

Coaxial High Pass Filter

ZHFW-K6010+

50Ω 6400 to 20000 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, 52 dB typical

Product Overview

ZHFW-K6010+ is a 50Ω high pass filter built in broadband connectorized package. Covering 6400-20000 MHz bandwidth, these units offer good matching within the passband and good rejection in stopband. ZHFW-K6010+ offer low insertion loss, and good 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.

Notes

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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



High Pass Filter

50Ω 6400 to 20000 MHz

ZHFW-K6010+



Features

- Very good rejection, 52dB typ.
- Temperature stable

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Connectors Model
2.92mm-F ZHFW-K6010+

+RoHS Compliant

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

Applications

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

Electrical Specifications at 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Stop Band	Rejection Loss	DC-F1	DC - 3500	45	52	-	dB
		F1-F2	3500 - 4900	20	34	-	dB
	Freq. Cut-Off	F3*	6010	-	3	-	dB
Pass Band	Insertion Loss	F4-F5	6400 - 7700	-	2.7	-	dB
		F5-F6	7700 - 14000	-	1.3	2.1	dB
	Return Loss	F6-F7	14000 - 20000	-	2.3	-	dB
		F4-F7	6400 - 20000	-	9	-	dB

In Applications where DC voltage is present at either input or output ports, DC blocks are required.

* Typically, a $\pm 5\%$ frequency deviation from the stated value may occur on a unit-to-unit basis.

Maximum Ratings

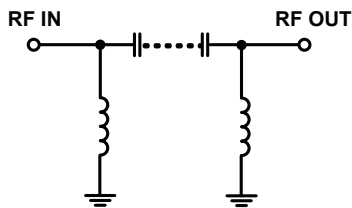
Operating Temperature	-55°C to 125°C
Storage Temperature	-55°C to 125°C
RF Power Input*	2.5W max. @25°C

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

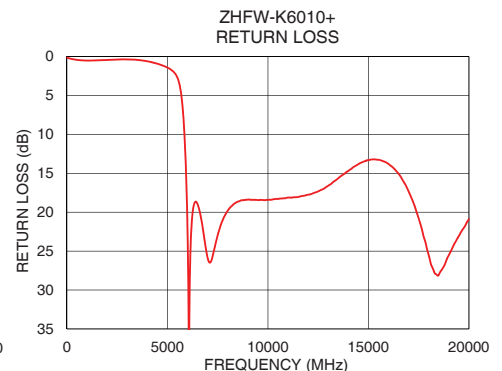
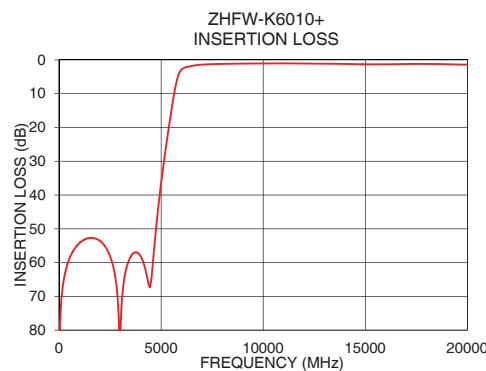
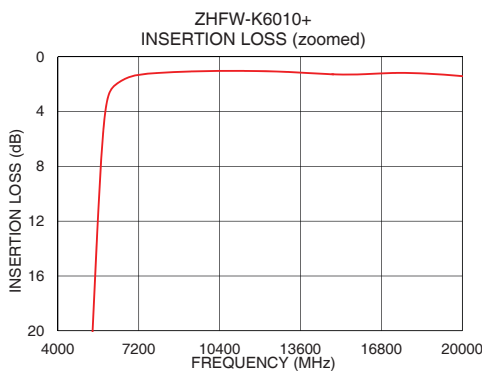
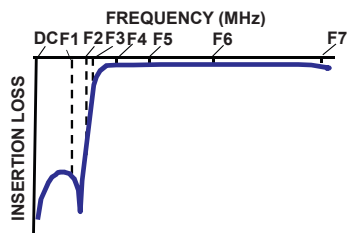
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)
10	79.05	0.11
500	58.95	0.41
1000	54.20	0.50
1500	52.71	0.48
2000	53.54	0.42
3500	58.32	0.42
4900	41.52	1.28
5140	30.01	1.61
5360	20.63	2.10
5640	9.88	4.09
6010	2.79	24.08
6400	1.89	18.64
7700	1.21	21.31
9000	1.09	18.38
10000	1.04	18.41
12000	1.05	17.74
14000	1.20	14.68
16000	1.28	13.79
18000	1.19	25.52
20000	1.42	20.89

