

3M™ SHROUDED BOARDMOUNT HEADER, 1.27mm (0.050") PITCH  
LATCH AND EJECT, 452 SERIES

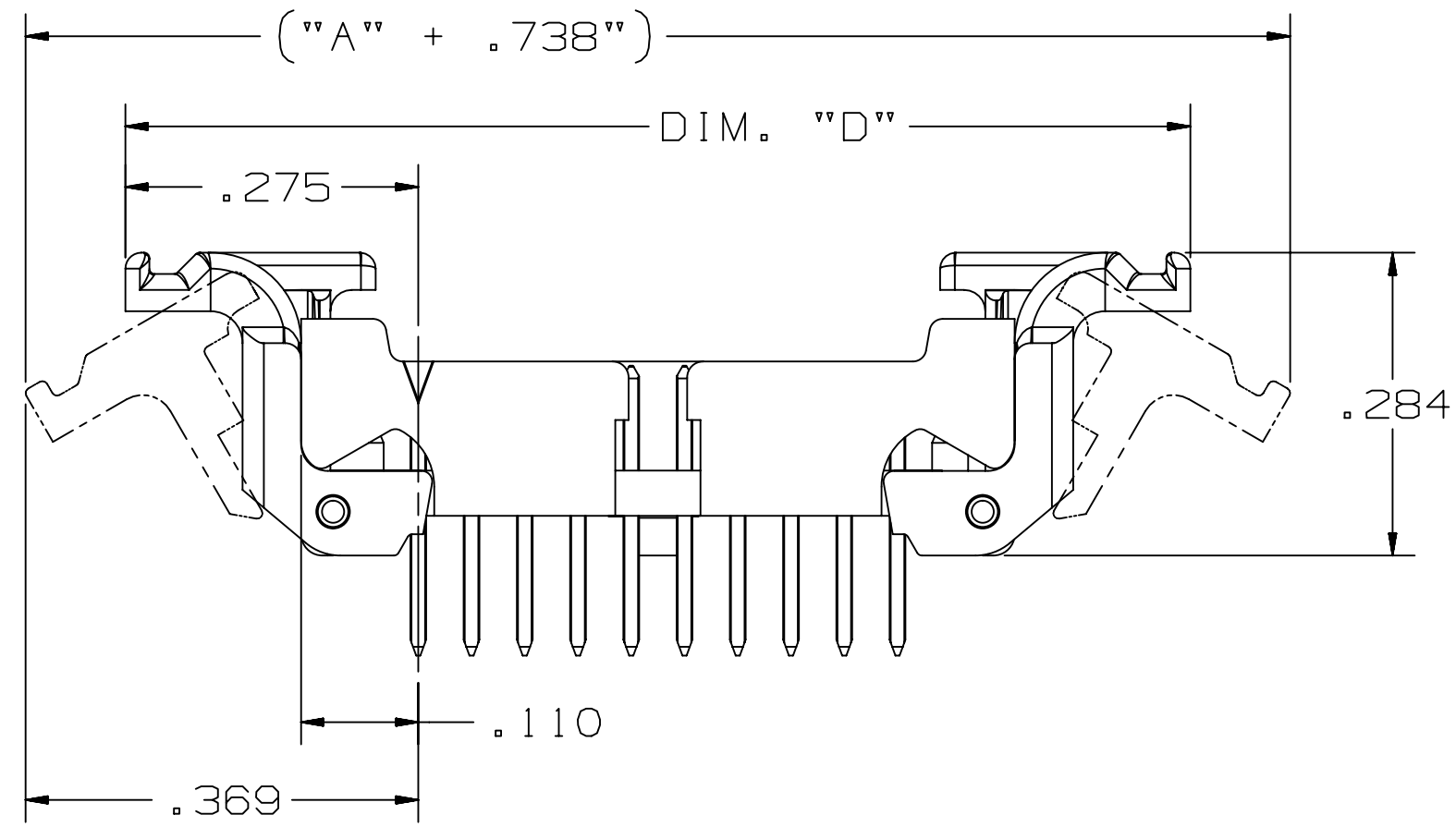
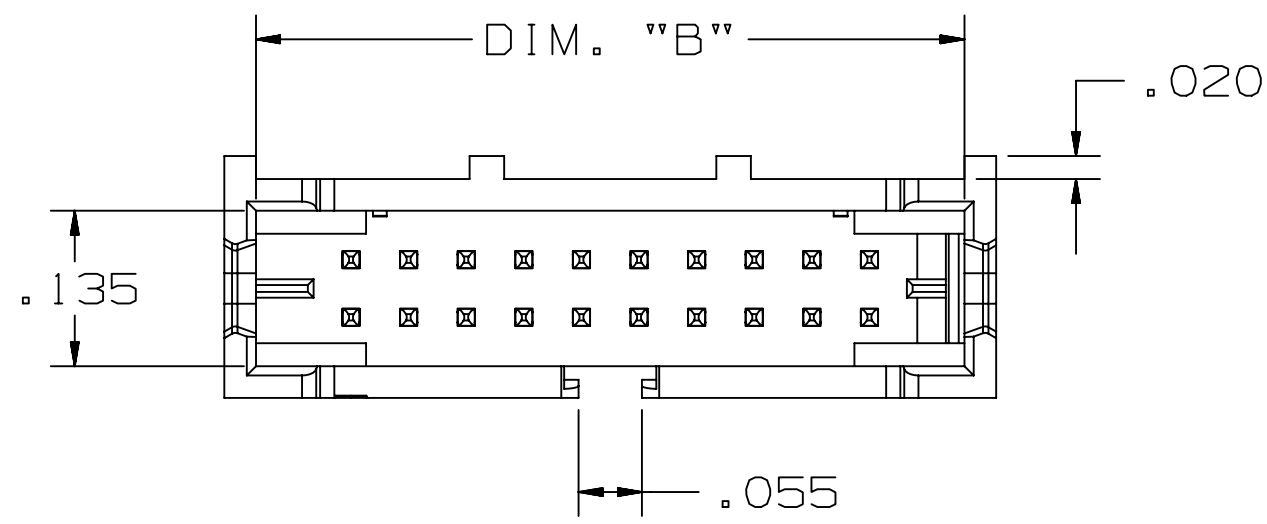
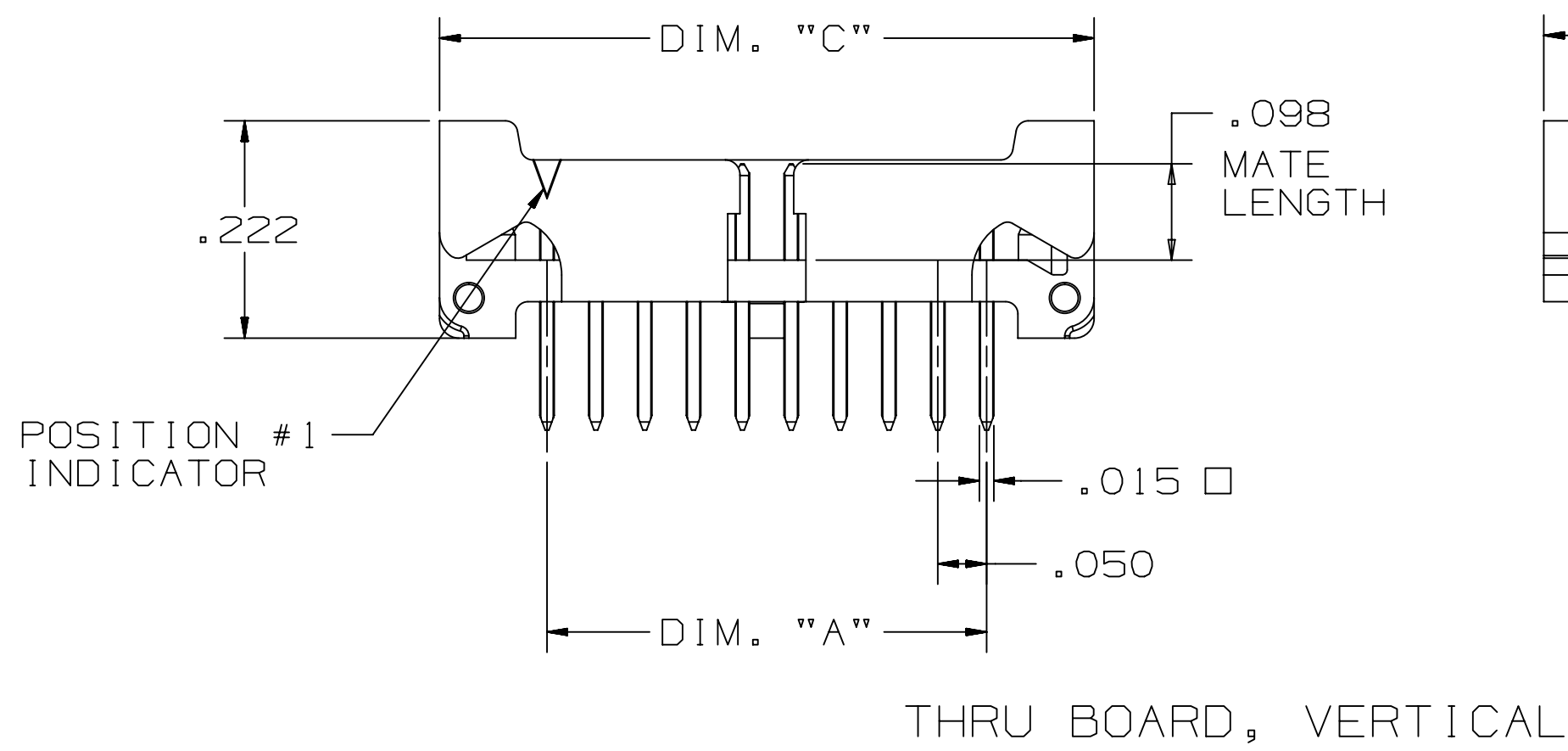


