**INPUT**

**Frequency**

10 MHz, +3 to +13 dBm into 50 ohms

**OUTPUT – 10 MHz**

**Frequency**

10 MHz, +12 dBm ±2 dB

**Phase Noise**

| | |
|---|---|
| 10 Hz | -130 dBc/Hz |
| 100 Hz | -150 dBc/Hz |
| 1 kHz | -160 dBc/Hz |
| 10 kHz | -165 dBc/Hz |

**Harmonics, Subs, Spurious**

-25, -85, -85 dBc

**OUTPUT – 100 MHz**

**Frequency**

100 MHz, +12dBm ±2 dB

**Output Phase Noise L(f)**

**Locked to Internal 10 MHz**

| | |
|---|---|
| 10 Hz | -100 dBc/Hz |
| 100 Hz | -118 dBc/Hz |
| 1 kHz | -150 dBc/Hz |
| 10 kHz | -165 dBc/Hz |

**Harmonics, Subs, Spurious**

-25, -85, -85 dBc to 600 MHz

**Loop BW**

Target Bandwidth: 40 Hz, typical, type 2 Loop

**STABILITY**

**Aging**

$\pm 5 \times 10^{-10}$ per day, typical

**Temperature Stability**

$\pm 1 \times 10^{-8}$, 0 to +50°C, (Ref. +25°C)

**Phase Lock Alarm - TTL**

Locked: +3.5 to +5.2 VDC (Hi)
Unlocked: +0.8 VDC max (Lo)

**Phase Lock Voltage Monitor**

Voltage monitor pin supplied, 0 to +8.5 VDC range

**MECHANICAL**

**Dimensions**

2.5 x 6.0 x 0.9”

**Connectors**

SMA’s
7 Pin D-subminiature, male

**Packaging**

Nickel plated machined brass housing

**POWER REQUIREMENTS**

**Supply Voltage**

+12 ±0.5VDC

**Warm-Up Power**

12.6 Watts maximum at start-up for 5 minutes at +25º C

**Total Power**

6 Watts, typical, steady state +25ºC

**ADJUSTMENT**

**Electrical Tuning**

±1 ppm, 0 to +10 VDC
Centered at +5 VDC
Negative Slope
Suitable for use with a 100 k ohm pot

**NOTE**

When the external 10 MHz reference is applied the internal 10 MHz is disabled and the external 10 MHz signal is phase locked to the 100 MHz internal OCXO. The external 10 MHz is also routed through the 10 MHz output port.

**SPECIAL**

**Reference Select Switch – Internal 10 MHz By Pass**

>+4.0 Volts enables external reference, bypassing internal 10 MHz
<+1.0 Volts disables external

| REV | DATE | REVISION RECORD | DWN | AUTH |
|---|---|---|---|---|
| - | 01-17-08 | Draft | VG | DC |
| A | 03-05-13 | PL Voltage Monitor, ET typo | BH | CR |
| | | | | |
| | | | | |
| | | | | |

**Wenzel Associates, Inc.**
Austin, Texas

Title:
**10 and 100 MHz Phase Locked Oscillator**

| P/N: | Rev: | Date: | Drawn: | Ref: |
|---|---|---|---|---|
| **501-18670** | **A** | **03-05-13** | | |

| Tolerances: (except as noted) Dimensions are in inches | 0.XX Dec: | 0.XXX Dec: | FSCM: | |
|---|---|---|---|---|
| | ±0.030” | ±0.010” | 62821 | Page 1 of 2 |

