

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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

ECS-TXO-3225

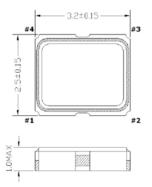
HCMOS TCXO

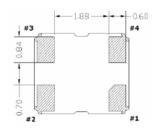
ECS-TXO-3225 (3.3V) HCMOS SMD TCXO and ECS-VTXO-3225 (3.3V) HCMOS SMD VC-TCXO are ideal for portable, wireless applications where stability is critical.

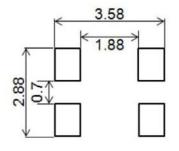
OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

| PARAMETERS | CONDITIONS | TONE | | | UNITS |
|-----------------------|-------------------------|---------|-------|--------|--------|
| PARAWEIERS | CONDITIONS | MIN | TYP | MAX | UNITS |
| 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 |
| | vs. Temp (-30 ~ +85°C) | | | ± 2.5 | ppm |
| Frequency Stability | 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)







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

Figure 1) Top, Side and Bottom views

Figure 2) Suggested Land Pattern

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

ECS -Frequency Abbreviation - Stability -TR **Series Temp** TXO-3225= TCXO 250 = 25.000 MHz Standard TR= **Standard** Blank = ±2.5 ppm Blank = -30 ~ +85°C Tape & Reel VTXO-3225=VC-TCXO See Developed Frequencies Custom Options **Custom Options** N= -40 ~ +85°C B= ±1.5 ppm C= ±1.0 ppm

| 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 | | | |
| | | | | |