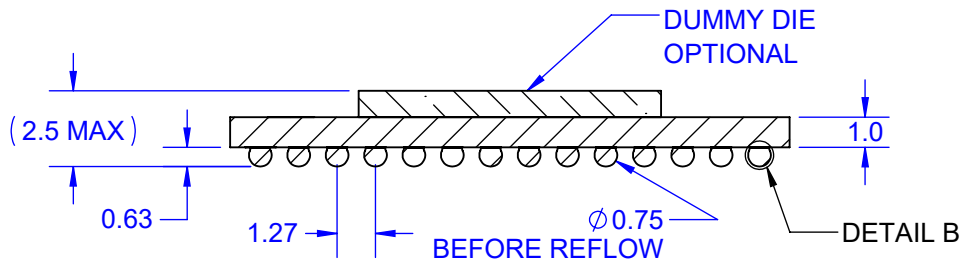
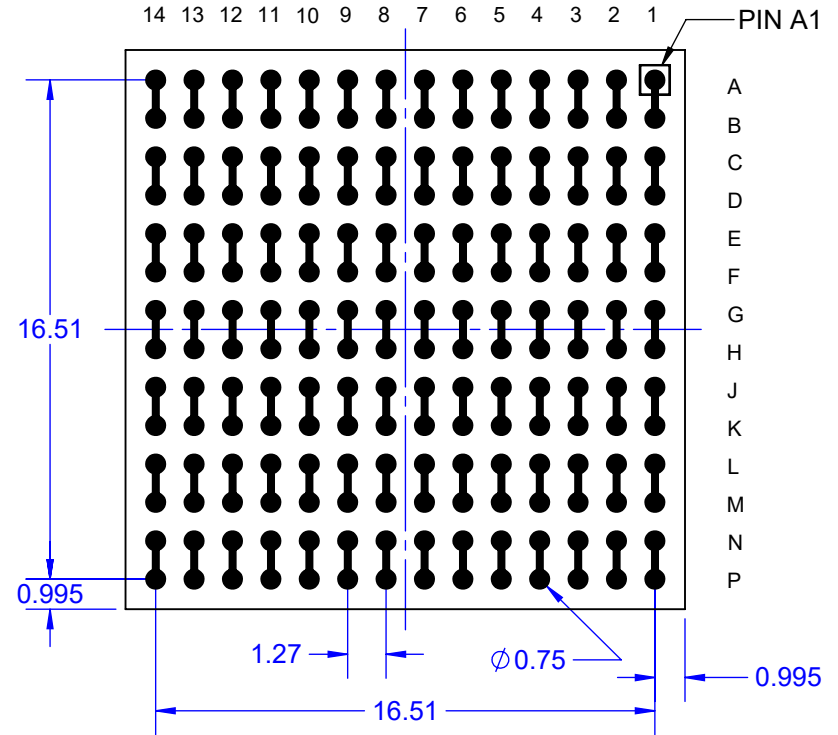
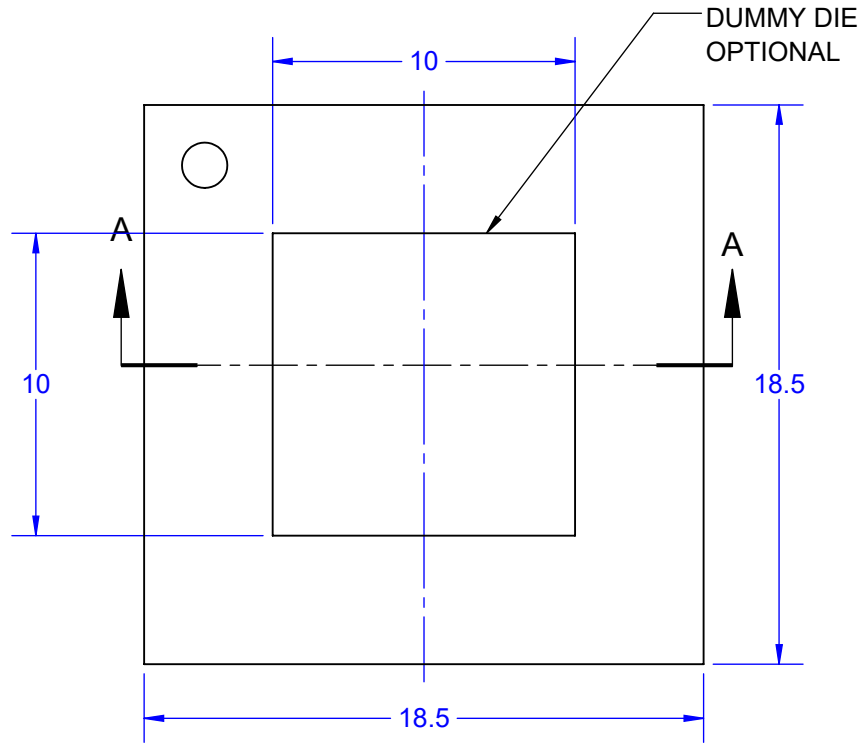


