OMNIMATE Housing - series CH20M6
LHZ-SMT R 1.5SN BK RL

Weidmüller Interface GmbH & Co. KG
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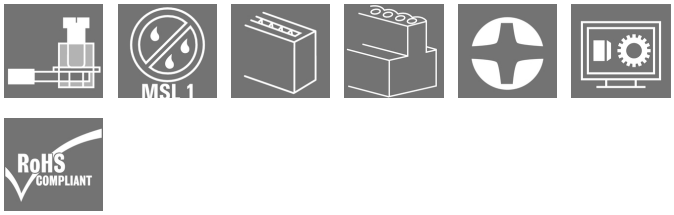

The electronics world in a single slice

With a width of only 6.1 mm, a wide range of compact applications originates from this electronic development expertise.

The modular housing design supports the engineering with many intelligent features:

- **Maximum freedom of design** with large total surface area (6800 mm²) on the PCB – enabling the maximum component assembly with the space-saving form of the reflow-compatible THR terminals.
- **Customised design opportunities** with laser printing and housing colours, individual processing options, variable printing, and easily labelled hinged cover
- **Maximum processing efficiency** with reflow-compatible connection elements for reflow soldering in machine-ready tape packaging.
- **Error-free assembly and solder processes** with optimised frame and connecting adapter shapes on the PCB resulting in a perfect fit and positioning of the connection elements
- **Quick installation** with features such as "Wire Ready" or the all-purpose Multi-Tool screw head

The combination of extensive knowledge from electronics developers and Weidmüller competence - creating innovative synergy for electronics applications.

General ordering data

Type	LHZ-SMT R 1.5SN BK RL
Order No.	2418590000
Version	Printed circuit board terminals, Connection element, right, block assembly, closed side, THT/ THR solder connection, Number of poles: 1, Solder pin length (l): 1.5 mm, tinned, black, Tape
GTIN (EAN)	4032248984343
Qty.	432 pc(s).
Product data	IEC: 500 V / 0.2 - 2.5 mm² UL:
Packaging	Tape

Creation date May 2, 2020 7:15:08 PM CEST

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Technical data

Dimensions and weights

Length	23.5 mm	Length (inches)	0.925 inch
Width	6 mm	Width (inches)	0.236 inch
Height	16.9 mm	Height (inches)	0.665 inch
Net weight	3.306 g		

System characteristics

Version	Connection element, right	Type of connection	Clamping yoke connection
Number of connections	1	PCB thickness	0.8 mm
Solder pin length (l)	1.5 mm	Type of contact to PCB	Reflow
Contact to terminal rail	No	Protection degree	IP20

Material data

Insulating material	LCP	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 175	Insulation strength	≥ 10^8 Ω
Moisture Level (MSL)	1	UL 94 flammability rating	V-0
Contact surface	tinned	Storage temperature, min.	-25 °C
Storage temperature, max.	50 °C	Max. relative humidity during storage	70 %
Operating temperature, min.	-40 °C	Operating temperature, max.	120 °C
Temperature range, installation, min.	-25 °C	Temperature range, installation, max.	120 °C

Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, max. number of poles (Tu=20°C)	13 A
Rated current, max. number of poles (Tu=40°C)	13 A	Rated voltage for surge voltage class / pollution degree II/2	500 V
Rated voltage for surge voltage class / pollution degree III/2	320 V	Rated voltage for surge voltage class / pollution degree III/3	250 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	4 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	4 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	4 kV		

Classifications

ETIM 6.0	EC002643	ETIM 7.0	EC002643
eClass 9.0	27-44-04-01	eClass 9.1	27-44-04-01
eClass 10.0	27-44-04-01		

Notes

IPC conformity	Conformity: The products are developed, manufactured and delivered according international recognized standards and norms and comply with the assured properties in the data sheet resp. fulfill decorative properties in accordance with IPC-A-610 "Class 2". Further claims on the products can be evaluated on request.

