

## Coaxial 20W 10dB Directional Coupler 1 - 67GHz



### Features

- High power handling up to 20W
- Ultra Wide band operation
- Functional Bandwidth : 0.5GHz to 70GHz
- Low Insertion Loss
- Stable performance over temperature

### Typical Applications

- Aerospace and Military Applications
- Wireless Infrastructure
- Test and Measurement

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

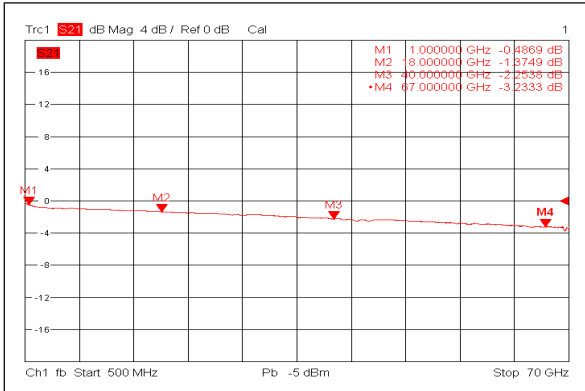
Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	1		18	18		40	40		67	GHz
Nominal Coupling	9	10.5	13	10	11.5	12.5	10	12.5	13.5	dB
Frequency Sensitivity		$\pm 1.0$	$\pm 1.5$		$\pm 0.5$	$\pm 0.7$		$\pm 1.0$	$\pm 1.5$	dB
Directivity	15	16		10	12		8	10		dB
Insertion Loss (Excl. Coupling)			1.3			2.5			3.5	dB
Insertion Loss (true)		1.5	1.8		2.2	2.8		3.5	4.0	dB
VSWR Primary		1.3	1.5		1.4	1.6		1.5	1.7	: 1
VSWR Secondary		1.3	1.5		1.4	1.6		1.5	1.7	: 1
Power Rating	Average	20								W
	Peak	300								W
Impedance	50								Ohms	
Weight	2.2 Max.								Ounces	
Input / Output Connectors	1.85mm - Female									
Material	Aluminum									
Finish	Blue Paint									

**Environmental Specifications and Test Standards**

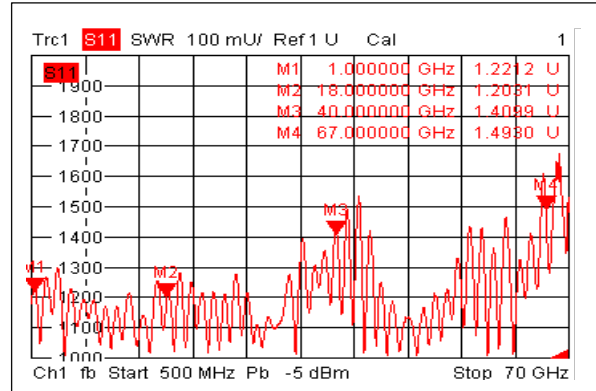
Parameter	Description
Operational Temperature	-40°C~+85°C (Case Temperature)
Storage Temperature	-50°C~+105°C
Thermal Shock	-40°C → +85°C (5 Cycles / 10 hours)
Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High Temperature Burn In	Temperature +85°C for 72 Hours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

