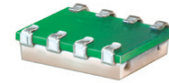


Surface Mount Frequency Mixer

SKY-53LHR+ SKY-53LHR

Level 10 (LO Power +10 dBm) 2800 to 5300 MHz



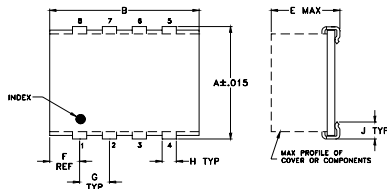
Maximum Ratings

| | |
|---|----------------|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Power | 50mW |
| IF Current | 40mA |
| Permanent damage may occur if any of these limits are exceeded. | |

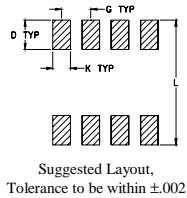
Pin Connections

| | |
|--------|-----------|
| LO | 5 |
| RF | 1 |
| IF | 7 |
| GROUND | 2,3,4,6,8 |

Outline Drawing



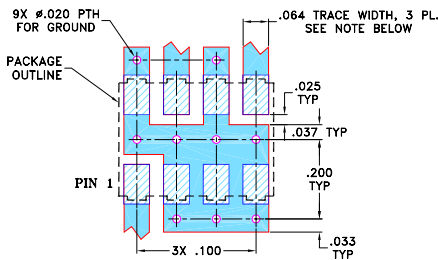
PCB Land Pattern



Outline Dimensions (inch)

| A | B | C | D | E | F | G | H | J | K | L | wt |
|------|------|----|------|------|------|------|------|------|------|------|-------|
| .305 | .390 | -- | .100 | .105 | .045 | .100 | .047 | .065 | .065 | .325 | grams |
| 7.75 | 9.91 | -- | 2.54 | 2.67 | 1.14 | 2.54 | 1.19 | 1.65 | 1.65 | 8.26 | 0.20 |

Demo Board MCL P/N: TB-11 Suggested PCB Layout (PL-056)



NOTES:

- TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
- 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

- wide bandwidth, 2800 to 5300 MHz.
- low conversion loss, 5.7 dB typ.
- good L-R isolation, 28 dB typ.
- J-leads for strain relief

Applications

- line of sight links
- fixed satellite

CASE STYLE: BJ398

PRICE: \$16.95 ea. QTY (1-9)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Electrical Specifications

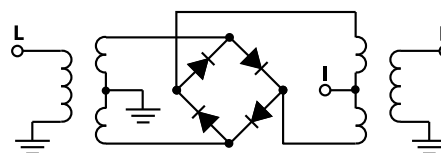
| FREQUENCY (MHz) | CONVERSION LOSS (dB) | LO-RF ISOLATION (dB) | LO-IF ISOLATION (dB) | | IP3 at center band (dBm) | |
|-----------------|----------------------|----------------------|----------------------|------|--------------------------|----|
| | | | Typ. | Min. | | |
| 2800-5300 | DC-500 | 28 | 15 | 12 | 8 | 14 |

1 dB COMP.: +5 dBm typ.

Typical Performance Data

| Frequency (MHz) | | Conversion Loss (dB) | Isolation L-R (dB) | Isolation L-I (dB) | VSWR RF Port (:1) | VSWR LO Port (:1) |
|-----------------|---------|----------------------|--------------------|--------------------|-------------------|-------------------|
| RF | LO | LO +10dBm | LO +10dBm | LO +10dBm | LO +10dBm | LO +10dBm |
| 2800.00 | 2830.00 | 8.29 | 23.70 | 17.95 | 4.30 | 1.64 |
| 2978.57 | 3008.57 | 6.15 | 21.68 | 15.70 | 3.20 | 1.55 |
| 3000.00 | 3030.00 | 5.97 | 24.67 | 13.33 | 1.25 | 2.46 |
| 3224.53 | 3254.53 | 7.40 | 20.33 | 14.13 | 2.58 | 1.44 |
| 3413.21 | 3443.21 | 6.93 | 20.24 | 13.49 | 2.14 | 1.40 |
| 3514.29 | 3544.29 | 5.14 | 23.70 | 11.33 | 1.39 | 2.61 |
| 3649.06 | 3679.06 | 6.65 | 20.25 | 12.26 | 2.05 | 1.34 |
| 3837.74 | 3867.74 | 6.78 | 20.59 | 12.81 | 2.13 | 1.24 |
| 4000.00 | 4030.00 | 7.03 | 22.00 | 13.98 | 2.28 | 1.10 |
| 4050.00 | 4080.00 | 5.97 | 29.50 | 13.83 | 1.47 | 3.09 |
| 4215.09 | 4185.09 | 7.66 | 23.01 | 15.30 | 2.46 | 1.02 |
| 4356.60 | 4326.60 | 8.19 | 24.31 | 15.86 | 2.50 | 1.03 |
| 4498.11 | 4468.11 | 7.63 | 25.54 | 16.04 | 2.51 | 1.16 |
| 4585.71 | 4615.71 | 6.00 | 42.50 | 16.34 | 1.74 | 3.46 |
| 4764.29 | 4794.29 | 6.28 | 27.73 | 18.42 | 2.62 | 1.54 |
| 4828.30 | 4798.30 | 6.51 | 28.05 | 18.93 | 2.67 | 1.54 |
| 5000.00 | 5030.00 | 6.06 | 30.48 | 20.92 | 2.74 | 1.56 |
| 5111.32 | 5081.32 | 7.21 | 31.40 | 21.92 | 2.97 | 1.49 |
| 5158.49 | 5128.49 | 7.24 | 31.98 | 22.36 | 3.02 | 1.47 |
| 5300.00 | 5270.00 | 7.52 | 36.61 | 23.42 | 3.30 | 1.33 |

Electrical Schematic



Mini-Circuits
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs & shopping online see web site

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IF/RF MICROWAVE COMPONENTS

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuits' applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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.

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Performance Charts

