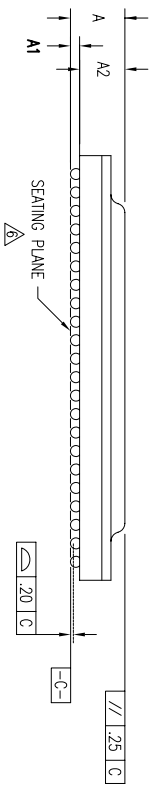
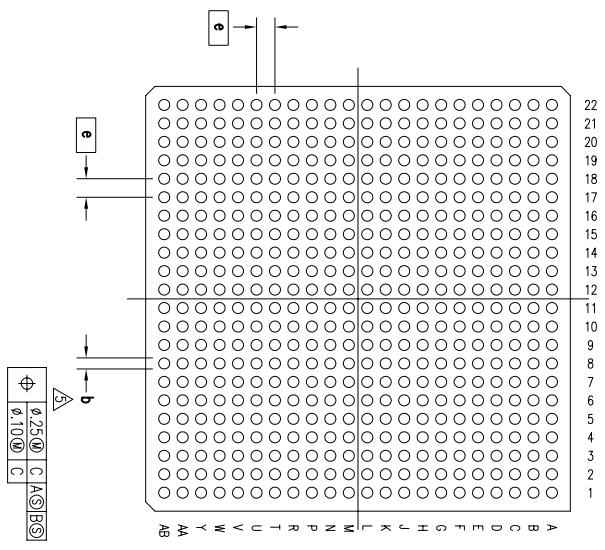
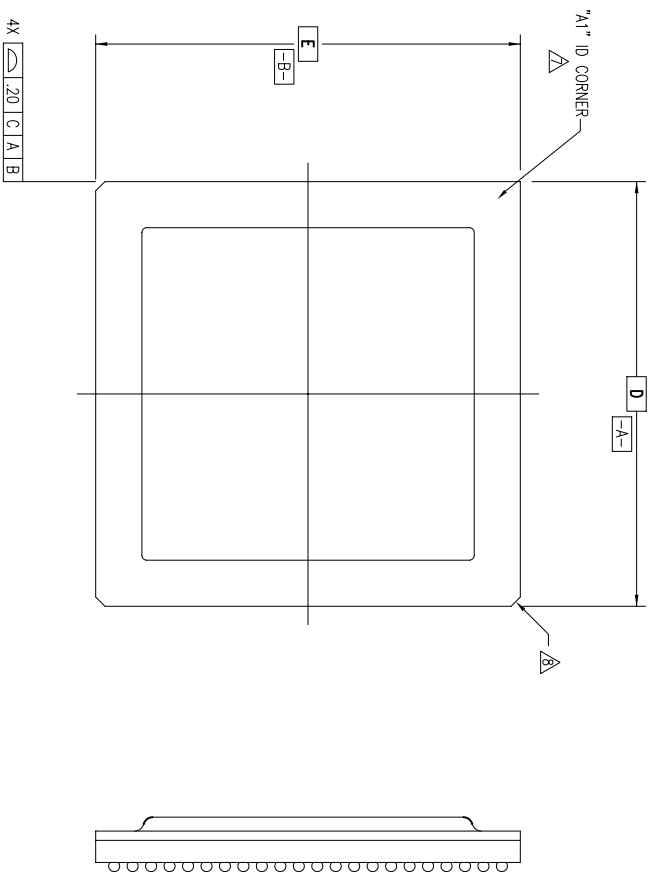
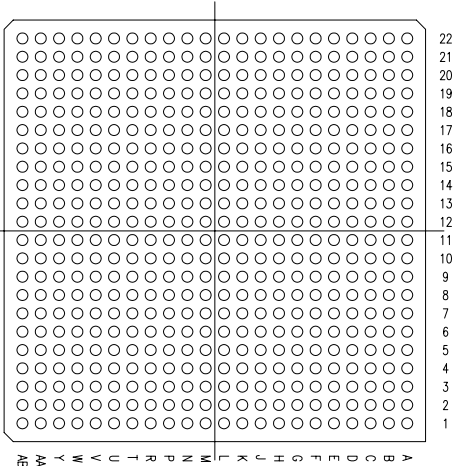


REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	09/22/09	DP
01	COMBINE POD & LAND PATTERN	5/31/13	KS



TOLERANCES UNLESS SPECIFIED		DECIMAL ANGULAR	
XX.X .05		±1°	
XXX.X .030			
APPROVALS	DATE	TITLE	HL/HLG PACKAGE OUTLINE
DRAWN <i>gpp</i>	09/15/06	23.0 x 23.0 mm BODY	
CHECKED		1.00 mm PITCH FCBGA	
SIZE	DRAWING No.	PSC-4287	REV 01
DO NOT SCALE DRAWING		SHEET 1 OF 3	

**IDT**  
 6024 Silver Creek Valley Rd  
 San Jose, CA 95138  
 PHONE: (408) 284-8200  
 FAX: (408) 284-3572  
 WWW.IDT.COM




# 484 BALLS

SYMBOL	JEDEC VARIATION			NOTE
	MIN	NOM	MAX	
A	-	-	2.92	
A1	-	.50	-	
A2	1.96	-	2.32	
D	23.00 BSC			
E	23.00 BSC			
M	22			3
N	484			4
e	1.00 BSC			
b	.50	.64	.70	5
CENTER BALL MATRIX	N/A			

