



(LTCC) COAXIAL

Low Pass Filter

ZLFV-K1752+

50Ω DC to 17.5 GHz 2.92mm Female

KEY FEATURES

- Low Insertion Loss, 1.9 dB Typ.
- Return Loss, 13 dB Typ.
- Stopband Rejection, 40 dB Typ.
- Broadband Connectorized Package
- Power Handling: 4.5 Watts

APPLICATIONS

- Ka Satcom
- Cellular Backhaul

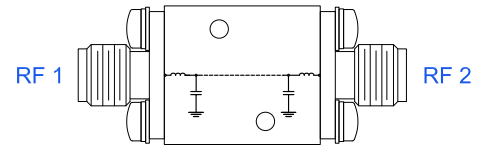
PRODUCT OVERVIEW

ZLFV-K1752+ is a 50Ω low pass filter built in broadband connectorized package. Covering DC-17.5 GHz bandwidth, these units offer good matching within the passband and good rejection in stopband. ZLFV-K1752+ offer low insertion loss, and good power handling capability. It handles up to 4.5W RF input power and provides a wide operating temperature range from -55°C to 125°C.



Generic photo used for illustration purposes only

FUNCTIONAL DIAGRAM



ELECTRICAL SPECIFICATIONS¹ AT +25°C

Parameter	F#	Frequency (GHz)	Min.	Typ.	Max.	Units	
Passband	DC-F1	DC - 16.5	—	1.9	2.6	dB	
	F1-F2	16.5 - 17.5	—	2.0	—		
	Freq. Cut-Off ²	Fc	19.3	—	—		dB
	Return Loss	DC-F2	DC- 17.5	—	13		—
Stopband	F3-F4	22.8 - 25	20	39	—	dB	
	F4-F5	25 - 30	30	36	—		
	F5-F6	30 - 40	—	40	—		

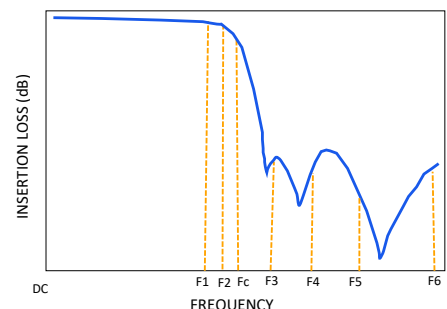
1. This component should not be used as a DC-block. In applications where DC voltage and/or current is present at either the input or output ports, external DC blocking capacitors are required.
 2. Typical variation ± 5%

ABSOLUTE MAXIMUM RATINGS³

Parameter	Ratings
Operating Temperature	-55°C to +125°C
Storage Temperature	-55°C to +125°C
Input Power ⁴	4.5 W @25°C

3. Permanent damage may occur if any of these limits are exceeded.
 4. Power rating applies only to signals within the passband. Power rating above +25°C operating temperature decreases linearly to 1.6 W at +125°C.

