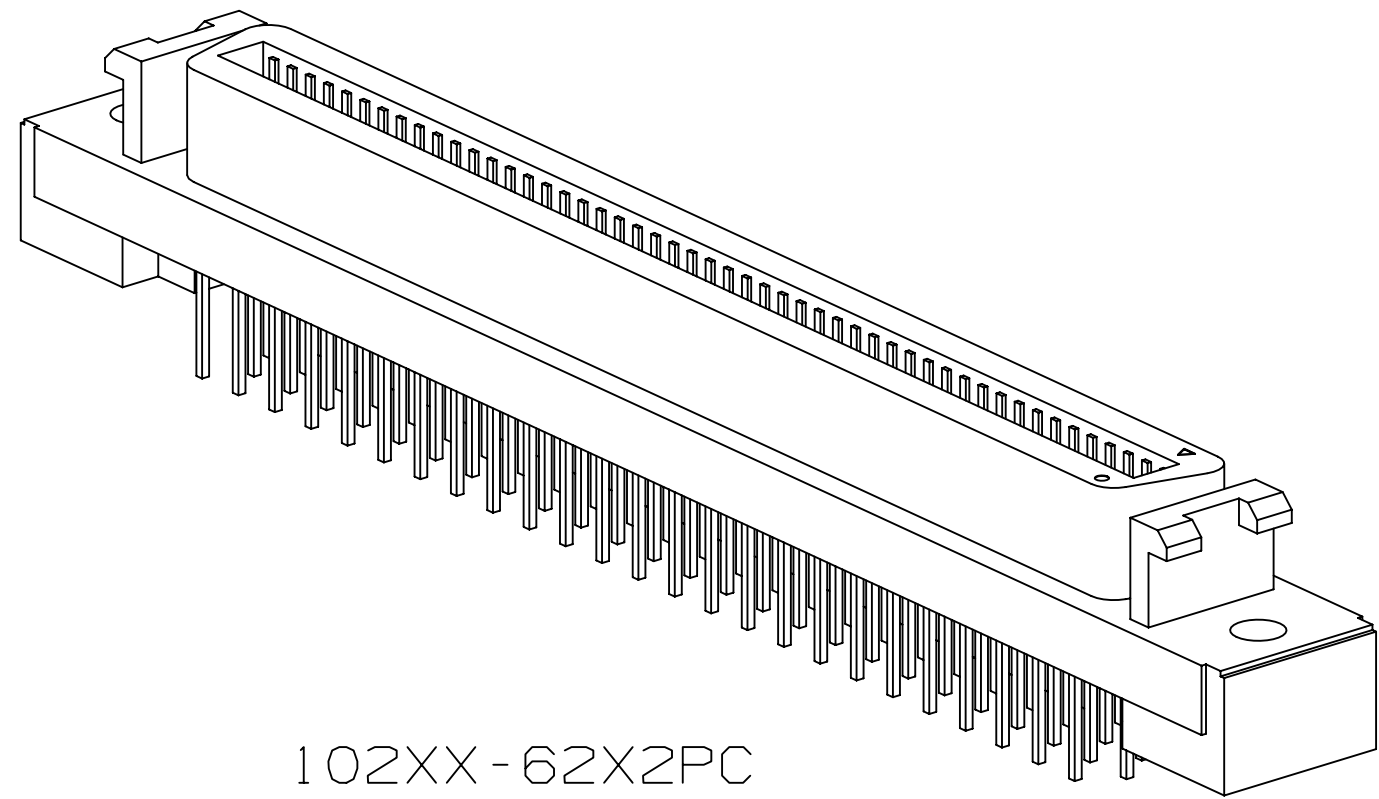




THE DATASHEET OF 10220-6212PL

3M™ MINI D RIBBON (MDR) CONNECTORS, 102 SERIES
.050" BOARDMOUNT THROUGH-HOLE VERTICAL RECEPTACLE - SHIELDED



102XX-62X2PC

2 PHYSICAL :

INSULATOR:
MATERIAL: GLASS FILLED POLYESTER (PBT) OR
GLASS FILLED POLYESTER (PCT) -
HIGH TEMP OPTION - SEE ORDERING INFORMATION
FLAMMABILITY: UL94V-0
COLOR: BLACK (PBT) OR BEIGE (PCT) - HIGH TMP - SEE ORDERING INFO.
CONTACT:
MATERIAL: COPPER ALLOY
PLATING:
UNDER PLATING: 100µ" [2.54µm] AVG. NICKEL-OVERALL
WIPING AREA: 30µ" [0.76µm] MIN. GOLD
SOLDER TAILS: GOLD FLASH OVER NICKEL
BODY:
MATERIAL: ZINC ALLOY
PLATING: NICKEL
SHROUD & LATCH HOOK:
MATERIAL: STEEL
PLATING: NICKEL
MARKINGS: 3M LOGO AND PART NUMBER

2 ELECTRICAL :

CURRENT RATING: 1A
INSULATION RESISTANCE: >5 X 10⁹Ω AT 500 V_{DC}
WITHSTANDING VOLTAGE: 500V_{RMS} FOR 1 MINUTE

2 ENVIRONMENTAL :

TEMPERATURE RATING: -55°C TO +85°C
PBT INSULATOR PROCESS RATING: SOLDER DIP TEST -260°C FOR 10 SEC.,
2 TIMES AFTER 100°C MAX. PREHEAT, 60 SEC.
MAX. DURATION.
PCT INSULATOR PROCESS RATING: HIGH TEMP. OPTION: 260°C (PROFILE PER J-STD-020C)

ORDERING INFORMATION

X 102XX-62X2PC

BLANK = STAND, PBT INSULATOR
N = HIGH TEMP. OPTION, PCT INSULATOR

CONTACT QTY.
A0 = 100 POS.
(SEE TABLE)

LOCKSTAND THREAD
0 = M2.6 (SPECIAL)
1 = M2.5 (STANDARD)

