

# SPE-T1-M8MSM-180-SMD - SPE PCB connector



1215777

<https://www.phoenixcontact.com/us/products/1215777>

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SPE PCB connector, design: IEC 63171-5, degree of protection: IP20, number of positions: 2, CAT B (ISO/IEC 63171), material: Plastic, connection method: SMD, Single Pair Ethernet

## Your advantages

- Connectors in accordance with IEC 63171-2
- THR solderable
- Data transmission up to 600 MHz
- Packaging available for automated pick and place assembly

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1215777       |
| Packing unit                         | 100 pc        |
| Minimum order quantity               | 100 pc        |
| Sales key                            | AB13          |
| Product key                          | ABNBDB        |
| GTIN                                 | 4063151297015 |
| Weight per piece (including packing) | 31.734 g      |
| Weight per piece (excluding packing) | 31.734 g      |
| Customs tariff number                | 85366930      |
| Country of origin                    | DE            |

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## Technical data

### Product properties

|                     |                              |
|---------------------|------------------------------|
| Product type        | Data connector (device side) |
| Type                | SPE                          |
| Sensor type         | Single Pair Ethernet         |
| Number of positions | 2                            |
| Connection profile  | SPE M8                       |
| Type of packaging   | Tape and Reel                |
| Number of slots     | 1                            |
| Shielded            | yes                          |
| Thread type         | M8                           |

### Insulation characteristics

|                      |   |
|----------------------|---|
| Overvoltage category | I |
| Degree of pollution  | 2 |

### Electrical properties

|   |                                      |
|---|--------------------------------------|
| Rated voltage (III/2)                   | 72 V DC                              |
| Rated surge voltage                     | 2250 V DC                            |
| Rated surge voltage (III/2)             | 1500 V                               |
| Rated surge voltage                     | 1000 V DC                            |
| Rated current                           | 4 A                                  |
| Frequency range                         | 5 Hz ... 500 Hz                      |
| Insulation resistance                   | > 1 TΩ                               |
| Contact resistance                      | 20 mΩ (in accordance with IEC 63171) |
| Transmission medium                     | Copper                               |
| Transmission characteristics (category) | CAT B (ISO/IEC 63171)                |
| Transmission speed                      | 1 Gbps                               |
| Power transmission                      | PoDL                                 |

### Output data

|                        |            |
|------------------------|------------|
| Transmission frequency | 600.00 MHz |
|------------------------|------------|

### Connection data

#### Connection technology

|                   |     |
|-------------------|-----|
| Connection method | SMD |
|-------------------|-----|

### Dimensions

|                    |          |
|--------------------|----------|
| Width              | 10.1 mm  |
| Height             | 22.1 mm  |
| Length             | 14.5 mm  |
| Installed height   | 21.50 mm |
| Orientation to PCB | 180.00 ° |

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### Material specifications

|  |              |
|--|--------------|
| Flammability rating according to UL 94 | V0           |
| Housing material                       | Plastic      |
| Contact material                       | Copper alloy |
| Contact surface material               | Gold         |
| Contact carrier material               | LCP          |

### Cable/line

|                          |              |
|--------------------------|--------------|
| Test voltage Core/Core   | 1000 V DC    |
| Test voltage Core/Shield | 2250.00 V DC |
| Halogen-free             | yes          |
| Resistance to oil        | yes          |
| Flame resistance         | yes          |

### Mechanical properties

#### Mechanical data

|                                     |  |
|-------------------------------------|--|
| Insertion/withdrawal cycles         | ≥ 100                                    |
| Insertion force per signal contact  | < 30.00 N (in accordance with IEC 63171) |
| Extraction force per signal contact | < 30 N (in accordance with IEC 63171)    |

### Environmental and real-life conditions

#### Test specification

|                  |                |
|------------------|----------------|
| Specification    | IEC 63171      |
| Cold stress      | -40°C          |
| Thermal stress   | 85°C           |
| Corrosive stress | IEC 60512-11-7 |

#### Test specification

|               |                         |
|---------------|-------------------------|
| Specification | IEC 60068-2-6           |
| Frequency     | 5-500 Hz                |
| Sweep speed   | 1 octave/min            |
| Amplitude     | 0.75 mm                 |
| Acceleration  | 100.00 m/s <sup>2</sup> |
| Test duration | 20.00 s                 |

