

Feed-through header - EMSTBVA 2,5/10-G-5,08 - 1859593

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PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 10, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Press-in technology, pin layout: Linear pinning, solder pin [P]: 3.9 mm




Your advantages

- Processing according to EN 60352-5
- Long-term stable press-in connection ensures high holding force without thermal load
- Maximum flexibility when it comes to device design – one header for connectors with different connection technologies
- Vertical connection enables multi-row arrangement on the PCB
- Closed contour for optimum stability of the plug-in connection



Key Commercial Data

Packing unit	50 pc
GTIN	 4 017918 133016
GTIN	4017918133016

Technical data

Item properties

Brief article description	Feed-through header
Plug-in system	CLASSIC COMBICON
Type of contact	Male connector
Range of articles	EMSTBVA 2,5/...-G
Pitch	5.08 mm
Number of positions	10
Mounting type	Press-in technology
Pin layout	Linear pinning
Locking	without
Number of levels	1
Number of connections	10

Feed-through header - EMSTBVA 2,5/10-G-5,08 - 1859593

Technical data

Item properties

Number of potentials	10
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Electrical parameters

Nominal current	12 A
Nom. voltage	320 V
Rated voltage	200 V
Rated voltage (III/2)	320 V
Rated voltage (II/2)	320 V
Rated surge voltage (III/3)	4 kV
Rated surge voltage (III/2)	4 kV
Rated surge voltage (II/2)	4 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 (1 - 2 µm Sn)
Metal surface contact area (middle layer)	Nickel (2 - 3 µm Ni),
Metal surface soldering area (top layer)	Tin (1 - 2 µm Sn)
Metal surface soldering area (middle layer)	Nickel (2 - 3 µm Ni)

Material data - housing

Housing color	green (6021)
Insulating material	PBT
Insulating material group	IIIa
CTI according to IEC 60112	225
Flammability rating according to UL 94	V0

Dimensions for the product

Length [l]	8.6 mm
Width [w]	52.8 mm
Height [h]	15.9 mm
Pitch	5.08 mm
Height (without solder pin)	12 mm
Solder pin [P]	3.9 mm

Dimensions for PCB design

Hole diameter	1.6 mm
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Packaging information

Type of packaging	packed in cardboard
Pieces per package	50
Denomination packing units	Pcs.

Feed-through header - EMSTBVA 2,5/10-G-5,08 - 1859593

Technical data

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

Minimum clearance - inhomogeneous field (III/2)	3 mm
Minimum creepage distance value (III/2)	3 mm

Mechanical tests (A)

Test specification	DIN VDE 0627 (in parts)
Insertion strength per pos. approx.	5 N
Withdraw strength per pos. approx.	4 N

Durability tests (B)

Specification	DIN VDE 0627:1993-05
Contact resistance R ₁	1.1 mΩ
Insertion/withdrawal cycles	100
Contact resistance R ₂	1.5 mΩ
Impulse withstand voltage at sea level	4.8 kV
Power-frequency withstand voltage	2.21 kV
Insulation resistance, neighboring positions	> 8 TΩ

Thermal tests (C)

Number of positions	6
Conductor cross section	2.5 mm ²
Test current	12 A

Climatic tests (D)

Specification	DIN VDE 0627:1993-05
Cold stress	-40 °C/2 h
Thermal stress	100 °C/168 h
Corrosive stress	0.2 dm ³ SO ₂ on 300 dm ³ /40 °C/1 cycle
Power-frequency withstand voltage	2.21 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 60068-2-6:1982 + AMD 2:1985
Result	Test passed
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 - 60.1 Hz)

