



LTCC COAXIAL

Low Pass Filter

VLFG-180+

50Ω

DC to 180 MHz SMA Male/Female

KEY FEATURES

- Low Insertion Loss, 0.9 dB Typ.
- Return Loss, 20 dB Typ.
- Stop Band Rejection, 48 dB Typ.
- Rugged unibody construction
- Power Handling: 3.5 Watts



Generic photo used for illustration purposes only

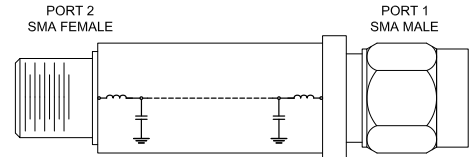
APPLICATIONS

- VHF Transmitters / Receivers
- Aircraft Communication

PRODUCT OVERVIEW

VLFG-180+ is a Low Pass filter with DC to 180 MHz passband supporting a variety of applications. This model provides 0.9 dB typical insertion loss over a wide band due to its rugged unibody construction. VLFG-180+ offers low insertion loss, and excellent power handling capability. It handles up to 3.5 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
Passband	Insertion Loss	DC-F1	DC- 180	—	0.9	1.6	dB
	Freq. Cut-Off ³	Fc	260	—	3	—	dB
	Return Loss	DC-F1	DC - 180	10	20	—	dB
Stopband	Rejection	F2-F3	380 - 800	20	28	—	dB
		F3-F4	800 - 1500	35	41	—	
		F4-F5	1500 - 3500	38	48	—	
		F5-F6	3500 - 6400	20	35	—	
		F6-F7	6400 - 8500	—	18	—	

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 $\pm 5\%$

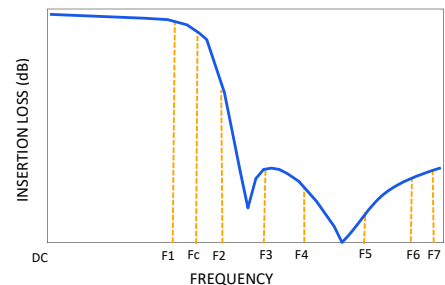
ABSOLUTE MAXIMUM RATINGS⁴

Parameter	Ratings
Operating Temperature	-55°C to +125°C
Storage Temperature	-55°C to +125°C
Input Power ⁵	3.5 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 0.8 W at +125°C.

