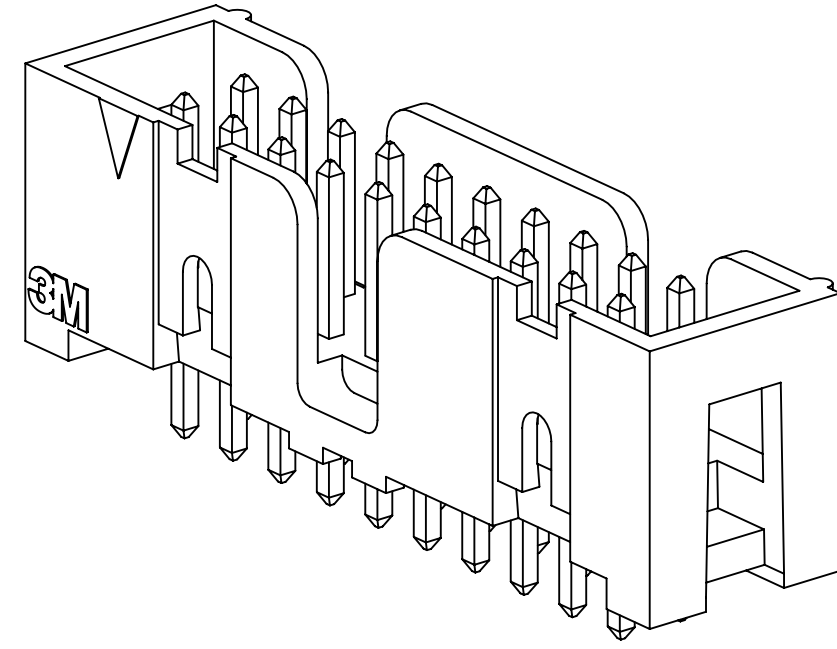
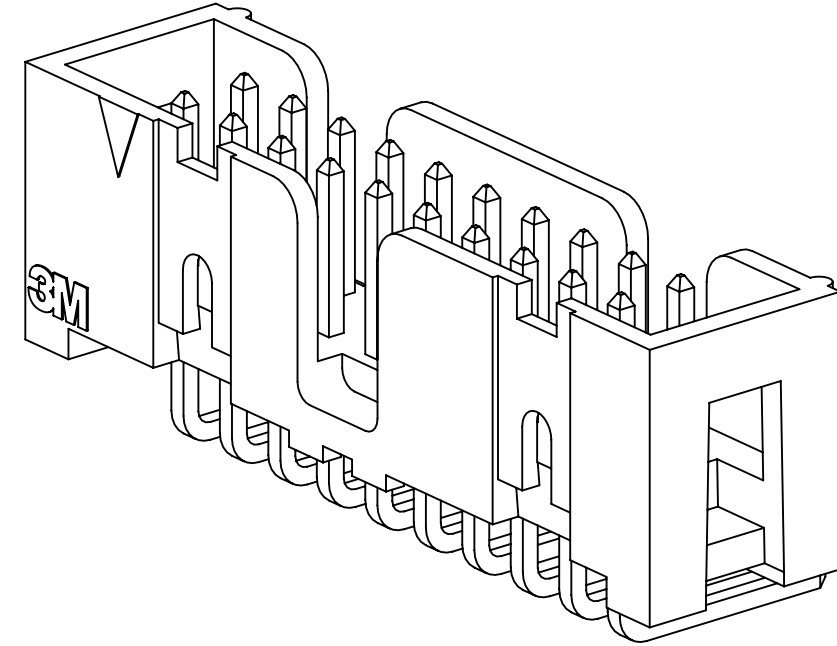


# 3M™ FOUR-WALL HEADER, 2500 SERIES

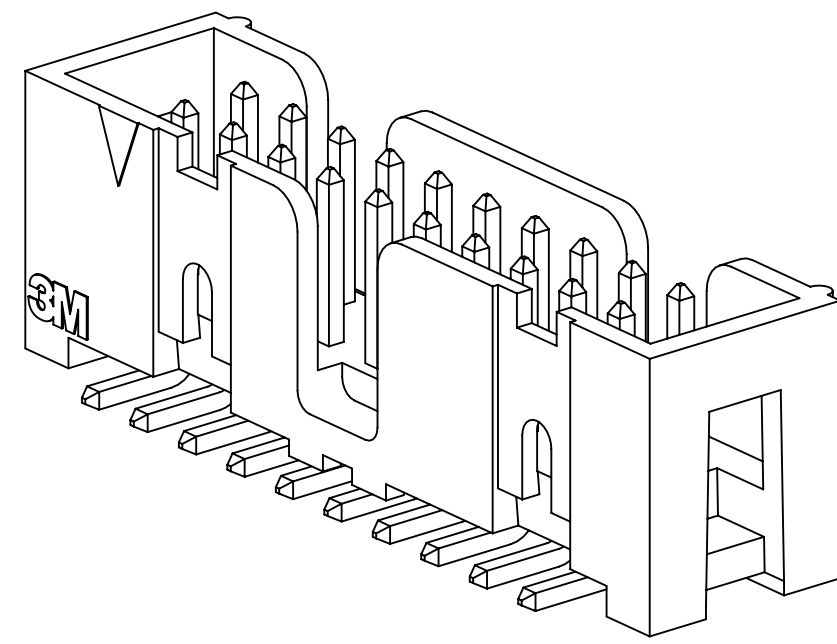
.100" X .100" LOW PROFILE, SURFACE MOUNT, STRAIGHT AND RIGHT ANGLE THROUGH-HOLE



**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 ACCOMMODATE 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.

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

REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
N	68908	AUG 02, 2016 REVISE DIM ON SHT2 & CLIP CHART ON SHT5	JNC	SC
M	56068	AUG 11, 2014 REVISED AND REDRAWN	JNC	RS
DRW				

