



MICRO LAMBDA WIRELESS, INC.

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TO-8 YIG OSCILLATOR SPECIFICATION

MODEL NO. MLTO-71020 Rev D
Base model no. _____ RoHS Compliant
Customer _____ Catalog _____ Date 01-15-20
Customer Part Number _____

Frequency Range	<u>10.0 - 20.5</u> GHz			
Free-Run Frequency	<u>15.5</u> GHz			
Free-Run Frequency Settability	<u>+/- 500</u> MHz			
Power Output	<u>+ 3</u> dBm	<input checked="" type="checkbox"/> min	<input type="checkbox"/> typ	<input type="checkbox"/> max
Power Output Variation / Freq	<u>12</u> dB	<input type="checkbox"/> min	<input type="checkbox"/> typ	<input checked="" type="checkbox"/> max
Frequency Drift over Temp	<u>+/- 50</u> MHz	<input type="checkbox"/> min	<input type="checkbox"/> typ	<input checked="" type="checkbox"/> max
Pulling Figure (12dB RL)	<u>2</u> MHz	<input type="checkbox"/> min	<input checked="" type="checkbox"/> typ	<input type="checkbox"/> max
Pushing Figure (+ Vdc supply)	<u>2</u> MHz/V	<input type="checkbox"/> min	<input checked="" type="checkbox"/> typ	<input type="checkbox"/> max
Pushing Figure (- 5 Vdc supply)	<u>2</u> MHz/V	<input type="checkbox"/> min	<input checked="" type="checkbox"/> typ	<input type="checkbox"/> max
Harmonics	<u>-12</u> dBc	<input type="checkbox"/> min	<input type="checkbox"/> typ	<input checked="" type="checkbox"/> max
Spurious Output	<u>-70</u> dBc	<input type="checkbox"/> min	<input type="checkbox"/> typ	<input checked="" type="checkbox"/> max
Phase Noise @ 10 kHz offset	<u>-94</u> dBc/Hz	<input type="checkbox"/> min	<input type="checkbox"/> typ	<input checked="" type="checkbox"/> max
Phase Noise @ 100 kHz offset				
10.0 to 16.2 GHz	<u>-123</u> dBc/Hz	<input type="checkbox"/> min	<input type="checkbox"/> typ	<input checked="" type="checkbox"/> max
16.2 to 18.6 GHz	<u>-120</u> dBc/Hz	<input type="checkbox"/> min	<input type="checkbox"/> typ	<input checked="" type="checkbox"/> max
18.6 to 20.5 GHz	<u>-118</u> dBc/Hz	<input type="checkbox"/> min	<input type="checkbox"/> typ	<input checked="" type="checkbox"/> max

Main Coil Characteristics

Sensitivity (+/- 1 MHz)	<u>10</u> MHz/mA	<input checked="" type="checkbox"/> min	<input type="checkbox"/> typ	<input checked="" type="checkbox"/> max
Linearity	<u>+/- 30</u> MHz	<input type="checkbox"/> min	<input type="checkbox"/> typ	<input checked="" type="checkbox"/> max
Hysteresis	<u>40</u> MHz	<input type="checkbox"/> min	<input checked="" type="checkbox"/> typ	<input type="checkbox"/> max
Input Impedance @ 1 kHz rate	<u>11</u> Ohm	<input type="checkbox"/> min	<input checked="" type="checkbox"/> typ	<input type="checkbox"/> max
	<u>30</u> mH	<input type="checkbox"/> min	<input checked="" type="checkbox"/> typ	<input type="checkbox"/> max
Feedthrough Capacitance	<u>0</u> pF	<input type="checkbox"/> min	<input checked="" type="checkbox"/> typ	<input type="checkbox"/> max

FM Coil Characteristics

Sensitivity (+/- 10 %)	<u>350</u> kHz/mA	<input type="checkbox"/> min	<input checked="" type="checkbox"/> typ	<input type="checkbox"/> max
3 dB Bandwidth	<u>5</u> MHz	<input type="checkbox"/> min	<input checked="" type="checkbox"/> typ	<input type="checkbox"/> max
Deviation @ 400 kHz rate	<u>+/- 50</u> MHz	<input checked="" type="checkbox"/> min	<input type="checkbox"/> typ	<input type="checkbox"/> max
Input Impedance @ 1 MHz rate	<u>1</u> Ohm	<input type="checkbox"/> min	<input checked="" type="checkbox"/> typ	<input type="checkbox"/> max
	<u>1</u> uH	<input type="checkbox"/> min	<input checked="" type="checkbox"/> typ	<input type="checkbox"/> max
Feedthrough Capacitance	<u>0</u> pF	<input type="checkbox"/> min	<input checked="" type="checkbox"/> typ	<input type="checkbox"/> max

DC Circuit Power

+ 5 Vdc or + 8 Vdc

70 mA

min

typ

max

-5 Vdc or N/C

15 mA

min

typ

max

Feedthrough Capacitance

0 pF

min

typ

max

Screening

N/A

MLW Screening

Procedure 110.012

Customer Screening

Procedure #

Revision

Military

Testing

Level 1 - No Data

Level 2 - Sample Data

Per Lot of

Level 3 - Summary Data

Level 4 - Standard Test Data

Level 5 - Special Test Requirements

Marking

Standard Labeling

MDL #, S/N, D/C, Warranty, ESD if Req'd

Special Labeling

Customer Part Number

Revision

Other

Customer Cage Code

Micro Lambda Cage Code

RoHS

Environmental

Comm. Operating Temp (case)

+10 °C to

+60 °C

Extended Operating Temp(case)

°C to

°C

Military Operating Temp (case)

