

Coaxial High Pass Filter

ZFHP-0R75-S+

50Ω 0.75 to 500 MHz



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CASE STYLE: H16

The Big Deal

- Low insertion loss
- High rejection
- Connectorized package

Product Overview

ZFHP-0R75-S+ is a High pass filter in a connectorized package. This low frequency cut-off high pass filter eliminates noise that feed into RF / base band circuits from low frequency sources.

Key Features

Feature	Advantages
Low insertion loss	Can be used in high performance applications.
Excellent low frequency rejection	Filters out low frequency noise from sources such as electric motors and generators. SMDS noise filtering and IF noise filtering.
Connectorized package	The connectorized package is easy to interface with other devices and well suited for test setups.

Notes

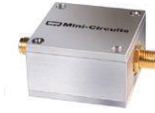
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B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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50Ω 0.75 to 500 MHz

ZFHP-0R75-S+



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Connectors Model
SMA-FEMALE ZFHP-0R75-S+
BRACKET (OPTION "B")

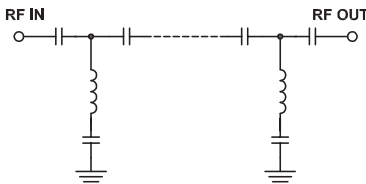
Features

- Wide band, 0.75 MHz to 500 MHz
- High rejection
- Connectorized package

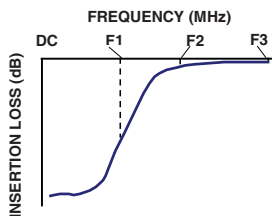
Applications

- Wire-line broad band access
- Fiber optic networks
- Receivers / transmitters
- Electrical equipment noise elimination

Functional Schematic



Typical Frequency Response



Electrical Specifications at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Stop Band	Rejection Loss	DC-F1	DC-0.3	25	49	dB
	VSWR	DC-F1	DC-0.3	-	83	:1
Pass Band	Insertion Loss	F2-F3	0.75-500	-	0.6	dB
	VSWR	F2-F3	0.75-500	-	1.4	:1

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	+5 dBm max.

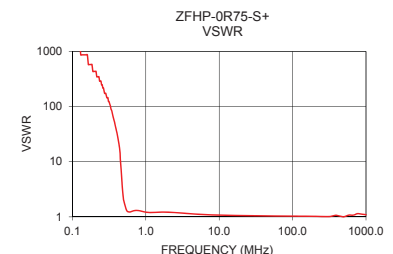
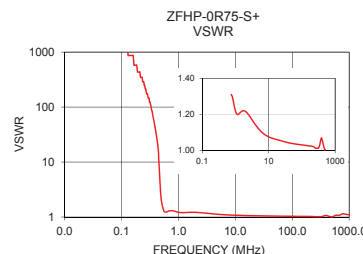
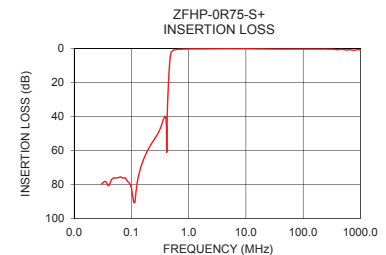
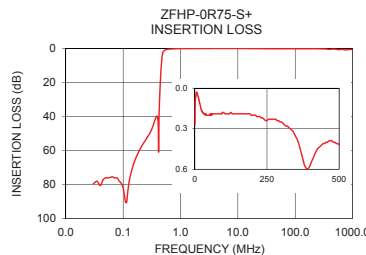
Permanent damage may occur if any of these limits are exceeded.

Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
0.030	79.71	1737.18
0.200	58.80	434.30
0.300	49.06	144.77
0.420	44.55	25.56
0.435	27.05	19.32
0.450	16.32	11.09
0.470	6.98	4.99
0.485	3.34	2.84
0.500	1.79	1.99
0.550	0.75	1.30
0.750	0.27	1.31
1.000	0.15	1.22
5.000	0.03	1.12
5.000	0.03	1.12
10.000	0.05	1.08
50.000	0.20	1.04
100.000	0.18	1.03
250.000	0.24	1.01
400.000	0.57	1.07
500.000	0.42	1.00

