



THIN FILM COAXIAL

Bandpass Filter

ZABF-K7R75G+

50Ω 6300 to 9200 MHz 2.92mm Female

KEY FEATURES

- Low Passband Insertion Loss 2 dB Typ.
- High Rejection 60 dB Typ.
- Small Size

APPLICATIONS

- X-Band Radar
- Aerospace and Defense

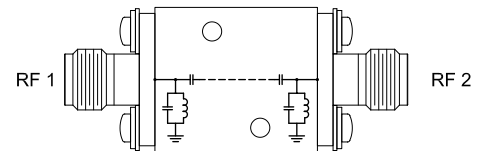


Generic photo used for illustration purposes only

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	—	—	7750	—	MHz
	Insertion Loss	F1-F2	—	2	3	dB
	Return Loss	F1-F2	—	10	—	dB
Stopband, Lower	Rejection	DC-F3	40	50	—	dB
		F3-F4	20	30	—	
Stopband, Upper	Rejection	F5-F6	20	30	—	dB
		F6-F7	40	60	—	

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 $\pm 3\%$

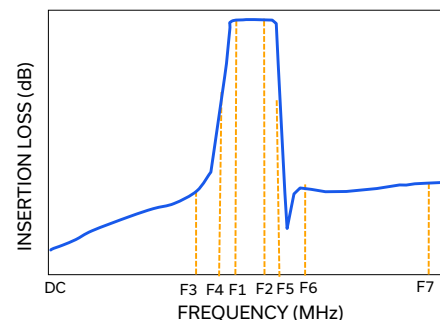
ABSOLUTE MAXIMUM RATINGS³

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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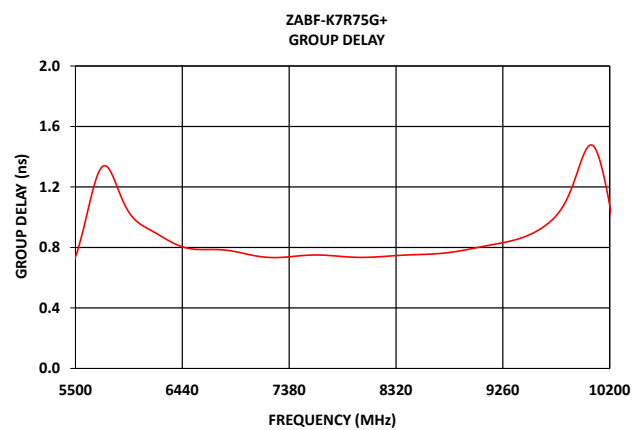
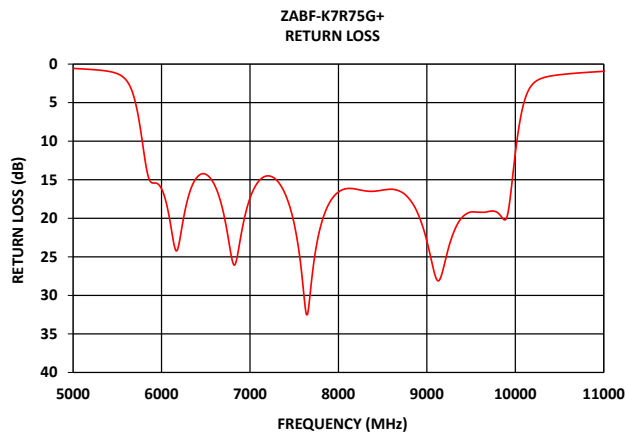
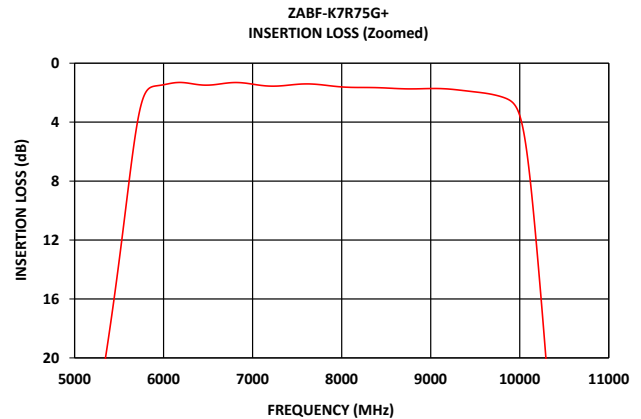
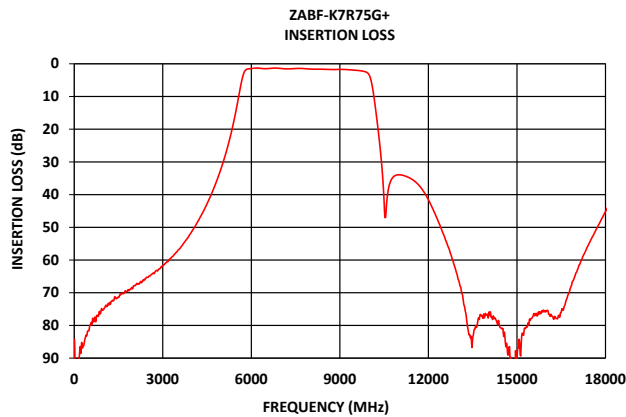
Bandpass Filter

