WR229 Waveguide Circulator 3.3GHz-4.9GHz

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

Product Description

RFWC229B is a waveguide circulator with a frequency range of 3.3 to 4.9GHz.

The circulator has a typical isolation of 22dB. The maximum insertion loss is 0.5dB.

The circulator's interface is WR229.

Features

- High power handling up to 400W
- 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		3.3-4.9		GHz
Insertion Loss		0.40	0.50	dB
Isolation	21	22		dB
VSWR		1.15	1.20	:1
Forward Power			400	W
Rotation		Clockwise (Standard) Counter Clockwise (upon request)		
Flange Type		Input flange is CPRG, output and port 3 flange are CPRF		
Weight		-		lbs.
Impedance		50		Ω
Interface		WR229		

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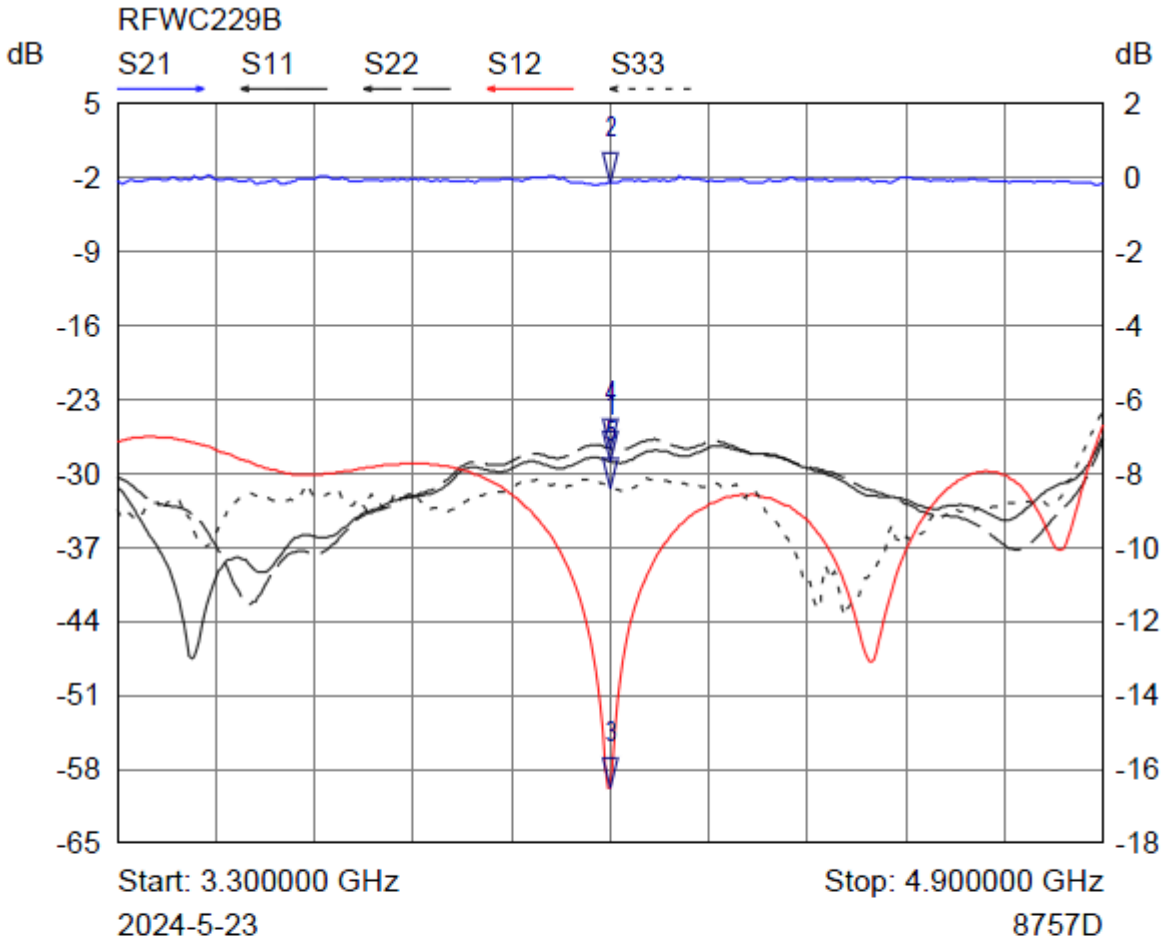
Environmental Specifications and Test Standards

