Description

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

Frequency Parameters

- Frequency 20.0MHz
- Frequency Tolerance @ 25°C ±0.50ppm
- Frequency Stability ±0.14ppm
- Operating Temperature Range -40.00 to 85.00°C
- Ageing ±0.02ppm max per day, ±1ppm max per year
- 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): ±0.1ppm max
- Load Variation (5% load change measurement referenced to frequency observed with TA=25°C, Vs=3.3V, VC=1.5V and load=15pF): ±0.2ppm max
- Frequency Tolerance (measurement referenced to frequency observed with TA=25°C, Vs=3.3V, VC=1.5V and within 30 days after ex-works): ±0.5ppm
- Short Term Stability (@ 25°C after 10mins power on): 5E-10/s typ @ 10MHz
- 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.

Electrical Parameters

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

Frequency Adjustment

- Pulling ±10ppm to ±15ppm
- Control Voltage Details 1.5V ±1.5V
- Linearity: ±10% max
- Input Impedance: 100kΩ min
- Slope: Positive

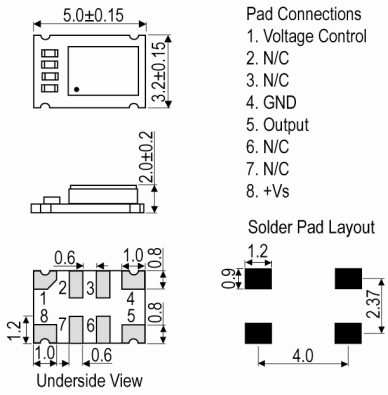
Output Details

- Output Compatability HCMOS
- Output Load 15pF
- Rise and Fall time (10% - 90%) 8ns 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)



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Environmental Parameters

- 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
- Storage Temperature Range: -55 to 105°C
- Operable Temperature Range: -40 to 85°C
- ESD Level:
  HBM, Class 2: 2000V to 4000V, JEDEC JS-001-2010
  Machine Model, Class B: 200V to 400V, JEDEC JS-001-2010

Manufacturing Details

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

Compliance

RoHS Status	Compliant
REACh Status	Compliant

Packaging

Pack Type: Bulk	Loose in bulk pack
Pack Size	1

- Alternative packing option available

This document is correct at the time of printing; please contact your local office for the latest version.

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