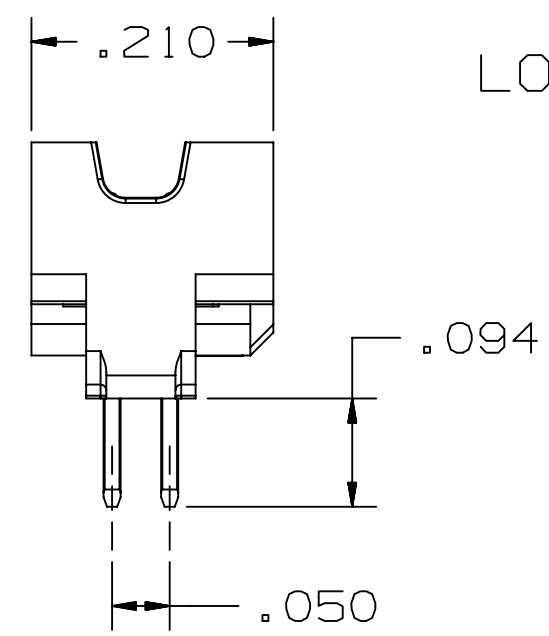
TABLE 1: VERTICAL THRU

No. of Positions	Dim "A"	Dim "B"	Dim "C"	Dim "D"
4	.050	.215	.270	.600
6	.100	.265	.320	.650
8	.150	.315	.370	.700
10	.200	.365	.420	.750
12	.250	.415	.470	.800
14	.300	.465	.520	.850
16	.350	.515	.570	.900
20	.450	.615	.670	1.000
26	.600	.765	.820	1.150
30	.700	.865	.920	1.250
40	.950	1.115	1.170	1.500
50	1.200	1.365	1.420	1.750

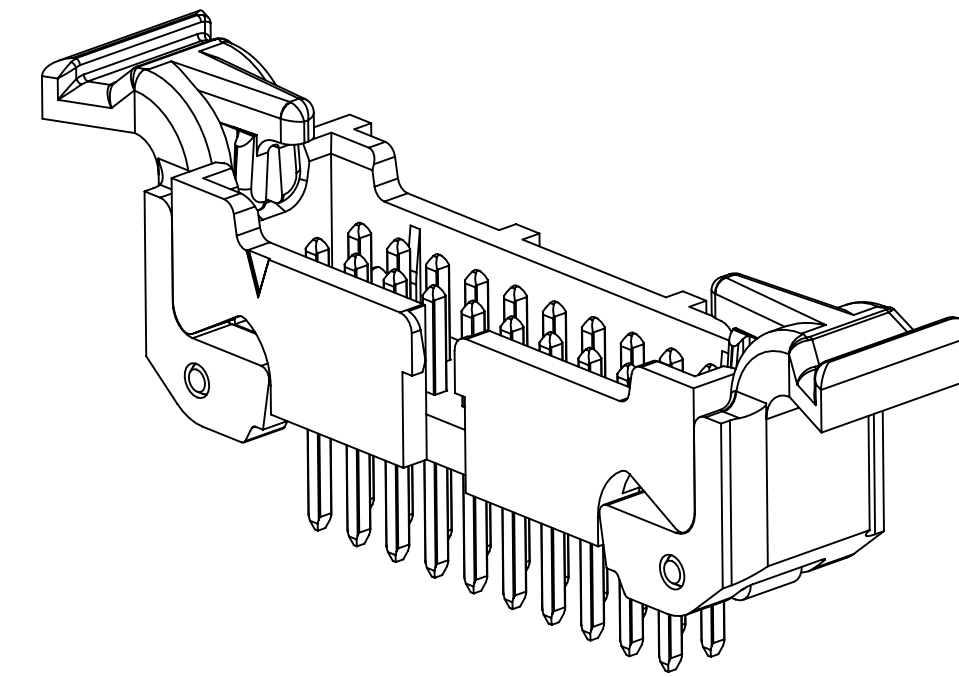
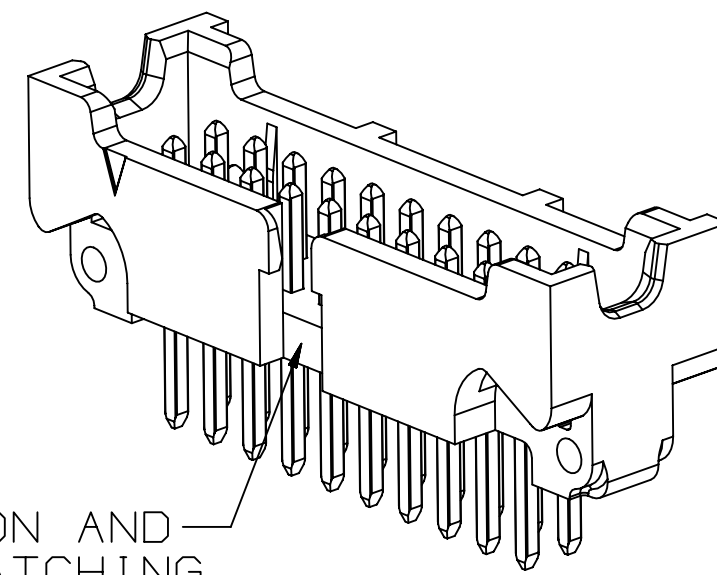
- NOTES
- MATERIAL: BODY: LCP, UL94V-0  
LATCH: PPA, UL94V-0  
CONTACTS: COPPER ALLOY.
  - PLATING: 50-150μ" NICKEL UNDERPLATE  
30 = 30μ" GOLD MIN. ON WIPING AREA WITH 200μ" MATTE TIN ON SOLDER TAIL  
00 = GOLD FLASH ON WIPING AREA WITH 100-140μ" MATTE TIN ON SOLDER TAIL.
  - MATING COMPATIBILITY: 3M 1.27mm (0.050"), 451 SERIES RIBBON CABLE SOCKET, TECH SHEETS TS-2436 AND TS-2396
  - REGULATORY INFORMATION: VISIT 3M.com/regs
  - 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.



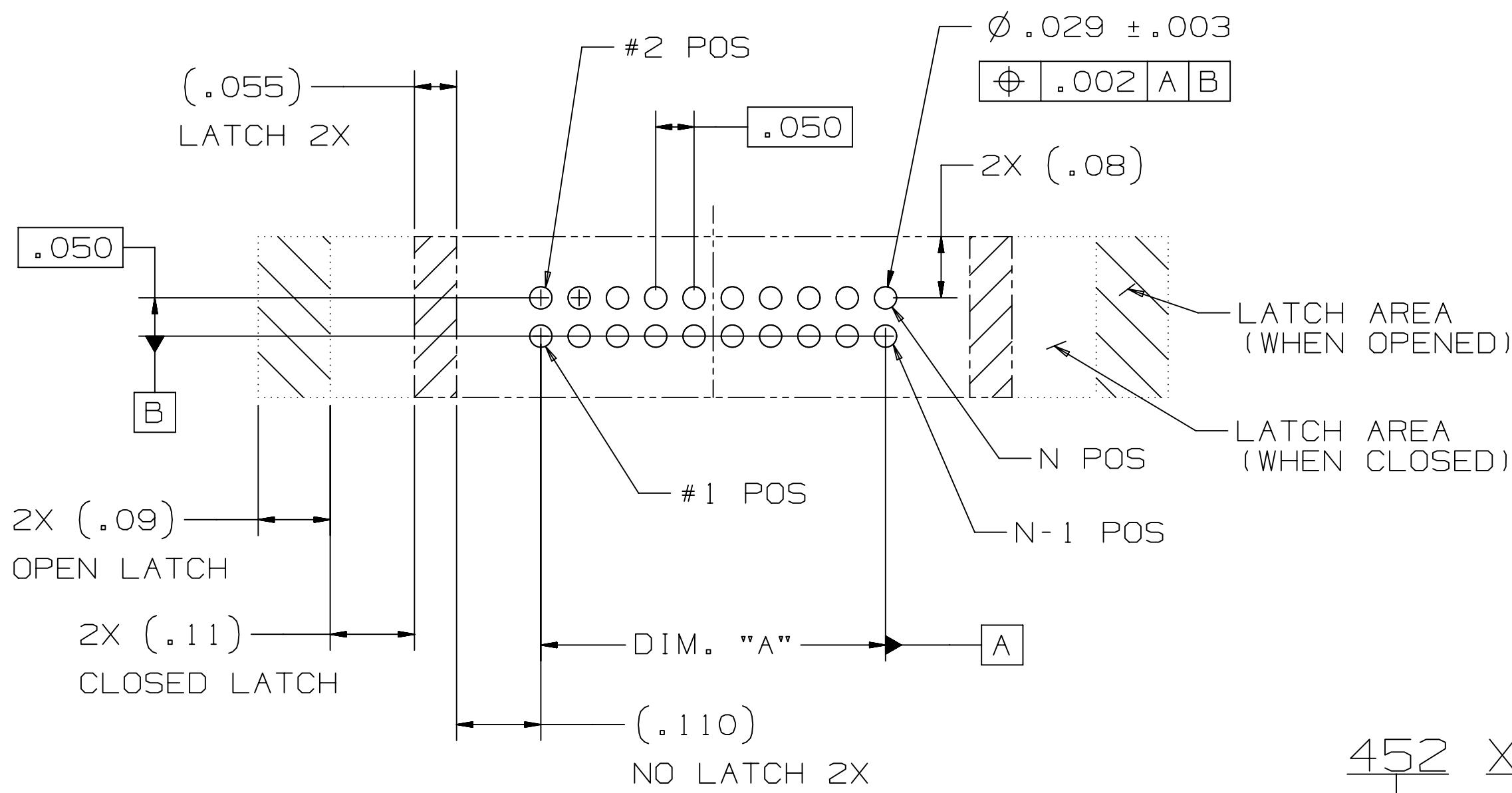
THRU BOARD, VERTICAL WITH LOW PROFILE LATCH/EJECT OPTION



POLARIZATION AND FRICTION LATCHING POSITIONS 8 AND HIGHER ONLY



WITH LATCH/EJECT



RECOMMENDED BOARD LAYOUT

452 XX - X X 0 2 XX  
SERIES  
No. OF POSITIONS SEE TABLE 1  
PLATING  
00 = AU FLASH  
30 = 30μ" GOLD  
CONTACT TAIL  
2 = STANDARD (.094")

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

PERFORMANCE:

CURRENT RATING: 1.0A, UL 04P-50P, NOT FOR CURRENT INTERRUPTION  
1.0A, CUL 04P-30P, NOT FOR CURRENT INTERRUPTION  
0.75A, CUL 32P-50P, NOT FOR CURRENT INTERRUPTION  
0.75A, ALL LINES ENERGIZED 30°C TEMP RISE PER EIA 364-70  
1.50A, 6 LINES ENERGIZED 30°C TEMP RISE PER EIA 364-70

UL & CUL VOLTAGE RATING: 125V<sub>AC</sub>  
INSULATION RESISTANCE: > 1 × 10<sup>9</sup> Ohms AT 500 VDC  
WITHSTANDING VOLTAGE: 1250V<sub>DC</sub> AT SEA LEVEL  
OPERATING TEMPERATURE: -65°C to +125°C  
UL & CUL OPERATING TEMPERATURE: +130°C  
PROCESSING TEMPERATURE: 260°C  
LEAD-FREE SOLDERABLE: YES  
MOISTURE SENSITIVITY LEVEL: MSL1 PER J-STD-020

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INTERCONNECT SOLUTIONS  
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UL FILE NO: E68080

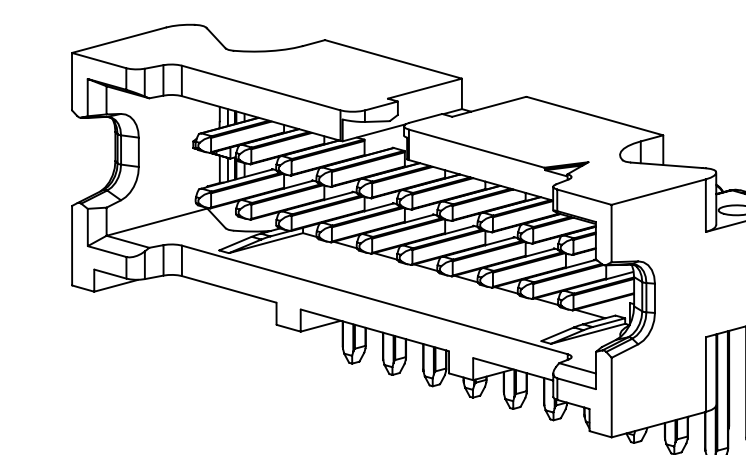
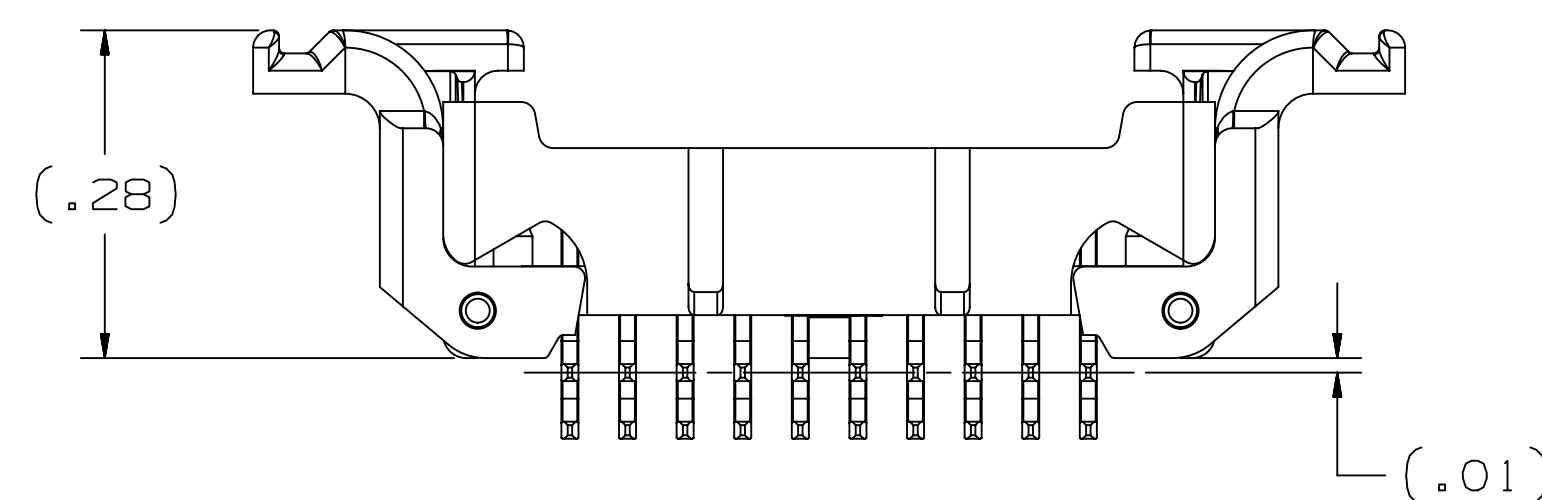
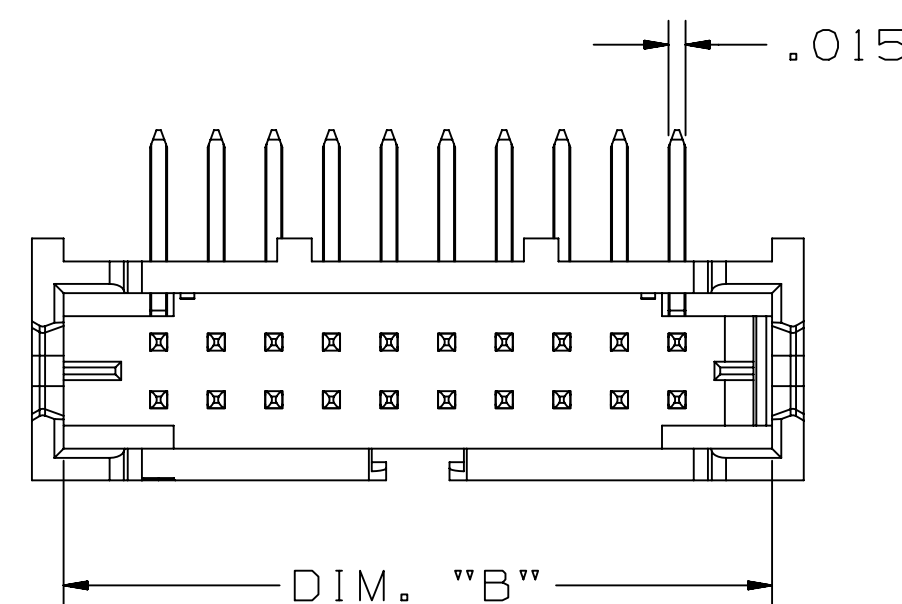
78-5100-2436-3 78-5100-2396-9	DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
			ARM		NOV 29, 2012 PRC		NOV 29, 2012
			SAN		NOV 29, 2012 SAN		NOV 29, 2012
DO NOT SCALE DRAWING	SCALE 6/1	TOLERANCES EXCEPT AS NOTED					
THIRD ANGLE PROJECTION	INCHES .00 ± .01 .00 ± .02 .000 ± .010 .0000 ± .0050	MILLIMETERS 0 ± .05 0 ± .10 0 ± .20 0 ± .50	TITLE SHROUDED BMT HEADER, .05 X .05 PITCH, L/E, 452 SERIES				
MAX SURFACE ROUGHNESS ALL SURFACES MARKED ONLY	INTERPRET PER ASME Y14.5 - 2018	ANGLES	CAGE NUMBER	SIZE	DRAWING NO.	REV.	
			D	452	78-5100-2437-1	J	
			MODEL	452	DET	1	SHT 1 OF 5

78-5100-2437-1  
DRAWING NUMBER  
REVISION

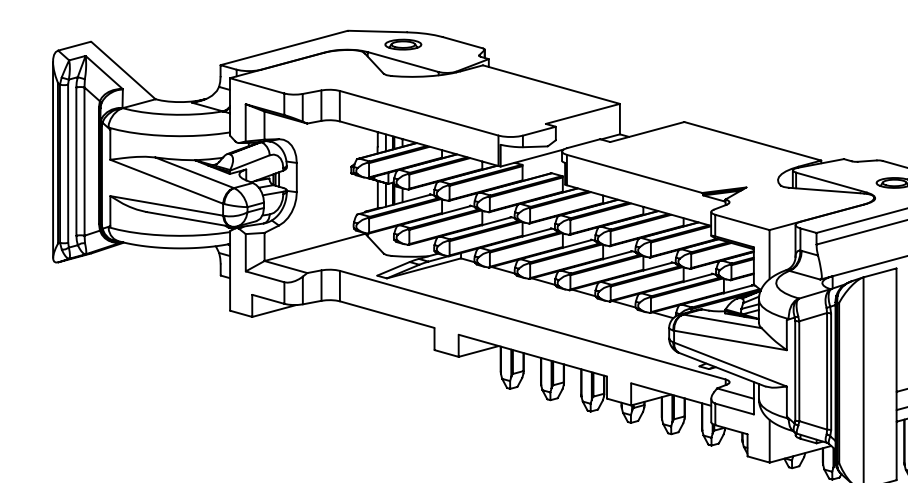
3M™ SHROUDED BOARDMOUNT HEADER, 1.27mm (0.050") PITCH  
LATCH AND EJECT, 452 SERIES

