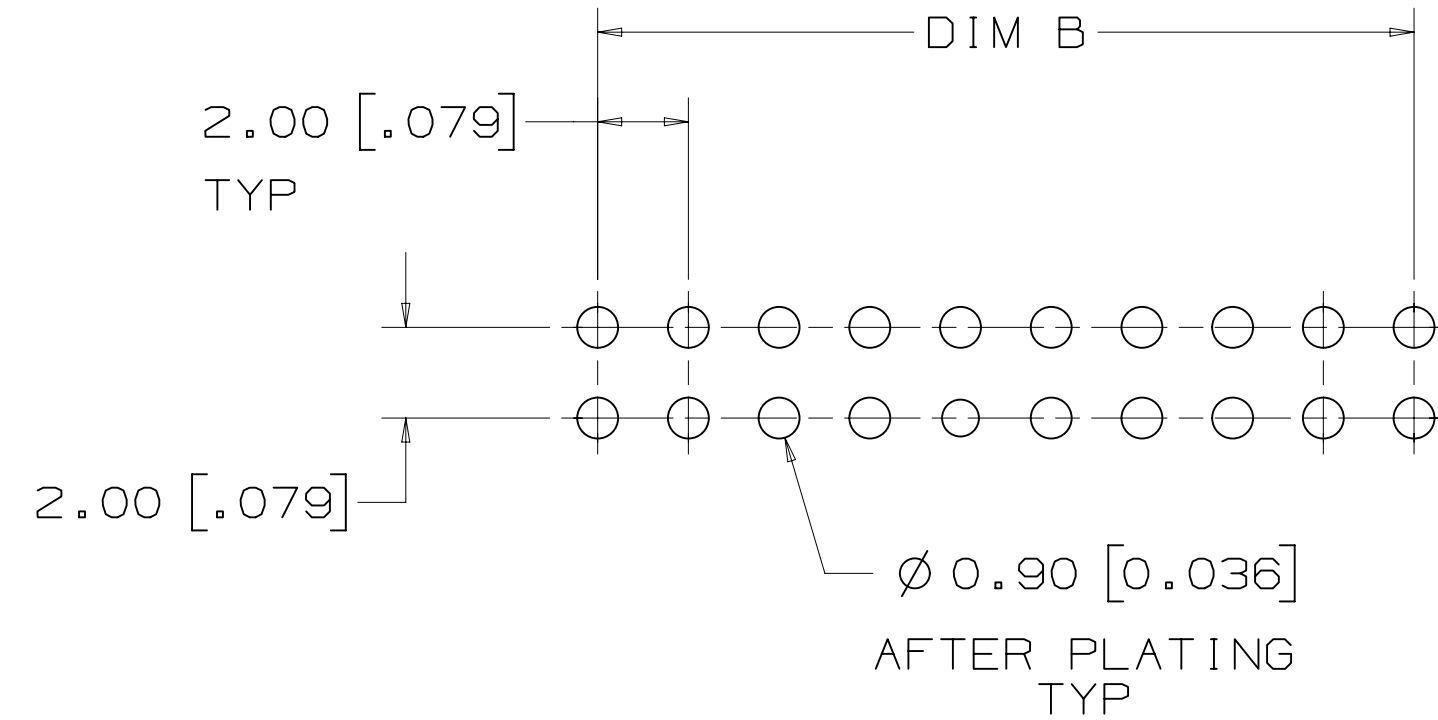
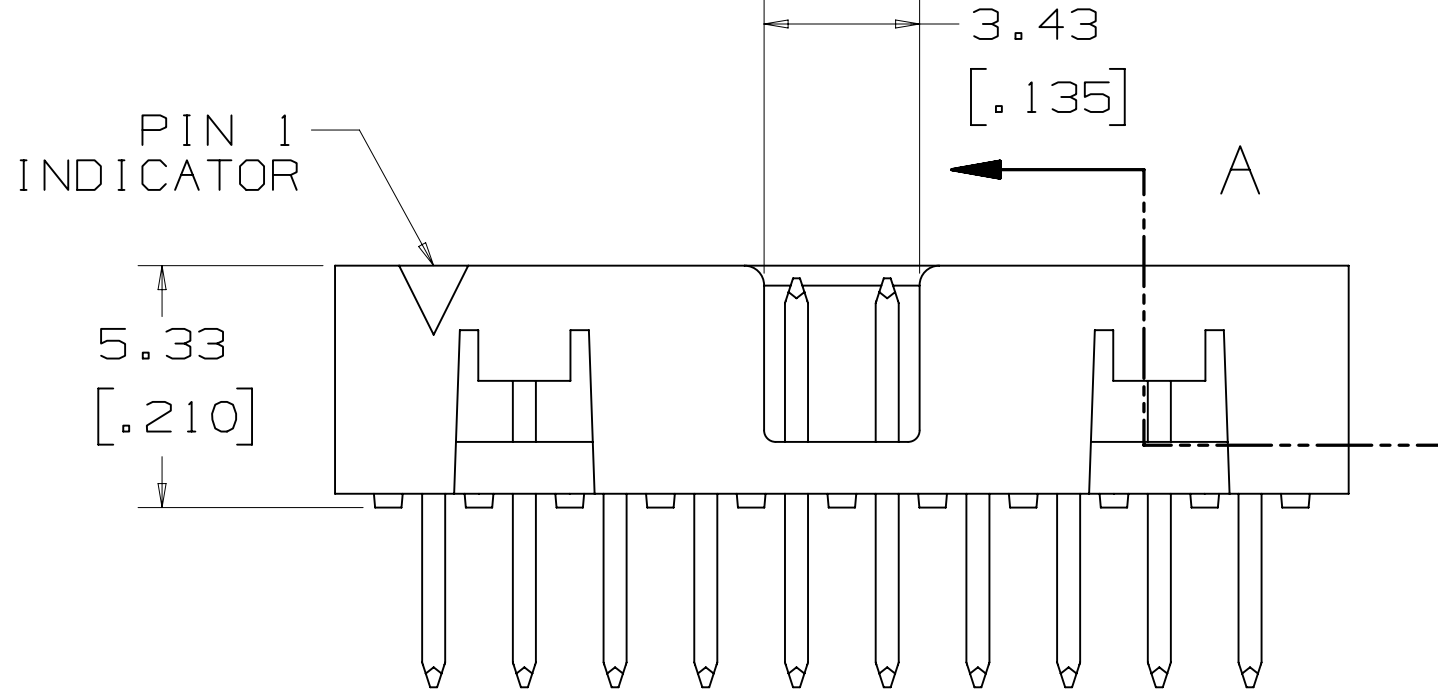
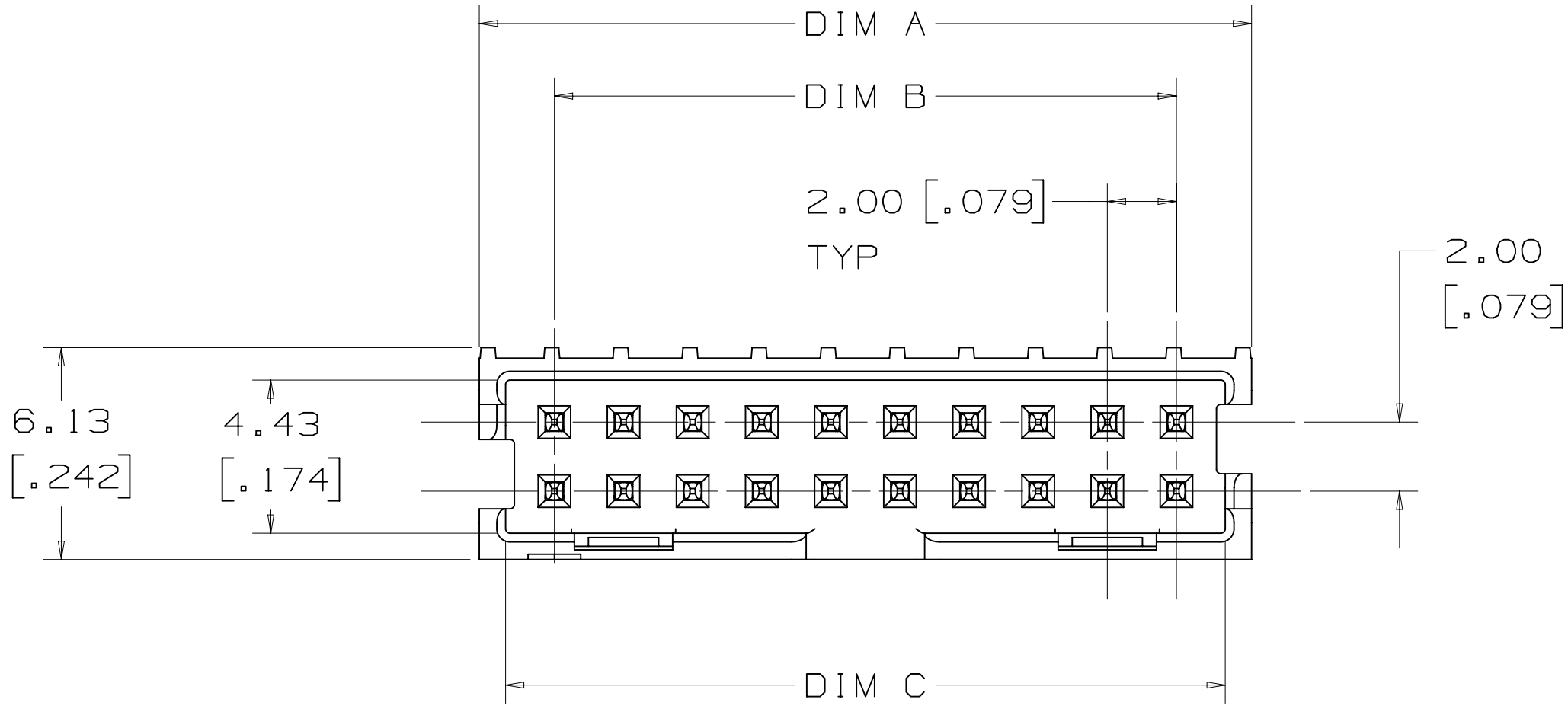
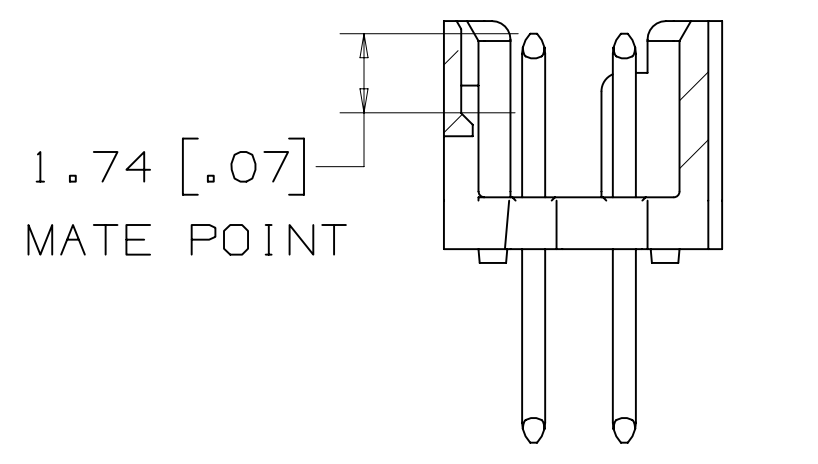
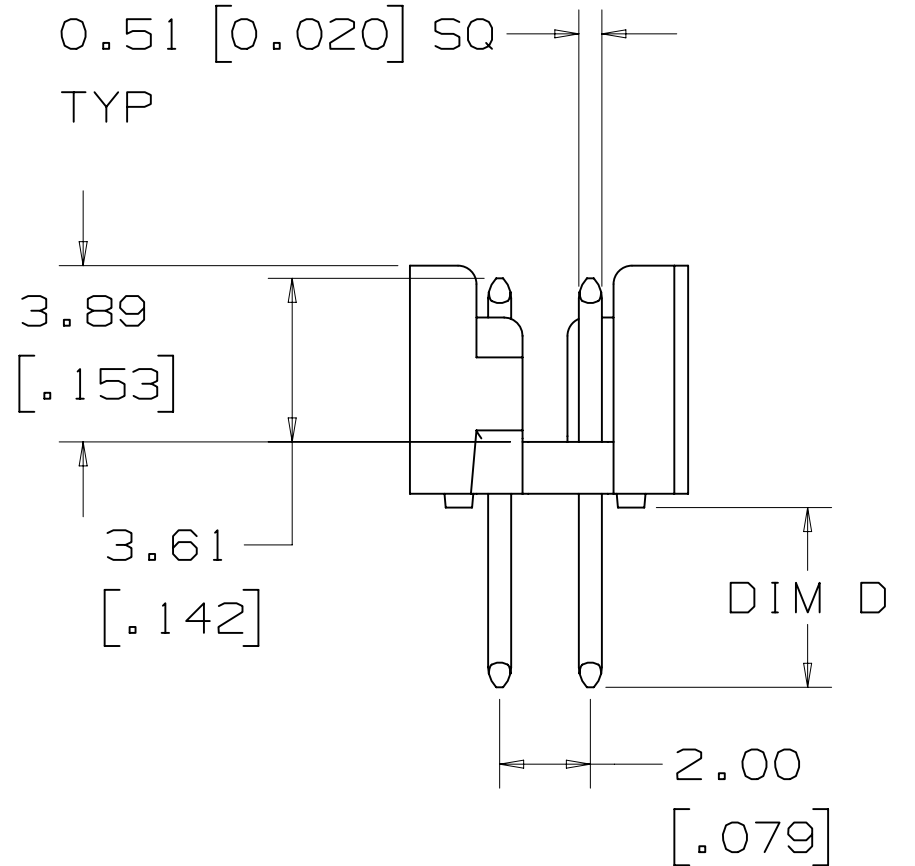


