**Description**

- Temperature compensated voltage controlled crystal oscillator (TCVCXO) in a hermetically sealed 3.2x2.5mm SMD package.
- Model: IQXT-220-2
- Model Issue number: 1

**Outline (mm)**

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

**Frequency Parameters**

- Frequency: 10.0MHz
- Frequency Tolerance: ±1.00ppm
- Frequency Stability: ±0.28ppm
- Operating Temperature Range: -40.00 to 85.00°C
- Ageing: ±0.02ppm max/day, ±1ppm max/year

**Frequency Tolerance:** Measurement referenced to frequency observed with TA=25°C, Vs=3.3V, VC=1.5V and load=10kΩ/10pF, within 30 days after ex-works.

**Frequency Stability:** TA varied across the operating temperature range, measurement referenced to frequency observed with ref=(fmax+fmin)/2, Vs=3.3V, VC=1.5V, load=10kΩ/10pF and temperature variable speed less than 2°C/min.

**Ageing:** Vs, VC, TA and load constant, measurement referenced to frequency observed with TA=25°C, Vs=3.3V, VC=1.5V, load=10kΩ/10pF and after 1hr of operation.

**Supply Voltage Variation** (measurement referenced to frequency observed TA=25°C, Vs varied from 3.13V to 3.47V, VC=1.5V and load=10kΩ/10pF): ±0.1ppm max

**Load Variation** (measurement referenced to frequency observed with TA=25°C, Vs=3.3V, VC=1.5V and load change=10kΩ/10pF ±5%): ±0.1ppm max

**Developed Frequencies:**
- 10.0MHz, 12.80MHz, 16.320MHz, 16.3840MHz, 19.20MHz, 20.0MHz, 30.720MHz, 32.7680MHz, 38.880MHz, 40.0MHz.

**Electrical Parameters**

- Supply Voltage: 3.3V ±5%
- Current Draw: 5.000mA
- Current Consumption (@ TA=25°C, Vs=3.3V, VC=1.5V and load=10kΩ/10pF): 5mA max

**Frequency Adjustment**

- Pulling: ±10ppm min to ±15ppm max
- Control Voltage: 1.5V ±1.0V
- Input Impedence: 100kΩ min
- Linearity: 10% max
- Slope: Positive

**Output Details**

- Output Compatability: Clipped Sine
- Drive Capability: 10kΩ/10pF
- Output Voltage Level: 0.8V pk-pk min

**Noise Parameters**

- Phase Noise @ 25°C (F=10.0MHz, typ):
  - -90dBc/Hz @ 10Hz
  - -120dBc/Hz @ 100Hz
  - -140dBc/Hz @ 1kHz
  - -145dBc/Hz @ 10kHz
  - -148dBc/Hz @ 100kHz

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Environmental Parameters

- Operable Temperature Range: -40 to 85°C
- Storage Temperature Range: -55 to 105°C
- ESD Levels: ANSI/ESDA/JEDEC JS-001-2010:
  - Human Body Model, Class 2: 2000V to 4000V
  - Machine Model, Class B: 200V to 400V
- Shock: IEC 60068-2-27, Test Ea, Severity 50A: 100G acceleration for 6ms, half sine wave, 3 times in 3 mutually perpendicular planes.
- Vibration: IEC 60068-2-06, Test Fc: 10Hz-2000Hz, 0.75mm amplitude, 10G acceleration, 30mins per cycle, 3 times in 3 mutually perpendicular planes, test duration 2hrs.

Manufacturing Details

- Storage Conditions:
  - Temperature: -10 to 35°C
  - Humidity: 20 to 70% RH
- Maximum Process Temperature: 260°C (30secs max)

Compliance

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

Packaging Details

- Pack Style: Cutt Cut tape
- Pack Size: 1

Alternative packing option available
Click to View Pricing, Inventory, Delivery & Lifecycle Information:

IQD Frequency Products:
LFTVXO075802Cutt