| REV | DATE | REVISION RECORD | DWN | AUTH |
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| - | 01-17-08 | Draft | VG | DC |
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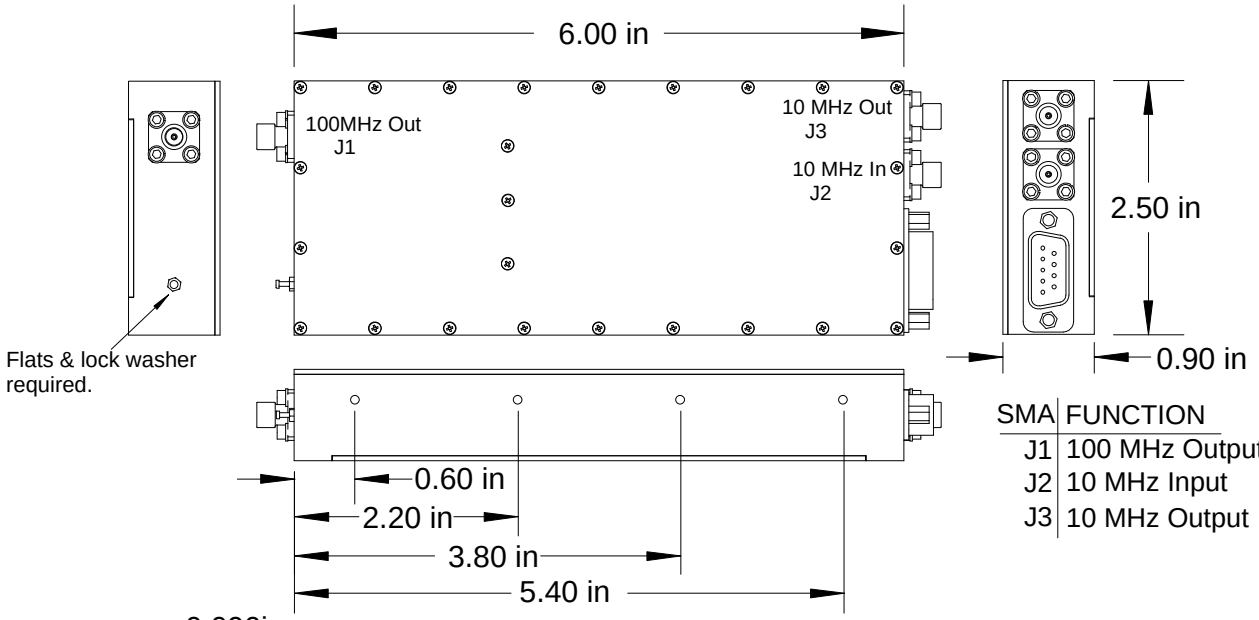
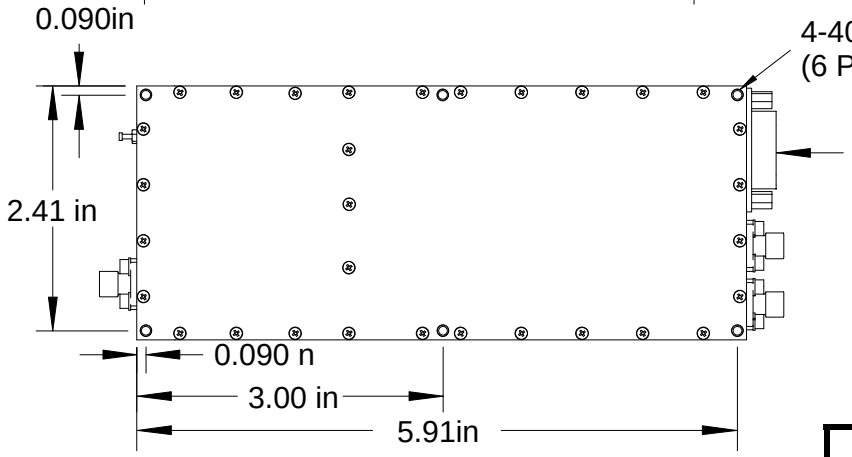
| | | | | |
| | | | | |




| SMA | FUNCTION |
|---|---|
| J1 | 100 MHz Output |
| J2 | 10 MHz Input |
| J3 | 10 MHz Output |




| PIN | FUNCTION |
|---|---|
| 1,8 | Supply Voltage |
| 2 | Int / Ext Reference Select |
| 3 | 10 MHz Vref |
| 4 | 100 MHz VCO tune voltage |
| 5 | TTL 100 MHz Lock out |
| 6,9 | Ground |
| 7 | 10 MHz Vtune |

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|---|---|---|---|---|
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