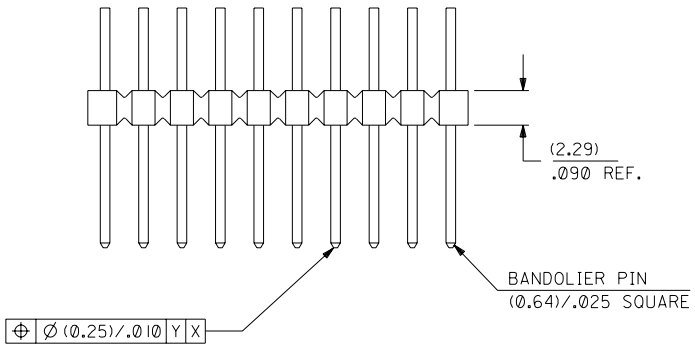
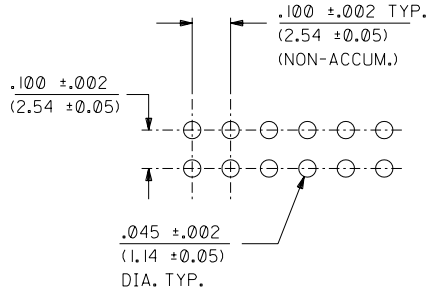
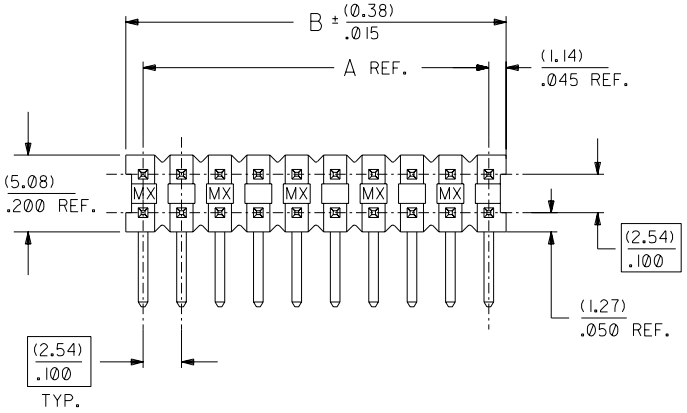
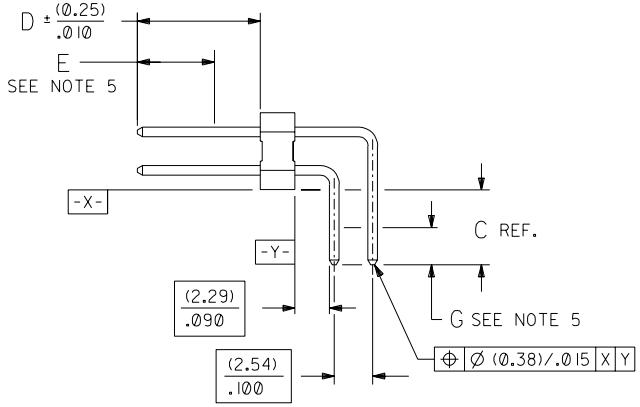



