

Coaxial Low Pass Filter

ZLFW-K6000+

50Ω DC to 6 GHz



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, 37 dB typical

Product Overview

ZLFW-K6000+ is a 50Ω low pass filter built in broadband connectorized package. Covering DC-6 GHz bandwidth, these units offer good matching within the passband and good rejection in stopband. ZLFW-K6000 + 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

- 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



Low Pass Filter

50Ω

DC to 6 GHz

ZLFW-K6000+



Generic photo used for illustration purposes only

CASE STYLE: UK3042
Connectors Model
2.92mm-F ZLFW-K6000+

+RoHS Compliant

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

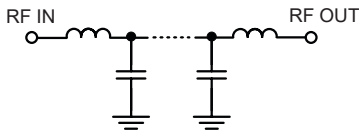
Features

- Good rejection 37dB typ.
- Temperature stable

Applications

- Harmonic Rejection
- VHF/UHF transmitters / receivers
- Test and measurements
- Telecommunications and broadband wireless system
- Military applications
- Satcom modems

Functional Schematic



Electrical Specifications at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	DC - 6000	—	1.9	2.7 dB
	Freq. Cut-Off	F2*	6800	—	3.0	dB
	Return Loss	DC-F1	DC - 6000	—	13	dB
Stop Band	Rejection Loss	F3-F4	8200 - 9000	20	37	— dB
		F4-F5	9000 - 14000	26	37	— dB
		F5-F6	14000 - 18000	22	35	— dB
		F6-F7	18000 - 26500	—	20	— 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

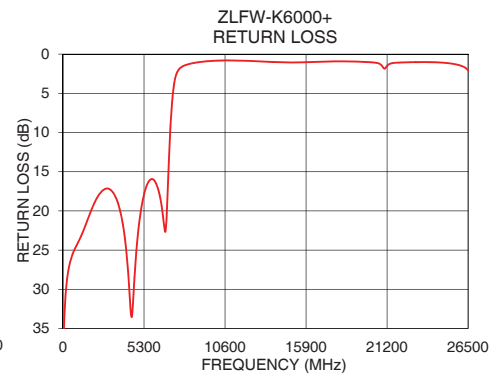
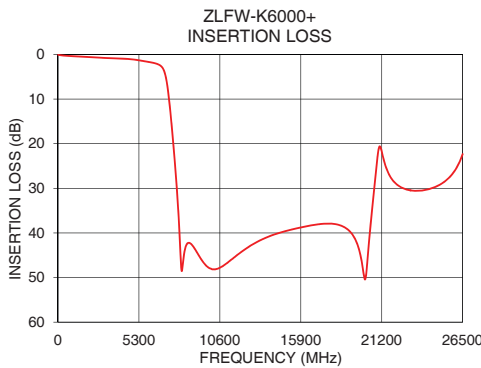
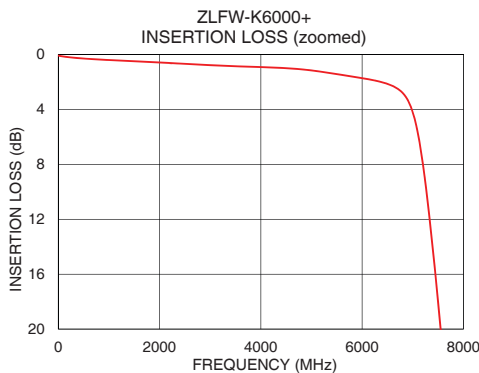
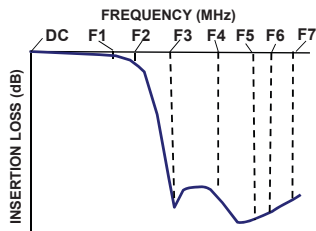
Operating Temperature	-55°C to 125°C
Storage Temperature	-55°C to 125°C
RF Power Input*	2.5W max. @ 25°C