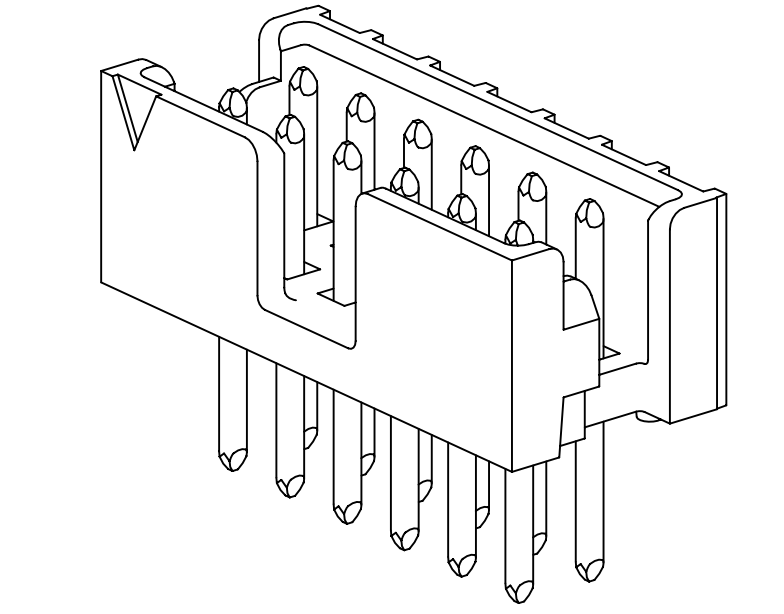
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length [3] and Extended Length [4]



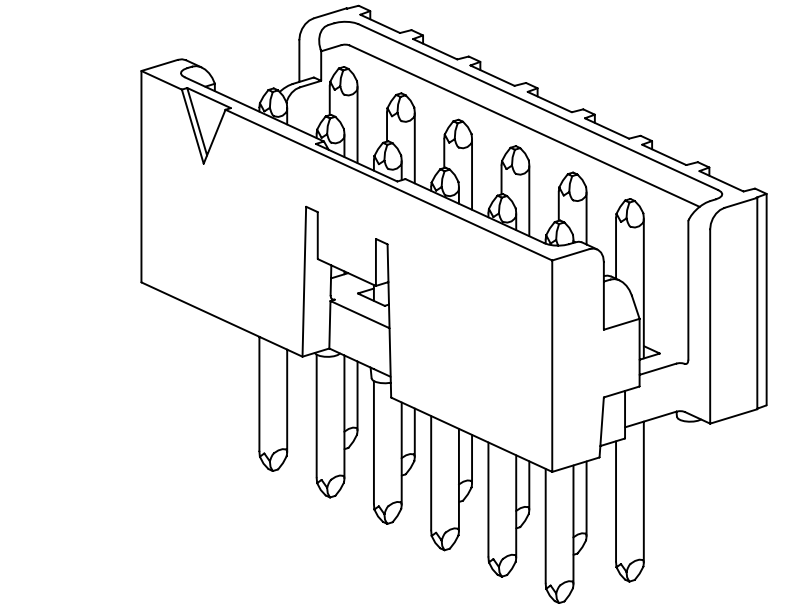
RECOMMENDED PCB HOLE PATTERN
TOLERANCE = 0.05 [.002]



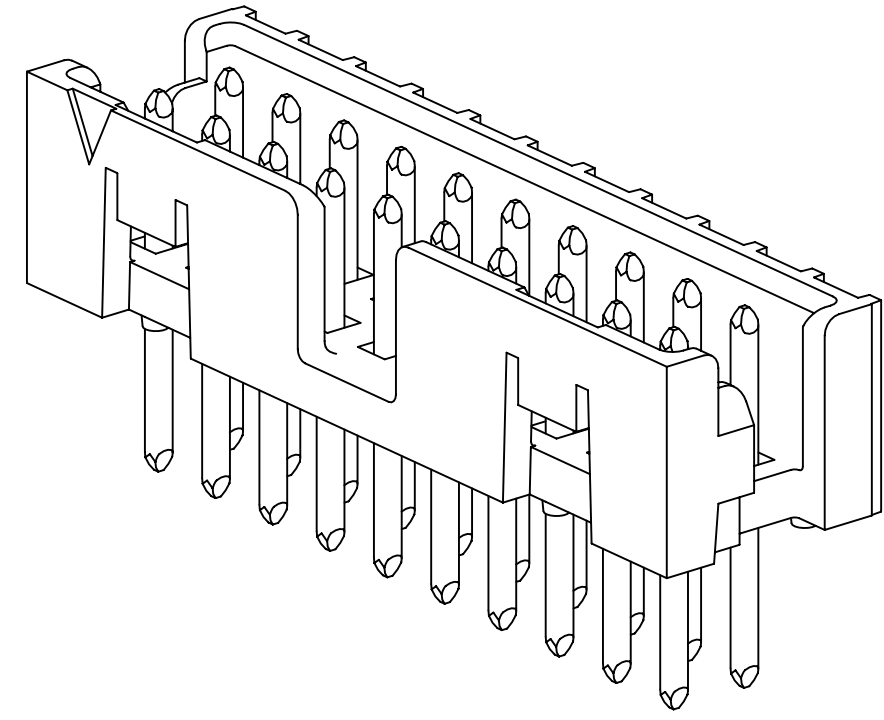
SECTION A - A



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 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 POSITIONS AND
SOLDER TAIL LENGTHS