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UL
UL FILE NO: E68080

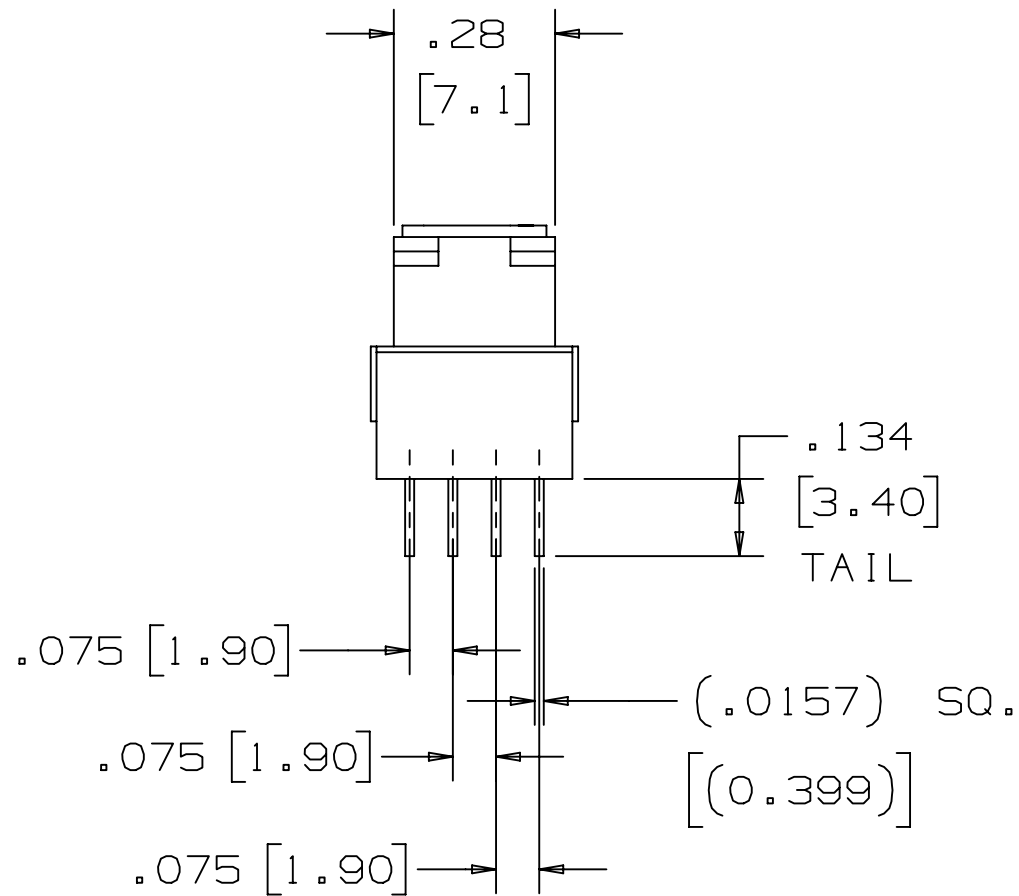
