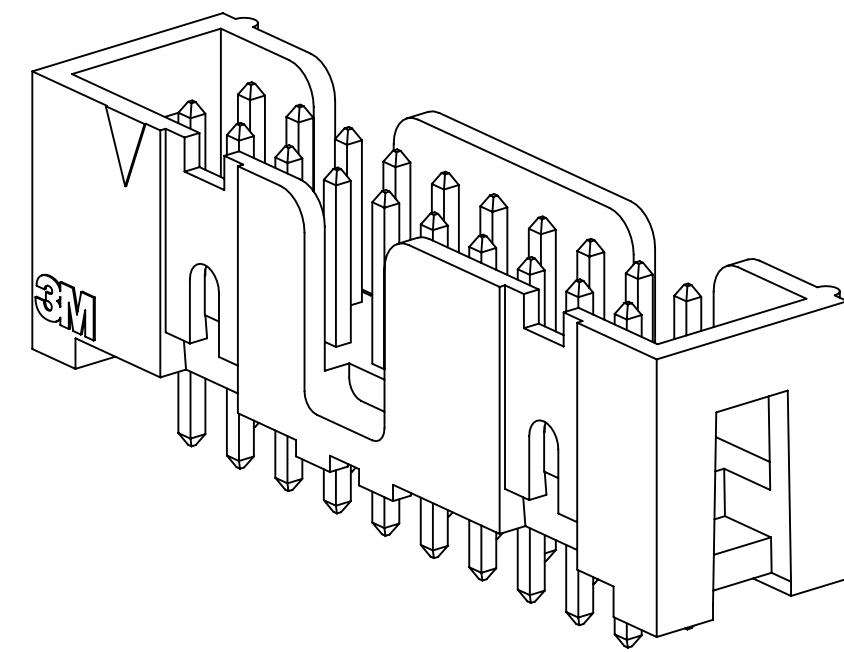
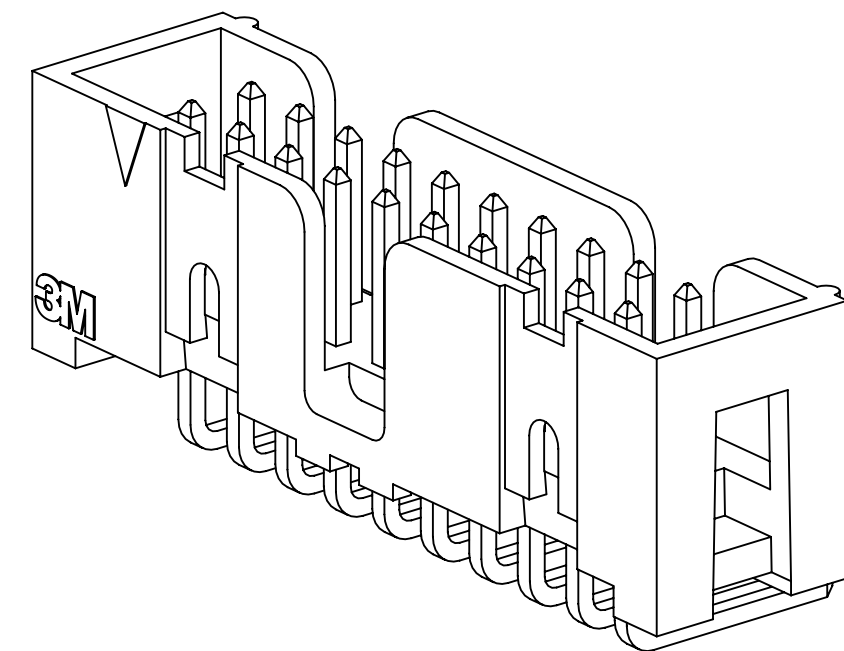


