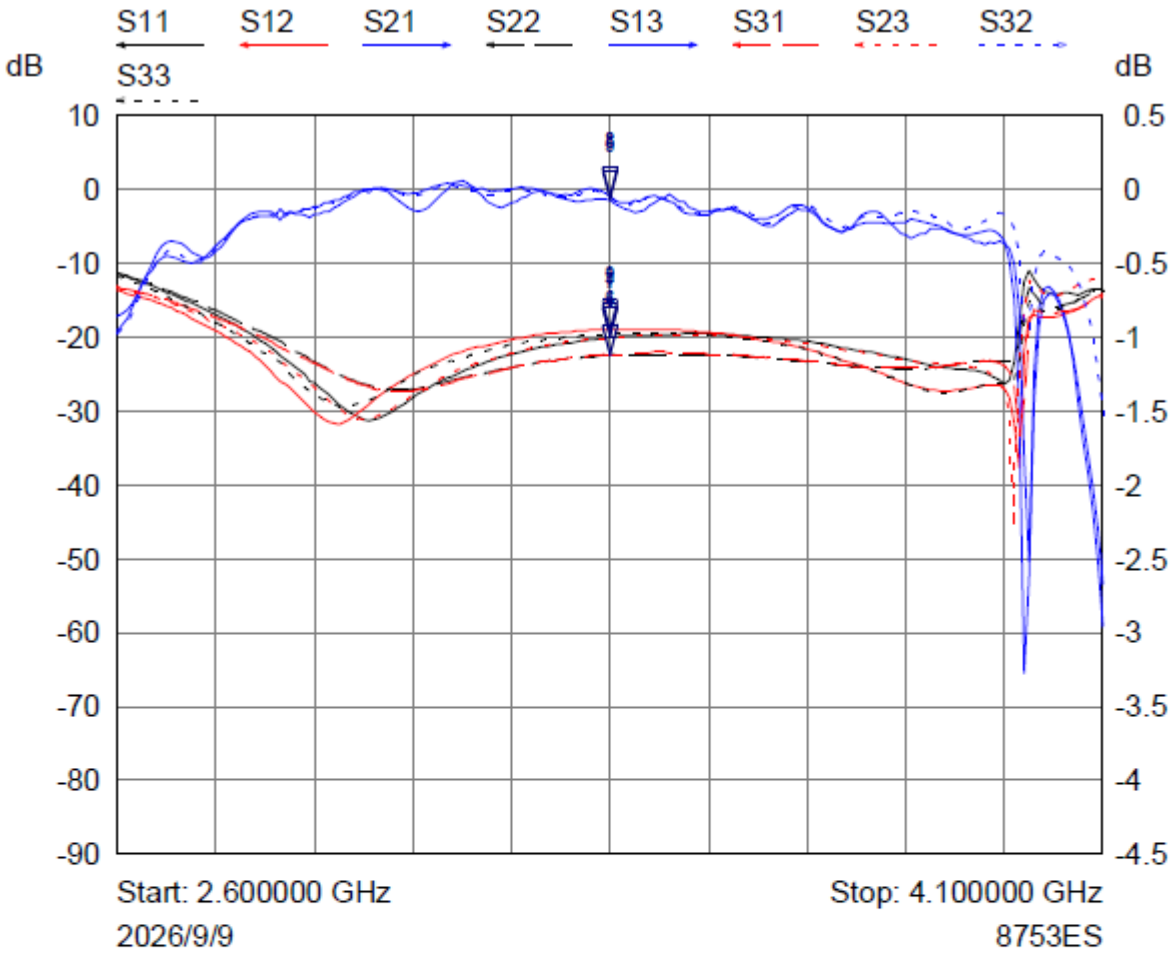
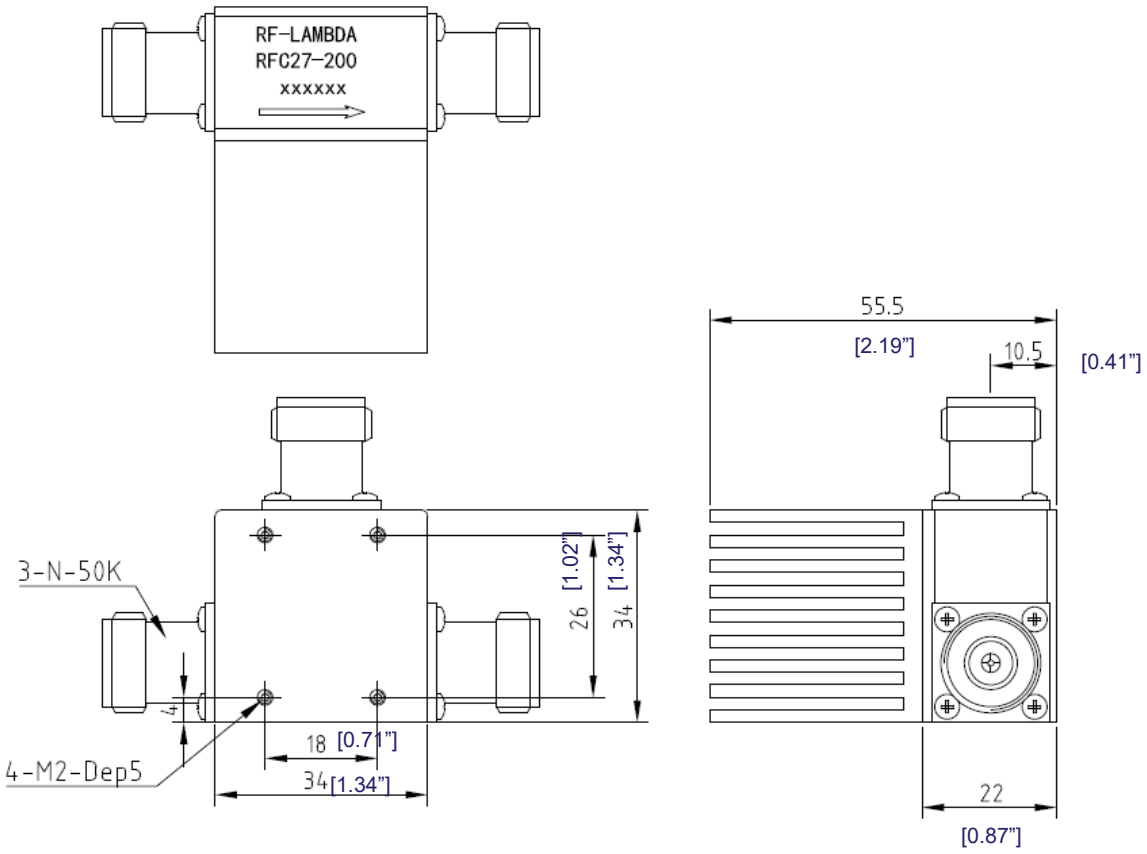
Typical Performance Plots



Mkr	Trace	X-Axis	Value	Notes
1	S11	3.350000 GHz	-20.0229 dB	
2	S12	3.350000 GHz	-18.9497 dB	
3	S21	3.350000 GHz	-0.0465 dB	
4	S22	3.350000 GHz	-22.4614 dB	
5	S13	3.350000 GHz	-0.0786 dB	
6	S31	3.350000 GHz	-22.3550 dB	
7	S23	3.350000 GHz	-20.0461 dB	
8	S32	3.350000 GHz	-0.0523 dB	
9	S33	3.350000 GHz	-19.4904 dB	

Outline Drawing



Notes:
1. Package Material: Aluminum Alloy / Copper
2. Finish: Nickel Plated
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
RFC27-200	Connectors N-Female	2.98GHz-3.72GHz High Power Circulator

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