



RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFDC2G52G10

Coaxial 20W 10dB Directional Coupler 2 - 52GHz



Features

- High power handling up to 20W
- Ultra Wide band operation
- High directivity within operational band
- Low Insertion Loss
- High peak to average handling capability

Typical Applications

- Stable performance over temperature
- Aerospace and military applications
- LMDS multi-carrier operation

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

Parameter		Min.	Typ.	Max.	Units
Frequency Range		2		52	GHz
Nominal Coupling		9	10.5	12	dB
Frequency Sensitivity			± 0.7	± 1.25	dB
Directivity		10	12		dB
Insertion Loss (Excl. Coupling)				2.0	dB
Insertion Loss (True)			2.5	3.0	dB
VSWR Primary			1.6	1.8	: 1
VSWR Secondary			1.6	1.8	: 1
Power Rating	Average	20			W
	Peak	300			W
Impedance		50			Ohms
Weight		1.41			Ounces
Input / Output Connectors		2.4mm - Female			
Material		Aluminum			
Finish		Blue Paint			

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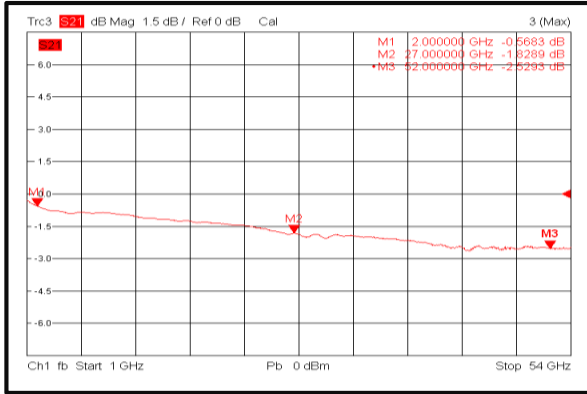
Environmental Specifications and Test Standards

Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45°C~+85°C
Storage Temperature		-55°C~+125°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)

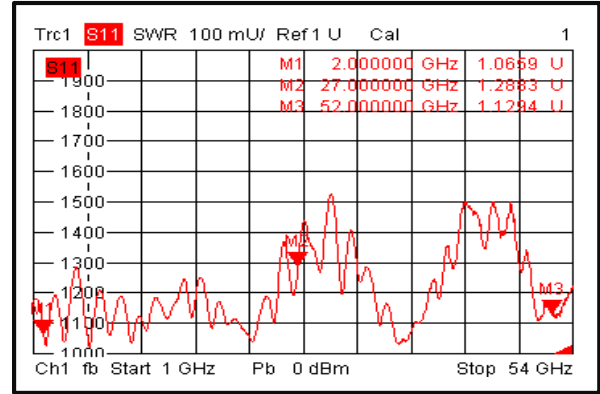


Typical Performance Plots

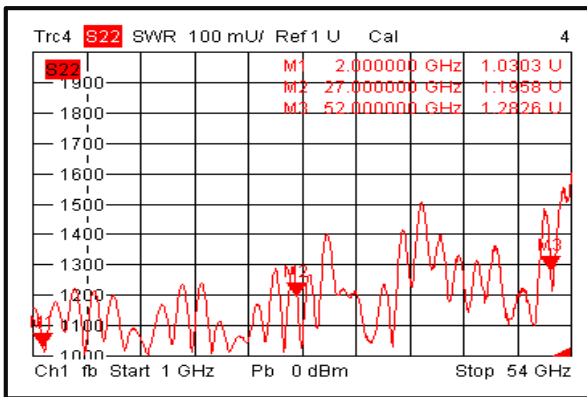
Insertion Loss



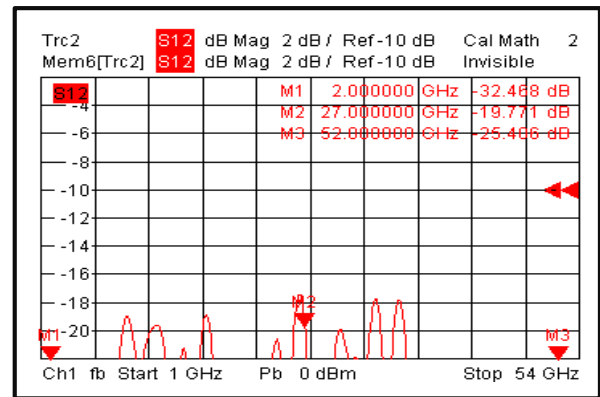
Primary VSWR



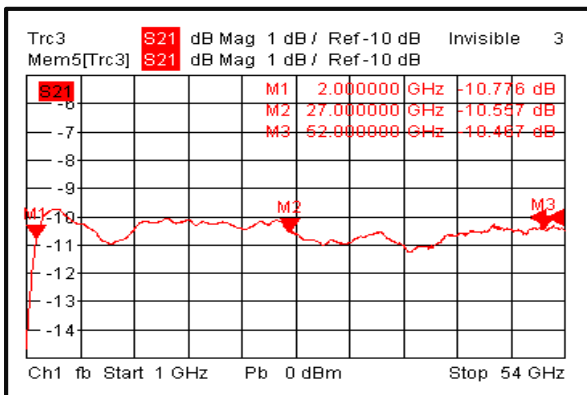
Secondary VSWR



Directivity



Nominal Coupling





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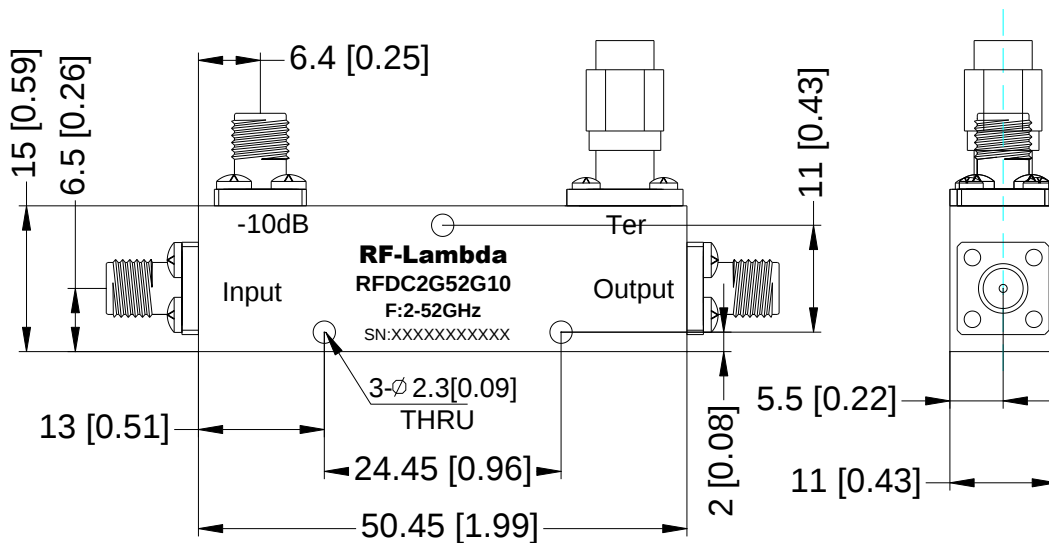
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Outline Drawing:

All Dimensions in mm [inches]

Tolerance ± 0.25 [0.01]



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