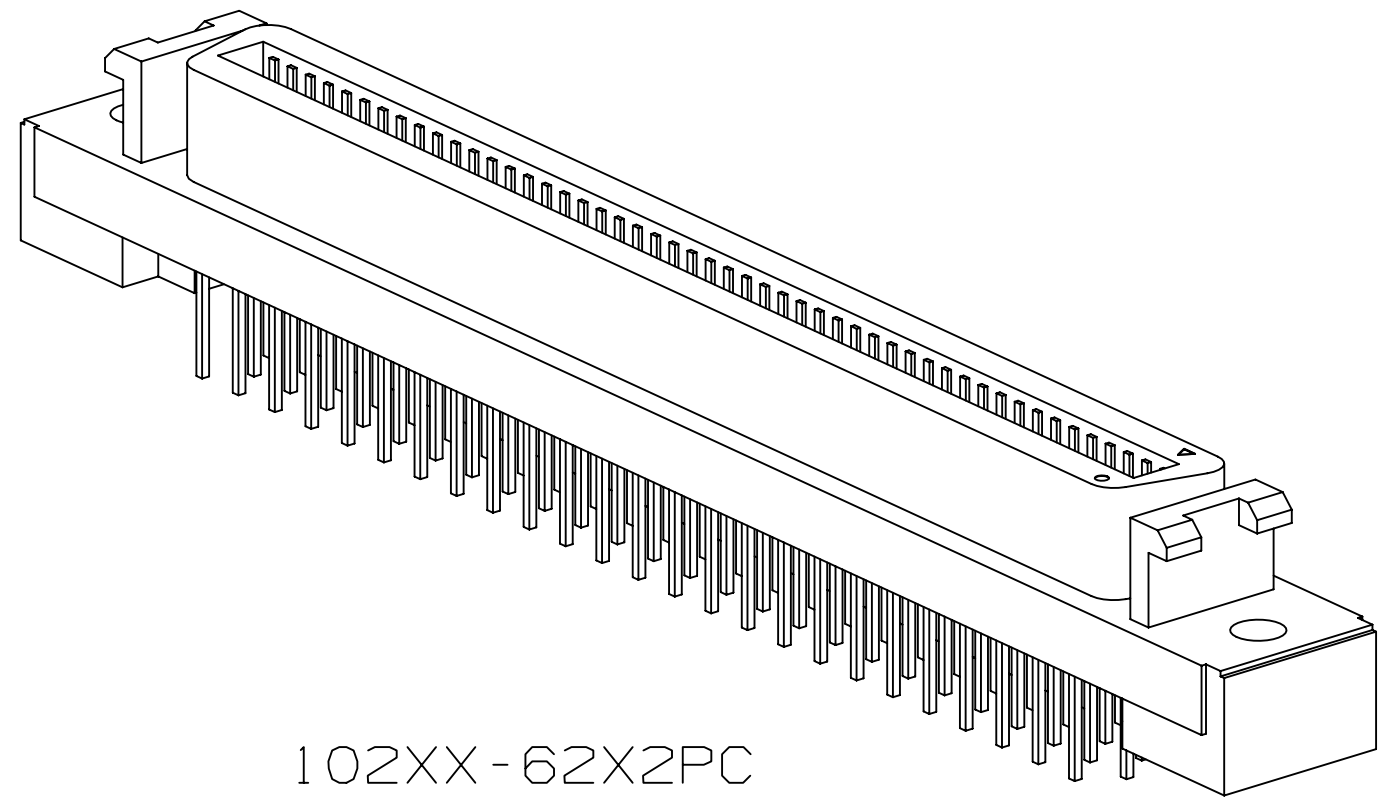


3M™ MINI D RIBBON (MDR) CONNECTORS, 102 SERIES  
.050" BOARDMOUNT THROUGHT-HOLE VERTICAL RECEPTACLE - SHIELDED



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 10<sup>9</sup>Ω AT 500 V<sub>DC</sub>  
WITHSTANDING VOLTAGE: 500V<sub>RMS</sub> 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

