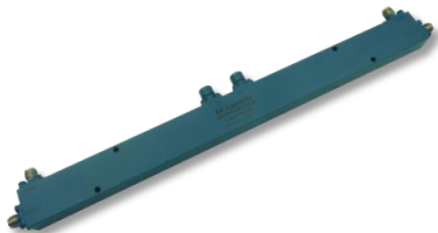


## Coaxial 50W 30dB Dual Directional Coupler 0.5 - 18GHz



Note: Photo is for illustration purposes only. Please refer to outline drawing.

### 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
- Wireless Infrastructure
- Test and Measurement

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

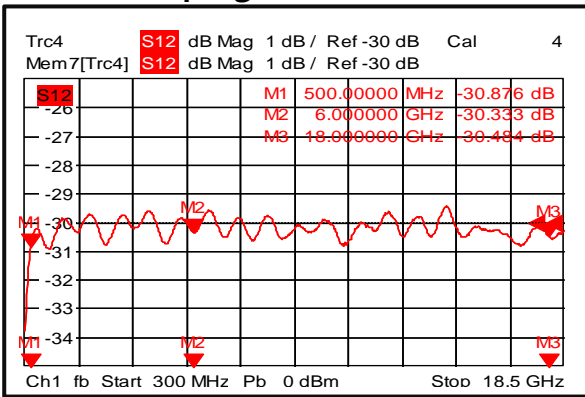
Parameters		Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range		0.5		6	6		18	GHz
Nominal Coupling		29	30	31.5	29	30	31.5	dB
Frequency Sensitivity			$\pm 0.7$	$\pm 1.0$		$\pm 0.7$	$\pm 1.0$	dB
Directivity		15			10			dB
Insertion Loss (Excl. Coupling)				1.0			1.8	dB
Insertion Loss (True)				1.1			2.0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

**Environmental Specifications and Test Standards**

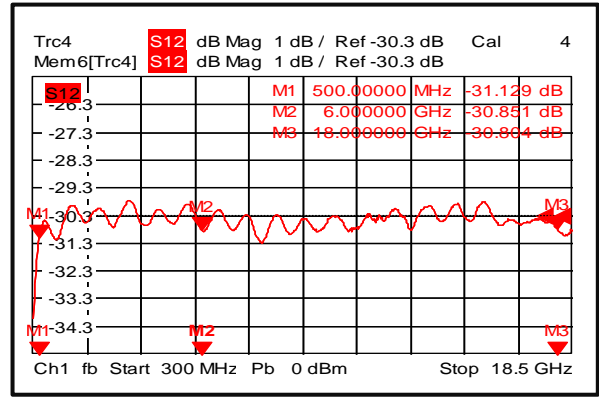
Parameter	Description
Operational Temperature	-40°C~+85°C (Case Temperature)
Storage Temperature	-50°C~+105°C
Thermal Shock	-40°C → +85°C (5 Cycles / 10 hours)
Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High Temperature Burn In	Temperature +85°C for 72 Hours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