Functional Schematic



Typical Frequency Response



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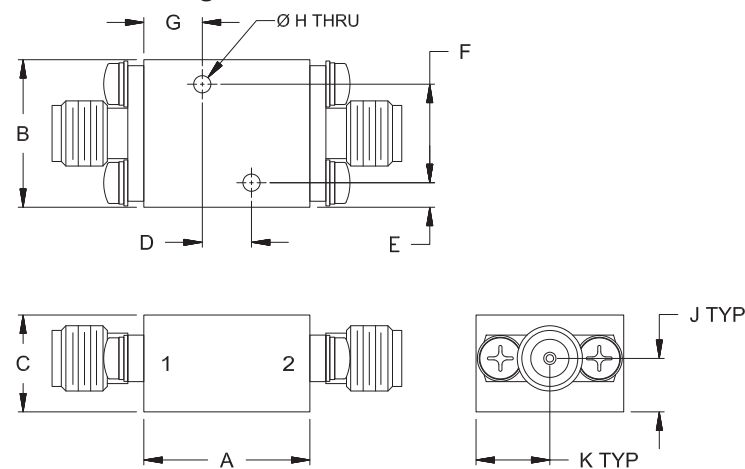


www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

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

Notes

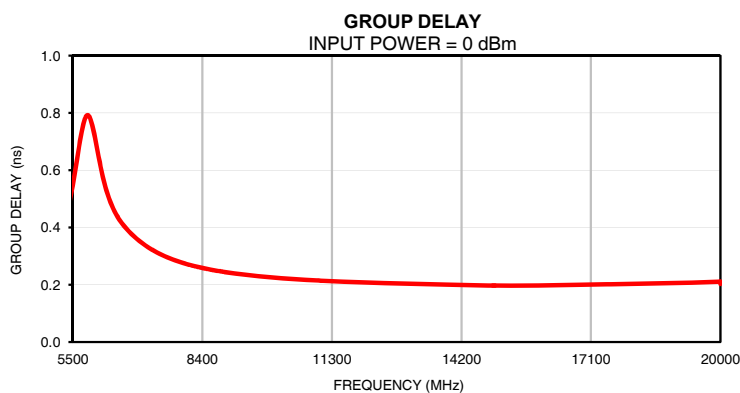
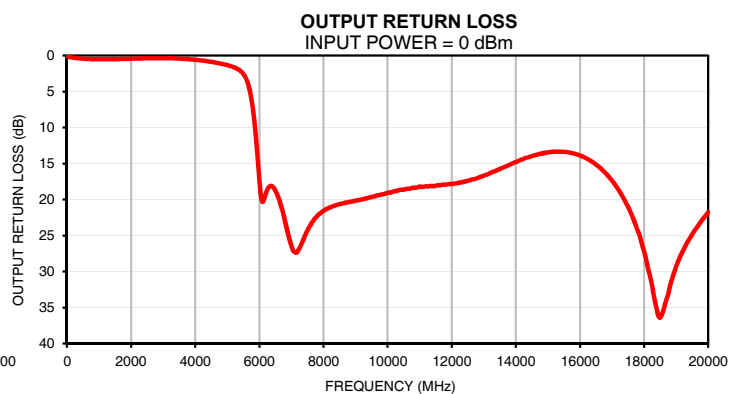
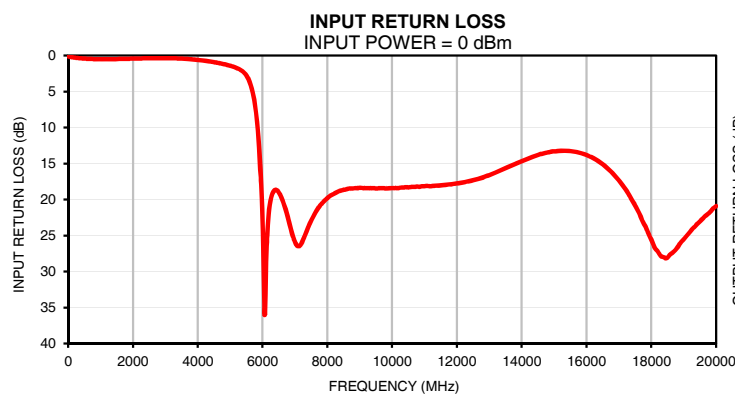
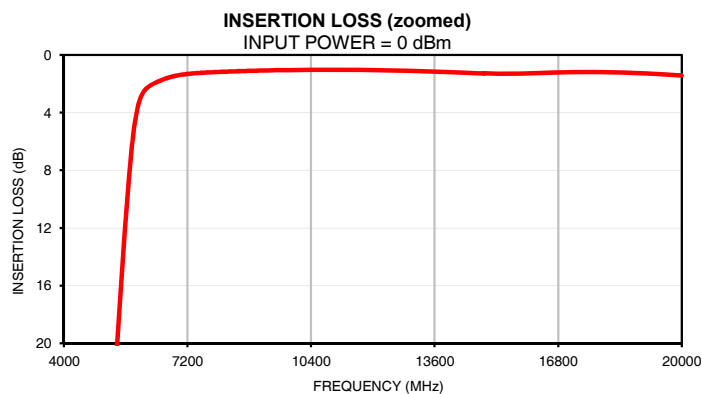
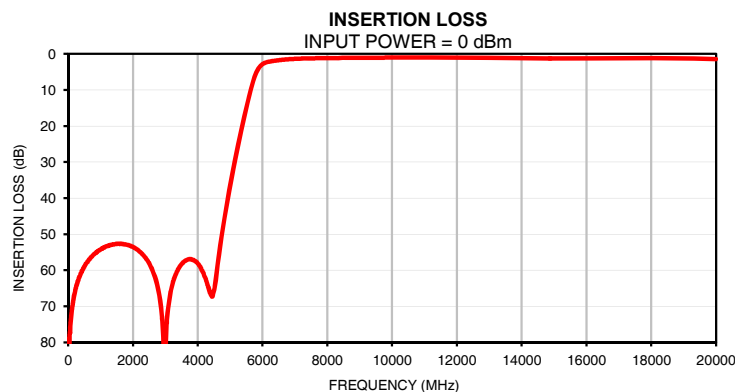
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Typical Performance Data

