



RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RWGCP3SA

WR3 Waveguide Directional Coupler 220– 325GHz

Features

- Ultra High Frequency Waveguide Coupler
- Customization available upon request

Typical Applications

- Aerospace and military applications
- Test and Measurement
- Research and Development

Electrical Specifications, $T_A=25\text{ }^{\circ}\text{C}$

Parameter	Min.	Typ.	Max.	Units
Frequency Range	220		325	GHz
Coupling		10		dB
Coupling frequency		± 2		dB
Directivity		22		dB
Through Insertion Loss			3	dB
Return loss		22		dB
Max Input Power			1	W
Waveguide Type	WR3			

Environmental Specifications and Test Standards

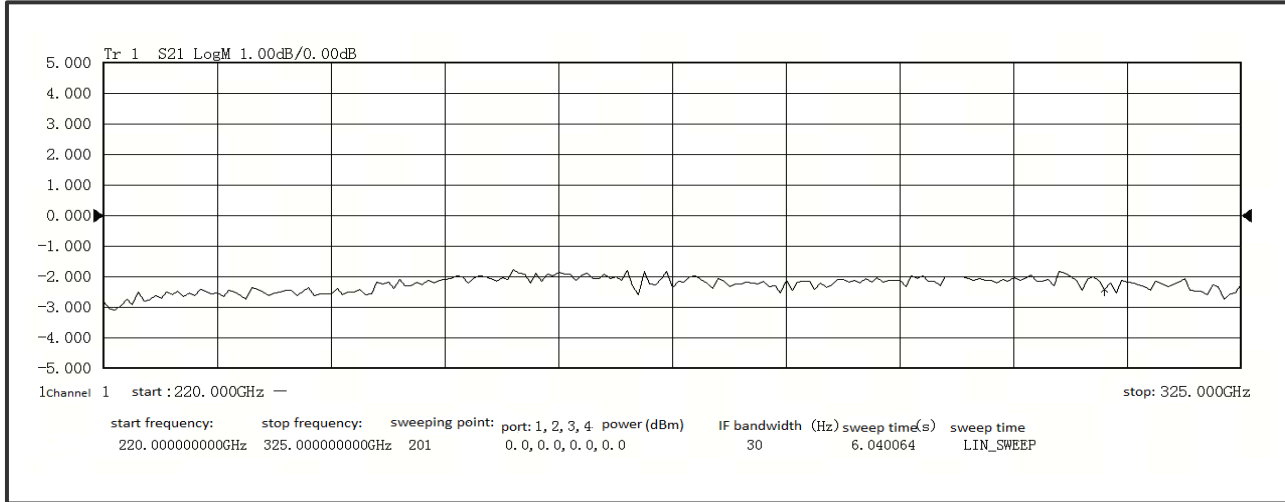
Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-20°C~+70°C
Storage Temperature		-40°C~+85°C
Thermal Shock		1 Hour@ -45°C → 1 Hour @ +85°C (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & Temperature Burn In		Temperature +85°C for 72 Hours
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	MIL-STD-883 (For Hermetically Sealed Units)

