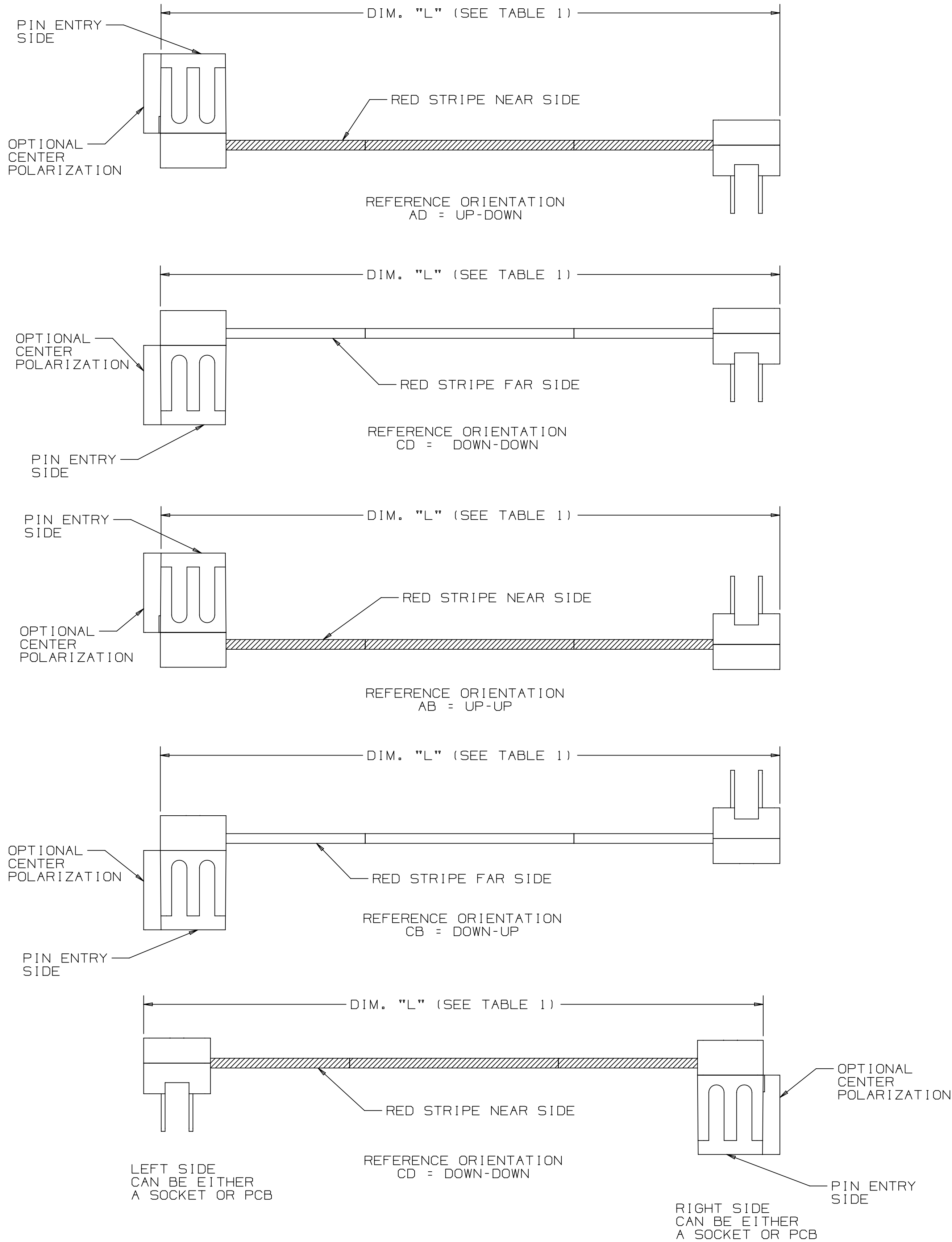


3M™ MOLDED ASSEMBLY, 1M SERIES
.100" X .100" FOR .050" PITCH CABLE, CABLE ASSEMBLY CONNECTOR



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MOLDED SOCKET:

- * PART OF COMPLETE CABLE ASSEMBLY
- * MATES WITH INDUSTRY STANDARD .025" SQUARE CONTACTS ON .100" BY .100" CENTERS
- * ONE PIECE, MOLDED-ON CONSTRUCTION WITH INTEGRAL STRAIN RELIEF
- * HIGH AND LOW PROFILES AVAILABLE, BOTH ACCOMMODATE TYPICAL HEADER LATCHES (SHORT AND LONG)
- * SLOTTED ENDS ALLOW MATING TO CONTINUOUS ROW HEADERS
- * INDUSTRY STANDARD POLARIZATION
- * MOLDED-ON POLARITY KEYS AVAILABLE ON SELECTED CONNECTOR SIZES
- * CLOSED END CONSTRUCTION
- * MODULAR TOOLING ALLOWS CUSTOMIZED DESIGNS

MOLDED PCB:

- * PART OF COMPLETE CABLE ASSEMBLY
- * MATES WITH INDUSTRY STANDARD .100 INCH X .100 INCH BOARD PATTERN
- * ONE PIECE, MOLDED-ON CONSTRUCTION WITH INTEGRAL STRAIN RELIEF
- * STANDARD AND RETENTION CONTACTS AVAILABLE
- * LOW PROFILE PERMITS CLOSE PC BOARD SPACING
- * CLOSED END CONSTRUCTION

