

TEMPERATURE COMPENSATED CRYSTAL OSCILLATOR



Part Number: 8304095056 | IQXT-602

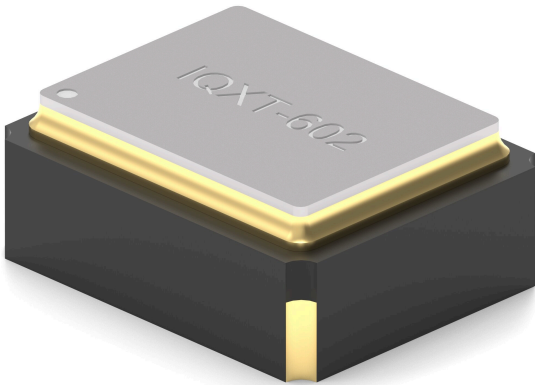
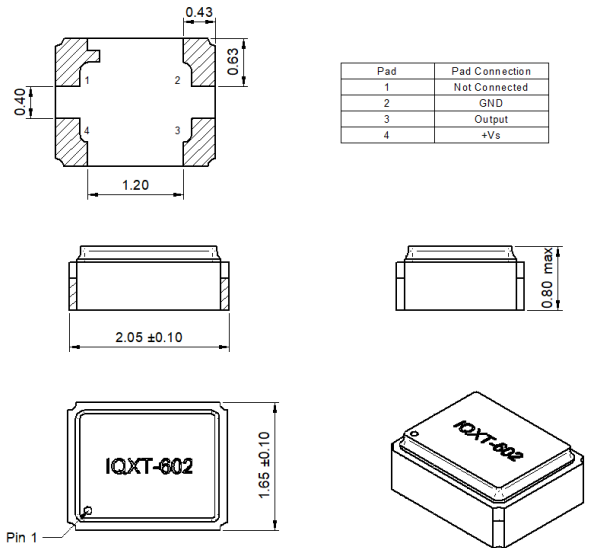
AKA Number: LFTCXO095056



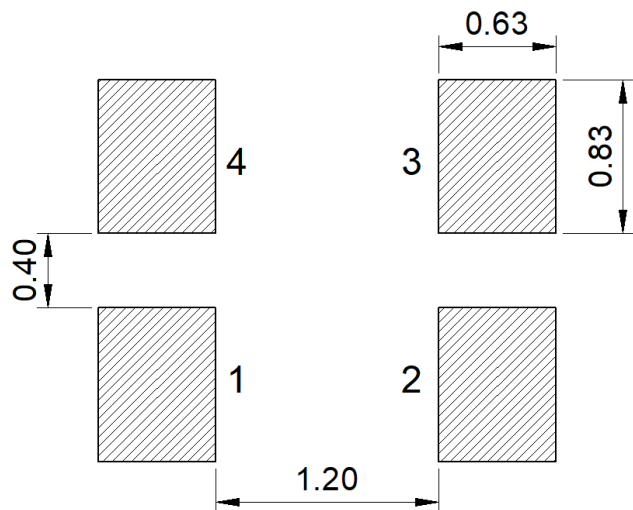
General Information

Surface mount temperature compensated crystal oscillator (TCXO) in a miniature ceramic package with a Clipped Sine Wave output.

Dimensions [mm]



Recommended Land Pattern [mm]



