

Coaxial

Low Pass Filter

ZLFW-K6500+

50Ω

DC to 6.5 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, 43 dB typical

Product Overview

ZLFW-K6500+ is a 50Ω low pass filter built in broadband connectorized package. Covering DC-6.5 GHz bandwidth, these units offer good matching within the passband and good rejection in stopband. ZLFW-K6500 + 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 6.5 GHz

ZLFW-K6500+



Generic photo used for illustration purposes only

CASE STYLE: UK3042
Connectors Model
2.92mm-F ZLFW-K6500+

+RoHS Compliant

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

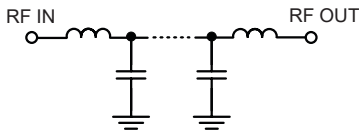
Features

- Good rejection 43dB typ.
- Temperature stable

Applications

- Military radios
- Point-Point communication
- 5G Sub 6 GHz
- WiFi
- ISM band

Functional Schematic



Electrical Specifications at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	DC - 6500	—	1.8	3.1 dB
	Freq. Cut-Off	F2*	7500	—	3.0	dB
	Return Loss	DC-F1	DC - 6500	—	13	dB
Stop Band	Rejection Loss	F3-F4	9000 - 9500	20	43	dB
		F4-F5	9500 - 15000	27	36	dB
		F5-F6	15000 - 18500	21	32	dB
		F6-F7	18500 - 26500	—	21	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

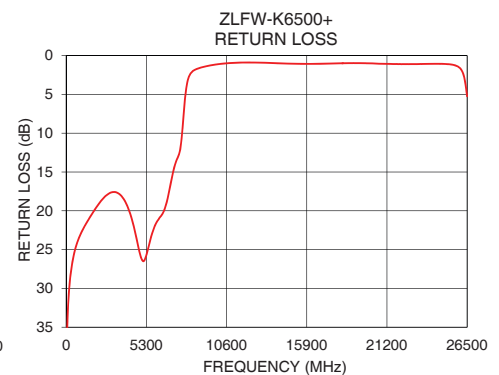
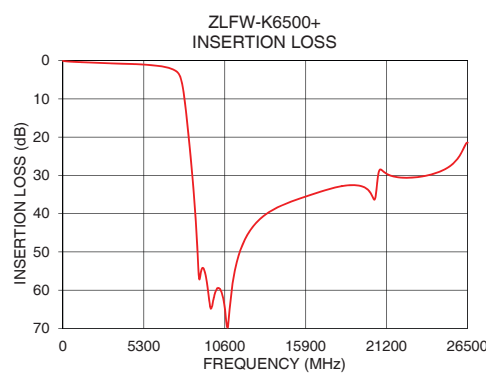
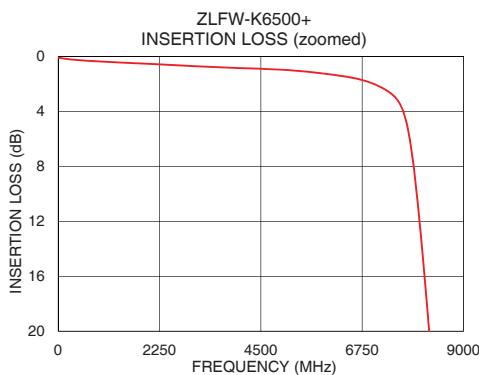
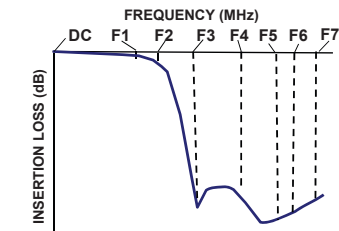
Operating Temperature	-55°C to 125°C
Storage Temperature	-55°C to 125°C
RF Power Input*	2.5W max. @25°C

*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	0.07	40.04
100	0.13	33.35
500	0.27	25.72
1000	0.37	22.81
2000	0.53	19.53
3000	0.69	17.62
5000	0.96	26.26
6500	1.52	19.82
7500	3.03	12.44
7960	9.93	3.92
8240	20.07	2.25
8480	30.27	1.86
9000	56.14	1.49
9500	60.02	1.27
12000	46.13	0.89
15000	36.78	1.05
18500	32.66	0.97
20000	33.85	0.99
22000	30.52	1.09
26500	21.45	5.23

