

High Pass Filter

PHP-100+

50Ω 90 to 400 MHz

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W max.
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

INPUT	1
OUTPUT	8
GROUND	2,3,4,5,6,7
CASE GROUND	2,3,4,5,6,7

Features

- Rugged shielded case, hermetically sealed
- other standard and custom PHP models available with wide selection of fco

Applications

- lab use
- transmitters/receivers
- military/hi-rel application



Generic photo used for illustration purposes only

CASE STYLE: A01

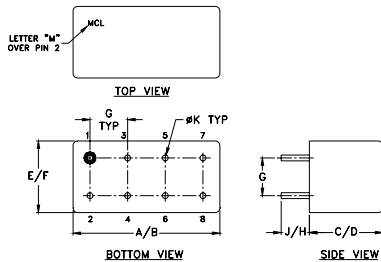
+RoHS Compliant

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

High Pass Filter Electrical Specifications

STOPBAND (MHz)		fco (MHz) Nom.	PASSBAND (MHz)	VSWR (:1)	
(loss > 40 dB)	(loss > 20 dB)	(loss 3 dB)	(loss < 1 dB)	Stopband Typ.	Passband Typ.
DC-40	40-55	82	90-400	17	1.5

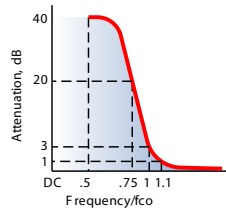
Outline Drawing



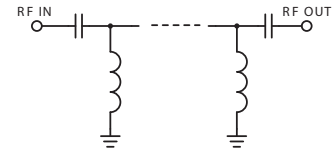
Outline Dimensions (inch/mm)

A	B	C	D	E	F
.770	.800	.385	.400	.370	.400
19.56	20.32	9.78	10.16	9.40	10.16
G	H	J	K	wt	
.200	.20	.14	.031	grams	
5.08	5.08	3.56	0.79	5.2	

typical frequency response

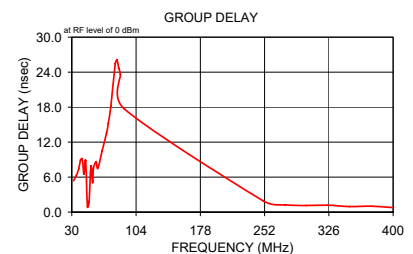
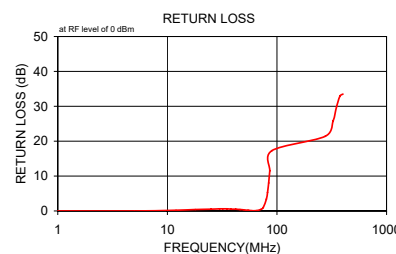


electrical schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
$\bar{x}$	σ			
1.00	66.80	1.3	32.00	5.38
5.00	69.56	0.5	35.00	6.18
12.00	76.93	5.0	38.00	7.45
18.00	72.01	4.0	40.00	8.91
25.00	74.64	7.6	42.00	9.15
30.00	70.54	2.0	44.00	6.49
32.00	70.63	3.7	46.00	8.82
35.00	70.04	3.6	48.00	0.92
38.00	63.40	2.1	50.00	1.83
40.00	59.85	0.7	52.00	7.91
42.00	55.56	0.6	54.00	5.06
46.00	49.83	0.5	55.00	7.57
50.00	43.77	0.6	58.00	8.59
52.00	40.75	0.6	60.00	7.49
54.00	37.94	0.5	65.00	10.52
55.00	36.57	0.6	70.00	13.56
58.00	32.40	0.6	72.00	15.21
65.00	22.98	0.7	75.00	18.22
72.00	13.63	0.6	80.00	25.45
75.00	9.75	0.5	82.00	26.11
80.00	4.23	0.1	84.00	24.72
82.00	2.74	0.1	86.00	23.58
84.00	1.74	0.1	90.00	17.77
86.00	1.16	0.1	250.50	1.92
90.00	0.72	0.1	275.50	1.26
275.50	0.23	0.1	300.00	1.14
325.00	0.21	0.1	325.00	1.18
350.00	0.21	0.1	350.00	0.95
375.00	0.21	0.1	375.00	1.01
400.00	0.21	0.1	400.00	0.78



