INPUT
Frequency
   10 MHz
Level
   +7 dBm ±6 dB into 50 ohms
OUTPUT
Frequency
   2.3 GHz
Level
   +13 dBm ±2 dB into 50 ohms
STABILITY
Aging (free-running)
   1×10^{-6} first year
   after 30 days operating, typical
   5×10^{-7} second year, typical
   3×10^{-7} per year thereafter, typical
Phase Noise L(f), typical, (free-running)

10 Hz	-62 dBc/Hz
100 Hz	-92 dBc/Hz
1 KHz	-121 dBc/Hz
10 KHz	-145 dBc/Hz
100 KHz	-146 dBc/Hz
1 MHz	-146 dBc/Hz

Temperature Stability
   $\pm 1 \times 10^{-6}$ free-running from -20 to +70°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/Output: SMA(f)
   Power, Monitoring: Feed Thru Terminals
   GND: Ground Turret
Packaging
   Nickel-plated machined
   aluminum housing – J2P
Mounting
   Threaded inserts on base,
   #2-56, 6 places
POWER REQUIREMENTS
Warm-Up Power
   ≤ 13 Watts for 5 minutes
Total Power
   ≤ 9.5 Watts at +25°C
Supply Voltage
   +15 VDC ±5%
ADJUSTMENT
Loop BW
   Target Bandwidth: ≤ 10 Hz
   Type 2 Loop
CRYSTAL
Type
   115 MHz SC-cut (x20)
OTHER
Label
   Use conventional label with the
   following information:
   501-30077 (Current Rev.)
   2.3 GHz 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

J2P MXO Connections	
Connector	Function
1	Supply Voltage
2	Ground, Case
4	RF Output
5	Phase Lock Voltage
6	Phase Lock Alarm
7	External Reference Input

Threaded Inserts, #2-56,
6 Places, 0.150" deep

Wenzel Associates, Inc.
Austin, Texas

Title:
2.3 GHz Multiplied Crystal Oscillator (MXO-PLD)

P/N: 501-30077	Rev: -	Date: 05-27-16	Drawn:	Ref:

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