

AMPMODU 2mm Connectors (Board to Board)

Product Facts

- 2.0 x 2.0 [.08 x .08] centerline spacing
- Two-piece, double-row connector system
- Unshrouded header styles include; breakaway and surface-mount
- All headers with 0.5 [.02] square posted contacts
- Surface-mount connectors compatible with standard surface-mount processing (VPR, IR)
- Closed top-entry receptacle assemblies include; vertical mount and right-angle
- Receptacle contacts employ dual cantilever beams for two-point electrical stability
- Duplex (gold/tin-lead) plated posted contacts and receptacle contacts
- Thermoplastic housing material, UL 94V-0 rated
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E28476
- Certified by Canadian Standards Association, File No. LR7189
- Produced under a Quality Management System certified to ISO 9001



A copy of the certificate is available upon request.



AMPMODU 2mm connectors reliably and economically meet the packaging and inter-connection requirements of today's miniature sophisticated electronics. They are ideal for mobile and portable personal computers and disk drive applications. In today's marketplace, 2mm is expanding over many other industry segments due to space constraints.

This versatile double-row connector system is comprised of various straight and right-angle posted headers for thru-hole and surface mounting and several closed top-entry receptacle assemblies for vertical and horizontal mounting. Headers and receptacle assemblies are available in selected sizes ranging from 4 through 80 positions.

Thru-hole breakaway headers feature brass straight or right-angle posts with a post length of 4.0 [.16] and a lead length of 2.6 [.10].

The receptacle assemblies employ phosphor bronze contacts with dual cantilever beams and built-in anti-overstress. This feature, coupled with duplex (gold/tin-lead) plating of the header posts and receptacle contacts, provide superior electrical performance as well as excellent solderability.

2mm Headers, Unshrouded, Double Row, Thru-Hole, Vertical Mount

0.5 [.02] Square Straight Posts

Material and Finish:

Housing—Black thermoplastic, UL 94V-0 Rated

Posted Contacts—Copper alloy, duplex plated as follows:

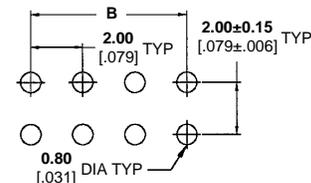
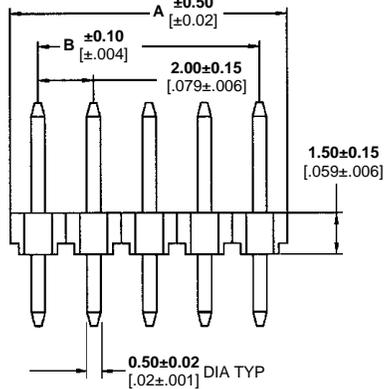
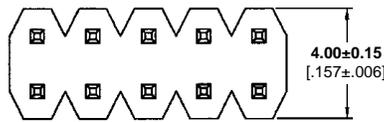
0.00020 [.000008] min. gold on contact area, 0.00254 [.000100] min. tin-lead on solder area, with entire contact underplated 0.00127 [.000050] min. nickel

Related Product Data:

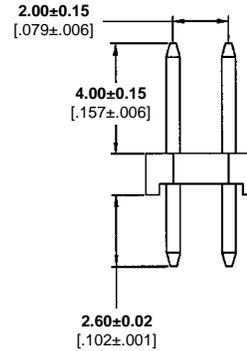
Mateable Receptacles—pages 80-83

AMP Product Specification 108-57197

Packaging Method—Loose piece, bag



Recommended Solder Pad Layout



| Position | Dimensions | | Part Numbers |
|----------|-------------|-------------|--------------|
| | A | B | |
| 4 | 4.0 [.16] | 2.0 [.08] | 1470213-4 |
| 6 | 6.0 [.24] | 4.0 [.16] | 1470213-6 |
| 8 | 8.0 [.32] | 6.0 [.24] | 1470213-8 |
| 10 | 10.0 [.39] | 8.0 [.32] | 1-1470213-0 |
| 12 | 12.0 [.47] | 10.0 [.39] | 1-1470213-2 |
| 14 | 14.0 [.55] | 12.0 [.47] | 1-1470213-4 |
| 16 | 16.0 [.63] | 14.0 [.55] | 1-1470213-6 |
| 18 | 18.0 [.71] | 16.0 [.63] | 1-1470213-8 |
| 20 | 20.0 [.79] | 18.0 [.71] | 2-1470213-0 |
| 22 | 22.0 [.87] | 20.0 [.79] | 2-1470213-2 |
| 24 | 24.0 [.94] | 22.0 [.87] | 2-1470213-4 |
| 26 | 26.0 [1.02] | 24.0 [.94] | 2-1470213-6 |
| 28 | 28.0 [1.10] | 26.0 [1.02] | 2-1470213-8 |
| 30 | 30.0 [1.18] | 28.0 [1.10] | 3-1470213-0 |
| 32 | 32.0 [1.26] | 30.0 [1.18] | 3-1470213-2 |
| 34 | 34.0 [1.34] | 32.0 [1.26] | 3-1470213-4 |
| 36 | 36.0 [1.42] | 34.0 [1.34] | 3-1470213-6 |
| 38 | 38.0 [1.50] | 36.0 [1.42] | 3-1470213-8 |
| 40 | 40.0 [1.57] | 38.0 [1.50] | 4-1470213-0 |
| 42 | 42.0 [1.65] | 40.0 [1.57] | 4-1470213-2 |
| 44 | 44.0 [1.73] | 42.0 [1.65] | 4-1470213-4 |
| 46 | 46.0 [1.81] | 44.0 [1.73] | 4-1470213-6 |
| 48 | 48.0 [1.89] | 46.0 [1.81] | 4-1470213-8 |
| 50 | 50.0 [1.97] | 48.0 [1.89] | 5-1470213-0 |
| 52 | 52.0 [2.05] | 50.0 [1.97] | 5-1470213-2 |
| 54 | 54.0 [2.13] | 52.0 [2.05] | 5-1470213-4 |
| 56 | 56.0 [2.20] | 54.0 [2.13] | 5-1470213-6 |
| 58 | 58.0 [2.28] | 56.0 [2.20] | 5-1470213-8 |
| 60 | 60.0 [2.36] | 58.0 [2.28] | 6-1470213-0 |
| 62 | 62.0 [2.44] | 60.0 [2.36] | 6-1470213-2 |
| 64 | 64.0 [2.52] | 62.0 [2.44] | 6-1470213-4 |
| 66 | 66.0 [2.60] | 64.0 [2.52] | 6-1470213-6 |
| 68 | 68.0 [2.68] | 66.0 [2.60] | 6-1470213-8 |
| 70 | 70.0 [2.76] | 68.0 [2.68] | 7-1470213-0 |
| 72 | 72.0 [2.83] | 70.0 [2.76] | 7-1470213-2 |
| 74 | 74.0 [2.91] | 72.0 [2.83] | 7-1470213-4 |
| 76 | 76.0 [2.99] | 74.0 [2.91] | 7-1470213-6 |
| 78 | 78.0 [3.07] | 76.0 [2.99] | 7-1470213-8 |
| 80 | 80.0 [3.15] | 78.0 [3.07] | 8-1470213-0 |

Breakaway Headers, Unshrouded, Double Row, Thru-Hole Mount

4

2mm Headers, Unshrouded, Double Row, Thru-Hole, Right-Angle Mount

**0.5 [.02] Square
Straight Posts**

Material and Finish:

Housing—Black thermoplastic,
UL 94V-0 Rated

Posted Contacts—Copper alloy,
duplex plated as follows:

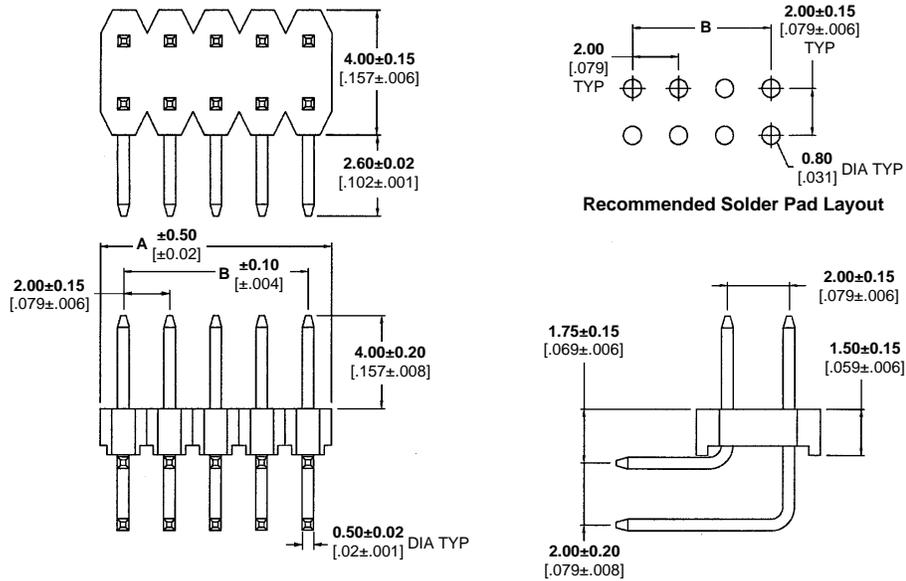
0.00020 [.000008] min. gold on contact
area, 0.00254 [.000100] min. tin-lead on
solder area, with entire contact
underplated 0.00127 [.000050] min.
nickel

