

WRD650 Double Ridge Waveguide Isolator 11.5 – 18GHz



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

Product Description

The RFWI650-11.5G18G is a WRD650 double ridge waveguide isolator with a frequency range of 11.5 to 18GHz.

The Isolator has a typical isolation of 13dB. The maximum insertion loss is 0.8dB.

The operating temperature of this product is within -20 to +50°C

Features

- High power handling capability up to 200W
- 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

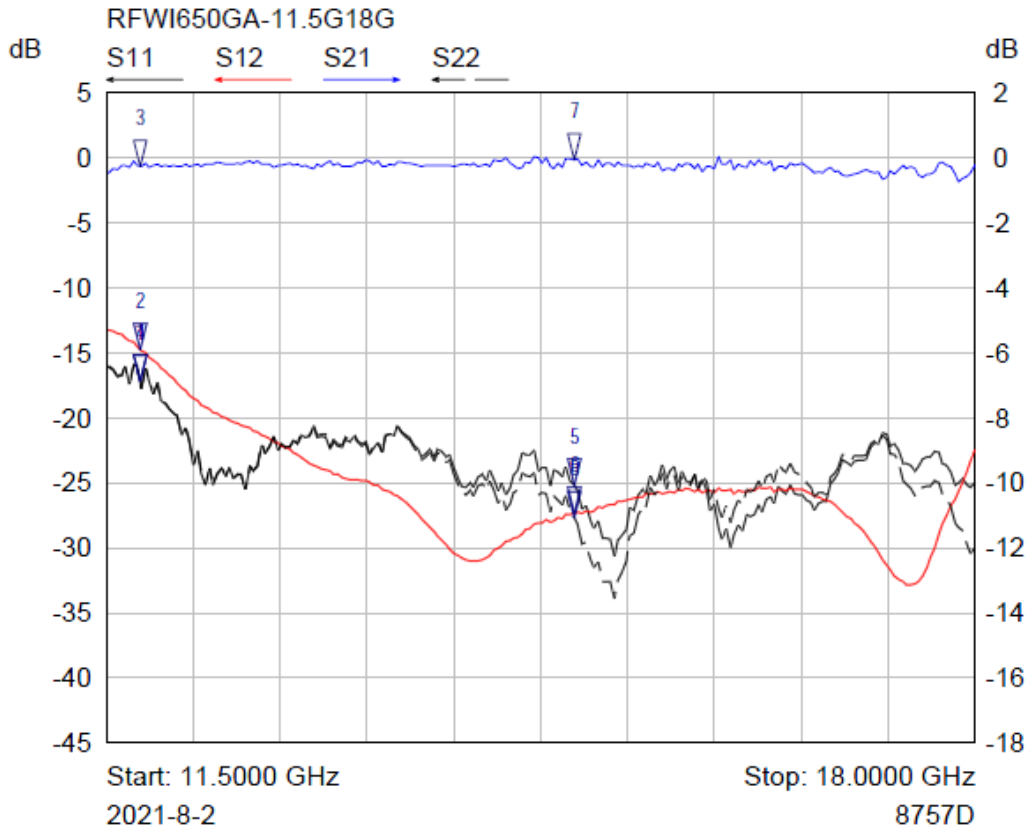
Electrical Specifications(T_A=25°C)

Parameter	Min	Typ	Max	Units
Frequency Range		11.5 - 18		GHz
Insertion Loss		@11.5-12GHz	0.8	dB
		@12-18GHz	0.6	dB
Reverse Isolation		@11.5-12GHz	13	dB
		@12-18GHz	16	dB
VSWR		@11.5-12GHz	1.5	:1
		@12-18GHz	1.35	:1
Forward Power (CW)			200	W
Reverse Power (CW)			50	W
Rotation		Clockwise		
Waveguide type		wrd650-C1		

Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-20°C to +50°C (Case Temperature)
Storage Temperature	-50°C to +125°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)

