

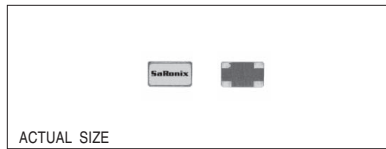
ADVANCE INFORMATION

SaRonix

Mini Crystal Clock Oscillator 3.3V, HCMOS, Tri-State, SMD

Technical Data

S1623 Series



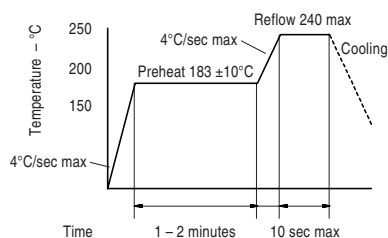
Description

The 3.3V S1623 Series are crystal-controlled, low-current oscillators providing precise rise and fall times to drive high performance applications. The sub-miniature 3.5 x 6 x 1.5mm, low profile leadless ceramic package has gold-plated contact pads ideal for today's pick-and-place SMT environments. Available to 50 MHz, the parts can be ordered with ± 20 , 25, 50 or 100 ppm frequency stability.

Applications & Features

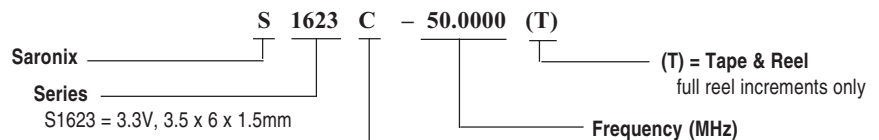
- Sub-miniature, 1.7mm high ceramic package ideal for SMT applications
- 3.3V operation
- Tri-State standard
- CMOS & HCMOS compatible
- Perfect for PCs; Notebook, Palmtop Computers; Portable Applications; PCMCIA Cards.
- Anywhere small size, low power, surface mountability are a priority.
- Available on tape & reel; 16mm tape, 1000pcs per reel

Solder Reflow Guide



Frequency Range:	1.544 MHz to 50 MHz
Frequency Stability:	± 20 , ± 25 , ± 50 or ± 100 ppm 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 $\pm 10\%$
Supply Current:	Output Enabled: 15mA max 1.544 to 32 MHz 25mA max 32+ to 50 MHz Output Disabled: 10 μ A max 1.544 to 50 MHz
Output:	Symmetry: 45/55% max @ 50% VDD Rise & Fall Times: 7ns max 20% to 80% VDD Logic 0: 10% VDD max Logic 1: 90% VDD min Load: 15pF max, 10LSTTL Period Jitter RMS: 8ps max
Tri-State Characteristics:	Output: oscillation @ VIN 2.2V min, high impedance @ VIN 0.8V max Internal Pullup Resistance: 50K Ω min Control Input: Disable Output Delay: 100 ns max Enable Output Delay: 10 ms max, 1.544 to 50MHz
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:	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

Part Numbering Guide



Stability Tolerance

- AA = ± 20 ppm, -10 to +70°C, limited frequencies, please contact SaRonix
- A = ± 25 ppm, -10 to +70°C, limited frequencies, please contact SaRonix
- B = ± 50 ppm, -10 to +70°C
- C = ± 100 ppm, -10 to +70°C
- E = ± 50 ppm, -40 to +85°C
- F = ± 100 ppm, -40 to +85°C

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Package Details

Marking Format (exact location of items may vary)

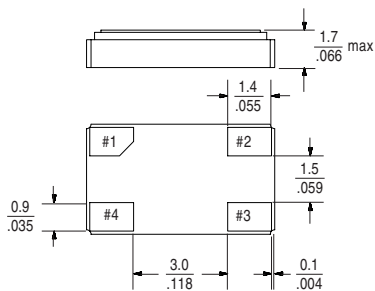
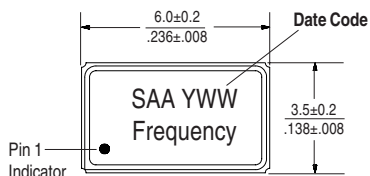
Line 1: S = SaRonix

C = Stability Tol. (see Part Numbering Guide)

Y = year: 1 = 2001, 2 = 2002, 3 = 2003 etc.

WW = week

Line 2: Frequency (up to 8 digits including decimal point)



Pin Configurations

- #1 = OE #2 = GND
- #4 = V_{DD} #3 = OUTPUT

Tri-State Logic Table

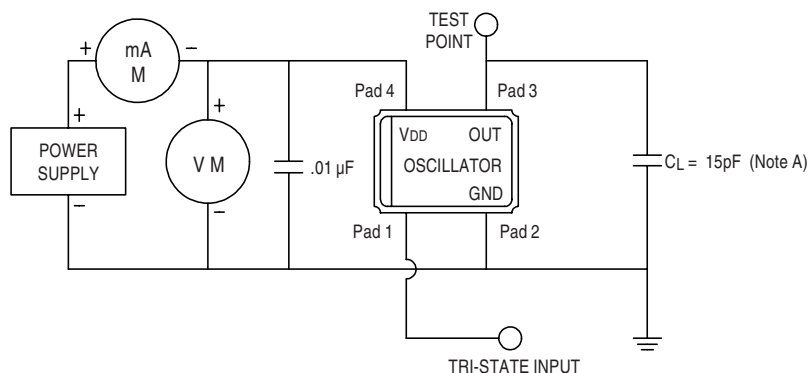
Pad # 1 Input	Pad # 3 Output
Logic 1 or NC	Oscillation
Logic 0 or GND	High Impedance

Required Input Level on pad #1:

Logic 1 = 2.2V min

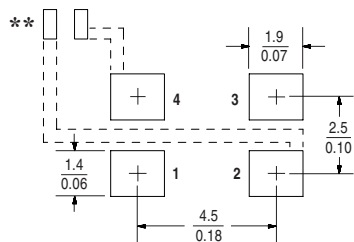
Logic 0 = 0.8V max

Test Circuits



Note A: C_L includes probe and jig capacitance.

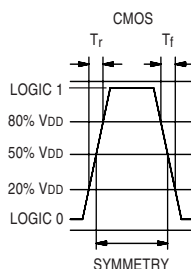
Recommended Land Pattern



** External high frequency power supply decoupling required.

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

Output Waveform



All specifications are subject to change without notice.

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