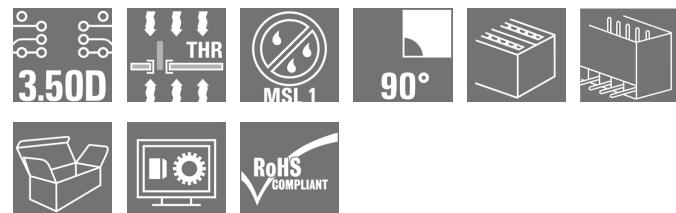


**OMNIMATE Signal - series B2C/S2C 3.50 - 2-row
S2C-SMT 3.50/16/90G 1.5SN BK BX**

Weidmüller Interface GmbH & Co. KG
Klingenbergsstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

Product image


Similar to illustration

High-temperature-resistant male header

- Finger-safe
- Can be plugged into female plug B2CF 3.50 PUSH IN
- **Plug-in direction is perpendicular or parallel to the circuit board (180° / 90°)**
- Housing variants: closed (G) and with solder flange (LF)
- **Packed either in a box (BX) or on anti-static tape-on-reel (RL)**
- Suitable for reflow and wave soldering applications
- Pin length of either 1.5 mm or 3.2 mm

General ordering data

Type	S2C-SMT 3.50/16/90G 1.5SN BK BX
Order No.	1289710000
Version	PCB plug-in connector, male header, closed side, THT/THR solder connection, 3.50 mm, No. of poles: 16, 90°, Solder pin length (l): 1.5 mm, tinned, Black, Box
GTIN (EAN)	4050118082630
Qty.	60 pc(s).
Product data	IEC: 200 V / 13.4 A UL: 150 V / 10 A
Packaging	Box

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Technical data
Dimensions and weights

Width	29.4 mm	Width (inches)	1.157 inch
Height	12.3 mm	Height (inches)	0.484 inch
Height of lowest version	10.8 mm	Depth	14.2 mm
Depth (inches)	0.559 inch	Net weight	5.82 g

System specifications

Product family	OMNIMATE Signal - series B2C/S2C 3.50 - 2-row	Type of connection	Board connection
Mounting onto the PCB	THT/THR solder connection	Pitch in mm (P)	3.5 mm
Pitch in inches (P)	0.138 inch	Outgoing elbow	90°
No. of poles	16	Number of solder pins per pole	1
Solder pin length (l)	1.5 mm	Tolerance of solder pin position	± 0.20 mm
Solder pin dimensions	d = 1.0 mm, Octagonal	Solder eyelet hole diameter (D)	1.3 mm
Solder eyelet hole diameter tolerance (D)+ 0,1 mm		Outside diameter of solder pad	2.1 mm
Template aperture diameter	1.9 mm	L1 in mm	24.5 mm
L1 in inches	0.965 inch	Number of rows	1
Pin series quantity		Touch-safe protection acc. to DIN VDE 57 106	touch-safe on connector face, safe to back of hand above the printed circuit board
	2	Can be coded	Yes
Touch-safe protection acc. to DIN VDE 0470	IP 20	Plugging force/pole, max.	3.5 N
Plugging cycles	25		
Pulling force/pole, max.	2.5 N		

Material data

Insulating material	LCP GF	Colour	Black
Colour chart (similar)	RAL 9011	Insulating material group	IIb
CTI	≥ 175	Insulation resistance	≥ 10 ⁸ Ω
Moisture Level (MSL)	1	UL 94 flammability rating	V-0
Contact material	Copper alloy	Contact surface	tinned
Layer structure of solder connection	1-3 µm Ni / 2-5 µm Sn matt	Storage temperature, min.	-25 °C
Storage temperature, max.	55 °C	Max. relative humidity during storage	80 %
Operating temperature, min.	-50 °C	Operating temperature, max.	120 °C
Temperature range, installation, min.	-40 °C	Temperature range, installation, max.	120 °C

Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. no. of poles (Tu=20°C)	13.4 A
Rated current, min. no. of poles (Tu=40°C)	12 A	Rated voltage for surge voltage class / pollution degree II/2	200 V
Rated voltage for surge voltage class / pollution degree III/2	160 V	Rated voltage for surge voltage class / pollution degree III/3	80 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	2.5 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	2.5 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	2.5 kV	Short-time withstand current resistance	3 x 1s with 80 A

Data sheet

**OMNIMATE Signal - series B2C/S2C 3.50 - 2-row
S2C-SMT 3.50/16/90G 1.5SN BK BX**

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Technical data**Rated data acc. to CSA**

Institute (CSA)



Certificate No. (CSA)

200039-1121690

Rated voltage (Use group B / CSA)	150 V
Rated voltage (Use group D / CSA)	150 V
Rated current (Use group C / CSA)	9.5 A
Reference to approval values	Specifications are maximum values, details - see approval certificate.