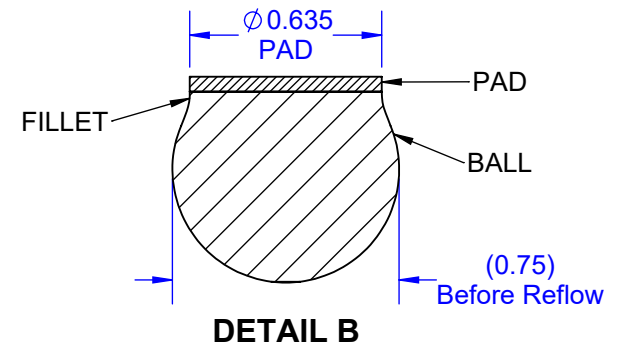
# CBGA WITH DIE

## TOP VIEW

## BALL VIEW



SECTION A-A  
SCALE 4 : 1



DETAIL B

Notes: (Unless Otherwise Specified).

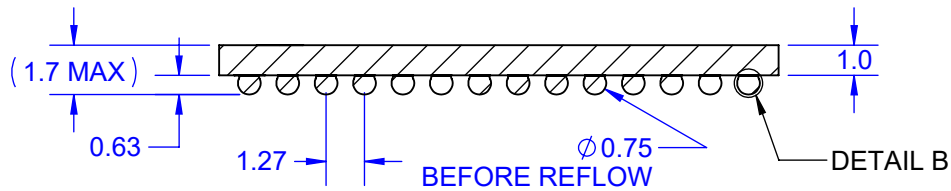
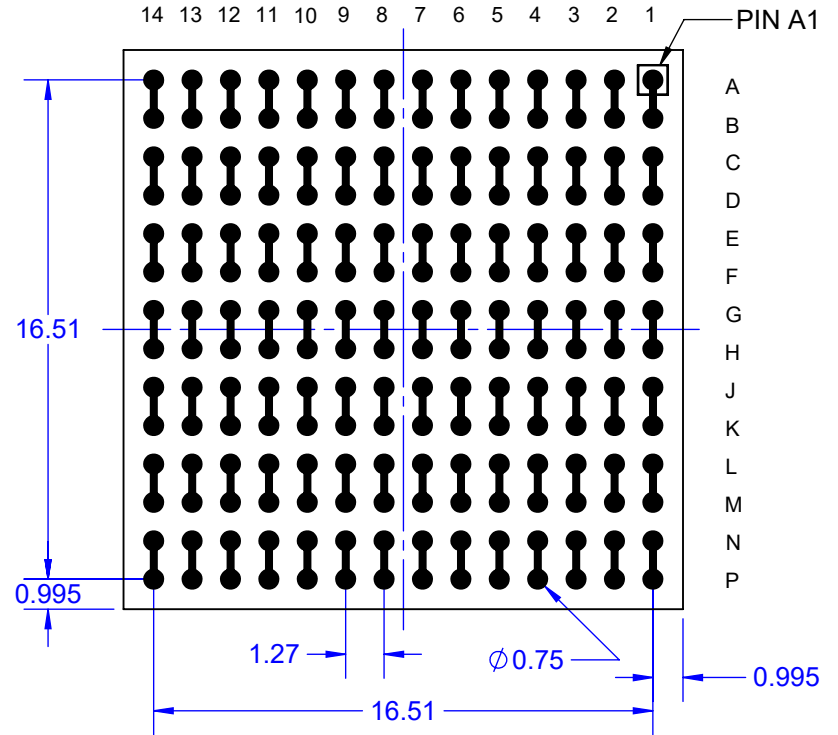
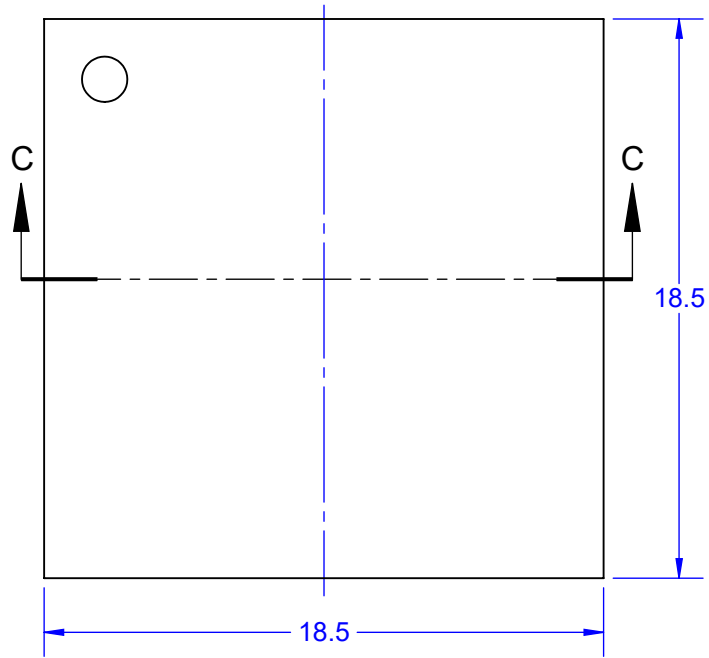
- 1) ALL DIMENSIONS ARE MM.
- 2) SOLDER BALL ALLOY: SEE PART NUMBER CONFIGURATION.
- 3) BALL DIAMETER (BEFORE REFLOW): 0.76mm (30 MIL).
- 4) SOLDER MASK OPENING: 0.635mm (25 MIL).
- 5) SUBSTRATE: ALUMINA CERAMIC.

APPROVALS	DATE	<b>TopLine®</b>			
DRAWN T. Au	07/30/2022				
ENG M. Hart	07/30/2022	TITLE CBGA196T1.27-DC11 CERAMIC BALL GRID ARRAY			
MFG		SCALE 4:1	SIZE A	DRAWING NO. 520117	REV A
QA		DO NOT SCALE DRAWING			SHEET 1 OF 6
CUST					
REVISED					