Approvals

Approvals	
ROHS	Conform

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Technical data

Downloads

Brochure/Catalogue	FL ANALO.SIGN.CONV. EN MB DEVICE MANUF. EN CAT 2 PORTFOLIOGUIDE EN FL MACHINE SAFETY EN FL 72H SAMPLE SER EN PO OMNIMATE EN
Engineering Data	EPLAN, WSCAD
Engineering Data	STEP

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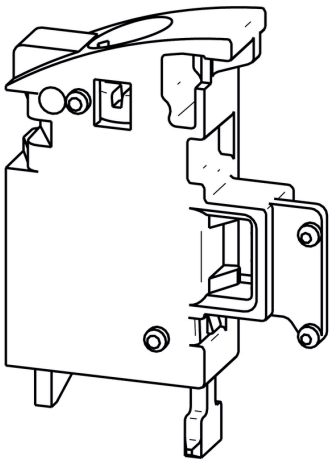
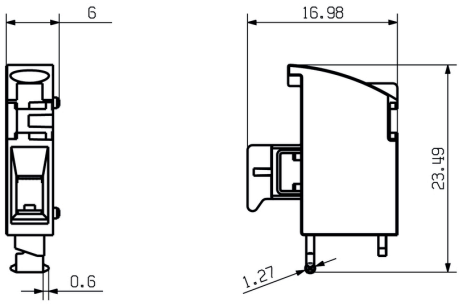
Drawings





Reflow Solder Profile

Recommended reflow soldering profile

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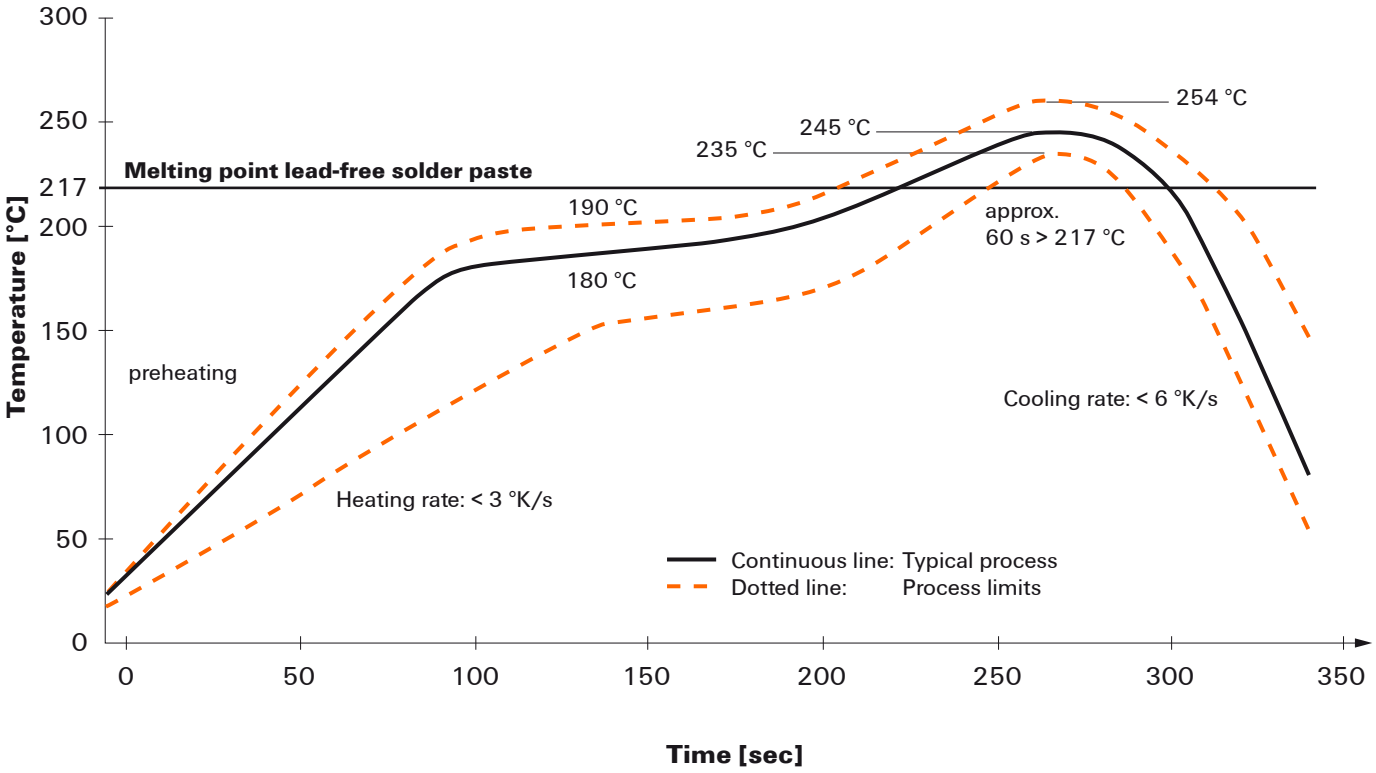

Reflow soldering profile

The perfect soldering profile for SMT Surface Mount Technology is one the most exiting question in SMT production. But there are more than one correct answer: The diagram of temperature-on-time is related to processing features of solder paste and to maximum load of components.