2 PHYSICAL:

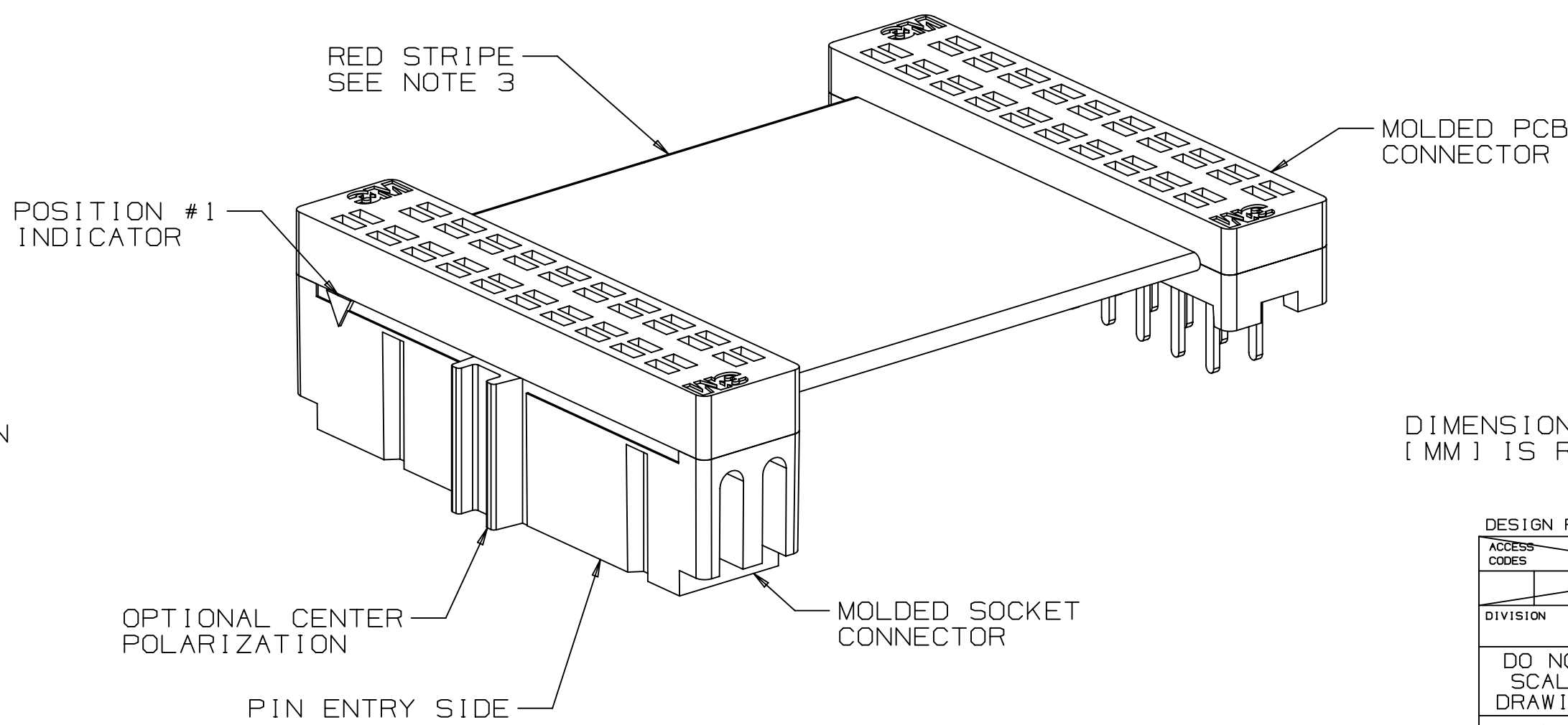
- INSULATOR: GLASS FILLED POLYESTER (PBT)
MATERIAL: UL94V-0
FLAMMABILITY: GREY
COLOR: COPPER ALLOY
CONTACT: COPPER ALLOY
- PLATING SOCKET:
UNDERPLATING & U-SLOT: 50 - 150 μ " [1.27 - 3.81 μ m] NICKEL
WIPING AREA: 30 μ " [0.76 μ m] GOLD AVG
- PLATING PCB:
UNDERPLATING & U-SLOT: 50 - 150 μ " [1.27 - 3.81 μ m] NICKEL
CONTACT TAIL: 300-400 μ " [7.62-10.16 μ m] MATTE TIN
- WIRE ACCOMMODATION: 26 AND 28 AWG SOLID AND STRANDED
COVER/STRAIN RELIEF RETENTION: 5N MIN PER CONTACT
- MARKINGS: 3M LOGO AND ORIENTATION TRIANGLE (SOCKET ONLY)

2 ELECTRICAL:

- CURRENT RATING: 1A
INSULATION RESISTANCE: $>1 \times 10^9 \Omega$ AT 500V_{DC}
WITHSTANDING VOLTAGE: 1000V_{RMS} AT SEA LEVEL
VOLTAGE RATING: 30V

2 ENVIRONMENTAL:

- TEMPERATURE RATING: -55C TO 105°C
NOTE: THE TEMPERATURE RANGE CAN BE LIMITED BY THE SELECTED CABLE.



VIEW SHOWN FOR REFERENCE ONLY
(ORIENTATION CD, DOWN-DOWN)