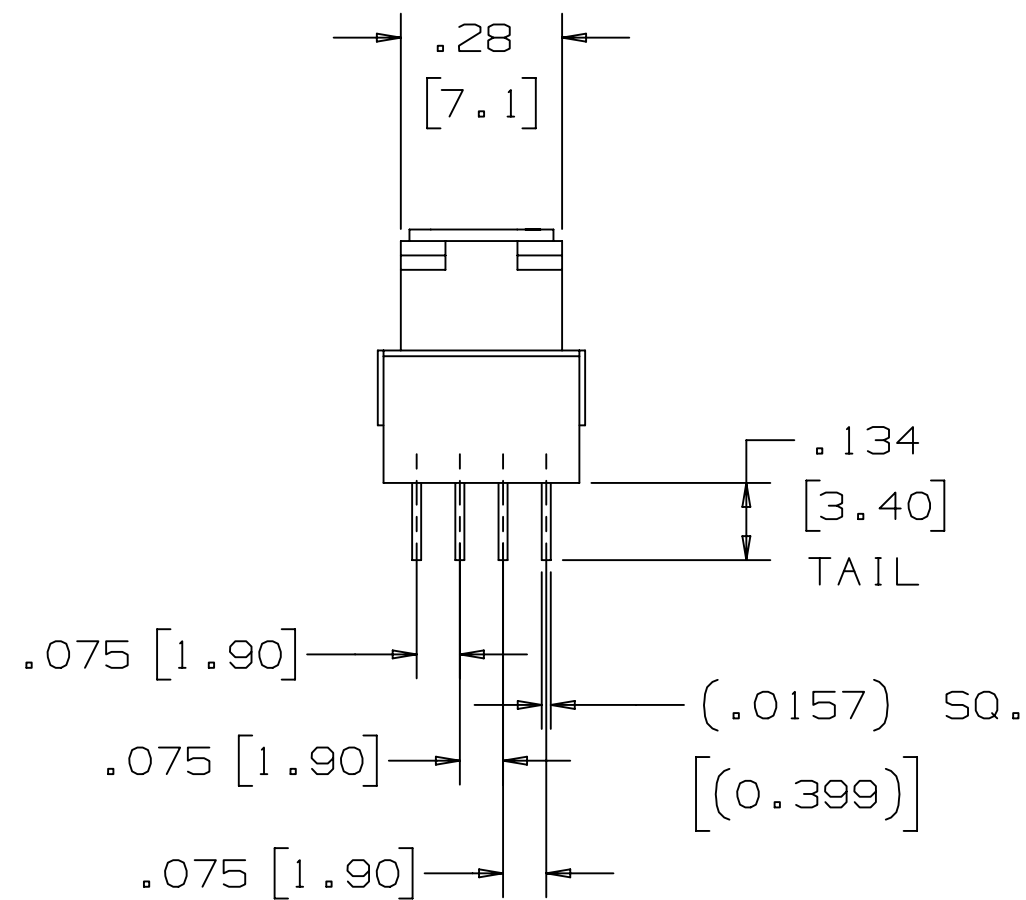
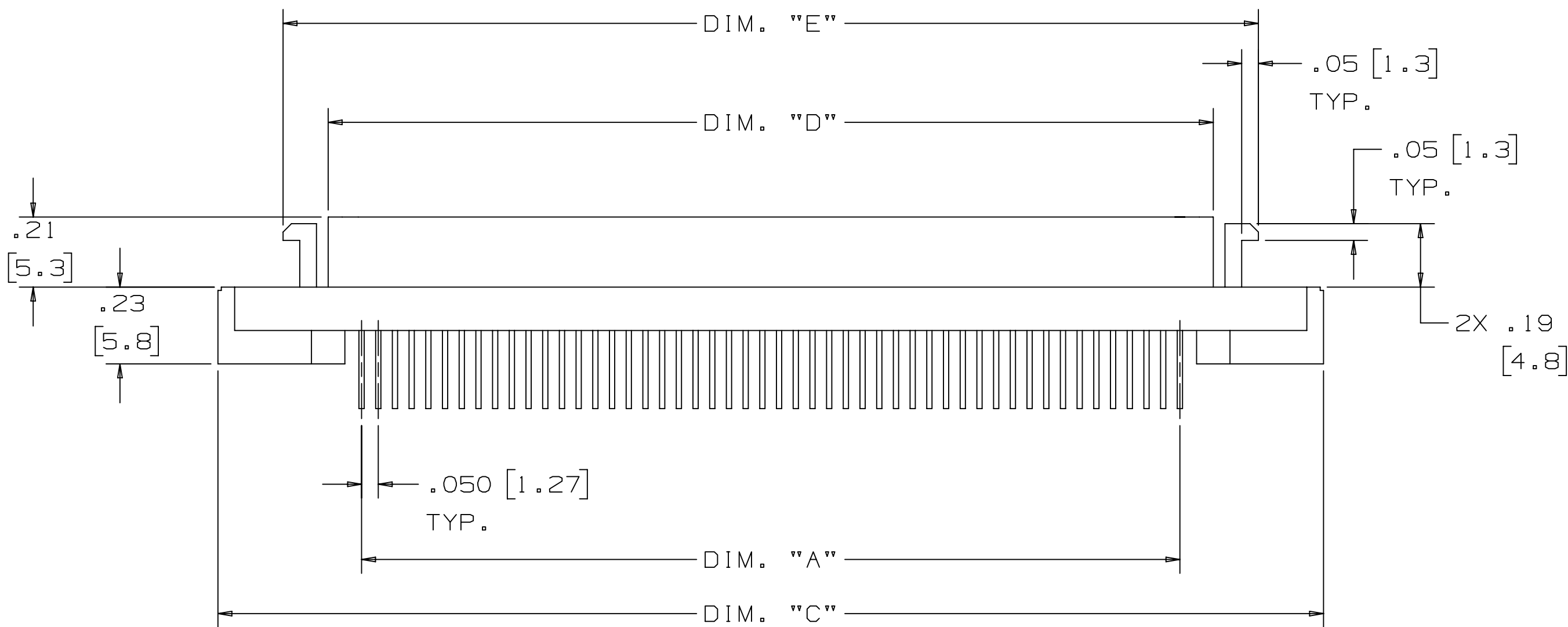
