


SECTION A-A

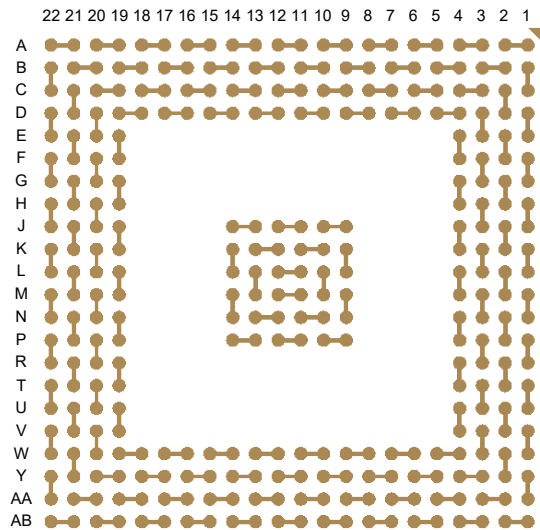
PART NUMBER TABLE

| PART NUMBER         | BALL ALLOY         | BALL ALLOY | RoHS | Si DIE |
|---------------------|--------------------|------------|------|--------|
| SBGA324T1.0C-DC224D | Sn96.5/Ag3.0/Cu0.5 | SAC305     | YES  | YES    |
| SBGA324T1.0-DC224D  | Sn63/Pb37          | Sn63       | NO   | YES    |

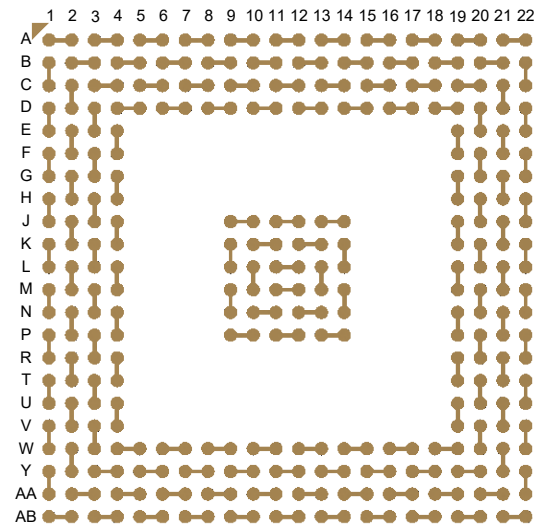
Notes: (Unless Otherwise Specified).

- 1) ALL DIMENSIONS ARE IN MM.
- 2) SOLDER BALL ALLOY: SEE PART NUMBER TABLE.
- 3) BALL DIAMETER (BEFORE REFLOW):  $\phi 0.61$ mm [24 MIL].
- 4) SOLDER MASK DEFINED PAD OPENING: 0.508mm [20 MIL].
- 5) PAD Cu DIAMETER: 0.636mm [25 MIL].
- 6) SUBSTRATE: BT - CTE 10ppm/ $^{\circ}$ C Young's Modulus 27GPa.
- 7) DUMMY DIE 12.168 x 11.912mm (675 $\mu$ m Thick).
- 8) DAISY CHAIN PATTERN (SEE PAGE 2).
- 9) MSL-3 RECOMMENDED BAKING 24 HOURS @ 125 $^{\circ}$ C TO REMOVE MOISTURE PRIOR TO SOLDERING TO PC BOARD.

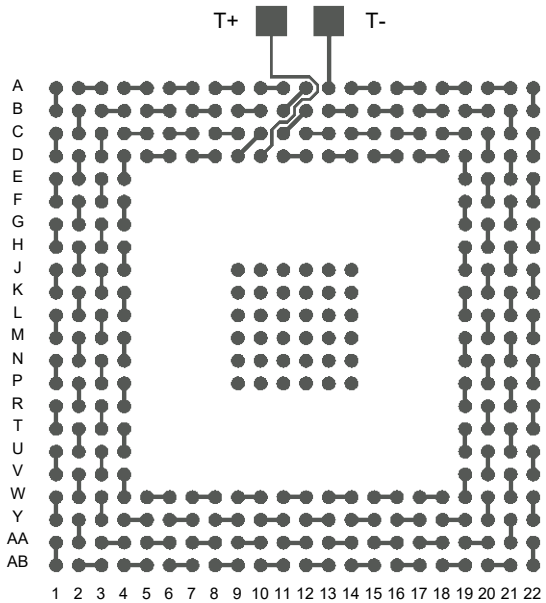
| APPROVALS |         | DATE       |  |  |        |                    |              |
|-----------|---------|------------|---|--|--------|--------------------|--------------|
| DRAWN     | T. Au   | 11/22/2021 |   |  |        |                    |              |
| ENG       | M. Hart | 11/22/2021 | TITLE SBGA324T1.0-DC224D<br>DAISY CHAIN DUMMY   |  |        |                    |              |
| MFG       |         |            | SCALE 3.5:1   |  | SIZE A | DRAWING NO. 512245 | REV A        |
| CUST      |         |            |   |  |        |                    |              |
| REVISED   |         |            | DO NOT SCALE DRAWING  |  |        |                    | SHEET 1 OF 5 |