# 3M™ FOUR-WALL HEADER, 2500 SERIES

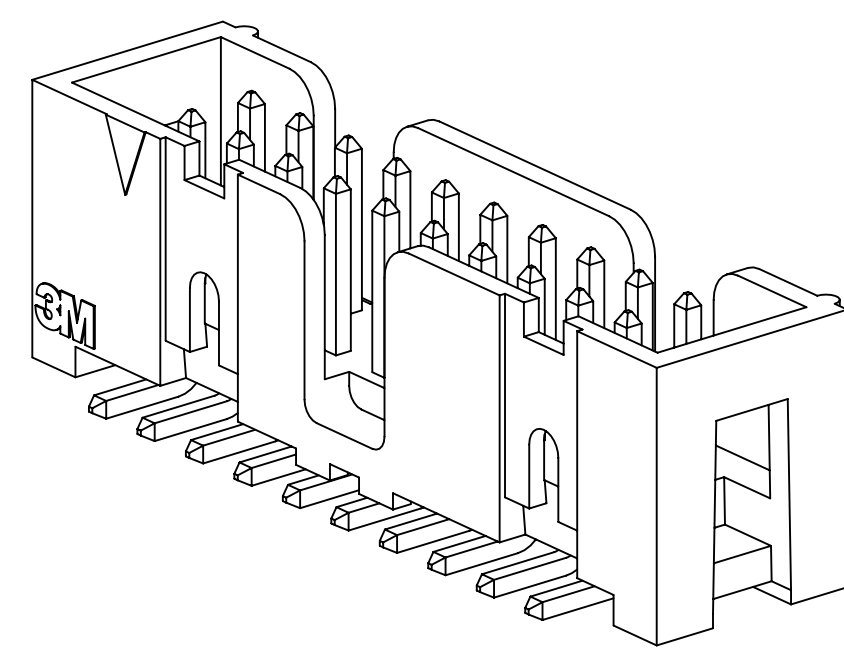
.100" X .100" LOW PROFILE, SURFACE MOUNT, STRAIGHT AND RIGHT ANGLE THROUGH-HOLE



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.

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

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

**CAUS**  
UL FILE NO: E68080

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

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
DATE	DATE	DATE	DATE	DATE	DATE	DATE
CHKD	CHKD	APPV	APPV	DATE	DATE	DATE
DIVISION	DIVISION CODE	© 3M COPYRIGHT 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.				
Interconnect Solutions	EMSD	3M Center St. Paul, MN 55144				
DO NOT SCALE DRAWING	SCALE 4-1	TOLERANCES EXCEPT AS NOTED INCHES .0 ± .01 .000 ± .005 .0000 ±				
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 2009	MILLIMETERS 0 ± .0 ± .3 .00 ± .13 .000 ±				
MAX SURFACE ROUGHNESS	MARKED ONLY	CAGE NUMBER D 78-5100-0770-7 N MODEL 2500 SERIES DET [ ] IS1s YES [ ] NO [ ] SHT 1 OF 5				

