

# ECS-TXO-20CSMV

## Clipped Sine Wave TCXO

### MultiVolt™

ECS-TXO-20CSMV Clipped Sine Wave SMD TCXO MultiVolt™ capability of 1.7 ~ 3.465V. The 2.0 x 1.6 x 0.8 mm ceramic package is ideal for portable, wireless applications where stability is critical.

[Request a Sample](#)

## OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

### ECS-TXO-20CSMV



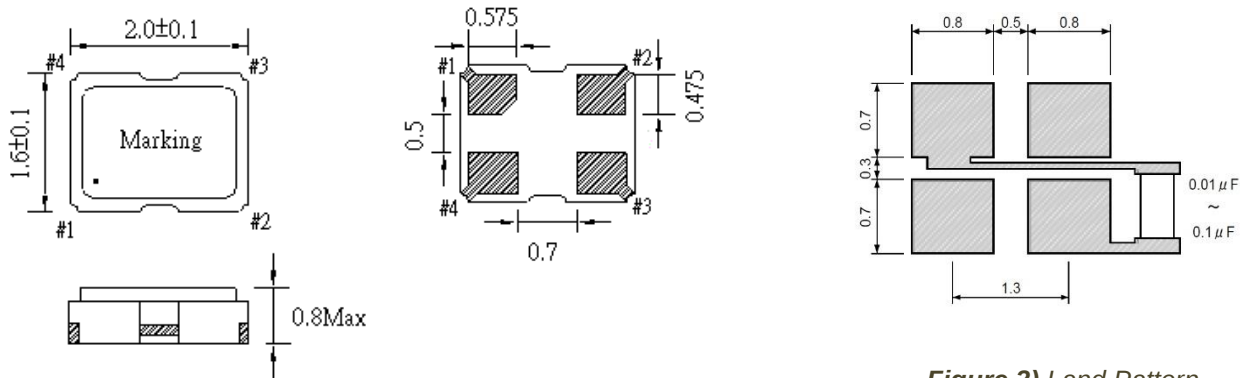
- Clipped Sine Wave TCXO
- 2.0 x 1.6 mm Footprint
- MultiVolt™ (1.7 ~ 3.465V)
- PbFree/RoHS Compliant
- MSL 1
- Lead Finish Au
- Compatible with 1.8V, 2.5V or 3.3V Power Supply

| Parameters            | Conditions                     | ECS-TXO-20CSMV |      |        | Units  |
|-----------------------|--------------------------------|----------------|------|--------|--------|
|                       |                                | MIN            | TYP  | MAX    |        |
| Frequency Range       |                                | 10.000         |      | 52.000 | MHz    |
| Frequency Tolerance   | @ +25°C ±2°C                   |                |      | ±2.0   | PPM    |
| Frequency Stability   | Vs. Temp (-40 ~ +85°C) BN Opt  |                |      | ±1.0   | PPM    |
|                       | Vs. Supply Change (±5%)        |                |      | ±0.2   | PPM    |
|                       | Vs. Load Change (±10%)         |                |      | ±0.2   | PPM    |
|                       | Vs. Aging 1 <sup>st</sup> Year |                |      | ±1.0   | PPM    |
| Input Voltage         | VDD                            | +1.7           |      | +3.465 | VDC    |
| Current Consumption   | 10 ~ 26 MHz                    |                |      | 2.0    | mA     |
|                       | 26.1 ~ 52 MHz                  |                |      | 2.5    | mA     |
| Output Level          | Clipped Sine Wave              | 0.8            |      |        | V p-p  |
| Output Load           |                                | 10KΩ//10 pF    |      |        |        |
| Start-up Time         |                                |                |      | 2      | mS     |
| Phase Noise           | @ 10 KHz Offset                |                | -145 |        | dBc/Hz |
| Operating Temperature | * N Option                     | -40            |      | +85    | °C     |
| Storage Temperature   |                                | -40            |      | +90    | °C     |

## Part Numbering Guide: Example ECS-TXO-20CSMV-320-BN-TR

| ECS | - | Series                                    | - | Frequency Abbreviations | - | Stability                                                               | - | Temperature                                                          | - | Packaging                   |
|-----|---|-------------------------------------------|---|-------------------------|---|-------------------------------------------------------------------------|---|----------------------------------------------------------------------|---|-----------------------------|
| ECS |   | TXO-20CSMV =<br>Clipped Sine Wave<br>TCXO |   | 260 = 26.000 MHz        |   | A= ±0.5 ppm<br>B= ±1.0 ppm<br>C= ±1.5 ppm<br>D= ±2.0 ppm<br>E= ±2.5 ppm |   | L= -10 ~ +70°C<br>M= -20 ~ +70°C<br>Y= -30 ~ +85°C<br>N= -40 ~ +85°C |   | TR = Tape & Reel<br>1K/reel |

## Package Dimensions (mm)

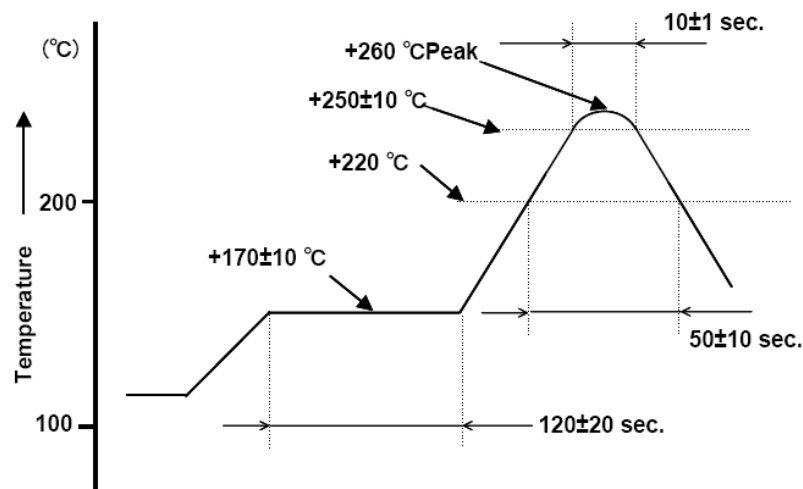


**Figure 1)** Top, Side, and Bottom views

**Figure 2)** Land Pattern

| Pin Connections |        |
|-----------------|--------|
| #1              | Ground |
| #2              | Ground |
| #3              | Output |
| #4              | VDD    |

| Developed Frequencies |                 |
|-----------------------|-----------------|
| * Abbreviation        | Frequency (MHz) |
| 200                   | 20.000          |
| 260                   | 26.000          |
| 320                   | 32.000          |
| 384                   | 38.400          |
| 400                   | 40.000          |



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