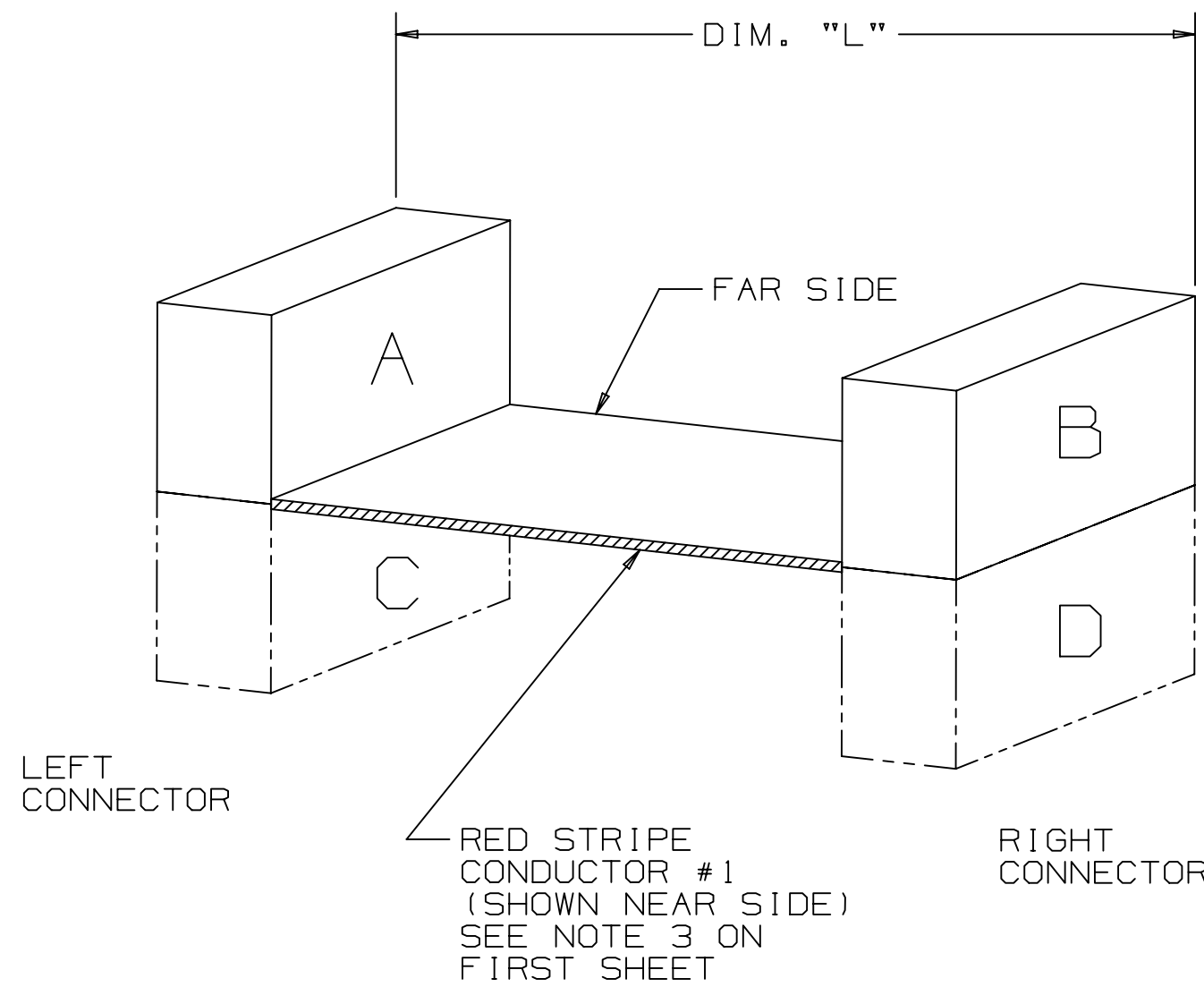
UL FILE NO: E86982

DIMENSIONS: INCHES [MM]
[MM] IS REFERENCE ONLY

DESIGN REFERENCE	NEXT ASSEMBLY
DO NOT SCALE DRAWING	SCALE 4/1
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 2018
MAX. SURFACE ROUGHNESS	ALL SURFACES
MARKED ONLY	ANGLES

B	108514	JAN 19, 2023	JNC	JC
A	0104943	MAY 27, 2022	LDS	JG
REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
DRFT	L SCHMIDT	DATE MAR 04, 2022	MFG	DATE
CHKD	J GOERTZ	DATE APR 29, 2022	APPL	DATE
3M Center St. Paul, MN 55144				
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TITLE				
MOLDED CABLE ASSY .100 WITH SOCKET AND PCB CONNECTORS				
CAGE NUMBER	SIZE	DRAWING NO.	REV.	
D		78-5100-2754-9	B	
MODEL	1M	DET	LISTS	YES
		NO	SHT	1 OF 5

3M™ MOLDED ASSEMBLY, 1M SERIES
.100" X .100" FOR .050" PITCH CABLE, CABLE ASSEMBLY CONNECTOR



NOTE:
1. A FANOUT ASSEMBLY, WITH MULTIPLE CONNECTORS ON ONE END, REQUIRES A DRAWING SUBMITTAL AND REVIEW.
2. SEE ORDERING INFORMATION FOR CONNECTOR ORIENTATION OPTIONS.

ORDERING INFORMATION

1M XX XX - XXX - XXXX - XXX . X - XX - XX - XX - X

CONNECTOR TYPES (LEFT AND RIGHT)
SOCKET, LOW PROFILE (.41")
10 = WITH MILITARY POLARIZATION SLOTS
16 = WITH CENTER POLARIZATION AND MILITARY POLARIZATION SLOTS
19 = WITH DUAL POLARIZATION AND MILITARY POLARIZATION SLOTS

SOCKET, REGULAR PROFILE (.56")
30 = WITH MILITARY POLARIZATION SLOTS
36 = WITH CENTER POLARIZATION AND MILITARY POLARIZATION SLOTS
39 = WITH DUAL POLARIZATION AND MILITARY POLARIZATION SLOTS

PCB, 2 ROW
A0 = STRAIGHT MATTE Sn SOLDER TAIL
A1 = RETENTION MATTE Sn SOLDER TAIL

NUMBER OF CABLE CONDUCTORS

ASSEMBLY LENGTH
TIP-TO-TIP INCHES
(DIM A IN INCHES)
EXAMPLE:
001.7 = 1.7" MIN)

CABLE PRODUCT SERIES
SEE LIST BELOW OF
SUITABLE CABLES
(SEE TABLE 3)

MARKING
0 = NO MARKING
1 = LABEL-DATE CODE
2 = INKSTAMP-DATE CODE

LEFT RIGHT
CENTER POLARIZATION ORIENTATION OPTIONS
0 = NONE
1 = INSIDE
2 = OUTSIDE

CONNECTOR ORIENTATION OPTIONS
(LEFT AND RIGHT)
AB = UP-UP
AD = UP-DOWN
CB = DOWN-UP
CD = DOWN-DOWN

LEFT RIGHT
CONNECTOR FEATURE OPTIONS
0 = NO PULL TAB OR KEYING REQUIRED
1 = PULL TAB (SOCKET ONLY, NOT AVAILABLE ON 6 OR 8 CONTACT QUANTITY)
2 = KEYING REQUIRED, SPECIFY POSITION(S)
3 = PULL TAB AND KEYING REQUIRED, SPECIFY POSITION(S)

TABLE 1		
DIM L		TOLERANCE
MIN	MAX	
1.7	10.0	±0.3
10.0	20.0	±0.5
20.0	40.0	±0.6
40.0	120.0	±1.0
120.0		±2.0

TABLE 2																	
AVAILABLE OPTIONS																	
CONNECTOR POSITION	6	8	10	12	14	16	20	24	26	30	34	36	40	44	50	60	64
SOCKET	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
PCB	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
ALL CABLES	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CABLE CONDUCTORS	6	8	10	12	14	16	20	24	26	30	34	36	40	44	50	60	64

