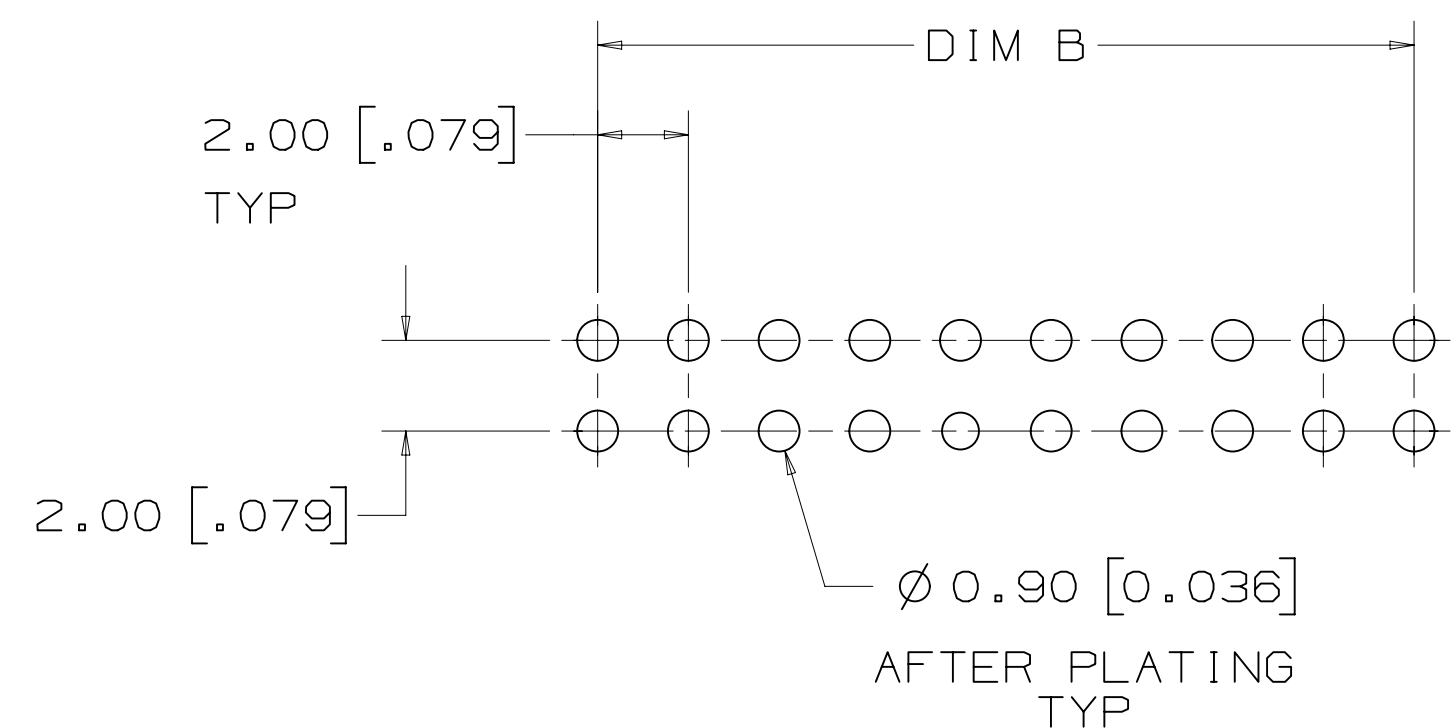
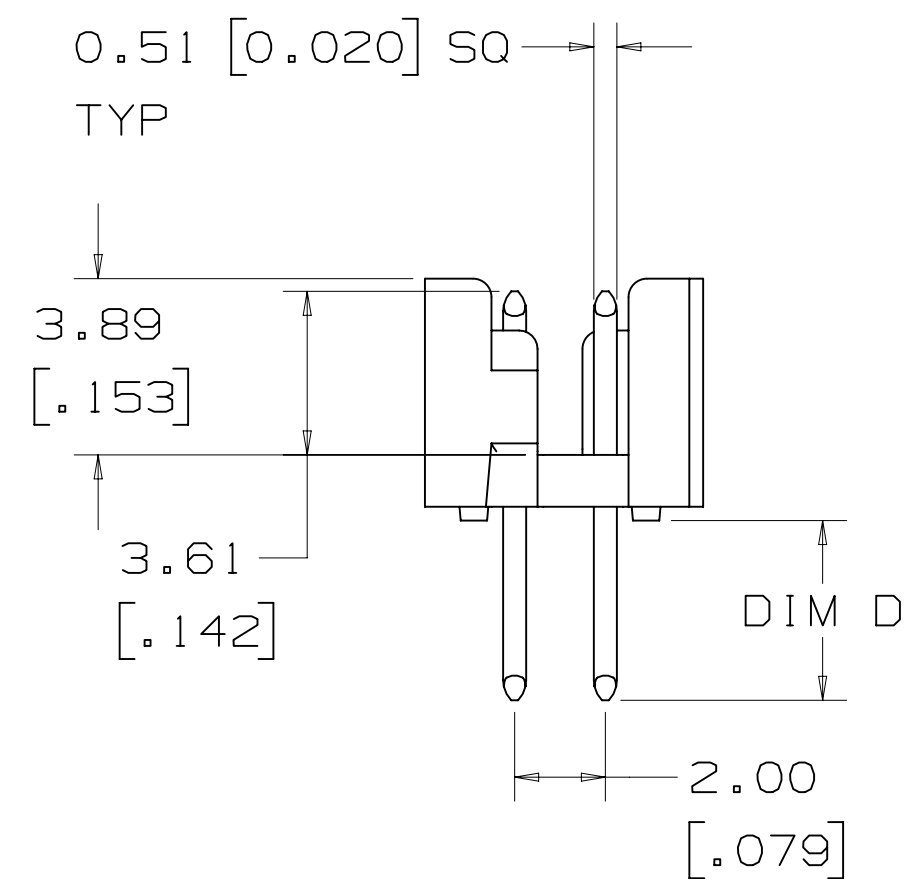
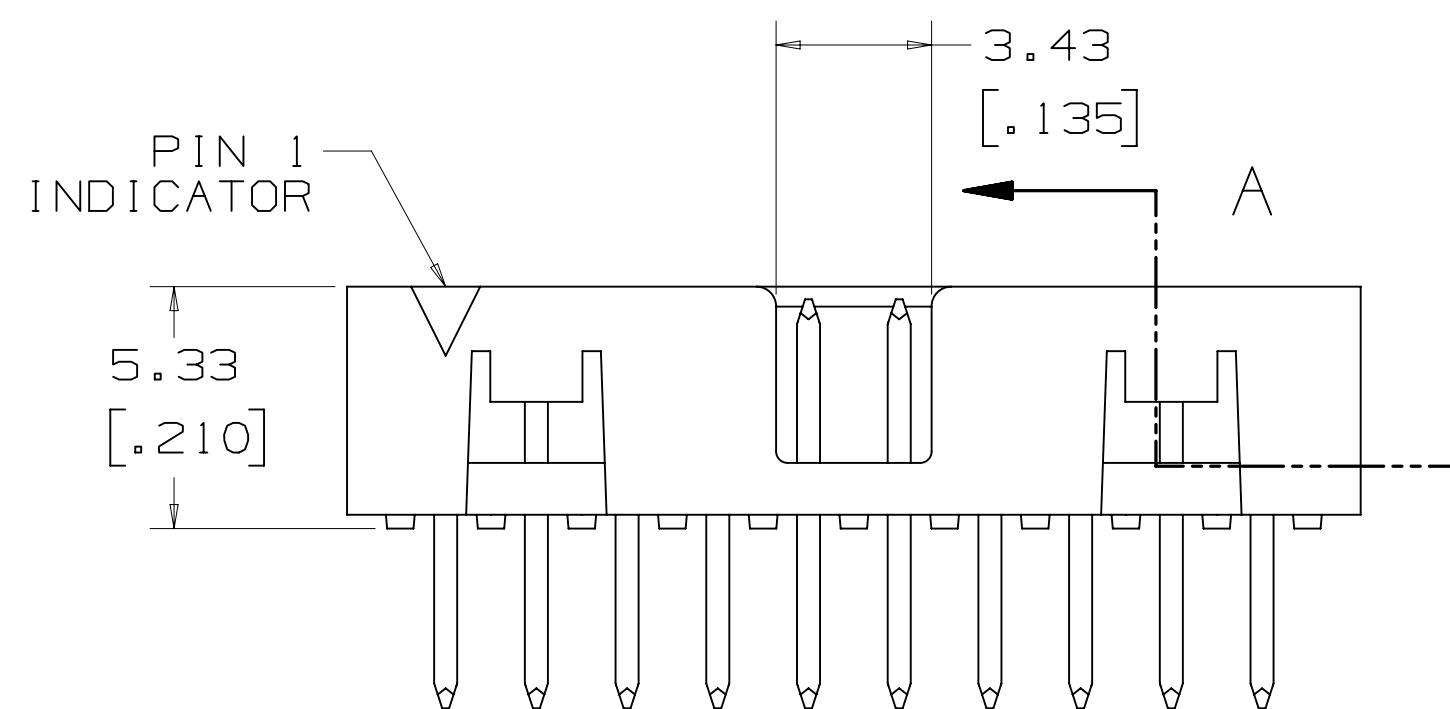
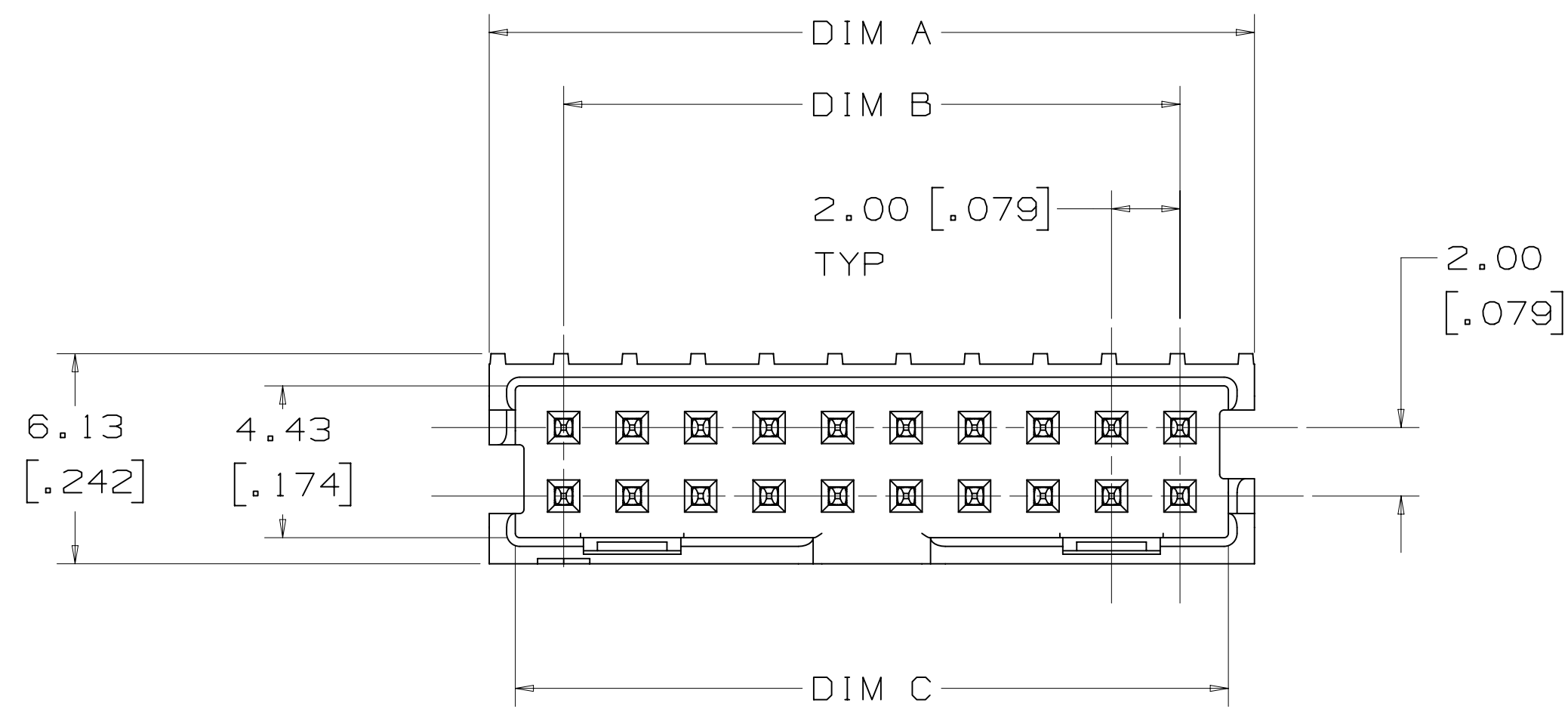
