

# Printed-circuit board connector - GMSTBVA 2,5 HC/ 5-G-7,62 - 1773455

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PCB headers, nominal current: 16 A, rated voltage (III/2): 630 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 5, pitch: 7.62 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm




## Your advantages

- ✓ Well-known mounting principle allows worldwide use
- ✓ Larger pitch for increased voltage requirements
- ✓ Closed contour for optimum stability of the plug-in connection
- ✓ Vertical connection enables multi-row arrangement on the PCB



## Key Commercial Data

|              |   |
|--------------|---|
| Packing unit | 50 pc   |
| GTIN         | <br>4 046356 465489 |
| GTIN         | 4046356465489   |

## Technical data

### Item properties

|                           |                     |
|---------------------------|---------------------|
| Brief article description | Feed-through header |
| Plug-in system            | POWER COMBICON 2,5  |
| Type of contact           | Male connector      |
| Range of articles         | GMSTBVA 2,5 HC/..-G |
| Pitch                     | 7.62 mm             |
| Number of positions       | 5                   |
| Mounting type             | Wave soldering      |
| Pin layout                | Linear pinning      |
| Locking                   | without             |
| Number of levels          | 1                   |
| Number of connections     | 5                   |
| Number of potentials      | 5                   |

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## Technical data

### Electrical parameters

|                             |        |
|-----------------------------|--------|
| Nominal current             | 16 A   |
| Nom. voltage                | 630 V  |
| Rated voltage               | 500 V  |
| Rated voltage (III/2)       | 630 V  |
| Rated voltage (II/2)        | 1000 V |
| Rated surge voltage (III/3) | 6 kV   |
| Rated surge voltage (III/2) | 6 kV   |
| Rated surge voltage (II/2)  | 6 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   | 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 ]                | 8.6 mm   |
| Width [ w ]                 | 38.1 mm  |
| Height [ h ]                | 15.9 mm  |
| Pitch                       | 7.62 mm  |
| Height (without solder pin) | 12 mm    |
| Solder pin [P]              | 3.9 mm   |
| Pin dimensions              | 1 x 1 mm |

### Dimensions for PCB design

|               |        |
|---------------|--------|
| Hole diameter | 1.4 mm |
|---------------|--------|

### Packaging information

|                    |                     |
|--------------------|---------------------|
| Type of packaging  | packed in cardboard |
| Pieces per package | 50                  |

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## Technical data

### Packaging information

|                            |      |
|----------------------------|------|
| Denomination packing units | Pcs. |
|----------------------------|------|

### 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) | 5.5 mm              |
| Minimum clearance - inhomogeneous field (III/2) | 5.5 mm              |
| Minimum clearance - inhomogeneous field (II/2)  | 5.5 mm              |
| Minimum creepage distance value (III/3)         | 6.3 mm              |
| Minimum creepage distance value (III/2)         | 3.2 mm              |
| Minimum creepage distance value (II/2)          | 5 mm                |

### Mechanical tests (A)

|  |             |
|--|-------------|
| Test specification                           | IEC 61984   |
| Insertion strength per pos. approx.          | 6 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 <sub>1</sub>            | 0.64 mΩ               |
| Insertion/withdrawal cycles                  | 50                    |
| Contact resistance R <sub>2</sub>            | 0.75 mΩ               |
| Impulse withstand voltage at sea level       | 9.8 kV                |
| Power-frequency withstand voltage            | 3.31 kV               |
| Insulation resistance, neighboring positions | 7 TΩ                  |

### Thermal tests (C)

|   |                       |
|---|-----------------------|
| Specification                                   | IEC 60512-5-1:2002-02 |
| Number of positions                             | 12                    |
| Conductor cross section                         | 2.5 mm <sup>2</sup>   |
| Test current                                    | 16 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     |

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## Technical data

### Climatic tests (D)

|  |   |
|--|---|
| Corrosive stress                       | 0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle |
| Impulse withstand voltage at sea level | 9.8 kV  |
| Power-frequency withstand voltage      | 3.31 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  |
| Result                 | Test passed            |
| Frequency              | 10 - 150 - 10 Hz       |
| 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 |
|  | CUL    |
| Flammability rating according to UL 94 | V0     |

