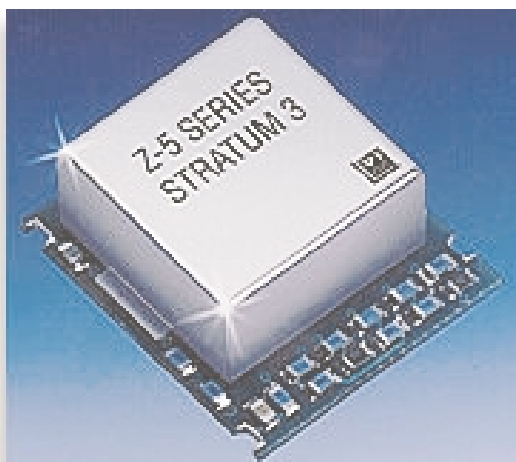


TC-210 (Z5) Series P/N's 6661, 6662, 6663, 6664

Temperature Compensated Crystal Oscillators



Features

- 12.800 MHz output frequency
- Stability as tight as ± 0.28 ppm over temperature
- 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)
- 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 6661, 6662, 6663, 6664 have 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.

The 6664 in particular has been designed to meet the stringent Holdover requirements for a Stratum 3 Clock source as called out in GR-1244-CORE, per Table 3-1 as described in Sections 5.2 and 9.1.1.

All four units have 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 TC-210 (Z5) series options can be downloaded from our website at:

