

High Pass Filter

PHP-175+

50Ω 160 to 800 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

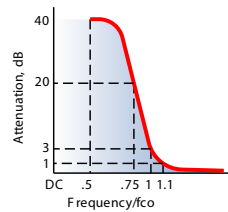
+RoHS Compliant

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

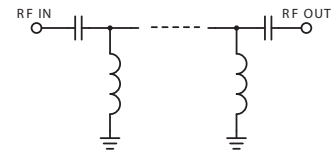
High Pass Filter Electrical Specifications

STOPBAND (MHz)	fco (MHz) Nom.	PASSBAND (MHz)	VSWR (:1)
(loss > 40 dB)	(loss > 20 dB)	(loss < 3 dB)	(loss < 1 dB)
DC-70	70-105	140	160-800
			Stopband Typ. Passband Typ.
			17 1.5

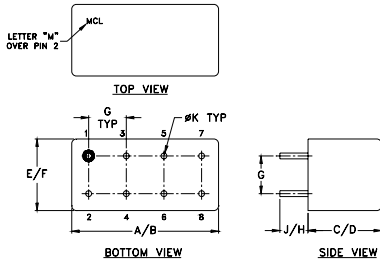
typical frequency response



electrical schematic



Outline Drawing

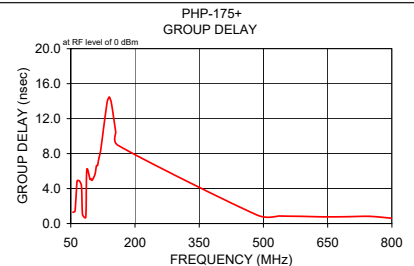
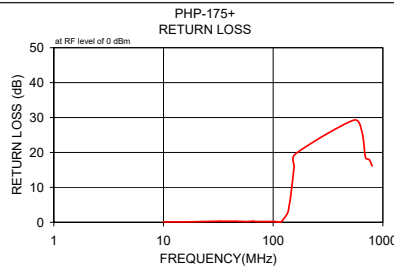
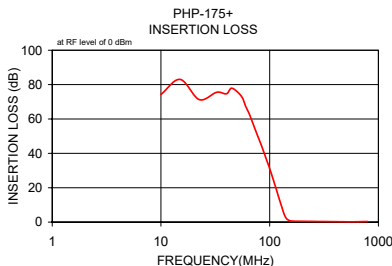


Outline Dimensions (inch/mm)

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 Performance Data

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
$\bar{x}$	σ			
10.00	74.24	5.1	55.00	1.30
15.00	83.02	3.4	60.00	1.43
22.50	71.28	2.9	65.00	4.88
32.50	75.54	2.9	70.00	4.88
40.00	74.66	2.9	75.00	4.29
45.00	77.91	4.5	77.50	1.02
55.00	73.19	4.3	85.00	0.72
60.00	67.53	1.4	87.50	6.14
65.00	62.87	1.7	95.00	5.06
70.00	57.55	1.1	97.50	5.12
75.00	52.51	0.4	100.00	4.95
85.00	43.70	0.3	105.00	5.42
95.00	35.16	0.3	107.50	5.81
97.50	33.16	0.4	110.00	6.62
100.00	31.08	0.4	112.50	6.63
105.00	27.09	0.4	115.00	7.30
107.50	25.06	0.4	117.50	7.83
112.50	21.11	0.4	120.00	8.44
117.50	17.21	0.3	135.00	13.89
120.00	15.29	0.3	140.00	14.48
135.00	5.06	0.1	145.00	13.77
140.00	2.90	0.1	155.00	10.48
145.00	1.60	0.1	160.00	8.96
155.00	0.67	0.1	185.00	0.98
160.00	0.54	0.1	196.00	0.86
537.50	0.18	0.1	292.00	0.82
642.50	0.21	0.1	262.00	0.77
695.00	0.26	0.1	18.50	0.78
747.50	0.27	0.1	18.00	0.82
800.00	0.31	0.1	16.10	0.60