Related Product Data:

Mateable Receptacles—
pages 80-83

AMP Product Specification
108-57197

Packaging Method—Loose piece,
bag



| Position | Dimensions | | Part Numbers |
|----------|-------------|-------------|--------------|
| | A | B | |
| 4 | 4.0 [0.16] | 2.0 [0.08] | 1470212-4 |
| 6 | 6.0 [0.24] | 4.0 [0.16] | 1470212-6 |
| 8 | 8.0 [0.31] | 6.0 [0.24] | 1470212-8 |
| 10 | 10.0 [0.39] | 8.0 [0.31] | 1-1470212-0 |
| 12 | 12.0 [0.47] | 10.0 [0.39] | 1-1470212-2 |
| 14 | 14.0 [0.55] | 12.0 [0.47] | 1-1470212-4 |
| 16 | 16.0 [0.63] | 14.0 [0.55] | 1-1470212-6 |
| 18 | 18.0 [0.71] | 16.0 [0.63] | 1-1470212-8 |
| 20 | 20.0 [0.79] | 18.0 [0.71] | 2-1470212-0 |
| 22 | 22.0 [0.87] | 20.0 [0.79] | 2-1470212-2 |
| 24 | 24.0 [0.94] | 22.0 [0.87] | 2-1470212-4 |
| 26 | 26.0 [1.02] | 24.0 [0.94] | 2-1470212-6 |
| 28 | 28.0 [1.10] | 26.0 [1.02] | 2-1470212-8 |
| 30 | 30.0 [1.18] | 28.0 [1.10] | 3-1470212-0 |
| 32 | 32.0 [1.26] | 30.0 [1.18] | 3-1470212-2 |
| 34 | 34.0 [1.34] | 32.0 [1.26] | 3-1470212-4 |
| 36 | 36.0 [1.42] | 34.0 [1.34] | 3-1470212-6 |
| 38 | 38.0 [1.50] | 36.0 [1.42] | 3-1470212-8 |
| 40 | 40.0 [1.57] | 38.0 [1.50] | 4-1470212-0 |
| 42 | 42.0 [1.65] | 40.0 [1.57] | 4-1470212-2 |
| 44 | 44.0 [1.73] | 42.0 [1.65] | 4-1470212-4 |
| 46 | 46.0 [1.81] | 44.0 [1.73] | 4-1470212-6 |
| 48 | 48.0 [1.89] | 46.0 [1.81] | 4-1470212-8 |
| 50 | 50.0 [1.97] | 48.0 [1.89] | 5-1470212-0 |
| 52 | 52.0 [2.05] | 50.0 [1.97] | 5-1470212-2 |
| 54 | 54.0 [2.13] | 52.0 [2.05] | 5-1470212-4 |
| 56 | 56.0 [2.20] | 54.0 [2.13] | 5-1470212-6 |
| 58 | 58.0 [2.28] | 56.0 [2.20] | 5-1470212-8 |
| 60 | 60.0 [2.36] | 58.0 [2.28] | 6-1470212-0 |
| 62 | 62.0 [2.44] | 60.0 [2.36] | 6-1470212-2 |
| 64 | 64.0 [2.52] | 62.0 [2.44] | 6-1470212-4 |
| 66 | 66.0 [2.60] | 64.0 [2.52] | 6-1470212-6 |
| 68 | 68.0 [2.68] | 66.0 [2.60] | 6-1470212-8 |
| 70 | 70.0 [2.76] | 68.0 [2.68] | 7-1470212-0 |
| 72 | 72.0 [2.83] | 70.0 [2.76] | 7-1470212-2 |
| 74 | 74.0 [2.91] | 72.0 [2.83] | 7-1470212-4 |
| 76 | 76.0 [2.99] | 74.0 [2.91] | 7-1470212-6 |
| 78 | 78.0 [3.07] | 76.0 [2.99] | 7-1470212-8 |
| 80 | 80.0 [3.15] | 78.0 [3.07] | 8-1470212-0 |

2mm Breakaway Headers, Unshrouded, Double Row, Thru-Hole, Right-Angle Mount

0.5 [.02] Square Right-Angle Posts

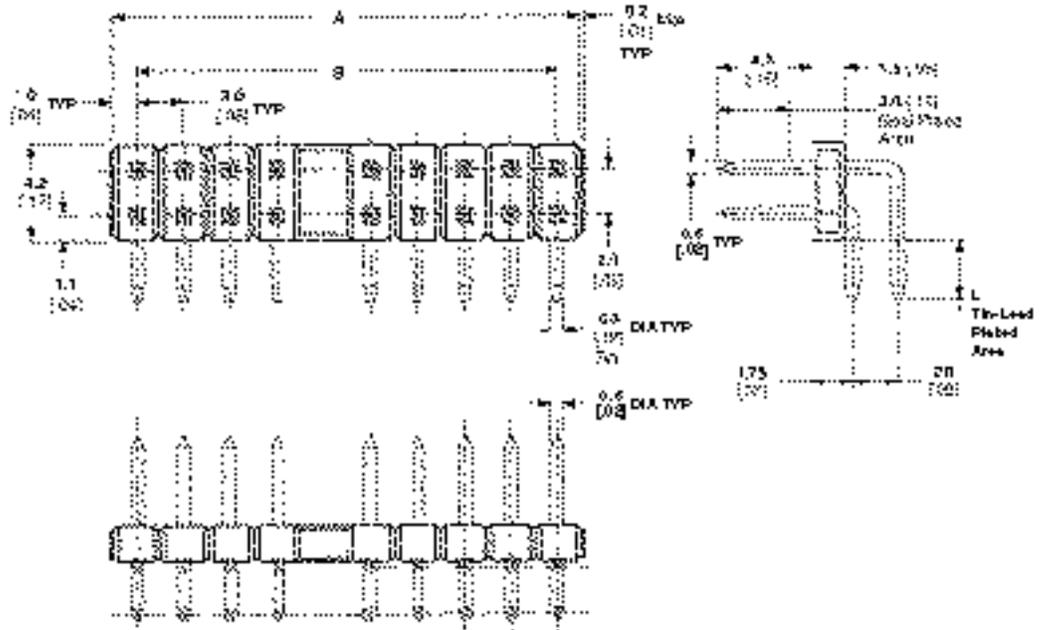
Material and Finish:

Housing—Black thermoplastic, UL 94V-0 rated

Posted Contacts—Brass, duplex plated as follows:

A—0.00020 [.000008] min. gold on contact area, 0.00100 [.000039] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

B—0.00076 [.000030] min. gold on contact area, 0.00100 [.000039] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel



Related Product Data:

Mateable Receptacles—pages 80-83

AMP Product Specification 108-5296

Packaging Method—Loose piece, bag



Breakaway Headers, Unshrouded, Double Row, Thru-Hole Mount

4

**2mm Breakaway Headers, Unshrouded, Double Row, Thru-Hole,
Right-Angle Mount** (Continued)

| No. of Positions | Dimensions | | Contact Plating | |
|------------------------|-------------|-------------|----------------------------|------------|
| | A | B | Lead Length L = 2.6[.10]** | |
| | | | A | B |
| 4 | 4.0 [0.16] | 2.0 [0.08] | 176837-1 | 2-176837-5 |
| 6 | 6.0 [0.24] | 4.0 [0.16] | 176837-2 | 2-176837-6 |
| 8 | 8.0 [0.31] | 6.0 [0.24] | 176837-3 | — |
| 10 | 10.0 [0.39] | 8.0 [0.31] | 176837-4 | — |
| 12 | 12.0 [0.47] | 10.0 [0.39] | 176837-5 | — |
| 14 | 14.0 [0.55] | 12.0 [0.47] | 176837-6 | 3-176837-0 |
| 16 | 16.0 [0.63] | 14.0 [0.55] | 176837-7 | — |
| 18 | 18.0 [0.71] | 16.0 [0.63] | — | 3-176837-2 |
| 20 | 20.0 [0.79] | 18.0 [0.71] | — | 3-176837-3 |
| 22 | 22.0 [0.87] | 20.0 [0.79] | — | 3-176837-4 |
| 26 | 26.0 [1.02] | 24.0 [0.94] | 1-176837-2 | — |
| 30 | 30.0 [1.18] | 28.0 [1.10] | 1-176837-4 | — |
| 32 | 32.0 [1.26] | 30.0 [1.18] | 1-176837-5 | 3-176837-9 |
| 34 | 34.0 [1.34] | 32.0 [1.26] | — | 4-176837-0 |
| 36 | 36.0 [1.42] | 34.0 [1.34] | — | 4-176837-1 |
| 38 | 38.0 [1.50] | 36.0 [1.42] | 1-176837-8 | 4-176837-2 |
| 40 | 40.0 [1.57] | 38.0 [1.50] | 1-176837-9 | 5-176837-2 |
| 42 | 42.0 [1.65] | 40.0 [1.57] | 2-176837-0 | 4-176837-4 |
| 44 | 44.0 [1.73] | 42.0 [1.65] | 2-176837-1 | — |
| 46 | 46.0 [1.81] | 44.0 [1.73] | 2-176837-2 | 4-176837-6 |
| 48 | 48.0 [1.89] | 46.0 [1.81] | 2-176837-3 | 4-176837-7 |
| 50 | 50.0 [1.97] | 48.0 [1.89] | 2-176837-4 | 4-176837-8 |

