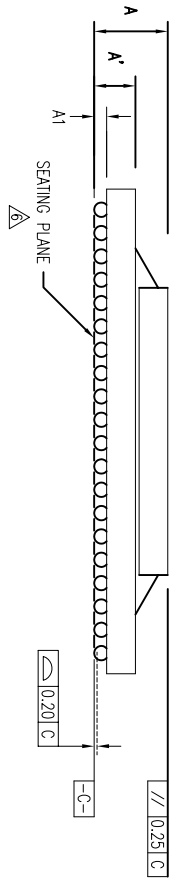
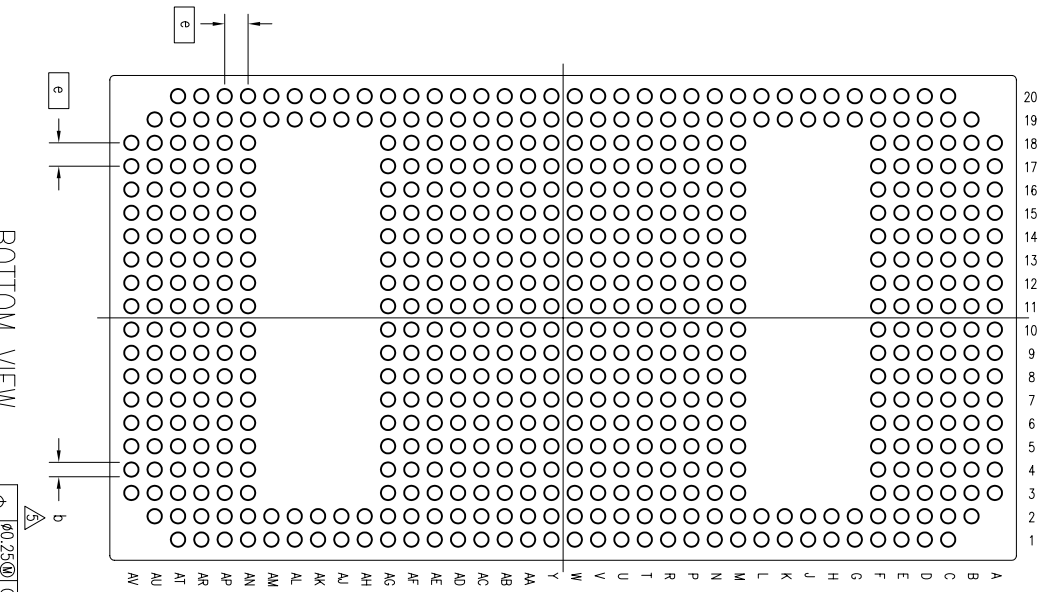
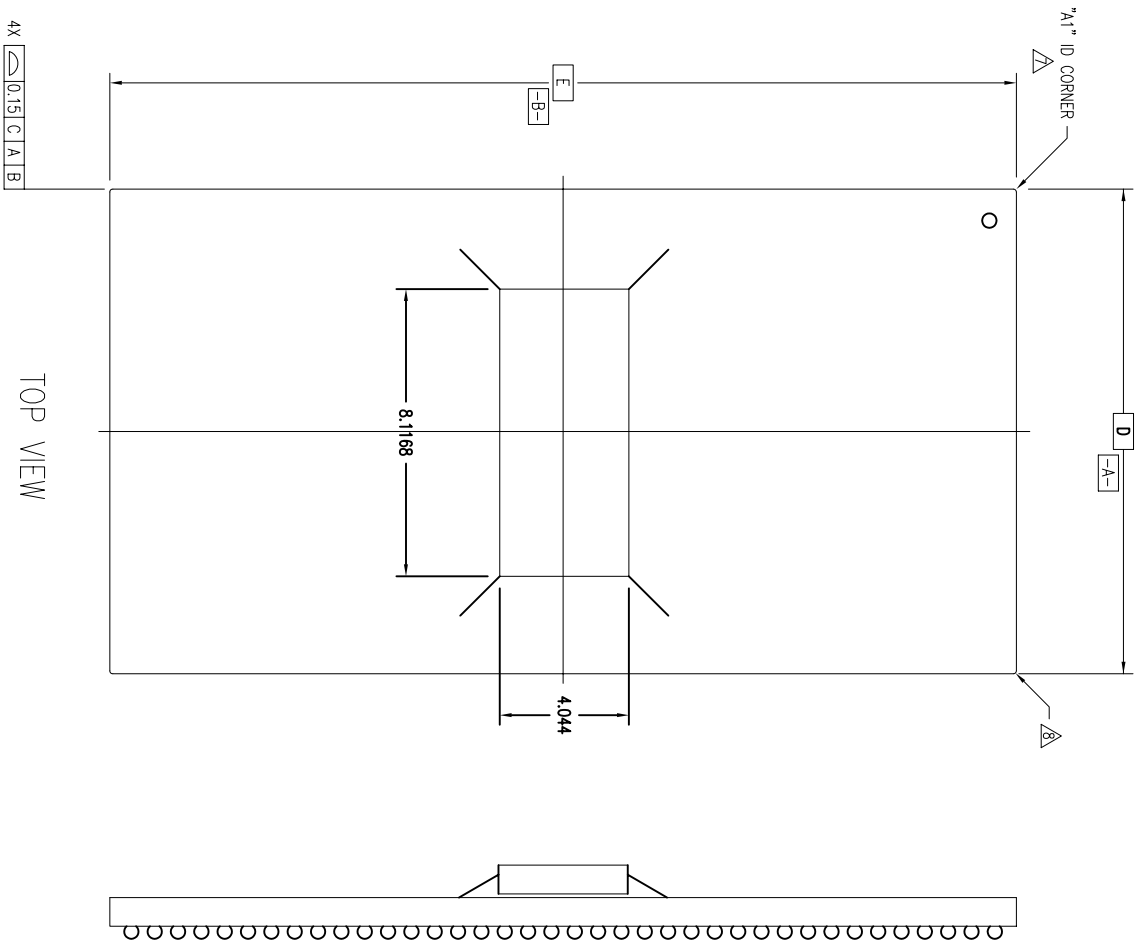


REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
01	CHANGE A, D & E AND ADD A' DIMENSIONS	09/10/09	TV
02	COMBINE POD & LAND PATTERN	5/31/13	KS



**TOLERANCES**  
UNLESS SPECIFIED  
DECIMAL ±  
ANGULAR ±

**APPROVALS**  
DRAWN 579 DATE 06/15/09  
CHECKED

**MBG 588 PACKAGE OUTLINE**  
13.50 X 25.20 mm BODY  
0.65 mm BALLPITCH FCBCA

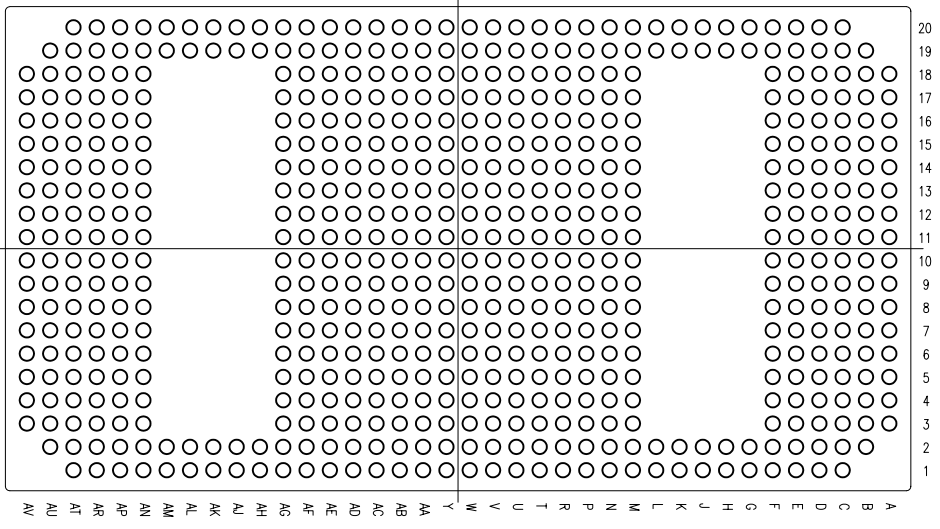
**IDT**  
6024 Silver Creek Valley Rd  
San Jose, CA 95138  
PHONE: (408) 284-8200  
FAX: (408) 284-2775

**PSC-4272**  
DRAWING No.

DO NOT SCALE DRAWING

SHEET 1 OF 3

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
01	CHANGE A, D & E AND ADD A' DIMENSIONS	09/10/09	TV
02	COMBINE P00 & LAND PATTERN	5/31/13	KS




BOTTOM VIEW  
(BALL SIDE VIEW)

SYMBOL	JEDEC VARIATION			NOTE
	MIN	NOM	MAX	
A	1.80	1.95	2.10	
A1	0.25	—	—	
A'	0.98	1.10	1.22	
D	13.50 BSC			
E	25.20 BSC			
M	20 x 38			3
N	588			4
e	0.65 BSC			
b	0.35	0.40	0.45	5
CENTER BALL MATRIX	N/A			