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

78-5100-0770-7  
 DRAWING NUMBER  
 N  
 REVISION  
 11:10 AM UTC-05:00  
 18/5/2016

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

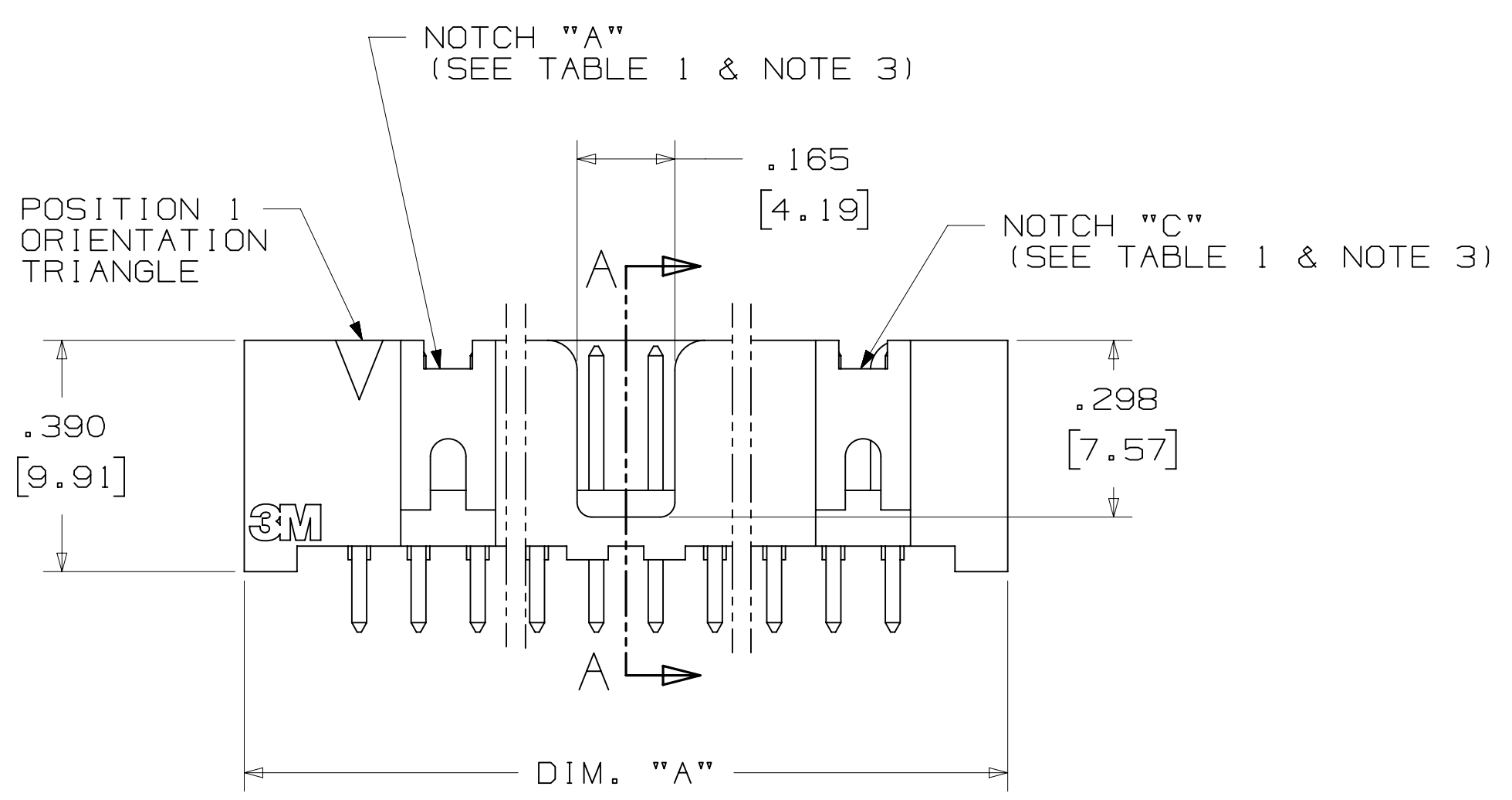
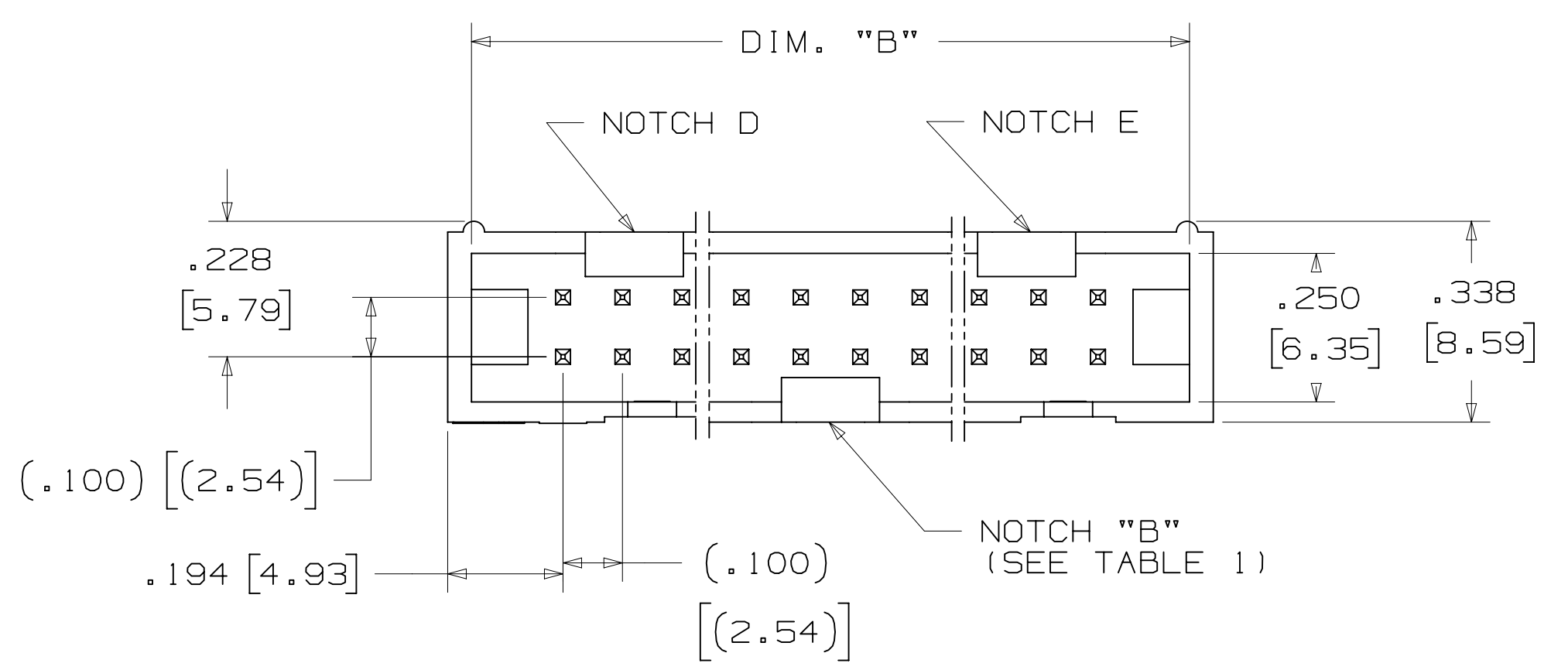
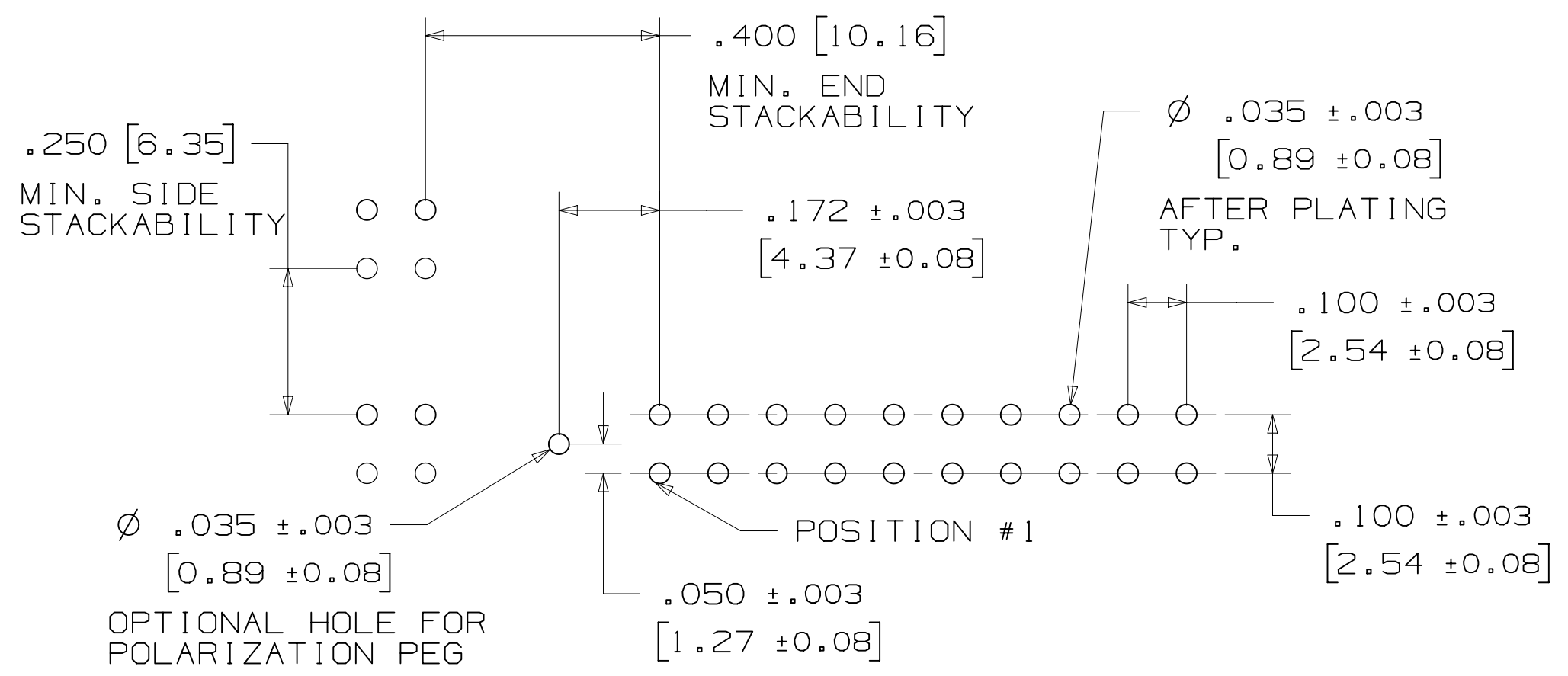