#### Test specification

|                                |                         |
|--------------------------------|-------------------------|
| Specification                  | IEC 60068-2-27          |
| Acceleration                   | 500.00 m/s <sup>2</sup> |
| Number of shocks per direction | 18.00                   |

### Standards and regulations

|                   |     |
|-------------------|-----|
| Flame resistance  | yes |
| Resistance to oil | yes |

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## Mounting

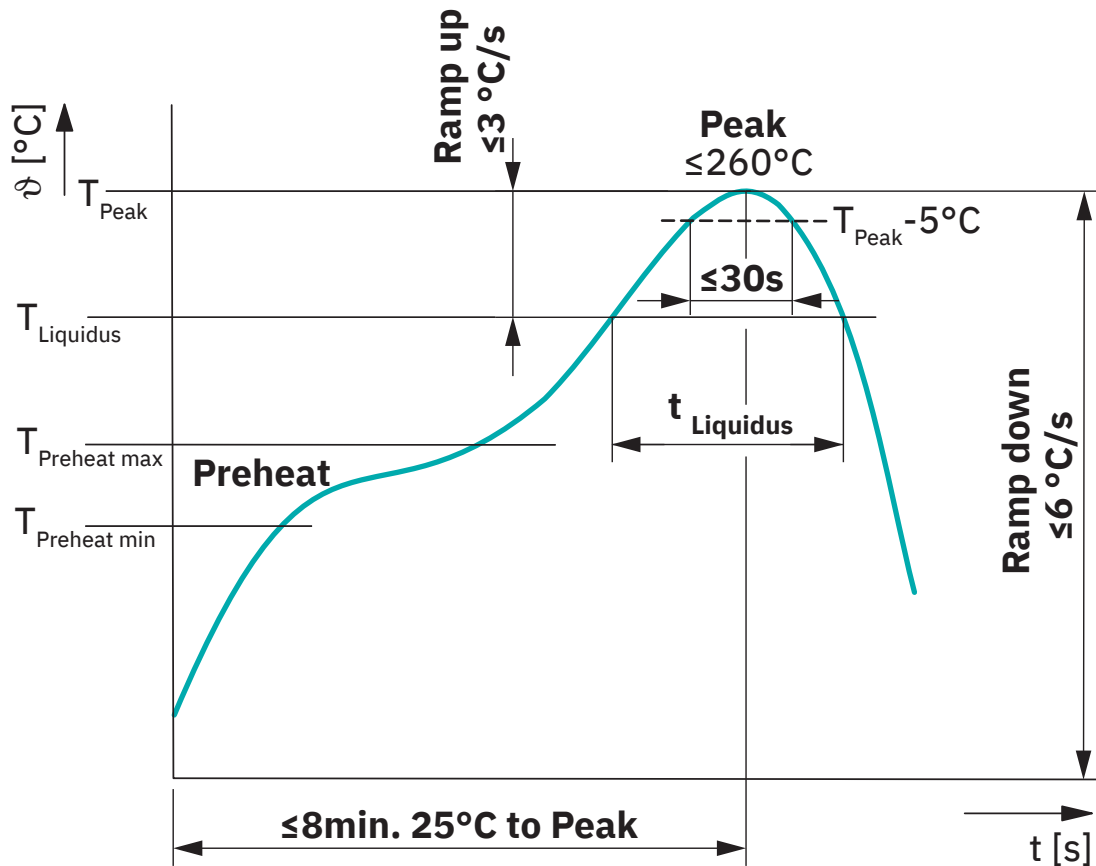
|               |               |
|---------------|---------------|
| Mounting type | SMD soldering |
|---------------|---------------|

## Processing notes

|                             |                       |
|-----------------------------|-----------------------|
| Process                     | Reflow/wave soldering |
| Moisture Sensitive Level    | MSL 1                 |
| Solder cycles in the reflow | 3                     |

Drawings

Diagram



Classification reflow soldering profile

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27440110 |
| ECLASS-15.0 | 27440110 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC003568 |
|-----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121400 |
|-------------|----------|

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## Environmental product compliance

### EU RoHS

|   |                    |
|---|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|---|--------------------|

### China RoHS

|  |  |
|--|--|
| Environment friendly use period (EFUP) | EFUP-E                                   |
|  | No hazardous substances above the limits |

### EU REACH SVHC

|                                     |                            |
|-------------------------------------|----------------------------|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

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