



LTCC COAXIAL

High Pass Filter

VHFG-1000+

50 Ω

1150 to 8000 MHz

SMA Male/Female

KEY FEATURES

- Low Insertion Loss, 0.8 dB Typ.
- Return Loss, 11 dB Typ.
- Stopband Rejection, 48 dB Typ.
- Rugged Unibody Construction
- Power Handling: 3 Watts

APPLICATIONS

- Test and Measurement
- Satellite Communications
- 5G Sub 6 GHz and Wi-Fi 6E
- Drone Mitigation

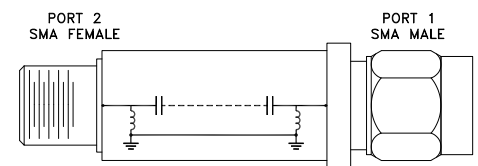
PRODUCT OVERVIEW

VHFG-1000+ is a 50 Ω high pass filter built in rugged unibody construction. Covering 1150-8000 MHz bandwidth, these units offer good matching within the passband and good rejection in stopband. VHFG-1000+ offer low insertion loss, and excellent power handling capability. It handles up to 3 W RF input power and provides a wide operating temperature range from -55°C to 125°C.



Generic photo used for illustration purposes only

FUNCTIONAL DIAGRAM

ELECTRICAL SPECIFICATIONS^{1,2} AT +25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Units
Passband	Insertion Loss	F3-F4	1150 - 2000	—	1.8	—	dB
		F4-F5	2000 - 6500	—	0.8	1.3	
		F5-F6	6500 - 8000	—	0.8	1.4	
	Return Loss	F3-F4	1150 - 2000	—	8	—	dB
		F4-F5	2000 - 6500	—	11	—	
		F5-F6	6500 - 8000	—	13	—	
Stopband	Rejection	DC-F1	DC - 600	41	48	—	dB
		F1-F2	600 - 780	20	38	—	
	Freq. Cut-Off ³	Fc	1000	—	3	—	dB

1. This filter is bi-directional, RF1 and RF2 ports may be interchanged, see S-Parameters for actual performance.

2. This component should not be used as a DC-block. In applications where DC voltage and/or current is present at either the input or output ports, external DC blocking capacitors are required.

3. Typical variation $\pm 5\%$

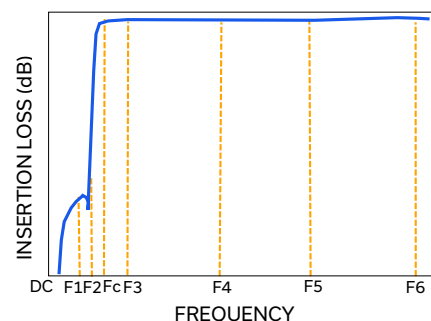
ABSOLUTE MAXIMUM RATINGS⁴

Parameter	Ratings
Operating Temperature	-55°C to +125°C
Storage Temperature	-55°C to +125°C
Input Power ⁵	3 W @+25°C

4. Permanent damage may occur if any of these limits are exceeded.

5. Power rating applies only to signals within the passband. Power rating above +25°C operating temperature decreases linearly to 0.7 W at +125°C.

