SaRonix

Crystal Clock Oscillator

2.5V, LVCMOS, Tri-State, SMD

Technical Data

S1614 Series

ACTUAL SIZE

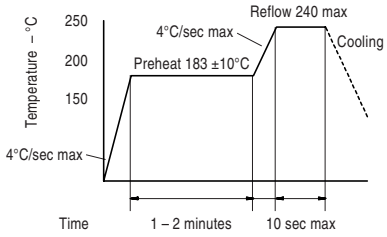
Description

The S1614 Series are LVCMOS crystal-controlled, low-current, 2.5V oscillators providing precise rise and fall times to drive high performance and low power applications. The sub-miniature, leadless ceramic package has gold-plated contact pads, ideal for today's pick-and-place SMT environments.

Applications & Features

- HDTV, MP3, Digital Cameras, GPS Ethernet, DSP, Set-top Boxes, PCMCIA Modem Cards
- 2.5V LVCMOS operation
- Perfect for applications, such as PC, PDA, Notebook, Palmtop Computers and PCMCIA Cards, and anywhere power and space conservation is a key factor.
- Tri-State Standard
- Available on tape & reel; 16mm tape,
- 1000pcs per reel

Solder Reflow Guide



Frequency Range:		1.544 MHz to 70 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:		2.5V ±5%
Supply Current:		
	Output Enabled:	15mA max 1.544 to 32 MHz 25mA max 32+ to 50 MHz 35mA max 50+ to 70 MHz
	Output Disabled:	10µA max 1.544 to 70 MHz
Output:		
	Symmetry:	45/55 % max @ 50% V_{DD}
	Rise & Fall Times:	10ns max 1.544 to 32 MHz @ 20% to 80% V_{DD} 7ns max 32+ to 70 MHz
	Logic 0:	10% V_{DD} max
	Logic 1:	90% V_{DD} min
	Load:	15pF 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
	Resitance 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

S 1614 B – 65.0000 (T)

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Series
2.5V, LVCMOS, SMD

Stability Tolerance
AA = ±20ppm, -10 to +70°C (call for frequency availability)
A = ±25ppm, -10 to +70°C (call for frequency availability)
B = ±50ppm, -10 to +70°C
C = ±100ppm, -10 to +70°C
E = ±50ppm, -40 to +85°C
F = ±100ppm, -40 to +85°C

Frequency (MHz)

Packing Method
(T) = Tape & Reel, **full reel increments only (1000pcs)**
Blank = Bulk

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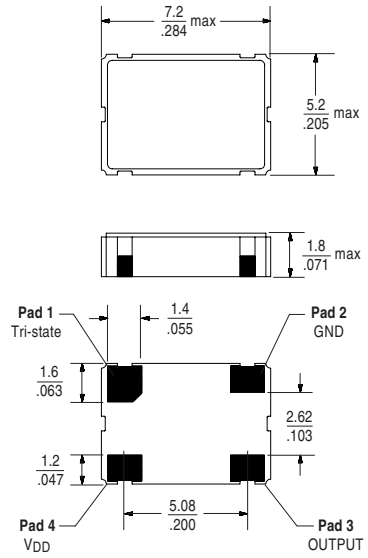
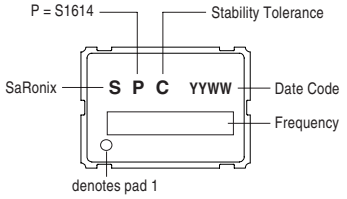
Package Details

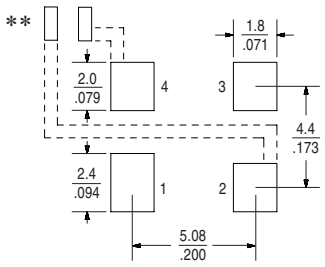


Marking Format*



*Exact location of items may vary

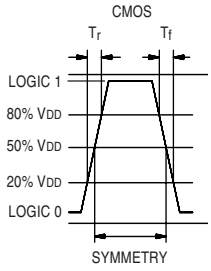
Recommended Land Pattern



**External high frequency power supply decoupling required.

Scale: None (Dimensions in mm / inches)

Output Waveform



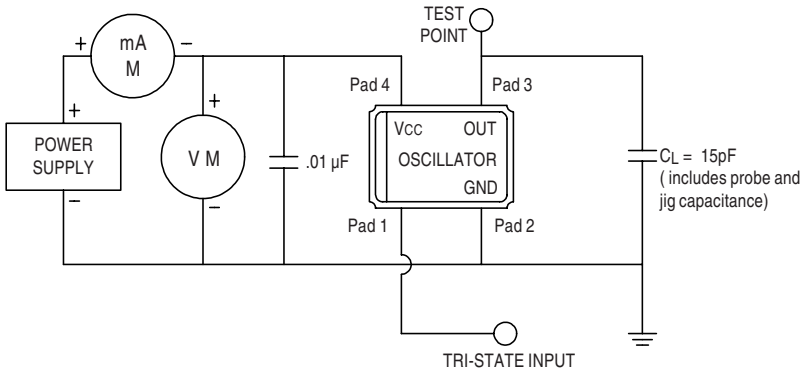
Tri-State Logic Table

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

Output:	Oscillation @ V_{IN}, 2.2V min
Output:	High Impedance @ V_{IN}, 0.8V max
Internal Pullup Resistance	50KΩ min
Control Input:	Disable Output Delay: 100ns max
Control Input:	Enable Output Delay: 10ms max 1.544 to 70 MHz

Test Circuits



All specifications are subject to change without notice.

DS-229 REV A