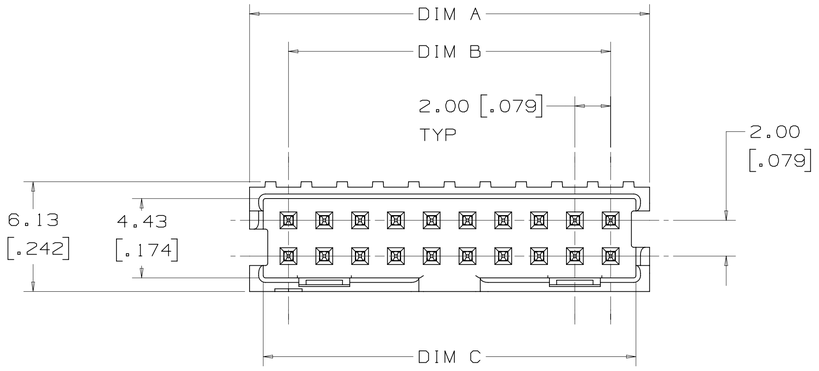
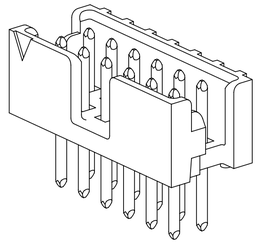
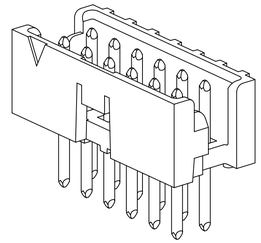
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length [3] and Extended Length [4]

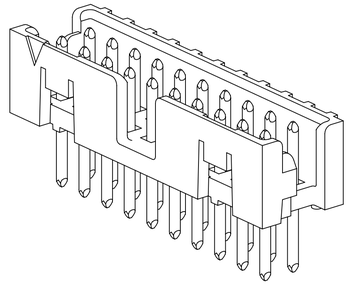




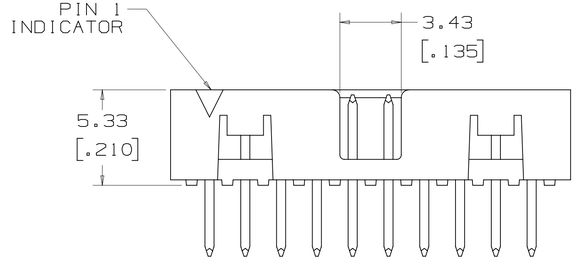
POLARIZATION SLOT
THRU-HOLE VERTICAL HEADER
6-12 POSITIONS ONLY

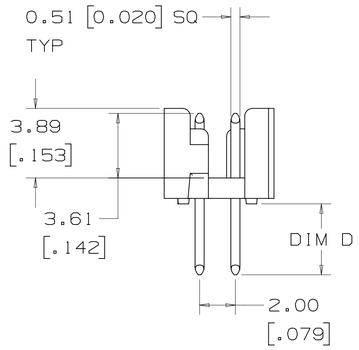


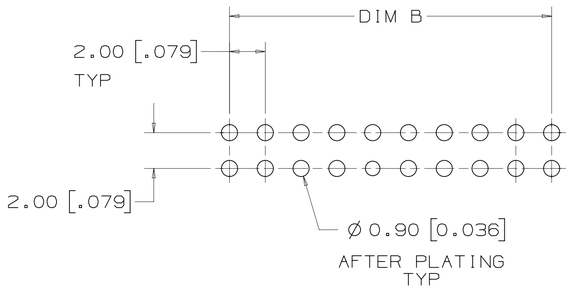
SINGLE FRICTION LATCH
THRU-HOLE VERTICAL HEADER
6-12 POSITIONS ONLY



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:	1A, 6 LINES 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 4
FOR AVAILABLE POSITIONS AND
SOLDER TAIL LENGTHS

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
A	30741	OCT 28,2010 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

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DO NOT SCALE DRAWING | SCALE 6:1

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

THIRD ANGLE PROJECTION

INTERPRET PER ASME Y14.5 - 1994

MAX SURFACE ROUGHNESS 125 ☐ ALL SURFACES ☒ MARKED ONLY

METRIC [ENGLISH]

