OMNIMATE Power - series BV/SV 7.62HP
SV-SMT 7.62IT/04/270MSF2 2.6SN BK RL

Weidmüller Interface GmbH & Co. KG
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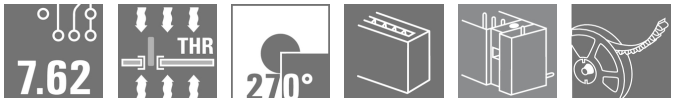
Similar to illustration



OMNIMATE Power for IT networks – scalable to 50 kVA

Tailor-made solutions for special requirements

More standard-compliance means fewer compromises: OMNIMATE Power for IT networks has integrated features incorporated as standard across the range. This makes the design-in and approvals process simpler and makes them safer and more reliable in operation. Results for the application and advantages for the user: unlimited use in 400-V IT systems and touch safety according to IEC 61800-5-1 (+ 5.5 mm). The self-snapping one-handed safety flange enables intuitive and safe usage. Operational reliability is guaranteed by the automatic interlock feature during the plug-in process. In conclusion: You need no additional device covering. The application-oriented design means that no compromises are necessary during the approval process.

General ordering data

Type	SV-SMT 7.62IT/04/270MSF2 2.6SN BK RL
Order No.	2546080000
Version	PCB plug-in connector, male header, Middle screw flange, THT/THR solder connection, 7.62 mm, Number of poles: 4, 270°, Solder pin length (l): 2.6 mm, tinned, black, Tape
GTIN (EAN)	4050118556117
Qty.	110 pc(s).
Product data	IEC: 1000 V / 41 A UL: 300 V / 40.5 A
Packaging	Tape

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Technical data

Dimensions and weights

Height of lowest version	11.4 mm	Depth	28.3 mm
Depth (inches)	1.114 inch	Net weight	8.8 g

System specifications

Product family	OMNIMATE Power - series BV/SV 7.62HP	Type of connection	Board connection
Mounting onto the PCB	THT/THR solder connection	Pitch in mm (P)	7.62 mm
Pitch in inches (P)	0.3 inch	Outgoing elbow	270°
Number of poles	4	Number of solder pins per pole	2
Solder pin length (l)	2.6 mm	Solder pin length tolerance	+0.1 / -0.3 mm
Tolerance of solder pin position	± 0.1 mm	Solder pin dimensions	0.8 x 1.0 mm
Solder eyelet hole diameter (D)	1.4 mm	Solder eyelet hole diameter tolerance (D)	+ 0,1 mm
L1 in mm	30.48 mm	L1 in inches	1.2 inch
Number of rows	1	Pin series quantity	1
Touch-safe protection acc. to DIN VDE 57 106	safe to back of hand above the printed circuit board	Touch-safe protection acc. to DIN VDE 0470	IP 20
Volume resistance	2.00 mΩ	Tightening torque for screw flange, min.	0.2 Nm
Tightening torque for screw flange, max.	0.3 Nm	Plugging cycles	25
Plugging force/pole, max.	12 N	Pulling force/pole, max.	7 N

Material data

Insulating material	PA GF HT3	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	I
Comparative Tracking Index (CTI)	≥ 600	Insulation strength	≥ 10^8 Ω
Moisture Level (MSL)	3	UL 94 flammability rating	V-0
Contact material	Copper alloy	Contact surface	tinned
Layer structure of solder connection	1-3 µm Ni / 4-6 µm Sn matt	Layer structure of plug contact	1-3 µm Ni / 4-6 µm Sn matt
Storage temperature, min.	-25 °C	Storage temperature, max.	50 °C
Max. relative humidity during storage	70 %	Operating temperature, min.	-50 °C
Operating temperature, max.	130 °C	Temperature range, installation, min.	-25 °C
Temperature range, installation, max.	130 °C		

Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	41 A
Rated current, max. number of poles (Tu=20°C)	41 A	Rated current, min. number of poles (Tu=40°C)	41 A
Rated current, max. number of poles (Tu=40°C)	41 A	Rated voltage for surge voltage class / pollution degree II/2	1,000 V
Rated voltage for surge voltage class / pollution degree III/2	630 V	Rated voltage for surge voltage class / pollution degree III/3	630 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	6 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	6 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	6 kV	Short-time withstand current resistance	3 x 1s with 420 A
Clearance, min.	6.9 mm	Creepage distance, min.	9.6 mm