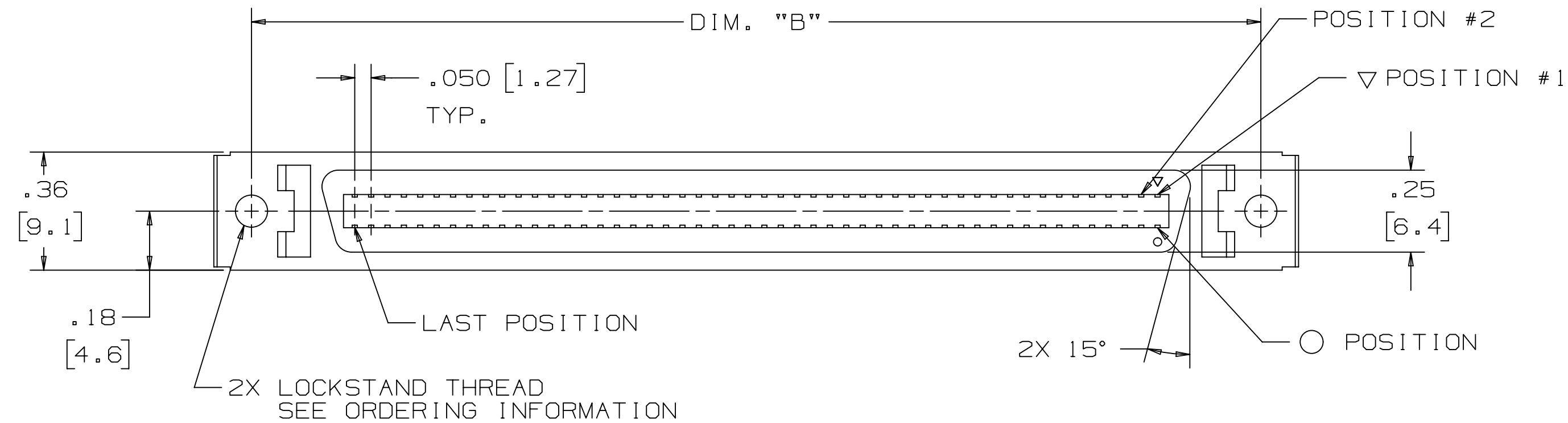
DIMENSIONS: INCHES [ MM ]  
[ MM ] IS FOR REF. ONLY

