



Description

- IQXT-205-2-18 is a 2.0 x 1.6mm SMD Voltage Controlled Temperature Compensated Crystal Oscillator (VCTCXO) in a hermetically sealed package.

Model	IQXT-205-2-18
Model Issue number	2

Frequency Parameters

- Frequency: 38.40MHz
- Frequency Tolerance Max: $\pm 1.50\text{ppm}$
- Tolerance Condition: @ 25°C $\pm 2^\circ\text{C}$
- Frequency Stability: $\pm 0.50\text{ppm}$
- Operating Temperature Range: -30.00 to 85.00°C
- Ageing: $\pm 1\text{ppm}$ max per year @ 25°C $\pm 3^\circ\text{C}$
- Frequency Tolerance: Referred to nominal frequency before reflow soldering.
- Supply Voltage Variation:
 - @ $\pm 5\%$ change for $\pm 0.5\text{ppm}$ stability: $\pm 0.1\text{ppm}$ max
 - @ $\pm 5\%$ change for $\pm 2.0\text{ppm}$ stability: $\pm 0.2\text{ppm}$ max
- Load Variation:
 - @ $\pm 10\%$ change for $\pm 0.5\text{ppm}$ stability: $\pm 0.1\text{ppm}$ max
 - @ $\pm 10\%$ change for $\pm 2.0\text{ppm}$ stability: $\pm 0.2\text{ppm}$ max
- Short Term Stability (Allan variance): $\pm 1\text{ppb}$ max (Tau = 0.1s)
- IR Reflow Resistance (ref to frequency before reflow): $\pm 1\text{ppm}$ max

Electrical Parameters

- Supply Voltage: 1.8V $\pm 5\%$
- Current Draw Max: 1.700mA
- Absolute Maximum Ratings:
 - Supply Voltage: -0.6V to 4.6V
 - Control Voltage: -0.6V to Vs+0.6V

Frequency Adjustment

- Pulling: $\pm 8\text{ppm}$ min to $\pm 13\text{ppm}$ max
- Control Voltage: 0.9V $\pm 0.8\text{V}$
- Slope: Positive

Output Details

- Output Compatibility: Clipped Sine
- Drive Capability: 10k Ω //10pF
- Output: DC coupled
- Output Level: 0.8V pk-pk min
- Start Up Time (90% of V pk-pk): 2ms max
- Start Up Time (within $\pm 0.5\text{ppm}$): 2ms max

Noise Parameters

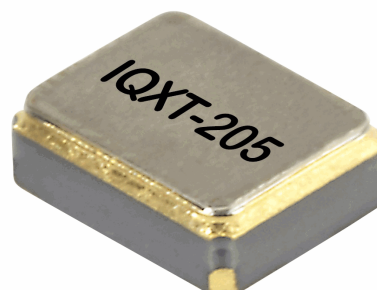
- Phase Noise (typ): -135dBc/Hz @ 1kHz
- Harmonic Distortion: -5.0dBc max

Environmental Parameters

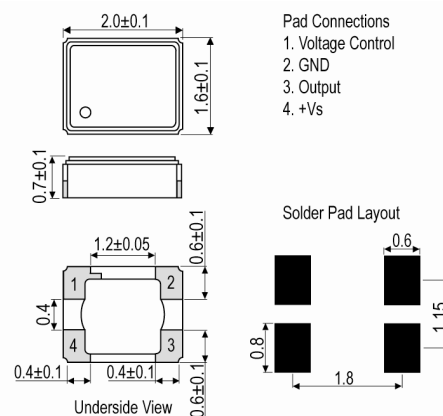
- Storage Temperature Range: -40 to 85°C

Manufacturing Details

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



Outline (mm)



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Compliance

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

Packaging Details

- Tape & reel in accordance with EIA-481
Quantities below the standard reel size to be supplied on cut tape

Standard Pack Quantity: 3,000

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