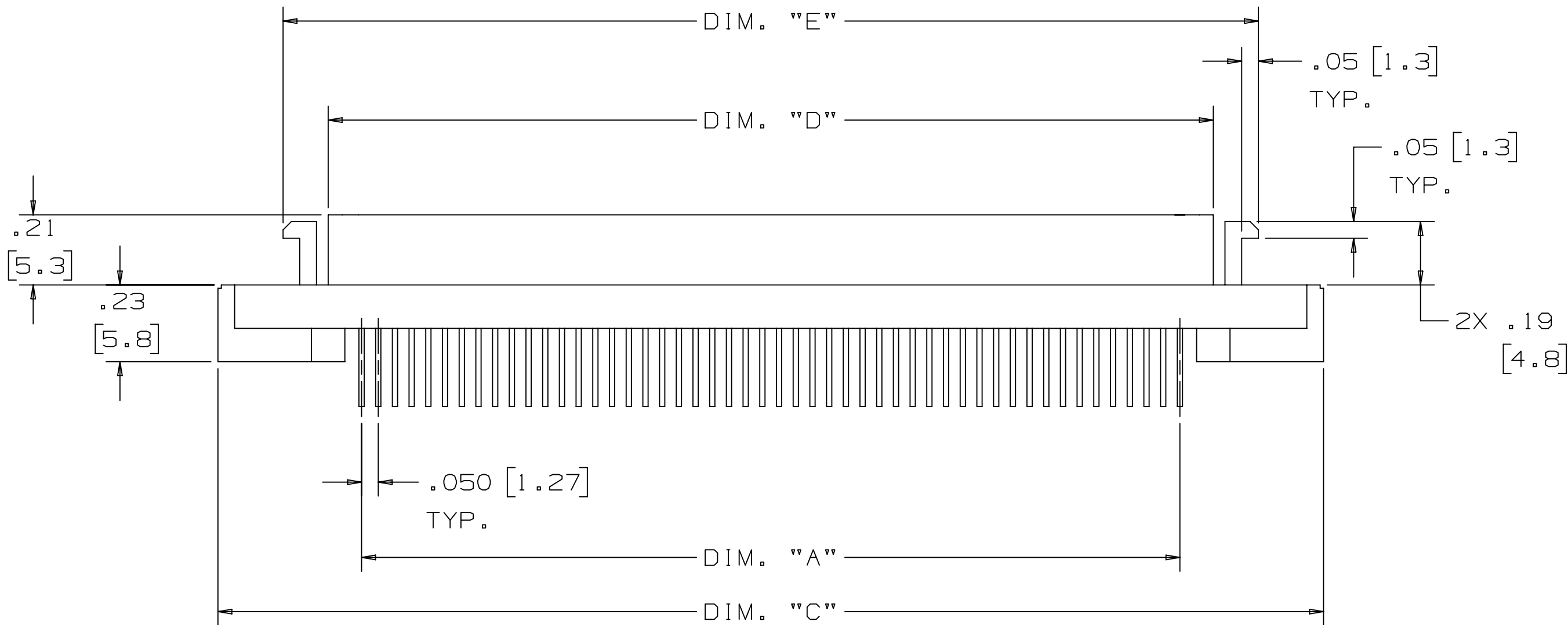
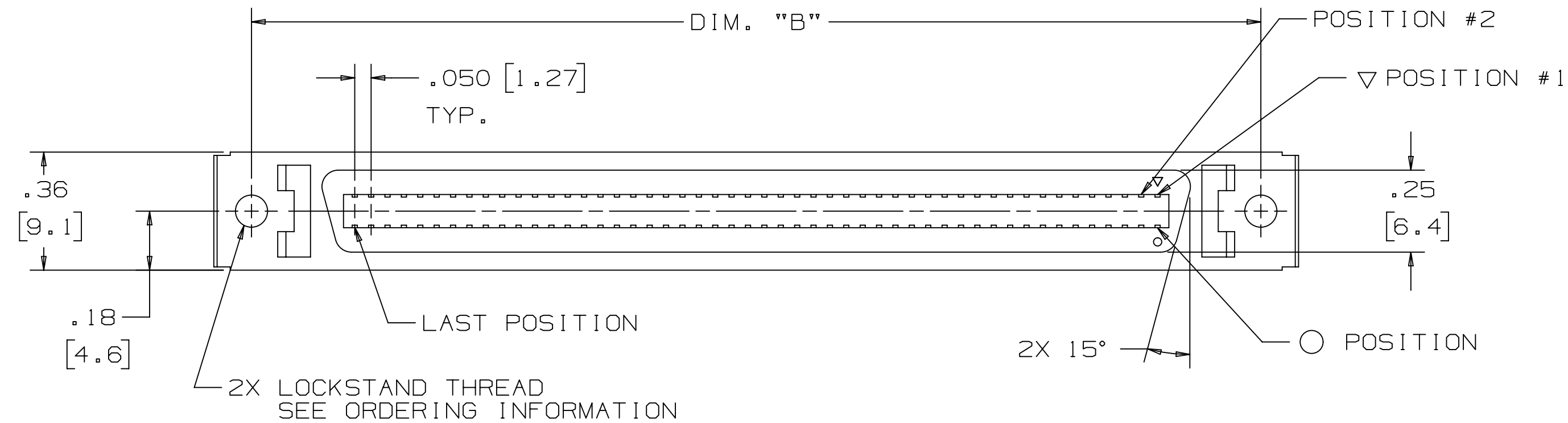
DIMENSIONS: INCHES [MM]
[MM] IS FOR REF. ONLY

