

WR112 High Power Waveguide Isolator 7.7~ 8.4GHz



Product Description

RFWIX12B is high power waveguide isolator with a frequency range of 7.7 to 8.4GHz.

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

The operating temperature of this product is within -45 to +85°C

Features

- High power handling capability 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

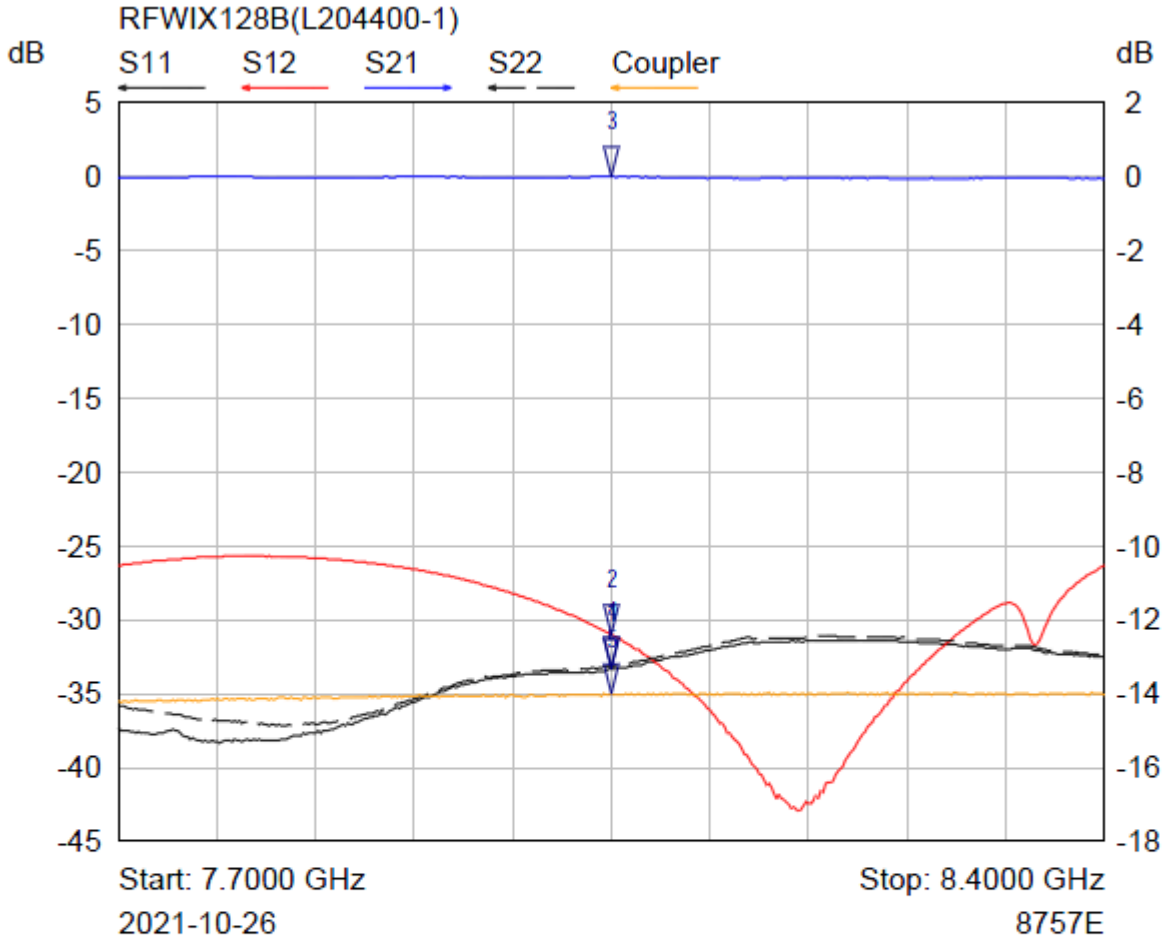
Electrical Specifications($T_A=25^\circ\text{C}$)

