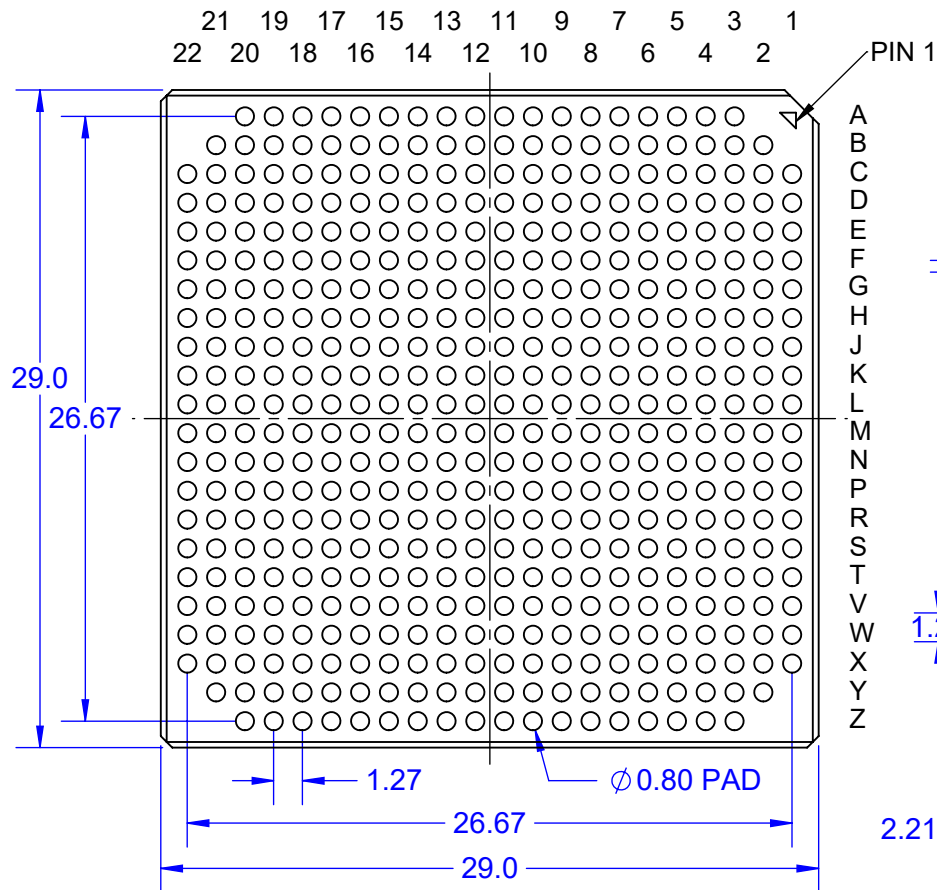
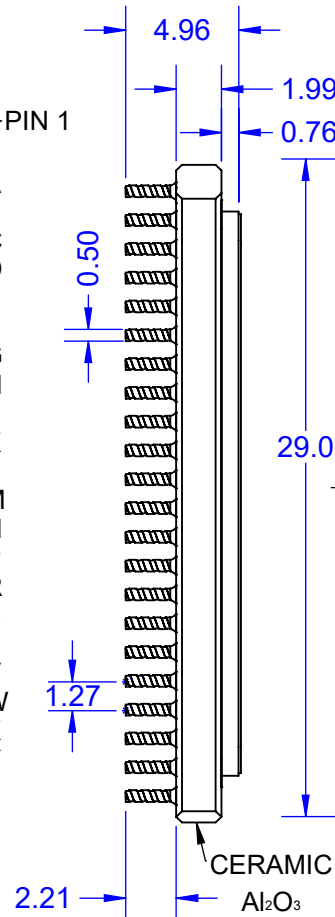


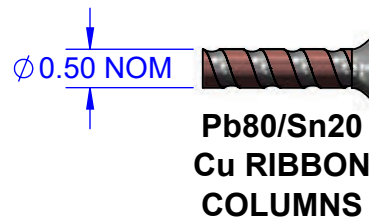
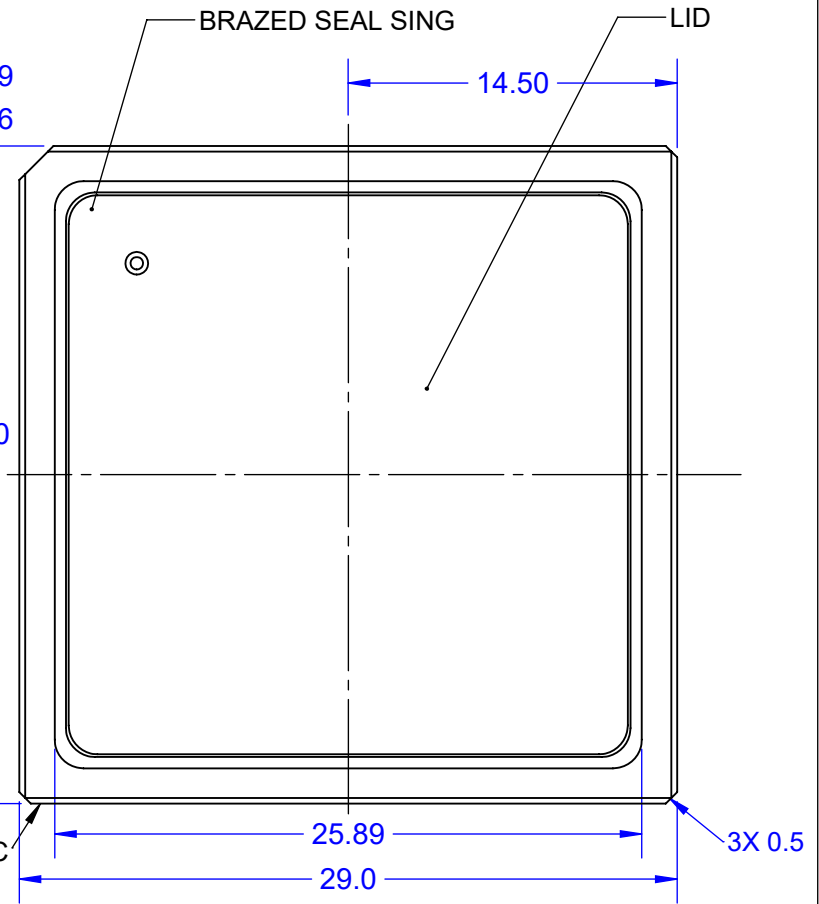
### BOTTOM VIEW



