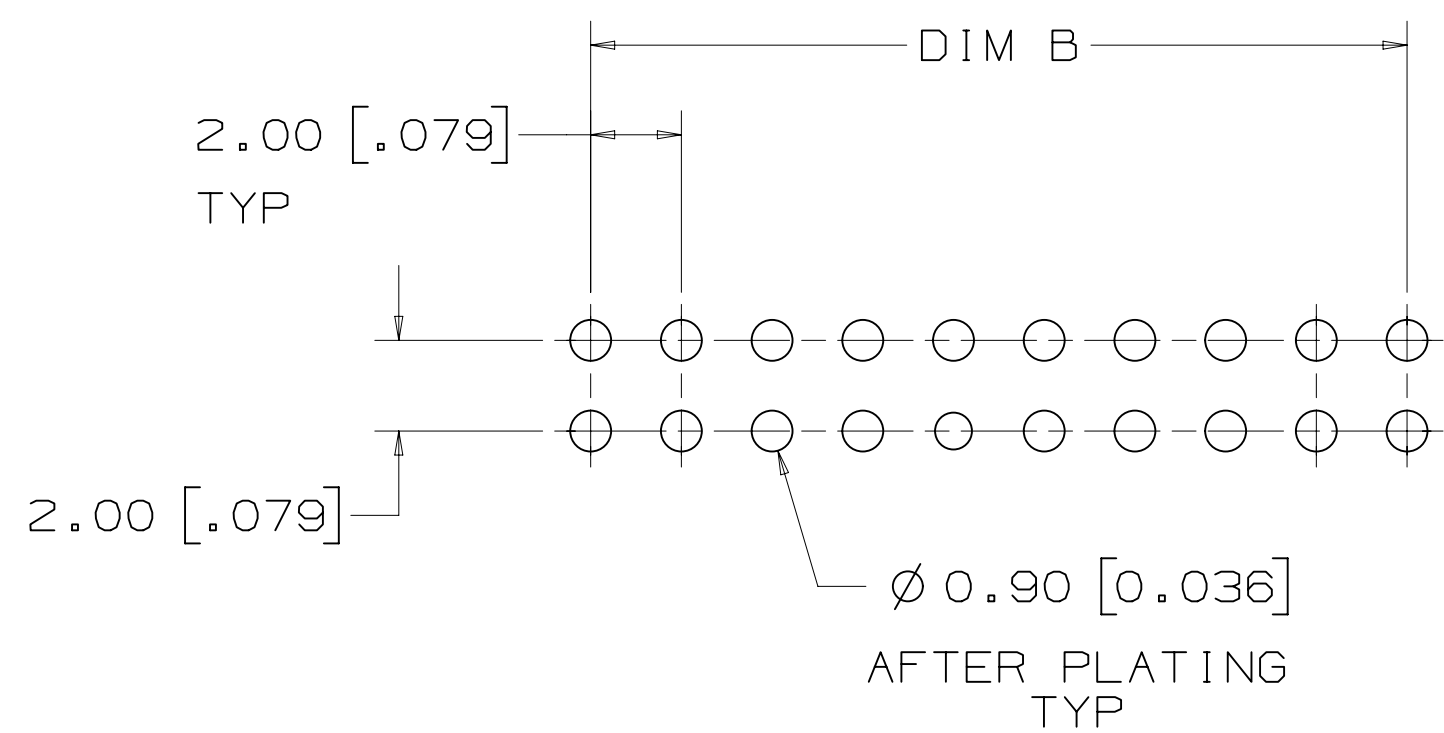
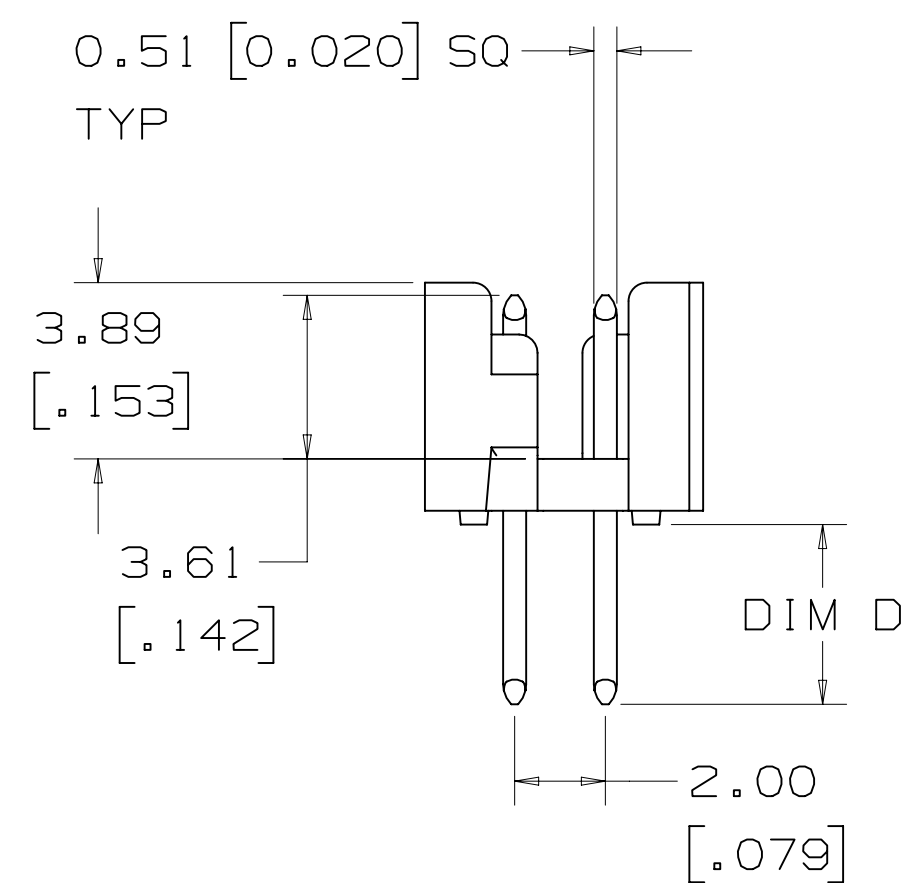
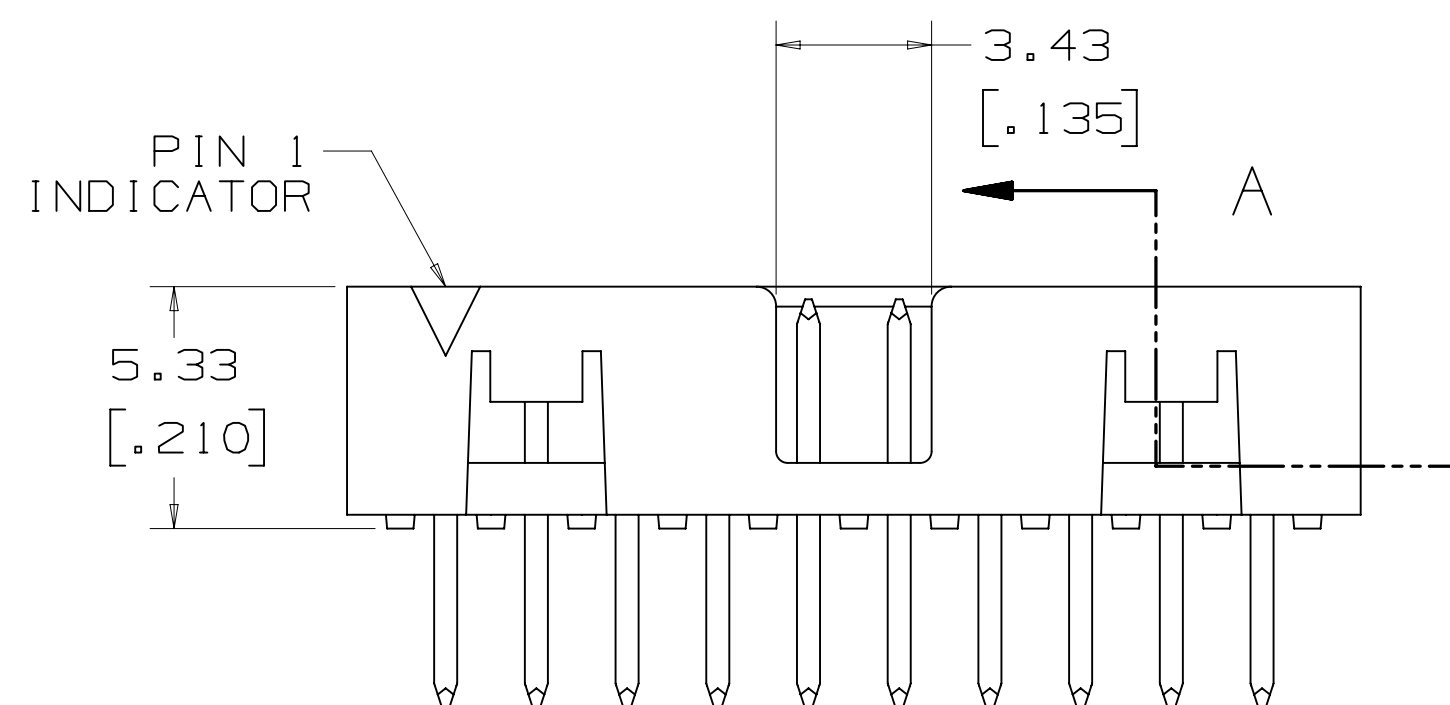
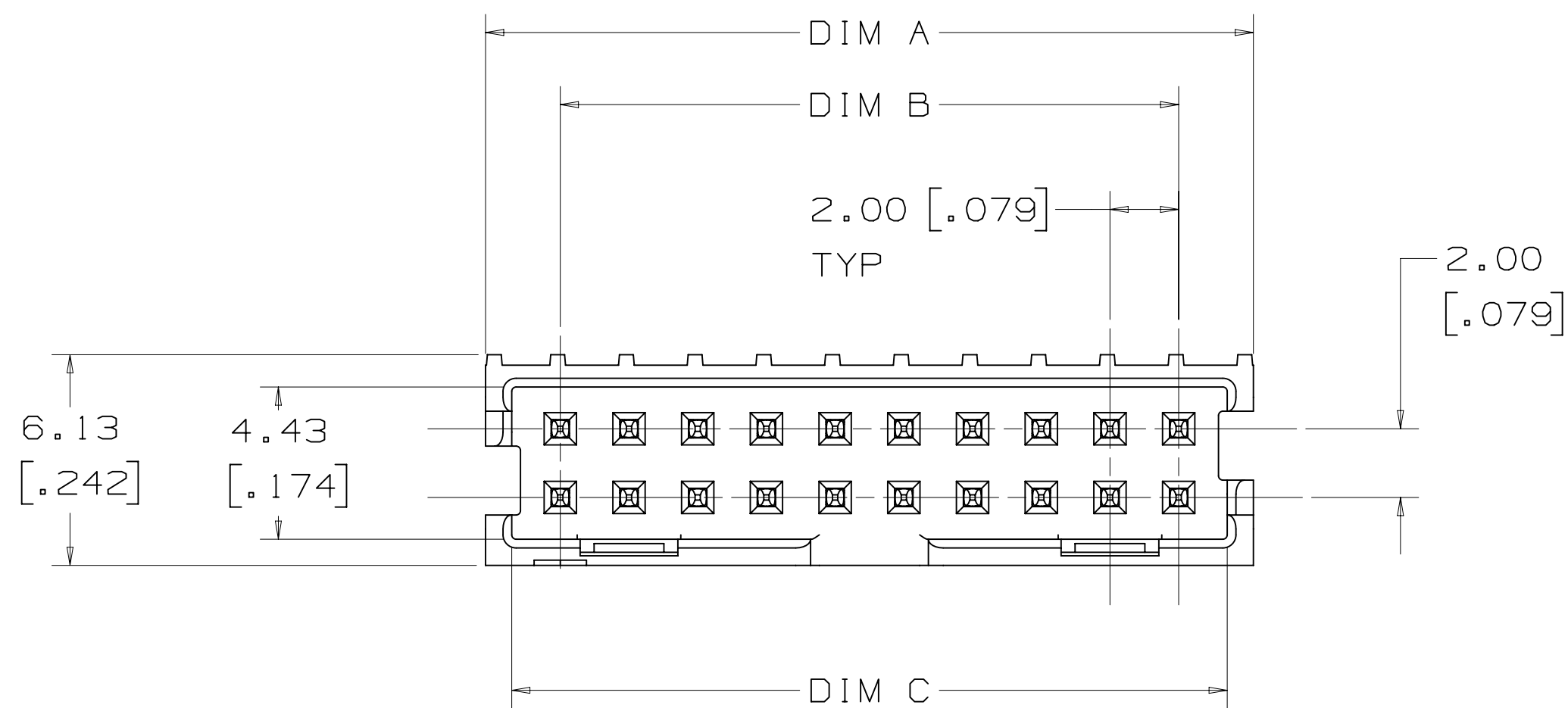
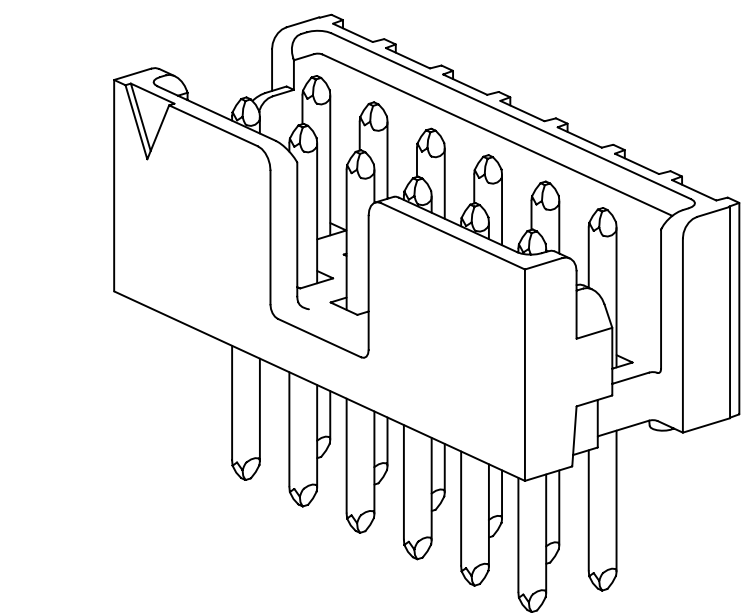
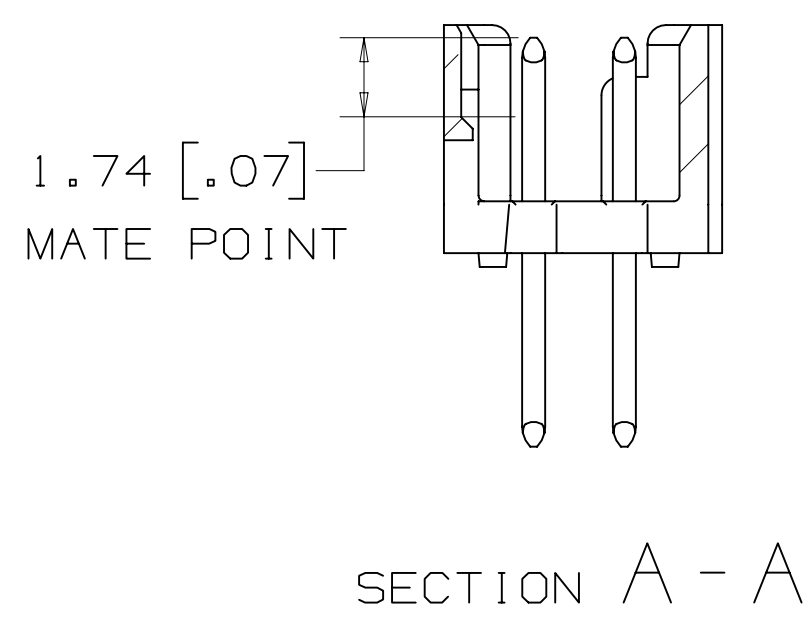