Feed-through header - EMSTBVA 2,5/10-G-5,08 - 1859593

Technical data

Vibration test

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

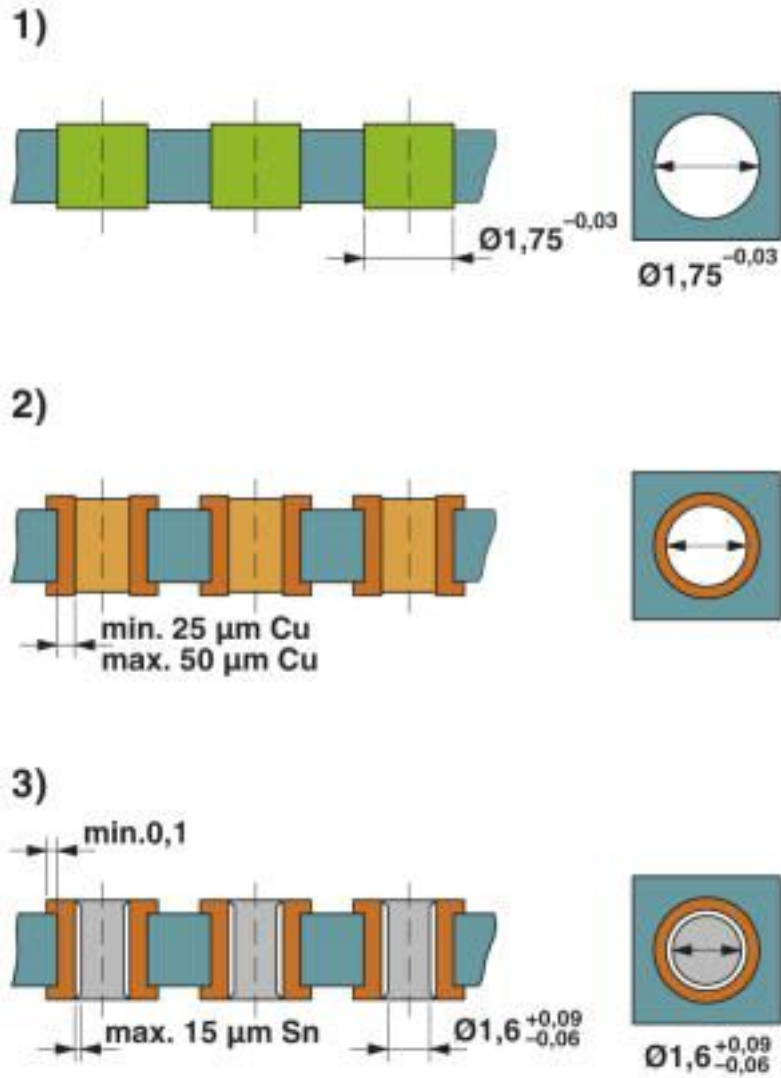
Environmental Product Compliance