Typical Frequency Response



Notes

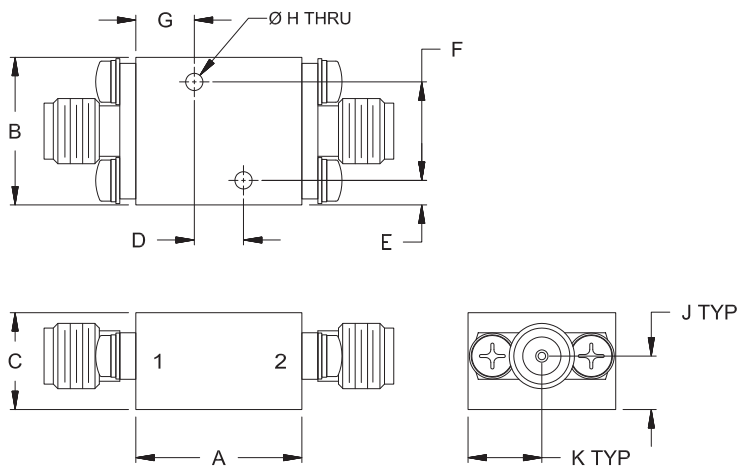
- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's 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 ($\frac{\text{inch}}{\text{mm}}$)

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

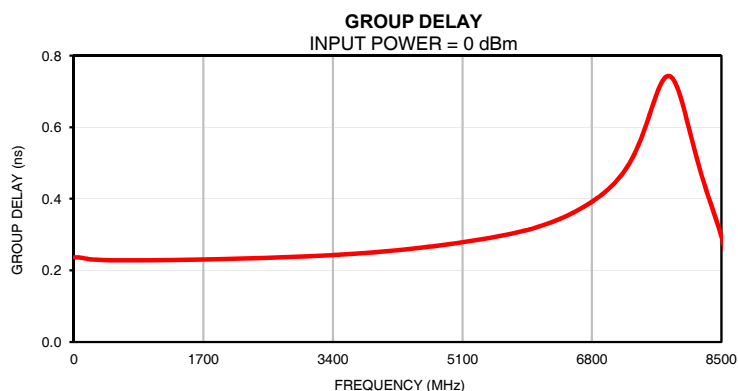
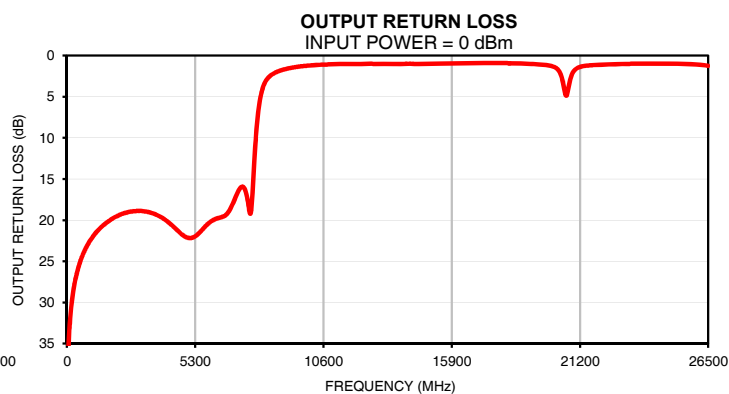
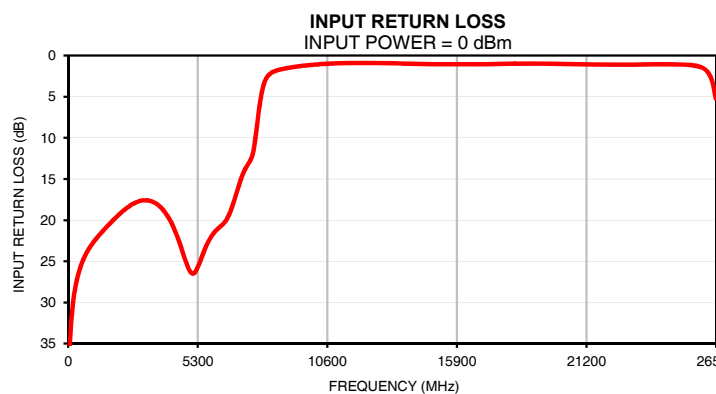
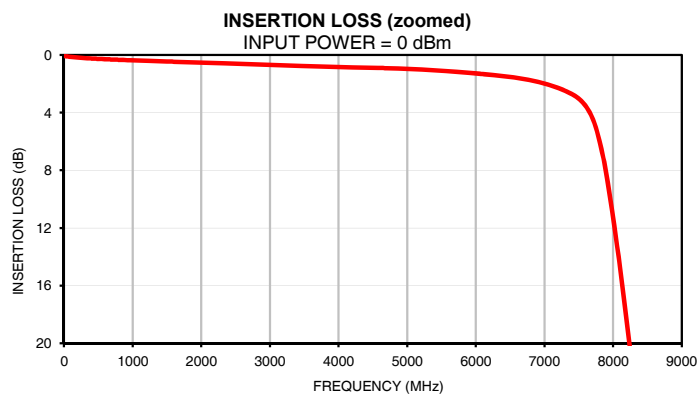
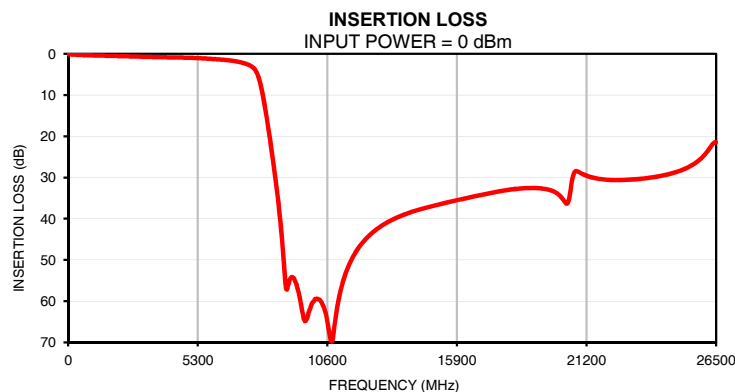
Notes
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's 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	0.07	40.04	40.29
100	0.13	33.35	33.32
200	0.18	30.01	29.94
300	0.21	28.07	27.95
400	0.25	26.73	26.55
500	0.27	25.72	25.48
600	0.29	24.93	24.62
700	0.31	24.27	23.89
800	0.34	23.72	23.28
900	0.35	23.24	22.74
1000	0.37	22.81	22.29
1200	0.40	22.05	21.51
1400	0.44	21.38	20.89
1600	0.47	20.73	20.37
1800	0.50	20.12	19.96
2000	0.53	19.53	19.61
