

1954799

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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: 12, number of rows: 1, number of positions: 12, number of connections: 12, product range: CC 2,5/..-GF, 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: Screw locking mechanism, mounting: Threaded flange, 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
- · Screwable flange for superior mechanical stability

Commercial data

Item number	1954799
Packing unit	50 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	AA03
Product key	AACTBB
Catalog page	Page 299 (C-1-2013)
GTIN	4017918925611
Weight per piece (including packing)	6 g
Weight per piece (excluding packing)	5.419 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/GF
Number of positions	12
Pitch	5.08 mm
Number of connections	12
Number of rows	1
Mounting flange	Threaded flange
Number of potentials	12
Pin layout	Linear pinning
Solder pins per potential	1

Electrical properties

Nominal current I _N	12 A
Nominal voltage U _N	320 V
Degree of pollution	3
Contact resistance	1 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
Flange	
Tightening torque	0.3 Nm
Processing notes	
Process	Reflow/wave soldering
Moisture Sensitive Level	MSL 1

260 °C

Material specifications

Classification temperature T_c Solder cycles in the reflow

Material data - contact

Note	WEEE/RoHS-compliant, free of whiskers according to IEC



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	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	
Color (Housing)	black (9005)
Insulating material	LCP
Insulating material group	Illa
CTI according to IEC 60112	175
Flammability rating according to UL 94	V0
otes	
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
mensions	
Dimensional drawing	P
Pitch	5.08 mm
Width [w]	71.12 mm
Height [h]	11.17 mm
Length [I]	12 mm
Installed height	8.57 mm
Solder pin length [P]	2.6 mm
Pin dimensions	1 x 1 mm
PCB design	
Hole diameter	1.6 mm
echanical tests Visual inspection	
Specification	IEC 60512-1-1:2002-02
Result	Test passed
	1 cot passed
Dimension check	
Specification	IEC 60512-1-2:2002-02



