

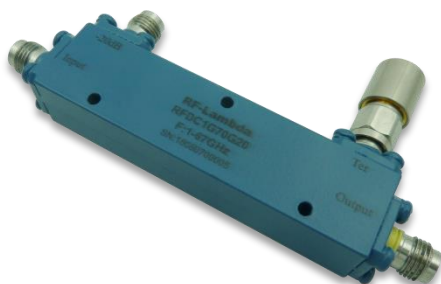


# RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

## RFDC1G70G20

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



#### Features

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

#### Typical Applications

- Aerospace and military applications
- LMDS multi-carrier operation

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

Parameter		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range		1		18	18		40	40		67	GHz
Nominal Coupling		19	20.5	23.5	19	21	22	19	22	23	dB
Frequency Sensitivity			$\pm 1.0$			$\pm 0.7$			$\pm 1.0$		dB
Directivity		15	16		10	12		8	10		dB
Insertion Loss (Excl. Coupling)				1.5			2.0			2.5	dB
Insertion Loss (true)			1.2	2.0		2.0	2.5		3.1	3.5	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		2.12									Ounces
Input / Output Connectors		1.85mm - Female									
Material		Aluminum									
Finish		Blue Paint									

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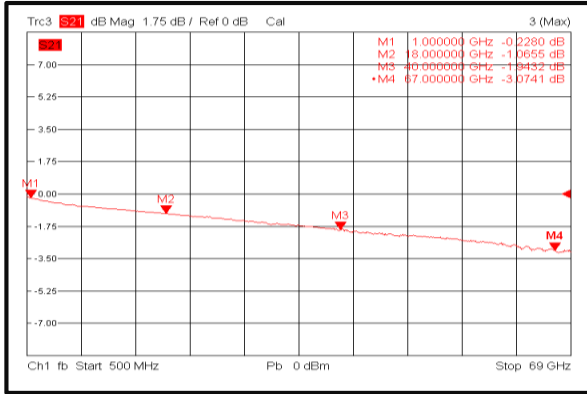
*Environmental Specifications and Test Standards*

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	MIL-STD-883	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)

