

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

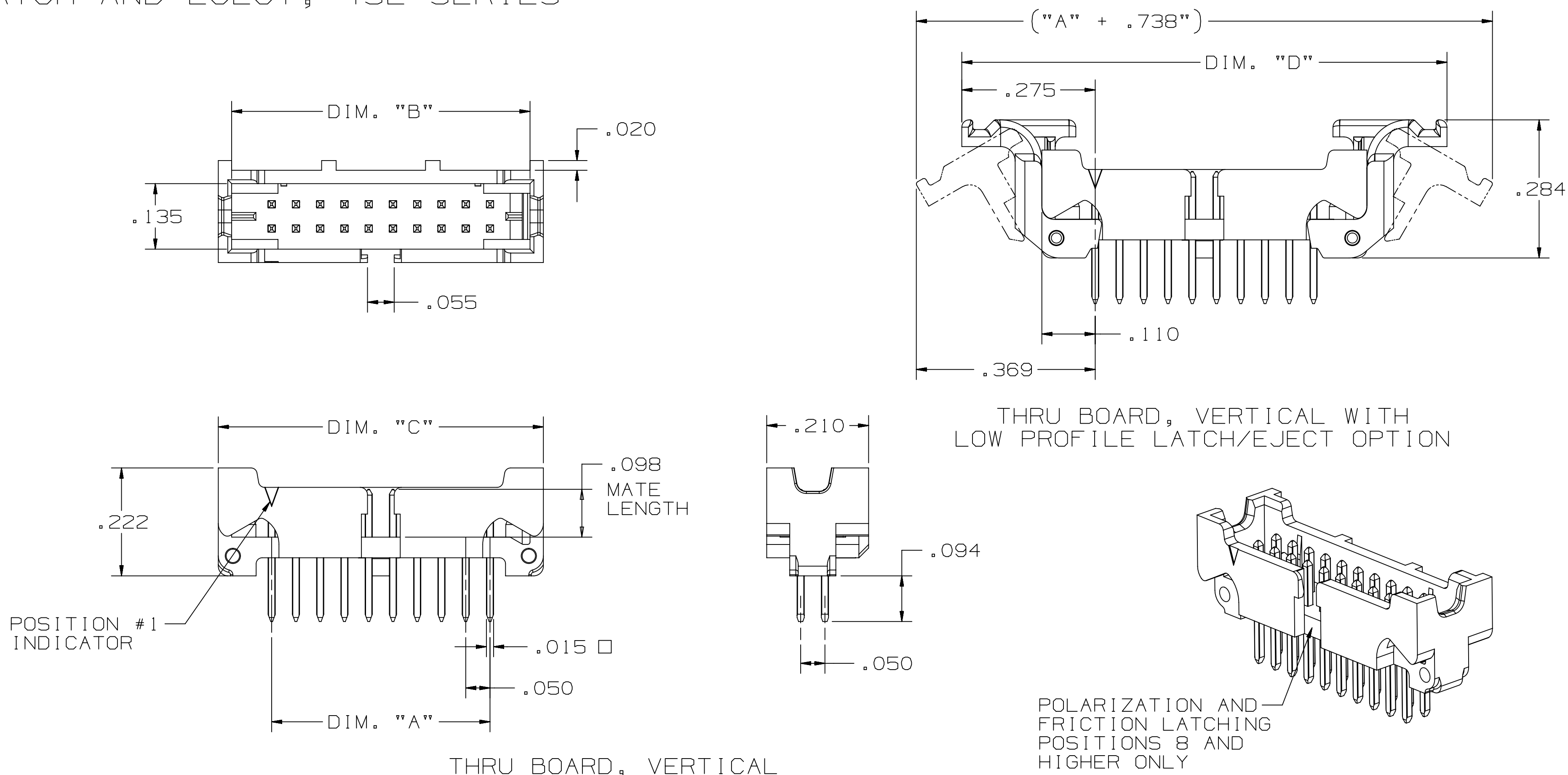
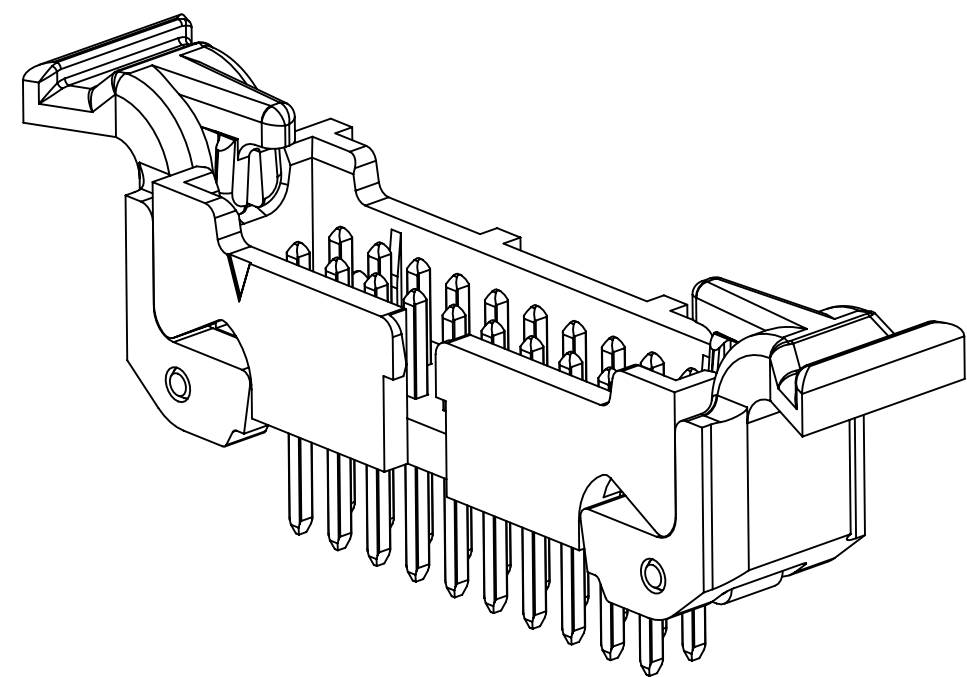