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Result	Test passed
esistance of inscriptions	
Specification	IEC 60068-2-70:1995-12
Result	Test passed
Polarization and coding	
Polarization and coding	IEC 60512-13-5:2006-02
Specification	
Result	Test passed
Contact holder in insert	
Specification	IEC 60512-15-1:2008-05
Contact holder in insert Requirements >20 N	Test passed
Insertion and withdrawal forces	
Result	Test passed
No. of cycles	25
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	6 N
	IEC 60517-5-177007-07
	IEC 60512-5-1:2002-02
Specification Tested number of positions	IEC 60512-5-1:2002-02 12
Tested number of positions	
Tested number of positions Insulation resistance	12
Tested number of positions Insulation resistance Specification Insulation resistance, neighboring positions	12 IEC 60512-3-1:2002-02
Tested number of positions Insulation resistance Specification	12 IEC 60512-3-1:2002-02
Tested number of positions Insulation resistance Specification Insulation resistance, neighboring positions Air clearances and creepage distances	12 IEC 60512-3-1:2002-02 > 5 MΩ
Tested number of positions Insulation resistance Specification Insulation resistance, neighboring positions Air clearances and creepage distances Specification	12 IEC 60512-3-1:2002-02 > 5 MΩ IEC 60664-1:2007-04
Tested number of positions Insulation resistance Specification Insulation resistance, neighboring positions Air clearances and creepage distances Specification Insulating material group	12 IEC 60512-3-1:2002-02 > 5 MΩ IEC 60664-1:2007-04 Illa
Tested number of positions Insulation resistance Specification Insulation resistance, neighboring positions Air clearances and creepage distances Specification Insulating material group Comparative tracking index (IEC 60112)	12 IEC 60512-3-1:2002-02 > 5 MΩ IEC 60664-1:2007-04 Illa CTI 175
Tested number of positions Insulation resistance Specification Insulation resistance, neighboring positions Air clearances and creepage distances Specification Insulating material group Comparative tracking index (IEC 60112) Rated insulation voltage (III/3)	IEC 60512-3-1:2002-02 > 5 MΩ IEC 60664-1:2007-04 IIIa CTI 175 250 V
Tested number of positions Insulation resistance Specification Insulation resistance, neighboring positions Air clearances and creepage distances Specification Insulating material group Comparative tracking index (IEC 60112) Rated insulation voltage (III/3) Rated surge voltage (III/3)	IEC 60512-3-1:2002-02 > 5 MΩ IEC 60664-1:2007-04 IIIa CTI 175 250 V 4 kV
Tested number of positions Insulation resistance Specification Insulation resistance, neighboring positions Air clearances and creepage distances Specification Insulating material group Comparative tracking index (IEC 60112) Rated insulation voltage (III/3) Rated surge voltage (III/3) minimum clearance value - non-homogenous field (III/3)	IEC 60512-3-1:2002-02 > 5 MΩ IEC 60664-1:2007-04 IIIa CTI 175 250 V 4 kV 3 mm
Tested number of positions Insulation resistance Specification Insulation resistance, neighboring positions Air clearances and creepage distances Specification Insulating material group Comparative tracking index (IEC 60112) Rated insulation voltage (III/3) Rated surge voltage (III/3) minimum clearance value - non-homogenous field (III/3) minimum creepage distance (III/3)	IEC 60512-3-1:2002-02 > 5 MΩ IEC 60664-1:2007-04 IIIa CTI 175 250 V 4 kV 3 mm 4 mm
Tested number of positions Insulation resistance Specification Insulation resistance, neighboring positions Air clearances and creepage distances Specification Insulating material group Comparative tracking index (IEC 60112) Rated insulation voltage (III/3) Rated surge voltage (III/3) minimum clearance value - non-homogenous field (III/3) minimum creepage distance (III/3) Rated insulation voltage (III/2)	IEC 60512-3-1:2002-02 > 5 MΩ IEC 60664-1:2007-04 IIIa CTI 175 250 V 4 kV 3 mm 4 mm 320 V
Tested number of positions Insulation resistance Specification Insulation resistance, neighboring positions Air clearances and creepage distances Specification Insulating material group Comparative tracking index (IEC 60112) Rated insulation voltage (III/3) Rated surge voltage (III/3) minimum clearance value - non-homogenous field (III/3) minimum creepage distance (III/3) Rated insulation voltage (III/2) Rated surge voltage (III/2)	IEC 60512-3-1:2002-02 > 5 MΩ IEC 60664-1:2007-04 IIIa CTI 175 250 V 4 kV 3 mm 4 mm 320 V 4 kV
Tested number of positions Insulation resistance Specification Insulation resistance, neighboring positions Air clearances and creepage distances Specification Insulating material group Comparative tracking index (IEC 60112) Rated insulation voltage (III/3) Rated surge voltage (III/3) minimum clearance value - non-homogenous field (III/3) Rated insulation voltage (III/2) Rated surge voltage (III/2) minimum clearance value - non-homogenous field (III/2)	IEC 60512-3-1:2002-02 > 5 MΩ IEC 60664-1:2007-04 IIIa CTI 175 250 V 4 kV 3 mm 4 mm 320 V 4 kV 3 mm
Tested number of positions Insulation resistance Specification Insulation resistance, neighboring positions Air clearances and creepage distances Specification Insulating material group Comparative tracking index (IEC 60112) Rated insulation voltage (III/3) Rated surge voltage (III/3) minimum clearance value - non-homogenous field (III/3) minimum creepage distance (III/2) Rated surge voltage (III/2) minimum clearance value - non-homogenous field (III/2) minimum creepage distance (III/2)	IEC 60512-3-1:2002-02 > 5 MΩ IEC 60664-1:2007-04 IIIa CTI 175 250 V 4 kV 3 mm 4 mm 320 V 4 kV 3 mm 3.2 mm
Tested number of positions Insulation resistance Specification Insulation resistance, neighboring positions Air clearances and creepage distances Specification Insulating material group Comparative tracking index (IEC 60112) Rated insulation voltage (III/3) Rated surge voltage (III/3) minimum clearance value - non-homogenous field (III/3) minimum creepage distance (III/3) Rated surge voltage (III/2) Rated surge voltage (III/2) Rated surge voltage (III/2) Rated surge voltage (III/2) minimum creepage distance (III/2) Rated insulation voltage (III/2) Rated insulation voltage (III/2)	IEC 60512-3-1:2002-02 > 5 MΩ IEC 60664-1:2007-04 IIIa CTI 175 250 V 4 kV 3 mm 4 mm 320 V 4 kV 3 mm 4 kV 3 mm 4 wV 4 mM 320 N 4 kV 4 kV 4 kV 5 mm 4 mm 6 mm 7 mm 7 mm 8 mm 9



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Environmental and real-life conditions

Type of packaging

Specification	IEC 60068-2-6:2007-12
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
rability test	
Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	4.8 kV
Contact resistance R ₁	1 mΩ
Contact resistance R ₂	1.1 mΩ
Insertion/withdrawal cycles	25
Insulation resistance, neighboring positions	> 5 MΩ
matic test	
Specification	ISO 6988:1985-02
Corrosive stress	0.2 dm ³ SO ₂ on 300 dm ³ /40 °C/1 cycle
Thermal stress	105 °C/168 h
Power-frequency withstand voltage	2.21 kV
ocks	
Specification	IEC 60068-2-27:2008-02
Pulse shape	Semi-sinusoidal
Acceleration	30g
Shock duration	18 ms
Test directions	X-, Y- and Z-axis (pos. and neg.)
abient conditions	
Ambient temperature (operation)	-40 °C 105 °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

packed in cardboard



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Classifications

UNSPSC 21.0

ECLASS

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

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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