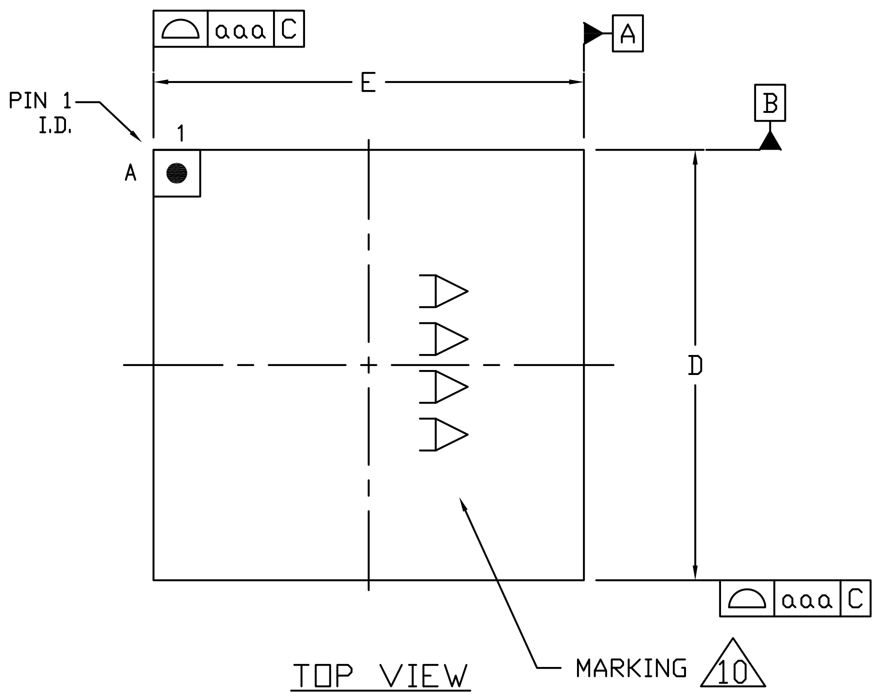

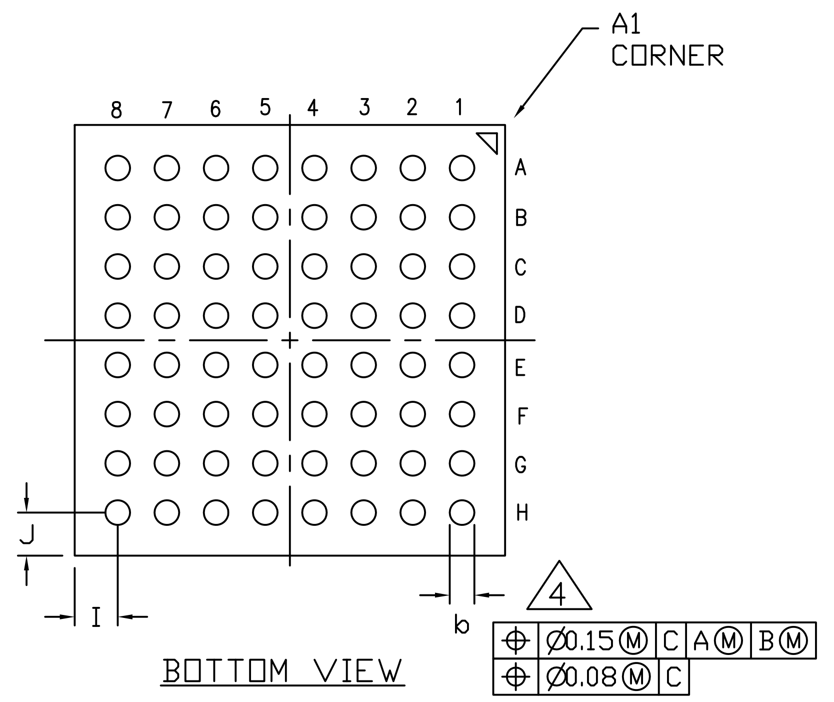

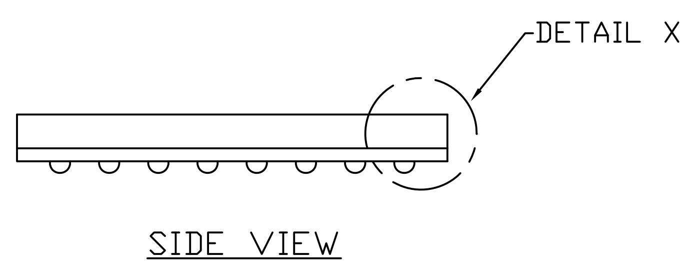

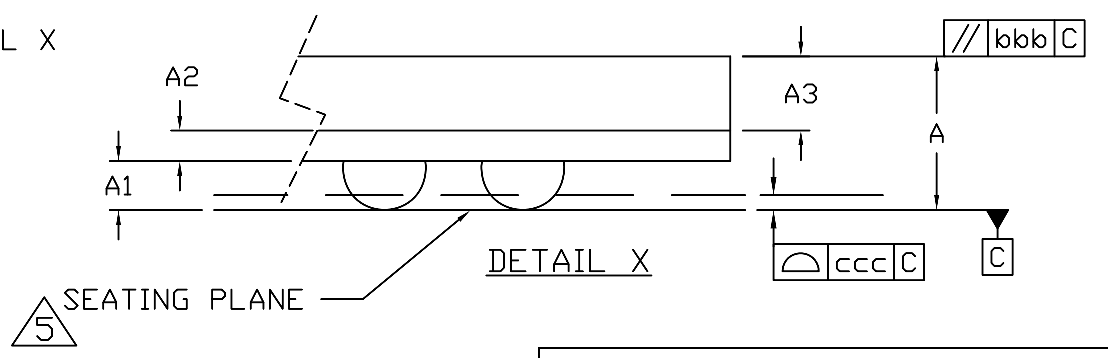

TITLE:
PACKAGE OUTLINE, 64 BALL CTBGA, 7x7x1.2MM, 0.8MM PITCH

APPROVAL	DOCUMENT CONTROL NO.	REV.	
	21-0461	E	1/2

-DRAWING NOT TO SCALE-

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS.

2. 'e' REPRESENTS THE BASIC SOLDER BALL GRID PITCH.

3. 'M' REPRESENTS THE BASIC SOLDER BALL MATRIX SIZE AND SYMBOL 'n' IS THE NUMBER OF BALLS AFTER DEPOPULATING.

4. 'b' IS MEASURABLE AT THE MAXIMUM SOLDER BALL DIAMETER AFTER REFLOW PARALLEL TO PRIMARY DATUM C.

5. PRIMARY DATUM C AND SEATING PLANE ARE DEFINED BY THE SPHERICAL CROWNS OF THE SOLDER BALLS.

6. SUBSTRATE MATERIAL BASE IS BT RESIN.

7. THE OVERALL PACKAGE THICKNESS "A" ALREADY CONSIDERS COLLAPSED BALLS.

8. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

9. DRAWING CONFORMS TO JEDEC MO-195D.

10. MARKING SHOWN IS FOR PACKAGE ORIENTATION REFERENCE ONLY.

11. ALL DIMENSIONS APPLY TO PbFREE (+) PKGS ONLY.

SYMBOL	MIN.	NOM.	MAX.
A	1.08	1.20	1.30
A1	0.28	0.33	0.38
A2	0.22	0.26	0.30
A3	0.55	0.60	0.65
D	6.90	7.00	7.10
E	6.90	7.00	7.10
I	0.70 REF.		
J	0.70 REF.		
M	8X8 <FULL>		
aaa	---	---	0.15
bbb	---	---	0.10
ccc	---	---	0.12
b	0.35	0.40	0.45
e	0.80 TYP.		
Pkgcode: X6477+2, X6477MK+3			

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APPROVAL	DOCUMENT CONTROL NO.	REV.	
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