TYPICAL FREQUENCY RESPONSE





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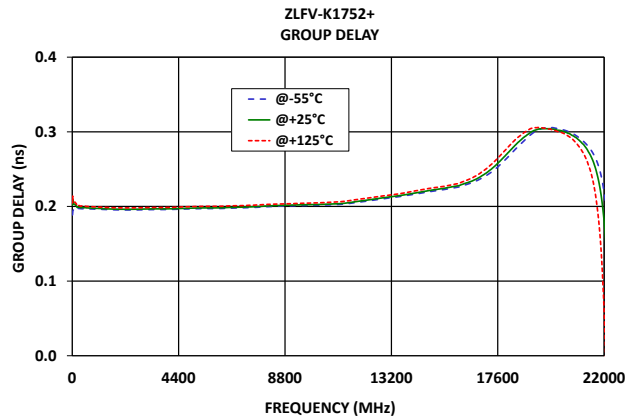
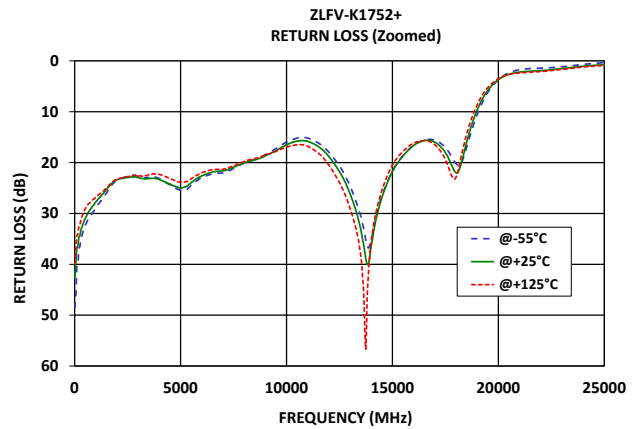
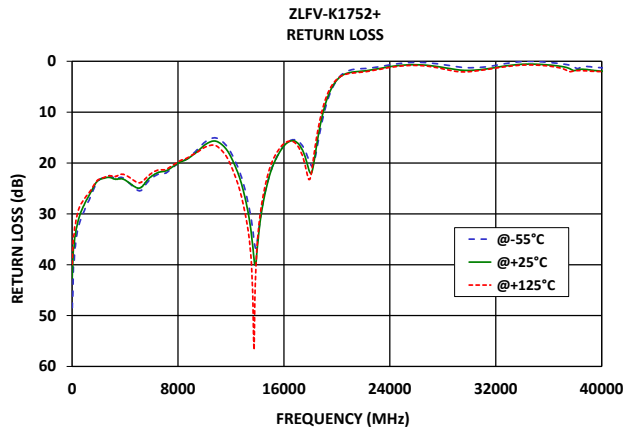
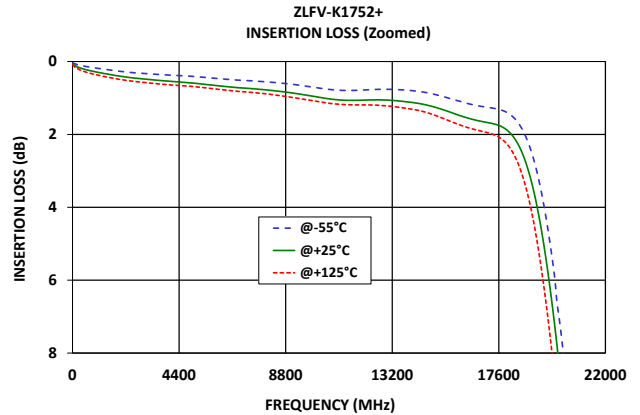
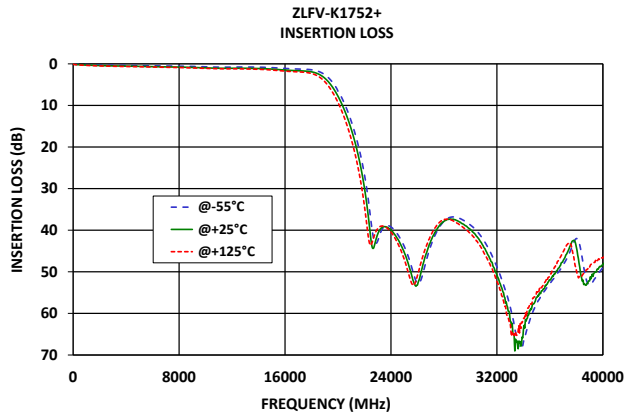
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50Ω DC to 17.5 GHz 2.92mm Female

