

4 TO 26 GHz DOUBLE-BALANCED MIXER

MODEL: DBO426LW1

FEATURES

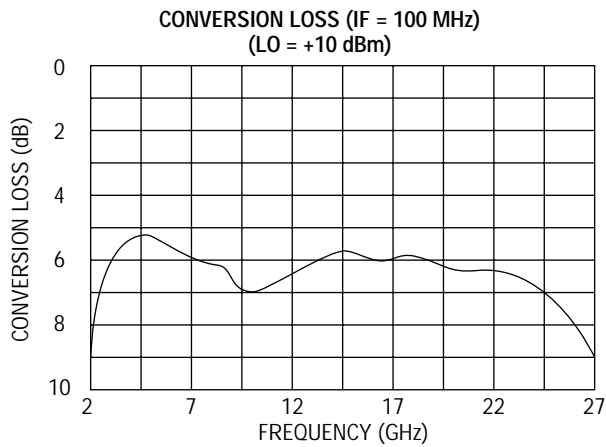
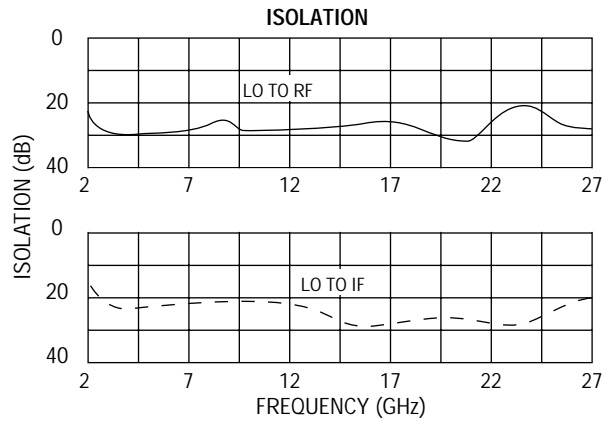
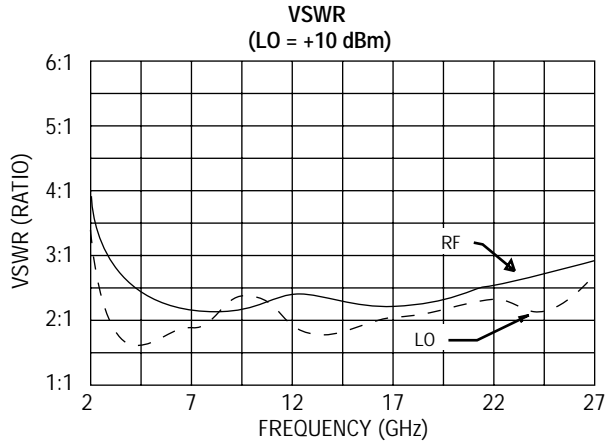
- RF/LO coverage 4 to 26 GHz
- IF operation DC to 2 GHz
- LO power range +7 to +13 dBm
- Input 1 dB comp. +5 dBm typical
- Packaging Hermetically sealed



MITEQ's double-balanced DBO426 series provides multioctave RF and LO coverage with high IF frequency operation. The miniature coaxial package is ideal for dense integration or drop-in interface.

ELECTRICAL SPECIFICATIONS

| INPUT PARAMETERS | CONDITION | UNITS | MIN. | TYP. | MAX. |
|--|----------------|-------|------|--------|------|
| RF frequency range | | GHz | 4 | | 26 |
| RF VSWR (RF = -10 dBm, LO = +10 dBm) | 4 to 26 GHz | Ratio | | 2.75:1 | |
| LO frequency range | | GHz | 4 | | 26 |
| LO power range | | dBm | +7 | +10 | +13 |
| LO VSWR (LO = +10 dBm) | 4 to 26 GHz | Ratio | | 2.5:1 | |
| TRANSFER CHARACTERISTICS | CONDITION | UNITS | MIN. | TYP. | MAX. |
| Conversion loss (IF = 100 MHz, LO = +10 dBm) | 4 to 26 GHz | dB | | 7.5 | 9.5 |
| Single-sideband noise figure | 4 to 26 GHz | dB | | | 10.5 |
| Isolation - LO to RF | 4 to 26 GHz | dB | 20 | 25 | |
| Isolation - LO to IF | 4 to 26 GHz | dB | | 20 | |
| Isolation - RF to IF | 4 to 26 GHz | dB | | 20 | |
| Input power at 1 dB compression | LO = +10 dBm | dBm | | +5 | |
| Input two-tone third-order intercept point | LO = +10 dBm | dBm | | +15 | |
| OUTPUT PARAMETERS | CONDITION | UNITS | MIN. | TYP. | MAX. |
| IF frequency range | 3 dB bandwidth | GHz | DC | | 2 |
| IF VSWR (IF = -10 dBm, LO = +10 dBm) | | Ratio | | 2.5:1 | |



SINGLE-TONE (m) RF x (n) LO RELATIVE SPUR LEVEL (dBc)
(AVERAGE MIDBAND RF, LO, IF FREQUENCIES,
RF = -10 dBm, LO = +10 dBm)

| SPUR (m) RF x (n) LO | RF TEST FREQ. (GHz) | LO TEST FREQ. (GHz) | SPUR LEVEL (dBc) |
|-------------------------|------------------------|------------------------|---------------------|
| 1 x 1 | 18 | 17.9 | 0 |
| 1 x 2 | 18 | 8.95 | 30 |
| 1 x 3 | 18 | 5.97 | 10 |
| 2 x 1 | 9 | 17.9 | 43 |
| 2 x 2 | 9 | 8.95 | 54 |
| 2 x 3 | 9 | 5.97 | 43 |
| 3 x 1 | 6 | 17.9 | 59 |
| 3 x 2 | 6 | 8.95 | 72 |
| 3 x 3 | 6 | 5.97 | 57 |

MAXIMUM RATINGS

Specifications taken at +25°C
 Operating temperature -54 to +85°C
 Storage temperature -65 to +125°C

OUTLINE DRAWING

