



# THE DATASHEET OF RLP-158+



# Low Pass Filter

50Ω DC to 158 MHz

## RLP-158+



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

### Maximum Ratings

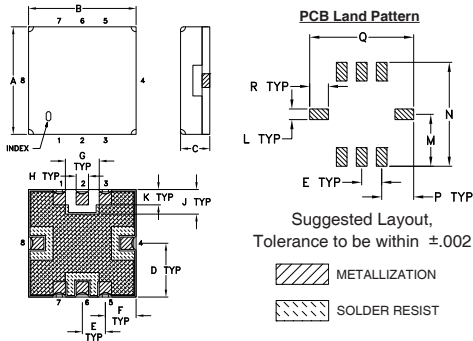
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W Max

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

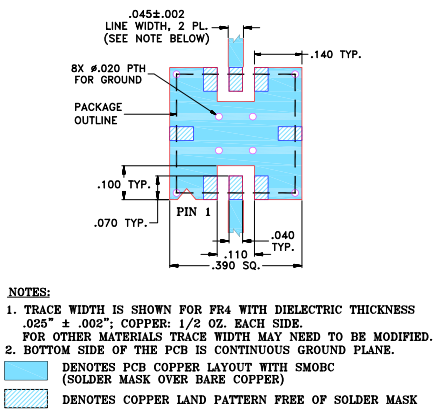


### Outline Dimensions (inch/mm)

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

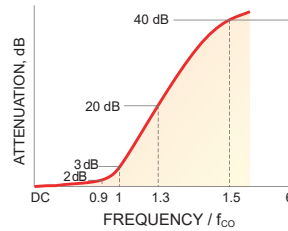
### Applications

- wireless communications
- receivers / transmitters

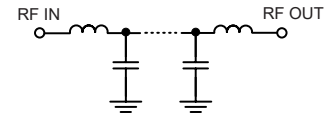
### Low Pass Filter Electrical Specifications (T<sub>AMB</sub> = 25°C)

PASSBAND (MHz)	f <sub>co</sub> , MHz Nom.	STOPBAND (MHz)		VSWR (:1)	
		(Loss > 20dB)	(Loss > 40dB)	Passband Typ.	Stopband Typ.
DC - 158	172	220 - 255	255 - 1000	1.1	20

### Typical Frequency Response

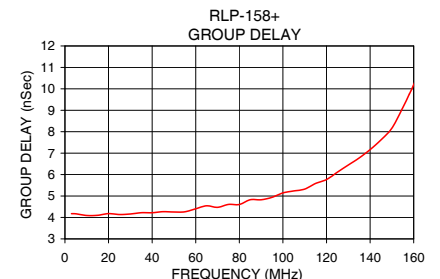
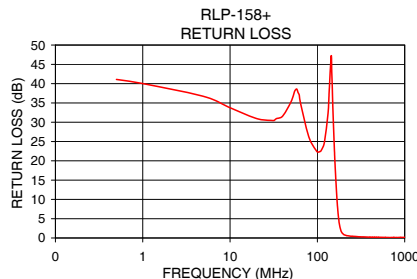
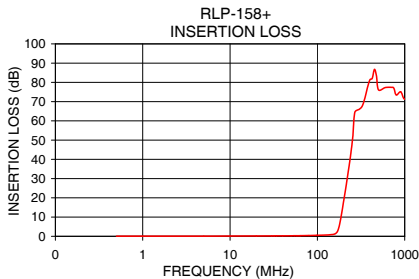


### Functional Schematic



### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nSec)
	$\bar{x}$	$\sigma$			
0.5	0.08	0.01	40.86	2.0	4.20
50.0	0.27	0.01	33.49	5.0	4.17
80.0	0.40	0.01	28.44	10.0	4.09
100.0	0.51	0.00	24.32	20.0	4.18
158.0	1.20	0.03	24.69	30.0	4.16
163.0	1.53	0.08	16.30	40.0	4.22
172.0	3.11	0.22	7.30	50.0	4.25
176.0	4.51	0.29	4.90	60.0	4.40
178.0	5.38	0.33	4.02	70.0	4.47
187.0	10.29	0.38	1.80	80.0	4.61
200.0	18.28	0.36	0.91	90.0	4.82
220.0	30.15	0.35	0.59	100.0	5.14
252.0	49.89	0.55	0.42	110.0	5.32
255.0	52.12	0.66	0.42	120.0	5.77
400.0	81.37	4.89	0.22	135.0	6.78
600.0	77.30	5.44	0.16	145.0	7.62
800.0	73.42	3.94	0.13	158.0	9.76
1000.0	71.29	4.00	0.16	160.0	10.19



### 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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