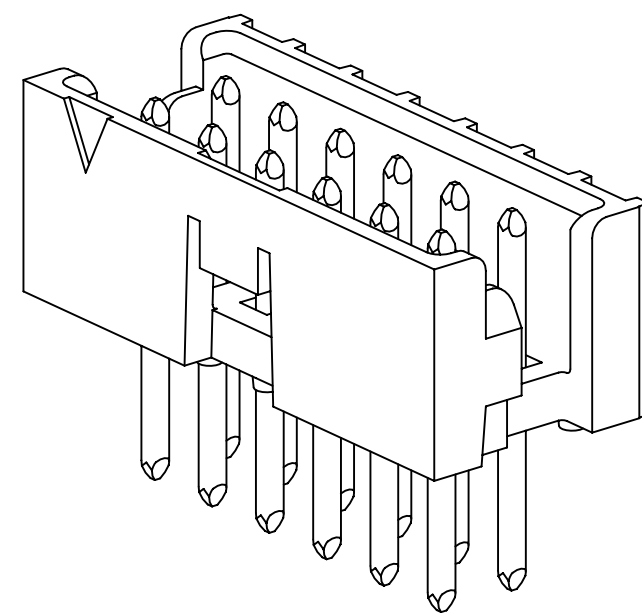
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length and Extended Length



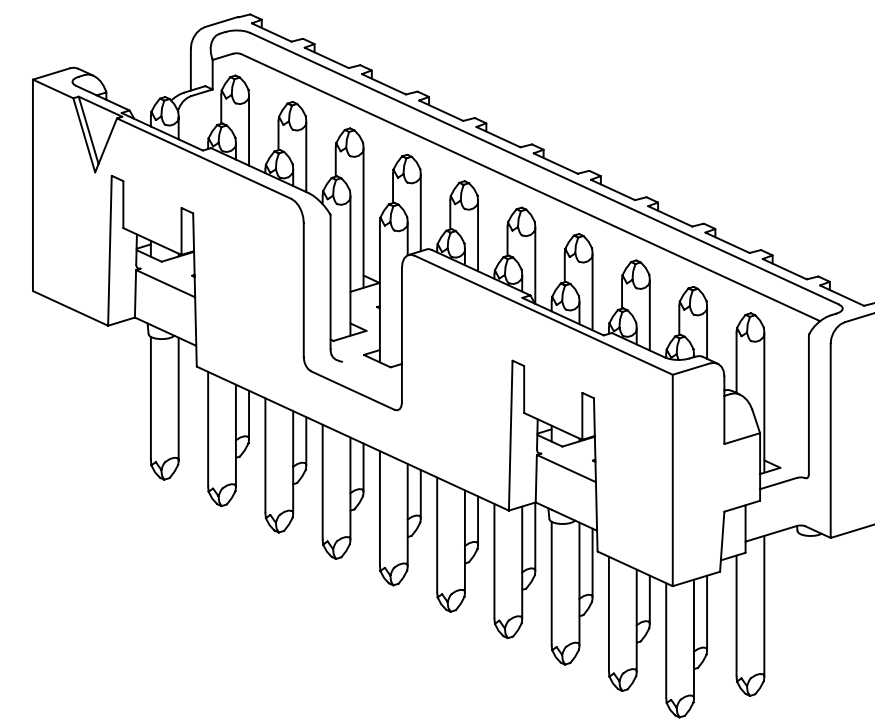
RECOMMENDED PCB HOLE PATTERN
TOLERANCE = 0.05 [.002]



