

Surface Mount Bandpass Filter

BPF-C75+

50Ω 60 to 90 MHz

Maximum Ratings

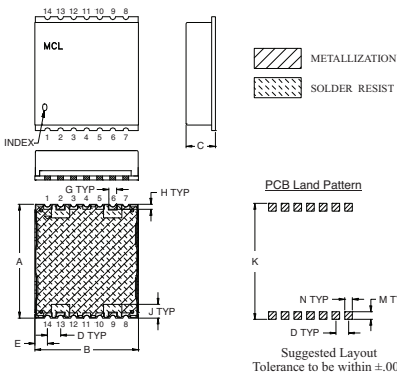
| | |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Power Input | 0.5W Max. |

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

Pin Connections

| | |
|---------------|----------------------------------|
| INPUT | 2 |
| OUTPUT | 9 |
| NOT CONNECTED | 6, 13 |
| GROUND | 1, 3, 4, 5, 7, 8, 10, 11, 12, 14 |

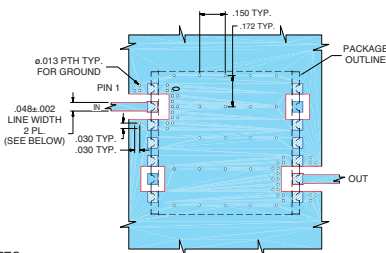
Outline Drawing



Outline Dimensions (inch/mm)

| A | B | C | D | E | G | H | J | K | M | N | wt. |
|-------|-------|------|------|------|------|------|------|-------|------|------|-------|
| .870 | .800 | .25 | .100 | .097 | .060 | .040 | .105 | .910 | .060 | .060 | grams |
| 22.10 | 20.32 | 6.35 | 2.54 | 2.46 | 1.52 | 1.02 | 2.67 | 23.11 | 1.52 | 1.52 | 2.85 |

Demo Board MCL P/N: TB-500+ Suggested PCB Layout (PL-294)



NOTES:

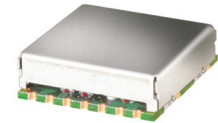
- TRACE WIDTH IS SHOWN FOR ROGERS RO4350B, DIELECTRIC THICKNESS: .030±.002"; COPPER: 1/2 OZ EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
 - BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
 DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Features

- High rejection
- Good VSWR, 1.2:1 typ @ passband
- Shielded case
- Aqueous washable

Applications

- Industrial microwave and RF
- Receivers / transmitters
- Harmonic rejection



CASE STYLE: HU1186
PRICE: \$26.95 ea. QTY (1-9)

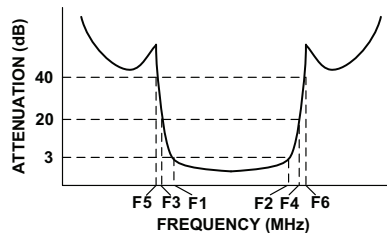
+RoHS Compliant

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

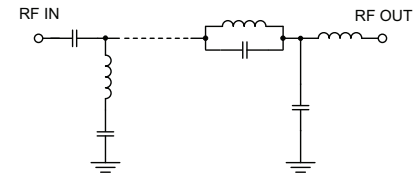
Bandpass Filter Electrical Specifications (T_{AMB} = 25°C)

| CENTER FREQ. (MHz) | PASSBAND (MHz) (Loss < 3dB) | STOPBANDS (MHz) | | | | VSWR (:1) | | |
|--------------------|---------------------------------|-----------------|----------------|----------------|----------------|-----------|------|----------|
| | | Loss > 20dB | | Loss > 40dB | | Passband | | Stopband |
| F _c | F ₁ - F ₂ | F ₃ | F ₄ | F ₅ | F ₆ | Typ. | Max. | Typ. |
| 75 | 60 - 90 | 46 | 102 | 42 | 108 - 1800 | 1.2 | 1.6 | 18 |

Typical Frequency Response

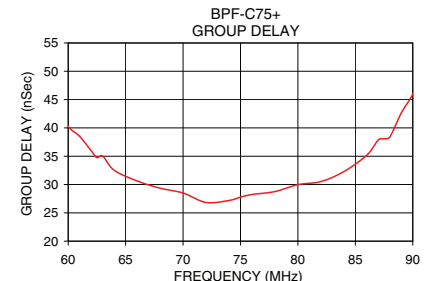
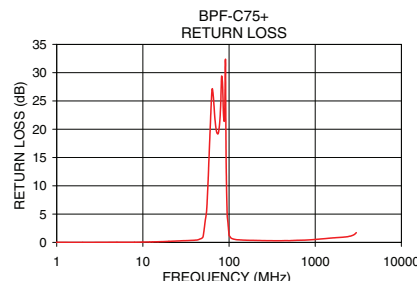
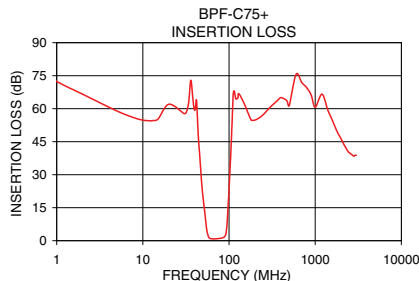


Functional Schematic



Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | | Return Loss (dB) | Frequency (MHz) | Group Delay (nSec) |
|-----------------|---------------------|----------|------------------|-----------------|--------------------|
| | \bar{x} | σ | | | |
| 0.5 | 79.67 | 1.09 | 0.01 | 60.0 | 40.28 |
| 42.0 | 63.82 | 3.90 | 0.41 | 62.0 | 35.98 |
| 46.0 | 37.45 | 5.83 | 0.59 | 64.0 | 32.52 |
| 53.0 | 11.02 | 3.22 | 3.86 | 66.0 | 30.64 |
| 55.0 | 5.30 | 2.56 | 5.74 | 68.0 | 29.36 |
| 57.0 | 2.41 | 1.17 | 10.55 | 70.0 | 28.50 |
| 60.0 | 1.06 | 0.16 | 19.07 | 72.0 | 26.84 |
| 66.0 | 0.83 | 0.05 | 25.39 | 74.0 | 27.19 |
| 75.0 | 0.95 | 0.04 | 19.29 | 75.0 | 27.77 |
| 80.0 | 1.10 | 0.05 | 24.31 | 76.0 | 28.24 |
| 90.0 | 2.09 | 0.09 | 26.65 | 78.0 | 28.76 |
| 93.0 | 4.17 | 0.46 | 12.07 | 80.0 | 29.98 |
| 95.0 | 8.13 | 0.86 | 5.05 | 82.0 | 30.52 |
| 97.0 | 14.22 | 0.93 | 3.53 | 84.0 | 32.29 |
| 102.0 | 30.02 | 1.06 | 1.07 | 86.0 | 35.19 |
| 108.0 | 51.30 | 1.66 | 0.67 | 87.0 | 37.89 |
| 500.0 | 61.34 | 5.48 | 0.31 | 88.0 | 38.39 |
| 1800.0 | 49.59 | 0.61 | 0.85 | 90.0 | 45.97 |



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