METRIC [ENGLISH]
cALUS
UL FILE NO: E68080

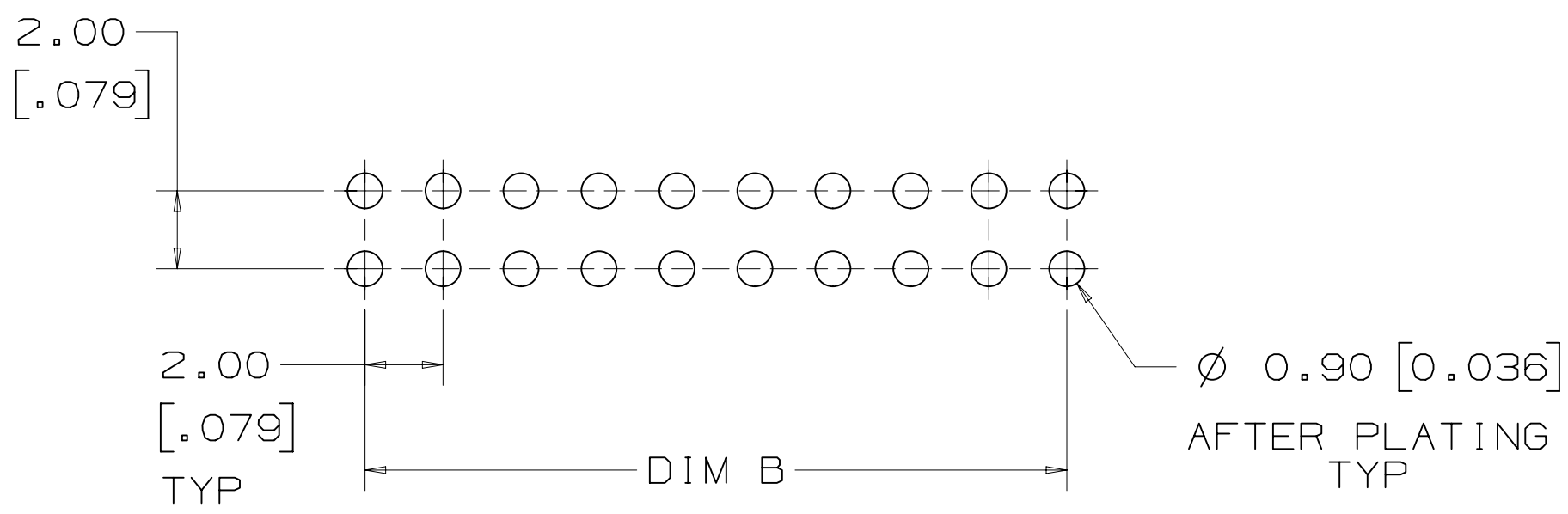
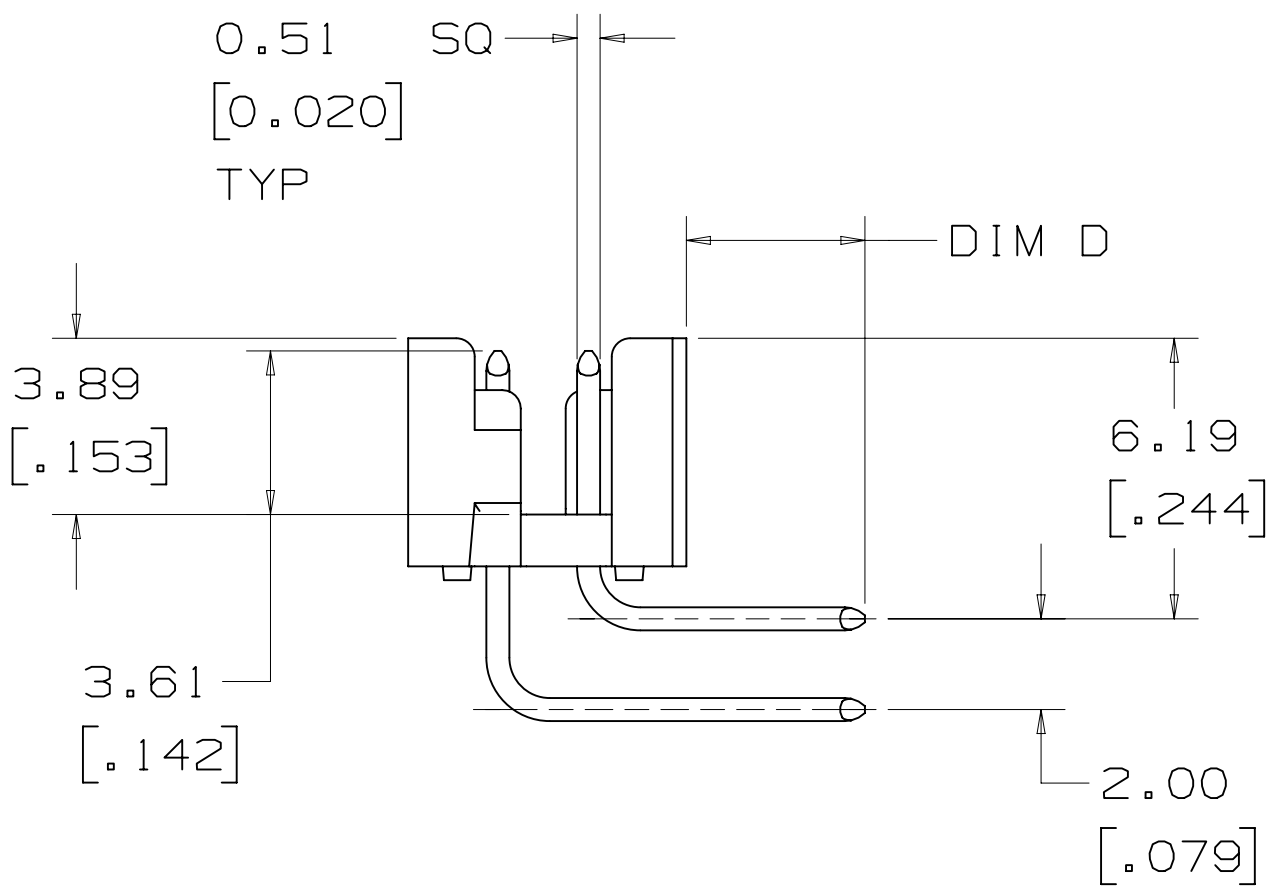
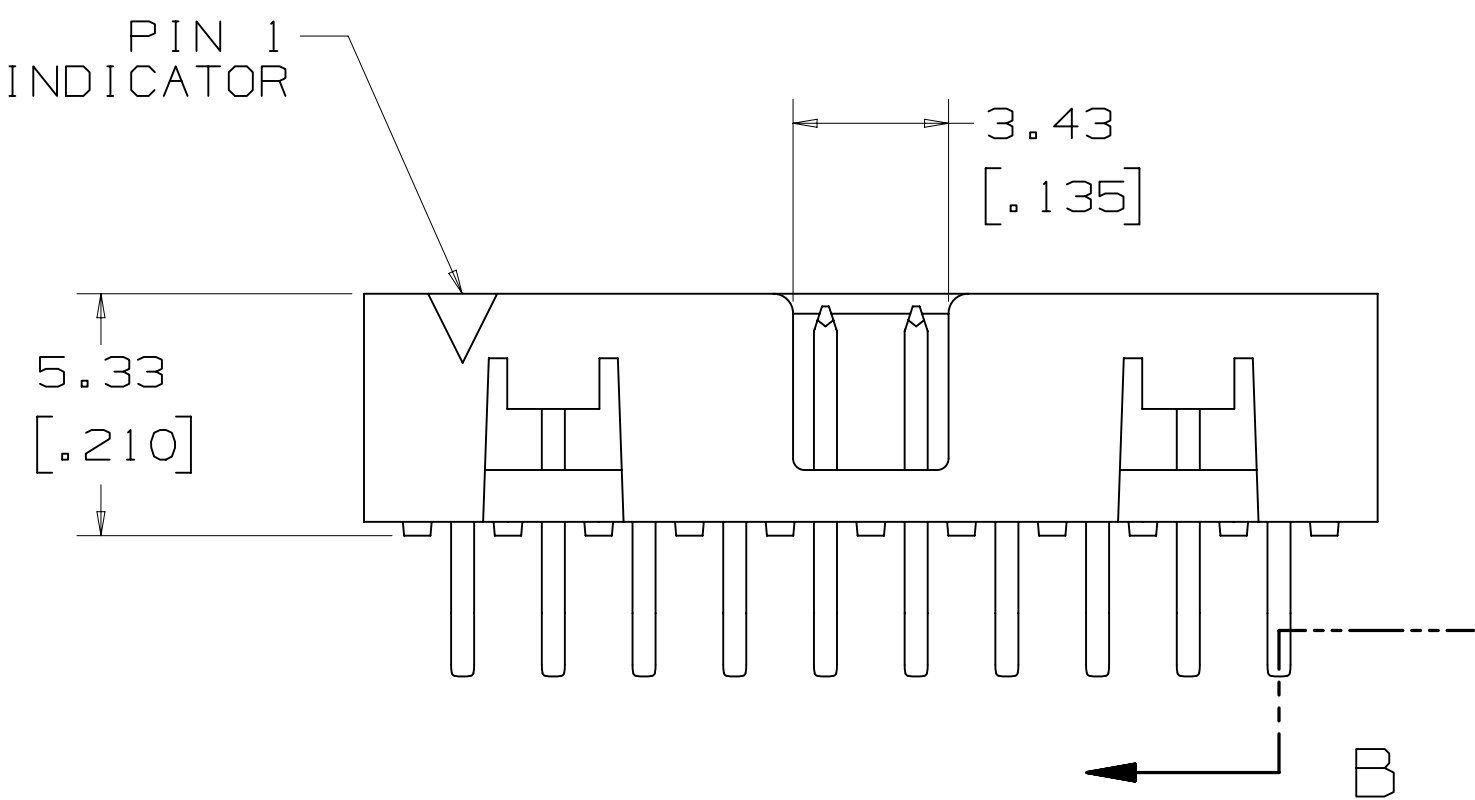
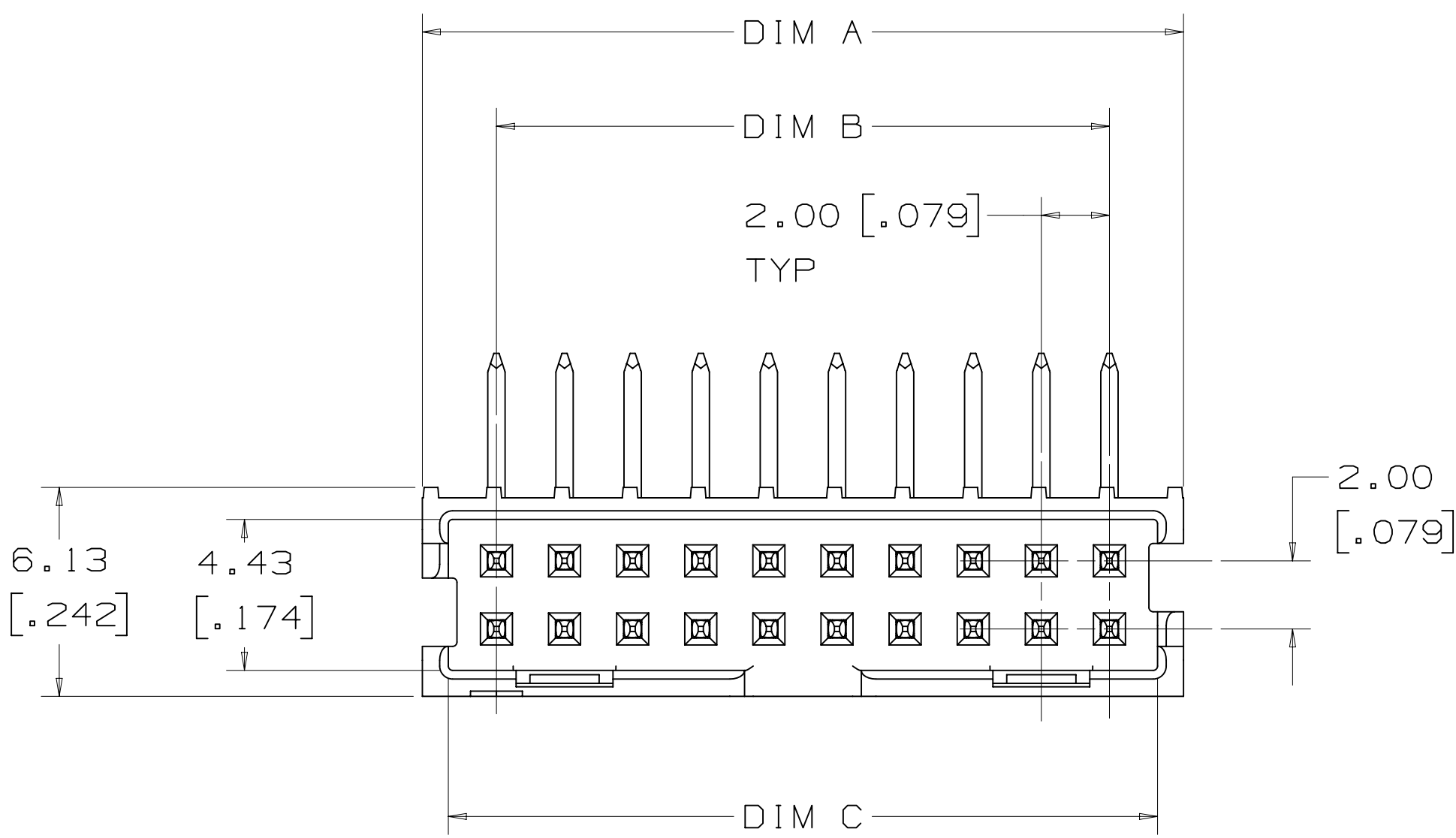
DESIGN REFERENCE	NEXT ASSEMBLY
DO NOT SCALE DRAWING	SCALE 6/1
THIRD ANGLE PROJECTION	TOLERANCES EXCEPT AS NOTED
INTERPRET PER ASME Y14.5 - 1994	INCHES 0.00 ± 0.002 ± 0.000 ±
MAX SURFACE ROUGHNESS 125 / ALL SURFACES ✓ MARKED ONLY	MILLIMETERS 0 ± 0.00 ± 0.00 ± 0.00 ±
	ANGLES ±1°

