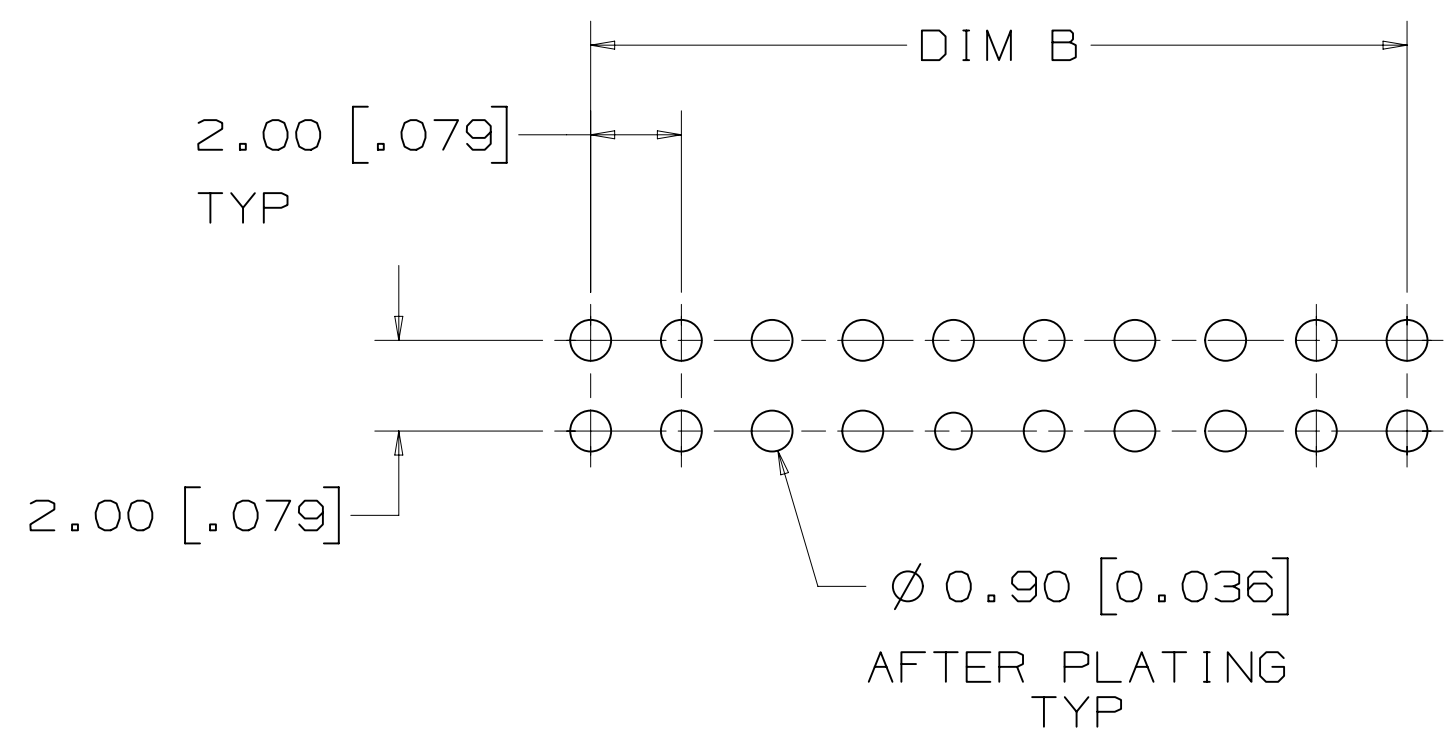
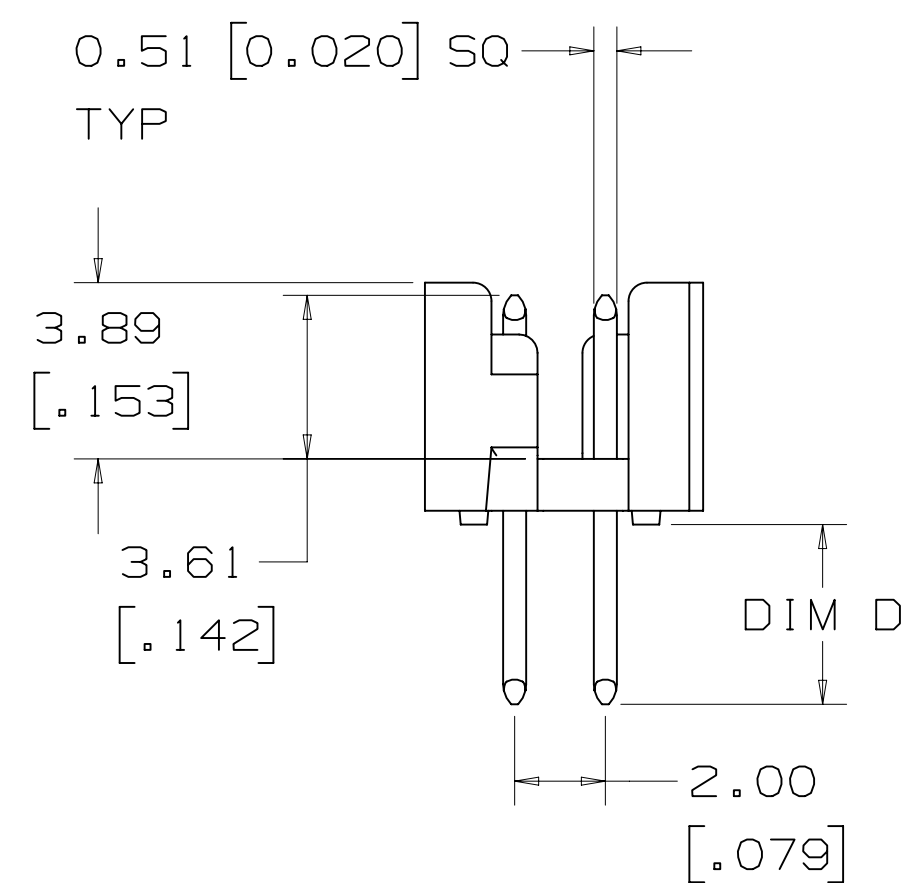
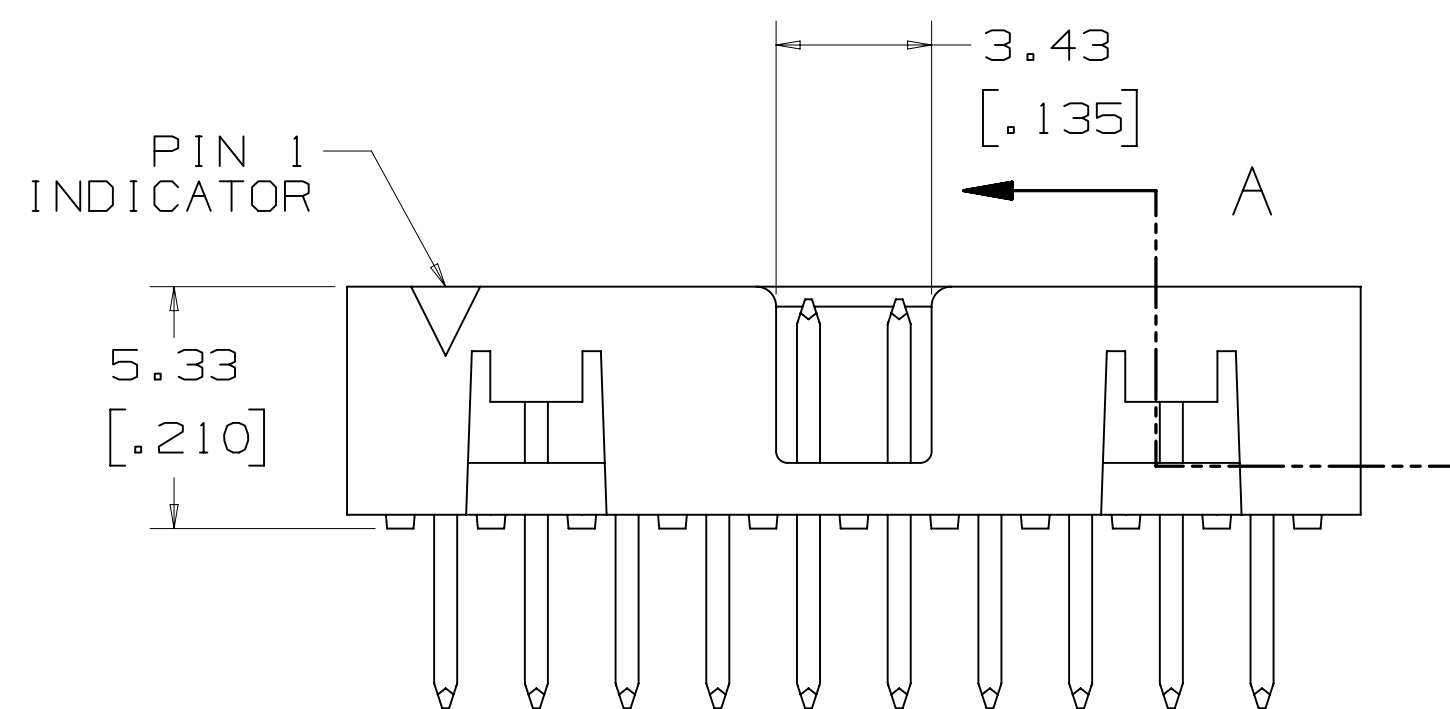
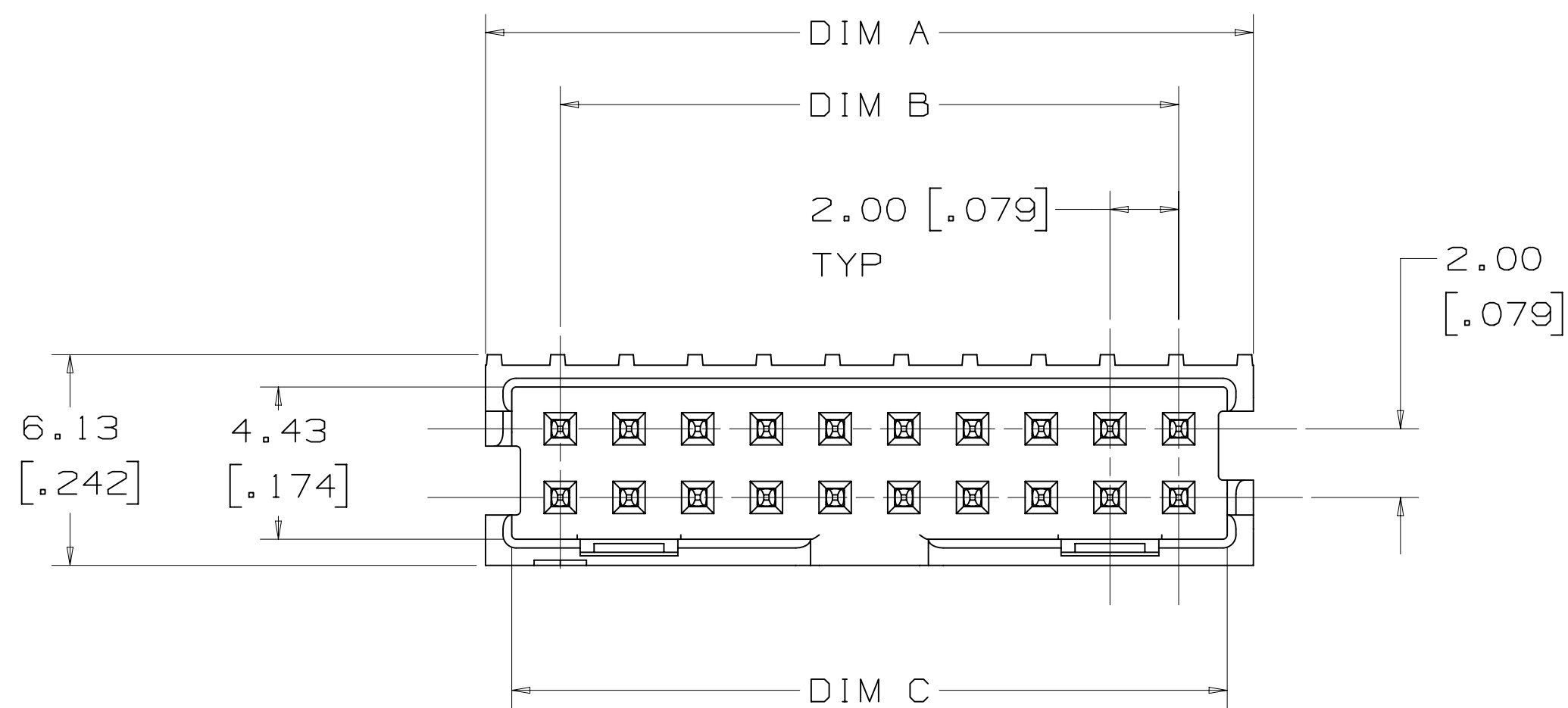
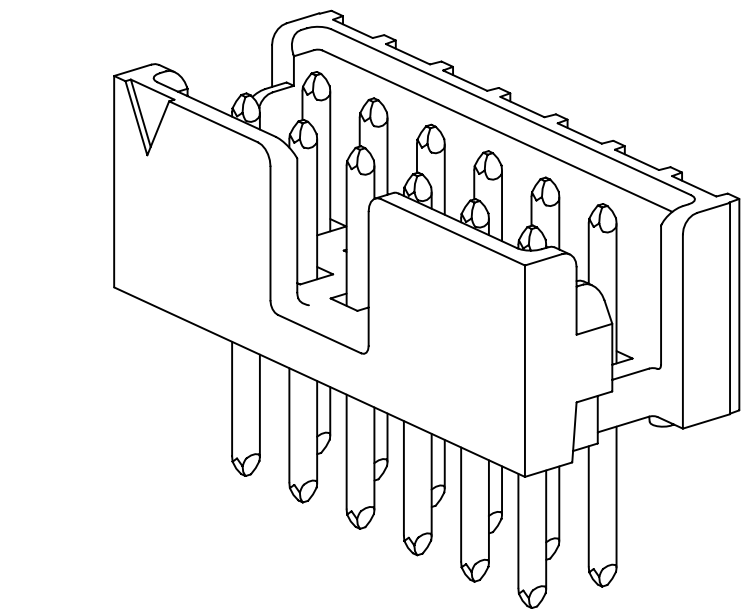
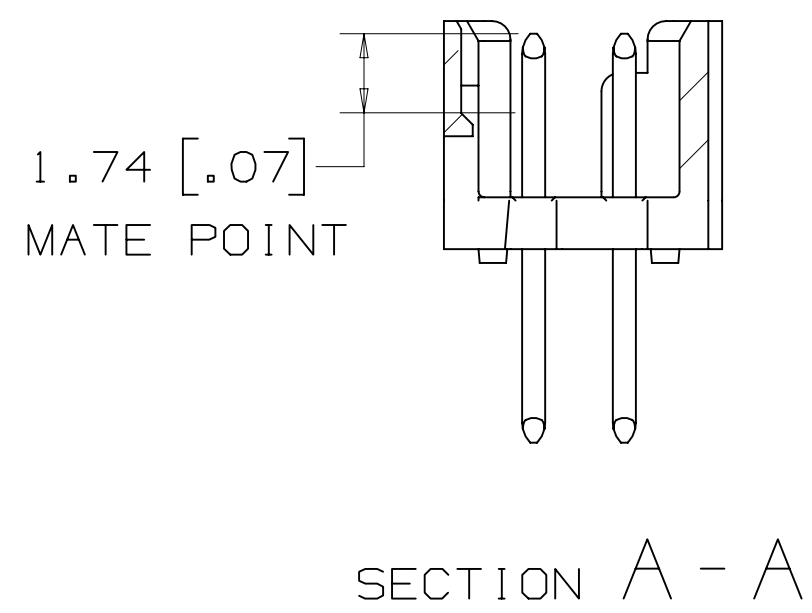


