



2ND/4TH LO-HARMONIC MIXERS

M9H-3040



Features

- RF 30.0 to 40.0 GHz
- LO 7.5 to 20.0 GHz
- IF DC to 1.0 GHz
- 20 dB Typical Conversion Loss
- 2nd and 4th Harmonic LO Mixing
- Available with 2.92 or 2.40 mm Connectors on the RF

Electrical Specifications - Specifications guaranteed from -55 to +100°C, measured in a 50-Ohm system.

| Parameter | LO (GHz) | RF (GHz) | IF (GHz) | Min | Typ | Max | Diode Option LO drive level (dBm) |
|--|-------------|-------------|-------------|-----|-----|-----|--------------------------------------|
| Conversion Loss (dB) | | | | | | | |
| 2nd Harmonic | 15.0-20.0 | 30.0-40.0 | DC-1.0 | | 20 | | |
| 4th Harmonic | 7.5-10.0 | 30.0-40.0 | DC-1.0 | | 20 | | |
| Isolation (dB) | | | | | | | |
| LO-RF | 7.5-20.0 | 7.5-20.0 | | | TBD | | |
| LO-IF | 7.5-20.0 | 7.5-20.0 | | | TBD | | |
| RF-IF | 30.0-40.0 | 30.0-40.0 | | | TBD | | |
| Input 1 dB Compression (dBm) | 7.5-20.0 | 30.0-40.0 | | | TBD | | L (+10 to +12) |
| Input Two-Tone Third Order Intercept Point (dBm) | 7.5-20.0 | 30.0-40.0 | | | TBD | | L (+10 to +12) |

Part Number Options

| <i>Please specify diode level and package style by adding to model number.</i> | |
|--|----------------------------|
| Package Style(s) | Example |
| N , NV | M9H-3040 <u>L</u> <u>N</u> |

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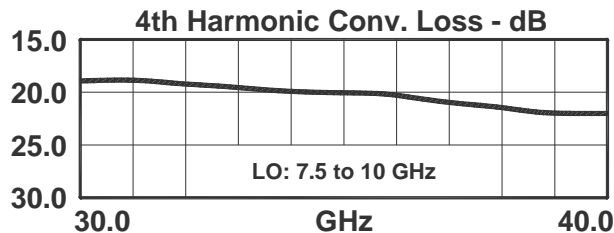
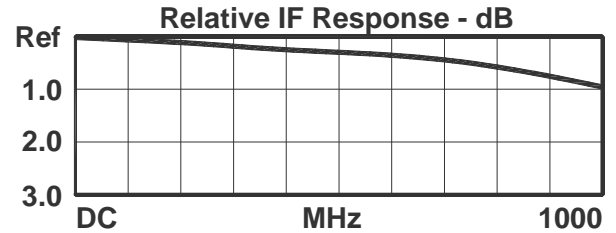
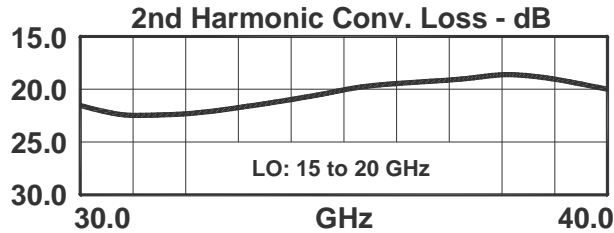
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RF 30.0 to 40.0 GHz

LO 7.5 to 20.0 GHz

IF DC to 1.0 GHz

Typical Performance



DATA SHEET NOTES:

1. Mixer Conversion Loss Plot IF frequency is 100 MHz.
2. Mixer Noise Figure typically measures within +0.5 dB of conversion loss for IF frequencies greater than 5 MHz.
3. Conversion Loss typically degrades less than 0.5 dB for LO drives 2 dB below the lowest and 3 dB above highest nominal LO drive levels.
4. Conversion Loss typically degrades less than 0.5 dB at +100°C and improves less than 0.5 dB at -55°C.
5. Maximum input power is +23 dBm at +25°C, derated linearly to +20 dBm at +100°C.
6. Specifications are subject to change without notice. Contact Marki Microwave for the most recent specifications and data sheets.
7. Catalog mixer circuits are continually improved. Configuration control requires custom mixer model numbers and specifications.

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