



### Coaxial 300W 30dB Directional Coupler 300-500MHz



#### Features

- High power handling capability up to 300W
- Wide band operation
- High isolation within operational band
- Low Insertion loss
- Stable performance over temperature
- High peak to average handling capability

#### Typical Applications

- Aerospace and military applications
- LMDS multi-carrier operation

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

Parameters		Min.	Typ.	Max.	Units
Frequency Range		300		500	MHz
Nominal Coupling			30		dB
Frequency Sensitivity			$\pm 0.5$	$\pm 0.8$	dB
Directivity		20	22		dB
Insertion Loss (Excl Coupling)				0.1	dB
Insertion Loss (true)			0.1	0.2	dB
VSWR Primary			1.1	1.2	:1
VSWR Secondary			1.1	1.2	:1
Power Rating	Average	300			W
	Peak	5			kW
Impedance		50			Ohms
Weight		33.51			Ounces
Input / Output Connectors		N-Female			
Material		Aluminum			
Finishing		Blue Paint			

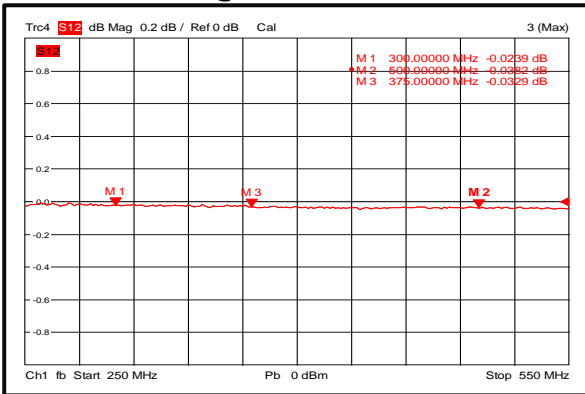
#### Environmental Specifications

Operational Temperature ( $^\circ\text{C}$ )	-45 to +85
Storage Temperature ( $^\circ\text{C}$ )	-55 to +125
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35c, 95%RH at 40 deg c
Shock	20G for 11msec half sine wave, 3 axis both directions

