

- ▶ HCMOS TCXO/VC-TCXO
- ▶ 3.2 x 2.5 mm Footprint
- ▶ Pb Free/RoHS
- ▶ Peak solder temp +260°C (10 sec)
- ▶ MSL 1
- ▶ Lead Finish Au

# ECS-TXO-3225

## HCMOS TCXO

ECS-TXO-3225 (3.3V) HCMOS SMD TCXO and ECS-VTXO-3225 (3.3V) HCMOS SMD VC-TCXO are ideal for portable, wireless applications where stability is critical.

### OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

| PARAMETERS            | CONDITIONS              |         |       |        | UNITS  |
|-----------------------|-------------------------|---------|-------|--------|--------|
|                       |                         | MIN     | TYP   | MAX    |        |
| Frequency Range       |                         | 8.192   |       | 40.000 | MHz    |
| Operating Temperature | *Standard               | -30     |       | +85    | °C     |
| Storage Temperature   |                         | -40     |       | +90    | °C     |
| Input Voltage         | VDD                     | +3.135  | +3.3  | +3.465 | VDC    |
| Frequency Stability   | vs. Temp (-30 ~ +85°C)  |         |       | ± 2.5  | ppm    |
|                       | vs. Supply Change (±5%) |         |       | ± 0.3  | ppm    |
|                       | vs. Load Change (±5%)   |         |       | ± 0.3  | ppm    |
|                       | vs. Aging/year          |         |       | ± 1.0  | ppm    |
| Frequency Tolerance   | @ +25°C ±2°C            |         |       | ±1.5   | ppm    |
| Current Consumption   |                         |         |       | 6.0    | mA     |
| "0" level             | VOL                     |         |       | 0.5    | VDC    |
| "1" level             | VOH                     | 80% VDD |       |        | VDC    |
| Output Symmetry       | @ 50% VDD Level         |         |       | 40/60  | %      |
| Rise and Fall Times   | 10% VDD to 90% level    |         |       | 10     | ns     |
| Output Load           | CMOS                    |         |       | 15     | pF     |
| Start-up Time         |                         |         |       | 2.0    | mS     |
| Phase Noise           | @ 1 KHz offset          |         |       | -135   | dBc/Hz |
| ECS-VTXO-3225 Option  |                         |         |       |        |        |
| Control Voltage       | Pin 1                   | +0.15   | +1.65 | +3.15  | VDC    |
| Pullability           |                         | ±5      |       |        | ppm    |

### DIMENSIONS (mm)

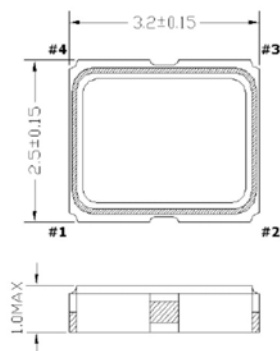


Figure 1) Top, Side and Bottom views

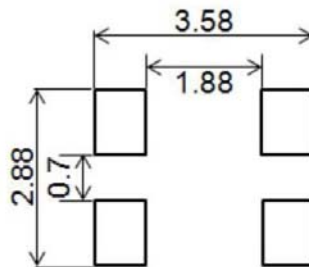
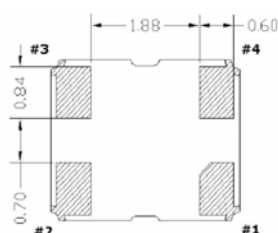


Figure 2) Suggested Land Pattern

#### Pin Connections

|        |              |
|--------|--------------|
| Pin #1 | N/C or VCONT |
| Pin #2 | Ground       |
| Pin #3 | Output       |
| Pin #4 | VDD          |

### PART NUMBERING GUIDE: Example ECS-TXO-3225-250-TR

ECS - Series - Frequency Abbreviation - Stability - Temp - TR

TXO-3225= TCXO  
VTXO-3225=VC-TCXO

250 = 25.000 MHz  
See Developed Frequencies

Standard  
Blank = ±2.5 ppm  
Custom Options  
B= ±1.5 ppm  
C= ±1.0 ppm

Standard  
Blank = -30 ~ +85°C  
Custom Options  
\* N= -40 ~ +85°C

TR=  
Tape & Reel

#### Developed Frequencies

| * Abbreviation | Frequency (MHz) |
|----------------|-----------------|
| 100            | 10.000          |
| 120            | 12.000          |
| 122.8          | 12.288          |
| 147.4          | 14.7456         |
| 160            | 16.000          |
| 200            | 20.000          |
| 250            | 25.000          |
| 270            | 27.000          |

\* Consult Factory for availability of ±1 ppm -40 ~ +85°C

# Mouser Electronics

Authorized Distributor

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