

## 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<sub>A</sub>=+25°C)

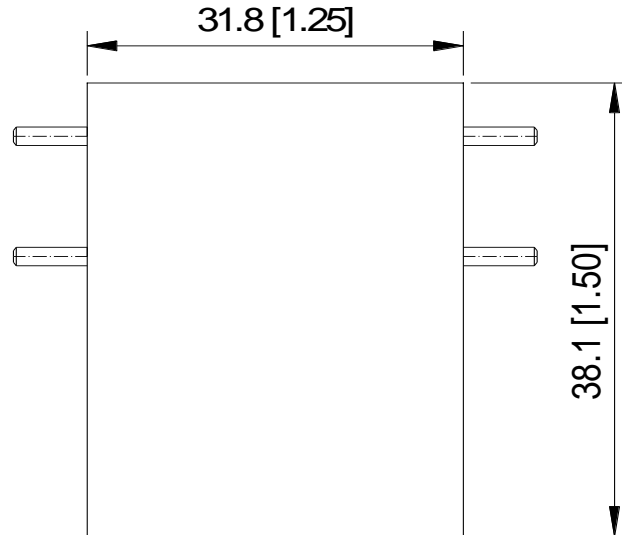
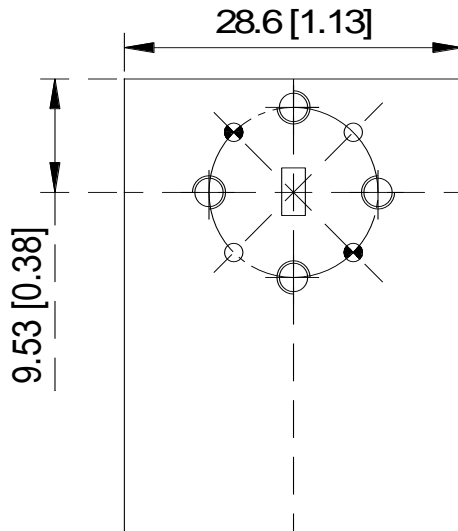
Parameter	Min.	Typ.	Max.	Units
Frequency Range		60-90GHz (2MHz BW) 77-79MHz shown		GHz
Insertion Loss			0.80	dB
Isolation	20			dB
VSWR			1.30	: 1
Forward Power (CW)			1	W
Rotation		Clockwise (Standard) Counter Clockwise (upon request)		
Input / Output Connectors		COVER flat 4 holes		
Flange Type		UG-387U/G		
Weight		/ Max.		ounces

**Environmental Specifications and Test Standards**

Parameter	Description
Operational Temperature	-10°C to +60°C (Case Temperature)
Storage Temperature	-45°C to +85°C
Thermal Shock	-10°C → +60°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.

**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  $\pm 0.5$ [0.02], Mounting Holes Tolerances  $\pm 0.2$ (0.008) unless otherwise specified.

**Additional Information**

Documentation	Webpage
ESD Policy	<a href="https://rflambda.com/pdf/rflambda_esd_control.pdf">https://rflambda.com/pdf/rflambda_esd_control.pdf</a>
Connector Torque Specifications	<a href="https://www.rflambda.com/pdf/Torque_Specifications.pdf">https://www.rflambda.com/pdf/Torque_Specifications.pdf</a>
Random Vibration Test Standard	<a href="https://www.rflambda.com/pdf/rflambda_random_vibration_MIL-STD-202G.pdf">https://www.rflambda.com/pdf/rflambda_random_vibration_MIL-STD-202G.pdf</a>

**Ordering Information**

Part Number	Modification	Description
RFWC12A	WR12	76GHz-81GHz Waveguide Circulator

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