



ISSUE 1; July 2014 - 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.

- HG-SM1 Gold Plated (RoHS) 20000G
- HG-SM5 Solder Dipped (RoHS) 20000G
- SM1 Gold Plated (RoHS)
- SM5 Solder Dipped (RoHS)



Frequency Parameters

- Frequency: 32.768kHz
- Frequency Tolerance: $\pm 10.00\text{ppm}$ to $\pm 100.00\text{ppm}$ @ 25°C
- 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 μA typ when operating, 3.2 μA 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

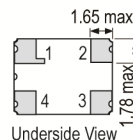
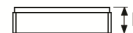
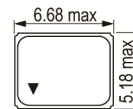
Environmental Parameters

- 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

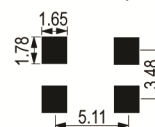
- Maximum Process Temperature: 260°C for 20sec

Outline (mm)



- 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 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

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