

# Ceramic High Pass Filter

50Ω 1300 to 3500 MHz

## HFTC-9R5+



Generic photo used for illustration purposes only

CASE STYLE: FR933

**+RoHS Compliant**

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

| Reel Size | Devices/Reel                |
|-----------|-----------------------------|
| 7"        | 20, 50, 100, 200, 500, 1000 |
| 13"       | 2000, 3000, 4000            |

### Maximum Ratings

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

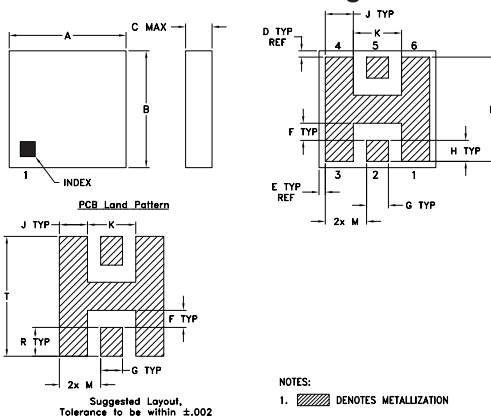
Permanent damage may occur if any of these limits are exceeded.

### Pin Connections

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

### Product Marking: HF7

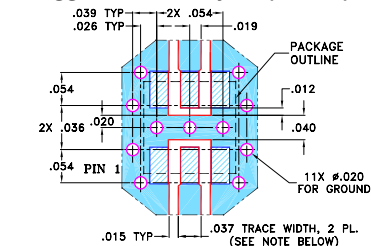
### Outline Drawing



### 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-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](http://www.minicircuits.com/MCLStore/terms.jsp)

### Features

- miniature size, 0.15"X0.15"X0.034"
- low profile, 0.034" height
- low pass-band insertion loss, 1.0 dB typ.
- excellent input power handling, 14W
- hermetically sealed

### Applications

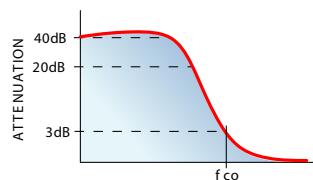
- sub-harmonic rejection
- transmitters/receivers
- dc blocking

### Electrical Specifications (T<sub>AMB</sub>=25°C)

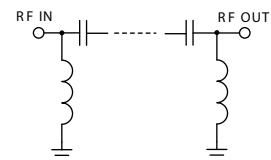
| STOP BAND (MHz) | f <sub>co</sub> , MHz Nom. | PASSBAND (MHz)  | VSWR (:1)         | POWER INPUT* (W) | MARKING | NO. OF SECTIONS |
|-----------------|----------------------------|-----------------|-------------------|------------------|---------|-----------------|
| (loss > 40 dB)  | (loss > 20 dB)             | (loss < 1.3 dB) | Stopband Passband |                  |         |                 |
| DC-600          | 750                        | 1300-3500       | Typ. Typ.         | 14               | HF7     | 7               |

\* Derate linearly to 6W at 100°C ambient.

### typical frequency response

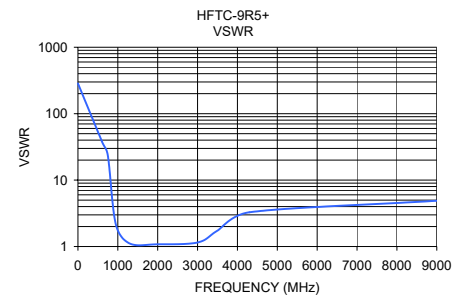
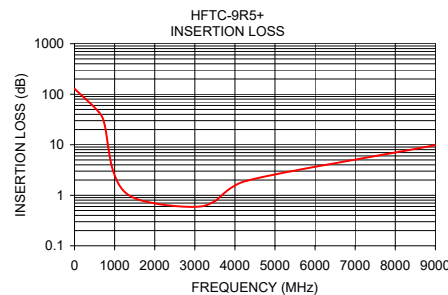


### electrical schematic



### Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 1.00            | 128.65              | 285.20    |
| 600.00          | 44.78               | 38.32     |
| 750.00          | 25.06               | 23.43     |
| 950.00          | 3.28                | 2.16      |
| 1300.00         | 1.08                | 1.11      |
| 2000.00         | 0.69                | 1.08      |
| 3000.00         | 0.59                | 1.15      |
| 3500.00         | 0.76                | 1.74      |
| 4300.00         | 1.94                | 3.28      |
| 9000.00         | 9.82                | 4.89      |



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