

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 ⁹ 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

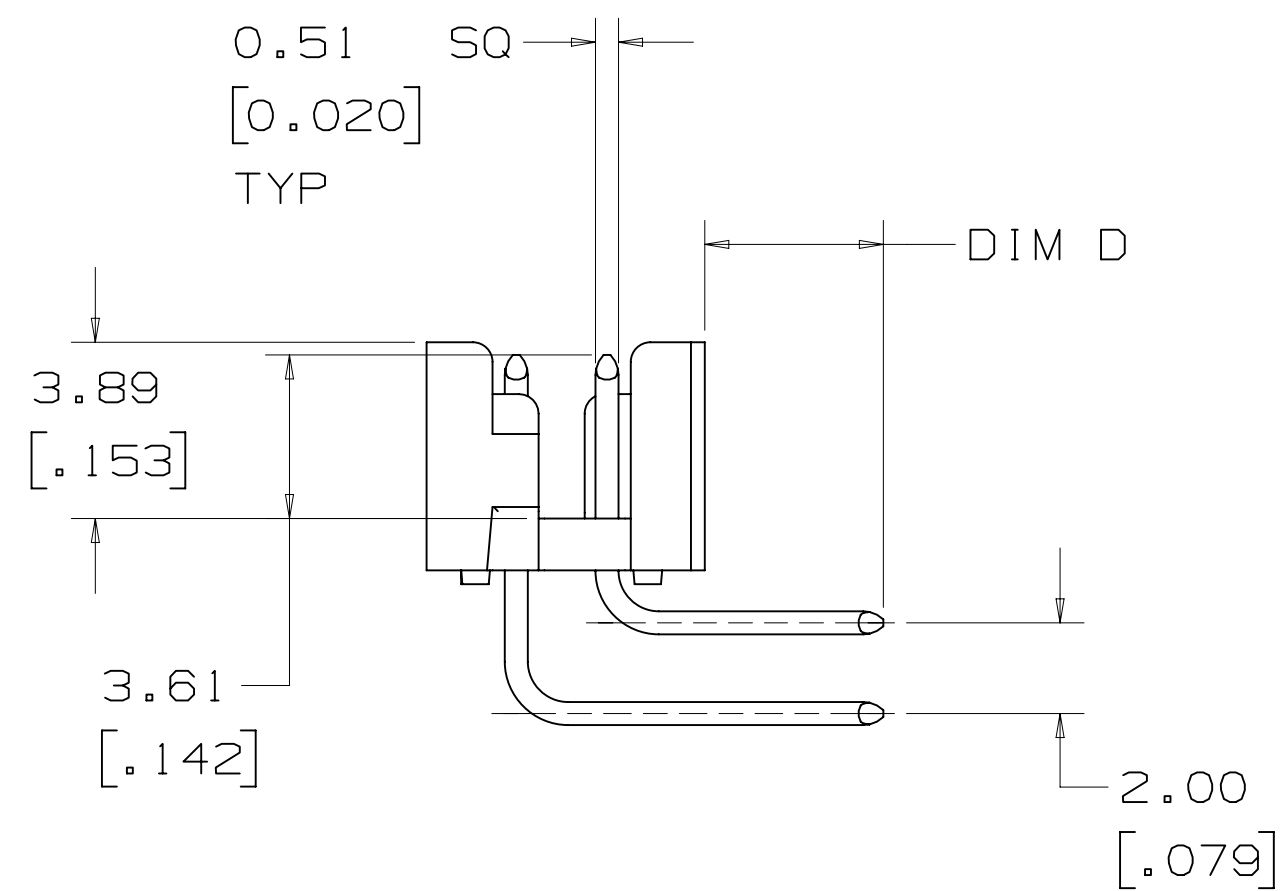
METRIC [ENGLISH]

NOTES

- 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.

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	MAX SURFACE ROUGHNESS 125	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	A
			MODEL	DET	ISTS	YES NO SHT 1 OF 4