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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 voltage (Use group C / UL 1059)	300 V
Rated voltage (Use group D / UL 1059)	600 V	Rated current (Use group B / UL 1059)	40.5 A
Rated current (Use group C / UL 1059)	40.5 A	Rated current (Use group D / UL 1059)	5 A
Clearance distance, min.	6.9 mm	Creepage distance, min.	9.6 mm
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Packing

Packaging	Tape	VPE length	0
VPE width	0	VPE height	0
Tape depth (T2)	15.8 mm	Tape width (W)	56 mm
Tape pocket depth (K0)	15.3 mm	Tape pocket height (A0)	28.4 mm
Tape pocket width (B0)	39.06 mm	Tape pocket separation (P1)	36 mm
Tape hole separation (E)	1.75 mm	Tape pocket separation (F)	26.2 mm
Tape reel diameter ∅ (A)	330 mm	Surface resistance	Rs = 10^9 - 10^{12} Ω

Classifications

ETIM 6.0	EC002637	ETIM 7.0	EC002637
eClass 9.0	27-44-04-02	eClass 9.1	27-44-04-02
eClass 10.0	27-44-04-02		

Notes

Notes	• Additional colours on request • Rated current related to rated cross-section & min. No. of poles. • 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.

Approvals

Approvals

Downloads

White paper power electronics connected correctly	Download Whitepaper
White paper UL 600 V	Download Whitepaper

Creation date May 2, 2020 6:01:26 AM CEST

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Mating connector (fully pluggable)

BVZ 7.72IT 180MSF SN

180° female plug with a 7.62 pitch for IT power networks. Meets the requirements of UL1059 600 V class C. In combination with male header SV 7.62 IT.. with leading contact.
Meets the extended requirements on 5.5 mm touch safety for IT power networks as per IEC 61800-5-1 for 400 V to earth.
The self-locking (optionally also screwable) middle flange reduces the space requirements by one pitch width in comparison with conventional solutions.
On request also available without middle flange interlock.

General ordering data

Type	BVZ 7.62IT/04/180MSF2 S ...	Version	Product data	Packaging
Order No.	2630100000	PCB plug-in connector, female plug, 7.62 mm, Number of poles: 4,	IEC: 1000 V / 41 A / 0.2 - 6 mm²	Box
GTIN (EAN)	4050118633672	180°, Clamping yoke connection, Clamping range, max. : 10 mm², Box	UL: 600 V / 40.5 A / AWG 24 - AWG	
Qty.	32 pc(s).		8	

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Accessories

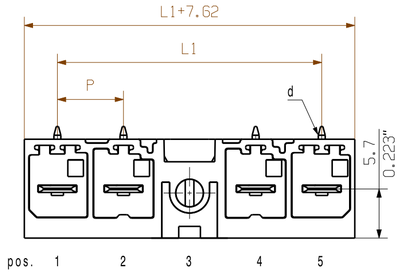
Coding elements

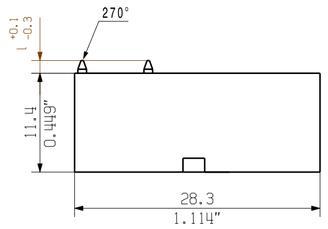
Only connects what is supposed to be connected: the right connection at the right place.
Coding elements and locking devices clearly assign connecting elements during the manufacturing process and operation
The coding elements and locking devices are inserted prior to assembly or during the cable assembly phase.
The Weidmüller alternative: configure online using the variant configurator to precode prior to delivery.
Incorrect assembly on the circuit board and incorrect plugging of connecting elements is no longer possible.
The advantage: no troubleshooting during manufacture and no operational errors by the user.

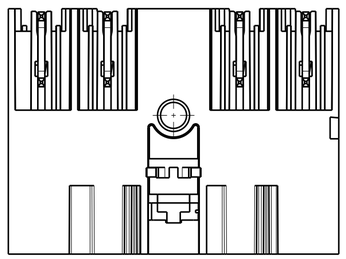
General ordering data

Type	BV/SV 7.62HP KO	Version	Product data	Packaging
Order No.	1937590000	PCB plug-in connector, Accessories, Coding element, black, Number		Box
GTIN (EAN)	4032248608881	of poles: 1		
Qty.	50 pc(s).			

