45 4580 01 SP T0,8

High-current contact elements

High-current contact bush, in through hole technology (THT), mateable from top, bottom or lateral direction, for tab contacts 0.8 mm, for printed circuit boards

Approvals: LV215

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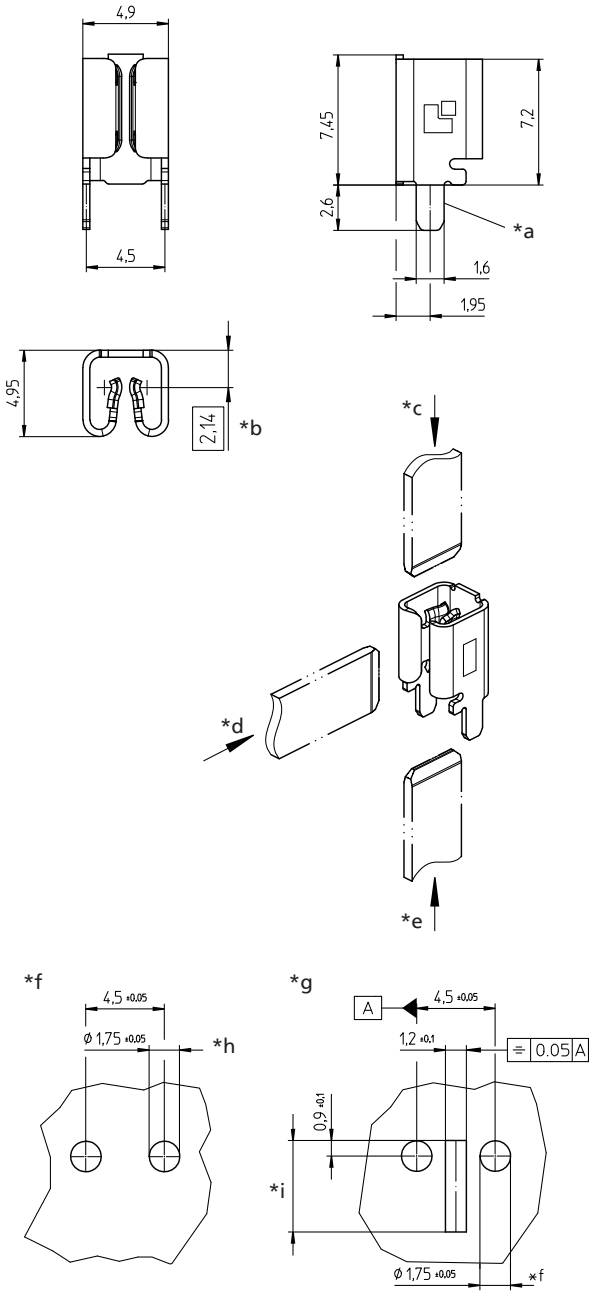

Environmental conditions

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 THT soldering on printed circuit board
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 A [1]

[1] depending on the connection to the printed circuit board, installation situation and heat dissipation

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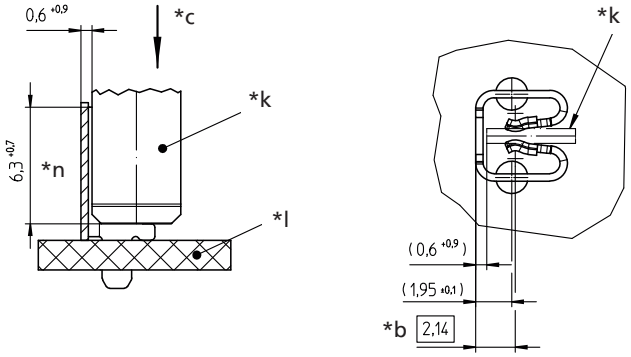

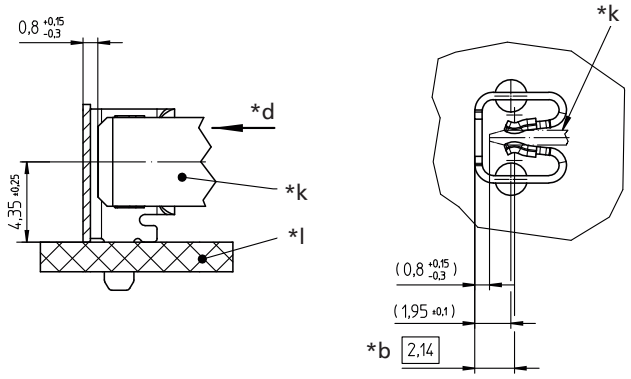

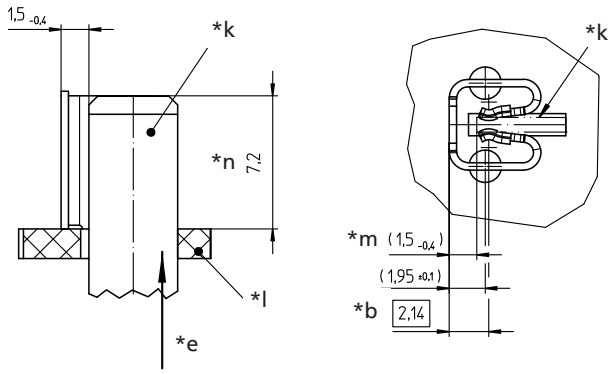

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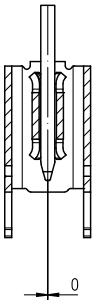
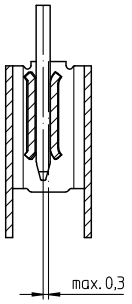
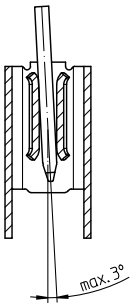
Assembly tolerances for top and bottom entry
- tab dimensions 4.8 mm x 0.8 mm x length 8 mm
- larger assembly tolerances possible for lengths > 15 mm