TABLE 3 - SEE NOTE BELOW								
CONNECTOR SPACING	AWG	CABLE SERIES	TECHNICAL DATA SHEET	PITCH	CONDUCTOR TYPE	INSULATION MATERIAL	SPECIAL FEATURE	CABLE TEMPERATURE RATING
.100"	26 AWG	3801	TS-0063	.050"	STRANDED	PVC		-20°C TO +105°C
		3811	TS-0122	.050"	STRANDED	PVC	COLOR CODED	-20°C TO +105°C
		3365	TS-0080	.050"	STRANDED	PVC		-20°C TO +105°C
	28 AWG	HF365	TS-2334	.050"	STRANDED	PO		-40°C TO +105°C
		3355	TS-0317	.050"	STRANDED	TPE		-40°C TO +105°C
		3601	TS-0553	.050"	STRANDED	FEP		-55°C TO +200°C
		3539	TS-0058	.050"	STRANDED	PVC	MEDIUM FLEX	-20°C TO +105°C
		3319	TS-0059	.050"	STRANDED	PVC	HIGH FLEX	-20°C TO +105°C
		3302	TS-0123	.050"	STRANDED	PVC	COLOR CODED	-20°C TO +105°C
		HF539	TS-2565	.050"	STRANDED	PO	MEDIUM FLEX	-40°C TO +105°C
		HF319	TS-2342	.050"	STRANDED	PO	HIGH FLEX	-40°C TO +105°C

NOTE: FOR REFERENCE ONLY. CONFIRM CABLE SPECIFICATION USING CABLE TECHNICAL DATA SHEET

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DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
XXXX	XXXX	DRFT	L SCHMIDT	DATE MAR 04,2022	MFG	DATE
XXXX	XXXX	CHKD	J GOERTZ	DATE APR 29,2022	APPL	DATE
DIVISION	DIVISION CODE	3M Center St. Paul, MN 55144				
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THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 2018	INCHES .0 ±.1 .00 ±.01 .000 ±.005 .0000 ±.0002	TITLE MOLDED CABLE ASSY .100 WITH SOCKET AND PCB CONNECTORS			
MAX SURFACE ROUGHNESS	ALL SURFACES	MILLIMETERS 0 ± .0 ± .00 ± .000 ±	CAGE NUMBER	SIZE	DRAWING NO.	REV.
✓ MARKED ONLY	✓ MARKED ONLY	ANGLES ±	D	1M	78-5100-2754-9	B
			MODEL	1M	LISTS	YES <input type="checkbox"/> NO <input type="checkbox"/> SHT 2 OF 5

