

**NEW
PRODUCT**

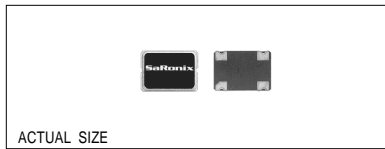
SaRonix

Crystal Clock Oscillator

3.3V, HCMOS, SMD

Technical Data

S1613 Series



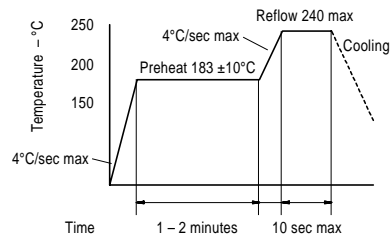
Description

The S1613 Series are crystal-controlled, low-current oscillators providing precise rise and fall times to drive high performance applications. The sub-miniature, low profile leadless ceramic package has gold-plated contact pads, ideal for today's pick-and-place SMT environments.

Applications & Features

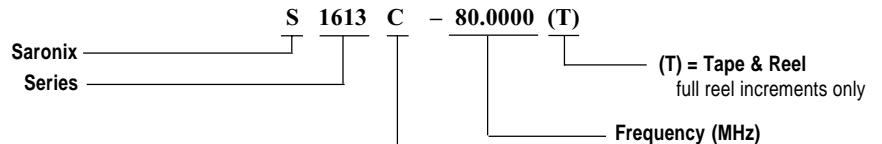
- Fibre Channel - 106.25MHz
- Gigabit Ethernet - 125 MHz
- Perfect for PCs; Notebook, Palmtop Computers; Portable Applications; PCMCIA Cards, or anywhere small size, low power, surface mountability are a priority
- Tri-State Standard
- 1.9mm high ceramic package
- 3.3V operation
- HCMOS compatible
- Available on tape & reel; 16mm tape, 500pcs per reel

Solder Reflow Guide



Frequency Range:	1.544 MHz to 125 MHz
Frequency Stability:	±20, ±25, ±50 or ±100ppm over all conditions; calibration tolerance, operating temperature, input voltage change, load change, aging (1 year @ 25°C average ambient operating temperature), shock and vibration.
Temperature Range:	Operating: -10 to +70°C, -40 to +85°C Storage: -55 to +125°C
Supply Voltage:	3.3V ±10%
Supply Current:	Output Enabled: 15mA max 1.544 to 32 MHz 25mA max 32+ to 50 MHz 40mA max 50+ to 80 MHz 55mA max 80+ to 125 MHz Output Disabled: 10µA max 1.544 to 80 MHz 25mA max 80+ to 125 MHz
Output:	Symmetry: 45/55 % max @ 50% VDD, -40 to +85°C, 1.544 to 80 MHz 45/55 % max @ 50% VDD, -10 to +70°C, 80+ to 125 MHz 40/60 % max @ 50% VDD, -40 to +85°C Rise & Fall Times: 7ns max 1.544 to 50 MHz @ 20% to 80% VDD 5ns max 50+ to 80 MHz 3ns max 80+ to 125 MHz Logic 0: 10% VDD max Logic 1: 90% VDD min Load: 15pF max, 10LSTTL Period Jitter RMS: 5ps max
Mechanical:	Shock: MIL-STD-883, Method 2002, Condition B Solderability: MIL-STD-883, Method 2003 Vibration: MIL-STD-883, Method 2007, Condition A Solvent Resistance: MIL-STD-202, Method 215 Terminal Strength: MIL-STD-883, Method 2004, Condition D 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

Part Numbering Guide



Stability Tolerance

- AA = ±20ppm, -10 to +70°C (certain frequencies only, consult SaRonix)
- A = ±25ppm, -10 to +70°C (certain frequencies only, consult SaRonix)
- B = ±50ppm, -10 to +70°C
- C = ±100ppm, -10 to +70°C
- E = ±50ppm, -40 to +85°C
- F = ±100ppm, -40 to +85°C

DS-223 REV B04

NEW PRODUCT

SaRonix

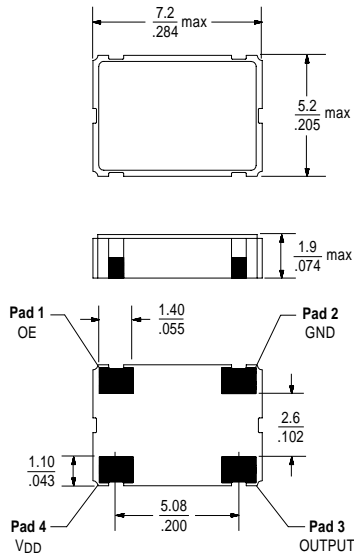
Crystal Clock Oscillator

3.3V, HCMOS, SMD

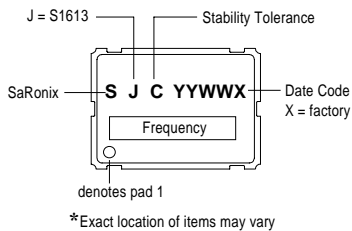
Technical Data

S1613 Series

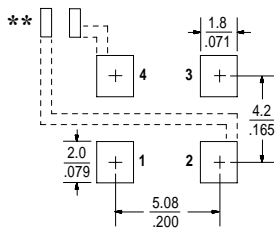
Package Details



Marking Format*



Recommended Land Pattern

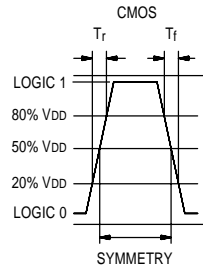


Tol: ±0.13mm

**External high frequency power supply decoupling required.

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

Output Waveform



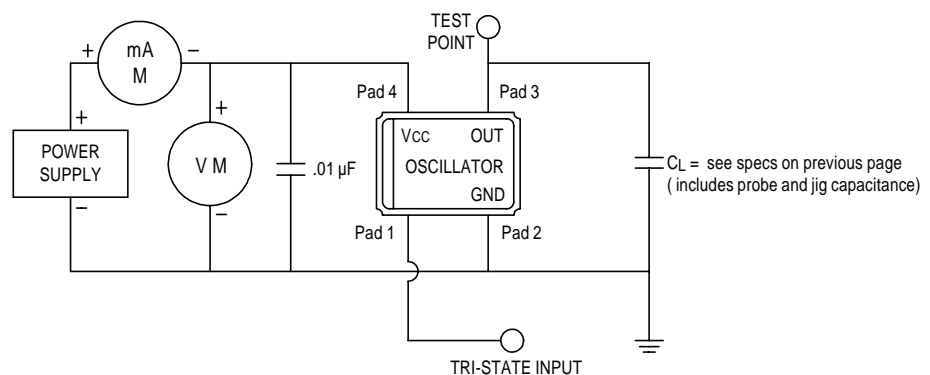
Tri-State Logic Table

Pad 1: Input	Pad 3: 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 Circuits



All specifications are subject to change without notice.

DS-223 REV B04