

## Stacking Height Guide for Parallel Board-to-Board Applications

### Stacking Height Guide for Parallel Board-to-Board Applications (Continued)

| Stacking Height |       | Connector Description | Pitch | Connector Sizes (No. of Positions) |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Connector Sizes (No. of Positions) <i>Continued</i> |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----------------|-------|-----------------------|-------|------------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----------------------------------------------------|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| mm              | inch  |                       |       | 10                                 | 12 | 14 | 16 | 20 | 22 | 24 | 30 | 34 | 38 | 40 | 46 | 50 | 54 | 56 | 60 | 64                                                  | 70 | 76 | 80 | 84 | 100 | 114 | 120 | 140 | 152 | 160 | 180 | 190 | 200 | 220 | 228 | 240 | 266 | 280 | 320 | 440 |
| 1.00            | 0.039 | .4mm Fine Stack       | .4mm  |                                    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                     |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 1.50            | 0.059 | .4mm Fine Stack       | .4mm  |                                    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                     |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 1.50            | 0.059 | .5mm Fine Stack       | .5mm  |                                    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                     |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 3.00            | 0.118 | .8mm Fine Stack       | .8mm  |                                    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                     |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 3.90            | 0.154 | .8mm Fine Stack       | .8mm  |                                    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                     |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 4.00            | 0.157 | .5mm Fine Mate        | .5mm  |                                    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                     |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 4.00            | 0.157 | .6mm Free Height      | .6mm  |                                    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                     |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 4.00            | 0.157 | .8mm Fine Mate        | .8mm  |                                    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                     |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 4.20            | 0.165 | .8mm Fine Stack       | .8mm  |                                    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                     |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 4.50            | 0.177 | .5mm Fine Mate        | .5mm  |                                    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                     |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 4.50            | 0.177 | .8mm Fine Mate        | .8mm  |                                    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                     |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 4.70            | 0.185 | .8mm Fine Stack       | .8mm  |                                    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                     |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 5.00            | 0.197 | .5mm Free Height      | .5mm  |                                    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                     |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 5.00            | 0.197 | .6mm Free Height      | .6mm  |                                    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                     |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 5.00            | 0.197 | .8mm Fine Stack       | .8mm  |                                    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                     |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 5.00            | 0.197 | .8mm Free Height      | .8mm  |                                    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                     |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 5.50            | 0.217 | .5mm Fine Mate        | .5mm  |                                    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                     |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 5.90            | 0.232 | .8mm Fine Stack       | .8mm  |                                    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                     |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 6.00            | 0.236 | .5mm Fine Mate        | .5mm  |                                    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                     |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 6.00            | 0.236 | .5mm Free Height      | .5mm  |                                    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                     |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 6.00            | 0.236 | .6mm Free Height      | .6mm  |                                    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                     |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

## 0.8mm Free Height (FH) Connectors

### Product Facts

- For parallel board stacking applications
- High density packaging on 0.8 [.031] centerline spacing
- Available sizes from 40 to 200 positions (in 20 position increments)
- Board stacking heights available from 5 [.197] to 16 [.630] (in 1 [.039] increments)
- Bellows type spring contacts are resistant to scooping and stubbing during mating and unmating
- Positioning bosses for proper on-board orientation
- Available packaged on "tape-and-reel" for automatic placement per EIA standards
- Recognized under the Component Program of Underwriter Laboratories Inc., File No. E28476



Tyco Electronics 0.8mm FH surface-mount connectors are designed for parallel board stacking applications using subminiature connectors to meet today's electronic industry requirements for high density packaging.

It is possible to save more than 50% of the required board space when compared to conventional 1.27 [.050] centerline connectors.

0.8mm FH connectors are ideally suited for application downsizing, such as notebook PCs, pen pads, cellular telephones and other electronic equipment requiring miniature connector packaging.

Vertical board-mount plugs and receptacles are available. By mating combinations of plug and receptacle housing heights, board-to-board stacking heights from 5 [.197] to 16 [.630] (in 1 [.039] increments) can be achieved.

The receptacles are preloaded with the Tyco Electronics unique bellows-type spring contacts for reliable electrical connection with the plugs.

In addition, right angle plugs are available which mate to standard receptacles.

### Performance Characteristics

**Voltage Rating** — 100 VAC

**Current Rating** — 0.5 ampere

**Contact Resistance** — 30 milliohms max. (initial)

**Dielectric Withstanding Voltage** — 500 VAC (1 minute)

**Operating Temperature** — -40°C to +85°C (Including terminal temperature rise)

**0.8mm Free Height (FH) Connectors (Continued)**

**Board-to-Board Stacking Heights (By Plug/Receptacle Combinations)**

Part No.: 5177984-□  
(Page 74)



Part No.: 5177983-□  
(Page 78)  
5 [.197] Stacking Height

Part No.: 5179029-□  
(Page 75)



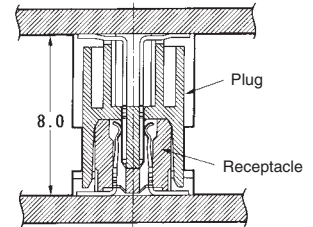
Part No.: 5177983-□  
(Page 78)  
6 [.236] Stacking Height

Part No.: 5179030-□  
(Page 76)



Part No.: 5177983-□  
(Page 78)  
7 [.276] Stacking Height

Part No.: 5179031-□  
(Page 77)



Part No.: 5177983-□  
(Page 78)  
8 [.315] Stacking Height

Part No.: 5177984-□  
(Page 74)



Part No.: 5-5179009-□  
(Page 79)  
9 [.354] Stacking Height

Part No.: 5179029-□  
(Page 75)



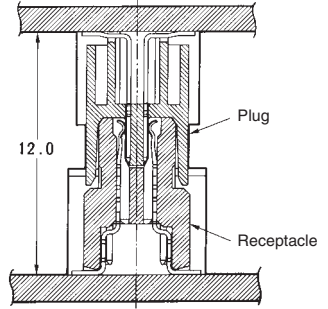
Part No.: 5-5179009-□  
(Page 79)  
10 [.394] Stacking Height

Part No.: 5179030-□  
(Page 76)



Part No.: 5-5179009-□  
(Page 79)  
11 [.433] Stacking Height

Part No.: 5179031-□  
(Page 77)



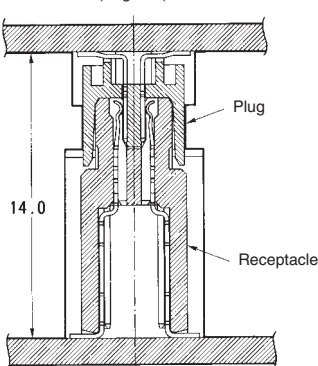
Part No.: 5-5179009-□  
(Page 79)  
12 [.472] Stacking Height

Part No.: 5177984-□  
(Page 74)



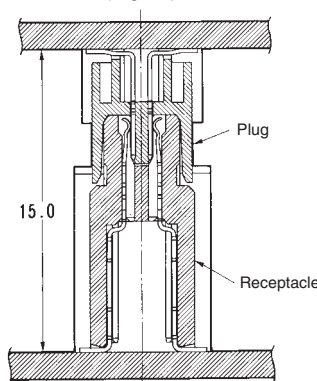
Part No.: 5-5179010-□  
(Page 80)  
13 [.512] Stacking Height

Part No.: 5179029-□  
(Page 75)



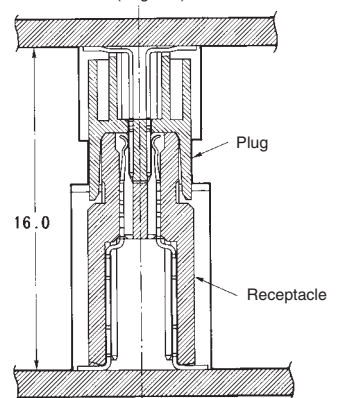
Part No.: 5-5179010-□  
(Page 80)  
14 [.551] Stacking Height

Part No.: 5179030-□  
(Page 76)



Part No.: 5-5179010-□  
(Page 80)  
15 [.591] Stacking Height

Part No.: 5179031-□  
(Page 77)



Part No.: 5-5179010-□  
(Page 80)  
16 [.630] Stacking Height

**Notes:** For specific dash nos. of sizes 40 to 200 positions (in 20-position increments), see pages 73 thru 81.  
Part Numbers are RoHS compliant.

