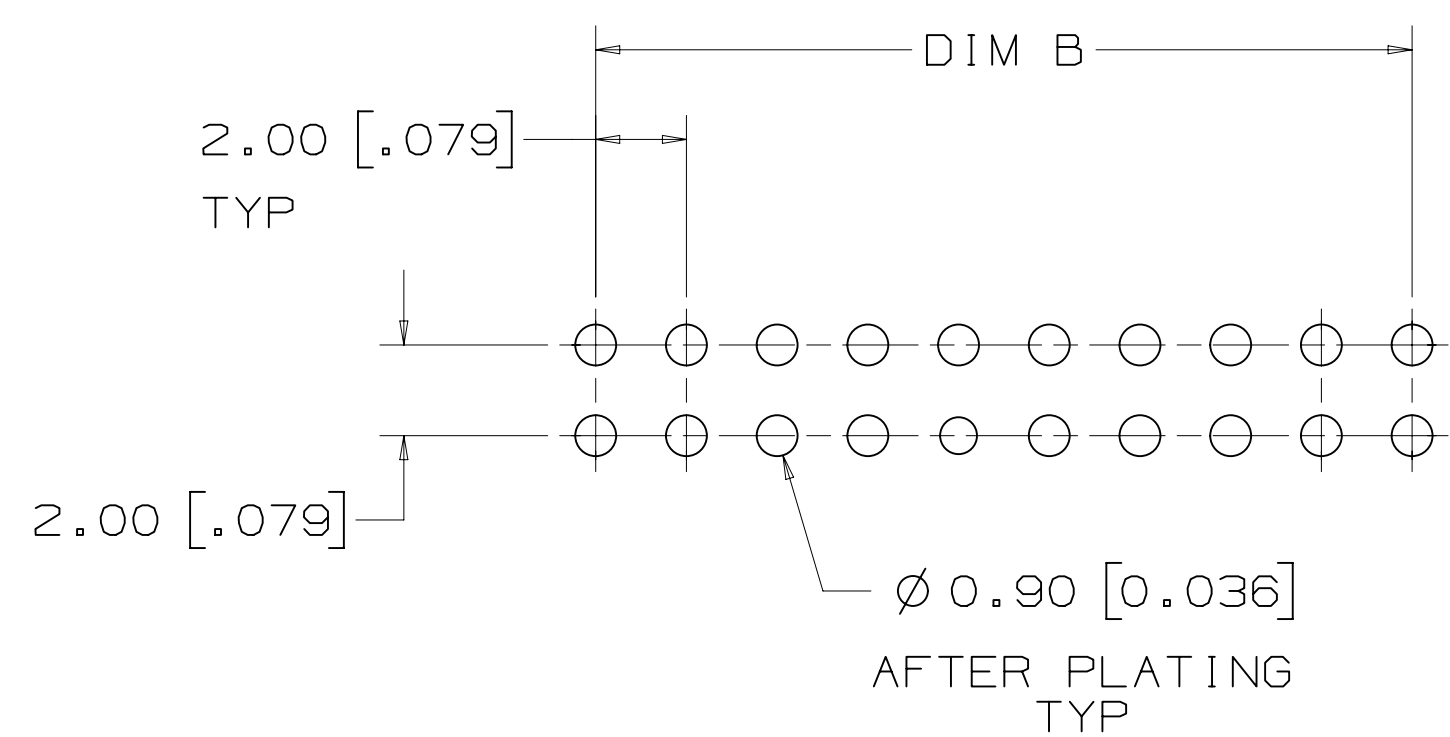
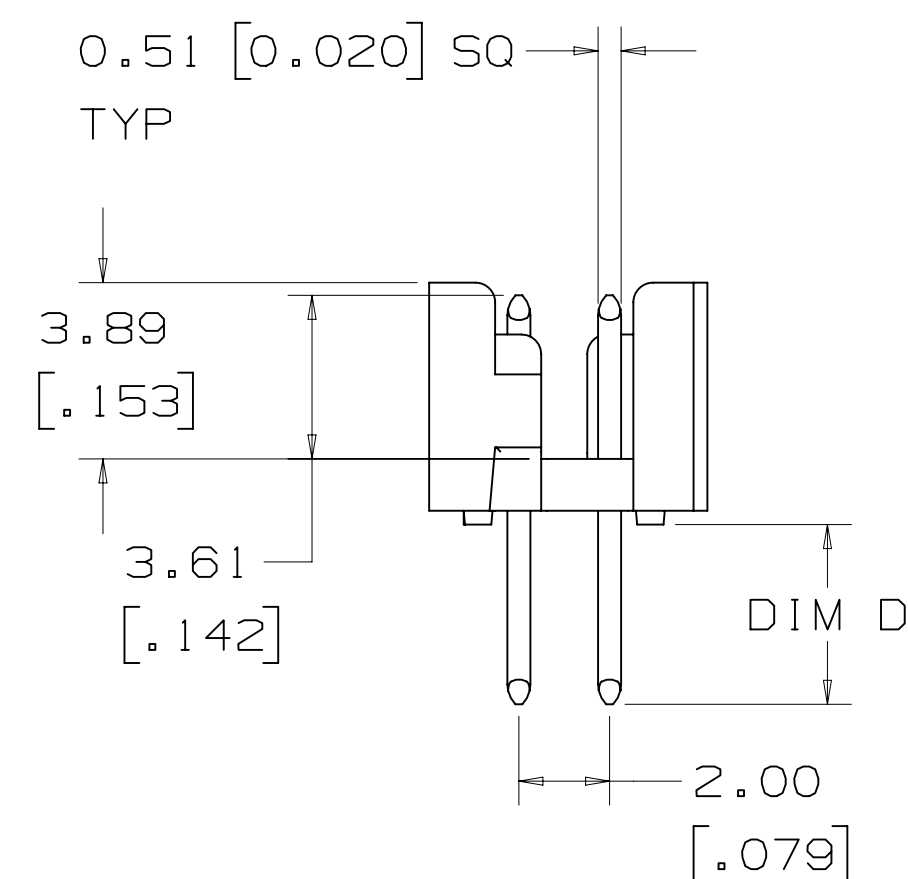