Parameter	Min	Typ	Max	Units
Frequency Range		7.7– 8.4		GHz
Insertion Loss			0.3	dB
Isolation (Note 1)	20			dB
VSWR			1.2	:1
Forward Power (CW)			250	W
Rotation		Clockwise (Standard) Counter Clockwise (Upon Request)		
Waveguide Type		WR-112		
Flange Type		CPRG, CPRF, COVER, CHOKE available		
Impedance		---		Ω

Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-40°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)

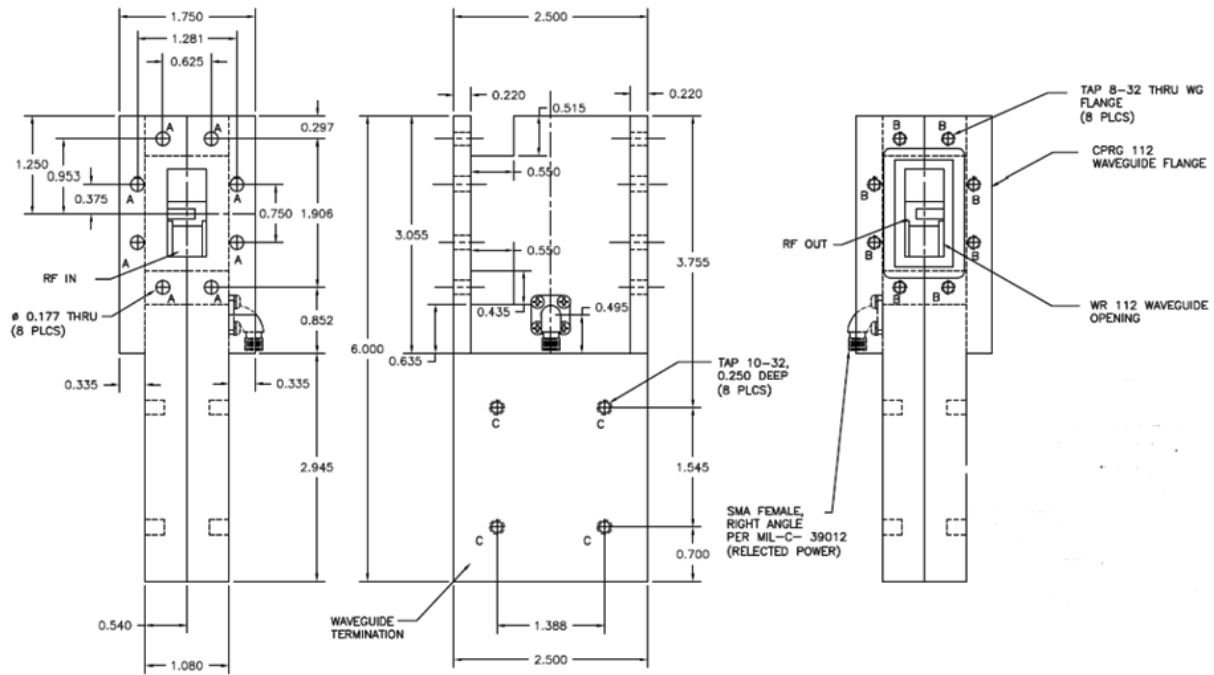
Typical Performance Plots



Mkr	Trace	X-Axis	Value	Notes
1 ▽	S11	8.0500 GHz	-33.36 dB	
2 ▽	S12	8.0500 GHz	-31.02 dB	
3 ▽	S21	8.0500 GHz	-0.01 dB	
4 ▽	S22	8.0500 GHz	-33.14 dB	
5 ▽	Coupler	8.0500 GHz	-35.03 dB	

SN:20211015

Outline Drawing



Notes:

1. Package Material: Aluminum alloy
2. Finish : Nickel Plated
3. All dimensions are in millimeters [inches]
4. Tolerance $\pm 0.25(0.01)$, unless otherwise specified.

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
RFWIX12B	WR112	7.7GHz ~ 8.4GHz High Power Waveguide Isolator

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