

Printed-circuit board connector - TVMSTB 2,5/ 3-STF-5,08 - 1719105

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PCB connector, nominal current: 12 A, rated voltage (III/2): 400 V, nominal cross section: 2.5 mm², number of positions: 3, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin


The figure shows the 10-position version

Your advantages

- Well-known connection principle allows worldwide use
- Screwable flange for superior mechanical stability
- Low temperature rise, thanks to maximum contact force
- Potentials can be easily looped through – ideal for BUS applications



Key Commercial Data

| | |
|--------------|---|
| Packing unit | 50 pc |
| GTIN |  4 046356 156318 |
| GTIN | 4046356156318 |

Technical data

Item properties

| | |
|---------------------------|--------------------------------------|
| Brief article description | Printed-circuit board connector |
| Plug-in system | CLASSIC COMBICON |
| Type of contact | Female connector |
| Range of articles | TVMSTB 2,5/...-STF |
| Pitch | 5.08 mm |
| Number of positions | 3 |
| Connection method | Screw connection with tension sleeve |
| Drive form screw head | Slotted (L) |
| Screw thread | M3 |
| Locking | Screw flange |
| Number of levels | 1 |

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Technical data

Item properties

| | |
|-----------------------|---|
| Number of connections | 6 |
| Number of potentials | 3 |

Electrical parameters

| | |
|-----------------------------|-------|
| Nominal current | 12 A |
| Nom. voltage | 400 V |
| Rated voltage | 250 V |
| Rated voltage (III/2) | 400 V |
| Rated voltage (II/2) | 630 V |
| Rated surge voltage (III/3) | 4 kV |
| Rated surge voltage (III/2) | 4 kV |
| Rated surge voltage (II/2) | 4 kV |

Connection capacity

| | |
|---|--|
| Connection method | Screw connection with tension sleeve |
| pluggable | Yes |
| Conductor cross section solid | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross section flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross section AWG / kcmil | 24 ... 12 |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm ² ... 2.5 mm ² |
| Conductor cross section, flexible, with ferrule, with plastic sleeve | 0.25 mm ² ... 2.5 mm ² |
| 2 conductors with same cross section, solid | 0.2 mm ² ... 1 mm ² |
| 2 conductors with same cross section, flexible | 0.2 mm ² ... 1.5 mm ² |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve | 0.25 mm ² ... 1 mm ² |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm ² ... 1.5 mm ² |
| Cylindrical gauge a x b / diameter | 2.8 mm x 2.0 mm / 2.4 mm |
| Stripping length | 7 mm |
| Torque | 0.5 Nm ... 0.6 Nm |

Flange specifications

| | |
|-----------------|---------------|
| Type of locking | Screw locking |
| Mounting flange | Screw flange |
| Torque | 0.3 Nm |

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 | hot-dip tin-plated |
| Metal surface terminal point (top layer) | Tin (1 - 3 µm Sn) |
| Metal surface contact area (top layer) | Tin (1 - 3 µm Sn) |

Material data - housing

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Material data - housing

| | |
|---|--------------|
| Housing color | green (6021) |
| Insulating material | PA |
| Insulating material group | I |
| CTI according to IEC 60112 | 600 |
| Flammability rating according to UL 94 | V0 |
| Glow wire flammability index GWFI according to EN 60695-2-12 | 850 |
| Glow wire ignition temperature GWIT according to EN 60695-2-13 | 775 |
| Temperature for the ball pressure test according to EN 60695-10-2 | 125 °C |

Dimensions for the product

| | |
|-----------------------------|----------|
| Length [l] | 19.6 mm |
| Width [w] | 25.24 mm |
| Height [h] | 25.8 mm |
| Pitch | 5.08 mm |
| Height (without solder pin) | 25.8 mm |

Packaging information

| | |
|----------------------------|---------------------|
| Type of packaging | packed in cardboard |
| Pieces per package | 50 |
| Denomination packing units | Pcs. |

General product information

| | |
|------|--|
| Note | In accordance with IEC 61984, COMBICON connectors have no switching power (COC). During designated use, they must not be plugged in or disconnected when carrying voltage or under load. |
|------|--|

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) |

Termination and connection method

| | |
|--|---------------------|
| Test for conductor damage and slackening | IEC 60999-1:1999-11 |
| | Test passed |

Pull-out test

| | |
|--|---|
| Pull-out test | IEC 60999-1:1999-11 |
| | Test passed |
| Conductor cross section / conductor type / tensile force | 0.2 mm ² / solid / > 10 N |
| | 0.2 mm ² / flexible / > 10 N |
| | 2.5 mm ² / solid / > 50 N |
| | 2.5 mm ² / flexible / > 50 N |

