

# Low Pass Filter

# RLP-176+

50Ω DC to 176 MHz

### Maximum Ratings

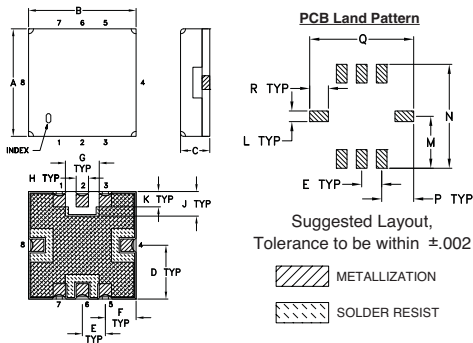
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W Max

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

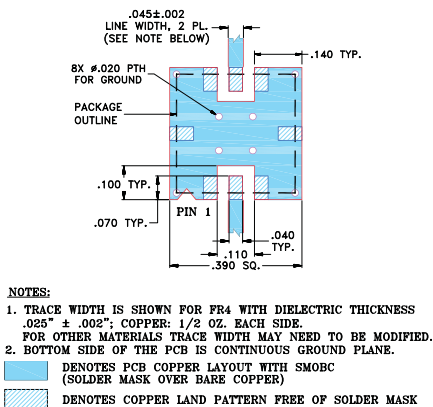
### Outline Drawing



### 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	1.93	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	

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



### Features

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

### Applications

- wireless communications
- receivers / transmitters



CASE STYLE: GP731  
 PRICE: \$7.95 ea. QTY (10)

**+RoHS Compliant**

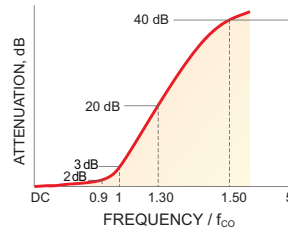
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

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

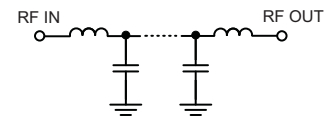
### Low Pass Filter Electrical Specifications (T<sub>AMB</sub> = 25°C)

PASSBAND (MHz)	f <sub>co</sub> , MHz Nom.	STOPBAND (MHz)		VSWR (:1)	
		(Loss > 20dB)	(Loss > 40dB)	Passband Typ.	Stopband Typ.
DC - 176	191	245 - 285	285 - 1000	1.1	20

### Typical Frequency Response

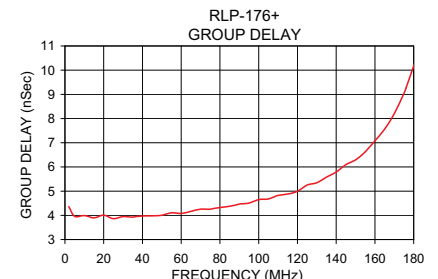
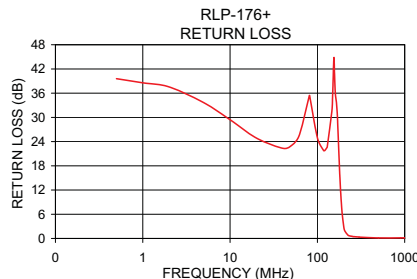
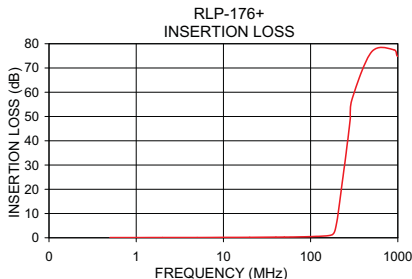


### Functional Schematic



### 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	39.59	2.0	4.36
50.0	0.30	0.01	22.96	5.0	3.96
100.0	0.48	0.01	24.93	10.0	3.99
150.0	0.78	0.01	36.17	20.0	4.01
176.0	1.23	0.02	21.44	30.0	3.95
185.0	1.97	0.06	11.39	40.0	3.98
188.0	2.47	0.09	8.93	60.0	4.08
191.0	3.19	0.12	6.89	70.0	4.26
200.0	6.60	0.19	3.06	80.0	4.33
206.0	9.64	0.21	1.89	90.0	4.47
225.0	19.92	0.19	0.77	100.0	4.65
245.0	29.97	0.18	0.55	110.0	4.82
255.0	34.74	0.17	0.48	130.0	5.35
285.0	49.18	0.26	0.38	140.0	5.79
300.0	57.36	0.55	0.33	150.0	6.29
500.0	76.65	8.71	0.13	160.0	7.08
900.0	77.53	6.17	0.14	176.0	9.25
1000.0	74.82	4.14	0.14	180.0	10.17



For detailed performance specs & shopping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at [minicircuits.com](http://minicircuits.com)

**Notes:** 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp).

REV. OR  
 M112722  
 EDR-8678U  
 RLP-176+  
 URJ/RAV  
 120805  
 Page 1 of 1