+RoHS Compliant

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



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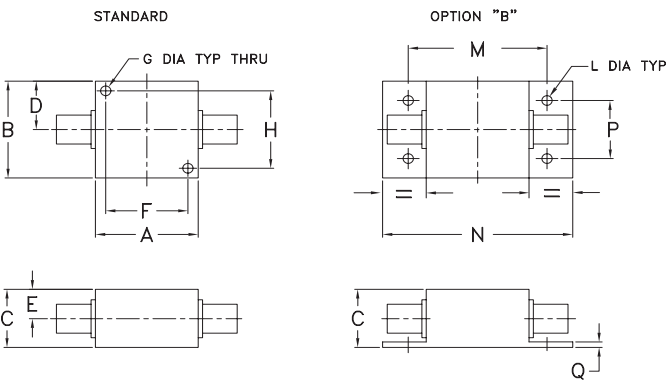
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REV.B
M171494
ZFHP-0R75-S+
EDU1024
URJ
200123
Page 2 of 3

Coaxial Connections

PORT - 1	SMA-Female
PORT - 2	SMA-Female

Outline Drawing



Outline Dimensions ($\frac{\text{inch}}{\text{mm}}$)

A	B	C	D	E	F	G	H
1.25	1.25	.75	.63	.38	1.000	.125	1.000
31.75	31.75	19.05	16.00	9.65	25.40	3.18	25.40

J	K	L	M	N	P	Q	wt
--	--	.125	1.688	2.18	.750	.06	grams
--	--	3.18	42.88	55.37	19.05	1.52	70.0