Mechanical tests according to standard

| | |
|--------------------|-----------|
| Test specification | IEC 61984 |
|--------------------|-----------|

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Mechanical tests according to standard

| | |
|-------------------------------------|------------------------|
| Visual inspection | IEC 60512-1-1:2002-02 |
| Dimension check | IEC 60512-1-2:2002-02 |
| Resistance of inscriptions | IEC 60068-2-70:1995-12 |
| Insertion and withdrawal force | IEC 60512-13-2:2006-02 |
| No. of cycles | 25 |
| Insertion strength per pos. approx. | 8 N |
| Withdraw strength per pos. approx. | 6 N |
| Polarization and coding | IEC 60512-13-5:2006-02 |
| Contact holder in insert | IEC 60512-15-1:2008-05 |
| Test force per pos. | 27 N |

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) | 3 mm |
| Minimum clearance - inhomogeneous field (III/2) | 3 mm |
| Minimum clearance - inhomogeneous field (II/2) | 3 mm |
| Minimum creepage distance value (III/3) | 3.2 mm |
| Minimum creepage distance value (III/2) | 3 mm |
| Minimum creepage distance value (II/2) | 3.2 mm |
| Note on connection cross section | With connected conductor 2.5 mm ² (stranded). |

Current carrying capacity / derating curves

| | |
|------------------|--|
| Caption | Type: TVMSTB 2,5/...-STF-5,08 with MSTBV 2,5/...-GF-5,08 |
| Specification | IEC 61984:2008-10 |
| Reduction factor | 0.8 |
| Note | Representation based on IEC 60512-5-2:2002-02 |
| | For number of positions, see diagram |

Mechanical tests (A)

| | |
|--|-------------|
| Test specification | IEC 61984 |
| Insertion strength per pos. approx. | 8 N |
| Withdraw strength per pos. approx. | 6 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 | 2.3 mΩ |
| Insertion/withdrawal cycles | 25 |
| Contact resistance R ₂ | 2.5 mΩ |
| Impulse withstand voltage at sea level | 4.8 kV |
| Power-frequency withstand voltage | 2.21 kV |

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Technical data

Durability tests (B)

| | |
|--|--------|
| Insulation resistance, neighboring positions | > 6 TΩ |
|--|--------|

Thermal tests (C)

| | |
|---|-----------------------|
| Specification | IEC 60512-5-1:2002-02 |
| Number of positions | 10 |
| Conductor cross section | 2.5 mm ² |
| Test current | 12 A DC |
| 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 | 4.8 kV |
| Power-frequency withstand voltage | 2.21 kV |

Environmental and durability tests (E)

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

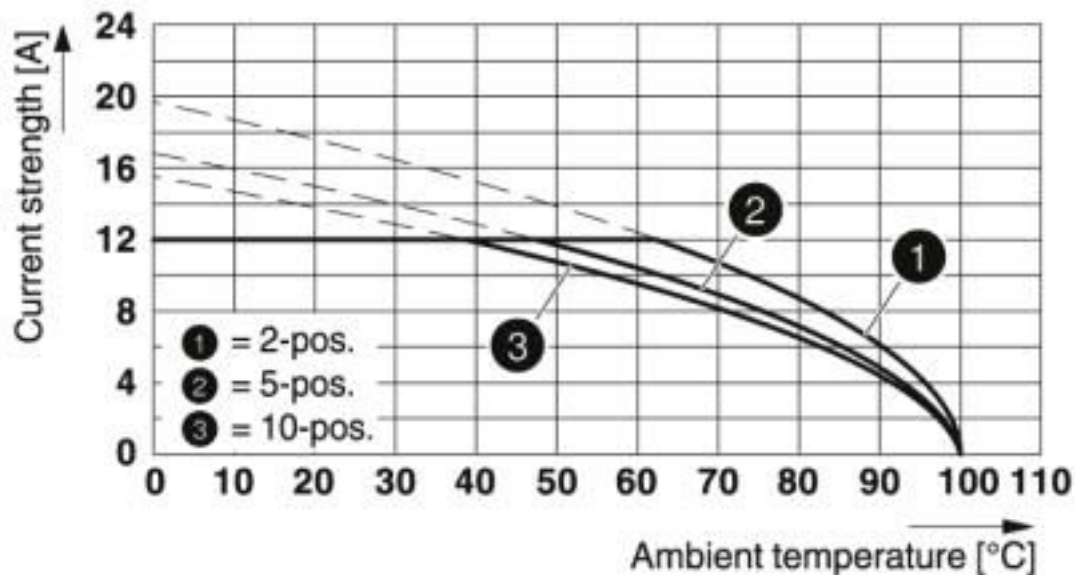
Environmental Product Compliance

| | |
|------------|---|
| REACH SVHC | Lead 7439-92-1 |
| China RoHS | Environmentally Friendly Use Period = 50 years |
| | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

