



THIN FILM COAXIAL

Bandpass Filter

ZABF-K8R75G+

50Ω 8600 to 8900 MHz 2.92mm Female

KEY FEATURES

- Low Passband Insertion Loss 2.5 dB Typ.
- High Rejection 50 dB Typ.
- Small Size

APPLICATIONS

- X-Band Radar
- Aerospace and Defense

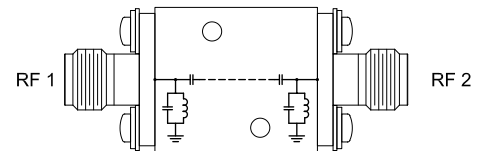


Generic photo used for illustration purposes only

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.

FUNCTIONAL DIAGRAM



ELECTRICAL SPECIFICATIONS¹ AT +25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Units
Passband	Center Frequency ²	—	—	8750	—	MHz
	Insertion Loss	F1-F2	—	2.5	3	dB
	Return Loss	F1-F2	—	10	—	dB
Stopband, Lower	Rejection	DC-F3	40	50	—	dB
		F3-F4	20	35	—	
Stopband, Upper	Rejection	F5-F6	20	38	—	dB
		F6-F7	40	47	—	
		F7-F8	—	35	—	

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 $\pm 3\%$

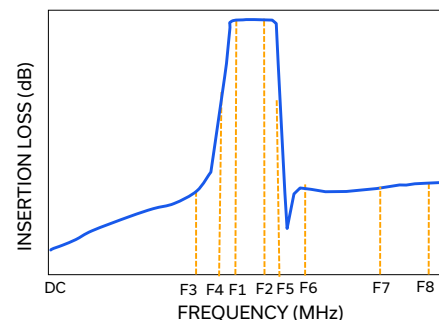
ABSOLUTE MAXIMUM RATINGS³

Parameter	Ratings
Operating Temperature	-55°C to +125°C
Storage Temperature	-55°C to +125°C
Input Power ⁴	1W at 25 °C

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

4. Power rating applies only to signals with in the passband.

TYPICAL FREQUENCY RESPONSE AT +25°C





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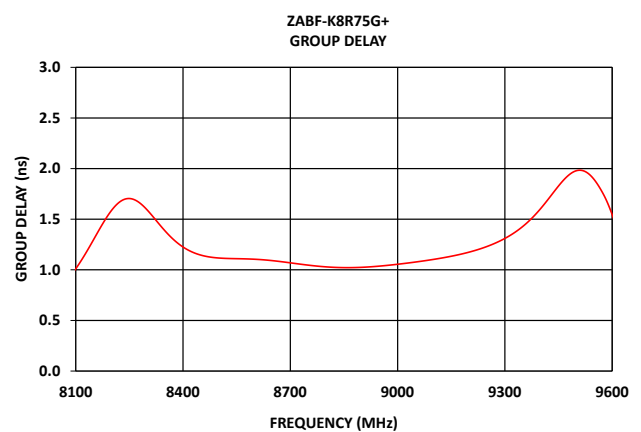
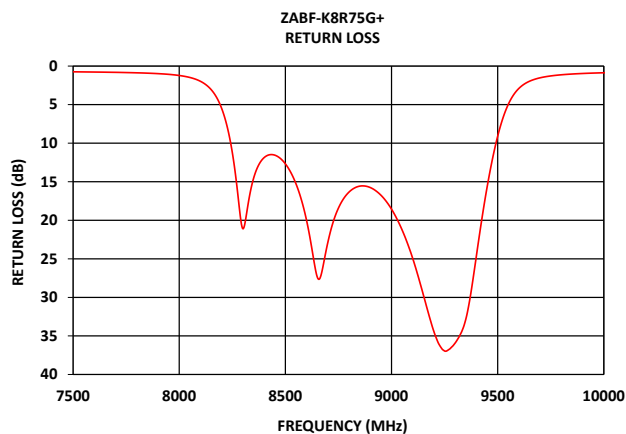
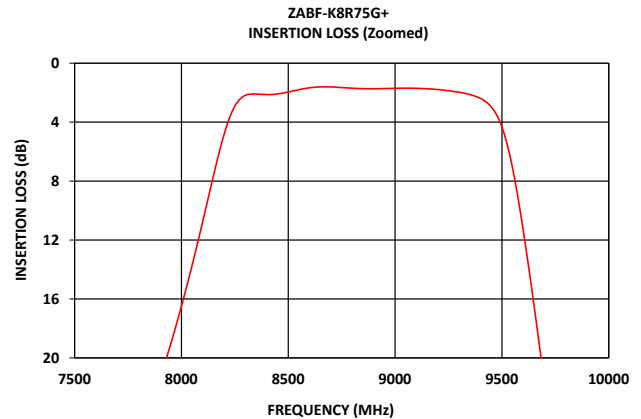
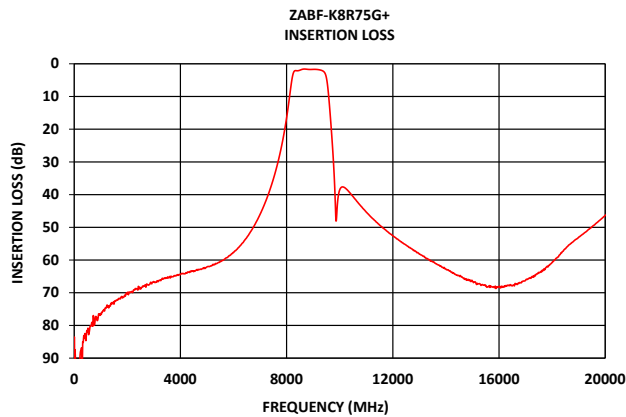
Mini-Circuits

