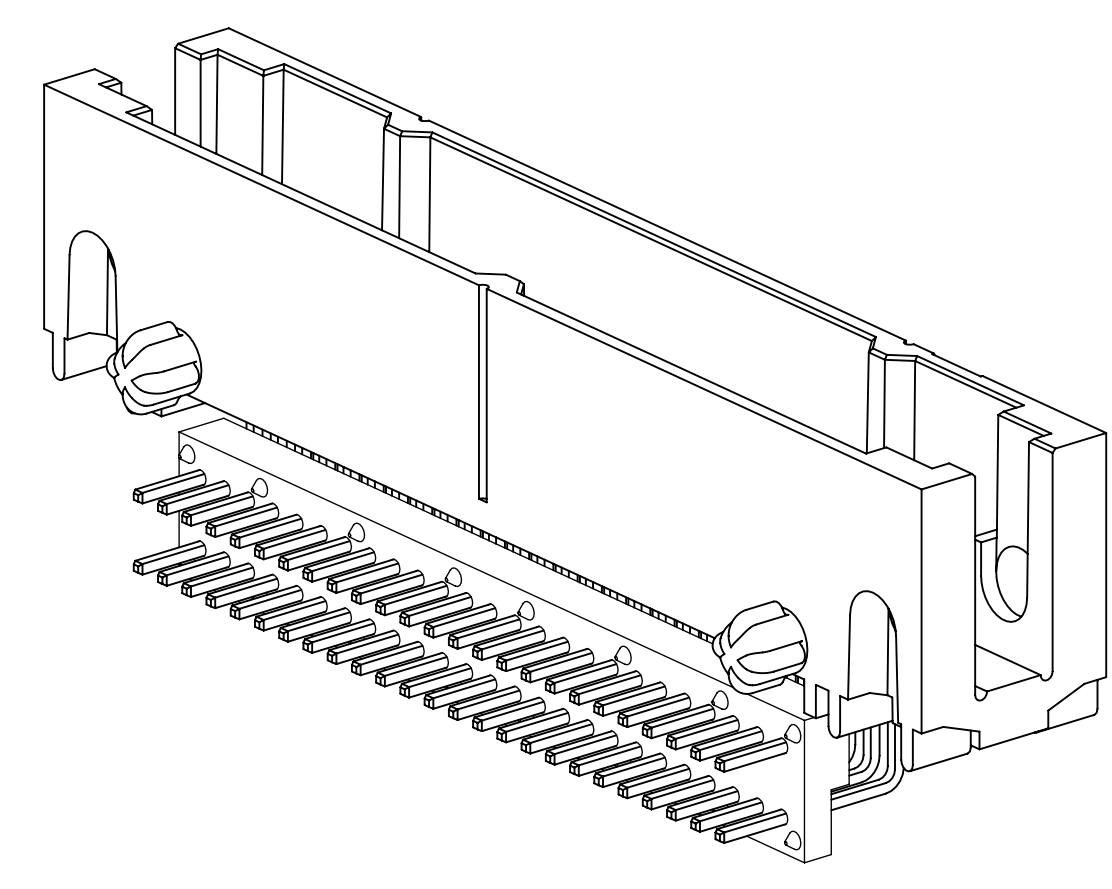
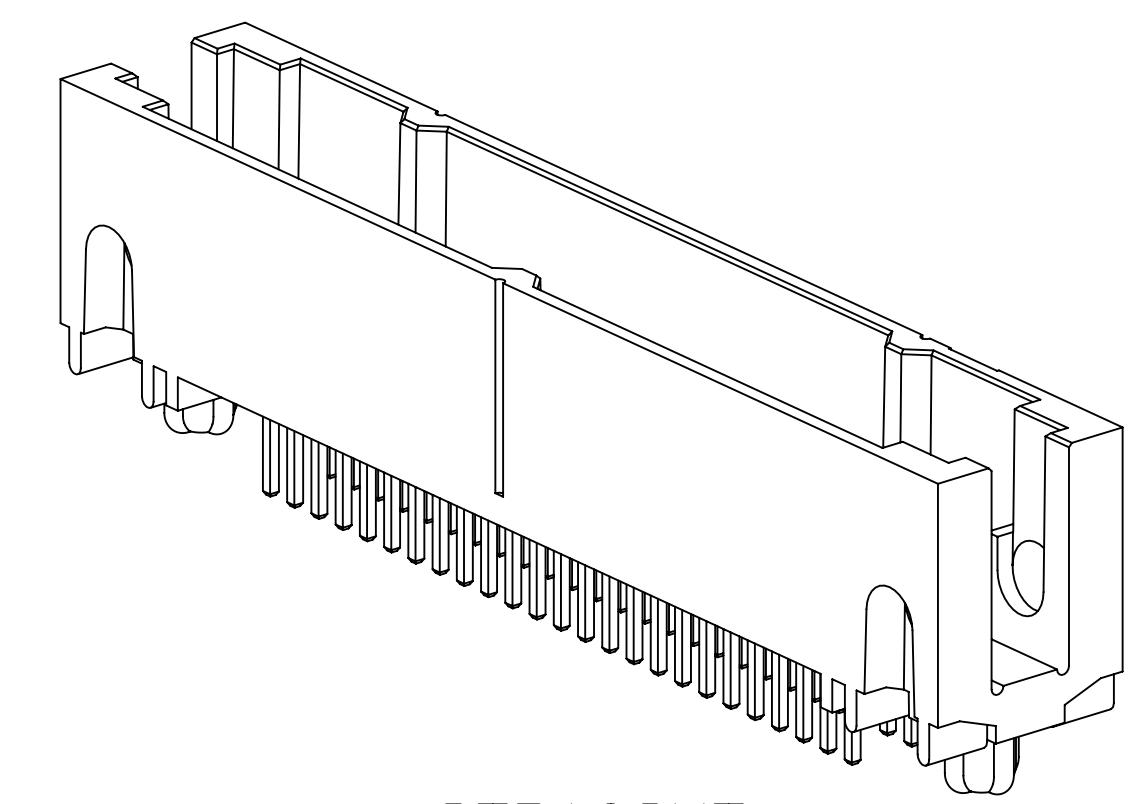


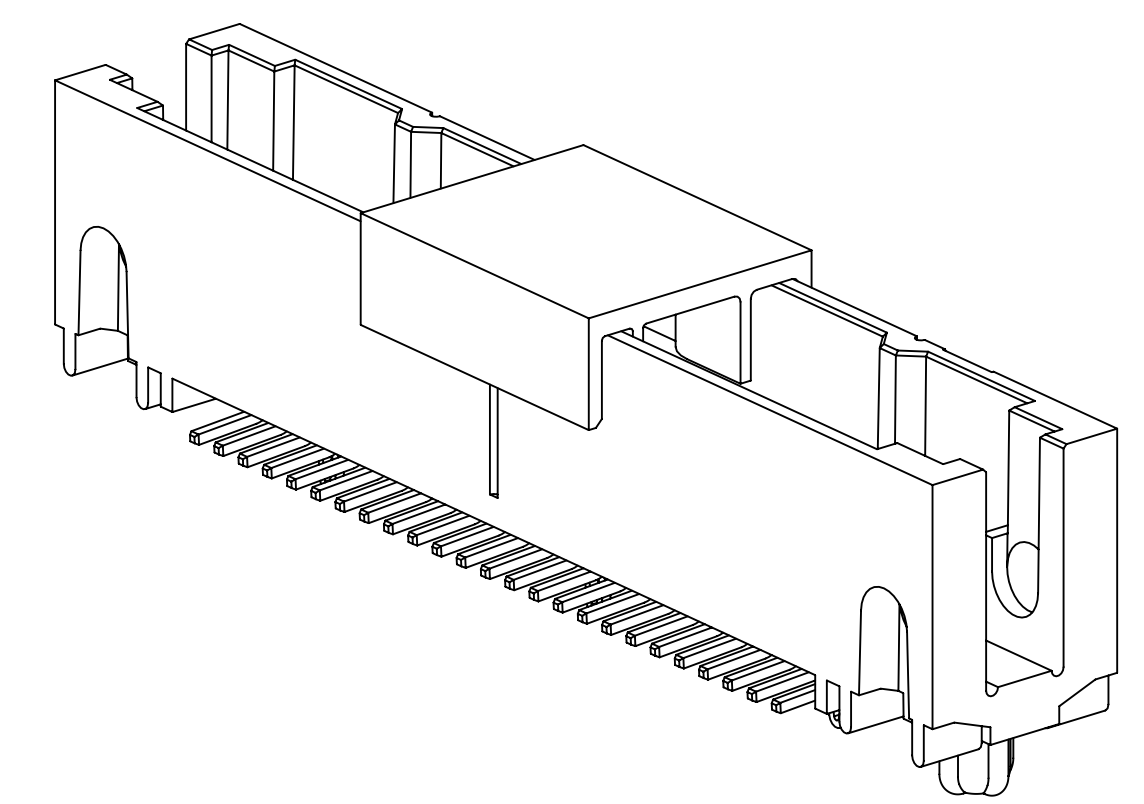
3M™ 4-WALL, TRIPOLARIZED HEADER, 810 SERIES
 .050" X .100" LATCH/EJECTOR, PTH AND SMT STRAIGHT, PTH RIGHT ANGLE



RIGHT ANGLE
VERSION
81XXX-5X0X03



STRAIGHT
VERSION
81XXX-6X0X0X



SURFACEMOUNT
VERSION
81XXX-6X0C0X

- * TRIPOLARIZED FOR ROBUST ALIGNMENT WHEN MATING TO 3M™ 820 SERIES SOCKET.
- * .050" X .100" HALVES THE CONNECTOR LENGTH VS. TRADITIONAL .100" X .100" PRODUCTS.
- * LATCHING EJECTOR FOR RUGGED HIGH PERFORMANCE APPLICATIONS.
- * AVAILABLE FOR THROUGH HOLE OR SURFACEMOUNT ATTACHMENT.
- * HIGH TEMPERATURE PLASTIC FOR LEAD FREE SURFACEMOUNT OR PASTE-IN-HOLE SOLDERING METHODS.
- * FOUR-WALL SHROUD PROVIDES CONTACT PROTECTION.

