



SYMBOL	MILLIMETERS			NOTE
	MIN.	NOM.	MAX.	
A	2.00	<i>h</i>	2.85	2
A ₁	0.40	<i>h</i>	0.60	
A ₂	1.60	<i>h</i>	2.25	
D/E	19.00 BASIC			
D ₁ /E ₁	17.00 REF			
e	1.00 BASIC			
φb	0.50	0.60	0.70	
aaa	<i>h</i>	<i>h</i>	0.20	
ccc	<i>h</i>	<i>h</i>	0.25	
ddd	<i>h</i>	<i>h</i>	0.25	
eee	<i>h</i>	<i>h</i>	0.10	
M	18			

NOTES:

1. ALL DIMENSIONS AND TOLERANCES CONFORM TO ANSI Y14.5M-1994
2. SYMBOL 'M' IS THE BALL MATRIX SIZE.
3. CONFORMS TO JEDEC MS-034-AAG-1

324-BALL FLIP CHIP BGA (FF324/FFG324)

Revision History

The following table shows the revision history for this document.

Date	Version	Revision
05/15/06	1.0	Initial Xilinx release.
11/15/07	1.1	<ul style="list-style-type: none">Corrected the “ob” dimension to point to the solder ball instead of the solder ball pitch.Modified the “A2” Min./Max. dimension from 0.60/1.00 to 1.60/2.25.Added the FFG package prefix and material information.
03/24/08	1.2	Updated JEDEC to MS-034-AAG-1.