Breakaway Headers, Unshrouded,
Double Row, Thru-Hole Mount

4

2mm Breakaway Headers, Unshrouded, Double Row, Thru-Hole, Vertical Mount

0.5 [.02] Square Straight Posts

Material and Finish:

Housing—Black thermoplastic, UL 94V-0 rated

Posted Contacts—Brass, duplex plated as follows:

Plating A—0.00020 [.000008] min. gold on contact area, 0.00100 [.000039] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

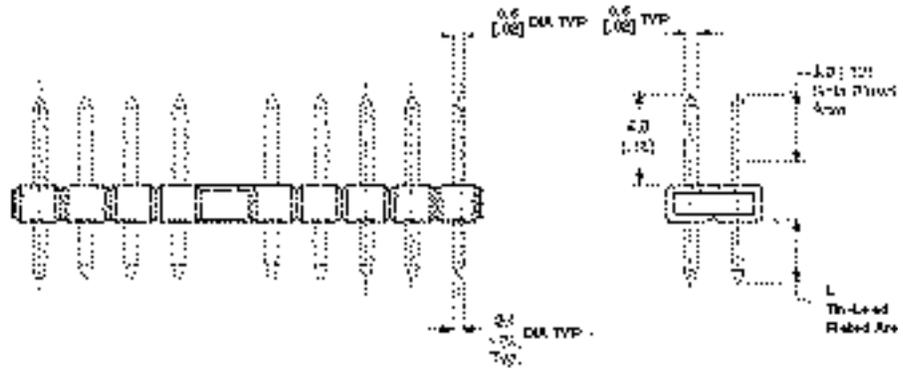
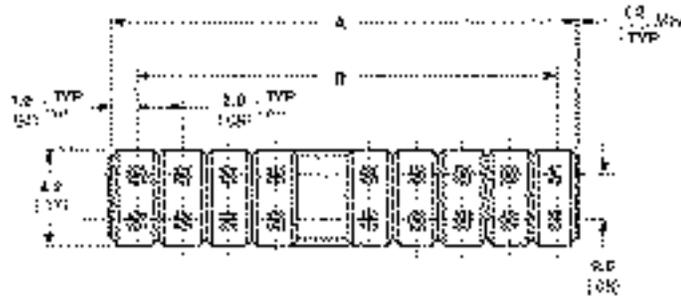
Plating B—0.00076 [.000030] min. gold on contact area, 0.00100 [.000039] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

Related Product Data:

Mateable Receptacles—pages 80-83

AMP Product Specification 108-5296

Packaging Method—Loose piece, bag



Breakaway Headers, Unshrouded, Double Row, Thru-Hole Mount

4

2mm Breakaway Headers, Unshrouded, Double Row, Thru-Hole, Vertical Mount

(Continued)

0.5 [.02] Square
Straight Posts

| No. of Positions | Dimensions | | Contact Plating | | | |
|------------------|-------------|-------------|---------------------------|------------|---------------------------|------------|
| | | | Lead Length L = 1.5 [.06] | | Lead Length L = 2.6 [.10] | |
| | A | B | A | B | A | B |
| 4 | 4.0 [0.16] | 2.0 [0.08] | 178751-1 | 2-178751-5 | 176264-1 | 1-176264-6 |
| 6 | 6.0 [0.24] | 4.0 [0.16] | — | 2-178751-6 | 176264-2 | 1-176264-7 |
| 8 | 8.0 [0.31] | 6.0 [0.24] | — | 2-178751-7 | 176264-3 | 1-176264-8 |
| 10 | 10.0 [0.39] | 8.0 [0.31] | 178751-4 | 2-178751-8 | 176264-4 | 1-176264-9 |
| 12 | 12.0 [0.47] | 10.0 [0.39] | — | 2-178751-9 | 176264-5 | 2-176264-0 |
| 14 | 14.0 [0.55] | 12.0 [0.47] | 178751-6 | 3-178751-0 | 176264-6 | 2-176264-1 |
| 16 | 16.0 [0.63] | 14.0 [0.55] | — | 3-178751-1 | 176264-7 | 2-176264-2 |
| 18 | 18.0 [0.71] | 16.0 [0.63] | 178751-8 | 3-178751-2 | 176264-8 | 2-176264-3 |
| 20 | 20.0 [0.79] | 18.0 [0.71] | 178751-9 | 3-178751-3 | 176264-9 | 2-176264-4 |
| 22 | 22.0 [0.87] | 20.0 [0.79] | 1-178751-0 | 3-178751-4 | 1-176264-0 | 2-176264-5 |
| 24 | 24.0 [0.94] | 22.0 [0.87] | 1-178751-1 | 3-178751-5 | 1-176264-1 | 2-176264-6 |
| 26 | 26.0 [1.02] | 24.0 [0.94] | 1-178751-2 | 3-178751-6 | — | — |
| 28 | 28.0 [1.10] | 26.0 [1.02] | — | 3-178751-7 | 1-176264-3 | — |
| 30 | 30.0 [1.18] | 28.0 [1.10] | 1-178751-4 | 3-178751-8 | 1-176264-4 | 2-176264-9 |
| 32 | 32.0 [1.26] | 30.0 [1.18] | 1-178751-5 | 3-178751-9 | 1-176264-5 | — |
| 34 | 34.0 [1.34] | 32.0 [1.26] | 1-178751-6 | 4-178751-0 | — | 4-176264-0 |
| 36 | 36.0 [1.42] | 34.0 [1.34] | 1-178751-7 | 4-178751-1 | 3-176264-2 | 4-176264-1 |
| 38 | 38.0 [1.50] | 36.0 [1.42] | 1-178751-8 | 4-178751-2 | 3-176264-3 | — |
| 40 | 40.0 [1.57] | 38.0 [1.50] | 1-178751-9 | 4-178751-3 | 3-176264-4 | — |
| 42 | 42.0 [1.65] | 40.0 [1.57] | 2-178751-0 | 4-178751-4 | — | — |
| 44 | 44.0 [1.73] | 42.0 [1.65] | 2-178751-1 | 4-178751-5 | 3-176264-6 | 4-176264-5 |
| 46 | 46.0 [1.81] | 44.0 [1.73] | 2-178751-2 | 4-178751-6 | — | 4-176264-6 |
| 48 | 48.0 [1.89] | 46.0 [1.81] | 2-178751-3 | 4-178751-7 | — | 4-176264-7 |
| 50 | 50.0 [1.97] | 48.0 [1.89] | 2-178751-4 | 4-178751-8 | 3-176264-9 | 4-176264-8 |

Breakaway Headers, Unshrouded, Double Row, Thru-Hole Mount

4

2mm Breakaway Headers, Unshrouded, Double Row, Surface Mount, Vertical

0.5 [.02] Square Straight Posts

Material and Finish:

Housing—Black polyphenylene sulfide, UL 94V-0 rated

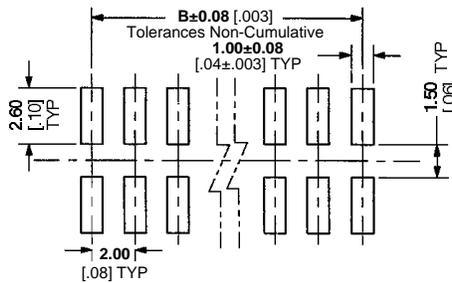
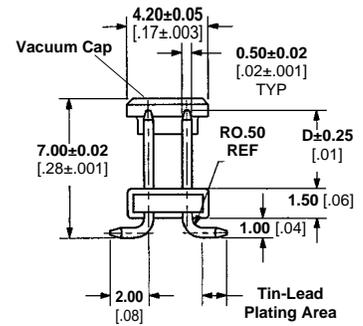
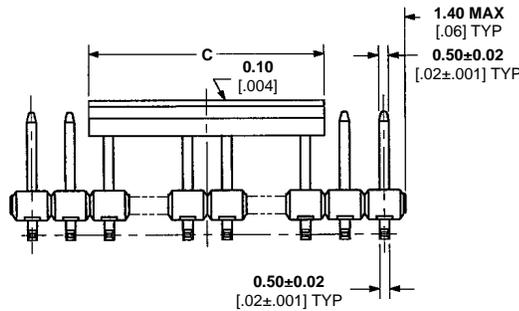
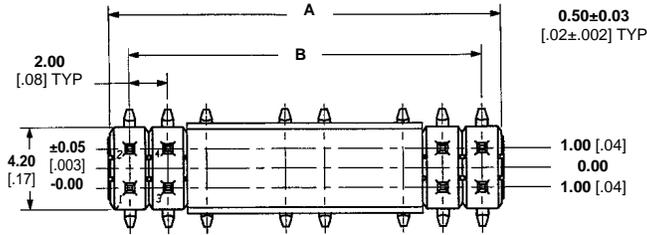
Posted Contacts—Phosphor bronze, plated as follows, Duplex plated 0.00020 [.000008] min. gold on contact area, 0.00200 [.000079] min. tin-lead on solder area, with entire contact underplated 0.00130 [.000051] min. nickel

