

Low Pass Filter

PBLP-117+ PBLP-117

50Ω Flat Time Delay DC to 65 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

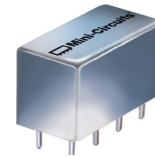
CASE GROUND 2,3,4,5,6,7

Features

- flat group delay for low pulse distortion
- rugged shielded case, hermetic
- other PBLP models available with wide selection of cut-off frequencies

Applications

- linear modulation techniques
- voice transmission applications
- digital communications



CASE STYLE: A01

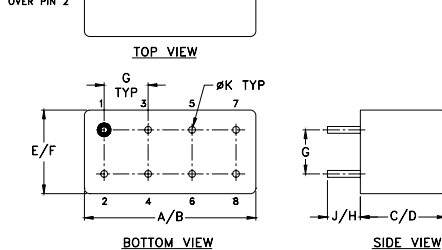
+RoHS Compliant

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

Low Pass Filter Electrical Specifications

PASSBAND (MHz)	fco, MHz Nom.	STOPBAND (MHz)	VSWR (:1)	GROUP DELAY VARIATION (nsec)
(loss <1.2 dB) Min.	(loss 3 dB)	(loss > 10 dB) (loss > 20 dB)	DC-0.2fco DC-0.6fco X X	DC-fco DC-2fco DC-2.67fco X X X
DC-65	117	234-312 312	1.3:1 2.4:1	0.35 1.4 1.9

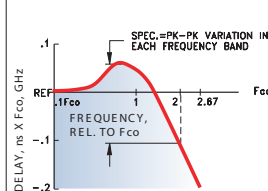
Outline Drawing



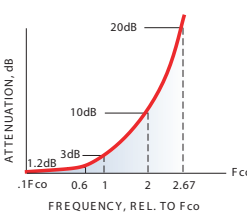
Outline Dimensions (inch/mm)

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

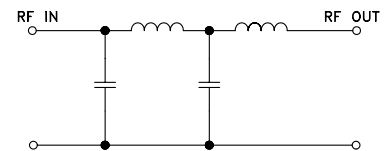
TYPICAL GROUP DELAY



TYPICAL FREQUENCY RESPONSE INSERTION LOSS

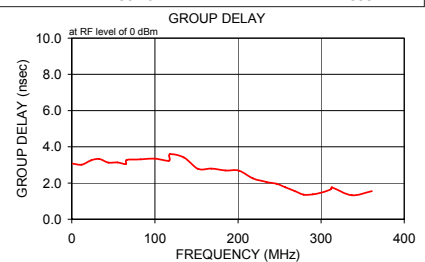
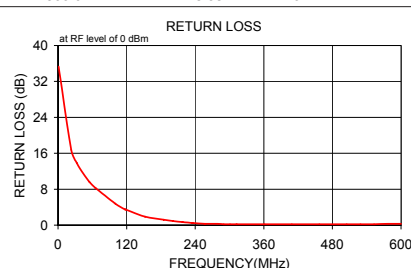
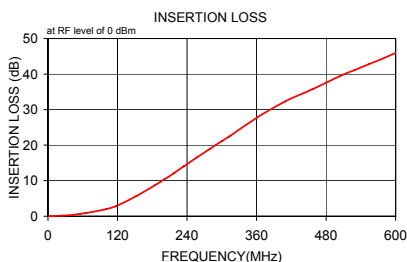


electrical schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	$\bar{x}$ σ			
1.0	0.02 0.1	35.3	1.0	3.075
23.0	0.15 0.1	16.8	12.0	3.015
33.0	0.26 0.1	13.8	23.0	3.252
44.0	0.42 0.1	11.5	33.0	3.331
55.0	0.65 0.1	9.6	44.0	3.126
65.0	0.90 0.1	8.3	55.0	3.140
66.0	0.92 0.1	8.2	65.0	3.044
100.0	1.96 0.1	4.8	66.0	3.271
117.0	2.80 0.1	3.5	83.0	3.303
118.0	2.86 0.1	3.5	100.0	3.348
152.0	5.63 0.1	1.9	117.0	3.233
185.0	8.79 0.2	1.2	118.0	3.593
201.0	10.40 0.2	0.9	135.0	3.409
218.0	12.20 0.2	0.7	152.0	2.782
234.0	13.99 0.2	0.5	168.0	2.798
235.0	14.10 0.2	0.5	185.0	2.689
257.0	16.54 0.3	0.3	201.0	2.681
279.0	18.92 0.4	0.3	218.0	2.252
290.0	20.08 0.5	0.2	234.0	2.060
301.0	21.23 0.5	0.2	235.0	2.038
312.0	22.36 0.6	0.2	246.0	1.965
313.0	22.46 0.6	0.2	257.0	1.759
361.0	27.82 0.7	0.2	268.0	1.562
409.0	32.27 0.9	0.2	279.0	1.358
457.0	35.79 1.0	0.2	290.0	1.372
505.0	39.52 1.3	0.2	301.0	1.483
529.0	41.10 1.4	0.2	312.0	1.659
553.0	42.74 1.6	0.2	313.0	1.765
577.0	44.30 1.5	0.3	337.0	1.324
600.0	45.95 2.0	0.3	361.0	1.555