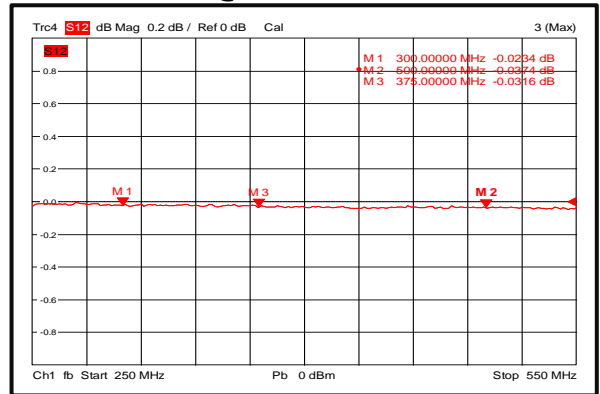


**Typical Performance Plots**

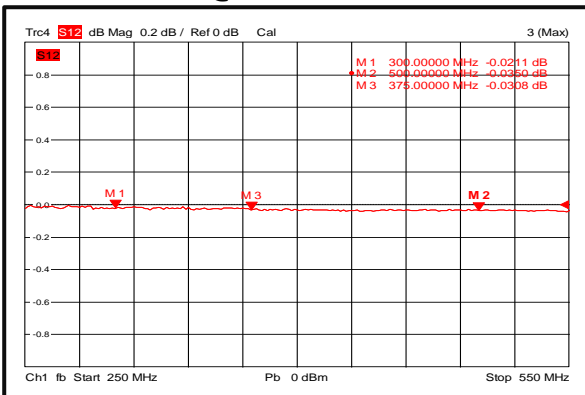
**Insertion Loss @+25°C**



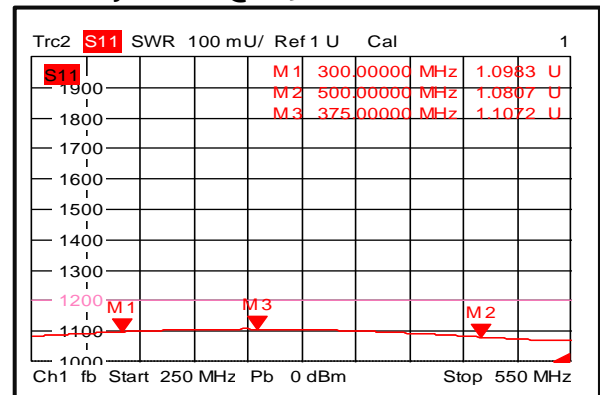
**Insertion Loss @-45°C**



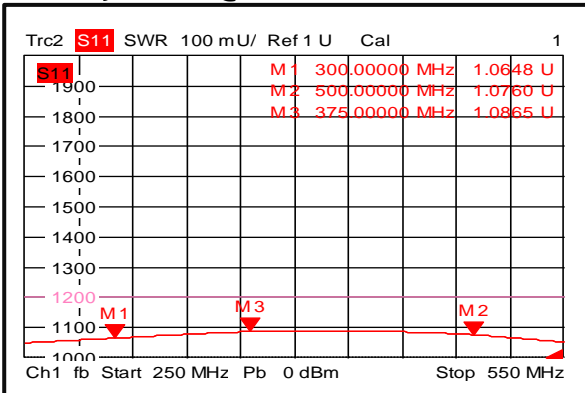
**Insertion Loss @+85°C**



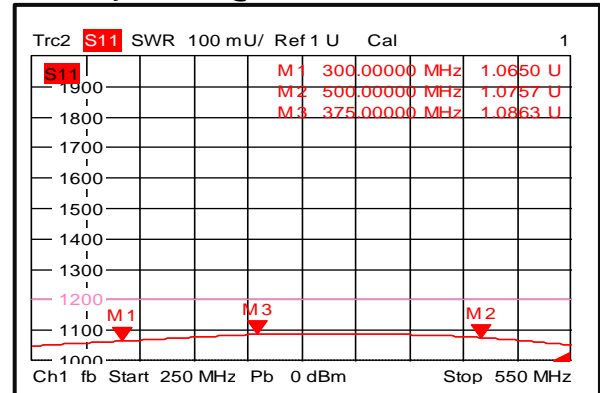
**Primary VSWR @+25°C**



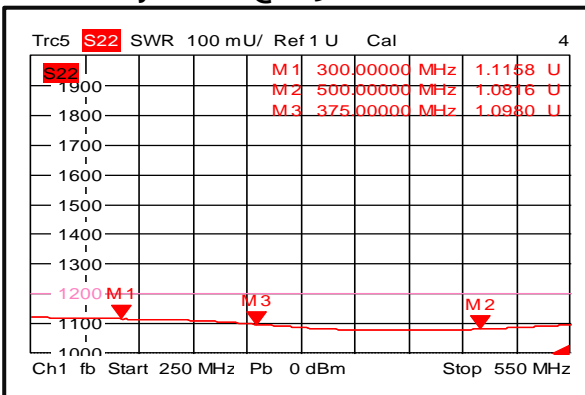
**Primary VSWR @-45°C**



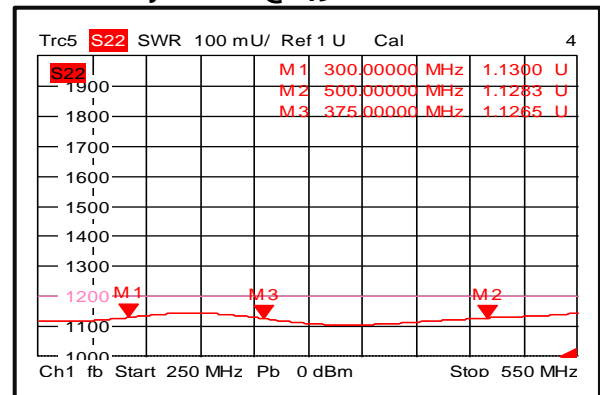
**Primary VSWR @+85°C**



**Secondary VSWR @+25°C**



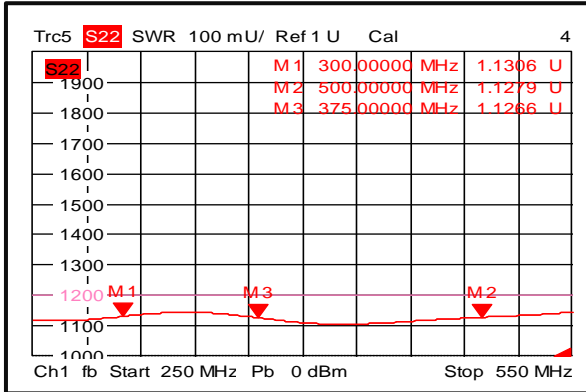
**Secondary VSWR @-45°C**



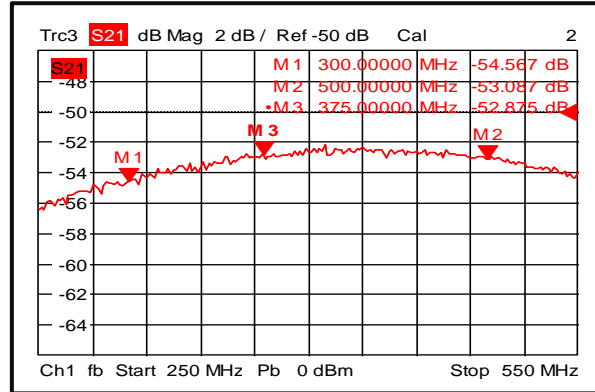
**COAXIAL 300W 30dB DIRECTIONAL COUPLER 300-500MHZ**



