

3M<sup>TH</sup> SHROUDED BOARDMOUNT HEADER, .05" X .05" (1.27mm X 1.27mm) PITCH,  
LATCH AND EJECT, 452 SERIES

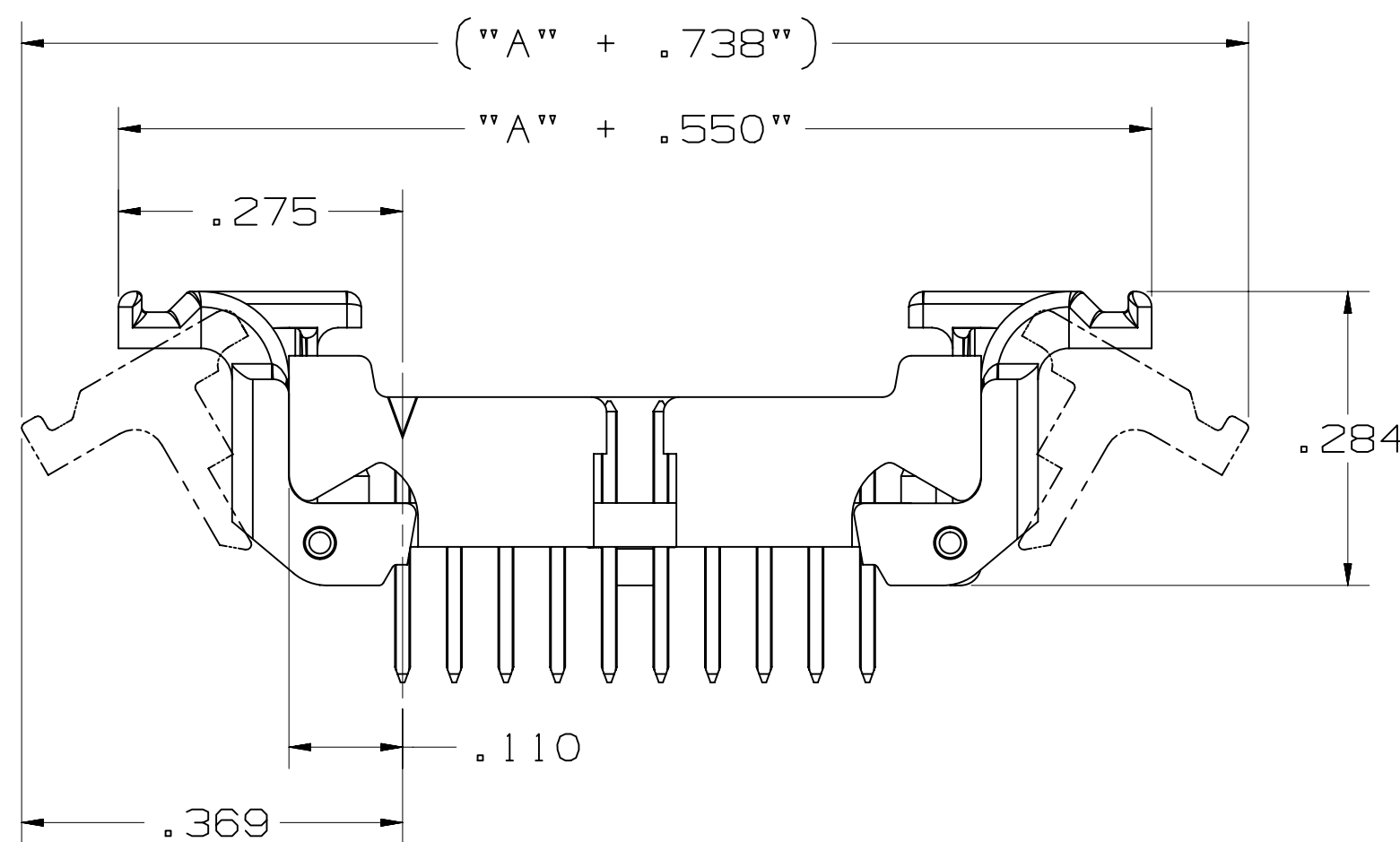
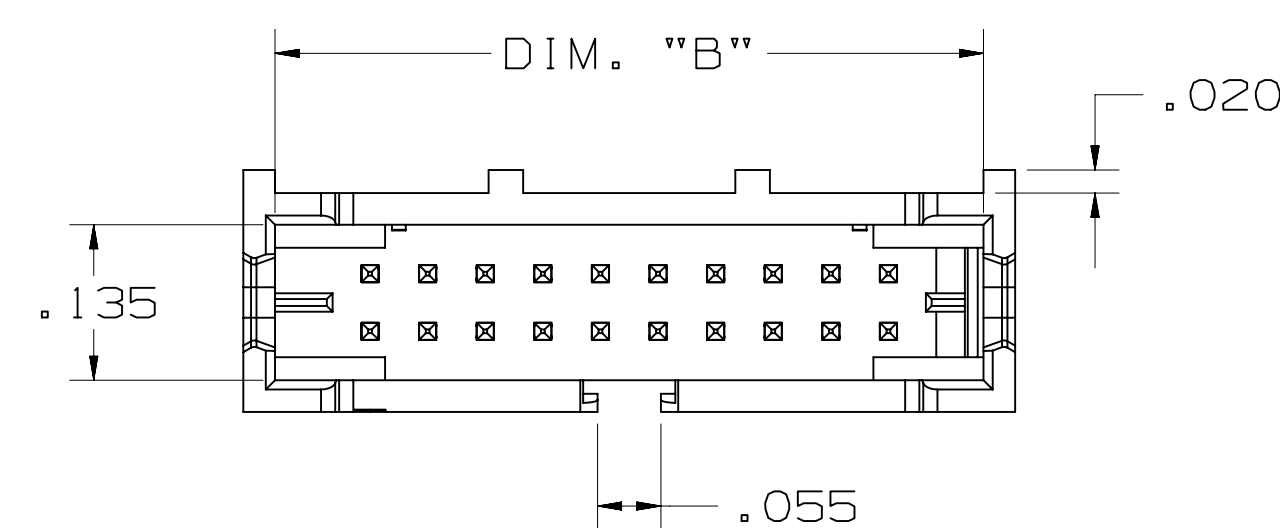
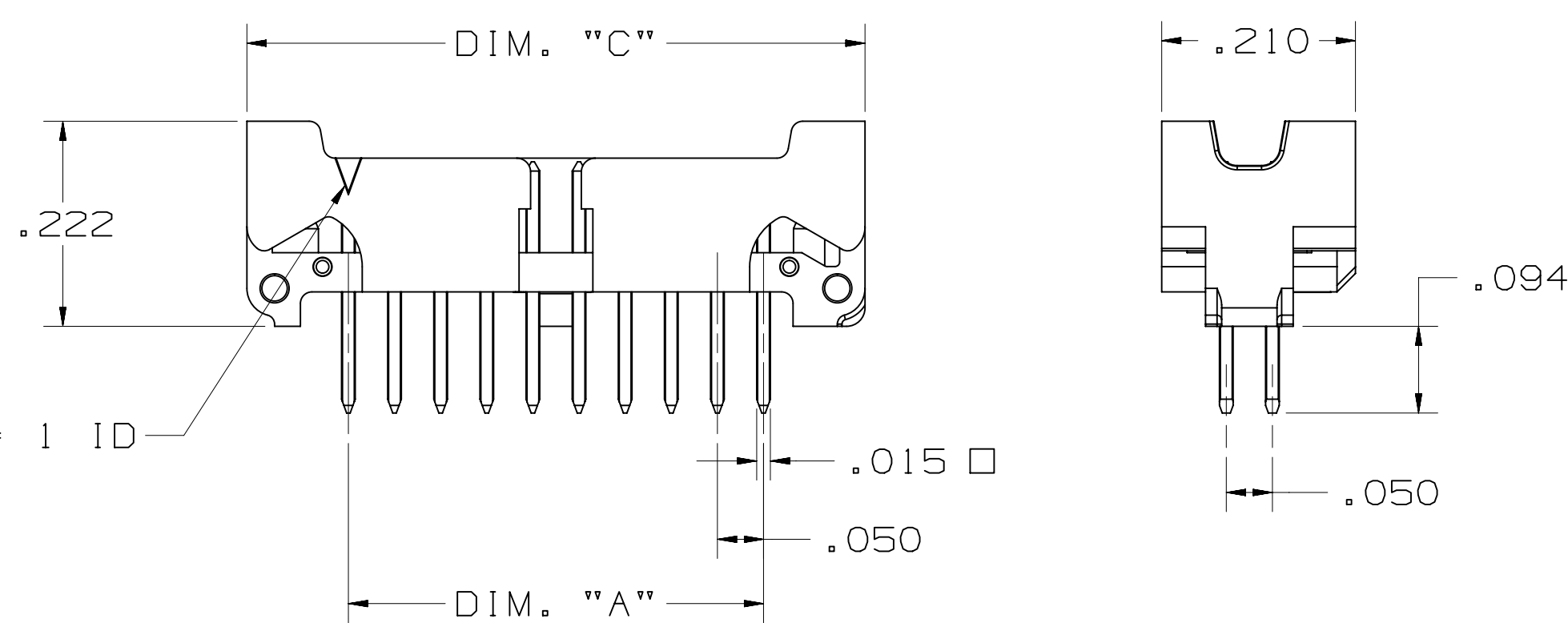


