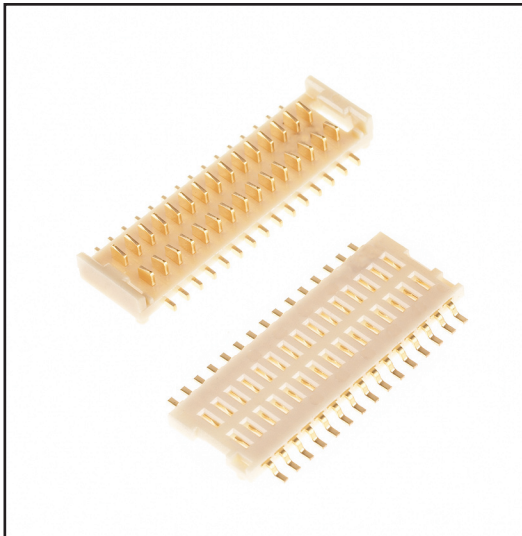


3M™ Board Stacking Connector System

1.0 mm, Surface Mount, 2.0 mm and 2.5 mm Stack Height

P10 Series



- 1.0 mm pitch connector system ideal for applications with limited space
- Suitable for rigid-to-rigid or rigid-to-flexible circuit board connection
- Integrated locking mechanism with “tactile click” action provides complete mating and high resistance to vibration and shock
- Compatible with automated pick and place
- Tape and reel packaging
- Ultra-low stacking heights of 2.0 and 2.5 mm
- See Regulatory Information Appendix (RIA) for chemical compliance information

Date Modified: May 4, 2009

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Sheet 1 of 5

Physical

Insulation:

Material: High Temp Plastic

Flammability: UL 94V-0

Color: Natural

Contact :

Material: Copper Alloy

Plating:

Underplating: 1.27 μm [50 $\mu\text{”}$] Nickel

Wiping Area: 0.2 μm [8 $\mu\text{”}$] Gold Overall

Mechanical:

Durability: 20 insertion/ withdrawal cycles

Insertion Force: Max. 44.1 N [4.50 kgf] 20 contacts

Removal Force: Min 6.67 N [0.68 kgf] 20 contacts

Electrical

Current Rating: 0.5A per contact

Voltage Rating: 60 $V_{AC/DC}$

Insulation Resistance: 10^3 M Ω min. at 500 V_{DC}

Withstanding Voltage: 250 V_{AC}

Environmental

Temperature Rating: -55°C to +85°C

Process Rating: Maximum Peak Surface Temperature of 245°C for 30 sec, IR Reflow
300°C for 5 sec, Soldering Iron

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3M™ Board Stacking Connector System