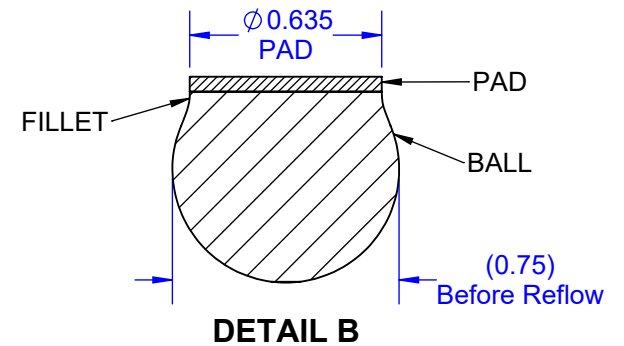
TOP VIEW

CBGA WITHOUT DIE

BALL VIEW



SECTION C-C  
SCALE 4 : 1

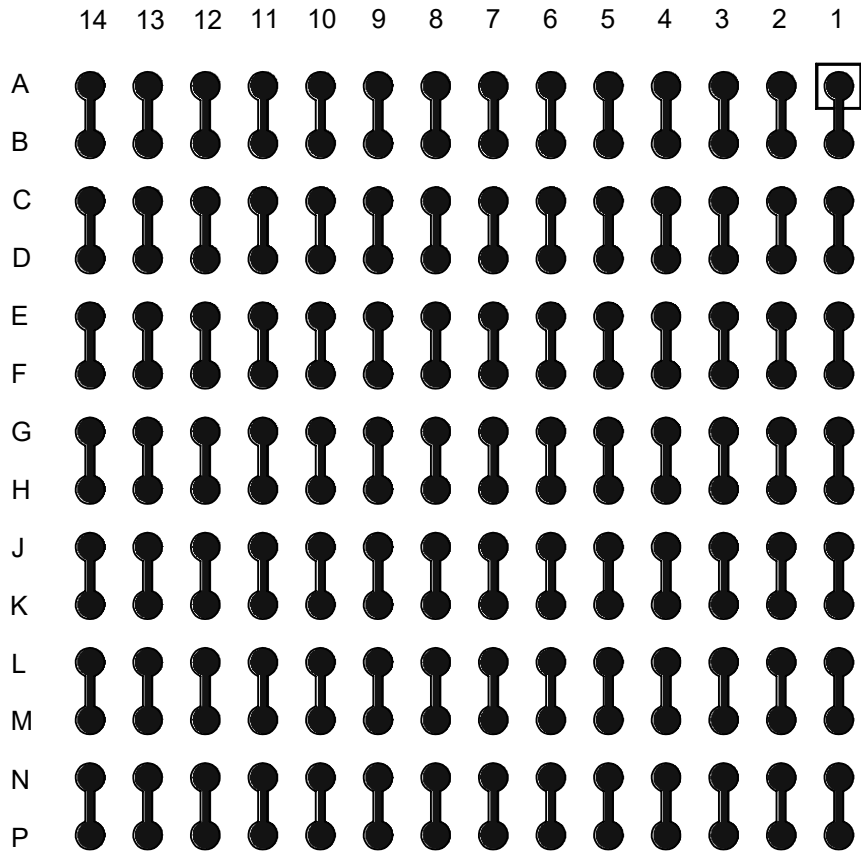


Notes: (Unless Otherwise Specified).

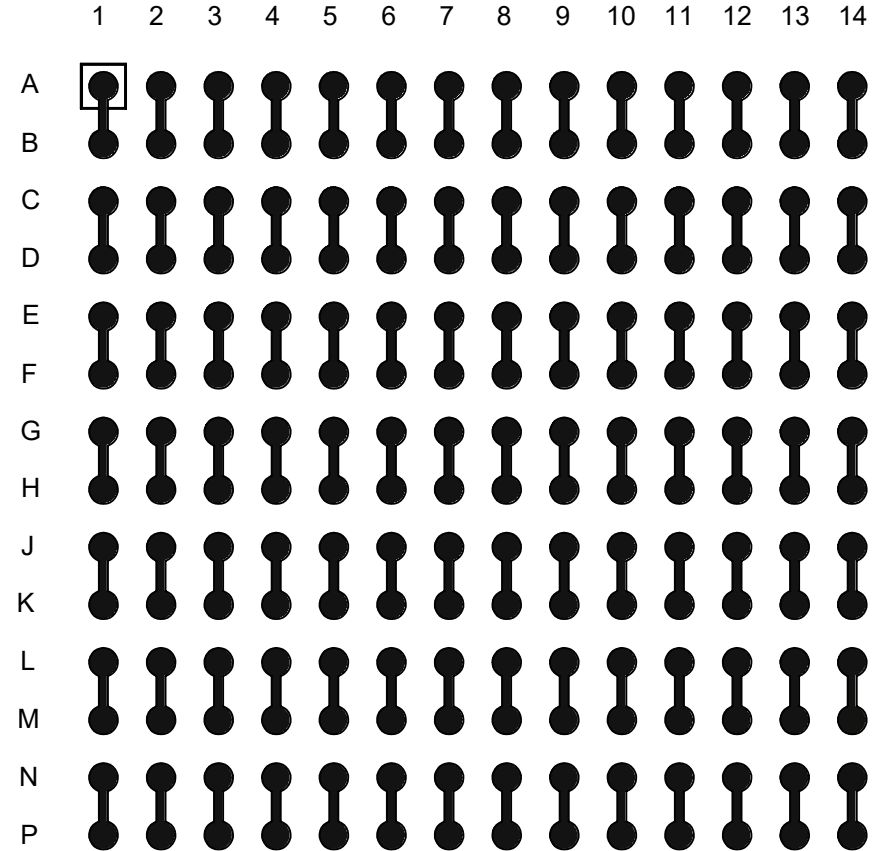
- 1) ALL DIMENSIONS ARE MM.
- 2) SOLDER BALL ALLOY: SEE PART NUMBER CONFIGURATION.
- 3) BALL DIAMETER (BEFORE REFLOW): 0.76mm (30 MIL).
- 4) SOLDER MASK OPENING: 0.635mm (25 MIL).
- 5) SUBSTRATE: ALUMINA CERAMIC.

