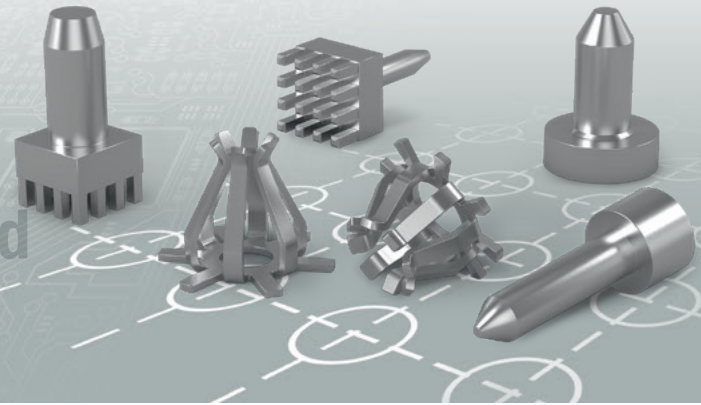




PowerBasket SMT

Original POWEELEMENT

150A Inline Processing
reliable established
 high quality contact surface
 SMT



PowerBasket SMD high current terminals are the result of the consequent advancement of our pluggable PowerBasket products in our customer's interest.

These Power Elements are processable in common SMT lines and are soldered in an infrared oven or with a vapor-phase system. Currents more than 100 A are possible depending on the layout and PowerBasket Element.

The insertion/extraction forces are compared to conventional systems significantly reduced. In combination with a position tolerance up to 0,6 mm several contacts can be used simultaneously. With this component, developed as phase contact, a new field of applications are possible especially in the board-to-board connection.

The use of a special contact alloy allows deployment at higher ambient temperatures with optimum current carrying capacity.

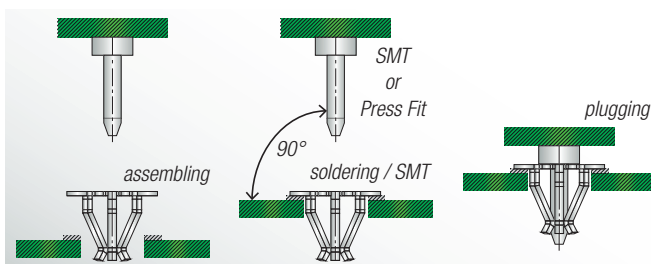
Reduce the installation effort in assembly, for your service technicians or your customers. Just plug in, no screws, done.

Application Possibilities

- Board-to-board
- Using multiple contacts at the same time
- Service friendly connections by plugging instead of screwing
- Multiple plug cycles
- Extended temperature range
- Phase connection (brushless e-motors)

Processing

PowerBasket SMD Power Elements are soldered onto the circuit board, which easily fit in to the processing chain of a SMT line. Due to the heat absorption of the component mass, individual tests are necessary for defining the parameters.



The delivery on reel in an ESD blister is optional also with a Kapton-Sticker available

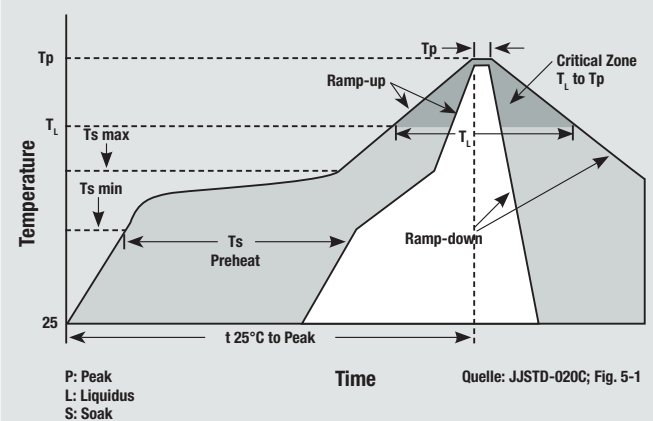
Technical Data

Current carrying capacity	See table overleaf
Material	CuNiSi
Surface	silver plated

Dimensions

Diameter solder pads	from 12 mm
Total height	from 9 mm
PCB thickness	from 1,0 mm
Diameter pin	3 mm and 6 mm

Würth Elektronik Test Arrangement - Soldering Profile



Compliant



PowerBasket SMT



Circuit Board Design

The circuit boards should be manufactured according to IPC A 600. Footprint indications are available.

Current Carrying Capacity

The current carrying capacity needs to be seen in the context of the overall system. The transition resistance has an extremely low value with 250 - 350 μOhm . Our measurements have shown that the limiting factor usually lies in the PCB layout or in the connection of feed lines.

Reference values for a pre-dimensioning can be found in the table below.

Qualification

PowerBasket high current contacts have successfully passed the vibration test according to the ISO 16750-3 standard.

Vibration test according to ISO 16750-3:2012 4.1.2.7.2 Random Test VII.

Our PowerBasket SMD high current contacts are currently in preparation for qualification based on the LV214.

Recommendation Specifications

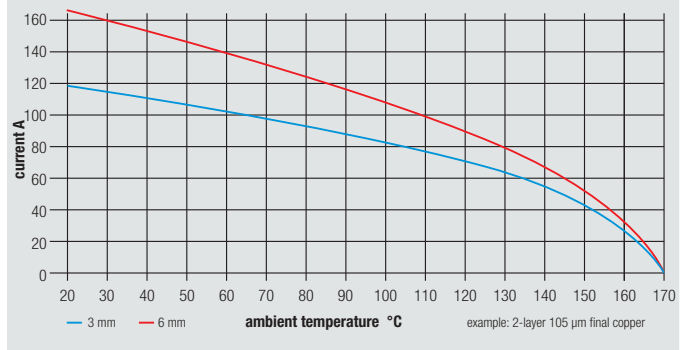
IPC A 600 Acceptability of Printed Boards

IPC TM 650 Acceptability of Assemblies (Test Methods)



Insertion forces

Number of plugging cycles	PowerBasket 3 mm	PowerBasket 6 mm
1	3 N	35 N
25	6 N	61 N





Derating curve PowerBasket SMD (preliminary)



Product overview PowerBaskets

		
Connection diameter	3 mm	6 mm
Construction form	Bush Through hole vertical	Bush Through hole vertical
Part-No.	99763	99600
Current carrying capacity at 20°C	~ 120 A	~ 164 A
Current carrying capacity at 85°C	~ 92 A	~ 121 A
Current carrying capacity at 125°C	~ 68 A	~ 85 A
Current carrying capacity at 150°C	~ 43 A	~ 55 A

Product overview contact pins

				
Connection diameter	3 mm	3 mm	6 mm	6 mm
Construction form	pin vertical	pin vertical	pin vertical	pin vertical
Socket height	15 mm	15 mm	15 mm	15 mm
Part-No.	900167	900172	900168	900146

For more information visit us at:
www.we-ics.com/pe