3M™ MOLDED ASSEMBLY, 1M SERIES
.100" X .100" FOR .050" PITCH CABLE, CABLE ASSEMBLY CONNECTOR

3M™ MOLDED SOCKET CONNECTOR
871 SERIES

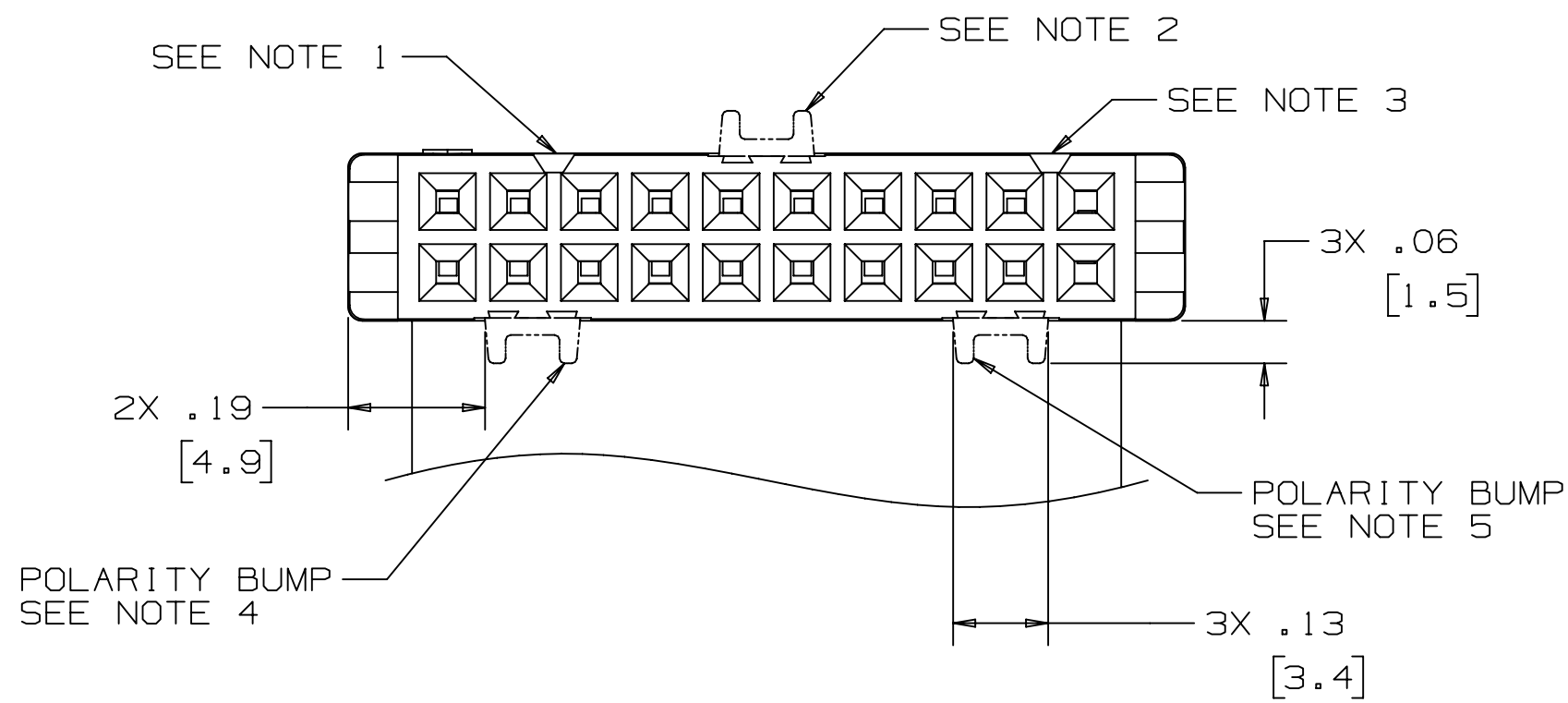
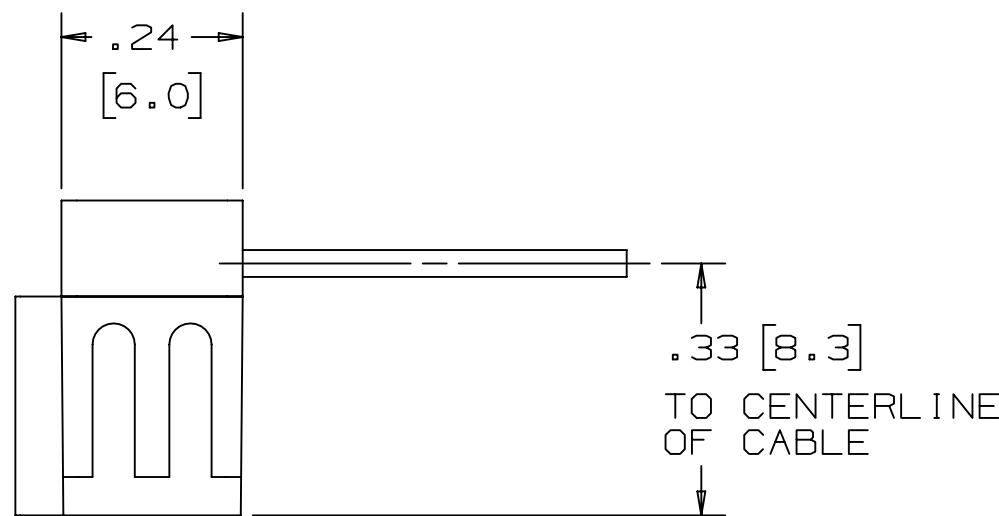
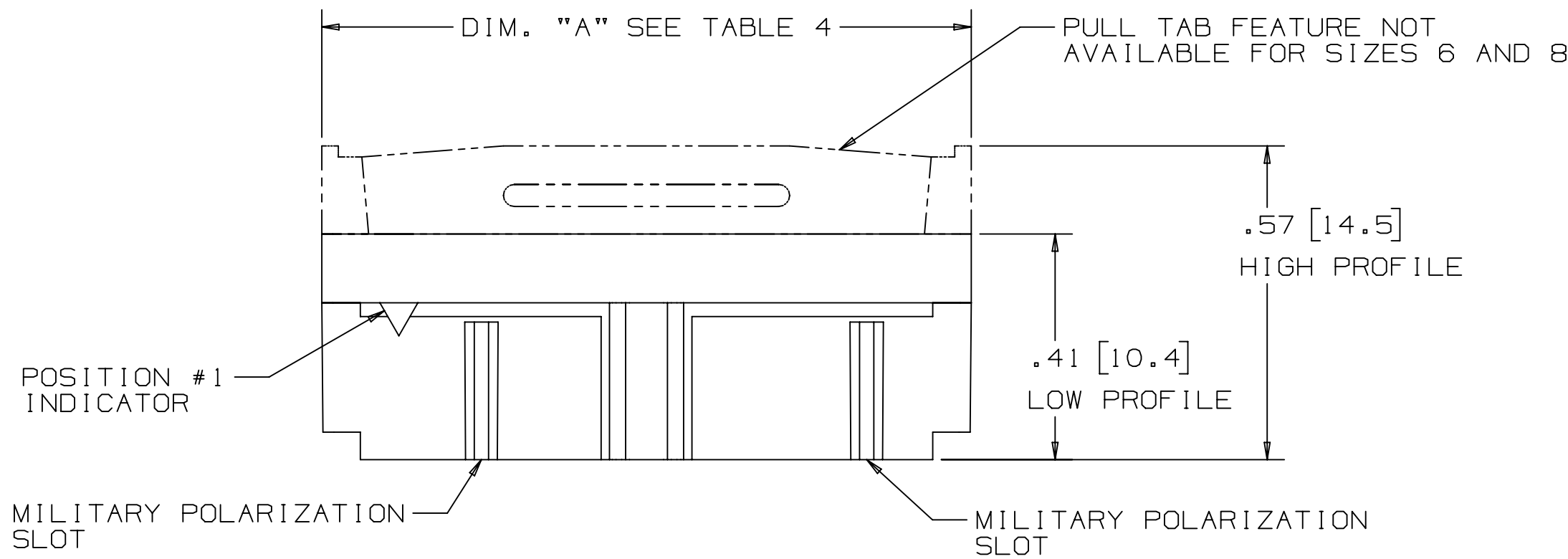
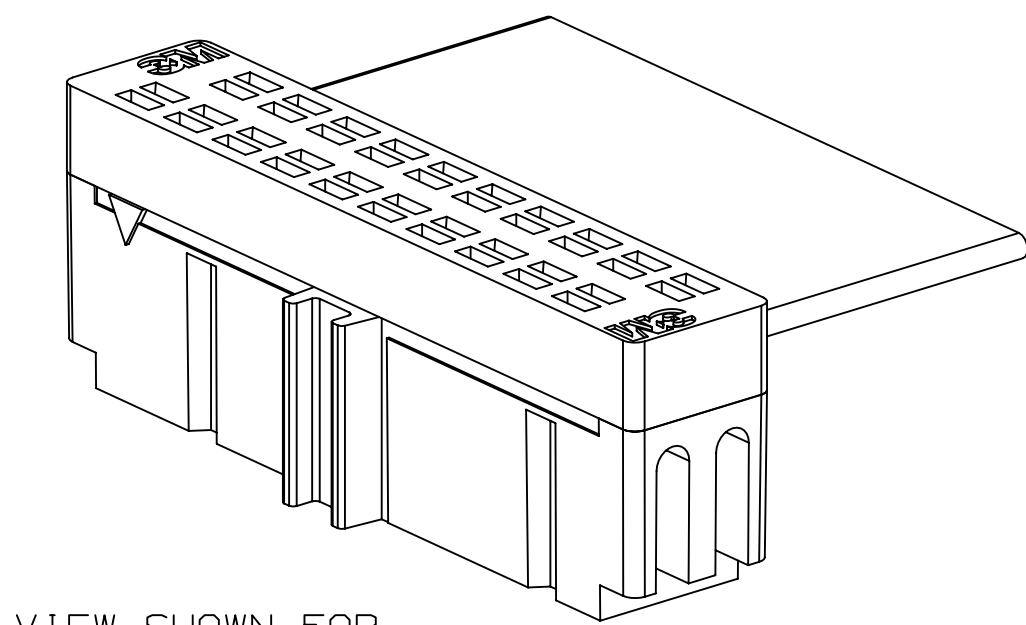