Related Product Data:

Mateable Headers—pages 80-83

AMP Product Specification
108-51001

Packaging Method—Tape & Reel



Recommended Solder Pad Layout

| No. of Positions | Dimensions | | | Part Numbers |
|------------------|-------------|-------------|------------|--------------|
| | A | B | C | |
| 4 | 4.0 [0.16] | 2.0 [0.08] | 4.0 [0.16] | 84476-1 |
| 6 | 6.0 [0.24] | 4.0 [0.16] | 6.0 [0.24] | 84476-2 |
| 16 | 16.0 [0.63] | 14.0 [0.55] | 8.0 [0.31] | 84476-3 |

Header Assembly, AMPMODU 2mm SMT Vertical

4

2mm Breakaway Headers, Unshrouded, Double Row, Surface Mount, Vertical

0.5 [.02] Square Straight Posts

Material and Finish:

Housing—Black polyphenylene sulfide, UL 94V-0 rated

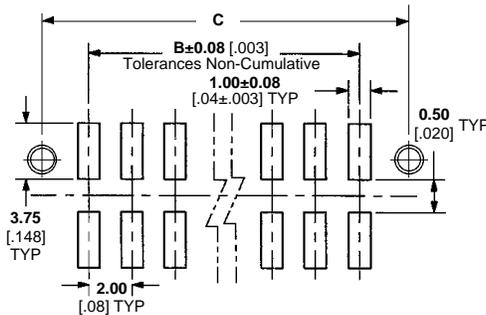
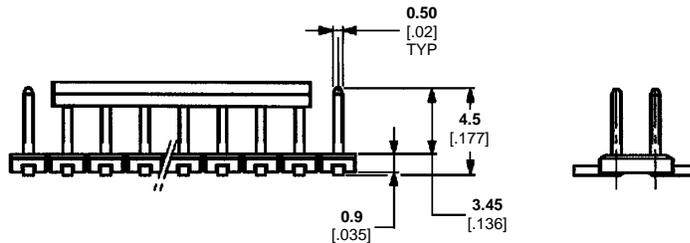
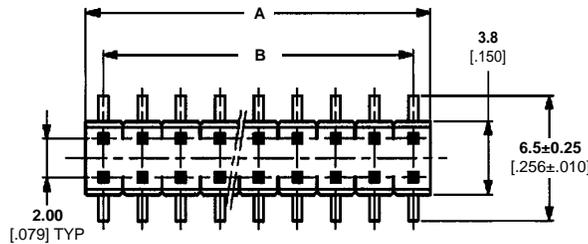
Posted Contacts—Phosphor bronze, plated as follows, Duplex plated 0.0076 [.000030] min. gold on contact area, 0.00254-0.00406 [.000100-.000160] min. tin-lead on solder area, with entire contact underplated 0.00127 [.000050] min. nickel

Related Product Data:

Mateable Headers—pages 80-83

AMP Product Specification
108-18544

Packaging Method—Tape & Reel



Recommended Solder Pad Layout

| No. of Positions | Dimensions | | | Part Numbers |
|------------------|-------------|-------------|--------------|--------------|
| | A | B | C | |
| 4 | 4.0 [0.16] | 2.0 [0.08] | 7.60 [0.30] | 966926-2 |
| 6 | 6.0 [0.24] | 4.0 [0.16] | 9.60 [0.38] | 966926-3 |
| 8 | 8.0 [0.31] | 6.0 [0.24] | 11.60 [0.46] | 966926-4 |
| 10 | 10.0 [0.39] | 8.0 [0.31] | 13.60 [0.53] | 966926-5 |
| 12 | 12.0 [0.47] | 10.0 [0.39] | 15.60 [0.61] | 966926-6 |
| 14 | 14.0 [0.55] | 12.0 [0.47] | 17.60 [0.69] | 966926-7 |
| 16 | 16.0 [0.63] | 14.0 [0.55] | 19.60 [0.77] | 966926-8 |
| 18 | 18.0 [0.71] | 16.0 [0.63] | 21.60 [0.85] | 966926-9 |
| 20 | 20.0 [0.79] | 18.0 [0.71] | 23.60 [0.93] | 1-966926-0 |
| 22 | 22.0 [0.87] | 20.0 [0.79] | 25.60 [1.01] | 1-966926-1 |
| 24 | 24.0 [0.94] | 22.0 [0.87] | 27.60 [1.09] | 1-966926-2 |

AMPMODU .025 Square Interconnection System

4

2mm Stacking Header, Unshrouded, Double Row, Thru-Hole, Vertical Mount

0.5 [.02] Square Straight Posts

12 Position
Part Number 1470776-1

Material and Finish:

Housing—Black thermoplastic, UL 94 V-0 Rated

Posted Contacts—Copper alloy, duplex plated as follows:

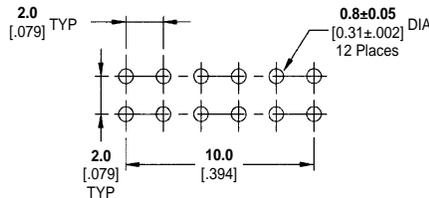
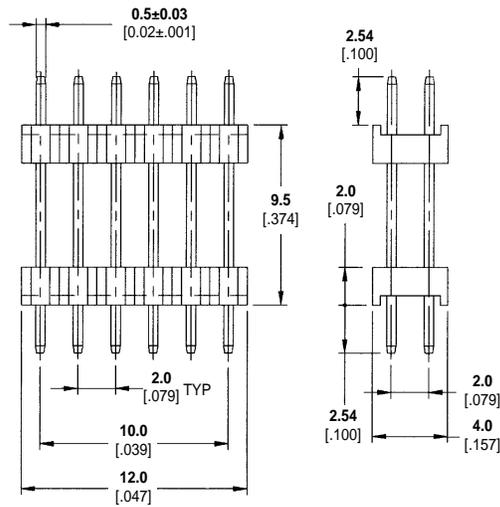
Gold flash all over contact underplated 0.00127 [.000050] min. nickel

Related Product Data:

Mateable Receptacles—pages 80-83

AMP Product Specification 108-57331

Packaging Method—Loose piece, bag



2.0 Pitch Vertical

4

2mm Header, Shrouded, Double Row, Thru-Hole, Right-Angle Mount

0.5 [.02] Square Right-Angle Posts

26 Position
Part Number 84700-1

Material and Finish:

Housing—High temperature, black thermoplastic, UL 94 V-O Rated

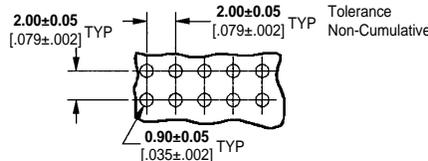
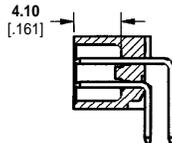
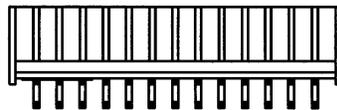
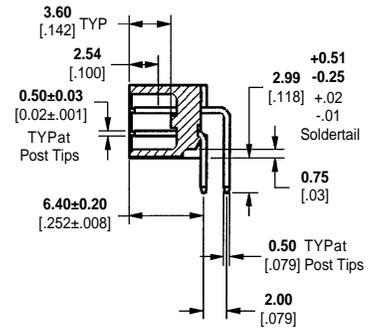
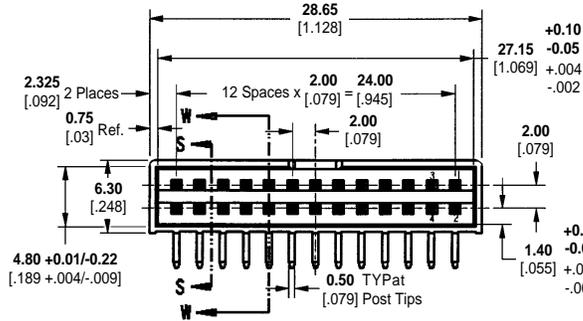
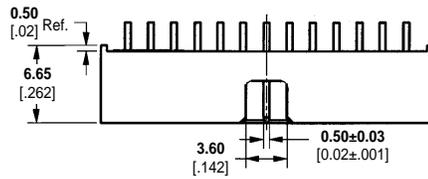
Posted Contacts—Copper alloy, duplex plated as follows: 0.00038[.000015] min. gold on contact area, 0.00254[.000100] min. tin-lead on solder area, with entire contact underplated 0.00127[.000050] min. nickel

Related Product Data:

Mateable Receptacles—pages 80 and 83

AMP Product Specification 108-5296

Packaging Method—Tube



Recommended PCB Layout

2.0 Vertical Mount Type

4

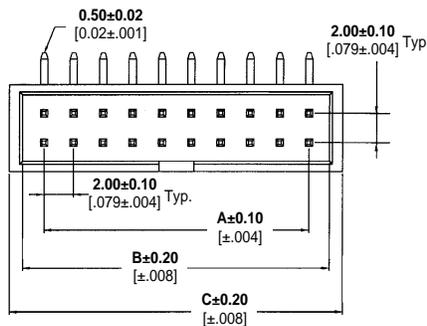
2mm Headers, Shrouded, Double Row, Thru-Hole, Right-Angle

