# Ceramic

# **High Pass Filter**

# **HFCN-2275**

Generic photo used for illustration purposes only

CASE STYLE: FV1206

# $50\Omega$

# 2450 to 7000 MHz

### **Maximum Ratings**

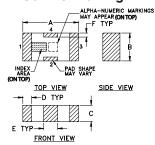
| Operating Temperature | -55°C to 100°C  |
|-----------------------|-----------------|
| Storage Temperature   | -55°C to 100°C  |
| RF Power Input*       | 7W max, at 25°C |

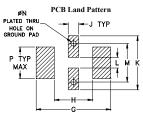
<sup>\*</sup> Passband rating, derate linearly to 3W at 100°C ambient. Permanent damage may occur if any of these limits are exceeded.

#### **Pin Connections**

| RF IN  | 1_  |
|--------|-----|
| RF OUT | 3   |
| GROUND | 2,4 |

# Outline Drawing



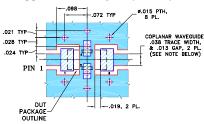


Suggested Layout, Tolerance to be within ±.002

# Outline Dimensions (inch )

| Α         | В         | С    | D    | Е         | F    | G    |             |
|-----------|-----------|------|------|-----------|------|------|-------------|
| .126      | .063      | .037 | .020 | .032      | .009 | .169 |             |
| 3.20      | 1.60      | 0.94 | 0.51 | 0.81      | 0.23 | 4.29 |             |
|           |           |      |      |           |      |      |             |
|           |           |      |      |           |      |      |             |
| Н         | J         | K    | L    | М         | N    | Р    | wt          |
| H<br>.087 | J<br>.024 | .122 | .024 | M<br>.087 |      |      | wt<br>grams |
|           |           |      | _    | .087      |      |      |             |

#### Demo Board MCL P/N: TB-270 Suggested PCB Layout (PL-137)



. COPLANAR WAYEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH THICKNESS .020" ± .0015". COPPER: 1/2 0Z. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED. NOTES: 1.

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**

- low cost
- small size 7 sections
- temperature stable
- hermetically sealed
- LTCC construction
- · excellent power handling, 7W

# **Applications**

- sub-harmonic rejection
- transmitters/receivers
- lab use

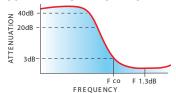
# Electrical Specifications(1,2) at 25°C

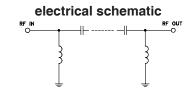
| STOP<br>(MI    | Hz)            | fco, MHz<br>Nom. |                 |               | VSWR (:1)<br>Typ. |                 | POWER<br>INPUT<br>(W) | NO. OF<br>SECTIONS |
|----------------|----------------|------------------|-----------------|---------------|-------------------|-----------------|-----------------------|--------------------|
| l wi           |                | (loss 3 dB)      | (loss < 1.3 dB) | (loss < 2 dB) |                   | Frequency (MHz) | (**)                  |                    |
| (loss > 40 dB) | (loss > 20 dB) | Тур.             | Max.            | Typ.          | Stopband          | 1.5:1           |                       |                    |
| 1400           | 1770           | 2275             | 2640-6230       | 2450-7000     | 20:1              | 2580-6000       | 7                     | 7                  |

(1) In Application where DC voltage is present at either input or output ports, coupling capacitors are required.

(2) Measured on Mini-Circuits Characterization Test Board TB-270.

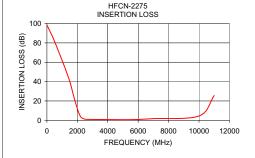
# typical frequency response

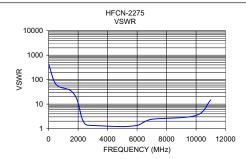




Typical Performance Data at 25°C

| Frequency<br>(MHz) | Insertion Loss<br>(dB) | VSWR<br>(:1) |
|--------------------|------------------------|--------------|
| 1,00               | 98.51                  | 434.30       |
| 500.00             | 81.55                  | 64.35        |
|                    |                        | 38.61        |
| 1400.00            | 45.01                  |              |
| 1770.00            | 24.31                  | 23.49        |
| 1980.00            | 12.96                  | 12.26        |
| 2150.00            | 5.62                   | 4.70         |
| 2275.00            | 2.75                   | 2.50         |
| 2450.00            | 1.39                   | 1.58         |
| 2580.00            | 1.08                   | 1.41         |
| 2640.00            | 0.99                   | 1.37         |
| 5000.00            | 0.65                   | 1.20         |
| 6000.00            | 0.89                   | 1.35         |
| 6230.00            | 1.09                   | 1.52         |
| 7000.00            | 1.76                   | 2.40         |
| 10000.00           | 4.48                   | 3.43         |
| 11000.00           | 25.63                  | 14.87        |
| 1                  |                        |              |





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- Electrical specifications and performance data contained in this specification document are intended to be actuated and volument and performance criteria and measurement instructions. Electrical specifications and performance criteria and measurement instructions.

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