

WRD750 Double Ridge Waveguide Circulator 7.5GHz–12GHz



Note: Photo is for illustration purposes only.
Please refer to the outline drawing

Product Description

RFWC750GA-7.5G12G is a waveguide circulator with a frequency range of 7.5 to 12GHz.

The circulator has a typical isolation of 16dB. The maximum insertion loss is 0.5dB.

The circulator's interface is WRD750.

Features

- High power handling up to 200W
- Wide band operation
- High isolation within operational band
- Low Insertion Loss
- Stable performance over temperature
- 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 ($T_A=+25^{\circ}\text{C}$)

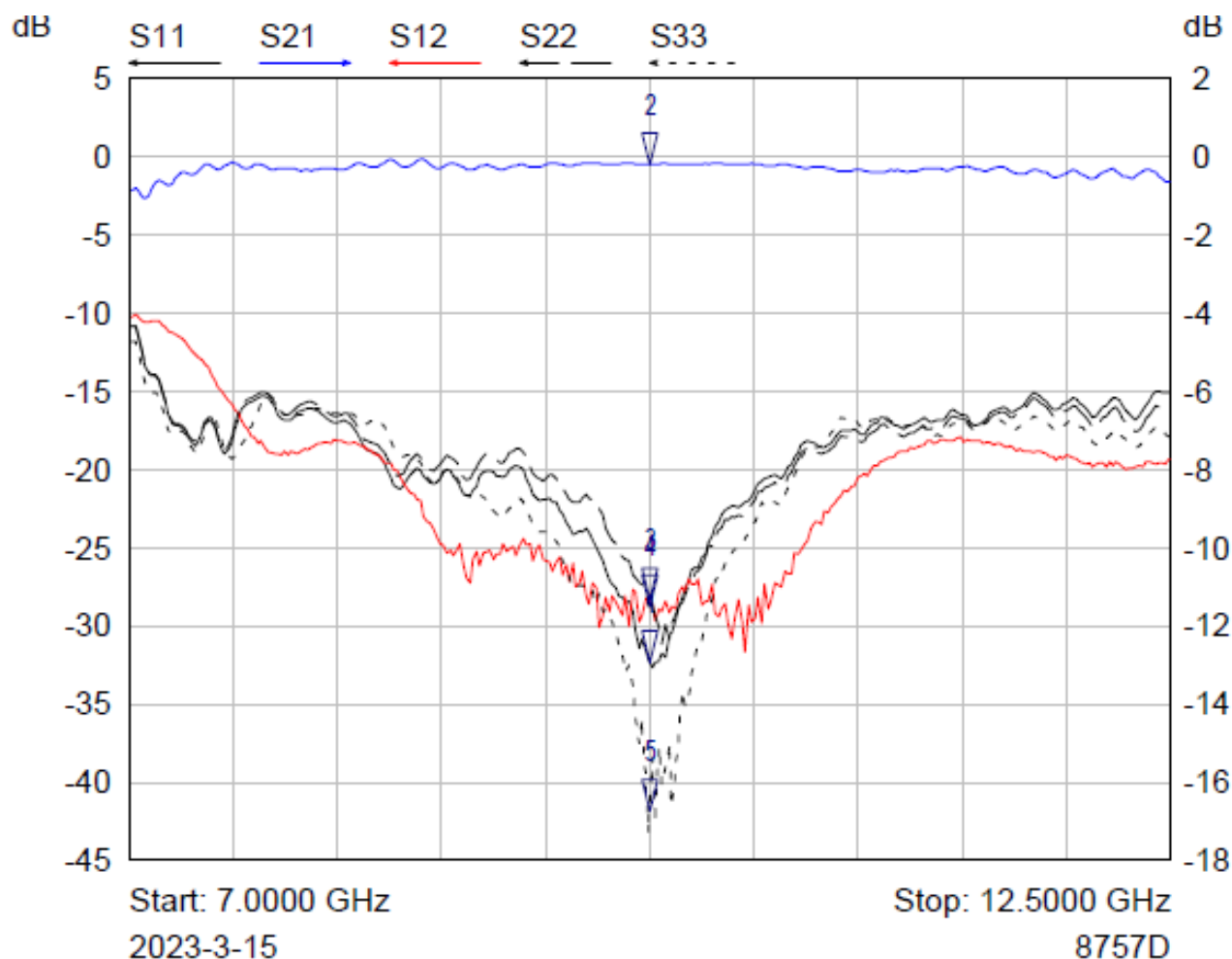
Parameter	Min.	Typ.	Max.	Units
Frequency Range		7.5 - 12		GHz
Insertion Loss		0.45	0.5	dB
Isolation	15	16		dB
VSWR		1.40	1.43	:1
Forward Power		200		W
Weight		-		lbs.
Rotation		Clockwise		
Interface		WRD750		
Flange Type		WRD750-C1		

Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-20°C to +50°C (Case Temperature)
Storage Temperature	-40°C to +70°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)

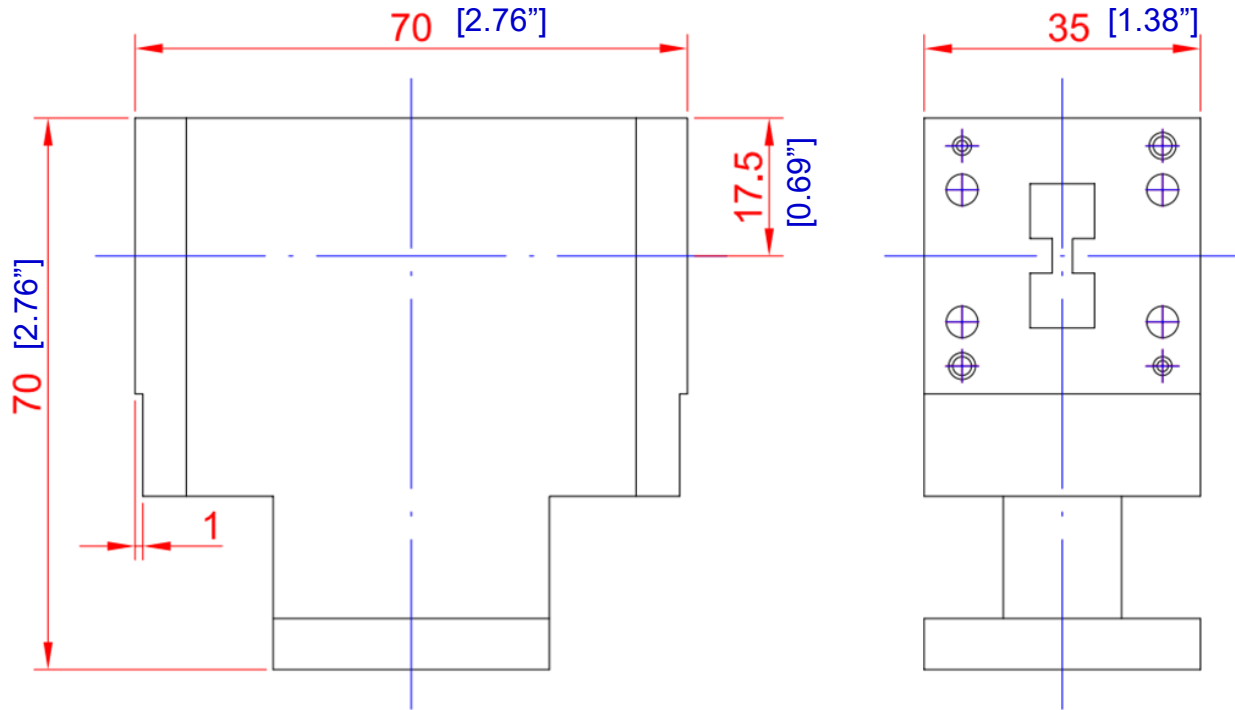
*For vibration testing details please see additional information section.

Typical Performance Plots



Mkr	Trace	X-Axis	Value	Notes
1 ▽	S11	9.7500 GHz	-32.29 dB	
2 ▽	S21	9.7500 GHz	-0.20 dB	
3 ▽	S12	9.7500 GHz	-28.36 dB	
4 ▽	S22	9.7500 GHz	-28.72 dB	
5 ▽	S33	9.7500 GHz	-41.88 dB	

Outline Drawing



Notes:

1. Package Material: Aluminum Alloy
2. Plating: Conductive Oxide
3. All dimensions are in millimeters [inches].
4. Outline Tolerances ± 0.5 [0.02], Mounting Holes Tolerances ± 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
RFWC750GA-7.5G12G	WRD750	7.5GHz-12GHz Waveguide Circulator

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