*Passband rating, derate linearly to 0.8W 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	0.08	39.73
100	0.14	33.05
500	0.29	26.29
1000	0.40	23.97
2000	0.58	19.23
3000	0.77	17.18
4000	0.91	22.75
6000	1.72	16.18
6800	2.80	19.82
7280	10.30	3.65
7550	20.01	2.02
7780	30.01	1.61
8200	46.23	1.29
9000	43.78	0.99
12000	44.27	0.85
14000	40.55	1.02
16000	38.70	1.03
18000	37.96	0.92
20000	48.81	1.02
26500	22.34	2.07

Typical Frequency Response



Notes

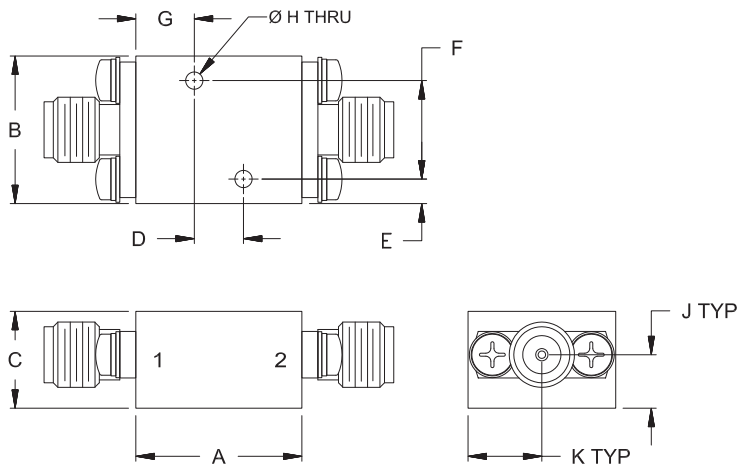
- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's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

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

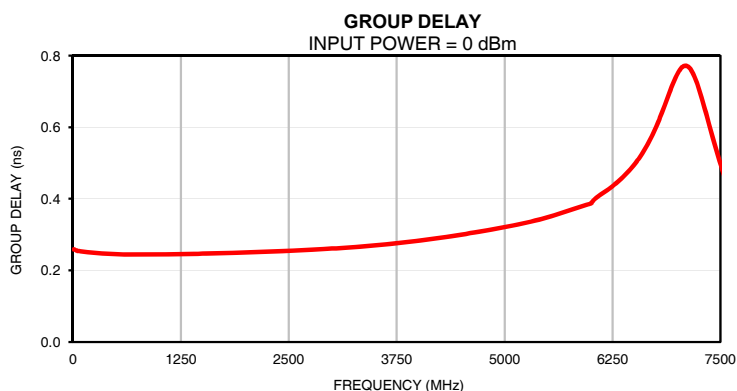
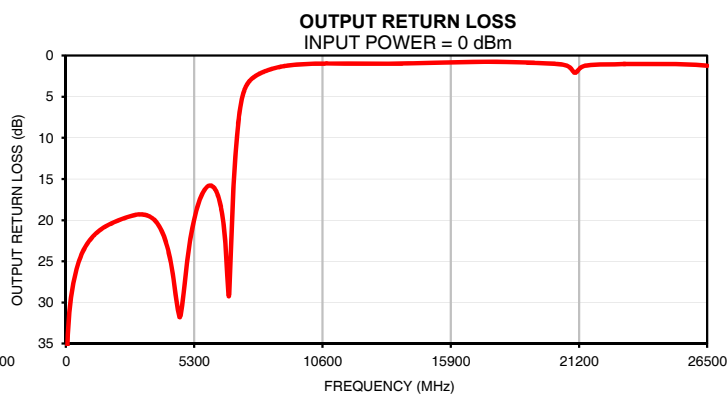
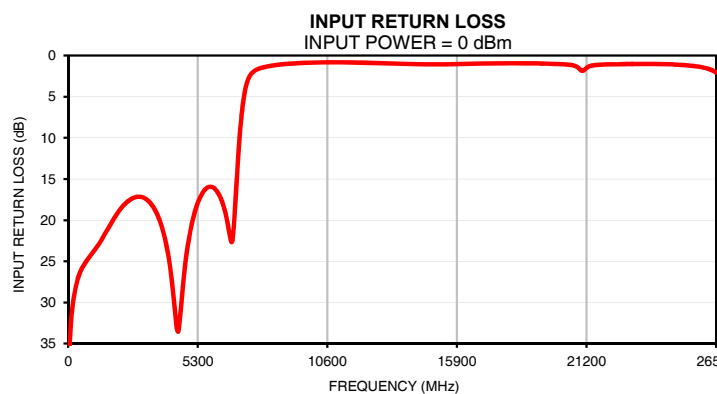
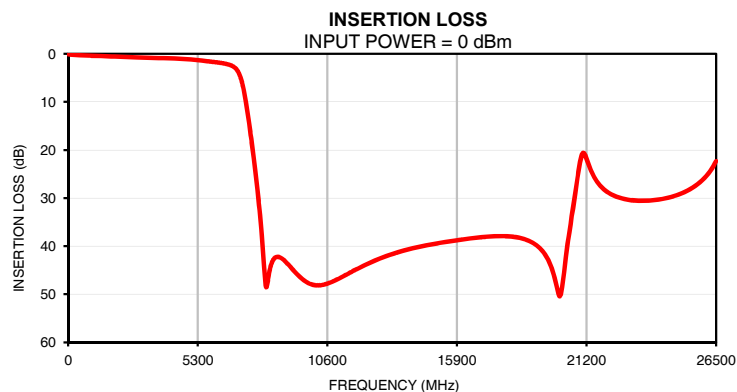


