

Coaxial Cavity Band Pass Filter 5.025GHz-5.175GHz



Product Description

RBPF5100M is a coaxial cavity band pass filter with a frequency range of 5.025 to 5.175GHz.

The peak power of this band pass filter is 1W. The insertion loss is 2.0dB@5.1GHz.

The working temperature of this product is between - 25°C and + 60°C.

Features

- High Rejection
- Low Insertion Loss
- Excellent Temperature Stability
- Miniaturization
- Filter Type: Cavity

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

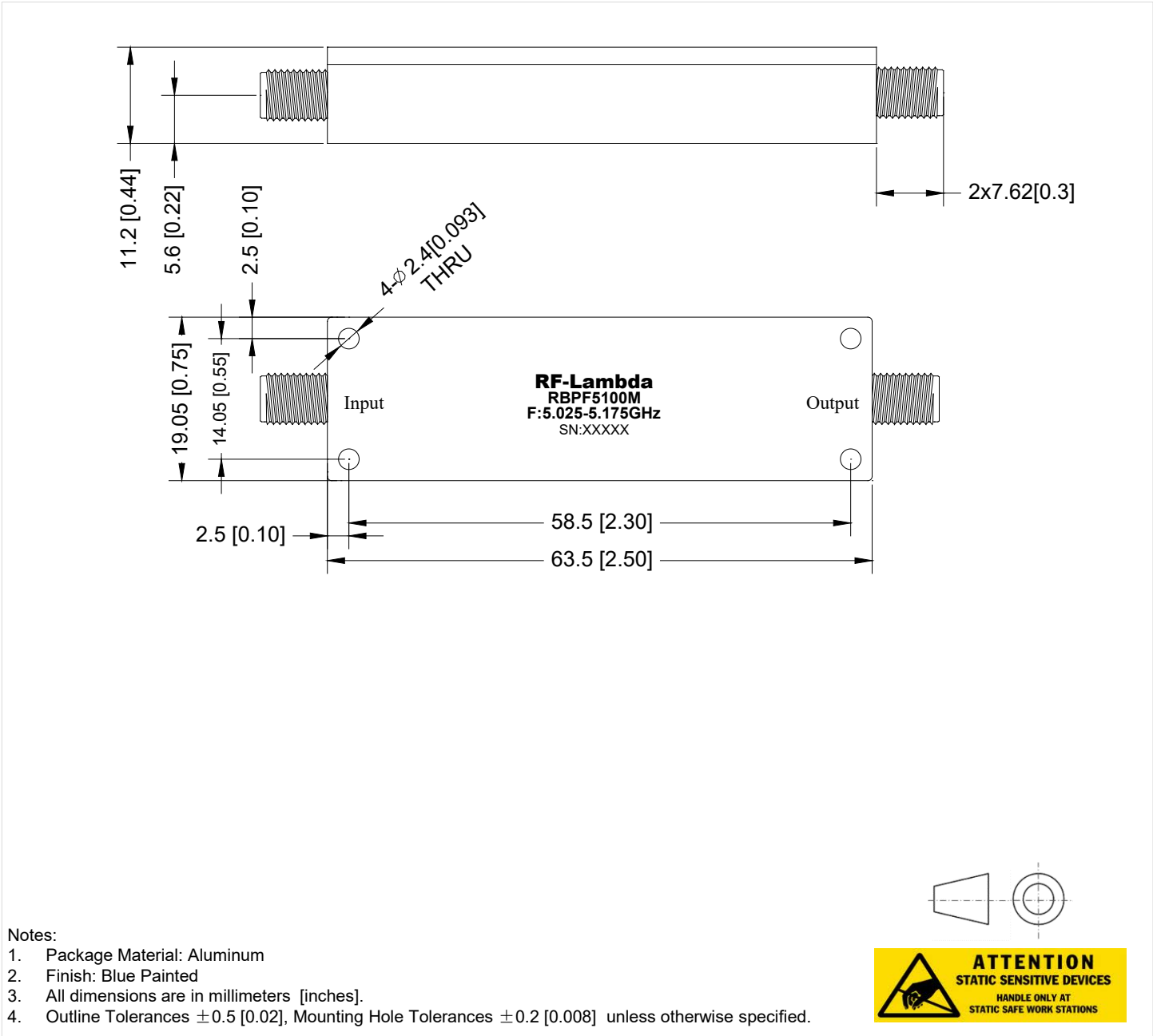
Parameter	Min	Typ	Max	Units
Frequency Range (1dB bandwidth)	5.025		5.175	GHz
Insertion Loss @5.1GHz			2.0	dB
Pass Band Ripple			1.0	dB
Return loss	15			dB
Rejection	@4.57GHz	95		dB
	@4.763GHz	27		dB
	@4.985GHz	17		dB
	@6~10.5GHz	80		dB
	@10.5~13GHz	60		dB
Power Rating	Average		1	W
	Peak (10% Duty Cycle, 1 us Pulse Width)		10	W
Weight		/		lbs
Impedance		50		Ω
Input / Output Connectors	SMA-Female(Input) – SMA-Female(Output)			
Package	Epoxy Sealed (Standard)			
	Hermetically Sealed (Optional)			

Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-25°C to +60°C (Case Temperature)
Storage Temperature	-40°C to +85°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.

Outline Drawing



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
RBPF5100M	Standard	5.025-5.175GHz Band Pass Filter

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