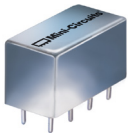
Plug-In

Low Pass Filter

PLP-100-75

75Ω DC to 98 MHz



CASE STYLE: A01

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

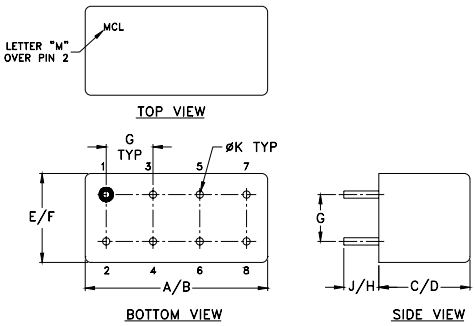
Features

- rugged welded case, hermetic
- other standard and custom PLP models available with wide selection of fco

Applications

- test equipment
- lab use
- transmitters/receivers
- military/hi-rel applications

Outline Drawing



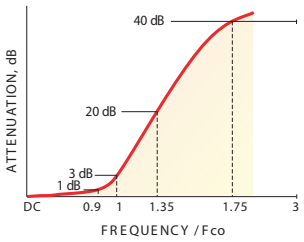
Outline Dimensions (inch / mm)

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

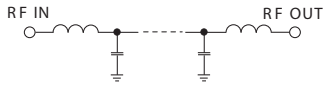
Low Pass Filter Electrical Specifications

PASSBAND (MHz)	fco (MHz) Nom.	STOPBAND (MHz)		VSWR (:1)	
				Passband Typ.	Stopband Typ.
(loss < 1 dB)	(loss 3 dB)	(loss > 20 dB)	(loss > 40 dB)		
DC-98	108	146-189	189-400	1.7	18

typical frequency response



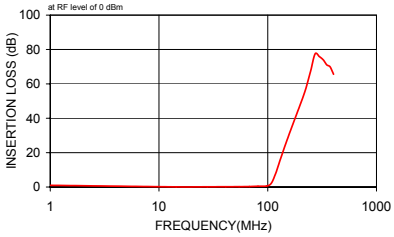
electrical schematic



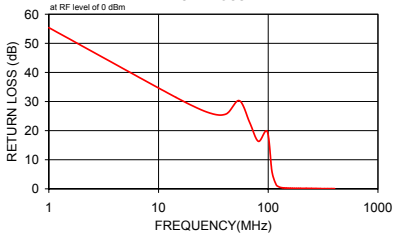
Typical Performance Data

Frequency (MHz)	Insertion Loss (dB) x̄	Insertion Loss (dB) σ	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
1.00	1.00	0.00	55.39	2.00	8.34
14.40	0.09	0.00	31.44	2.34	7.84
27.80	0.14	0.00	26.34	2.73	7.56
41.10	0.18	0.01	25.69	3.19	7.79
54.50	0.22	0.01	30.30	3.72	7.62
67.90	0.29	0.01	22.73	4.34	7.59
81.30	0.45	0.04	16.35	5.07	7.61
98.00	0.62	0.07	19.63	5.91	7.74
108.00	2.25	0.40	6.07	6.90	7.59
118.00	7.71	0.73	1.47	8.05	7.58
123.60	11.47	0.75	0.78	9.39	7.69
129.20	15.15	0.72	0.50	10.96	7.75
134.80	18.64	0.71	0.37	12.94	7.74
140.40	21.90	0.69	0.30	15.10	7.71
146.00	24.97	0.68	0.26	17.83	7.72
151.60	27.86	0.69	0.23	20.81	7.74
159.10	31.52	0.70	0.21	24.57	7.77
166.60	34.94	0.73	0.19	28.67	7.76
174.00	38.15	0.75	0.18	33.85	7.90
181.50	41.21	0.85	0.18	39.50	8.02
189.00	44.21	0.98	0.17	46.64	8.21
196.50	47.04	1.03	0.17	54.43	8.54
221.90	56.41	1.79	0.16	64.27	9.03
247.40	67.24	4.43	0.14	75.00	9.68
272.80	77.49	6.61	0.11	88.56	11.21
298.30	75.88	6.64	0.10	98.00	14.05
323.70	73.99	6.37	0.08	108.00	16.77
349.10	71.06	5.19	0.08	146.00	4.66
374.60	69.94	3.57	0.08	189.00	2.25
403.00	65.59	2.49	0.08	196.20	2.29

