



Model XO5153-022R Oven Controlled Crystal Oscillator

Electrical Specifications

Nominal Frequency (F₀): 10.0MHz

Warm Up Time @ 25° C with V_S = nominal

To within $2 \ge 10^{-8}$ of the frequency @ 1-hour <5.0 minutes

Frequency Stability

vs Operating Temperature Range : ≤ 0.7 ppb (pk-pk) 10-Years Aging: < 1ppm vs Supply $(\pm 50mV)$: $\leq \pm 0.2ppb$ Allan Deviation @ 1sec: 7x10⁻¹² typical Aging (After 30-days operation): per day: +/- 0.1ppb per year: +/- 30ppb

Frequency Adjustment

Method: External Voltage (Vc), 0VDC to +5VDC Range: $> \pm 1$ ppm sufficient for all causes for 20 years Slope: Positive

Output (Sinewave)

Level: +9dBm ±2dBm Load: $50\Omega \pm 5\%$

SSB Phase Noise (under static conditions)

-90dBc/Hz @ 1Hz offset -120dBc/Hz @ 10Hz offset -140dBc/Hz @ 100Hz offset -150dBc/Hz @ 1000Hz offset -155dBc/Hz @ 10kHz offset -155dBc/Hz @ 100kHz offset DATE 7 / 10 / 20

MtronPTI Model: XO5153-022R ENG. Approval: <u>*R.*</u> Lakhe DATE 7 / 10 / 20 MFG. Approval: G. Lara QA Approval: J. Nichols DATE 7 / 27 / 20

Spurious: < -70dBc

Power

Supply Voltage (Vs): +12VDC ± 0.5 VDC Power Consumption Steady State @ 25°C: 1.7W typical Turn-on (*a*) All Temperatures: \leq 7.0W.

Environmental

Temperature Range Operating (OTR): -30°C to +70°C Storage: -45°C to +85°C Vibration (Survival only, with power applied) Per MIL-STD 202G, Method 214, Test Condition IA, (.02g²/Hz 100 Hz to 1000 Hz) Shock (Survival only, with power applied) Per MIL-STD 202G, Method 213, Test Condition A, 50g peak half sine.

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Vtune N/C SUPPLY RF OUT GROUND

PIN FUNCTIONS

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Data Sheet Revision Table:

Date	Rev.	Orig.	Details of Revision
07-09-20	А	DPD	Production release

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