



Product Description

A crystal controlled, 3.3 or 5 volt, low current oscillator designed to drive low power, high performance 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.

Product Features

- Footprint compatible and direct replacement for SG615 series
- Frequency range from 1 to 70 MHz
- 3.3V and 5V operations
- Tri-State output standard
- EIA standard SO-J-20 foot-print
- Compact, plastic-molded SMD
- Available on tape & reel; 24mm tape, 1000pcs reel

Typical Applications

- Low voltage CMOS, HCMOS and TTL compatible
- Ideally suited for use with contemporary MPUs and custom ASICs
- Perfect for PCs, laptop, portable applications; disk drives – anywhere small size, low power and surface mountability are a priority

Frequency Range:

- 1 MHz to 70 MHz

Temperature Range:

- Operating: 0 to +70°C or -40 to +85°C
- Storage: -55 to +125°C

Frequency Stability Tolerance:

±50 or ±100 ppm over all conditions: calibration tolerance, operating temperature, input voltage change, load change, aging, shock and vibration.

Supply Voltage:

Recommended Operating: 5V ±10% or 3.3V ±10% (HCMOS only)

Supply Current:

	5V, 10TTL/30pF	5V, 50pF	3.3V, 30pF
1 MHz to 26 MHz	15mA max	35mA max	15mA max
26+ MHz to 50 MHz	30mA max	45mA max	25mA max
50+ MHz to 70 MHz	45mA max		25mA max

Mechanical:

- Shock: MIL-STD-883, Method 2002, Condition B
- Solderability: MIL-STD-883, Method 2003
- Terminal Strength: MIL-STD-883, Method 2004, Condition B2
- 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 I or J

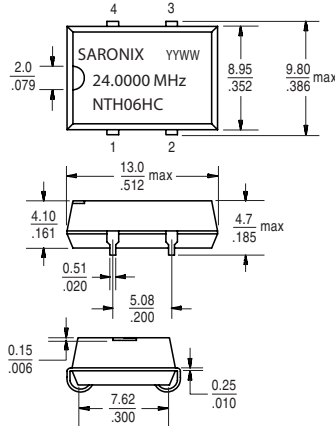
Environmental:

- Thermal Shock: MIL-STD-883, Method 1011, Condition A
- Moisture Resistance: MIL-STD-883, Method 1004

Reflow Temperature:

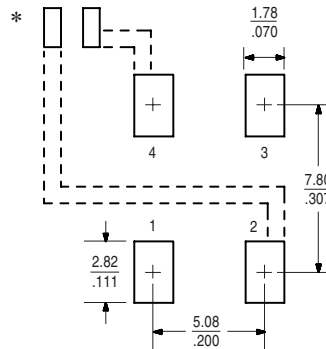
240°C Max

Packaging Information: Type H



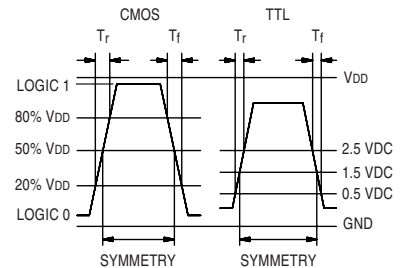
Pin Function:
Pin 1: Tri-State Control
Pin 2: GND
Pin 3: Output
Pin 4: +5 VDC

Recommended Land Pattern



*External high frequency power supply decoupling required.

Output Waveform



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 or 0.2V max @ 3.3V

Output Drive

HCMOS:

Symmetry: 40/60% or 45/55% max @ 50% V_{DD}, See Part Numbering Guide

Rise and Fall Times: 8ns max 20% to 80% V_{DD} @ 5V
4ns max 20% to 80% V_{DD} @ 3.3V

Logic 0: 10% V_{DD} max or 0.4V max @ 3.3V

Logic 1: 90% V_{DD} min or V_{DD} - 0.4V min @ 3.3V

Load: 50pF max to 50 MHz, 30pF 50+ to 70 MHz
30pF @ 3.3V operation

Period Jitter RMS: 8ps max

TTL 5(V):

Symmetry: 40/60% or 45/55% max @ 1.5V level, See Part Numbering Guide

Rise and Fall Times: 8ns max 0.5 to 2.5V

Logic 0: 0.5V max

Logic 1: 2.5V min

Load: 10 TTL to 50 MHz, 5 TTL 50+ to 70 MHz

Period Jitter RMS: 8ps max

Ordering Information

