

Coaxial

Low Pass Filter

ZLFW-K6300+

50Ω

DC to 6.3 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, 39 dB typical

Product Overview

ZLFW-K6300+ is a 50Ω low pass filter built in broadband connectorized package. Covering DC-6.3 GHz bandwidth, these units offer good matching within the passband and good rejection in stopband. ZLFW-K6300+ 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



Low Pass Filter

50Ω DC to 6.3 GHz

ZLFW-K6300+



Features

- Good rejection 39dB typ.
- Temperature stable

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CASE STYLE: UK3042
Connectors Model
2.92mm-F ZLFW-K6300+

+RoHS Compliant

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

Applications

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

Electrical Specifications at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	DC - 6300	—	1.9	2.8 dB
	Freq. Cut-Off	F2*	7200	—	3.0	dB
	Return Loss	DC-F1	DC - 6300	—	12	dB
Stop Band	Rejection Loss	F3-F4	8600 - 9300	20	39	dB
		F4-F5	9300 - 14300	28	37	dB
		F5-F6	14300 - 18300	25	34	dB
		F6-F7	18300 - 26500	—	23	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

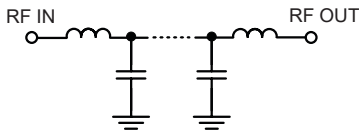
Operating Temperature	-55°C to 125°C
Storage Temperature	-55°C to 125°C
RF Power Input*	2.5W max. @ 25°C

*Passband rating, derate linearly to 0.8W at 125°C ambient
Permanent damage may occur if any of these limits are exceeded.

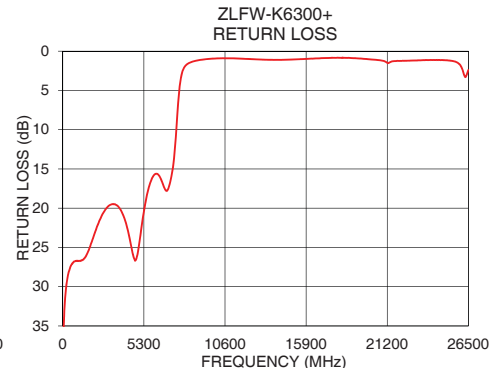
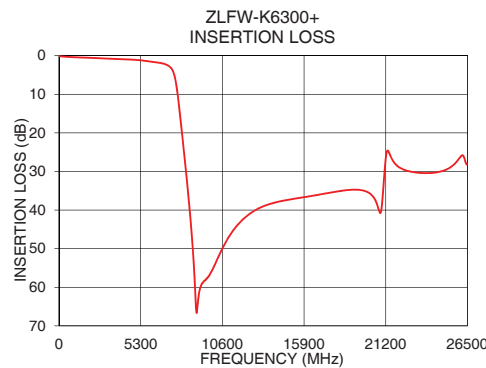
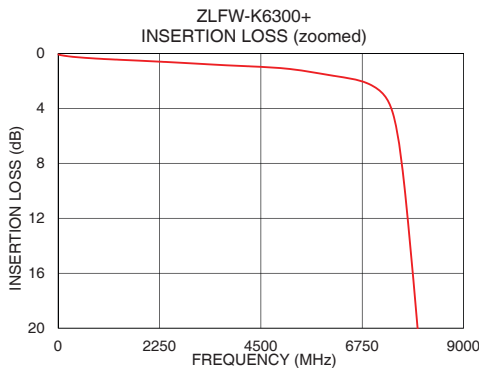
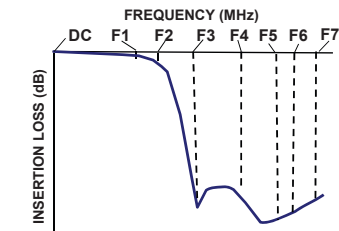
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)
10	0.08	39.17
100	0.15	33.26
500	0.30	27.47
1000	0.41	26.71
2000	0.56	23.68
3000	0.73	19.70
4000	0.91	21.15
6300	1.73	15.86
7200	2.91	14.80
7700	10.13	3.65
7980	20.07	1.94
8240	30.07	1.51
8600	45.75	1.26
9300	58.91	1.03
12000	42.17	0.98
14300	37.78	1.10
16000	36.60	0.98
18300	35.03	0.83
20000	35.30	1.02
26500	28.15	2.40

