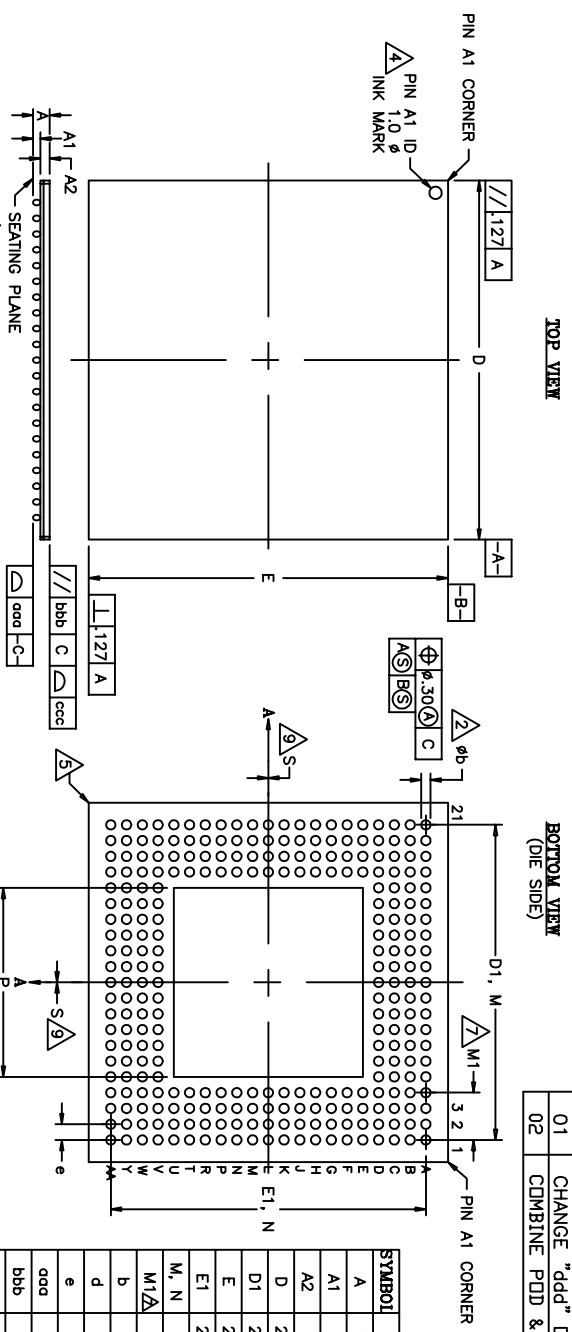
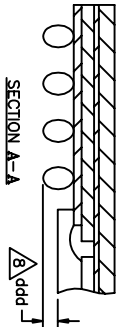


REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	12/4/95	<i>B. Buflornand</i>
01	CHANGE "ddd" DIMENSION	03/10/98	<i>B. Buflornand</i>
02	COMBINE PDD & LAND PATTERN	06/10/13	KS



SYMBOL	MIN	NOM	MAX	NOTE
A	1.10	1.38	1.65	OVERALL THICKNESS
A1	.50	.60	.70	BALL HEIGHT
A2	.60	.78	.95	BODY THICKNESS
D	28.90	29.00	29.10	BODY SIZE
D1	25.30	25.40	25.50	BALL FOOTPRINT
E	28.90	29.00	29.10	BODY SIZE
E1	25.30	25.40	25.50	BALL FOOTPRINT
M, N	21 X 21			BALL MATRIX
M1/A		4		NUMBER OF ROWS DEEP
b	.60	.75	.90	BALL DIAMETER
d		.5		CORNER RADIUS/TANT
e		1.27		BALL PITCH
ddd			.15	COPLANARITY
bbb			.15	PARALLEL
ccc			.20	TOP FLATNESS
ddd	.15	.41	.54	SEATING PLANE CLEARANCE FROM ENCAPSULATION AREA MAX
P	-	-	20.80	SEATING PLANE CLEARANCE FROM ENCAPSULATION AREA MAX
S	-	-	.00	SOLDER BALL PLACEMENT

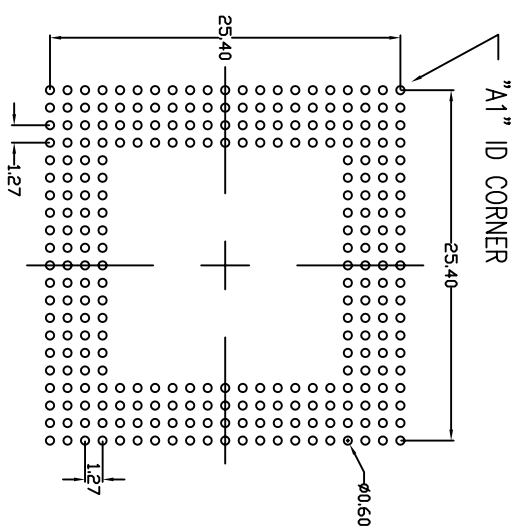
- NOTES: (UNLESS OTHERWISE SPECIFIED)
1. ALL DIMENSIONS & TOLERANCES CONFORM TO ANSI Y14.5M-1982.
 2. DIM "b" MEASURED AT THE MAX SOLDER BALL DIAMETER, PARALLEL TO PRIMARY DATUM [C-].
 3. PRIMARY DATUM [C-] AND SEATING PLANE ARE DEFINED BY THE SPHERICAL CROWNS OF THE SOLDER BALLS.
 4. PIN A1 ID MARKED BY INK (OPTION).
 5. OPTIONAL SHAPE AT CORNER "d" OR OR D
 6. ALL DIMENSIONS ARE IN MILLIMETERS.
 7. NUMBERS OF ROWS IN FROM EDGE TO CENTER.
 8. HEIGHT FROM BALL SEATING PLANE TO PLANE OF ENCAPSULANT.
 9. "S" IS MEASURED WITH RESPECT TO -A- AND -B- AND DEFINES THE POSITION OF THE CENTER SOLDER BALL IN THE OUTER ROW.



TOLERANCES UNLESS OTHERWISE SPECIFIED		DRAWN ADD 11/28/95		SCALE N/A	
DECIMAL	± .10	CHECKED		STOCK NO.	272 SuperBGA® MKT DWG
ANGLE	± 1°			29.0mm x 29.0mm	
.XX ± .03				1.27mm PITCH	
.XXX ± .03					
APPROVALS	DATE			DRAWING NO.	PSC-4051
				REV	02
				DO NOT SCALE DRAWING SHEET 1 OF 2	

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 San Jose, CA 95138
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 FAX: (408) 492-8674

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	12/4/95	J. Bullkamdt
01	CHANGE "ddd" DIMENSION	03/10/98	J. Bullkamdt
02	COMBINE PDD & LAND PATTERN	06/10/13	KS



RECOMMENDED LAND PATTERN DIMENSION

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 OTHERWISE SPECIFIED		ANGLE ± 1°	
X ± .10			
XX ± .05			
XXX ± .03			
APPROVALS	DATE		
DRAWN Ad	11/28/95	272 SuperBGA® MKT DWG	
CHECKED		29.0mm x 29.0mm	
		1.27mm PITCH	
		STOCK NO.	DRAWING NO.
		N/A	PSC-4051
DO NOT SCALE DRAWING		SHEET	2 OF 2

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SCALE N/A
 SIZE B
 REV 02