**0.8mm Free Height (FH) Connectors** (Continued)

**0.8mm Product Tree**

| Gender | Height | Plating Au Thickness | Package Type  | Pickup Cap | 40 Pos.     | 60 Pos.     | 80 Pos.     | 100 Pos.    | 120 Pos.    | 140 Pos.    | 160 Pos.    | 180 Pos.    | 200 Pos.    |
|--------|--------|----------------------|---------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Rcpt.  | 5H     | 8µ"                  | Tube          | No         | 5177983-1   | 5177983-2   | 5177983-3   | 5177983-4   | 5177983-5   | 5177983-6   | 5177983-8   | 5177983-9   | 1-5177983-0 |
|        |        |                      | Tube          | Yes        | 5179229-1   | 5179229-2   | 5179229-3   | 5179229-4   | 5179229-5   | 5179229-6   | 5179229-8   | 5179229-9   | 1-5179229-0 |
|        |        |                      | Tape and Reel | Yes        | 5177985-1   | 5177985-2   | 5177985-3   | 5177985-4   | 5177985-5   | 5177985-6   | 5177985-8   | —           | —           |
|        |        |                      | Tube          | No         | 6123000-1   | 6123000-2   | 6123000-3   | 6123000-4   | 6123000-5   | 6123000-6   | 6123000-8   | 6123000-9   | 1-6123000-0 |
|        | 9H     | 8µ"                  | Tube          | Yes        | —           | —           | —           | —           | —           | —           | —           | —           | —           |
|        |        |                      | Tape and Reel | Yes        | 5353999-1   | 5353999-2   | 5353999-3   | 5353999-4   | 5353999-5   | 5353999-6   | 5353999-8   | —           | —           |
|        |        |                      | Tube          | No         | 5-5179009-1 | 5-5179009-2 | 5-5179009-3 | 5-5179009-4 | 5-5179009-5 | 5-5179009-6 | 5-5179009-8 | 5-5179009-9 | 6-5179009-0 |
|        |        |                      | Tube          | Yes        | —           | 5-5179232-2 | 5-5179232-3 | 5-5179232-4 | 5-5179232-5 | 5-5179232-6 | 5-5179232-8 | 5-5179232-9 | 6-5179232-0 |
|        | 13H    | 8µ"                  | Tape and Reel | Yes        | 5-5179180-1 | 5-5179180-2 | 5-5179180-3 | 5-5179180-4 | 5-5179180-5 | 5-5179180-6 | —           | —           | —           |
|        |        |                      | Tube          | No         | 5084613-1   | 5084613-2   | 5084613-3   | 5084613-4   | 5084613-5   | 5084613-6   | 5084613-8   | 5084613-9   | 1-5084613-0 |
|        |        |                      | Tube          | Yes        | —           | —           | —           | —           | —           | —           | —           | —           | —           |
|        |        |                      | Tape and Reel | Yes        | 7-5179180-1 | 7-5179180-2 | 7-5179180-3 | 7-5179180-4 | 7-5179180-5 | 7-5179180-6 | —           | —           | —           |
| Plug   | 5H     | 8µ"                  | Tube          | No         | 5-5179010-1 | 5-5179010-2 | 5-5179010-3 | 5-5179010-4 | 5-5179010-5 | 5-5179010-6 | 5-5179010-8 | 5-5179010-9 | 6-5179010-0 |
|        |        |                      | Tube          | Yes        | 5-5179233-1 | 5-5179233-2 | 5-5179233-3 | 5-5179233-4 | 5-5179233-5 | 5-5179233-6 | 5-5179233-8 | 5-5179233-9 | 6-5179233-0 |
|        |        |                      | Tape and Reel | Yes        | 5084616-1   | 5084616-2   | 5084616-3   | 5084616-4   | 5084616-5   | 5084616-6   | 5084616-8   | 5084616-9   | —           |
|        |        |                      | Tube          | No         | 5-6123212-1 | 5-6123212-2 | 5-6123212-3 | 5-6123212-4 | 5-6123212-5 | 5-6123212-6 | 5-6123212-8 | 5-6123212-9 | 6-6123212-0 |
|        | 6H     | 8µ"                  | Tube          | Yes        | —           | —           | —           | —           | —           | —           | —           | —           | —           |
|        |        |                      | Tape and Reel | Yes        | 5084618-1   | 5084618-2   | 5084618-3   | 5084618-4   | 5084618-5   | 5084618-6   | 5084618-8   | 5084618-9   | —           |
|        |        |                      | Tube          | No         | 5177984-1   | 5177984-2   | 5177984-3   | 5177984-4   | 5177984-5   | 5177984-6   | 5177984-8   | 5177984-9   | 1-5177984-0 |
|        |        |                      | Tube          | Yes        | 5179230-1   | 5179230-2   | 5179230-3   | 5179230-4   | 5179230-5   | 5179230-6   | 5179230-8   | 5179230-9   | 1-5179230-0 |
|        | 7H     | 8µ"                  | Tape and Reel | Yes        | 5177986-1   | 5177986-2   | 5177986-3   | 5177986-4   | 5177986-5   | 5177986-6   | 5177986-8   | —           | —           |
|        |        |                      | Tube          | No         | 5084615-1   | 5084615-2   | 5084615-3   | 5084615-4   | 5084615-5   | 5084615-6   | 5084615-8   | 5084615-9   | 1-5084615-0 |
|        |        |                      | Tube          | Yes        | —           | —           | —           | —           | —           | —           | 1-5084615-8 | 1-5084615-9 | 2-5084615-0 |
|        |        |                      | Tape and Reel | Yes        | 6-5177986-1 | 6-5177986-2 | 6-5177986-3 | 6-5177986-4 | 6-5177986-5 | 6-5177986-6 | —           | —           | —           |
| R/A    | 8H     | 8µ"                  | Tube          | No         | 5179030-1   | 5179030-2   | 5179030-3   | 5179030-4   | 5179030-5   | 5179030-6   | 5179030-8   | 5179030-9   | 1-5179030-0 |
|        |        |                      | Tube          | Yes        | 4-5179230-1 | 4-5179230-2 | 4-5179230-3 | 4-5179230-4 | 4-5179230-5 | 4-5179230-6 | 4-5179230-8 | 4-5179230-9 | 5-5179230-0 |
|        |        |                      | Tape and Reel | Yes        | 2-5177986-1 | 2-5177986-2 | 2-5177986-3 | 2-5177986-4 | 2-5177986-5 | 2-5177986-6 | —           | —           | —           |
|        |        |                      | Tube          | No         | 1-5179030-1 | 1-5179030-2 | 1-5179030-3 | 1-5179030-4 | 1-5179030-5 | 1-5179030-6 | 1-5179030-8 | 1-5179030-9 | 2-5179030-0 |
|        | R/A    | 8µ"                  | Tube          | Yes        | 2-5179030-1 | 2-5179030-2 | 2-5179030-3 | 2-5179030-4 | 2-5179030-5 | 2-5179030-6 | 2-5179030-8 | 2-5179030-9 | 3-5179030-0 |
|        |        |                      | Tape and Reel | Yes        | —           | —           | —           | —           | —           | —           | —           | —           | —           |
|        |        |                      | Tube          | No         | 5179031-1   | 5179031-2   | 5179031-3   | 5179031-4   | 5179031-5   | 5179031-6   | 5179031-8   | 5179031-9   | 1-5179031-0 |
|        |        |                      | Tube          | Yes        | 6-5179230-1 | 6-5179230-2 | 6-5179230-3 | 6-5179230-4 | 6-5179230-5 | 6-5179230-6 | 6-5179230-8 | 6-5179230-9 | 7-5179230-0 |
|        | R/A    | 8µ"                  | Tape and Reel | Yes        | 3-5177986-1 | 3-5177986-2 | 3-5177986-3 | 3-5177986-4 | 3-5177986-5 | 3-5177986-6 | 3-5177986-8 | 3-5177986-9 | —           |
|        |        |                      | Tube          | No         | 6123002-1   | 6123002-2   | 6123002-3   | 6123002-4   | 6123002-5   | 6123002-6   | 6123002-8   | 6123002-9   | 1-6123002-0 |
|        |        |                      | Tube          | Yes        | —           | —           | —           | —           | —           | —           | —           | —           | —           |
|        |        |                      | Tape and Reel | Yes        | 6123001-1   | 6123001-2   | 6123001-3   | 6123001-4   | 6123001-5   | 6123001-6   | 6123001-8   | 6123001-9   | —           |

