Coaxial Cavity Band Pass Filter
23GHz – 30GHz

Product Description

RBPF23G30G is a coaxial cavity band pass filter with a frequency range of 23 to 30GHz.

The power handling of this band pass filter is 1W. The insertion loss is 1.0 dB with a typical rejection of 40dB.

The working temperature of this product is between 5℃ and + 45℃.

Features

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

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
Passband Frequency Range		23		30	GHz
Passband Insertion Loss			1.0	2.5	dB
Passband Return loss		10	13		dB
Rejection	@10-15GHz	40	85		dBc
	@34-50GHz	40	45		dBc
Power Rating (CW)				1	W
Weight			0.09 Max.		lbs
Impedance			50		Ω
Input / Output Connectors			2.4mm-Female(Input) – 2.4mm-Male(Output)		
Package			Epoxy Sealed (Standard)		
			Hermetically Sealed (Optional)		

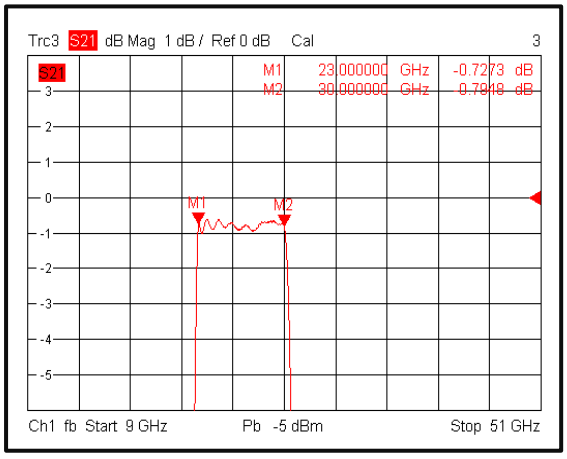
Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	5ºC to +45ºC (Case Temperature)
Storage Temperature	-25ºC to +55ºC
Thermal Shock	5ºC → +45ºC (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)

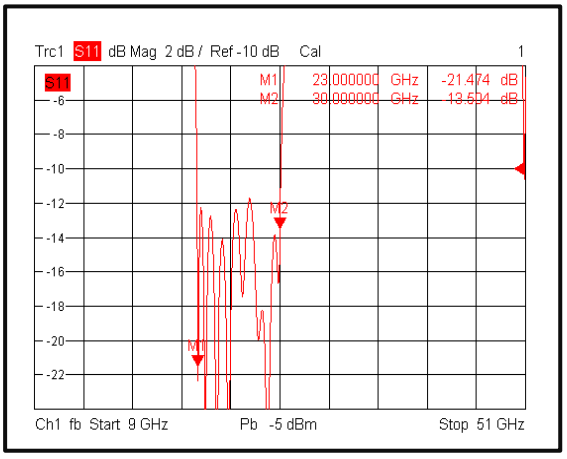
**For vibration testing details please see additional information section.

