Coaxial

Bandpass Filter

ZX75BP-1100-S+

50Ω 1000 to 1200 MHz

Generic photo used for illustration purposes only

CASE STYLE: KE1467

The Big Deal

- Fast roll-off on the upper sideband
- Good Matching and low loss in the pass band
- Connectorized package

Product Overview

ZX75BP-1100-S+ is a wideband bandpass filter in a rugged connectorized package covering 1000 to 1200 MHz. This is designed for asymmetric rejection applications such as super-heterodyne receivers. By having asymmetric band, faster roll-off at upper side band is achieved in a comparatively smaller package and lower pass band insertion loss. It has repeatable performance across lots and consistent performance across temperature

Key Features

Feature	Advantages
Fast roll-off on the upper side band	Wide bandwidth filter with fast-roll off on the upper side band, which increases selectivity on the adjacent channel.
Good matching and low loss in pass band	This filter has good matching and low loss in the pass band
Connectorized package	Connectorized package is easy to interface with other devices and well suited for test setups.
High power handling	This model uses high Q capacitors and high current handling inductors which is well suited for high power applications.

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CASE STYLE: KE1467

Connectors	Model
SMA-M\F	ZX75BP-1100-S+

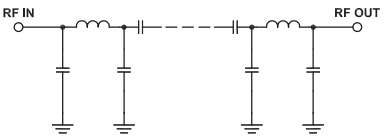
Features

- Fast roll-off on the upper side band
- Good matching in the pass band
- Connectorized package

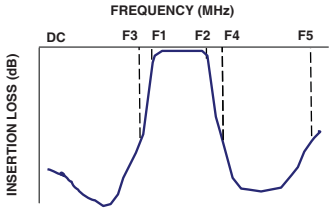
Applications

- Aviation and aeronautical
- Aeronautical radio navigation
- Radar systems
- Navigation systems

Functional Schematic



Typical Frequency Response



+RoHS Compliant

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

Electrical Specifications at 25°C

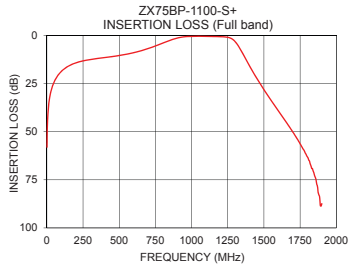
Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	-	-	-	1100	-	MHz
	Insertion Loss	F1-F2	1000-1200	-	0.7	2.0	dB
	VSWR	F1-F2	1000-1200	-	1.2	1.78	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC - 25	20	30	-	dB
	VSWR	DC-F3	DC - 25	-	20	-	:1
Stop Band, Upper	Insertion Loss	F4-F5	1500-1900	20	30	-	dB
	VSWR	F4-F5	1500-1900	-	20	-	:1

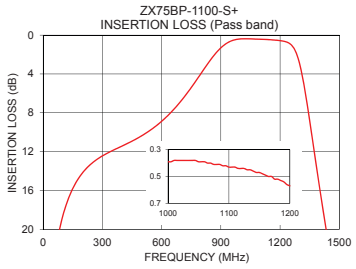
Maximum Ratings	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	3.2 W max.

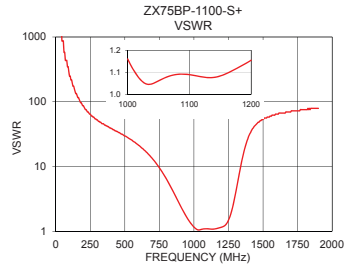
Permanent damage may occur if any of these limits are exceeded.

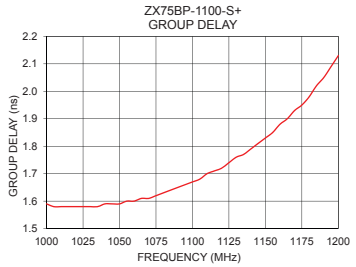
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1	57.98	1737.18	1000	1.59
5	43.96	1737.18	1020	1.58
25	30.02	1737.18	1030	1.58
70	21.37	434.30	1040	1.59
150	15.81	133.63	1050	1.59
600	8.88	21.20	1060	1.60
830	3.05	4.95	1070	1.61
1000	0.39	1.16	1080	1.63
1100	0.43	1.09	1090	1.65
1200	0.57	1.15	1100	1.67
1235	0.72	1.30	1110	1.70
1265	1.19	1.80	1120	1.72
1300	3.03	3.73	1130	1.76
1380	12.96	23.18	1140	1.79
1440	20.89	42.38	1150	1.83
1500	28.10	54.29	1160	1.88
1520	30.37	56.04	1170	1.93
1650	44.58	66.82	1180	1.98
1800	63.04	75.53	1190	2.05
1900	87.41	78.97	1200	2.13









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.