**Stack Height = [(Rcpt. Height + Plug Height) - 5]**  
 example: [(13H Rcpt. + 6H Plug) - 5] = [(13 + 6) - 5] = 14mm stack height  
 Note: Part Numbers are RoHS compliant.

**0.8mm Free Height (FH)  
Connectors**

# 0.8mm Free Height Vertical Plugs, 0.8 [.031] Pitch

**5mm Plugs for 5 [.197],  
9 [.354] and 13 [.512]  
Stacking Heights**

## Material and Finish

**Housing** — High temperature thermo-plastic, natural color, 94V-0 rated

**Contacts** — Brass; duplex plated 0.00020 [.000008] min. gold on contact area, 0.00100 [.000039] min. tin on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

## Related Product Data

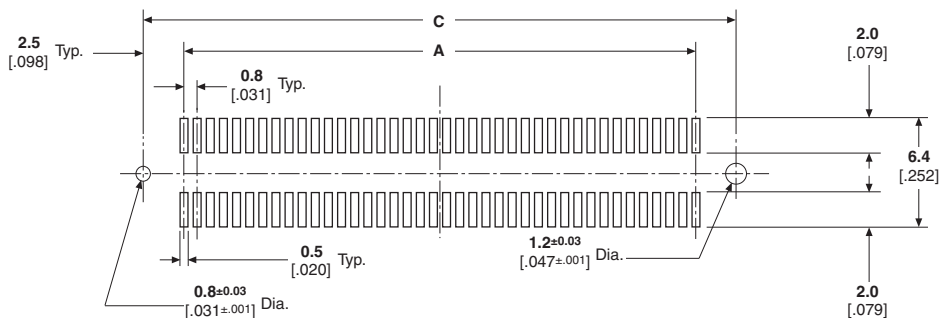
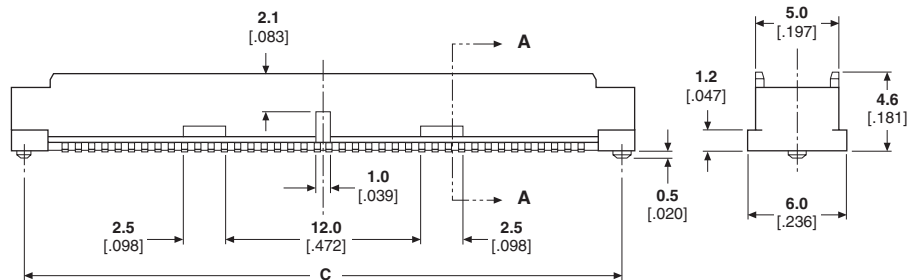
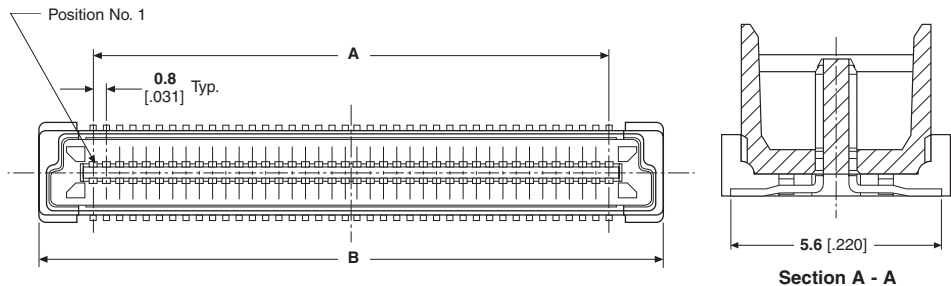
**Performance Characteristics** —  
page 71

**Stacking Height Combinations** —  
page 72

**Mating Receptacles** — pages 78  
thru 80

**Technical Documents** (page 113)

**Product Specification**  
108-5390



Recommended PC Board Layout

| Dimensions            |                       |                       | No. of Positions | Plating Type | Part Numbers |                    |               |
|-----------------------|-----------------------|-----------------------|------------------|--------------|--------------|--------------------|---------------|
| A                     | B                     | C                     |                  |              | Tube         | Tube w/ Pickup Cap | Tape and Reel |
| <b>15.20</b><br>.598  | <b>21.80</b><br>.858  | <b>20.20</b><br>.795  | 40               | 8μ" Au       | 5177984-1    | 5179230-1          | 5177986-1     |
|                       |                       |                       |                  | 30μ" Au      | 5084614-1    | —                  | 5-5177986-1   |
| <b>23.20</b><br>.913  | <b>29.80</b><br>1.173 | <b>28.20</b><br>1.110 | 60               | 8μ" Au       | 5177984-2    | 5179230-2          | 5177986-2     |
|                       |                       |                       |                  | 30μ" Au      | 5084614-2    | —                  | 5-5177986-2   |
| <b>31.20</b><br>1.228 | <b>37.80</b><br>1.488 | <b>36.20</b><br>1.425 | 80               | 8μ" Au       | 5177984-3    | 5179230-3          | 5177986-3     |
|                       |                       |                       |                  | 30μ" Au      | 5084614-3    | —                  | 5-5177986-3   |
| <b>39.20</b><br>1.543 | <b>45.80</b><br>1.803 | <b>44.20</b><br>1.740 | 100              | 8μ" Au       | 5177984-4    | 5179230-4          | 5177986-4     |
|                       |                       |                       |                  | 30μ" Au      | 5084614-4    | —                  | 5-5177986-4   |
| <b>47.20</b><br>1.858 | <b>53.80</b><br>2.118 | <b>52.20</b><br>2.055 | 120              | 8μ" Au       | 5177984-5    | 5179230-5          | 5177986-5     |
|                       |                       |                       |                  | 30μ" Au      | 5084614-5    | —                  | 5-5177986-5   |
| <b>55.20</b><br>2.173 | <b>61.80</b><br>2.433 | <b>60.20</b><br>2.370 | 140              | 8μ" Au       | 5177984-6    | 5179230-6          | 5177986-6     |
|                       |                       |                       |                  | 30μ" Au      | 5084614-6    | —                  | 5-5177986-6   |
| <b>63.20</b><br>2.488 | <b>69.80</b><br>2.748 | <b>68.20</b><br>2.685 | 160              | 8μ" Au       | 5177984-8    | 5179230-8          | 5177986-8     |
|                       |                       |                       |                  | 30μ" Au      | 5084614-8    | —                  | 5-5177986-8   |
| <b>71.20</b><br>2.803 | <b>77.80</b><br>3.063 | <b>76.20</b><br>3.000 | 180              | 8μ" Au       | 5177984-9    | 5179230-9          | —             |
|                       |                       |                       |                  | 30μ" Au      | 5084614-9    | —                  | —             |
| <b>79.20</b><br>3.118 | <b>85.80</b><br>3.378 | <b>84.20</b><br>3.315 | 200              | 8μ" Au       | 1-5177984-0  | 1-5179230-0        | —             |
|                       |                       |                       |                  | 30μ" Au      | 1-5084614-0  | —                  | —             |

