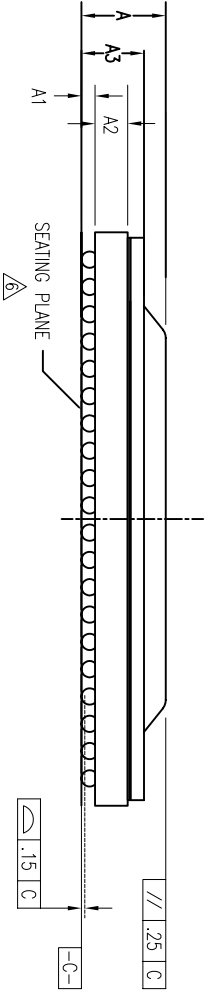
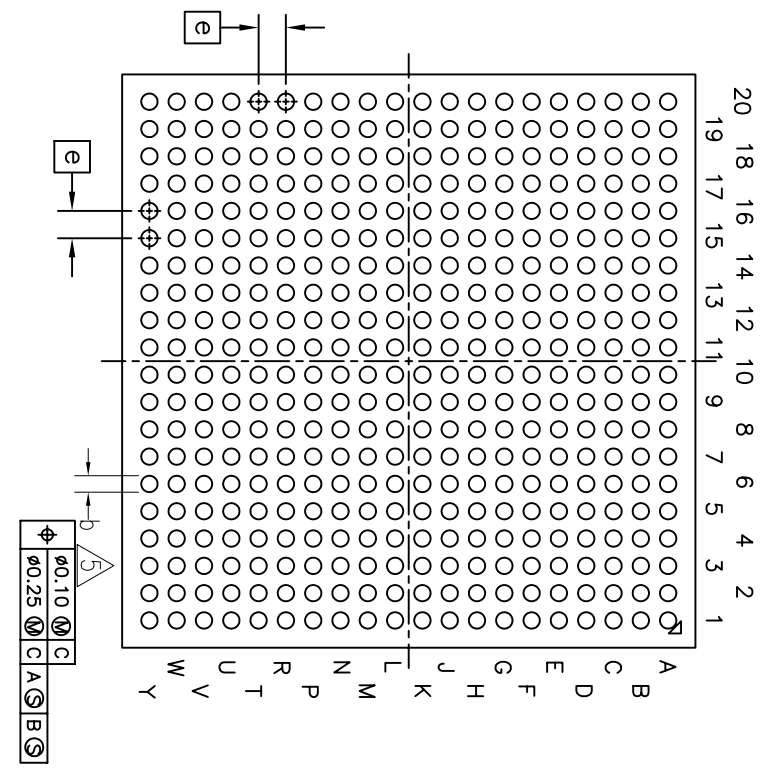
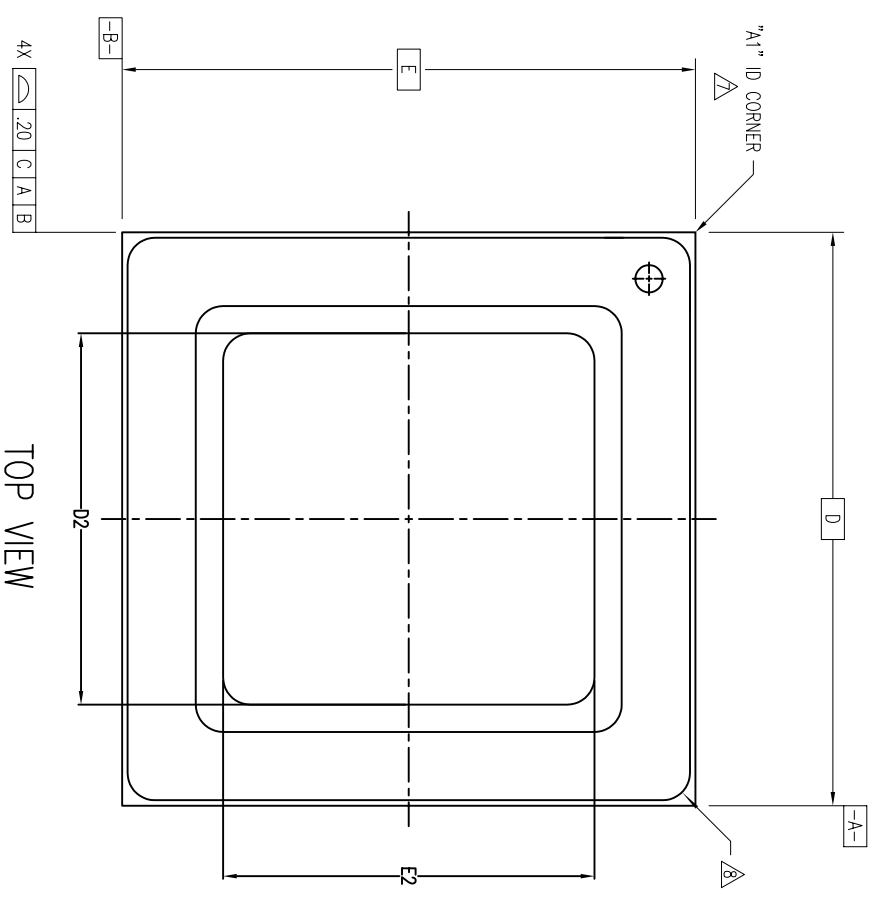


REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	04/30/12	K.S
01	COMBINE POD & LAND PATTERN	05/29/13	K.S



BOTTOM VIEW  
(BALL SIDE VIEW)

TOLERANCES UNLESS SPECIFIED		6024 Silver Creek Valley Rd San Jose, CA 95138 PHONE: (408) 284-8200	
DECIMAL	±	FAX: (408) 284-2775	
ANGULAR		www.IDT.com	
XX±		6024 Silver Creek Valley Rd	
XXXX±		San Jose, CA 95138	
DATE	04/17/12	PHONE: (408) 284-8200	
TITLE	HL/HR 400 PACKAGE OUTLINE	FAX: (408) 284-2775	
DRAWN	JCS	Hot Lid, 21.0 X 21.0 mm BODY	
CHECKED		1.00 mm BALLPITCH FCBGA	
SIZE	C	DRAWING No.	PSC-4416
DO NOT SCALE DRAWING		REV	01
		SHEET	1 OF 3

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	04/30/12	K.S
01	COMBINE POD & LAND PATTERN	05/29/13	K.S

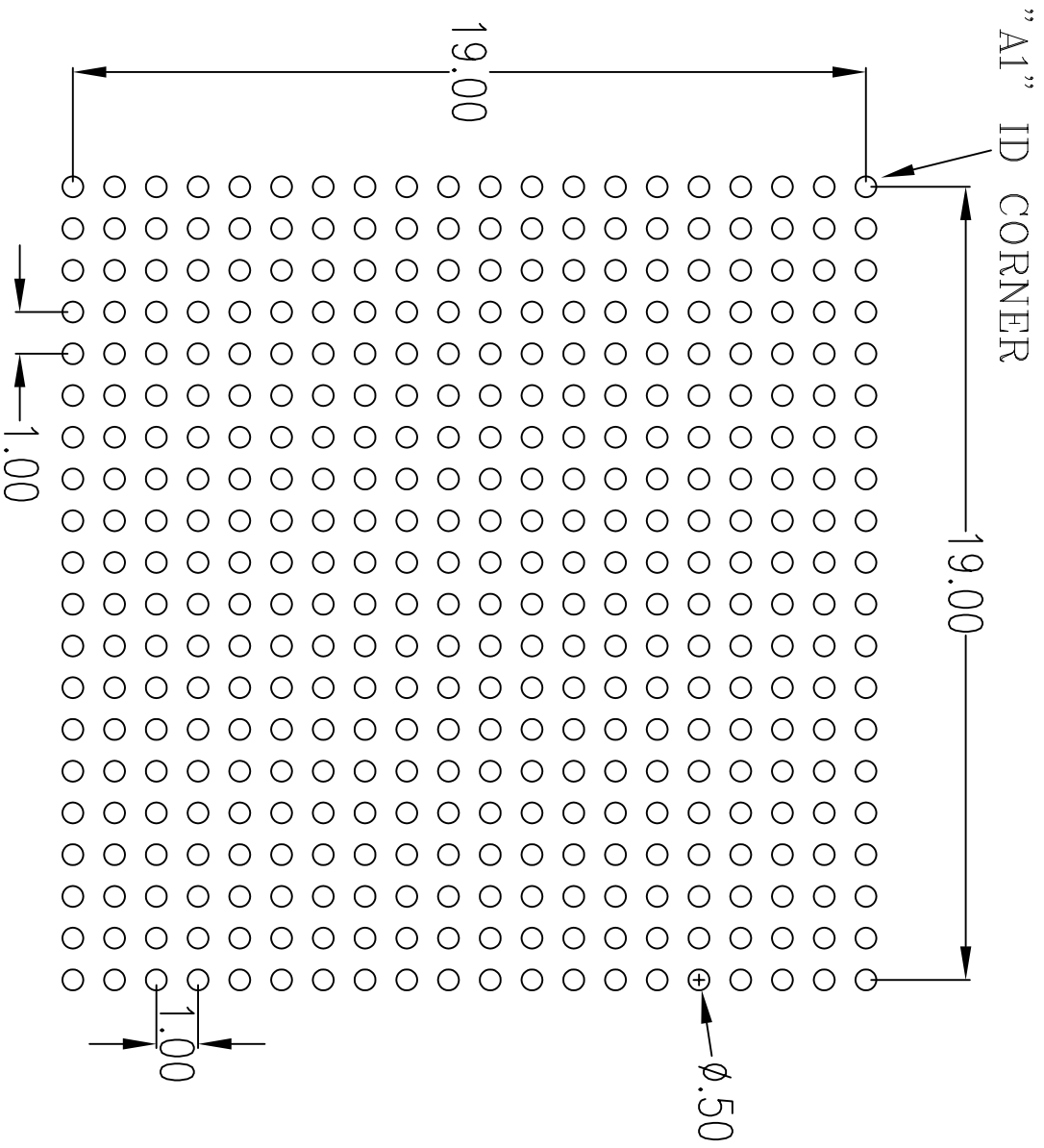
NOTES:

- 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  $\square$ -C-
- 6 SEATING PLANE AND PRIMARY DATUM  $\square$ -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

SYMBOL	JEDEC VARIATION			NOTE
	MIN	NOM	MAX	
A	2.84	3.09	3.34	
A1	0.30	0.50	-	
A2	-	1.19	-	
A3		2.29		