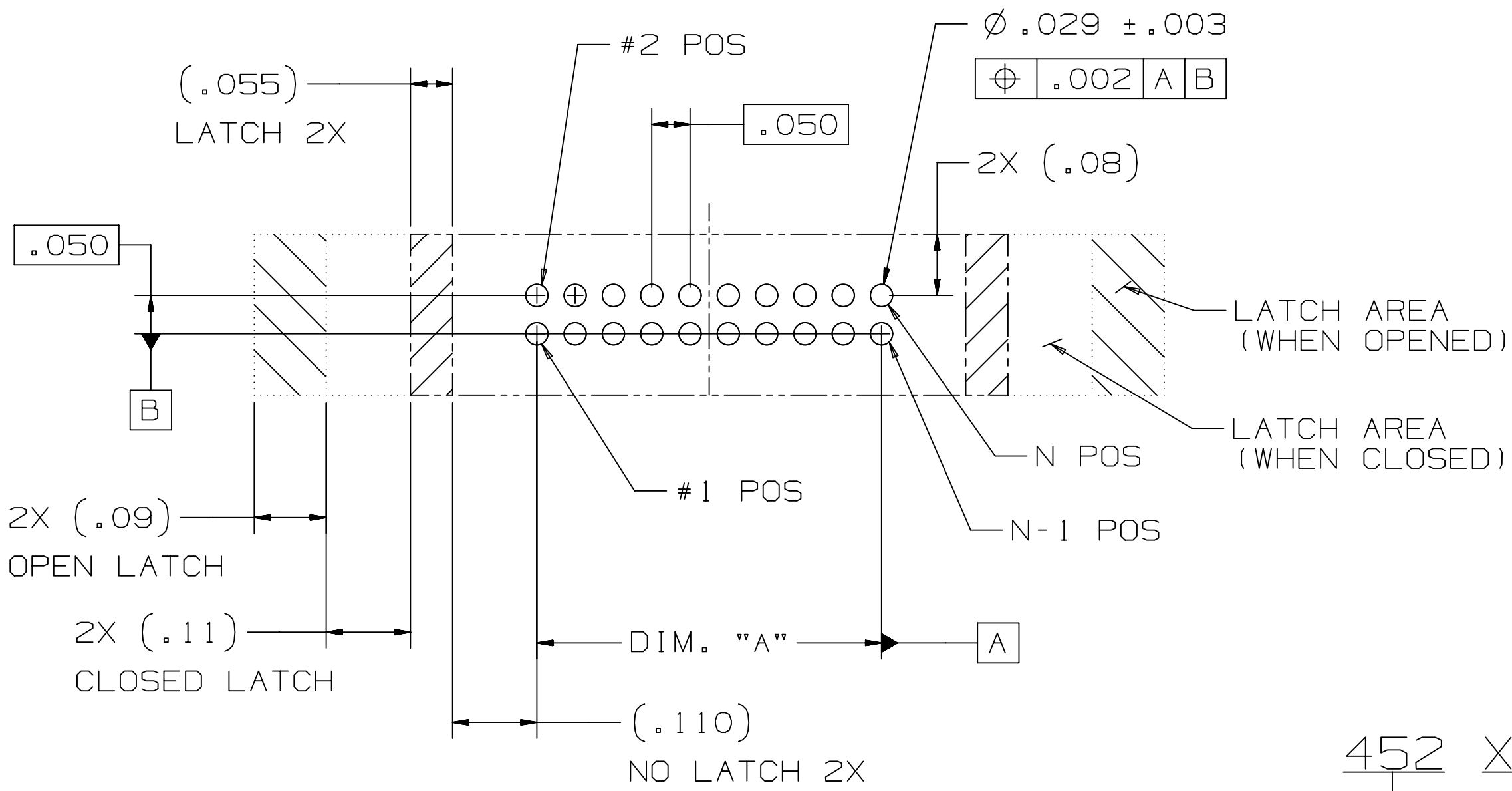
TABLE 1: VERTICAL THRU				
No. of Positions	Dim "A"	Dim "B"	Dim "C"	Dim "D"
4	.050	.215	.270	.600
6	.100	.265	.320	.650
8	.150	.315	.370	.700
10	.200	.365	.420	.750
12	.250	.415	.470	.800
14	.300	.465	.520	.850
16	.350	.515	.570	.900
20	.450	.615	.670	1.000
26	.600	.765	.820	1.150
30	.700	.865	.920	1.250
40	.950	1.115	1.170	1.500
50	1.200	1.365	1.420	1.750



WITH LATCH/EJECT

- NOTES
1. MATERIAL:
BODY: LCP, UL94V-0
LATCH: PPA, UL94V-0
CONTACTS: COPPER ALLOY.
 2. 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.
 3. MATING COMPATIBILITY:
3M 1.27mm (0.050"), 451 SERIES
RIBBON CABLE SOCKET. TECH
SHEETS TS-2436 AND TS-2396
 4. REGULATORY INFORMATION:
VISIT 3M.com/regs
 5. IN THE EVENT OF CONFLICT
BETWEEN THIS DATA AND THAT
CONTAINED IN THE PRODUCT
SPECIFICATION, THE PRODUCT
SPECIFICATION TAKES
PRECEDENT.
 6. REFERENCE PRODUCT SPEC:
3M DOC ID# 78-5102-0091-4
 7. OTHER PIN COUNTS AVAILABLE
UPON REQUEST. CONTACT 3M.
 8. 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.
 9. PACKAGING:
VERTICAL THRU: TRAY
RIGHT ANGLE THRU: TRAY
VERTICAL SMT: TAPE AND REEL.

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 _{AC}
INSULATION RESISTANCE:	> 1 × 10 ⁹ Ohms AT 500 VDC
WITHSTANDING VOLTAGE:	1250V _{DC} 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
<http://www.3M.com/interconnect>

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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

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")

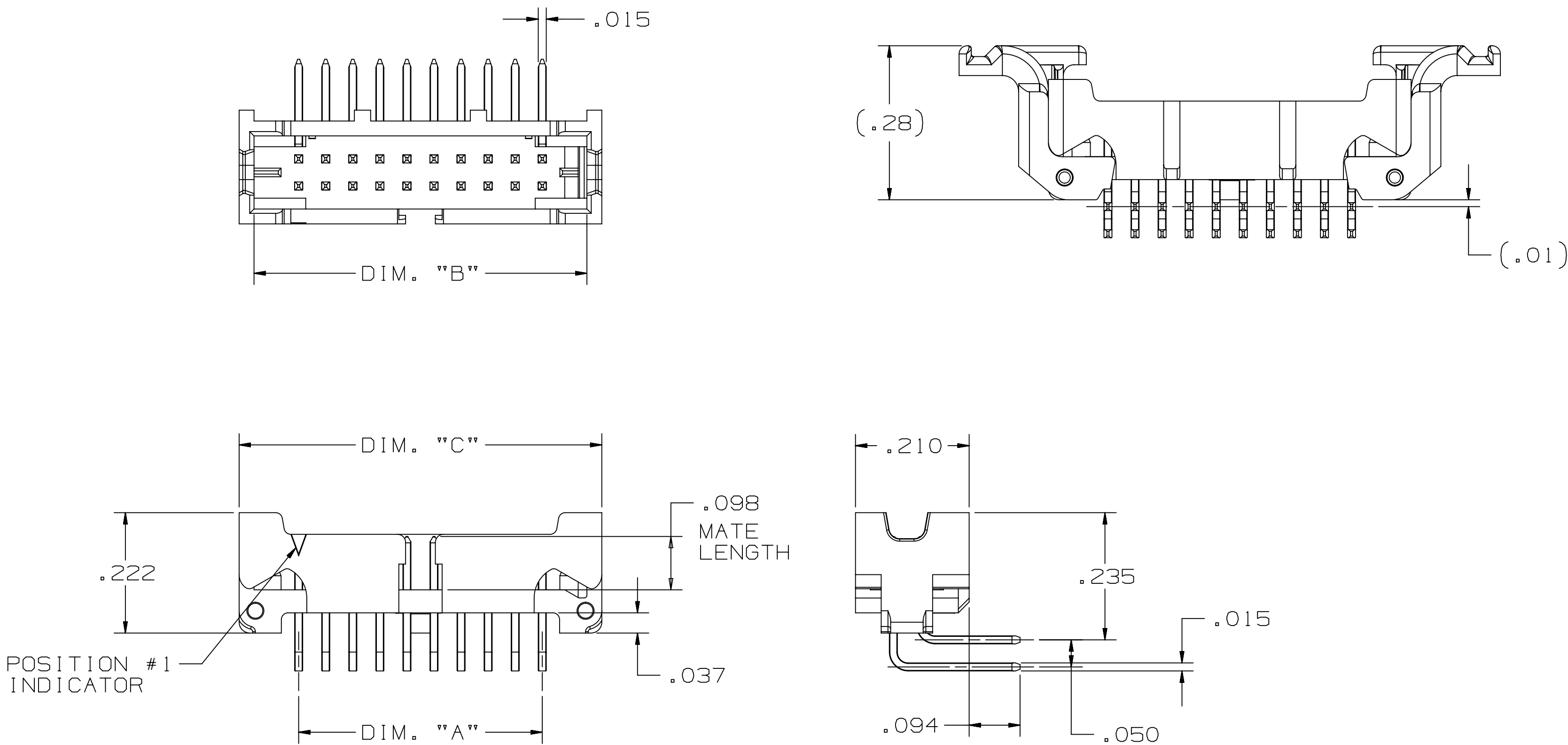
LATCH/EJECT
0 = NO LATCHES
2 = WITH LOW PROFILE LATCHES

UL FILE NO: E68080

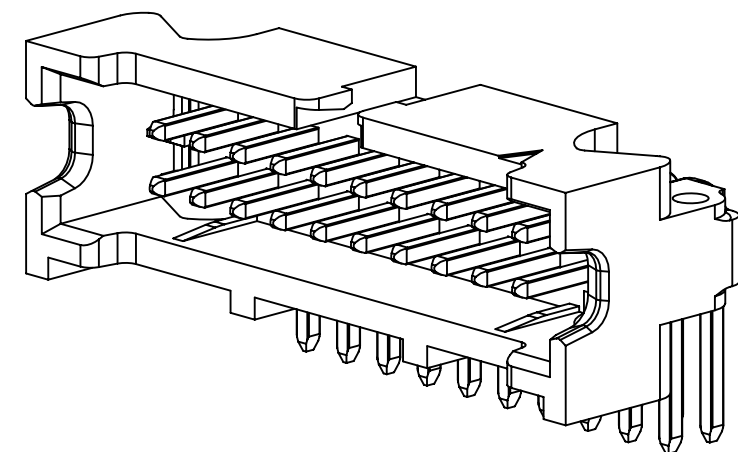
78-5100-2436-3 78-5100-2396-9	DESIGN REFERENCE	NEXT ASSEMBLY
DO NOT SCALE DRAWING	SCALE 6 1	TOLERANCES EXCEPT AS NOTED
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 2018	MAX. SURFACE ROUGHNESS
MARKED ONLY	ALL SURFACES	ANGLES

