

SWITCHES**Approvals:**

Laurent Kubat
Engineering Manager

Date

Revision record:

Revision	Date	Comments
-	May 22 nd 2014	Creation
A	August 06 th 2014	According to ECRO 8855
B	May 15 th 2017	Update : <i>(according to ECRO 12046)</i> <ul style="list-style-type: none">• Reflow soldering cycle §4

Summary:

1. Plating on switches
2. Precaution for Handling and Storage
3. Impact of aging on terminals
4. Soldering

SWITCHES**I- Plating on switches**

C&K uses different kinds of plating for the soldering of terminals:

- Pure Tin plating with specific bath solderon BT280 (very low level of whiskers: test report “Evaluation of Pure Tin bath use in C&K Dole for Whisker growth”)
- Silver plating
- Gold plating

In most cases, plating is only on terminals, but sometimes we can have it on complete metallic part. For example, we can have it on complete metallic frame, when selective plating is not possible.

II- Precaution for Handling and Storage

Products are packaged in sealed bag with desiccant, bag sealing is ensured. This guaranties the storage of the switch during at least 1 year without any bag opening.

After opening of the sealing bag, if customer doesn't use all the switches from a reel, we recommend putting the incomplete reel in a sealing bag:

- without air
- or with a desiccant
- and if the sealing bag used is translucent, put it in a opaque box to limit the light on switches.

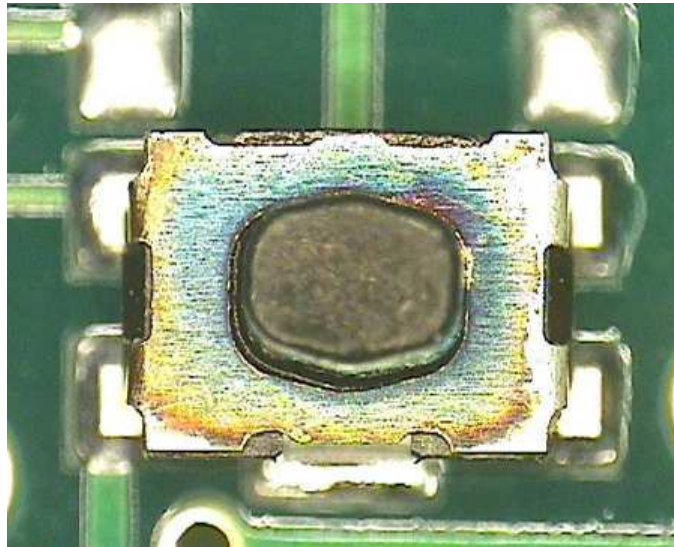
Shelf storage: products must be stored in sealed conditions with desiccant, without moisture and without light exposure.



SWITCHES**III- Impact of ageing on terminals**

Pure tin and gold plating: no impact

On silver plating switches, sulphidation / tarnishing can occur. Then a discoloration of silver in yellow/blue/brown can appear. This is a combination of silver sulphide and silver oxide. This is only a cosmetic aspect which no impact switch functions.



This phenomenon is linked to 4 factors:

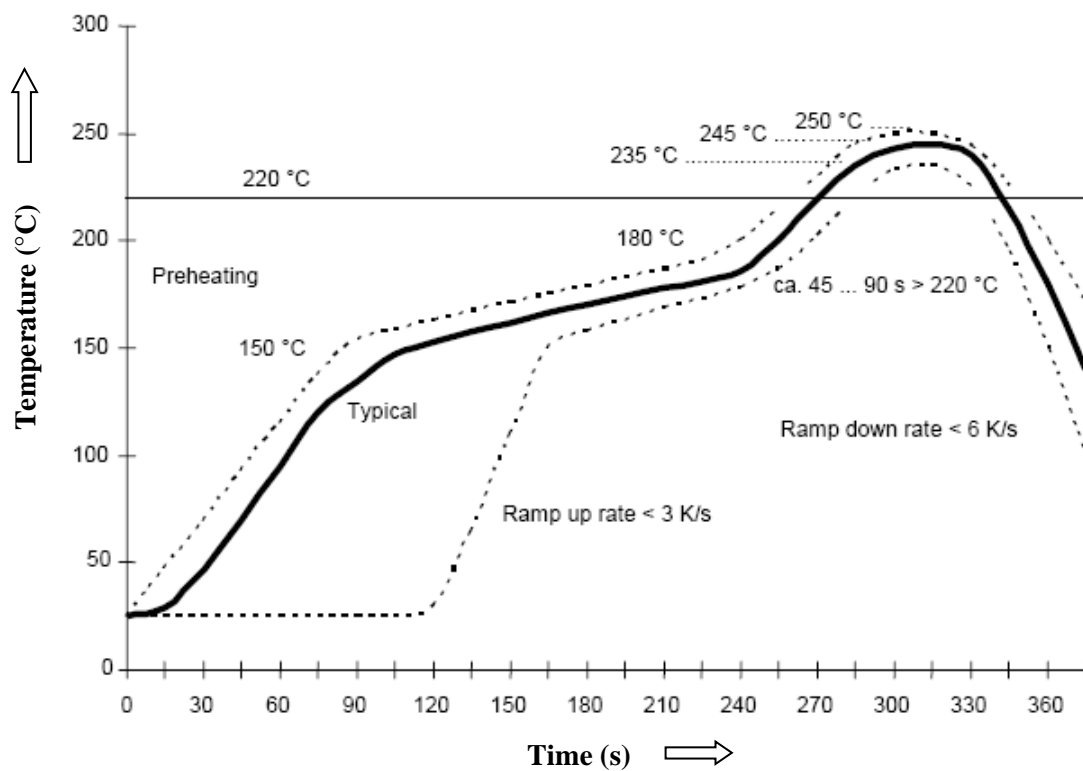
- light
- atmosphere
- humidity
- Temperature

As heat accelerates silver tarnishing, it is sometimes easily visible after the first reflow cycle, depending of reflow process.