Note: Please refer to case style drawing for details

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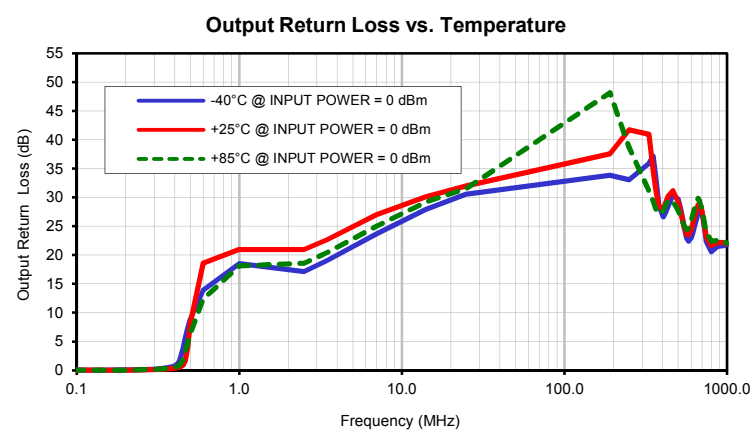
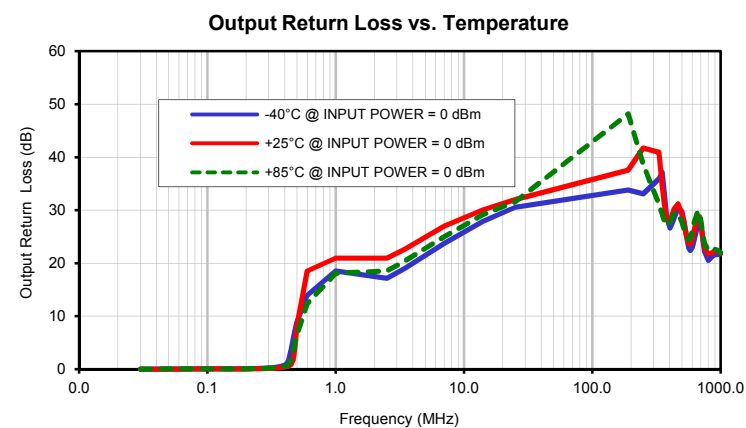
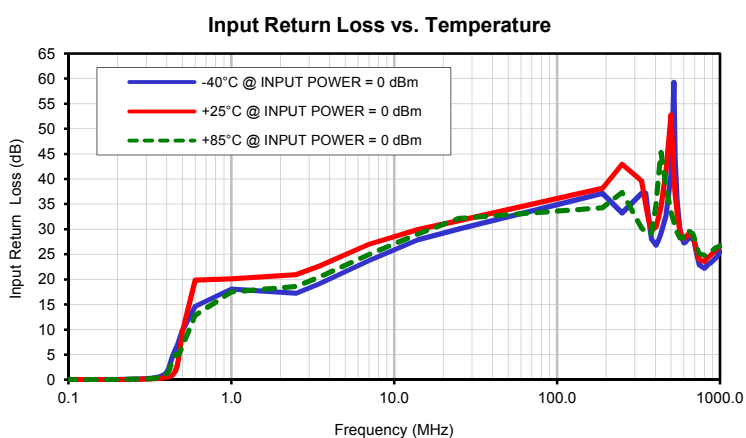
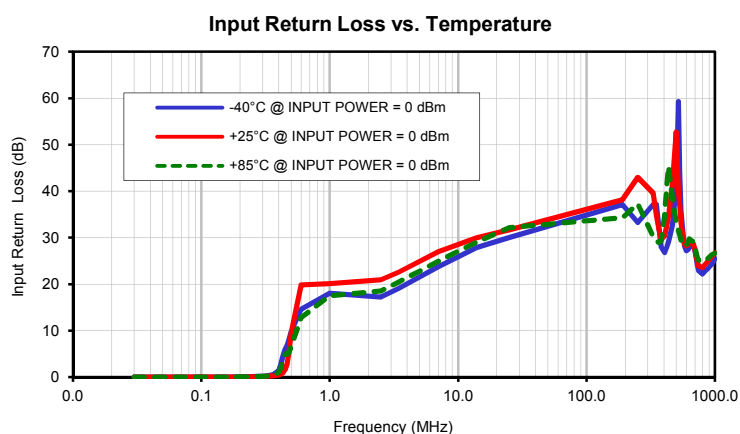
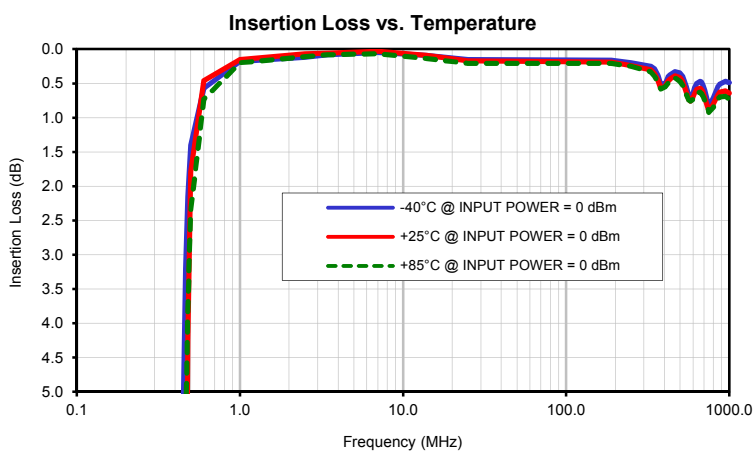
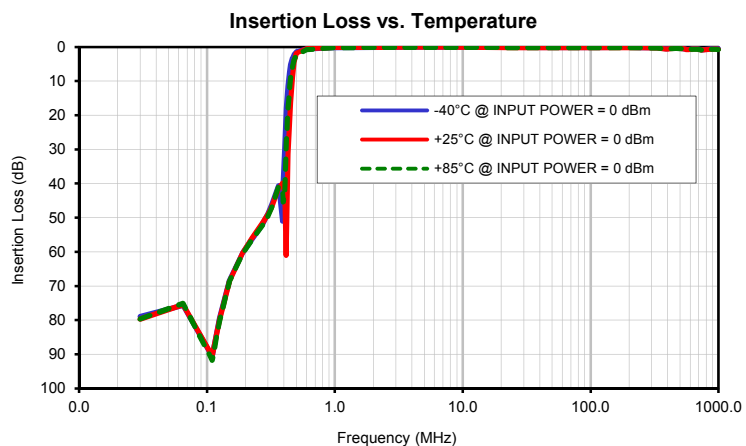
Typical Performance Data