DESIGN REFERENCE	NEXT ASSEMBLY

DESIGNER	CHECKED	DATE	APPV	DATE
CASTIGLIONE		AUG 11, 2014	R. SCHERER	SEP 05, 2014

DIVISION	DIVISION CODE
Interconnect Solutions	EMSD

DO NOT SCALE DRAWING	SCALE	TOLERANCES EXCEPT AS NOTED
	4 1	

INCHES	
-.0	± .01
.000	± .005
.0000	±

MILLIMETERS	
0	±
.0	± .3
.00	± .13
.000	±

TITLE	CAGE NUMBER	SIZE	DRAWING NO.	REV.
HEADER, 4-WALL, LO-PRO, .100 X .100, SMT, STRAIGHT & RA	D		78-5100-0770-7	N

MODEL	DRAWING NO.	REV.	DATE	SHT	OF
2500 SERIES				1	5

**CAI**<sup>®</sup> US  
UL FILE NO: E68080

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

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

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

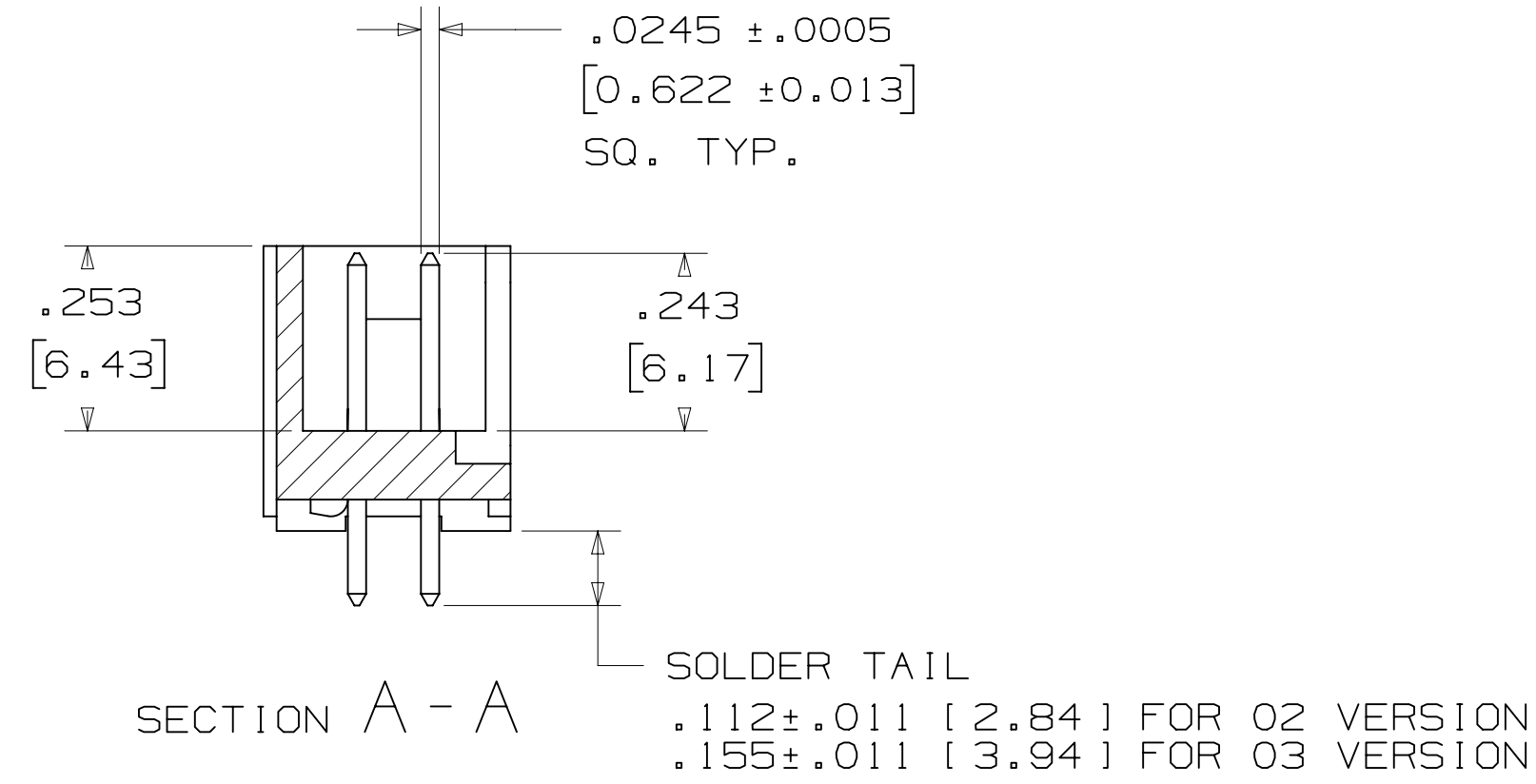
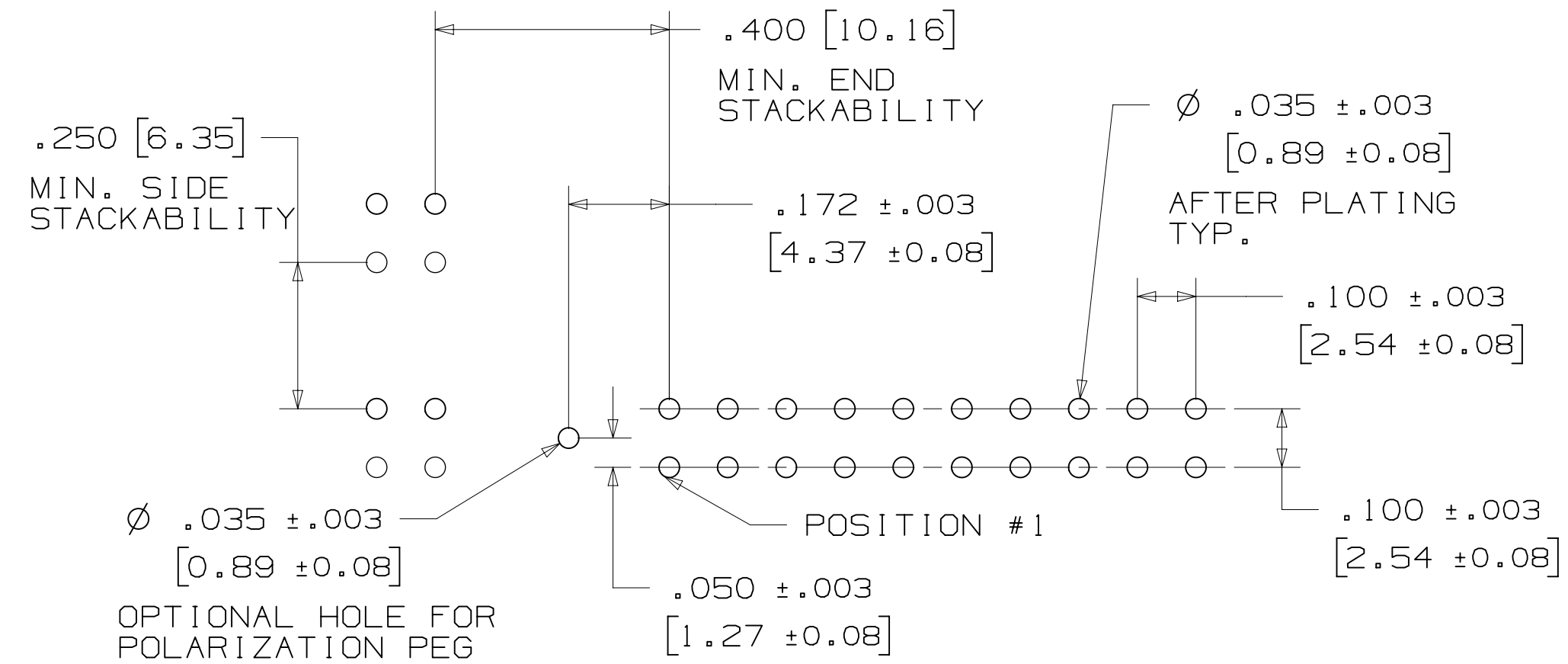
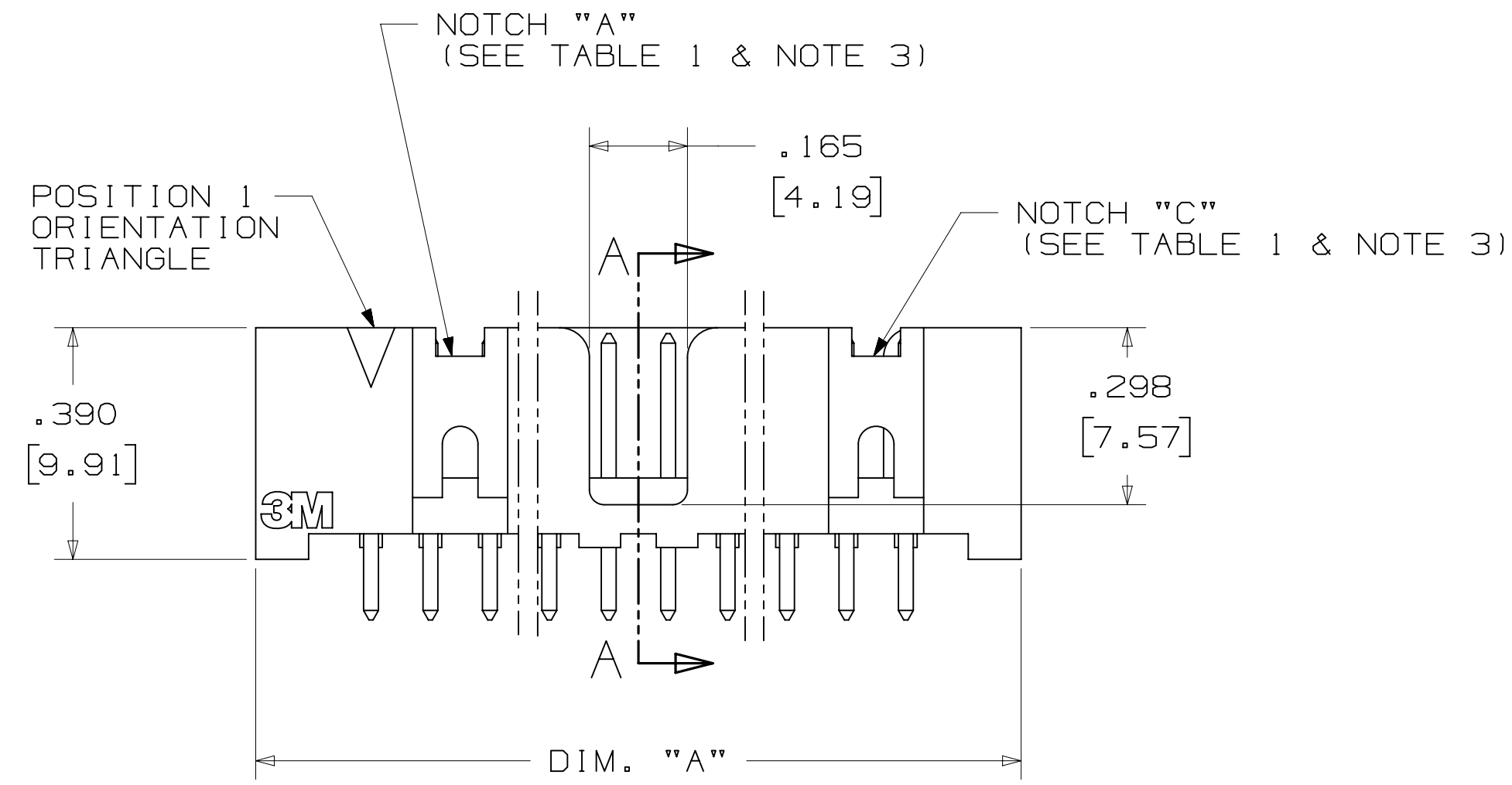
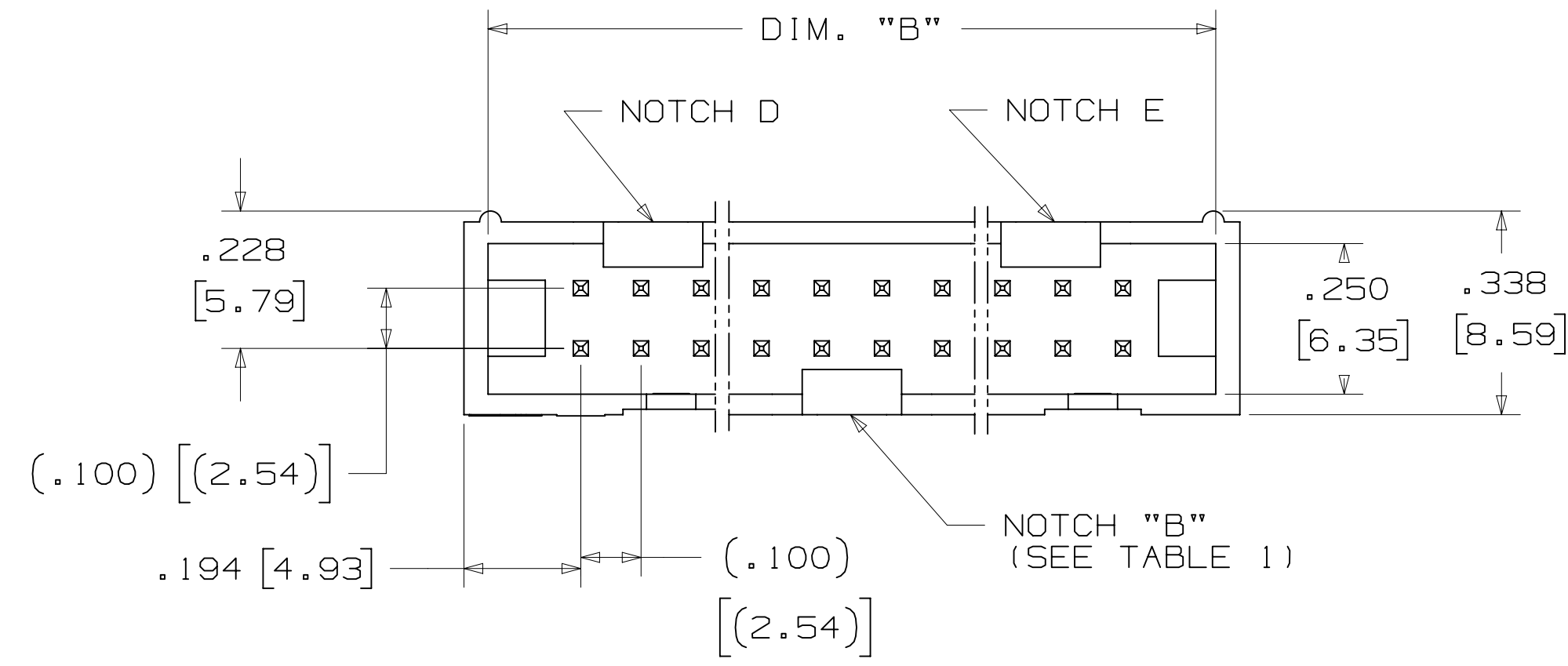


