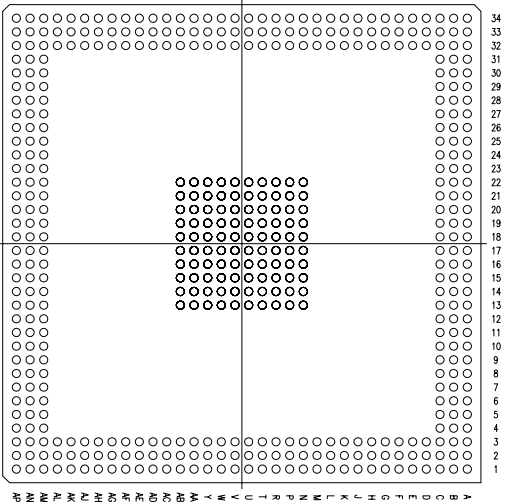
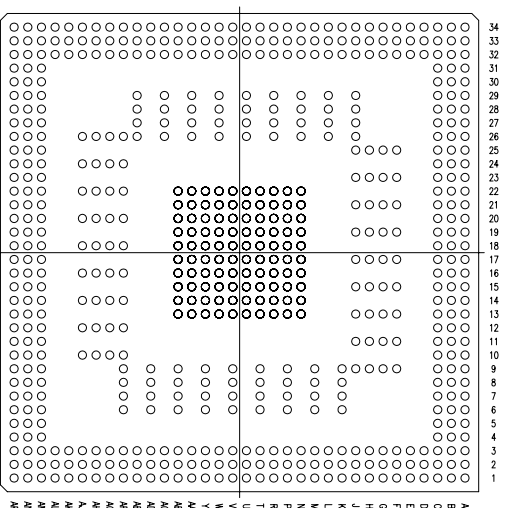


REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	09/11/02	AN
01	CHANGE FROM 472 TO 616 BALLCOUNT	12/25/02	TV
02	TITLE CHANGE TO BL AND ADD BL472 BALLCOUNT	11/03/03	TV
03	ADDED BR TO TITLE	10/25/05	PKP
04	COMBINE POD & LAND PATTERN	05/29/13	KS



472 BALLS



616 BALLS

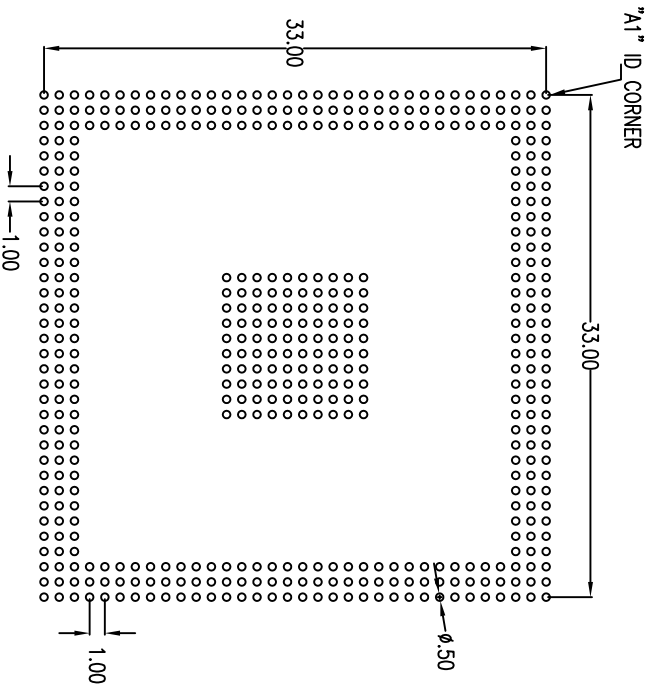
SYMBOL	JEDEC VARIATION				JEDEC VARIATION			
	MIN	NOM	MAX	MIN	NOM	MAX	MIN	MAX
A	-	-	3.42	-	-	3.42	-	-
A1	.30	-	-	.30	-	-	-	-
A2	2.16	-	2.82	2.16	-	2.82	-	-
D	35.00 BSC				35.00 BSC			
E	35.00 BSC				35.00 BSC			
M	34 (DEPOPULATED)				34 (DEPOPULATED)			
N	472				616			
e	1.00 BSC				1.00 BSC			
b	.50	.60	.70	.50	.60	.70		
CENTER BALL MATRIX	10 x 10				10 x 10			

