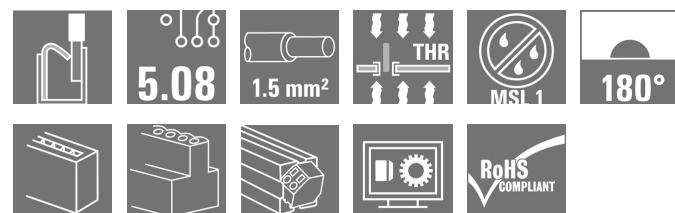


**LSF-SMT 5.08/08/180 1.5SN BK TU**

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergsstraße 26  
 D-32758 Detmold  
 Germany

[www.weidmueller.com](http://www.weidmueller.com)

**Product image**

PCB terminal for fully automatic assembly in reflow soldering (SMT), with Push In conductor connection system. Conductor inserted and slider operated in same direction (TOP). Packed in box or as tape on reel. Pin lengths optimised at 1.5 mm or 3.5 mm.

**General ordering data**

Version	Printed circuit board terminals, 5.08 mm, Number of poles: 8, 180°, Solder pin length (l): 1.5 mm, black, PUSH IN with actuator, Clamping range, max. : 1.5 mm <sup>2</sup> , Tube
Order No.	<a href="#">1870270000</a>
Type	LSF-SMT 5.08/08/180 1.5SN BK TU
GTIN (EAN)	4032248447350
Qty.	13 pc(s).
Product data	IEC: 500 V / 17.5 A / 0.2 - 1.5 mm <sup>2</sup> UL: 300 V / 12 A / AWG 28 - AWG 14
Packaging	Tube

Creation date September 16, 2022 8:00:15 PM CEST

## LSF-SMT 5.08/08/180 1.5SN BK TU

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## Technical data

## Dimensions and weights

Depth	7.8 mm	Depth (inches)	0.307 inch
Height	15.5 mm	Height (inches)	0.61 inch
Height of lowest version	14 mm	Width	39.76 mm
Width (inches)	1.565 inch	Net weight	4.84 g

## Temperatures

Continuous operating temp., max.	120 °C
----------------------------------	--------

## System parameters

Product family	OMNIMATE Signal - series LSF	Wire connection method	PUSH IN with actuator
Mounting onto the PCB	THT/THR solder connection	Conductor outlet direction	180°
Pitch in mm (P)	5.08 mm	Pitch in inches (P)	0.2 inch
Number of poles	8	Pin series quantity	1
Fitted by customer	No	Solder pin length (l)	1.5 mm
Solder pin length tolerance	+0.1 / -0.3 mm	Solder pin dimensions	0.35 x 0.8 mm
Solder pin dimensions = d tolerance	0 / -0.1 mm	Solder eyelet hole diameter (D)	1.1 mm
Solder eyelet hole diameter tolerance (D)+ 0.1 mm		Number of solder pins per pole	2
Stripping length	8 mm	L1 in mm	35.56 mm
L1 in inches	1.4 inch	Touch-safe protection acc. to DIN VDE 0470	IP 20
Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch	Protection degree	IP20
Volume resistance	1.60 mΩ		

## Material data

Insulating material	LCP GF	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 175	Moisture Level (MSL)	1
UL 94 flammability rating	V-0	Contact material	Copper alloy
Layer structure of solder connection	4...6 µm Sn matt	Storage temperature, min.	-40 °C
Storage temperature, max.	70 °C	Operating temperature, min.	-50 °C
Operating temperature, max.	120 °C	Temperature range, installation, min.	-30 °C
Temperature range, installation, max.	120 °C		

## Conductors suitable for connection

Clamping range, min.	0.13 mm <sup>2</sup>
Clamping range, max.	1.5 mm <sup>2</sup>
Wire connection cross section AWG, min.	AWG 28
Wire connection cross section AWG, max.	AWG 14
Solid, min. H05(07) V-U	0.2 mm <sup>2</sup>
Solid, max. H05(07) V-U	1.5 mm <sup>2</sup>
Flexible, min. H05(07) V-K	0.2 mm <sup>2</sup>
Flexible, max. H05(07) V-K	1.5 mm <sup>2</sup>
w. plastic collar ferrule, DIN 46228 pt 4, 0.25 mm <sup>2</sup> min.	
w. plastic collar ferrule, DIN 46228 pt 4, 0.75 mm <sup>2</sup> max.	

