


Description

- Temperature compensated crystal oscillator (TCXO)
- Model IQXT-210-48
- Model Issue number 1

Frequency Parameters

- Frequency 20.0MHz
- Frequency Tolerance $\pm 1.00\text{ppm}$
- Frequency Stability $\pm 0.28\text{ppm}$
- Operating Temperature Range -40.00 to 105.00°C
- Ageing $\pm 0.01\text{ppm}$ max per day, $\pm 1\text{ppm}$ max per year
- Frequency Tolerance: Measurement referenced to frequency observed with $T_A=25^\circ\text{C}$, $V_s=3.3\text{V}$ and within 30 days after ex-works.
- Frequency Stability: TA varied across the operating temperature range, measurement referenced to frequency observed with $T_A=25^\circ\text{C}$, $V_s=3.3\text{V}$, load= 15pF and temperature variable speed less than 2°C per minute.
- Ageing: $T_A=25^\circ\text{C}$, $V_s=3.3\text{V}$ and after 1hr of operation.
- Supply Voltage Variation (measurement referenced to frequency observed with $T_A=25^\circ\text{C}$, V_s varied from 3.13V to 3.47V and load= 15pF): $\pm 0.1\text{ppm}$ max
- Load Variation (measurement referenced to frequency observed with $T_A=25^\circ\text{C}$, $V_s=3.3\text{V}$ and load change= 15pF $\pm 5\%$): $\pm 0.1\text{ppm}$ max

Electrical Parameters

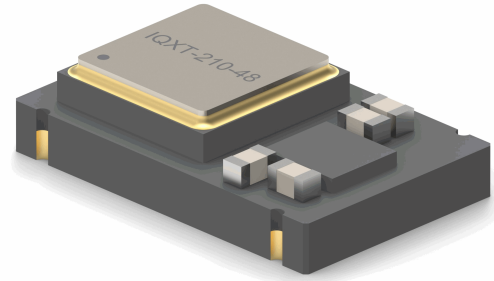
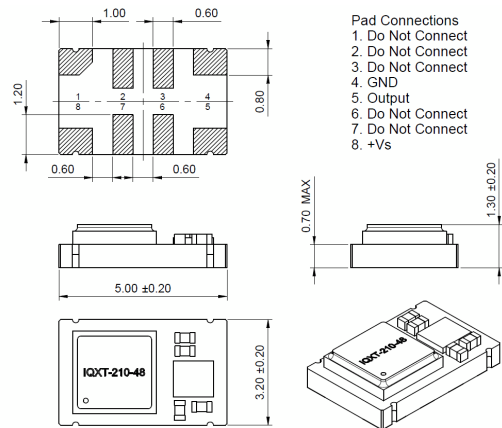
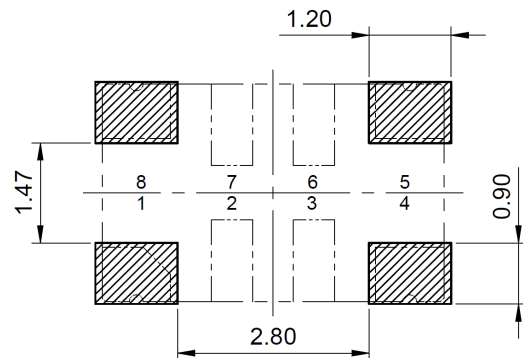
- Supply Voltage $3.3\text{V} \pm 5\%$
- Current Draw 10.000mA max
- Current: $T_A=25^\circ\text{C}$, $V_s=3.3\text{V}$ and load= 15pF

Output Details

- Output Compatibility HCMOS
- Drive Capability 15pF
- Rise and Fall Time 8.0ns max
- Duty Cycle $45/55\%$ max
- Output Low (@ $V_s=3.3\text{V}$, load= 15pF): 0.4V max
- Output High (@ $V_s=3.3\text{V}$, load= 15pF): 2.4V min

Noise Parameters

- Phase Noise (@ 25°C typ):
 - 93dBc/Hz @ 10Hz
 - 120dBc/Hz @ 100Hz
 - 145dBc/Hz @ 1kHz
 - 157dBc/Hz @ 10kHz
 - 159dBc/Hz @ 100kHz
 - 159dBc/Hz @ 1MHz
- Phase Noise (@ 25°C max):
 - 88dBc/Hz @ 10Hz
 - 115dBc/Hz @ 100Hz
 - 140dBc/Hz @ 1kHz
 - 152dBc/Hz @ 10kHz
 - 154dBc/Hz @ 100kHz
 - 154dBc/Hz @ 1MHz


Outline (mm)

Recommended Solder Pad Layout

Sales Office Contact Details:

UK: +44 (0)1460 270200

USA: +1.760.318.2824

 Email: info@iqdfrequencyproducts.com

 Web: www.iqdfrequencyproducts.com

Environmental Parameters

- Storage Temperature Range: -55 to 105°C
- ESD Level:
Human Body Model: Class 2: 2000V to 4000V, JEDEC JS-001-2010
Machine Model: Class B: 200V to 400V, JEDEC JESD22-A115C
- 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

- Maximum Process Temperature: 260°C (30secs max)

Compliance

- RoHS Status (2015/863/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): 3

Packaging Details

- Pack Style: Reel Tape & reel in accordance with EIA-481-D
Pack Size: 1,000
- *Alternative packing option available*

Sales Office Contact Details:

UK: +44 (0)1460 270200

USA: +1.760.318.2824

Email: info@iqdfrequencyproducts.comWeb: www.iqdfrequencyproducts.com