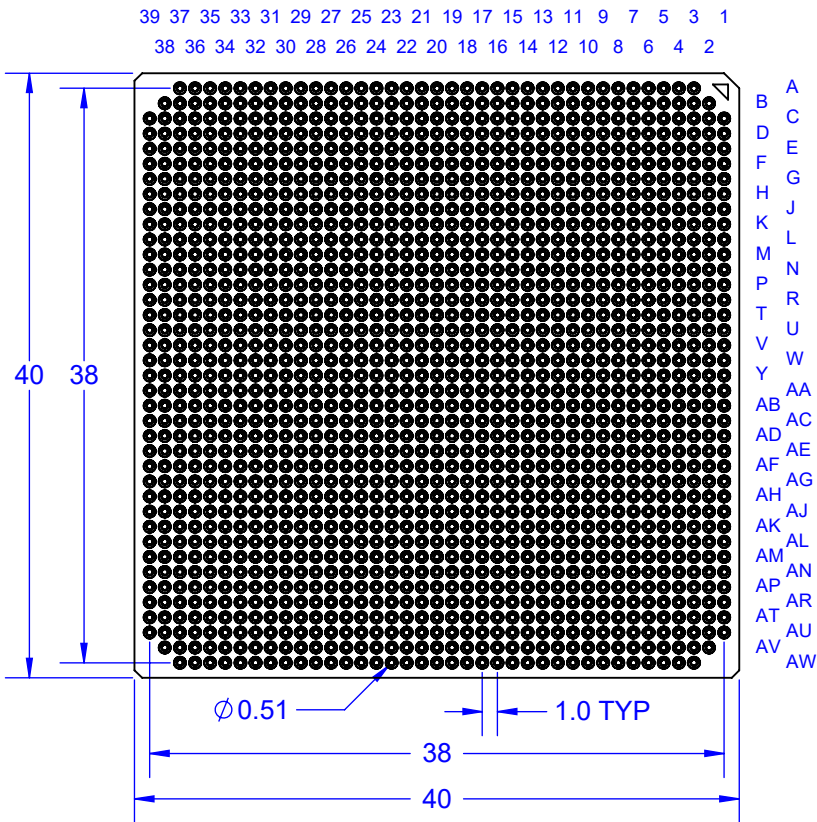
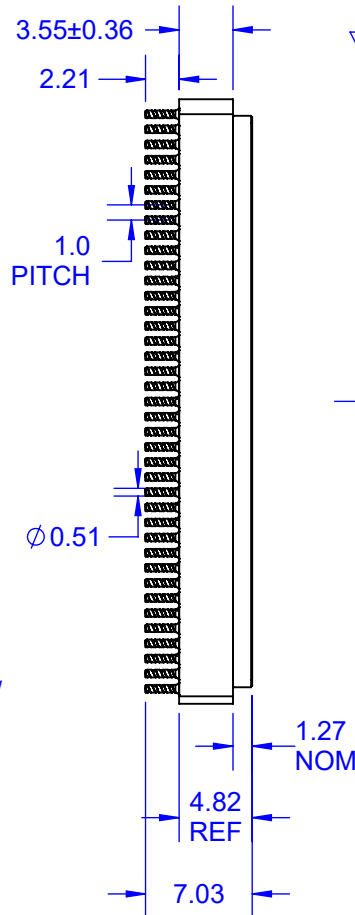


