

# Low Pass Filter

# RLP-105+

50Ω DC to 105 MHz

## Maximum Ratings

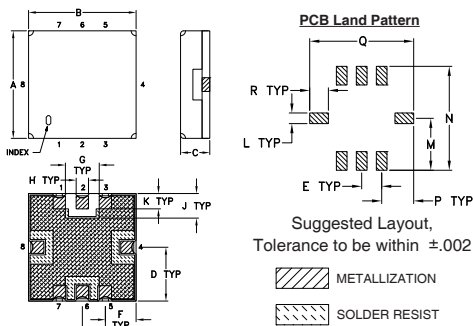
|                       |                |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C  |
| Storage Temperature   | -55°C to 100°C |
| RF Power Input        | 0.5W Max       |

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

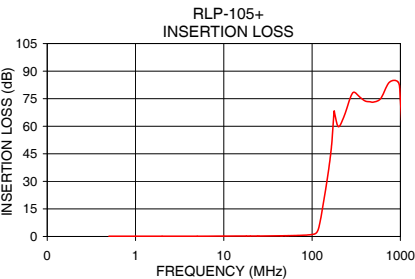
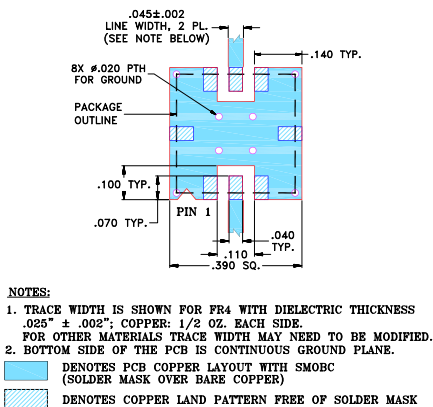


## Outline Dimensions (inch/mm)

|      |      |      |      |      |      |      |       |      |
|------|------|------|------|------|------|------|-------|------|
| 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)



## 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

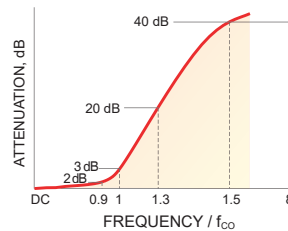
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

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

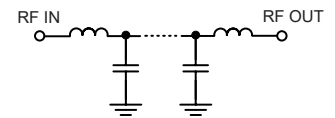
## Low Pass Filter Electrical Specifications (T<sub>AMB</sub> = 25°C)

| PASSBAND (MHz) | f <sub>co</sub> , MHz Nom. | STOPBAND (MHz) |               | VSWR (:1)     |               |
|----------------|----------------------------|----------------|---------------|---------------|---------------|
|                |                            | (Loss > 20dB)  | (Loss > 40dB) | Passband Typ. | Stopband Typ. |
| DC - 105       | 116                        | 145 - 165      | 165 - 1000    | 1.1           | 20            |

## Typical Frequency Response

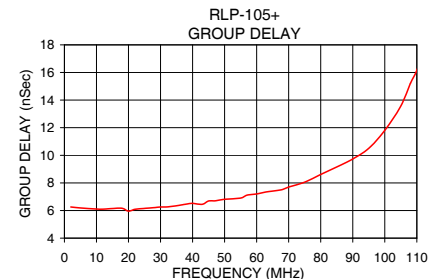


## Functional Schematic



## Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) |          | Return Loss (dB) | Frequency (MHz) | Group Delay (nSec) |
|-----------------|---------------------|----------|------------------|-----------------|--------------------|
|                 | $\bar{x}$           | $\sigma$ |                  |                 |                    |
| 0.5             | 0.13                | 0.01     | 35.22            | 2.0             | 6.26               |
| 10.0            | 0.20                | 0.00     | 29.65            | 5.0             | 6.19               |
| 50.0            | 0.41                | 0.00     | 37.09            | 10.0            | 6.11               |
| 75.0            | 0.63                | 0.01     | 32.32            | 20.0            | 5.96               |
| 85.0            | 0.75                | 0.01     | 31.58            | 25.0            | 6.16               |
| 100.0           | 1.08                | 0.01     | 22.50            | 45.0            | 6.69               |
| 105.0           | 1.28                | 0.02     | 24.06            | 50.0            | 6.82               |
| 112.0           | 1.99                | 0.08     | 13.30            | 55.0            | 6.90               |
| 116.0           | 3.18                | 0.18     | 7.69             | 60.0            | 7.20               |
| 120.0           | 5.42                | 0.29     | 4.25             | 65.0            | 7.41               |
| 126.0           | 10.34               | 0.37     | 1.93             | 70.0            | 7.70               |
| 145.0           | 27.98               | 0.37     | 0.70             | 75.0            | 8.06               |
| 165.0           | 47.88               | 0.51     | 0.50             | 80.0            | 8.61               |
| 180.0           | 67.19               | 1.63     | 0.43             | 85.0            | 9.16               |
| 300.0           | 78.51               | 3.90     | 0.20             | 95.0            | 10.51              |
| 500.0           | 73.18               | 2.18     | 0.10             | 100.0           | 11.81              |
| 750.0           | 83.89               | 3.52     | 0.10             | 105.0           | 13.57              |
| 1000.0          | 74.40               | 3.14     | 0.14             | 110.0           | 16.16              |



## Notes

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