WRD650 Double Ridge Waveguide Isolator
6 – 12GHz

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

Product Description

RFWI650GA is a Double Ridge Waveguide Isolator with a frequency range of 6 to 12GHz.

The isolator has a minimum isolation of 13dB. The maximum insertion loss is 1.0 dB.

The circulator waveguide type is wrd650-C1.

Features

- High power handling up to 200W
- Wide band operation
- High isolation within operational band
- Low Insertion Loss
- Stable performance over temperature
- High peak to average handling 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=+25ºC)

Parameter		Min.	Typ.	Max.	Units
Frequency Range			6 – 12		GHz
Insertion Loss	@6-6.5GHz			1.0	dB
	@6.5-12GHz			0.6	dB
Reverse Isolation		13			dB
VSWR				1.55	:1
Forward Power (CW)				200	W
Reverse Power (CW)				50	W
Rotation			Clockwise		
Waveguide type			wrd650-C1		

RF-LAMBDA USA LLC: www.rflambda.com
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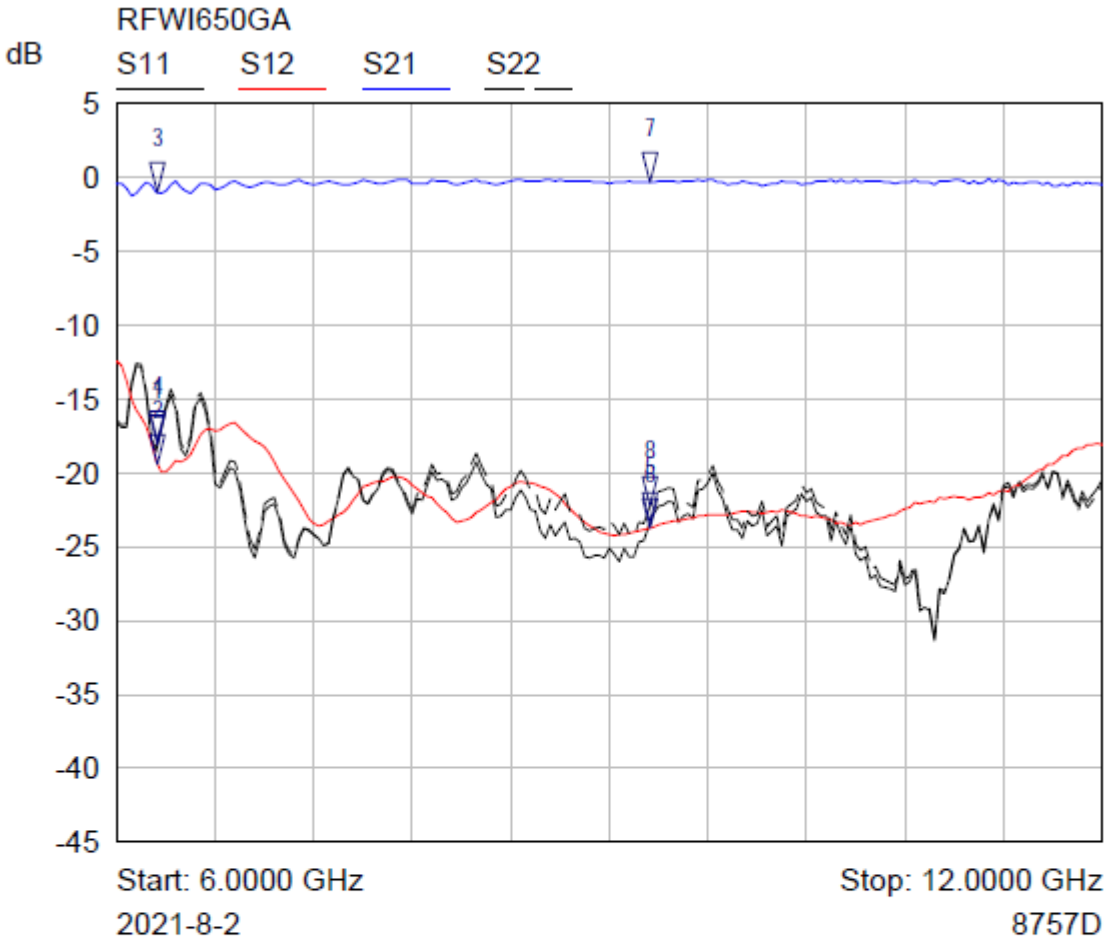
Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-20ºC to +50ºC (Case Temperature)
Storage Temperature	-50ºC to +125ºC
Thermal Shock	-20ºC → +50ºC (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

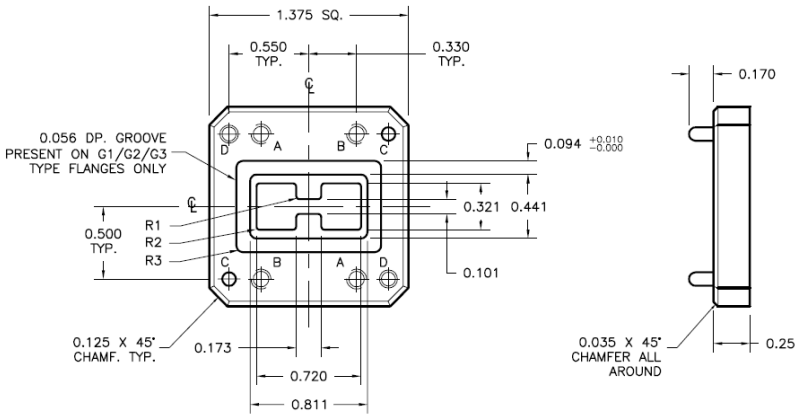


Mkr	Trace	X-Axis	Value	Notes
1	S11	6.2500 GHz	-18.05 dB	
2	S12	6.2500 GHz	-19.41 dB	
3	S21	6.2500 GHz	-1.03 dB	
4	S22	6.2500 GHz	-17.83 dB	
5	S11	9.2500 GHz	-23.33 dB	
6	S12	9.2500 GHz	-23.73 dB	
7	S21	9.2500 GHz	-0.33 dB	
8	S22	9.2500 GHz	-22.25 dB	

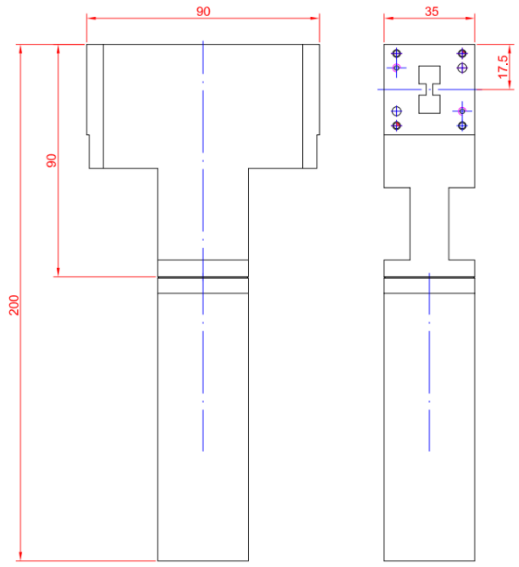
SN:20210801

Typical Performance Plots

Dimensions in inches



All Dimensions in mm



Notes:
1. Package Material: Aluminum alloy
2. Finish : Conductive Oxide
3. All dimensions are in millimeters [inches]
4. Tolerance ±0.25(0.01).unless otherwise specified.

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
RFWI650GA	waveguide type is wrd650-C1	6GHz-12GHz Double Ridge Waveguide Isolator

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