

200W WR62 Waveguide Circulator 12GHz-18GHz



Product Description

The RFWC62B is a waveguide circulator with a frequency range of 12 to 18GHz.

The circulator has a typical isolation of 21dB. The maximum insertion loss is 0.3dB. The circulator has good isolation performance.

The circulator's interface is WR62.

Features

- High power handling up to 200W
- 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 ($T_A=+25^{\circ}\text{C}$)

Parameter	Min.	Typ.	Max.	Units
Frequency Range		12-18		GHz
Insertion Loss		0.25	0.30	dB
Isolation	20	21		dB
VSWR		1.15	1.20	:1
Forward Power (CW)			200	W
Weight		0.23 Max.		lbs.
Rotation		Clockwise (Standard) Counter Clockwise (upon request)		
Interface		WR62		
Flange Type		UG419/U		

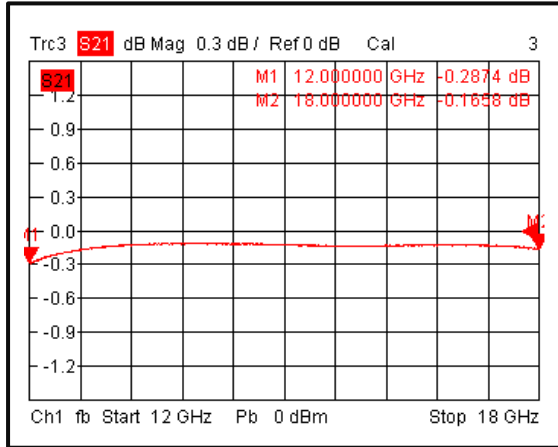
Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-20°C to +70°C (Case Temperature)
Storage Temperature	-40°C to +85°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)

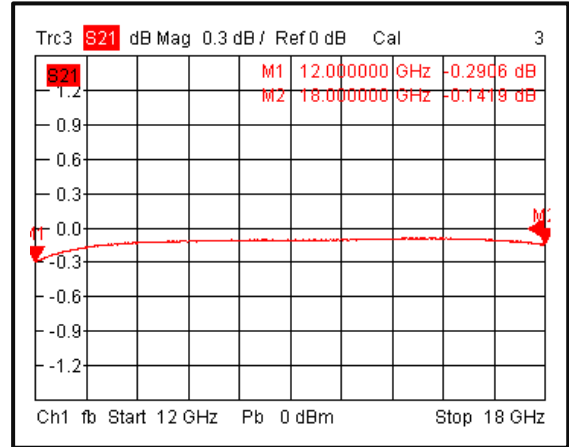
*For vibration testing details please see additional information section.

Typical Performance Plots

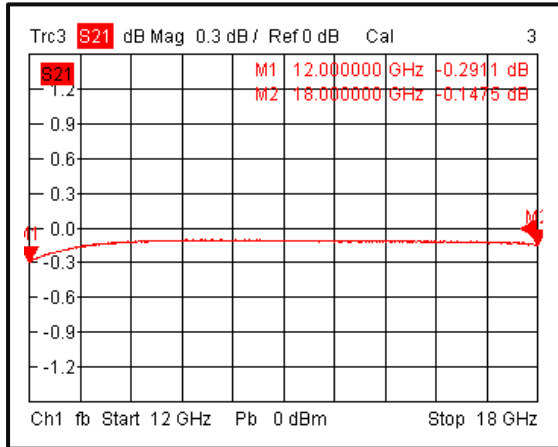
Insertion Loss (Port 1-Port 2)



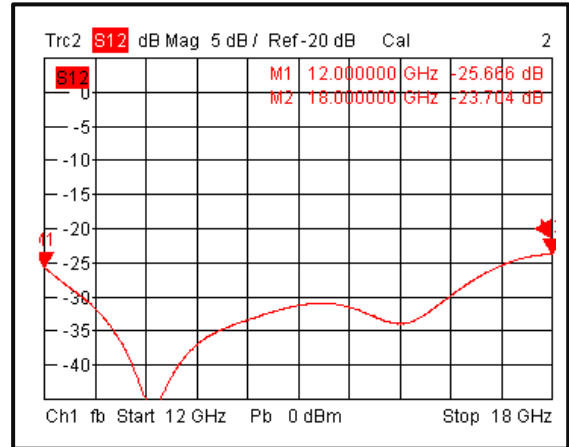
Insertion Loss (Port 2-Port 3)



