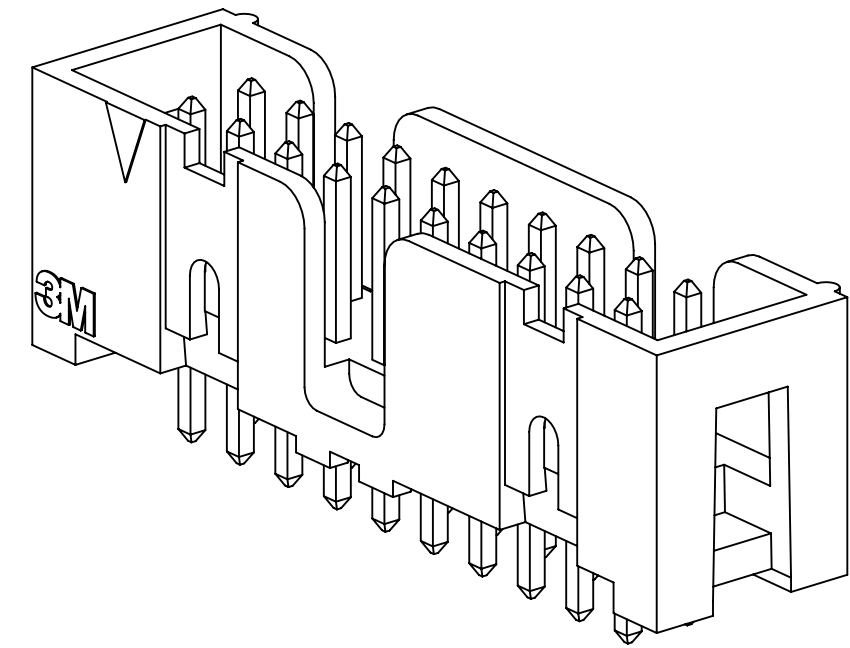
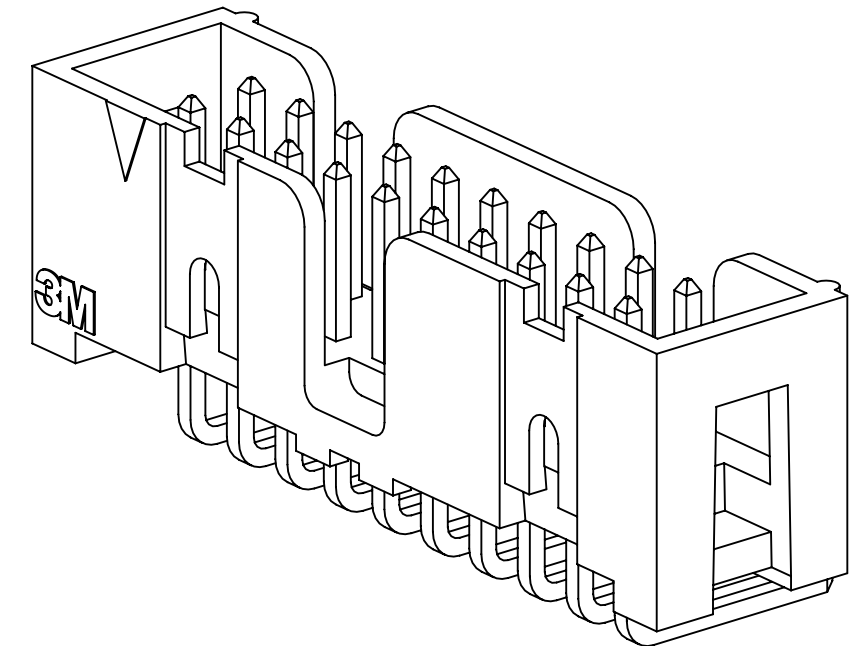


# 3M™ FOUR-WALL HEADER, 2500 SERIES

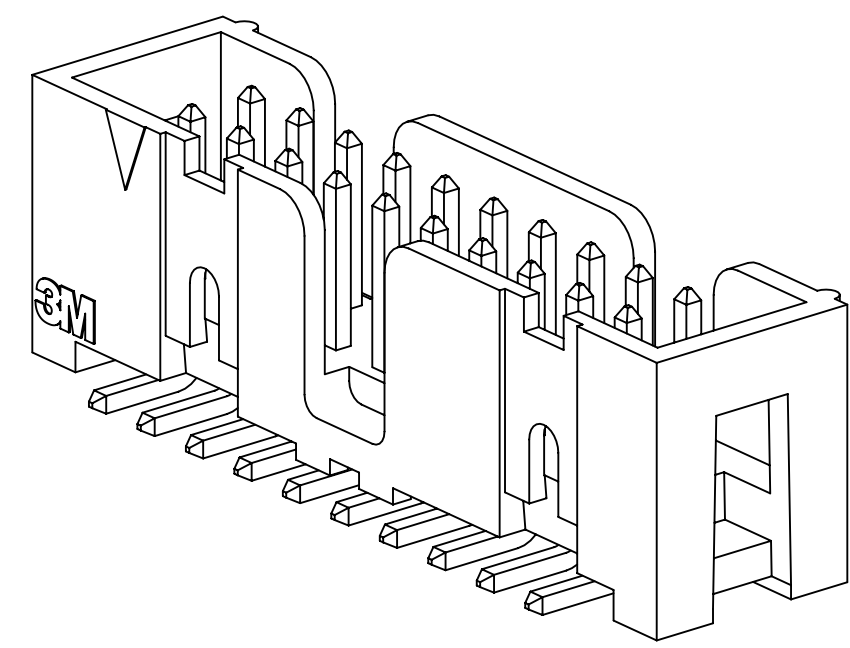
.100" X .100" LOW PROFILE, SURFACE MOUNT, STRAIGHT AND RIGHT ANGLE THROUGH-HOLE



25XX-60XX  
STRAIGHT VERSION



25XX-50XX  
RIGHT ANGLE VERSION



25XX-6VOC  
SURFACE MOUNT VERSION

- \* LOW PROFILE, SPACE SAVING DESIGN.
- \* CENTER SLOT POLARIZATION PREVENTS MIS-INSERTIONS AND REDUCES INSERTION TIME.
- \* DUAL SLOT POLARIZATION MEANS BROADER COMPATIBILITY WITH COMPETITIVE POLARIZATION DESIGNS (NOT AVAILABLE ON 6, 8 OR 10 POSITIONS).
- \* OPTIONAL RETAINER CLIP FOR LOCKING SOCKETS IN PLACE AND INCREASING CONNECTION RELIABILITY IN VIBRATION-PRONE ENVIRONMENTS.
- \* HIGH TEMPERATURE INSULATOR SUITABLE FOR "NO LEAD" SOLDERING OPERATIONS.
- \* THROUGH HOLE VERSION SUITABLE FOR REFLOW SOLDERING USING "PASTE IN HOLE" TECHNIQUES.
- \* EXPOSED SOLDER TAILS (ON RIGHT ANGLE VERSION) PROVIDE EASE OF CLEANING AND REDUCED REPAIR COST.
- \* STRAIGHT SURFACE MOUNT VERSION AVAILABLE.

## 2 PHYSICAL :

INSULATOR:  
MATERIAL: GLASS FILLED POLYESTER (PCT)  
FLAMMABILITY: UL94V-0  
COLOR: BLACK  
CONTACT:  
MATERIAL: COPPER ALLOY  
PLATING:  
UNDER PLATING: 100µ" [2.54µm] NICKEL-OVERALL  
WIPING AREA: AVG. GOLD (SEE ORDERING INFORMATION)  
SOLDER TAILS: 200µ" [5.08µm] TIN LEAD OR MATTE TIN (SEE ORDERING INFORMATION)  
MARKINGS: 3M LOGO, PART IDENTIFICATION NUMBER AND ORIENTATION TRIANGLE

## 2 ELECTRICAL :

CURRENT RATING: 5.00A, 1 CONTACT POWERED  
3.00A, 6 CONTACTS POWERED  
1.75A, 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 10<sup>9</sup>Ω AT 500 V<sub>DC</sub>  
WITHSTANDING VOLTAGE: 1,000V<sub>RMS</sub> AT SEA LEVEL

## 2 ENVIRONMENTAL :

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

- ### NOTES
1. REGULATORY INFORMATION: ROHS COMPLIANT. SEE THE REGULATORY INFORMATION APPENDIX (RIA) IN THE "ROHS COMPLIANCE" SECTION OF WWW.3MCONNECTORS.COM FOR COMPLIANCE INFORMATION.
  2. IN THE EVENT OF CONFLICT BETWEEN THIS DATA AND THAT CONTAINED IN THE PRODUCT SPECIFICATION, THE PRODUCT SPECIFICATION TAKES PRECEDENT.
  3. NOTCHES A & C WILL ACCOMODATE 3M POLARIZING KEY: N3518.
  4. CONTACT TAILS .0245 [ .622 ] WIRE WITH .0075 [ .191 ] CORNER RADIUS AND .028 [ .072 ] DIAGONAL.
  5. SOLDER STANDOFFS FACILITATE .01 [ .3 ] CLEARANCE ABOVE BOARD FOR REFLOW SOLDERING.

