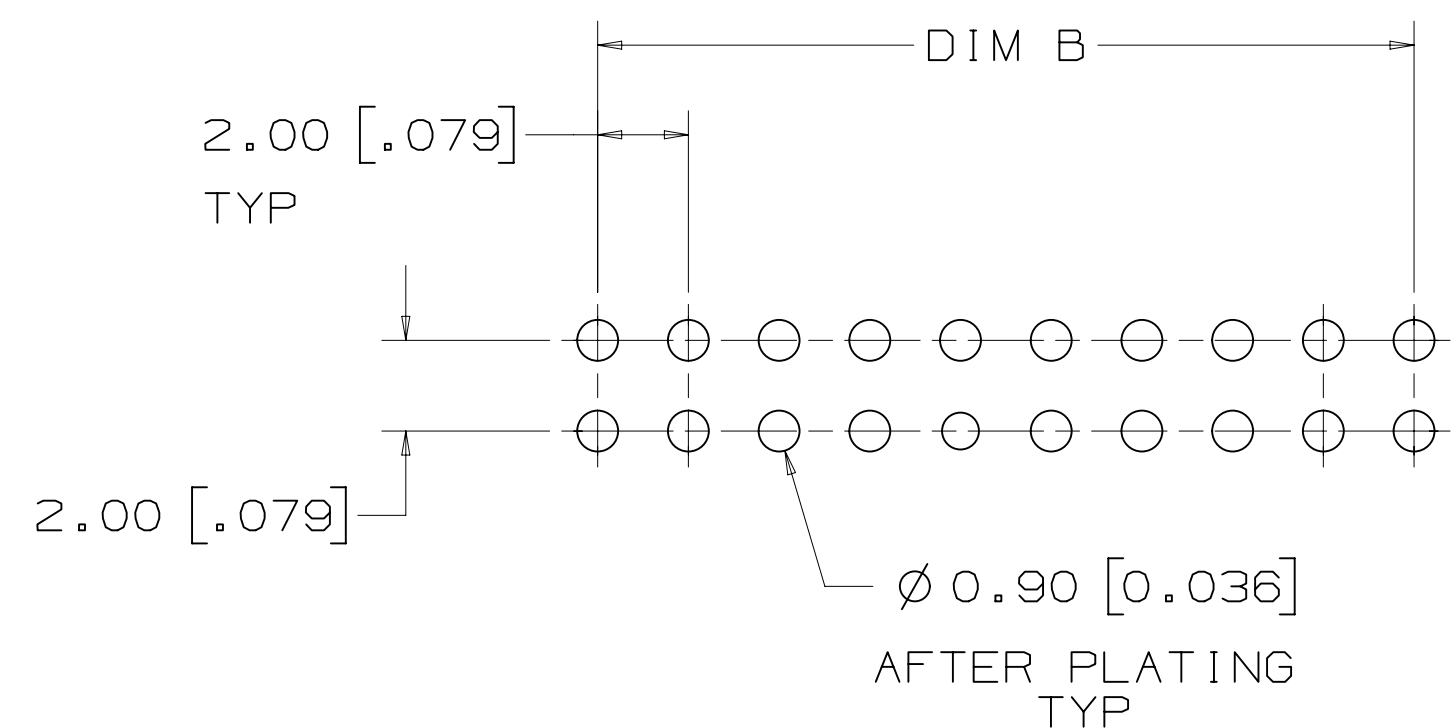
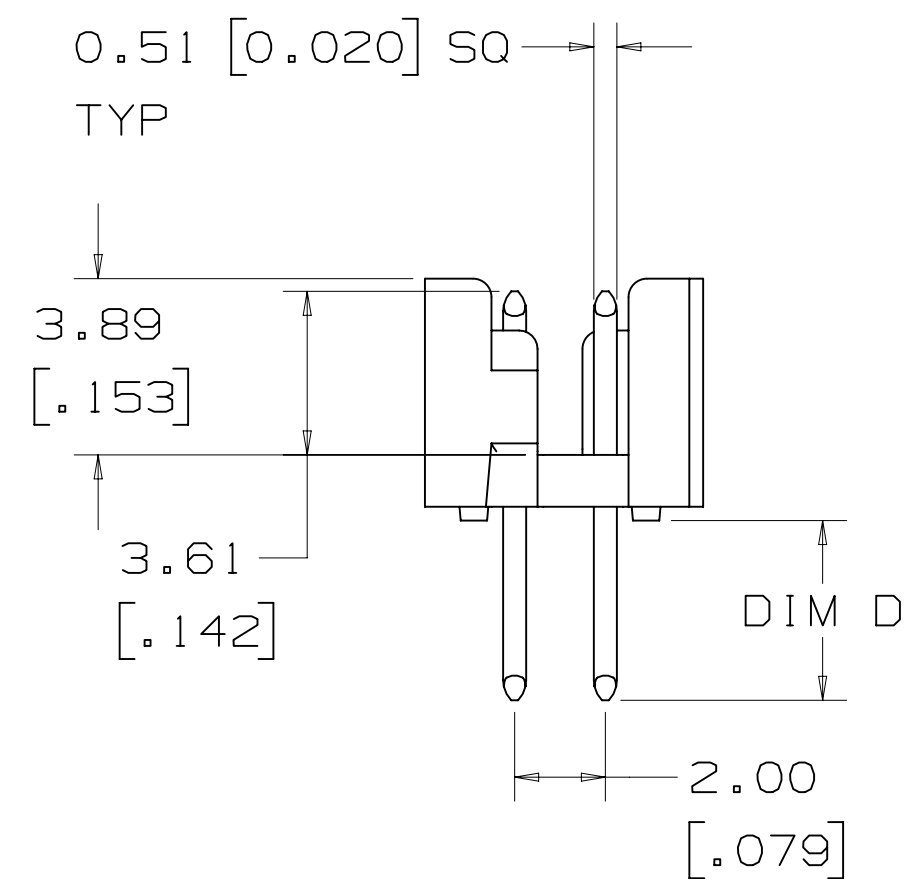
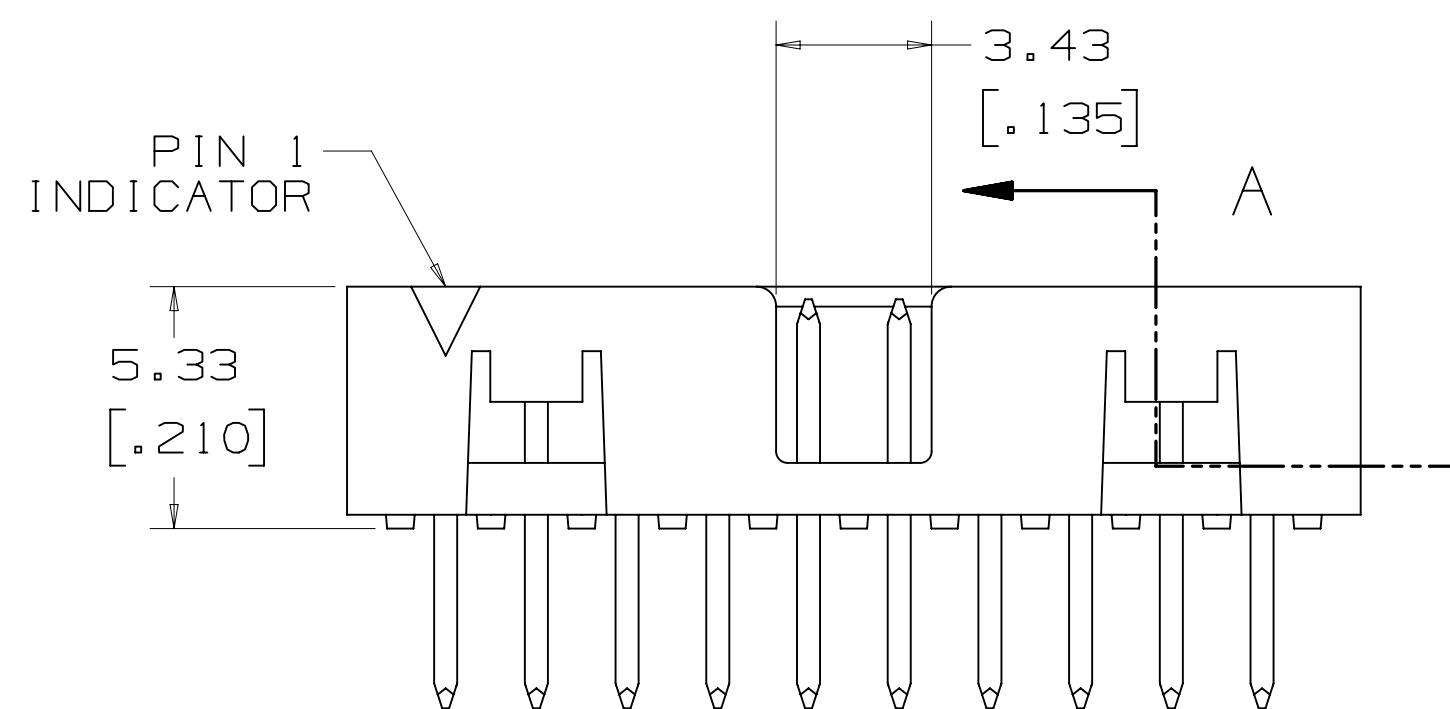
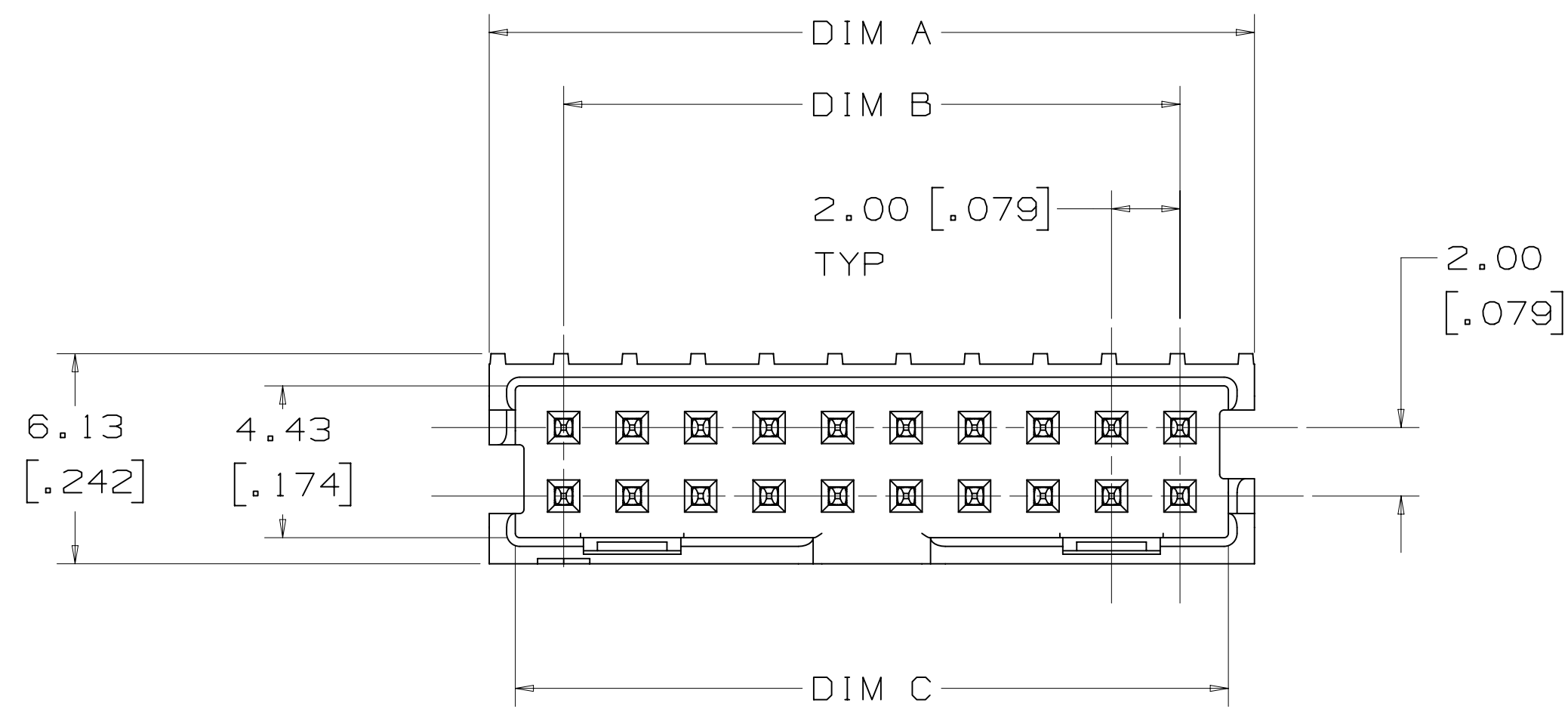
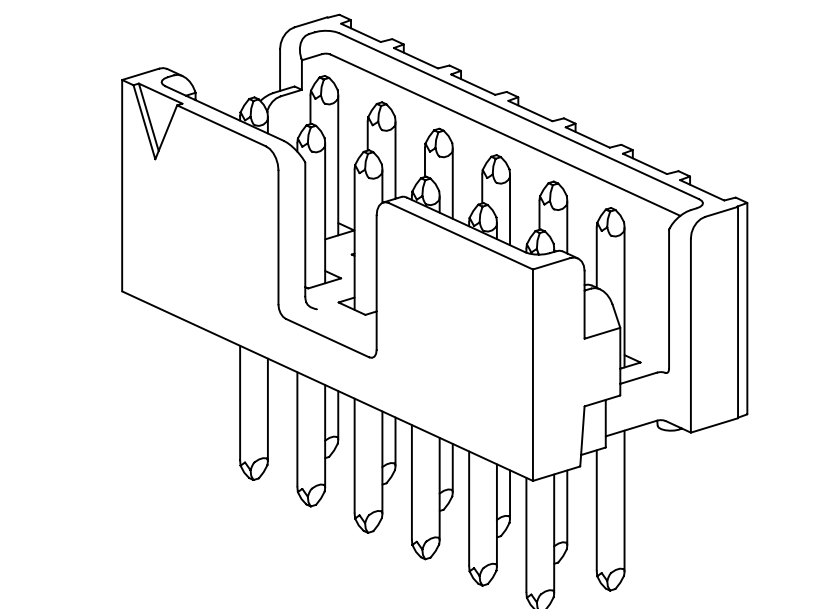
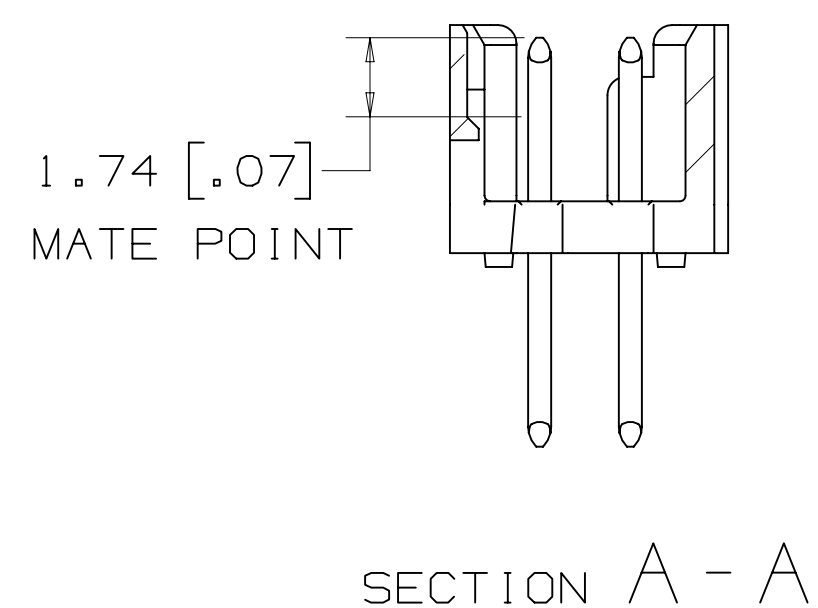