- 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 ---C---
 △ SEATING PLANE AND PRIMARY DATUM ---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

NOTES:

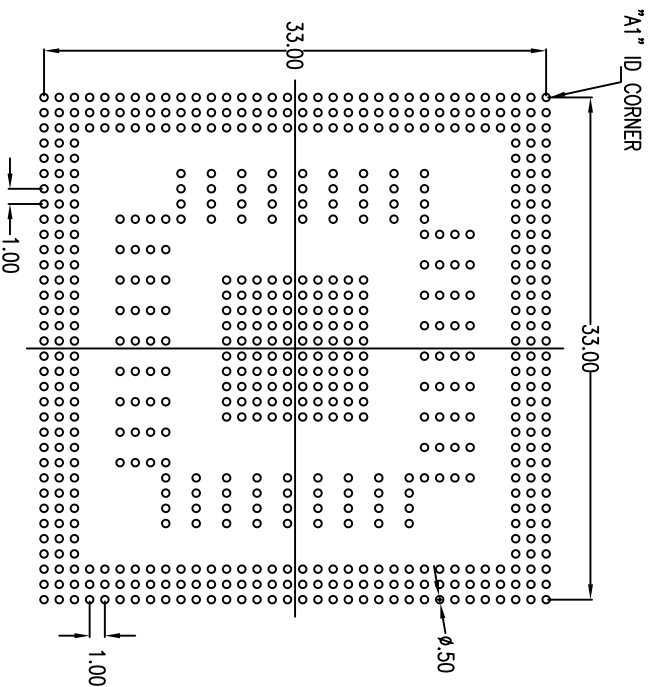
TOLERANCES UNLESS SPECIFIED		ANGULAR ±1°	
DECIMAL	±.05	www.IDT.com	
ANGULAR	±1°	6024 SILVER CREEK VALLEY ROAD SAN JOSE CA 95138 PHONE: (408) 284-8200 FAX: (408) 284-8591	
DATE	09/11/02	TITLE	BL/BR PACKAGE OUTLINE
APPROVALS	472	SIZE	35.0 x 35.0 mm BODY 1.00 mm PITCH FCBGA
CHECKED		DRAWING No.	PSC-4116
		DO NOT SCALE DRAWING	REV 04
			SHEET 2 OF 3

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	09/11/02	AN
01	CHANGE FROM 472 TO 616 BALLCOUNT	12/25/02	TV
02	TITLE CHANGE TO BL AND ADD BL.472 BALLCOUNT	11/03/03	TV
03	ADDED BR TO TITLE	10/25/05	PKP
04	COMBINE POD & LAND PATTERN	05/29/13	KS




472 BALLS

RECOMMENDED LAND PATTERN DIMENSION



616 BALLS

TOLERANCES UNLESS SPECIFIED		 IDT™ 6024 SILVER CREEK VALLEY ROAD SAN JOSE CA 95138 PHONE: (408) 284-8200 FAX: (408) 284-8591
DECIMAL	ANGULAR	
XX± .1	±1°	WWW.IDT.COM WWW.IDT.COM TITLE BL/BR PACKAGE OUTLINE DRAWN 472 35.0 x 35.0 mm BODY CHECKED 1.00 mm PITCH FCBCA
XXX± .030		
APPROVALS	DATE	SIZE
	09/11/02	C
DRAWING No. PSC-4116		REV 04
DO NOT SCALE DRAWING		SHEET 3 OF 3