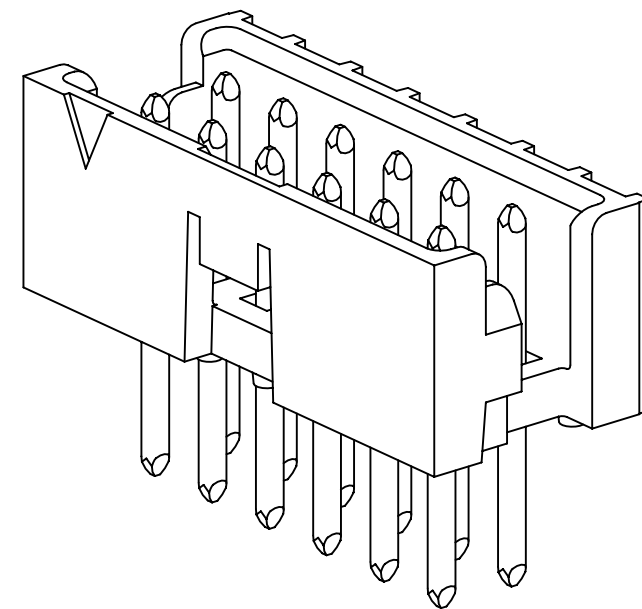
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length and Extended Length



