

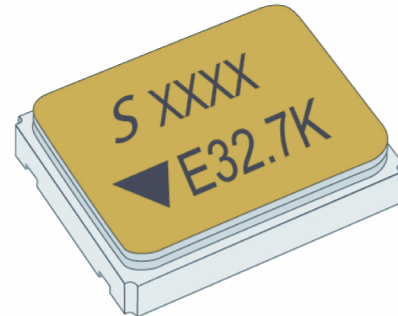
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### Description

- 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.

- HG-SM1 Gold Plated (RoHS) 20000G
- HG-SM5 Solder Dipped (RoHS) 20000G
- SM1 Gold Plated (RoHS)
- SM5 Solder Dipped (RoHS)
- Please note that all data is only valid at 25°C unless otherwise stated.



### Frequency Parameters

- Frequency: 32.768kHz
- Frequency Tolerance:  $\pm 10.00\text{ppm}$  to  $\pm 100.00\text{ppm}$
- Tolerance Condition: @ 25°C
- Frequency Stability:  $\pm 10.00\text{ppm}$  to  $\pm 100.00\text{ppm}$
- Ageing:  $\pm 3\text{ppm}$  max in 1st year

### Electrical Parameters

- Supply Voltage: 3.3V  $\pm 10\%$
- Start-Up Time: 0.8ms typ
- Current: 500 $\mu\text{A}$  typ when operating, 3.2 $\mu\text{A}$  typ when in EN mode.
- Absolute Maximum Supply Voltage: -0.3V to 5.0V

### Operating Temperature Ranges

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

### Output Details

- Output Compatibility: CMOS
- Drive Capability: 15pF

### Output Levels

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

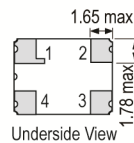
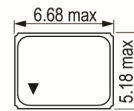
### Environmental Parameters

- 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

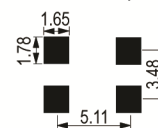
- Maximum Process Temperature: 260°C for 20sec

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



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



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### Ordering Information

- 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

### 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	%
32.768000kHz	32.768000kHz	-10 to 70	±10.0	-	1,000	45/55%
		-40 to 85	±20.0	-	1,000	45/55%
		-55 to 125	±30.0	-	1,000	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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