DESIGN REFERENCE		NEXT ASSEMBLY	
XXXXXX	CODES		
DIVISION		DIVISION CODE	
DO NOT SCALE DRAWING		TOLERANCES EXCEPT AS NOTED	
THIRD ANGLE PROJECTION		INTERPRET PER ASME Y14.5 - 2018	
MAX. SURFACE ROUGHNESS		ALL SURFACES	
MARKED ONLY		ANGLES	

C	105842	JUL 13,2022	JNC	FJR
B	16859	NOV 26,2022	BAC	ARM
A	16859	MAR 05,2007	BAC	DFC
REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
DRFT	CAS	IGL	ONE	
CHKD		DATE	DATE	DATE
		JUL 13,2022	JUL 13,2022	JUL 13,2022
		APPR	F. RODRIGUEZ	
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MDR CONN, SHIELDED, .050" BMT THRU-HOLE VERT RECEPTACLE				
CAGE NUMBER	SIZE	DRAWING NO.	REV.	
D	102	78-5100-0427-4	C	
MODEL	102	DET	LISTS	YES
		NO	SHT	1 OF 4

3M™ MINI D RIBBON (MDR) CONNECTORS, 102 SERIES
.050" BOARDMOUNT THROUGH-HOLE VERTICAL RECEPTACLE - SHIELDED

TABLE 1					
CONTACT QTY.	DIM. "A"	DIM. "B"	DIM. "C"	DIM. "D"	DIM. "E"
14	.300 [7.62]	.93 [23.6]	1.16 [29.5]	.50 [12.6]	.77 [19.5]
20	.450 [11.43]	1.08 [27.5]	1.31 [33.4]	.65 [16.4]	.92 [23.4]
26	.600 [15.24]	1.23 [31.3]	1.46 [37.2]	.80 [20.2]	1.07 [27.2]
36	.850 [21.59]	1.48 [37.6]	1.71 [43.5]	1.05 [26.6]	1.32 [33.5]
40	.950 [24.13]	1.58 [40.2]	1.81 [46.1]	1.15 [29.1]	1.42 [36.1]
50	1.200 [30.48]	1.83 [46.5]	3.06 [52.4]	1.40 [35.5]	1.67 [42.4]
68	1.650 [41.91]	2.28 [57.9]	2.51 [63.8]	1.85 [46.9]	2.12 [53.8]
80	1.950 [49.53]	2.58 [65.6]	2.81 [71.5]	2.15 [54.5]	2.42 [61.5]
100	2.540 [62.23]	3.08 [78.3]	3.31 [84.2]	2.65 [67.2]	2.92 [74.2]



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DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
XXXXXX	XXXXXX	DRFT	C	CASTIGLIONE	DATE	DATE
XXXXXX	XXXXXX	CHKD		DATE	DATE	DATE
DIVISION	DIVISION CODE	© 3M COPYRIGHT 2022				
DO NOT SCALE DRAWING	SCALE 3/1	TOLERANCES EXCEPT AS NOTED				
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 2018	INCHES .00 ± .01 .000 ± .005 .0000 ± .0002				
MAX. SURFACE ROUGHNESS	ALL SURFACES	MILLIMETERS 0 ± .00 ± .000				
MARKED ONLY	ANGLES	CAGE NUMBER D78-5100-0427-4				
		MODEL 102		REV. C		

C	105842	JUL 13, 2022	JNC	FJR
B	16859	NOV 26, 2022	BAC	ARM
A	16859	MAR 05, 2007	BAC	DFC
REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
DRFT	C	CASTIGLIONE	DATE	DATE
CHKD		DATE	DATE	DATE