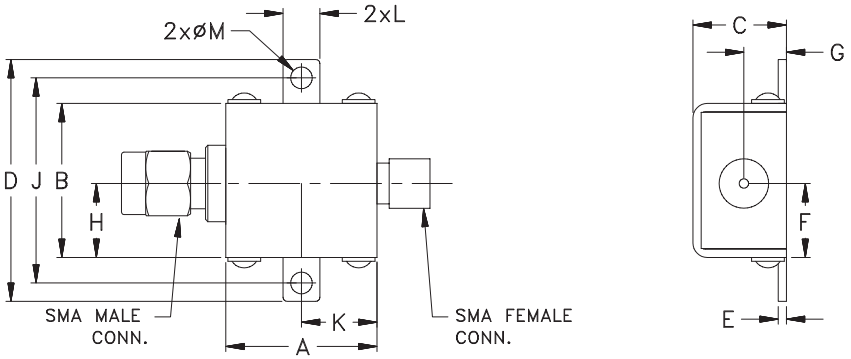
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.

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

INPUT	SMA-MALE
OUTPUT	SMA-FEMALE

Outline Drawing



Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
.74	**.75**	**.46**	**1.18**	**.04**	**.362**	**.21**
18.80	19.05	11.68	29.97	1.02	9.19	5.33

H	J	K	L	M		Wt.
.362	**1.00**	**.37**	**.18**	**.11**		grams
9.19	25.40	9.40	4.57	2.79		24.4

