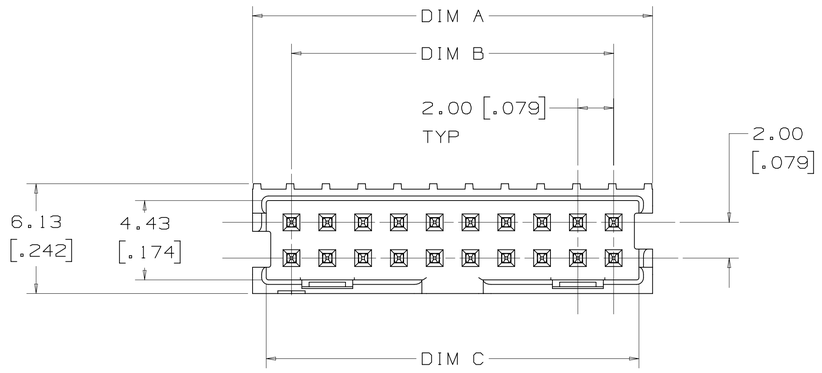
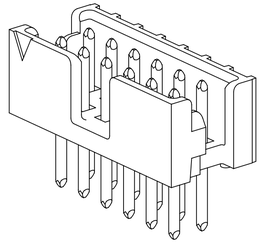
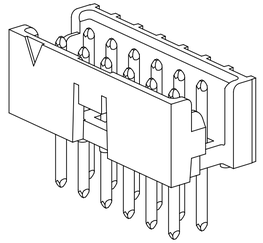
# 3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length [3] and Extended Length [4]

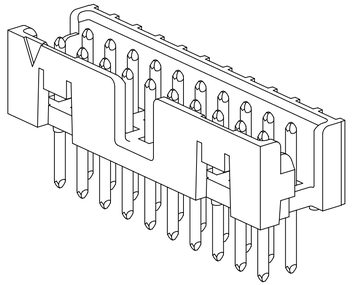


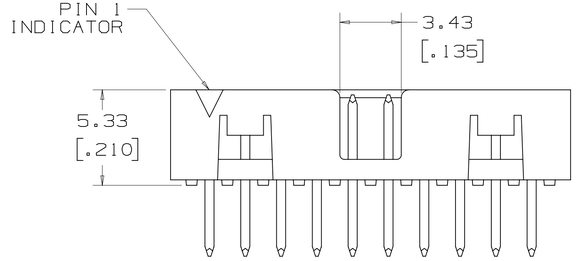
POLARIZATION SLOT
THRU-HOLE VERTICAL HEADER
6-12 POSITIONS ONLY

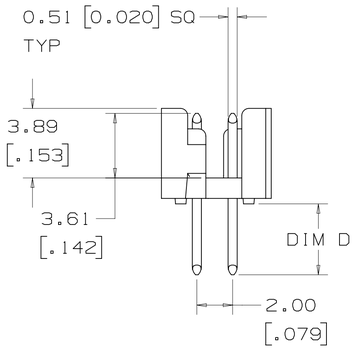


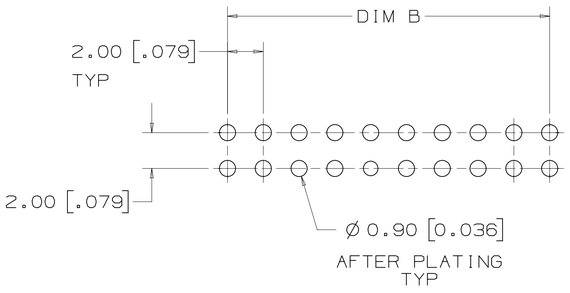
SINGLE FRICTION LATCH
THRU-HOLE VERTICAL HEADER
6-12 POSITIONS ONLY



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




RECOMMENDED PCB HOLE PATTERN
TOLERANCE = 0.05 [ .002 ]

| 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 $10^9$ OHMS AT 500 VDC |
| 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 ]

NOTES

1. MATERIAL:
BODY: HIGH TEMPERATURE GLASS FILLED LCP, BLACK UL94V-0
CONTACTS: COPPER ALLOY

2. PLATING:
2.03-3.81 µm [80-150 µin] NICKEL UNDERPLATE.
0.38 µm [15 µin] OR 0.76 µm [30µin] AVG GOLD ON WIPING AREA.
5.08 µm [200 µin] MIN MATTE TIN ON SOLDER TAILS.