- NOTES
- MATERIAL:
BODY: HIGH TEMPERATURE GLASS FILLED LCP, BLACK UL94V-0
CONTACTS: COPPER ALLOY
 - PLATING:
2.03-3.81 μ m [80-150 μ in]
NICKEL UNDERPLATE.
0.38 μ m [15 μ in] OR
0.76 μ m [30 μ in] AVG GOLD
ON WIPING AREA.
5.08 μ m [200 μ in] MIN
MATTE TIN ON SOLDER TAILS.
 - STANDARD LENGTH HEADERS
MATE WITH 3M™ SOCKETS,
158 SERIES (REFERENCE 3M
DRAWING 78-5100-2358-91).
 - 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

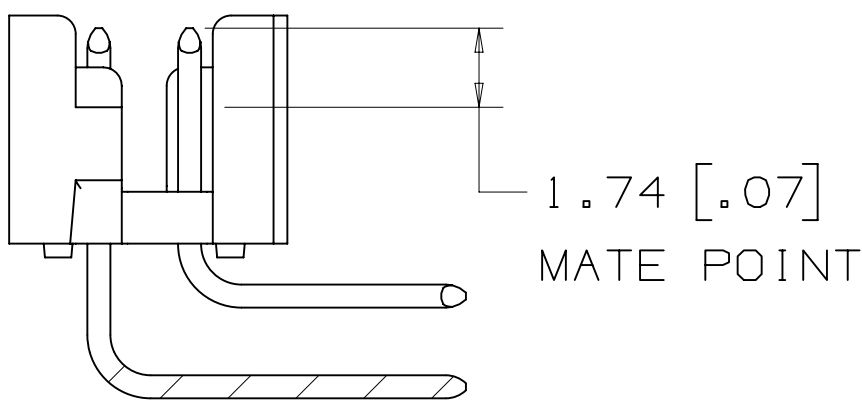
F	52868	MAR 05, 2014	SJS	SAN
E	51692	DEC 16, 2013	SJS	SAN
D	41488	JUN 20, 2012	LDS	SAN
C	39876	APR 18, 2012	LDS	SAN
B	34080	MAY 18, 2011	LDS	SF
A	30741	OCT 28, 2010	LDS	SF

REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
L	SCHMIDT	JUL 29, 2010		
CHGD		DATE	APPR	DATE
			S FELDMAN	AUG 09, 2010
DIVISION				
DIVISION CODE				
TITLE				
3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES				
CAGE NUMBER	SIZE	DRAWING NO.	REV.	
125	D	78-5100-2359-7	F	
MODEL	DET	LISTS	YES	NO
			SHT 1	OF 5

