



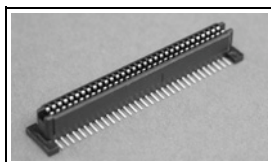
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5120521-1 Product Details

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5120521-1

TE Internal Number: 5120521-1

Active

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1 mm Free Height (IEEE 1386)

Always EU RoHS/ELV Compliant (Statement of Compliance)

Product Highlights:

- Connector Style = Receptacle
- 64 Positions
- Stack Height = 8.00 mm, 9.00 mm, 10.00 mm
- With PCB Mount Retention
- With PCB Mount Alignment

[View all Features](#)

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Documentation & Additional Information

Product Drawings:

- [RECEPTACLE ASSY, 1.0mm FH\(IEEE1386\) CONNECTOR \(PDF, English\)](#)

Catalog Pages/Data Sheets:

- [Fine Pitch Stacking Connectors - 1.0mm Free Height \(... \(PDF, English\)](#)

Product Specifications:

- [1.0 mm Mezzanine Connectors \(PDF, English\)](#)

Application Specifications:

- [1.0 mm Free Height \(FH\) Plug and Receptacle Connecto... \(PDF, English\)](#)

Instruction Sheets:

- None Available

CAD Files: [\(CAD Format & Compression Information\)](#)

- [2D Drawing \(DXF, Version A\)](#)
- [3D Model \(IGES, Version A\)](#)
- [3D Model \(STEP, Version A\)](#)

[List all Documents](#)

Additional Product Images:

- [Product Photo](#)

Related Products:

- [Tooling](#)
- [Mating Products \(9\)](#)

Product Features (Please use the Product Drawing for all design activity)

Product Type Features:

- PCB Mount Retention = With
- PCB Mount Alignment = With
- Product Type = Connector
- Connector Type = Connector Assembly
- Product Line = 1mm FH
- UL File Number = E28476
- CSA File Number = LR7189
- PCB Mount Retention Type = Locating Posts
- Termination Method to PC Board = Surface Mount
- PCB Mounting Orientation = Vertical
- PCB Mount Alignment Type = Locating Post(s)

Electrical Characteristics:

- Contact - Rated Current (A) = 0.8
- Operating Voltage Reference = AC/DC
- Operating Voltage (VAC) = 250
- Operating Voltage (VDC) = 250

Termination Features:

- Tail Length (mm [in]) = 2.05 [0.081]
- Tail Orientation = In-line

Dimensions:

- Length (X-Axis) (mm [in]) = 34.22 [1.347]
- Width (Z-Axis) (mm [in]) = 6.04 [0.238]
- Profile Height (Y-Axis) (mm [in]) = 5.37 [0.211]

Body Features:

- Underplate Material Thickness (µm [µin]) = 1.27 [50.000]
- Mating Retention = Without

Housing Features:

- Connector Style = Receptacle
- Centerline (mm [in]) = 1.00 [0.039]
- UL Flammability Rating = UL 94V-0
- Housing Color = Black
- Mating Alignment = Without
- Housing Material = Thermoplastic

Configuration Features:

- Number of Positions = 64
- Stack Height (mm [in]) = 10.00 [0.394], 8.00 [0.315], 9.00 [0.354]
- Number of Columns = 32
- Number of Rows = 2
- Differential Signaling = Yes

Industry Standards:

- [RoHS/ELV Compliance](#) = RoHS compliant, ELV compliant
- [Lead Free Solder Processes](#) = Reflow solder capable to 245°C, Reflow solder capable to 260°C
- RoHS/ELV Compliance History = Always was RoHS compliant
- Industry Standard = IEEE 1386 Mezzanine Connector
- Agency/Standard = UL, CSA
- UL Rating = Listed
- CSA Certified = Yes

Environmental:

- Operating Temperature (°C [°F]) = -55 - +110 [-67 - +230]

Conditions for Usage:

- Applies To = Printed Circuit Board
- Board-to-Board Configuration = Mezzanine

Contact Features:

- Contact Base Material = Phosphor Bronze
- [Contact Plating, Mating Area, Material](#) = Gold
- Contact Plating, Mating Area, Thickness (μm [μin]) = 0.76 [29.92]
- Contact Plating, Termination Area, Material = Matte Tin
- Contact Plating, Termination Area, Thickness (μm [μin]) = 3.81 [150]
- Underplate Material = Nickel
- Contact Design = Single Beam
- Pitch (mm [in]) = 16.00 [0.630]