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

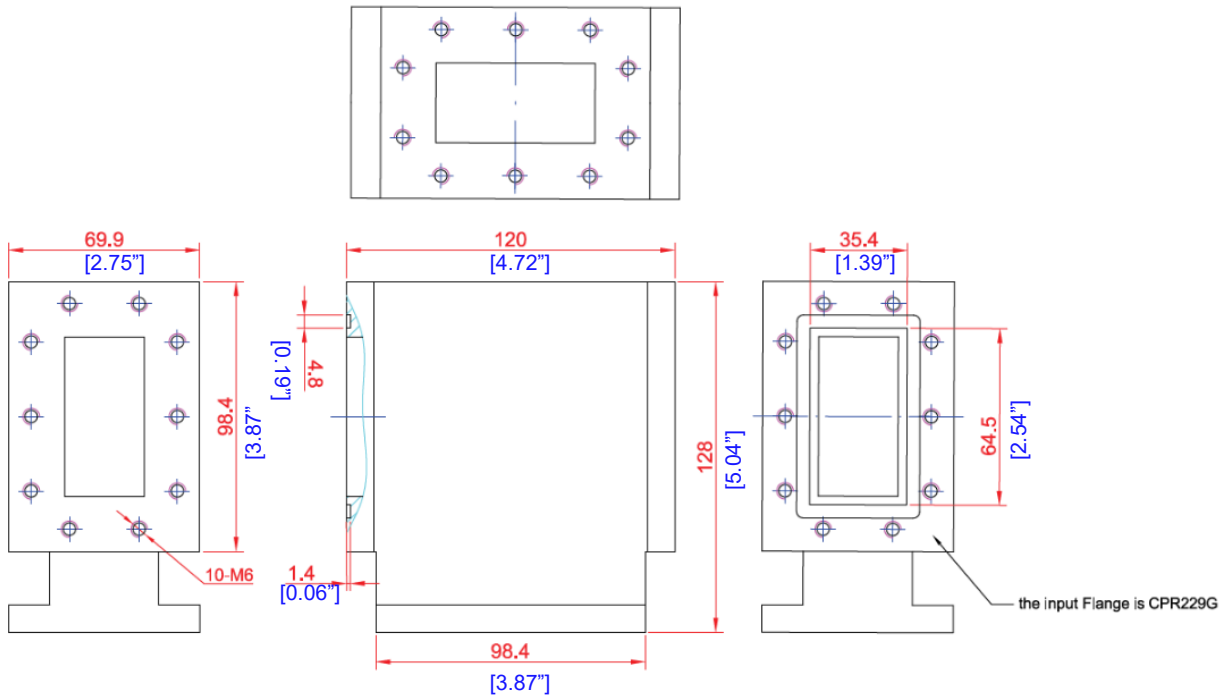
*For vibration testing details please see additional information section.

Typical Performance Plots



Mkr	Trace	X-Axis	Value	Notes
1 ▽	S11	4.100000 GHz	-28.8700 dB	
2 ▽	S21	4.100000 GHz	-0.1460 dB	
3 ▽	S12	4.100000 GHz	-59.7040 dB	
4 ▽	S22	4.100000 GHz	-27.6400 dB	
5 ▽	S33	4.100000 GHz	-31.3590 dB	

Outline Drawing



Notes:
1. Package Material: Aluminum Alloy
2. Finish: Conductive oxidation
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
RFWC229B	WR229	3.3GHz-4.9GHz Waveguide Circulator

Important Notice

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