

45 4580 01 OP T0,8

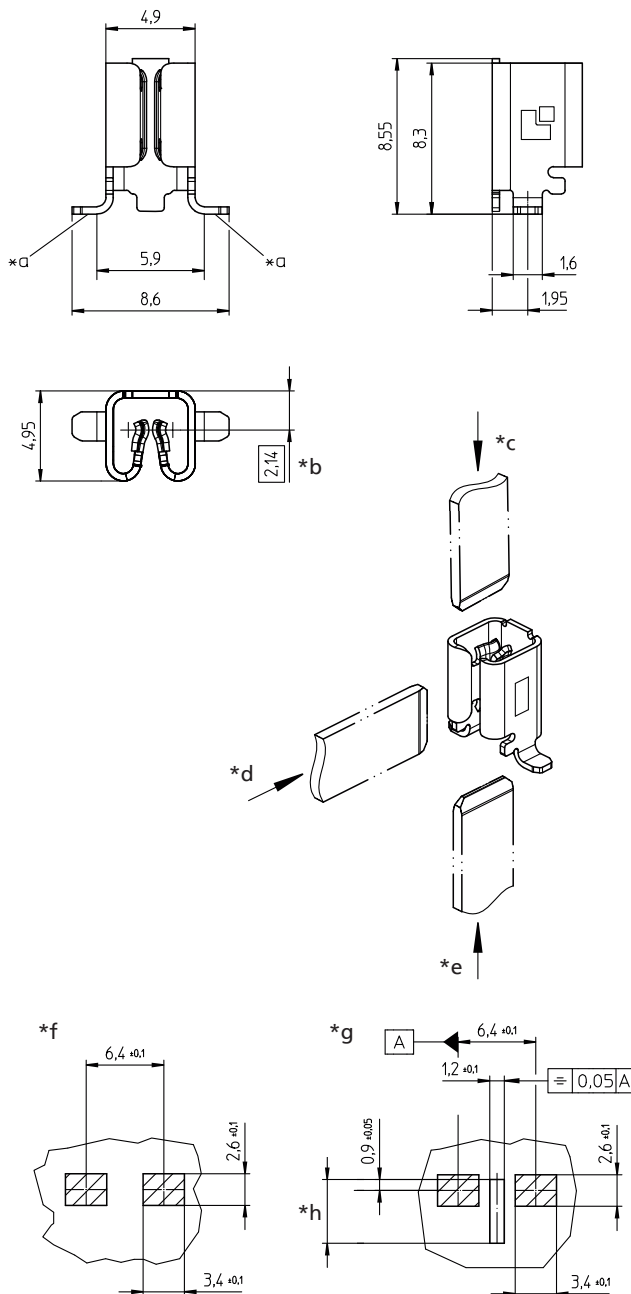
High-current contact elements



High-current contact bush, in surface mount technology (SMT), mateable from top, bottom or lateral direction, for tab contacts 0.8 mm, for printed circuit boards or busbars

Approvals: **LV215**

45 4580 01 OP T0,8



Environmental conditions

Temperature range -40 °C/+120 °C

Materials

Contact CuCr alloy, tin-plated

Mechanical data

Mating with tab contact 2.8–6.8 mm x 0.8 mm
applicable for reflow soldering on
printed circuit board
applicable for laser welding on a
busbar or lead frame

Mating cycles ≤ 5

Insertion force
32 N ± 15 N – top entry
18 N ± 10 N – lateral entry
32 N ± 15 N – bottom entry
1

Withdrawal force
32 N ± 10 N – top entry
15 N ± 10 N – lateral entry
32 N ± 10 N – bottom entry
1

