WR-159 Waveguide Isolator
4.9-7.05GHz

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

Product Description

The RFWI159B is a ultra wide band WR-159 waveguide isolator with a frequency range of 4.9 to 7.05GHz.

The isolator has a typical isolation of 19dB. The maximum insertion loss is 0.5dB.

The operating temperature of this product is within -20 to +60ºC

Features

- High power handling up to 400W
- 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℃)

Parameter	Min	Typ	Max	Units
Frequency Range		4.9-7.05		GHz
Insertion Loss		0.40	0.50	dB
Isolation	19	20		dB
VSWR		1.20	1.25	:1
Forward Power			400	W
Reverse Power			40	W
Rotation		Counter Clockwise		
Finish		Conductive Oxide		
Flange Type		UDR58 (UG 1731/U)		

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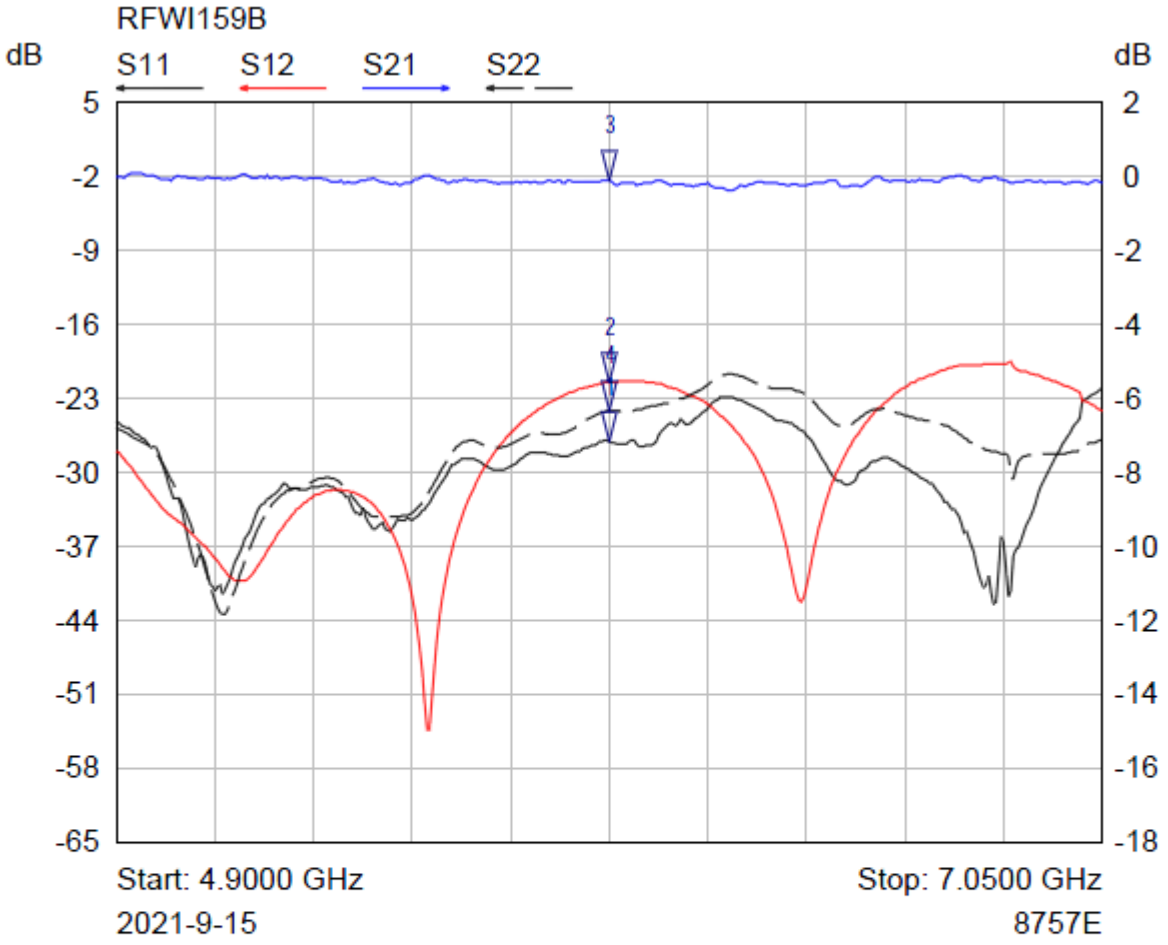
Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-20ºC to +60ºC (Case Temperature)
Storage Temperature	-40ºC to +85ºC
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)