1.0 mm, Surface Mount, 2.0 mm and 2.5 mm Stack Height

P10 Series

Dimensions

Socket

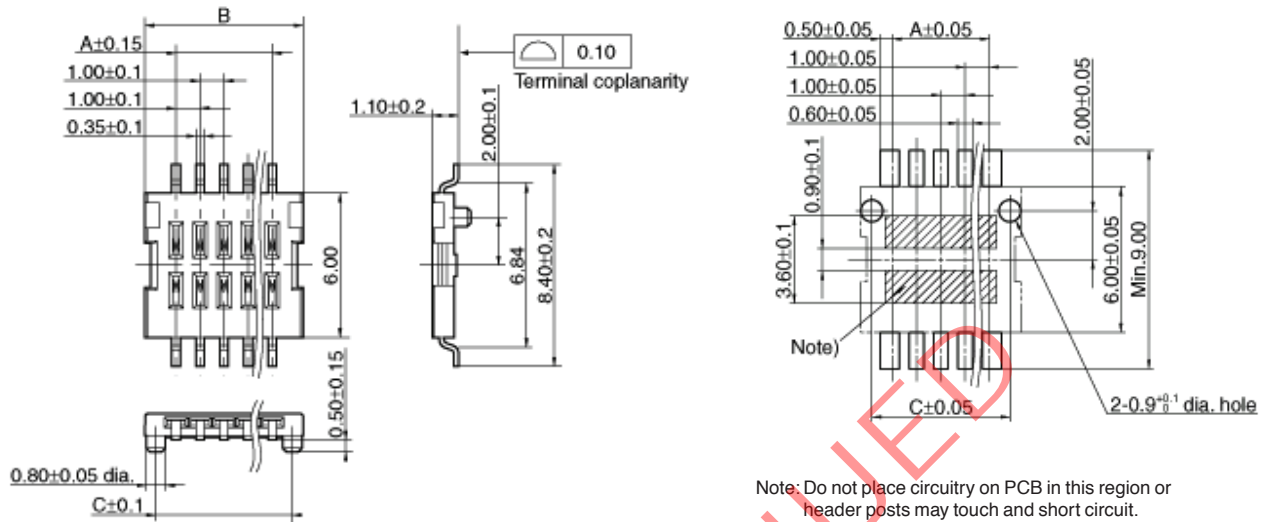


Table 1

Contact Quantity	A	B	C
010	4.00 [0.158]	6.58 [0.259]	5.68 [0.224]
016	7.00 [0.276]	9.58 [0.377]	8.68 [0.342]
020	9.00 [0.355]	11.58 [0.456]	10.68 [0.421]
030	14.00 [0.552]	16.58 [0.653]	15.68 [0.618]

mm
[Inch]

Tolerance Unless Noted		
	.0	.00
mm	±.3	±.20

[] Dimensions for Reference only

Ordering Information

Socket
P10-XXXSLT-A-G (RIA E1 and C1 apply)

Contact Quantity
See Table 1

TS-2255-B
Sheet 2 of 5



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3M™ Board Stacking Connector System

1.0 mm, Surface Mount, 2.0 mm and 2.5 mm Stack Height

P10 Series

Dimensions

Plug

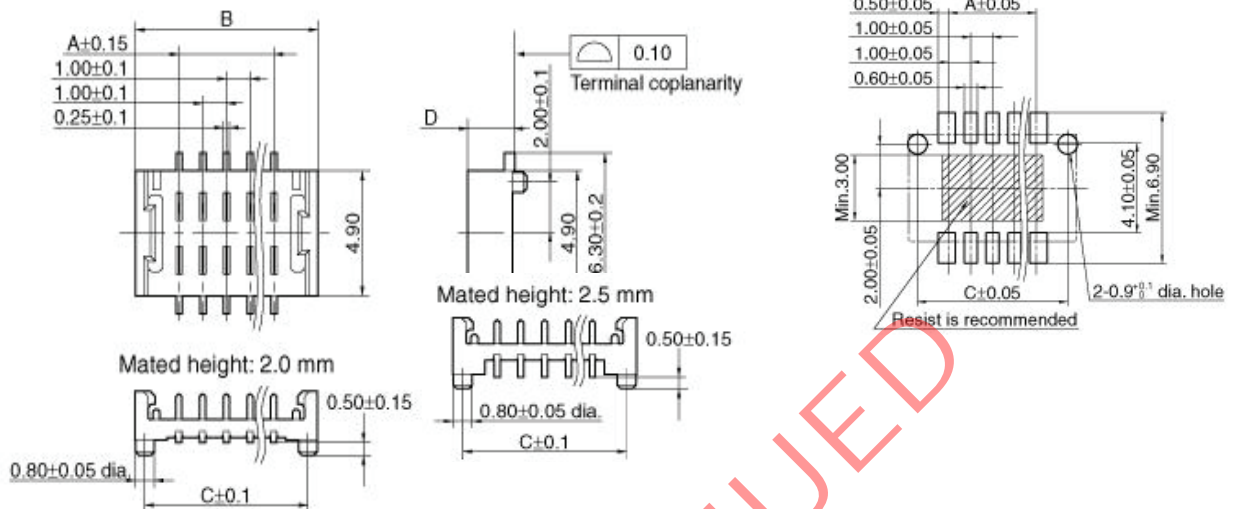


Table 2

Contact Quantity	A	B	C
10	4.00 [0.158]	7.70 [0.303]	6.68 [0.271]
16	7.00 [0.276]	10.70 [0.422]	9.88 [0.389]
20	9.00 [0.355]	12.70 [0.500]	11.88 [0.468]
30	14.00 [0.552]	17.70 [0.697]	16.88 [0.665]

mm [Inch]		
Tolerance Unless Noted		
	.0	.00
mm	±.3	±.20

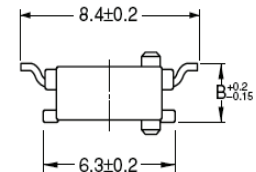
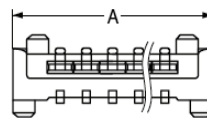
[] Dimensions for Reference only

Mated Dimensions

Table 2	
Contact Quantity	A
10	7.70 [0.303]
16	10.70 [0.422]
20	12.70 [0.500]
30	17.70 [0.697]

Mated Height	B
2.0 mm	2.00 [0.79]
2.5 mm	2.50 [0.099]

Note: Common for all Contact Quantities.



