

OUTPUT**Frequency**

80 MHz

Level

+13 dBm ±2 dB into 50 ohms

STABILITY**Aging**1 x 10⁻⁶ first year

after 30 days operating, typical

5 x 10⁻⁷ second year, typical3 x 10⁻⁷ per year thereafter, typical**Phase Noise L(f), dBc/Hz****Each Axis**

	Static	Dynamic, goal
5 Hz	-80	-71
10 Hz	-98	-65
15 Hz	-103	-61
16 Hz	-104	-64
25 Hz	-108	-60
26 Hz	-109	-66
33 Hz	-115	-63
100 Hz	-130	
1 kHz	-158	
10 kHz	-174	
100 kHz	-174	

Temperature Stability±5 x 10⁻⁷, -40° to +63°C (Ref +25°C)**Harmonics, Sub-harmonics**

≤-30 dBc

Non-Harmonic Spurious

-80 dBc, max

MECHANICAL**Dimensions**

2.386 x 2 x 1.06"

Connectors

SMA(f) and solder pins on one side

PackagingNickel-plated machined
aluminum housing**Mounting**

Threaded inserts, # 2-56, 4 places

Threaded inserts on sides, 16 places
(provisions for shock mounts)**POWER REQUIREMENTS****Warm-Up Power**

≤ 6 Watts for 5 minutes at +25°C

Total Power

≤ 3.5 Watts at +25°C

Supply Voltage

+15 VDC ±5%

ADJUSTMENT**Mechanical Tuning**±4 x 10⁻⁶**Electrical Tuning**±2 x 10⁻⁷ min, 0 to +10 VDC

Negative slope

CRYSTAL**Type**

80 MHz SC-cut (low-g)

ENVIRONMENTAL**Acceleration Sensitivity**5 x 10⁻¹⁰/g per axis, typical**Shock**

Designed to survive operational and non-operational testing with degraded phase noise and spurious signal performance during shock. No performance data is provided. No testing is provided on production units.

30g, 11 ms, half sine, horizontally

12g, 11 ms, half sine, vertically

3 blows in each axis, both ways

Vibration

Designed to survive operational and non-operational testing per MIL-STD-167-1A Type I, with degraded phase noise and spurious signal performance during vibration.

Tested at 5, 15, 16, 25, 26 and 33 Hz only.

5 Hz* to 15 Hz 0.030 ±0.006 inSA

16 Hz to 25 Hz 0.020 ±0.004 inSA

26 Hz to 33 Hz 0.010 ±0.002 inSA

* Lowest offset available on in-house testing capabilities

Humidity

Designed to meet operational and non-operational testing per MIL-STD-810, Method 507.4, but no testing is provided on production units. Vital components shall be conformal coated.

High Storage Temperature

Designed to survive non-operational testing per MIL-STD-810, Method 501.4, Procedure I. No testing is provided on production units.

High Operation Temperature

Designed to meet operational testing per MIL-STD-810, Method 501.4, Procedure II. No testing is provided on production units.

REV	DATE	REVISION RECORD	DWN	AUTH
-	03-03-11	Initial Release	PAC	
A	05-02-13	Updated Title	PAC	

Low Storage Temperature

Designed to survive non-operational testing per MIL-STD-810, Method 502.4, Procedure I. No testing is provided on production units.

Low Operation Temperature

Designed to meet operational testing per MIL-STD-810, Method 502.4, Procedure II. No testing is provided on production units.

OTHER**Special**

The electrical design of this oscillator incorporates High Reliability & COTS components, for an extended life span.

Design

PCBs secured for operation in a dynamic environment

Test Data – Production Units

Output Level

Phase Noise – Static and Dynamic

Temperature Stability

Harmonics, Subs, Spurious

Current Draw – Warm-up and Total

Tuning – ET and MT

Acceleration Sensitivity

Environmental Qualification Testing

(On one (1) randomly selected production unit only – Qual testing is listed as a separate line item on the quote)

- Pre-Environmental Electrical Tests
- High Storage Temperature
- High Operating Temperature
- Low Storage Temperature
- Low Operating Temperature
- Shock
- Vibration
- Humidity
- Post-Environmental Electrical Tests

Wenzel Associates, Inc.