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

Drawings

Feed-through header - EMSTBVA 2,5/10-G-5,08 - 1859593

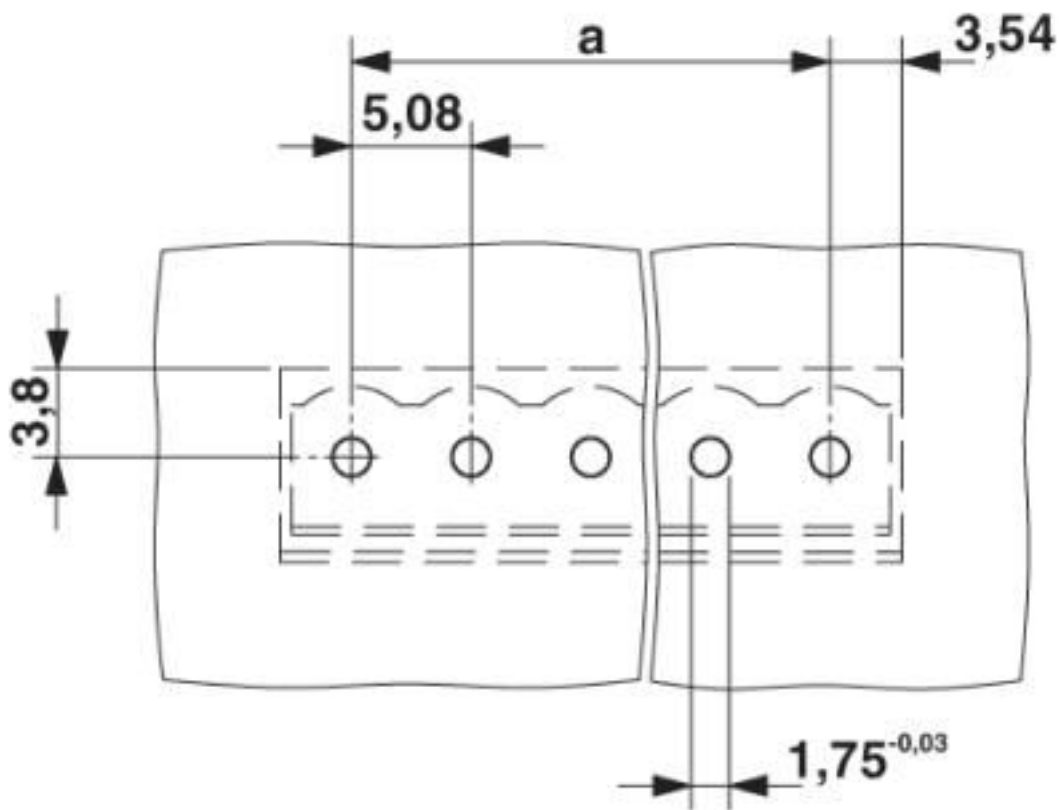
Drilling diagram



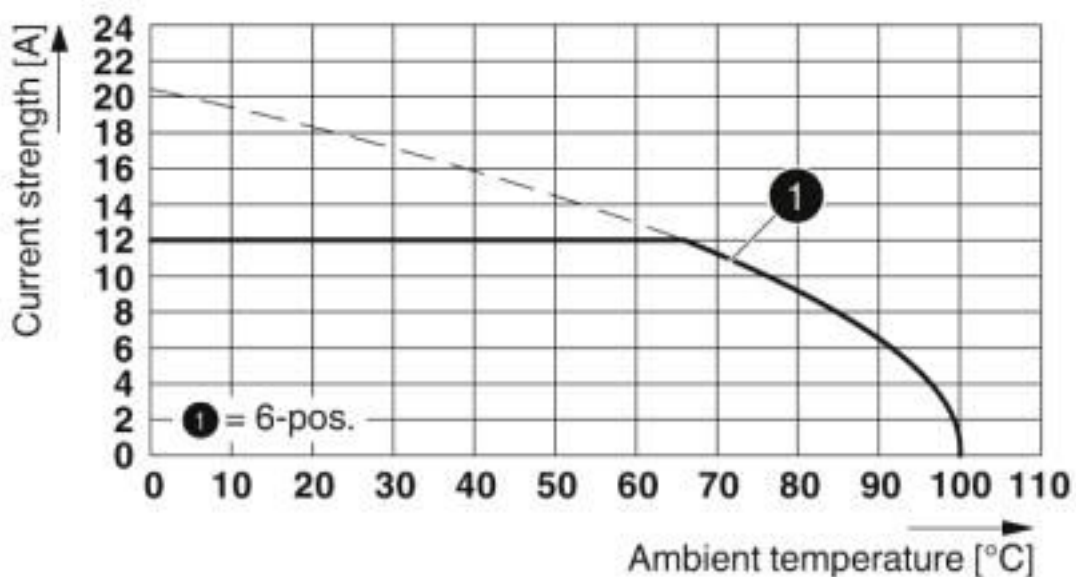
Drill hole layout in FR4 or EP-GC basic material