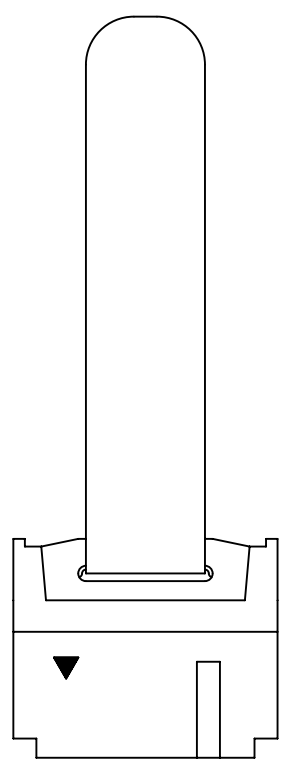
TABLE 4	
CONTACT QTY	DIM A
6	.48 [12.2]
8	.58 [14.7]
10	.68 [17.3]
12	.78 [19.8]
14	.88 [22.4]
16	.98 [24.9]
20	1.18 [30.0]
24	1.38 [35.1]
26	1.48 [37.6]
30	1.68 [42.7]
34	1.88 [47.8]
36	1.98 [50.3]
40	2.18 [55.4]
50	2.68 [68.1]
60	3.18 [80.8]
64	3.38 [85.9]

- NOTES:
1. THIS POLARIZATION SLOT IS NONEXISTENT ON SIZES 6, 8, 10, 12 AND 14.
 2. OPTIONAL CENTER POLARIZATION FEATURE.
 3. THIS POLARIZATION SLOT IS NONEXISTENT ON SIZES 6 AND 8.
 4. DUAL POLARIZATION BUMPS ARE NOTE OFFERED ON SIZES 6, 8, 10 AND 12.
 5. POLARIZATION BUMP AT THIS LOCATION NOT OFFERED ON SIZES 10 AND 12.

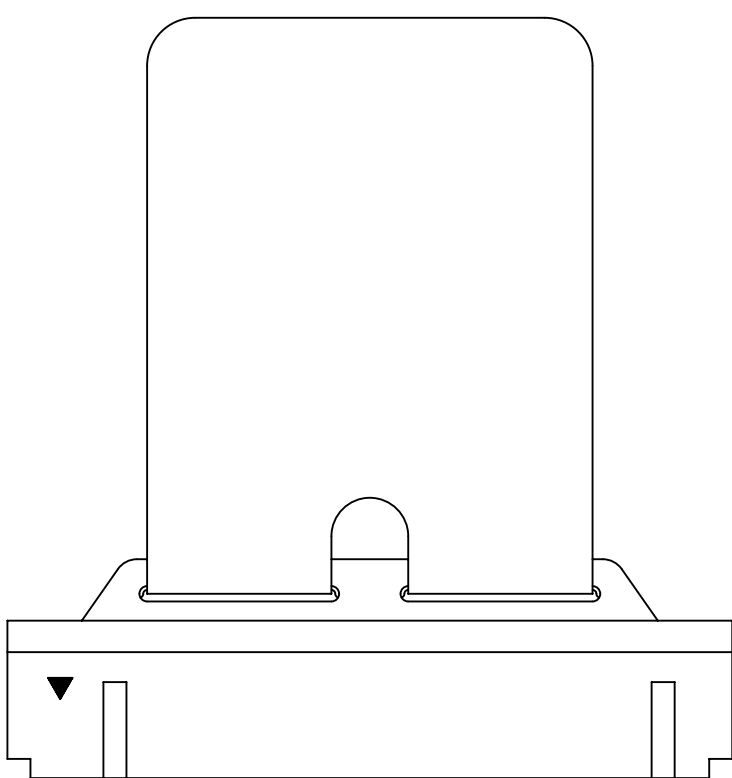
PULL TAB FEATURES
VARY WITH CONNECTOR SIZE