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

|                                                                                       |        |                                                                                                                                                                                                                        |              |             |      |
|---------------------------------------------------------------------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|------|
| D                                                                                     | 123358 | JUN 03,2025                                                                                                                                                                                                            |              | JNC         | FJR  |
|                                                                                       |        | REVISE TABLE 1 50P                                                                                                                                                                                                     |              |             |      |
| C                                                                                     | 105842 | JUL 13,2022                                                                                                                                                                                                            |              | JNC         | FJR  |
|                                                                                       |        | REDRAWN                                                                                                                                                                                                                |              |             |      |
|                                                                                       |        | REVISE TEMP RATING                                                                                                                                                                                                     |              |             |      |
| B                                                                                     | 16859  | NOV 26,2022                                                                                                                                                                                                            |              | BAC         | ARM  |
|                                                                                       |        | REMOVE NON-ROHS                                                                                                                                                                                                        |              |             |      |
| A                                                                                     | 16859  | MAR 05,2007                                                                                                                                                                                                            |              | BAC         | DFC  |
|                                                                                       |        | PRODUCTION RELEASE                                                                                                                                                                                                     |              |             |      |
| REV                                                                                   | ECO    | ISSUE DATE AND DESCRIPTION                                                                                                                                                                                             |              | DRFT        | CHKD |
| DRFT                                                                                  | CAS    | DATE                                                                                                                                                                                                                   | MFG          | DATE        |      |
| CASTIGLIONE                                                                           |        | JUL 13,2022                                                                                                                                                                                                            |              |             |      |
| CHKD                                                                                  |        | DATE                                                                                                                                                                                                                   | APPR         | DATE        |      |
|                                                                                       |        |                                                                                                                                                                                                                        | F. RODRIGUEZ | JUL 13,2022 |      |
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| TITLE                                                                                 |        |                                                                                                                                                                                                                        |              |             |      |
| MDR CONN, SHIELDED,<br>050" BMT THRU-HOLE<br>VERT RECEPTACLE                          |        |                                                                                                                                                                                                                        |              |             |      |
| CAGE NUMBER                                                                           | SIZE   | DRAWING NO.                                                                                                                                                                                                            |              | REV.        |      |
| D                                                                                     | 102    | 78-5100-0427-4                                                                                                                                                                                                         |              | D           |      |
| MODEL                                                                                 | 102    | DET.                                                                                                                                                                                                                   |              | YES         |      |
|                                                                                       |        | 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 ] | 2.06 [ 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 ] |



