



(LTCC) COAXIAL

High Pass Filter

VHFG-1780+

50Ω 1980 to 11000 MHz SMA Male/Female

KEY FEATURES

- Low Insertion Loss, 1 dB Typ.
- Return Loss, 14 dB Typ.
- Stop Band Rejection, 48 dB Typ.
- Rugged unibody construction
- Power Handling: 4 Watts

APPLICATIONS

- Test and Measurement Equipment
- Communications, Radar, EW, and ECM Defense Systems
- 5G MIMO and Back Haul Radio Systems
- 5G Sub 6 GHz
- WiFi 6E

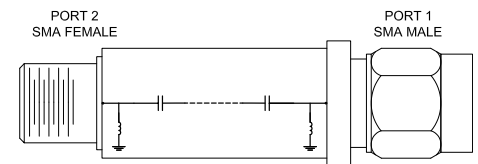


Generic photo used for illustration purposes only

PRODUCT OVERVIEW

VHFG-1780+ is a 50Ω high pass filter built in rugged unibody construction. Covering 1980-11000 MHz bandwidth, these units offer good matching within the passband and good rejection in stopband. VHFG-1780+ offer low insertion loss, and excellent power handling capability. It handles up to 4 W RF input power and provides a wide operating temperature range from -55°C to 125°C.

FUNCTIONAL DIAGRAM



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

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Units
Pass Band	Insertion Loss	F3-F4	1980 - 2500	—	2.0	—	dB
		F4-F5	2500 - 10000	—	1.0	1.6	
		F5-F6	10000 - 11000	—	1.6	—	
Pass Band	Return Loss	F3-F4	1980 - 2500	—	14	—	dB
		F4-F5	2500 - 10000	—	14	—	
		F5-F6	10000 - 11000	—	12	—	
Stop Band	Rejection	DC-F1	DC - 1100	43	48	—	dB
		F1-F2	1100 - 1400	22	34	—	
	Freq. Cut-Off ³	F _c ³	1780	—	3.0	—	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 ± 5%

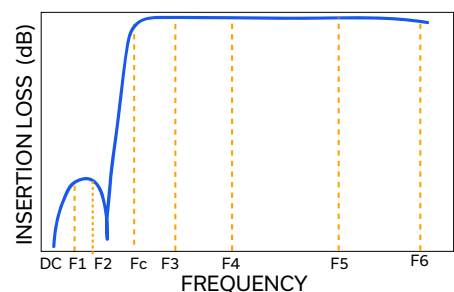
ABSOLUTE MAXIMUM RATINGS⁴

Parameter	Ratings
Operating Temperature	-55 °C to +125 °C
Storage Temperature	-55 °C to +125 °C
Input Power ⁵	4W @+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 0.9W at +125°C.