Rated voltage (Use group C / CSA)	50 V
Rated current (Use group B / CSA)	9.5 A
Rated current (Use group D / CSA)	9.5 A

Rated data acc. to UL 1059

Institute (cURus)



Certificate No. (cURus)

E60693

Rated voltage (Use group B / UL 1059)	150 V
Rated current (Use group B / UL 1059)	10 A
Reference to approval values	Specifications are maximum values, details - see approval certificate.

Rated voltage (Use group C / UL 1059)	50 V
Rated current (Use group C / UL 1059)	10 A

Packaging

Packaging	Box	VPE length	30 mm
VPE width	135 mm	VPE height	350 mm

Classifications

ETIM 4.0	EC002637	ETIM 5.0	EC002637
ETIM 6.0	EC002637	eClass 6.2	27-26-07-04
eClass 7.1	27-44-04-02	eClass 8.1	27-44-04-02
eClass 9.0	27-44-04-02	eClass 9.1	27-44-04-02

Notes

Notes	<ul style="list-style-type: none"> Gold-plated contact surfaces on request Rated current related to rated cross-section & min. No. of poles. Spacing between rows: see hole layout 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.
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.

Data sheet

OMNIMATE Signal - series B2C/S2C 3.50 - 2-row S2C-SMT 3.50/16/90G 1.5SN BK BX

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Technical data

Approvals

Approvals



ROHS

Conform

Downloads

Approval/Certificate/Document of
Conformity

[Declaration of the Manufacturer](#)

Brochure/Catalogue

[FL DRIVES EN](#)
[MB SMT EN](#)
[FL DRIVES DE](#)
[MB DEVICE MANUF. EN](#)
[CAT 2 PORTFOLIOGUIDE EN](#)
[FL BUILDING SAFETY EN](#)
[FL APPL LED LIGHTING EN](#)
[FL INDUSTR.CONTROLS EN](#)
[FL MACHINE SAFETY EN](#)
[FL HEATING ELECTR EN](#)
[FL APPL_INVERTER EN](#)
[FL_BASE_STATION_EN](#)
[FL_ELEVATOR_EN](#)
[FL_POWER_SUPPLY_EN](#)
[FL 72H SAMPLE SER EN](#)
[PO OMNIMATE EN](#)

Engineering Data

[EPLAN, WSCAD](#)

Engineering Data

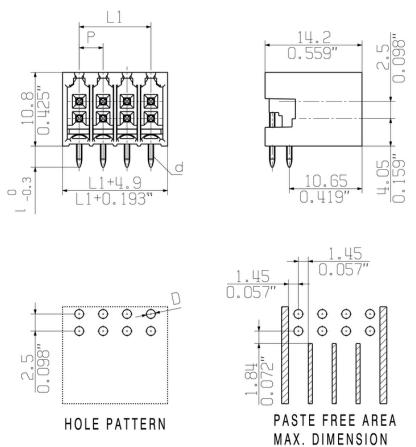
[STEP](#)

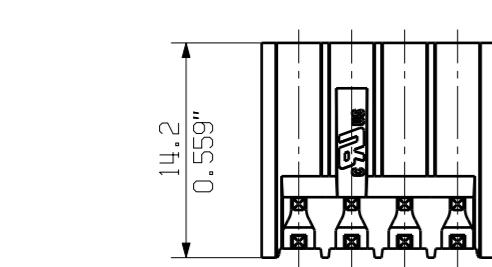
SMT white paper

[Download Whitepaper](#)