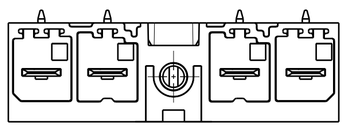
SV-SMT 7.62IT/04/270MF3

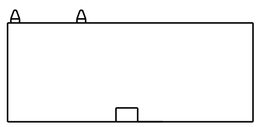


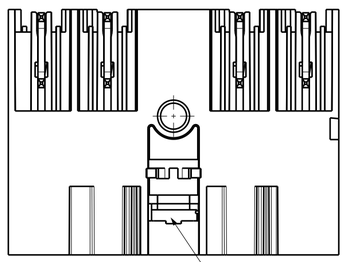




SV-SMT 7.62IT/04/270MSF3







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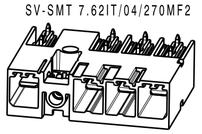

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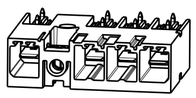

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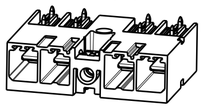

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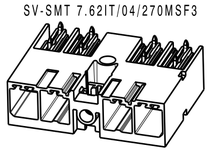
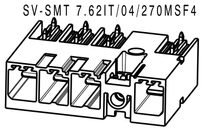
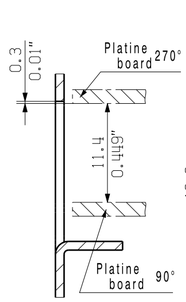
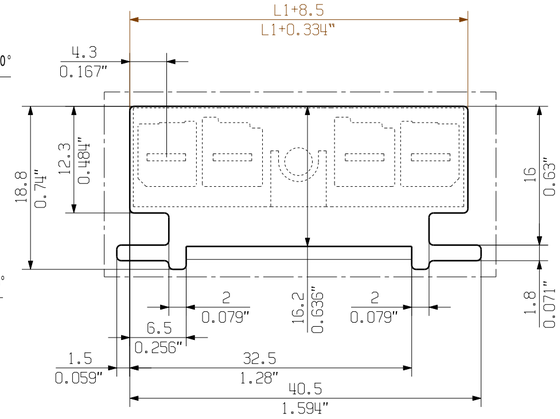


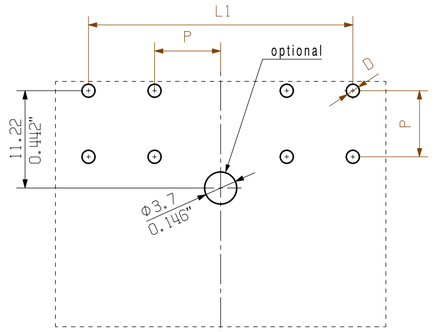
SV-SMT 7.62IT/04/270MF4

SV-SMT 7.62IT/04/270MSF4

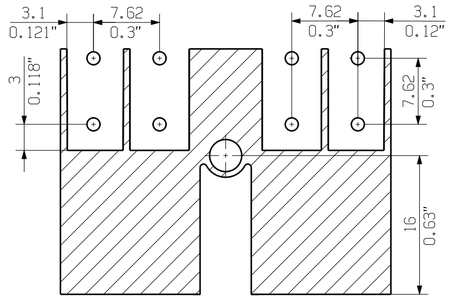








hole pattern



paste free area
max. dimension

SO = ohne voreilenden Kontakt/
without leading pin

D = Ø1.4+0.1/-0.05
d = 0.8x1.0

POL = Pol/pole
PE = Voreilender Kontakt / leading pin
P = Raster / pitch 7.62
MF = Mittelflansch / middle flange
MSF = Mittelschraubflansch / middle flange with screw

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 occuring of electrical, mechanical, thermic and corrosive stress will be satisfied.

1.5
2.6
3.5
l [mm]

GENERAL TOLERANCE:
DIN ISO 2768-m

description	no of poles	L1 [mm]	L1 [inch]	position MF								
				1	2	3	4	5	6	7	8	9
SV 7.62IT/05/...M(S)F5	5	38.10	1.50	Pol	Pol	Pol	Pol	MF	PE			
SV 7.62IT/05/...M(S)F4				Pol	Pol	Pol	MF	Pol	Pol			
SV 7.62IT/05/...M(S)F3				Pol	Pol	MF	Pol	Pol	Pol			
SV 7.62IT/05/...M(S)F2				PE	MF	Pol	Pol	Pol	Pol			
SV 7.62IT/04/...M(S)F4	4	30.48	1.20	Pol	Pol	Pol	MF	PE				
SV 7.62IT/04/...M(S)F3				Pol	Pol	MF	Pol	Pol				
SV 7.62IT/04/...M(S)F2				PE	MF	Pol	Pol	Pol				
SV 7.62IT/03/...M(S)F3	3	22.86	0.90	Pol	Pol	MF	PE					
SV 7.62IT/03/...M(S)F2				PE	MF	Pol	Pol					
SV 7.62IT/02/...M(S)F2 SO	2	15.24	0.60	Pol	MF	Pol						

