

Description

- Surface mount Voltage Controlled Temperature Compensated Crystal Oscillator (VCTCXO) in a miniature 1.6 x 1.2mm surface mount package.
- Model IQXT-351
- Model Issue number 1

Frequency Parameters

- Frequency 52.0MHz
- Frequency Tolerance $\pm 1.50\text{ppm}$
- 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 $\pm 3^\circ\text{C}$
- Developed Frequencies: 26.0MHz and 52.0MHz
- Supply Voltage Variation ($\pm 5\%$ change @ 25°C): $\pm 0.1\text{ppm}$ max
- Load Variation ($\pm 10\%$ change @ 25°C): $\pm 0.1\text{ppm}$ max
- IR Reflow Resistance (referred to frequency before reflow): $\pm 1\text{ppm}$ max

Electrical Parameters

- Supply Voltage 1.8V $\pm 5\%$
- Current Draw 2.000mA
- Absolute Maximum Supply Voltage: -0.6V to 4.6V

Frequency Adjustment

- Pulling $\pm 8\text{ppm}$ to $\pm 13\text{ppm}$
- Control Voltage 0.9V $\pm 0.8\text{V}$
- Absolute Maximum Control Voltage: -0.6V to Vs+0.6V
- Slope: Positive

Output Details

- Output Compatibility Clipped Sine
- Drive Capability 10k Ω //10pF
- Output Voltage Level: 0.8V pk-pk min
- Output: DC coupled
- Start Up Time (Vout $\geq 90\%$ Vpk-pk): 2ms max

Noise Parameters

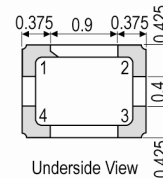
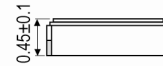
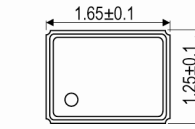
- Harmonic distortion: -5.0dBc max
- Phase Noise @ 25°C: -135dBc/Hz @ 1kHz typ

Environmental Parameters

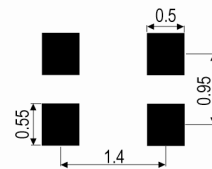
- Storage Temperature Range: -40 to 85°C

Manufacturing Details

- Reflow Process
Preheating: 170°C $\pm 10^\circ\text{C}$ for 1 to 2 minutes.
Maximum reflow: 250°C $\pm 10^\circ\text{C}$ for 10secs.
- A DC-cut capacitor is not built in to the oscillator; a 1000pF DC-cut capacitor is therefore required in the output line.
- RoHS Terminations AuNi
- RoHS Reflow Temp Maximum reflow: 250°C $\pm 10^\circ\text{C}$ for


Outline (mm)


- Pad Connections
1. Voltage Control
 2. GND
 3. Output
 4. +Vs

Solder Pad Layout

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Compliance

- RoHS Status (2011/65/EU) Compliant
- REACh Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Packaging Details

- Pack Style: Reel Tape and reel in accordance with
Pack Size: 1,000 EIA-481-D
- *Alternative packing option available*

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