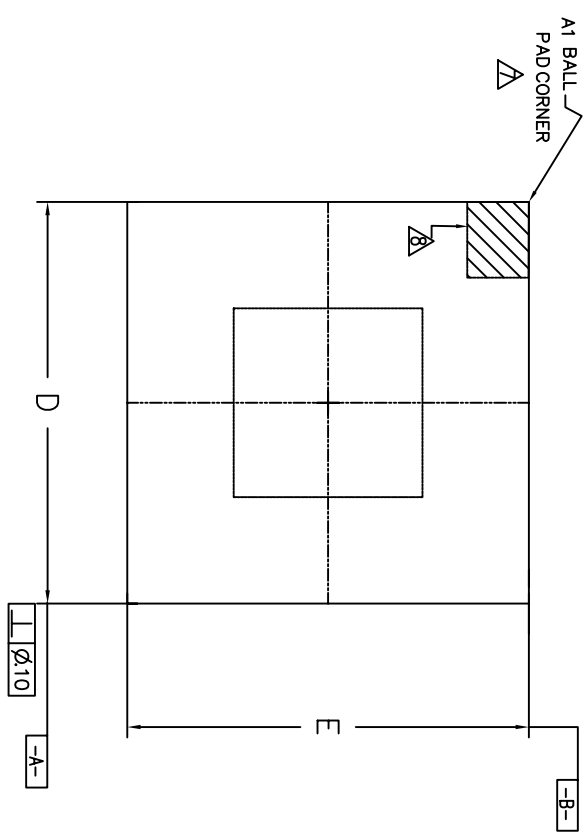
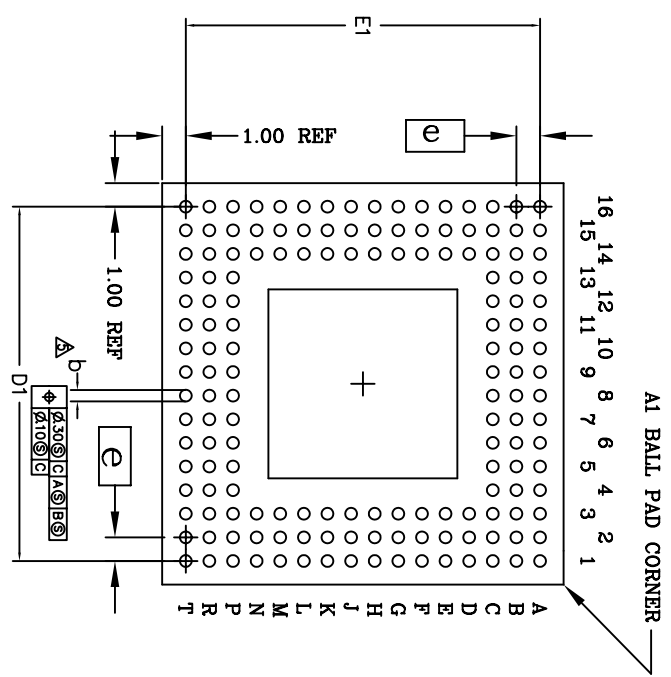


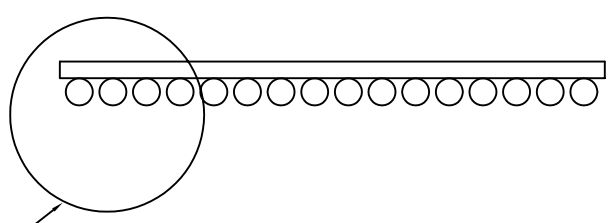
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	06/01/01	DX
01	COMPLETE PCD & LAND PATTERN	06/10/13	KS



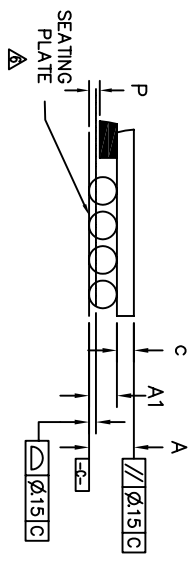
TOP VIEW



BOTTOM VIEW
(156 SOLDER BALLS)



SIDE VIEW

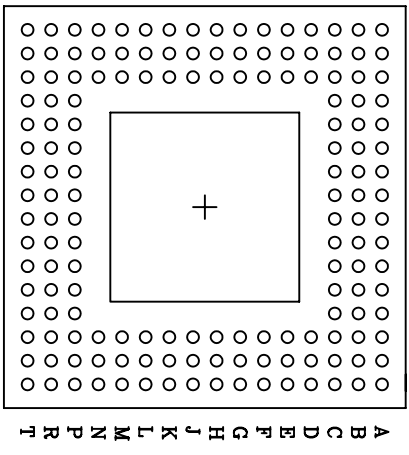


DETAIL A

TOLERANCES UNLESS SPECIFIED		IDT 6024 SILVER CREEK VALLEY ROAD	
DECIMAL	±	Son Jose, CA 95138	
ANGULAR	±	PHONE: (408) 284-8200	
XXXX		FAX: (408) 492-8674	
XXXX		www.IDT.com	
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)

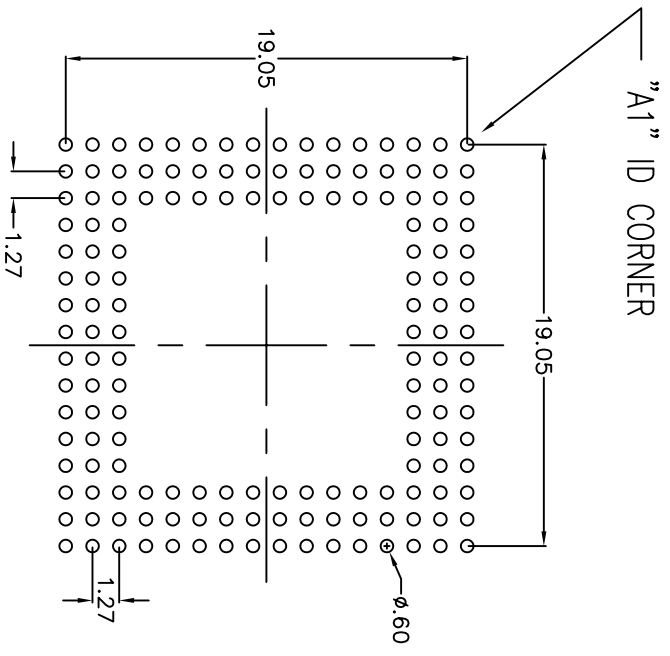
SYMBOL	JEDEC VARIATION			NOTE
	MO-192 VARIATION BAH-1	MIN	NOM	
A	1.45	1.55	1.65	
A1	0.60	0.65	0.70	
D	20.80	21.00	21.20	
D1	19.05 BSC			
E	20.80	21.00	21.20	
E1	19.05 BSC			
M	16 X 16			3
N	156			4
P			0.25	
b	0.65	0.75	0.85	5
c	0.85	0.90	0.95	
e	1.27 BSC			

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

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

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	06/07/01	DX
01	CORNER POD & 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 SPECIFIED		DATE	
DECIMAL	ANGULAR	06/29/01	
XXX	±		
XXXX			
XXXXX			
APPROVALS		TITLE	
DRAWN	JG	BS156 PACKAGE OUTLINE	
CHECKED		21.0 X 21.0 mm BODY	
		SRGA	
		SIZE	REV
		C	01
DRAWING No.		PSC-4102	
DO NOT SCALE DRAWING		SHEET 3 OF 3	

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