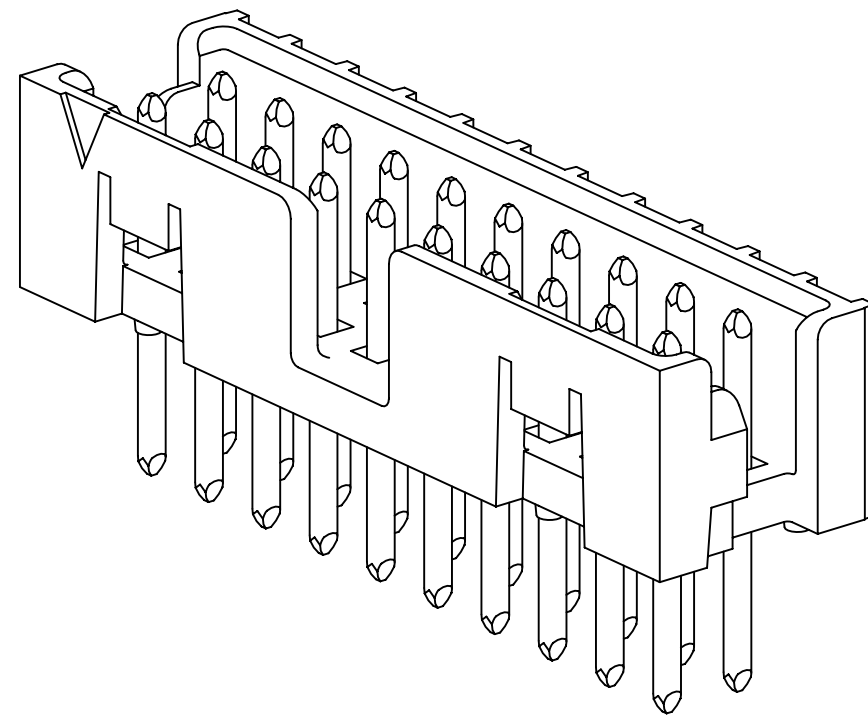
RECOMMENDED PCB HOLE PATTERN
TOLERANCE = 0.05 [.002]



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

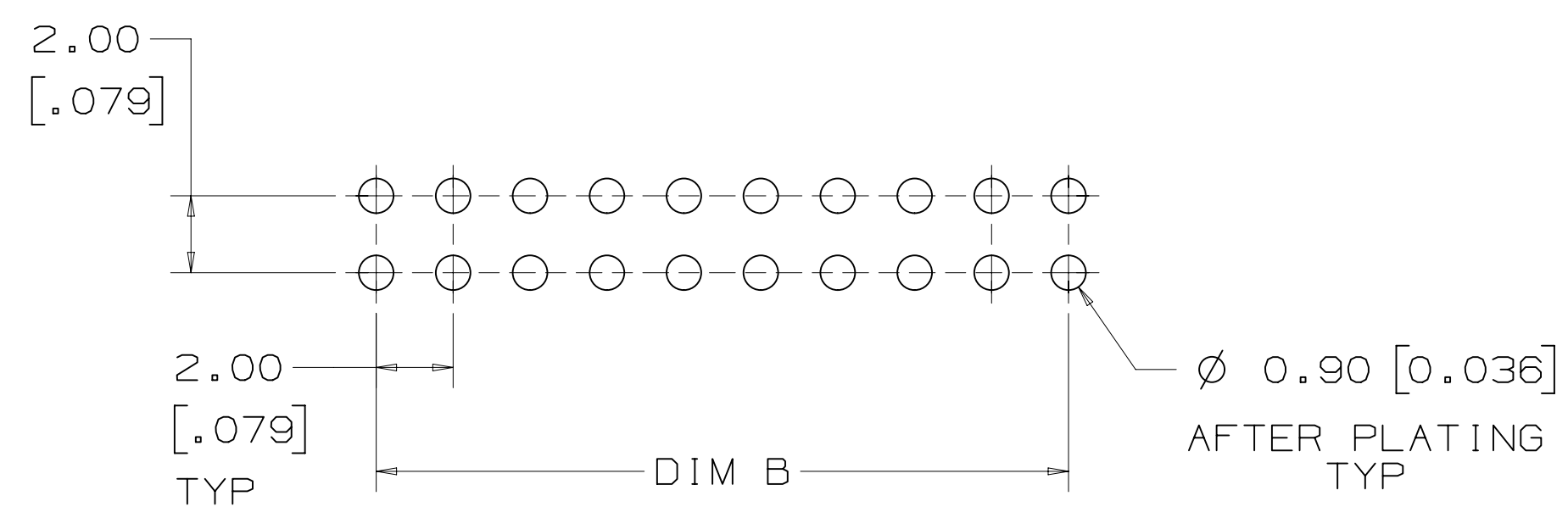
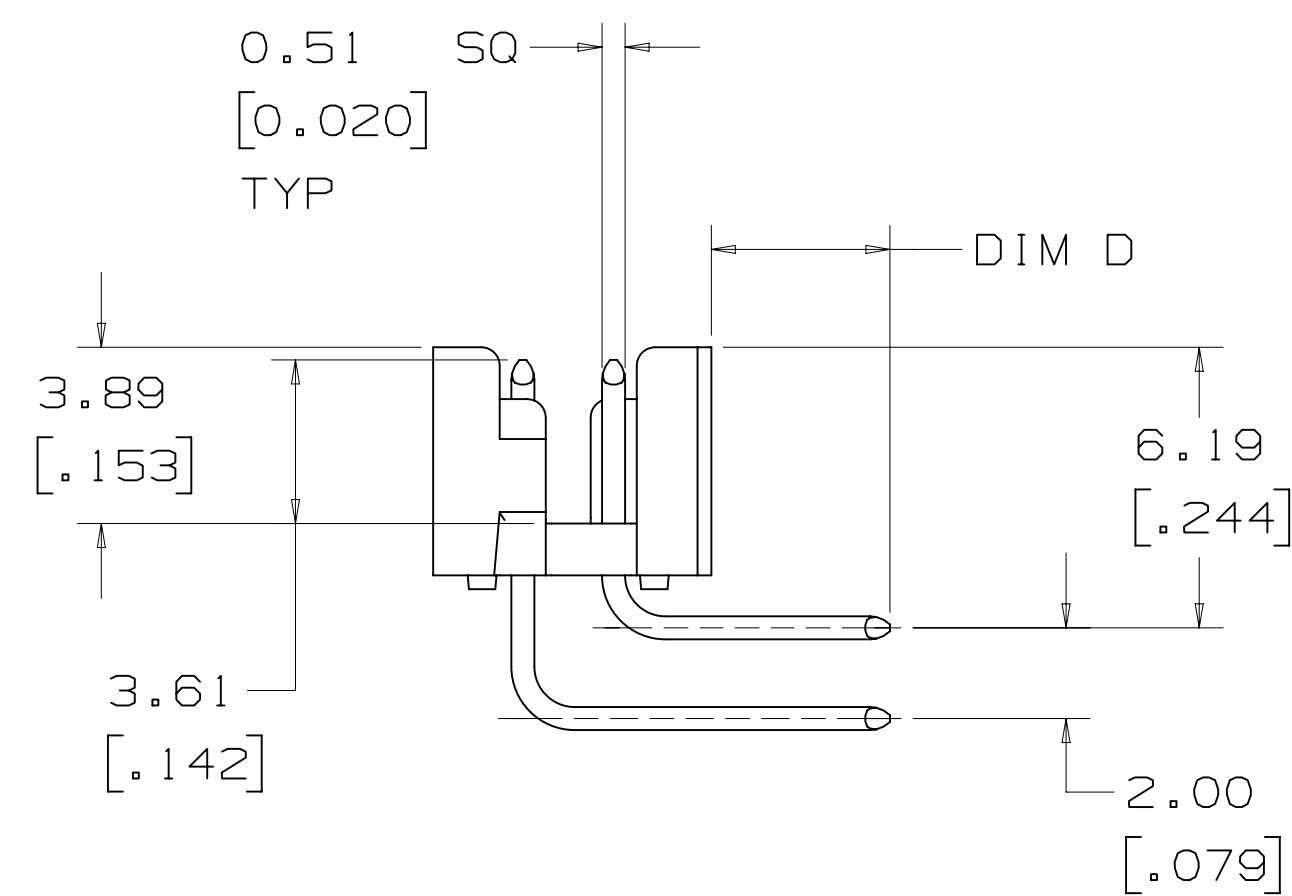
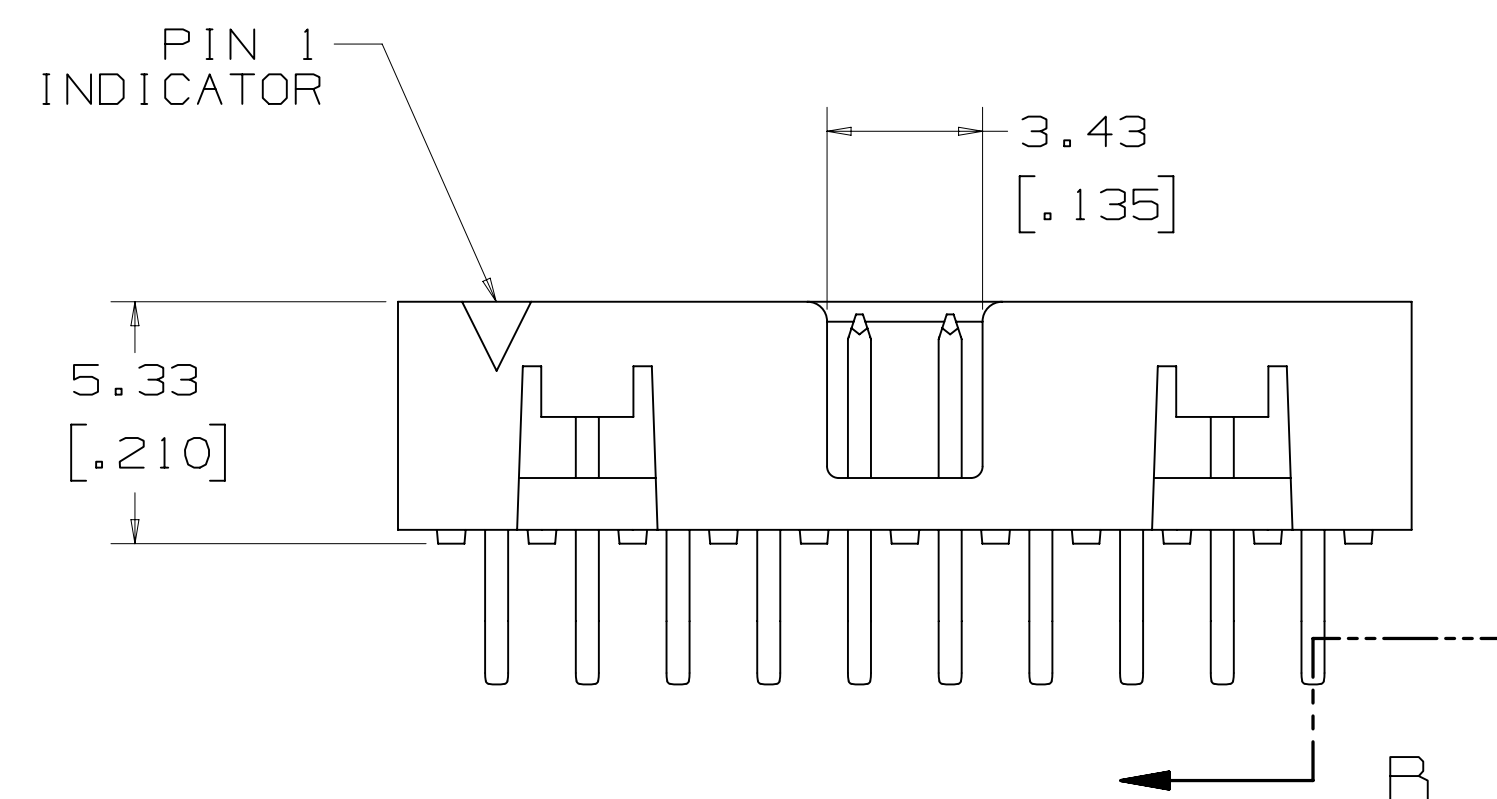
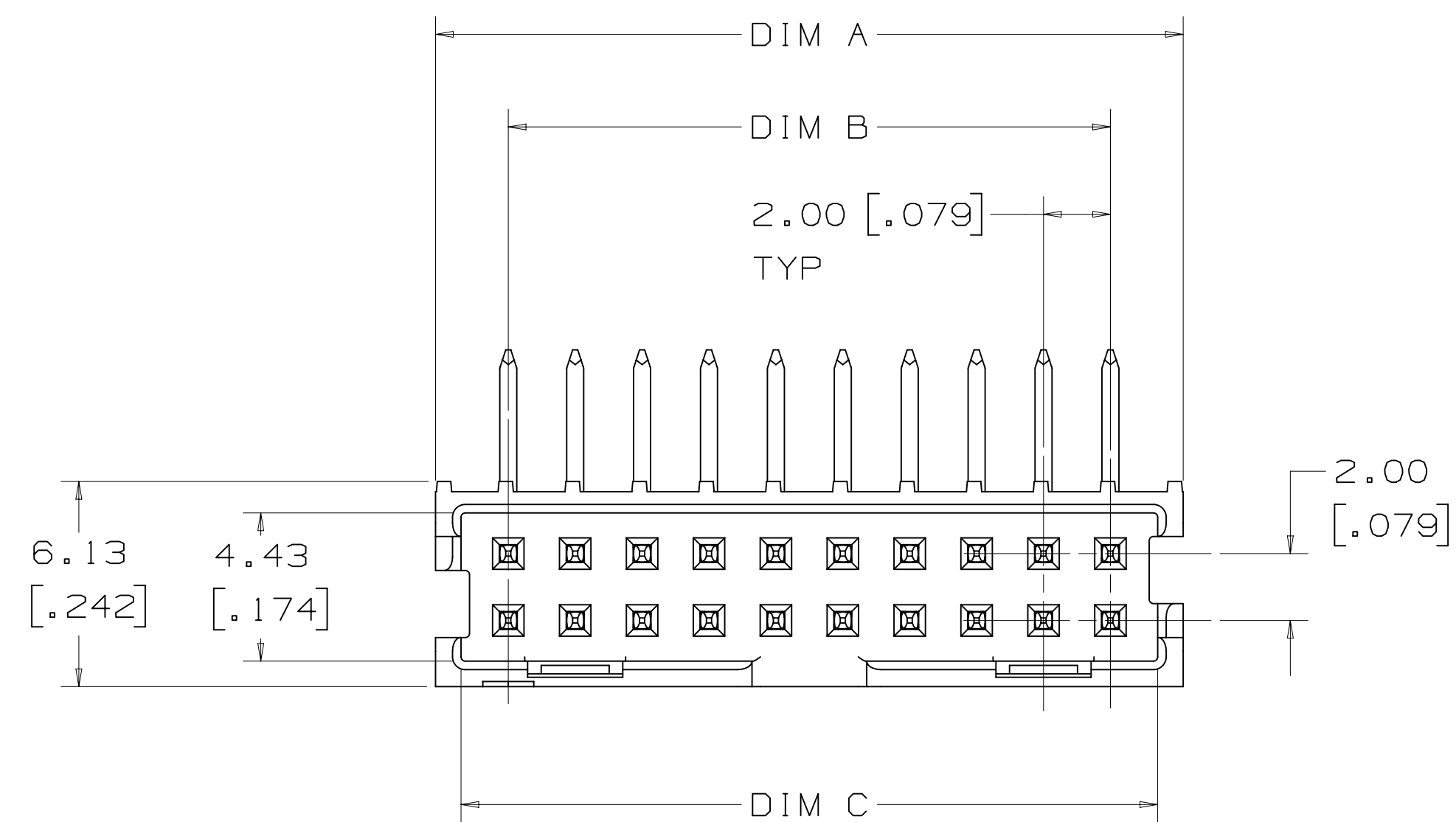
F	52868	MAR 05,2014 ADD TAPE & REEL, MATE PT. VOLTAGE RATING	SJS	SAN
E	51692	DEC 16,2013 ADD UL SYMBOLS	SJS	SAN
D	41488	JUN 20,2012 REVISED CURRENT RATING IN PERFORMANCE TABLE	LDS	SAN
C	39876	APR 18,2012 REMOVED 32 POS FROM TABLE ON SHT 5	LDS	SAN
B	34080	MAY 18,2011 ADDED 6.19 DIM ON SHT 2; REVISED & 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											
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				6				TOLERANCES EXCEPT AS NOTED											
				1																			
				INCHES																			
THIRD ANGLE PROJECTION				.00 ±																			
INTERPRET PER ASME Y14.5 - 1994				.000 ±																			
MAX SURFACE ROUGHNESS				MILLIMETERS																			
125				.00 ± 0.13																			
☐ ALL SURFACES				.000 ±																			
☒ MARKED ONLY				ANGLES ± 1°																			
				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 3M permission or used or disclosed other than for 3M authorized purposes. All rights reserved.											
				TITLE				3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES															
				CAGE NUMBER				SIZE				DRAWING NO.				REV.							
				D				78-5100-2359-7				F											
				MODEL				DET.				LISTS				YES ☐ NO ☒				SHT 1 OF 5			