TYPICAL PERFORMANCE GRAPHS





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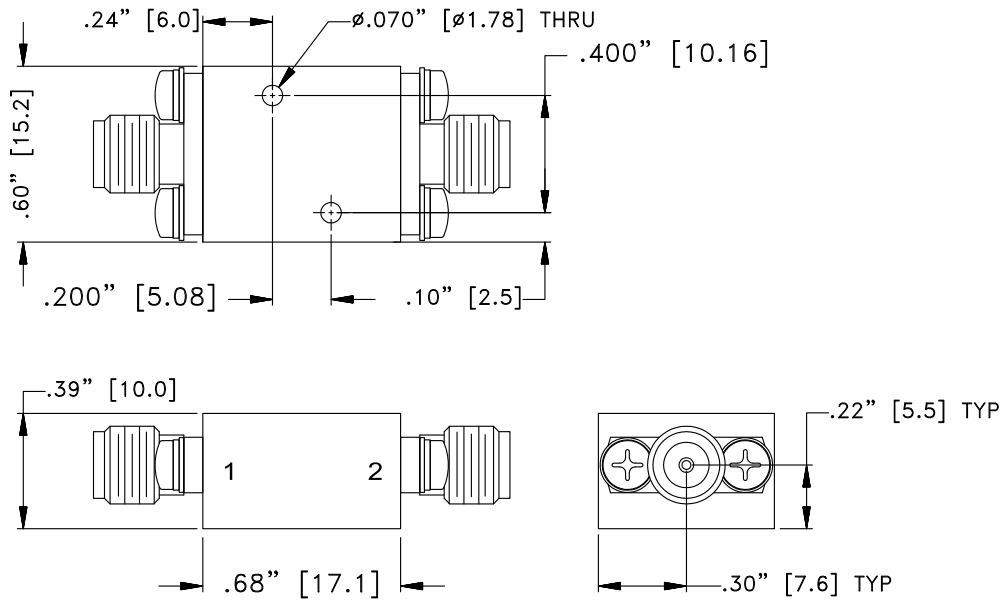
ZLFV-K1752+

50Ω DC to 17.5 GHz 2.92mm Female

CONNECTOR DESCRIPTION

Function	Marking on Unit	Connector
RF1	1	2.92mm Female
RF2	2	2.92mm Female

CASE STYLE DRAWING



Unit weight: 24grams

Dimensions are in inches (mm). Tolerances: 2 Pl.±.050"; 3 Pl.±.015"

PRODUCT MARKING*: ZLFV-K1752+

*Marking may contain other features or characters for internal lot control.



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Low Pass Filter

ZLFV-K1752+

50Ω DC to 17.5 GHz 2.92mm Female

ADDITIONAL INFORMATION IS AVAILABLE ON OUR DASHBOARD

[CLICK HERE](#)

Performance Data & Graphs	<p>Data</p> <p>Graphs</p> <p>S-Parameter (S2P Files) Data Set (.zip file)</p>
Case Style	UK3042
RoHS Status	Compliant
Environmental Ratings	ENV124

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-Circuits' 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/terms/viewterm.html