TYPICAL FREQUENCY RESPONSE AT +25°C





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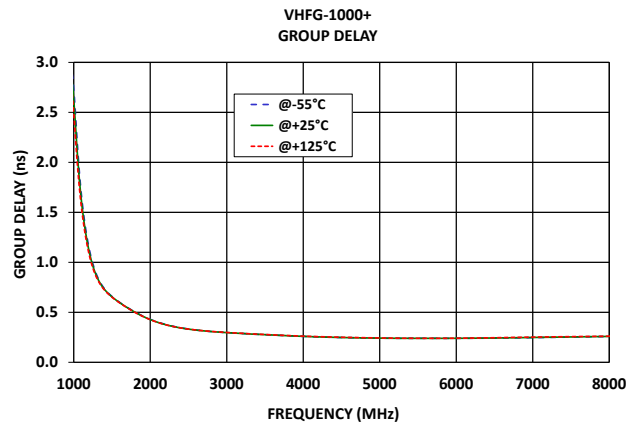
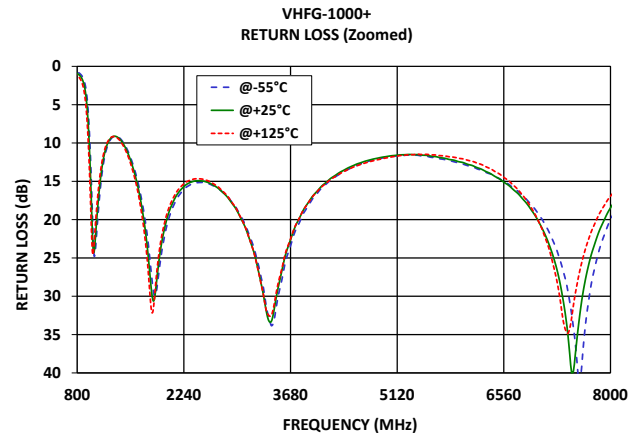
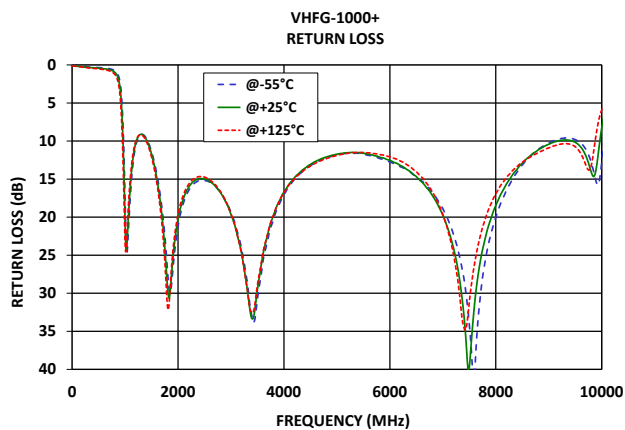
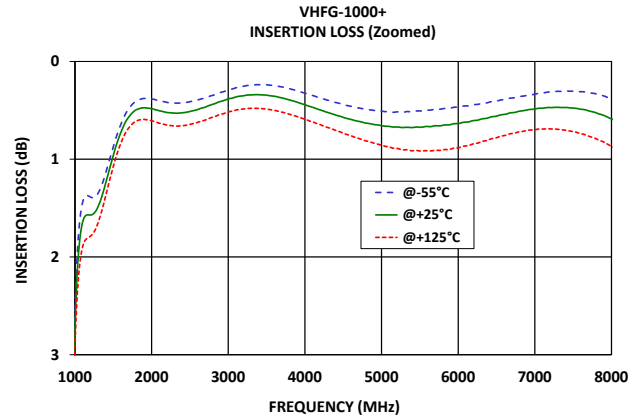
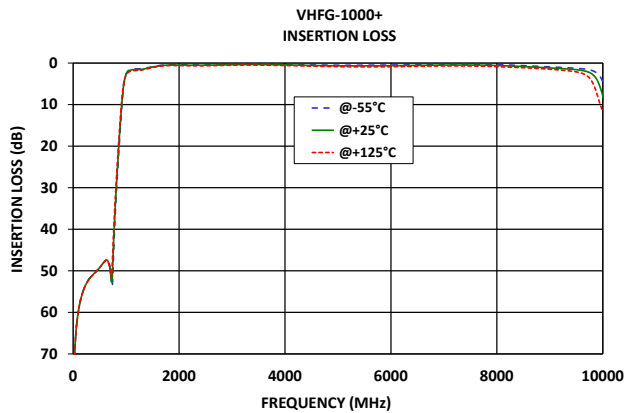
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TYPICAL PERFORMANCE GRAPHS

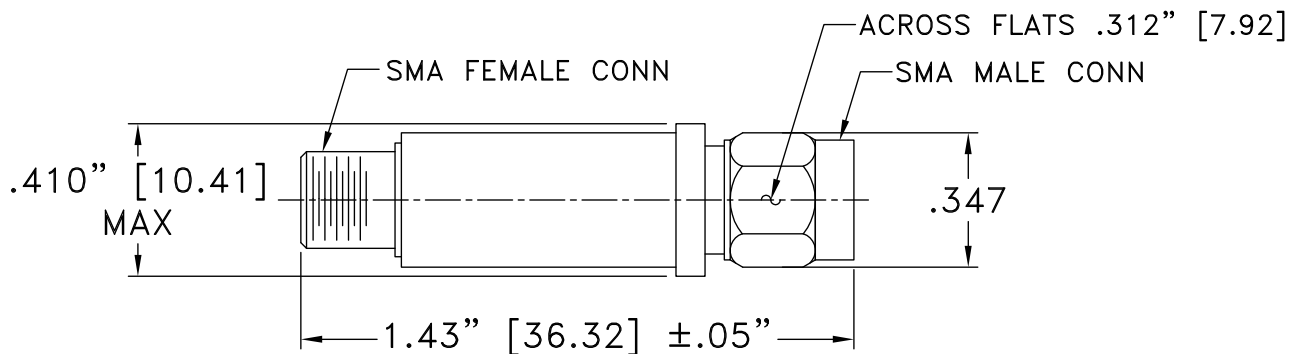




CONNECTOR DESCRIPTION

Function	Functionality	Connector
RF1 ¹	Port-1	SMA MALE
RF2 ¹	Port-2	SMA FEMALE

CASE STYLE DRAWING



Unit weight: 10.0grams

Dimensions are in inches (mm). Tolerances: 2 Pl. ± 0.04 "; 3 Pl. ± 0.30 "

PRODUCT MARKING*: VHFG-1000+

*Marking may contain other features or characters for internal lot control.



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ADDITIONAL INFORMATION IS AVAILABLE ON OUR DASHBOARD

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Performance Data & Graphs	Data
	Graphs
	S-Parameter (S2P Files) Data Set (.zip file)
Case Style	FF704
RoHS Status	Compliant
Environmental Ratings	ENV113

NOTES

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
- C. The parts covered by this specification document are subject to Mini-Circuits' standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the standard terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/terms/viewterm.html