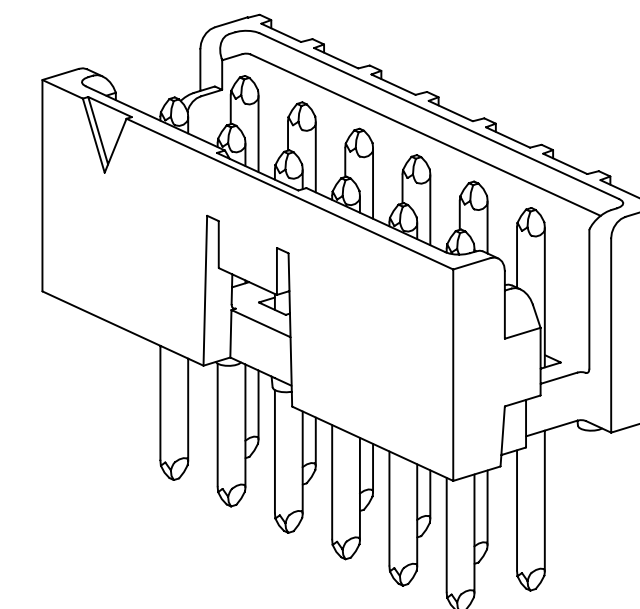
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length [3] and Extended Length [4]



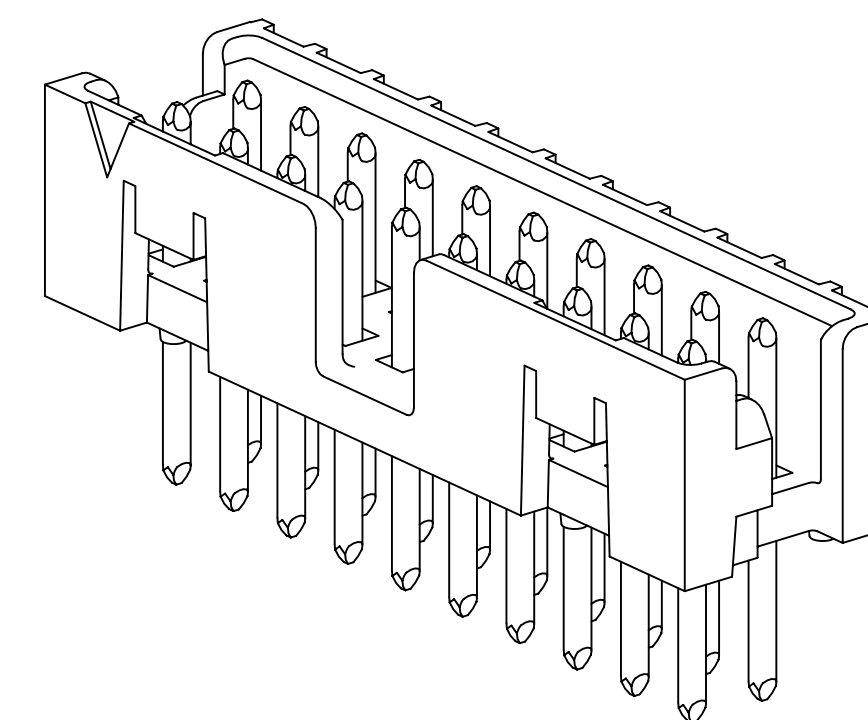
RECOMMENDED PCB HOLE PATTERN
TOLERANCE = 0.05 [.002]



POLARIZATION SLOT
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 2.75 A, 6 LINES ENERGIZED 4.75 A, 1 LINE ENERGIZED
INSULATION RESISTANCE:	>1 X 10 ⁹ 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 TAIL POSITIONS AND
SOLDER TAIL LENGTHS

NOTES

- MATERIAL:
BODY: HIGH TEMPERATURE GLASS FILLED LCP, BLACK UL94V-0
CONTACTS: COPPER ALLOY
- PLATING:
2.03-3.81 μm [80-150 μin] NICKEL UNDERPLATE.
0.38 μm [15 μin] OR 0.76 μm [30 μin] AVG GOLD ON WIPING AREA.
5.08 μm [200 μin] 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

REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
F	52868	MAR 05, 2014 ADD TAPE & REEL, MATE PT, VOLTAGE RATING	SJS	SAN
E	51692	DEC 16, 2013 ADD UL SYMBOLS	SJS	SAN
D	41488	JUN 20, 2012 REVISED CURRENT RATING IN PERFORMANCE TABLE	LDS	SAN
C	39876	APR 18, 2012 REMOVED 32 POS FROM TABLE ON SHT 5	LDS	SAN
B	34080	MAY 18, 2011 ADDED 6.19 DIM ON SHT 2; REVISED & MOVED TABLE TO SHT 5	LDS	SF
A	30741	OCT 28, 2010 INITIAL RELEASE	LDS	SF

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
DATE	DATE	DATE	DATE	DATE	DATE	DATE
APPROVED	APPROVED	APPROVED	APPROVED	APPROVED	APPROVED	APPROVED

METRIC [ENGLISH]

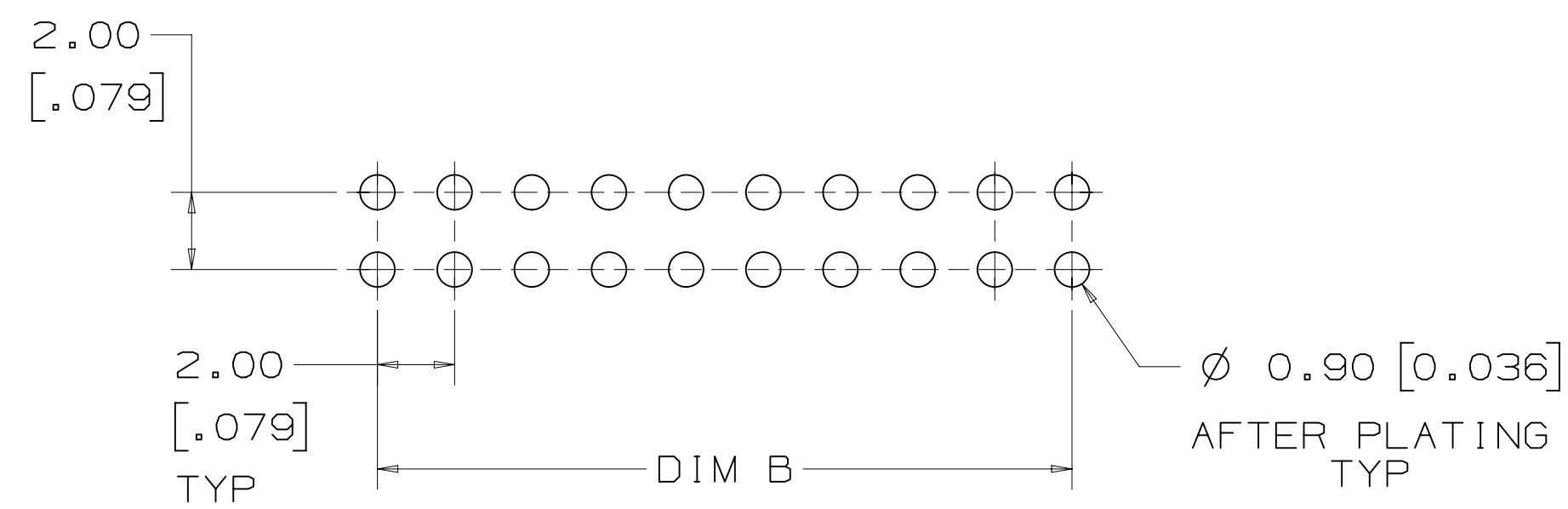
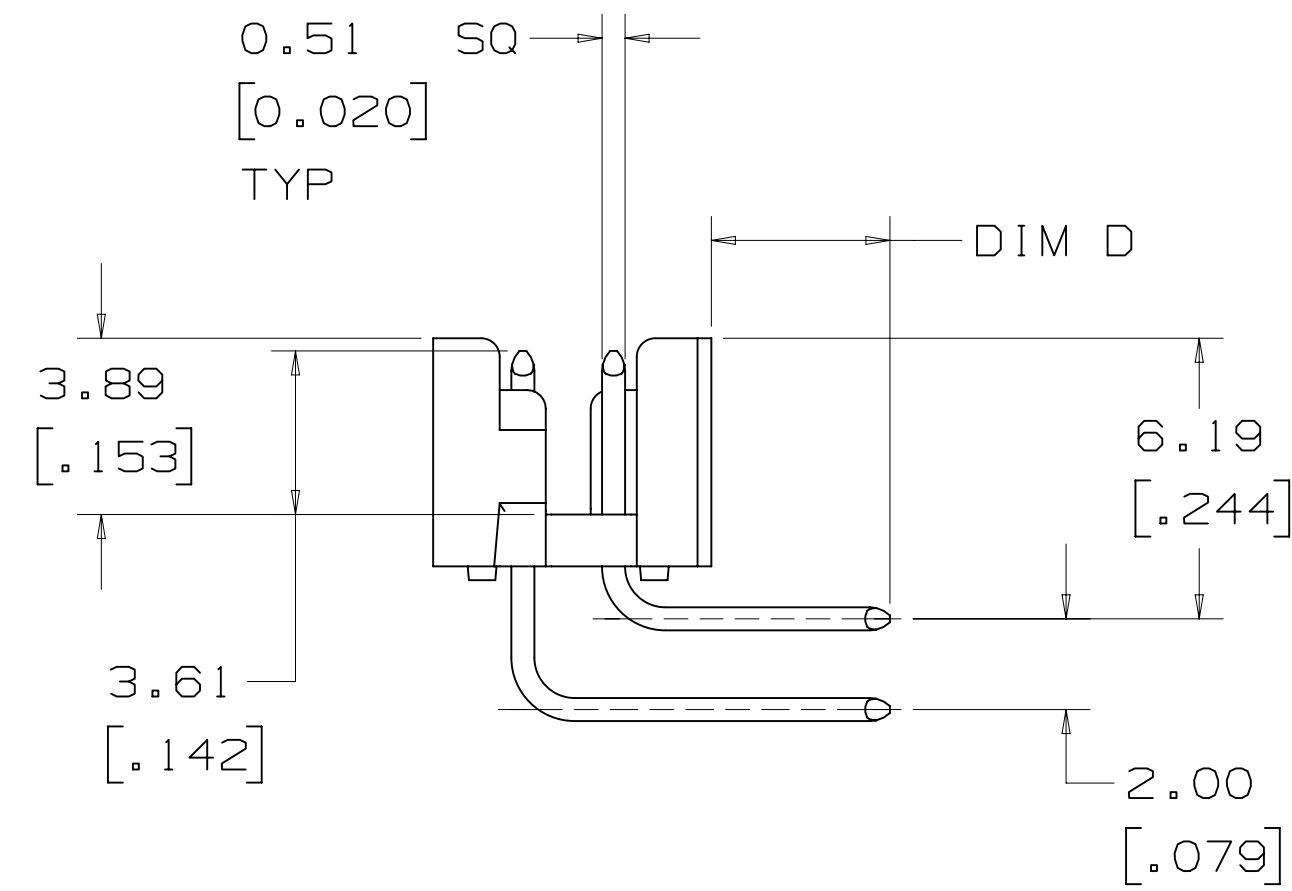
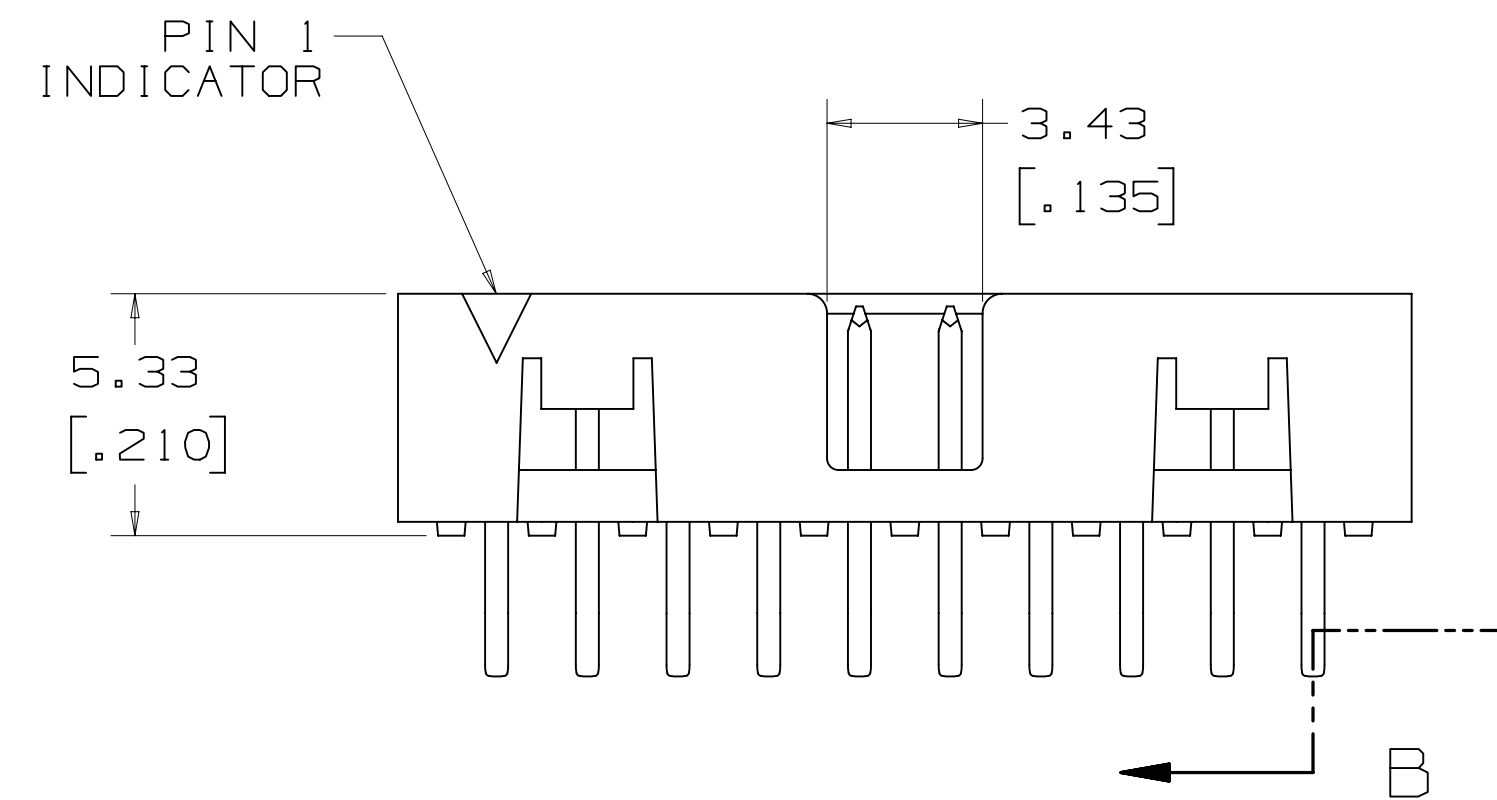
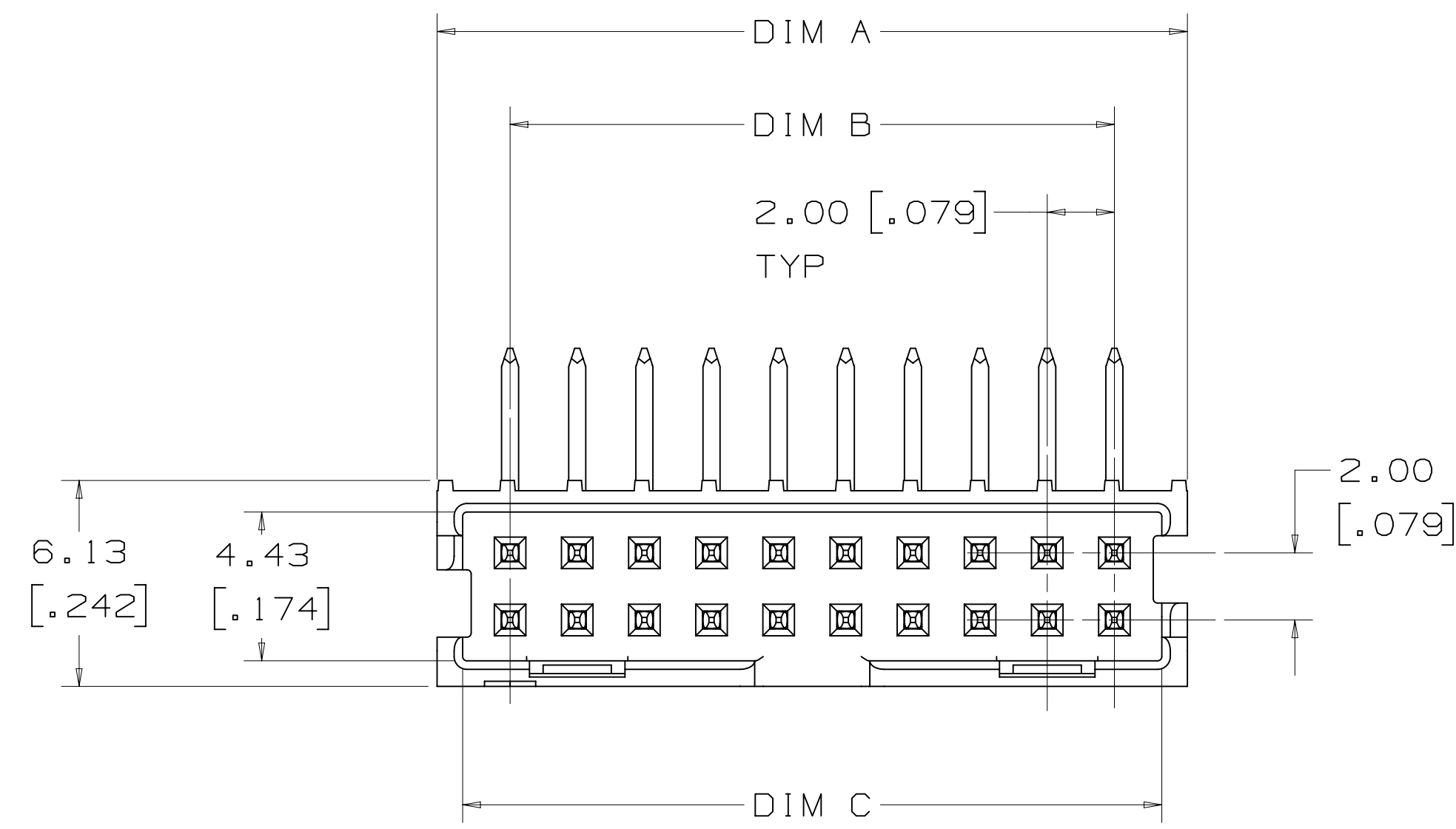