2 PHYSICAL :

INSULATION: HIGH TEMPERATURE PLASTIC (LCP)
 MATERIAL: HIGH TEMPERATURE PLASTIC (LCP)
 FLAMMABILITY: UL94V-0
 COLOR: BLACK
 CONTACT: COPPER ALLOY
 MATERIAL: COPPER ALLOY
 PLATING: NICKEL-OVERALL
 UNDER PLATING: 50μ"-150μ" [1.27μm-3.81μm] NICKEL-OVERALL
 WIPING AREA: 30μ" [0.76μm] GOLD AVG.
 SOLDER TAILS: 100μ"-300μ" [2.54μm-7.62μm] MATTE TIN
 MARKINGS: 3M LOGO, PART No. AND ORIENTATION TRIANGLE

2 ELECTRICAL :

CURRENT RATING: 3.00 A, 1 CONTACT POWERED
 2.00 A, 4 CONTACTS POWERED
 0.75 A, ALL CONTACTS POWERED

RATING CONDITIONS: EIA-364-070 METHOD 2, 30°C MAXIMUM TEMPERATURE RISE, 20% DERATED. REFERENCE APPROPRIATE 3M PRODUCT SPECIFICATION FOR DETAILED CURRENT DERATING CURVES.

INSULATION RESISTANCE: >1 X 10⁹Ω AT 500 V_{DC}
 WITHSTANDING VOLTAGE: 500V_{RMS} AT SEA LEVEL

2 ENVIRONMENTAL :

TEMPERATURE RATING: -55°C TO +105°C
 PROCESS RATING: MAXIMUM 260°C
 MOISTURE SENSITIVITY LEVEL: 1 (PER J-STD-020C)

NOTES

- REGULATORY INFORMATION: VISIT 3M.com/regs
- UNLESS OTHERWISE NOTED, REFERENCES TO INDUSTRY SPECIFICATIONS ARE INTENDED TO INDICATE SUBSTANTIAL COMPLIANCE TO THE MATERIAL ELEMENTS OF THE SPECIFICATION. SUCH REFERENCES SHOULD NOT BE CONSTRUED AS A GUARANTEE OF COMPLIANCE TO ALL REQUIREMENTS IN A GIVEN SPECIFICATION.
- THIS POLARIZING SLOT DOES NOT EXIST ON THE 20 POSITION HEADER.
- RECOMMENDED TO BE MATED TO THE .050" X .100" 3M™ 820XX SERIES SOCKETS, TS-0254.
- SOLDER THIEF SOLDER PADS REQUIRED ONLY ON SOLDER SIDE OF PC BOARD.
- A DUMMY OR SOLDER THIEF SOLDER PAD AT THE END OF EACH ROW IS RECOMMENDED ON THE BOTTOM OR SOLDER SIDE OF THE PC BOARD IN ORDER TO HELP PREVENT SOLDER BRIDGING ON THE END SOLDER TAILS. THE SOLDER THIEFS ARE ONLY REQUIRED ON THE END OF THE ROWS WHICH THE SOLDER BATH LAST.
- RECOMMENDED TO PROCESS PC BOARDS THROUGH THE SOLDER BATH SUCH THAT THE CONNECTOR ENTERS END FIRST (TWO SOLDER TAILS AT A TIME). THIS WILL PREVENT SOLDER BRIDGING.
- IN ORDER TO FACILITATE SOLDERING IT IS RECOMMENDED THAT EJECTOR LATCHES BE INSTALLED AFTER THE SOLDERING PROCESS.

3M ELECTRONICS MATERIALS SOLUTIONS DIVISION
 INTERCONNECT SOLUTIONS
<http://www.3M.com/interconnect>

3M IS A TRADEMARK OF 3M COMPANY.
 FOR TECHNICAL, SALES OR ORDERING
 INFORMATION CALL 800-225-5373



DIMENSIONS: INCHES [MM]
 [MM] IS REF. ONLY

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
				JAN 13, 2022 REVISED AND REDRAWN	JNC	SAN
DATE	DATE	DATE	DATE	DATE	DATE	DATE
				JAN 13, 2022		JAN 13, 2022
DIVISION	DIVISION CODE	© 3M COPYRIGHT 2022 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.				
DO NOT SCALE DRAWING	SCALE	TOLERANCES EXCEPT AS NOTED				
		INCHES: .0 ± .1 .00 ± .01 .000 ± .005 .0000 ± .0002				
THIRD ANGLE PROJECTION		MILLIMETERS: 0 ± .0 ± .00 ± ± .000 ±				
INTERPRET PER ASME Y14.5 - 2018		CAGE NUMBER: D78-5100-0253-4				
MAX SURFACE ROUGHNESS		DRAWING NO. 78-5100-0253-4				
MARKED ONLY		REV. L				
		MODEL 810				
		SHT 1 OF 5				