### SIDE VIEW



### TOP VIEW



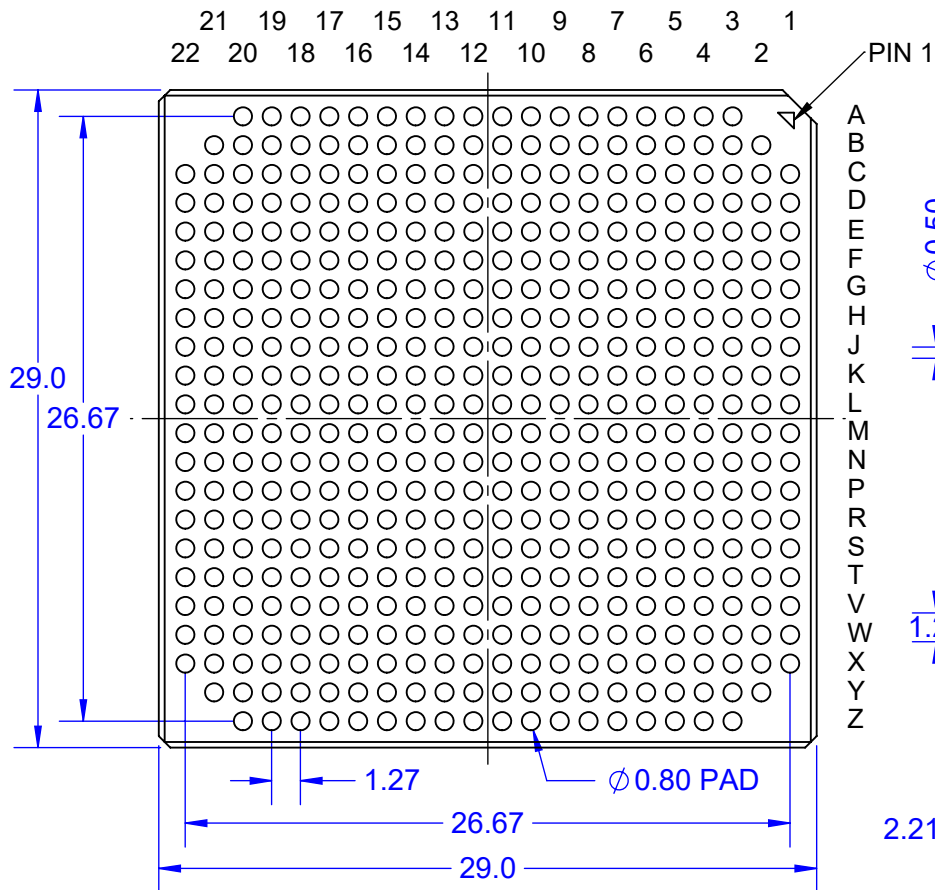
Notes: (Unless Otherwise Specified).

- 1) DIMENSIONS ARE IN mm.
- 2) SHOWN WITH COLUMNS.
- 3) SHOWN WITH LID.
- 4) PART NUMBER: CCGA472T1.27-DC226D.

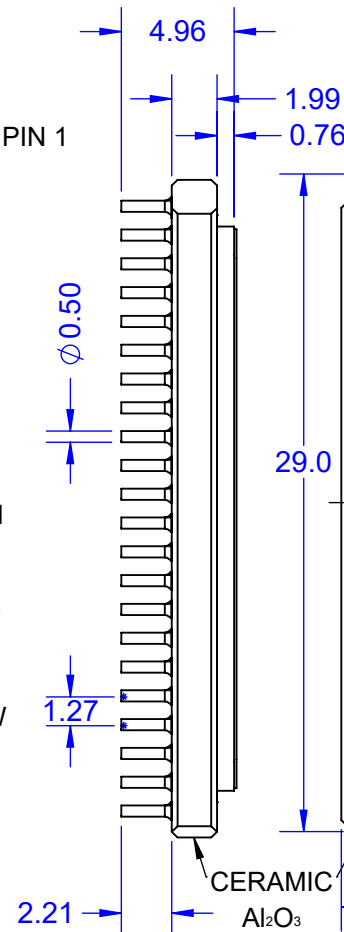
PART NUMBER OPTIONS			
PART NUMBER	DUMMY DIE	SOLDER PIN	LID
CCGA472T1.27-DC226D	YES	YES	YES

APPROVALS	DATE	<b>TopLine®</b>		
DRAWN T. Au	4/16/2022			
ENG M. Hart	4/16/2022	TITLE CCGA472T1.27-DC226D DUMMY COLUMN GRID ARRAY		
MFG		SCALE	SIZE	DRAWING NO.
QA		3:1	A	160057
CUST				REV A
REVISED		DO NOT SCALE DRAWING		SHEET 1 OF 11