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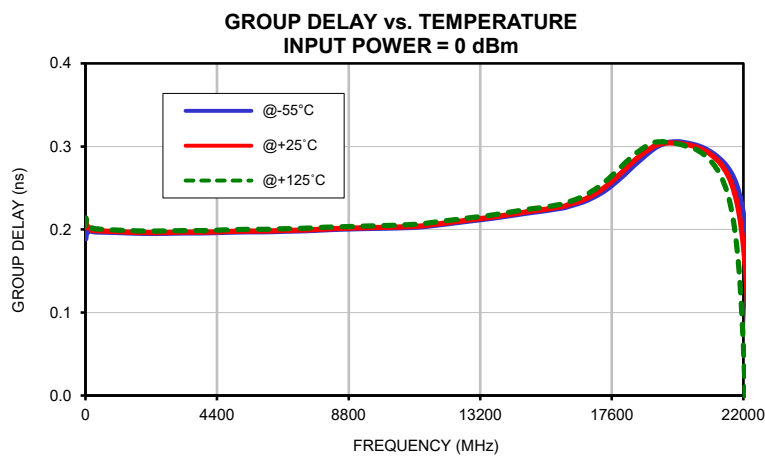
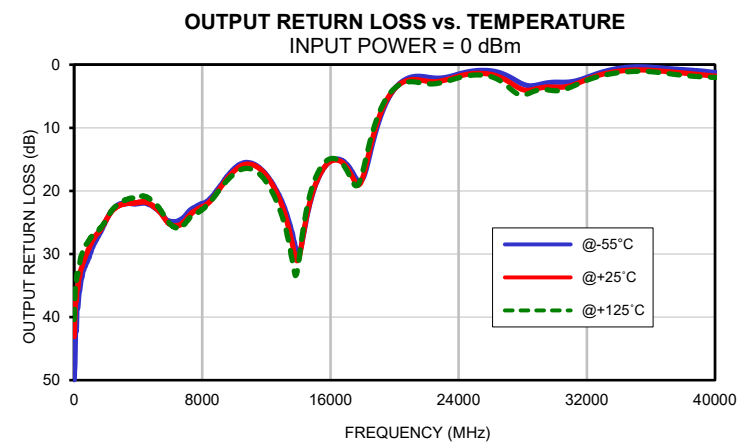
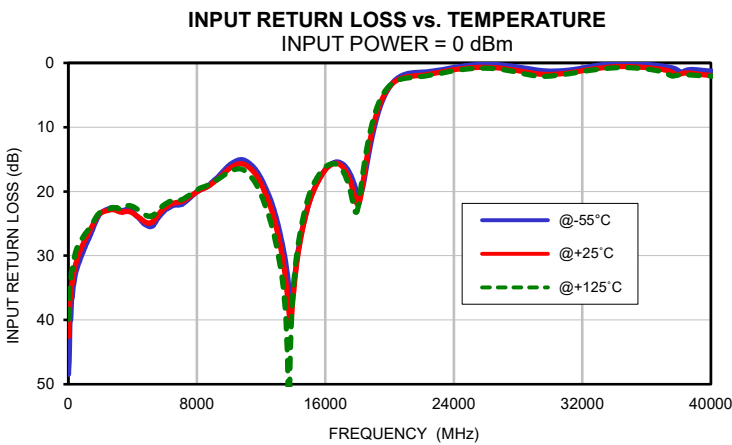
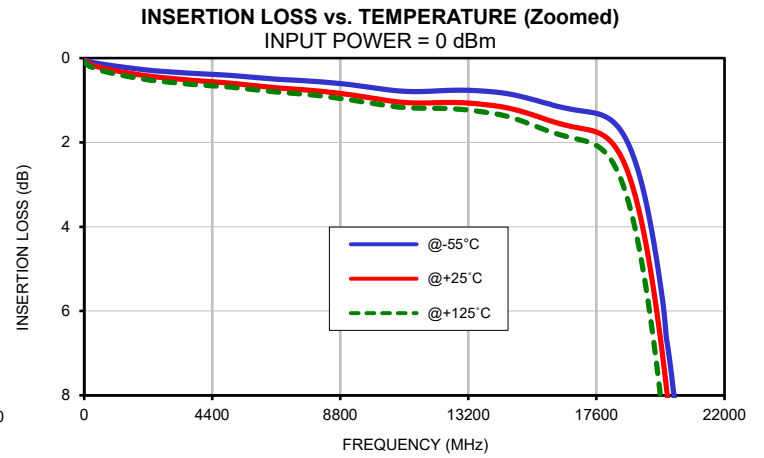
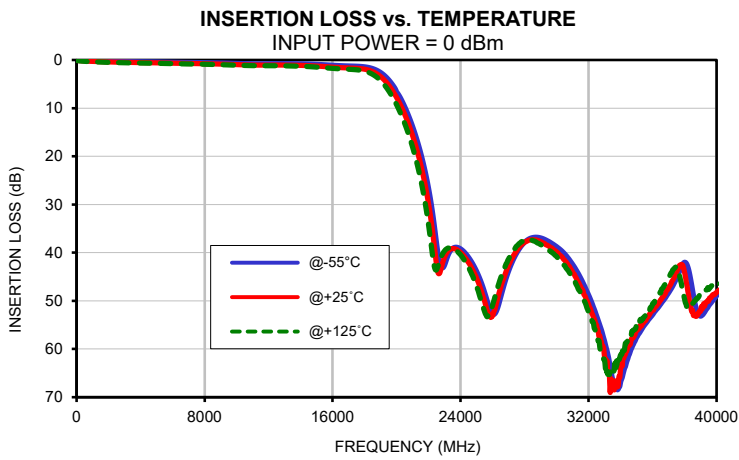
Typical Performance Data