2500	0.61	18.30	19.05
3000	0.69	17.62	18.87
3500	0.77	17.82	19.12
4000	0.83	19.21	19.85
4500	0.89	22.27	21.06
5000	0.96	26.26	22.13
5500	1.09	24.23	21.45
6000	1.28	21.40	20.07
6200	1.37	20.83	19.79
6500	1.52	19.82	19.51
7500	3.03	12.44	18.20
7960	9.93	3.92	5.66
8240	20.07	2.25	2.98
8480	30.27	1.86	2.28
8600	36.15	1.74	2.08
8800	48.82	1.60	1.83
9000	56.14	1.49	1.66
9300	55.35	1.35	1.47
9500	60.02	1.27	1.37
9800	63.61	1.17	1.26
10000	60.32	1.12	1.21
10250	59.57	1.05	1.15
10500	62.17	1.01	1.11
10750	69.61	0.97	1.08
11000	61.66	0.94	1.05
11250	55.09	0.91	1.04
11500	51.04	0.90	1.02
11750	48.25	0.89	1.01
12000	46.13	0.89	1.01
12200	44.76	0.89	1.00
12500	43.12	0.89	1.00
12700	42.21	0.90	1.00
13000	41.08	0.92	1.00
13200	40.44	0.92	1.00
13500	39.60	0.94	1.01
13700	39.12	0.96	1.01
14000	38.47	0.99	1.00
14500	37.57	1.02	1.00
15000	36.78	1.05	0.99
16000	35.40	1.07	0.95
17000	34.10	1.05	0.91
18500	32.66	0.97	0.94
20000	33.85	0.99	1.25
26500	21.45	5.23	1.24