J	105041	MAY 26,2022			JNC	SAN
		REVISE PERFORMANCE SECTION				
H	100200	OCT 19,2021			JNC	SAN
		ADD POS 26, 40, 50				
G	92270	AUG 18,2020			JNC	SAN
		REVISE NOTES				
F	56988	SEP 24,2014			JNC	SN
		REVISE PERFORMANCE CHART				
E	54514	JUN 19,2014			SJS	SAN
		ADD UL LOGO, ADD 56MM T&R				
D	51884	JAN 08,2014			SJS	SAN
		ADD DESIGN REF, UPDATE TITLE,				
C	50290	OCT 08,2013			JNC	SN
		REVISE NOTE 1, 9 & OPERATING TEMP.				
B	48635	JUL 12,2013			JNC	SN
		MATCH TEXT FONTS & ADD NOTE 9				
A	46797	MAR 25,2013			JNC	SAN
		PRODUCTION RELEASE				
REV	ECO	ISSUE DATE AND DESCRIPTION			DRFT	CHKD
DRFT	ARM	DATE NOV 29,2012	MFG PRC	DATE NOV 29,2012		
CHKD	SAN	DATE NOV 29,2012	APPR	DATE NOV 29,2012		
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TITLE						
SHROUDED BMT HEADER, .05 X .05 PITCH, L/E, 452 SERIES						
CAGE NUMBER		DRAWING NO.			REV.	
D		78-5100-2437-1			J	
MODEL		452		DET: ☐ YES ☒ NO		SHT 1 OF 5

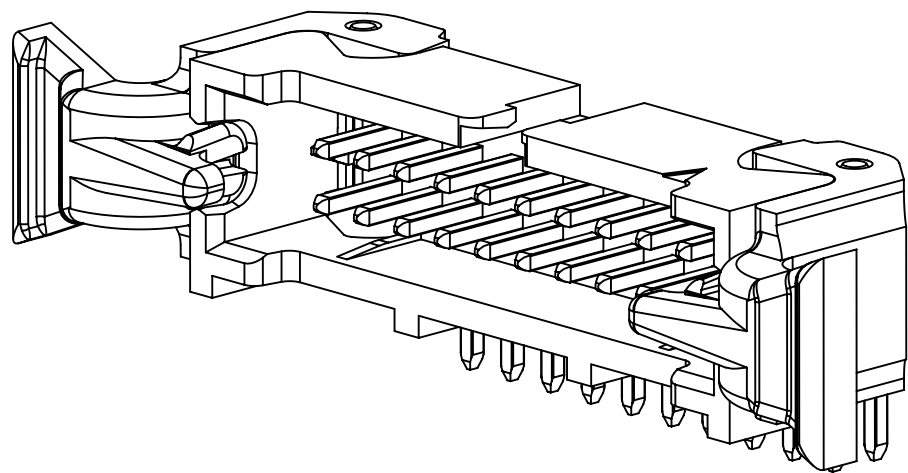
3M™ SHROUDED BOARDMOUNT HEADER, 1.27mm (0.050") PITCH
LATCH AND EJECT, 452 SERIES



