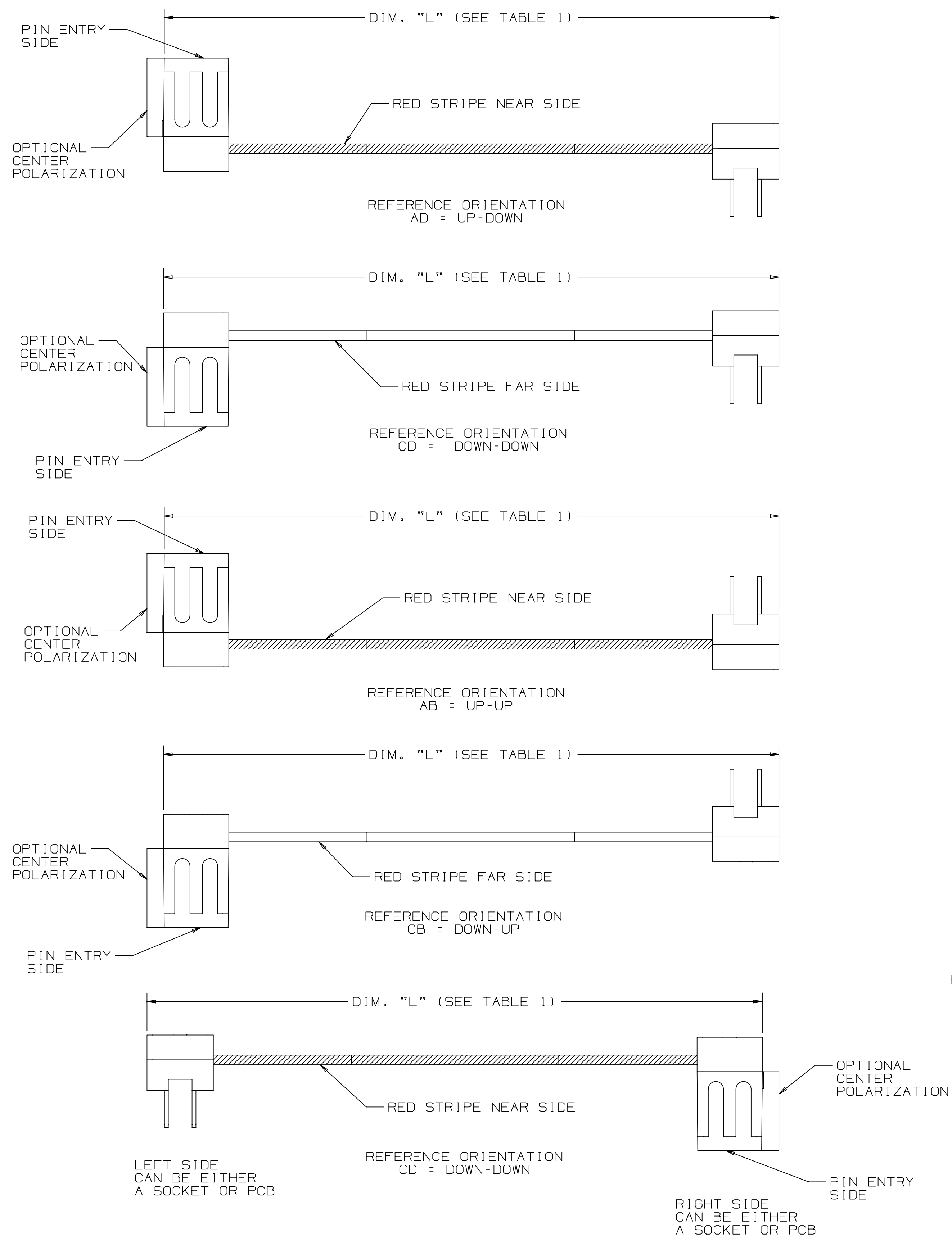


3M™ MOLDED ASSEMBLY, 1M SERIES
 .100" X .100" FOR .050" PITCH CABLE, CABLE ASSEMBLY CONNECTOR



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:

