

1954553

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PCB headers, nominal cross section: 2.5 mm², color: black, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Pin, number of potentials: 10, number of rows: 1, number of positions: 10, number of connections: 10, product range: CC 2,5/..-G, pitch: 5.08 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard, For user information and design recommendations for through-hole reflow technology, go to: Downloads

### Your advantages

- · Designed for integration into the SMT soldering process
- · Maximum flexibility when it comes to device design one header for connectors with different connection technologies

#### Commercial data

Item number	1954553
Packing unit	50 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	AA03
Product key	AACTBA
Catalog page	Page 234 (CC-2009)
GTIN	4017918925376
Weight per piece (including packing)	4.22 g
Weight per piece (excluding packing)	3.77 g
Customs tariff number	85366930
Country of origin	DE



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### Technical data

#### Product properties

Туре	Component suitable for through hole reflow
Product line	COMBICON Connectors M
Product type	PCB headers
Product family	CC 2,5/G
Number of positions	10
Pitch	5.08 mm
Number of connections	10
Number of rows	1
Mounting flange	without
Number of potentials	10
Pin layout	Linear pinning
Solder pins per potential	1

### Electrical properties

Nominal current I <sub>N</sub>	12 A
Nominal voltage U <sub>N</sub>	320 V
Degree of pollution	3
Contact resistance	1.3 mΩ
Rated voltage (III/3)	250 V
Rated surge voltage (III/3)	4 kV
Rated voltage (III/2)	320 V
Rated surge voltage (III/2)	4 kV
Rated voltage (II/2)	400 V
Rated surge voltage (II/2)	4 kV

#### Mounting

Mounting type	THR soldering
Pin layout	Linear pinning
Processing notes	
Droope	Poflow/ways caldering

Process	Reflow/wave soldering
Moisture Sensitive Level	MSL 1
Classification temperature T <sub>c</sub>	260 °C
Solder cycles in the reflow	3

#### Material specifications

#### 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



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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	
Color (Housing)	black (9005)
Insulating material	LCP
Insulating material group	Illa
CTI according to IEC 60112	175
Flammability rating according to UL 94	V0
Notes	
General	Processing using reflow processes in compliance with IEC 60068-2-58 or DIN EN 61760-1 (latest version)  Moisture Sensitive Level (MSL) = 1 according to IPC/JEDEC J-STD-020-C
Dimensions	
Dimensional drawing	P, h
Pitch	5.08 mm
Width [w]	50.4 mm
Height [h]	11.2 mm
Length [I]	12 mm
Installed height	8.6 mm
Solder pin length [P]	2.6 mm
Pin dimensions	1 x 1 mm
PCB design	
Hole diameter	1.6 mm
Mechanical tests	
Visual inspection	
Specification	IEC 60512-1-1:2002-02
Result	Test passed
Dimension check	
Specification	IEC 60512-1-2:2002-02
Result	Test passed
Resistance of inscriptions	
Specification	IEC 60068-2-70:1995-12



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Specification	IEC 60512-13-5:2006-02	
Result	Test passed	
ontact holder in insert		
Specification	IEC 60512-15-1:2008-05	
Contact holder in insert Requirements >20 N	Test passed	
sertion and withdrawal forces		
Result	Test passed	
	25	
No. of cycles		
No. of cycles Insertion strength per pos. approx.	8 N	

#### Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	12

#### Insulation resistance

Specification	IEC 60512-3-1:2002-02
Insulation resistance, neighboring positions	> 5 MΩ

#### Air clearances and creepage distances |

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Specification	IEC 60664-1:2007-04
Insulating material group	Illa
Comparative tracking index (IEC 60112)	CTI 175
Rated insulation voltage (III/3)	250 V
Rated surge voltage (III/3)	4 kV
minimum clearance value - non-homogenous field (III/3)	3 mm
minimum creepage distance (III/3)	4 mm
Rated insulation voltage (III/2)	320 V
Rated surge voltage (III/2)	4 kV
minimum clearance value - non-homogenous field (III/2)	3 mm
minimum creepage distance (III/2)	3.2 mm
Rated insulation voltage (II/2)	400 V
Rated surge voltage (II/2)	4 kV
minimum clearance value - non-homogenous field (II/2)	3 mm
minimum creepage distance (II/2)	4 mm

#### Environmental and real-life conditions

Vibration	test
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Specification	IEC 60068-2-6:2007-12



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Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 Hz 60.1 Hz)
Sweep speed	5g (60.1 Hz 150 Hz)
Test duration per axis	2.5 h
urability test	
Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	4.8 kV
Contact resistance R <sub>1</sub>	1.3 mΩ
Contact resistance R <sub>2</sub>	1.4 mΩ
Insertion/withdrawal cycles	25
limatic test Specification	ISO 6988:1985-02
Corrosive stress	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle
Thermal stress	100 °C/168 h
Power-frequency withstand voltage	2.21 kV
mbient conditions	
Ambient temperature (operation)	-40 °C 100 °C (dependent on the derating curve)
Ambient temperature (storage/transport)	-40 °C 70 °C
Relative humidity (storage/transport)	30 % 70 %
Ambient temperature (assembly)	-5 °C 100 °C
kaging specifications	
Type of packaging	packed in cardboard
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### Classifications

#### **ECLASS**

	ECLASS-11.0	27460201		
	ECLASS-12.0	27460201		
	ECLASS-13.0	27460201		
ETIM				
	ETIM 9.0	EC002637		
UNSPSC				
	UNSPSC 21.0	39121400		



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### Environmental product compliance

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

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