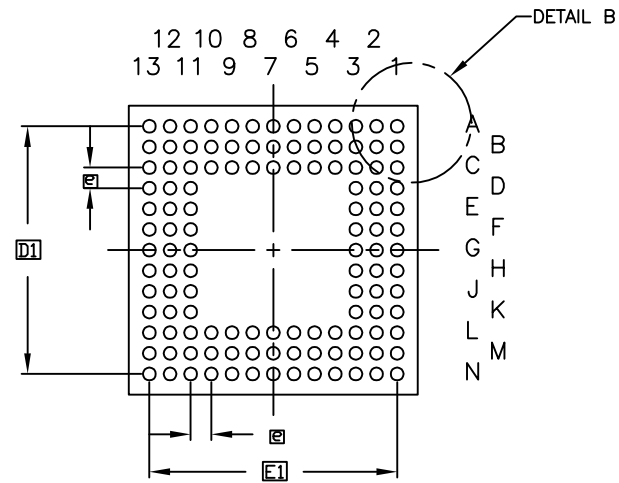
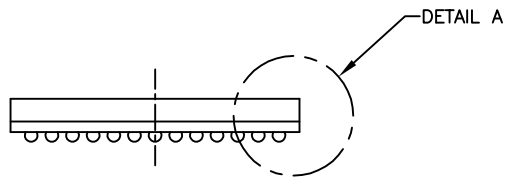


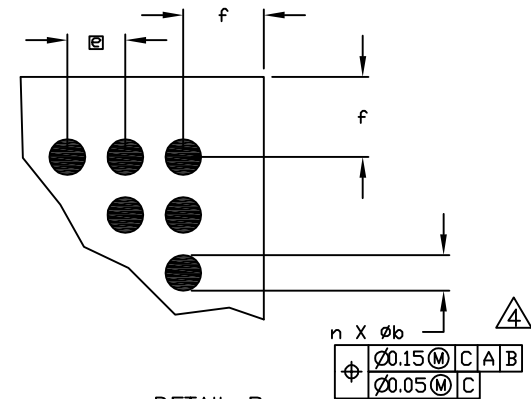
TOP VIEW



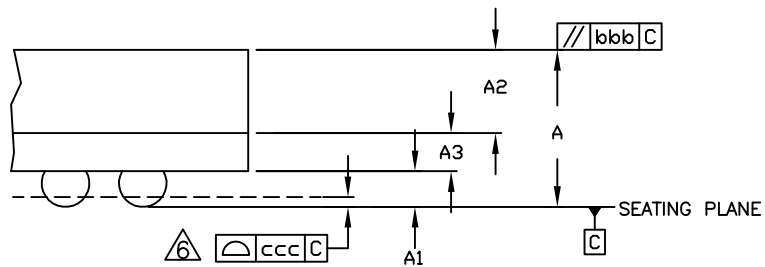
BOTTOM VIEW



SIDE VIEW



DETAIL B



DETAIL A

-DRAWING NOT TO SCALE-



TITLE:  
PACKAGE OUTLINE, 120 BALL CSBGA,  
7x7x1.2 mm, 0.5mm PITCH

APPROVAL  
Scott Schroeder  
03-18-14

DOCUMENT CONTROL NO.  
21-1037

REV. 1/2  
A

DIMENSIONAL REFERENCES			
REF.	MIN.	NOM.	MAX.
A	1.10	1.20	1.32
A1	0.15	0.23	0.30
A2	0.65	0.70	0.75
A3	0.29 REF.		
D	7.00 BSC.		
D1	6.00 BSC.		
E	7.00 BSC.		
E1	6.00 BSC.		
b	0.25	0.30	0.35
aaa	0.15		
bbb	0.10		
ccc	0.08		
e	0.50 BSC.		
f	-	0.50	-
M	13		
n	120		
PKG. CODE	X12077MK+1		

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. DIMENSIONING & TOLERANCING CONFORM TO ASME Y14.5M-1994.
3. DRAWING CONFORMS TO JEDEC MO-195D.
4. 'b' IS MEASURABLE AT THE MAXIMUM SOLDER BALL DIAMETER.
5. 'M' REPRESENTS THE BASIC SOLDER BALL MATRIX SIZE AND SYMBOL 'n' IS THE NUMBER OF BALLS AFTER DEPOPULATING.
6. DIMENSION 'ccc' IS MEASURED PARALLEL TO PRIMARY DATUM C.
7. PRIMARY DATUM C AND SEATING PLANE ARE DEFINED BY THE SPHERICAL CROWNS OF THE SOLDER BALLS.
8. WARPAGE SHALL NOT EXCEED 0.10MM.
9. THE OVERALL PACKAGE THICKNESS "A" ALREADY CONSIDERS COLLAPSED BALLS
10. MARKING IS FOR PACKAGE ORIENTATION REFERENCE ONLY.
11. MATERIAL MUST COMPLY WITH BANNED AND RESTRICTED SUBSTANCES SPEC# 10-0131. SUBSTRATE MATERIAL BASE IS BT RESIN. GREEN, LEADFREE SUBSTRATE.
12. ALL DIMENSIONS APPLY TO PbFREE (+) PKG. CODE ONLY.



TITLE:  
PACKAGE OUTLINE, 120 BALL CSBGA,  
7x7x1.2 mm,0.5mm PITCH

APPROVAL  
Scott Schroeder  
03-18-14

DOCUMENT CONTROL NO.  
21-1037

REV. A 2/2

-DRAWING NOT TO SCALE-