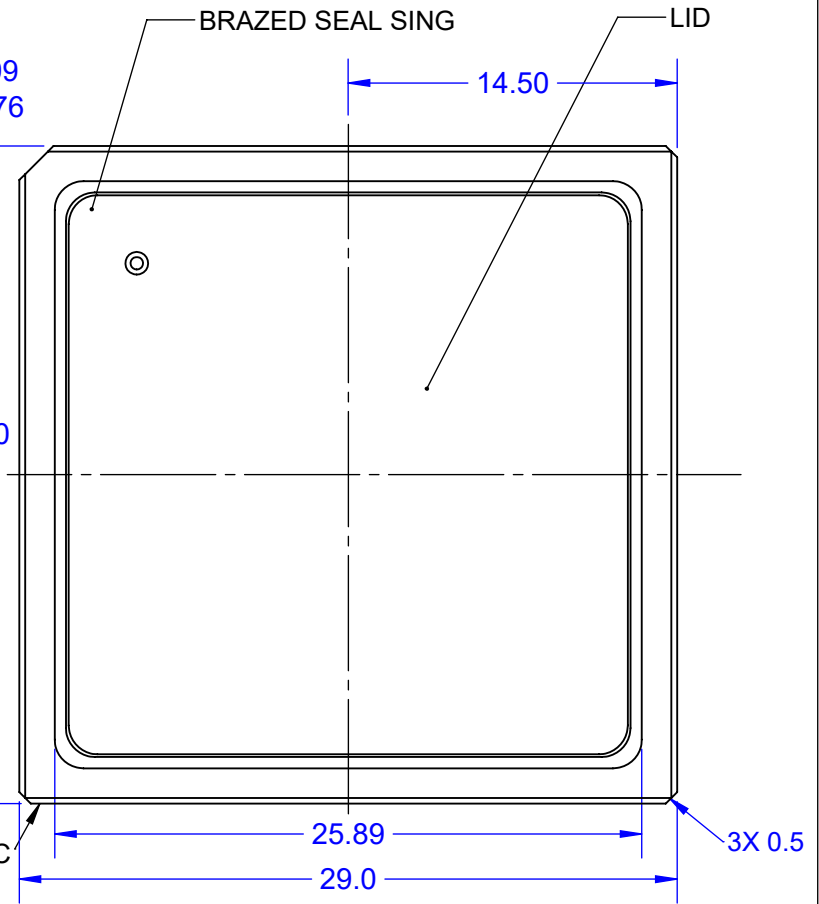
### BOTTOM VIEW



### SIDE VIEW



### TOP VIEW



**Pb90/Sn10  
PLAIN COLUMNS**

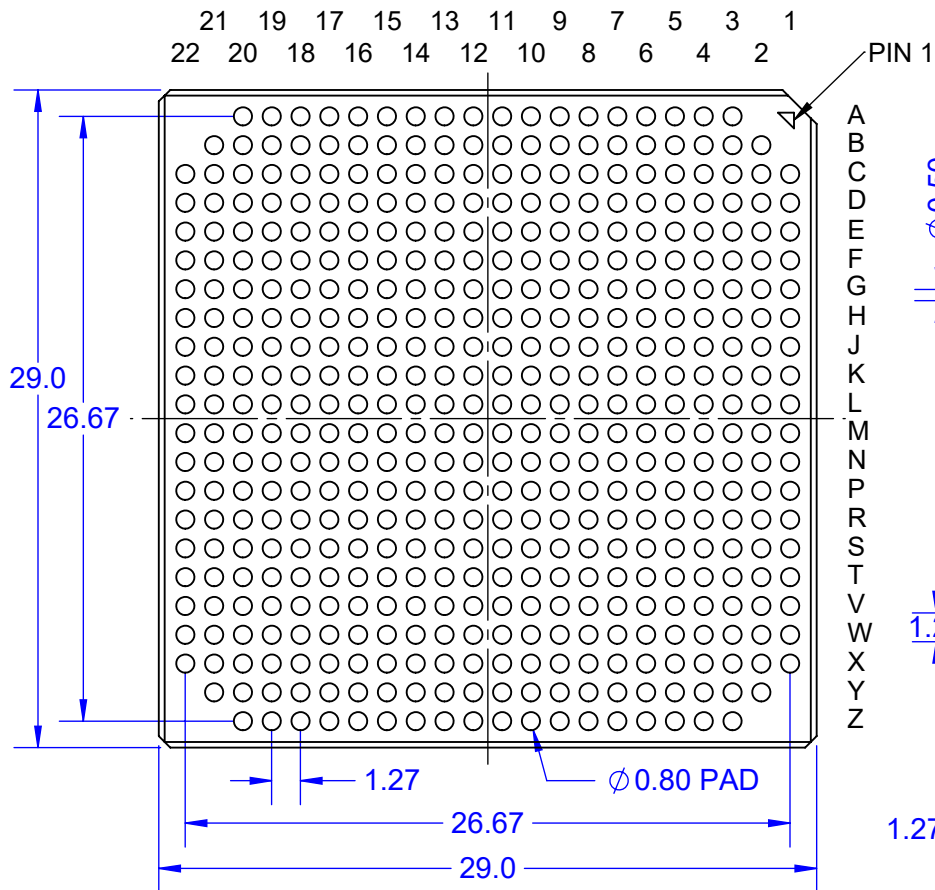
Notes: (Unless Otherwise Specified).

- 1) DIMENSIONS ARE IN mm.
- 2) SHOWN WITH COLUMNS.
- 3) SHOWN WITH LID.
- 4) PART NUMBER: CCGA472T1.27A-DC226D.

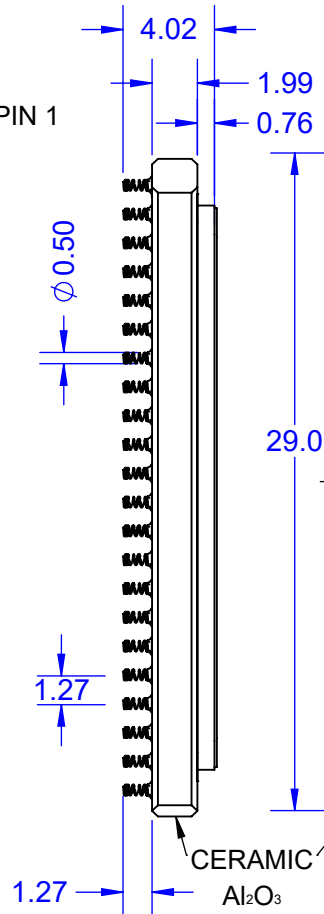
PART NUMBER OPTIONS			
PART NUMBER	DUMMY DIE	SOLDER PIN	LID
CCGA472T1.27A-DC226D	YES	YES	YES

APPROVALS	DATE	<b>TopLine®</b>			
DRAWN T. Au	4/16/2022				
ENG M. Hart	4/16/2022	TITLE CCGA472T1.27-DC226D DUMMY COLUMN GRID ARRAY			
MFG		SCALE	SIZE	DRAWING NO.	REV
QA		3:1	A	160057	A
CUST		DO NOT SCALE DRAWING			SHEET 2 OF 11
REVISED					

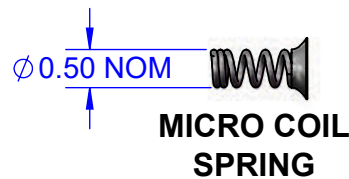
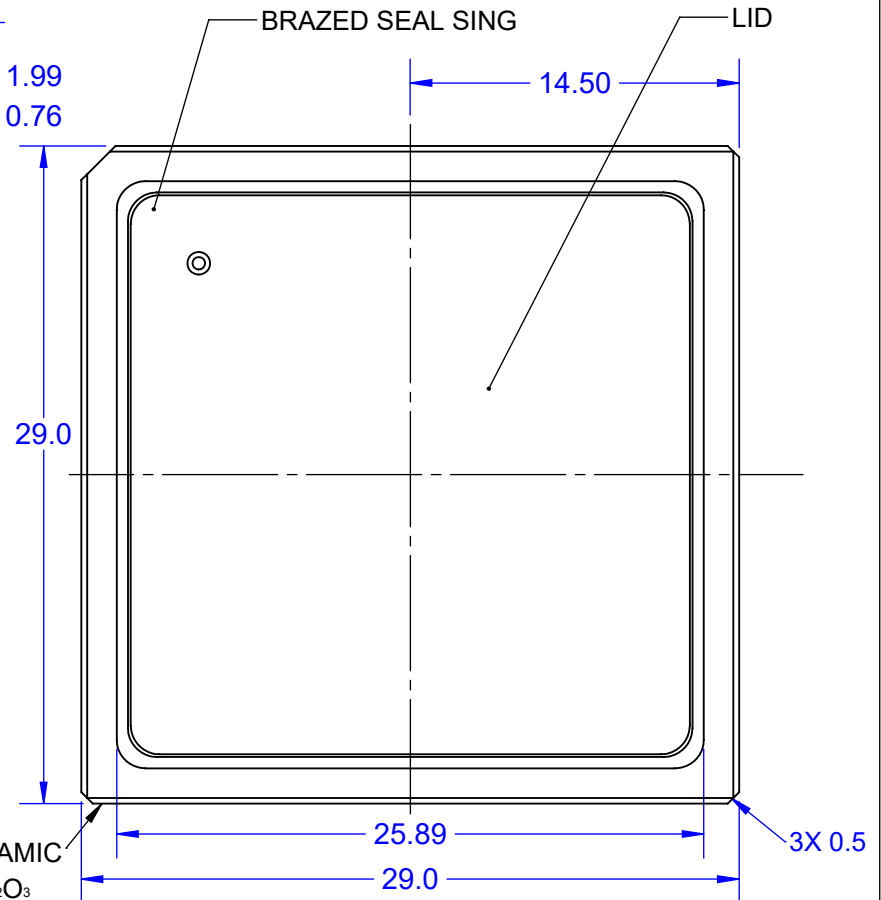
### BOTTOM VIEW



