WR112 Waveguide Isolator
7.7GHz-8.4GHz

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

Product Description

RFWI112A is a WR112 waveguide isolator with a frequency range of 7.7 to 8.4GHz.

The isolator has a minimum isolation of 20dB. The maximum insertion loss is 0.3dB.

The isolator interface is WR112.

Features

- High power handling up to 250W
- 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=+25ºC)

Parameter	Min.	Typ.	Max.	Units
Frequency Range		7.7 – 8.4		GHz
Insertion Loss			0.3	dB
Isolation	20			dB
VSWR			1.2	:1
Power Handling			250	W
Rotation		Clockwise (Standard) Counter Clockwise (upon request)		
Waveguide type		Rectangular Waveguide WR112		
Flange type		CPRG, CPRF, COVER, CHOKE available		
Flange Holes		Through or tapped holes		

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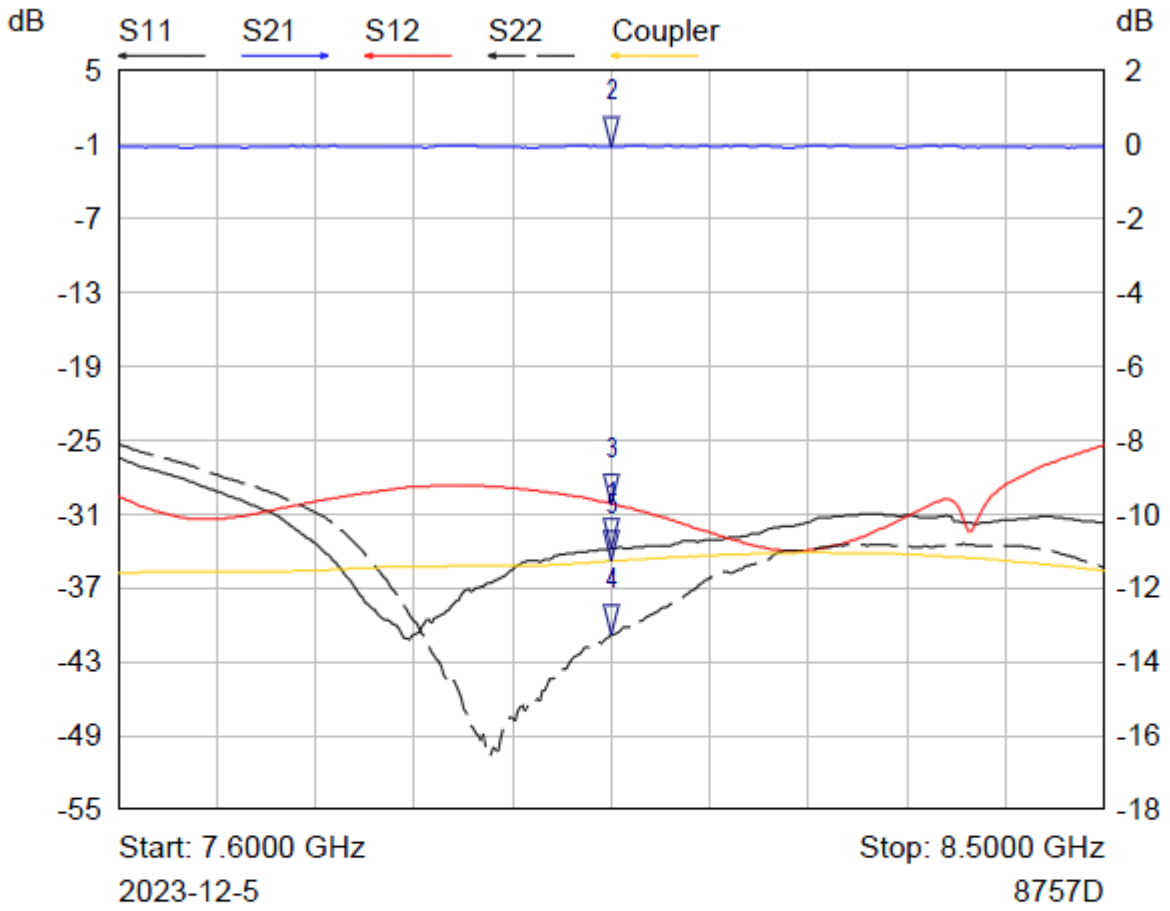
Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-40ºC to +85ºC (Case Temperature)
Storage Temperature	-50ºC to +105ºC
Thermal Shock	-40ºC → +85ºC (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)