Ordering Information

P10-XXXPLT-X-G (RIA E1 and C1 Apply)

Contact Quantity:
See Table 2

Mated Height:
A = 2.0 mm
B = 2.5 mm

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Sheet 3 of 5

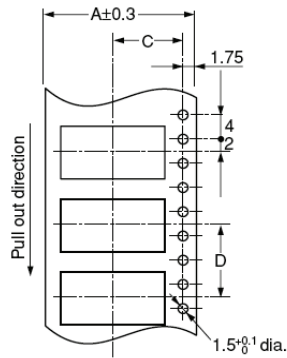
3M™ Board Stacking Connector System

1.0 mm, Surface Mount, 2.0 mm and 2.5 mm Stack Height

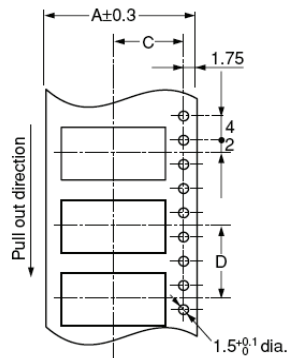
P10 Series

Tape and Reel Information

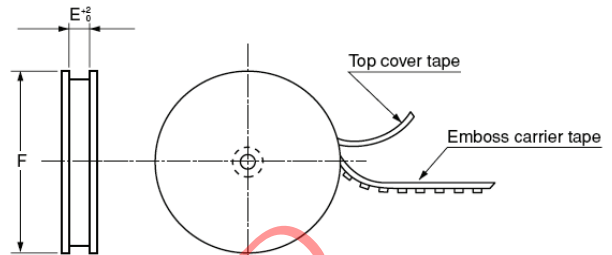
Socket



Plug



Paper Reel

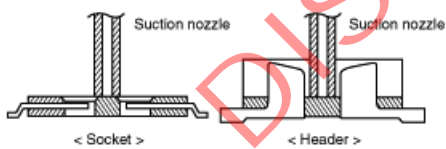


Note:
When stripping off the top cover tape, do not tear the tape itself

Dimension Table - 1 Reel, 1,000 Pieces Embossed tape package

A	B	C	D	E	F
24.00 [0.946]	---	11.50 [0.453]	12.00 [0.473]	24.40 [0.961]	330 dia.

Automatic Pick and Place



Use these suction nozzle types to allow automatic pick and place without the need for suction tape.