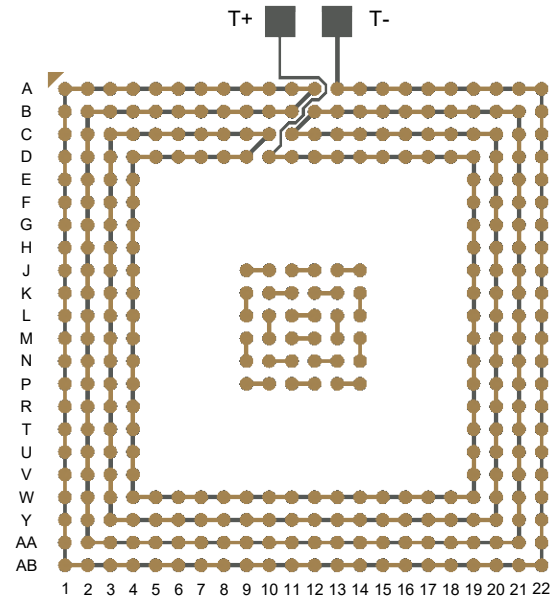
BALL VIEW



BOTTOM SIDE  
(TOP X-RAY VIEW)



TEST VEHICLE  
BOARD

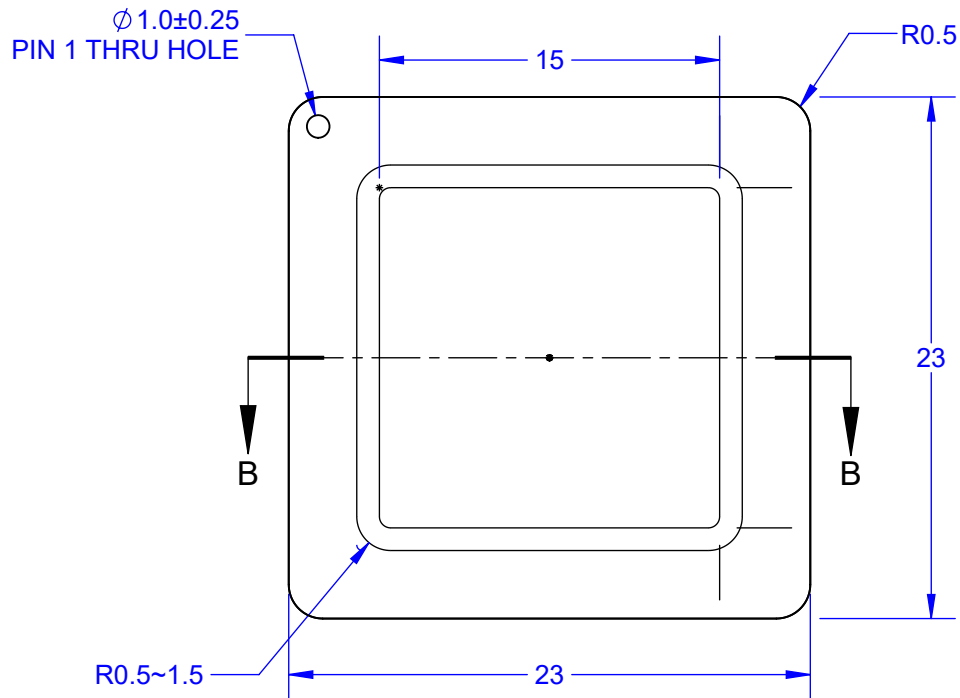


AFTER MOUNTING

Notes:

- 1) PCB BOARD DIMENSIONS ARE PRESENTED ONLY AS A GUIDELINE. DESIGNERS SHOULD USE THEIR OWN EXPERIENCE WHEN DESIGNING PCB.
- 2) PCB Cu BALL PAD DIAMETER 0.636mm (25 MIL).
- 3) PCB DAISY CHAIN TRACING LINE WIDTH 0.203mm (8 MIL).
- 4) SMD (SOLDER MASK DEFINED) PAD OPENING 0.508mm (20 MIL).