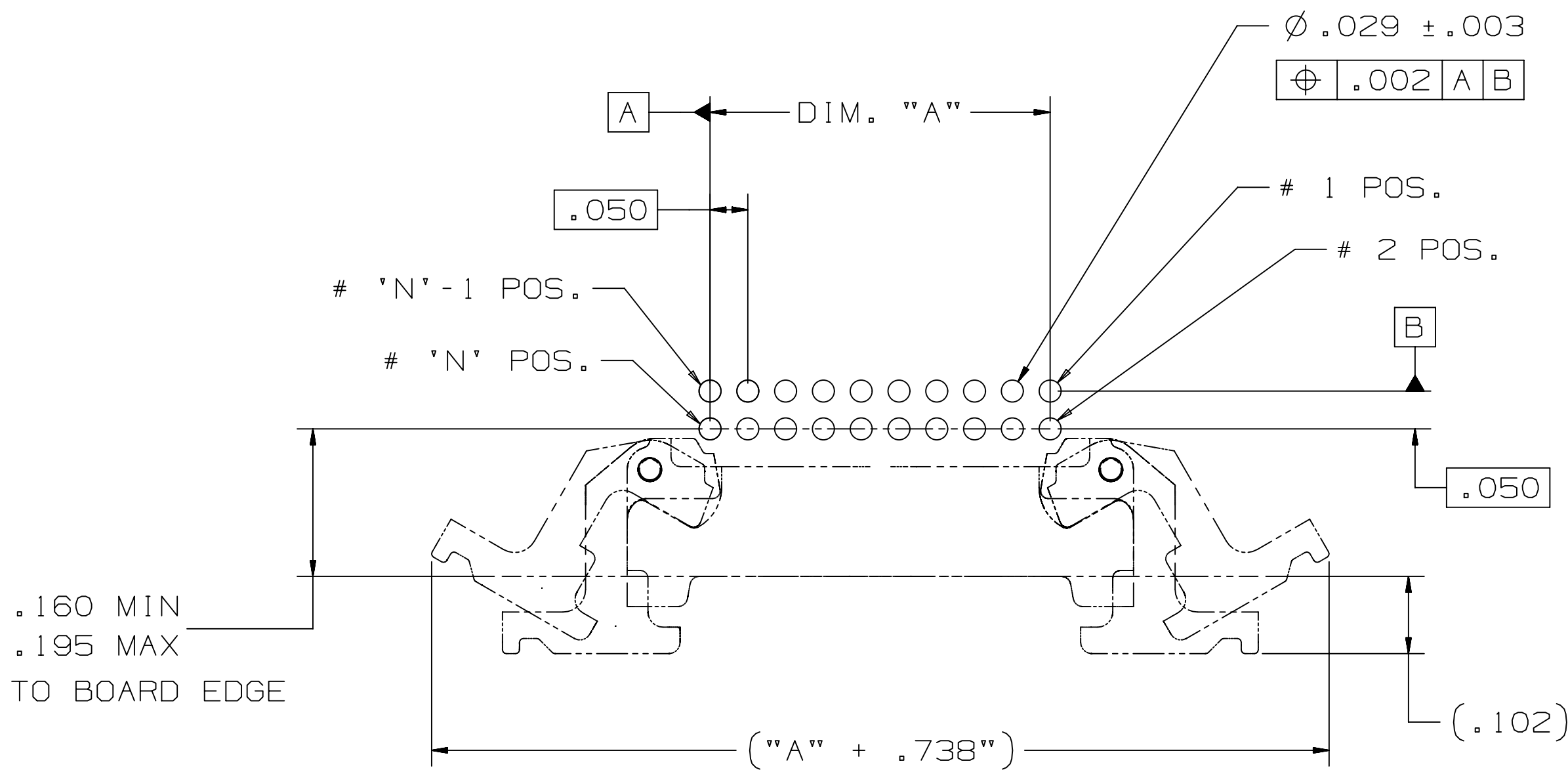
THRU BOARD, RIGHT ANGLE



WITHOUT LATCH/EHECT



WITH LATCH/EJECT



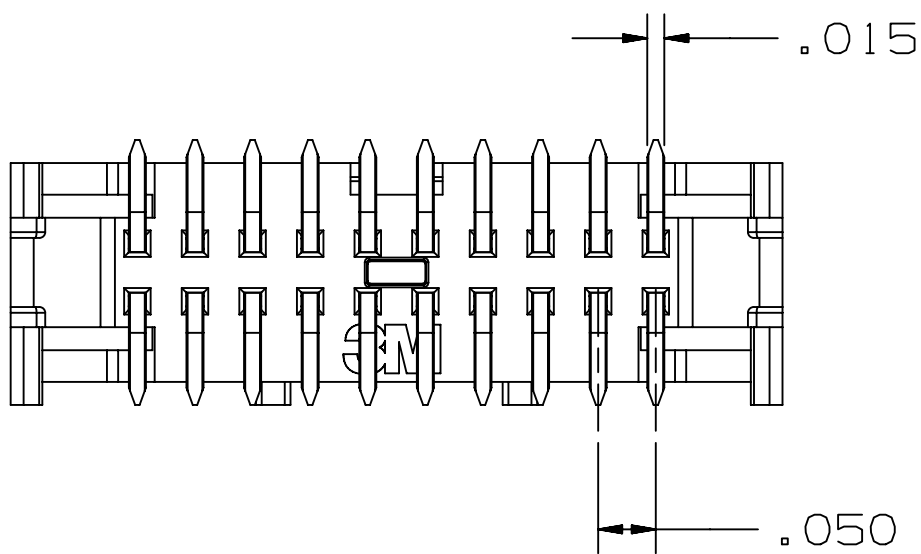
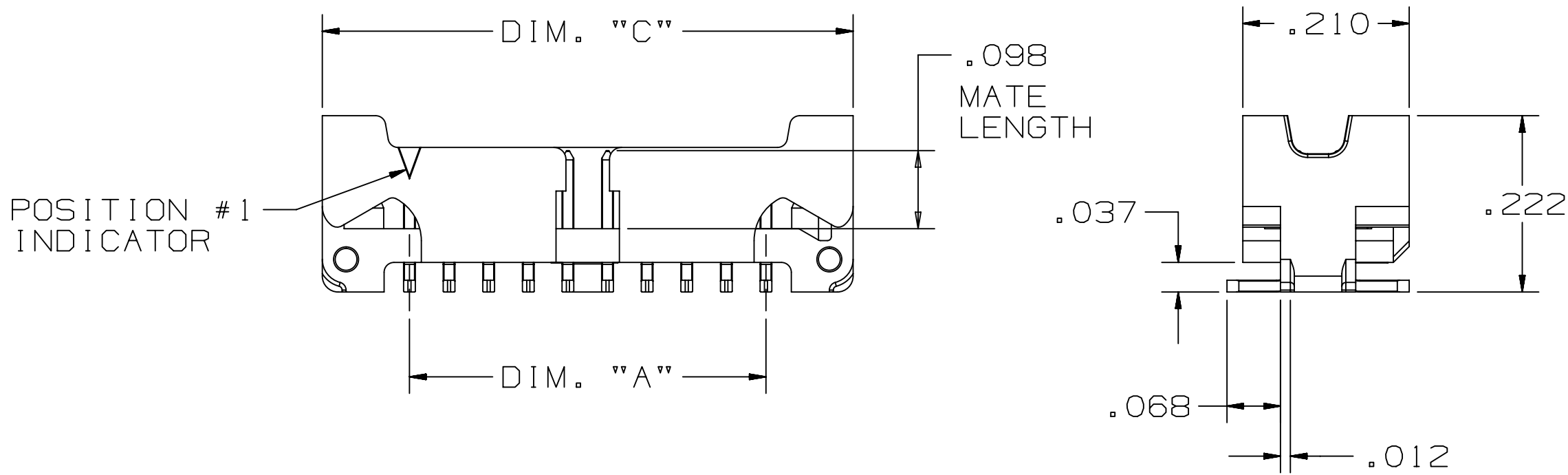
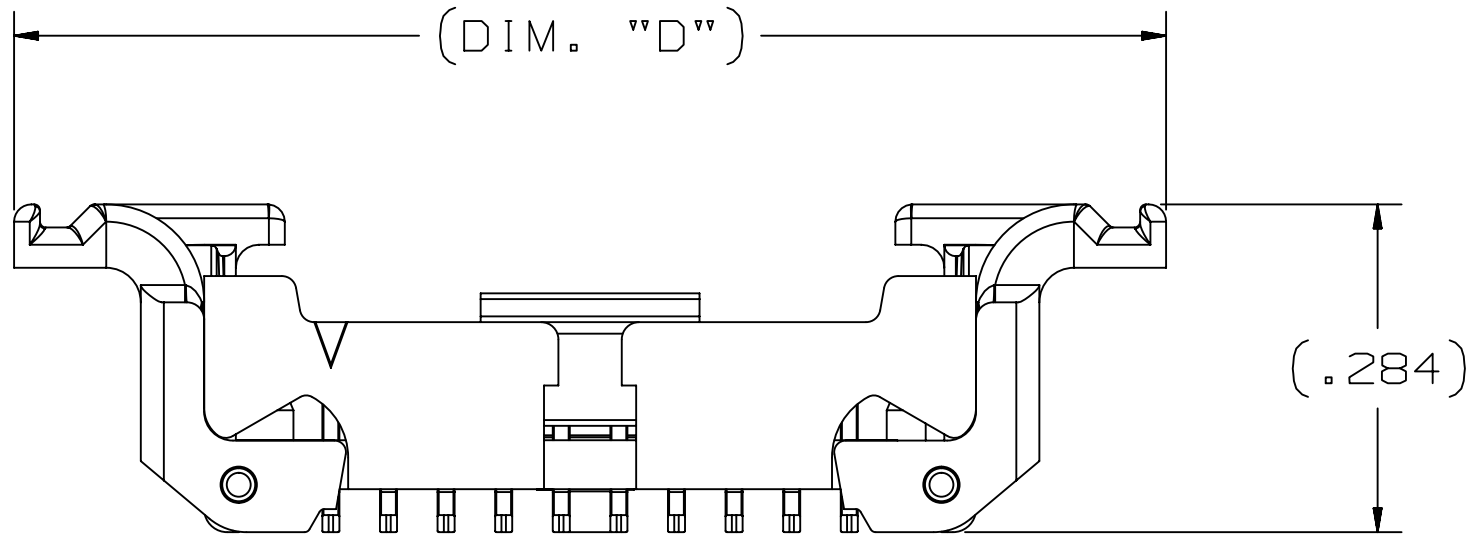
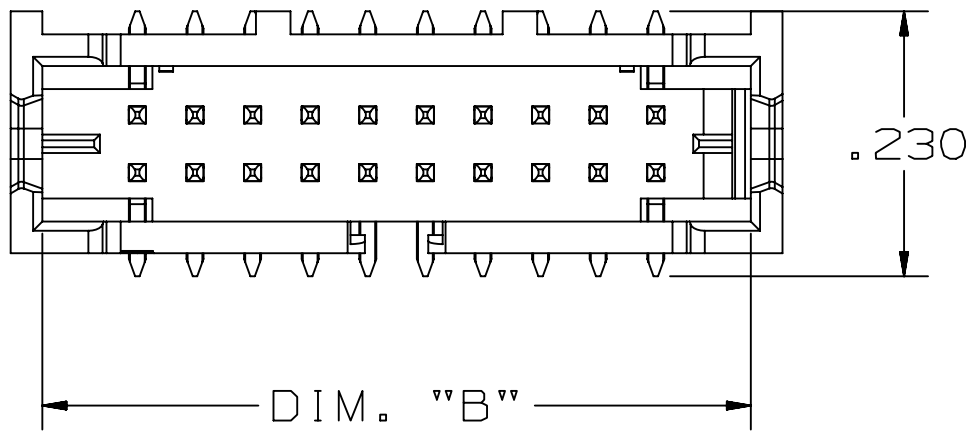
RECOMMENDED BOARD LAYOUT