Notes

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



Plug-In High Pass Filter

PHP-175+

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
10.0	74.24	0.10	55.0	1.300
15.0	83.02	0.10	60.0	1.430
22.5	71.28	0.20	65.0	4.880
32.5	75.54	0.30	70.0	4.880
40.0	74.66	0.30	75.0	4.290
45.0	77.91	0.30	77.5	1.020
55.0	73.19	0.20	85.0	0.720
60.0	67.53	0.20	87.5	6.140
65.0	62.87	0.30	95.0	5.060
70.0	57.55	0.20	97.5	5.120
75.0	52.51	0.20	100.0	4.950
85.0	43.70	0.20	105.0	5.420
95.0	35.16	0.20	107.5	5.810
97.5	33.16	0.20	110.0	6.620
100.0	31.08	0.20	112.5	6.630
105.0	27.09	0.20	115.0	7.300
107.5	25.06	0.10	117.5	7.830
112.5	21.11	0.10	120.0	8.440
117.5	17.21	0.10	135.0	13.890
120.0	15.29	0.30	140.0	14.480
135.0	5.06	2.60	145.0	13.770
140.0	2.90	4.80	155.0	10.480
145.0	1.60	7.90	160.0	8.960
155.0	0.67	15.80	485.0	0.980
160.0	0.54	19.60	537.5	0.860
537.5	0.18	29.20	590.0	0.820
642.5	0.21	26.10	642.5	0.770
695.0	0.26	18.50	695.0	0.780
747.5	0.27	18.00	747.5	0.820
800.0	0.31	16.10	800.0	0.600

REV. X1
PHP-175+
060725
Page 1 of 1



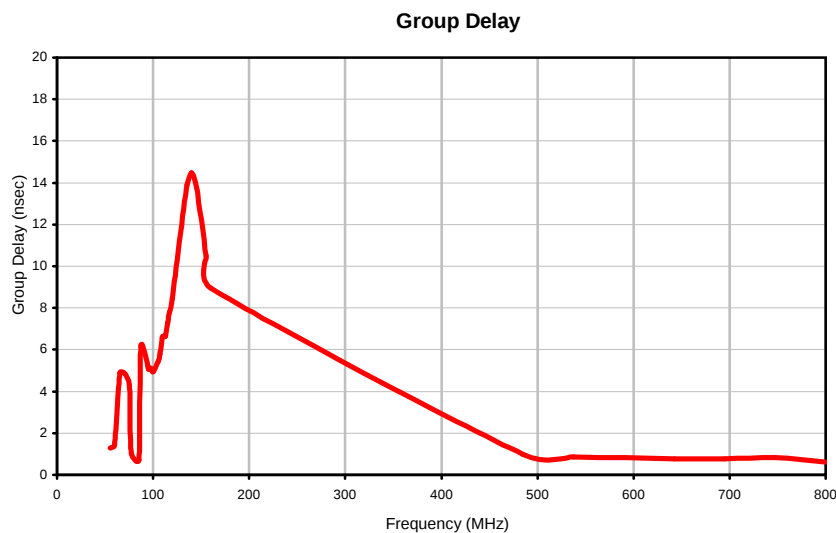
Mini-Circuits®
IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS9100 CERTIFIED • RoHS compliant

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see



Typical Performance Curves



REV. X1
 PHP-175+
 060725
 Page 1 of 1

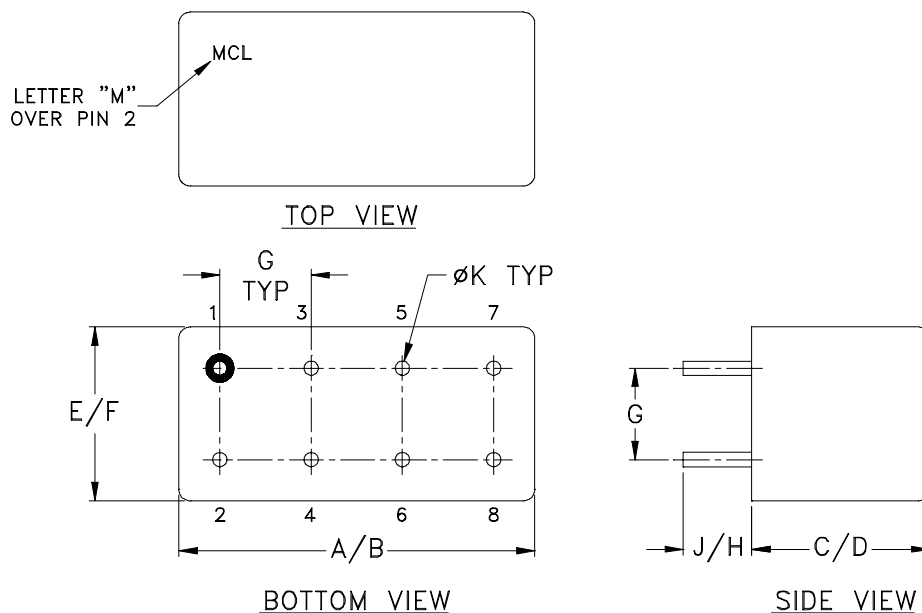


Mini-Circuits®
 IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS 9100 CERTIFIED • RoHS compliant
 P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661
 The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see



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.



Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-832600 • Fax 44-1252-837010

Mini-Circuits ISO 9001 & ISO 14001 Certified

INTERNET <http://www.minicircuits.com>

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661



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



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
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