



RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFHB02M05MVT

Coaxial 50W 90° Hybrid Coupler 250- 500MHz



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		250		500	MHz
Nominal Coupling			3		dB
Insertion Loss			0.2	0.3	dB
Isolation		22	25		dB
Amplitude Imbalance			± 0.35	± 0.5	dB
Phase Imbalance			± 1	± 2	deg
VSWR			1.1	1.2	: 1
Power Rating	Average	50			W
	Peak	500			W
Impedance		50			Ohms
Weight		1.76			ounces
Input / Output Connectors		SMA-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

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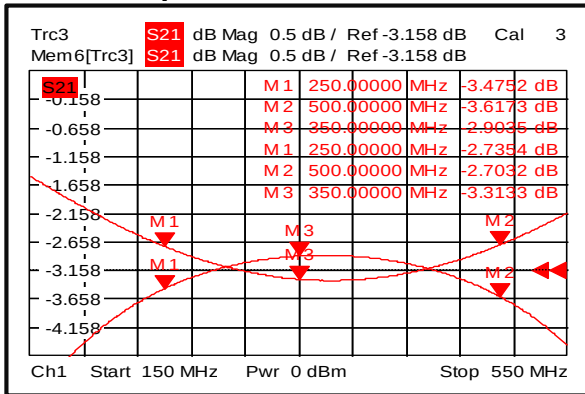
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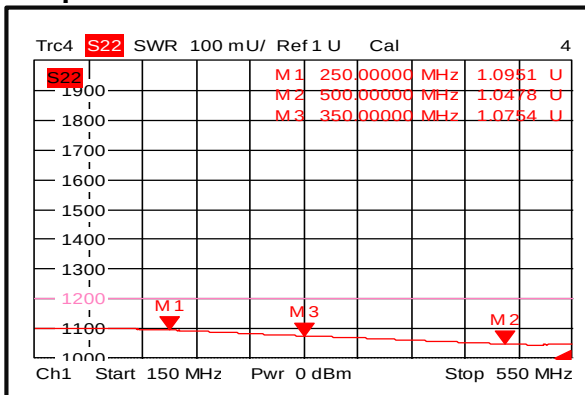
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Typical Performance Plots