TABLE 1: VERTICAL THRU

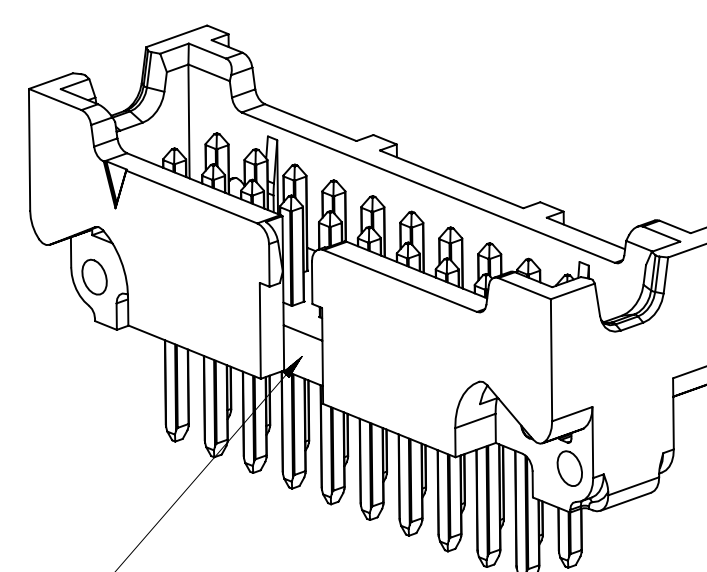
No. Positions	Dim "A"	Dim "B"	Dim "C"
4	.050	.215	.270
6	.100	.265	.320
8	.150	.315	.370
10	.200	.365	.420
12	.250	.415	.470
14	.300	.465	.520
16	.350	.515	.570
20	.450	.615	.670
30	.700	.865	.920

- NOTES
- MATERIAL: BODY: LCP, UL94V-0  
LATCH: PPA, UL94V-0  
CONTACTS: COPPER ALLOY.
  - PLATING: 50-150μ" NICKEL UNDERPLATE  
30 = 30μ" GOLD MIN. ON WIPING AREA WITH 200μ" MATTE TIN ON SOLDER TAIL  
00 = GOLD FLASH ON WIPING AREA WITH 100-140μ" MATTE TIN ON SOLDER TAIL.
  - MATING COMPATIBILITY: 3M .050" X .050", 451 SERIES RIBBON CABLE SOCKET.
  - REGULATORY INFORMATION: ROHS COMPLIANT. SEE THE REGULATORY INFORMATION APPENDIX (RIA) IN THE "ROHS COMPLIANCE" SECTION OF WWW.3MCONNECTORS.COM FOR COMPLIANCE INFORMATION (RIA E1 & C1 APPLY)
  - IN THE EVENT OF CONFLICT BETWEEN THIS DATA AND THAT CONTAINED IN THE PRODUCT SPECIFICATION, THE PRODUCT SPECIFICATION TAKES PRECEDENT.
  - REFERENCE PRODUCT SPEC: 3M DOC ID# 78-5102-0091-4
  - OTHER PIN COUNTS AVAILABLE UPON REQUEST. CONTACT 3M.
  - 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.
  - PACKAGING: VERTICAL THRU: TRAY  
RIGHT ANGLE THRU: TRAY  
VERTICAL SMT: TAPE AND REEL.

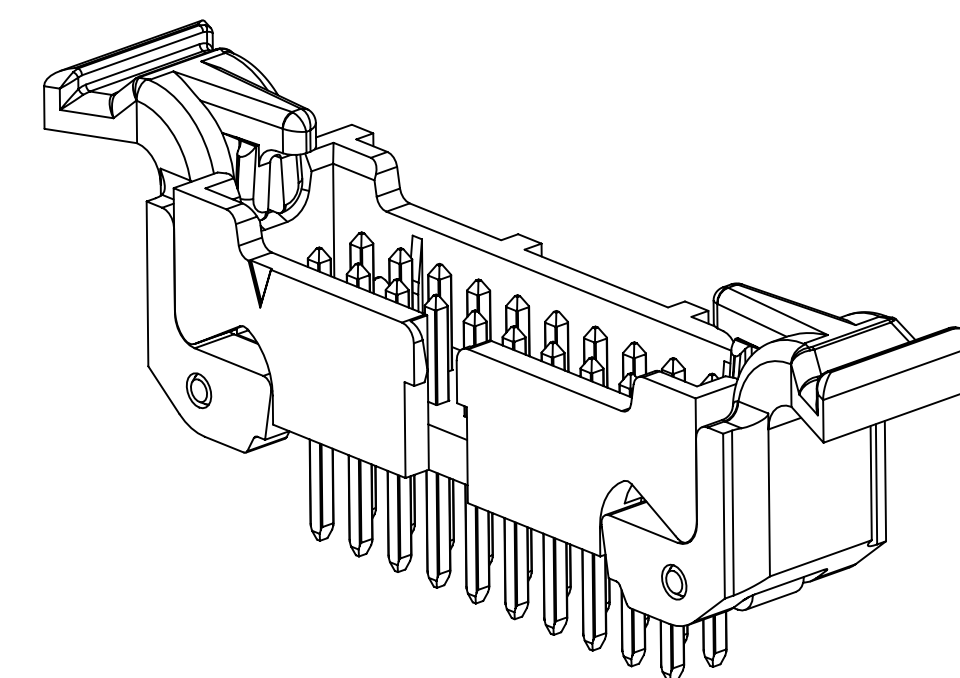
THRU BOARD, VERTICAL WITH LOW PROFILE LATCH/EJECT OPTION



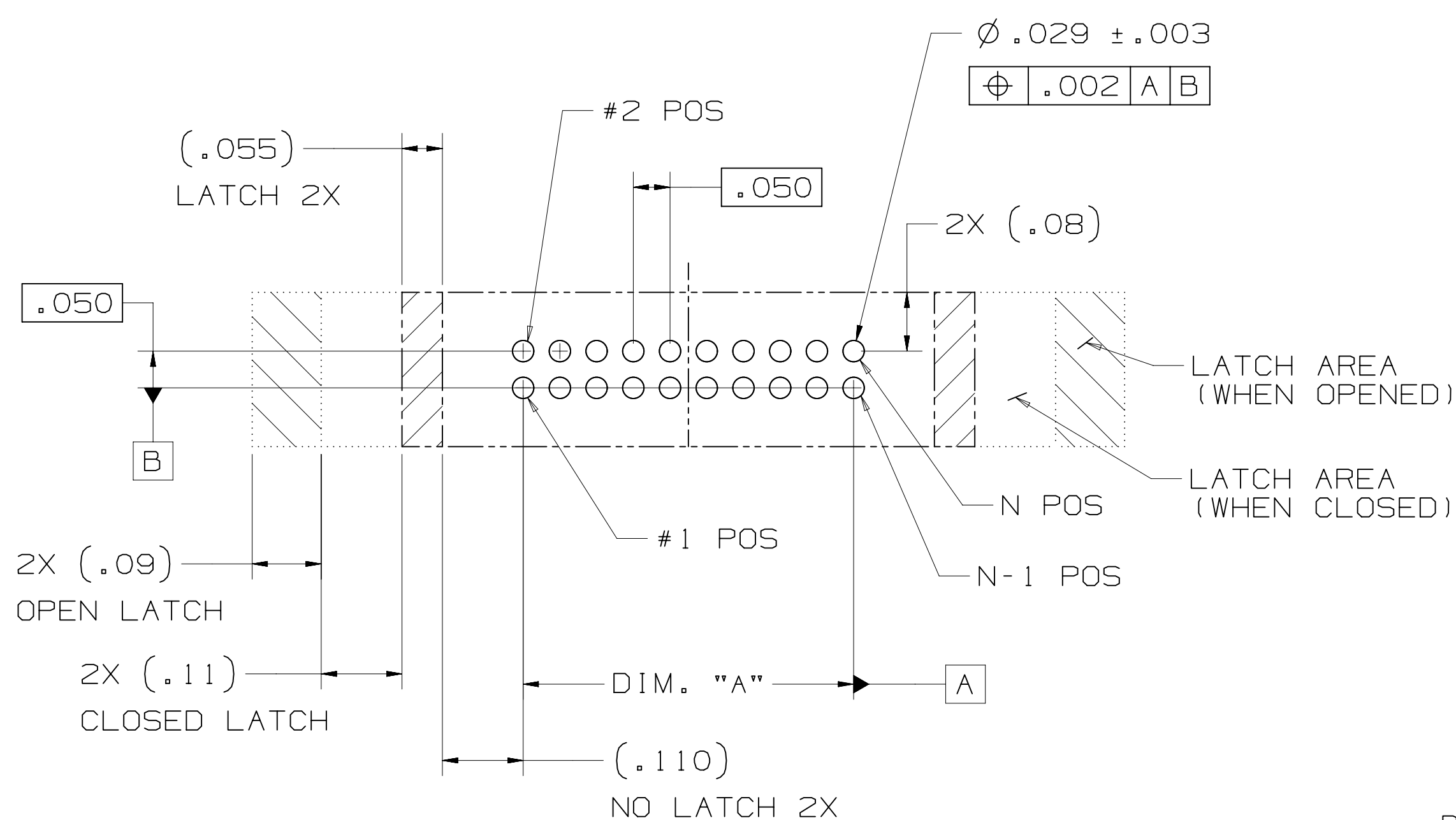
THRU BOARD, VERTICAL



POLARIZATION AND FRICTION LATCHING POSITIONS 8-30 ONLY



WITH LATCH/EJECT



RECOMMENDED BOARD LAYOUT

Performance:

Current Rating:	1.0 A, all lines energized, 30C temp rise per EIA 364-70 1.5 A, 6 lines energized, 30C temp rise per EIA 364-70 2.5 A, 1 line energized, 30C temp rise per EIA 364-70
Voltage Rating:	125V
Insulation Resistance:	> 1 x 10 <sup>9</sup> Ohms at 500 VDC
Withstanding Voltage:	1250VACrms at sea level
Operating Temperature:	-65°C to +105°C
Processing Temperature:	260°C
Lead-Free Solderable:	Yes
Moisture Sensitivity Level:	MSL1 per J-STD-020