TYPICAL FREQUENCY RESPONSE AT +25°C





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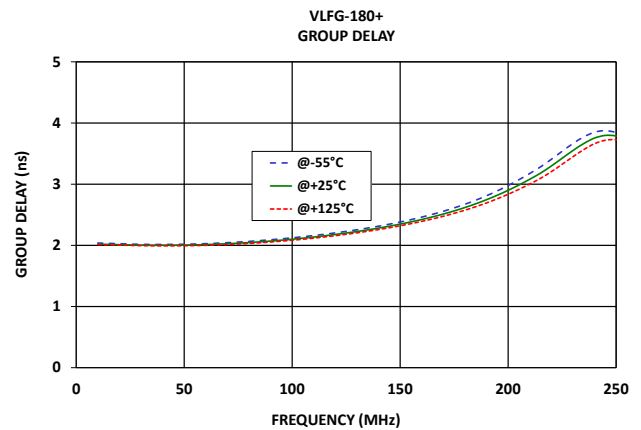
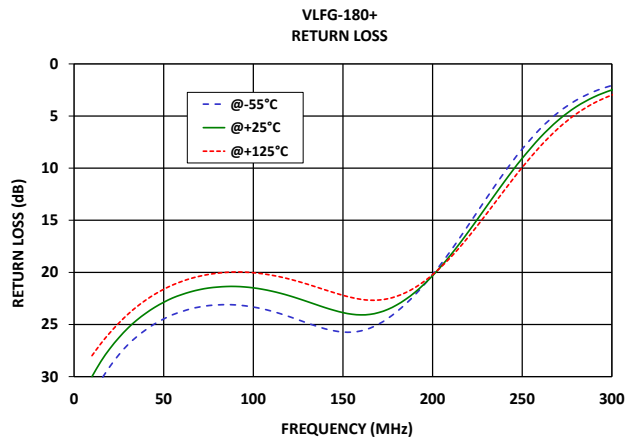
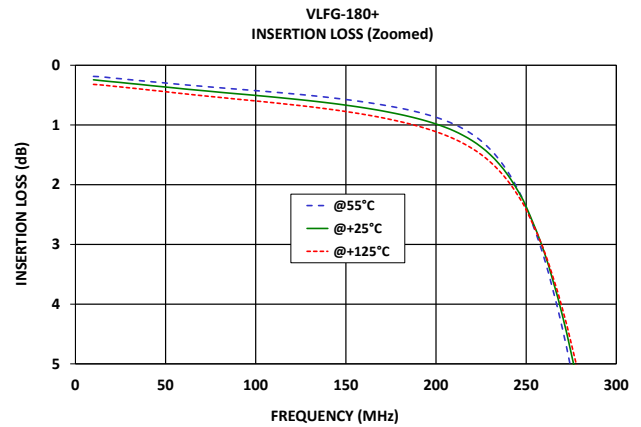
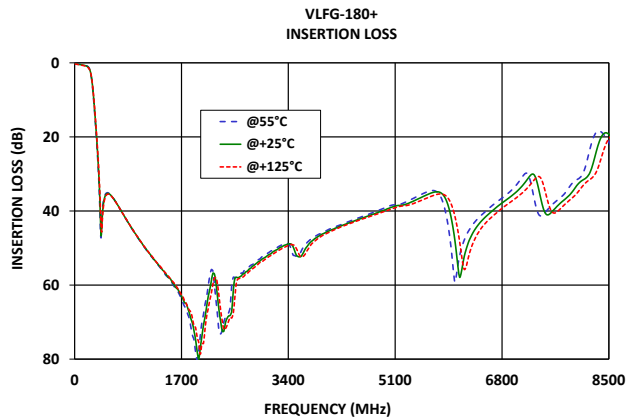
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TYPICAL PERFORMANCE GRAPHS AT +25°C

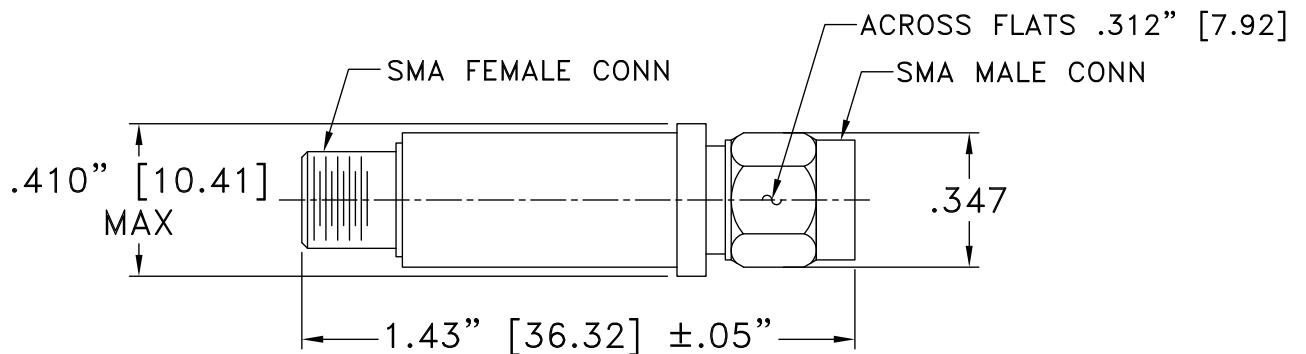




CONNECTOR DESCRIPTION

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. $\pm.04$ "; 3 Pl. $\pm.30$ "

PRODUCT MARKING*: VLFG-180+

*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.
- 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

