

# High Pass Filter

## RHP-305+

**50Ω      420 to 3200 MHz**

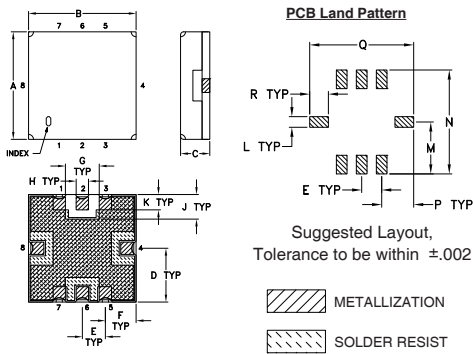
### Maximum Ratings

|                                                                 |                |
|-----------------------------------------------------------------|----------------|
| 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

|        |                  |
|--------|------------------|
| INPUT  | 2                |
| OUTPUT | 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 |

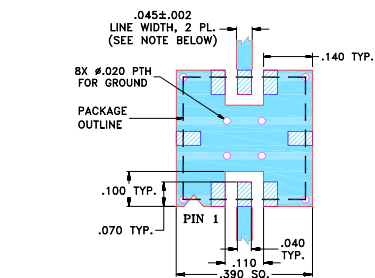
  

| K    | L    | M    | N    | P    | Q    | R    | wt.   |
|------|------|------|------|------|------|------|-------|
| .050 | .040 | .195 | .390 | .120 | .390 | .070 | grams |
| 1.27 | 1.02 | 4.95 | 9.91 | 3.05 | 9.91 | 1.78 | 0.25  |

Note: Please refer to case style drawing for details

### Demo Board MCL P/N: TB-332

### Suggested PCB Layout (PL-176)



#### NOTES:

1. 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.
  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

### Features

- low insertion loss, 0.4dB typ. @ passband
- high rejection
- shielded case
- aqueous washable

### Applications

- transmitters / receivers
- sub-harmonic rejection
- military communications



Generic photo used for illustration purposes only

CASE STYLE: GP731

#### +RoHS Compliant

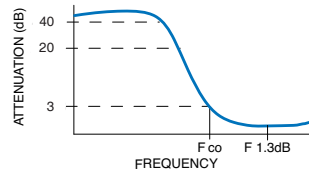
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

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

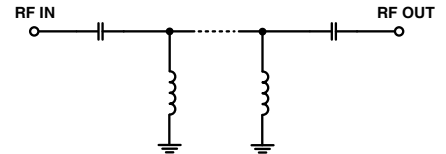
### High Pass Filter Electrical Specifications (T<sub>AMB</sub> = 25°C)

| STOPBAND (MHz) | f <sub>co</sub> , MHz Nom. | PASSBAND (MHz) | VSWR (:1)                   |
|----------------|----------------------------|----------------|-----------------------------|
| (Loss > 40dB)  | (Loss > 20dB)              | (Loss < 1dB)   | Stopband Typ. Passband Typ. |
| DC - 160       | DC - 215                   | 305            | 420 - 3200                  |
|                |                            |                | 18 1.2                      |

### Typical Frequency Response

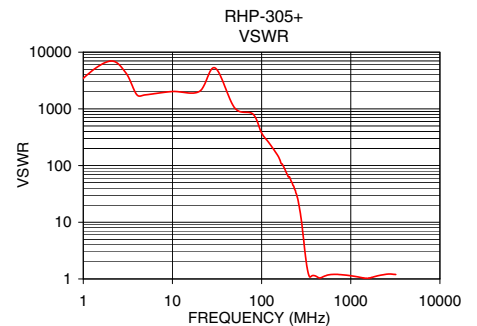
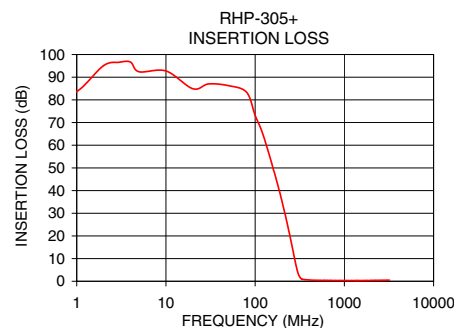


### Functional Schematic



### Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 1.0             | 83.65               | 3465.64   |
| 20.0            | 84.93               | 2026.91   |
| 50.0            | 86.29               | 1038.38   |
| 100.0           | 73.12               | 374.58    |
| 120.0           | 65.69               | 256.53    |
| 160.0           | 49.30               | 127.03    |
| 215.0           | 30.10               | 53.00     |
| 260.0           | 15.22               | 21.85     |
| 285.0           | 7.59                | 8.38      |
| 300.0           | 4.04                | 4.06      |
| 305.0           | 3.17                | 3.21      |
| 320.0           | 1.57                | 1.78      |
| 350.0           | 0.78                | 1.08      |
| 420.0           | 0.53                | 1.09      |
| 700.0           | 0.36                | 1.21      |
| 1000.0          | 0.32                | 1.14      |
| 2000.0          | 0.37                | 1.13      |
| 3200.0          | 0.50                | 1.20      |



#### Notes

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