



Coaxial 50W 6dB Directional Coupler 4 - 18GHz



Features

- High power handling up to 50 W
- Wide band operation
- High directivity within operational band
- Low Insertion Loss
- High peak to average handling capability
- 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.	Units
Frequency Range	4		8	8		18	GHz
Nominal Coupling	5.5	6	7	5.5	6	7	dB
Frequency Sensitivity		± 0.5	± 0.7		± 0.5	± 0.7	dB
Directivity	15	17		12	14		dB
Insertion Loss (Excl Coupling)			0.5			0.5	dB
Insertion Loss (true)		1.5	1.8		1.7	1.9	dB
VSWR Primary		1.3	1.4		1.4	1.5	:1
VSWR Secondary		1.3	1.4		1.4	1.5	:1
Power Rating	Average	50					W
	Peak	300					W
Impedance	50					Ohms	
Weight	1.06					Ounces	
Input / Output Connectors	SMA-Female						
Material	Aluminum						
Finish	Blue Paint						

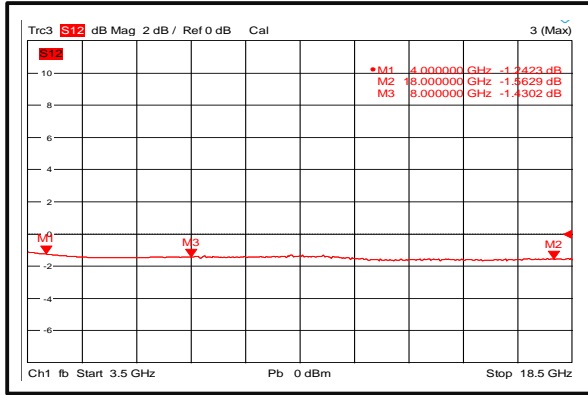
Environmental Specifications and Test Standards

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		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)