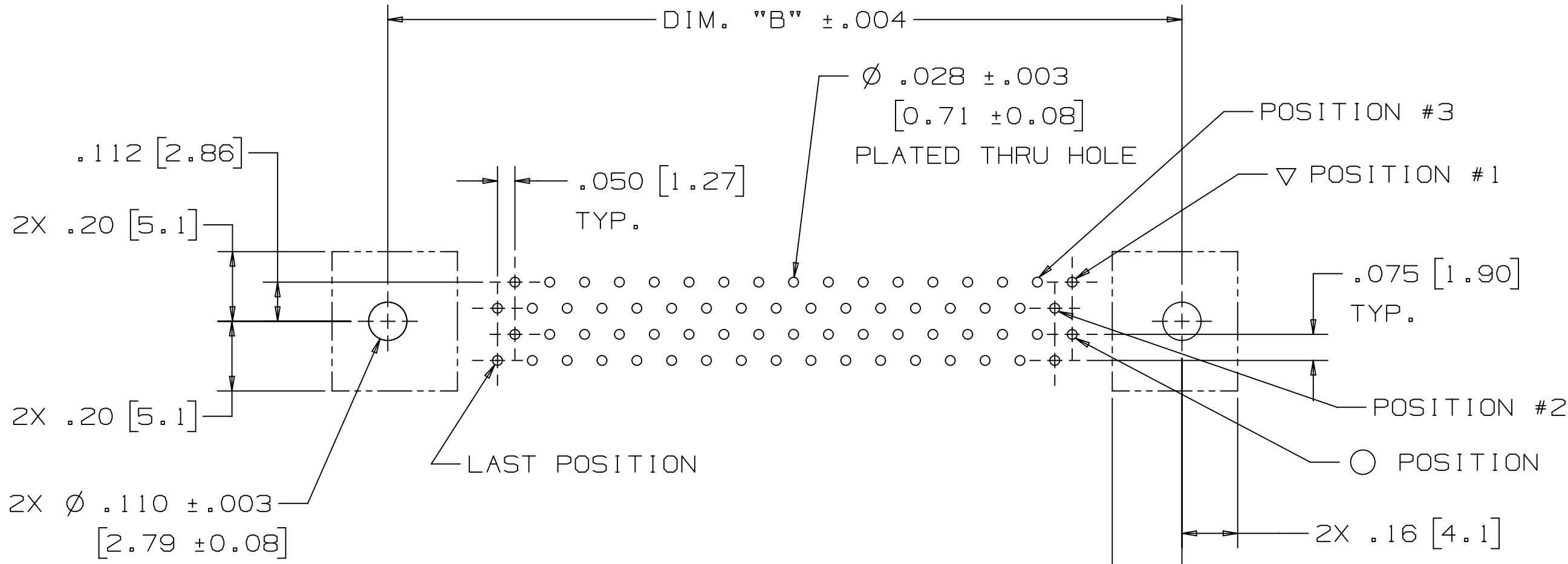
3M Center St. Paul, MN 55144

MDR CONN, SHIELDED, .050" BMT THRU-HOLE VERT RECEPTACLE

LISTS YES NO SHT 2 OF 4

