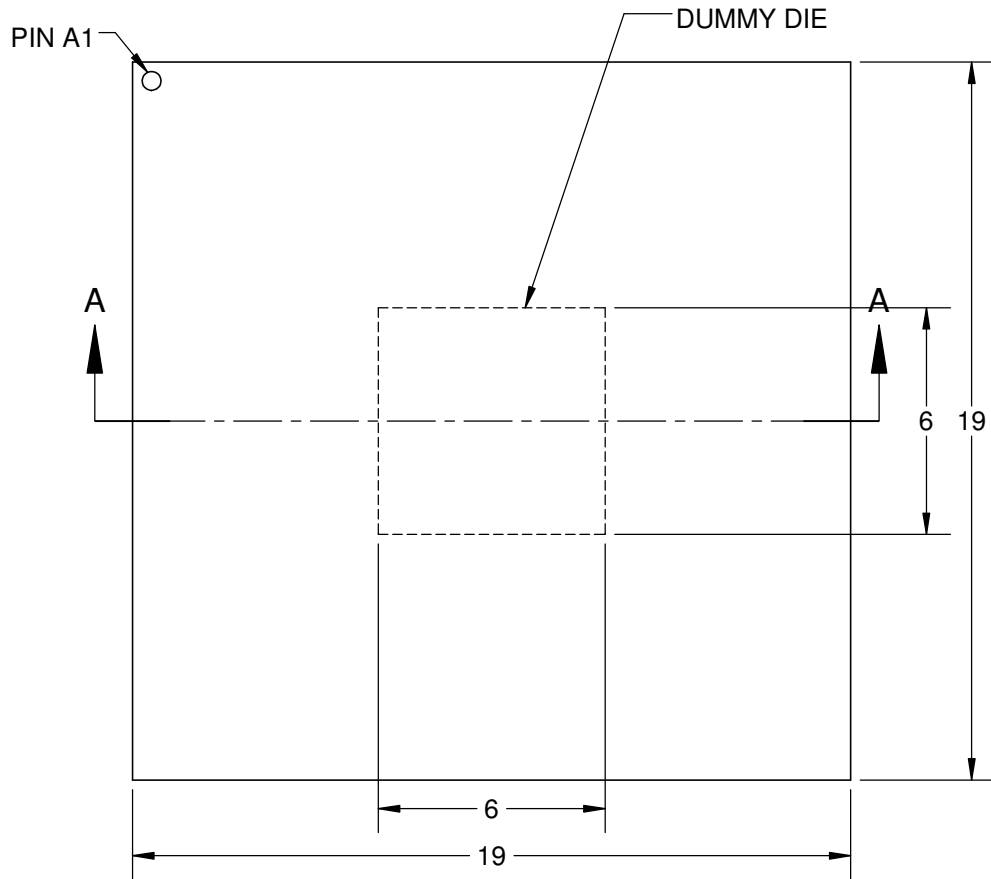
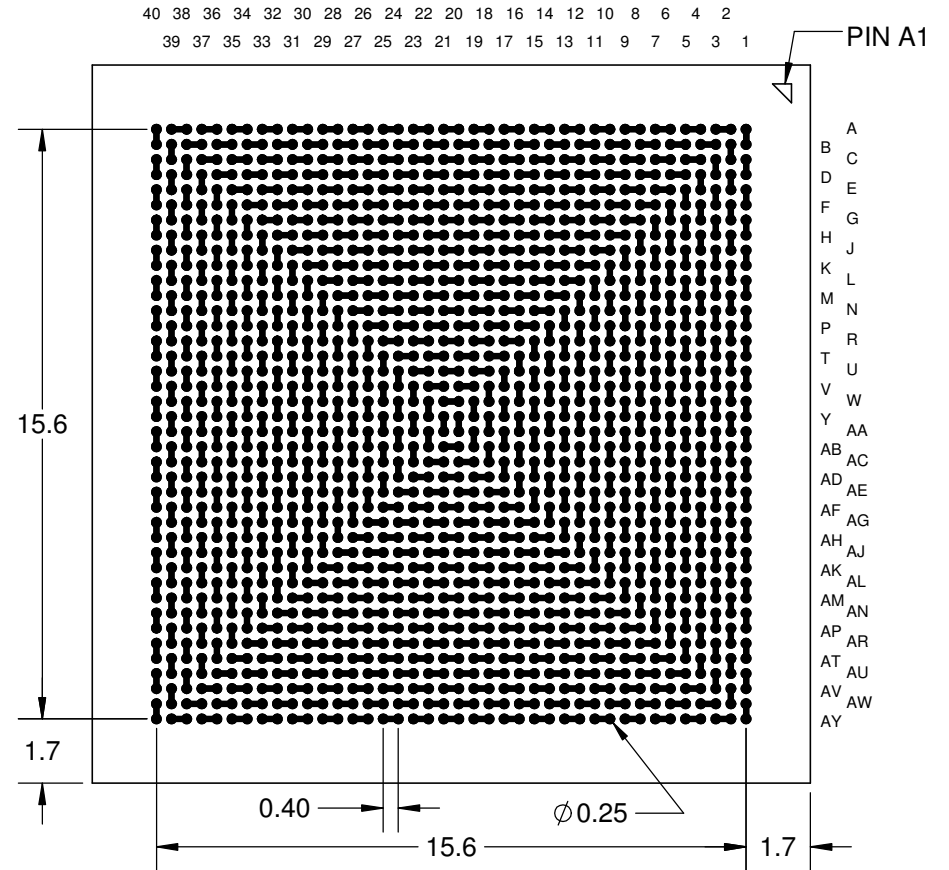


