



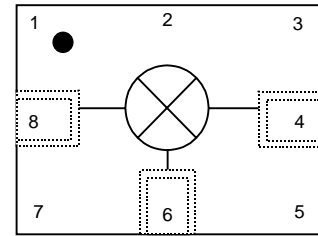
SME901-13

Quad-Diode Mixer

Product Features

- High IIP3 +22 dBm
- RF Freq 800-1000 MHz
- LO Freq 550-1250 MHz
- IF Freq 20-250 MHz
- LO Drive Level +13 dBm
- High L-R Isolation 42 dB

Functional Diagram



| Function | Pin No. |
|----------|---------|
| Ground | 1-3 |
| RF | 4 |
| Ground | 5 |
| IF | 6 |
| Ground | 7 |
| LO | 8 |

Specifications

| Parameters | Units | Minimum | Typical | Maximum | Comments |
|---------------------|-------|---------|---------|---------|----------|
| RF Frequency | MHz | 800 | | 1000 | |
| LO Frequency | MHz | 550 | | 1250 | |
| IF Frequency | MHz | 20 | | 250 | |
| SSB Conversion Loss | dB | | 6.5 | | |
| L-R Isolation | dB | | 42 | | |
| L-I Isolation | dB | | 27 | | |
| R-I Isolation | dB | | 23 | | |
| IIP3 | dBm | | 22 | | |
| LO Drive | dBm | | 13 | | |
| RF - Return Loss | dB | | 12 | | |
| LO - Return Loss | dB | | 10 | | |
| IF - Return Loss | dB | | 12 | | |
| 1 dB Compression | dBm | | +8 | | |

Test conditions unless otherwise noted

1. Tested as a downconverter in a 50 Ohm System, low Side LO, @25 deg C.

Recommended Maximum Rating

| Parameters | Rating |
|-------------------------------------|----------------|
| Operating Case Temperature | -40 to +85 °C |
| Storage Temperature | -65 to +100 °C |
| RF Input Power at 25°C (continuous) | +23 dBm |

Ordering Information

| Part No. | Description |
|---------------|---|
| SME901-13 | Diode Mixer (Available in Tape & Reel) |
| SME901-13-PCB | Fully Assembled App Ckt. |

This document contains information on a new product. Specifications and information are subject to change without notice

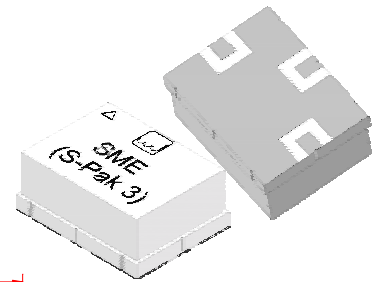


SME901-13

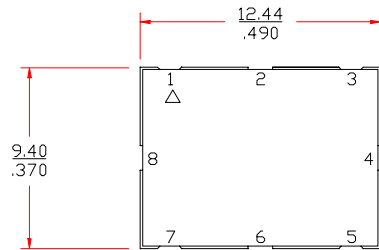
Quad-Diode Mixer

The Communications Edge™

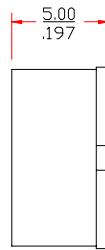
Preliminary Product Information



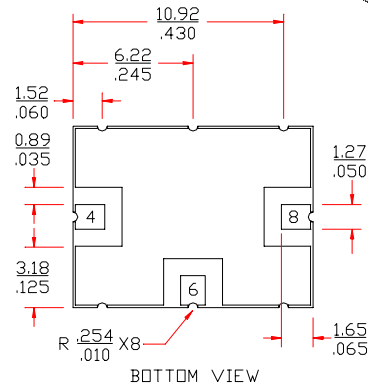
OUTLINE DRAWING



TOP VIEW

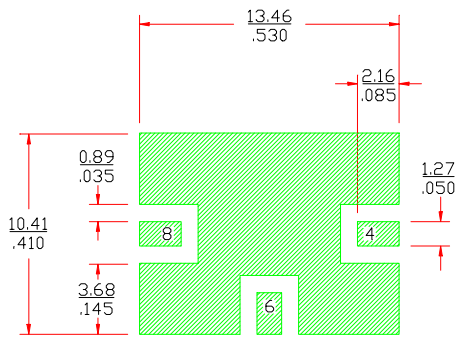


mm
inch



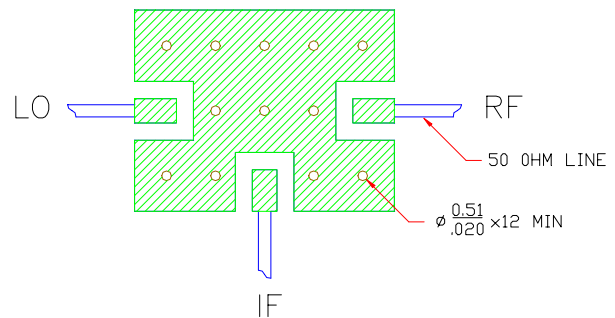
BOTTOM VIEW

LAND PATTERN



TOP VIEW

MOUNTING CONFIGURATION



| FUNCTION | PIN NO. |
|----------|---------|
| GROUND | 1-3 |
| RF | 4 |
| GROUND | 5 |
| IF | 6 |
| GROUND | 7 |
| LO | 8 |

- Notes:
1. Ground vias are critical for thermal and RF grounding considerations.
 2. A minimum of 12 ground vias are required.
 3. If your PCB design rules allow, ground vias should be placed under the land pattern for better RF and thermal performance. Otherwise ground vias should be placed as close to land pattern as possible.
 4. Trace width depends on PC board.

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