50Ω

8600 to 8900 MHz

2.92mm Female

TYPICAL PERFORMANCE GRAPHS AT +25°C





THIN FILM COAXIAL

Bandpass Filter

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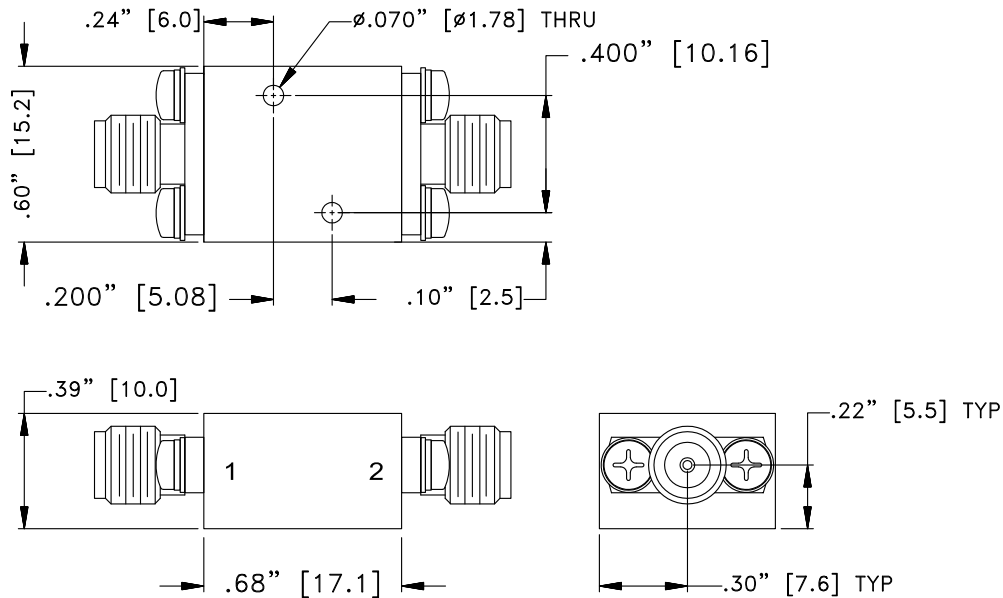
50Ω 8600 to 8900 MHz 2.92mm Female