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## Technical data

w. wire end ferrule, DIN 46228 pt 1, min. 0.25 mm<sup>2</sup>

w. wire end ferrule, DIN 46228 pt 1, max. 1.5 mm<sup>2</sup>

Clampable conductor

Cross-section for conductor connection	nominal	0.25 mm <sup>2</sup>
wire end ferrule	Stripping length	nominal 10 mm
	Recommended wire-end ferrule	<a href="#">H0.25/12 HBL</a>
Cross-section for conductor connection	nominal	0.34 mm <sup>2</sup>
wire end ferrule	Stripping length	nominal 10 mm
	Recommended wire-end ferrule	<a href="#">H0.34/12 TK</a>
Cross-section for conductor connection	nominal	0.5 mm <sup>2</sup>
wire end ferrule	Stripping length	nominal 10 mm
	Recommended wire-end ferrule	<a href="#">H0.5/14 OR</a>
Cross-section for conductor connection	nominal	0.75 mm <sup>2</sup>
wire end ferrule	Stripping length	nominal 10 mm
	Recommended wire-end ferrule	<a href="#">H0.75/14T HBL</a>

Reference text Length of ferrules is to be chosen depending on the product and the rated voltage., The outside diameter of the plastic collar should not be larger than the pitch (P)

## Rated data acc. to IEC

tested acc. to standard

IEC 60664-1, IEC 61984

Rated current, max. number of poles (Tu=20°C)	Rated current, min. number of poles (Tu=20°C)	17.5 A
Rated current, max. number of poles (Tu=40°C)	Rated current, min. number of poles (Tu=40°C)	17.5 A
Rated voltage for surge voltage class / pollution degree II/2	Rated voltage for surge voltage class / pollution degree II/2	500 V
Rated voltage for surge voltage class / pollution degree III/2	Rated voltage for surge voltage class / pollution degree III/3	250 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	Rated impulse voltage for surge voltage class/ pollution degree III/2	4 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	Short-time withstand current resistance	3 x 1s with 80 A

## Rated data acc. to CSA

Institute (CSA)



Certificate No. (CSA)

200039-1664286

Rated voltage (Use group B / CSA)	300 V
Rated current (Use group B / CSA)	10 A
Wire cross-section, AWG, min.	AWG 28
Reference to approval values	Specifications are maximum values, details - see approval certificate.

## LSF-SMT 5.08/08/180 1.5SN BK TU

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## Technical data

## Rated data acc. to UL 1059

Institute (cURus)



Certificate No. (cURus)

E60693

Rated voltage (Use group B / UL 1059) 300 V

Rated current (Use group B / UL 1059) 12 A

Wire cross-section, AWG, min. AWG 28

Reference to approval values  
Specifications are maximum values, details - see approval certificate.

Rated voltage (Use group D / UL 1059) 300 V

Rated current (Use group D / UL 1059) 10 A

Wire cross-section, AWG, max. AWG 14

## Packing

Packaging	Tube
VPE width	20 mm
Surface resistance	$Rs = 10^9 - 10^{12} \Omega$

VPE length	556 mm
VPE height	15 mm

## Classifications

ETIM 6.0	EC002643
ETIM 8.0	EC002643
ECLASS 9.1	27-44-04-01
ECLASS 11.0	27-46-01-01

ETIM 7.0	EC002643
ECLASS 9.0	27-44-04-01
ECLASS 10.0	27-44-04-01
ECLASS 12.0	27-46-01-01

## Important note

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.