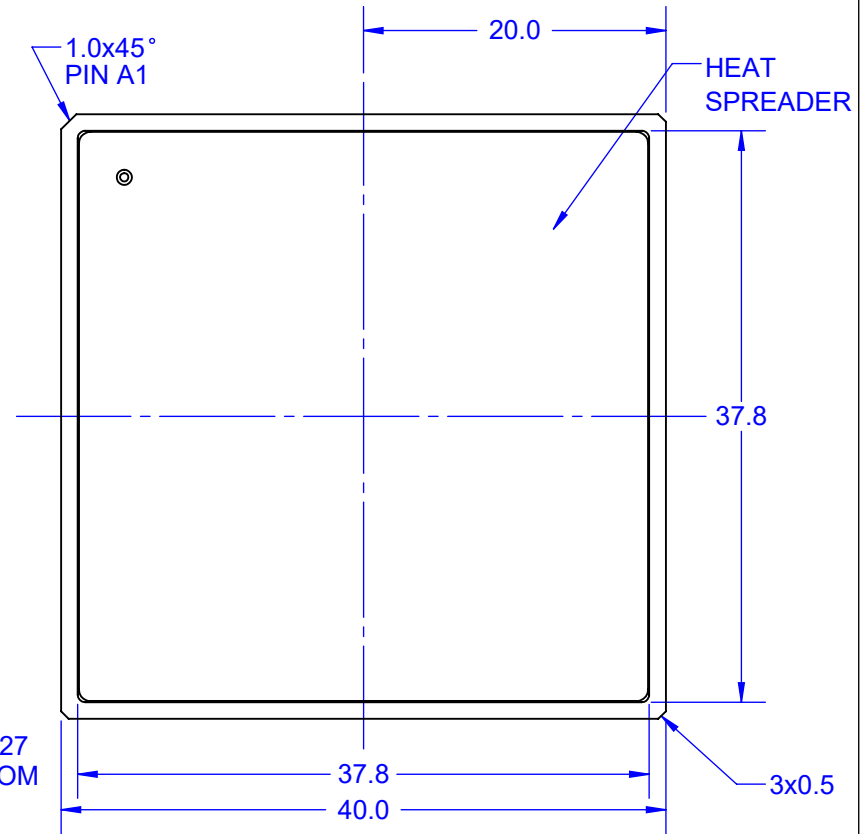
### BOTTOM VIEW



### SIDE VIEW



### TOP VIEW




**Cu Wrap Column  
Pb80/Sn20**

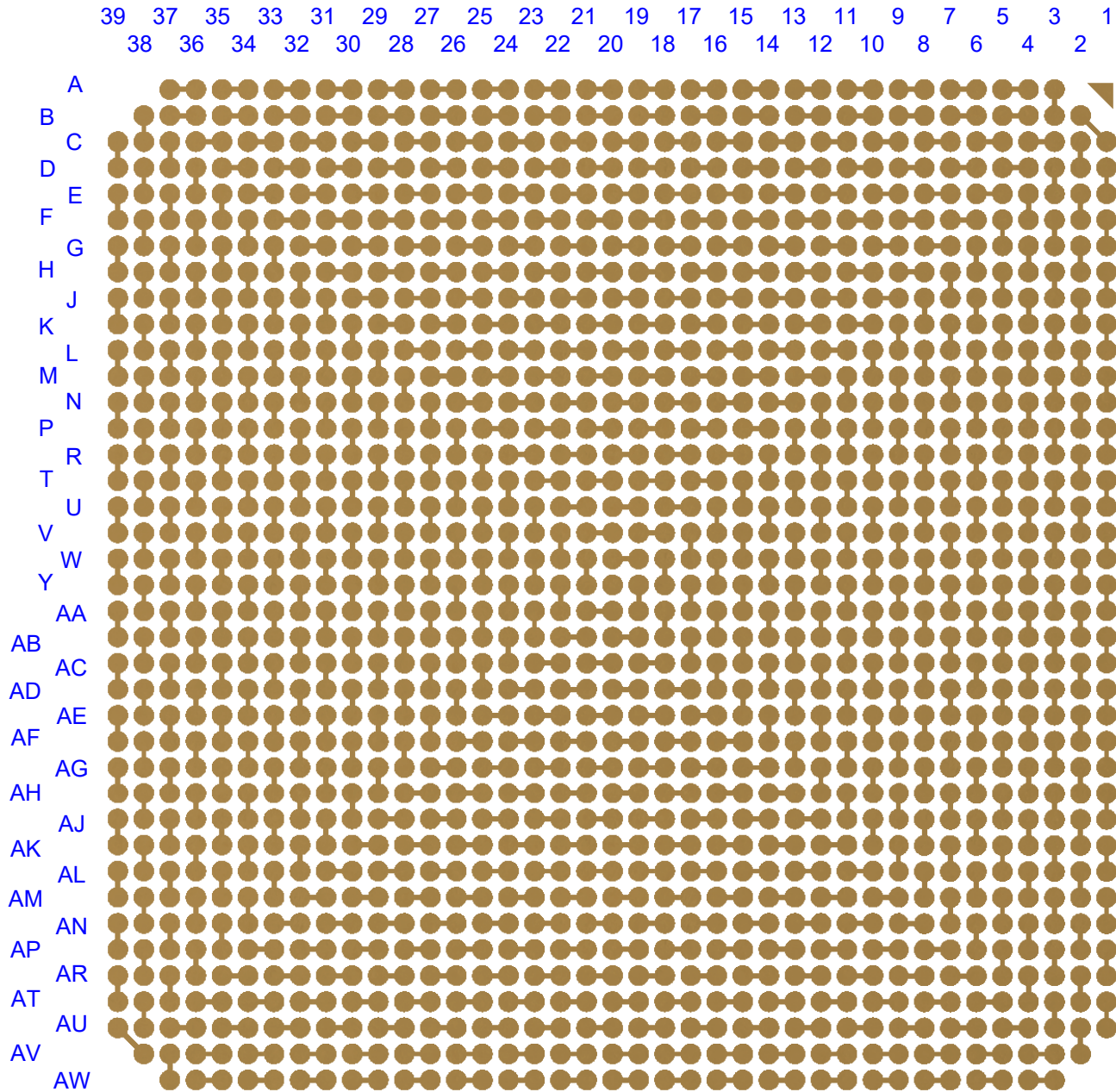
NOTES: (Unless Otherwise Specified).

- 1) DIMENSIONS ARE IN mm.
- 2) SHOWN WITH COLUMNS.
- 3) SHOWN WITH LID.
- 4) SHOWN WITH DUMMY DIE.
- 5) SHOWN WITHOUT CAPACITORS.
- 6) PART NUMBER CCGA1509T1.0-DC396D.

| PART NUMBER OPTIONS |           |             |     |           |
|---------------------|-----------|-------------|-----|-----------|
| PART NUMBER         | DUMMY DIE | SOLDER PIN  | LID | CAPACITOR |
| CCGA1509T1.0-DC396D | YES       | Pb80 / Sn20 | YES | NONE      |

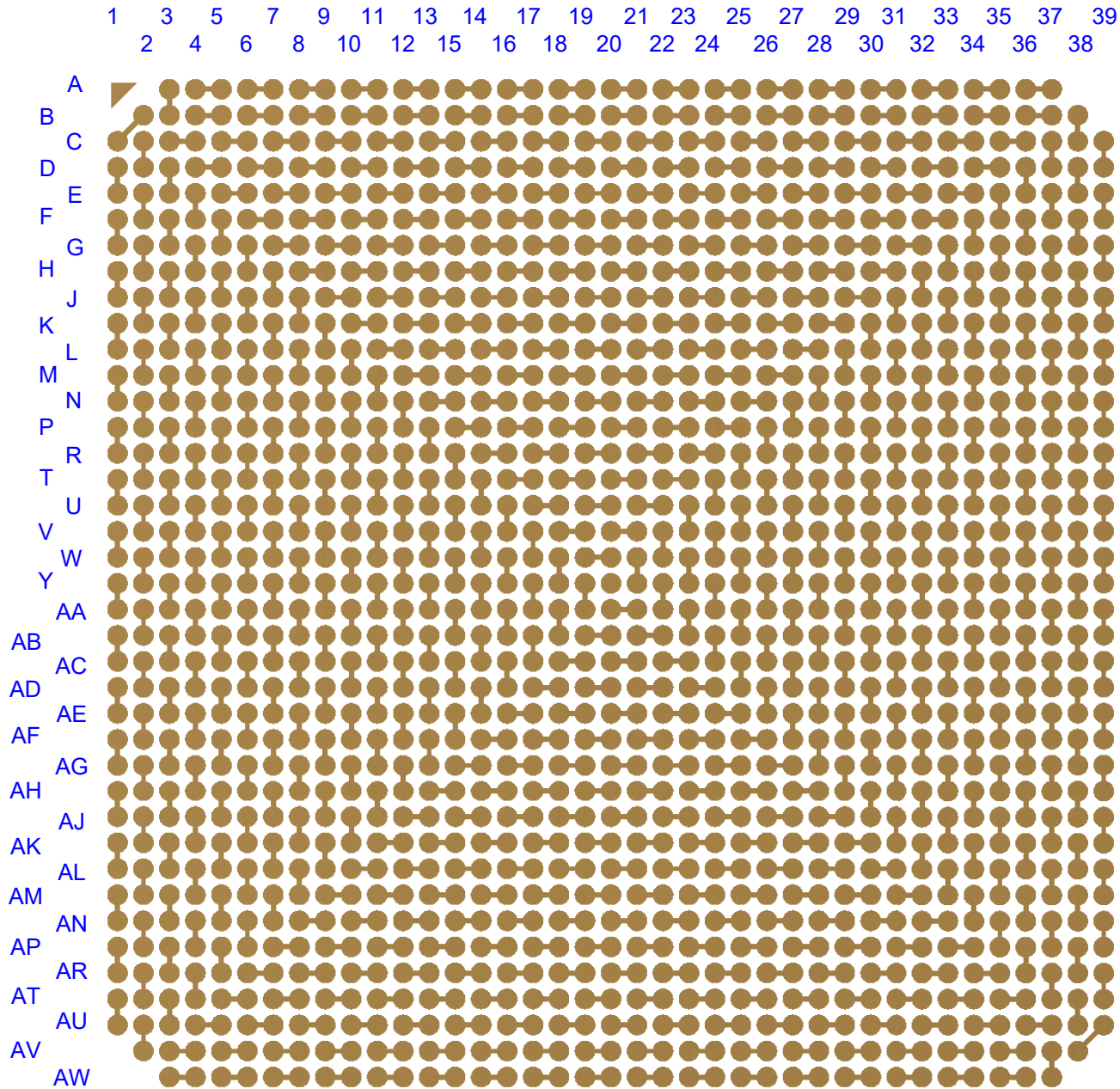
| APPROVALS |         | DATE      |  |      |  |               |
|-----------|---------|-----------|---|------|--|---------------|
| DRAWN     | T.Au    | 3/15/2022 |   |      |  |               |
| ENG       | M. Hart | 3/15/2022 | TITLE   |      | CCGA1509T1.0-DC396D<br>COLUMN GRID ARRAY |               |
| MFG       |         |           | SCALE   | SIZE | DRAWING NO.                              | REV           |
| QA        |         |           | 2:1   | A    | 160183                                   | A             |
| CUST      |         |           | DO NOT SCALE DRAWING  |      |  | SHEET 1 OF 10 |
| REVISED   |         |           |   |      |  |               |

