

2KW CW WR62 4-Port Waveguide Circulator 12.4GHz - 18GHz



Product Description

RFWC62E is a full band high power WR62 waveguide circulator with a frequency range of 12.4 to 18GHz.

The circulator has a minimum isolation of 21dB. The maximum insertion loss is 0.3dB.

The circulator waveguide type is WR62.

Features

- High power handling up to 2KW CW
- Wide band operation
- High isolation within operational band
- Low Insertion Loss

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		12.4-18		GHz
Insertion Loss			0.3	dB
Isolation	21			dB
VSWR			1.25	:1
* Power Handling (CW)			2	KW
Rotation		Clockwise (Standard) Counter Clockwise (upon request)		
Waveguide Type		WR62		
Flange Type		UG1665/U		

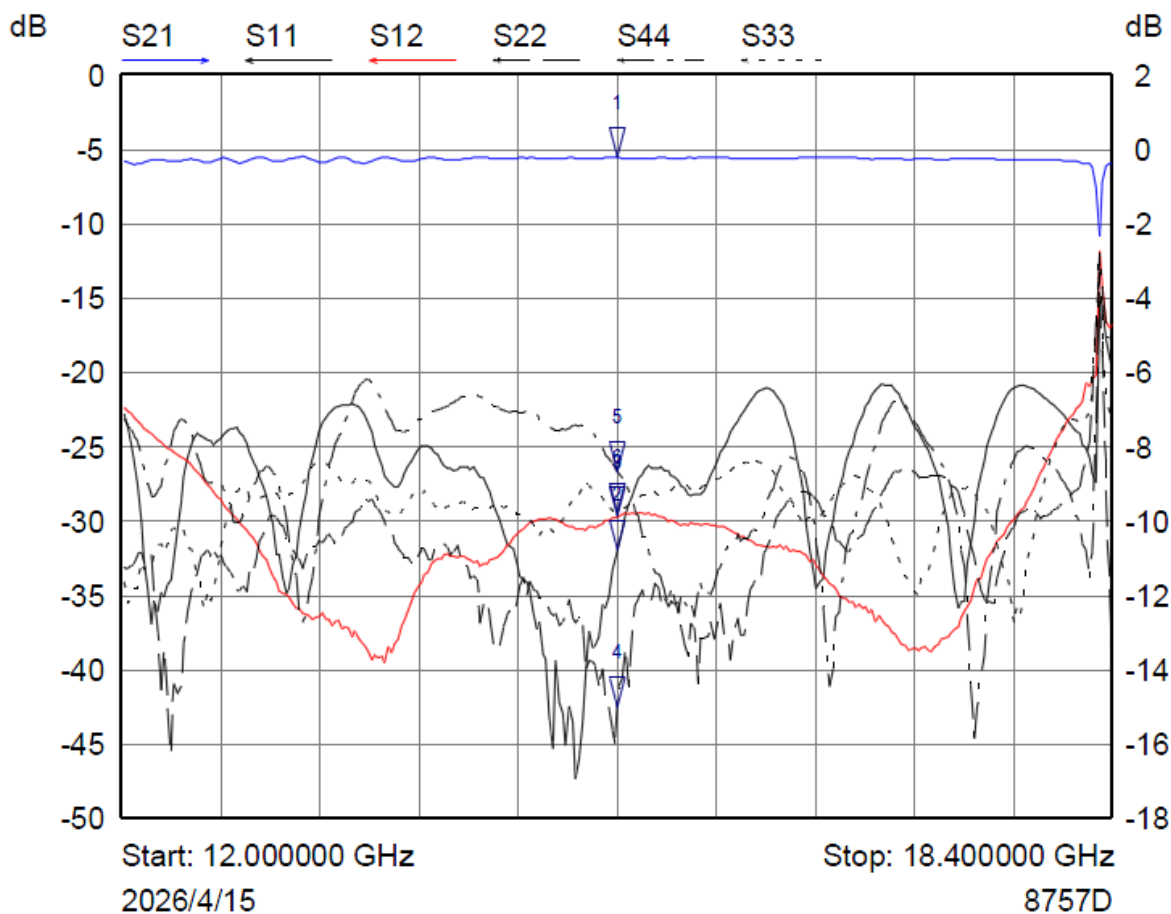
* Power Handling Notes

- The reverse power shall not exceed the power handling capacity of the port 3 load.
- To use it as an isolator: port 1->port 2; connect port 3 with a power load and port 4 with a matched load (20W).
- For applications over 1KW air cooling is recommended to keep the case temperature at 50°C