Notes

- Additional push button colours on request
- Operating force of slider max. 40 N
- Rated current related to rated cross-section & min. No. of poles.
- Wire end ferrule with plastic collar to DIN 46228/4
- Wire end ferrule without plastic collar to DIN 46228/1
- P on drawing = pitch
- Rated data refer only to the component itself. Clearance and creepage distances to other components are to be designed in accordance with the relevant application standards.
- Crimping shape "A" for wire end ferrules with PZ 6/5 crimping tool recommended.
- Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months

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**Technical data****Approvals**

Approvals



ROHS	Conform
UL File Number Search	<a href="#">UL Website</a>
Certificate No. (cURus)	E60693

**Downloads**

Approval/Certificate/Document of Conformity	<a href="#">Declaration of the Manufacturer</a>
Engineering Data	<a href="#">CAD data – STEP</a>
Engineering Data	<a href="#">EPLAN, WSCAD</a>
Catalogues	<a href="#">Catalogues in PDF-format</a>
Brochures	<a href="#">FL DRIVES EN</a> <a href="#">FL ANALO.SIGN.CONV. EN</a> <a href="#">MB SMT EN</a> <a href="#">FL DRIVES DE</a> <a href="#">MB DEVICE MANUF. EN</a> <a href="#">FL BUILDING SAFETY EN</a> <a href="#">FL APPL LED LIGHTING EN</a> <a href="#">FL INDUSTR.CONTROLS EN</a> <a href="#">FL MACHINE SAFETY EN</a> <a href="#">FL HEATING ELECTR EN</a> <a href="#">FL APPL_INVERTER EN</a> <a href="#">FL_BASE_STATION_EN</a> <a href="#">FL_ELEVATOR_EN</a> <a href="#">FL_POWER_SUPPLY_EN</a> <a href="#">FL_72H_SAMPLE_SER_EN</a> <a href="#">PO_OMNIMATE_EN</a> <a href="#">PO_OMNIMATE_EN</a>
White paper surface mount technology	<a href="#">Download Whitepaper</a>

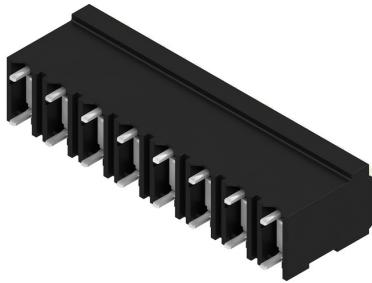
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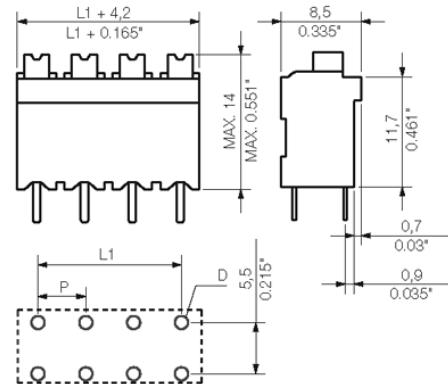
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## Drawings