### SIDE VIEW



### TOP VIEW



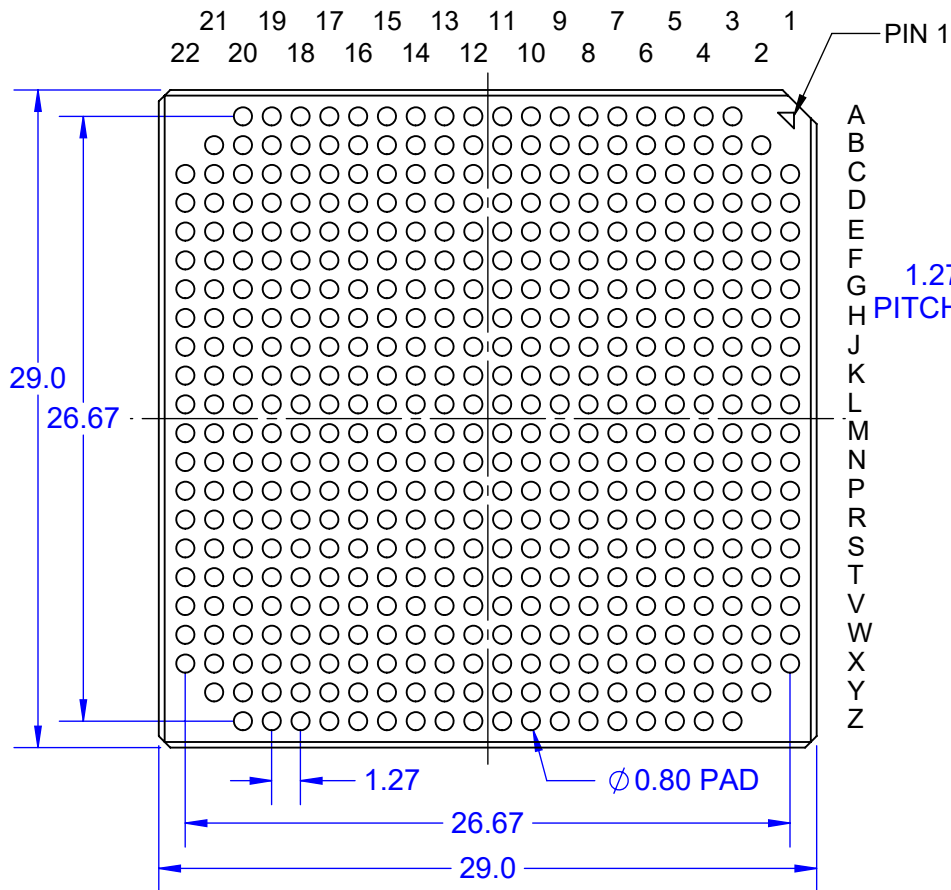
Notes: (Unless Otherwise Specified).

- 1) DIMENSIONS ARE IN mm.
- 2) SHOWN WITH MICRO-COIL SPRINGS.
- 3) SHOWN WITH LID.
- 4) PART NUMBER: CCGA472T1.27M-DC226D.

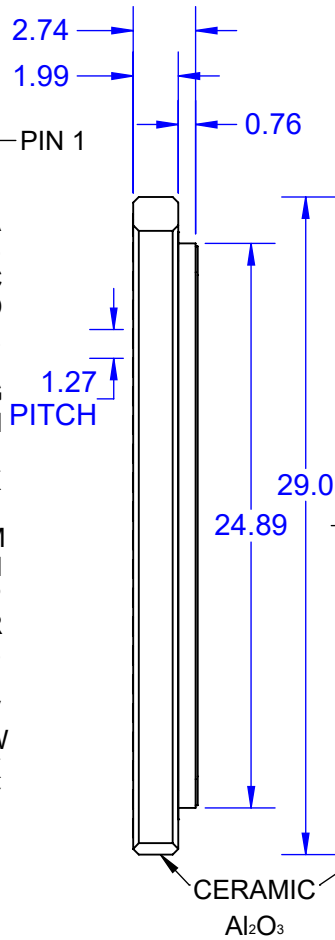
PART NUMBER OPTIONS			
PART NUMBER	DUMMY DIE	SOLDER PIN	LID
CCGA472T1.27M-DC226D	YES	YES	YES

APPROVALS	DATE	<b>TopLine®</b>			
DRAWN T. Au	4/16/2022				
ENG M. Hart	4/16/2022	TITLE CCGA472T1.27-DC226D DUMMY COLUMN GRID ARRAY			
MFG		SCALE	SIZE	DRAWING NO.	REV
QA		3:1	A	160057	A
CUST		DO NOT SCALE DRAWING			SHEET 3 OF 11
REVISED					

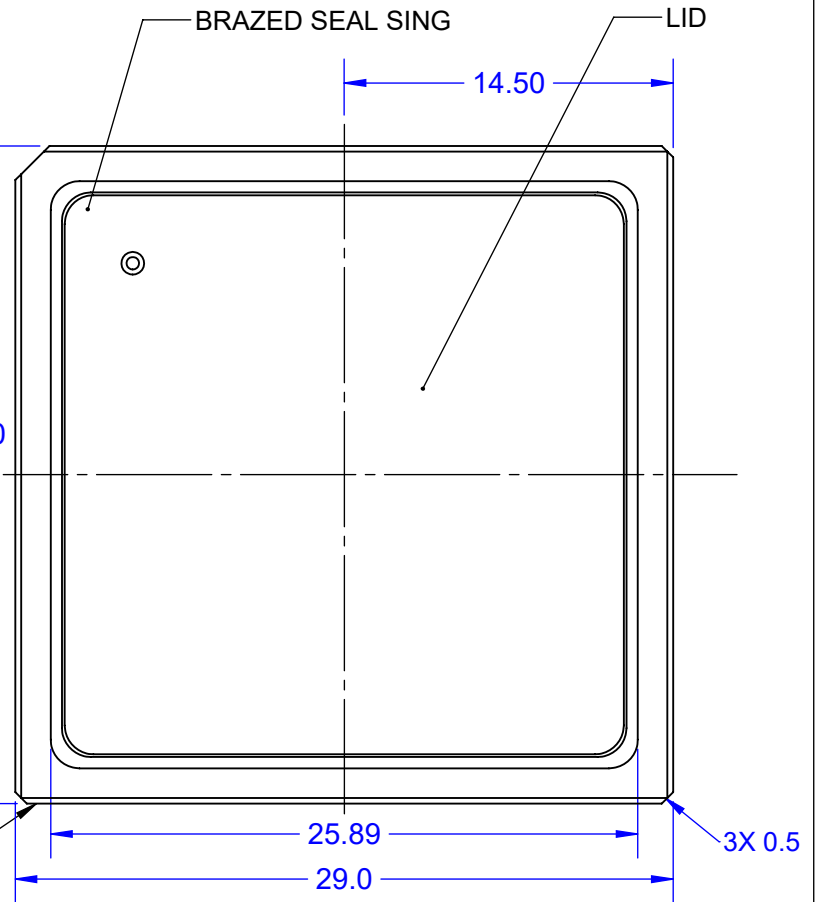
### BOTTOM VIEW



### SIDE VIEW



### TOP VIEW



Notes: (Unless Otherwise Specified).

- 1) DIMENSIONS ARE IN mm.
- 2) CLGA SHOWN WITHOUT COLUMNS.
- 3) SHOWN WITH LID.
- 4) PART NUMBER: CLGA472T1.27-DC226D.

