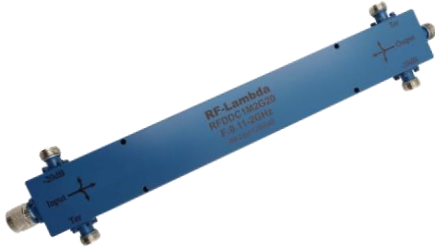


Coaxial 500W 20dB Dual Directional Coupler 0.11GHz-2GHz



Product Description

RFDDC1M2G20 is a coaxial dual directional coupler with a frequency range of 0.11 to 2GHz.

The power handling for this dual directional coupler is 500W. The Insertion Loss is 0.8dB with a typical directivity of 22dB.

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

Features

- Power handling up to 500W
- 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	0.11		0.4	0.4		2	GHz
Nominal Coupling	20	22	23.5	18.5	20	21.5	dB
Frequency Sensitivity		±0.7	±1		±0.7	±1	dB
Directivity	20	22		20	22		dB
Insertion Loss (Excl. Coupling)			0.5			0.8	dB
Insertion Loss (true)		0.3	0.5		0.7	0.8	dB
VSWR Primary		1.15	1.25		1.15	1.25	: 1
VSWR Secondary		1.15	1.25		1.15	1.25	: 1
Power Rating	Average		500				W
	Peak		5 (1% Duty Cycle, 1 us Pulse Width)				KW
Weight			3 Max.				lbs
Impedance			50				Ω
Input / Output Connectors			N-Male(Input) – N-Female(Output)				
Package			Epoxy Sealed (Standard)				
			Hermetically Sealed (Optional)				

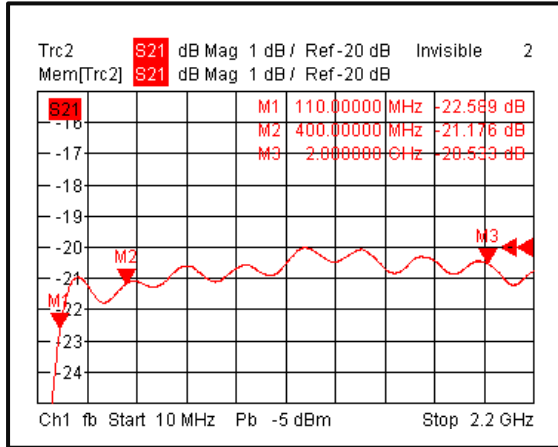
Environmental Specifications and Test Standards

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
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)

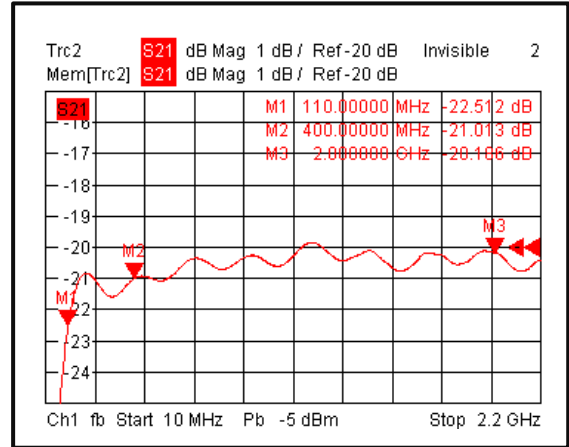
**For vibration testing details please see additional information section.