3M ELECTRONIC MATERIALS SOLUTIONS DIVISION  
INTERCONNECT SOLUTIONS  
<http://www.3mconnectors.com>

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FOR TECHNICAL, SALES OR ORDERING  
INFORMATION CALL 800-225-5373

**3M**  
UL FILE NO: E68080

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

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
				AUG 02, 2016	JNC	SC
				REVISE DIM ON SHT2 & CLIP CHART ON SHT5		
				AUG 11, 2014	JNC	RS
				REVISED AND REDRAWN		
DATE	DATE	DATE	DATE	DATE	DATE	DATE
CASTIGLIONE	AUG 11, 2014	MFG				
		R. SCHERER		SEP 05, 2014		
DIVISION: Interconnect Solutions		DIVISION CODE: EMSD		© 3M COPYRIGHT 2016		
DO NOT SCALE DRAWING		SCALE: 4/1		TOLERANCES EXCEPT AS NOTED		
THIRD ANGLE PROJECTION		INCHES: .00 ± .01, .000 ± .005, .0000 ±		MILLIMETERS: 0 ±, .0 ± .3, .00 ± .13		
INTERPRET PER ASME Y14.5 - 2009		MAX SURFACE ROUGHNESS: .125 SURFACES		CAGE NUMBER: D78-5100-0770-7		
MARKED ONLY		ANGLES: 45°		REV. NUMBER: N		
				MODEL: 2500 SERIES		
				SHEET: 1 OF 5		

3M™ FOUR-WALL HEADER, 2500 SERIES  
 .100" X .100" LOW PROFILE, SURFACE MOUNT, STRAIGHT AND RIGHT ANGLE THROUGH-HOLE

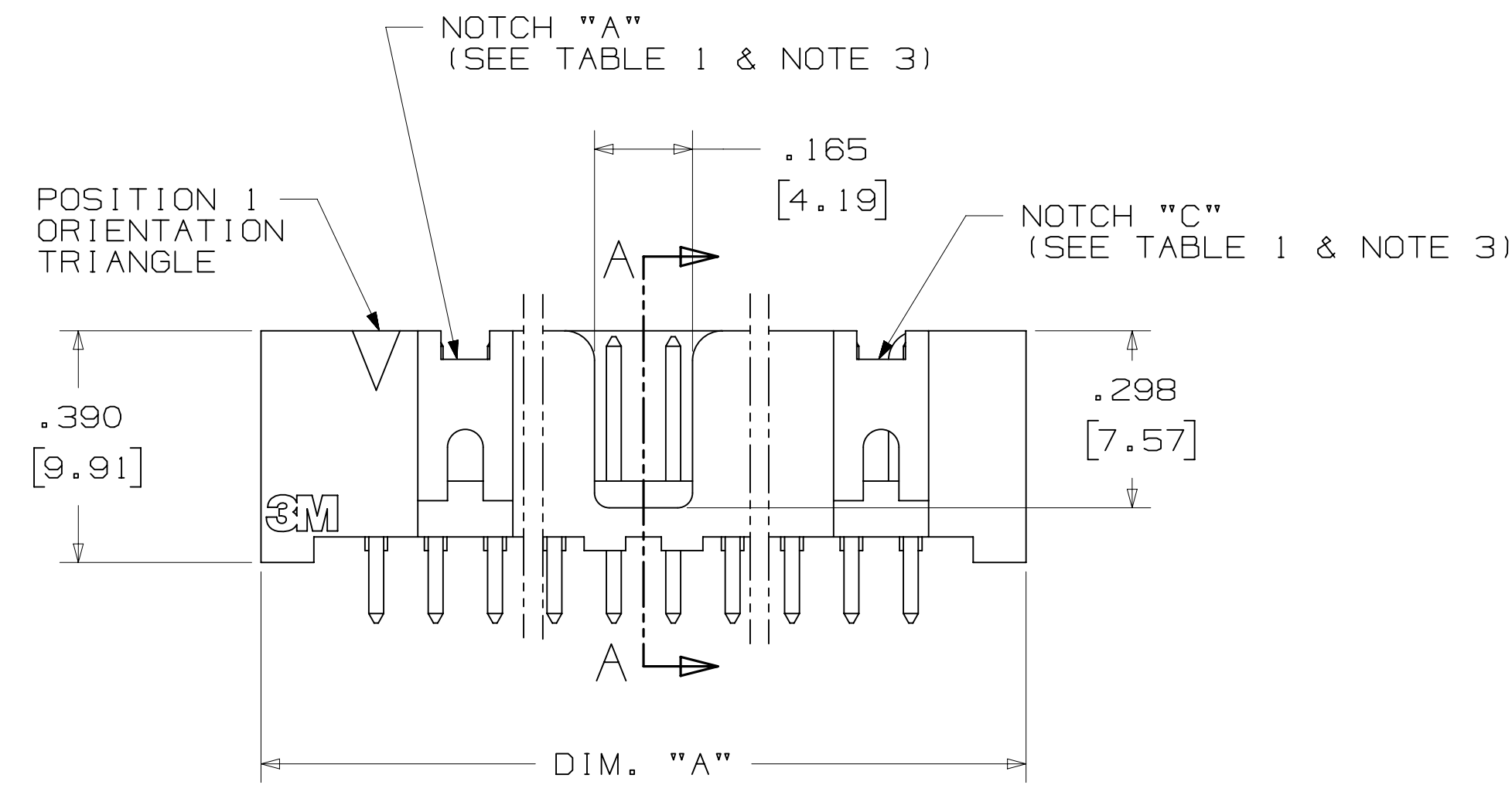
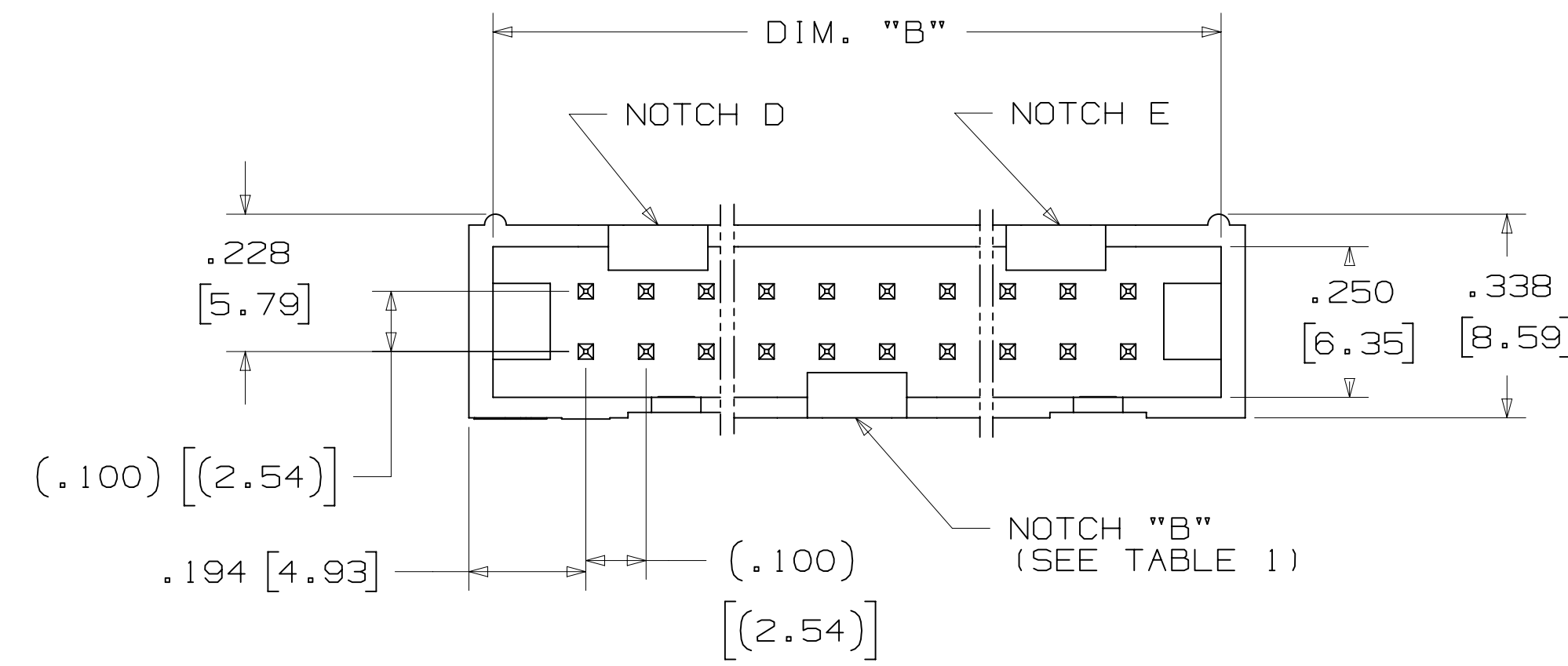
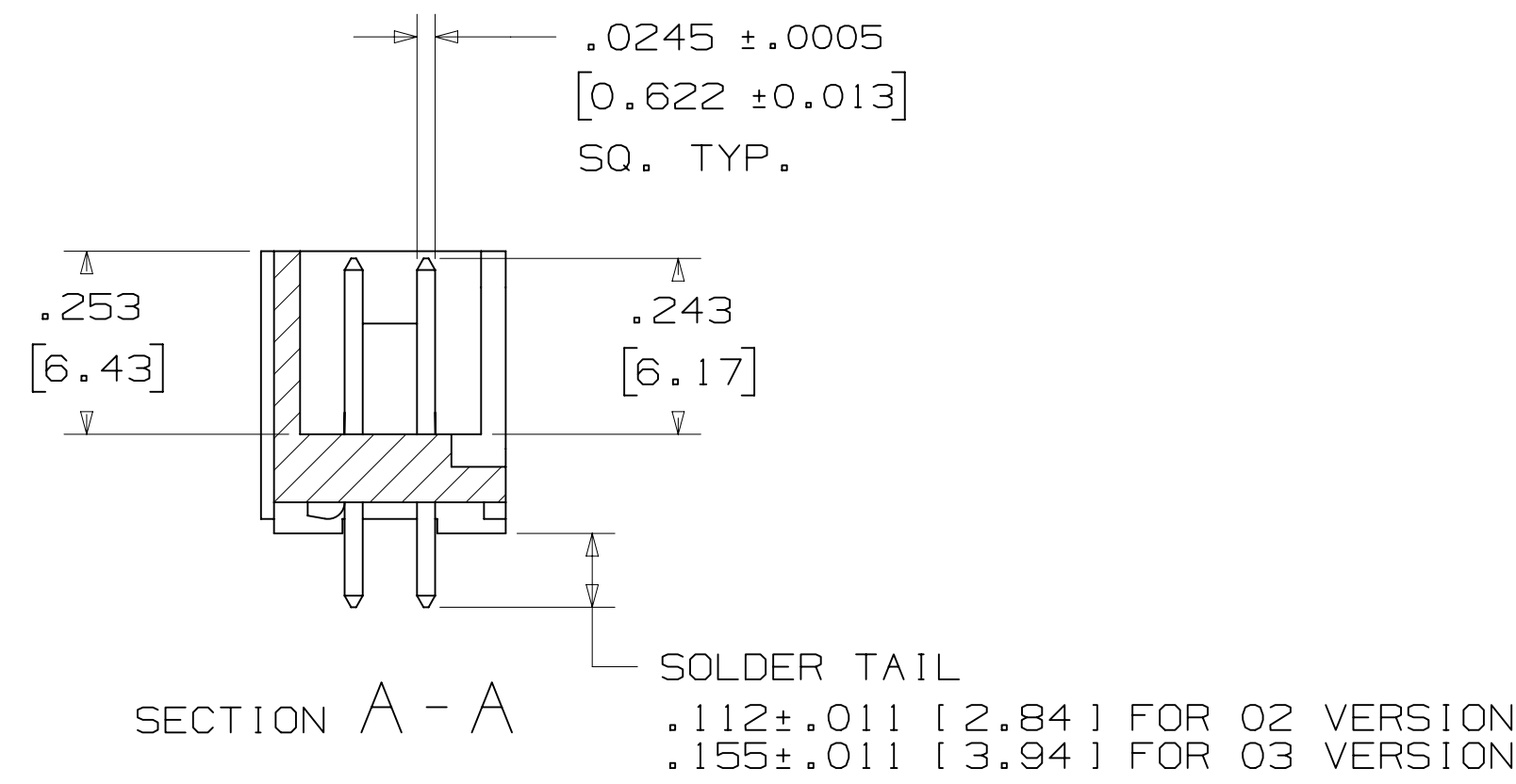
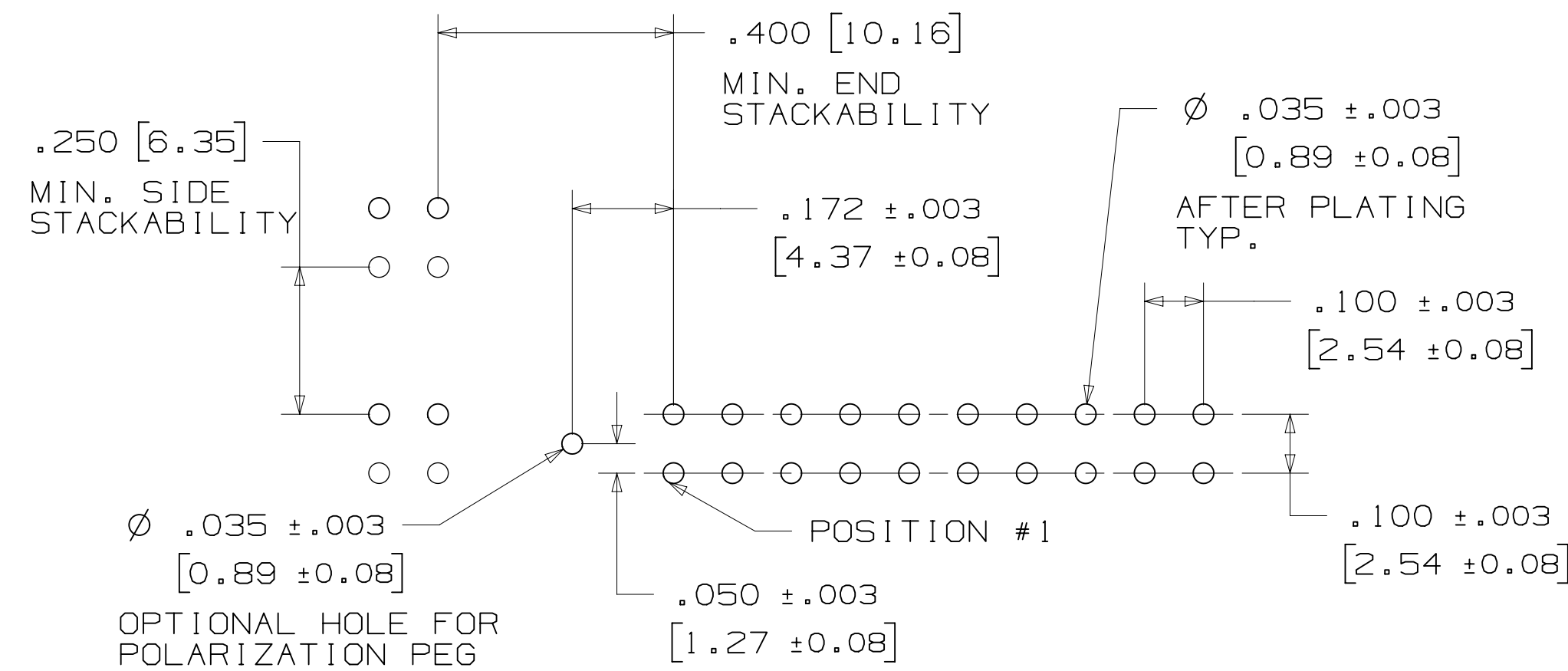