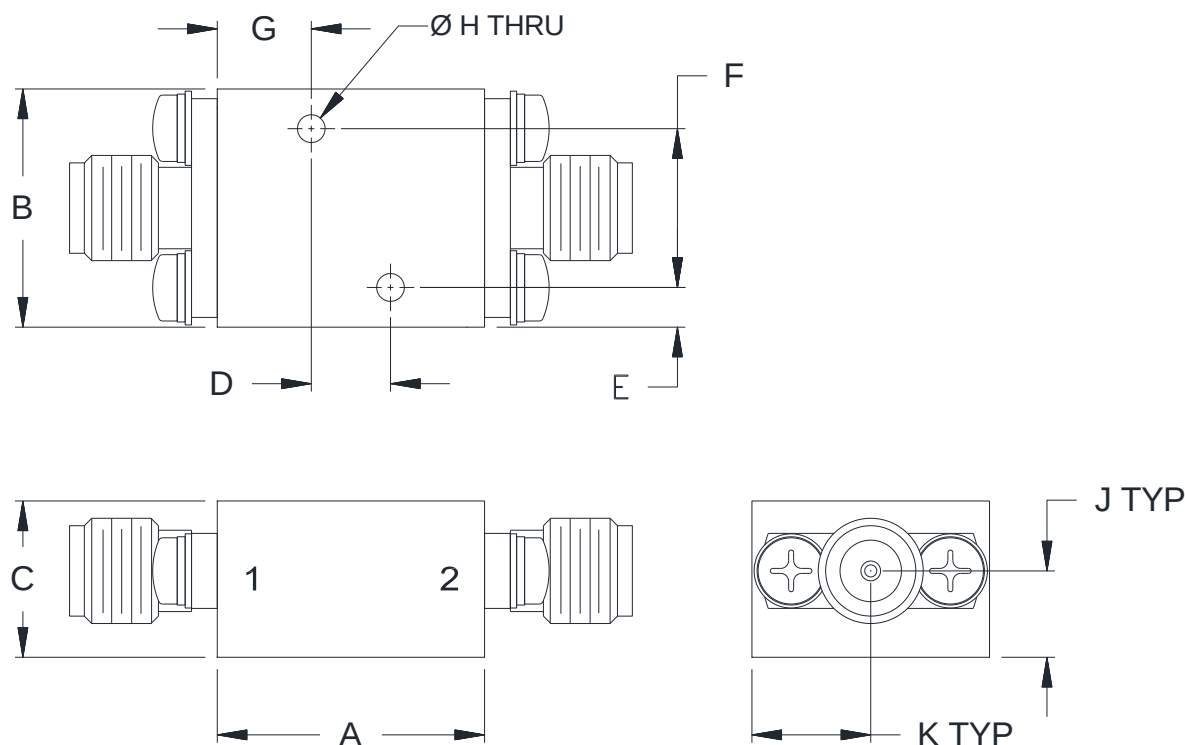
FREQ.	Insertion Loss	Input Return Loss	Output Return Loss	FREQ.	Group Delay
(MHz)	(dB)	(dB)	(dB)	(MHz)	(ns)
10	79.05	0.11	0.12	6400	0.46
50	77.22	0.17	0.17	6600	0.41
100	72.19	0.21	0.21	6800	0.38
150	68.92	0.24	0.25	7000	0.35
200	66.36	0.27	0.28	7200	0.33
250	64.38	0.31	0.32	7400	0.31
300	63.09	0.33	0.34	7600	0.30
350	61.74	0.36	0.37	7800	0.28
400	60.75	0.38	0.39	8000	0.27
450	59.83	0.40	0.41	8200	0.27
500	58.95	0.41	0.42	8400	0.26
550	58.22	0.43	0.44	8600	0.25
600	57.59	0.44	0.45	8800	0.25
700	56.47	0.46	0.47	9000	0.24
800	55.57	0.48	0.49	9200	0.24
900	54.83	0.49	0.50	9400	0.23
1000	54.20	0.50	0.51	9600	0.23
1500	52.71	0.48	0.49	9800	0.23
2000	53.54	0.42	0.43	10000	0.22
2500	58.07	0.36	0.37	10200	0.22
3000	84.74	0.35	0.35	10400	0.22
3500	58.32	0.42	0.41	10600	0.22
4000	58.13	0.59	0.58	10800	0.22
4200	61.42	0.70	0.68	11000	0.21
4500	65.83	0.91	0.87	11200	0.21
4700	53.09	1.08	1.02	11400	0.21
4900	41.52	1.28	1.21	11600	0.21
5140	30.01	1.61	1.51	11800	0.21
5360	20.63	2.10	1.96	12000	0.21
5640	9.88	4.09	3.80	12200	0.21
