

500W Wide Band High Power Circulator 2.7GHz-3.3GHz



Product Description

RFC27W500G30 is a 500W Wide Band High Power Circulator with a frequency range of 2.7 to 3.3GHz.

The circulator has a typical isolation of 20dB. The maximum insertion loss is 0.3dB.

The operating temperature of this product is within -20 to +70°C

Features

- High power handling up to 500W
- Wide band operation
- High isolation within operational band
- Low Insertion Loss

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

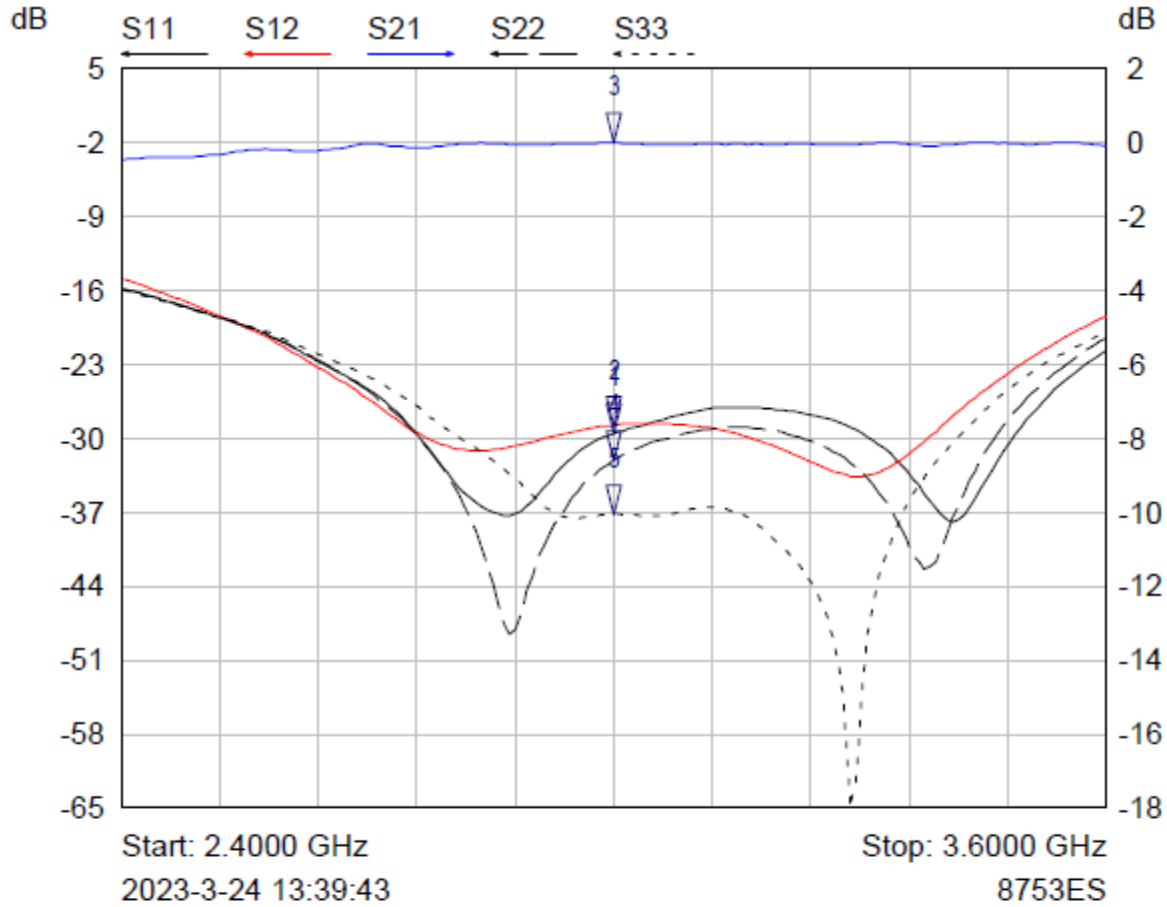
Electrical Specifications (T_A=25°C)

