



CERAMIC

High Pass Filter

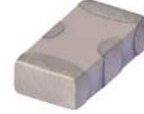
HFCN-1810D+

Mini-Circuits

50Ω 1950 to 4750 MHz

THE BIG DEAL

- 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 web site for RoHS Compliance 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 | 1100 | 40 | — | — | dB |
| | | 1480 | 20 | — | — | |
| | Freq. Cut-Off | 1810 | — | 3.0 | — | dB |
| | VSWR | 1100-1480 | — | 20 | — | :1 |
| Pass Band | Insertion Loss | 1950-4750 | — | 2.0 | — | dB |
| | | 2250-3850 | — | — | 1.3 | dB |
| | VSWR | 2250-3750 | — | 1.5 | — | :1 |

1. DC Resistance to ground is 100 Mohms min..

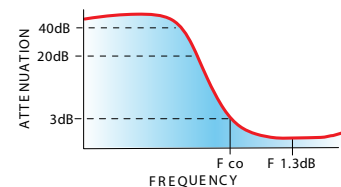
2. Measured on Mini-Circuits Characterization Test Board TB-270.

MAXIMUM RATINGS

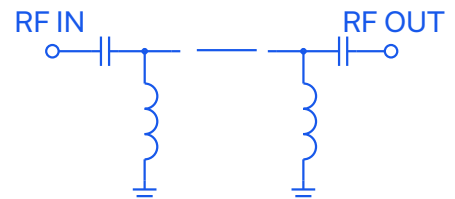
| Parameter | Ratings |
|-----------------------------|-----------------|
| Operating temperature | -55°C to +100°C |
| Storage temperature | -55°C to +100°C |
| RF Power Input ³ | 7W max.at 25°C |
| Max. DC Voltage at pins 1&3 | 25 VDC |

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



Mini-Circuits

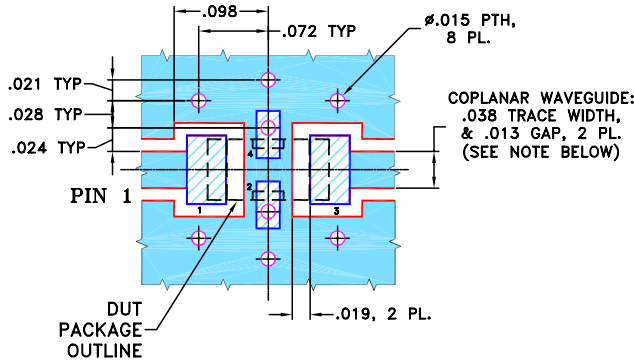


PIN CONNECTIONS

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

PRODUCT MARKING: N/A

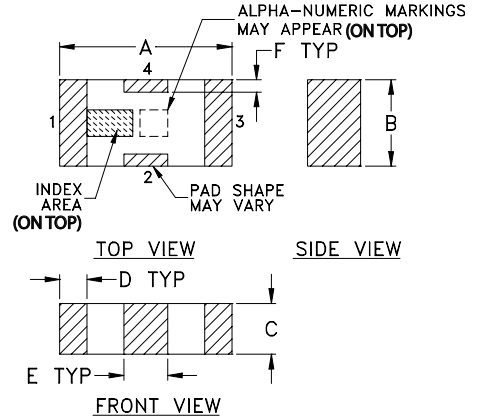
DEMO BOARD MCL P/N: TB-270
SUGGESTED PCB LAYOUT (PL-137)



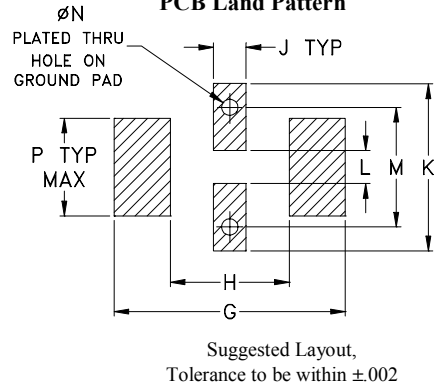
- NOTES:**
1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH THICKNESS .020" ± .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED.
 2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

OUTLINE DRAWING



PCB Land Pattern



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



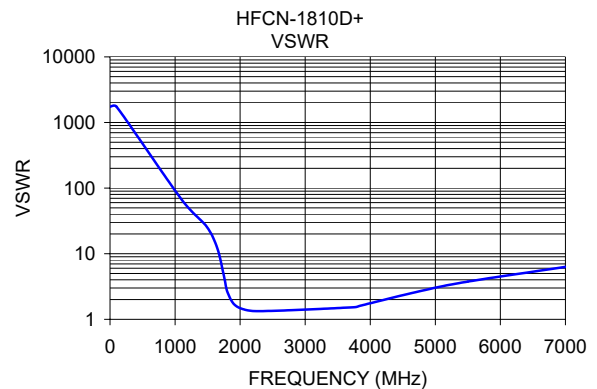
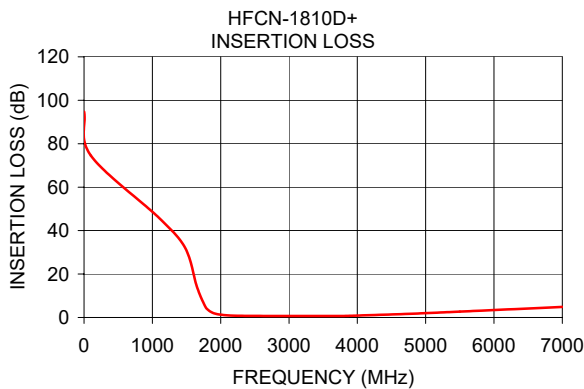
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HFCN-1810D+

TYPICAL PERFORMANCE DATA AT 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR :1 |
|-----------------|---------------------|---------|
| 1.00 | 94.72 | 1737.18 |
| 100.00 | 74.52 | 1737.18 |
| 1100.00 | 45.78 | 66.82 |
| 1480.00 | 32.05 | 26.33 |
| 1650.00 | 14.33 | 12.01 |
| 1750.00 | 6.57 | 4.61 |
| 1810.00 | 3.63 | 2.52 |
| 1950.00 | 1.52 | 1.57 |
| 2250.00 | 0.78 | 1.33 |
| 3750.00 | 0.69 | 1.53 |
| 3850.00 | 0.74 | 1.61 |
| 4750.00 | 1.66 | 2.67 |
| 5500.00 | 2.71 | 3.76 |
| 7000.00 | 4.89 | 6.30 |



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