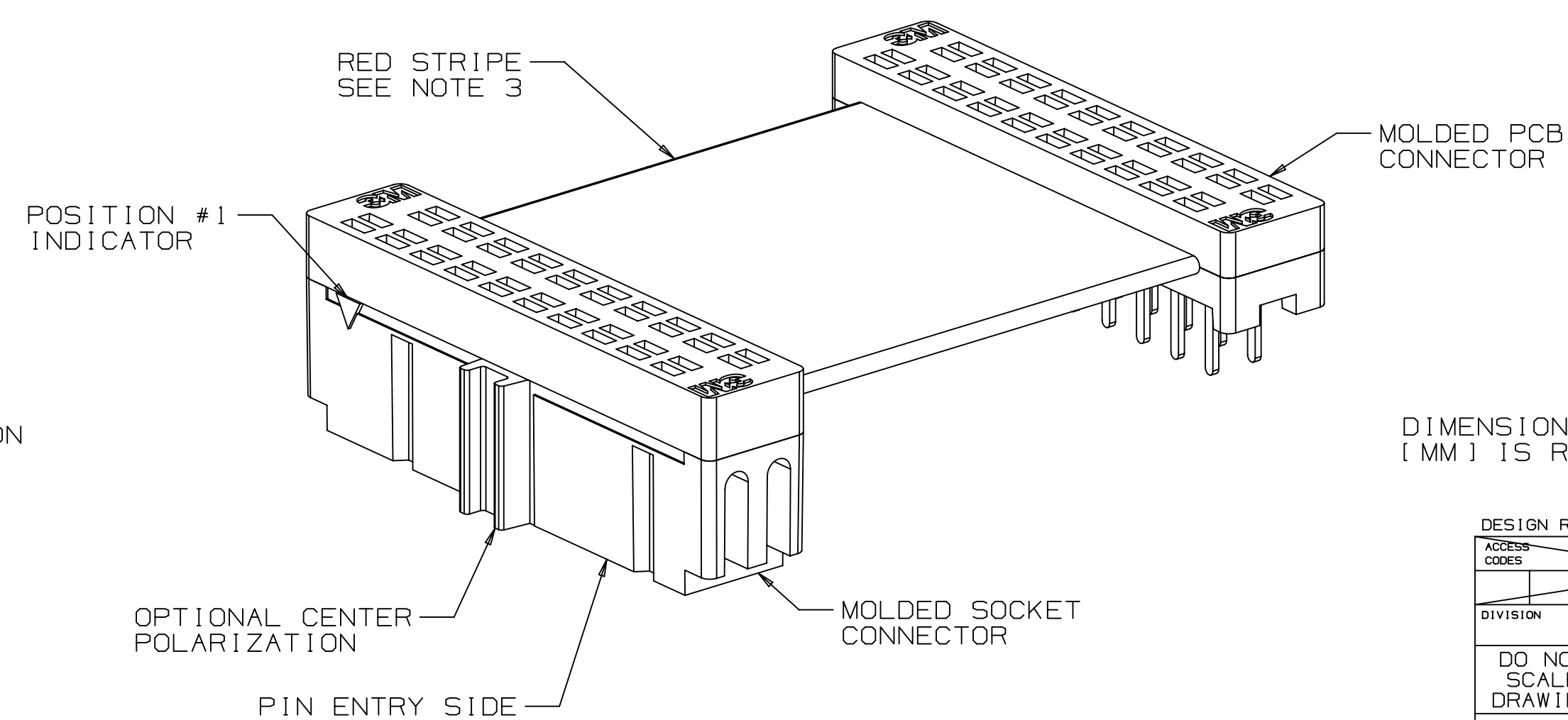
- INSULATOR: GLASS FILLED POLYESTER (PBT)
 MATERIAL: UL94V-0
 FLAMMABILITY: GREY
 COLOR: COPPER ALLOY
 CONTACT: COPPER ALLOY
- PLATING SOCKET:
 UNDERPLATING & U-SLOT: 50 - 150 μm [1.27 - 3.81 μm] NICKEL
 WIPING AREA: 30 μm [0.76 μm] GOLD AVG
- PLATING PCB:
 UNDERPLATING & U-SLOT: 50 - 150 μm [1.27 - 3.81 μm] NICKEL
 CONTACT TAIL: 300-400 μm [7.62-10.16 μm] 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: >1X10⁹Ω 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.



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	MARKED SURFACES
TOLERANCES EXCEPT AS NOTED	INCHES: .00 ± .01, .000 ± .005, .0000 ± .0002
	MILLIMETERS: 0 ± .000, .00 ± .000
	ANGLES: ±

NOTES	
1	REGULATORY INFORMATION: VISIT 3M.com/regs
2	IN THE EVENT OF CONFLICT BETWEEN THIS DATA AND THAT CONTAINED IN THE PRODUCT SPECIFICATION, THE PRODUCT SPECIFICATION TAKES PRECEDENT.
3	CABLE RED STRIPE CAN BE EITHER NEAR SIDE OR FAR SIDE, DEPENDING ON THE ORIENTATION OF THE SOCKET POSITION 1 INDICATOR.

