



# Mixers

## Space Qualified

## MD-S50XX Series

### Electrical Specifications

| Part #                                       |         | MD-S5007                   | MD-S5008        | MD-S5010        |
|--|---------|----------------------------|-----------------|-----------------|
| <b>Description</b>                           |         | <b>Mixer with LO Drive</b> | <b>RF Mixer</b> | <b>RF Mixer</b> |
| <b>Frequency Range</b>                       |         |                            |                 |                 |
|  | LO      | 800–2000 MHz               | 10–1000 MHz     | 1140–1190 MHz   |
|  | RF      | 200–1700 MHz               | 10–1000 MHz     | 1300–1650 MHz   |
|  | IF      | 200–1700 MHz               | 10–1000 MHz     | 160 MHz         |
| <b>Conversion Loss</b>                       |         | 8.0 dB max                 | 8.0 dB max      | 7.5 dB max      |
| <b>Conversion Loss Variation vs LO Drive</b> |         | 0.1 dB max                 | —               | 0.2 dB max      |
| <b>VSWR</b>                                  |         | 2.0:1 max                  | 2.0:1 max       | 2.0:1 max       |
| <b>LO Power</b>                              |         | –8 to –12 dBm              | +7 dBm          | +9 to +11.5 dBm |
| <b>Isolation</b>                             |         |                            |                 |                 |
|  | LO–RF   | 7 dB min                   | 25 dB min       | 35 dB min       |
|  | LO–IF   | 4 dB min                   | 30 dB min       | 30 dB min       |
|  | RF–IF   | 22 dB min                  | 30 dB min       | 30 dB min       |
| <b>RF Noise Figure</b>                       |         | 9.0 dB max                 | 9.0 dB max      | 8.5 dB max      |
| <b>2-Tone IM Ratio</b>                       |         | 52 dBc min                 | 40 dBc min      | 50 dBc min      |
| <b>Inband Spurious</b>                       |         |                            |                 |                 |
|  | 2RF+2LO | –50 dBc min                | —               | —               |
|  | 2RF+3LO | –50 dBc min                | —               | —               |
|  | 3RF+2LO | –50 dBc min                | —               | —               |
| <b>1 dB Comp Point</b>                       |         | +7 dBm min                 | —               | —               |
| <b>Bias Current @ +5 Vdc</b>                 |         | 90 mA max                  | —               | —               |

Specifications Subject to Change Without Notice.

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