

# Low Pass Filter

## RLP-288+

50Ω DC to 288 MHz

### Maximum Ratings

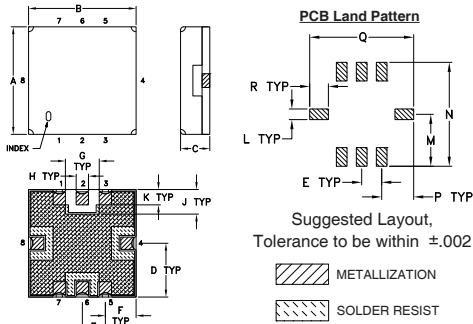
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W Max

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

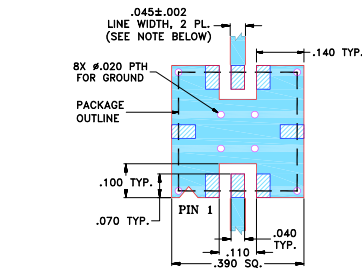


### Outline Dimensions (inch/mm)

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	1.91	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, 1.15:1 typ. @ passband
- aqueous washable

### Applications

- wireless communications
- receivers / transmitters



Generic photo used for illustration purposes only  
CASE STYLE: GP731

### +RoHS Compliant

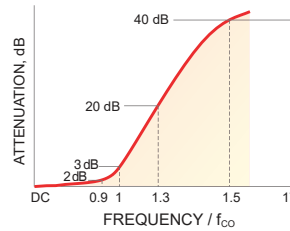
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

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

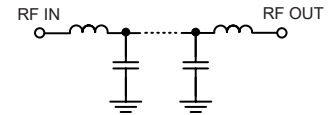
### Low Pass Filter Electrical Specifications (T<sub>AMB</sub> = 25°C)

PASSBAND (MHz)	f <sub>co</sub> , MHz Nom.	STOPBAND (MHz)		VSWR (:1)	
		(Loss > 20dB)	(Loss > 40dB)	Passband Typ.	Stopband Typ.
DC - 288	310	390 - 455	455 - 1500	1.15	20

### Typical Frequency Response

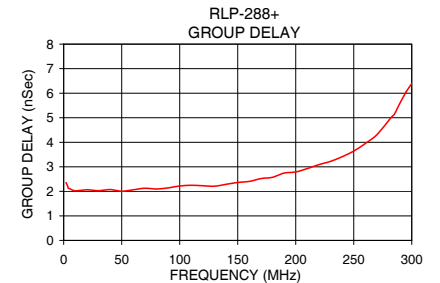
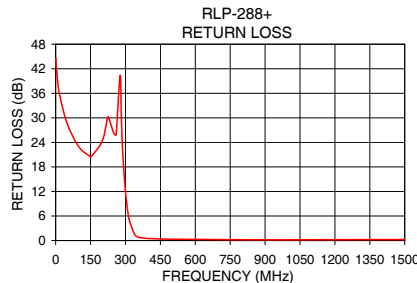
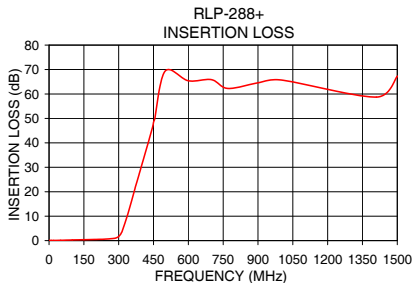


### Functional Schematic



### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nSec)
	$\bar{x}$	$\sigma$			
0.5	0.04	0.01	44.49	2.0	2.36
50.0	0.15	0.01	28.50	5.0	2.11
100.0	0.26	0.00	22.88	10.0	2.02
150.0	0.37	0.01	20.50	30.0	2.03
200.0	0.47	0.01	24.28	50.0	2.01
277.0	0.87	0.01	40.36	70.0	2.12
288.0	1.08	0.04	21.56	100.0	2.22
310.0	2.89	0.20	7.02	120.0	2.23
315.0	3.80	0.26	5.27	140.0	2.29
340.0	11.06	0.40	1.43	160.0	2.41
370.0	21.26	0.41	0.66	180.0	2.57
390.0	27.85	0.42	0.53	200.0	2.79
455.0	49.75	1.06	0.38	220.0	3.09
600.0	65.40	6.49	0.28	240.0	3.41
770.0	62.26	5.08	0.21	260.0	3.95
1000.0	65.73	8.41	0.18	270.0	4.31
1410.0	58.73	4.49	0.25	288.0	5.42
1500.0	67.18	6.87	0.24	300.0	6.40



### 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)