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



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



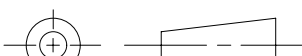
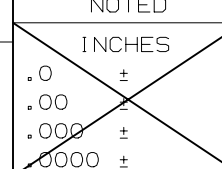
POLARIZATION SLOT AND
DUAL FRICTION LATCHES
THRU-HOLE VERTICAL HEADER
14-50 POSITIONS

PERFORMANCE	
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 VAC _{rms} 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

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 [30 μin] 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.
8	PACKAGING: VERTICAL THRU: TRAY RIGHT ANGLE: TRAY VERTICAL SMT: TAPE & REEL

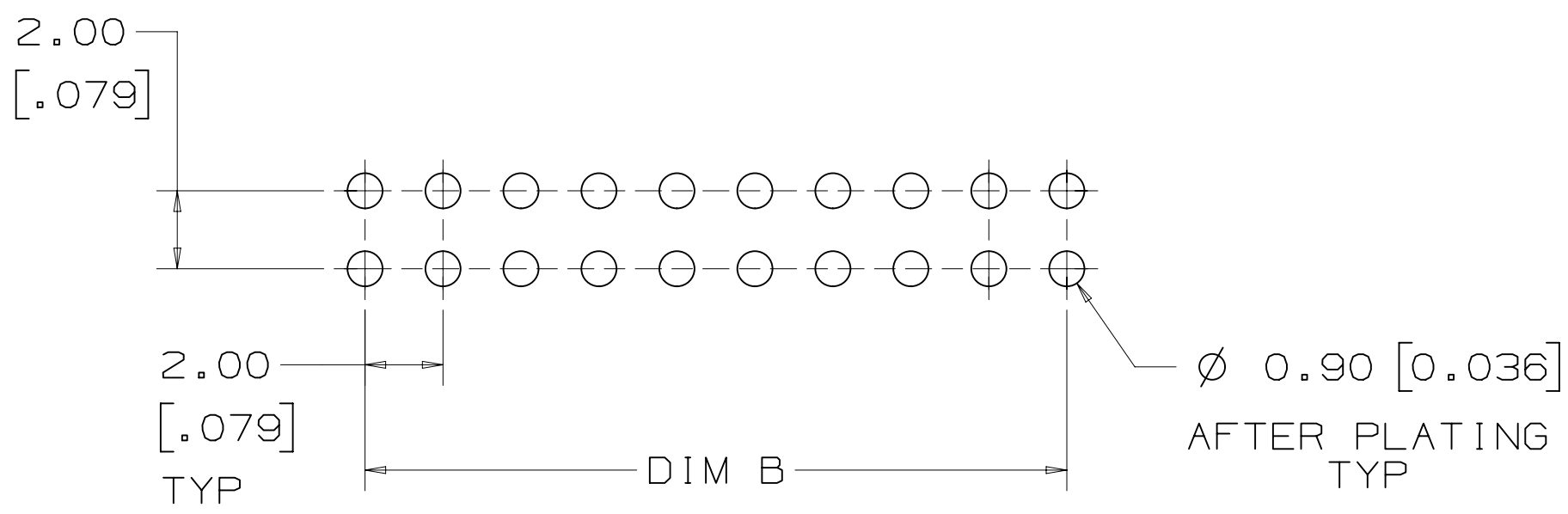
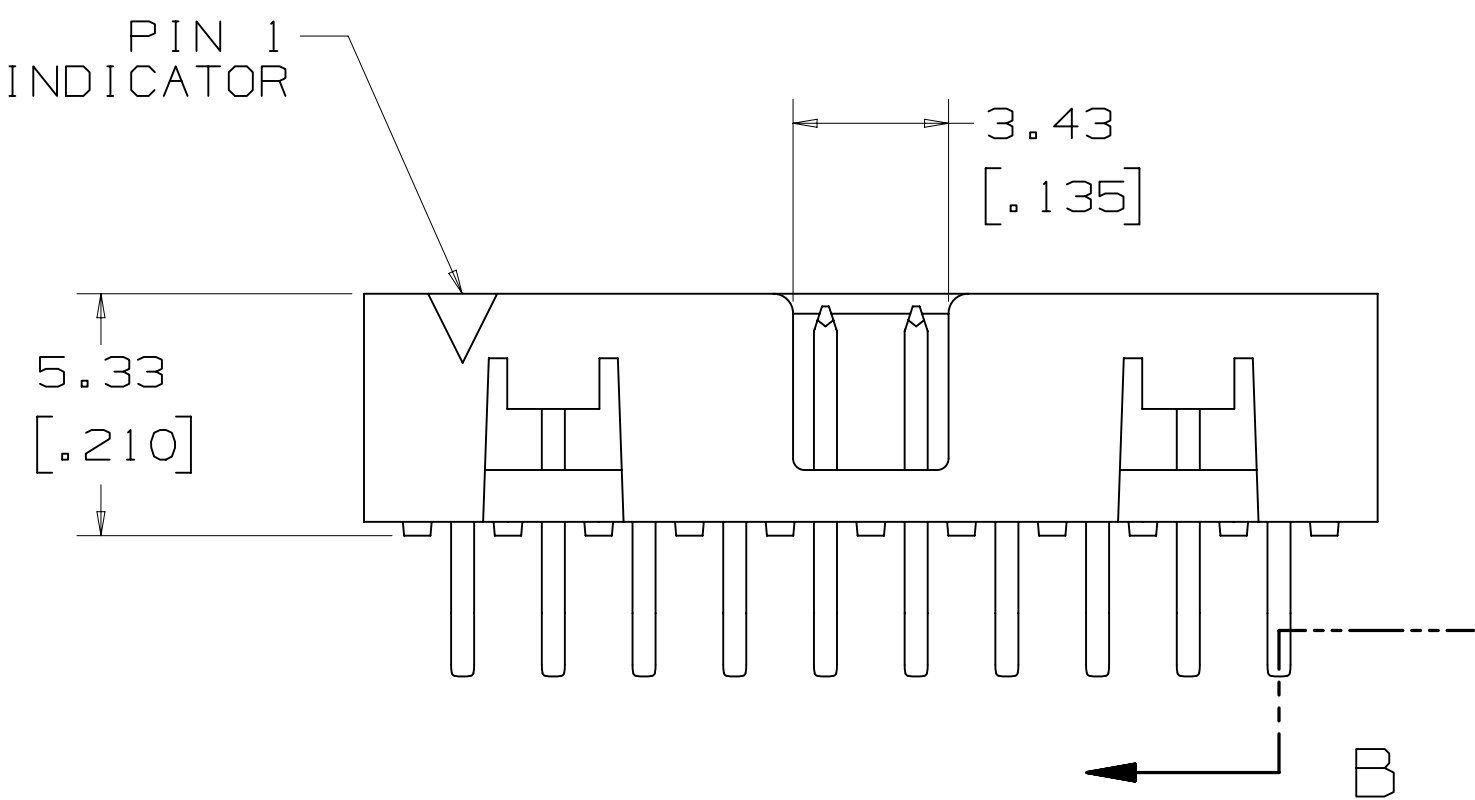
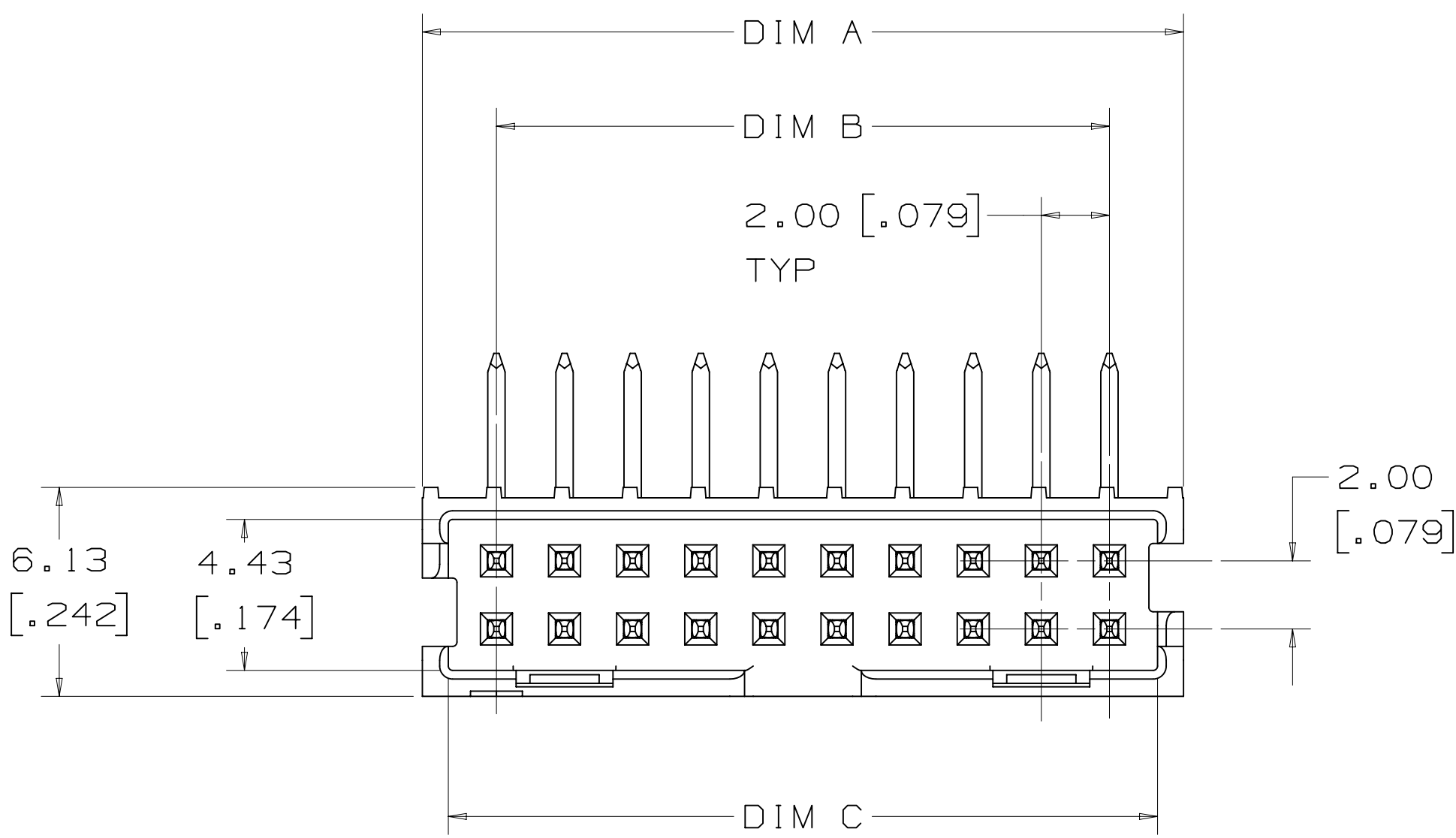
F	52868	MAR 05,2014 ADD TAPE & REEL, MATE PT, VOLTAGE RATING	SJS	SAN
E	51692	DEC 16,2013 ADD UL SYMBOLS	SJS	SAN
D	41488	JUN 20,2012 REVISED CURRENT RATING IN PERFORMANCE TABLE	LDS	SAN
C	39876	APR 18,2012 REMOVED 32 POS FROM TABLE ON SHT 5	LDS	SAN
B	34080	MAY 18,2011 ADDED 6.19 DIM ON SHT 24, REVISED & MOVED TABLE TO SHT 5	LDS	SF
A	30741	OCT 28,2010 INITIAL RELEASE	LDS	SF
REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
DRFT	L. SCHMIDT	DATE JUL 29, 2010	MFG	DATE
CHKD		DATE	APPROV. S. FELDMAN	DATE AUG 09, 2010

