



Free Height

TE Internal #: 3-5177986-6  
PCB Mount Header, Vertical, Board-to-Board, 140 Position, .8 mm [.031 in] Centerline, Fully Shrouded, Gold, Surface Mount, Signal, Free Height

[View on TE.com >](#)

Connectors > PCB Connectors > PCB Headers & Receptacles > Free Height Plug Connector: Board-Board, Vertical, 140, 0.8mm



PCB Connector Assembly Type: **PCB Mount Header**  
PCB Mount Orientation: **Vertical**  
Connector System: **Board-to-Board**  
Number of Positions: **140**  
Centerline (Pitch): **.8 mm [ .031 in ]**

[All Free Height Plug Connector: Board-Board, Vertical, 140, 0.8mm \(18\)](#)

Features

Electrical Characteristics

Operating Voltage	100 VAC
Insulation Resistance	2 MΩ
Dielectric Withstanding Voltage (Max)	500 VAC

Dimensions

Stack Height	8 mm, 20 mm, 12 mm, 16 mm[.63 in][.315 in][.787 in][.472 in]
Connector Height	8 mm[.315 in]

Packaging Features

	.5 in
Packaging Quantity	400
Packaging Method	Tape & Reel

Usage Conditions

--	--



Housing Temperature Rating	High
Operating Temperature Range	-40 – 125 °C[-40 – 257 °F]

Body Features

Assembly Process Feature Material	Steel
Primary Product Color	Natural

Operation/Application

Assembly Process Feature	Pick and Place Cover
Circuit Application	Signal

Mechanical Attachment

Mounting Alignment Feature Length	.5 mm[.02 in]
Mating Alignment Type	Polarization
PCB Mount Alignment Type	Positioning Bosses
PCB Mount Retention	Without
PCB Mount Alignment	With
Connector Mounting Type	Board Mount
Mating Alignment	With

Termination Features

Rectangular Termination Post & Tail Width	.25 mm[.01 in]
Rectangular Termination Post & Tail Thickness	.2 mm[.008 in]
Termination Method to PCB	Surface Mount

Contact Features

PCB Contact Termination Area Plating Material Finish	Matte
Contact Mating Area Plating Material Thickness	.2 μm[8 μin]
Mating Tab Width	.4 mm[.016 in]
PCB Contact Termination Area Plating Material Thickness	2 μm[78.74 μin]
Contact Layout	Inline
Contact Base Material	Brass
Mating Tab Thickness	.2 mm[.008 in]
PCB Contact Termination Area Plating Material	Tin
Contact Mating Area Plating Material Finish	Matte
Contact Mating Area Plating Material	Gold
Contact Type	Tab



Contact Current Rating (Max)	.5 A
------------------------------	------

Housing Features

Mating Entry Location	Top
Housing Material	Matte
Centerline (Pitch)	.8 mm[.031 in]

Configuration Features

Board-to-Board Configuration	Parallel
Stackable	Yes
PCB Mount Orientation	Vertical
Number of Positions	140

Product Type Features

PCB Connector Assembly Type	PCB Mount Header
Connector System	Board-to-Board
Header Type	Fully Shrouded
Sealable	No
Connector & Contact Terminates To	Printed Circuit Board

Industry Standards

UL Flammability Rating	UL 94V-0
------------------------	----------

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) Candidate List Declared Against: JUNE 2024 (241) 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

Reflow solder capable to 260°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 # CAT-313-RCB140

Receptacle Connector: Free Height, PCB Mount, Vertical

Also in the Series | Free Height

Board-to-Board Headers & Receptacles(751)

PCB Headers & Receptacles(751)

Customers Also Bought

TE Part #5177985-6

0.8FH,R05H.5,140,08/Sn,TR,SC

TE Part #5177986-6

0.8FH,P05H.5,140,08/Sn,TR,SC

TE Part #1-2324271-3

RIGHT SEGMENT LGA4189-4 SOCKETP4 FOR ODM

TE Part #1-2324271-4

LEFT SEGMENT LGA4189-4 SOCKET-P4 FOR ODM





TE Part #2-2330550-1  
SOCKET P4 BOLSTER PLATE ASSY, W /O COVER



TE Part #2-2330551-1  
SOCKET P4/P5 BACKPLATE ASSY, STUD 6.02MM



TE Part #2-2330553-1  
SOCKET P4/P5 DUST COVER, LGA4189



TE Part #1-2176397-4  
3502 3R6 1%



TE Part #CONSMA001-C-G  
SMA Jack 50 Ohm PCB Through Hole



TE Part #L9000279-01  
SMA Jack 50 Ohm .062 PCB Edge Mount

Documents

CAD Files

3D PDF

3D

Customer View Model

ENG\_CVM\_CVM\_3-5177986-6\_D.2d\_dxf.zip

English

Customer View Model

ENG\_CVM\_CVM\_3-5177986-6\_D.3d\_igs.zip

English

Customer View Model

ENG\_CVM\_CVM\_3-5177986-6\_D.3d\_stp.zip

English

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

Datasheets & Catalog Pages

Fine Pitch Stacking Connectors - 0.8mm Free Height (FH) Connectors

English

Product Specifications

Product Specification

English

Product Specification

English

Agency Approvals

UL

English

3-5177986-6

PCB Mount Header, Vertical, Board-to-Board, 140 Position, .8 mm [.031 in] Centerline,  
Fully Shrouded, Gold, Surface Mount, Signal, Free Height

