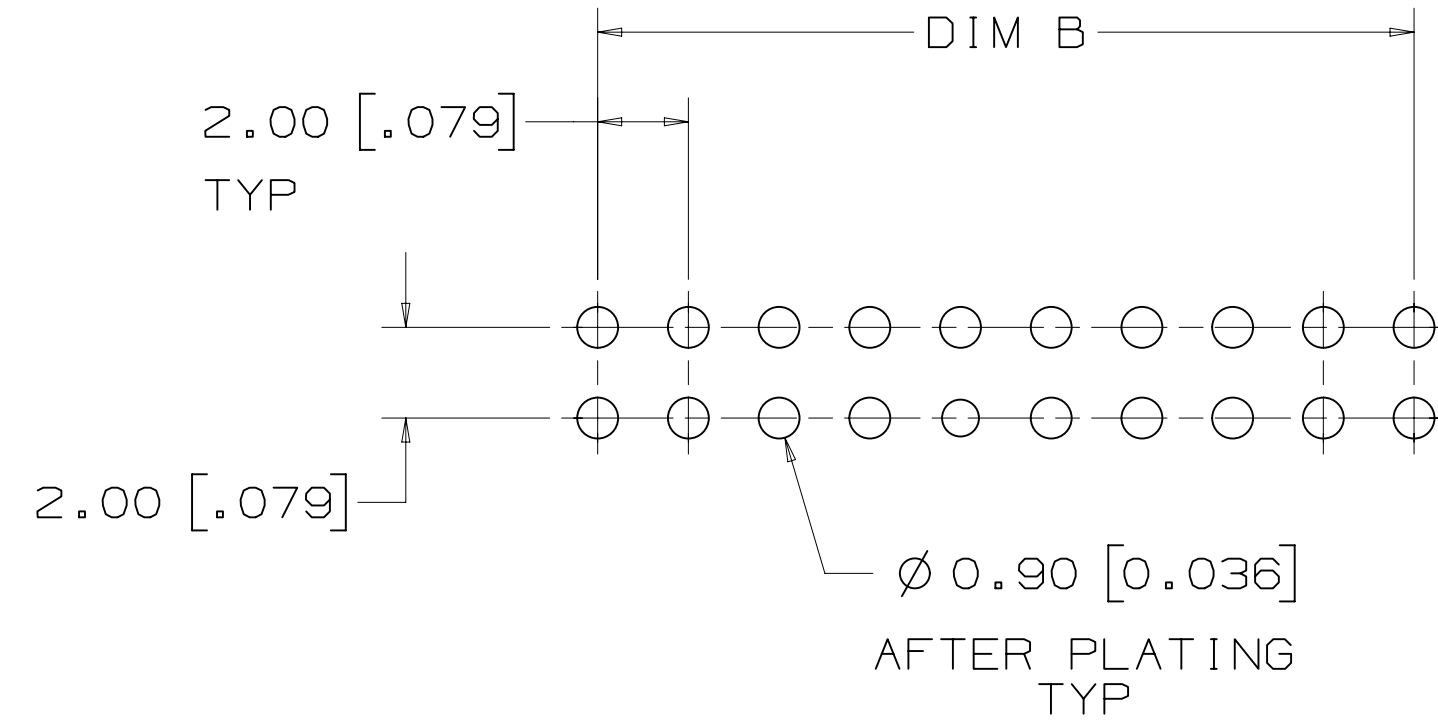
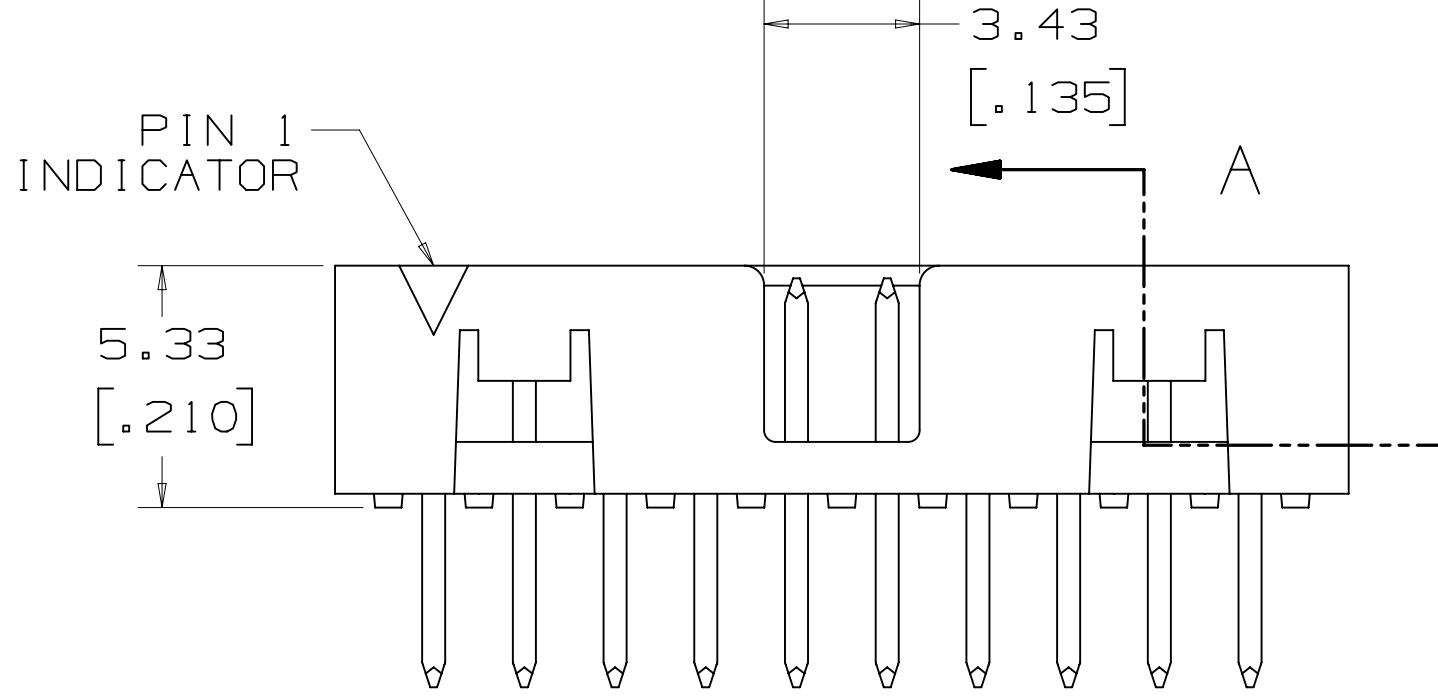
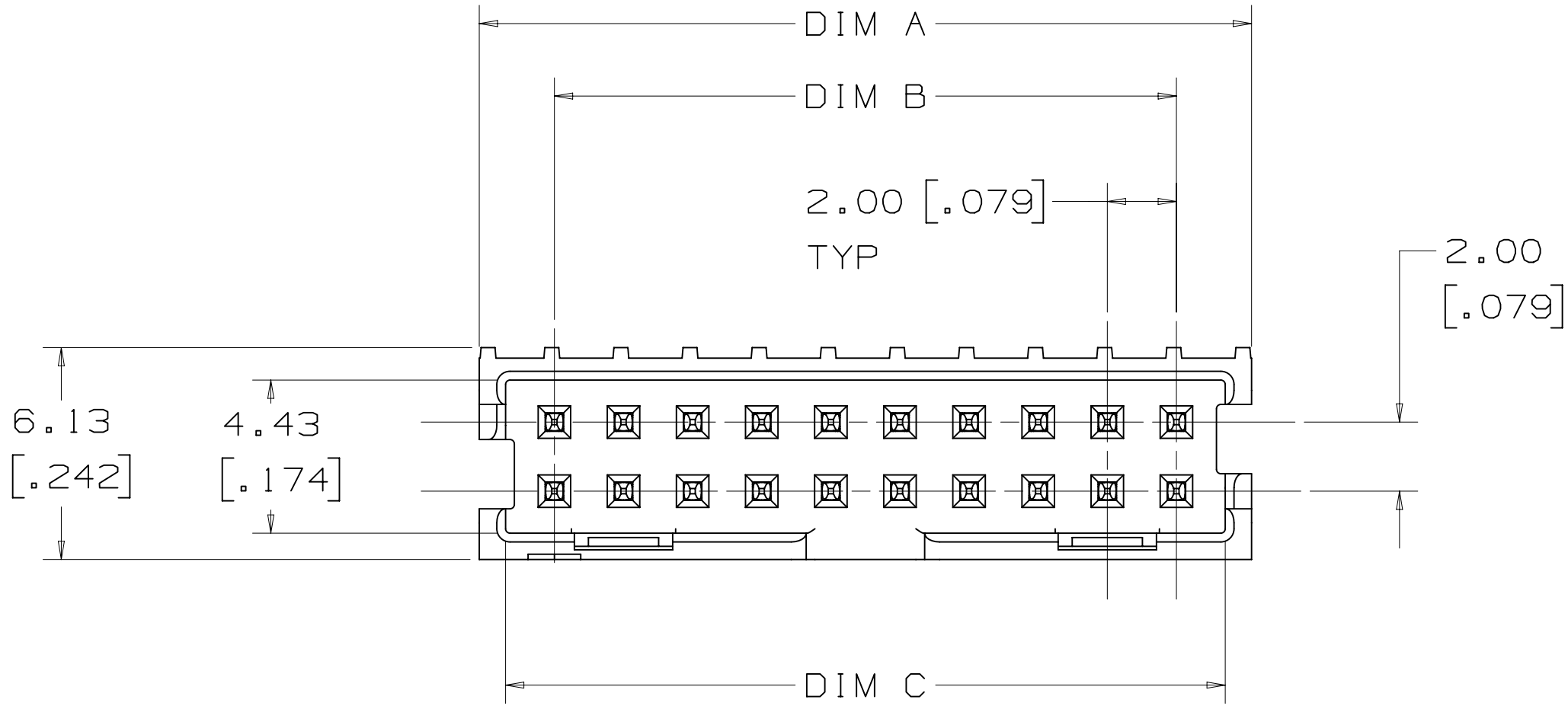
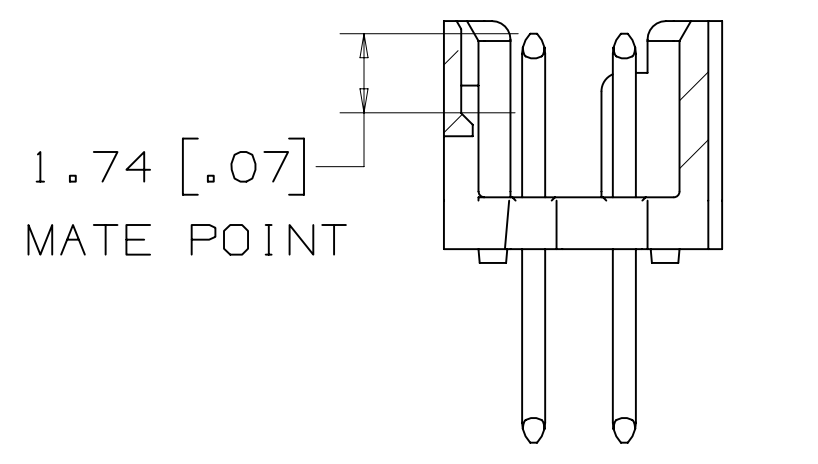
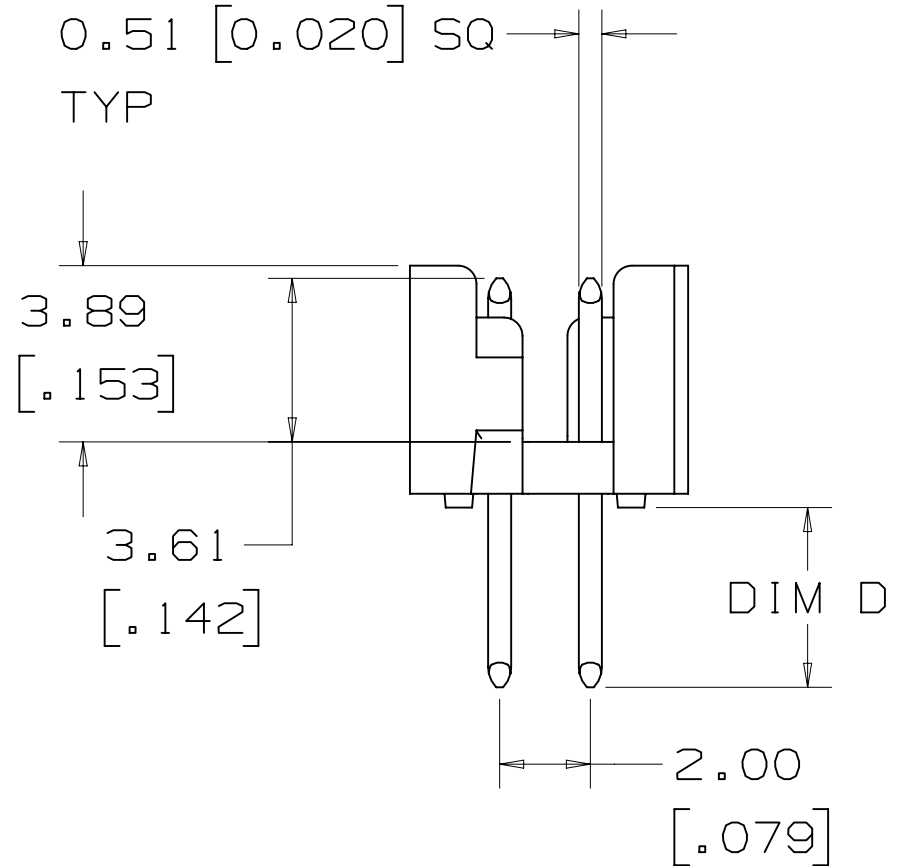