TABLE 1: RIGHT ANGLE THRU

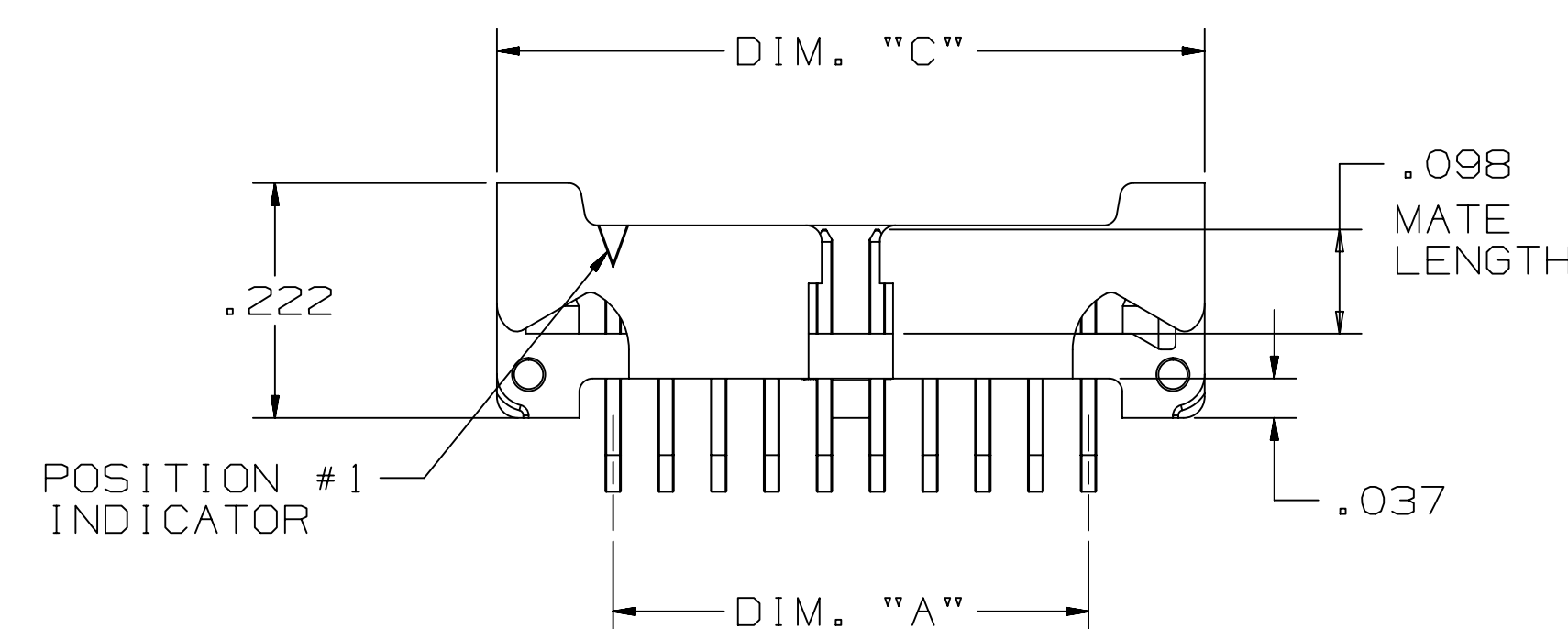
No. Positions	Dim "A"	Dim "B"	Dim "C"
4	.050	.215	.270
6	.100	.265	.320
8	.150	.315	.370
10	.200	.365	.420
12	.250	.415	.470
14	.300	.465	.520
16	.350	.515	.570
20	.450	.615	.670
26	.600	.765	.820
30	.700	.865	.920
40	.950	1.115	1.170
50	1.200	1.365	1.420



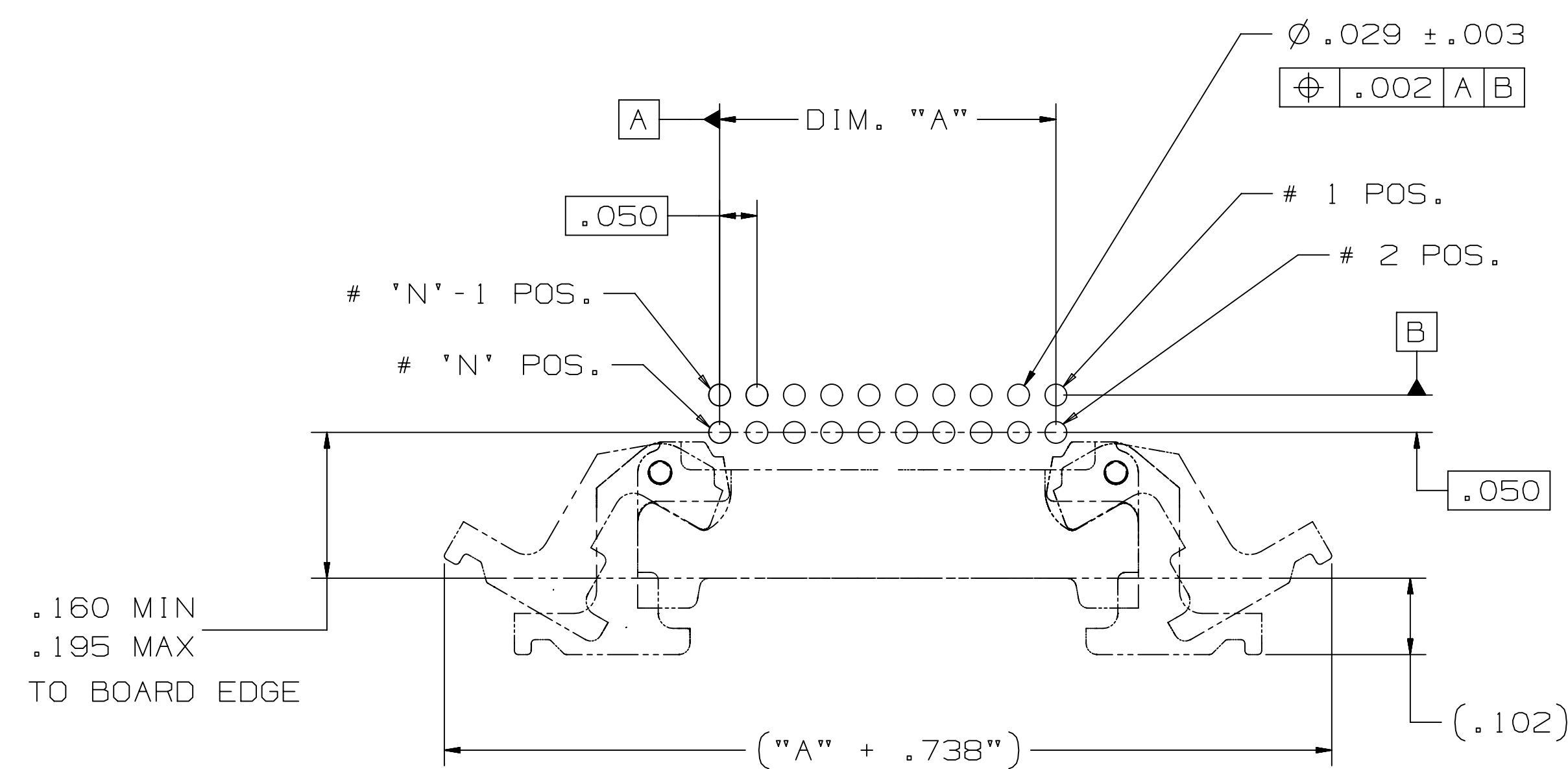
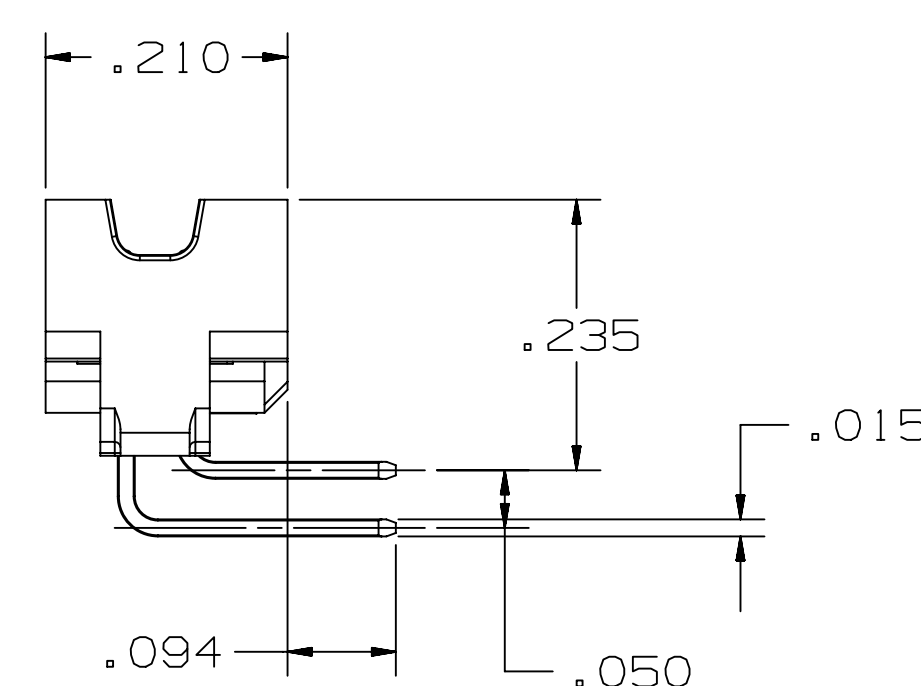
WITHOUT LATCH/EJECT



WITH LATCH/EJECT



THRU BOARD, RIGHT ANGLE



RECOMMENDED BOARD LAYOUT

REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
J	105041	MAY 26, 2022 REVISE PERFORMANCE SECTION	JNC	SAN
H	100200	OCT 19, 2021 ADD POS 26, 40, 50	JNC	SAN
G	92270	AUG 18, 2020 REVISE NOTES	JNC	SAN
F	56988	SEP 24, 2014 REVISE PERFORMANCE CHART	JNC	SN
E	54514	JUN 19, 2014 ADD UL LOGO, ADD 56MM T&R	SJS	SAN
D	51884	JAN 08, 2014 ADD DESIGN REF, UPDATE TITLE,	SJS	SAN
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

78-5100-2436-3  
78-5100-2396-9

DESIGN REFERENCE NEXT ASSEMBLY

DRFT	DATE	CHKD	DATE	APPR	DATE
ARM	NOV 29, 2012	PRC	NOV 29, 2012		NOV 29, 2012
SAN	NOV 29, 2012	SAN	NOV 29, 2012		NOV 29, 2012