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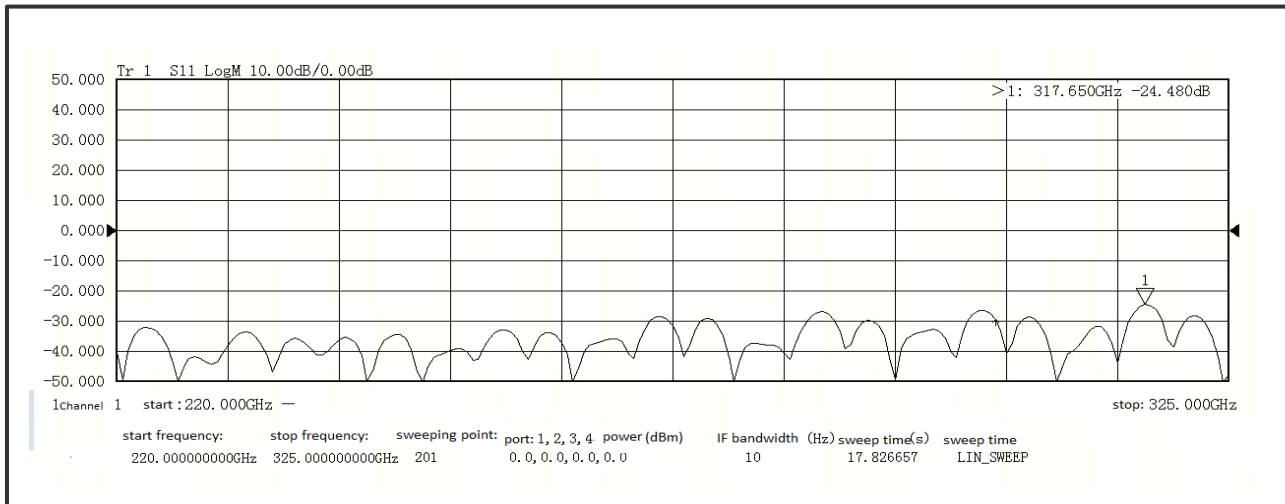


