

500W Wide Band High Power Circulator 2GHz-2.7GHz



Product Description

RFC27W500G23 is a 500W wide band high power circulator with a frequency range of 2 to 2.7GHz.

The circulator has a minimum isolation of 20dB. The maximum insertion loss is 0.4dB.

The circulator input and output connectors are N-Female or 7/16 DIN.

Features

- High power handling up to 500W
- 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

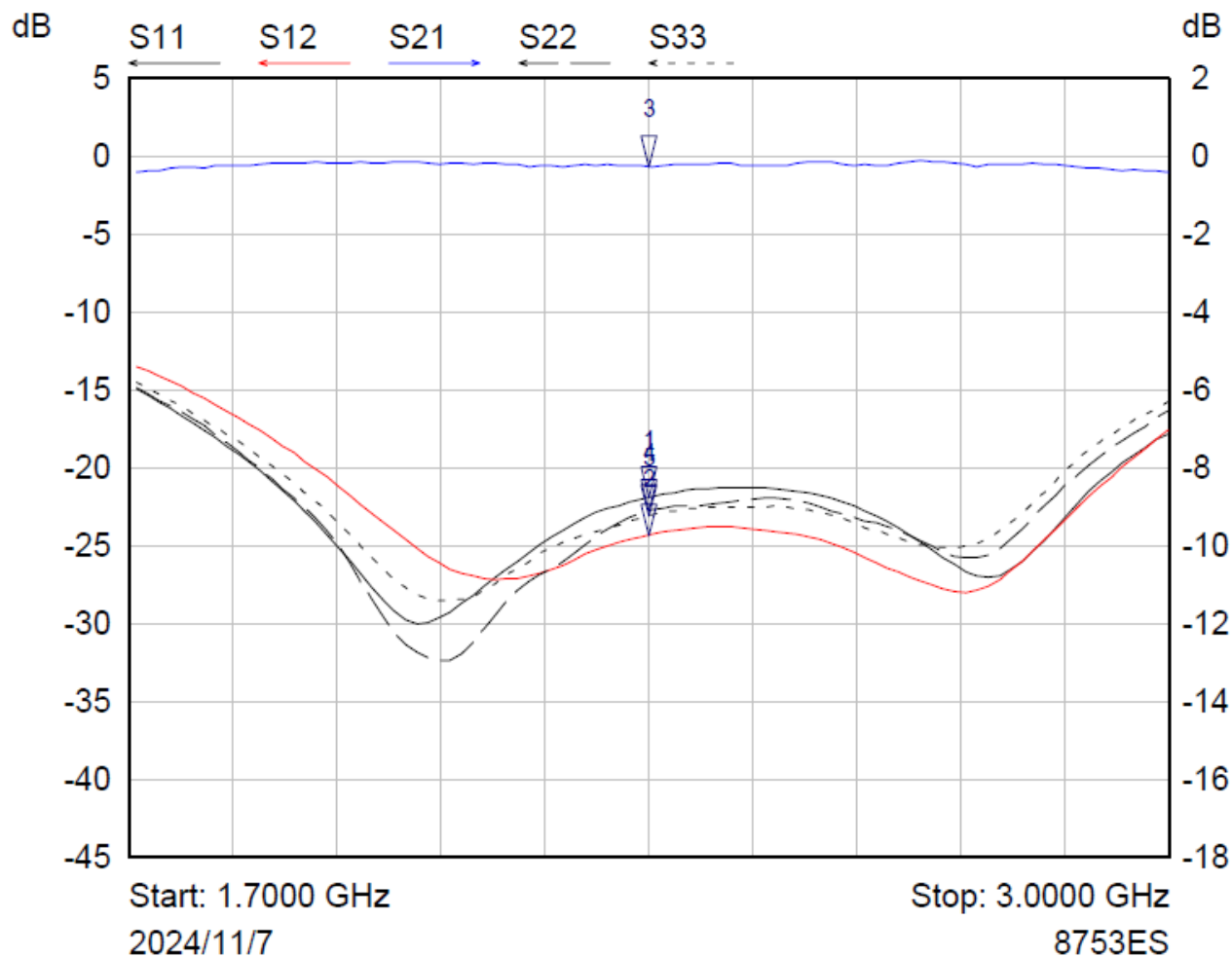
Electrical Specifications($T_A=25^{\circ}\text{C}$)