TABLE 1				
PIN QTY.	DIM. "A"	DIM. "B"	POLARIZING NOTCHES	PIN QTY.
06	.588 [14.94]	.508 [12.90]	B	06
08	.688 [17.48]	.608 [15.44]	B	08
10	.788 [20.02]	.708 [17.98]	BC	10
14	.988 [25.10]	.908 [23.06]	BCDE	14
16	1.088 [27.64]	1.008 [25.60]	ABCDE	16
20	1.288 [32.72]	1.208 [30.68]	ABCDE	20
24	1.488 [37.80]	1.408 [35.76]	ABCDE	24
26	1.588 [40.34]	1.508 [38.30]	ABCDE	26
30	1.788 [45.42]	1.708 [43.38]	ABCDE	30
34	1.988 [50.50]	1.908 [48.46]	ABCDE	34
36	2.088 [53.04]	2.008 [51.00]	ABCDE	36
40	2.288 [58.12]	2.208 [56.08]	ABCDE	40
50	2.788 [70.82]	2.708 [68.78]	ABCDE	50
60	3.288 [83.52]	3.208 [81.48]	ABCDE	60
64	3.488 [88.60]	3.408 [86.56]	ABCDE	64



ORDERING INFORMATION  
 STRAIGHT VERSION

X25XX-60XX-XX

N = HIGH TEMP BLACK (PCT)  
 (RB, UB OR UG PLATING REQ'D)  
 BLANK = (UB OR UG PLATING)

PIN QUANTITY:  
 (SEE TABLE 1)