Drawings

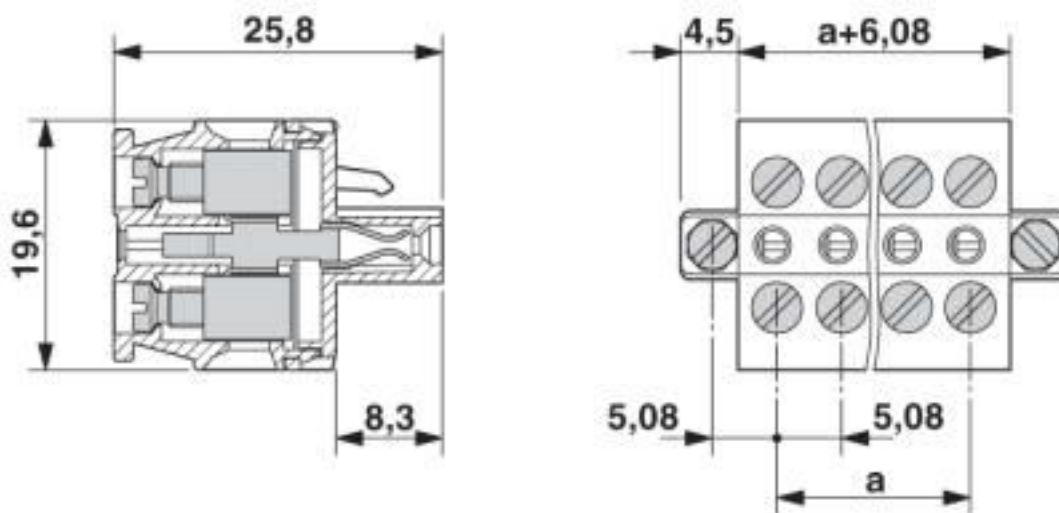
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Diagram



Type: TVMSTB 2,5/...-STF-5,08 with MSTBV 2,5/...-GF-5,08

Dimensional drawing



Classifications

eCl@ss

| | |
|---------------|----------|
| eCl@ss 10.0.1 | 27440309 |
| eCl@ss 4.0 | 27260700 |
| eCl@ss 4.1 | 27260700 |
| eCl@ss 5.0 | 27260700 |
| eCl@ss 5.1 | 27260700 |

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Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 6.0 | 27260700 |
| eCl@ss 7.0 | 27440309 |
| eCl@ss 8.0 | 27440309 |
| eCl@ss 9.0 | 27440309 |

ETIM

| | |
|----------|----------|
| ETIM 3.0 | EC001121 |
| ETIM 4.0 | EC002638 |
| ETIM 5.0 | EC002638 |
| ETIM 6.0 | EC002638 |
| ETIM 7.0 | EC002638 |

UNSPSC

| | |
|---------------|----------|
| UNSPSC 6.01 | 30211810 |
| UNSPSC 7.0901 | 39121409 |
| UNSPSC 11 | 39121409 |
| UNSPSC 12.01 | 39121409 |
| UNSPSC 13.2 | 39121409 |
| UNSPSC 18.0 | 39121409 |
| UNSPSC 19.0 | 39121409 |
| UNSPSC 20.0 | 39121409 |
| UNSPSC 21.0 | 39121409 |

Approvals


Approvals

Approvals

IECEE CB Scheme / VDE Gutachten mit Fertigungsüberwachung / EAC / cULus Recognized

Ex Approvals

Approval details

| | | | |
|--------------------|---|---|----------------|
| IECEE CB Scheme |  | http://www.iecee.org/ | DE1-58421-B1B2 |
| Nominal voltage UN | 400 V | | |
| Nominal current IN | 12 A | | |

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Approvals

| | |
|---------------|---------|
| mm²/AWG/kcmil | 0.2-2.5 |
|---------------|---------|

| | | | |
|---|---------|---|----------|
| VDE Gutachten mit Fertigungsüberwachung | | http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx | 40041286 |
| Nominal voltage UN | 400 V | | |
| Nominal current IN | 12 A | | |
| mm²/AWG/kcmil | 0.2-2.5 | | |

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

| | | | |
|--------------------|-------|---|-----------------|
| cULus Recognized | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | E60425-19931011 |
| | B | D | |
| Nominal voltage UN | 300 V | 300 V | |
| Nominal current IN | 10 A | 10 A | |
| mm²/AWG/kcmil | 30-12 | 30-12 | |

Accessories

Additional products

Feed-through header - MSTB 2,5/ 3-GF-5,08 - 1776511

PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 3, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm



Printed-circuit board connector - MSTBV 2,5/ 3-GF-5,08 - 1777086

PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 3, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm



Printed-circuit board connector - TVMSTB 2,5/ 3-STF-5,08 - 1719105

Accessories

Feed-through header - MDSTB 2,5/ 3-GF-5,08 - 1842377



PCB headers, nominal current: 10 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 3, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.2 mm, The article can be aligned to create different nos. of positions! In combination with MVSTB or FKCV plug components, both an MVSTBW (or FKCVW) and an MVSTBR plug (or FKCVR) must be used. Combination with TMSTBP plug components is not possible!

