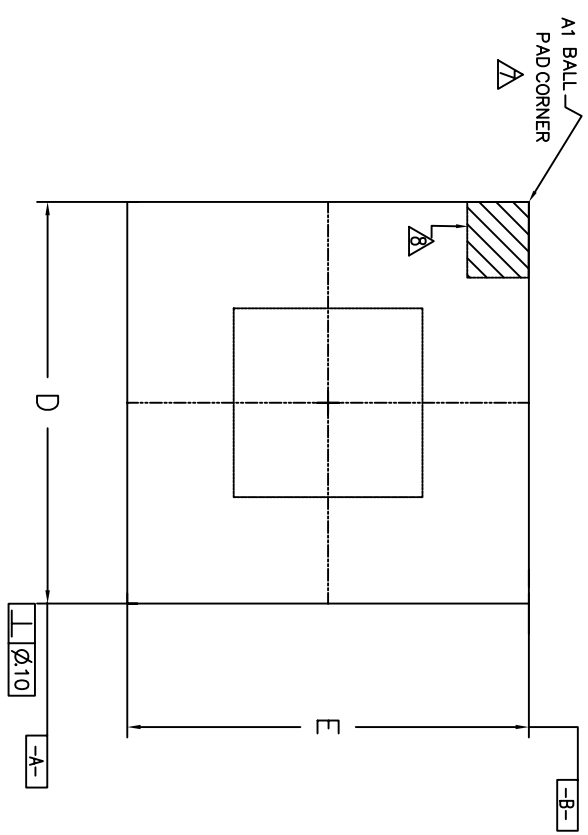
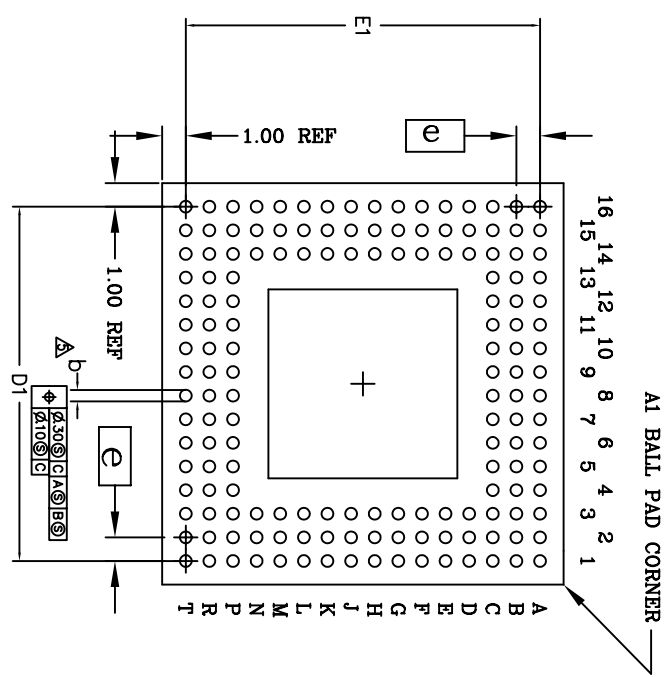


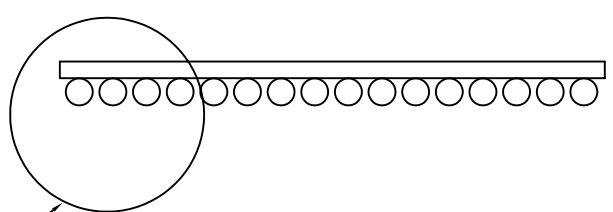
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	06/01/01	DX
01	COMPLETE PCD & LAND PATTERN	06/10/13	KS



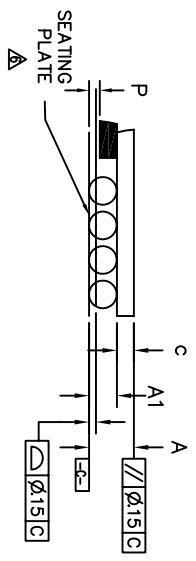
TOP VIEW



BOTTOM VIEW
(156 SOLDER BALLS)



SIDE VIEW

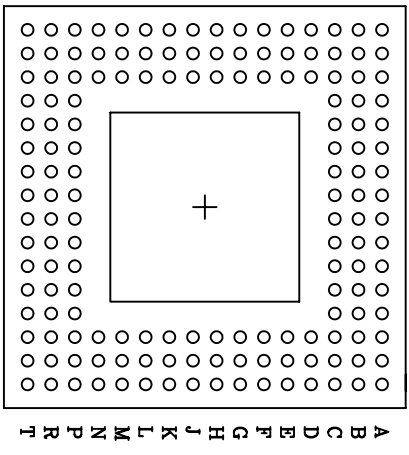


DETAIL A

TOLERANCES UNLESS SPECIFIED		IDT 6024 SILVER CREEK VALLEY ROAD	
DECIMAL	±	Son Jose, CA 95138	
ANGULAR	±	PHONE: (408) 284-8200	
XXXX		FAX: (408) 492-8674	
XXXXX			
APPROVALS	DATE	TITLE	BS156 PACKAGE OUTLINE
DRAWN	05/29/01	SIZE	21.0 X 21.0 mm BODY
CHECKED		DRAWING No.	SBCA
		PSC-4102	
		REV	01
DO NOT SCALE DRAWING		SHEET	1 OF 3

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	06/01/01	DX
01	COMPLETE PCD & LAND PATTERN	06/10/13	KS

16 14 12 10 9 8 7 6 5 4 3 2 1
15 13 11



(156 SOLDER BALLS)

NOTES: UNLESS OTHERWISE SPECIFIED

- 1 ALL DIMENSIONING AND TOLERANCING CONFORM TO ASME Y14.5M-1994
- 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 $\boxed{-C-}$
- 6 SEATING PLANE AND PRIMARY DATUM $\boxed{-C-}$ 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 IF "A1" ID CORNER IS ON PACKAGE BODY, IT MUST BE LOCATED WITHIN THE ZONE INDICATED
- 9 ALL DIMENSIONS ARE IN MILLIMETERS

SYMBOL	JEDEC VARIATION			NOTE
	MO-192 VARIATION	BAA-1		
	MIN	NOM	MAX	
A	1.45	1.55	1.65	
A1	0.60	0.65	0.70	
D	20.80	21.00	21.20	
D1	19.05 BSC			
E	20.80	21.00	21.20	
E1	19.05 BSC			
M	16 X 16			3
N	156			4
P			0.25	
b	0.65	0.75	0.85	5
c	0.85	0.90	0.95	
e	1.27 BSC			

TOLERANCES UNLESS SPECIFIED		6024 SILVER CREEK VALLEY ROAD San Jose, CA 95138 PHONE: (408) 284-8200 FAX: (408) 492-6674 <small>www.IDT.com</small>	
DECIMAL	ANGULAR	DATE	TITLE
XX.X	±	06/29/01	BS156 PACKAGE OUTLINE
XXX.X			21.0 X 21.0 mm BODY
XXXX.X			SBGA
APPROVALS	DATE	SIZE	DRAWING NO.
DRAWN <i>BJC</i>	06/29/01	C	PSC-4102
CHECKED			
			DO NOT SCALE DRAWING
			SHEET 2 OF 3
		REV	01

