

WR15 Waveguide Isolator 57GHz-63GHz



Product Description

RFWI15A60 is a WR15 waveguide isolator with a frequency range of 57 to 63GHz.

The isolator has a typical isolation of 18dB. The maximum insertion loss is 1.0dB.

The isolator input and output connectors are UG385/U.

Features

- High power handling up to 2W
- 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 ($T_A=+25^{\circ}\text{C}$)

Parameter		Min.	Typ.	Max.	Units
Frequency Range			57 - 63		GHz
Insertion Loss	@57-60GHz		0.8	1.0	dB
	@60-63GHz		0.5	0.6	
Isolation		16	18		dB
VSWR	@57-60GHz		1.7	1.9	:1
	@60-63GHz		1.5	1.6	
Forward Power				2	W
Reverse Power				1	W
Rotation			Clockwise		
Input / Output Connectors			UG385/U		
Weight			0.17 Max.		lbs

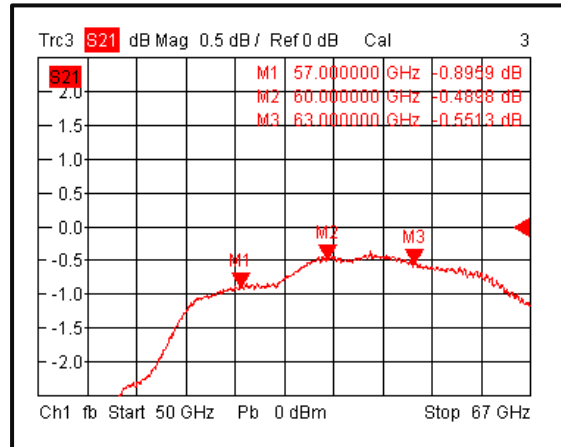
Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-20°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)

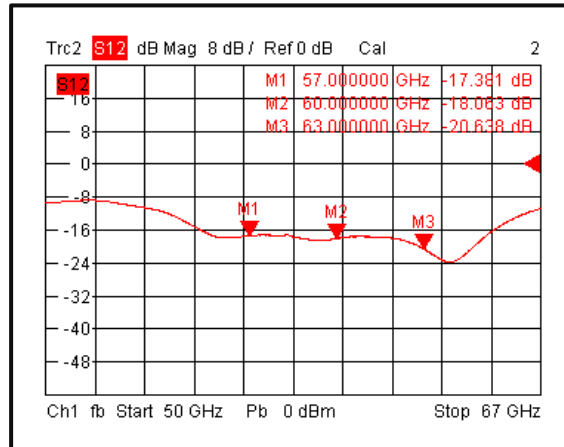
**For vibration testing details please see additional information section.