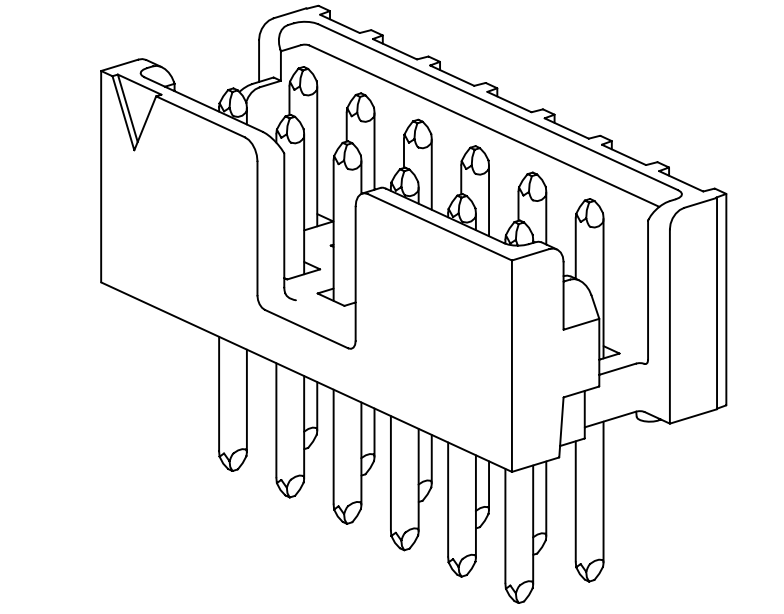
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length [3] and Extended Length [4]



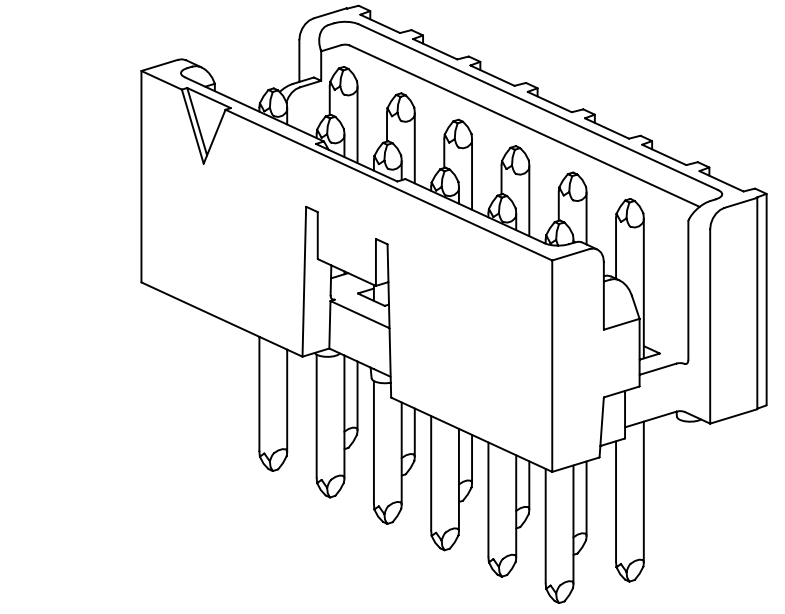
RECOMMENDED PCB HOLE PATTERN  
TOLERANCE = 0.05 [ .002 ]