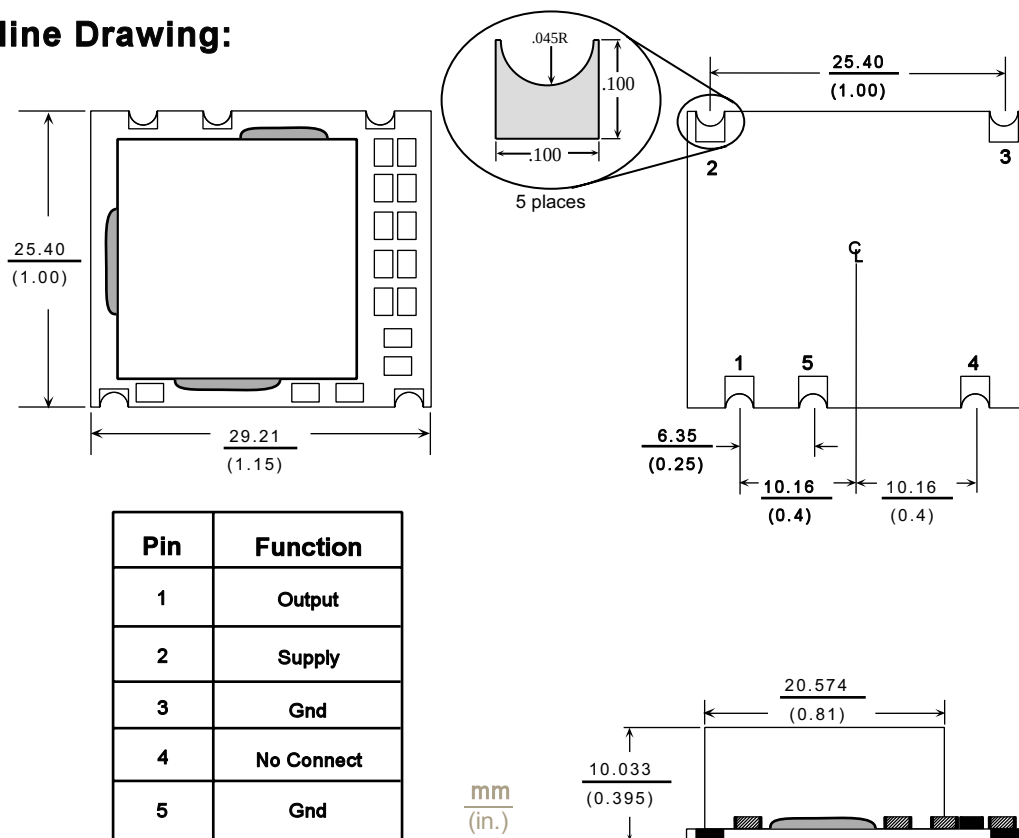
www.stratum3.com

6661, 6662, 6663, 6664 Temperature Compensated Crystal Oscillators

Performance Characteristics

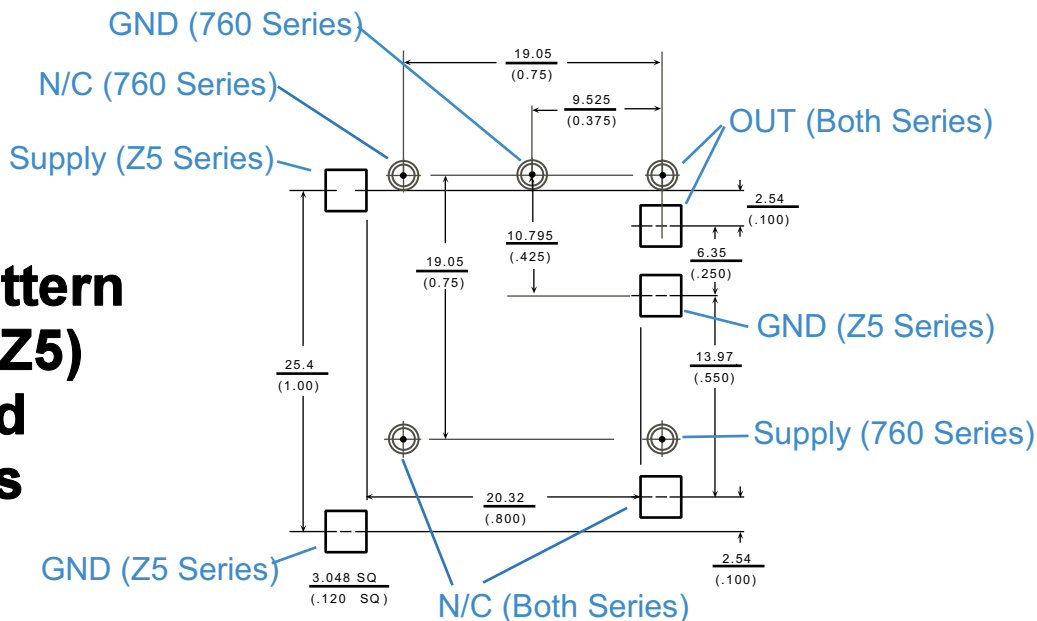
Parameter	Characteristics			
Part Number:	6661	6662	6663	6664
Frequency:	12.800 MHz	12.800 MHz	12.800 MHz	12.800 MHz
Operating Temp Range:	-20°C to +70°C	0°C to +50°C	-20°C to +70°C	0°C to +50°C
Aging:	<20 ppm for 20 years	<20 ppm for 20 years	<4.0 ppm for 20 years	<4.0 ppm for 20 years
Stability vs Temperature:	±1.0 ppm -20°C to +70°C	±0.28 ppm 0°C to +50°C	±1.0 ppm -20°C to +70°C	±0.28 ppm 0°C to +50°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:	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)			

210 (Z5) Outline Drawing:

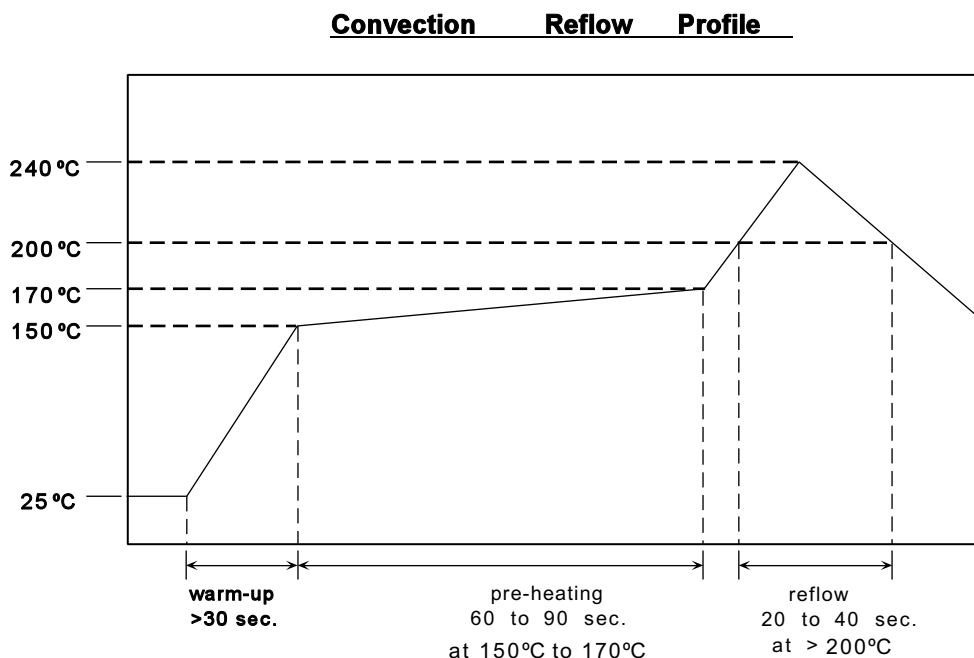


Recommended Land Pattern

Dual Land Pattern for TC-210 (Z5) Series and 760 Series



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 TC-210 (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

- 6661** (± 1.0 ppm -20°C to $+70^{\circ}\text{C}$, <20 ppm aging for 20 years)
- 6662** (± 0.28 ppm 0°C to $+50^{\circ}\text{C}$, <20 ppm aging for 20 years)
- 6663** (± 1.0 ppm -20°C to $+70^{\circ}\text{C}$, <4.0 ppm aging for 20 years)
- 6664** (± 0.28 ppm 0°C to $+50^{\circ}\text{C}$, <4.0 ppm aging for 20 years)

Visit Our Website at www.vectron.com

For additional information please contact:



USA: Vectron International 267 Lowell Road, Hudson, NH 03051 Tel: 1-888-VECTRON-1 Fax: 1-888-FAX-VECTRON
 EUROPE: Tel: 49 (0) 3328 4784 17 Fax: 49 (0) 3328 4784
 30ASIA: Tel: +86 21 28909740 / 41 / 42 Fax: +86 21 28909240 / 28909999

www.vectron.com