

# Low Pass Filter

50Ω DC to 137 MHz

## RLP-137+



Generic photo used for illustration purposes only  
CASE STYLE: GP731

### 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

### Features

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

### Applications

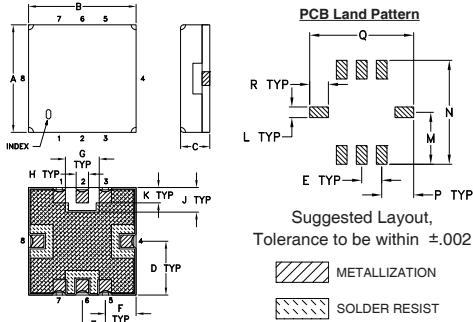
- wireless communications
- receivers / transmitters

#### +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

### Outline Drawing

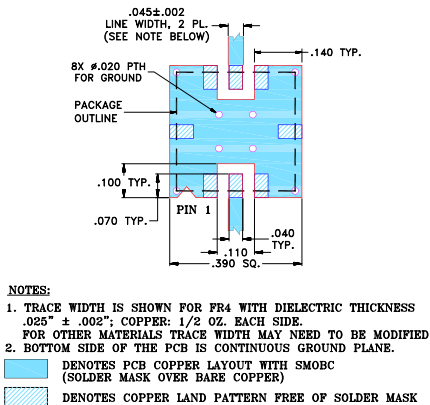


### Outline Dimensions (inch/mm)

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)

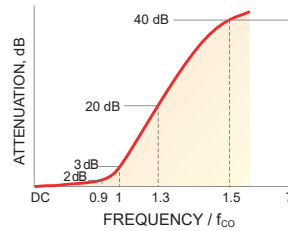


- NOTES:
1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .025" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
  2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
  - DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

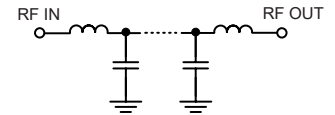
### Low Pass Filter Electrical Specifications (T<sub>AMB</sub> = 25°C)

PASSBAND (MHz)	f <sub>co</sub> , MHz Nom.	STOPBAND (MHz)		VSWR (:1)	
		(Loss > 20dB)	(Loss > 40dB)	Passband Typ.	Stopband Typ.
DC - 137	150	190 - 215	215 - 1000	1.1	20

### Typical Frequency Response

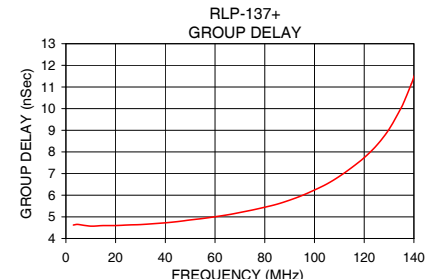
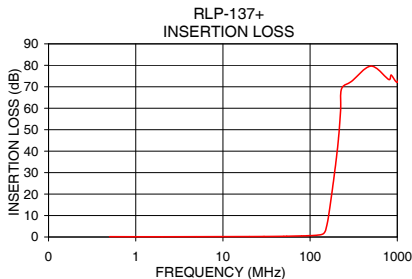


### Functional Schematic



### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nSec)
	$\bar{x}$	$\sigma$			
0.5	0.14	0.01	36.14	2.0	4.84
50.0	0.33	0.00	30.73	5.0	4.65
80.0	0.50	0.01	25.48	10.0	4.57
110.0	0.72	0.01	33.01	20.0	4.60
137.0	1.23	0.03	38.14	30.0	4.64
146.0	2.04	0.10	12.80	40.0	4.72
150.0	2.96	0.15	8.23	50.0	4.86
151.0	3.28	0.17	7.33	55.0	4.92
161.0	8.46	0.25	2.36	60.0	5.00
175.0	18.51	0.26	0.93	70.0	5.20
183.0	24.28	0.26	0.72	80.0	5.44
190.0	29.31	0.27	0.63	90.0	5.77
200.0	36.60	0.29	0.53	100.0	6.24
215.0	48.99	0.49	0.45	110.0	6.87
300.0	72.60	3.25	0.27	120.0	7.74
500.0	79.63	5.04	0.14	130.0	9.05
800.0	73.36	5.27	0.13	137.0	10.58
1000.0	72.09	4.99	0.15	140.0	11.46



#### Notes

- A. 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.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
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