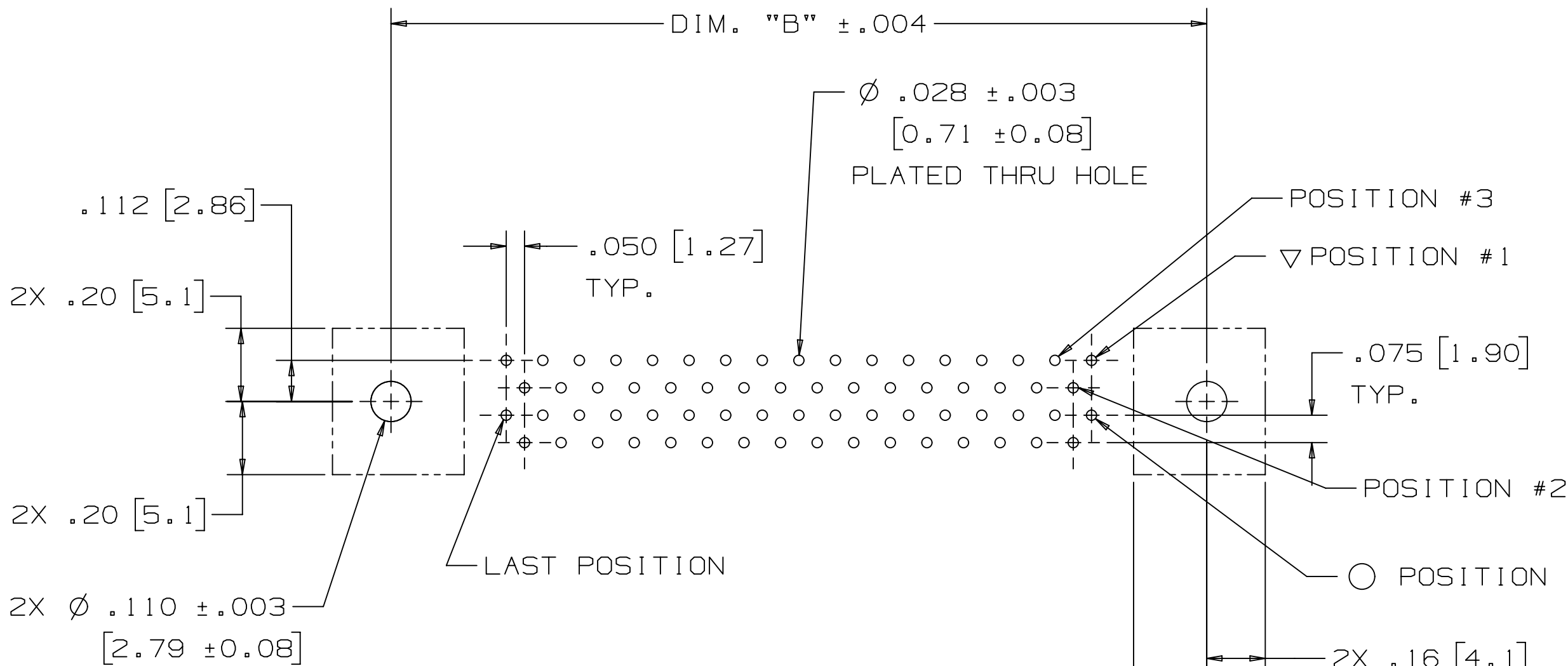
3M™ MINI D RIBBON (MDR) CONNECTORS, 102 SERIES
.050" BOARDMOUNT THROUGH-HOLE VERTICAL RECEPTACLE - SHIELDED