6010	2.79	24.08	17.73	12400	0.21
6400	1.89	18.64	18.16	12600	0.21
7000	1.39	25.89	26.41	12800	0.20
7300	1.29	25.07	26.27	13000	0.20
7700	1.21	21.31	22.83	13200	0.20
8000	1.18	19.80	21.58	13400	0.20
8200	1.16	19.20	21.10	13600	0.20
8400	1.14	18.77	20.77	13800	0.20
8600	1.12	18.56	20.52	14000	0.20
8800	1.10	18.44	20.33	14200	0.20
9000	1.09	18.38	20.14	14400	0.20
9500	1.06	18.44	19.65	14600	0.20
10000	1.04	18.41	19.08	14800	0.20
10500	1.03	18.30	18.64	15000	0.20
11000	1.03	18.12	18.19	15200	0.20
11500	1.03	18.04	18.07	15400	0.20
12000	1.05	17.74	17.84	15600	0.20
12500	1.07	17.32	17.40	15800	0.20
13000	1.10	16.59	16.67	16000	0.20
13500	1.15	15.63	15.76	16200	0.20
14000	1.20	14.68	14.77	16400	0.20
14500	1.25	13.82	13.96	16600	0.20
15000	1.29	13.30	13.44	16800	0.20
15500	1.30	13.26	13.36	17000	0.20
16000	1.28	13.79	13.86	17500	0.20
16500	1.24	15.06	15.11	18000	0.20
17000	1.20	17.34	17.36	18500	0.20
18000	1.19	25.52	27.22	19000	0.21
19000	1.28	25.53	29.25	19500	0.21
20000	1.42	20.89	21.75	20000	0.20

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