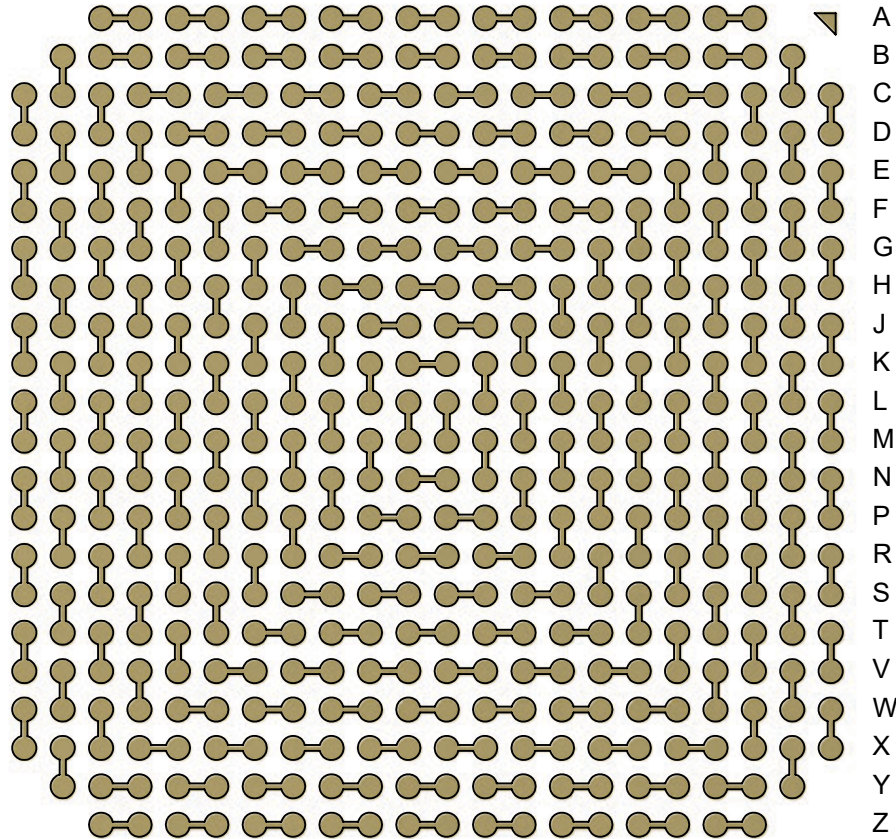
PART NUMBER OPTIONS			
PART NUMBER	DUMMY DIE	SOLDER PIN	LID
CLGA472T1.27-DC226D	YES	NONE	YES

APPROVALS	DATE	<b>TopLine®</b>			
DRAWN T. Au	4/16/2022				
ENG M. Hart	4/16/2022	TITLE CCGA472T1.27-DC226D DUMMY COLUMN GRID ARRAY			
MFG		SCALE	SIZE	DRAWING NO.	REV
QA		3:1	A	160057	A
CUST		DO NOT SCALE DRAWING			SHEET 4 OF 11
REVISED					

# DAISY CHAIN PATTERN

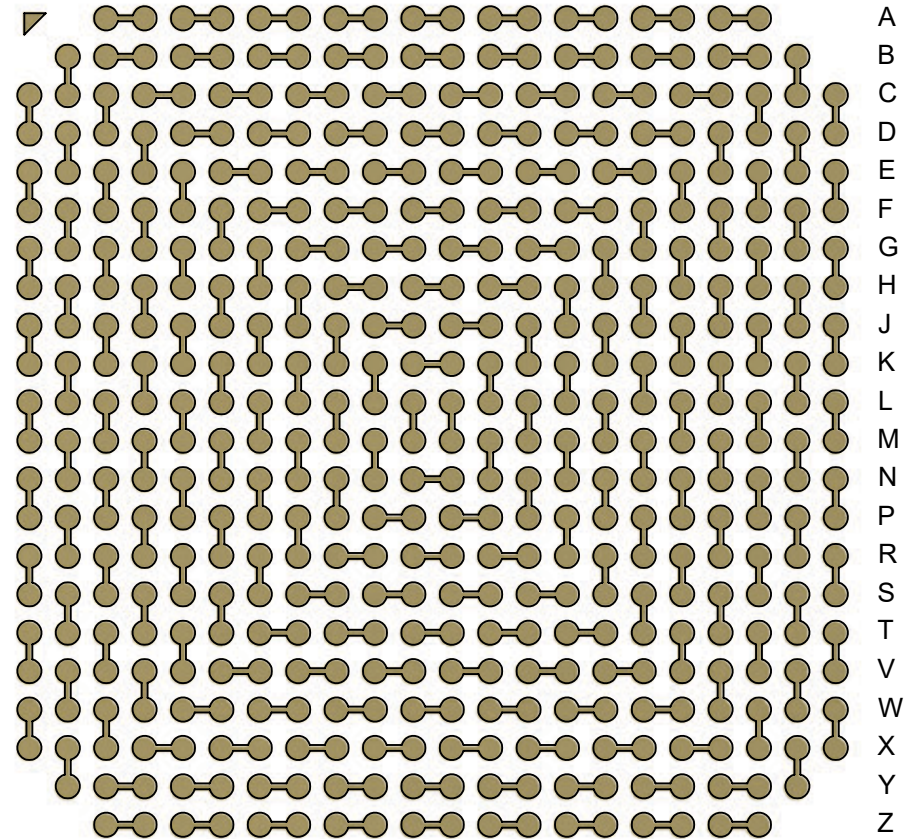
## COLUMN (PAD) VIEW

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



## BOTTOM X-RAY VIEWED FROM TOP

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



**TopLine®**

TITLE CCGA472T1.27-DC226D  
DUMMY COLUMN GRID ARRAY

SCALE 4:1	SIZE A	DRAWING NO. 160057	REV A
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DO NOT SCALE DRAWING

SHEET 5 OF 11

## DAISY CHAIN NET LIST

PIN	PIN
A3	A4
A5	A6
A7	A8
A9	A10
A11	A12
A13	A14
A15	A16
A17	A18
A19	A20
B2	C2
B3	B4
B5	B6
B7	B8
B9	B10
B11	B12
B13	B14
B15	B16
B17	B18
B19	B20
B21	C21
C1	D1
C3	D3
C4	C5
C6	C7
C8	C9
C10	C11
C12	C13
C14	C15
C16	C17
C18	C19

PIN	PIN
C20	D20
C22	D22
D2	E2
D4	E4
D5	D6
D7	D8
D9	D10
D11	D12
D13	D14
D15	D16
D17	D18
D19	E19
D21	E21
E1	F1
E3	F3
E5	F5
E6	E7
E8	E9
E10	E11
E12	E13
E14	E15
E16	E17
E18	F18
E20	F20
E22	F22
F2	G2
F4	G4
F6	G6
F7	F8
F9	F10

PIN	PIN
F11	F12
F13	F14
F15	F16
F17	G17
F19	G19
F21	G21
G1	H1
G3	H3
G5	H5
G7	H7
G8	G9
G10	G11
G12	G13
G14	G15
G16	H16
G18	H18
G20	H20
G22	H22
H2	J2
H4	J4
H6	J6
H8	J8
H9	G10
H11	H12
H13	H14
H15	J15
H17	J17
H19	J19
H21	J21
J1	K1

PIN	PIN
J3	K3
J5	K5
J7	K7
J9	K9
J10	J11
J12	J13
J14	K14
J16	K16
J18	K18
J20	K20
J22	K22
K2	L2
K4	L4
K6	L6
K8	L8
K10	L10
K11	K12
K13	L13
K15	L15
K17	L17
K19	L19
K21	L21
L1	M1
L3	M3
L5	M5
L7	M7
L9	M9
L11	M11
L12	M12
L14	M14

<b>TopLine®</b>			
TITLE    CCGA472T1.27-DC226D DUMMY COLUMN GRID ARRAY			
SCALE NONE	SIZE A	DRAWING NO. 160057	REV A
DO NOT SCALE DRAWING			SHEET 6 OF 11