We have to consider the following parameters:
- Time for pre heating
- Maximum temperature
- Time above melting point
- Time for cooling
- Maximum heating rate
- Maximum cooling rate

We recommend a typical solder profile with associated process limits. With preheating components and board are prepared smoothly for the solder phase. Heating rate is typically ≤ +3K/s. In parallel the solder paste is ‚activated'. The time above melting point of 217°C the paste gets liquid and components and boards begin to connect. The maximum temperature of 245°C to 254°C should stay between 10 and 40 seconds. In the cooling phase at ≥ -6K/s solder is cured. Board and components cool down while avoiding cold cracks.

Wave Solder Profile

Recommended wave solderding profiles

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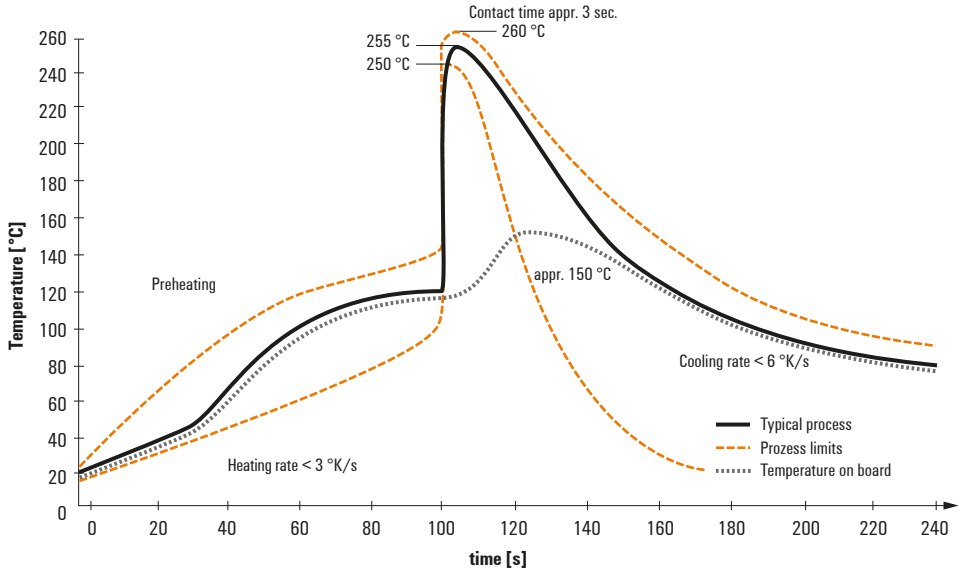
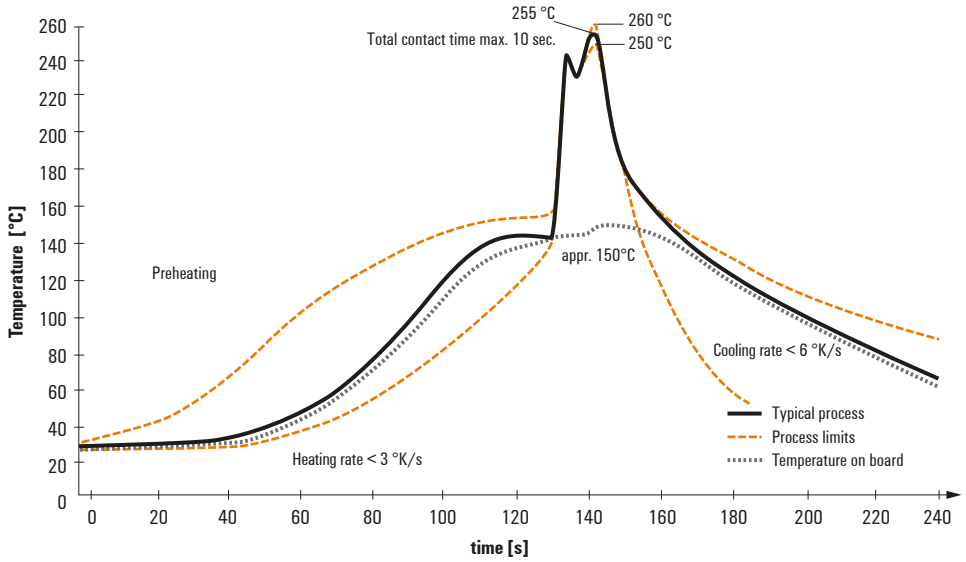
Single Wave:



