Coaxial 50W 90° Hybrid Coupler 450-900MHz

RoHS Compliant

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 ℃

Parameters		Min.	Typ.	Max.	Units
Frequency Range		450		900	MHz
Nominal Coupling			3		dB
Insertion Loss			0.2	0.3	dB
Isolation		20	22		dB
Amplitude Imbalance			±0.35	±0.5	dB
Phase Imbalance			±1	±2	deg
VSWR			1.15	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			

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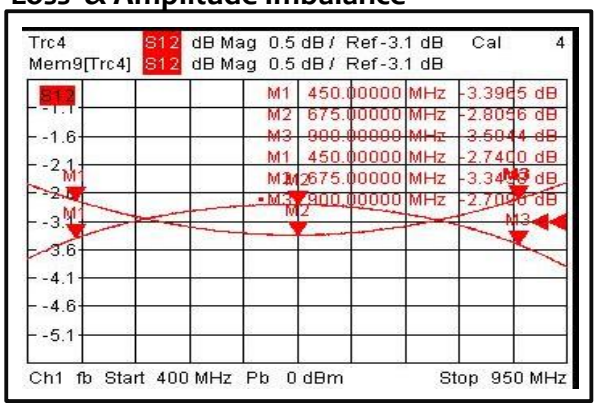
Environmental Specifications and Test Standards

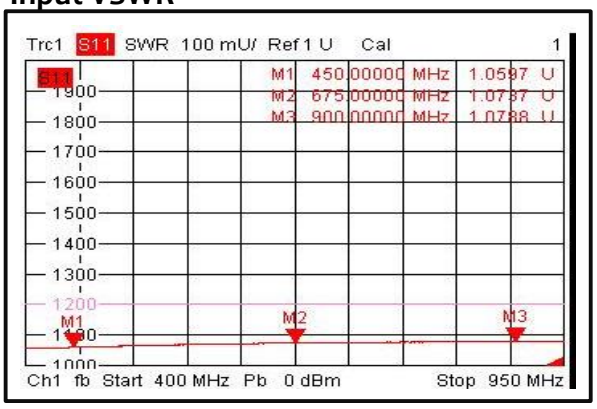
Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45℃~+85℃
Storage Temperature		-55℃~+125℃
Thermal Shock		1 Hour@ -45℃→ 1 Hour @ +85℃ (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & Temperature Burn In		Temperature +85℃ for 72 Hours
Shock		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)

