

## Low Power - Low Frequency SMD Oscillator

- Low current consumption, low frequency from 700kHz
- Low profile, miniature SMD package
- Full military testing available
- Testing to MIL-PRF-55310 available

### DESCRIPTION

LSM series oscillators are precision surface mount oscillators with a frequency range from 700kHz to 2.1MHz. The part comprises of a hermetically sealed crystal with a hybrid circuit sealed in a ceramic package with a Kovar lid. Full MIL testing is available.

### SPECIFICATION

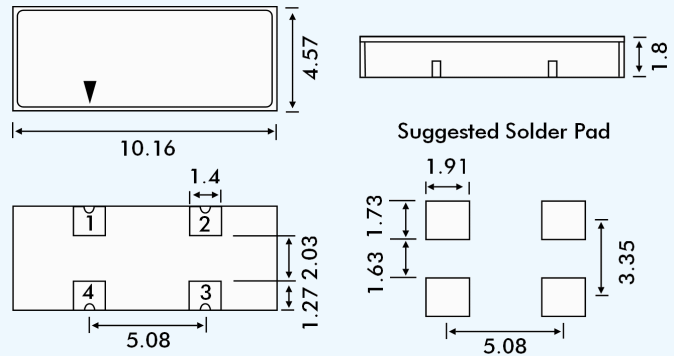
Frequency Range:	700kHz to 2.1MHz 2.0MHz standard****
Supply Voltage*:	3.3 or 5.0 Volts $\pm 10\%$
Calibration Tolerance**	
Code A:	$\pm 0.01\%$ ( $\pm 100\text{ppm}$ )
Code B:	$\pm 0.03\%$
Code C:	$\pm 0.1\%$
Frequency Stability***	
0° to +70°C:	-0.12% typical -0.017% maximum
Voltage Coefficient:	$\pm 5\text{ppm/V}$ maximum
Ageing:	$\pm 10\text{ppm/year}$ maximum
Shock:	750g, 0.3ms, 1/2 sine, $\pm 3\text{ppm}$ max.
Vibration:	10g rms, 10-2000Hz, $\pm 3\text{ppm}$ max.
Frequency Change vs. 10% Output Load Change:	$\pm 1\text{ppm}$ maximum
Operating Temperature:	-10° to +70°C Commercial -40° to +85°C Industrial -55° to +125°C Military
Output Voltage (5.0V supply)	
HIGH:	4.8V minimum, 4.95V typical
LOW:	0.2V maximum, 0.05V typical
Rise/Fall Times:	12ns typical
Symmetry:	40/60% maximum, 45/55% typical
Supply Current	
5.0V supply:	400 $\mu\text{A}$ max., 300 $\mu\text{A}$ typical
3.3V supply:	300 $\mu\text{A}$ max., 200 $\mu\text{A}$ typical
Packaging:	Tray pack (standard) 16mm tape, 17.8cm or 33cm reels
Start-up Time:	20ms typical

### Notes:

- \* Contact factory for lower supply voltages
- \*\* Tighter tolerances available
- \*\*\* Does not include calibration tolerance. Positive variations are much smaller.
- \*\*\*\* Contact factory for other frequencies



### OUTLINE & DIMENSIONS

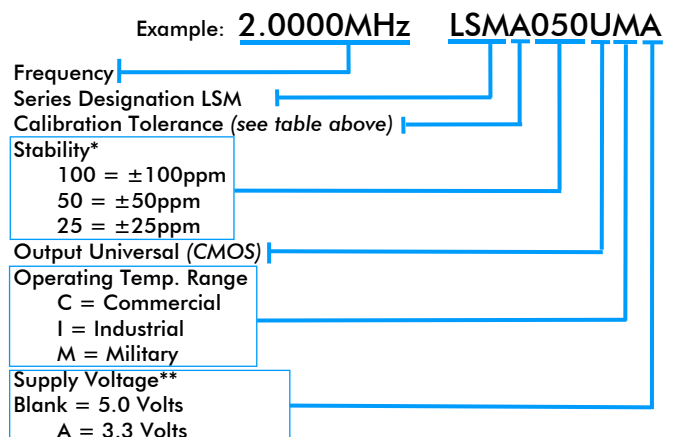


#### Pad Connections

1. Not connected
2. Ground
3. Output
4. Supply Voltage

#### Terminations: Au over Ni

### PART NUMBERING



- \* For other stability requirements enter figure required.
- \*\* For other supply voltage enter required voltage.