

# Surface Mount High Pass Filter

50Ω 27.5 to 200 MHz

## Maximum Ratings

Operating Temperature -40°C to 85°C

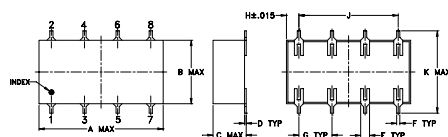
Storage Temperature -55°C to 100°C

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

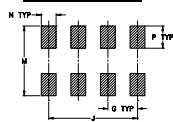
## Pin Connections

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

## Outline Drawing



### PCB Land Pattern



Suggested Layout,  
Tolerance to be within ±.002

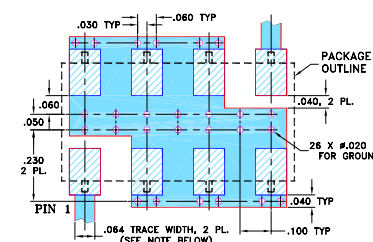
## Outline Dimensions (inch)

| A     | B    | C    | D    | E    | F    | G    |
|-------|------|------|------|------|------|------|
| 0.75  | 0.38 | 0.28 | 0.01 | 0.05 | 0.02 | 0.2  |
| 19.05 | 9.65 | 7.11 | 0.25 | 1.27 | 0.51 | 5.08 |

| H     | J     | K     | M     | N    | P    | wt    |
|-------|-------|-------|-------|------|------|-------|
| 0.075 | 0.6   | 0.45  | 0.47  | 0.1  | 0.15 | grams |
| 1.91  | 15.24 | 11.43 | 11.94 | 2.54 | 3.81 | 1.60  |

## Demo Board MCL P/N: TB-187+ Suggested PCB Layout (PL-049)



NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .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.  
3. DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)  
4. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

## Features

- low pass band insertion loss
- custom models available

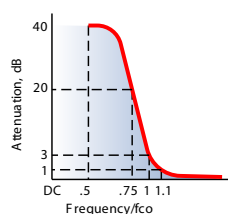
## Applications

- VHF
- lab use
- transmitters/receivers

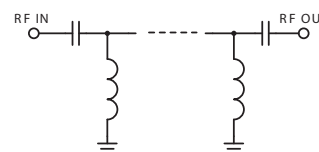
## High Pass Filter Electrical Specifications

| STOP BAND<br>(MHz)      | fco, MHz<br>Nom.<br>(loss 3 dB)<br>Typ. | PASSBAND<br>(MHz)   | VSWR<br>(:1)     |                  | POWER<br>INPUT<br>(W) |
|-------------------------|---|---------------------|------------------|------------------|-----------------------|
|                         |   |                     | Stopband<br>Typ. | Passband<br>Typ. |                       |
| DC-13<br>(loss > 40 dB) | 13-19<br>(loss > 20 dB)                 | 25<br>(loss < 1 dB) | 18               | 1.3              | 0.5                   |

## typical frequency response

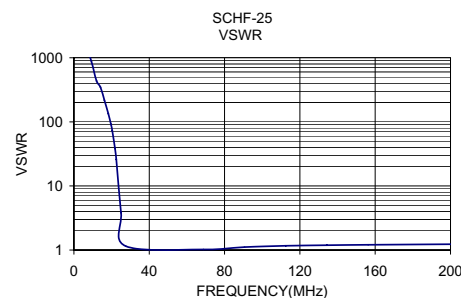
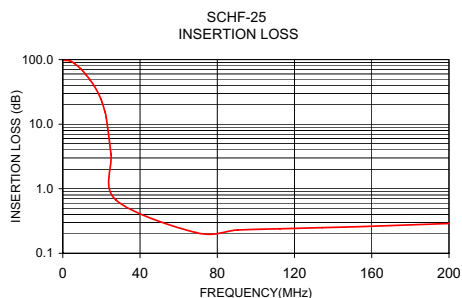


## electrical schematic



## Typical Performance Data

| Frequency<br>(MHz) | Insertion Loss<br>(dB) | VSWR<br>(:1) |
|--------------------|------------------------|--------------|
| 1.00               | 97.10                  | 0.00         |
| 6.00               | 87.20                  | 0.00         |
| 7.90               | 79.30                  | 0.00         |
| 9.30               | 72.10                  | 0.00         |
| 12.00              | 58.60                  | 4.00         |
| 13.00              | 53.80                  | 4.00         |
| 15.10              | 44.30                  | 7.00         |
| 16.20              | 39.50                  | 8.00         |
| 18.30              | 30.50                  | 0.10         |
| 19.00              | 27.60                  | 0.20         |
| 20.40              | 21.60                  | 0.20         |
| 21.80              | 15.70                  | 0.50         |
| 22.50              | 12.70                  | 0.70         |
| 25.00              | 3.40                   | 4.60         |
| 68.80              | 0.20                   | 39.60        |
| 90.60              | 0.20                   | 25.50        |
| 112.50             | 0.20                   | 22.40        |
| 156.30             | 0.30                   | 20.60        |
| 178.10             | 0.30                   | 20.10        |
| 200.00             | 0.30                   | 19.70        |



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