Operation/Application:

- Pick and Place Cover = Without
- Application Use = Board-to-Board
- Contact Transmits (Typical Application) = Signal (Data)

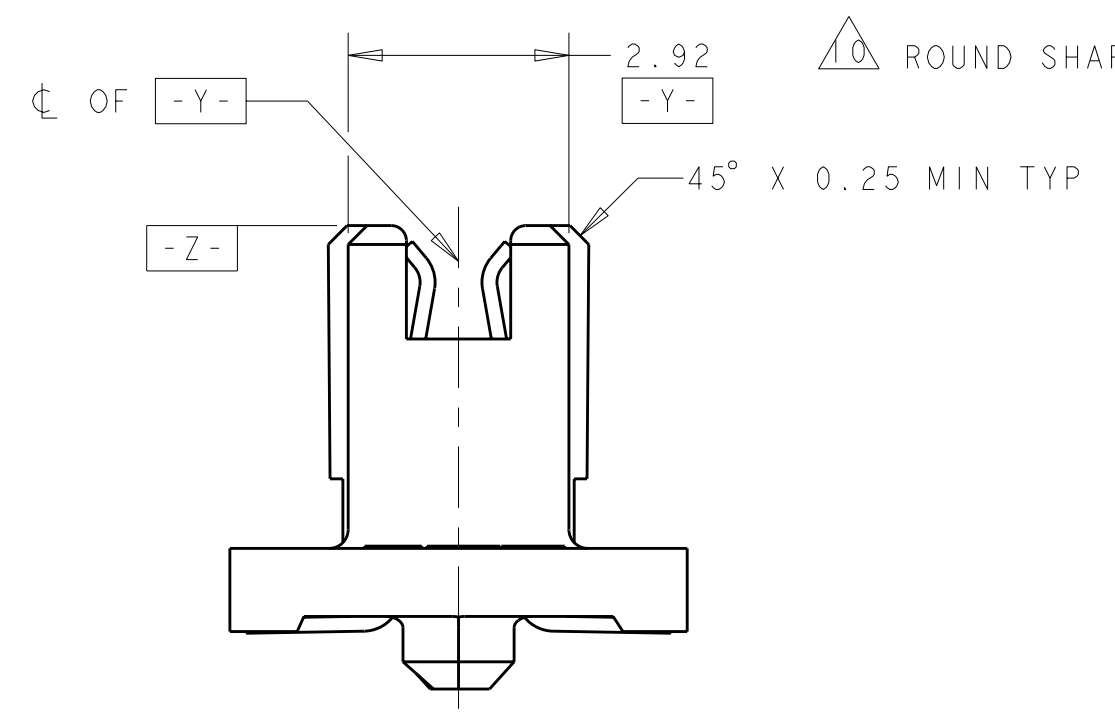
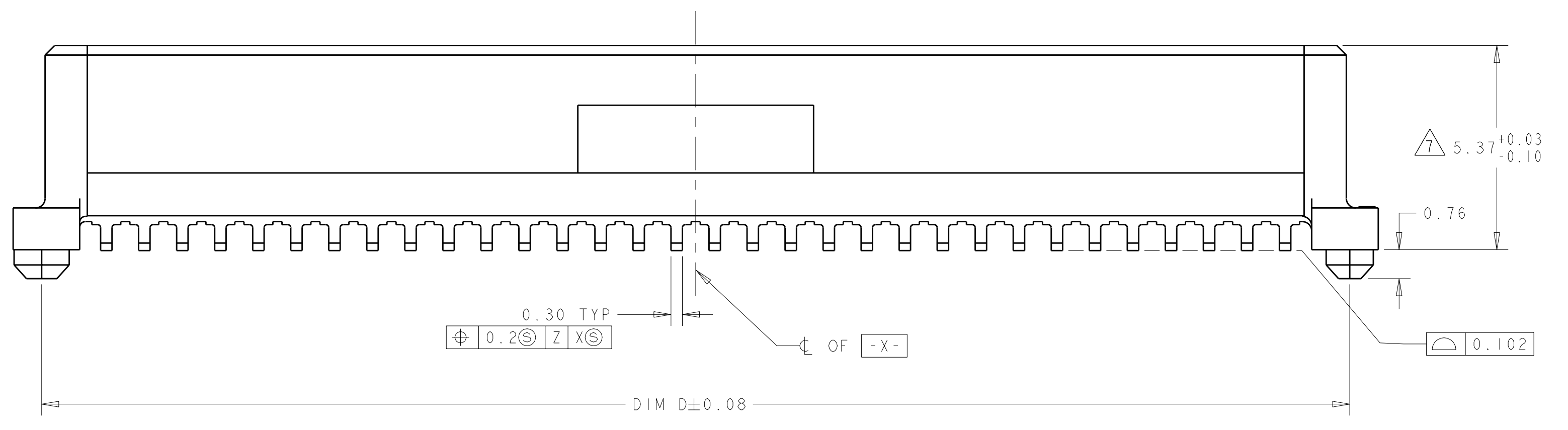
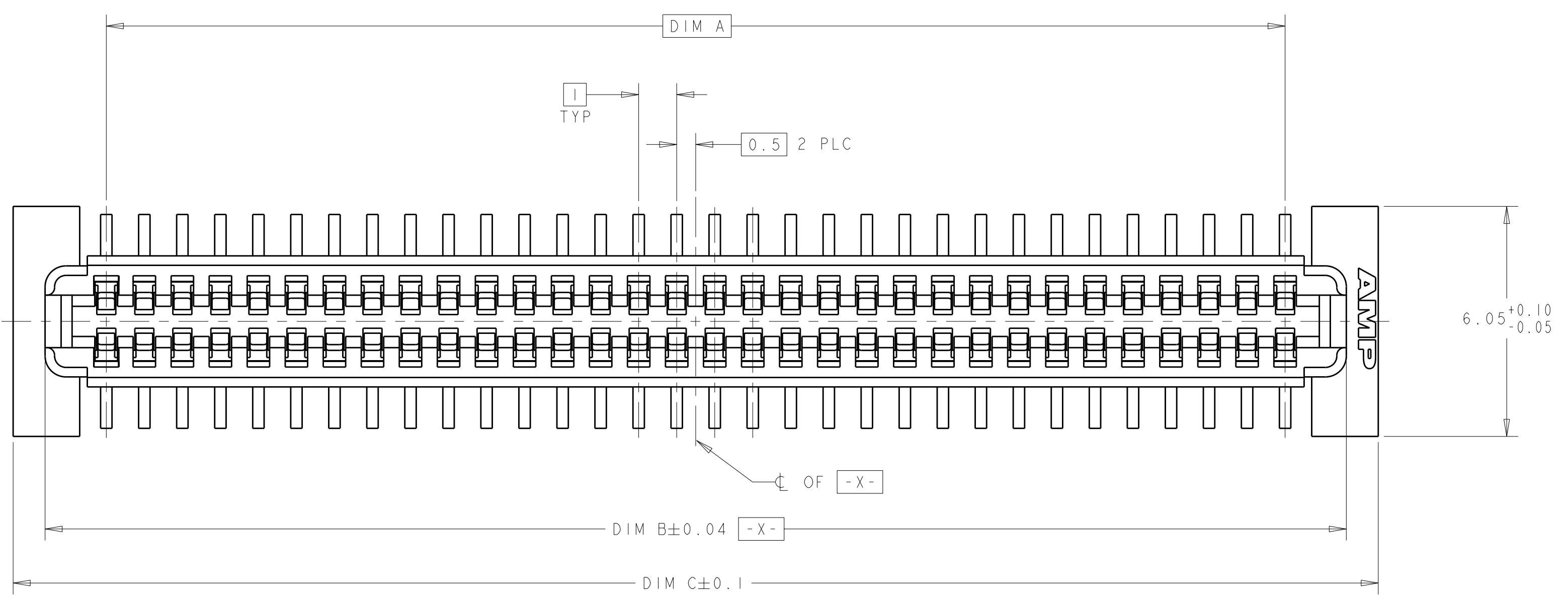
Packaging Features:

- Packaging Method = Tape & Reel

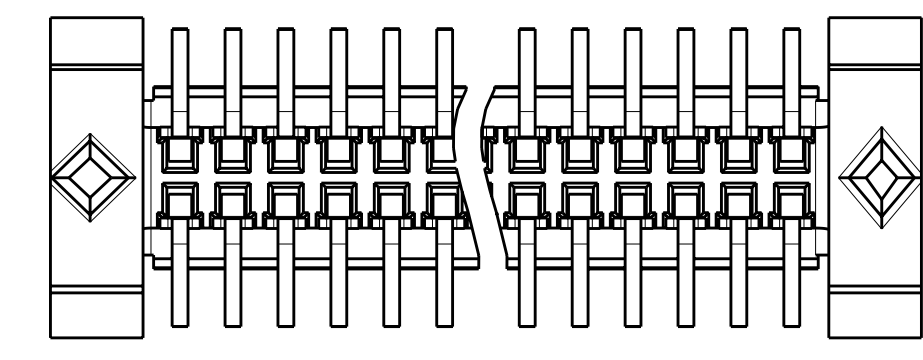
Other:

- Brand = AMP

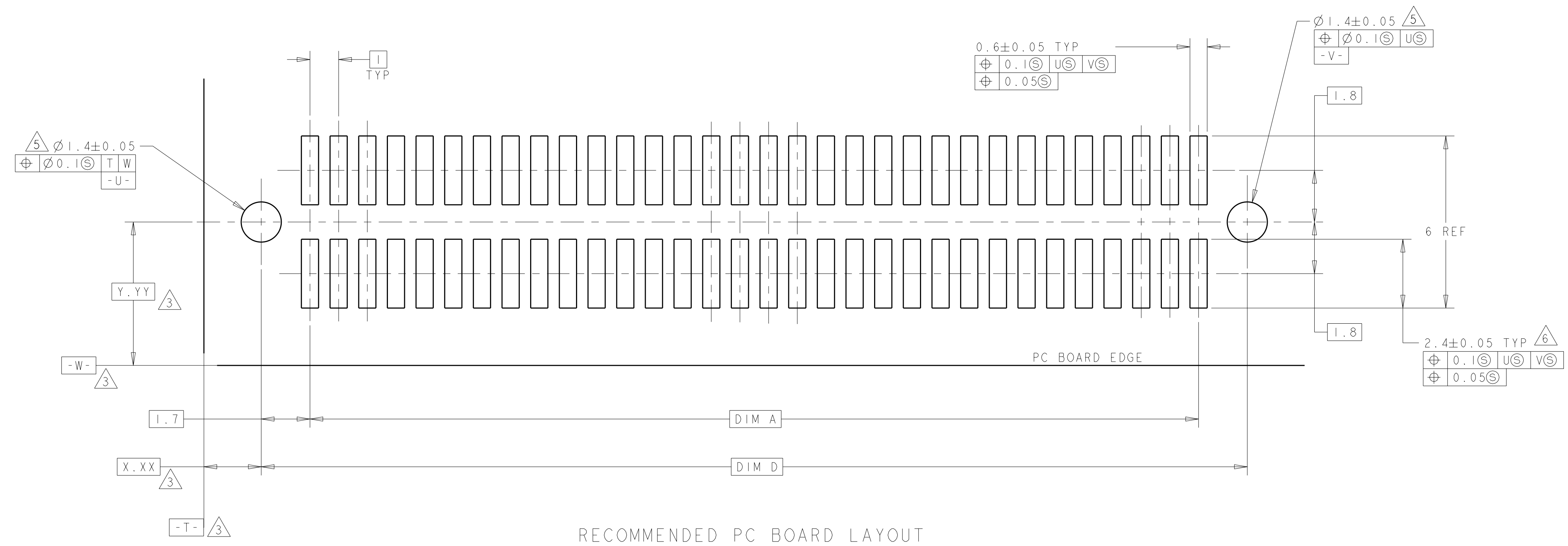
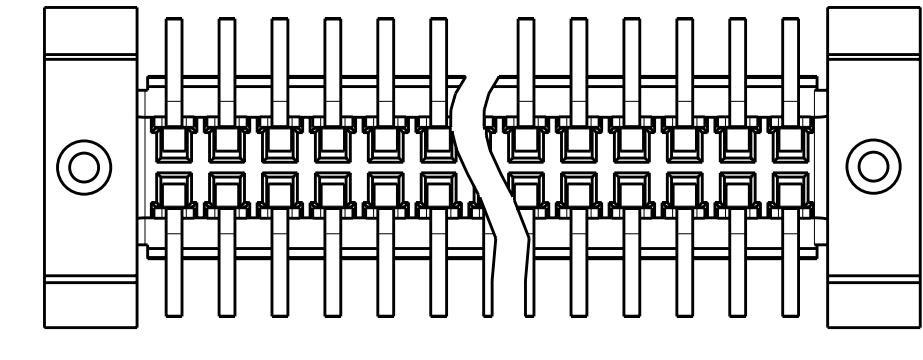
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9 STYLE A POSTS