SOLDER TAIL:  
 O2 = FOR .062 [1.57] THICK BOARD  
 O3 = FOR .094 TO .125 [2.39 TO 3.18]  
 THICK BOARD

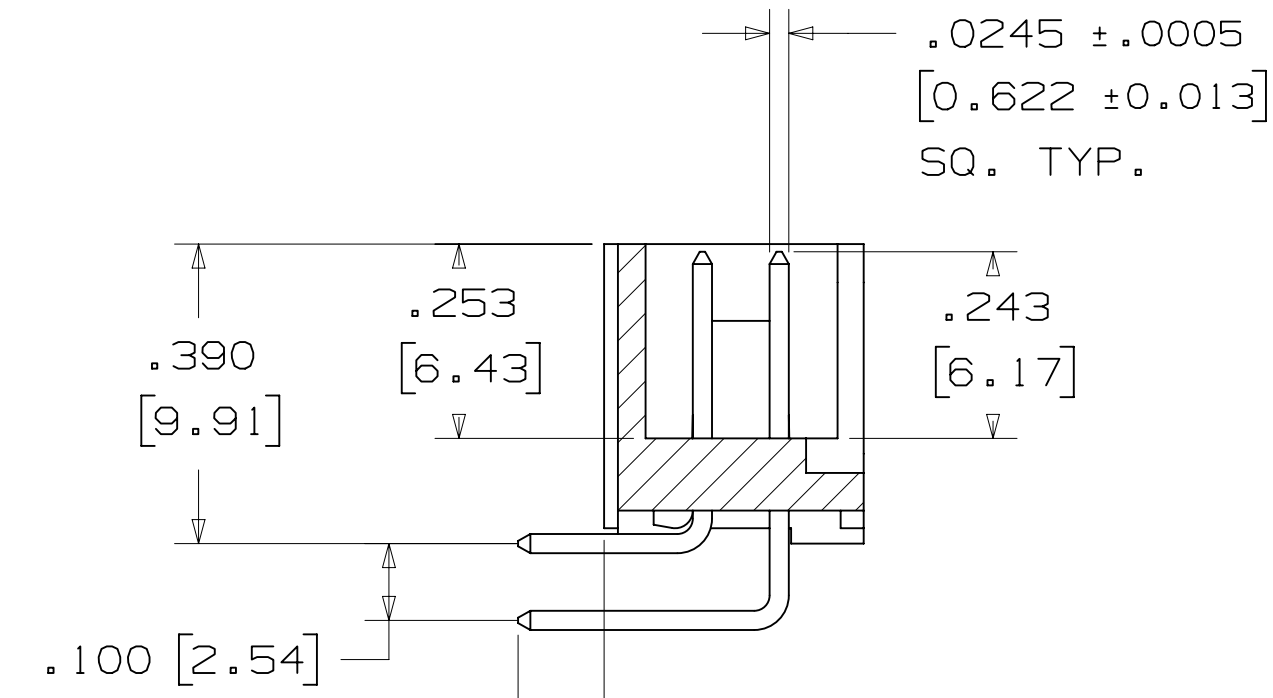
PLATING:  
 RB = 30μ" [0.76μm] AVG. GOLD  
 200μ" [5.08μm] MATTE TIN (RIA, E1 & C1 APPLY)  
 UG = 15μ" [0.38μm] AVG. GOLD  
 200μ" [5.08μm] 60:40 TIN-LEAD SOLDER TAILS  
 (RIA E3 & C2 APPLY)  
 UB = 30μ" [0.76μm] AVG. GOLD  
 200μ" [5.08μm] 60:40 TIN LEAD SOLDER TAILS  
 (RIA E3 & C2 APPLY)

RECOMMENDED HOLE PATTERN  
 SHOWN FROM COMPONENT SIDE

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
				AUG 11, 2014		
DIVISION: Interconnect Solutions		DIVISION CODE: EMSD		DATE: AUG 11, 2014		
DO NOT SCALE DRAWING		SCALE: 4/1		TOLERANCES EXCEPT AS NOTED		
THIRD ANGLE PROJECTION		INCHES: .00 ± .01, .000 ± .005, .0000 ± .0001		MILLIMETERS: 0 ± .03, .00 ± .13, .000 ± .001		
INTERPRET PER ASME Y14.5 - 2009		MAX SURFACE ROUGHNESS: SURFACES		CAGE NUMBER: D78-5100-0770-7		
MARKED ONLY		ANGLES		MODEL: 2500 SERIES		
N 68908		AUG 02, 2016		JNC SC		
M 56068		AUG 11, 2014		JNC RS		
		REVISED AND REDRAWN		DATE: SEP 05, 2014		
		R. SCHERER		DATE: SEP 05, 2014		
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<p>HEADER, 4-WALL,                  LO-PRO, .100 X .100,                  SMT, STRAIGHT &amp; RA</p>						
CAGE NUMBER: D78-5100-0770-7		DRAWING NO.:		REV.:		
MODEL: 2500 SERIES		DET: [ ]		SHT 2 OF 5		