Austin, Texas

Title:

80 MHz ULN II Crystal Oscillator

P/N:

501-23707

Rev:

A

Date:

05-02-13

Drawn:

Ref:

19435a

Tolerances:
(except as noted)
Dimensions are in inches

0.XX Dec:

±0.030"

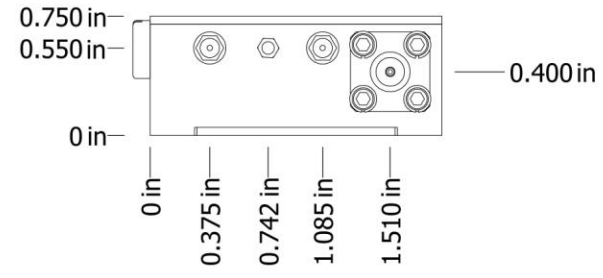
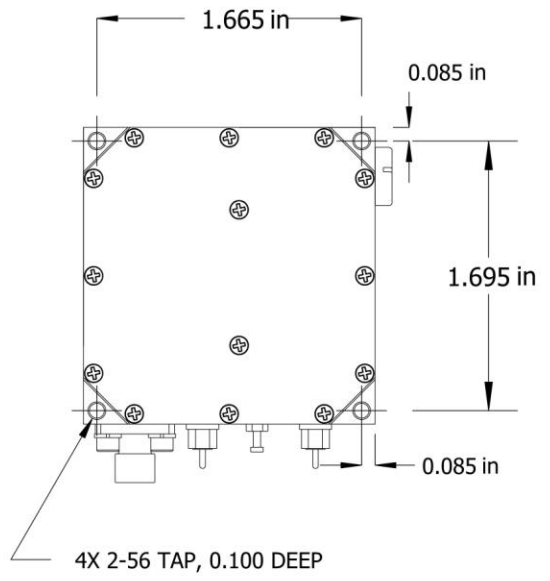
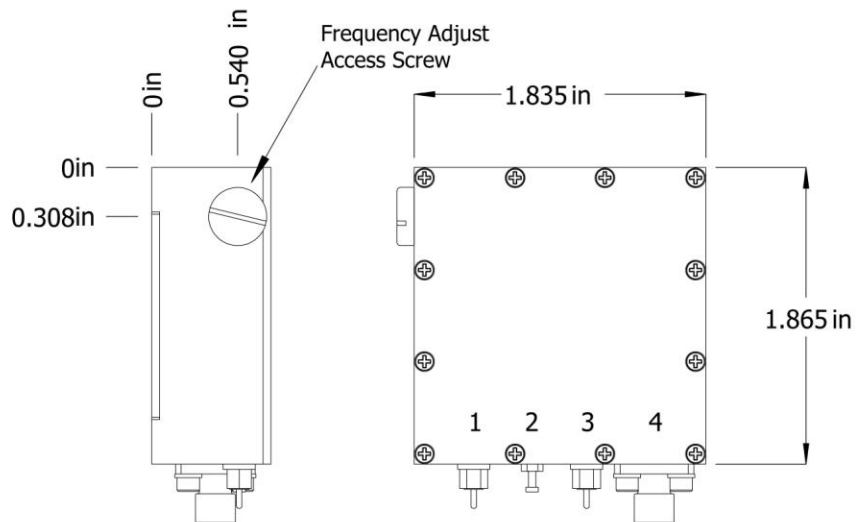
0.XXX Dec:

±0.010"

FSCM:

62821

Page 1 of 2



CONN	Function
1	Electrical Tuning
2	Case Ground
3	Supply Voltage
4	RF Output

Wenzel Associates, Inc.
Austin, Texas

Title: **80 MHz ULN II Crystal Oscillator**

P/N: 501-23707	Rev: A	Date: 05-02-13	Drawn:	Ref: 19435a
Tolerances: (except as noted) Dimensions are in inches		0.XX Dec: ±0.030"	0.XXX Dec: ±0.010"	FSCM: 62821

Page 2 of 2