

3M™ Four-Wall Header

.100" x .100" Low Profile, SMT Straight, Straight and Rt Angle Through-Hole

D2500 Series



- Low profile, space saving design
- Center slot polarization designed to prevent misinsertions and reduce insertion time
- Dual slot polarization means broader compatibility with competitive polarization designs (not 6, 8 or 10 pos.)
- Optional retainer clip for locking sockets in place and increasing connection reliability in vibrationprone environments
- High temperature insulator suitable for “no lead” soldering operations
- High temperature insulator in through-hole version suitable for “paste in hole” reflow soldering
- Exposed solder tails (on right angle version) are designed to provide ease of cleaning and help reduce repair costs
- Straight surface mount version available
- RoHS Compliant. See the Regulatory Information Appendix (RIA) in the “RoHS compliance” section of www.3Mconnectors.com for compliance information

Date Modified: June 13, 2012

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Physical

Insulator

Material: High Temp Glass Filled Polyester (PCT)
Flammability: UL 94V-0
Color: Black (PCT)
Contact Material: Brass

Plating

Underplating: 50 -100 μ " [1.25 μ m] Ni
Wiping Area: 10 μ " [0.25 μ m] Gold
Solder Tails: 40 - 120 μ " [1-3 μ m] Matte Tin

Marking: 3M Logo, Part Identification Number and Orientation Triangle

Electrical

Current Rating: 5.00 A, 1 Contact Powered
3.00 A, 6 Contacts Powered
1.75 A, All Contacts Powered
Rating Conditions: EIA-364-070 Method 2, 30°C maximum temperature rise, 20% derated. Reference appropriate 3M Product Specification for detailed current derating curves.

Insulation Resistance: $>1 \times 10^9 \Omega$ at 500 V_{DC}

Withstanding Voltage: 1,000 V_{RMS} at Sea Level

Environmental

Temperature Rating: -55°C to +105°C

Process Rating: 260°C single pass (profile per J-STD-020C)

Moisture Sensitivity Level: 1 (per J-STD-020C)

UL File No.: E68080

3M

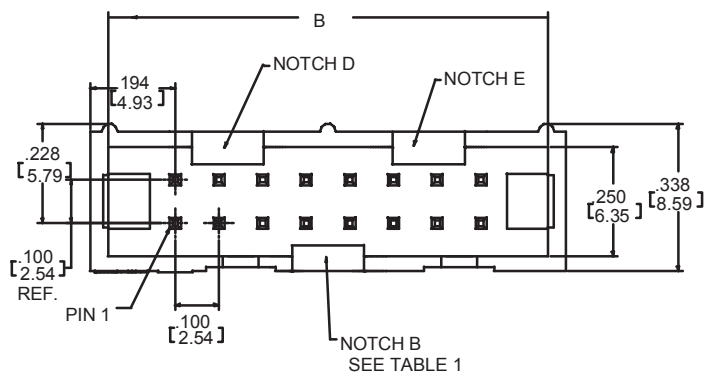
Electronic Solutions Division
Interconnect Solutions
<http://www.3Mconnectors.com>

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3M™ Four-Wall Header

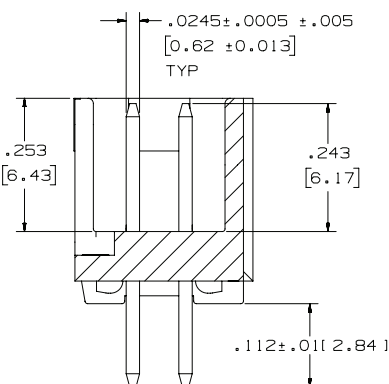
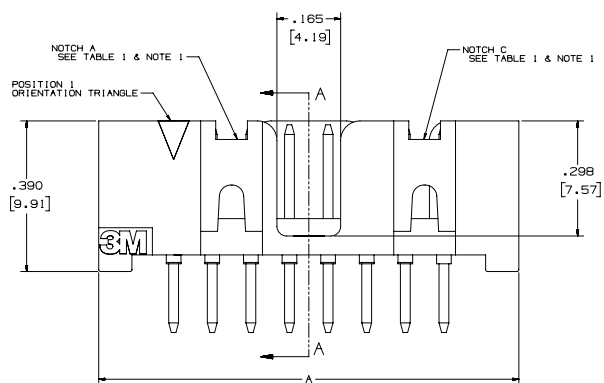
.100" x .100" Low Profile, Straight Through-Hole