3. STANDARD LENGTH HEADERS MATE WITH 3M™ SOCKETS, 158 SERIES (REFERENCE 3M DRAWING 78-5100-2358-9).

4. EXTENDED LENGTH HEADERS MATE WITH 3M™ SOCKETS, 870 SERIES.

5. FOR PRODUCT SPECIFICATIONS AND WARRANTY INFORMATION SEE 3M 78-5102-0078-1.

6. SEE THE REGULATORY INFORMATION APPENDIX (RIA) IN THE "RoHS COMPLIANCE" SECTION OF WWW.3MCONNECTOR.COM FOR COMPLIANCE INFORMATION (RIA E1 & C1 APPLY).

7. IN THE EVENT OF CONFLICT BETWEEN THIS DATA AND THAT CONTAINED IN THE PRODUCT SPECIFICATION, THE PRODUCT SPECIFICATION TAKES PRECEDENT.

| REV | ECO | ISSUE DATE AND DESCRIPTION | DRFT | CHKD |
|---|---|---|---|---|
| D | 41488 | JUN 20,2012<br>REVISED CURRENT RATING IN PERFORMANCE TABLE | LDS | SAN |
| C | 39876 | APR 18,2012<br>REMOVED 32 POS FROM TABLE ON SHT 5 | LDS | SAN |
| B | 34080 | MAY 18,2011<br>ADDED 6.19 DIM ON SHT 2; REVISED & MOVED TABLE TO SHT 5 | LDS | SF |
| A | 30741 | OCT 28,2010<br>INITIAL RELEASE | LDS | SF |

DESIGN REFERENCE | NEXT ASSEMBLY
DISTRIBUTION CODES
DIVISION | DIVISION CODE
DRFT: L. SCHMIDT DATE: JUL 29,2010 MFG DATE:
CHKD DATE: APPVL: S FELDMAN DATE: AUG 09,2010
DO NOT SCALE DRAWING | SCALE 6:1
TOLERANCES EXCEPT AS NOTED
INCHES .0 ± .00 ± .000 ± .0000 ±
THIRD ANGLE PROJECTION
INTERPRET PER ASME Y14.5 - 1994
MILLIMETERS 0 ± .0 ± .00 ± 0.13 .000 ± 0.025
MAX SURFACE ROUGHNESS 125 ☐ ALL SURFACES ☒ MARKED ONLY
ANGLES ± 1°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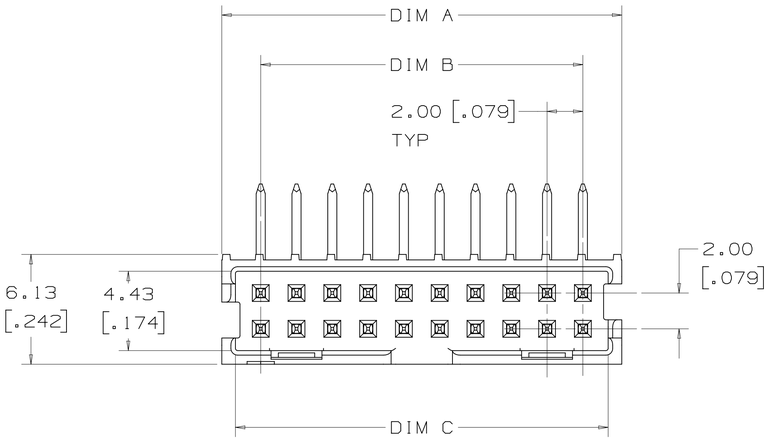
3M Center St. Paul, MN 55144

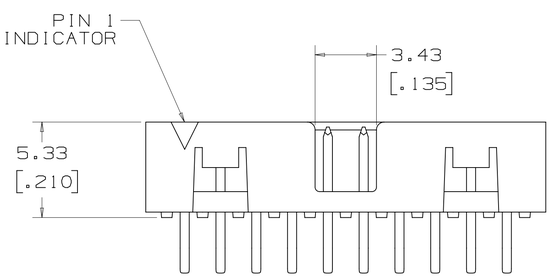
TITLE: 3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES

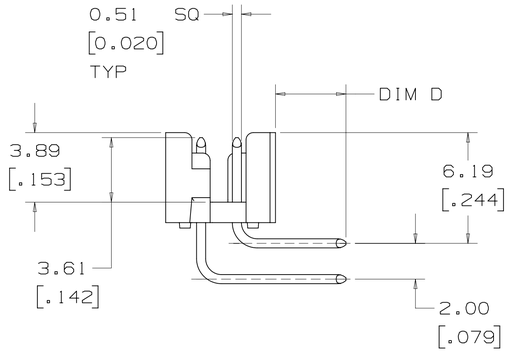
CAGE NUMBER | SIZE D | DRAWING NO. 78-5100-2359-7 | REV. D
MODEL | DET. LISTS ☐ YES ☒ NO | SHT 1 OF 5

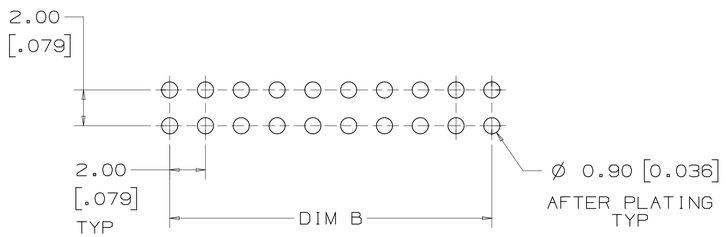
78-5100-2359-7 (DRAWING NUMBER) D (REVISION)

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

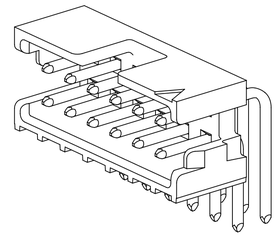


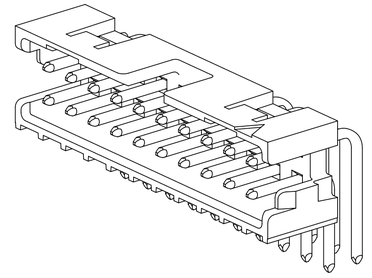



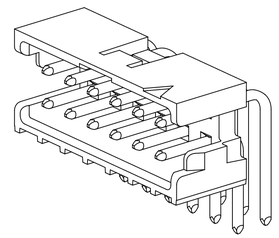

RECOMMENDED PCB HOLE PATTERN
TOLERANCE = ±0.05 [ .002 ]



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

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

METRIC [ ENGLISH ]

| REV | ECO | ISSUE DATE AND DESCRIPTION | DRFT | CHKD |
|---|---|---|---|---|
| D | 41488 | JUN 20,2012<br>REVISED CURRENT RATING IN PERFORMANCE TABLE | LDS | SAN |
| C | 39876 | APR 18,2012<br>REMOVED 32 POS FROM TABLE ON SHT 5 | LDS | SAN |
| B | 34080 | MAY 18,2011<br>ADDED 6.19 DIM ON SHT 2; REVISED & MOVED TABLE TO SHT 5 | LDS | SF |
| A | 30741 | OCT 28,2010<br>INITIAL RELEASE | LDS | SF |

