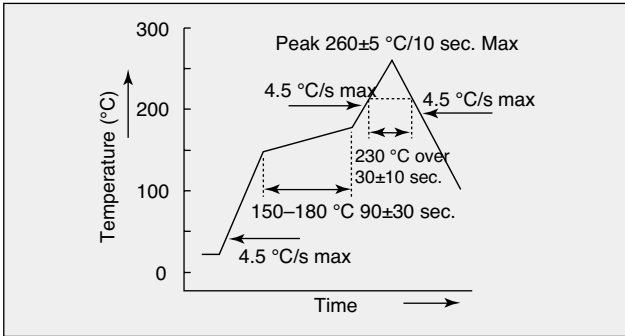


How to Handle 2700 Series

Example of Lead-free Soldering Conditions (Infrared Soldering)



Soldering conditions

The product's characteristics may deteriorate, depending on soldering conditions. Use the product within the following limitations:

- * At 260 °C or less within 10 seconds or at 230 °C or less within 60 seconds

Shock Resistance

This product has been designed to be highly resistant to shock (it is guaranteed that it will not be damaged when dropped three times from a height of 75 cm onto a hard wooden board or at 29,400/s² in each of the half-wave sine-wave X, Y, and Z directions three times). However, if the unit is dropped by mistake, measure the performance (oscillation check) of the product again.

Cleaning

Ultrasonic cleaning of this product is possible, but depending on the cleaning conditions the product's oscillator may suffer a resonance fracture. Before ultrasonic cleaning, make sure to check the conditions.

Others

- Because CMOS is used for this product, pay great care to static electricity in the same way as for normal CMOS IC.
- The #2 terminal (GND) is a ground terminal. Therefore, if it is mistaken for the #4 terminal (V_{CC}) and a reverse voltage applied, it may suffer internal fractures. Make sure to connect the terminal correctly.

Guaranteed Items

The environmental and mechanical characteristics of 2700 Series are guaranteed by conducting the following tests:

No.	Test Items	Conditions	Specifications
1	Thermal shock resistance	100 cycles (one cycle is conducted for 30 minutes at -40 °C and for 30 minutes at +85 °C.)	
2	High temperature and high humidity resistance	Subject to a temperature of +85 °C, in humidity of 80 to 85 %, and for 500 hours (nonactive)	*1
3	85 °C aging	85 °C (nonactive), for 720 hours Total amplitude:	*1
4	Vibration resistance	Total amplitude: 1.52 mm or 196 m/s ² , frequency: 10 to 2,000 Hz, and logarithmic frequency sweep for 20 minutes in each of the three orthogonal directions for four hours (12 hours in total)	*1
5	Shock resistance	Impact acceleration: 29,400 m/s ² , impact time: 0.3 ms, and half-wave sine wave in each of the three orthogonal directions, three times	*1
6	Free drop impact resistance	Dropped three times from a height of 75 cm onto a hard wooden board	*1
7	Soldering property	Immersed in a solder bath at a temperature of +230±5 °C for 3.5±1 seconds	Ninety-five percent or more of the soldered part must be covered with solder.
8	Soldering heat resistance	Reflow is conducted three times at a warm-up temperature of 180 °C for 90±30 seconds and at the peak temperature of 260±5 °C for up to 10 seconds (at 230 °C or more for 30±10 seconds).	*1

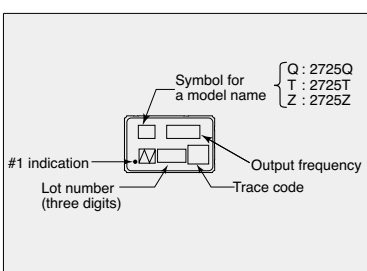
(*1) After the above tests have been conducted, the tested product must then meet the electric characteristic specifications.

In addition, the change amount of F before and after the above tests must follow $\Delta F/F \leq \pm 10 \times 10^{-6}$.

The electric characteristic specifications refer to the standard specifications of the following items:

(Current consumption, Tr/Tf, V_{OL}/V_{OH}, symmetry, current consumption during standby, and standby function)

Package Indications



Because of space limitations, the output frequency is indicated as six digits including the decimal point.

Therefore, 14.31818 MHz is indicated as 14.318.