3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length [3] and Extended Length [4]



RECOMMENDED PCB HOLE PATTERN  
TOLERANCE = 0.05 [ .002 ]



PERFORMANCE [5] [7]	
CURRENT:	1A, 6 LINES ENERGIZED
INSULATION RESISTANCE:	>1 X 10 <sup>9</sup> OHMS AT 500 VDC
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 4  
FOR AVAILABLE TAIL POSITIONS AND  
SOLDER TAIL LENGTHS

METRIC [ ENGLISH ]

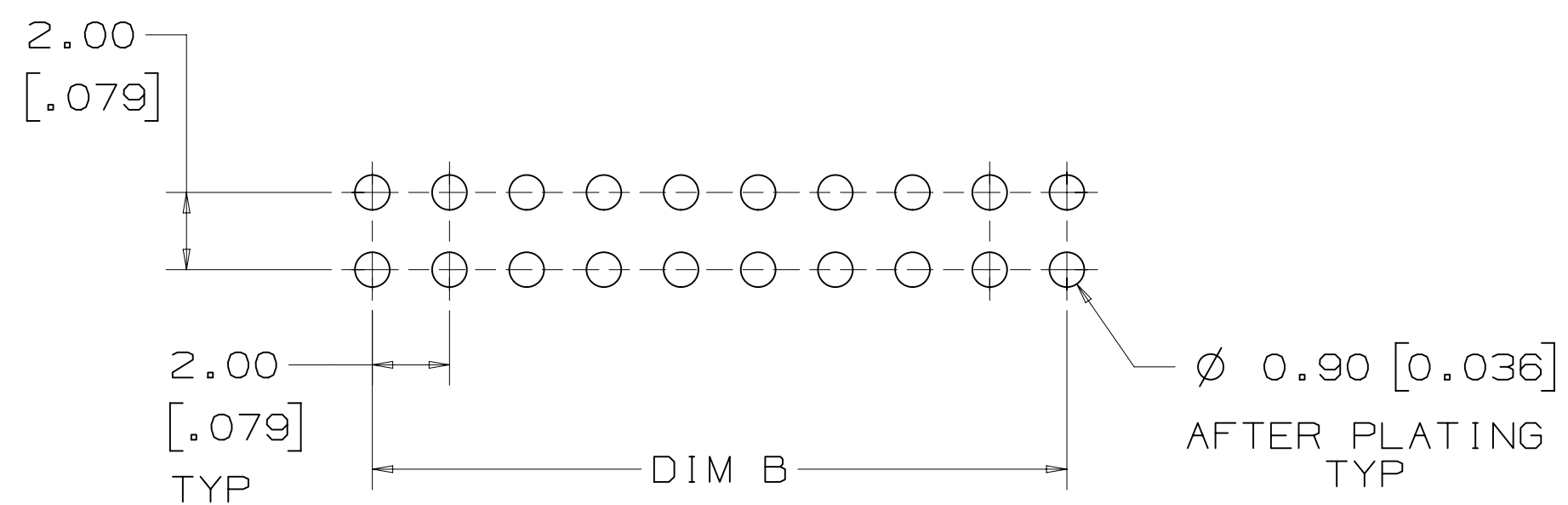
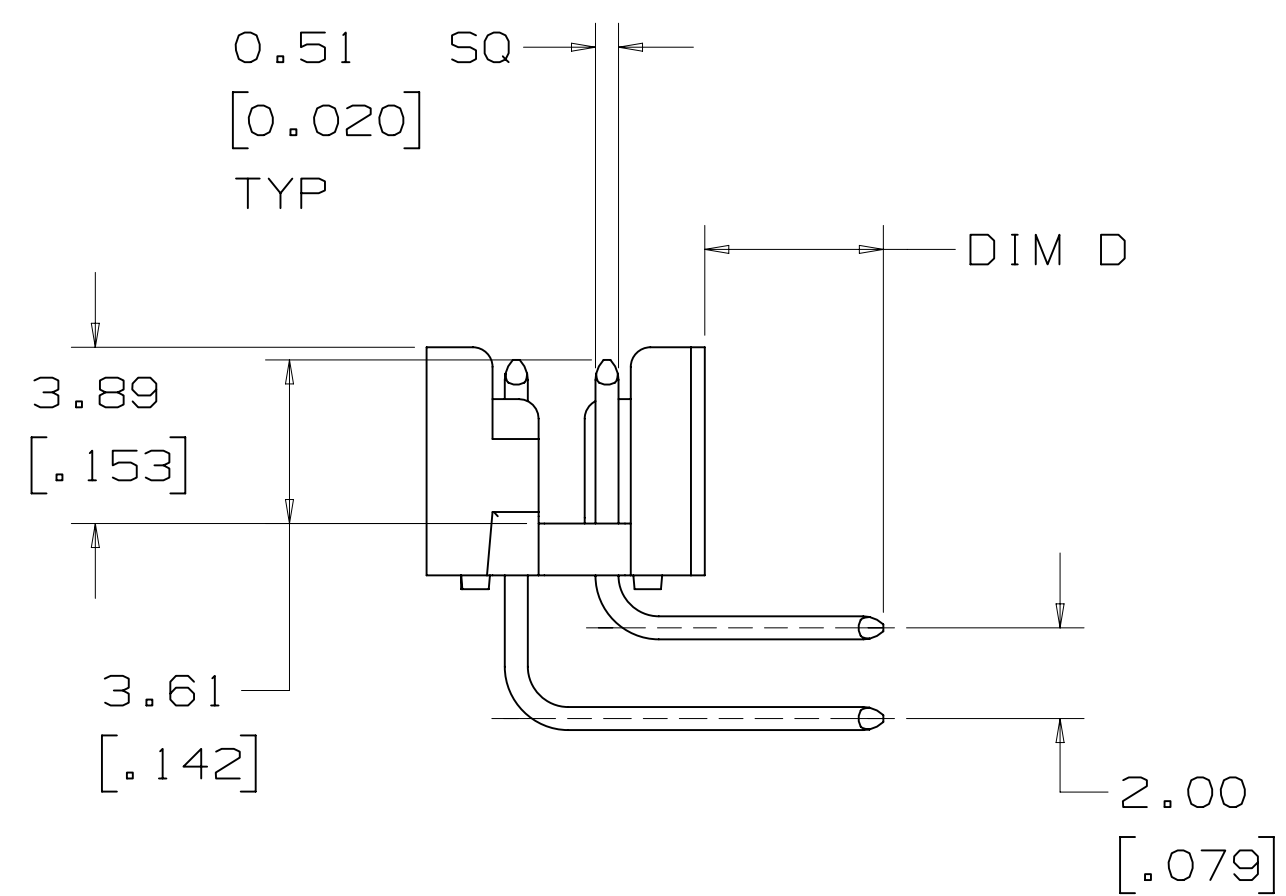
NOTES