# DAISY CHAIN PATTERN PAD (COLUMN VIEW)



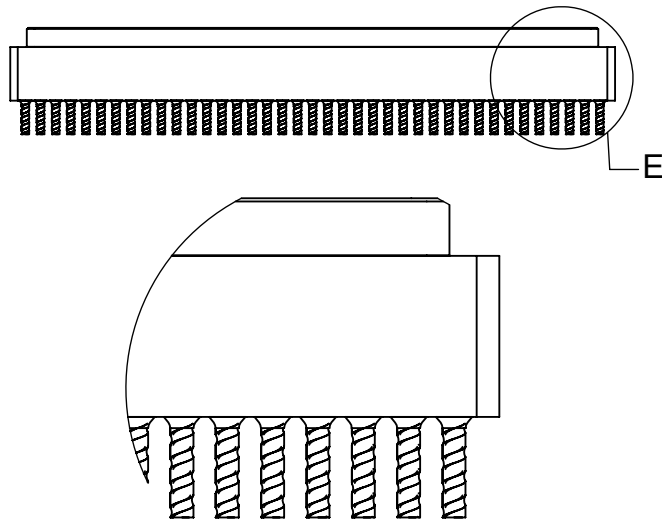
|                      |      |  |               |
|----------------------|------|--|---------------|
| <b>TopLine®</b>      |      |  |               |
| TITLE                |      | CCGA1509T1.0-DC396D<br>COLUMN GRID ARRAY |               |
| SCALE                | SIZE | DRAWING NO.                              | REV           |
| 4:1                  | A    | 160183                                   | A             |
| DO NOT SCALE DRAWING |      |  | SHEET 2 OF 10 |

