



**THE DATASHEET OF  
RBP-135+**



# Bandpass Filter

## RBP-135+

50Ω 120 to 150 MHz

### Maximum Ratings

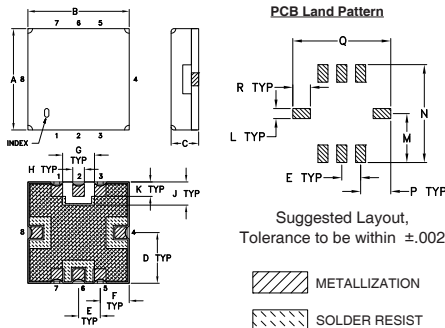
|                       |                |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C  |
| Storage Temperature   | -55°C to 100°C |
| RF Power Input        | 0.5W at 25°C   |

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



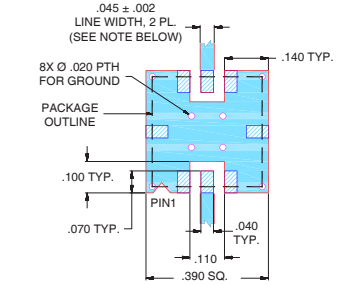
### Outline Dimensions (inch/mm)

| 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)



### Features

- high rejection
- linear phase, up to ±6deg typ. @ Fc ±15MHz
- good VSWR, 1.3:1 typ. @ passband
- small size 0.35" x 0.35"
- shielded case
- aqueous washable

### Applications

- harmonic rejection
- transmitters / receivers
- base station



Generic photo used for illustration purposes only

CASE STYLE: GP731

### +RoHS Compliant

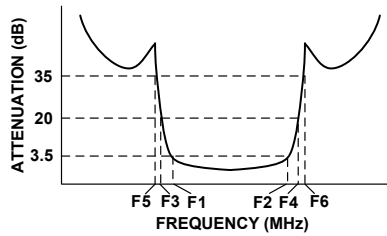
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

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

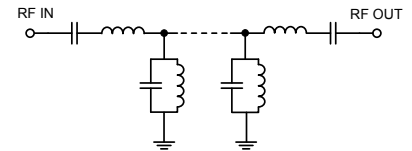
### Bandpass Filter Electrical Specifications (T<sub>AMB</sub> = 25°C)

| CENTER FREQ. (MHz) | PASSBAND (MHz)<br>(Loss < 3.5dB) | STOPBANDS (MHz) |             |          |          | MAXIMUM DEVIATION FROM LINEAR PHASE (deg.) | VSWR (:1) |      |      |
|--------------------|----------------------------------|-----------------|-------------|----------|----------|--|-----------|------|------|
|                    |                                  | Loss > 20dB     | Loss > 35dB | Passband | Stopband |  |           |      |      |
| Fc                 | F1 - F2                          | F3              | F4          | F5       | F6       | Fc ± 15MHz                                 | Typ.      | Max. | Typ. |
| 135                | 120 - 150                        | 85              | 210         | 75       | 245-2000 | ±12  | 1.3       | 1.8  | 18   |

### Typical Frequency Response

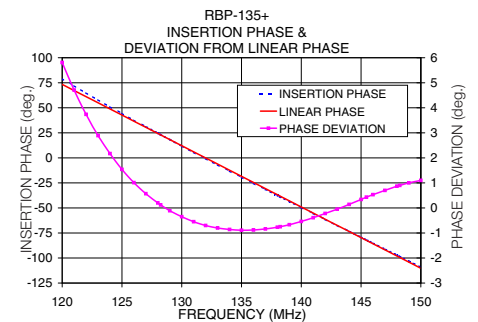
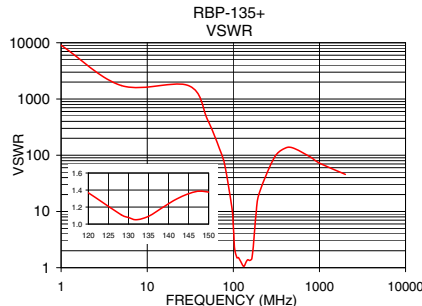
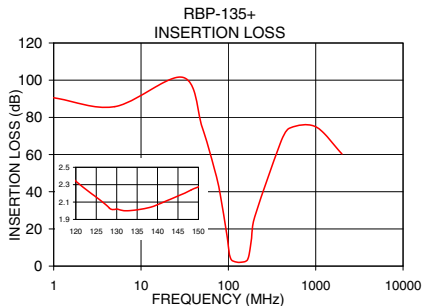


### Functional Schematic



### Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) | Frequency (MHz) | Deviation from Linear Phase (deg) |
|-----------------|---------------------|-----------|-----------------|-----------------------------------|
| 1.0             | 90.55               | 9035.28   | 120.0           | 5.81                              |
| 40.0            | 90.05               | 868.59    | 122.0           | 3.74                              |
| 75.0            | 45.52               | 91.43     | 123.0           | 2.89                              |
| 85.0            | 33.18               | 43.44     | 125.0           | 1.54                              |
| 95.0            | 18.74               | 14.50     | 127.0           | 0.57                              |
| 100.0           | 10.53               | 5.47      | 129.0           | -0.11                             |
| 104.0           | 5.28                | 1.93      | 130.0           | -0.35                             |
| 120.0           | 2.26                | 1.28      | 131.0           | -0.55                             |
| 135.0           | 2.01                | 1.09      | 133.0           | -0.80                             |
| 150.0           | 2.28                | 1.39      | 135.0           | -0.89                             |
| 170.0           | 4.81                | 2.24      | 137.0           | -0.84                             |
| 177.0           | 9.12                | 4.79      | 140.0           | -0.54                             |
| 210.0           | 31.97               | 29.46     | 143.0           | -0.05                             |
| 245.0           | 45.60               | 56.04     | 145.0           | 0.34                              |
| 500.0           | 74.19               | 133.63    | 147.0           | 0.70                              |
| 1000.0          | 74.95               | 72.39     | 149.0           | 1.00                              |
| 2000.0          | 60.33               | 45.72     | 150.0           | 1.10                              |



### Notes

- 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.
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