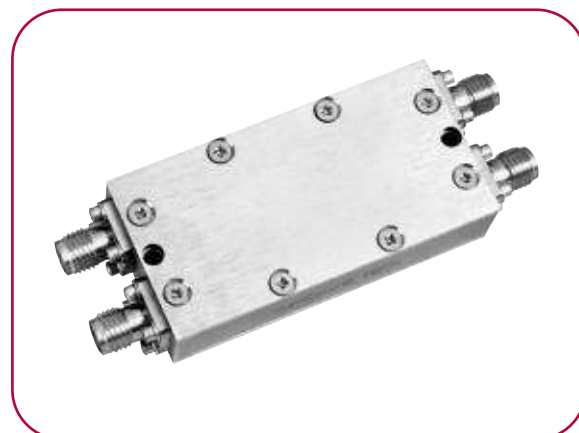


2 TO 8 GHz IMAGE REJECTION OR I/Q MIXERS

MODELS: IRM0208LC2A, IRM0208LC2B, IRM0208LC2C AND IRM0208LC2Q

FEATURES

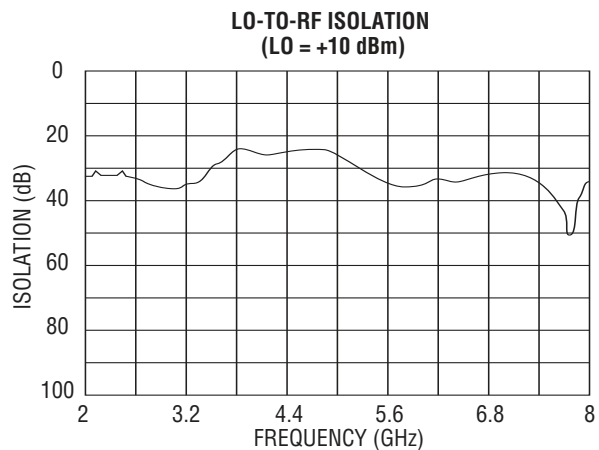
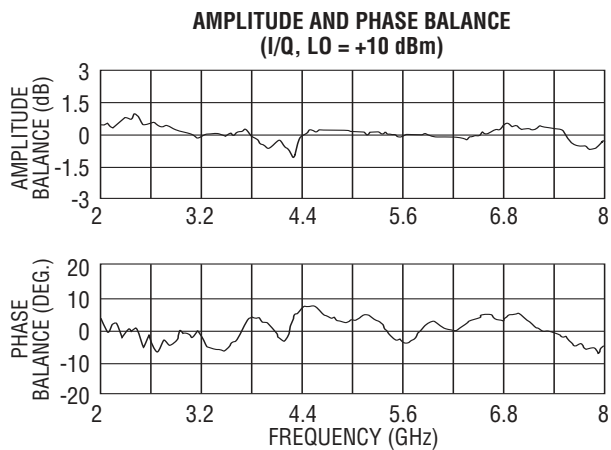
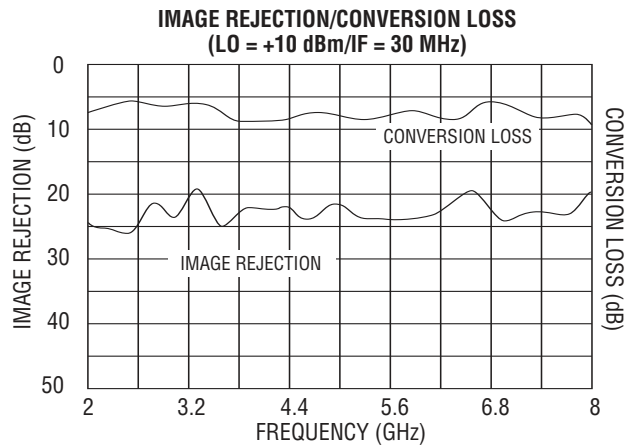
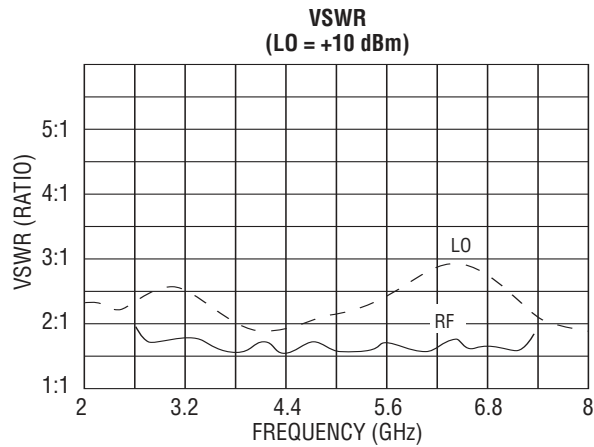
- RF/LO coverage 2 to 8 GHz
- IF operation DC to 0.5 GHz
- Conversion loss 8.5 dB typical
- Image rejection 20 dB typical



