

26 TO 40 GHz LOW-NOISE RECEIVER FRONT END

MODELS: AR2640LI8A, AR2640LI8B AND AR2640LI8C

FEATURES

- RF/LO coverage 26 to 40 GHz
- IF operation 20 to 200 MHz
- Conversion gain..... 32 dB typical
- Image rejection 23 dB typical
- Noise figure..... 3.2 dB typical

OPTIONS

- Integrated LO amplifier
- Waveguide input
- Single positive bias supply
- Custom IF frequencies
- Custom bandwidths

ELECTRICAL SPECIFICATIONS

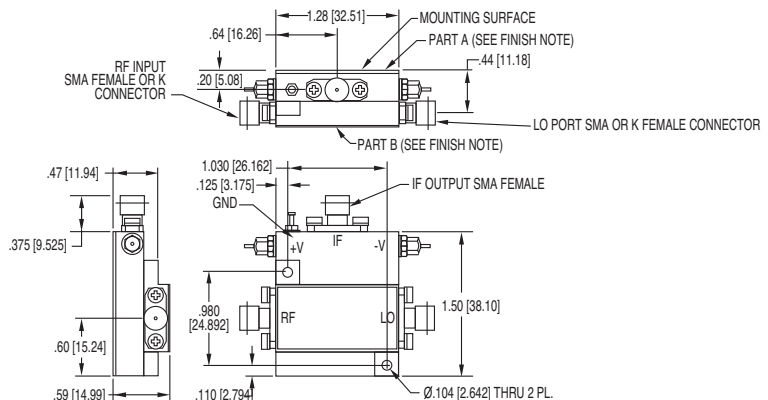
| INPUT PARAMETERS | CONDITION | UNITS | MIN. | TYP. | MAX. |
|---|--|-------------------|-----------------|-----------|-----------------|
| RF/LO frequency range | | GHz | 26 | | 40 |
| RF/LO VSWR (RF = -10 dBm) | | Ratio | | 2.5:1 | |
| LO power range | | dBm | +16 | | +18 |
| LO VSWR | | Ratio | | 2.5:1 | |
| Bias | @ +9 to +16 V @ -9 to -16 V | mA mA | | 175 30 | |
| TRANSFER CHARACTERISTICS | CONDITION | UNITS | MIN. | TYP. | MAX. |
| Conversion gain | RF > LO | dB | 35 | 45 | |
| Single-sideband noise figure at 25°C | | dB | | 3.2 | 4 |
| Image rejection | RF < LO | dB | 18 | 23 | |
| LO-to-RF isolation | | dB | 40 | 50 | |
| LO-to-IF isolation | | dB | | 20 | |
| Output power at 1 dB compression | | dB | | +5 | |
| Output two-tone third-order intercept point | | | | 13 | |
| OUTPUT PARAMETERS | CONDITION | UNITS | MIN. | TYP. | MAX. |
| IF frequency range | AR2640LI8A AR2640LI8B AR2640LI8C | MHz MHz MHz | 20 40 100 | | 40 80 200 |
| IF VSWR (IF = -10 dBm) | | Ratio | | 1.5:1 | |

NOTE: Test data supplied at 25°C; conversion loss, LO-to-RF isolation and image rejection.

MAXIMUM RATINGS

Specification temperature +25°C
 Operating temperature -55 to +85°C
 Storage temperature -65 to +95°C

OUTLINE DRAWING



NOTES:

- Part A - Material: Aluminum
Finish: Chemical film CL3
- Part B - Material: Kovar
Finish: Gold Plate

All dimensions shown in brackets [] are in millimeters.

QIFM, I/Q DEMODULATOR