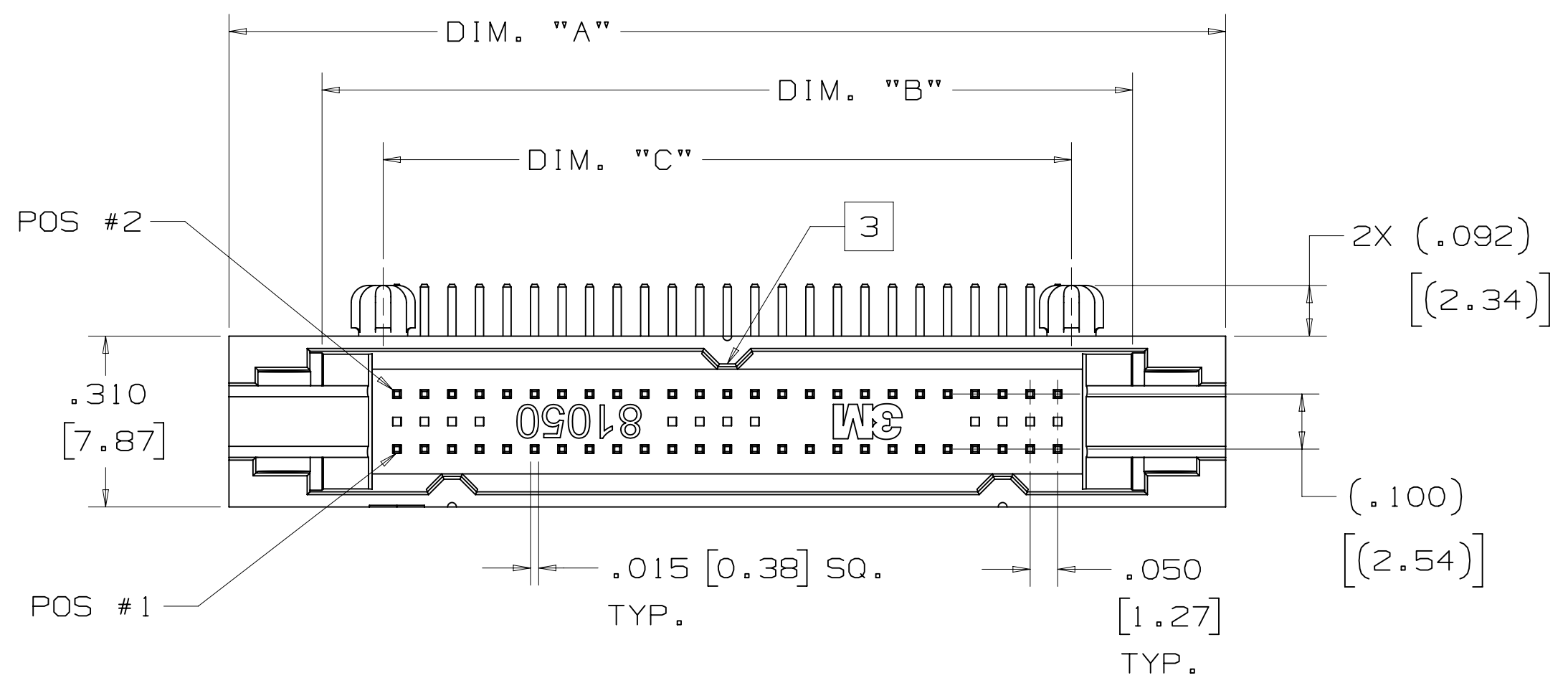
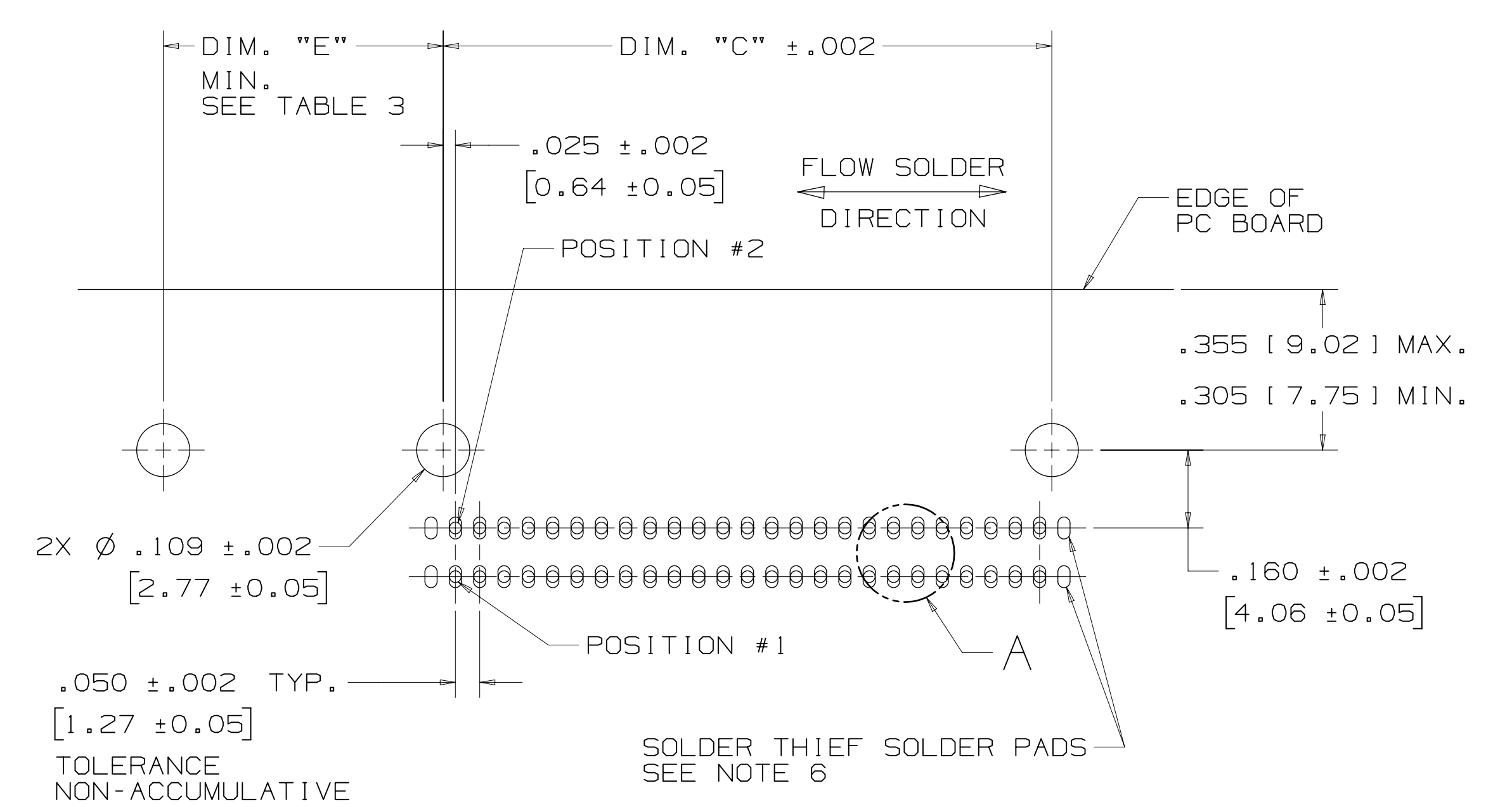
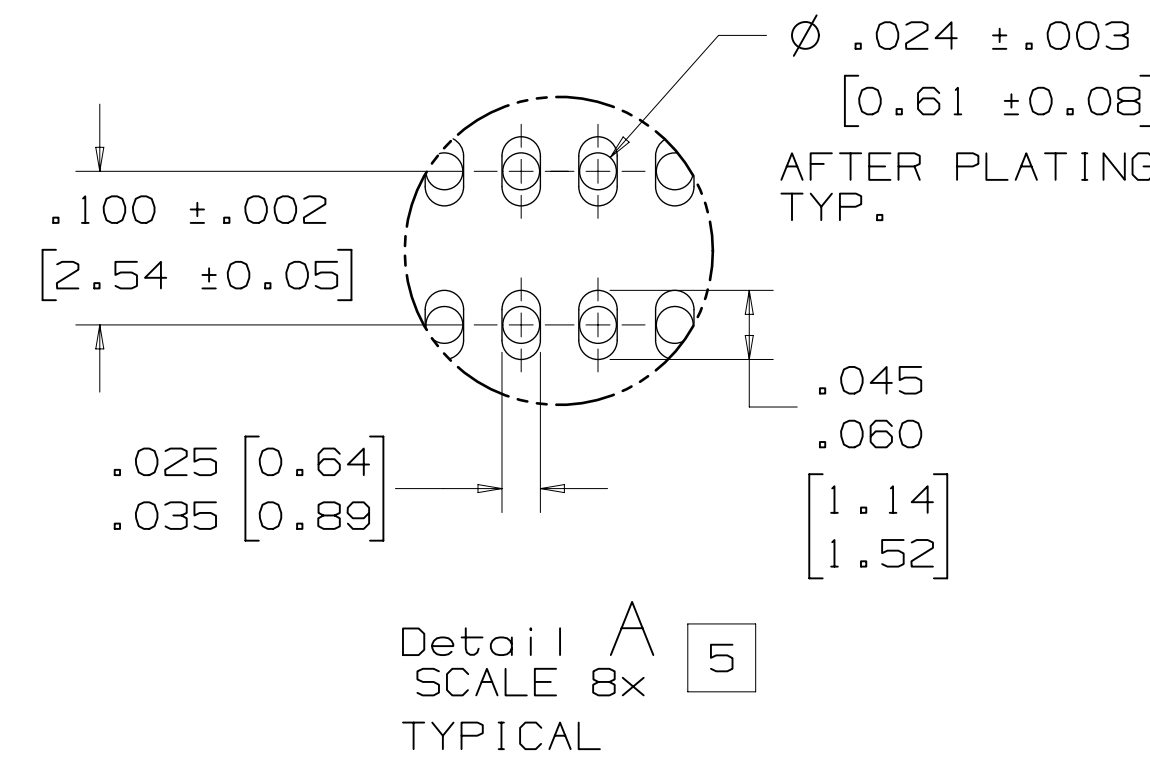
78-5100-0253-4
 1/25/2022 -- UTC
 1/25/2022 1:25:00 PM
 1/25/2022 1:25:00 PM

3M™ 4-WALL, TRIPOLARIZED HEADER, 810 SERIES
 .050" X .100" LATCH/EJECTOR, PTH AND SMT STRAIGHT, PTH RIGHT ANGLE

CONTACT QTY.	DIM. "A"	DIM. "B"	DIM. "C"	DIM. "D" SHORT	DIM. "D" LONG
020	1.060 [26.92]	.722 [18.34]	.500 [12.70]	1.671 [42.44]	1.842 [46.79]
026	1.210 [30.73]	.872 [22.15]	.650 [16.51]	1.821 [46.25]	1.992 [50.60]
036	1.460 [37.80]	1.122 [28.50]	.900 [22.86]	2.071 [52.60]	2.242 [56.95]
040	1.560 [39.62]	1.222 [31.04]	1.000 [25.40]	2.171 [55.14]	2.342 [59.49]
050	1.810 [45.97]	1.472 [37.39]	1.250 [31.75]	2.421 [61.49]	2.592 [65.84]
060	2.060 [52.32]	1.722 [43.74]	1.500 [38.10]	2.671 [67.84]	2.842 [72.19]
068	2.260 [57.40]	1.922 [48.82]	1.700 [43.18]	2.871 [72.92]	3.042 [77.27]
080	2.560 [65.02]	2.222 [56.44]	2.000 [50.80]	3.171 [80.54]	3.342 [84.89]
100	3.060 [77.72]	2.722 [69.14]	2.500 [63.50]	3.671 [93.24]	3.842 [97.59]

PCB THICKNESS	DIM. "F"
.062 [1.57]	.090 [2.29]
.094 [2.39]	.112 [2.84]
.125 [3.18]	.143 [3.63]

ADJACENT CONNECTOR	
EJECTOR LATCHES	DIM. "E"
NONE	.575 [14.61]
LONG	1.010 [25.65]
SHORT	.885 [22.48]



