

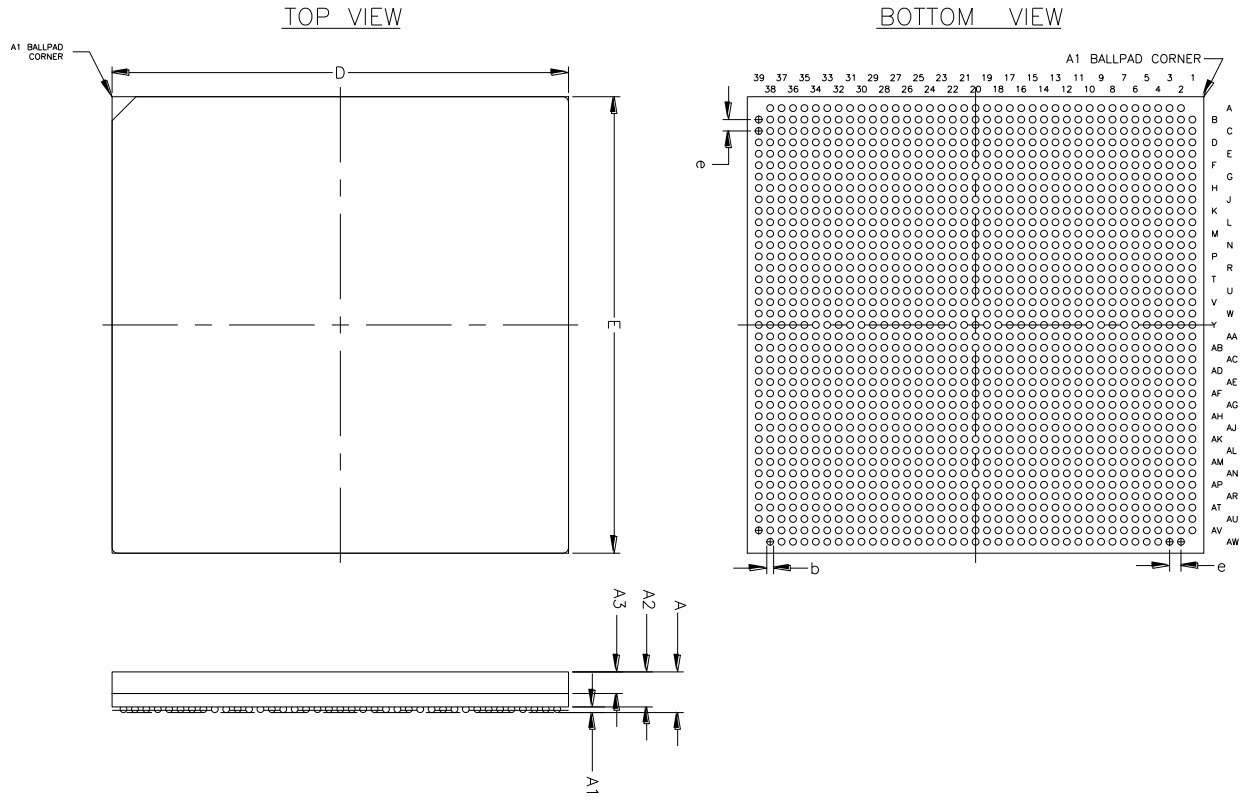
1517-Pin FineLine Ball-Grid Array (FBGA) - Flip Chip- Flat Top Single-Piece Lid - A:3.50

- All dimensions and tolerances conform to ASME Y14.5M – 1994.
- Controlling dimension is in millimeters.
- Pin A1 may be indicated by an ID dot, or a special feature, in its proximity on package surface.

Package Information	
Description	Specification
Ordering Code Reference	F
Package Acronym	FBGA
Substrate Material	BT
Solder ball composition	Regular: 63Sn:37Pb (Typ.) Pb-free: Sn:3Ag:0.5Cu (Typ.)
JEDEC Outline Reference	MS-034 Variation: AAU-1
Lead Coplanarity	0.008 inch (0.20 mm)
Weight	20.8 g (Typ.)
Moisture Sensitivity Level	Printed on moisture barrier bag

Package Outline Dimension Table			
Symbol	Millimeters		
	Min.	Nom.	Max.
A	3.10	3.30	3.50
A1	0.40	0.50	0.60
A2	2.50	2.80	3.10
A3	1.40	1.45	1.50
D	40.00 BSC		
E	40.00 BSC		
b	0.50	0.60	0.70
e	1.00 BSC		

Package Outline



Document Revision History

Table 1 shows the revision history for this document.

Table 1. Document Revision History

Date	Version	Changes
January 2014	1.0	Initial release
May 2014	2.0	Update package weight in the package information table.
February 2015	3.0	Update package weight in the package information table.
June 2015	4.0	Update Lead Coplanarity from 0.010 inch (0.25 mm) to 0.008 inch (0.20 mm) in the package information table.
January 2016	5.0	Change package thickness, dimension A from "3.45+/-0.20mm" to "3.30+/-0.20mm" Change dimension A2 from "2.95+/-0.30mm" to "2.80+/-0.30mm"



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