DESIGN REFERENCE		NEXT ASSEMBLY		REV	ECO	ISSUE DATE AND DESCRIPTION		DRFT	CHKD
ADDRESS CODES				DRFT	DATE		MFG	DATE	
				L. SCHMIDT	JUL 29, 2010				
				CHKD	DATE		APPROVAL	DATE	
							S. FELDMAN	AUG 09, 2010	
DIVISION		DIVISION CODE		3M 3M Center St. Paul, Minn 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.		
DO NOT SCALE DRAWING		SCALE 6 1							
				TITLE 3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES					
THIRD ANGLE PROJECTION		MILLIMETERS .01 .00 .003 .0000 ±		CAGE NUMBER		SIZE		DRAWING NO.	
INTERPRET PER ASME Y14.5 - 1994		.01 .00 .003 .0000 ±		D		78-5100-2359-7		REV. F	
MAX SURFACE ROUGHNESS 125 ☐ ALL SURFACES ☒ MARKED ONLY		ANGLES ± 1°		MODEL		DET. LISTS ☐ YES ☒ NO		SHT 1 OF 5	

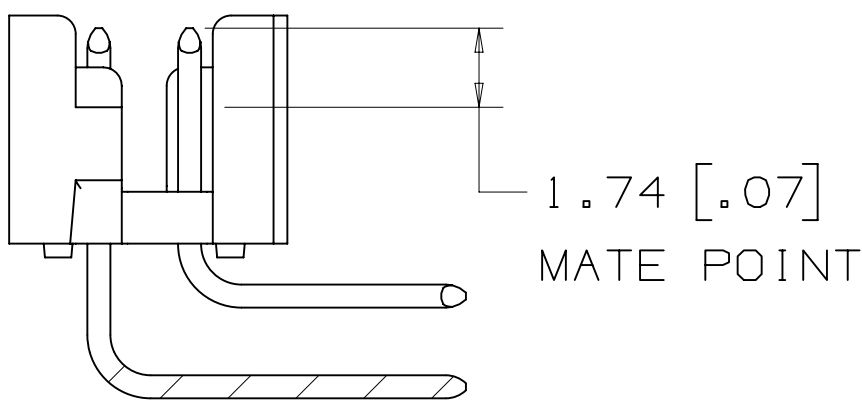
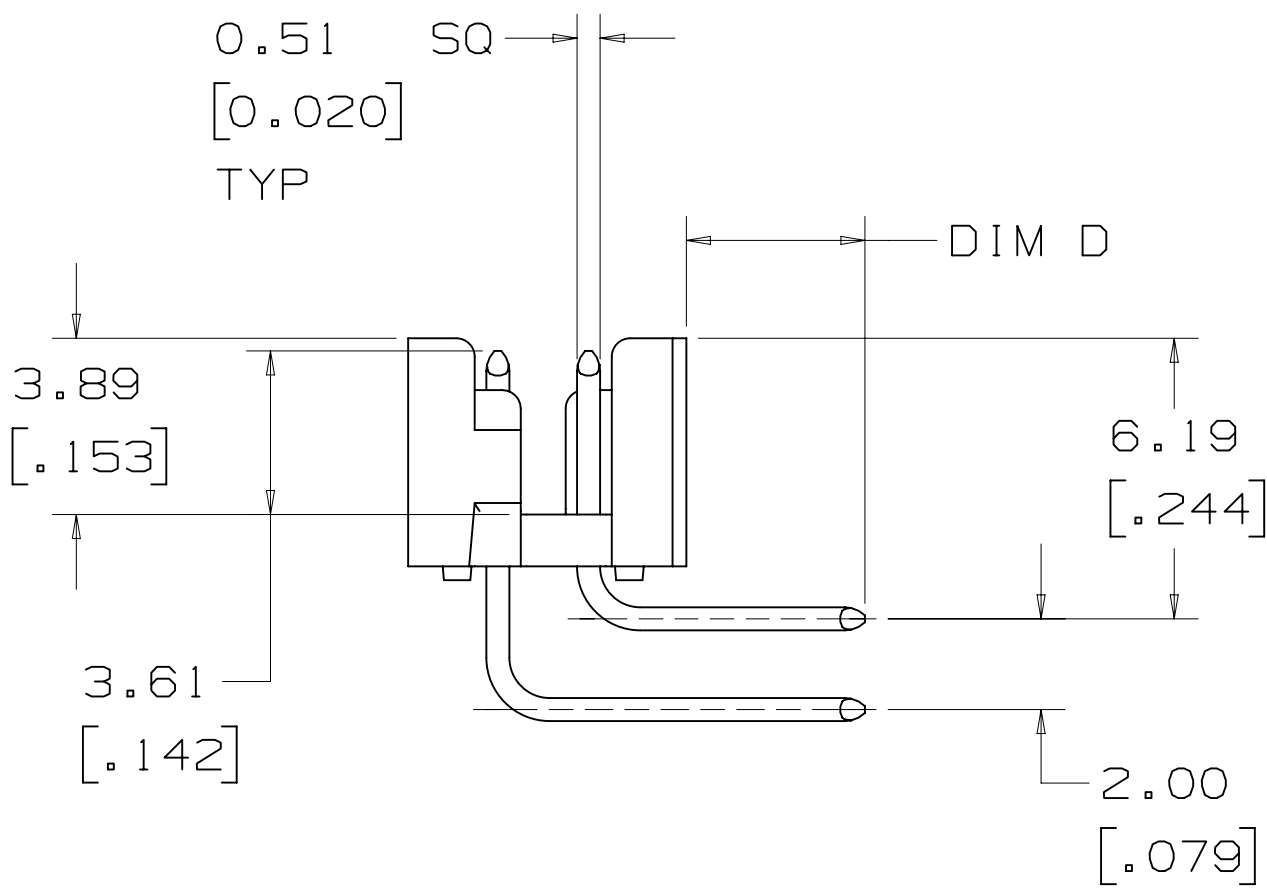
METRIC [ENGLISH]

UL[®]
US
UL FILE NO: E68080

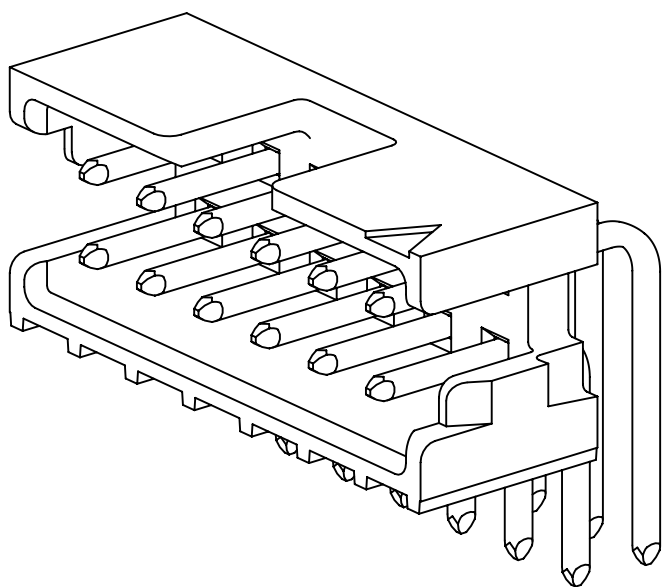
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length 3 and Extended Length 4



