Coaxial

High Pass Filter

ZHFW-K7500+

50Ω 8200 to 21000 MHz

Generic photo used for illustration purposes only

CASE STYLE: UK3042

The Big Deal

- Good power handling, 2.5W
- Temperature stable
- Broadband connectorized package
- Good rejection, 49 dB typical

Product Overview

ZHFW-K7500+ is a 50Ω high pass filter built in broadband connectorized package. Covering 8200-21000 MHz bandwidth, these units offer good matching within the passband and good rejection in stopband. ZHFW-K7500+ offer low insertion loss, and excellent power handling capability. It handles up to 2.5W RF input power and provides a wide operating temperature range from -55°C to 125°C.

Key Features

Feature	Advantages
Low passband insertion loss	Suitable for high performance application.
2.5W Power handling	Supports a range of system power requirements.
Connectorized package	The connectorized package is easy to interface with other devices and well suited for test setups.

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Connectors	Model
2.92mm-F	ZHFW-K7500+

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

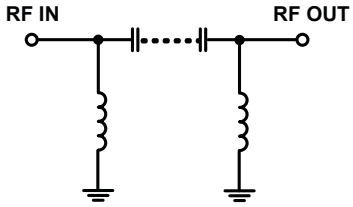
Features

- Very good rejection, 49dB typ.
- Temperature stable

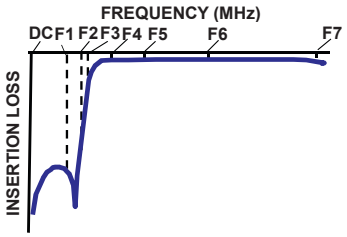
Applications

- Test and measurements
- Military applications
- Telecommunications and broadband wireless systems

Functional Schematic



Typical Frequency Response



Electrical Specifications at 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Stop Band	Rejection Loss	DC-F1	DC - 4000	42	49	-	dB
		F1-F2	4000 - 6000	25	34	-	dB
	Freq. Cut-Off	F3*	7600	-	3.0	-	dB
Pass Band	Insertion Loss	F4-F5	8200 - 9500	-	2.2	-	dB
		F5-F6	9500 - 15000	-	1.6	2.4	dB
		F6-F7	15000 - 21000	-	2.4	-	dB
	Return Loss	F4-F7	8200 - 21000	-	10	-	dB

In Applications where DC voltage is present at either input or output ports, DC blocks are required.
* Typically, a ±5% frequency deviation from the stated value may occur on a unit-to-unit basis.

Maximum Ratings	
Operating Temperature	-55°C to 125°C
Storage Temperature	-55°C to 125°C
RF Power Input*	2.5W max.@25°C

*Passband rating, derate linearly to 0.7 at 125°C ambient
Permanent damage may occur if any of these limits are exceeded.

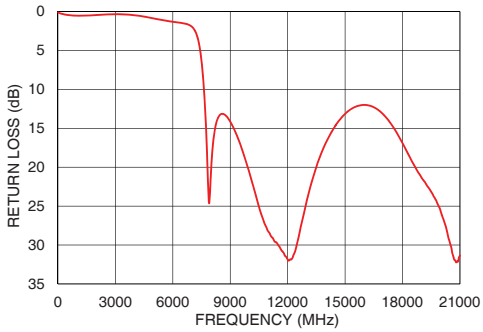
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)
10	90.76	0.10
500	58.93	0.42
1000	53.62	0.51
2000	49.88	0.43
3000	50.95	0.33
4000	58.60	0.46
5000	82.38	0.87
6000	42.63	1.30
6440	30.33	1.45
6820	20.47	1.67
7240	10.17	2.91
7600	3.91	9.07
8200	1.99	15.11
9000	1.60	14.13
9500	1.40	16.88
12000	1.11	31.87
15000	1.39	13.14
16000	1.47	11.99
18000	1.29	16.91
21000	1.41	31.36

ZHFW-K7500+
INSERTION LOSS (zoomed)