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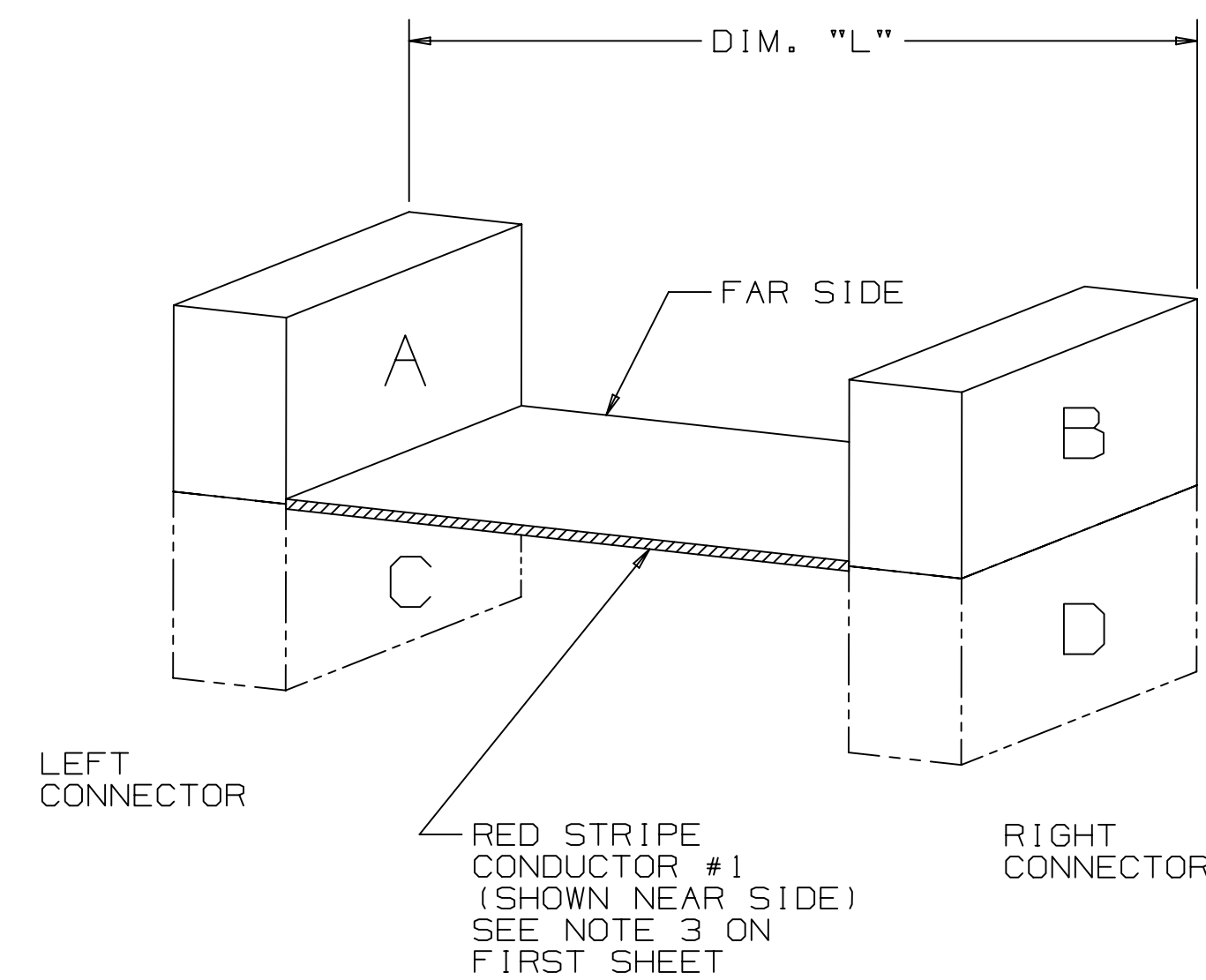
UL **us**
 UL FILE NO: E86982

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	MAR 04, 2022	MFG	DATE
CHKD	J. GOERTZ	APR 29, 2022	APPL	DATE
DIVISION: _____ DIVISION CODE: _____ DO NOT SCALE DRAWING: _____ SCALE: 4/1 TOLERANCES EXCEPT AS NOTED: INCHES: .00 ± .01, .000 ± .005, .0000 ± .0002; MILLIMETERS: 0 ± .000, .00 ± .000 INTERPRET PER ASME Y14.5 - 2018 MAX SURFACE ROUGHNESS: _____ MARKED SURFACES: _____ ANGLES: ± _____				
TITLE: MOLDED CABLE ASSY .100 WITH SOCKET AND PCB CONNECTORS CAGE NUMBER: D78-5100-2754-9 MODEL: 1M DET: _____ YES <input type="checkbox"/> NO <input type="checkbox"/> SHT 1 OF 5				

78-5100-2754-9 DRAWING NUMBER

A

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



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)

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)

- 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.

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

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

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
		ECO		JAN 19, 2023	JNC	JC
		ECO		REVISED AND REDRAWN	LDS	JG
		ECO		MAY 27, 2022		
		ECO		PRODUCTION RELEASE		
DATE	DATE	DATE	DATE	DATE	DATE	DATE
APR 29, 2022	APR 29, 2022	APR 29, 2022	APR 29, 2022	APR 29, 2022	APR 29, 2022	APR 29, 2022
DIVISION		DIVISION CODE		© 3M COPYRIGHT 2023 This document and the information it contains are 3M property and may not be reproduced or further distributed without 3M permission, or used or disclosed other than for 3M authorized purposes. All rights reserved.		
DO NOT SCALE DRAWING	SCALE 4/1	TOLERANCES EXCEPT AS NOTED		INCHES .0 ±.1 .00 ±.01 .000 ±.005 .0000 ±.0002		
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 2018	MILLIMETERS		0 ± .0 ± .00 ± .000 ±		
MAX SURFACE ROUGHNESS	MARKED ONLY	ANGLES		CAGE NUMBER DRAWING NO. MODEL 1M		
				TITLE MOLDED CABLE ASSY .100 WITH SOCKET AND PCB CONNECTORS		
				CAGE NUMBER DRAWING NO. MODEL 1M		
				DET IS1s <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> SHT 2 OF 5		