TABLE 1				
PIN QTY.	DIM. "A"	DIM. "B"	POLARIZING NOTCHES	PIN QTY.
06	.588 [14.94]	.508 [12.90]	B	06
08	.688 [17.48]	.608 [15.44]	B	08
10	.788 [20.02]	.708 [17.98]	BC	10
14	.988 [25.10]	.908 [23.06]	BCDE	14
16	1.088 [27.64]	1.008 [25.60]	ABCDE	16
20	1.288 [32.72]	1.208 [30.68]	ABCDE	20
24	1.488 [37.80]	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:  
 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)

RECOMMENDED HOLE PATTERN  
 SHOWN FROM COMPONENT SIDE

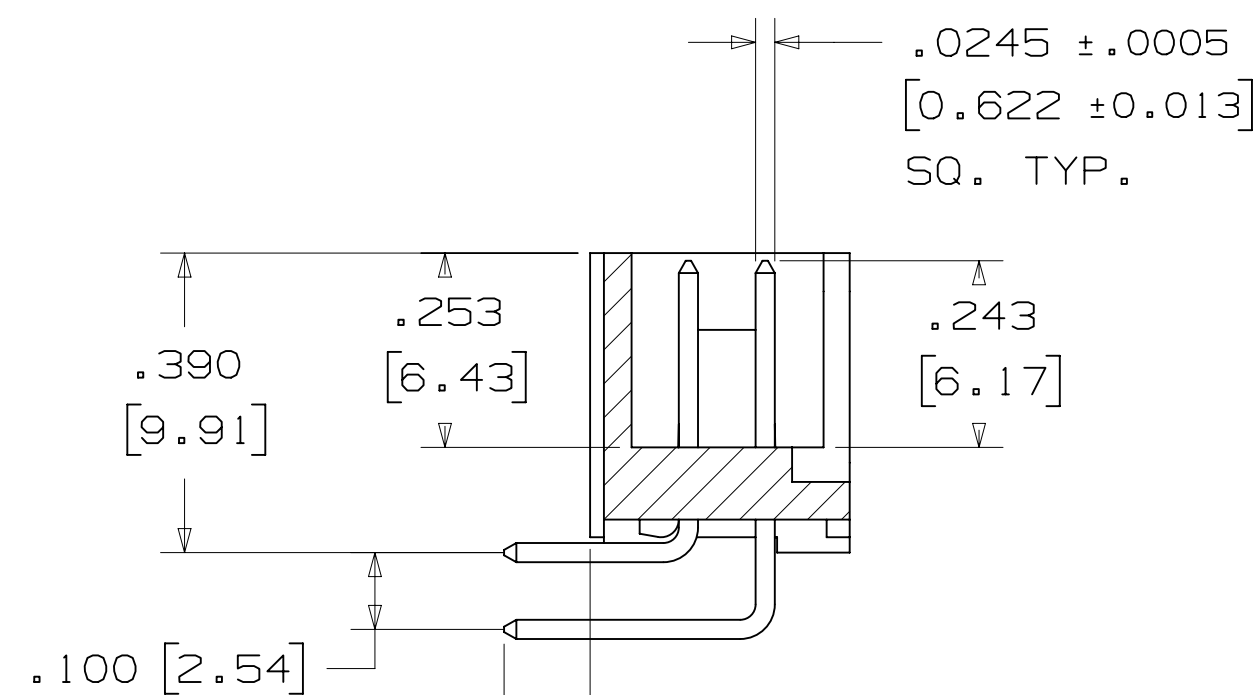
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		CASTIGLIONE	AUG 11, 2014	MFG		
DIVISION	DIVISION CODE	DATE	DATE	DATE	DATE	DATE
Interconnect Solutions	EMSD					
DO NOT SCALE DRAWING	SCALE	TOLERANCES EXCEPT AS NOTED	INCHES			
	4 1		.00 ± .01 .000 ± .005 .0000 ±			
THIRD ANGLE PROJECTION			MILLIMETERS			
INTERPRET PER ASME Y14.5 - 2009			0 ± .00 ± .13 .000 ±			
MAX SURFACE ROUGHNESS			CAGE NUMBER			
MARKED ONLY			D 78-5100-0770-7			
			MODEL			
			2500 SERIES			
			REV.			
			N			

N	68908	AUG 02, 2016	JNC	SC
M	56068	AUG 11, 2014	JNC	RS

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 St. Paul,  
 MN 55144  
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 TITLE  
 HEADER, 4-WALL,  
 LO-PRO, .100 X .100,  
 SMT, STRAIGHT & RA  
 MODEL  
 2500 SERIES  
 SHEET  
 1 OF 5  
 SHT 2 OF 5

