

Waveguide WRD650 Double Ridge Dual Directional Coupler 8GHz - 18GHz



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

Product Description

RWGDCP650DRB is a waveguide double ridge dual directional coupler with a frequency range of 8 to 18GHz.

The power handling for this dual directional coupler is 300W. The maximum Insertion Loss is 0.3dB with a minimum directivity of 18dB.

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

Features

- Compact Package
- Excellent phase and amplitude balance
- Bi-Directional as divider and combiner
- Low Insertion loss and high isolation
- Standard: MIL E-5400, MIL E -16400
- High power handling capability
- 3W/2W maximum input when work as combiner.

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		18	GHz
Coupling Forward	28.5	30	31.5	dB
Directivity	18			dB
Insertion Loss			0.3	dB
VSWR Primary			1.2	: 1
VSWR Secondary			1.2	: 1
Average Power		300		W
Waveguide Type		Rectangular WRD650		
Flange Type		CPRG, CPRF, COVER, CHOKE available		
Flange Holes		Through		

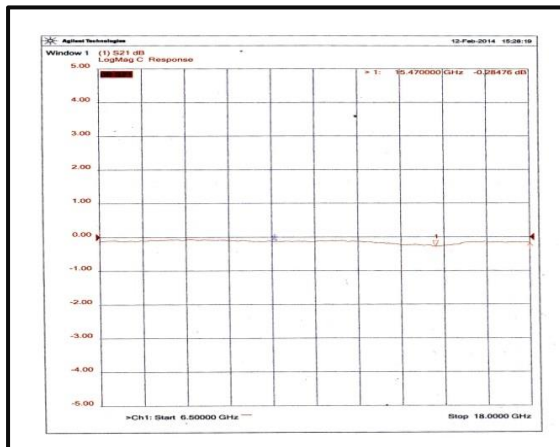
Environmental Specifications and Test Standards

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)

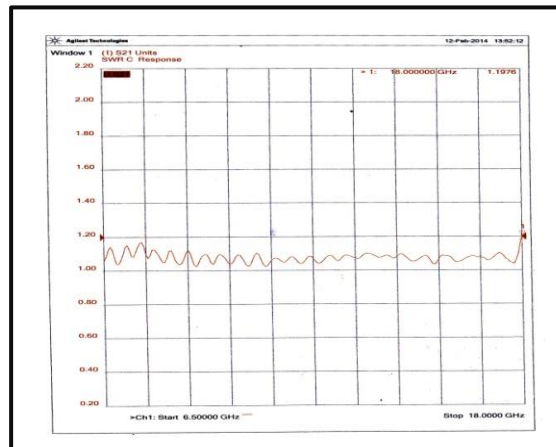
**For vibration testing details please see additional information section.

Typical Performance Plots

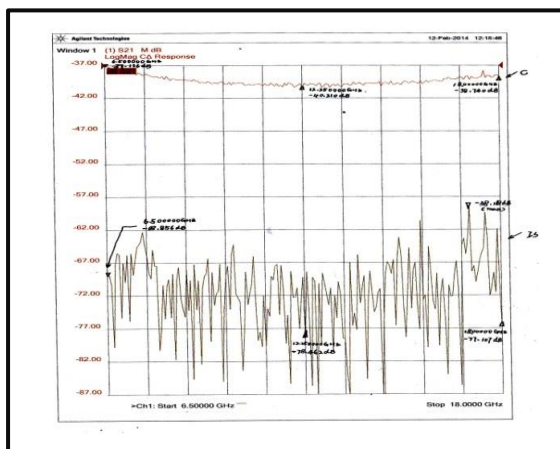
Insertion Loss



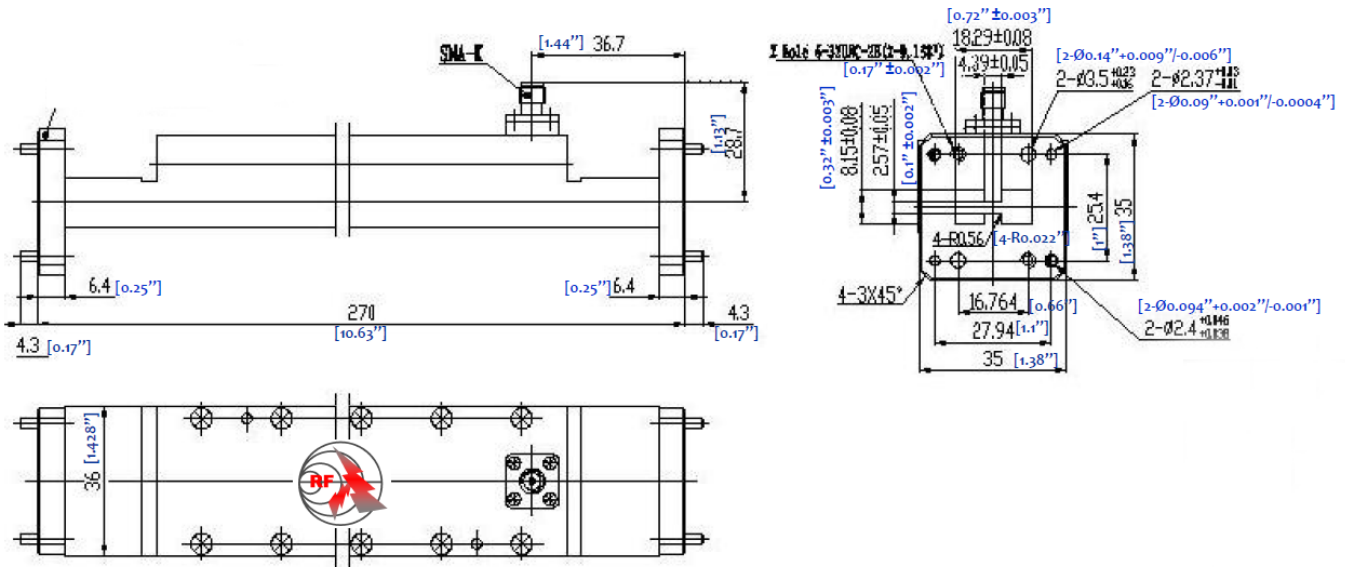
VSWR



Coupling and Isolation

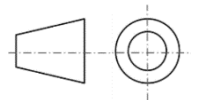


Outline Drawing



Notes:

1. Basis-material : Alloyed Cuprum
2. Internal Body Finish:Plated chromate or conversion;
3. External Body Finish:Body painted with gray / black epoxy enamel
4. All dimensions are in millimeters [inches].
5. 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
RWGDCP650DRB	Rectangular WRD650	8GHz-18GHz Waveguide Double Ridge Dual Directional Coupler

Important Notice

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