- MATERIAL:  
BODY: HIGH TEMPERATURE  
GLASS FILLED LCP, BLACK  
UL94V-0  
CONTACTS: COPPER ALLOY
- PLATING:  
2.03-3.81  $\mu\text{m}$  [80-150  $\mu\text{in}$ ]  
NICKEL UNDERPLATE.  
0.38  $\mu\text{m}$  [15  $\mu\text{in}$ ] OR  
0.76  $\mu\text{m}$  [30  $\mu\text{in}$ ] AVG GOLD  
ON WIPING AREA.  
5.08  $\mu\text{m}$  [200  $\mu\text{in}$ ] 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.

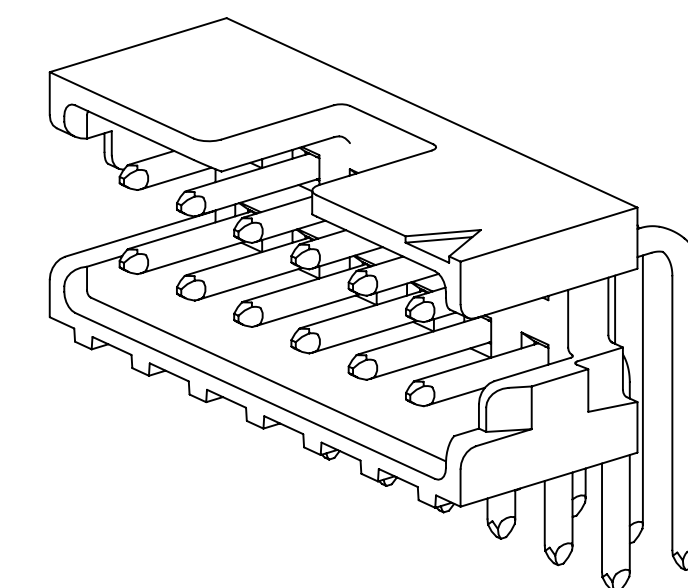
DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
DIVISION	DIVISION CODE	DATE	DATE	DATE	DATE	DATE
		JUL 29, 2010				
DO NOT SCALE DRAWING	SCALE 6/1	TOLERANCES EXCEPT AS NOTED				
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 1994	INCHES .00 .000 2000 ±	MILLIMETERS 0 ± .00 ± 0.13 .000 ±	TITLE <b>3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES</b>		
MAX SURFACE ROUGHNESS 125	ALL SURFACES	ANGLES ±1°	CAGE NUMBER	SIZE	DRAWING NO.	REV.
			D		78-5100-2359-7	A
			MODEL	DET	ISTS	YES NO SHT 1 OF 4