Typical Performance Plots

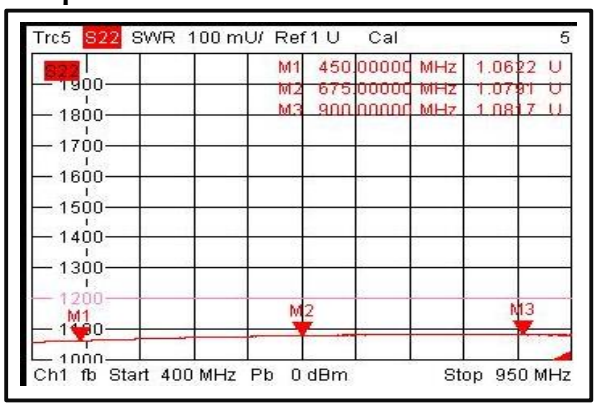
Loss & Amplitude Imbalance



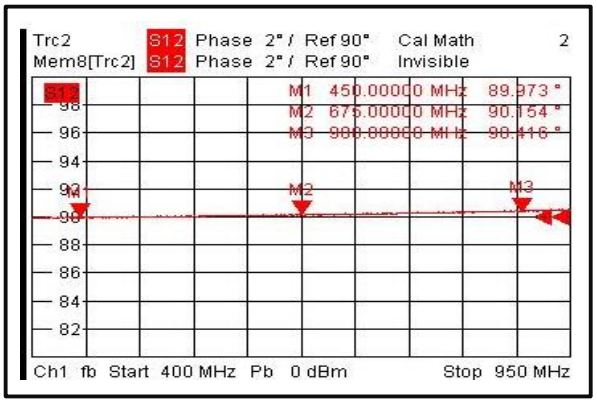
Input VSWR



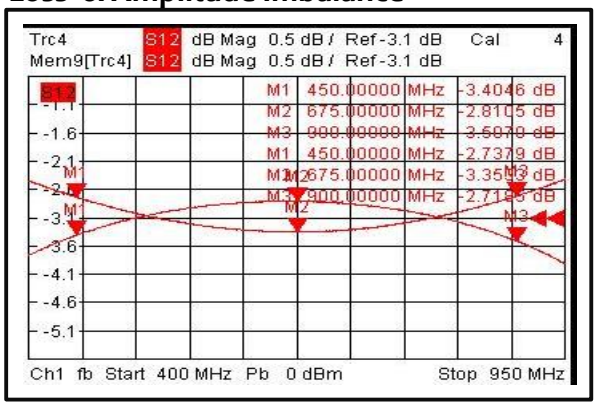
Output VSWR



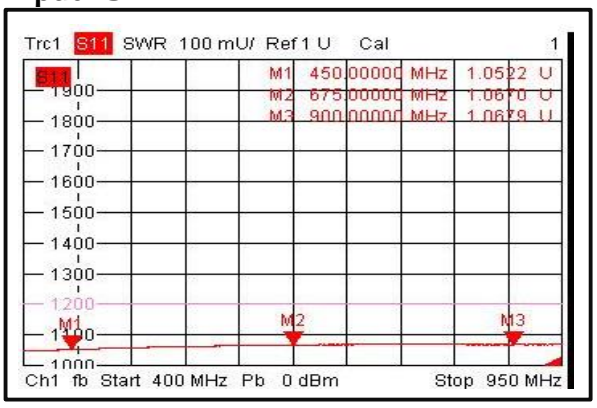
Phase Imbalance



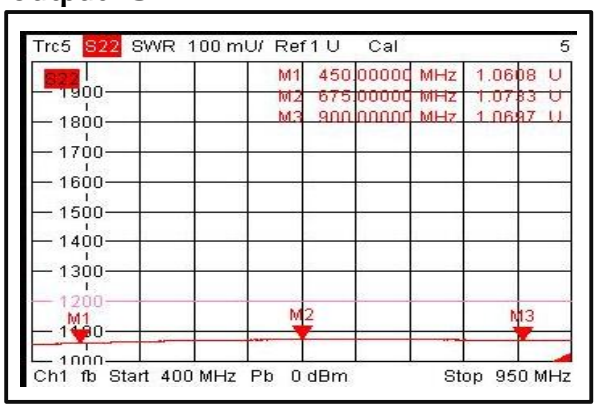
Loss & Amplitude Imbalance