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

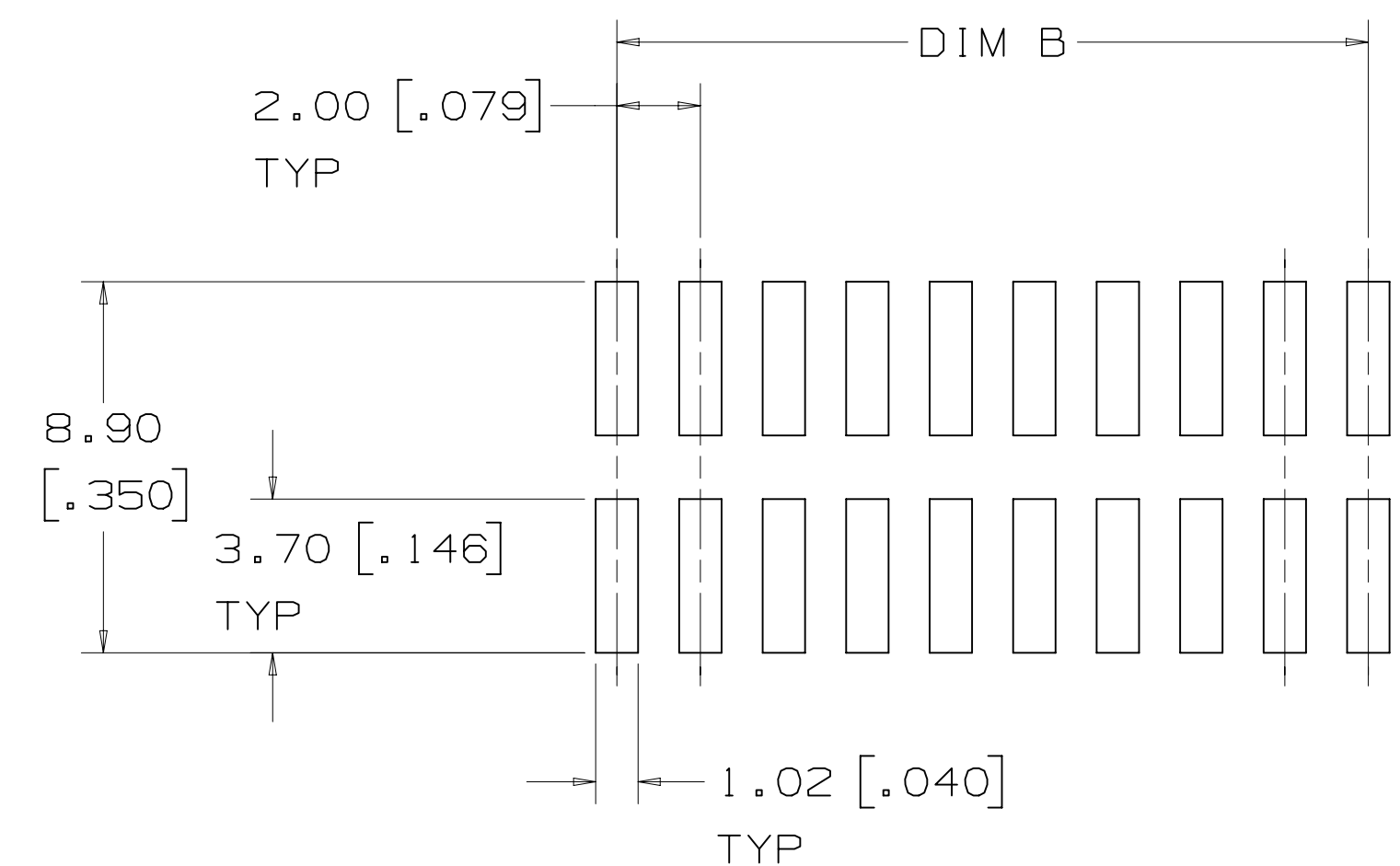
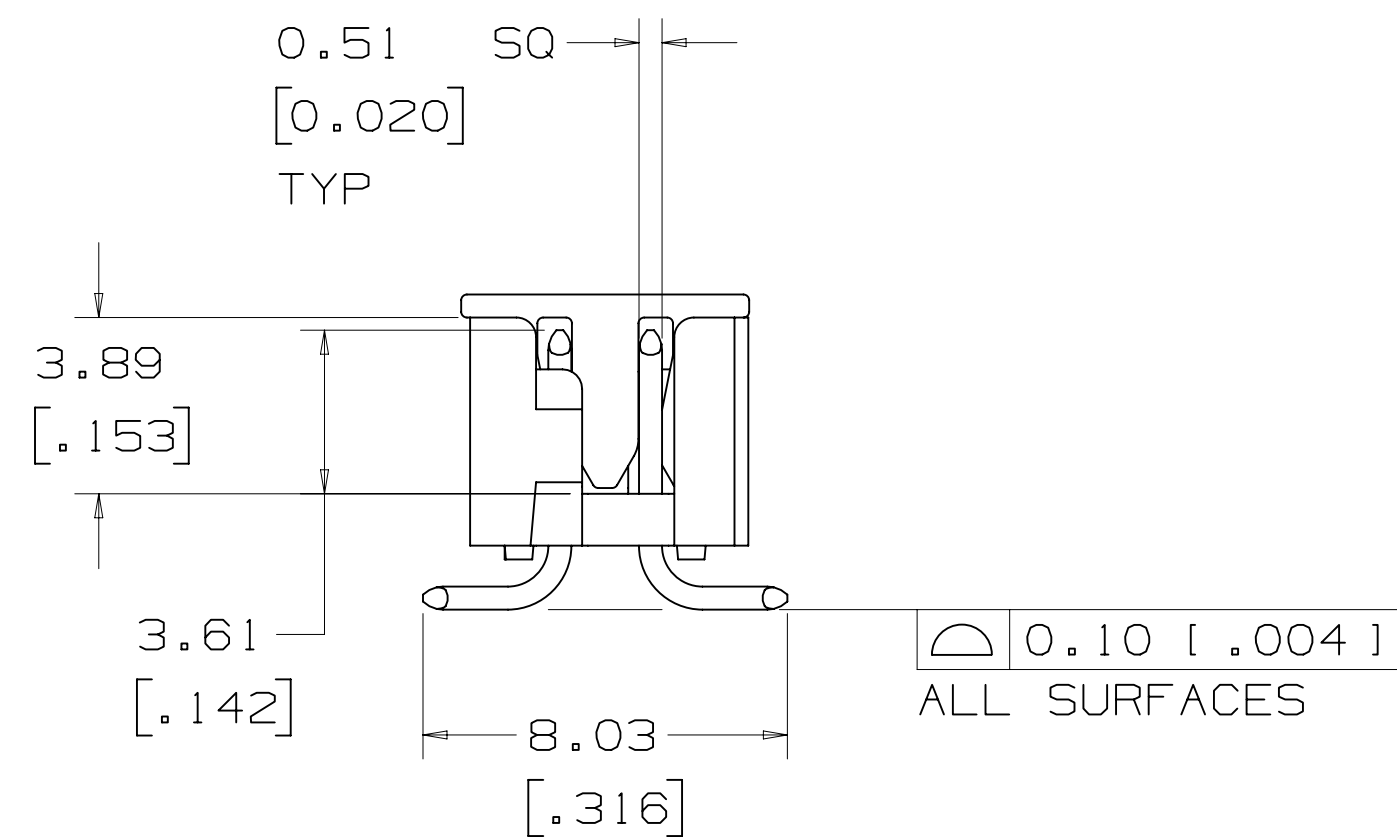
METRIC [ENGLISH]

