

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: -0.6V to 4.6V

Operating Temperature Ranges

- 40 to 105°C

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

Environmental Parameters

- Storage Temperature Range: -40 to 105°C

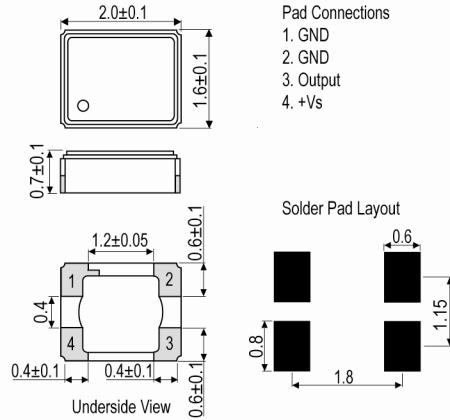
Manufacturing Details

- 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°C 1.8V

Outline (mm)



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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 ±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	±0.5	1.5	-	-
30.0MHz	39.999999MHz	-40 to 105	±0.5	1.7	-	-
40.0MHz	52.0MHz	-40 to 105	±0.5	2	-	-

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