Notes

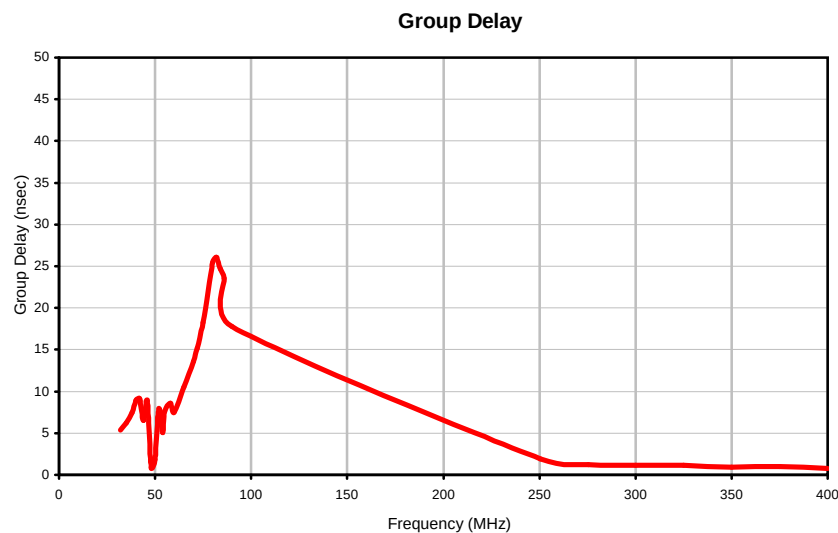
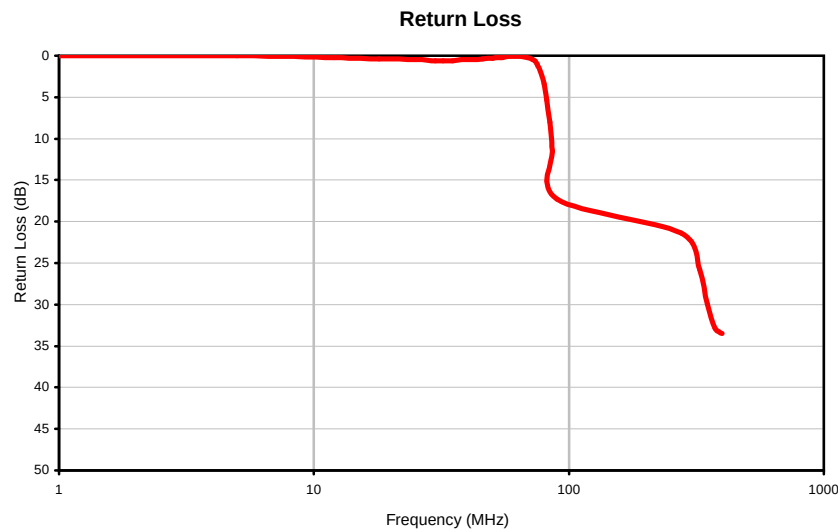
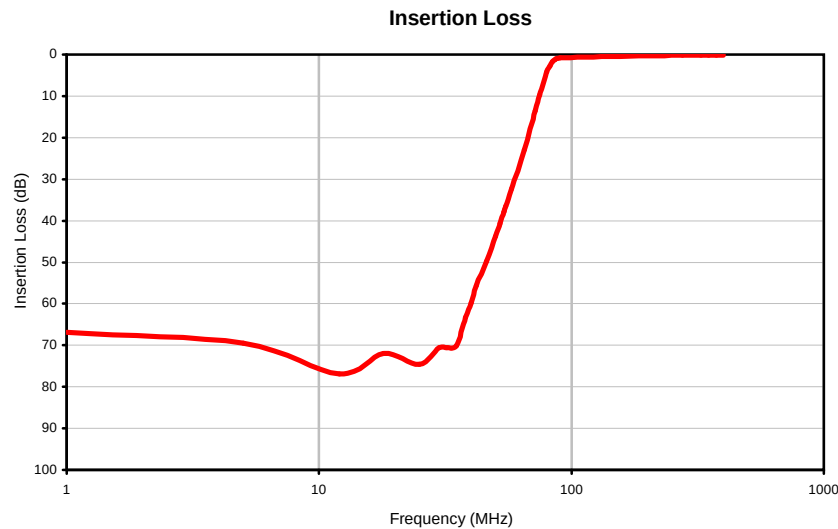
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Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
1.0	66.80	0.00	32.0	5.380
5.0	69.56	0.00	35.0	6.180
12.0	76.93	0.20	38.0	7.450
18.0	72.01	0.40	40.0	8.910
25.0	74.64	0.50	42.0	9.150
30.0	70.54	0.60	44.0	6.490
32.0	70.63	0.60	46.0	8.820
35.0	70.04	0.60	48.0	0.920
38.0	63.40	0.50	50.0	1.830
40.0	59.85	0.50	52.0	7.910
42.0	55.56	0.50	54.0	5.060
46.0	49.83	0.40	55.0	7.570
50.0	43.77	0.30	58.0	8.590
52.0	40.75	0.20	60.0	7.490
54.0	37.94	0.20	65.0	10.520
55.0	36.57	0.20	70.0	13.560
58.0	32.40	0.10	72.0	15.210
65.0	22.98	0.10	75.0	18.220
72.0	13.63	0.50	80.0	25.450
75.0	9.75	1.00	82.0	26.110
80.0	4.23	3.40	84.0	24.720
82.0	2.74	5.30	86.0	23.580
84.0	1.74	8.00	90.0	17.770
86.0	1.16	11.50	250.5	1.920
90.0	0.72	17.30	275.5	1.260
275.5	0.23	21.40	300.0	1.140
325.0	0.21	25.80	325.0	1.180
350.0	0.21	29.90	350.0	0.950
375.0	0.21	32.90	375.0	1.010
400.0	0.21	33.50	400.0	0.780

