

Coaxial

Low Pass Filter

ZLFV-K1652+

50Ω

DC to 16500 MHz



Generic photo used for illustration purposes only

CASE STYLE: UK3042

The Big Deal

- Good power handling, 3.2W
- Temperature stable
- Broadband connectorized package
- Good rejection, 33 dB typical

Product Overview

ZLFV-K1652+ is a 50Ω low pass filter built in broadband connectorized package. Covering DC-16500 MHz bandwidth, these units offer good matching within the passband and good rejection in stopband. ZLFV-K1652+ offer low insertion loss, and excellent power handling capability. It handles up to 3.2W 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.
3.2W 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



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Connectors	Model
2.92mm-F	ZLFV-K1652+

+RoHS Compliant

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

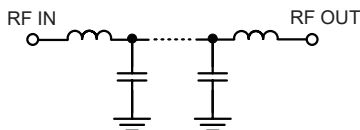
Features

- Good rejection 33dB typ.
- Good power handling, 3.2W
- Temperature stable

Applications

- Military radar applications
- Test and measurement
- Telecommunications & broadband wireless applications

Functional Schematic



Electrical Specifications at 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	DC - 15500	—	1.5	2.5	dB
		F1-F2	15500 - 16500	—	2.0	—	dB
	Frequency Cut-off	F3*	18000	—	3.0	—	dB
	Return Loss	DC-F1	DC - 15500	—	13	—	dB
Stop Band		F1-F2	15500 - 16500	—	10	—	dB
	Rejection Loss	F4-F5	22500 - 25000	20	33	—	dB
		F5-F6	25000 - 26500	22	33	—	dB
		F6-F7	26500 - 40000	—	30	—	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

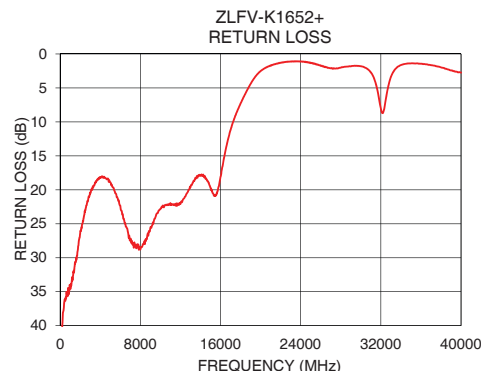
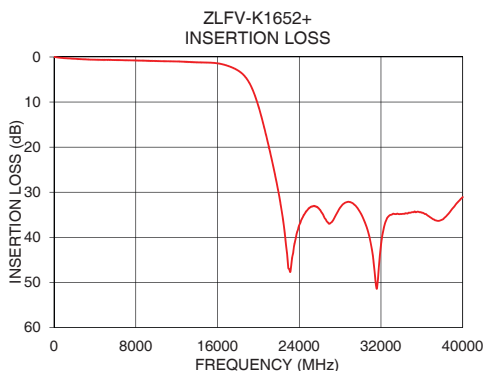
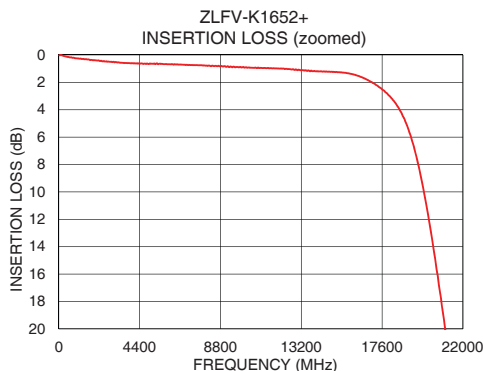
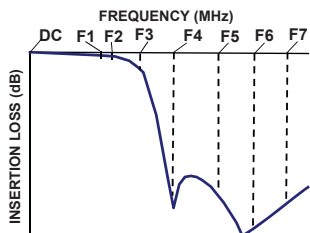
Operating Temperature	-55°C to 125°C
Storage Temperature	-55°C to 125°C
RF Power Input*	3.2W max. @25°C

