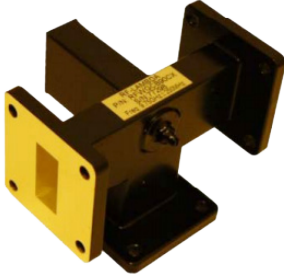


## Waveguide WR90 Magic Tee Power Combiner 8.2GHz-12.4GHz (10-20% BW)



### Product Description

RWCB90W2 is a waveguide WR90 magic tee power combiner with a frequency range of 8.2 to 12.4GHz. The product is not a full band product, but can be tuned within the bandwidth of the waveguide.

The power of this combiner's input is 55W. The insertion loss is 0.3dB with a typical isolation of 18dB.

The working temperature of this product is between - 40°C and + 70°C.

### Features

- 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, TA = +25°C

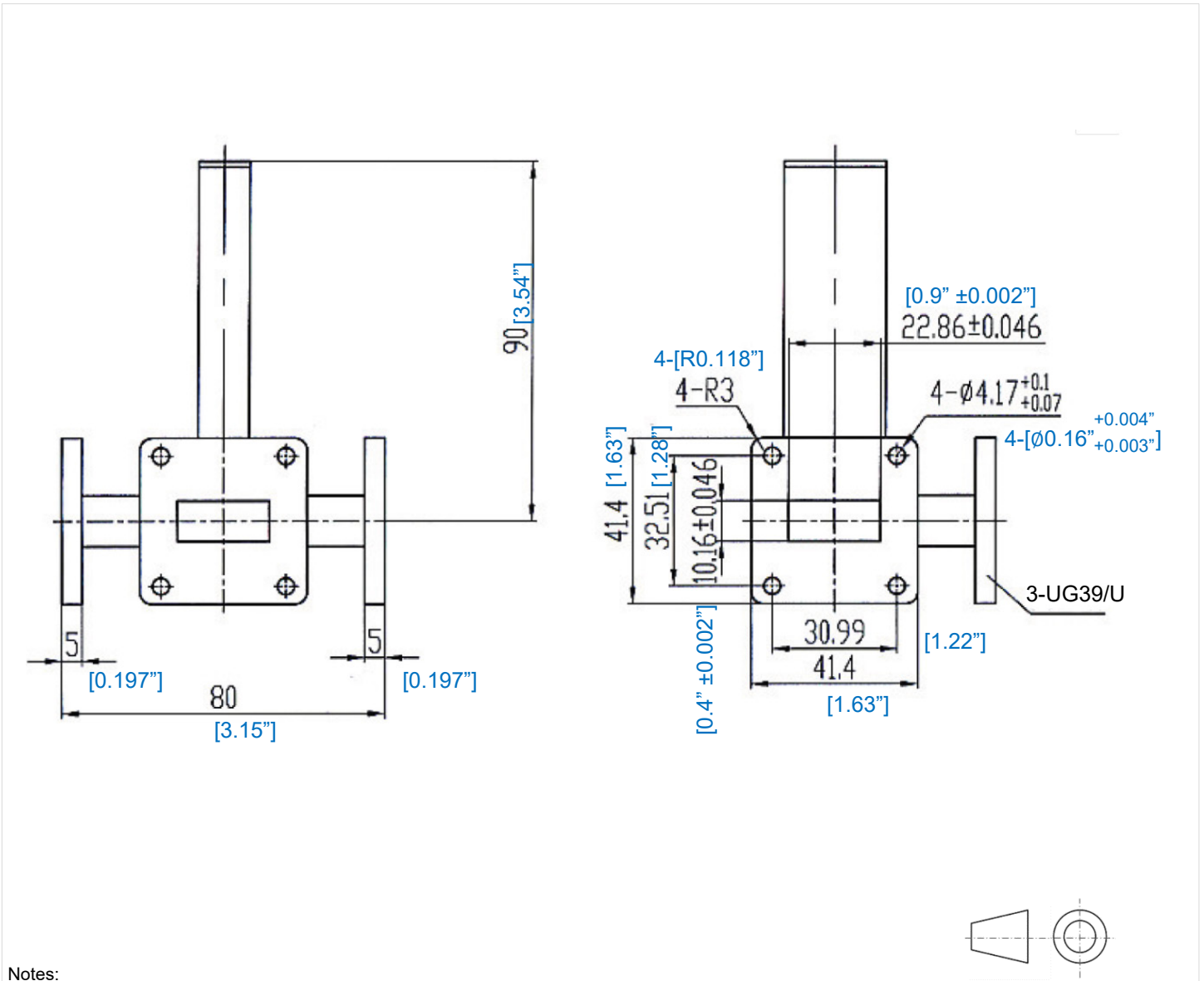
Parameter	Min	Typ	Max	Units
Frequency Range		8.2 - 12.4 (10-20%BW) 9-11GHz Shown		GHz
Insertion Loss			0.3	dB
Isolation(Balance Arms)	18			dB
VSWR			1.25	: 1
Amplitude Imbalance			± 0.3	dB
Power Handling (CW)	Input	55		W
	Output		110	W
Weight		-		lbs
Waveguide Type		WR90		
Flange Type		UG39/U		

**Environmental Specifications and Test Standards**

Parameter	Description
Operational Temperature	-40°C to +70°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)

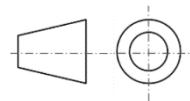
\*For vibration testing details please see additional information section.

**Outline Drawing**



Notes:

1. Package Material: Copper
2. Inside finish: Silver plating , Outside finish: Anticorrosion grey paint.
3. All dimensions are in millimeters [inches].
4. Tolerances ±0.2 [0.008] unless otherwise specified.



Additional Information

Documentation	Webpage
Connector Torque Specifications	<a href="https://www.rflambda.com/pdf/Torque_Specifications.pdf">https://www.rflambda.com/pdf/Torque_Specifications.pdf</a>
Random Vibration Test Standard	<a href="https://www.rflambda.com/pdf/rflambda_random_vibration_MIL-STD-202G.pdf">https://www.rflambda.com/pdf/rflambda_random_vibration_MIL-STD-202G.pdf</a>

**Ordering Information**

Part Number	Modification	Description
RWCB90W2	WR90	8.2-12.4GHz Magic Tee Power Combiner

**Important Notice**

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