

Product Data Sheet

One27 Male mid-profile,
Part No. 403-53012-51

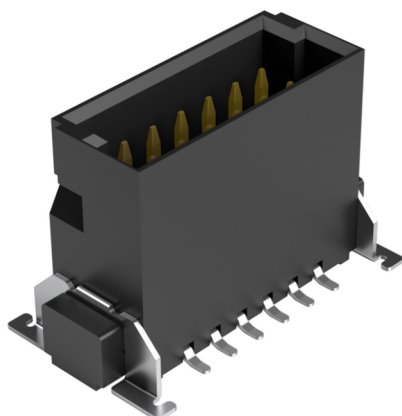
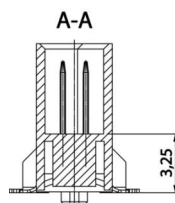
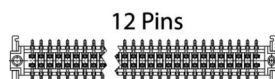


Illustration similar



Parallel



Perpendicular



SMT



Cable-to-Board



High Density



Rugged

- Can be combined for a PCB spacing (board-to-board distance) of 9.5–18.4 mm
- contact wipe 1.5 mm
- number of positions 12 in a pitch of 1.27 mm
- termination technology SMT
- height (unplugged): 3.25 mm
- Performance Level 1



» to product on www.ept.de



» to product group One27

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Technical Specifications

Basics

No. of Contacts	12
Termination Technology	SMT
Board-to-Board Distance	9.5 mm – 18.4 mm
Operating Temperature Range	-55°C to +125°C

Material

Insulator Material	LCP, UL 94 V-0
CTI value <i>IEC 60112</i>	175
Contact Material	copper alloy
Plating	gold over palladium-nickel over nickel
Termination area	tin over nickel

Mechanical

Pitch	1.27 mm
Mating Force per Pin	≤ 0.5 N
Separating Force per Pin	≥ 0.1 N
Durability <i>IEC 60512-9-1</i>	performance level 1: 500 mating cycles
Coplanarity	≤ 0.1 mm
Vibration, sinusoidal <i>IEC 60512-6-4</i>	10–2000 Hz, 20 g
Contact mating problems if vibrations occur, sinusoidal <i>IEC 60512-2-5</i>	≤ 1 µs
Shock, semi-sinusoidal <i>IEC 60512-6-3</i>	50 g, 11 ms
Contact mating problems if shock occur, semi-sinusoidal <i>IEC 60512-2-5</i>	≤ 1 µs
Overmating Distance	0.9 mm
Wipe lenght	1.5 mm
Center offset	± 0.7 mm
Axial offset when mated (x/y)	± 0.4 mm
Angular offset longitudinally	± 4°
Angular offset transversally	± 2°

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Electrical

Operational Current <i>IEC 60512-5-2</i>	3.1 A at 20°C (4-pin out of 50-pin) 1.4 A at 20°C (50-pin out of 50-pin)
Test Voltage <i>IEC 60512-4-1</i>	500 VAC
Contact Resistance <i>IEC 60512-2-1</i>	≤ 25 mΩ
Clearance and Creepage	at least 0.4 mm
Insulation Resistance <i>IEC 60512-3-1</i>	≥ 10 GΩ

Processing

Soldering Temperature <i>JEDEC J-STD-020E</i>	20–40 seconds at 260°C
MSL <i>JEDEC J-STD-020E</i>	1
Assembly	Pick and Place

Approval / Compliance

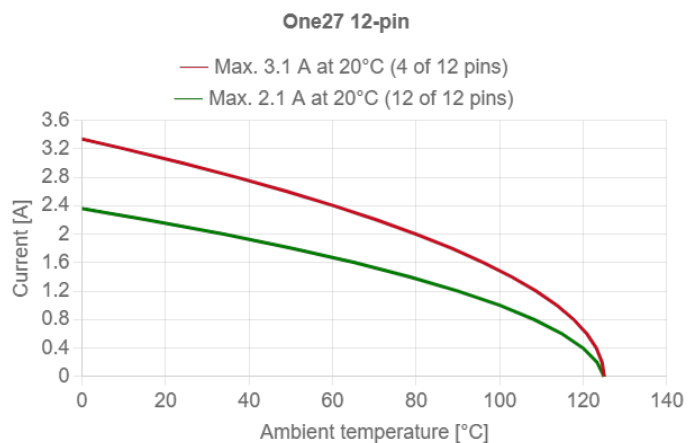
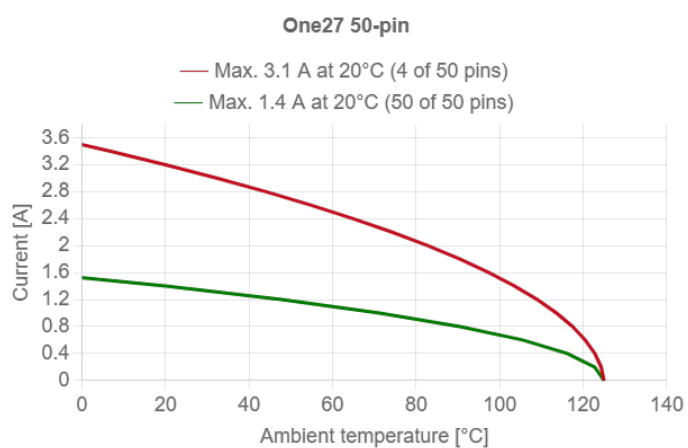
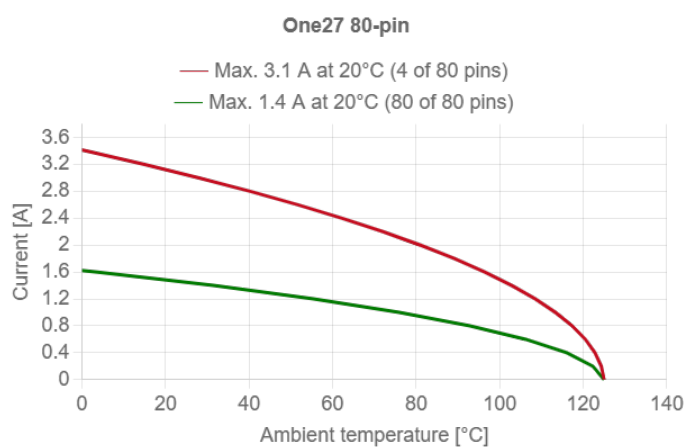
UL file	E130314
Environment	RoHS compliant

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Derating Diagram



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Modifications

Available on request

- other pole counts
- other quality grades

Drawings

Component data in 2D and 3D format you can download here:

[» PDF](#)

[» 3D IGES](#)

[» 3D STEP](#)

[» 3D PDF](#)