APPROVALS	DATE	<b>TopLine</b> <sup>®</sup>			
DRAWN T. Au	07/30/2022				
ENG M. Hart	07/30/2022	TITLE CBGA196T1.27-DC11 CERAMIC BALL GRID ARRAY			
MFG		SCALE	SIZE	DRAWING NO.	REV
QA		4:1	A	520117	A
CUST		DO NOT SCALE DRAWING			SHEET 2 OF 6
REVISED					

### BALL VIEW



### BOTTOM SIDE (TOP X-RAY VIEW)



**TopLine<sup>®</sup>**

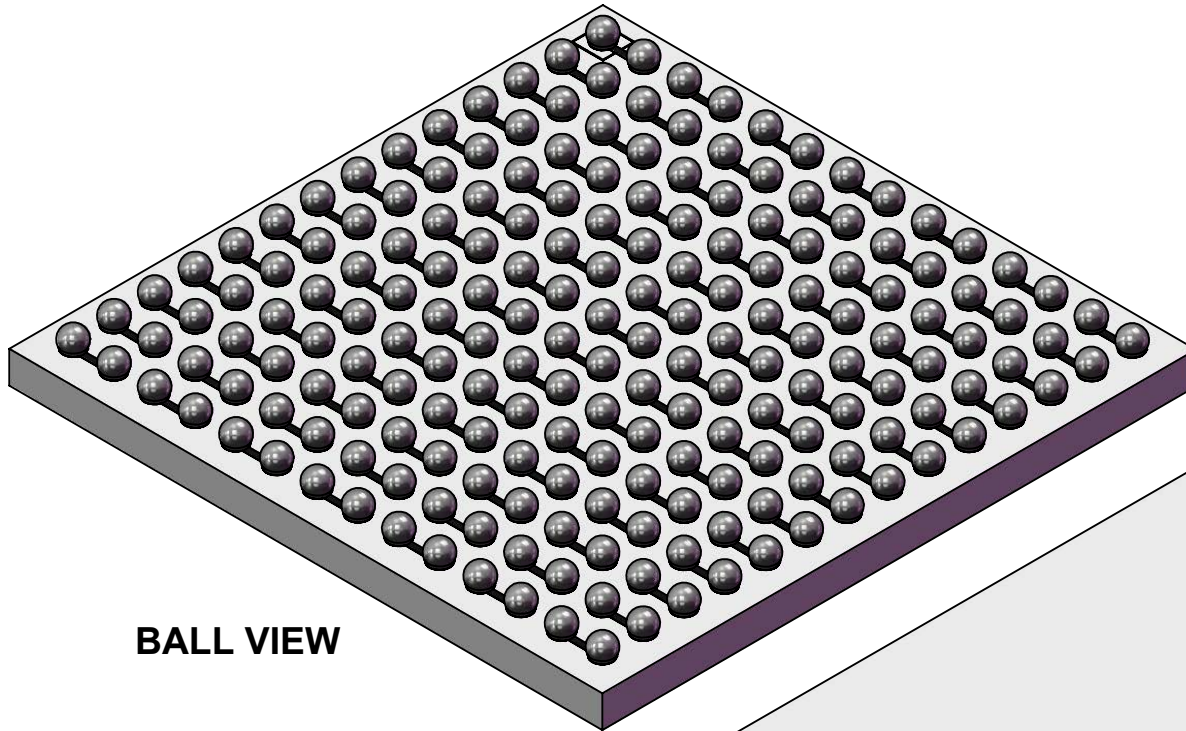
TITLE CBGA196T1.27-DC11  
CERAMIC BALL GRID ARRAY