ORDERING INFORMATION

PTH RIGHT ANGLE HEADER
 81XXX-5X0X03-RB

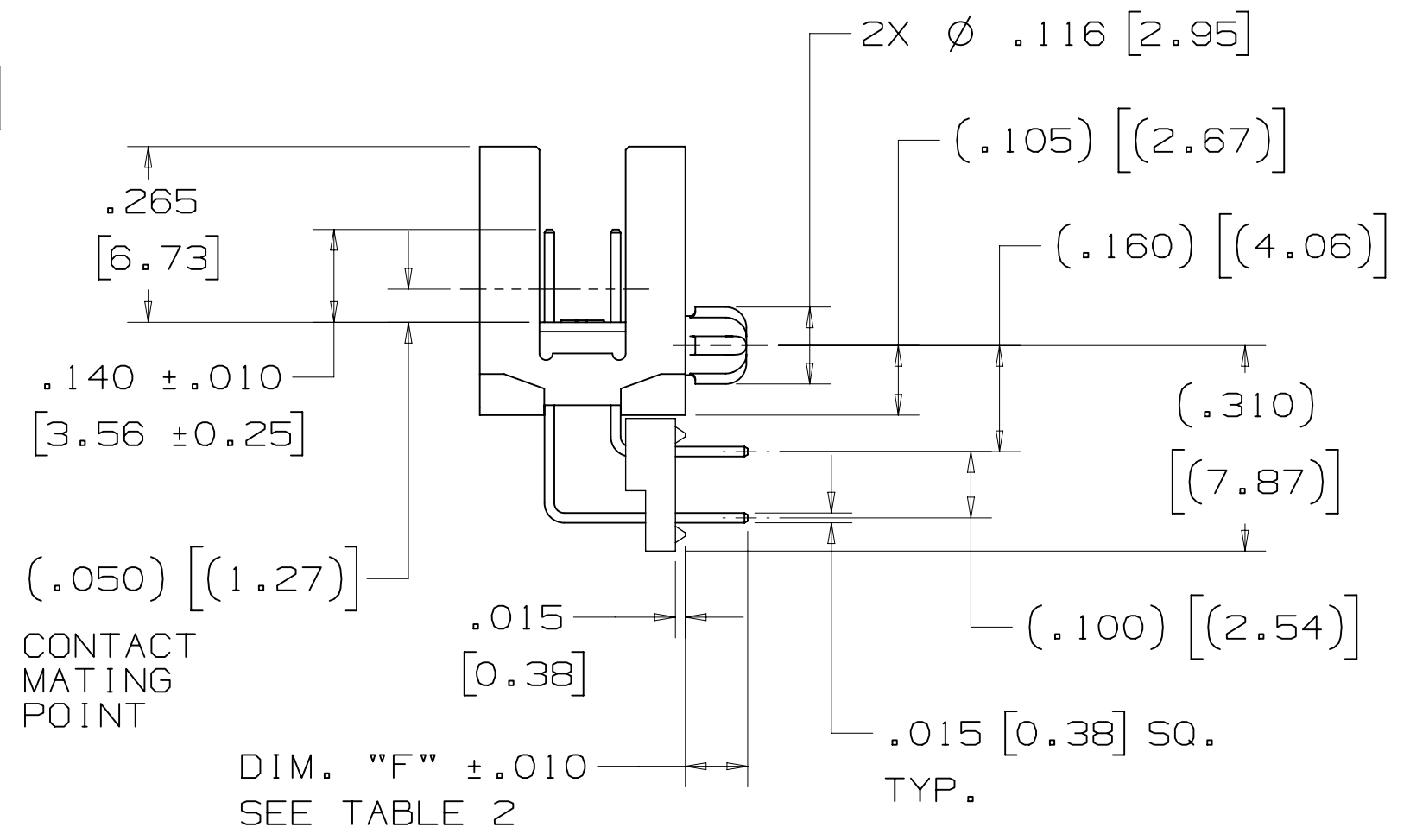
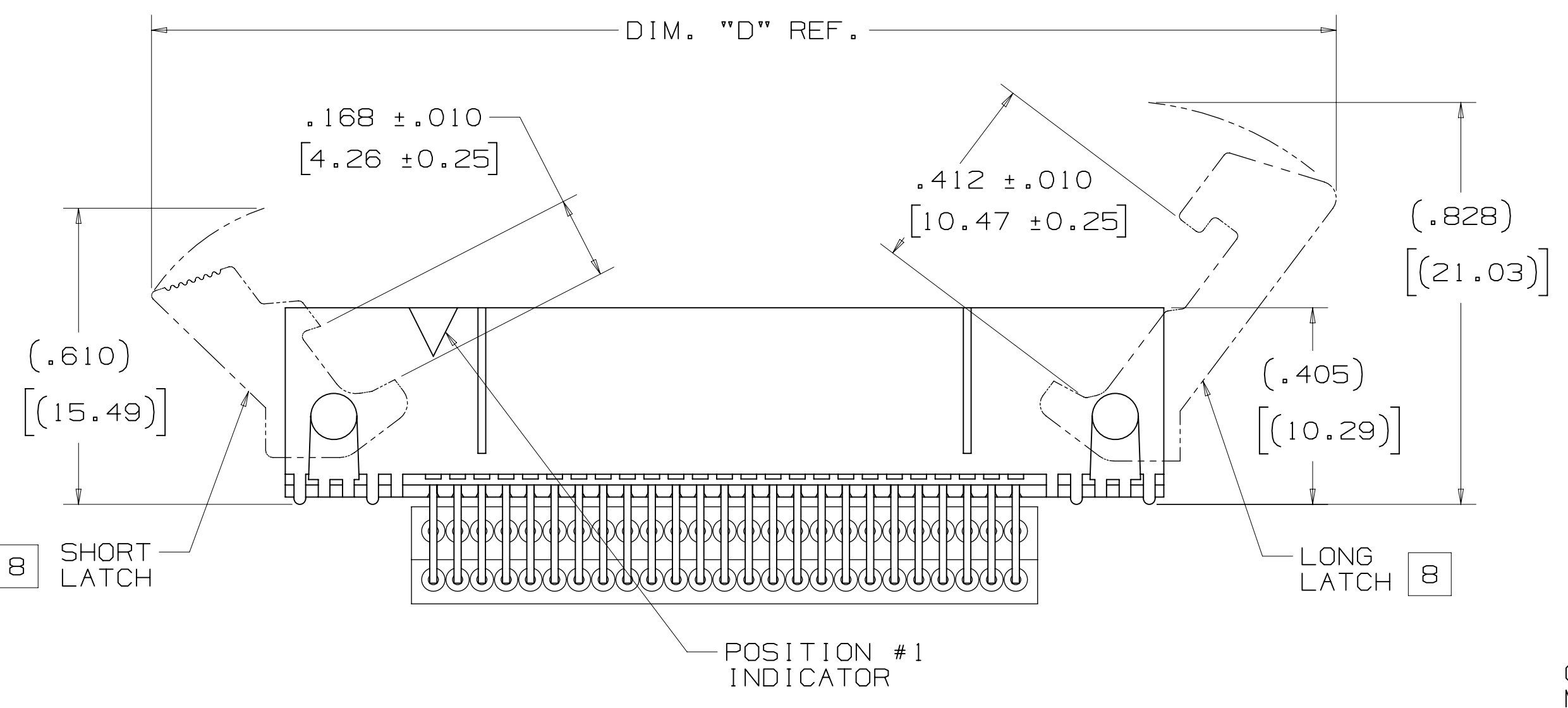
CONTACT QTY: (SEE TABLE 1)

CONTACT SOLDER TAIL:
 2 = FOR .062 [1.75] PC BOARD (STANDARD)
 3 = FOR .094 [2.39] PC BOARD (SPECIAL ORDER)
 4 = FOR .125 [3.18] PC BOARD (SPECIAL ORDER)

EJECTOR/LATCH SYSTEM:
 0 = NONE (SPECIAL ORDER)
 5 = WITH SHORT EJECTORS INSTALLED (SPECIAL ORDER)
 6 = WITH LONG EJECTORS INSTALLED (STANDARD)

EJECTOR LATCHES

(IF ORDERED SEPARATELY)
 LONG LATCHES: 3505-28
 SHORT LATCHES: 3505-29



DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
				JAN 13, 2022	JNC	SAN
DO NOT SCALE DRAWING		SCALE		TOLERANCES EXCEPT AS NOTED		
THIRD ANGLE PROJECTION		EMSD		INCHES: .00 ± .01		
INTERPRET PER ASME Y14.5 - 2018		EMSD		MILLIMETERS: .000 ± .005		
MAX SURFACE ROUGHNESS		EMSD		MILLIMETERS: 0 ± .0002		
SURFACES MARKED ONLY		EMSD		MILLIMETERS: .00 ± .0002		
TITLE		CAGE NUMBER		REV.		
TRIPOLARIZED HEADER, 4-WALL, LATCH/EJECT, .050" X .100"		D 78-5100-0253-4		L		
MODEL		SIZE		DRAWING NO.		
810		L		78-5100-0253-4		
SHT 2 OF 5		L		SHT 2 OF 5		