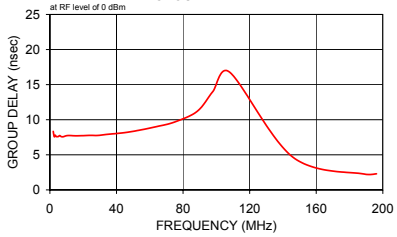
INSERTION LOSS



RETURN LOSS



GROUP DELAY



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.
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Plug-In Low Pass Filter PLP-100-75

Typical Performance Data

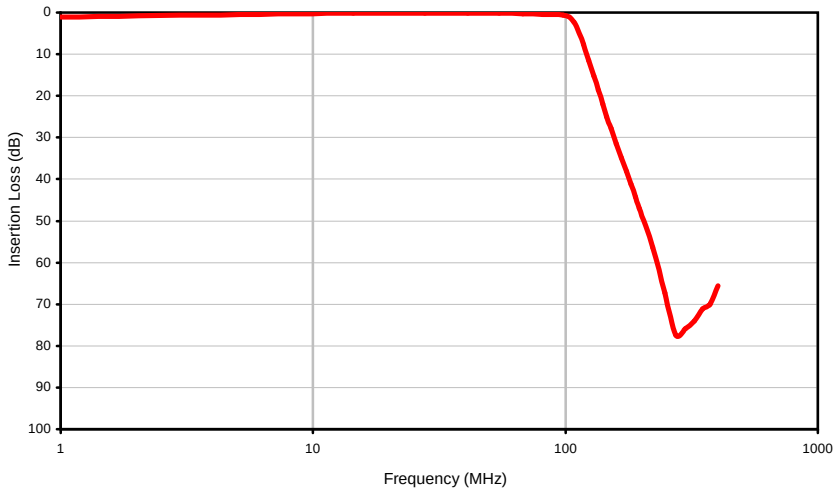
FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)
1.00	1.00	55.39
14.40	0.09	31.44
27.80	0.14	26.34
41.10	0.18	25.69
54.50	0.22	30.30
67.90	0.29	22.73
81.30	0.45	16.35
98.00	0.62	19.63
108.00	2.25	6.07
118.00	7.71	1.47
123.60	11.47	0.78
129.20	15.15	0.50
134.80	18.64	0.37
140.40	21.90	0.30
146.00	24.97	0.26
151.60	27.86	0.23
159.10	31.52	0.21
166.60	34.94	0.19
174.00	38.15	0.18
181.50	41.21	0.18
189.00	44.21	0.17
196.50	47.04	0.17
221.90	56.41	0.16
247.40	67.24	0.14
272.80	77.49	0.11
298.30	75.88	0.10
323.70	73.99	0.08
349.10	71.06	0.08
374.60	69.94	0.08
403.00	65.59	0.08

FREQUENCY (MHz)	GROUP DELAY (nsec)
2.00	8.340
2.34	7.840
2.73	7.560
3.19	7.790
3.72	7.620
4.34	7.590
5.07	7.610
5.91	7.740
6.90	7.590
8.05	7.580
9.39	7.690
10.96	7.750
12.94	7.740
15.10	7.710
17.83	7.720
20.81	7.740
24.57	7.770
28.67	7.760
33.85	7.900
39.50	8.020
46.64	8.210
54.43	8.540
64.27	9.030
75.00	9.680
88.56	11.210
98.00	14.050
108.00	16.770
146.00	4.660
189.00	2.250
196.20	2.290