### TOP VIEW

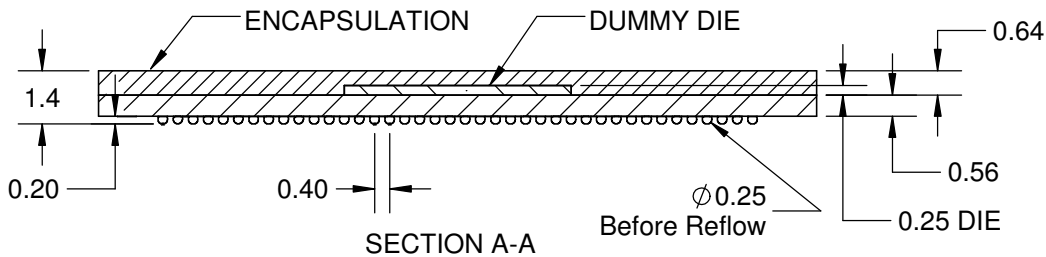


### BALL VIEW



Notes: (Unless Otherwise Specified).

- 1) ALL DIMENSIONS ARE IN MM.
- 2) SOLDER BALL ALLOY: SEE PART NUMBER TABLE.
- 3) BALL DIAMETER (BEFORE REFLOW): 0.25mm (9.8 MIL).
- 4) SOLDER MASK DEFINED PAD OPENING: 0.22mm (8.7 MIL).
- 5) PAD Cu DIAMETER: 0.305mm (12 MIL).
- 6) SUBSTRATE MATERIAL: BT (ALTERNATE FR4).
- 7) DUMMY DIE IS OPTIONAL.
- 8) DAISY CHAIN PATTERN (SEE PAGE 2).
- 9)MSL-3 RECOMMENDED BAKING 24 HOURS @ 125°C TO REMOVE MOISTURE PRIOR SOLDERING TO PC BOARD.