TABLE 1: RIGHT ANGLE THRU

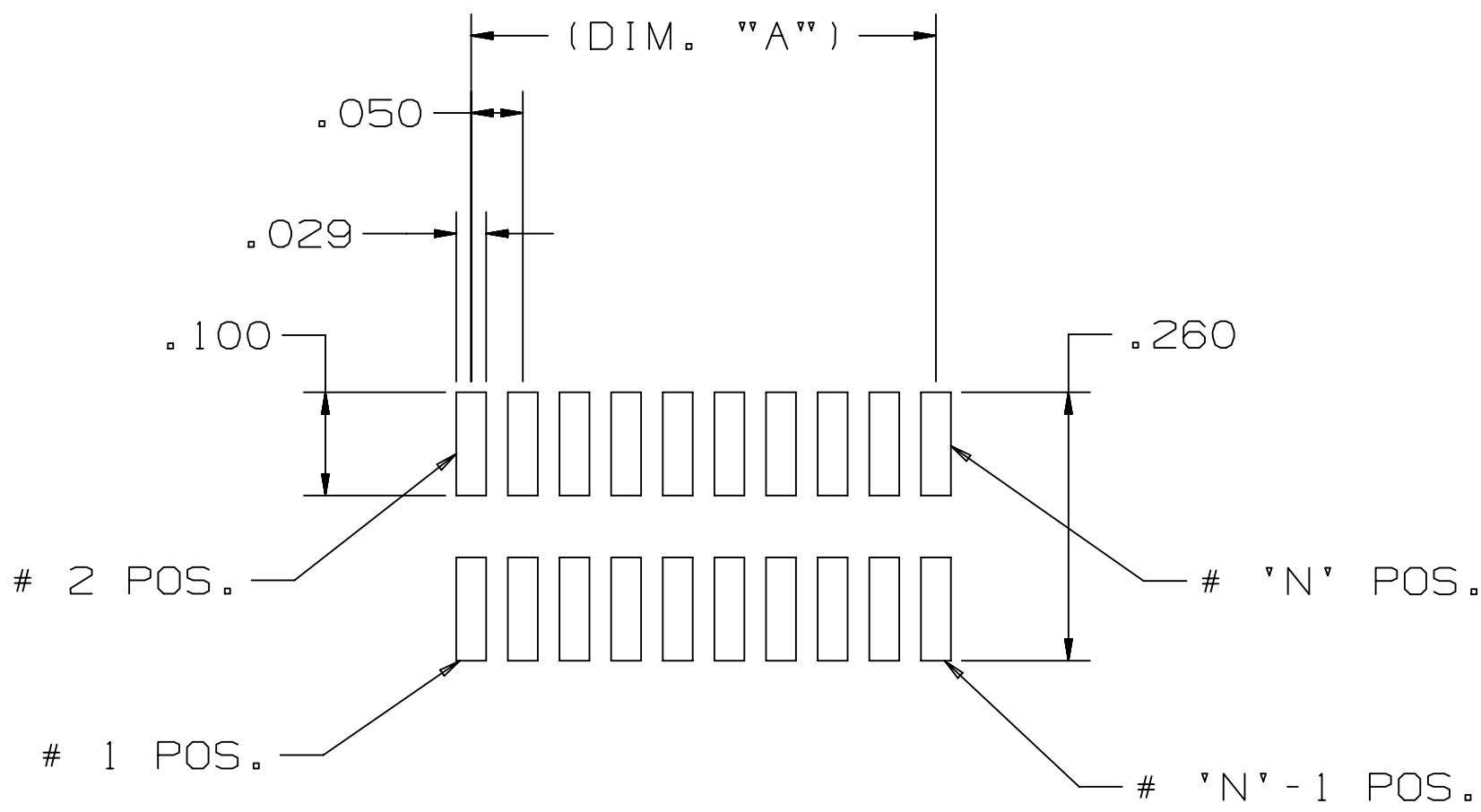
No. Positions	Dim "A"	Dim "B"	Dim "C"
4	.050	.215	.270
6	.100	.265	.320
8	.150	.315	.370
10	.200	.365	.420
12	.250	.415	.470
14	.300	.465	.520
16	.350	.515	.570
20	.450	.615	.670
26	.600	.765	.820
30	.700	.865	.920
40	.950	1.115	1.170
50	1.200	1.365	1.420

78-5100-2436-3 78-5100-2396-9		NEXT ASSEMBLY		PRODUCTION RELEASE							
DESIGN REFERENCE		NEXT ASSEMBLY		REV	ECO	ISSUE DATE AND DESCRIPTION		DRFT	CHKD		
XREF CODES		XREF CODES		DRFT	ARM	DATE	NOV 29,2012	PRC	DATE	NOV 29,2012	
XREF CODES		XREF CODES		CHKD	SAN	DATE	NOV 29,2012	APPR	SAN	DATE	NOV 29,2012
DIVISION		DIVISION CODE		EMSD		© 3M COPYRIGHT 2022					
DO NOT SCALE DRAWING		SCALE 6 1		TOLERANCES EXCEPT AS NOTED		This document and the information it contains are 3M property and may not be reproduced or further distributed without the written permission or, used or disclosed other than for 3M authorized purposes. All rights reserved.					
THIRD ANGLE PROJECTION		INCHES 0.00 ± .1 .0000 ± .02 .0000 ± .010 .0000 ± .0050		MILLIMETERS 0 ± .00 ± .000 ± .000 ±		TITLE SHROUDED BMT HEADER, .05 X .05 PITCH, L/E, 452 SERIES					
INTERPRET PER ASME Y14.5 - 2018		CAGE NUMBER		SIZE		DRAWING NO.		REV.			
MAX SURFACE ROUGHNESS		D		78-5100-2437-1		J		SHT 2 OF 5			
ALL SURFACES		MODEL		452		LISTS		YES NO		SHT 2 OF 5	
MARKED ONLY		ANGLES		±		YES NO		SHT 2 OF 5		SHT 2 OF 5	

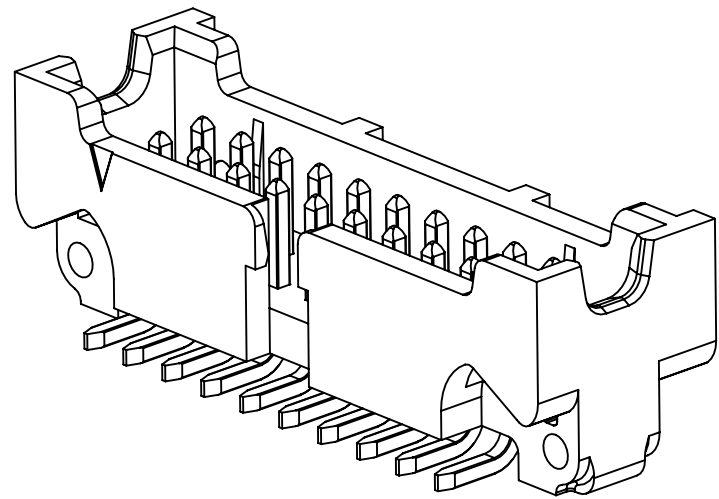
3M™ SHROUDED BOARDMOUNT HEADER, 1.27mm (0.050") PITCH
LATCH AND EJECT, 452 SERIES