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

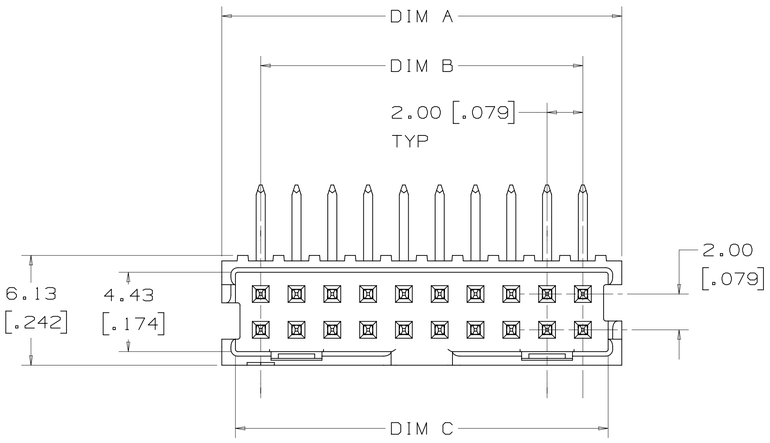
CAGE NUMBER | SIZE D | DRAWING NO. 78-5100-2359-7 | REV. A

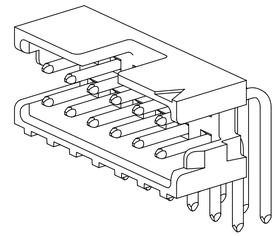
MODEL | DET. LISTS ☐ YES ☒ NO | SHT 1 OF 4

A REVISION

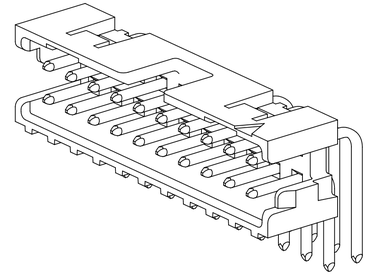
78-5100-2358-7 DRAWING NUMBER

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

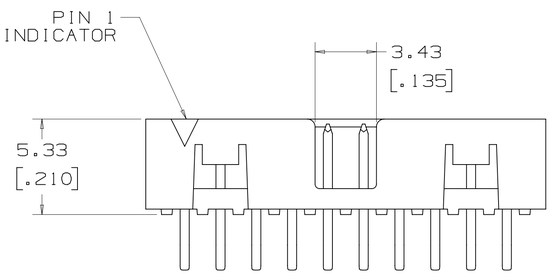


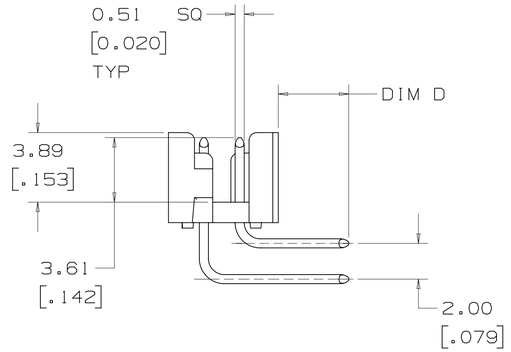


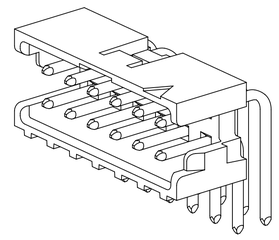
POLARIZATION SLOT
RIGHT ANGLE HEADER
6-12 POSITIONS ONLY



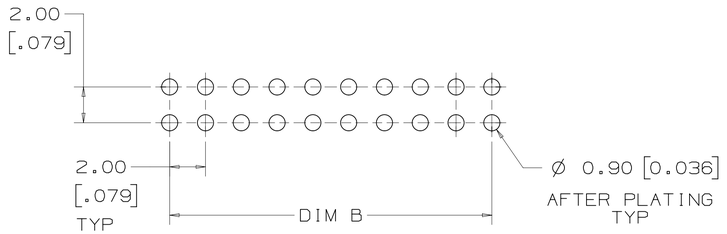
POLARIZATION SLOT AND
DUAL FRICTION LATCHES
RIGHT ANGLE HEADER
14-50 POSITIONS







SINGLE FRICTION LATCH
RIGHT ANGLE HEADER
6-12 POSITIONS ONLY



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

REFERENCE TABLE ON SHEET 4
FOR AVAILABLE POSITIONS AND
SOLDER TAIL LENGTHS

METRIC [ENGLISH]

REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
A	30741	OCT 28,2010 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

