

## Coaxial 500W 30dB Directional Coupler 0.1 – 0.8GHz



### Features

- High power handling up to 500W
- Wide band operation
- High directivity within operational band
- Low Insertion Loss
- High peak to average handling capability

### Typical Applications

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

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

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	0.1		0.2	0.2		0.8	GHz
Nominal Coupling	29	30	33	29	30	31	dB
Frequency Sensitivity		$\pm 1.0$	$\pm 1.5$		$\pm 0.7$	$\pm 1.0$	dB
Directivity	20	22		20	22		dB
Insertion Loss (Excl. Coupling)			0.3			0.4	dB
Insertion Loss (True)		0.1	0.3		0.2	0.4	dB
VSWR Primary		1.15	1.2		1.15	1.2	: 1
VSWR Secondary		1.15	1.2		1.15	1.2	: 1
Power Rating	Average	500					W
	Peak	5					KW
Impedance	50					Ohms	
Weight	35 Max.					Ounces	
Input / Output Connectors	N-Female(All ports)						
Material	Aluminum						
Finish	Blue Paint						

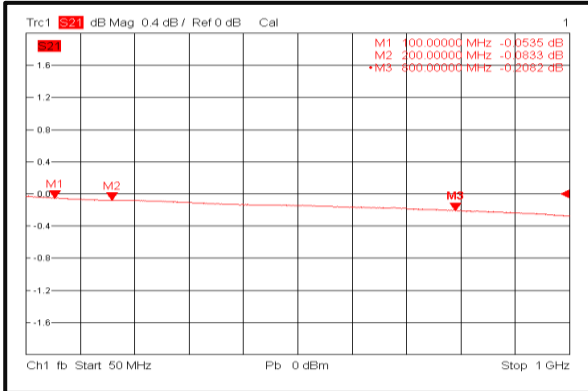
**Coaxial 500W/30dB Directional Coupler 0.1 – 0.8GHz**

**Environmental Specifications and Test Standards**

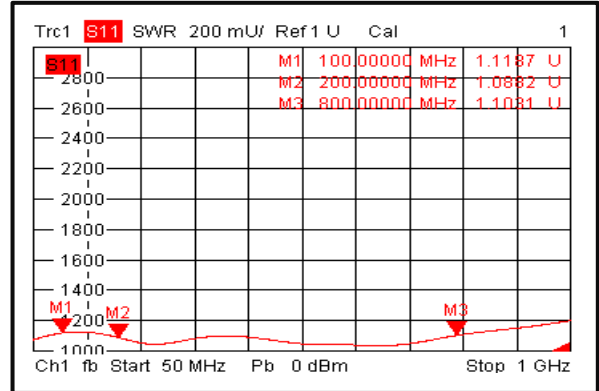
Parameter	Description
Operational Temperature	-40°C~+85°C (Case Temperature)
Storage Temperature	-50°C~+105°C
Thermal Shock	-40°C → +85°C (5 Cycles / 10 hours)
Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High Temperature Burn In	Temperature +85°C for 72 Hours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