0.5 [.02] Square Right-Angle Posts

Material and Finish:

Housing—Natural color thermoplastic, UL 94 V-0 Rated

Posted Contacts—Brass, plated as follows:
0.00020 [.000008] min. gold on contact area with entire contact underplated
0.00127 [.000050] min. nickel

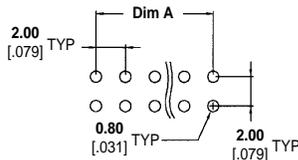
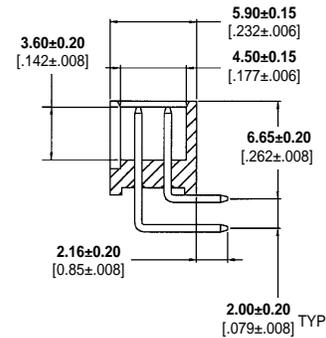
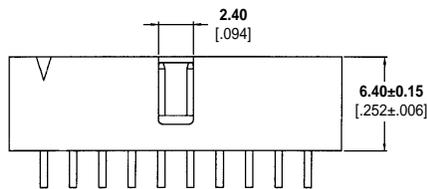


Related Product Data:

Mateable Receptacles—pages 80 and 83

AMP Product Specification 108-57221

Packaging Method—Tubes



Recommended PCB Layout

| No. of Positions | Dimensions | | | Part Numbers |
|------------------|-------------|--------------|--------------|--------------|
| | A | B | C | |
| 8 | 6.0 [0.24] | 10.85 [0.43] | 12.65 [0.50] | 1470192-8 |
| 10 | 8.0 [0.31] | 12.85 [0.51] | 14.65 [0.57] | 1-1470192-0 |
| 12 | 10.0 [0.39] | 14.85 [0.58] | 16.65 [0.65] | 1-1470192-2 |
| 14 | 12.0 [0.47] | 16.85 [0.66] | 18.65 [0.73] | 1-1470192-4 |
| 20 | 18.0 [0.71] | 20.85 [0.82] | 22.65 [0.89] | 2-1470192-0 |
| 24 | 22.0 [0.87] | 24.85 [0.98] | 26.65 [1.05] | 2-1470192-4 |
| 26 | 24.0 [0.94] | 26.85 [1.06] | 28.65 [1.13] | 2-1470192-6 |
| 30 | 28.0 [1.10] | 32.85 [1.29] | 32.65 [1.28] | 3-1470192-0 |
| 32 | 30.0 [1.18] | 34.85 [1.37] | 34.65 [1.36] | 3-1470192-2 |
| 34 | 32.0 [1.26] | 36.85 [1.45] | 36.65 [1.44] | 3-1470192-4 |
| 40 | 38.0 [1.50] | 40.85 [1.61] | 42.65 [1.68] | 4-1470192-0 |
| 44 | 42.0 [1.65] | 44.85 [1.77] | 46.65 [1.84] | 4-1470192-4 |
| 50 | 48.0 [1.89] | 50.85 [2.00] | 52.65 [2.07] | 5-1470192-0 |
| 60 | 58.0 [2.28] | 60.85 [2.40] | 62.65 [2.47] | 6-1470192-0 |
| 64 | 62.0 [2.44] | 64.85 [2.55] | 66.65 [2.62] | 6-1470192-4 |

2.0 Pitch Right-Angle

4

2mm Headers, Shrouded, Double Row, Surface Mount, Vertical

0.5 [.02] Square Straight Posts

Material and Finish:

Housing—Black high temperature thermoplastic, UL 94 V-0 Rated

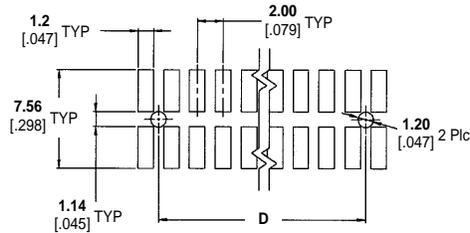
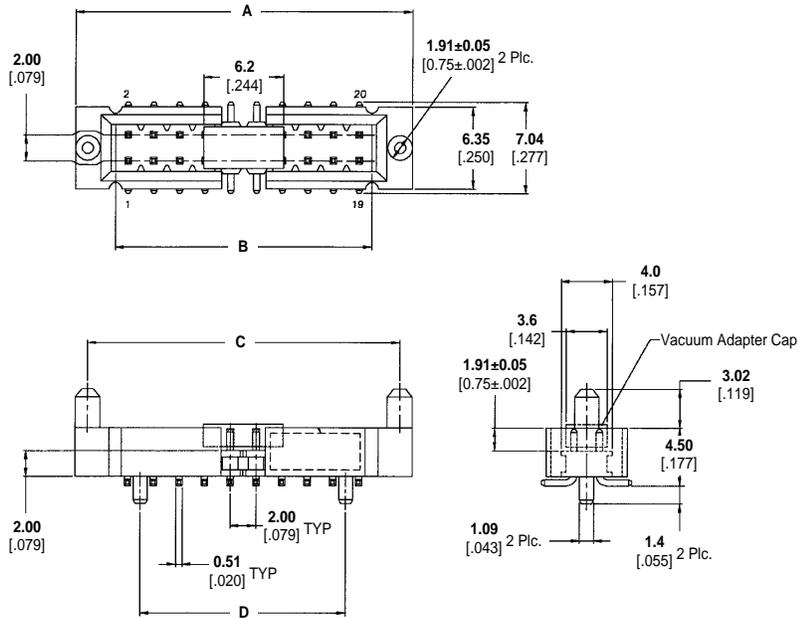
Posted Contacts—Phosphor Bronze, duplex plated as follows:

0.00076[0.00030] min. gold on contact area, 0.00381[.000150] min. tin-lead on solder area, with entire contact underplated 0.00127[.000050] min. nickel

AMP Product Specification

108-57328

Packaging Method—Tape and reel



| No. of Positions | Dimensions | | | | Part Numbers |
|------------------|-------------|-------------|-------------|-------------|--------------|
| | A | B | C | D | |
| 20 | 26.2 [1.03] | 20.0 [0.79] | 24.3 [0.96] | 16.0 [.63] | 2-1470325-0 |
| 30 | 36.2 [1.43] | 30.0 [1.18] | 34.3 [1.35] | 26.0 [1.02] | 3-1470325-0 |

Receptacle Assemblies,
Double Row, Vertical Mount with
Vacuum Adapter Cap
4

2mm Headers, Shrouded, Double Row, Thru-Hole, Vertical

0.5 [.02] Square Straight Posts

Material and Finish:

Housing—Black thermoplastic, UL 94 V-0 Rated

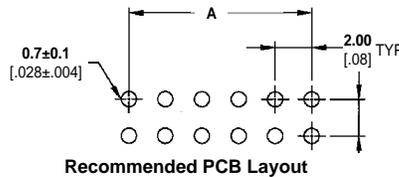
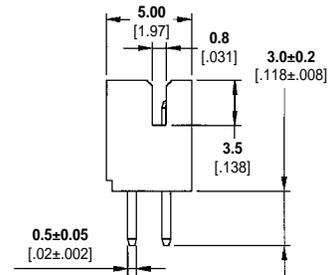
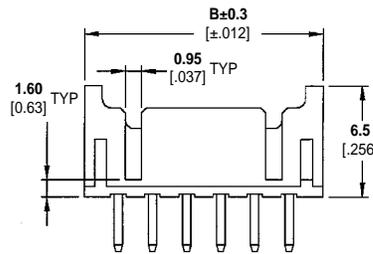
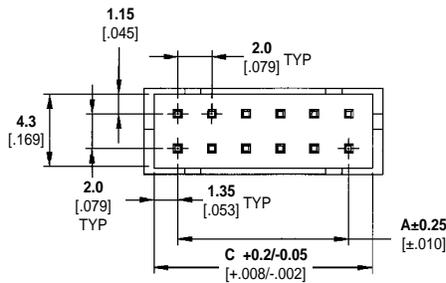
Posted Contacts—Brass, duplex plated as follows:
0.00254 [.000100] min. tin-lead on contact area, with entire contact underplated 0.00127 [.000050] min. nickel

Related Product Data:

Mateable Receptacles—pages 80 and 83

AMP Product Specification 108-57217

Packaging Method—Loose piece, bag



| No. of Position | Dimensions | | | Part Numbers |
|-----------------|-------------|-------------|--------------|--------------|
| | A | B | C | |
| 6 | 4.0 [0.16] | 8.0 [0.31] | 6.74 [0.26] | 1470109-6 |
| 8 | 6.0 [0.24] | 10.0 [0.39] | 8.74 [0.34] | 1470109-8 |
| 10 | 8.0 [0.31] | 12.0 [0.47] | 10.74 [0.42] | 1-1470109-0 |
| 12 | 10.0 [0.39] | 14.0 [0.55] | 12.74 [0.50] | 1-1470109-2 |
| 14 | 12.0 [0.47] | 16.0 [0.63] | 14.74 [0.58] | 1-1470109-4 |
| 16 | 14.0 [0.55] | 18.0 [0.71] | 16.74 [0.66] | 1-1470109-6 |
| 18 | 16.0 [0.63] | 20.0 [0.79] | 18.74 [0.74] | 1-1470109-8 |
| 20 | 18.0 [0.71] | 22.0 [0.87] | 20.74 [0.82] | 2-1470109-0 |
| 22 | 20.0 [0.79] | 24.0 [0.94] | 22.74 [0.89] | 2-1470109-2 |
| 24 | 22.0 [0.87] | 26.0 [1.02] | 24.74 [0.97] | 2-1470109-4 |
| 26 | 24.0 [0.94] | 28.0 [1.10] | 26.74 [1.05] | 2-1470109-6 |
| 28 | 26.0 [1.02] | 30.0 [1.18] | 28.74 [1.13] | 2-1470109-8 |
| 30 | 28.0 [1.10] | 32.0 [1.26] | 30.74 [1.21] | 3-1470109-0 |
| 32 | 30.0 [1.18] | 34.0 [1.34] | 32.74 [1.29] | 3-1470109-2 |