D2500 Series

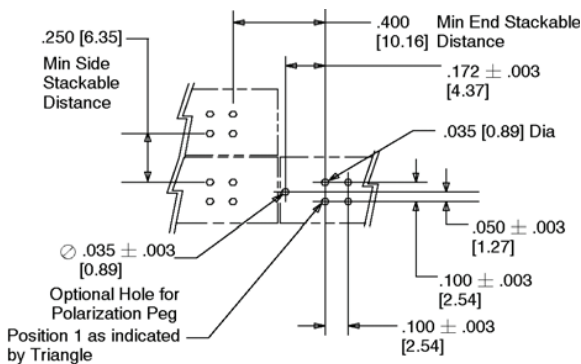


| Inch (mm) | | | |
|------------------------|-----|-----|-------|
| Tolerance Unless Noted | | | |
| | .0 | .00 | .000 |
| Inch | ±.1 | ± | ±.005 |

[] Dimensions for Reference only



SECTION A - A



Recommended P.C. Board Hole Pattern
(Shown for mounting side of board.)

| Pin Qty | Dimensions | | Polarizing Notches |
|---------|---------------|---------------|--------------------|
| | A | B | |
| 6 | 0.588 (14.94) | 0.508 (12.90) | B |
| 8 | 0.688 (17.48) | 0.608 (15.44) | B |
| 10 | 0.788 (20.02) | 0.708 (17.98) | BC |
| 14 | 0.988 (25.10) | 0.908 (22.06) | BCDE |
| 16 | 1.088 (27.64) | 1.008 (25.60) | ABCDE |
| 20 | 1.288 (32.72) | 1.208 (30.68) | ABCDE |
| 24 | 1.488 (37.80) | 1.408 (35.76) | ABCDE |
| 26 | 1.588 (40.34) | 1.508 (38.30) | ABCDE |
| 30 | 1.788 (45.42) | 1.708 (43.38) | ABCDE |
| 34 | 1.988 (50.50) | 1.908 (48.46) | ABCDE |
| 36 | 2.088 (53.04) | 2.008 (51.00) | ABCDE |
| 40 | 2.288 (58.12) | 2.208 (56.08) | ABCDE |
| 50 | 2.788 (70.82) | 2.708 (68.78) | ABCDE |
| 60 | 3.288 (83.52) | 3.208 (81.48) | ABCDE |
| 64 | 3.488 (88.60) | 3.408 (86.56) | ABCDE |

Ordering Information

D25XX-6002-AR

Plating:
AR = 10 μm [0.25 μm] Gold (RIA E1 & C1 apply)

Solder Tail
02 = for .062 [1.57] thick board

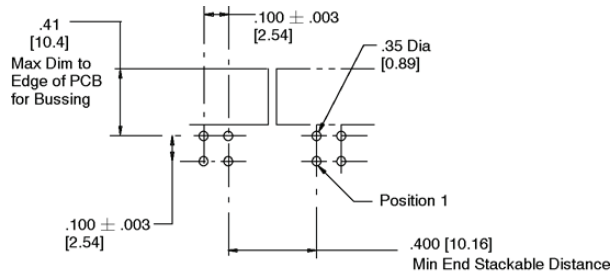
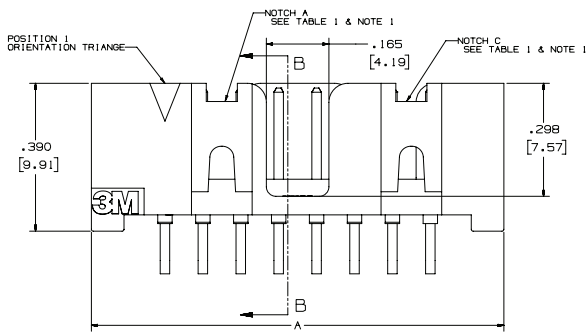
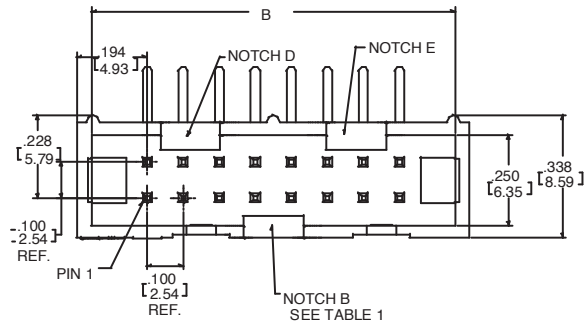
Pin Quantity:
(See Table 1)