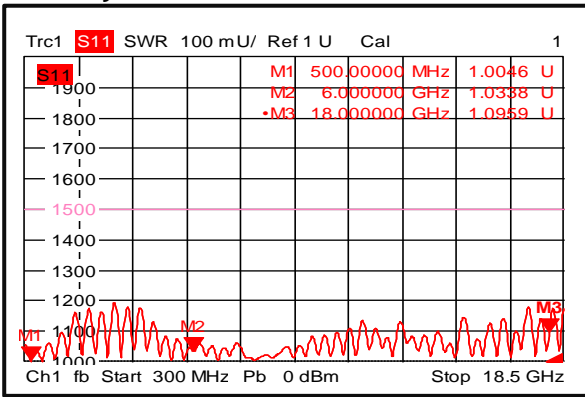
**Nominal Coupling 1**



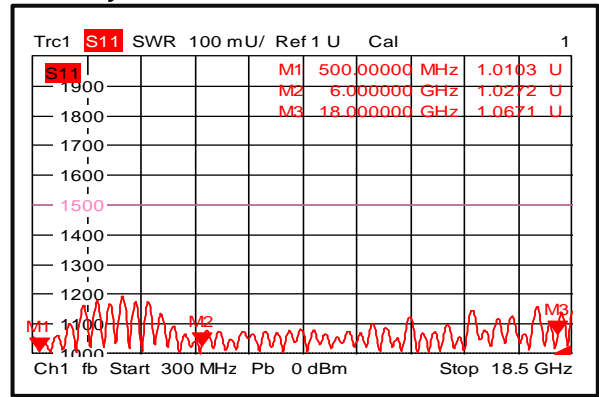
**Nominal Coupling 2**



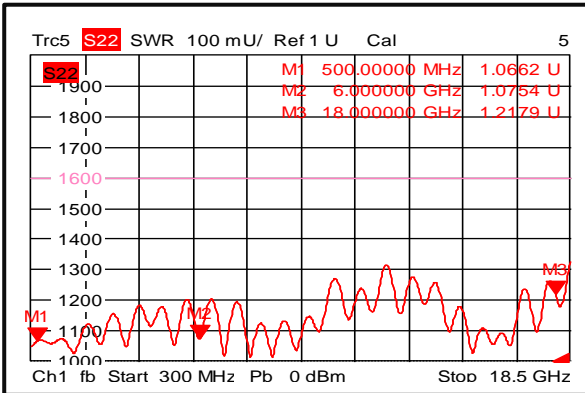
**Primary VSWR 1**



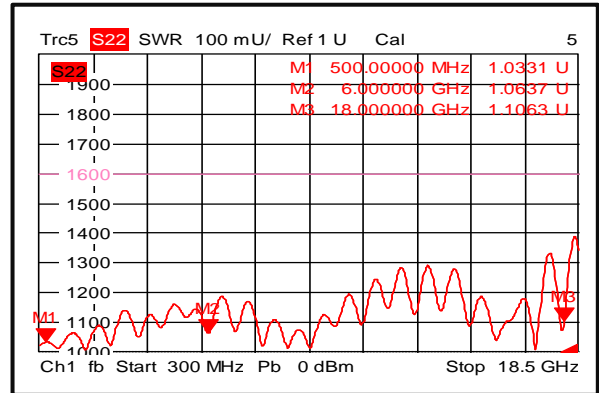
**Primary VSWR 2**



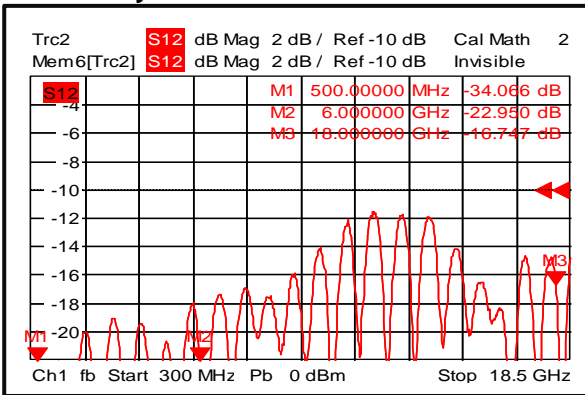
**Secondary VSWR 1**



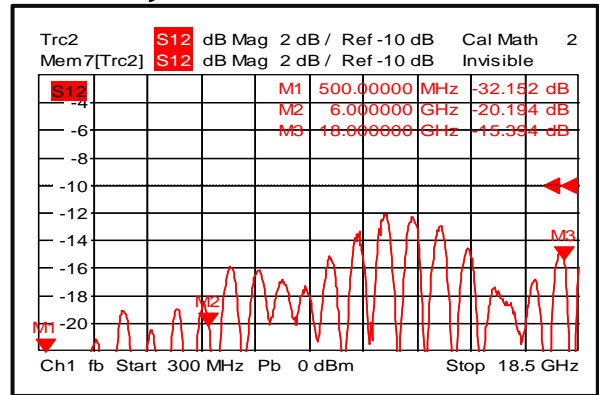
