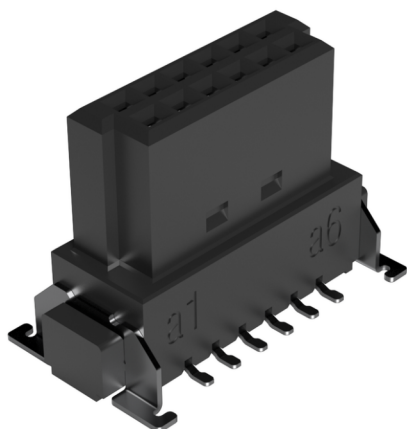
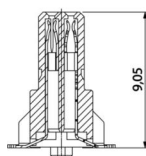


# Product Data Sheet

## One27 Mid-Profile Connector, Part No. 404-53012-51



A-A



12 Pins



Illustration similar



Parallel



Perpendicular



SMT



High Density



Rugged

- Can be combined for PCB spacing of 10.8–15.4 mm
- Contact overlap: 1.5 mm
- Pole count 12 in a 1.27 mm grid
- SMT Connectivity
- Height (unplugged): 9.05 mm
- Performance Level 1



» to product on [www.ept.de](http://www.ept.de)



» to product group One27

# Product Data Sheet

## One27 Mid-Profile Connector, Part No. 404-53012-51



### Technical Specifications

#### Basics

|                             |                   |
|-----------------------------|-------------------|
| No. of Contacts             | 12                |
| Termination Technology      | SMT               |
| Board-to-Board Distance     | 10.8 mm – 15.4 mm |
| Operating Temperature Range | -55°C to +125°C   |

#### Material

|                               |                      |
|-------------------------------|----------------------|
| Insulator Material            | LCP, UL 94 V-0       |
| CTI value<br><i>IEC 60112</i> | 175                  |
| Contact Material              | copper alloy         |
| Plating                       | Au over PdNi over Ni |
| Termination area              | Sn over Ni           |

#### Mechanical

|                                                                                 |                               |
|---------------------------------------------------------------------------------|-------------------------------|
| Pitch                                                                           | 1.27 mm                       |
| Mating Force per Pin                                                            | $\leq 0.5$ N                  |
| Separating Force per Pin                                                        | $\geq 0.1$ N                  |
| Durability<br><i>IEC 60512-9-1</i>                                              | Grade 1: 500 insertion cycles |
| Coplanarity                                                                     | $\leq 0.1$ mm                 |
| Vibration, sinusoidal<br><i>IEC 60512-6-4</i>                                   | 10–2000 Hz, 20 g              |
| Contact mating problems if vibrations occur, sinusoidal<br><i>IEC 60512-2-5</i> | $\leq 1$ $\mu$ s              |
| Shock, semi-sinusoidal<br><i>IEC 60512-6-3</i>                                  | 50 g, 11 ms                   |
| Contact mating problems if shock occur, semi-sinusoidal<br><i>IEC 60512-2-5</i> | $\leq 1$ $\mu$ s              |
| Overmating Distance                                                             | 0.9 mm                        |
| Wipe lenght                                                                     | 1.5 mm                        |
| Center offset                                                                   | $\pm 0.7$ mm                  |
| Axial offset when mated (x/y)                                                   | $\pm 0.4$ mm                  |
| Angular offset longitudinally                                                   | $\pm 4^\circ$                 |
| Angular offset transversally                                                    | $\pm 2^\circ$                 |

# Product Data Sheet

## One27 Mid-Profile Connector, Part No. 404-53012-51



### Technical Specifications

#### Electrical

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

#### Processing

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

#### Approval / Compliance

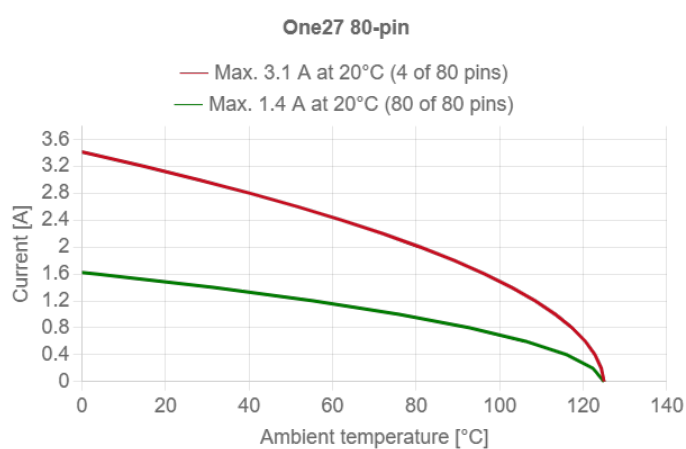
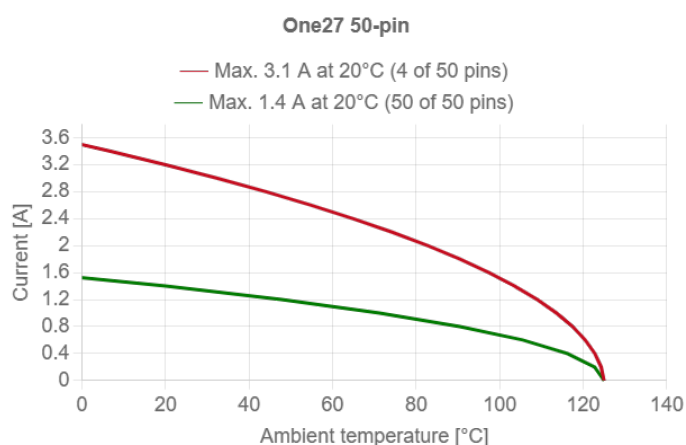
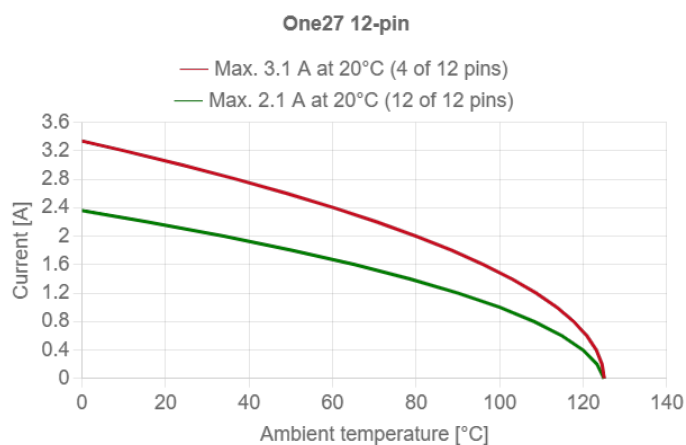
|             |                |
|-------------|----------------|
| UL file     | E130314        |
| Environment | RoHS compliant |

# Product Data Sheet

## One27 Mid-Profile Connector, Part No. 404-53012-51



### Derating Diagram



# Product Data Sheet

One27 Mid-Profile Connector,  
Part No. 404-53012-51

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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](#)