Parameter	Min	Typ	Max	Units
Frequency Range		2.7-3.3		GHz
Insertion Loss			0.3	dB
Isolation	20			dB
VSWR			1.25	:1
Forward Power (CW)			500	W
Reverse Power (CW)			500	W
Peak Power (CW)			1200	W
Rotation		Clockwise (Standard) Counter Clockwise (upon request)		
Impedance		50		Ω
Input /Output Connectors		N-Female		

Environmental Specifications and Test Standards

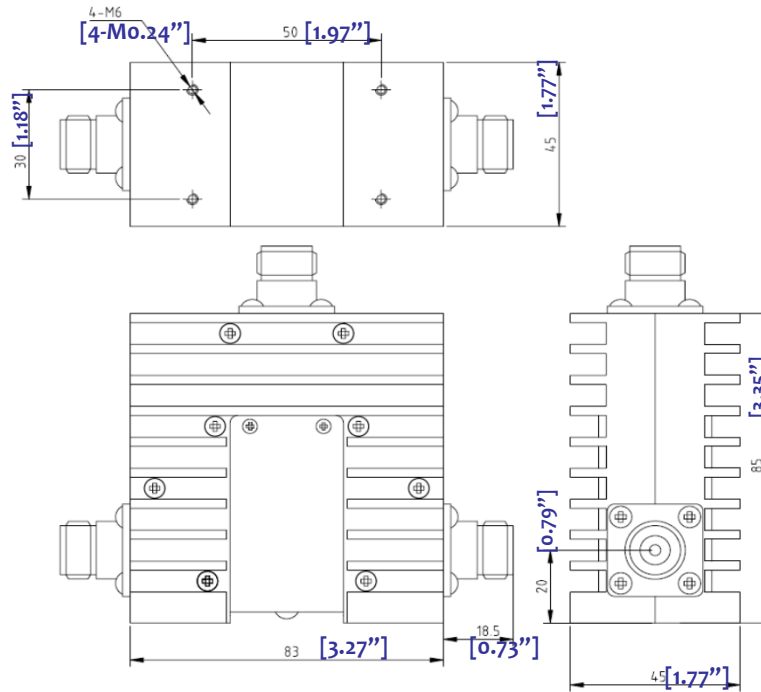
Parameter	Description
Operational Temperature	-20°C to +70°C (Case Temperature)
Storage Temperature	-40°C to +85°C
Thermal Shock	-40°C → +85°C (5 Cycles / 10 hours)
**Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
Shock	1. Weight >20g, 50g half sine wave for 11ms, 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	3.0000 GHz	-29.58 dB	
2 ▾	S12	3.0000 GHz	-28.75 dB	
3 ▾	S21	3.0000 GHz	-0.01 dB	
4 ▾	S22	3.0000 GHz	-32.09 dB	
5 ▾	S33	3.0000 GHz	-37.19 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
RFC27W500G30	Standard	2.7GHz-3.3GHz Wide Band Coaxial Circulator

Important Notice

The information contained herein is believed to be reliable. RF-Lambda makes no warranties regarding the information contained herein. RF-Lambda assumes no responsibility or liability whatsoever for any of the information contained herein. RF-Lambda assumes no responsibility or liability whatsoever for the use of the information contained herein. The information contained herein is provided "AS IS, WHERE IS" and with all faults, and the entire risk associated with such information is entirely with the user. All information contained herein is subject to change without notice. Customers should obtain and verify the latest relevant information before placing orders for RF-Lambda products. The information contained herein or any use of such information does not grant, explicitly or implicitly, to any party any patent rights, licenses, or any other intellectual property rights, whether with regard to such information itself or anything described by such information. RF-Lambda products are not warranted or authorized for use as critical components in medical, life-saving, or life sustaining applications, or other applications where a failure would reasonably be expected to cause severe personal injury or death.