**Typical Performance Plots**

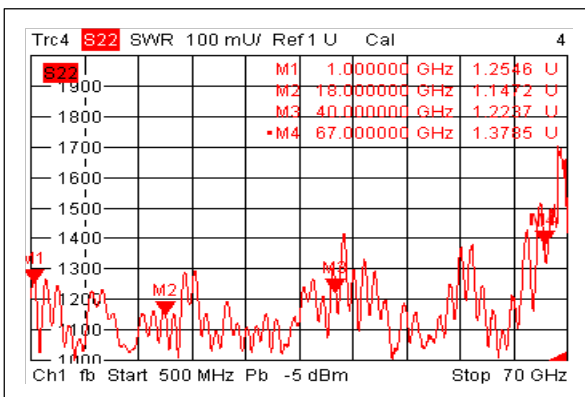
**Insertion Loss**



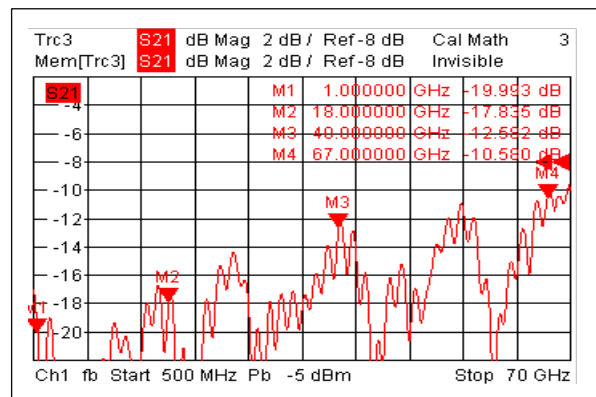
**Primary VSWR**



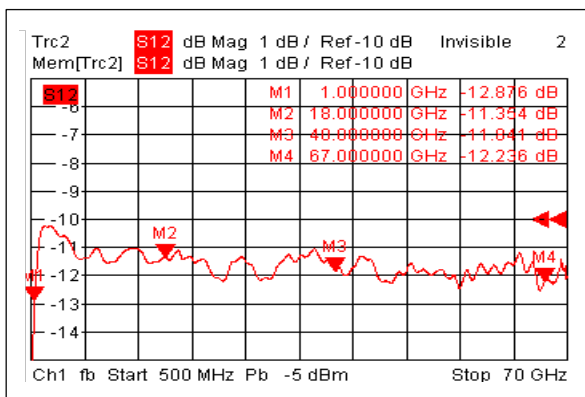
**Secondary VSWR**



**Directivity**



**Nominal Coupling**



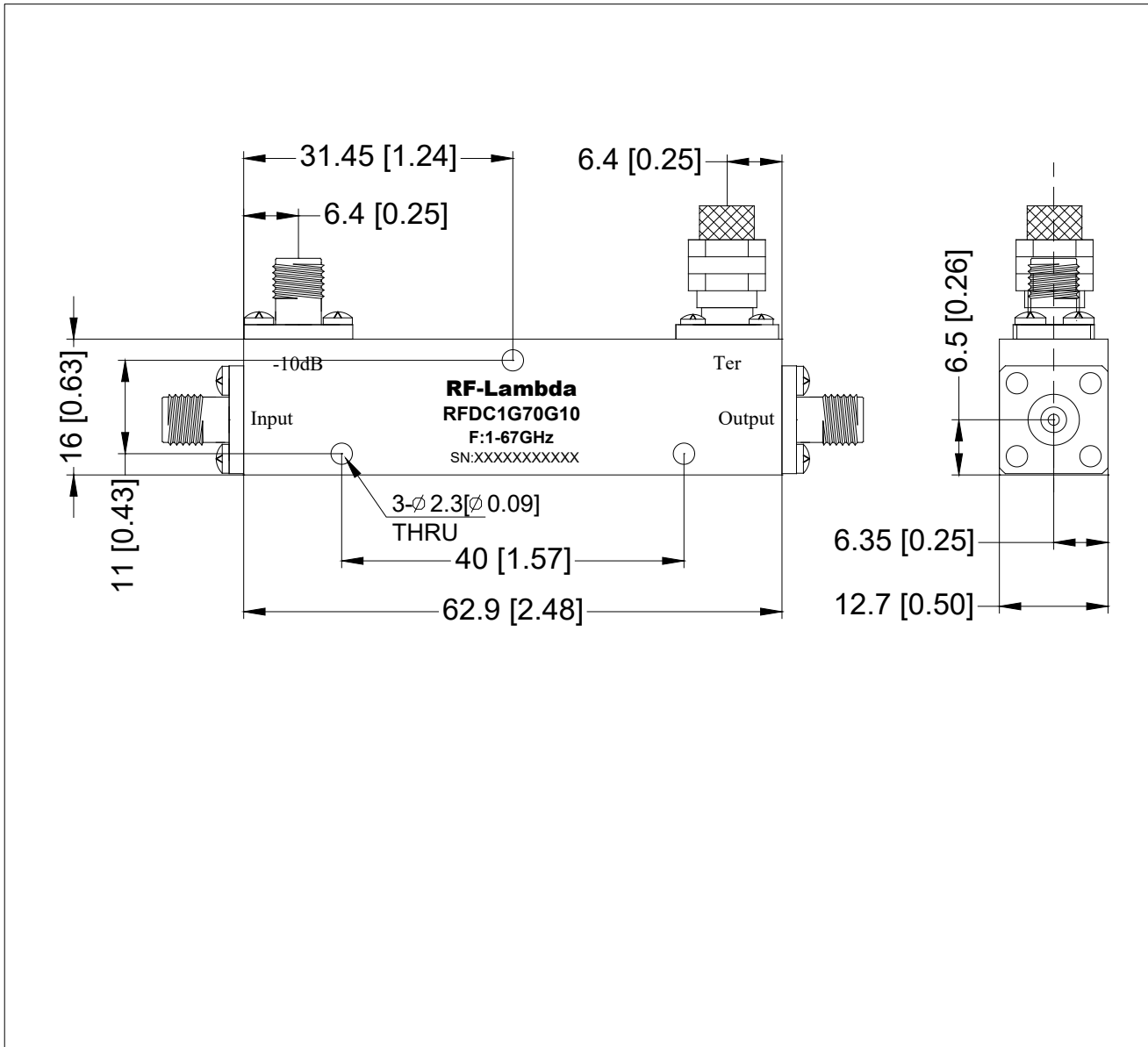
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**Outline Drawing:**

All Dimensions in mm [inches]

Outline Tolerances  $\pm 0.5$  [0.02]

Mounting Holes Tolerances  $\pm 0.2$  [0.008]



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