# DAISY CHAIN PATTERN BOTTOM X-RAY VIEWED FROM TOP

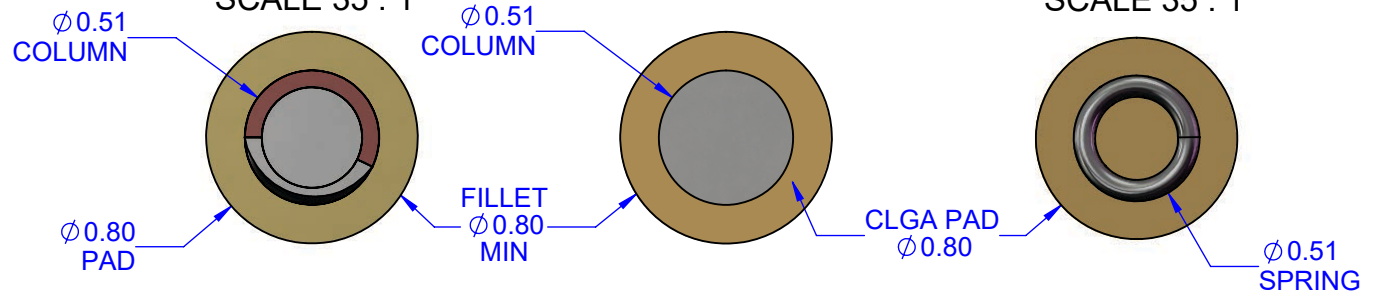
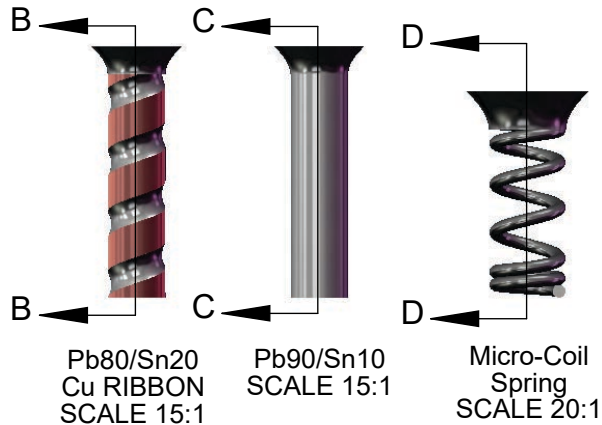
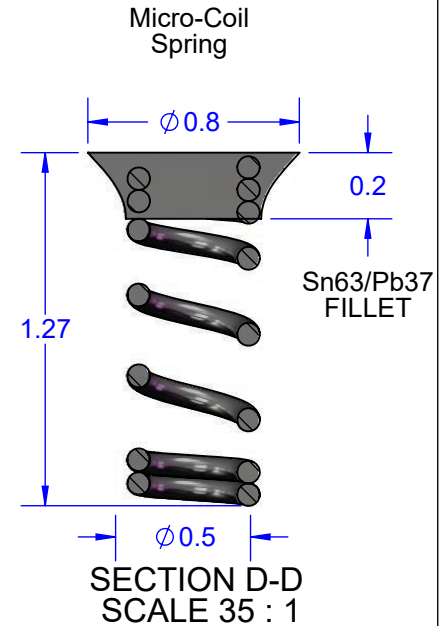
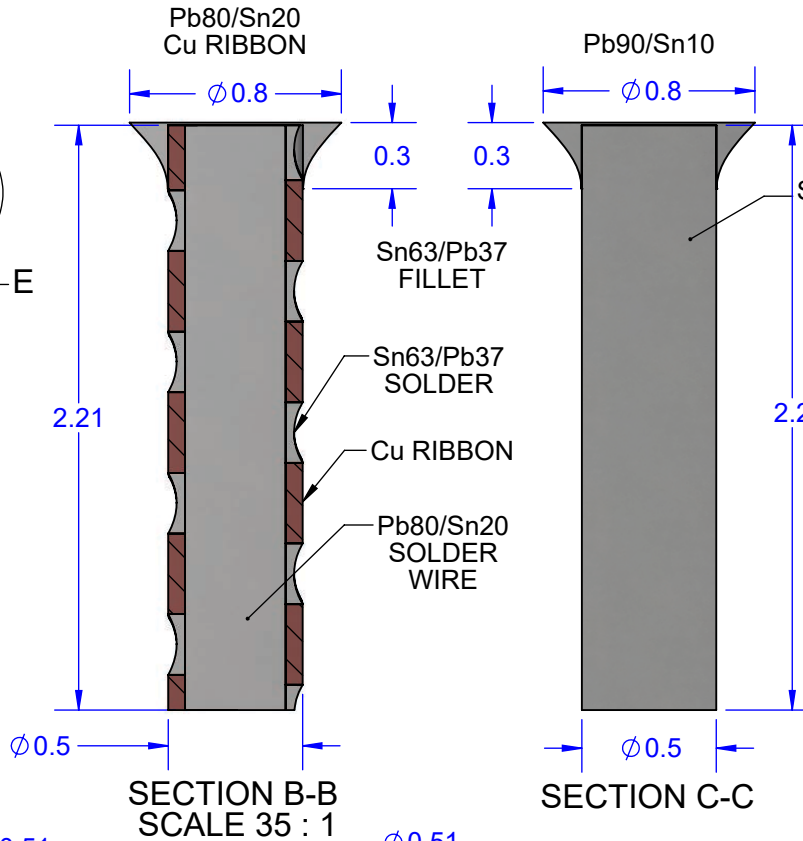


|                      |      |  |               |
|----------------------|------|--|---------------|
| <b>TopLine®</b>      |      |  |               |
| TITLE                |      | CCGA1509T1.0-DC396D<br>COLUMN GRID ARRAY |               |
| SCALE                | SIZE | DRAWING NO.                              | REV           |
| 4:1                  | A    | 160183                                   | A             |
| DO NOT SCALE DRAWING |      |  | SHEET 3 OF 10 |

# SOLDER PIN OPTIONS



DETAIL E  
SCALE 6 : 1



|  |           |                       |               |
|--|-----------|-----------------------|---------------|
| <b>TopLine®</b>                                |           |                       |               |
| TITLE CCGA1509T1.0-DC396D<br>COLUMN GRID ARRAY |           |                       |               |
| SCALE<br>2:1                                   | SIZE<br>A | DRAWING NO.<br>160183 | REV<br>A      |
| DO NOT SCALE DRAWING                           |           |                       | SHEET 4 OF 10 |

## DAISY CHAIN NET LIST

| DC PAIR |     |
|---------|-----|
| D1      | E1  |
| F1      | G1  |
| H1      | J1  |
| K1      | L1  |
| M1      | N1  |
| P1      | R1  |
| T1      | U1  |
| V1      | W1  |
| Y1      | AA1 |
| AB1     | AC1 |
| AD1     | AE1 |
| AF1     | AG1 |
| AH1     | AJ1 |
| AK1     | AL1 |
| AM1     | AN1 |
| AP1     | AR1 |
| AT1     | AU1 |
| C2      | D2  |
| E2      | F2  |
| G2      | H2  |
| J2      | K2  |
| L2      | M2  |
| N2      | P2  |
| R2      | T2  |
| U2      | V2  |
| W2      | Y2  |
| AA2     | AB2 |

| DC PAIR |     |
|---------|-----|
| AC2     | AD2 |
| AE2     | AF2 |
| AG2     | AH2 |
| AJ2     | AK2 |
| AL2     | AM2 |
| AN2     | AP2 |
| AR2     | AT2 |
| AU2     | AV2 |
| A3      | B3  |
| B2      | C1  |
| D3      | E3  |
| F3      | G3  |
| H3      | J3  |
| K3      | L3  |
| M3      | N3  |
| P3      | R3  |
| T3      | U3  |
| V3      | W3  |
| Y3      | AA3 |
| AB3     | AC3 |
| AD3     | AE3 |
| AF3     | AG3 |
| AH3     | AJ3 |
| AK3     | AL3 |
| AM3     | AN3 |
| AP3     | AR3 |
| AT3     | AU3 |

| DC PAIR |     |
|---------|-----|
| C3      | C4  |
| E4      | F4  |
| G4      | H4  |
| J4      | K4  |
| L4      | M4  |
| N4      | P4  |
| R4      | T4  |
| U4      | V4  |
| W4      | Y4  |
| AA4     | AB4 |
| AC4     | AD4 |
| AE4     | AF4 |
| AG4     | AH4 |
| AJ4     | AK4 |
| AL4     | AM4 |
| AN4     | AP4 |
| AR4     | AT4 |
| AV3     | AV4 |
| AW3     | AW4 |
| A4      | A5  |
| B4      | B5  |
| D4      | D5  |
| F5      | G5  |
| H5      | J5  |
| K5      | L5  |
| M5      | N5  |
| P5      | R5  |
| T5      | U5  |