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Mini-Circuits

50 Ω 6300 to 9200 MHz 2.92mm Female

TYPICAL PERFORMANCE GRAPHS AT +25°C





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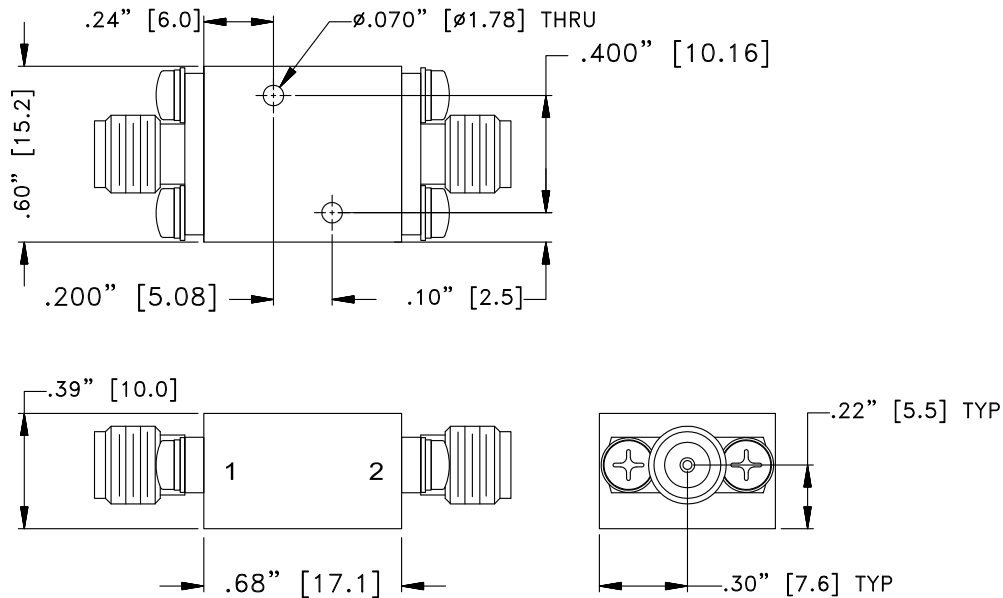
50Ω 6300 to 9200 MHz 2.92mm Female

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-K7R75G+

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



Mini-Circuits

THIN FILM COAXIAL

Bandpass Filter

ZABF-K7R75G+

50Ω

6300 to 9200 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

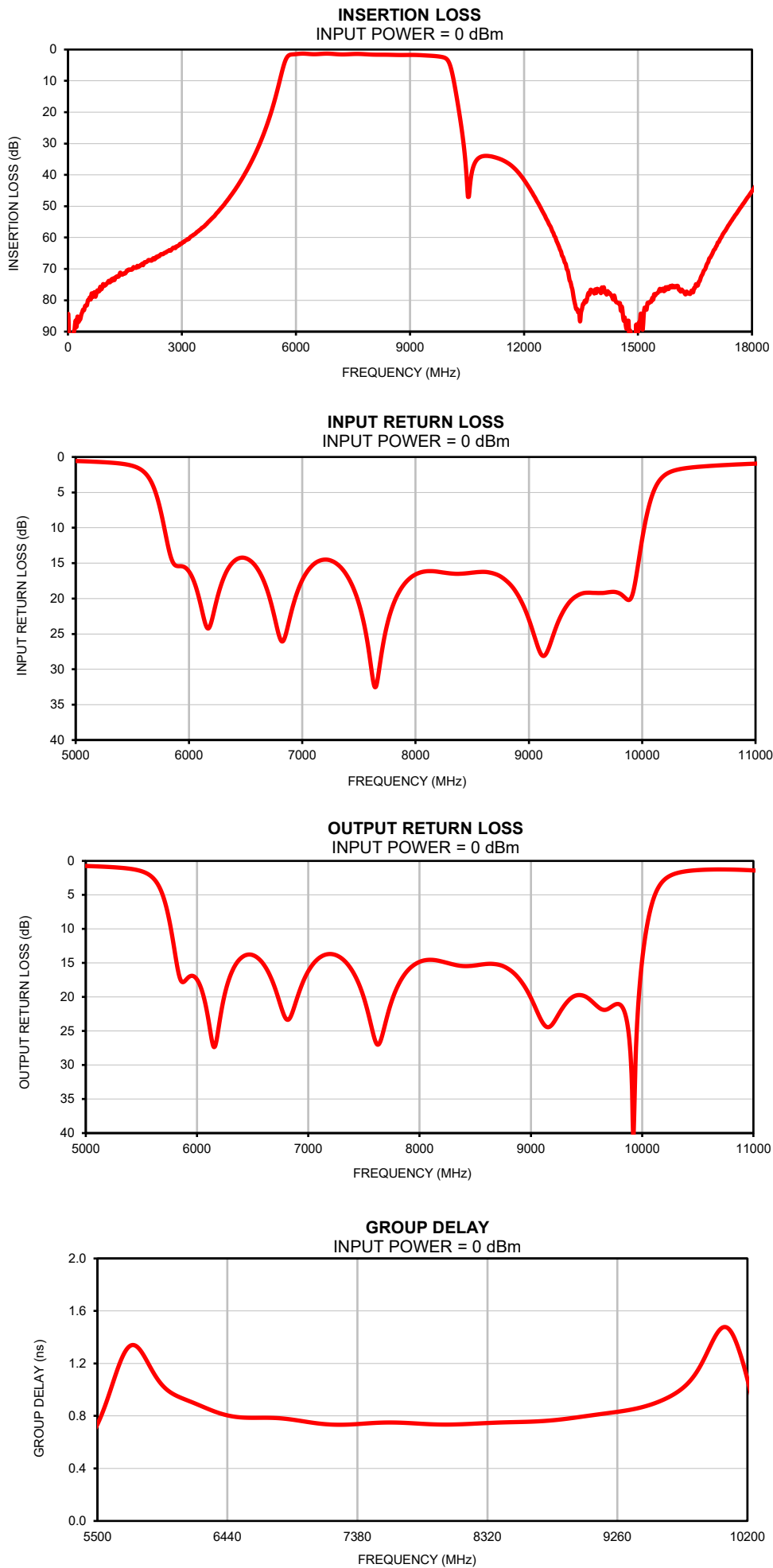
- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
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- C. The parts covered by this specification document are 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



