

# Product Data Sheet

Zero8 plug low-profile unshielded,  
Part No. 405-52020-51

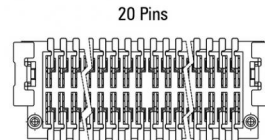
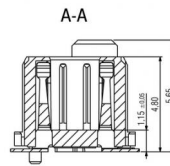
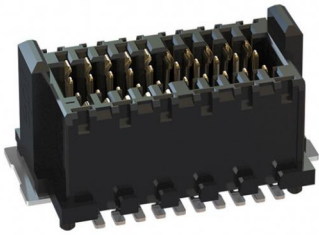


Illustration similar



Parallel



SMT



High Density



High Speed



Rugged

- 20 pins
- unmated stacking height: 1.15 mm
- SMT
- 0.8 mm pitch
- Performance level 1



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



» to product group Zero8

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## Technical Specifications

### Basics

|  |                   |
|--|-------------------|
| Performance Level<br><i>IEC 60512-9-1:2010</i> | 1                 |
| No. of Contacts                                | 20                |
| Termination Technology                         | SMT               |
| Board-to-Board Distance                        | 6.0 mm to 13.5 mm |
| Operating Temperature Range                    | -55°C to + 125°C  |

### Material

|                               |                |
|-------------------------------|----------------|
| Insulator Material            | LCP, UL 94 V-0 |
| CTI value<br><i>IEC 60112</i> | 150            |
| Contact Material              | Copper alloy   |
| Plating                       | Au over Ni     |
| Termination area              | Sn over Ni     |

### Mechanical

|   |                   |
|---|-------------------|
| Pitch   | 0.8 mm            |
| Mating Force per Pin  | $\leq 0.5$ N      |
| Separating Force per Pin  | $\leq 0.4$ N      |
| Durability<br><i>IEC 60512-9-1</i>  | 500 mating cycles |
| Coplanarity   | $\leq 0.1$ mm     |
| Vibration, sinusoidal<br><i>IEC 60512-6-4</i>                                   | 10 - 2000 Hz, 20g |
| 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>                                  | 50g, 11 ms        |
| Contact mating problems if shock occur, semi-sinusoidal<br><i>IEC 60512-2-5</i> | $\leq 1$ $\mu$ s  |

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### Electrical

|   |   |
|---|---|
| Operational Current<br><i>IEC 60512-5-2</i>   | 1.7 A at 20°C (80 of 80 pins)<br>5.5 A at 20°C (2 of 80 pins)<br>5.1 A at 20°C (4 of 80 pins)<br>16 A at 20°C (shield of 80 pins) |
| Contact Resistance<br><i>IEC 60512-2-1</i>    | ≤ 20 mΩ   |
| Clearance and Creepage                        | 0.25 mm   |
| Insulation Resistance<br><i>IEC 60512-3-1</i> | > 5 GΩ  |
| Test Voltage<br><i>IEC 60512-4-1</i>          | 500 VAC   |
| Data Transfer Rate                            | 16 Gbps   |

### Processing

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

### Approval / Compliance

|             |              |
|-------------|--------------|
| UL file     | E130314      |
| Environment | RoHS konform |

