



THIN FILM COAXIAL

# Bandpass Filter

## ZABF-K7125+

50Ω 6750 to 7500 MHz 2.92mm Female

### KEY FEATURES

- Low Passband Insertion Loss 2.1 dB Typ.
- High Rejection 53 dB Typ.
- Small Size

### APPLICATIONS

- Wireless Communication Systems
- Military and Defense
- Test and Measurement

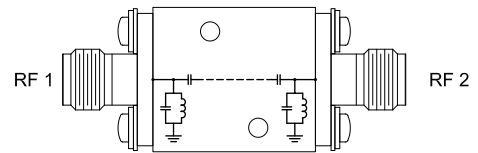


Generic photo used for illustration purposes only

### 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 SPECIFICATIONS AT<sup>1</sup> +25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Units
Passband	Center Frequency <sup>2</sup>	—	—	—	7125	—	MHz
	Insertion Loss	F1-F2	6750 - 7500	—	2.1	3	dB
	Return Loss	F1-F2	6750 - 7500	—	12	—	dB
Stopband, Lower	Rejection	DC-F3	DC - 5250	40	53	—	dB
		F3-F4	5250 - 5800	20	37	—	dB
Stopband, Upper	Rejection	F5-F6	8500 - 9000	20	45	—	dB
		F6-F7	9000 - 13000	38	46	—	dB
		F7-F8	13000 - 14000	—	40	—	dB

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

2. Typical variation ± 3%

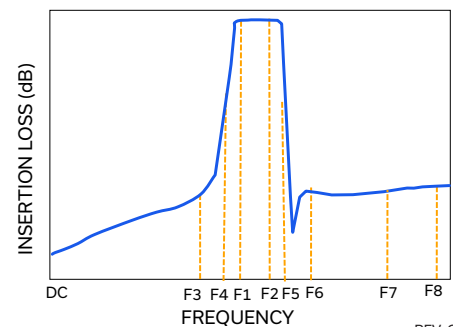
### ABSOLUTE MAXIMUM RATINGS<sup>3</sup>

Parameter	Ratings
Operating Temperature	-55 °C to +125 °C
Storage Temperature	-55 °C to +125 °C
Input Power <sup>4</sup>	1W Max. 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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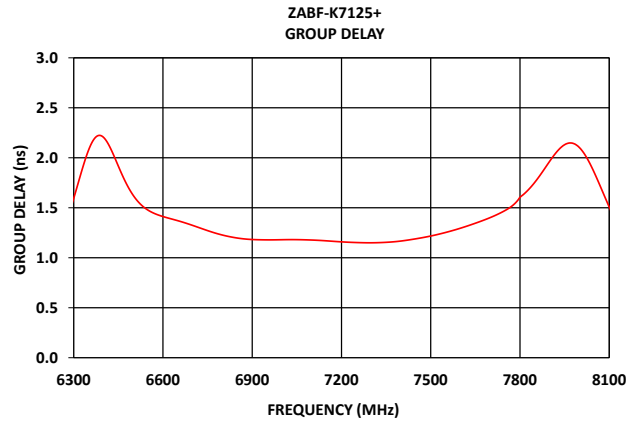
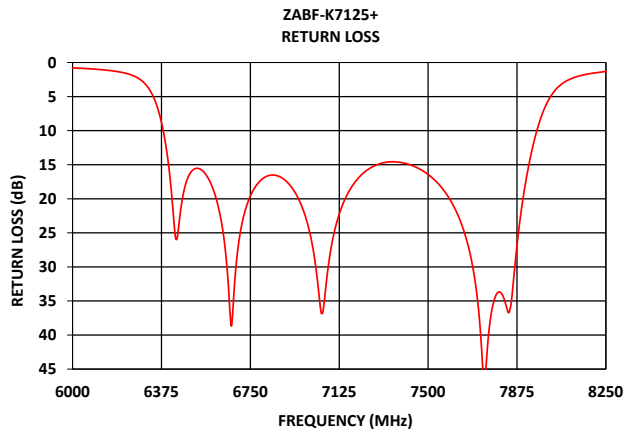
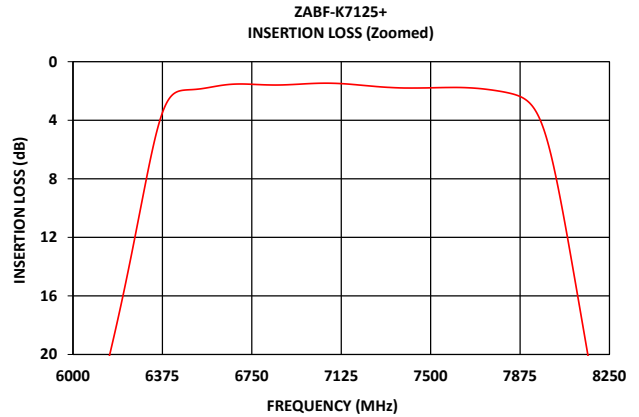
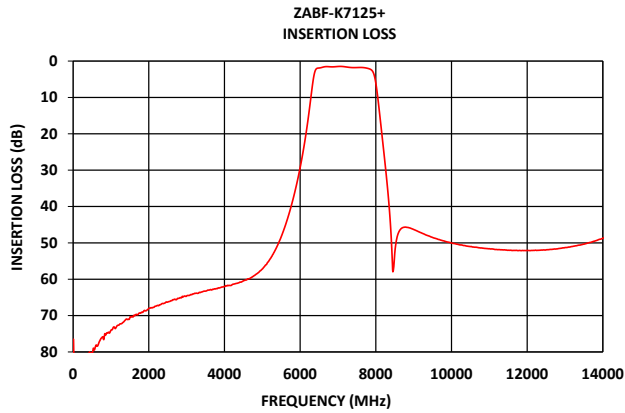
Mini-Circuits