2mm Headers, Shrouded, Double Row, Thru-Hole, Right-Angle

0.5 [.02] Square Right-Angle Posts

Material and Finish:

Housing—Black thermoplastic, UL 94 V-0 Rated

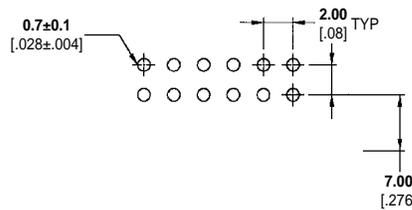
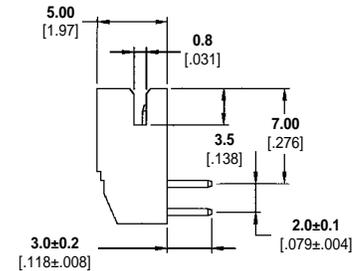
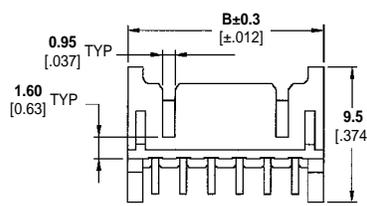
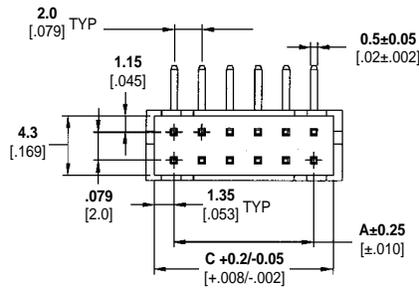
Posted Contacts—Brass, duplex plated as follows:
0.00254 [.000100] min. tin-lead on contact area, with entire contact underplated 0.00127 [.000050] min. nickel

Related Product Data:

Mateable Receptacles—pages 80 and 83

AMP Product Specification 108-57217

Packaging Method—Loose piece, bag



Recommended PCB Layout

| No. of Position | Dimensions | | | Part Numbers |
|-----------------|-------------|--------------|--------------|--------------|
| | A | B | C | |
| 6 | 4.0 [0.16] | 8.00 [0.31] | 6.74 [0.26] | 1470108-6 |
| 8 | 6.0 [0.24] | 10.00 [0.39] | 8.74 [0.34] | 1470108-8 |
| 10 | 8.0 [0.32] | 12.00 [0.47] | 10.74 [0.42] | 1-1470108-0 |
| 12 | 10.0 [0.39] | 14.00 [0.55] | 12.74 [0.50] | 1-1470108-2 |
| 14 | 12.0 [0.47] | 16.00 [0.63] | 14.74 [0.58] | 1-1470108-4 |
| 16 | 18.0 [0.71] | 18.00 [0.71] | 16.74 [0.66] | 1-1470108-6 |
| 18 | 14.0 [0.55] | 20.00 [0.79] | 18.74 [0.74] | 1-1470108-8 |
| 20 | 16.0 [0.63] | 22.00 [0.87] | 20.74 [0.82] | 2-1470108-0 |
| 22 | 22.0 [0.87] | 24.00 [0.94] | 22.74 [0.89] | 2-1470108-2 |
| 24 | 20.0 [0.79] | 26.00 [1.02] | 24.74 [0.97] | 2-1470108-4 |
| 26 | 24.0 [0.94] | 28.00 [1.10] | 26.74 [1.05] | 2-1470108-6 |
| 28 | 28.0 [1.10] | 30.00 [1.18] | 28.74 [1.13] | 2-1470108-8 |
| 30 | 26.0 [1.02] | 32.00 [1.26] | 30.74 [1.21] | 3-1470108-0 |
| 32 | 30.0 [1.18] | 34.00 [1.34] | 32.74 [1.29] | 3-1470108-2 |

Pitch Right Angle Mount
4

2mm Centerline Receptacles, Double Row, Thru-Hole, Vertical Mount

Receptacle, Through-Hole, Vertical

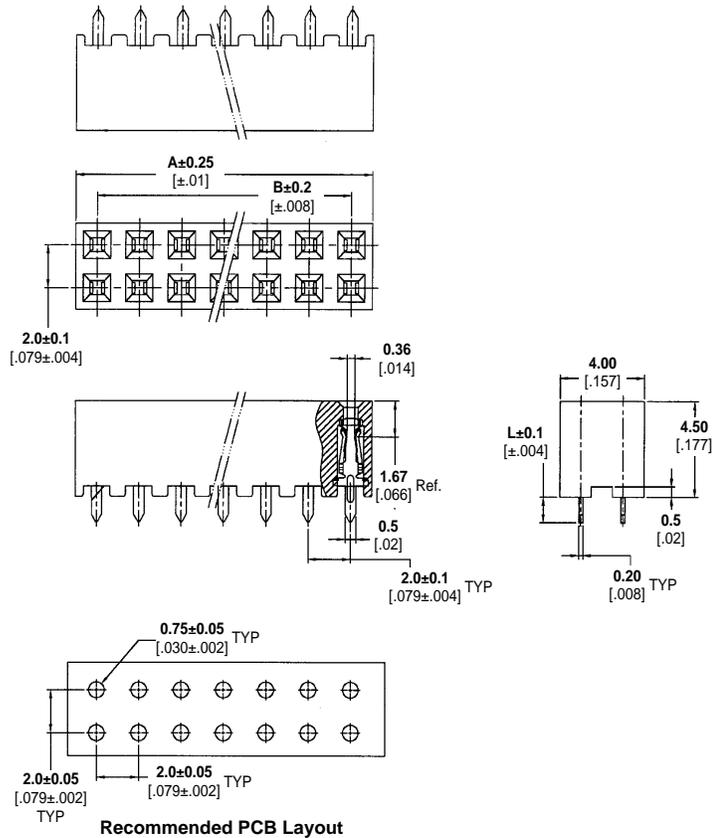
Material and Finish:

Housing—Black thermoplastic, UL 94 V-0 Rated

Contacts—Copper alloy, plated as follows:

A-0.00020[.000008] min. gold on contact area, 0.00203[.000080] min. tin on solder area, with entire contact underplated 0.00127[.000050] min. nickel

B-0.00076[.000030] min. gold on contact area, 0.00203[.000080] min. tin on solder area, with entire contact underplated 0.00127[.000050] min. nickel



Related Product Data:

