

Coaxial 250W 35dB Dual Directional Coupler 0.9GHz-9GHz



Product Description

RFDDC9M9G35 is a coaxial dual directional coupler with a frequency range of 0.9 to 9GHz.

The power of this directional coupler is 250W. The Insertion Loss is 0.5dB with a typical directivity of 17dB.

The working temperature of this product is between - 40°C and + 85°C.

Features

- High power handling up to 250W
- Ultra Wide band operation
- High directivity within operational band
- Low Insertion Loss

Typical Applications

- Wireless Infrastructure
- Military and Aerospace Applications
- Test Instrumentation
- Radar Systems
- 5G Wireless Communications
- Microwave Radio Systems
- TR Modules
- Research and Development
- Cellular Base Stations

Electrical Specifications, TA = +25°C

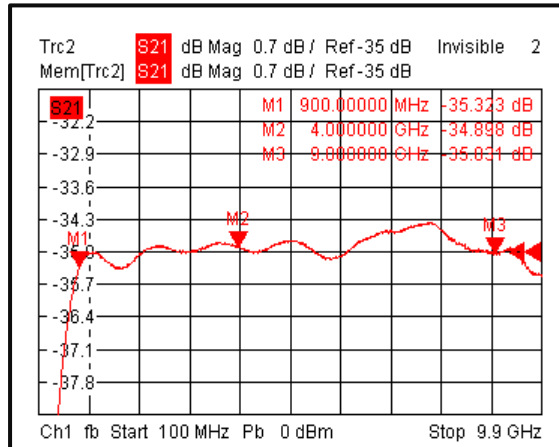
Parameter		Min	Typ	Max	Min	Typ	Max	Units
Frequency Range		0.9		4	4		9	GHz
Nominal Coupling		34	35	36	34	35	36	dB
Frequency Sensitivity			±0.5	±0.7		±0.5	±0.7	dB
Directivity		15	17		11	13		dB
Insertion Loss(Excl Coupling)				0.3			0.5	dB
Insertion Loss (True)			0.2	0.3		0.35	0.5	dB
VSWR Primary			1.3	1.4		1.25	1.4	: 1
VSWR Secondary			1.15	1.35		1.2	1.35	: 1
Power Rating	Average	250						W
	Peak	3 (10% Duty Cycle, 10us Pulse Width)						KW
Weight		0.65 Max.						lbs
Impedance		50						Ω
Input / Output Connectors		N-Female(Input) – N-Female(Output)						
Package	Epoxy Sealed (Standard)							
	Hermetically Sealed (Optional)							

Environmental Specifications and Test Standards

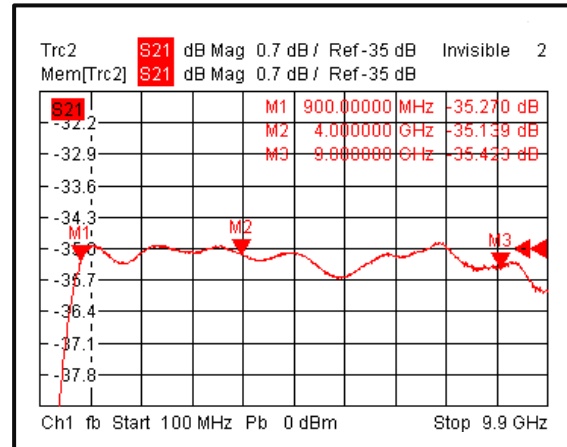
Parameter	Description
Operational Temperature	-40°C to +85°C (Case Temperature)
Storage Temperature	-50°C to +105°C
Thermal Shock	-40°C → +85°C (5 Cycles / 10 hours)
**Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High Temperature Burn In	Temperature +85°C for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