452 XX - XX 0 2 XX  
SERIES  
POSITION COUNT  
04 - 30  
SEE TABLE 1

PLATING  
00 = Au FLASH  
30 = 30μ" GOLD

CONTACT TAIL  
2 = STANDARD (.094")

LATCH/EJECT  
0 = NO LATCHES  
2 = WITH LOW PROFILE LATCHES

PART CONFIG. AND PACKAGING  
6 = VERTICAL THRU HOLE, TRAY PACKAGING  
5 = RIGHT ANGLE THRU HOLE, TRAY PACKAGING  
2 = VERTICAL SMT, TAPE AND REEL WITH VAC CAP

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

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INFORMATION CALL 800-225-5373

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
		C	50290	OCT 08, 2013	JNC	SN
		B	48635	JUL 12, 2013	JNC	SN
		A	46797	MAR 25, 2013	JNC	SAN
				PRODUCTION RELEASE		

DATE	DATE	DATE	DATE
NOV 29, 2012	NOV 29, 2012	NOV 29, 2012	NOV 29, 2012

DO NOT SCALE DRAWING	SCALE	TOLERANCES EXCEPT AS NOTED
	6-1	

INCHES	MILLIMETERS
.00 ± .01	0 ± .25
.000 ± .010	0 ± .25
.0000 ± .0050	0 ± .25

INTERPRET PER ASME Y14.5 - 1994	MAX SURFACE ROUGHNESS	DEF SURFACES	MARKED ONLY
	0 ± .25		

TITLE	CAGE NUMBER	SIZE	DRAWING NO.	REV.
BOARDMOUNT HEADER, .05 X .05 PITCH, L/E, 452 SERIES	D		78-5100-2437-1	C

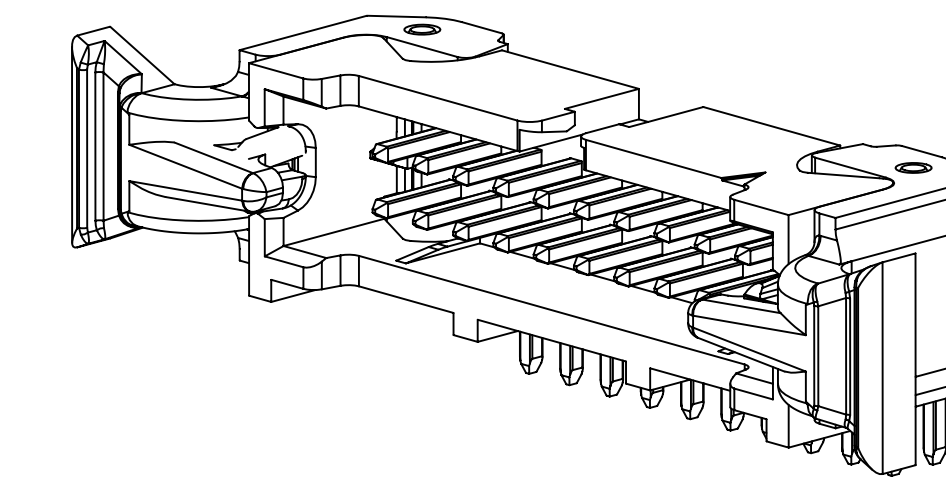
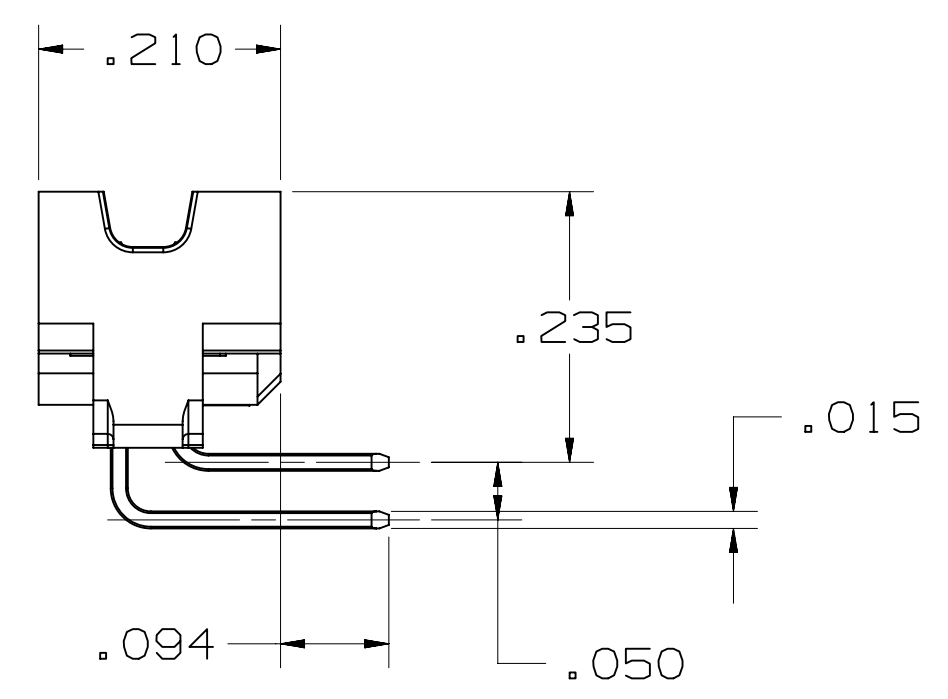
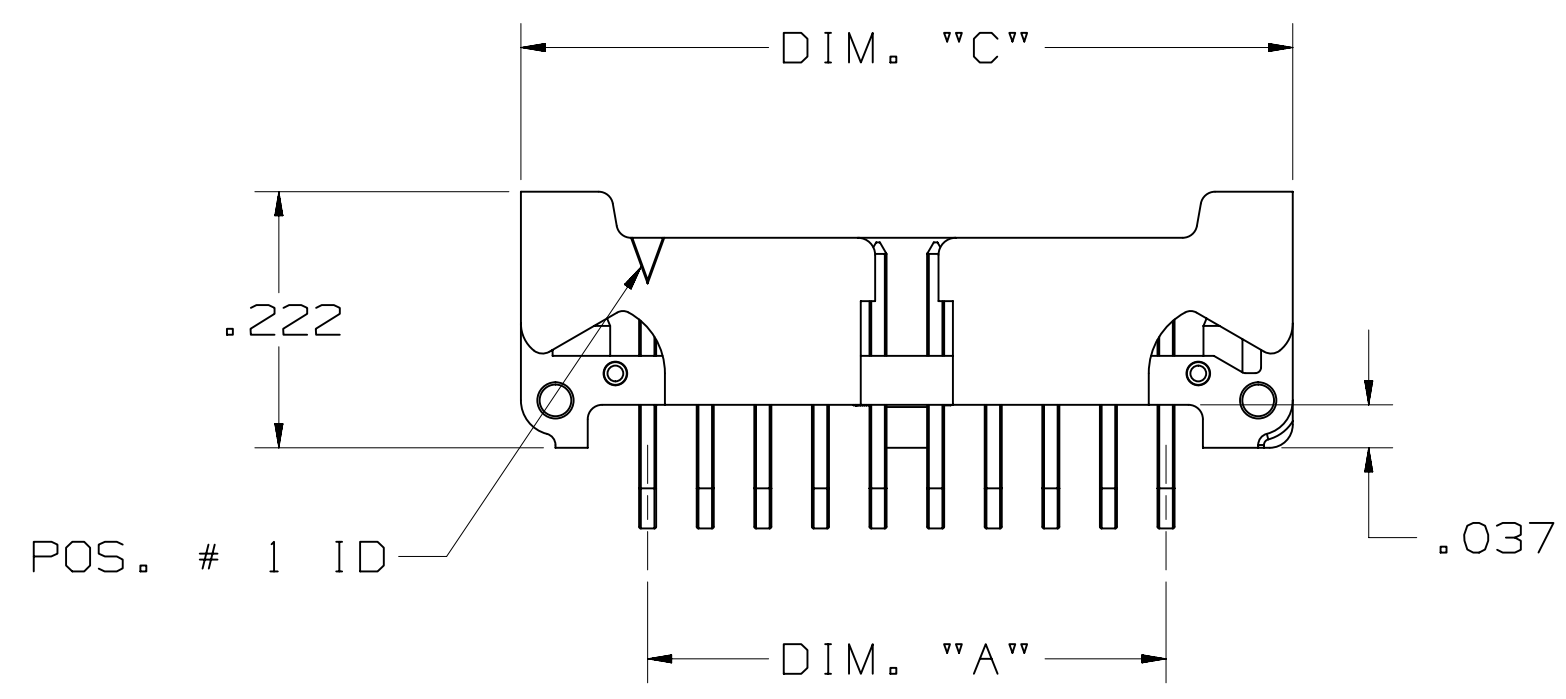
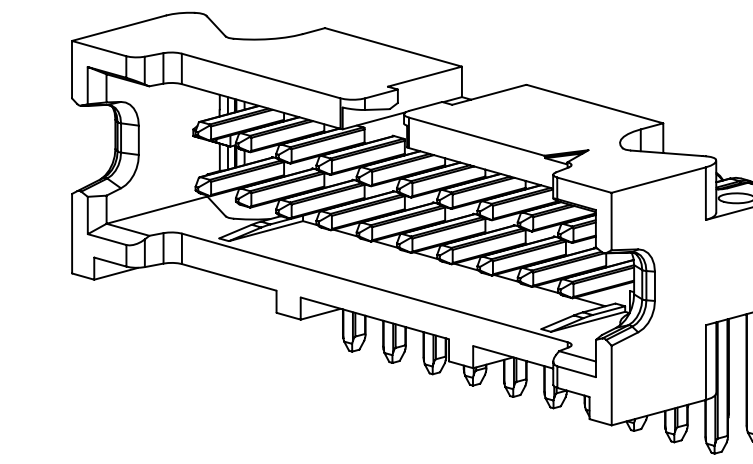
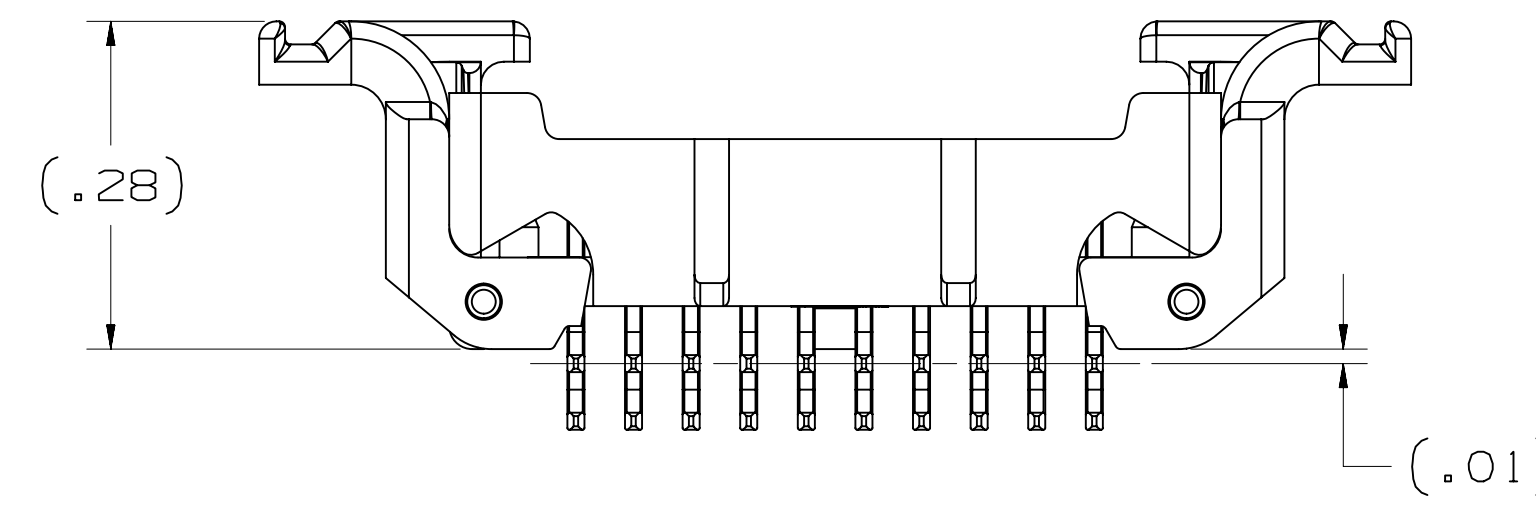
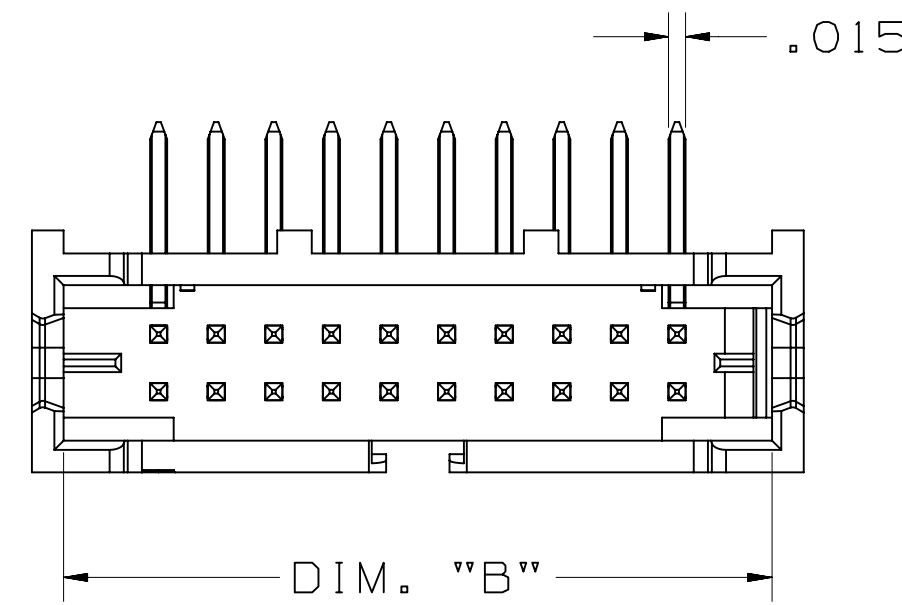
MODEL	DET	YES	NO	SHT	OF
				1	4