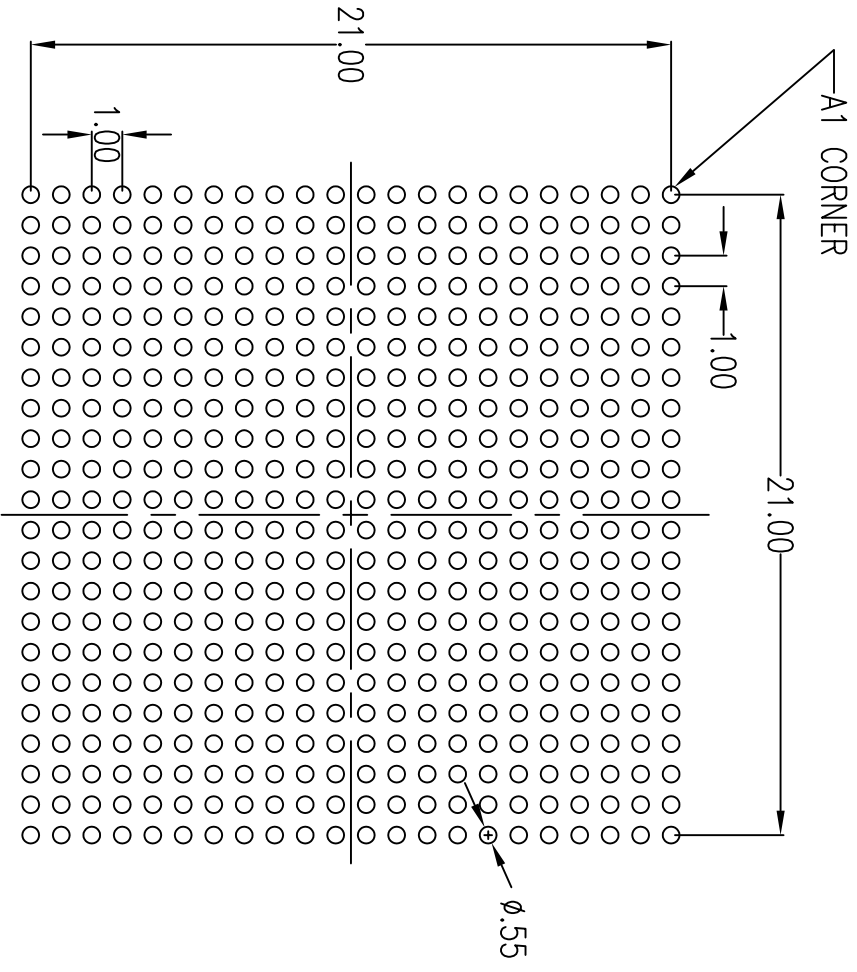
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	09/22/09	DP
01	COMBINE POD & LAND PATTERN	5/31/13	KS

### 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
- DIMENSION "b" IS MEASURED AT THE MAXIMUM SOLDER BALL DIAMETER, PARALLEL TO PRIMARY DATUM  $\text{--C--}$
- SEATING PLANE AND PRIMARY DATUM  $\text{--C--}$  ARE DEFINED BY THE SPHERICAL CROWNS OF THE SOLDER BALLS
- "A1" ID CORNER MUST BE IDENTIFIED BY CHAMFER, INK MARK, METALLIZED MARKING, INDENTATION OR OTHER FEATURE ON PACKAGE BODY
- EXACT SHAPE OF EACH CORNER IS OPTIONAL
- ALL DIMENSIONS ARE IN MILLIMETERS

<b>TOLERANCES UNLESS SPECIFIED</b> DECIMAL ANGULAR $\pm .1$ $\pm 1^\circ$ .05 .030		 <b>IDT</b> 6024 Silver Creek Valley Rd San Jose, CA 95138 PHONE: (408) 284-8200 FAX: (408) 294-3572
APPROVALS DRAWN <i>gjp</i> DATE 09/22/09 CHECKED	TITLE HL/HLG PACKAGE OUTLINE 23.0 x 23.0 mm BODY 1.00 mm PITCH FBGA	
SIZE C DRAWING No. PSC-4287	DO NOT SCALE DRAWING	REV 01 SHEET 2 OF 3

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	09/22/09	DP
01	COMBINE POD & LAND PATTERN	5/31/13	KS



RECOMMENDED LAND PATTERN

NOTE:

- 1) ALL dimensions are in mm, Angles in degrees.
- 2) Top down view, as view on PCB.
- 3) NSMD Land Pattern Assumed
- 4) Land Pattern Recommendation as per IPC-7351B generic requirement for surface mount design and Land Pattern.

TOLERANCES UNLESS SPECIFIED		ANGULAR ±1°	
DECIMAL XX± .105	WWW.IDT.COM		
APPROVALS XXX± .030	DATE 09/22/09	TITLE HL/HLG PACKAGE OUTLINE	6024 Silver Creek Valley Rd San Jose, CA 95138 PHONE: (408) 284-8200 FAX: (408) 284-3572
DRAWN gpp	CHECKED	SIZE C	23.0 x 23.0 mm BODY 1.00 mm PITCH FOBGA
DO NOT SCALE DRAWING		DRAWING No. PSC-4287	REV 01
		SHEET 3 OF 3	