Parameter	Min	Typ	Max	Units
Frequency Range		2 - 2.7		GHz
Insertion Loss			0.4	dB
Isolation	20			dB
VSWR			1.25	:1
Forward Power (CW)			500	W
Reverse Power (CW)			500	W
Peak Power			1.2	KW
Rotation		Clockwise (Standard) Counter Clockwise (Upon Request)		
Input / Output Connector Options		N-Female 7/16 DIN		
Impedance		50		Ω

Environmental Specifications and Test Standards

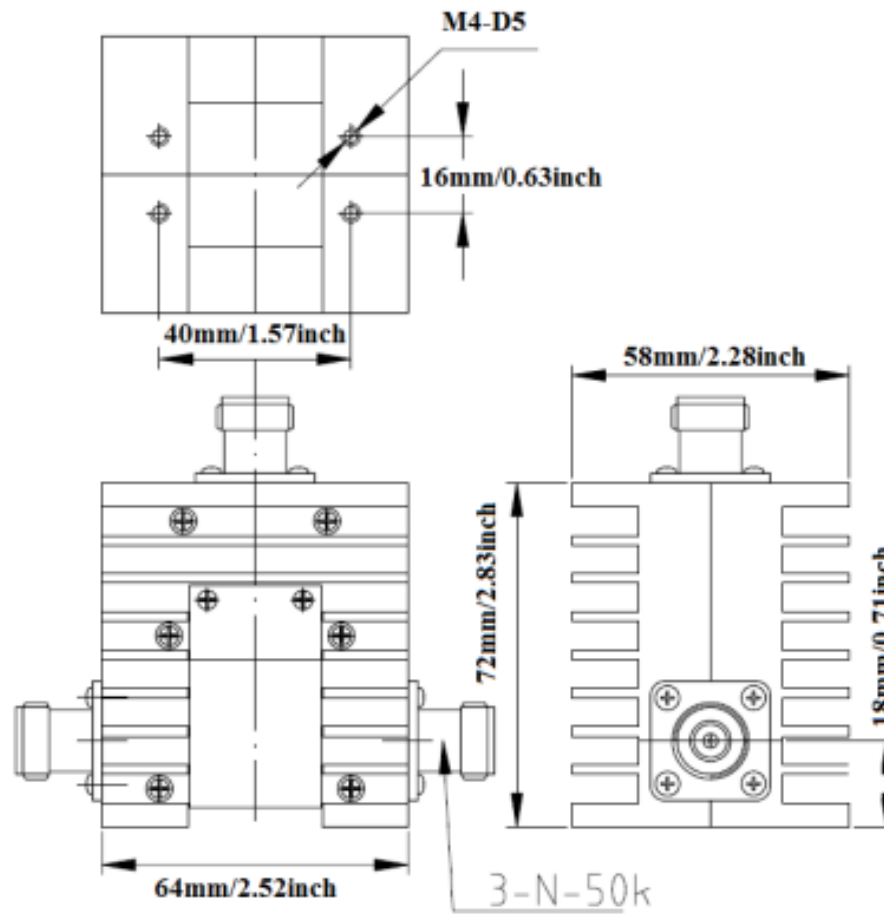
Parameter	Description
Operational Temperature	-20°C to +70°C (Case Temperature)
Storage Temperature	-40°C to +85°C
Thermal Shock	-40°C → +85°C (5 Cycles / 10 hours)
**Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
Shock	1. Weight >20g, 50g half sine wave for 11ms, 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)

Typical Performance Plots



Mkr	Trace	X-Axis	Value	Notes
1 ▾	S11	2.3500 GHz	-21.91 dB	
2 ▾	S12	2.3500 GHz	-24.32 dB	
3 ▾	S21	2.3500 GHz	-0.24 dB	
4 ▾	S22	2.3500 GHz	-22.73 dB	
5 ▾	S33	2.3500 GHz	-23.08 dB	

Outline Drawing



Notes:

1. Package Material: Aluminum Alloy
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
RFC27W500G23	N-Female and 7/16 DIN Connectors	2GHz-2.7GHz High Power Circulator

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