Image: C.3.10/29/2013 10:46 AM UTC-05:00

3M<sup>TH</sup> SHROUDED BOARDMOUNT HEADER, .05" X .05" (1.27mm X 1.27mm) PITCH,  
LATCH AND EJECT, 452 SERIES

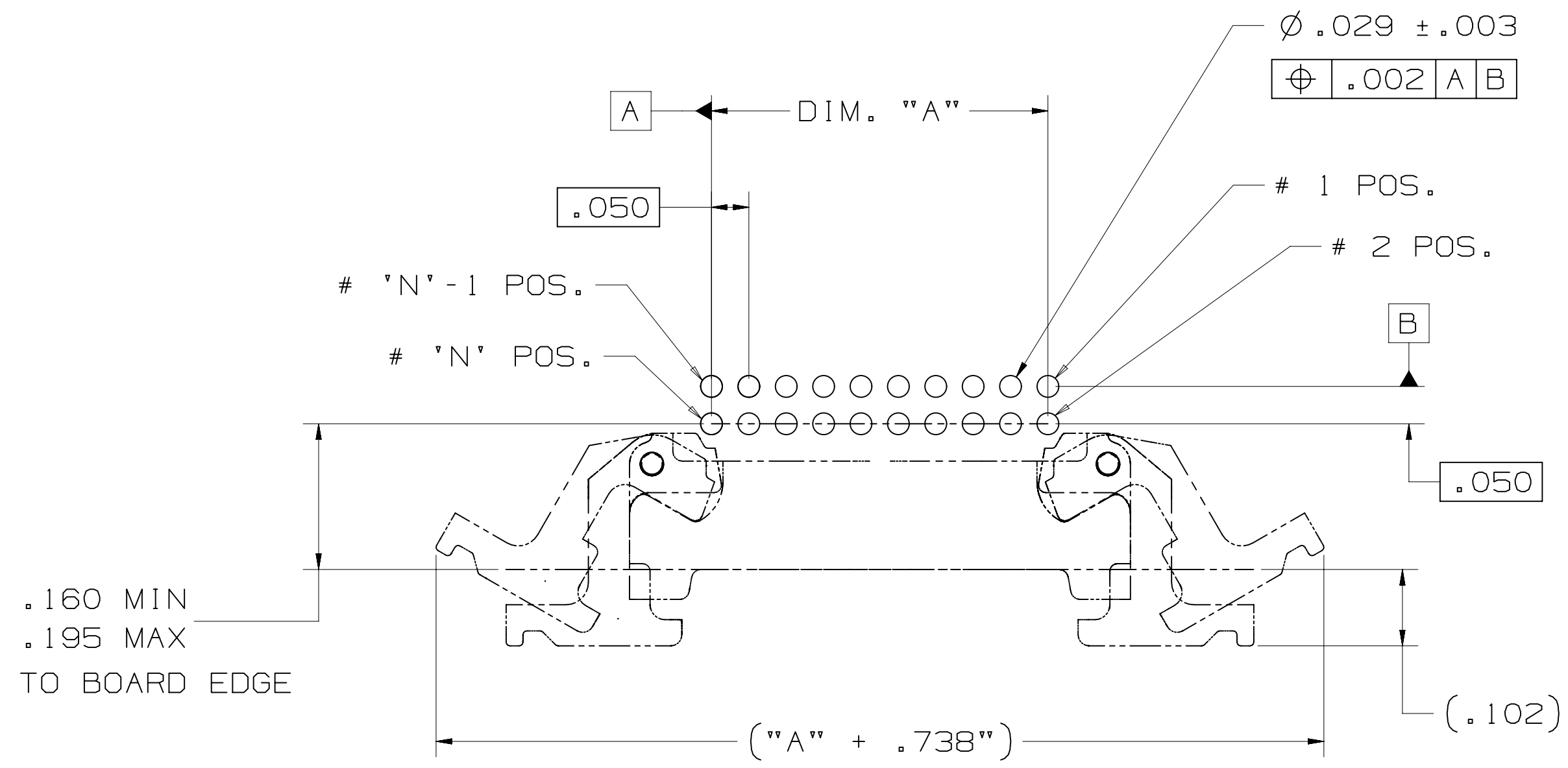
TABLE 1: RIGHT ANGLE THRU

No. Positions	Dim "A"	Dim "B"	Dim "C"
4	.050	.215	.270
6	.100	.265	.320
8	.150	.315	.370
10	.200	.365	.420
12	.250	.415	.470
14	.300	.465	.520
16	.350	.515	.570
20	.450	.615	.670
30	.700	.865	.920



THRU BOARD, RIGHT ANGLE

WITH LATCH/EJECT



RECOMMENDED BOARD LAYOUT

REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
C	50290	OCT 08, 2013 REVISE NOTE 1, 9 & OPERATING TEMP.	JNC	SN
B	48635	JUL 12, 2013 MATCH TEXT FONTS & ADD NOTE 9	JNC	SN
A	46797	MAR 25, 2013 PRODUCTION RELEASE	JNC	SAN

