

# Low Pass Filter

**50Ω DC to 50 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.

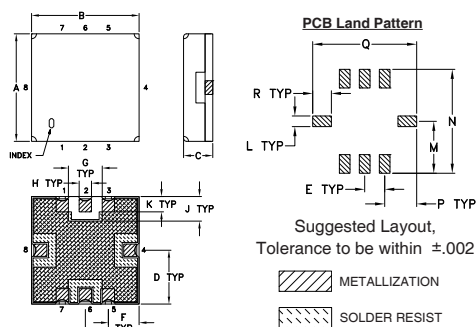
## Pin Connections

RF IN 2

RF OUT 6

GROUND 1, 3, 4, 5, 7, 8

## Outline Drawing



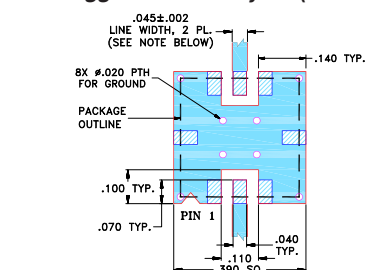
## Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J
.350	.350	.100	.175	.075	.100	.110	.040	.080
8.89	8.89	2.54	4.45	1.93	2.54	2.79	1.02	2.03

K	L	M	N	P	Q	R	wt.
.050	.040	.195	.390	.120	.390	.070	grams
1.27	1.02	4.95	9.91	3.05	9.91	1.78	0.25

## Demo Board MCL P/N: TB-332 Suggested PCB Layout (PL-176)

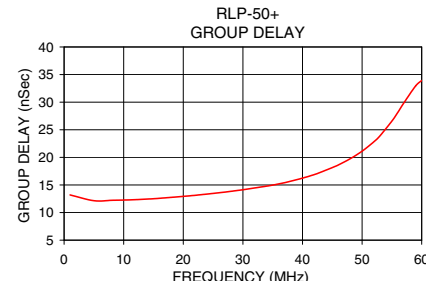
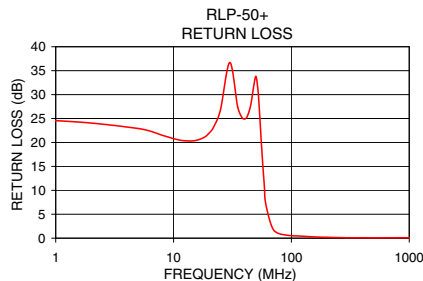
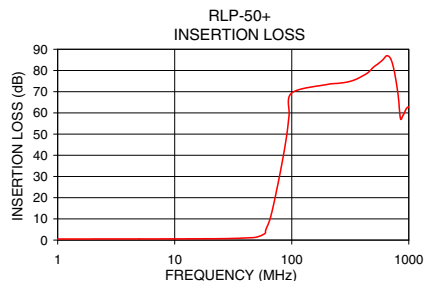


1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .025" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.

2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

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

4. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK



### 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.
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## Features

- high rejection
- sharp insertion loss roll off
- excellent VSWR, 1.1:1 typ. @ passband
- aqueous washable

## Applications

- wireless communications
- receivers / transmitters



CASE STYLE: GP731

### +RoHS Compliant

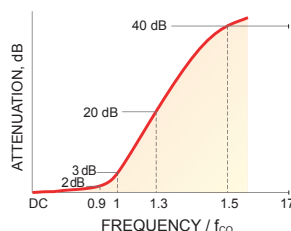
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Reel Size	Devices/Reel
7"	10, 20, 50, 100, 200
13"	500, 1000

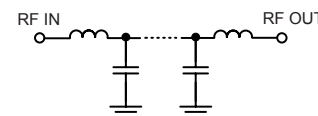
## Low Pass Filter Electrical Specifications (T<sub>AMB</sub> = 25°C)

PASSBAND (MHz)	f <sub>co</sub> , MHz Nom.	STOPBAND (MHz)	VSWR (:1)
(Loss < 2dB)	(Loss 3dB)	(Loss > 20dB) (Loss > 40dB)	Passband Typ. Stopband Typ.
DC - 50	59	78 - 91 91 - 1000	1.1 20

## Typical Frequency Response



## Functional Schematic



## Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB) $\bar{x}$	Insertion Loss (dB) $\sigma$	Return Loss (dB)	Frequency (MHz)	Group Delay (nSec)
0.5	0.52	0.01	24.56	1.0	13.19
20.0	0.64	0.01	21.92	5.0	12.14
40.0	1.00	0.01	24.90	8.0	12.22
50.0	1.40	0.01	33.82	10.0	12.27
56.0	2.06	0.04	18.72	12.0	12.34
59.0	3.06	0.10	10.79	18.0	12.76
61.0	5.48	0.16	7.02	20.0	12.94
65.0	9.55	0.23	3.96	22.0	13.13
70.0	16.59	0.31	1.86	25.0	13.46
75.0	24.42	0.33	1.18	30.0	14.13
78.0	29.07	0.34	0.99	35.0	14.98
91.0	49.88	0.47	0.63	38.0	15.67
97.0	63.18	0.81	0.54	40.0	16.23
100.0	69.26	0.80	0.51	45.0	18.14
200.0	75.27	1.16	0.17	50.0	21.12
400.0	78.87	0.99	0.08	53.0	23.91
700.0	86.84	1.87	0.08	56.0	28.15
1000.0	62.27	0.31	0.10	60.0	33.92