TEMPERATURE COMPENSATED CRYSTAL OSCILLATOR



Part Number: **8304095056** | IQXT-602

AKA Number: LFTCX0095056

Frequency Parameters

Frequency	40.0 MHz
Frequency Tolerance	$\pm 1.5 \text{ ppm @ } 25^\circ\text{C} \pm 2^\circ\text{C}$
Frequency Stability	$\pm 0.5 \text{ ppm max.}$
Operating Temperature	$-40^\circ\text{C to } 85^\circ\text{C}$
Ageing	$\pm 1 \text{ ppm max. first year}$
- Frequency Tolerance: 2 hours, after 2 times reflow soldering, based on nominal frequency. - Frequency Stability: TA varied across the operating temperature range, measurement referenced to frequency observed with $f_{\text{ref}} = (f_{\text{max}} + f_{\text{min}}) / 2$, $V_s = 3.3 \text{ V}$, load = $10 \text{ k}\Omega // 10 \text{ pF}$ and temperature variable speed less than 2°C per minute. - Supply Voltage Variation (measurement referenced to frequency observed with $T_A = 25^\circ\text{C}$, $V_s = 3.3 \text{ V} \pm 5\%$ and load = $10 \text{ k}\Omega // 10 \text{ pF}$): $\pm 0.1 \text{ ppm max.}$ - Load Variation (10 % load change, measurement referenced to frequency observed with $T_A = 25^\circ\text{C}$, $V_s = 3.3 \text{ V}$ and load change = $10 \text{ k}\Omega // 10 \text{ pF}$): $\pm 0.1 \text{ ppm max.}$ - Ageing: $T_A = 25^\circ\text{C}$, $V_s = 3.3 \text{ V}$ and after 1 hour of operation.	

Output Details

Output Compatibility	Clipped sine
Drive Capability	$10 \text{ k}\Omega // 10 \text{ pF}$
Output Voltage Levels:	
Output Low (VoL): 0.8 Vp-p min.	
Output High (VoH): 1.2 Vp-p max.	

Material Parameters

Termination Finish	Au Ni
Moisture Sensitivity Level (MSL)	3

Manufacturing Details

Reflow: $260^\circ\text{C max. for } 30 \text{ seconds max.}$

Electrical Parameters

Supply Voltage	$1.71 \text{ V to } 3.63 \text{ V}$
Current Consumption	3 mA max.
- Current consumption @ 25°C, $V_s = 3.3 \text{ V}$ and load = $10 \text{ k}\Omega // 10 \text{ pF}$ - Start up time (more than 90 % of final output voltage): 2 ms max.	

Noise Parameters

Phase Noise (max.) @ $25^\circ\text{C} \pm 2^\circ\text{C}$	
- 45 dBc/Hz	@ 1 Hz
- 80 dBc/Hz	@ 10 Hz
- 111 dBc/Hz	@ 100 Hz
- 135 dBc/Hz	@ 1 kHz
- 145 dBc/Hz	@ 10 kHz
- 152 dBc/Hz	@ 100 kHz
- 154 dBc/Hz	@ 1 MHz
Spurious Suppression: -8 dBc max.	

Environmental Parameters

Storage Temperature Range:	$-55^\circ\text{C to } 105^\circ\text{C}$
- Vibration: IEC 68-2-06 Test Fc. Test Condition: 0.75 mm; acceleration ($10 \text{ Hz} \sim 2000 \text{ Hz}$), 10 g, 1 cycle per 30 minutes, test 2 hours (3 times for each of the 3 directions, X, Y, Z). - Shock: IEC 68-2-27 Test Ea/Severity 50 A: 100 g; 6 ms; half sine wave (3 times for each of the 3 directions X, Y, Z).	

Technical Standards

RoHS Status	2015/863/EU - Compliant
REACH Status	(EC)1907/2006 - Compliant
ESD	$4000 \text{ V Human Body Model}$ $400 \text{ V Machine Model}$

Packaging Details

Packaging SPQ	Tape & Reel 3000 pcs
Tape & reel in accordance with EIA-481	
Quantities below the standard reel size to be supplied on cut tape.	

TEMPERATURE COMPENSATED CRYSTAL OSCILLATOR



Part Number: 8304095056 | IQXT-602

AKA Number: LFTCX0095056

Technical Notes

Current Consumption: 3 mA max.

Company Address

IQD Frequency Products Ltd.
Station Road
Crewkerne
Somerset
TA18 8AR, United Kingdom