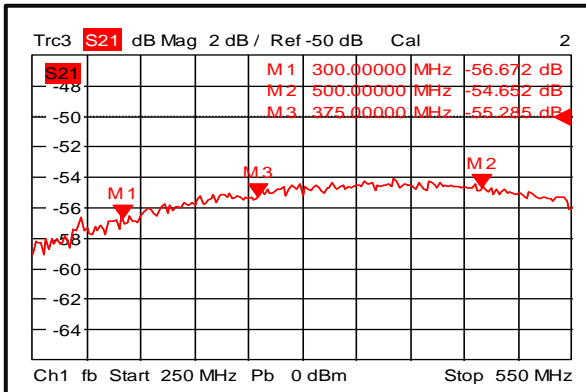
### Secondary VSWR @+85°C



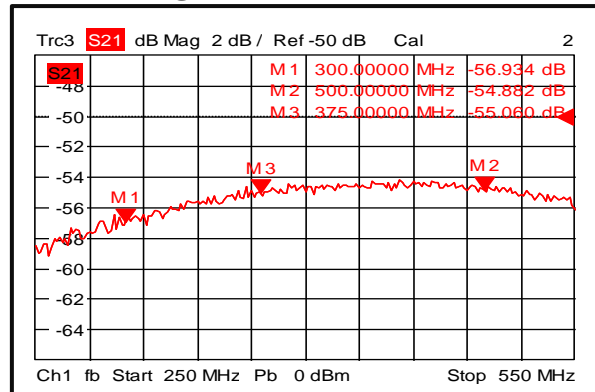
### Directivity @+25°C



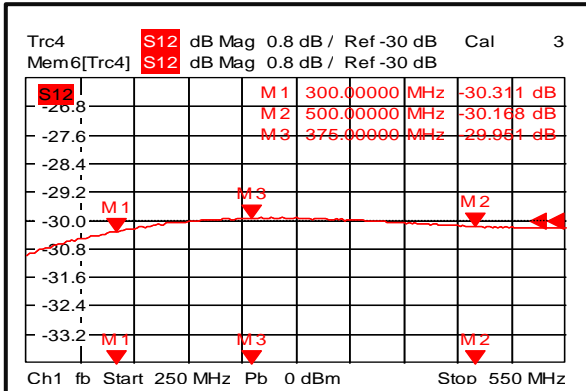
### Directivity @-45°C



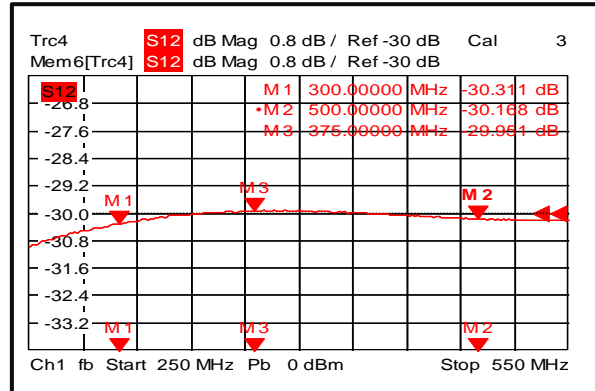
### Directivity @+85°C



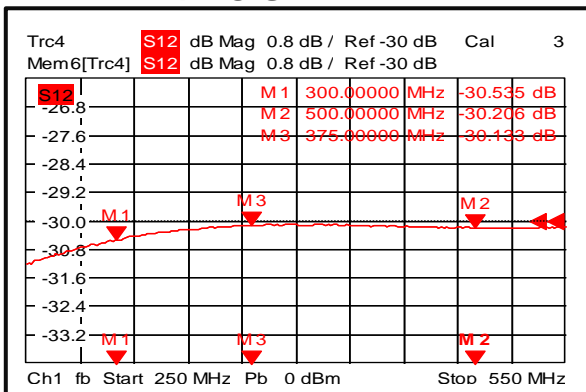