**Note:** Part Numbers are RoHS compliant.

**0.8mm Free Height Vertical Plugs, 0.8 [.031] Pitch** (Continued)

**6mm Plugs for 6 [.236],  
10 [.394] and 14 [.551]  
Stacking Heights**

**Material and Finish**

**Housing** — High temperature thermo-plastic, natural color, 94V-0 rated

**Contacts** — Brass; duplex plated 0.00020 [.000008] min. gold on contact area, 0.00100 [.000039] min. tin on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

**Related Product Data**

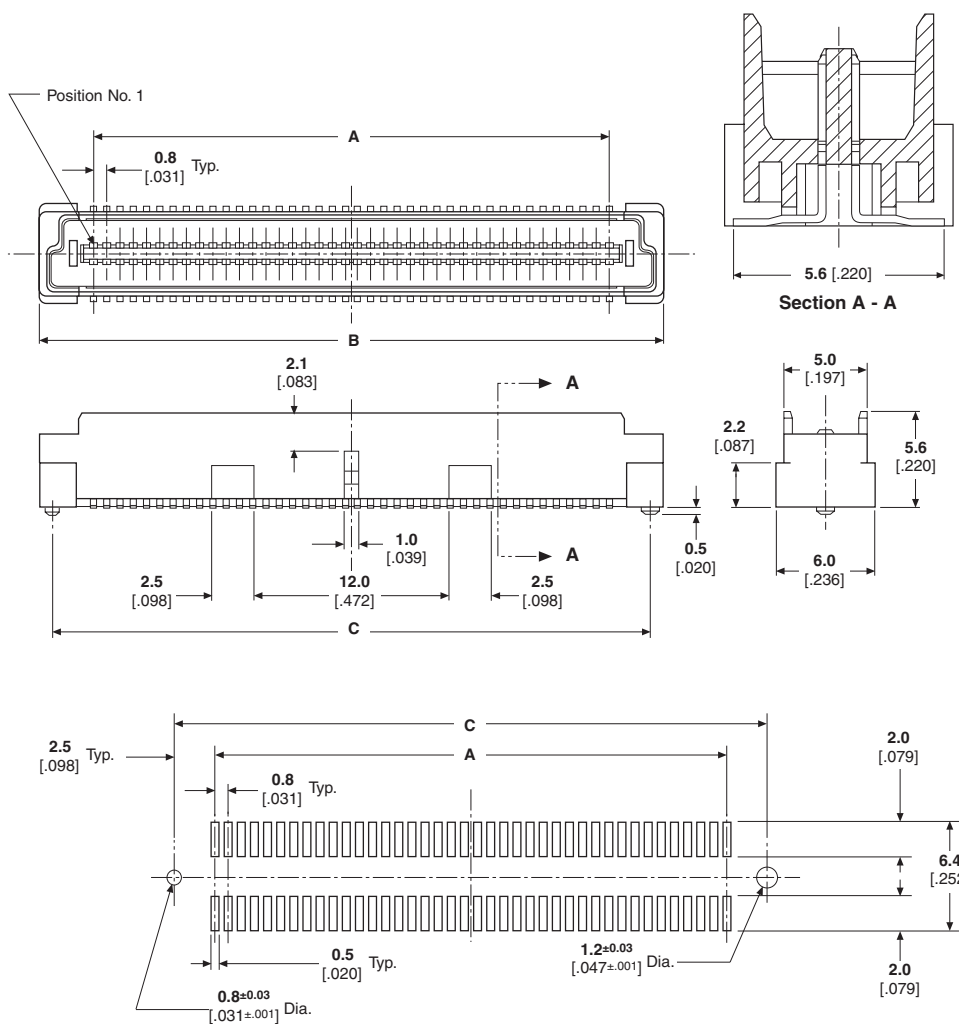
**Performance Characteristics** —  
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**Stacking Height Combinations** —  
page 72

**Mating Receptacles** — pages 78  
thru 80

**Technical Documents** (page 113)

**Product Specification**  
108-5390



**Recommended PC Board Layout**

| Dimensions            |                       |                       | No. of Positions | Plating Type | Part Numbers |                    |               |
|-----------------------|-----------------------|-----------------------|------------------|--------------|--------------|--------------------|---------------|
| A                     | B                     | C                     |                  |              | Tube         | Tube w/ Pickup Cap | Tape and Reel |
| <b>15.20</b><br>.598  | <b>21.80</b><br>.858  | <b>20.20</b><br>.795  | 40               | 8μ" Au       | 5179029-1    | 2-5179230-1        | 1-5177986-1   |
|                       |                       |                       |                  | 30μ" Au      | 5084615-1    | —                  | 6-5177986-1   |
| <b>23.20</b><br>.913  | <b>29.80</b><br>1.173 | <b>28.20</b><br>1.110 | 60               | 8μ" Au       | 5179029-2    | 2-5179230-2        | 1-5177986-2   |
|                       |                       |                       |                  | 30μ" Au      | 5084615-2    | —                  | 6-5177986-2   |
| <b>31.20</b><br>1.228 | <b>37.80</b><br>1.488 | <b>36.20</b><br>1.425 | 80               | 8μ" Au       | 5179029-3    | 2-5179230-3        | 1-5177986-3   |
|                       |                       |                       |                  | 30μ" Au      | 5084615-3    | —                  | 6-5177986-3   |
| <b>39.20</b><br>1.543 | <b>45.80</b><br>1.803 | <b>44.20</b><br>1.740 | 100              | 8μ" Au       | 5179029-4    | 2-5179230-4        | 1-5177986-4   |
|                       |                       |                       |                  | 30μ" Au      | 5084615-4    | —                  | 6-5177986-4   |
| <b>47.20</b><br>1.858 | <b>53.80</b><br>2.118 | <b>52.20</b><br>2.055 | 120              | 8μ" Au       | 5179029-5    | 2-5179230-5        | 1-5177986-5   |
|                       |                       |                       |                  | 30μ" Au      | 5084615-5    | —                  | 6-5177986-5   |
| <b>55.20</b><br>2.173 | <b>61.80</b><br>2.433 | <b>60.20</b><br>2.370 | 140              | 8μ" Au       | 5179029-6    | 2-5179230-6        | 1-5177986-6   |
|                       |                       |                       |                  | 30μ" Au      | 5084615-6    | —                  | 6-5177986-6   |
| <b>63.20</b><br>2.488 | <b>69.80</b><br>2.748 | <b>68.20</b><br>2.685 | 160              | 8μ" Au       | 5179029-8    | 2-5179230-8        | —             |
|                       |                       |                       |                  | 30μ" Au      | 5084615-8    | 1-5084615-8        | —             |
| <b>71.20</b><br>2.803 | <b>77.80</b><br>3.063 | <b>76.20</b><br>3.000 | 180              | 8μ" Au       | 5179029-9    | 2-5179230-9        | —             |
|                       |                       |                       |                  | 30μ" Au      | 5084615-9    | 1-5084615-9        | —             |
| <b>79.20</b><br>3.118 | <b>85.80</b><br>3.378 | <b>84.20</b><br>3.315 | 200              | 8μ" Au       | 1-5179029-0  | 3-5179230-0        | —             |
|                       |                       |                       |                  | 30μ" Au      | 1-5084615-9  | 2-5084615-0        | —             |