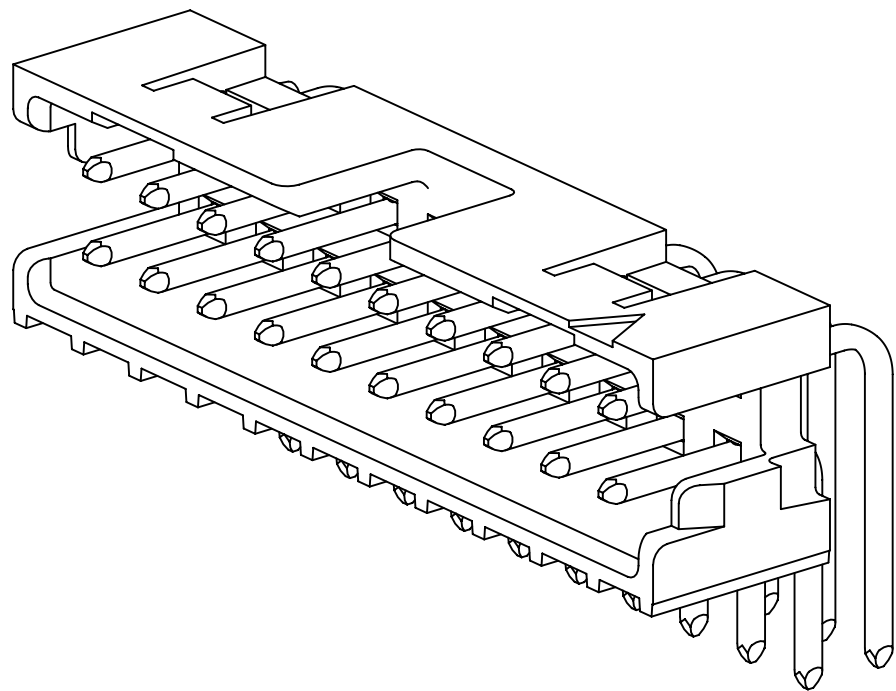
RECOMMENDED PCB HOLE PATTERN
TOLERANCE = ±0.05 [.002]