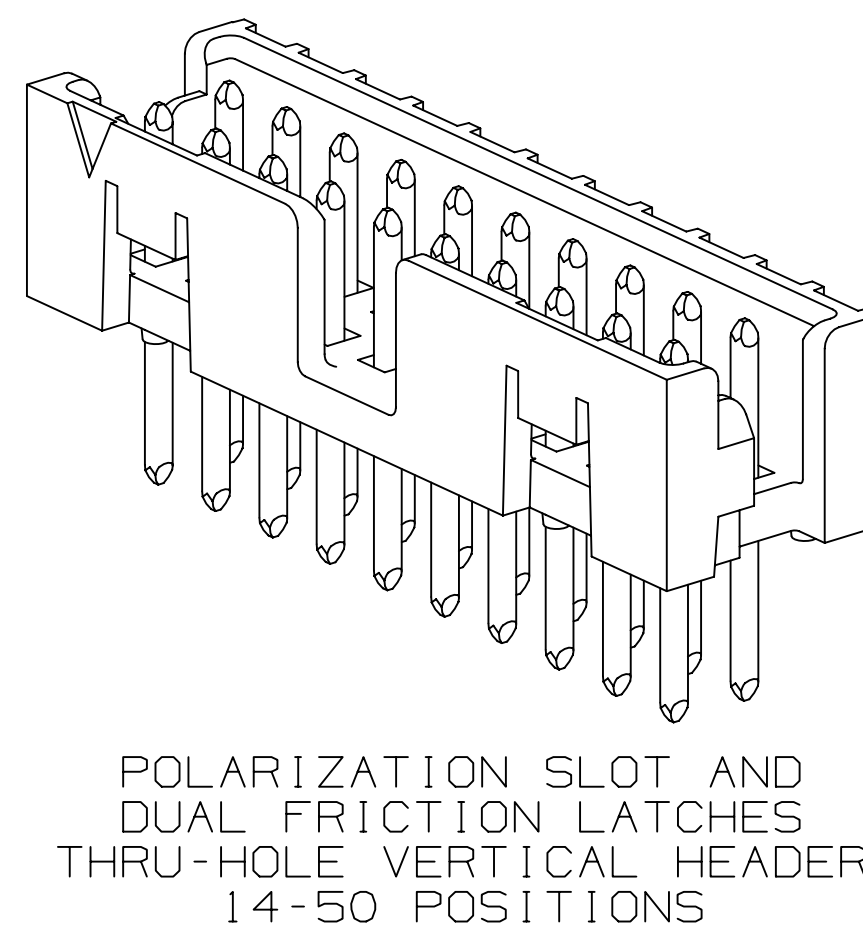
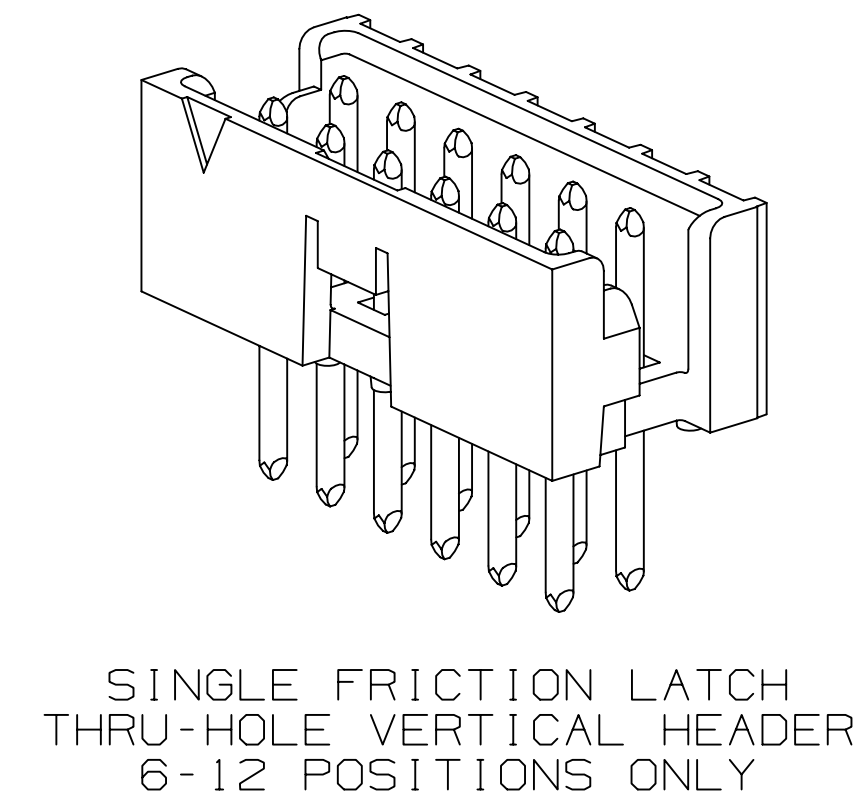
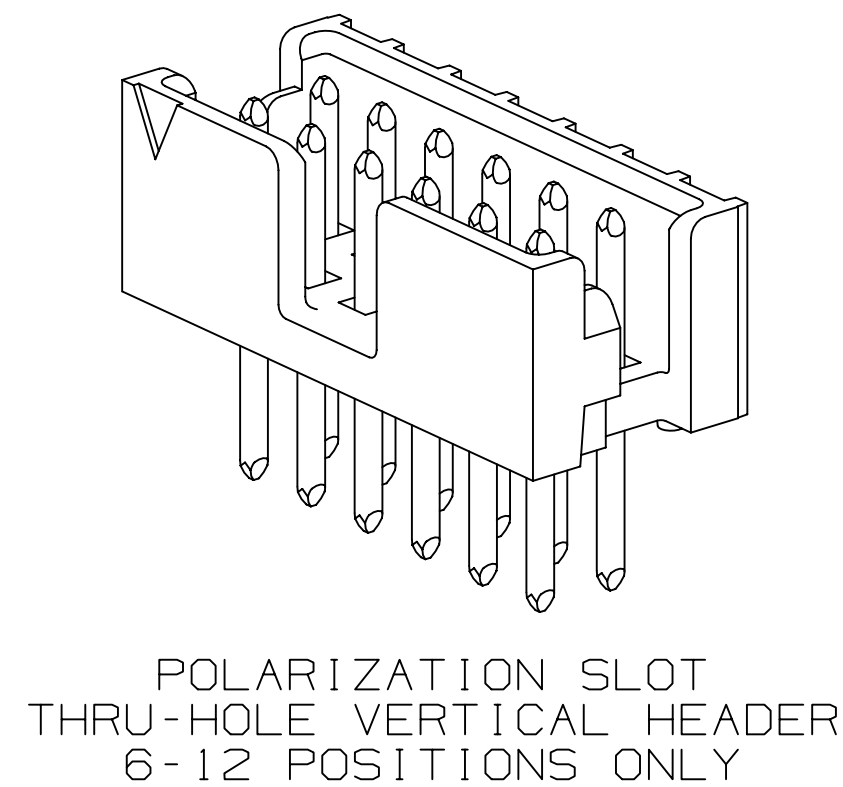
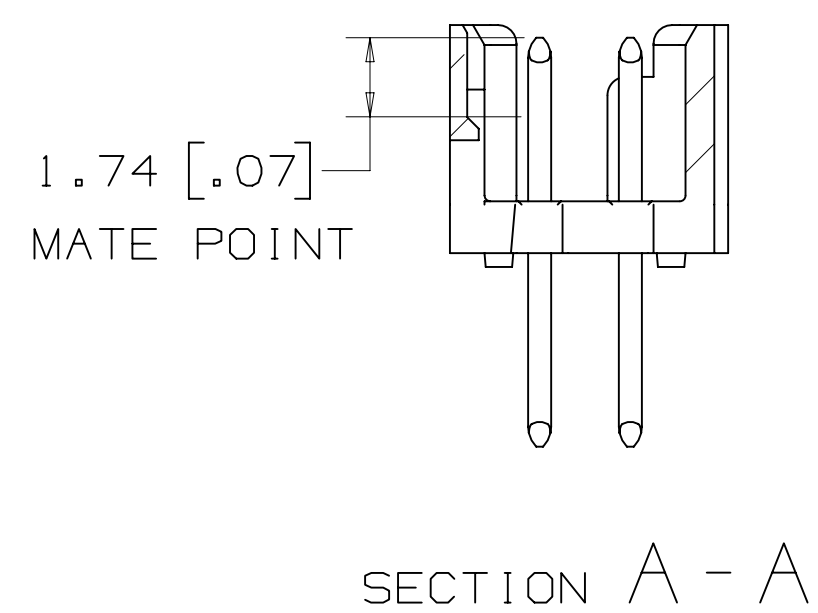