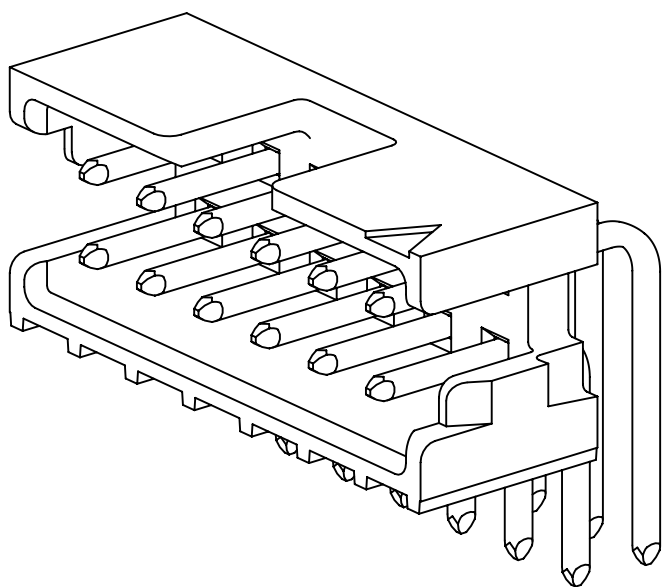
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length 3 and Extended Length 4



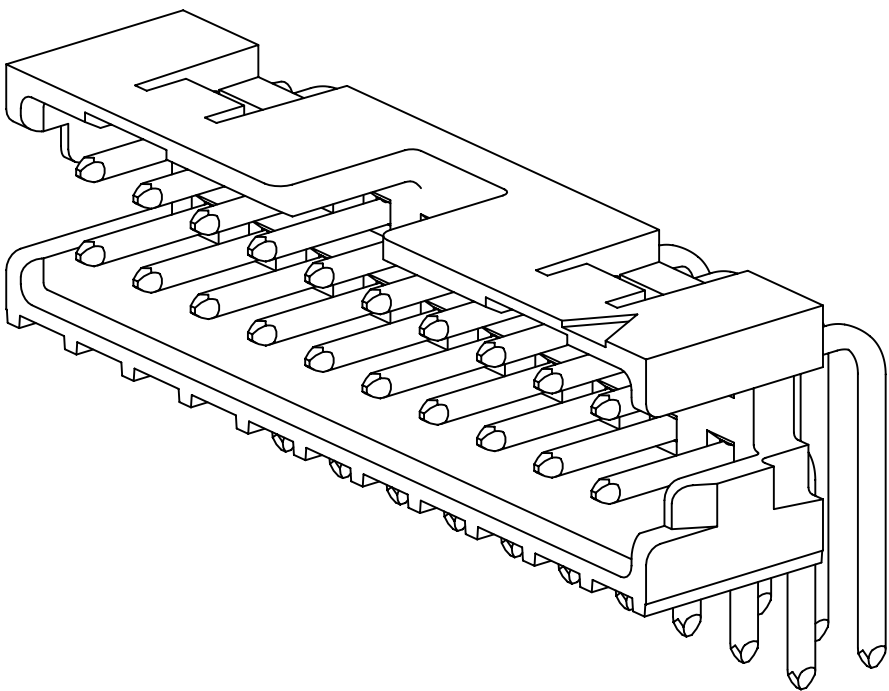
RECOMMENDED PCB HOLE PATTERN
TOLERANCE = ±0.05 [.002]



