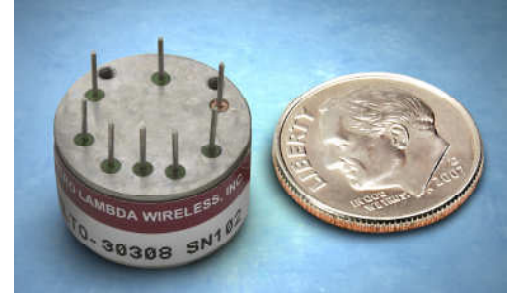


**FEATURES**

- 2-8 GHz Frequency Coverage
- FM/Phase-Lock Port
- TO-8 Package
- High Reliability

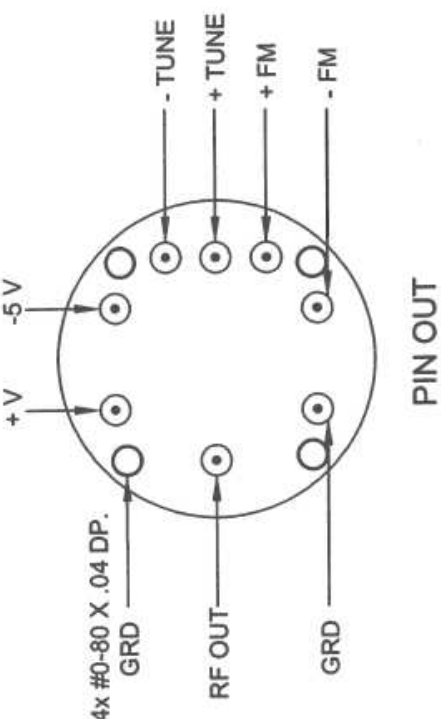
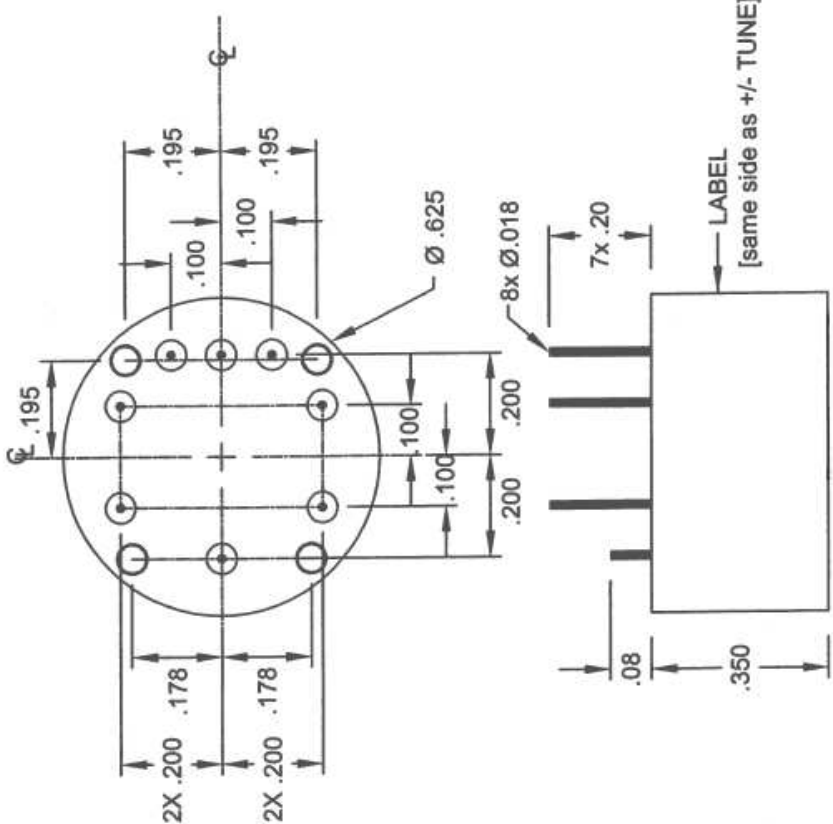

**DESCRIPTION**

The MICRO LAMBDA **MLTO**-Series Permanent Magnet YIG-Tuned Oscillators cover the frequency range of 2-8 GHz. They are available in customer selected tuning ranges and are fitted with a low power main coil, and FM coil for phase locking. All units operate from a +8 Volt and -5 Volt supply and operate over the 0° to + 65°C temperature range. Units do not require a heater.