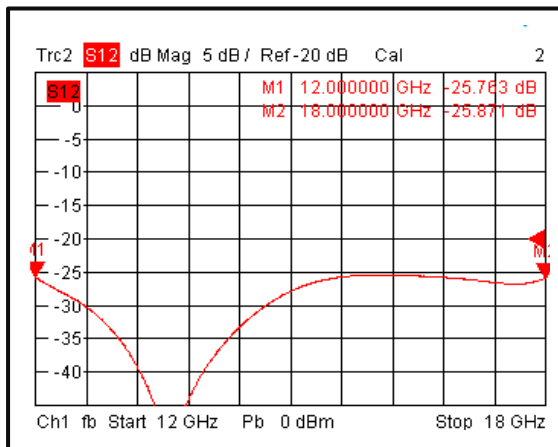
Insertion Loss (Port 3-Port 1)



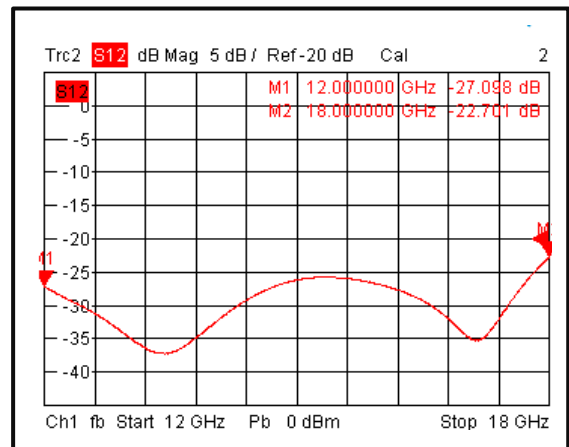
Isolation (Port 2-Port 1)



Isolation (Port 3-Port 2)

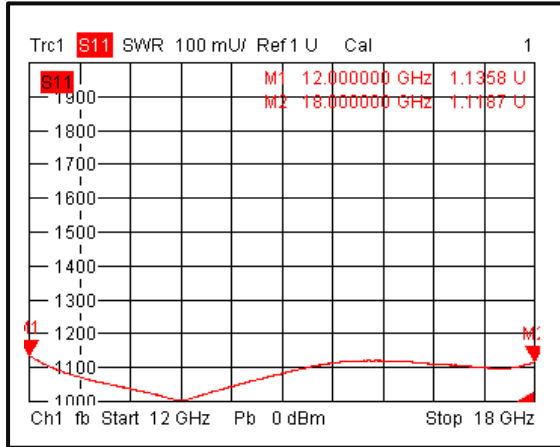


Isolation (Port 1-Port 3)

