*Surface Mount*

# Bandpass Filter

50Ω 2250 to 2500 MHz

# SYBP-232+

CASE STYLE: TT1423
PRICE: $9.95 ea. QTY (10)

## Features

- High power handling
- Small size
- Temperature stable
- Excellent rejection

## Applications

- Military radio
- Lab use

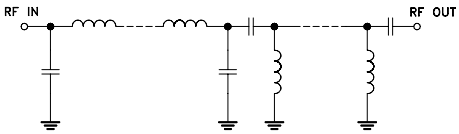
## Electrical Specifications at 25°C

| Parameter | | F# | Frequency (MHz) | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|---|
| **Pass Band** | Center Frequency | — | — | — | 2300 | — | MHz |
| | Insertion Loss | F1-F2 | 2250 - 2500 | — | 2.0 | 2.9 | dB |
| | VSWR | F1-F2 | 2250 - 2500 | — | 1.8 | 2.5 | :1 |
| **Stop Band, Lower** | Insertion Loss | DC-F3 | DC - 1520 | 20 | 23 | — | dB |
| | VSWR | DC-F3 | DC - 1520 | — | 15 | — | :1 |
| **Stop Band, Upper** | Insertion Loss | F4-F5 | 3720 - 4800 | 20 | 25 | — | dB |
| | VSWR | F4-F5 | 3720 - 4800 | — | 10 | — | :1 |

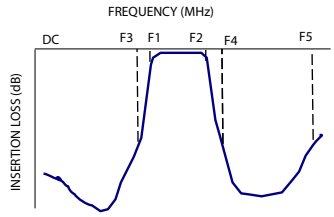
| Maximum Ratings | |
|---|---|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Power Input | 7W* max. at 25°C |

*Passband rating, derate linearly to 3W at 85°C ambient
Permanent damage may occur if any of these limits are exceeded.

## Functional Schematic




## Typical Frequency Response

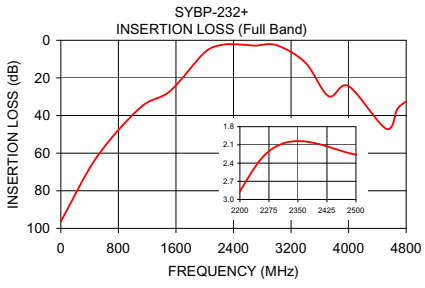


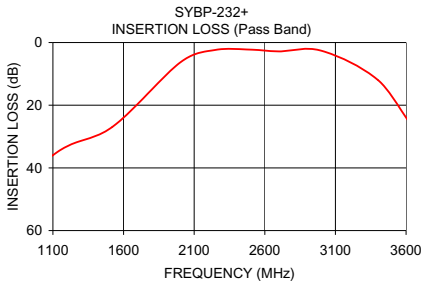

*+ RoHS compliant in accordance with EU Directive (2002/95/EC)*

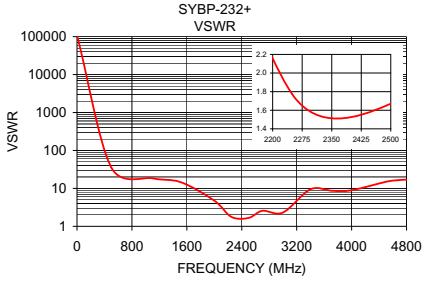
*The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.*

## Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|---|---|---|
| 1.00 | 96.25 | 107689.00 |
| 500.00 | 62.12 | 35.24 |
| 1100.00 | 35.95 | 18.48 |
| 1520.00 | 26.94 | 14.37 |
| 2000.00 | 6.40 | 4.75 |
| 2250.00 | 2.37 | 1.77 |
| 2500.00 | 2.26 | 1.67 |
| 2700.00 | 2.82 | 2.57 |
| 3000.00 | 2.61 | 2.31 |
| 3400.00 | 11.93 | 9.45 |
| 3720.00 | 29.70 | 8.62 |
| 4000.00 | 24.38 | 8.94 |
| 4520.00 | 46.99 | 15.20 |
| 4680.00 | 36.39 | 16.43 |
| 4800.00 | 32.49 | 17.04 |



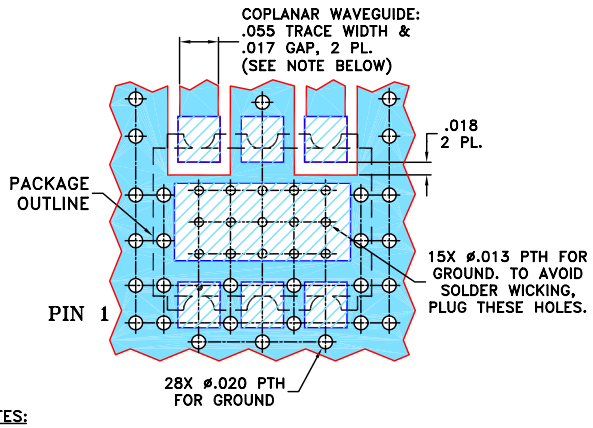



## Pin Connections

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

***Demo Board MCL P/N: TB-517+***
***Suggested PCB Layout (PL-308)***

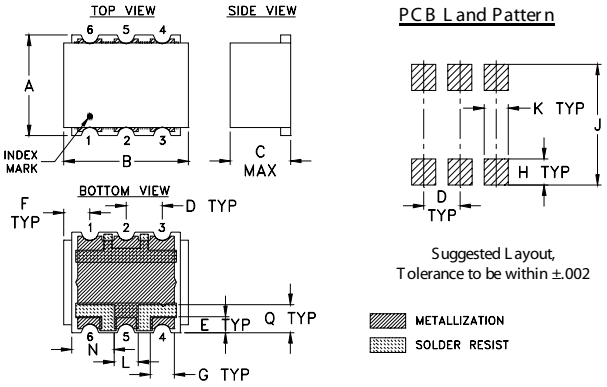



NOTES:
1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH AND GAP MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

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

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

## Outline Drawing




## Outline Dimensions ( inch / mm )

| A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|
| .25 | .31 | .15 | .090 | .040 | .065 | .060 | .065 |
| 6.35 | 7.87 | 3.81 | 2.29 | 1.02 | 1.65 | 1.52 | 1.65 |

| J | K | L | N | Q | wt. |
|---|---|---|---|---|---|
| .300 | .060 | .060 | .105 | .070 | grams |
| 7.62 | 1.52 | 1.52 | 2.67 | 1.78 | 0.50 |