VIEW SHOWN FOR
REFERENCE ONLY



HIGH PROFILE SOCKET
WITH PULL TAB



LOW PROFILE SOCKET
WITH PULL TAB

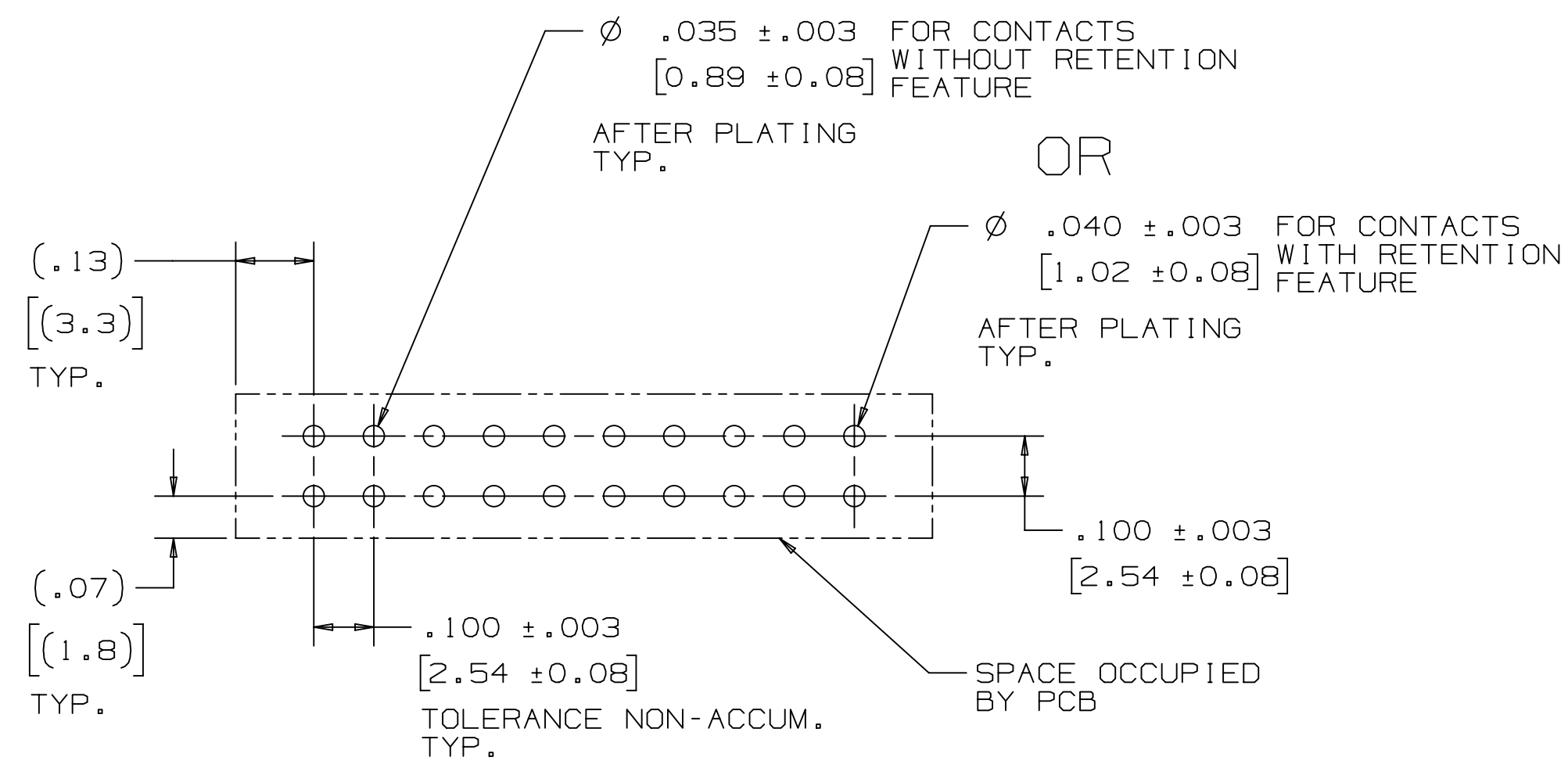
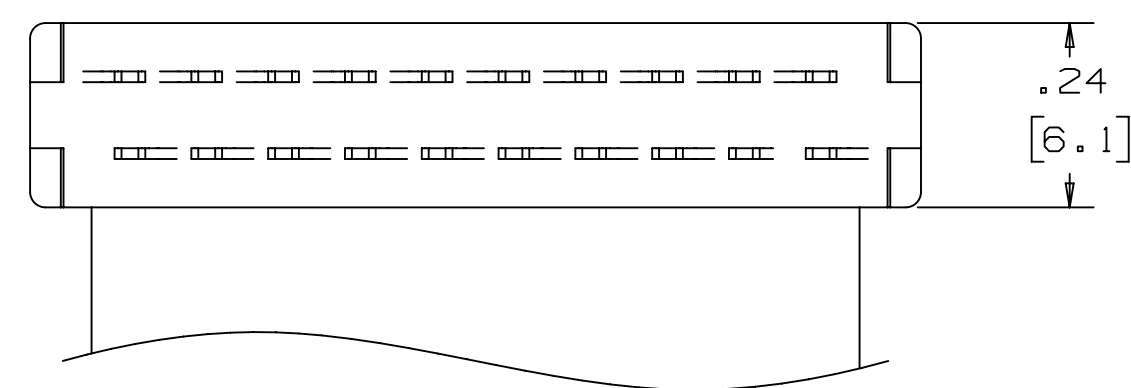
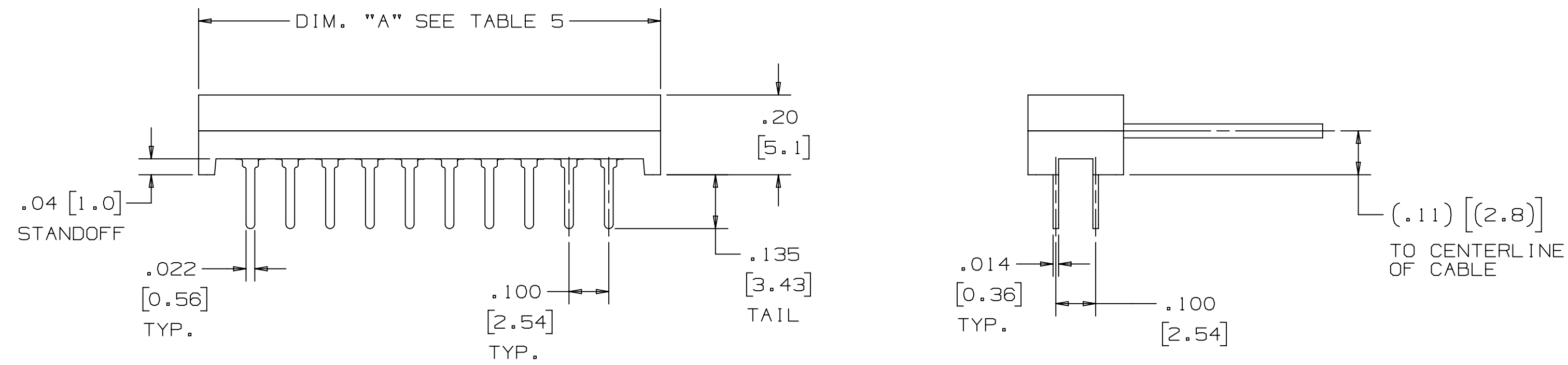
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DESIGN REFERENCE		NEXT ASSEMBLY		REV	ECO	ISSUE DATE AND DESCRIPTION		DRFT	CHKD
XREFS		CODES		DRFT	L. SCHMIDT	DATE	MAR 04, 2022	MFG	DATE
DIVISION		DIVISION CODE		CHKD	J. GOERTZ	DATE	APR 29, 2022	APPL	DATE
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MARKED ONLY		TOLERANCES EXCEPT AS NOTED		MAX. SURFACE ROUGHNESS		TITLE			
DO NOT SCALE DRAWING		SCALE 4/1		TOLERANCES EXCEPT AS NOTED		MOLDED CABLE ASSY .100 WITH SOCKET AND PCB CONNECTORS			
THIRD ANGLE PROJECTION		INTERPRET PER ASME Y14.5 - 2018		MAX. SURFACE ROUGHNESS		CAGE NUMBER			
MARKED ONLY		TOLERANCES EXCEPT AS NOTED		MAX. SURFACE ROUGHNESS		DRAWING NO. 78-5100-2754-9			
DO NOT SCALE DRAWING		SCALE 4/1		TOLERANCES EXCEPT AS NOTED		REV. B			
THIRD ANGLE PROJECTION		INTERPRET PER ASME Y14.5 - 2018		MAX. SURFACE ROUGHNESS		MODEL 1M			
MARKED ONLY		TOLERANCES EXCEPT AS NOTED		MAX. SURFACE ROUGHNESS		DET. [] YES [] NO [] SHT 3 OF 5			

