

OUTPUT**Frequency**
100 MHz**Level**
+15 dBm ±2 dB into 50 ohms**STABILITY****Aging**
±1 x 10⁻⁶ per year
after 30 days operating, typical**Phase Noise L(f), dBc/Hz** (each axis)
Static **Dynamic**

10 Hz	---	-60
100 Hz	-125	-80
1 kHz	-150	-100
2 kHz	---	-108
10 kHz	-165	---
100 kHz	-165	---

Temperature Stability≤ ±5 x 10⁻⁷, -20° to +70°C (Ref +25°C)
≤ ±2 x 10⁻⁶, -40° to +85°C (Ref +25°C)**Frequency vs. Supply Voltage**≤ ±5 x 10⁻⁸ for a ±5% change in supply voltage**Harmonics**

-25 dBc

Sub-Harmonics

-80 dBc

Spurious-80 dBc, excluding power
supply line related spurs**MECHANICAL****Dimensions**

1.5 x 1.5 x 0.535"

Connectors

Solder pins on base

Packaging

Solder sealed steel can

POWER REQUIREMENTS**Warm-Up Power**

≤ 5 Watts for 3 minutes

Total Power

≤ 2.5 Watts at +25°C, typical

Supply Voltage

+12 VDC ±5%

ADJUSTMENT**Electrical Tuning**±4 x 10⁻⁶, 0 to +10 VDC
Negative Slope**CRYSTAL****Type**100 MHz SC-cut (3rd OT, Low-G)**ENVIRONMENTAL****Operating Temperature**

-40° to +85°C

Storage Temperature

-54° to +85°C

HumidityOperational in up to 95% condensing RH
at +28 to +85°C. Verify performance
requirements before and after exposure
on one qualification unit only. MIL-STD
810, Method 507 may be used as
guidance.**Temperature-Altitude**Operational to 40,000 feet at -40°C. Verify
performance requirements before and
after exposure on one qualification unit
only, per MIL-STD 810, Method 520,
Procedure I.**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 on production units.**High Storage Temperature**Designed to survive non-operational
testing per MIL-STD-810, Method 501.4,
Procedure I. No testing on production
units.**High Operation Temperature**Designed to meet operational testing per
MIL-STD-810, Method 501.4, Procedure
II. No testing on production units.**Vibration**Operational with degraded phase noise
performance during the following profile:10 to 1 kHz 0.06 g²/Hz

-6 dB/octave

2 kHz 0.0396 g²/Hz**Shock**Designed to survive non-operational
shocks per the following:
12g, 11 msec, half sine, 3 shocks per axis,
all 3 axes, 2 directions
Verify performance requirements before
and after exposure on one qualification
unit only. MIL-STD-810, Method 503 may
be used as guidance.

REV	DATE	REVISION RECORD	DWN	AUTH
-	03-03-11	Initial Release	PAC	

OTHER**Acceleration Sensitivity**≤5 x 10⁻¹⁰/g per axis, typical**Design**Unit will be secured for vibration, and conformal coating will be
used on all PCB material. Materials, finish, processes and parts
shall be in accordance with the guidelines of MIL-HDBK-454.**Labeling**Label per MIL-STD-130 with:
Wenzel Associates and/or Symbol
501-23710 (Current Rev)
100 MHz
+12 VDC

Serial # - Date Code

Test Data – Production UnitsOutput Level
Phase Noise (Static and Dynamic)
Temperature Stability
Harmonics, Subs, Spurious
Power – Warm-up and Total
Provide COC**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
- Temperature-Altitude
- Post-Environmental Electrical Tests

**Wenzel Associates, Inc.**

Austin, Texas

Title:

100 MHz-SC L.O. Series Crystal Oscillator

P/N:

501-23710

Rev:

-

Date:

03-03-11

Drawn:

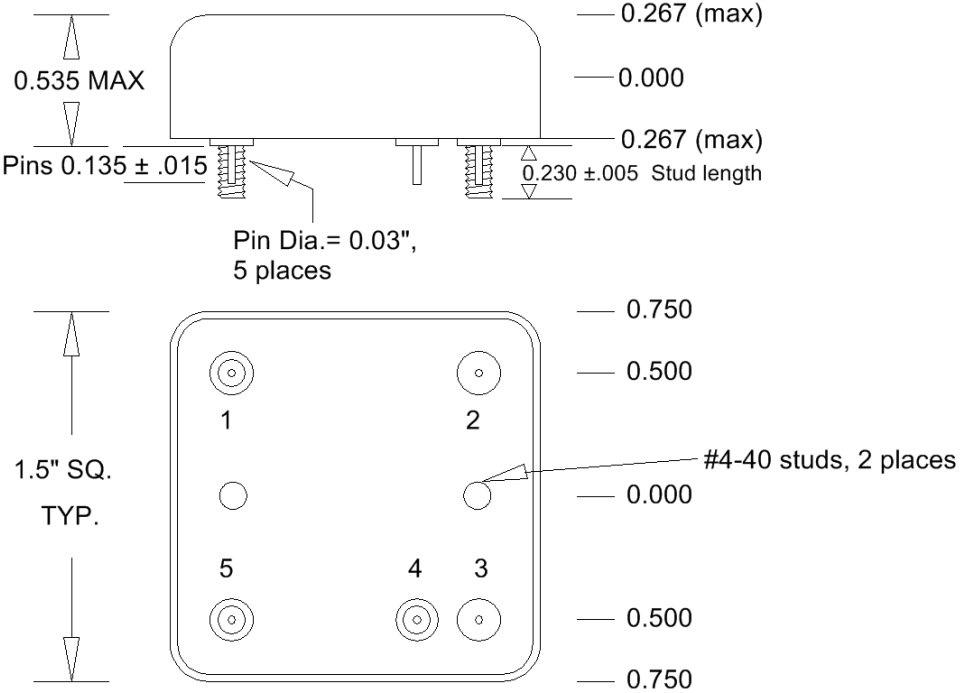
Ref:

23566a

Tolerances:
(except as noted)
Dimensions are in inches0.XX Dec:
±0.030"0.XXX Dec:
±0.010"FSCM:
62821

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PIN	FUNCTION
1	Supply Voltage
2	Ground, Case
3	Ground, Case
4	RF Output
5	Electrical Tuning

Connector numbers are for reference only, they are not marked on unit.



Wenzel Associates, Inc.
Austin, Texas

Title: 100 MHz-SC L.O. Series Crystal Oscillator				
P/N: 501-23710	Rev: -	Date: 03-03-11	Drawn:	Ref: 23566a
Tolerances: (except as noted) Dimensions are in inches		0.XX Dec: ±0.030"	0.XXX Dec: ±0.010"	FSCM: 62821
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