

# 3M™ Four-Wall Header

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

3000 Series



- Military (with 3M's 3518 & N3518 polarizing key) and centerbump polarization
- Optional ejector latches
- Mounting holes for securing header to board
- Optional polarizing posts available
- High temperature insulator option suitable for "no lead" soldering operations
- High temperature option suitable for reflow soldering using "paste in hole" techniques
- Solder tail option
- See the Regulatory Information Appendix (RIA) in the "RoHS compliance" section of [www.3Mconnectors.com](http://www.3Mconnectors.com) for compliance information

Date Modified: October 2, 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  $\mu$ " [2.54  $\mu$ m] Nickel - Overall

Wiping Area: 30  $\mu$ " [ 0.76  $\mu$ m ] Gold

Solder Tails: 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:** 1,000 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



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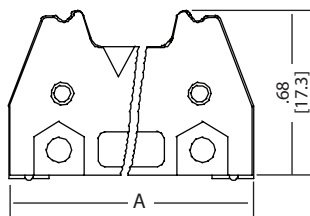
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# 3M™ Four-Wall Header

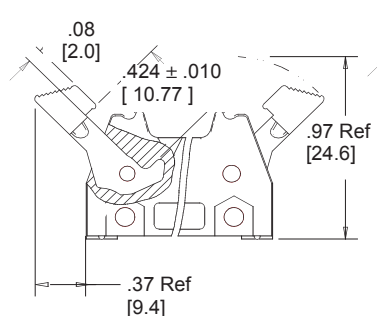
.100" × .100" Latch/Ejector, Straight and Right Angle

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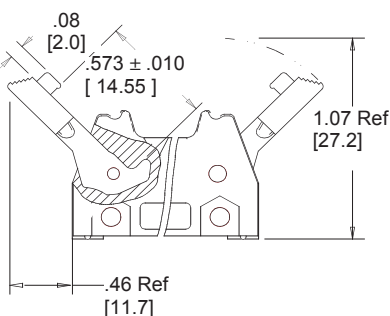
-X0XX  
Header without Latch Ejector



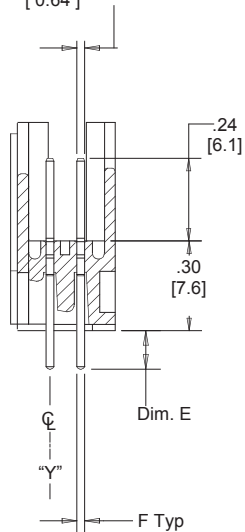
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Header with  
Short Ejector/Latch  
for 3M Sockets without  
Strain Relief



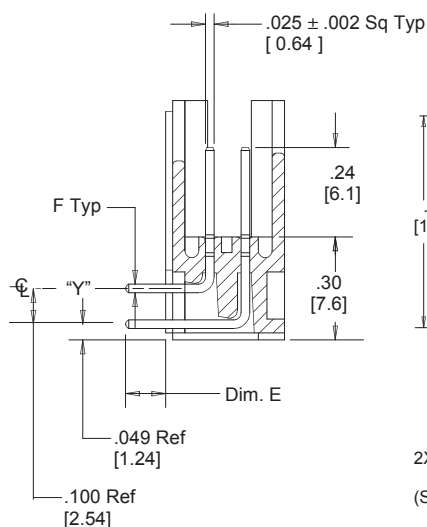
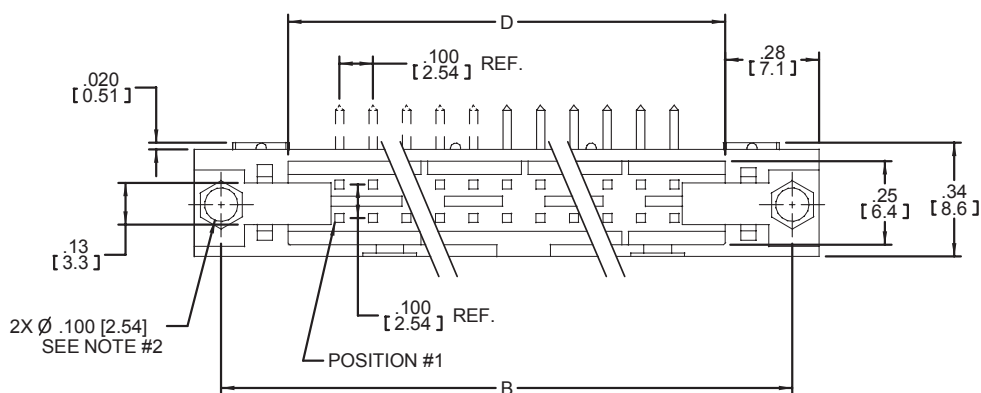
-X3XX  
Header with  
Long Ejector/Latch  
for 3M Sockets with  
Strain Relief