| DC PAIR |     |
|---------|-----|
| V5      | W5  |
| Y5      | AA5 |
| AB5     | AC5 |
| AD5     | AE5 |
| AF5     | AG5 |
| AH5     | AJ5 |
| AK5     | AL5 |
| AM5     | AN5 |
| AP5     | AR5 |
| AU4     | AU5 |
| C5      | C6  |
| E5      | E6  |
| G6      | H6  |
| J6      | K6  |
| L6      | M6  |
| N6      | P6  |
| R6      | T6  |
| U6      | V6  |
| W6      | Y6  |
| AA6     | AB6 |
| AC6     | AD6 |
| AE6     | AF6 |
| AG6     | AH6 |
| AJ6     | AK6 |
| AL6     | AM6 |
| AN6     | AP6 |
| AT5     | AT6 |
| AV5     | AV6 |

| DC PAIR |     |
|---------|-----|
| AW5     | AW6 |
| A6      | A7  |
| B6      | B7  |
| D6      | D7  |
| F6      | F7  |
| H7      | J7  |
| K7      | L7  |
| M7      | N7  |
| P7      | R7  |
| T7      | U7  |
| V7      | W7  |
| Y7      | AA7 |
| AB7     | AC7 |
| AD7     | AE7 |
| AF7     | AG7 |
| AH7     | AJ7 |
| AK7     | AL7 |
| AM7     | AN7 |
| AR6     | AR7 |
| AU6     | AU7 |
| C7      | C8  |
| E7      | E8  |
| G7      | G8  |
| J8      | K8  |
| L8      | M8  |
| N8      | P8  |
| R8      | T8  |
| U8      | V8  |

| DC PAIR |     |
|---------|-----|
| W8      | Y8  |
| AA8     | AB8 |
| AC8     | AD8 |
| AE8     | AF8 |
| AG8     | AH8 |
| AJ8     | AK8 |
| AL8     | AM8 |
| AP7     | AP8 |
| AT7     | AT8 |
| AV7     | AV8 |
| AW7     | AW8 |
| A8      | A9  |
| B8      | B9  |
| D8      | D9  |
| F8      | F9  |
| H8      | H9  |
| K9      | L9  |
| M9      | N9  |
| P9      | R9  |
| T9      | U9  |
| V9      | W9  |
| Y9      | AA9 |
| AB9     | AC9 |
| AD9     | AE9 |
| AF9     | AG9 |
| AH9     | AJ9 |
| AK9     | AL9 |
| AN8     | AN9 |

| DC PAIR |      |
|---------|------|
| AR8     | AR9  |
| AU8     | AU9  |
| C9      | C10  |
| E9      | E10  |
| G9      | G10  |
| J9      | J10  |
| L10     | M10  |
| N10     | P10  |
| R10     | T10  |
| U10     | V10  |
| W10     | Y10  |
| AA10    | AB10 |
| AC10    | AD10 |
| AE10    | AF10 |
| AG10    | AH10 |
| AJ10    | AK10 |
| AM9     | AM10 |
| AP9     | AP10 |
| AT9     | AT10 |
| AV9     | AV10 |
| AW9     | AW10 |
| A10     | A11  |
| B10     | B11  |

| DC PAIR |      |
|---------|------|
| D10     | D11  |
| F10     | F11  |
| H10     | H11  |
| K10     | K11  |
| M11     | N11  |
| P11     | R11  |
| T11     | U11  |
| V11     | W11  |
| Y11     | AA11 |
| AB11    | AC11 |
| AD11    | AE11 |
| AF11    | AG11 |
| AH11    | AJ11 |
| AL10    | AL11 |
| AN10    | AN11 |
| AR10    | AR11 |
| AU10    | AU11 |
| C11     | C12  |
| E11     | E12  |
| G11     | G12  |
| J11     | J12  |
| L11     | L12  |
| N12     | P12  |

|  |           |                       |               |
|--|-----------|-----------------------|---------------|
| <b>TopLine®</b>                                |           |                       |               |
| TITLE CCGA1509T1.0-DC396D<br>COLUMN GRID ARRAY |           |                       |               |
| SCALE<br>NONE                                  | SIZE<br>A | DRAWING NO.<br>160183 | REV<br>A      |
| DO NOT SCALE DRAWING                           |           |                       | SHEET 5 OF 10 |

## DAISY CHAIN NET LIST

| DC PAIR |      |
|---------|------|
| R12     | T12  |
| U12     | V12  |
| W12     | Y12  |
| AA12    | AB12 |
| AC12    | AD12 |
| AE12    | AF12 |
| AG12    | AH12 |
| AK11    | AK12 |
| AM11    | AM12 |
| AP11    | AP12 |
| AT11    | AT12 |
| AV11    | AV12 |
| AW11    | AW12 |
| A12     | A13  |
| B12     | B13  |
| D12     | D13  |
| F12     | F13  |
| H12     | H13  |
| K12     | K13  |
| M12     | M13  |
| P13     | R13  |
| T13     | U13  |
| V13     | W13  |
| Y13     | AA13 |
| AB13    | AC13 |
| AD13    | AE13 |
| AF13    | AG13 |
| AJ12    | AJ13 |

| DC PAIR |      |
|---------|------|
| AL12    | AL13 |
| AN12    | AN13 |
| AR12    | AR13 |
| AU12    | AU13 |
| C13     | C14  |
| E13     | E14  |
| G13     | G14  |
| J13     | J14  |
| L13     | L14  |
| N13     | N14  |
| R14     | T14  |
| U14     | V14  |
| W14     | Y14  |
| AA14    | AB14 |
| AC14    | AD14 |
| AE14    | AF14 |
| AH13    | AH14 |
| AK13    | AK14 |
| AM13    | AM14 |
| AP13    | AP14 |
| AT13    | AT14 |
| AV13    | AV14 |
| AW13    | AW14 |
| A14     | A15  |
| B14     | B15  |
| D14     | D15  |
| F14     | F15  |
| H14     | H15  |

| DC PAIR |      |
|---------|------|
| K14     | K15  |
| M14     | M15  |
| P14     | P15  |
| T15     | U15  |
| V15     | W15  |
| Y15     | AA15 |
| AB15    | AC15 |
| AD15    | AE15 |
| AG14    | AG15 |
| AJ14    | AJ15 |
| AL14    | AL15 |
| AN14    | AN15 |
| AR14    | AR15 |
| AU14    | AU15 |
| C15     | C16  |
| E15     | E16  |
| G15     | G16  |
| J15     | J16  |
| L15     | L16  |
| N15     | N16  |
| R15     | R16  |
| U16     | V16  |
| W16     | Y16  |
| AA16    | AB16 |
| AC16    | AD16 |
| AF15    | AF16 |
| AH15    | AH16 |
| AK15    | AK16 |