Mateable Receptacles—pages 66-76, 78, 79

AMP Product Specification 108-57197

Packaging Method—Tray

| No. of Positions | Dimensions | | Part Numbers | | | |
|------------------|--------------|--------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| | | | Plating A | | Plating B | |
| | | | Dim. L 1.2+/-0.1 (.047+/- .004) | Dim. L 2.6+/-0.1 (.102+/- .004) | Dim. L 1.2+/-0.1 (.047+/- .004) | Dim. L 2.6+/-0.1 (.102+/- .004) |
| 4 | 4.0 [.157] | 2.0 [.079] | 1470209-1 | 2-1470209-5 | 5-1470209-1 | 7-1470209-5 |
| 6 | 6.0 [.236] | 4.0 [.157] | 1470209-2 | 2-1470209-6 | 5-1470209-2 | 7-1470209-6 |
| 8 | 8.0 [.315] | 6.0 [.236] | 1470209-3 | 2-1470209-7 | 5-1470209-3 | 7-1470209-7 |
| 10 | 10.0 [.394] | 8.0 [.315] | 1470209-4 | 2-1470209-8 | 5-1470209-4 | 7-1470209-8 |
| 12 | 12.0 [.472] | 10.0 [.394] | 1470209-5 | 2-1470209-9 | 5-1470209-5 | 7-1470209-9 |
| 14 | 14.0 [.551] | 12.0 [.472] | 1470209-6 | 3-1470209-0 | 5-1470209-6 | 8-1470209-0 |
| 16 | 16.0 [.630] | 14.0 [.551] | 1470209-7 | 3-1470209-1 | 5-1470209-7 | 8-1470209-1 |
| 18 | 18.0 [.709] | 16.0 [.630] | 1470209-8 | 3-1470209-2 | 5-1470209-8 | 8-1470209-2 |
| 20 | 20.0 [.787] | 18.0 [.709] | 1470209-9 | 3-1470209-3 | 5-1470209-9 | 8-1470209-3 |
| 22 | 22.0 [.866] | 20.0 [.787] | 1-1470209-0 | 3-1470209-4 | 6-1470209-0 | 8-1470209-4 |
| 24 | 24.0 [.945] | 22.0 [.866] | 1-1470209-1 | 3-1470209-5 | 6-1470209-1 | 8-1470209-5 |
| 26 | 26.0 [1.024] | 24.0 [.945] | 1-1470209-2 | 3-1470209-6 | 6-1470209-2 | 8-1470209-6 |
| 28 | 28.0 [1.102] | 26.0 [1.024] | 1-1470209-3 | 3-1470209-7 | 6-1470209-3 | 8-1470209-7 |
| 30 | 30.0 [1.181] | 28.0 [1.102] | 1-1470209-4 | 3-1470209-8 | 6-1470209-4 | 8-1470209-8 |
| 32 | 32.0 [1.260] | 30.0 [1.181] | 1-1470209-5 | 3-1470209-9 | 6-1470209-5 | 8-1470209-9 |
| 34 | 34.0 [1.339] | 32.0 [1.260] | 1-1470209-6 | 4-1470209-0 | 6-1470209-6 | 9-1470209-0 |
| 36 | 36.0 [1.417] | 34.0 [1.339] | 1-1470209-7 | 4-1470209-1 | 6-1470209-7 | 9-1470209-1 |
| 38 | 38.0 [1.496] | 36.0 [1.417] | 1-1470209-8 | 4-1470209-2 | 6-1470209-8 | 9-1470209-2 |
| 40 | 40.0 [1.575] | 38.0 [1.496] | 1-1470209-9 | 4-1470209-3 | 6-1470209-9 | 9-1470209-3 |
| 42 | 42.0 [1.654] | 40.0 [1.575] | 2-1470209-0 | 4-1470209-4 | 7-1470209-0 | 9-1470209-4 |
| 44 | 44.0 [1.732] | 42.0 [1.654] | 2-1470209-1 | 4-1470209-5 | 7-1470209-1 | 9-1470209-5 |
| 46 | 46.0 [1.811] | 44.0 [1.732] | 2-1470209-2 | 4-1470209-6 | 7-1470209-2 | 9-1470209-6 |
| 48 | 48.0 [1.890] | 46.0 [1.811] | 2-1470209-3 | 4-1470209-7 | 7-1470209-3 | 9-1470209-7 |
| 50 | 50.0 [1.969] | 48.0 [1.890] | 2-1470209-4 | 4-1470209-8 | 7-1470209-4 | 9-1470209-8 |

2.0 Mount Type w/PickUp

4

2mm Receptacle, Double Row, Surface Mount, Right-Angle Mount

Receptacle, Surface Mount, Right Angle

Material and Finish:

Housing—Black Thermoplastic, UL 94V-0 Rated

Contact—Phosphor Bronze

Contact Finish—0.00020 [0.00008]

Min. Gold Plated on Contact Area, 0.00229 [0.00090] Min. Tin-Lead Plated on Solder Tail, 0.00127 [0.00050] Min. Nickel Underplated Over All

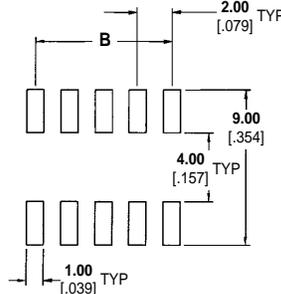
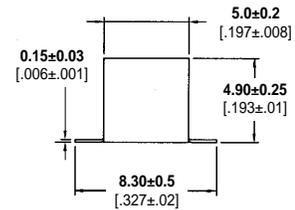
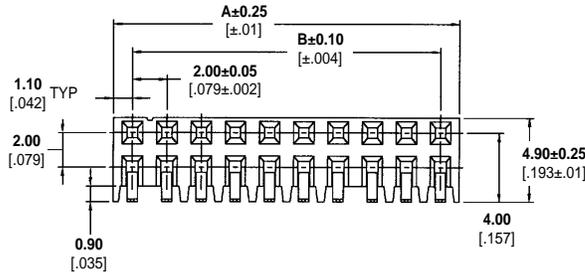
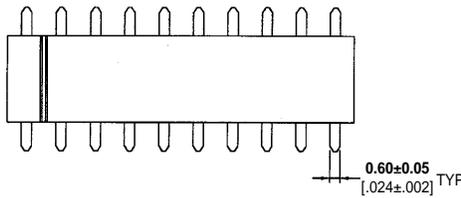
Related Product Data:

Mateable Headers—pages 66-74

AMP Product Specification

108-57250

Packaging Method—Tape and reel



Recommended PCB Layout

2mm Receptacle

4

| Position | Dimensions | | Part Numbers |
|----------|---------------|--------------|--------------|
| | A | B | |
| 6 | 6.20 [0.244] | 4.0 [0.157] | 1470380-6 |
| 8 | 8.20 [0.323] | 6.0 [0.236] | 1470380-8 |
| 10 | 10.20 [0.402] | 8.0 [0.315] | 1-1470380-0 |
| 12 | 12.20 [0.480] | 10.0 [0.394] | 1-1470380-2 |
| 14 | 14.20 [0.559] | 12.0 [0.472] | 1-1470380-4 |
| 16 | 16.20 [0.638] | 14.0 [0.551] | 1-1470380-6 |
| 18 | 18.20 [0.717] | 16.0 [0.630] | 1-1470380-8 |
| 20 | 20.20 [0.795] | 18.0 [0.709] | 2-1470380-0 |
| 22 | 22.20 [0.874] | 20.0 [0.787] | 2-1470380-2 |
| 24 | 24.20 [0.953] | 22.0 [0.866] | 2-1470380-4 |
| 26 | 26.20 [1.031] | 24.0 [0.945] | 2-1470380-6 |
| 28 | 28.20 [1.110] | 26.0 [1.024] | 2-1470380-8 |
| 30 | 30.20 [1.189] | 28.0 [1.102] | 3-1470380-0 |
| 32 | 32.20 [1.268] | 30.0 [1.181] | 3-1470380-2 |
| 34 | 34.20 [1.346] | 32.0 [1.260] | 3-1470380-4 |
| 36 | 36.20 [1.425] | 34.0 [1.339] | 3-1470380-6 |
| 38 | 38.20 [1.504] | 36.0 [1.417] | 3-1470380-8 |
| 40 | 40.20 [1.583] | 38.0 [1.496] | 4-1470380-0 |
| 42 | 42.20 [1.661] | 40.0 [1.575] | 4-1470380-2 |
| 44 | 44.20 [1.740] | 42.0 [1.654] | 4-1470380-4 |
| 46 | 46.20 [1.819] | 44.0 [1.732] | 4-1470380-6 |
| 48 | 48.20 [1.898] | 46.0 [1.811] | 4-1470380-8 |
| 50 | 50.20 [1.976] | 48.0 [1.890] | 5-1470380-0 |

2mm Receptacle, Double Row, Thru-Hole, Right-Angle Mount

Receptacle, Thru-Hole, Right-Angle

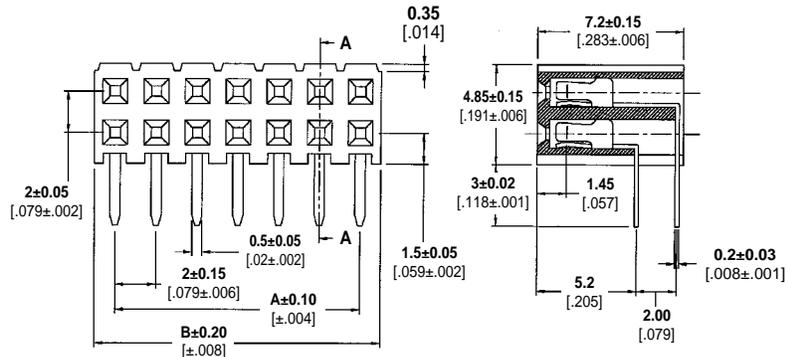
Material and Finish:

Housing—Black Thermoplastic, UL 94V-0 Rated

Contact—Phosphor Bronze

Contact Finish—0.00020 [0.00008]

Min. Gold Plated on Contact Area, 0.00254 [0.00100] Min. Tin-Lead Plated on Solder Tail, 0.00127 [0.00050] Min. Nickel Underplated Over All



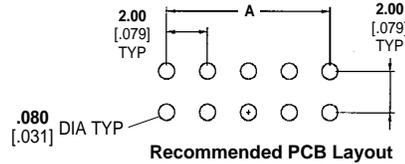
Section A-A

Related Product Data:

