

# Bandpass Filter

50Ω 95 to 180 MHz

## Maximum Ratings

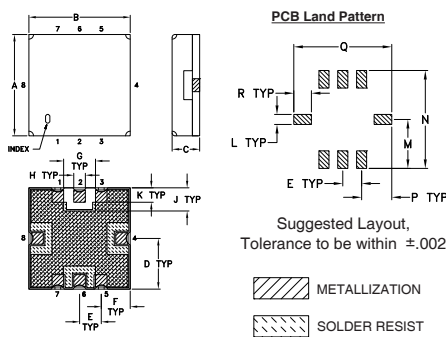
|                       |                |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C  |
| Storage Temperature   | -55°C to 100°C |
| RF Power Input        | 0.25 W at 25°C |

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

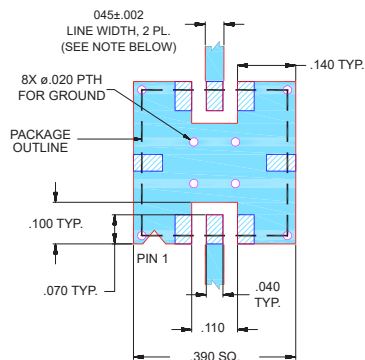


## Outline Dimensions (inch/mm)

| 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)



### NOTES:

- TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .025" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
  - 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

- good VSWR, 1.3:1 typ. @ passband
- high rejection
- small size (0.35" X 0.35")
- shielded case
- aqueous washable

## Applications

- base station
- harmonic rejection
- transmitters/receivers



Generic photo used for illustration purposes only

CASE STYLE: GP731

## +RoHS Compliant

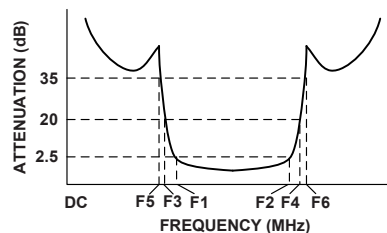
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

| Reel Size | Devices/Reel         |
|-----------|----------------------|
| 7"        | 10, 20, 50, 100, 200 |
| 13"       | 500, 1000            |

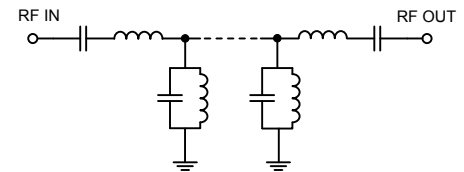
## Bandpass Filter Electrical Specifications (T<sub>AMB</sub> = 25°C)

| CENTER FREQ. (MHz) | PASSBAND (MHz)<br>(Loss < 2.5dB) | STOPBANDS (MHz) |                |                |                | VSWR (:1) |      |          |
|--------------------|----------------------------------|-----------------|----------------|----------------|----------------|-----------|------|----------|
|                    |                                  | Loss > 20dB     |                | Loss > 35dB    |                | Passband  |      | Stopband |
| F <sub>c</sub>     | F <sub>1</sub> - F <sub>2</sub>  | F <sub>3</sub>  | F <sub>4</sub> | F <sub>5</sub> | F <sub>6</sub> | Typ.      | Max. | Typ.     |
| 130                | 95 - 180                         | 58              | 260            | 48             | 310 - 2500     | 1.3       | 1.9  | 20       |

## Typical Frequency Response

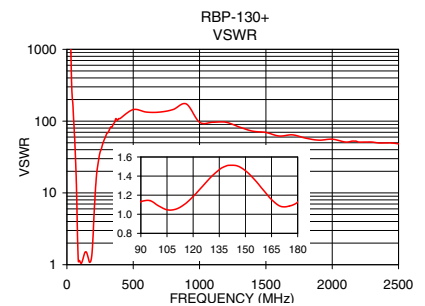
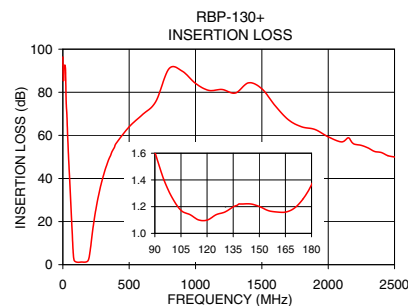


## Functional Schematic



## Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 0.5             | 96.41               | 1737.18   |
| 48.0            | 43.71               | 127.74    |
| 58.0            | 31.01               | 63.87     |
| 70.0            | 15.40               | 15.81     |
| 75.0            | 8.88                | 6.71      |
| 80.0            | 4.01                | 2.45      |
| 85.0            | 2.09                | 1.22      |
| 95.2            | 1.40                | 1.14      |
| 110.2           | 1.14                | 1.05      |
| 130.2           | 1.16                | 1.39      |
| 150.2           | 1.20                | 1.45      |
| 180.2           | 1.37                | 1.13      |
| 200.0           | 4.01                | 3.23      |
| 210.0           | 8.44                | 7.76      |
| 230.0           | 18.23               | 22.58     |
| 260.0           | 29.35               | 41.37     |
| 310.0           | 42.28               | 69.49     |
| 2500.0          | 49.95               | 48.26     |



### Notes

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