178-5100-2754-9

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

3M™ MOLDED SOCKET CONNECTOR
 871 SERIES

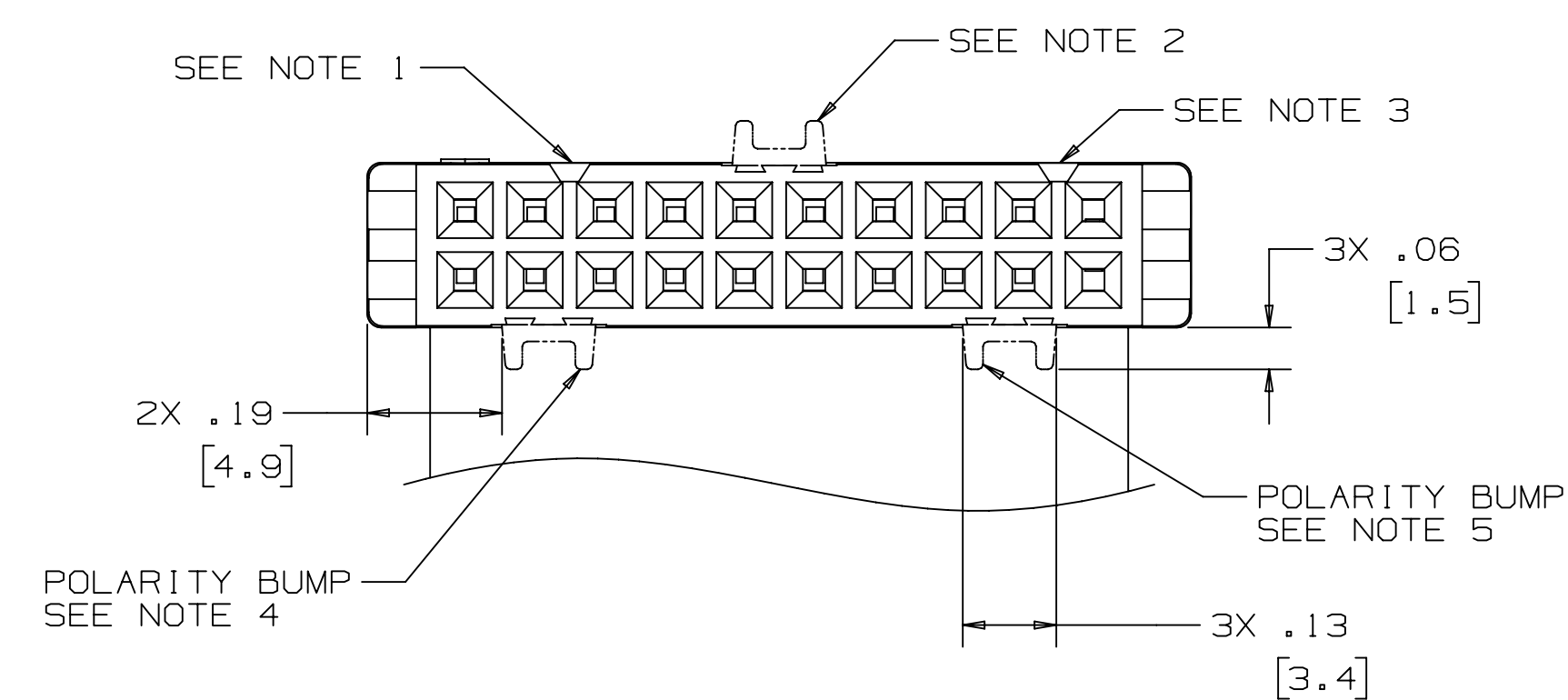
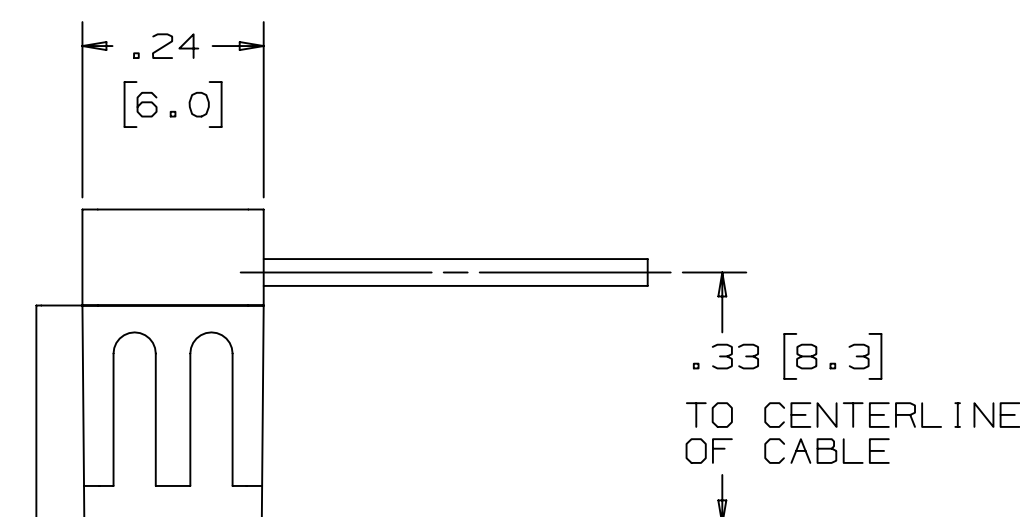