Typical Performance Data

FREQ.	Insertion Loss	Input Return Loss	Output Return Loss
(MHz)	(dB)	(dB)	(dB)
10	0.08	39.73	39.94
100	0.14	33.05	32.99
200	0.19	29.93	29.61
300	0.23	28.20	27.67
400	0.26	27.08	26.35
500	0.29	26.29	25.30
600	0.31	25.65	24.49
700	0.34	25.17	23.81
800	0.36	24.74	23.25
900	0.38	24.36	22.77
1000	0.40	23.97	22.38
1200	0.43	23.13	21.72
1400	0.47	22.20	21.22
1600	0.51	21.17	20.82
1800	0.54	20.16	20.50
2000	0.58	19.23	20.22
2500	0.68	17.57	19.66
3000	0.77	17.18	19.30
3500	0.85	18.49	19.62
4000	0.91	22.75	21.60
4500	0.99	33.53	28.25
5000	1.16	21.28	25.27
5300	1.31	17.91	19.90
5500	1.43	16.66	17.75
5800	1.60	15.94	16.03
6000	1.72	16.18	15.80
6800	2.80	19.82	24.92
7280	10.30	3.65	5.14
7550	20.01	2.02	3.22
7780	30.01	1.61	2.58
8200	46.23	1.29	1.93
8300	43.90	1.24	1.82
8400	42.75	1.19	1.72
8500	42.27	1.15	1.62
8600	42.22	1.11	1.54
8700	42.42	1.08	1.47
8800	42.78	1.05	1.40
8900	43.26	1.02	1.34
9000	43.78	0.99	1.29
9100	44.35	0.97	1.24
9200	44.93	0.95	1.20
9300	45.49	0.93	1.16
9400	46.00	0.91	1.13
9600	46.96	0.88	1.08
9800	47.63	0.86	1.04
10000	47.99	0.84	1.01
10500	47.95	0.81	0.97
11000	46.92	0.81	0.96
11500	45.59	0.82	0.97
12000	44.27	0.85	0.98
12500	43.10	0.89	0.99
13000	42.08	0.94	0.99
13500	41.24	0.98	0.99
14000	40.55	1.02	0.95
15000	39.50	1.06	0.89
16000	38.70	1.03	0.81
17000	38.09	0.96	0.76
18000	37.96	0.92	0.76
20000	48.81	1.02	0.96
26500	22.34	2.07	1.24