TABLE 1				
PIN QTY.	DIM. "A"	DIM. "B"	POLARIZING NOTCHES	PIN QTY.
06	.588 [14.94]	.508 [12.90]	B	06
08	.688 [17.48]	.608 [15.44]	B	08
10	.788 [20.02]	.708 [17.98]	BC	10
14	.988 [25.10]	.908 [23.06]	BCDE	14
16	1.088 [27.64]	1.008 [25.60]	ABCDE	16
20	1.288 [32.72]	1.208 [30.68]	ABCDE	20
24	1.488 [37.80]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

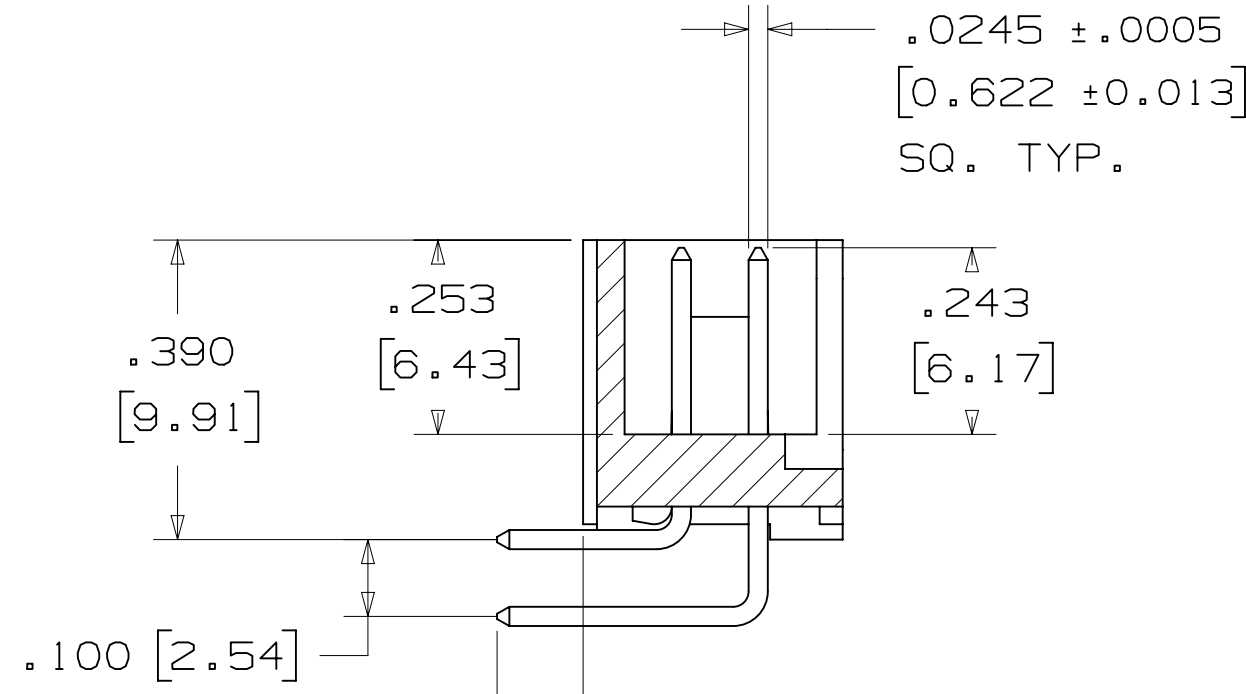
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				AUG 11, 2014		
DIVISION: Interconnect Solutions		DIVISION CODE: EMSD		DATE: AUG 11, 2014		
DO NOT SCALE DRAWING	SCALE: 4/1	TOLERANCES EXCEPT AS NOTED		DATE: SEP 05, 2014		
THIRD ANGLE PROJECTION		INCHES		DATE: SEP 05, 2014		
INTERPRET PER ASME Y14.5 - 2009		MILLIMETERS		DATE: SEP 05, 2014		
MAX SURFACE ROUGHNESS		ANGLES		DATE: SEP 05, 2014		
SURFACES				DATE: SEP 05, 2014		
MARKED ONLY				DATE: SEP 05, 2014		

N	68908	AUG 02, 2016	JNC	SC
M	56068	AUG 11, 2014	JNC	RS
REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
		AUG 11, 2014		
TITLE: HEADER, 4-WALL, LO-PRO, .100 X .100, SMT, STRAIGHT & RA CAGE NUMBER: D78-5100-0770-7 MODEL: 2500 SERIES SHEET: 2 OF 5				