RECOMMENDED P.C. BOARD HOLE LAYOUT




| CKT. SIZE | DIM. A REF. (MM) | DIM. A REF. INCH | DIM. B REF. (MM) | DIM. B REF. INCH |
|---|---|---|---|---|
| 4 | (2.54) | .100 | (4.83) | .190 |
| 6 | (5.08) | .200 | (7.37) | .290 |
| 8 | (7.62) | .300 | (9.91) | .390 |
| 10 | (10.16) | .400 | (12.45) | .490 |
| 12 | (12.70) | .500 | (14.99) | .590 |
| 14 | (15.24) | .600 | (17.53) | .690 |
| 16 | (17.78) | .700 | (20.07) | .790 |
| 18 | (20.32) | .800 | (22.61) | .890 |
| 20 | (22.86) | .900 | (25.15) | .990 |
| 22 | (25.40) | 1.000 | (27.69) | 1.090 |
| 24 | (27.94) | 1.100 | (30.23) | 1.190 |
| 26 | (30.48) | 1.200 | (32.77) | 1.290 |
| 28 | (33.02) | 1.300 | (35.31) | 1.390 |
| 30 | (35.56) | 1.400 | (37.85) | 1.490 |
| 32 | (38.10) | 1.500 | (40.39) | 1.590 |
| 34 | (40.64) | 1.600 | (42.93) | 1.690 |
| 36 | (43.18) | 1.700 | (45.47) | 1.790 |
| 38 | (45.72) | 1.800 | (48.01) | 1.890 |
| 40 | (48.26) | 1.900 | (50.55) | 1.990 |
| 42 | (50.80) | 2.000 | (53.09) | 2.090 |
| 44 | (53.34) | 2.100 | (55.63) | 2.190 |
| 46 | (55.88) | 2.200 | (58.17) | 2.290 |
| 48 | (58.42) | 2.300 | (60.71) | 2.390 |
| 50 | (60.96) | 2.400 | (63.25) | 2.490 |
| 52 | (63.50) | 2.500 | (65.79) | 2.590 |
| 54 | (66.04) | 2.600 | (68.33) | 2.690 |
| 56 | (68.58) | 2.700 | (70.87) | 2.790 |
| 58 | (71.12) | 2.800 | (73.41) | 2.890 |
| 60 | (73.66) | 2.900 | (75.95) | 2.990 |
| 62 | (76.20) | 3.000 | (78.49) | 3.090 |
| 64 | (78.74) | 3.100 | (81.03) | 3.190 |
| 66 | (81.28) | 3.200 | (83.57) | 3.290 |
| 68 | (83.82) | 3.300 | (86.11) | 3.390 |
| 70 | (86.36) | 3.400 | (88.65) | 3.490 |
| 72 | (88.90) | 3.500 | (91.19) | 3.590 |
| 74 | (91.44) | 3.600 | (93.73) | 3.690 |
| 76 | (93.98) | 3.700 | (96.27) | 3.790 |
| 78 | (96.52) | 3.800 | (98.81) | 3.890 |
| 80 | (99.06) | 3.900 | (101.35) | 3.990 |

## NOTES:

1 - PIN PUSHOUT FORCE: 4 LBS. MINIMUM
2 - FOR ILLUSTRATION PURPOSES, 20 (DUAL 10) CIRCUIT SIZE IS SHOWN.
3 - PINS MUST MEET SOLDERABILITY SPEC. ES-152, EXCEPT VOIDS ARE PERMISSIBLE AT BANDOLIER PIN FAYING SURFACE. (APPROX. .025 LNG X .006 WD. REF.) - 2 LOCATIONS
4 - WAFER TO BE FLAT WITHIN (0.03 MM/CM)/.003 IN./IN.
5 - MEASURE POINT FOR PLATING THICKNESS.
6 - THIS PRODUCT CONFORMS TO MOLEX PRODUCT SPEC. PS-70203.
7 - FOR ASSEMBLIES WITH VOIDS, REFER TO DRAWING NUMBER SDA-70203-5001-9999.
8 - PACKAGING INFORMATION:
(UNLESS OTHERWISE NOTED IN TABLES)

| CIRCUIT SIZE | PACKAGING DRAWING |
|---|---|
| 4 THROUGH 8 | PK-70873-0353 |
| 10 AND OVER | PK-70873-0075 |

## FINISH:

TIN - .000150 MINIMUM TIN PLATE OVER NICKEL PLATE.
15 GOLD - .000015 MINIMUM GOLD PLATE IN SELECT AREA, .000075 MINIMUM TIN PLATE IN SELECT AREA, OVER NICKEL PLATE OVERALL.
30 GOLD - .000030 MINIMUM GOLD PLATE IN SELECT AREA, .000075 MINIMUM TIN PLATE IN SELECT AREA, OVER NICKEL PLATE OVERALL.

*THE PRIMARY SHIPPING CARTON WILL BE LABELED "COMPLIANT TO RoHS DIRECTIVE 2002/95/EC AND ELV ANNEX II OF DIRECTIVE 2000/53/EC". CARTONS WITHOUT THIS LABEL MAY CONTAIN PRODUCT WITH LEAD.