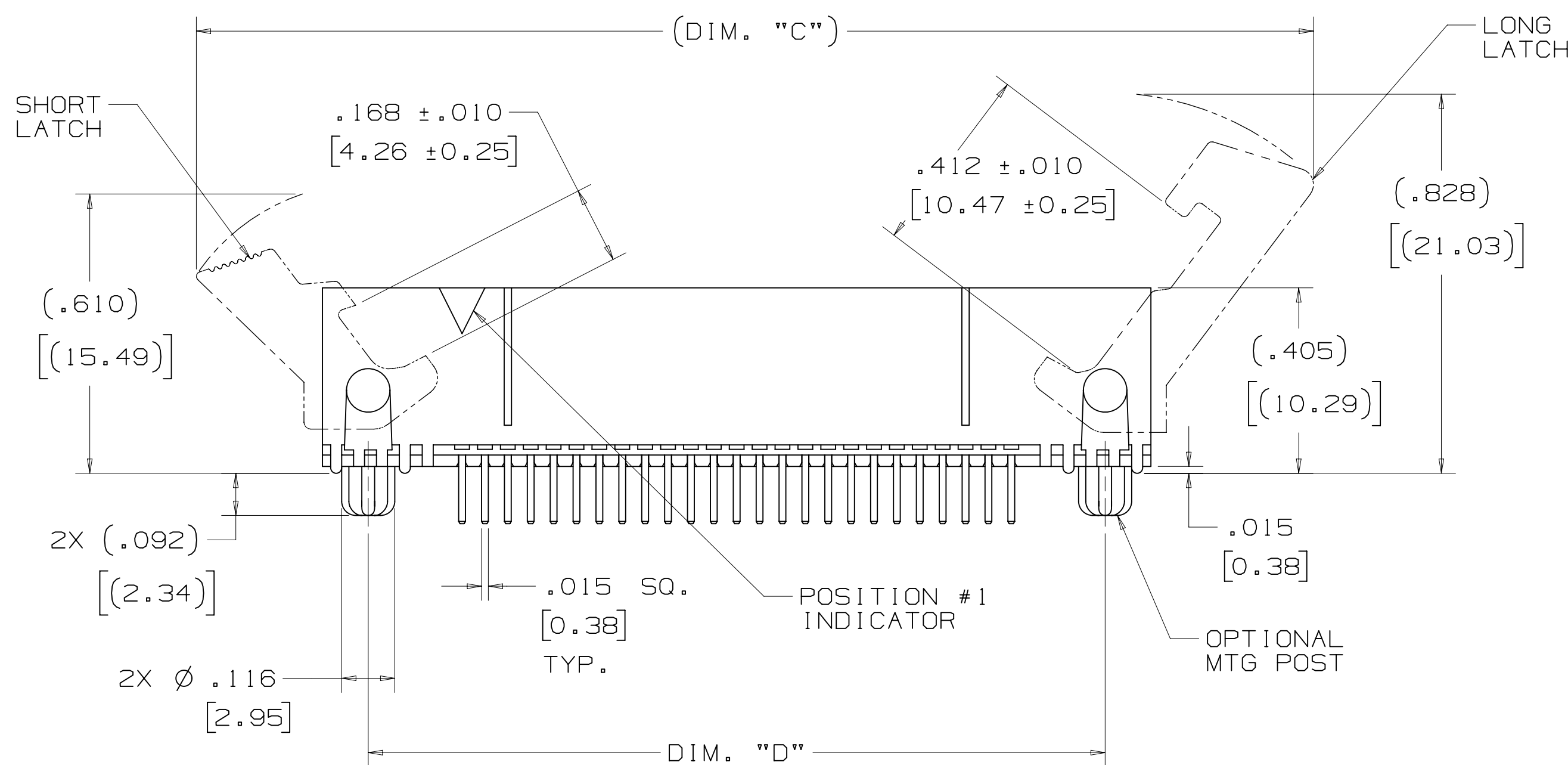
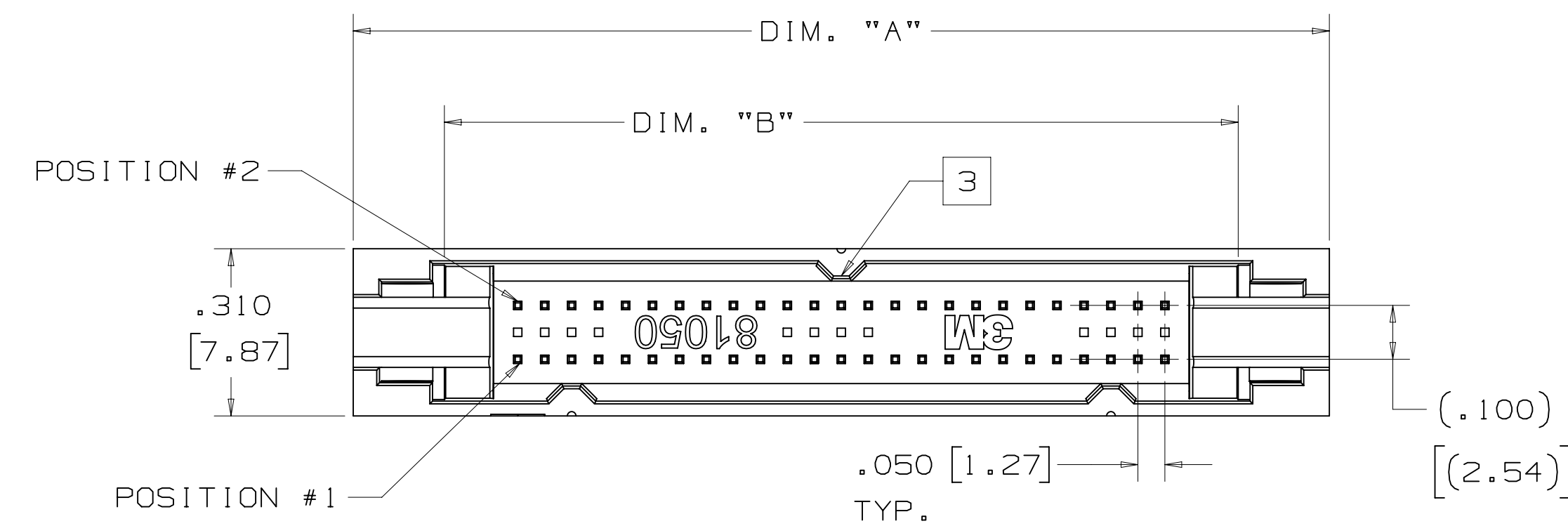
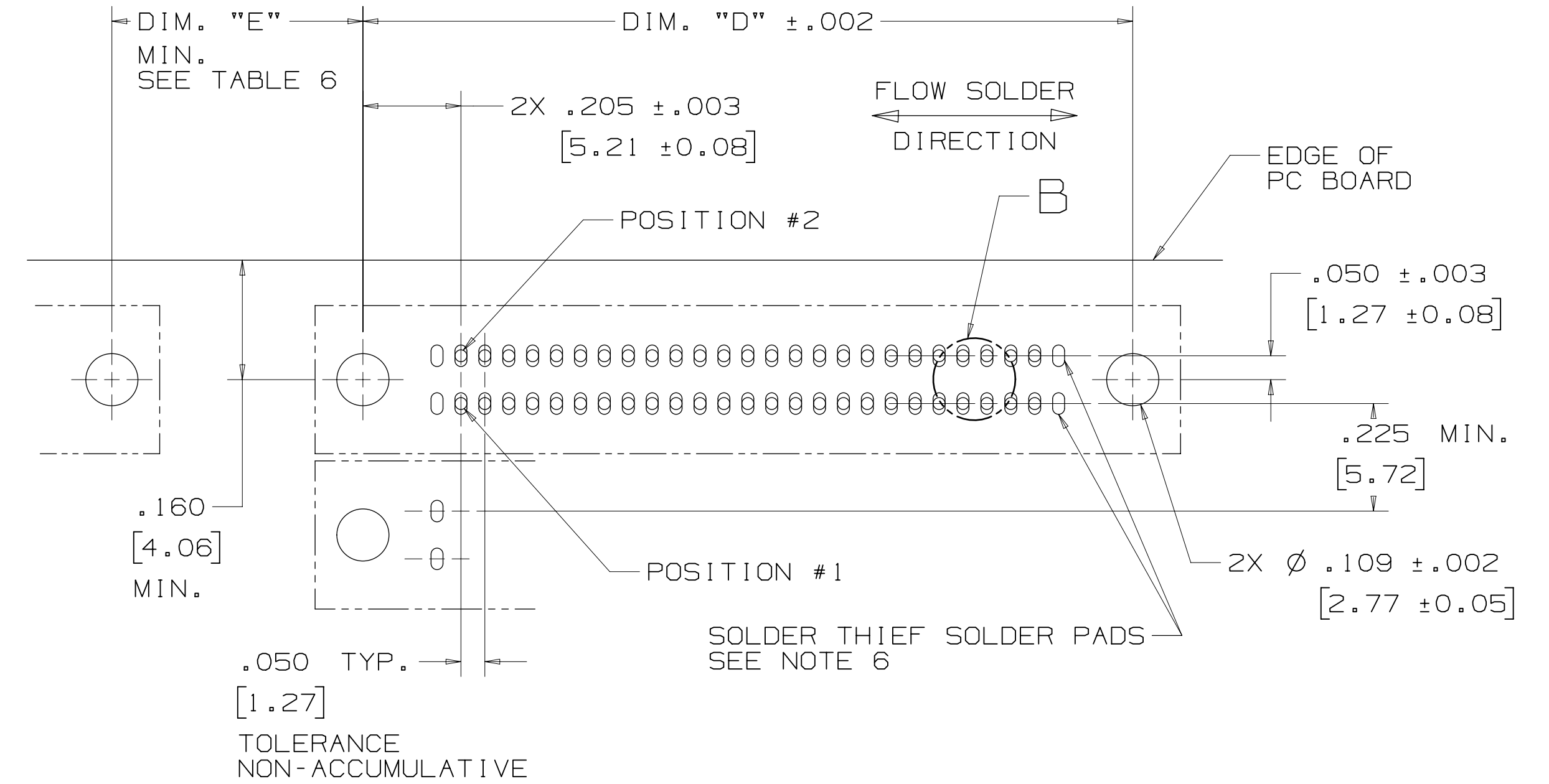
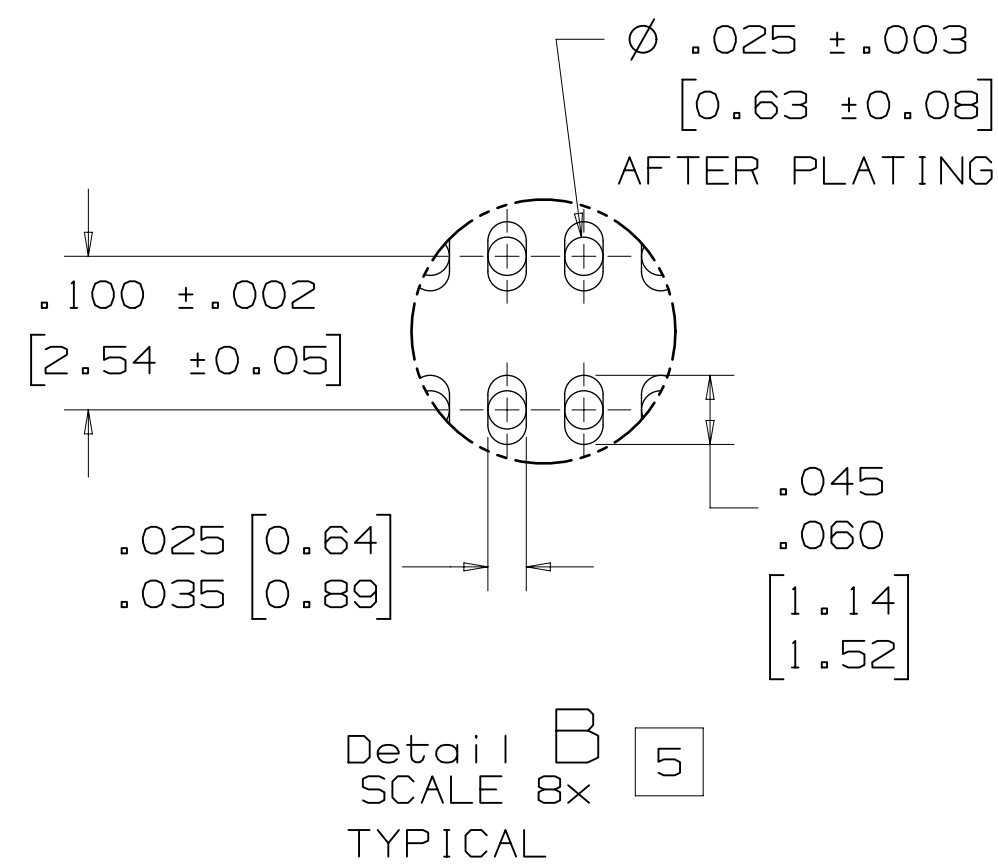
78-5100-0253-4
 DRAWING NUMBER
 1/25/2022 -- UTC
 Drt-set (hrs) 6
 REVISION

