

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)
- Please note that all data is only valid at 25°C unless otherwise stated.

Frequency Parameters

- Frequency 700.0kHz to 2.1MHz
- Frequency Tolerance $\pm 100.00\text{ppm}$ to $\pm 1,000.00\text{ppm}$
- Tolerance Condition @ 25°C
- Ageing $\pm 10\text{ppm}$ max per year
- Frequency Stability (over 0°C to 70°C): -0.12% typ, -0.017% max
Note: Does not include Frequency Tolerance. Positive variations are much smaller.
- Note: Other Frequency Tolerances are available - please contact an IQD Sales Office
- Voltage Coefficient: $\pm 5\text{ppm/V}$ max
- Load Variation ($\pm 10\%$ change): $\pm 1\text{ppm}$ max

Electrical Parameters

- Supply Voltage 3.3V $\pm 10\%$
- Absolute Maximum Supply Voltage: 2.97V to 7V
- Start-Up Time: 20ms typ

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

Output Levels

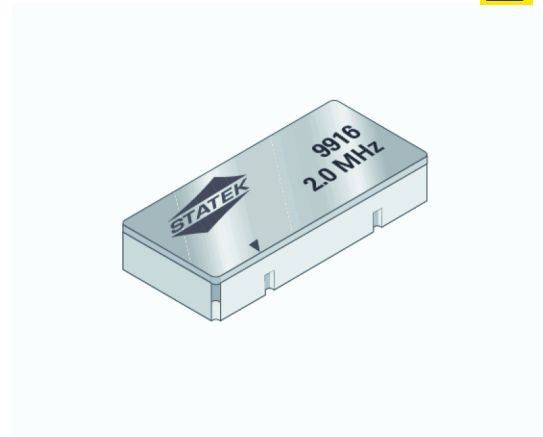
- VoL: 10%Vs max
- VoH: 90%Vs min

Environmental Parameters

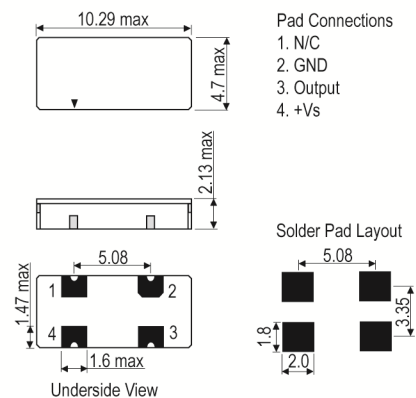
- Shock: 750G, 0.3ms, 1/2 sine
- Vibration: 10G rms, 10-2000Hz
- Storage Temperature Range: -55 to 125°C

Manufacturing Details

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



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



Sales Office Contact Details:

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Ordering Information

- Frequency*
Model*
Supply Voltage
Termination Variant*
Frequency Tolerance*
Operating Temperature Range*
(*minimum required)
- Termination Variants:
SM1 = Gold Plated
SM5 = Solder Dipped
Note: non-RoHS compliant terminations are available - please contact an IQD Sales Office
- Example
1.0MHz LSM EXT 3.3V-SM1
CMOS ± 1000 ppm -40 to 85C

Compliance

- RoHS Status (2011/65/EU) Optional
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Packaging Details

- Pack Style: Tray Supplied on a tray
Pack Size: 100
- Pack Style: Reel Tape & reel in accordance with EIA-481-D
Pack Size: 1,000

Electrical Specification - maximum limiting values 3.3V $\pm 10\%$

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
700.0kHz	2.1MHz	-10 to 70	-	0.3	25	40/60%
		-40 to 85	-	0.3	25	40/60%
		-55 to 125	-	0.3	25	40/60%

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

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