WR22 Waveguide Isolator
33 - 50GHz 8W

Note: The photo is for illustration only. Please refer to the outline drawing.

Product Description

RFWI22B is a WR22 waveguide isolator with a frequency range of 33 to 50GHz.

The isolator has a typical isolation of 25dB. The maximum insertion loss is 1.5dB.

The isolator waveguide type is WR22.

Features

- High power handling capability up to 8 W
- 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=+25ºC)

Parameter	Min	Typ	Max	Units
Frequency Range		33-50		GHz
Insertion Loss		1.40	1.50	dB
ReverseIsolation (Note 1)		≥ 30 dB @ 33 ~ 46 GHz		
		≥ 25 dB @ 46 ~ 50 GHz		
VSWR		1.40	1.45	: 1
Forward Power (CW)			8	W
Reverse Power (CW)			1	W
Rotation		Clockwise (Standard) Port 3 is a load		
Input / Output Interface		COVER flat 4 holes		
Flange Type		UG383/U		

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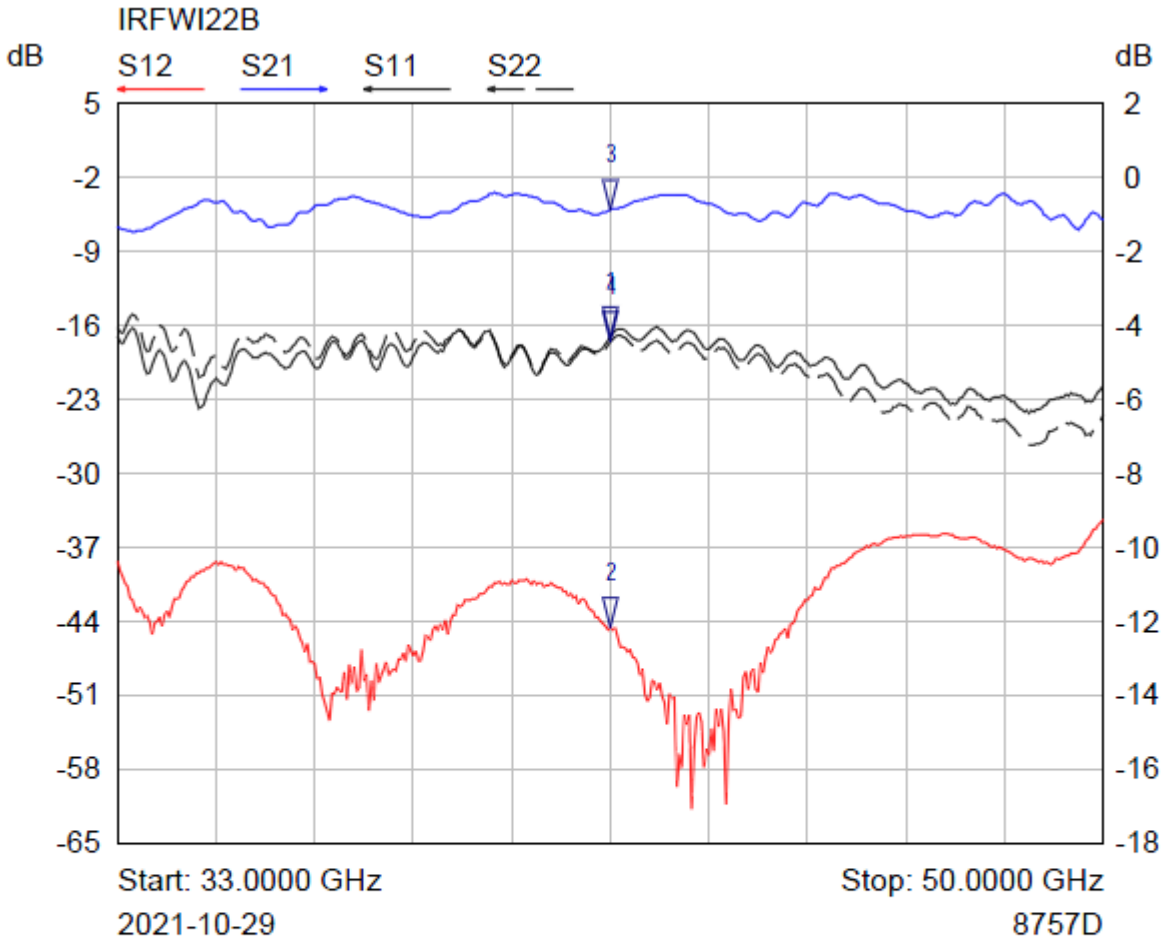
Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-20ºC to +60ºC (Case Temperature)
Storage Temperature	-45ºC to +85ºC
Thermal Shock	-40ºC → +70ºC (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.

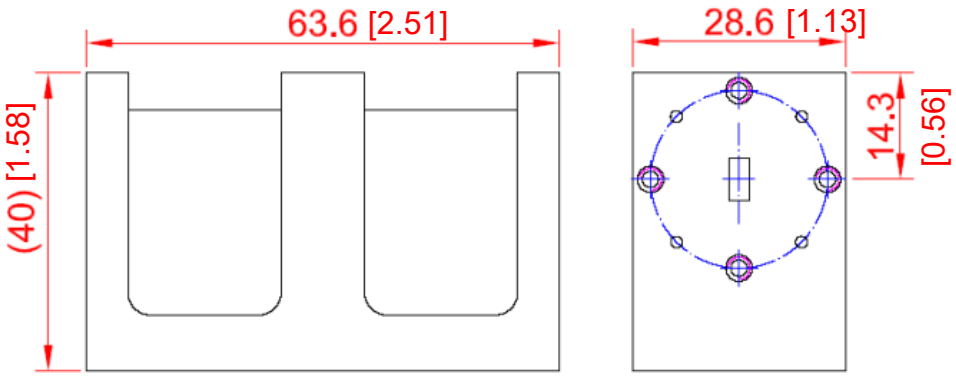
Typical Performance Plots



Mkr	Trace	X-Axis	Value	Notes
1	S11	41.5000 GHz	-17.04 dB	
2	S12	41.5000 GHz	-44.57 dB	
3	S21	41.5000 GHz	-0.86 dB	
4	S22	41.5000 GHz	-17.55 dB	

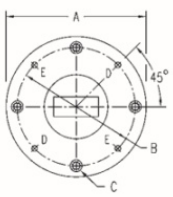
SN:211004

Outline Drawing



Flange: UG383/U

WR22	WG23	R400
UG383/U		
Dimensions	inches	mm
A	1.13	28.85
B	0.94	23.81
C Holes	4-40 UNC-2B	
D Holes	0.063	1.613
E Dowels	0.061	1.555



Notes:
1. Package Material: Aluminum alloy or Copper
2. All dimensions are in millimeters [inches]
3. 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
RFWI22B	Waveguide Type WR22	33GHz-50GHz Waveguide Isolator

Important Notice

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