## DAISY CHAIN NET LIST

PIN	PIN
L16	M16
L18	M18
L20	M20
L22	M22
M2	N2
M4	N4
M6	N6
M8	N8
M10	N10
M13	N13
M15	N15
M17	N17
M19	N19
M21	N21
N1	P1
N3	P3
N5	P5
N7	P7
N9	P9
N11	N12
N14	P14
N16	P16
N18	P18
N20	P20
N22	P22
P2	R2
P4	R4
P6	R6
P8	R8
P10	P11

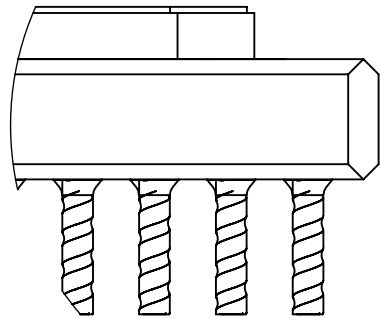
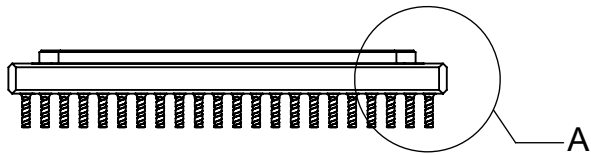
PIN	PIN
P12	P13
P15	R15
P17	R17
P19	R19
P21	R21
R1	S1
R3	S3
R5	S5
R7	S7
R9	R10
R11	R12
R13	R14
R16	S16
R18	S18
R20	S20
R22	S22
S2	T2
S4	T4
S6	T6
S8	S9
S10	S11
S12	S13
S14	S15
S17	T17
S19	T19
S21	T21
T1	V1
T3	V3
T5	V5
T7	T8

PIN	PIN
T9	T10
T11	T12
T13	T14
T15	T16
T18	V18
T20	V20
T22	V22
V2	W2
V4	W4
V6	V7
V8	V9
V10	V11
V12	V13
V14	V15
V16	V17
V19	W19
V21	W21
W1	X1
W3	X3
W5	W6
W7	W8
W9	W10
W11	W12
W13	W14
W15	W16
W17	W18
W20	X20
W22	X22
X2	Y2
X4	X5

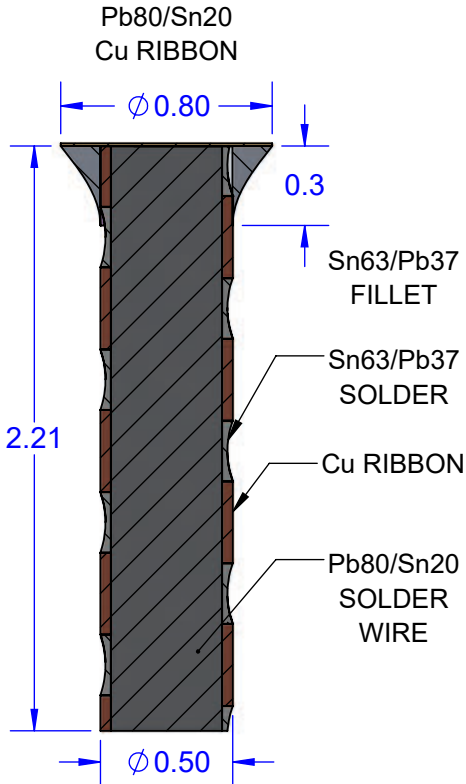
PIN	PIN
X6	X7
X8	X9
X10	X11
X12	X13
X14	X15
X16	X17
X18	X19
X21	Y21
Y3	Y4
Y5	Y6
Y7	Y8
Y9	Y10
Y11	Y12
Y13	Y14
Y15	Y16
Y17	Y18
Y19	Y20
Z3	Z4
Z5	Z6
Z7	Z8
Z9	Z10
Z11	Z12
Z13	Z14
Z15	Z16
Z17	Z18
Z19	Z20

<b>TopLine®</b>			
TITLE    CCGA472T1.27-DC226D DUMMY COLUMN GRID ARRAY			
SCALE	SIZE	DRAWING NO.	REV
NONE	A	160057	A
DO NOT SCALE DRAWING			SHEET 7 OF 11