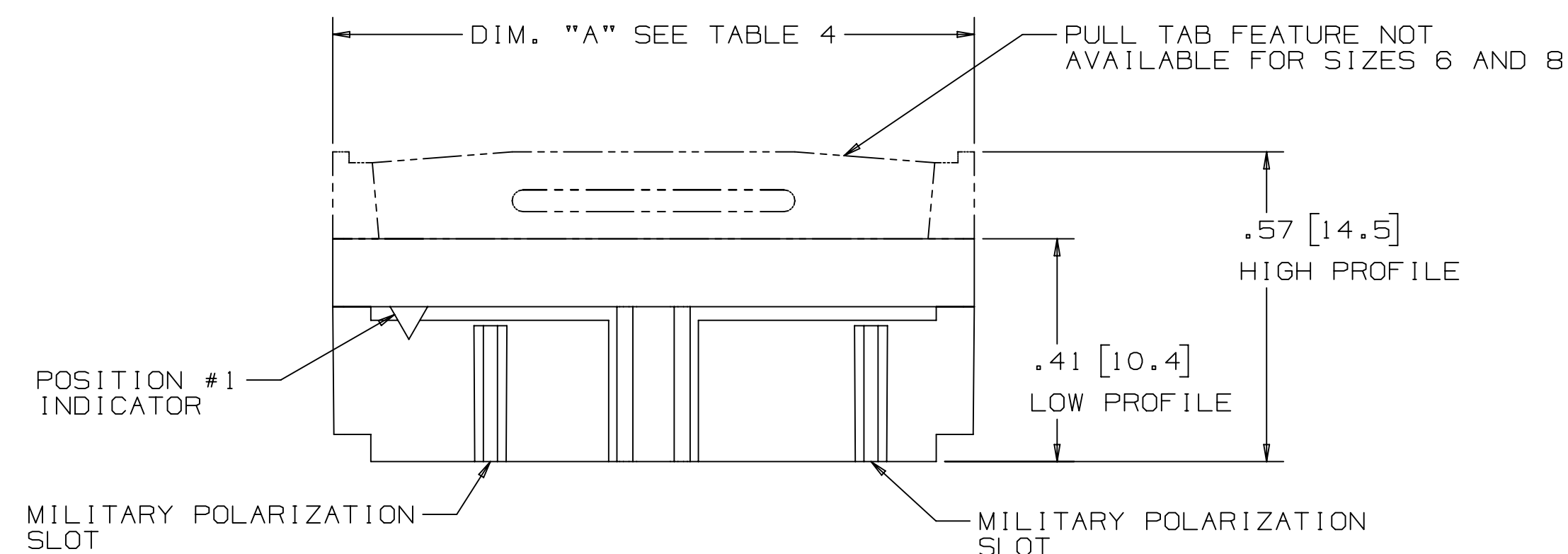
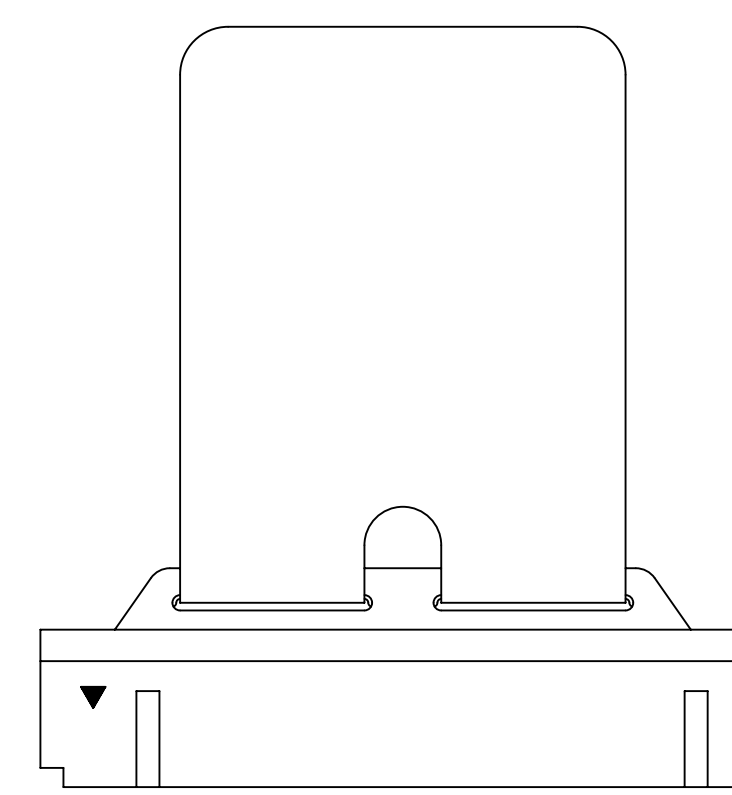
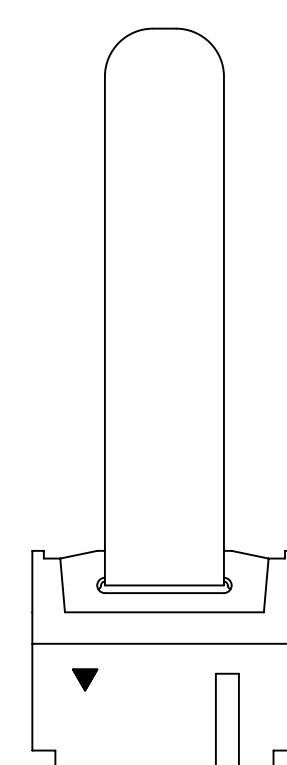
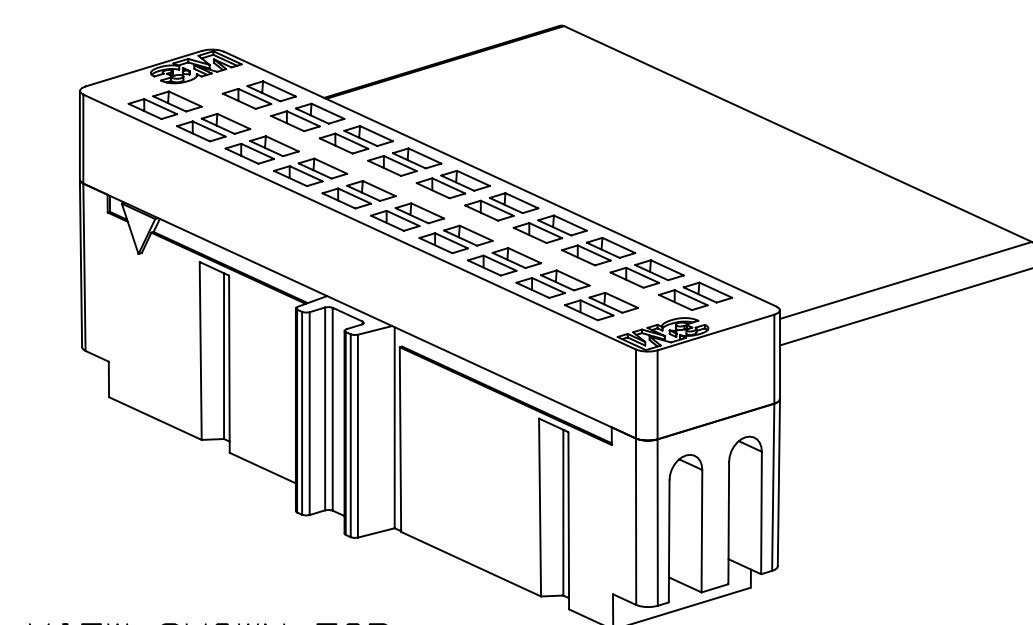


