CERAMIC

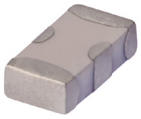
# High Pass Filter

# HFCN-1910+

50Ω 2000 to 5200 MHz

## FEATURES

- Low cost
- Small size
- 7 sections
- Temperature stable
- LTCC construction
- Excellent power handling, 7W
- Hermetically sealed



*Generic photo used for illustration purposes only*

CASE STYLE: FV1206

**+RoHS Compliant**
The +Suffix identifies RoHS Compliance.
See our website for methodologies and qualifications

## APPLICATIONS

- Sub-harmonic rejection
- Transmitters/receivers
- Lab use

## ELECTRICAL SPECIFICATIONS [1,2] AT 25°C

| Parameter | | Frequency (MHz) | Min. | Typ. | Max. | Units |
|---|---|---|---|---|---|---|
| Stop Band | Rejection Loss | 1075 | 40 | — | — | dB |
| | | 1400 | 20 | — | — | |
| | Freq. Cut-Off | 1910 | — | 3.0 | — | dB |
| | VSWR | 1075-1400 | — | 20 | — | :1 |
| Pass Band | Insertion Loss | 2000-5200 | — | 2.0 | — | dB |
| | | 2200-4400 | — | — | 1.3 | dB |
| | VSWR | 2100-4500 | — | 1.5 | — | :1 |

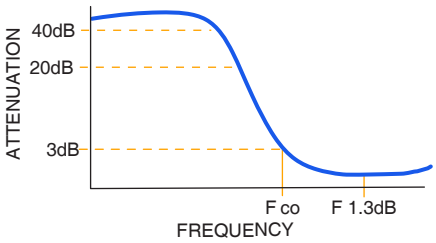
1. In Application where DC voltage is present at either input or output ports, coupling capacitors are required. Alternatively, Mini-Circuits' "D" suffix version of this model will provide>100 MOhm isolation to ground.
2. Measured on Mini-Circuits Characterization Test Board TB-270.

## ABSOLUTE MAXIMUM RATINGS

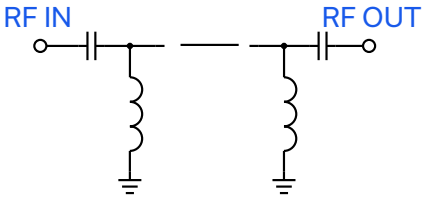
| Parameter | Ratings |
|---|---|
| Operating temperature | -55°C to +100°C |
| Storage temperature | -55°C to +100°C |
| RF Power Input[3] | 7W max.at 25°C |

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

## TYPICAL FREQUENCY RESPONSE




## FUNCTIONAL SCHEMATIC




REV. M
ECO-023234
HFCN-1910+
RVN/AD/CP/AM
241004

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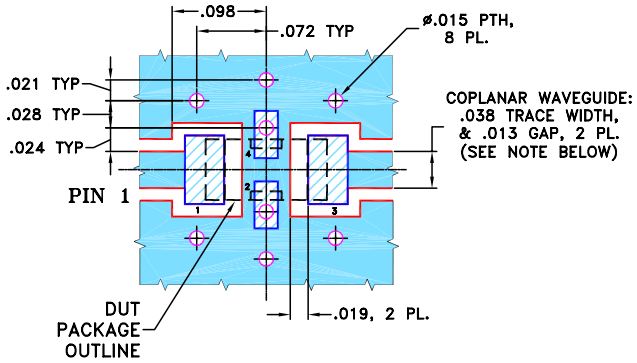
## PIN CONNECTIONS

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

## PRODUCT MARKING: XD

## DEMO BOARD MCL P/N: TB-270
## SUGGESTED PCB LAYOUT (PL-137)

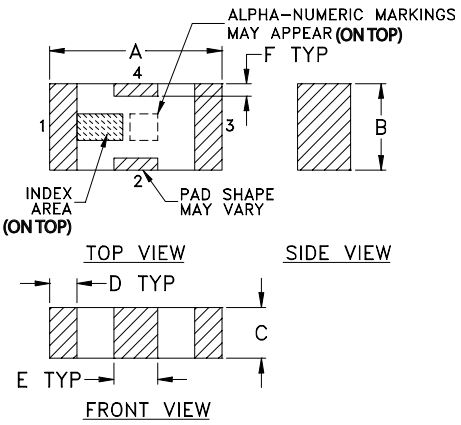



NOTES:
1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH THICKNESS .020" ± .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

