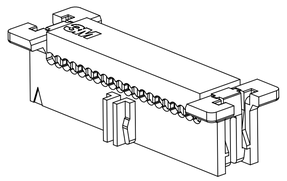
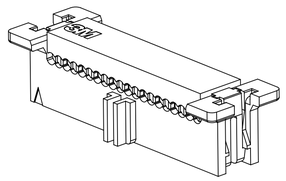
3M™ RIBBON CABLE WIREMOUNT SOCKET ASSEMBLY, 451 SERIES

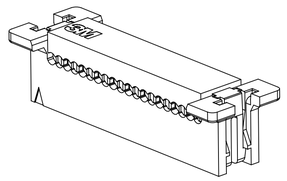
.050" X .050" (1.27MM X 1.27MM) FOR .025" PITCH CABLE



CENTER POLARIZATION
AND FRICTION LATCH

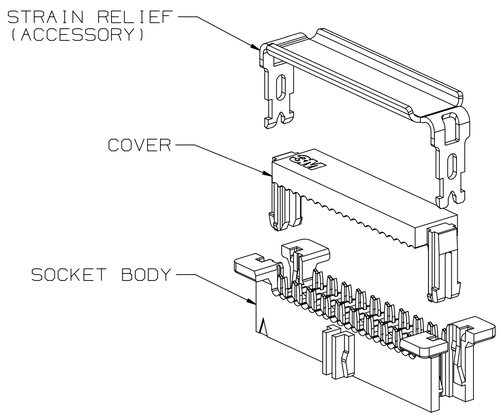


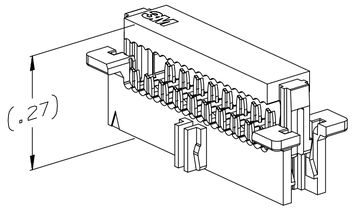
CENTER POLARIZATION
AND NO FRICTION LATCH



NO CENTER POLARIZATION
AND NO FRICTION LATCH

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 x 10^9 Ohms AT 500 VDC
WITHSTANDING VOLTAGE:	$1250V_{DC}$ AT SEA LEVEL
OPERATING TEMPERATURE:	-65° C TO +125° C
UL & CUL OPERATING TERMERATURE:	+130° C





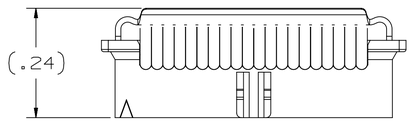
PRE-POSITIONED COVER

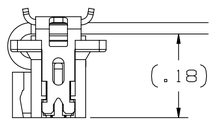
ORDERING INFORMATION
FOR RAPID INSTALLATION ON
RIBBON CABLE APPLICATIONS

451 XX - 0 X 0 0 XX

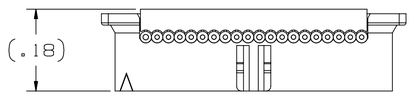
- 451 — SERIES
- XX — NUMBER OF POSITIONS SEE TABLE 1
- X — CENTER POLARIZATION / FRICTION LATCH
  - 0 = NO CENTER POLARIZATION (CP) (ALL POS.)
  - 1 = CP NO FRICTION LATCH (08 AND HIGHER POS.)
  - 2 = CP WITH FRICTION LATCH (08 AND HIGHER POS.)
- 0 — PACKAGING
  - 0 = STANDARD (TRAYS)
- 0 — OPTIONAL FEATURES
  - 0 = NONE SPECIFIED
- XX — PLATING
  - 00 = Au FLASH
  - 30 = 30μ" GOLD

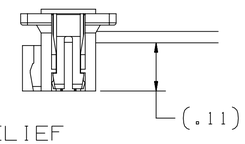
NOTE:
FRICTION LATCH (OPTION 2) IS NOT SUITABLE
FOR HEADER WITH LATCH EJECT OPTION





WITH OPTIONAL
STRAIN RELIEF





NO STRAIN RELIEF

TERMINATED
CONNECTOR

ACCESSORY: STRAIN RELIEF
3448-451XX

- XX — NUMBER OF POSITIONS

APPLICATION TOOLING:
ALUMINUM: 3443-82-XX

- XX — NUMBER OF POSITIONS

NOTES

1. MATERIAL:
   BODY: PBT, UL94V-0
   COVER: PBT, UL94V-0
   STRAIN RELIEF: STAINLESS STEEL
   CONTACTS: BeCu ALLOY.
2. PLATING:
   50-150μ" NICKEL UNDERPLATE
   30 = 30μ" MIN. GOLD ON WIPING AREA
   00 = FLASH GOLD ON WIPING AREA.
3. RIBBON CABLE COMPATIBILITY:
   GENERAL:
   0.025" PITCH, 30 AWG, SOLID OR STRANDED.
   RECOMMENDED CABLE:
   SEE TABLE 2 FOR CABLE COMPATIBILITY.
4. MATING COMPATIBILITY:
   3M 1.27mm (0.050"), SERIES 452 HEADER WITH LATCH/EJECT OPTION. TECH SHEETS TS-2437 AND TS-2396
5. REGULATORY INFORMATION:
   VISIT 3M.com/regs
6. IN THE EVENT OF CONFLICT BETWEEN THIS DATA AND THAT CONTAINED IN THE PRODUCT SPECIFICATION, THE PRODUCT SPECIFICATION TAKES PRECEDENT.
7. REFERENCE RELATED DOCUMENTS:
   PRODUCT SPECIFICATION:
   3M DOC. ID# 78-5102-0091-4.
8. TOOLING AND INSTALLATION INSTRUCTIONS:
   3M DOC. ID# 78-9101-8937-8.
9. OTHER PIN COUNTS AVAILABLE UPON REQUEST. CONTACT 3M.
10. PACKAGING:
    SOCKET: TRAY
    COVER: BAG

REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
K	106347	AUG 19,2022 ADD TABLE 2 FOR CABLE	JNC	SAN
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 19,2020 ADD NOTES AND VIEWS	JNC	SAN
F	56988	SEP 24,2014 REVISE PERFORMANCE CHART	JNC	SN
E	54514	MAY 07,2014 ADD UL LOGO	SJS	SAN
D	51884	JAN 08,2014 ADD DESIGN REF, UPDATE TITLE, ADD TS REF	SJS	SAN
C	50290	OCT 08,2013 REVISE NOTES 1, 3, 8 & OPERATING TEMP.	JNC	SN
B	48635	JUL 12,2013 MATCH TEXT FONTS & ADD NOTE 10	JNC	SAN
A	46797	MAR 25,2013 PRODUCTION RELEASE	JNC	SAN

78-5100-2396-9
78-5100-2437-1
DESIGN REFERENCE — NEXT ASSEMBLY

ACCESS CODES

DRFT	DATE	MFG	DATE
ARM	FEB 11,2011		
CHKD	DATE	APPVL SAN	DATE FEB 11,2011

DIVISION

DIVISION CODE
EMSD

DO NOT SCALE DRAWING — SCALE 6/1

TOLERANCES EXCEPT AS NOTED
INCHES
.0 ±.1
.00 ±.02
.000 ±.010
.0000 ±.005
MILLIMETERS
0 ±
.0 ±
.00 ±
.000 ±
ANGLES ±

THIRD ANGLE PROJECTION

INTERPRET PER ASME Y14.5 - 2018

MAX SURFACE ROUGHNESS
☐ ALL SURFACES
☐ MARKED ONLY

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3M Center
St. Paul, MN 55144

TITLE
RIBBON CABLE WMT SOCKET, .05 X .05 PITCH, 451 SERIES

CAGE NUMBER	SIZE	DRAWING NO.	REV.
	D	78-5100-2436-3	K

MODEL 451
DET. LISTS ☐ YES ☒ NO
SHT 1 OF 3

78-5100-2436-3 K REVISION

3M ELECTRONICS MATERIALS SOLUTIONS DIVISION
INTERCONNECT SOLUTIONS
http://www.3M.com/interconnect

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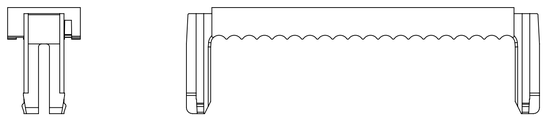
UL FILE NO: E68080

3M™ RIBBON CABLE WIREMOUNT SOCKET ASSEMBLY, 451 SERIES

.050" X .050" (1.27MM X 1.27MM) FOR .025" PITCH CABLE



COVER

TABLE 1			
No. Positions	Dim "A"	Dim "B"	Dim "C"
4	.050	.210	.270
6	.100	.260	.320
8	.150	.310	.370
10	.200	.360	.420
12	.250	.410	.470
14	.300	.460	.520
16	.350	.510	.570
20	.450	.610	.670
26	.600	.760	.820
30	.700	.860	.920
40	.950	1.110	1.170
50	1.200	1.360	1.420

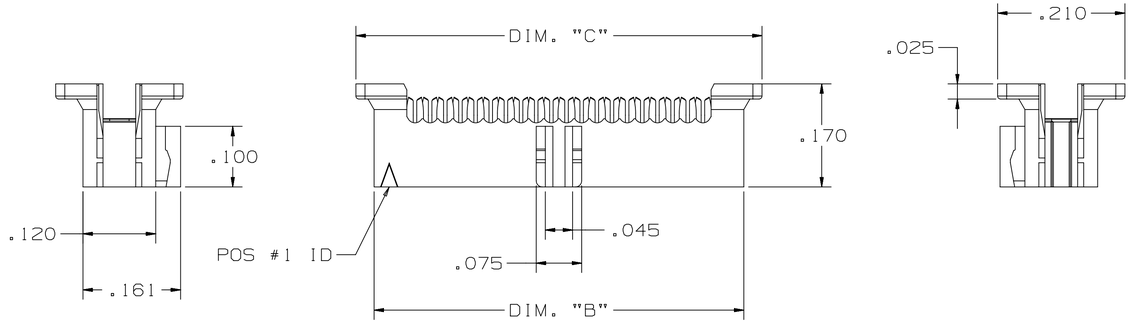
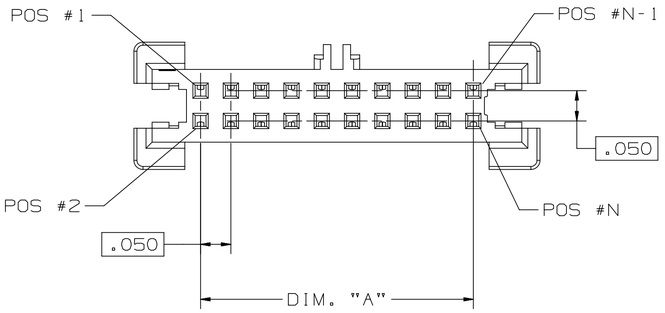
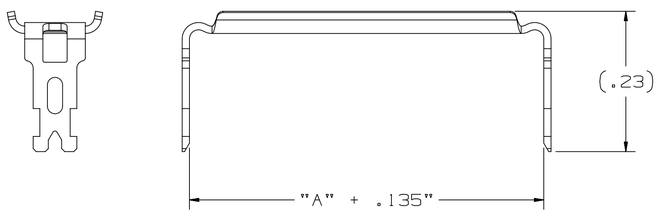