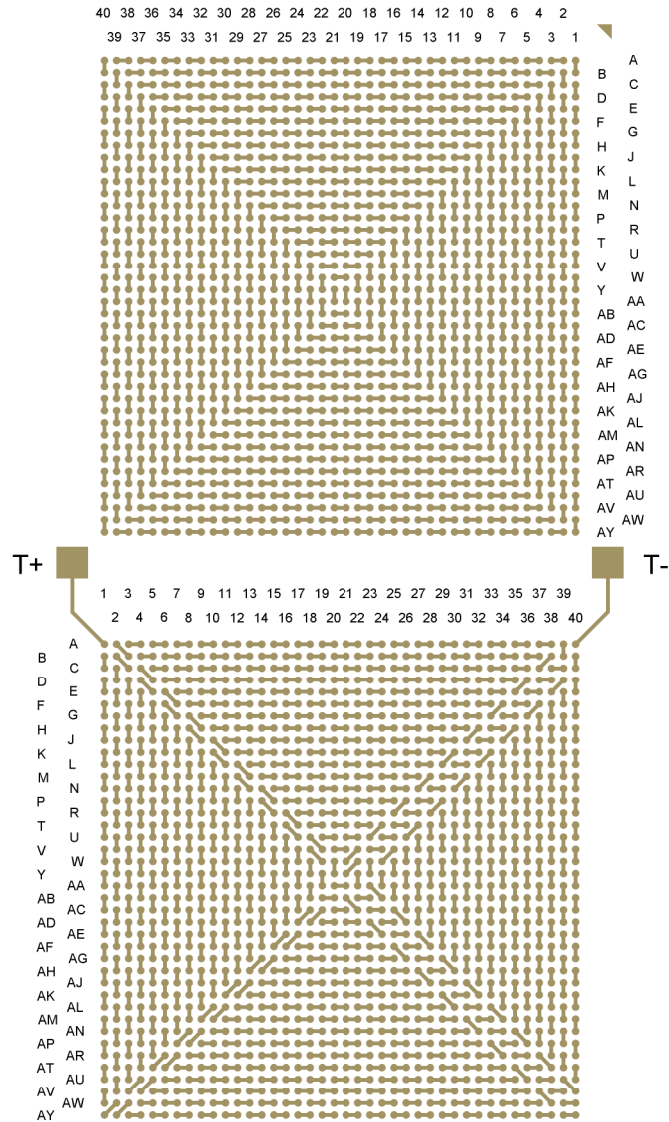


### PART NUMBER TABLE

PART NUMBER	BALL ALLOY	Pb-Free	RoHS	Si DIE
BGA1600T.4C-DC409D	Sn96.5/Ag3.0/Cu0.5	YES	YES	YES
BGA1600T.4-DC409D	Sn63/Pb37	NO	NO	YES

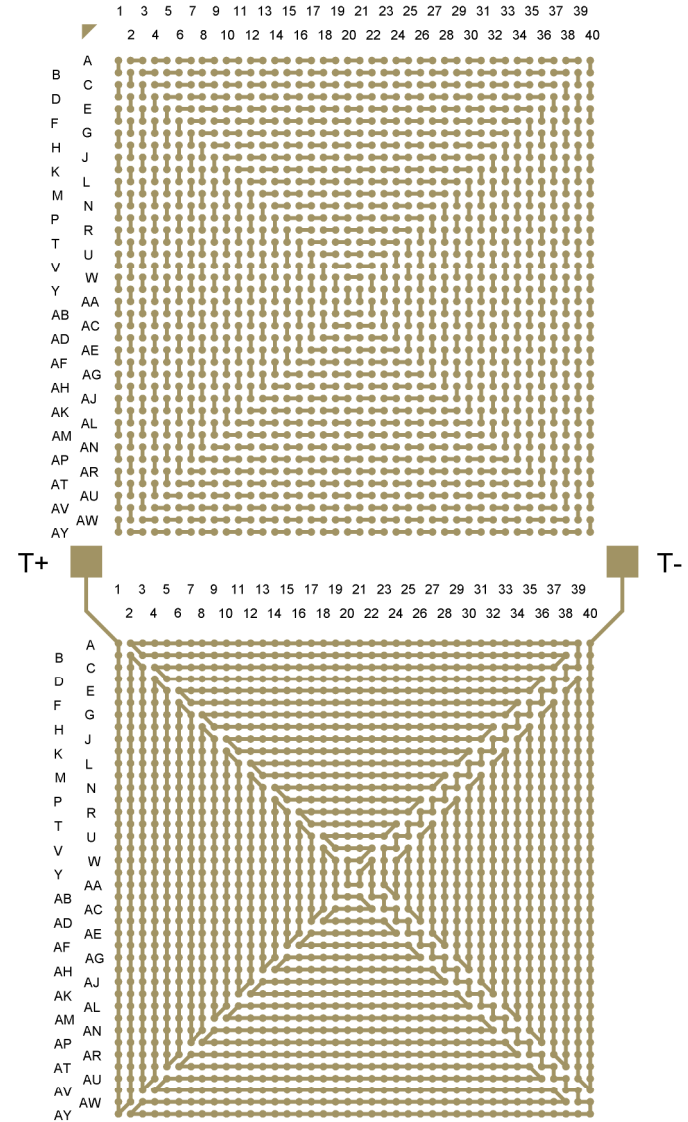
APPROVALS	DATE	<b>TopLine®</b>			
DRAWN T. Au	2/27/2018	TITLE BGA1600T.4C-DC409D DAISY CHAIN DUMMY			
ENG M. Hart	2/27/2018				
MFG		SCALE	SIZE	DRAWING NO.	REV
QA		5:1	A	544090	A
CUST		DO NOT SCALE DRAWING			SHEET 1 OF 5
REVISED					

