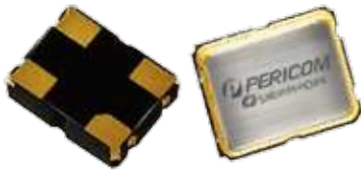


# 1.8V ~ 3.3V DC Clipped Sinewave VCTCXO

## WC255



2.5 x 2.0mm Ceramic SMD

| Typical Frequencies available MHz: |        |        |
|------------------------------------|--------|--------|
| 16.367667                          | 16.369 | 19.200 |
| 25.000                             | 26.000 | 40.000 |

### Product Features

- Low Current
- Tight temperature stability
- Clipped Sinewave output levels
- Excellent Phase Noise
- Industrial Temperature Range
- Pb-free and RoHS/Green compliant
- Fast lead time

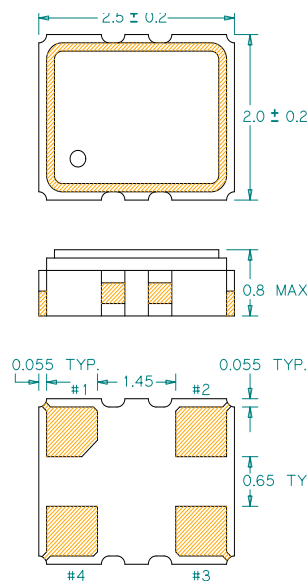
### Product Description

The WC255 VCTCXO series is a high performance temperature compensated oscillator with a clipped sinewave output for a very low operating supply current. It supports various power supply voltages, stabilities and other features. It is designed to meet existing application requirements.

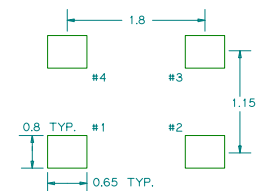
### Applications

- Networking systems
- Networking
- GPS/Navigation
- Metering
- Mobile and wireless
- Handset

### Package: (scale-none, dimensions in mm)



### Recommended Land Pattern:



### Pin Functions:

| Pin | Function        |
|-----|-----------------|
| 1   | Control Voltage |
| 2   | Ground          |
| 3   | Output          |
| 4   | V <sub>DD</sub> |

### Part Ordering Information:

WC255 V X FFFF.FFFFFFF

| Voltage:   | Stability and Temp Range: |   |   |   | Frequency:<br>FFFFFFFF<br>MHz, "4 digits/decimal/6 digits" format |
|------------|---------------------------|---|---|---|---|
|            | Temp Range                | A | F | K |   |
| 1 = +3.3V  | -20/+70C                  | A | F | K | P   |
| 2 = +2.5V  |                           | B | G | L | Q   |
| 3 = +1.8V  |                           | C | H | M | R   |
| 4 = +1.5V  |                           | D | I | N | S   |
| B = +3.0V  |                           | E | J | O | T   |
| C = +2.8V  |                           |   | W | X | Z   |
| D = +2.7V  |                           |   |   |   |   |
| E = +2.85V |                           |   |   |   |   |
| F = +2.75V |                           |   |   |   |   |
| G = +2.4V  |                           |   |   |   |   |

Following the above format, PSE Technology Corporation part numbers will be assigned upon confirmation of exact customer requirements.



## Electrical Performance

| Parameter                                  | Min.           | Typ. | Max. | Units  | Notes                                     |   |
|--|----------------|------|------|--------|---|---|
| Output Frequency                           | 10             |      | 40   | MHz    |   |   |
| Supply Voltage                             | 1.8            |      | 3.3  | V      | See ordering options, V <sub>DD</sub> ±5% |   |
| Supply Current                             |                |      | 1.5  | mA     | Output Frequency ≤ 26 MHz                 |   |
|  |                |      | 2.0  | mA     | Output Frequency > 26 MHz                 |   |
| Output Voltage Level                       | 0.8            |      | 1.4  | V      | Pk-Pk                                     |   |
| Control Voltage Center                     |                | 0.9  |      | V      | For V <sub>DD</sub> ≤ 2.5V                |   |
|  |                | 1.4  |      | V      | For V <sub>DD</sub> > 2.5V                |   |
| Control Voltage Range                      | 0              |      | 1.8  | V      | For V <sub>DD</sub> ≤ 2.5V                |   |
|  | 0.4            |      | 2.4  | V      | For V <sub>DD</sub> > 2.5V                |   |
| Frequency Adjustment Range (Pulling Range) | -15            |      | 15   | ppm    |   |   |
| Linearity                                  |                |      | 10   | %      | Positive slope                            |   |
| Input Impedance                            | 500            |      |      | kΩ     |   |   |
| Modulation Bandwidth                       | 10             |      |      | kHz    |   |   |
| Output Load                                | Resistance     | 9    | 10   | 11     | kΩ  |   |
|  | Capacitance    | 9    | 10   | 11     | pF  |   |
| Frequency Stability                        | vs Temperature | ±0.5 |      | ±5.0   | ppm                                       |   |
|  | vs Load        |      |      | ±0.2   | ppm                                       | ±10% load change                          |
|  | vs Voltage     |      |      | ±0.1   | ppm                                       | ±5% supply voltage change at typical load |
| Frequency Aging                            |                |      | ±1.0 | ppm    | First year, +25°C                         |   |
| Frequency Tolerance After Two Reflows      |                |      | ±2.0 | ppm    | @ +25°C±3°C after one hour recovery       |   |
| Harmonics                                  |                |      | -7   | dBc    |   |   |
| Operating Temperature Range                | -30            |      | 85   | °C     | See ordering options                      |   |
| Storage Temperature Range                  | -40            |      | 85   | °C     |   |   |
| Phase Noise at 1KHz offset                 |                | -133 |      | dBc/Hz | At 26MHz                                  |   |

## Notes:

- For specifications other than those listed, please contact sales.
- Not all combinations of V<sub>DD</sub>, Operating Temperature Range, Frequency Stability and Output Frequency are available.
- Frequency Stability vs. Temperature is reference to the mid-point between minimum and maximum frequency values over the specified Operating Temperature Range
- Frequency Stability vs. Voltage and vs. Load changes are reference to the Nominal Frequency at 25°C

For the latest product information visit: <http://www.pericom.com/products/crystals-and-crystal-oscillators/tcxo/?part=WC255>

For test circuit go to: [http://www.pericom.com/assets/sre/VCTCXO\\_CLIPPEDESINE\\_RevA.pdf](http://www.pericom.com/assets/sre/VCTCXO_CLIPPEDESINE_RevA.pdf)

For soldering reflow profile and reliability test ratings go to: <http://www.pericom.com/assets/sre/reflow.pdf>

For tape and reel information go to: [http://www.pericom.com/assets/sre/tr\\_2520\\_xo.pdf](http://www.pericom.com/assets/sre/tr_2520_xo.pdf)