



ISSUE 1; January 2013 - RoHS 2011/65/EU

**Description**

- Statek's 32.768kHz surface mount LFXO oscillators, designed especially for applications requiring a fast start-up and high precision, consist of a Statek miniature AT quartz crystal and a CMOS/TTL compatible hybrid circuit in a ceramic package. Each crystal is pre-qualified before assembly into the oscillator through electrical tests and characterization over temperature.

For harsh environments, a high shock version of the LFXO is also available.

**Frequency Range**

- Frequency 32.7680kHz

Supply Voltage

- Voltage 3.3V ±10%
- Frequency Tolerance 10ppm to 100ppm

Ageing

- Ageing ±3ppm max in 1st year

Output Compatibility & Load

- Output Compatibility CMOS
- Drive Capability 15pF

Operating Temperature Ranges

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

Electrical Parameters

- Start-Up Time: 0.8ms typ
- Current: 500µA typ when operating, 3.2µA typ when in EN mode.
- Absolute Maximum Supply Voltage: -0.3V to 5.0V

Output Levels

- Output High: 90%Vs min
- Output Low: 10%Vs max

Output Control

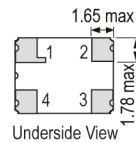
- EN - Enable/Disable:
 - Pad 1 logic '0', pad 3 high impedance
 - Pad 1 logic '1', pad 3 output
 - Internal oscillator stops, low current
- NC - No Connection:
 - Pad 1 not connected internally

Environmental Parameters

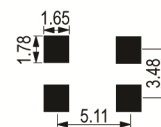
- Storage Temperature Range: -55 to 125°C
- Shock (std): 5000G, 0.3ms, 1/2 sine
- Shock (HG): 20000G, 0.3ms, 1.2 sine
- Vibration: MIL-STD-202G, Method 204D, Test Condition D 20G, 10Hz-2000Hz, swept sine

Manufacturing Details

- Maximum Process Temperature: 260°C for 20sec

Outline (mm)

Pad Connections	Height (H) =
1. EN/NC	SM1 1.65mm max
2. GND	SM3 1.85mm max
3. Output	SM5 1.85mm max
4. +Vs	

Solder Pad Layout**Sales Office Contact Details:**

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Ordering Information (*minimum required)

- Frequency*
- Model*
- Termination Variant*
- Output Compatibility
- Frequency Tolerance (@25°C)*
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Supply Voltage
- Pad 1 Function*
- Example
- 32.768kHz LFXO-AT 3.3V HG-SM1
- CMOS ±10ppm ±50ppm -10 to 70C NC

Packing Details

- Pack Style: **Reel** Tape and reel in accordance with EIA-481-D
- Pack Size 1,000
- Alternative packing options available

Electrical Specification - maximum limiting values 3.3V ±10%

Developed Frequencies	Temp Range	Frequency Stability	Current Draw	Rise & Fall (10 to 90%)	Duty Cycle %
32.7680kHz	-10.0 to 70.0°C	±10ppm	-	1,000ns	45/55%
	-40.0 to 85.0°C	±20ppm	-	1,000ns	45/55%
	-55.0 to 125.0°C	±50ppm	-	1,000ns	45/55%

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

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