DIVISION CODE: EMSD

DO NOT SCALE DRAWING

SCALE: 6/1

TOLERANCES EXCEPT AS NOTED

INCHES	MILLIMETERS
.0 ± .1	0 ±
.00 ± .02	.00 ±
.000 ± .010	.000 ±
.0000 ± .0050	.0000 ±

THIRD ANGLE PROJECTION

INTERPRET PER ASME Y14.5 - 2018

MAX SURFACE ROUGHNESS: 0.000 ±

MARKED ONLY

3M Center St. Paul, MN 55144

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TITLE: SHROUDED BMT HEADER, .05 X .05 PITCH, L/E, 452 SERIES

CAGE NUMBER: D78-5100-2437-1

MODEL: 452

REV. J

DET: [ ] YES [X] NO

SHT 2 OF 5

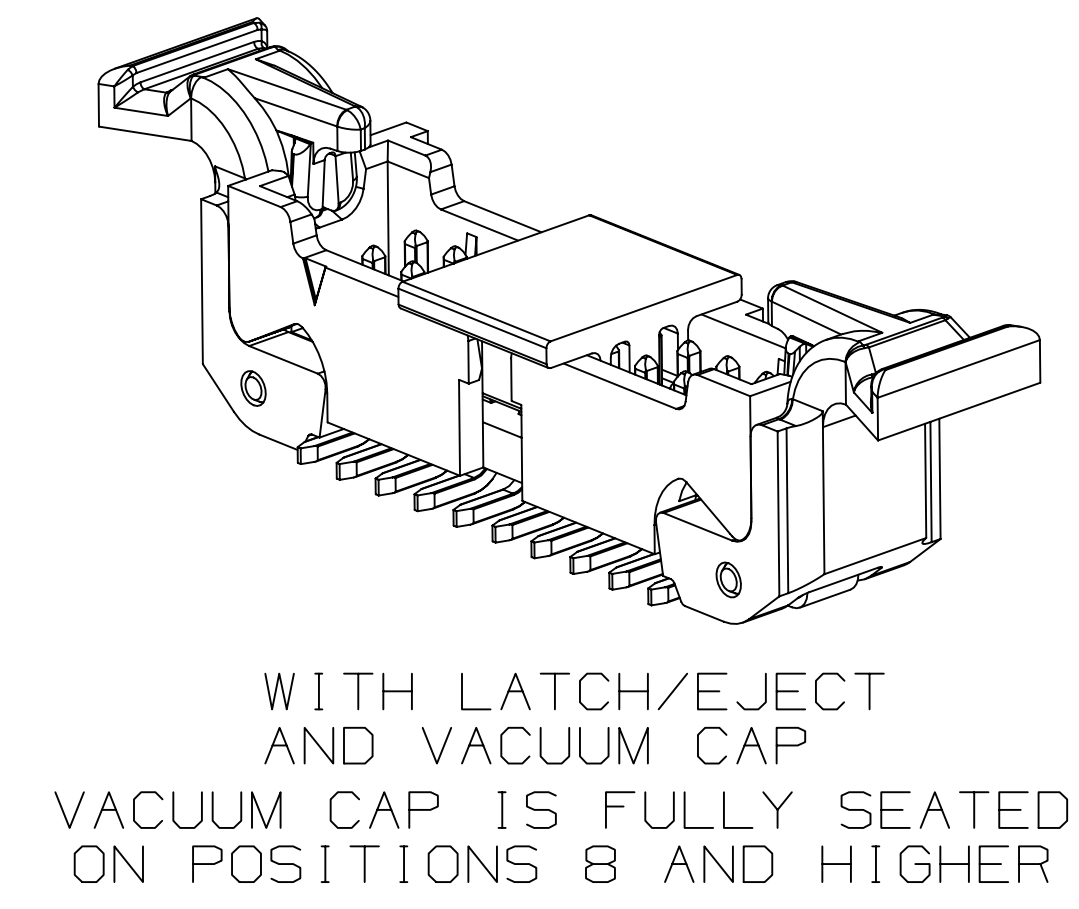
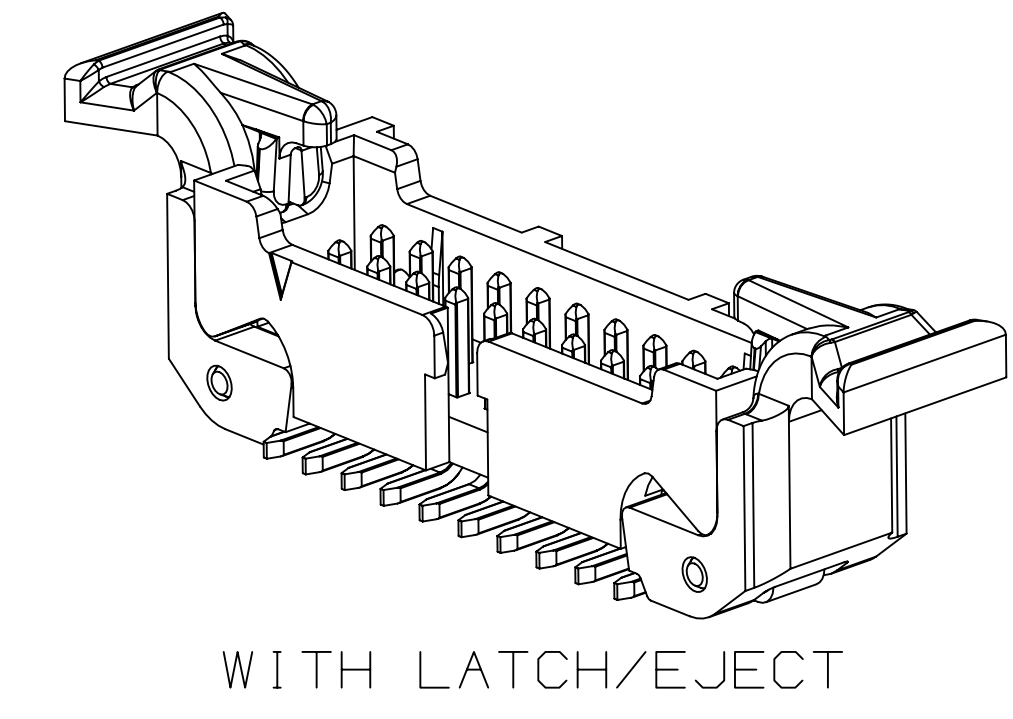
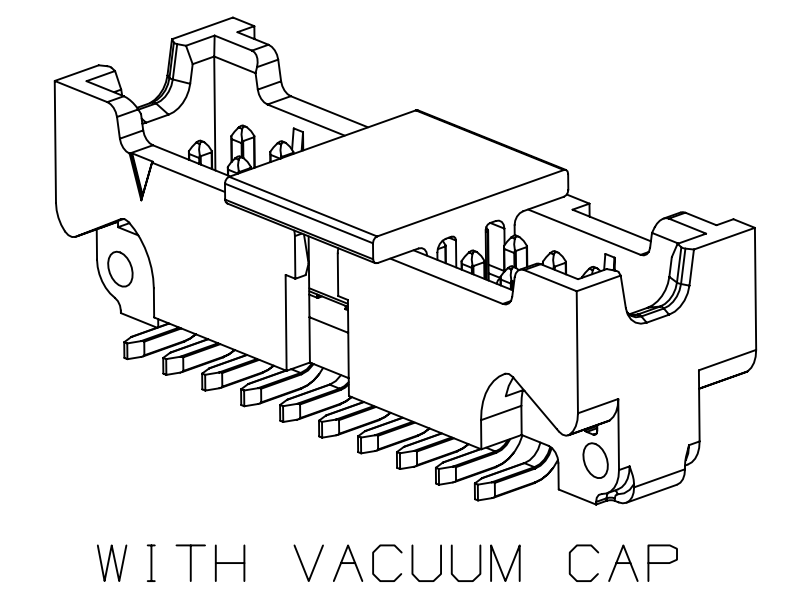
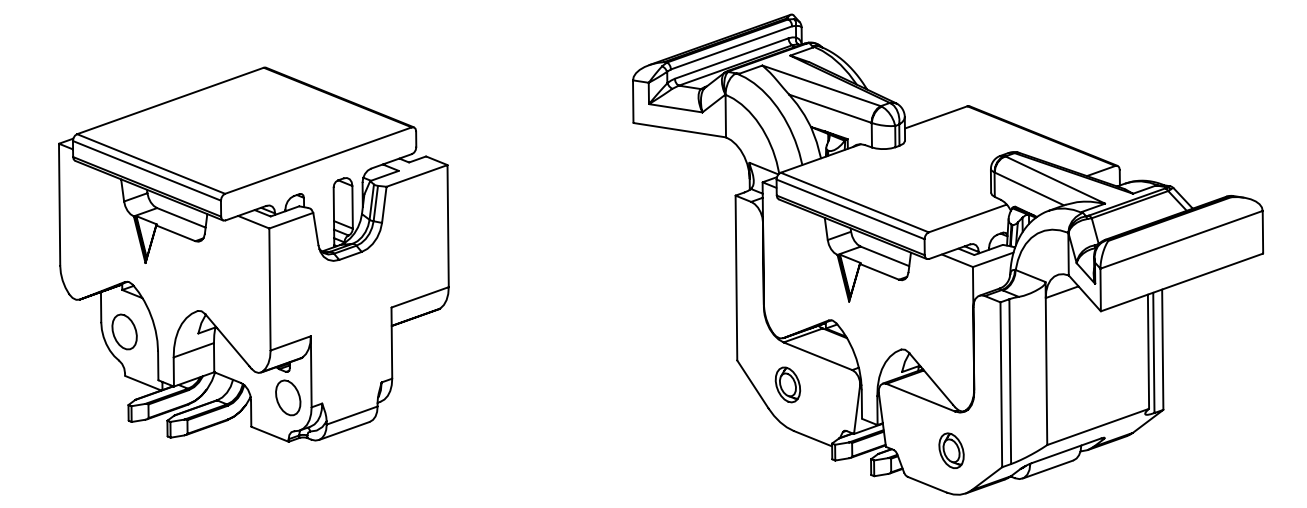
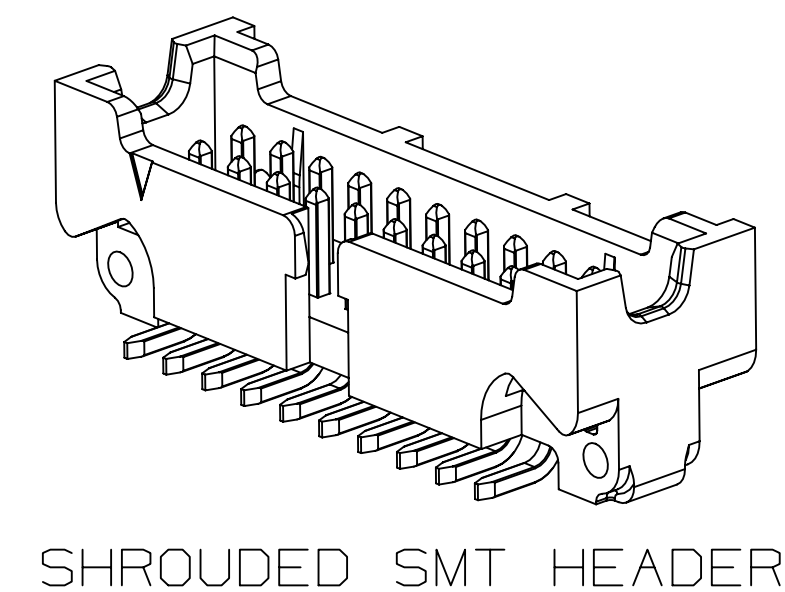
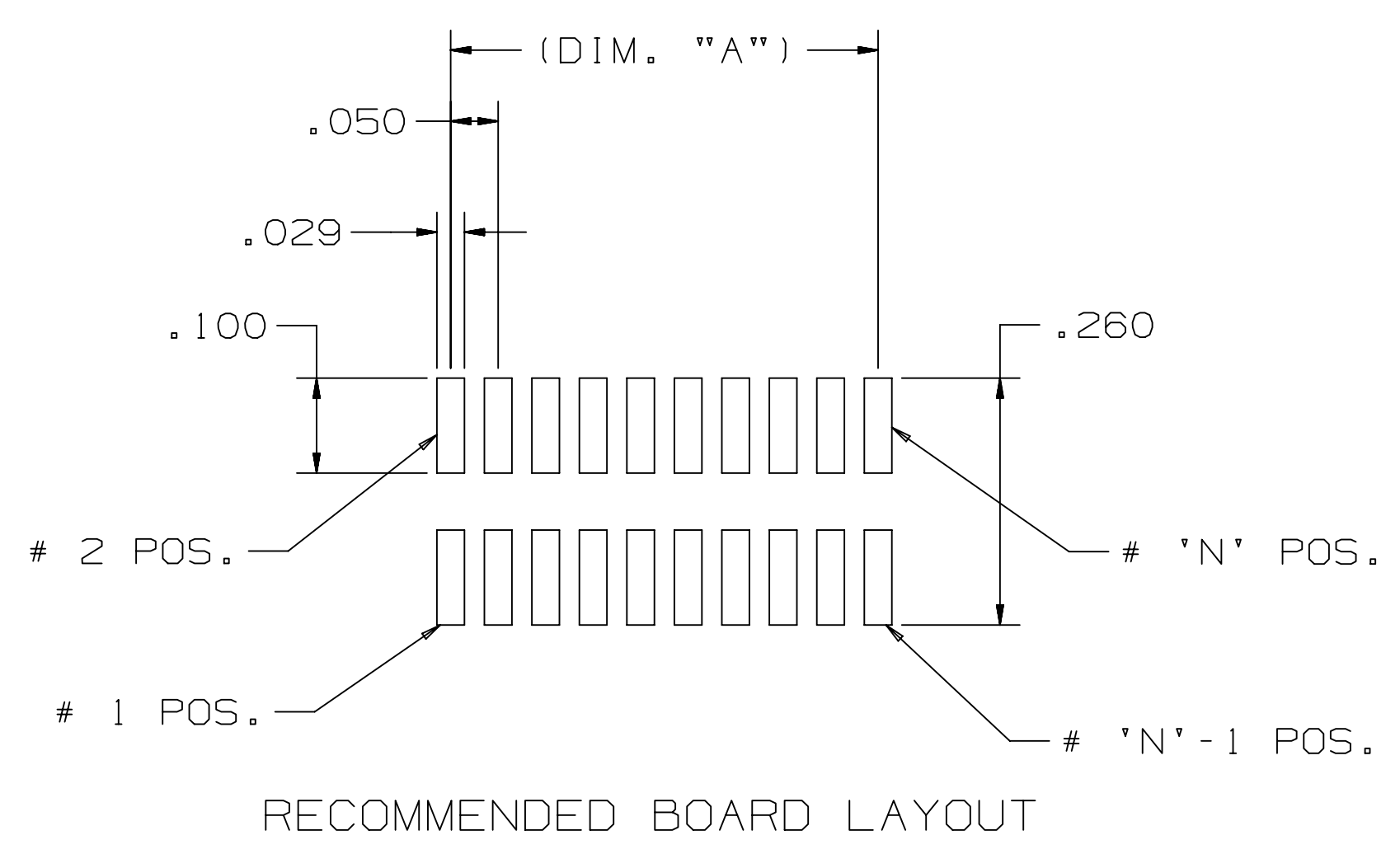
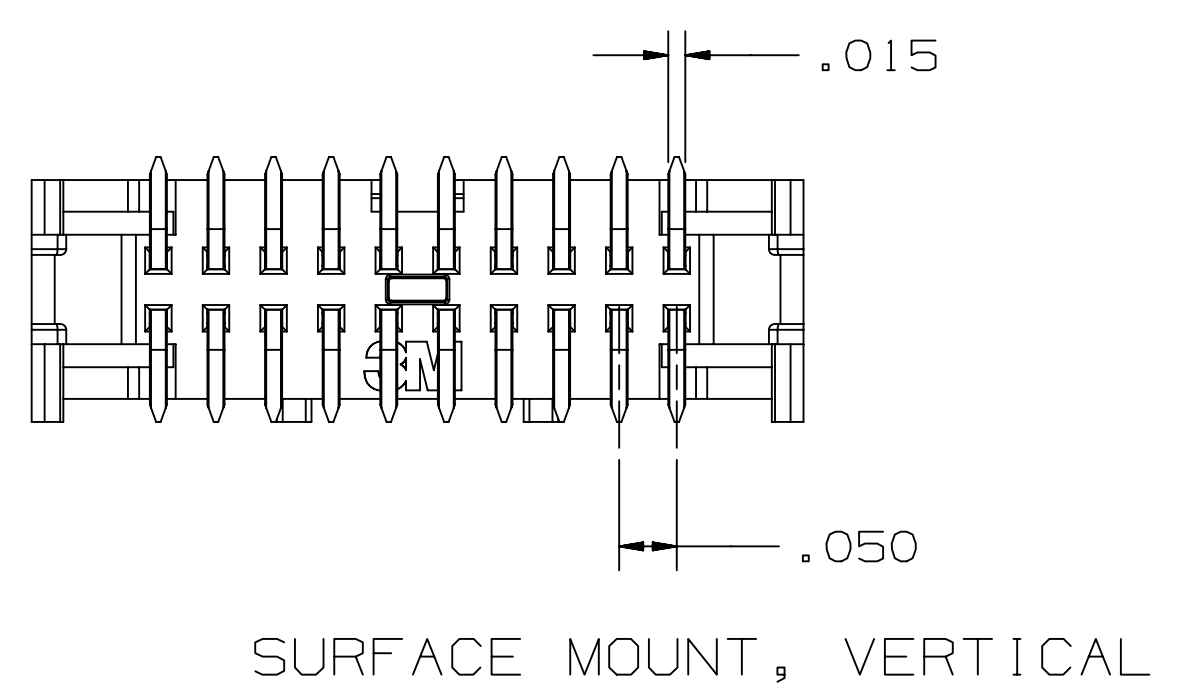
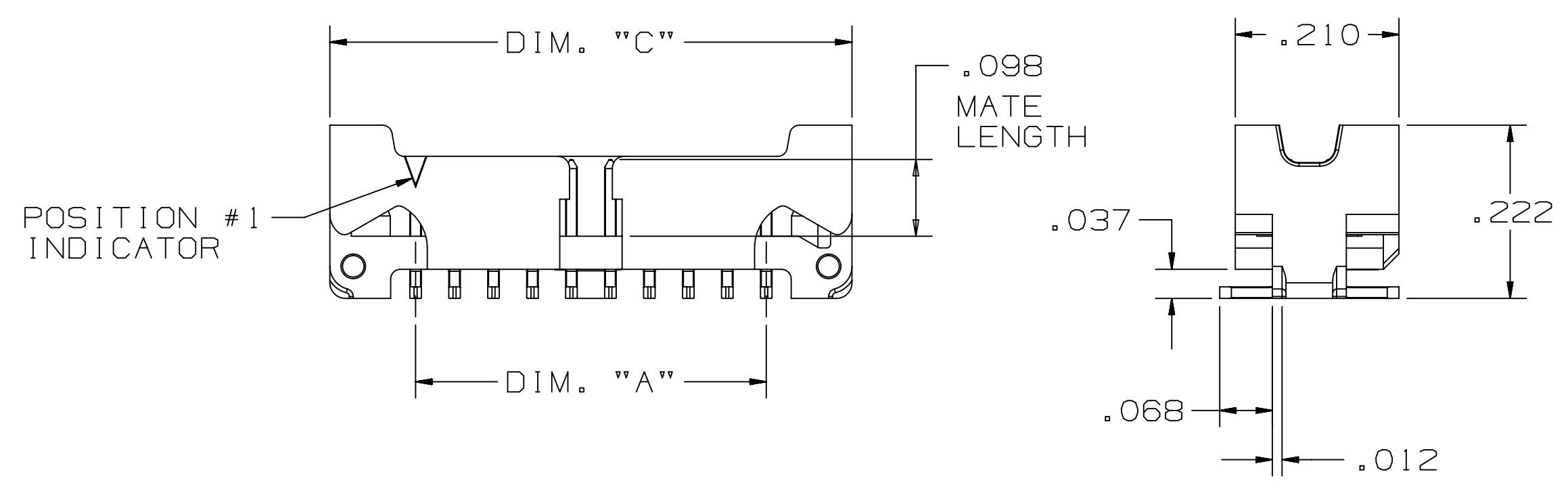
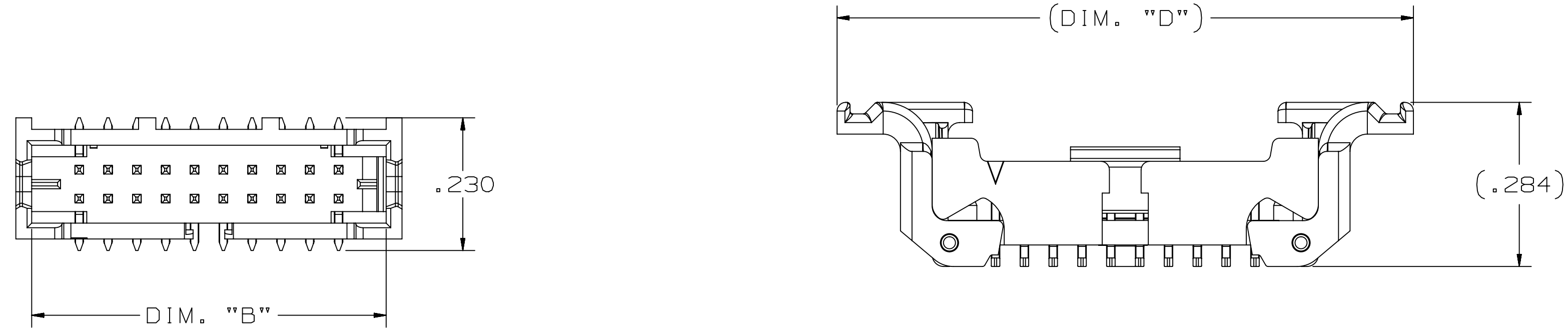
78-5100-2437-1  
DRAWING NUMBER

