

Suspended Substrate Stripline Low Pass Filter DC-20GHz



Product Description

RLPF13G20 is a suspended substrate stripline low pass filter with a frequency range of DC to 20GHz.

The peak power handling of this low pass filter is 100W. The insertion loss is 1.2dB with a typical rejection of 45dB.

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
- Designs that Cover up to 40GHz Also Available

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		DC		20	GHz
Insertion Loss			0.8	1.2	dB
Pass Band Ripple			0.8	1.0	dB
VSWR			1.4	1.6	: 1
Rejection	@23-30GHz	40	45		dB
Power Rating	Average		15		W
	Peak		100 (10% Duty Cycle, 1us Pulse Width)		W
Weight			0.05 Max.		lbs
Impedance			50		Ω
Input / Output Connectors		SMA-Female(Input) – SMA-Female(Output)			
Package	Epoxy Sealed (Standard)				
	Hermetically Sealed (Optional)				

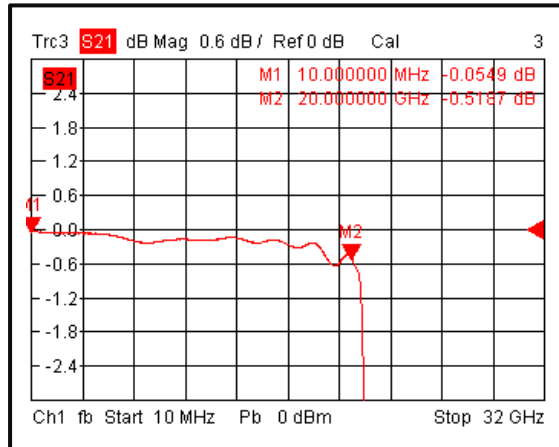
Environmental Specifications and Test Standards

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)

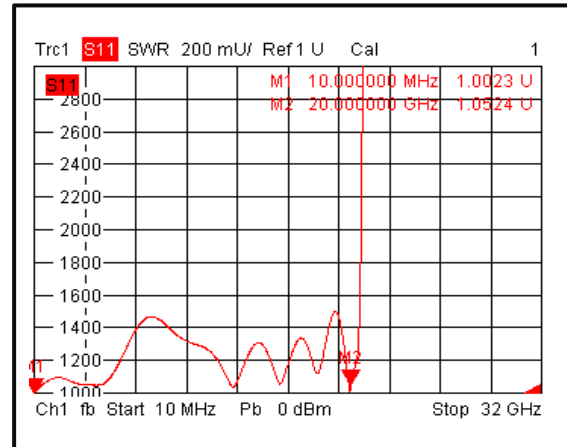
**For vibration testing details please see additional information section.

Typical Performance Plots

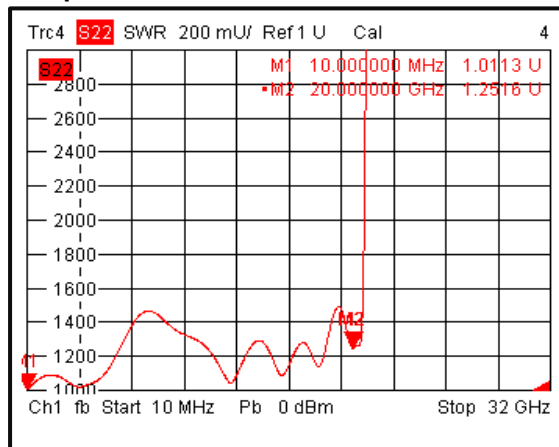
Insertion Loss



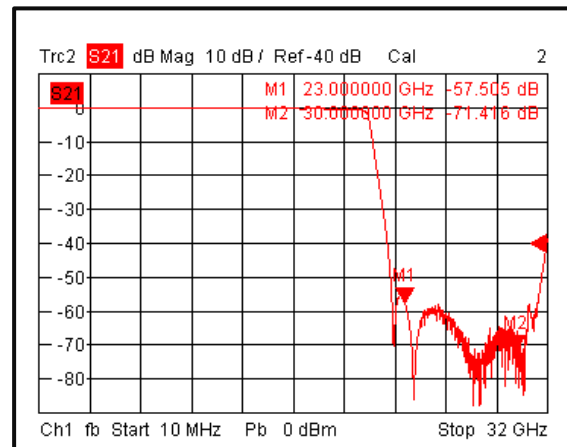
Input VSWR



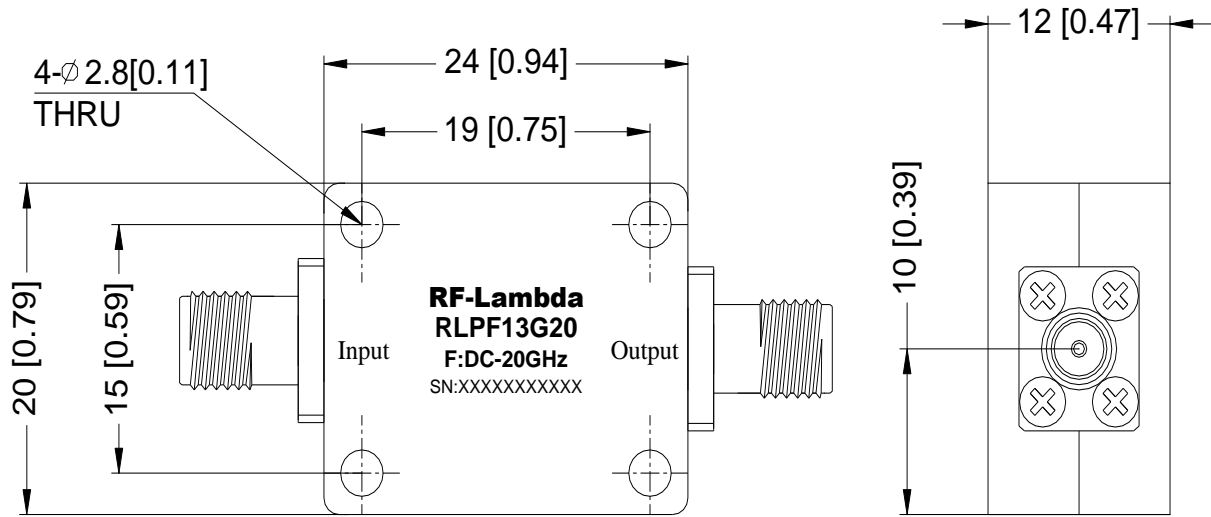
Output VSWR



Rejection

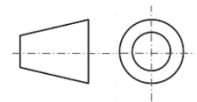


Outline Drawing



Notes:

1. Package Material: Aluminum
2. Finish: Blue Paint
3. All dimensions are in millimeters [inches].
4. Outline Tolerances ± 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

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

Webpage

Ordering Information

Part Number	Modification	Description
RLPF13G20	Standard	DC-20GHz SSS Low Pass Filter

Important Notice

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