¹ measured with a tin-plated test tab

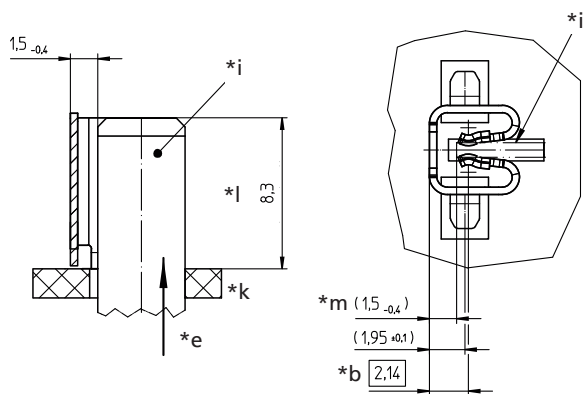
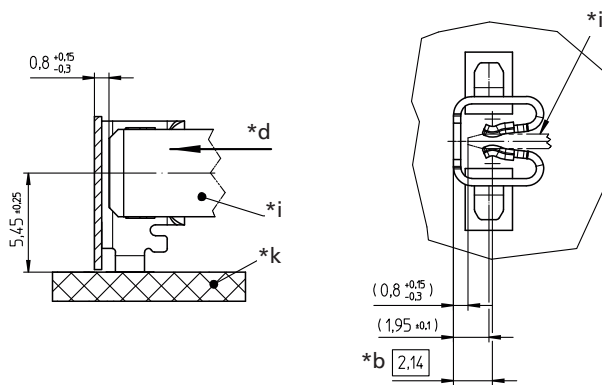
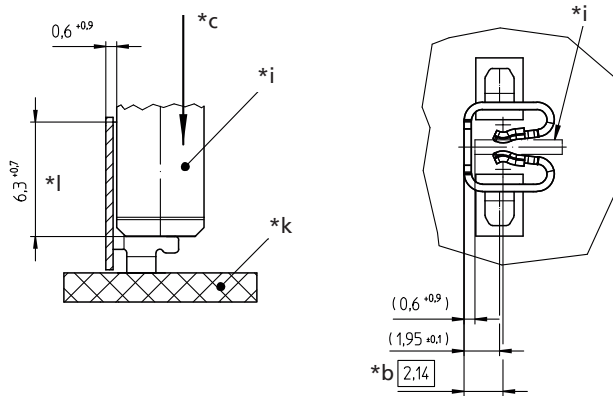
Electrical data (at T_{amb} 20 °C)

Contact resistance < 1 mΩ

Rated current ≤ 56 A¹

¹ depending on the connection to the printed circuit board/busbar, installation situation and heat dissipation

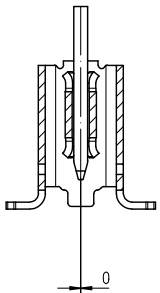
45 4580 01 OP T0,8



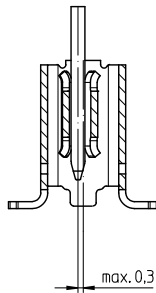
45 4580 01 OP T0,8

Assembly tolerances for top and bottom entry

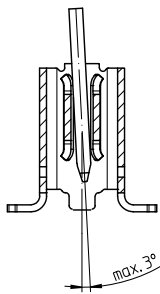
- tab dimensions 4.8 mm x 0.8 mm x length 8 mm
- larger assembly tolerances possible for lengths > 15 mm



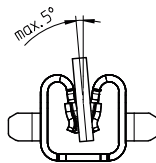
typical mating



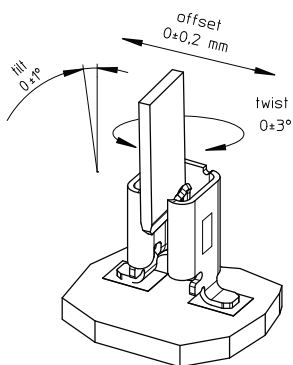
permissible lateral offset



permissible tilt



permissible twist

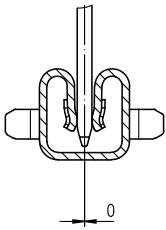


permissible combined tolerances

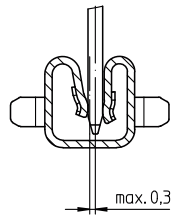
45 4580 01 OP T0,8

Assembly tolerances for lateral entry

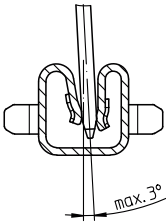
- tab dimensions 4.8 mm x 0.8 mm x length 8 mm
- larger assembly tolerances possible for lengths > 15 mm