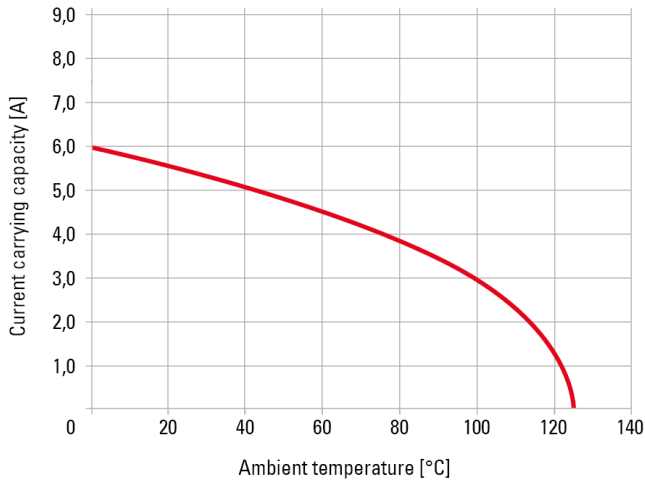
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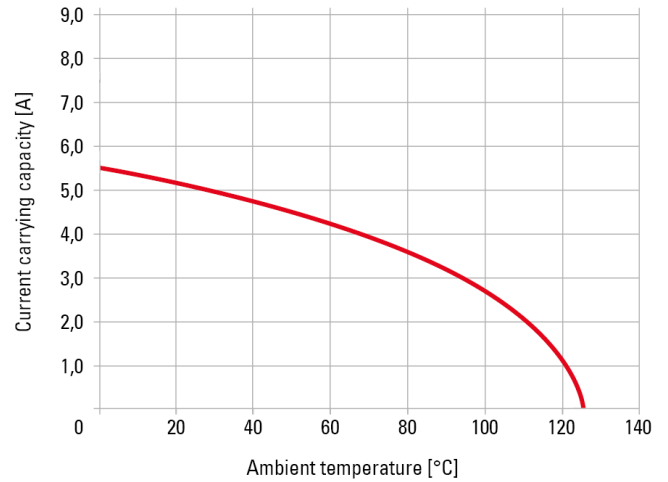


## Derating Diagram

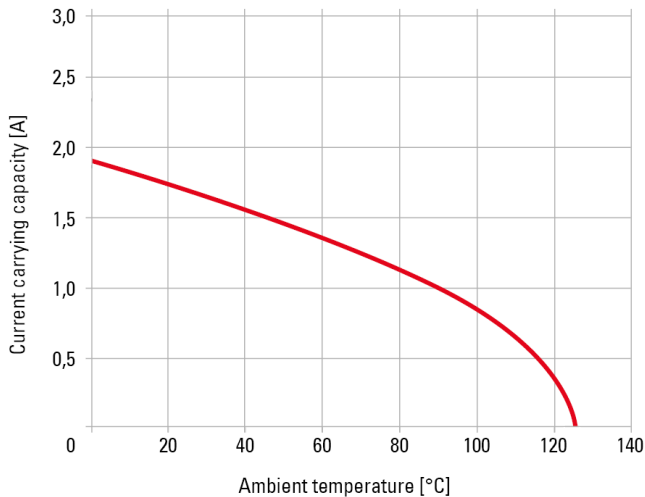
Current carrying capacity signal contact  
max. 5.5A at 20°C (2 of 80 pins)



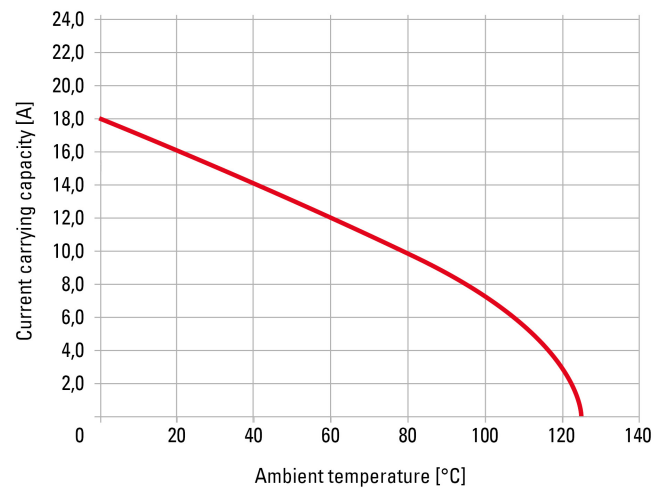
Current carrying capacity signal contact  
max. 5.1A at 20°C (4 of 80 pins)



Current carrying capacity signal contact  
max. 1.7A at 20°C (80 pins)



Current carrying capacity shield  
max. 16A at 20°C  
80 pin, low-profile



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## Modifications

Available on request

- different number of pins
- other performance level

## Drawings

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

[» PDF](#)

[» 3D IGES](#)

[» 3D STEP](#)

[» 3D PDF](#)