## BALL VIEW



## TEST VEHICLE BOARD

## BOTTOM SIDE (TOP X-RAY VIEW)



## AFTER MOUNTING

### Notes:

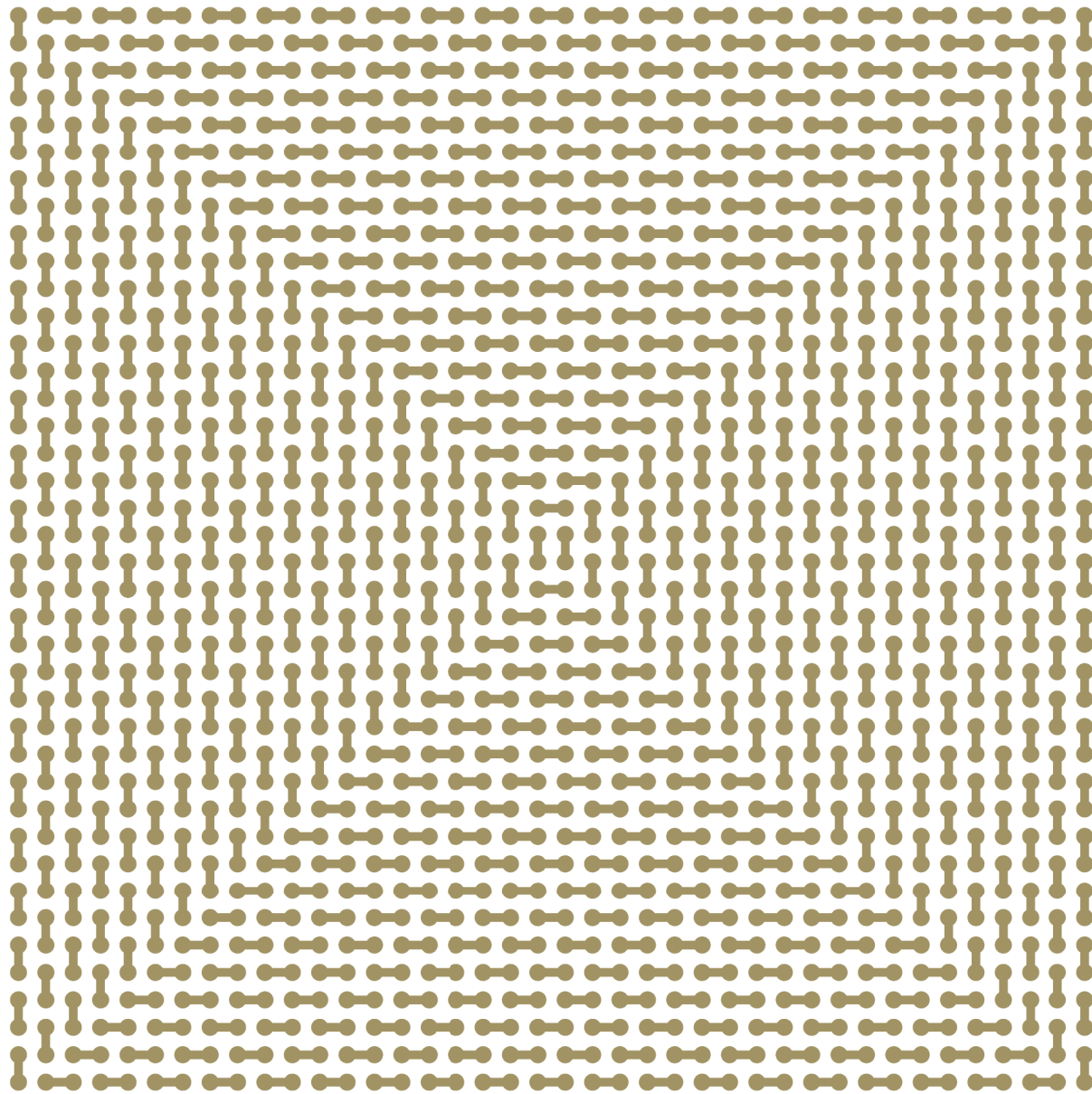
- 1) PCB BOARD DIMENSIONS ARE PRESENTED ONLY AS A GUIDELINE. DESIGNERS SHOULD USE THEIR OWN EXPERIENCE WHEN DESIGNING PCB.
- 2) PCB Cu BALL PAD DIAMETER 0.305mm (12 MIL).
- 3) PCB DAISY CHAIN TRACING LINE WIDTH 0.127mm (5 MIL).
- 4) SMD (SOLDER MASK DEFINED) PAD OPENING: 0.22mm (8.7 MIL).

