

# Bandpass Filter

## Features

- good VSWR, 1.5:1 typ. @ passband
- small size 0.35" x 0.35"
- shielded case
- aqueous washable

## Applications

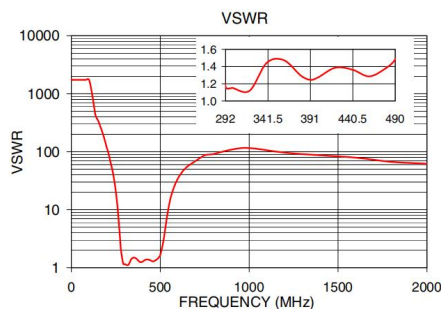
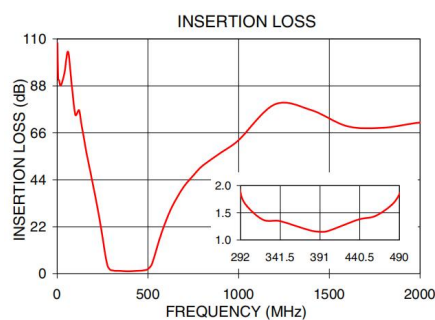
- harmonic rejection
- transmitters / receivers
- navigation

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

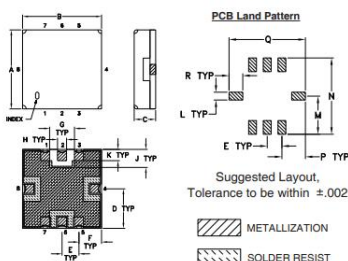
| CENTER<br>FREQ.<br>(MHz) | PASSBAND<br>(MHz)<br>(Loss < 4dB) | STOPBAND<br>(MHz) |     |               |          | VSWR     |      |          |
|--------------------------|-----------------------------------|-------------------|-----|---------------|----------|----------|------|----------|
|                          |                                   | (Loss > 20dB)     |     | (Loss > 35dB) |          | Passband |      | Stopband |
| Fc                       | F1 - F2                           | F3                | F4  | F5            | F6       | Typ.     | Max. | Typ.     |
| 391                      | 292-490                           | 230               | 620 | 200           | 700-2000 | 1.5      | 2.3  | 18       |

## Typical Performance Data at 25° C

| Frequency<br>(MHz) | Insertion Loss<br>(dB) | VSWR<br>(:1) |
|--------------------|------------------------|--------------|
| 0.3                | 96.06                  | 1737.18      |
| 200                | 40.54                  | 115.81       |
| 230                | 27.24                  | 49.64        |
| 252                | 16.05                  | 18.50        |
| 267                | 8.01                   | 6.11         |
| 277                | 3.93                   | 2.45         |
| 292                | 1.86                   | 1.16         |
| 300                | 1.62                   | 1.15         |
| 391                | 1.15                   | 1.25         |
| 400                | 1.16                   | 1.27         |
| 490                | 1.84                   | 1.48         |
| 518                | 3.85                   | 2.91         |
| 535                | 7.85                   | 6.58         |
| 560                | 15.13                  | 16.72        |
| 620                | 28.98                  | 43.44        |
| 700                | 41.02                  | 69.49        |
| 1400               | 76.67                  | 86.86        |
| 2000               | 70.80                  | 62.05        |



## Outline Drawing



## Outline Dimensions: Unit (mm)

|   |      |    |      |   |      |
|---|------|----|------|---|------|
| A | 8.89 | B  | 8.89 | C | 2.54 |
| D | 4.45 | E  | 1.91 | F | 2.54 |
| G | 2.79 | H  | 1.02 | J | 2.03 |
| K | 1.27 | L  | 1.02 | M | 4.95 |
| N | 9.91 | P  | 3.05 | Q | 9.91 |
| R | 1.78 | wt | 0.25 |   |      |

## JY-RBP-400+



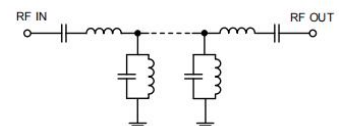
50Ω 292 to 490 MHz

## Maximum Ratings

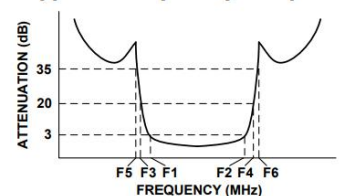
|                       |                |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C  |
| Storage Temperature   | -55°C to 100°C |
| RF Power Input*       | 0.5 W at 25°C  |

Permanent damage may occur if any of these limits are exceeded.

## Functional Schematic



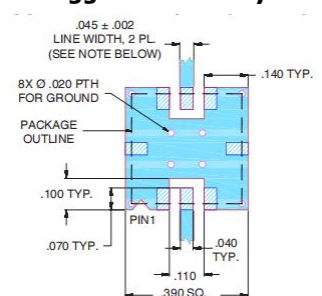
## Typical Frequency Response



## Pad Connections

|        |                  |
|--------|------------------|
| RF IN  | 2                |
| RF OUT | 6                |
| GROUND | 1, 3, 4, 5, 7, 8 |

## Suggested PCB Layout



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