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3M™ Four-Wall Header

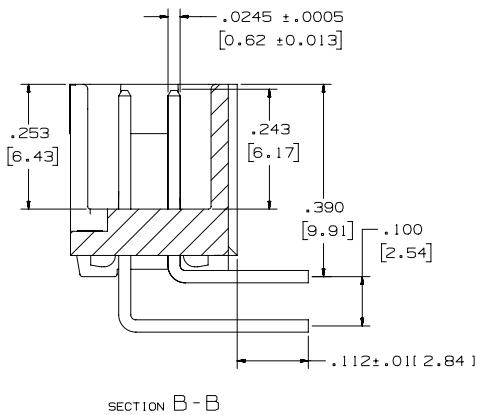
.100" x .100" Low Profile, Right Angle Through-Hole

D2500 Series



Recommended Mounting Hole Pattern

| Pin Qty | Dimensions | | Polarizing Notches |
|---------|---------------|---------------|--------------------|
| | A | B | |
| 6 | 0.588 (14.94) | 0.508 (12.90) | B |
| 8 | 0.688 (17.48) | 0.608 (15.44) | B |
| 10 | .788 (20.02) | .708 (17.98) | BC |
| 14 | .988 (25.10) | .908 (22.06) | BCDE |
| 16 | 1.088 (27.64) | 1.008 (25.60) | ABCDE |
| 20 | 1.288 (32.72) | 1.208 (30.68) | ABCDE |
| 24 | 1.488 (37.80) | 1.408 (35.76) | ABCDE |
| 26 | 1.588 (40.34) | 1.508 (38.30) | ABCDE |
| 30 | 1.788 (45.42) | 1.708 (43.38) | ABCDE |
| 34 | 1.988 (50.50) | 1.908 (48.46) | ABCDE |
| 36 | 2.088 (53.04) | 2.008 (51.00) | ABCDE |
| 40 | 2.288 (58.12) | 2.208 (56.08) | ABCDE |
| 50 | 2.788 (70.82) | 2.708 (68.78) | ABCDE |
| 60 | 3.288 (83.52) | 3.208 (81.48) | ABCDE |
| 64 | 3.488 (88.60) | 3.408 (86.56) | ABCDE |



| Tolerance Unless Noted | | | |
|------------------------|------|-----|--------|
| | .0 | .00 | .000 |
| Inch | ± .1 | ± | ± .005 |

[] Dimensions for Reference only



Notes:

- Notches A & C will accommodate 3M Polarizing Keys (3M Part N3518).
- Contacts tails .0245 [0.622] wire with .0075 [0.191] corner radii & .028 [0.71] diagonal.

Ordering Information

D25XX-5002-AR

Plating:
AR = 10 μm [0.25 μm] Gold (RIA E1 & C1 apply)

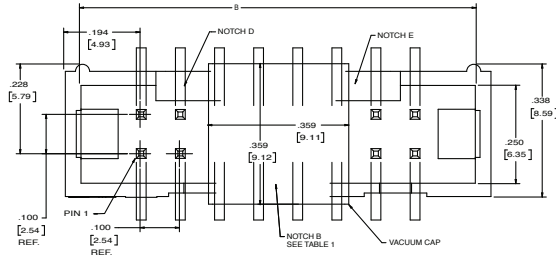
Pin Quantity: (See Table 1) Solder Tail
02 = for .062 [1.57] thick board

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Sheet 3 of 5

3M™ Four-Wall Header

.100” x .100” Low Profile, Surface Mount Straight

D2500 Series



Inch
[mm]

| Tolerance Unless Noted | | |
|------------------------|----------|------------|
| | .0 | .000 |
| Inch | $\pm .1$ | $\pm .01$ |
| | | $\pm .005$ |