# 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

## ORDERING INFORMATION RIGHT ANGLE VERSION

X25XX - 50XX - XX

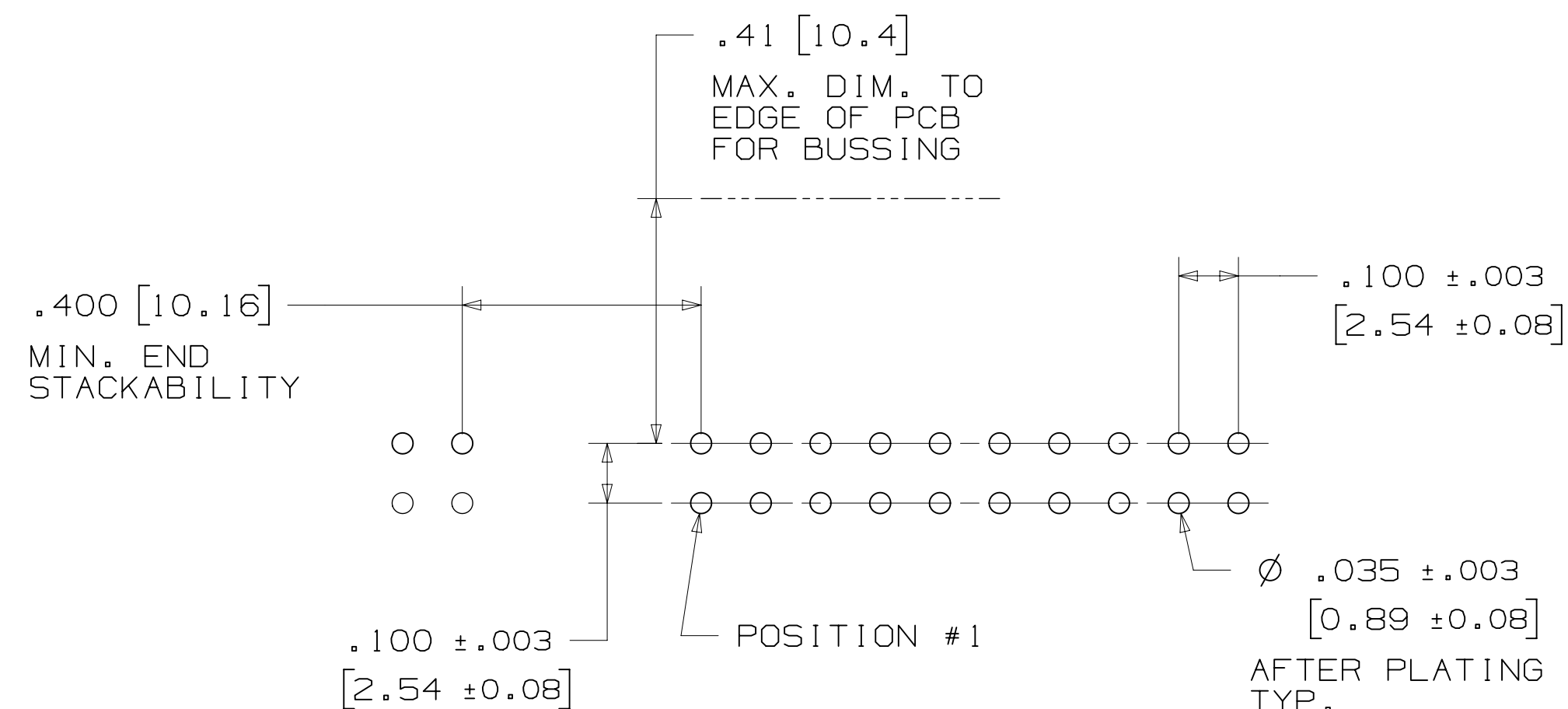
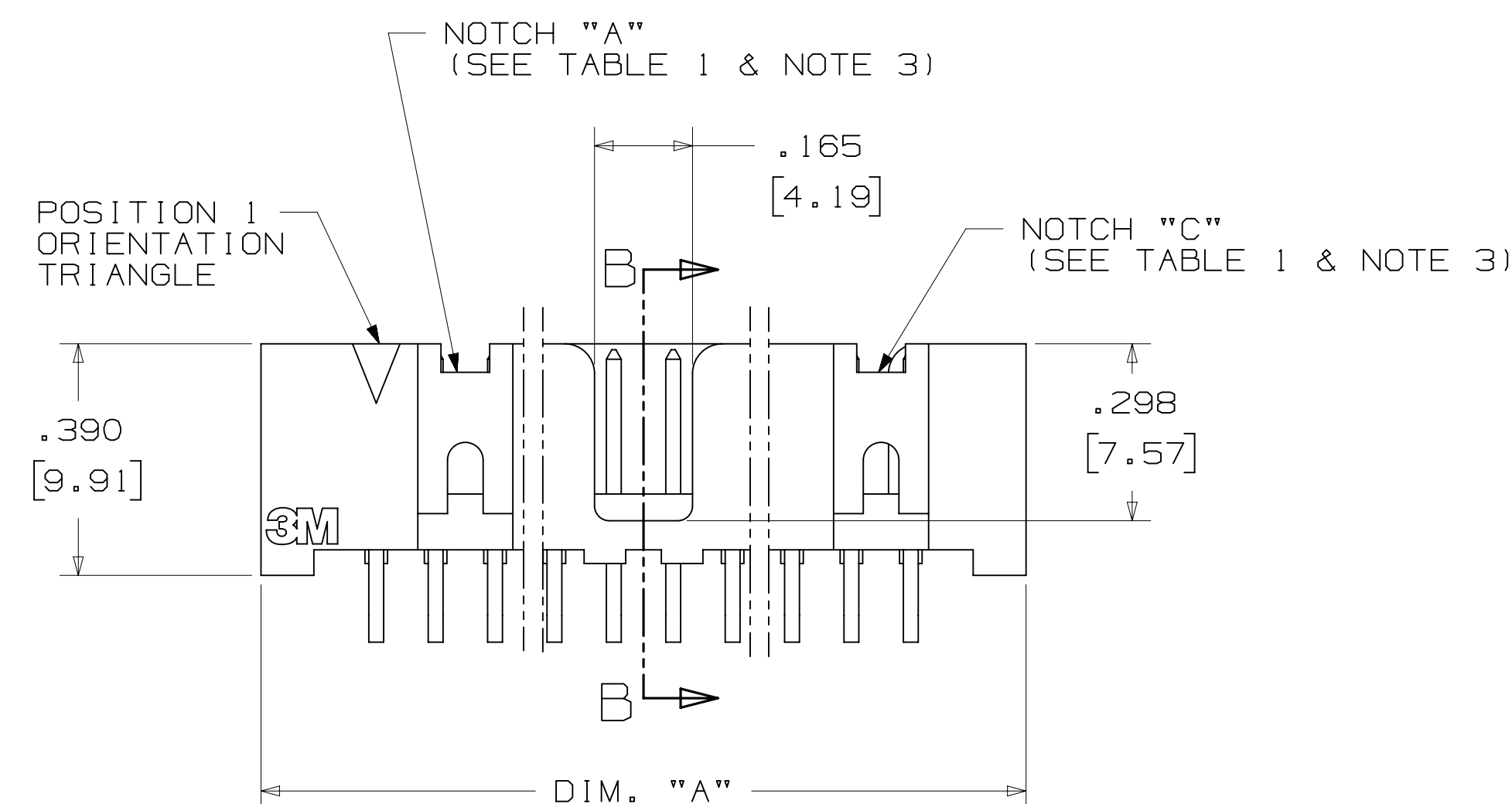
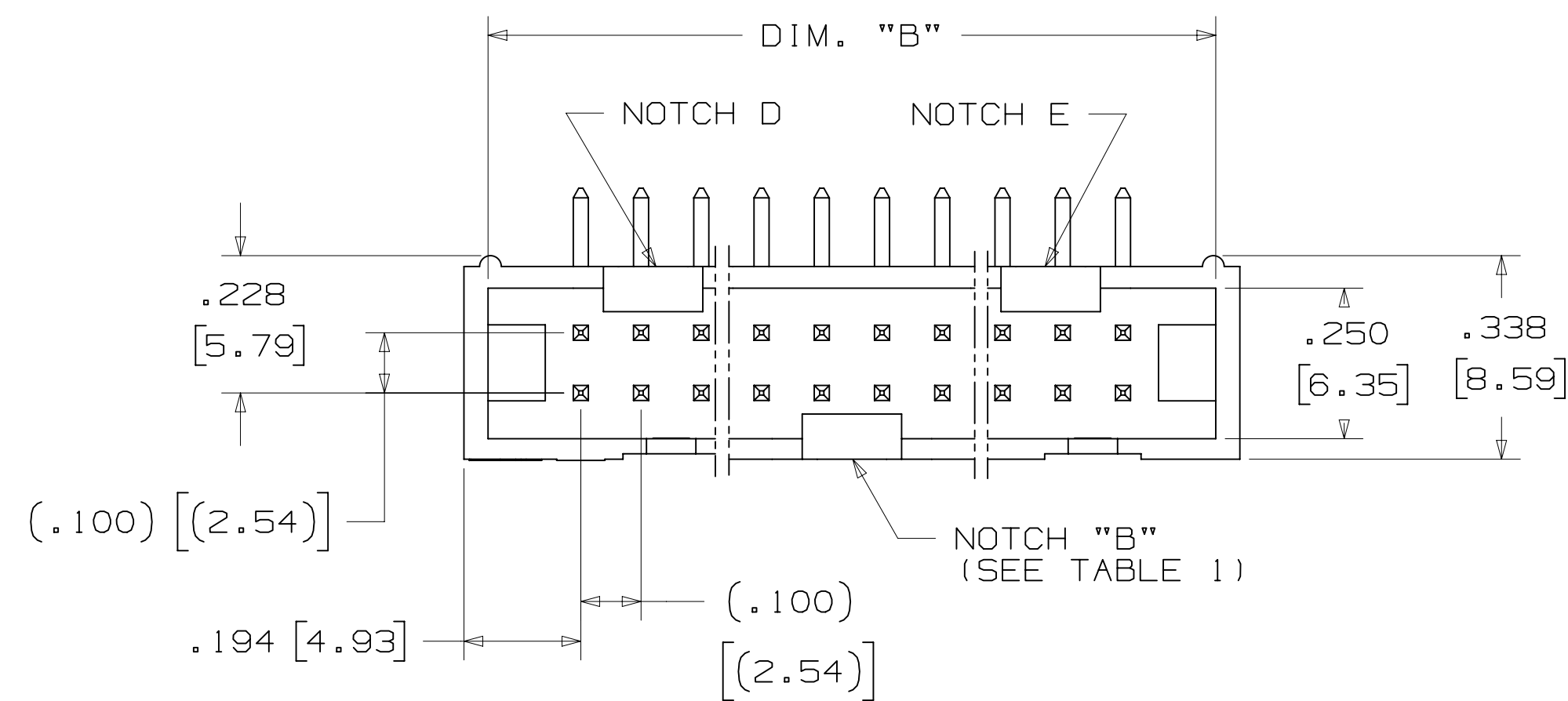
N = HIGH TEMP BLACK (PCT)  
 (RB, UB OR UG PLATING REQ'D)  
 BLANK = (UB OR UG PLATING)

