



# MZ7407/MZ7407C

## DOUBLE-BALANCED MIXER

- LO 3.5 TO 18 GHz
- RF 6 TO 18 GHz
- IF DC TO 3 GHz
- LO DRIVE +7 dBm (nominal)
- MINIATURE PACKAGE
- WIDE BANDWIDTH
- AVAILABLE WITH FIELD REPLACEABLE CONNECTORS
- MIL-M-28837 EQUIVALENT LEVEL SCREENING

Specifications (Rev. Date: 11/01)\*

| Characteristics                                                                                                                                                                                       | Typical                              | Guaranteed                           |                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
|                                                                                                                                                                                                       |                                      | +25°C                                | -54° to +85°C                        |
| SSB Conversion Loss & SSB Noise Figure (max.)<br>$f_{R1} = 7$ to 15 GHz, $f_{L1} = 6$ to 13.5 GHz, $f_{I1} = 3$ to 10 GHz<br>$f_{R2} = 6$ to 18 GHz, $f_{L2} = 4$ to 18 GHz, $f_{I2} = 0.03$ to 3 GHz | 6 dB<br>7 dB                         | 8 dB<br>9 dB                         | 8.5 dB<br>9.5 dB                     |
| Isolation (min.)<br>L to R<br>$f_{L1} = 4$ to 14 GHz<br>$f_{L2} = 14$ to 18 GHz<br><br>L to I<br>$f_{L1} = 4$ to 8 GHz<br>$f_{L2} = 8$ to 18 GHz                                                      | 36 dB<br>32 dB<br><br>25 dB<br>35 dB | 23 dB<br>18 dB<br><br>16 dB<br>23 dB | 21 dB<br>16 dB<br><br>14 dB<br>21 dB |
| 1 dB Conversion Compression<br>$f_{L1}$ @ +3 dBm                                                                                                                                                      | +1 dBm                               |                                      |                                      |
| Input IP3<br>$f_{R1} = 13$ GHz @ -10 dBm $f_{R2} = 13.01$ GHz @ -10 dBm<br>$f_{L1} = 14$ GHz @ 10 dBm                                                                                                 | +10 dBm                              |                                      |                                      |

Measured in a 50-ohm system with nominal LO drive and downconverter application only, unless otherwise specified. Subject to change without notice.

### Absolute Maximum Ratings

|                       |                        |
|-----------------------|------------------------|
| Operating Temperature | -54°C to 100°C         |
| Storage Temperature   | -65°C to 100°C         |
| Peak Input Power      | 23 dBm max. @ +25°, °C |
| Peak Input Current    | 100 mA DC              |

### Outline Drawing(s)

|         |        |         |
|---------|--------|---------|
| Package | Figure | Model   |
| VPAC    | JD     | MZ7407  |
| SMA     | JC     | MZ7407C |