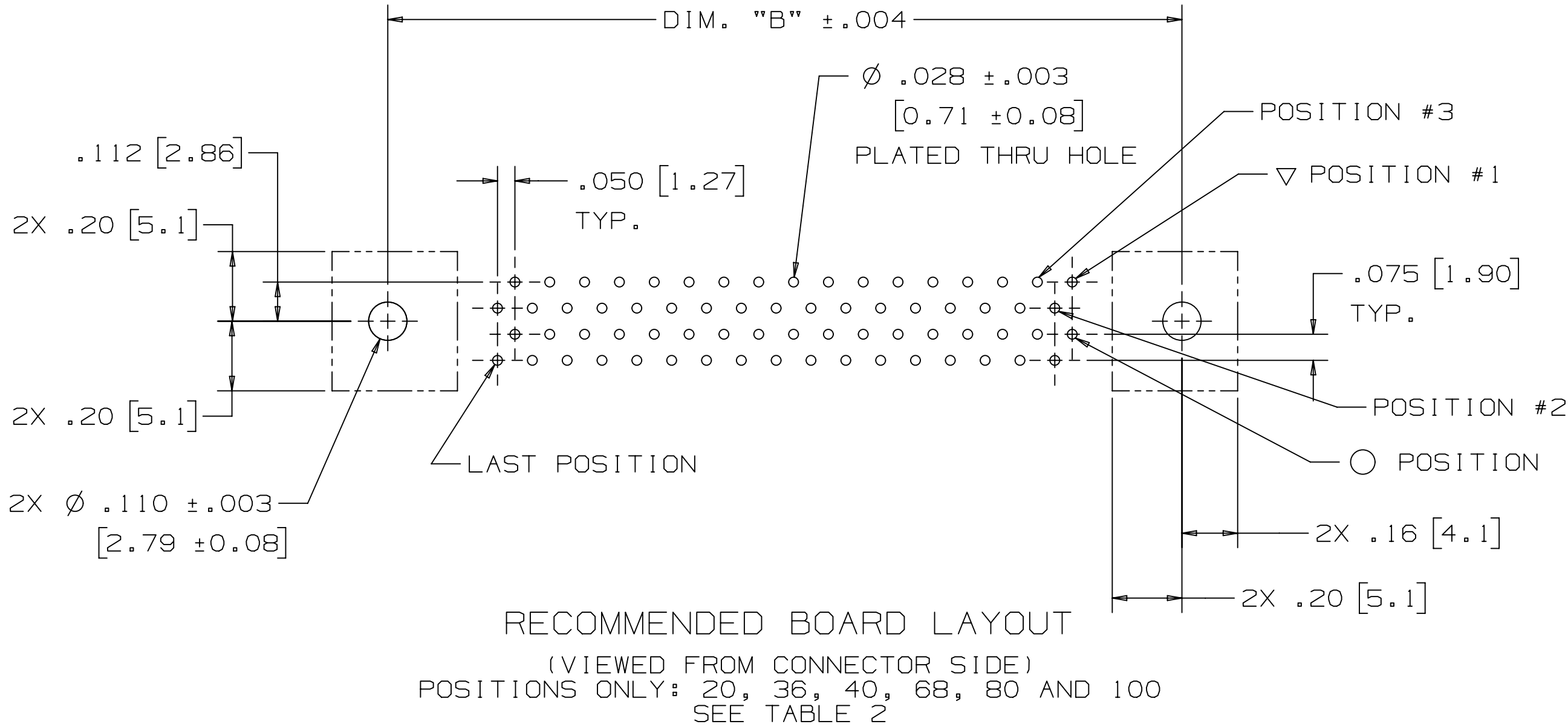
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<http://www.3M.com/interconnect>