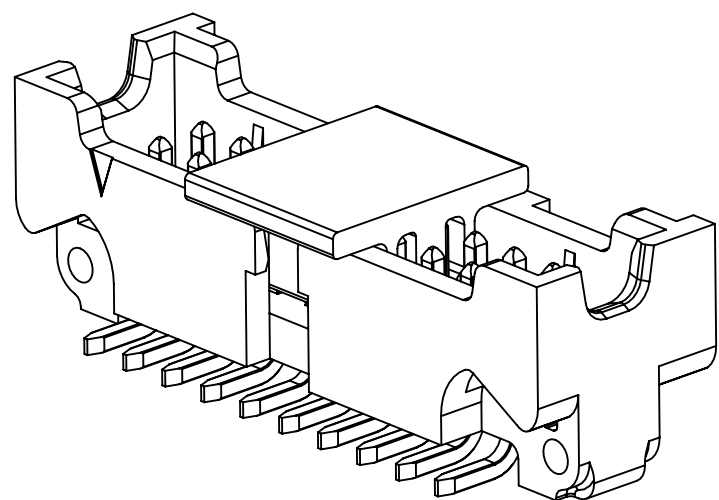
SURFACE MOUNT, VERTICAL



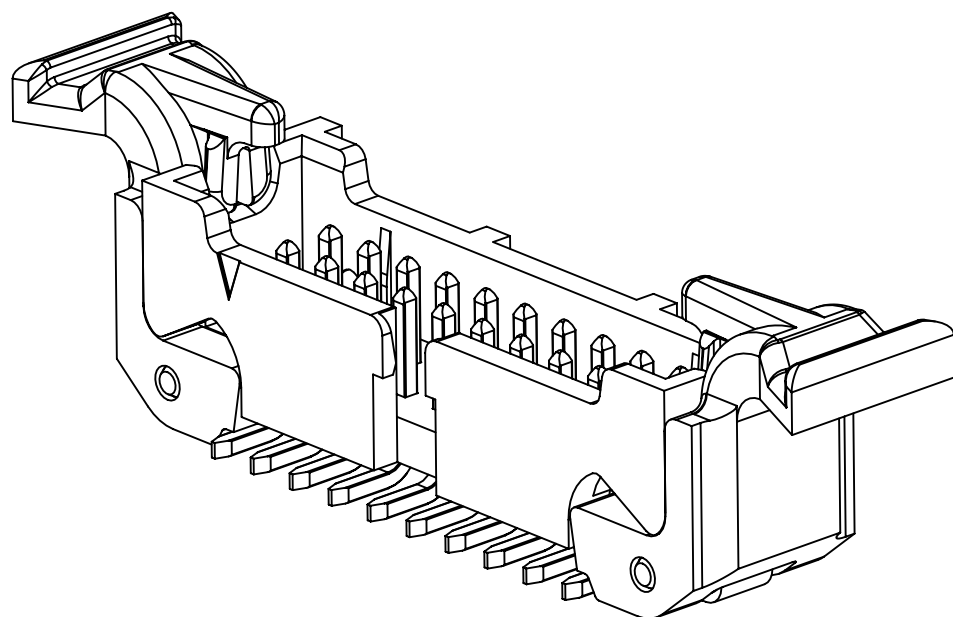
RECOMMENDED BOARD LAYOUT



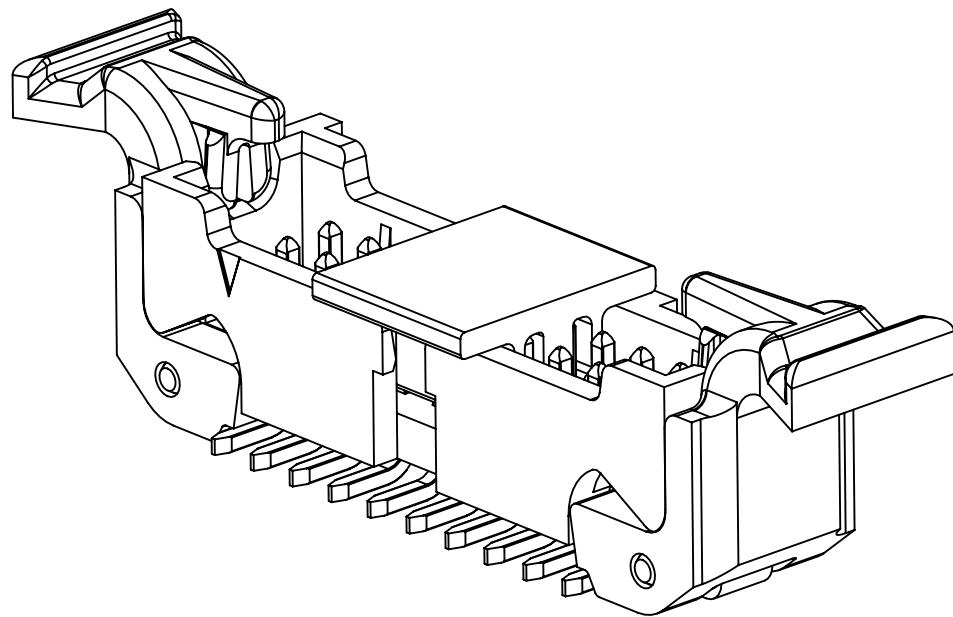
SHROUDED SMT HEADER



WITH VACUUM CAP



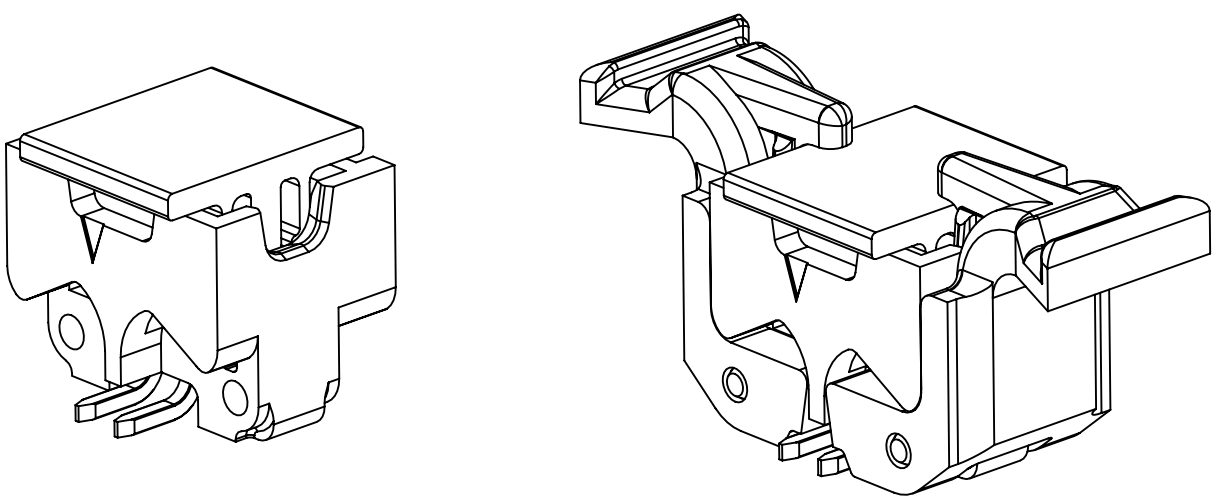
WITH LATCH/EJECT



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

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



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

78-5100-2436-3 78-5100-2396-9		DESIGN REFERENCE		NEXT ASSEMBLY	
XREF CODES		DIVISION		DIVISION CODE	
DO NOT SCALE DRAWING		SCALE 6/1		TOLERANCES EXCEPT AS NOTED	
THIRD ANGLE PROJECTION		INTERPRET PER ASME Y14.5 - 2018		MAX. SURFACE ROUGHNESS	
ALL SURFACES MARKED ONLY		CAGE NUMBER		DRAWING NO.	
MODEL 452		REV. J		SHT 3 OF 5	

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

REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
ARM	PRC	NOV 29, 2012	NOV 29, 2012	NOV 29, 2012
SAN	SAN	NOV 29, 2012	NOV 29, 2012	NOV 29, 2012
3M Center St. Paul, MN 55144				
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TITLE SHROUDED BMT HEADER, .05 X .05 PITCH, L/E, 452 SERIES				
CAGE NUMBER	SIZE	DRAWING NO.	REV.	
D	78-5100-2437-1	J		
MODEL	452	DET	LISTS	YES NO
SHT 3 OF 5				

