

# Low Pass Filter

# RLP-105+

50Ω DC to 105 MHz

### Maximum Ratings

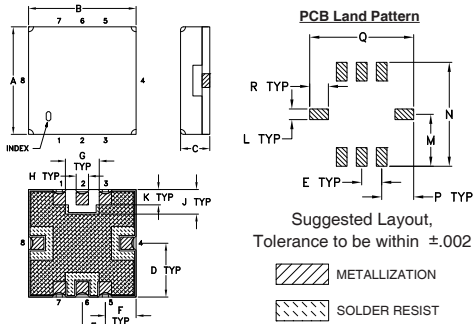
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W Max

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

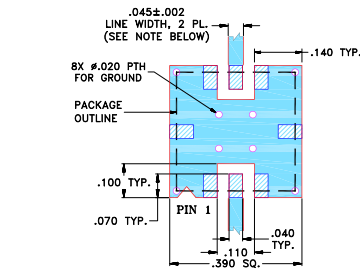


### Outline Dimensions (inch/mm)

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	1.91	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	

Note: Please refer to case style drawing for details

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



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

### Applications

- wireless communications
- receivers / transmitters



Generic photo used for illustration purposes only  
CASE STYLE: GP731

### +RoHS Compliant

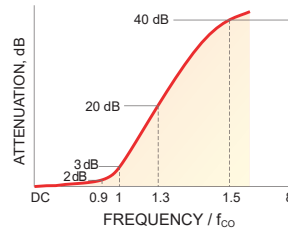
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Available Tape and Reel at no extra cost	
Reel Size	Devices/Reel
7"	10, 20, 50, 100, 200
13"	500, 1000

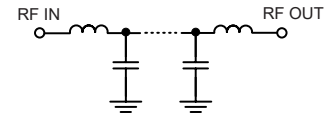
### Low Pass Filter Electrical Specifications (T<sub>AMB</sub> = 25°C)

PASSBAND (MHz)	f <sub>co</sub> , MHz Nom.	STOPBAND (MHz)		VSWR (:1)	
		(Loss > 20dB)	(Loss > 40dB)	Passband Typ.	Stopband Typ.
DC - 105	116	145 - 165	165 - 1000	1.1	20

### Typical Frequency Response

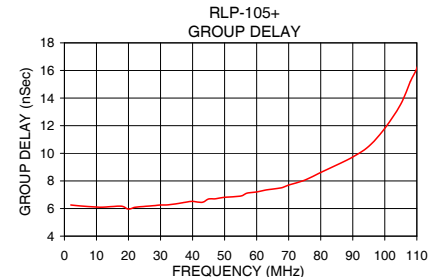
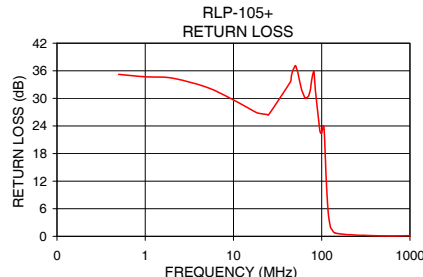
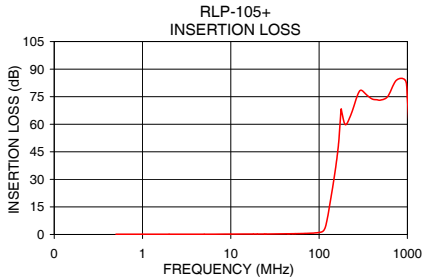


### Functional Schematic



### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nSec)
	$\bar{x}$	$\sigma$			
0.5	0.13	0.01	35.22	2.0	6.26
10.0	0.20	0.00	29.65	5.0	6.19
50.0	0.41	0.00	37.09	10.0	6.11
75.0	0.63	0.01	32.32	20.0	5.96
85.0	0.75	0.01	31.58	25.0	6.16
100.0	1.08	0.01	22.50	45.0	6.69
105.0	1.28	0.02	24.06	50.0	6.82
112.0	1.99	0.08	13.30	55.0	6.90
116.0	3.18	0.18	7.69	60.0	7.20
120.0	5.42	0.29	4.25	65.0	7.41
126.0	10.34	0.37	1.93	70.0	7.70
145.0	27.98	0.37	0.70	75.0	8.06
165.0	47.88	0.51	0.50	80.0	8.61
180.0	67.19	1.63	0.43	85.0	9.16
300.0	78.51	3.90	0.20	95.0	10.51
500.0	73.18	2.18	0.10	100.0	11.81
750.0	83.89	3.52	0.10	105.0	13.57
1000.0	74.40	3.14	0.14	110.0	16.16



### 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.
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