3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length [3] and Extended Length [4]



RECOMMENDED PCB HOLE PATTERN
TOLERANCE = 0.05 [.002]



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

- 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

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

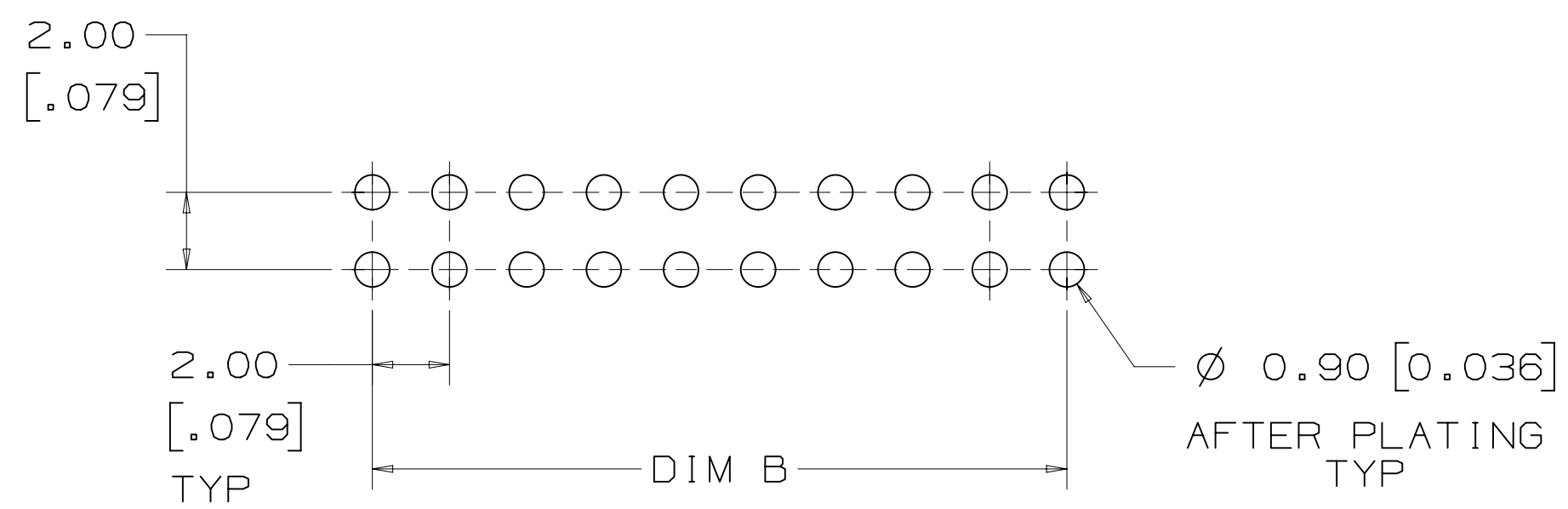
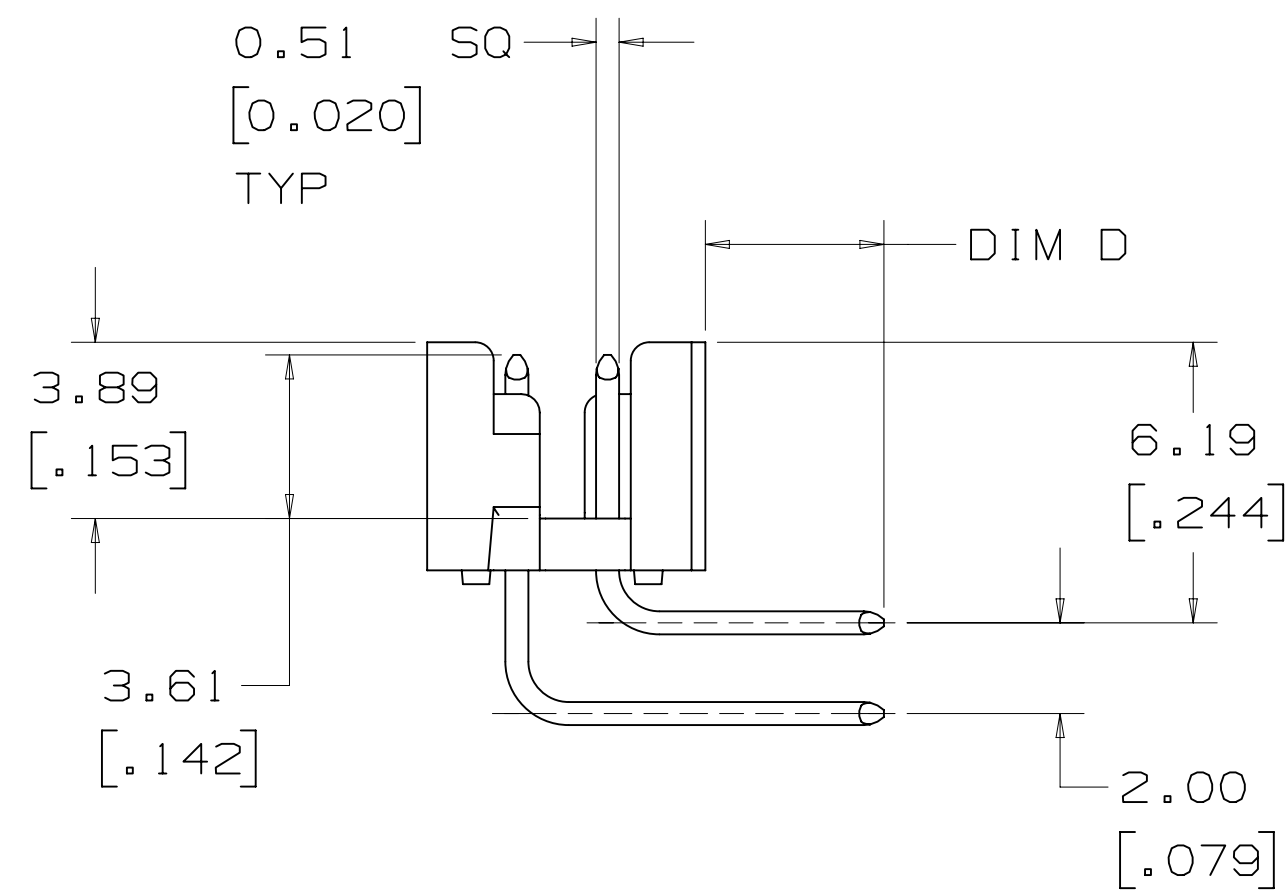
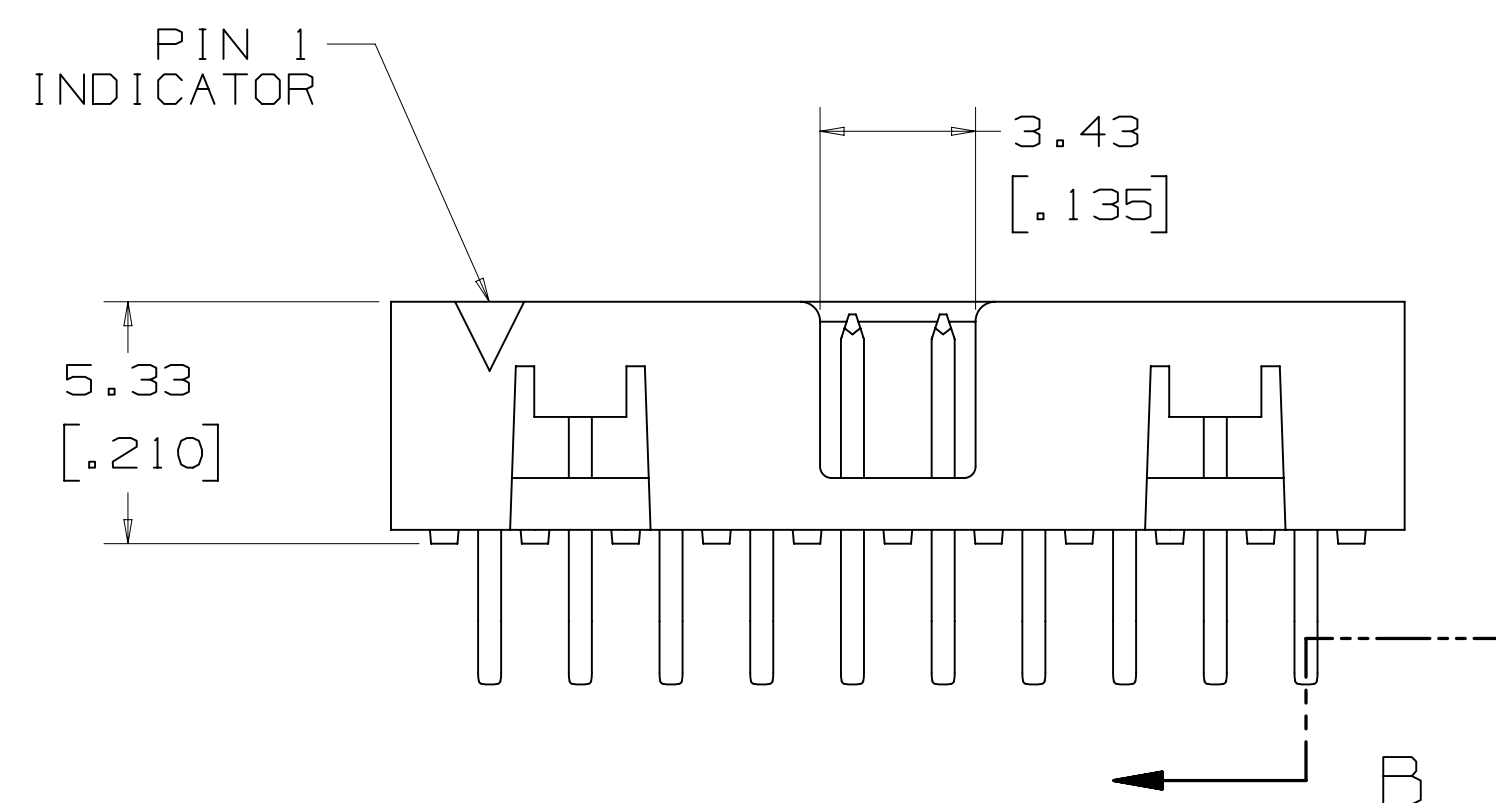
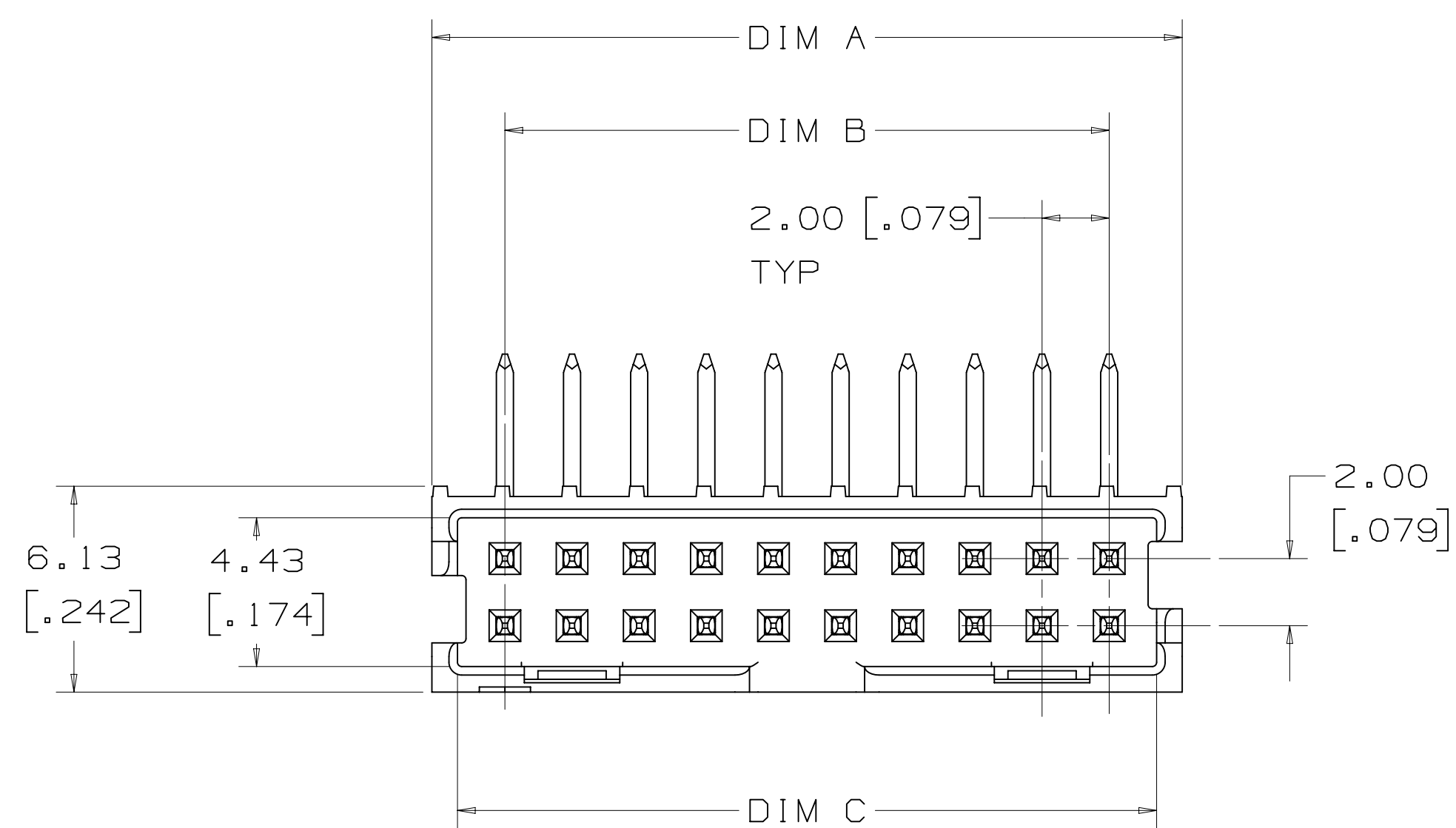
DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
DIVISION		DIVISION CODE				