TABLE 4	
CONTACT QTY	DIM A
6	.48 [12.2]
8	.58 [14.7]
10	.68 [17.3]
12	.78 [19.8]
14	.88 [22.4]
16	.98 [24.9]
20	1.18 [30.0]
24	1.38 [35.1]
26	1.48 [37.6]
30	1.68 [42.7]
34	1.88 [47.8]
36	1.98 [50.3]
40	2.18 [55.4]
50	2.68 [68.1]
60	3.18 [80.8]
64	3.38 [85.9]

- 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 NOT 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



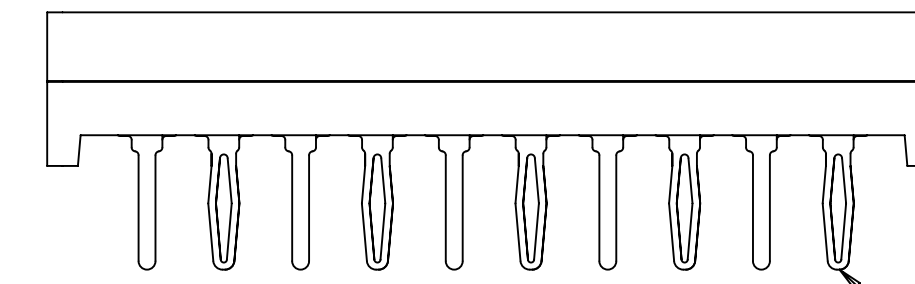
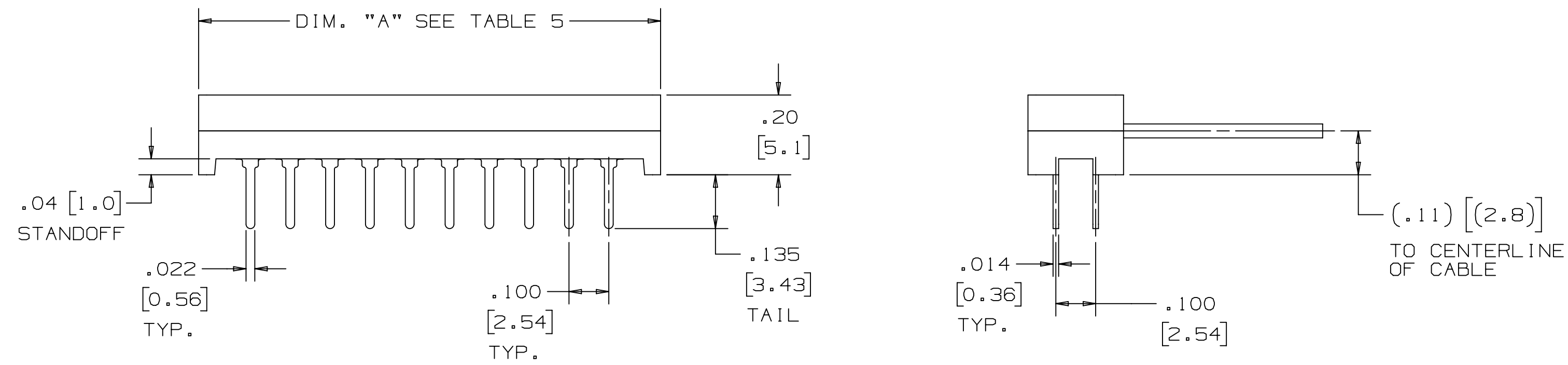
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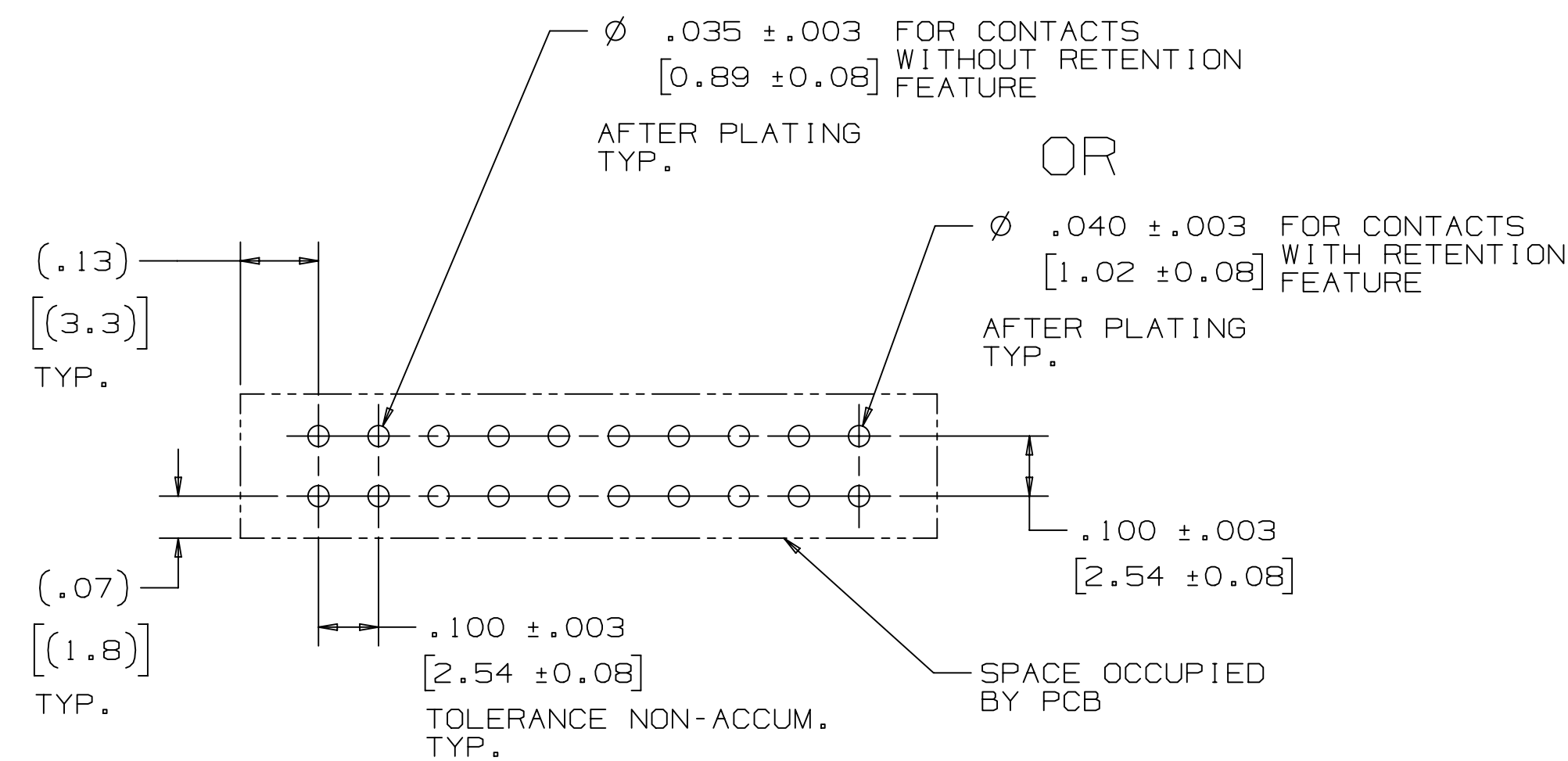
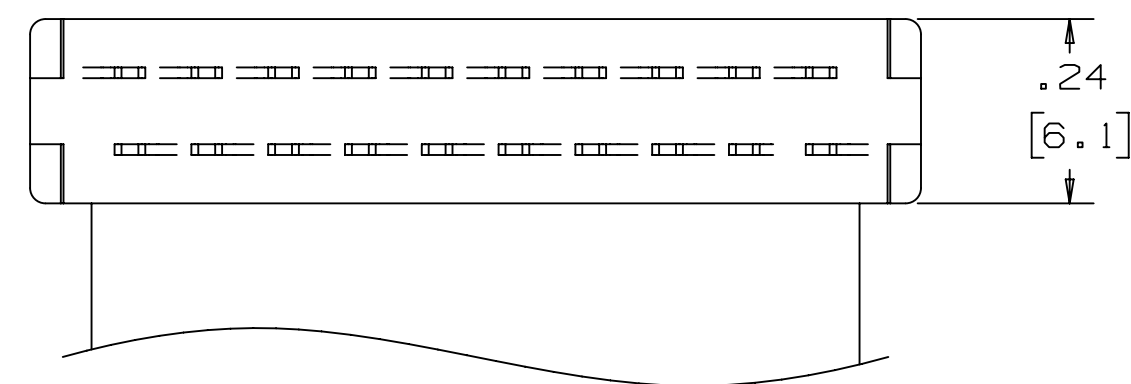
DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
		DRFT	L. SCHMIDT	DATE	MAR 04, 2022	MFG
		CHKD	J. GOERTZ	DATE	APR 29, 2022	APPL
DIVISION		DIVISION CODE				
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THIRD ANGLE PROJECTION		INCHES				
INTERPRET PER ASME Y14.5 - 2018		MILLIMETERS				
MAX SURFACE ROUGHNESS		ANGLES				
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TITLE		MOLDDED CABLE ASSY .100 WITH SOCKET AND PCB CONNECTORS				
CAGE NUMBER	SIZE	DRAWING NO.	REV.		DET: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO SHT 3 OF 5	
D78-5100		2754-9	B			