TYPICAL FREQUENCY RESPONSE





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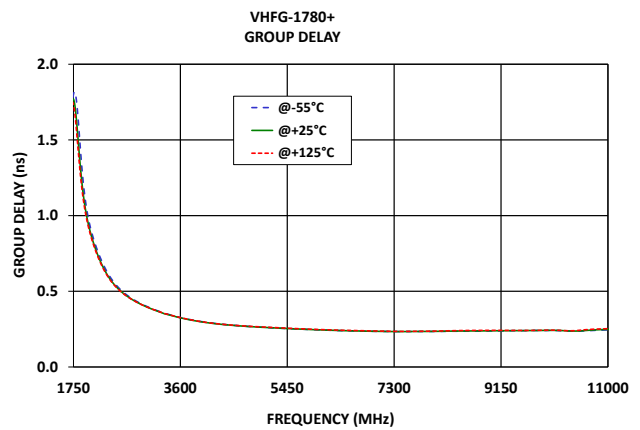
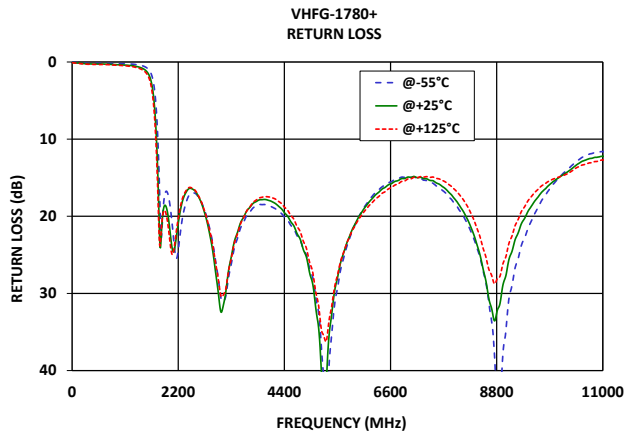
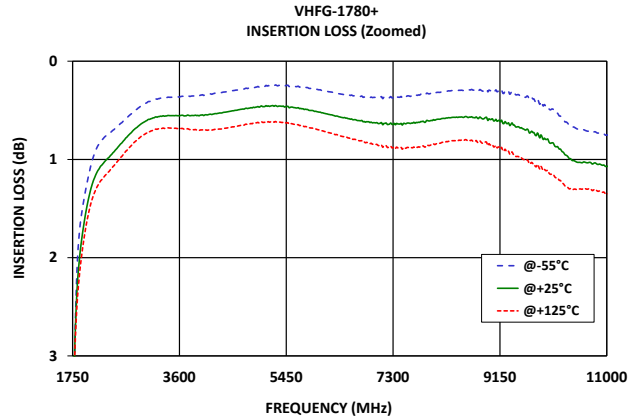
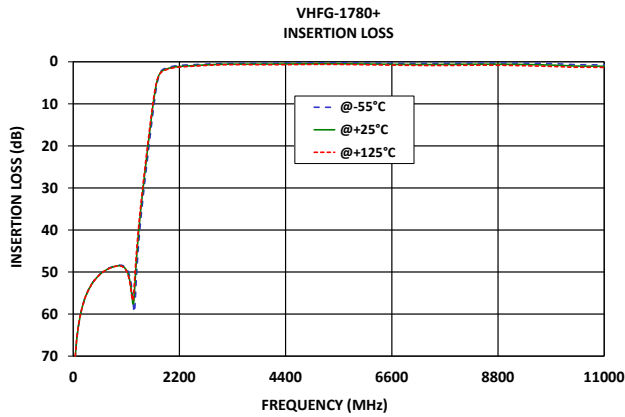
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Mini-Circuits

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TYPICAL PERFORMANCE GRAPHS





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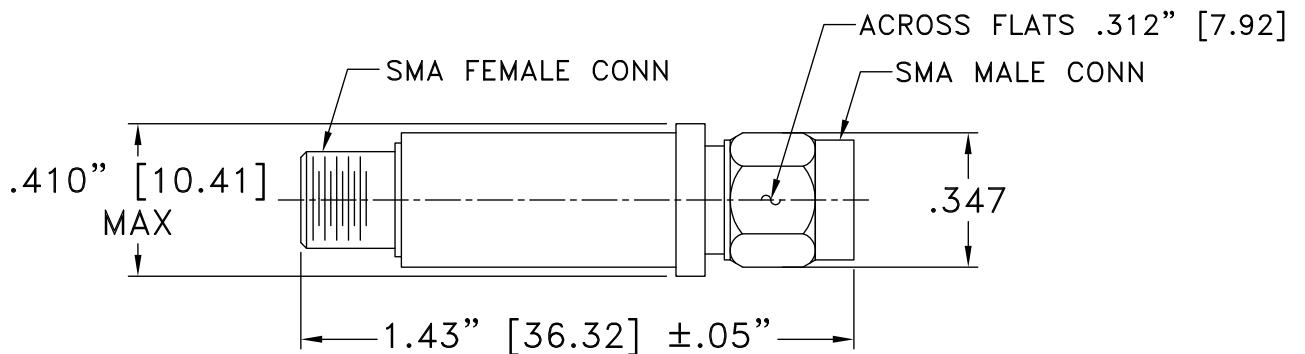
Mini-Circuits

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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. ±.04"; 3 Pl. ±.30"

PRODUCT MARKING*: VHFG-1780+

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



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ADDITIONAL INFORMATION IS AVAILABLE ON OUR DASHBOARD

[CLICK HERE](#)

Performance Data & Graphs	<p>Data</p> <p>Graphs</p> <p>S-Parameter (S2P Files) Data Set (.zip file)</p>
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

