



04R-00254-2.0

572-Pin FineLine Ball-Grid Array (FBGA) - Flip Chip - Lidless - A:2.20

- 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: AAK-1		
Lead Coplanarity	0.008 inch (0.20 mm)		
Weight	2.2 g (Typ.)		
Moisture Sensitivity Level	Printed on moisture barrier bag		

ackage Outline Dimension Table							
Querralitati	Millimeters						
Symbol	Min.	Nom.	Max.				
Α	1.80	2.00	2.20				
A1	0.40	0.50	0.60				
A2	1.20	1.50	1.80				
A3	0.75	0.85	0.95				
D	25.00 BSC						
D1	Device Specific Dimension (see table below)						
E	25.00 BSC						
E1	Device Specific Dimension (see table below)						
b	0.50	0.60	0.70				
е	1.00 BSC						

Device Specific Dimension Table						
Device	Millin	neters	Device	Millimeters		
Device	D1	E1	Device	D1	E1	
EP2AGX45	11.10	10.50	EP2AGX65	11.10	10.50	
EP2AGX95	13.40	13.10	EP2AGX125	13.40	13.10	

Altera Device Package Information

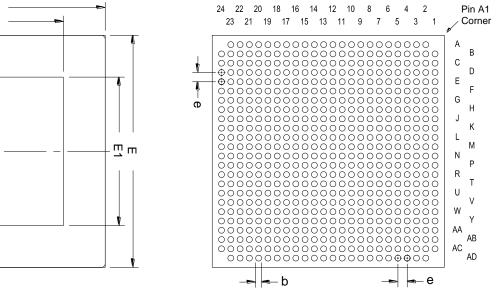
Package Outline

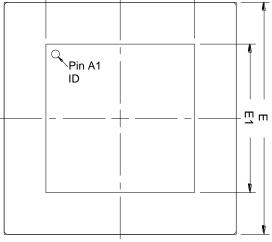
TOP VIEW

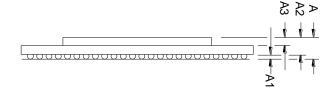
D

D1

BOTTOM VIEW







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	
November 2011	2.0	Add Device Specific Dimension Table at page 1.	



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