### Nominal Coupling @+25°C



### Nominal Coupling @-45°C



### Nominal Coupling @+85°C

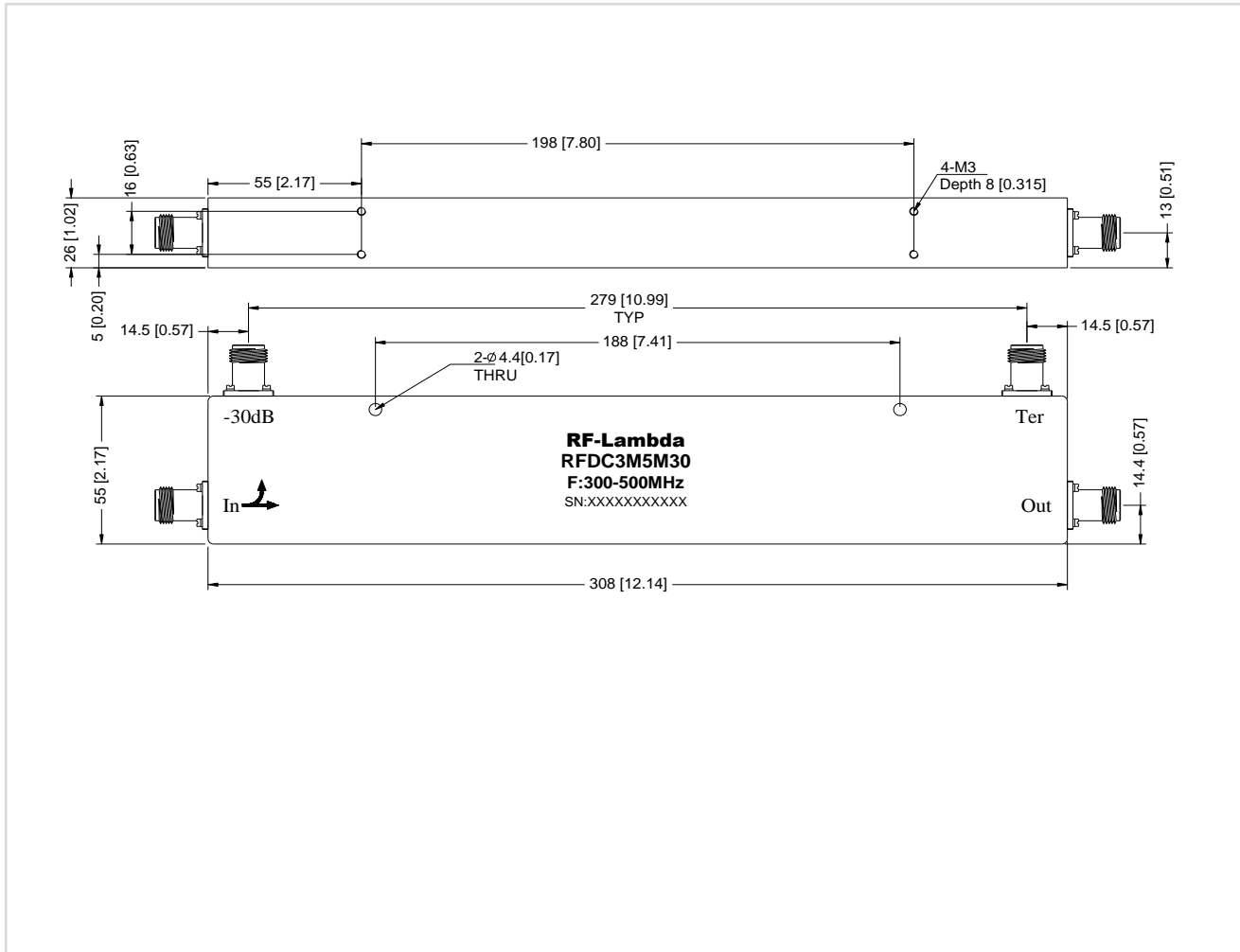




**Outline Drawing:**

All Dimensions in mm [inches]

Tolerance  $\pm 0.25$  [0.01]



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