A

3M™ SHROUDED BOARDMOUNT HEADER, 1.27mm (0.050") PITCH  
LATCH AND EJECT, 452 SERIES

TABLE 1: VERTICAL SMT

No. Positions	Dim "A"	Dim "B"	Dim "C"	Dim "D"
4	.050	.215	.270	.600
6	.100	.265	.320	.650
8	.150	.315	.370	.700
10	.200	.365	.420	.750
12	.250	.415	.470	.800
14	.300	.465	.520	.850
16	.350	.515	.570	.900
20	.450	.615	.670	1.000
26	.600	.765	.820	1.150
30	.700	.865	.920	1.250
40	.950	1.115	1.170	1.500
50	1.200	1.365	1.420	1.750



REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
J	105041	MAY 26, 2022 REVISE PERFORMANCE SECTION	JNC	SAN
H	100200	OCT 19, 2021 ADD POS 26, 40, 50	JNC	SAN
G	92270	AUG 18, 2020 REVISE NOTES	JNC	SAN
F	56988	SEP 24, 2014 REVISE PERFORMANCE CHART	JNC	SN
E	54514	JUN 19, 2014 ADD UL LOGO, ADD 56MM T&R	SJS	SAN
D	51884	JAN 08, 2014 ADD DESIGN REF, UPDATE TITLE	SJS	SAN
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

78-5100-2436-3  
78-5100-2396-9  
DESIGN REFERENCE NEXT ASSEMBLY

DRFT	DATE	DRFT	DATE
ARM	NOV 29, 2012	PRC	NOV 29, 2012
CHKD	DATE	APPR	DATE
SAN	NOV 29, 2012	SAN	NOV 29, 2012

DIVISION: EMSD

DO NOT SCALE DRAWING

SCALE: 6/1

TOLERANCES EXCEPT AS NOTED

INCHES	MILLIMETERS
.0 ± .1	0 ±
.00 ± .02	.00 ±
.000 ± .010	.000 ±
.0000 ± .0050	.000 ±

THIRD ANGLE PROJECTION

INTERPRET PER ASME Y14.5 - 2018

MAX SURFACE ROUGHNESS: ALL SURFACES

MARKED ONLY

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TITLE: SHROUDED BMT HEADER, .05 X .05 PITCH, L/E, 452 SERIES

CAGE NUMBER: D78-5100-2437-1

REV. J

MODEL: 452

DET: [ ] YES [X] NO

SHT 3 OF 5

78-5100-2437-1  
DRAWING NUMBER

3M™ SHROUDED BOARDMOUNT HEADER, 1.27mm (0.050") PITCH  
LATCH AND EJECT, 452 SERIES

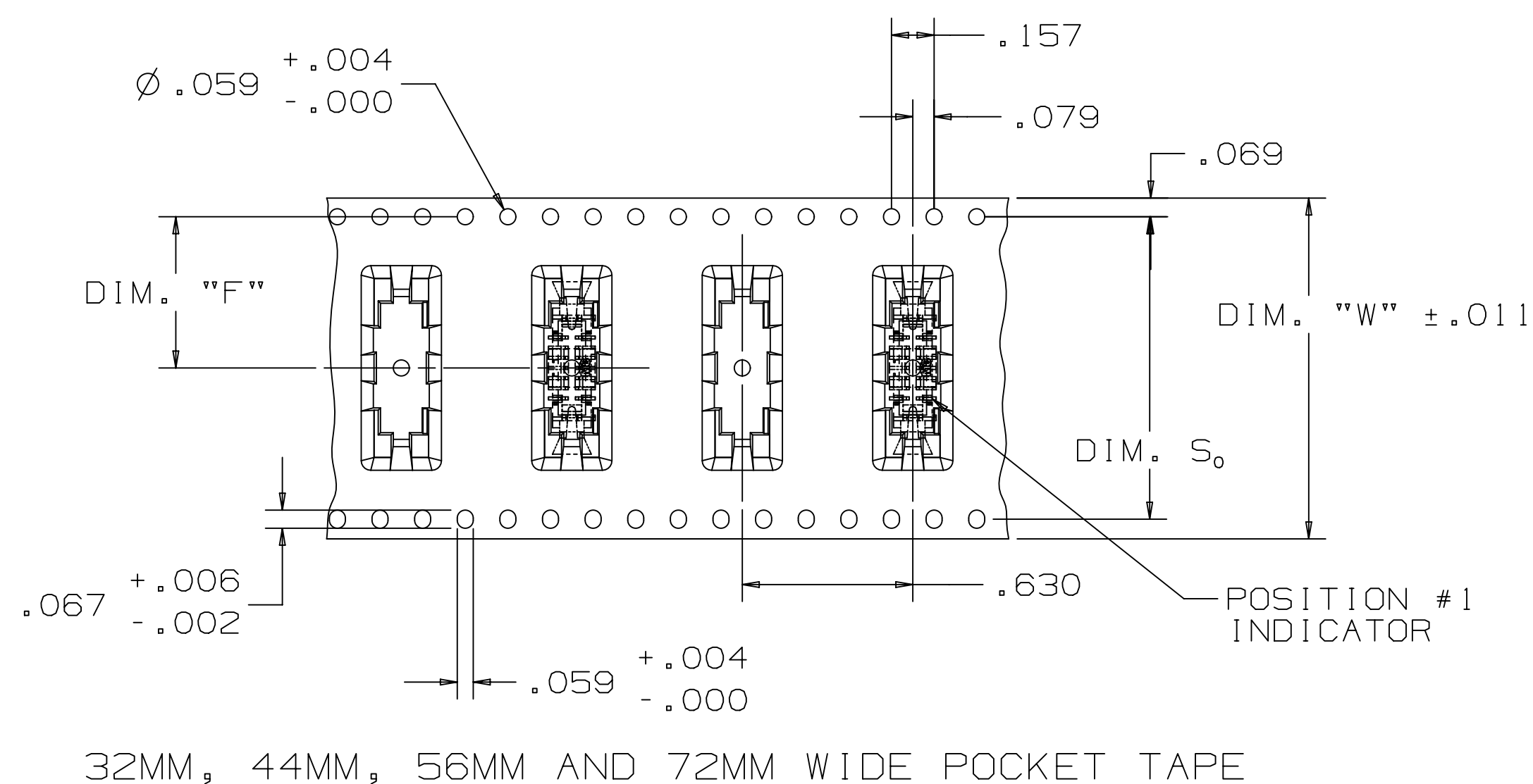
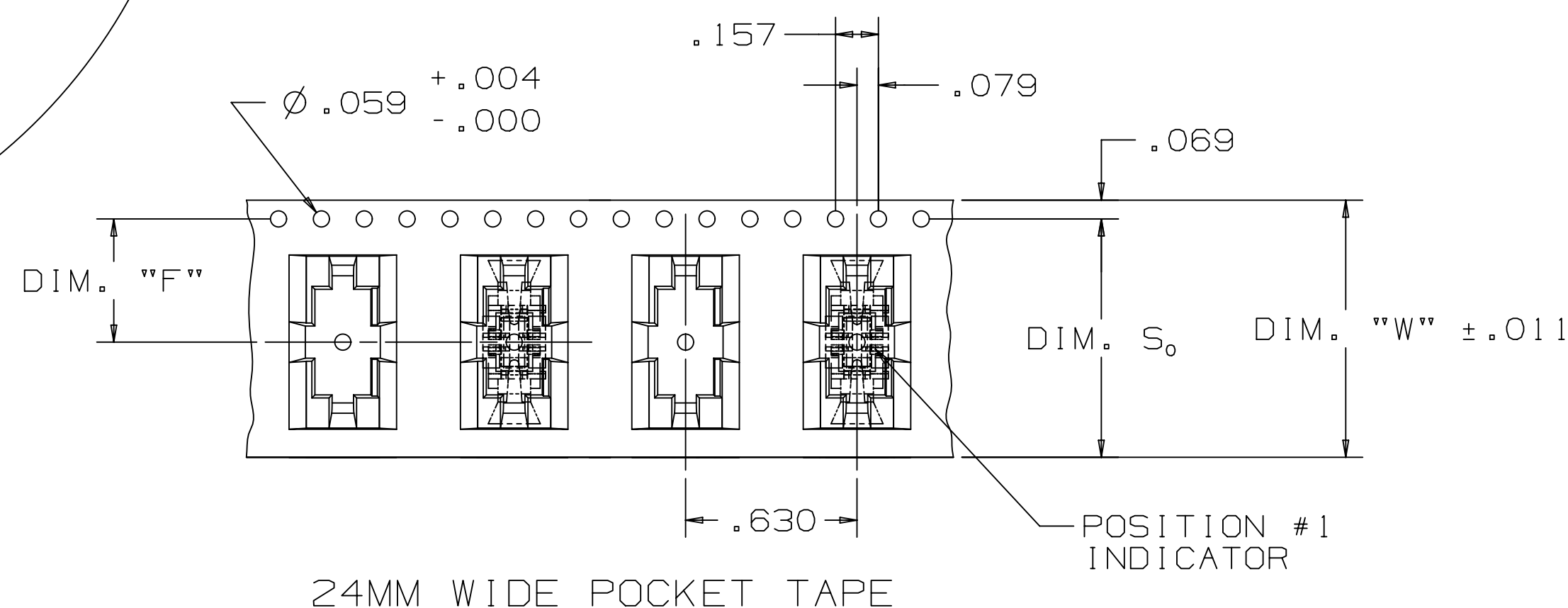
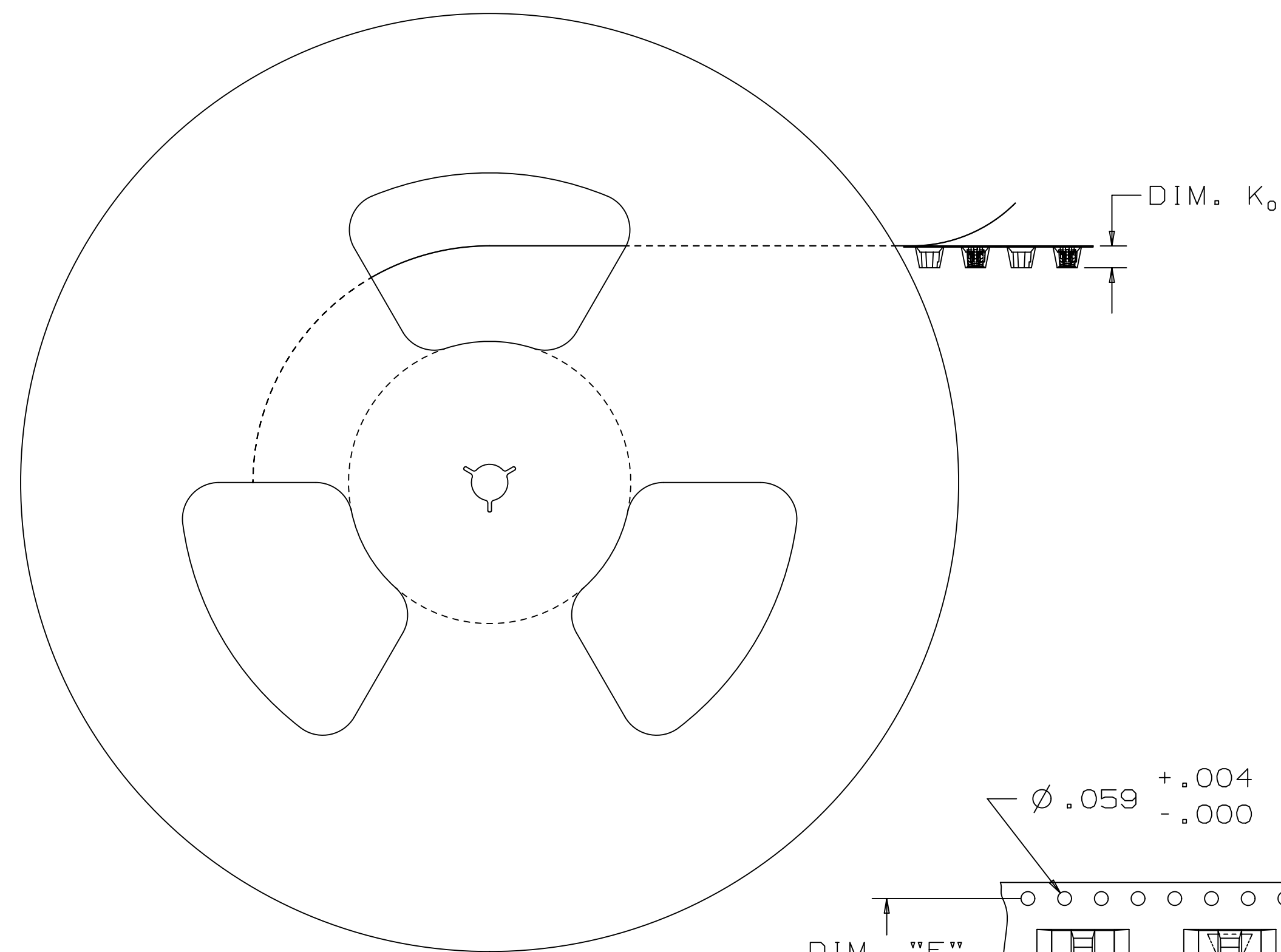
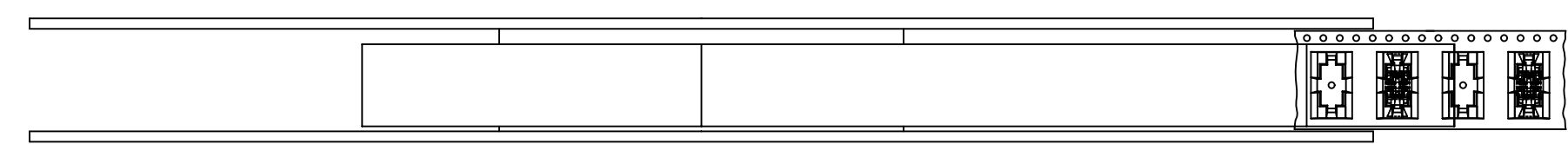


