

Altera Device Package Information

04R-00372-2.0

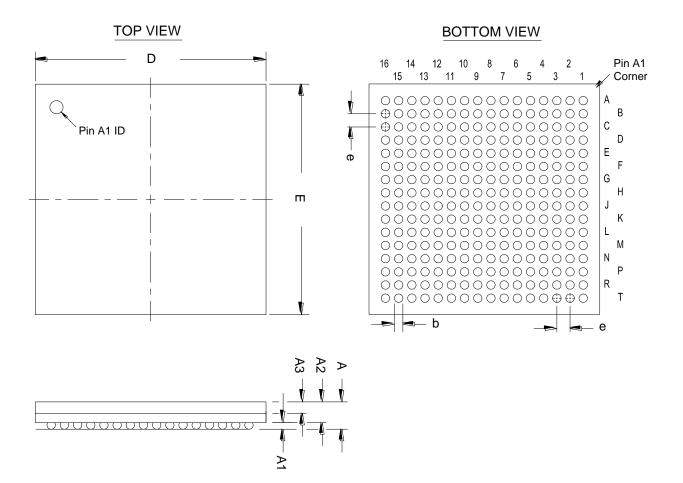
256-Pin Ultra FineLine Ball-Grid Array (UBGA) - Wire Bond - A:1.50

- 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	U	
Package Acronym	UBGA	
Substrate Material	BT	
Solder ball composition	Regular: 63Sn:37Pb (Typ.) Pb-free: Sn:3Ag:0.5Cu (Typ.)	
JEDEC Outline Reference	MO-275 Variation: JJAA-2	
Lead Coplanarity	0.005 inch (0.12 mm)	
Weight	0.70 g (Typ.)	
Moisture Sensitivity Level	Printed on moisture barrier bag	

Package Outline	Package Outline Dimension Table				
Symbol	Millimeters				
	Min.	Nom.	Max.		
Α	1.20	1.35	1.50		
A1	0.35	0.40	0.45		
A2	0.75	0.95	1.15		
А3	0.65	0.70	0.75		
D	14.00 BSC				
E	14.00 BSC				
b	0.45	0.50	0.55		
е	0.80 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
December 2011	2.0	Change dimension "b" from 0.40/0.50/0.60 to 0.45/0.50/0.55. Change the JEDEC Outline Reference from MO-216 Variation: BAJ-1 to MO-275 Variation: JJAA-2



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