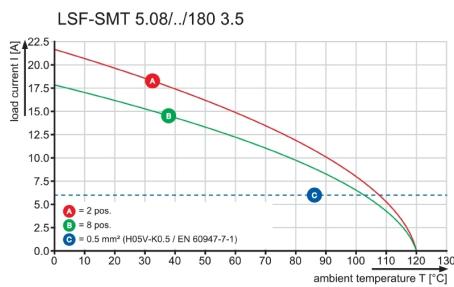
## Product image



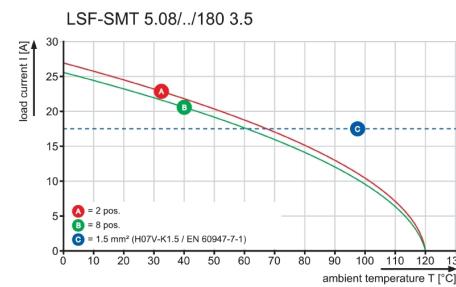
## Dimensional drawing

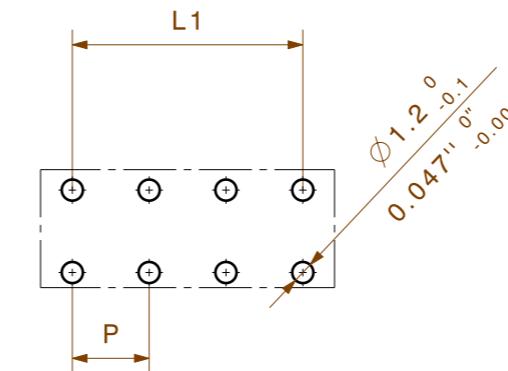
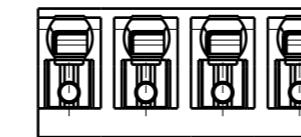
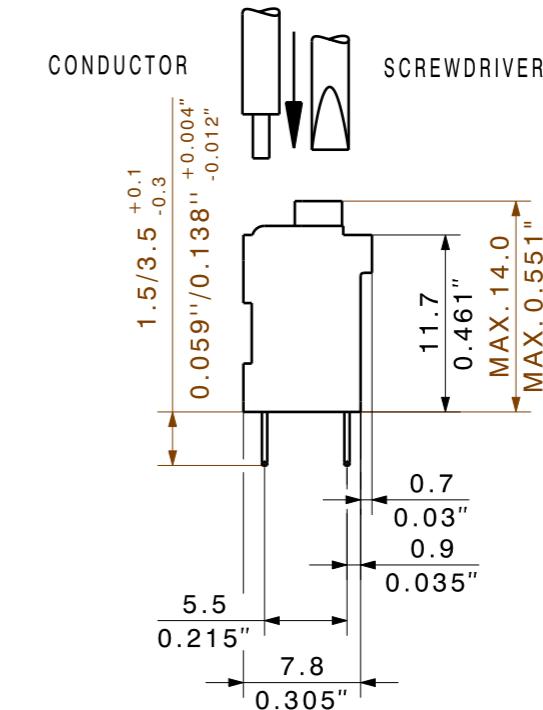
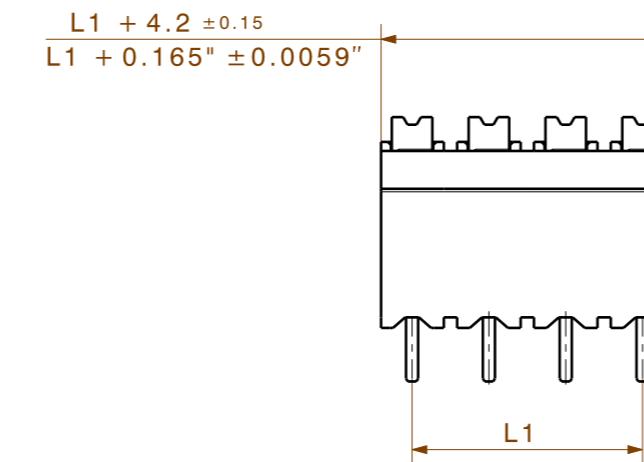


## Graph

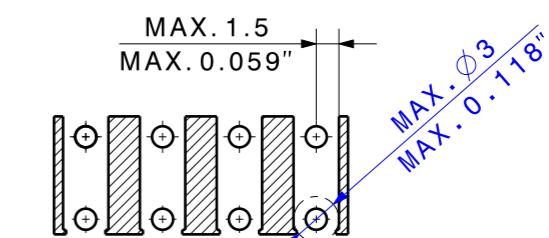


## Graph





HOLE PATTERN



PASTE-FREE AREA

 $P = 5.08$ 

SHOWN: LSF-SMT 5.08/04/180

For the mounting on PCBs, it should be noted that the rated data relates only to the PCB components alone.

The necessary creepage and clearance paths must be observed in the relevant equipment standards in accordance with IEC 664 / VDE 0110.

The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3.

Weidmüller PCB components are rated in accordance with the DIN EN 61984 standard, and are valid for its field of application.

If the components are used in accordance with the intended purpose, the components will meet all requirements with respect to the occurrence of electrical, mechanical, thermic and corrosive stress.