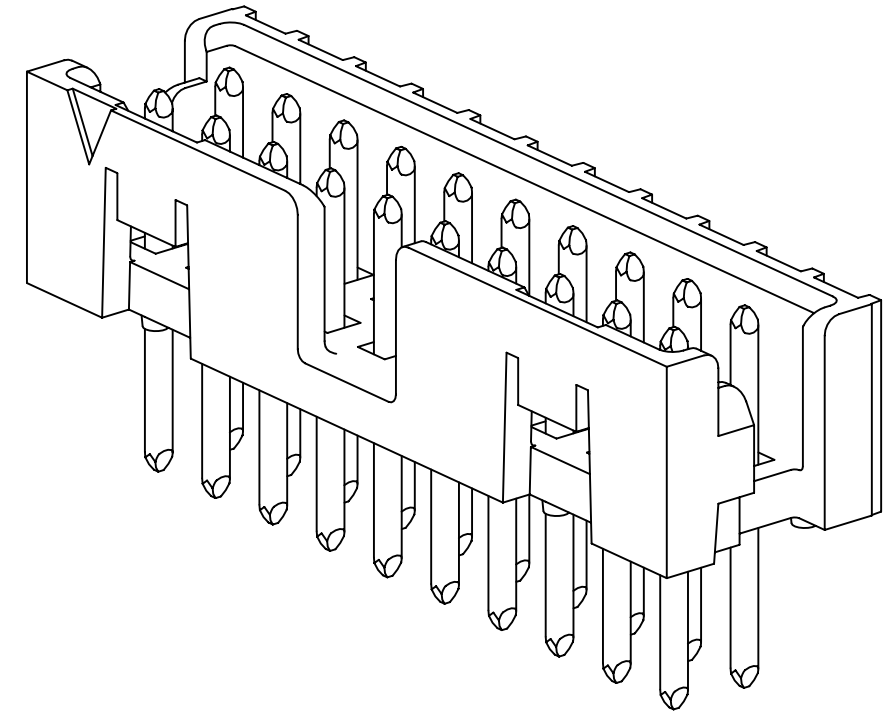
SECTION A - A



POLARIZATION SLOT  
THRU-HOLE VERTICAL HEADER  
6-12 POSITIONS ONLY



SINGLE FRICTION LATCH  
THRU-HOLE VERTICAL HEADER  
6-12 POSITIONS ONLY



POLARIZATION SLOT AND  
DUAL FRICTION LATCHES  
THRU-HOLE VERTICAL HEADER  
14-50 POSITIONS

| PERFORMANCE [5] [7]         |                                                                                      |
|-----------------------------|--------------------------------------------------------------------------------------|
| CURRENT:                    | 1.25 A, ALL LINES ENERGIZED<br>2.75 A, 6 LINES ENERGIZED<br>4.75 A, 1 LINE ENERGIZED |
| INSULATION RESISTANCE:      | >1 X 10 <sup>9</sup> OHMS AT 500 VDC                                                 |
| VOLTAGE RATING:             | 150 VAC PER EIA-364-20                                                               |
| WITHSTANDING VOLTAGE:       | 500 VACrms AT SEA LEVEL                                                              |
| TEMPERATURE RATING:         | -55°C TO +105°C                                                                      |
| SOLDER PROCESS TEMPERATURE: | 260°C MAX PER IPC/JEDEC J-STD-020D                                                   |

REFERENCE TABLE ON SHEET 5  
FOR AVAILABLE POSITIONS AND  
SOLDER TAIL LENGTHS

METRIC [ ENGLISH ]  
**cALUS**  
UL FILE NO: E68080

| DESIGN REFERENCE       |  | NEXT ASSEMBLY                   |  | REV                        | ECO          | ISSUE DATE AND DESCRIPTION |              | DRFT | CHKD |
|------------------------|--|---------------------------------|--|----------------------------|--------------|----------------------------|--------------|------|------|
| KIDDER CODES           |  | L. SCHMIDT                      |  | DATE                       | JUL 29, 2010 | MFG                        | DATE         |      |      |
| DIVISION               |  | CHKD                            |  | APPROV                     | S FELDMAN    | DATE                       | AUG 09, 2010 |      |      |
| DO NOT SCALE DRAWING   |  | SCALE 6 1                       |  | TOLERANCES EXCEPT AS NOTED |              | INCHES                     |              |      |      |
| THIRD ANGLE PROJECTION |  | INTERPRET PER ASME Y14.5 - 1994 |  | MILLIMETERS                |              | MILLIMETERS                |              |      |      |
| MAX SURFACE ROUGHNESS  |  | 125 / ALL SURFACES              |  | 0 ±                        |              | 0 ±                        |              |      |      |
| ✓ MARKED ONLY          |  | 0.00 ±                          |  | 0.00 ±                     |              | 0.00 ±                     |              |      |      |
|                        |  | ANGLES ±1°                      |  |                            |              |                            |              |      |      |