TABLE 2		
CONTACT QTY.	DIM. "A"	DIM. "B"
20	.450 [11.43]	1.081 [27.45]
36	.850 [21.59]	1.481 [37.61]
40	.950 [24.13]	1.581 [40.15]
68	1.650 [41.91]	2.281 [57.93]
80	1.950 [49.53]	2.581 [65.55]
100	2.450 [62.23]	3.081 [78.25]



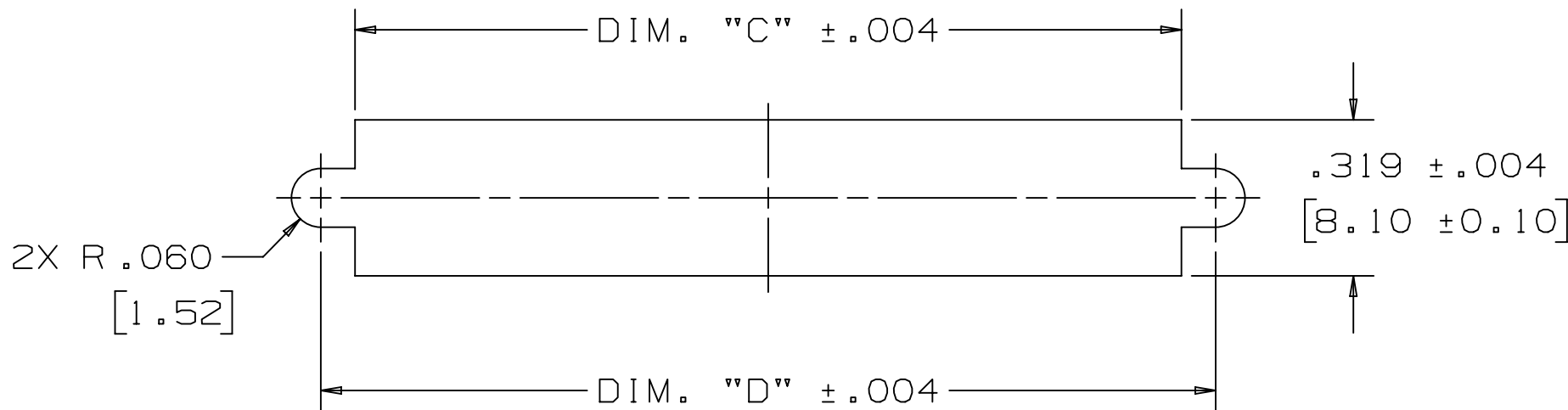
RECOMMENDED BOARD LAYOUT
(VIEWED FROM CONNECTOR SIDE)
POSITIONS ONLY: 20, 36, 40, 68, 80 AND 100
SEE TABLE 2