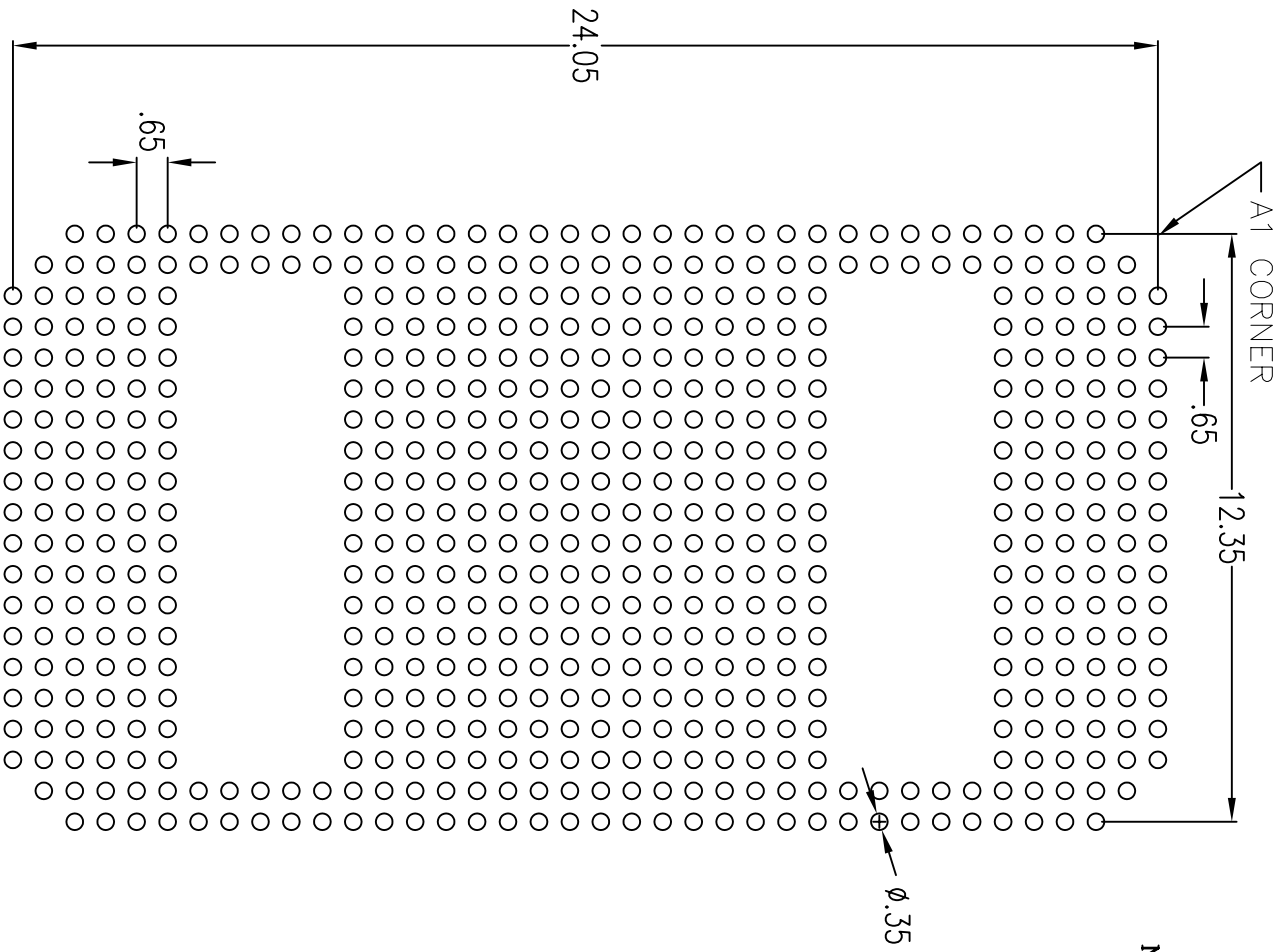
- 1 ALL DIMENSIONING AND TOLERANCING CONFORM TO ANSI Y14.5M-1982
- 2 "e" REPRESENTS THE BASIC SOLDER BALL GRID PITCH
- 3 "M" REPRESENTS THE MAXIMUM SOLDER BALL MATRIX SIZE
- 4 "N" REPRESENTS THE BALLCOUNT NUMBER
- 5 DIMENSION "b" IS MEASURED AT THE MAXIMUM SOLDER BALL DIAMETER, PARALLEL TO PRIMARY DATUM [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 EXACT SHAPE OF EACH CORNER IS OPTIONAL
- 9 ALL DIMENSIONS ARE IN MILLIMETERS

NOTES:


TOLERANCES UNLESS SPECIFIED		 <b>6024 Silver Creek Valley Rd</b> San Jose, CA 95138 PHONE: (408) 284-8200 FAX: (408) 284-2775
DECIMAL	ANGULAR	
±		
XXXX		
APPROVALS	DATE	TITLE
DRAWN 579	06/15/09	MBG 588 PACKAGE OUTLINE
CHECKED		13.50 X 25.20 mm BODY
		0.65 mm BALLPITCH FCBGA
SIZE	DRAWING No.	REV
C	PSC-4272	02
DO NOT SCALE DRAWING		SHEET 2 OF 3

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
01	CHANGE A, D & E AND ADD A' DIMENSIONS	09/10/09	TV
02	COMBINE POD & LAND PATTERN	5/31/13	KS

- 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.



RECOMMENDED LAND PATTERN

TOLERANCES UNLESS SPECIFIED		6024 Silver Creek Valley Rd San Jose, CA 95138 PHONE: (408) 294-8200 FAX: (408) 294-2775	
DECIMAL	ANGULAR		
XXX	±		
XXXX		www.IDT.com	
APPROVALS	DATE	TITLE	MBG 588 PACKAGE OUTLINE
DRAWN 372	06/15/09	13.50 X 25.20 mm BODY	
CHECKED		0.65 mm BALLPITCH FCBSA	
		SIZE C	DRAWING No. PSC-4272
			REV 02
DO NOT SCALE DRAWING			SHEET 3 OF 3