**TopLine**<sup>®</sup>

TITLE		BGA1600T.4C-DC409D DAISY CHAIN DUMMY		
SCALE	SIZE	DRAWING NO.	REV	
4:1	A	544090	A	
DO NOT SCALE DRAWING			SHEET 2 OF 5	

# BALL VIEW

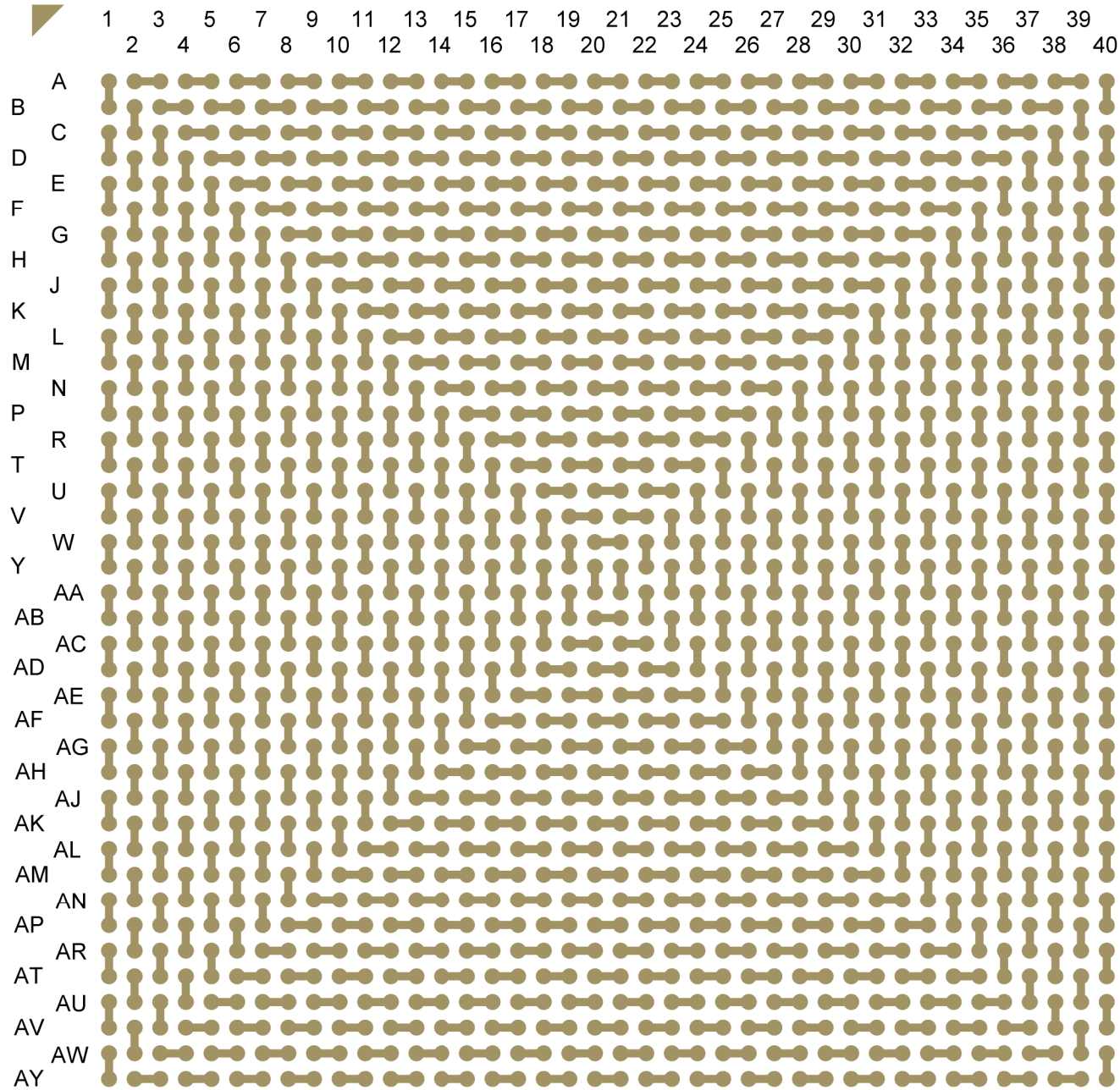
40 38 36 34 32 30 28 26 24 22 20 18 16 14 12 10 8 6 4 2  
 39 37 35 33 31 29 27 25 23 21 19 17 15 13 11 9 7 5 3 1



