


**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 1
- Developed frequencies: 16.2, 16.368, 16.369, 19.2, 20.0, 24.0, 25.0, 26.0, 27.456, 28.925, 28.974, 30.0, 32.0, 33.6, 38.4, 48.0, 50.0 and 52.0MHz

**Frequency Parameters**

- Frequency 16.3680MHz
- 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**

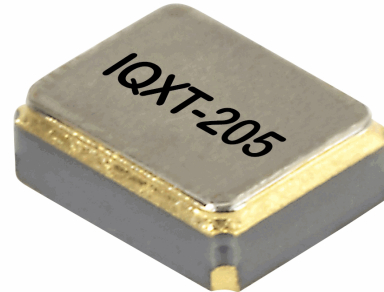
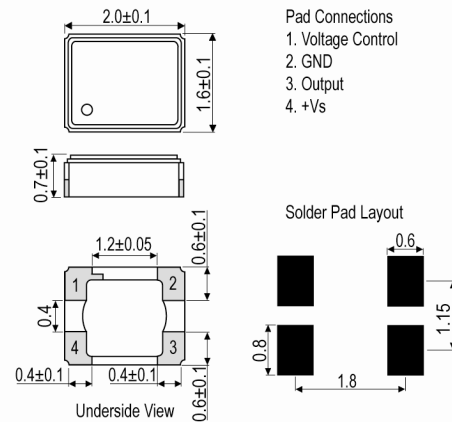
- Output Compatibility Clipped Sine
- Drive Capability  $10\text{k}\Omega / 10\text{pF}$
- Output: DC coupled
- Output Level:  $0.8\text{V}$  pk-pk min
- Start Up Time (90% of V pk-pk): 2ms max
- Start Up Time (within  $\pm 0.5\text{ppm}$ ): 2ms max

**Noise Parameters**

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

**Environmental Parameters**

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


**Outline (mm)**

**Sales Office Contact Details:**

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**Manufacturing Details**

- RoHS Terminations                      NiAu
- RoHS Reflow Temp                        +250°C ±10°C for 10 sec max

**Compliance**

- RoHS Status (2011/65/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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