

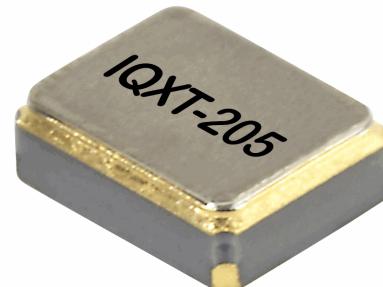


### Description

- 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

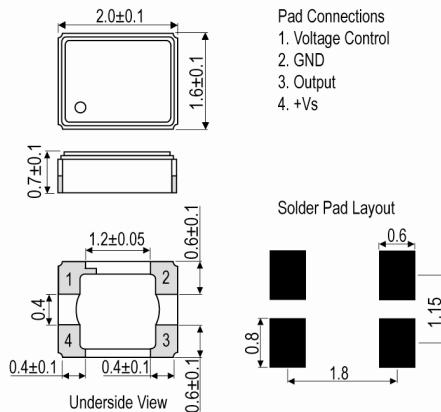
- Frequency 52.0MHz
- Frequency Tolerance Max  $\pm 1.50\text{ppm}$
- Tolerance Condition @  $25^\circ\text{C} \pm 2^\circ\text{C}$
- Frequency Stability  $\pm 0.50\text{ppm}$
- Operating Temperature Range -30.00 to 85.00°C
- Ageing  $\pm 1\text{ppm}$  max per year @  $25^\circ\text{C}$   
 $\pm 3^\circ\text{C}$
- 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 ( $\text{Tau} = 0.1\text{s}$ )
- 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 2.000mA
- Absolute Maximum Ratings:  
Supply Voltage: -0.6V to 4.6V  
Control Voltage: -0.6V to  $\text{Vs}+0.6\text{V}$

### Outline (mm)



### 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: 0.8V 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

### 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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