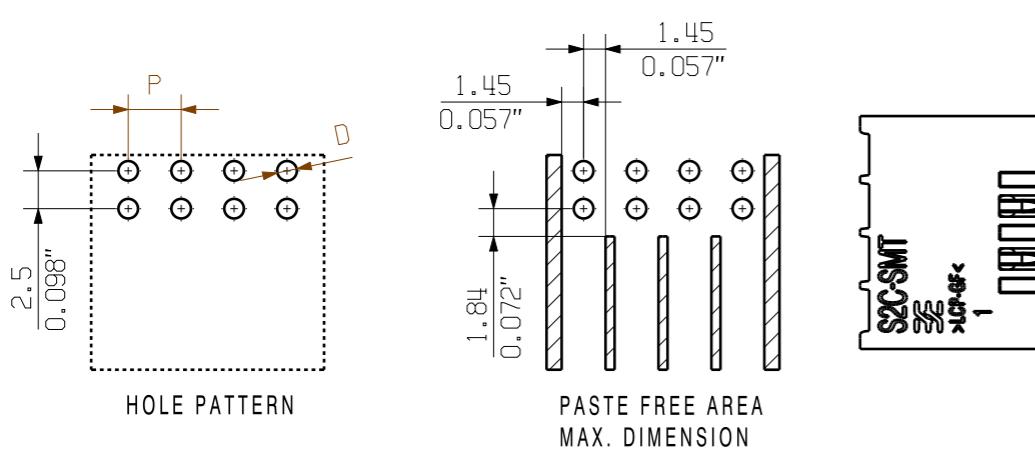
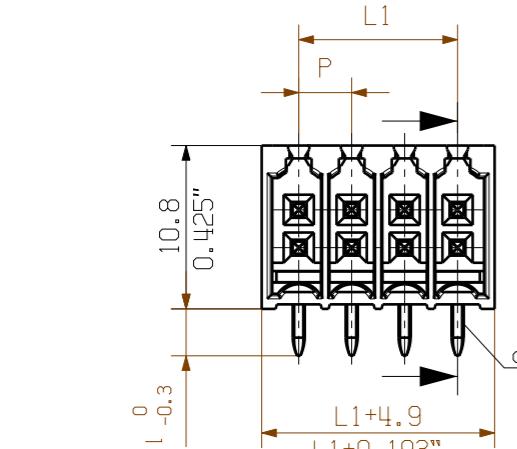
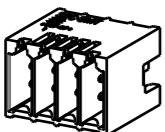
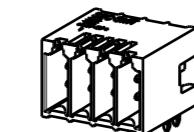
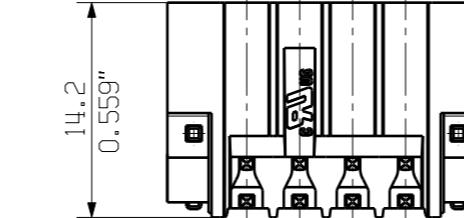
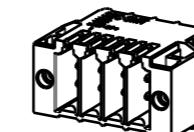
Data sheet**OMNIMATE Signal - series B2C/S2C 3.50 - 2-row
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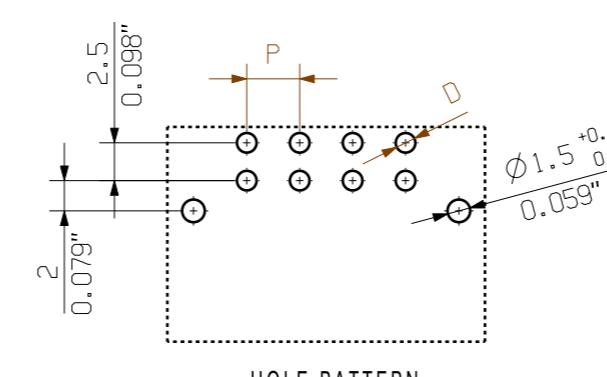
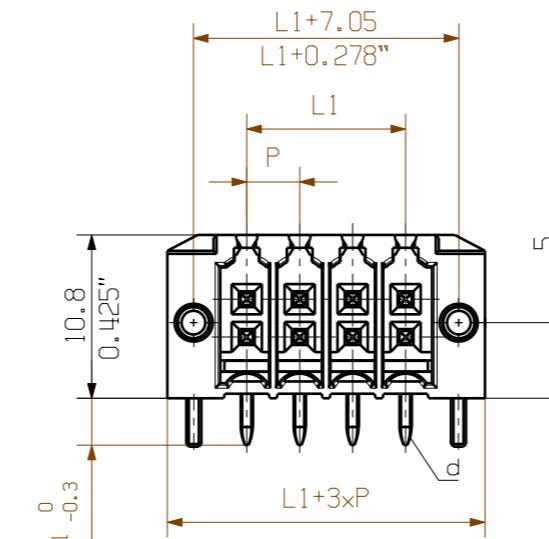
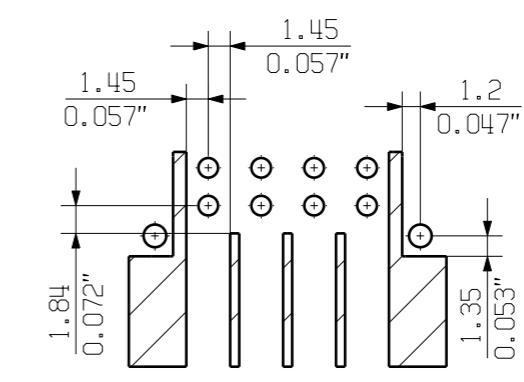
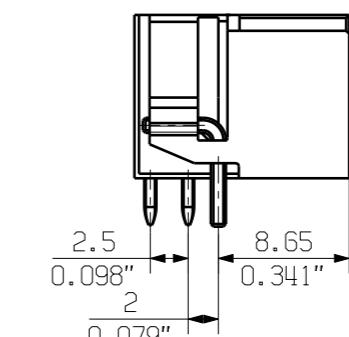
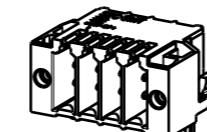
Drawings**Dimensional drawing**