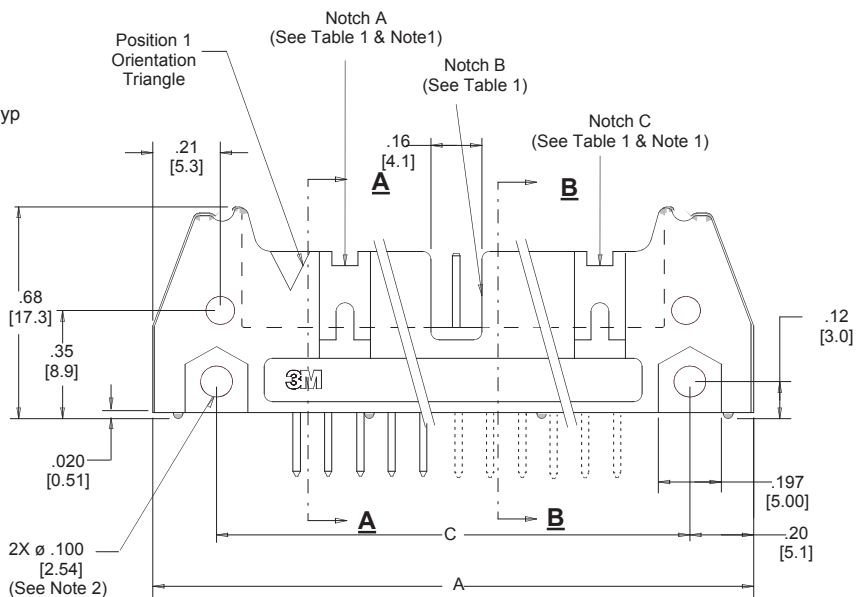
.025 ± .002 Sq Typ  
[0.64]