Environmental Specifications and Test Standards

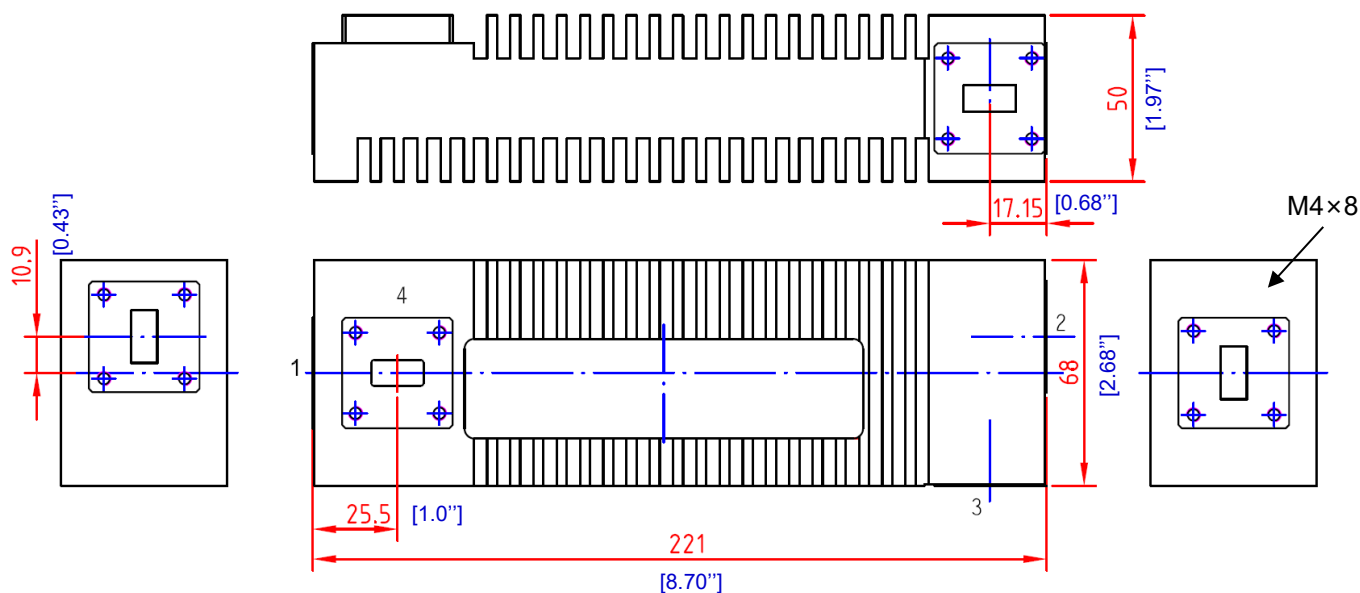
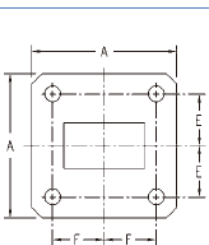
Parameter	Description
Operational Temperature	-20°C to +50°C (Case Temperature)
Storage Temperature	-40°C to +85°C
Thermal Shock	-20°C → +50°C (5 Cycles / 10 hours)
**Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
Shock	1. Weight >20g, 50g half sine wave for 11ms,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



Outline Drawing

WR62	WG18	R140
UG419/U	UBR140	
Dimensions	inches	mm
A	1.31 ¹	33.30
E	0.478	12.14
F	0.497	12.63
Hole Dia.	0.144 ²	4.085



Notes:

1. Package Material: Aluminum Alloy
2. All dimensions are in millimeters [inches].
3. Standard torque wrench must be used to secure RF connectors.

Additional Information

Documentation

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

Webpage

Ordering Information

Part Number	Modification	Description
RFWC62E	WR62	12.4GHz-18GHz Waveguide Circulator

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