

Bandpass Filter

PBP-70+

50Ω Elliptic Response 63 to 77 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

- low insertion loss, 1.5 dB max.
- good selectivity, 1.76 typ. 20 dB/3 dB BW ratio
- rugged shielded case, hermetically sealed

Applications

- military hi-rel systems
- high rejection applications
- image rejection
- IF signal processing



Generic photo used for illustration purposes only

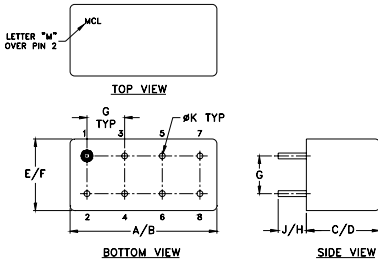
CASE STYLE: A01

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

Bandpass Filter Electrical Specifications

CENTER FREQ. (MHz)	PASSBAND (MHz)	3dB BANDWIDTH (MHz)	STOPBANDS		VSWR (:1)	
			(I. loss > 20 dB) at MHz	(I. loss > 35 dB) at MHz	Passband Max.	Stopband Typ.
70	I.L. 1.5 dB Max. 63-77	Typ. 58-82	51 & 94	6.0 & 193-1000	1.7	16

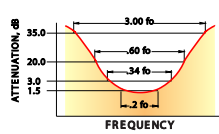
Outline Drawing



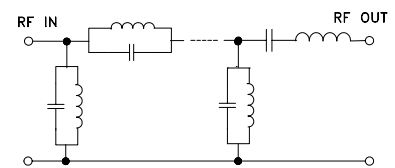
Outline Dimensions (inch/mm)

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

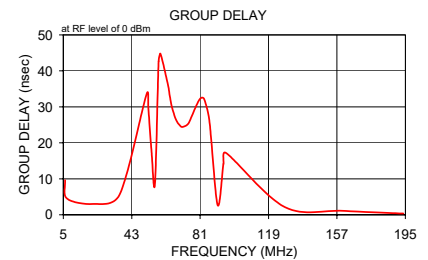
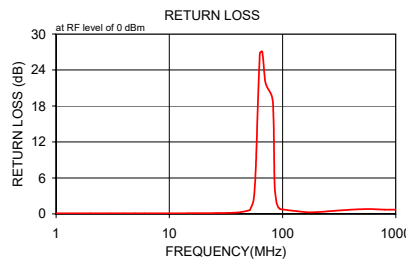


electrical schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	\bar{x}	σ			
1.0	74.05	9.9	0.1	6.0	9.637
2.0	72.12	9.9	0.1	7.0	4.541
3.0	70.17	9.9	0.1	21.6	3.025
4.0	65.27	9.9	0.1	36.3	5.629
5.0	62.16	9.9	0.1	51.3	33.642
6.0	58.09	9.9	0.1	52.2	29.619
10.0	49.84	8.7	0.1	54.0	17.384
37.3	26.90	2.5	0.2	55.9	8.664
51.0	31.67	1.6	0.6	57.9	42.682
52.0	31.71	6.1	0.8	58.9	44.815
55.3	10.89	2.4	2.2	63.1	36.286
57.0	5.56	1.5	4.8	64.2	32.857
58.0	3.59	1.0	7.7	65.3	30.036
63.0	1.24	0.1	26.8	67.6	26.418
66.2	1.10	0.1	27.1	70.0	24.706
70.0	1.11	0.1	22.3	71.2	24.425
72.7	1.18	0.1	21.2	73.7	24.966
82.0	2.13	0.6	18.8	75.0	25.878
85.0	6.18	2.4	5.1	77.6	28.843
88.0	12.70	3.1	2.1	80.4	31.882
91.0	22.06	4.0	1.2	81.8	32.569
94.0	32.17	1.3	0.9	83.2	32.242
95.0	33.31	2.7	0.8	86.1	26.228
160.3	35.43	0.7	0.3	90.7	2.764
193.0	41.33	1.0	0.3	93.9	14.126
200.0	42.38	1.0	0.3	95.5	17.176
400.0	60.24	9.9	0.7	128.1	2.113
600.0	53.81	8.2	0.8	160.3	1.095
800.0	46.59	4.3	0.7	190.5	0.413
1000.0	42.50	2.9	0.7	193.9	0.375