Note: Please refer to case style drawing for details

Coaxial Band Pass Filter ZX75BP-1100-S+

Typical Performance Data

FREQ.	INSERTION LOSS			INPUT RETURN LOSS			OUTPUT RETURN LOSS		
(MHz)	(dB)			(dB)			(dB)		
	@-40°C	@+25°C	@+85°C	@-40°C	@+25°C	@+85°C	@-40°C	@+25°C	@+85°C
1	57.96	57.98	57.96	0.00	0.00	0.00	0.00	0.00	0.00
10	37.94	37.95	37.95	0.00	0.00	0.00	0.00	0.00	0.00
25	30.02	30.02	30.01	0.00	0.01	0.00	0.00	0.00	0.01
50	24.16	24.13	24.10	0.01	0.02	0.02	0.02	0.02	0.02
75	20.88	20.82	20.76	0.03	0.04	0.04	0.03	0.04	0.04
100	18.69	18.60	18.53	0.06	0.07	0.07	0.05	0.06	0.06
175	14.91	14.89	14.83	0.15	0.17	0.17	0.13	0.14	0.15
200	14.15	14.18	14.14	0.19	0.20	0.20	0.16	0.17	0.18
250	13.02	13.15	13.19	0.26	0.27	0.27	0.21	0.22	0.23
300	12.28	12.45	12.54	0.32	0.33	0.32	0.27	0.27	0.27
340	11.85	12.01	12.13	0.36	0.38	0.37	0.30	0.31	0.31
375	11.54	11.67	11.78	0.40	0.42	0.41	0.33	0.34	0.34
400	11.32	11.43	11.53	0.42	0.45	0.44	0.35	0.36	0.36
450	10.86	10.93	11.00	0.47	0.51	0.50	0.40	0.42	0.42
500	10.32	10.36	10.41	0.54	0.59	0.58	0.47	0.49	0.49
525	10.01	10.04	10.08	0.59	0.63	0.63	0.51	0.53	0.54
585	9.12	9.14	9.15	0.72	0.77	0.78	0.64	0.67	0.68
600	8.86	8.88	8.89	0.76	0.82	0.83	0.69	0.72	0.73
650	7.90	7.90	7.90	0.95	1.01	1.03	0.88	0.92	0.93
700	6.74	6.74	6.74	1.25	1.32	1.34	1.18	1.23	1.25
725	6.09	6.09	6.08	1.47	1.54	1.57	1.40	1.45	1.48
755	5.25	5.26	5.24	1.81	1.89	1.94	1.75	1.81	1.85
800	3.92	3.94	3.90	2.62	2.71	2.79	2.57	2.65	2.72
830	3.02	3.05	3.02	3.46	3.56	3.67	3.42	3.51	3.61
890	1.47	1.52	1.49	6.38	6.53	6.76	6.39	6.53	6.75
900	1.26	1.31	1.30	7.10	7.27	7.53	7.13	7.28	7.53
915	0.99	1.05	1.04	8.36	8.55	8.85	8.41	8.59	8.89
935	0.71	0.77	0.78	10.39	10.63	11.01	10.51	10.74	11.11
945	0.60	0.66	0.68	11.60	11.87	12.29	11.75	12.02	12.43
1000	0.32	0.39	0.43	21.78	22.58	23.29	22.87	23.75	24.69
1030	0.30	0.38	0.42	30.77	32.69	32.11	36.81	41.37	39.15
1050	0.31	0.39	0.43	30.04	30.52	29.84	30.91	30.63	30.02
1065	0.32	0.40	0.44	27.96	28.25	28.02	27.81	27.67	27.46
1100	0.34	0.43	0.48	26.68	27.37	27.41	26.23	26.50	26.36
1115	0.35	0.44	0.49	27.16	28.09	27.88	26.72	27.12	26.69
1150	0.38	0.47	0.53	27.65	27.94	26.62	27.81	27.61	26.09
1185	0.43	0.53	0.60	25.03	24.24	23.32	26.28	25.22	24.10
1195	0.45	0.56	0.62	24.20	23.33	22.58	25.88	24.77	23.87
1200	0.46	0.57	0.64	23.76	22.87	22.21	25.68	24.57	23.80
1230	0.57	0.69	0.77	19.43	18.78	18.43	21.72	21.21	21.01
1245	0.68	0.82	0.92	15.97	15.50	15.16	17.50	17.21	16.95
1275	1.32	1.53	1.69	9.10	8.83	8.54	9.67	9.48	9.20
1300	2.73	3.03	3.30	4.92	4.78	4.61	5.19	5.08	4.91
1325	5.20	5.59	5.93	2.48	2.45	2.39	2.59	2.58	2.51
1360	9.76	10.19	10.58	1.02	1.07	1.08	1.03	1.08	1.08
1375	11.84	12.27	12.65	0.74	0.81	0.84	0.74	0.79	0.81
1400	15.26	15.68	16.05	0.50	0.57	0.62	0.46	0.52	0.55
1435	19.85	20.26	20.60	0.35	0.42	0.47	0.29	0.35	0.37
1470	24.19	24.57	24.90	0.29	0.36	0.40	0.21	0.26	0.29
1500	27.73	28.10	28.41	0.25	0.32	0.37	0.17	0.22	0.25
1520	30.03	30.37	30.69	0.24	0.31	0.35	0.16	0.21	0.23
1600	38.83	39.14	39.47	0.20	0.27	0.32	0.12	0.17	0.18
1610	39.93	40.24	40.53	0.20	0.27	0.32	0.12	0.16	0.18
1685	48.15	48.46	48.79	0.18	0.25	0.30	0.10	0.14	0.16
1700	49.83	50.19	50.49	0.18	0.25	0.30	0.10	0.14	0.16
1780	59.67	60.04	60.52	0.16	0.23	0.28	0.09	0.13	0.15
1800	62.52	63.04	63.71	0.16	0.23	0.28	0.09	0.13	0.14
1840	69.91	70.37	70.74	0.16	0.23	0.28	0.08	0.13	0.14
1890	88.34	88.43	84.85	0.15	0.22	0.27	0.08	0.13	0.14
1900	87.31	87.41	86.34	0.14	0.22	0.27	0.08	0.12	0.13

