WR12 Waveguide Circulator 60-90GHz

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

Product Description

RFWC12A is a waveguide circulator with a frequency range of 60-90GHz with a 2MHz BW.

The circulator has a typical isolation of 20dB. The maximum insertion loss is 0.80dB.

The circulator's interface is WR12.

Features

- High power handling up to 1W
- Wide band operation
- High isolation within operational band
- Low Insertion Loss
- Stable performance over temperature
- 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		60-90GHz (2MHz BW) 77-79MHz shown		GHz
Insertion Loss			0.80	dB
Isolation	20			dB
VSWR			1.30	: 1
Forward Power (CW)			1	W
Rotation		Clockwise (Standard) Counter Clockwise (upon request)		
Input / Output Connectors		COVER flat 4 holes		
Flange Type		UG-387U/G		
Weight		/ Max.		ounces

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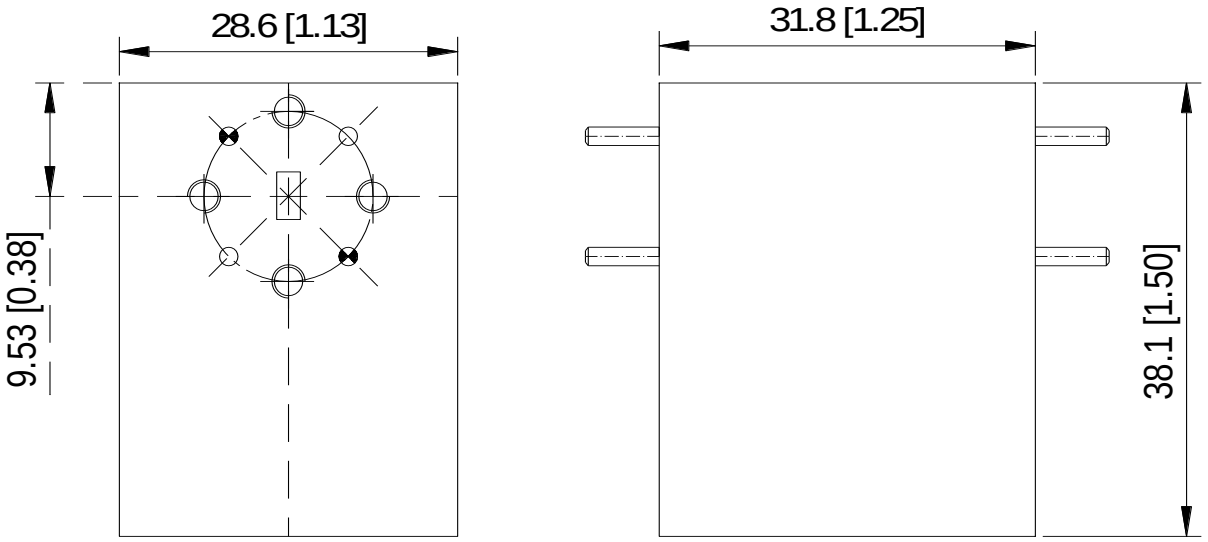
Environmental Specifications and Test Standards

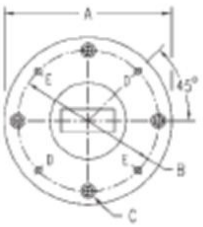
Parameter	Description
Operational Temperature	-10ºC to +60ºC (Case Temperature)
Storage Temperature	-45ºC to +85ºC
Thermal Shock	-10ºC → +60ºC (5 Cycles / 10 hours)
*Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
Shock	1. Weight >20g, 50g half sine wave for 11ms, 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.

Outline Drawing



WR12	WG26	R740
	UG387/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
All Holes	0.563	14.29



Notes:
1. Package Material: Aluminum Alloy
2. Finish: Conductive Oxide (not painted)
3. All dimensions are in millimeters [inches].
4. Outline Tolerances ±0.5[0.02], Mounting Holes Tolerances ±0.2(0.008)unless otherwise specified.

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
RFWC12A	WR12	76GHz-81GHz Waveguide Circulator

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