

Surface Mount Bandpass Filter

BPF-C45+

50Ω 30 to 70 MHz

Maximum Ratings

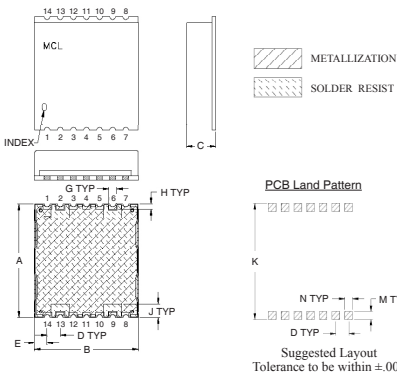
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W Max.

Permanent damage may occur if any of these limits are exceeded.

Pin Connections

INPUT	2
OUTPUT	9
NOT CONNECTED	6,13
GROUND	1,3,4,5,7,8,10,11,12,14

Outline Drawing

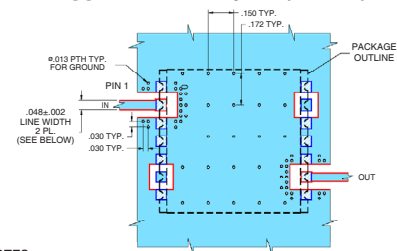


Outline Dimensions (inch/mm)

A	B	C	D	E	G	H	J	K	M	N	wt.
.870	.800	.25	.100	.097	.060	.040	.105	.910	.060	.060	grams
22.10	20.32	6.35	2.54	2.46	1.52	1.02	2.67	23.11	1.52	1.52	2.85

Note: Please refer to case style drawing for details

Demo Board MCL P/N: TB-500+
Suggested PCB Layout (PL-294)



- NOTES:
- TRACE WIDTH IS SHOWN FOR ROGERS R04350B, DIELECTRIC THICKNESS: .030±.002; COPPER: 1/2 OZ EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
 - BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
□ DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Features

- High Rejection
- Good VSWR, 1.2:1 Typ @ Passband
- Shielded case
- Aqueous washable

Applications

- Military communications
- Receivers / Transmitters
- Harmonic rejection



Generic photo used for illustration purposes only
CASE STYLE: HU1186

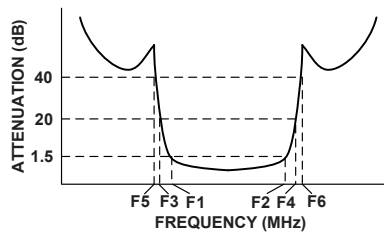
+RoHS Compliant

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

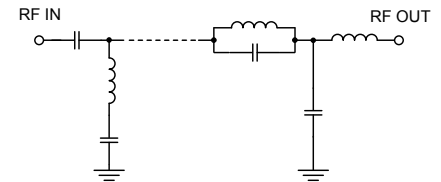
Bandpass Filter Electrical Specifications (T_{AMB} = 25°C)

CENTER FREQ. (MHz)	PASSBAND (MHz) (Loss < 1.5dB)	STOPBANDS (MHz)				VSWR (:1)		
		Loss > 20dB		Loss > 40dB		Passband		Stopband
F _c	F ₁ - F ₂	F ₃	F ₄	F ₅	F ₆	Typ.	Max.	Typ.
45	30 - 70	23	95	21	120 - 2500	1.2	1.5	18

Typical Frequency Response

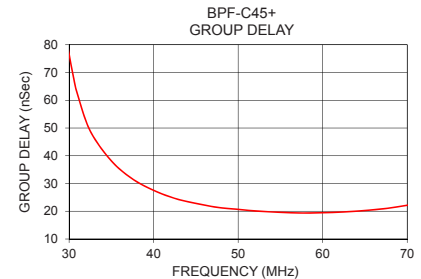
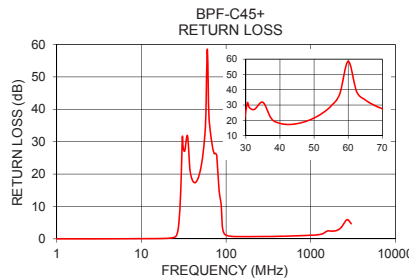
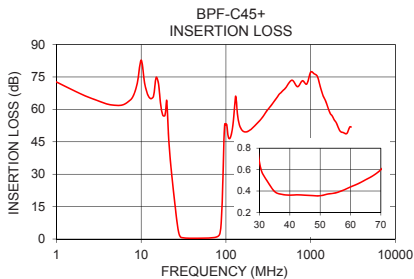


Functional Schematic



Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	Frequency (MHz)	Group Delay (nSec)
0.5	78.80	1.42	30.0	76.63
5.0	61.88	0.25	30.5	68.58
23.0	29.29	1.18	31.0	62.06
26.0	10.40	1.15	35.0	38.15
27.0	5.46	1.00	37.5	31.64
29.0	1.02	0.21	40.0	27.53
30.0	0.67	0.05	42.5	24.63
40.0	0.36	0.03	45.0	22.83
45.0	0.36	0.03	47.5	21.42
60.0	0.44	0.03	50.0	20.68
70.0	0.60	0.02	52.5	19.99
80.0	1.18	0.13	55.0	19.62
87.5	6.28	4.17	57.5	19.36
90.0	15.44	6.96	60.0	19.46
95.0	47.02	8.60	62.5	19.74
120.0	51.78	3.04	65.0	20.27
500.0	69.64	3.27	67.5	21.00
2500.0	49.02	1.51	70.0	22.16



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.
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