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

3M™ MOLDED 2-ROW PCB CONNECTOR
 878 SERIES

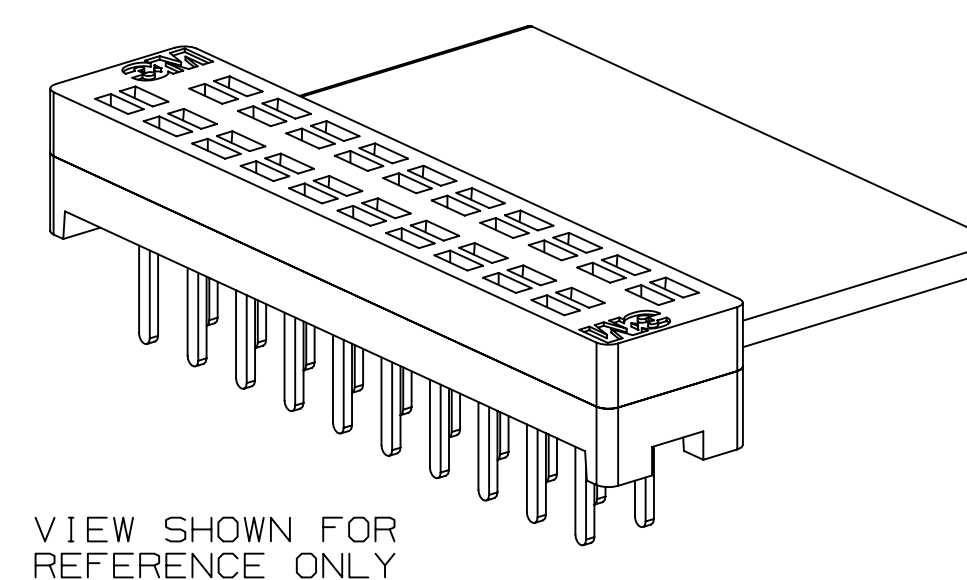


RETENTION CONTACTS ORIENTED AS SHOWN—
 EVERY OTHER CONTACT WITH THE FIRST AND
 SECOND ROW ORDER SHIFTED BY ONE
 CONTACT. (ORIENTATION IS NOT BASED ON
 DELTA LOCATION AND MAY VARY FROM
 CONNECTOR TO CONNECTOR)



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

TABLE 5	
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]



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		DRFT	L. SCHMIDT	DATE	MAR 04, 2022	MFG
		CHKD	J. GOERTZ	DATE	APR 29, 2022	APPL
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THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 2018	TITLE MOLDED CABLE ASSY .100 WITH SOCKET AND PCB CONNECTORS				
MAX. SURFACE ROUGHNESS	ALL SURFACES	CAGE NUMBER	SIZE	DRAWING NO.	REV.	
MARKED ONLY		D		78-5100-2754-9	B	
		MODEL	IM	DET	IS1s	YES NO
				SHT	4	OF 5

78-5100-2754-9
 DRAWING NUMBER

B

A

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

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		DRFT	L SCHMIDT	DATE	MAR 04, 2022	MFG
		CHKD	J GOERTZ	DATE	APR 29, 2022	APPL
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MAX SURFACE ROUGHNESS	ALL SURFACES	INCHES		CAGE NUMBER D 78-5100-2754-9		
MARKED ONLY	ANGLES	INCHES .0 ± .1 .00 ± .01 .000 ± .005 .0000 ± .0002		DRAWING NO. 78-5100-2754-9		
		MILLIMETERS 0 ± .0 ± .00 ± .000 ±		MODEL 1M		
		ANGLES ±		DET [] YES [X] NO SHT 5 OF 5		

78-5100-2754-9
DRAWING NUMBER

A

D

D

C

C

B

B

A

A