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

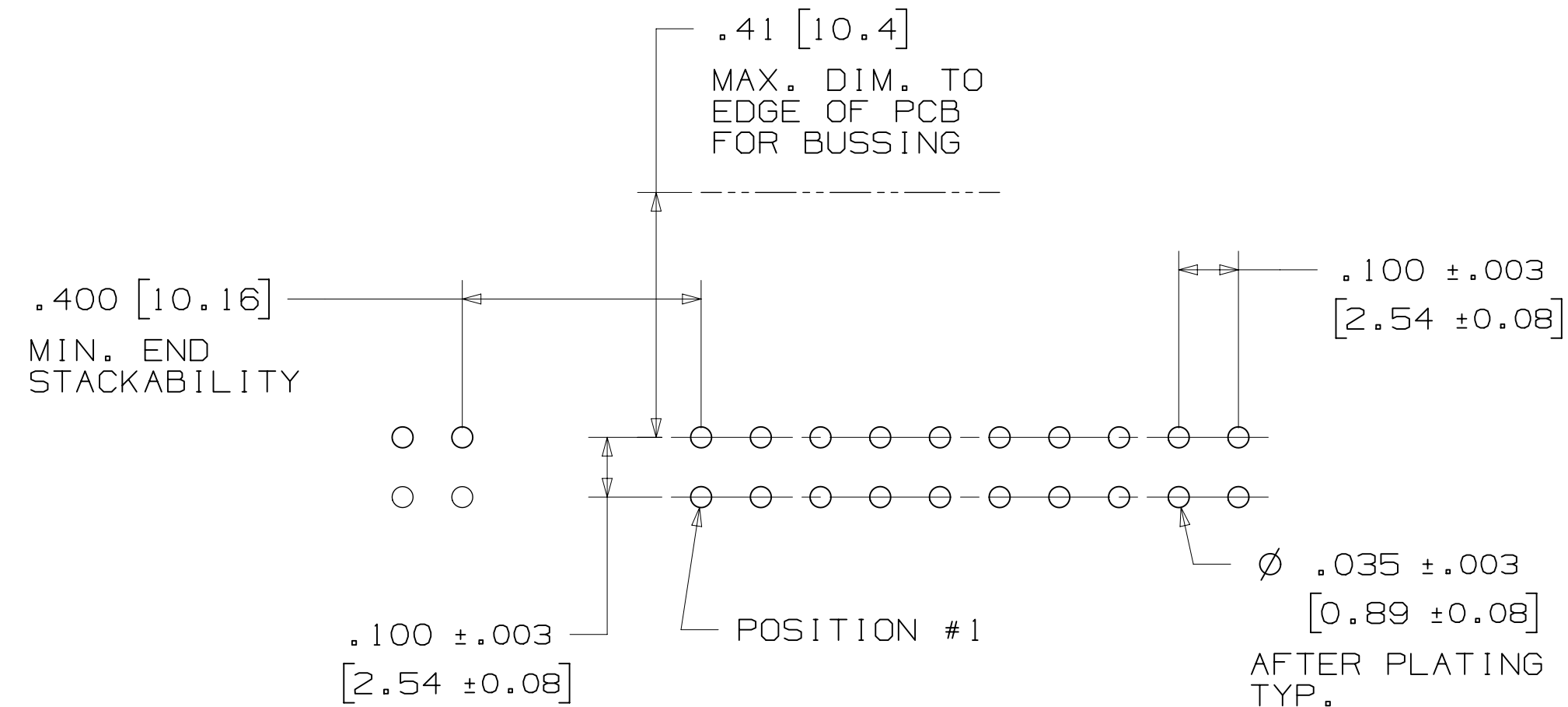
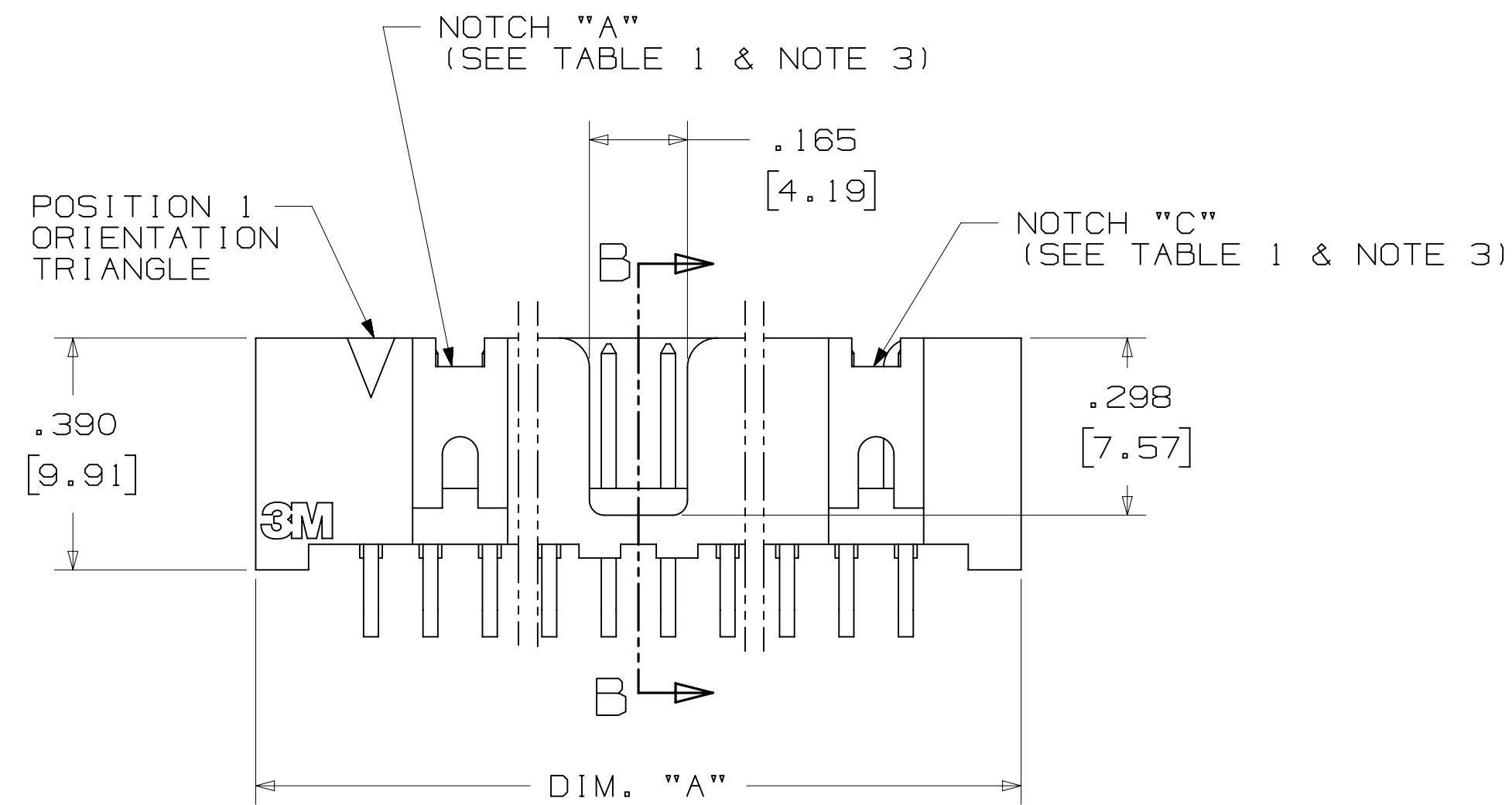