## MATERIAL:

WAFER - G.F. POLYESTER; 94V-0; COLOR: BLACK
PIN - PHOSPHOR BRONZE

| MFG. | SH. | REV. | LTR. | REVISIONS |
|---|---|---|---|---|
| | 2 | D | D | LEAD FREE UCP2004-1770 RWHITE 04/04/23 |
| | 1 | D | C1 | REVISE PKGNG ECN UDT2000-0949 SCHAFER 00/4/6 |
| | | | C | REVISED PER ECN # U60711 1/8/96 BJS/RCB |
| | | | B1 | ADDED EDP #'S PER ECR # U60256 95/08/23 CAC |
| | | | B | VOIDED EDP NO'S PER ECR # U60097 95/07/27 CAC |
| | | | A | RELEASED PER ECR # U31656 11/18/93 REED |

▽ = 0 ▼ = 0 REVISE ONLY ON CAD SYSTEM

DIMENSIONS SHOWN (METRIC) INCH
UNLESS OTHERWISE SPECIFIED TOLERANCES: ANGULAR ± 1/2°

| | INCH | METRIC |
|---|---|---|
| 3 PLACE | ± .005 | --- |
| 2 PLACE | ± .01 | ± 0.13 |
| 1 PLACE | --- | ± 0.25 |

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

TITLE: SALES ASSY-DUAL ROW WAFER W/BREAK-OFF OPTION RIGHT ANGLE/.025 SQ PINS

molex MOLEX INCORPORATED LISLE,ILL. 60532 U.S.A.
SHEET NO. 1 OF 2
DATE 11/18/93
PART NO. SEE CHART
DRWG. NO. SDA-70203-0001-5000

| DRWG. BY | CHK'D. BY | APP'D. BY |
|---|---|---|
| SMR | SMR | |

SCALE 4:1
FILE NAME ST0203X1
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION.
DIV. DA
SIZE C

70203

| ENGINEERING NUMBER A-70203 | RELEASE FOR MANUFACTURE | | EXPOSED PIN DIM. C REF. | EXPOSED PIN DIM. D ± (0.25) .010 | | | | | PLATING PER NOTES SHEET 1 | CONNECTOR END PLATING TYPE | CONNECTOR END PLATING E MEAS. | | P.C. BOARD END PLATING TYPE | P.C. BOARD END PLATING G MEAS. | | FOR PKG. INFO. SEE NOTE 8, SHEET 1 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -0001/-0039 | R.F.M. | | (2.79) .110 | (6.10) .240 | | | | | TIN | TIN | (2.54) .100 | | TIN | (1.27) .050 | | | |
| -0040/-0078 | R.F.M. | | (2.79) .110 | (8.13) .320 | | | | | TIN | TIN | (4.57) .180 | | TIN | (1.27) .050 | | | |
| -0079/-0117 | R.F.M. | | (4.45) .175 | (6.10) .240 | | | | | TIN | TIN | (2.54) .100 | | TIN | (1.27) .050 | | | |
| -0157/-0195 | R.F.M. | | (2.79) .110 | (6.10) .240 | | | | | 15 GOLD | GOLD | (2.54) .100 | | TIN | (1.27) .050 | | | |
| -0196/-0234 | R.F.M. | | (2.79) .110 | (8.13) .320 | | | | | 15 GOLD | GOLD | (4.57) .180 | | TIN | (1.27) .050 | | | |
| -0313/-0351 | R.F.M. | | (2.79) .110 | (6.10) .240 | | | | | 30 GOLD | GOLD | (2.54) .100 | | TIN | (1.27) .050 | | | |
| -0352/-0390 | R.F.M. | | (2.79) .110 | (8.13) .320 | | | | | 30 GOLD | GOLD | (4.57) .180 | | TIN | (1.27) .050 | | | |