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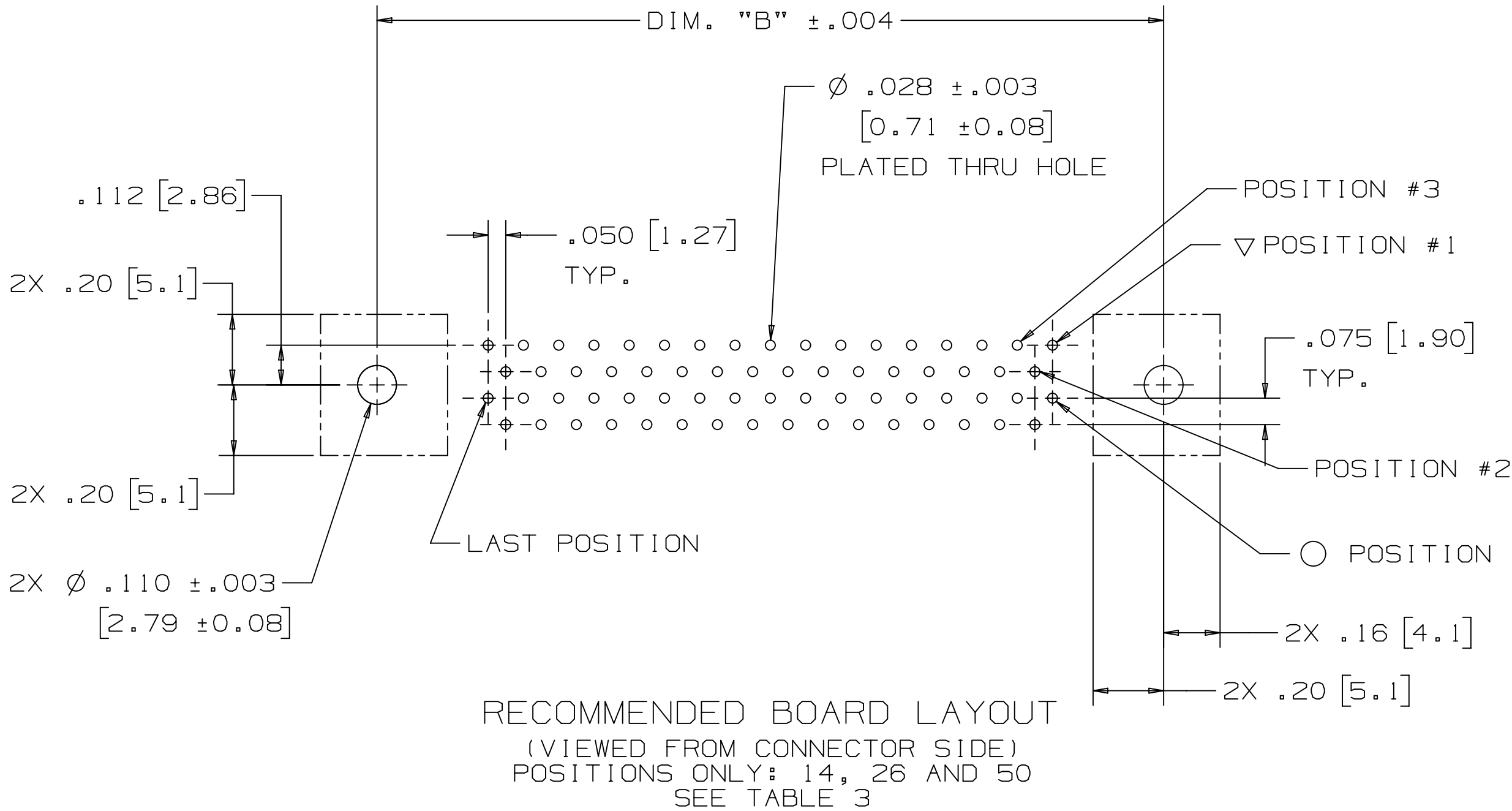
| DESIGN REFERENCE                |        | NEXT ASSEMBLY                                                                                                                                                                                                          |        |
|---------------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| XXXXXX                          | XXXXXX | XXXXXX                                                                                                                                                                                                                 | XXXXXX |
| DIVISION                        |        | DIVISION CODE                                                                                                                                                                                                          |        |
| DO NOT SCALE DRAWING            |        | DEPP                                                                                                                                                                                                                   |        |
| THIRD ANGLE PROJECTION          |        | TOLERANCES EXCEPT AS NOTED                                                                                                                                                                                             |        |
| INTERPRET PER ASME Y14.5 - 2018 |        | INCHES                                                                                                                                                                                                                 |        |
| MAX. SURFACE ROUGHNESS          |        | MILLIMETERS                                                                                                                                                                                                            |        |
| ALL SURFACES                    |        | ANGLES                                                                                                                                                                                                                 |        |
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| CAGE NUMBER                     |        | DRAWING NO.                                                                                                                                                                                                            |        |
| 102                             |        | D 78-5100-0427-4                                                                                                                                                                                                       |        |
| MODEL                           |        | REV.                                                                                                                                                                                                                   |        |
| 102                             |        | D                                                                                                                                                                                                                      |        |
| LISTS                           |        | YES                                                                                                                                                                                                                    |        |
| SHT 2 OF 4                      |        |                                                                                                                                                                                                                        |        |