| DC PAIR |      |
|---------|------|
| AM15    | AM16 |
| AP15    | AP16 |
| AT15    | AT16 |
| AV15    | AV16 |
| AW15    | AW16 |
| A16     | A17  |
| B16     | B17  |
| D16     | D17  |
| F16     | F17  |
| H16     | H17  |
| K16     | K17  |
| M16     | M17  |
| P16     | P17  |
| T16     | T17  |
| V17     | W17  |
| Y17     | AA17 |
| AB17    | AC17 |
| AE16    | AE17 |
| AG16    | AG17 |
| AJ16    | AJ17 |
| AL16    | AL17 |
| AN16    | AN17 |
| AR16    | AR17 |
| AU16    | AU17 |
| C17     | C18  |
| E17     | E18  |
| G17     | G18  |
| J17     | J18  |

| DC PAIR |      |
|---------|------|
| L17     | L18  |
| N17     | N18  |
| R17     | R18  |
| U17     | U18  |
| W18     | Y18  |
| AA18    | AB18 |
| AD17    | AD18 |
| AF17    | AF18 |
| AH17    | AH18 |
| AK17    | AK18 |
| AM17    | AM18 |
| AP17    | AP18 |
| AT17    | AT18 |
| AV17    | AV18 |
| AW17    | AW18 |
| A18     | A19  |
| B18     | B19  |
| D18     | D19  |
| F18     | F19  |
| H18     | H19  |
| K18     | K19  |
| M18     | M19  |
| P18     | P19  |
| T18     | T19  |
| V18     | V19  |
| Y19     | AA19 |
| AC18    | AC19 |
| AE18    | AE19 |

| DC PAIR |      |
|---------|------|
| AG18    | AG19 |
| AJ18    | AJ19 |
| AL18    | AL19 |
| AN18    | AN19 |
| AR18    | AR19 |
| AU18    | AU19 |
| C19     | C20  |
| E19     | E20  |
| G19     | G20  |
| J19     | J20  |
| L19     | L20  |
| N19     | N20  |
| R19     | R20  |
| U19     | U20  |
| W19     | W20  |
| AB19    | AB20 |
| AD19    | AD20 |
| AF19    | AF20 |
| AH19    | AH20 |
| AK19    | AK20 |
| AM19    | AM20 |
| AP19    | AP20 |
| AT19    | AT20 |
| AV19    | AV20 |
| AW19    | AW20 |
| A20     | A21  |
| B20     | B21  |
| D20     | D21  |

| DC PAIR |      |
|---------|------|
| F20     | F21  |
| H20     | H21  |
| K20     | K21  |
| M20     | M21  |
| P20     | P21  |
| T20     | T21  |
| V20     | V21  |
| W21     | Y21  |
| AA20    | AA21 |
| AC20    | AC21 |
| AE20    | AE21 |
| AG20    | AG21 |
| AJ20    | AJ21 |
| AL20    | AL21 |
| AN20    | AN21 |
| AR20    | AR21 |
| AU20    | AU21 |
| C21     | C22  |
| E21     | E22  |
| G21     | G22  |
| J21     | J22  |
| L21     | L22  |
| N21     | N22  |

| DC PAIR |      |
|---------|------|
| R21     | R22  |
| U21     | U22  |
| V22     | W22  |
| Y22     | AA22 |
| AB21    | AB22 |
| AD21    | AD22 |
| AF21    | AF22 |
| AH21    | AH22 |
| AK21    | AK22 |
| AM21    | AM22 |
| AP21    | AP22 |
| AT21    | AT22 |
| AV21    | AV22 |
| AW21    | AW22 |
| A22     | A23  |
| B22     | B23  |
| D22     | D23  |
| F22     | F23  |
| H22     | H23  |
| K22     | K23  |
| M22     | M23  |
| P22     | P23  |
| T22     | T23  |

|  |           |                       |               |
|--|-----------|-----------------------|---------------|
| TopLine®                                       |           |                       |               |
| TITLE CCGA1509T1.0-DC396D<br>COLUMN GRID ARRAY |           |                       |               |
| SCALE<br>NONE                                  | SIZE<br>A | DRAWING NO.<br>160183 | REV<br>A      |
| DO NOT SCALE DRAWING                           |           |                       | SHEET 6 OF 10 |

## DAISY CHAIN NET LIST

| DC PAIR |      |
|---------|------|
| U23     | V23  |
| W23     | Y23  |
| AA23    | AB23 |
| AC22    | AC23 |
| AE22    | AE23 |
| AG22    | AG23 |
| AJ22    | AJ23 |
| AL22    | AL23 |
| AN22    | AN23 |
| AR22    | AR23 |
| AU22    | AU23 |
| C23     | C24  |
| E23     | E24  |
| G23     | G24  |
| J23     | J24  |
| L23     | L24  |
| N23     | N24  |
| R23     | R24  |
| T24     | U24  |
| V24     | W24  |
| Y24     | AA24 |
| AB24    | AC24 |
| AD23    | AD24 |
| AF23    | AF24 |
| AH23    | AH24 |
| AK23    | AK24 |
| AM23    | AM24 |
| AP23    | AP24 |

| DC PAIR |      |
|---------|------|
| AT23    | AT24 |
| AV23    | AV24 |
| AW23    | AW24 |
| A24     | A25  |
| B24     | B25  |
| D24     | D25  |
| F24     | F25  |
| H24     | H25  |
| K24     | K25  |
| M24     | M25  |
| P24     | P25  |
| R25     | T25  |
| U25     | V25  |
| W25     | Y25  |
| AA25    | AB25 |
| AC25    | AD25 |
| AE24    | AE25 |
| AG24    | AG25 |
| AJ24    | AJ25 |
| AL24    | AL25 |
| AN24    | AN25 |
| AR24    | AR25 |
| AU24    | AU25 |
| C25     | C26  |
| E25     | E26  |
| G25     | G26  |
| J25     | J26  |
| L25     | L26  |