| CKTS | EDP NUMBER | ENG NUMBER | EDP NUMBER | ENG NUMBER | EDP NUMBER | ENG NUMBER | EDP NUMBER | ENG NUMBER | EDP NUMBER | ENG NUMBER | EDP NUMBER | ENG NUMBER | EDP NUMBER | ENG NUMBER | EDP NUMBER | ENG NUMBER | CKTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04 | 10-88-1045 | A-70203-0001 | 10-88-1046 | A-70203-0040 | | | 10-89-1046 | A-70203-0157 | 10-89-1047 | A-70203-0196 | 10-89-2046 | A-70203-0313 | 10-89-2047 | A-70203-0352 | 04 |
| 06 | 10-88-1065 | A-70203-0002 | 10-88-1066 | A-70203-0041 | | | 10-89-1066 | A-70203-0158 | 10-89-1067 | A-70203-0197 | 10-89-2066 | A-70203-0314 | 10-89-2067 | A-70203-0353 | 06 |
| 08 | 10-88-1085 | A-70203-0003 | 10-88-1086 | A-70203-0042 | | | 10-89-1086 | A-70203-0159 | 10-89-1087 | A-70203-0198 | 10-89-2086 | A-70203-0315 | 10-89-2087 | A-70203-0354 | 08 |
| 10 | 10-88-1105 | A-70203-0004 | 10-88-1106 | A-70203-0043 | | | 10-89-1106 | A-70203-0160 | 10-89-1107 | A-70203-0199 | 10-89-2106 | A-70203-0316 | 10-89-2107 | A-70203-0355 | 10 |
| 12 | 10-88-1125 | A-70203-0005 | 10-88-1126 | A-70203-0044 | | | 10-89-1126 | A-70203-0161 | 10-89-1127 | A-70203-0200 | 10-89-2126 | A-70203-0317 | 10-89-2127 | A-70203-0356 | 12 |
| 14 | 10-88-1145 | A-70203-0006 | 10-88-1146 | A-70203-0045 | | | 10-89-1146 | A-70203-0162 | 10-89-1147 | A-70203-0201 | 10-89-2146 | A-70203-0318 | 10-89-2147 | A-70203-0357 | 14 |
| 16 | 10-88-1165 | A-70203-0007 | 10-88-1166 | A-70203-0046 | | | 10-89-1166 | A-70203-0163 | 10-89-1167 | A-70203-0202 | 10-89-2166 | A-70203-0319 | 10-89-2167 | A-70203-0358 | 16 |
| 18 | 10-88-1185 | A-70203-0008 | 10-88-1186 | A-70203-0047 | | | 10-89-1186 | A-70203-0TIN | 10-89-1187 | A-70203-0203 | 10-89-2186 | A-70203-0320 | 10-89-2187 | A-70203-0359 | 18 |
| 20 | 10-88-1205 | A-70203-0009 | 10-88-1206 | A-70203-0048 | | | 10-89-1206 | A-70203-0165 | 10-89-1207 | A-70203-0204 | 10-89-2206 | A-70203-0321 | 10-89-2207 | A-70203-0360 | 20 |
| 22 | 10-88-1225 | A-70203-0010 | 10-88-1226 | A-70203-0049 | | | 10-89-1226 | A-70203-0166 | 10-89-1227 | A-70203-0205 | 10-89-2226 | A-70203-0322 | 10-89-2227 | A-70203-0361 | 22 |
| 24 | 10-88-1245 | A-70203-0011 | 10-88-1246 | A-70203-0050 | | | 10-89-1246 | A-70203-0167 | 10-89-1247 | A-70203-0206 | 10-89-2246 | A-70203-0323 | 10-89-2247 | A-70203-0362 | 24 |
| 26 | 10-88-1265 | A-70203-0012 | 10-88-1266 | A-70203-0051 | | | 10-89-1266 | A-70203-0168 | 10-89-1267 | A-70203-0207 | 10-89-2266 | A-70203-0324 | 10-89-2267 | A-70203-0363 | 26 |
| 28 | 10-88-1285 | A-70203-0013 | 10-88-1286 | A-70203-0052 | | | 10-89-1286 | A-70203-0169 | 10-89-1287 | A-70203-0208 | 10-89-2286 | A-70203-0325 | 10-89-2287 | A-70203-0364 | 28 |
| 30 | 10-88-1305 | A-70203-0014 | 10-88-1306 | A-70203-0053 | | | 10-89-1306 | A-70203-0170 | 10-89-1307 | A-70203-0209 | 10-89-2306 | A-70203-0326 | 10-89-2307 | A-70203-0365 | 30 |
| 32 | 10-88-1325 | A-70203-0015 | 10-88-1326 | A-70203-0054 | | | 10-89-1326 | A-70203-0171 | 10-89-1327 | A-70203-0210 | 10-89-2326 | A-70203-0327 | 10-89-2327 | A-70203-0366 | 32 |
| 34 | 10-88-1345 | A-70203-0016 | 10-88-1346 | A-70203-0055 | | | 10-89-1346 | A-70203-0172 | 10-89-1347 | A-70203-0211 | 10-89-2346 | A-70203-0328 | 10-89-2347 | A-70203-0367 | 34 |
| 36 | 10-88-1365 | A-70203-0017 | 10-88-1366 | A-70203-0056 | | | 10-89-1366 | A-70203-0173 | 10-89-1367 | A-70203-0212 | 10-89-2366 | A-70203-0329 | 10-89-2367 | A-70203-0368 | 36 |
| 38 | 10-88-1385 | A-70203-0018 | 10-88-1386 | A-70203-0057 | | | 10-89-1386 | A-70203-0174 | 10-89-1387 | A-70203-0213 | 10-89-2386 | A-70203-0330 | 10-89-2387 | A-70203-0369 | 38 |
| 40 | 10-88-1405 | A-70203-0019 | 10-88-1406 | A-70203-0058 | | | 10-89-1406 | A-70203-0175 | 10-89-1407 | A-70203-0214 | 10-89-2406 | A-70203-0331 | 10-89-2407 | A-70203-0370 | 40 |
