

WR112 Waveguide High Power Circulator 7.05GHz-10GHz



Product Description

RFWC112B is a WR112 waveguide high power circulator with a frequency range of 7.05 to 10GHz.

The circulator has a minimum isolation of 20dB. The maximum insertion loss is 0.5dB.

The circulator waveguide type is WR112.

Features

- High power handling up to 250W
- 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°C)

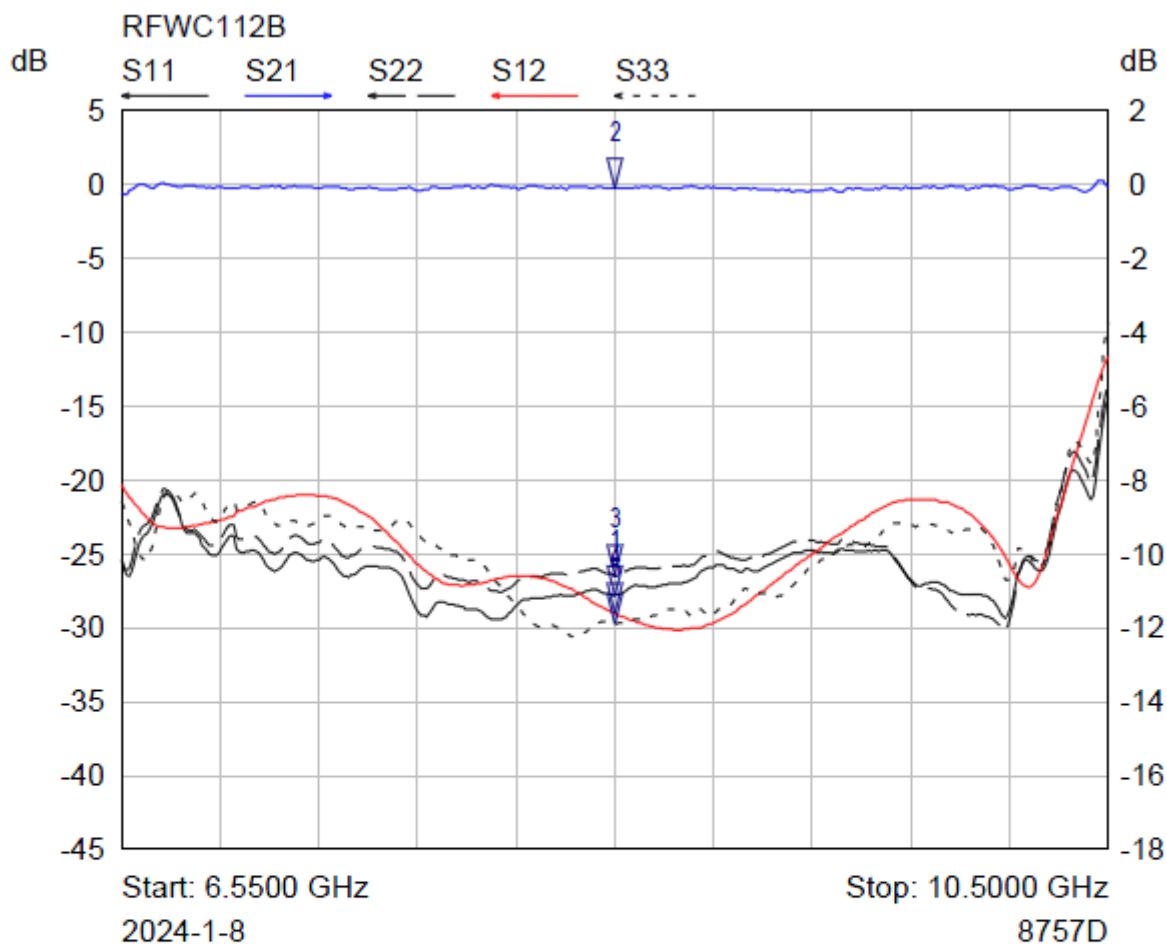
Parameter	Min	Typ	Max	Units
Frequency Range		7.05 - 10		GHz
Insertion Loss			0.50	dB
Isolation	20			dB
VSWR			1.25	:1
Forward Power (CW)			250	W
Reverse Power (CW)			250	W
Peak Power Handling		4KW (8% duty cycle)		
Rotation		Clockwise (Standard) Counter Clockwise (upon request)		
Waveguide type		Rectangular Waveguide WR112		
Flange Type		CPR112F		

Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-20°C to +60°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)

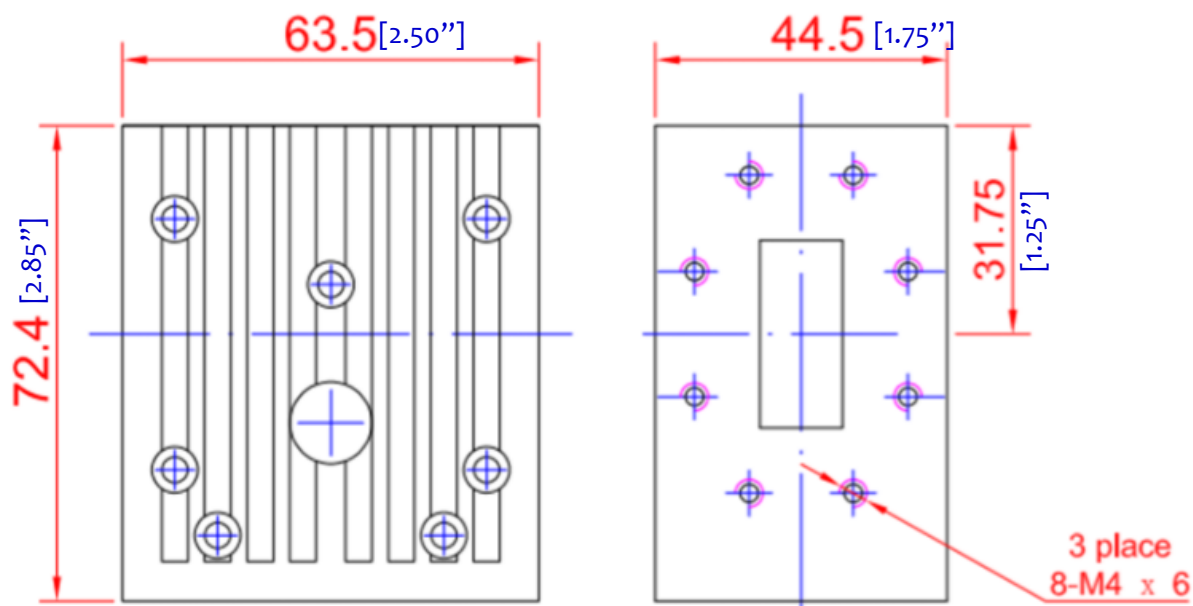
*For vibration testing details please see additional information section.

Typical Performance Plots



SN:20231202

Outline Drawing



Notes:

1. Package Material: Aluminum Alloy
2. 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
RFWC112B	waveguide type WR112	7.05GHz–10GHz WR112 Waveguide Circulator

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