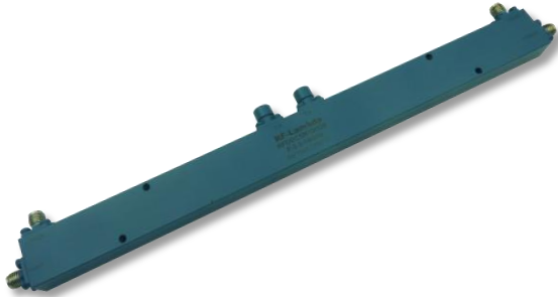




### Coaxial 50W 30dB Dual Directional Coupler 0.5 - 18GHz



#### Features

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

#### Typical Applications

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

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

Parameters		Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range		0.5		6	6		18	GHz
Nominal Coupling		29	30	31.5	29	30	31.5	dB
Frequency Sensitivity			$\pm 0.7$	$\pm 1.0$		$\pm 0.7$	$\pm 1.0$	dB
Directivity		15	18		10	12		dB
Insertion Loss (Excl Coupling)			0.7	1.0		1.5	1.8	dB
Insertion Loss (True)			0.7	1.1		1.6	2.0	dB
VSWR Primary			1.3	1.5		1.3	1.5	:1
VSWR Secondary			1.3	1.5		1.4	1.6	:1
Power Rating	Average	50						W
	Peak	1						KW
Impedance		50						Ohms
Weight		5.64						Ounces
Input / Output Connectors		SMA-Female						
Material		Aluminum						
Finish		Blue Paint						

Coaxial 50W 30dB Dual Directional Coupler 0.5 - 18GHz



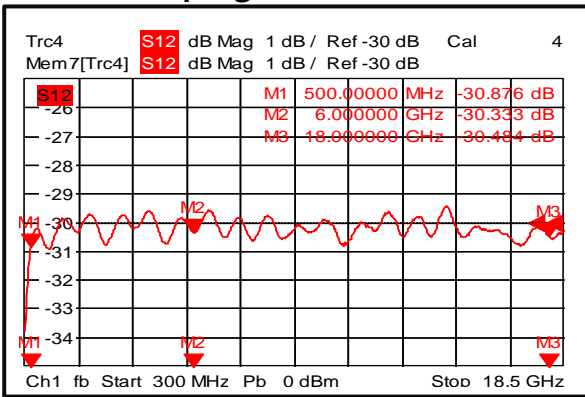
*Environmental Specifications and Test Standards*

