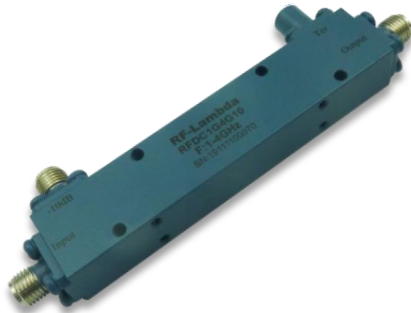




### Coaxial 50W 10 dB Directional Coupler 1 - 4GHz



#### Features

- High power handling up to 50W
- Ultra Wide band operation
- High directivity within operational band
- Low Insertion Loss
- Stable performance over temperature

#### Typical Applications

- Aerospace and Military
- Wireless Infrastructure
- Test and Measurement

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

Parameters		Min.	Typ.	Max.	Units
Frequency Range		1		4	GHz
Nominal Coupling		9	10	11	dB
Frequency Sensitivity			$\pm 0.5$	$\pm 0.7$	dB
Directivity		20	22		dB
Insertion Loss (Excl Coupling)				0.5	dB
Insertion Loss (True)			0.7	0.9	dB
VSWR Primary			1.15	1.2	: 1
VSWR Secondary			1.15	1.2	: 1
Power Rating	Average	50			W
	Peak	1			KW
Impedance		50			Ohms
Weight		1.6 Max.			Ounces
Input / Output Connectors		SMA – Female			
Material		Aluminum			
Finish		Blue Paint			

Coaxial 50W 10 dB Directional Coupler 1 - 4GHz



**Environmental Specifications and Test Standards**

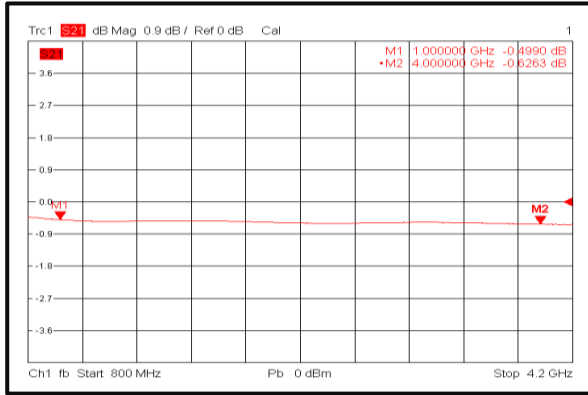
Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45°C~+85°C
Storage Temperature		-55°C~+125°C
Thermal Shock		1 Hour@ -45°C → 1 Hour @ +85°C (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & Temperature Burn In		Temperature +85°C for 72 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)