A  
 B  
 C  
 D  
 E  
 F  
 G  
 H  
 J  
 K  
 L  
 M  
 N  
 P  
 R  
 T  
 U  
 V  
 W  
 Y  
 AA  
 AB  
 AC  
 AD  
 AE  
 AF  
 AG  
 AH  
 AJ  
 AK  
 AL  
 AM  
 AN  
 AP  
 AR  
 AT  
 AU  
 AV  
 AW  
 AY

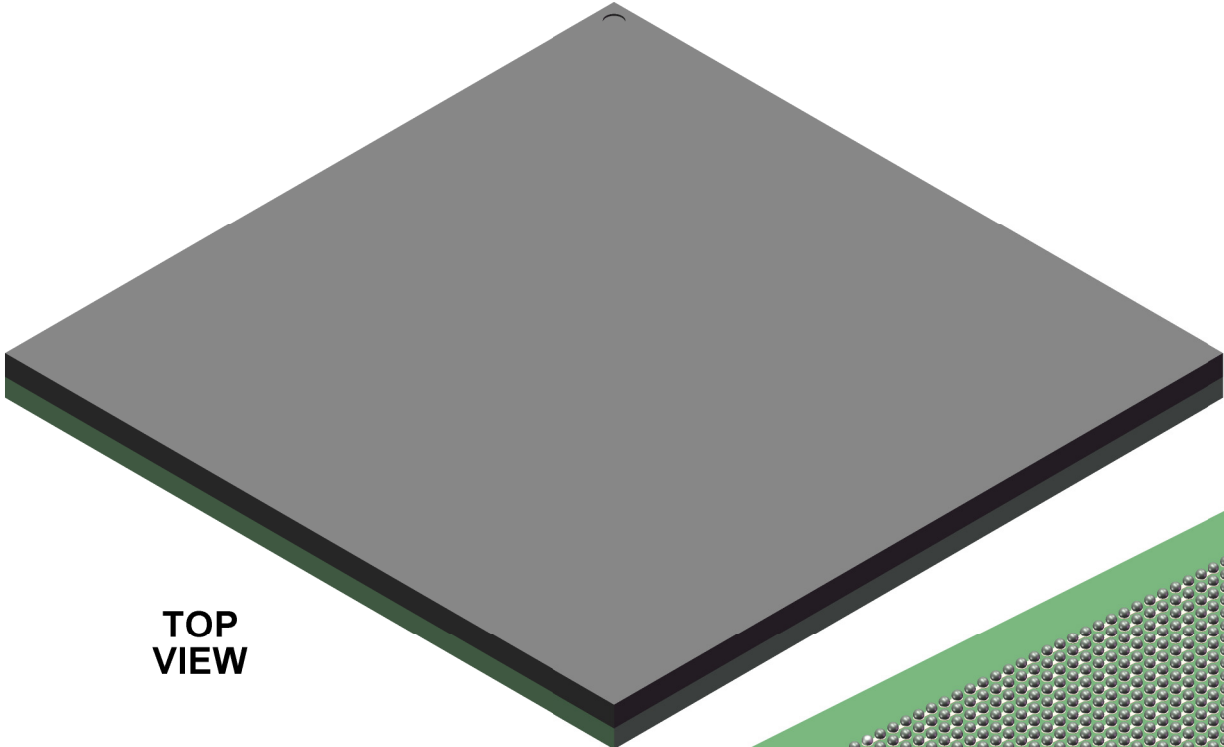
<b>TopLine</b> <sup>®</sup>			
TITLE		BGA1600T.4C-DC409D DAISY CHAIN DUMMY	
SCALE	SIZE	DRAWING NO.	REV
10:1	A	544090	A
DO NOT SCALE DRAWING			SHEET 3 OF 5