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**3M**

TITLE  
3M SHROUDED BOARD  
MOUNT HEADER 2 MM X 2  
MM PITCH 159 SERIES

CAGE NUMBER  
125 /

SIZE  
D

DRAWING NO.  
78-5100-2359-7

REV.  
F

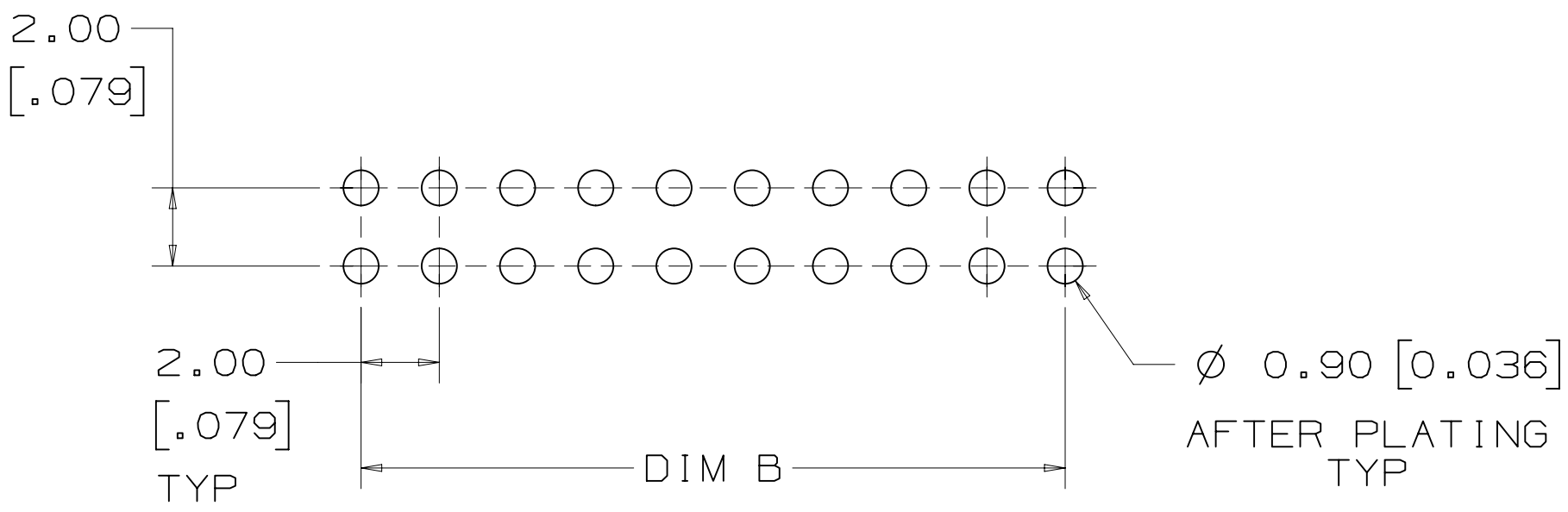
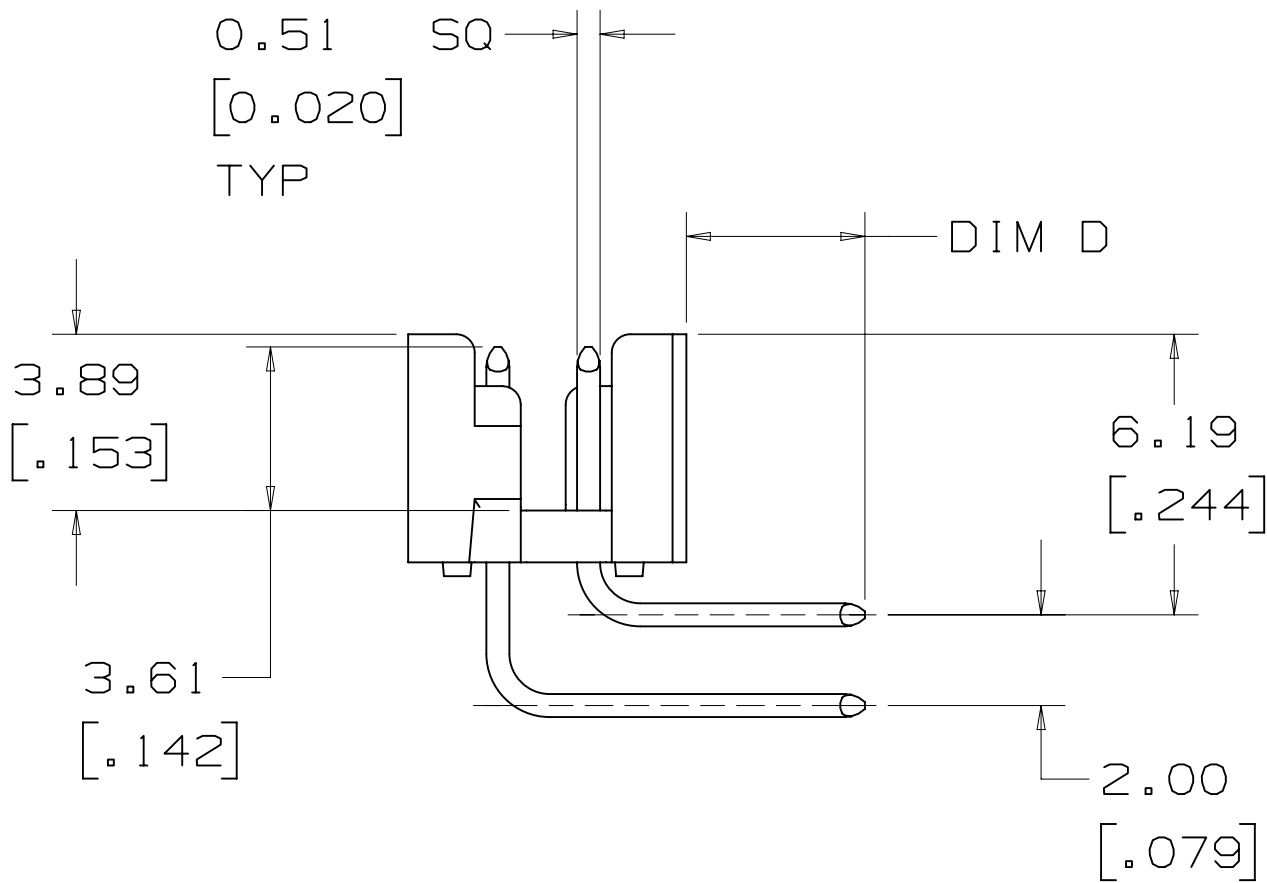
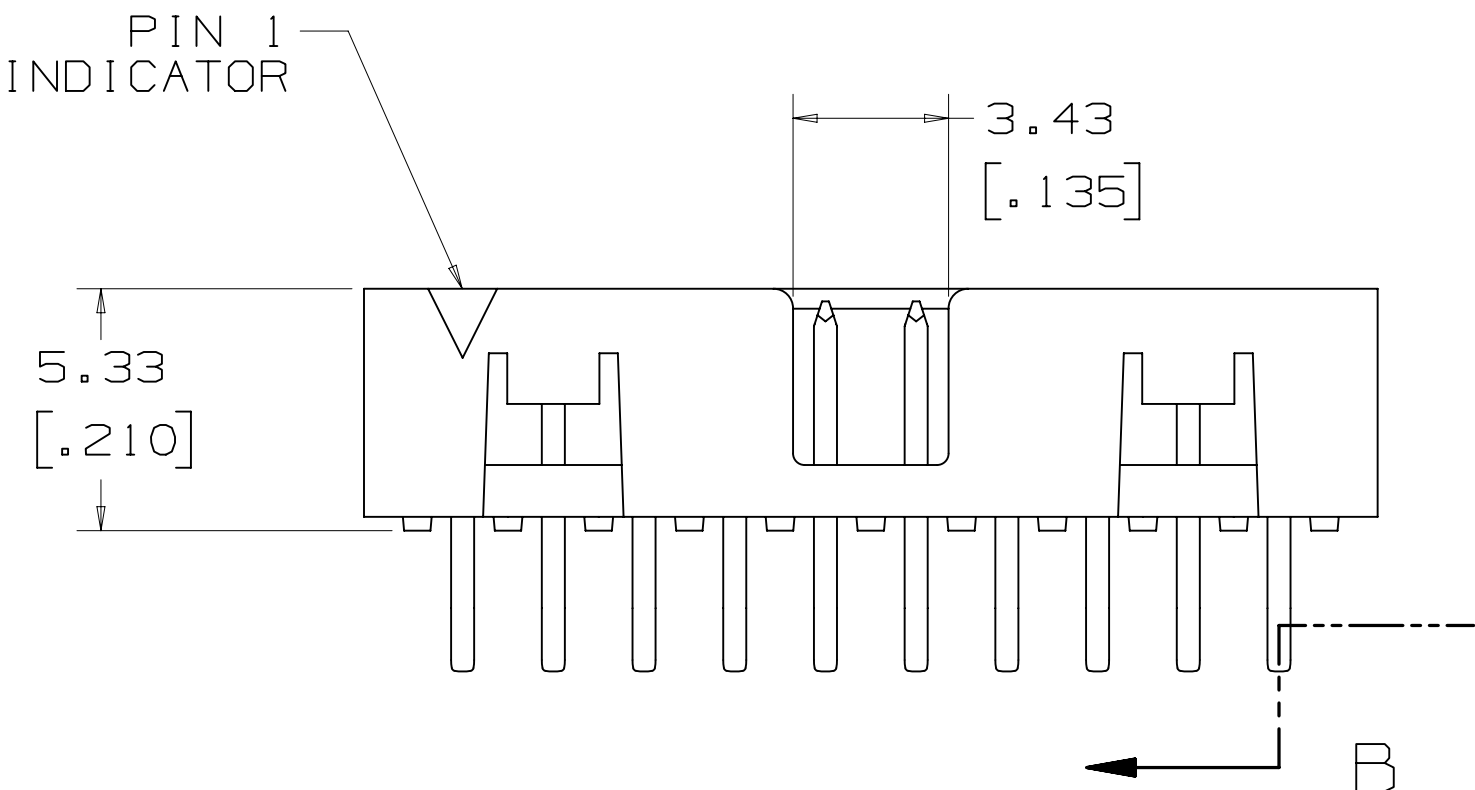
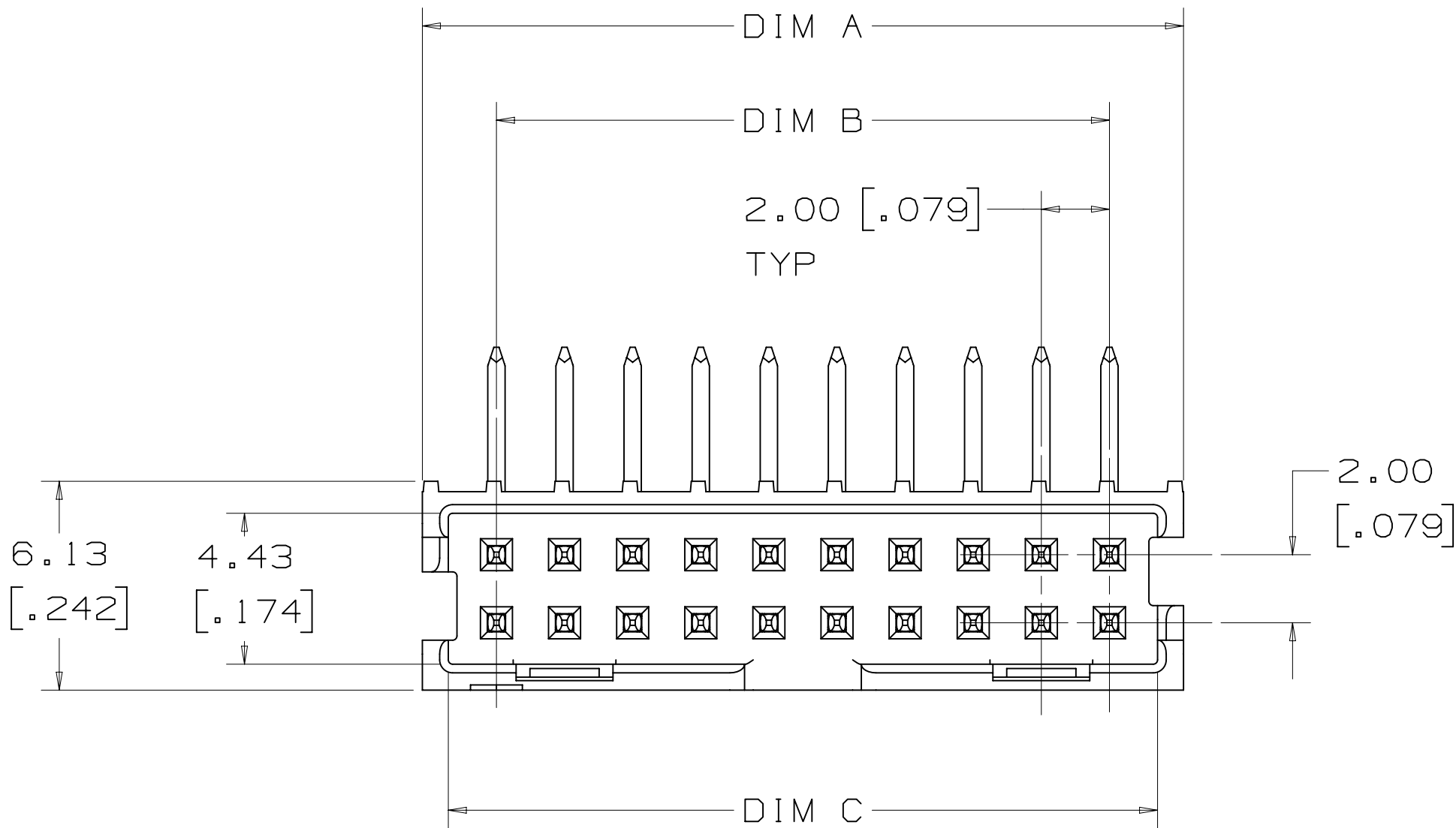
MODEL  
SHT 1 OF 5

- NOTES
- MATERIAL:  
BODY: HIGH TEMPERATURE GLASS FILLED LCP, BLACK UL94V-0  
CONTACTS: COPPER ALLOY
  - PLATING:  
2.03-3.81  $\mu$ m [80-150  $\mu$ in]  
NICKEL UNDERPLATE.  
0.38  $\mu$ m [15  $\mu$ in] OR  
0.76  $\mu$ m [30  $\mu$ in] AVG GOLD ON WIPING AREA.  
5.08  $\mu$ m [200  $\mu$ in] MIN  
MATTE TIN ON SOLDER TAILS.
  - STANDARD LENGTH HEADERS MATE WITH 3M™ SOCKETS, 158 SERIES (REFERENCE 3M DRAWING 78-5100-2358-9).
  - EXTENDED LENGTH HEADERS MATE WITH 3M™ SOCKETS, 870 SERIES.
  - FOR PRODUCT SPECIFICATIONS AND WARRANTY INFORMATION SEE 3M 78-5102-0078-1.
  - SEE THE REGULATORY INFORMATION APPENDIX (RIA) IN THE "ROHS COMPLIANCE" SECTION OF WWW.3MCONNECTOR.COM FOR COMPLIANCE INFORMATION (RIA E1 & C1 APPLY).
  - IN THE EVENT OF CONFLICT BETWEEN THIS DATA AND THAT CONTAINED IN THE PRODUCT SPECIFICATION, THE PRODUCT SPECIFICATION TAKES PRECEDENT.
  - PACKAGING:  
VERTICAL THRU: TRAY  
RIGHT ANGLE: TRAY  
VERTICAL SMT: TAPE & REEL