3M™ 4-WALL, TRIPOLARIZED HEADER, 810 SERIES
 .050" X .100" LATCH/EJECTOR, PTH AND SMT STRAIGHT, PTH RIGHT ANGLE

CONTACT QTY.	DIM. "A"	DIM. "B"	DIM. "C" SHORT	DIM. "C" LONG	DIM. "D"
020	1.060 [26.92]	.722 [18.34]	1.671 [42.44]	1.842 [46.79]	.860 [21.84]
026	1.210 [30.73]	.872 [22.15]	1.821 [46.25]	1.992 [50.60]	1.010 [25.65]
036	1.460 [37.80]	1.122 [28.50]	2.071 [52.60]	2.242 [56.95]	1.260 [32.00]
040	1.560 [39.62]	1.222 [31.04]	2.171 [55.14]	2.342 [59.49]	1.360 [34.54]
050	1.810 [45.97]	1.472 [37.39]	2.421 [61.49]	2.592 [65.84]	1.610 [40.89]
060	2.060 [52.32]	1.722 [43.74]	2.671 [67.84]	2.842 [72.19]	1.860 [47.24]
068	2.260 [57.40]	1.922 [48.82]	2.871 [72.92]	3.042 [77.27]	2.060 [52.32]
080	2.560 [65.02]	2.222 [56.44]	3.171 [80.54]	3.342 [84.89]	2.360 [59.94]
100	3.060 [77.72]	2.722 [69.14]	3.671 [93.24]	3.842 [97.59]	2.860 [72.64]

PCB THICKNESS	DIM. "F"
.062 [1.57]	.092 [2.34]
.094 [2.39]	.110 [2.79]

ADJACENT CONNECTOR	
EJECTOR LATCHES	DIM. "E"
NONE	.215 [5.46]
LONG	.650 [16.51]
SHORT	.525 [13.34]



EJECTOR/LATCH SYSTEM:
 0 = NONE (SPECIAL ORDER)
 5 = WITH SHORT EJECTORS INSTALLED (SPECIAL ORDER)
 6 = WITH LONG EJECTORS INSTALLED (STANDARD)

ORDERING INFORMATION
 PTH STRAIGHT HEADER

81XXX-6X0X0X-RB

CONTACT QTY:
 (SEE TABLE 4)

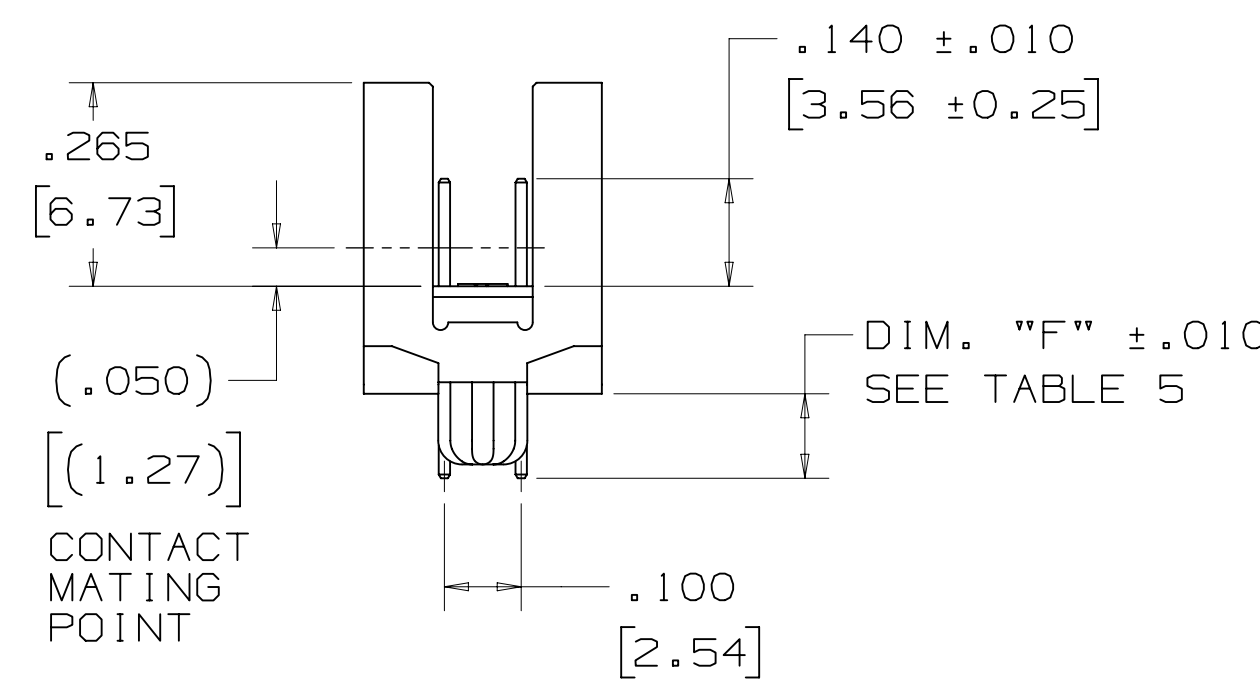
BOARD MOUNTING OPTIONS:
 1 = NONE (SPECIAL ORDER)
 3 = PRESS FIT POSTS BOTH ENDS (STANDARD)

CONTACT SOLDER TAIL:
 2 = FOR .062 [1.75] PC BOARD (STANDARD)
 3 = FOR .094 [2.39] PC BOARD (SPECIAL ORDER)
 4 = FOR .125 [3.18] PC BOARD (SPECIAL ORDER)

EJECTOR LATCHES

(IF ORDERED SEPARATELY)

LONG LATCHES: 3505-28
 SHORT LATCHES: 3505-29



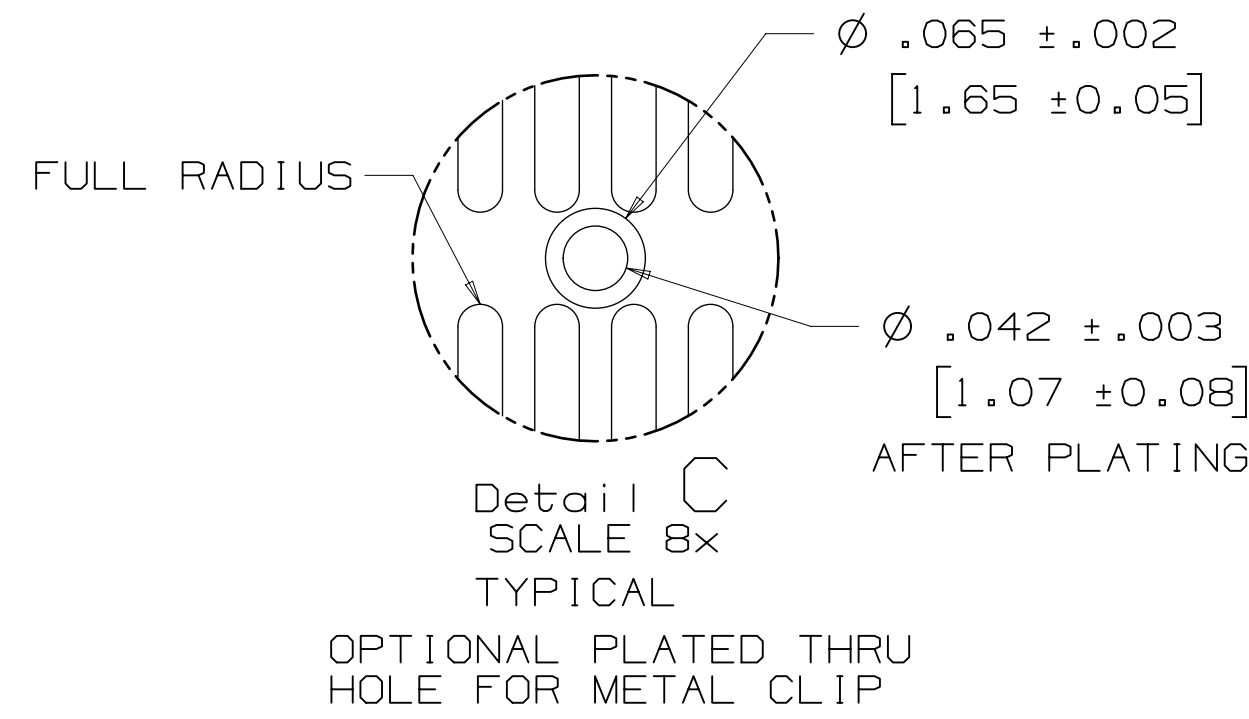
DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
				JAN 13, 2022	JNC	SAN
REVISED AND REDRAWN		DATE	DATE	DATE	DATE	DATE
CASTIGLIONE		JAN 13, 2022	MFG			
DIVISION		DIVISION CODE	EMSD	APPRV	DATE	DATE
				S. NEU	JAN 13, 2022	
DO NOT SCALE DRAWING	SCALE	TOLERANCES EXCEPT AS NOTED				
		INCHES: .00 ± .01, .000 ± .005, .0000 ± .0002	© 3M COPYRIGHT 2022 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 - 2018	MILLIMETERS: 0 ±, .0 ±, .00 ±, .000 ±	TITLE: TRIPOLARIZED HEADER, 4-WALL, LATCH/EJECT, .050" X .100"			
MAX SURFACE ROUGHNESS	DT SURFACES	MARKED ONLY	CAGE NUMBER	SIZE	DRAWING NO.	REV.
			D 78-5100-0253-4	L		
			MODEL	810	DET	LISTS YES NO SHT 3 OF 5