DIN ISO 2768-m		Cat. no.:	
	98688/5 23.10.17 HELIS_MA	00	
Modification			
	Date	Name	
Drawn	22.06.2004	SEIDEL_T	
Responsible		KRUG_M	
Scale: 5/1	Checked	01.11.2017	HELIS_MA
Supersedes:	Approved		HECKERT_M
Product file: LSF-SMT		7358	

**Weidmüller**

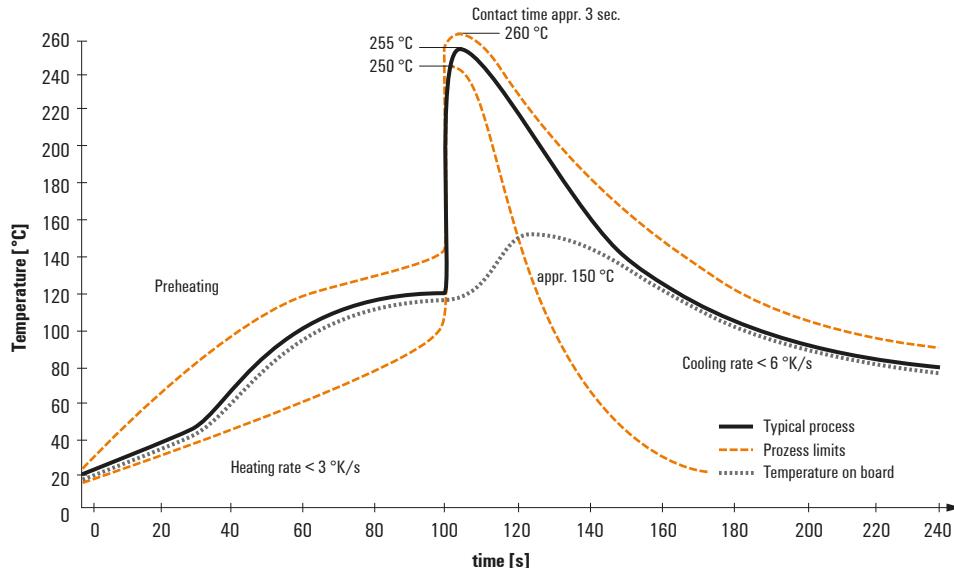
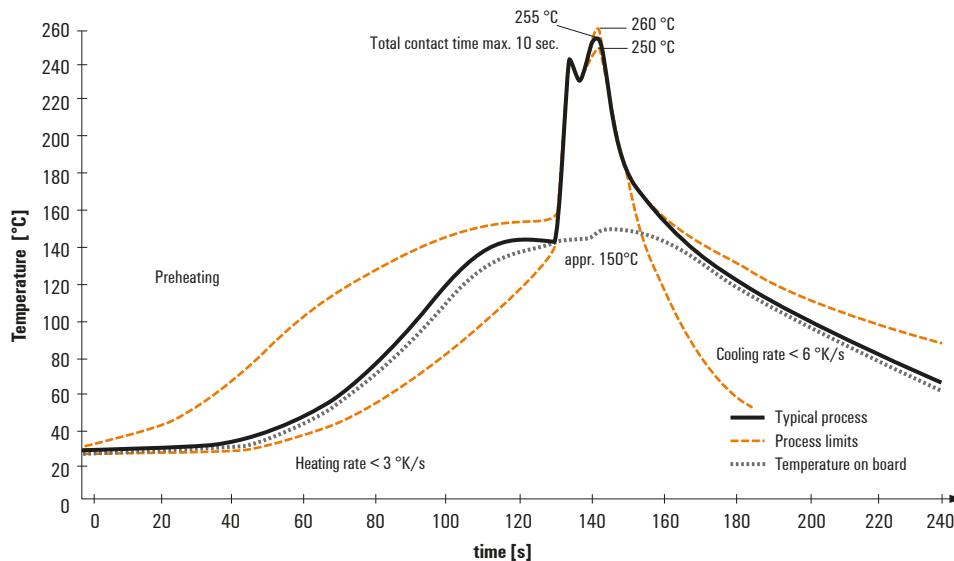
3 34084 15

Drawing no. Sheet 04 of 07 sheets

LSF-SMT .../.../180...TU  
LEITERPLATTENKLEMME  
PCB TERMINAL

## Recommended wave soldering profiles

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergsstraße 16  
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 Germany  
 Fon: +49 5231 14-0  
 Fax: +49 5231 14-292083  
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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.