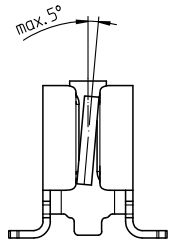
typical mating



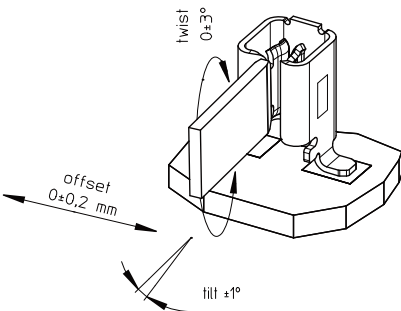
permissible lateral offset



permissible tilt



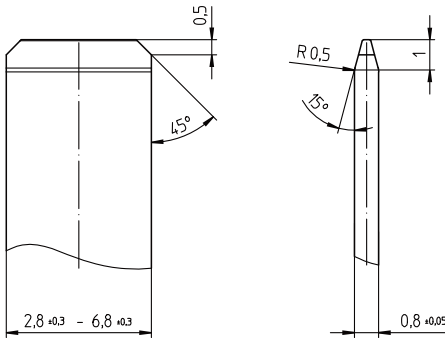
permissible twist



permissible combined tolerances

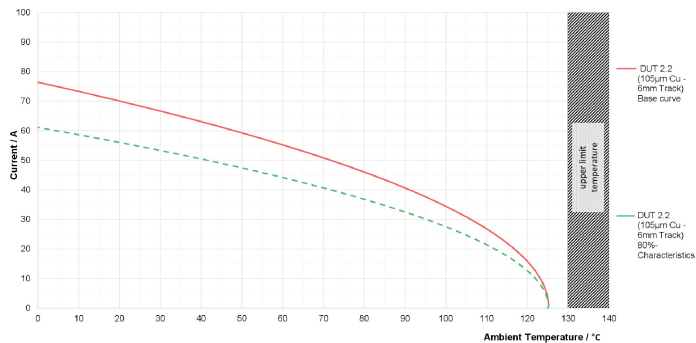
45 4580 01 OP T0,8

Geometry of the mating tab contact



Material to be coordinated with Lumberg.

Derating diagram



Test setup: application example of a closed system, no air circulation, no heat dissipation

- tab contact: CuZn37, tin-plated, 4.8 mm x 0.8 mm (corresponding to a cross section of 4 mm²)
- connected wire: section 6 mm²
- PCB: double-sided, conductor thickness 105 µm, track width 6 mm
- ambient temperature: 20 °C

Further test configurations and details upon request.

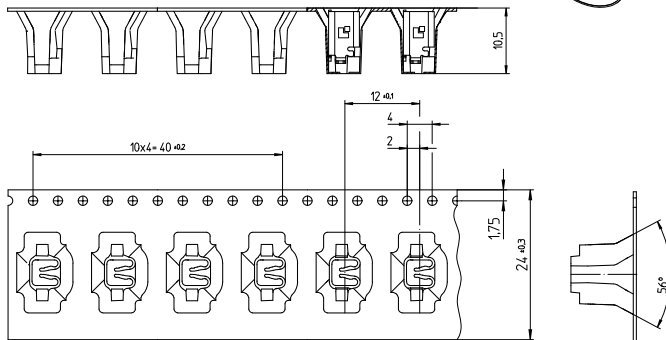
45 4580 01 OP T0,8

Verpackung

Rolle: 330 mm/110 mm/24,5 mm

Vorlauf: 408 mm, 34 Leerfächer

Nachlauf: 168 mm, 14 Leerfächer



- *a SMT solder area
- *b contact point
- *c mating from top direction
- *d mating from lateral direction
- *e mating from bottom direction
- *f printed circuit board layout (example) for mating from top or lateral direction
- *g printed circuit board layout (example) for mating from bottom direction
- *h slot in the printed circuit board min. 0.5 mm wider than tab
- *i contact tab
- *k printed circuit board
- *l insertion depth

45

4580 01 OP T0,8

Designation	Pole Number	PU (Pieces)	MDQ (Pieces)
4580 01 OP T0,8 V12VP12	1	500	

Packaging:

on reel

4580 01 - High-current contact

Overview acc. LV 215 Edition (VW 80332: 2021-02)

Test PCB: FR4 1.6 mm ±10 % (IPC 4101C/121) TG (DSC= 170 °C / 2 layers Cu 105 µm / 6 mm)

Connection wire cross section for high load: 6 mm²



Version: 1

13.06.2025

Test group			Results
TG 1	Dimensions		OK
TG 2	Material and surface analysis, contacts		OK
TG 3	Material and surface analysis, housing		OK*
TG 4	Contact engagement Length	Contact overlap – Plug in direction top/bottom	OK
		Contact overlap – Plug in direction horizontal	with limitations Design-related contact overlap 0.69 mm
TG 5	Mechanical and thermal relaxation behaviour		OK
TG 6	Interaction between contact and contact housing		OK*
TG 7	Handling and functional reliability of the contact housings		OK*
TG 8	Insertion and holding forces of the contact parts in the contact housing		OK*
TG 9	Pin insertion angle/misuse-proofing (scoop- proofing)		OK
TG 10	Contacts: Based on PG 10 - Misuse / Share force from PCBA SMD variant only		OK
TG 11	Contacts: Insertion and extraction forces; number of mating cycles	Insertion/extraction direction from horizontal/front side	OK
		Insertion/extraction direction from top side/bottom side	with limitations Change in insertion force up to 30 %
		Insertion force change max. 25 % on each sample between 1st and 5th insertion	
TG 12	Current heating derating - free in air		OK
TG 13	Derating wit housing		OK
TG 14	Thermal time constant		OK
TG 15	Electrical stress test		OK
TG 16	Fretting corrosion		OK
TG 17	Dynamic loading - Severity 2		OK
TG 18 A	Coastal climate stress		OK*
TG 19	Environmental simulation		OK
TG 20A	Environmental load of the housing		OK*
TG 21	Long-term temperature aging		OK*
TG 22A	Chemical resistance		OK*

*= not relevant for the application