Functional Schematic



Typical Frequency Response



Notes

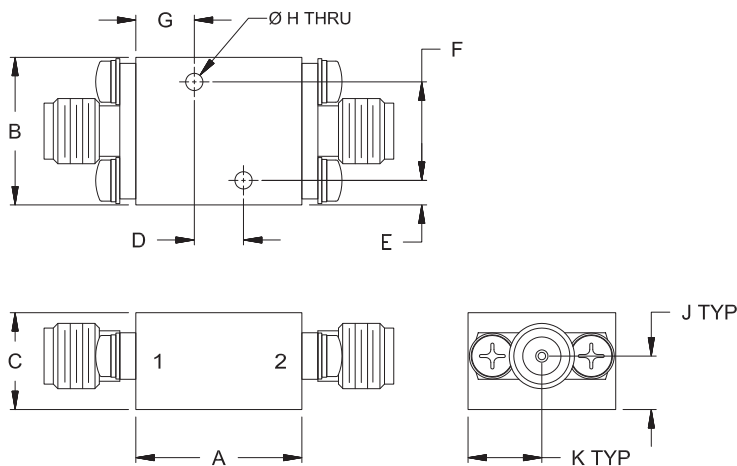
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Coaxial Connections

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

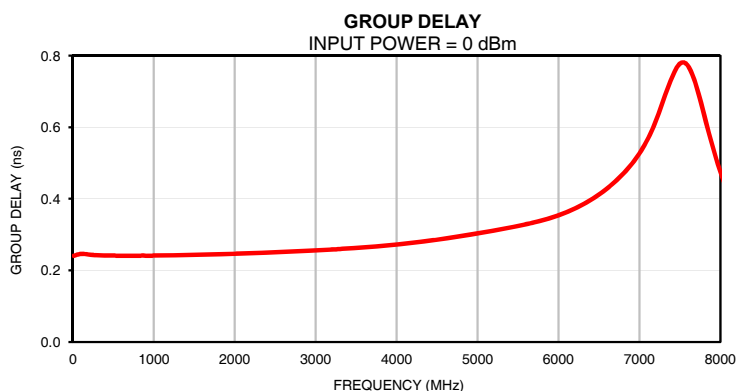
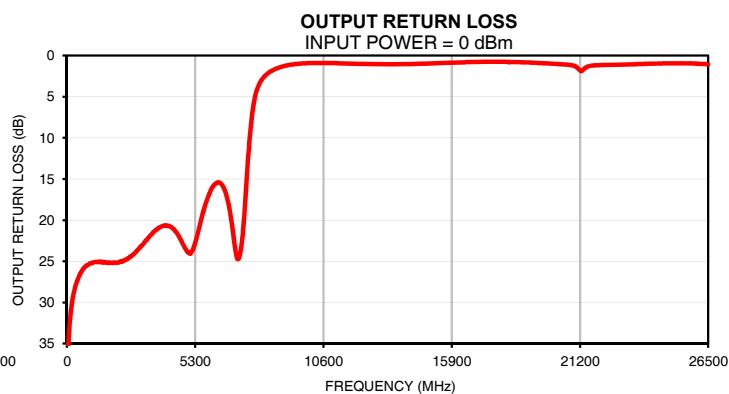
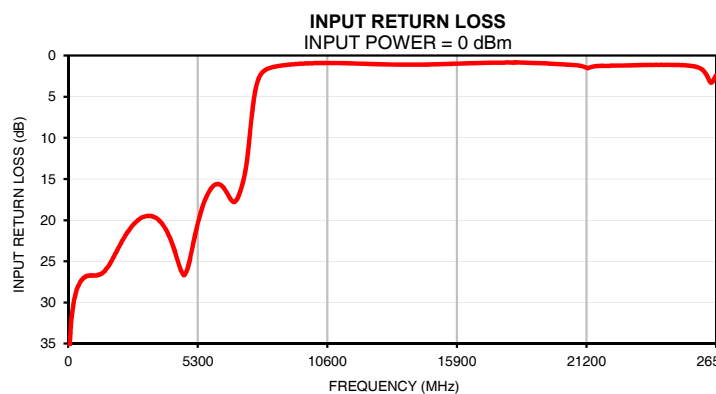
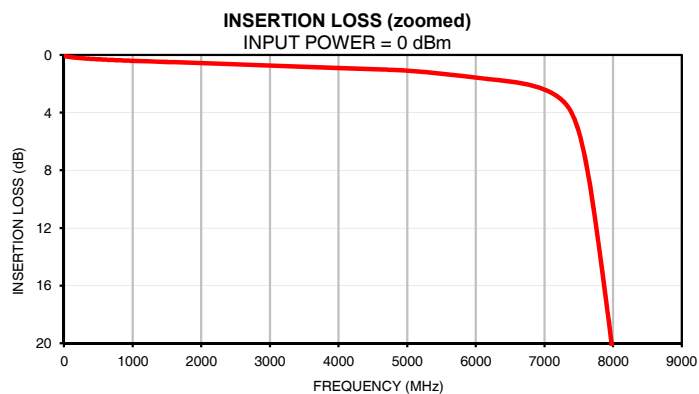
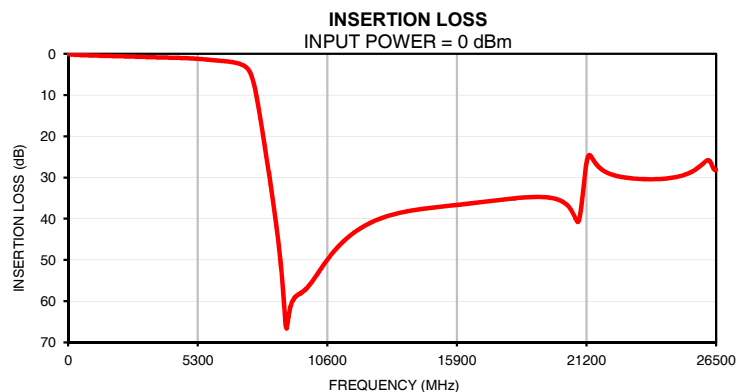
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Typical Performance Data