DO NOT SCALE DRAWING		SCALE	TOLERANCES EXCEPT AS NOTED			
THIRD ANGLE PROJECTION		INCHES	MILLIMETERS			
INTERPRET PER ASME Y14.5 - 1994		MAX SURFACE ROUGHNESS	CAGE NUMBER			
ALL SURFACES MARKED ONLY		ANGLES ±1°	DRAWING NO.			
			REV.			

METRIC [ENGLISH]

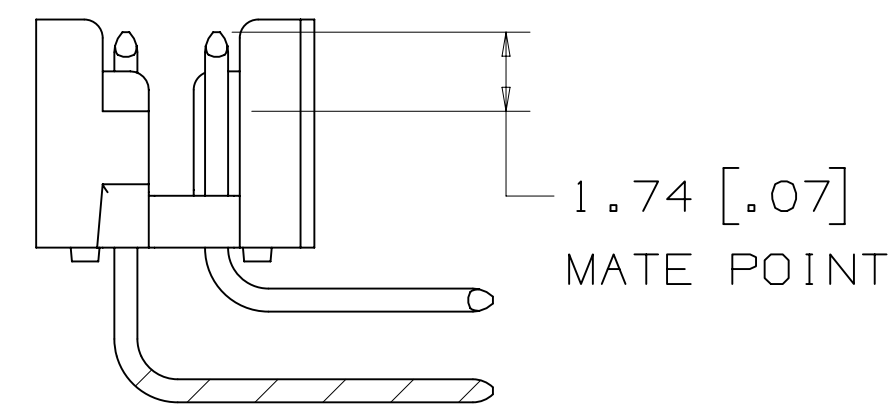
3M
US
UL FILE NO: E68080

3M Center St. Paul, MN 55144		© 3M COPYR [SHT] 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.
125	D	78-5100-2359-7	F
MODEL		SHT 1 OF 5	

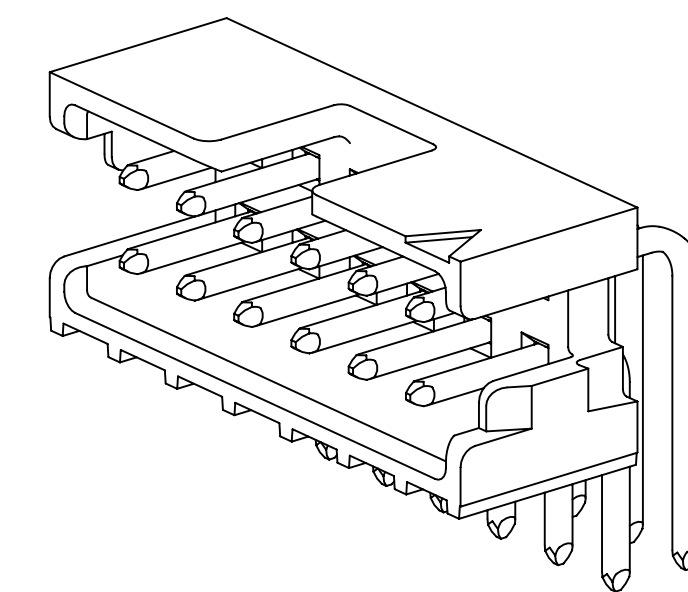
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length 3 and Extended Length 4