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.050" BOARDMOUNT THROUGH-HOLE VERTICAL RECEPTACLE - SHIELDED

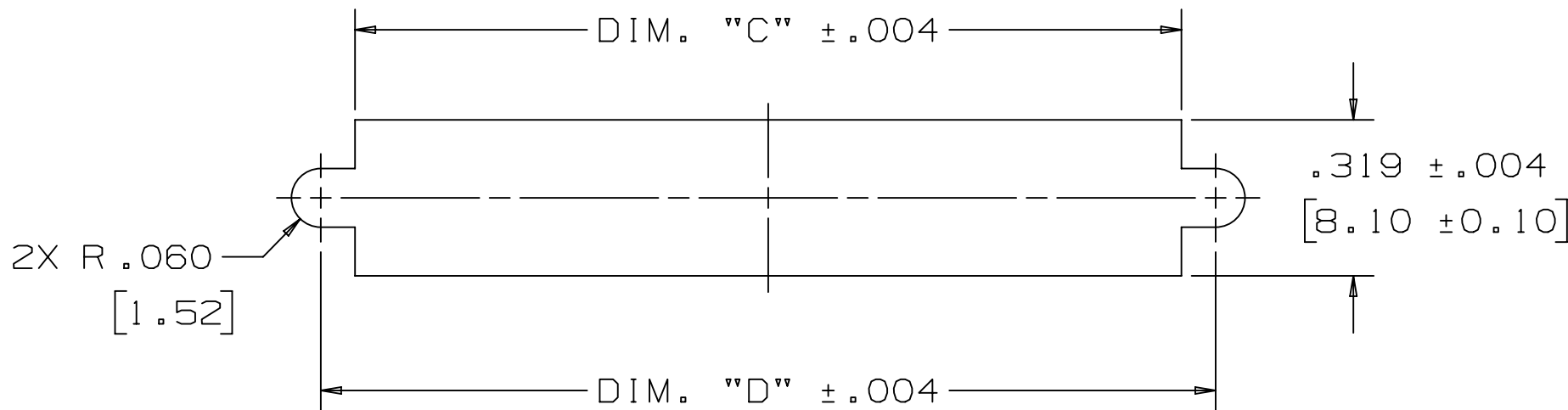
| TABLE 2      |                 |                 |
|--------------|-----------------|-----------------|
| CONTACT QTY. | DIM. "A"        | DIM. "B"        |
| 20           | .450 [ 11.43 ]  | 1.081 [ 27.45 ] |
| 36           | .850 [ 21.59 ]  | 1.481 [ 37.61 ] |
| 40           | .950 [ 24.13 ]  | 1.581 [ 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 ] |



| 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 ] |



| 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              |                                                                                |
| DESIGN CODES             |  | DIVISION CODE              | DEPP                                                                           |
| DIVISION                 |  | TOLERANCES EXCEPT AS NOTED |                                                                                |
| DO NOT SCALE DRAWING     |  | INCHES                     | .0 ±.1<br>.00 ±.01<br>.000 ±.005<br>.0000 ±.0002                               |
| THIRD ANGLE PROJECTION   |  | MILLIMETERS                | 0 ±<br>.0 ±<br>.00 ±<br>.000 ±                                                 |
| MAX. SURFACE ROUGHNESS   |  | ANGLES                     | ±                                                                              |
| ALL SURFACES MARKED ONLY |  |                            |                                                                                |
| CAGE NUMBER              |  | SIZE                       | DRAWING NO.                                                                    |
| D                        |  | 102                        | 78-5100-0427-4                                                                 |
| MODEL                    |  | LISTS                      | YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> SHT 3 OF 4 |