Typical Performance Plots

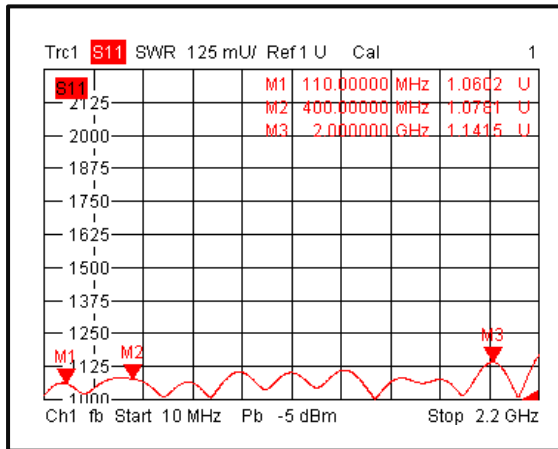
Nominal Coupling 1



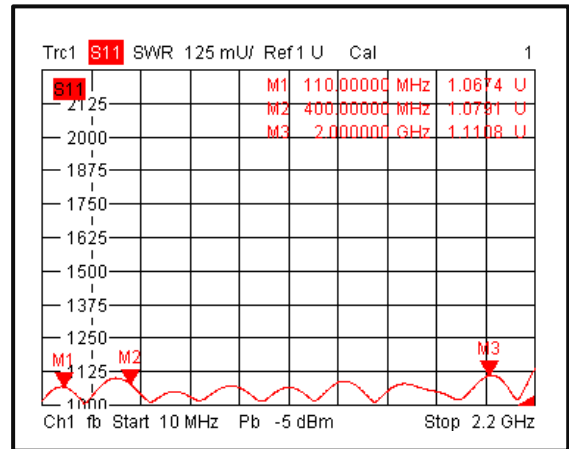
Nominal Coupling 2



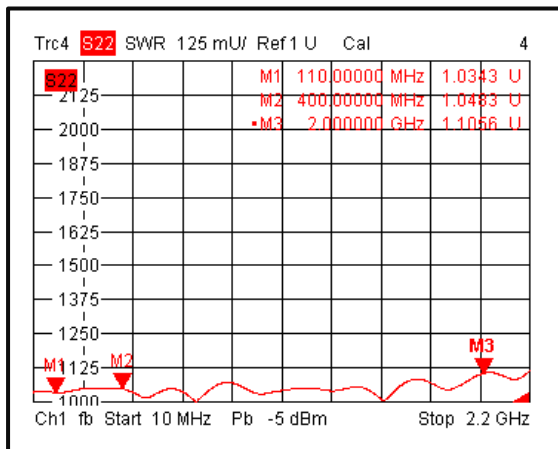
Primary VSWR 1



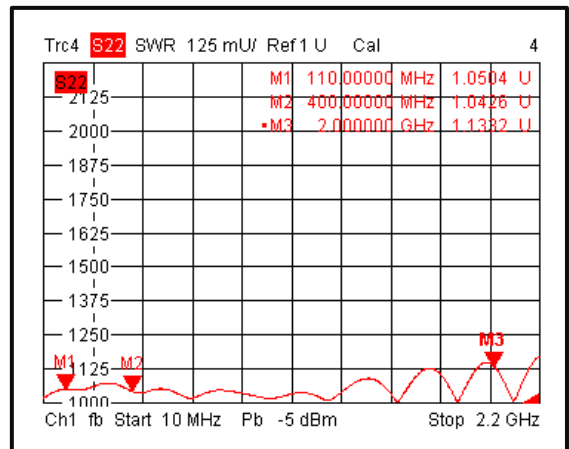
Primary VSWR 2



Secondary VSWR 1

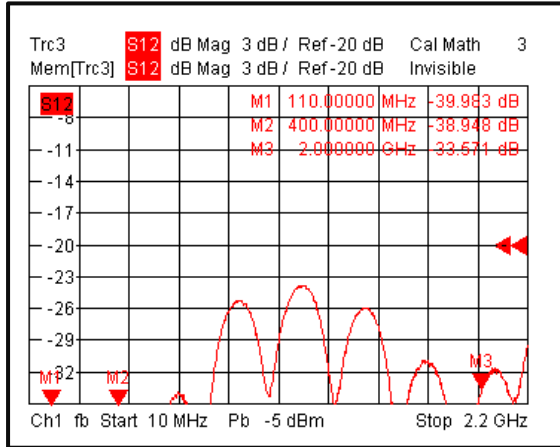


Secondary VSWR 2

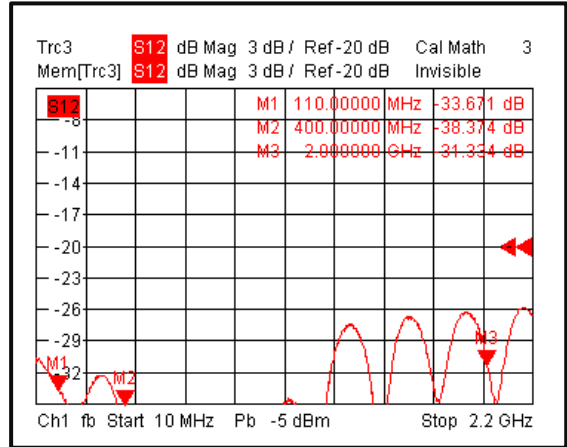


Typical Performance Plots

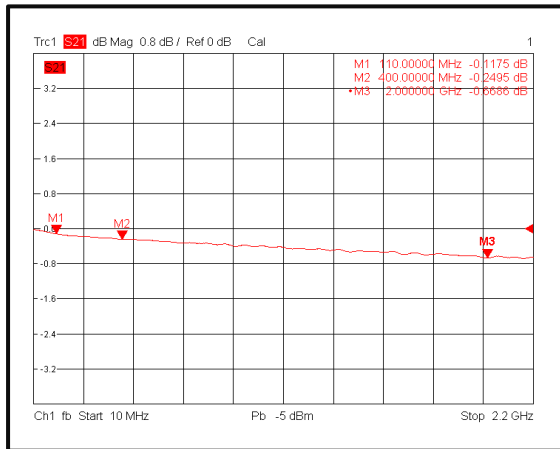
Directivity 1



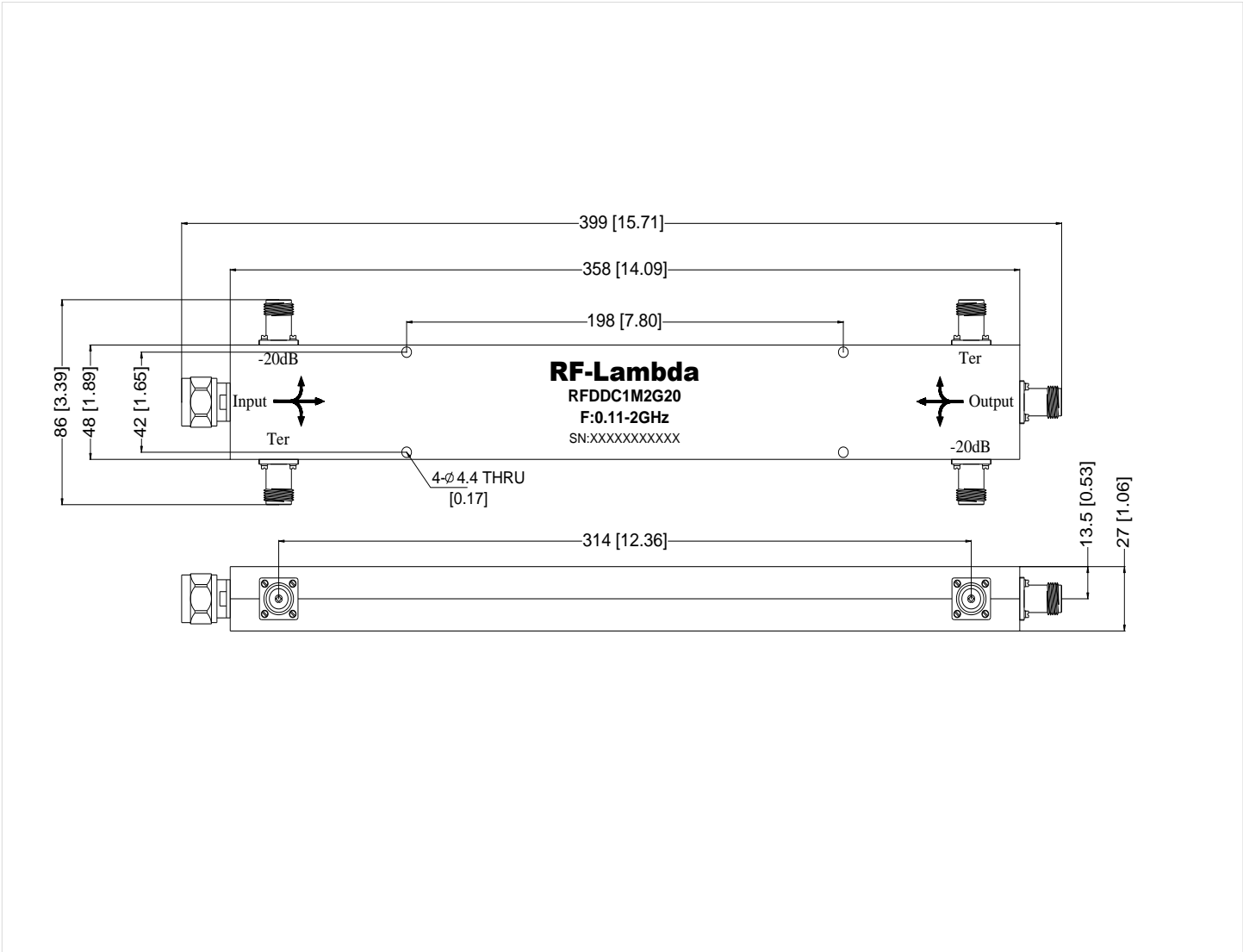
Directivity 2



Insertion Loss

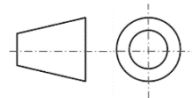


Outline Drawing



Notes:

1. Package Material: Aluminum
2. Finish: Blue Paint
3. All dimensions are in millimeters [inches].
4. Outline Tolerances ± 0.5 [0.02], Mounting Hole Tolerances ± 0.2 [0.008] unless otherwise specified.
5. Standard torque wrench must be used to secure RF connectors.



Additional Information

Documentation	Webpage
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

Ordering Information

Part Number	Modification	Description
RFDDC1M2G20	Standard	0.11GHz-2GHz Dual Directional Coupler

Important Notice

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