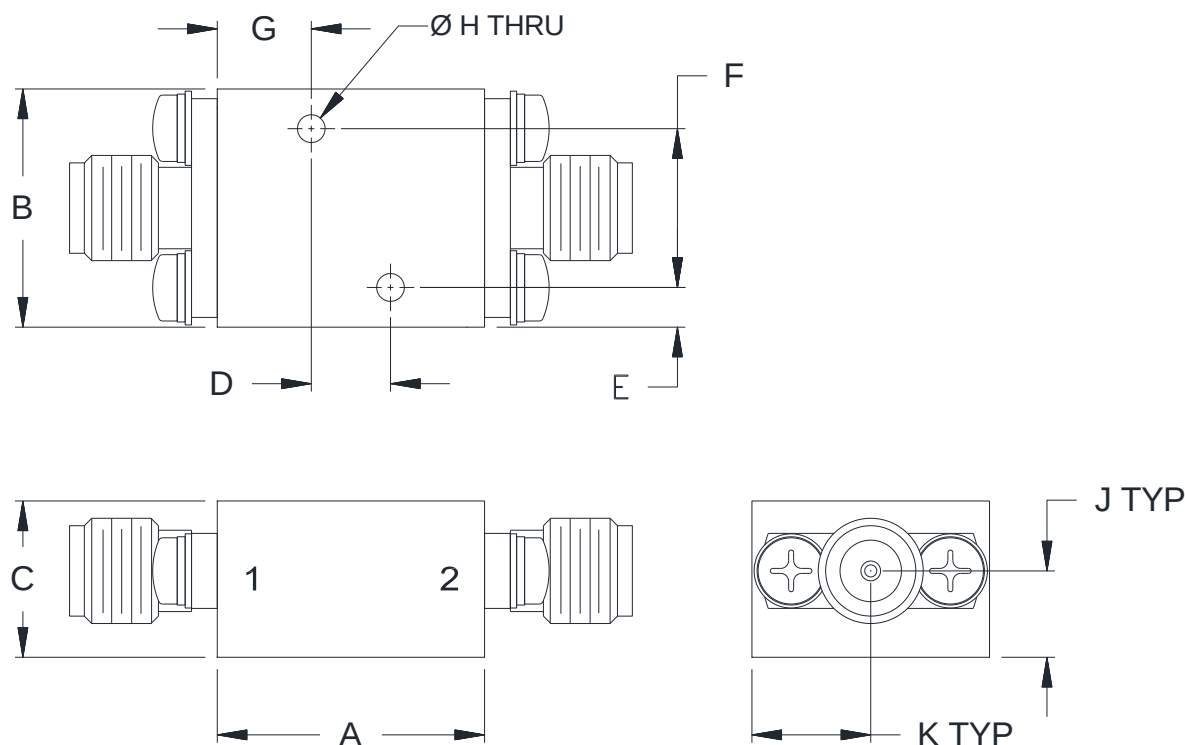
FREQ.	Group Delay
(MHz)	(ns)
10	0.24
50	0.24
100	0.24
150	0.23
200	0.23
250	0.23
300	0.23
350	0.23
400	0.23
450	0.23
500	0.23
550	0.23
600	0.23
650	0.23
700	0.23
750	0.23
800	0.23
850	0.23
900	0.23
1000	0.23
1100	0.23
1200	0.23
1300	0.23
1400	0.23
1500	0.23
1600	0.23
1700	0.23
1800	0.23
1900	0.23
2000	0.23
2100	0.23
2200	0.23
2300	0.23
2400	0.23
2500	0.23
2600	0.24
2700	0.24
2800	0.24
2900	0.24
3000	0.24
3100	0.24
3200	0.24
3300	0.24
3400	0.24
3500	0.24
3600	0.25
3700	0.25
3800	0.25
3900	0.25
4000	0.25
4100	0.25
4200	0.26
4300	0.26
4400	0.26
4500	0.26
4800	0.27
5000	0.28
5500	0.29
6000	0.32
6500	0.36

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