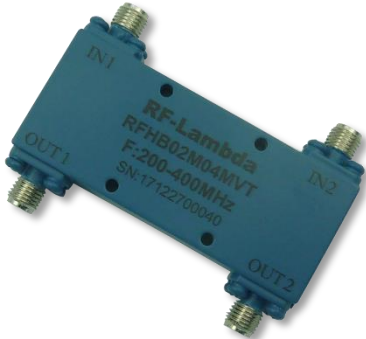




### Coaxial 50W 90° Hybrid Coupler 200-400MHz



#### Features

- High power handling up to 50W
- 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

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

Parameters		Min.	Typ.	Max.	Units
Frequency Range		200		400	MHz
Nominal Coupling			3		dB
Insertion Loss			0.15	0.3	dB
Isolation		22	25		dB
Amplitude Imbalance			$\pm 0.35$	$\pm 0.5$	dB
Phase Imbalance			$\pm 1.5$	$\pm 2$	deg
VSWR			1.1	1.2	:1
Power Rating	Average	50			W
	Peak	1			KW
Impedance		50			Ohms
Weight		1.76			ounces
Input / Output Connectors		SMA-Female			
Material		Aluminum			
Finish		Blue Paint			

Coaxial 50 W 90° Hybrid Coupler 200-400 MHz



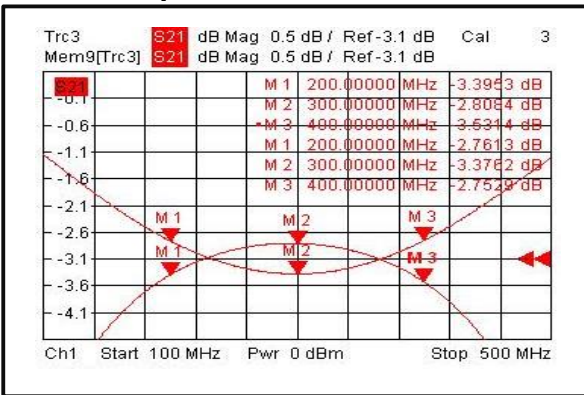
**Environmental Specifications and Test Standards**

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	MIL-STD-883 (For Hermetically Sealed Units)

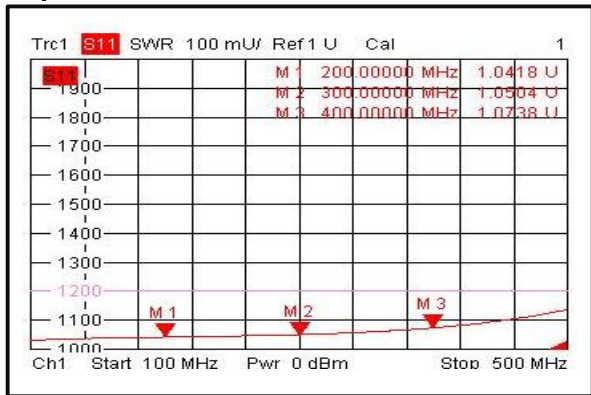
**Coaxial 50 W 90° Hybrid Coupler 200-400 MHz**



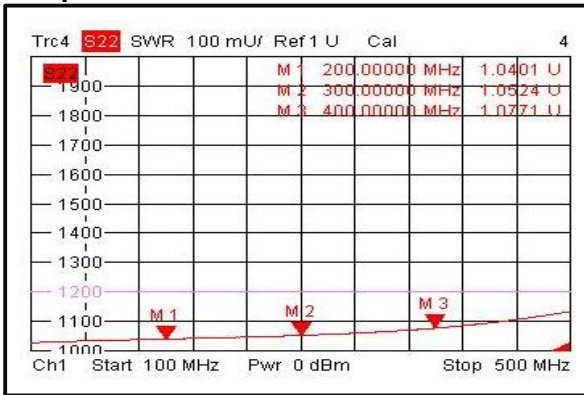
**Typical Performance Plots**  
**Loss & Amplitude Imbalance**