Typical Performance Data

FREQ.	Insertion Loss	Input Return Loss	Output Return Loss	FREQ.	Group Delay
(MHz)	(dB)	(dB)	(dB)	(MHz)	(ns)
10	84.35	0.12	0.19	6300	0.85
100	92.97	0.23	0.30	6310	0.85
125	92.89	0.25	0.32	6320	0.85
200	86.48	0.29	0.37	6350	0.83
500	81.60	0.39	0.49	6400	0.82
700	77.42	0.43	0.54	6450	0.80
1000	75.02	0.45	0.57	6500	0.79
1500	71.49	0.45	0.53	6550	0.79
2000	68.14	0.41	0.45	6600	0.79
2500	65.32	0.35	0.36	6650	0.79
3000	61.77	0.29	0.30	6700	0.79
3500	57.22	0.26	0.30	6750	0.79
4000	51.04	0.28	0.38	6800	0.78
4400	44.67	0.35	0.49	6850	0.78
5000	31.35	0.57	0.74	6900	0.77
5340	20.28	0.84	1.05	6950	0.77
5590	9.10	1.95	2.29	7000	0.76
5730	3.26	6.34	7.21	7050	0.75
6300	1.38	17.33	16.81	7100	0.74
6500	1.49	14.30	13.84	7150	0.74
6600	1.44	15.69	15.25	7200	0.73
7000	1.42	17.38	16.19	7250	0.73
7750	1.45	23.63	20.58	7300	0.73
8000	1.61	16.59	14.83	7350	0.74
8100	1.64	16.14	14.54	7400	0.74
8500	1.68	16.34	15.36	7450	0.74
9000	1.72	22.97	20.12	7500	0.75
9100	1.72	27.65	23.61	7550	0.75
9200	1.75	25.87	23.86	7600	0.75
9970	3.09	14.55	20.04	7650	0.75
10120	8.06	4.17	4.78	7700	0.75
10250	16.71	2.10	2.19	7750	0.75
10300	20.48	1.84	1.86	7800	0.74
10425	31.67	1.50	1.46	7850	0.74
11000	33.94	0.94	1.40	7900	0.74
11100	34.04	0.88	1.51	7950	0.74
11200	34.28	0.83	1.66	8000	0.73
11300	34.63	0.78	1.84	8050	0.73
11400	35.08	0.74	2.06	8100	0.74
11500	35.68	0.70	2.29	8150	0.74
11600	36.42	0.67	2.50	8200	0.74
11700	37.36	0.65	2.64	8250	0.74
11800	38.54	0.63	2.67	8300	0.75
11900	39.95	0.61	2.57	8350	0.75
12000	41.58	0.59	2.38	8400	0.75
12100	43.41	0.58	2.14	8450	0.75
12200	45.39	0.57	1.91	8500	0.75
12300	47.43	0.57	1.70	8550	0.75
12400	49.61	0.57	1.52	8600	0.76
12500	51.91	0.57	1.38	8650	0.76
13000	65.71	0.60	0.99	8700	0.76
13500	83.85	0.67	0.87	8750	0.76
13800	77.12	0.72	0.84	8800	0.77
14000	76.59	0.76	0.84	8850	0.77
14200	77.09	0.79	0.84	8900	0.78
14500	81.13	0.84	0.84	8950	0.79
14800	89.77	0.89	0.85	9000	0.79
15000	90.18	0.91	0.85	9100	0.81
15500	77.79	0.94	0.87	9150	0.82
16000	75.52	0.92	0.87	9200	0.82

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.



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



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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