



TITLE:  
PACKAGE OUTLINE, 120 BALL CTBGA,  
7x7x1.1 mm, 0.5mm PITCH

APPROVAL

DOCUMENT CONTROL NO.

REV.

21-0899

C

1/2

-DRAWING NOT TO SCALE-

DIMENSIONAL REFERENCES			
REF.	MIN.	NOM.	MAX.
A	1.00	1.12	1.20
A1	0.16	0.21	0.26
A2	0.65 REF.		
A3	0.26 REF.		
D	7.00 BSC.		
D1	6.00 BSC.		
E	7.00 BSC.		
E1	6.00 BSC.		
b	0.27	0.31	0.37
aaa	0.10		
bbb	0.10		
ccc	0.08		
e	0.50 BSC.		
f	-	0.50	-
M	13		
n	120		
PKG. CODE	X12077+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.



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