Notes

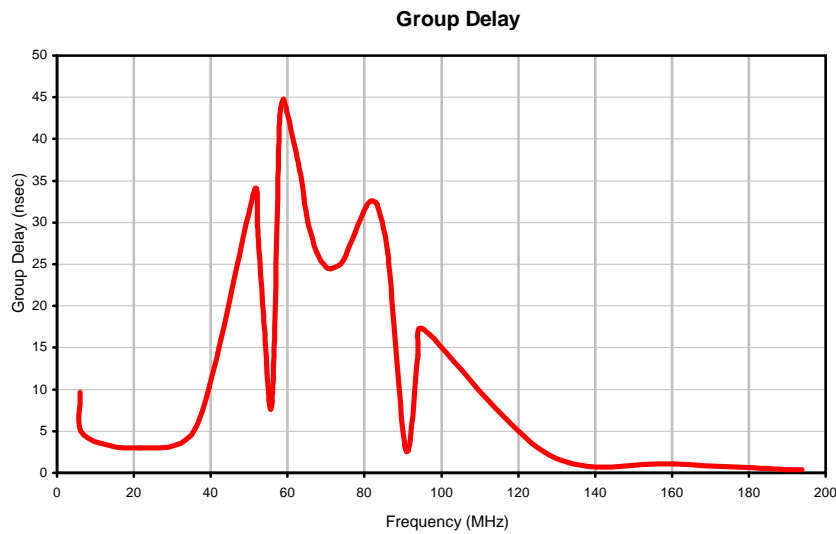
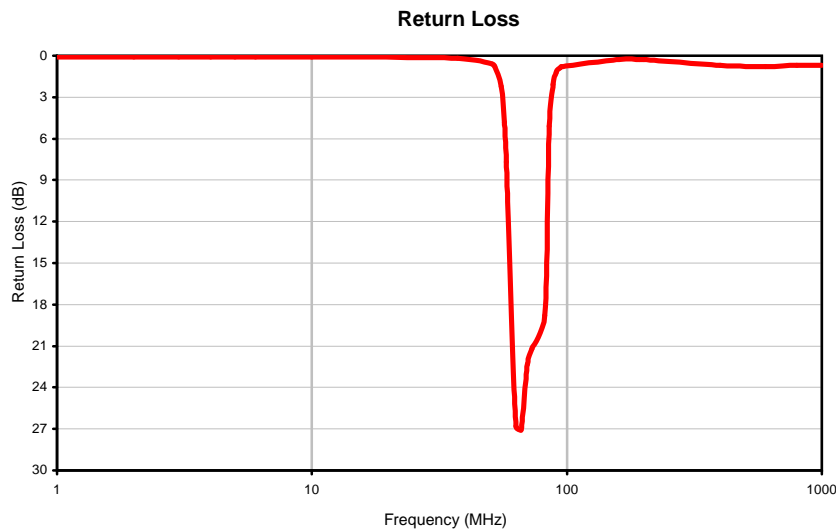
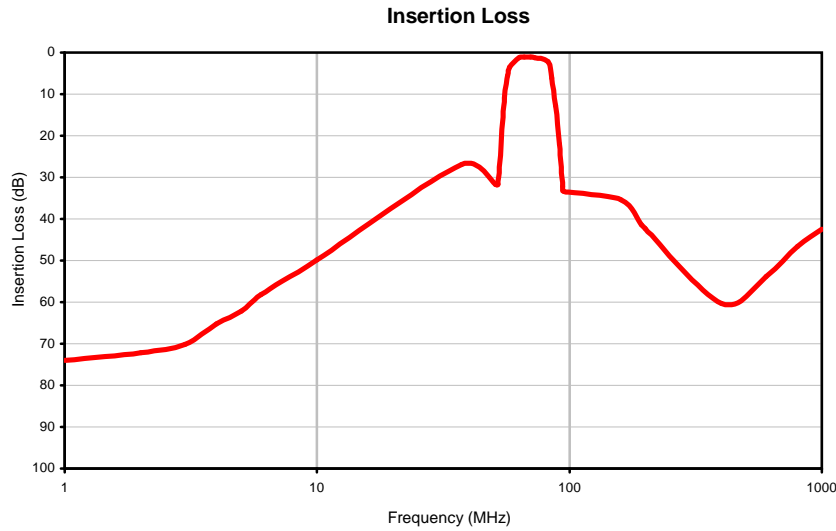
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Plug-In Band Pass Filter (Elliptic Response)