*Passband rating, derate linearly to 1.6W 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)
25	0.02	46.91
200	0.04	40.25
1000	0.25	34.35
2000	0.39	26.36
3000	0.50	20.56
6000	0.68	22.33
12000	0.99	22.09
15500	1.29	20.75
16500	1.63	14.22
18000	2.99	7.28
19875	10.02	2.69
21050	20.18	1.68
21975	30.11	1.31
22500	37.62	1.17
25000	33.46	1.32
26500	35.78	1.95
30000	34.56	1.80
32000	41.69	8.07
35000	34.44	1.39
40000	31.08	2.74

Typical Frequency Response



Notes

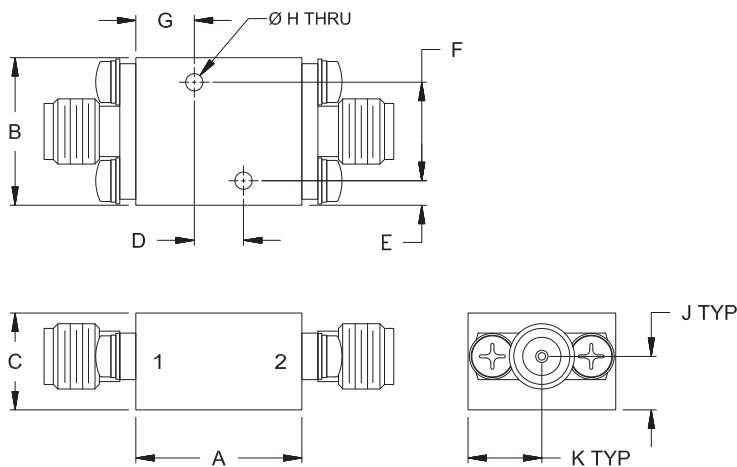