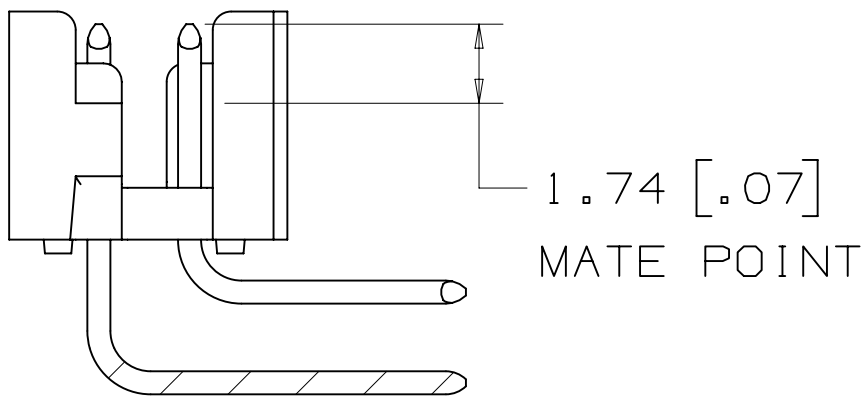
|   |       |              |     |     |
|---|-------|--------------|-----|-----|
| F | 52868 | MAR 05, 2014 | SJS | SAN |
| E | 51692 | DEC 16, 2013 | SJS | SAN |
| D | 41488 | JUN 20, 2012 | LDS | SAN |
| C | 39876 | APR 18, 2012 | LDS | SAN |
| B | 34080 | MAY 18, 2011 | LDS | SF  |
| A | 30741 | OCT 28, 2010 | LDS | SF  |



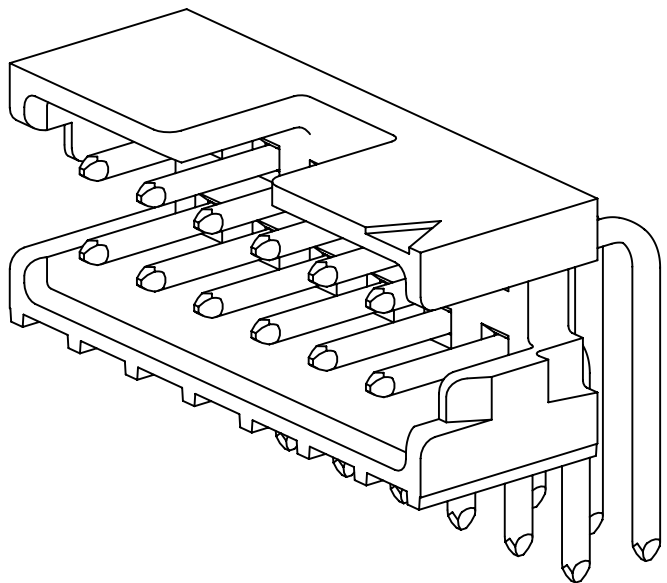
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length 3 and Extended Length 4



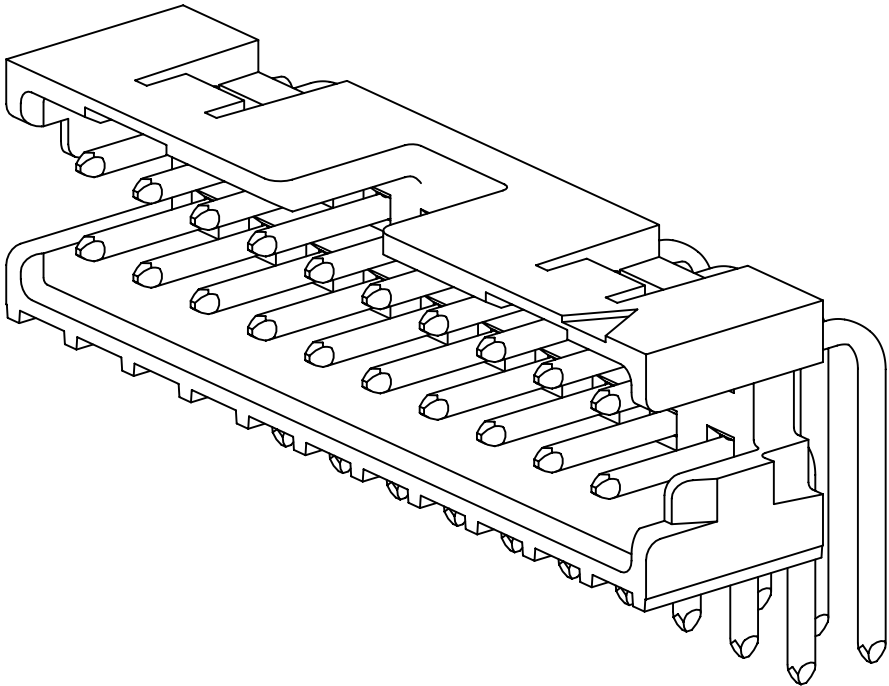
RECOMMENDED PCB HOLE PATTERN  
TOLERANCE = ±0.05 [ .002 ]



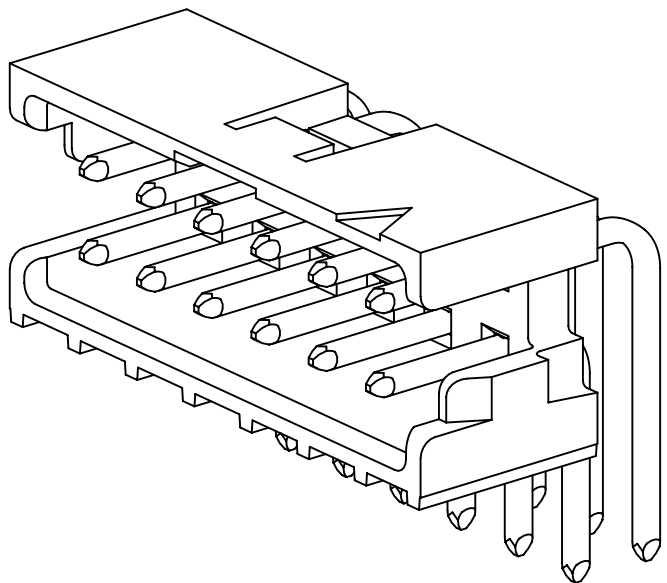
SECTION B - B



POLARIZATION SLOT  
RIGHT ANGLE HEADER  
6-12 POSITIONS ONLY



POLARIZATION SLOT AND  
DUAL FRICTION LATCHES  
RIGHT ANGLE HEADER  
14-50 POSITIONS



SINGLE FRICTION LATCH  
RIGHT ANGLE HEADER  
6-12 POSITIONS ONLY

|            |       |                            |           |             |
|------------|-------|----------------------------|-----------|-------------|
| F          | 52868 | MAR 05,2014                | SJS       | SAN         |
| E          | 51692 | DEC 16,2013                | SJS       | SAN         |
| D          | 41488 | JUN 20,2012                | LDS       | SAN         |
| C          | 39876 | APR 18,2012                | LDS       | SAN         |
| B          | 34080 | MAY 18,2011                | LDS       | SF          |
| A          | 30741 | OCT 28,2010                | LDS       | SF          |
| REV        | ECO   | ISSUE DATE AND DESCRIPTION | DRFT      | CHKD        |
| DRFT       | CHKD  | DATE                       | DATE      | DATE        |
| L. SCHMIDT |       | JUL 29,2010                | MFG       |             |
|            |       |                            | APPR      |             |
|            |       |                            | S FELDMAN | AUG 09,2010 |