**Note:** Part Numbers are RoHS compliant.

**7mm Plugs for 7 [.276],  
11 [.433] and 15 [.591]  
Stacking Heights**

**Material and Finish**

**Housing** — High temperature thermo-plastic, natural color, 94V-0 rated

**Contacts** — Brass; duplex plated 0.00020 [.000008] min. gold on contact area, 0.00100 [.000039] min. tin on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

**Related Product Data**

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page 71

**Stacking Height Combinations** —  
page 72

**Mating Receptacles** — pages 78  
thru 80

**Technical Documents** (page 113)

**Product Specification**  
108-5390

**0.8mm Free Height Vertical Plugs, 0.8 [.031] Pitch** (Continued)



**Recommended PC Board Layout**

| Dimensions     |                |                | No. of Positions | Plating Type | Part Numbers |                    |               |
|----------------|----------------|----------------|------------------|--------------|--------------|--------------------|---------------|
| A              | B              | C              |                  |              | Tube         | Tube w/ Pickup Cap | Tape and Reel |
| 15.20<br>.598  | 21.80<br>.858  | 20.20<br>.795  | 40               | 8μ" Au       | 5179030-1    | 4-5179230-1        | 2-5177986-1   |
|                |                |                |                  | 30μ" Au      | 1-5179030-1  | 2-5179030-1        | —             |
| 23.20<br>.913  | 29.80<br>1.173 | 28.20<br>1.110 | 60               | 8μ" Au       | 5179030-2    | 4-5179230-2        | 2-5177986-2   |
|                |                |                |                  | 30μ" Au      | 1-5179030-2  | 2-5179030-2        | —             |
| 31.20<br>1.228 | 37.80<br>1.488 | 36.20<br>1.425 | 80               | 8μ" Au       | 5179030-3    | 4-5179230-3        | 2-5177986-3   |
|                |                |                |                  | 30μ" Au      | 1-5179030-3  | 2-5179030-3        | —             |
| 39.20<br>1.543 | 45.80<br>1.803 | 44.20<br>1.740 | 100              | 8μ" Au       | 5179030-4    | 4-5179230-4        | 2-5177986-4   |
|                |                |                |                  | 30μ" Au      | 1-5179030-4  | 2-5179030-4        | —             |
| 47.20<br>1.858 | 53.80<br>2.118 | 52.20<br>2.055 | 120              | 8μ" Au       | 5179030-5    | 4-5179230-5        | 2-5177986-5   |
|                |                |                |                  | 30μ" Au      | 1-5179030-5  | 2-5179030-5        | —             |
| 55.20<br>2.173 | 61.80<br>2.433 | 60.20<br>2.370 | 140              | 8μ" Au       | 5179030-6    | 4-5179230-6        | 2-5177986-6   |
|                |                |                |                  | 30μ" Au      | 1-5179030-6  | 2-5179030-6        | —             |
| 63.20<br>2.488 | 69.80<br>2.748 | 68.20<br>2.685 | 160              | 8μ" Au       | 5179030-8    | 4-5179230-8        | 2-5177986-8   |
|                |                |                |                  | 30μ" Au      | 1-5179030-8  | 2-5179030-8        | —             |
| 71.20<br>2.803 | 77.80<br>3.063 | 76.20<br>3.000 | 180              | 8μ" Au       | 5179030-9    | 4-5179230-9        | 2-5177986-9   |
|                |                |                |                  | 30μ" Au      | 1-5179030-9  | 2-5179030-9        | —             |
| 79.20<br>3.118 | 85.80<br>3.378 | 84.20<br>3.315 | 200              | 8μ" Au       | 1-5179030-0  | 5-5179230-0        | 3-5177986-0   |
|                |                |                |                  | 30μ" Au      | 2-5179030-0  | 3-5179030-0        | —             |

**Note:** Part Numbers are RoHS compliant.

### 0.8mm Free Height Vertical Plugs, 0.8 [.031] Pitch (Continued)

### 8mm Plugs for 8 [.315], 12 [.472] and 16 [.630] Stacking Heights

## Material and Finish

**Housing** — High temperature thermoplastic, natural color, 94V-0 rated

**Contacts** — Brass; duplex plated 0.00020 [0.00008] min. gold on contact area, 0.00100 [0.00039] min. tin on solder area, with entire contact underplated 0.00130 [0.00051] min. nickel

### Related Product Data

**Performance Characteristics** —  
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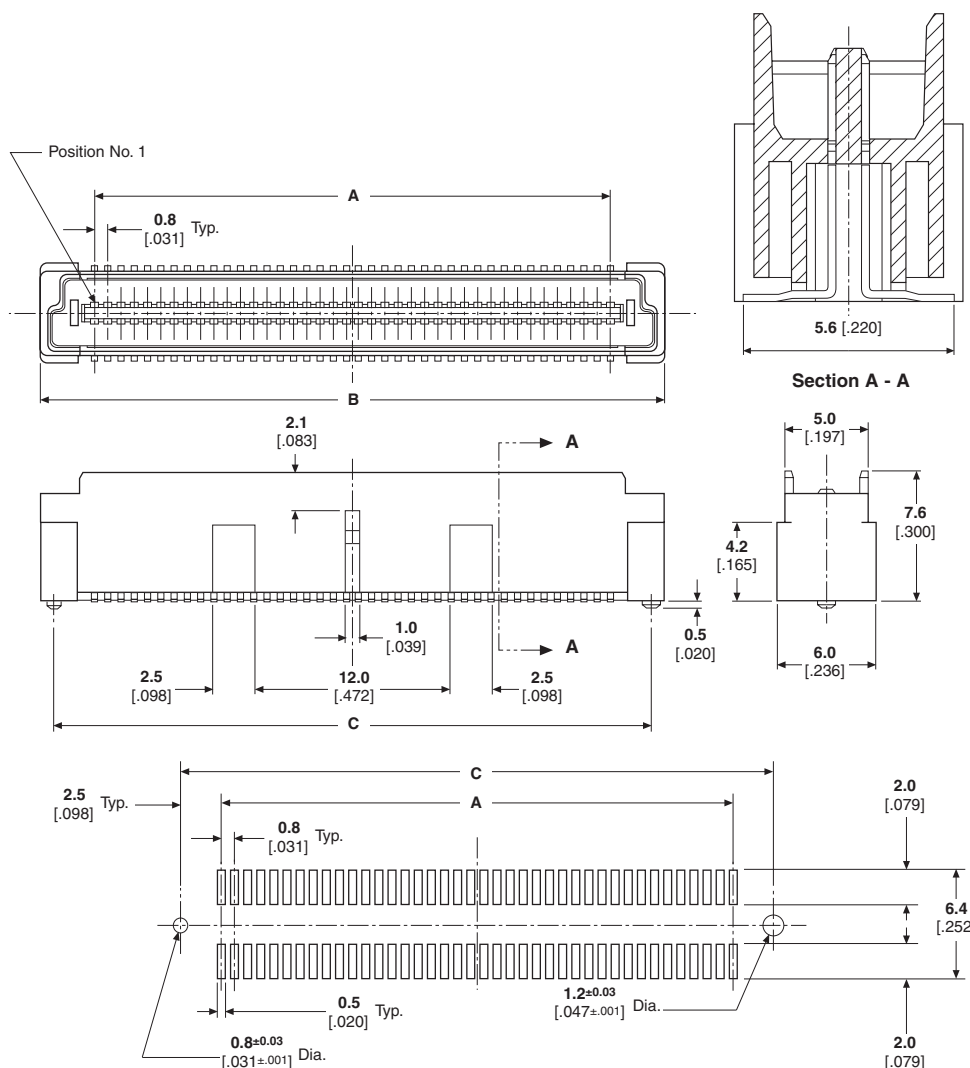
Stacking Height Combinations —  
page 72

