

Ceramic High Pass Filter

NON-CATALOG

HFTC-39+

50Ω 4600 to 5500 MHz



Generic photo used for illustration purposes only

CASE STYLE: FR933

Maximum Ratings

| | |
|-----------------------|----------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature | -55°C to 125°C |

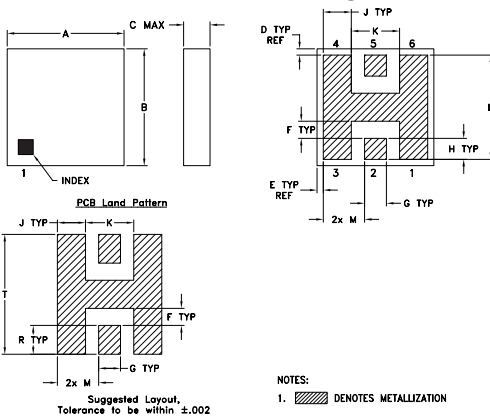
Permanent damage may occur if any of these limits are exceeded.

Pin Connections

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

Product Marking: HF12

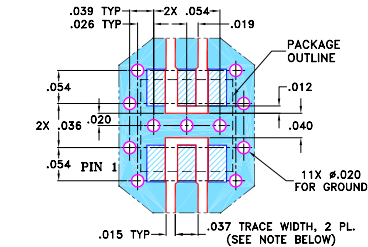
Outline Drawing



Outline Dimensions (inch/mm)

| A | B | C | D | E | F | G | H |
|-------|-------|-------|-------|-------|-------|-------|-------|
| .150 | .150 | .034 | .008 | .008 | .022 | .028 | .027 |
| 3.81 | 3.81 | 0.864 | 0.203 | 0.203 | 0.559 | 0.711 | 0.686 |
| J | K | L | M | R | T | wt | |
| .036 | .062 | .134 | .053 | .037 | .154 | grams | |
| 0.914 | 1.575 | 3.404 | 1.346 | 0.940 | 3.912 | 0.15 | |

Demo Board MCL P/N: TB-233 Suggested PCB Layout (PL-112)



NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.020" ± 0.0015"; 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

Notes

A. 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.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits 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-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

Features

- miniature size, 0.15"X0.15"
- low profile, 0.028" height
- low pass-band insertion loss, 1.0 dB typ.
- excellent input power handling, 10W
- hermetically sealed

Applications

- sub-harmonic rejection
- transmitters/receivers
- dc blocking

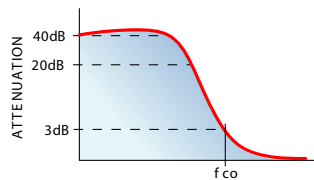
Electrical Specifications¹ (T_{AMB}=25°C)

| STOP BAND (MHz) | f _{co} , MHz Nom. | PASSBAND (MHz) | VSWR (:1) | POWER INPUT* (W) | MARKING | NO. OF SECTIONS |
|-----------------|----------------------------|-----------------|-------------------|------------------|---------|-----------------|
| (loss > 40 dB) | (loss 3 dB) | (loss < 1.3 dB) | Stopband Passband | | | |
| DC-1900 | 3900 | 4600-5500 | Typ. Typ. | 10 | HF12 | 7 |

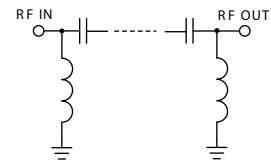
* Derate linearly to 4W at 100°C ambient.

1. Measured on Mini-Circuits Characterization Test Board TB-233.

typical frequency response



electrical schematic



Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 1.00 | 102.75 | 810.23 |
| 600.00 | 64.59 | 136.92 |
| 1000.00 | 55.35 | 109.48 |
| 1500.00 | 48.85 | 92.42 |
| 1900.00 | 43.70 | 81.79 |
| 2500.00 | 34.87 | 62.84 |
| 3050.00 | 24.00 | 40.15 |
| 3500.00 | 12.11 | 14.49 |
| 4500.00 | 0.97 | 1.10 |
| 5500.00 | 0.98 | 1.47 |