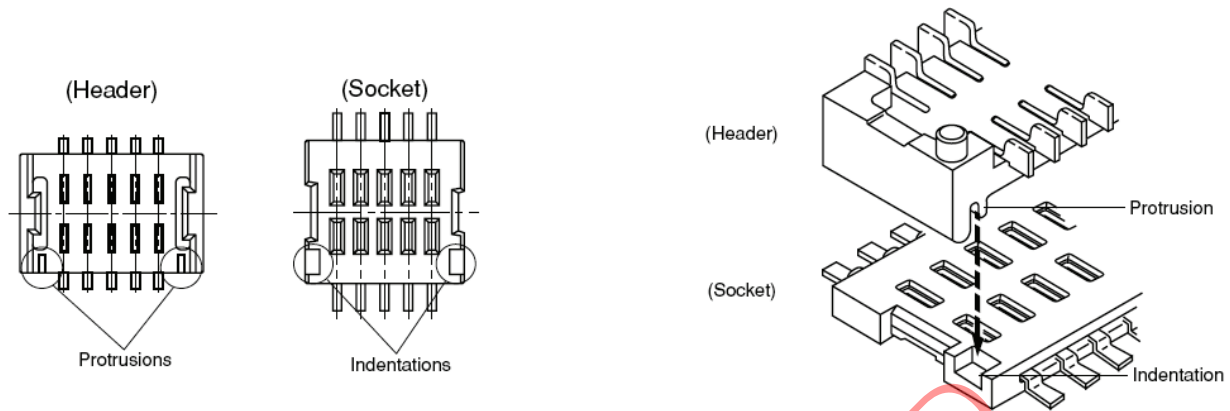
TS-2255-B
Sheet 4 of 5

3M™ Board Stacking Connector System

1.0 mm, Surface Mount, 2.0 mm and 2.5 mm Stack Height

P10 Series

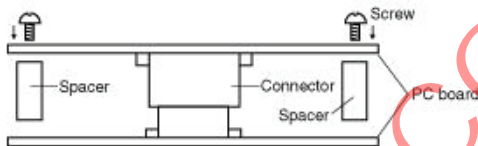
Product Use Recommendations



Note: Prevention of reverse mating

The socket and plug are designed to prevent mismatching. If excessive force is applied the insulator may break. Be sure to fit the plug and socket together so that the projections on the plug line up with the indentations in the socket.

High Vibration and Shock Applications



In high vibration and shock use applications it is recommended that the PCB is fixed in place using a fastening mechanism. This will prevent separation of the mated connectors and high stress on solder joints.

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Sheet 5 of 5

Regulatory Information Appendix

3M Electronic Solutions Division/Interconnect

EUROPE

Appendix E1: European Union RoHS

Directive 2002/95/EC, Restriction of the Use of Certain Hazardous Substances in Electrical & Electronic Equipment, as amended by EU Commission Decision 2005/618/EC.

This product is RoHS Compliant 2005/95/EC.

“RoHS Compliant 2005/95/EC” means that the product or part (“Product”) does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2005/618/EC, unless the substance is in an application that is exempt under EU RoHS. Unless otherwise stated by 3M in writing, this information represents 3M’s best knowledge and belief based upon information provided by third party suppliers to 3M.

In the event any product is proven not to conform with 3M’s Regulatory Information Appendix, then 3M’s entire liability and Buyer’s exclusive remedy will be in accordance with the Warranty stated below.

Appendix E2: European Union RoHS

Directive 2002/95/EC, Restriction of the Use of Certain Hazardous Substances in Electrical & Electronic Equipment, as amended by EU Commission Decision 2005/618/EC.

This product contains lead in the compliant pin area in excess of the maximum concentration value allowed but is compliant by exemption under EU Commission Decision 2005/747/EC.

“RoHS Compliant 2005/95/EC” means that the product or part (“Product”) does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2005/618/EC, unless the substance is in an application that is exempt under EU RoHS. Unless otherwise stated by 3M in writing, this information represents 3M’s best knowledge and belief based upon information provided by third party suppliers to 3M.

In the event any product is proven not to conform with 3M’s Regulatory Information Appendix, then 3M’s entire liability and Buyer’s exclusive remedy will be in accordance with the Warranty stated below.

Appendix E3: European Union RoHS

Directive 2002/95/EC, Restriction of the Use of Certain Hazardous Substances in Electrical & Electronic Equipment as amended by Commission Decision 2005/618/EC.

This product contains lead in the solder tail area in excess of the maximum concentration value allowed.

Unless otherwise stated by 3M in writing, this information represents 3M’s best knowledge and belief based upon information provided by third party suppliers to 3M.

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Appendix E4: European Union RoHS

Directive 2002/95/EC, Restriction of the Use of Certain Hazardous Substances in Electrical & Electronic Equipment, as amended by EU Commission Decision 2005/618/EC.

This product contains decaBDE in the insulating material in excess of the maximum concentration value allowed but is compliant by exemption under EU Commission Decision 2005/717/EC.

“RoHS Compliant 2005/95/EC” means that the product or part (“Product”) does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2005/618/EC, unless the substance is in an application that is exempt under EU RoHS. Unless otherwise stated by 3M in writing, this information represents 3M’s best knowledge and belief based upon information provided by third party suppliers to 3M.

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Appendix E5: European Union RoHS

Directive 2002/95/EC, Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, as amended by EU Commission Decision 2005/618/EC.

This product contains lead in excess of the maximum concentration value allowed but is compliant by exemption under Item 6 of the Annex to the Directive.

“RoHS Compliant 2005/95/EC” means that the product or part (“Product”) does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2005/618/EC, unless the substance is in an application that is exempt under EU RoHS. Unless otherwise stated by 3M in writing, this information represents 3M’s best knowledge and belief based upon information provided by third party suppliers to 3M.

