Surface Mount

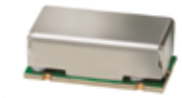
Low Pass Filter

LPF-B50+

50Ω DC to 50 MHz

The Big Deal

- Low Insertion loss
- High rejection
- Fast roll-off
- Miniature shielded package



CASE STYLE: HZ1198

Product Overview

The LPF-B50+ is a lowpass filter in a shielded package (size of 0.472" x 0.826" x .22") fabricated using SMT technology. Covering DC-50 MHz band width, these units offer good matching within the passband and high rejection. This unit uses a miniature high Q capacitors and wire welded inductors for high reliability. In addition it has repeatable performance across production lots and consistent performance across temperature.

Key Features

Feature	Advantages
Low passband insertion loss	Low insertion loss will be used in designs optimized for high performance applications.
Fast roll-off	Provides very good adjacent band rejection.

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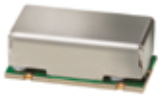


CASE STYLE: HZ1198
PRICE: $16.95 ea. QTY (1-9)

Features

- High rejection
- Sharp insertion loss roll-off
- Shielded case
- Aqueous washable

Applications

- Defence communications
- Transmitters / receivers
- Harmonic rejection

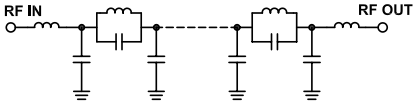
Electrical Specifications at 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	DC-50	—	0.8	2	dB
	Freq. Cut-Off	F2	55	—	3.5	—	dB
	VSWR	DC-F1	DC-50	—	1.2	1.5	:1
Stop Band	Rejection Loss	F3-F4	65-3300	20	36	—	dB
	VSWR	F3-F4	65-3300	—	18	—	:1

Maximum Ratings	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to +100°C
RF Power Input	1 W max.

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

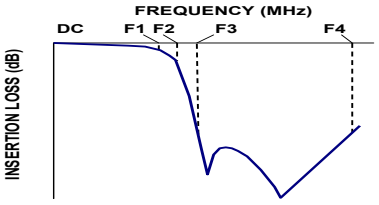
Functional Schematic



Typical Performance Data at 25°C

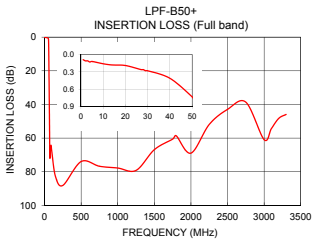
Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1.0	0.09	1.03	1.00	15.67
14.0	0.18	1.09	5.00	15.67
30.0	0.28	1.10	10.00	15.83
40.0	0.41	1.07	13.00	16.09
50.0	0.73	1.10	15.00	16.28
54.0	1.40	1.50	18.00	16.74
55.0	2.21	2.14	20.00	17.09
56.0	3.95	3.57	23.00	17.61
57.0	6.86	6.30	25.00	18.06
59.0	14.69	14.03	28.00	18.83
62.0	27.08	21.20	30.00	19.53
65.0	39.46	24.83	33.00	20.75
71.0	67.01	30.49	35.00	21.75
75.0	70.91	33.42	38.00	23.51
100.0	68.31	54.29	40.00	24.95
500.0	73.95	217.15	43.00	27.73
1500.0	66.89	69.49	45.00	30.21
2000.0	68.96	49.64	47.00	33.54
3000.0	60.90	41.37	48.00	35.73
3300.0	45.95	31.60	50.00	41.43

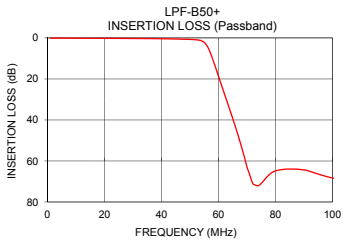
Typical Frequency Response

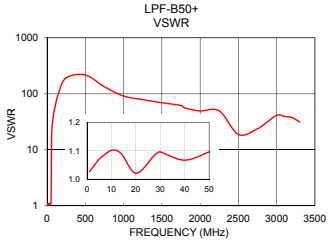


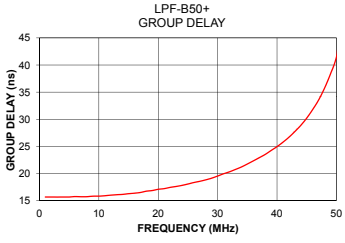
+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.









For detailed performance specs & shopping online see web site

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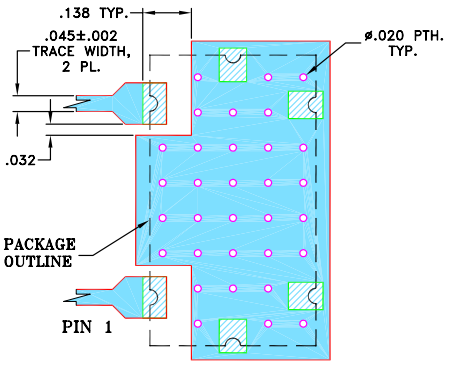
Pad Connections

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

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

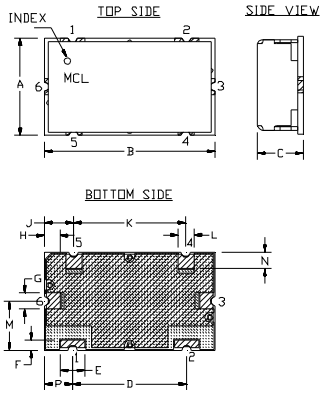


NOTES:
1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .025"±.002". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

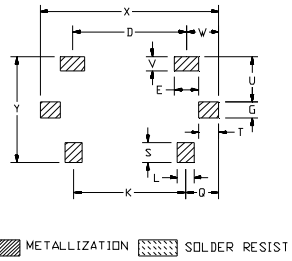
DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

Outline Drawing



PCB Land Pattern



METALLIZATION SOLDER RESIST

Suggested Layout,
Tolerance to be within ±.002

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	1.93	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

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