

MSTBO 2,5/ 4-G1R THRR44 BK - PCB header



2697204

<https://www.phoenixcontact.com/us/products/2697204>

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PCB headers, nominal cross section: 2.5 mm², color: black, nominal current: 16 A, rated voltage (III/2): 320 V, contact surface: Sn, contact connection type: Pin, number of rows: 1, number of positions: 4, product range: MSTBO 2,5/...-G1R-THR, pitch: 5 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.5 mm, number of solder pins per potential: 1, Pin connector pattern alignment: Orthogonal, locking: without, type of packaging: 44 mm wide tape, Product with pin output on right side

Your advantages

- Versions available for wave and THR soldering process
- High mechanical strength and resistance to corrosion
- Contact resistance with long-term stability for continuous use

Commercial data

Item number	2697204
Packing unit	100 pc
Minimum order quantity	100 pc
Sales key	AC08
Product key	ACHADB
GTIN	4046356040280
Weight per piece (including packing)	7.82 g
Weight per piece (excluding packing)	7.28 g
Customs tariff number	85366930
Country of origin	PL

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Technical data

Product properties

Product type	PCB headers
Product family	MSTBO 2,5/..-G1R-THR
Type	Component suitable for through hole reflow
Number of positions	4
Pitch	5 mm
Number of rows	1
Mounting type	without
Pin layout	Linear pinning
Solder pins per potential	1

Electrical properties

Properties

Nominal current I_N	16 A
Nominal voltage U_N	320 V
Contact resistance	1.57 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)	630 V
Rated surge voltage (II/2)	4 kV

Mounting

Mounting type	THR soldering
Pin layout	Linear pinning

Processing notes

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	tin-plated
Metal surface contact area (top layer)	Tin (Sn)
Metal surface contact area (middle layer)	Nickel (Ni)
Metal surface soldering area (top layer)	Tin (Sn)

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Metal surface soldering area (middle layer)	Nickel (Ni)
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Material data - housing

Color (Housing)	black (9005)
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

Dimensional drawing	
Pitch	5 mm
Width [w]	19.95 mm
Height [h]	16.5 mm
Length [l]	15.35 mm
Solder pin length [P]	2.5 mm
Pin dimensions	1 x 1 mm

PCB design

Pin spacing	5.00 mm
Hole diameter	1.5 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
Result	Test passed

Polarization and coding

Specification	IEC 60512-13-5:2006-02
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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	
Specification	IEC 60512-13-2:2006-02
Result	Test passed
No. of cycles	25
Insertion strength per pos. approx.	7 N
Withdraw strength per pos. approx.	6 N

Electrical tests

Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	4

Insulation resistance

Specification	IEC 60512-3-1:2002-02
Insulation resistance, neighboring positions	$10^{12} \Omega$

Air clearances and creepage distances |

Specification	IEC 60664-1:2007-04
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
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)	3.2 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)	1.6 mm
Rated insulation voltage (II/2)	630 V
Rated surge voltage (II/2)	4 kV
minimum clearance value - non-homogenous field (II/2)	3 mm
minimum creepage distance (II/2)	3.2 mm

Environmental and real-life conditions

Durability test

Specification	IEC 60512-5:1992-08
Impulse withstand voltage at sea level	4.8 kV
Contact resistance R_1	1.57 m Ω

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Contact resistance R_2	1.65 m Ω
Insertion/withdrawal cycles	25

Climatic test

Specification	ISO 6988:1985-02
Corrosive stress	KFW 0.2 S/1 cycle
Thermal stress	100 °C/168 h
Power-frequency withstand voltage	2.25 kV

Vibration test

Specification	IEC 60068-2-6:1995-03
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 Hz ... 60.1 Hz)
Acceleration	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis

Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 55 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C ... 105 °C (dependent on the derating curve)

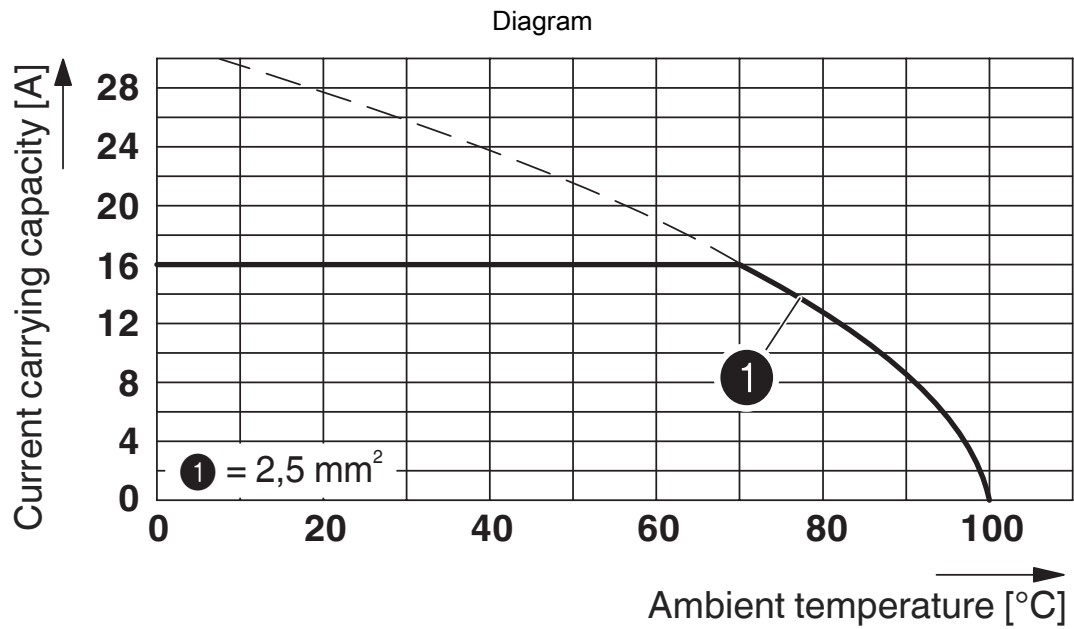
Packaging specifications

Type of packaging	44 mm wide tape
[W] tape width	44 mm
Outer packaging type	Transparent-Bag

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Drawings



Type: MSTBT 2.5 HC/...-ST mit MSTBO 2.5/...-G1L(R) THRR...

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Approvals

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 cULus Recognized Approval ID: E60425-20050718				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B	300 V	16 A	-	-
D	300 V	10 A	-	-

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Classifications

ECLASS

ECLASS-13.0	27460201
ECLASS-15.0	27460201

ETIM

ETIM 10.0	EC002637
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UNSPSC

UNSPSC 21.0	39121400
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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