78-5100-0253-4
 DRAWING NUMBER
 1/25/2022 -- UTC
 Drf-set (hrs) 6

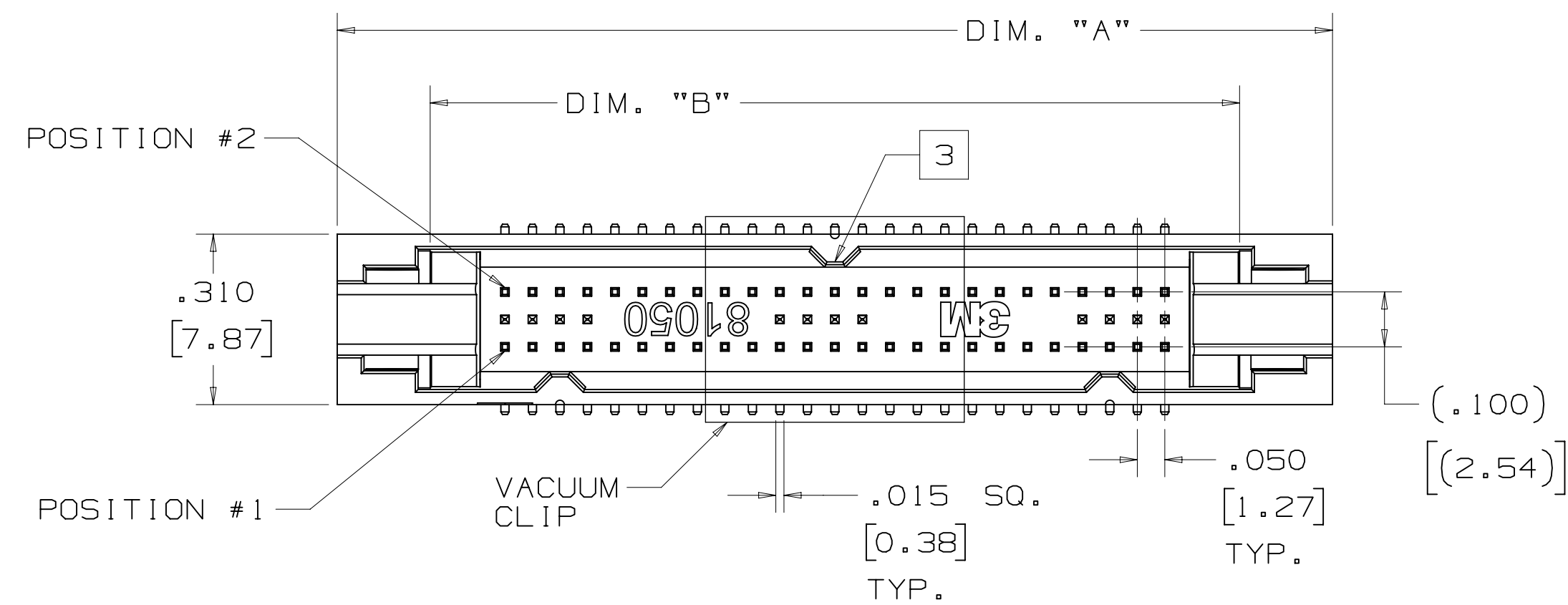
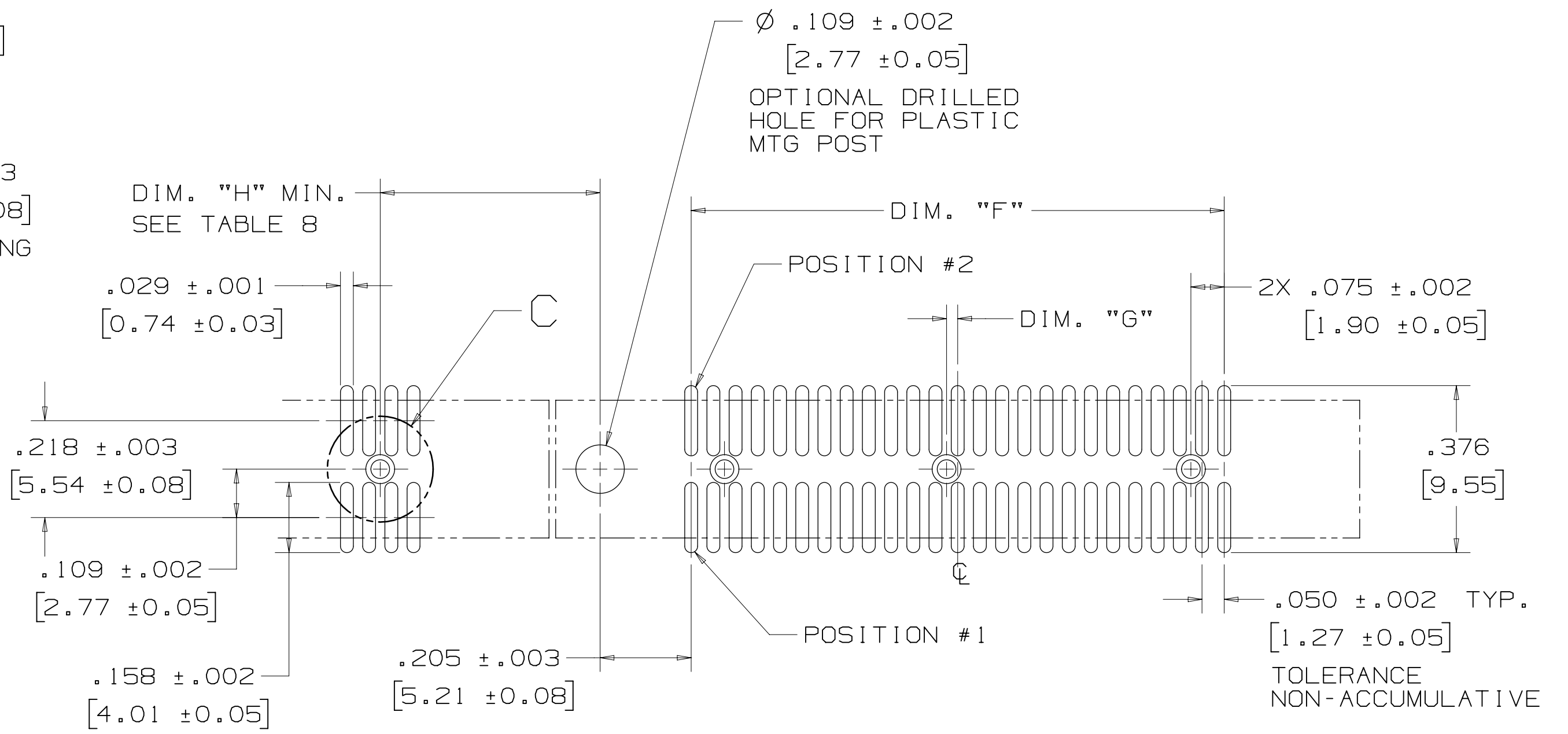
3M™ 4-WALL, TRIPOLARIZED HEADER, 810 SERIES
 .050" X .100" LATCH/EJECTOR, PTH AND SMT STRAIGHT, PTH RIGHT ANGLE

CONTACT QTY.	DIM. "A"	DIM. "B"	DIM. "D" SHORT	DIM. "D" LONG	DIM. "F"	DIM. "G"	TAPE AND REEL SUFFIX
020	1.060 [26.92]	.722 [18.34]	1.671 [42.44]	1.842 [46.79]	.450 [11.43]	N/A	WF
026	1.210 [30.73]	.872 [22.15]	1.821 [46.25]	1.992 [50.60]	.600 [15.24]	.025 [0.64]	WF
036	1.460 [37.80]	1.122 [28.50]	2.071 [52.60]	2.242 [56.95]	.850 [21.59]	N/A	WG
040	1.560 [39.62]	1.222 [31.04]	2.171 [55.14]	2.342 [59.49]	.950 [24.13]	N/A	WG
050	1.810 [45.97]	1.472 [37.39]	2.421 [61.49]	2.592 [65.84]	1.200 [30.48]	.025 [0.64]	WG
060	2.060 [52.32]	1.722 [43.74]	2.671 [67.84]	2.842 [72.19]	1.450 [36.83]	0.000	WG
068	2.260 [57.40]	1.922 [48.82]	2.871 [72.92]	3.042 [77.27]	1.650 [41.91]	0.000	WH
080	2.560 [65.02]	2.222 [56.44]	3.171 [80.54]	3.342 [84.89]	1.950 [49.53]	0.000	WH
100	3.060 [77.72]	2.722 [69.14]	3.671 [93.24]	3.842 [97.59]	2.450 [62.23]	0.000	WH

- NOTE:
- LATCHES SUPPLIED IN THE "OPEN" POSITION UNLESS SPECIFIED OTHERWISE
 - SUFFIX DETERMINED WITH NO POSTS OR CLIPS.
 - ADDITION OF POSTS OR CLIPS MAY INCREASE SUFFIX.
 - 120MM (WH) IS THE MAXIMUM WIDTH OF POCKET TAPE.



