

INPUT

Frequency

10 MHz

Level

+13 dBm ± 1 dB into 50 ohms

OUTPUT

RF Output	Frequency	Output Level (into 50 ohms)
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A	100 MHz	+13 dBm ± 2 dB
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B	1 GHz	+13 dBm ± 2 dB
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STABILITY

Aging (free-running)

1 x 10⁻⁶ first year

after 30 days operating, typical

5 x 10⁻⁷ second year, typical

3 x 10⁻⁷ per year thereafter, typical

Phase Noise L(f), typical, (free-running)

	100 MHz	1 GHz
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10 Hz	-105	-83
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100 Hz	-135	-113
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300 Hz	-147	-125
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1 kHz	-160	-138
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10 kHz	-174	-152
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30 kHz	-175	-153
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100 kHz	-176	-154
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1 MHz	-176	-172
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3 MHz	-176	-173
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10 MHz	-176	-174
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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 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

5.36 x 4 x 1"

Connectors

RF Input/Output: SMA(f)

Power, Monitoring: Feed Thru Terminals

GND: Ground Turret

Packaging

Nickel-plated machined

aluminum housing – J2PM-03

Mounting

Threaded inserts on base,

6 places, #2-56

POWER REQUIREMENTS

Warm-Up Power

≤ 18 Watts for 5 minutes

Total Power

≤ 14 Watts at +25°C

Supply Voltage

+15 VDC $\pm 5\%$

ADJUSTMENT

Loop BW

Target Bandwidth: ~300 Hz

Type 2 Loop

CRYSTAL

Type

100 MHz SC-cut (x10)

OTHER

Label

Use conventional label with the
following information:

501-31414 (Current Rev.)

100M/1G GQMXO-PLM

+15 VDC

Serial # - Date Code

(Mark connectors with function)

Test Data

- Output Level

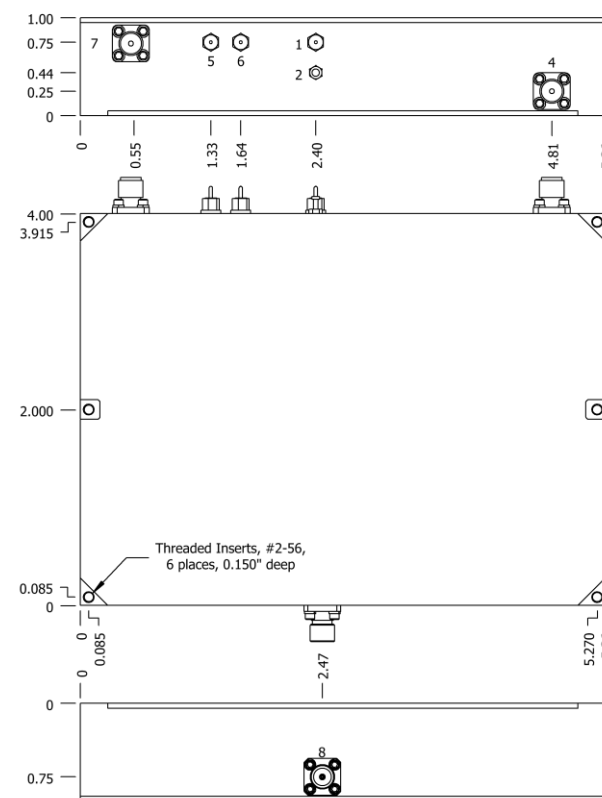
- Phase Noise – free-running

- Harmonics, Subs, Products, Spurious

- Power – Warm-up and Total

REV	DATE	REVISION RECORD	DWN	AUTH
-	01-24-18	Initial Release	PAC	

J2PM-03 MXO Connections	
Connector	Function
1	Supply Voltage
2	Ground, Case
4	RF Output B
5	Phase Lock Voltage
6	Phase Lock Alarm
7	External Reference Input
8	RF Output A



Wenzel Associates, Inc.

Austin, Texas

Title:

100M/1G Multiplied Crystal Oscillator (GQMXO-PLM)

P/N:

501-31414

Rev:

-

Date:

01-24-18

Drawn:

Ref:

Tolerances:
(except as noted)
Dimensions are in inches

0.XX Dec:
 ± 0.030 "

0.XXX Dec:
 ± 0.010 "

FSCM:
62821

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