DESIGN REFERENCE | NEXT ASSEMBLY

DRFT: L. SCHMIDT — DATE: JUL 29,2010 — MFG — DATE

CHKD — DATE — APPVL: S FELDMAN — DATE: AUG 09,2010

DISTRIBUTION CODES

DIVISION — DIVISION CODE

DO NOT SCALE DRAWING — SCALE 4/1

THIRD ANGLE PROJECTION

INTERPRET PER ASME Y14.5 - 1994

MAX SURFACE ROUGHNESS 125 — ☐ ALL SURFACES ☒ MARKED ONLY

TOLERANCES EXCEPT AS NOTED

INCHES: .0 ± / .00 ± / .000 ± / .0000 ±

MILLIMETERS: 0 ± / .0 ± / .00 ± 0.13 / .000 ±

ANGLES ±1°

3M Center, St. Paul, MN 55144

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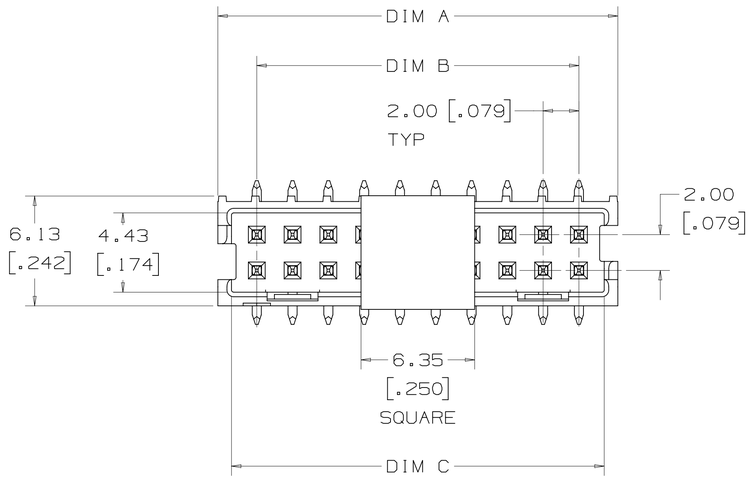
TITLE: 3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES

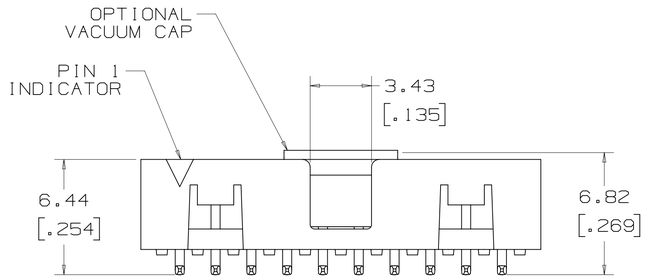
CAGE NUMBER | SIZE: D | DRAWING NO.: 78-5100-2359-7 | REV.: D

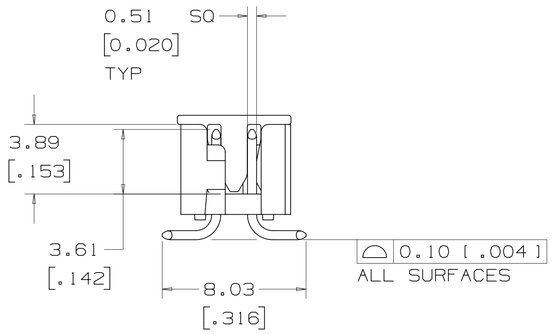
MODEL | DET. LISTS ☐ YES ☒ NO | SHT 2 OF 5

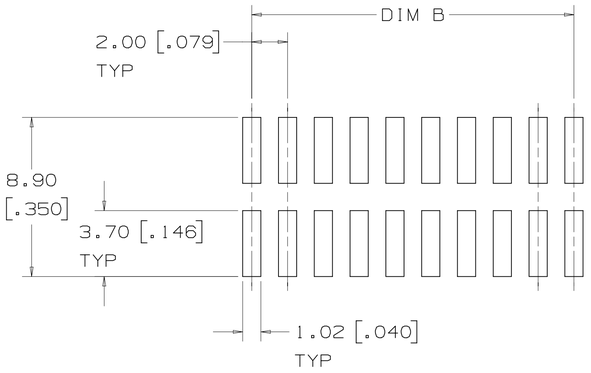
78-5100-2359-7 D
DRAWING NUMBER REVISION

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

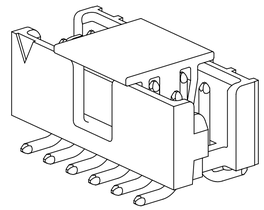


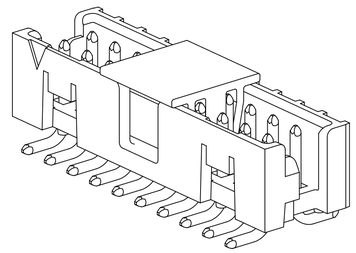



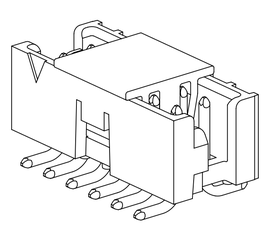

RECOMMENDED PCB PAD PATTERN
TOLERANCE = ±0.08 [ .003 ]



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 ]

| REV | ECO | ISSUE DATE AND DESCRIPTION | DRFT | CHKD |
|---|---|---|---|---|
| D | 41488 | JUN 20,2012<br>REVISED CURRENT RATING IN PERFORMANCE TABLE | LDS | SAN |
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DESIGN REFERENCE | NEXT ASSEMBLY