TABLE 3		
CONTACT QTY.	DIM. "A"	DIM. "B"
14	.300 [7.62]	.931 [23.64]
26	.600 [15.24]	1.231 [31.26]
50	1.200 [30.48]	1.831 [46.50]



RECOMMENDED BOARD LAYOUT
(VIEWED FROM CONNECTOR SIDE)
POSITIONS ONLY: 14, 26 AND 50
SEE TABLE 3

TABLE 4		
CONTACT QTY.	DIM. "C"	DIM. "D"
14	.78 [20.0]	.93 [23.64]
20	.94 [23.8]	1.08 [27.45]
26	1.09 [27.6]	1.23 [31.26]
36	1.33 [33.9]	1.48 [37.61]
40	1.44 [36.5]	1.58 [40.15]
50	1.69 [42.8]	1.83 [46.50]
68	2.13 [54.2]	2.28 [57.93]
80	2.44 [61.9]	2.58 [65.55]
100	2.94 [74.6]	3.08 [78.25]



RECOMMENDED PANEL CUT-OUT
NOTE: PANEL THICKNESS: .079 [2.00] MAX.
SEE TABLE 4

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NOTES	
1.	RECOMMENDED PC BOARD THICKNESS OF .062".

DESIGN REFERENCE		NEXT ASSEMBLY		REV	ECO	ISSUE DATE AND DESCRIPTION		DRFT	CHK
ACCESS CODES				REF	CST	1	GL	ONE	
				DATE	JUL 13, 2022		MPG	DATE	
				CHD	DATE		APPR	DATE	
						F. RODRIGUEZ		JUL 13, 2022	
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		INCHES 0.0 ±.1 .00 ±.01 0.00 ±.005 0.000 ±.0002		MDR CONN., SHIELDED, 050" BMT THRU-HOLE VERT RECEPTACLE					
THIRD ANGLE PROJECTION		MILLIMETERS 0 ±.1 .00 ±.01 0.00 ±.005 0.000 ±.0002		CAGE NUMBER		SIZE		DRAWING NO.	
INTERPRET PER ASME Y14.5 - 2018		MAX. SURFACE ROUGHNESS		102		5		78-5100-0427-4	
☒ ALL SURFACES		☐ MARKED ONLY		MODEL		DET.		REV.	
						LISTS		YES ☐ NO ☐	
								SHT 3 OF	

3M™ MINI D RIBBON (MDR) CONNECTORS, 102 SERIES

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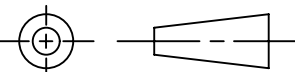
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C		105842	JUL 13,2022		JNC	FJR
B		16859	REDRAWN REVISE TEMP RATING		BAC	ARM
A		16859	NOV 26,2022 REMOVE NON-ROHS		BAC	DFC
			MAR 05,2007 PRODUCTION RELEASE			
REV		ECO	ISSUE DATE AND DESCRIPTION		DRFT	CHKD
ACCESS CODES		DRAFT CASTIGLIONE		DATE JUL 13,2022	APPR. F. RODRIGUEZ	DATE JUL 13,2022
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 THIRD ANGLE PROJECTION		INCHES .00 ±.1 .00 ±.01 .000 ±.005 .0000 ±.0002		TITLE MDR CONN, SHIELDED, 050" BMT THRU-HOLE VERT RECEPTACLE		
INTERPRET PER ASME Y14.5 - 2018		MILLIMETERS 0 ± .0 ± .00 ± .000 ±		CAGE NUMBER D 578-5100-0427-4		
MAX SURFACE ROUGHNESS ☒ ALL SURFACES ☐ MARKED ONLY		ANGLES ±		REV. C DET. DIST. ☐ YES ☒ NO SHT 4 OF 4		

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