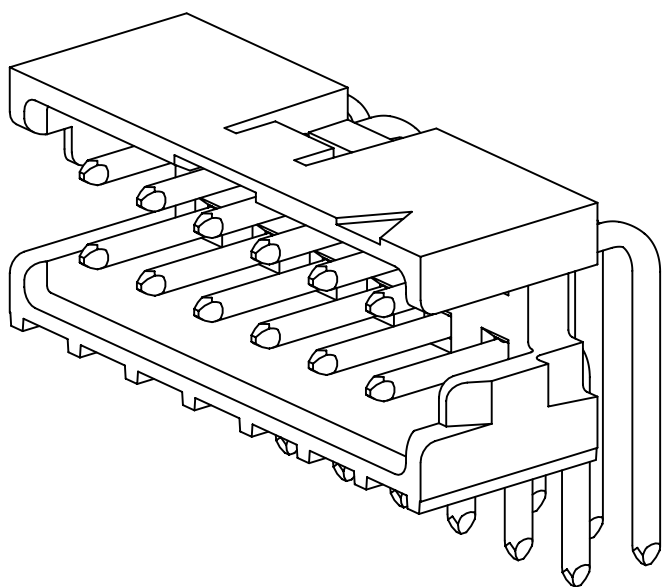
SECTION B - B



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

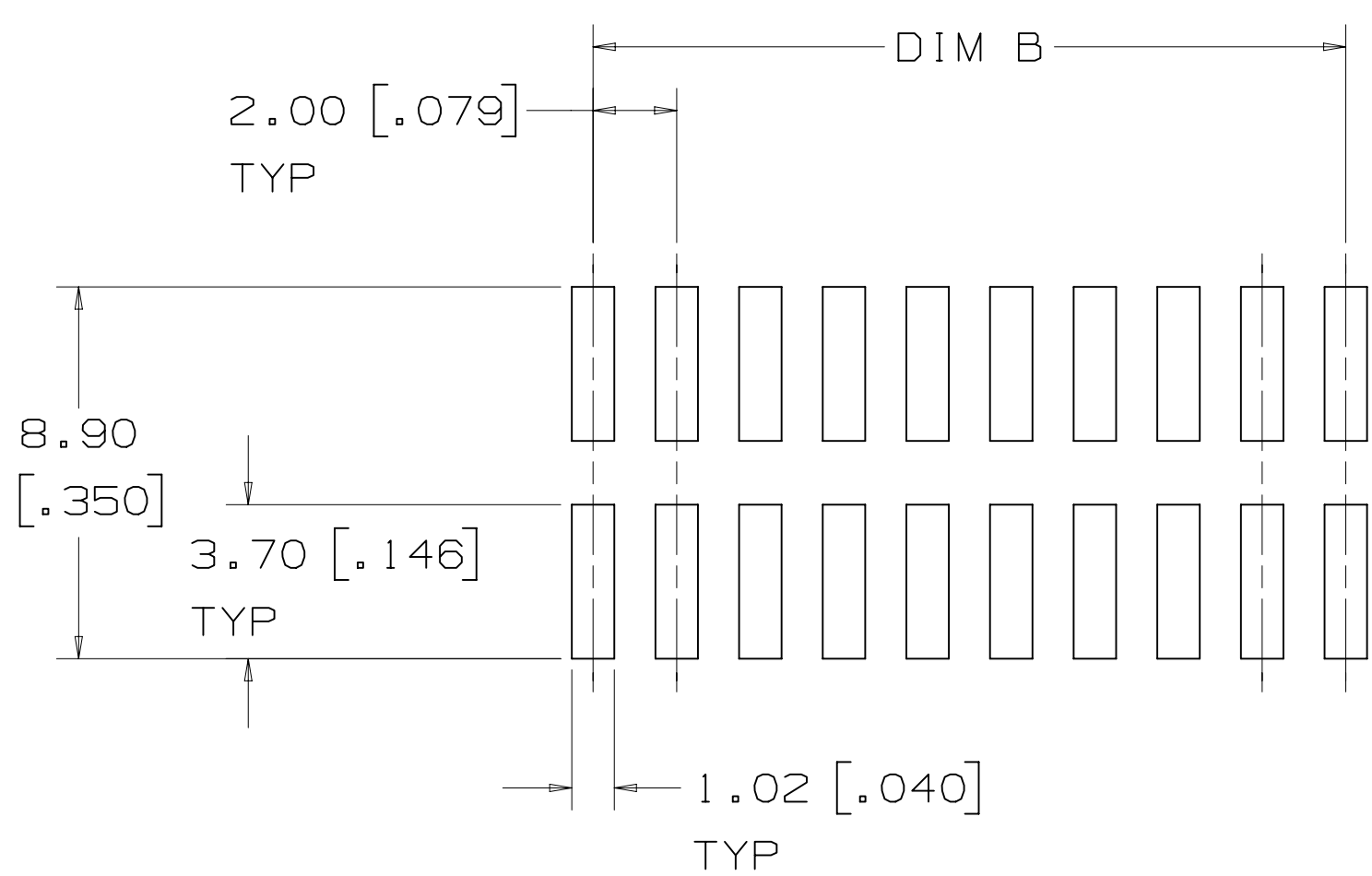
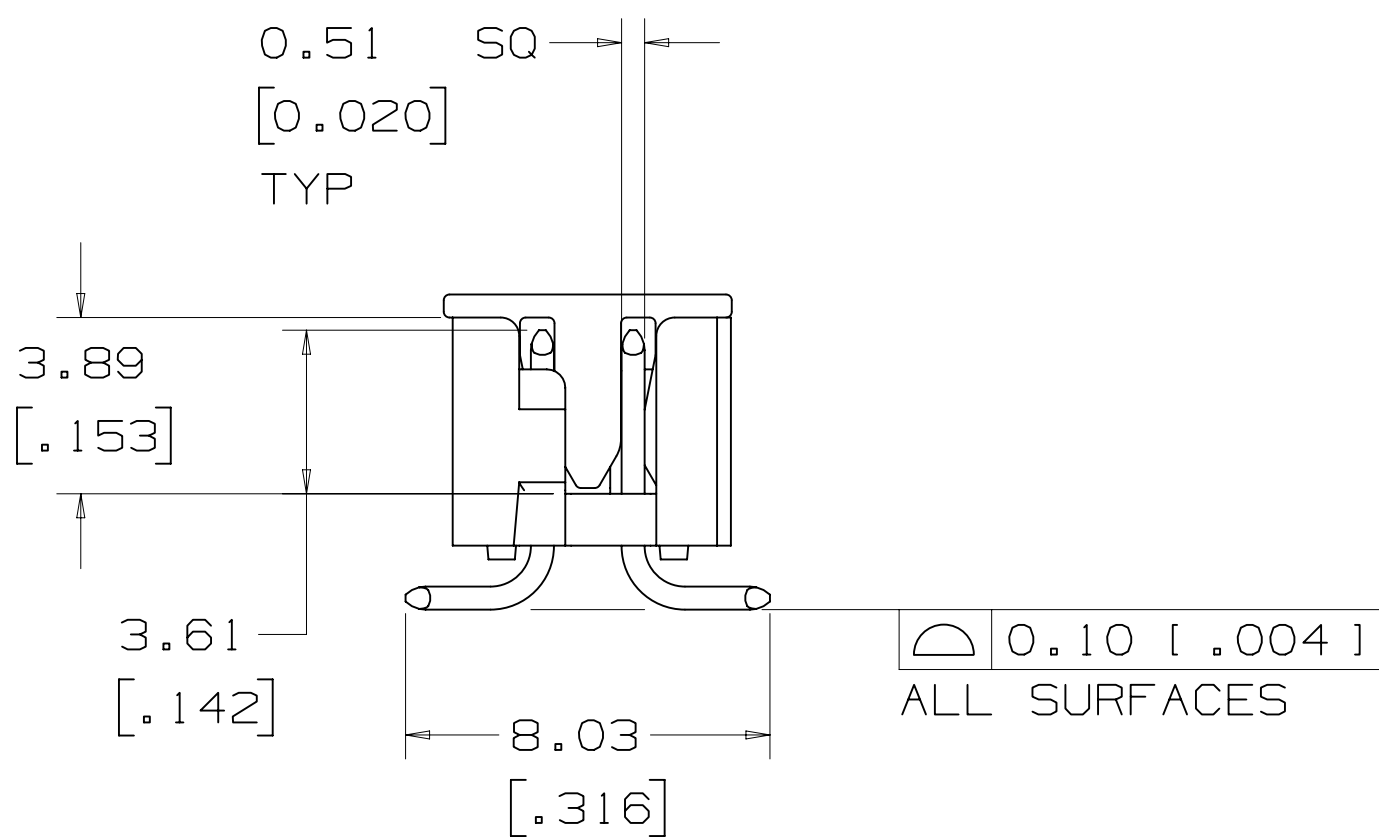
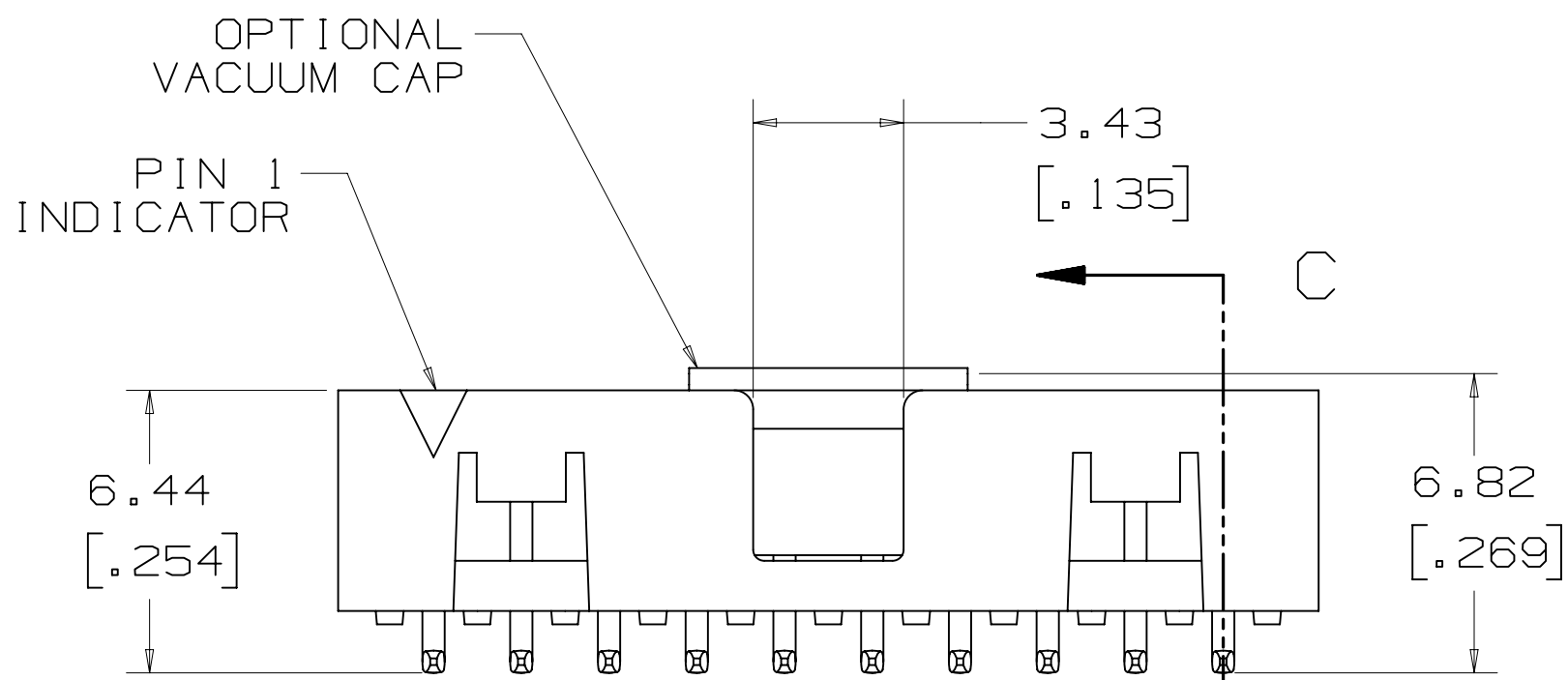
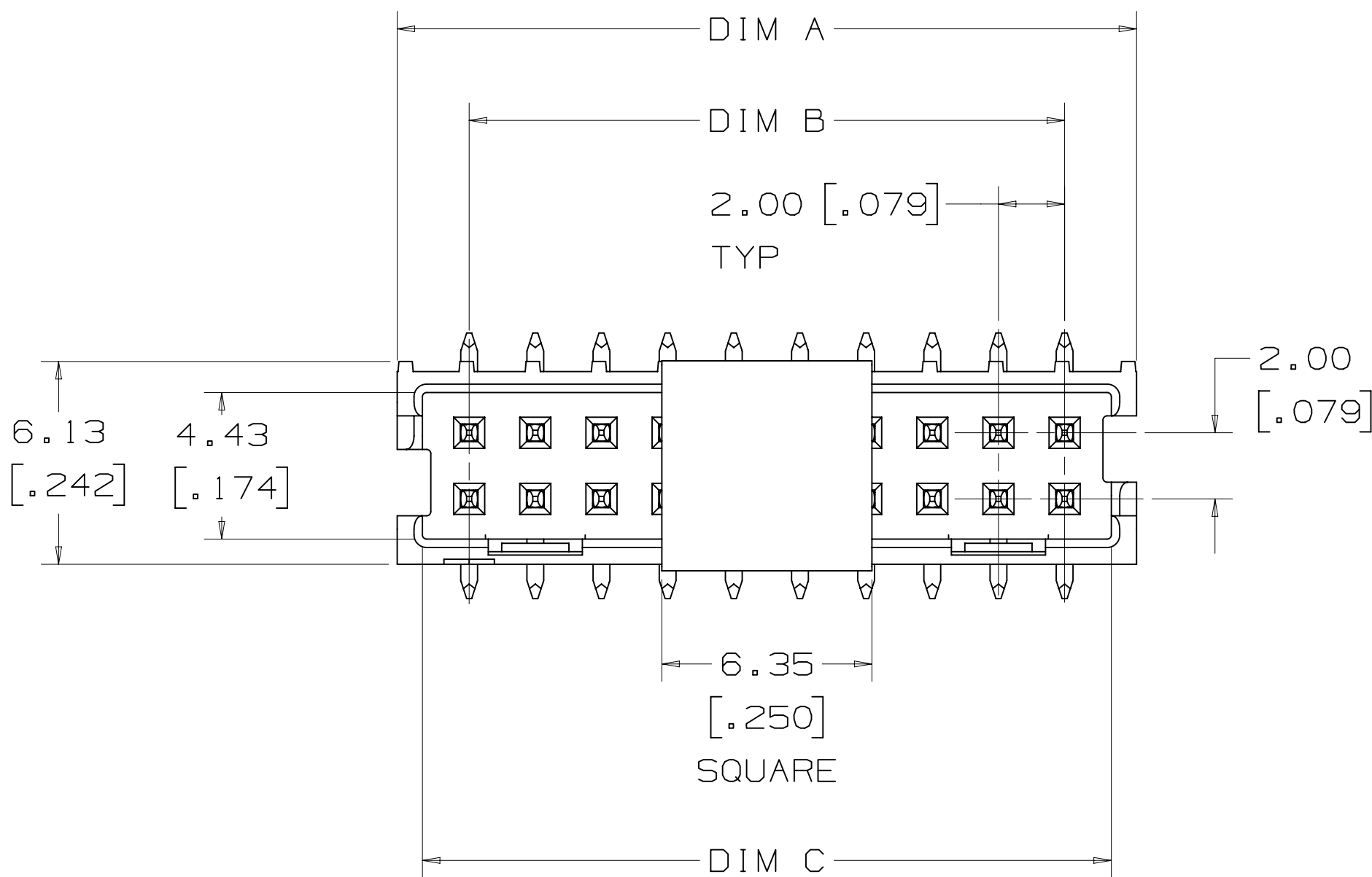
METRIC [ENGLISH]