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

THIRD ANGLE PROJECTION

INTERPRET PER ASME Y14.5 - 1994

MAX SURFACE ROUGHNESS 125 ☐ ALL SURFACES ☒ MARKED ONLY

3M Center St. Paul, MN 55144

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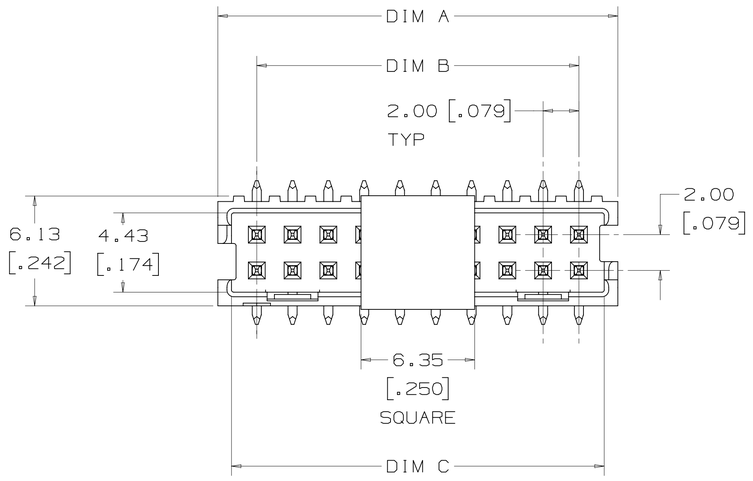
TITLE: 3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES

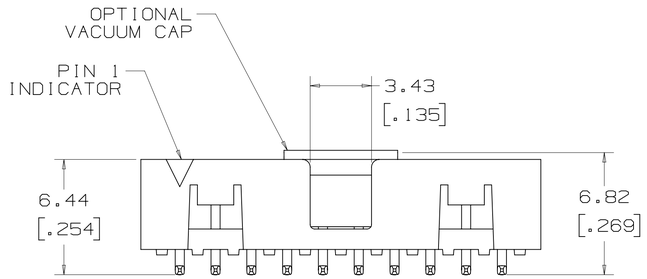
CAGE NUMBER | SIZE D | DRAWING NO. 78-5100-2359-7 | REV. A

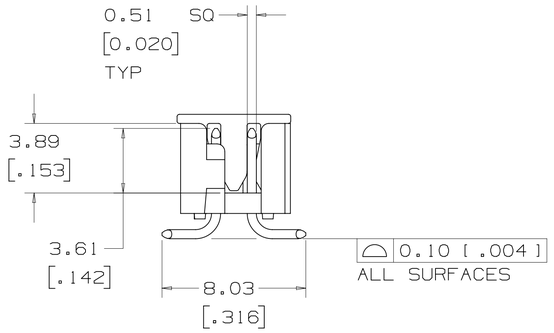
MODEL | DET. LISTS ☐ YES ☒ NO | SHT 2 OF 4

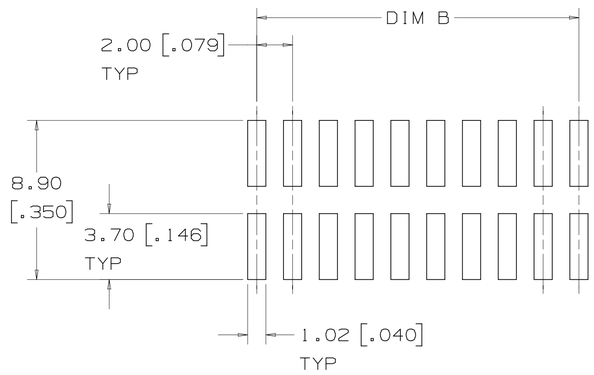
78-5100-2359-7 DRAWING NUMBER | A REVISION

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

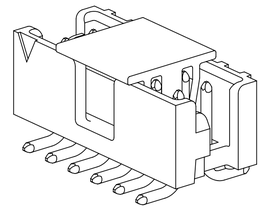




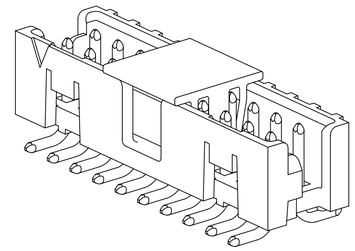




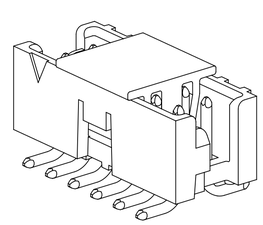
RECOMMENDED PCB PAD PATTERN
TOLERANCE = ±0.08 [.003]



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 4
FOR AVAILABLE POSITIONS

METRIC [ENGLISH]

REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
A	30741	OCT 28,2010 INITIAL RELEASE	LDS	SF

DESIGN REFERENCE | NEXT ASSEMBLY | DISTRIBUTION CODES

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

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DO NOT SCALE DRAWING | SCALE 4:1

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

THIRD ANGLE PROJECTION

INTERPRET PER ASME Y14.5 - 1994

MAX SURFACE ROUGHNESS 125 ☐ ALL SURFACES ☒ MARKED ONLY

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

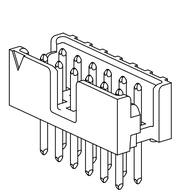
CAGE NUMBER | SIZE D | DRAWING NO. 78-5100-2359-7 | REV. A