**Section A-A**  
(Straight)



**Section B-B**  
(Right Angle)



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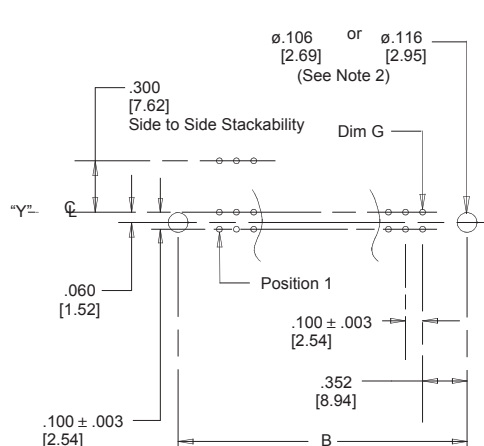
| Table 1 |                |                |               |               |               |                    |
|---------|----------------|----------------|---------------|---------------|---------------|--------------------|
| Pin Qty | 3M Part Number | Dimensions     |               |               |               | Polarizing Notches |
|         |                | A              | B             | C             | D             |                    |
| 06      | 3869           | 1.065 (27.05)  | 0.905 (22.99) | 0.665 (16.89) | 0.505 (12.83) | B*                 |
| 08      | 3889           | 1.165 (29.59)  | 1.005 (25.53) | 0.765 (19.43) | 0.605 (15.37) | B*                 |
| 10      | 3793           | 1.265 (32.13)  | 1.105 (28.04) | 0.865 (21.97) | 0.705 (17.91) | BC                 |
| 14      | 3314           | 1.465 (37.21)  | 1.305 (33.12) | 1.065 (27.05) | 0.905 (22.99) | BC                 |
| 16      | 3408           | 1.565 (39.75)  | 1.405 (35.66) | 1.165 (29.59) | 1.005 (25.53) | ABC                |
| 20      | 3428           | 1.765 (44.83)  | 1.605 (40.74) | 1.365 (34.67) | 1.205 (30.61) | ABC                |
| 24      | 3627           | 1.965 (49.91)  | 1.805 (45.82) | 1.565 (39.75) | 1.405 (35.69) | ABC                |
| 26      | 3429           | 2.065 (52.45)  | 1.905 (48.36) | 1.665 (42.29) | 1.505 (38.23) | ABC                |
| 30      | 3440           | 2.265 (57.53)  | 2.105 (53.44) | 1.865 (47.37) | 1.705 (43.31) | ABC                |
| 34      | 3431           | 2.465 (62.61)  | 2.305 (58.52) | 2.065 (52.45) | 1.905 (48.39) | ABC                |
| 40      | 3432           | 2.765 (70.23)  | 2.605 (66.14) | 2.365 (60.07) | 2.205 (56.01) | ABC                |
| 50      | 3433           | 3.265 (82.93)  | 3.105 (78.84) | 2.865 (72.77) | 2.705 (68.71) | ABC                |
| 60      | 3372           | 3.765 (95.63)  | 3.605 (91.54) | 3.365 (85.47) | 3.205 (81.41) | ABC                |
| 64      | 3764           | 3.965 (100.71) | 3.805 (96.62) | 3.565 (90.55) | 3.405 (86.49) | ABC                |

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

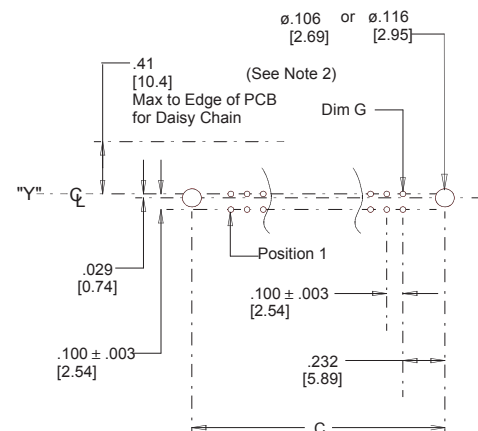
[ ] Dimensions for Reference only

\* Available without center notch B. Contact 3M.

| Table 2               |                                                           |                    |                       |                    |                   |                                  |
|-----------------------|-----------------------------------------------------------|--------------------|-----------------------|--------------------|-------------------|----------------------------------|
| 3M Part Number Suffix | Contact Tail                                              | Dim E              | Pin Cross Section     |                    |                   | Dim G                            |
| -5XX2                 | Solder Tail for .062 (1.57) Thick PC Board                | .112 ± .010 (2.84) | Dim F                 | Diagonals          | Corner Radii      | 0.035 ± .003 (0.89) (See Note 3) |
| -6XX2                 |                                                           |                    | .0245 ± .0005 (0.622) | .028 ± .001 (0.71) | .0075 Ref (0.191) |                                  |
| -5X03                 | Solder Tail for 0.94 (2.39) to .125 (3.18) Thick PC Board | .155 ± .010 (3.94) | .0245 ± .0005 (0.622) | .028 ± .001 (0.71) | .0075 Ref (0.191) | 0.035 ± .003 (0.89)              |
| -6X03                 |                                                           |                    |                       |                    |                   |                                  |



Recommended Mounting Hole Pattern (Straight)



Recommended Mounting Hole Pattern (Right Angle)

Notes: 1. Notches A & C will accommodate 3M Polarizing Keys (3M Part #3518 or #N3518).

2. Mounting hardware: From solder side of pc board use #4-24 thread cutting screw (3M Part # 3341-5) and .116 [2.95] dia mounting hole. For right angle version only, #2-56 bolt and nut (3M Part # 3341-6) with .106 [2.69] dia mounting hole may be used. See illustrations on page 4.