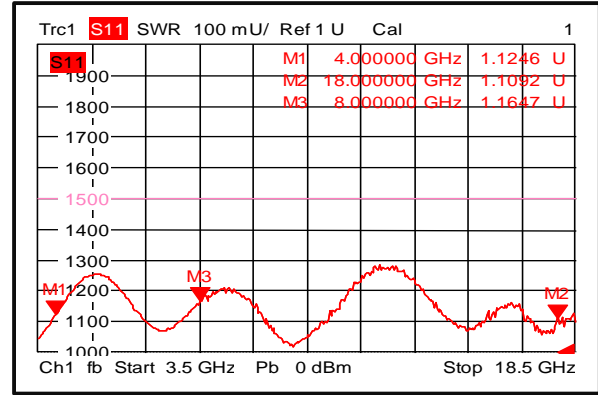


Typical Performance Plots

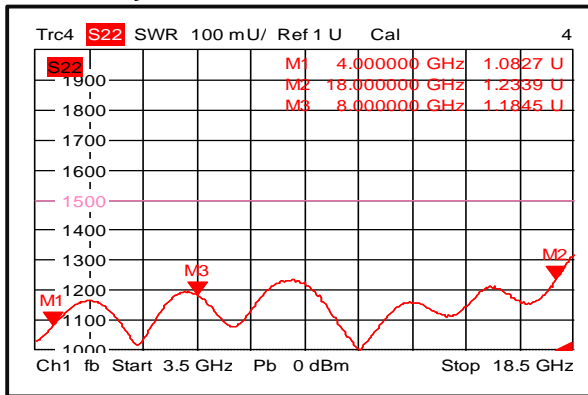
Insertion Loss



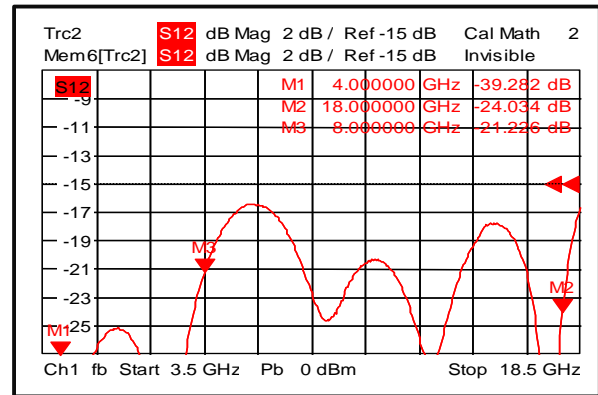
Primary VSWR



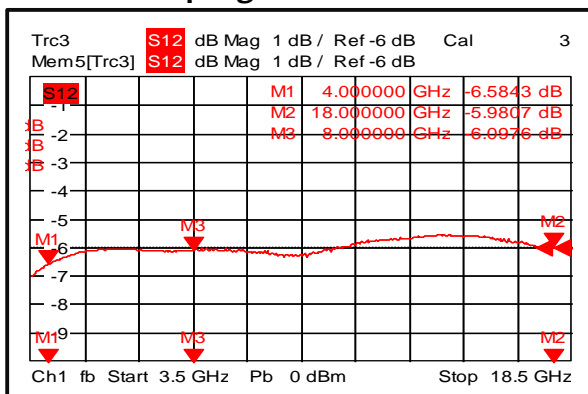
Secondary VSWR



Directivity



Nominal Coupling

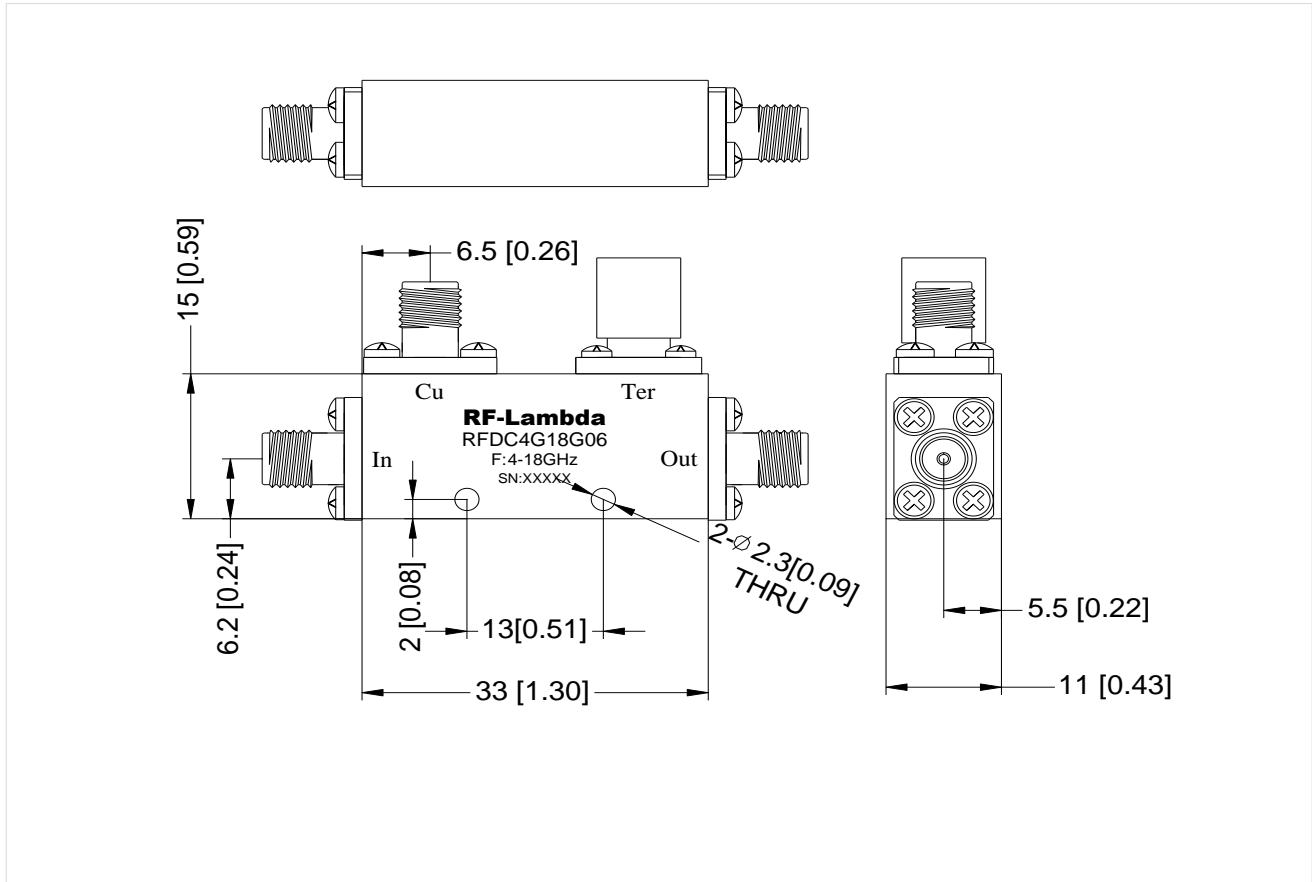




Outline Drawing:

All Dimensions in mm [inches]

Tolerance ± 0.2 [0.008]



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