



THIN FILM COAXIAL

Low Pass Filter

ZALF-5000-S+

50Ω DC to 5 GHz SMA Male/Female

KEY FEATURES

- Low Passband Insertion Loss, 1.5 dB Typ.
- High Rejection, 38 dB Typ.
- Small Size

APPLICATIONS

- Telecommunication & Broadband Wireless System
- Test and Measurement Equipment
- 5G Sub 6GHz

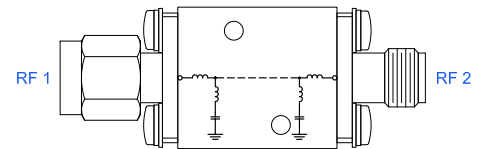
PRODUCT OVERVIEW

Mini-Circuits' Connectorized Thin-Film filters offer low insertion loss and high rejection realized via Thin-Film on Alumina substrate, using a sputtering process that can guarantee an enhanced Q and repeatable performance. Low pass, high pass, and bandpass connectorized thin-film designs can be realized with this technology up to 40 GHz in a small form factor helping customers achieve their SWaP objectives. Using our high quality thin-film manufacturing process we can guarantee repeatability on large batches of filters.



Generic photo used for illustration purposes only

FUNCTIONAL DIAGRAM



ELECTRICAL SPECIFICATIONS¹ AT +25°C

Parameter		F#	Frequency (GHz)	Min.	Typ.	Max.	Units
Passband	Insertion Loss	DC-F1	DC - 5	—	1.5	2.0	dB
	Freq. Cut-Off ²	Fc	5.77	—	3	—	dB
	Return Loss	DC-F1	DC - 5	—	15	—	dB
Stopband	Rejection	F2-F3	6.7 - 7.5	20	33	—	dB
		F3-F4	7.5 - 12	32	38	—	
		F4-F5	12 - 17	—	25	—	

1. 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.

2. Typical variation $\pm 3\%$

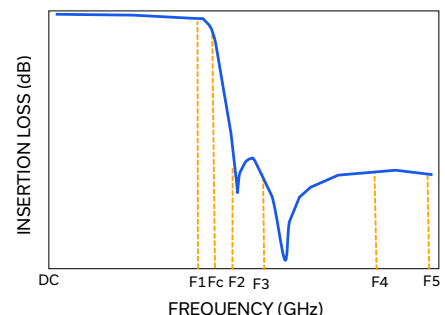
ABSOLUTE MAXIMUM RATINGS³

Parameter	Ratings
Operating Temperature	-55°C to +125°C
Storage Temperature	-55°C to +125°C
Input Power ⁴	5 W at 25°C

