

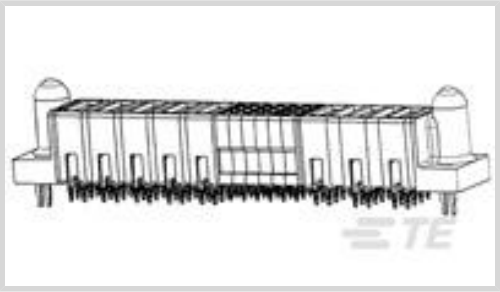
MULTI-BEAM

TE Internal #: 3-6450140-0  
PCB Mount Receptacle, Vertical, Board-to-Board, 20 Position, 2.54 mm / 6.35 mm [.1 in / .25 in] Centerline, Fully Shrouded, Gold

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Connectors > PCB Connectors > PCB Headers & Receptacles



PCB Connector Assembly Type: **PCB Mount Receptacle**  
PCB Mount Orientation: **Vertical**  
Connector System: **Board-to-Board**  
Number of Positions: **20**  
Number of Rows: **4**

Features

Electrical Characteristics

|                   |                 |
|-------------------|-----------------|
| Operating Voltage | 200 VDC, 60 VDC |
|-------------------|-----------------|

Dimensions

|                             |                                |
|-----------------------------|--------------------------------|
| Row-to-Row Spacing          | 2.54 mm[.1 in]                 |
| Connector Width             | 11.94 mm[.47 in]               |
| PCB Thickness (Recommended) | 2.11 – 2.62 mm[.083 – .103 in] |
| Connector Height            | 12.7 mm[.5 in]                 |
| Connector Length            | 97.79 mm[3.85 in]              |

Packaging Features

|                    |      |
|--------------------|------|
| Packaging Quantity | 22   |
| Packaging Method   | Tray |

Industry Standards

|                        |                                       |
|------------------------|---------------------------------------|
| Glow Wire Rating       | High Temperature Part - Not Glow Wire |
| UL Flammability Rating | UL 94V-0                              |

Usage Conditions

|                             |                            |
|-----------------------------|----------------------------|
| Operating Temperature (Max) | 105 °C[221 °F]             |
| Operating Temperature Range | -55 – 105 °C[-67 – 221 °F] |

Mechanical Attachment

|                  |         |
|------------------|---------|
| Mating Retention | Without |
|------------------|---------|



|                          |             |
|--------------------------|-------------|
| Mating Alignment Type    | Guide Post  |
| PCB Mount Retention Type | Hold-Down   |
| PCB Mount Alignment Type | Hold-Down   |
| PCB Mount Retention      | With        |
| PCB Mount Alignment      | With        |
| Connector Mounting Type  | Board Mount |
| Mating Alignment         | With        |

Termination Features

|                                |                       |
|--------------------------------|-----------------------|
| Termination Post & Tail Length | 3.43 mm[.135 in]      |
| Termination Method to PCB      | Through Hole - Solder |

Contact Features

|   |                               |
|---|-------------------------------|
| Contact Underplating Material                           | Nickel                        |
| Contact Underplating Material Thickness                 | 1.27 – 2.54 µm[50 – 100 µin]  |
| Contact Mating Area Plating Material Thickness          | .076 µm[3 µin]                |
| PCB Contact Termination Area Plating Material Thickness | 2.54 – 5.08 µm[100 – 200 µin] |
| Contact Layout  | Matrix                        |
| Contact Base Material                                   | Copper Alloy                  |
| PCB Contact Termination Area Plating Material           | Tin                           |
| Contact Mating Area Plating Material                    | Gold                          |
| Contact Type  | Receptacle                    |
| Contact Current Rating (Max)                            | 42 A                          |

Housing Features

|                    |   |
|--------------------|---|
| Housing Material   | High Temperature Thermoplastic Glass-Filled |
| Centerline (Pitch) | 6.35 mm, 2.54 mm[.25 in][.1 in]             |

Configuration Features

|                            |          |
|----------------------------|----------|
| Number of Columns          | 14       |
| Number of Loaded Positions | 20       |
| Number of Signal Positions | 8        |
| Number of Power Positions  | 12       |
| PCB Mount Orientation      | Vertical |
| Number of Positions        | 20       |
| Number of Rows             | 4        |