| 42 | 10-88-1425 | A-70203-0020 | 10-88-1426 | A-70203-0059 | | | 10-89-1426 | A-70203-0176 | 10-89-1427 | A-70203-0215 | 10-89-2426 | A-70203-0332 | 10-89-2427 | A-70203-0371 | 42 |
| 44 | 10-88-1445 | A-70203-0021 | 10-88-1446 | A-70203-0060 | | | 10-89-1446 | A-70203-0177 | 10-89-1447 | A-70203-0216 | 10-89-2446 | A-70203-0333 | 10-89-2447 | A-70203-0372 | 44 |
| 46 | 10-88-1465 | A-70203-0022 | 10-88-1466 | A-70203-0061 | | | 10-89-1466 | A-70203-0178 | 10-89-1467 | A-70203-0217 | 10-89-2466 | A-70203-0334 | 10-89-2467 | A-70203-0373 | 46 |
| 48 | 10-88-1485 | A-70203-0023 | 10-88-1486 | A-70203-0062 | | | 10-89-1486 | A-70203-0179 | 10-89-1487 | A-70203-0218 | 10-89-2486 | A-70203-0335 | 10-89-2487 | A-70203-0374 | 48 |
| 50 | 10-88-1505 | A-70203-0024 | 10-88-1506 | A-70203-0063 | | | 10-89-1506 | A-70203-0180 | 10-89-1507 | A-70203-0219 | 10-89-2506 | A-70203-0336 | 10-89-2507 | A-70203-0375 | 50 |
| 52 | 10-88-1525 | A-70203-0025 | 10-88-1526 | A-70203-0064 | | | 10-89-1526 | A-70203-0181 | 10-89-1527 | A-70203-0220 | 10-89-2526 | A-70203-0337 | 10-89-2527 | A-70203-0376 | 52 |
| 54 | 10-88-1545 | A-70203-0026 | 10-88-1546 | A-70203-0065 | | | 10-89-1546 | A-70203-0182 | 10-89-1547 | A-70203-0221 | 10-89-2546 | A-70203-0338 | 10-89-2547 | A-70203-0377 | 54 |
| 56 | 10-88-1565 | A-70203-0027 | 10-88-1566 | A-70203-0066 | | | 10-89-1566 | A-70203-0183 | 10-89-1567 | A-70203-0222 | 10-89-2566 | A-70203-0339 | 10-89-2567 | A-70203-0378 | 56 |
| 58 | 10-88-1585 | A-70203-0028 | 10-88-1586 | A-70203-0067 | | | 10-89-1586 | A-70203-0184 | 10-89-1587 | A-70203-0223 | 10-89-2586 | A-70203-0340 | 10-89-2587 | A-70203-0379 | 58 |
| 60 | 10-88-1605 | A-70203-0029 | 10-88-1606 | A-70203-0068 | | | 10-89-1606 | A-70203-0185 | 10-89-1607 | A-70203-0224 | 10-89-2606 | A-70203-0341 | 10-89-2607 | A-70203-0380 | 60 |
| 62 | 10-88-1625 | A-70203-0030 | 10-88-1626 | A-70203-0069 | | | 10-89-1626 | A-70203-0186 | 10-89-1627 | A-70203-0225 | 10-89-2626 | A-70203-0342 | 10-89-2627 | A-70203-0381 | 62 |
| 64 | 10-88-TIN5 | A-70203-0031 | 10-88-TIN6 | A-70203-0070 | | | 10-89-TIN6 | A-70203-0187 | 10-89-TIN7 | A-70203-0226 | 10-89-2646 | A-70203-0343 | 10-89-2647 | A-70203-0382 | 64 |
| 66 | 10-88-1665 | A-70203-0032 | 10-88-1666 | A-70203-0071 | | | 10-89-1666 | A-70203-0188 | 10-89-1667 | A-70203-0227 | 10-89-2666 | A-70203-0344 | 10-89-2667 | A-70203-0383 | 66 |
| 68 | 10-88-1685 | A-70203-0033 | 10-88-1686 | A-70203-0072 | | | 10-89-1686 | A-70203-0189 | 10-89-1687 | A-70203-0228 | 10-89-2686 | A-70203-0345 | 10-89-2687 | A-70203-0384 | 68 |
| 70 | 10-88-1705 | A-70203-0034 | 10-88-1706 | A-70203-0073 | | | 10-89-1706 | A-70203-0190 | 10-89-1707 | A-70203-0229 | 10-89-2706 | A-70203-0346 | 10-89-2707 | A-70203-0385 | 70 |
| 72 | 10-88-1725 | A-70203-0035 | 10-88-1726 | A-70203-0074 | | | 10-89-1726 | A-70203-0191 | 10-89-1727 | A-70203-0230 | 10-89-2726 | A-70203-0347 | 10-89-2727 | A-70203-0386 | 72 |
| 74 | 10-88-1745 | A-70203-0036 | 10-88-1746 | A-70203-0075 | | | 10-89-1746 | A-70203-0192 | 10-89-1747 | A-70203-0231 | 10-89-2746 | A-70203-0348 | 10-89-2747 | A-70203-0387 | 74 |
| 76 | 10-88-1765 | A-70203-0037 | 10-88-1766 | A-70203-0076 | | | 10-89-1766 | A-70203-0193 | 10-89-1767 | A-70203-0232 | 10-89-2766 | A-70203-0349 | 10-89-2767 | A-70203-0388 | 76 |
| 78 | 10-88-1785 | A-70203-0038 | 10-88-1786 | A-70203-0077 | | | 10-89-1786 | A-70203-0194 | 10-89-1787 | A-70203-0233 | 10-89-2786 | A-70203-0350 | 10-89-2787 | A-70203-0389 | 78 |
| 80 | 10-88-1805 | A-70203-0039 | 10-88-1806 | A-70203-0078 | 10-88-1807 | A-70203-0117 | 10-89-1806 | A-70203-0195 | 10-89-1807 | A-70203-0234 | 10-89-2806 | A-70203-0351 | 10-89-2807 | A-70203-0390 | 80 |

