



Description

- Temperature compensated crystal oscillator (TCXO)

Model	IQXT-210-1
Model Issue number	2

Frequency Parameters

- Frequency: 12.80MHz
- Frequency Tolerance @ 25°C: ± 0.50 ppm
- Frequency Stability: ± 0.14 ppm
- Operating Temperature Range: -40.00 to 85.00°C
- Ageing: ± 0.02 ppm max per day, ± 1 ppm max per year
- Supply Voltage Variation (measurement referenced to frequency observed with TA=25°C, Vs varied from 3.13V to 3.47V and load=15pF): ± 0.1 ppm max
- Load Variation (5% load change measurement referenced to frequency observed with TA=25°C, Vs=3.3V and load=15pF): ± 0.2 ppm max
- Frequency Stability: TA varied across the operating temperature range, measurement referenced to frequency observed with TA=25°C, Vs=3.3V, load=15pF and temperature variable speed less than 2°C per minute.
- Short Term Stability (@ 25°C after 10mins power on): 5E-10/s typ @ 10MHz
- Frequency Tolerance (measurement referenced to frequency observed with TA=25°C, Vs=3.3V and within 30 days after ex-works)
- Ageing: TA=25°C, Vs=3.3V and after 1hr of operation.

Electrical Parameters

- Supply Voltage: 3.30V
- Supply Voltage Tolerance: $\pm 5\%$
- Current Draw: 10.00mA max
- Current: TA=25°C, Vs=3.3V and load=15pF

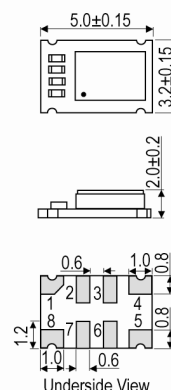
Output Details

- Output Compatibility: HCMOS
- Output Load: 15pF
- Rise and Fall time (10% - 90%): 8ns max
- Duty Cycle: 45/55% max
- 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

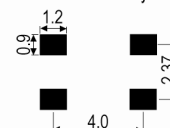
Outline (mm)



Pad Connections

1. N/C
2. N/C
3. N/C
4. GND
5. Output
6. N/C
7. N/C
8. +Vs

Solder Pad Layout



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Part No. + Packaging: **LFTCX0063778BULK**

- Shock: IEC 60068-2-27, Test Ea: 100G acceleration for 6ms, half sine wave, 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

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

■ RoHS Status	Compliant
■ REACH Status	Compliant

- 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.

Web: www.igdfrequencyproducts.com