78-5100-0770-7  
 N  
 DRAWING NUMBER  
 REVISION  
 11:10 AM UTC-05:00  
 Imaged: N.1 8/5/2016

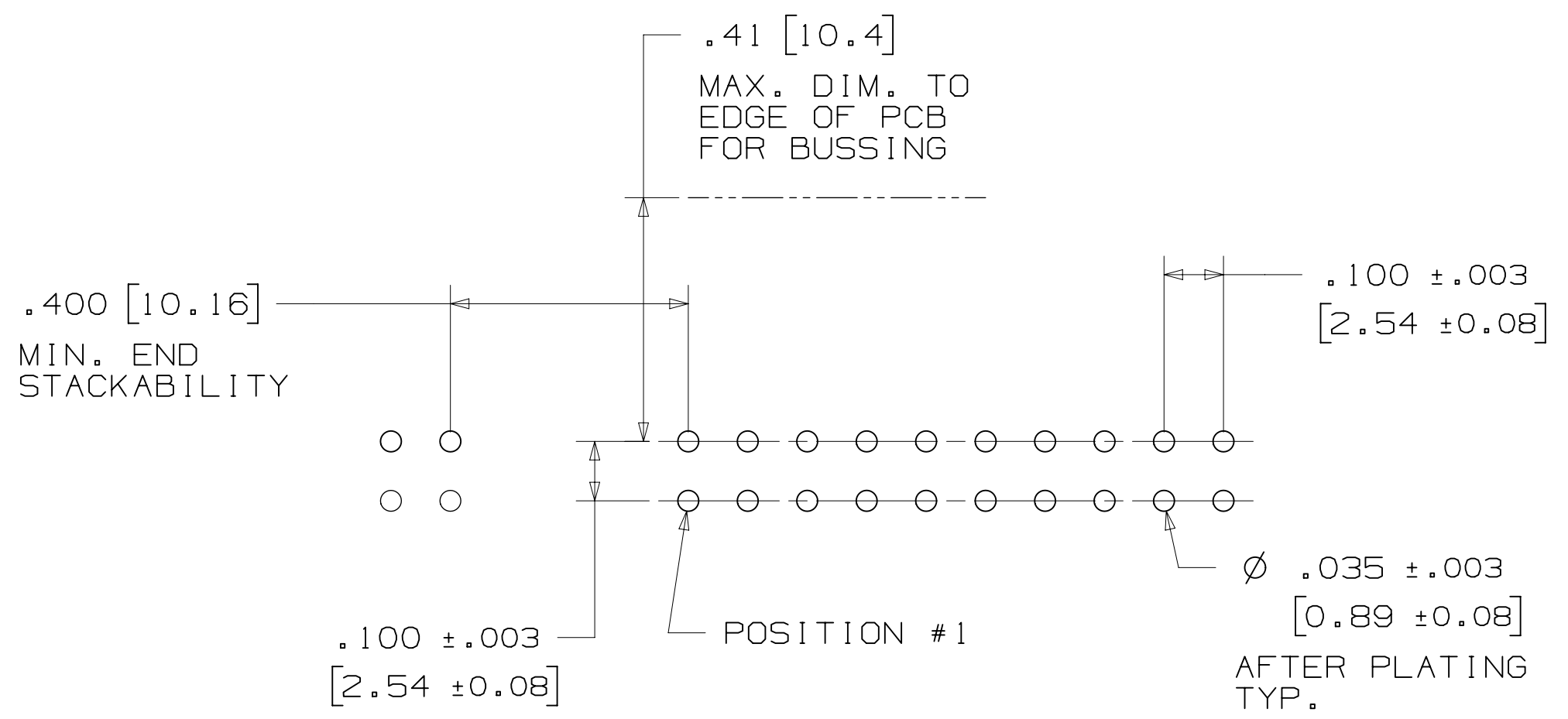
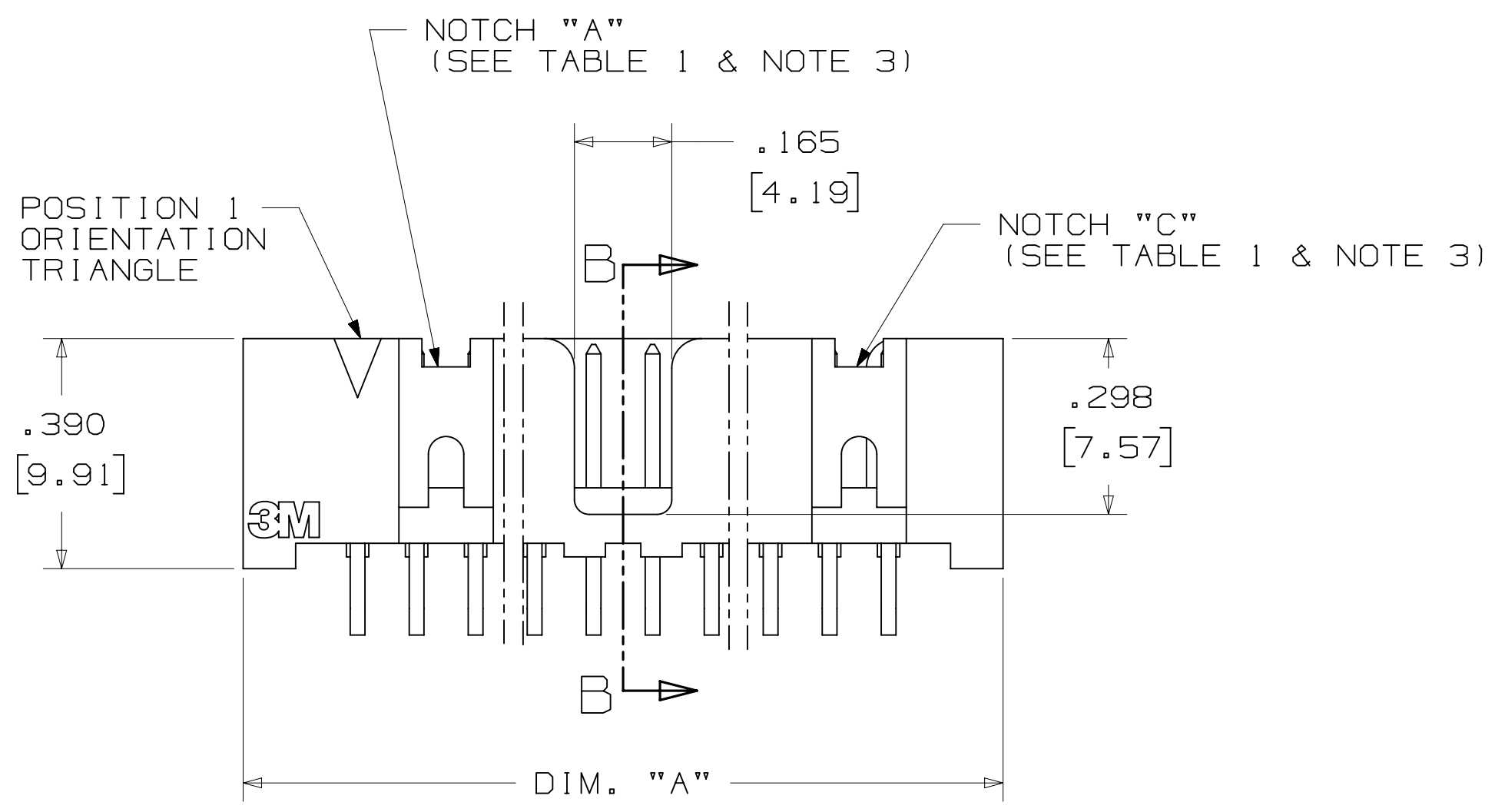
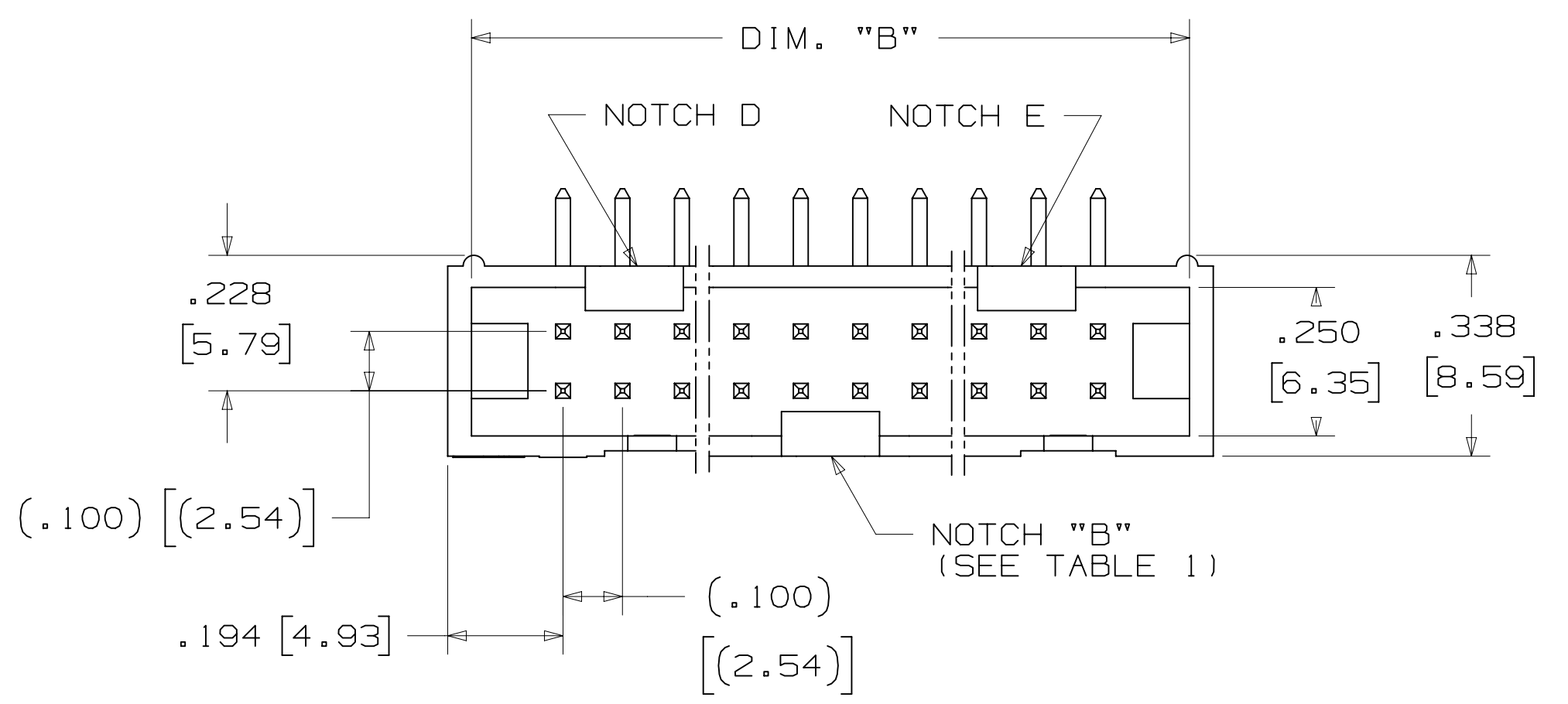
3M™ FOUR-WALL HEADER, 2500 SERIES  
 .100" X .100" LOW PROFILE, SURFACE MOUNT, STRAIGHT AND RIGHT ANGLE THROUGH-HOLE



SOLDER TAIL  
 .112 ± .011 [2.84] FOR 02 VERSION  
 .155 ± .011 [3.94] FOR 03 VERSION

SECTION B - B

TABLE 1				
PIN QTY.	DIM. "A"	DIM. "B"	POLARIZING NOTCHES	PIN QTY.
06	.588 [14.94]	.508 [12.90]	B	06
08	.688 [17.48]	.608 [15.44]	B	08
10	.788 [20.02]	.708 [17.98]	BC	10
14	.988 [25.10]	.908 [23.06]	BCDE	14
16	1.088 [27.64]	1.008 [25.60]	ABCDE	16
20	1.288 [32.72]	1.208 [30.68]	ABCDE	20
24	1.488 [37.80]	1.408 [35.76]	ABCDE	24
26	1.588 [40.34]	1.508 [38.30]	ABCDE	26
30	1.788 [45.42]	1.708 [43.38]	ABCDE	30
34	1.988 [50.50]	1.908 [48.46]	ABCDE	34
36	2.088 [53.04]	2.008 [51.00]	ABCDE	36
40	2.288 [58.12]	2.208 [56.08]	ABCDE	40
50	2.788 [70.82]	2.708 [68.78]	ABCDE	50
60	3.288 [83.52]	3.208 [81.48]	ABCDE	60
64	3.488 [88.60]	3.408 [86.56]	ABCDE	64



RECOMMENDED HOLE PATTERN  
 SHOWN FROM COMPONENT SIDE

ORDERING INFORMATION  
 RIGHT ANGLE VERSION

X25XX - 50XX - XX

N = HIGH TEMP BLACK (PCT)  
 (RB, UB OR UG PLATING REQ'D)  
 BLANK = (UB OR UG PLATING)

PIN QUANTITY:  
 (SEE TABLE 1)

SOLDER TAIL:  
 02 = FOR .062 [1.57] THICK BOARD  
 03 = FOR .094 TO .125 [2.39 TO 3.18]  
 THICK BOARD

PLATING:  
 RB = 30µ" [0.76µm] AVG. GOLD  
 200µ" [5.08µm] MATTE TIN (RIA, E1 & C1 APPLY)  
 UG = 15µ" [0.38µm] AVG. GOLD  
 200µ" [5.08µm] 60:40 TIN-LEAD SOLDER TAILS  
 (RIA E3 & C2 APPLY)  
 UB = 30µ" [0.76µm] AVG. GOLD  
 200µ" [5.08µm] 60:40 TIN LEAD SOLDER TAILS  
 (RIA E3 & C2 APPLY)