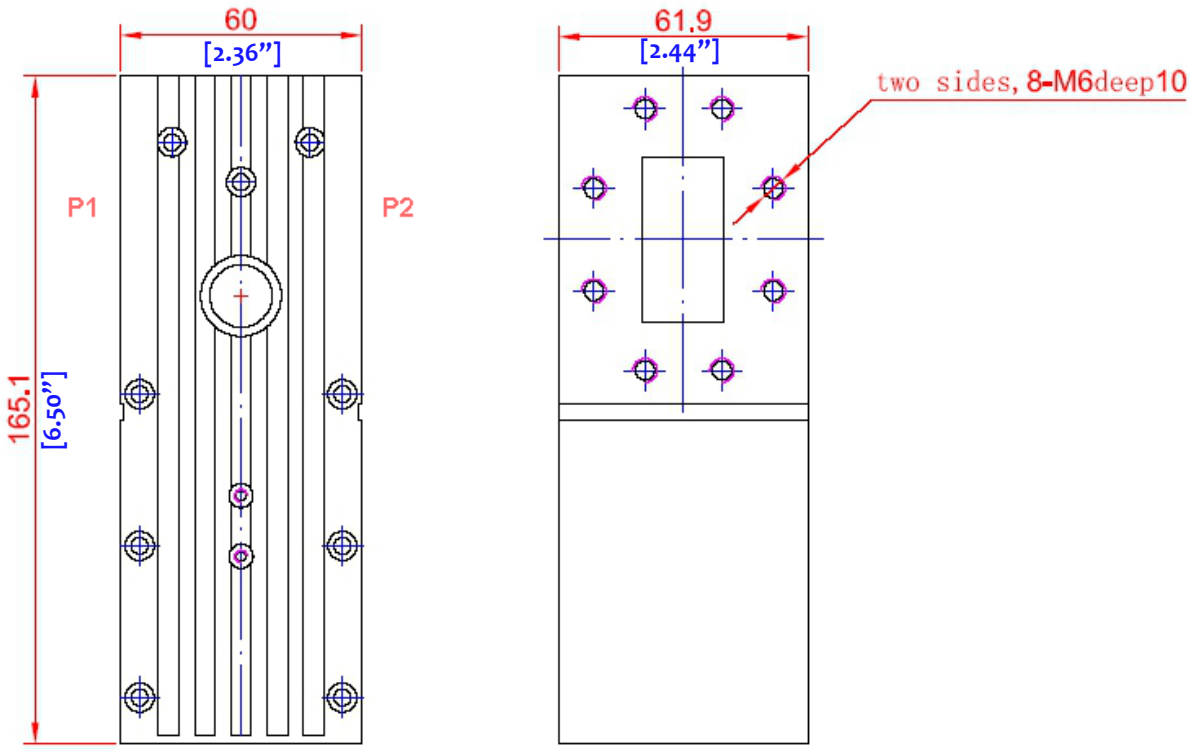
Typical Performance Plots



Mkr	Trace	X-Axis	Value	Notes
1	S11	5.9750 GHz	-27.10 dB	
2	S12	5.9750 GHz	-21.50 dB	
3	S21	5.9750 GHz	-0.10 dB	
4	S22	5.9750 GHz	-24.21 dB	

SN:210902

Outline Drawing



Notes:
1. Package Material: Aluminum Alloy / Copper
2. Plating: Nickel
3. All dimensions are in millimeters [inches].

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
RFWI159B	Standard	4.9GHz-7.05GHz Waveguide Isolator

Important Notice

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