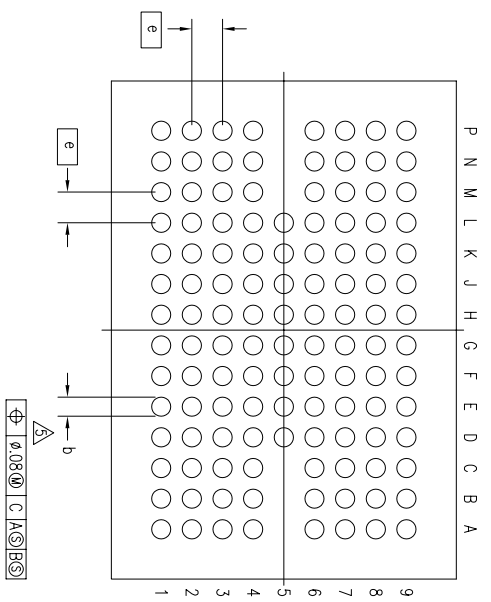
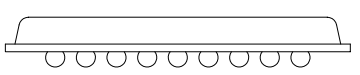
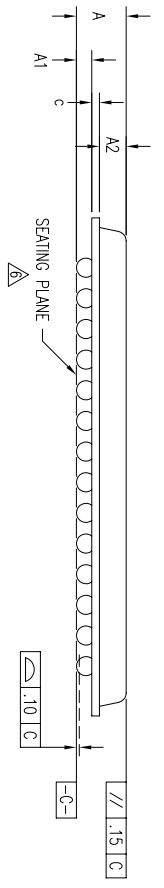
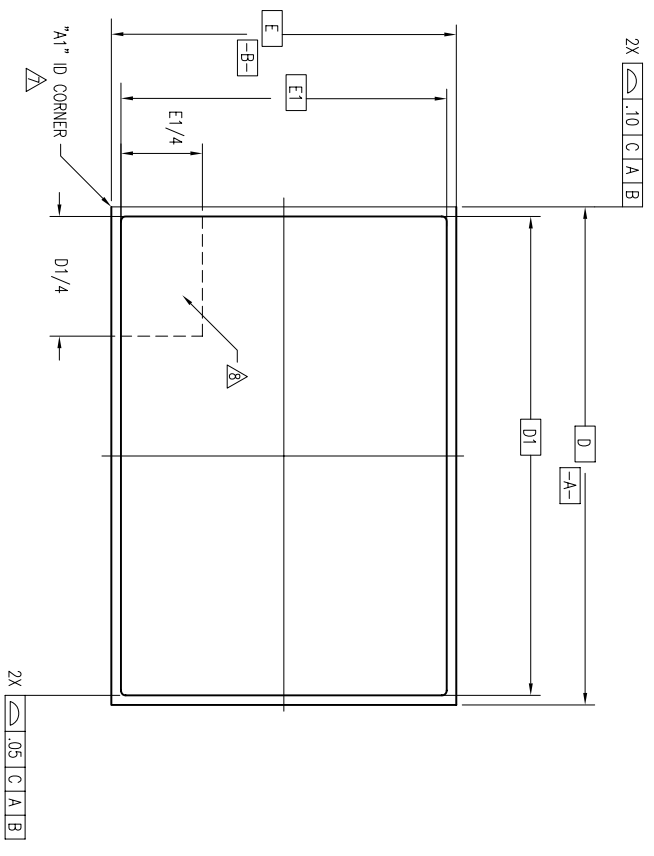
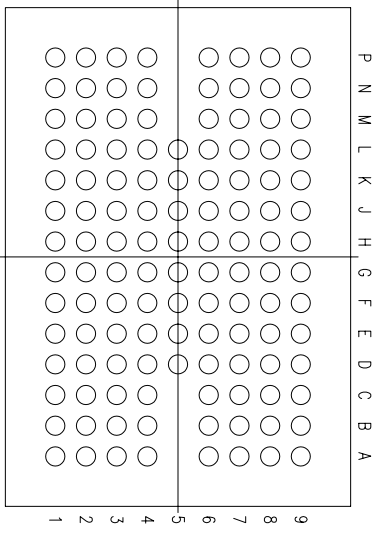


REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	09/15/97	TV
01	COMBINE POD & LAND PATTERN	05/23/13	KS



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 379	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