RoHS COMPLIANT
EC00002212
First Issue Date 14.11.2016

Prim PLM Part No.: 225880
Prim ERP Part No.: 2499550000

Max. nos.
Modification

Weidmüller

63450 Drawing no. 4 Issue no.
Sheet 16 of 17 sheets

	Date	Name
Drawn	30.08.2019	Helis, Maria
Responsible		Döhrer, Karl
Approved	09.10.2019	Lang, Thomas

Scale: 2:1 Size: A2
Drawings Assembly

SV-SMT 7.62HP/IT/../90/270...
STIFTLEISTE
MALE HEADER

Product file: 7407 BLF 7.50HP

Wave Solder Profile

Recommended wave solderding profiles

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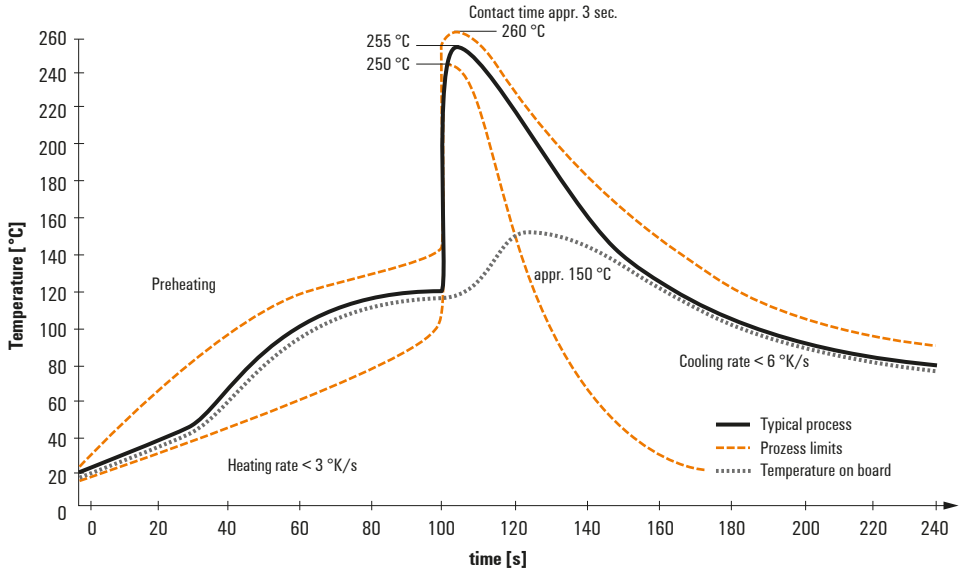
Single Wave:



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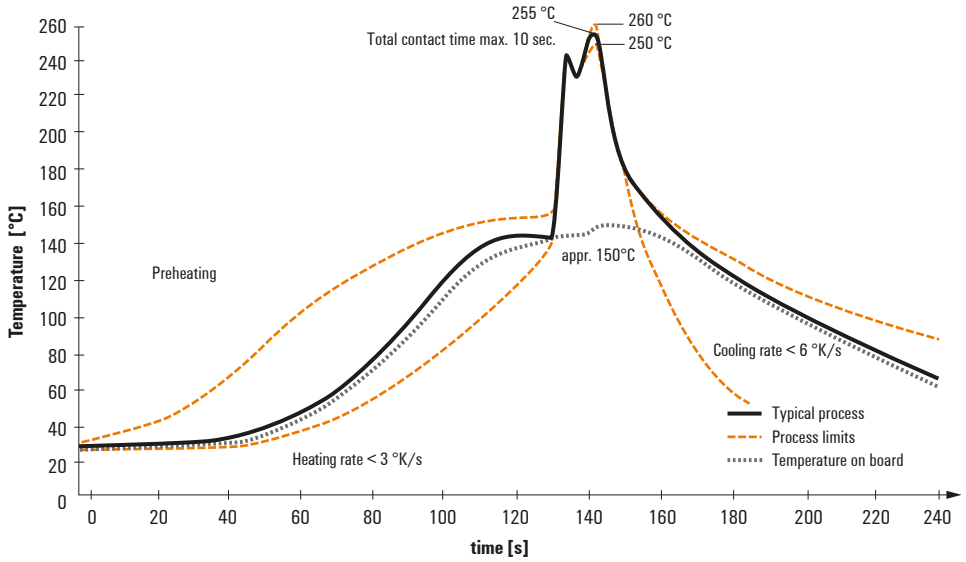

