

# Low Pass Filter

## RLP-83+

50Ω DC to 83 MHz

### Maximum Ratings

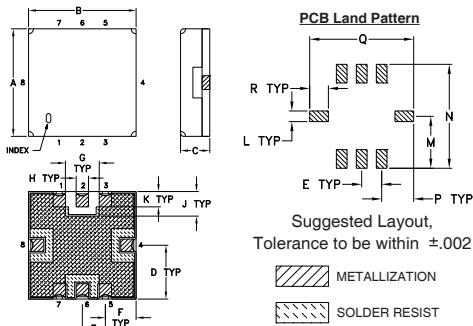
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W Max

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

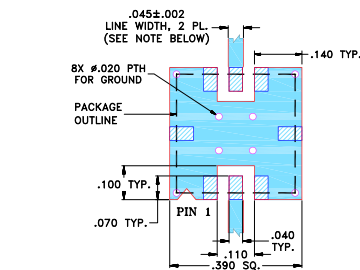


### Outline Dimensions (inch/mm)

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

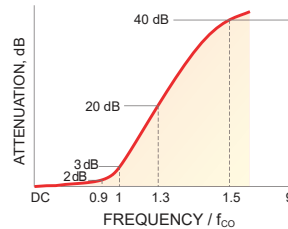
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

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

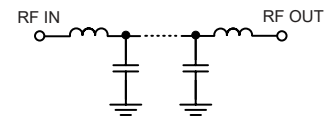
### Low Pass Filter Electrical Specifications (T<sub>AMB</sub> = 25°C)

PASSBAND (MHz)	f <sub>co</sub> , MHz Nom.	STOPBAND (MHz)		VSWR (:1)	
		(Loss > 20dB)	(Loss > 40dB)	Passband Typ.	Stopband Typ.
DC - 83	93	118 - 135	135 - 850	1.1	20

### Typical Frequency Response

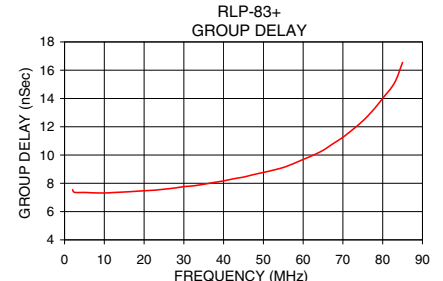
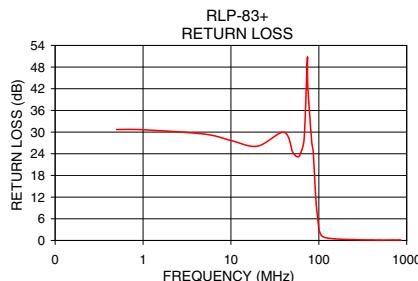
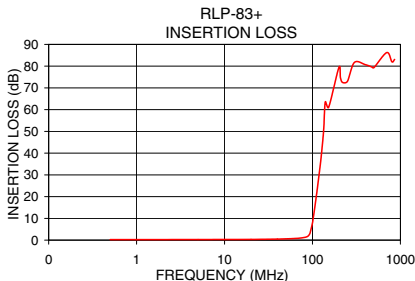


### Functional Schematic



### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nSec)
	$\bar{x}$	$\sigma$			
0.5	0.25	0.01	30.72	2.0	7.55
40.0	0.47	0.01	29.97	5.0	7.35
60.0	0.72	0.01	23.36	10.0	7.32
83.0	1.32	0.03	27.35	15.0	7.39
90.0	2.02	0.10	16.65	20.0	7.48
93.0	2.86	0.20	10.79	25.0	7.58
94.0	3.29	0.25	9.20	30.0	7.77
100.0	7.87	0.50	3.32	35.0	7.93
102.0	10.02	0.55	2.45	40.0	8.17
110.0	19.47	0.58	1.12	45.0	8.44
115.0	25.43	0.59	0.88	50.0	8.77
118.0	28.99	0.60	0.79	55.0	9.12
135.0	52.69	1.14	0.55	60.0	9.69
200.0	79.43	6.12	0.29	65.0	10.33
300.0	81.71	4.23	0.18	70.0	11.26
500.0	79.32	3.65	0.11	75.0	12.41
800.0	82.01	5.38	0.13	83.0	15.12
850.0	82.92	5.63	0.12	85.0	16.55



**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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