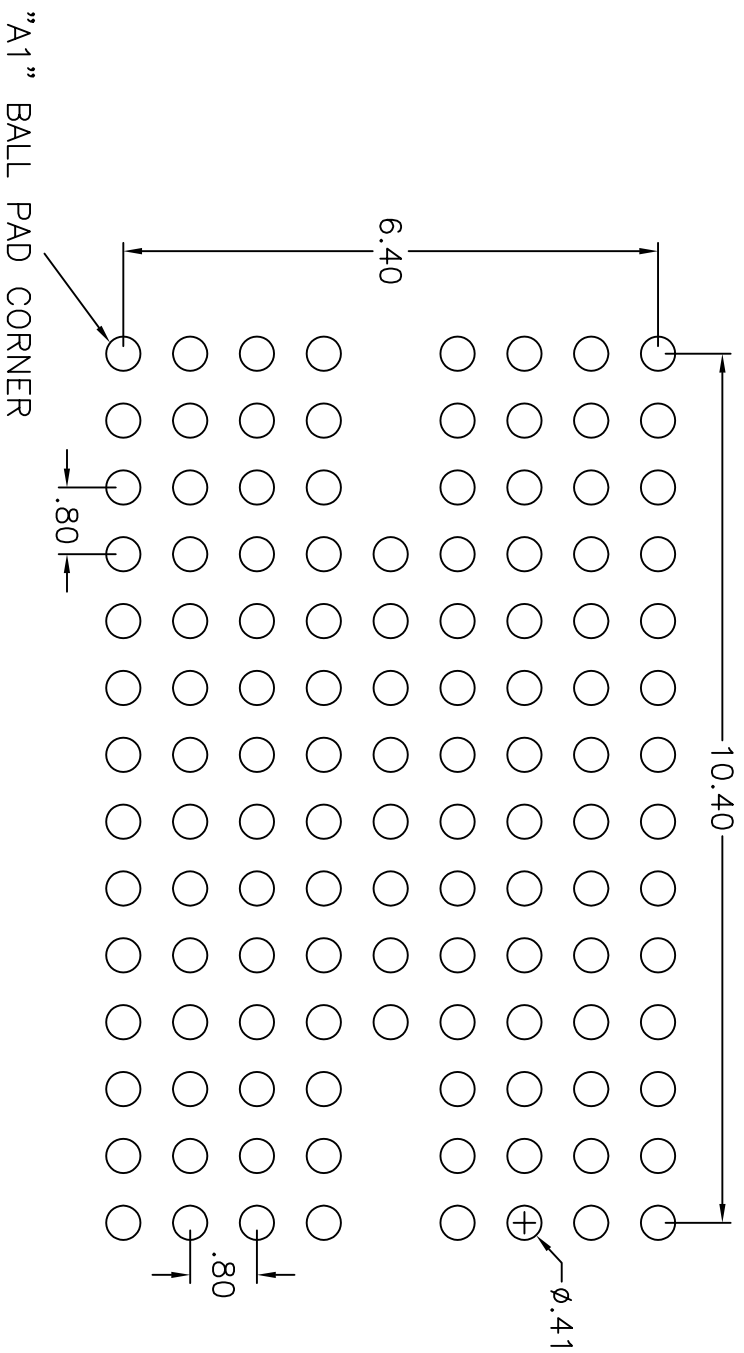
NOTES:

- 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


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			

TOLERANCES UNLESS SPECIFIED		 6024 SILVER CREEK VALLEY ROAD SAN JOSE CA 95138 PHONE: (408) 284-8200 FAX: (408) 284-8591
DECIMAL	±	
ANGULAR	±	
XXX± XXXX±		
APPROVALS	DATE	TITLE
DRAWN 379	09/15/97	BF PACKAGE OUTLINE 9.0 X 13.0 mm BODY FPBGA
CHECKED		
SIZE	DRAWING No.	REV
C	PSC-4060	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 San Jose CA 95138 PHONE: (408) 284-8200 FAX: (408) 284-8591 www.idt.com
DECIMAL	ANGULAR	
XX.X	±1°	
XXX.X	±0.50	
APPROVALS	DATE	TITLE
DRAWN BY	06/15/97	BF PACKAGE OUTLINE FPBGA
CHECKED		
SIZE	DRAWING No.	REV
C	PSC-4060	01
DO NOT SCALE DRAWING		SHEET 3 OF 3