Mateable Headers—pages 66-74

Performance Specifications—108-57197

Packaging Method—Tube



2mm Receptacle

4

| Position | Dimensions | | Part Numbers |
|----------|--------------|---------------|--------------|
| | A | B | |
| 8 | 6.0 [.236] | 8.50 [.335] | 1470260-8 |
| 10 | 8.0 [.315] | 10.50 [.413] | 1-1470260-0 |
| 12 | 10.0 [.394] | 12.50 [.492] | 1-1470260-2 |
| 14 | 12.0 [.472] | 14.50 [.571] | 1-1470260-4 |
| 16 | 14.0 [.551] | 16.50 [.650] | 1-1470260-6 |
| 18 | 16.0 [.630] | 18.50 [.728] | 1-1470260-8 |
| 20 | 18.0 [.709] | 20.50 [.807] | 2-1470260-0 |
| 22 | 20.0 [.787] | 22.50 [.886] | 2-1470260-2 |
| 24 | 22.0 [.866] | 24.50 [.965] | 2-1470260-4 |
| 26 | 24.0 [.945] | 26.50 [1.043] | 2-1470260-6 |
| 28 | 26.0 [1.024] | 28.50 [1.122] | 2-1470260-8 |
| 30 | 28.0 [1.102] | 30.50 [1.201] | 3-1470260-0 |
| 32 | 30.0 [1.181] | 32.50 [1.280] | 3-1470260-2 |
| 34 | 32.0 [1.260] | 34.50 [1.358] | 3-1470260-4 |
| 36 | 34.0 [1.339] | 36.50 [1.437] | 3-1470260-6 |
| 38 | 36.0 [1.417] | 38.50 [1.516] | 3-1470260-8 |
| 40 | 38.0 [1.496] | 40.50 [1.594] | 4-1470260-0 |
| 42 | 40.0 [1.575] | 42.50 [1.673] | 4-1470260-2 |
| 44 | 42.0 [1.654] | 44.50 [1.752] | 4-1470260-4 |
| 46 | 44.0 [1.732] | 46.50 [1.831] | 4-1470260-6 |
| 48 | 46.0 [1.811] | 48.50 [1.909] | 4-1470260-8 |
| 50 | 48.0 [1.890] | 50.50 [1.988] | 5-1470260-0 |
| 52 | 50.0 [1.969] | 52.50 [2.067] | 5-1470260-2 |
| 54 | 52.0 [2.047] | 54.50 [2.146] | 5-1470260-4 |
| 56 | 54.0 [2.123] | 56.50 [2.224] | 5-1470260-6 |
| 58 | 56.0 [2.205] | 58.50 [2.303] | 5-1470260-8 |
| 60 | 58.0 [2.283] | 60.50 [2.381] | 6-1470260-0 |
| 62 | 60.0 [2.362] | 62.50 [2.461] | 6-1470260-2 |
| 64 | 62.0 [2.441] | 64.50 [2.539] | 6-1470260-4 |
| 66 | 64.0 [2.520] | 66.50 [2.618] | 6-1470260-6 |
| 68 | 66.0 [2.598] | 68.50 [2.697] | 6-1470260-8 |
| 70 | 68.0 [2.677] | 70.50 [2.776] | 7-1470260-0 |
| 72 | 70.0 [2.756] | 72.50 [2.854] | 7-1470260-2 |
| 74 | 72.0 [2.834] | 74.50 [2.933] | 7-1470260-4 |
| 76 | 74.0 [2.913] | 76.50 [3.012] | 7-1470260-6 |
| 78 | 76.0 [2.992] | 78.50 [3.091] | 7-1470260-8 |
| 80 | 78.0 [3.071] | 80.50 [3.169] | 8-1470260-0 |

2mm Receptacle, Double Row, Surface Mount, Vertical Mount

Receptacle, Top Entry, Surface Mount

Material and Finish:

Housing—Black Thermoplastic, UL 94V-0 Rated

Contact—Copper Alloy, plated 0.00076 [.000030] Min. Gold Plated on Contact Area, 0.00254 [.000100] Tin-Lead Plated on Solder Tail, Underplated 0.00127 [.000050] Nickel

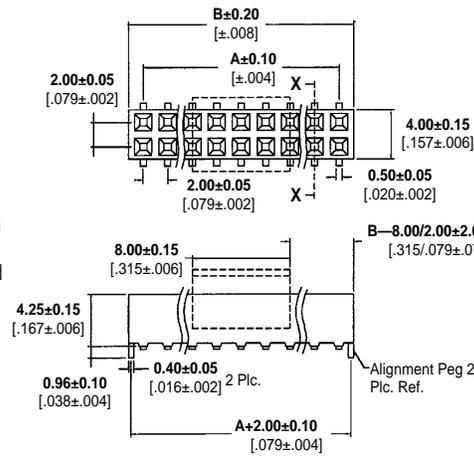
Cap—Thermoplastic

Related Product Data:

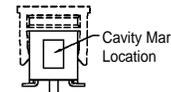
Mateable Headers—pages 66-76, 78, 79

Performance Specifications—108-57227

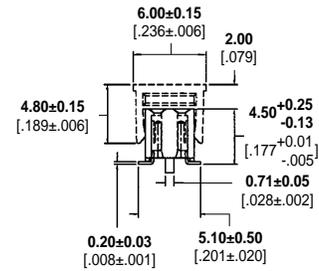
Packaging Method—Tape and reel



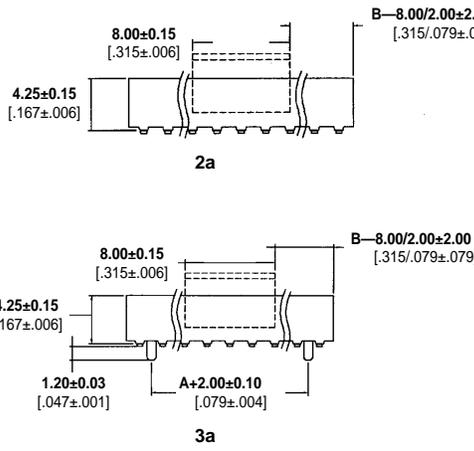
1a



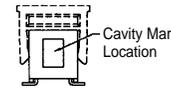
1b



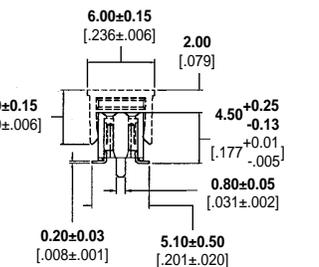
Section X-X
Rotated 90° CW



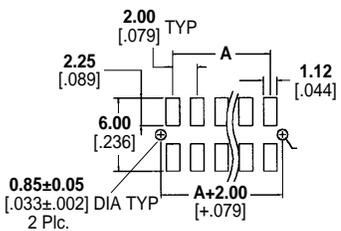
2a



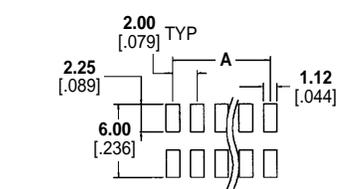
2b



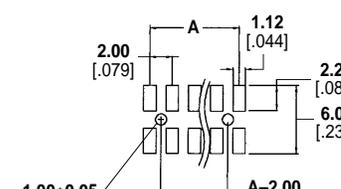
Section X-X
Rotated 90° CW



Recommended PCB Layout
(for size .038*)



Recommended PCB Layout
(without alignment peg**)



Recommended PCB Layout
(for size .047***)

| Position | Dimensions | | Part Numbers | | |
|----------|----------------|-----------------|--------------------|--------------|-------------------------|
| | A | B | with Alignment Peg | | without Alignment Peg** |
| | | | Size .038* | Size .047*** | |
| 8 | 6.0 [.236] | 8.40 [.331] | 1470226-8 | 1470310-8 | 5-1470226-8 |
| 10 | 8.0 [.315] | 10.40 [.409] | 1-1470226-0 | 1-1470310-0 | 6-1470226-0 |
| 12 | 10.0 [.394] | 12.40 [.488] | 1-1470226-2 | 1-1470310-2 | 6-1470226-2 |
| 14 | 12.0 [.472] | 14.40 [.567] | 1-1470226-4 | 1-1470310-4 | 6-1470226-4 |
| 16 | 14.0 [.551] | 16.40 [.646] | 1-1470226-6 | 1-1470310-6 | 6-1470226-6 |
| 18 | 16.0 [.630] | 18.40 [.724] | 1-1470226-8 | 1-1470310-8 | 6-1470226-8 |
| 20 | 18.0 [.709] | 20.40 [.803] | 2-1470226-0 | 2-1470310-0 | 7-1470226-0 |
| 22 | 20.0 [.787] | 22.40 [.881] | 2-1470226-2 | 2-1470310-2 | 7-1470226-2 |
| 24 | 22.0 [.866] | 24.40 [.961] | 2-1470226-4 | 2-1470310-4 | 7-1470226-4 |
| 26 | 24.0 [.945] | 26.40 [1.039] | 2-1470226-6 | 2-1470310-6 | 7-1470226-6 |
| 28 | 26.0 [1.024] | 28.40 [1.118] | 2-1470226-8 | 2-1470310-8 | 7-1470226-8 |
| 30 | 28.0 [1.102] | 30.40 [1.197] | 3-1470226-0 | 3-1470310-0 | 8-1470226-0 |
| 32 | 30.0 [1.181] | 32.40 [1.276] | 3-1470226-2 | 3-1470310-2 | 8-1470226-2 |
| 34 | 32.0 [1.260] | 34.40 [1.354] | 3-1470226-4 | 3-1470310-4 | 8-1470226-4 |
| 36 | 34.0 [1.339] | 36.40 [1.433] | 3-1470226-6 | 3-1470310-6 | 8-1470226-6 |
| 38 | 36.0 [1.417] | 38.40 [1.512] | 3-1470226-8 | 3-1470310-8 | 8-1470226-8 |
| 40 | 38.0 [1.496] | 40.40 [1.591] | 4-1470226-0 | 4-1470310-0 | 9-1470226-0 |

*See views 1a and 1b
**See views 2a and 2b
***See views 3a and 3b