SCALE 6:1	SIZE A	DRAWING NO. 520117	REV A
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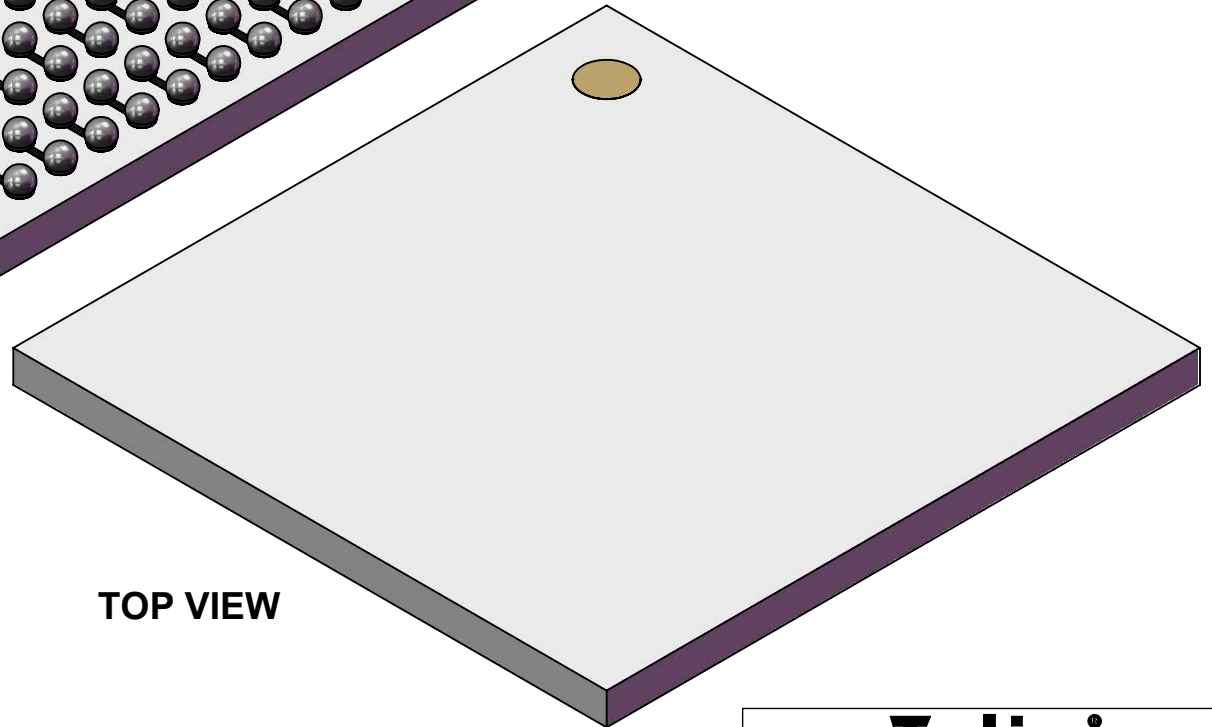
DO NOT SCALE DRAWING