DISTRIBUTION CODES

DIVISION | DIVISION CODE

DRFT L. SCHMIDT DATE JUL 29,2010 | MFG | DATE

CHKD | DATE | APPVL S FELDMAN DATE AUG 09,2010

DO NOT SCALE DRAWING | SCALE 4/1

THIRD ANGLE PROJECTION

INTERPRET PER ASME Y14.5 - 1994

MAX SURFACE ROUGHNESS 125 ☐ ALL SURFACES ☒ MARKED ONLY

TOLERANCES EXCEPT AS NOTED

| INCHES | |
|---|---|
| .0 | ± |
| .00 | ± |
| .000 | ± |
| .0000 | ± |

| MILLIMETERS | |
|---|---|
| 0 | ± |
| .0 | ± |
| .00 | ± 0.13 |
| .000 | ± |

ANGLES ± 1°

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

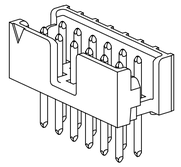
CAGE NUMBER | SIZE D | DRAWING NO. 78-5100-2359-7 | REV. D

MODEL | DET. LISTS ☐ YES ☒ NO | SHT 3 OF 5

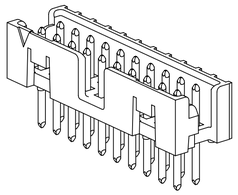
78-5100-2359-7 DRAWING NUMBER | D REVISION

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

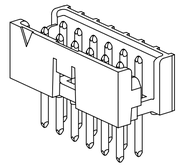
STANDARD LENGTH HEADERS ARE AVAILABLE



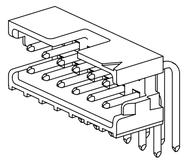
STANDARD LENGTH, POLARIZATION SLOT, VERTICAL HEADER 6-12 POSITIONS ONLY



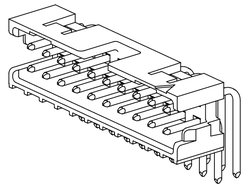
STANDARD LENGTH, POLARIZATION SLOT, DUAL FRICTION LATCHES, VERTICAL HEADER 14-50 POSITIONS



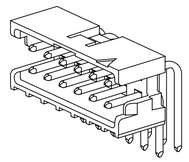
STANDARD LENGTH, SINGLE FRICTION LATCH, VERTICAL HEADER 6-12 POSITIONS



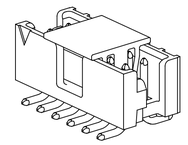
STANDARD LENGTH, POLARIZATION SLOT, RIGHT ANGLE HEADER 6-12 POSITIONS



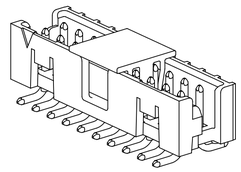
STANDARD LENGTH, POLARIZATION SLOT, DUAL FRICTION LATCHES, RIGHT ANGLE HEADER 14-50 POSITIONS



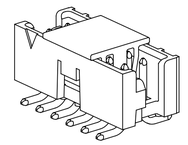
STANDARD LENGTH, SINGLE FRICTION LATCH, RIGHT ANGLE HEADER 6-12 POSITIONS



STANDARD LENGTH, POLARIZATION SLOT, SURFACE MOUNT HEADER 6-12 POSITIONS



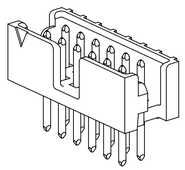
STANDARD LENGTH, POLARIZATION SLOT, DUAL FRICTION LATCHES, SURFACE MOUNT HEADER 14-50 POSITIONS



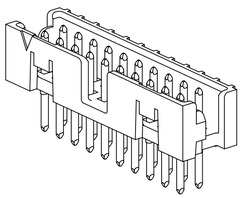
STANDARD LENGTH, SINGLE FRICTION LATCH, SURFACE MOUNT HEADER 6-12 POSITIONS

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

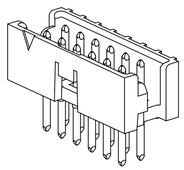
CALL 3M INTERCONNECT SOLUTIONS AT 800-225-5373 FOR AVAILABILITY OF EXTENDED LENGTH HEADERS



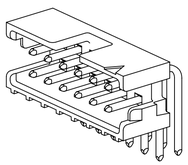
EXTENDED LENGTH, POLARIZATION SLOT, VERTICAL HEADER 6-12 POSITIONS



