

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°C and + 45°C.

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)			

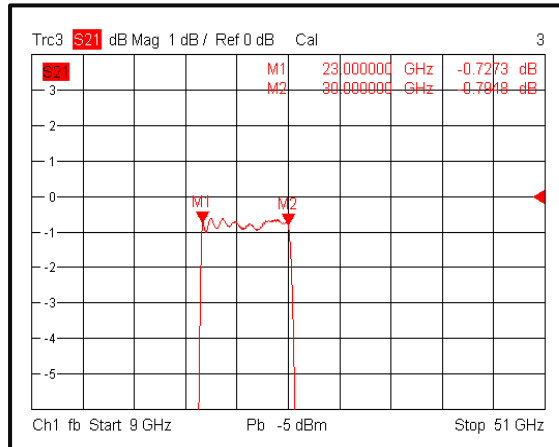
Environmental Specifications and Test Standards

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

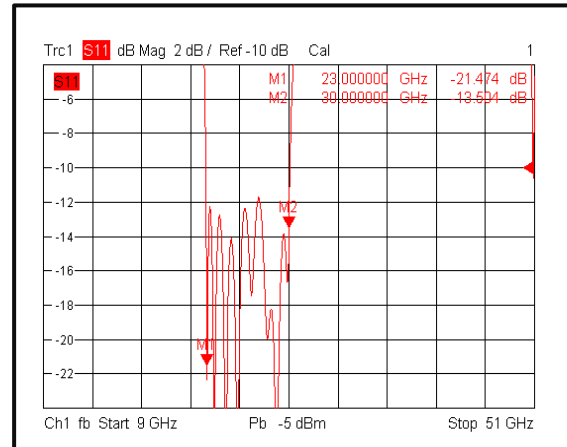
**For vibration testing details please see additional information section.

Typical Performance Plots

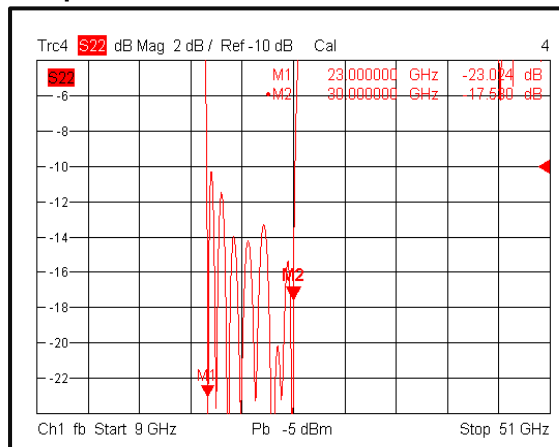
Insertion Loss



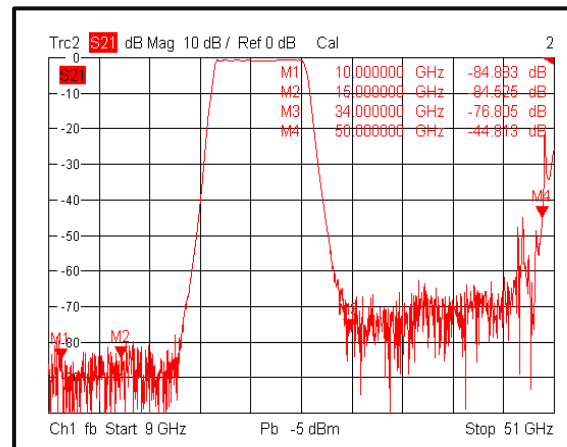
Input VSWR



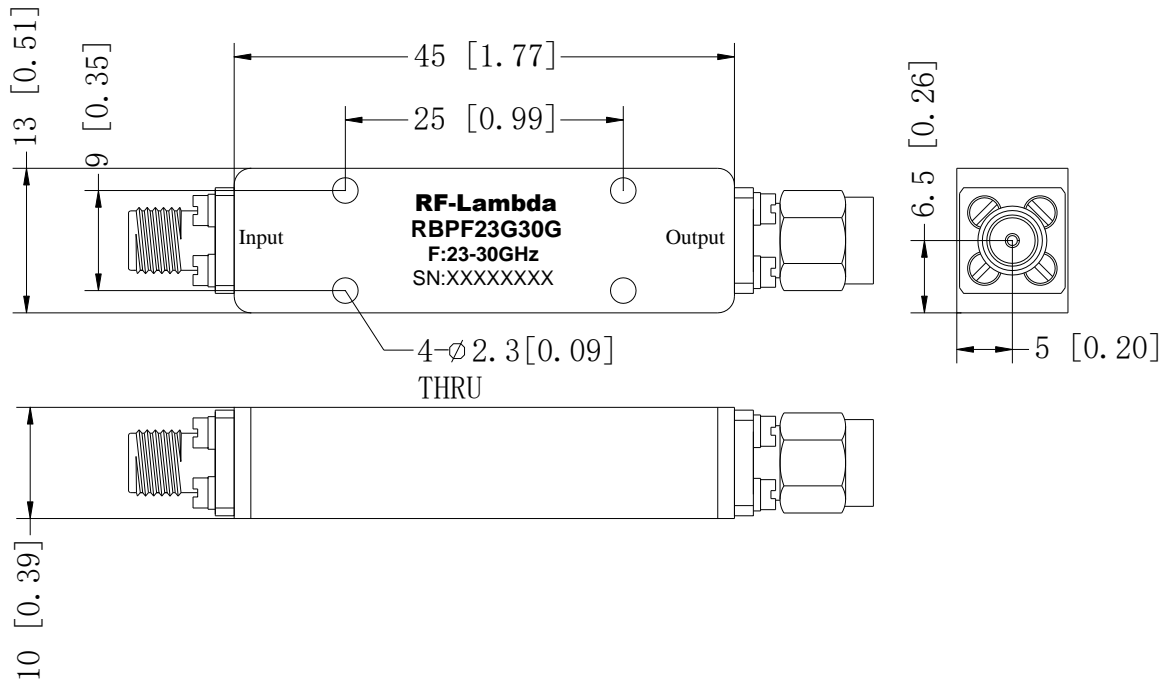
Output VSWR



Rejection

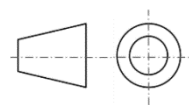


Outline Drawing



Notes:

1. Package Material: Aluminum
2. Finish: Blue Paint
3. All dimensions are in millimeters [inches].
4. Outline Tolerances $\pm 1.0[0.04]$, Mounting Hole Tolerances $\pm 0.5[0.02]$ 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

The information contained herein is believed to be reliable. RF-Lambda makes no warranties regarding the information contained herein. RF-Lambda assumes no responsibility or liability whatsoever for any of the information contained herein. RF-Lambda assumes no responsibility or liability whatsoever for the use of the information contained herein. The information contained herein is provided "AS IS, WHERE IS" and with all faults, and the entire risk associated with such information is entirely with the user. All information contained herein is subject to change without notice. Customers should obtain and verify the latest relevant information before placing orders for RF-Lambda products. The information contained herein or any use of such information does not grant, explicitly or implicitly, to any party any patent rights, licenses, or any other intellectual property rights, whether with regard to such information itself or anything described by such information. RF-Lambda products are not warranted or authorized for use as critical components in medical, life-saving, or life sustaining applications, or other applications where a failure would reasonably be expected to cause severe personal injury or death.