SHEET 3 OF 6

MODEL  
CBGA WITH BALL  
WITHOUT DIE



BALL VIEW



TOP VIEW

**TopLine**<sup>®</sup>

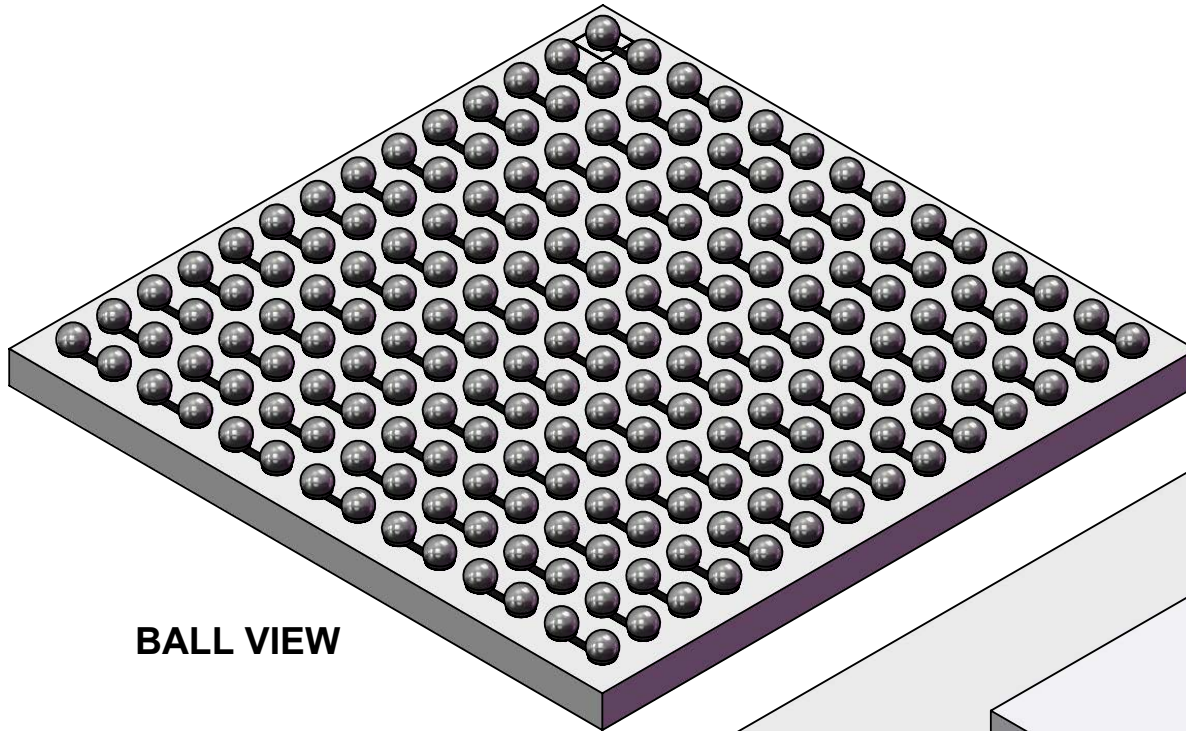
TITLE CBGA196T1.27-DC11  
CERAMIC BALL GRID ARRAY