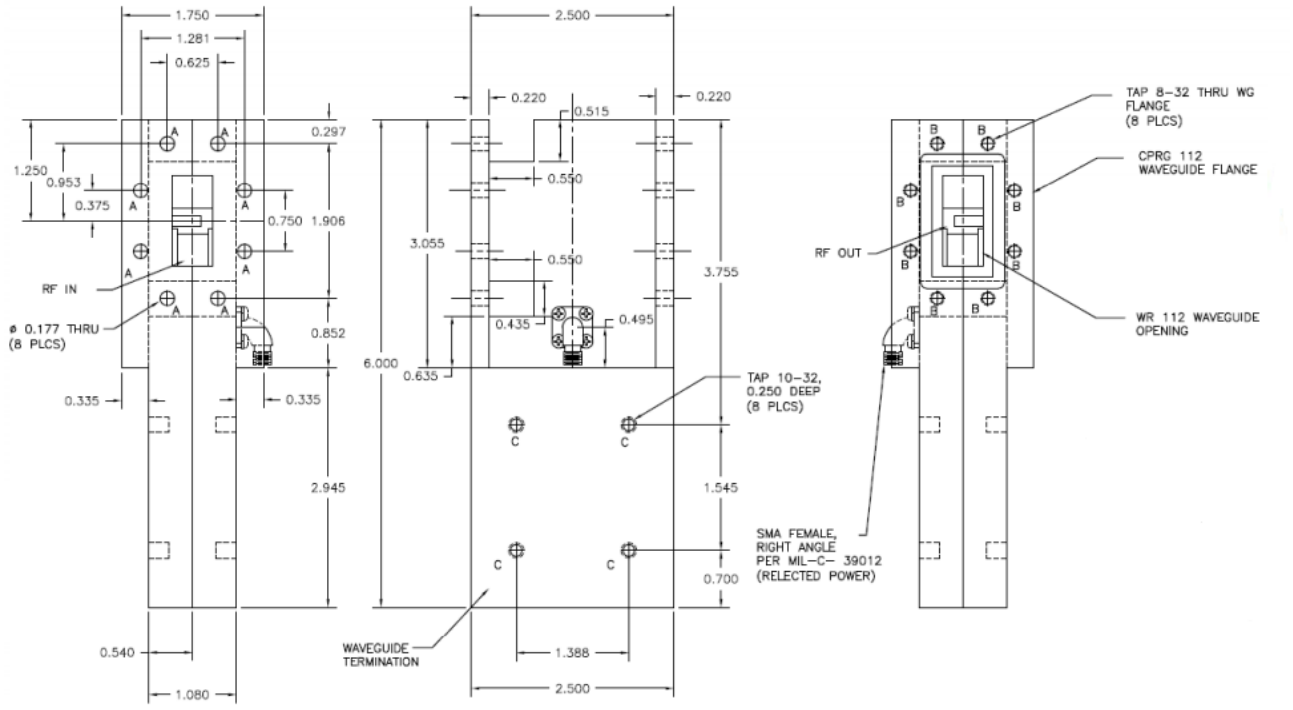
**For vibration testing details please see additional information section.

Typical Performance Plots



Mkr	Trace	X-Axis	Value	Notes
1 ▽	S11	8.0500 GHz	-33.82 dB	
2 ▽	S21	8.0500 GHz	-0.05 dB	
3 ▽	S12	8.0500 GHz	-30.17 dB	
4 ▽	S22	8.0500 GHz	-40.84 dB	
5 ▽	Coupler	8.0500 GHz	-34.83 dB	

Outline Drawing



Notes:
1. All dimensions are in millimeters [inches]

Additional Information

Documentation	Webpage
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
RFWI112A	WR112	7.7GHz-8.4GHz Waveguide Isolator

Important Notice

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