TABLE 2	
LINE	COMPATABLE RIBBON CABLE
1	3M™ ROUND CONDUCTOR FLAT CABLE, 3754 SERIES: PVC, ROUND STRANDED CONDUCTOR
2	3M™ ROUND CONDUCTOR FLAT CABLE, 3447 SERIES: PVC, ROUND SOLID CONDUCTOR
3	3M™ ROUND CONDUCTOR FLAT CABLE, 3756 SERIES: TPE, ROUND STRANDED CONDUCTOR
4	3M™ ROUND CONDUCTOR FLAT CABLE, 3749 SERIES: TPE, ROUND SOLID CONDUCTOR
5	3M™ ROUND CONDUCTOR FLAT CABLE, 3609 SERIES: FEP, ROUND STRANDED CONDUCTOR
6	3M™ ROUND CONDUCTOR FLAT CABLE, 3604 SERIES: FEP, ROUND SOLID CONDUCTOR
7	3M™ ROUND CONDUCTOR FLAT CABLE, HF447 SERIES: PO, HALOGEN FREE, ROUND SOLID CONDUCTOR
8	3M™ ROUND CONDUCTOR FLAT CONTROLLED IMPEDANCE CABLE, 7700 SERIES: PO, SHIELDED, ROUND SOLID CONDUCTOR





ACCESSORY - STRAIN RELIEF
PART NUMBER 3448-451XX

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78-5100-2396-9
78-5100-2437-1
DESIGN REFERENCE

NEXT ASSEMBLY

ACCESS CODES

DRFT ARM — DATE FEB 11,2011 — MFG — DATE

CHKD — DATE — APPVL SAN — DATE FEB 11,2011

DIVISION

DIVISION CODE EMSD

DO NOT SCALE DRAWING

SCALE 4 1

TOLERANCES EXCEPT AS NOTED

INCHES
.0 ±.1
.00 ±.02
.000 ±.010
.0000 ±.005

THIRD ANGLE PROJECTION

INTERPRET PER ASME Y14.5 - 2018

MILLIMETERS
0 ±
.0 ±
.00 ±
.000 ±

MAX SURFACE ROUGHNESS
☐ ALL SURFACES
☑ MARKED ONLY

ANGLES ±

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TITLE

RIBBON CABLE WMT SOCKET, .05 X .05 PITCH, 451 SERIES

CAGE NUMBER — SIZE D — DRAWING NO. 78-5100-2436-3 — REV. K

MODEL 451

DET. LISTS ☐ YES ☒ NO

SHT 2 OF 3

78-5100-2436-3 K
DRAWING NUMBER REVISION

3M™ RIBBON CABLE WIREMOUNT SOCKET ASSEMBLY, 451 SERIES

.050" X .050" (1.27MM X 1.27MM) FOR .025" PITCH CABLE

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Austin, TX 78753-5380
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78-5100-2396-9
78-5100-2437-1
DESIGN REFERENCE NEXT ASSEMBLY

ACCESS CODES

DRFT AFM — DATE FEB 11,2011 — MFG — DATE

CHKD — DATE — APPVL SAN — DATE FEB 11,2011

DIVISION

DIVISION CODE EMSD

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TOLERANCES EXCEPT AS NOTED
INCHES
.0 ±.1
.00 ±.02
.000 ±.010
.0000 ±.005
MILLIMETERS
0 ±
.0 ±
.00 ±
.000 ±
ANGLES ±

THIRD ANGLE PROJECTION

INTERPRET PER ASME Y14.5 - 2018

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TITLE
RIBBON CABLE WMT SOCKET, .05 X .05 PITCH, 451 SERIES

CAGE NUMBER — SIZE D — DRAWING NO. 78-5100-2436-3 — REV. K

MODEL 451 — DET LISTS ☐ YES ☒ NO — SHT 3 OF 3

K REVISION
78-5100-2436-3 DRAWING NUMBER