FREQ. (MHz)	INSERTION LOSS			INPUT RETURN LOSS			OUTPUT RETURN LOSS		
	(dB)			(dB)			(dB)		
	@-55°C	@+25°C	@+125°C	@-55°C	@+25°C	@+125°C	@-55°C	@+25°C	@+125°C
25	0.04	0.07	0.10	47.63	41.12	38.32	48.51	41.53	38.53
50	0.05	0.08	0.12	46.63	39.85	36.88	47.61	40.09	37.02
100	0.06	0.12	0.16	40.58	36.82	34.33	41.89	37.35	34.76
200	0.09	0.15	0.20	37.11	34.67	32.53	38.54	35.30	33.15
300	0.11	0.18	0.23	34.94	33.15	31.14	36.39	33.88	31.83
400	0.12	0.19	0.25	33.46	32.00	30.00	34.80	32.68	30.66
500	0.13	0.21	0.28	32.32	30.98	29.08	33.64	31.92	29.91
1000	0.18	0.29	0.36	28.87	27.74	26.79	29.86	28.56	27.45
1500	0.23	0.35	0.44	26.05	25.33	25.01	27.26	26.61	26.21
2000	0.27	0.41	0.50	23.40	23.36	23.24	24.74	24.67	24.62
2500	0.31	0.45	0.54	22.71	22.91	22.73	22.76	22.90	22.71
3000	0.33	0.48	0.58	22.70	22.94	22.54	22.04	22.13	21.65
3500	0.35	0.51	0.61	22.91	23.11	22.39	21.97	21.87	21.14
4000	0.37	0.54	0.64	23.16	23.33	22.33	21.98	21.79	20.92
4500	0.39	0.57	0.66	24.35	24.22	23.10	21.92	21.78	20.94
5000	0.41	0.59	0.69	25.39	24.92	23.85	22.66	22.59	21.95
6000	0.47	0.66	0.76	22.94	22.60	22.01	24.83	25.32	25.27
7000	0.52	0.72	0.83	22.06	21.64	21.34	23.73	24.44	24.89
8000	0.56	0.78	0.89	20.08	20.07	19.78	22.07	22.58	23.01
9000	0.62	0.86	0.98	18.44	18.67	18.53	19.60	20.00	20.09
10000	0.71	0.96	1.08	15.97	16.50	16.95	16.44	16.84	17.26
11000	0.79	1.05	1.17	15.19	15.84	16.81	15.57	15.78	16.51
12000	0.78	1.06	1.19	17.95	18.81	20.50	17.46	17.61	18.64
13000	0.76	1.06	1.22	24.65	26.16	29.08	21.86	22.50	24.16
14000	0.80	1.12	1.31	35.01	36.34	35.33	29.81	30.75	31.48
15000	0.91	1.26	1.48	21.63	21.73	20.46	19.57	19.42	18.36
16500	1.18	1.58	1.85	15.56	15.67	15.67	14.99	15.17	15.13
17500	1.30	1.73	2.04	17.07	18.07	19.45	17.64	18.44	19.05