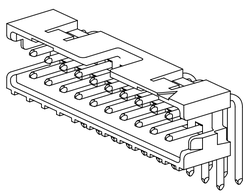
EXTENDED LENGTH, POLARIZATION SLOT, DUAL FRICTION LATCHES, VERTICAL HEADER 14-50 POSITIONS



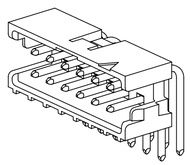
EXTENDED LENGTH, SINGLE FRICTION LATCH, VERTICAL HEADER 6-12 POSITIONS



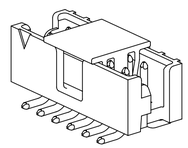
EXTENDED LENGTH, POLARIZATION SLOT, RIGHT ANGLE HEADER 6-12 POSITIONS



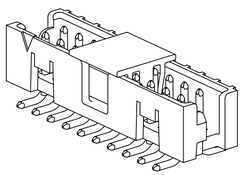
EXTENDED LENGTH, POLARIZATION SLOT, DUAL FRICTION LATCHES, RIGHT ANGLE HEADER 14-50 POSITIONS



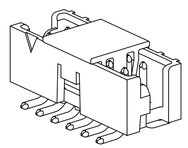
EXTENDED LENGTH, SINGLE FRICTION LATCH, RIGHT ANGLE HEADER 6-12 POSITIONS



EXTENDED LENGTH, POLARIZATION SLOT, SURFACE MOUNT HEADER 6-12 POSITIONS



EXTENDED LENGTH, POLARIZATION SLOT, DUAL FRICTION LATCHES, SURFACE MOUNT HEADER 14-50 POSITIONS



EXTENDED LENGTH, SINGLE FRICTION LATCH, SURFACE MOUNT HEADER 6-12 POSITIONS

## ORDERING INFORMATION

### TIER 1 - BEST

1591XX-XXXX

TIER
1 = BEST 0.76 μm [ 30 μin ] 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 μm [ 15 μin ] 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 ]

| REV | ECO | ISSUE DATE AND DESCRIPTION | DRFT | CHKD |
|---|---|---|---|---|
| D | 41488 | JUN 20,2012<br>REVISED CURRENT RATING IN PERFORMANCE TABLE | LDS | SAN |
| C | 39876 | APR 18,2012<br>REMOVED 32 POS FROM TABLE ON SHT 5 | LDS | SAN |
| B | 34080 | MAY 18,2011<br>ADDED 6.19 DIM ON SHT 2; REVISED & MOVED TABLE TO SHT 5 | LDS | SF |
| A | 30741 | OCT 28,2010<br>INITIAL RELEASE | LDS | SF |

