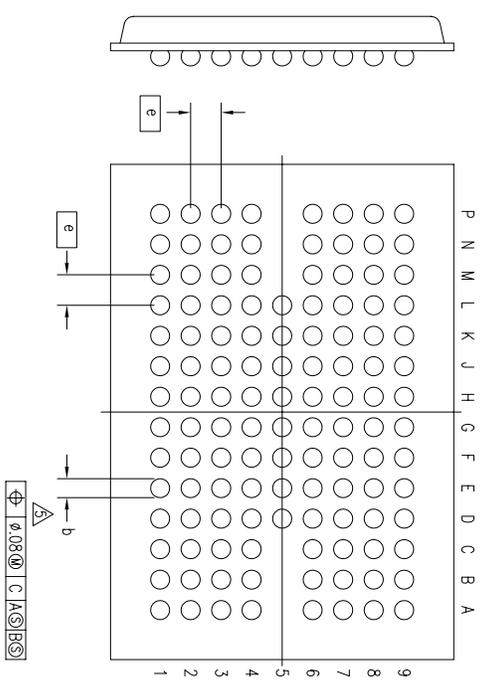
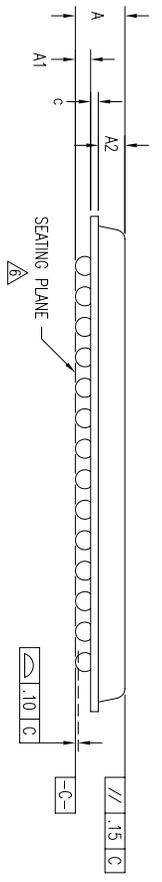
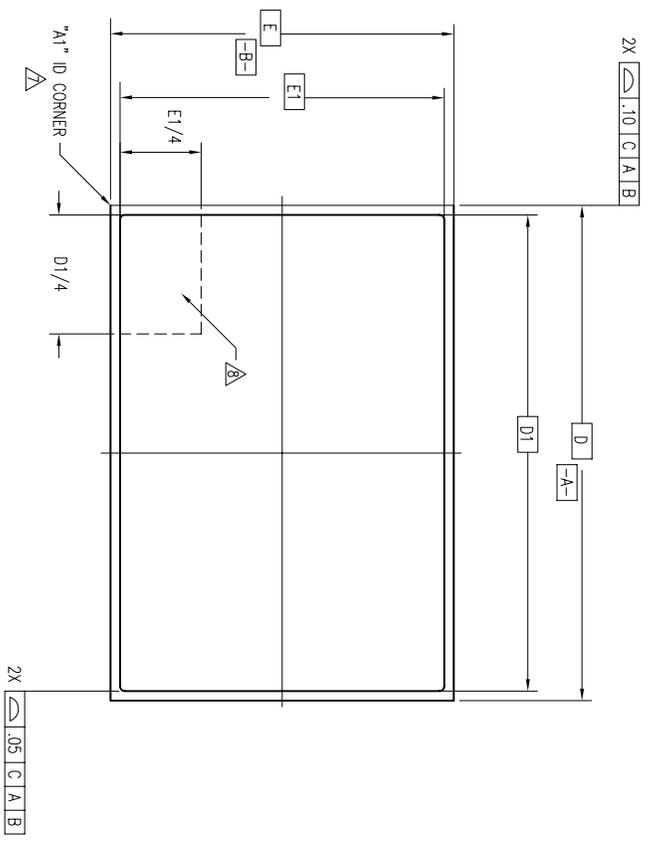
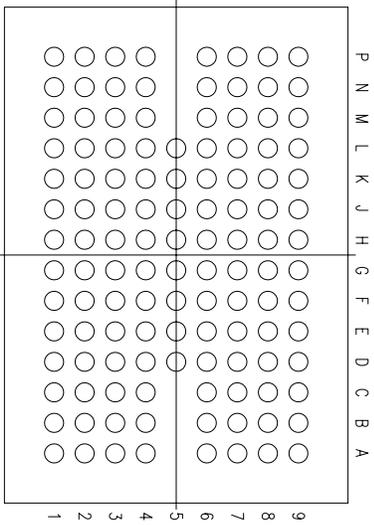