DO NOT SCALE DRAWING	SCALE 6/1	TOLERANCES EXCEPT AS NOTED		INCHES .00 ± .000 ± .0000 ±
INTERPRET PER ASME Y14.5 - 1994		MILLIMETERS 0 ± 0 ± 0 ±		
MAX SURFACE ROUGHNESS	ALL SURFACES	0.00 ± 0.13		
125	MARKED ONLY			
ANGLES ±1°				

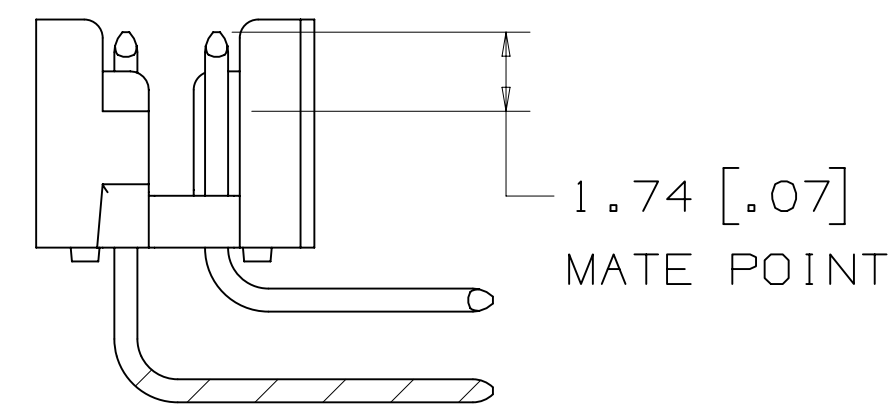
3M Center St. Paul, MN 55144
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TITLE	3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES
CAGE NUMBER	D 78-5100-2359-7
DRAWING NO.	78-5100-2359-7
REV.	F
MODEL	SHT 1 OF 5

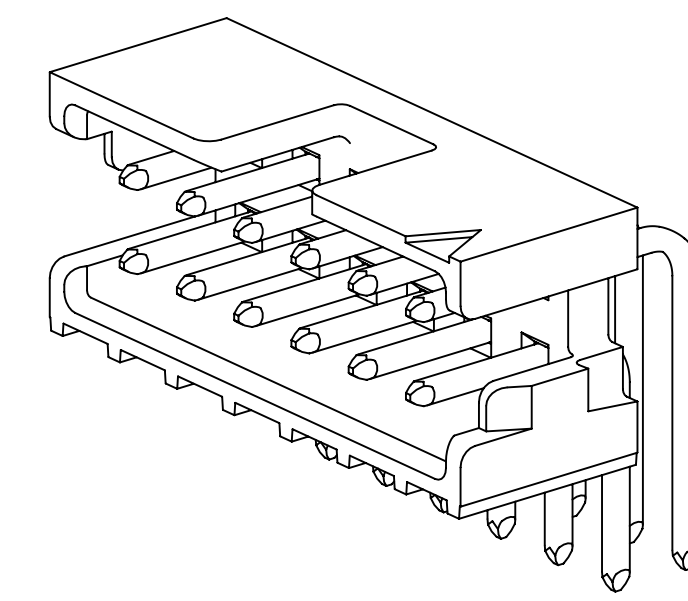
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length 3 and Extended Length 4



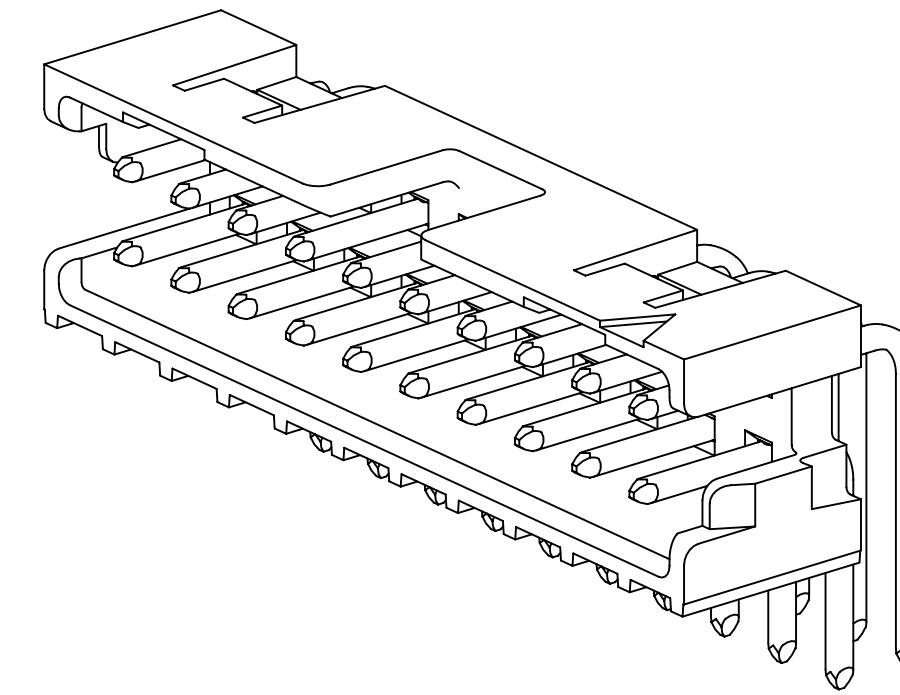
RECOMMENDED PCB HOLE PATTERN
TOLERANCE = ±0.05 [.002]