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Coaxial Connections

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

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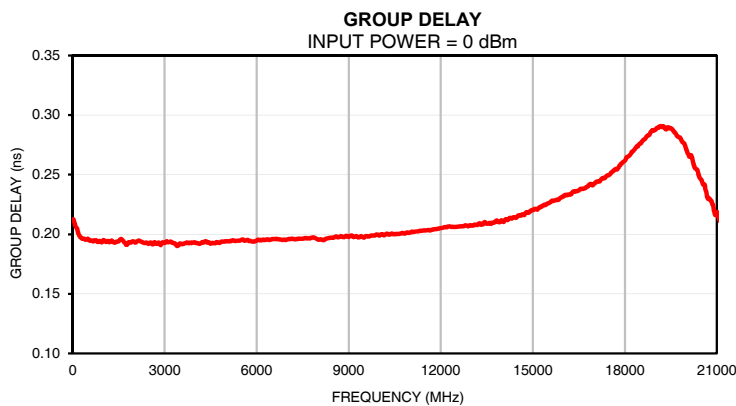
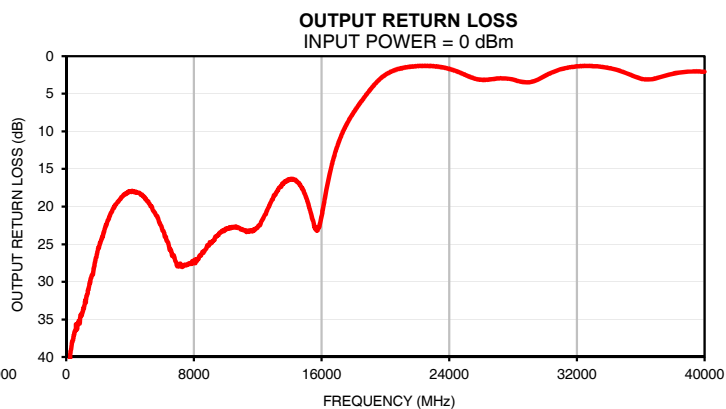
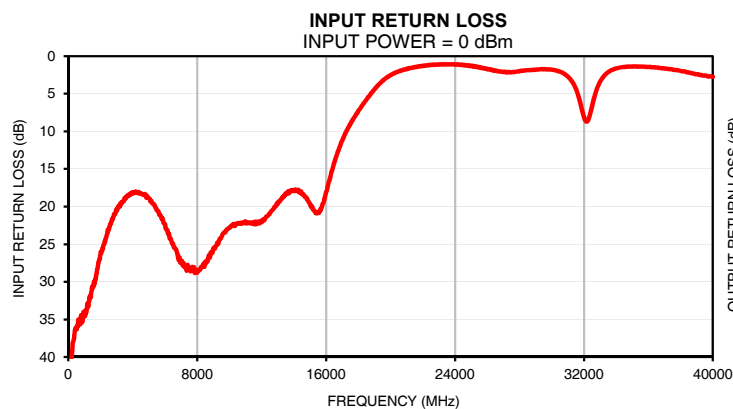
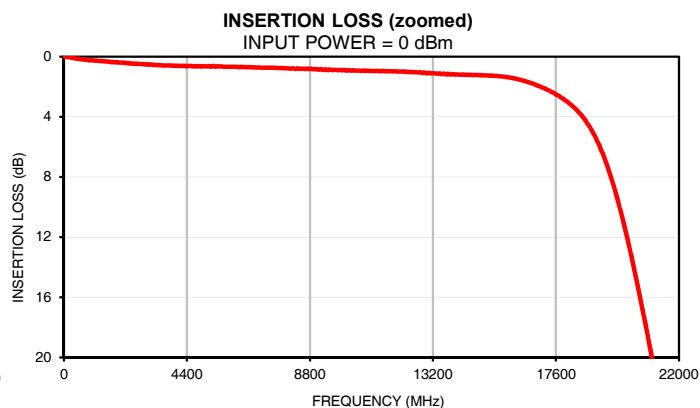
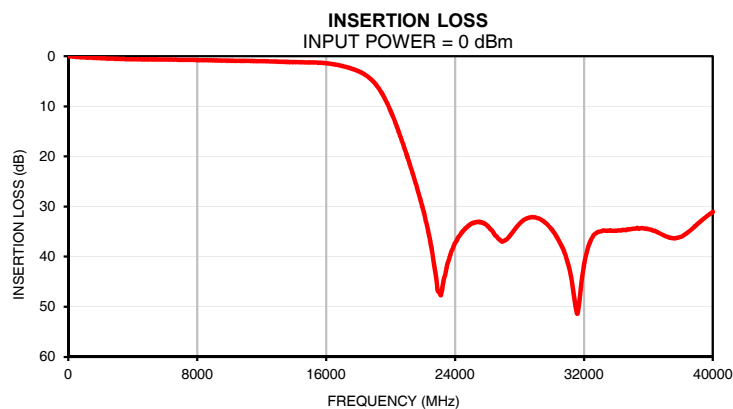
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Typical Performance Data