Coaxial Band Pass Filter ZX75BP-1100-S+

Typical Performance Data

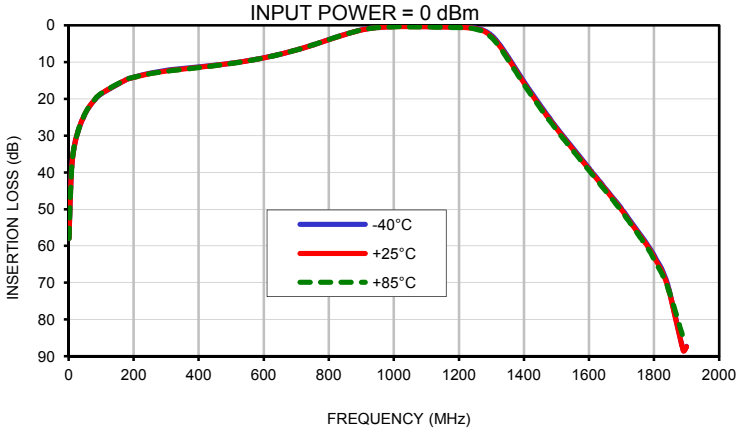
FREQ.	GROUP DELAY		
(MHz)	(nsec)		
	@-40°C	@+25°C	@+85°C
1000	1.59	1.59	1.58
1005	1.59	1.58	1.58
1010	1.59	1.58	1.58
1015	1.59	1.58	1.58
1020	1.59	1.58	1.58
1025	1.59	1.58	1.58
1035	1.59	1.58	1.58
1040	1.59	1.59	1.58
1045	1.60	1.59	1.59
1050	1.60	1.59	1.59
1055	1.60	1.60	1.59
1060	1.61	1.60	1.60
1065	1.61	1.61	1.61
1070	1.62	1.61	1.61
1075	1.63	1.62	1.62
1080	1.63	1.63	1.63
1085	1.64	1.64	1.64
1090	1.65	1.65	1.65
1095	1.66	1.66	1.66
1100	1.67	1.67	1.67
1105	1.69	1.68	1.68
1110	1.70	1.70	1.70
1115	1.71	1.71	1.71
1120	1.73	1.72	1.73
1125	1.74	1.74	1.74
1130	1.76	1.76	1.76
1135	1.78	1.77	1.78
1140	1.79	1.79	1.80
1145	1.81	1.81	1.82
1150	1.83	1.83	1.84
1155	1.85	1.85	1.86
1160	1.88	1.88	1.88
1165	1.90	1.90	1.90
1170	1.92	1.93	1.93
1175	1.95	1.95	1.96
1180	1.98	1.98	1.99
1185	2.01	2.02	2.02
1190	2.05	2.05	2.06
1195	2.08	2.09	2.10
1200	2.12	2.13	2.14

Coaxial Band Pass Filter

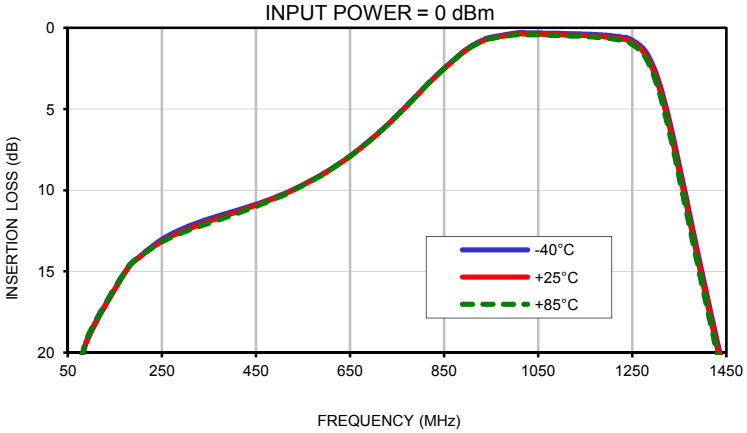
ZX75BP-1100-S+

Typical Performance Curves

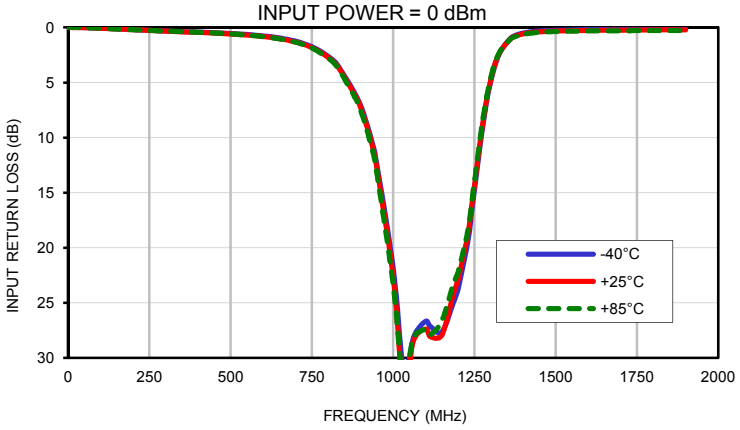
INSERTION LOSS vs. TEMPERATURE
INPUT POWER = 0 dBm