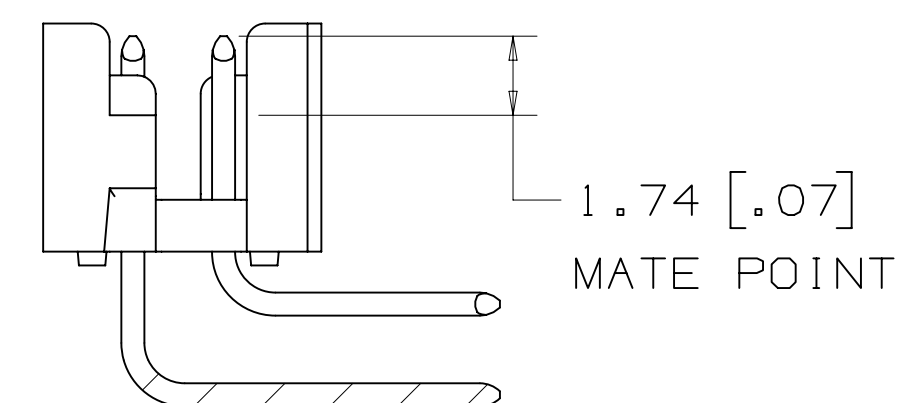
METRIC [ENGLISH]

cUL[®]us
UL FILE NO: E68080

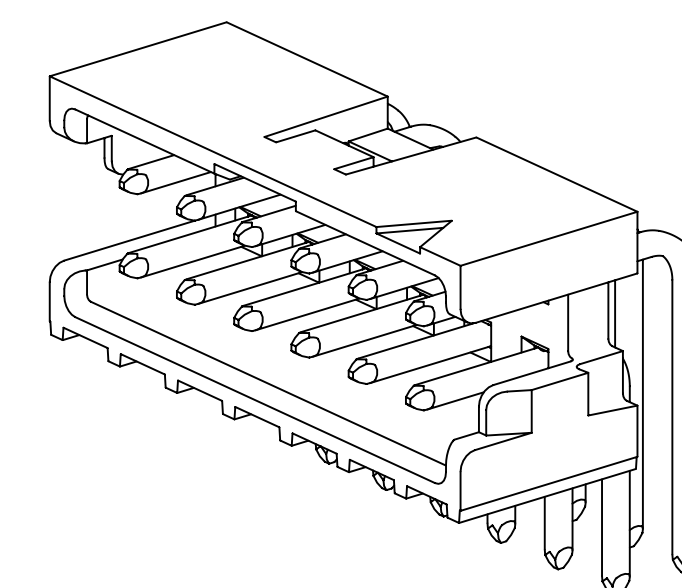
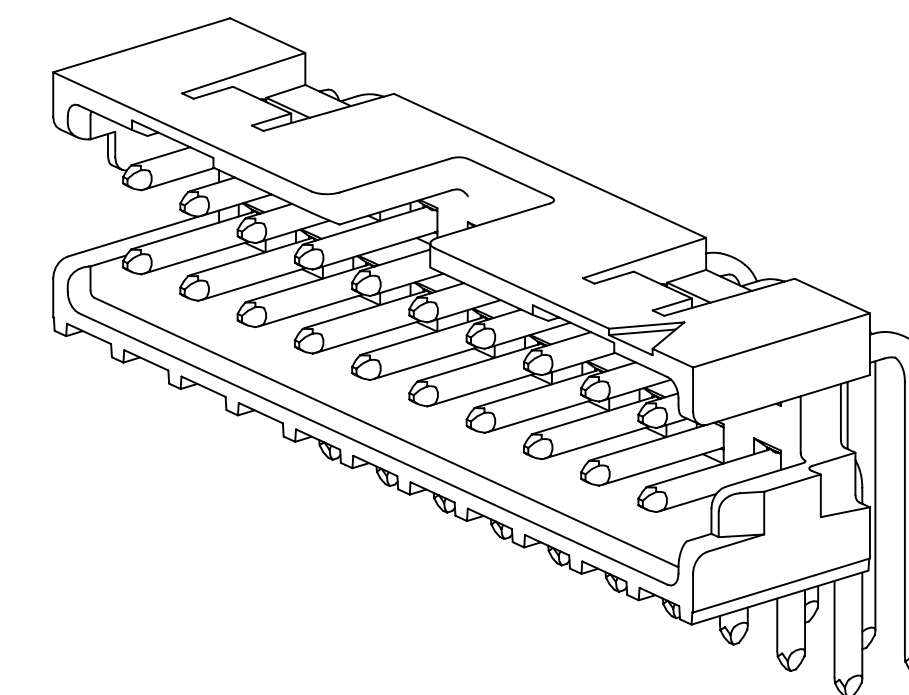
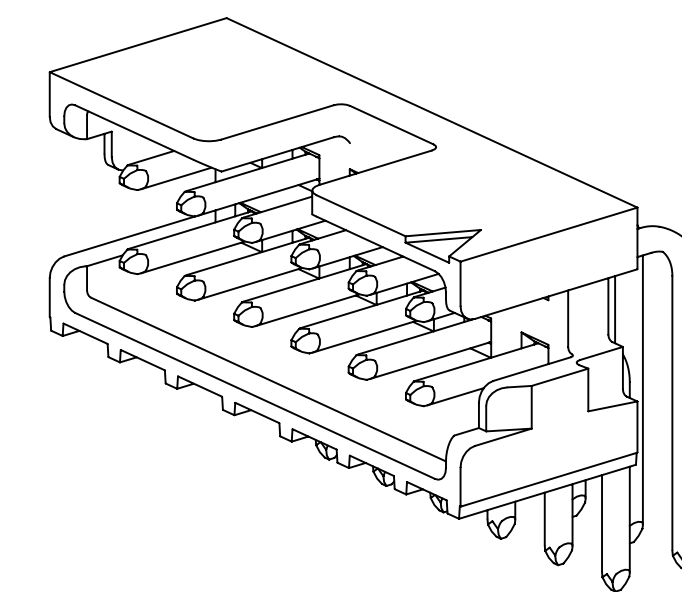
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length 3 and Extended Length 4



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



SECTION B - B



F	52686	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
REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
DRFT	L. SCHMIDT	DATE JUL 29,2010	MRG	DATE
CHKD		DATE	APPROV S FELDMAN	DATE AUG 09,2010

