



FF323 - Sn/Pb SOLDER BALLS  
FFG323 - Sn/Ag/Cu SOLDER BALLS

SYMBOL	MILLIMETERS			NOTE
	MIN.	NOM.	MAX.	
A	2.00	$\approx$	2.85	2
A <sub>1</sub>	0.40	$\approx$	0.60	
A <sub>2</sub>	1.60	$\approx$	2.25	
D/E	19.00 BASIC			
D <sub>1</sub> /E <sub>1</sub>	17.00 REF			
e	1.00 BASIC			
$\phi_b$	0.50	0.60	0.70	
aaa	$\approx$	$\approx$	0.20	
ccc	$\approx$	$\approx$	0.25	
ddd	$\approx$	$\approx$	0.25	
eee	$\approx$	$\approx$	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
- $\triangle$  4 SOLDER BALL COUNT = 324

**323-BALL FLIP-CHIP BGA (FF323/FFG323)**

## Revision History

The following table shows the revision history for this document.

Date	Version	Revision
12/07/07	1.0	Initial Xilinx release.
03/24/08	1.1	Updated JEDEC to MS-034-AAG-1