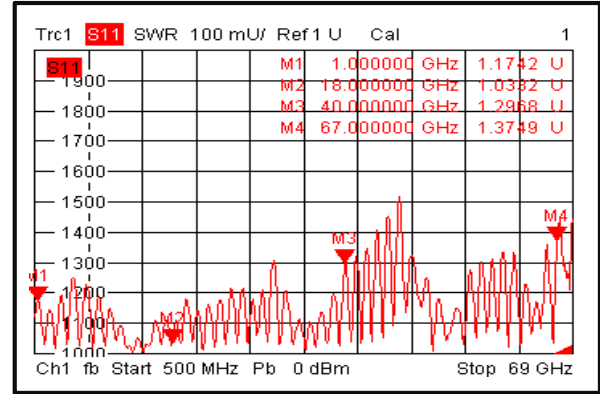


### Typical Performance Plots

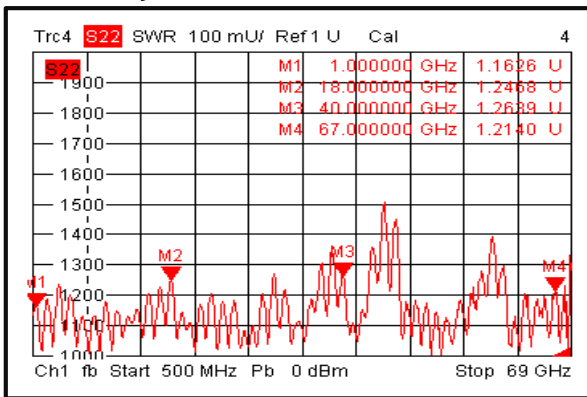
#### Insertion Loss



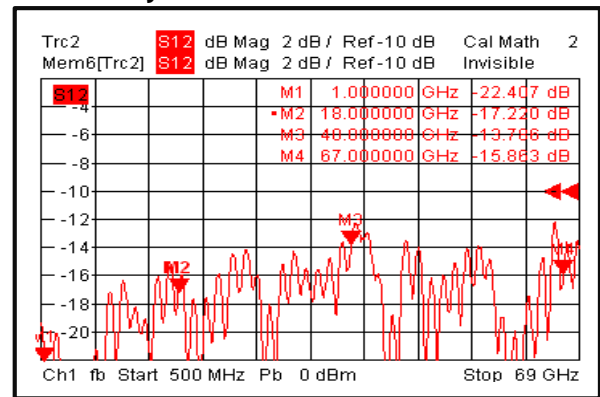
#### Primary VSWR



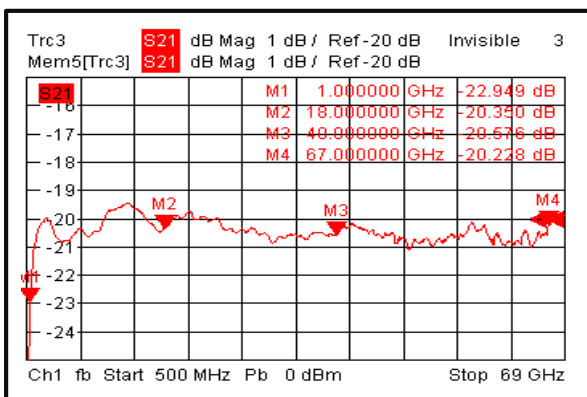
#### Secondary VSWR



#### Directivity



#### Nominal Coupling





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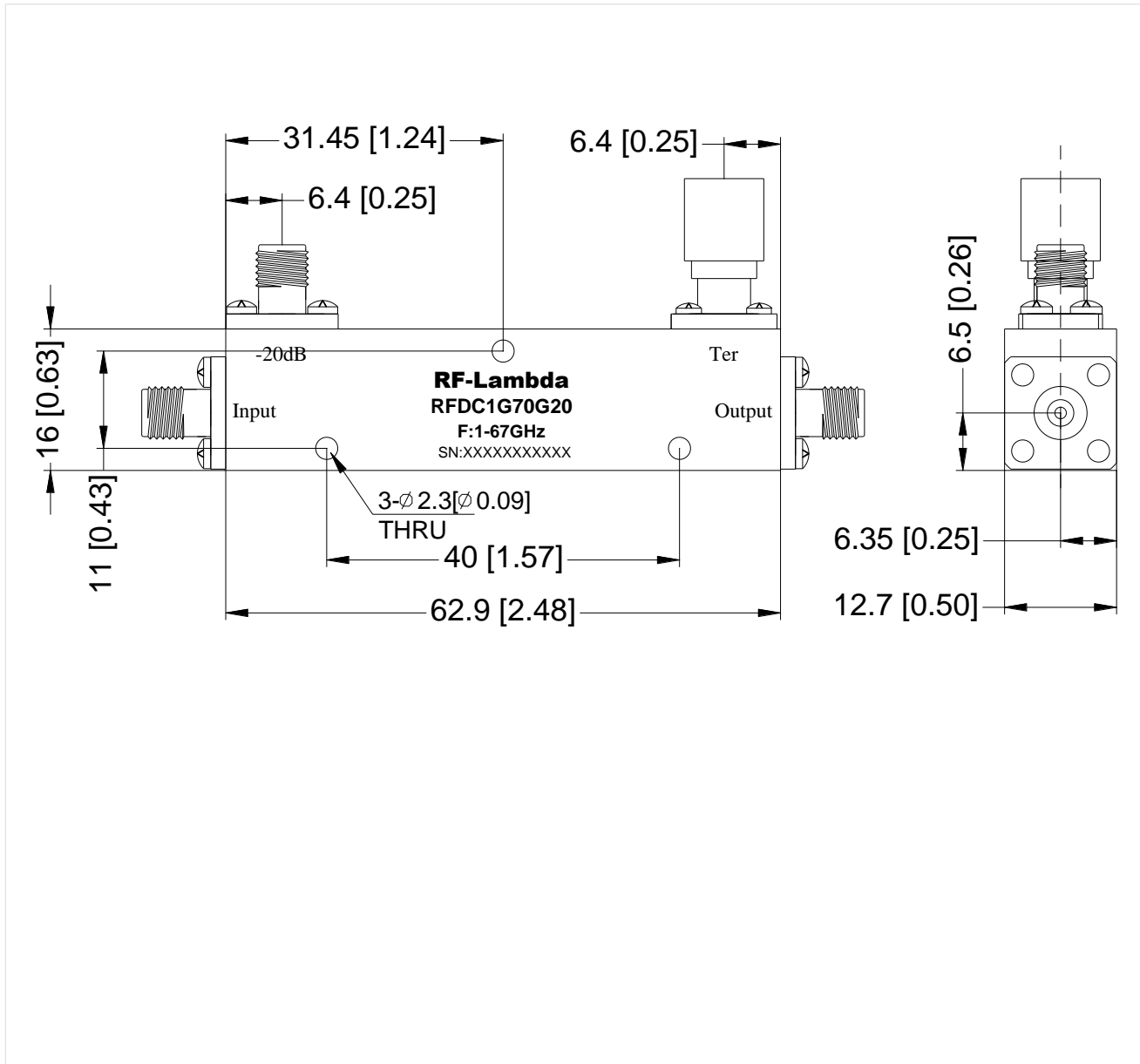
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## RFDC1G70G20

### Outline Drawing:

All Dimensions in mm [inches]

Tolerance  $\pm 0.25$  [0.01]



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### Important Notice

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