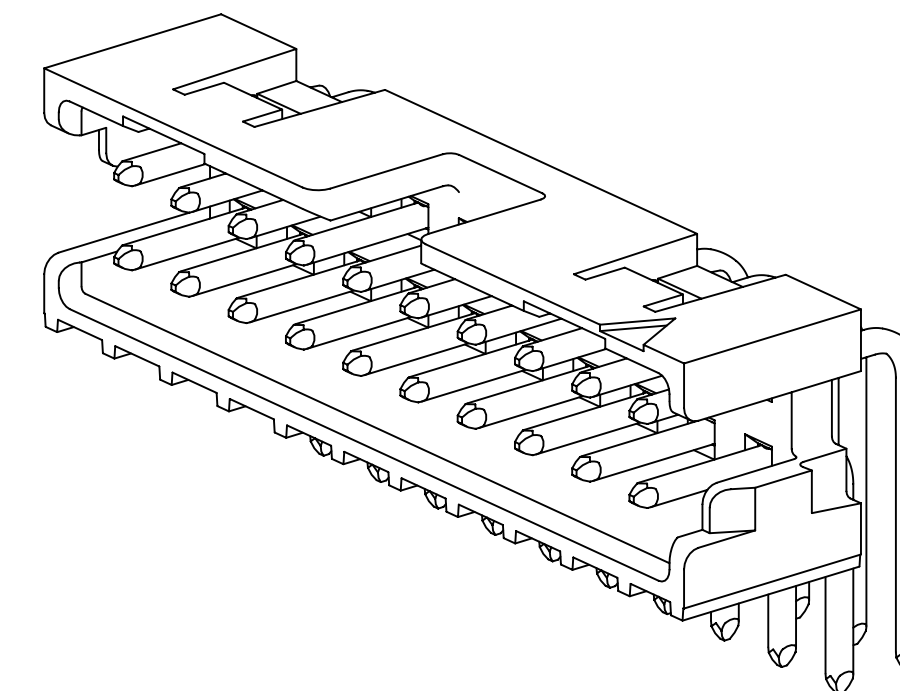
RECOMMENDED PCB HOLE PATTERN
TOLERANCE = ±0.05 [.002]