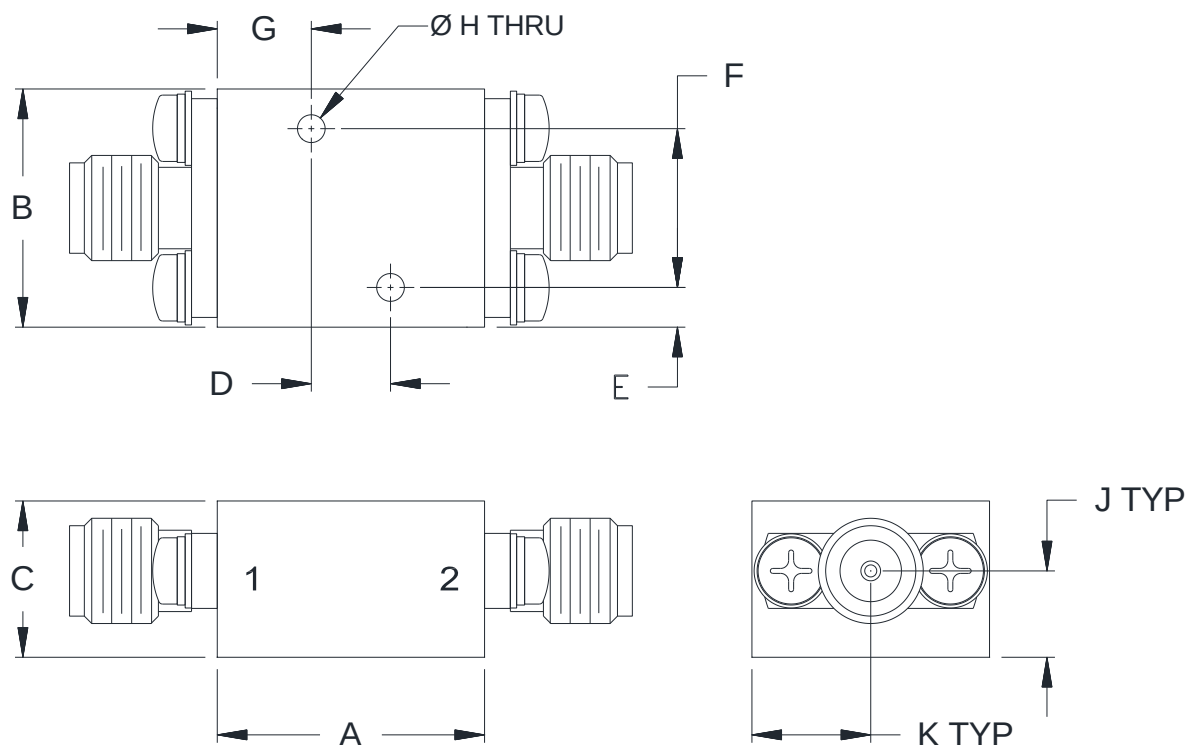
FREQ.	Insertion Loss	Input Return Loss	Output Return Loss	FREQ.	Group Delay
(MHz)	(dB)	(dB)	(dB)	(MHz)	(ns)
25	0.02	46.91	46.14	25	0.21
100	0.02	47.05	47.54	50	0.21
200	0.04	40.25	41.53	100	0.21
250	0.06	39.13	40.03	150	0.20
300	0.08	37.97	39.07	200	0.20
400	0.11	36.70	37.84	400	0.20
500	0.14	36.25	37.10	600	0.19
600	0.18	35.90	36.45	800	0.19
700	0.18	35.47	36.14	1000	0.19
800	0.20	34.44	35.19	1200	0.19
1000	0.25	34.35	34.25	1400	0.19
2000	0.39	26.36	25.67	1600	0.20
3000	0.50	20.56	20.15	1800	0.19
4000	0.60	18.23	18.03	2000	0.19
5000	0.64	18.88	18.97	2200	0.19
7000	0.72	27.47	27.95	2400	0.19
8000	0.78	28.79	27.53	2600	0.19
10000	0.89	22.84	22.94	2800	0.19
12000	0.99	22.09	22.77	3000	0.19
14000	1.19	17.89	16.36	3200	0.19
14500	1.22	18.35	16.71	3400	0.19
15000	1.24	19.66	18.57	3600	0.19
15500	1.29	20.75	22.07	3800	0.19
15800	1.35	19.58	22.83	4000	0.19
16000	1.41	18.09	21.38	4200	0.19
16200	1.48	16.58	19.04	4400	0.19
16500	1.63	14.22	15.84	4600	0.19
18000	2.99	7.28	7.52	4800	0.19
19875	10.02	2.69	2.68	5000	0.19
21050	20.18	1.68	1.59	5200	0.19
21975	30.11	1.31	1.33	5400	0.19
22500	37.62	1.17	1.30	5600	0.19
23000	47.02	1.12	1.33	5800	0.19
23200	46.51	1.08	1.36	6000	0.19
23400	43.49	1.08	1.42	6200	0.20
23600	40.78	1.08	1.49	6400	0.20
23800	38.75	1.08	1.59	6600	0.20
24000	37.29	1.11	1.69	6800	0.20
24200	36.14	1.15	1.81	7000	0.20
24400	35.27	1.18	1.96	7200	0.20
24600	34.52	1.18	2.13	7400	0.20
24800	33.95	1.22	2.31	7600	0.20
25000	33.46	1.32	2.47	8000	0.20
25500	33.10	1.49	2.91	8500	0.20
26000	33.87	1.74	3.15	9000	0.20
26500	35.78	1.95	3.11	9500	0.20
27000	36.94	2.10	2.98	10000	0.20
27500	35.44	2.14	2.96	10500	0.20
28000	33.42	2.01	3.12	11000	0.20
28500	32.30	1.87	3.40	11500	0.20
29000	32.18	1.82	3.47	12000	0.21
29500	32.95	1.75	3.18	12500	0.21
30000	34.56	1.80	2.64	13000	0.21
30500	37.16	2.05	2.13	13500	0.21
31000	41.27	2.71	1.75	14000	0.21
31500	50.45	4.37	1.50	14500	0.22
32000	41.69	8.07	1.36	15000	0.22
33000	34.99	3.39	1.33	15500	0.23
35000	34.44	1.39	2.20	16000	0.23
40000	31.08	2.74	2.06	16500	0.24

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