78-5100-2359-7  
DRAWING NUMBER

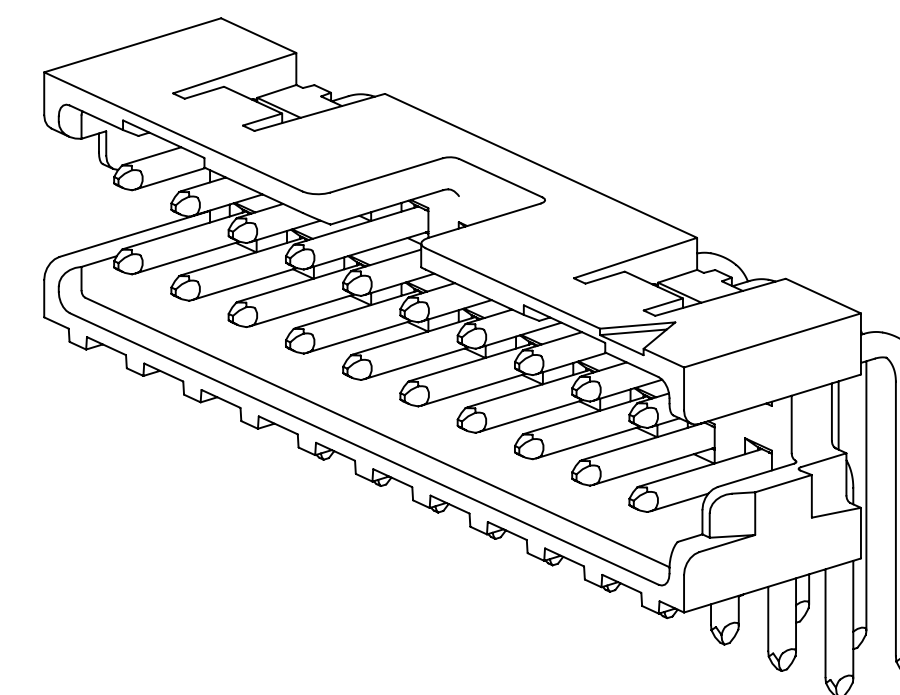
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length 3 and Extended Length 4