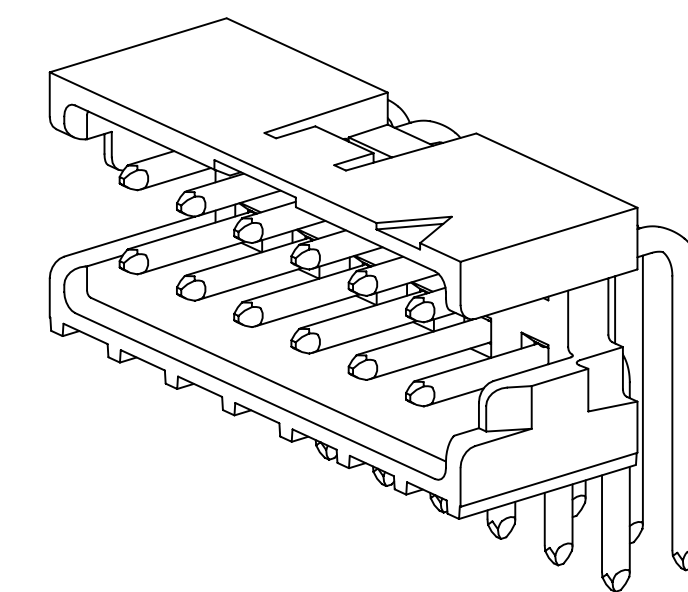
SECTION B-B



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

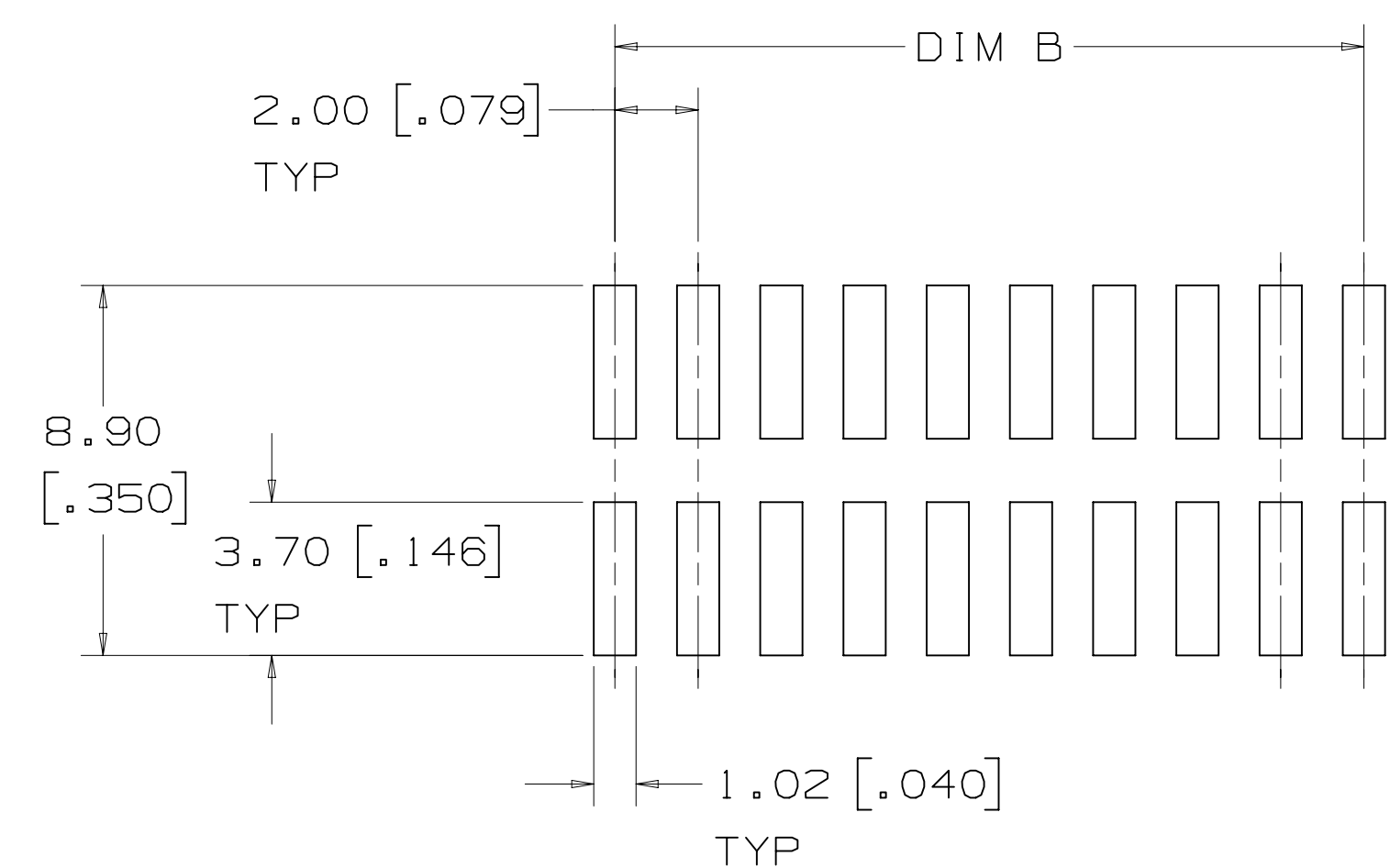
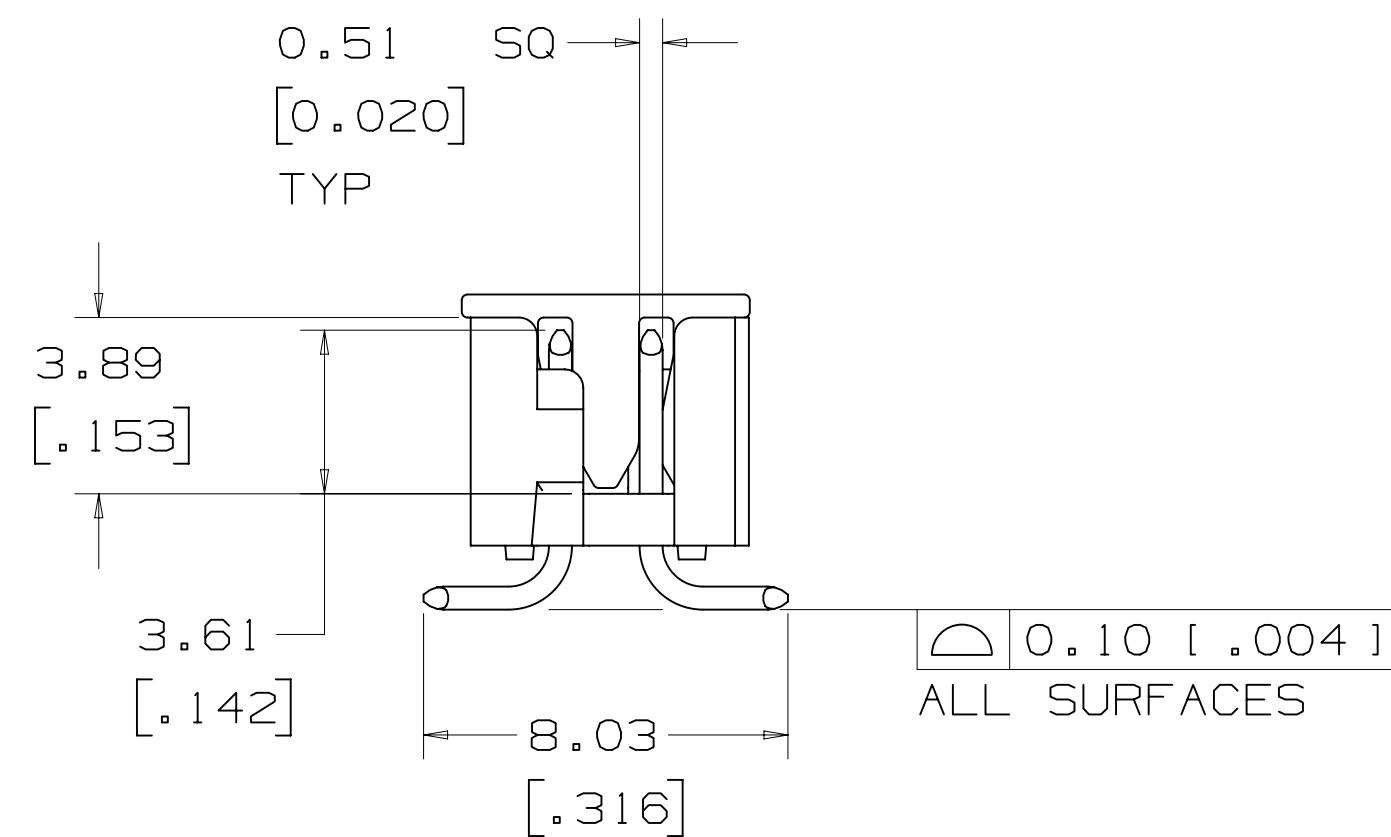
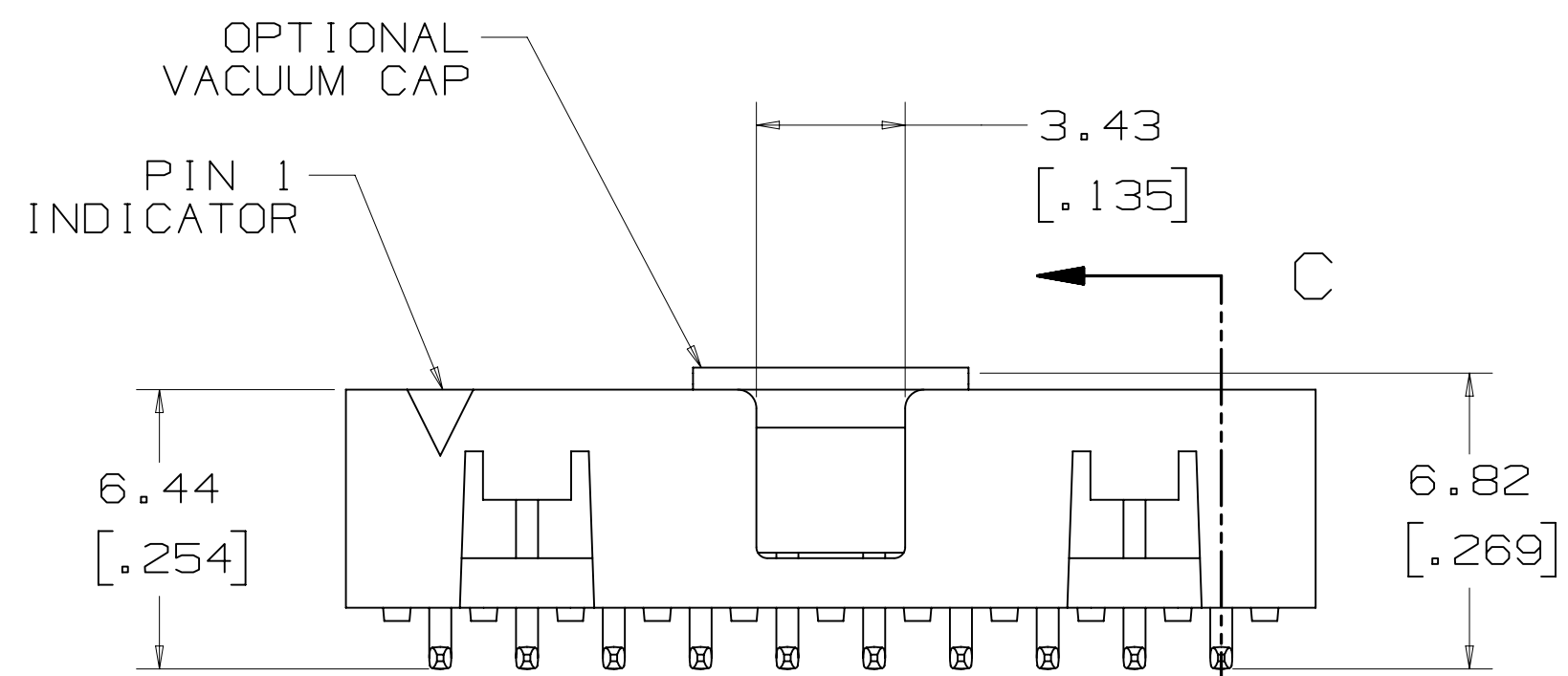
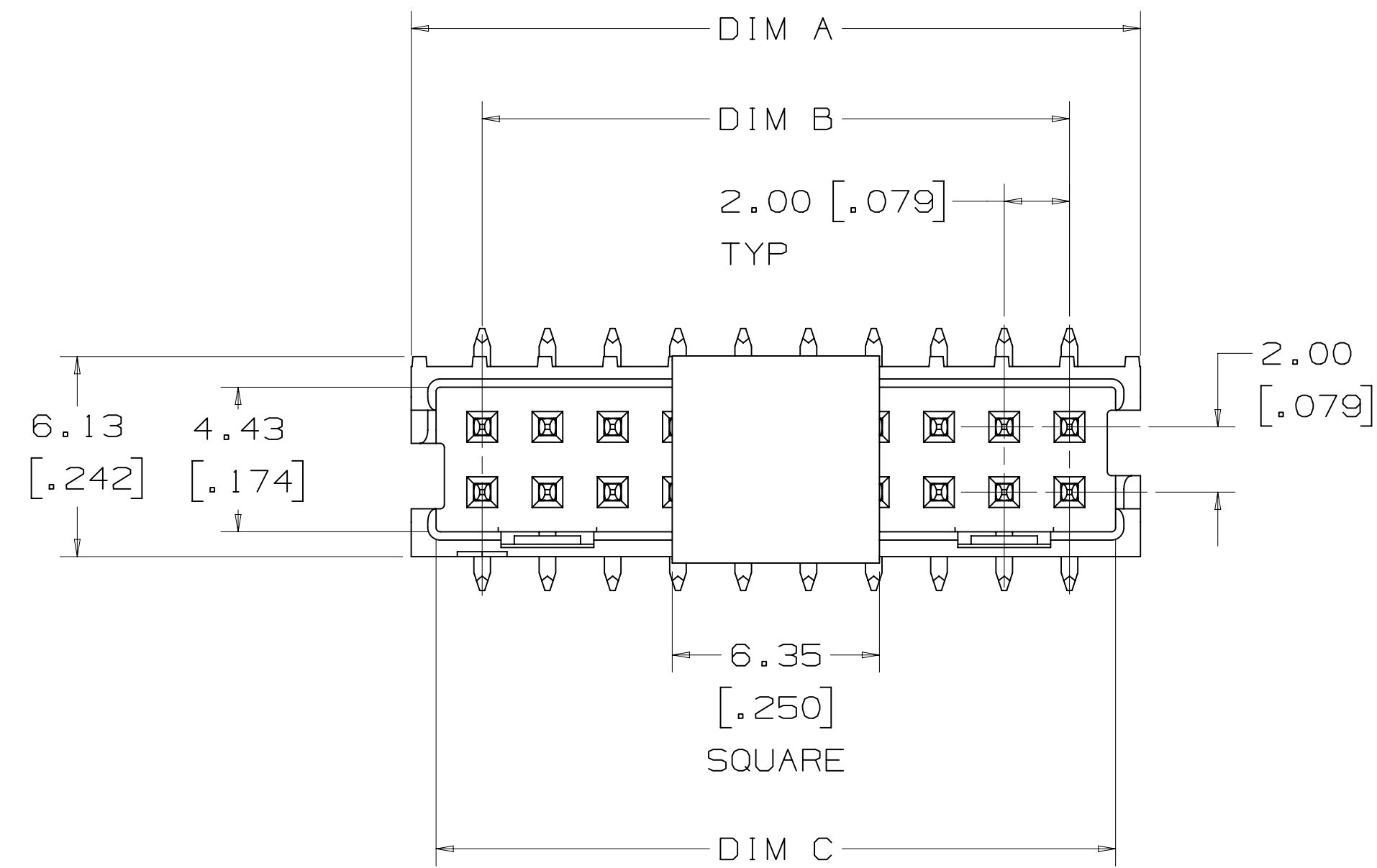
METRIC [ENGLISH]