SHOWN: S2C-SMT 3.50/08/90G 3.2

M 1/1
S2C-SMT 3.50/08/90G 1.5M 1/1
S2C-SMT 3.50/08/90G 3.2M 1/1
S2C-SMT 3.50/08/90LF 1.5

SHOWN: S2C-SMT 3.50/08/90LF 3.2

M 1/1
S2C-SMT 3.50/08/90LF 3.2

P = 3.50 RASTER
PITCH

D* = 0.13 +0.1
0.051"

d = 0.8x0.8
0.031"x0.031"

* from n (no of poles) 26
D = 1.4mm +0.1

S2C-SMT 3.50...180LF 3.5	3.5	0.126
S2C-SMT 3.50...180LF 1.5	1.5	0.059
S2C-SMT 3.50...180G 3.5	3.2	0.126
S2C-SMT 3.50...180G 1.5	1.5	0.059
TYP	1	1
PART NAME	[mm]	[inch]

For the mounting of 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 connection with the respective applicant in accordance to IEC 664 / VDE 0110.
The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.

Weidmüller PCB components are tested to the DIN EN 61984 standard, and are valid for its field of application.
Provided that the components are used to the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

36	59.5	2.343	±0.2
34	56.0	2.205	
32	52.5	2.067	
30	49.0	1.929	
28	45.5	1.791	
26	42.0	1.654	
24	38.5	1.516	
22	35.0	1.378	
20	31.5	1.240	
18	28.0	1.102	
16	24.5	0.965	
14	21.0	0.827	
12	17.5	0.689	
10	14.0	0.551	
8	10.5	0.413	
6	7.00	0.276	
4	3.50	0.138	
n POLZAHL		L1 [mm]	L1 [inch]
n POLES		TOLERANZ	TOLERANCE

Cat.no.: 3 50160 06

Drawing no. Sheet 02 of 04 sheets

Issue no.

Weidmüller

7400

GENERAL TOLERANCE:
DIN ISO 2768-m

Max. nos. RoHS COMPLIANT

Modification

Date Name

Drawn 15.07.2011 FRIELING_L

Responsible AMANN_A

Scale: 2/1 Checked 04.04.2018 HELIS_MA

Supersedes: Approved LANG_T

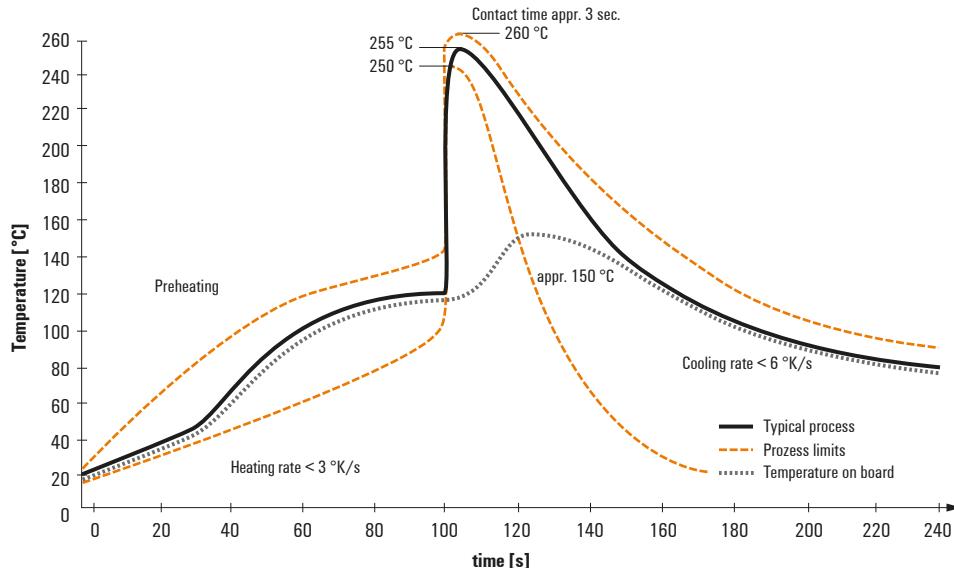
S2C-SMT 3.50/.../
STIFTLEISTE
MALE HEADER

