





Description

 The IQXT-260-11 employs an analogue ASIC for the oscillator and a high-order temperature compensation circuit in a 2.5 x 2.0mm size package.

■ Model IQXT-260-11

■ Model Issue number

Frequency Parameters

■ Frequency
 ■ Frequency Tolerance
 ■ Tolerance Condition
 ■ Frequency Stability
 ■ Operating Temperature Range
 19.20MHz
 ±1.00ppm
 25°C ±2°C
 ±0.50ppm
 30.00 to 85.00°C

■ Ageing ±1ppm max over 1yr @ 25°C

 Frequency Stability: TA varied over operating temperature range, measurement referenced to frequency observed with Fref=(Fmax+Fmin)/2, Vs=1.8V and load=10kΩ//10pF.

 Frequency Slope (minimum of one frequency reading every 2°C):

-10 to 60°C: 0.05ppm/°C max

 Frequency Drift (calculated from frequency slope with temperature varied at a maximum of 1.92°C/min (0.032°C/s) over -10°C to 60°C): 1.6ppb/s max

 Frequency Slope (minimum of one frequency reading every 2°C):

-30 to 85°C: 0.1ppm/°C max

 Frequency Drift (calculated from frequency slope with temperature varied at a maximum of 0.96°C/min (0.016°C/s) over -30°C to 85°C): 1.6ppb/s max

 Note: Frequency Drift rate is calculated from the equation ppb/s=°C/s x ppb/°C

Small Thermal Cycle Frequency Slope (measured at 0.5°C intervals over any 5°C heating and 5°C cooling cycle, at a minimum rate of 1°C/minute within the operating temperature range): 50ppb/°C max

(Note: Disport the first 0.5°C interval of each heating and cools are recorded as a cool of cools heating and cools are recorded.

(Note: Discard the first 0.5°C interval of each heating and cooling cycle.)

 Small Thermal Cycle Hysteresis (difference in frequency measurements over any 5°C heating and 5°C cooling cycle, at a minimum rate of 1°C/minute within the operating temperature range): 50ppb pk-pk max

Supply Voltage Variation (±5% change @ 25°C): ±0.1ppm max

■ Load Variation (±10% change @ 25°C): ±0.2ppm max

 Reflow Variation (after two consecutive reflows as per profile shown and 1hr recovery @ 25°C): ±1ppm max

 Note: Parts should be shielded from drafts causing unexpected thermal gradients. Temperature changes due to ambient air currents can lead to short term frequency drift.

Electrical Parameters

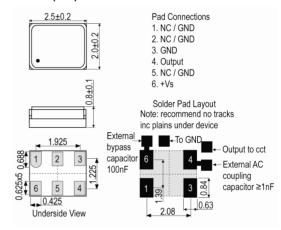
Supply Voltage 1.8V ±5%Current Draw 1.50mA

Supply Current (@ TA=25°C, Vs max and load=10kΩ//10pF):
 1.5mA max

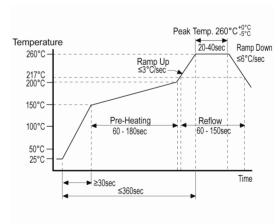




Outline (mm)



Pb-Free Reflow



Sales Office Contact Details:

UK: +44 (0)1460 270200 France: 0800 901 383 Germany: 0800 1808 443 USA: +1.760.318.2824 Email: info@iqdfrequencyproducts.com
Web: www.iqdfrequencyproducts.com





Part No. + Packaging: LFTCX0070033Reel

Output Details

Output Compatability Clipped Sine
 Drive Capability 10kΩ//10pF ±10%

 Output Voltage Level (@ TA=25°C, Vs min and load=10kΩ//10pF): 0.8V pk-pk min

- Start Up Time (amplitude within 90% of specified output level): 0.5ms max
- Start Up Time (frequency within ±0.5ppm of steady state frequency): 2ms max
- Output: DC coupled
- Note: AC-coupled output requires an external capacitor, ≥1nF recommended.

Noise Parameters

- Phase Noise @ 25°C (typ):
 - -64dBc/Hz @ 1Hz
 - -94dBc/Hz @ 10Hz
 - -117dBc/Hz @ 100Hz
 - -139dBc/Hz @ 1kHz
 - -150dBc/Hz @ 10kHz
 - -152dBc/Hz @ 100kHz

Environmental Parameters

- Storage Temperature Range: -40 to 85°C
- Shock: MIL-STD-202 M213: Half sine wave acceleration of 3000G peak amplitude, duration 0.3ms, velocity 12.3ft/s.
- Vibration: JESD22-B103-B: 10G peak acceleration for 20mins, 12 cycles in each of the 3 orientations, tested from 10-2000Hz.
- Moisture Resistance: MIL-STD-202 M106g: 1000hrs @ 85°C, 85% RH, biased.
- Thermal Cycling: JESD22 Method JA-104C: 1000 temperature cycles, where each cycle consists of a 25mins soak time @ -40°C followed by a 25mins soak time @ 85°C, with a 60secs maximum transition time between temperatures, air to air transition.
- Note: Frequency shift ≤1ppm after environmental conditions.

Manufacturing Details

Maximum Process Temperature: 260°C (40secs max)

Compliance

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

Packaging Details

 Pack Style: Reel Pack Size: 3.000
 Tape & reel in accordance with EIA-481-D

Alternative packing option available

Sales Office Contact Details:

UK: +44 (0)1460 270200 France: 0800 901 383 Germany: 0800 1808 443 USA: +1.760.318.2824 Email: info@iqdfrequencyproducts.com Web: www.iqdfrequencyproducts.com