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

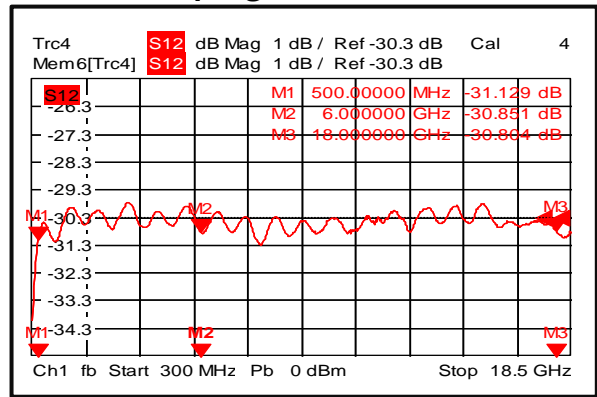


**Typical Performance Plots**

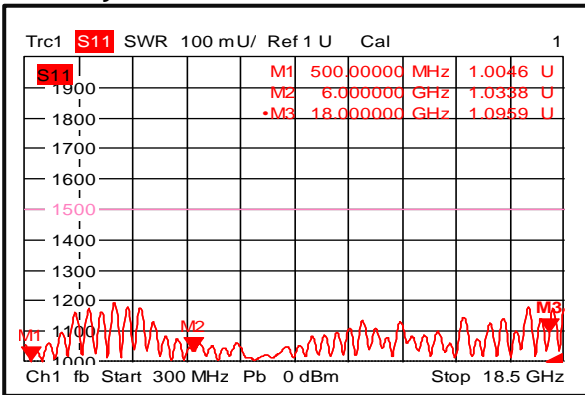
**Nominal Coupling 1**



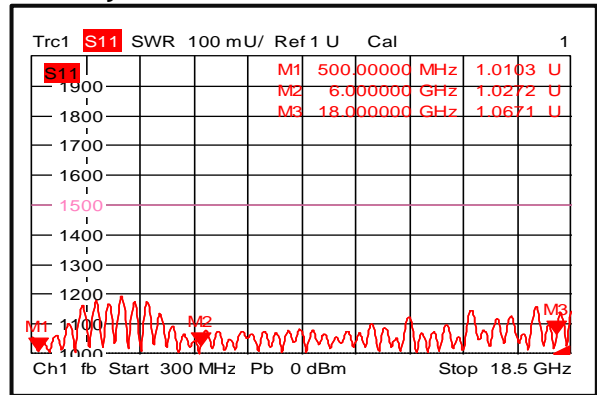
**Nominal Coupling 2**



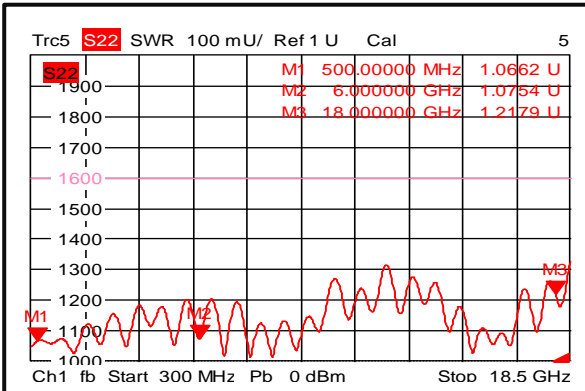
**Primary VSWR 1**



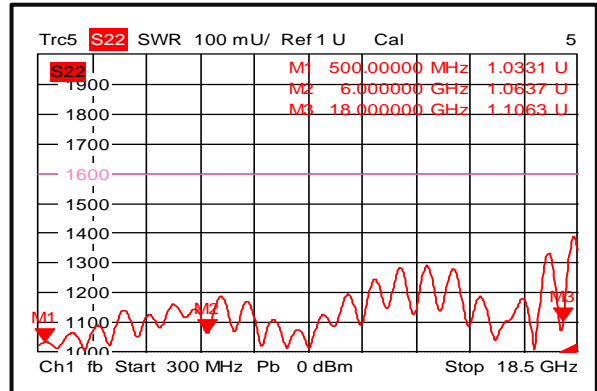
**Primary VSWR 2**



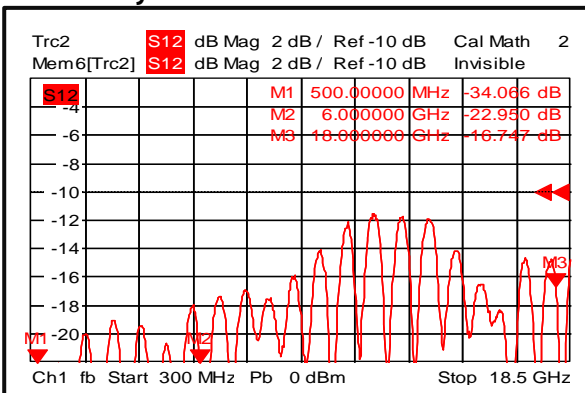
**Secondary VSWR 1**



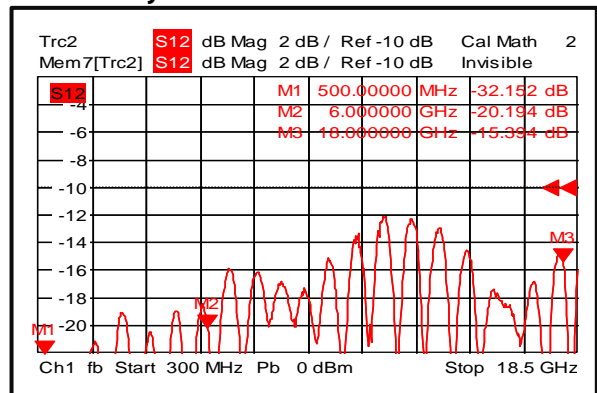