50Ω

6750 to 7500 MHz

2.92mm Female

### TYPICAL PERFORMANCE GRAPHS AT +25°C





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# Bandpass Filter

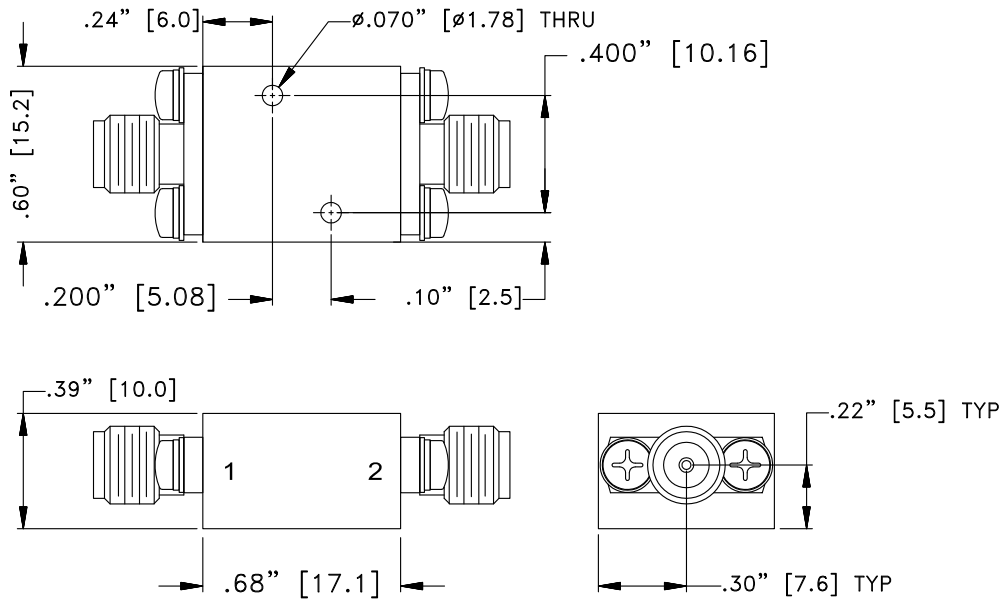
## ZABF-K7125+

50Ω      6750 to 7500 MHz      2.92mm Female

### CONNECTOR DESCRIPTION

Function	Marking on Unit	Connector
RF1 <sup>1</sup>	1	2.92mm Female
RF2 <sup>1</sup>	2	2.92mm Female