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

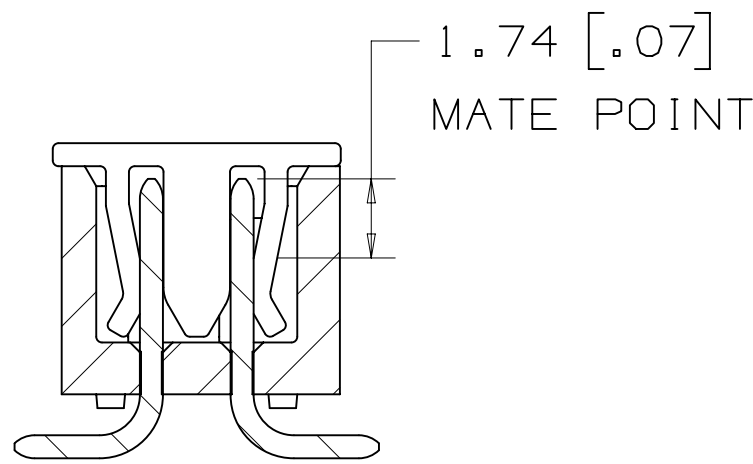
F	52868	MAR 05,2014	SJS	SAN
E	51692	DEC 16,2013	SJS	SAN
D	41488	JUN 20,2012	LDS	SAN
C	39876	APR 18,2012	LDS	SAN
B	34080	MAY 18,2011	LDS	SF
A	30741	OCT 28,2010	LDS	SF
REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
DRFT	CHKD	DATE	DATE	DATE
L. SCHMIDT		JUL 29,2010	MFG	
			APPR	
			S FELDMAN	AUG 09,2010

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
DO NOT SCALE DRAWING	SCALE 4/1	TOLERANCES EXCEPT AS NOTED	INCHES	0.00 ±	0.00 ±	0.00 ±
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 1994	MILLIMETERS	0 ±	0.00 ±	0.00 ±	0.00 ±
MAX SURFACE ROUGHNESS	125	ALL SURFACES	0.00 ±	0.00 ±	0.00 ±	0.00 ±
MARKED ONLY	ANGLES ±1°	MODEL	DET	LISTS	YES	NO
TITLE		3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES				
CAGE NUMBER		DRAWING NO.		REV.		
125		D 78-5100-2359-7		F		
MODEL		DET		LISTS		
YES		NO		SHT 2 OF 5		

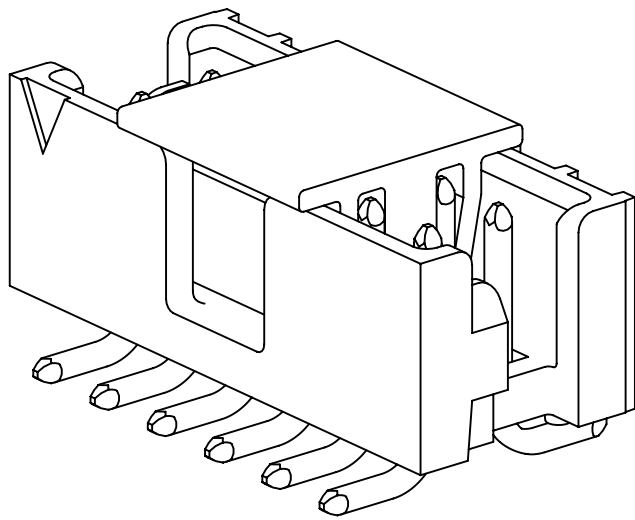
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length 3 and Extended Length 4



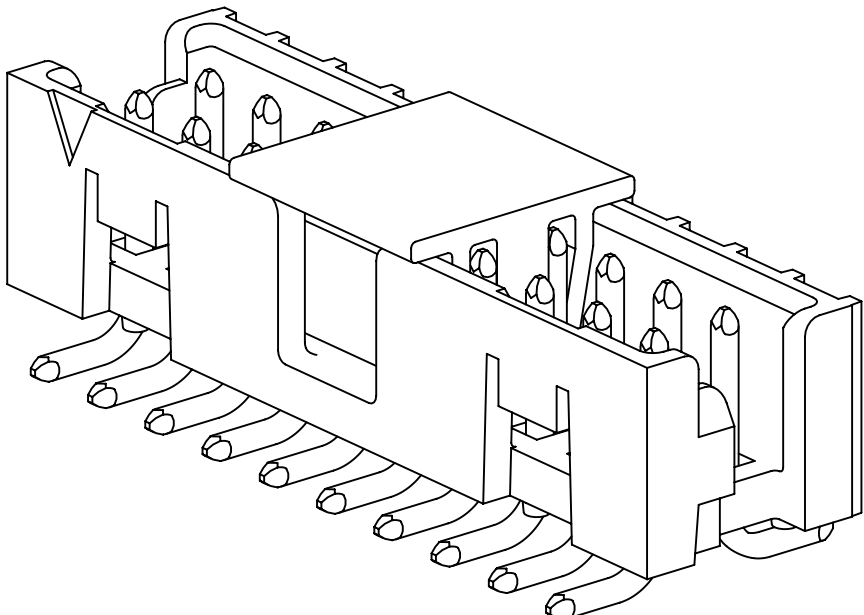
RECOMMENDED PCB PAD PATTERN
TOLERANCE = ±0.08 [0.003]



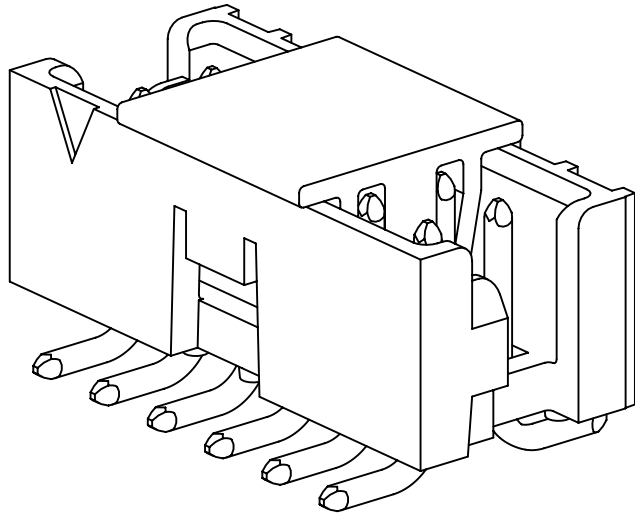
SECTION C - C



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

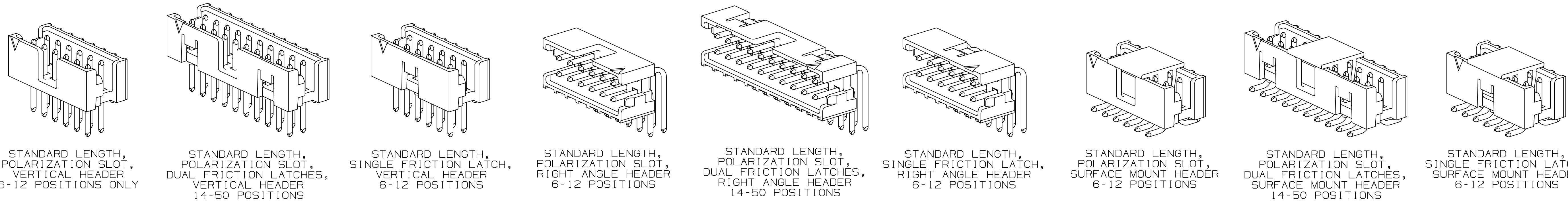
REFERENCE TABLE ON SHEET 5
FOR AVAILABLE POSITIONS

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	
MARKED ONLY		ANGLES ±1°		MODEL		DET		SHT 3 OF 5	