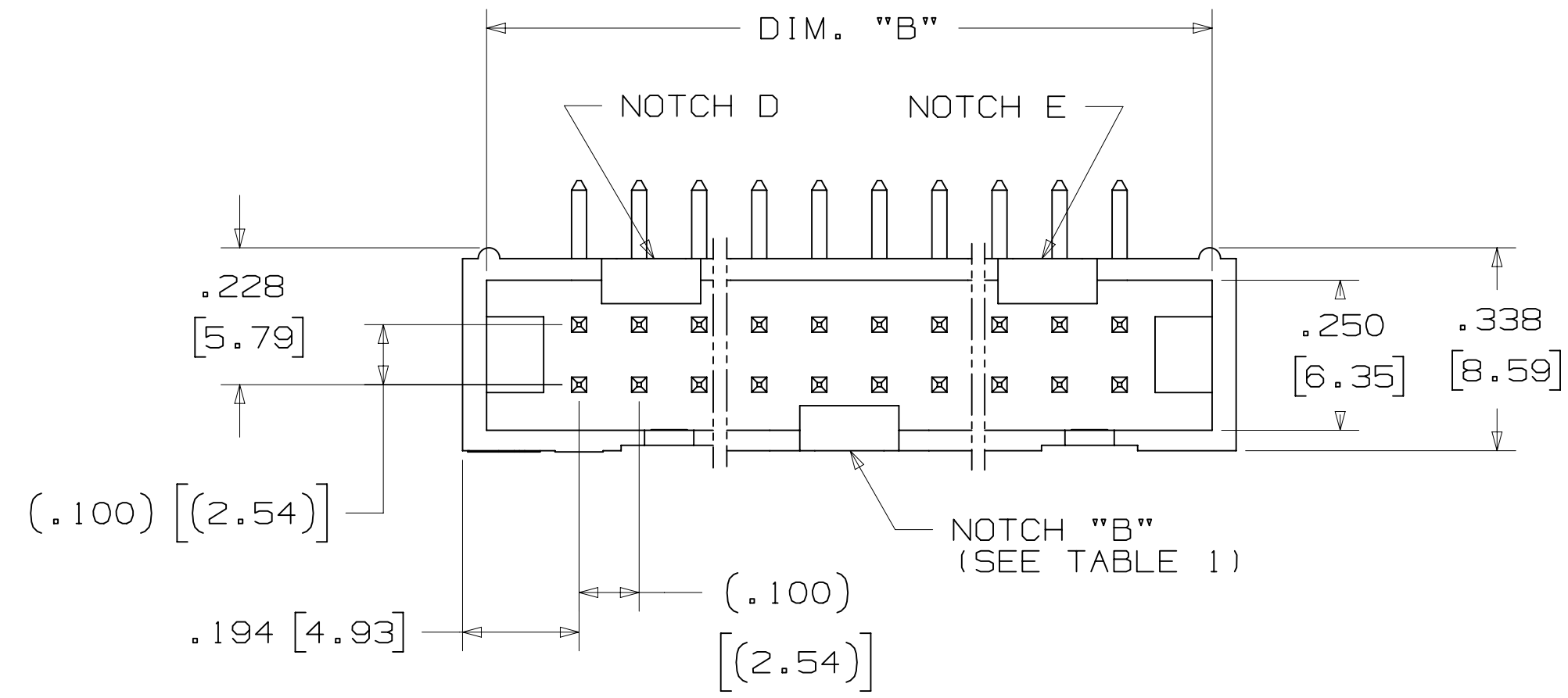
**3M™ FOUR-WALL HEADER, 2500 SERIES**  
 .100" X .100" LOW PROFILE, SURFACE MOUNT, STRAIGHT AND RIGHT ANGLE THROUGH-HOLE



