



## CXOX

A high frequency, low profile, miniature surface-mount oscillator consisting of a CMOS compatible hybrid circuit and a state-of-the-art fundamental-mode crystal.

Model Name	Description
CXOX 3.3V	A 3.3V Version
CXOX 5.0V	A 5.0V Version

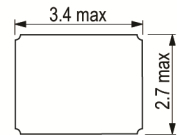
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### Description

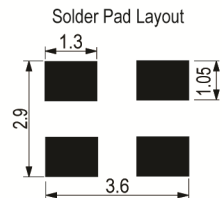
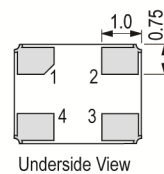
- A high frequency, low profile, miniature surface-mount oscillator consisting of a CMOS compatible hybrid circuit and a state-of-the-art fundamental-mode crystal.
- SM1 Gold Plated (RoHS)
- SM5 Solder Dipped (RoHS)
- Features:
  - Hermetically sealed ceramic package
  - Low power consumption
  - Low EMI emission
  - Optional Output Enable/Disable with Tri-State
- Applications:
  - Aerospace -
    - Communications
    - Navigation
    - GPS
  - Industrial, Computer & Communications -
    - Miniature clock oscillator
    - Handheld instrumentation
    - PDA
    - Transponder/Animal migration
  - Medical -
    - Test & Diagnostic equipment
    - Handheld devices
- Please note that all data is only valid at 25°C unless otherwise stated.



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



Pad Connections	Height (H) =
1. NC/EN	SM1 1.09 max
2. GND	SM3 1.21 max
3. Output	SM5 1.21 max
4. +Vs	



### Frequency Parameters

- |                       |                         |
|-----------------------|-------------------------|
| ■ Frequency           | 1.0MHz to 160.0MHz      |
| ■ Frequency Tolerance | ±100.00ppm              |
| ■ Tolerance Condition | @ 25°C                  |
| ■ Frequency Stability | ±50.00ppm to ±100.00ppm |
| ■ Ageing              | ±5ppm max in 1st year   |

### Electrical Parameters

- |   |             |
|---|-------------|
| ■ Supply Voltage                            | 3.3V ±10%   |
| ■ Supply Current (typical):                 |             |
| 3mA @ 24 MHz                                |             |
| 5mA @ 32 MHz                                |             |
| 6mA @ 50 MHz                                |             |
| 23mA @ 130MHz                               |             |
| ■ Supply Voltage (absolute maximum rating): | -0.5V to 7V |

### Operating Temperature Ranges

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

### Output Details

- |                          |      |
|--------------------------|------|
| ■ Output Compatibility   | CMOS |
| ■ Drive Capability       | 15pF |
| ■ Start Up Time: 5ms max |      |

### Output Control

- Enable/Disable (EN):
  - Logic 1 to pin 1, output enabled
  - Logic 0 to pin 1, output disabled, output goes to high impedance state, current consumption low, internal oscillator stops.
- No Connection (NC):
  - Pad 1 not connected internally

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### Environmental Parameters

- Shock: 5000G, 0.3ms, 1/2 sine
- Vibration: MIL-STD-202G, Method 204D, Condition D: 20G rms, 10Hz-2000Hz swept sine
- Storage Temperature Range: -55 to 125°C

### Manufacturing Details

- Solder Process Temperature: 260°C max for 20sec max

### Ordering Information

- Frequency\*
- Model\*
- Termination Variant\*
- Output
- Frequency Tolerance (@ 25°C)\*
- Frequency Stability\*
- Operating Temperature Range\*
- Pad 1 Function\*
- (\*minimum required)
- Termination Variants:  
SM1 = Gold Plated / SM5 = Solder Dipped  
(Note: Non-RoHS compliant terminations also available - SM3 = Solder Dipped)
- Example  
40.0MHz CXOX 3.3V SM1  
CMOS ±100ppm ±100ppm -40 to 85C NC

### Compliance

- RoHS Status (2011/65/EU)      Optional
- 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

**Electrical Specification - maximum limiting values 3.3V ±10%**

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
1.0MHz	160.0MHz	-10 to 70	±50.0	-	6	40/60%
		-40 to 85	±100.0	-	6	40/60%
		-55 to 125	±100.0	-	6	40/60%

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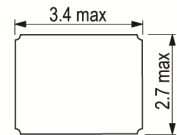
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### Description

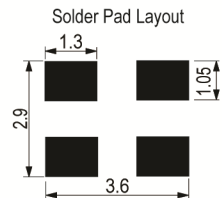
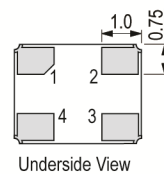
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| ■ Tolerance Condition | @ 25°C                  |
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| ■ Ageing              | ±5ppm max in 1st year   |

### Electrical Parameters

- |   |             |
|---|-------------|
| ■ Supply Voltage                            | 5.0V ±10%   |
| ■ Supply Current (typical):                 |             |
| 8mA @ 24 MHz                                |             |
| 10mA @ 32 MHz                               |             |
| 13mA @ 50 MHz                               |             |
| 39mA @ 130MHz                               |             |
| ■ Supply Voltage (absolute maximum rating): | -0.5V to 7V |

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