



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. DIMENSIONING AND TOLERANCING PER ASME Y14.5M 1994.
3. MATERIAL MUST COMPLY WITH BANNED AND RESTRICTED SUBSTANCES SPEC# 10-0131
4. 'e' REPRESENTS THE BASIC SOLDER BALL PITCH.
5. 'N' IS THE NUMBER OF ATTACHED SOLDER BALLS.
- $\triangle 6$  'b' IS MEASURABLE AT THE MAXIMUM SOLDER BALL DIAMETER PARALLEL TO THE PRIMARY DATUM [C].
- $\triangle 7$  DIMENSION 'ddd' IS MEASURED PARALLEL TO PRIMARY DATUM [C].
- $\triangle 8$  PRIMARY DATUM [C] (SEATING PLANE) IS DEFINED BY THE SPHERICAL CROWNS OF THE SOLDER BALLS.
9. THE OVERALL PACKAGE THICKNESS "A" ALREADY CONSIDERS COLLAPSE BALLS.
- $\triangle 10$  MARKING SHOWN IS FOR PKG. ORIENTATION ONLY.
11. ALL DIMENSIONS APPLY TO PbfREE (+) PKG. CODES.
12. PKG CODE: X28027FM+1 & X28027FM+2

DIMENSIONAL REFERENCES			
REF.	MIN.	NOM.	MAX.
A	1.200	1.300	1.400
A1	0.360	--	0.460
A3	0.530 REF		
b	0.440	--	0.640
c	0.350 REF		
D	12.000 BSC		
D1	10.400 BSC		
E	17.000 BSC		
E1	15.200 BSC		
e	0.800 BSC		
aaa	0.150		
bbb	0.200		
ddd	0.150		
eee	0.150		
fff	0.080		
N	280		

**MAXIM**

TITLE:  
PACKAGE OUTLINE, 280 BALLS,  
FLIP CHIP BGA, 12x17x1.3mm

APPROVAL	DOCUMENT CONTROL NO. 21-0652	REV. D	1/1
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