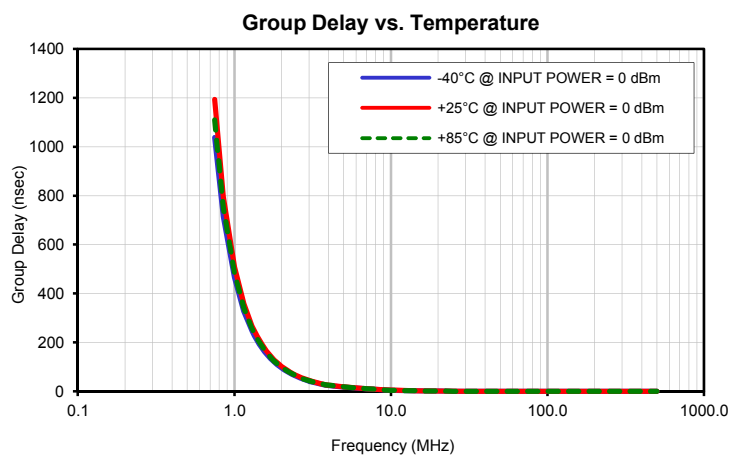
FREQ. (MHz)	INSERTION LOSS			INPUT RETURN LOSS			OUTPUT RETURN LOSS		
	(dB)			(dB)			(dB)		
	@-40°C	@+25°C	@+85°C	@-40°C	@+25°C	@+85°C	@-40°C	@+25°C	@+85°C
0.030	78.96	79.71	79.68	0.01	0.01	0.00	0.01	0.00	0.00
0.065	75.65	75.52	75.09	0.01	0.01	0.01	0.02	0.01	0.02
0.110	90.64	90.46	91.82	0.02	0.01	0.02	0.03	0.02	0.03
0.125	79.41	79.90	80.39	0.02	0.01	0.03	0.04	0.02	0.03
0.150	68.38	68.63	68.65	0.03	0.02	0.04	0.05	0.03	0.04
0.190	60.40	60.28	60.55	0.05	0.04	0.05	0.07	0.05	0.06
0.225	56.31	55.85	56.36	0.07	0.05	0.07	0.10	0.06	0.08
0.270	52.13	51.73	52.41	0.12	0.09	0.12	0.15	0.09	0.12
0.300	48.86	49.06	49.57	0.19	0.12	0.17	0.21	0.13	0.16
0.320	46.02	46.94	47.06	0.25	0.15	0.22	0.26	0.15	0.20
0.365	40.61	41.37	40.78	0.58	0.29	0.47	0.47	0.24	0.34
0.390	50.99	39.83	42.09	1.08	0.42	0.82	0.67	0.33	0.46
0.395	39.22	40.15	45.40	1.26	0.45	0.95	0.72	0.35	0.49
0.405	27.52	42.79	43.59	1.76	0.52	1.30	0.84	0.39	0.57
0.415	19.58	61.02	29.63	2.56	0.62	1.89	1.02	0.45	0.66
0.430	11.05	31.31	17.82	4.30	0.81	3.52	1.67	0.56	0.90
0.450	5.15	16.32	9.01	5.98	1.57	4.96	3.76	0.87	1.87
0.465	3.20	8.85	5.72	6.86	2.82	4.87	5.57	1.66	3.22
0.480	2.15	4.25	3.80	8.03	5.35	5.29	7.15	3.77	4.63
0.500	1.41	1.79	2.36	9.80	9.59	6.64	8.93	8.26	6.40
0.600	0.57	0.46	0.73	14.63	19.84	12.84	13.91	18.55	12.36
1.000	0.18	0.15	0.20	18.07	20.10	17.47	18.53	20.97	18.11
2.500	0.12	0.07	0.11	17.23	20.91	18.55	17.14	20.94	18.56
3.450	0.08	0.06	0.08	19.11	22.61	20.43	19.02	22.61	20.43
7.000	0.05	0.03	0.07	23.76	26.99	24.96	23.70	26.99	25.00
14.000	0.09	0.09	0.14	27.87	29.95	29.05	27.90	30.07	29.16
25.000	0.15	0.17	0.21	30.04	31.70	32.14	30.55	32.01	31.57
190.000	0.16	0.19	0.21	37.10	38.16	34.29	33.82	37.54	48.16
250.000	0.20	0.24	0.25	33.24	42.96	37.29	33.07	41.75	38.65
330.000	0.25	0.30	0.33	37.10	39.62	30.26	35.90	40.96	31.13
350.000	0.29	0.36	0.40	37.21	34.82	29.44	37.17	34.73	29.36
365.000	0.38	0.45	0.49	32.20	31.80	28.91	33.21	31.09	27.98
380.000	0.52	0.57	0.58	28.01	29.71	29.25	28.73	28.38	27.08
405.000	0.50	0.54	0.55	26.77	30.46	34.87	26.63	27.97	27.69
420.000	0.41	0.47	0.50	27.85	32.37	40.68	27.50	29.13	28.78
435.000	0.37	0.43	0.45	29.16	34.64	45.30	28.59	30.30	29.51
465.000	0.33	0.39	0.42	32.63	41.39	38.51	30.40	31.20	29.25
500.000	0.35	0.42	0.47	40.96	52.72	33.43	29.72	29.26	27.79
520.000	0.40	0.48	0.53	59.26	40.11	31.48	27.72	27.28	26.36
530.000	0.45	0.53	0.57	43.91	36.87	30.67	26.63	26.29	25.86
545.000	0.54	0.62	0.65	35.78	33.21	29.35	24.86	24.89	25.15
565.000	0.67	0.73	0.74	30.38	29.89	28.25	22.89	23.64	24.40
580.000	0.71	0.76	0.76	28.28	28.63	28.21	22.39	23.53	24.65
600.000	0.64	0.70	0.73	27.24	28.23	28.43	22.96	24.41	25.98
615.000	0.56	0.64	0.68	27.42	28.43	29.04	23.85	25.45	26.98
630.000	0.50	0.59	0.64	27.95	28.83	29.77	24.96	26.63	27.99
665.000	0.47	0.57	0.63	28.38	28.98	29.29	27.47	28.72	29.86
675.000	0.48	0.59	0.65	28.31	28.70	29.14	27.80	28.84	29.43
680.000	0.49	0.60	0.65	28.20	28.50	29.01	27.89	28.79	29.13
685.000	0.50	0.61	0.67	28.02	28.25	28.82	27.90	28.64	28.84
695.000	0.54	0.65	0.70	27.40	27.65	28.20	27.73	28.13	28.31
715.000	0.64	0.74	0.78	25.48	25.99	26.51	26.05	26.22	26.72
730.000	0.73	0.81	0.84	24.10	24.80	25.75	24.06	24.53	25.10
745.000	0.81	0.88	0.89	22.97	23.92	25.15	22.38	23.16	23.88
750.000	0.84	0.91	0.92	22.86	23.91	25.14	22.07	22.93	23.74
800.000	0.71	0.80	0.85	22.18	23.53	24.79	20.55	21.65	22.42
850.000	0.55	0.67	0.73	23.02	24.44	25.43	21.17	21.94	22.46
875.000	0.51	0.63	0.70	23.31	24.84	25.50	21.54	22.17	22.69
950.000	0.47	0.61	0.69	24.40	25.99	26.38	21.64	22.21	22.41
1000.000	0.49	0.64	0.73	25.50	26.72	26.67	21.77	21.91	22.00