| REVISIONS | | | |
|-----------|----------------------------|----------|----------|
| REV | DESCRIPTION | DATE | APPROVED |
| 00 | INITIAL RELEASE | 09/15/97 | TV |
| 01 | COMBINE POD & LAND PATTERN | 05/23/13 | KS |



| | | | |
|-----------------------------|----------|-------------------------------|-------------------|
| TOLERANCES UNLESS SPECIFIED | | 6024 SILVER CREEK VALLEY ROAD | |
| DECIMAL | ± | WWW.IDT.COM | SAN JOSE CA 95138 |
| ANGULAR | ± | PHONE: (408) 284-8200 | |
| XXX± | | FAX: (408) 284-8591 | |
| XXXX± | | | |
| APPROVALS | DATE | TITLE | |
| DRAWN 979 | 09/15/97 | BF PACKAGE OUTLINE | |
| CHECKED | | 9.0 X 13.0 mm BODY | |
| | | FPGA | |
| | | SIZE | DRAWING No. |
| | | C | PSC-4060 |
| | | DO NOT SCALE DRAWING | SHEET 1 OF 3 |

| REVISIONS | | | |
|-----------|----------------------------|----------|----------|
| REV | DESCRIPTION | DATE | APPROVED |
| 00 | INITIAL RELEASE | 09/15/97 | TV |
| 01 | COMBINE POD & LAND PATTERN | 05/23/13 | KS |



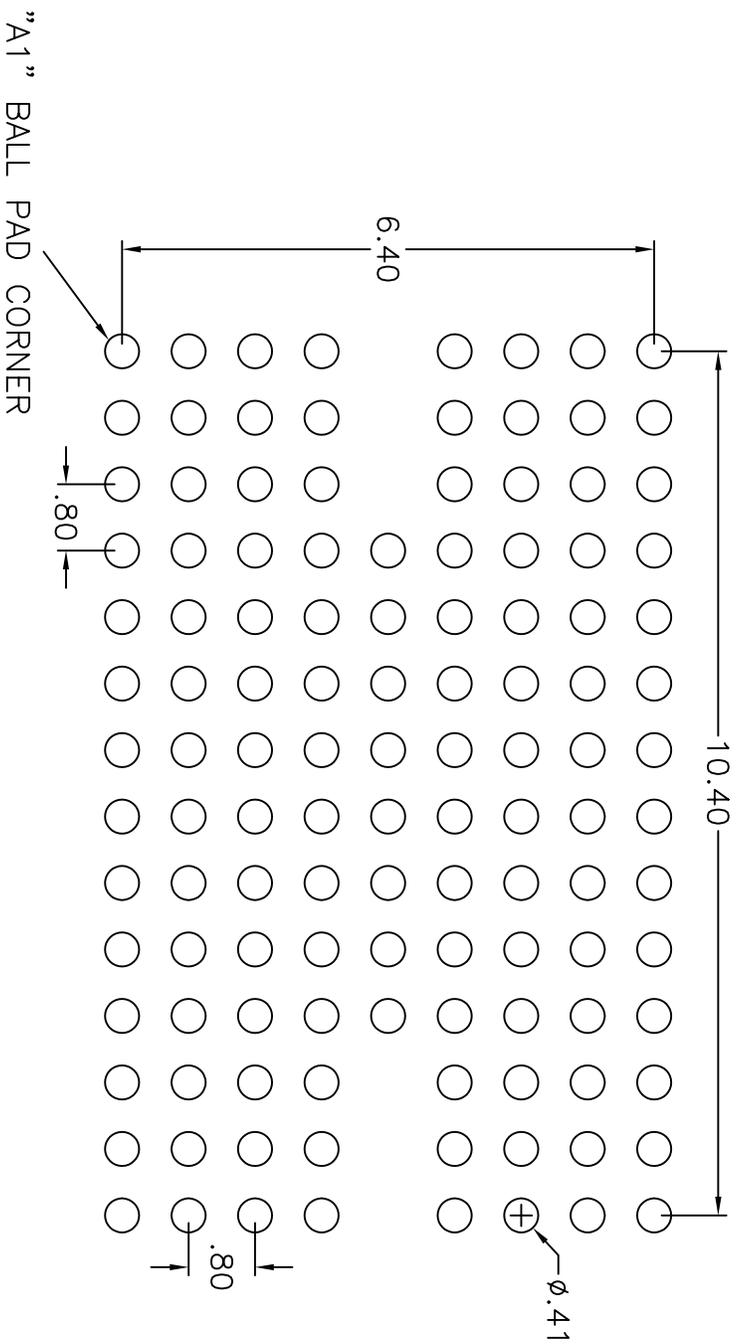
| SYMBOL | JEDEC VARIATION NOT YET REGISTERED | | | NOTE |
|--------------------|---------------------------------------|-----|------|------|
| | MIN | NOM | MAX | |
| A | — | — | 1.42 | |
| A1 | .35 | .40 | .45 | |
| A2 | .75 | .80 | .85 | |
| D | 13.00 BSC | | | |
| D1 | 12.50 BSC | | | |
| E | 9.00 BSC | | | |
| E1 | 8.50 BSC | | | |
| M | 9 X 14 | | | 3 |
| N | 120 | | | 4 |
| e | .80 BSC | | | |
| b | .45 | .50 | .55 | 5 |
| c | .08 | — | .22 | |
| CENTER BALL MATRIX | N/A | | | |

