

Technical Data

NTH / NCH Series



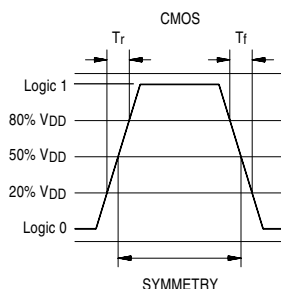
Description

A crystal controlled, low current, low jitter and high frequency oscillator with precise rise and fall times demanded in networking applications. 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

- ADSL, DSL
- DS3, ES3, E1, STS-1, T1
- Ethernet Switch, Gigabit Ethernet
- Fibre Channel Controller
- MPEG
- Network Processors
- Voice Over Packet
- 32 Bit Microprocessors
- Tri-State output on NTH
- HCMOS compatible
- Available up to 106.25 MHz
- Grounded, all metal, full or half size packages, gull wing leads available
- Plastic SMD available, see separate data sheet

Output Waveform

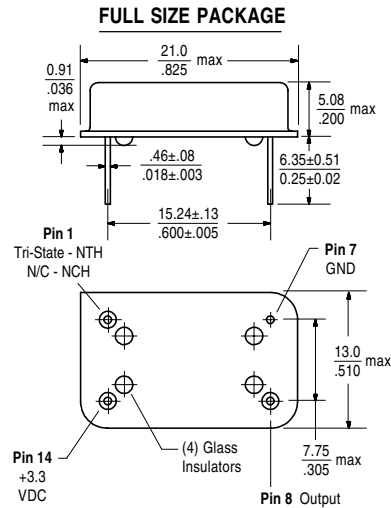


Frequency Range:	0.5 MHz to 106.25 MHz
Frequency Stability:	±20, ±25, ±50 or ±100 ppm over all conditions: calibration tolerance, operating temperature, input voltage change, load change, 30 day aging, shock and vibration.
Temperature Range:	Operating: 0 to +70°C or -40 to +85°C, See Part Numbering Guide Storage: -55 to +125°C
Supply Voltage:	Recommended Operating: 3.3V ±10%
Supply Current:	20mA max, 0.5 to 30 MHz 25mA max, 30+ to 50 MHz 30mA max, 50+ to 80 MHz 35mA max, 80+ to 106.25 MHz
Output Drive:	HCMOS Symmetry: 40/60% max @ 50% VDD 45/55% max to 70 MHz max Rise and Fall Times: 4ns max 0.5 to 50 MHz, 20% to 80% VDD 3ns max 50+ to 80 MHz 1.5ns max 80+ to 106.25 MHz Logic 0: 10% VDD max Logic 1: 90% VDD min Load: 50pF, 0.5 to 50 MHz 30pF, 50+ to 70 MHz 15pF, 70+ to 106.25 MHz Period Jitter RMS: 8ps max
Mechanical:	Shock: MIL-STD-883, Method 2002, Condition B Solderability: MIL-STD-883, Method 2003 Terminal Strength: MIL-STD-883, Method 2004, Conditions A & 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 A, B or C
Environmental:	Gross Leak Test: MIL-STD-883, Method 1014, Condition C Fine Leak Test: MIL-STD-883, Method 1014, Condition A2 Thermal Shock: MIL-STD-883, Method 1011, Condition A Moisture Resistance: MIL-STD-883, Method 1004

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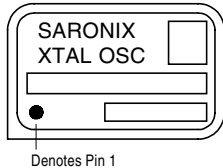
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Package Details

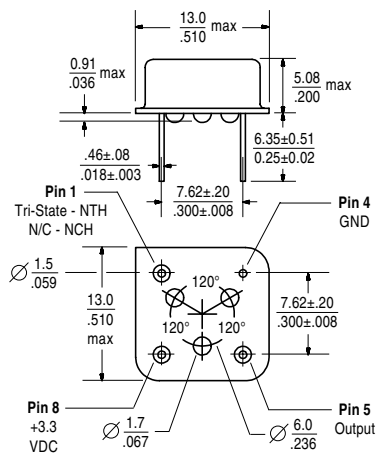


Standard Marking Format**

Includes Date Code, Frequency & Model



HALF SIZE PACKAGE



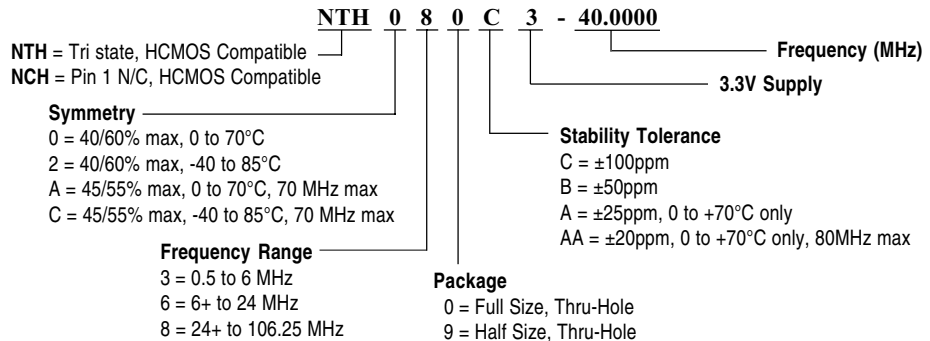
Standard Marking Format**

Includes Date Code, Frequency & Model



**Exact location of items may vary

Part Numbering Guide



Example PN: NTH080C3 - 24.0001

Tri-State Logic Table (NTH only)

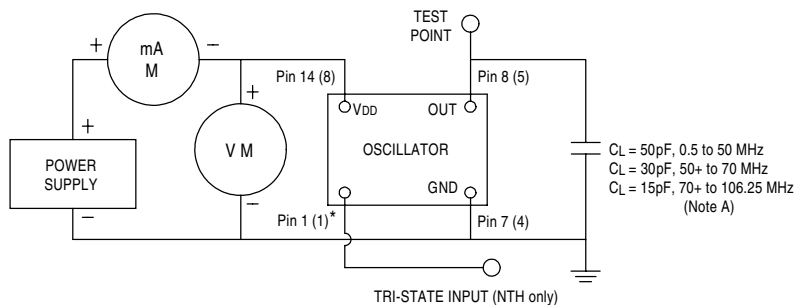
Pin 1 Input	Pin 8 (5) Output
Logic 1 or NC	Oscillation
Logic 0 or GND	High Impedance

Required Input Levels on Pin 1:

Logic 1 = 2.2V min

Logic 0 = 0.8V max

Test Circuit



NOTE A: CL includes probe and fixture capacitance

* () Indicates pin numbers for half-size package

All specifications are subject to change without notice.

DS-159 REV C01