FREQ.	Insertion Loss	Input Return Loss	Output Return Loss
(MHz)	(dB)	(dB)	(dB)
10	0.08	39.17	39.09
100	0.15	33.26	33.14
200	0.20	30.50	30.19
300	0.24	29.00	28.60
400	0.27	28.06	27.57
500	0.30	27.47	26.79
600	0.32	27.10	26.25
700	0.35	26.88	25.80
800	0.37	26.76	25.55
900	0.39	26.71	25.35
1000	0.41	26.71	25.20
1200	0.44	26.66	25.09
1400	0.47	26.40	25.08
1600	0.50	25.77	25.11
1800	0.53	24.83	25.19
2000	0.56	23.68	25.15
2500	0.64	21.16	24.71
3000	0.73	19.70	23.38
3500	0.83	19.60	21.71
4000	0.91	21.15	20.66
4500	0.98	25.11	21.39
5000	1.09	24.46	23.92
5500	1.30	18.36	20.49
5800	1.46	16.35	17.40
6000	1.57	15.70	16.04
6300	1.73	15.86	15.42
7200	2.91	14.80	23.28
7700	10.13	3.65	6.11
7980	20.07	1.94	3.26
8240	30.07	1.51	2.30
8600	45.75	1.26	1.64
8800	58.12	1.18	1.42
9000	64.39	1.10	1.25
9300	58.91	1.03	1.08
9500	58.15	0.99	1.01
9800	56.61	0.94	0.94
10000	55.08	0.93	0.91
10250	52.91	0.91	0.90
10500	50.77	0.90	0.89
10750	48.80	0.90	0.90
11000	47.07	0.91	0.91
11250	45.57	0.91	0.93
11500	44.27	0.94	0.95
11750	43.15	0.96	0.98
12000	42.17	0.98	1.00
12200	41.51	1.00	1.01
12500	40.62	1.03	1.03
12700	40.11	1.04	1.03
13000	39.47	1.06	1.04
13200	39.12	1.08	1.04
13500	38.67	1.10	1.05
13700	38.40	1.10	1.05
14000	38.06	1.10	1.02
14300	37.78	1.10	1.00
15000	37.25	1.06	0.95
16000	36.60	0.98	0.85
17000	35.91	0.89	0.76
18300	35.03	0.83	0.77
20000	35.30	1.02	0.96
26500	28.15	2.40	1.05

