(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

Generic photo used for illustration purposes only

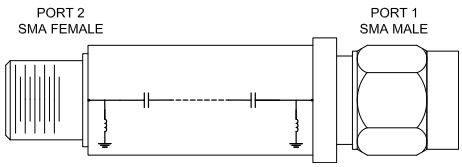
APPLICATIONS

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

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	—	
	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]	Fc[3]	1780	—	3.0	—	dB

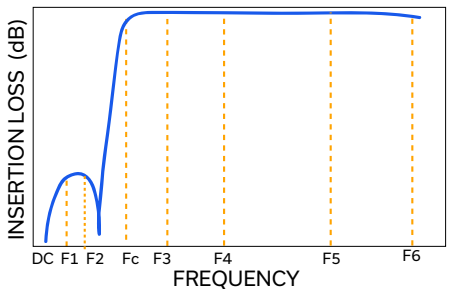
1. This filter is bi-directional, RF1 and RF2 ports may be interchanged, see S-Parameters for actual performance.
2. This component should not be used as a DC-block. In applications where DC voltage and/or current is present at either the input or output ports, external DC blocking capacitors are required.
3. Typical variation ± 5%

ABSOLUTE MAXIMUM RATINGS[4]

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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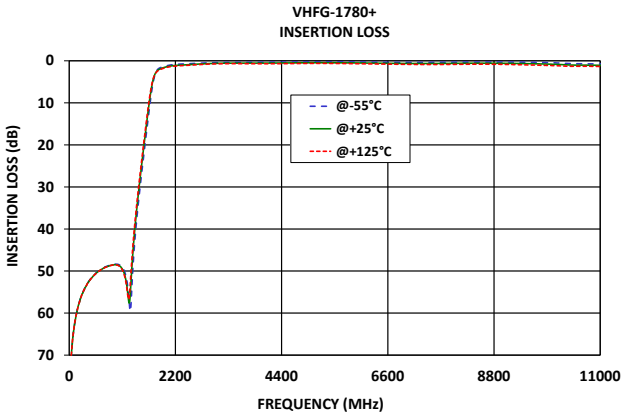
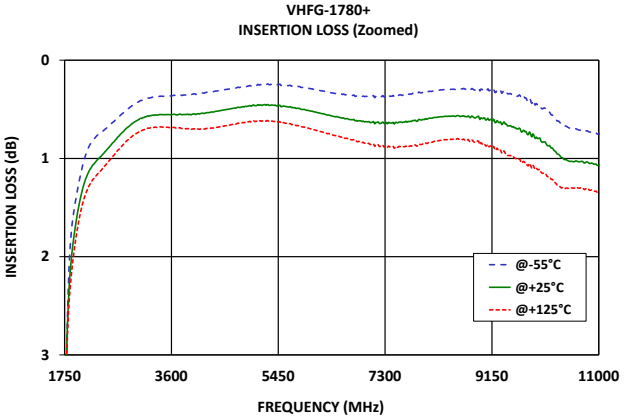
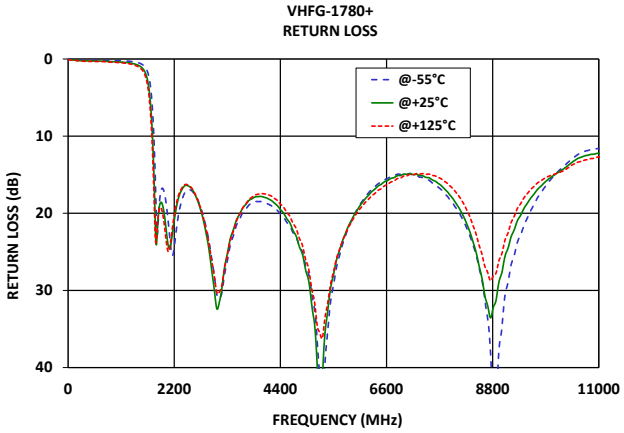
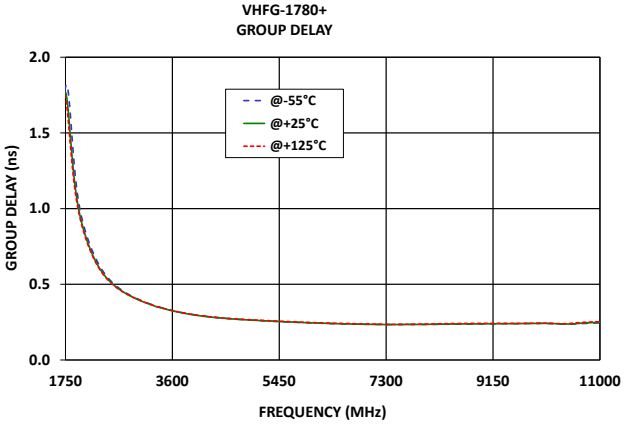
TYPICAL PERFORMANCE GRAPHS









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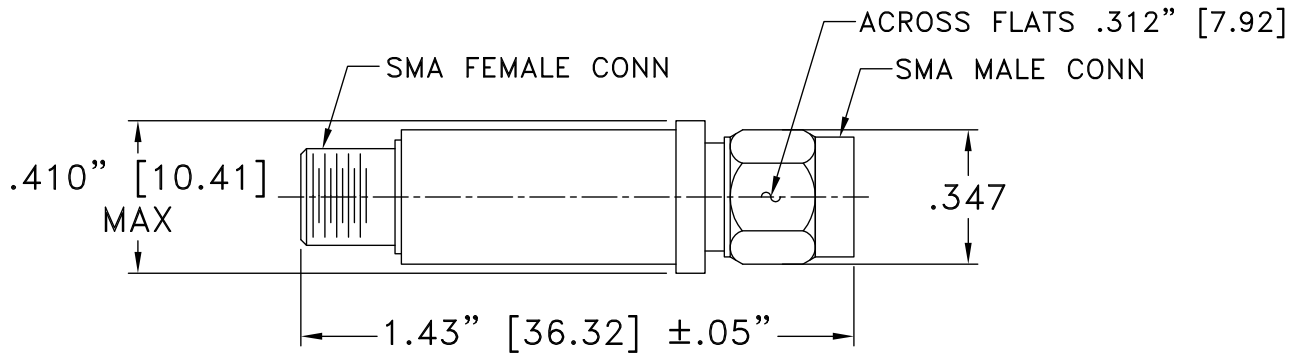
CONNECTOR DESCRIPTION

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	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.
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