



MICRO LAMBDA WIRELESS, INC.

MLVG Series for 5G Applications Ultra Wide Tuning Range and Low Phase Noise YTO's

FEATURES

- 6-21 GHz Frequency Coverage
- 12 GHz Tuning Bandwidth
- FM/Phase-Lock Port
- Miniature Size
- High Reliability
- Low Power Consumption: No Heater Required

DESCRIPTION

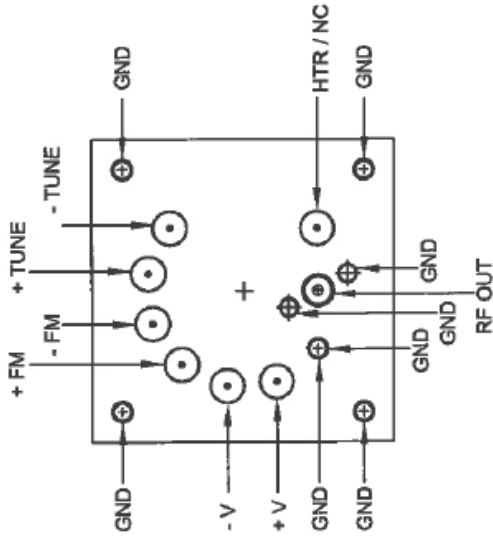
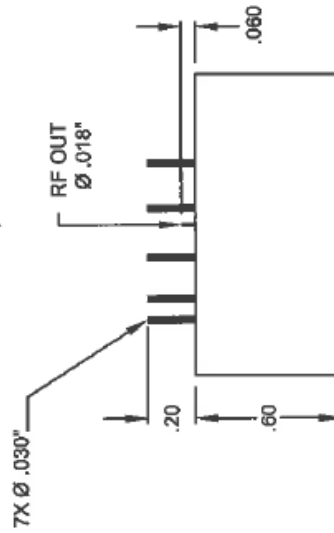
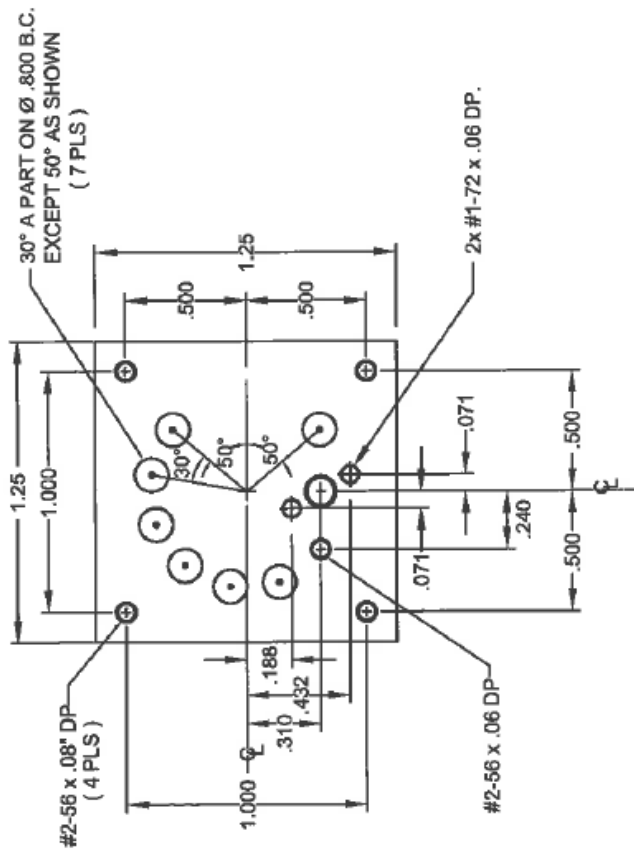
The MICRO LAMBDA MLVG-Series YIG-Tuned Oscillators are signal sources covering the frequency range of 6-21 GHz. They are available in any customer selected **12 GHz tuning bandwidth** (± 6 GHz). The units are available in a standard 1.25" x 1.25" x .60" configuration with a field replaceable SMP shroud or RF pin for PCB Mounting. No heater required for power consumption.



ELECTRICAL AND PERFORMANCE SPECIFICATIONS

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

| Model No. | MLVG-0618 | MLVG-0820 | MLVG-1021 |
|--|------------------|------------------|------------------|
| Frequency Range, Min. | 6-18 GHz | 8-20 GHz | 10-21 GHz |
| Power Output, Min. | +14 dBm | +14 dBm | +14 dBm |
| Power Output Variation, Max. | +/- 3 dB | +/- 3 dB | +/- 3 dB |
| Frequency Drift over Temperature, Max. | +/-20 MHz | +/-20 MHz | +/-20 MHz |
| Pulling Figure (12 dB RL), Typ. | 1 MHz | 1 MHz | 1 MHz |
| Pushing Figure +8 Vdc Supply, Typ. | 0.1 MHz/V | 0.1 MHz/V | 0.1 MHz/V |
| Pushing Figure -5 Vdc Supply, Typ. | 1 MHz/V | 1 MHz/V | 1 MHz/V |
| 2nd Harmonic, Min. | -12 dBc | -12 dBc | -12 dBc |
| 3rd Harmonic, Min. | -20 dBc | -20 dBc | -20 dBc |
| Spurious Output, Min. | -70 dBc | -70 dBc | -70 dBc |
| Phase Noise @ 10kHz Offset Max. | -100 dBc/Hz | -100 dBc/Hz | -100 dBc/Hz |
| @ 100kHz Offset Max. | -125 dBc/Hz | -123 dBc/Hz | -123 dBc/Hz |
| Main Coil | | | |
| Sensitivity, Typ. | 18 MHz/mA | 18 MHz/mA | 18 MHz/mA |
| Linearity, Typ. | +/-10 MHz | +/-10 MHz | +/-10 MHz |
| Hysteresis, Typ. | 15 MHz | 15 MHz | 15 MHz |
| Input Impedance @ 1 kHz, Typ. | 7 Ohm / 20 mH | 7 Ohm / 20 mH | 7 Ohm / 20 mH |
| FM Coil | | | |
| Sensitivity, Typ. | 340 kHz/ma | 340 kHz/ma | 340 kHz/ma |
| 3 dB Bandwidth, Typ. | 1000 kHz | 1000 kHz | 1000 kHz |
| Deviation @ 400 kHz Rate, Min. | +/- 50 MHz | +/- 50 MHz | +/- 50 MHz |
| Input Impedance @ 1 MHz, Typ. | 1.0 Ohm / 2.0 uH | 1.0 Ohm / 2.0 uH | 1.0 Ohm / 2.0 uH |
| DC Circuit Power, +8 Vdc +/- 5% | | | |
| | 250 mA | 250 mA | 250 mA |
| -5 Vdc +/- 5% | | | |
| | 20 mA | 20 mA | 20 mA |
| Case Style | | | |
| | 99-0061-112 | 99-0061-112 | 99-0061-112 |
| | 99-0061-113 | 99-0061-113 | 99-0061-113 |



