

## **Altera Device Package Information**

04R-00436-1.0

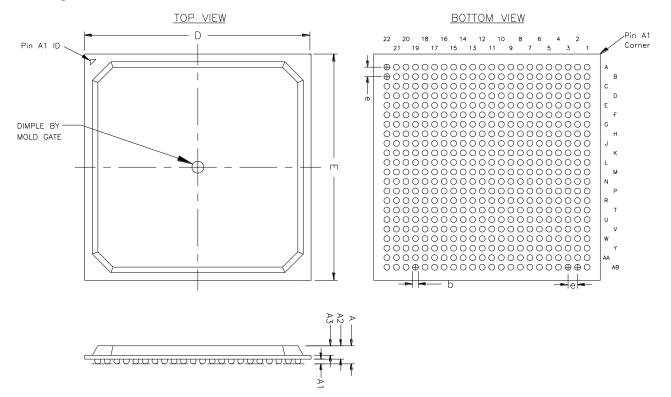
## 484-Pin Ultra FineLine Ball-Grid Array (UBGA) - Wire Bond - A:1.90

- 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	ВТ	
Solder ball composition	Regular: 63Sn:37Pb (Typ.) Pb-free: Sn:3Ag:0.5Cu (Typ.)	
JEDEC Outline Reference	MO-275 Variation: PPAA-2	
Lead Coplanarity	0.005 inch (0.12 mm)	
Weight	1.4 g (Typ.)	
Moisture Sensitivity Level	Printed on moisture barrier bag	

Package Outline	Package Outline Dimension Table				
0	Millimeters				
Symbol	Min.	Nom.	Max.		
Α	1.60	1.75	1.90		
A1	0.35	0.40	0.45		
A2	1.15	1.35	1.55		
А3	0.75	0.80	0.85		
D	19.00 BSC				
E	19.00 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
December 2011	1.0	Initial release



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