

Waveguide WRD650 Double Ridge Directional Coupler 6GHz - 18GHz



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

Product Description

RWGDCP650DRA is a waveguide double ridge dual directional coupler with a frequency range of 6 to 18GHz.

The power handling for this dual directional coupler is 200W. 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
- Low Insertion loss
- High power handling capability

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	6		18	GHz
Coupling Forward		40		dB
Directivity	18			dB
Insertion Loss			0.3	dB
VSWR Primary			1.2	: 1
VSWR Secondary			1.2	: 1
Average Power		200		W
Waveguide Type		Rectangular WRD650		
Flange Type		CPRG, CPRF, COVER, CHOKE available		
Flange Holes		Through		

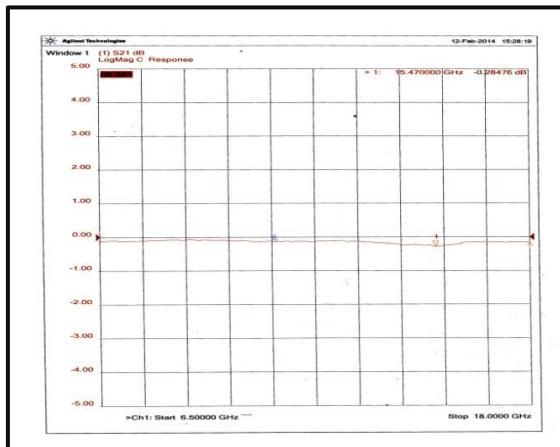
Environmental Specifications and Test Standards

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)

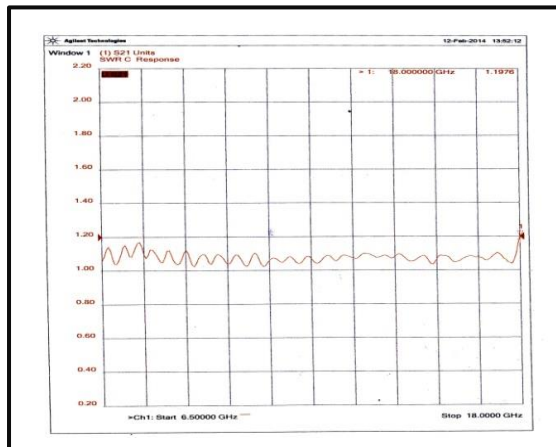
**For vibration testing details please see additional information section.

Typical Performance Plots

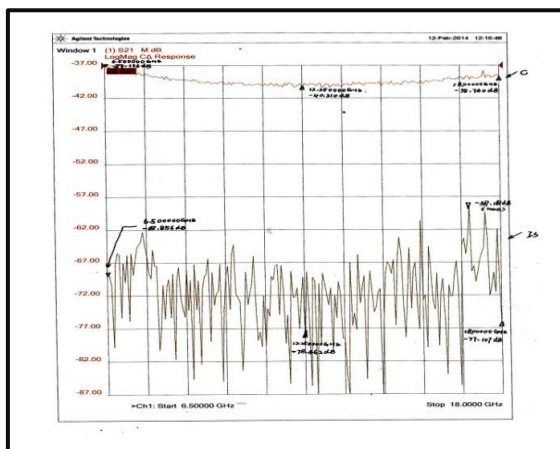
Insertion Loss



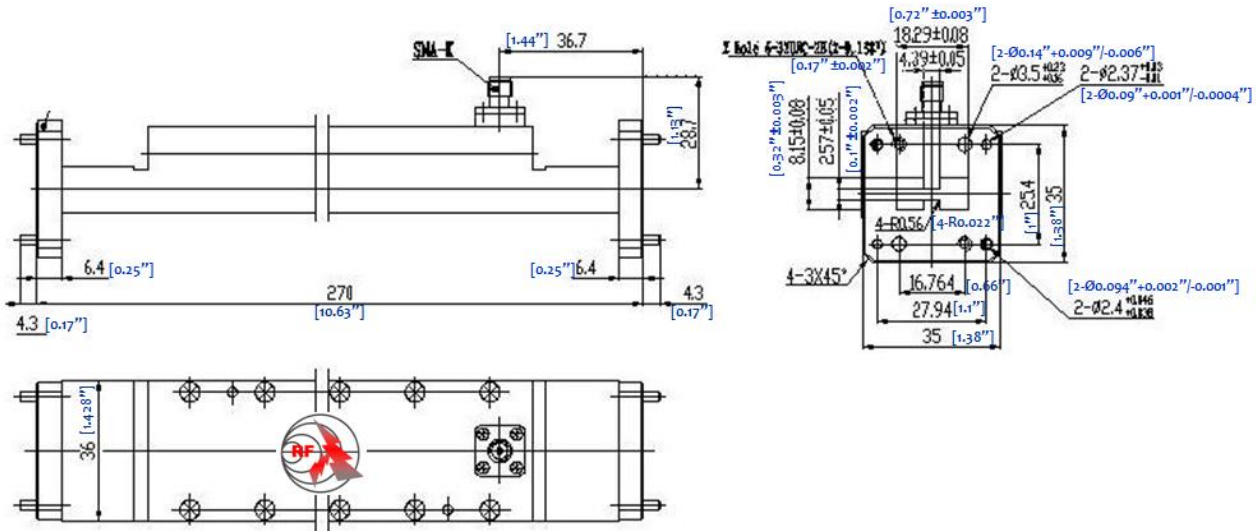
VSWR



Coupling and Isolation

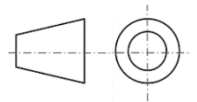


Outline Drawing



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
RWGDCP650DRA	Rectangular WRD650	6GHz-18GHz Waveguide Double Ridge Dual Directional Coupler

Important Notice

The information contained herein is believed to be reliable. RF-Lambda makes no warranties regarding the information contained herein. RF-Lambda assumes no responsibility or liability whatsoever for any of the information contained herein. RF-Lambda assumes no responsibility or liability whatsoever for the use of the information contained herein. The information contained herein is provided "AS IS, WHERE IS" and with all faults, and the entire risk associated with such information is entirely with the user. All information contained herein is subject to change without notice. Customers should obtain and verify the latest relevant information before placing orders for RF-Lambda products. The information contained herein or any use of such information does not grant, explicitly or implicitly, to any party any patent rights, licenses, or any other intellectual property rights, whether with regard to such information itself or anything described by such information. RF-Lambda products are not warranted or authorized for use as critical components in medical, life-saving, or life sustaining applications, or other applications where a failure would reasonably be expected to cause severe personal injury or death.