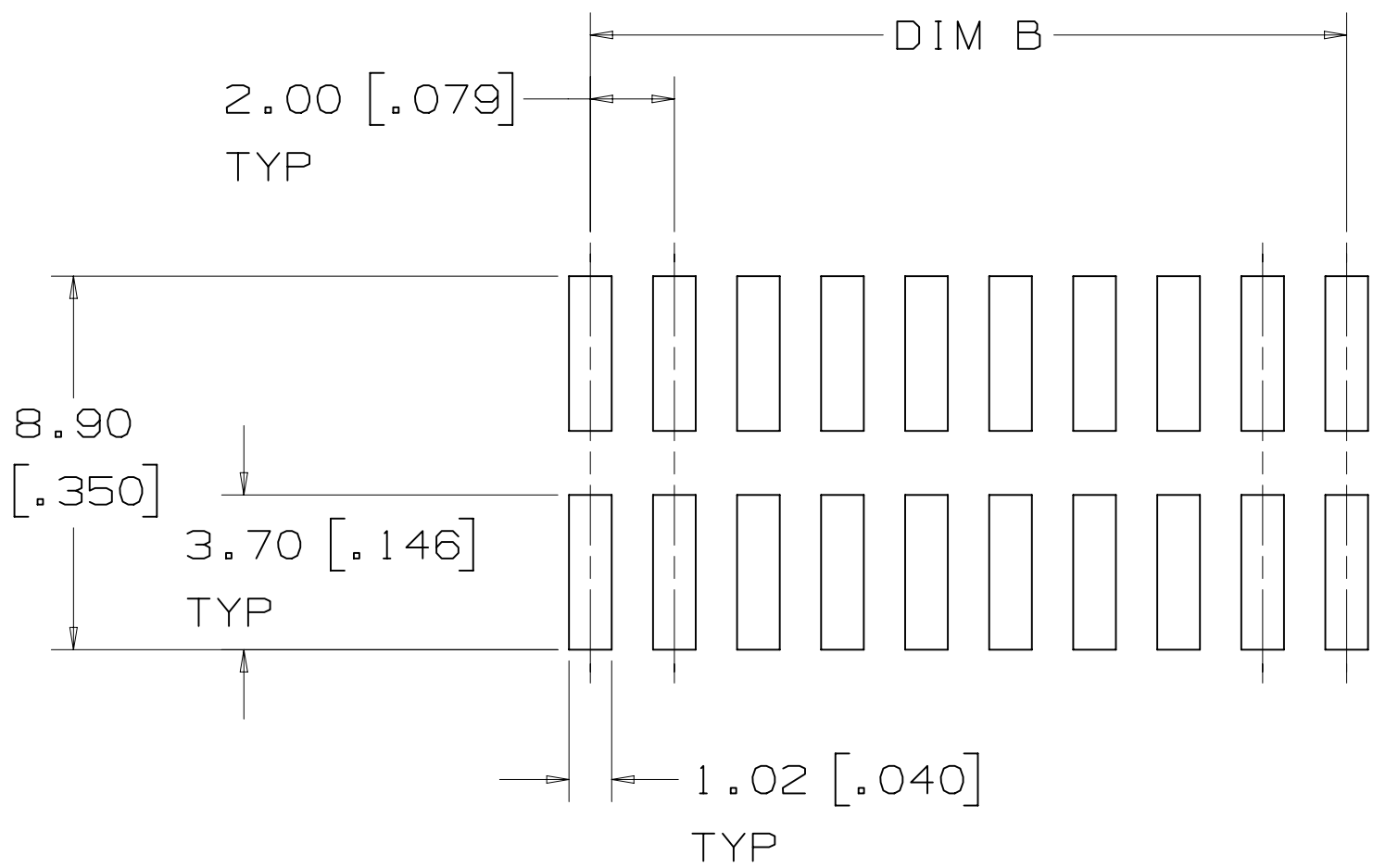
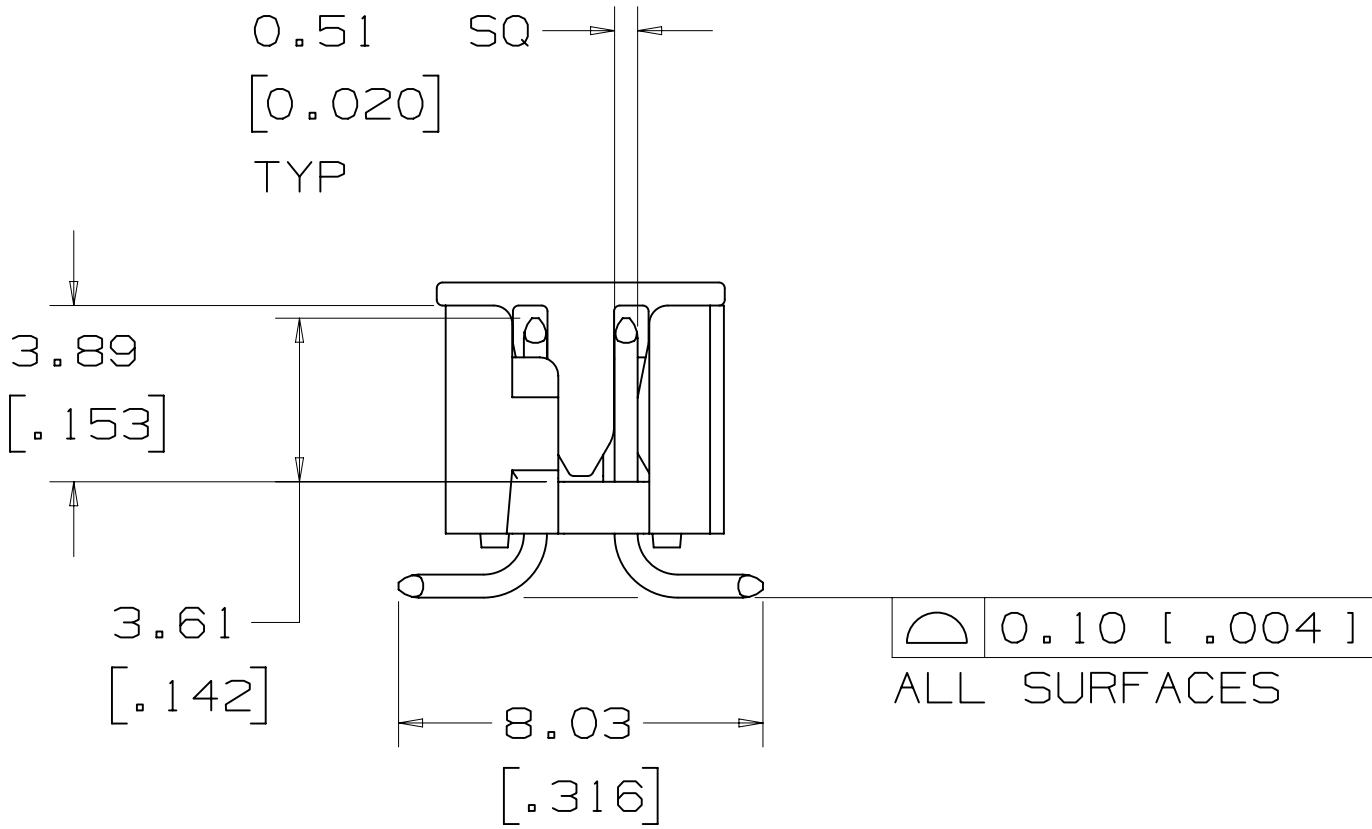
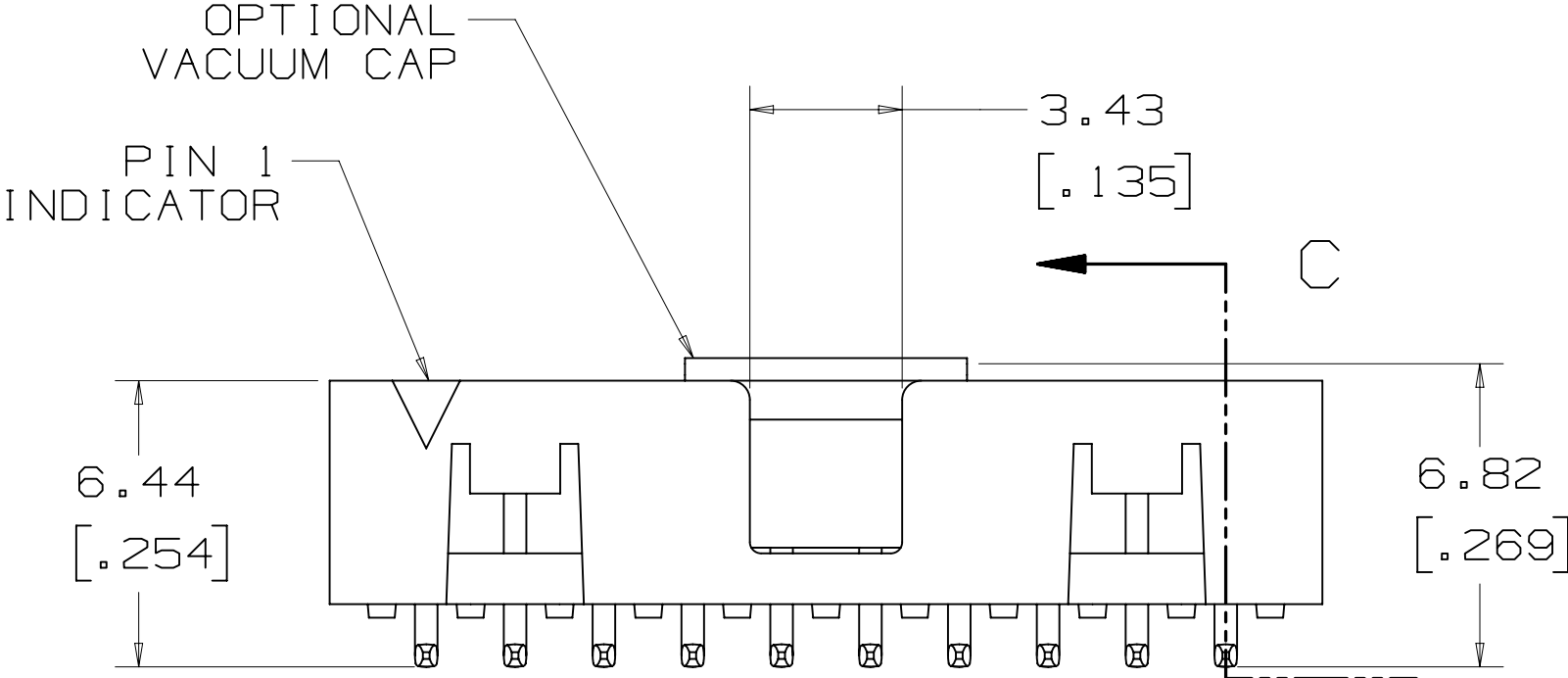
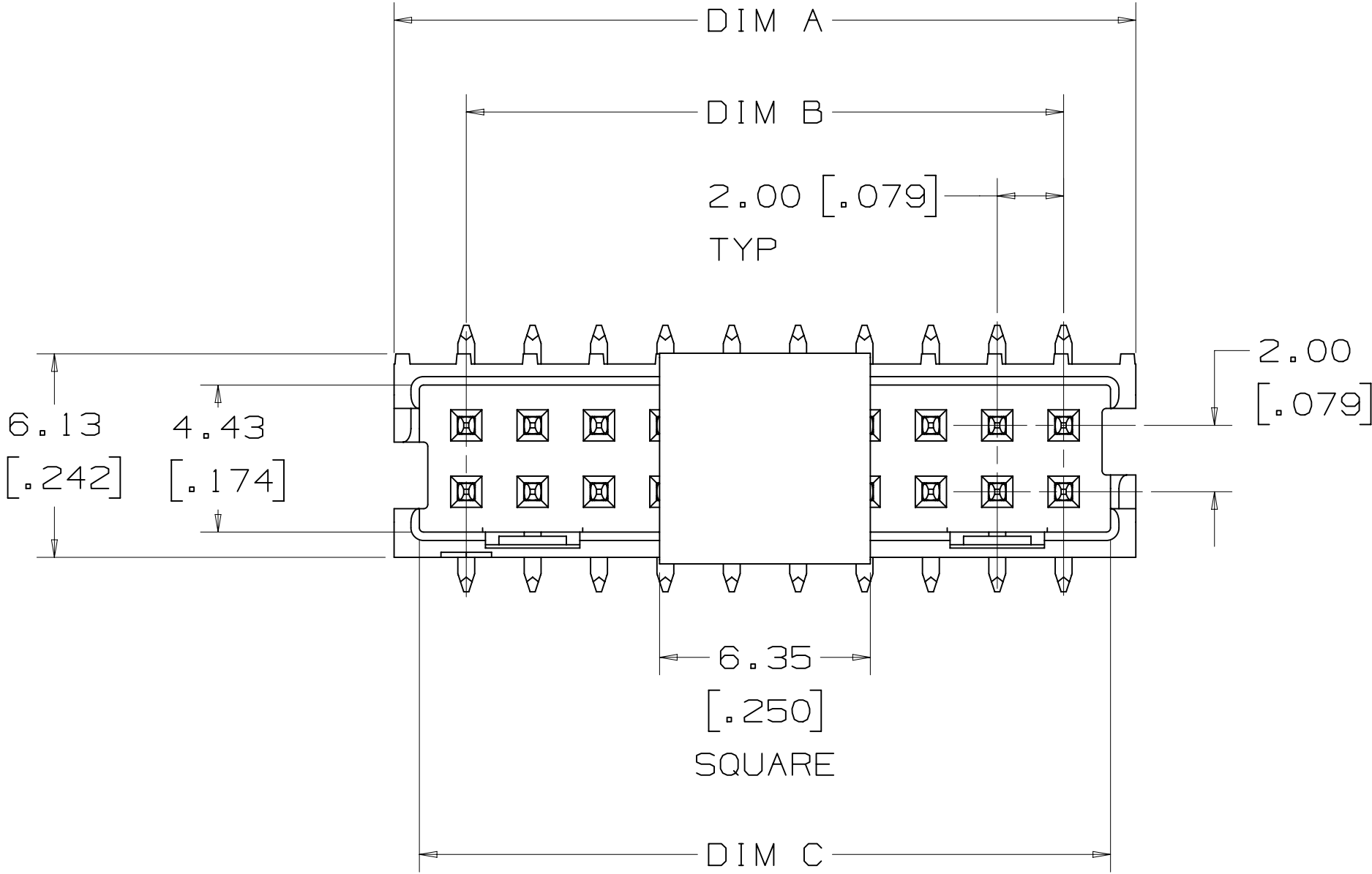
|                                                                            |      |                                    |      |                                                                                                                                                                                                                                                           |  |
|----------------------------------------------------------------------------|------|------------------------------------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
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| TITLE<br>3M SHROUDED BOARD<br>MOUNT HEADER 2 MM X 2<br>MM PITCH 159 SERIES |      |                                    |      |                                                                                                                                                                                                                                                           |  |
| CAGE<br>NUMBER                                                             | SIZE | DRAWING NO.                        | REV. |                                                                                                                                                                                                                                                           |  |
| 125                                                                        | D    | 78-5100-2359-7                     | F    |                                                                                                                                                                                                                                                           |  |
| MODEL                                                                      |      | DET                                |      | SHT 2 OF 5                                                                                                                                                                                                                                                |  |
|                                                                            |      | LISTS                              |      | YES NO                                                                                                                                                                                                                                                    |  |