NOTES:

- 1 ALL DIMENSIONING AND TOLERANCING CONFORM TO ANSI Y14.5M-1982
- 2 "e" REPRESENTS THE BASIC SOLDER BALL GRID PITCH
- 3 "M" REPRESENTS THE MAXIMUM SOLDER BALL MATRIX SIZE
- 4 "N" REPRESENTS THE BALLCOUNT NUMBER
- 5 DIMENSION "b" IS MEASURED AT THE MAXIMUM SOLDER BALL DIAMETER, PARALLEL TO PRIMARY DATUM [C]
- 6 SEATING PLANE AND PRIMARY DATUM [C] ARE DEFINED BY THE SPHERICAL CROWNS OF THE SOLDER BALLS
- 7 "A1" ID CORNER MUST BE IDENTIFIED BY CHAMFER, INK MARK, METALLIZED MARKING, INDENTATION OR OTHER FEATURE ON PACKAGE BODY
- 8 IF "A1" ID CORNER IS ON PACKAGE BODY, IT MUST BE LOCATED WITHIN THE ZONE INDICATED
- 9 ALL DIMENSIONS ARE IN MILLIMETERS

| | | | |
|-----------------------------|------|--|--------------------|
| TOLERANCES UNLESS SPECIFIED | |  6024 SILVER CREEK VALLEY ROAD SAN JOSE CA 95138 PHONE: (408) 284-8200 FAX: (408) 284-8591 | |
| DECIMAL | ± | DATE | 09/15/97 |
| ANGULAR | ± | TITLE | BF PACKAGE OUTLINE |
| APPROVALS | DATE | DRAWN | 77J |
| CHECKED | | SIZE | C |
| | | DRAWING NO. | PSC-4060 |
| | | REV | 01 |
| DO NOT SCALE DRAWING | | SHEET 2 OF 3 | |

| REVISIONS | | | |
|-----------|----------------------------|----------|----------|
| REV | DESCRIPTION | DATE | APPROVED |
| 00 | INITIAL RELEASE | 09/15/97 | TV |
| 01 | COMBINE POD & LAND PATTERN | 05/23/13 | KS |



RECOMMENDED LAND PATTERN DIMENSION (mm)

| | | | |
|-----------------------------|-------------|-------------------------------|--------|
| TOLERANCES UNLESS SPECIFIED | | 8024 Silver Creek Valley Road | |
| DECIMAL | ANGULAR | San Jose CA 95138 | |
| XX± .05 | ±1° | PHONE: (408) 284-8200 | |
| XXX± .030 | | FAX: (408) 284-8591 | |
| APPROVALS | DATE | TITLE | |
| DRAWN 2V | 06/15/97 | BF PACKAGE OUTLINE | |
| CHECKED | | FPBGA | |
| SIZE | DRAWING No. | REV | |
| C | PSC-4060 | 01 | |
| DO NOT SCALE DRAWING | | SHEET | 3 OF 3 |