

Technical Data

S6800 Series



Description

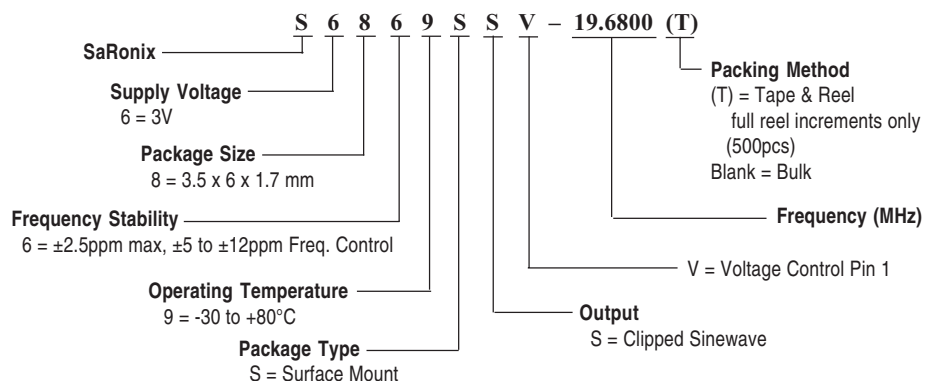
A surface mountable, digitally temperature compensated crystal oscillator for 3Volt operation. The sub-miniature size, extremely low profile and low power consumption of this TCVCXO makes it ideally suited for portable, wireless applications such as cellular telephones and networking. The hermetically sealed ceramic package is fully compatible with standard surface mounting processes.

Applications & Features

- Cellular Telephones (GSM, PDC, TDMA, CDMA)
- GPS
- Mobile and Portable Radio/Telephone
- Communications Transceivers
- 3 Volt operation
- Sub-miniature 3.5 x 6 mm, very low profile 1.7mm max height package
- Hermetically sealed, compatible with standard board washing techniques
- Available on tape & reel; 16mm tape, 500pcs per reel

Frequencies:	12.80, 13.00, 14.40, 16.384, 16.80, 19.20, 19.44, 19.68, 19.8 MHz
Frequency Stability:	vs. temperature: ± 2.5 ppm max vs. supply voltage: ± 0.3 ppm max vs. aging: ± 1 ppm max per year, ± 3.5 ppm / 5yrs, ± 6 ppm / 10yrs (@ 40°C Average Ambient Operating Temperature) vs. load: ± 0.3 ppm max, C_L : ([10k Ω // 10 pF] $\pm 10\%$)
Temperature Range:	Operating: -30 to +80°C
Supply Voltage:	3V $\pm 10\%$
Supply Current:	1.5mA max (12.8 to 13 MHz), 2.0mA max (14.4 to 19.8 MHz)
Output:	<u>Clipped Sinewave</u> Level: 0.9V peak-to-peak min Load: 10K Ω // 10pF
Frequency Control Range:	± 5 to ± 12 ppm, 0.5 to 2.5V
Control Voltage:	1.5V ± 1.0 V
Phase Noise:	-40 dBc/Hz @ 1Hz -90 dBc/Hz @ 10Hz -112 dBc/Hz @ 100Hz -130 dBc/Hz @ 1kHz -145 dBc/Hz @ 10kHz -148 dBc/Hz @ 100kHz
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 Resistance to Soldering Heat: MIL-STD-202, Method 210, Condition I
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 Humidity: MIL-STD-202, Method 103, Condition C

Part Numbering Guide



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Package Details

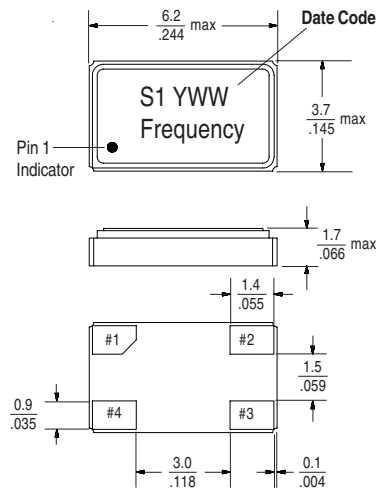
Marking Format - exact location of items may vary

S = SaRonix

1 = ± 2.5 ppm, ± 5 to 12ppm FC, -30 to +80°C

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

WW = week



Pad Configurations

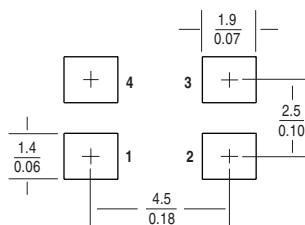
Pad 1 = Control Voltage

Pad 2 = GND

Pad 3 = Output

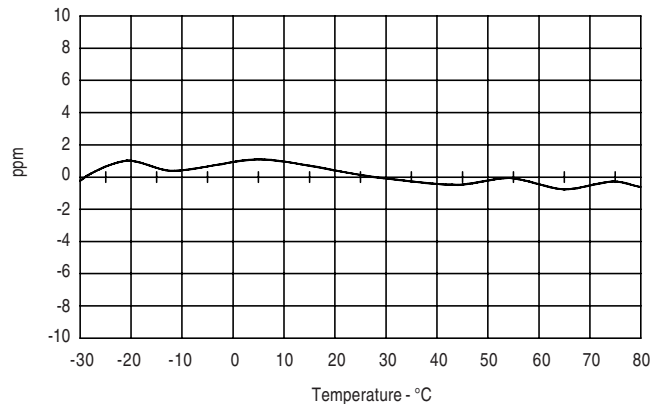
Pad 4 = V_{DD}

Recommended Land Pattern

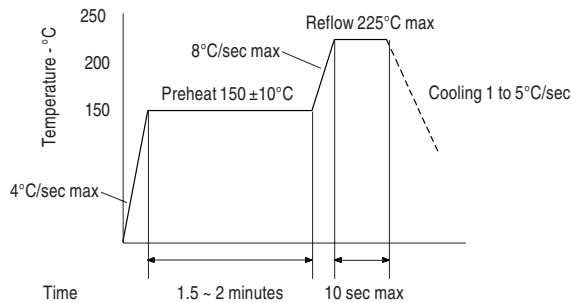


Scale: None (Dimensions in $\frac{\text{mm}}{\text{inches}}$)

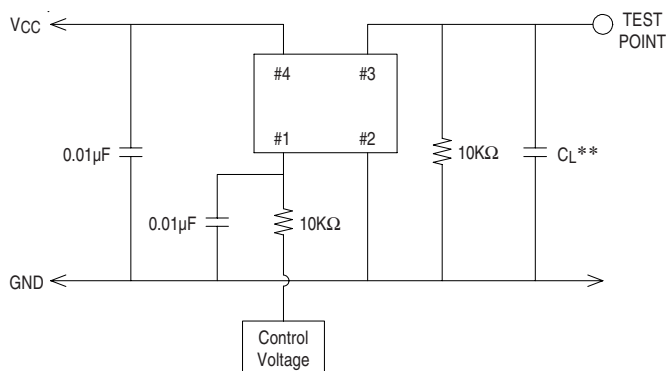
Typical Frequency vs. Temperature Characteristics



Solder Reflow Guide



Test Circuit



** C_L = 10pF (Including probe and jig capacitance)

All specifications are subject to change without notice.

DS-173 REV B