Double Wave:



Wave soldering profiles

Wired connection elements should be processed in accordance with the DIN EN 61760-1 standard. We have included two recommendations for practical wave soldering profiles, with which Weidmüller PCB terminals and connectors are qualified.

When choosing a suitable profile for your application, the following factors also need to be considered:
- PCB thickness
- Proportion of Cu in the layers
- Single/double-sided assembly
- Product range
- Heating and cooling rates

The single and double wave profiles each indicate the recommended operating range, including the maximum soldering temperature of 260°C. In practice, the maximum soldering temperature is quite often well below the above maximum profile.

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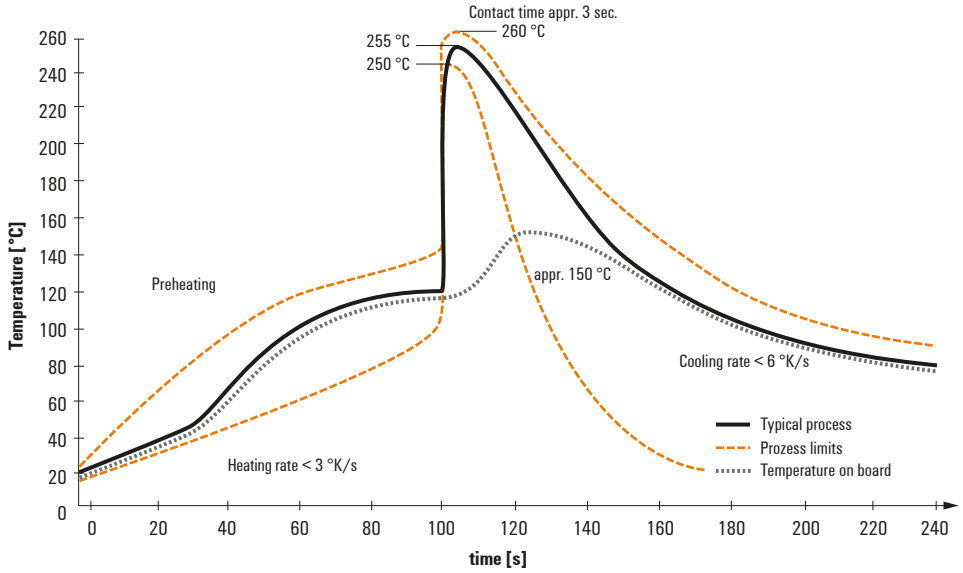

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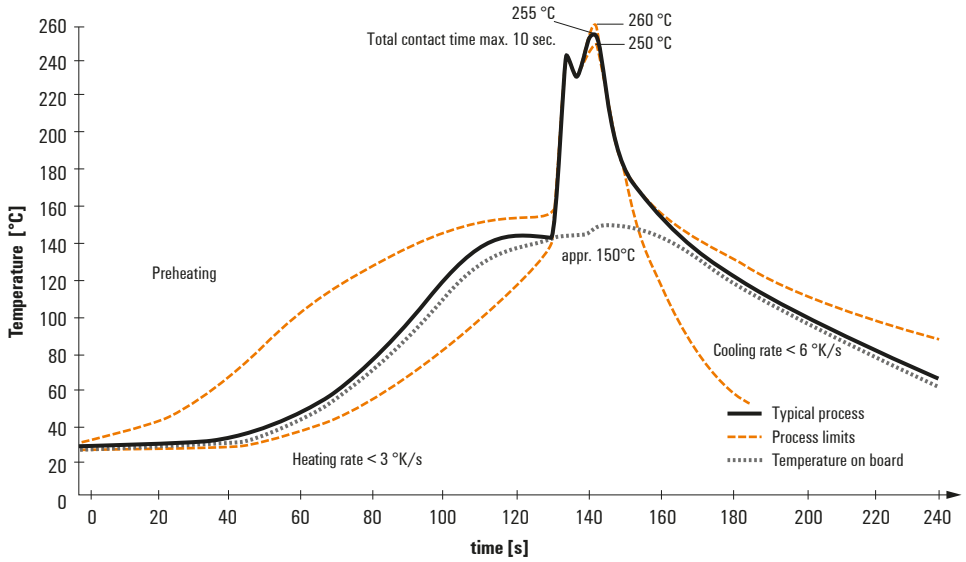

