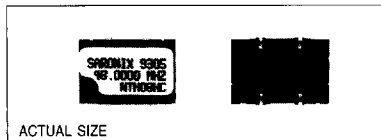
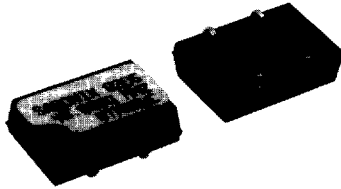


Technical Data

NTH / NTT Series, Type H



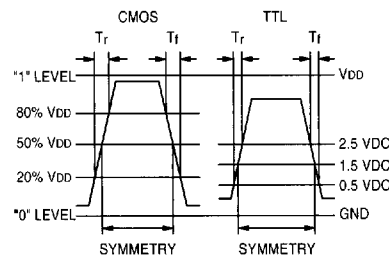
Description

A crystal controlled, low current oscillator providing rise and fall times to drive HCMOS and NMOS microprocessors. The plastic-molded surface mountable package is ideal for today's automated assembly environments. J-leads are compatible with EIA standard footprints. The HCMOS device is capable of driving both CMOS and TTL loads.

Applications & Features

- Compact, plastic-molded, surface mountable package
- TTL and CMOS compatible
- Tri-State output
- Matches EIA standard SO-J-20 footprint
- Ideally suited for use with contemporary MPU's and custom ASIC's.

Output Waveform



Frequency Range:	1 MHz to 70 MHz
Frequency Stability:	±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 Storage: -55°C to +125°C
Supply Voltage:	Recommended Operating: +5 VDC ±10% Absolute Maximum: +7 VDC
Supply Current:	1 MHz to 26 MHz: 15mA 26 MHz to 50 MHz: 30mA Above 50 MHz: 38mA
Output Drive:	
HCMOS	Symmetry: 50% ±10% @ 50% VDD Rise & Fall Times: 20% to 80% VDD: Tr = 8ns max, Tf = 8ns max Logic 0: 10% VDD max Logic 1: 90% VDD min Output Load: 50 pF max to 50 MHz, 30 pF > 50 MHz
TTL	Symmetry: 50% ±10% @ 1.5V level Rise & Fall Times: 0.5 to 2.5V: Tr = 8ns max, Tf = 8ns max Logic 0: 0.5V max Logic 1: 2.5V min Output Load: 10 TTL to 50 MHz, 5 TTL > 50 MHz
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:	
Thermal Shock:	MIL-STD-883, Method 1011, Condition A
Moisture Resistance:	MIL-STD-883, Method 1004

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Technical Data

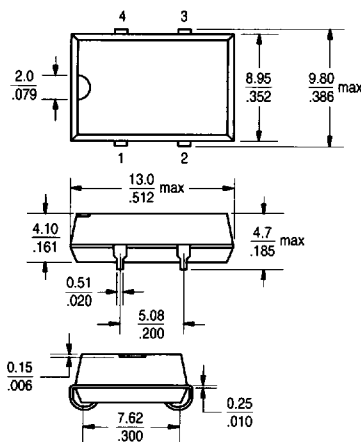
NTH / NTT Series, Type H

Tri-State Logic Table

Pin 1 Input	Pin 3 Output
Logic "1" or NC	Oscillation
Logic "0" or GND	High Impedance

Required Input Levels on Pin 1:
 Logic "1" = 2.0V min
 Logic "0" = 0.8V max

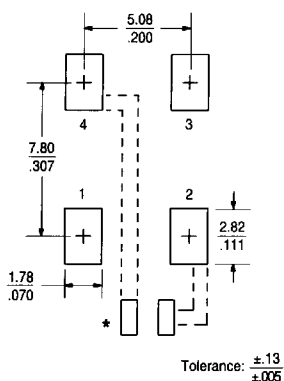
Package Details, Type H



Pin Function:

Pin 1: Tri-State Control
 Pin 2: GND
 Pin 3: Output
 Pin 4: +5 VDC

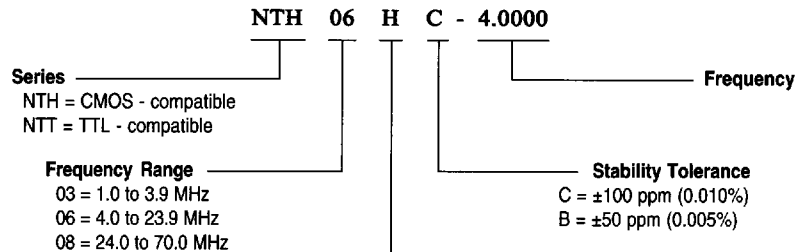
Recommended Land Pattern



* External high frequency power supply decoupling required.

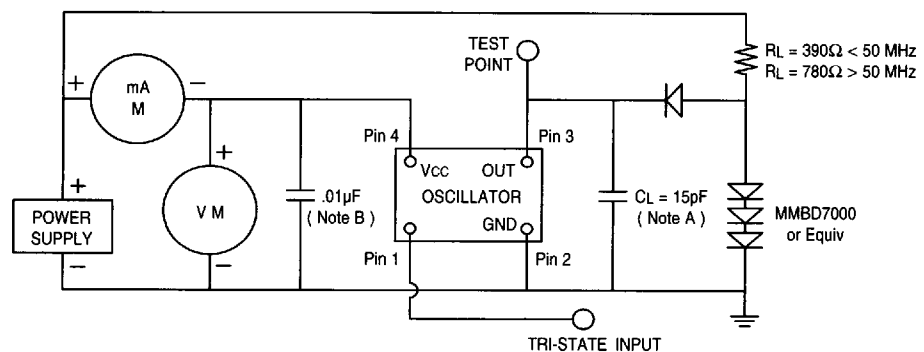
Scale: None (Dimensions in mm / inches)

Part Numbering Guide



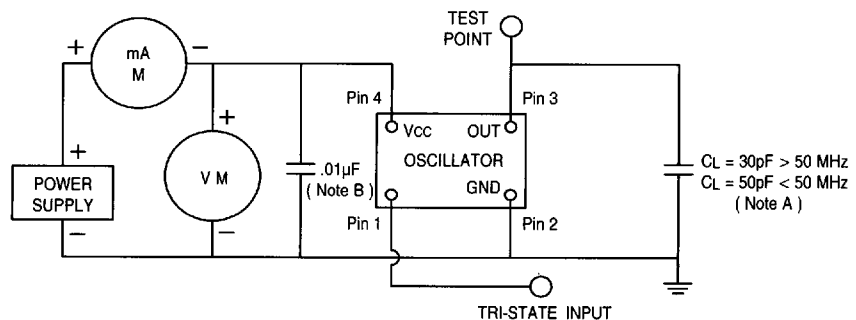
Example PN: NTH08HC - 36.0000

Test Circuits



NOTE: A. CL includes probe and fixture capacitance.
 NOTE: B. An external .01 μ F bypass capacitor close to package ground and Vcc pin is recommended

FIGURE 1 - TTL TEST CIRCUIT



NOTE: A. CL includes probe and fixture capacitance.
 NOTE: B. An external .01 μ F bypass capacitor close to package ground and Vcc pin is recommended

FIGURE 2 - HCMOS TEST CIRCUIT

All specifications are subject to change without notice.

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