### CASE STYLE DRAWING



Unit weight: 24grams

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

### PRODUCT MARKING\*: ZABF-K7125+

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



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# Bandpass Filter

## ZABF-K7125+

Mini-Circuits

50Ω    6750 to 7500 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

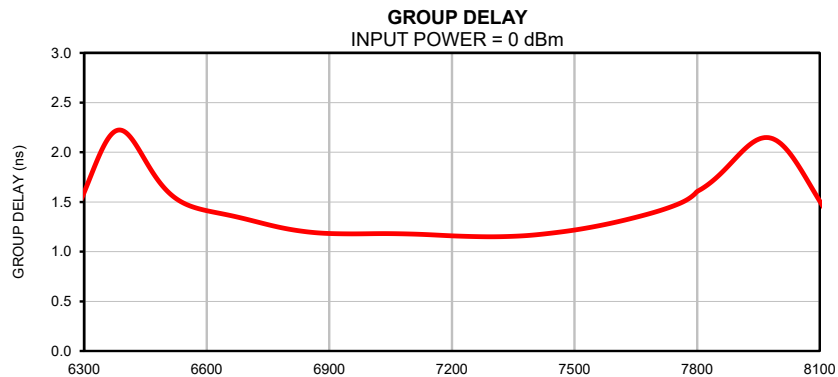
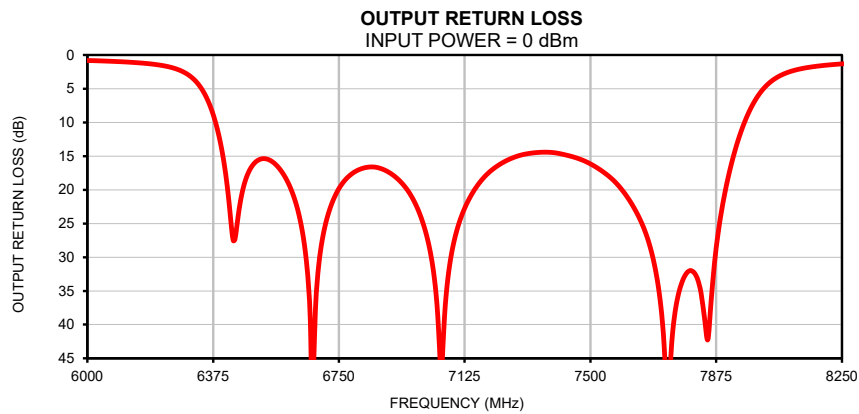
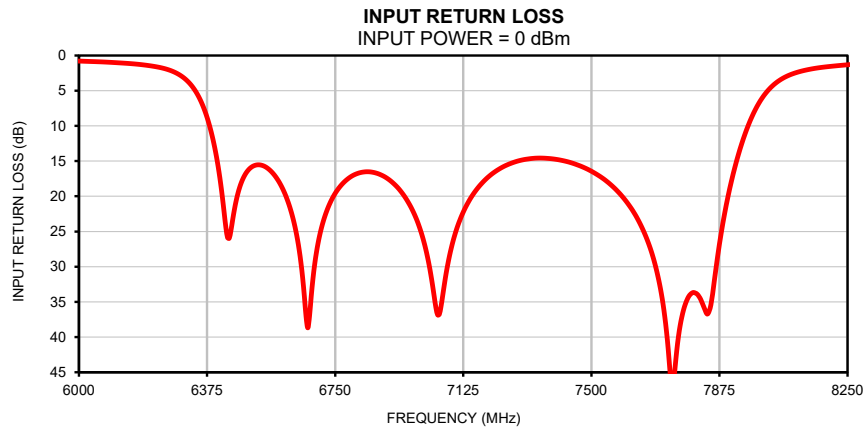
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- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
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## Typical Performance Data

