



OCXO 127-10

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CRYSTAL OSCILLATOR SPECIFICATION

This specification defines the operating characteristics of an ovenized crystal oscillator. Long term stability is assured through use of premium components.

REV.	DESCRIPTION OF REVISION	REQ. BY	DWN. BY	DATE
-		TST	TST	10-26-93
A	±5% in 2.5. was ±5	BTB	TST	03-09-94
B	Added < +18 dBm to 1.3., In 2.7 30 minutes was 15 minutes, Rewrote second section in paragraph 2.7.	BTB	TST	07-21-94
C	Was specification for OCXO 127-14	LMH	TST	10-04-94

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	31785	OCXO 127-10	1	3	114-605	C

- 1. OUTPUT
 - 1.1. Frequency 3.000 MHz
(At time of shipment set to $\pm 1 \times 10^{-8}$ @ +25°C)
 - 1.2. Waveform Sine wave
 - 1.3. Level > +13 dBm
< +18 dBm (Cpk > 1.5)
 - 1.4. Load 50 Ω $\pm 5\%$
 - 1.5. Harmonics < -20 dBc

- 2. FREQUENCY STABILITY
 - 2.1. Total < $\pm 2.5 \times 10^{-7}$ /year for Ambient, Aging, Voltage, and load.
 - 2.2. Ambient < $\pm 5 \times 10^{-8}$ (Cpk > 1.5)
from -30°C to +70°C
(referenced to +25°C)
 - 2.3. Aging
 - a. Daily < $\pm 1 \times 10^{-9}$ at time of shipment
 - b. Yearly < $\pm 1 \times 10^{-7}$
 - 2.4. Voltage
 - a. Oscillator < $\pm 1 \times 10^{-9}$ /+4% change
 - b. Oven < $\pm 3 \times 10^{-9}$ /voltage range
 - 2.5. Load < $\pm 1 \times 10^{-9}$ /+5% change
 - 2.6. Phase noise < -140 dBc @ 60 kHz
 - 2.7. Retrace < $\pm 1 \times 10^{-7}$ after 30 minutes
< $\pm 3.3 \times 10^{-8}$ after 24 hours
(at +25°C, From 3 MHz following a maximum of 4 weeks off power)

- 3. MECHANICAL FREQUENCY ADJUSTMENT
 - 3.1. Range > ± 1 PPM
 - 3.2. Resolution < $\pm 1 \times 10^{-8}$
 - 3.3. Control Multi-turn trimmer

- 4. INPUT POWER
 - 4.1. Oscillator
 - a. Voltage +15 VDC $\pm 4\%$
 - b. Current < 50 mA
 - 4.2. Oven
 - a. Voltage +27 VDC +3 VDC, -6 VDC
 - b. Current < 400 mA @ turn on
 - c. Steady state < 2.8 Watts

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5. ENVIRONMENTAL

5.1. Humidity

MIL-STD-202F, Method 103B, Test Condition A, except at +50°C (95% R.H. @ +50°C, non-condensing, 240 hours) -40°C to +85°C

5.2. Storage temperature

6. MECHANICAL

6.1. Applicable series

OCXO 127 series

6.2. Model number

OCXO 127-10

6.3. Outline drawing

125-353

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