10 STYLE B POSTS



RECOMMENDED PC BOARD LAYOUT

1. HOUSING MATERIAL: HIGH TEMPERATURE THERMOPLASTIC, COLOR: BLACK. CONTACT MATERIAL: PHOSPHOR BRONZE.
2. CONTACT FINISH: NICKEL UNDERPLATE ALL OVER, MATING SURFACES PLATED TO MEET PL1 PERFORMANCE REQUIREMENTS OF INDUSTRY SPECIFICATION EIA-700AAAB, SOLDER TAILS PLATED TIN.
3. DATUM LOCATIONS AND BASIC DIMENSIONS TO BE ESTABLISHED BY THE CUSTOMER. CONSULT AMP ENGINEERING WHEN PLACING MULTIPLE CONNECTORS ON A PC BOARD.
4. PACKAGED IN TAPE ON REEL PER EIA-481.
5. 1.5 MIN DIAMETER HOLE SHOULD BE USED IF USING POST STYLE "A" AND PLACING ON PCB WITH VACUUM PLACEMENT EQUIPMENT.
6. SHORTER SOLDER LANDS MAY BE USED PER EIA 700AAAB, HOWEVER 2.4 LENGTH ASSURES OPTIMUM SOLDER FILLET REGARDLESS OF MANUFACTURER OF CONNECTOR.
7. REFERRED TO AS DIM H = 5.30±0.1 IN EIA700AAAB SPECIFICATION.
8. CONTACT FINISH: 0.00381 MINIMUM MATTE TIN PER ASTM B 545 ON SOLDER AREA, 0.00127 MINIMUM GOLD PER ASTM B 488 ON MATING AREA, BOTH OVER 0.00127 MINIMUM NICKEL PER SAE-AMS-QQ-N-290 ON ENTIRE CONTACT.
9. SQUARE AND DIAMOND SHAPED POSTS
10. ROUND SHAPED POSTS

POST STYLE	FINISH	DIM D	DIM C	DIM B	DIM A	STACK HGTS	POS	PART NO
10	8	44.4	45.9	44.22	41	8, 9, 10	84	3-5120521-2
10	8	34.4	35.9	34.22	31	8, 9, 10	64	3-5120521-1
10	2	44.4	45.9	44.22	41	8, 9, 10	84	2-5120521-2
10	2	34.4	35.9	34.22	31	8, 9, 10	64	2-5120521-1
9	8	44.4	45.9	44.22	41	8, 9, 10	84	1-5120521-2
9	8	34.4	35.9	34.22	31	8, 9, 10	64	1-5120521-1
9	2	44.4	45.9	44.22	41	8, 9, 10	84	5120521-2
9	2	34.4	35.9	34.22	31	8, 9, 10	64	5120521-1

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm
 TOLERANCES UNLESS OTHERWISE SPECIFIED:
 9 PLC ±
 1 PLC ±0.03
 2 PLC ±0.003
 3 PLC ±
 4 PLC ±
 ANGLES 40°-1°
 FINISH SEE TABLE

DWG: B. CARBO 29SEP04
 CHK: R. WERTZ 29SEP04
 APPD: R. WERTZ 29SEP04
 NAME: R. WERTZ
 PRODUCT SPEC: 502-1079
 APPLICATION SPEC: 114-25045
 WEIGHT: -
 CUSTOMER DRAWING

STE TE Connectivity
 RECEPTACLE ASSY, 1.0mm FH (IEEE1386) CONNECTOR
 SIZE: 100779 C=5120521
 SCALE: 10:1 SHEET 1 OF 1 REV A2