°C to

°C

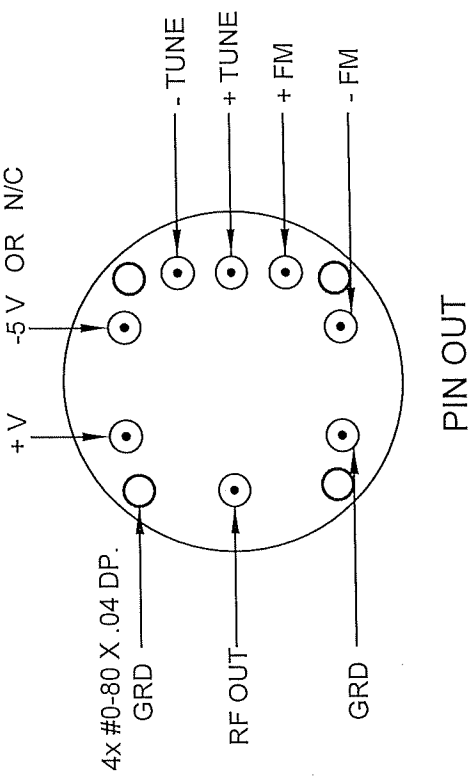
Case

Outline Drawing # 99-0091-020 Oscillator

0.8 oz Weight

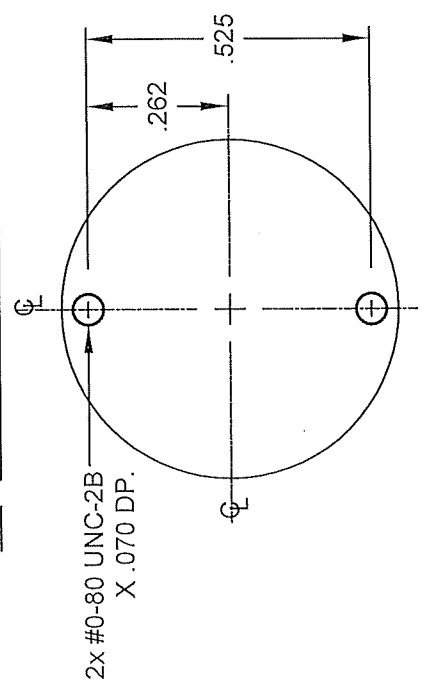
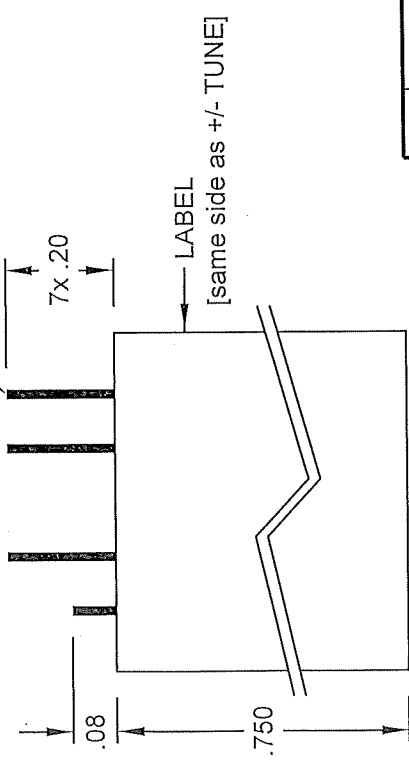
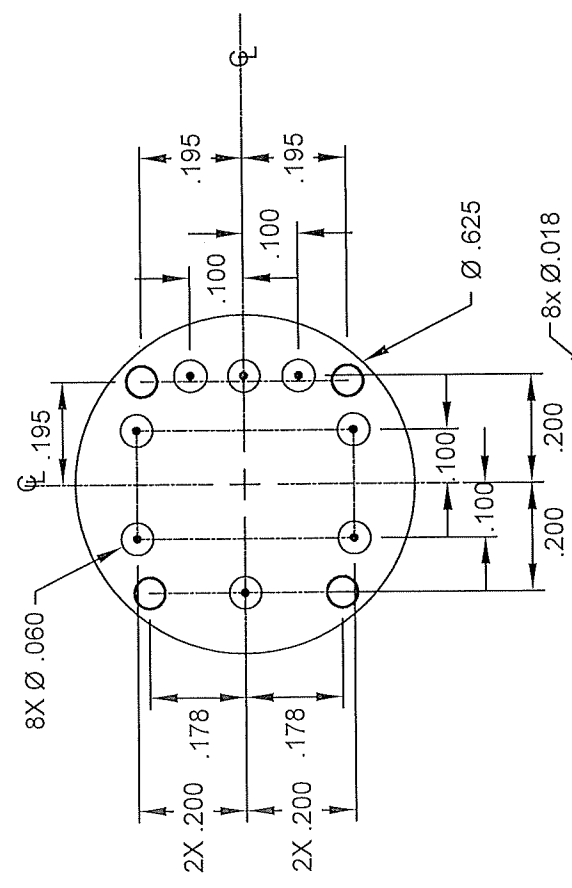
Notes:

Rev D: issued to clarify parameters



PIN OUT

WEIGHT: .78 Oz (22g)



REV	DESCRIPTION	DATE	APPROVED

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCE ARE:
FRACTIONS DECIMALS ANGLES
* .xx ±.010
* .xxx ±.005

CONTRACT NO. _____

APPROVALS: N. NGUYEN DATE: 10/16/19

DRAWN: _____

CHECKED: *[Signature]* DATE: 10/16/19

ISSUED: _____

MATERIAL: _____

FINISH: _____

DO NOT SCALE DRAWING

MICRO LAMBDA WIRELESS, INC.

PC MOUNT OSCILLATOR
(φ .625" X .750" HIGH W/ 4 MTC. SCREWS)

SCALE: 0RN63

DWG. NO. 99-0091-020

REV. D

SHEET