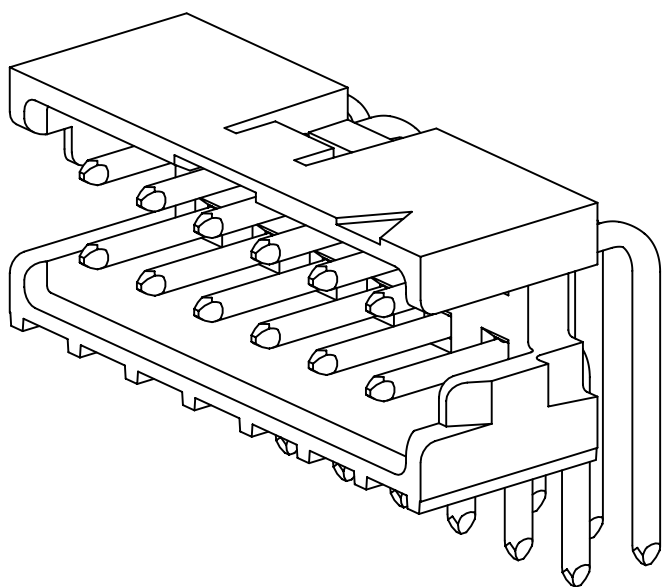
SECTION B - B



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

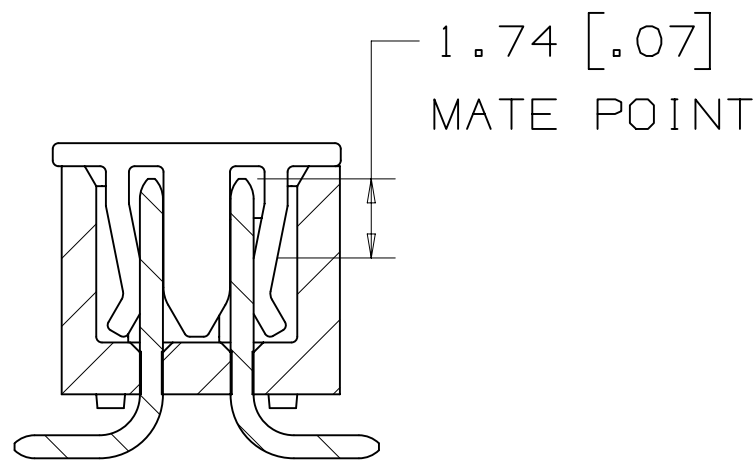
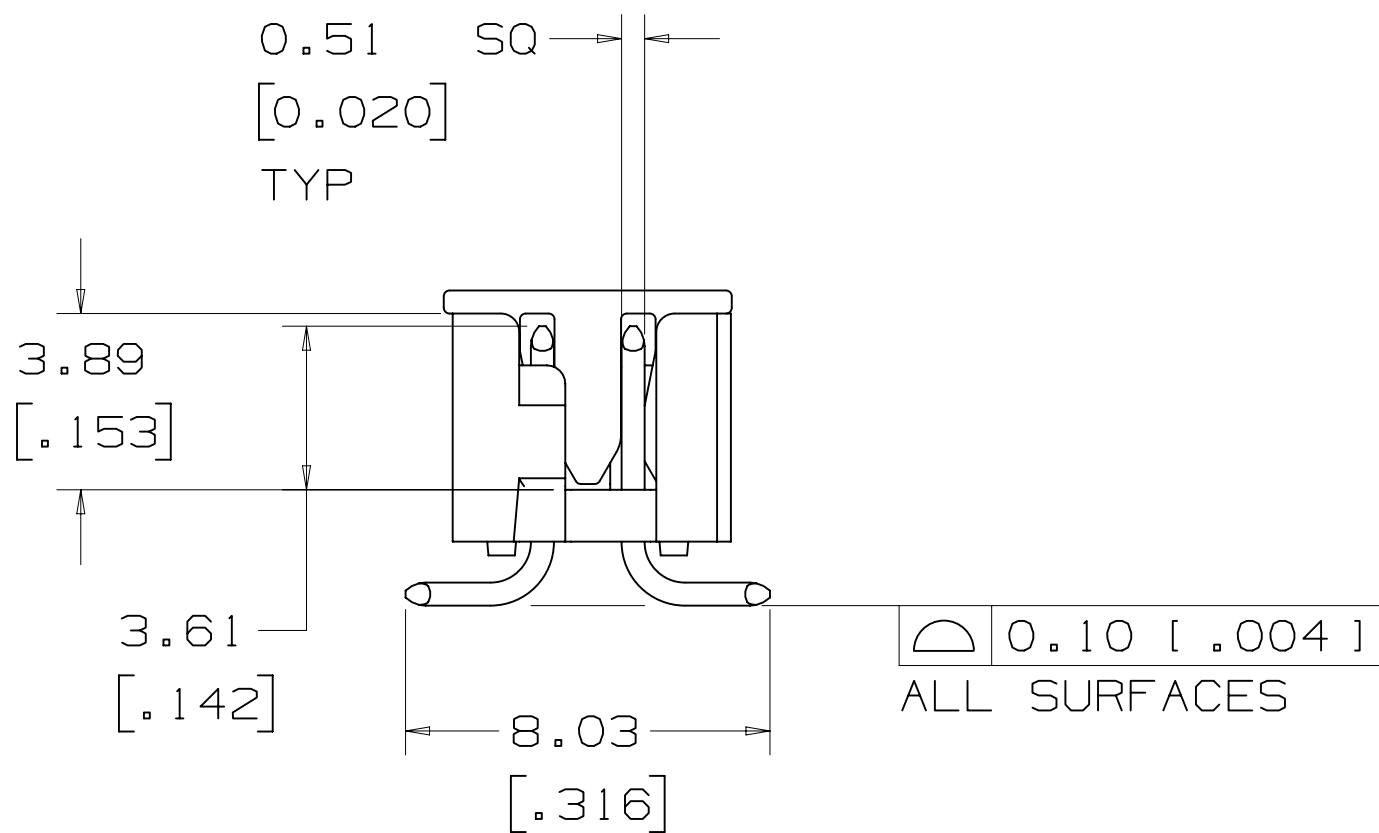
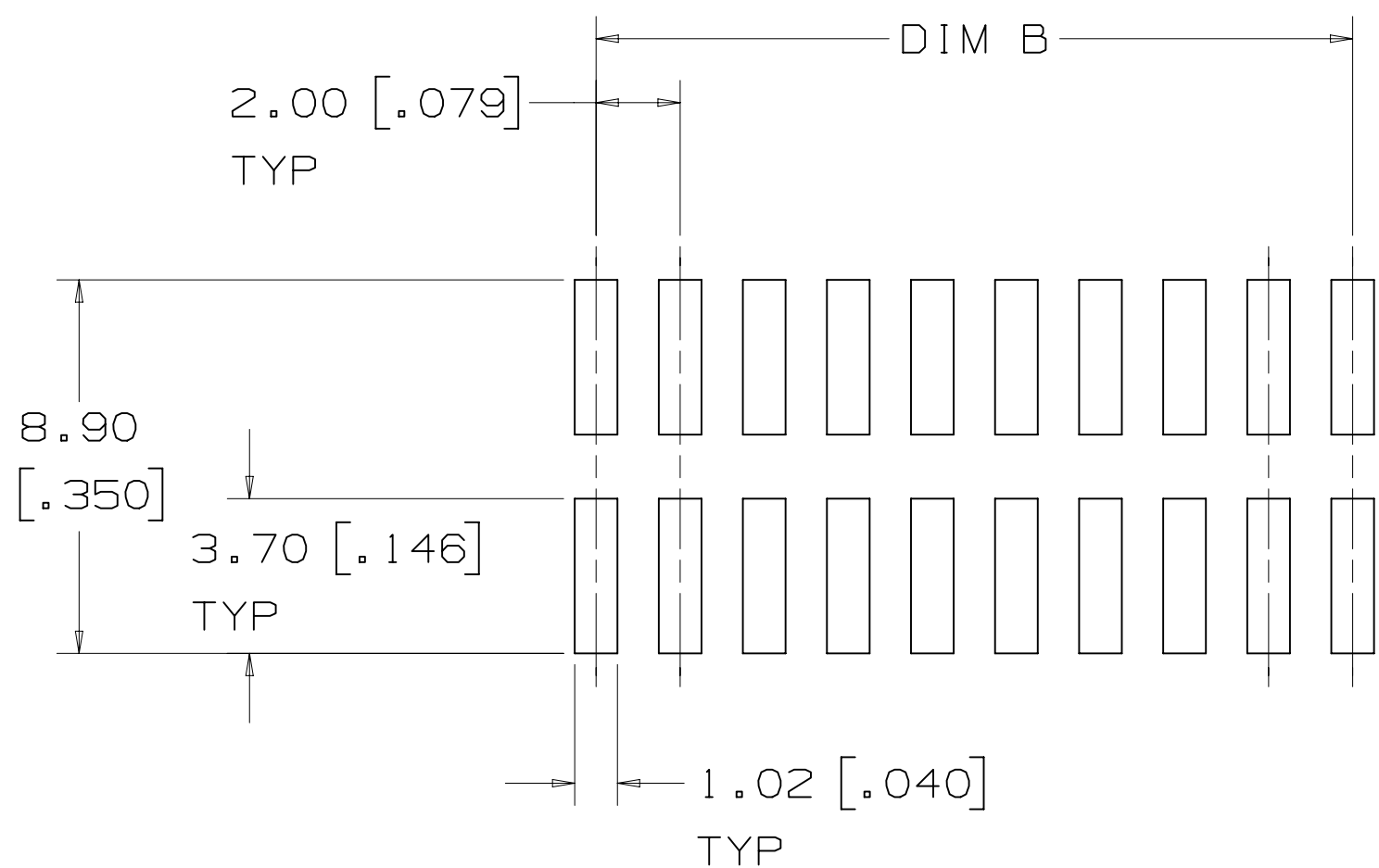
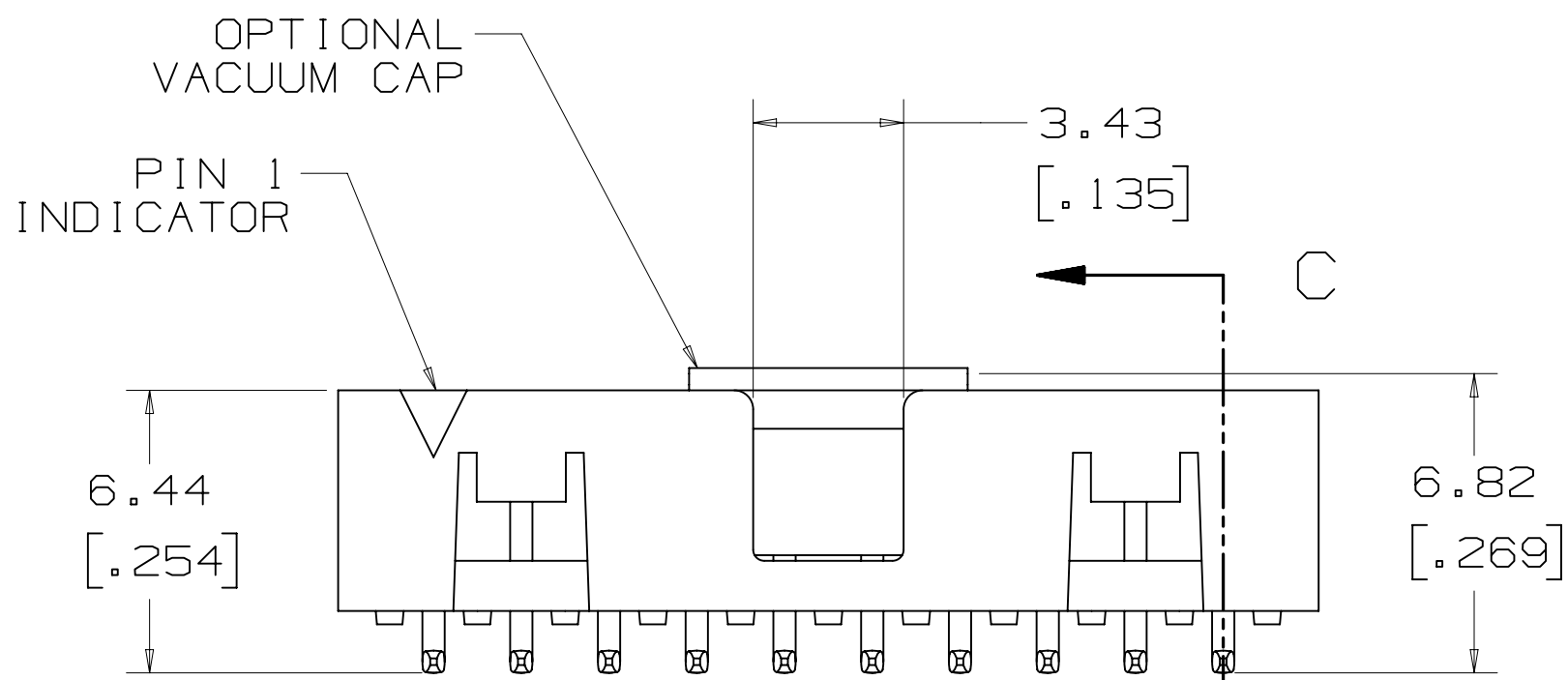
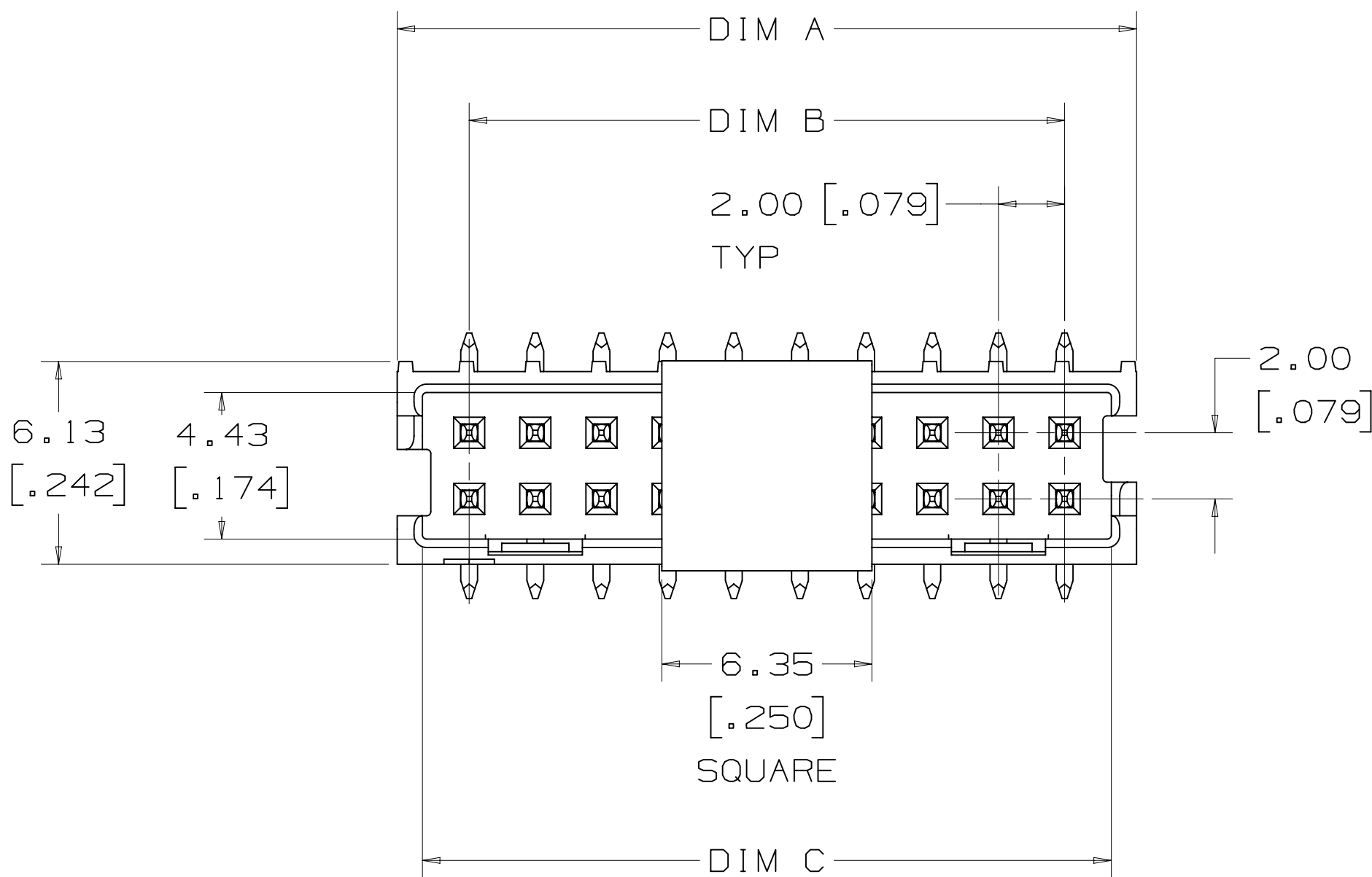
METRIC [ENGLISH]

