

# Low Pass Filter

# WGLL-01400

50Ω DC to 1400 MHz

Ver. B  
2024.06.25

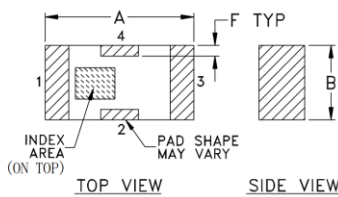
## Maximum Rating

|                       |                 |
|-----------------------|-----------------|
| Operating Temperature | -55°C~+100°C    |
| Storage Temperature   | -55°C~+100°C    |
| RF Input Power        | 10W max at 25°C |

## Pin Connections

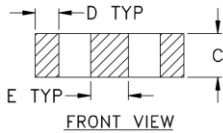
|           |     |
|-----------|-----|
| RF Input  | 1   |
| RF Output | 3   |
| Ground    | 2,4 |

## Outline Drawing



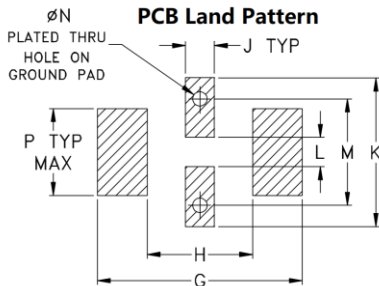
TOP VIEW

SIDE VIEW



FRONT VIEW

## PCB Land Pattern



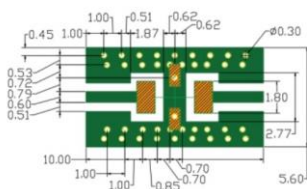
Suggested Layout

Tolerance to be within  $\pm .002$

## Outline Dimensions (Tolerance) mm

|           |           |           |           |           |           |      |
|-----------|-----------|-----------|-----------|-----------|-----------|------|
| A         | B         | C         | D         | E         | F         | G    |
| 3.20      | 1.60      | 0.95      | 0.51      | 0.81      | 0.23      | 4.29 |
| $\pm 0.2$ | $\pm 0.2$ | $\pm 0.2$ | $\pm 0.1$ | $\pm 0.1$ | $\pm 0.1$ |      |
| H         | J         | K         | L         | M         | N         | P    |
| 2.21      | 0.61      | 3.10      | 0.61      | 2.21      | 0.30      | 1.8  |
|           |           |           |           |           |           | wt   |
|           |           |           |           |           |           | .020 |

Demo Board MCL P/N: T-39  
Suggested PCB Layout (PL-137)



NOTES: 1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350 WITH THICKNESS .508"  $\pm$  .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED.

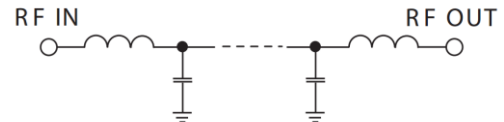
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.  
 DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)  
 DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

## Features

- High Performance
- Small Size
- Wide Band
- Ultra Low I.L.
- Temperature Stable
- LTCC Structure



RoHS Compliant



Functional Schematic

## Application

- Harmonic Rejection
- Transmitters/Receivers
- Lab Use

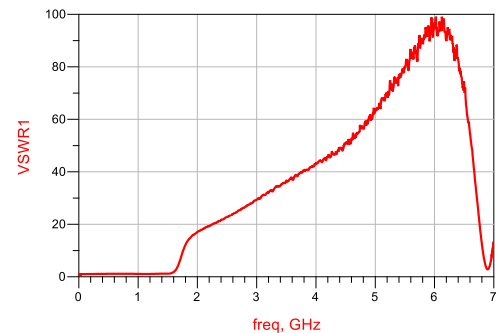
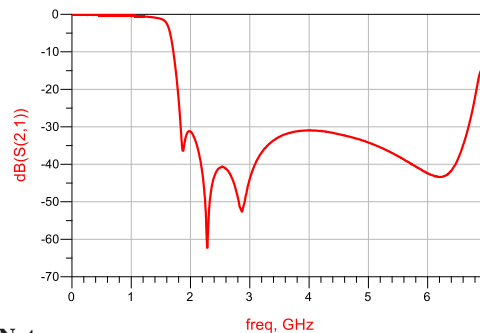
## Electrical Specifications<sup>(1)</sup> at 25°C

| Parameter |                | Frequency (MHz) | MIN | Typ. | MAX | Unit |
|-----------|----------------|-----------------|-----|------|-----|------|
| Pass Band | Insertion Loss | DC-1400         | -   | 0.8  | 1.2 | dB   |
|           | Freq. Cut-off  | 1540            | -   | 3.0  | -   | dB   |
|           | VSWR           | DC-1400         | -   | 1.2  | 1.5 | :1   |
| Stop Band | Rejection Loss | 2015            | 20  | 30   | -   | dB   |
|           |                | 2100-6600       | 20  | 30   | -   | dB   |
|           |                | 6800            | 15  | 20   | -   | dB   |

(1) Tested on Demo Board.

## Typical Performance at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 100             | 0.10                | 1.03      |
| 500             | 0.24                | 1.12      |
| 1000            | 0.45                | 1.15      |
| 1400            | 0.87                | 1.18      |
| 1700            | 8.87                | 5.81      |
| 1975            | 31.07               | 16.58     |
| 2000            | 31.23               | 17.07     |
| 2050            | 32.44               | 17.64     |
| 3000            | 43.80               | 29.31     |
| 4000            | 30.95               | 43.17     |
| 5000            | 34.09               | 63.11     |
| 6100            | 42.49               | 94.14     |
| 6800            | 21.99               | 12.18     |
| 7000            | 18.15               | 13.08     |



## Notes

- The specifications are tested at 25°C  $\pm$  5°C, relative humidity 55~75%.
- Other quality and characteristic not specify in this datasheet. Please contact us for detail requirements.



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