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		.00 ±		0 ±		
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		
				MODEL		
				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)

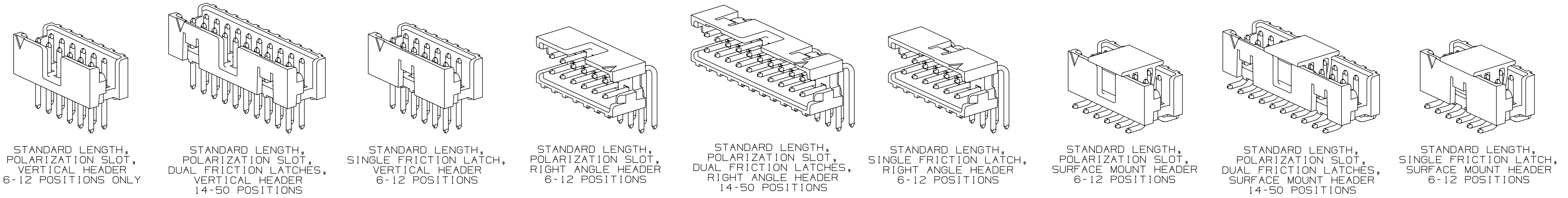
DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
DIVISION		DIVISION CODE		DATE		
DO NOT SCALE DRAWING		SCALE 4/1		TOLERANCES EXCEPT AS NOTED		
THIRD ANGLE PROJECTION		MILLIMETERS		INCHES		
INTERPRET PER ASME Y14.5 - 1994		0 ±		.00 ±		
MAX SURFACE ROUGHNESS 125		.00 ± 0.13	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

DRAWING NUMBER 78-5100-2359-7

REVISION A

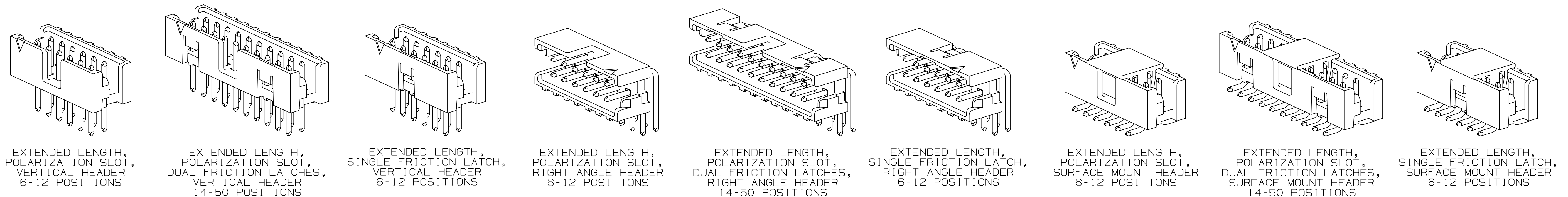
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length 3

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		DRP	DATE	MFG	DATE	
		L. SCHMIDT	JUL 29, 2010			
DIVISION	DIVISION CODE	CHKD	DATE	APPV	DATE	
		S FELDMAN	AUG 09, 2010			
DO NOT SCALE DRAWING	SCALE 4/1	TOLERANCES EXCEPT AS NOTED		© 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.		
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 1994	MILLIMETERS		TITLE 3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES		
MAX SURFACE ROUGHNESS 125	ALL SURFACES MARKED ONLY	INCHES		CAGE NUMBER D 78-5100-2359-7		
		ANGLES ±1°		DRAWING NO. 78-5100-2359-7		
				REV. A		
				MODEL SHT 4 OF 4		

78-5100-2359-7 DRAWING NUMBER

A REVISION