Product Type Features

|                                   |                       |
|-----------------------------------|-----------------------|
| Mixed & Hybrid Header             | Yes                   |
| Connector Shape                   | Rectangular           |
| PCB Connector Assembly Type       | PCB Mount Receptacle  |
| Connector System                  | Board-to-Board        |
| Header Type                       | Fully Shrouded        |
| Sealable                          | No                    |
| Connector & Contact Terminates To | Printed Circuit Board |

Body Features

|                       |       |
|-----------------------|-------|
| Primary Product Color | Black |
|-----------------------|-------|

Operation/Application

|                     |                |
|---------------------|----------------|
| Circuit Application | Power & Signal |
|---------------------|----------------|

Other

|                    |           |
|--------------------|-----------|
| EU RoHS Compliance | Compliant |
| EU ELV Compliance  | Compliant |

Product Compliance

For compliance documentation, visit the product page on TE.com>

|   |   |
|---|---|
| EU RoHS Directive 2011/65/EU                  | Compliant   |
| EU ELV Directive 2000/53/EC                   | Compliant   |
| China RoHS 2 Directive MIIT Order No 32, 2016 | No Restricted Materials Above Threshold   |
| EU REACH Regulation (EC) No. 1907/2006        | Current ECHA Candidate List: JUNE 2024 (241)<br>Candidate List Declared Against: JUNE 2024 (241)<br>Does not contain REACH SVHC |
| Halogen Content                               | Not Low Halogen - contains Br or Cl > 900 ppm.  |
| Solder Process Capability                     | Wave solder capable to 265°C  |

Product Compliance Disclaimer

This information is provided based on reasonable inquiry of our suppliers and represents our current actual knowledge based on the information they provided. This information is subject to change. The part numbers that TE has identified as EU RoHS compliant have a maximum concentration of 0.1% by weight in homogenous materials for lead, hexavalent chromium, mercury, PBB, PBDE, DBP, BBP, DEHP, DIBP, and 0.01% for cadmium, or qualify for an exemption to these limits as defined in the Annexes of Directive 2011/65/EU (RoHS2). Finished electrical and electronic equipment products will be CE marked as required by Directive 2011/65/EU. Components may not be CE marked. Additionally, the part numbers that TE has identified as EU ELV compliant have a maximum concentration of 0.1% by weight in homogenous



materials for lead, hexavalent chromium, and mercury, and 0.01% for cadmium, or qualify for an exemption to these limits as defined in the Annexes of Directive 2000/53/EC (ELV). Regarding the REACH Regulation, the information TE provides on SVHC in articles for this part number is based on the latest European Chemicals Agency (ECHA) 'Guidance on requirements for substances in articles' posted at this URL: <https://echa.europa.eu/guidance-documents/guidance-on-reach>

Compatible Parts

TE Part # 3-6600333-8  
MBXL VERT HDR 6P+8S+6P

Customers Also Bought

TE Part #DT04-2P  
REC, 2P, GRY, N

TE Part #DT06-2S  
PLG, 2P, GRY, N

TE Part #CAT-D487-W416  
Wedgelocks: DEUTSCH DT

TE Part #CAT-D48-ST273  
DEUTSCH Solid Contacts

TE Part #CAT-AM71-CH8172  
AMP SUPERSEAL 1.5MM,  
CONNECTOR HOUSING

TE Part #281934-2  
SINGLE WIRE SEAL

TE Part #114017-ZZ  
SEALING PLUG, SIZE 12/16, WHT

Documents

Product Drawings  
MBXL VERT RCPT 6P+8S+6P

English

CAD Files  
Customer View Model  
ENG\_CVM\_CVM\_3-6450140-0\_D.2d\_dxf.zip

English

3D PDF

3D



Customer View Model

[ENG\\_CVM\\_CVM\\_3-6450140-0\\_D.3d\\_igs.zip](#)

English

Customer View Model

[ENG\\_CVM\\_CVM\\_3-6450140-0\\_D.3d\\_stp.zip](#)

English

By downloading the CAD file I accept and agree to the [Terms and Conditions](#) of use.

Datasheets & Catalog Pages

[2\\_PIECE\\_POWER\\_CONNECTORS\\_qrg\\_4-1773458-1](#)

English

Product Specifications

[Application Specification](#)

English