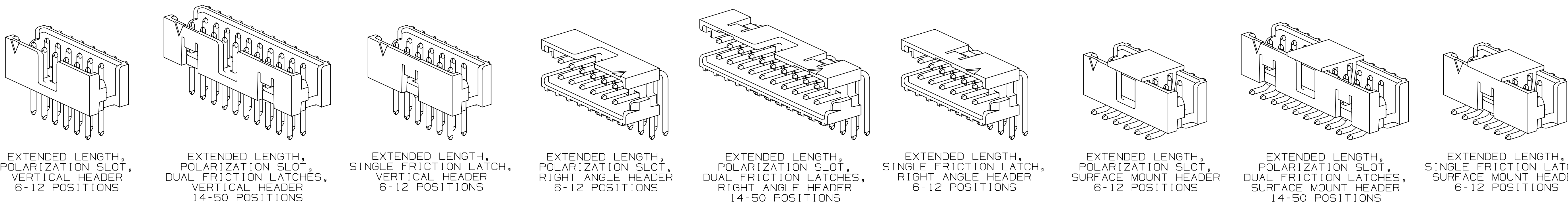
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length 3

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]
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)

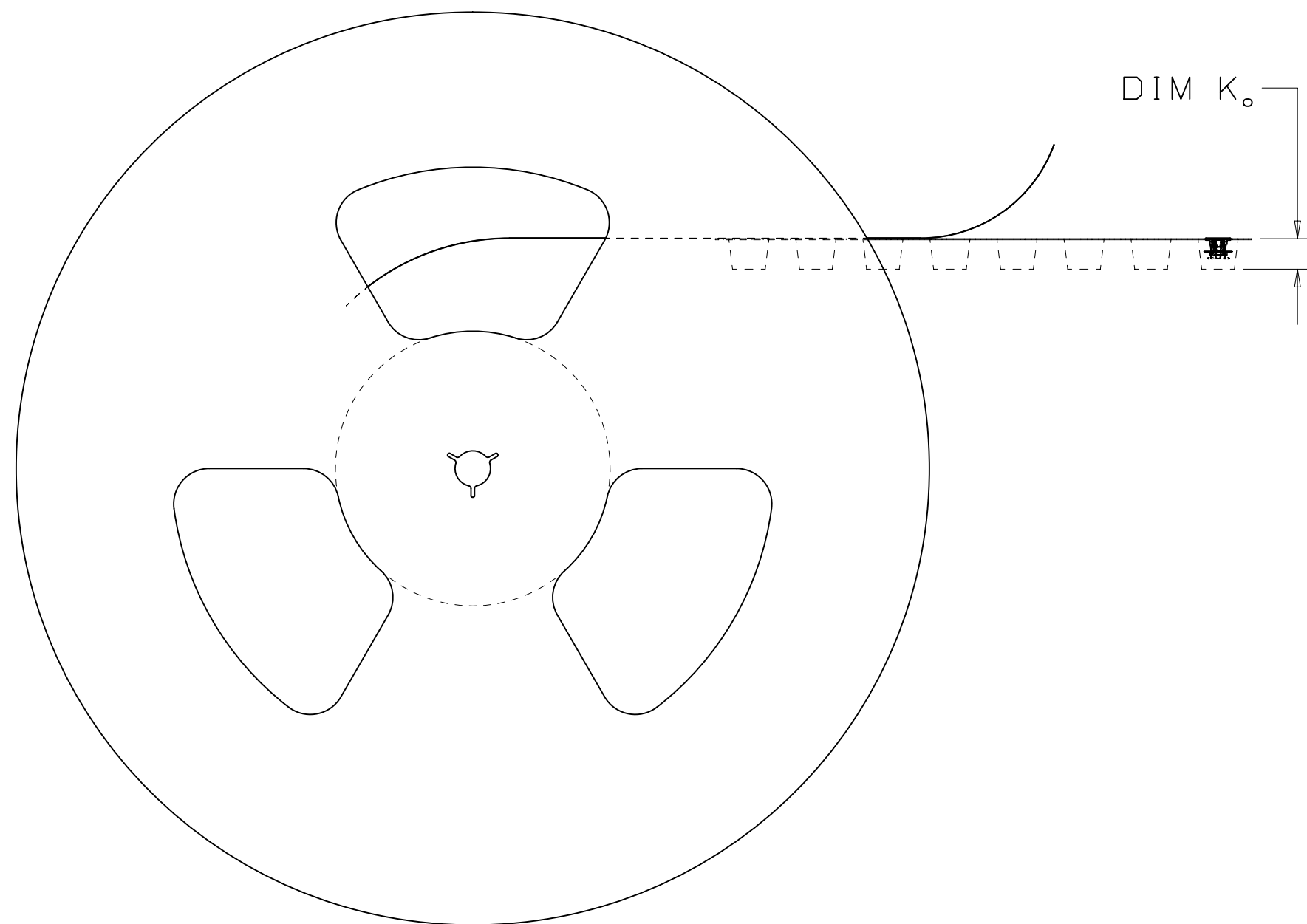
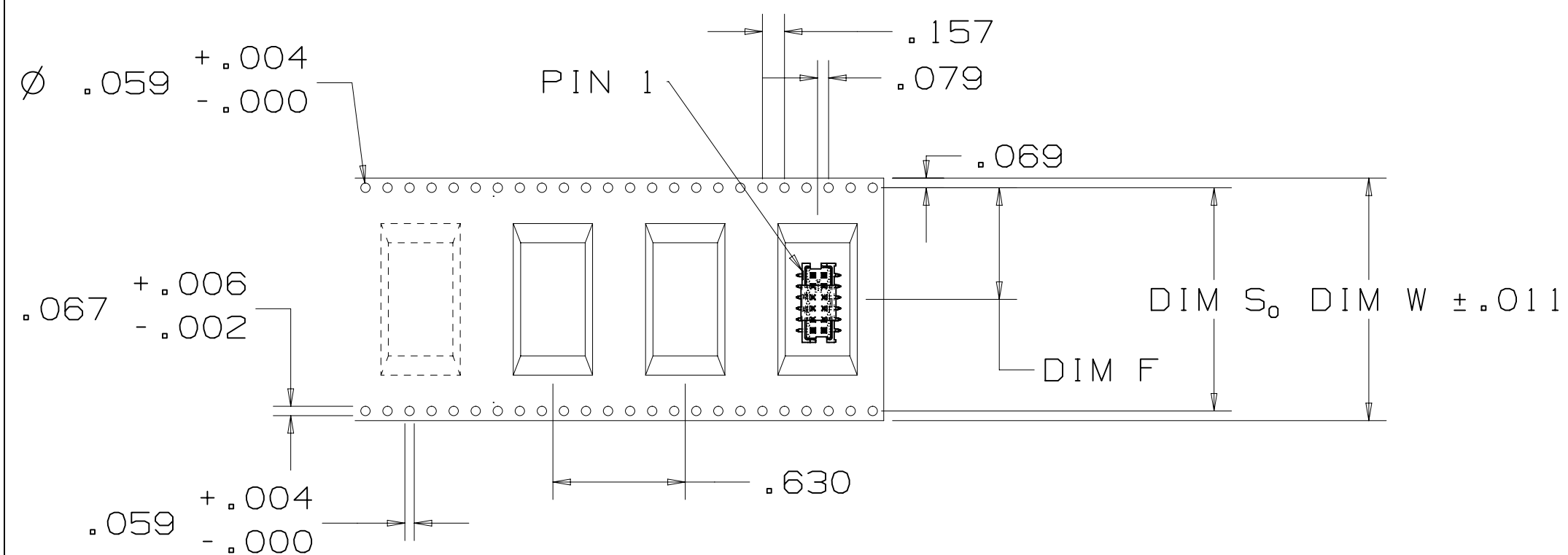
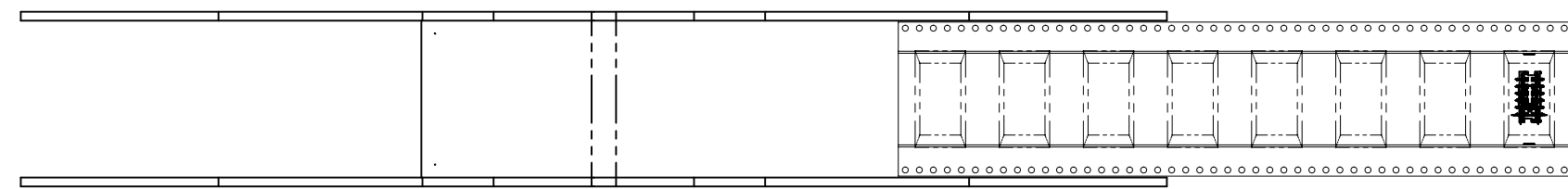
METRIC [ENGLISH]

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°				
3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES				
CAGE NUMBER	SIZE	DRAWING NO.	REV.	
125	D	78-5100-2359-7	F	
MODEL	DET	LISTS	YES	NO
			SHT	4 OF 5

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

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)



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
ADDEND CODES				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 1 1		TOLERANCES EXCEPT AS NOTED		3M 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 the prior written permission of 3M. All rights reserved.			
THIRD ANGLE PROJECTION		INCHES		MILLIMETERS		TITLE 3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES			
MAX SURFACE ROUGHNESS		ANGLES ± 1°		CAGE NUMBER		SIZE		DRAWING NO.	
125 ✓		☐ ALL SURFACES ☒ MARKED ONLY		.00 ± .013 .000 ±		D		78-5100-2359-7	
				MODEL		DET.		REV.	
						LISTS		YES ☒ NO ☐	
						SHT		5 OF 5	

METRIC [ENGLISH]