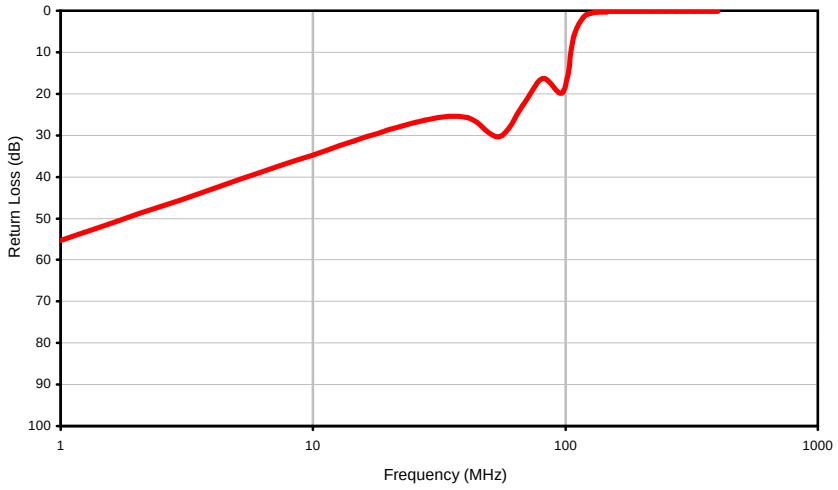
Plug-In Low Pass Filter PLP-100-75

Typical Performance Curves

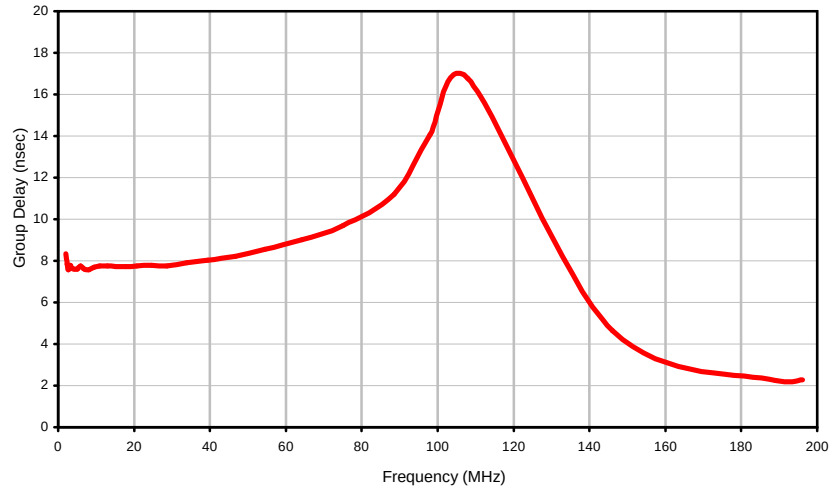
Insertion Loss



Return Loss



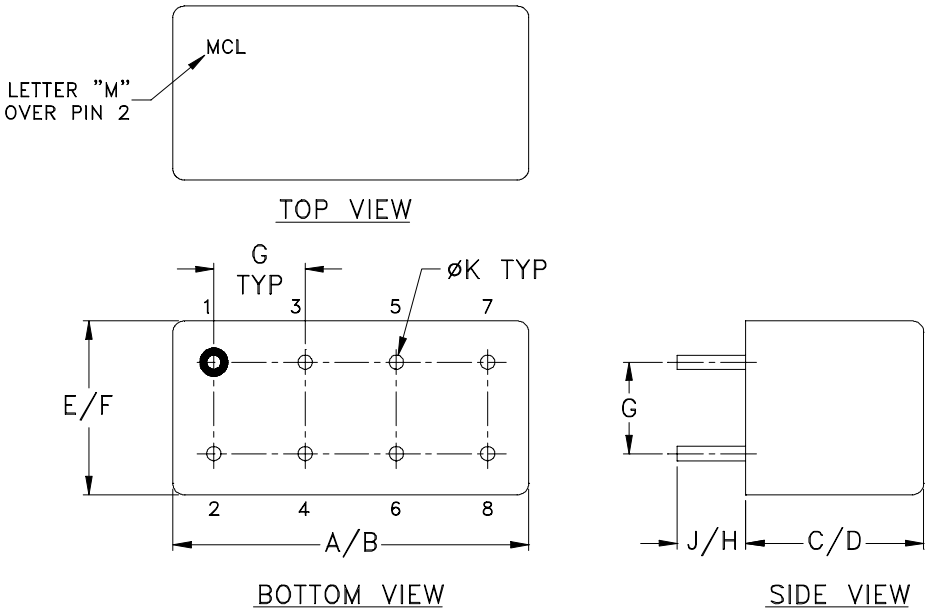
Group Delay



Case Style A

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. ± .03; 3 Pl. ± .015

Notes:

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

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Environmental Specifications ENV01

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