**ELECTRICAL AND PERFORMANCE SPECIFICATIONS**

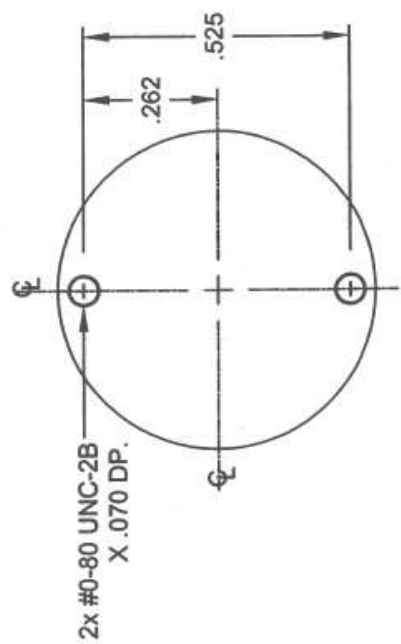
Guaranteed Specifications at 0° to +65° C Case Temperature

| <b>Model No.</b>                  | <b>MLTO-30204</b> | <b>MLTO-30206</b> | <b>MLTO-30306</b> | <b>MLTO-30308</b> |
|-----------------------------------|-------------------|-------------------|-------------------|-------------------|
| Frequency Range, Min.             | 2-4 GHz           | 2-6 GHz           | 3-6 GHz           | 3-8 GHz           |
| Free Run Frequency                | 3 GHz             | 4 GHz             | 4.5 GHz           | 5.5 GHz           |
| Free Run Frequency Settability    | +/- 300 MHz       | +/- 300 MHz       | +/- 300 MHz       | +/- 300 MHz       |
| Power Output, Min.                | +10 dBm           | +10 dBm           | +10 dBm           | +9 dBm            |
| Power Output Variation, Max.      | 3 dB              | 3 dB              | 3 dB              | 4 dB              |
| Freq. Drift over Temp., Max.      | +/-10 MHz         | +/-10 MHz         | +/-10 MHz         | +/-10 MHz         |
| Pulling Figure (12 dB RL), Typ.   | 2 MHz             | 2 MHz             | 2 MHz             | 2 MHz             |
| Pushing Figure +8 Vdc, Typ.       | 2 MHz/V           | 2 MHz/V           | 2 MHz/V           | 2 MHz/V           |
| Harmonics, Min.                   | -15 dBc           | -15 dBc           | -15 dBc           | -15 dBc           |
| Spurious Output, Min.             | -70 dBc           | -70 dBc           | -70 dBc           | -70 dBc           |
| Phase Noise @ 10kHz Offset Typ.   | -100 dBc/Hz       | -100 dBc/Hz       | -100 dBc/Hz       | -100 dBc/Hz       |
| @ 100kHz Offset Min.              | -125 dBc/Hz       | -125 dBc/Hz       | -125 dBc/Hz       | -125 dBc/Hz       |
| @ 100kHz Offset Typ.              | -128 dBc/Hz       | -128 dBc/Hz       | -128 dBc/Hz       | -128 dBc/Hz       |
| <b>Main Coil</b>                  |                   |                   |                   |                   |
| Sensitivity, Typ.                 | 7.5 MHz/mA        | 7.5 MHz/mA        | 7.5 MHz/mA        | 7.5 MHz/mA        |
| Linearity, Typ.                   | +/-4 MHz          | +/-7 MHz          | +/-6 MHz          | +/-9 MHz          |
| Hysteresis, Typ.                  | 4 MHz             | 8 MHz             | 6 MHz             | 8 MHz             |
| Impedance @ 1 kHz, Typ.           | 9 Ohm/20 mH       | 9 Ohm/20 mH       | 9 Ohm/20 mH       | 9 Ohm/20 mH       |
| <b>FM Coil</b>                    |                   |                   |                   |                   |
| Sensitivity, Typ.                 | 300 kHz/ma        | 300 kHz/ma        | 300 kHz/ma        | 300 kHz/ma        |
| 3 dB Bandwidth, Typ.              | 1 MHz             | 1 MHz             | 1 MHz             | 1 MHz             |
| Deviation @ 400 kHz, Min.         | +/- 50 MHz        | +/- 50 MHz        | +/- 50 MHz        | +/- 50 MHz        |
| Impedance @ 1 MHz, Typ.           | .7 Ohm/1 uH       | .7 Ohm/1 uH       | .7 Ohm/1 uH       | .7 Ohm/2 uH       |
| DC Power, Max. +8.0 Vdc +/- 0.5 V | 60 mA             | 60 mA             | 60 mA             | 60 mA             |
| -5.0 Vdc +/- 0.25 v               | 15 mA             | 15 mA             | 15 mA             | 15 mA             |
| Case Style                        | 99-0091-022       | 99-0091-022       | 99-0091-022       | 99-0091-022       |



WEIGHT: .41 Oz (12g)

| REV | DESCRIPTION | DATE | APPROVED |
|-----|-------------|------|----------|
|     |             |      |          |



|   |  |   |
|---|--|---|
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCE ARE :<br>FRACTIONS    DECIMALS    ANGLES<br>.                .XX        .010<br>.                .XXX      .005 |  | CONTRACT NO.<br>MICRO LAMBDA WIRELESS, INC. |
| MATERIAL  | APPROVALS<br>DRAWN    N.GUYEN<br>CHECKED <i>[Signature]</i><br>ISSUED    4/11/18 | DATE<br>4/11/18                             |
| FINISH  | SCALE<br>DO NOT SCALE DRAWING  | DWG. NO.<br>99-0091-022                     |
| REV.  | CAGE NO.<br>0RN63  | REV.<br>C                                   |