ZHFW-K7500+
INSERTION LOSS

ZHFW-K7500+
RETURN LOSS

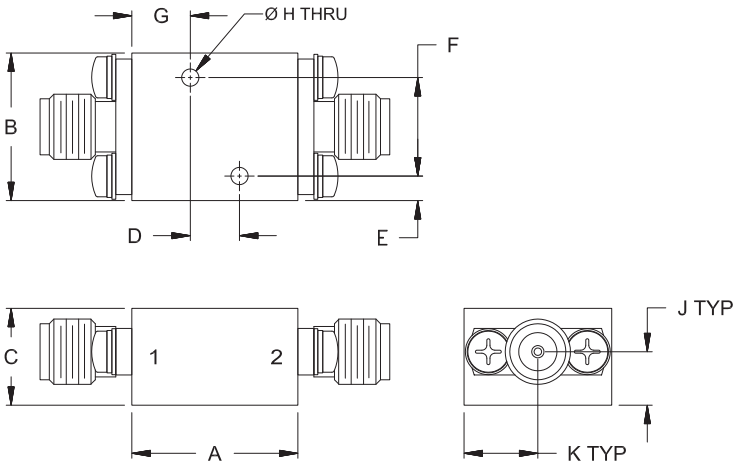


Notes
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's 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/MCLStore/terms.jsp

Coaxial Connections

PORT - 1	2.92mm-Female
PORT - 2	2.92mm-Female

Outline Drawing



Outline Dimensions (inch / mm)

A	B	C	D	E	F
.68	**.60**	**.39**	**.200**	**.10**	**.400**
17.1	15.2	10.0	5.08	2.5	10.16

G	H	J	K		Wt.
.24	**.070**	**.22**	**.30**		grams
6.0	1.78	5.5	7.6		**24**

Note: Please refer to case style drawing for details

Coaxial High Pass Filter ZHFW-K7500+

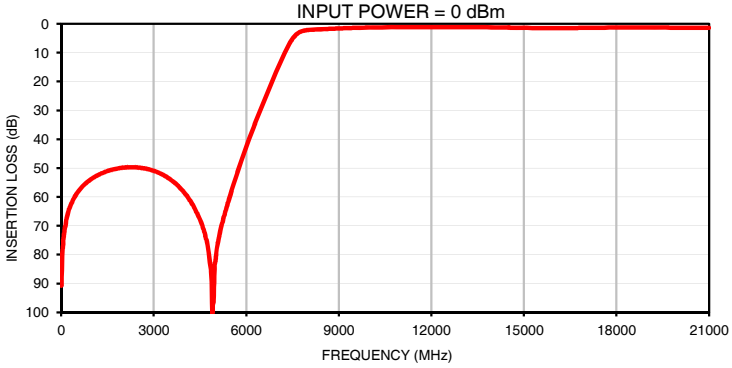
Typical Performance Data

FREQ. (MHz)	Insertion Loss (dB)	Input Return Loss (dB)	Output Return Loss (dB)
10	90.76	0.10	0.12
50	78.02	0.16	0.19
100	72.59	0.20	0.24
160	68.27	0.25	0.29
200	66.44	0.28	0.32
260	64.13	0.31	0.35
300	63.11	0.34	0.37
360	61.73	0.37	0.39
400	60.73	0.38	0.41
460	59.69	0.41	0.43
500	58.93	0.42	0.44
560	58.02	0.44	0.45
600	57.49	0.45	0.46
700	56.29	0.48	0.48
800	55.26	0.49	0.49
900	54.39	0.51	0.50
1000	53.62	0.51	0.51
1200	52.40	0.52	0.51
1400	51.42	0.51	0.50
1600	50.70	0.49	0.48
2000	49.88	0.43	0.43
2500	49.80	0.37	0.37
3000	50.95	0.33	0.33
3500	53.63	0.35	0.35
4000	58.60	0.46	0.44
4500	67.82	0.64	0.60
5000	82.38	0.87	0.80
5500	58.77	1.10	1.02
6000	42.63	1.30	1.23
6440	30.33	1.45	1.40
6820	20.47	1.67	1.63
7240	10.17	2.91	2.82
7600	3.91	9.07	8.53
8200	1.99	15.11	14.43
9000	1.60	14.13	13.87
9500	1.40	16.88	16.38
9800	1.32	19.10	18.14
10000	1.28	20.71	19.27
10300	1.23	23.30	20.83
10600	1.19	25.88	22.18
11000	1.15	28.29	23.74
11300	1.14	29.48	25.17
11600	1.12	30.34	26.94
12000	1.11	31.87	30.01
12300	1.10	31.30	30.29
12600	1.10	28.70	27.64
13000	1.11	24.28	23.36
13300	1.13	21.52	20.76
13600	1.16	19.21	18.68
14000	1.21	16.83	16.53
14300	1.26	15.44	15.28
14600	1.32	14.27	14.28
15000	1.39	13.14	13.29
15500	1.45	12.27	12.56
16000	1.47	11.99	12.35
17000	1.39	13.22	13.70
18000	1.29	16.91	17.62
19000	1.28	21.35	23.60
20000	1.33	25.72	31.37
21000	1.41	31.36	33.92

