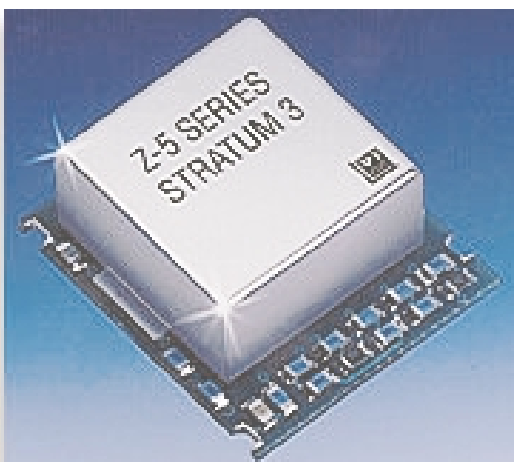


Z5 Series P/N 6825

Temperature Compensated Crystal Oscillators



Features

- 12.800 MHz output frequency
- Low Current Draw Consumption: <20 mA
- Aging to <4.0 ppm for 20 years
- Package: 1.0" x 1.15" x 0.395" (25.40x29.21x10.03mm)
- LS TTL output
- +3.3 Vdc (operable over +3.135 Vdc to +5.5 Vdc)

Applications

- For use with Semtech Chip ACS8510 SETS
- SONET/SDH Network Timing Sources
- Computer Telephony CT-BUS

Description

The 6825 has been optimized to work with the Semtech Chip ACS8510 SETS to meet the requirements of Bell Core specification GR-1244-CORE and ITU G.813.

This unit has been designed to meet the Frequency vs Supply requirement of ± 0.05 ppm over any $\pm 5\%$ change in Supply from a minimum of +3.135 Vdc to a maximum of +5.5 Vdc.

Note: Other Stability and Output Options are available. A data sheet explaining all the Z5 series options can be downloaded from the TCXO section of our website

at: [**www.stratum3.com**](http://www.stratum3.com)

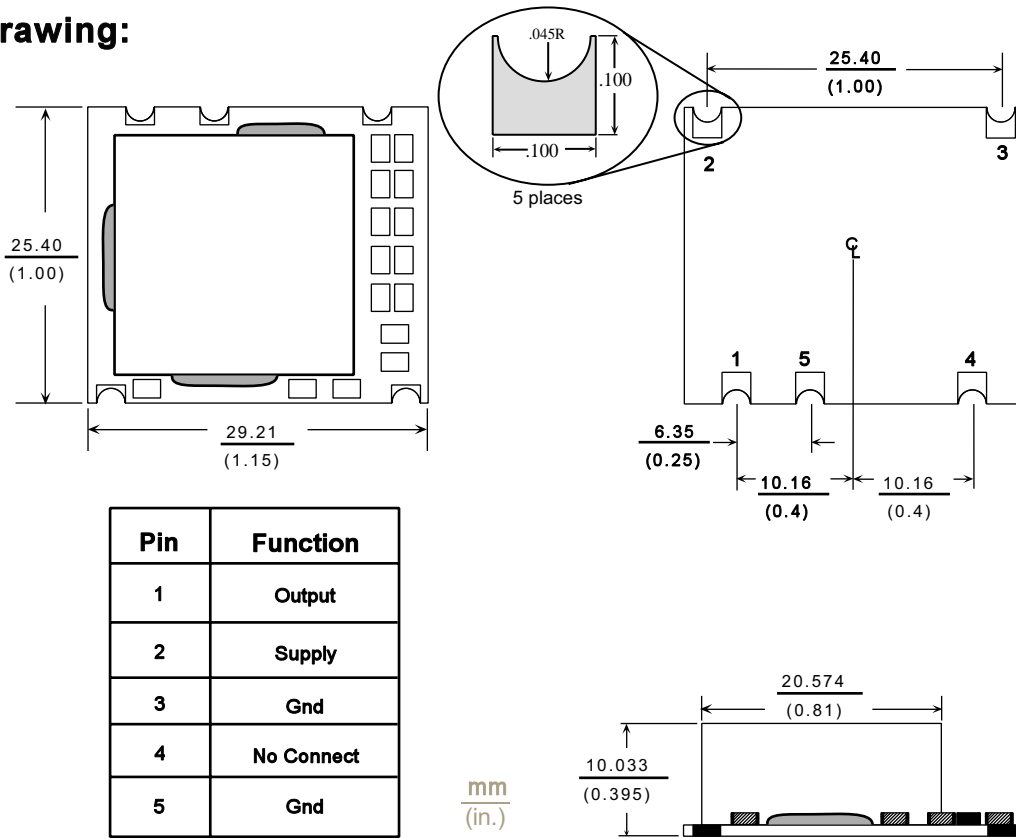
6825 Temperature Compensated Crystal Oscillators

