

## OUTPUTS

| Output | Frequency | Level (into 50Ω) |
|--------|-----------|------------------|
| A      | 10 MHz    | +13 ±2 dBm       |
| B      | 100 MHz   | +13 ±2 dBm       |
| C      | 500 MHz   | +13 ±2 dBm       |

## STABILITY

### Aging

- 1 x 10<sup>-7</sup> first year
- after 30 days operating, typical
- 5 x 10<sup>-8</sup> second year, typical
- 2 x 10<sup>-8</sup> per year thereafter, typical

### Phase Noise L(f), dBc/Hz, typical

|         | 10 MHz | 100 MHz | 500 MHz |
|---------|--------|---------|---------|
| 10 Hz   | -140   | -120    | -105    |
| 100 Hz  | -160   | -138    | -123    |
| 300 Hz  | -165   | -144    | -129    |
| 1 kHz   | -172   | -157    | -142    |
| 10 kHz  | -174   | -174    | -159    |
| 100 kHz | -175   | -176    | -161    |

### Temperature Stability

- ±5 x 10<sup>-9</sup>, 0 to +50°C (Ref. +25°C)

### Harmonics

- ≤ -25 dBc

### Sub-Harmonics

- ≤ -60 dBc

### PLL Reference 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

- 5.56 x 4 x 1"

### Connectors

- RF Outputs: SMA(f)
- Power, Monitoring: Feed Thru Terminals
- GND: Ground Turret

## Packaging

- Nickel-plated machined aluminum housing – J1PMX-01

## Mounting

- Threaded inserts on base, #2-56, 9 places

## POWER REQUIREMENTS

### Warm-Up Power

- ≤ 19 Watts for 5 minutes

### Total Power

- ≤ 12 Watts at +25°C

### Supply Voltage

- +15 VDC ±5%

## ADJUSTMENT

### Mechanical Tuning (Internal 10 MHz)

- ±1 x 10<sup>-6</sup>

### Loop BW (Internal 100 MHz PLL)

- Target Bandwidth: ~300 Hz
- Type 2 Loop

## CRYSTAL

### Type

- 100 MHz SC-cut (x5)

## OTHER

### Label

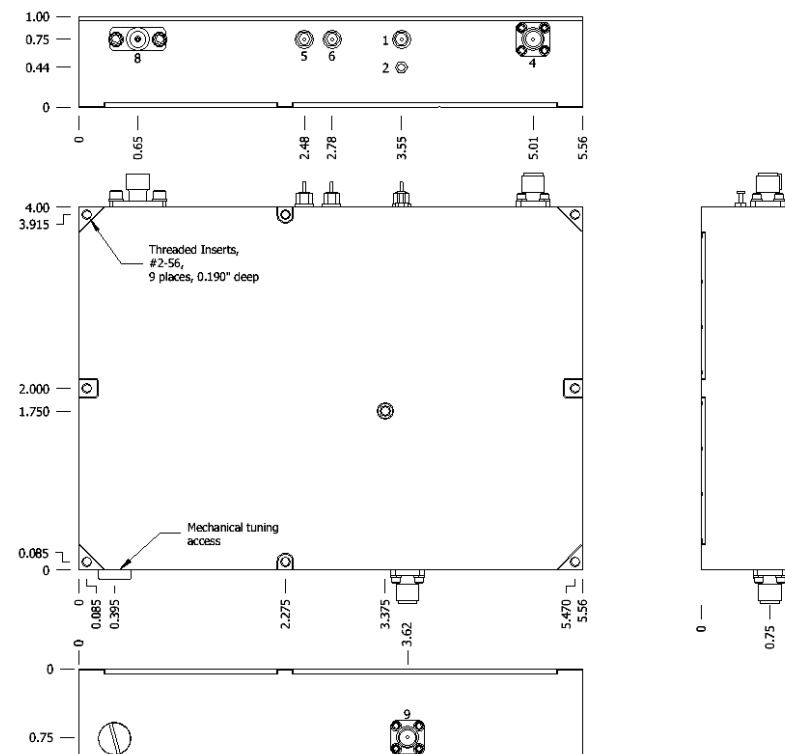
- Use conventional label with the following information:  
501-25937 (Current Rev.)  
10M/100M/500M MXO-PLMX  
+15 VDC  
Serial # - Date Code  
(Mark connectors with function)

## Test Data

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

| REV | DATE     | REVISION RECORD | DWN | AUTH |
|-----|----------|-----------------|-----|------|
| -   | 02-07-13 | Initial Release | PAC |      |
|     |          |                 |     |      |
|     |          |                 |     |      |
|     |          |                 |     |      |
|     |          |                 |     |      |

| J1PMX-01 MXO Connections |                    |
|--------------------------|--------------------|
| Connector                | Function           |
| 1                        | Supply Voltage     |
| 2                        | Ground, Case       |
| 4                        | RF Output C        |
| 5                        | Phase Lock Voltage |
| 6                        | Phase Lock Alarm   |
| 8                        | RF Output A        |
| 9                        | RF Output B        |



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|                                                                                             |                             |                              |                       |             |
|---------------------------------------------------------------------------------------------|-----------------------------|------------------------------|-----------------------|-------------|
| Title:<br><b>10 MHz, 100 MHz &amp; 500 MHz<br/>Multiplied Crystal Oscillator (MXO-PLMX)</b> |                             |                              |                       |             |
| P/N:<br><b>501-25937</b>                                                                    | Rev:<br><b>-</b>            | Date:<br><b>02-07-13</b>     | Drawn:                | Ref:        |
| Tolerances:<br>(except as noted)<br>Dimensions are in inches                                | 0.XX Dec:<br><b>±0.030"</b> | 0.XXX Dec:<br><b>±0.010"</b> | FSCM:<br><b>62821</b> | Page 1 of 1 |