Surface Mount

Bandpass Filter

BPF-B48+

50Ω 47 to 49 MHz

Generic photo used for illustration purposes only

CASE STYLE: HZ1198

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.15W Max.

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

Pin Connections

INPUT	1
OUTPUT	2
GROUND	3, 4, 5, 6

Features

- High rejection
- Good VSWR, 1.2:1 typ @ passband
- Shielded case
- Aqueous washable

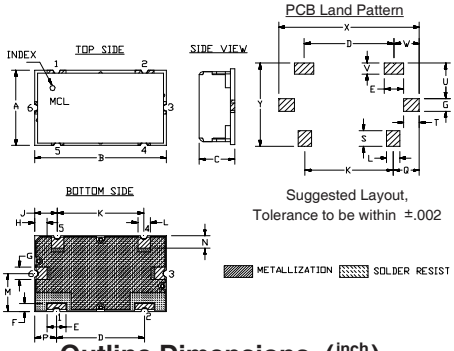
Applications

- Military
- Lab
- Harmonic rejection
- Transmitters/receivers

+RoHS Compliant

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

Outline Drawing



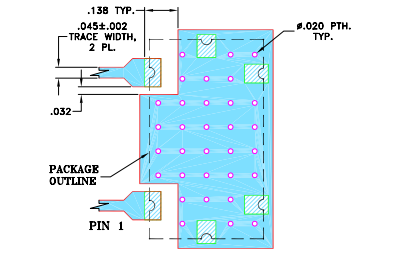
Outline Dimensions (inch / mm)

A	B	C	D	E	F	G	H	J	K	L	M
.472"	.826"	.220"	.551"	.118"	.047"	.078"	.076"	.142"	.543"	.078"	.236"
11.99	20.98	5.59	14.00	3.00	1.19	1.98	1.92	3.61	13.79	1.98	5.99

N	P	Q	S	T	U	V	W	X	Y	wt
.079"	.138"	.162"	.098"	.096"	.217"	.067"	.157"	.866"	.512"	grams
2.01	3.51	4.11	2.49	2.44	5.51	1.70	3.99	22.00	13.00	6.0

Note: Please refer to case style drawing for details

Demo Board MCL P/N: TB-400+
Suggested PCB Layout (PL-247)



NOTES:
1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .025"±.002". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

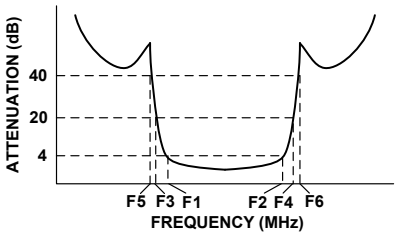
DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

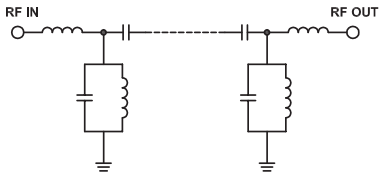
Bandpass Filter Electrical Specifications (T_{AMB}= 25°C)

CENTER FREQ. (MHz)	PASSBAND (MHz) (Loss < 4dB)	STOPBANDS (MHz)				VSWR (:1)		
		Loss > 20dB		Loss > 40dB		Passband		Stopband
Fc	F1 - F2	F3	F4	F5	F6	Typ.	Max.	Typ.
48	47 - 49	41	56	37	64 - 2400	1.2	1.5	20

Typical Frequency Response



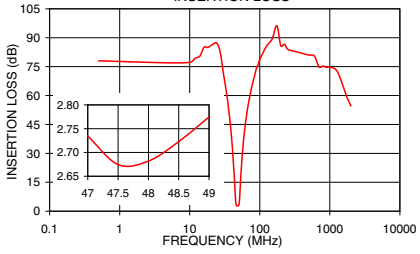
Functional Schematic



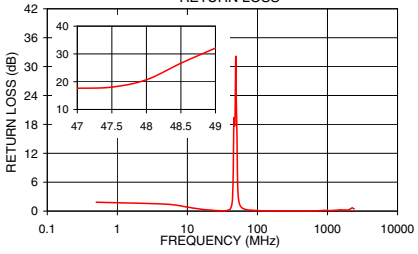
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB) $\bar{x}$	Insertion Loss (dB) σ	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
0.5	78.03	4.46	1.85	46.00	167.71
37.0	49.10	0.39	0.12	46.25	161.42
41.0	30.99	0.52	0.47	46.50	154.52
44.0	12.42	0.63	2.64	47.00	142.38
45.0	6.45	0.44	6.93	47.25	137.66
46.0	3.43	0.15	19.20	47.50	134.06
47.0	2.73	0.03	17.62	47.75	131.25
47.5	2.67	0.02	18.05	48.00	129.14
48.0	2.68	0.02	20.70	48.25	127.37
48.5	2.72	0.03	26.66	48.50	126.62
49.0	2.77	0.03	32.10	48.75	126.57
51.0	4.54	0.37	15.56	49.00	127.40
52.0	9.10	0.73	6.47	49.25	129.07
53.0	14.81	0.76	3.42	49.50	132.10
56.0	28.44	0.55	1.32	49.75	136.34
64.0	48.44	0.36	0.45	50.00	142.10
500.0	80.99	2.23	0.03	50.25	148.26
2400.0	47.70	0.53	0.47	50.50	154.45

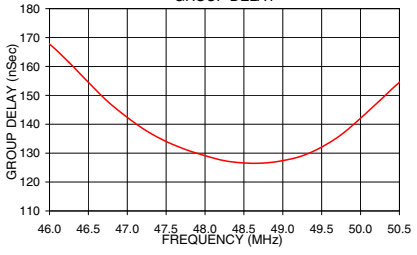
BPF-B48+
INSERTION LOSS



BPF-B48+
RETURN LOSS



BPF-B48+
GROUP DELAY



Notes

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