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

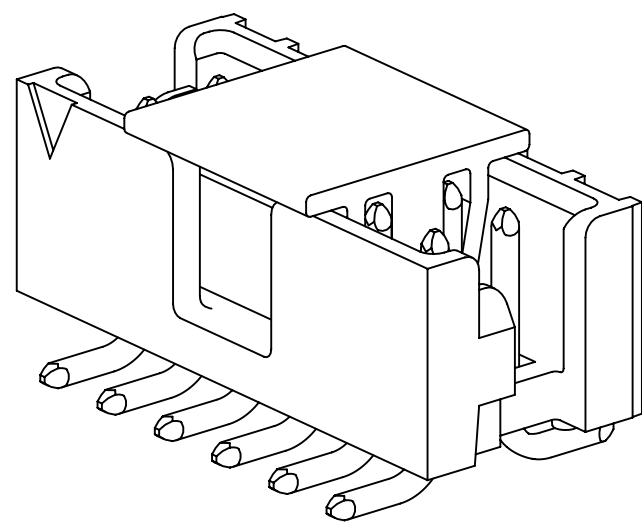
F	52868	MAR 05, 2014	SJS	SAN
E	51692	DEC 16, 2013	SJS	SAN
D	41488	JUN 20, 2012	LDS	SAN
C	39876	APR 18, 2012	LDS	SAN
B	34080	MAY 18, 2011	LDS	SF
A	30741	OCT 28, 2010	LDS	SF

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
DO NOT SCALE DRAWING	SCALE 4/1	DO NOT SCALE DRAWING	SCALE 4/1	TOLERANCES EXCEPT AS NOTED	DO NOT SCALE DRAWING	SCALE 4/1
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 1994	MAX SURFACE ROUGHNESS 125/0.000	ALL SURFACES MARKED ONLY	ANGLES ±1°	INCHES 0.000 ±0.000 ±0.000 ±0.000	MILLIMETERS 0 ±0.00 ±0.00 ±0.00
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
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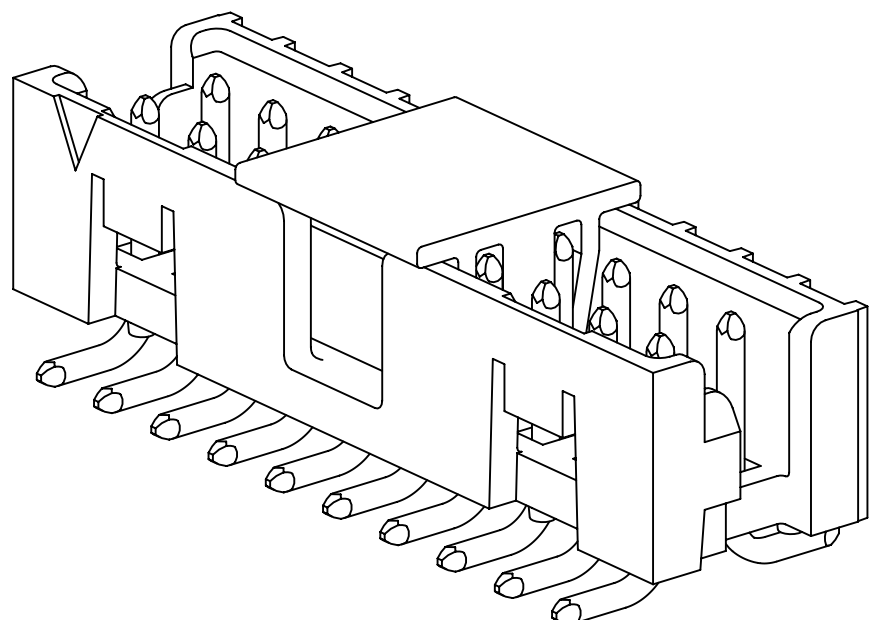
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length [3] and Extended Length [4]



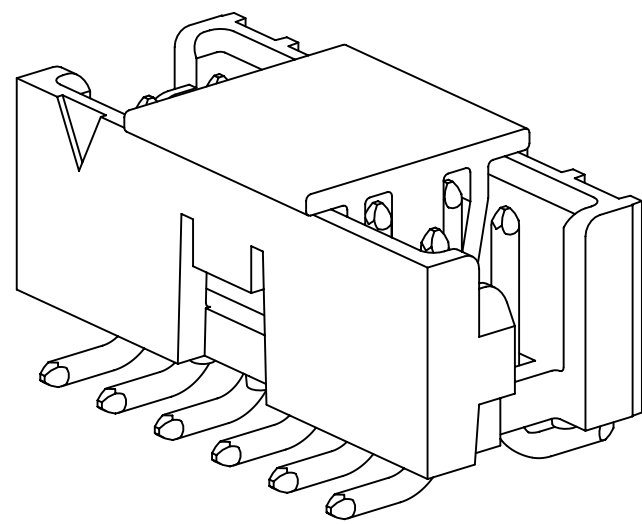
SECTION C - C



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

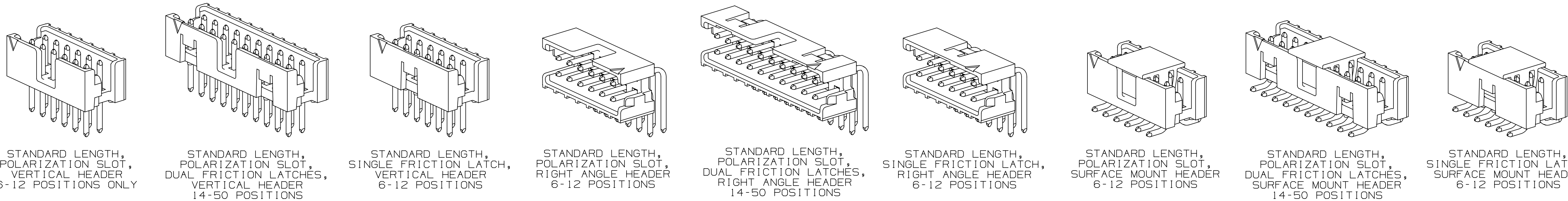
REFERENCE TABLE ON SHEET 5
FOR AVAILABLE POSITIONS

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		CAGE NUMBER		DRAWING NO.	
125/		ALL SURFACES		0.00 ± 0.13		D 78-5100-2359-7		REV. F	
MARKED ONLY		ANGLES ±1°		MODEL		DET		SHT 3 OF 5	

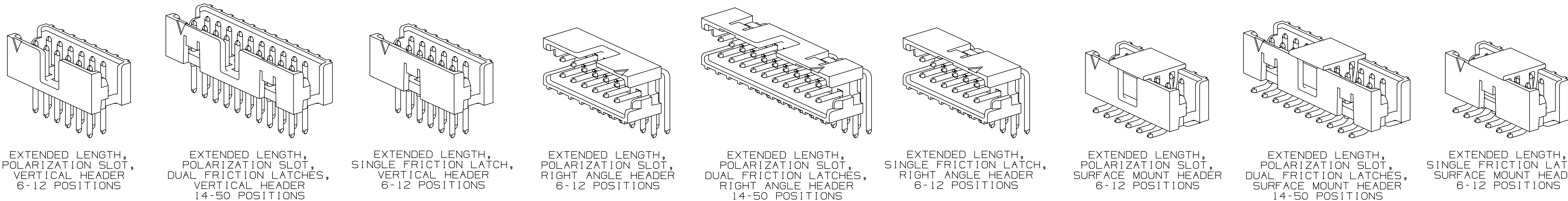
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length 3

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 μ m
[30 μ 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 μ m
[15 μ in] GOLD

POSITION COUNT
(SEE TABLE)

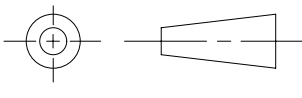
PART CONFIGURATION
2 = VERTICAL SMT
5 = RIGHT ANGLE THRU HOLE
6 = VERTICAL THRU HOLE

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

CONTACT TAIL LENGTH
2 = 2.84 mm [.112]
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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
		INITIAL RELEASE		
REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
DRFT L. SCHMIDT		DATE JUL 29, 2010	MFG	DATE
CHKD		DATE	APPROV S FELDMAN	DATE AUG 09, 2010
DESIGN REFERENCE		NEXT ASSEMBLY		
ACCESS CODES				
DIVISION		DIVISION CODE		
DO NOT SCALE DRAWING		SCALE 4 1		
		TOLERANCES EXCEPT AS NOTED		
		INCHES .00 ± .00 ± .000 ± .0000 ±		
THIRD ANGLE PROJECTION		MILLIMETERS 0 ± .00 ± .000 ± .0000 ±		
INTERPRET PER ASME Y14.5 - 1994		MAX SURFACE ROUGHNESS 125 √		
		□ ALL SURFACES MARKED ONLY		
		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
MODEL		DET. LISTS		REV. F
		YES ☒ NO		SHT 4 OF 5