Feed-through header - EMSTBVA 2,5/10-G-5,08 - 1859593

Drilling diagram



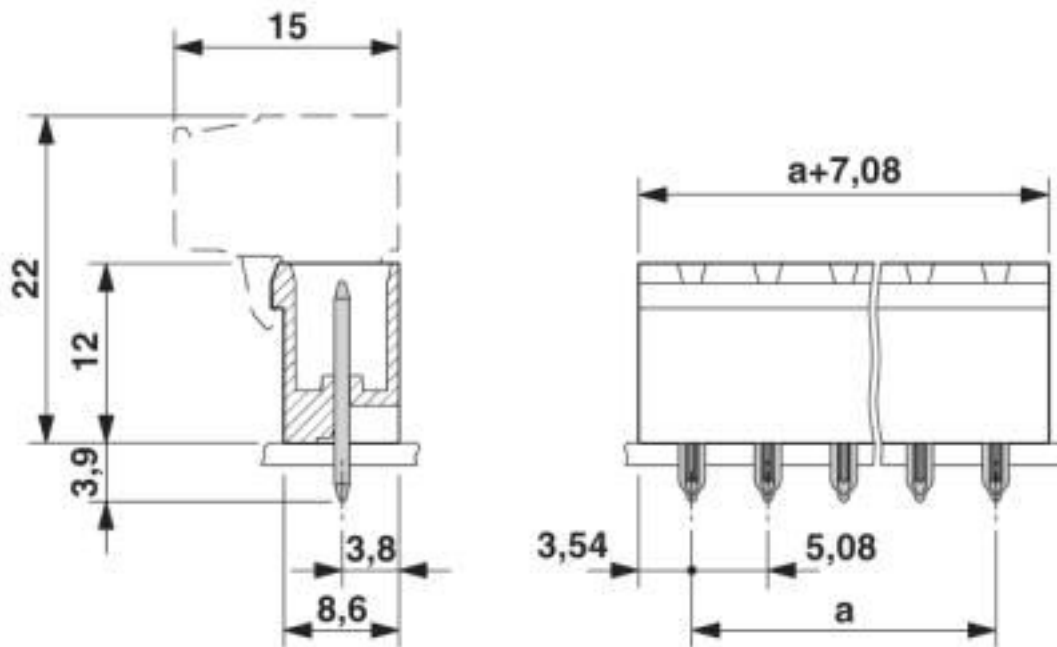
Diagram



Type: MSTB 2,5/...-ST(-5,08) with EMSTBVA 2,5/...-G(-5,08)

Feed-through header - EMSTBVA 2,5/10-G-5,08 - 1859593

Dimensional drawing



Classifications

eCl@ss

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

Feed-through header - EMSTBVA 2,5/10-G-5,08 - 1859593

Classifications

UNSPSC

UNSPSC 19.0	39121409
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Approvals

Approvals

Approvals

IECEE CB Scheme / EAC / cULus Recognized / VDE Zeichengenehmigung

Ex Approvals

Approval details

IECEE CB Scheme		http://www.iecee.org/	DE1-60988-B1B2
Nominal voltage UN		250 V	
Nominal current IN		12 A	

EAC		B.01687
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cULus Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	E60425-19931011
Nominal voltage UN		B 300 V	D 300 V
Nominal current IN		12 A	10 A

VDE Zeichengenehmigung		http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx	40050648
Nominal voltage UN		250 V	
Nominal current IN		12 A	

Accessories

Accessories

Feed-through header - EMSTBVA 2,5/10-G-5,08 - 1859593

Accessories

Coding element

Coding section - CR-MSTB - 1734401



Coding section, inserted into the recess in the header or the inverted plug, red insulating material

Filler plug

Accessories - MSTB-BL - 1755477



Keying cap, for forming sections, plugs onto header pin, green insulating material

Labeled terminal marker

Marker card - SK 5,08/3,8:FORTL.ZAHLEN - 0804293



Marker card, Card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... (99)100, mounting type: adhesive, for terminal block width: 5.08 mm, lettering field size: 5.08 x 3.8 mm

Accessories - EMSTB 2,5-SH - 1877203



Stamp holder, for upper and lower stamp

EMSTBVA 2,5-SS-3-5,0 - 1914810

Stamp set, consisting of an upper and lower stamp, upper stamp: 17 to 24-pos., lower stamp: 2 to 24-pos., pitch: 5.0 mm

Additional products

Feed-through header - EMSTBVA 2,5/10-G-5,08 - 1859593

Accessories

Printed-circuit board connector - TVMSTB 2,5/10-ST-5,08 - 1719082



PCB connector, nominal current: 12 A, rated voltage (III/2): 400 V, nominal cross section: 2.5 mm², number of positions: 10, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - FKCN 2,5/10-ST-5,08 - 1754649



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 10, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