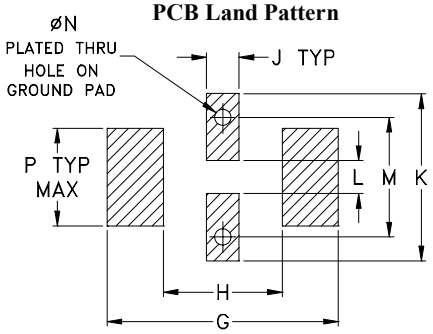
DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

## OUTLINE DRAWING




**PCB Land Pattern**




Suggested Layout,
Tolerance to be within ±.002

## OUTLINE DIMENSIONS (Inches / mm)

| A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|
| .126 | .063 | .037 | .020 | .032 | .009 | .169 |
| 3.20 | 1.60 | 0.94 | 0.51 | 0.81 | 0.23 | 4.29 |

| H | J | K | L | M | N | P | wt |
|---|---|---|---|---|---|---|---|
| .087 | .024 | .122 | .024 | .087 | .012 | .071 | grams |
| 2.21 | 0.61 | 3.10 | 0.61 | 2.21 | 0.30 | 1.80 | .020 |

## TAPE & REEL INFORMATION: F71

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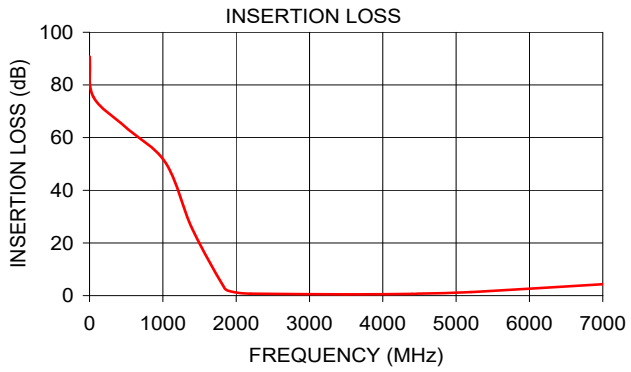
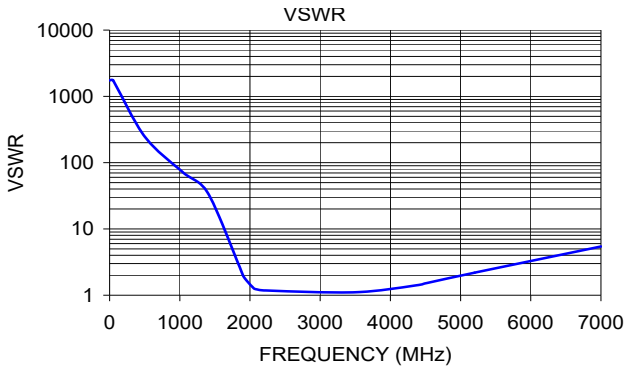
## TYPICAL PERFORMANCE DATA AT 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR :1 |
|---|---|---|
| 1.00 | 90.73 | 1737.18 |
| 50.00 | 75.59 | 1737.18 |
| 500.00 | 63.78 | 248.17 |
| 1040.00 | 50.40 | 72.39 |
| 1400.00 | 25.38 | 34.75 |
| 1840.00 | 2.89 | 2.89 |
| 1910.00 | 1.73 | 1.90 |
| 2050.00 | 0.97 | 1.29 |
| 2100.00 | 0.87 | 1.23 |
| 2200.00 | 0.75 | 1.18 |
| 3500.00 | 0.48 | 1.11 |
| 4400.00 | 0.67 | 1.42 |
| 4500.00 | 0.76 | 1.51 |
| 5200.00 | 1.37 | 2.19 |
| 7000.00 | 4.34 | 5.44 |




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/terms/viewterm.html