**Coaxial 50W 10 dB Directional Coupler 1 - 4GHz**

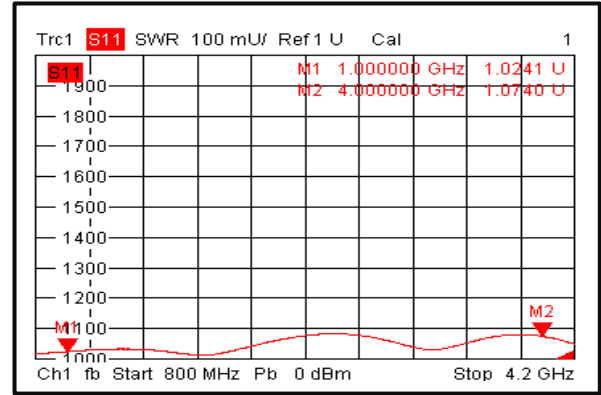


**Typical Performance Plots**

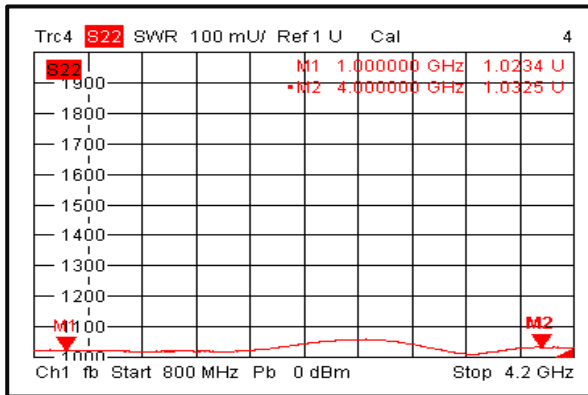
**Insertion Loss**



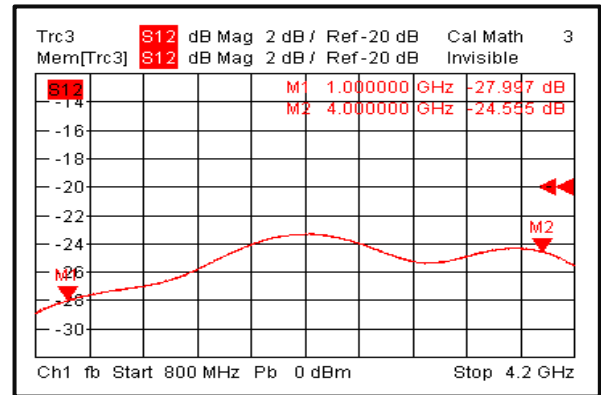
**Primary VSWR**



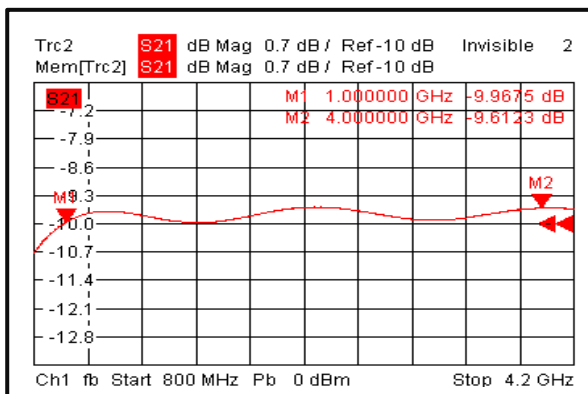
**Secondary VSWR**



**Directivity**



**Nominal Coupling**



**Coaxial 50W 10 dB Directional Coupler 1 - 4GHz**

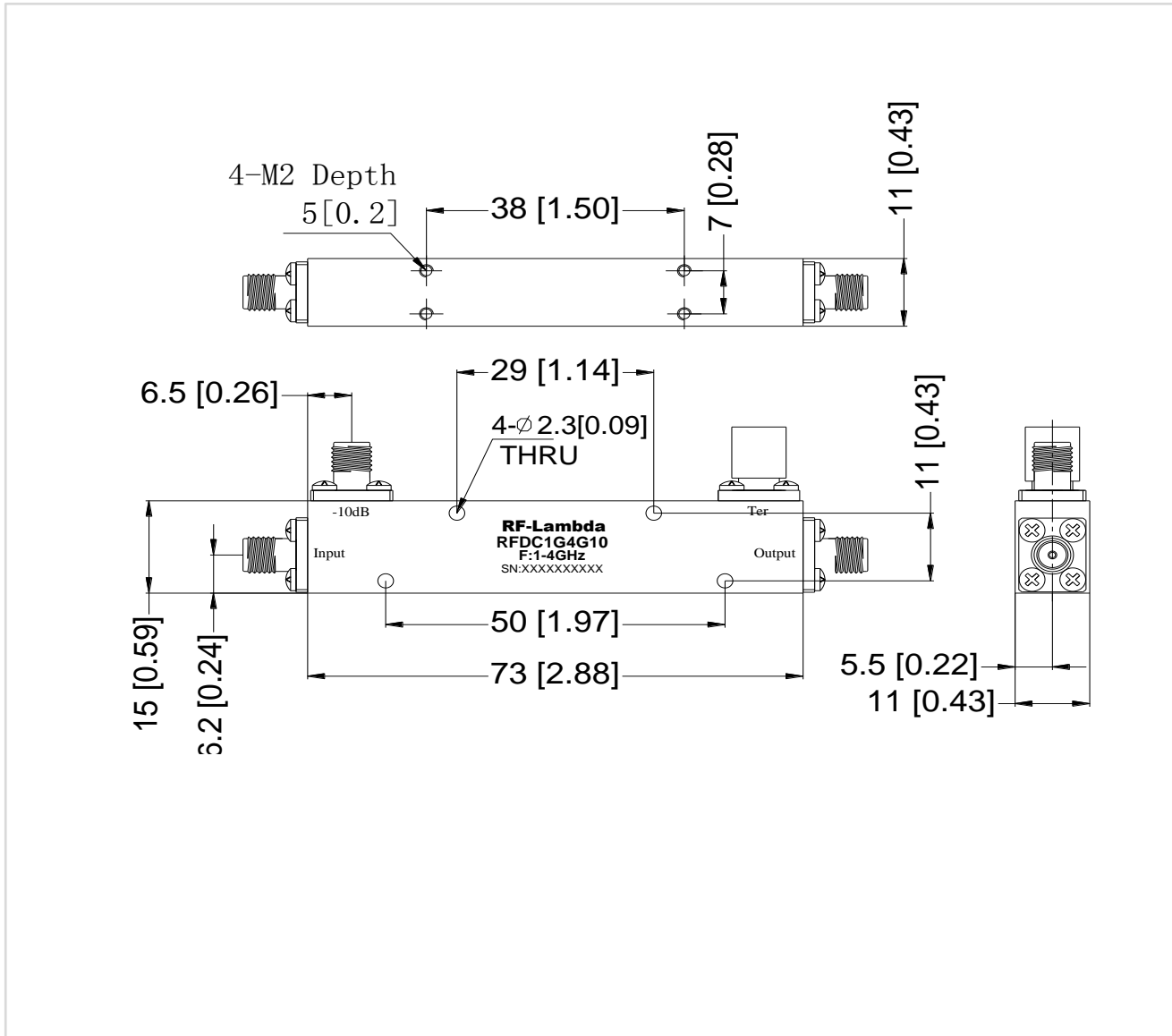


### Outline Drawing:

All Dimensions in mm (inches)

Outline Tolerances  $\pm 0.5$  (0.02)

Mounting Holes Tolerances  $\pm 0.2$ (0.008)



Coaxial 50W 10 dB Directional Coupler 1 - 4GHz

### Important Notice

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