Performance Characteristics

Parameter	Characteristics	
Part Number:	6825	
Frequency:	12.800 MHz	
Operating Temp Range:	-5°C to +55°C	
Aging:	<4.0 ppm for 20 years	
Stability vs Temperature:	±0.28 ppm -5°C to +55°C	
Stability vs Supply:	±0.05 ppm for any ±5% change in Voltage	
Initial Accuracy @ +25°C:	±1.5 ppm Pre-Reflow	
Supply Voltage:	+3.3 Vdc (operable over +3.135 Vdc to +5.5 Vdc)	
Current (@ +3.3 Vdc):	<20 mA (7 mA Typical)	
Output:	LS TTL	
Symmetry (at 50% Vdd):	60/40 to 40/60, maximum	
Rise/Fall Time (10-90%):	<10 nanoseconds	
Level "0" and "1":	<0.5 Volts, >2.5 Volts	
Phase Noise: (TYPICAL)	<u>Offset</u> 100 Hz 1k Hz 10k Hz 100k Hz	<u>Phase Noise</u> -115 dBc/Hz -130 dBc/Hz -140 dBc/Hz -155 dBc/Hz
Shock:	50g, 11ms per MIL-STD-202 Method 213 Condition G	
Vibration - Sine:	10g, 10Hz to 500Hz per MIL-STD-202 Method 204 Condition A	
Vibration - Random:	5.2g rms per MIL-STD-202 Method 214 Condition A	
Thermal Shock:	-55°C to +85°C per MIL-STD-202 Method 107 Condition A	
Acceleration:	50g per MIL-STD-202 Method 212 Condition A	
Size:	1.00" x 1.15" x 0.395" (25.40mm x 29.21mm x 10.03mm)	

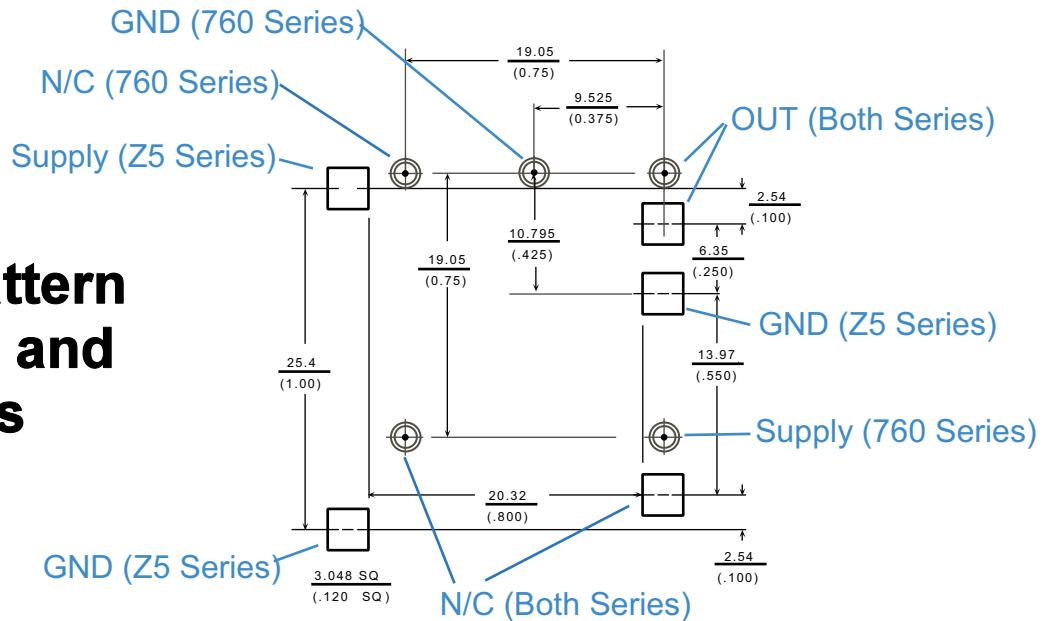
6825 Temperature Compensated Crystal Oscillators

