

Würth Elektronik eiSos GmbH &amp; Co. KG

EMC &amp; Inductive Solutions

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## Product / Process Change Notification (PCN)

- Major change  
 Minor change

**PCN #:** PCN\_IndMAPI\_20200919

**Affected Series:** WE-MAPI; 744383xxx

**PCN Date:** June 19, 2020

**Effective Date:** September 19, 2020

### Change Category:

- Equipment / Location  
 General Data  
 Material  
 Process  
 Product Design  
 Shipping / Packaging  
 Supplier  
 Software

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### Data Sheet Change:

Yes  No

### Attachment:

Yes  No

### DESCRIPTION AND PURPOSE OF CHANGE:

To improve the processability, Würth Elektronik will add a recommendation on the solder paste thickness. This is only a datasheet amendment, there will be no change in form, fit, function, quality or reliability of the product.

### DETAIL OF CHANGE:

The recommendation as follows:

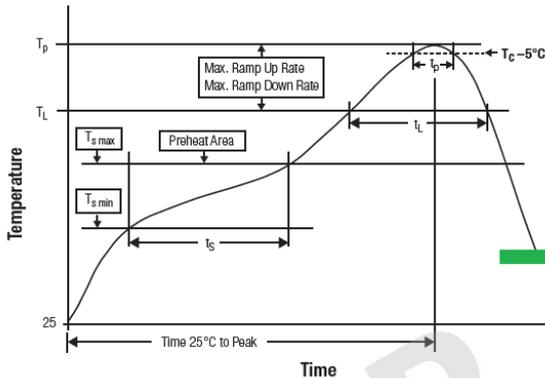
**“Make sure that you use the correct thickness of solder paste to avoid an insufficient soldering result. We recommend 100µm solder paste as a reference.”**

Will be implemented under the Classification Soldering Profile and in the Cautions and Warnings.

The drafts below show the parts of the datasheet in question:



**Classification Reflow Profile for SMT components:**



**Classification Reflow Soldering Profile:**

Profile Feature	Value
Preheat Temperature Min	$T_{s\ min}$ 150 °C
Preheat Temperature Max	$T_{s\ max}$ 200 °C
Preheat Time $t_s$ from $T_{s\ min}$ to $T_{s\ max}$	$t_s$ 60 - 120 seconds
Ramp-up Rate ( $T_L$ to $T_p$ )	3 °C/second max.
Liquidous Temperature	$T_L$ 217 °C
Time $t_L$ maintained above $T_L$	$t_L$ 60 - 150 seconds
Peak package body temperature	$T_p$ $T_p \leq T_c$ see Table below
Time within 5°C of actual peak temperature	$t_p$ 20 - 30 seconds
Ramp-down Rate ( $T_p$ to $T_L$ )	6 °C/second max.
Time 25°C to peak temperature	8 minutes max.

refer to IPC/JEDEC J-STD-020E  
Make sure that you use the correct thickness of solder paste to avoid an insufficient soldering result. We recommend 100µm solder paste as a reference.

**Package Classification Reflow Temperature ( $T_c$ ):**

Properties	Volume mm <sup>3</sup> <350	Volume mm <sup>3</sup> 350-2000	Volume mm <sup>3</sup> >2000
PB-Free Assembly   Package Thickness < 1.6 mm	260 °C	260 °C	260 °C
PB-Free Assembly   Package Thickness 1.6 mm - 2.5 mm	260 °C	250 °C	245 °C
PB-Free Assembly   Package Thickness ≥ 2.5 mm	250 °C	245 °C	245 °C

refer to IPC/JEDEC J-STD-020E

**Cautions and Warnings:**

The following conditions apply to all goods within the product series of WE-MAPI of Würth Elektronik eiSos GmbH & Co. KG:

**General:**

- This electronic component was designed and manufactured for use in general electronic equipment.
- Würth Elektronik must be asked for written approval (following the PPAP procedure) before incorporating the components into any equipment in fields such as military, aerospace, aviation, nuclear control, submarine, transportation (automotive control, train control, ship control), transportation signal, disaster prevention, medical, public information network, etc. where higher safety and reliability are especially required and/or if there is the possibility of direct damage or human injury.
- Electronic components that will be used in safety-critical or high-reliability applications, should be pre-evaluated by the customer.
- The component is designed and manufactured to be used within the datasheet specified values. If the usage and operation conditions specified in the datasheet are not met, the wire insulation may be damaged or dissolved.
- Do not drop or impact the components, the component may be damaged.
- Würth Elektronik products are qualified according to international standards, which are listed in each product reliability report. Würth Elektronik does not guarantee any customer qualified product characteristics beyond Würth Elektronik's specifications, for its validity and sustainability over time.
- The customer is responsible for the functionality of their own products. All technical specifications for standard products also apply to customer specific products.

**Product specific:**

**Soldering:**

- The solder profile must comply with the technical product specifications. All other profiles will void the warranty.
- All other soldering methods are at the customers' own risk.
- To improve the solderability of bottom termination components please refer to appendix AN1026 on our homepage.
- Make sure that you use the correct thickness of solder paste to avoid an insufficient soldering result. We recommend 100µm solder paste as a reference.

**Cleaning and Washing:**

- Washing agents used during the production to clean the customer application may damage or change the characteristics of the wire insulation, marking or plating. Washing agents may have a negative effect on the long-term functionality of the product.

**Potting:**

- If the product is potted in the customer application, the potting material may shrink or expand during and after hardening. Shrinking could lead to an incomplete seal, allowing contaminants into the core. Expansion could damage the components. We recommend a manual inspection after potting to avoid these effects.

**Storage Conditions:**

- A storage of Würth Elektronik products for longer than 12 months is not recommended. Within other effects, the terminals may suffer degradation, resulting in bad solderability. Therefore, all products shall be used within the period of 12 months based on the day of shipment.
- Do not expose the components to direct sunlight.
- The storage conditions in the original packaging are defined according to DIN EN 61760-2.
- The storage conditions stated in the original packaging apply to the storage time and not to the transportation time of the components.

**Handling:**

- Violation of the technical product specifications such as exceeding the nominal rated current will void the warranty.
- Applying currents with audio-frequency signals may result in audible noise due to the magnetostrictive material properties.

These cautions and warnings comply with the state of the scientific and technical knowledge and are believed to be accurate and reliable. However, no responsibility is assumed for inaccuracies or incompleteness.

**RELIABILITY / QUALIFICATION SUMMARY:**

Solderability / J-STD-002

Vibration / MIL-STD 202G Method 204