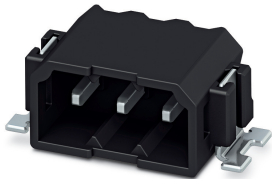


Feed-through header - PTSM 0,5/ 4-HH-2,5-SMD R32 - 1778780

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PCB header, nominal cross section: 0.5 mm², color: black, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 4, Number of rows: 1, Number of positions per row: 4, number of connections: 4, product range: PTSM 0,5/..-HH-SMD, pitch: 2.5 mm, mounting: SMD soldering, pin layout: Linear pad geometry, plug-in system: COMBICON COMPACT PTSM, Pin connector pattern alignment: Standard, Locking: without, mounting: without, type of packaging: 32 mm wide tape, Article with anti-rotation pin


The figure shows the 3-pos. version

Your advantages

- ✓ Designed for integration into the SMT soldering process
- ✓ Supplied in tape-on-reel packing according to IEC 60286-3 for automated mounting
- ✓ Additional solder anchors reduce the mechanical strain on the soldering spots



Key Commercial Data

| | |
|--------------------------------------|---|
| Packing unit | 1 pc |
| Minimum order quantity | 600 pc |
| GTIN |  4 046356 529990 |
| GTIN | 4046356529990 |
| Weight per Piece (excluding packing) | 1.400 g |
| Custom tariff number | 85366930 |
| Country of origin | India |

Technical data

Item properties

| | |
|---------------------------|-----------------------|
| Brief article description | Feed-through header |
| Connector system | COMBICON COMPACT PTSM |
| Type of contact | Male connector |
| Range of articles | PTSM 0,5/..-HH-SMD |
| Pitch | 2.5 mm |

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Technical data

Item properties

| | |
|---------------------------------|---------------------|
| Number of positions | 4 |
| Mounting type | SMD soldering |
| Pin layout | Linear pad geometry |
| Locking | without |
| Number of levels | 1 |
| Number of connections | 4 |
| Number of potentials | 4 |
| Pin connector pattern alignment | Standard |

Electrical parameters

| | |
|-----------------------------|--------|
| Nominal current | 6 A |
| Nom. voltage | 160 V |
| Rated voltage (III/3) | 50 V |
| Rated voltage (III/2) | 160 V |
| Rated voltage (II/2) | 160 V |
| Rated surge voltage (III/3) | 2.5 kV |
| Rated surge voltage (III/2) | 2.5 kV |
| Rated surge voltage (II/2) | 2.5 kV |

Material data - contact

| | |
|---|---|
| Note | WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/ JEDEC JESD 201 |
| Contact material | Cu alloy |
| Surface characteristics | Tin-plated |
| Metal surface contact area (top layer) | Tin (3 - 5 µm Sn) |
| Metal surface contact area (middle layer) | Nickel (1.3 - 3 µm Ni) |
| Metal surface soldering area (top layer) | Tin (3 - 5 µm Sn) |
| Metal surface soldering area (middle layer) | Nickel (1.3 - 3 µm Ni) |

Material data - housing

| | |
|--|--------------|
| Housing color | black (9005) |
| Insulating material | LCP |
| Insulating material group | IIIa |
| CTI according to IEC 60112 | 175 |
| Flammability rating according to UL 94 | V0 |

Flange specifications

| | |
|-----------------|---------|
| Type of locking | without |
| Mounting flange | without |

Feed-through header - PTSM 0,5/ 4-HH-2,5-SMD R32 - 1778780

Technical data

Dimensions for the product

| | |
|-----------------------------|--|
| Caption | Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center |
| Length [l] | 7.5 mm |
| Width [w] | 13.8 mm |
| Height [h] | 5 mm |
| Pitch | 2.5 mm |
| Height (without solder pin) | 5 mm |
| Pin spacing | 2.50 mm |

Dimensions for PCB design

| | |
|-------------|---------|
| Pin spacing | 2.50 mm |
|-------------|---------|

Packaging information

| | |
|-----------------------------|--|
| Type of packaging | 32 mm wide tape |
| Pieces per package | 600 |
| Denomination packing units | Pcs. |
| [W] tape width | 32 mm |
| [A] coil diameter | 330 mm |
| [W2] coil overall dimension | 38.4 mm |
| Outer packaging type | Transparent-Bag |
| ESD level | (D) electrostatically conductive |
| Specification | DIN EN 61340-5-1 (VDE 0300-5-1): 2008-07 |

Processing notes

| | |
|----------------------------------|--|
| Process | Reflow soldering |
| Specification | Following IPC/JEDEC J-STD-020D.1:2008-03 |
| | Following IEC 60068-2-58:2005-02 |
| Moisture Sensitive Level | MSL 1 |
| Classification temperature T_c | 260 °C |
| Solder cycles in the reflow | 3 |