|                      |      |   |              |
|----------------------|------|---|--------------|
| <b>TopLine®</b>      |      |   |              |
| TITLE                |      | SBGA324T1.0-DC224D<br>DAISY CHAIN DUMMY |              |
| SCALE                | SIZE | DRAWING NO.                             | REV          |
| 3:1                  | A    | 512245                                  | A            |
| DO NOT SCALE DRAWING |      |   | SHEET 2 OF 5 |

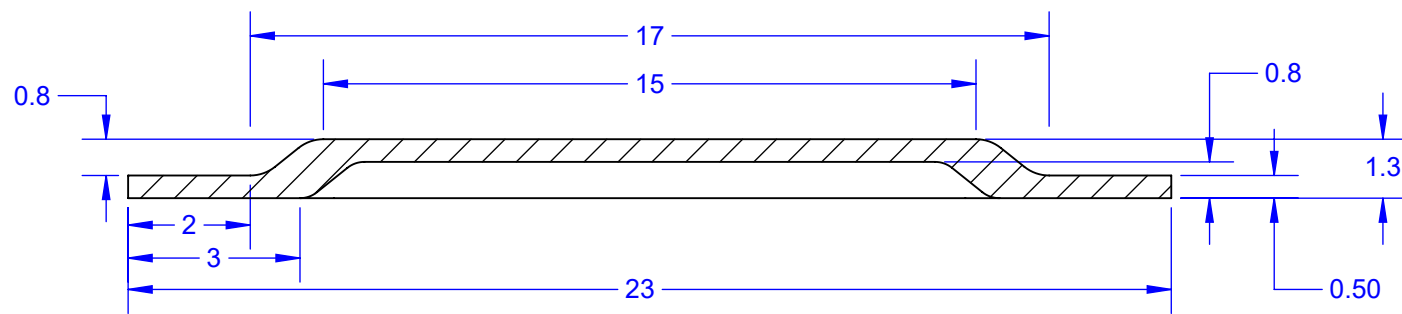


TOP



CAVITY

MODEL



SECTION B-B  
SCALE 6 : 1

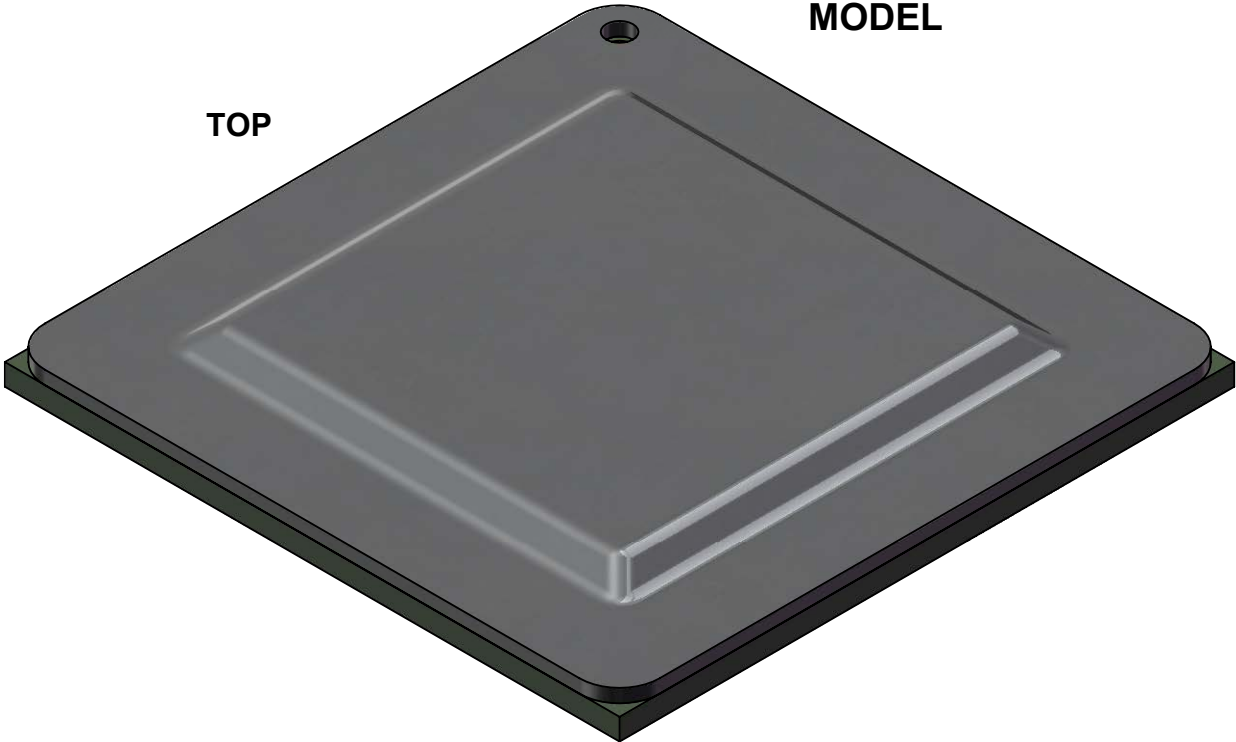
NOTE:

- 1) DIMENSION mm.
- 2) MATERIAL: OXYGEN FREE, 1/2H C1020 or C1100.

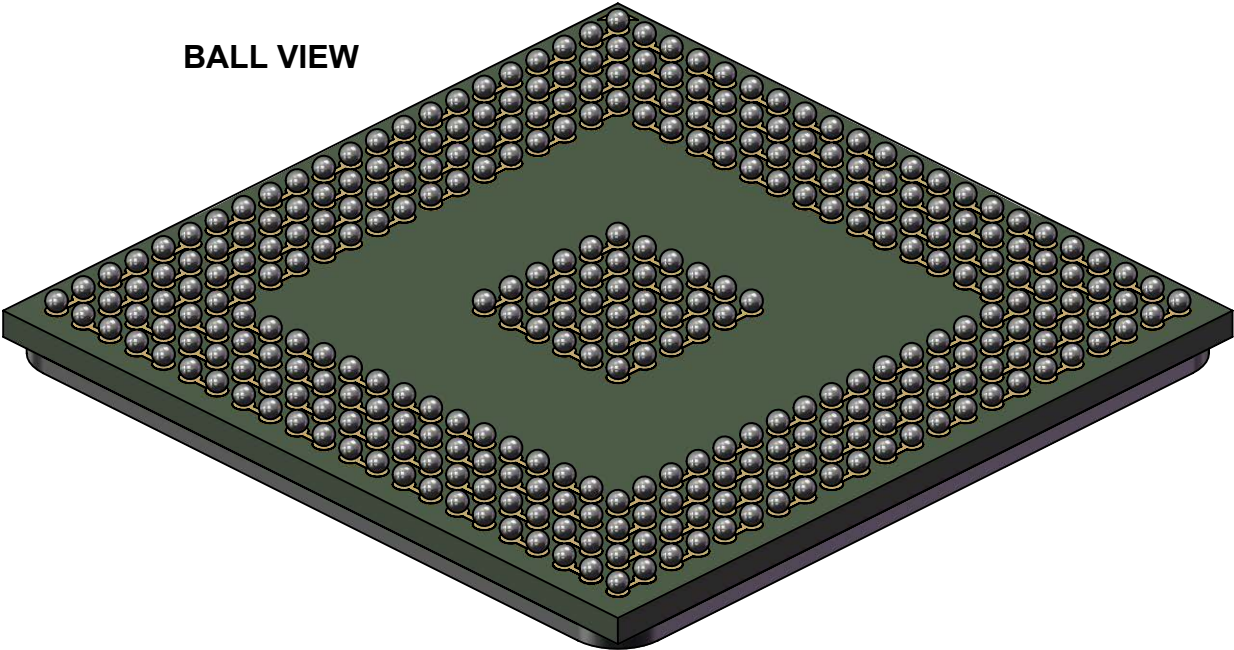
|                      |      |   |              |
|----------------------|------|---|--------------|
| <b>TopLine®</b>      |      |   |              |
| TITLE                |      | SBGA324T1.0-DC224D<br>DAISY CHAIN DUMMY |              |
| SCALE                | SIZE | DRAWING NO.                             | REV          |
| 3:1                  | A    | 512245                                  | A            |
| DO NOT SCALE DRAWING |      |   | SHEET 3 OF 5 |

**MODEL**

**TOP**



**BALL VIEW**



**TopLine®**

TITLE SBGA324T1.0-DC224D  
DAISY CHAIN DUMMY

|              |           |                       |          |
|--------------|-----------|-----------------------|----------|
| SCALE<br>5:1 | SIZE<br>A | DRAWING NO.<br>512245 | REV<br>A |
|--------------|-----------|-----------------------|----------|