Typical Performance Data

FREQ. (MHz)	GROUP DELAY		
	(nsec)		
	@-40°C	@+25°C	@+85°C
0.750	1037.32	1193.37	1109.90
0.850	713.86	795.09	751.69
1.000	463.97	508.50	483.79
1.150	327.71	358.22	341.24
1.300	245.35	267.52	255.33
1.400	206.64	225.43	215.27
1.500	177.18	192.65	184.60
1.600	153.30	166.68	159.45
1.750	126.67	137.06	131.18
1.800	119.22	129.18	123.73
1.900	106.65	114.85	110.26
2.000	95.25	102.88	99.00
2.200	78.37	84.37	80.84
2.400	65.83	70.16	67.92
2.550	57.67	61.83	59.77
2.700	51.47	54.94	53.18
2.850	46.50	49.67	48.02
3.000	41.55	44.48	42.94
3.150	37.94	40.27	39.02
3.400	32.54	34.52	33.62
3.600	29.13	30.83	29.96
3.850	25.29	26.83	26.02
5.000	17.80	18.90	18.42
7.000	10.54	11.17	10.84
10.000	4.69	5.03	4.81
13.000	2.75	2.93	2.80
18.000	1.55	1.60	1.49
21.000	1.18	1.17	1.09
25.000	0.90	0.89	0.84
30.000	0.66	0.66	0.65
36.000	0.55	0.55	0.53
43.000	0.48	0.48	0.46
49.000	0.45	0.43	0.42
53.000	0.43	0.42	0.40
55.000	0.41	0.40	0.39
61.000	0.40	0.38	0.39
70.000	0.38	0.37	0.36
79.000	0.36	0.35	0.34
84.000	0.35	0.33	0.33
89.000	0.36	0.36	0.33
93.000	0.35	0.34	0.32
95.000	0.37	0.35	0.33
125.000	0.33	0.32	0.31
245.000	0.31	0.30	0.29
265.000	0.32	0.31	0.30
295.000	0.34	0.33	0.30
320.000	0.33	0.32	0.31
350.000	0.36	0.34	0.31
365.000	0.32	0.29	0.25
370.000	0.28	0.25	0.22
375.000	0.23	0.21	0.20
385.000	0.15	0.15	0.16
400.000	0.16	0.17	0.18
405.000	0.20	0.20	0.20
410.000	0.24	0.23	0.23
415.000	0.27	0.26	0.25
420.000	0.30	0.29	0.27
430.000	0.33	0.31	0.29
450.000	0.34	0.33	0.31
500.000	0.36	0.34	0.32