Feed-through header - MDSTBV 2,5/ 3-GF-5,08 - 1845646



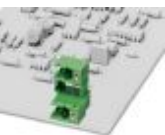
PCB headers, nominal current: 10 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 3, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm, The article can be aligned to create different nos. of positions! In combination with MVSTB or FKCV plug components, both an MVSTBW (or FKCVW) and an MVSTBR plug (or FKCVR) must be used. Combination with TMSTBP plug components is not possible!

Feed-through header - MDSTB 2,5/ 3-GFL-5,08 - 1874633



PCB headers, nominal current: 10 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 3, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.2 mm, Can be aligned! Mounting flange: Order no. 1736771, 1736768. In combination with MVSTB or FKCV plugs, both an MVSTBW (or FKCVW) and an MVSTBR plug (or FKCVR) must be used. Combination with TMSTBP plugs is not possible!

Feed-through header - MDSTB 2,5/ 3-GFR-5,08 - 1874646



PCB headers, nominal current: 10 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 3, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.2 mm, Can be aligned! Mounting flange: Order no. 1736771, 1736768. In combination with MVSTB or FKCV plugs, both an MVSTBW (or FKCVW) and an MVSTBR plug (or FKCVR) must be used. Combination with TMSTBP plugs is not possible!

Feed-through header - MDSTBV 2,5/ 3-GFL-5,08 - 1874675



PCB headers, nominal current: 10 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 3, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm, The article can be aligned to create different nos. of positions! In combination with MVSTB or FKCV plug components, both an MVSTBW (or FKCVW) and an MVSTBR plug (or FKCVR) must be used. Combination with TMSTBP plug components is not possible!

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Accessories

Feed-through header - MDSTBV 2,5/ 3-GFR-5,08 - 1874688



PCB headers, nominal current: 10 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 3, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm, The article can be aligned to create different nos. of positions! In combination with MVSTB or FKCV plug components, both an MVSTBW (or FKCVW) and an MVSTBR plug (or FKCVR) must be used. Combination with TMSTBP plug components is not possible!

Feed-through header - EMSTBV 2,5/ 3-GF-5,08 - 1898648



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 3, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Press-in technology, pin layout: Linear pinning, solder pin [P]: 3.9 mm

Printed-circuit board connector - DFK-MSTBA 2,5/ 3-GF-5,08 - 1898994



Feed-through header, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 3, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.2 mm

Printed-circuit board connector - DFK-MSTBVA 2,5/ 3-GF-5,08 - 1899294



Feed-through header, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 3, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm

Feed-through header - MSTB 2,5/ 3-GF-5,08 THT - 1927577



PCB headers, number of positions: 3, pitch: 5.08 mm, color: black, contact surface: Tin, pin layout: Linear pinning, solder pin [P]: 3.5 mm, User information and design recommendations for through hole reflow technology can be found under: Downloads

Printed-circuit board connector - TVMSTB 2,5/ 3-STF-5,08 - 1719105

Accessories

Feed-through header - MSTBV 2,5/ 3-GF-5,08 THT - 1940907



PCB headers, number of positions: 3, pitch: 5.08 mm, color: black, contact surface: Tin, pin layout: Linear pinning, solder pin [P]: 3.9 mm, User information and design recommendations for through hole reflow technology can be found under: Downloads

Printed-circuit board connector - CC 2,5/ 3-GF-5,08 P26THR - 1954702



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 3, pitch: 5.08 mm, color: black, contact surface: Tin, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, User information and design recommendations for through hole reflow technology can be found under: Downloads

Printed-circuit board connector - CC 2,5/ 3-GF-5,08 P26THRR56 - 1954812



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 3, pitch: 5.08 mm, color: black, contact surface: Tin, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, User information and design recommendations for through hole reflow technology can be found under: Downloads

Printed-circuit board connector - CCV 2,5/ 3-GF-5,08 P26THR - 1955646



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 3, pitch: 5.08 mm, color: black, contact surface: Tin, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, User information and design recommendations for through hole reflow technology can be found under: Downloads

Printed-circuit board connector - CCV 2,5/ 3-GF-5,08 P26THRR56 - 1955756



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 3, pitch: 5.08 mm, color: black, contact surface: Tin, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, User information and design recommendations for through hole reflow technology can be found under: Downloads

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