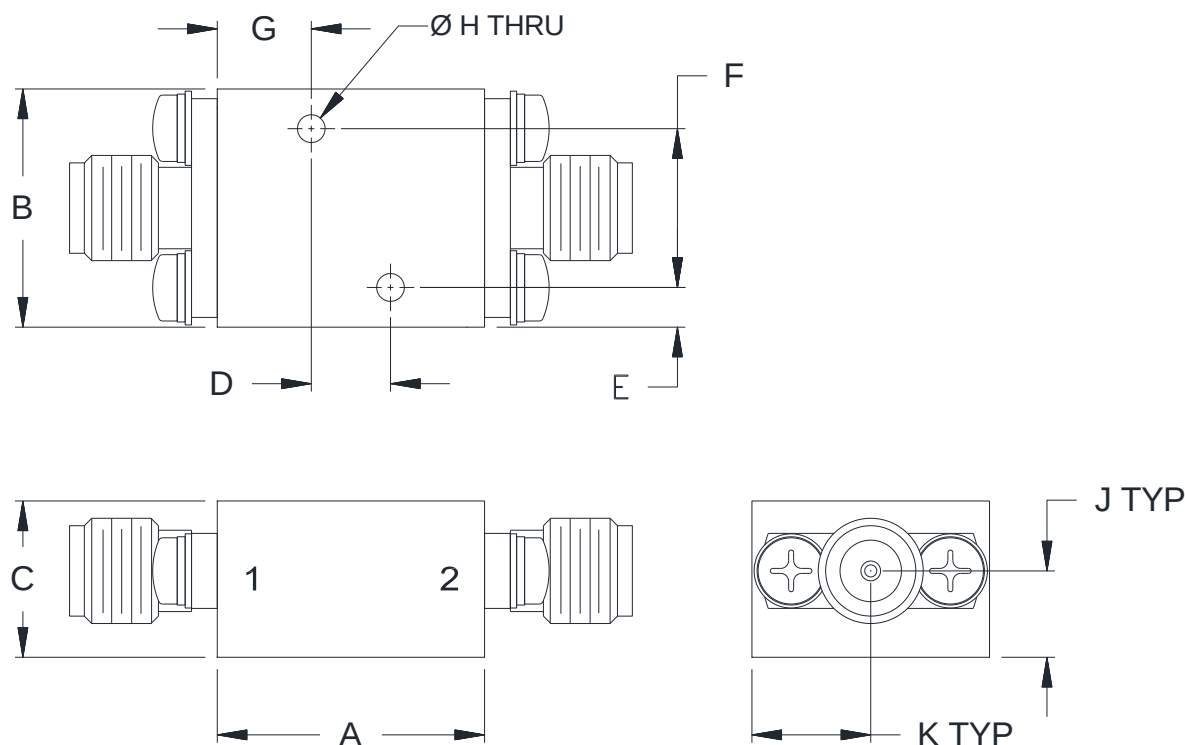
FREQ.	Group Delay
(MHz)	(ns)
10	0.26
50	0.25
100	0.25
150	0.25
200	0.25
250	0.25
300	0.25
350	0.25
400	0.25
450	0.25
500	0.25
550	0.24
600	0.24
650	0.24
700	0.24
750	0.24
800	0.24
850	0.24
900	0.24
1000	0.24
1100	0.24
1200	0.25
1300	0.25
1400	0.25
1500	0.25
1600	0.25
1700	0.25
1800	0.25
1900	0.25
2000	0.25
2100	0.25
2200	0.25
2300	0.25
2400	0.25
2500	0.25
2600	0.26
2700	0.26
2800	0.26
2900	0.26
3000	0.26
3100	0.26
3200	0.26
3300	0.27
3400	0.27
3500	0.27
3600	0.27
3700	0.27
3800	0.28
3900	0.28
4000	0.28
4100	0.29
4200	0.29
4300	0.29
4400	0.30
4500	0.30
4600	0.30
4700	0.31
5000	0.32
5500	0.35
6000	0.39

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



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