Typical Performance Plots

Insertion loss VS Frequency

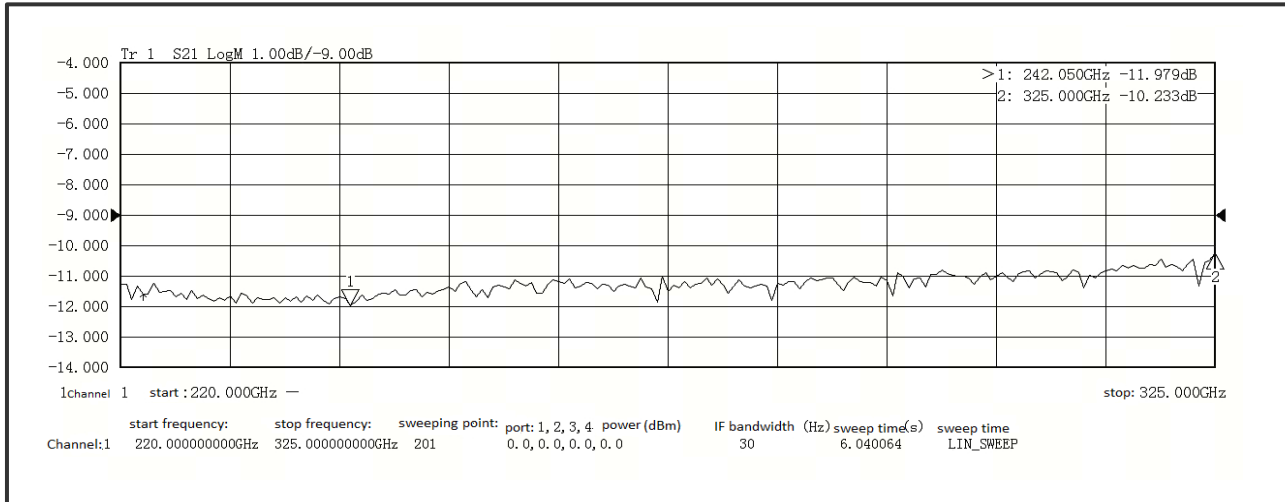


Return loss VS Frequency

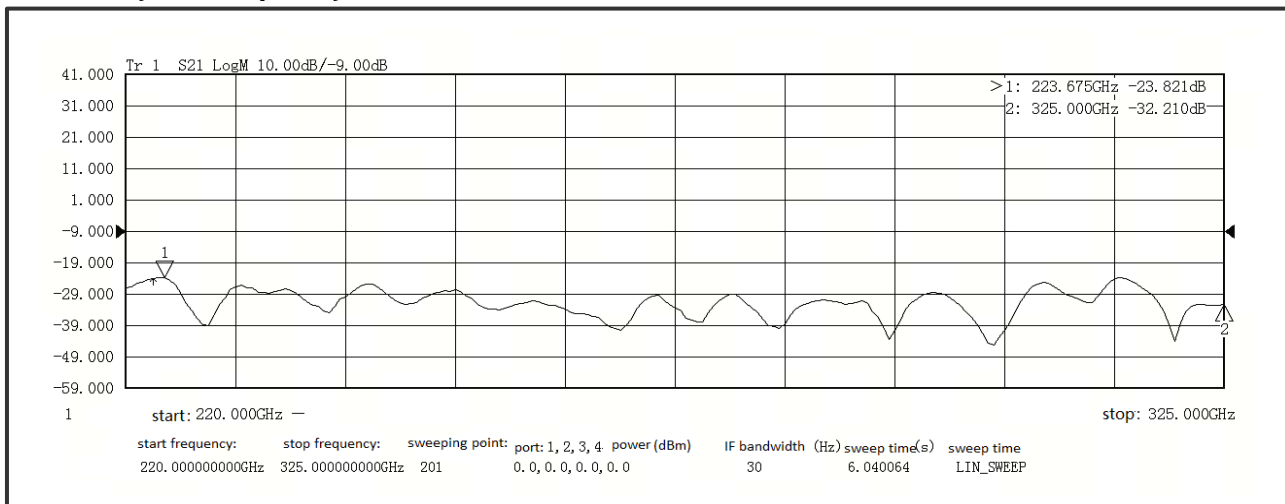




Coupling vs. Frequency



Directivity vs. Frequency





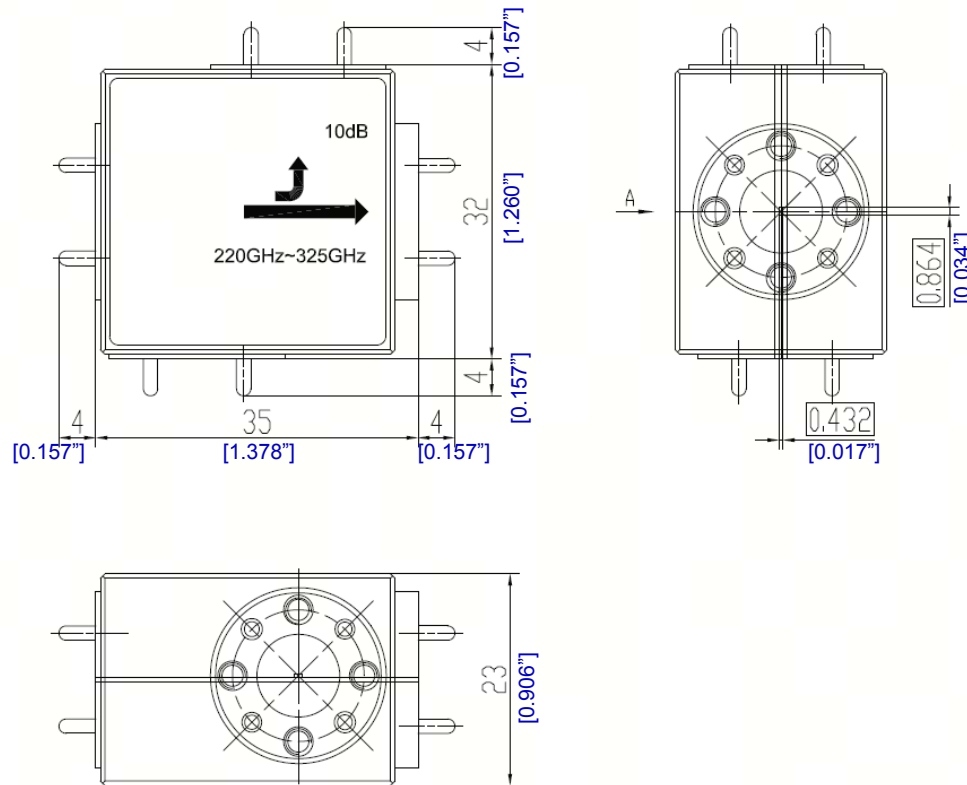
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Outline Drawing:

All Dimensions in mm [inches]



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