

50Ω Flat Time Delay DC to 120 MHz

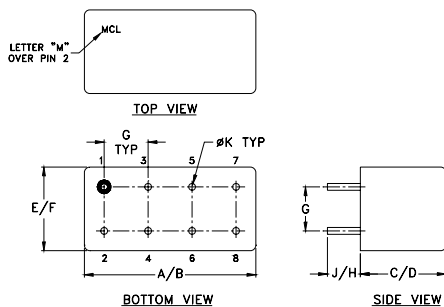
Maximum Ratings

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

Outline Drawing



Outline Dimensions (inch/mm)

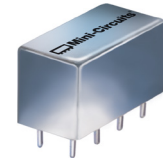
A	B	C	D	E	F
.770	.800	.385	.400	.370	.400
19.56	20.32	9.78	10.16	9.40	10.16
G	H	J	K	wt	
.200	.20	.14	.031		grams
5.08	5.08	3.56	0.79		5.2

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



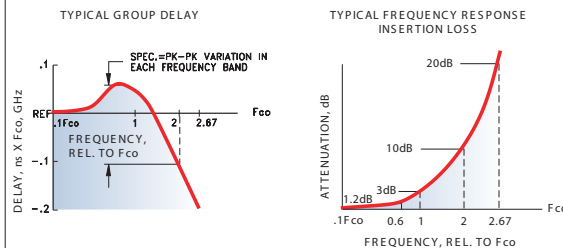
CASE STYLE: A01

+RoHS Compliant

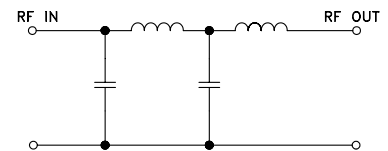
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Low Pass Filter Electrical Specifications

PASSBAND (MHz)	f _{co} , 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-0.2f _{co} DC-0.6f _{co}	DC-f _{co} DC-2f _{co} DC-2.67f _{co}
DC-120	200	400-534 534	1.6:1 1.9:1	0.4 1.3 1.6

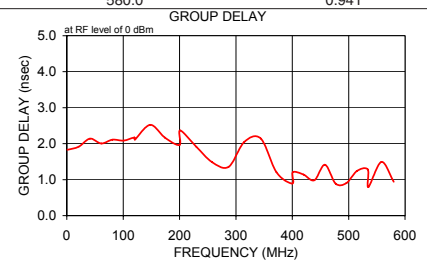
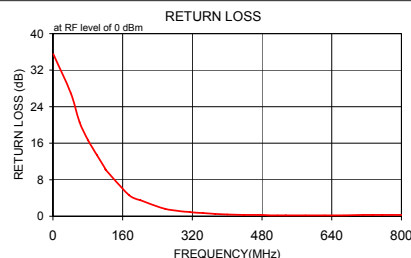


electrical schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
1.0	0.04	0.1	1.0	1.829
41.0	0.10	0.1	21.0	1.915
61.0	0.16	0.1	41.0	2.140
81.0	0.22	0.1	61.0	2.006
101.0	0.33	0.1	81.0	2.109
120.0	0.52	0.1	101.0	2.087
121.0	0.53	0.1	120.0	2.170
174.0	2.10	0.1	121.0	2.113
200.0	3.22	0.1	148.0	2.521
201.0	3.26	0.1	174.0	2.169
258.0	6.65	0.2	200.0	1.964
315.0	9.45	0.2	201.0	2.367
344.0	11.17	0.3	230.0	1.912
372.0	13.45	0.4	258.0	1.485
400.0	15.58	0.5	287.0	1.356
401.0	15.65	0.5	315.0	2.048
439.0	17.90	0.7	344.0	2.142
477.0	20.36	0.8	372.0	1.206
496.0	21.60	0.8	400.0	0.894
515.0	22.72	0.9	401.0	1.205
534.0	23.75	0.9	420.0	1.143
535.0	23.81	0.9	439.0	0.984
580.0	26.67	1.0	458.0	1.412
624.0	29.26	1.0	477.0	0.888
668.0	31.05	1.1	496.0	0.903
712.0	33.19	1.2	515.0	1.244
734.0	34.36	1.2	534.0	1.282
756.0	35.72	1.2	535.0	0.796
778.0	37.00	1.2	558.0	1.491
800.0	37.94	1.1	580.0	0.941



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-Circuit's 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-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp



Plug-In Low Pass Filter (Flat Time Delay)