3. The recommended PCB hole size for the kinked tail positions on the .112 solder tail connector is .035 ± .002. See page 4 for kink position details (K2 version).

4. Contact your 3M sales representative for custom requirements.

## Ordering Information

N = High Temp Black (PCT)/(RB Plating Req'd)

Blank = Std. Temp Gray (PBT) (Blank or UB Pltg. Req'd.)

X3XXX-XXXXXX

3M Part Number  
(See Table 1)

Pin Configuration  
5 = Right Angle Solder Tails  
6 = Straight Solder Tails

Latch/Ejector System  
0 = No Latch/Ejector installed  
2 = Short Roll Pin Latch/Ejectors  
3 = Long, Roll Pin Latch/Ejectors  
5 = Short, Snap-In Latch/Ejectors  
6 = Long, Snap-In Latch/Ejectors

Plating

RB = 30 μ" [ 0.76 μm ] Gold and 200 μ" [ 5.08 μm ] Matte Tin  
(App. E1 & C1 Apply)

Blank or UB = 30 μ" (0.76 μm) Gold and 200 μ" [ 5.08 μm ]

Tin Lead (App. E3 & C2 Apply)

Tail

02 = for .062 [1.57] thick board

03 = for .094 to .125 [2.39 to 3.18] thick board

K2 = kinked for .062 [1.57] thick board

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3000 Series

## Part Customization

This spec sheet details our standard offering.

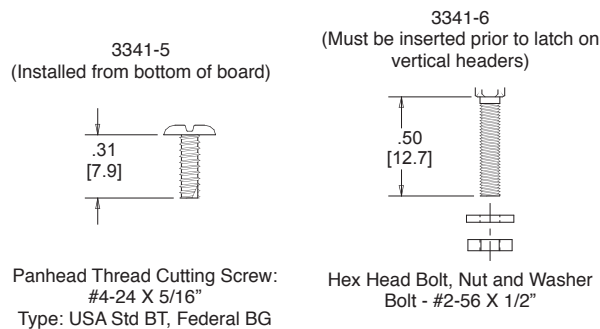
3M has several capabilities that can provide a part tailored to your specific needs. Ask your 3M sales representative or customer service for more details.

Both snap in and roll pin latches may be ordered separately. Snap in and roll style latches are dimensionally and functionally equivalent. If ordering snap-in or roll pin style latches separately, please use the below chart.

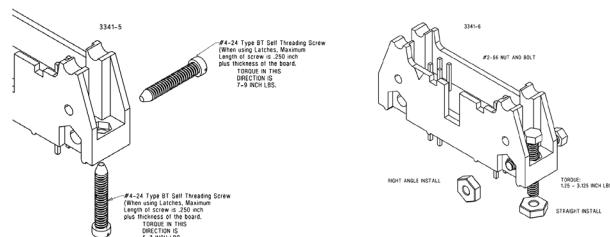
|                            | Short Latch | Long Latch | Latch Style | Color |
|----------------------------|-------------|------------|-------------|-------|
| Standard Temperature (PBT) | 3505-2      | 3505-3     | Roll Pin    | Gray  |
| High Temperature (PCT)     | N3505-2B    | N3505-3B   | Roll 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 compatibility)
- Wire wrap tails styles

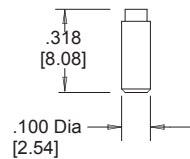
## Mounting Hardware



3341-5 & 6  
Material - Stainless Steel



## Polarizing Post



|        |     |       |
|--------|-----|-------|
| 3201-4 | LCP | Black |
| 3201-5 | PBT | Gray  |

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

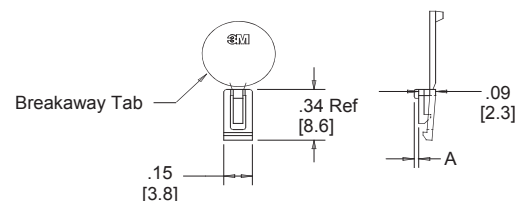
## 2500 & 3000 Series Shrouded Header

| 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.

## Polarizing Keys

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



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

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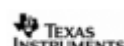
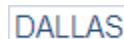
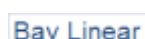
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