DESIGN REFERENCE		NEXT ASSEMBLY		
REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
CASTIGLIONE	AUG 11, 2014	REVISED AND REDRAWN	JNC	RS
DATE	DATE	DATE	DATE	DATE
AUG 11, 2014	AUG 11, 2014	SEP 05, 2014		
APPR	DATE	DATE	DATE	DATE
R. SCHERER				
DIVISION	INTERCONNECT SOLUTIONS	DIVISION CODE	EMSD	
DO NOT SCALE DRAWING	SCALE 4-1	TOLERANCES EXCEPT AS NOTED		
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 2009	MILLIMETERS		
MAX SURFACE ROUGHNESS		INCHES		
		0 ± .01		
		.00 ± .005		
		.0000 ±		
		0 ± .3		
		.00 ± .13		
		.000 ±		
		ANGLES		
CAGE NUMBER	SIZE	DRAWING NO.	REV.	
D		78-5100-0770-7	N	
MODEL	2500 SERIES	DET	IS1s	YES X NO
		SHT	3	OF 5

# 3M™ FOUR-WALL HEADER, 2500 SERIES

.100" X .100" LOW PROFILE, SURFACE MOUNT, STRAIGHT AND RIGHT ANGLE THROUGH-HOLE



SECTION C - C

TABLE 1					
PIN QTY.	DIM. "A"	DIM. "B"	POLARIZING NOTCHES	TAPE AND REEL PKG CODE	PIN QTY.
06	.588 [14.94]	.508 [12.90]	B	WD (44 MM)	06
08	.688 [17.48]	.608 [15.44]	B	WD (44 MM)	08
10	.788 [20.02]	.708 [17.98]	BC	WD (44 MM)	10
14	.988 [25.10]	.908 [23.06]	BCDE	WD (44 MM)	14
16	1.088 [27.64]	1.008 [25.60]	ABCDE	WD (44 MM)	16
20	1.288 [32.72]	1.208 [30.68]	ABCDE	WE (56 MM)	20
24	1.488 [37.80]	1.408 [35.76]	ABCDE	WE (56 MM)	24
26	1.588 [40.34]	1.508 [38.30]	ABCDE	WE (56 MM)	26
30	1.788 [45.42]	1.708 [43.38]	ABCDE	WF (72 MM)	30
34	1.988 [50.50]	1.908 [48.46]	ABCDE	WF (72 MM)	34
36	2.088 [53.04]	2.008 [51.00]	ABCDE	WG (88 MM)	36
40	2.288 [58.12]	2.208 [56.08]	ABCDE	WG (88 MM)	40
50	2.788 [70.82]	2.708 [68.78]	ABCDE	WG (88 MM)	50
60	3.288 [83.52]	3.208 [81.48]	ABCDE	WH (120 MM)	60
64	3.488 [88.60]	3.408 [86.56]	ABCDE	WH (120 MM)	64

## ORDERING INFORMATION SURFACE MOUNT VERSION

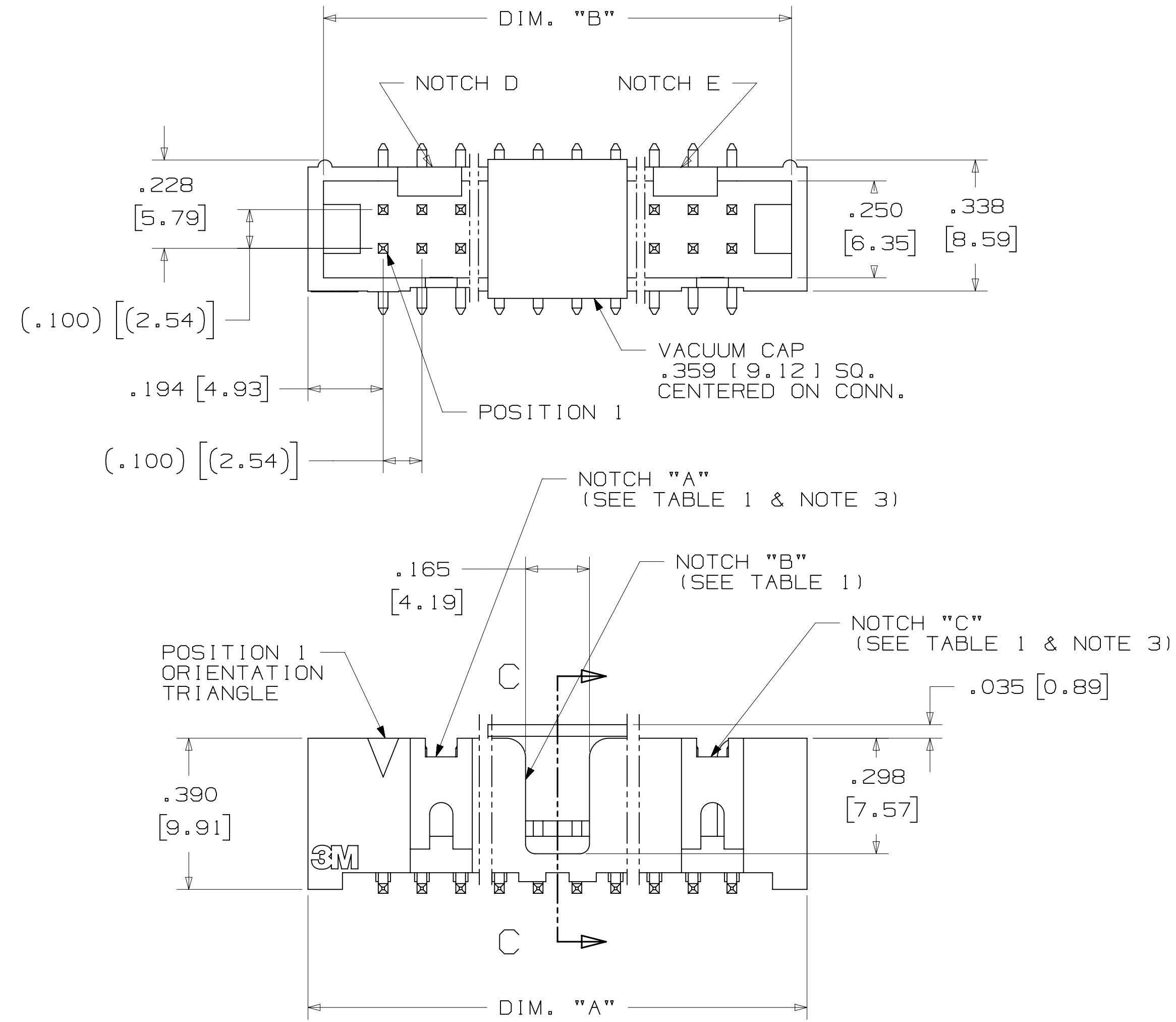
N25XX-6VOC-XX-XX

N = HIGH TEMP BLACK (PCT) (RB PLATING REQ'D)

PIN QUANTITY: (SEE TABLE 1)

PACKAGING OPTIONS:  
WX = TAPE & REEL PACKAGING (SEE TABLE 1)

PLATING:  
RB = 30µ" [0.76µm] AVG. GOLD  
200µ" [5.08µm] MATTE TIN (RIA, E1 & C1 APPLY)



RECOMMENDED PAD LAYOUT

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
				AUG 11, 2014		
DIVISION: Interconnect Solutions		DIVISION CODE: EMSD		DATE: AUG 11, 2014		
DO NOT SCALE DRAWING		SCALE: 4/1		TOLERANCES EXCEPT AS NOTED		
THIRD ANGLE PROJECTION		INCHES: .00 ±.01, .000 ±.005, .0000 ±		MILLIMETERS: 0 ±, .0 ±.3, .00 ±.13, .000 ±		
MAX SURFACE ROUGHNESS: SURFACES		MARKED ONLY		CAGE NUMBER: D78-5100-0770-7		
				MODEL: 2500 SERIES		
				REV. N		

N 68908 AUG 02, 2016 JNC SC  
 REVISE DIM ON SHT2 & CLIP CHART ON SHT5  
 M 56068 AUG 11, 2014 JNC RS  
 REVISED AND REDRAWN  
 DRFT: CASTIGLIONE, DATE: AUG 11, 2014  
 CHKD: R. SCHERER, DATE: SEP 05, 2014

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TITLE: HEADER, 4-WALL, LO-PRO, .100 X .100, SMT, STRAIGHT & RA  
 CAGE NUMBER: D78-5100-0770-7  
 MODEL: 2500 SERIES  
 SHEET: 4 OF 5