Typical Performance Curves

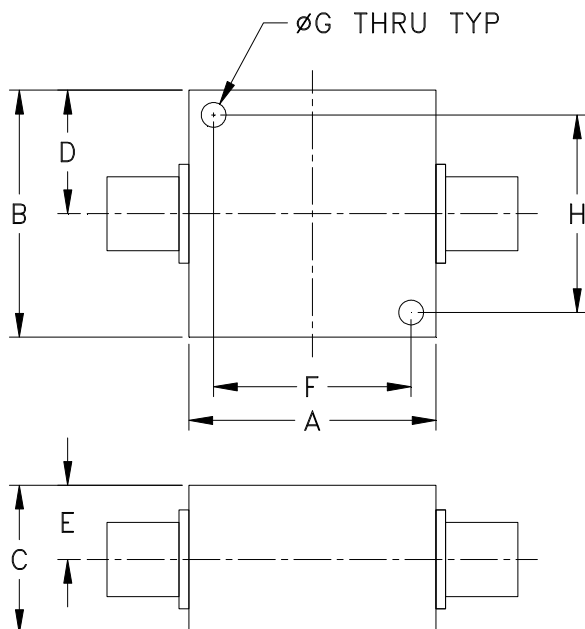




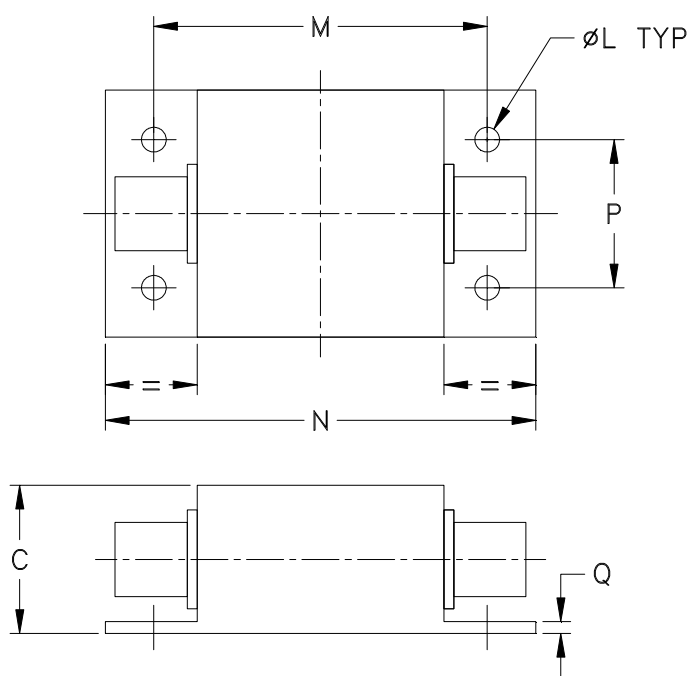
Outline Dimensions

H16

STANDARD



OPTION "B"



CASE#	A	B	C	D	E	F	G	H	J	K	L	M	N
H16	1.25 (31.75)	1.25 (31.75)	.75 (19.05)	.63 (16.00)	.38 (9.65)	1.000 (25.40)	.125 (3.18)	1.000 (25.40)	--	--	.125 (3.18)	1.688 (42.88)	2.18 (55.37)

CASE#	P	Q	WT.GRAMS
H16	.750 (19.05)	.06 (1.52)	70

Dimensions are in inches (mm). Tolerances: 2PL. $\pm .03$; 3PL. $\pm .015$

Notes:

1. Case material: Aluminum alloy.
2. Case finish:
For RoHS Case Styles: Clear chemical conversion coating, non-chrome or trivalent chrome based.
3. Mounting bracket available on request. Add suffix B to part number.
4. Bracket version, option B, dimension "C" changes from .75 to .94 inches when connectors are type N.
5. 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



The Design Engineers Search Engine 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 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, Condition 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