



# Crystal Clock Oscillator — HCMOS

by SaRonix

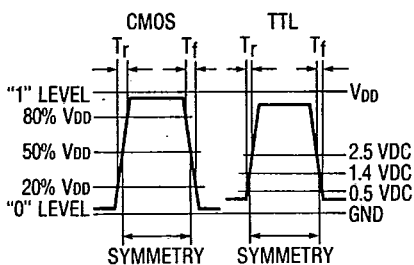
## Technical Data

Ref. No.	Series C
Date	May 1988
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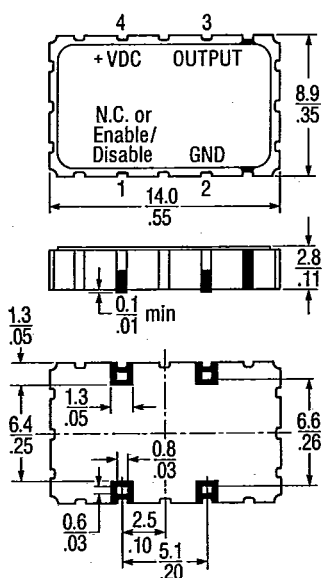
### Description

A crystal controlled, low current hybrid oscillator circuit providing precise rise/fall times to drive both CMOS and TTL loads. The device is housed in a ruggedized, ceramic base with gold-plated nickel-tungsten contacts suitable for today's pick and place, surface mount environments.

### Output Waveform



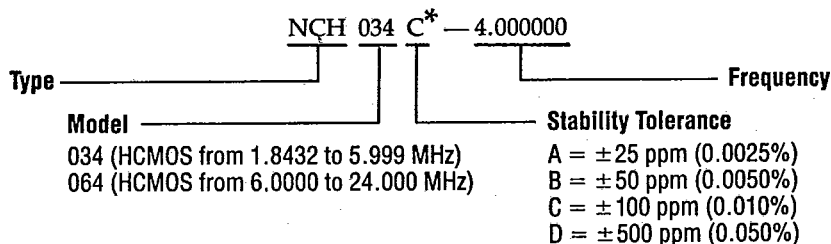
### Package



Scale: None (Dimension in  $\frac{mm}{inches}$ )

<b>Frequency Range:</b>	100 kHz to 35 MHz
<b>Frequency Stability:</b>	$\pm 0.005\%$ to $\pm 0.050\%$ over operating temperature and voltage.
<b>Temperature Range:</b>	Operating: $0^{\circ}\text{C}$ to $+70^{\circ}\text{C}$ Storage: $-55^{\circ}\text{C}$ to $+125^{\circ}\text{C}$
<b>Input Voltage:</b>	$+5\text{ VDC} \pm 0.5\text{V}$
<b>Input Current:</b>	(Typical when $C_L = 15\text{ pF}$ ) 8 mA at 1 MHz 20 mA at 30 MHz
<b>TTL Output:</b>	Symmetry: $50\% \pm 10\%$ max. Rise & Fall Times: 20% to 80% $V_{DD}$ : $T_r = 8\text{ ns max.}$ ; $T_f = 8\text{ ns max.}$ 0.5V to 2.5V: $T_r = 6\text{ ns max.}$ ; $T_f = 6\text{ ns max.}$ "0" Level: +0.5 volts "1" Level: +2.5 volts Output Load: 15 pF typical
<b>Mechanical:</b>	Reflow Method: Vapor Phase/Wave Solder Reflow Process Conditions: Vapor Phase $215^{\circ}\text{C}$ ( $419^{\circ}\text{F}$ ) 5 minutes max. Wave Solder $260^{\circ}\text{C}$ ( $507^{\circ}\text{F}$ ) for 5 seconds Solvent Resistance: MIL-STD-202F, Method 215B Resistance to Soldering Heat: MIL-STD-202F, Method 210A, Condition B
<b>Environmental:</b>	Cycle: MIL-STD-883B, Method 1010.2, Level B Shock: 5.000 g, 0.35 msec, $\frac{1}{2}$ sinewave, 3 shocks each plane Vibration: 10 Hz – 55 Hz, 0.060" D.A., 55 Hz – 2000 Hz 25 g, Duration time 12 hours Lead Material: Gold plated over Nickel and Tungsten Thermal Shock: $-55^{\circ}\text{C}$ to $+125^{\circ}\text{C}$ , 100 cycles

### Part Numbering Guide



\*For Enable/Disable function on pin #1, add "E" suffix after the tolerance.  
Example: NCH034CE - 4.0000