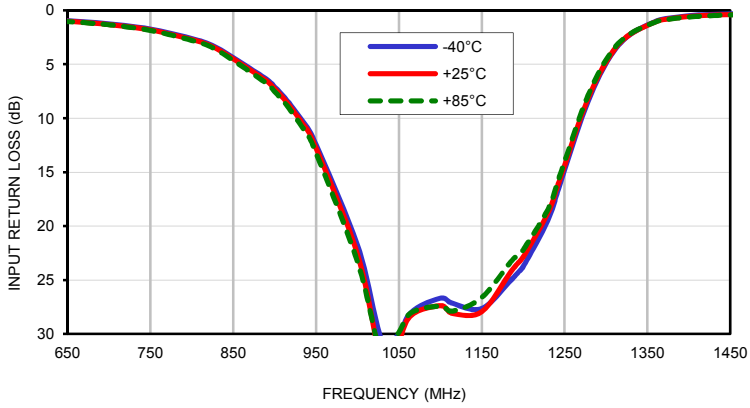
INSERTION LOSS vs. TEMPERATURE
INPUT POWER = 0 dBm



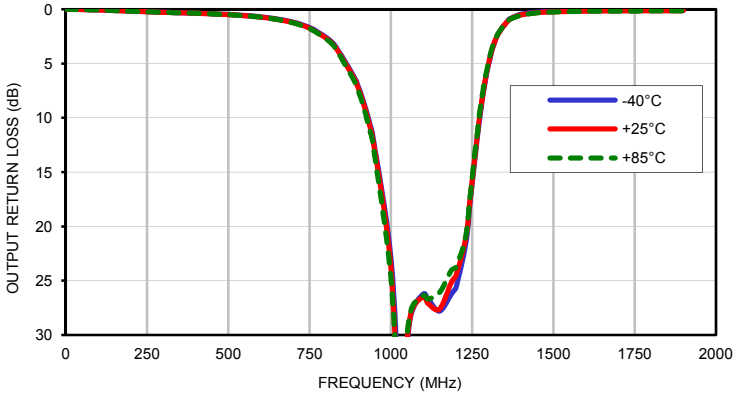
INPUT RETURN LOSS vs. TEMPERATURE
INPUT POWER = 0 dBm



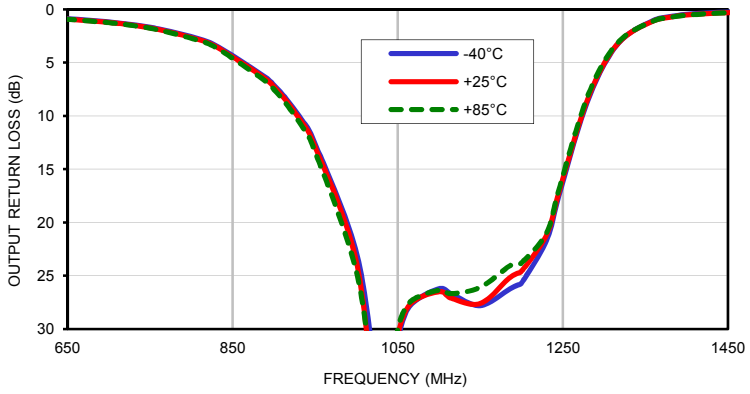
INPUT RETURN LOSS vs. TEMPERATURE
INPUT POWER = 0 dBm



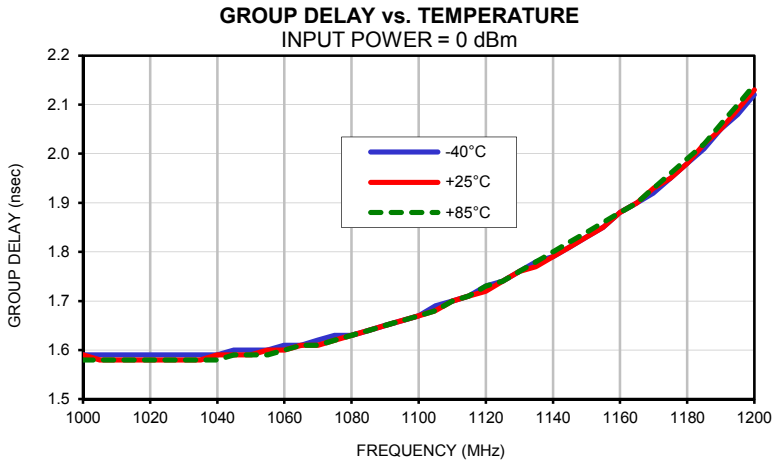
OUTPUT RETURN LOSS vs. TEMPERATURE
INPUT POWER = 0 dBm