After reflow process, tarnish phenomenon will continue on surfaces out of solder, depending on environment. If needed, to limit it we recommend to put PCBs in sealing bag and to add desiccant.

SWITCHES**IV- Soldering****IV.1 SMT Components**

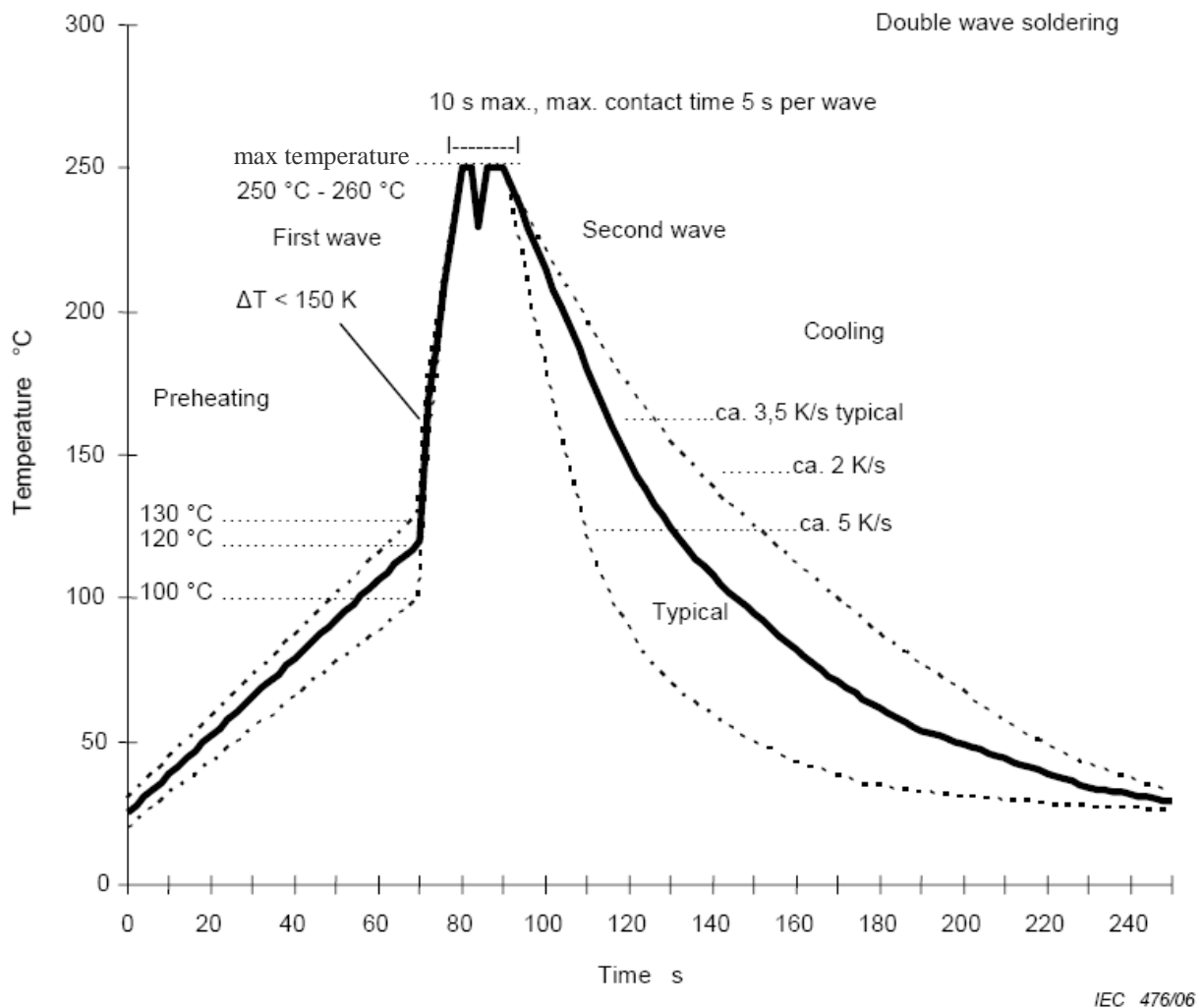
Product has been qualified with the below typical curve of the IEC 61760-1
(in bold)



Note: Usage of a different reflow cycle must be qualified by the Customer

Surface Mount Component and Pin in Paste components.

Unless specific soldering profile included in specifications, a profile lower than following soldering reflow profile from CEI 61760-1 can be used.

SWITCHES**IV.2 THT Components**

Lead-free wave-solderable components can be processed in accordance with this double-wave soldering profile from standard IEC 61760-1.