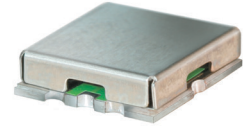


# Low Pass Filter

50Ω DC to 30 MHz

## RLP-30+



Generic photo used for illustration purposes only  
CASE STYLE: GP1212

**+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

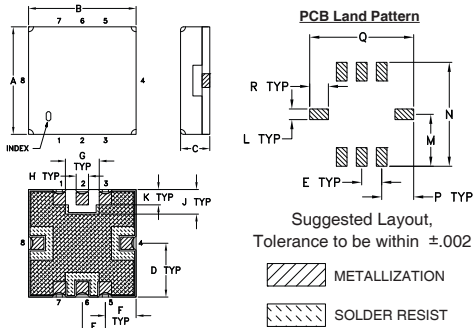
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W Max

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

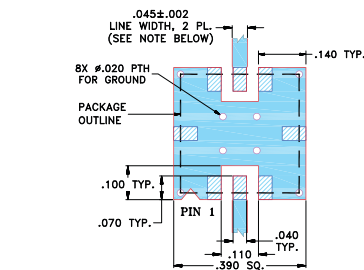


### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J
.350	.350	.150	.175	.075	.100	.110	.040	.080
8.89	8.89	3.81	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	0.50	

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, 1.15:1 typ. @ passband
- aqueous washable

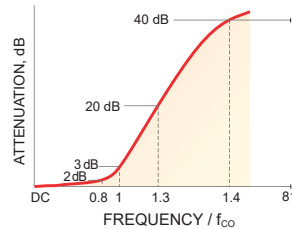
### Applications

- satellite
- wireless communications
- receivers / transmitters

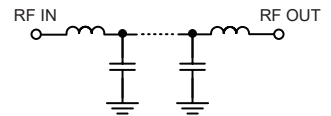
### Low Pass Filter Electrical Specifications (T<sub>AMB</sub> = 25°C)

PASSBAND (MHz)	f <sub>co</sub> , MHz Nom.	STOPBAND (MHz)		VSWR (:1)	
		(Loss > 20dB)	(Loss > 40dB)	Passband Typ.	Stopband Typ.
DC - 30	37	47 - 53	53 - 3000	1.15	20

### Typical Frequency Response

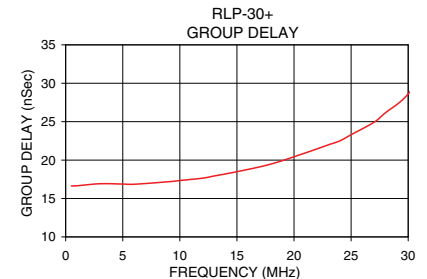
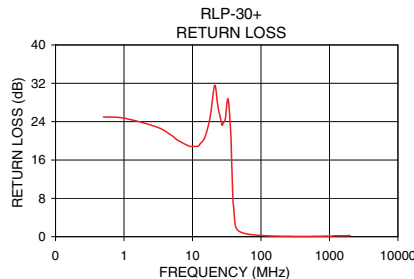
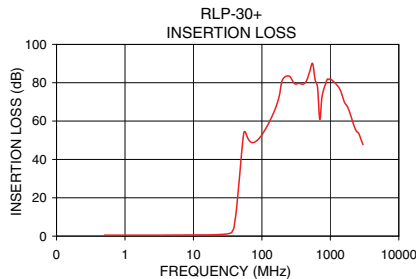


### Functional Schematic



### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nSec)
	$\bar{x}$	$\sigma$			
0.5	0.50	0.01	24.98	0.5	16.64
25.0	0.86	0.01	25.36	1.0	16.66
30.0	1.08	0.01	24.46	3.0	16.92
36.0	1.85	0.05	22.30	5.0	16.88
37.0	2.62	0.14	17.45	6.0	16.86
39.0	4.17	0.33	7.75	9.0	17.18
40.0	6.92	0.45	6.00	10.0	17.34
42.0	12.41	0.68	2.51	12.0	17.65
45.0	23.23	0.76	1.47	13.0	17.93
47.0	30.50	0.84	1.21	15.0	18.49
53.0	50.90	1.81	0.84	18.0	19.49
100.0	52.85	0.47	0.25	21.0	20.94
500.0	85.89	4.68	0.07	23.0	21.98
1000.0	81.99	3.92	0.09	24.0	22.50
1400.0	76.06	1.88	0.20	25.0	23.31
2000.0	62.57	0.80	0.24	27.0	24.92
2600.0	53.56	0.54	0.48	28.0	26.15
3000.0	47.74	0.53	0.33	30.0	28.61



**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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuit's 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-Circuit's website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)