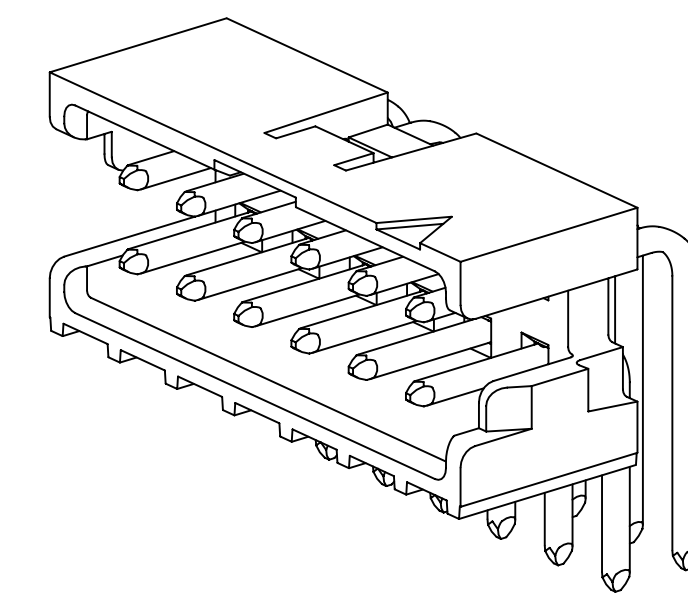
SECTION B-B



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

REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
F	52868	MAR 05, 2014 ADD TAPE & REEL, MATE PT, VOLTAGE RATING	SJS	SAN
E	51692	DEC 16, 2013 ADD UL SYMBOLS	SJS	SAN
D	41488	JUN 20, 2012 REVISED CURRENT RATING IN PERFORMANCE TABLE	LDS	SAN
C	39876	APR 18, 2012 REMOVED 32 POS FROM TABLE ON SHT 5	LDS	SAN
B	34080	MAY 18, 2011 ADDED 6.19 DIM ON SHT 2; REVISED & MOVED TABLE TO SHT 5	LDS	SF
A	30741	OCT 28, 2010 INITIAL RELEASE	LDS	SF