78-5100-0770-7  
 N  
 REV. N  
 11:10 AM UTC-05:00  
 8/5/2016

3M™ FOUR-WALL HEADER, 2500 SERIES  
 .100" X .100" LOW PROFILE, SURFACE MOUNT, STRAIGHT AND RIGHT ANGLE THROUGH-HOLE

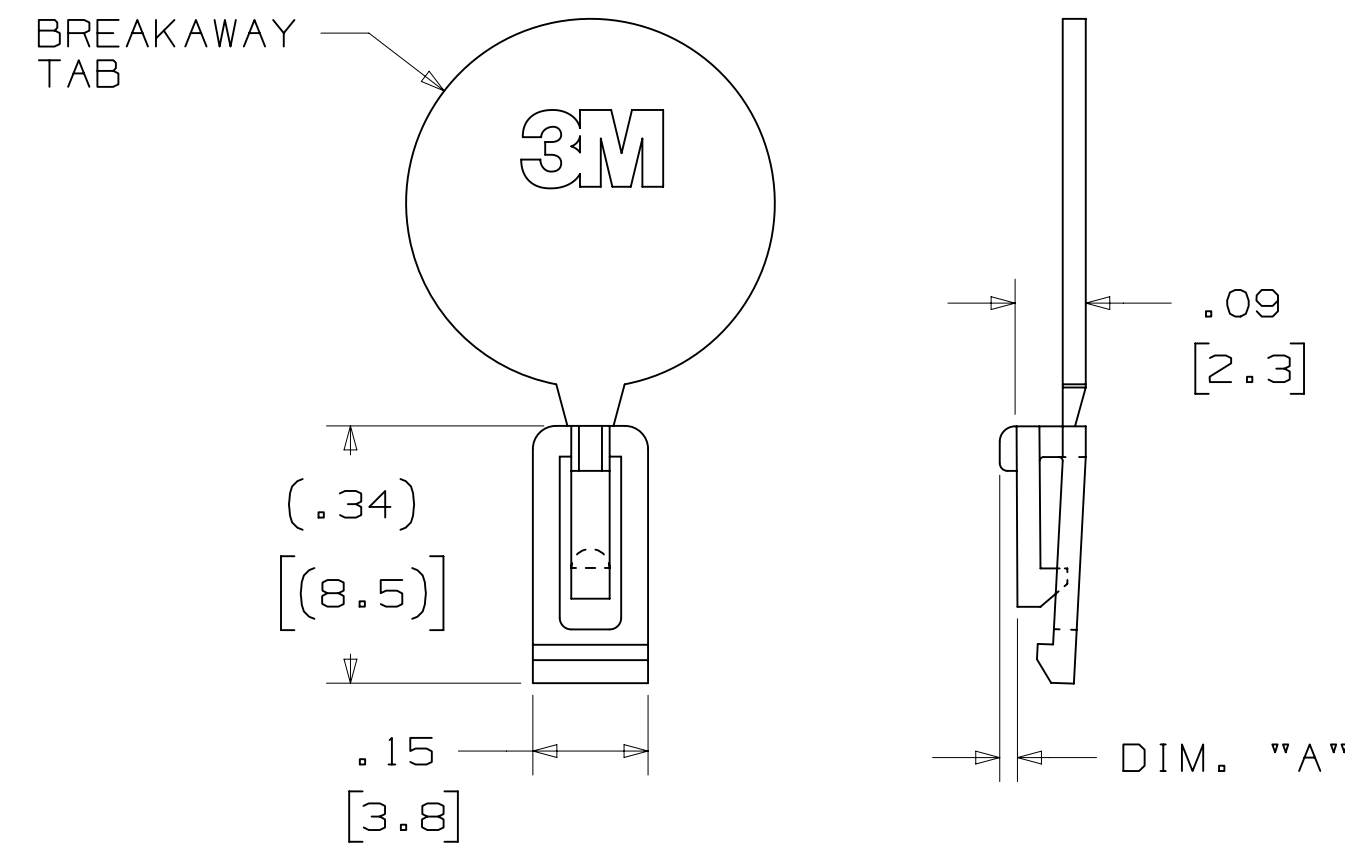
PART CUSTOMIZATION

THIS SPEC SHEET DETAILS OUR STANDARD OFFERING.

3M HAS SEVERAL CAPABILITIES THAT CAN PROVIDE A PART TAILORED TO YOUR SPECIFIC NEEDS. ASK YOUR 3M SALES REPRESENTATIVE OR CUSTOMER SERVICE FOR MORE DETAILS.

- \* SELECTIVE PIN REMOVAL (FOR BOARD ASSEMBLY POLARIZATION).
- \* DIFFERENT PIN LENGTHS.

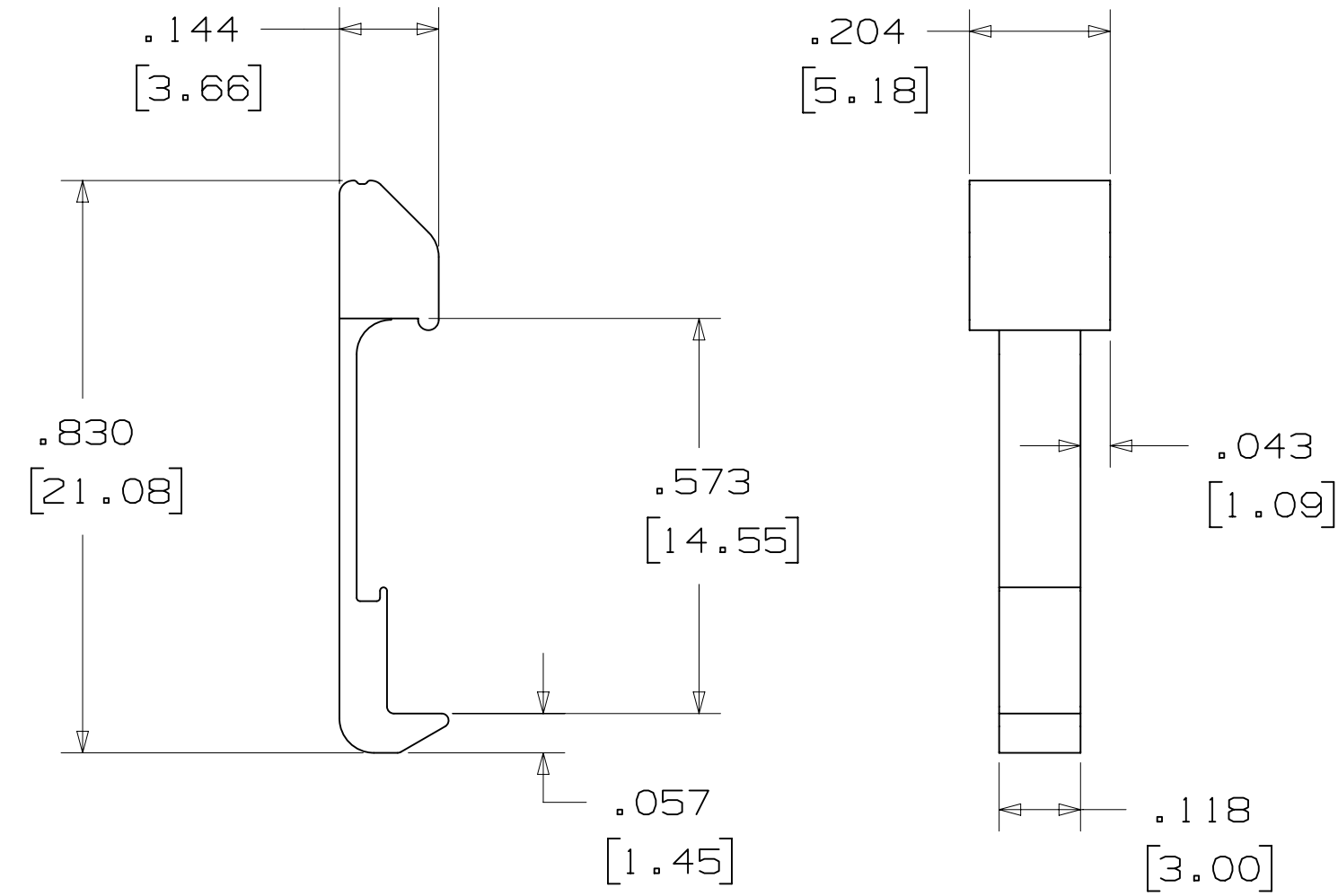
POLARIZING KEY



3M PART NO.	MATERIAL	COLOR	DIM. "A"
N3518	LCP	BLACK	.02

NOTE:  
 #2216 B/A SCOTCHWELD CAN BE USED TO ADHERE KEYS.