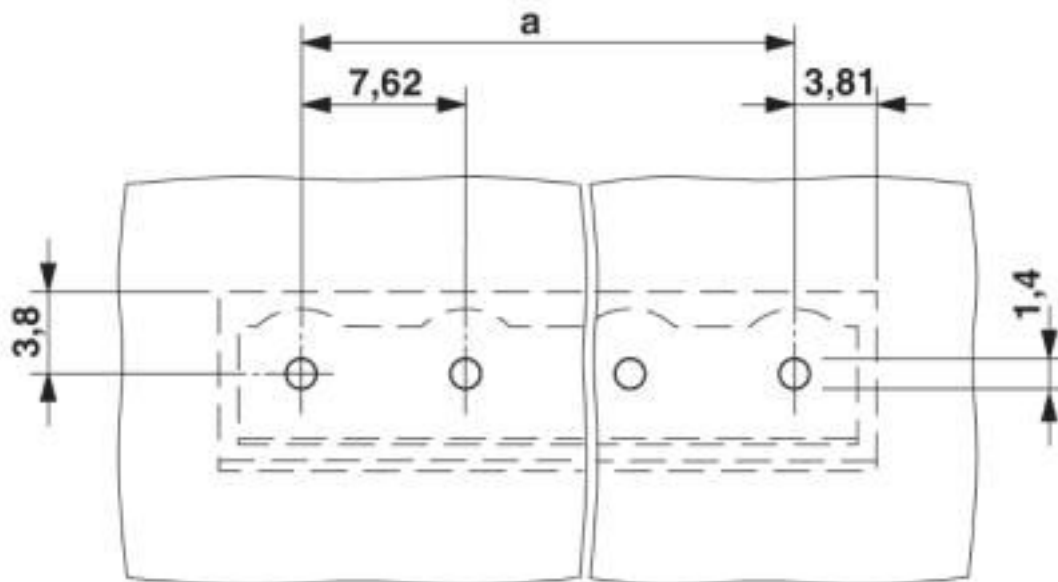
### Environmental Product Compliance

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

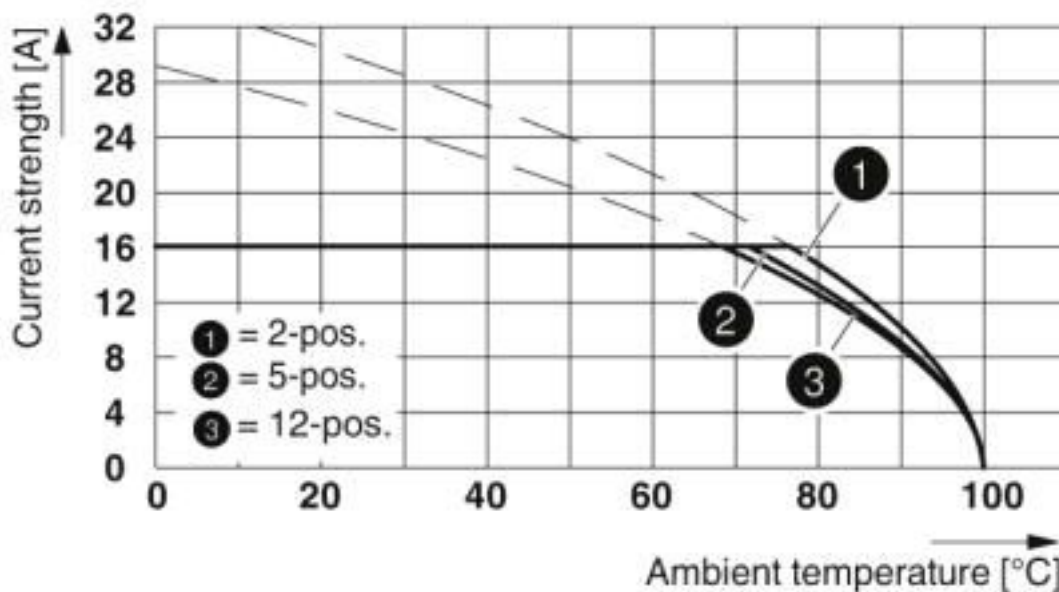
## Drawings

# Printed-circuit board connector - GMSTBVA 2,5 HC/ 5-G-7,62 - 1773455

Drilling diagram



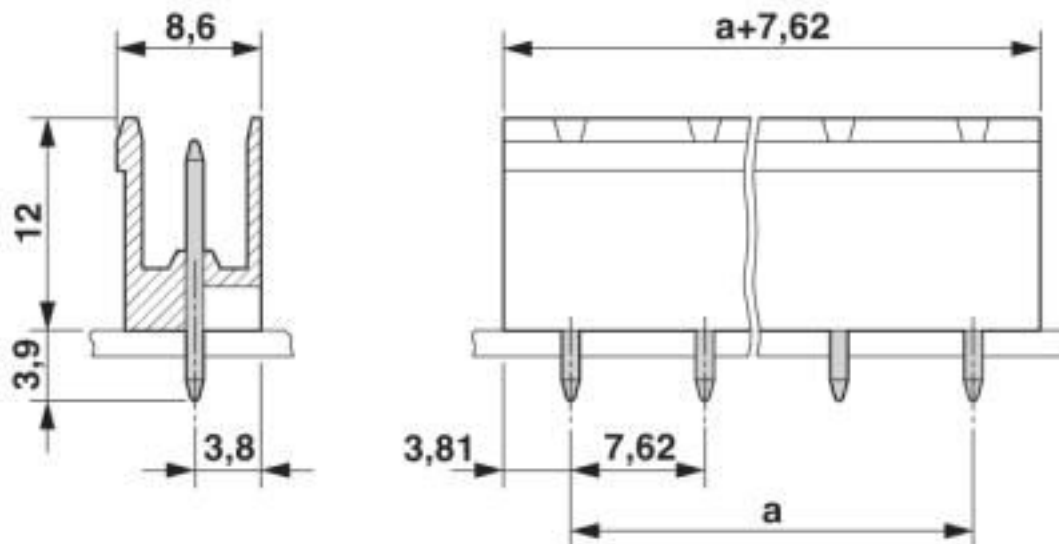
Diagram



Type: GMSTB 2.5 HCV/...-ST-7.62(-LR) with GMSTBVA 2.5 HC/...-G-7.62(-LR)

# Printed-circuit board connector - GMSTBVA 2,5 HC/ 5-G-7,62 - 1773455

Dimensional drawing



## Classifications

### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27440402 |
| 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 8.0    | 27440402 |
| eCl@ss 9.0    | 27440402 |

### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC001121 |
| ETIM 4.0 | EC002637 |
| ETIM 5.0 | 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 |
| UNSPSC 18.0   | 39121409 |

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## Classifications

### UNSPSC

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

## Approvals

### Approvals

#### Approvals

EAC / cULus Recognized / IECEE CB Scheme / VDE Zeichengenehmigung

#### Ex Approvals

### Approval details

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

|                    |       |   |                 |
|--------------------|-------|---|-----------------|
| cULus Recognized   |       | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | E60425-19931013 |
|                    | B     | D   |                 |
| Nominal voltage UN | 300 V | 300 V   |                 |
| Nominal current IN | 20 A  | 10 A  |                 |

|                    |       |   |                |
|--------------------|-------|---|----------------|
| IECEE CB Scheme    |       | <a href="http://www.iecee.org/">http://www.iecee.org/</a> | DE1-60988-B1B2 |
| Nominal voltage UN | 400 V |   |                |
| Nominal current IN | 16 A  |   |                |

|                        |       |   |          |
|------------------------|-------|---|----------|
| VDE Zeichengenehmigung |       | <a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a> | 40050079 |
| Nominal voltage UN     | 400 V |   |          |
| Nominal current IN     | 16 A  |   |          |

## Printed-circuit board connector - GMSTBVA 2,5 HC/ 5-G-7,62 - 1773455

### Accessories

#### Additional products

Plug - GMSTB 2,5 HCV/ 5-ST-7,62 - 1714304



PCB connector, nominal current: 16 A, rated voltage (III/2): 1000 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 5, pitch: 7.62 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

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