



RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFDC8G40G15

Coaxial 30W 15 dB Directional Coupler 8 - 40GHz



Features

- High power handling up to 30W
- Wide band operation
- High directivity within operational band
- Low Insertion Loss
- High peak to average handling capability

Typical Applications

- Stable performance over temperature
- Aerospace and military applications
- LMDS multi-carrier operation

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

Parameters		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range		8		20	20		40	40		43.5	GHz
Nominal Coupling		14	15	16	14	15	16		15		dB
Frequency Sensitivity			± 0.4	± 0.7		± 0.3	± 0.7		± 0.3		dB
Directivity		14	18		10	14			12		dB
Insertion Loss (Excl Coupling)				0.6			1.0		1.2		dB
Insertion Loss (True)			0.7	1.0		1.1	1.5		1.3		dB
VSWR Primary			1.3	1.5		1.4	1.6		1.5		: 1
VSWR Secondary			1.3	1.5		1.4	1.6		1.5		: 1
Power Rating	Average	30									W
	Peak	500									W
Impedance		50									Ohms
Weight		0.71									ounces
Input / Output Connectors		2.92mm-Female									
Material		Aluminum									
Finish		Blue Paint									

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Environmental Specifications and Test Standards

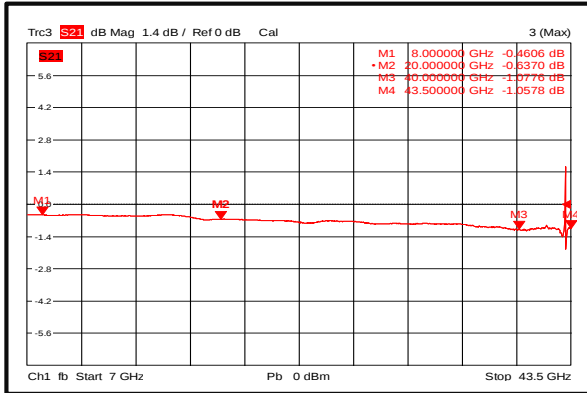
Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45°C~+85°C
Storage Temperature		-55°C~+125°C
Thermal Shock		1 Hour@ -45°C → 1 Hour @ +85°C (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & Temperature Burn In		Temperature +85°C for 72 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		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)

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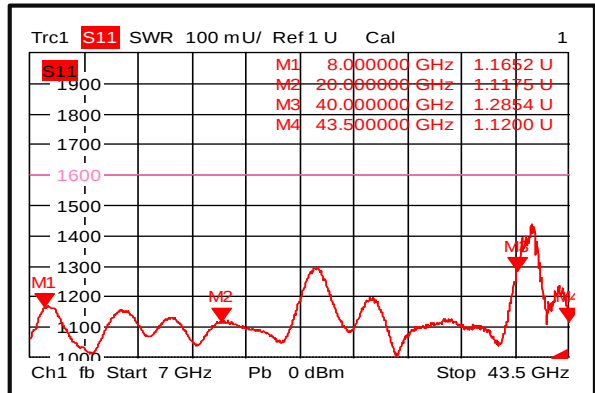


Typical Performance Plots

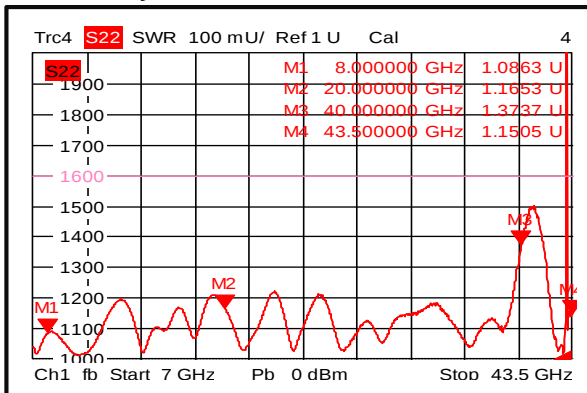
Insertion Loss



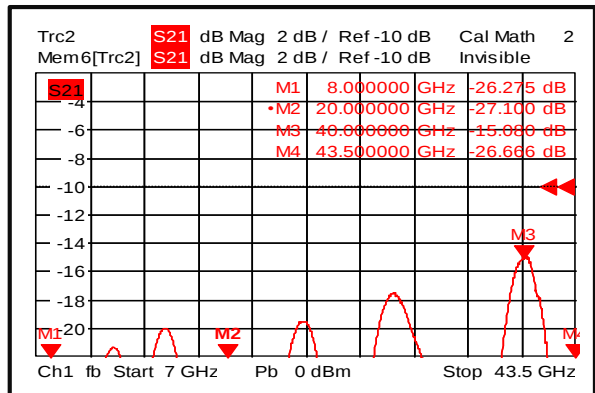
Primary VSWR



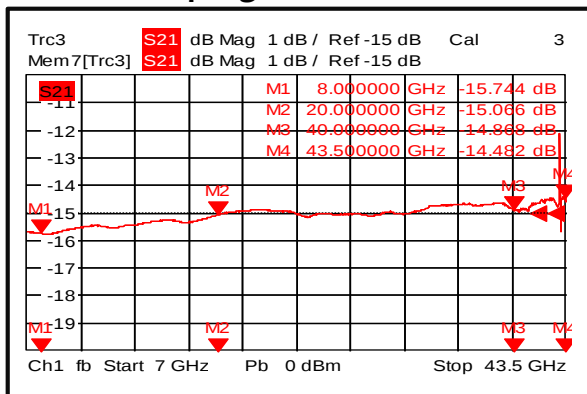
Secondary VSWR



Directivity



Nominal Coupling





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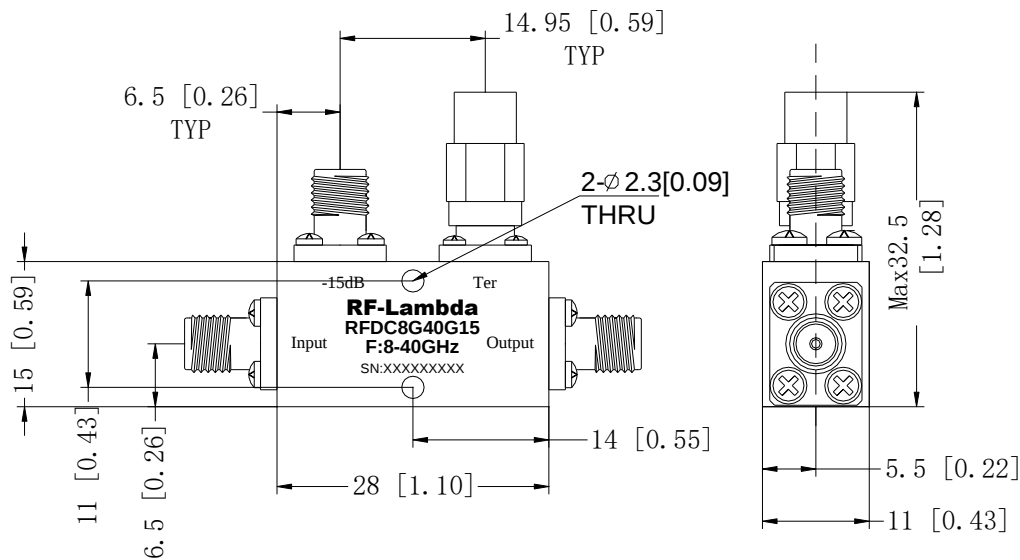
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Outline Drawing:

All Dimensions in mm [inches]

Tolerance ± 0.2 [0.08]



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