

## Suspended Substrate Stripline Band Pass Filter 8GHz-12GHz



### Product Description

RBPF33G08G12 is a suspended substrate stripline band pass filter with a frequency range of 8 to 12GHz.

The peak power of this band pass filter is 100W. The insertion loss is 0.8dB with a typical rejection of 53dB.

The working temperature of this product is between - 55°C and + 85°C.

### Features

- SSS Filter - Suspended Substrate Stripline Filter
- Flat frequency response and low insertion loss
- Covers the 1 GHz to 18 GHz Frequency Range
- Designs that Cover up to 40 GHz Also Available
- MIL-E-5400 standard

### 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	8		12	GHz
Insertion Loss		0.8	1.0	dB
Pass Band Ripple		0.6	0.8	dB
VSWR		1.4	1.6	: 1
Rejection	@6.8GHz	45	53	dB
	@13.8GHz	45	54	dB
Power Rating	Average		15	W
	Peak		100 (10% Duty Cycle, 1us Pulse Width)	W
Weight		0.08 Max.		lbs
Impedance		50		Ω
Input / Output Connectors	SMA-Female(Input) – SMA-Female(Output)			
Package	Epoxy Sealed (Standard)			
	Hermetically Sealed (Optional)			

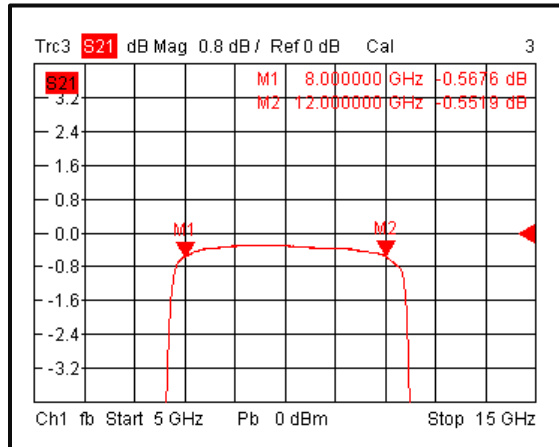
**Environmental Specifications and Test Standards**

Parameter	Description
Operational Temperature	-55°C to +85°C (Case Temperature)
Storage Temperature	-55°C to +125°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)

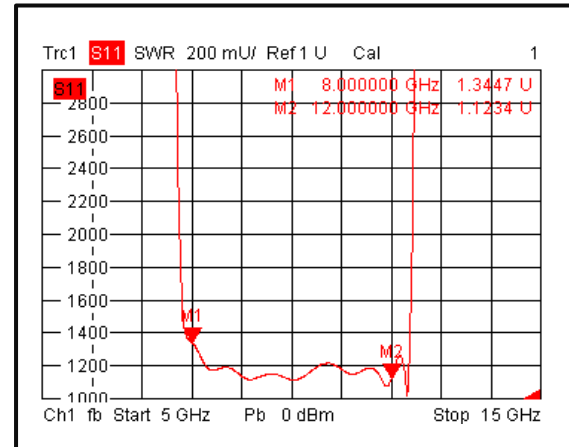
\*For vibration testing details please see additional information section.

Typical Performance Plots

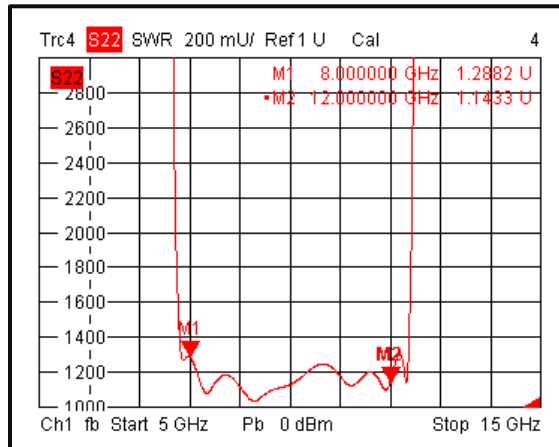
Insertion Loss



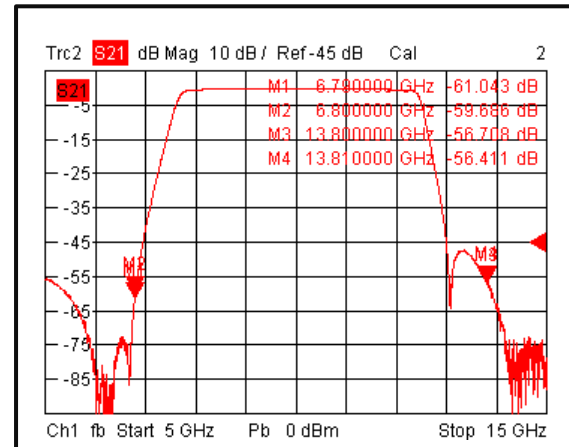
Input VSWR



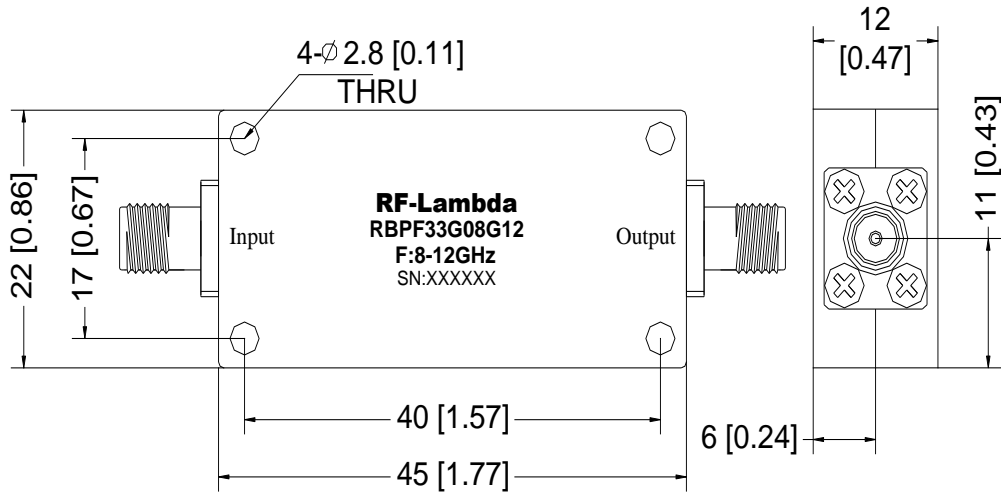
Output VSWR



Rejection

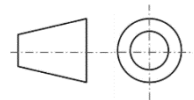


**Outline Drawing**



Notes:

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



Additional Information

Documentation	Webpage
Connector Torque Specifications	<a href="https://www.rflambda.com/pdf/Torque_Specifications.pdf">https://www.rflambda.com/pdf/Torque_Specifications.pdf</a>
Random Vibration Test Standard	<a href="https://www.rflambda.com/pdf/rflambda_random_vibration_MIL-STD-202G.pdf">https://www.rflambda.com/pdf/rflambda_random_vibration_MIL-STD-202G.pdf</a>

**Ordering Information**

Part Number	Modification	Description
RBPF33G08G12	Standard	8GHz-12GHz SSS Band Pass Filter

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