TABLE 2  
TAPE AND REEL PACKAGING FOR SURFACEMOUNT HEADERS

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	1.260 [ 32MM ]
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	1.732 [ 44MM ]
10	NO	.453	.238	.876	.945 [ 24MM ]
10	YES	.559	.300	1.118	1.732 [ 44MM ]
12	NO	.453	.238	.876	.945 [ 24MM ]
12	YES	.559	.300	1.118	1.732 [ 44MM ]
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 ]
26	NO	.795	.254	1.594	1.732 [ 44MM ]
26	YES	1.031	.288	2.067	2.205 [ 56MM ]
30	NO	.795	.238	1.591	1.732 [ 44MM ]
30	YES	.795	.300	1.591	2.205 [ 56MM ]
40	NO	1.031	.254	2.067	2.205 [ 56MM ]
40	YES	1.031	.288	2.067	2.205 [ 56MM ]
50	NO	1.031	.254	2.067	2.205 [ 56MM ]
50	YES	1.346	.288	2.693	2.835 [ 72MM ]

NOTE:  
LATCH AND EJECT HEADERS ARE PACKAGED WITH THE  
LATCHES IN AN OPEN POSITION.

REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
J	105041	MAY 26, 2022 REVISE PERFORMANCE SECTION	JNC	SAN
H	100200	OCT 19, 2021 ADD POS 26, 40, 50	JNC	SAN
G	92270	AUG 18, 2020 REVISE NOTES	JNC	SAN
F	56988	SEP 24, 2014 REVISE PERFORMANCE CHART	JNC	SN
E	54514	JUN 19, 2014 ADD UL LOGO, ADD 56MM T&R	SJS	SAN
D	51884	JAN 08, 2014 ADD DESIGN REF, UPDATE TITLE	SJS	SAN
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

78-5100-2436-3  
78-5100-2396-9

DESIGN REFERENCE NEXT ASSEMBLY

DRFT	DATE	DRFT	DATE
ARM	NOV 29, 2012	PRC	NOV 29, 2012
CHKD	DATE	APPR	DATE
SAN	NOV 29, 2012	SAN	NOV 29, 2012

DIVISION DIVISION CODE  
EMSD

DO NOT SCALE DRAWING

THIRD ANGLE PROJECTION

MAX. SURFACE ROUGHNESS  
ALL SURFACES  
MARKED ONLY

TOLERANCES EXCEPT AS NOTED

INCHES  
.0 ± .1  
.00 ± .02  
.000 ± .010  
.0000 ± .0050

MILLIMETERS  
0 ±  
.0 ±  
.00 ±  
.000 ±

3M Center  
St. Paul, MN 55144

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TITLE  
SHROUDED BMT HEADER,  
.05 X .05 PITCH, L/E,  
452 SERIES

CAGE NUMBER  
D 78-5100-2437-1

REV. J

MODEL 452

DET 452

IS1s YES NO SHT 4 OF 5

DRAWING NUMBER  
78-5100-2437-1

REVISION  
J

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

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G	92270	AUG 18, 2020 REVISE NOTES	JNC	SAN
F	56988	SEP 24, 2014 REVISE PERFORMANCE CHART	JNC	SN
E	54514	JUN 19, 2014 ADD UL LOGO, ADD 56MM T&R	SJS	SAN
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A	46797	MAR 25, 2013 PRODUCTION RELEASE	JNC	SAN

78-5100-2436-3  
 78-5100-2396-9

DESIGN REFERENCE NEXT ASSEMBLY

DRFT	DATE	APPV	DATE
ARM	NOV 29, 2012	PRC	NOV 29, 2012
CHKD	DATE	APPV	DATE
SAN	NOV 29, 2012	SAN	NOV 29, 2012

DIVISION CODE  
 EMSD

DO NOT SCALE DRAWING

SCALE 1

TOLERANCES EXCEPT AS NOTED

INCHES  
 .0 ± .1  
 .00 ± .02  
 .000 ± .010  
 .0000 ± .0050

THIRD ANGLE PROJECTION

INTERPRET PER ASME Y14.5 - 2018

MAX SURFACE ROUGHNESS

MARKED ONLY

3M Center St. Paul, MN 55144

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TITLE  
 SHROUDED BMT HEADER,  
 .05 X .05 PITCH, L/E,  
 452 SERIES

CAGE NUMBER D78-5100-2437-1

MODEL 452

REV. J

DET. [ ] YES [X] NO SHT 5 OF 5

78-5100-2437-1  
 DRAWING NUMBER  
 J  
 REVISION