MODEL | DET. LISTS ☐ YES ☒ NO | SHT 3 OF 4

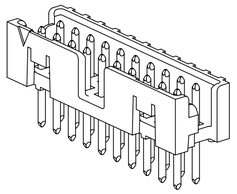
78-5100-2359-7 DRAWING NUMBER A REVISION

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

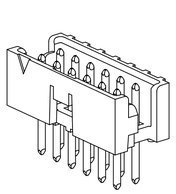
STANDARD LENGTH HEADERS ARE AVAILABLE



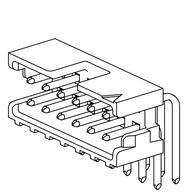
STANDARD LENGTH, POLARIZATION SLOT, VERTICAL HEADER 6-12 POSITIONS ONLY



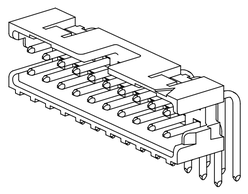
STANDARD LENGTH, POLARIZATION SLOT, DUAL FRICTION LATCHES, VERTICAL HEADER 14-50 POSITIONS



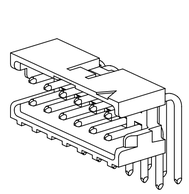
STANDARD LENGTH, SINGLE FRICTION LATCH, VERTICAL HEADER 6-12 POSITIONS



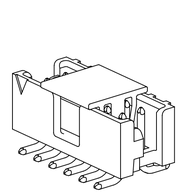
STANDARD LENGTH, POLARIZATION SLOT, RIGHT ANGLE HEADER 6-12 POSITIONS



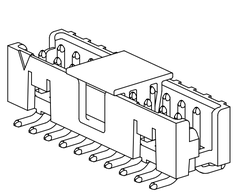
STANDARD LENGTH, POLARIZATION SLOT, DUAL FRICTION LATCHES, RIGHT ANGLE HEADER 14-50 POSITIONS



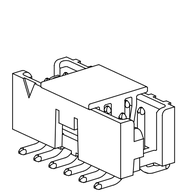
STANDARD LENGTH, SINGLE FRICTION LATCH, RIGHT ANGLE HEADER 6-12 POSITIONS



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



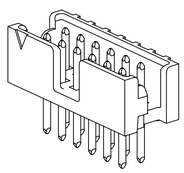
STANDARD LENGTH, POLARIZATION SLOT, DUAL FRICTION LATCHES, SURFACE MOUNT HEADER 14-50 POSITIONS



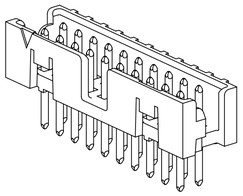
STANDARD LENGTH, SINGLE FRICTION LATCH, SURFACE MOUNT HEADER 6-12 POSITIONS

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

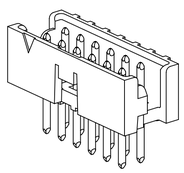
CALL 3M INTERCONNECT SOLUTIONS AT 800-225-5373 FOR AVAILABILITY OF EXTENDED LENGTH HEADERS



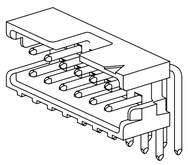
EXTENDED LENGTH, POLARIZATION SLOT, VERTICAL HEADER 6-12 POSITIONS



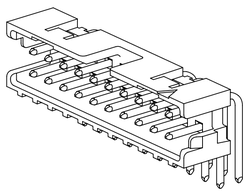
EXTENDED LENGTH, POLARIZATION SLOT, DUAL FRICTION LATCHES, VERTICAL HEADER 14-50 POSITIONS



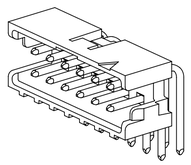
EXTENDED LENGTH, SINGLE FRICTION LATCH, VERTICAL HEADER 6-12 POSITIONS



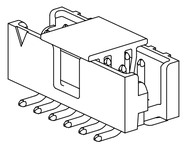
EXTENDED LENGTH, POLARIZATION SLOT, RIGHT ANGLE HEADER 6-12 POSITIONS



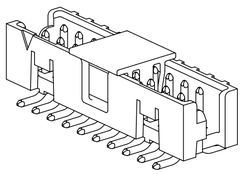
EXTENDED LENGTH, POLARIZATION SLOT, DUAL FRICTION LATCHES, RIGHT ANGLE HEADER 14-50 POSITIONS



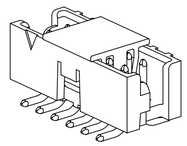
EXTENDED LENGTH, SINGLE FRICTION LATCH, RIGHT ANGLE HEADER 6-12 POSITIONS



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)

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	16.36 [.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]

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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°

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. A

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

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