Product file: B2CF/S2C

allgemeingültige Kundenzzeichnung, aktueller Stand nur auf Anfrage
general customer drawing, topical version only if required

Recommended wave soldering profiles

Weidmüller Interface GmbH & Co. KG
 Klingenbergsstraße 16
 D-32758 Detmold
 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.

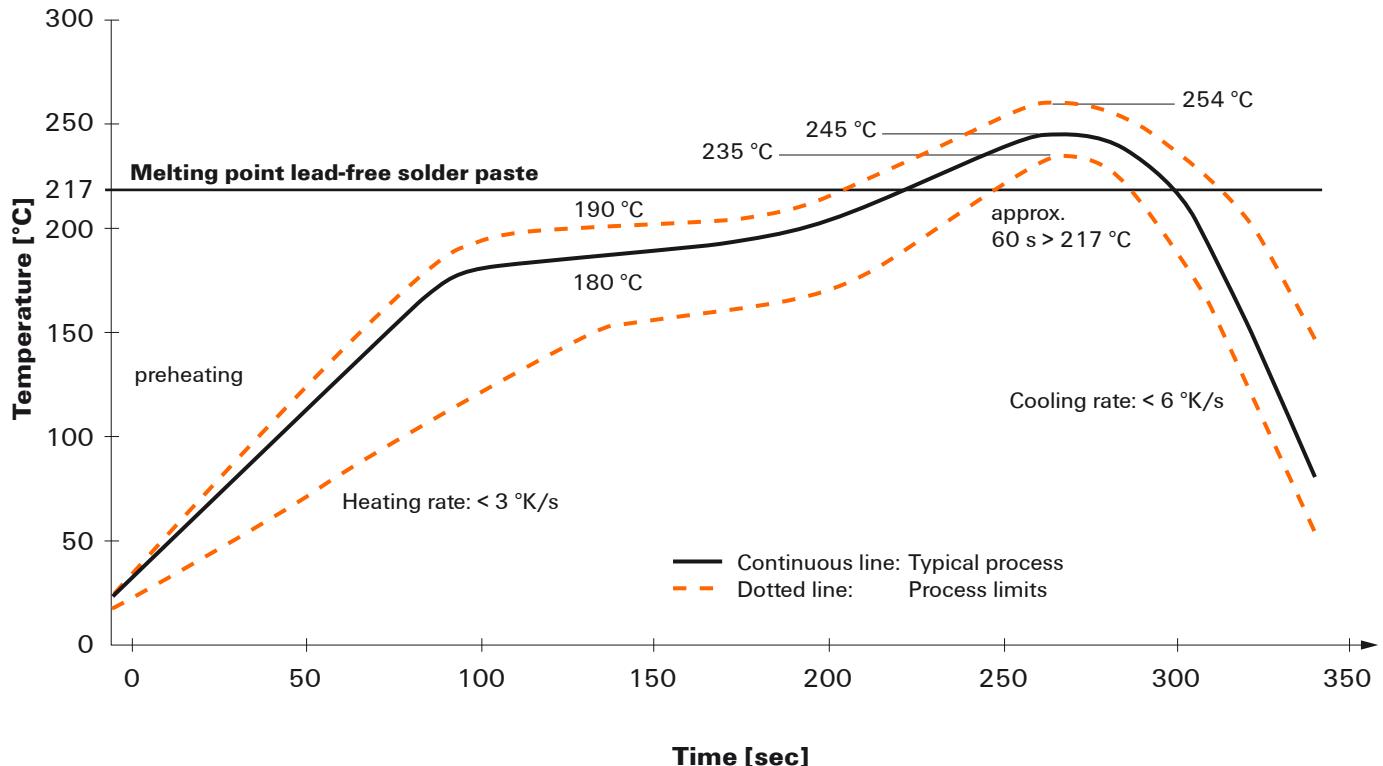
When choosing a suitable profile for your application, the following factors also need to be considered:

- 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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 D-32758 Detmold
 Germany
 Fon: +49 5231 14-0
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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.