[] Dimensions for Reference only

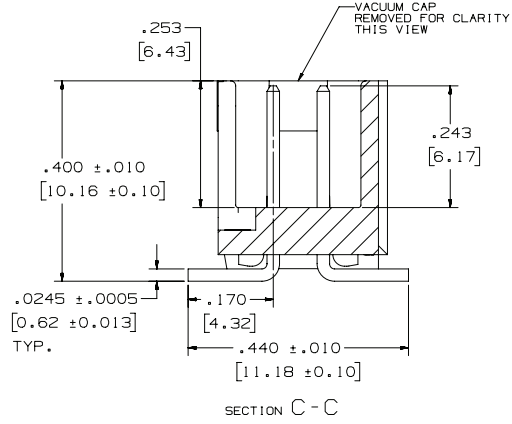
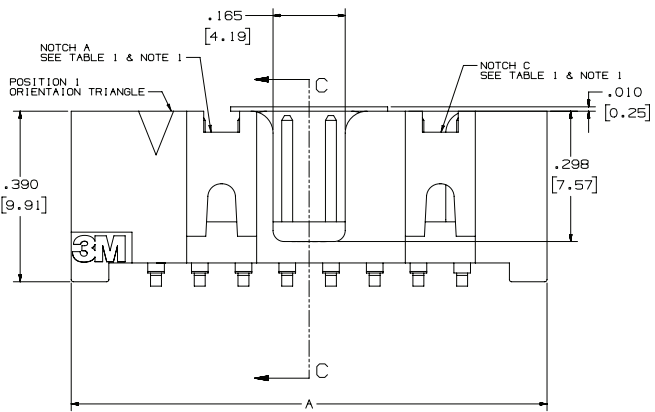
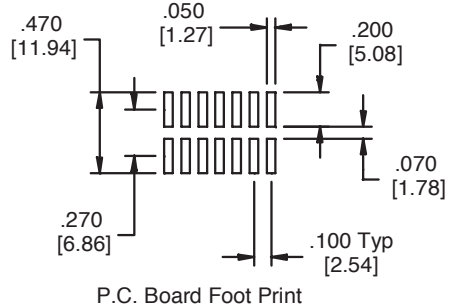


Table 1

| Pin Qty | Dimensions | | Polarizing Notches | Tape and Reel Pkg Code |
|---------|---------------|---------------|--------------------|------------------------|
| | A | B | | |
| 6 | 0.588 (14.94) | 0.508 (12.90) | B | WD (44 mm) |
| 8 | 0.688 (17.48) | 0.608 (15.44) | B | WD (44 mm) |
| 10 | .788 (20.02) | .708 (17.98) | BC | WD (44 mm) |
| 14 | .988 (25.10) | .908 (22.06) | BCDE | WD (44 mm) |
| 16 | 1.088 (27.64) | 1.008 (25.60) | ABCDE | WD (44 mm) |
| 20 | 1.288 (32.72) | 1.208 (30.68) | ABCDE | WE (56 mm) |
| 24 | 1.488 (37.80) | 1.408 (35.76) | ABCDE | WE (56 mm) |
| 26 | 1.588 (40.34) | 1.508 (38.30) | ABCDE | WE (56 mm) |
| 30 | 1.788 (45.42) | 1.708 (43.38) | ABCDE | WF (72 mm) |
| 34 | 1.988 (50.50) | 1.908 (48.46) | ABCDE | WF (72 mm) |
| 36 | 2.088 (53.04) | 2.008 (51.00) | ABCDE | WG (88 mm) |
| 40 | 2.288 (58.12) | 2.208 (56.08) | ABCDE | WG (88 mm) |
| 50 | 2.788 (70.82) | 2.708 (68.78) | ABCDE | WG (88 mm) |
| 60 | 3.288 (83.52) | 3.208 (81.48) | ABCDE | WH (120 mm) |
| 64 | 3.488 (88.60) | 3.408 (86.56) | ABCDE | WH (120 mm) |



Notes:

- 1. Notches A & C will accommodate 3M Polarizing Key N3518.
- 2. Vacuum cap will be centered on connectors with odd # of pins/row. It will be offset away from pin 1 on connectors having an even # of pins per row (shown).
- 3. Coplanarity .004 for less than 30 position, .006 for 30 and above.