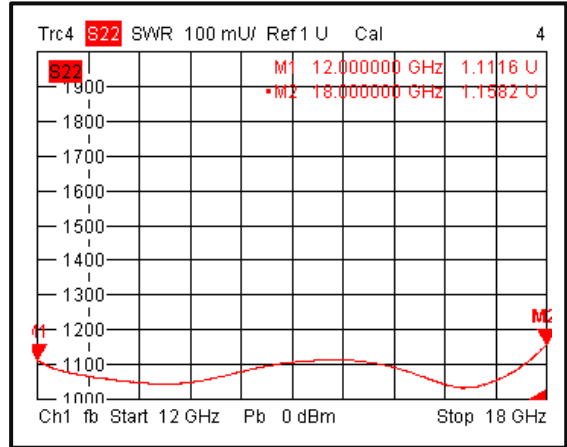


Typical Performance Plots

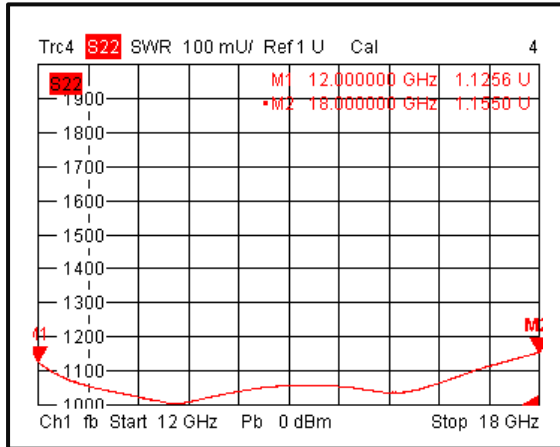
VSWR 1



VSWR 2

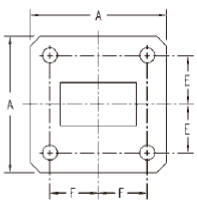
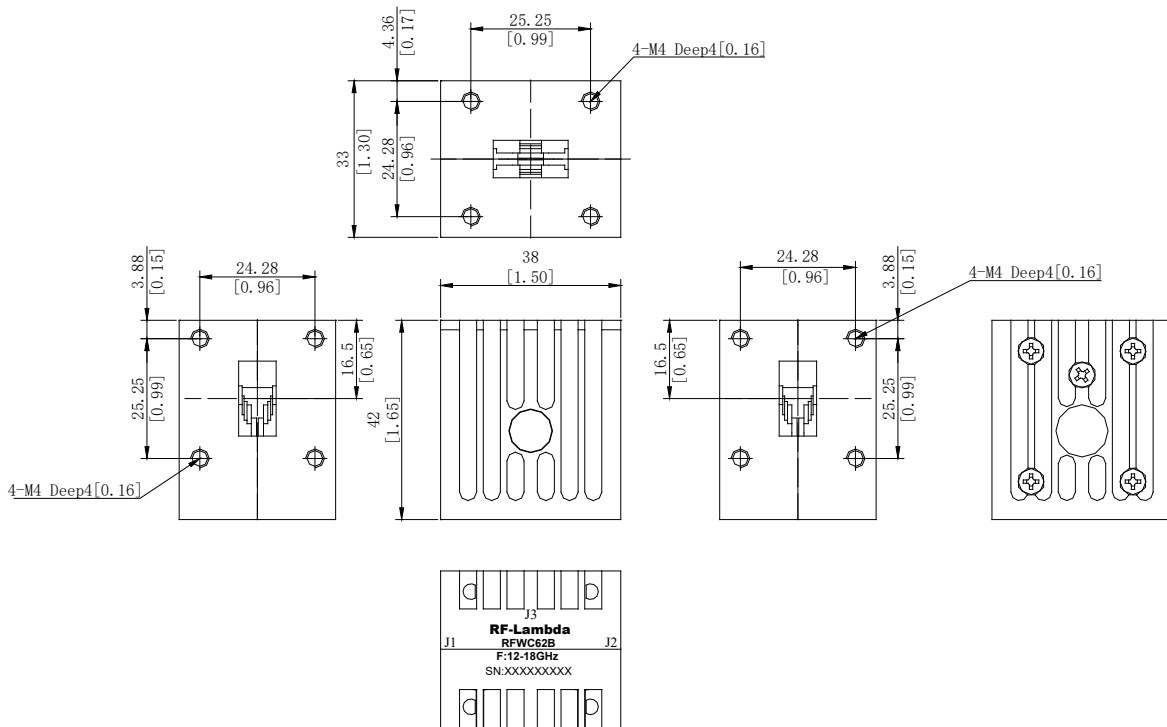


VSWR3



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. Plating: Conductive Oxide
3. All dimensions are in millimeters [inches].
4. Tolerance $\pm 0.25[0.01]$, 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
RFWC62B	WR62	12GHz-18GHz Waveguide Circulator

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