

## Coaxial 50W 10dB Directional Coupler 4 - 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,  $T_A=25\text{ }^\circ\text{C}$

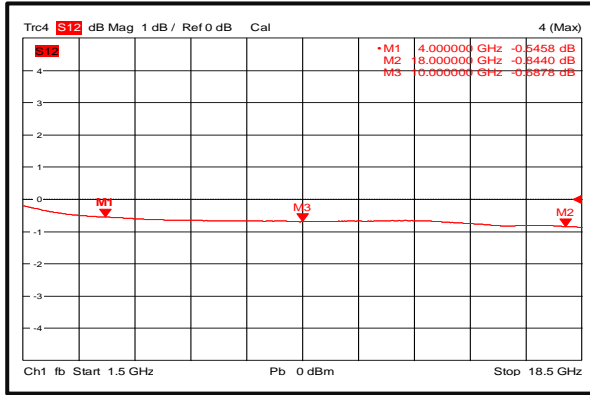
Parameters		Min.	Typ.	Max.	Units
Frequency Range		4		18	GHz
Nominal Coupling		9	10	11	dB
Frequency Sensitivity			$\pm 0.4$	$\pm 0.7$	dB
Directivity		12	15		dB
Insertion Loss (Excl Coupling)				0.5	dB
Insertion Loss (True)			0.8	1.0	dB
VSWR Primary			1.3	1.5	:1
VSWR Secondary			1.4	1.5	:1
Power Rating	Average	50			W
	Peak	500			W
Impedance		50			Ohms
Weight		1.0 Max.			ounces
Input / Output Connectors		SMA-Female			
Material		Aluminum			
Finish		Blue Paint			

**Environmental Specifications and Test Standards**

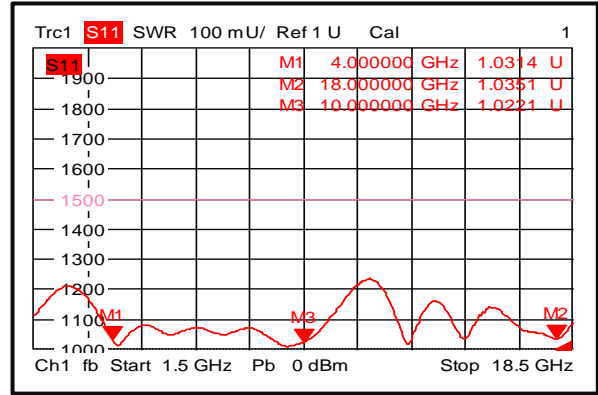
Parameter	Description
Operational Temperature	-40°C~+85°C (Case Temperature)
Storage Temperature	-50°C~+105°C
Thermal Shock	-40°C → +85°C (5 Cycles / 10 hours)
Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High Temperature Burn In	Temperature +85°C for 72 Hours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