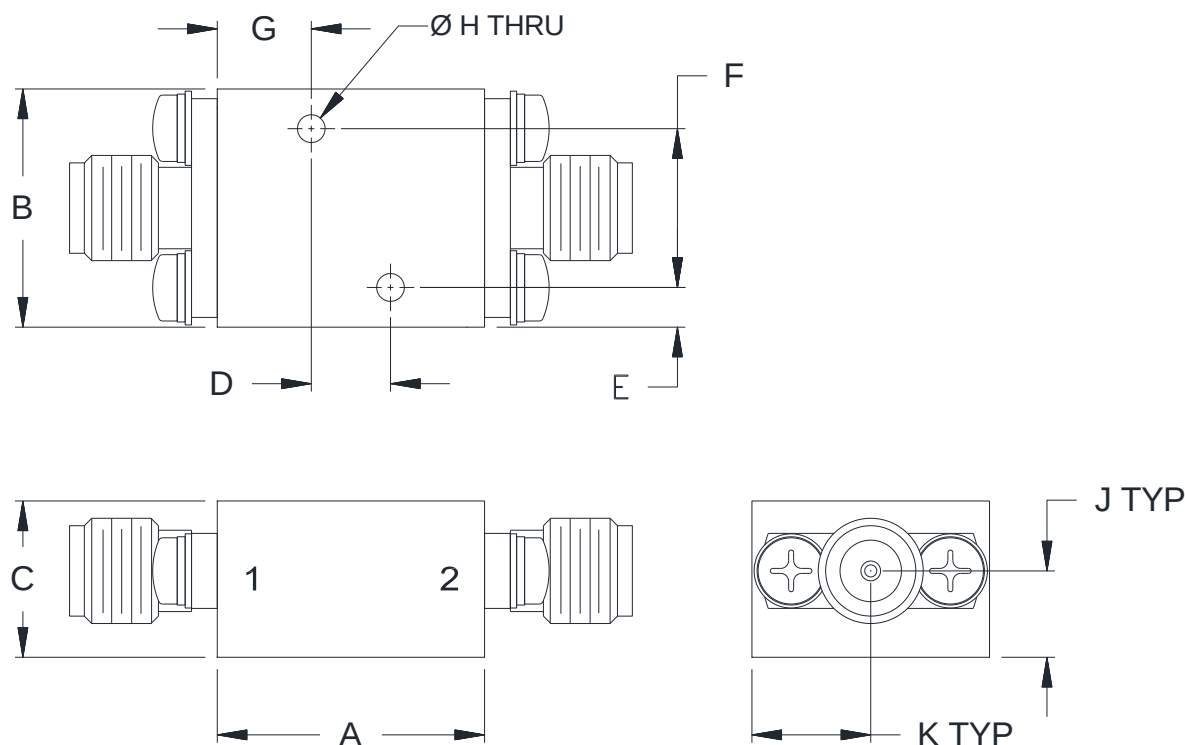
FREQ.	Group Delay
(MHz)	(ns)
10	0.24
50	0.24
100	0.25
150	0.25
200	0.24
250	0.24
300	0.24
350	0.24
400	0.24
450	0.24
500	0.24
550	0.24
600	0.24
650	0.24
700	0.24
750	0.24
800	0.24
850	0.24
900	0.24
1000	0.24
1100	0.24
1200	0.24
1300	0.24
1400	0.24
1500	0.24
1600	0.24
1700	0.24
1800	0.25
1900	0.25
2000	0.25
2100	0.25
2200	0.25
2300	0.25
2400	0.25
2500	0.25
2600	0.25
2700	0.25
2800	0.25
2900	0.25
3000	0.26
3100	0.26
3200	0.26
3300	0.26
3400	0.26
3500	0.26
3600	0.26
3700	0.27
3800	0.27
3900	0.27
4000	0.27
4100	0.27
4200	0.28
4300	0.28
4400	0.28
4500	0.29
4800	0.30
5000	0.30
5500	0.32
6000	0.35
6300	0.38

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