



CERAMIC

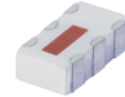
High Pass Filter

HFCN-2700A+

50Ω 2900 to 8700 MHz

THE BIG DEAL

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



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

APPLICATIONS

- Sub-harmonic rejection
- Transmitters/receivers

ELECTRICAL SPECIFICATIONS^{1,2} AT 25°C

| Parameter | Frequency (MHz) | Min. | Typ. | Max. | Units |
|-----------|-----------------|-----------|------|------|-------|
| Stop Band | Rejection Loss | 2270 | 30 | — | dB |
| | | 2150 | 20 | — | |
| | Freq. Cut-Off | 2700 | — | 3.0 | dB |
| | VSWR | 2270-2150 | — | 20 | :1 |
| Pass Band | Insertion Loss | 2900-8700 | — | 2.0 | dB |
| | | 3070-8500 | — | 1.5 | dB |
| | VSWR | 3400-9000 | — | 1.5 | :1 |

1. In Application where DC voltage is present at either input or output ports, coupling capacitors are required. Alternatively, if DC pass IN-OUT is required, Mini-Circuits' "D" suffix version of this model will support DC IN-OUT, and provide >100 MOhm isolation to ground.

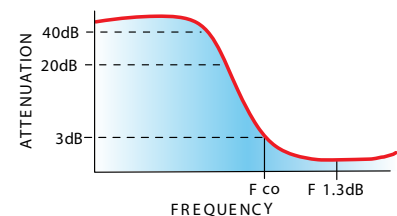
2. Measured on Mini-Circuits Characterization Test Board TB-285.

MAXIMUM RATINGS

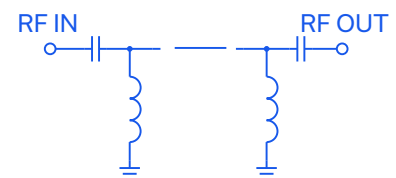
| Parameter | Ratings |
|-----------------------------|------------------|
| Operating temperature | -55°C to 100°C |
| Storage temperature | -55°C to 100°C |
| RF Power Input ³ | 7 W max. at 25°C |

3. Passband rating, derate linearly to 3.5W at 100°C ambient. Permanent damage may occur if any of these limits are exceeded.

TYPICAL FREQUENCY RESPONSE



FUNCTIONAL SCHEMATIC



REV. F
ECO-012163
HFCN-2700A+
RAV/CP/AM
220303



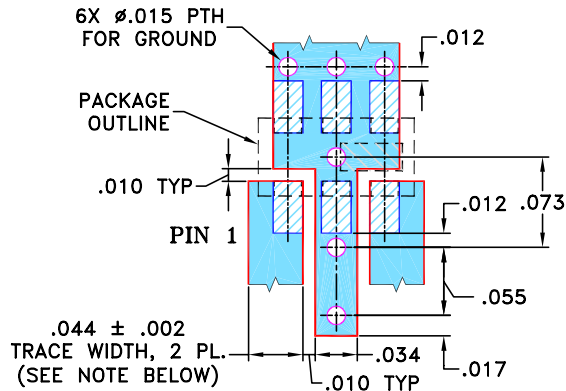


PIN CONNECTIONS

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

PRODUCT MARKING: N/A

DEMO BOARD MCL P/N: TB-285
SUGGESTED PCB LAYOUT (PL-158)

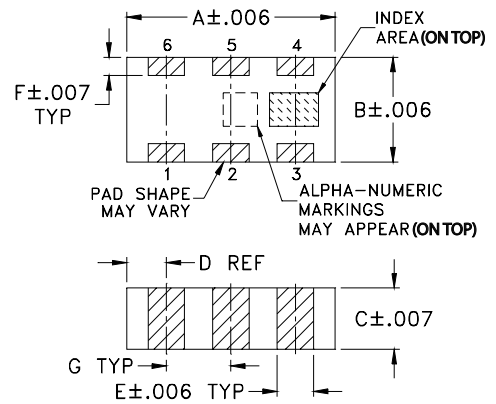


NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS R04350 WITH DIELECTRIC THICKNESS: $.020 \pm .0015$; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.

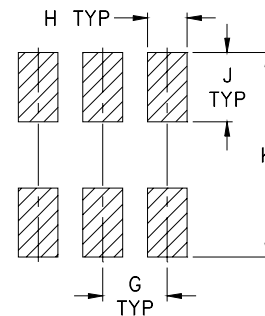
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

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

OUTLINE DRAWING



PCB Land Pattern



Suggested Layout,
Tolerance to be within $\pm .002$

OUTLINE DIMENSIONS (Inches mm)

| 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 | |

TAPE & REEL INFORMATION: F75



CERAMIC

High Pass Filter

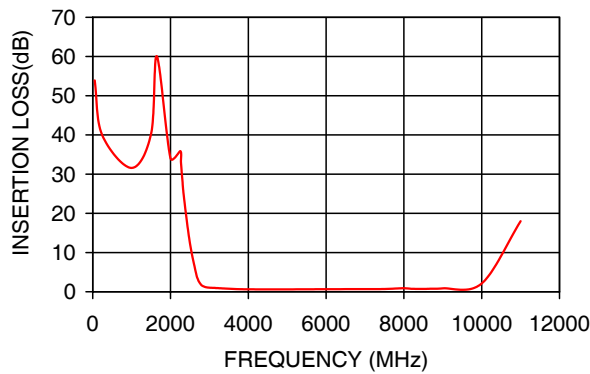
HFCN-2700A+

Mini-Circuits

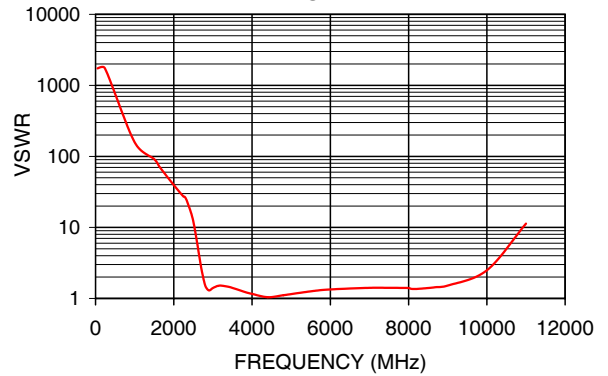
TYPICAL PERFORMANCE DATA AT 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 50 | 53.91 | 1737.18 |
| 240 | 40.00 | 1737.18 |
| 1000 | 31.58 | 157.93 |
| 1650 | 60.06 | 69.49 |
| 2150 | 37.69 | 32.79 |
| 2270 | 32.83 | 27.16 |
| 2700 | 3.27 | 2.72 |
| 3000 | 1.04 | 1.40 |
| 3070 | 1.00 | 1.47 |
| 3400 | 0.82 | 1.46 |
| 6000 | 0.66 | 1.34 |
| 8500 | 0.73 | 1.40 |
| 8700 | 0.77 | 1.44 |
| 9000 | 0.87 | 1.52 |
| 10000 | 2.13 | 2.49 |
| 11000 | 18.01 | 11.31 |

HFCN-2700A+
INSERTION LOSS



HFCN-2700A+
VSWR



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