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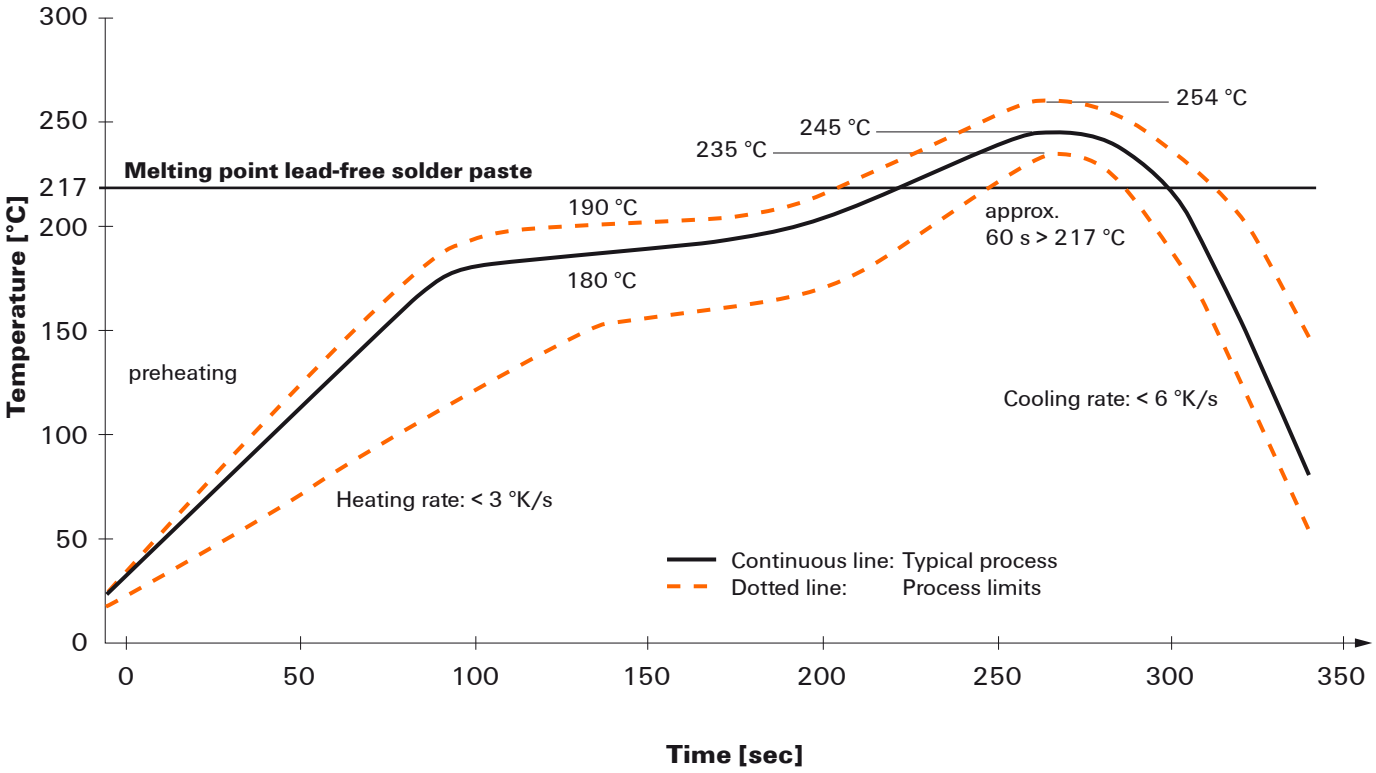

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