Ordering Information

D25XX-6V0C-AR-XX

Packaging Options:
WX = tape & reel packaging (see table 1)

Plating:
AR = 10 μm [0.25 μm] Gold (RIA E1 & C1)

Pin Quantity:
(See Table)

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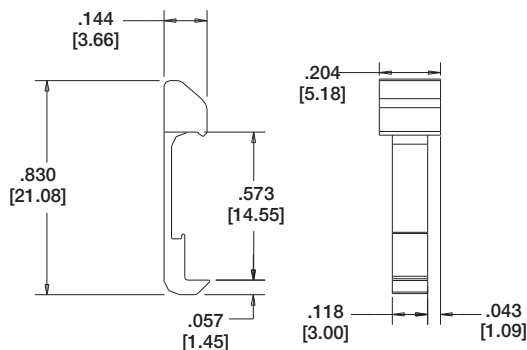
3M™ Four-Wall Header

.100" x .100" Low Profile, Accessories

2500 Series

| Connector Pin Qty | Dimension A |
|-------------------|-------------|
| 6 | N/A |
| 8 | N/A |
| 10 | 0.81 (20.6) |
| 14 | 1.02 (25.9) |
| 16 | 1.12 (28.4) |
| 20 | 1.32 (33.5) |
| 24 | 1.52 (38.7) |
| 26 | 1.63 (41.4) |
| 30 | 1.83 (46.4) |
| 34 | 2.03 (51.6) |
| 36 | N/A |
| 40 | 2.33 (59.2) |
| 50 | 2.83 (71.9) |
| 60 | 3.33 (84.6) |
| 64 | 3.53 (89.7) |

| Part Number | Material | Color |
|-------------|----------|-------|
| 3505-33B | Nylon | Black |



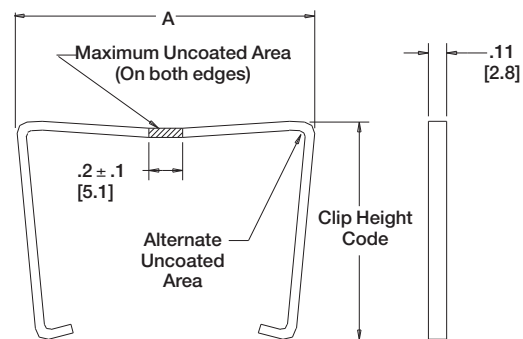
Long Snap In Latch

Note: Latches not compatible with reflow soldering. For reflow soldering, attach latches after soldering.

3505-8XXX

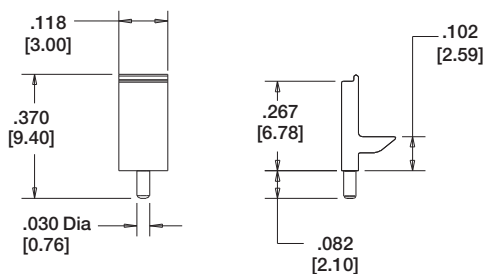
Connector Pin Count:
(See Table)

Clip Height Code
0 = .31 [7.9] for Sockets
W/O Strain Relief
1 = .53 [13.5] for Sockets
with Strain Relief



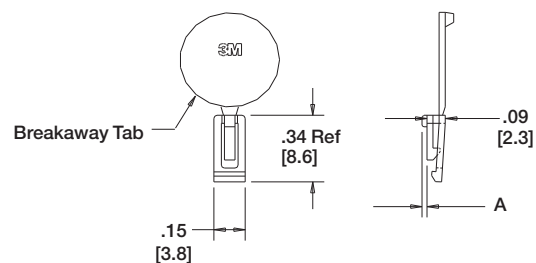
Short/Long Socket Retainer Clip

| Part Number | Material | Color |
|-------------|----------|-------|
| 3201-3 | PCT | Black |



Polarizing Post

| Part Number | Material | Color | Dim A |
|-------------|----------|-------|-------|
| N3518 | LCP | Black | 0.02 |



Note: 3M™ Scotch-Weld™ Epoxy Adhesive 2216 B/A

Polarizing Keys

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RIA-2217B-E

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