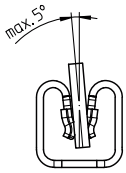
typical mating



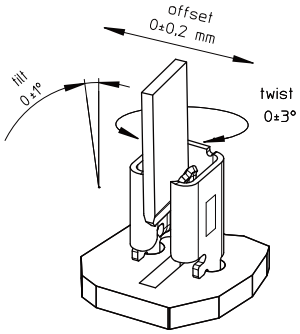
permissible lateral offset



permissible tilt



permissible twist



permissible combined tolerances

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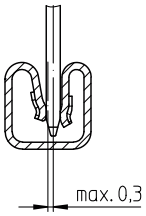
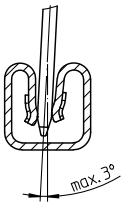
Assembly tolerances for lateral entry
- tab dimensions 4.8 mm x 0.8 mm x length 8 mm
- larger assembly tolerances possible for lengths > 15 mm

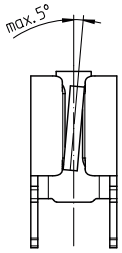
typical mating



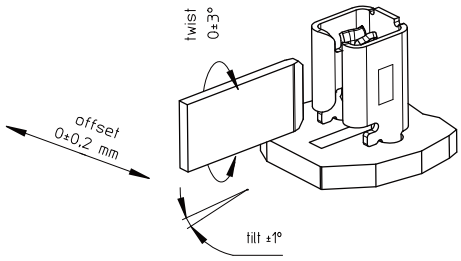
permissible lateral offset



permissible tilt

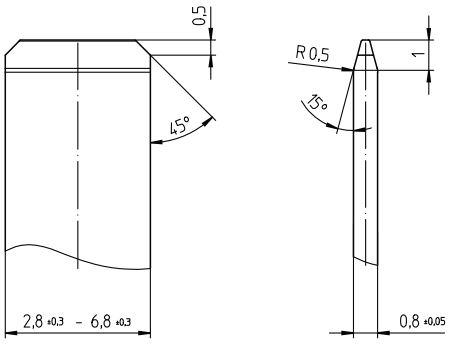


permissible twist



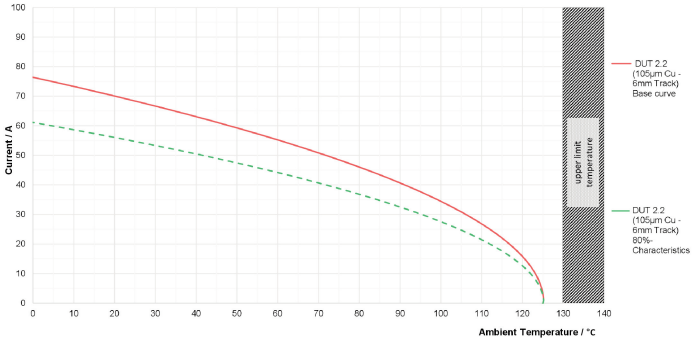
permissible combined tolerances

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.

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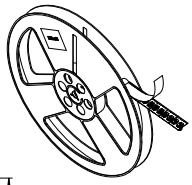
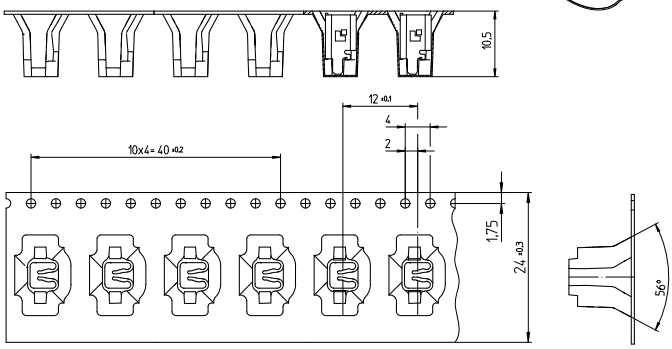
Packaging
reel: 330 mm/110 mm/24,5 mm
leader: 408 mm, 34 empty cavities
trailer: 168 mm, 14 empty cavities





*a THT solder pin
*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 bore hole for THT solder pin
*i slot in the printed circuit board min. 0.5 mm wider than tab
*k contact tab
*l printed circuit board
*m dimension 1.5 mm depending on the slot in the printed circuit board
*n insertion depth

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Designation	Pole Number	PU (Pieces)	MDQ (Pieces)
4580 01 SP 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 Insertion force change max. 25 % on each sample between 1st and 5th insertion	with limitations Change in insertion force up to 30 %
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