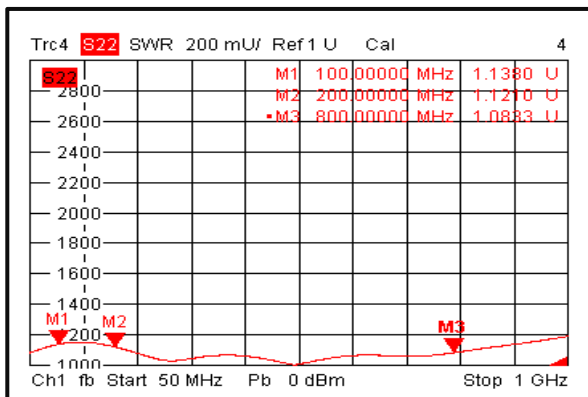
**Insertion Loss**



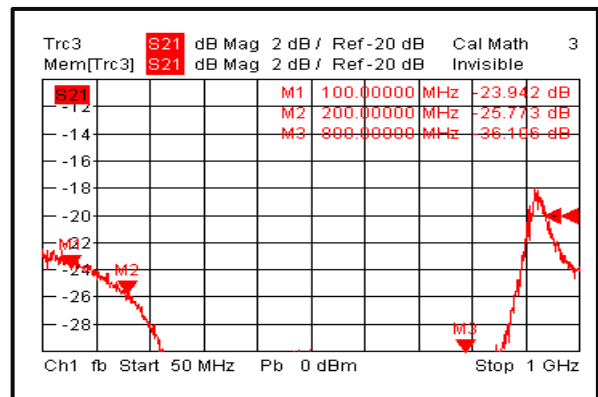
**Primary VSWR**



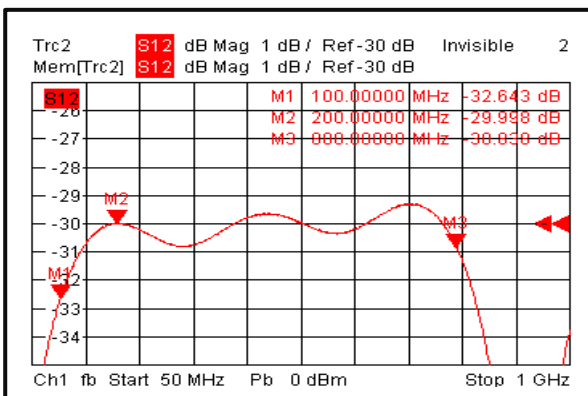
**Secondary VSWR**



**Directivity**



**Nominal Coupling**

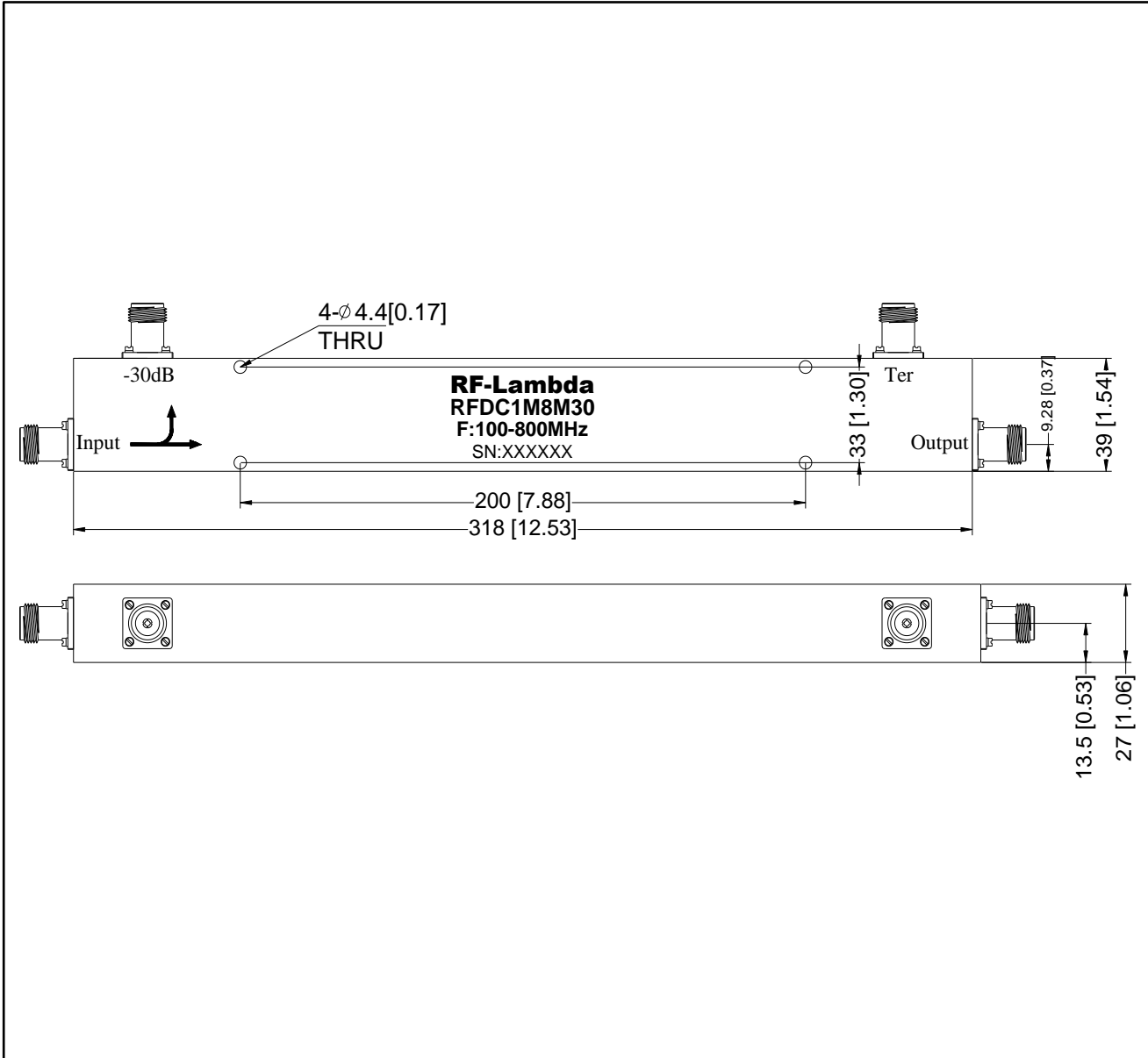


**Outline Drawing:**

All Dimensions in mm [inches]

Outline Tolerances  $\pm 0.5$  [0.02]

Mounting Holes Tolerances  $\pm 0.2$  [0.008]



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