Ambient conditions

| | |
|---|---|
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |
| Ambient temperature (assembly) | -5 °C ... 100 °C |
| Ambient temperature (operation) | -40 °C ... 100 °C (dependent on the derating curve) |

Air clearances and creepage distances

| | |
|---|---------------------|
| Clearances and creepage distances | IEC 60664-1:2007-04 |
| Specification | IEC 60664-1:2007-04 |
| Minimum clearance - inhomogeneous field (III/3) | 1.5 mm |

Feed-through header - PTSM 0,5/ 4-HH-2,5-SMD R32 - 1778780

Technical data

Air clearances and creepage distances

| | |
|---|--------|
| Minimum clearance - inhomogeneous field (III/2) | 1.5 mm |
| Minimum clearance - inhomogeneous field (II/2) | 1.5 mm |
| Minimum creepage distance value (III/3) | 1.9 mm |
| Minimum creepage distance value (III/2) | 1.6 mm |
| Minimum creepage distance value (II/2) | 1.6 mm |

Mechanical tests (A)

| | |
|--|-------------|
| Test specification | IEC 61984 |
| Insertion strength per pos. approx. | 4 N |
| Withdraw strength per pos. approx. | 4 N |
| Polarization when inserted requirement >20 N | Test passed |
| Contact holder in insert requirements >20 N | Test passed |

Durability tests (B)

| | |
|--|-----------------------|
| Specification | IEC 60512-9-1:2010-03 |
| Contact resistance R ₁ | 3.6 mΩ |
| Insertion/withdrawal cycles | 25 |
| Contact resistance R ₂ | 3.8 mΩ |
| Impulse withstand voltage at sea level | 1.75 kV |

Thermal tests (C)

| | |
|---|-----------------------|
| Specification | IEC 60512-5-1:2002-02 |
| Number of positions | 8 |
| Upper limiting temperature requirements <100 °C | Test passed |

Climatic tests (D)

| | |
|--|---|
| Specification | ISO 6988:1985-02 |
| Cold stress | -40 °C/2 h |
| Thermal stress | 100 °C/168 h |
| Corrosive stress | 0.2 dm ³ SO ₂ on 300 dm ³ /40 °C/1 cycle |
| Impulse withstand voltage at sea level | 1.75 kV |
| Power-frequency withstand voltage | 0.84 kV |

Environmental and durability tests (E)

| | |
|---------------------------------------|-------------------------------------|
| Specification | IEC 61984:2008-10 |
| Result, degree of protection, IP code | Finger safety with IP20 test finger |

Vibration test

| | |
|---------------|-----------------------|
| Specification | IEC 60068-2-6:2007-12 |
| Frequency | 10 - 150 - 10 Hz |

Feed-through header - PTSM 0,5/ 4-HH-2,5-SMD R32 - 1778780

Technical data

Vibration test

| | |
|------------------------|------------------------|
| Sweep speed | 1 octave/min |
| Amplitude | 0.35 mm (10 - 60.1 Hz) |
| Acceleration | 5 g (60.1 - 150 Hz) |
| Test duration per axis | 2.5 h |

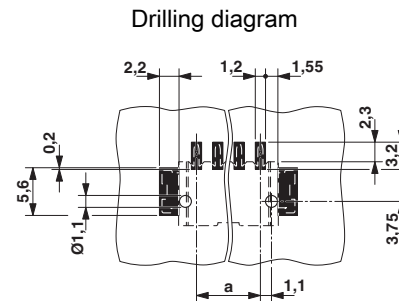
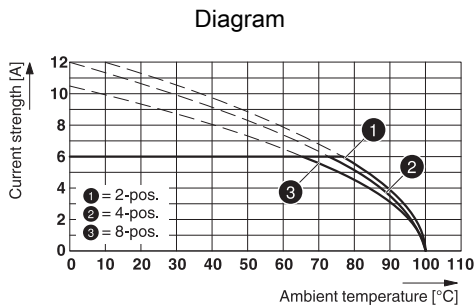
Standards and Regulations

| | |
|--|--------|
| Connection in acc. with standard | EN-VDE |
| | UL |
| Flammability rating according to UL 94 | V0 |

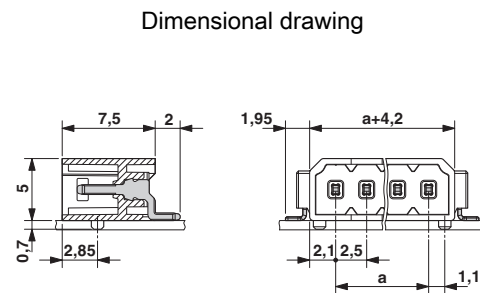
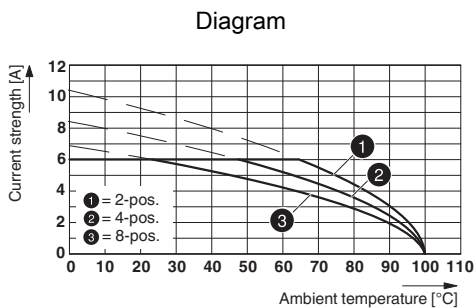
Environmental Product Compliance

| | |
|------------|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
| | No hazardous substances above threshold values |