D		21.00 BSC		
E		21.00 BSC		
D2		13.6		
E2		13.6		
M		20		3
N		400		4
e		1.00 BSC		
b	.50	.60	.70	5
CENTER BALL MATRIX		N/A		

TOLERANCES UNLESS SPECIFIED		6024 Silver Creek Valley Rd San Jose, CA 95138	
DECIMAL	ANGULAR	PHONE: (408) 284-8200	
±	±	FAX: (408) 284-2775	
XXXX±		www.IDT.com	
APPROVALS	DATE	TITLE	
DRAWN $\checkmark$ S	04/17/10	HL/HR 400 PACKAGE OUTLINE	
CHECKED		HdL Lid, 21.0 X 21.0 mm BODY	
		1.00 mm BALLPITCH FCBGA	
SIZE	DRAWING No.	REV	
C	PSC-4416	01	
DO NOT SCALE DRAWING			SHEET 2 OF 3

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	04/30/12	K.S
01	COMBINE POD & LAND PATTERN	05/29/13	K.S



RECOMMENDED LAND PATTERN DIMENSION

TOLERANCES UNLESS SPECIFIED		6024 Silver Creek Valley Rd San Jose, CA 95138	
DECIMAL	ANGULAR	PHONE: (408) 284-8200	
XXX ± 0.05	±	FAX: (408) 284-2775	
XXXX		www.IDT.com	
APPROVALS	DATE	TITLE HL/HR 400 PACKAGE OUTLINE	
DRAWN	08/09/17/12	HAT LID, 21.0 X 21.0mm BODY	
CHECKED		1.0 mm BALLPITCH FCBGA	
		SIZE	REV
		C	01
		DRAWING No.	
		PSC-4416	
		DO NOT SCALE DRAWING	SHEET 3 OF 3