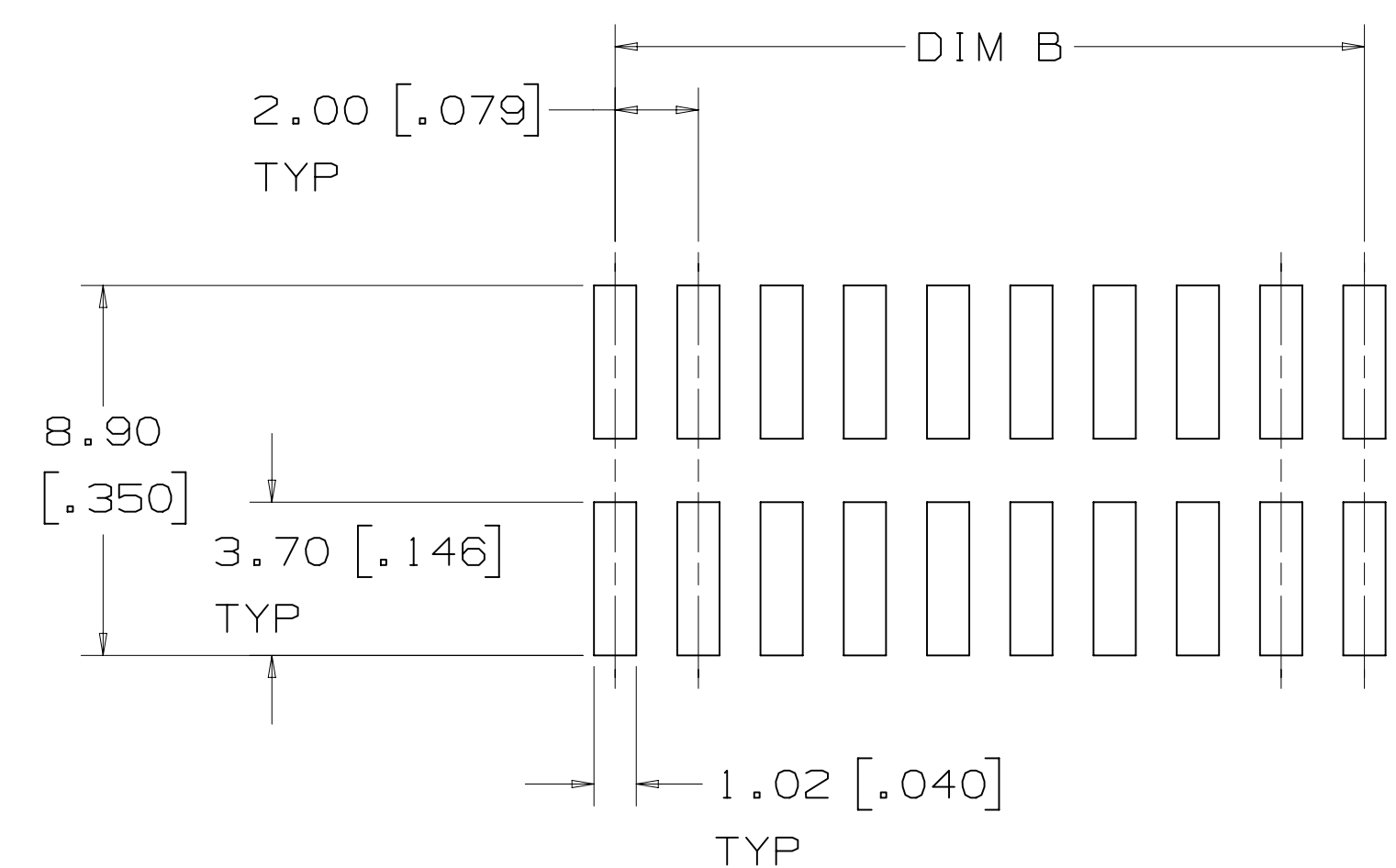
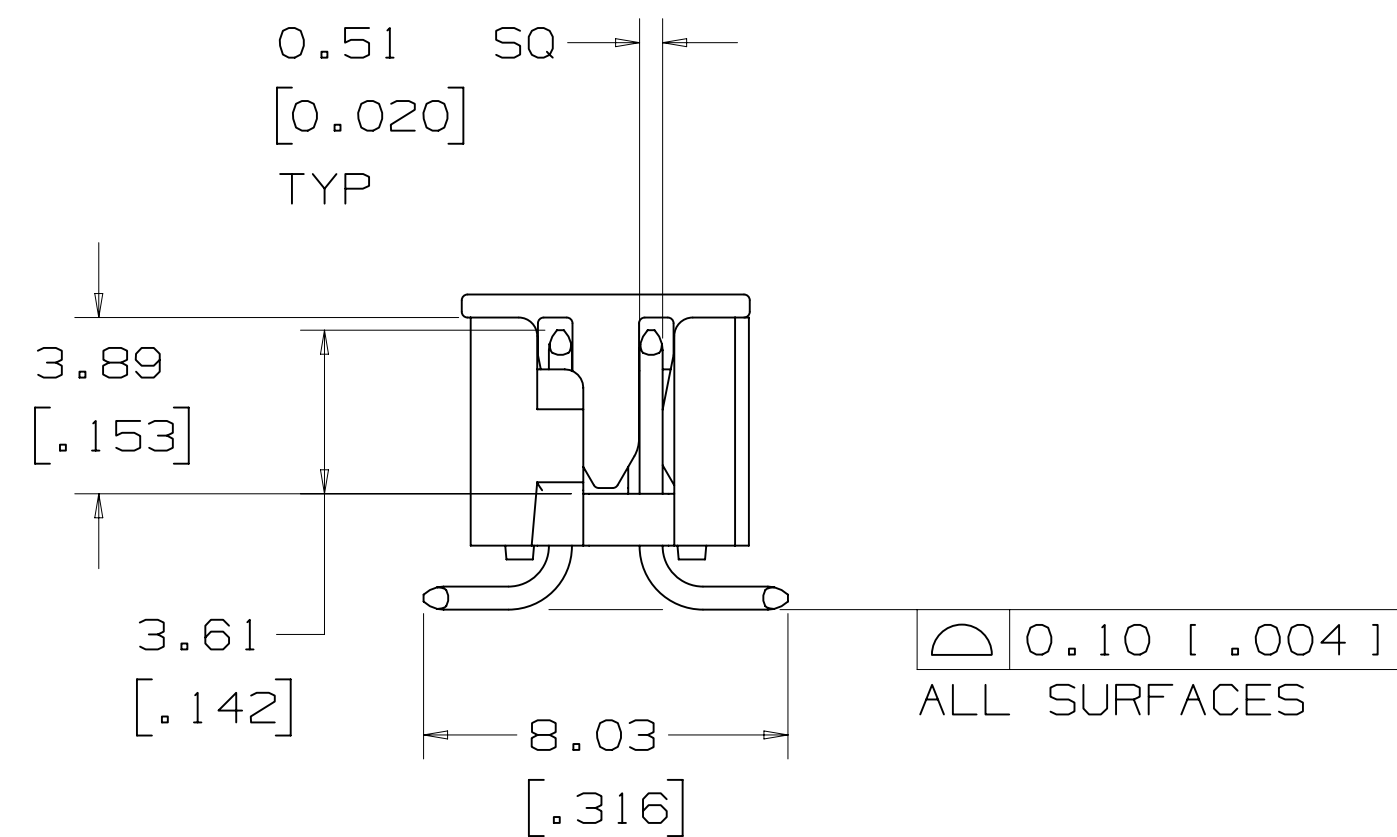
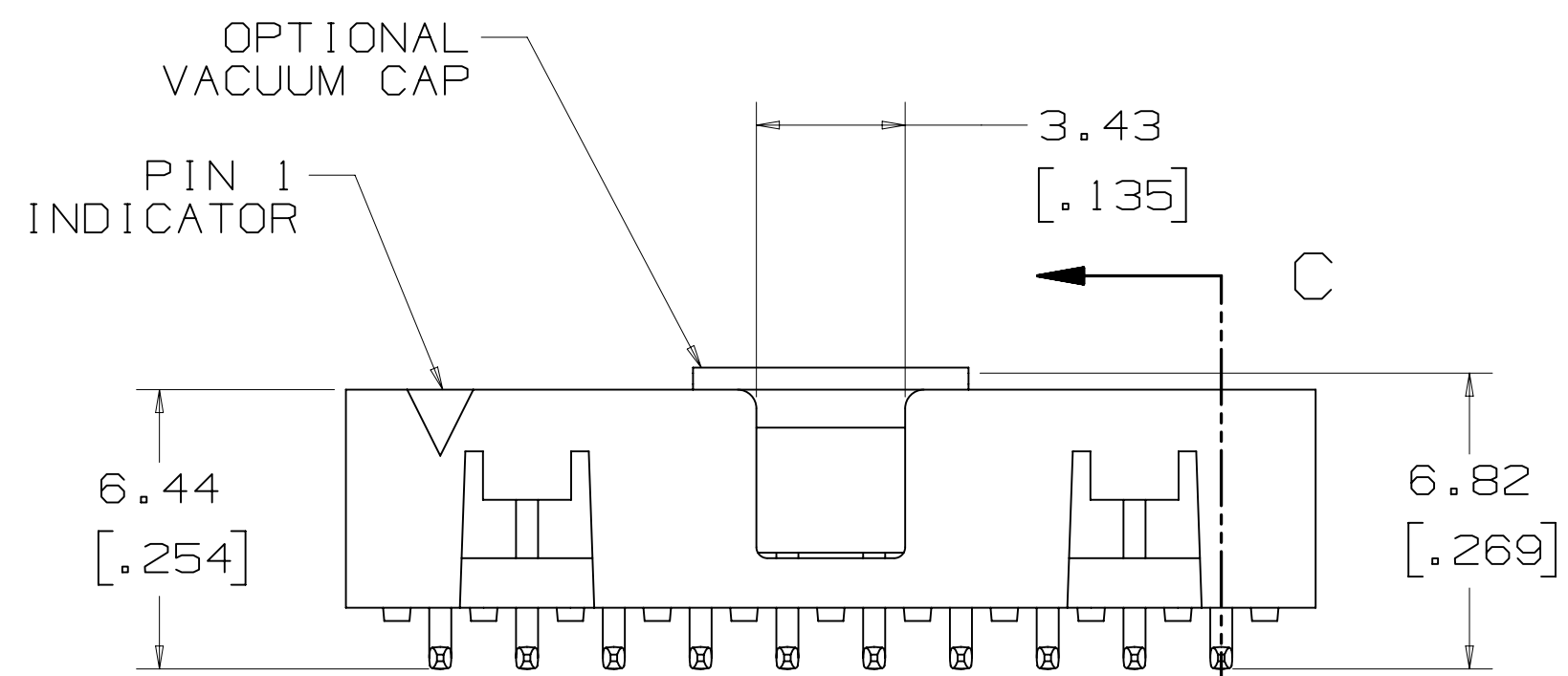
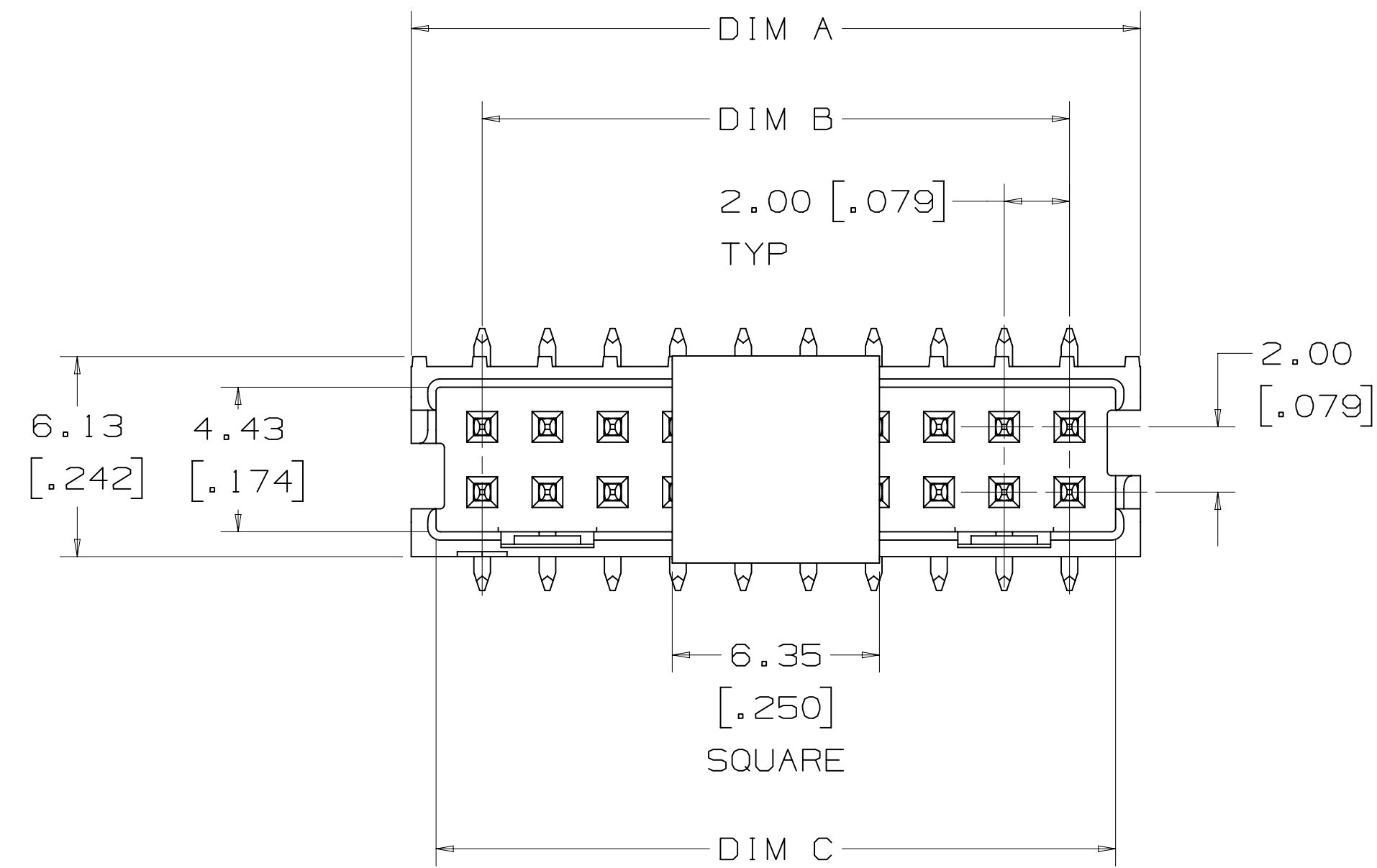
DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
DIVISION	DIVISION CODE	<p>3M Center St. Paul, MN 55144 © 3M COPYRIGHT 2010 This document and the information it contains are 3M property and may not be reproduced or further distributed without 3M permission, or used or disclosed other than for 3M authorized purposes. All rights reserved.</p>				
DO NOT SCALE DRAWING	SCALE 4/1	<p>TOLERANCES EXCEPT AS NOTED INCHES .00 ± .000 ± 2.000 ±</p>				
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 1994	<p>MILLIMETERS 0 ± .00 ± .00 ± 0.13 .000 ±</p>				
MAX SURFACE ROUGHNESS 125	ALL SURFACES MARKED ONLY	<p>ANGLES ±1°</p>				
<p>TITLE 3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES</p>		CAGE NUMBER	SIZE	DRAWING NO.	REV.	
		D		78-5100-2359-7	F	
		MODEL		DET	ISTS	YES NO SHT 2 OF 5

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

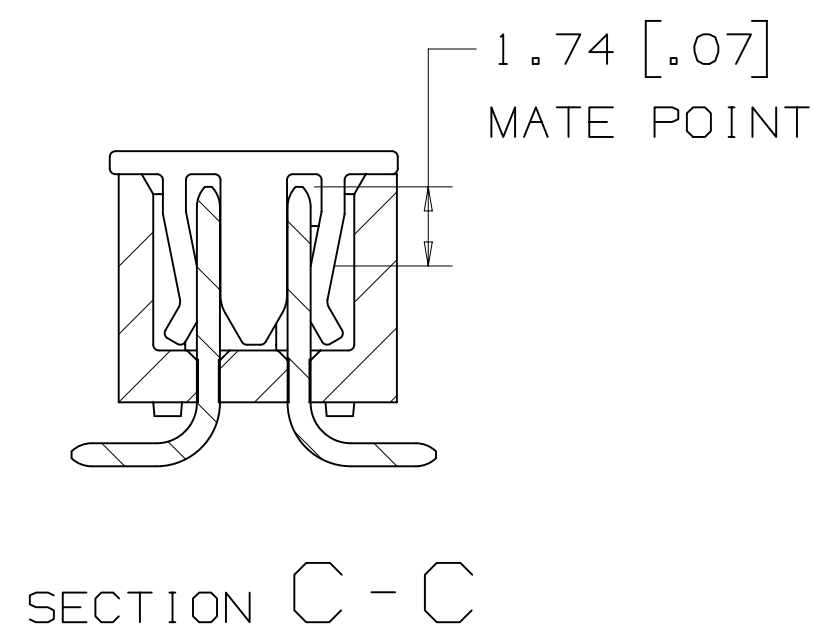
METRIC (ENGLISH)