Z5 Outline Drawing:



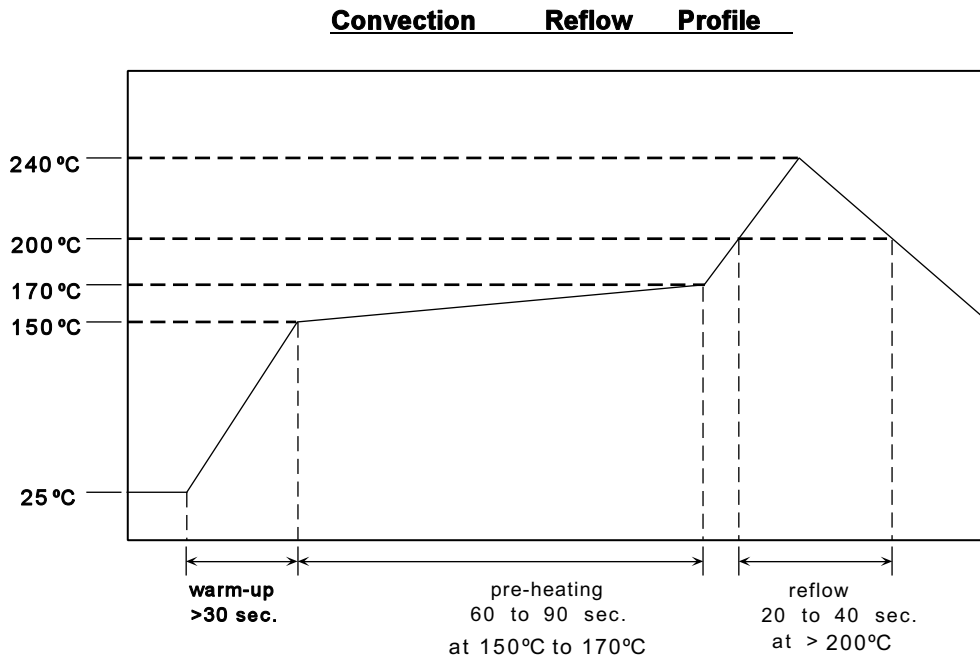
Recommended Land Pattern

Dual Land Pattern for Z5 Series and 760 Series



6825 Temperature Compensated Crystal Oscillators

Recommended Reflow Profile



Note: TCXO's are precision subsystems with tolerances measured to ± 0.01 ppm. Non-Hermetically sealed TCXO's should not be subjected to a wash process that will immerse the TCXO in solvents. NO CLEAN is the recommended procedure. The Z5 series of TCXO's has been designed for pick and place reflow soldering. The suggested reflow profile is shown above. The TCXO may be reflowed two times. Typical frequency shift as a result of reflow is < 1.0 ppm per reflow. VI recommends waiting at least two hours after reflow before measuring the unit.

How to Order

6825 (± 0.28 ppm -5°C to $+55^{\circ}\text{C}$)

Visit Our Website at **www.vectron.com**

For additional information please contact:



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