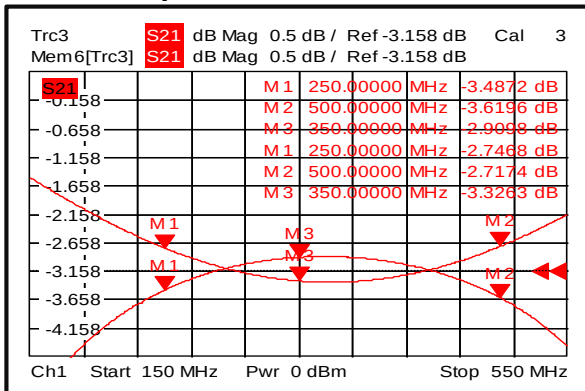
Loss & Amplitude Imbalance



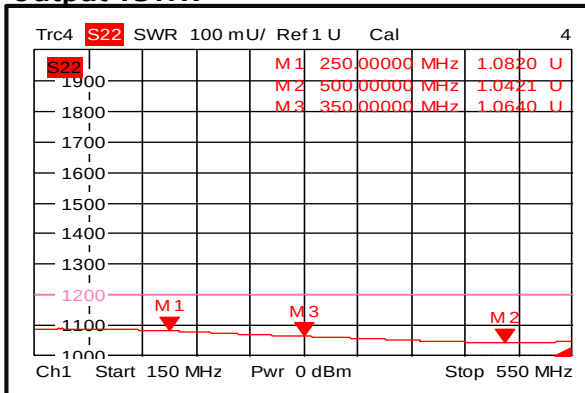
Output VSWR



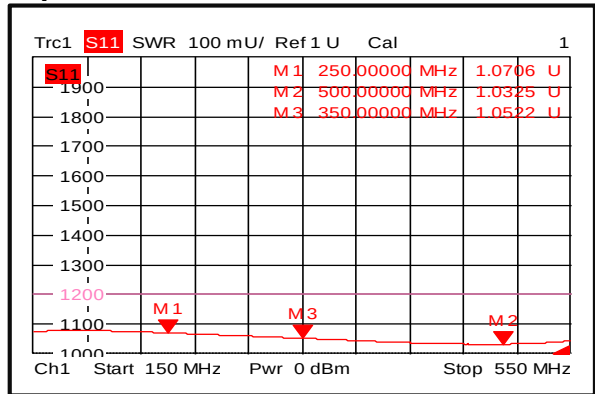
Loss & Amplitude Imbalance



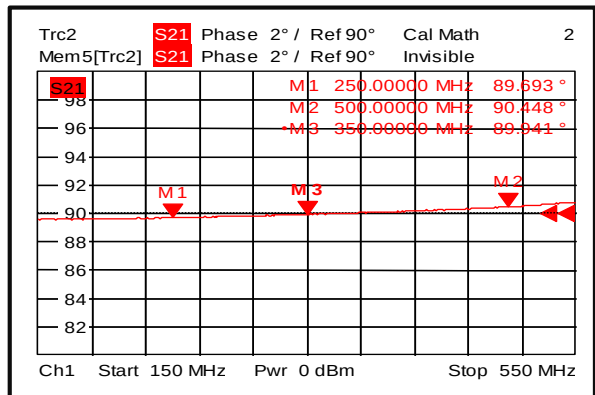
Output VSWR



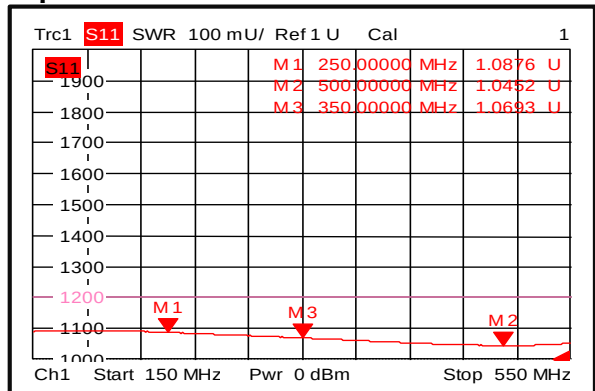
Input VSWR



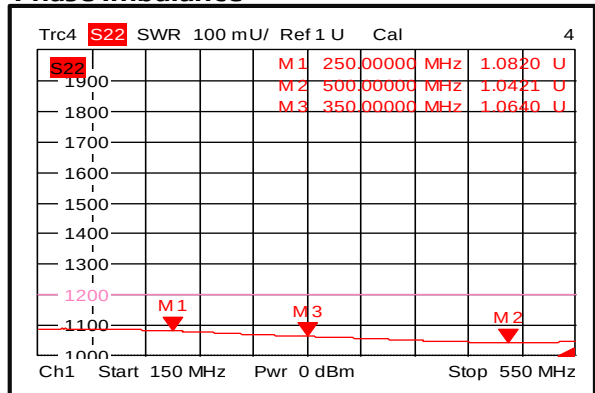
Phase Imbalance



Input VSWR



Phase Imbalance



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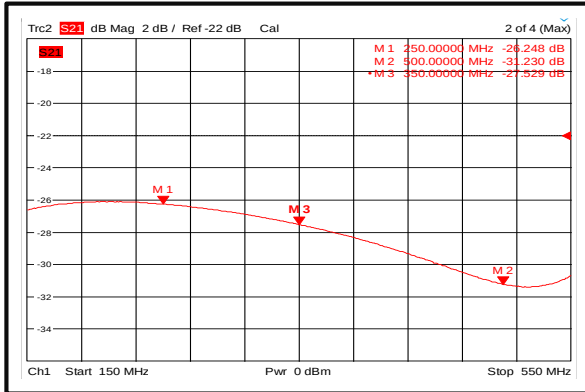


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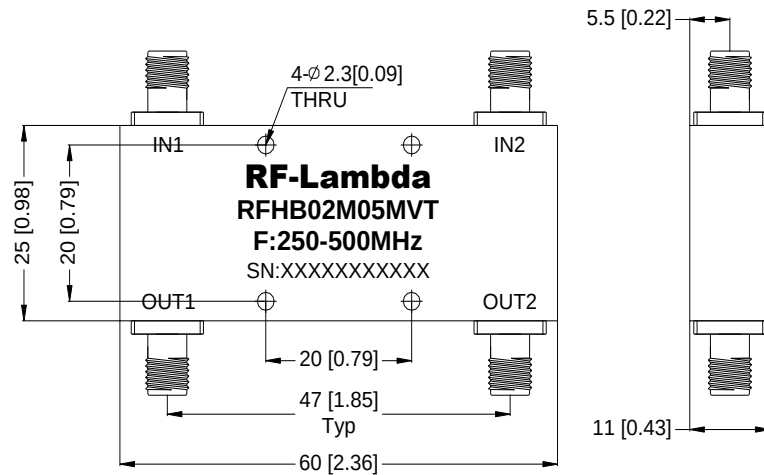
Isolation



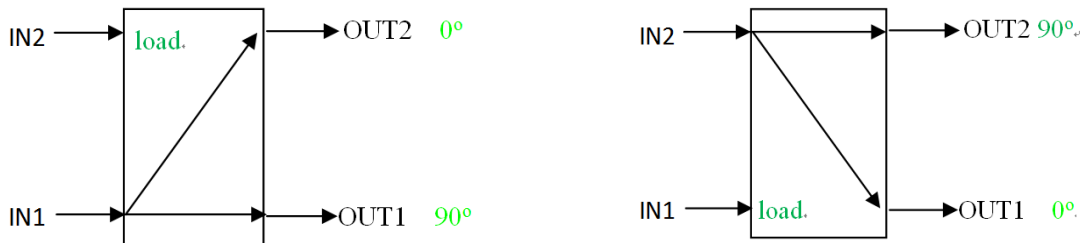
Outline Drawing:

All Dimensions in mm [inches]

Tolerances ± 0.25 [0.01]



Schematic:



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