**Secondary VSWR 2**



**Directivity 1**

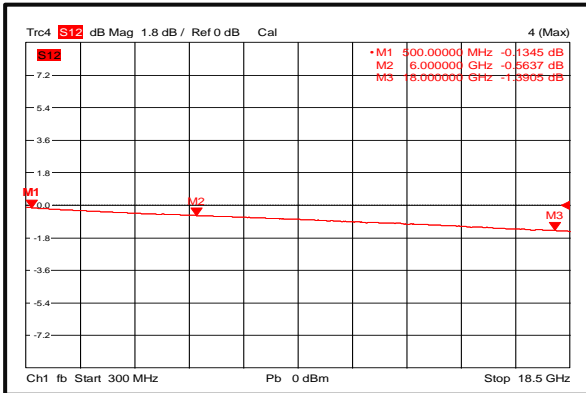


**Directivity 2**



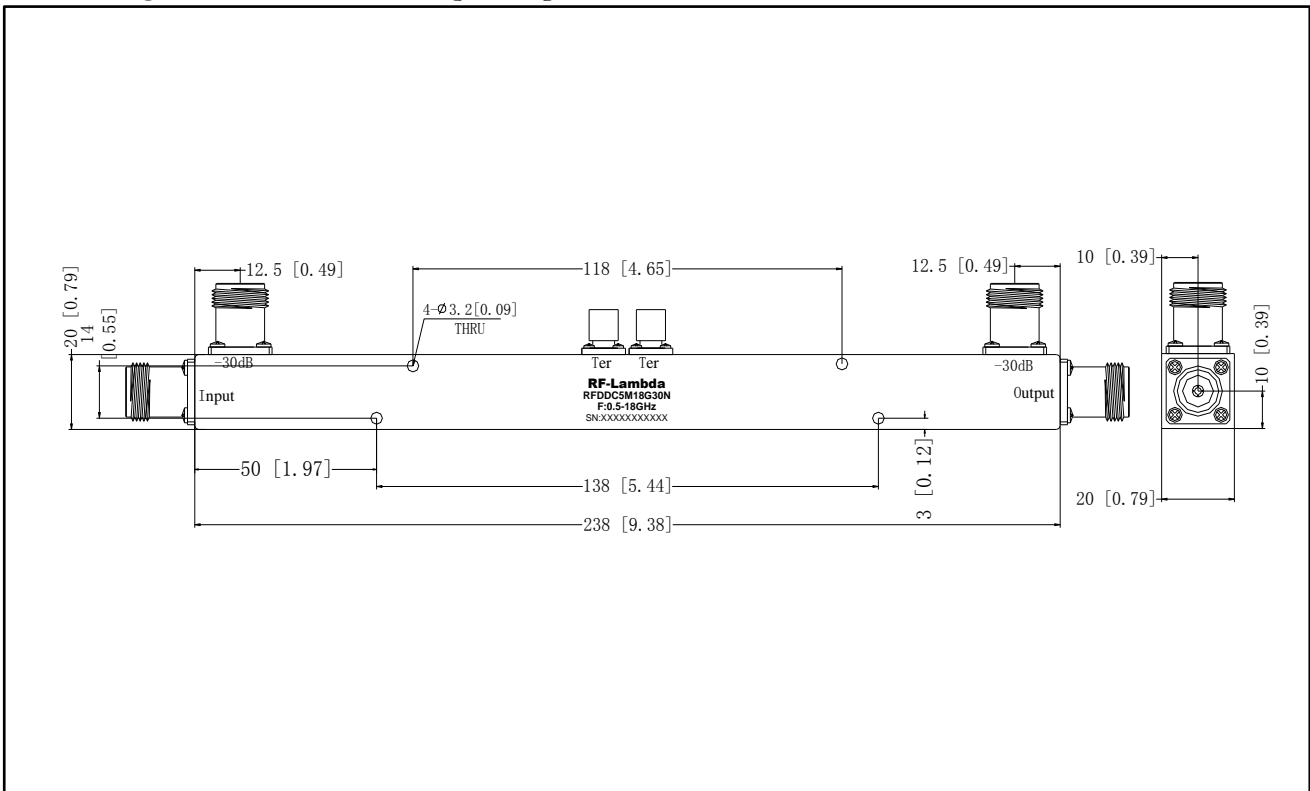
**Coaxial 50W 30dB Dual Directional Coupler 0.5 - 18GHz**

**Insertion Loss**



**Outline Drawing:**

All Dimensions in mm [inches]  
 Outline Tolerance  $\pm 0.5$  [0.02]  
 Mounting Holes Tolerance  $\pm 0.2$  [0.008]



**Important Notice**

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