3M 3M Center
St. Paul
MN 5514

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TITLE

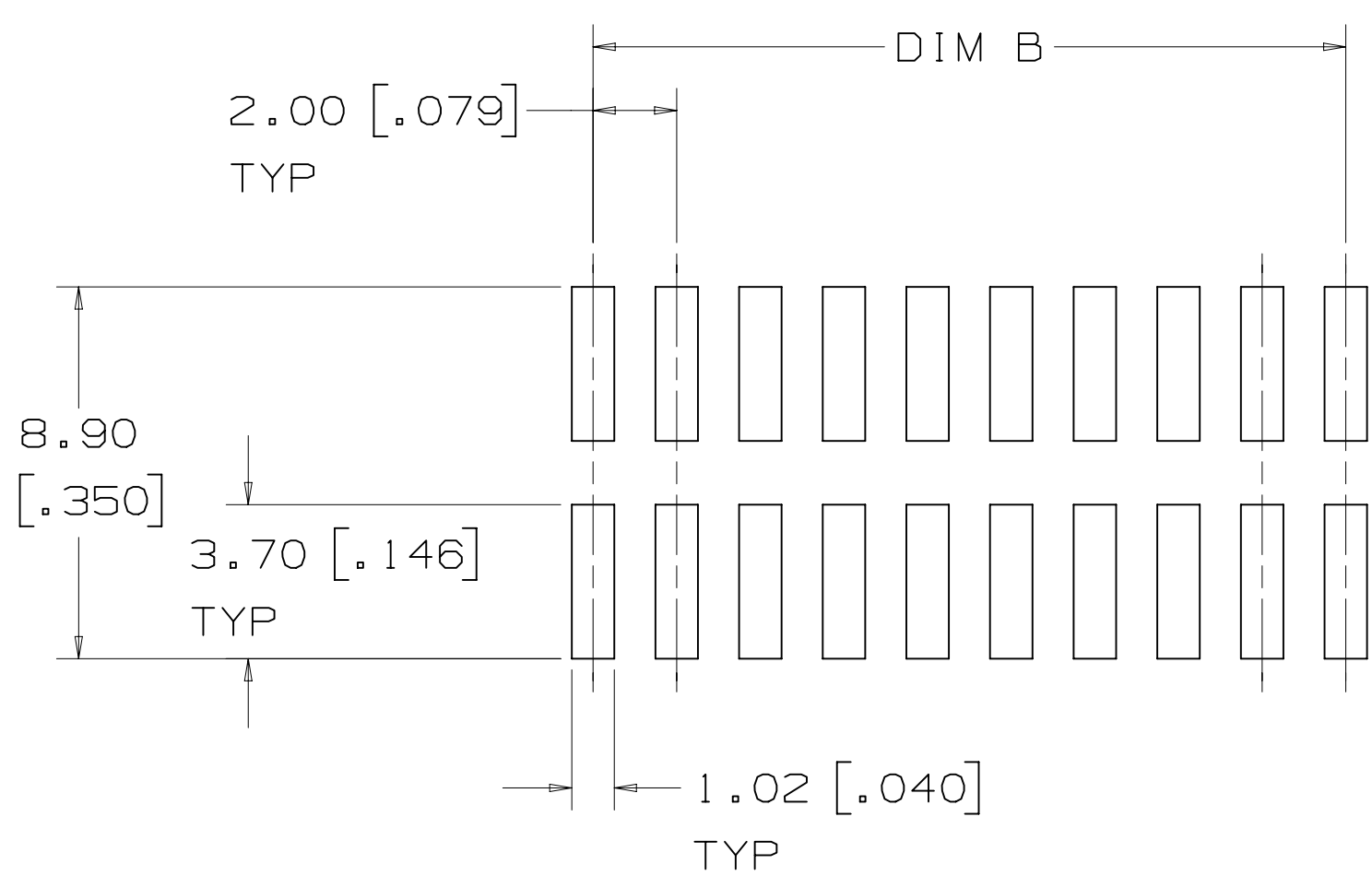
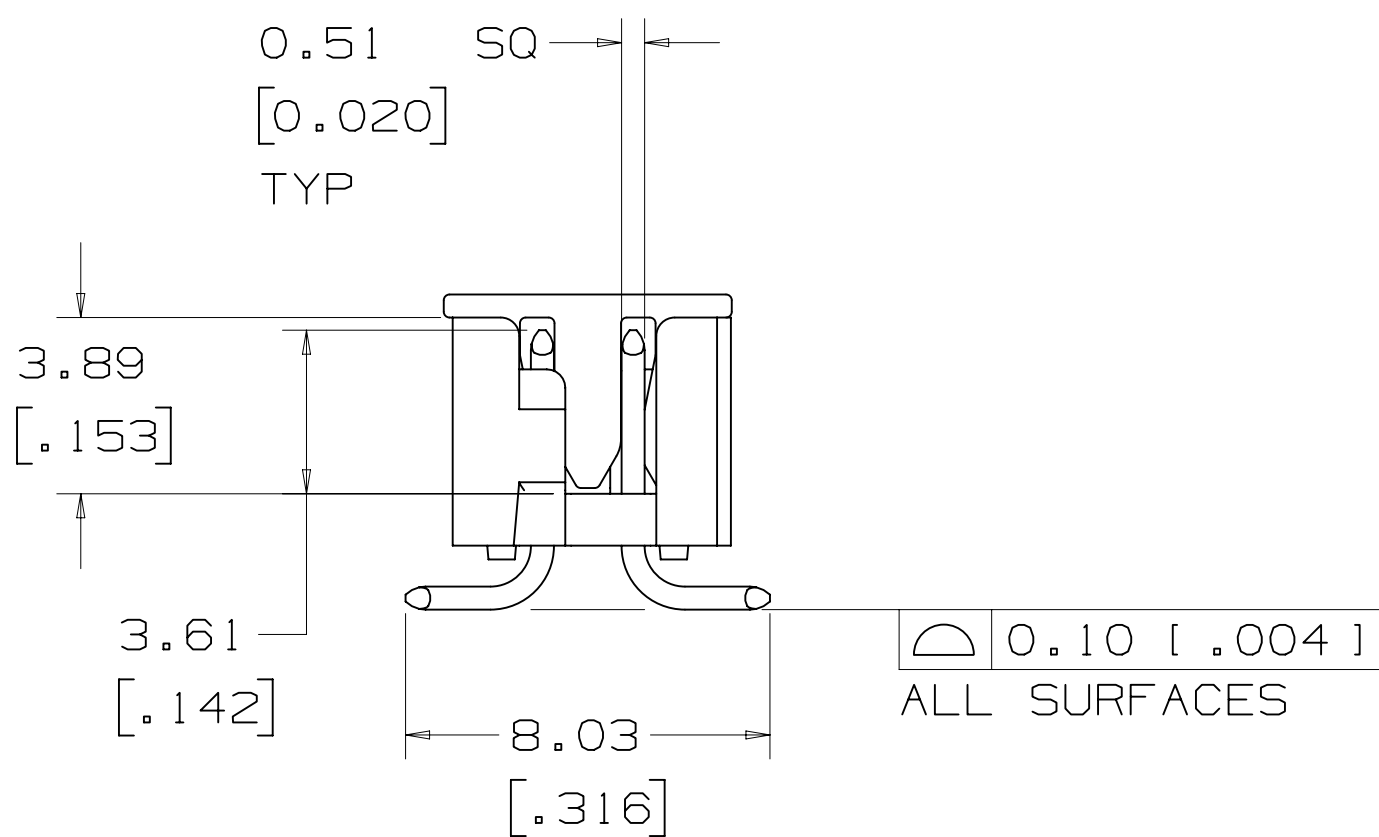
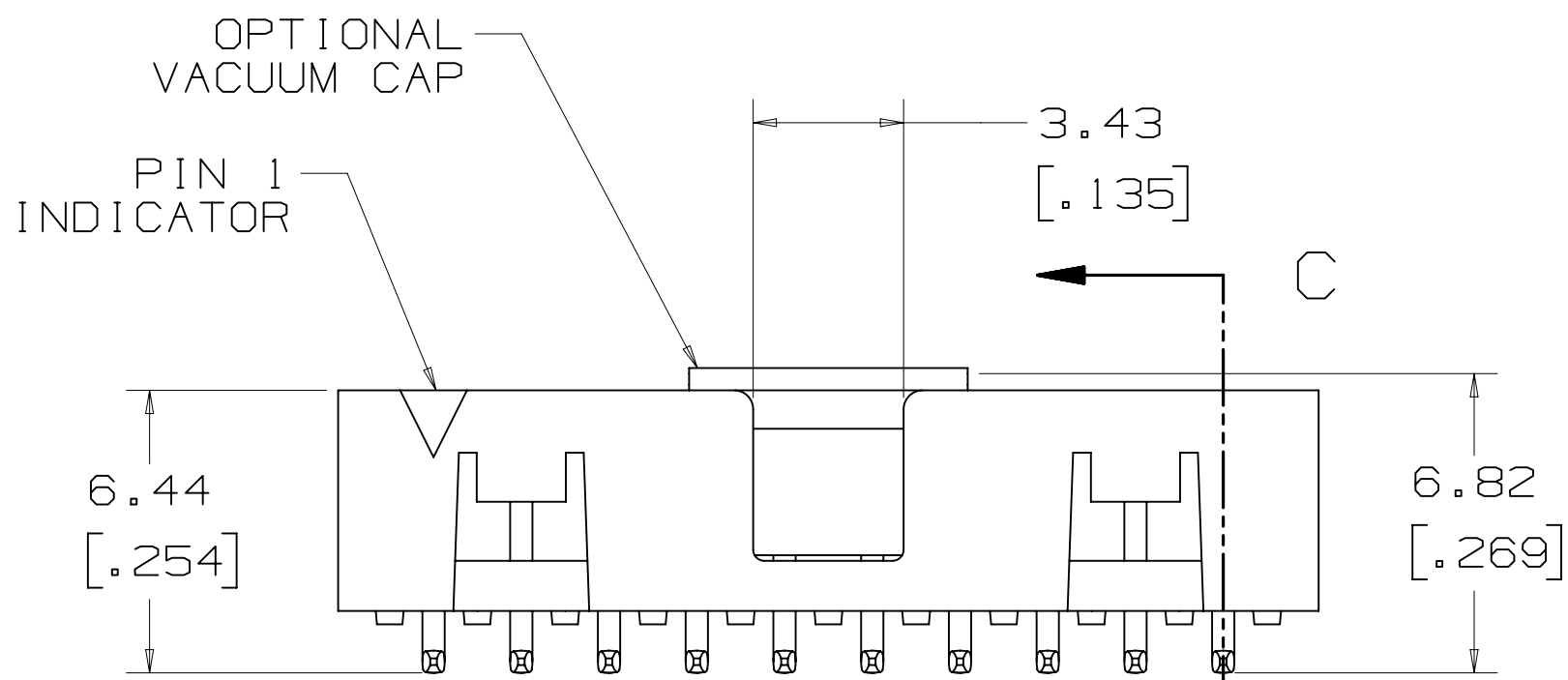
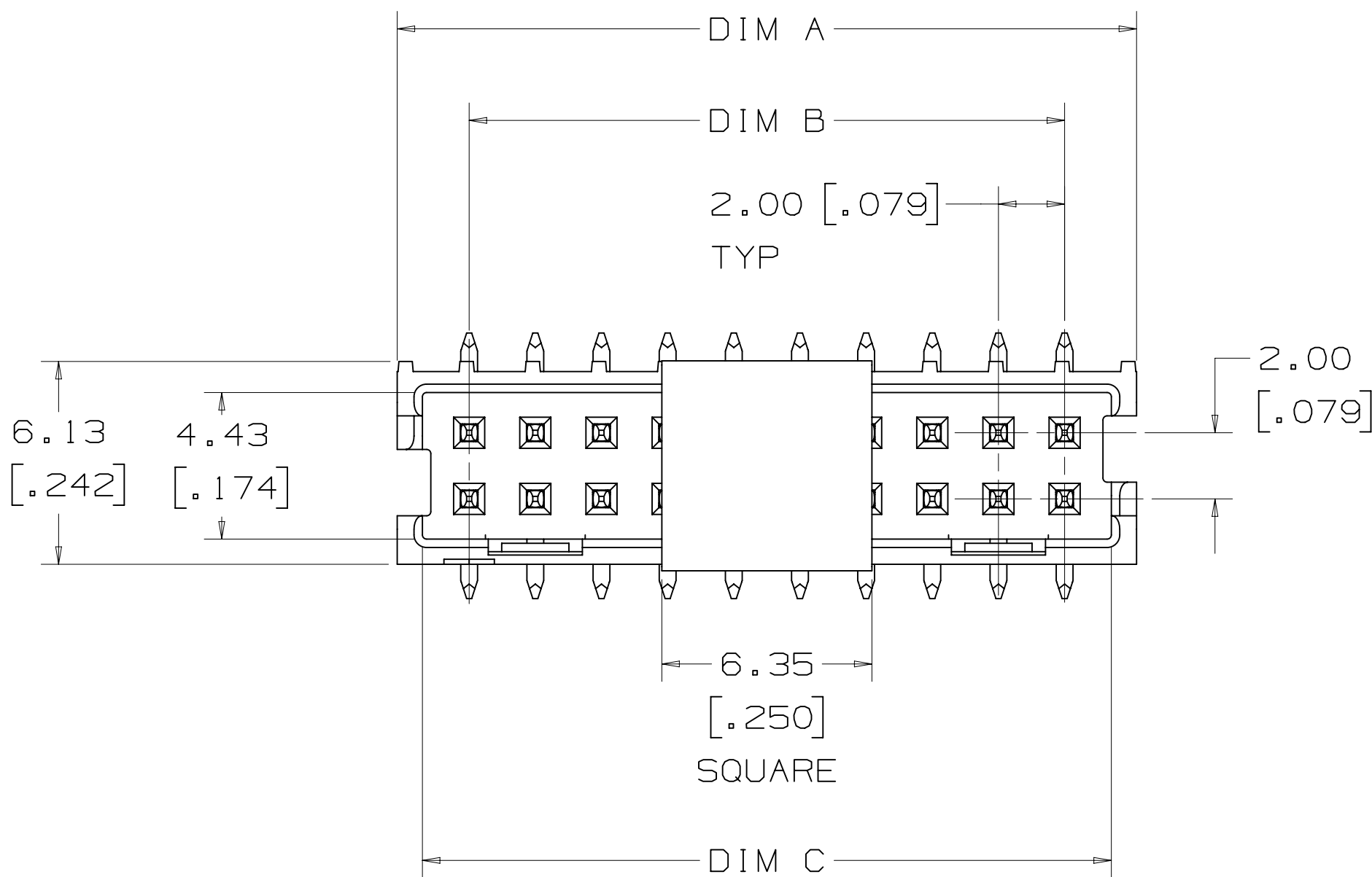
3M SHROUDED BOARD
MOUNT HEADER 2 MM X 2
MM PITCH 159 SERIES

