

Surface Mount Bandpass Filter

SXBP-240+

50Ω 238 to 242 MHz

Maximum Ratings

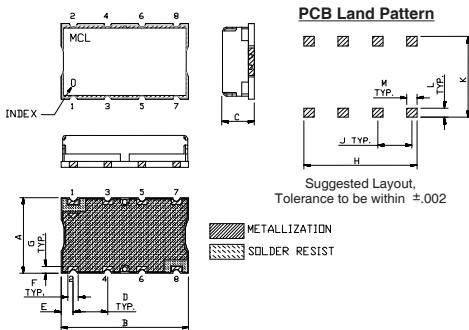
| | |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Power Input | 0.5W Max. |

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

Pin Connections

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

Outline Drawing

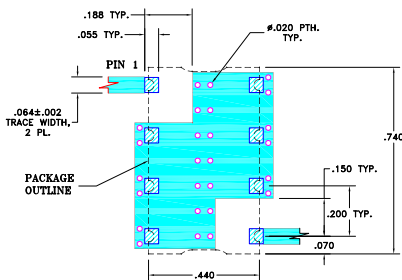


Outline Dimensions (inch/mm)

| | | | | | | |
|-------|-------|------|-------|------|------|-------|
| A | B | C | D | E | F | |
| .44 | .74 | .27 | .200 | .07 | .060 | |
| 11.18 | 18.80 | 6.86 | 5.08 | 1.78 | 1.52 | |
| G | H | J | K | L | M | wt. |
| .040 | .660 | .200 | .470 | .055 | .060 | grams |
| 1.02 | 16.76 | 5.08 | 11.94 | 1.40 | 1.52 | 3.0 |

Note: Please refer to case style drawing for details

Demo Board MCL P/N: TB-368 Suggested PCB Layout (PL-230)



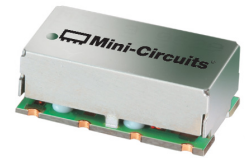
- NOTE:
- TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS: .025"±.002". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
 - BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
 DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Features

- excellent rejection
- flat group delay @ passband
- good VSWR, 1.3:1 typ @ passband
- aqueous washable

Applications

- receivers / transmitters
- wire-line broadband access
- cable system (video & data)



Generic photo used for illustration purposes only
CASE STYLE: HF1139

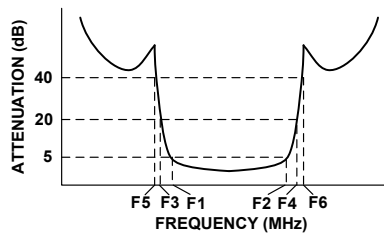
+RoHS Compliant

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

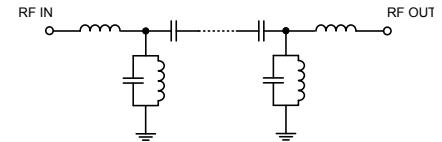
Bandpass Filter Electrical Specifications (T_{AMB} = 25°C)

| CENTER FREQ. (MHz) | PASSBAND (MHz) (Loss < 5dB) | 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. |
| 240 | 238 - 242 | 220 | 260 | 210 | 275 - 2500 | 1.3 | 1.8 | 18 |

Typical Frequency Response

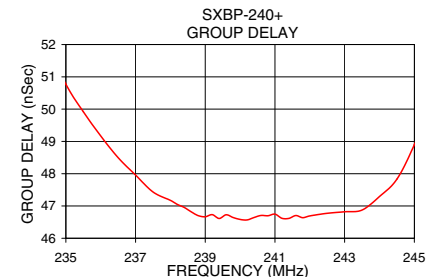
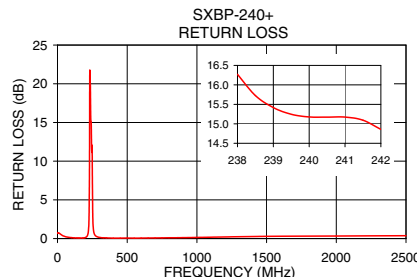
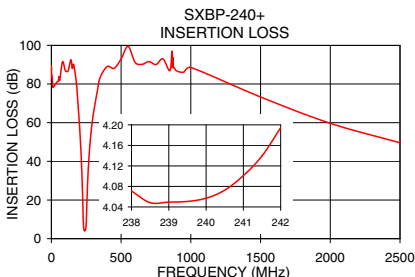


Functional Schematic



Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | | Return Loss (dB) | Frequency (MHz) | Group Delay (nSec) |
|-----------------|---------------------|----------|------------------|-----------------|--------------------|
| | \bar{x} | σ | | | |
| 1.0 | 87.75 | 3.29 | 0.69 | 235.0 | 50.77 |
| 10.0 | 78.24 | 1.27 | 0.71 | 235.5 | 49.92 |
| 100.0 | 86.90 | 2.12 | 0.12 | 236.0 | 49.17 |
| 210.0 | 48.10 | 0.27 | 0.26 | 236.5 | 48.50 |
| 220.0 | 31.25 | 0.50 | 0.74 | 237.0 | 47.96 |
| 226.0 | 16.64 | 0.88 | 2.63 | 237.5 | 47.43 |
| 229.0 | 8.88 | 0.72 | 8.14 | 238.0 | 47.18 |
| 238.0 | 4.07 | 0.04 | 16.27 | 238.4 | 46.95 |
| 240.0 | 4.06 | 0.02 | 15.18 | 239.0 | 46.67 |
| 242.0 | 4.19 | 0.04 | 14.86 | 239.4 | 46.61 |
| 250.0 | 8.24 | 0.57 | 8.62 | 240.0 | 46.58 |
| 253.0 | 14.85 | 0.71 | 2.99 | 240.6 | 46.71 |
| 260.0 | 29.15 | 0.51 | 0.89 | 241.0 | 46.75 |
| 275.0 | 47.42 | 0.36 | 0.33 | 242.0 | 46.69 |
| 300.0 | 64.20 | 0.50 | 0.16 | 243.0 | 46.82 |
| 500.0 | 92.94 | 5.40 | 0.07 | 244.0 | 47.29 |
| 1500.0 | 73.28 | 0.76 | 0.29 | 244.5 | 47.83 |
| 2500.0 | 49.59 | 1.01 | 0.37 | 245.0 | 48.90 |



Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
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