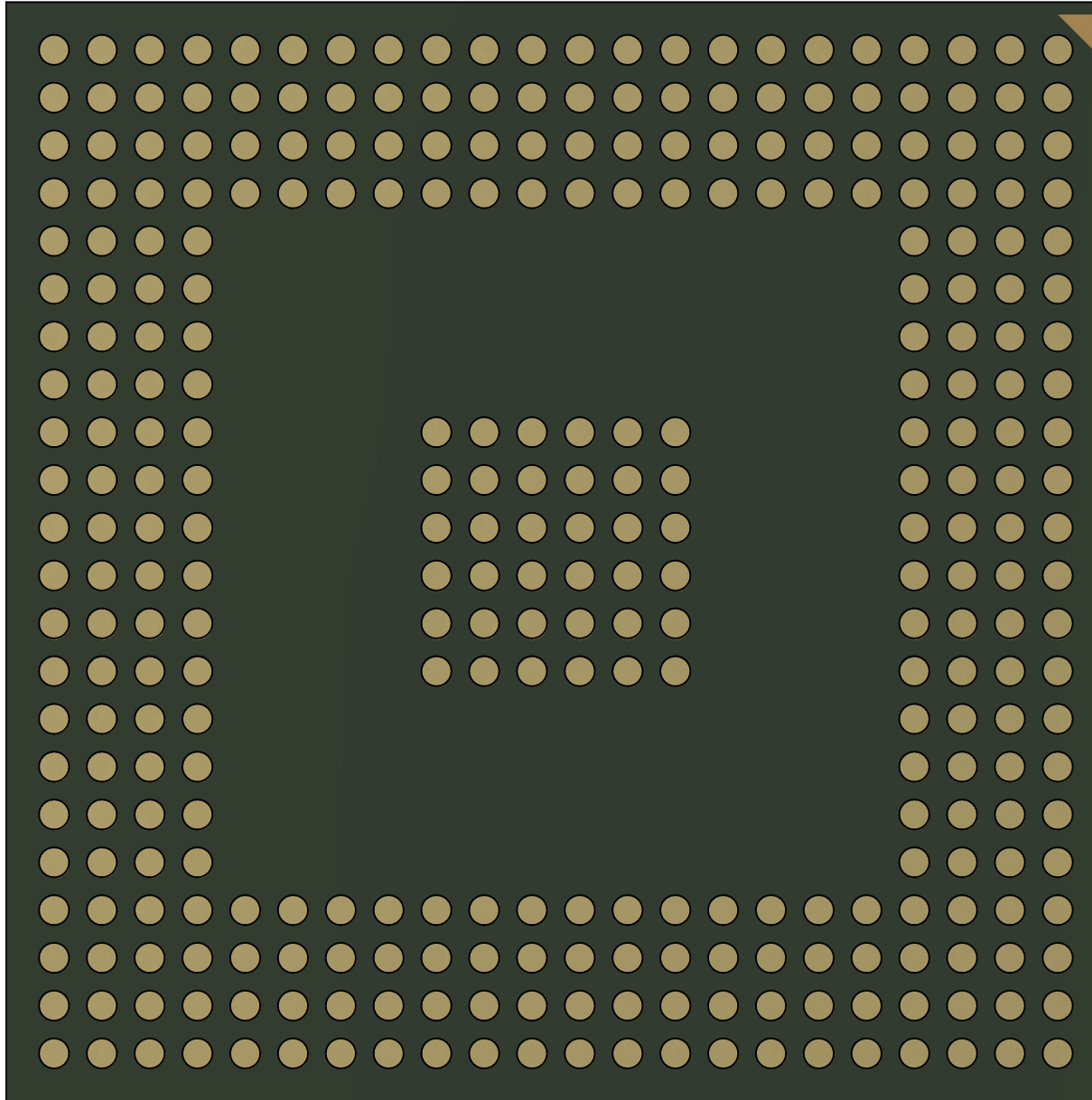
DO NOT SCALE DRAWING

SHEET 4 OF 5

**BOTTOM SOLDER MASK  
(RIGHT READING)**

22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

A  
B  
C  
D  
E  
F  
G  
H  
J  
K  
L  
M  
N  
P  
R  
T  
U  
V  
W  
Y  
AA  
AB



|                      |      |   |              |
|----------------------|------|---|--------------|
| <b>TopLine®</b>      |      |   |              |
| TITLE                |      | SBGA324T1.0-DC224D<br>DAISY CHAIN DUMMY |              |
| SCALE                | SIZE | DRAWING NO.                             | REV          |
| 7:1                  | A    | 512245                                  | A            |
| DO NOT SCALE DRAWING |      |   | SHEET 5 OF 5 |