

WR187 High Power 4-Port Waveguide Circulator 5.25GHz–5.75GHz



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

Product Description

RFWG4PC-5750 is a high power 4-Port waveguide circulator with a frequency range of 5.25 to 5.75GHz.

The circulator has a typical isolation of 20dB. The maximum insertion loss is 0.4dB.

The circulator waveguide type is WR187.

Features

- High power handling up to 320W
- Wide band operation
- High isolation within operational band
- Low Insertion Loss
- Stable performance over temperature
- Aerospace and military applications
- LMDS multi-carrier operation
- 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

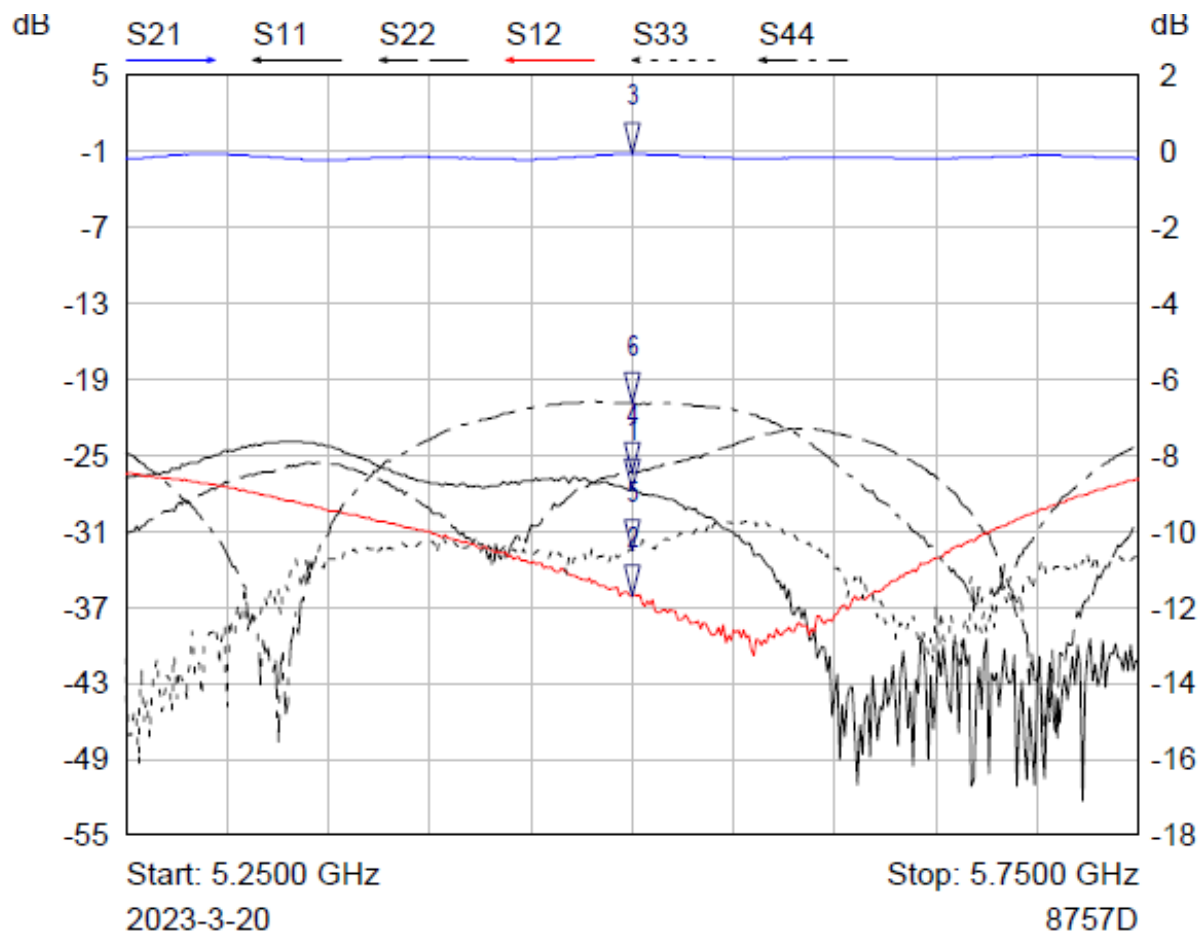
Electrical Specifications (T_A=+25°C)

Parameter	Min	Typ	Max	Units
Frequency Range		5.25 - 5.75		GHz
Insertion Loss			0.40	dB
Isolation	20			dB
VSWR			1.20	:1
Forward Power (CW)			320	W
Peak Power (CW)			270	KW
Rotation		Clockwise (Standard) Counter Clockwise (upon request)		
Waveguide type		WR187		
Flange Type		UG138/U		

Environmental Specifications and Test Standards

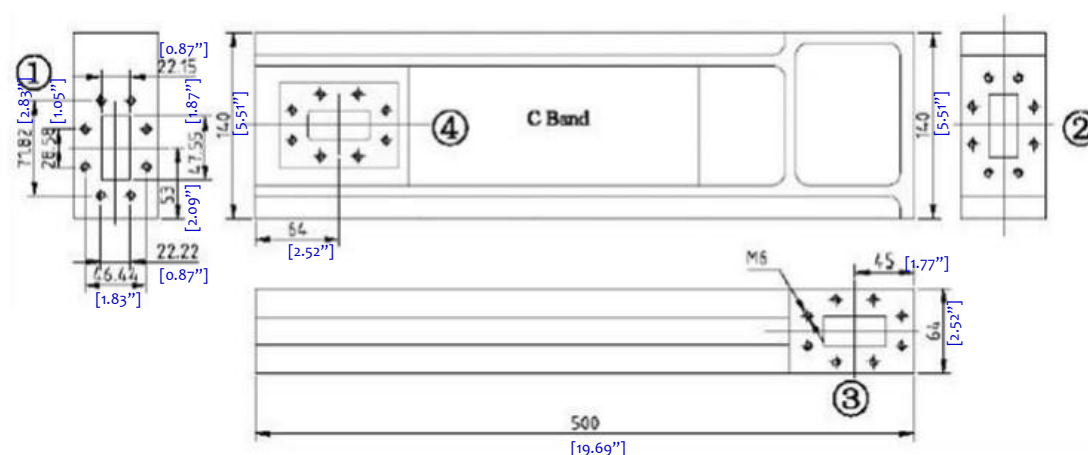
Parameter	Description
Operational Temperature	-30°C to +55°C (Case Temperature)
Storage Temperature	-50°C to +105°C
Thermal Shock	-40°C → +85°C (5 Cycles / 10 hours)
**Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
Shock	1. Weight >20g, 50g half sine wave for 11ms, 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)

Typical Performance Plots



Mkr	Trace	X-Axis	Value	Notes
1 ▽	S11	5.5000 GHz	-27.74 dB	
2 ▽	S12	5.5000 GHz	-36.07 dB	
3 ▽	S21	5.5000 GHz	-0.07 dB	
4 ▽	S22	5.5000 GHz	-26.35 dB	
5 ▽	S33	5.5000 GHz	-32.48 dB	
6 ▽	S44	5.5000 GHz	-20.94 dB	

Outline Drawing



Notes:

- Notes:
1. Package Material: Aluminum Alloy
 2. Finish: Nickel Plated
 3. All dimensions are in millimeters [inches].

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
RFWG4PC-5750	Standard	5.25GHz~5.75GHz High Power 4-Port Waveguide Circulator

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