CAGE NUMBER	SIZE D	DRAWING NO. 78-5100-2359-7	REV. F
MODEL		DET. LISTS ☐ YES ☒ NO	SHT 2 OF 5

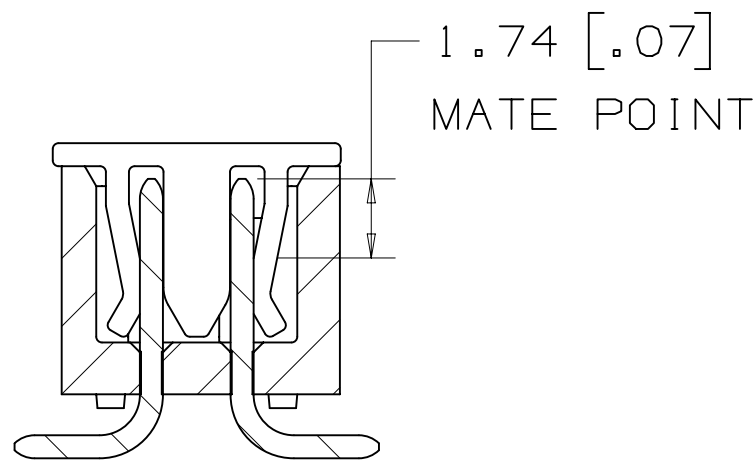
REFERENCE TABLE ON SHEET 5
FOR AVAILABLE POSITIONS AND
SOLDER TAIL LENGTHS

METRIC [ENGLISH]

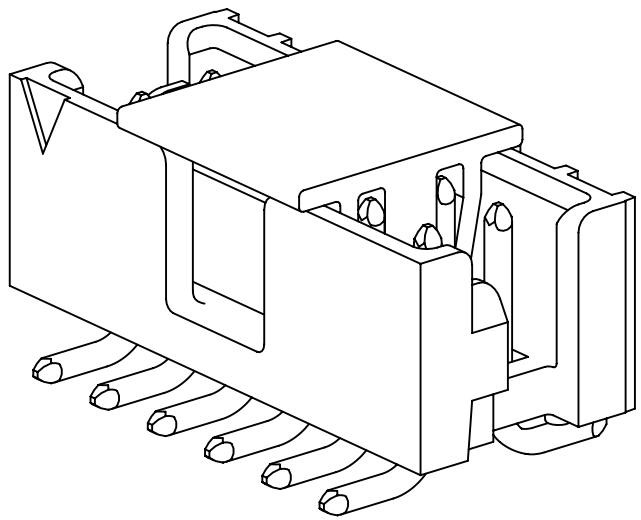
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length [3] and Extended Length [4]



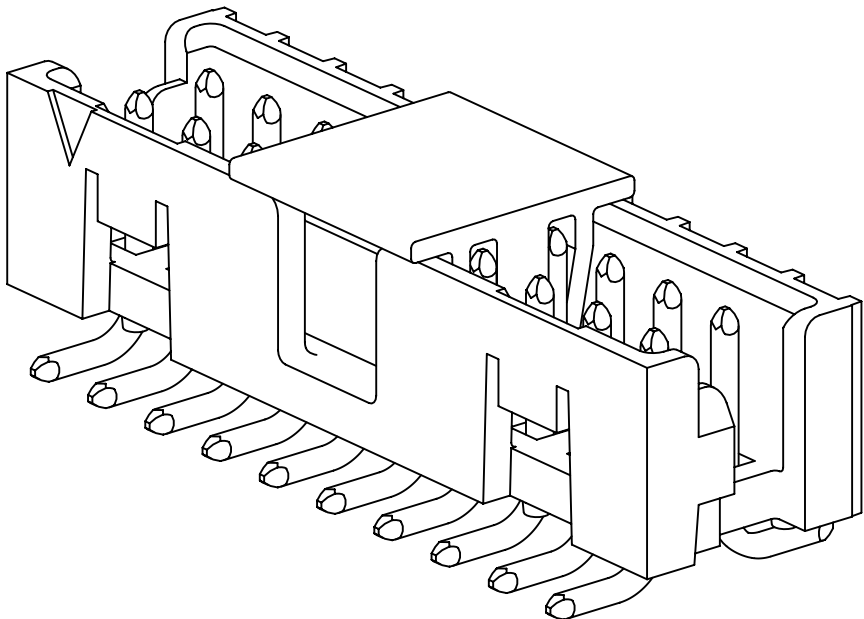
RECOMMENDED PCB PAD PATTERN
TOLERANCE = ±0.08 [0.003]



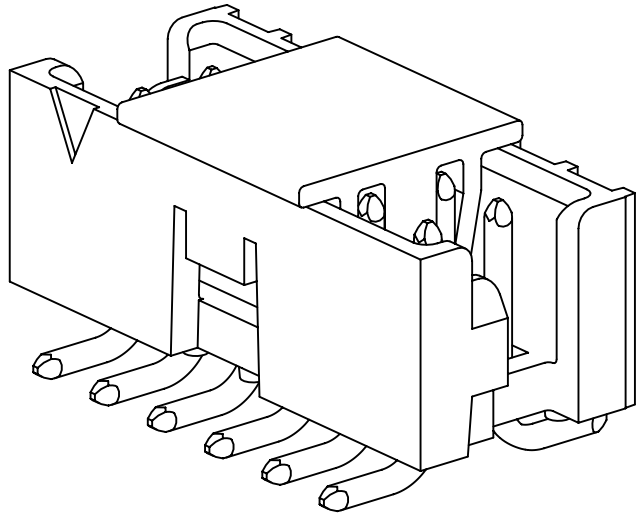
SECTION C - C



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

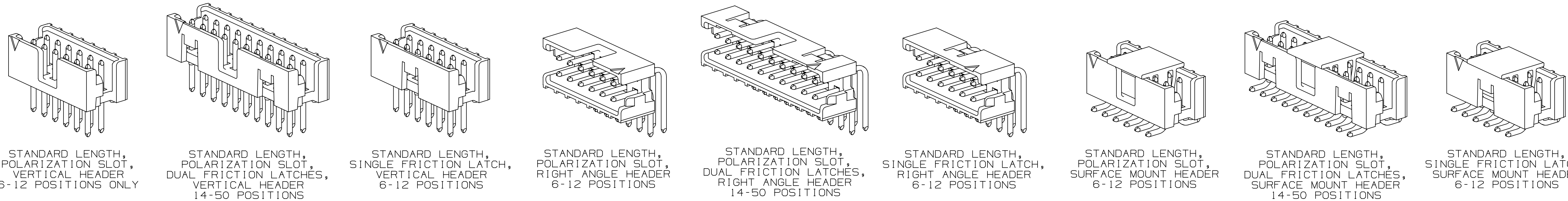
REFERENCE TABLE ON SHEET 5
FOR AVAILABLE POSITIONS