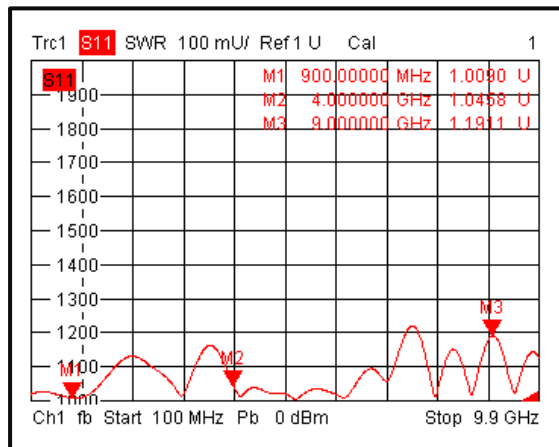
Nominal Coupling 1



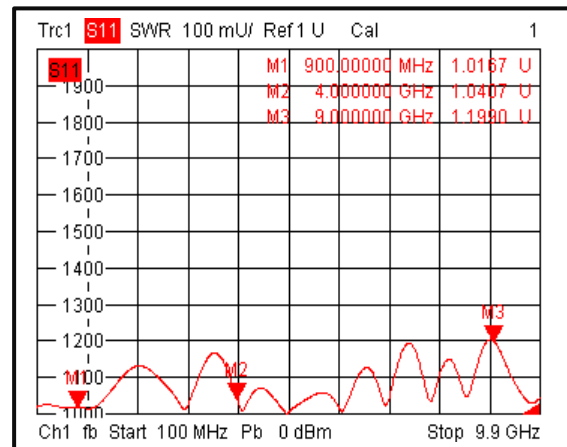
Nominal Coupling 2



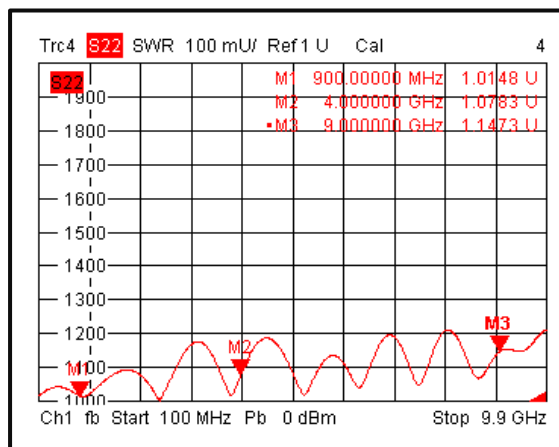
Primary VSWR 1



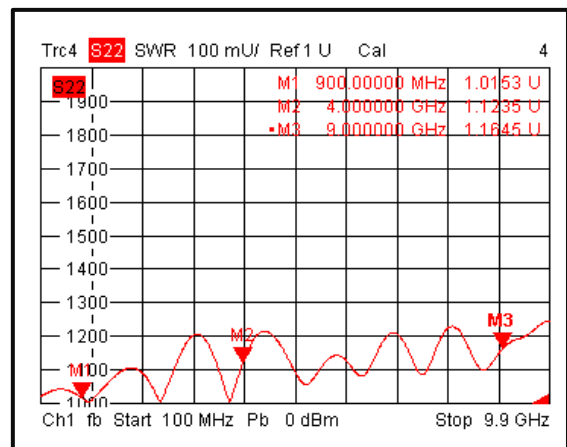
Primary VSWR 2



Secondary VSWR 1

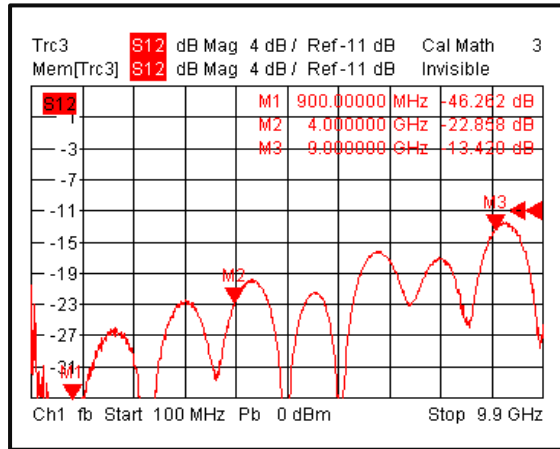


Secondary VSWR 2

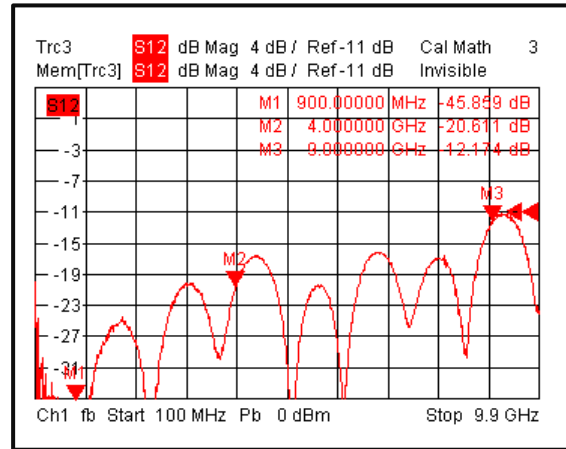


Typical Performance Plots

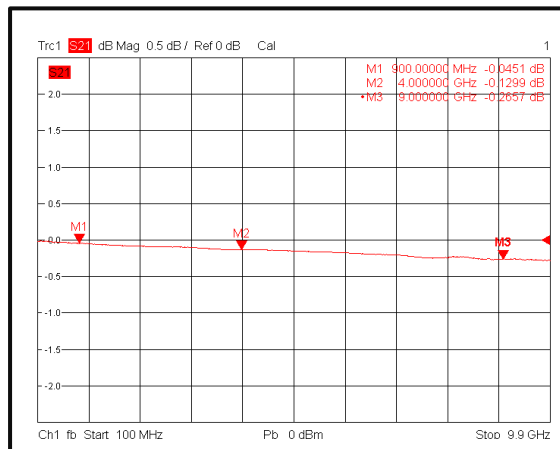
Directivity 1



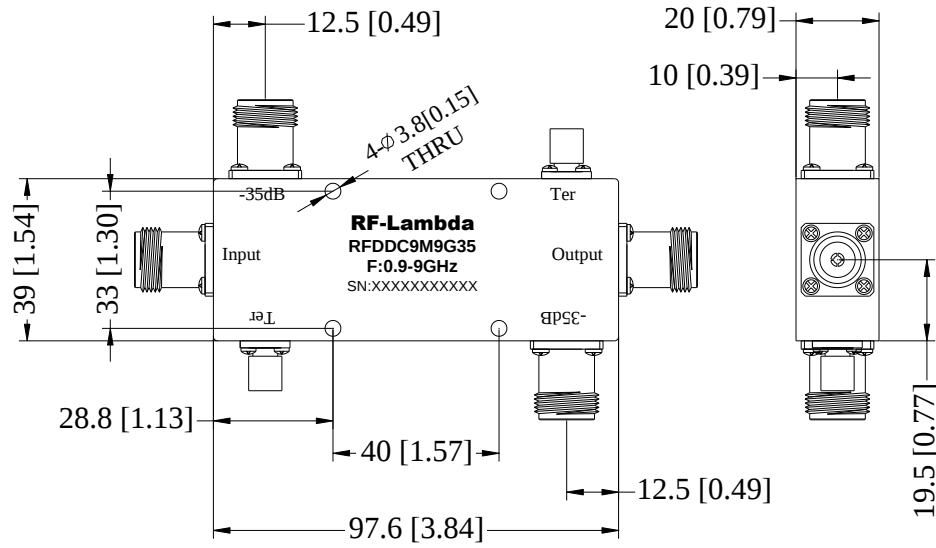
Directivity 2



Insertion Loss

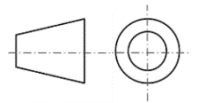


Outline Drawing



Notes:

1. Package Material: Aluminum
2. Finish: Blue Paint
3. All dimensions are in millimeters [inches].
4. Outline Tolerances ± 0.25 [0.01], Mounting Hole Tolerances ± 0.2 [0.008] unless otherwise specified.
5. Standard torque wrench must be used to secure RF connectors.



Additional Information

Documentation

Connector Torque Specifications

https://www.rflambda.com/pdf/Torque_Specifications.pdf

Random Vibration Test Standard

https://www.rflambda.com/pdf/rflambda_random_vibration_MIL-STD-202G.pdf

Webpage

Ordering Information

Part Number	Modification	Description
RFDDC9M9G35	Connectors N-Female	0.9GHz-9GHz Dual Directional Coupler

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