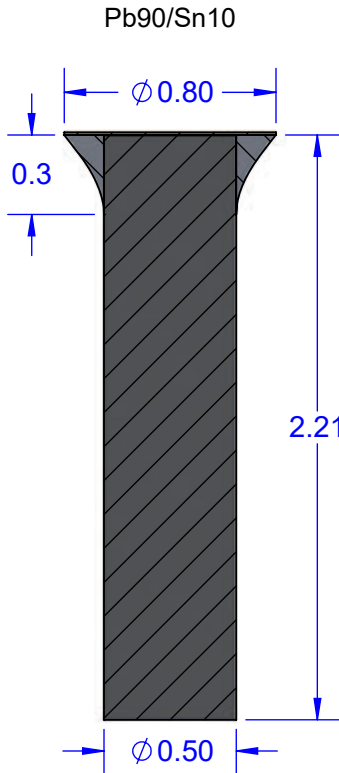
# SOLDER PIN OPTIONS



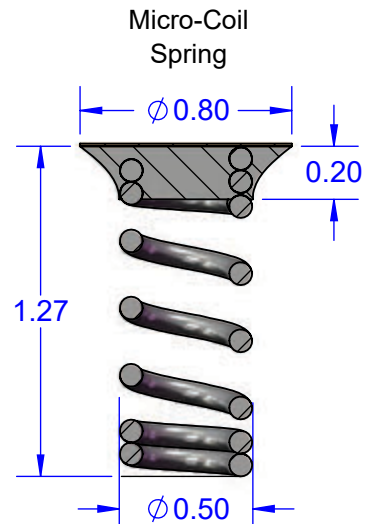
DETAIL A  
SCALE 8 : 1



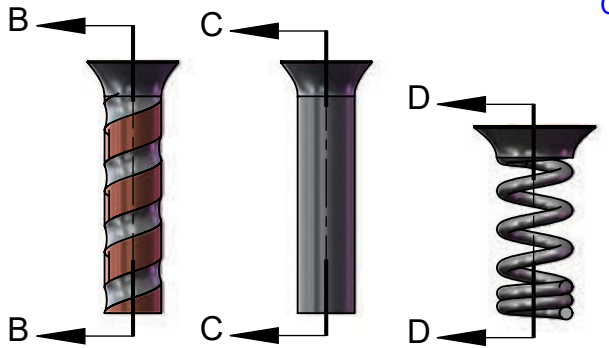
SECTION B-B  
SCALE 35 : 1



SECTION C-C  
SCALE 35 : 1



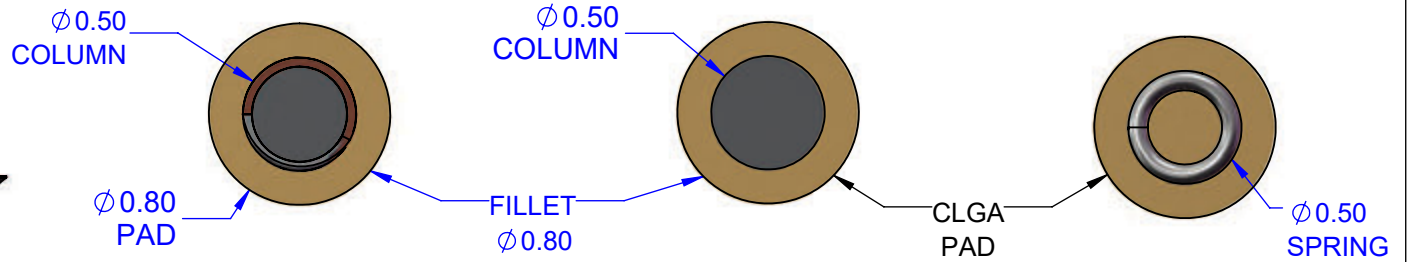
SECTION D-D  
SCALE 35 : 1



Pb80/Sn20  
Cu RIBBON  
SCALE 15:1

Pb90/Sn10  
SCALE 15:1

Micro-Coil  
Spring  
SCALE 20:1



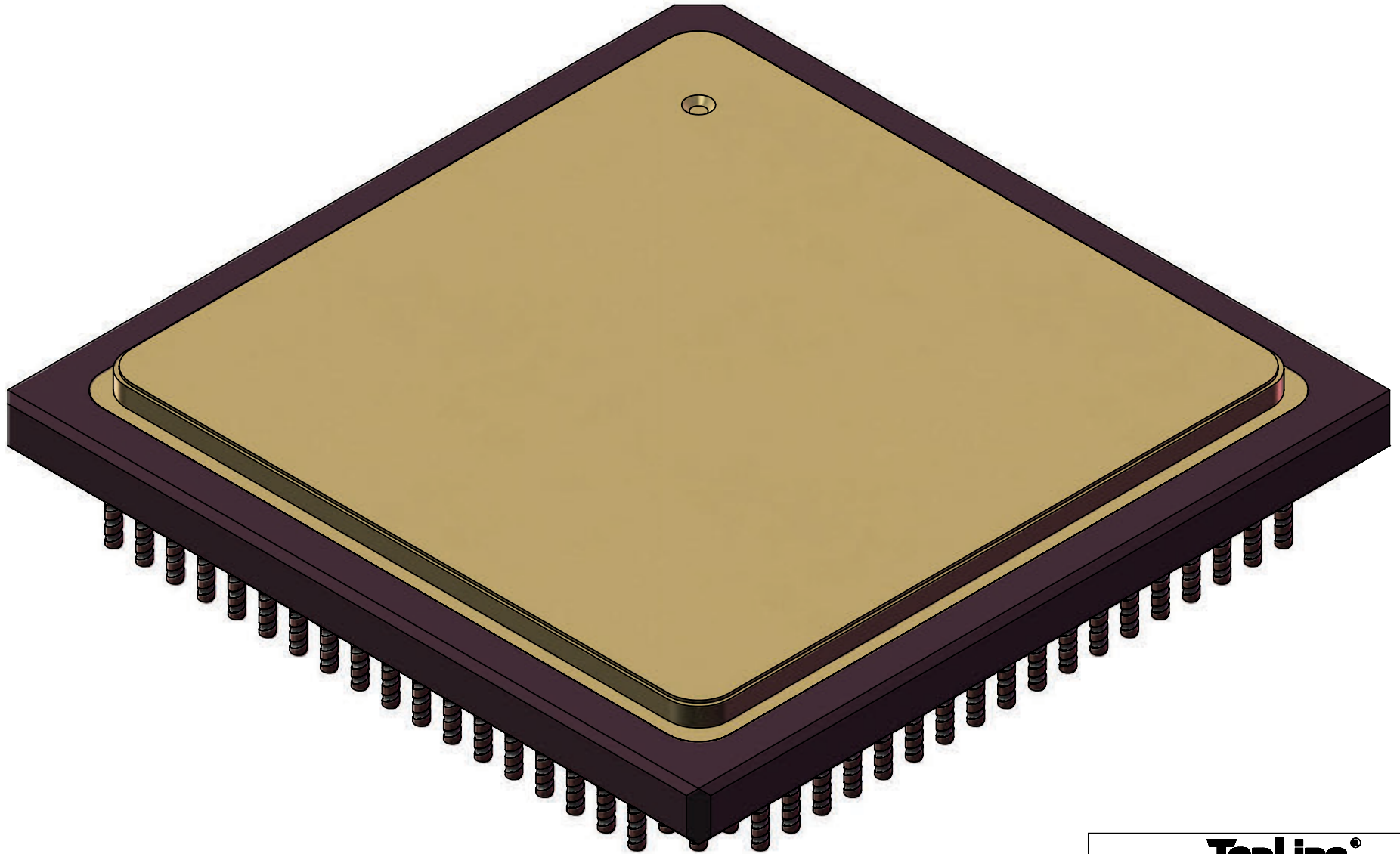
**TopLine**<sup>®</sup>

TITLE CCGA472T1.27-DC226D  
DUMMY COLUMN GRID ARRAY

SCALE 8:1	SIZE A	DRAWING NO. 160057	REV A
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**MODEL**  
**CCGA472T1.27-DC226D**  
**TOP VIEW**



**TopLine<sup>®</sup>**

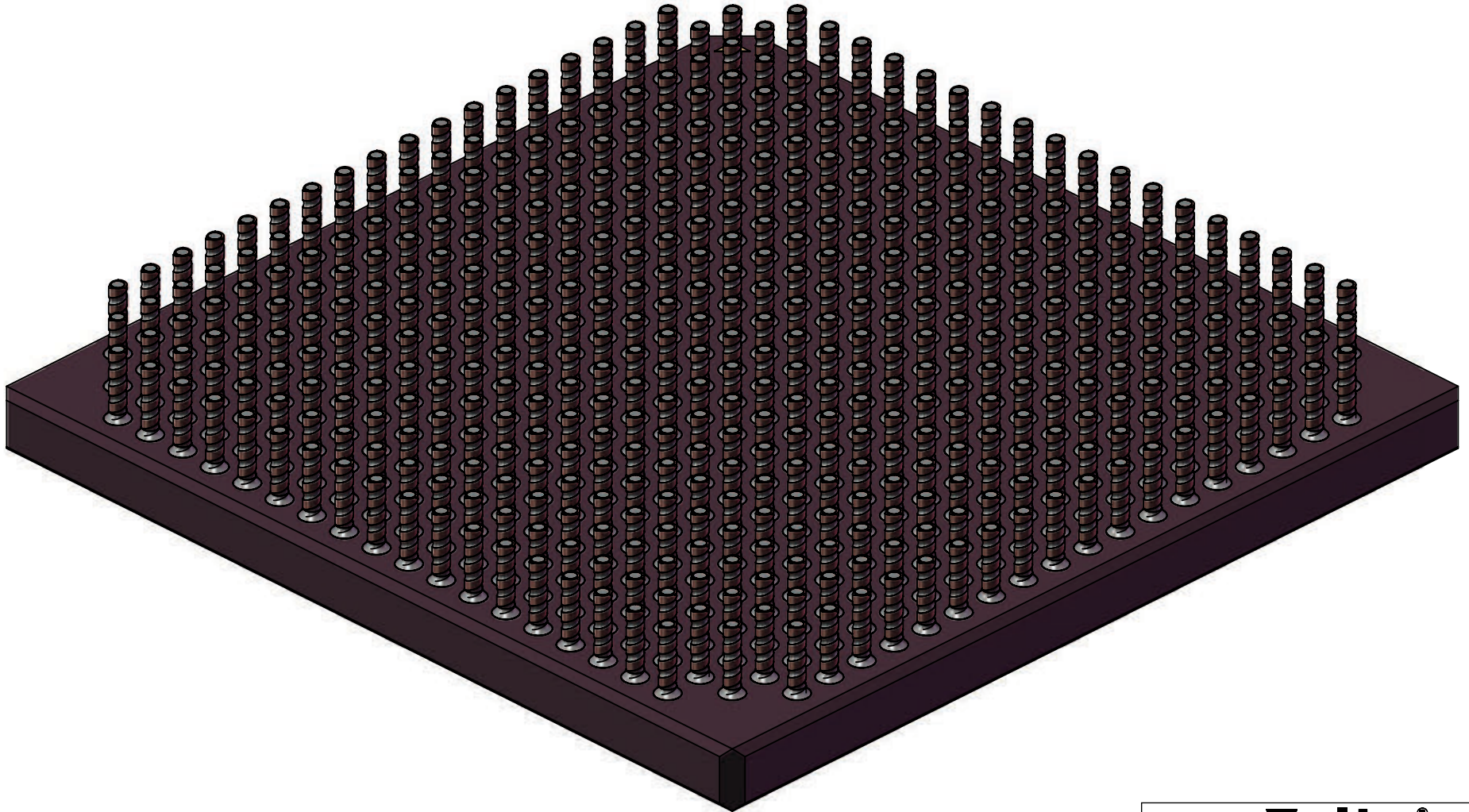
TITLE CCGA472T1.27-DC226D  
DUMMY COLUMN GRID ARRAY