19300	3.41	4.41	5.44	7.68	7.09	6.36	7.08	6.65	6.17
20500	9.65	11.24	13.13	2.36	2.64	2.70	2.62	2.82	2.95
21400	18.04	20.29	23.24	1.55	2.06	2.27	1.85	2.38	2.79
22000	26.71	29.92	34.31	1.44	1.92	2.11	1.97	2.61	3.02
22800	42.99	43.06	40.76	1.23	1.60	1.77	2.14	2.62	2.92
23000	42.55	40.92	39.62	1.15	1.52	1.69	2.10	2.53	2.81
23500	39.12	39.15	39.11	0.95	1.29	1.46	1.86	2.20	2.46
23700	38.88	39.26	39.47	0.85	1.19	1.35	1.71	2.05	2.30
24000	39.22	39.96	40.45	0.70	1.06	1.21	1.49	1.83	2.07
24200	39.77	40.67	41.38	0.62	0.98	1.14	1.36	1.70	1.94
24400	40.53	41.56	42.50	0.55	0.93	1.07	1.23	1.59	1.83
24600	41.47	42.61	43.78	0.48	0.86	1.01	1.13	1.51	1.75
24800	42.58	43.88	45.24	0.42	0.81	0.95	1.05	1.44	1.68
25000	43.88	45.32	46.99	0.36	0.77	0.91	0.97	1.39	1.64
25200	45.42	47.05	49.07	0.31	0.73	0.86	0.93	1.38	1.63
25400	47.22	49.05	51.23	0.27	0.70	0.84	0.91	1.37	1.64
25600	49.32	51.27	52.99	0.25	0.69	0.83	0.91	1.41	1.70
25800	51.46	53.10	52.87	0.23	0.69	0.82	0.92	1.45	1.77
26000	52.75	53.15	50.85	0.22	0.68	0.82	0.97	1.54	1.89
26200	52.39	51.00	48.49	0.23	0.70	0.84	1.06	1.66	2.07
26400	50.53	48.42	46.31	0.23	0.72	0.87	1.16	1.81	2.28
26600	48.08	46.21	44.34	0.25	0.75	0.90	1.31	2.02	2.57
27000	43.80	42.62	41.31	0.34	0.84	1.02	1.71	2.53	3.32
27500	40.11	39.62	38.63	0.48	1.01	1.24	2.41	3.33	4.37
28000	37.84	37.86	37.43	0.65	1.21	1.50	3.08	3.95	4.81
28500	36.88	37.30	37.47	0.84	1.42	1.76	3.36	4.03	4.42
29000	36.93	37.70	38.32	1.05	1.64	1.99	3.17	3.73	4.00
29500	37.66	38.63	39.44	1.20	1.77	2.09	2.91	3.55	3.99
30000	38.75	39.89	40.80	1.28	1.81	2.05	2.78	3.55	4.13
32000	48.80	50.74	52.36	0.80	1.21	1.34	2.01	2.35	2.48
35000	57.60	56.11	54.81	0.05	0.58	0.75	0.34	0.84	1.05
40000	48.92	48.28	46.66	1.31	1.97	2.06	1.24	1.80	2.02