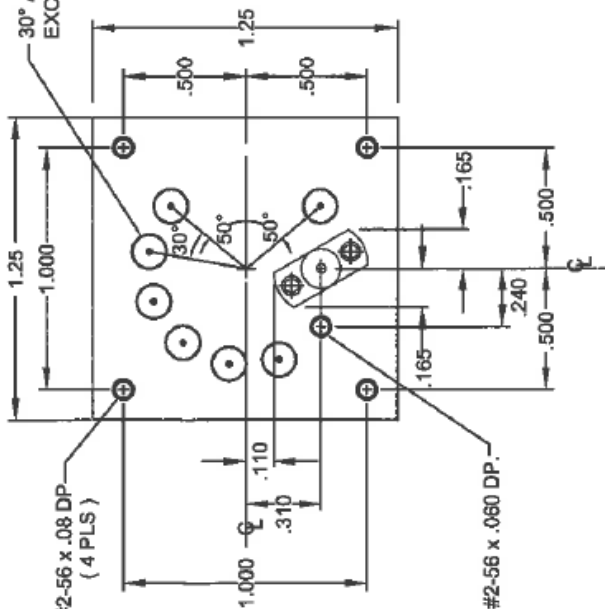
PIN OUT

WEIGHT: 3.5 Oz (99.2g) MAX.

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

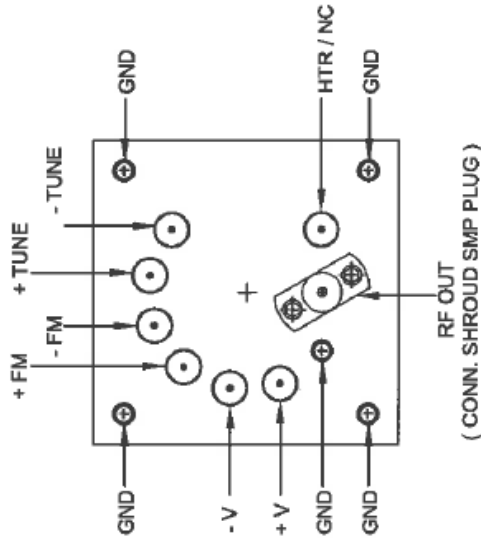
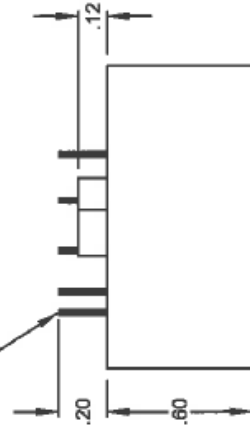
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|--|--------------|----------------------|----------|
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCE ARE: | | CONTRACT NO. | |
| FRACTIONS | DECIMALS | APPROVALS | DATE |
| • .XX ± .010 | • .XX ± .005 | N. NGUYEN | 10/26/17 |
| MATERIAL | | CHECKED | ISSUED |
| | | <i>[Signature]</i> | 10/26/17 |
| FINISH | | SCALE | |
| | | DO NOT SCALE DRAWING | |
| MICRO LAMBDA WIRELESS, INC. | | | |
| PMO 1.25" | | | |
| SIZE | CAGE NO. | DWG NO. | REV. |
| | 0RN63 | 99-0061 -112 | A |

#2-56 x .08 DP (4 PLS)
 30° A PART ON Ø .800 B.C. EXCEPT 50° AS SHOWN (7 PLS)



#2-56 x .060 DP.

7X Ø .030"



PIN OUT

SUGGESTED: MATING CONNECTORS
 1/ SMP R/A FEMALE ROSENBERGER 19K202-270L5
 2/ SMP STRAIGHT FEMALE ROSENBERGER 19K101-270L5

WEIGHT: 3.5 Oz (99.2g) MAX.

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

| | | |
|--|--|----------------------|
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCE ARE: FRACTIONS DECIMALS ANGLES . | CONTRACT NO. | DATE |
| | APPROVALS DRAWN: N. NGUYEN CHECKED: <i>[Signature]</i> ISSUED: <i>[Signature]</i> | 10/26/17 |
| MATERIAL | MICRO LAMBDA WIRELESS, INC. PMO 1.25" W/SMP MALE CONNECTOR | SCALE |
| FINISH | SIZE CAGE NO. 0RN63 | DWG. NO. 99-0061-113 |
| DO NOT SCALE DRAWING | REV. A | SHEET |