

DMC 0,5/ 2-G1SH-2,54P20THR24 - PCB header



1097546
<https://www.phoenixcontact.com/us/products/1097546>

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PCB headers, color: black, nominal current: 5 A, rated voltage (III/2): 160 V, contact surface: Gold, contact connection type: Pin, number of positions: 2, product range: DMC 0,5/..-G1-SH-THR, pitch: 2.54 mm, mounting: THR soldering, solder pin [P]: 2 mm, plug-in system: COMBICON DFMC 0,5 shielded, Electrical properties: shielded, Pin connector pattern alignment: Standard, locking: shielded connection, mounting: without, type of packaging: 24 mm wide tape, Suitable for CAT5

Your advantages

- Gold-plated contacts ensure transfer quality remains stable over the long term
- Designed for integration into the SMT process
- Conductor connection on several levels enables higher contact density with the same surface area
- Supplied in tape-on-reel packing according to IEC 60286-3 for automated mounting

Commercial data

Item number	1097546
Packing unit	300 pc
Minimum order quantity	300 pc
Sales key	AA01
Product key	AAAJAA
GTIN	4055626938936
Weight per piece (including packing)	2.639 g
Weight per piece (excluding packing)	2.22 g
Customs tariff number	85366930
Country of origin	PL

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Technical data

Product properties

Product line	COMBICON Connectors XS
Product type	PCB headers
Product family	DMC 0,5/...-G1-SH-THR
Number of positions	2
Pitch	2.54 mm
Electrical characteristic	shielded

Electrical properties

Nominal current I_N	5 A
Nominal voltage U_N	160 V
Degree of pollution	3
Contact resistance	4.8 mΩ
Rated voltage (III/3)	50 V
Rated surge voltage (III/3)	2.5 kV
Rated voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
Rated voltage (II/2)	160 V
Rated surge voltage (II/2)	2.5 kV
Electrical characteristic	shielded

Mounting

Mounting type	THR soldering
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Processing notes

Process	Reflow/wave soldering
Moisture Sensitive Level	MSL 1
Classification temperature T_c	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	Completely gold-plated
Metal surface contact area (top layer)	Gold (0.25 Au)
Metal surface contact area (middle layer)	Nickel (2 - 4 μm Ni)
Metal surface soldering area (top layer)	Gold (0.25 Au)
Metal surface soldering area (middle layer)	Nickel (2 - 4 μm Ni)

Material data - housing

DMC 0,5/ 2-G1SH-2,54P20THR24 - PCB header



1097546

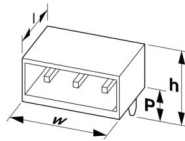
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Color (Housing)	black (9005)
Insulating material	LCP
Insulating material group	IIIa
CTI according to IEC 60112	175
Flammability rating according to UL 94	V0

Notes

General	The item is qualified for CAT5 Ethernet applications. For this reason, it is suited for use in IoT devices.
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Dimensions

Dimensional drawing	
Pitch	2.54 mm
Width [w]	9.66 mm
Height [h]	10.29 mm
Length [l]	11.54 mm
Installed height	8.29 mm
Solder pin length [P]	2 mm

PCB design

Hole diameter	1.2 mm
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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
Result	Test passed

Polarization and coding

Specification	IEC 60512-13-5:2006-02
Result	Test passed

Contact holder in insert

Specification	IEC 60512-15-1:2008-05
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1097546

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Contact holder in insert Requirements >20 N	Test passed
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Insertion and withdrawal forces

Result	Test passed
No. of cycles	100
Insertion strength per pos. approx.	3 N
Withdraw strength per pos. approx.	3 N

Electrical tests

Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	2

Insulation resistance

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

Air clearances and creepage distances |

Specification	IEC 60664-1:2007-04
Insulating material group	IIIa
Comparative tracking index (IEC 60112)	CTI 175
Rated insulation voltage (III/3)	50 V
Rated surge voltage (III/3)	2.5 kV
minimum clearance value - non-homogenous field (III/3)	1.5 mm
minimum creepage distance (III/3)	1.9 mm
Rated insulation voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
minimum clearance value - non-homogenous field (III/2)	1.5 mm
minimum creepage distance (III/2)	1.6 mm
Rated insulation voltage (II/2)	160 V
Rated surge voltage (II/2)	2.5 kV
minimum clearance value - non-homogenous field (II/2)	1.5 mm
minimum creepage distance (II/2)	1.6 mm

Environmental and real-life conditions

Vibration test

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	50 m/s ² (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h

Durability test

DMC 0,5/ 2-G1SH-2,54P20THR24 - PCB header



1097546

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Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	2.95 kV
Contact resistance R_1	4.8 mΩ
Contact resistance R_2	4.9 mΩ
Insertion/withdrawal cycles	100
Insulation resistance, neighboring positions	> 5 MΩ

Climatic test

Specification	ISO 6988:1985-02
Corrosive stress	0.2 dm ³ SO ₂ on 300 dm ³ /40 °C/1 cycle
Thermal stress	80 °C/168 h
Power-frequency withstand voltage	1.39 kV

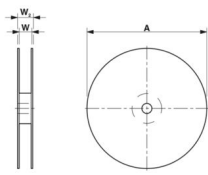
Shocks

Specification	IEC 60068-2-27:2008-02
Pulse shape	Semi-sinusoidal
Acceleration	350 m/s ²
Shock duration	11 ms
Test directions	X-, Y- and Z-axis (pos. and neg.)

Ambient conditions

Ambient temperature (storage/transport)	-30 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 80 °C
Ambient temperature (installation)	-40 °C ... 80 °C (dependent on the derating curve)
Ambient temperature (mobile installation)	-30 °C 80 °C dependent on the derating curve

Packaging specifications

Dimensional drawing	
Type of packaging	24 mm wide tape
[W] tape width	24 mm
[W2] coil overall dimension	30.4 mm
[A] coil diameter	330 mm
Outer packaging type	Transparent-Bag
ESD level	(D) electrostatically conductive
Specification	DIN EN 61340-5-1 (VDE 0300-5-1): 2008-07

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1097546

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Classifications

ECLASS

ECLASS-11.0	27460201
ECLASS-12.0	27460201
ECLASS-13.0	27460201

ETIM

ETIM 9.0	EC002637
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UNSPSC

UNSPSC 21.0	39121400
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1097546

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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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