

WR75 Waveguide Circulator 10GHz-15GHz



Product Description

RFWC75D is a waveguide circulator with a frequency range of 10 to 15GHz.

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

The circulator's interface is WR75.

Features

- Wide band operation 10-15GHz
- High isolation within operational band
- Low Insertion loss
- Low temperature coefficient ferrite material offer stable performance over temperature
- Commercial Aerospace and military application
- High peak to average handle capability
- All specifications can be modified upon request

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)

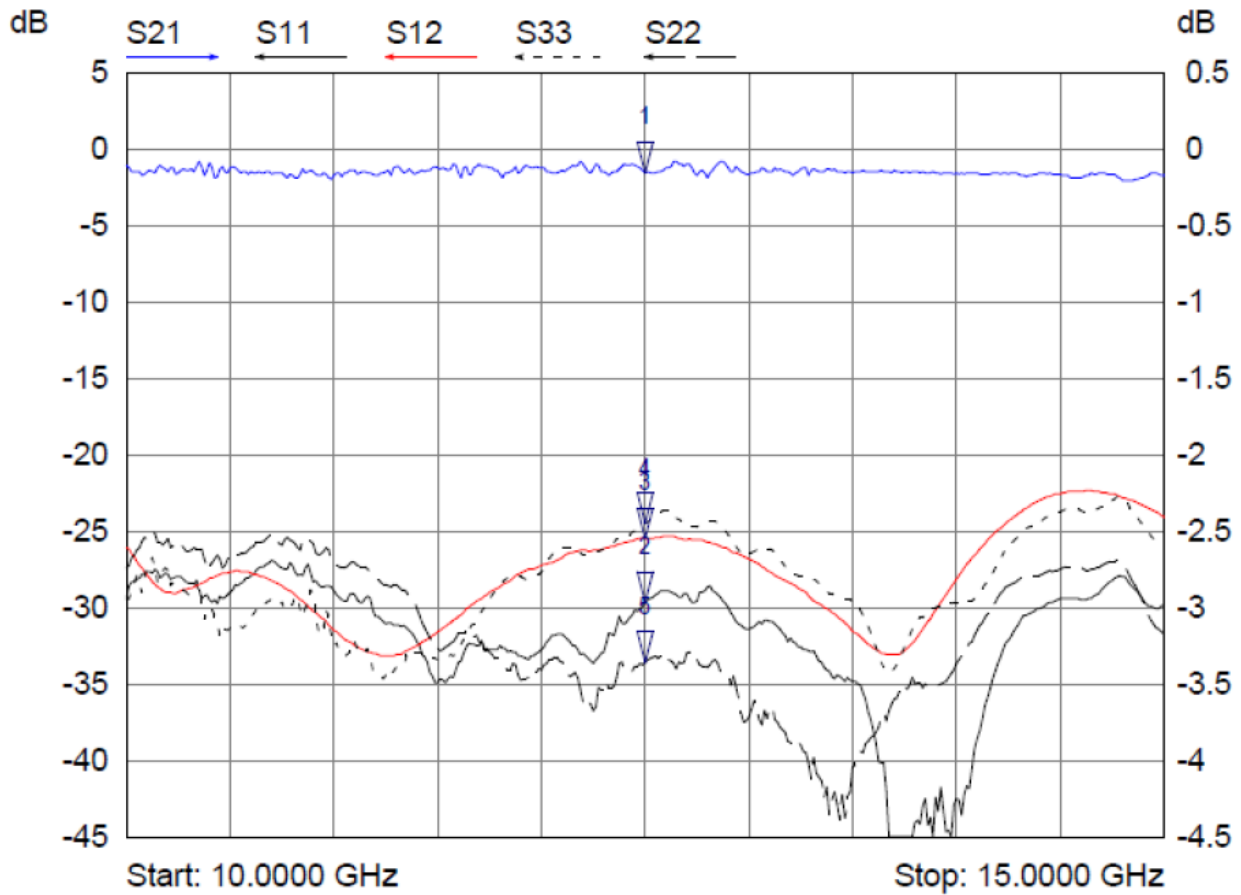
Parameter	Min.	Typ.	Max.	Units
Frequency Range		10-15		GHz
Insertion Loss			0.50	dB
Isolation	20			dB
VSWR			1.25	:1
Forward Power (CW)			100	W
Rotation		Clockwise (Standard) Counter Clockwise (upon request)		
Input /Output Connector		COVER Flange 4 Holes Flat		
Interface		WR75		

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	-20°C → +60°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)

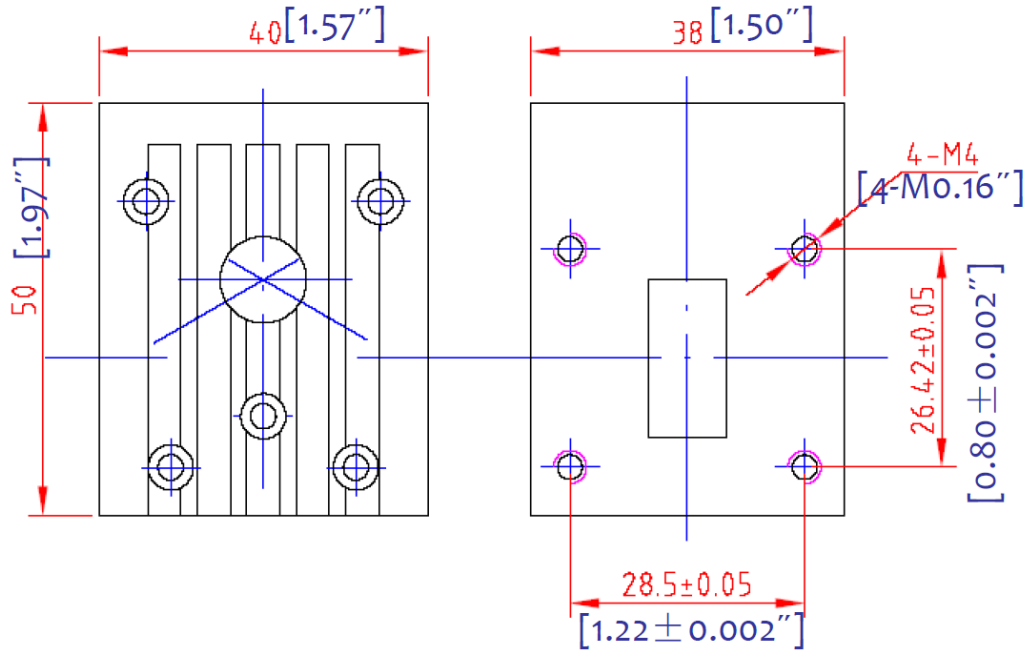
*For vibration testing details please see additional information section.

Typical Performance Plots



Mkr	Trace	X-Axis	Value
1 ▾	S21	12.5000 GHz	-0.16 dB
2 ▾	S11	12.5000 GHz	-29.70 dB
3 ▾	S12	12.5000 GHz	-25.49 dB
4 ▾	S33	12.5000 GHz	-24.52 dB
5 ▾	S22	12.5000 GHz	-33.54 dB

Outline Drawing



Notes:

1. Package Material: Aluminum/copper
2. Finish: Conductive Oxide (not painted)
3. All dimensions are in millimeters [inches].
4. Outline Tolerances $\pm 0.5[0.02]$, Mounting Holes Tolerances $\pm 0.2(0.008)$ unless otherwise specified.

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
RFWC75D	WR75	10GHz-15GHz Waveguide Circulator

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