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

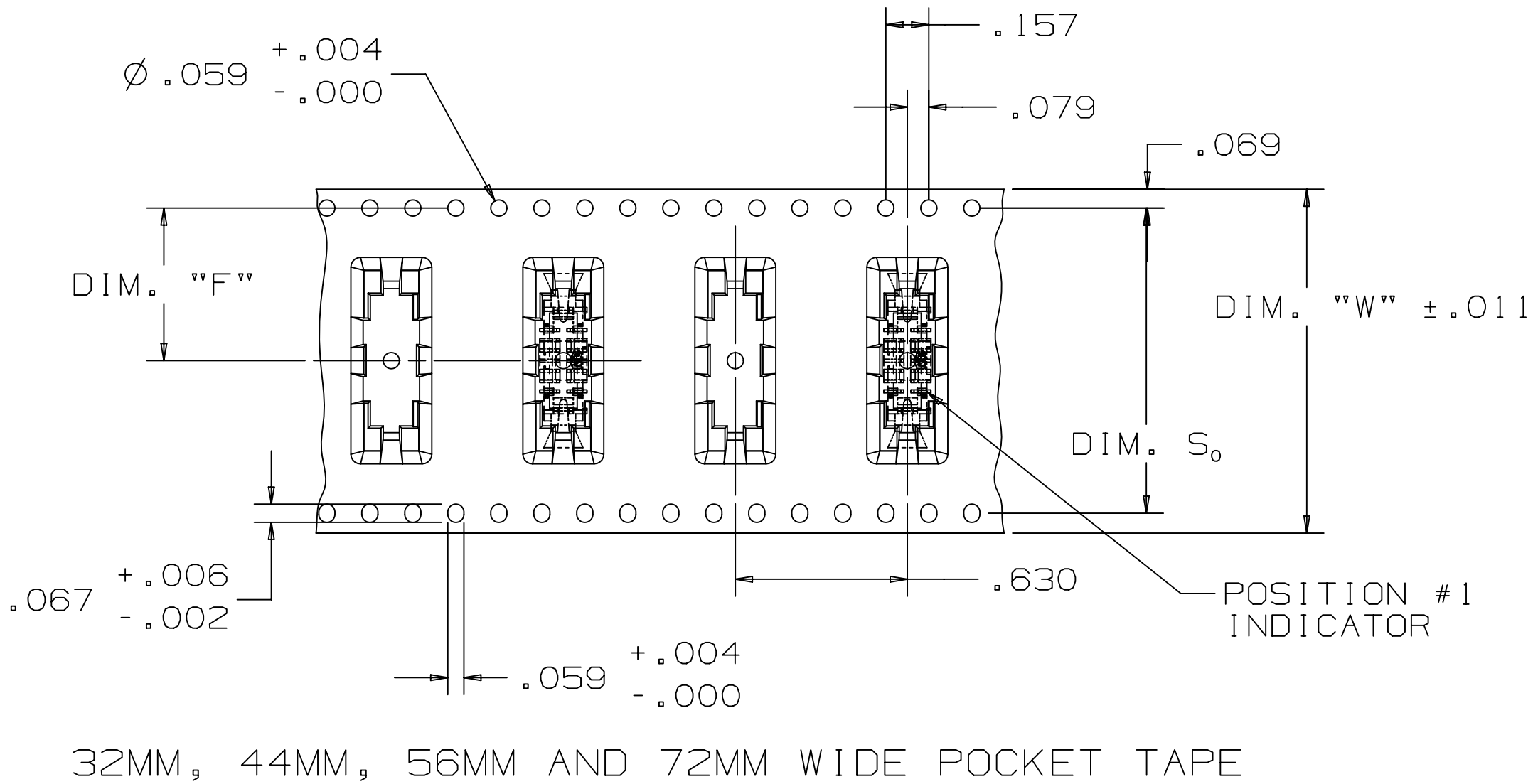
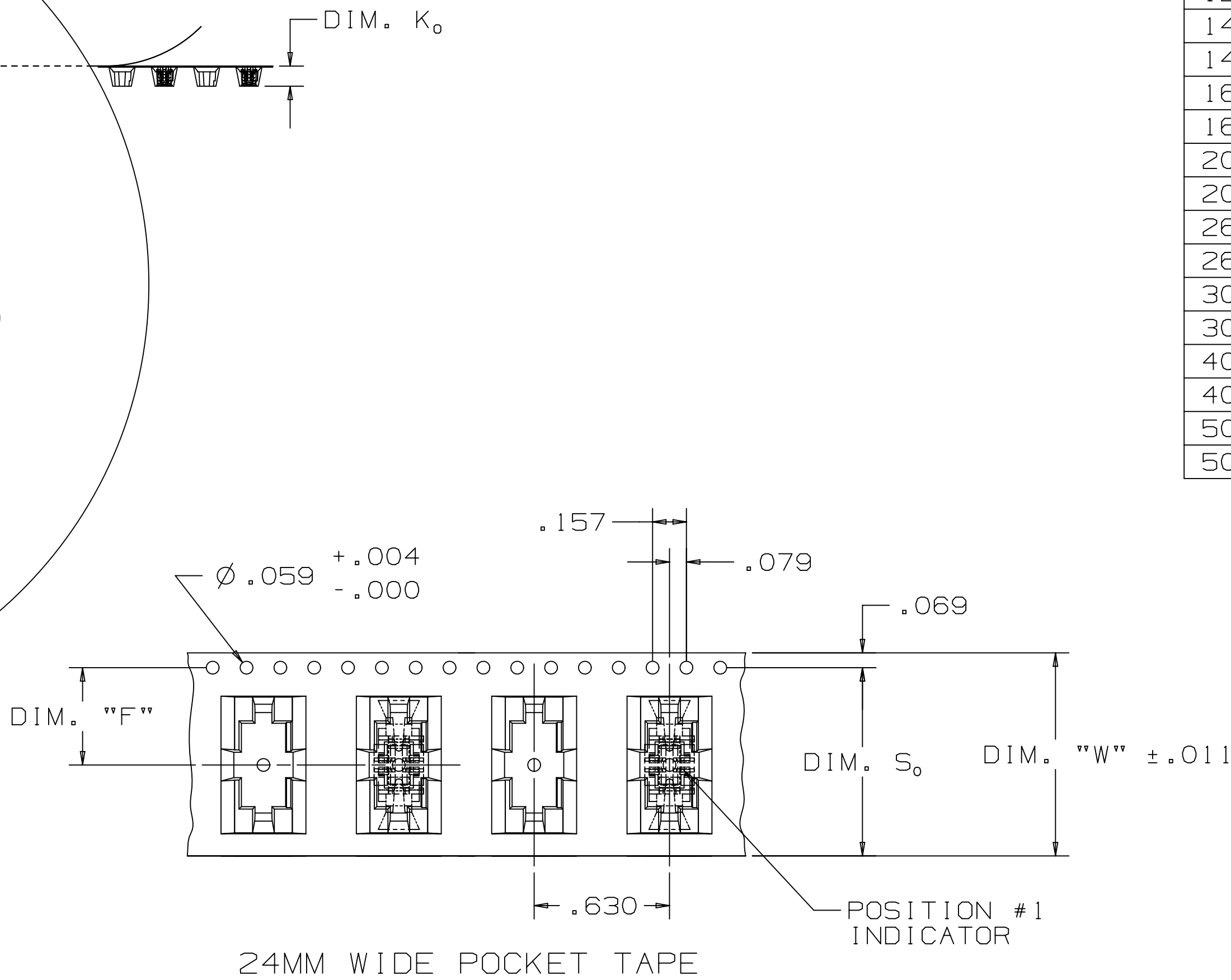
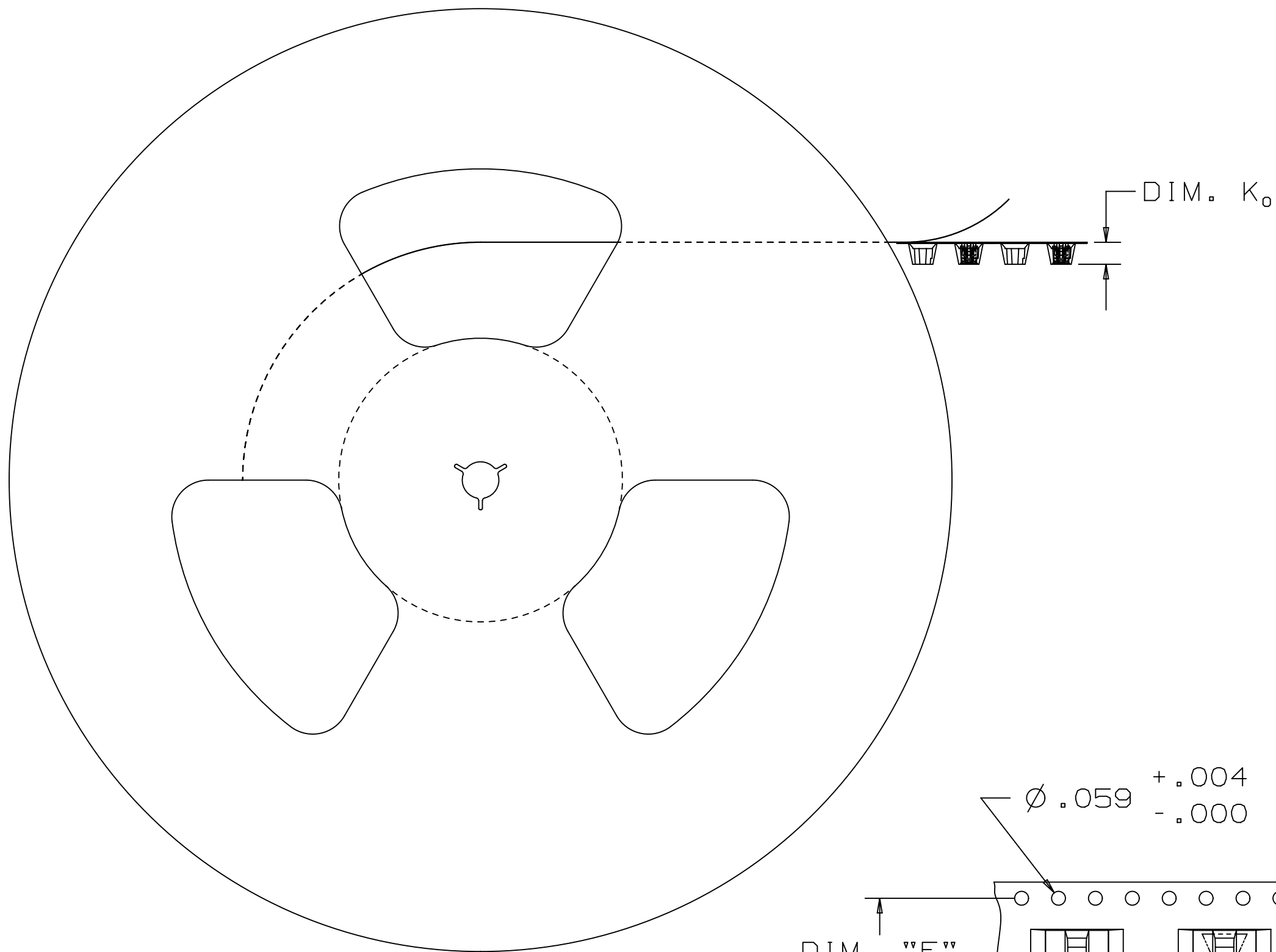
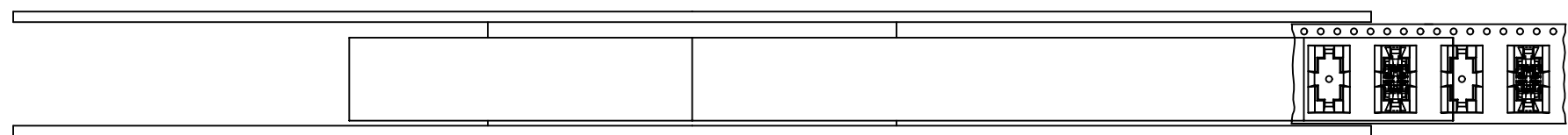