SOLDER TAIL  
 .112±.011 [2.84] FOR O2 VERSION  
 .155±.011 [3.94] FOR O3 VERSION

SECTION B-B

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:  
 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
		N	68908	AUG 02,2016	JNC	SC
		M	56068	AUG 11,2014	JNC	RS
DIVISION: Interconnect Solutions		DRFT	COSTIGLIONE	DATE	MFG	DATE
SCALE: DO NOT SCALE DRAWING		CHKD		DATE	APPV	DATE
THIRD ANGLE PROJECTION		DIVISION CODE: EMSD		© 3M COPYR [GHT 2016 3M Center St. Paul, MN 55144 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.		
INTERPRET PER ASME Y14.5 - 2009		TOLERANCES EXCEPT AS NOTED		<b>3M</b> TITLE: <b>HEADER, 4-WALL, LO-PRO, .100 X .100, SMT, STRAIGHT &amp; RA,</b>		
MAX SURFACE ROUGHNESS		INCHES		CAGE NUMBER: <b>D 78-5100-0770-7</b>		
L <sub>A</sub> SURFACES		MILLIMETERS		DRAWING NO.: <b>78-5100-0770-7</b>		
□ MARKED ONLY		ANGLES		REV. NUMBER: <b>N</b>		
				MODEL: <b>2500 SERIES</b>		
				DET: <b>IS15</b> YES <input type="checkbox"/> NO <input type="checkbox"/> SHT <b>3</b> OF <b>5</b>		

DRAWING NUMBER: 78-5100-0770-7

Imaged: N.1 B/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



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		MILLIMETERS: 0 ± .005		
INTERPRET PER ASME Y14.5 - 2009		MILLIMETERS: 0 ± .005		MILLIMETERS: 0 ± .005		
MAX SURFACE ROUGHNESS: 1.6 μm		SURFACES: 1.6 μm		MILLIMETERS: 0 ± .005		
MARKED ONLY		ANGLES: 1.6 μm		MILLIMETERS: 0 ± .005		
CAGE NUMBER: D78-5100-0770-7		SIZE: N		DRAWING NO.: 78-5100-0770-7		
MODEL: 2500 SERIES		REV.:		DATE: SEP 05, 2014		

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3M Center St. Paul, MN 55144

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

CAGE NUMBER: D78-5100-0770-7 N

MODEL: 2500 SERIES

REV.:

DATE: SEP 05, 2014

SHT 4 OF 5

DRAWING NUMBER: 78-5100-0770-7

REVISION: N

AM UTC-05:00

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.

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

POLARIZING KEY



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

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

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
ACROSS CODES		CASTIGLIONE	AUG 11, 2014	MFG		
DIVISION	DIVISION CODE	APPRV	DATE	DATE		
Interconnect Solutions	EMSD	R. SCHERER	SEP 05, 2014			
DO NOT SCALE DRAWING	SCALE 4/1	TOLERANCES EXCEPT AS NOTED		© 3M COPYRIGHT 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.		
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 2009	INCHES .00 ± .01 .000 ± .005 .0000 ±		TITLE HEADER, 4-WALL, LO-PRO, .100 X .100, SMT, STRAIGHT & RA		
MAX SURFACE ROUGHNESS	MARKED SURFACES	MILLIMETERS 0 ± .3 .00 ± .13 .000 ±		CAGE NUMBER D78-5100-0770-7 N		
MARKED ONLY	ANGLES	MODEL 2500 SERIES		REV. SHT 5 OF 5		

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