| DC PAIR |      |
|---------|------|
| N25     | N26  |
| P26     | R26  |
| T26     | U26  |
| V26     | W26  |
| Y26     | AA26 |
| AB26    | AC26 |
| AD26    | AE26 |
| AF25    | AF26 |
| AH25    | AH26 |
| AK25    | AK26 |
| AM25    | AM26 |
| AP25    | AP26 |
| AT25    | AT26 |
| AV25    | AV26 |
| AW25    | AW26 |
| A26     | A27  |
| B26     | B27  |
| D26     | D27  |
| F26     | F27  |
| H26     | H27  |
| K26     | K27  |
| M26     | M27  |
| N27     | P27  |
| R27     | T27  |
| U27     | V27  |
| W27     | Y27  |
| AA27    | AB27 |
| AC27    | AD27 |

| DC PAIR |      |
|---------|------|
| AE27    | AF27 |
| AG26    | AG27 |
| AJ26    | AJ27 |
| AL26    | AL27 |
| AN26    | AN27 |
| AR26    | AR27 |
| AU26    | AU27 |
| C27     | C28  |
| E27     | E28  |
| G27     | G28  |
| J27     | J28  |
| L27     | L28  |
| M28     | N28  |
| P28     | R28  |
| T28     | U28  |
| V28     | W28  |
| Y28     | AA28 |
| AB28    | AC28 |
| AD28    | AE28 |
| AF28    | AG28 |
| AH27    | AH28 |
| AK27    | AK28 |
| AM27    | AM28 |
| AP27    | AP28 |
| AT27    | AT28 |
| AV27    | AV28 |
| AW27    | AW28 |
| A28     | A29  |

| DC PAIR |      |
|---------|------|
| B28     | B29  |
| D28     | D29  |
| F28     | F29  |
| H28     | H29  |
| K28     | K29  |
| L29     | M29  |
| N29     | P29  |
| R29     | T29  |
| U29     | V29  |
| W29     | Y29  |
| AA29    | AB29 |
| AC29    | AD29 |
| AE29    | AF29 |
| AG29    | AH29 |
| AJ28    | AJ29 |
| AL28    | AL29 |
| AN28    | AN29 |
| AR28    | AR29 |
| AU28    | AU29 |
| C29     | C30  |
| E29     | E30  |
| G29     | G30  |
| J29     | J30  |
| K30     | L30  |
| M30     | N30  |
| P30     | R30  |
| T30     | U30  |
| V30     | W30  |

| DC PAIR |      |
|---------|------|
| Y30     | AA30 |
| AB30    | AC30 |
| AD30    | AE30 |
| AF30    | AG30 |
| AH30    | AJ30 |
| AK29    | AK30 |
| AM29    | AM30 |
| AP29    | AP30 |
| AT29    | AT30 |
| AV29    | AV30 |
| AW29    | AW30 |
| A30     | A31  |
| B30     | B31  |
| D30     | D31  |
| F30     | F31  |
| H30     | H31  |
| J31     | K31  |
| L31     | M31  |
| N31     | P31  |
| R31     | T31  |
| U31     | V31  |
| W31     | Y31  |
| AA31    | AB31 |
| AC31    | AD31 |
| AE31    | AF31 |
| AG31    | AH31 |
| AJ31    | AK31 |
| AL30    | AL31 |

| DC PAIR |      |
|---------|------|
| AN30    | AN31 |
| AR30    | AR31 |
| AU30    | AU31 |
| C31     | C32  |
| E31     | E32  |
| G31     | G32  |
| H32     | J32  |
| K32     | L32  |
| M32     | N32  |
| P32     | R32  |
| T32     | U32  |
| V32     | W32  |
| Y32     | AA32 |
| AB32    | AC32 |
| AD32    | AE32 |
| AF32    | AG32 |
| AH32    | AJ32 |
| AK32    | AL32 |
| AM31    | AM32 |
| AP31    | AP32 |
| AT31    | AT32 |
| AV31    | AV32 |
| AW31    | AW32 |

| DC PAIR |      |
|---------|------|
| A32     | A33  |
| B32     | B33  |
| D32     | D33  |
| F32     | F33  |
| G33     | H33  |
| J33     | K33  |
| L33     | M33  |
| N33     | P33  |
| R33     | T33  |
| U33     | V33  |
| W33     | Y33  |
| AA33    | AB33 |
| AC33    | AD33 |
| AE33    | AF33 |
| AG33    | AH33 |
| AJ33    | AK33 |
| AL33    | AM33 |
| AN32    | AN33 |
| AR32    | AR33 |
| AU32    | AU33 |
| C33     | C34  |
| E33     | E34  |
| F34     | G34  |

|  |           |                       |               |
|--|-----------|-----------------------|---------------|
| <b>TopLine®</b>                                |           |                       |               |
| TITLE CCGA1509T1.0-DC396D<br>COLUMN GRID ARRAY |           |                       |               |
| SCALE<br>NONE                                  | SIZE<br>A | DRAWING NO.<br>160183 | REV<br>A      |
| DO NOT SCALE DRAWING                           |           |                       | SHEET 7 OF 10 |

## DAISY CHAIN NET LIST

| DC PAIR |      |
|---------|------|
| H34     | J34  |
| K34     | L34  |
| M34     | N34  |
| P34     | R34  |
| T34     | U34  |
| V34     | W34  |
| Y34     | AA34 |
| AB34    | AC34 |
| AD34    | AE34 |
| AF34    | AG34 |
| AH34    | AJ34 |
| AK34    | AL34 |
| AM34    | AN34 |
| AP33    | AP34 |
| AT33    | AT34 |
| AV33    | AV34 |
| AW33    | AW34 |
| A34     | A35  |
| B34     | B35  |
| D34     | D35  |
| E35     | F35  |
| G35     | H35  |
| J35     | K35  |
| L35     | M35  |
| N35     | P35  |
| R35     | T35  |
| U35     | V35  |
| W35     | Y35  |

| DC PAIR |      |
|---------|------|
| AA35    | AB35 |
| AC35    | AD35 |
| AE35    | AF35 |
| AG35    | AH35 |
| AJ35    | AK35 |
| AL35    | AM35 |
| AN35    | AP35 |
| AR34    | AR35 |
| AU34    | AU35 |
| C35     | C36  |
| D36     | E36  |
| F36     | G36  |
| H36     | J36  |
| K36     | L36  |
| M36     | N36  |
| P36     | R36  |
| T36     | U36  |
| V36     | W36  |
| Y36     | AA36 |
| AB36    | AC36 |
| AD36    | AE36 |
| AF36    | AG36 |
| AH36    | AJ36 |
| AK36    | AL36 |
| AM36    | AN36 |
| AP36    | AR36 |
| AT35    | AT36 |
| AV35    | AV36 |

