Coaxial 20W 90° Hybrid Coupler
2 - 40GHz

Features

- High power handling up to 20W
- High isolation within operational band
- Low Insertion Loss
- Stable performance over temperature
- High peak to average handling capability

Typical Applications

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

Electrical Specifications, T_A=25 ℃

Parameters		Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range		2		8	8		40	GHz
Nominal Coupling			3			3		dB
Insertion Loss				1.0			2.5	dB
Isolation		15	18		10	12		dB
Amplitude Imbalance			±1.5	±1.8		±0.8	±1.2	dB
Phase Imbalance				±8			±10	deg
VSWR			1.4	1.6		1.6	1.8	: 1
Power Rating	Average	20						W
	Peak	200						W
Impedance		50						Ohms
Weight		1.2 Max.						ounces
Input / Output Connectors		2.4mm - Female						
Material		Aluminum						
Finish		Blue Paint						

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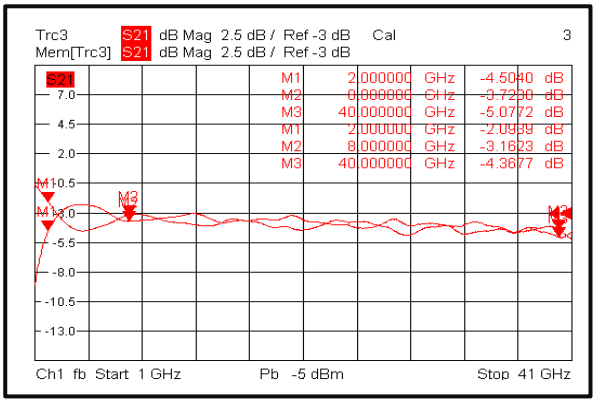
Environmental Specifications and Test Standards

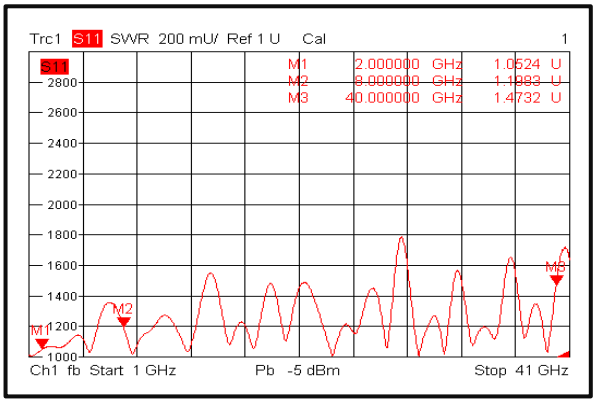
Parameter	Description
Operational Temperature	-40℃~+85℃ (Case Temperature)
Storage Temperature	-50℃~+105℃
Thermal Shock	-40℃ → +85℃ (5 Cycles / 10 hours)
Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High Temperature Burn In	Temperature +85℃ for 72 Hours
Shock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