| LTR. | REVISIONS | LTR. | REVISIONS |
|---|---|---|---|
| | | D | SEE SHEET 1 |
| | | C1 | SEE SHEET 1 |
| | | C | SEE SHEET 1 |
| | | B1 | SEE SHEET 1 |
| | | B | SEE SHEET 1 |
| | | A | SEE SHEET 1 |

DIMENSIONS SHOWN (METRIC) INCH

UNLESS OTHERWISE SPECIFIED TOLERANCES: ANGULAR ± 1/2°

| | INCH | METRIC |
|---|---|---|
| 3 PLACE | ± .005 | --- |
| 2 PLACE | ± .01 | ± 0.13 |
| 1 PLACE | --- | ± 0.25 |

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DRWG. BY SMR | CHK'D. BY SMR | APP'D. BY | SCALE :

▽ = 0 ▼ = 0 REVISE ONLY ON CAD SYSTEM

TITLE: SALES ASSY-DUAL ROW WAFER W/BREAK-OFF OPTION RIGHT ANGLE/.025 SQ PINS

molex MOLEX INCORPORATED LISLE,ILL. 60532 U.S.A.

SHEET NO. 2 | DATE 11/18/93

PART NO. SEE CHART | DRWG. NO. SDA-70203-0001-5000

FILE NAME S70203X2

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DIV. DA | SIZE C