SCALE 6:1	SIZE A	DRAWING NO. 160057	REV A
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DO NOT SCALE DRAWING

SHEET 9 OF 11

MODEL  
CCGA472T1.27-DC226D  
BOTTOM VIEW



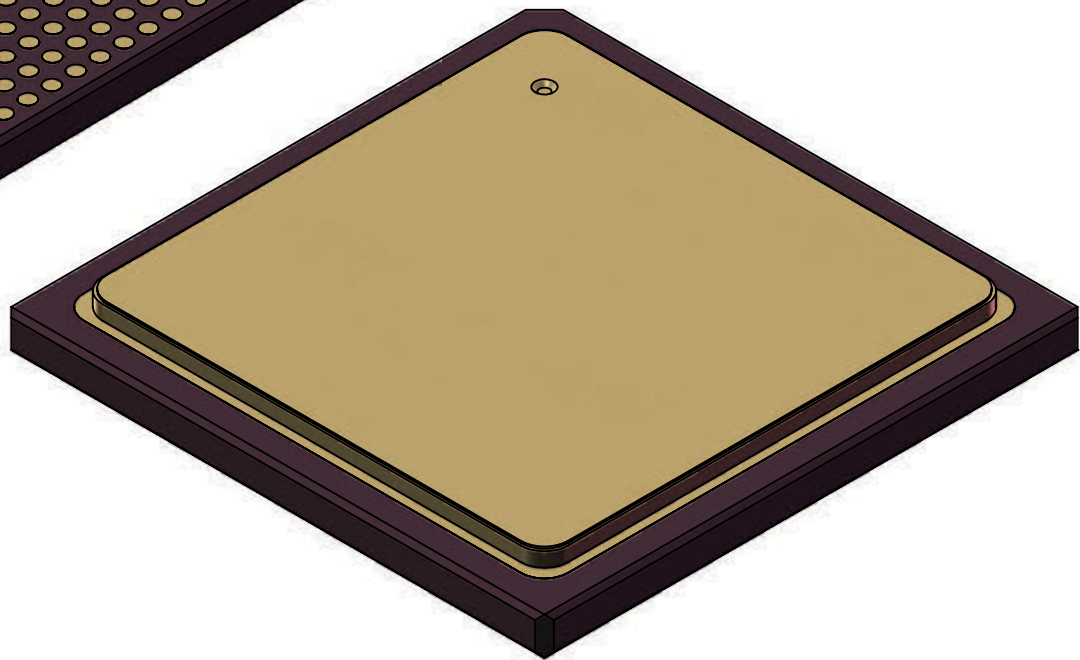
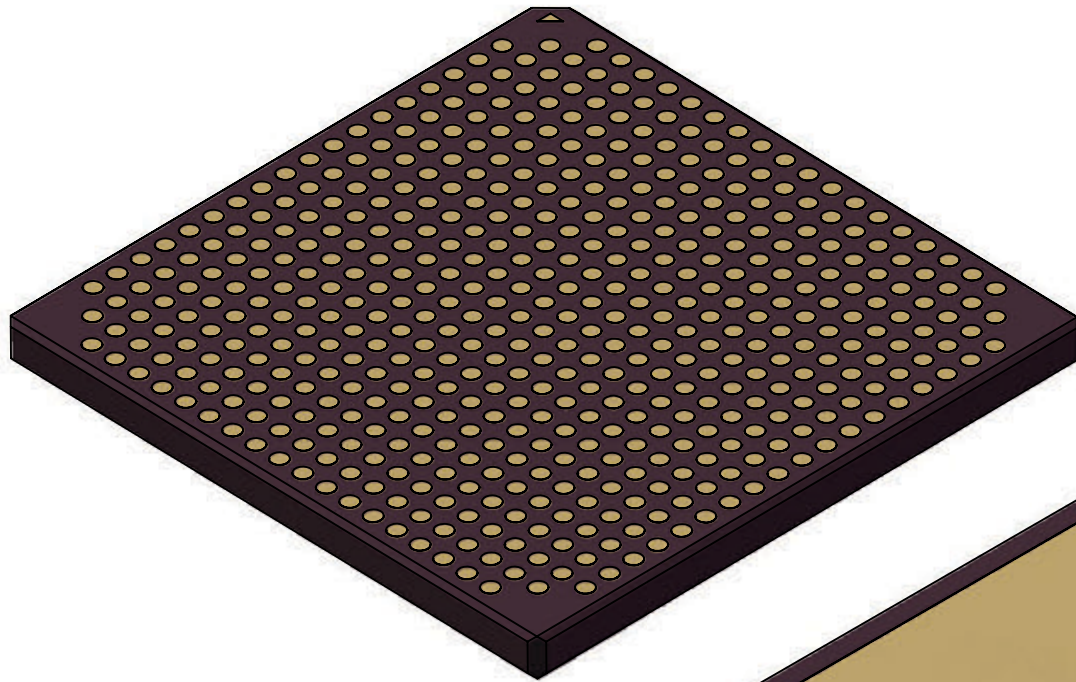
**TopLine®**

TITLE CCGA472T1.27-DC226D  
DUMMY COLUMN GRID ARRAY

SCALE 6:1	SIZE A	DRAWING NO. 160057	REV A
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DO NOT SCALE DRAWING SHEET 10 OF 11

**MODEL  
CLGA472T1.27-DC226D  
WITHOUT COLUMNS**



**TopLine®**

TITLE CCGA472T1.27-DC226D  
DUMMY COLUMN GRID ARRAY

SCALE 3.5:1	SIZE A	DRAWING NO. 160057	REV A
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DO NOT SCALE DRAWING

SHEET 11 OF 11