ADJACENT CONNECTOR	
EJECTOR LATCHES	DIM. "H"
NONE	.775 [19.69]
LONG	1.085 [27.56]
SHORT	1.21 [30.73]



ORDERING INFORMATION
 SURFACE MOUNT STRAIGHT HEADER
 81XXX-6XOCOX-RB-XX

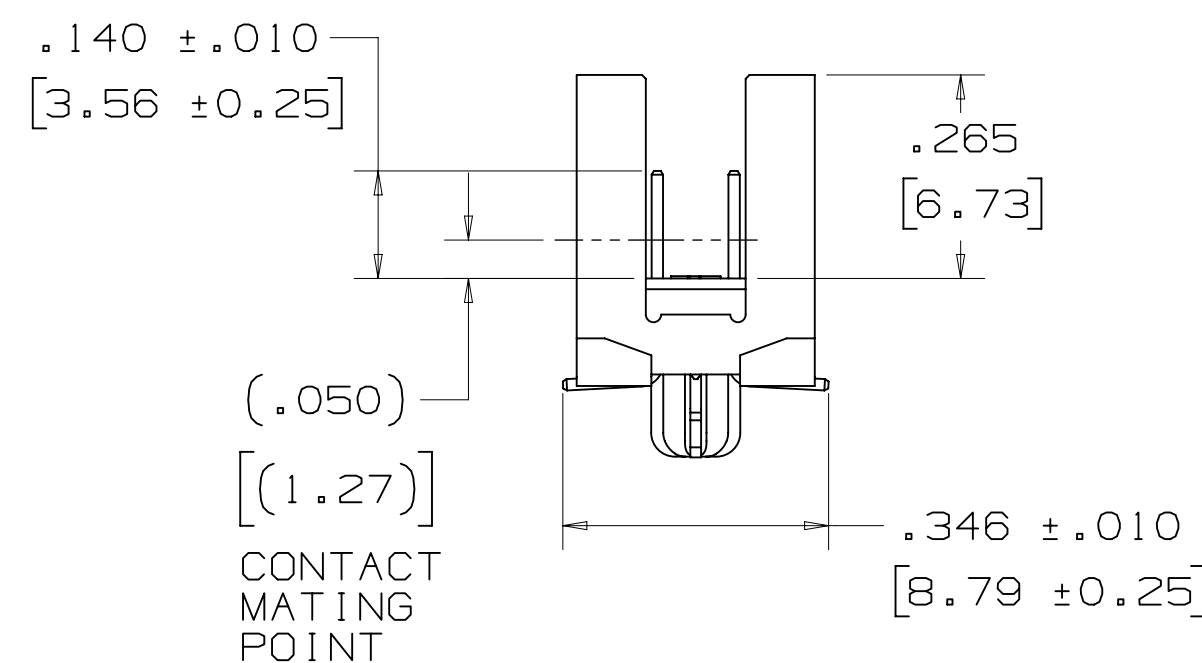
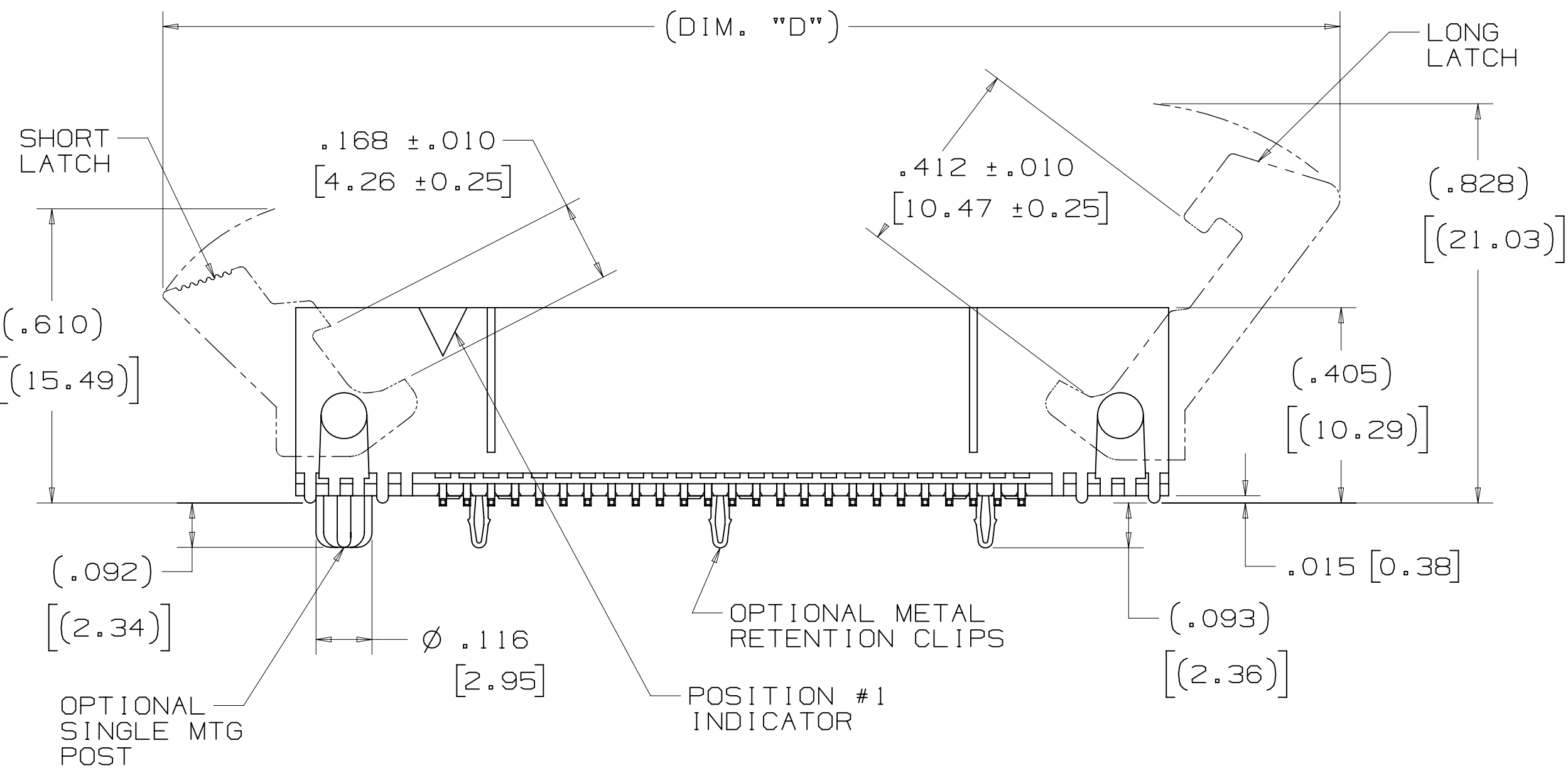
CONTACT QTY:
 (SEE TABLE 7)

PACKAGING OPTIONS:
 BLANK = TRAYS
 WX = TAPE AND REEL PACKAGE
 SEE TABLE 7

EJECTOR/LATCH SYSTEM:
 0 = NONE (SPECIAL ORDER)
 5 = WITH SHORT EJECTORS INSTALLED (SPECIAL ORDER)
 6 = WITH LONG EJECTORS INSTALLED (STANDARD)

BOARD MOUNTING OPTIONS:
 1 = NONE
 4 = PRESS FIT POST AT POSITION 1 END
 7 = METAL RETENTION CLIPS
 8 = POS #1 END POST AND METAL RETENTION CLIPS (SPECIAL ORDER)

EJECTOR LATCHES
 (IF ORDERED SEPARATELY)
 LONG LATCHES: 3505-28
 SHORT LATCHES: 3505-29



DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
				JAN 13, 2022	JNC	SAN
DIVISION		EMSD		DATE		
DO NOT SCALE DRAWING		TOLERANCES EXCEPT AS NOTED		DATE		
THIRD ANGLE PROJECTION		INCHES		DATE		
MAX SURFACE ROUGHNESS		MILLIMETERS		DATE		
MARKED ONLY		ANGLES		DATE		
CAGE NUMBER		DRAWING NO.		REV.		
D 78-5100-0253-4		L		L		
MODEL		810		SHT 4 OF 5		

78-5100-0253-4
 1/25/2022 -- UTC
 6 hrs
 00:00:00

3M™ 4-WALL, TRIPOLARIZED HEADER, 810 SERIES
 .050" X .100" LATCH/EJECTOR, PTH AND SMT STRAIGHT, PTH RIGHT ANGLE

Regulatory: For regulatory information about this product, visit 3M.com/regs or contact your 3M representative.


Technical Information: The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

Product Use: Many factors beyond 3M's control and uniquely within user's control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

Warranty, Limited Remedy, and Disclaimer: Unless an additional warranty is specifically stated on the applicable 3M product packaging or product literature, 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OR TRADE. If the 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

Limitation of Liability: Except where prohibited by law, 3M will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.

3M Company
 Electronics Materials Solutions Division
 13011 McCallen Pass, Bldg. C
 Austin, TX 78753-5380
 1-800-225-5373
www.3M.com/interconnect

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
		L	101674	JAN 13, 2022 REVISED AND REDRAWN	JNC	SAN
APPROVED	DATE	DATE	DATE	DATE	DATE	DATE
CASTIGLIONE	JAN 13, 2022	MFG				
CHKD	DATE	APPRV	DATE	DATE	DATE	DATE
		S. NEU	JAN 13, 2022			
DIVISION	DIVISION CODE	 © 3M COPYRIGHT 2022 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.				
DO NOT SCALE DRAWING	SCALE	TOLERANCES EXCEPT AS NOTED INCHES: .0 ± .1 .00 ± .01 .000 ± .005 .0000 ± .0002				
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 2018	MILLIMETERS: 0 ± .0 ± .00 ± .000 ±				
MAX SURFACE ROUGHNESS	MARKED ONLY	CAGE NUMBER	SIZE	DRAWING NO.	REV.	
		D	810	78-5100-0253-4	L	
		MODEL	810	DET	YES	NO
				SHT	5	OF 5

78-5100-0253-4
 DRAWING NUMBER
 1/25/2022 -- UTC
 08:56:00
 6
 1/25/2022 -- UTC
 08:56:00
 6