

500W Wide Band High Power Circulator 2.7~3.3GHz



Product Description

The 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 from -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

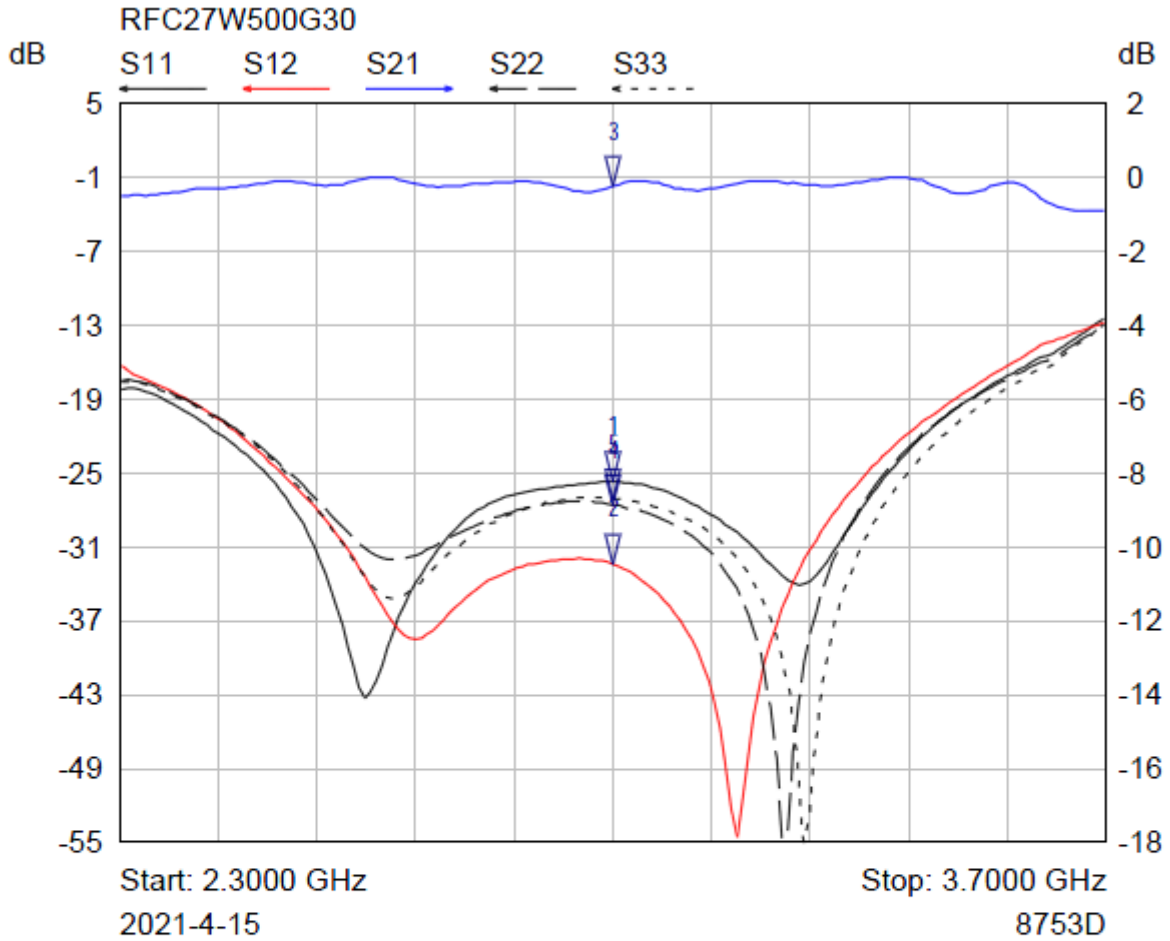
Electrical Specifications (T_A=25°C)

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			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)

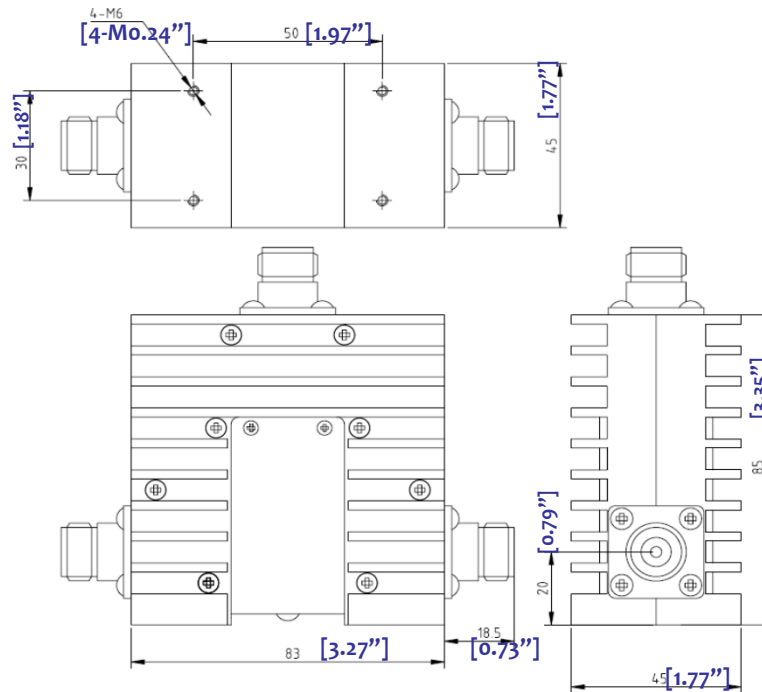
Typical Performance Plots



Mkr	Trace	X-Axis	Value	Notes
1 ▾	S11	3.0000 GHz	-25.74 dB	
2 ▾	S12	3.0000 GHz	-32.43 dB	
3 ▾	S21	3.0000 GHz	-0.24 dB	
4 ▾	S22	3.0000 GHz	-27.56 dB	
5 ▾	S33	3.0000 GHz	-27.07 dB	

SN:20210405

Outline Drawing



Notes:

1. Package Material: Aluminum alloy
2. Plating: 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
RFLC101M61M97S	SMA Female Connectors	610MHz-970MHz Wide Band Coaxial Circulator

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