Drawings



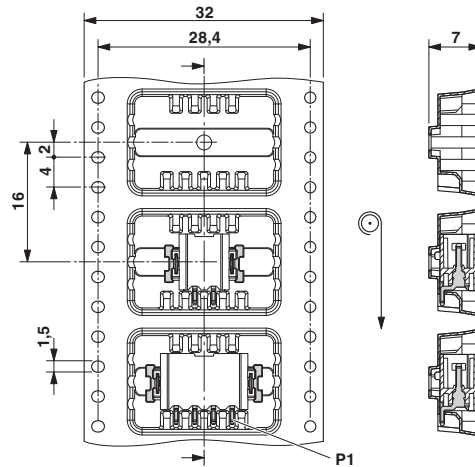
Type: PTSM 0,5/...-PL-2,5 ... with PTSM 0,5/...-HH-2,5-SMD... R...



Type: PTSM 0,5/...-HHI-2,5-SMD R... with PTSM 0,5/...-HH-2,5-SMD R...

Feed-through header - PTSM 0,5/ 4-HH-2,5-SMD R32 - 1778780

Dimensional drawing



Classifications

eCl@ss

| | |
|---------------|----------|
| eCl@ss 10.0.1 | 27440402 |
| eCl@ss 11.0 | 27460201 |
| eCl@ss 4.0 | 27260700 |
| eCl@ss 4.1 | 27260700 |
| eCl@ss 5.0 | 27260700 |
| eCl@ss 5.1 | 27260700 |
| eCl@ss 6.0 | 27260700 |
| eCl@ss 7.0 | 27440402 |
| eCl@ss 9.0 | 27440402 |

ETIM

| | |
|----------|----------|
| ETIM 3.0 | EC001121 |
| ETIM 4.0 | EC002637 |
| ETIM 6.0 | EC002637 |
| ETIM 7.0 | EC002637 |

UNSPSC

| | |
|---------------|----------|
| UNSPSC 6.01 | 30211810 |
| UNSPSC 7.0901 | 39121409 |
| UNSPSC 11 | 39121409 |
| UNSPSC 12.01 | 39121409 |
| UNSPSC 13.2 | 39121409 |

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Classifications

UNSPSC

| | |
|-------------|----------|
| UNSPSC 18.0 | 39121409 |
| UNSPSC 19.0 | 39121409 |
| UNSPSC 20.0 | 39121409 |
| UNSPSC 21.0 | 39121409 |

Approvals


Approvals

Approvals

VDE Zeichengenehmigung / UL Recognized / EAC / cULus Recognized

Ex Approvals

Approval details

| | | | |
|----------------------------|---|---|----------|
| VDE Zeichengenehmigung |  | http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx | 40048497 |
| Nominal voltage UN | 160 V | | |
| Nominal current IN | 6 A | | |
| mm ² /AWG/kcmil | 0.14-.5 | | |

| | | | |
|--------------------|---|---|------------------|
| UL Recognized |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | E118976-20130619 |
| | B | | |
| Nominal voltage UN | 150 V | | |
| Nominal current IN | 5 A | | |

| | | |
|-----|---|---------|
| EAC |  | B.01687 |
|-----|---|---------|

Feed-through header - PTSM 0,5/ 4-HH-2,5-SMD R32 - 1778780

Approvals

| | | | |
|--------------------|--|---|-----------------|
| cULus Recognized | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | E60425-20110108 |
| | | B | |
| Nominal voltage UN | | | 150 V |
| Nominal current IN | | | 6 A |

Accessories

Additional products

Printed-circuit board connector - PTSM 0,5/ 4-P-2,5 - 1778858



PCB connector, nominal cross section: 0.5 mm², color: black, nominal current: 6 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, number of potentials: 4, Number of rows: 1, Number of positions per row: 4, number of connections: 4, product range: PTSM 0,5/...-P, pitch: 2.5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON COMPACT PTSM, Locking: without, mounting: without, type of packaging: packed in cardboard

Plug - PTPM 0,2/ 4-P-2,5 - 1780480



Plug - PTPM 0,4/ 4-P-2,5 - 1780532



PCB connector, color: black, contact surface: Tin, Number of positions per row: 4, product range: PTPM 0,4/...-P, pitch: 2.5 mm