DESIGN REFERENCE	NEXT ASSEMBLY	DRFT	DATE	DRFT	DATE
ARM	NOV 29, 2012	PRC	NOV 29, 2012	NOV 29, 2012	NOV 29, 2012
DRG	SAN	NOV 29, 2012	SAN	NOV 29, 2012	SAN

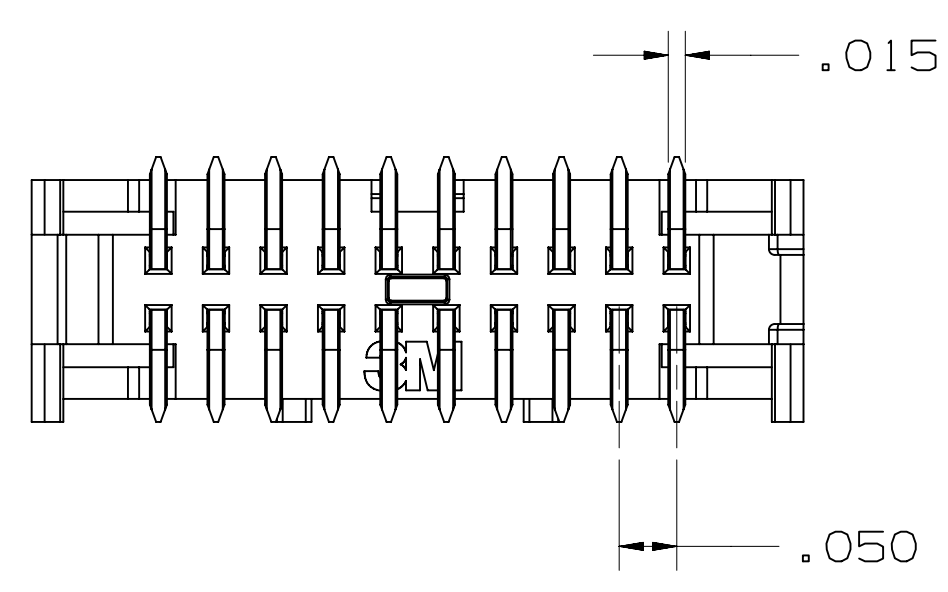
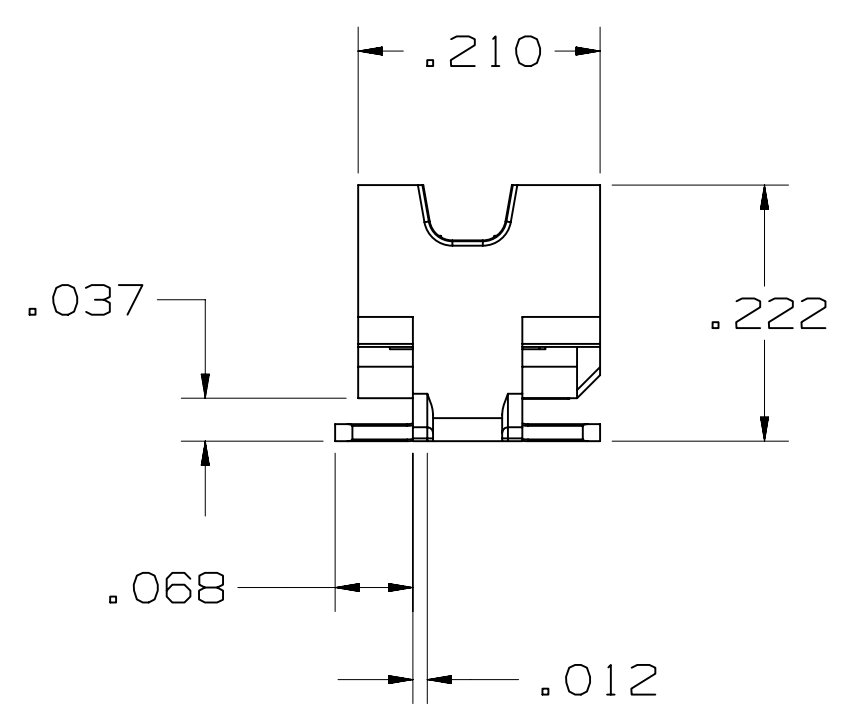
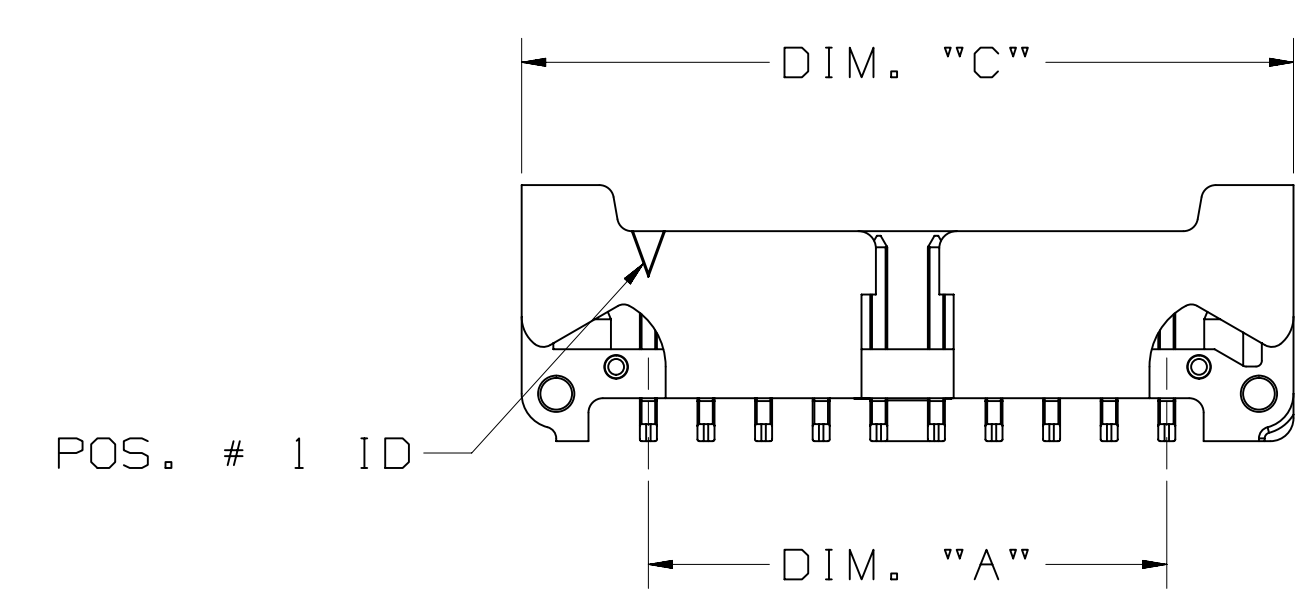
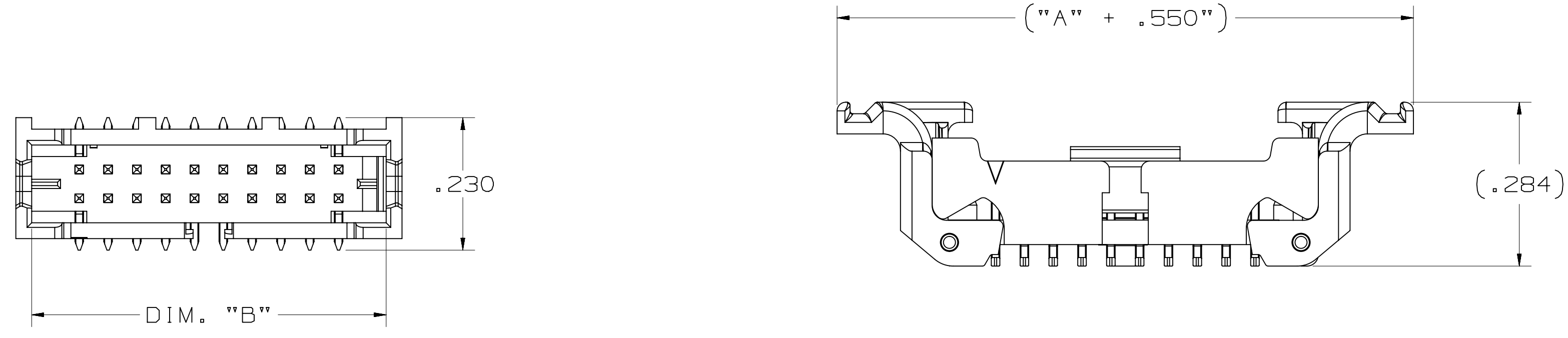
DIVISION: Interconnect Solutions  
 SCALE: 6/1  
 TOLERANCES EXCEPT AS NOTED:  
 INCHES: .0 ± .1, .00 ± .02, .000 ± .010, .0000 ± .0050  
 MILLIMETERS: 0 ± .1, .00 ± .01, .000 ± .005  
 INTERPRET PER ASME Y14.5 - 1994  
 MAX SURFACE ROUGHNESS: .000 SURFACES, .000 MARKED ONLY  
 THIRD ANGLE PROJECTION  
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 3M Center St. Paul, MN 55144  
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 TITLE: BOARDMOUNT HEADER, .05 X .05 PITCH, L/E, 452 SERIES  
 CAGE NUMBER: D78-5100-2437-1  
 MODEL: [ ]  
 SHEET: 2 OF 4

