

Coaxial 20KW 50dB Dual Directional Coupler 15.8MHz-21.8MHz



Note: Photo is for illustration purposes only.
Please refer to outline drawing.

Product Description

RFDDC10M22M50 is a coaxial dual directional coupler with a frequency range of 15.8 to 21.8MHz.

The power handling of this dual directional coupler is 20KW. The insertion loss is 0.3dB with a typical directivity of 20dB.

The working temperature of this product is between - 40°C and + 70°C.

Features

- High power handling up to 20KW
- Wide band operation
- High Directivity within operational band
- Low Insertion Loss
- High peak to average handling capability
- Stable performance over temperature

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

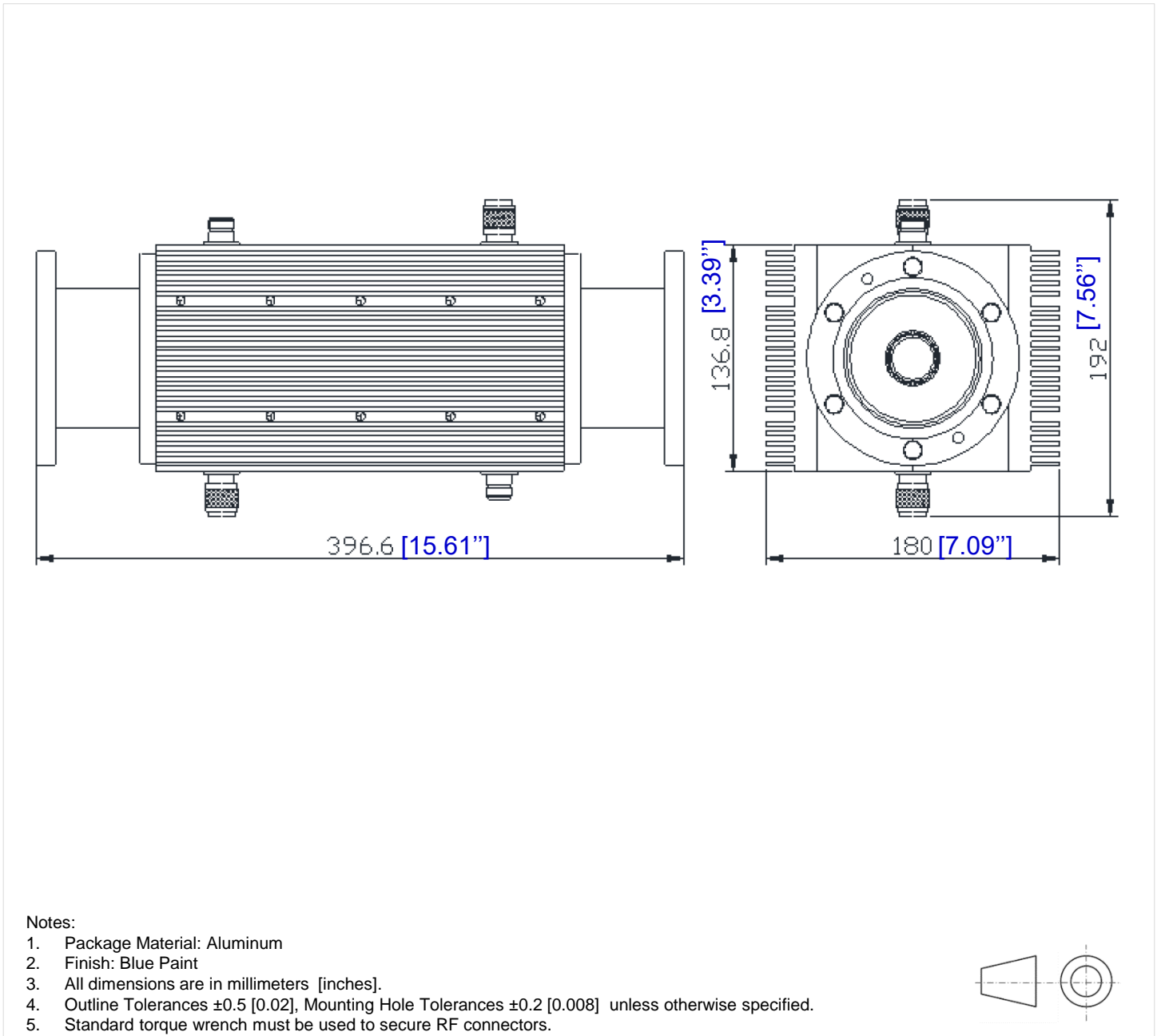
Parameter	Min	Typ	Max	Units
Frequency Range	15.8		21.8	MHz
Nominal Coupling		50		dB
Frequency Sensitivity		/	/	dB
Directivity	20			dB
Insertion Loss (Excl. Coupling)			0.3	dB
Insertion Loss (true)			0.3	dB
VSWR Primary			1.15	: 1
VSWR Secondary			1.15	: 1
Power Handling		20		KW
Weight		29.77 Max.		lbs
Impedance		50		Ω
Input / Output Connectors	3-1/8" EIA-Female (Input) – 3-1/8" EIA-Female (Output)			
Package	Epoxy Sealed (Standard)			
	Hermetically Sealed (Optional)			

Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-40°C to +70°C (Case Temperature)
Storage Temperature	-50°C to +85°C
Thermal Shock	-40°C → +70°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.

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
RFDDC10M22M50	Input connector 3-1/8" EIA-Female and Output connector 3-1/8" EIA-Female	15.8MHz-21.8MHz Dual Directional Coupler

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