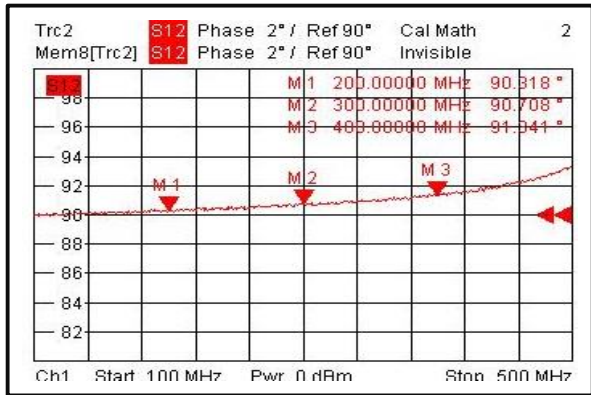
**Input VSWR**



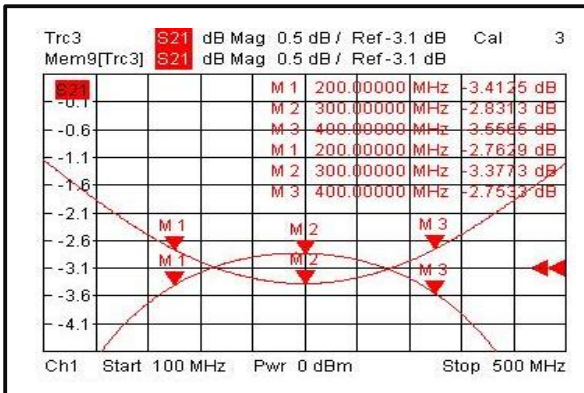
**Output VSWR**



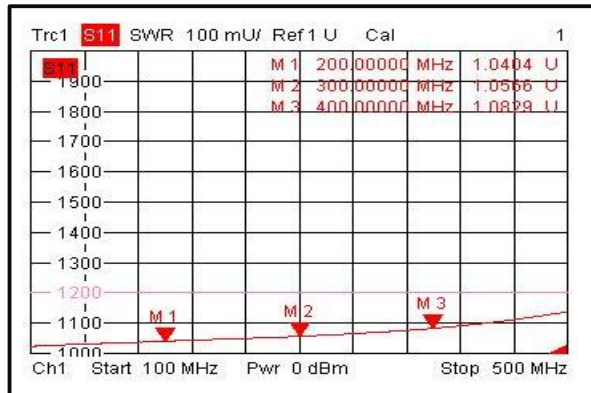
**Phase Imbalance**



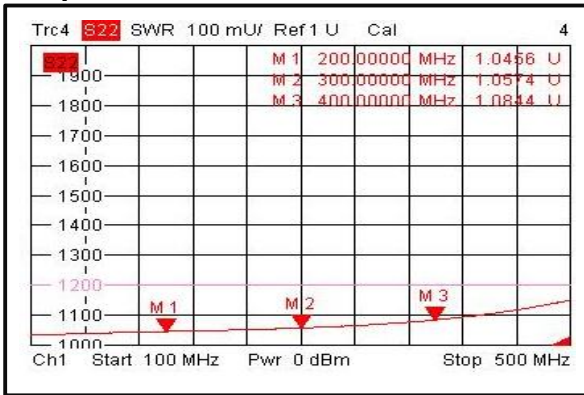
**Loss & Amplitude Imbalance**



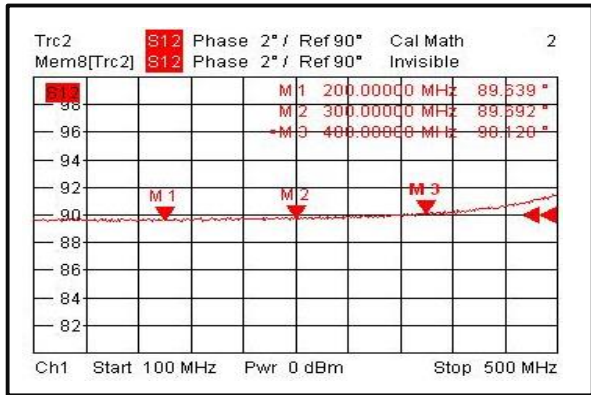
**Input VSWR**



**Output VSWR**



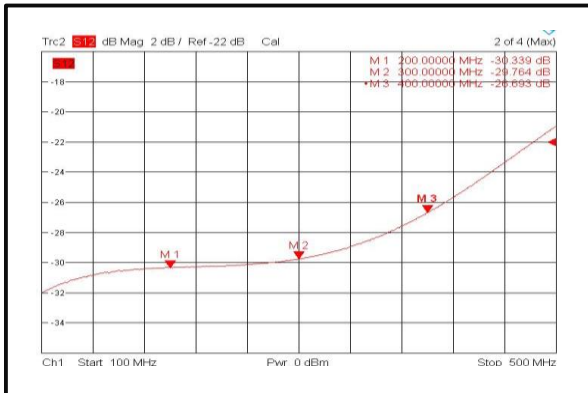