Printed-circuit board connector - MSTB 2,5/10-ST-5,08 - 1757093



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 10, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - MSTB 2,5/10-STZ-5,08 - 1764303



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 10, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - MSTBP 2,5/10-ST-5,08 - 1769094



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 10, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Feed-through header - EMSTBVA 2,5/10-G-5,08 - 1859593

Accessories

Printed-circuit board connector - FRONT-MSTB 2,5/10-ST-5,08 - 1777361

PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 10, pitch: 5.08 mm, connection method: Front screw connection, color: green, contact surface: Tin



Printed-circuit board connector - MSTBT 2,5/10-ST-5,08 - 1781069

PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 10, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin



Printed-circuit board connector - MVSTBR 2,5/10-ST-5,08 - 1792320

PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 10, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin



Printed-circuit board connector - MVSTBW 2,5/10-ST-5,08 - 1792838

PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 10, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin



Printed-circuit board connector - MSTBC 2,5/10-ST-5,08 - 1808890

PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 10, pitch: 5.08 mm, connection method: Crimp connection, color: green, Corresponding female crimp contacts with current [A] and conductor cross section range [mm²] data: 10A/MSTBC-MT 0,5-1,0 (3190564); 10A/MSTBC-MT 0,5-1,0 BA (3190645); 12A/MSTBC-MT 1,5-2,5 (3190551); 12A/MSTBC-MT 1,5-2,5 BA (3190658). BA = Bandkontakte



Feed-through header - EMSTBVA 2,5/10-G-5,08 - 1859593

Accessories

Printed-circuit board connector - MSTBC 2,5/10-STZ-5,08 - 1809585



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 10, pitch: 5.08 mm, connection method: Crimp connection, color: green, Corresponding female crimp contacts with current [A] and conductor cross section range [mm²] data: 10A/MSTBC-MT 0,5-1,0 (3190564); 10A/MSTBC-MT 0,5-1,0 BA (3190645); 12A/MSTBC-MT 1,5-2,5 (3190551); 12A/MSTBC-MT 1,5-2,5 BA (3190658). BA = Bandkontakte

Printed-circuit board connector - MSTBU 2,5/10-STD-5,08 - 1824201



Direct plug-in block, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 10, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin, mounting: Direct mounting

Printed-circuit board connector - MSTBU 2,5/10-ST-5,08-FL - 1824434



Direct plug-in block, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 10, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin, mounting: Direct mounting

Printed-circuit board connector - SMSTB 2,5/10-ST-5,08 - 1826364



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 10, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - MSTBVK 2,5/10-ST-5,08 - 1831391



DIN rail connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 10, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin, mounting: DIN rail

Feed-through header - EMSTBVA 2,5/10-G-5,08 - 1859593

Accessories

Printed-circuit board connector - UMSTBVK 2,5/10-ST-5,08 - 1833894



DIN rail connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 10, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin, mounting: DIN rail

Printed-circuit board connector - TMSTBP 2,5/10-ST-5,08 - 1853094



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 10, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin, The plug allows conductors to be looped through from module to module.

Printed-circuit board connector - FKC 2,5/10-ST-5,08 - 1873139



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 10, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

Printed-circuit board connector - FKCVW 2,5/10-ST-5,08 - 1873731



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 10, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

Printed-circuit board connector - FKCVR 2,5/10-ST-5,08 - 1874031



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 10, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

Feed-through header - EMSTBVA 2,5/10-G-5,08 - 1859593

Accessories

Printed-circuit board connector - QC 1/10-ST-5,08 - 1883336



PCB connector, nominal current: 10 A, rated voltage (III/2): 630 V, nominal cross section: 1 mm², number of positions: 10, pitch: 5.08 mm, connection method: Displacement connection, color: green, contact surface: Tin

Printed-circuit board connector - FKCT 2,5/10-ST-5,08 - 1902194



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 10, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

Printed-circuit board connector - TFKC 2,5/10-ST-5,08 - 1962684



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 10, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

Printed-circuit board connector - FKCS 2,5/10-ST-5,08 - 1975150



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 10, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

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