

Altera Device Package Information

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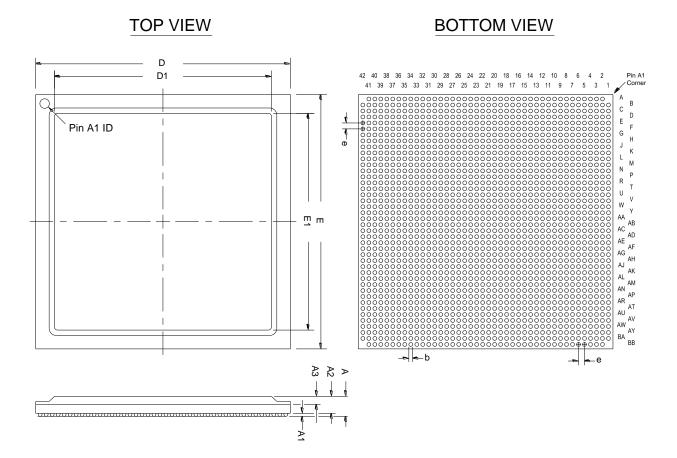
1760-Pin FineLine Ball-Grid Array (FBGA) - Flip Chip - Single-Piece Lid - A:3.40 - D1:36.2

- 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	вт	
Solder ball composition	Regular: 63Sn:37Pb (Typ.) Pb-free: Sn:3Ag:0.5Cu (Typ.)	
JEDEC Outline Reference	MS-034 Variation: AAV-1	
Lead Coplanarity	0.008 inch (0.20 mm)	
Weight	16.8 g (Typ.)	
Moisture Sensitivity Level	Printed on moisture barrier bag	

	Millimeters			
Symbol	Min.	Nom.	Max.	
Α	3.00	3.20	3.40	
A1	0.40	0.50	0.60	
A2	2.40	2.70	3.00	
A3	1.30	1.40	1.50	
D		42.50 BSC		
D1		36.20 BSC		
E		42.50 BSC		
E1		36.20 BSC		
b	0.50	0.60	0.70	
е		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
June 2011	1.0	Initial release



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