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



POLARIZATION SLOT  
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

REFERENCE TABLE ON SHEET 4  
FOR AVAILABLE POSITIONS AND  
SOLDER TAIL LENGTHS

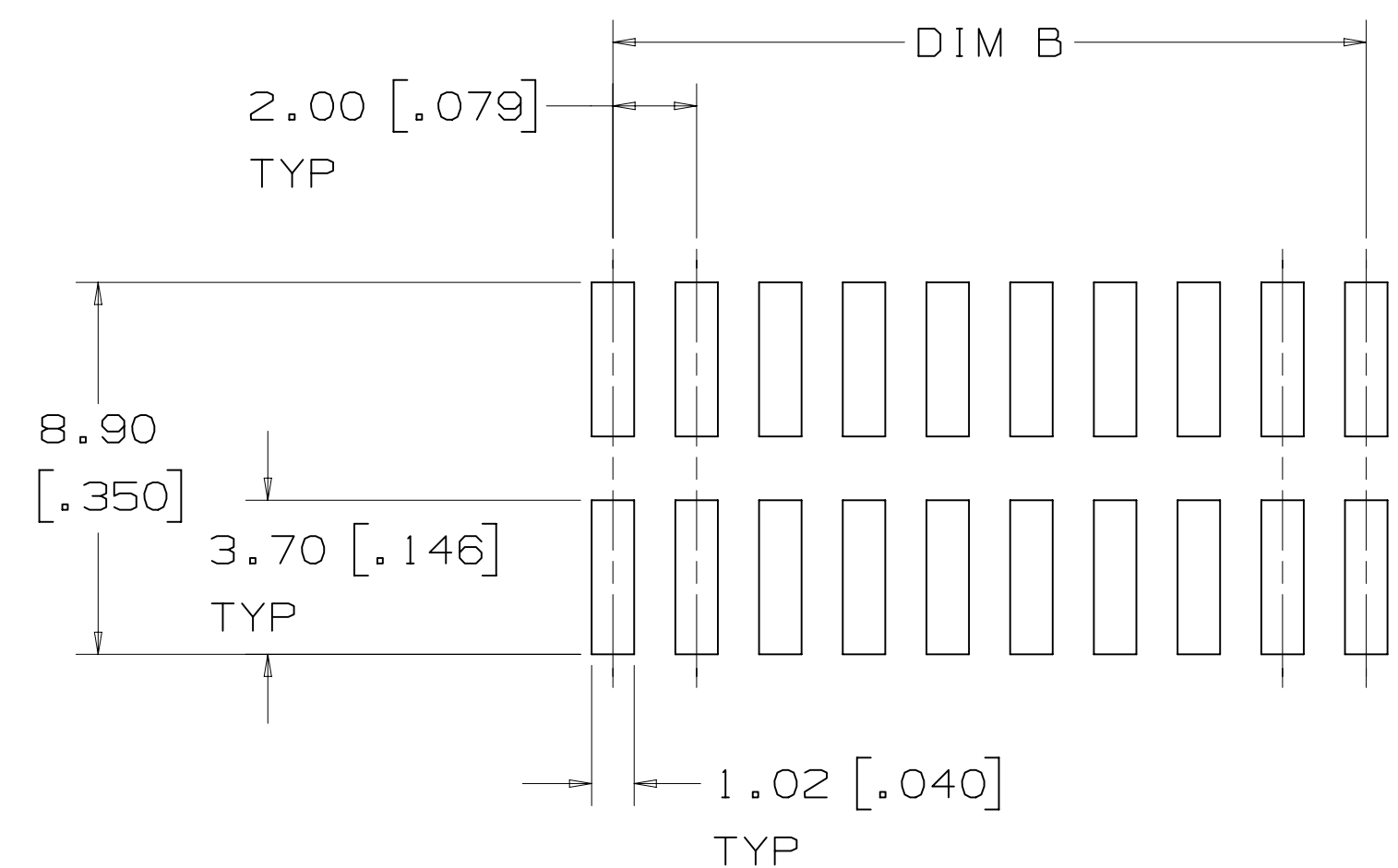
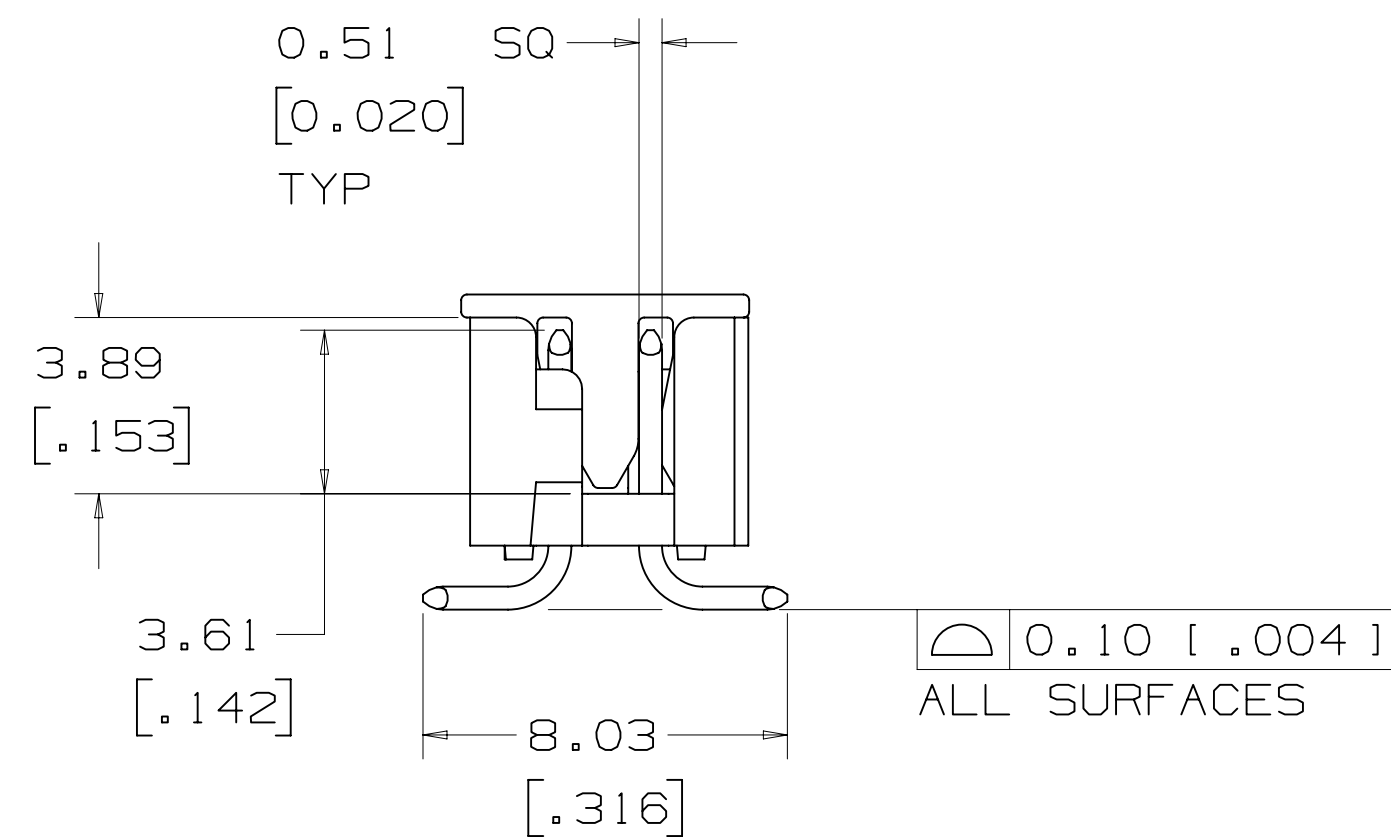
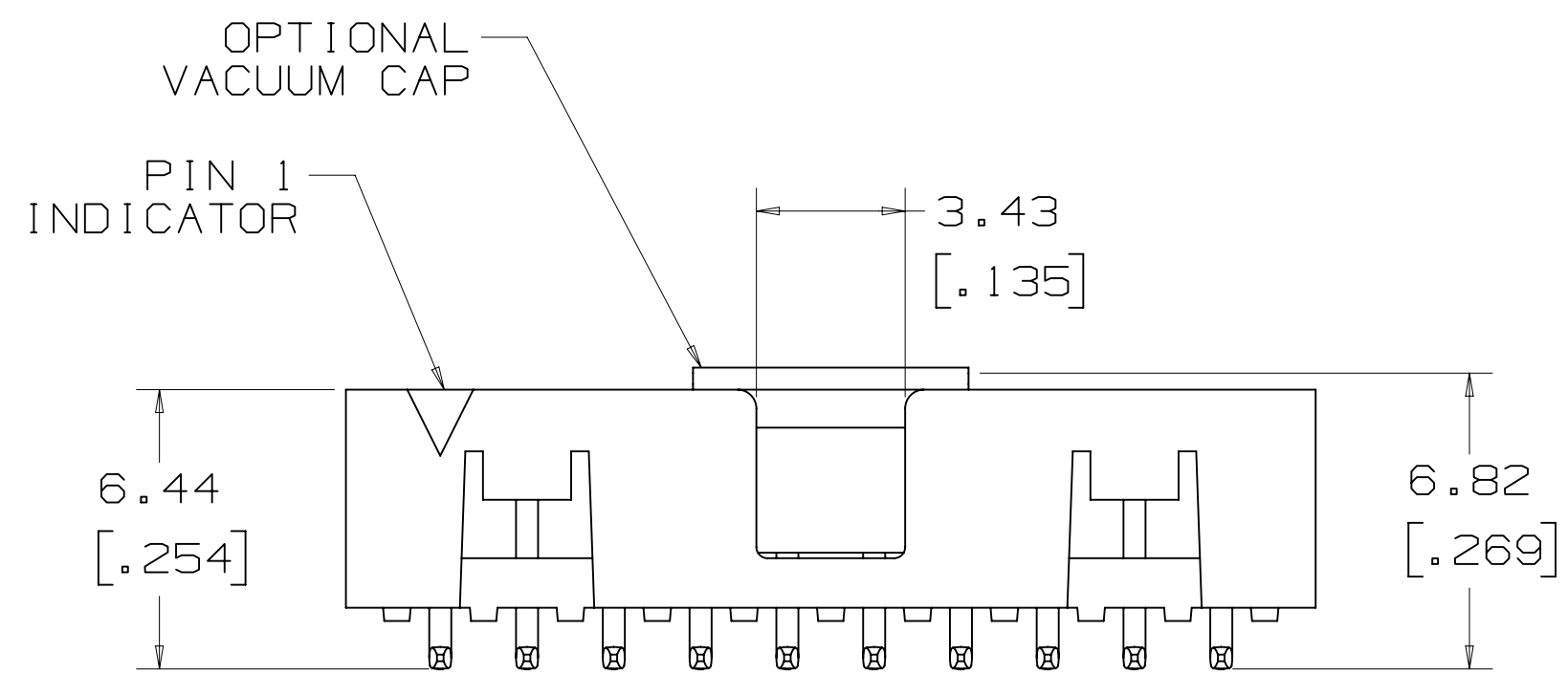
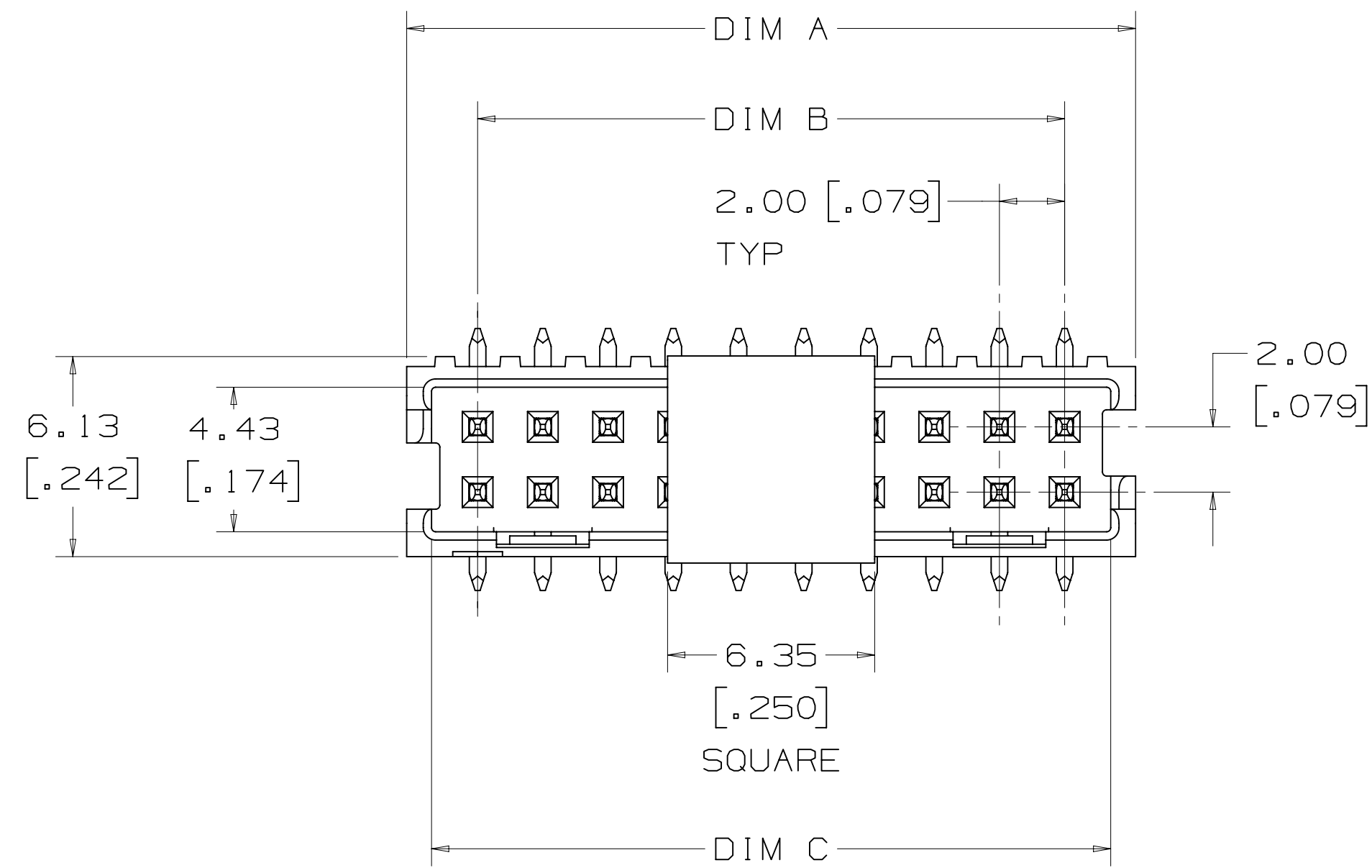
METRIC [ ENGLISH ]