SCALE 6:1	SIZE A	DRAWING NO. 520117	REV A
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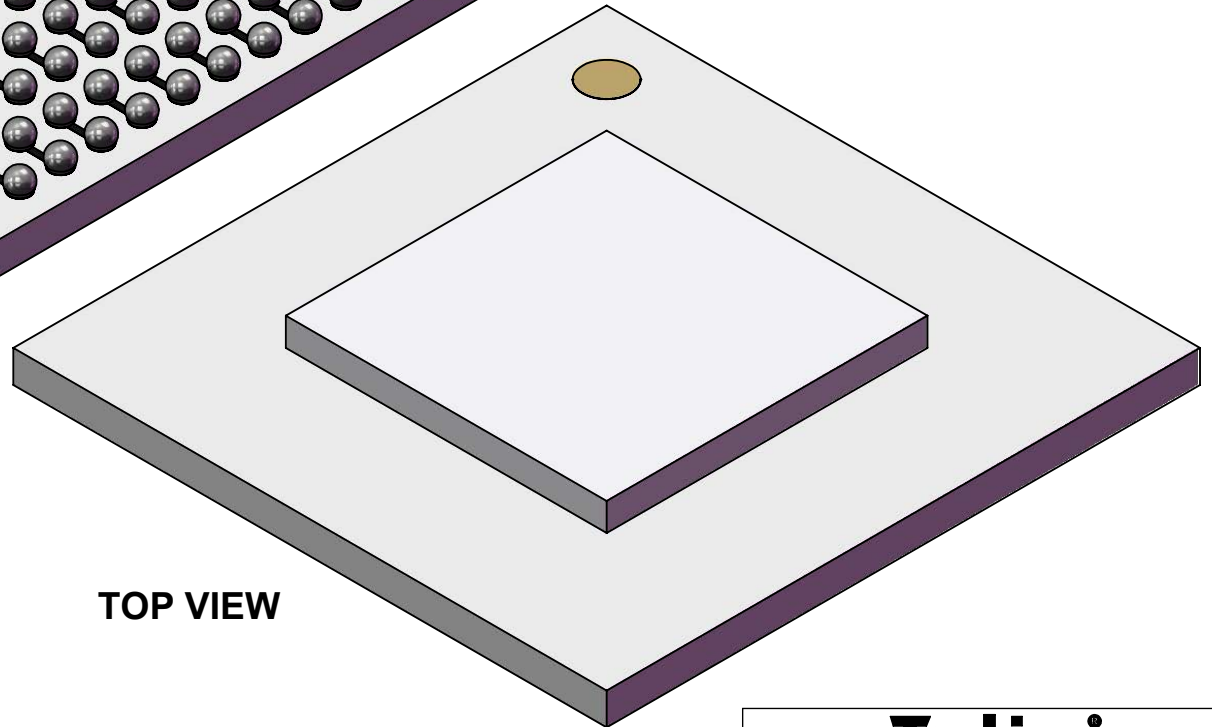
DO NOT SCALE DRAWING

SHEET 4 OF 6

MODEL  
CBGA WITH BALL  
WITH DIE



BALL VIEW



TOP VIEW

**TopLine**<sup>®</sup>

TITLE CBGA196T1.27-DC11  
CERAMIC BALL GRID ARRAY

SCALE	SIZE	DRAWING NO.	REV
6:1	A	520117	A

DO NOT SCALE DRAWING

SHEET 5 OF 6

# PART NUMBER SYSTEM

**CBGA**

**196**

**T**

**1.27**

**-**

**DC11**

**D**

**SERIES**

CBGA = CERAMIC  
BALL GRID ARRAY

**BALLS**

NBR SOLDER  
BALLS

**TRAY**

T = JEDEC

**PITCH**

1.27mm = 0.050"

**ALLOY**

L = Sn62/Pb36/Ag2.0  
X = Sn63/Pb37  
C = SAC305  
Blank = Sn10/Pb90

**DIE**

D = DUMMY DIE  
BLANK = WITHOUT DIE

**DAISY CHAIN**

DC11 = SEE PATTERN

PART NUMBER	BALL ALLOY	CODE	LEAD FREE	DIE
CBGA196T1.27-DC11	Sn10/Pb90	Sn10	NO	NO
CBGA196T1.27-DC11D	Sn10/Pb90	Sn10	NO	YES
CBGA196T1.27L-DC11	Sn62/Pb36/Ag2.0	Sn62	NO	NO
CBGA196T1.27L-DC11D	Sn62/Pb36/Ag2.0	Sn62	NO	YES
CBGA196T1.27X-DC11	Sn63/Pb37	Sn63	NO	NO
CBGA196T1.27X-DC11D	Sn63/Pb37	Sn63	NO	YES
CBGA196T1.27C-DC11	Sn96.5/Ag3.0/Cu0.5	SAC305	YES	NO
CBGA196T1.27C-DC11D	Sn96.5/Ag3.0/Cu0.5	SAC305	YES	YES

<b>TopLine<sup>®</sup></b>			
TITLE    CBGA196T1.27-DC11 CERAMIC BALL GRID ARRAY			
SCALE NONE	SIZE A	DRAWING NO. 520117	REV A
DO NOT SCALE DRAWING		SHEET 6 OF 6	