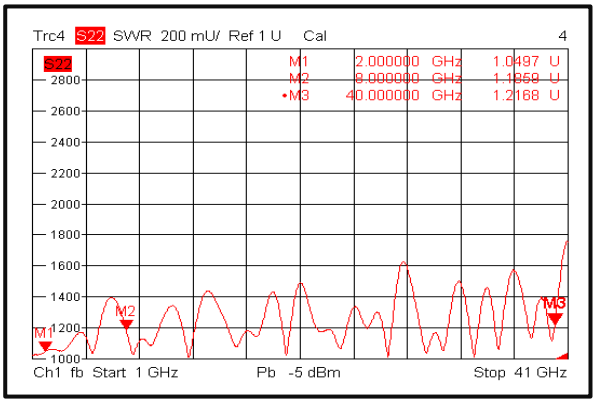
Loss & Amplitude Imbalance



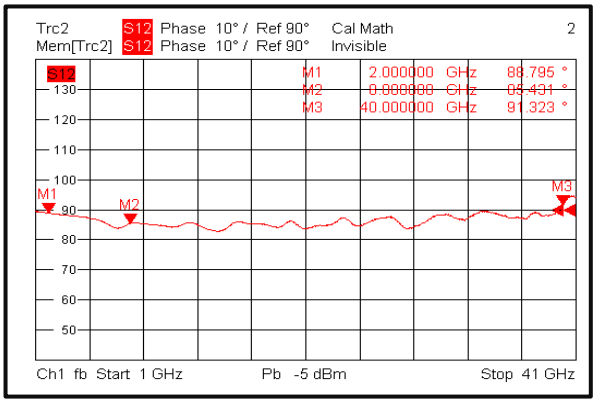
Input VSWR



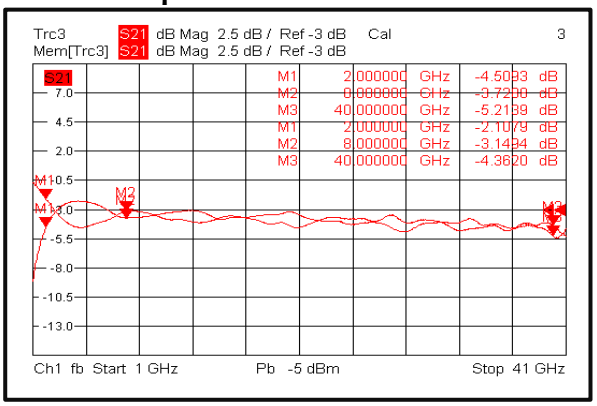
Output VSWR



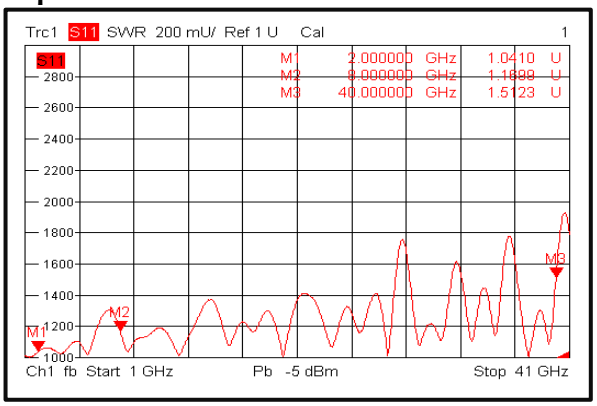
Phase Imbalance



Loss & Amplitude Imbalance



Input VSWR



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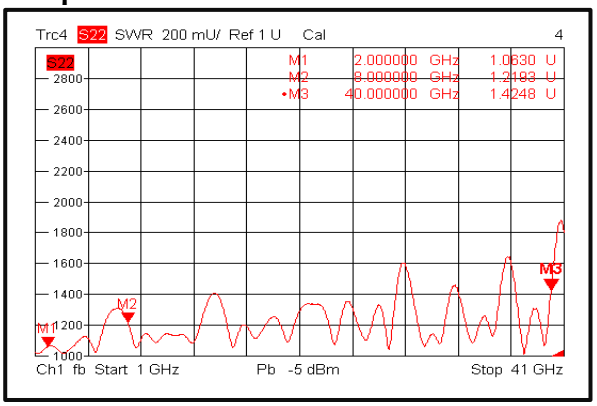
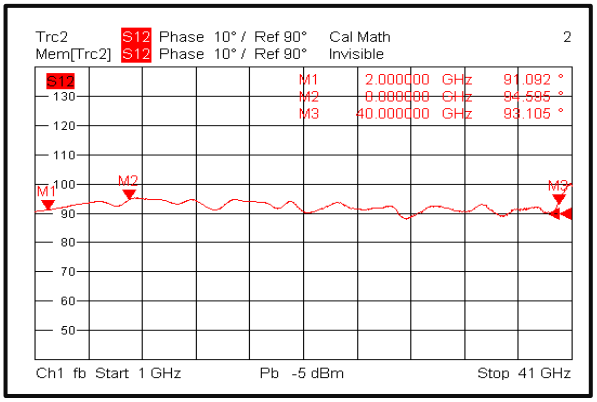
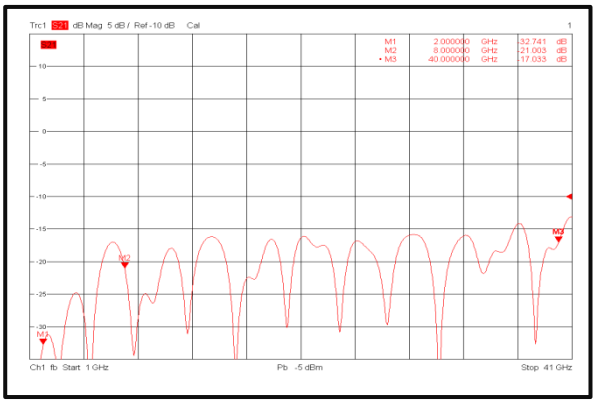
Output VSWR