Notes

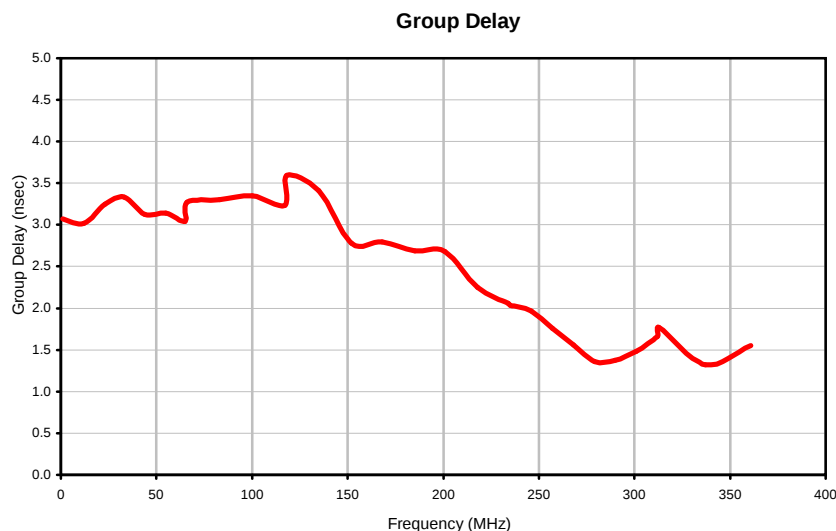
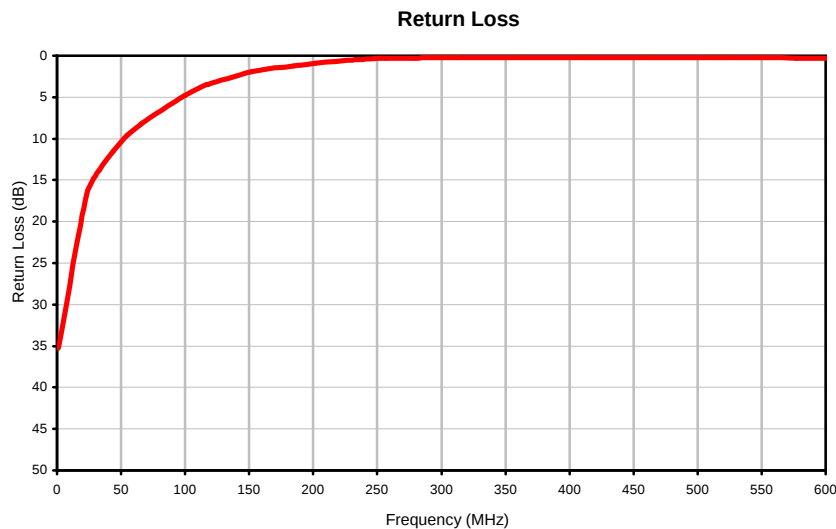
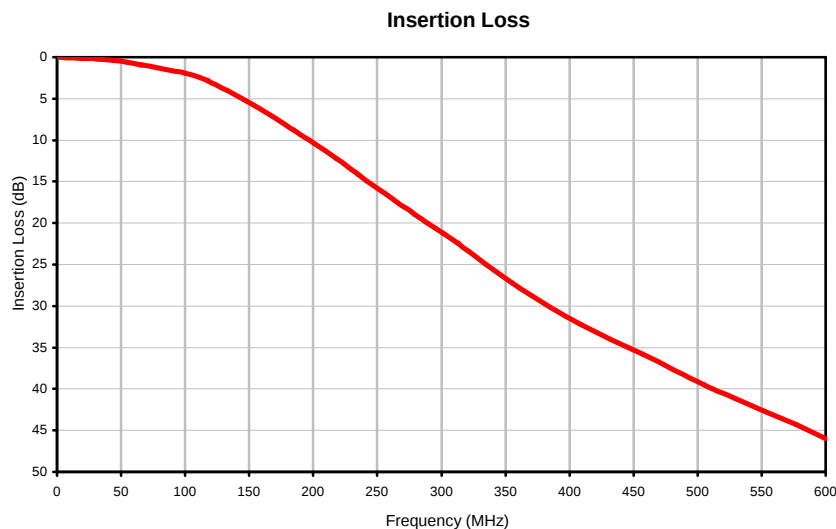
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Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
1	0.02	35.30	1	3.075
23	0.15	16.80	12	3.015
33	0.26	13.80	23	3.252
44	0.42	11.50	33	3.331
55	0.65	9.60	44	3.126
65	0.90	8.30	55	3.140
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100	1.96	4.80	66	3.271
117	2.80	3.50	83	3.303
118	2.86	3.50	100	3.348
152	5.63	1.90	117	3.233
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201	10.40	0.90	135	3.409
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234	13.99	0.50	168	2.798
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257	16.54	0.30	201	2.681
279	18.92	0.30	218	2.252
290	20.08	0.20	234	2.060
301	21.23	0.20	235	2.038
312	22.36	0.20	246	1.965
313	22.46	0.20	257	1.759
361	27.82	0.20	268	1.562
409	32.27	0.20	279	1.358
457	35.79	0.20	290	1.372
505	39.52	0.20	301	1.483
529	41.10	0.20	312	1.659
553	42.74	0.20	313	1.765
577	44.30	0.30	337	1.324
600	45.95	0.30	361	1.555

Typical Performance Curves



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.



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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