|      |             |                                                          |      |      |
|------|-------------|----------------------------------------------------------|------|------|
| D    | 123358      | JUN 03,2025                                              | JNC  | FJR  |
| C    | 105842      | REVISION<br>JUL 13,2022<br>REDRAWN<br>REVISE TEMP RATING | JNC  | FJR  |
| B    | 16859       | NOV 26,2022<br>REMOVE NON-ROHS                           | BAC  | ARM  |
| A    | 16859       | MAR 05,2007<br>PRODUCTION RELEASE                        | BAC  | DFC  |
| REV  | ECO         | ISSUE DATE AND DESCRIPTION                               | DRFT | CHKD |
| DRFT | CASTIGLIONE | DATE<br>JUL 13,2022                                      | DATE | DATE |
| CHKD |             | DATE<br>JUL 13,2022                                      | DATE | DATE |

|                                    |  |                                                                                                                                                                                                                        |                                                                                |
|------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
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| TITLE                              |  | MDR CONN, SHIELDED,<br>.050" BMT THRU-HOLE<br>VERT RECEPTACLE                                                                                                                                                          |                                                                                |
| CAGE NUMBER                        |  | SIZE                                                                                                                                                                                                                   | DRAWING NO.                                                                    |
| D                                  |  | 102                                                                                                                                                                                                                    | 78-5100-0427-4                                                                 |
| MODEL                              |  | LISTS                                                                                                                                                                                                                  | YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> SHT 3 OF 4 |

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

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|                                 |        |                                                                                                                                                                                                                                    |                |             |
|---------------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------|
| D                               | 123598 | JUN 03,2025                                                                                                                                                                                                                        | JNC            | FJR         |
| C                               | 105842 | JUL 13,2022                                                                                                                                                                                                                        | JNC            | FJR         |
| B                               | 16859  | NOV 26,2022                                                                                                                                                                                                                        | BAC            | ARM         |
| A                               | 16859  | MAR 05,2007                                                                                                                                                                                                                        | BAC            | DFC         |
|                                 |        | PRODUCTION RELEASE                                                                                                                                                                                                                 |                |             |
| REV                             | ECO    | ISSUE DATE AND DESCRIPTION                                                                                                                                                                                                         | DRFT           | CHKD        |
| DFT                             | CAS    | IGNITION                                                                                                                                                                                                                           | DATE           | JUL 13,2022 |
| CHKD                            | DATE   | APPR                                                                                                                                                                                                                               | DATE           | JUL 13,2022 |
|                                 |        | BY                                                                                                                                                                                                                                 | RODRIGUEZ      |             |
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| SCALE                           |        | INCHES                                                                                                                                                                                                                             |                |             |
| TOLERANCES EXCEPT AS NOTED      |        | 0.000 ± .0002                                                                                                                                                                                                                      |                |             |
| THIRD ANGLE PROJECTION          |        | MILLIMETERS                                                                                                                                                                                                                        |                |             |
| INTERPRET PER ASME Y14.5 - 2018 |        | 0.000 ±                                                                                                                                                                                                                            |                |             |
| MAX SURFACE ROUGHNESS           |        | 0.0                                                                                                                                                                                                                                |                |             |
| ALL SURFACES                    |        | 0.000 ±                                                                                                                                                                                                                            |                |             |
| MARKED ONLY                     |        | ANGLES ±                                                                                                                                                                                                                           |                |             |
| TITLE                           |        | MDR CONN, SHIELDED, 050" BMT THRU-HOLE VERT RECEPTACLE                                                                                                                                                                             |                |             |
| CAGE NUMBER                     |        | SIZE                                                                                                                                                                                                                               | DRAWING NO.    |             |
| D                               |        | 1                                                                                                                                                                                                                                  | 78-5100-0427-4 |             |
| MODEL                           |        | 102                                                                                                                                                                                                                                |                | REV.        |
|                                 |        | DET.                                                                                                                                                                                                                               |                | LISTS       |
|                                 |        | YES                                                                                                                                                                                                                                |                | YES         |
|                                 |        | NO                                                                                                                                                                                                                                 |                | SHT 4 OF 4  |

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