CONNECTOR DESCRIPTION

Function	Connector
RF1 ⁵	2.92mm Female
RF2 ⁵	2.92mm 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.±.050"; 3 Pl.±.015"

PRODUCT MARKING*: ZABF-K8R75G+

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



Mini-Circuits

THIN FILM COAXIAL

Bandpass Filter

ZABF-K8R75G+

50Ω

8600 to 8900 MHz

2.92mm Female

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

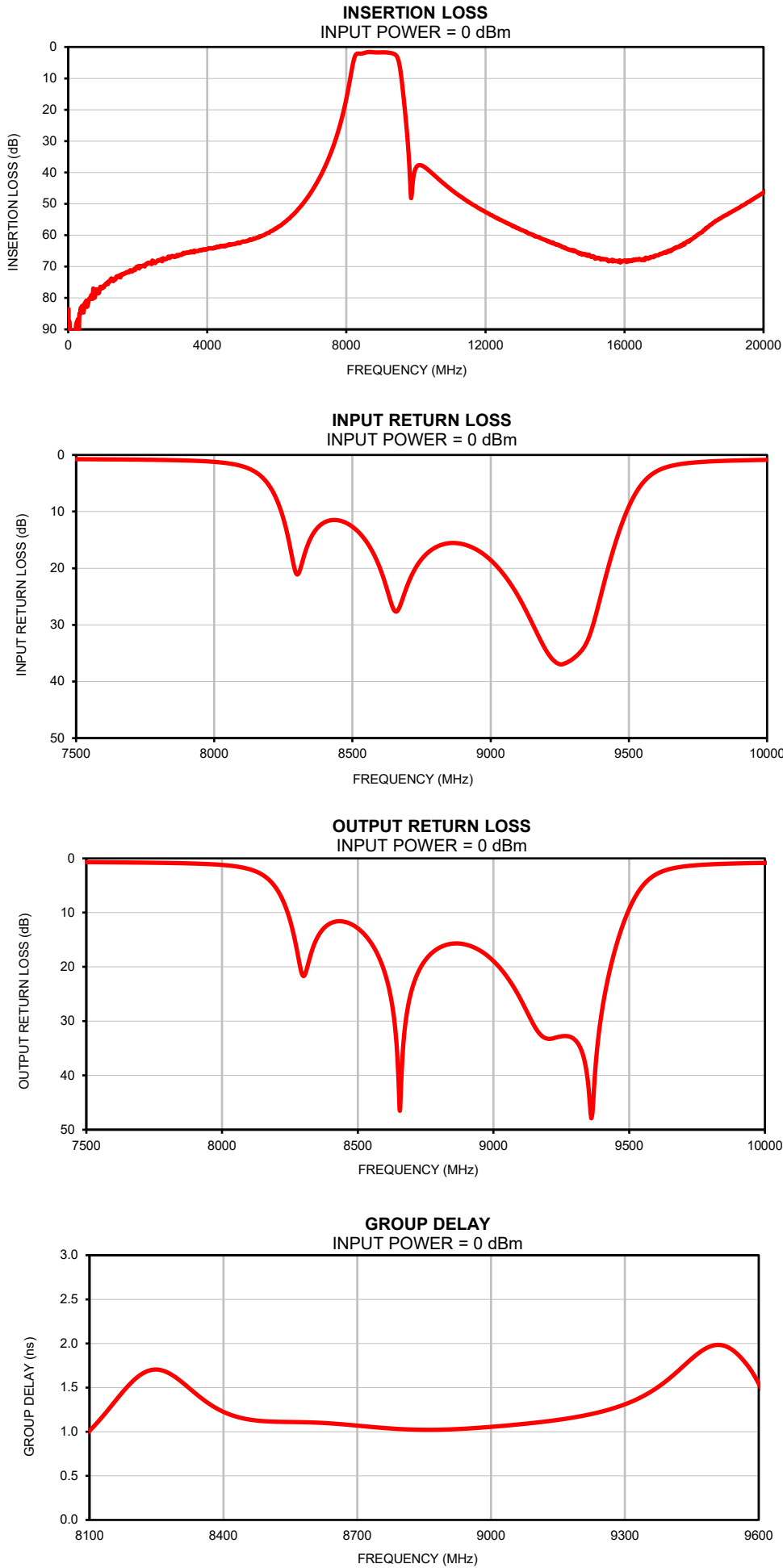
- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
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Typical Performance Data

