**INPUT**

**Frequency**

10 MHz

**Level**

+7 dBm ±6 dB into 50 ohms

**OUTPUTS**

| RF Output | Frequency | Output Level (into 50 ohms) |
|---|---|---|
| A | 100 MHz | +13 dBm ±2 dB |
| B | 700 MHz | +10 dBm ±2 dB |
| C | 3.5 GHz | +10 dBm ±2 dB |
| D | 7 GHz | +13 dBm ±2 dB |

**STABILITY**

**Aging (free-running)**

$1 \times 10^{-6}$ first year

after 30 days operating, typical

$5 \times 10^{-7}$ second year, typical

$3 \times 10^{-7}$ per year thereafter, typical

**Phase Noise L(f), dBc/Hz, typical, (free-running)**

| | 100 MHz | 700 MHz | 3.5 GHz | 7 GHz |
|---|---|---|---|---|
| 10 Hz | -100 | -82 | -67 | -60 |
| 100 Hz | -130 | -112 | -97 | -90 |
| 1 kHz | -158 | -140 | -124 | -117 |
| 10 kHz | -175 | -157 | -141 | -134 |
| 100 kHz | -176 | -158 | -142 | -135 |
| 1 MHz | -176 | -158 | -142 | -135 |

**Temperature Stability**

$\pm 5 \times 10^{-7}$ free-running from 0 to +50°C

(Ref. +25°C)

**Harmonics**

-25 dBc

**Sub-Harmonics**

-60 dBc

**PLL Divider Products**

-60 dBc

**Spurious**

-80 dBc, excluding power supply line related spurs

**Phase Lock Alarm**

TTL

Locked: +3.5 VDC to +5.2 VDC (Hi)

Out-of-Lock: +0.8 VDC max (Lo)

**Phase Lock Voltage Monitor**

Voltage monitor pin supplied

**MECHANICAL**

**Dimensions**

4.4 x 4 x 1”

**Connectors**

RF Input/Outputs: SMA(f)

Power, Monitoring: Feed Thru Terminals

GND: Ground Turret

**Packaging**

Nickel-plated machined aluminum housing – J2P-0123

**Mounting**

Threaded inserts on base, #2-56, 6 places

**POWER REQUIREMENTS**

**Warm-Up Power**

≤ 14 Watts for 5 minutes

**Total Power**

≤ 10.5 Watts at +25°C

**Supply Voltage**

+15 VDC ±5%

**ADJUSTMENT**

**Loop BW**

Target Bandwidth: ≤ 10 Hz

Type 2 Loop

**CRYSTAL**

**Type**

100 MHz SC-cut (x70)

**OTHER**

**Label**

Use conventional label with the following information:

501-30164 (Current Rev.)

100M/700M/3.5G/7G MXO-PLD

+15 VDC

Serial # - Date Code

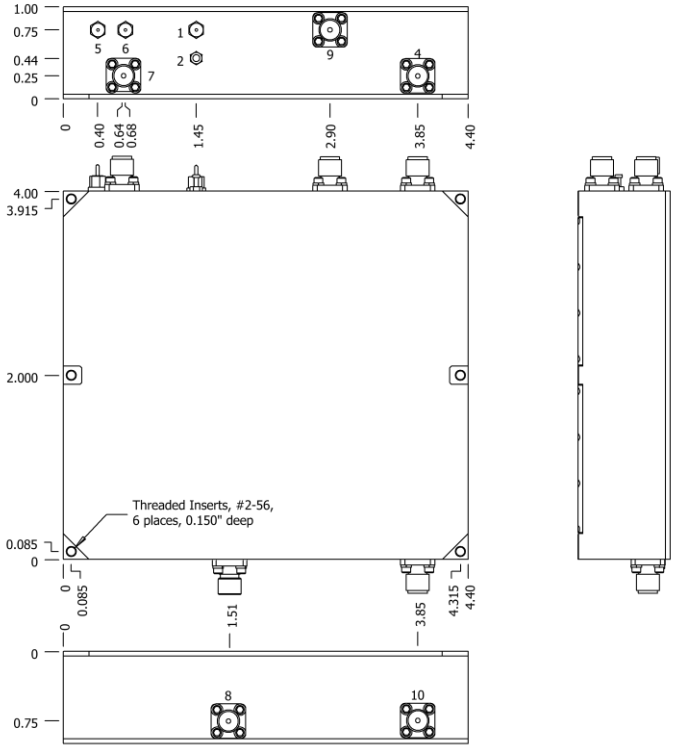
(Mark connectors with function)

**Test Data**

- Output Level
- Phase Noise – free-running
- Temperature Stability – free-running
- Harmonics, Subs, Products, Spurious
- Power – Warm-up and Total

| REV | DATE | REVISION RECORD | DWN | AUTH |
|---|---|---|---|---|
| - | 07-06-16 | Initial Release | PAC | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| J2P-0123 MXO Connections | |
|---|---|
| Connector | Function |
| 1 | Supply Voltage |
| 2 | Ground, Case |
| 4 | RF Output D |
| 5 | Phase Lock Voltage |
| 6 | Phase Lock Alarm |
| 7 | External Reference Input |
| 8 | RF Output A |
| 9 | RF Output B |
| 10 | RF Output C |




**Wenzel Associates, Inc.**

Austin, Texas

Title:

**100 MHz, 700 MHz, 3.5 GHz & 7 GHz Multiplied Crystal Oscillator (MXO-PLD)**

| P/N: | Rev: | Date: | Drawn: | Ref: |
|---|---|---|---|---|
| 501-30164 | - | 07-06-16 | | |

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