

# 3M™ Three-Wall Header

.100" × .100" Latch/Ejector, Straight and Right Angle

3000 Series



- Military (with 3M's 3518 or N3518 polarizing key) and center bump polarization
- Low profile
- Optional ejector latches
- Mounting holes for securing header to board
- Three wall shroud provides design flexibility
- Solder tail and wrap tail options
- Optional polarizing posts available
- Optional high temperature insulator suitable for "no lead" soldering operations
- High temperature option is suitable for reflow soldering using "paste in hole" techniques
- See the Regulatory Information Appendix (RIA) in the "RoHS compliance" section of [www.3Mconnectors.com](http://www.3Mconnectors.com) for compliance information

Date Modified: May 21, 2012

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## Physical

### Insulator:

Material: Glass Filled Polyester (PBT)  
Glass Filled Polyester (PCT) - High Temp Option

Flammability: UL 94V-0

Color: Gray (PBT), Black (PCT)

### Contact:

Material: Copper Alloy

### Plating:

Underplating: 100 μ" [ 2.54 μm ] Nickel - Overall

Wiping Area: 30 μ" [ 0.76 μm ] Gold

Solder Tails: 200 μ" [ 5.08 μm ] Tin Lead or Matte Tin (See Ordering Information)

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<sub>DC</sub>

**Withstanding Voltage:** 1000 V<sub>RMS</sub> at Sea Level

## Environmental

**Temperature Rating:** -55°C to +105°C

**Process Rating:** High Temp PCT insulator version: 260°C, per J-STD-020C, single pass  
PBT insulator version: 191°C, maximum insulator temperature, solder wave process only

**Moisture Sensitivity Level:** 1 (per J-STD-020C) High Temp. (PCT) versions only

UL File No.: E68080

**3M**

Electronic Solutions Division  
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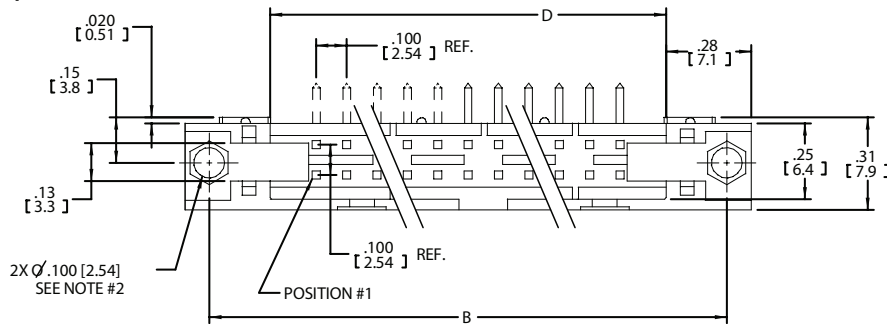
-X0XX  
Header without Latches



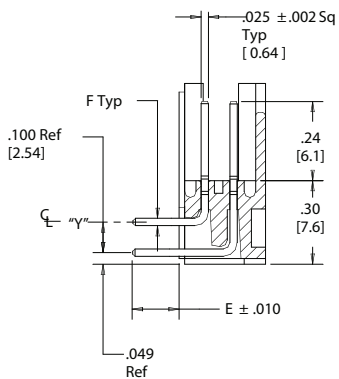
-X2XX  
Header with  
Short Ejector/Latch  
for 3M Sockets without  
Strain Relief



-X3XX  
Header with  
Long Ejector/Latch  
for 3M Sockets with  
Strain Relief



Section A-A  
(Straight)



Section B-B  
(Right Angle)



