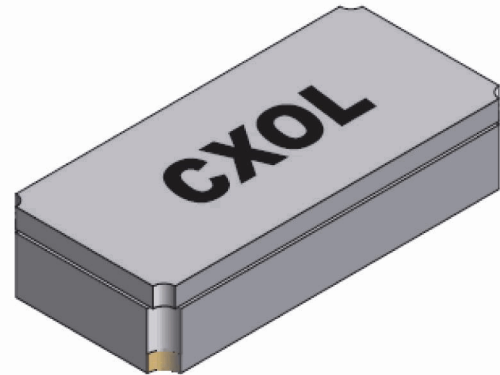


ISSUE 1; June 2019

### Description

- This product is designed and manufactured by Statek Corporation in California, USA and distributed by IQD. The surface-mount CXOL is an ultra-miniature, ultra-low current quartz crystal oscillator with a typical start-up time of 200ms, hermetically sealed in a highly reliable ceramic housing.
- SM1 Gold Plated (RoHS)
- SM5 Solder Dipped (RoHS)
- FEATURES:  
Ultra-low current consumption  
Typical start-up time of 200ms  
Typical rise and fall times of 25ns  
Hermetically sealed ceramic package  
Optional output enable/disable with Tri-State
- Please note that all data is only valid at 25°C unless otherwise stated.



### Frequency Parameters

- Frequency: 32.0kHz to 100.0kHz
- Frequency Tolerance:  $\pm 20.00\text{ppm}$  to  $\pm 100.00\text{ppm}$
- Tolerance Condition: @ 25°C
- Ageing:  $\pm 2\text{ppm}$  max in 1st year
- Voltage Coefficient:  $\pm 1\text{ppm/V}$  typ
- Note: Other Frequency Tolerances are available - please contact an IQD Sales Office

### Electrical Parameters

- Supply Voltage: 5.0V  $\pm 10\%$
- Note: Other Supply Voltages are available - please contact an IQD Sales Office
- Supply Voltage (absolute maximum rating): -0.5V to 7.0V
- Supply Current:  
32.768kHz (with  $V_s=3.3\text{V}$  & load=10pF): 2.8 $\mu\text{A}$  typ  
32.768kHz (with  $V_s=3.3\text{V}$ , load=10pF & OE is low): 0.4 $\mu\text{A}$  typ  
100kHz (with  $V_s=3.3\text{V}$  & load=10pF): 8.0 $\mu\text{A}$  typ

### Operating Temperature Ranges

- -10 to 70°C
- -40 to 85°C
- -55 to 125°C

### Output Details

- Output Compatibility: CMOS
- Drive Capability: 10pF
- Note: Other Output Loads are available - please contact an IQD Sales Office
- Output Level High  $V_{oh}$ :  $V_s - 0.4\text{V}$  min  
Output Level Low  $V_{ol}$ : 0.4V max

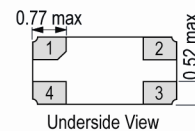
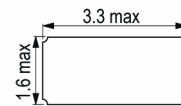
### Output Control

- Start Up Time: 200ms typ

### Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- Shock: 5000G, 0.3ms, 1/2 sine
- Vibration: 20G, 10Hz-2000Hz swept sine

### Outline (mm) SM1 = Gold Plated (RoHS)



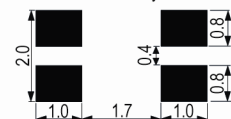
#### Pad Connections

1. Output
2. GND
3. Tri-State/NC
4. +Vs

#### Termination (H):

- SM1 = 1.0mm max
- SM3 and SM5 = 1.2mm max

#### Solder Pad Layout



### Sales Office Contact Details:

UK: +44 (0)1460 270200

USA: +1.760.318.2824

Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)

Web: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)

**Manufacturing Details**

- Maximum Process Temperature: 260°C max (for 2mins max)

**Ordering Information**

- Frequency\*
- Model\*
- Supply Voltage\*
- Termination Variant\*
- Output
- Frequency Tolerance (@ 25°C)\*
- Operating Temperature Range\*
- Pad 3 Function\*  
(minimum required\*)
- Termination Variants:
  - SM1 = Gold Plated
  - SM3 = Solder Dipped (non RoHS)
  - SM5 = Solder Dipped (RoHS)
- Pad 3 Function Options:
  - TS = Tri-State
  - NC = No connection
- Example
  - 32.768kHz CXOL 5.0V SM1
  - CMOS ±50ppm -40 to 85C NC

**Compliance**

- RoHS Status (2015/863/EU)      Optional
- REACH Status                      Compliant
- MSL Rating (JDEC-STD-033):    Not Applicable

**Packaging Details**

- Pack Style: Tray      Supplied on a tray  
Pack Size: 1
- Pack Style: Reel      Tape & reel in accordance with EIA-481-D  
Pack Size: 1,000

**Electrical Specification - maximum limiting values 5.0V ±10%**

Frequency Min	Frequency Max	Temperature Range	Stability	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
32.0kHz	100.0kHz	-10 to 70	-	-	50	45/55%
		-40 to 85	-	-	50	45/55%
		-55 to 125	-	-	50	45/55%

*This document was correct at the time of printing; please contact your local sales office for the latest version.*  
[Click to view latest version on our website.](#)

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