Typical Performance Curves



REV. X1
 PHP-100+
 060725
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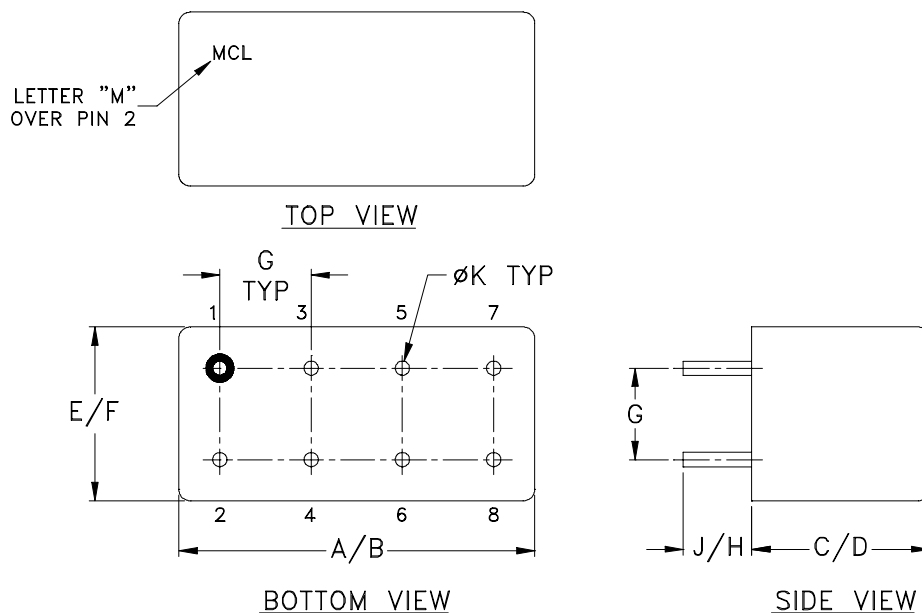


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A01
A04
A05
A06

Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	WT, GRAM
A01	.770 (19.56)	.800 (20.32)	.385 (9.78)	.400 (10.16)	.370 (9.40)	.400 (10.16)	.200 (5.08)	.20 (5.08)	.14 (3.56)	.031 (.79)	5.2
A04			.200 (5.08)	.210 (5.33)							3.7
A05			.240 (6.10)	.250 (6.35)							3.7
A06			.285 (7.24)	.310 (7.87)							5.2

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

Notes:

- Header material: C.R.S.
Pin material: #52 alloy.
Cover material: Cupro-Nickel.
- Pin finish: Electro Tin-Silver.
- Insulated spacer available. Request P/N B14-045-01.
- Tolerance on pin diameter $\pm .005$ inch.
- Glass meniscus 0.015 inch max.
- Blue bead indicates Pin 1. Pin numbers do not appear on unit, for reference only.



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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
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, 11 ms, 1/2-sine, 18 shocks: 3 each direction, each of 3 axes	MIL-STD-202, Method 213, Condition A
Moisture Resistance	10 cycles, 24 hours per cycle	MIL-STD-202, Method 106, Condition A, except 50°C and end point electrical test done within 12 hours
Solderability	10X Magnification	J-STD-002, 95% Coverage
Resistance to Solder Heat	260°C for 10 seconds	MIL-STD-202, Method 210, Condition B
Marking Resistance to Solvents	Isopropyl alcohol + mineral spirits at 25°C; terpene defluxer at 25°C; distilled water + proylene glycol monomethyl ether + monoethanolamine at 63°C to 70°C	MIL-STD-202, Method 215
Terminal Strength	4 1/2 Pound Pull	MIL-STD-202, Method 211, Condition A



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Specification	Test/Inspection Condition	Reference/Spec
Gross Leak	125°C Bubble Test	MIL-STD-202, Method 112, Condition D
Barometric Pressure	100,000 Feet	MIL-STD-202, Method 105, Condition D