**Mating Receptacles** — pages 78  
thru 80

## Technical Documents (page 113)

## Product Specification

### 108-5390



## Recommended PC Board Layout

| Dimensions     |                |                | No. of Positions | Plating Type | Part Numbers |                    |               |
|----------------|----------------|----------------|------------------|--------------|--------------|--------------------|---------------|
| A              | B              | C              |                  |              | Tube         | Tube w/ Pickup Cap | Tape and Reel |
| 15.20<br>.598  | 21.80<br>.858  | 20.20<br>.795  | 40               | 8μ" Au       | 5179031-1    | 6-5179230-1        | 3-5177986-1   |
|                |                |                |                  | 30μ" Au      | 6123002-1    | —                  | 6123001-1     |
| 23.20<br>.913  | 29.80<br>1.173 | 28.20<br>1.110 | 60               | 8μ" Au       | 5179031-2    | 6-5179230-2        | 3-5177986-2   |
|                |                |                |                  | 30μ" Au      | 6123002-2    | —                  | 6123001-2     |
| 31.20<br>1.228 | 37.80<br>1.488 | 36.20<br>1.425 | 80               | 8μ" Au       | 5179031-3    | 6-5179230-3        | 3-5177986-3   |
|                |                |                |                  | 30μ" Au      | 6123002-3    | —                  | 6123001-3     |
| 39.20<br>1.543 | 45.80<br>1.803 | 44.20<br>1.740 | 100              | 8μ" Au       | 5179031-4    | 6-5179230-4        | 3-5177986-4   |
|                |                |                |                  | 30μ" Au      | 6123002-4    | —                  | 6123001-4     |
| 47.20<br>1.858 | 53.80<br>2.118 | 52.20<br>2.055 | 120              | 8μ" Au       | 5179031-5    | 6-5179230-5        | 3-5177986-5   |
|                |                |                |                  | 30μ" Au      | 6123002-5    | —                  | 6123001-5     |
| 55.20<br>2.173 | 61.80<br>2.433 | 60.20<br>2.370 | 140              | 8μ" Au       | 5179031-6    | 6-5179230-6        | 3-5177986-6   |
|                |                |                |                  | 30μ" Au      | 6123002-6    | —                  | 6123001-6     |
| 63.20<br>2.488 | 69.80<br>2.748 | 68.20<br>2.685 | 160              | 8μ" Au       | 5179031-8    | 6-5179230-8        | 3-5177986-8   |
|                |                |                |                  | 30μ" Au      | 6123002-8    | —                  | 6123001-8     |
| 71.20<br>2.803 | 77.80<br>3.063 | 76.20<br>3.000 | 180              | 8μ" Au       | 5179031-9    | 6-5179230-9        | 3-5177986-9   |
|                |                |                |                  | 30μ" Au      | 6123002-9    | —                  | 6123001-9     |
| 79.20<br>3.118 | 85.80<br>3.378 | 84.20<br>3.315 | 200              | 8μ" Au       | 1-5179031-0  | 7-5179230-0        | —             |
|                |                |                |                  | 30μ" Au      | 1-6123002-0  | —                  | —             |

**Note:** Part Numbers are RoHS compliant.

**5mm Receptacles for  
5 [.197], 6 [.236],  
7 [.276] and 8 [.315]  
Stacking Heights**

**Material and Finish**

**Housing** — High temperature thermo-plastic, natural color, 94V-0 rated

**Contacts** — Beryllium copper; duplex plated 0.00020 [.000008] min. gold on contact area, 0.00100 [.000039] min. tin on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

**Related Product Data**

**Performance Characteristics** —  
page 71

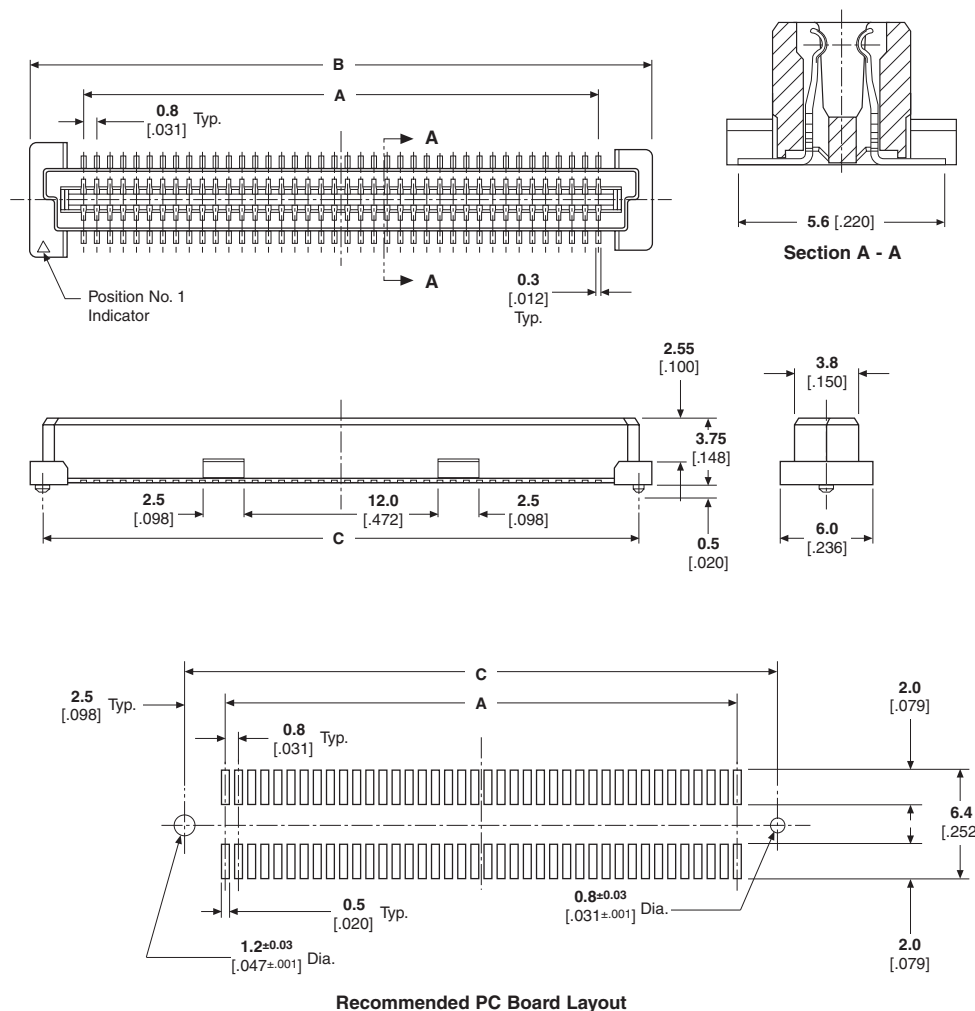
**Stacking Height Combinations** —  
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and 81

