

2143629-2 ✓ ACTIVE

## IMPACT

TE Internal #: 2143629-2

High Speed Backplane Connectors, Board-to-Board, 180 Position,  
Mating Alignment, Polarization Mating Alignment Type, 15 Row, 12  
Column, IMPACT

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Connectors > PCB Connectors > Backplane Connectors > High Speed Connectors



Connector System: **Board-to-Board**

Number of Positions: **180**

Row-to-Row Spacing: **1.15 mm [ .045 in ]**

Mating Alignment: **With**

Mating Alignment Type: **Polarization**

### Features

#### Product Type Features

|                                   |                       |
|-----------------------------------|-----------------------|
| Signal Arrangement                | Differential          |
| Connector System                  | Board-to-Board        |
| PCB Connector Assembly Type       | PCB Mount Header      |
| Shroud Style                      | Partially Shrouded    |
| Sealable                          | No                    |
| Connector & Contact Terminates To | Printed Circuit Board |

#### Configuration Features

|                            |            |
|----------------------------|------------|
| Number of Ground Positions | 60         |
| Number of Pairs            | 60         |
| Stackable                  | No         |
| Number of Signal Positions | 120        |
| Number of Positions        | 180        |
| Number of Rows             | 15         |
| Number of Columns          | 12         |
| Backplane Architecture     | Orthogonal |
| PCB Mount Orientation      | Vertical   |
| Guide Location             | Unguided   |

#### Electrical Characteristics



|           |              |
|-----------|--------------|
| Impedance | 100 $\Omega$ |
|-----------|--------------|

|                   |        |
|-------------------|--------|
| Operating Voltage | 30 VAC |
|-------------------|--------|

### Signal Characteristics

|   |   |
|---|---|
| Number of Differential Pairs per Column | 5 |
|---|---|

|           |              |
|-----------|--------------|
| Data Rate | 20 – 25 Gb/s |
|-----------|--------------|

### Contact Features

|                |        |
|----------------|--------|
| Contact Layout | Inline |
|----------------|--------|

|                            |                 |
|----------------------------|-----------------|
| Contact Mating Area Length | 5.5 mm[.217 in] |
|----------------------------|-----------------|

|   |  |
|---|--|
| PCB Contact Termination Area Plating Material Thickness | .76 – 1.52 $\mu\text{m}$ [30 – 60 $\mu\text{in}$ ] |
|---|--|

|              |     |
|--------------|-----|
| Contact Type | Pin |
|--------------|-----|

|   |   |
|---|---|
| Contact Underplating Material Thickness | 1.27 $\mu\text{m}$ [50 $\mu\text{in}$ ] |
|---|---|

|  |   |
|--|---|
| Contact Mating Area Plating Material Thickness | .76 $\mu\text{m}$ [29.92 $\mu\text{in}$ ] |
|--|---|

|                                      |      |
|--------------------------------------|------|
| Contact Mating Area Plating Material | Gold |
|--------------------------------------|------|

|  |       |
|--|-------|
| PCB Contact Termination Area Plating Material Finish | Matte |
|--|-------|

|                      |           |
|----------------------|-----------|
| Contact Shape & Form | Dual Beam |
|----------------------|-----------|

|                               |        |
|-------------------------------|--------|
| Contact Underplating Material | Nickel |
|-------------------------------|--------|

|   |     |
|---|-----|
| PCB Contact Termination Area Plating Material | Tin |
|---|-----|

|                       |              |
|-----------------------|--------------|
| Contact Base Material | Copper Alloy |
|-----------------------|--------------|

|                              |       |
|------------------------------|-------|
| Contact Current Rating (Max) | .75 A |
|------------------------------|-------|

### Termination Features

|                                |                 |
|--------------------------------|-----------------|
| Termination Post & Tail Length | 1.4 mm[.055 in] |
|--------------------------------|-----------------|

|   |                          |
|---|--------------------------|
| Termination Method to Printed Circuit Board | Through Hole - Press-Fit |
|---|--------------------------|

### Mechanical Attachment

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

|                |         |
|----------------|---------|
| Guide Hardware | Without |
|----------------|---------|

|                     |      |
|---------------------|------|
| PCB Mount Retention | With |
|---------------------|------|

|                          |                       |
|--------------------------|-----------------------|
| PCB Mount Retention Type | Action/Compliant Tail |
|--------------------------|-----------------------|

|                  |      |
|------------------|------|
| Mating Alignment | With |
|------------------|------|

|                       |              |
|-----------------------|--------------|
| Mating Alignment Type | Polarization |
|-----------------------|--------------|

|                         |             |
|-------------------------|-------------|
| Connector Mounting Type | Board Mount |
|-------------------------|-------------|

### Housing Features

|                          |   |
|--------------------------|---|
| Number of Shrouded Sides | 3 |
|--------------------------|---|



|                    |                              |
|--------------------|------------------------------|
| End Wall Location  | Left                         |
| Housing Material   | LCP (Liquid Crystal Polymer) |
| Housing Color      | Black                        |
| Centerline (Pitch) | 1.9 mm[.075 in]              |

### Dimensions

|                             |                   |
|-----------------------------|-------------------|
| Connector Length            | 25.6 mm[1.008 in] |
| Connector Height            | 11.95 mm[.47 in]  |
| Connector Width             | 24.8 mm[.976 in]  |
| PCB Thickness (Recommended) | 3 mm[.118 in]     |
| PCB Hole Diameter           | .39 mm[.015 in]   |
| Row-to-Row Spacing          | 1.15 mm[.045 in]  |

### Usage Conditions

|                             |                           |
|-----------------------------|---------------------------|
| Operating Temperature Range | -55 – 85 °C[-67 – 185 °F] |
|-----------------------------|---------------------------|

### Operation/Application

|                     |        |
|---------------------|--------|
| Circuit Application | Signal |
|---------------------|--------|

### Industry Standards

|                        |            |
|------------------------|------------|
| UL File Number         | E28476     |
| UL Rating              | Recognized |
| CSA Certified          | Yes        |
| UL Flammability Rating | UL 94V-0   |

### Packaging Features

|                  |                  |
|------------------|------------------|
| Packaging Method | Box & Tube, Tube |
|------------------|------------------|

### 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 2022 (224)<br>Candidate List Declared Against: JUNE 2022 (224)<br>Does not contain REACH SVHC |
| Halogen Content                               | Low Halogen - Br, Cl, F, I < 900 ppm per  |

homogenous material. Also BFR/CFR/PVC Free

Solder Process Capability

Not reviewed for solder process capability

#### 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 # 2132698-1  
IMP1000,R,RA5P12C,UG,39

## Also in the Series | IMPACT



High Speed Backplane Connectors  
(1769)

## Documents

### Product Drawings

[IMP1000,HMP,V5P12C,UG,LEW39,5.5](#)

English

### CAD Files

[3D PDF](#)

[3D](#)



**Customer View Model**

[ENG\\_CVM\\_CVM\\_2143629-2\\_D.2d\\_dxf.zip](#)

English

**Customer View Model**

[ENG\\_CVM\\_CVM\\_2143629-2\\_D.3d\\_igs.zip](#)

English

**Customer View Model**

[ENG\\_CVM\\_CVM\\_2143629-2\\_D.3d\\_stp.zip](#)

English

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**Product Specifications**

[Application Specification](#)

English

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**Agency Approvals**

[Agency Approval Document](#)

English