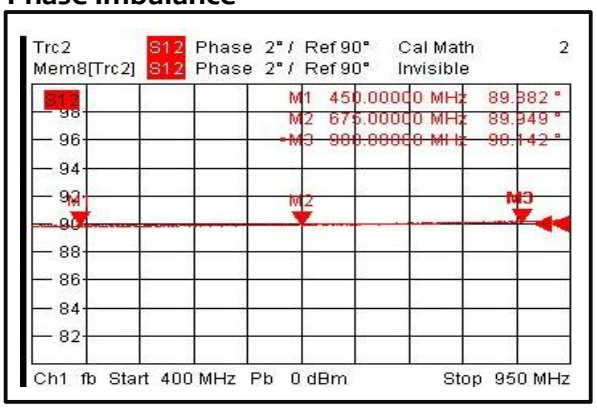
Input VSWR



Output VSWR



Phase Imbalance



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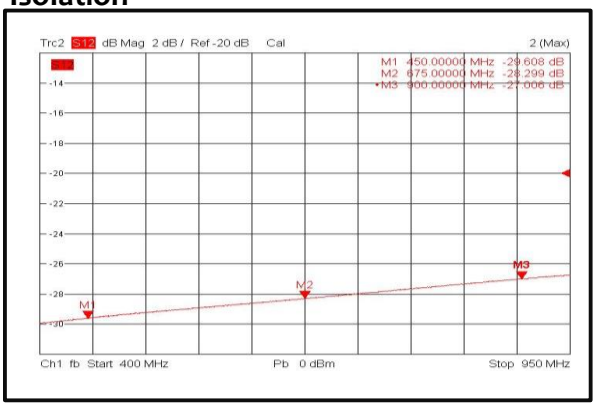
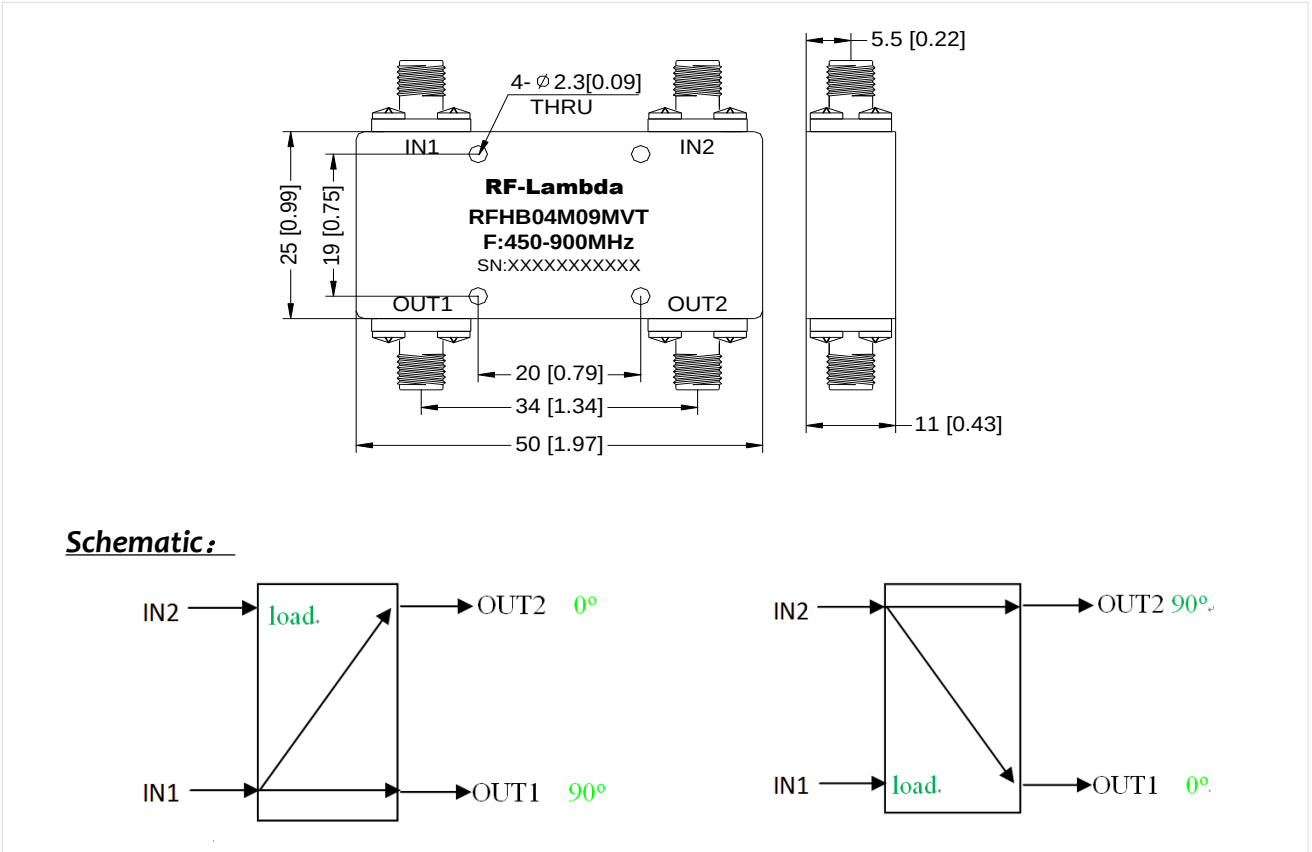
Isolation



Outline Drawing:

All Dimensions in mm [inches]
Tolerance ±0.25[0.01]



Schematic：

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