



### 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  $85.00^{\circ}\text{C}$
- Ageing  $\pm 1\text{ppm}$  max per year @  $25^{\circ}\text{C} \pm 3^{\circ}\text{C}$
- 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  $1.8\text{V} \pm 5\%$
- Current Draw Max  $1.500\text{mA}$
- Absolute Maximum Ratings:
  - Supply Voltage:  $-0.6\text{V}$  to  $4.6\text{V}$
  - Control Voltage:  $-0.6\text{V}$  to  $V_s + 0.6\text{V}$

### Frequency Adjustment

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

### Output Details

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

### Noise Parameters

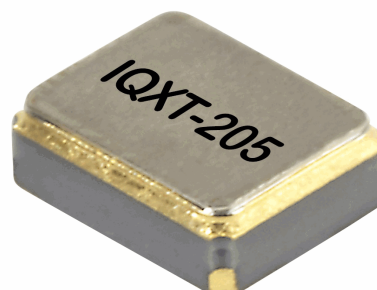
- Phase Noise (typ):  $-135\text{dBc/Hz}$  @  $1\text{kHz}$
- Harmonic Distortion:  $-5.0\text{dBc}$  max

### Environmental Parameters

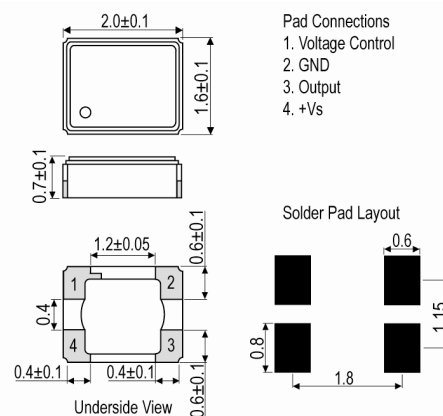
- Storage Temperature Range:  $-40$  to  $85^{\circ}\text{C}$

### 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:

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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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