78-5100-2437-1  
DRAWING NUMBER  
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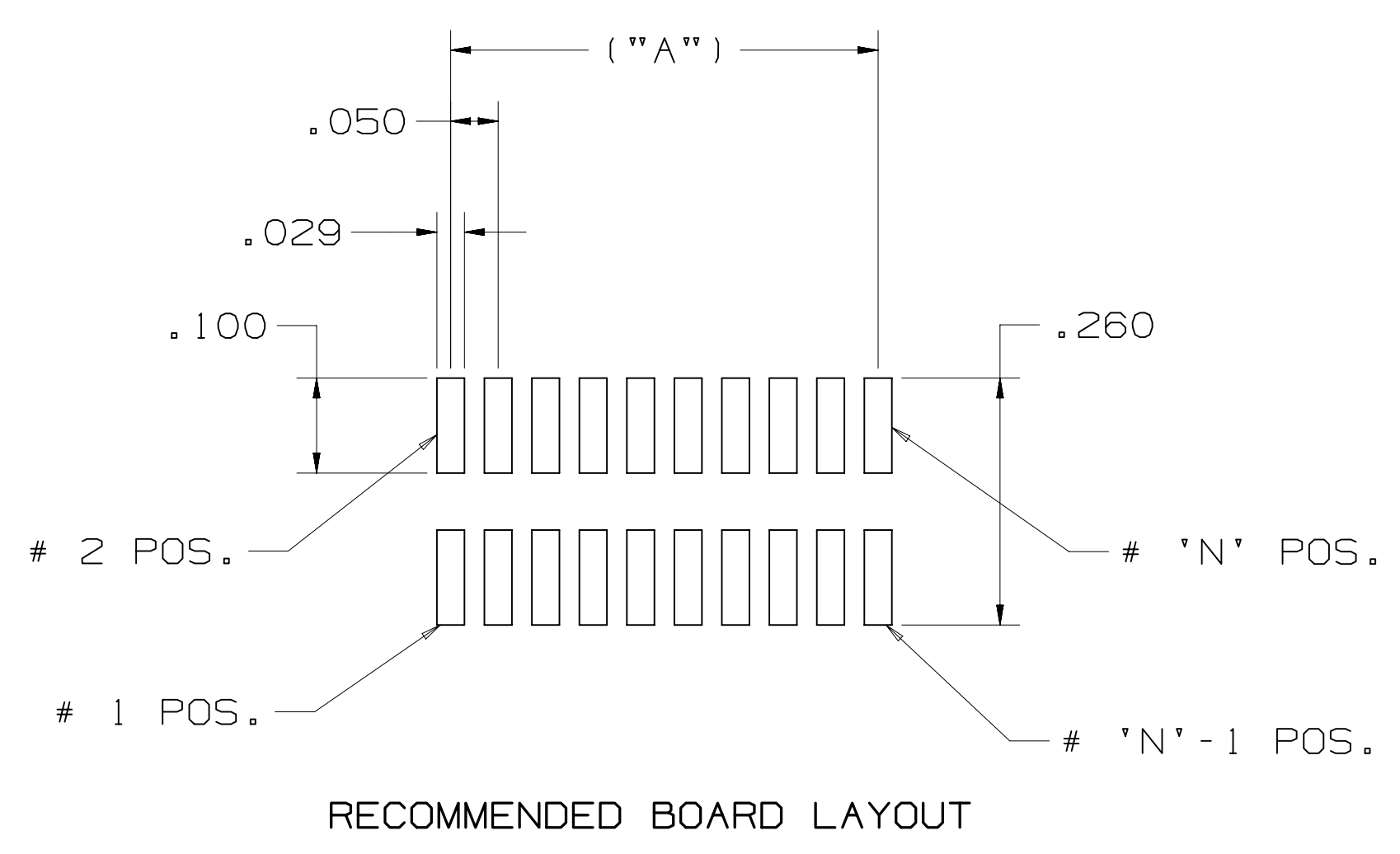
3M<sup>TH</sup> SHROUDED BOARDMOUNT HEADER, .05" X .05" (1.27mm X 1.27mm) PITCH,  
LATCH AND EJECT, 452 SERIES

TABLE 1: VERTICAL SMT

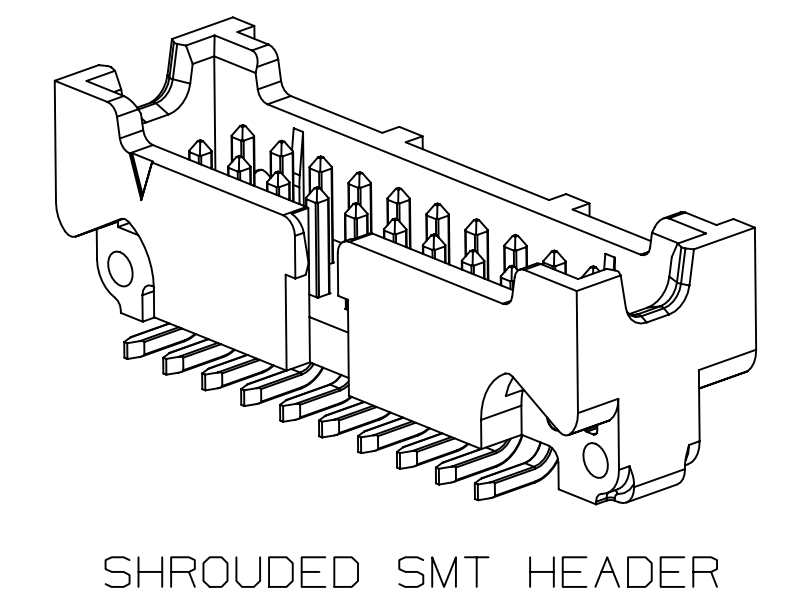
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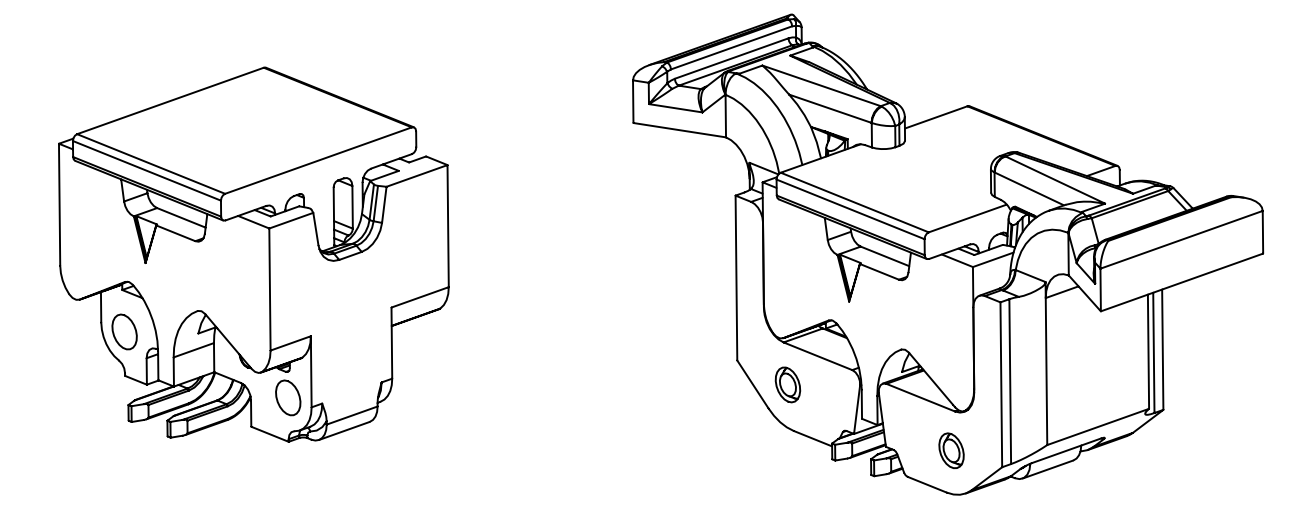
SURFACE MOUNT, VERTICAL