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
DIVISION		DIVISION CODE		DATE		
DO NOT SCALE DRAWING		SCALE 4/1		TOLERANCES EXCEPT AS NOTED		
THIRD ANGLE PROJECTION		INCHES		MILLIMETERS		
INTERPRET PER ASME Y14.5 - 1994		0 ±		.00 ±		
MAX SURFACE ROUGHNESS		.00 ± 0.13		.000 ±		
125 ALL SURFACES		.000 ±		.000 ±		
MARKED ONLY		ANGLES ±1°		TITLE		
				3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES		
				CAGE NUMBER		
				D 78-5100-2359-7		
				REV. A		
				SHT 2 OF 4		

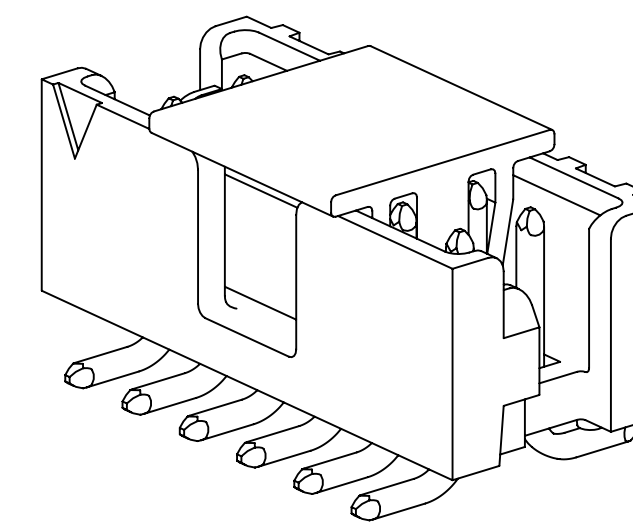
78-5100-2359-7  
DRAWING NUMBER

A

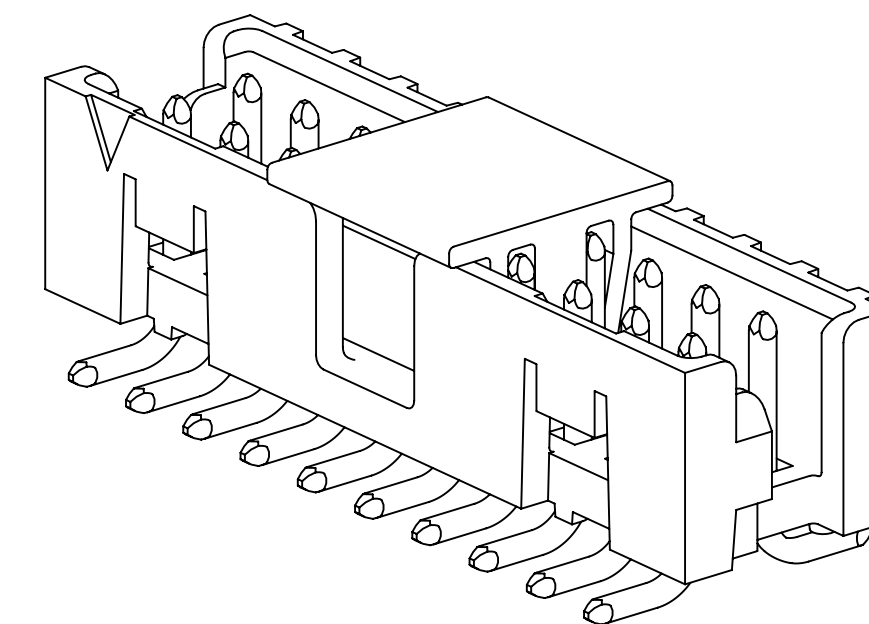
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length 3 and Extended Length 4



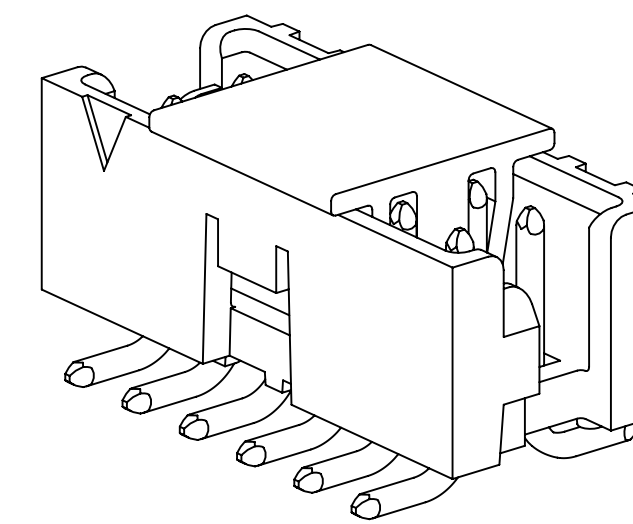
RECOMMENDED PCB PAD PATTERN  
TOLERANCE = ±0.08 [.003]