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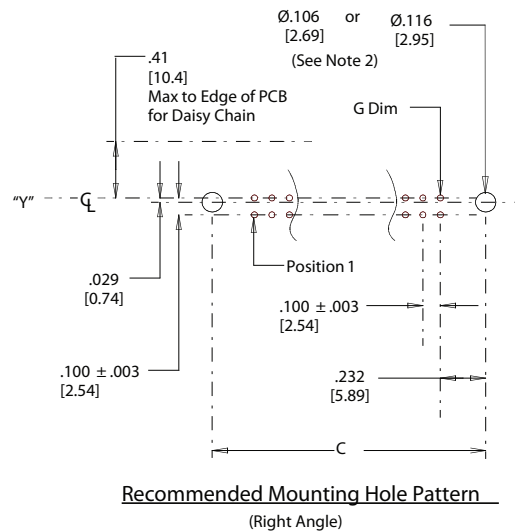
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| Table 1 |                |              |               |               |             |                    |
|---------|----------------|--------------|---------------|---------------|-------------|--------------------|
| Pin Qty | 3M Part Number | Dimensions   |               |               |             | Polarizing Notches |
|         |                | A            | B             | C             | D           |                    |
| 10      | 3793           | 1.26 (32.1)  | 1.105 (28.07) | 0.865 (21.97) | 0.71 (18.0) | BC                 |
| 14      | 3314           | 1.46 (37.2)  | 1.305 (33.15) | 1.065 (27.05) | 0.91 (23.1) | BC                 |
| 16      | 3408           | 1.56 (39.7)  | 1.405 (35.69) | 1.165 (29.59) | 1.01 (25.6) | ABC                |
| 20      | 3428           | 1.76 (44.8)  | 1.605 (40.77) | 1.365 (34.67) | 1.21 (30.7) | ABC                |
| 26      | 3429           | 2.06 (52.4)  | 1.905 (48.39) | 1.665 (42.29) | 1.51 (38.3) | ABC                |
| 34      | 3431           | 2.46 (62.6)  | 2.305 (58.55) | 2.065 (52.45) | 1.91 (48.5) | ABC                |
| 40      | 3432           | 2.76 (70.2)  | 2.605 (66.17) | 2.365 (60.07) | 2.21 (56.1) | ABC                |
| 50      | 3433           | 3.26 (82.9)  | 3.105 (78.87) | 2.865 (72.77) | 2.71 (68.8) | ABC                |
| 60      | 3372           | 3.76 (95.6)  | 3.605 (91.57) | 3.365 (85.47) | 3.21 (81.5) | ABC                |
| 64      | 3764           | 3.96 (100.7) | 3.805 (96.65) | 3.565 (90.55) | 3.41 (86.6) | ABC                |

| Table 2               |  |                |                          |                       |                      |                                     |
|-----------------------|--|----------------|--------------------------|-----------------------|----------------------|-------------------------------------|
| 3M Part Number Suffix | Contact Tail   | Dimension E    | Pin Cross Section        |                       |                      | Dimension G                         |
|                       |  |                | Dimension F              | Diagonals             | Corner Radii         |                                     |
| -1XX2<br>-2XX2        | Solder Tail for<br>.062 (1.57)<br>Thick PC Board                   | .112<br>(2.84) | .0245 ± .0005<br>(0.622) | .028 ± .001<br>(0.71) | .0075 Ref<br>(0.191) | 0.035 ± .003<br>(0.89) (See Note 3) |
| -1X03<br>-2X03        | Solder Tail for<br>0.94 (2.39) to .125<br>(3.18) Thick PC<br>Board | .155<br>(3.94) | .0245 ± .0005<br>(0.622) | .028 ± .001<br>(0.71) | .0075 Ref<br>(0.191) | 0.035 ± .003 (0.89)                 |



| Inch (mm)              |      |       |        |
|------------------------|------|-------|--------|
| Tolerance Unless Noted |      |       |        |
|                        | .0   | .00   | .000   |
| Inch                   | ± .1 | ± .01 | ± .005 |

[ ] Dimensions for Reference only

**Notes:**

- Notches A & C will accommodate 3M Polarizing Keys (3M Part #3518 or N3518).
- Accepts Rear and Front mounting hardware:  
Rear Entry: #4-24 thread cutting screw, 3M Part #3341-5, .116 [2.95] dia mounting hole  
Front Entry: (Prior to installation of latch on Straight Versions) #2-56 bolt and nut, 3M Part #3341-6, .106 [2.69] dia mounting hole. See illustrations on page 5.
- The recommended PCB hole size for the kinked tail positions on the .112 solder tail connector is .035 ± .002. Kink is located .05" below bottom surface of plastic. External radius of kink toward part centerline

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## Ordering Information



## Part Customization

This spec sheet details our standard offering.

3M has several capabilities that can provide a part tailored to your specific needs. Ask your 3M sales representative or customer service for more details.

Use of snap-in style latch/ejectors in either short (N3XXX X5XX) or long (N3XXX-X6XX) styles, installed or shipped separately (the -5 & -6 snap-in latches are dimensional and functional equivalents to the -2 & -3 roll pin latches) which are also available separately with roll pins included. Refer to chart below.

