

WR51 Waveguide 3-Port Directional Coupler 14.5GHz - 22GHz



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

Product Description

RWGCP51SB is a WR51 waveguide 3-Port directional coupler with a frequency range of 14.5 to 22GHz.

The power of this directional coupler is 250W. The nominal coupling is 30dB with a typical directivity of 30dB.

The working temperature of this product is between - 40°C and + 85°C.

Features

- High power handling up to 250W
- Ultra Wide band operation
- High directivity within operational band

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, TA = +25°C

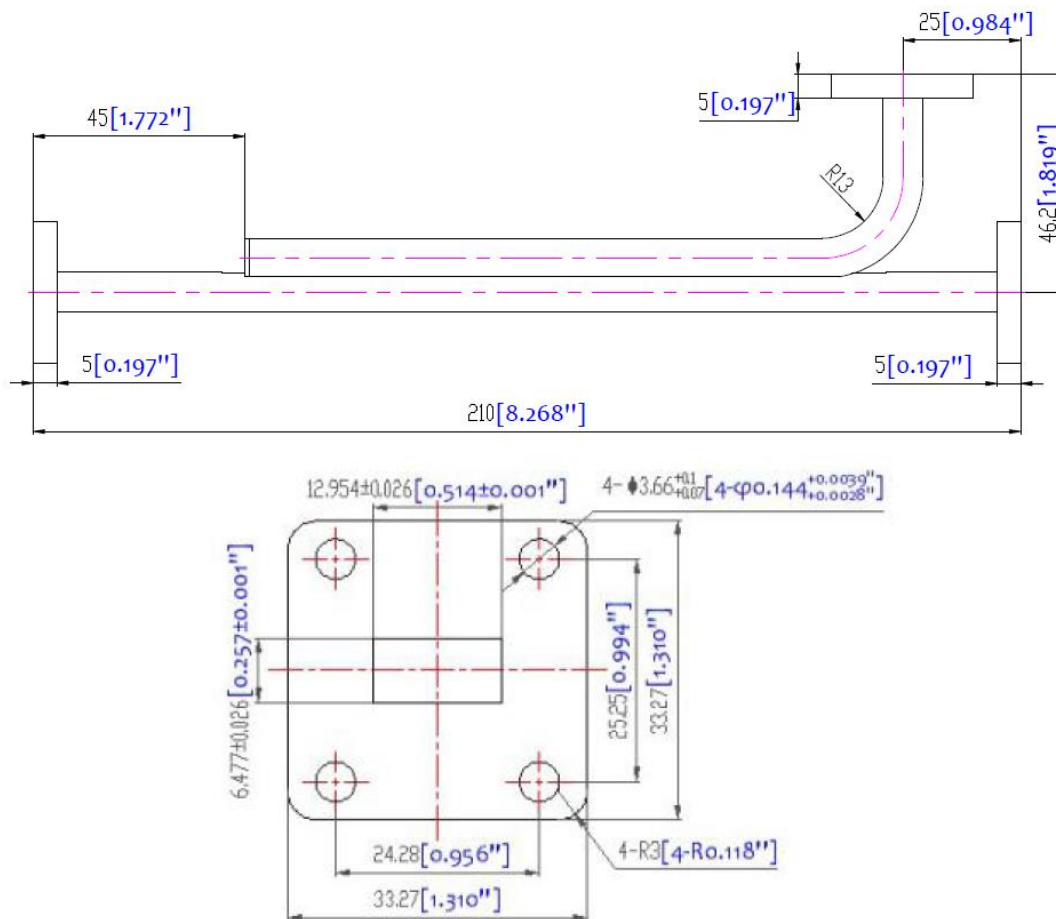
Parameter	Min	Typ	Max	Units
Frequency Range	14.5		22	GHz
Nominal Coupling		30		dB
Directivity	30			dB
VSWR Primary			1.1	: 1
VSWR Secondary			1.25	: 1
Power Handling (CW)		250		W
Waveguide Type		WR51		
Flange Type		UBR180		
Package	Epoxy Sealed (Standard)			
	Hermetically Sealed (Optional)			

Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-40°C to +85°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)

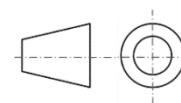
*For vibration testing details please see additional information section.

Outline Drawing



Notes:

1. Package Material: Copper/Brass
2. Inside Finish: Silver Plating; Outside Finish: Anticorrosion grey paint
3. All dimensions are in millimeters [inches].
4. Standard torque wrench must be used to secure RF connectors.



Additional Information

Documentation

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
RWGCP51SB	WR51	14.5GHz-22GHz Waveguide 3-Port Directional Coupler

Important Notice

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