**Phase Imbalance**



**Coaxial 50 W 90° Hybrid Coupler 200-400 MHz**



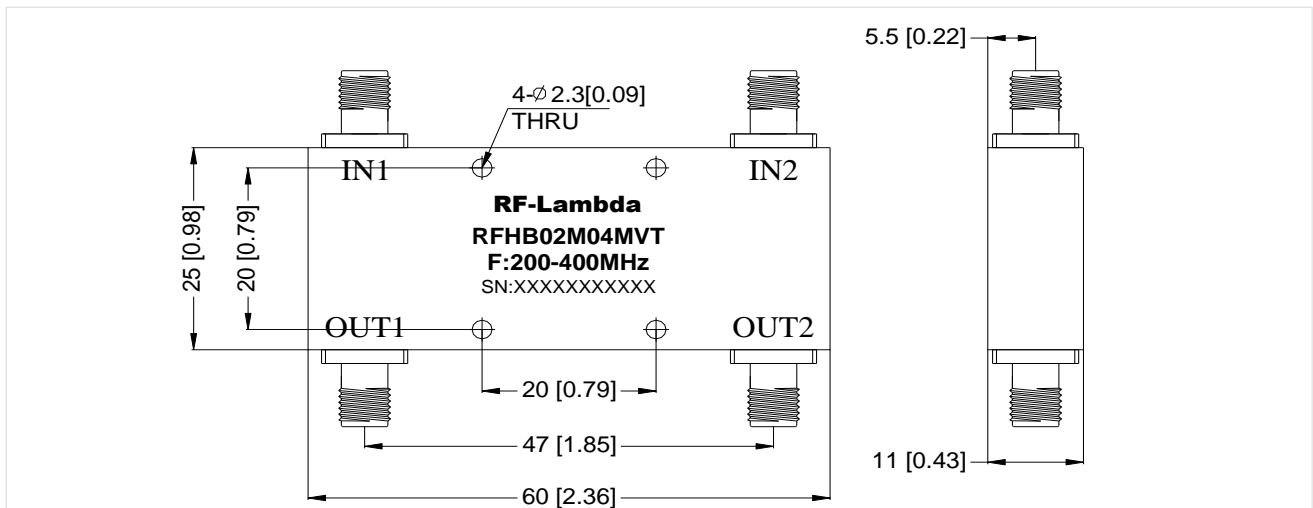
**Isolation**



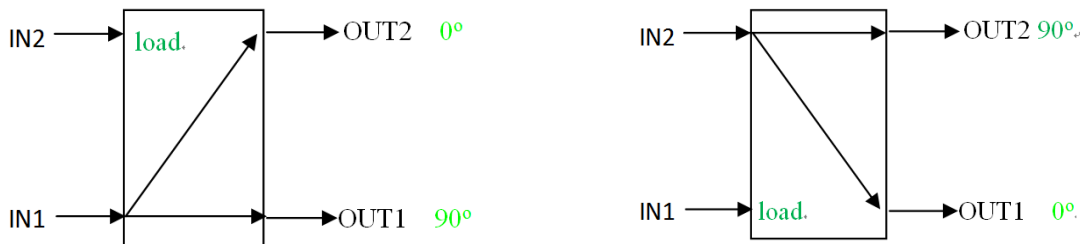
**Outline Drawing:**

All Dimensions in mm [inches]

Tolerance  $\pm 0.25$ [0.01]



**Schematic:**



**Important Notice**

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**Coaxial 50 W 90° Hybrid Coupler 200-400 MHz**