

Surface Mount Bandpass Filter

SXBP-100+

50Ω 87 to 117 MHz

Maximum Ratings

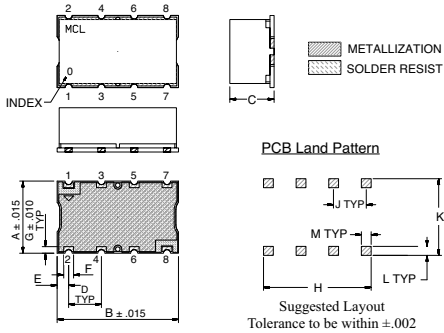
| | |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Power Input | 0.25W Max. |

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

Pin Connections

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

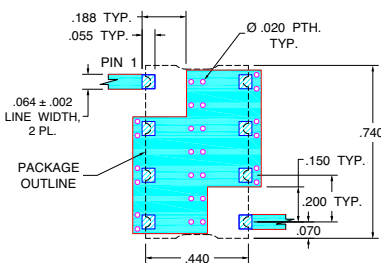
Outline Drawing



Outline Dimensions (inch/mm)

| A | B | C | D | E | F | G | H | J | K | L | M | wt. grams |
|------|------|------|------|------|------|-------|-------|------|-------|------|------|-----------|
| .440 | .740 | .27 | .200 | .07 | .060 | 11.18 | 18.80 | 6.86 | 5.08 | 1.78 | 1.52 | |
| .040 | .660 | .200 | .470 | .055 | .060 | 1.02 | 16.76 | 5.08 | 11.94 | 1.40 | 1.52 | 3.0 |

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



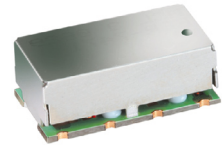
- TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS: .025±.002". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
 - BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
 - DENOTES COPPER LAND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

Features

- High rejection
- Good VSWR, 1.3:1 typ @ passband
- Shielded case
- Aqueous washable

Applications

- Radio
- Test equipment
- Receivers / transmitters
- Harmonic rejection



CASE STYLE: HF1139
PRICE: \$15.95 ea. QTY (1-9)

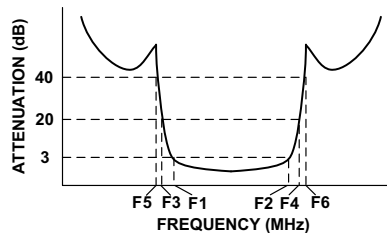
+ RoHS compliant in accordance with EU Directive (2002/95/EC)

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

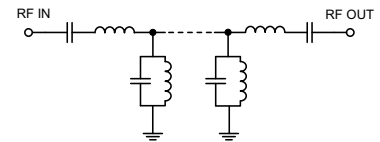
Bandpass Filter Electrical Specifications (T_{AMB} = 25°C)

| 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. |
| 100 | 87- 117 | 66 | 143 | 55 | 175 - 1500 | 1.3 | 1.7 | 20 |

Typical Frequency Response

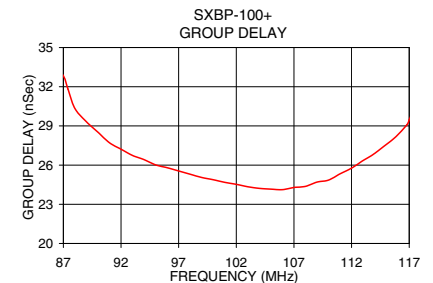
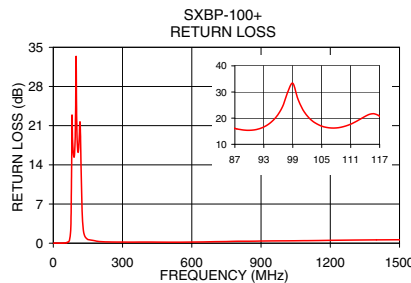
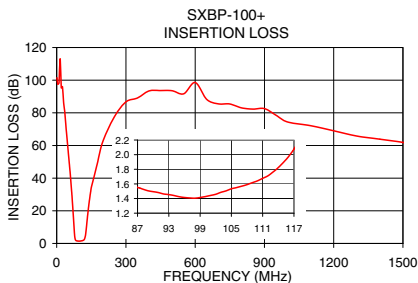


Functional Schematic



Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | Return Loss (dB) | Frequency (MHz) | Group Delay (nSec) |
|-----------------|---------------------|------------------|-----------------|--------------------|
| 1 | 101.48 | 3.67 | 87 | 32.84 |
| 55 | 48.64 | 0.58 | 88 | 30.34 |
| 66 | 29.62 | 0.77 | 89 | 29.32 |
| 70 | 21.58 | 0.91 | 90 | 28.52 |
| 75 | 10.14 | 1.07 | 92 | 27.22 |
| 78 | 4.46 | 0.73 | 94 | 26.42 |
| 80 | 2.65 | 0.36 | 96 | 25.80 |
| 87 | 1.55 | 0.05 | 98 | 25.30 |
| 95 | 1.42 | 0.03 | 100 | 24.88 |
| 100 | 1.43 | 0.04 | 102 | 24.53 |
| 110 | 1.64 | 0.05 | 104 | 24.22 |
| 117 | 2.08 | 0.07 | 106 | 24.12 |
| 125 | 5.20 | 0.70 | 108 | 24.37 |
| 130 | 11.60 | 0.86 | 110 | 24.85 |
| 140 | 24.55 | 0.66 | 111 | 25.33 |
| 143 | 27.66 | 0.62 | 112 | 25.77 |
| 175 | 48.35 | 0.58 | 113 | 26.35 |
| 1500 | 61.87 | 0.63 | 117 | 29.46 |



Mini-Circuits®
ISO 9001 ISO 14001 AS 9100 CERTIFIED

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicircuits.com

For detailed performance specs & shopping online see web site

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuit's standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp.

REV. OR
M121548
EDR-9427AUF1
SXBP-100+
URJ/RAV
090721
Page 1 of 1