Typical Performance Data

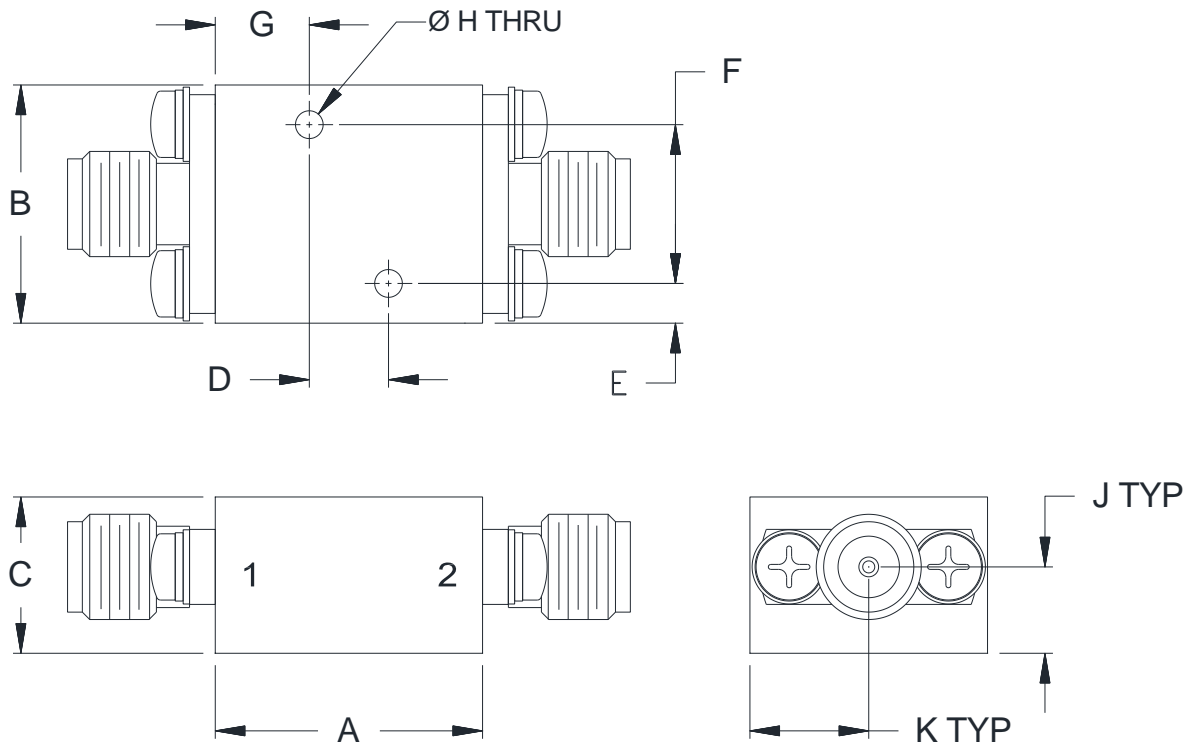
FREQ. (MHz)	GROUP DELAY		
	(nsec)		
	@-55°C	@+25°C	@+125°C
10	0.19	0.20	0.20
50	0.20	0.20	0.21
100	0.20	0.20	0.21
200	0.20	0.20	0.20
300	0.20	0.20	0.20
400	0.20	0.20	0.20
500	0.20	0.20	0.20
1000	0.20	0.20	0.20
1500	0.20	0.20	0.20
2000	0.20	0.20	0.20
2500	0.20	0.20	0.20
3000	0.20	0.20	0.20
3500	0.20	0.20	0.20
4000	0.20	0.20	0.20
4500	0.20	0.20	0.20
5000	0.20	0.20	0.20
5500	0.20	0.20	0.20
6000	0.20	0.20	0.20
6500	0.20	0.20	0.20
7000	0.20	0.20	0.20
7500	0.20	0.20	0.20
8000	0.20	0.20	0.20
8500	0.20	0.20	0.20
9000	0.20	0.20	0.20
9500	0.20	0.20	0.20
10000	0.20	0.20	0.20
10500	0.20	0.20	0.21
11000	0.20	0.20	0.21
11500	0.20	0.21	0.21
12000	0.21	0.21	0.21
12500	0.21	0.21	0.21
13000	0.21	0.21	0.21
13500	0.21	0.21	0.22
14000	0.22	0.22	0.22
14500	0.22	0.22	0.22
15000	0.22	0.22	0.23
15500	0.22	0.23	0.23
16000	0.23	0.23	0.23
16500	0.23	0.23	0.24
17500	0.25	0.25	0.26

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:

1. Case material: Brass alloy.
2. Case Finish:
 - a. Case & Cover of the units –Gold plating.
3. 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