PBP-70+

Typical Performance Curves



REV. X1
PBP-70+
060725

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Plug-In Band Pass Filter (Elliptic Response)

PBP-70+

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
1.0	74.05	0.10	6.0	9.637
2.0	72.12	0.10	7.0	4.541
3.0	70.17	0.10	21.6	3.025
4.0	65.27	0.10	36.3	5.629
5.0	62.16	0.10	51.3	33.642
6.0	58.09	0.10	52.2	29.619
10.0	49.84	0.10	54.0	17.384
37.3	26.90	0.20	55.9	8.664
51.0	31.67	0.60	57.9	42.682
52.0	31.71	0.80	58.9	44.815
55.3	10.89	2.20	63.1	36.286
57.0	5.56	4.80	64.2	32.857
58.0	3.59	7.70	65.3	30.036
63.0	1.24	26.80	67.6	26.418
66.2	1.10	27.10	70.0	24.706
70.0	1.11	22.30	71.2	24.425
72.7	1.18	21.20	73.7	24.966
82.0	2.13	18.80	75.0	25.878
85.0	6.18	5.10	77.6	28.843
88.0	12.70	2.10	80.4	31.882
91.0	22.06	1.20	81.8	32.569
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REV. X1
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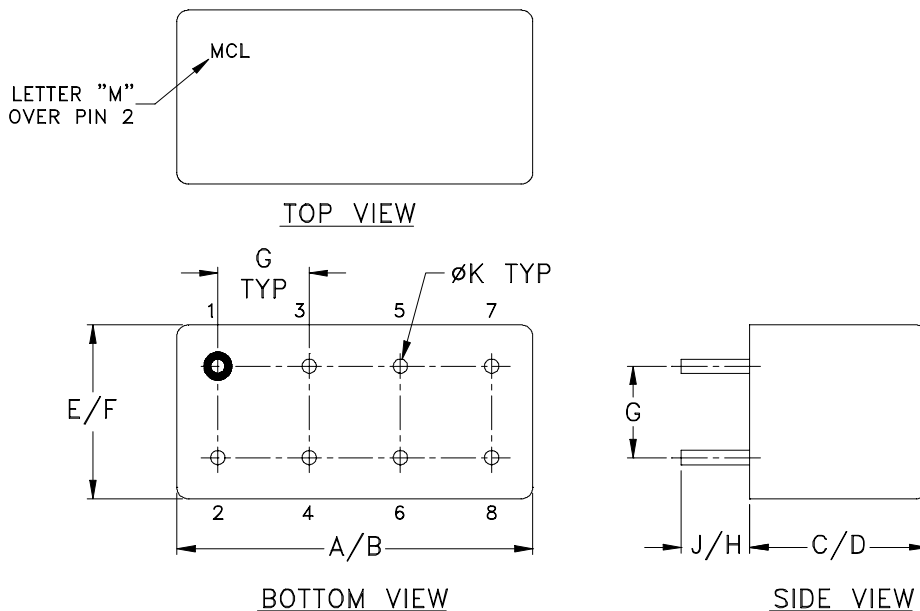


Case Style

A

A01
A04
A05
A06

Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	WT, GRAM
A01			.385 (9.78)	.400 (10.16)							5.2
A04	.770 (19.56)	.800 (20.32)	.200 (5.08)	.210 (5.33)	.370 (9.40)	.400 (10.16)	.200 (5.08)	.20 (5.08)	.14 (3.56)	.031 (.79)	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