

LF POWERONE SMD

Powerelements



LF PowerOne SMD high current contacts are the result of the consequent advancement of our products for the benefit of our customers. The lead-free Powerelements can be processed in the typical SMT lines and are soldered in an infrared oven or with the vapour-phase system. Depending on the layout, currents of up to 300 amperes are possible. This makes these power supply terminals ideal for use as connection elements for fuses, for cable connections to the PCB, or as fastening elements.

The LF Powerelements from Würth Elektronik ICS are lead-free high current contacts with the same performance and application range as the original Powerelements. However, they already now meet the future requirements of the RoHS Directive without any exemptions.

Applications

- Contacting / mounting of switches, fuses, etc.
- Wire-to-board screw connection of cable lugs
- Board-to-board
- Electromechanics such as mounting of housings and space

Processing

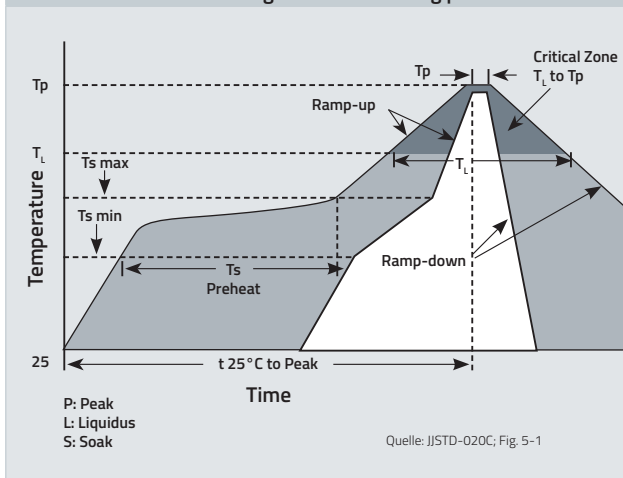
LF PowerOne SMD Powerelements are soldered onto the PCB and easily fit into an SMT assembly line. Due to the heat absorption of the component mass, individual tests are necessary for defining the parameters.

Use only with suitable fixing materials (see processing instructions).

Technical data	
Current carrying capacity	see table on the back
Material	brass lead-free (max. 0,1% Pb)
Surface	tin-plated (standard)

Dimensions (standard)	
Length x width	from 7 x 7 mm
Height	from 7.5 mm

Würth Elektronik test arrangement – Soldering profile



With comprehensive engineering expertise and as a pioneer for Powerelements, we will meet your requirements and find the best technical and economical solution - whether from our standard range or as a customised variant.



LEAD-FREE



REACH
COMPLIANT



RoHS
COMPLIANT

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PCB design

The PCB has to be designed in accordance with the latest edition of IPC A 600.

Footprint indications are available.

Torques

Torque values for the various thread dimensions can be found in the table opposite. Different material combinations or different thread lengths of the connectors are not listed here. Depending on the thread length, the bushes can be tightened with higher torques.

Torques for brass

Thread	M4	M5	M6	M8
Nm	1.2	2.2	3.9	9.0

Current carrying capacity

The current carrying capacity has to be always considered in the context of the overall system. Our measurements have shown that the limiting factor usually lies in the PCB layout, and in the connection of a feed line.

Depending on the system structure, the values of the derating curve shown may vary.

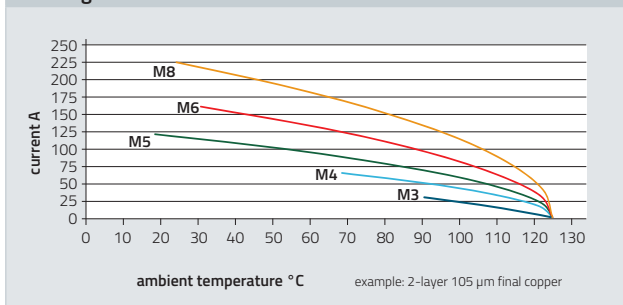
Qualification

LF PowerOne SMD high current contacts have successfully passed the vibration test and the mechanical shock test according to ISO 16750-3 standard.

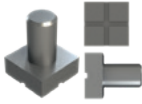
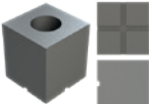
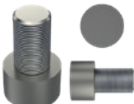
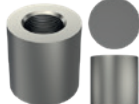
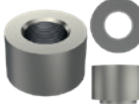
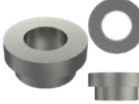
Vibration tests according to ISO 16750-3:2012 4.1.2.7 Random Test VII.

Mechanical shock tests according to ISO 16750-3:2012 4.2.3 Severity 2.

Derating curve LF PowerOne SMD



Overview of LF PowerOne SMD standard products

Construction form						
Socket	Square	Square	Round	Round	Round	Round
Current carrying capacity at 20°C*	~ 90 – 330 A					
Current carrying capacity at 85°C*	~ 54 – 198 A					
Dimensions	M3 – M8					

* Recommended value for system design based on PCB limiting temperature of 125°C

All threads are also available in UNC.

For more information visit us at:
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