PBLP-200+

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
1	0.04	35.50	1	1.829
41	0.10	27.00	21	1.915
61	0.16	20.60	41	2.140
81	0.22	16.60	61	2.006
101	0.33	13.40	81	2.109
120	0.52	10.40	101	2.087
121	0.53	10.20	120	2.170
174	2.10	4.70	121	2.113
200	3.22	3.50	148	2.521
201	3.26	3.50	174	2.169
258	6.65	1.60	200	1.964
315	9.45	0.90	201	2.367
344	11.17	0.70	230	1.912
372	13.45	0.50	258	1.485
400	15.58	0.40	287	1.356
401	15.65	0.40	315	2.048
439	17.90	0.30	344	2.142
477	20.36	0.30	372	1.206
496	21.60	0.20	400	0.894
515	22.72	0.20	401	1.205
534	23.75	0.20	420	1.143
535	23.81	0.20	439	0.984
580	26.67	0.20	458	1.412
624	29.26	0.20	477	0.888
668	31.05	0.20	496	0.903
712	33.19	0.30	515	1.244
734	34.36	0.30	534	1.282
756	35.72	0.30	535	0.796
778	37.00	0.30	558	1.491
800	37.94	0.30	580	0.941

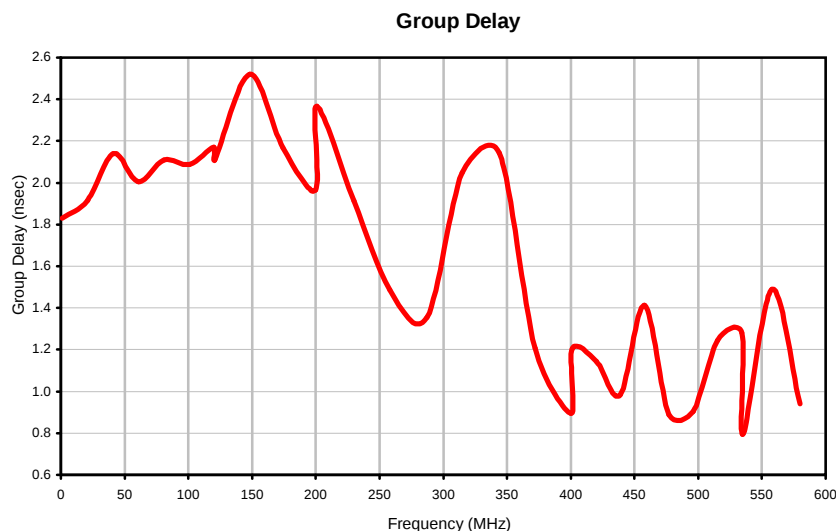
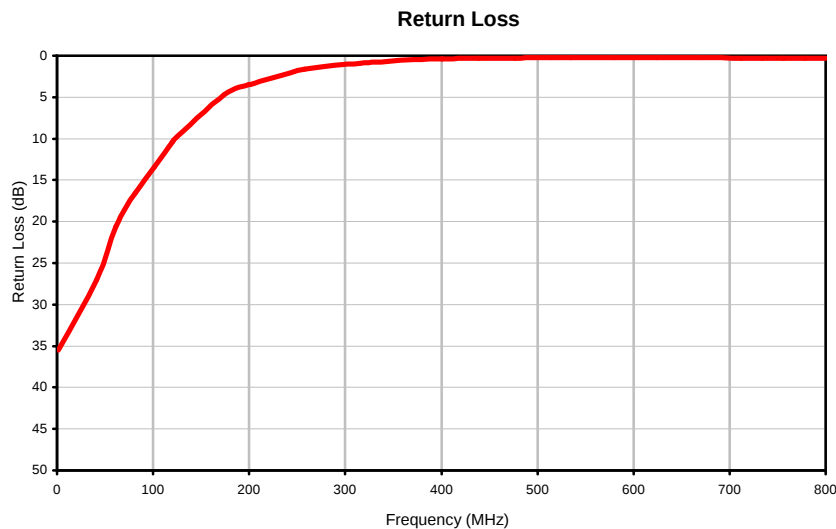
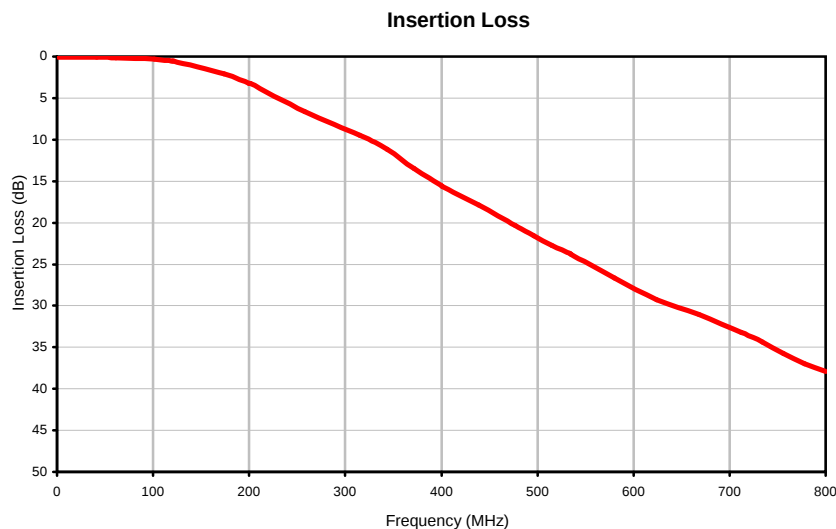
REV. X1
PBLP-200+
081222
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Typical Performance Curves



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PBLP-200+
081222
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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