POLARIZATION SLOT  
SURFACE MOUNT HEADER  
6-12 POSITIONS ONLY



POLARIZATION SLOT AND  
DUAL FRICTION LATCHES  
SURFACE MOUNT HEADER  
14-50 POSITIONS

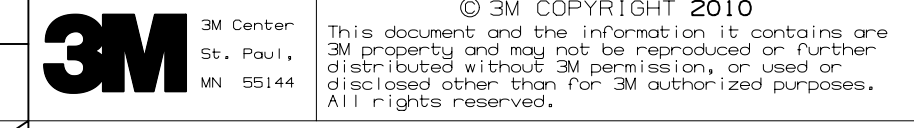


SINGLE FRICTION LATCH  
SURFACE MOUNT HEADER  
6-12 POSITIONS ONLY

REFERENCE TABLE ON SHEET 4  
FOR AVAILABLE POSITIONS

METRIC ( ENGLISH )

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
DIVISION		DIVISION CODE		DATE		
DO NOT SCALE DRAWING		SCALE 4/1		TOLERANCES EXCEPT AS NOTED		
THIRD ANGLE PROJECTION		MILLIMETERS		INCHES		
INTERPRET PER ASME Y14.5 - 1994		0 ±		.00 ±		
MAX SURFACE ROUGHNESS 125		.00 ± 0.13		.000 ±		
ALL SURFACES MARKED ONLY		ANGLES ±1°		.0000 ±		
CAGE NUMBER		DRAWING NO.		REV.		
D78-5100-2359-7		A		A		
MODEL		SHT 3 OF 4		REV.		
				AUG 09, 2010		



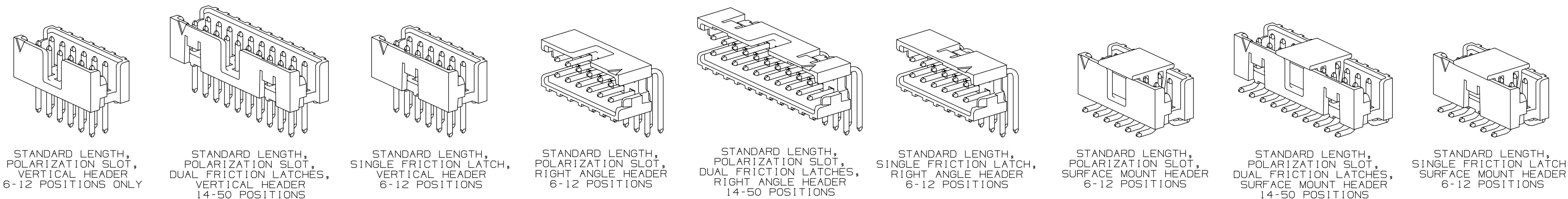
TITLE  
3M SHROUDED BOARD  
MOUNT HEADER 2 MM X 2  
MM PITCH 159 SERIES

DRAWING NUMBER 78-5100-2359-7

REVISION A

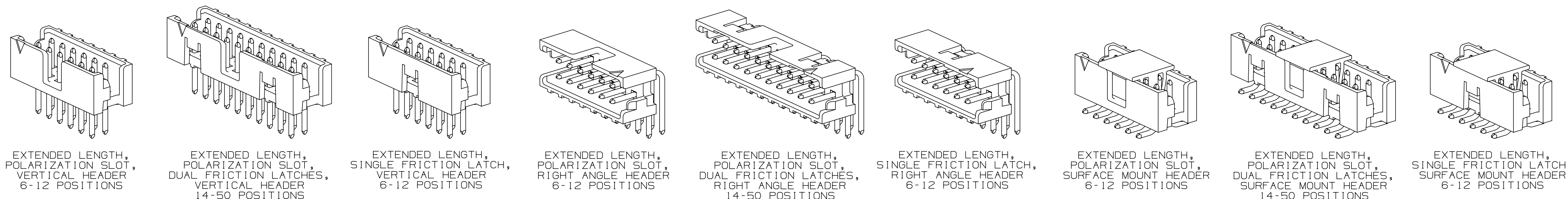
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length 3

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

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)

NUMBER OF POSITIONS	SHROUDED BOX HEADER						DIM D	
	DIM A		DIM B	DIM C				
	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]	

METRIC (ENGLISH)

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
				INITIAL RELEASE	LDS	SF
DISTRICT CODES		DRFT		DATE		DATE
		L. SCHMIDT		JUL 29, 2010		
DIVISION	DIVISION CODE	CHKD		DATE		DATE
		S FELDMAN		AUG 09, 2010		
DO NOT SCALE DRAWING	SCALE 4/1	TOLERANCES EXCEPT AS NOTED				
		INCHES				
		.00 ±				
		.000 ±				
		.0000 ±				
THIRD ANGLE PROJECTION		MILLIMETERS				
		0 ±				
		.00 ± 0.13				
MAX SURFACE ROUGHNESS		.000 ±				
125		ALL SURFACES				
		MARKED ONLY				
		ANGLES ±1°				
TITLE		CAGE NUMBER		DRAWING NO.		REV.
3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES		D 78-5100-2359-7		A		A
MODEL		SHT		4 OF 4		

78-5100-2359-7 DRAWING NUMBER

A