ELECTRICAL SPECIFICATIONS

| INPUT PARAMETERS | CONDITION | UNITS | MIN. | TYP. | MAX. |
|--|-------------|---------|------|---------|---------|
| RF frequency range | | GHz | 2 | | 8 |
| RF VSWR (RF = -10 dBm) | | Ratio | | 2:1 | |
| LO frequency range | | GHz | 2 | | 8 |
| LO power range | IRM0208LC2 | dBm | +10 | +12 | +13 |
| | IRM0208MC2 | dBm | +13 | +15 | +16 |
| | IRM0208HC2 | dBm | +17 | +18 | +20 |
| LO VSWR | | Ratio | | 2.5:1 | |
| TRANSFER CHARACTERISTICS | CONDITION | UNITS | MIN. | TYP. | MAX. |
| Conversion loss (Note 1) | RF > LO | dBm | | 8.5 | 9 |
| | IRM0208LC2Q | dB | | 11.5 | 12 |
| Single-sideband noise figure | | dB | | 9.5 | |
| Image rejection (Note 1) | RF < LO | dB | 18 | 20 | |
| LO-to-RF isolation | | dB | 18 | 20 | |
| LO-to-IF isolation | | dB | | 20 | |
| Input power at 1 dB compression | IRM0208LC2 | dBm | | +6 | |
| | IRM0208MC2 | dBm | | +10 | |
| | IRM0208HC2 | dBm | | +15 | |
| Input two-tone third-order intercept point | IRM0208LC2 | dBm | | +16 | |
| | IRM0208MC2 | dBm | | +20 | |
| | IRM0208HC2 | dBm | | +25 | |
| Amplitude balance | IRM0208LC2Q | dB | | | ±1.5 |
| Phase balance | IRM0208LC2Q | Degrees | | | ±10 |
| Truth table | IRM0208LC2Q | | PORT | RF < LO | RF > LO |
| | | | I | 0 | -90 |
| | | | Q | -90 | 0 |
| OUTPUT PARAMETERS | CONDITION | UNITS | MIN. | TYP. | MAX. |
| IF frequency (image rejection mode) | IRM0208LC2A | MHz | 20 | | 40 |
| | IRM0208LC2B | MHz | 40 | | 80 |
| | IRM0208LC2C | MHz | 100 | | 200 |
| IF frequency (QIFM, I/Q demodulator mode) | IRM0208LC2Q | MHz | DC | | 500 |
| IF VSWR (IF = -10 dBm) | | Ratio | | 1.5:1 | |

IRM0208LC2A TYPICAL TEST DATA



MAXIMUM RATINGS

Specification temperature +25°C
 Operating temperature..... -54 to +85°C
 Storage temperature -65 to +125°C

GENERAL NOTES

- Standard catalog unit aligned and tested for guaranteed RF > LO performance. RF < LO guaranteed performance is available, please contact MITEQ.
- For upconverter applications, please order Model Number SSM0208 Series. See Modulator section of catalog.

NOTE: Test data supplied at 25°C; conversion loss, LO-to-RF isolation, image rejection (IF Options A, B and C), phase and amplitude balance (IF Option Q).

OUTLINE DRAWINGS

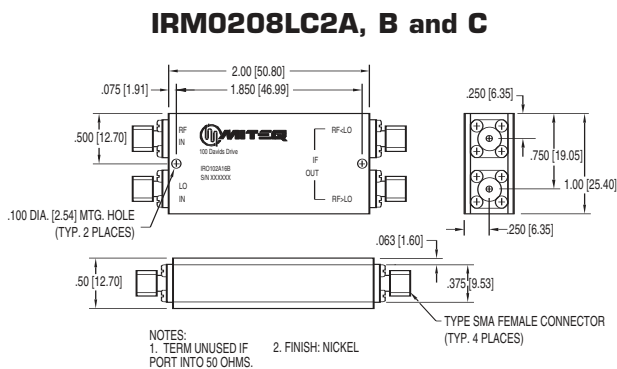
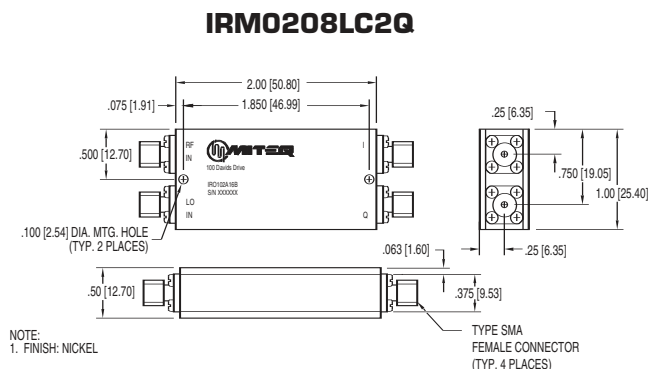


IMAGE REJECTION



QIFM, I/Q DEMODULATOR

NOTE: All dimensions shown in brackets [] are in millimeters.