OUTPUT RETURN LOSS vs. TEMPERATURE
INPUT POWER = 0 dBm



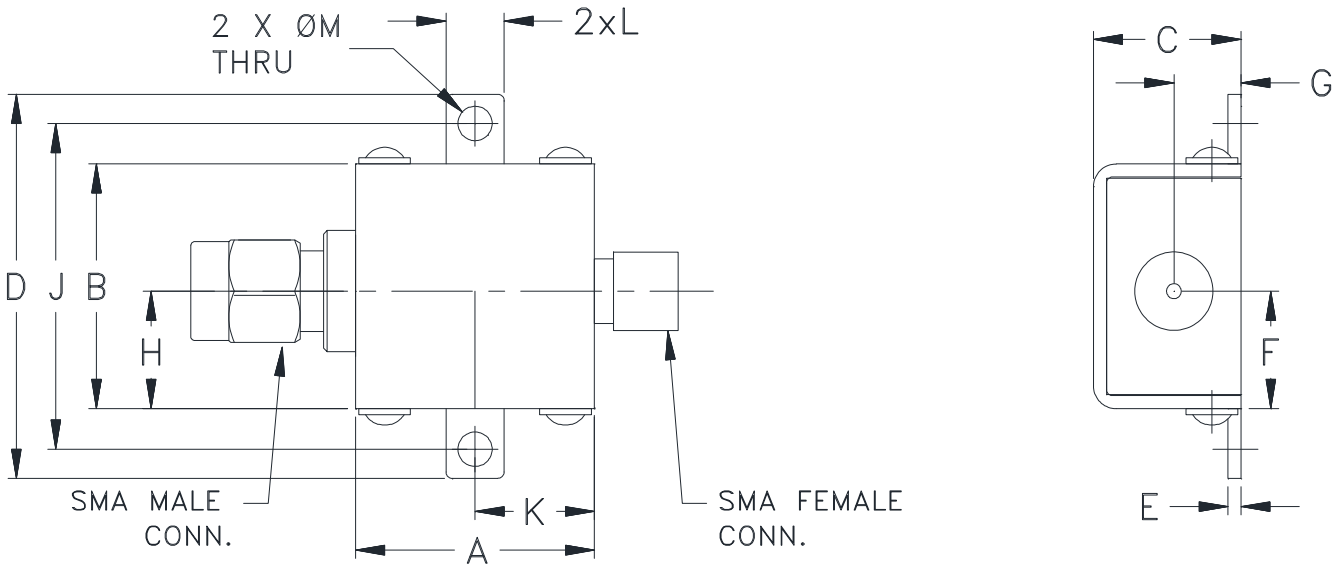
Typical Performance Curves



Case Style KE

KE1467

Outline Dimensions



CASE #.	A	B	C	D	E	F	G	H	J	K	L	M
KE1467	.74 (18.80)	.75 (19.05)	.46 (11.68)	1.18 (29.97)	.04 (1.02)	.362 (9.19)	.21 (5.33)	.362 (9.19)	1.00 (25.40)	.37 (9.40)	.18 (4.57)	.11 (2.79)

CASE #.	WT. GRAM
KE1467	24.4

Dimensions are in inches (mm). Tolerances: 2Pl. ± .03; 3Pl. ± .015
Tolerance on hole size and interaxes dimensions to be ± .005.

Note:

1. Case material: Brass
2. Case finish: Gold
3. Cover: Nickel plated.

Mini-Circuits®
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Mini-Circuits

Environmental Specifications ENV46

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 100°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Humidity	90 to 95% RH, 40°C, 96 hours; Units may require bake-out after humidity to restore full performance.	MIL-STD-202, Method 103, Condintion B
Thermal Shock	-55° to 100°C, 100 cycles	MIL-STD-202, Method 107, Condition A-3, except +100°C
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	50g, 11ms half-sine, 3 shocks each direction 3 axes (total 18)	MIL-STD-202, Method 213, Condition A