# BOTTOM SIDE (TOP X-RAY VIEW)

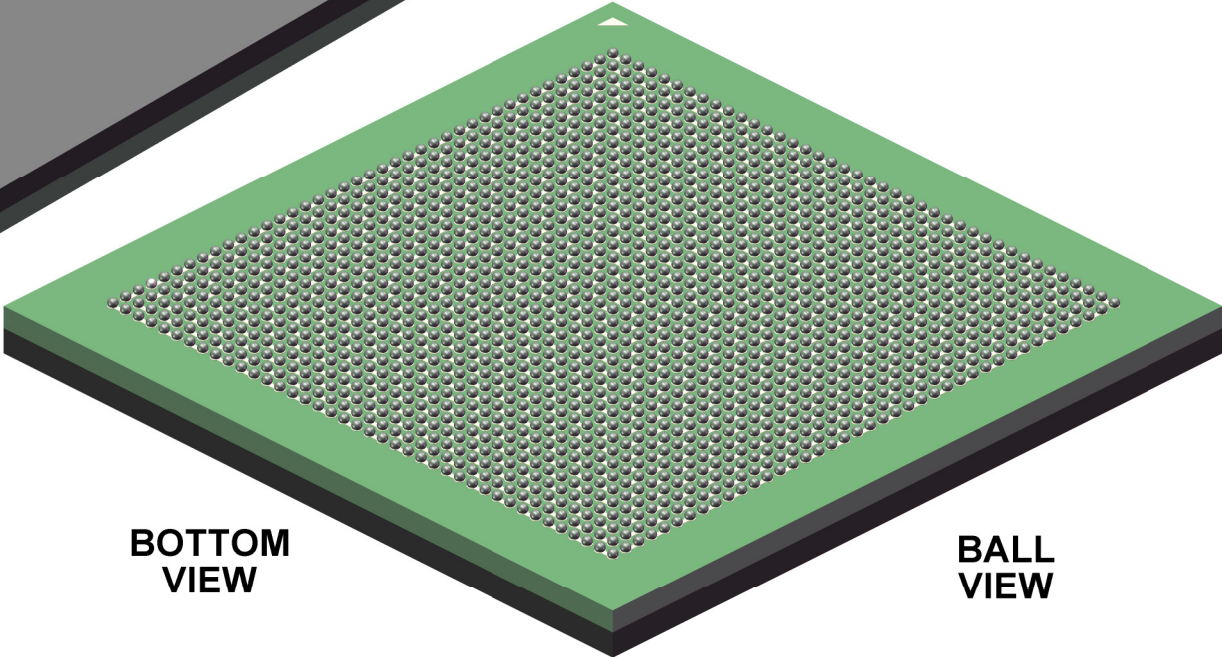


<b>TopLine<sup>®</sup></b>			
TITLE		BGA1600T.4C-DC409D DAISY CHAIN DUMMY	
SCALE	SIZE	DRAWING NO.	REV
4:1	A	544090	A
DO NOT SCALE DRAWING			SHEET 4 OF 5

**MODELS**



**TOP  
VIEW**



**BOTTOM  
VIEW**

**BALL  
VIEW**

<b>TopLine<sup>®</sup></b>			
TITLE		BGA1600T.4C-DC409D DAISY CHAIN DUMMY	
SCALE	SIZE	DRAWING NO.	REV
6:1	A	544090	A
DO NOT SCALE DRAWING			SHEET 5 OF 5