Typical Performance Plots

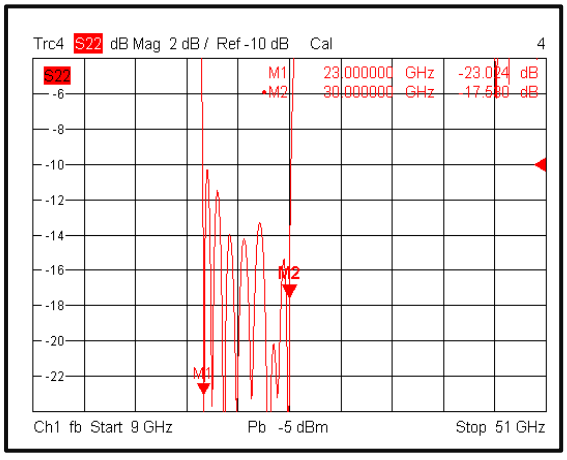
Insertion Loss



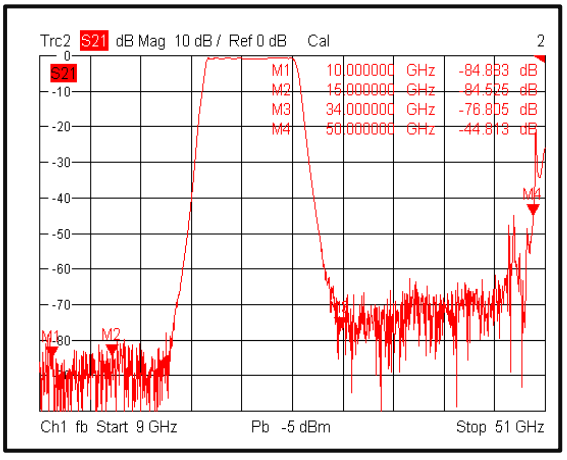
Input VSWR



Output VSWR



Rejection



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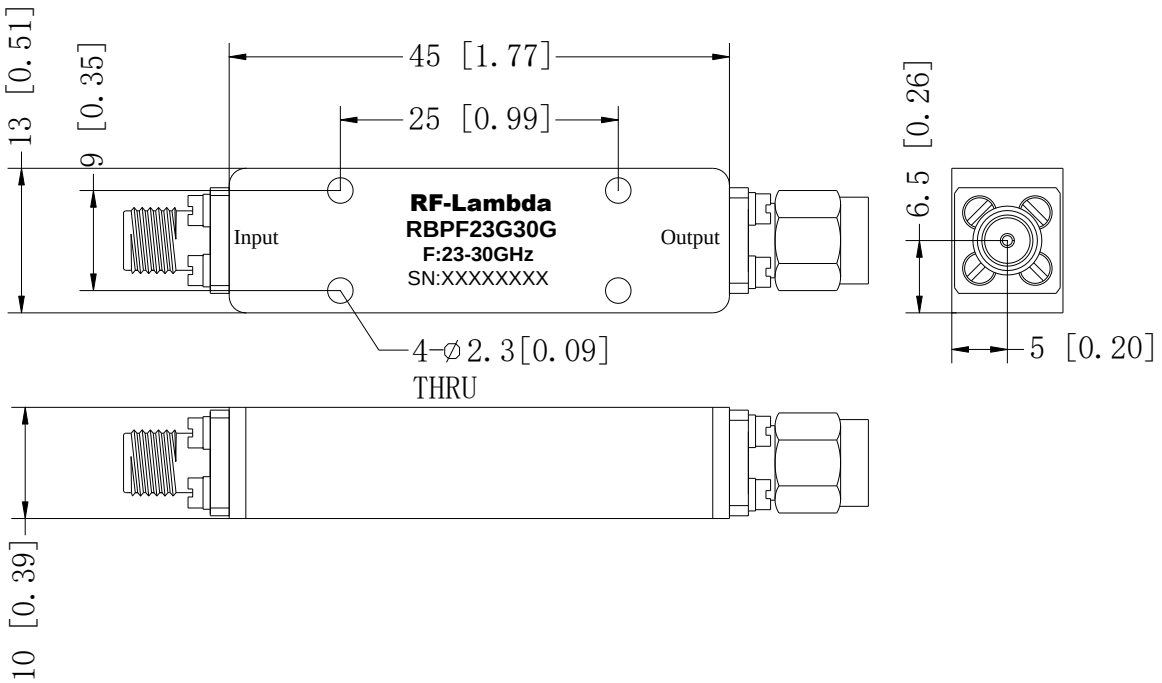
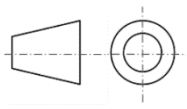
Outline Drawing



Notes:
1. Package Material: Aluminum
2. Finish: Blue Paint
3. All dimensions are in millimeters [inches].
4. Outline Tolerances ±1.0[0.04], Mounting Hole Tolerances ±0.5[0.02] 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
RBPF23G30G	Connectors 2.4mm-Female and 2.4mm-Male	23GHz-30GHz Band Pass Filter

Important Notice

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