

# Ceramic Low Pass Filter

50Ω DC to 2000 MHz

LFTC-2000+



## Maximum Ratings

|                                                                 |                |
|-----------------------------------------------------------------|----------------|
| Operating Temperature                                           | -55°C to 100°C |
| Storage Temperature                                             | -55°C to 125°C |
| Permanent damage may occur if any of these limits are exceeded. |                |

## Pin Connections

|        |         |
|--------|---------|
| RF IN  | 2       |
| RF OUT | 5       |
| GROUND | 1,3,4,6 |

## Features

- miniature size, 0.15"X0.15"X0.028"
- low profile, 0.028" height
- excellent power handling, 10W
- hermetically sealed

## Applications

- harmonic rejection
- internal rejection
- receivers & transmitters

CASE STYLE: FR933  
PRICE: \$3.75 ea. QTY. (20)

### +RoHS Compliant

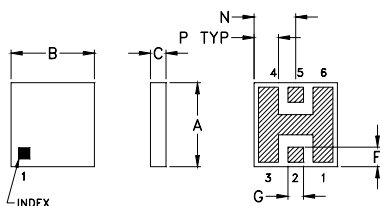
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications



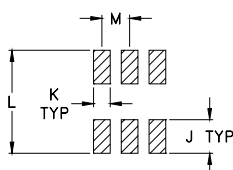
Available Tape and Reel at no extra cost

| Reel Size | Devices/Reel                |
|-----------|-----------------------------|
| 7"        | 20, 50, 100, 200, 500, 1000 |
| 13"       | 2000, 4000                  |

## Outline Drawing



## PCB Land Pattern

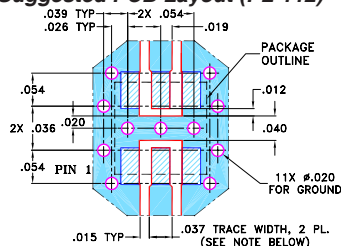


Suggested Layout,  
Tolerance to be within ±0.02

## Outline Dimensions (inch)

| A    | B    | C    | D    | E    | F    | G     | H  |
|------|------|------|------|------|------|-------|----|
| .150 | .150 | .034 | --   | --   | .035 | .028  | -- |
| 3.81 | 3.81 | 0.86 | --   | --   | 0.89 | 0.71  | -- |
| J    | K    | L    | M    | N    | P    | wt    |    |
| .060 | .030 | .184 | .050 | .075 | .044 | grams |    |
| 1.52 | 0.76 | 4.67 | 1.27 | 1.91 | 1.12 | 0.15  |    |

## Demo Board MCL P/N: TB-233 Suggested PCB Layout (PL-112)



NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.020" ± 0.0015"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.

2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

3. DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

4. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

## 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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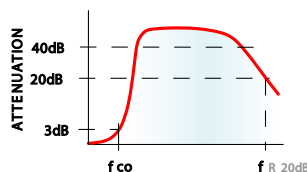
## Electrical Specifications<sup>1</sup> (T<sub>AMB</sub> = 25°C)

| PASSBAND (MHz) | f <sub>co</sub> , MHz Nom. | STOP BAND (MHz) |                |      | VSWR (:1) Passband | POWER INPUT* (W) | MARKING | NO. OF SECTIONS |
|----------------|----------------------------|-----------------|----------------|------|--------------------|------------------|---------|-----------------|
| (loss < 1 dB)  | (loss 3 dB)                | fr20 dB         |                |      |                    |                  |         |                 |
| Typ.           | Typ.                       | ( > 20 dB)      | (loss > 40 dB) | Typ. | Typ.               |                  |         |                 |
| DC-2000        | 2430                       | 3450            | 4500-5500      | 8000 | 1.2                | 10               | LF8     | 7               |

\* Derate linearly to 4W at 100°C ambient.

1. Measured on Mini-Circuits Characterization Test Board TB-233.

## typical frequency response

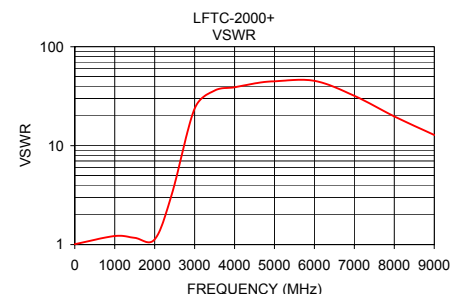
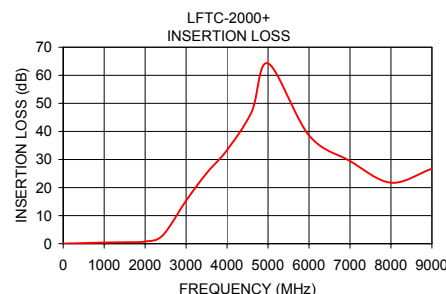


## electrical schematic



## Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 1.00            | 0.04                | 1.01      |
| 1000.00         | 0.39                | 1.22      |
| 1500.00         | 0.53                | 1.17      |
| 2000.00         | 0.77                | 1.13      |
| 2430.00         | 2.98                | 3.23      |
| 3000.00         | 15.33               | 23.65     |
| 3500.00         | 25.15               | 36.03     |
| 4000.00         | 33.38               | 38.95     |
| 4600.00         | 46.96               | 43.22     |
| 5000.00         | 64.27               | 44.76     |
| 6000.00         | 38.59               | 45.25     |
| 7000.00         | 29.45               | 31.94     |
| 8000.00         | 21.74               | 19.74     |
| 9000.00         | 26.73               | 12.84     |



REV. H  
M121640  
LFTC-2000+  
EDB-020614  
AD/YB/CP/AM  
140811