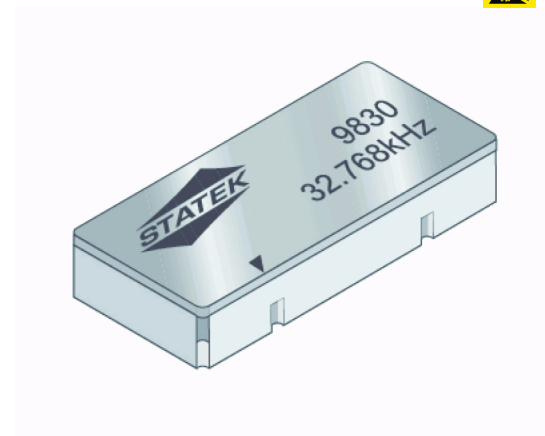


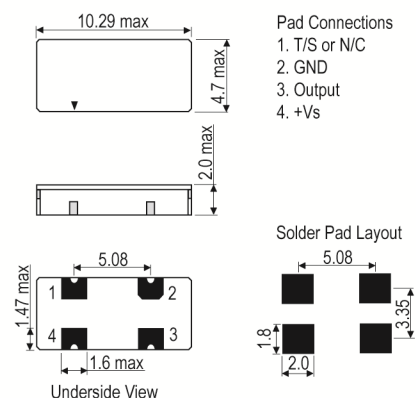
ISSUE 1; April 2016

Description

- The LSM oscillator has the highest accuracy, stability and the lowest current of all STATEK surface mount oscillators. The design consists of a STATEK crystal, and a CMOS-compatible integrated circuit. The hybrid design is hermetically-sealed with a kovar lid in a surface mount ceramic package. Permanent precision tuning of the oscillator is accomplished by laser trimming the crystal.
- -SM1 Gold Plated (RoHS)
- -SM5 Solder Dipped (RoHS)
- FEATURES:
 - Low power consumption
 - Low ageing
 - CMOS compatible
 - Double hermetically sealed package
 - Full military testing available
 - Optional tri-state
 - Low harmonic noise
- APPLICATIONS:
 - Industrial, Computer & Communications -
 - General purpose clock oscillator
 - Data logger
 - Remote sensor
 - Real time clock
 - Medical test and diagnostics
 - Military -
 - Portable field communication
 - Military high speed modem
 - Flight recorder
- The data provided is specifically for this oscillator at a frequency of 32.768kHz, for other frequencies please contact an IQD Sales office.
- Please note that all data is only valid at 25°C unless otherwise stated.



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



Frequency Parameters

- Frequency: 30.0kHz to 200.0kHz
- Frequency Tolerance: $\pm 10.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Tolerance Condition: @ 25°C
- Ageing: $\pm 1\text{ppm typ per year}$, $\pm 3\text{ppm max per year}$
- Frequency Stability Over Temperature:
 - 0°C to 50°C: $\pm 40\text{ppm max}$
 - 10°C to 70°C: $\pm 100\text{ppm max}$
- Load Variation (@ $\pm 10\%$ change): $\pm 1\text{ppm max}$

Electrical Parameters

- Supply Voltage: 3.3V $\pm 10\%$
- Voltage Coefficient: $\pm 1\text{ppm/V typ}$, $\pm 3\text{ppm/V max}$
- Absolute Maximum Supply Voltage: -0.3V to +7.0V

Operating Temperature Ranges

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

Output Details

- Output Compatibility: CMOS
- Drive Capability: 10pF//10M Ω

Sales Office Contact Details:

UK: +44 (0)1460 270200
Germany: 0800 1808 443

France: 0800 901 383
USA: +1.760.318.2824

Email: info@iqdfrequencyproducts.com
Web: www.iqdfrequencyproducts.com

Output Levels

- Output Low (Vol): 0.2V max
- Output High (Voh): 4.8V min

Environmental Parameters

- Shock: 5000G, 0.3ms, 1/2 sine
- Vibration: 10G rms, 10-2000Hz
- Storage Temperature Range: -55 to 125°C

Manufacturing Details

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

Ordering Information

- Frequency*
- Model*
- Supply Voltage
- Termination Variant*
- Frequency Tolerance*
- Operating Temperature Range*
- Tri-State or N/C*
- (*minimum required)
- Termination Variants:
 - SM1 - Gold Plated (Lead Free)
 - SM3 - Solder Dipped
 - SM5 - Solder Dipped (Lead Free)
- Example:
 - 32.768kHz LSM TF 3.3V -SM1
 - CMOS ±100ppm -40 to 85C TS

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: 100

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	%
30.00kHz	200.0kHz	-10 to 70	-	0.01	50	40/60%
		-40 to 85	-	0.01	50	40/60%
		-55 to 125	-	0.01	50	40/60%

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

[Click to view latest version on our website.](#)

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