| Maximum Ratings |  |
| :---: | :---: |
| Operating Temperature | $-55^{\circ} \mathrm{C}$ to $100^{\circ} \mathrm{C}$ |
| Storage Temperature | $-55^{\circ} \mathrm{C}$ to $100^{\circ} \mathrm{C}$ |
| RF Power Input* | 8.5 W max. at $25^{\circ} \mathrm{C}$ |
| * Passband rating, derate linearly to 3.5 W at $100^{\circ} \mathrm{C}$ ambient. Permanent damage may occur if any of these limits are exceeded. |  |
| Pin Connections |  |
| RF IN | 1 |
| RF OUT | 3 |
| GROUND | 2,4 |



| Outline Dimensions |  |  |  |  |  | ( $\left.\begin{array}{l}\text { inch } \\ \mathrm{mm}\end{array}\right)$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 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 |

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


## Features

- excellent power handling, 8.5 W
- small size
- 7 sections
- temperature stable
- LTCC construction
- protected by U.S. Patent 6,943,646


## Applications

- harmonic rejection
- VHF/UHF transmitters/receivers


Electrical Specifications ${ }^{(1,2)}$ at $25^{\circ} \mathrm{C}$

| Parameter |  | F\# | Frequency (MHz) | Min. | Typ. | Max. | Unit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pass Band | Insertion Loss | DC-F1 | DC-225 | - | - | 1.2 | dB |
|  | Freq. Cut-Off | F2 | 350 | - | 3.0 | - | dB |
|  | VSWR | DC-F1 | DC-225 | - | 1.2 | - | $: 1$ |
| Stop Band | Rejection Loss | F4-F5 | $510-2500$ | - | - | - | dB |
|  |  | F6 | 5500 | - | 20 | - | dB |
|  |  | VSWR | F3-F6 | $460-5500$ | - | 20 | - |

(1) In Applications where $D C$ isolation to ground is required, coupling capacitors are recommended to avoid $D C$ leakage. Alternatively, if $D C$ 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-270.


| Frequency <br> $(\mathbf{M H z})$ | Insertion Loss <br> $\mathbf{( d B )}$ | VSWR <br> $\mathbf{( : 1 )}$ |
| :---: | :---: | :---: |
| 1.00 | 0.09 | 1.02 |
| 100.00 | 0.36 | 1.08 |
| 225.00 | 0.69 | 1.05 |
| 240.00 | 0.76 | 1.06 |
| 425.00 | 14.11 | 7.80 |
| 450.00 | 27.79 | 12.52 |
| 460.00 | 34.45 | 14.03 |
| 495.00 | 38.38 | 17.93 |
| 510.00 | 41.66 | 19.32 |
| 610.00 | 38.03 | 27.59 |
| 900.00 | 51.04 | 49.64 |
| 1400.00 | 55.18 | 72.39 |
| 2500.00 | 51.22 | 72.39 |
| 3220.00 | 39.48 | 59.91 |
| 5500.00 | 24.20 | 28.03 |



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

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FM-104-PIN CER0813B MAPDCC0005 3A325 4028741180 ATB3225-75032NCT BD0810N50100AHF BD2425J50200AHF C5060J5003AHF JHS-115-PIN JP503AS DC0710J5005AHF DC2327J5005AHF DC3338J5005AHF 43020 LFB2H2G60BB1C106 LFL15869MTC1B787 X3C19F1-20S XC3500P-20S 10013-20 SF2194E CDBLB455KCAX39-B0 TGL2208-SM, EVAL RF1353C PD0922J5050D2HF 1E1305-3 1G1304-30 B0922J7575AHF 2020-6622-20 TP-102-PIN TP-103-PIN BD1222J50200AHF