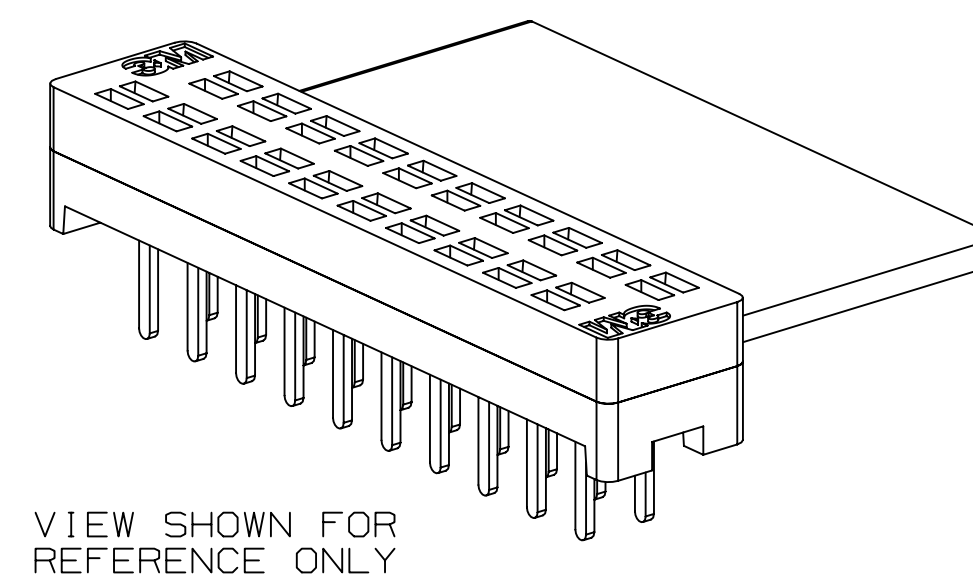
3M™ MOLDED ASSEMBLY, 1M SERIES
.100" X .100" FOR .050" PITCH CABLE, CABLE ASSEMBLY CONNECTOR

3M™ MOLDED 2-ROW PCB CONNECTOR
878 SERIES



RECOMMENDED MOUNTING HOLE PATTERN
(SHOWN FROM MOUNTING SIDE OF BOARD)

CONTACT QTY	DIM. "A"
06	.46 [11.7]
08	.56 [14.2]
10	.66 [16.8]
14	.86 [21.8]
16	.96 [24.4]
20	1.16 [29.5]
24	1.36 [34.5]
26	1.46 [37.1]
30	1.66 [42.1]
34	1.86 [47.2]
36	1.96 [49.8]
40	2.16 [54.9]
44	2.36 [59.9]
50	2.66 [67.6]
60	3.16 [80.3]
64	3.36 [85.3]

VIEW SHOWN FOR
REFERENCE ONLY

		B	108514		JAN 19,2023		JNC	JC
		A	0104943		REVISED AND REDRAWN MAY 27,2022		LDS	JG
		PRODUCTION RELEASE						
DESIGN REFERENCE		NEXT ASSEMBLY		REV	ECO	ISSUE DATE AND DESCRIPTION		DRFT CHKD
ADDRESS CODES				DWGT U SCHMIDT	DATE MAR 04, 2022		MFG	DATE
				CHG J GOERTZ	DATE APR 29, 2022		APPVL	DATE
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THIRD ANGLE PROJECTION						TITLE		
INTERPRET PER ASME Y14.5 - 2018		MILLIMETERS 0 ± .0 ± .00 ± .000 ±				MOLDED CABLE ASSY = 100 WITH SOCKET AND PCB CONNECTORS		
MAX SURFACE ROUGHNESS				CAGE NUMBER		SIZE DRAWHG NO.		REV.
<input checked="" type="checkbox"/> ALL SURFACES <input type="checkbox"/> MARKED ONLY				D 78-5100-2754-9		B		
		ANGLES ±		MODEL		DET. LISTS YES YES NO		SHT 4 OF 5

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3M™ MOLDED ASSEMBLY, 1M SERIES
.100" X .100" FOR .050" PITCH CABLE, CABLE ASSEMBLY CONNECTOR

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Electronics Materials Solutions Division
13011 McCallen Pass, Bldg. C
Austin, TX 78753-5380
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www.3M.com/interconnect

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DESIGN REFERENCE
NEXT ASSEMBLY

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THIRD ANGLE PROJECTION

MAX. SURFACE ROUGHNESS
ALL SURFACES
MARKED ONLY

SCALE
1

TOLERANCES EXCEPT AS NOTED

INCHES
±.1
±.01
±.005
±.0002

MILLIMETERS
±
±
±
±

ANGLES ±

REV. ECO

DATE MAR 04, 2022

DATE APR 29, 2022

DATE

DATE

DATE

3M

3M Center
St. Paul,
MN 55144

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TITLE

MOLDED CABLE ASSY
.100 WITH SOCKET AND
PCB CONNECTORS

CAGE NUMBER
D

SIZE

DRAWING NO.
78-5100-2754-9

REV.
B

MODEL
1M

DET
LISTS

YES

NO

SHT 5 OF 5