

ISSUE 1; July 2024

### Description

- IQXT-205-3-18 is a 2.0 x 1.6mm SMD Temperature Compensated Crystal Oscillator (TCXO) in a hermetically sealed package with a wide operating temperature range.
- Developed frequencies: 16.368, 16.369, 19.2, 26.0, 33.6, 38.4 and 52.0MHz

### Frequency Parameters

- Frequency 13.0MHz to 52.0MHz
- Frequency Tolerance Max  $\pm 1.50\text{ppm}$
- Tolerance Condition @  $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$
- Frequency Stability  $\pm 0.50\text{ppm}$
- Ageing  $\pm 1\text{ppm}$  max per year @  $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$
- Frequency Tolerance: Referred to nominal frequency before reflow soldering.
- IR Reflow Resistance (@  $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$  ref to frequency before reflow):  $\pm 1\text{ppm}$  max, 24hrs after reflow
- Supply Voltage Variation (@  $\pm 5\%$  change):  $\pm 0.1\text{ppm}$  max
- Load Variation (@  $\pm 10\%$  change):  $\pm 0.1\text{ppm}$  max

### Electrical Parameters

- Supply Voltage  $1.8\text{V} \pm 5\%$
- Absolute Maximum Ratings: Supply Voltage:  $-0.6\text{V}$  to  $4.6\text{V}$

### Operating Temperature Ranges

- $-40$  to  $105^{\circ}\text{C}$

### 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

### Environmental Parameters

- Storage Temperature Range:  $-40$  to  $105^{\circ}\text{C}$

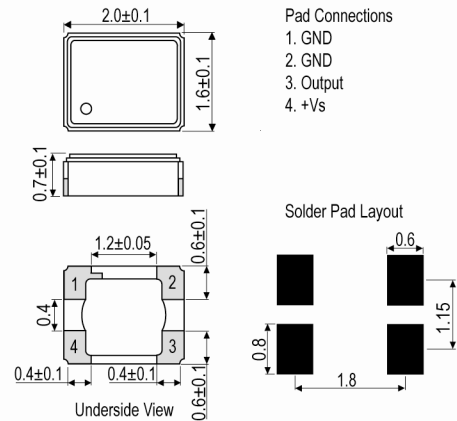
### Manufacturing Details

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

### Ordering Information

- \*Minimum info required  
Frequency\*  
Model\*  
Output  
Frequency Stability (over operating temperature range)\*  
Operating Temperature Range\*  
Supply Voltage
- Example  
26.0MHz IQXT-205-3-18  
Clipped Sine  $\pm 0.5\text{ppm}$   $-40$  to  $105^{\circ}\text{C}$   $1.8\text{V}$

### 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):      2

#### Packaging Details

- Pack Style: Cutt      Cut tape  
Standard Pack Quantity: 100
- Pack Style: Reel      Tape & reel in accordance with EIA-481  
Standard Pack Quantity: 3,000

#### Electrical Specification - maximum limiting values 1.8V $\pm$ 5%

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
13.0MHz	29.999999MHz	-40 to 105	$\pm$ 0.5	1.5	-	-
30.0MHz	39.999999MHz	-40 to 105	$\pm$ 0.5	1.7	-	-
40.0MHz	52.0MHz	-40 to 105	$\pm$ 0.5	2	-	-

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