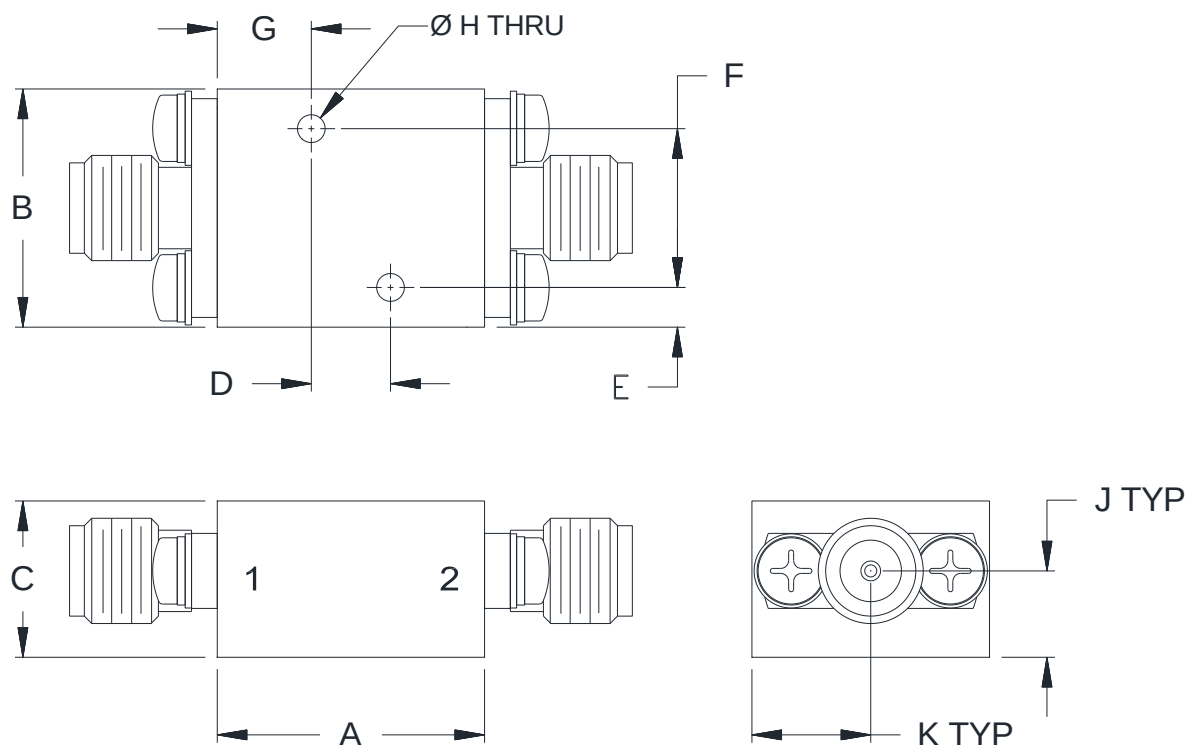
FREQ.	Insertion Loss	Input Return Loss	Output Return Loss	FREQ.	Group Delay
(MHz)	(dB)	(dB)	(dB)	(MHz)	(ns)
10	83.55	0.10	0.08	8600	1.10
100	93.80	0.23	0.19	8605	1.10
140	93.12	0.26	0.22	8610	1.10
200	94.73	0.29	0.25	8615	1.10
500	81.97	0.40	0.34	8620	1.10
700	80.25	0.43	0.37	8625	1.10
1000	76.31	0.46	0.40	8630	1.10
1500	73.48	0.47	0.41	8635	1.10
2000	70.35	0.44	0.39	8640	1.09
2500	68.91	0.39	0.35	8645	1.09
3000	66.58	0.32	0.29	8650	1.09
3500	65.48	0.26	0.24	8655	1.09
4000	64.46	0.23	0.21	8660	1.09
4400	63.38	0.23	0.21	8665	1.08
5000	62.10	0.27	0.25	8670	1.08
5300	61.36	0.32	0.28	8675	1.08
6000	57.71	0.45	0.39	8680	1.08
6200	56.13	0.49	0.42	8685	1.08
6300	55.17	0.51	0.44	8690	1.07
6500	53.13	0.55	0.48	8695	1.07
6600	51.90	0.57	0.50	8700	1.07
7000	46.04	0.64	0.57	8705	1.07
7400	37.82	0.72	0.66	8710	1.06
7500	35.26	0.74	0.69	8715	1.06
7660	30.53	0.80	0.75	8720	1.06
7910	20.94	1.00	0.97	8725	1.06
8000	16.50	1.22	1.20	8730	1.05
8230	3.53	8.36	8.43	8735	1.05
8500	1.96	12.69	12.88	8740	1.05
8600	1.67	20.05	21.15	8745	1.05
8630	1.62	24.56	28.10	8750	1.05
8650	1.61	27.35	40.77	8755	1.04
8750	1.65	18.41	18.67	8760	1.04
8800	1.70	16.33	16.48	8765	1.04
8820	1.71	15.90	16.04	8770	1.04
8860	1.73	15.54	15.67	8775	1.04
8900	1.74	15.76	15.91	8780	1.03
9000	1.71	18.56	18.93	8785	1.03
9470	3.37	12.78	13.22	8790	1.03
9625	13.83	2.34	2.34	8795	1.03
9700	21.93	1.52	1.50	8800	1.03
9780	32.32	1.18	1.15	8805	1.03
10000	38.55	0.87	0.83	8810	1.03
10200	37.95	0.77	0.73	8815	1.03
