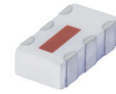


High Pass Filter

50Ω 9000 to 13000 MHz

HFCN-8400+



Generic photo used for illustration purposes only

CASE STYLE: FV1206-1

+RoHS Compliant

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

Available Tape and Reel at no extra cost

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

Maximum Ratings

| | |
|-----------------------|-----------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature | -55°C to 100°C |
| RF Power Input* | 7W max. at 25°C |

*Passband rating, derate linearly to 3W at 100°C ambient. Permanent damage may occur if any of these limits are exceeded.

Pin Connections

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

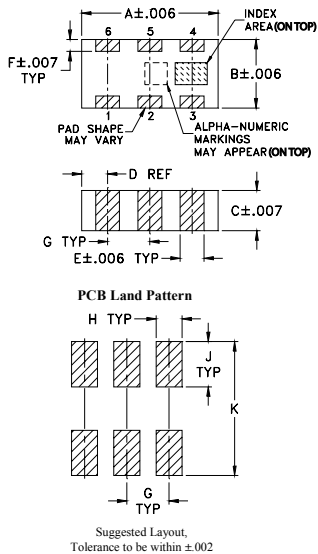
Features

- Low cost
- Small size
- 5 sections
- Temperature stable
- Excellent power handling, 7W
- Hermetically sealed
- LTCC construction
- Protected by US Patent 7,760,485

Applications

- Sub-harmonic rejection
- Transmitters / receivers

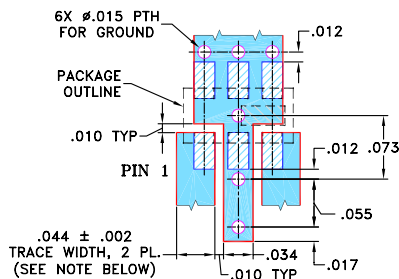
Outline Drawing



Outline Dimensions (inch)

| A | B | C | D | E | F |
|------|------|------|------|-------|------|
| .126 | .063 | .035 | .024 | .022 | .011 |
| 3.20 | 1.60 | 0.89 | 0.61 | 0.56 | 0.28 |
| G | H | J | K | wt | |
| .039 | .024 | .042 | .123 | grams | |
| 0.99 | 0.61 | 1.07 | 3.12 | .020 | |

Demo Board MCL P/N: TB-285 Suggested PCB Layout (PL-158)



NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350 WITH DIELECTRIC THICKNESS: .020 ± .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.

- DENOTES PCB COPPER LAYOUT
- DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

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

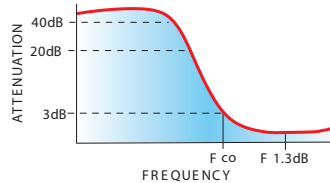
Electrical Specifications^(1,2) at 25°C

| STOPBAND (MHz) | f _{co} , MHz | PASSBAND (MHz) | VSWR | POWER INPUT | NO. OF SECTIONS |
|--------------------|-----------------------|---------------------|----------------|-------------|-----------------|
| (Loss > 30dB) Typ. | (Nom.) | (Loss < 2.5dB) Max. | Typ. Frequency | (W) | |
| (Loss > 20dB) Min. | (Typ.) | (Loss < 3dB) Max. | Stopband | Max. | |
| 5700 | 6000 | 8400 | 1.5:1 | | 5 |
| | | 9500-13000 | 9000-13000 | | |

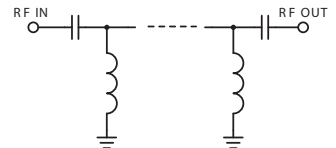
(1) In Application where DC voltage is present at either input or output ports, coupling capacitors are required. Alternatively, Mini-Circuit's "D" suffix version of this model will provide >100 MOhm isolation to ground.

(2) Measured on Mini-Circuit's Characterization Test Board TB-285.

typical frequency response

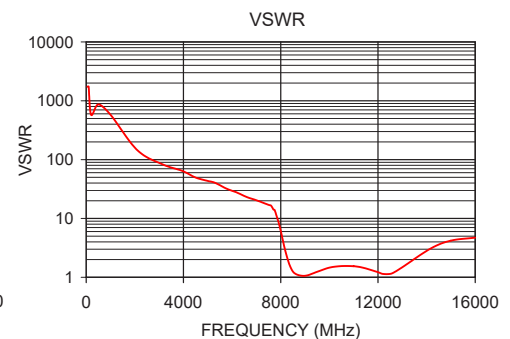


electrical schematic



Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 50 | 55.48 | 1737.18 |
| 500 | 41.57 | 868.59 |
| 4500 | 31.17 | 49.64 |
| 5700 | 36.69 | 31.60 |
| 6000 | 27.78 | 29.46 |
| 7500 | 23.46 | 17.05 |
| 8020 | 9.65 | 5.68 |
| 8400 | 2.88 | 1.50 |
| 8600 | 2.11 | 1.15 |
| 9000 | 1.57 | 1.06 |
| 9500 | 1.43 | 1.24 |
| 10000 | 1.47 | 1.46 |
| 12000 | 0.92 | 1.22 |
| 13000 | 1.10 | 1.48 |
| 16000 | 5.43 | 4.72 |



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