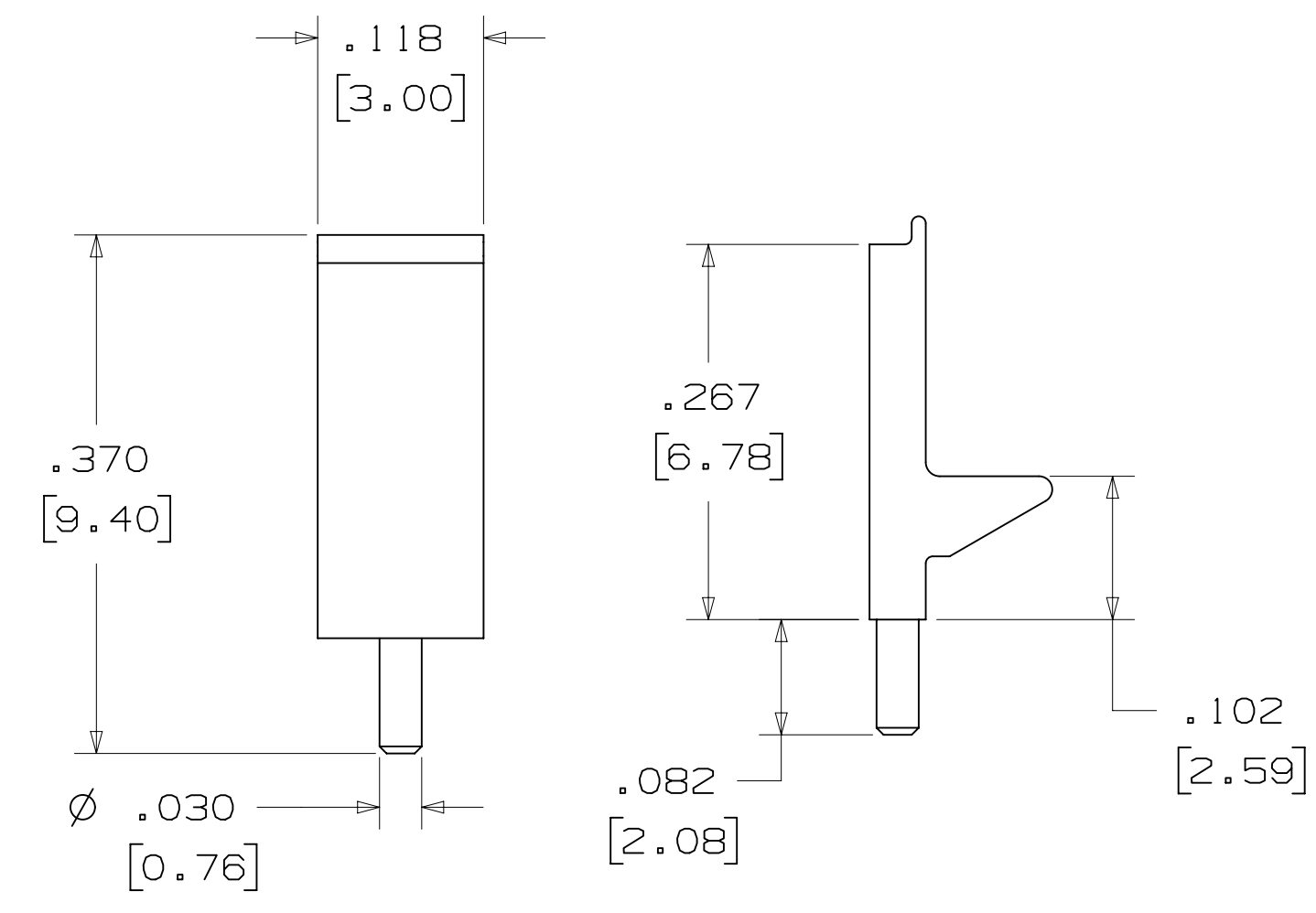
LOW PROFILE LATCH



PART NO.	MATERIAL	COLOR
3505-33B	NYLON	BLACK

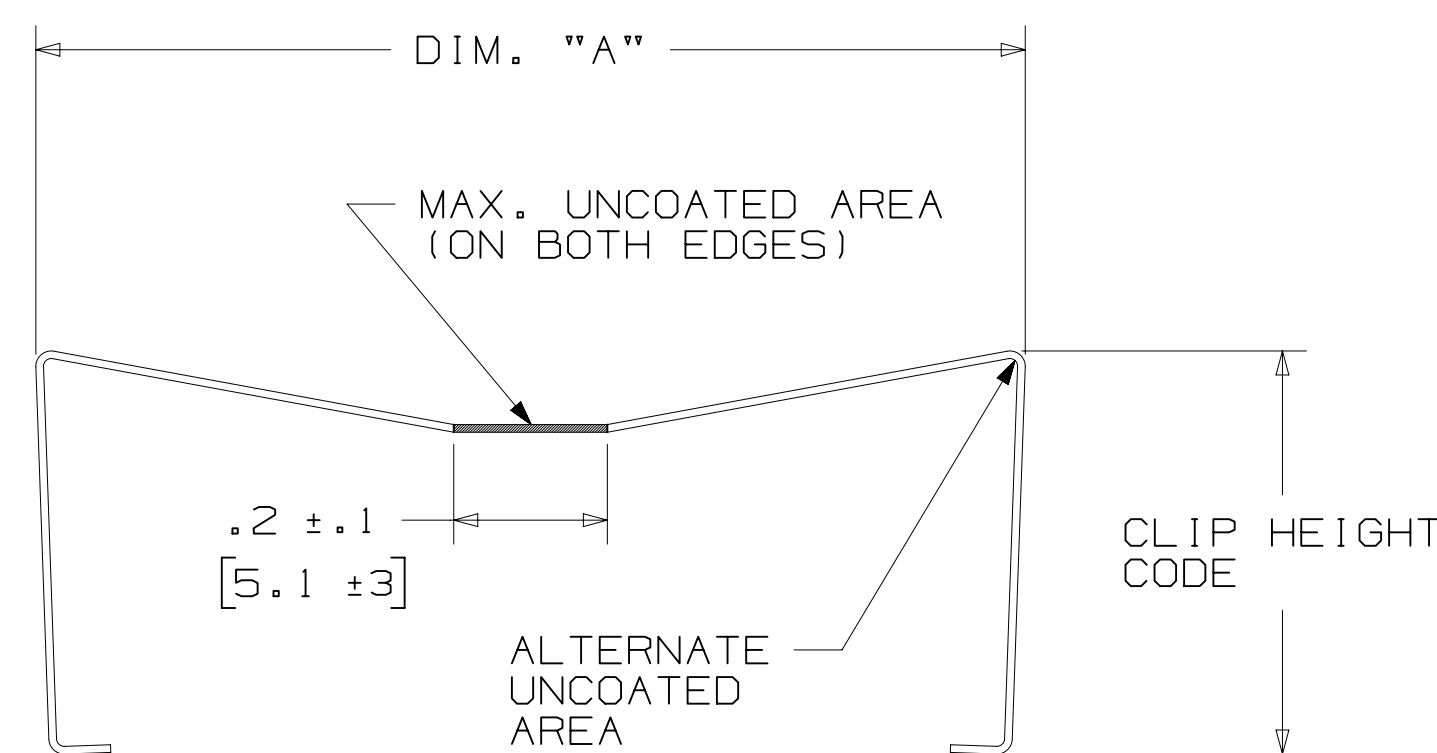
NOTE:  
 LATCHES NOT COMPATIBLE WITH REFLOW SOLDERING.  
 ATTACH LATCHES AFTER SOLDERING.

POLARIZING POST



PART NO.	MATERIAL	COLOR
3201-3	PCT	BLACK

SHORT/LONG SOCKET RETAINER CLIP



PIN QTY.	DIM. "A"
06	N/A
08	N/A
10	.81 [20.6]
14	1.02 [25.9]
16	1.12 [28.4]
20	1.32 [33.5]
24	1.52 [38.7]
26	1.63 [41.4]
30	1.83 [46.4]
34	2.03 [51.6]
36	N/A
40	2.33 [59.2]
50	2.83 [71.9]
60	3.33 [84.6]
64	3.53 [89.7]

NOTE:  
 STAINLESS STEEL WITH GRAY POLYURETHANE COATING.

3505-8XXX

CLIP HEIGHT CODE \_\_\_\_\_ PIN COUNT (SEE TABLE)  
 0 = .31 [7.9] FOR SOCKETS WITHOUT STRAIN RELIEF  
 1 = .53 [13.5] FOR SOCKETS WITH STRAIN RELIEF

NOTE:  
 1) THE FOLLOWING RETAINER CLIPS HAVE BEEN DISCONTINUED:  
 3505-8064  
 3505-8124  
 3505-8150

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
DO NOT SCALE DRAWING	SCALE 4/1	CASTIGLIONE	AUG 11, 2014	REVISED AND REDRAWN	JNC	RS
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 2009	DATE	APPRV	DATE	JNC	SC
MAX SURFACE ROUGHNESS	MARKED ONLY	DATE	R. SCHERER	SEP 05, 2014	JNC	SC
TOLERANCES EXCEPT AS NOTED		3M Center St. Paul, MN 55144		© 3M COPYRIGHT 2016		
TITLE		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.				
CAGE NUMBER		DRAWING NO.		REV.		
D78-5100-0770-7		N		SHT 5 OF 5		

78-5100-0770-7  
 11:10 AM UTC-05:00  
 N REVISION  
 C  
 B  
 A

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[MIKQ6-7SH076](#) [R288940005](#) [RF174-01RP1-03RP1-0110](#) [RMTB1-6PHY0102](#) [145111-05-12.00](#) [1661-C-24](#) [2192](#) [CA-628485-A43](#)  
[24P104C24J1-012](#) [24P104C24P1-006](#) [24P104C24P1-018](#) [24P203C24P2-006](#) [24P204C24J1-003](#) [172-2150-EX](#) [1800920920914PJ](#) [FCB-3030-](#)  
[ALT](#) [21117-046](#) [21117-050](#) [PCX-24-50](#) [24P103C24P2-003](#) [25P203C25P2-003](#) [R284008001](#) [R285426000](#) [R288940003](#) [R288940008](#)  
[RF174-03RP1-01BR1-0200](#) [RF179-74BJ3-77RP1-0305](#) [RMTB1-15PHY0102](#) [RMTB1-8PHY0102](#) [4814-BB-24](#) [500-181-R-ACC](#) [MIKQ6-](#)  
[7SH023](#) [5260-72](#) [314-120](#) [JR4N1-CL1-6F](#) [JR4R3-CL1-4F](#) [JT2N1-CL1-1F](#) [JT2T1-CL1-6F](#) [4814-K-48](#) [RN-UFL-SMA6](#) [100E151JW3600X](#)  
[CCNTN2-MM-LL335-26](#)