**Technical Documents** (page 113)

**Product Specification**  
108-5390

**0.8mm Free Height Vertical Plugs, 0.8 [.031] Pitch** (Continued)



| Dimensions     |                |                | No. of Positions | Plating Type      | Part Numbers               |                    |                        |
|----------------|----------------|----------------|------------------|-------------------|----------------------------|--------------------|------------------------|
| A              | B              | C              |                  |                   | Tube                       | Tube w/ Pickup Cap | Tape and Reel          |
| 15.20<br>.598  | 21.80<br>.858  | 20.20<br>.795  | 40               | 8μ" Au<br>30μ" Au | 5177983-1<br>6123000-1     | 5179229-1<br>—     | 5177985-1<br>5353999-1 |
| 23.20<br>.913  | 29.80<br>1.173 | 28.20<br>1.110 | 60               | 8μ" Au<br>30μ" Au | 5177983-2<br>6123000-2     | 5179229-2<br>—     | 5177985-2<br>5353999-2 |
| 31.20<br>1.228 | 37.80<br>1.488 | 36.20<br>1.425 | 80               | 8μ" Au<br>30μ" Au | 5177983-3<br>6123000-3     | 5179229-3<br>—     | 5177985-3<br>5353999-3 |
| 39.20<br>1.543 | 45.80<br>1.803 | 44.20<br>1.740 | 100              | 8μ" Au<br>30μ" Au | 5177983-4<br>6123000-4     | 5179229-4<br>—     | 5177985-4<br>5353999-4 |
| 47.20<br>1.858 | 53.80<br>2.118 | 52.20<br>2.055 | 120              | 8μ" Au<br>30μ" Au | 5177983-5<br>6123000-5     | 5179229-5<br>—     | 5177985-5<br>5353999-5 |
| 55.20<br>2.173 | 61.80<br>2.433 | 60.20<br>2.370 | 140              | 8μ" Au<br>30μ" Au | 5177983-6<br>6123000-6     | 5179229-6<br>—     | 5177985-6<br>5353999-6 |
| 63.20<br>2.488 | 69.80<br>2.748 | 68.20<br>2.685 | 160              | 8μ" Au<br>30μ" Au | 5177983-8<br>6123000-8     | 5179229-8<br>—     | 5177985-8<br>5353999-8 |
| 71.20<br>2.803 | 77.80<br>3.063 | 76.20<br>3.000 | 180              | 8μ" Au<br>30μ" Au | 5177983-9<br>6123000-9     | 5179229-9<br>—     | —<br>—                 |
| 79.20<br>3.118 | 85.80<br>3.378 | 84.20<br>3.315 | 200              | 8μ" Au<br>30μ" Au | 1-5177983-0<br>1-6123000-0 | 1-5179229-0<br>—   | —<br>—                 |

**Note:** Part Numbers are RoHS compliant.

**9mm Receptacles for  
9 [.354], 10 [.394],  
11 [.433] and 12 [.472]  
Stacking Heights**

**Material and Finish**

**Housing** — High temperature thermo-plastic, natural color, 94V-0 rated

**Contacts** — Beryllium copper; duplex plated 0.00020 [.000008] min. gold on contact area, 0.00100 [.000039] min. tin on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

**Related Product Data**

**Performance Characteristics** —  
page 71

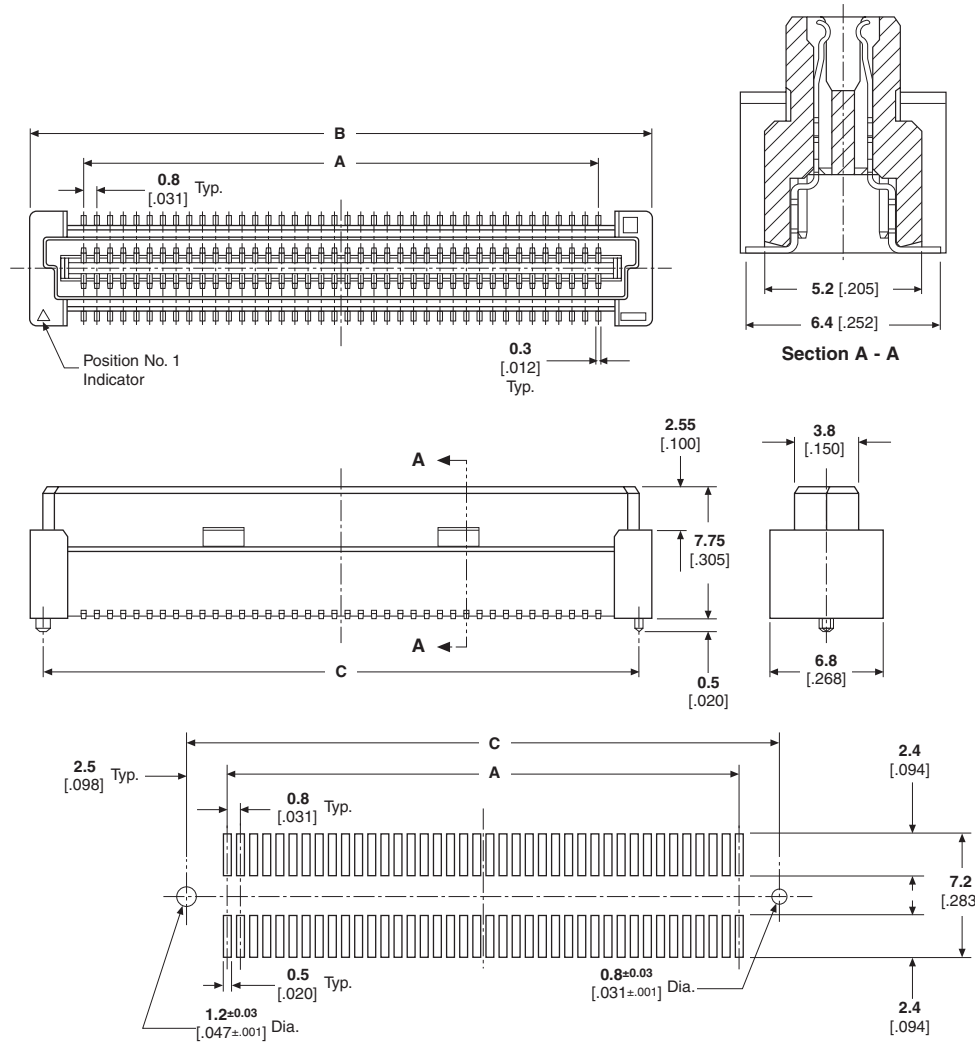
**Stacking Height Combinations** —  
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**Mating Plugs** — pages 74 thru 77,  
and 81