11000	45.35	0.71	0.67	8820	1.02
11500	49.31	0.73	0.70	8825	1.02
12000	52.56	0.74	0.72	8830	1.02
12500	55.43	0.75	0.73	8835	1.02
13000	58.21	0.74	0.71	8840	1.02
13500	60.54	0.69	0.66	8845	1.02
14000	62.80	0.62	0.58	8850	1.02
14500	64.82	0.54	0.49	8855	1.02
15000	66.46	0.46	0.42	8860	1.02
15500	67.72	0.42	0.38	8865	1.02
16000	68.25	0.44	0.38	8870	1.02
16500	67.93	0.51	0.45	8875	1.02
17000	66.17	0.63	0.56	8880	1.02
18000	60.78	0.89	0.85	8885	1.02
19000	53.06	1.02	1.01	8890	1.02
20000	46.40	0.89	0.89	8900	1.02

Typical Performance Curves



Outline Dimensions

UK3042



CASE#	A	B	C	D	E	F
UK3042	.68 (17.1)	.60 (15.2)	.39 (10.0)	.200 (5.08)	.10 (2.5)	.400 (10.16)

CASE#	G	H	J	K	WT.GRAMS
UK3042	.24 (6.0)	.070 (1.78)	.22 (5.5)	.30 (7.6)	24

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

Notes:

- Case material: Brass alloy.
- Case Finish:
 - Case & Cover of the units –Gold plating.
- Refer to the individual model data sheet for the type of connectors available.



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Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

RF/IF MICROWAVE COMPONENTS



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-40° to 100° C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Humidity	90 to 95% RH, 40°C, 96 hours Units may require bake-out after humidity to restore full performance.	MIL-STD-202. method 103. Condition B
Thermal Shock	-40°C to 100°C, 100 cycles	MIL-STD-202, Method 107, Condition A-3, except -40°C and +100°C