Phase Imbalance



Isolation



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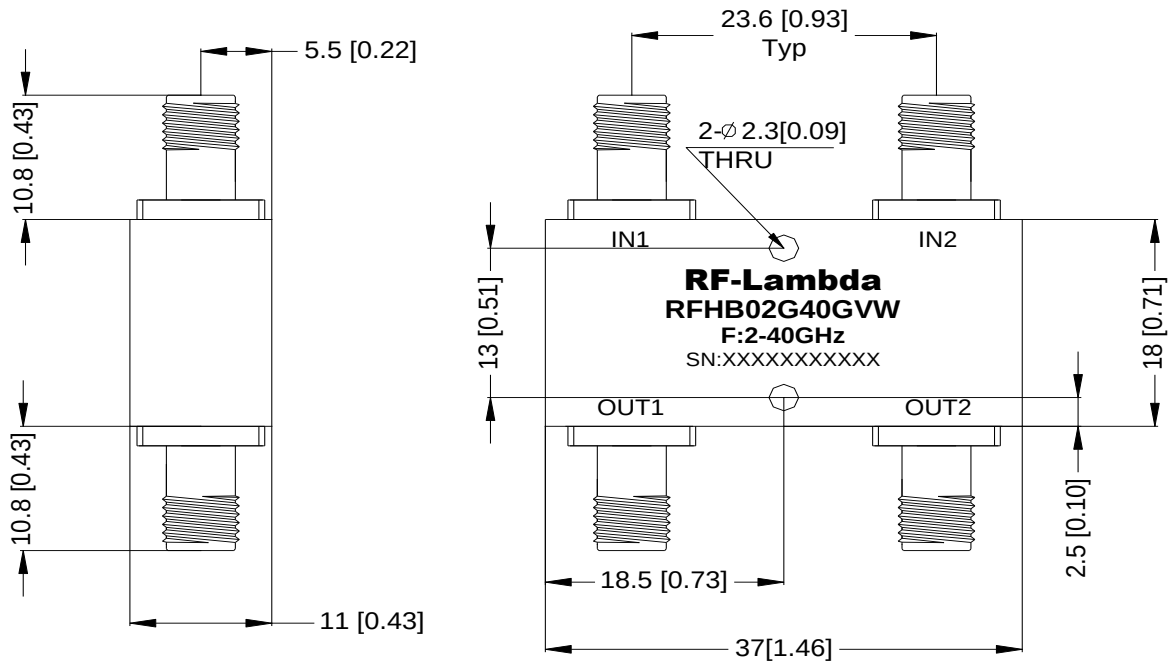
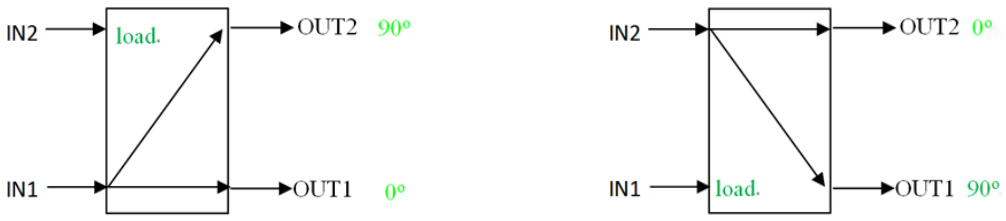
Outline Drawing:

All Dimensions in mm [inches]
Outline Tolerances ±0.5 [0.02]
Mounting Holes Tolerances ±0.2 [0.008]



Schematic:



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