Typical Performance Plots

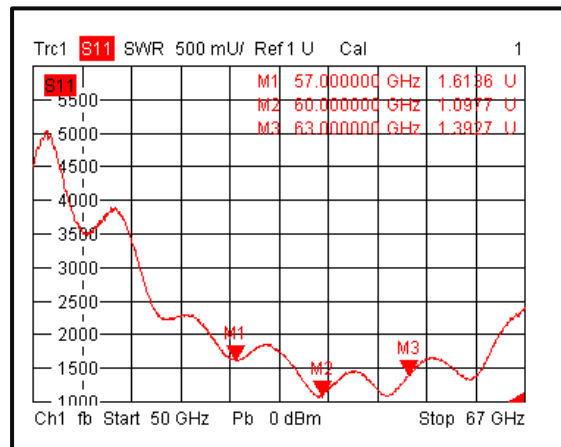
Insertion Loss



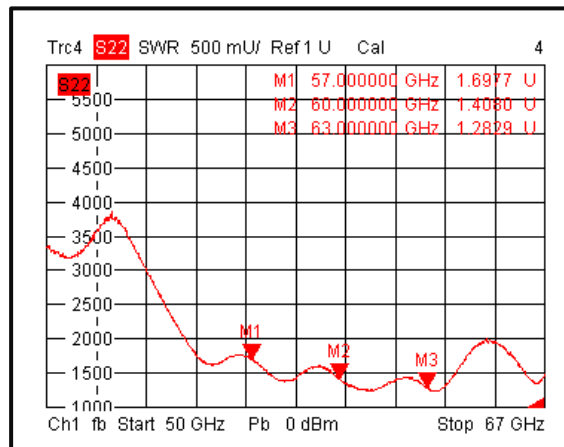
Isolation



VSWR 1

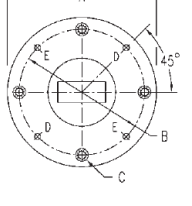


VSWR2

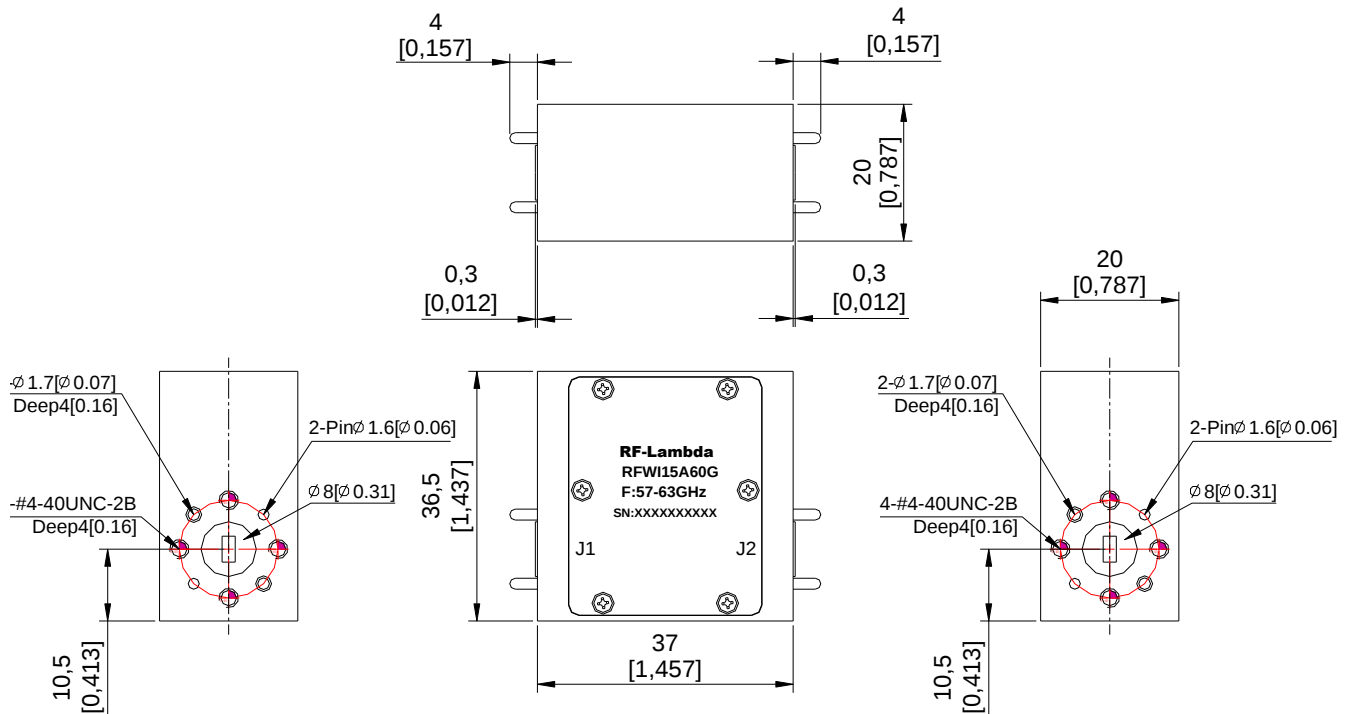


Outline Drawing

	WR15	WG25	R620
UG385/U			
Dimensions	inches	mm	
A	0.750	19.05	
B	0.563	14.29	
C Holes	4-40 UNC-2B		
D Holes	0.063	1.613	
E Dowels	0.061	1.555	

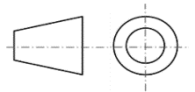


The diagram illustrates a circular layout with concentric circles. Dimension A is the outer diameter. Dimension B is the diameter of the inner circle. Dimension C is the diameter of the holes on the outer circle. Dimension D is the diameter of the holes on the inner circle. Dimension E is the diameter of the dowels on the inner circle. A 45-degree angle is indicated between the center line and the line connecting the center to the outer hole.



Notes:

- Package Material: Aluminum alloy
- Finish : Gold Plated
- All dimensions are in millimeters [inches]
- Outline Tolerances ± 0.5 [0.02], Mounting Hole Tolerances ± 0.2 [0.008] unless otherwise specified.



Additional Information

Documentation

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

Webpage

Ordering Information

Part Number	Modification	Description
RFWI15A60	Connectors UG385/U	57GHz-63GHz Waveguide Isolator

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