



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 16.3690MHz
- Frequency Tolerance Max $\pm 1.50\text{ppm}$
- Tolerance Condition @ $25^\circ\text{C} \pm 2^\circ\text{C}$
- 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 ($\text{Tau} = 0.1\text{s}$)
- IR Reflow Resistance (ref to frequency before reflow): $\pm 1\text{ppm}$ max

Electrical Parameters

- Supply Voltage 1.8V $\pm 5\%$
- Current Draw Max 1.500mA
- 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 $10\text{k}\Omega//10\text{pF}$
- 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

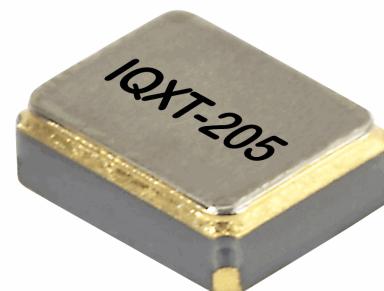
- Phase Noise (typ): -135dBc/Hz @ 1kHz
- Harmonic Distortion: -5.0dBc max

Environmental Parameters

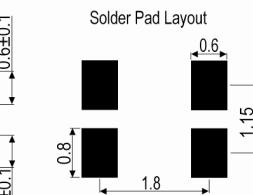
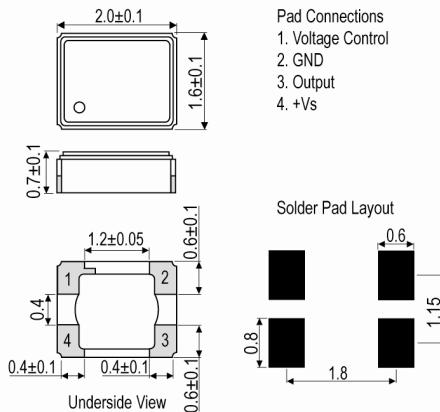
- Storage Temperature Range: -40 to 85°C

Manufacturing Details

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