In the event any product is proven not to conform with 3M’s Regulatory Information Appendix, then 3M’s entire liability and Buyer’s exclusive remedy will be in accordance with the Warranty stated below.

CHINA

Appendix C1: China RoHS



Electronic Industry Standard of the People’s Republic of China, SJ/T11363-2006, Requirements for Concentration Limits for Certain Hazardous Substances in Electronic Information Products.

This symbol, per Marking for the Control of Pollution Caused by Electronic Information Products, SJ/T11364-2006, means that the product or part **does not** contain any of the following substances in excess of the following maximum concentration values in any homogeneous material: (a) 0.1% (by weight) for lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers; or (b) 0.01% (by weight) for cadmium. Unless otherwise stated by 3M in writing, this information represents 3M’s best knowledge and belief based upon information provided by third party suppliers to 3M.

In the event any product is proven not to conform with 3M’s Regulatory Information Appendix, then 3M’s entire liability and Buyer’s exclusive remedy will be in accordance with the Warranty stated below.

Appendix C2: China RoHS



Electronic Industry Standard of the People’s Republic of China, SJ/T11363-2006, Requirements for Concentration Limits for Certain Hazardous Substances in Electronic Information Products.

This symbol, per Marking for the Control of Pollution Caused by Electronic Information Products, SJ/T11364-2006, means that the product or part **does** contain a substance, as detailed in the chart below, in excess of the following maximum concentration values in any homogeneous material: (a) 0.1% (by weight) for lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers; or (b) 0.01% (by weight) for cadmium. Unless otherwise stated by 3M in writing, this information represents 3M’s best knowledge and belief based upon information provided by third party suppliers to 3M.

The numerical reference in the symbol above should not be construed as a representation regarding the product’s life or an extension of a product warranty. The product warranty is stated below. In the event any product is proven not to conform with 3M’s Regulatory Information Appendix, then 3M’s entire liability and Buyer’s exclusive remedy will be in accordance with the product Warranty stated below.

产品中有毒有害物质或元素的名称及含量 Name and Content of Hazardous Substances or Elements

部件名称 (Part or Component Name)	有毒有害物质或元素 (Hazardous Substances or Elements)					
	铅(Pb)	汞(Hg)	镉(Cd)	六价铬(Cr(VI))	多溴联苯(PBB)	多溴二苯醚(PBDE)
端子镀层(contact plating)	×	○	○	○	○	○
○: 表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T11363-2006 标准规定的限量要求以下。(Indicates that this hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in SJ/T11363-2006.) ×: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T11363-2006 标准规定的限量要求。(Indicates that this hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in SJ/T11363-2006.)						

Appendix C3: China RoHS

Electronic Industry Standard of the People's Republic of China, SJ/T11363-2006, Requirements for Concentration Limits for Certain Hazardous Substances in Electronic Information Products.

This symbol, per Marking for the Control of Pollution Caused by Electronic Information Products, SJ/T11364-2006, means that the product or part **does** contain a substance, as detailed in the chart below, in excess of the following maximum concentration values in any homogeneous material: (a) 0.1% (by weight) for lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers; or (b) 0.01% (by weight) for cadmium. Unless otherwise stated by 3M in writing, this information represents 3M's best knowledge and belief based upon information provided by third party suppliers to 3M.

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产品中有毒有害物质或元素的名称及含量 Name and Content of Hazardous Substances or Elements

部件名称 (Part or Component Name)	有毒有害物质或元素 (Hazardous Substances or Elements)					
	铅(Pb)	汞(Hg)	镉(Cd)	六价铬(Cr(VI))	多溴联苯(PBB)	多溴二苯醚(PBDE)
合金(Metal alloy)	×	○	○	○	○	○
○: 表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T11363-2006 标准规定的限量要求以下。(Indicates that this hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in SJ/T11363-2006.) ×: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T11363-2006 标准规定的限量要求。(Indicates that this hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in SJ/T11363-2006.)						

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This product will be free from defects in material and manufacture for a period of one (1) year from the time of purchase. **3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. **Except where prohibited by law, 3M will not be liable for any indirect, special, incidental or consequential loss or damage arising from this 3M product, regardless of the legal theory asserted.**



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