

WR90 Waveguide 3-Port Directional Coupler 8.2GHz – 12.4GHz



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

Product Description

RWGCP90SG is a WR90 waveguide 3-Port directional coupler with a frequency range of 8.0 to 10.0GHz.

The power handling of this directional coupler is 1KW. The nominal coupling is 40dB 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 1KW
- 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

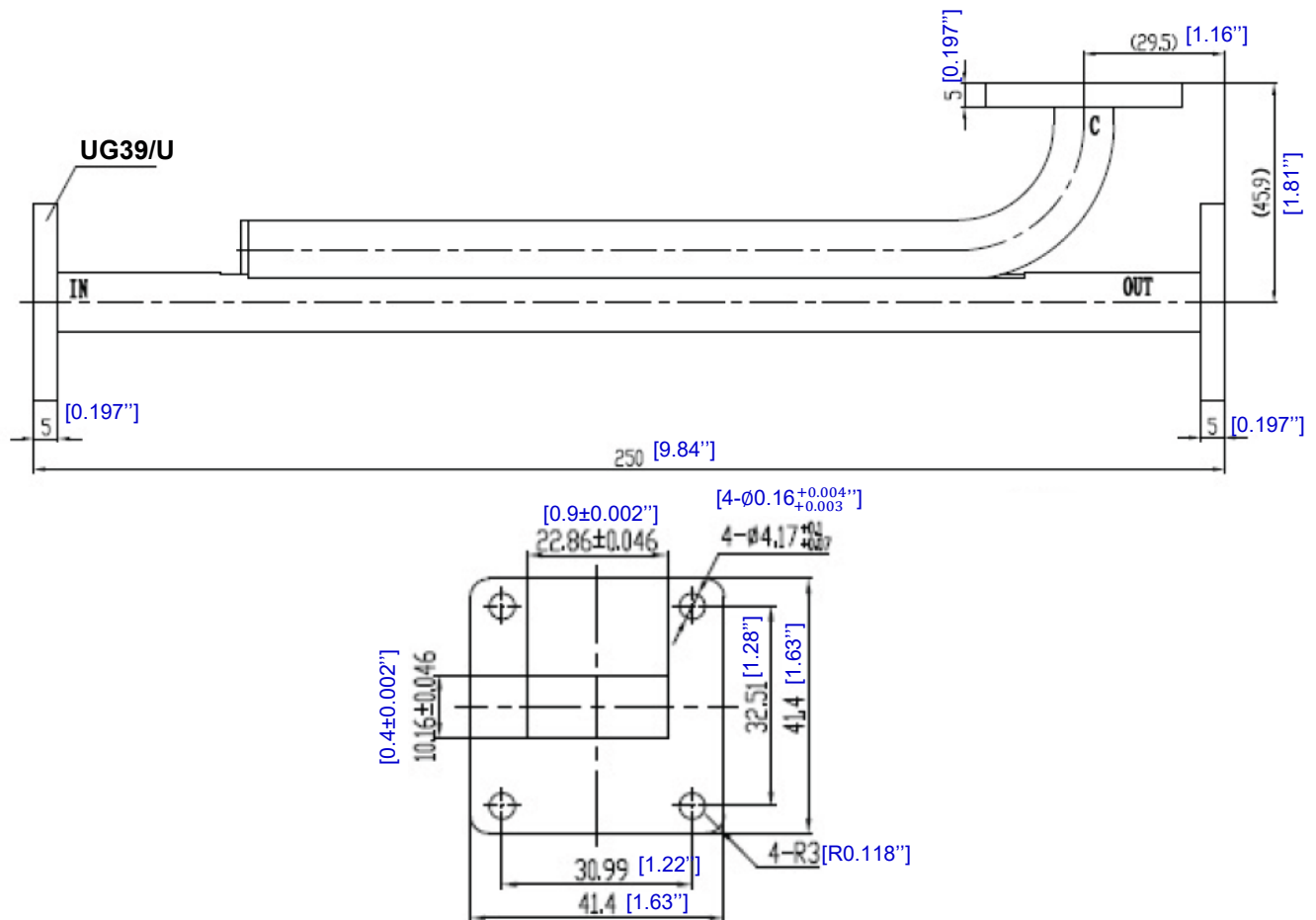
Parameter	Min	Typ	Max	Units
Frequency Range	8.0		10.0	GHz
Nominal Coupling		40		dB
Directivity	27			dB
VSWR			1.1	: 1
Insertion Loss			0.2	dB
Power Handling (CW)		1		KW
Waveguide Type		WR90		
Flange Type		UG39/U (Cover)		
Flange Holes		Through		
Package		Epoxy Sealed (Standard)		
		Hermetically Sealed (Optional)		

Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-40°C to +85°C (Case Temperature)
Storage Temperature	-60°C to +125°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)

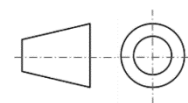
*For vibration testing details please see additional information section.

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
RWGCP90SG	WR90	8.2GHz-12.4GHz Waveguide 3-Port Directional Coupler

Important Notice

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