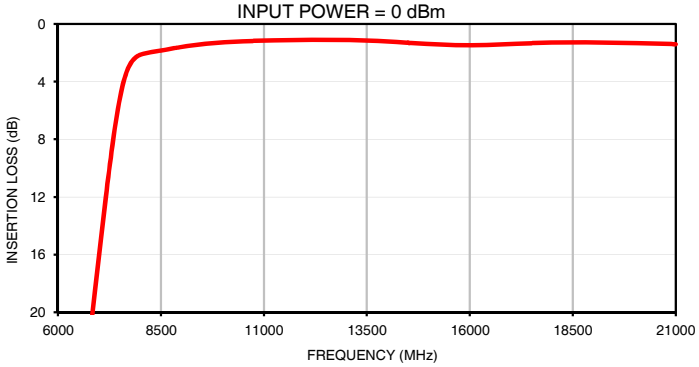
FREQ. (MHz)	Group Delay (ns)
8200	0.41
8400	0.37
8600	0.34
8800	0.32
9000	0.31
9200	0.30
9400	0.29
9600	0.28
9800	0.27
10000	0.26
10200	0.26
10400	0.25
10600	0.25
10800	0.24
11000	0.24
11200	0.23
11400	0.23
11600	0.23
11800	0.23
12000	0.22
12200	0.22
12400	0.22
12600	0.22
12800	0.22
13000	0.22
13200	0.21
13400	0.21
13600	0.21
13800	0.21
14000	0.21
14200	0.21
14400	0.21
14600	0.20
14800	0.20
15000	0.20
15200	0.20
15400	0.20
15600	0.20
15800	0.20
16000	0.20
16200	0.20
16400	0.20
16600	0.20
16800	0.20
17000	0.20
17200	0.20
17400	0.20
17600	0.20
17800	0.20
18000	0.20
18200	0.20
18400	0.20
18600	0.20
18800	0.20
19000	0.20
19200	0.20
19500	0.20
20000	0.20
20500	0.21
21000	0.21

Typical Performance Curves

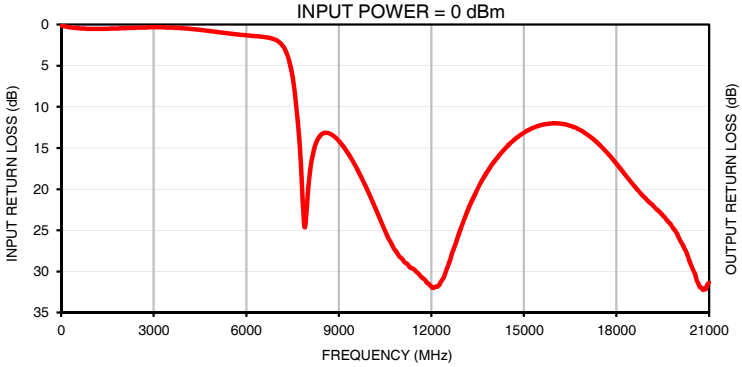
INSERTION LOSS
INPUT POWER = 0 dBm



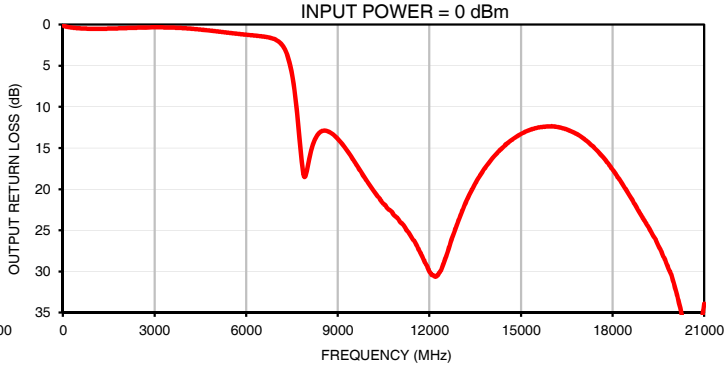
INSERTION LOSS (zoomed)
INPUT POWER = 0 dBm