78-5100-2359-7

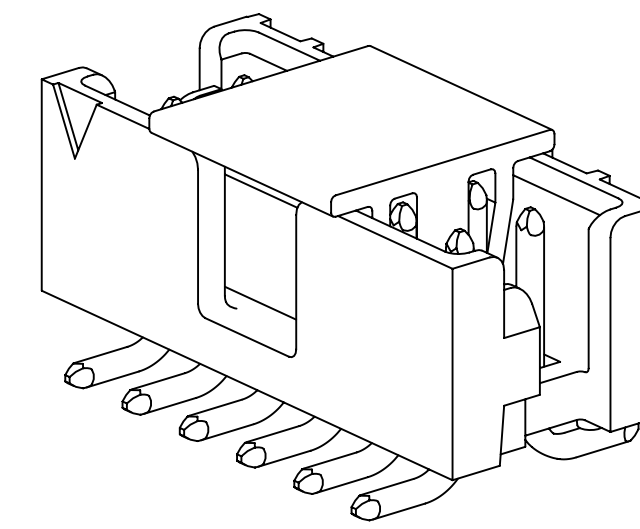
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length [3] and Extended Length [4]



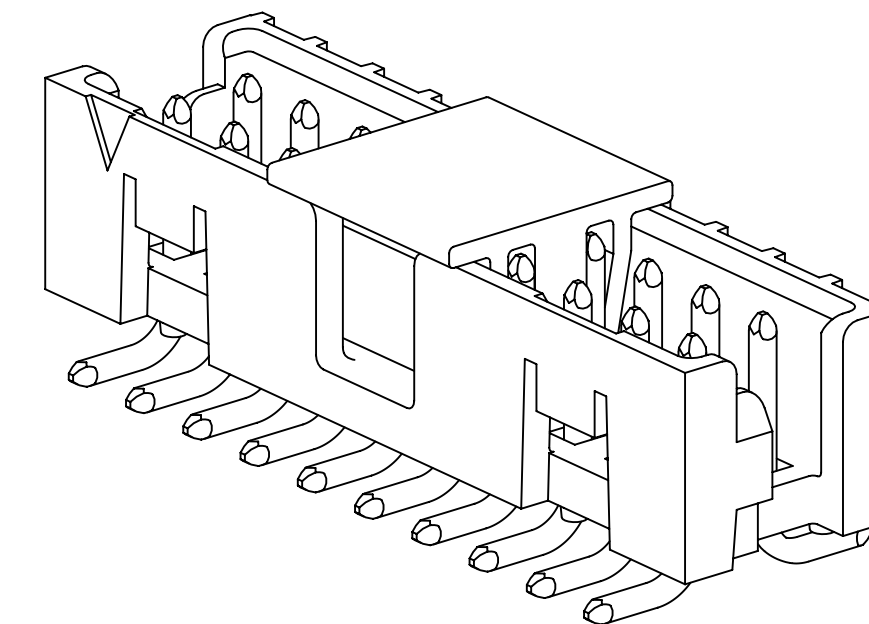
RECOMMENDED PCB PAD PATTERN
TOLERANCE = ±0.08 [.003]



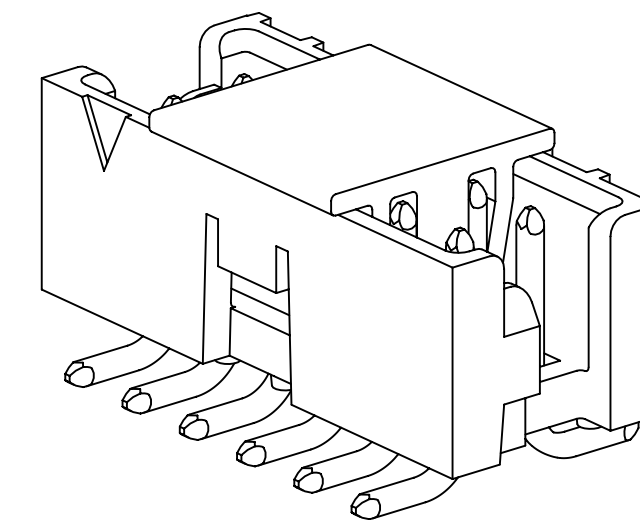
REFERENCE TABLE ON SHEET 5
FOR AVAILABLE POSITIONS



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

REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
F	52868	MAR 05, 2014 ADD TAPE & REEL, MATE PT, VOLTAGE RATING	SJS	SAN
E	51692	DEC 16, 2013 ADD UL SYMBOLS	SJS	SAN
D	41488	JUN 20, 2012 REVISED CURRENT RATING IN PERFORMANCE TABLE	LDS	SAN
C	39876	APR 18, 2012 REMOVED 32 POS FROM TABLE ON SHT 5	LDS	SAN
B	34080	MAY 18, 2011 ADDED 6.19 DIM ON SHT 2; REVISED & MOVED TABLE TO SHT 5	LDS	SF
A	30741	OCT 28, 2010 INITIAL RELEASE	LDS	SF

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
DIVISION		DIVISION CODE		DATE		
DO NOT SCALE DRAWING		SCALE	4	TOLERANCES EXCEPT AS NOTED		
THIRD ANGLE PROJECTION		INCHES		MILLIMETERS		
INTERPRET PER ASME Y14.5 - 1994		0 ±		0 ±		
MAX SURFACE ROUGHNESS		.00 ± 0.13		.00 ±		
125		ALL SURFACES		.000 ±		
X MARKED ONLY		ANGLES ±1°				
CAGE NUMBER		SIZE	DRAWING NO.	REV.		
D			78-5100-2359-7	F		
MODEL		SHT		3 OF 5		

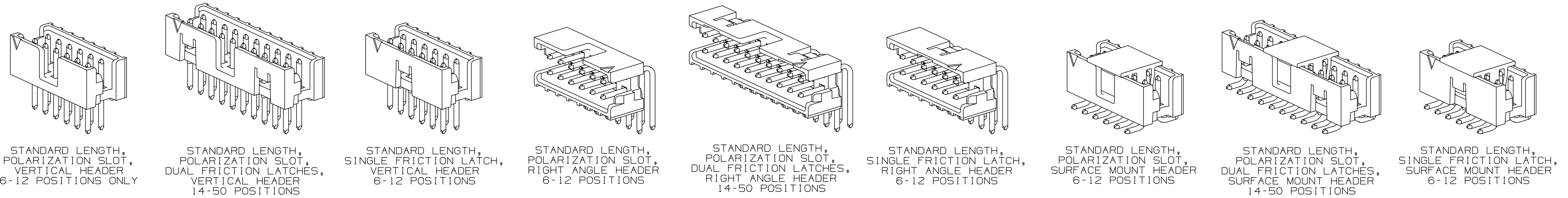
METRIC (ENGLISH)

78-5100-2359-7
DRAWING NUMBER

A

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

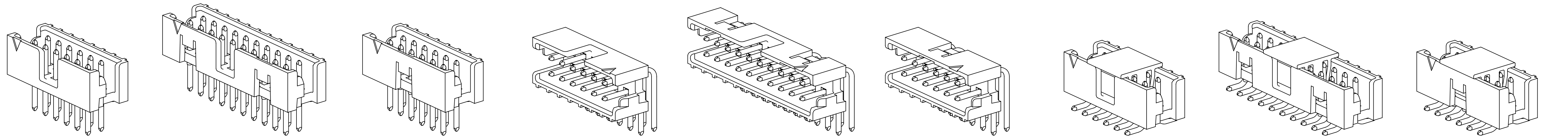
STANDARD LENGTH, POLARIZATION SLOT, SURFACE MOUNT HEADER 6-12 POSITIONS

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

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)

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)

TIER 2 - BETTER
 1592XX-XXXX

TIER 2 = BETTER 0.38 μm [15 μin] GOLD

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)

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)

METRIC (ENGLISH)

REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
F	52868	MAR 05, 2014 ADD TAPE & REEL, MATE PT, VOLTAGE RATING	SJS	SAN
E	51692	DEC 16, 2013 ADD UL SYMBOLS	SJS	SAN
D	41488	JUN 20, 2012 REVISED CURRENT RATING IN PERFORMANCE TABLE	LDS	SAN
C	39876	APR 18, 2012 REMOVED 32 POS FROM TABLE ON SHT 5	LDS	SAN
B	34080	MAY 18, 2011 ADDED 6.19 DIM ON SHT 2; REVISED & MOVED TABLE TO SHT 5	LDS	SF
A	30741	OCT 28, 2010 INITIAL RELEASE	LDS	SF

