

Coaxial 50W 6dB Directional Coupler 1 - 4GHz



Features

- High power handling up to 50W
- Wide band operation
- High directivity within operational band
- Low Insertion Loss

Typical Applications

- Test and Measurement
- Aerospace and military applications
- Wireless Infrastructure

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

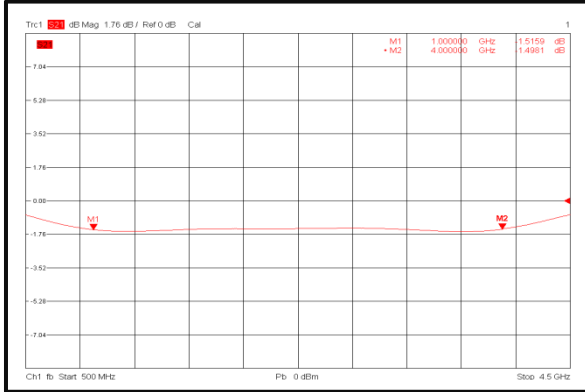
Parameters		Min.	Typ.	Max.	Units
Frequency Range		1		4	GHz
Nominal Coupling		5	6	7	dB
Frequency Sensitivity			± 0.5	± 0.7	dB
Directivity		20	22		dB
Insertion Loss (Excl. Coupling)			0.3	0.5	dB
Insertion Loss (True)			1.5	1.8	dB
VSWR Primary			1.2	1.25	:1
VSWR Secondary			1.2	1.25	:1
Power Rating	Average	50			W
	Peak	500			W
Impedance		50			Ohms
Weight		5.5 Max.			ounces
Input / Output Connectors		N-Female			
Material		Aluminum			
Finish		Blue Paint			

Environmental Specifications and Test Standards

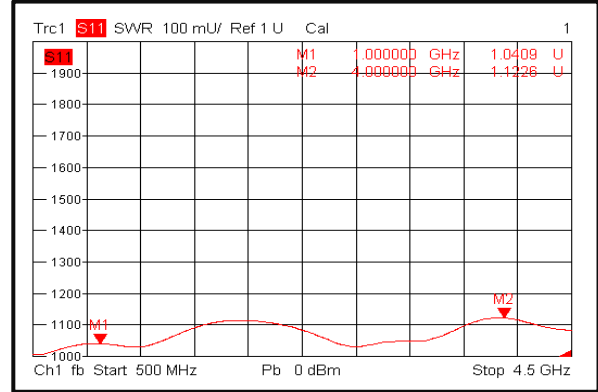
Parameter	Description
Operational Temperature	-40°C~+85°C (Case Temperature)
Storage Temperature	-50°C~+105°C
Thermal Shock	-40°C → +85°C (5 Cycles / 10 hours)
Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High Temperature Burn In	Temperature +85°C for 72 Hours
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 (For Hermetically Sealed Units)

