| 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* | 7 W max. at $25^{\circ} \mathrm{C}$ |
| * Passband rating, derate linearly to 3 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 |

## 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 $\mathbf{2 5}^{\circ} \mathbf{C}$

| STOP BAND (MHz) Min. | fco, MHz Nom. | $\begin{aligned} & \text { PASSBAND } \\ & (\mathrm{MHz}) \end{aligned}$ |  | VSWR (:1) Typ. |  | POWER INPUT (W) | $\begin{gathered} \text { NO. OF } \\ \text { SECTIONS } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (loss 3 dB ) | (loss < 1.3 dB ) | (loss < 2 dB ) |  | Frequency (MHz) |  |  |
| (loss > 40 dB ) (loss > 20 dB ) | Typ. | Max. | Typ. | Stopband | 1.5:1 |  |  |
| 750910 | 1180 | 1380-4000 | 1220-4600 | 20:1 | 1300-3200 | 7 | 7 |

(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.
typical frequency response
electrical schematic



Typical Performance Data at $25^{\circ} \mathrm{C}$

| Frequency <br> $(\mathbf{M H z})$ | Insertion Loss <br> $(\mathbf{d B})$ | VSWR <br> $(: 1)$ |
| :---: | :---: | :---: |
|  |  |  |
| 1.00 | 104.60 | 1737.18 |
| 100.00 | 76.44 | 1737.18 |
| 750.00 | 63.39 | 56.04 |
| 910.00 | 30.29 | 32.79 |
| 1050.00 | 13.74 | 12.35 |
| 1130.00 | 6.09 | 4.53 |
| 1180.00 | 3.15 | 2.35 |
| 120.00 | 2.01 | 1.65 |
| 1300.00 | 1.24 | 1.39 |
| 1380.00 | 0.98 | 1.39 |
| 3200.00 | 0.44 | 1.33 |
| 4000.00 | 0.93 | 2.01 |
| 70000 | 1.02 | 2.73 |
| 7000.00 | 4.86 | 6.63 |



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 " $\pm .0015^{\prime \prime}$.
FOR OTHER MATERIALS TRACE WIDTH \& GAP MAY NEED TO BE FOR OTHER
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


E TYP $\rightarrow \quad-$
FRONT VIEW


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

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.
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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