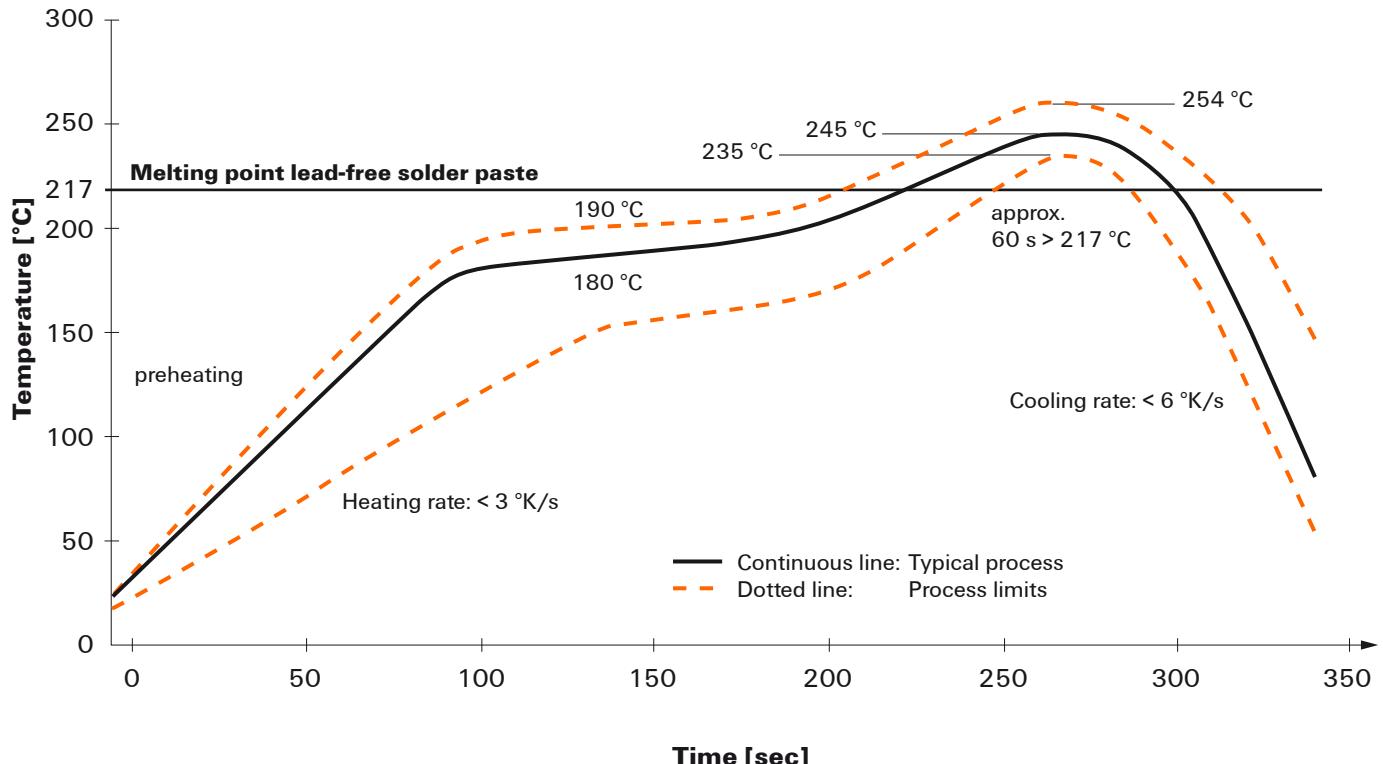
When choosing a suitable profile for your application, the following factors also need to be considered:

- 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.

## 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  $\leq +3\text{K/s}$ . 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  $\geq -6\text{K/s}$  solder is cured. Board and components cool down while avoiding cold cracks.