REFERENCE TABLE ON SHEET 5  
FOR AVAILABLE POSITIONS AND  
SOLDER TAIL LENGTHS

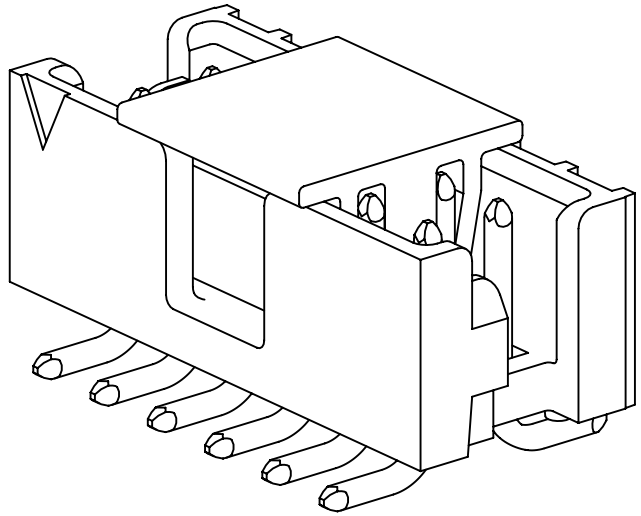
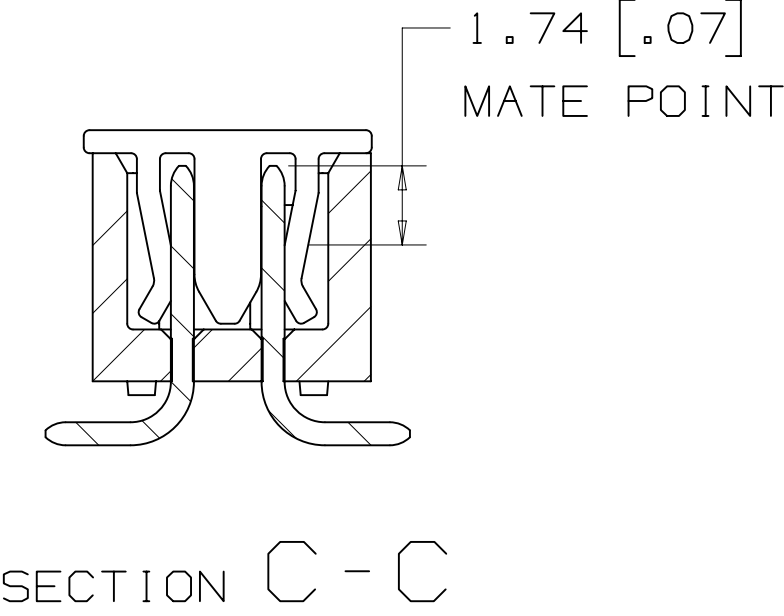
METRIC [ ENGLISH ]



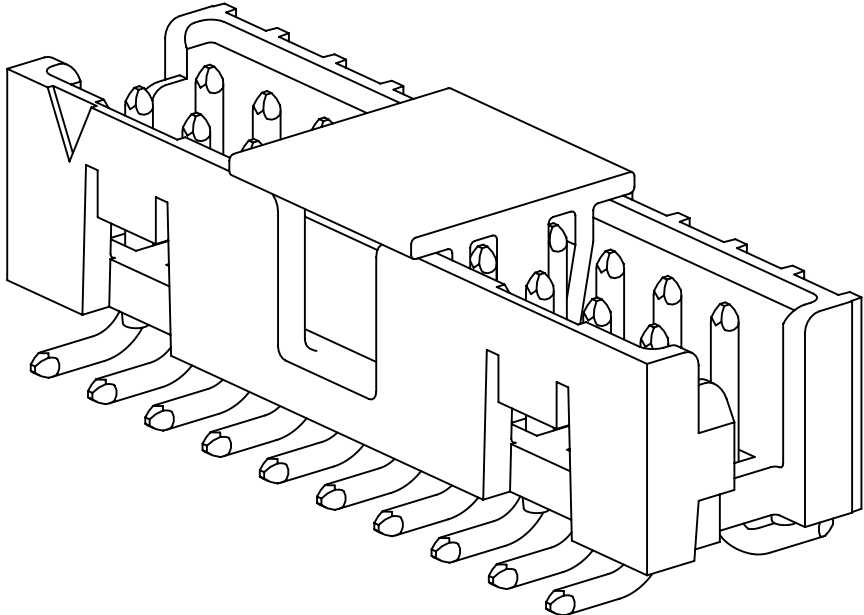
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length 3 and Extended Length 4



