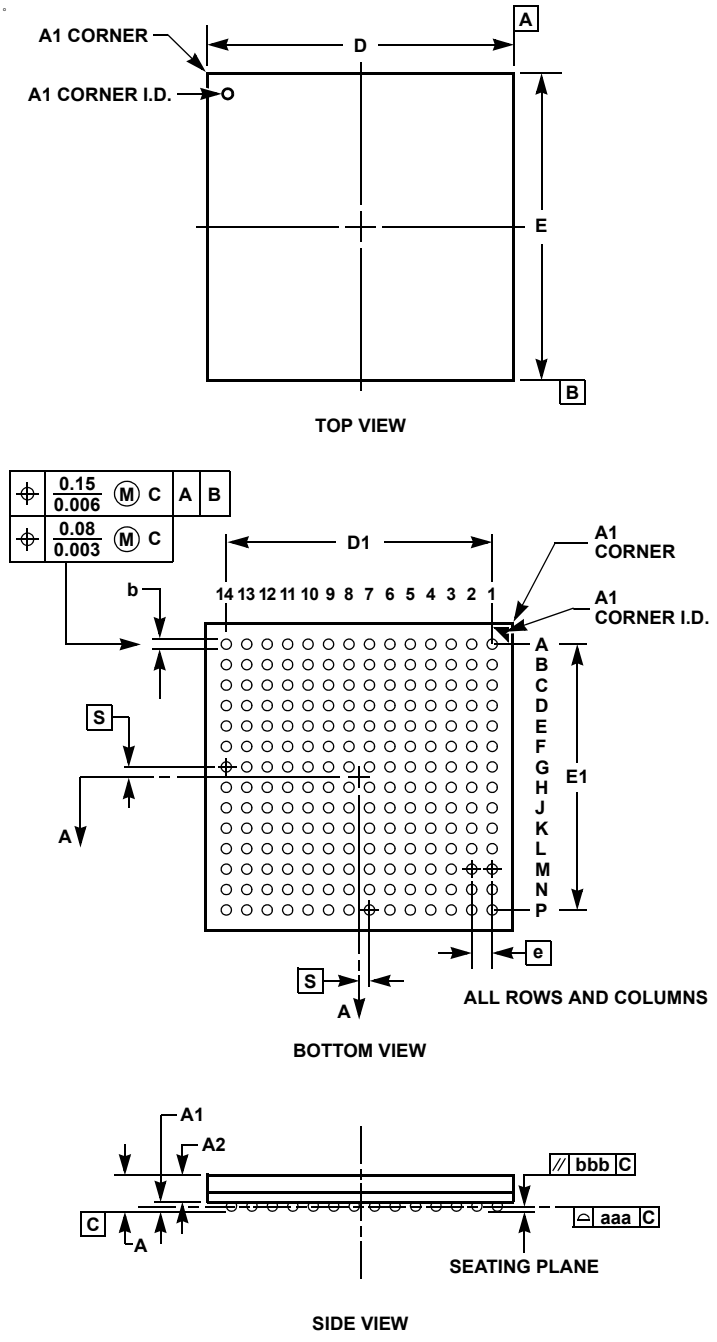
Plastic Ball Grid Array Packages (BGA)



V196.15x15

196 BALL PLASTIC BALL GRID ARRAY PACKAGE

SYMBOL	INCHES		MILLIMETERS		NOTES
	MIN	MAX	MIN	MAX	
A	-	0.059	-	1.50	-
A1	0.012	0.016	0.31	0.41	-
A2	0.037	0.044	0.93	1.11	-
b	0.016	0.020	0.41	0.51	7
D/E	0.587	0.595	14.90	15.10	-
D1/E1	0.508	0.516	12.90	13.10	-
N	196		196		-
e	0.039 BSC		1.0 BSC		-
MD/ME	14 x 14		14 x 14		3
bbb	0.004		0.10		-
aaa	0.005		0.12		-

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NOTES:

1. Controlling dimension: MILLIMETER. Converted inch dimensions are not necessarily exact.
2. Dimensioning and tolerancing conform to ASME Y14.5M-1994.
3. “MD” and “ME” are the maximum ball matrix size for the “D” and “E” dimensions, respectively.
4. “N” is the maximum number of balls for the specific array size.
5. Primary datum C and seating plane are defined by the spherical crowns of the contact balls.
6. Dimension “A” includes standoff height “A1”, package body thickness and lid or cap height “A2”.
7. Dimension “b” is measured at the maximum ball diameter, parallel to the primary datum C.
8. Pin “A1” is marked on the top and bottom sides adjacent to A1.
9. “S” is measured with respect to datum’s A and B and defines the position of the solder balls nearest to package centerlines. When there is an even number of balls in the outer row the value is “S” = e/2.