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)



RECOMMENDED HOLE PATTERN  
SHOWN FROM COMPONENT SIDE

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
Interconnect Solutions	EMSD	CASTIGLIONE	AUG 11, 2014	REVISED AND REDRAWN	JNC	RS
DO NOT SCALE DRAWING	SCALE 4/1	TOLERANCES EXCEPT AS NOTED	INCHES .00 ± .01 .000 ± .005 .0000 ±	MILLIMETERS 0 ± .0 ± .13 .000 ±	DATE	DATE
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 2009	MAX SURFACE ROUGHNESS	1 SURFACES	MARKED ONLY	MODEL	2500 SERIES
DIVISION: Interconnect Solutions ST. PAUL, MN 55144		DATE: AUG 11, 2014 APPR: R. SCHERER		© 3M COPYR[IGHT] 2016 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: HEADER, 4-WALL, LO-PRO, .100 X .100, SMT, STRAIGHT & RA		CAGE NUMBER	SIZE	DRAWING NO.	REV.	
D 78-5100-0770-7		N		3	OF 5	

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

# 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



RECOMMENDED PAD LAYOUT

## 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)

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: 12.5 SURFACES		MARKED ONLY		CAGE NUMBER: D78-5100-0770-7		
				MODEL: 2500 SERIES		

N	68908	AUG 02, 2016	JNC	SC
M	56068	AUG 11, 2014	JNC	RS

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3M Center St. Paul, MN 55144

HEADER, 4-WALL, LO-PRO, .100 X .100, SMT, STRAIGHT & RA

REV. N

SHT 4 OF 5

DRAWING NUMBER: 78-5100-0770-7

REVISION: N

DATE: AUG 11, 2014

DRAWN BY: R. SCHERER

CHECKED BY: R. SCHERER

DATE: SEP 05, 2014

CAGE NUMBER: D78-5100-0770-7

MODEL: 2500 SERIES

SHEET: 4 OF 5

IMAGED: N.1 8/5/2016 11:10 AM UTC-05:00

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

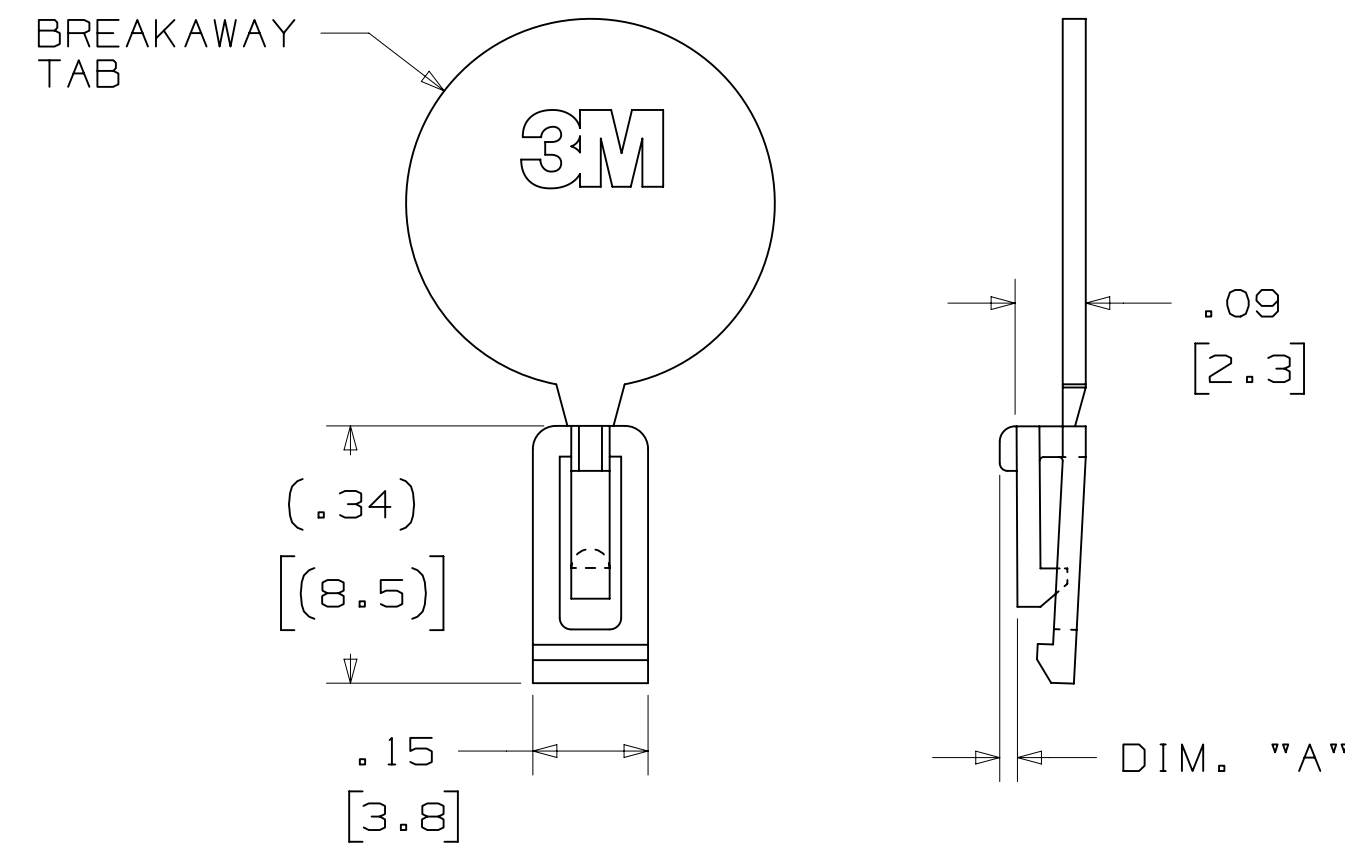
PART CUSTOMIZATION

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.

