

This document contains useful information how to handle Jauch JSO LC MEMS oscillators

ESD handling

Jauch JSO LC oscillators are semiconductor devices, that should be protected against electrostatic discharge during transportation, storage, manufacturing process and assembled module handling.

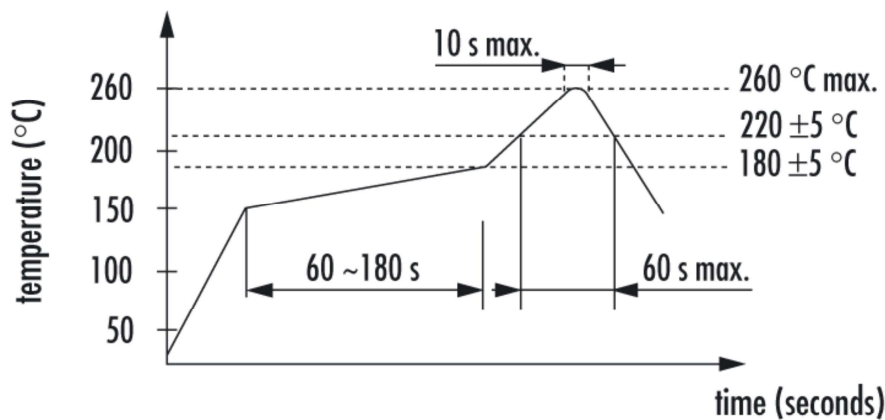
Please refer to JEDEC JESD625 for more information about ESD control methods to avoid electrostatic discharge, that could result in a degradation or even a total failure of the semiconductor device.

JSO LC oscillators do not suffer from ESD of 2kV max. (HBM according to JEDEC JESD22)

Reflow Soldering

A Pb-free reflow soldering profile with a peak reflow soldering temperature of 260°C max. according to JEDEC J-STD-020 can be applied. Up to 3 reflow cycles are acceptable.

Please use thermocoupled elements to control the maximum temperature and the recommended reflow soldering profile, to ensure that the maximum soldering temperature is not exceeded.



note: parts are also suitable for soldering systems with lead (Pb) content

It is difficult to assess the components robustness against alternative soldering methods like vapor phase soldering, as the temperature profiles may show large variations depending on each customer’s soldering equipment and conditions. Please accept that we’re unable to confirm the components robustness for any kind of alternative soldering processes.

Manual Soldering

Manual soldering can easily damage components in very small SMD packages, as they can heat up very easily. In case of doubt, better use a new oscillator, instead of re-using a part that has been subjected to manual soldering.

MSL level

JSO LC oscillators are quite insensitive against moisture. Opened reels can be stored at the storage conditions being recommended by JEDEC J-STD-020 MSL level 1. Re-sealing of opened reels is not required.

Storage

During storage of the component, the storage conditions should never exceed the temperature limits as specified in the catalog or datasheets. Please note that the storage temperature range applies to the component only.

Preferably, please keep the storage temperature between +10° ~ +45°C (50°F ~ 115°F) and below 60% RH as long as the component is packed and reeled.

PCB cleaning recommendation

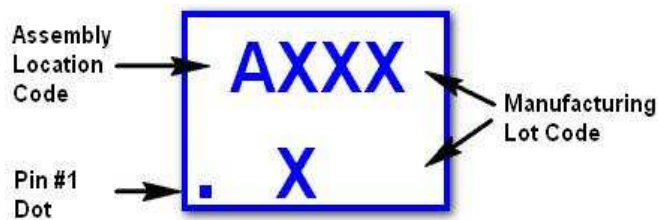
The plastic mold material of Jauch JSO LC oscillator packages is tolerant against aqueous or other common solvents like alcohol or acetone. We recommend using Isopropyl, similar alcohol-based solvents or demineralized water for PCB cleaning.

Ultrasonic Cleaning

Ultrasonic cleaning should be avoided, as there is a risk of generating mechanical resonances, which may cause an intermittent or permanent damage of the JSO LC oscillator. Please be aware that ultrasonic waves propagate over a board in a way which is not under control of the oscillator supplier.

Marking Information

JSO21:



JSO22 ~ JSO75:



The letter "A" stands for one out of three assembly location codes:

A = Malaysia

B = Thailand

C = Taiwan

"XXXX" stands for 4 alpha-numeric characters representing the manufacturing lot code

Absolute Maximum Ratings (electrical)

Junction Temperature:	+150°C max.
Operating Temperature (*):	+125°C max.
Storage Temperature:	-55°C min. ~ +150°C max.
VDC:	-0.5V min. ~ 4.0V max.
Electrostatic Discharge (HBM):	2000V max.

Note: (*) Ambient temperature not causing damage to the component, stability spec may not be guaranteed, refer to JSO LC datasheet for details about available temp. ranges and stabilities.

Environmental Reliability Specification

Moisture Sensitivity Level:	JEDEC J-STD020: MSL1, 260°C max.
Solderability:	MIL-STD-883F, method 2003
Mechanical Shock:	MIL-STD-883F, method 2002
Mechanical Vibration:	MIL-STD-883F, method 2007