**Secondary VSWR 2**



**Directivity 1**



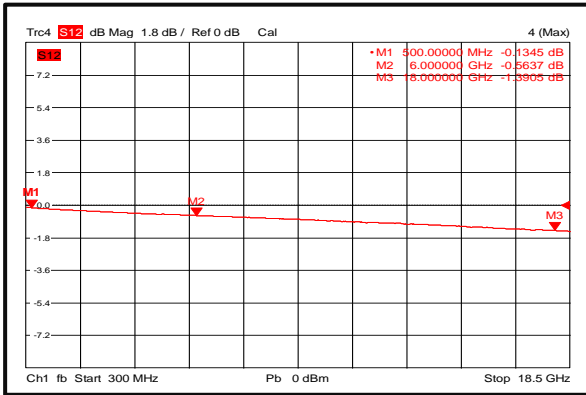
**Directivity 2**



**Coaxial 50W 30dB Dual Directional Coupler 0.5 - 18GHz**

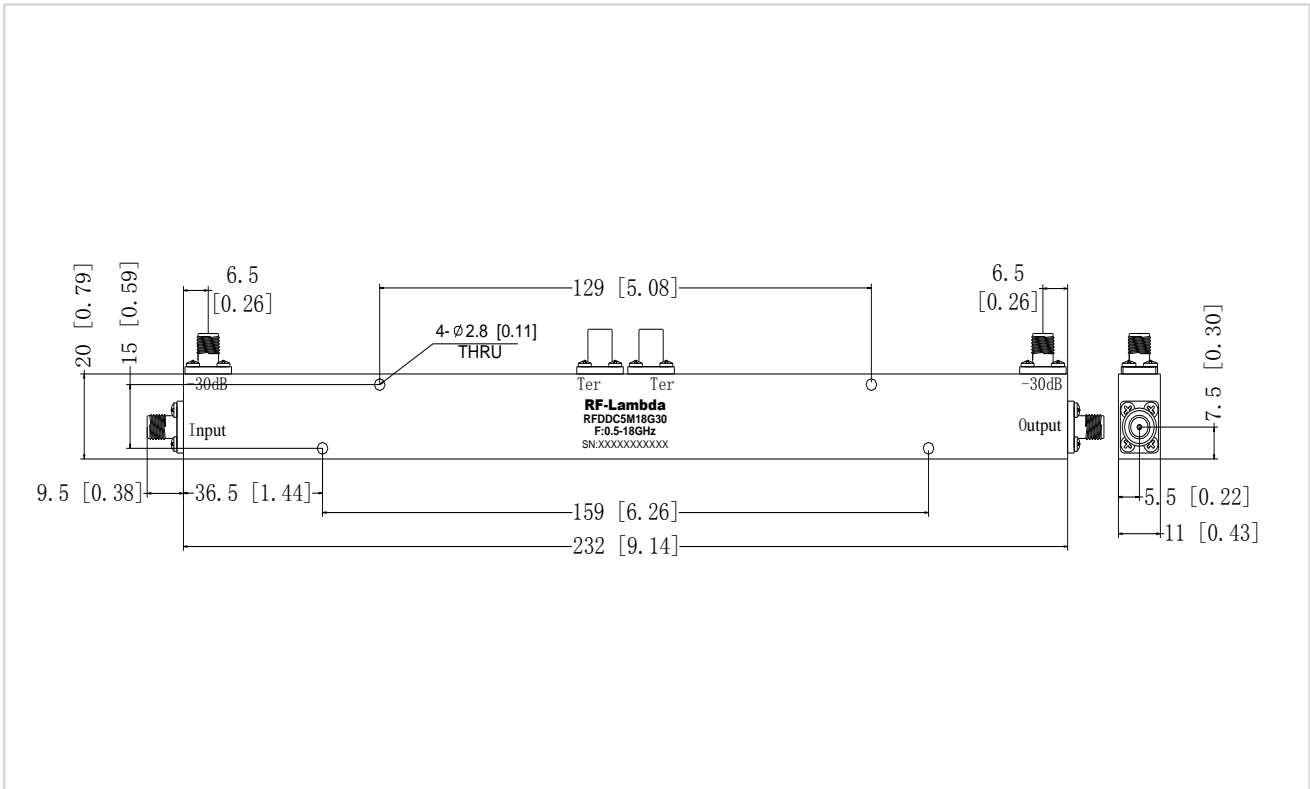


**Insertion Loss**



**Outline Drawing:**

All Dimensions in mm [inches]  
Tolerance  $\pm 0.25$  [0.01]



**Important Notice**

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**Coaxial 50W 30dB Dual Directional Coupler 0.5 - 18GHz**