


Description

- Temperature compensated voltage controlled crystal oscillator (TCVCXO)
- Model IQXT-210-3
- Model Issue number 2

Frequency Parameters

- Frequency 20.0MHz
- Frequency Tolerance ± 0.50 ppm
- Tolerance Condition @ 25°C, 3.3V & VC=1.5V
- Frequency Stability ± 0.14 ppm
- Operating Temperature Range -40.00 to 85.00°C
- Ageing ± 0.02 ppm max per day, ± 1 ppm max per year
- Frequency Tolerance (measurement referenced to frequency observed with TA=25°C, Vs=3.3V, VC=1.5V and within 30 days after ex-works)
- Frequency Stability: TA varied across the operating temperature range, measurement referenced to frequency observed with TA=25°C, Vs=3.3V, VC=1.5V, load=15pF and temperature variable speed less than 2°C per minute.
- Ageing: TA=25°C, Vs=3.3V, VC=1.5V and after 1hr of operation.
- Supply Voltage Variation (measurement referenced to frequency observed with TA=25°C, Vs varied from 3.13V to 3.47V, VC=1.5V and load=15pF): ± 0.1 ppm max
- Load Variation (5% load change measurement referenced to frequency observed with TA=25°C, Vs=3.3V, VC=1.5V and load=15pF): ± 0.1 ppm max
- Short Term Stability (@ 25°C after 10mins power on): 5E-10/s typ @ 10MHz

Electrical Parameters

- Supply Voltage 3.3V $\pm 5\%$
- Current Draw 10.00mA
- Current: TA=25°C, Vs=3.3V, VC=1.5V and load=15pF

Frequency Adjustment

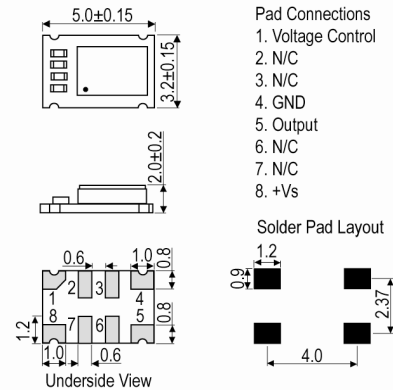
- Pulling ± 10 ppm to ± 15 ppm
- Control Voltage 1.5V ± 1.5 V
- Linearity: $\pm 10\%$ max
- Slope: Positive
- Input Impedance: 100k Ω min

Output Details

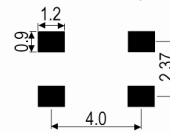
- Output Compatability HCMOS
- Drive Capability 15pF
- Rise and Fall Time 8.0ns max
- Duty Cycle 45/55%
- Output Low (@ Vs=3.3V, load=15pF): 0.4V max
- Output High (@ Vs=3.3V, load=15pF): 2.4V min

Noise Parameters

- Phase Noise (@ 10MHz typ):
 - 90dBc/Hz @ 10Hz
 - 115dBc/Hz @ 100Hz
 - 135dBc/Hz @ 1kHz
 - 145dBc/Hz @ 10kHz
 - 148dBc/Hz @ 100kHz
 - 150dBc/Hz @ 1MHz

Outline (mm)

Pad Connections

1. Voltage Control
2. N/C
3. N/C
4. GND
5. Output
6. N/C
7. N/C
8. +Vs

Solder Pad Layout

Sales Office Contact Details:

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Environmental Parameters

- Storage Temperature Range: -55 to 105°C
- ESD Level:
HBM, Class 2: 2000V to 4000V, JEDEC JS-001-2010
Machine Model, Class B: 200V to 400V, JEDEC JS-001-2010
- Shock: IEC 60068-2-27, Test Ea: 100G acceleration for 6ms, half sinewave, in 3 mutually perpendicular planes
- Vibration: IEC 60068-2-6, Test Fc: 10Hz-2000Hz, 0.75mm amplitude, 10G acceleration, 30mins per cycle, in 3 mutually perpendicular planes, test duration 2hrs

Manufacturing Details

- Moisture Sensitivity Level: 2
- Maximum Reflow Temperature: 260°C (30secs max)

Compliance

- RoHS Status (2011/65/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): 2

Packaging Details

- Pack Style: Bulk Loose in bulk pack
Pack Size: 1
- *Alternative packing option available*

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