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	

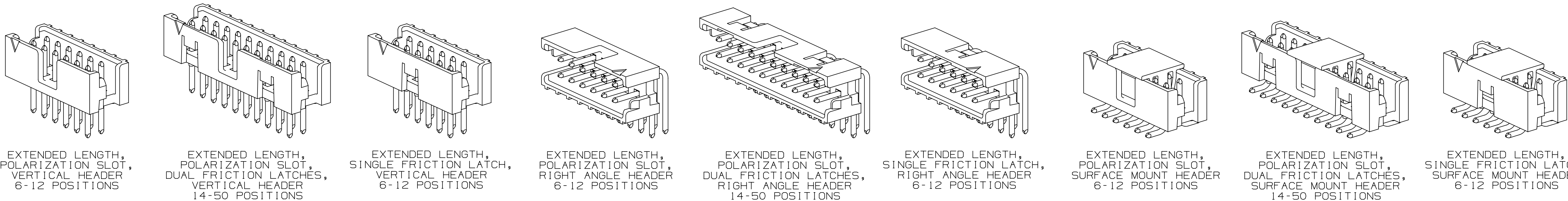
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length 3

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.	
78-5100-2359-7	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

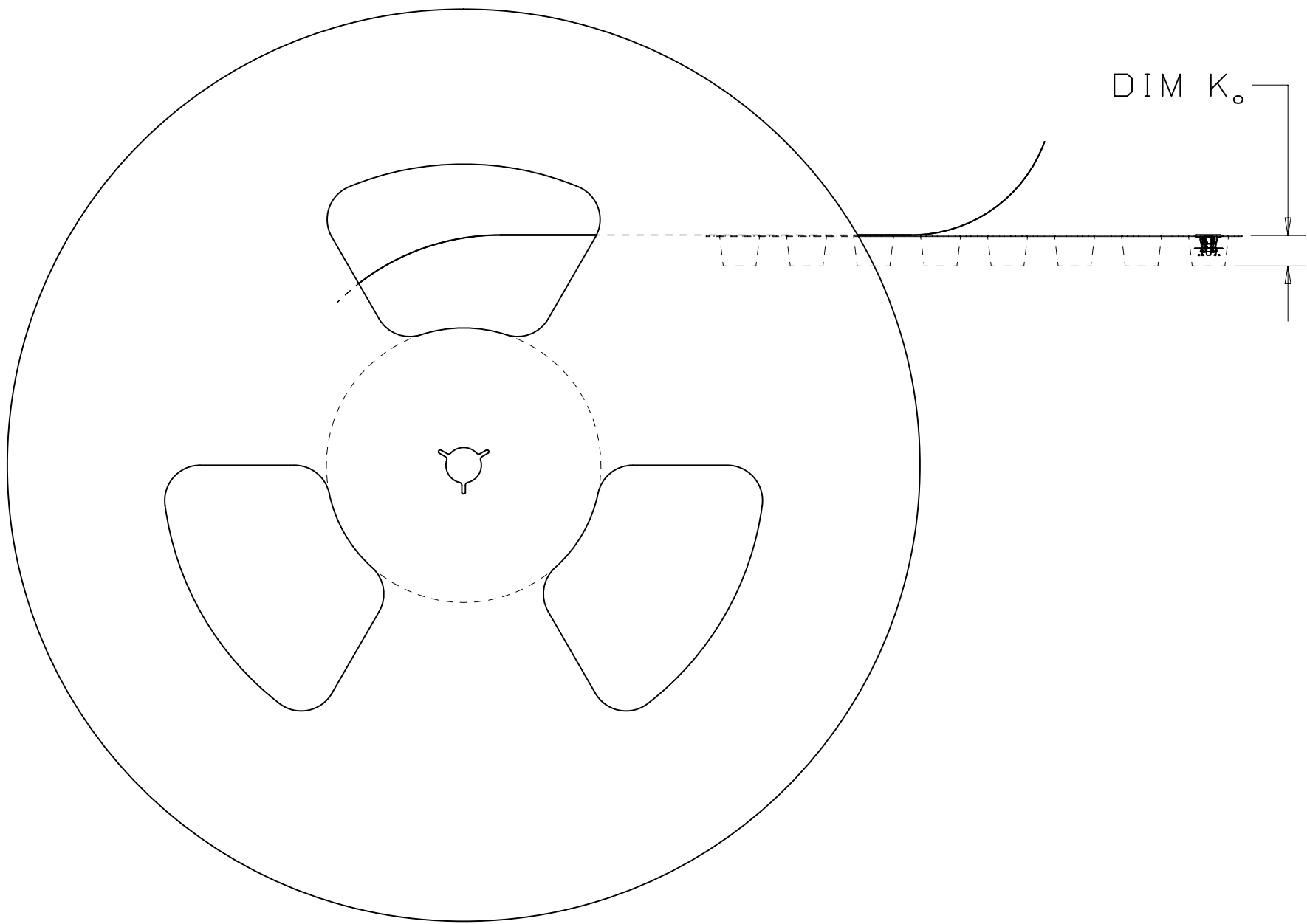
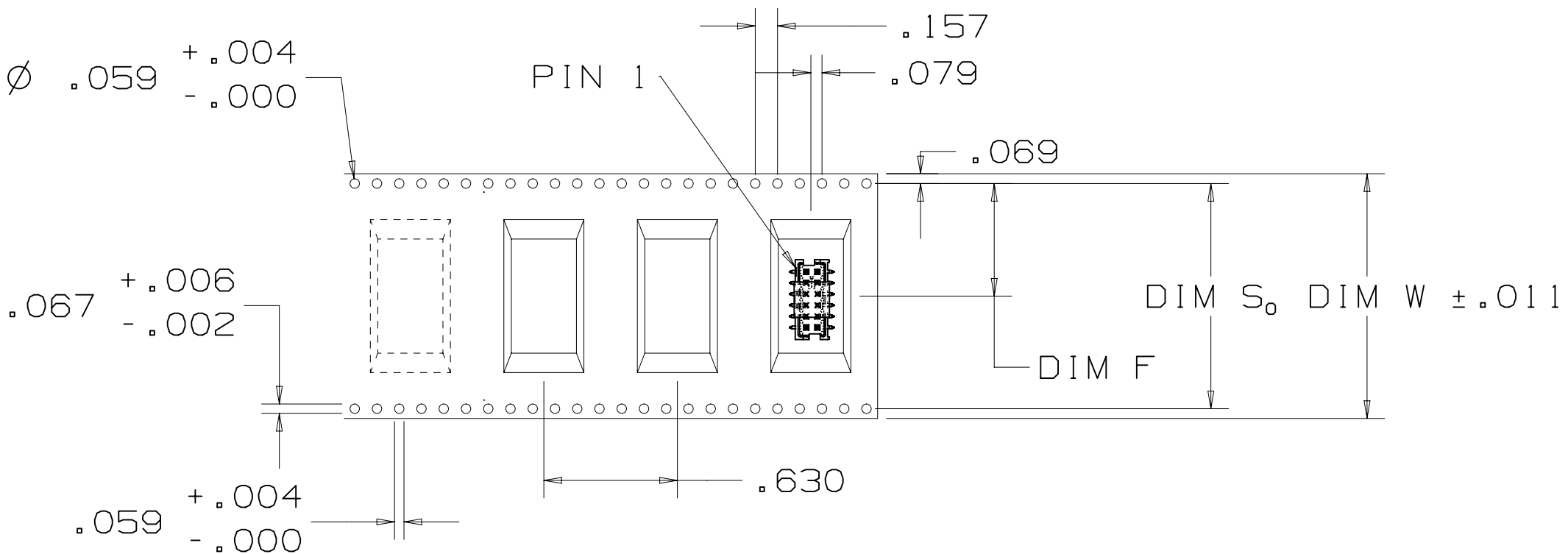
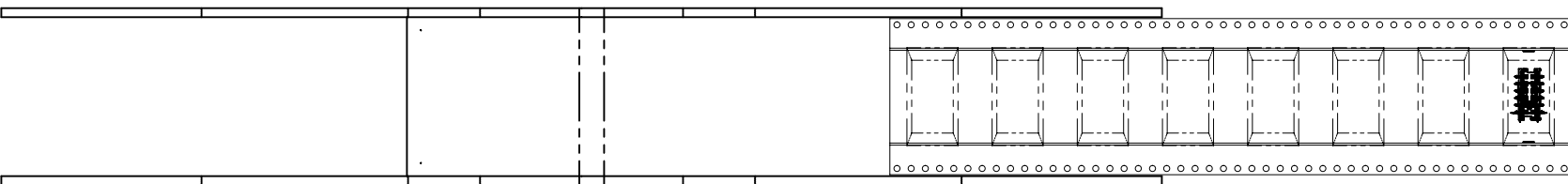
3

 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]

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
CODES		L. SCHMIDT		DATE JUL 29, 2010	MFG	DATE
DIVISION	DIVISION CODE	CHKD		DATE	APPROV	DATE
DO NOT SCALE DRAWING	SCALE 1/1	TOLERANCES EXCEPT AS NOTED				
THIRD ANGLE PROJECTION		INCHES				
INTERPRET PER ASME Y14.5 - 1994		MILLIMETERS				
MAX SURFACE ROUGHNESS		ANGLES ±1°				
125/						
LISTS						
YES						
NO						
SHT 5						
OF 5						

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

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TITLE		
3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES		
CAGE NUMBER	SIZE	DRAWING NO.
125/	D	78-5100-2359-7
MODEL	DEF	LISTS
YES	NO	SHT 5 OF 5