Typical Performance Plots

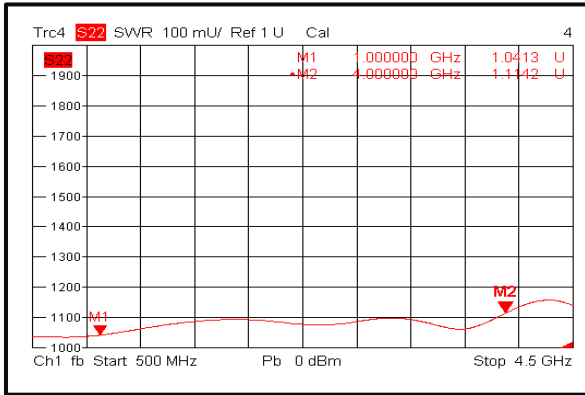
Insertion Loss



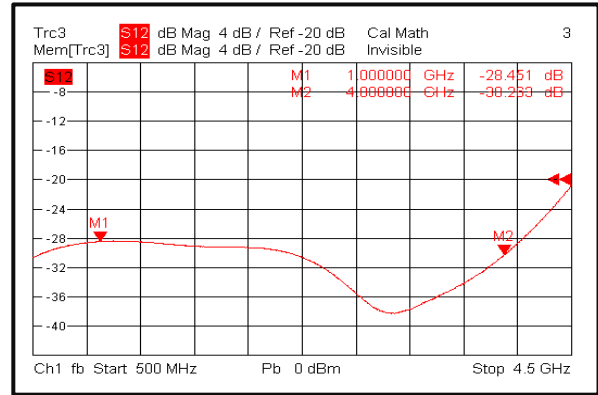
Primary VSWR



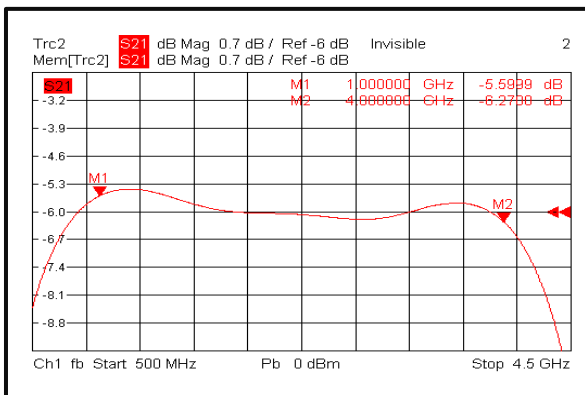
Secondary VSWR



Directivity



Nominal Coupling



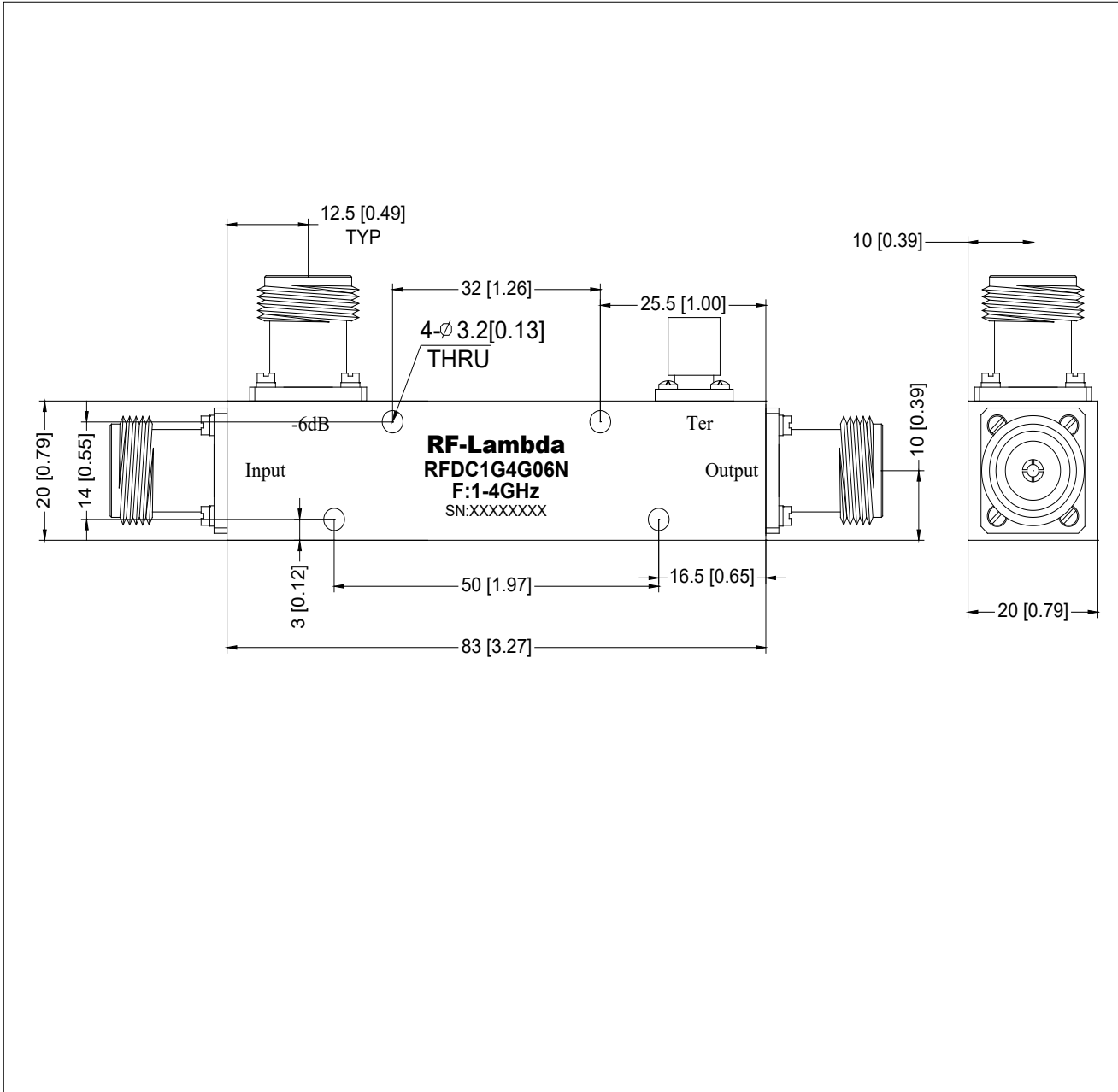
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Outline Drawing:

All Dimensions in mm [inches]

Outline Tolerances ± 0.5 [0.02]

Mounting Hole Tolerances ± 0.2 [0.008]



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