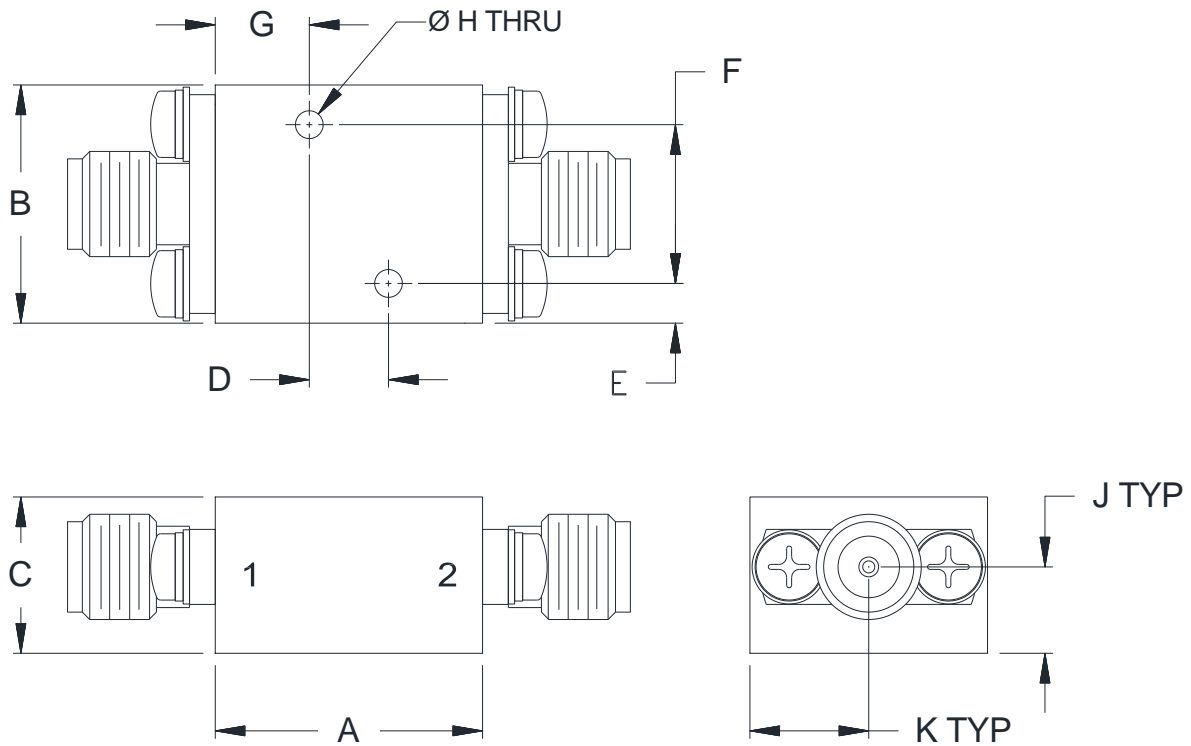
FREQ.	Insertion Loss	Input Return Loss	Output Return Loss	FREQ.	Group Delay
(MHz)	(dB)	(dB)	(dB)	(MHz)	(ns)
10	76.50	0.08	0.10	6750	1.27
110	92.48	0.22	0.25	6760	1.26
210	86.15	0.28	0.31	6770	1.25
310	85.09	0.32	0.35	6780	1.24
510	80.35	0.38	0.41	6790	1.23
710	76.82	0.42	0.45	6800	1.23
1010	73.91	0.46	0.47	6810	1.22
1260	72.26	0.47	0.48	6820	1.21
1410	70.93	0.46	0.48	6830	1.21
1660	69.67	0.45	0.47	6840	1.20
1810	69.04	0.45	0.46	6850	1.20
2035	67.96	0.45	0.44	6860	1.19
2210	67.29	0.43	0.42	6870	1.19
2460	66.24	0.40	0.39	6880	1.19
2610	65.89	0.37	0.37	6890	1.18
3110	64.20	0.31	0.30	6900	1.18
3535	63.15	0.25	0.25	6910	1.18
4110	61.76	0.17	0.20	6920	1.18
4560	60.21	0.17	0.21	6930	1.18
5250	53.72	0.27	0.32	6940	1.18
5800	38.46	0.55	0.60	6950	1.18
6000	29.29	0.79	0.82	6960	1.18
6160	19.60	1.19	1.19	6970	1.18
6300	8.65	2.92	2.91	6980	1.18
6400	2.61	13.71	13.84	6990	1.18
6750	1.54	19.59	19.83	7000	1.18
6800	1.58	17.10	17.26	7010	1.18
6900	1.58	17.38	17.44	7020	1.18
7000	1.49	24.86	24.83	7030	1.18
7100	1.48	25.53	26.33	7040	1.18
7125	1.50	22.25	22.74	7050	1.18
7150	1.52	20.01	20.34	7060	1.18
7200	1.59	17.18	17.31	7070	1.18
7300	1.73	14.82	14.77	7080	1.18
7400	1.80	14.78	14.56	7090	1.18
7500	1.79	16.44	16.16	7100	1.18
7930	3.11	14.15	14.36	7110	1.18
8040	9.04	3.91	3.87	7125	1.17
8150	19.14	1.86	1.84	7130	1.17
8250	28.75	1.32	1.32	7140	1.17
8350	39.72	1.03	1.05	7150	1.17
8500	52.92	0.78	0.82	7160	1.17
8700	45.87	0.60	0.67	7170	1.16
9000	46.32	0.51	0.57	7180	1.16
9200	47.23	0.51	0.55	7190	1.16
9400	48.10	0.52	0.54	7200	1.16
9600	48.85	0.53	0.55	7210	1.16
9800	49.46	0.56	0.56	7220	1.16
10000	50.04	0.59	0.58	7230	1.15
10200	50.50	0.62	0.60	7240	1.15
10400	50.88	0.64	0.61	7250	1.15
10600	51.18	0.65	0.63	7260	1.15
10800	51.40	0.66	0.64	7270	1.15
11000	51.60	0.68	0.65	7280	1.15
11200	51.83	0.69	0.67	7290	1.15
11400	51.92	0.70	0.69	7300	1.15
11600	52.11	0.70	0.70	7350	1.15
12000	52.09	0.69	0.71	7400	1.17
13000	51.29	0.69	0.71	7450	1.19
14000	48.71	0.67	0.66	7500	1.22

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:

1. Case material: Brass alloy.
2. Case Finish:
  - a. Case & Cover of the units –Gold plating.
3. 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



The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: [www.minicircuits.com](http://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