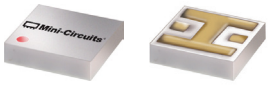
*Ceramic*

# Low Pass Filter

## LFTC-850+

50Ω DC to 850 MHz



CASE STYLE: FR933

### 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"X0.034"
- low profile, 0.034" height
- excellent power handling, 16W
- hermetically sealed

### Applications

- harmonic rejection
- internal rejection
- receivers & transmitters

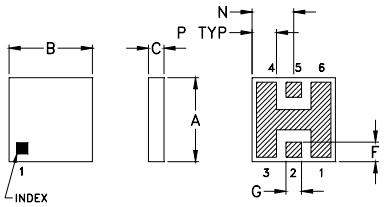
***+RoHS Compliant***

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

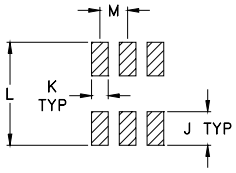
*Available Tape and Reel at no extra cost*

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

### Outline Drawing




**PCB Land Pattern**



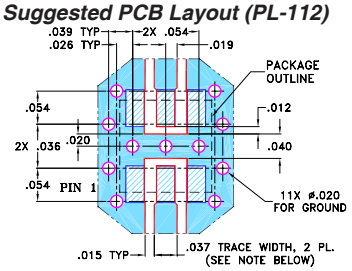

Suggested Layout,
Tolerance to be within ±.002

### Outline Dimensions (inch / mm)

| 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.

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

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

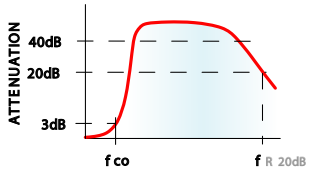
### Electrical Specifications[1] ($T_{AMB}$=25°C)

| PASSBAND (MHz) | fco, 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-850 | 1078 | 1500 | 2000-3500 | 5500 | 1.2 | 16 | LF3 | 7 |

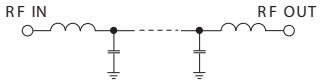
* Derate linearly to 7W at 100°C ambient.

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

### typical frequency response

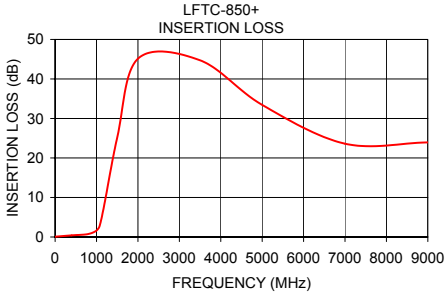


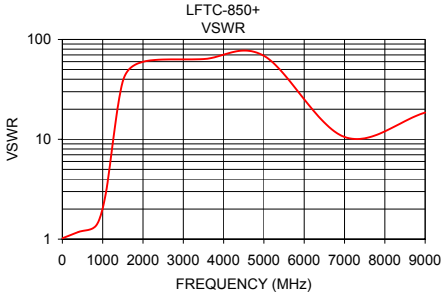

### electrical schematic




### Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|---|---|---|
| 1.00 | 0.09 | 1.02 |
| 400.00 | 0.42 | 1.18 |
| 850.00 | 0.90 | 1.39 |
| 1078.00 | 2.87 | 2.87 |
| 1500.00 | 25.19 | 38.22 |
| 2000.00 | 45.14 | 59.79 |
| 3500.00 | 44.71 | 63.65 |
| 5000.00 | 33.44 | 68.63 |
| 7000.00 | 23.62 | 10.54 |
| 9000.00 | 23.95 | 18.52 |




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