

SYMBOL	DIMENSIONS		
	MIN.	NOM.	MAX.
A	-	-	1.40
A1	0.40	-	-
A2	0.60	-	-
D	9.00 BSC.		
E	9.00 BSC.		
D1	7.00 BSC.		
E1	7.00 BSC.		
MD	8		
ME	8		
N	64		
Øb	0.50	0.60	0.70
eD	1.00 BSC.		
eE	1.00 BSC.		
SD/SE	0.50 BSC.		

NOTES:


- DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994 .
- ALL DIMENSIONS ARE IN MILLIMETERS .
- BALL POSITION DESIGNATION PER JEP95 SECTION 3, SPP-020 (RECTANGULAR) OR SPP-010 (SQUARE).
- e REPRESENTS THE SOLDER BALL GRID PITCH .
- SYMBOL "MD" IS THE BALL ROW MATRIX SIZE IN THE "D" DIRECTION.
SYMBOL "ME" IS THE BALL COLUMN MATRIX SIZE IN THE "E" DIRECTION.
N IS THE TOTAL NUMBER OF SOLDER BALLS.
- 6 DIMENSION "b" IS MEASURED AT THE MAXIMUM BALL DIAMETER IN A PLANE PARALLEL TO DATUM C .
- 7 "SD" AND "SE" ARE MEASURED WITH RESPECT TO DATUMS A AND B AND DEFINE THE POSITION OF THE CENTER SOLDER BALL IN THE OUTER ROW.

WHEN THERE IS AN ODD NUMBER OF SOLDER BALLS IN THE OUTER ROW, "SD" OR "SE" = 0.

WHEN THERE IS AN EVEN NUMBER OF SOLDER BALLS IN THE OUTER ROW, "SD" = eD/2 AND "SE" = eE/2.
- "+" INDICATES THE THEORETICAL CENTER OF DEPOPULATED BALLS.
- 9 A1 CORNER TO BE IDENTIFIED BY CHAMFER, LASER OR INK MARK, METALLIZED MARK INDENTATION OR OTHER MEANS.
- JEDEC SPECIFICATION NO. REF : N/A

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TITLE PACKAGE OUTLINE, 64 BALL FBGA 9.0X9.0X1.4 MM LAE064	
SPEC NO. 002-15537	REV *A
SCALE : TO FIT	SHEET 1 OF 2

REVISIONS			
Rev	ECN No.	Orig. of change	Reason for Revision
**	5353272	KOTA	NEW RELEASE
*A	5390524	KOTA	Changed tolerance from 0.15 to 0.10 in side view. Added note #10.

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SPEC NO. 002-15537	REV *A
SCALE : TO FIT	SHEET 2 OF 2

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