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

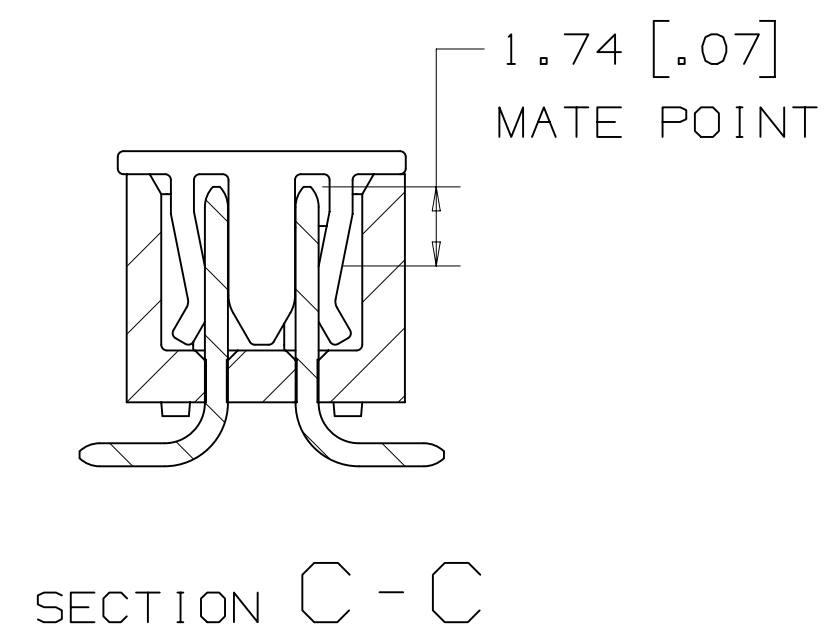
REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
F	52868	MAR 05, 2014 ADD TAPE & REEL, MATE PT, VOLTAGE RATING	SJS	SAN
E	51692	DEC 16, 2013 ADD UL SYMBOLS	SJS	SAN
D	41488	JUN 20, 2012 REVISED CURRENT RATING IN PERFORMANCE TABLE	LDS	SAN
C	39876	APR 18, 2012 REMOVED 32 POS FROM TABLE ON SHT 5	LDS	SAN
B	34080	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
DRW CODES		DRW	L. SCHMIDT	DATE	JUL 29, 2010	MFG
DIVISION	DIVISION CODE	CHKD	S FELDMAN	DATE	AUG 09, 2010	
DO NOT SCALE DRAWING	SCALE 4/1	TOLERANCES EXCEPT AS NOTED				
THIRD ANGLE PROJECTION		INCHES				
INTERPRET PER ASME Y14.5 - 1994		MILLIMETERS				
MAX SURFACE ROUGHNESS 125		ANGLES ±1°				
© 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	ISTS	YES NO SHT 2 OF 5

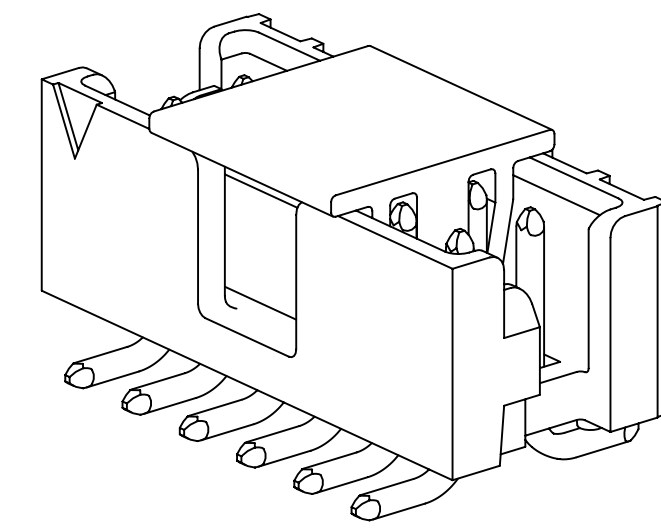
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length [3] and Extended Length [4]



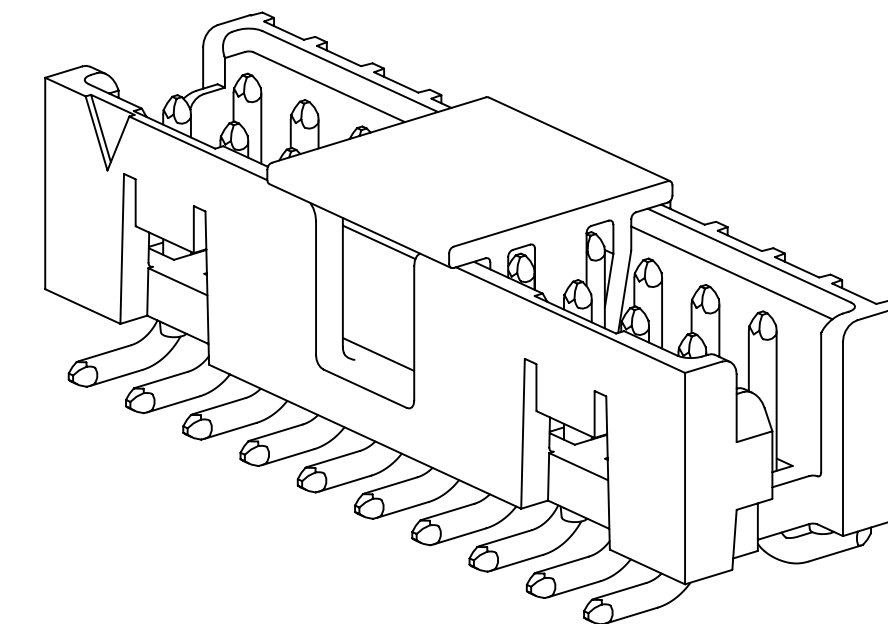
RECOMMENDED PCB PAD PATTERN
TOLERANCE = ±0.08 [.003]



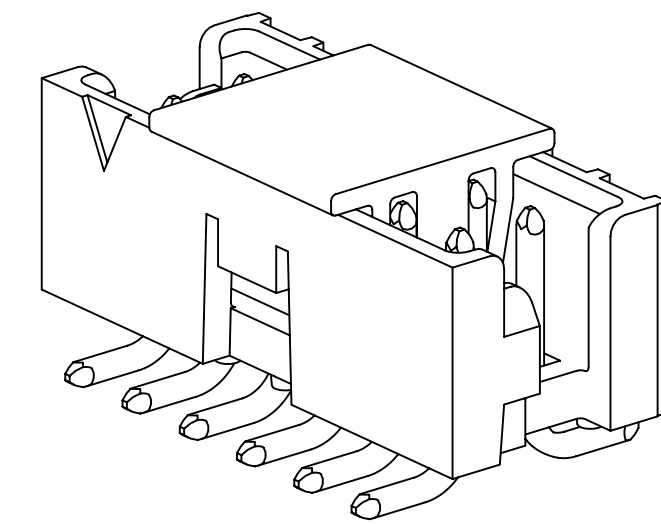
REFERENCE TABLE ON SHEET 5
FOR AVAILABLE POSITIONS



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

DO NOT SCALE DRAWING	SCALE 4/1	TOLERANCES EXCEPT AS NOTED
THIRD ANGLE PROJECTION	INCHES .00 .000 2000 ±	MILLIMETERS 0 ± .00 ± 0.13 .000 ±
MAX SURFACE ROUGHNESS 125	ALL SURFACES	MARKED ONLY
	ANGLES ±1°	

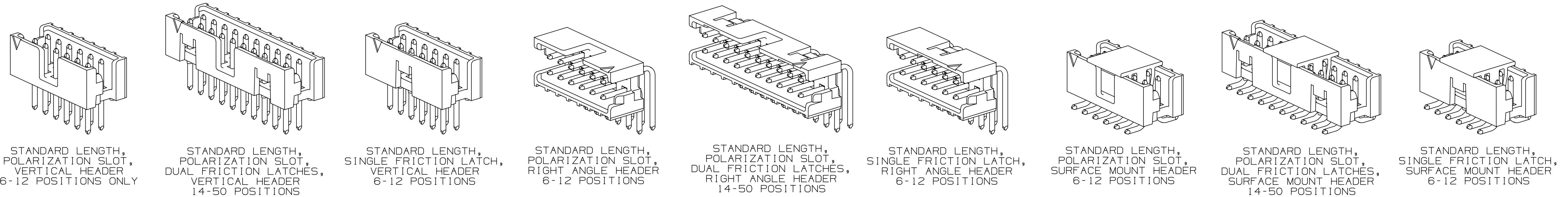
3M Center St. Paul, MN 55144	© 3M COPYRIGHT 2010 This document and the information it contains are 3M property and may not be reproduced or further distributed without 3M permission, or used or disclosed other than for 3M authorized purposes. All rights reserved.
TITLE	3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES
CAGE NUMBER	D78-5100-2359-7
REV.	F
MODEL	SHT 3 OF 5

METRIC [ENGLISH]

DRAWING NUMBER 78-5100-2359-7

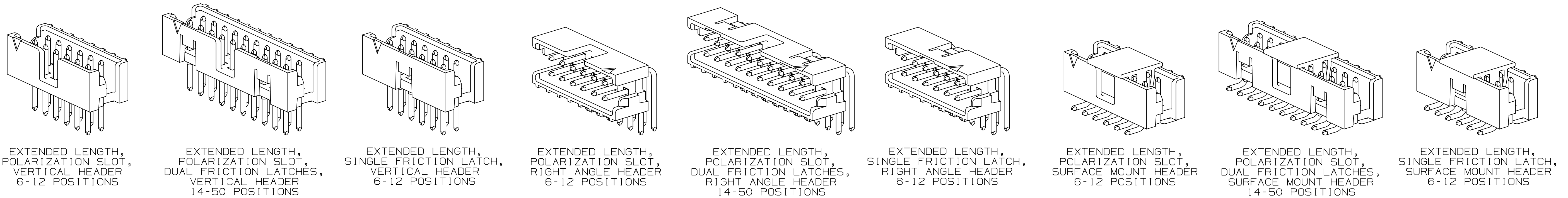
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length 3

