



Description

- Temperature compensated crystal oscillator (TCXO) in a hermetically sealed 3.2x2.5mm SMD package.
- Model IQXT-220-1
- Model Issue number 3

Frequency Parameters

- Frequency 40.0MHz
- Frequency Tolerance ± 1.00 ppm
- Frequency Stability ± 0.28 ppm
- Operating Temperature Range -40.00 to 85.00°C
- Ageing ± 0.02 ppm max/day, ± 1 ppm max/year
- Frequency Tolerance: Measurement referenced to frequency observed with TA=25°C, Vs=3.3V and load=10k Ω /10pF, within 30 days after ex-works.
- Frequency Stability: TA varied across the operating temperature range, measurement referenced to frequency observed with $f_{ref} = (f_{max} + f_{min})/2$, Vs=3.3V, load=10k Ω /10pF and temperature variable speed less than 2°C/min.
- Ageing: Vs, TA and load constant, measurement referenced to frequency observed with TA=25°C, Vs=3.3V, load=10k Ω /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 and load=10k Ω /10pF): ± 0.1 ppm max
- Load Variation (measurement referenced to frequency observed with TA=25°C, Vs=3.3V and load change=10k Ω /10pF $\pm 5\%$): ± 0.1 ppm max

Electrical Parameters

- Supply Voltage 3.3V $\pm 5\%$
- Current Draw 5.000mA
- Current Consumption (@ TA=25°C, Vs=3.3V and load=10k Ω /10pF): 5mA max

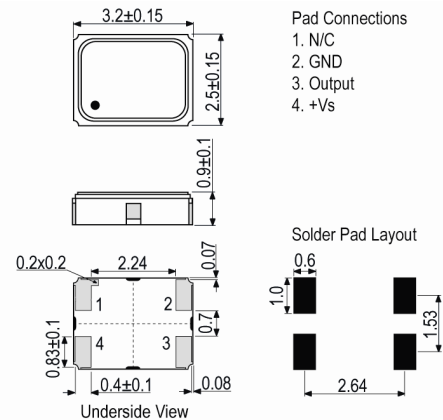
Output Details

- Output Compatibility Clipped Sine
- Drive Capability 10k Ω /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

Outline (mm)



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Environmental Parameters

- Operable Temperature Range: -40 to 85°C
- Storage Temperature Range: -55 to 105°C
- ESD Levels:
 - ESD Human Body Model (JEDEC JS-001-2010): Class 2: 2000V to 4000V
 - ESD Machine Model (JEDEC JESD22-A115C): 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
- RoHS Terminations Ni (1µm~9µm), Au (0.5µ~1µm)
- RoHS Reflow Temp 260°C max for 30sec max

Compliance

- RoHS Status (2015/863/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): 1

Packaging Details

- Tape & reel in accordance with EIA-481
Quantities below the standard reel size to be supplied on cut tape

Standard Pack Quantity: 3,000

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