If ordering snap-in or roll pin style latches separately, please use the below chart

|                            | Short Latch | Long Latch | Latch Style | Color |
|----------------------------|-------------|------------|-------------|-------|
| Standard Temperature (PBT) | 3505-2      | 3505-3     | Roll Pin    | Gray  |
| High Temperature (PCT)     | N3505-2B    | N3505-3B   | Roll Pin    | Black |
| High Temperature (PBT)     | 3505-30     | 3505-31    | Snap-In     | Gray  |
| High Temperature (PPA)     | N3505-30B   | N3505-31B  | Snap-In     | Black |

- Selective pin removal (ATA or other compatability)
- Wire wrap tails styles

## Kinked Tail (K2 option) positions:

| 2500 & 3000 Series Shrouded Header |                        |                  |    |    |    |
|------------------------------------|------------------------|------------------|----|----|----|
| Total Number of Pins               | Number of Tails Kinked | Positions Kinked |    |    |    |
| 10                                 | 4                      | 3                | 4  | 7  | 8  |
| 14                                 | 4                      | 3                | 4  | 11 | 12 |
| 16                                 | 4                      | 3                | 4  | 13 | 14 |
| 20                                 | 4                      | 3                | 4  | 17 | 18 |
| 24                                 | 4                      | 3                | 4  | 21 | 22 |
| 26                                 | 4                      | 3                | 4  | 23 | 24 |
| 30                                 | 4                      | 5                | 6  | 25 | 26 |
| 34                                 | 4                      | 7                | 8  | 27 | 28 |
| 36                                 | 4                      | 7                | 8  | 27 | 28 |
| 40                                 | 4                      | 7                | 8  | 33 | 34 |
| 50                                 | 4                      | 7                | 8  | 43 | 44 |
| 60                                 | 4                      | 11               | 12 | 49 | 50 |
| 64                                 | 4                      | 11               | 12 | 53 | 54 |

### Kinked Tail Detail:

Kink is located .05" below bottom surface of plastic.  
External radius of kink toward part centerline.

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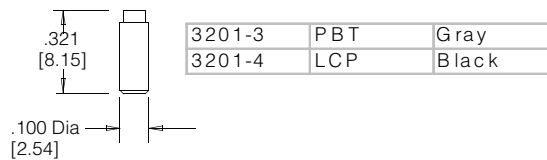
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## Polarizing Post



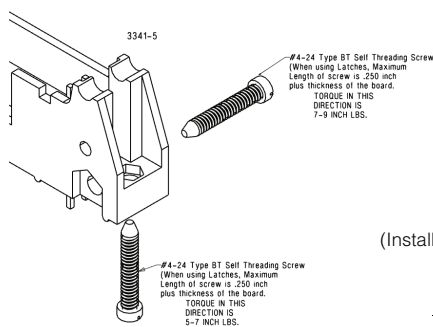
Note: Insert Post into one mounting hardware hole on bottom of header. Set post to protrude .115" [2.92]

## Polarizing Keys

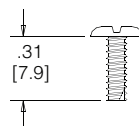
|       |     |       | Dim A |
|-------|-----|-------|-------|
| N3518 | LCP | Black | .02   |
| 3518  | PBT | Gray  | .02   |



Note: #2216 B/A Scotchweld can be used to adhere keys.



3341-5  
(Installed from bottom of board)

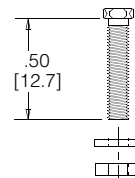


Panhead Thread Cutting Screw:  
#4-24 X 5/16"  
Type: USA Std BT, Federal BG

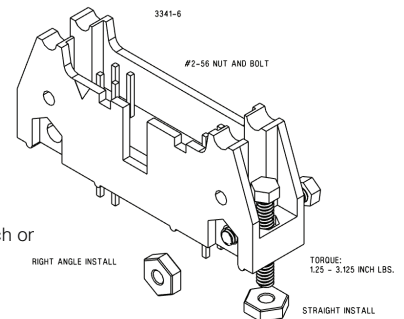
3341-5 & 6  
Material - Stainless Steel

## Mounting Hardware

3341-6  
(Must be inserted prior to latch or vertical headers)



Hex Head Bolt, Nut and Was  
Bolt - #2-56 X 1/2"



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RIA-2217B-E

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