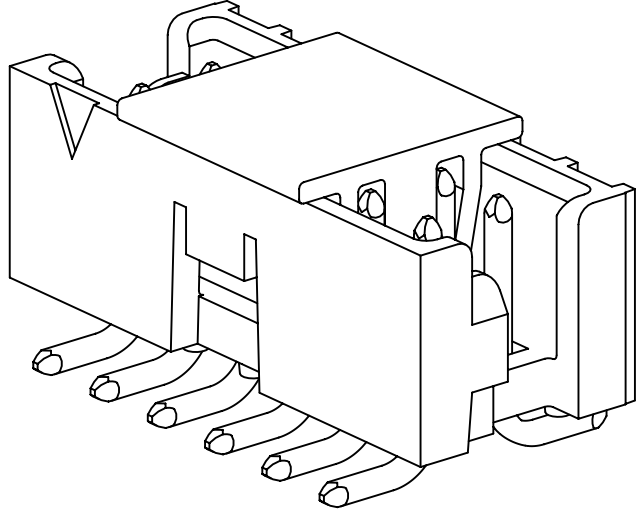
RECOMMENDED PCB PAD PATTERN  
TOLERANCE = ±0.08 [0.003]



POLARIZATION SLOT  
SURFACE MOUNT HEADER  
6-12 POSITIONS ONLY



POLARIZATION SLOT AND  
DUAL FRICTION LATCHES  
SURFACE MOUNT HEADER  
14-50 POSITIONS



SINGLE FRICTION LATCH  
SURFACE MOUNT HEADER  
6-12 POSITIONS ONLY

REFERENCE TABLE ON SHEET 5  
FOR AVAILABLE POSITIONS

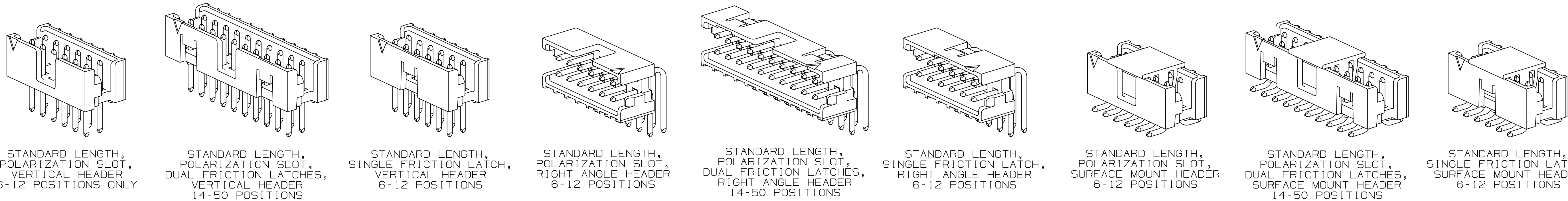
METRIC [ ENGLISH ]

| DESIGN REFERENCE       |  | NEXT ASSEMBLY                   |  | REV                        | ECO | ISSUE DATE AND DESCRIPTION |  | DRFT        | CHKD |
|------------------------|--|---------------------------------|--|----------------------------|-----|----------------------------|--|-------------|------|
| L. SCHMIDT             |  | JUL 29, 2010                    |  | 1                          |     | MFG                        |  | DATE        |      |
| DIVISION               |  | DIVISION CODE                   |  | CHKD                       |     | APPROVAL                   |  | DATE        |      |
| DO NOT SCALE DRAWING   |  | SCALE 4/1                       |  | TOLERANCES EXCEPT AS NOTED |     | INCHES                     |  | MILLIMETERS |      |
| THIRD ANGLE PROJECTION |  | INTERPRET PER ASME Y14.5 - 1994 |  | MAX SURFACE ROUGHNESS      |     | ALL SURFACES               |  | MARKED ONLY |      |
| 125                    |  | 0.00 ± 0.13                     |  | 0.00 ± 0.000               |     | 0.00 ± 0.000               |  | ANGLES ± 1° |      |
| CAGE NUMBER            |  | SIZE                            |  | DRAWING NO.                |     | REV.                       |  |             |      |
| 125                    |  | D                               |  | 78-5100-2359-7             |     | F                          |  |             |      |
| MODEL                  |  | LISTS                           |  | YES                        |     | NO                         |  | SHT 3 OF 5  |      |



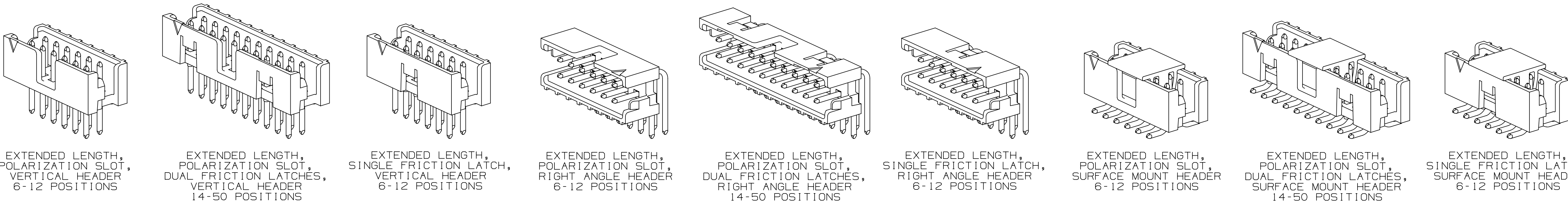
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length 3

STANDARD LENGTH HEADERS  
ARE AVAILABLE



3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Extended Length 4

CALL 3M INTERCONNECT SOLUTIONS  
AT 800-225-5373 FOR AVAILABILITY  
OF EXTENDED LENGTH HEADERS



ORDERING INFORMATION

TIER 1 - BEST  
1591XX-XXXX

TIER  
1 = BEST 0.76  $\mu$ m  
[30  $\mu$ in] GOLD

POSITION COUNT  
(SEE TABLE)

PART CONFIGURATION  
2 = VERTICAL SMT  
5 = RIGHT ANGLE THRU HOLE  
6 = VERTICAL THRU HOLE

BODY LENGTH  
0 = STANDARD LENGTH  
(MATES TO 158 SERIES)  
1 = EXTENDED LENGTH  
(MATES TO 870 SERIES)

CONTACT TAIL LENGTH  
2 = 2.84 mm [.112]  
3 = 3.94 mm [.155]

POLARIZATION/LATCHING  
0 = POLARIZATION SLOT AND  
DUAL FRICTION LATCHES  
(14-50 POSITIONS ONLY)  
1 = POLARIZATION SLOT  
(6-12 POSITIONS ONLY)  
2 = SINGLE FRICTION LATCH  
(6-12 POSITIONS ONLY)

TIER 2 - BETTER  
1592XX-XXXX

TIER  
2 = BETTER 0.38  $\mu$ m  
[15  $\mu$ in] GOLD

POSITION COUNT  
(SEE TABLE)

PART CONFIGURATION  
2 = VERTICAL SMT  
5 = RIGHT ANGLE THRU HOLE  
6 = VERTICAL THRU HOLE

BODY LENGTH  
0 = STANDARD LENGTH  
(MATES TO 158 SERIES)  
1 = EXTENDED LENGTH  
(MATES TO 870 SERIES)

CONTACT TAIL LENGTH  
2 = 2.84 mm [.112]  
3 = 3.94 mm [.155]

POLARIZATION/LATCHING  
0 = POLARIZATION SLOT AND  
DUAL FRICTION LATCHES  
(14-50 POSITIONS ONLY)  
1 = POLARIZATION SLOT  
(6-12 POSITIONS ONLY)  
2 = SINGLE FRICTION LATCH  
(6-12 POSITIONS ONLY)

METRIC [ENGLISH]

|                                 |                                                             |                            |                  |                   |
|---------------------------------|-------------------------------------------------------------|----------------------------|------------------|-------------------|
| F                               | 52868                                                       | MAR 05, 2014               | SJS              | SAN               |
| E                               | 51692                                                       | DEC 16, 2013               | SJS              | SAN               |
| D                               | 41488                                                       | JUN 20, 2012               | LDS              | SAN               |
| C                               | 39876                                                       | APR 18, 2012               | LDS              | SAN               |
| B                               | 34080                                                       | MAY 18, 2011               | LDS              | SF                |
| A                               | 30741                                                       | OCT 28, 2010               | LDS              | SF                |
| REV                             | ECO                                                         | ISSUE DATE AND DESCRIPTION | DRFT             | CHKD              |
| DRFT                            | L. SCHMIDT                                                  | DATE JUL 29, 2010          | DATE             | DATE              |
| CHKD                            |                                                             | DATE                       | APPROV S FELDMAN | DATE AUG 09, 2010 |
| DIVISION                        |                                                             | DIVISION CODE              |                  |                   |
| DO NOT SCALE DRAWING            | SCALE 4 1                                                   | TOLERANCES EXCEPT AS NOTED |                  |                   |
| THIRD ANGLE PROJECTION          |                                                             | INCHES .00 .00 .000 .0000  |                  |                   |
| INTERPRET PER ASME Y14.5 - 1994 |                                                             | MILLIMETERS 0 .0 .00 .000  |                  |                   |
| MAX SURFACE ROUGHNESS 125       |                                                             | ALL SURFACES MARKED ONLY   |                  |                   |
| ANGLES $\pm$ 1°                 |                                                             |                            |                  |                   |
| TITLE                           | 3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES |                            |                  |                   |
| CAGE NUMBER                     | 78-5100-2359-7                                              | DRAWING NO.                | REV.             |                   |
| MODEL                           |                                                             | DET                        | ISTS             | YES NO SHT 4 OF 5 |





# Mouser Electronics

Authorized Distributor

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3M:

[159112-5012](#) [159208-6012](#) [159210-6012](#) [159212-5012](#) [159220-6002](#) [159226-6002](#)