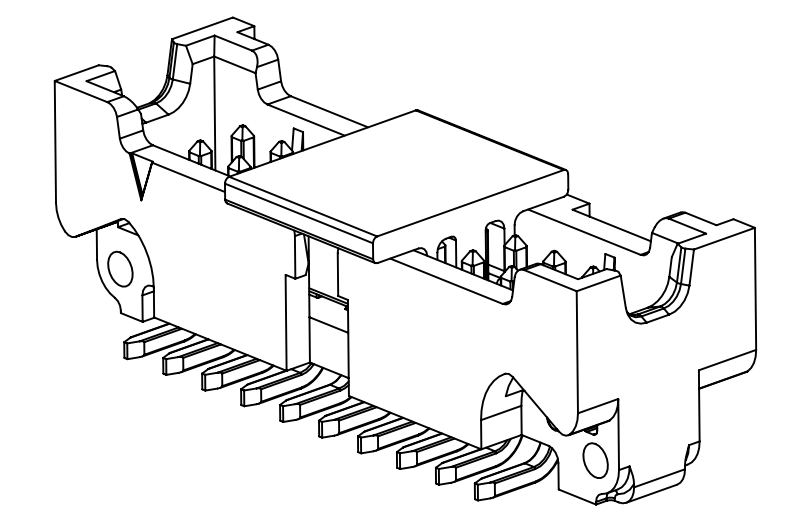
RECOMMENDED BOARD LAYOUT



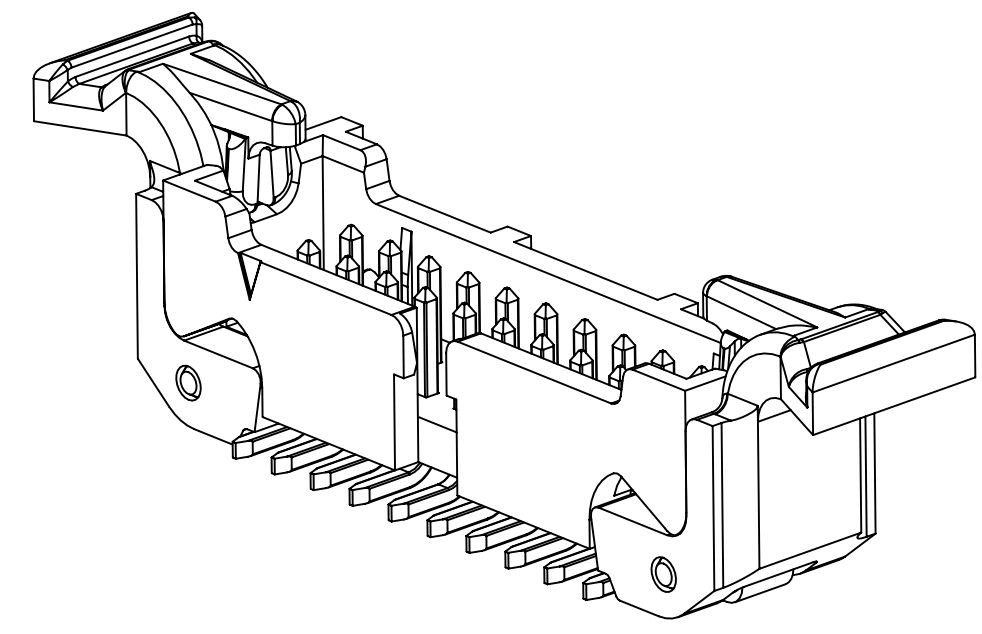
SHROUDED SMT HEADER



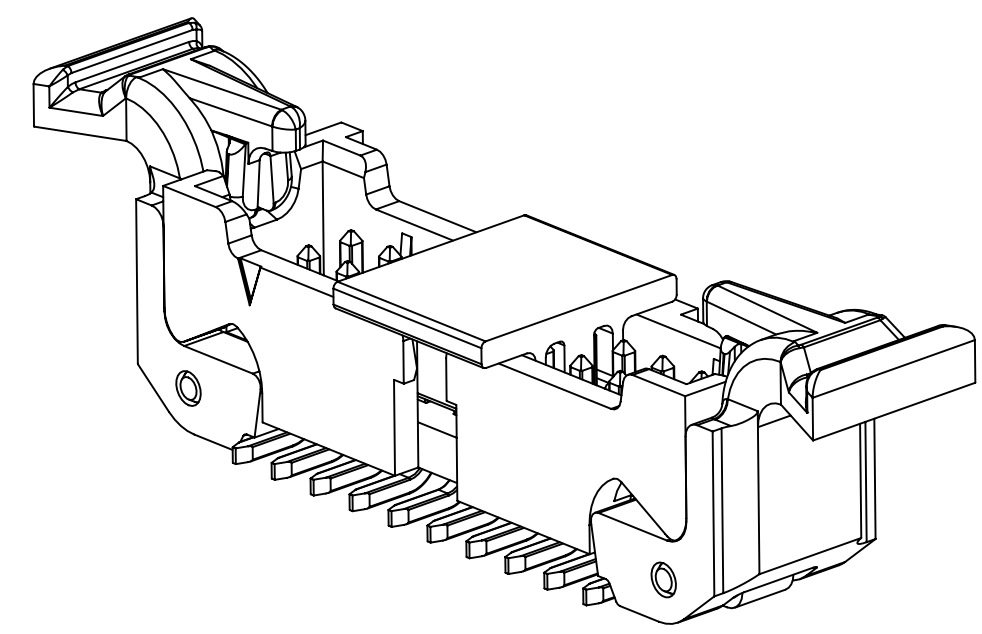
VACUUM CAP SEATED ON TOP  
EDGES OF END WALLS ON  
POSITIONS 4 AND 6



WITH VACUUM CAP



WITH LATCH/EJECT



WITH LATCH/EJECT  
AND VACUUM CAP  
VACUUM CAP IS FULLY SEATED  
ON POSITIONS 8 THRU 30

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
ARM				NOV 29, 2012 PRC		NOV 29, 2012
DIVISION	DIVISION CODE	DATE	DATE	DATE	DATE	DATE
Interconnect Solutions	ISD	NOV 29, 2012	NOV 29, 2012	NOV 29, 2012	NOV 29, 2012	NOV 29, 2012
DO NOT SCALE DRAWING	SCALE 6-1	TOLERANCES EXCEPT AS NOTED				
		INCHES: .00 ± .01, .000 ± .02, .0000 ± .0010, .0000 ± .0050				
		MILLIMETERS: 0 ± .01, .00 ± .02, .000 ± .005				
THIRD ANGLE PROJECTION		INTERPRET PER ASME Y14.5 - 1994				
		MAX SURFACE ROUGHNESS: 0.40 ± .000 SURFACES				
		MARKED ONLY				
TITLE		CAGE NUMBER		DRAWING NO.		REV.
BOARDMOUNT HEADER, .05 X .05 PITCH, L/E, 452 SERIES		D78-5100-2437-1		C		
MODEL		SHT		3 OF 4		

