

# Low Pass Filter

## RLP-70+

50Ω DC to 70 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

### Features

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

### Applications

- wireless communications
- receivers / transmitters



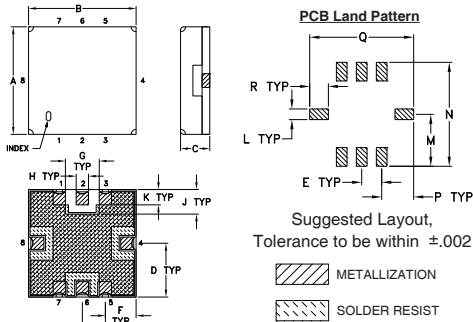
Generic photo used for illustration purposes only  
CASE STYLE: GP731

#### +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

### Outline Drawing

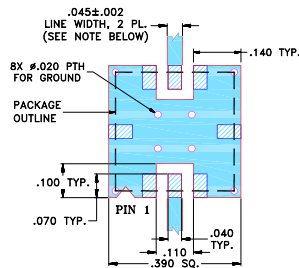


### Outline Dimensions (inch/mm)

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)

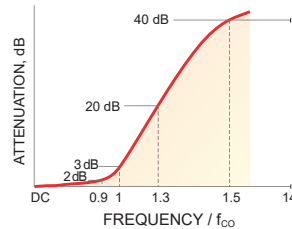


- NOTES:
1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .025" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
  2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
  - DENOTES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

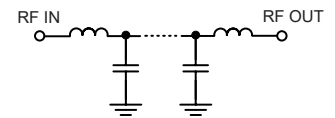
### Low Pass Filter Electrical Specifications (T<sub>AMB</sub> = 25°C)

PASSBAND (MHz)	f <sub>co</sub> , MHz Nom.	STOPBAND (MHz)		VSWR (:1)	
		(Loss > 20dB)	(Loss > 40dB)	Passband Typ.	Stopband Typ.
DC - 70	77	100 - 115	115 - 1000	1.1	20

### Typical Frequency Response

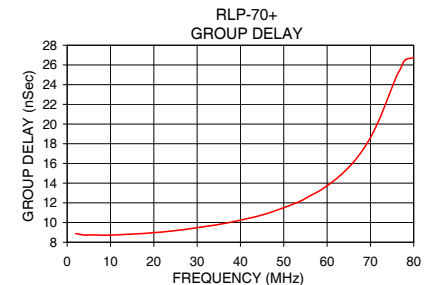
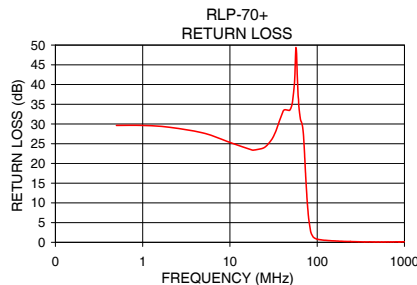
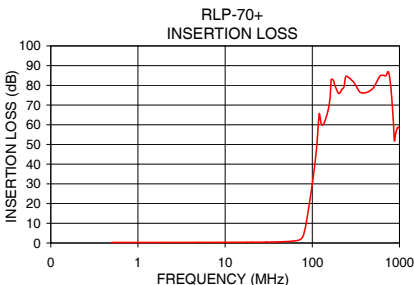


### Functional Schematic



### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nSec)
	$\bar{x}$	$\sigma$			
0.5	0.26	0.01	29.63	2.0	8.88
30.0	0.46	0.00	26.01	4.0	8.73
50.0	0.73	0.01	34.05	10.0	8.72
70.0	1.44	0.03	26.46	16.0	8.84
74.0	1.96	0.07	16.38	20.0	8.98
77.0	2.86	0.13	10.21	26.0	9.24
80.0	4.64	0.23	5.93	30.0	9.48
84.0	8.66	0.34	2.87	36.0	9.88
86.0	11.14	0.36	2.12	40.0	10.24
92.0	19.15	0.38	1.17	46.0	10.90
100.0	29.98	0.41	0.81	50.0	11.51
110.0	44.80	0.63	0.64	56.0	12.70
115.0	54.65	1.12	0.58	60.0	13.75
200.0	75.92	2.39	0.26	66.0	16.08
400.0	76.19	1.55	0.12	70.0	18.62
600.0	84.79	4.15	0.09	76.0	24.82
800.0	78.30	3.25	0.13	77.0	25.65
1000.0	58.09	0.60	0.14	80.0	26.75



#### 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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