DESIGN REFERENCE | NEXT ASSEMBLY

DISTRIBUTION CODES

DRFT L. SCHMIDT DATE JUL 29,2010 | MFG | DATE

CHKD | DATE | APPR. S FELDMAN DATE AUG 09,2010

DIVISION | DIVISION CODE

DO NOT SCALE DRAWING | SCALE 4/1

THIRD ANGLE PROJECTION

INTERPRET PER ASME Y14.5 - 1994

MAX SURFACE ROUGHNESS 125 ☐ ALL SURFACES ☒ MARKED ONLY

TOLERANCES EXCEPT AS NOTED
INCHES
.0 ±
.00 ±
.000 ±
.0000 ±
MILLIMETERS
0 ±
.0 ±
.00 ± 0.13
.000 ±
ANGLES ± 1°

3M 3M Center St. Paul, MN 55144

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

CAGE NUMBER | SIZE D | DRAWING NO. 78-5100-2359-7 | REV. D

MODEL | DET. LISTS ☐ YES ☒ NO | SHT 4 OF 5

78-5100-2359-7 D REVISION

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

| SHROUDED BOX HEADER | | | | | | | |
|---|---|---|---|---|---|---|---|
| NUMBER OF POSITIONS | DIM A | | DIM B | DIM C | | DIM D | |
| | STANDARD | EXTENDED | | STANDARD | EXTENDED | | |
| 6 | 8.35 [.329] | 9.52 [.375] | 4.00 [.157] | 6.83 [.269] | 7.99 [.315] | 2.84 [.112] | 3.94 [.155] |
| 8 | 10.35 [.407] | 11.52 [.453] | 6.00 [.236] | 8.83 [.347] | 9.99 [.393] | 2.84 [.112] | 3.94 [.155] |
| 10 | 12.35 [.486] | 13.52 [.532] | 8.00 [.315] | 10.83 [.426] | 11.99 [.472] | 2.84 [.112] | 3.94 [.155] |
| 12 | 14.35 [.565] | 15.52 [.611] | 10.00 [.394] | 12.83 [.505] | 13.99 [.551] | 2.84 [.112] | 3.94 [.155] |
| 14 | 16.35 [.644] | 17.52 [.690] | 12.00 [.472] | 14.83 [.584] | 15.99 [.630] | 2.84 [.112] | 3.94 [.155] |
| 16 | 18.35 [.722] | 19.52 [.768] | 14.00 [.551] | 16.83 [.662] | 17.99 [.708] | 2.84 [.112] | 3.94 [.155] |
| 20 | 22.35 [.880] | 23.52 [.926] | 18.00 [.709] | 20.83 [.820] | 21.99 [.866] | 2.84 [.112] | 3.94 [.155] |
| 22 | 24.35 [.959] | 25.52 [1.005] | 20.00 [.787] | 22.83 [.899] | 23.99 [.945] | 2.84 [.112] | 3.94 [.155] |
| 24 | 26.35 [1.037] | 27.52 [1.083] | 22.00 [.866] | 24.83 [.977] | 25.99 [1.023] | 2.84 [.112] | 3.94 [.155] |
| 26 | 28.35 [1.116] | 29.52 [1.162] | 24.00 [.945] | 26.83 [1.056] | 27.99 [1.102] | 2.84 [.112] | 3.94 [.155] |
| 30 | 32.35 [1.274] | 33.52 [1.320] | 28.00 [1.102] | 30.83 [1.214] | 31.99 [1.260] | 2.84 [.112] | 3.94 [.155] |
| 34 | 36.35 [1.431] | 37.52 [1.477] | 32.00 [1.260] | 34.83 [1.371] | 35.99 [1.417] | 2.84 [.112] | 3.94 [.155] |
| 40 | 42.35 [1.667] | 43.52 [1.713] | 38.00 [1.496] | 40.83 [1.607] | 41.99 [1.653] | 2.84 [.112] | 3.94 [.155] |
| 44 | 46.35 [1.825] | 47.52 [1.871] | 42.00 [1.654] | 44.83 [1.765] | 45.99 [1.811] | 2.84 [.112] | 3.94 [.155] |
| 50 | 52.35 [2.061] | 53.52 [2.107] | 48.00 [1.890] | 50.83 [2.001] | 51.99 [2.047] | 2.84 [.112] | 3.94 [.155] |

METRIC [ENGLISH]

| REV | ECO | ISSUE DATE AND DESCRIPTION | DRFT | CHKD |
|---|---|---|---|---|
| D | 41488 | JUN 20,2012<br>REVISED CURRENT RATING IN PERFORMANCE TABLE | LDS | SAN |
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DESIGN REFERENCE | NEXT ASSEMBLY

DISTRIBUTION CODES | DIVISION | DIVISION CODE

DRFT: L. SCHMIDT — DATE: JUL 29,2010 — MFG — DATE

CHKD — DATE — APPVD: S FELDMAN — DATE: AUG 09,2010

DO NOT SCALE DRAWING | SCALE 1/1

THIRD ANGLE PROJECTION

INTERPRET PER ASME Y14.5 - 1994

MAX SURFACE ROUGHNESS 125 ☐ ALL SURFACES ☒ MARKED ONLY

TOLERANCES EXCEPT AS NOTED

INCHES: .0 ± | .00 ± | .000 ± | .0000 ±

MILLIMETERS: 0 ± | .0 ± | .00 ± 0.13 | .000 ± | ANGLES ± 1°

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3M Center, St. Paul, MN 55144

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

CAGE NUMBER | SIZE D | DRAWING NO. 78-5100-2359-7 | REV. D

MODEL | DET. LISTS ☐ YES ☒ NO | SHT 5 OF 5

78-5100-2359-7 DRAWING NUMBER | D REVISION

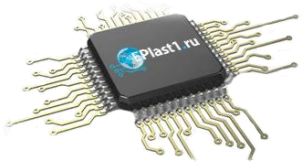
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.




**Как с нами связаться**

**Телефон:** 8 (812) 309 58 32 (многоканальный)
**Факс:** 8 (812) 320-02-42
**Электронная почта:** org@eplast1.ru
**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.