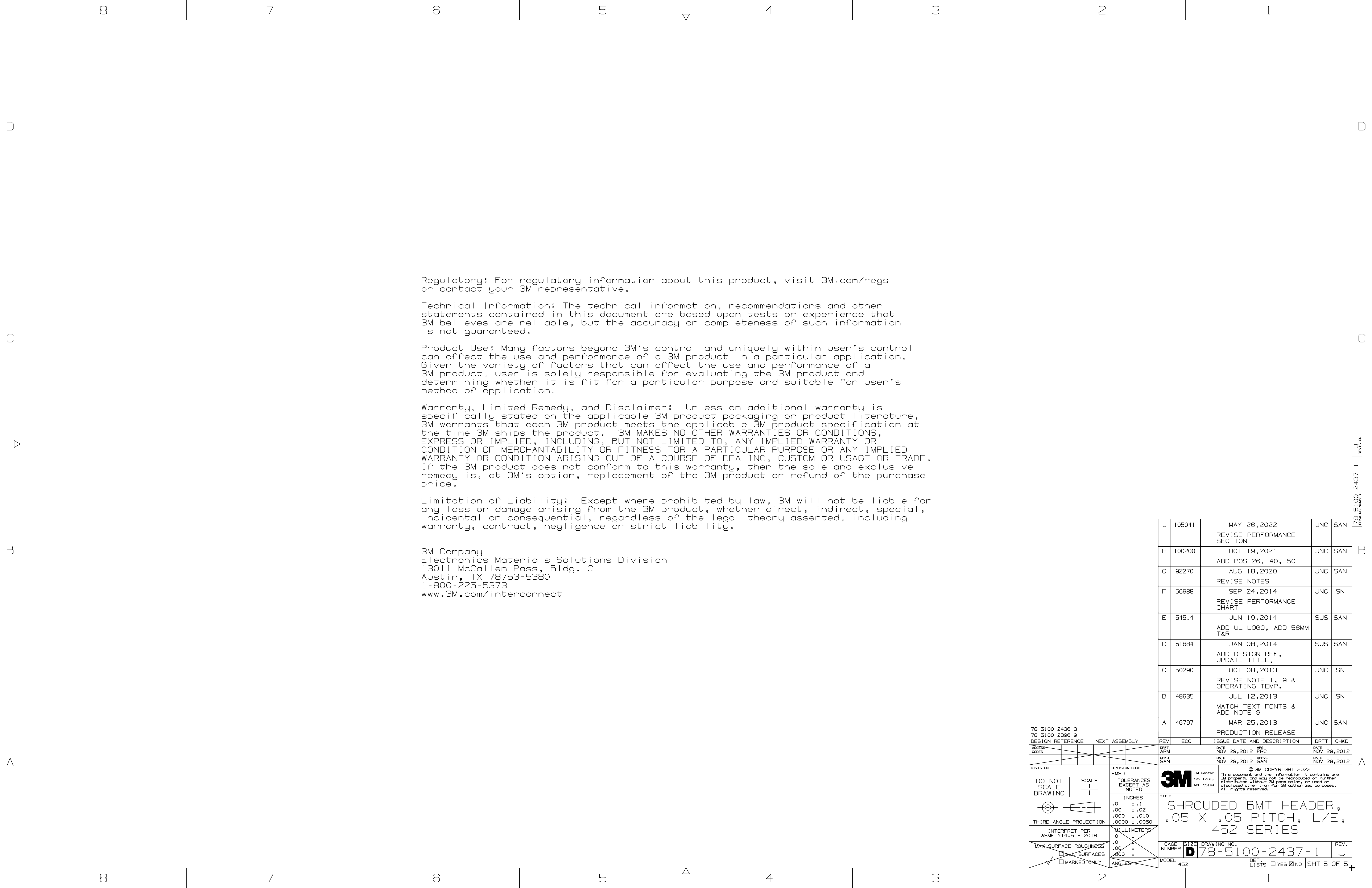
TABLE 2
TAPE AND REEL PACKAGING FOR SURFACEMOUNT HEADERS

POS	LATCHES	DIM. "F"	DIM. K ₀	DIM. S ₀	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.

78-5100-2436-3 78-5100-2396-9		NEXT ASSEMBLY	
DESIGN REFERENCE		NEXT ASSEMBLY	
DO NOT SCALE DRAWING	SCALE 1	TOLERANCES EXCEPT AS NOTED	
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 2018	MILLIMETERS	
MAX. SURFACE ROUGHNESS	ALL SURFACES	MARKED ONLY	
CAGE NUMBER		DRAWING NO.	
D78-5100-2437-1		J	
MODEL		452	

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
REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD	
DRFT	ARM	DATE NOV 29, 2012	PRC	DATE NOV 29, 2012	
CHKD	SAN	DATE NOV 29, 2012	APRVL	DATE NOV 29, 2012	
DIVISION		DIVISION CODE			
		EMSD			
DO NOT SCALE DRAWING		SCALE 1		TOLERANCES EXCEPT AS NOTED	
THIRD ANGLE PROJECTION		INTERPRET PER ASME Y14.5 - 2018		MILLIMETERS	
MAX. SURFACE ROUGHNESS		ALL SURFACES		MARKED ONLY	
CAGE NUMBER		DRAWING NO.		REV.	
D78-5100-2437-1		J			
MODEL		452		LISTS	
		YES		NO	
		SHT 4 OF 5			



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

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TITLE				
SHROUDED BMT HEADER,				
.05 X .05 PITCH, L/E,				
452 SERIES				
CAGE NUMBER	SIZE	DRAWING NO.	REV.	
D		78-5100-2437-1	J	
MODEL	452	DET	LISTS	YES ☐ NO ☒ SHT 5 OF 5