



### 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: 24.0MHz
- 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: 1.500mA
- 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: 10k $\Omega$ //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

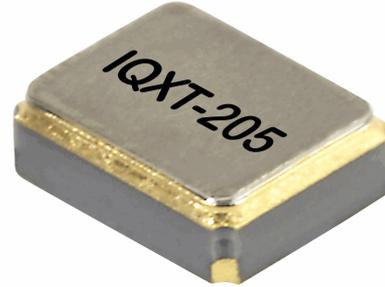
- Phase Noise (typ): -135dBc/Hz @ 1kHz
- Harmonic Distortion: -5.0dBc max

### Environmental Parameters

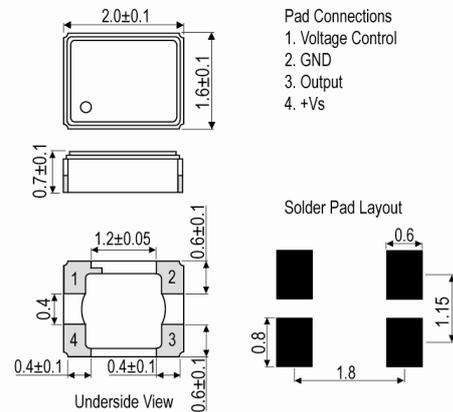
- Storage Temperature Range: -40 to 85°C

### Manufacturing Details

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



### Outline (mm)



### 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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