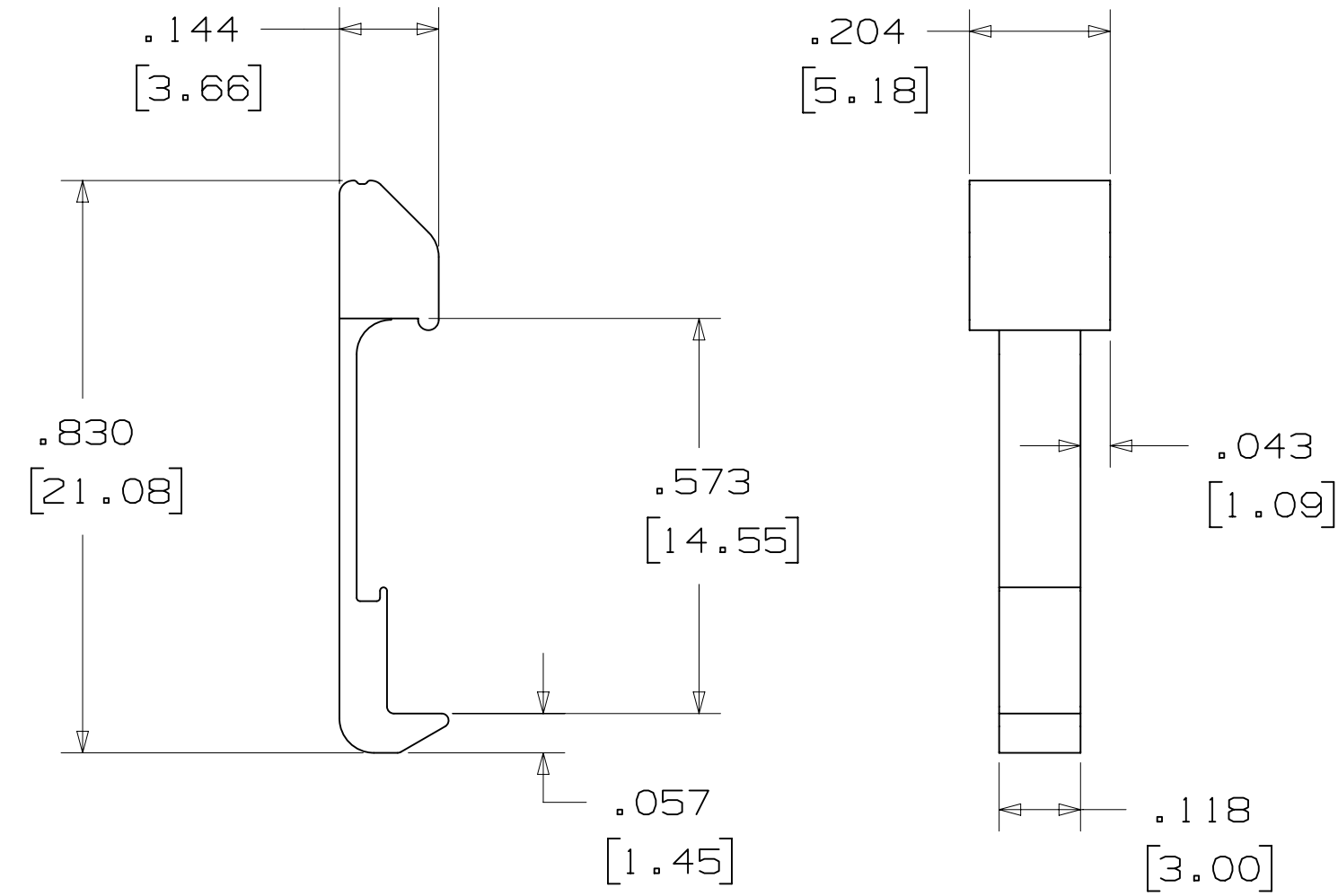
POLARIZING KEY



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

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

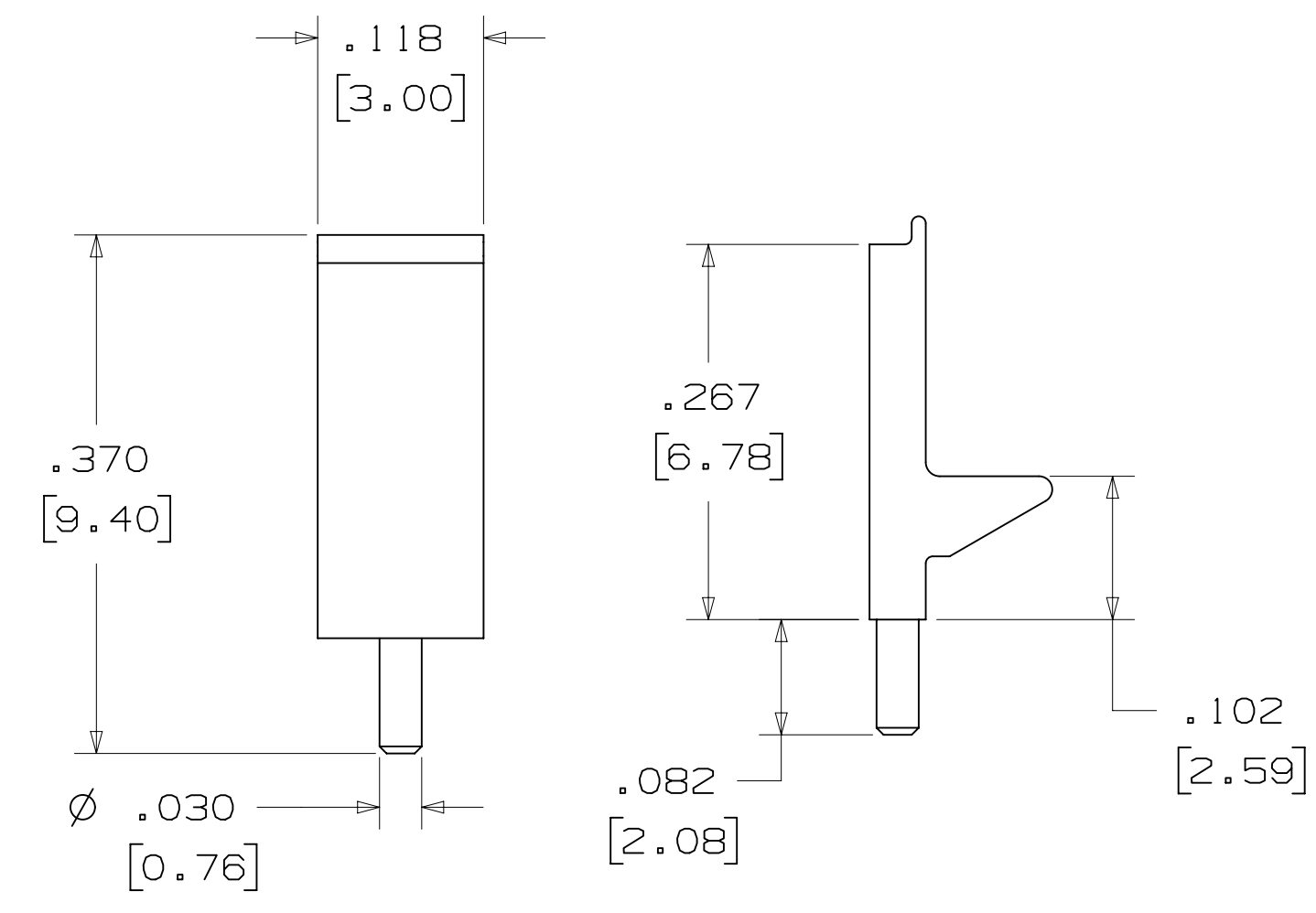
LOW PROFILE LATCH



PART NO.	MATERIAL	COLOR
3505-33B	NYLON	BLACK

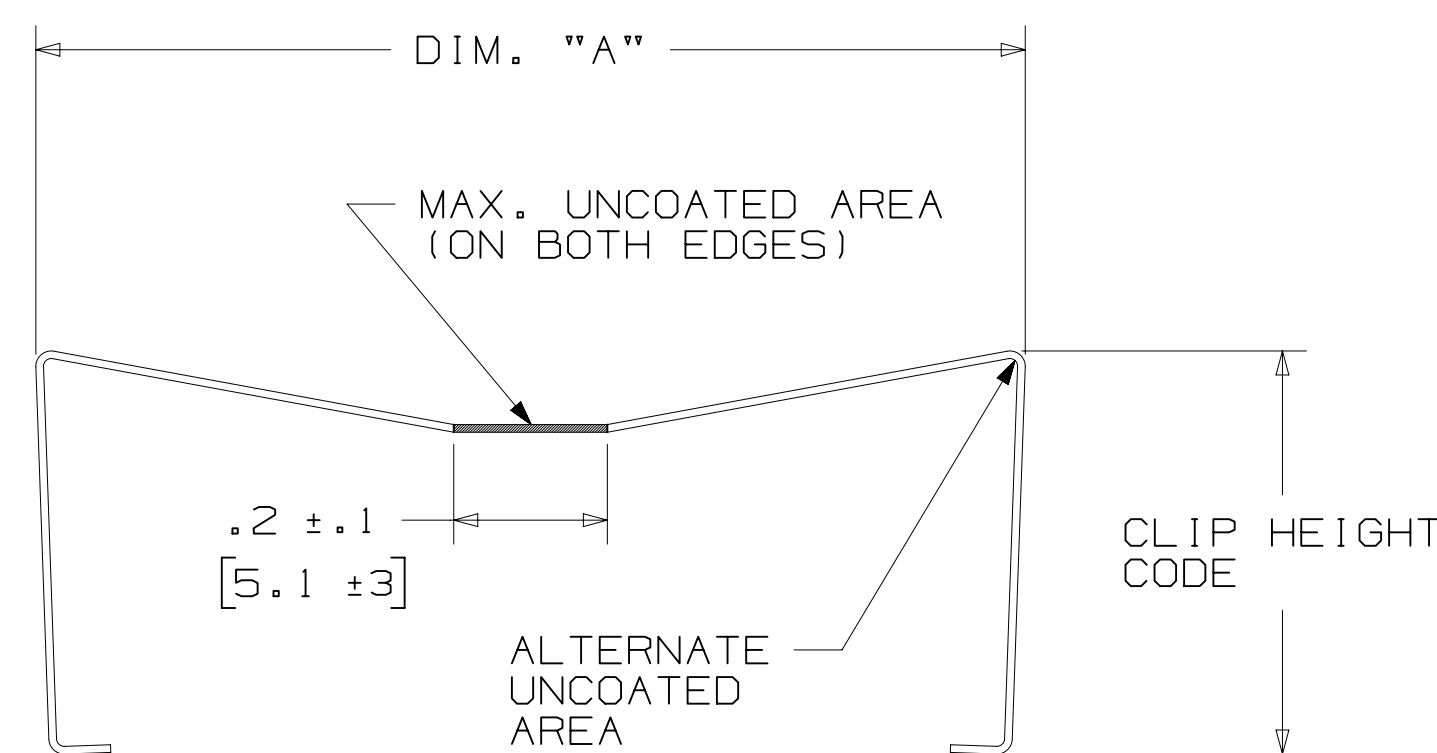
NOTE:  
 LATCHES NOT COMPATIBLE WITH REFLOW SOLDERING.  
 ATTACH LATCHES AFTER SOLDERING.

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
DATE	DATE	DATE	DATE	DATE	DATE	DATE
AUG 11, 2014	AUG 11, 2014	AUG 11, 2014	AUG 11, 2014	AUG 11, 2014	AUG 11, 2014	AUG 11, 2014
APPROV	APPROV	APPROV	APPROV	APPROV	APPROV	APPROV
R. SCHERER	R. SCHERER	R. SCHERER	R. SCHERER	R. SCHERER	R. SCHERER	R. SCHERER
DIVISION CODE		DIVISION CODE		DIVISION CODE		
Interconnect Solutions		EMSD		EMSD		
DO NOT SCALE DRAWING	SCALE 4/1	TOLERANCES EXCEPT AS NOTED		TOLERANCES EXCEPT AS NOTED		
THIRD ANGLE PROJECTION		INCHES		MILLIMETERS		
INTERPRET PER ASME Y14.5 - 2009		.00 ± .01		.000 ± .005		
MAX SURFACE ROUGHNESS		.00 ± .13		.000 ± .010		
MARKED ONLY		ANGLES		ANGLES		
CAGE NUMBER		DRAWING NO.		REV.		
D78-5100-0770-7		N		N		
MODEL		2500 SERIES		SHT 5 OF 5		

78-5100-0770-7  
 N  
 REV. DATE  
 AUG 11, 2014  
 R. SCHERER  
 AUG 02, 2016  
 AUG 11, 2014  
 REVISE DIM ON SHT2 & CLIP CHART ON SHT5  
 REVISED AND REDRAWN  
 JNC SC  
 JNC RS  
 N  
 11:10 AM UTC-05:00  
 Imaged: N.1 B/5/2016