

ISSUE 1; September 2016

### Description

- CXOLP is an ultra-miniature, low power, fast start-up time, high shock and low ageing quartz crystal oscillator hermetically sealed in a ceramic housing.
- SM1 Gold Plated (RoHS)
- SM4 Solder Plated (RoHS)
- FEATURES:
  - Low current consumption (55µA @ 1MHz)
  - Fast start-up (1ms typical)
  - Tight tolerance
  - High shock resistance (10000G typical)
  - Low ageing
  - Hermetically sealed ceramic package
- APPLICATIONS:
  - Military, Aerospace & Avionics
  - Communications
  - Battery Operated Devices
  - Navigation
  - ICAD Devices
  - GPS
  - Industrial, Computer & Communications
  - Wireless Telemetry
  - Handheld instrumentation
  - Transponder/Animal migration
  - Medical
  - Patient monitoring
  - Infusion Pumps



### Frequency Parameters

- Frequency 1.0MHz to 8.5MHz
- Frequency Tolerance ±25.00ppm
- Tolerance Condition @ 25°C
- Frequency Stability ±10.00ppm to ±100.00ppm
- Ageing ±2ppm max in 1st year
- Note: Other Frequency Tolerances are available - please contact an IQD sales office

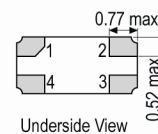
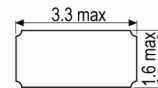
### Electrical Parameters

- Supply Voltage 1.8V ±10%
- Supply Voltage (absolute maximum rating): -0.5V to 5.0V
- Supply Current (@ 1.8V):
  - 2MHz (@ 25°C and load=5pF): 65µA typ
  - 4MHz (@ 25°C and load=5pF): 115µA typ
  - 8MHz (@ 25°C and load=5pF): 210µA typ
- Please note that all data is only valid at 25°C unless otherwise stated.

### Operating Temperature Ranges

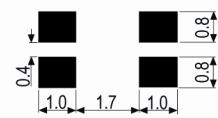
- -10 to 70°C
- -40 to 85°C
- -55 to 125°C

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



- Pad Connections
1. Output
  2. GND
  3. Enable/Disable/NC
  4. +Vs

#### Solder Pad Layout



### Sales Office Contact Details:

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Germany: 0800 1808 443

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USA: +1.760.318.2824

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

#### Output Details

- Output Compatibility CMOS
- Drive Capability 5pF
- Note: Other output loads available - please contact IQD sales office.
- Output Levels:
  - Output High Voh: 90%Vs min
  - Output Low Vol: 10%Vs max
- Rise Time (@ 3.3V, 5pF//1MΩ load): 5.5ns typ
- Fall Time (@ 3.3V, 5pF//1MΩ load): 5.0ns typ

#### Output Control

- Start Up Time: 1ms typ

#### Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- Shock: 10000G, 0.3ms, 1/2 sine
- Higher Shock available - please contact IQD sales office.
- Vibration: per MIL-STD-202G, Method 204D. Cond.D, 20G, 10Hz-2000Hz swept sine

#### Manufacturing Details

- Maximum Process Temperature: 260°C max (for 20s 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 (RoHS)
  - SM4 = Solder Plated (RoHS)
- Example
  - 2MHz CXOLP 1.8V SM1
  - CMOS ±50ppm -40 to 85C NC

#### Compliance

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

#### Packaging Details

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

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Electrical Specification - maximum limiting values 1.8V  $\pm$ 10%

Frequency Min	Frequency Max	Temperature Range	Stability	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
1.0MHz	8.5MHz	-10 to 70	$\pm$ 10.0	-	-	40/60%
		-40 to 85	$\pm$ 20.0	-	-	40/60%
		-55 to 125	$\pm$ 40.0	-	-	40/60%

*This document was correct at the time of printing; please contact your local sales office for the latest version.*

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