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

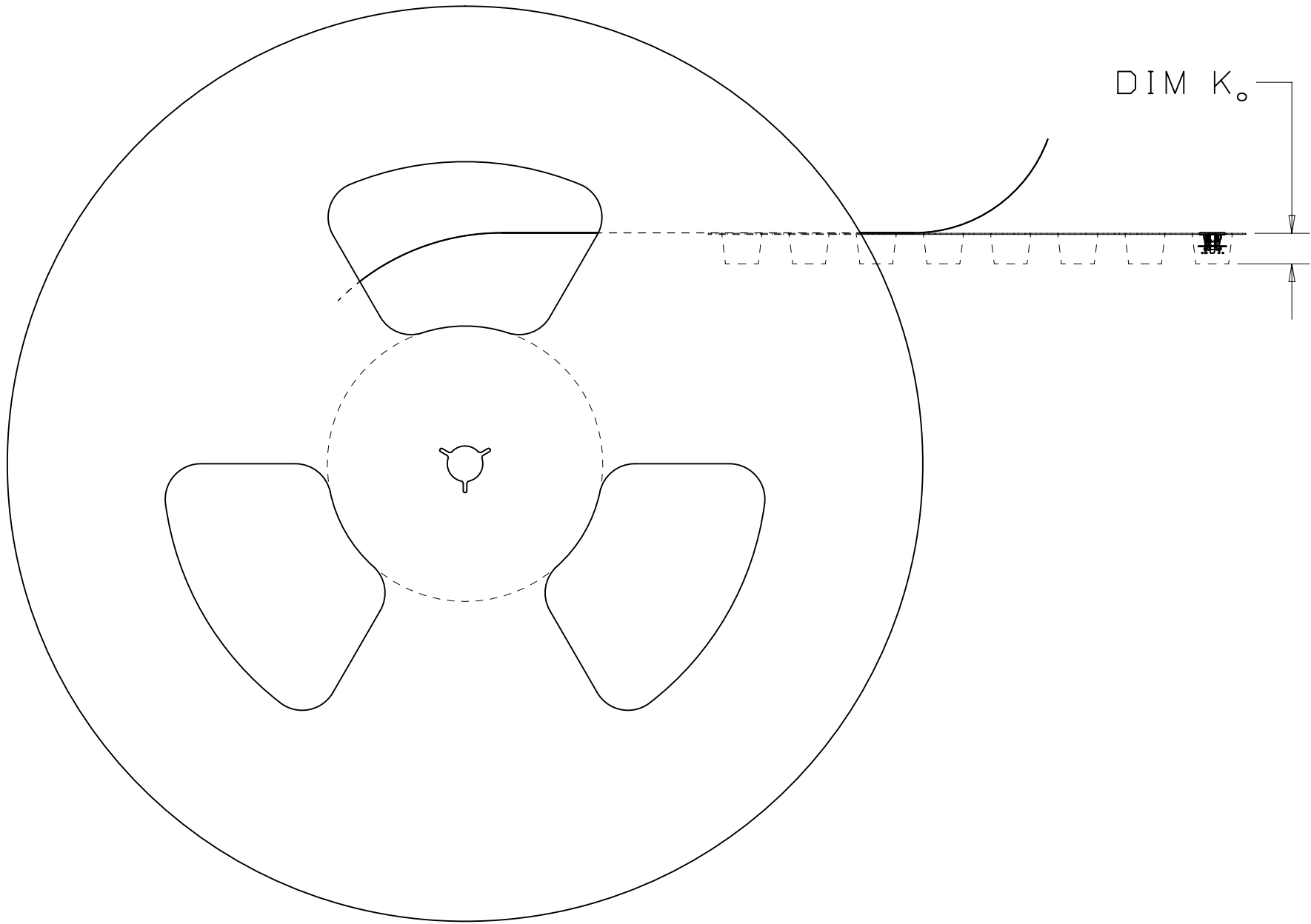
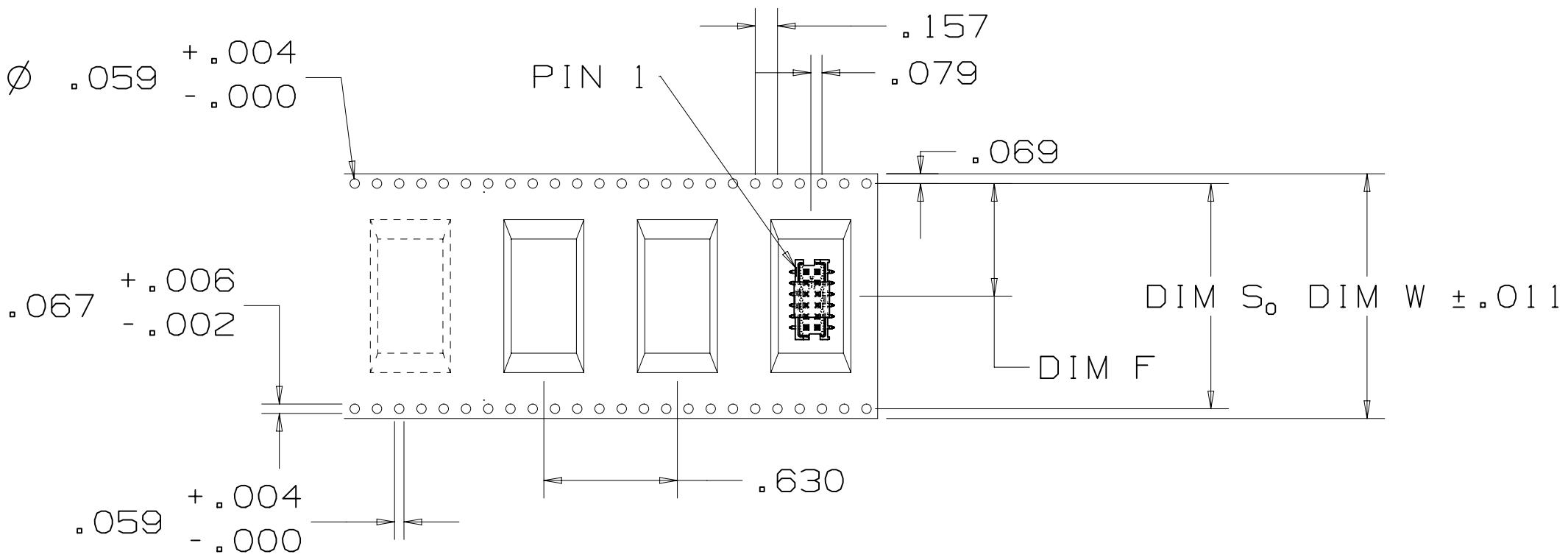
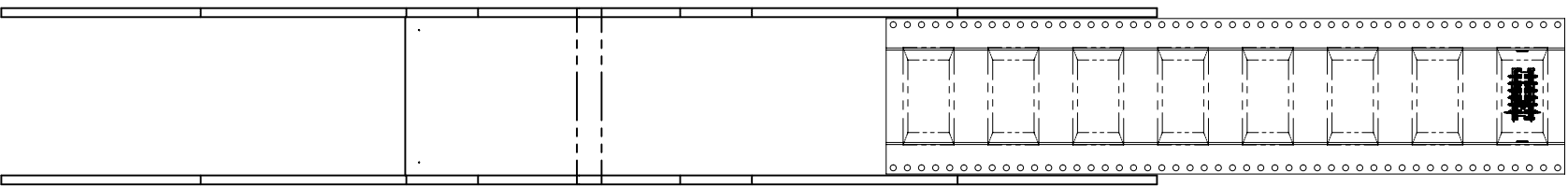
3

 and Extended Length

4

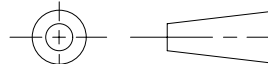
SHROUDED BOX HEADER							
NUMBER OF POSITIONS	DIM A		DIM B	DIM C		DIM D	
	STANDARD	EXTENDED		STANDARD	EXTENDED		
6	8.35 [.329]	9.52 [.375]	4.00 [.157]	6.83 [.269]	7.99 [.315]	2.84 [.112]	3.94 [.155]
8	10.35 [.407]	11.52 [.453]	6.00 [.236]	8.83 [.347]	9.99 [.393]	2.84 [.112]	3.94 [.155]
10	12.35 [.486]	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]

NUMBER OF POSITIONS	DIM F +/- 0.10	DIM K _o +/- 0.10	DIM S _o +/- 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]

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
ACCESS CODES				DRFT		L. SCHMIDT	DATE JUL 29, 2010	MFG	DATE
				CHKD			DATE	APPROV. S FELDMAN	DATE AUG 09, 2010
DIVISION		DIVISION CODE							
DO NOT SCALE DRAWING		SCALE 1		TOLERANCES EXCEPT AS NOTED					
				INCHES .0 .00 .009 .0005					
THIRD ANGLE PROJECTION				MILLIMETERS 0 .0 .00 ±0.13 .000					
INTERPRET PER ASME Y14.5 - 1994				ANGLES ± 1°					
MAX SURFACE ROUGHNESS 125 ✓		☐ ALL SURFACES							
☒ MARKED ONLY									