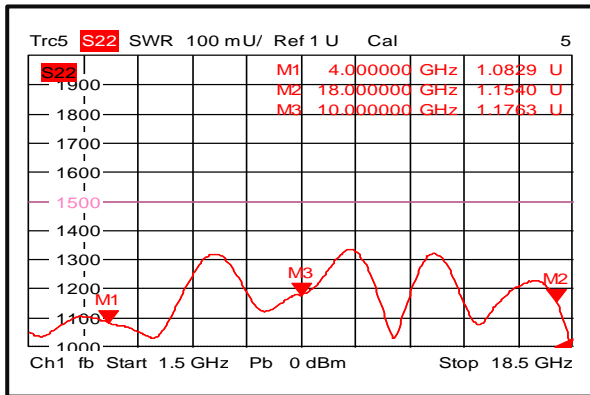
**Insertion Loss**



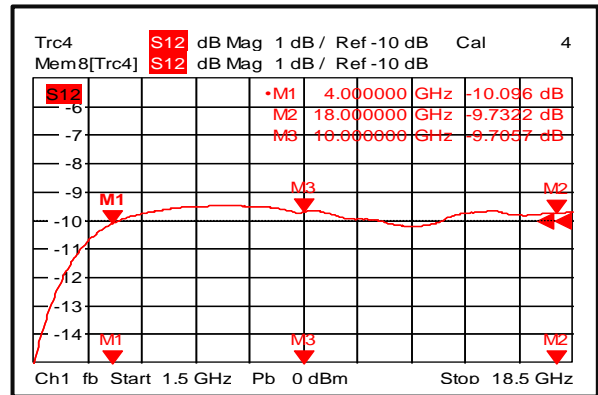
**Primary VSWR**



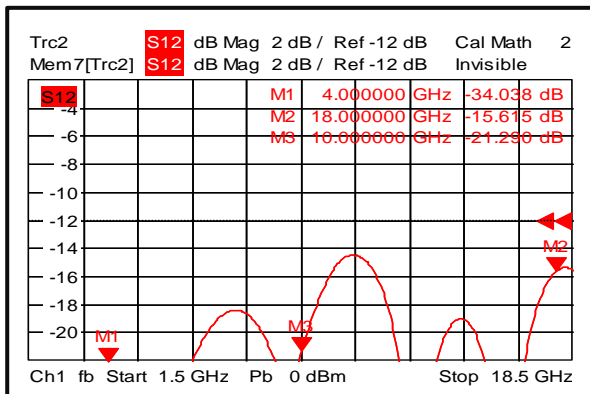
**Secondary VSWR**



**Directivity**



**Nominal Coupling**

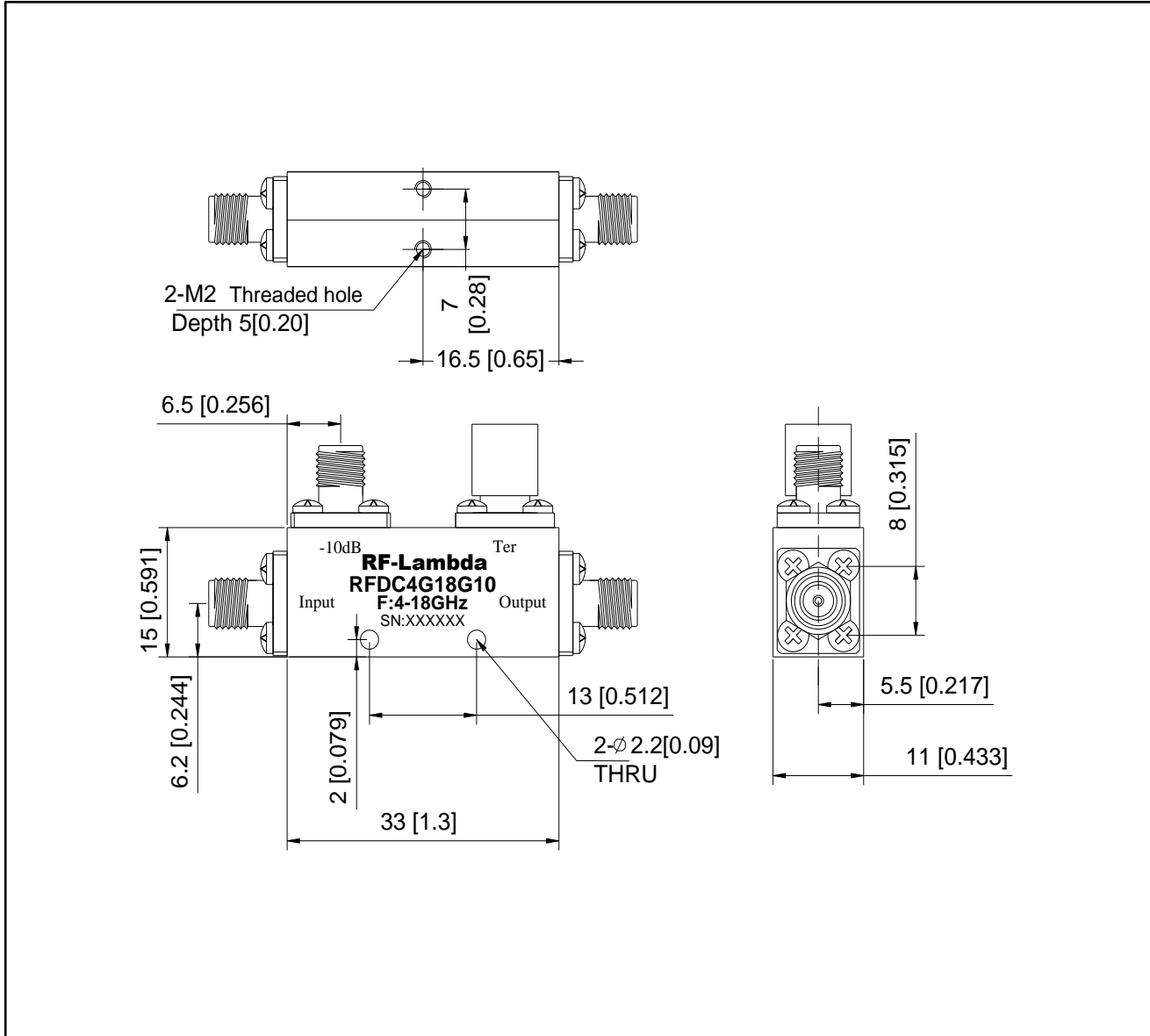


**Outline Drawing:**

All Dimensions in mm [inches]

Outline Tolerances  $\pm 0.5$  [0.02]

Mounting Holes Tolerances  $\pm 0.2$  [0.008]



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