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

4. Power rating applies only to signals within the passband.

TYPICAL FREQUENCY RESPONSE





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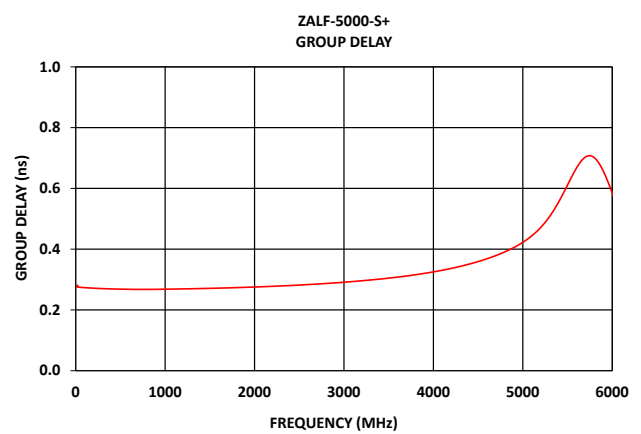
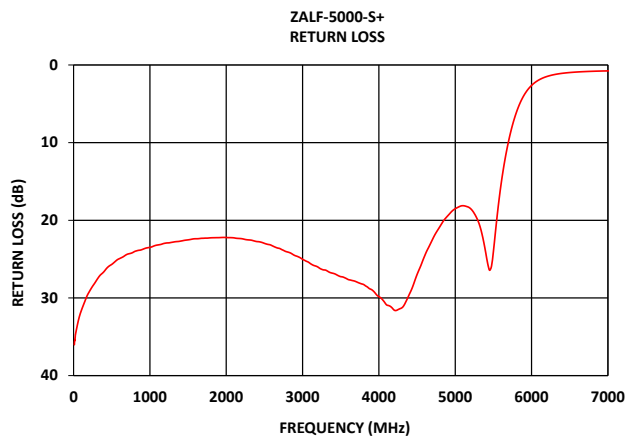
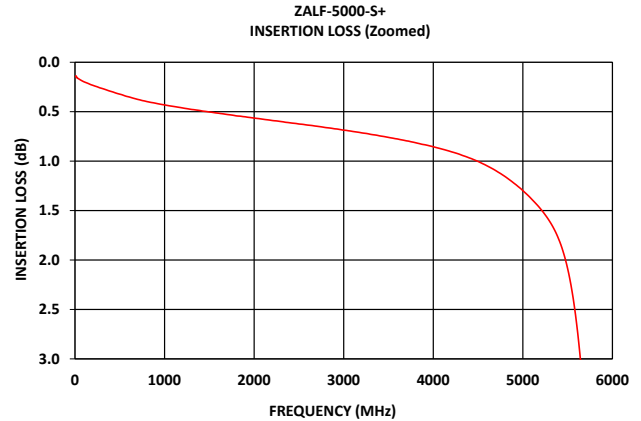
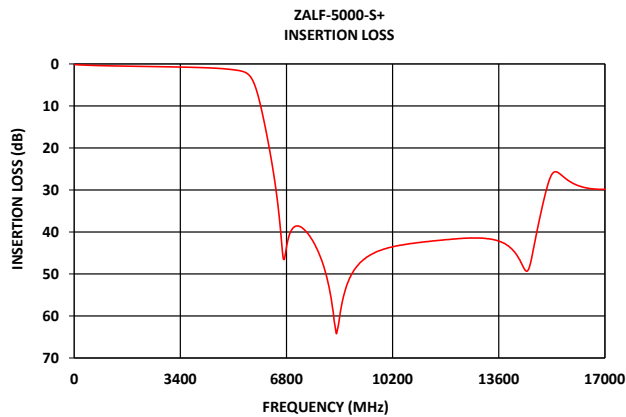
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TYPICAL PERFORMANCE GRAPHS





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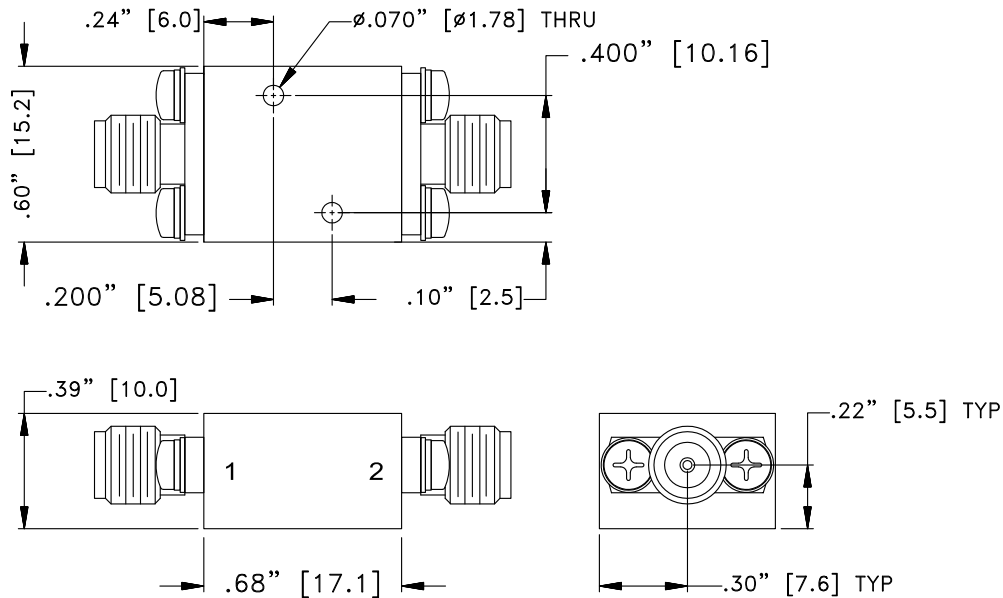
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CONNECTOR DESCRIPTION

Function	Connector
RF1 ⁵	SMA Male
RF2 ⁵	SMA Female

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

CASE STYLE DRAWING



Unit weight: 24grams

Dimensions are in inches (mm). Tolerances: 2 Pl. \pm .050"; 3 Pl. \pm .015"

PRODUCT MARKING*: ZALF-5000-S+

*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	UK3042
RoHs Status	Compliant
Environmental Ratings	ENV144

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