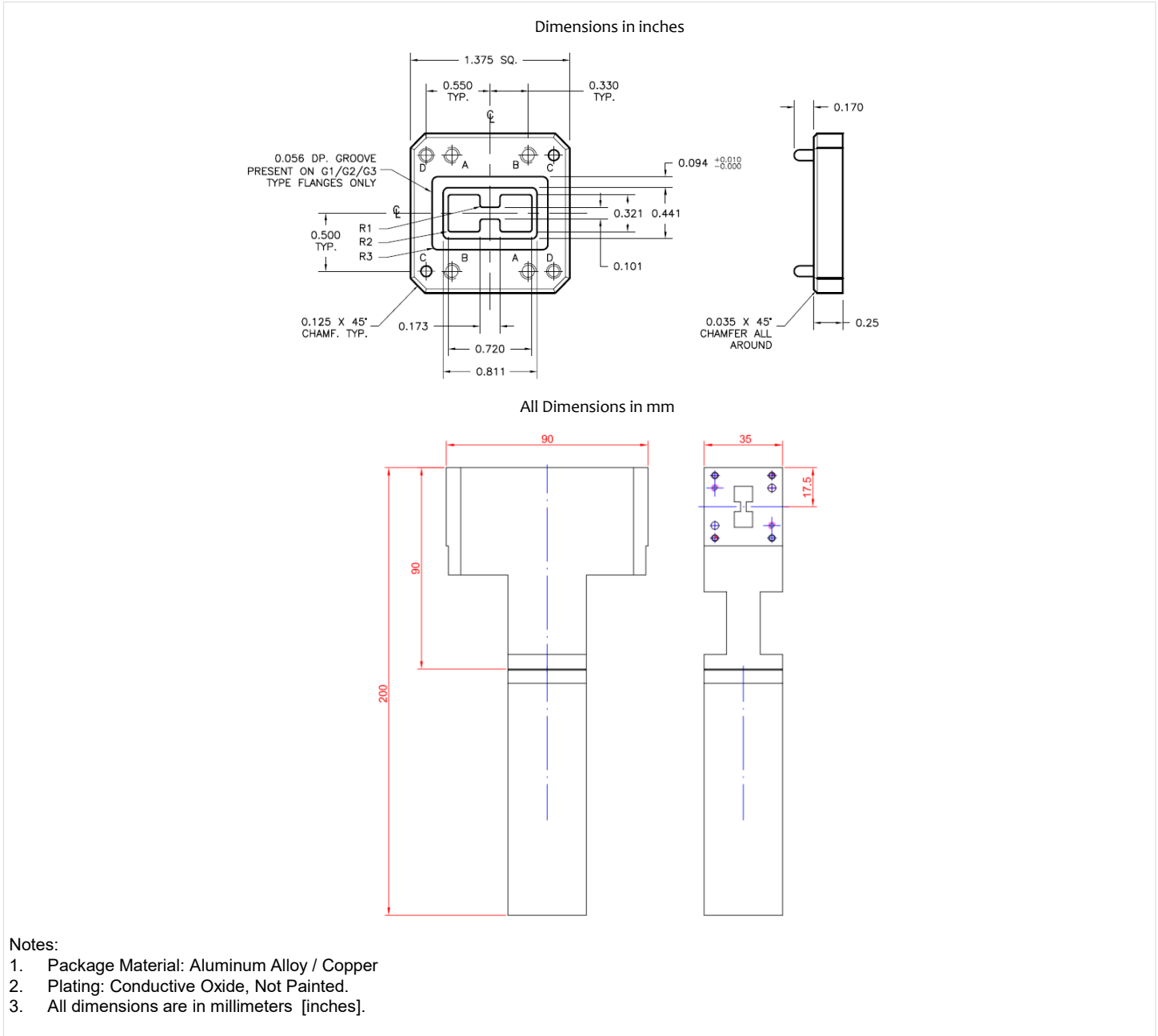
Typical Performance Plots



Mkr	Trace	X-Axis	Value	Notes
1 ▽	S11	11.7500 GHz	-17.15 dB	
2 ▽	S12	11.7500 GHz	-14.72 dB	
3 ▽	S21	11.7500 GHz	-0.25 dB	
4 ▽	S22	11.7500 GHz	-17.17 dB	
5 ▽	S11	15.0000 GHz	-25.20 dB	
6 ▽	S12	15.0000 GHz	-27.35 dB	
7 ▽	S21	15.0000 GHz	-0.08 dB	
8 ▽	S22	15.0000 GHz	-27.64 dB	

SN:20210801

Outline Drawing



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
RFWI650-11.5G18G	waveguide type is wrd650-C1	11.5GHz-18GHz Double Ridge Waveguide Isolator

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