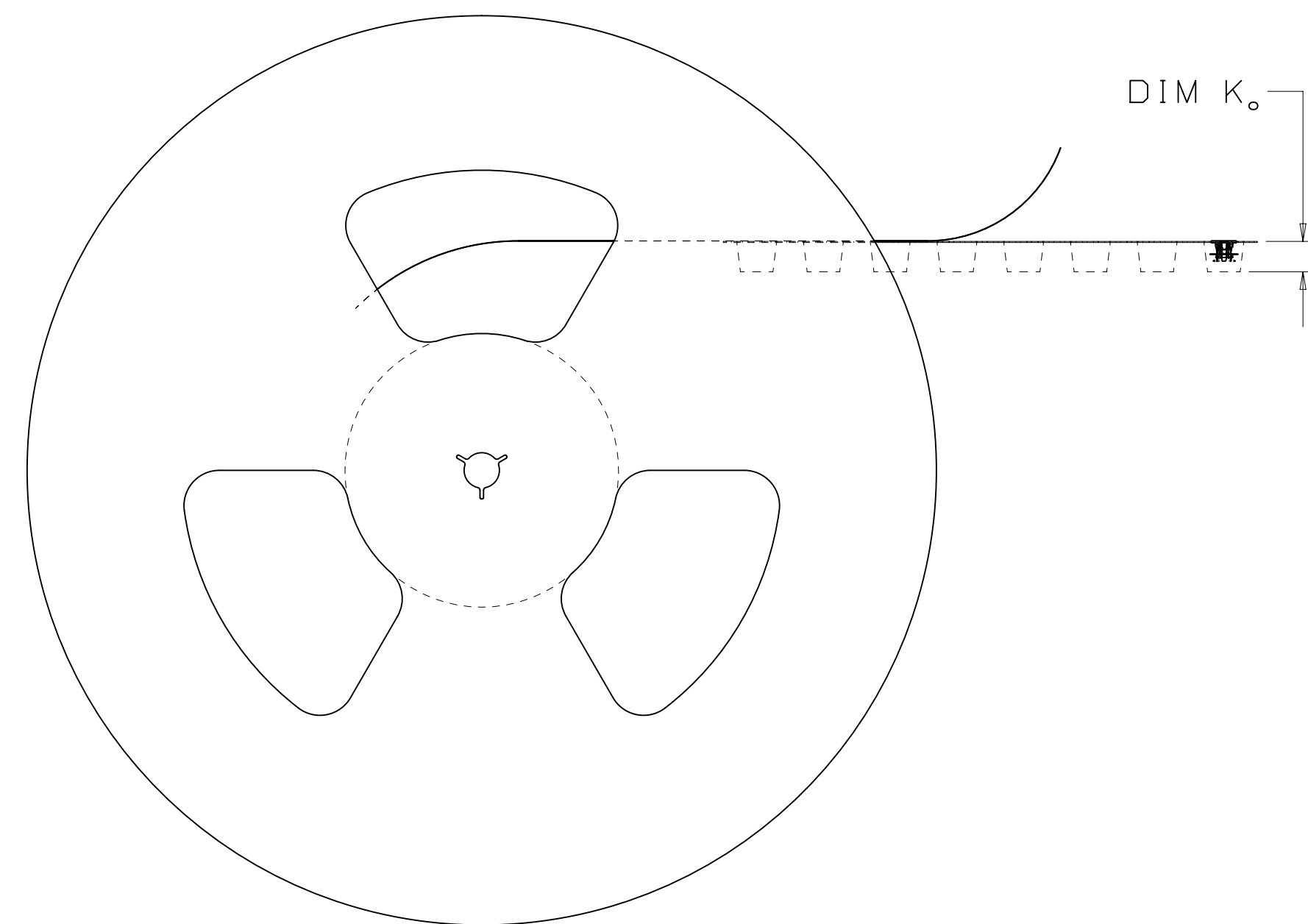
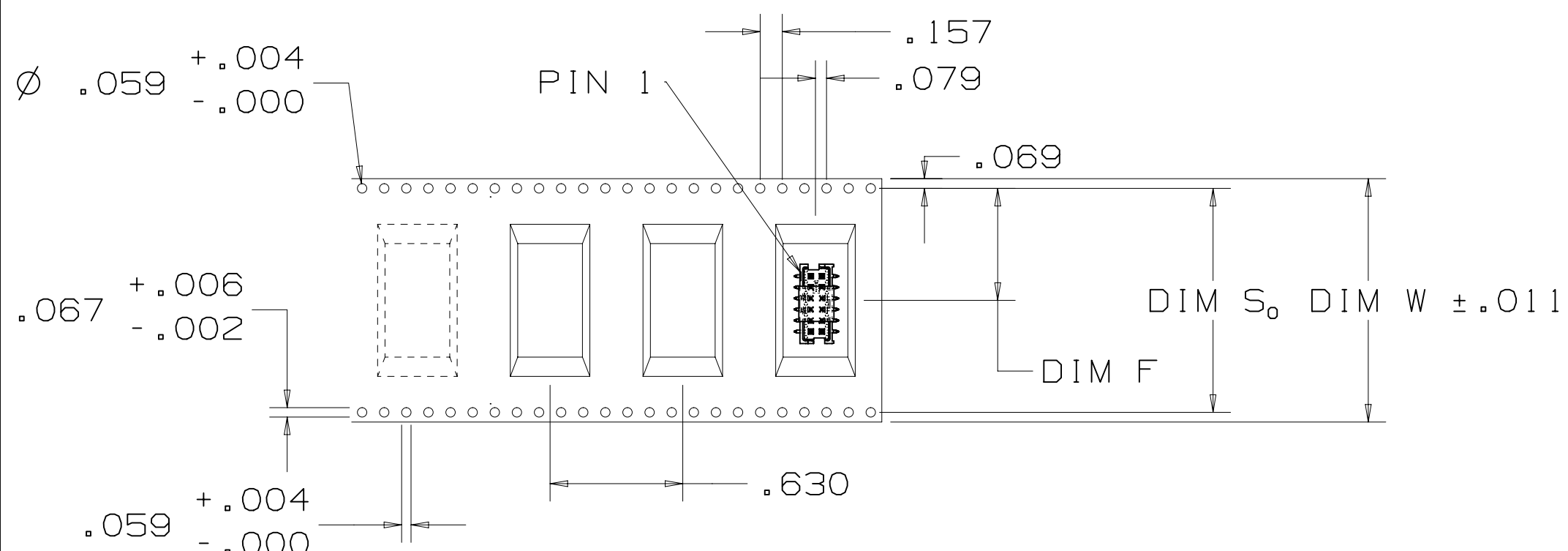
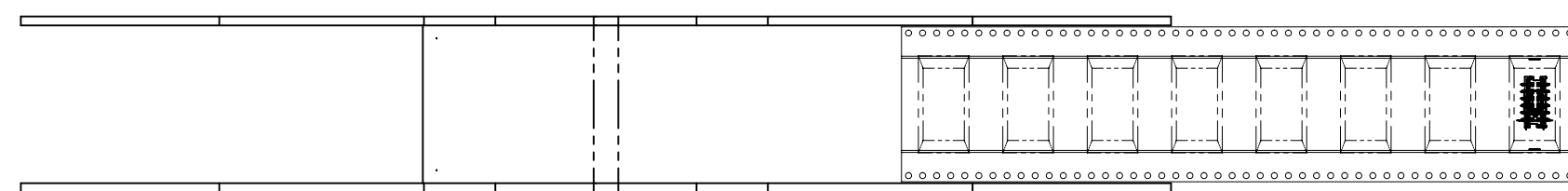
DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
		DRFT	L. SCHMIDT	DATE JUL 29, 2010	DATE	
		CHKD		DATE	DATE	
		APPR	S FELDMAN	DATE AUG 09, 2010		
DIVISION		DIVISION CODE				
DO NOT SCALE DRAWING	SCALE 4 1	TOLERANCES EXCEPT AS NOTED				
THIRD ANGLE PROJECTION		INCHES .00 ± .000 ± 2000 ±				
INTERPRET PER ASME Y14.5 - 1994		MILLIMETERS 0 ± .00 ± .00 ± 0.13 .000 ±				
MAX SURFACE ROUGHNESS 125		ALL SURFACES <input type="checkbox"/> ALL SURFACES <input checked="" type="checkbox"/> MARKED ONLY				
ANGLES ±1°						
CAGE NUMBER D 78-5100-2359-7		TITLE 3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES				
MODEL		REV. NUMBER F				
		SHT 4 OF 5				

78-5100-2359-7
DRAWING NUMBER
REVISION

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

NUMBER OF POSITIONS	SHROUDED BOX HEADER						
	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]

NUMBER OF POSITIONS	DIM F +/- 0.10	DIM K ₀ +/- 0.10	DIM S ₀ +/- 0.10	DIM W +/- 0.30
6	14.20 (.559)	7.46 (.294)	28.40 (1.118)	32 (1.26)
8	20.20 (.795)	7.46 (.294)	40.40 (1.591)	44 (1.73)
10	14.20 (.559)	7.46 (.294)	28.40 (1.118)	32 (1.26)
12	20.20 (.795)	7.46 (.294)	40.40 (1.591)	44 (1.73)
14	14.20 (.559)	7.46 (.294)	28.40 (1.118)	32 (1.26)
16	20.20 (.795)	7.46 (.294)	40.40 (1.591)	44 (1.73)
20	20.20 (.795)	7.46 (.294)	40.40 (1.591)	44 (1.73)
22	26.20 (1.031)	7.46 (.294)	52.40 (2.063)	56 (2.20)
24	20.20 (.795)	7.46 (.294)	40.40 (1.591)	44 (1.73)
26	26.20 (1.031)	7.46 (.294)	52.40 (2.063)	56 (2.20)
30	26.20 (1.031)	7.46 (.294)	52.40 (2.063)	56 (2.20)
34	26.20 (1.031)	7.46 (.294)	52.40 (2.063)	56 (2.20)
40	34.20 (1.346)	7.46 (.294)	68.40 (2.693)	72 (2.83)
44	34.20 (1.346)	7.46 (.294)	68.40 (2.693)	72 (2.83)
50	34.20 (1.346)	7.46 (.294)	68.40 (2.693)	72 (2.83)



METRIC [ENGLISH]

REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
F	52868	MAR 05, 2014 ADD TAPE & REEL, MATE PT, VOLTAGE RATING	SJS	SAN
E	51692	DEC 16, 2013 ADD UL SYMBOLS	SJS	SAN
D	41488	JUN 20, 2012 REVISED CURRENT RATING IN PERFORMANCE TABLE	LDS	SAN
C	39876	APR 18, 2012 REMOVED 32 POS FROM TABLE ON SHT 5	LDS	SAN
B	34080	MAY 18, 2011 ADDED 6.19 DIM ON SHT 2; REVISED & MOVED TABLE TO SHT 5	LDS	SF
A	30741	OCT 28, 2010 INITIAL RELEASE	LDS	SF

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
SCALE	SCALE	© 3M COPYRIGHT 2010 This document and the information it contains are 3M property and may not be reproduced or further distributed without 3M permission, or used or disclosed other than for 3M authorized purposes. All rights reserved.				
DO NOT SCALE DRAWING	SCALE 1/1	TOLERANCES EXCEPT AS NOTED INCHES .00 ± .000 ± .0000 ±				
THIRD ANGLE PROJECTION		MILLIMETERS 0 ± .00 ± .00 ± 0.13 .000 ±				
INTERPRET PER ASME Y14.5 - 1994		MAX SURFACE ROUGHNESS ALL SURFACES MARKED ONLY				
TITLES 3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES		CAGE NUMBER D78-5100-2359-7		DRAWING NO. 78-5100-2359-7		REV. F
MODEL 125		SHT 5 OF 5		YES NO		

78-5100-2359-7
DRAWING NUMBER

A