78-5100-2437-1 C REVISION  
DRAWING NUMBER  
AM UTC-05:00  
C 3.10/29/2013 10:46

3M<sup>TH</sup> SHROUDED BOARDMOUNT HEADER, .05" X .05" (1.27mm X 1.27mm) PITCH,  
LATCH AND EJECT, 452 SERIES

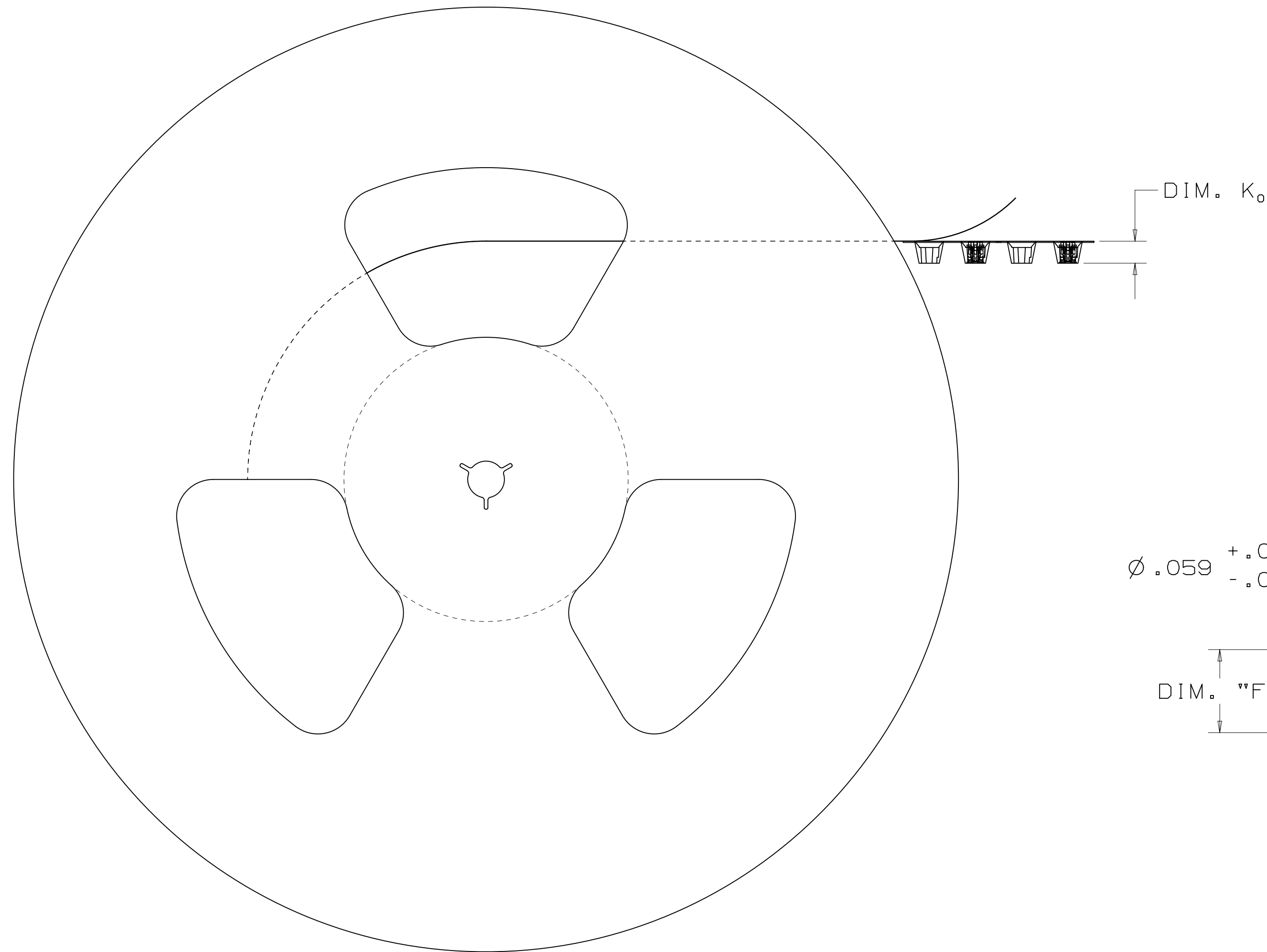
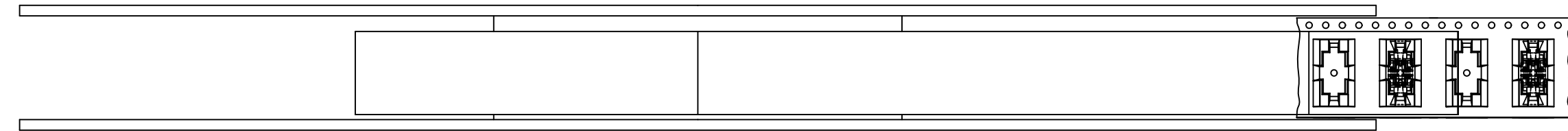
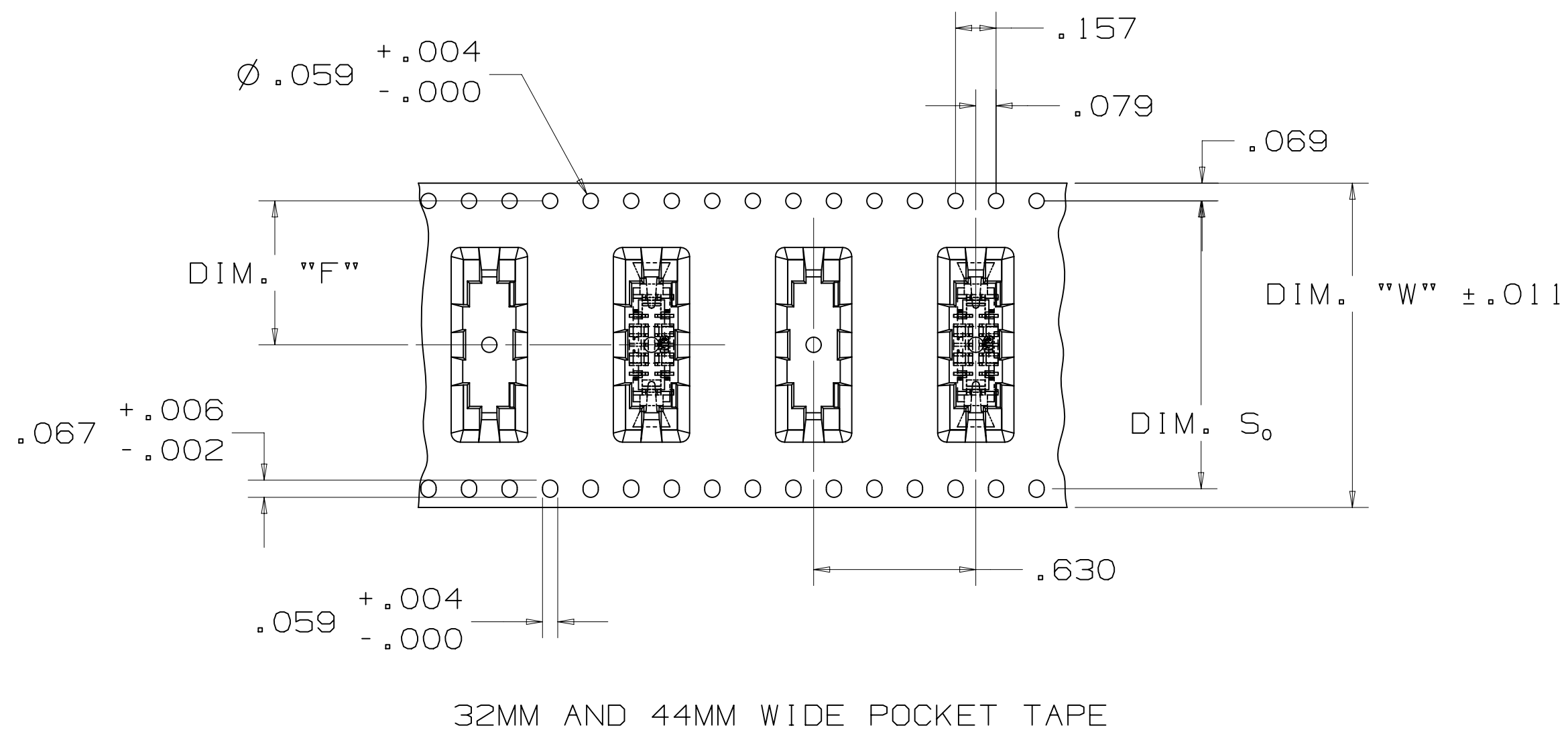
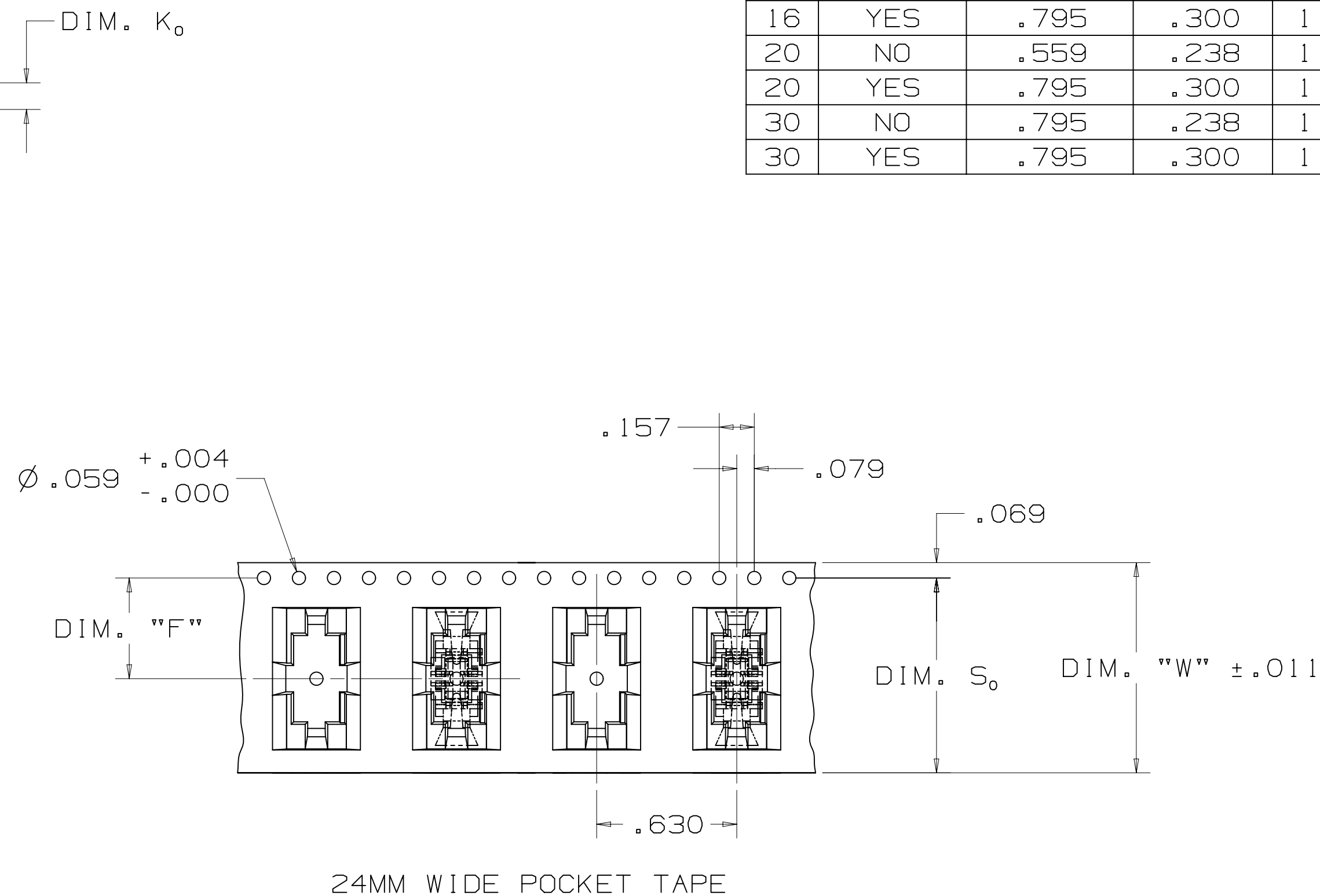


TABLE 2  
TAPE AND REEL PACKAGING FOR SURFACEMOUNT HEADERS

POS	LATCHES	DIM. "F"	DIM. K <sub>0</sub>	DIM. S <sub>0</sub>	DIM. "W"
4	NO	.453	.263	.876	.945 [ 24MM ]
4	YES	.453	.300	.876	.945 [ 24MM ]
6	NO	.453	.238	.876	.945 [ 24MM ]
6	YES	.559	.300	1.118	1.260 [ 32MM ]
8	NO	.453	.238	.876	.945 [ 24MM ]
8	YES	.559	.300	1.118	1.260 [ 32MM ]
10	NO	.453	.238	.876	.945 [ 24MM ]
10	YES	.559	.300	1.118	1.260 [ 32MM ]
12	NO	.453	.238	.876	.945 [ 24MM ]
12	YES	.559	.300	1.118	1.260 [ 32MM ]
14	NO	.453	.238	.876	.945 [ 24MM ]
14	YES	.795	.300	1.591	1.732 [ 44MM ]
16	NO	.453	.238	.876	.945 [ 24MM ]
16	YES	.795	.300	1.591	1.732 [ 44MM ]
20	NO	.559	.238	1.118	1.260 [ 32MM ]
20	YES	.795	.300	1.591	1.732 [ 44MM ]
30	NO	.795	.238	1.591	1.732 [ 44MM ]
30	YES	.795	.300	1.591	1.732 [ 44MM ]



DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
ARM				NOV 29, 2012 PRC		NOV 29, 2012
DIVISION	DIVISION CODE	DATE	DATE	DATE	DATE	DATE
Interconnect Solutions	ISD	NOV 29, 2012	NOV 29, 2012	NOV 29, 2012	NOV 29, 2012	NOV 29, 2012
DO NOT SCALE DRAWING	TOLERANCES EXCEPT AS NOTED					
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INTERPRET PER ASME Y14.5 - 1994	MILLIMETERS	BOARDMOUNT HEADER, .05 X .05 PITCH, L/E, 452 SERIES				
MAX SURFACE ROUGHNESS	MARKED ONLY	CAGE NUMBER	SIZE	DRAWING NO.	REV.	
		D	78-5100-2437-1	C		
		MODEL	LISTS	YES	NO	SHT 4 OF 4

78-5100-2437-1 C REVISION DRAWING NUMBER  
A  
C  
B  
A  
Image: C.3.10/29/2013 10:46 AM UTC-05:00