



by SaRonix

Ref. No. Series M
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A crystal controlled, highly accurate and stable CMOS compatible oscillator. Device features include low power consumption, low aging, and a hermetically sealed all metal package.

Frequency Range: 10 kHz - 2.000000 MHz

Freq. Range

Initial Accuracy at 25°C

kHz	AA	A	B	C
10-74.9	±0.001%	±0.003%	±0.010%	±0.100%
75-169	±0.003%	±0.005%	±0.010%	±0.100%
170-249	±0.005%	±0.010%	±0.020%	±0.200%
250-499	±0.010%	±0.020%	±0.050%	±0.500%
500-2000	±0.025%	±0.050%	±0.100%	±1.000%

Temperature Characteristic:

$$\Delta f/f = K (T_0 - T)^2 \text{ where } T = \text{point of temperature comparison, } K = -0.038 \text{ ppm}/^\circ\text{C}^2 \text{ typ.}$$

Operating: -20°C to +70°C
Storage: -30°C to +85°C

Rated	Operating
+5 VDC $\pm 10\%$	+3 VDC min. +10 VDC max.

40 μ A typical @ 40.0000 kHz

Symmetry: 50% $\pm$ 10% at 50% V_{DD}
 & Fall Times: 40 ns typical, 60 ns max.
 "0" Level: $V_{SS} + 0.5V$ max.
 "1" Level: $V_{DD} - 0.5V$ min.
 Output Load: 200 k Ω at 15 pF

Shock:	MIL-STD-883C, Method 2002.3, Condition B
Solderability:	MIL-STD-883C, Method 2003.5
Terminal Strength:	MIL-STD-202F, Method 211A, Conditions A and C
Vibration:	MIL-STD-883C, Method 2007.1, Condition A
Solvent Resistance:	MIL-STD-202F, Method 215C
Resistance to Soldering Heat:	MIL-STD-202F, Method 210A, Condition B

Gross Leak Test:	MIL-STD-883C, Method 1014.8, Condition C1
Fine Leak Test:	MIL-STD-883C, Method 1014.8, Condition A2, <5 × 10 ⁻⁸ ATM cc/sec.
Thermal Shock:	MIL-STD-883C, Method 1011.7, Condition A
Moisture Resistance:	MIL-STD-883C, Method 1004.6

Type _____ **NCL** **020** **C** **-100.0000** **Frequency in kHz**
Model _____ **Frequency Tolerance**
 020 10 kHz to 250 kHz
 030 250 + kHz to 2.0000 MHz
 (see table above)