

Customer Part:

Description

- IQXT-225 is a 2.0 x 1.6mm SMD Temperature Compensated Crystal Oscillator (TCXO) in a hermetically sealed package with E/D on pad 1 for low power operation.
- Model IQXT-225-12
- Model Issue number 1
- Developed frequencies: 16.368, 16.369, 19.2, 26.0, 33.6 and 38.4MHz

Frequency Parameters

- Frequency 16.3680MHz
- Frequency Tolerance Max ± 1.50 ppm
- Frequency Stability ± 0.50 ppm
- Operating Temperature Range -30.00 to 85.00°C
- Ageing ± 1 ppm max per year @ 25°C
 $\pm 2^{\circ}\text{C}$
- Frequency Tolerance: @ 25°C $\pm 2^{\circ}\text{C}$ referred to nominal frequency before reflow soldering.
- Supply Voltage Variation (@ $\pm 5\%$ change): ± 0.1 ppm max
- Load Variation (@ $\pm 10\%$ change): ± 0.1 ppm max
- Reflow Variation (at 25°C $\pm 2^{\circ}\text{C}$ referred to frequency before reflow): ± 1 ppm max, 24 hrs after reflow.

Electrical Parameters

- Supply Voltage $1.2\text{V} \pm 5\%$
- Current Draw Max 1.700mA
- Absolute Maximum Ratings:
Supply Voltage: -0.6V to 4.6V
E/D Control Voltage: -0.6V to $V_s + 0.6\text{V}$ (4.6V max)

Output Details

- Output Compatibility Clipped Sine
- Drive Capability $10\text{k}\Omega / 10\text{pF} \pm 10\%$
- Output: DC coupled
Note: a 1000pF DC-cut capacitor is to be connected in the output line of the TCXO.
- Output Level: 0.8V pk-pk min
- Start Up Time: $V_{out} \geq 90\%$ of V pk-pk: 2ms max
- Start Up Time (within ± 0.5 ppm): 2ms max

Output Control

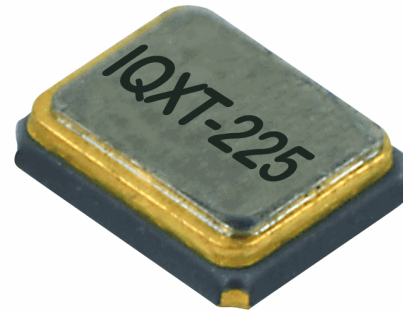
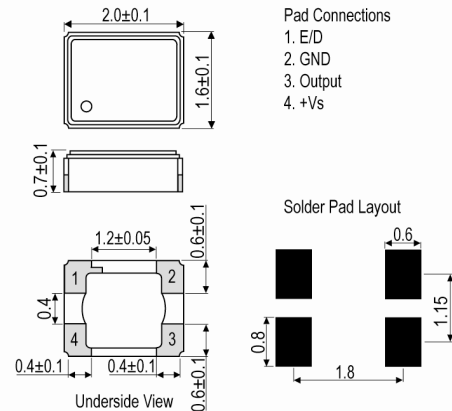
- Enable/Disable (pad 1):
Logic '1' ($80\%V_s$ min) or no connection to pad 1 enables the oscillator output.
Logic '0' ($20\%V_s$ max) to pad 1 disables the oscillator output, the output goes to a high impedance state.
Disable current in E/D mode: $3\mu\text{A}$ max

Noise Parameters

- Phase Noise (typ): $-135\text{dBc}/\text{Hz}$ @ 1kHz

Environmental Parameters
Manufacturing Details

- RoHS Terminations NiAu
- RoHS Reflow Temp $+250^{\circ}\text{C} \pm 10^{\circ}\text{C}$ for 10 sec max


Outline (mm)

Sales Office Contact Details:

UK: +44 (0)1460 270200

France: 0800 901 383

 Email: info@iqdfrequencyproducts.com

Germany: 0800 1808 443

USA: +1.760.318.2824

 Web: www.iqdfrequencyproducts.com

Customer Part:**Compliance**

- RoHS Status (2015/863/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Packaging Details

- Pack Style: Reel Tape & reel in accordance with EIA-481-D
Pack Size: 3,000
- *Alternative packing option available*

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