

Ceramic

# Low Pass Filter

50Ω DC<sup>1</sup> to 990 MHz

## Features

- Low loss, 0.4 dB typ.
- Small size 0805 (2.0 x 1.25 mm)
- Temperature stable
- LTCC construction

## Applications

- Harmonic Rejection
- VHF/UHF transmitters / receivers
- lab use

# LFCG-92+



Generic photo used for illustration purposes only  
CASE STYLE: GE0805C-2

**+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"        | 20, 50, 100, 200, 500, 1000, 4000 |

## Electrical Specifications<sup>1,2</sup> at 25°C

| Parameter | F#             | Frequency (MHz) | Min.        | Typ. | Max. | Unit |    |
|-----------|----------------|-----------------|-------------|------|------|------|----|
| Pass Band | Insertion Loss | DC - F1         | DC - 990    | —    | 0.4  | 0.8  | dB |
|           | Freq. cut-off  | F2              | 1400        | —    | 3.0  | —    | dB |
|           | VSWR           | DC - F1         | DC - 990    | —    | 1.45 | —    | :1 |
| Stop Band | Rejection Loss | F3              | 1700        | —    | 30   | —    | dB |
|           |                | F4 - F5         | 1800 - 2700 | 30   | 40   | —    | dB |
|           |                | F6              | 5000        | —    | 50   | —    | dB |

<sup>1</sup> In Application where DC voltage is present at either input or output port, coupling capacitors are required.

<sup>2</sup> Measured on Mini-Circuits Characterization Test Board TB-800+

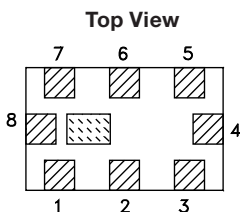
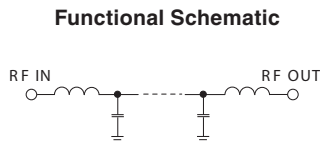
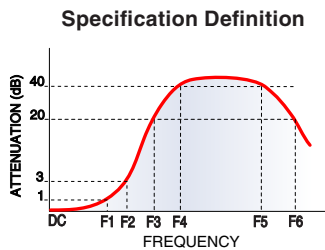
## Maximum Ratings

|                       |                 |
|-----------------------|-----------------|
| Operating Temperature | -55°C to +100°C |
| Storage Temperature   | -55°C to +100°C |
| RF Power Input*       | 2W at 25°C      |

\*Passband rating, derate linearly to 1W at 100°C ambient  
Permanent damage may occur if any of these limits are exceeded.

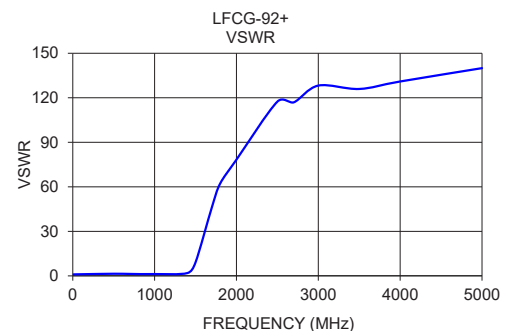
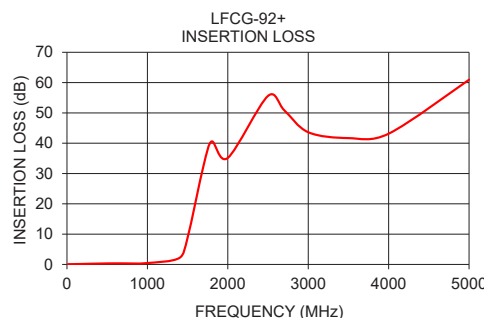
## Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 10              | 0.06                | 1.03      |
| 20              | 0.08                | 1.02      |
| 100             | 0.11                | 1.11      |
| 500             | 0.34                | 1.44      |
| 700             | 0.35                | 1.32      |
| 990             | 0.44                | 1.22      |
| 1400            | 2.18                | 1.90      |
| 1500            | 8.83                | 9.15      |
| 1700            | 32.78               | 46.32     |
| 1800            | 40.59               | 62.15     |
| 2000            | 35.16               | 78.35     |
| 2500            | 55.61               | 117.43    |
| 2700            | 50.94               | 116.94    |
| 3000            | 43.62               | 128.23    |
| 3500            | 41.69               | 125.95    |
| 4000            | 43.14               | 130.99    |
| 5000            | 60.95               | 139.99    |

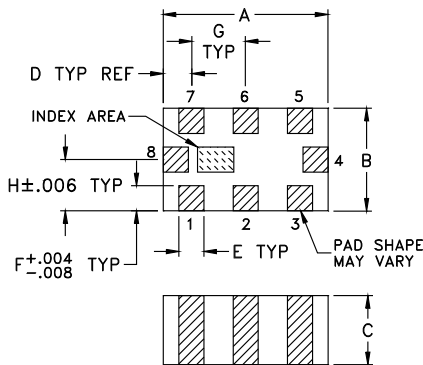


## Pad Connections

|                         |         |
|-------------------------|---------|
| Input                   | 8       |
| Output                  | 4       |
| Ground                  | 1,3,5,7 |
| Isolate (Do not ground) | 2,6     |



## Outline Drawing



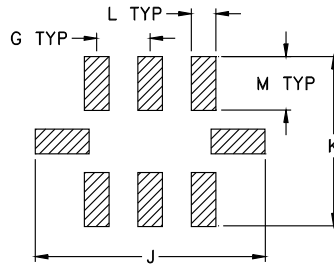
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|-------------------------|---------|
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### Outline Dimensions (inch/mm)

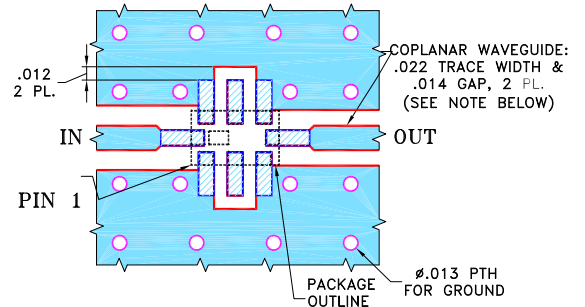
|      |      |      |       |      |      |       |
|------|------|------|-------|------|------|-------|
| A    | B    | C    | D     | E    | F    | G     |
| .079 | .049 | .037 | .014  | .012 | .012 | .026  |
| 2.01 | 1.24 | 0.94 | 0.36  | 0.30 | 0.30 | 0.66  |
| H    | J    | K    | L     | M    |      | wt    |
| .025 | .134 | .104 | 0.014 | .039 |      | grams |
| 0.64 | 3.40 | 2.64 | 0.36  | 0.99 |      | .008  |

### PCB Land Pattern



Suggested Layout,  
Tolerance to be within .002

### Demo Board MCL P/N: TB-800+ Suggested PCB Layout (PL-427)



#### NOTES:

1. COPLANAR WAVEGUIDE IS SHOWN FOR ROGERS R04350B WITH DIELECTRIC THICKNESS  $.010" \pm .001"$ . COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH AND 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.

### Additional Notes

- A. 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.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- C. The parts covered by this specification document 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)

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