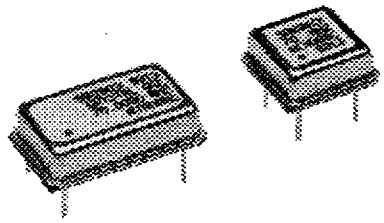
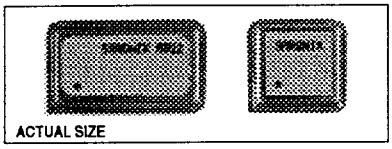
SaRonix

Crystal Clock Oscillator — 3 VOLT, Tri-State, HCMOS

Technical Data — NTH / NCH Series





ACTUAL SIZE

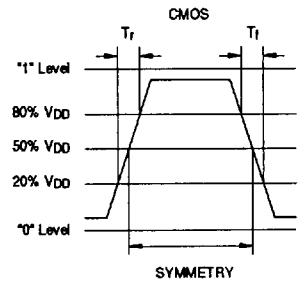
Description

A crystal controlled, low current oscillator providing precise rise and fall times to drive High Speed HCMOS and NMOS microprocessors. The tri-state function on the NTH enables the output to go high impedance. Device is packaged in a 14 or an 8-pin DIP compatible resistance welded, all metal grounded case, to reduce EMI.

Applications & Features

- Clock 16 and 32 bit microprocessors
- Tri-State output on NTH
- HCMOS compatible
- Available up to 50 MHz
- Grounded, all metal full size or half size case

Output Waveform



Frequency Range:	1.5 MHz to 50 MHz
Frequency Stability:	±25, ±50 or ±100 ppm over all conditions: calibration tolerance, operating temperature, input voltage change, load change, aging, shock and vibration.
Temperature Range:	
Operating:	0°C to +70°C (extended temperature range available)
Storage:	-55°C to +125°C
Supply Voltage:	
Recommended Operating:	+3.0V ±10%, +3.3V ±10%
Absolute Maximum:	+7VDC
Supply Current:	
	30pF Load
	typ / max
Frequency: to 30 MHz	20 / 45mA
30+ to 50 MHz	22 / 45mA
Output Drive:	
HCMOS	
Symmetry:	50 ±5% at .5 V_{DD}
Rise and Fall Times:	20% to 80% V_{DD}: T_r = 4ns max, T_f = 4ns max
Logic "0":	10% V_{DD} max
Logic "1":	90% V_{DD} min
Output Load:	30pF
Mechanical:	
Shock:	MIL-STD-883, Method 2002, Condition B
Solderability:	MIL-STD-883, Method 2003
Terminal Strength:	MIL-STD-202, Method 211, Conditions A and C
Vibration:	MIL-STD-883, Method 2007, Condition A
Solvent Resistance:	MIL-STD-202, Method 215
Resistance to Soldering Heat:	MIL-STD-202, Method 210, Condition B
Environmental:	
Gross Leak Test:	MIL-STD-883, Method 1014, Condition C
Fine Leak Test:	MIL-STD-883, Method 1014, Condition A2 <5 x 10^{-8} ATM cc/sec
Thermal Shock:	MIL-STD-883, Method 1011, Condition A
Moisture Resistance:	MIL-STD-883, Method 1004

8003329 0000194 561

SaRonix 151 Laura Lane • Palo Alto, CA 94303 • USA • 415-856-6900 • 800-227-8974 • Fax 415-856-4732

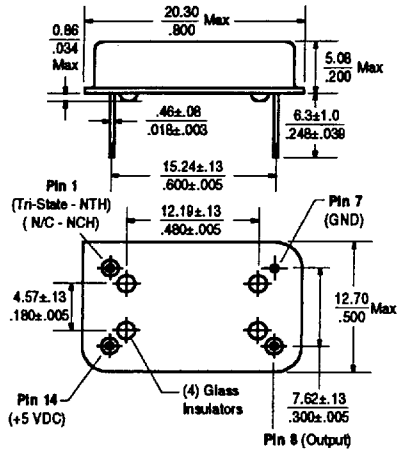
SaRonix

Crystal Clock Oscillator — 3 VOLT, Tri-State, HCMOS

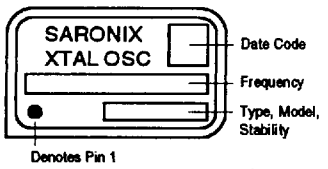
Technical Data — NTH / NCH Series

Package Details

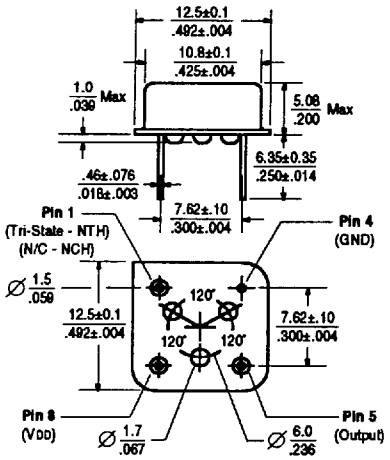
FULL SIZE PACKAGE



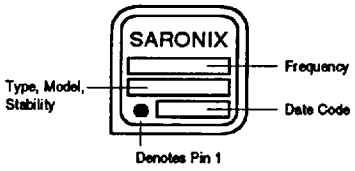
Standard Marking Format



HALF SIZE PACKAGE



Standard Marking Format



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

Part Numbering Guide

NTH 080 C 3 - 40.0000

NTH - Tri state
NCH - Pin 1 N/C

Model
030 = 0.5 ~ 6 MHz, full size
060 = 6 ~ 24 MHz, full size
080 = 24 MHz up, full size
039 = 0.5 ~ 6 MHz, half size
069 = 6 ~ 24 MHz, half size
089 = 24 MHz up, half size

Stability Tolerance
A = ±25 ppm (0.0025%)
B = ±50 ppm (0.005%)
C = ±100 ppm (0.01%)

Supply
3 = 3V option

Frequency

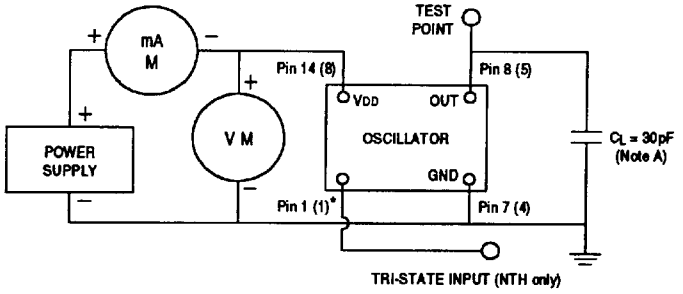
Example PN: NTH080C3 - 32.0000

Tri-State Logic Table (NTH only)

Pin 1 Input	Pin 8 (5) Output
Logic "1" or NC	Oscillation
Logic "0" or GND	High Impedance

Required Input Levels on Pin 1:
Logic "1" = 2.0V minimum
Logic "0" = 0.8V maximum

Test Circuit



NOTE A: C_L includes probe and fixture capacitance
*( ) Indicates pin numbers for half-size package

49373 N

All specifications are subject to change without notice.

8003329 0000195 4T8

DS-159 REV 02	June 1995	0.0

SaRonix 151 Laura Lane • Palo Alto, CA 94303 • USA • 415-856-6900 • 800-227-8974 • Fax 415-856-4732

2