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 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)

METRIC (ENGLISH)

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
CODES		L. SCHMIDT		JUL 29, 2010		
DIVISION	DIVISION CODE	APPR	DATE	MFG	DATE	
		S FELDMAN			AUG 09, 2010	
DO NOT SCALE DRAWING	SCALE 4/1	TOLERANCES EXCEPT AS NOTED				
		INCHES		MILLIMETERS		
		.00		0		
		.000		±		
		.0000		±		
INTERPRET PER ASME Y14.5 - 1994		MILLIMETERS		.00 ± 0.13		
		.00		±		
		.000		±		
MAX SURFACE ROUGHNESS		ANGLES ±1°				
125						
<input type="checkbox"/> ALL SURFACES						
<input checked="" type="checkbox"/> MARKED 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

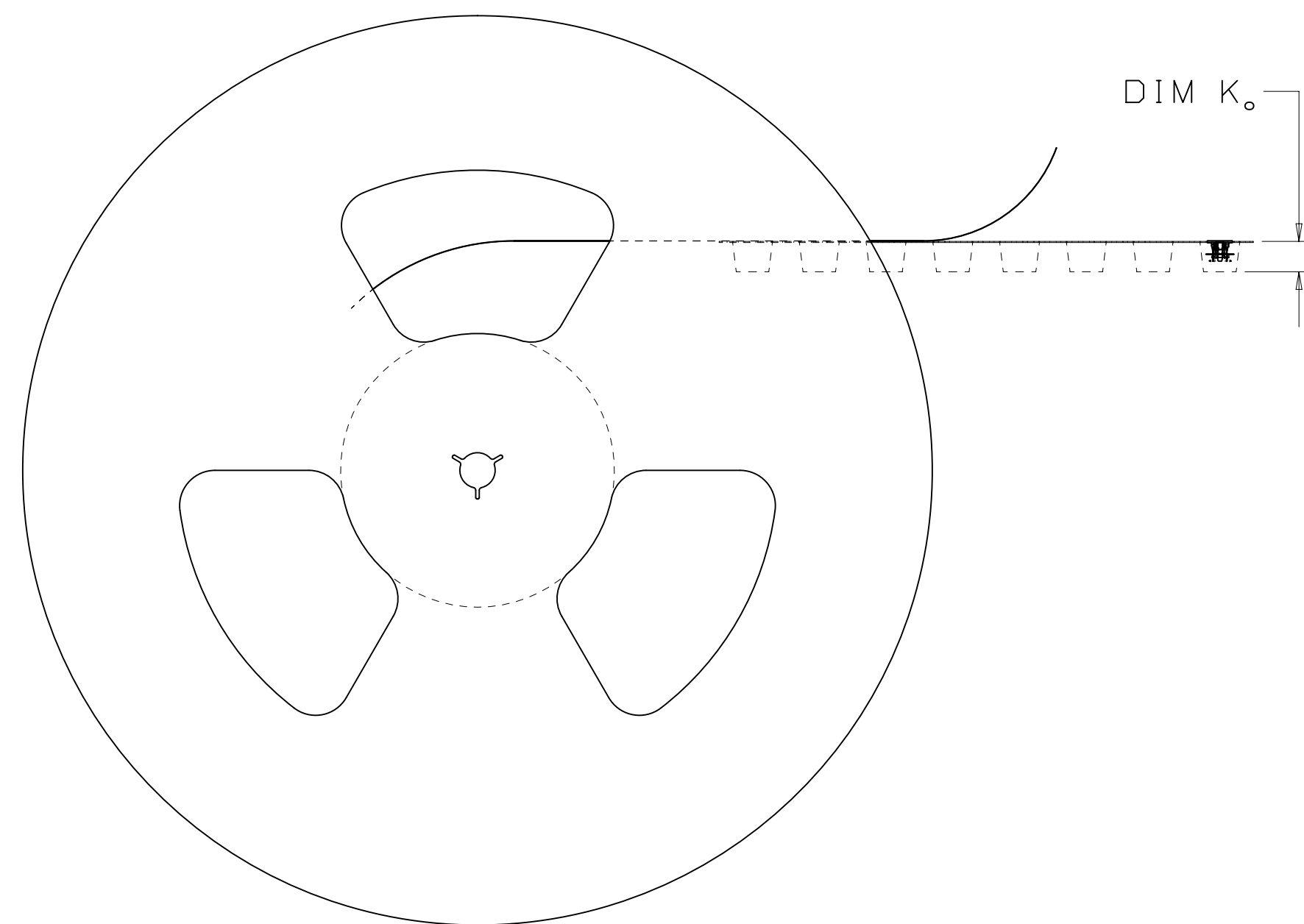
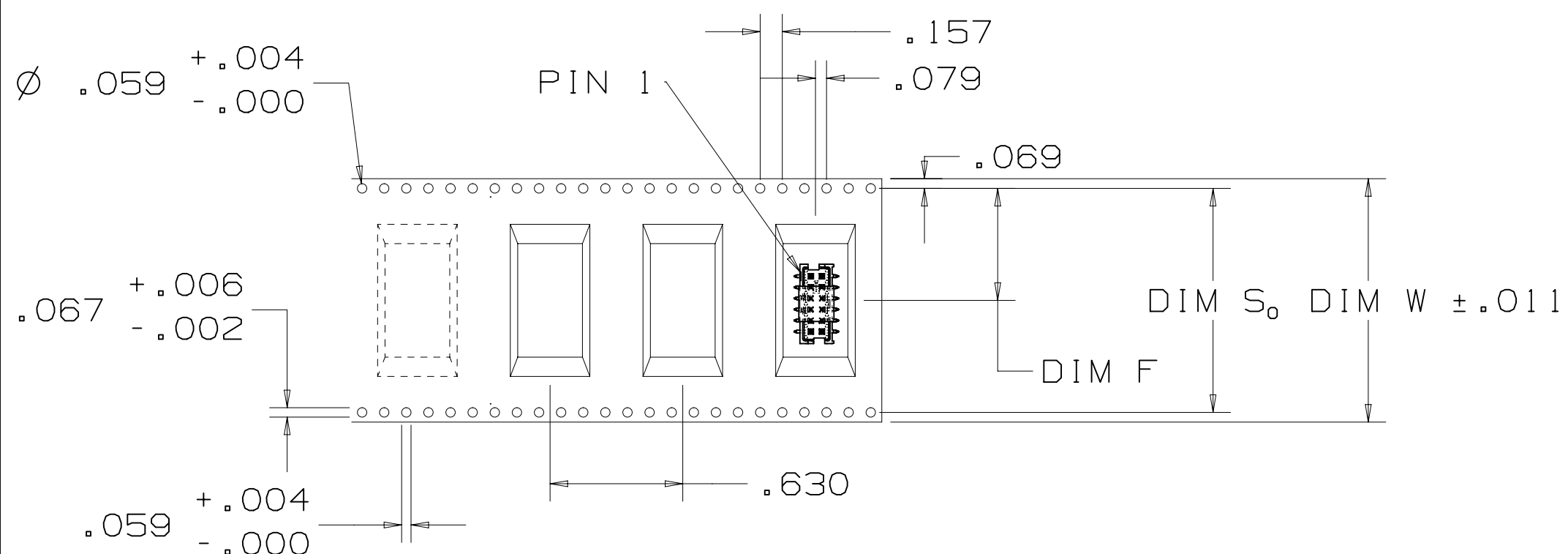
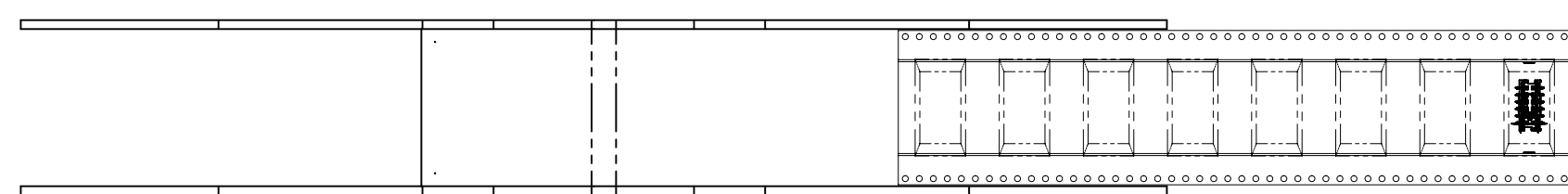
TITLE	3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES
CAGE NUMBER	D 78-5100-2359-7
SIZE	F
DRAWING NO.	78-5100-2359-7
REV.	F
MODEL	SHT 4 OF 5

78-5100-2359-7
DRAWING NUMBER
F
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]

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
		L. SCHMIDT		JUL 29, 2010		
DIVISION	DIVISION CODE	APPR	DATE	DATE		
		S FELDMAN		AUG 09, 2010		
DO NOT SCALE DRAWING	SCALE 1/1	TOLERANCES EXCEPT AS NOTED				
THIRD ANGLE PROJECTION		INCHES				
		MILLIMETERS				
		.00 ±				
		.000 ±				
		.0000 ±				
		.0 ±				
		.0 ±				
		.00 ± 0.13				
		.000 ±				
		ANGLES ±1°				
INTERPRET PER ASME Y14.5 - 1994		© 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.				
MAX SURFACE ROUGHNESS		TITLE				
<input type="checkbox"/> ALL SURFACES <input checked="" type="checkbox"/> MARKED ONLY		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		SHEET 5 OF 5				

78-5100-2359-7 DRAWING NUMBER

X-ON Electronics

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