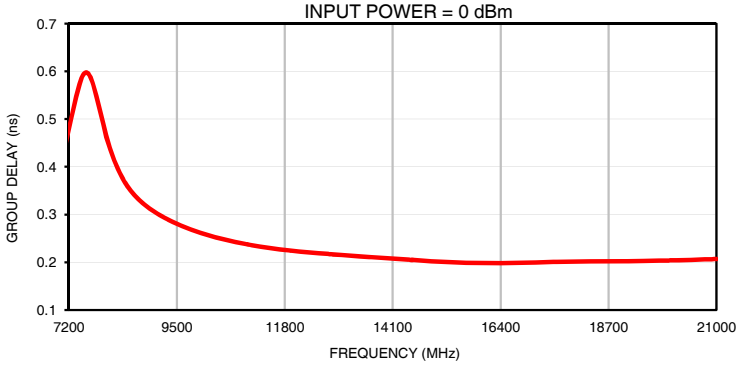
INPUT RETURN LOSS
INPUT POWER = 0 dBm



OUTPUT RETURN LOSS
INPUT POWER = 0 dBm



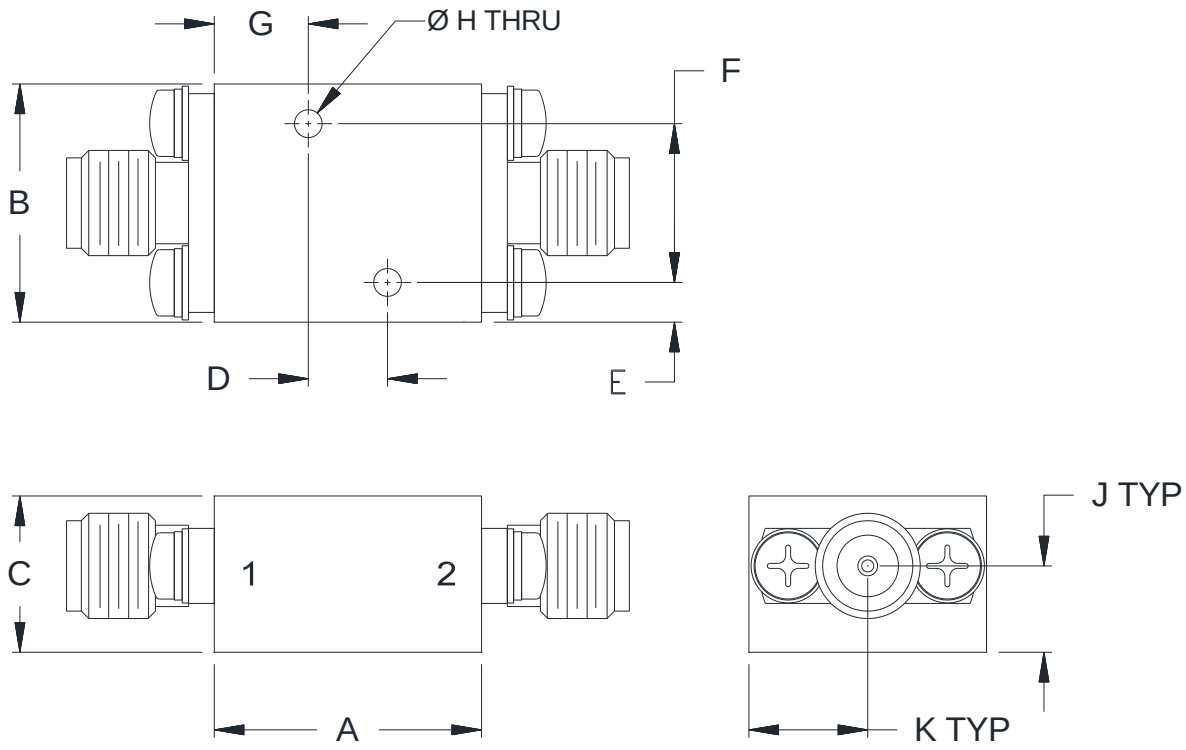
GROUP DELAY
INPUT POWER = 0 dBm



Case Style UK

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. ± .050; 3 Pl. ± .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.

Mini-Circuits

Environmental Specifications ENV124

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	-55° to 125° C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 125° C Ambient Environment	Individual Model Data Sheet