**Technical Documents** (page 113)

**Product Specification**  
108-5390

**0.8mm Free Height Vertical Plugs, 0.8 [.031] Pitch** (Continued)



**Recommended PC Board Layout**

| Dimensions     |                |                | No. of Positions | Plating Type | Part Numbers |                    |               |
|----------------|----------------|----------------|------------------|--------------|--------------|--------------------|---------------|
| A              | B              | C              |                  |              | Tube         | Tube w/ Pickup Cap | Tape and Reel |
| 15.20<br>.598  | 21.80<br>.858  | 20.20<br>.795  | 40               | 8μ" Au       | 5-5179009-1  | —                  | 5-5179180-1   |
|                |                |                |                  | 30μ" Au      | 5084613-1    | —                  | 7-5179180-1   |
| 23.20<br>.913  | 29.80<br>1.173 | 28.20<br>1.110 | 60               | 8μ" Au       | 5-5179009-2  | 5-5179232-2        | 5-5179180-2   |
|                |                |                |                  | 30μ" Au      | 5084613-2    | —                  | 7-5179180-2   |
| 31.20<br>1.228 | 37.80<br>1.488 | 36.20<br>1.425 | 80               | 8μ" Au       | 5-5179009-3  | 5-5179232-3        | 5-5179180-3   |
|                |                |                |                  | 30μ" Au      | 5084613-3    | —                  | 7-5179180-3   |
| 39.20<br>1.543 | 45.80<br>1.803 | 44.20<br>1.740 | 100              | 8μ" Au       | 5-5179009-4  | 5-5179232-4        | 5-5179180-4   |
|                |                |                |                  | 30μ" Au      | 5084613-4    | —                  | 7-5179180-4   |
| 47.20<br>1.858 | 53.80<br>2.118 | 52.20<br>2.055 | 120              | 8μ" Au       | 5-5179009-5  | 5-5179232-5        | 5-5179180-5   |
|                |                |                |                  | 30μ" Au      | 5084613-5    | —                  | 7-5179180-5   |
| 55.20<br>2.173 | 61.80<br>2.433 | 60.20<br>2.370 | 140              | 8μ" Au       | 5-5179009-6  | 5-5179232-6        | 5-5179180-6   |
|                |                |                |                  | 30μ" Au      | 5084613-6    | —                  | 7-5179180-6   |
| 63.20<br>2.488 | 69.80<br>2.748 | 68.20<br>2.685 | 160              | 8μ" Au       | 5-5179009-8  | 5-5179232-8        | —             |
|                |                |                |                  | 30μ" Au      | 5084613-8    | —                  | —             |
| 71.20<br>2.803 | 77.80<br>3.063 | 76.20<br>3.000 | 180              | 8μ" Au       | 5-5179009-9  | 5-5179232-9        | —             |
|                |                |                |                  | 30μ" Au      | 5084613-9    | —                  | —             |
| 79.20<br>3.118 | 85.80<br>3.378 | 84.20<br>3.315 | 200              | 8μ" Au       | 6-5179009-0  | 6-5179232-0        | —             |
|                |                |                |                  | 30μ" Au      | 1-5084613-0  | —                  | —             |

**Note:** Part Numbers are RoHS compliant.

**13mm Receptacles for  
13 [.512], 14 [.551],  
15 [.591] and 16 [.630]  
Stacking Heights**

**Material and Finish**

**Housing** — High temperature thermo-  
plastic, natural color, 94V-0 rated

**Contacts** — Beryllium copper; duplex  
plated 0.00020 [.000008] min. gold on  
contact area, 0.00100 [.000039] min. tin  
on solder area, with entire contact  
underplated 0.00130 [.000051] min.  
nickel

**Related Product Data**

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**Stacking Height Combinations** —  
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**Mating Plugs** — pages 74 thru 77,  
and 81

**Technical Documents** (page 113)

**Product Specification**  
108-5390

**0.8mm Free Height Vertical Plugs, 0.8 [.031] Pitch** (Continued)



**Recommended PC Board Layout**

| Dimensions     |                |                | No. of Positions | Plating Type | Part Numbers |                    |               |
|----------------|----------------|----------------|------------------|--------------|--------------|--------------------|---------------|
| A              | B              | C              |                  |              | Tube         | Tube w/ Pickup Cap | Tape and Reel |
| 15.20<br>.598  | 21.80<br>.858  | 20.20<br>.795  | 40               | 8µ" Au       | 5-5179010-1  | 5-5179233-1        | 5084616-1     |
|                |                |                |                  | 30µ" Au      | 5-6123212-1  | —                  | 5084618-1     |
| 23.20<br>.913  | 29.80<br>1.173 | 28.20<br>1.110 | 60               | 8µ" Au       | 5-5179010-2  | 5-5179233-2        | 5084616-2     |
|                |                |                |                  | 30µ" Au      | 5-6123212-2  | —                  | 5084618-2     |
| 31.20<br>1.228 | 37.80<br>1.488 | 36.20<br>1.425 | 80               | 8µ" Au       | 5-5179010-3  | 5-5179233-3        | 5084616-3     |
|                |                |                |                  | 30µ" Au      | 5-6123212-3  | —                  | 5084618-3     |
| 39.20<br>1.543 | 45.80<br>1.803 | 44.20<br>1.740 | 100              | 8µ" Au       | 5-5179010-4  | 5-5179233-4        | 5084616-4     |
|                |                |                |                  | 30µ" Au      | 5-6123212-4  | —                  | 5084618-4     |
| 47.20<br>1.858 | 53.80<br>2.118 | 52.20<br>2.055 | 120              | 8µ" Au       | 5-5179010-5  | 5-5179233-5        | 5084616-5     |
|                |                |                |                  | 30µ" Au      | 5-6123212-5  | —                  | 5084618-5     |
| 55.20<br>2.173 | 61.80<br>2.433 | 60.20<br>2.370 | 140              | 8µ" Au       | 5-5179010-6  | 5-5179233-6        | 5084616-6     |
|                |                |                |                  | 30µ" Au      | 5-6123212-6  | —                  | 5084618-6     |
| 63.20<br>2.488 | 69.80<br>2.748 | 68.20<br>2.685 | 160              | 8µ" Au       | 5-5179010-8  | 5-5179233-8        | 5084616-8     |
|                |                |                |                  | 30µ" Au      | 5-6123212-8  | —                  | 5084618-8     |
| 71.20<br>2.803 | 77.80<br>3.063 | 76.20<br>3.000 | 180              | 8µ" Au       | 5-5179010-9  | 5-5179233-9        | 5084616-9     |
|                |                |                |                  | 30µ" Au      | 5-6123212-9  | —                  | 5084618-9     |
| 79.20<br>3.118 | 85.80<br>3.378 | 84.20<br>3.315 | 200              | 8µ" Au       | 6-5179010-0  | 6-5179233-0        | —             |
|                |                |                |                  | 30µ" Au      | 6-6123212-0  | 7-6123212-0        | —             |

**Note:** Part Numbers are RoHS compliant.

**0.8mm Free Height Right Angle Plugs, 0.8 [.031] Pitch**

**8mm Plugs for 5 [.197],  
9 [.354] and 13 [.512]  
Stacking Heights**

**Material and Finish**

**Housing** — High temperature thermo-plastic, natural color, 94V-0 rated

**Contacts** — Brass; duplex plated  
0.00020 [.000008] min. gold on contact  
area, 0.00100 [.000039] min. tin on sol-  
der area, with entire contact underplated  
0.00130 [.000051] min. nickel

**Related Product Data**

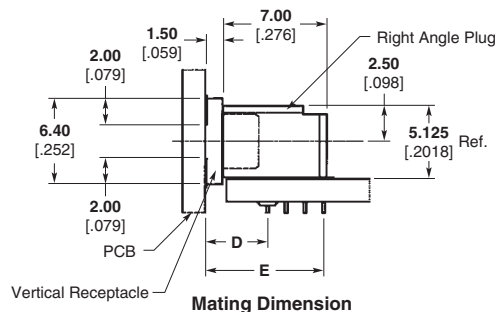
**Performance Characteristics** —  
page 71

**Stacking Height Combinations** —  
page 72

**Mating Receptacles** — pages 78  
thru 80

**Technical Documents** (page 113)

**Product Specification**  
108-5390



| Receptacle<br>Height | Dimension     |               |
|----------------------|---------------|---------------|
|                      | D             | E             |
| 5.00<br>.197         | 4.40<br>.173  | 8.30<br>.327  |
| 9.00<br>.354         | 8.40<br>.331  | 12.30<br>.484 |
| 13.00<br>.512        | 12.40<br>.488 | 16.30<br>.642 |



| Dimension      |                |                |    | No. of<br>Positions | Part Number |
|----------------|----------------|----------------|----|---------------------|-------------|
| A              | B              | C              | a  |                     |             |
| 23.20<br>.913  | 27.40<br>1.079 | 29.80<br>1.173 | 29 | 60                  | 316229-2    |
| 31.20<br>1.228 | 35.40<br>1.394 | 37.80<br>1.488 | 39 | 80                  | 316229-3    |

**Note:** Part Numbers are RoHS compliant.

**Engineering Notes**

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