

ISSUE 2; July 2023

Description

- Surface mount Temperature Compensated Crystal Oscillator (TCXO) in a miniature 1.6 x 1.2mm surface mount package.

Frequency Parameters

- Frequency: 26.0MHz, 52.0MHz
- Frequency Tolerance: $\pm 1.50\text{ppm}$
- Tolerance Condition: @ 25°C $\pm 2^\circ\text{C}$
- Frequency Stability: $\pm 0.50\text{ppm}$ to $\pm 1.50\text{ppm}$
- 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 $\pm 5\%$
- Absolute Maximum Supply Voltage: -0.6V to 4.6V

Operating Temperature Ranges

- 30 to 85°C
- 40 to 85°C

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 ($V_{out} \geq 90\%V_{pk-pk}$): 2ms max

Noise Parameters

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

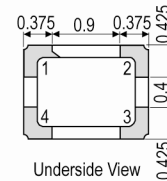
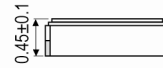
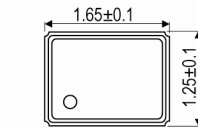
Environmental Parameters

- Storage Temperature Range: -40 to 85°C

Manufacturing Details

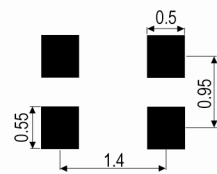
- Reflow Process
 - Preheating: 170°C $\pm 10^\circ\text{C}$ for 1 to 2 minutes.
 - Maximum reflow: 250°C $\pm 10^\circ\text{C}$ for 10secs.
- A DC-cut capacitor is not built in to the oscillator; a 1000pF DC-cut capacitor is therefore required in the output line.
- RoHS Terminations: AuNi
- RoHS Reflow: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

Outline (mm)



Pad Connections
 1. GND
 2. GND
 3. Output
 4. +Vs

Solder Pad Layout



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Ordering Information

- *Minimum information required
Frequency*
Model*
Supply Voltage
Frequency Stability*
Operating Temperature Range*
- Example:
26.0MHz IQXT-350
±0.5ppm -30 to 85C 1.8V

Compliance

- RoHS Status (2015/863/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Packaging Details

- Pack Style: Cutt Cut tape
Pack Size: 100
- Pack Style: Reel Tape and reel in accordance with
Pack Size: 5,000 EIA-481-D

Electrical Specification - maximum limiting values 1.80V ±5%

Frequency	Temperature Range	Stability	Current Draw	Rise and Fall Time	Duty Cycle
	°C	ppm	mA	ns	%
26.0MHz	-40 to 85	±1.50	1.5	-	-
	-30 to 85	±0.50	1.5	-	-
52.0MHz	-40 to 85	±1.50	2	-	-
	-30 to 85	±0.50	2	-	-

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