Wave soldering profiles

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.

Reflow Solder Profile

Recommended reflow soldering profile

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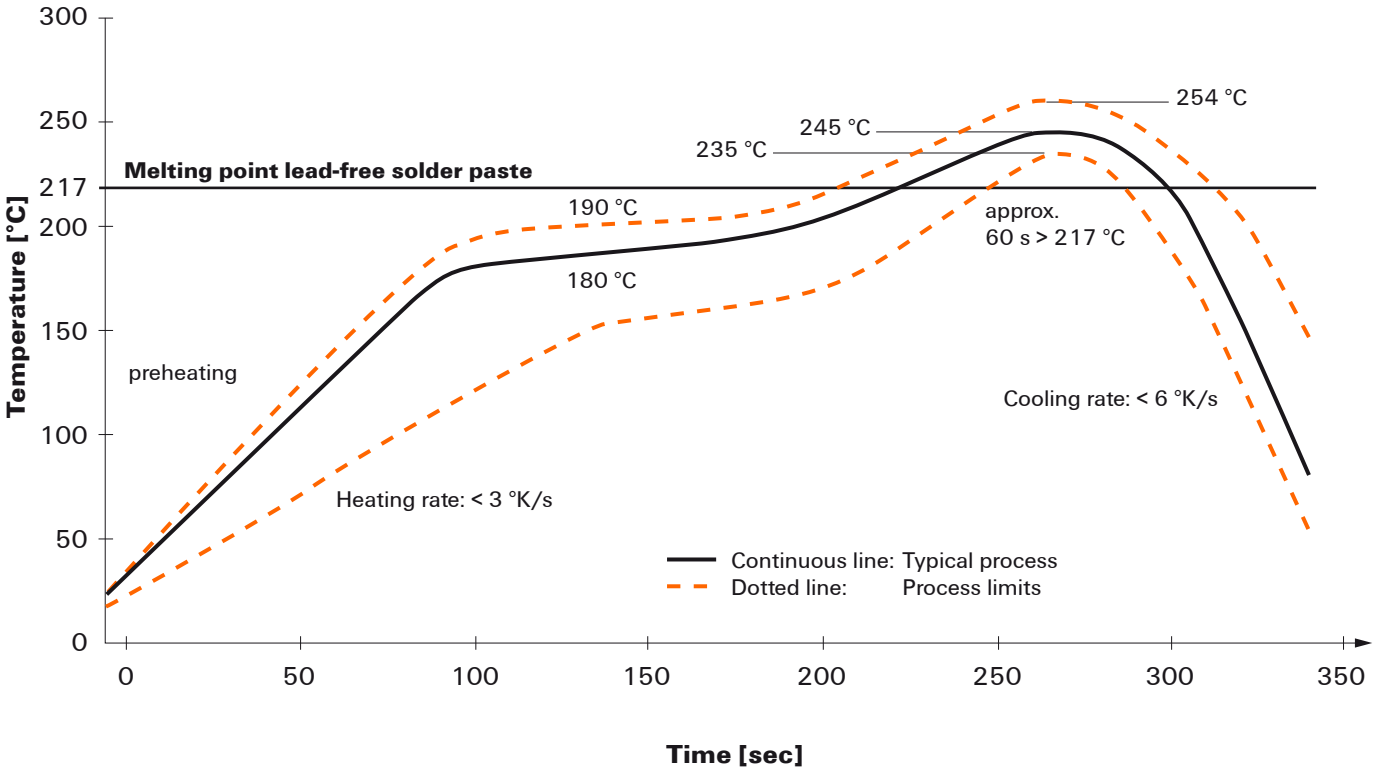

Reflow soldering profile

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.