| DC PAIR |      |
|---------|------|
| AW35    | AW36 |
| A36     | A37  |
| B36     | B37  |
| C37     | D37  |
| E37     | F37  |
| G37     | H37  |
| J37     | K37  |
| L37     | M37  |
| N37     | P37  |
| R37     | T37  |
| U37     | V37  |
| W37     | Y37  |
| AA37    | AB37 |
| AC37    | AD37 |
| AE37    | AF37 |
| AG37    | AH37 |
| AJ37    | AK37 |
| AL37    | AM37 |
| AN37    | AP37 |
| AR37    | AT37 |
| AU36    | AU37 |
| B38     | C38  |
| D38     | E38  |
| F38     | G38  |
| H38     | J38  |
| K38     | L38  |
| M38     | N38  |
| P38     | R38  |

| DC PAIR |      |
|---------|------|
| T38     | U38  |
| V38     | W38  |
| Y38     | AA38 |
| AB38    | AC38 |
| AD38    | AE38 |
| AF38    | AG38 |
| AH38    | AJ38 |
| AK38    | AL38 |
| AM38    | AN38 |
| AP38    | AR38 |
| AT38    | AU38 |
| AV37    | AW37 |
| C39     | D39  |
| E39     | F39  |
| G39     | H39  |
| J39     | K39  |
| L39     | M39  |
| N39     | P39  |
| R39     | T39  |
| U39     | V39  |
| W39     | Y39  |
| AA39    | AB39 |
| AC39    | AD39 |
| AE39    | AF39 |
| AG39    | AH39 |
| AJ39    | AK39 |
| AL39    | AM39 |
| AN39    | AP39 |

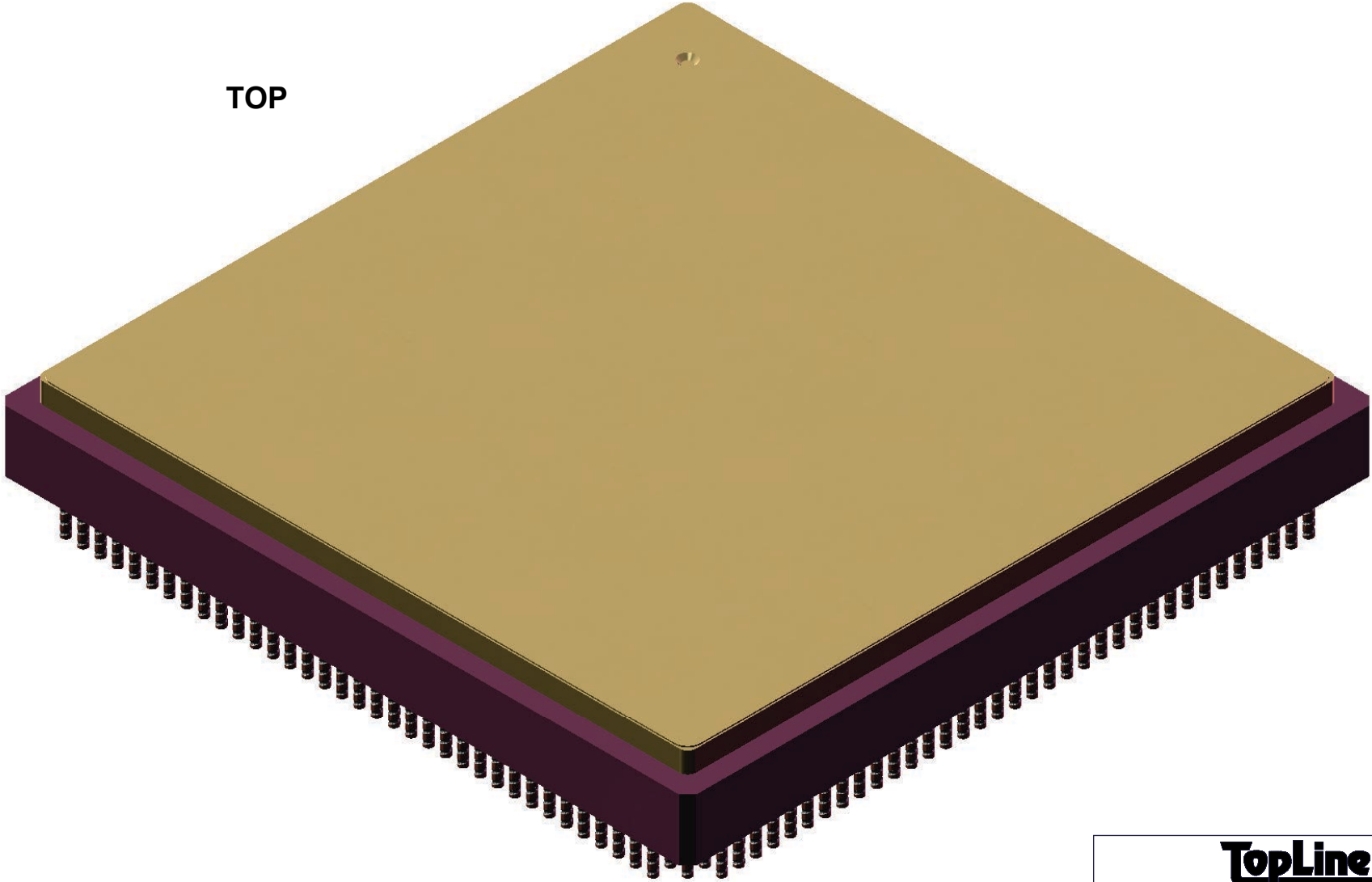
| DC PAIR |         |
|---------|---------|
| AR39    | AT39    |
| AU39    | AV38    |
| Y20     | NO PAIR |

|  |           |                       |               |
|--|-----------|-----------------------|---------------|
| <b>TopLine®</b>                                |           |                       |               |
| TITLE CCGA1509T1.0-DC396D<br>COLUMN GRID ARRAY |           |                       |               |
| SCALE<br>NONE                                  | SIZE<br>A | DRAWING NO.<br>160183 | REV<br>A      |
| DO NOT SCALE DRAWING                           |           |                       | SHEET 8 OF 10 |



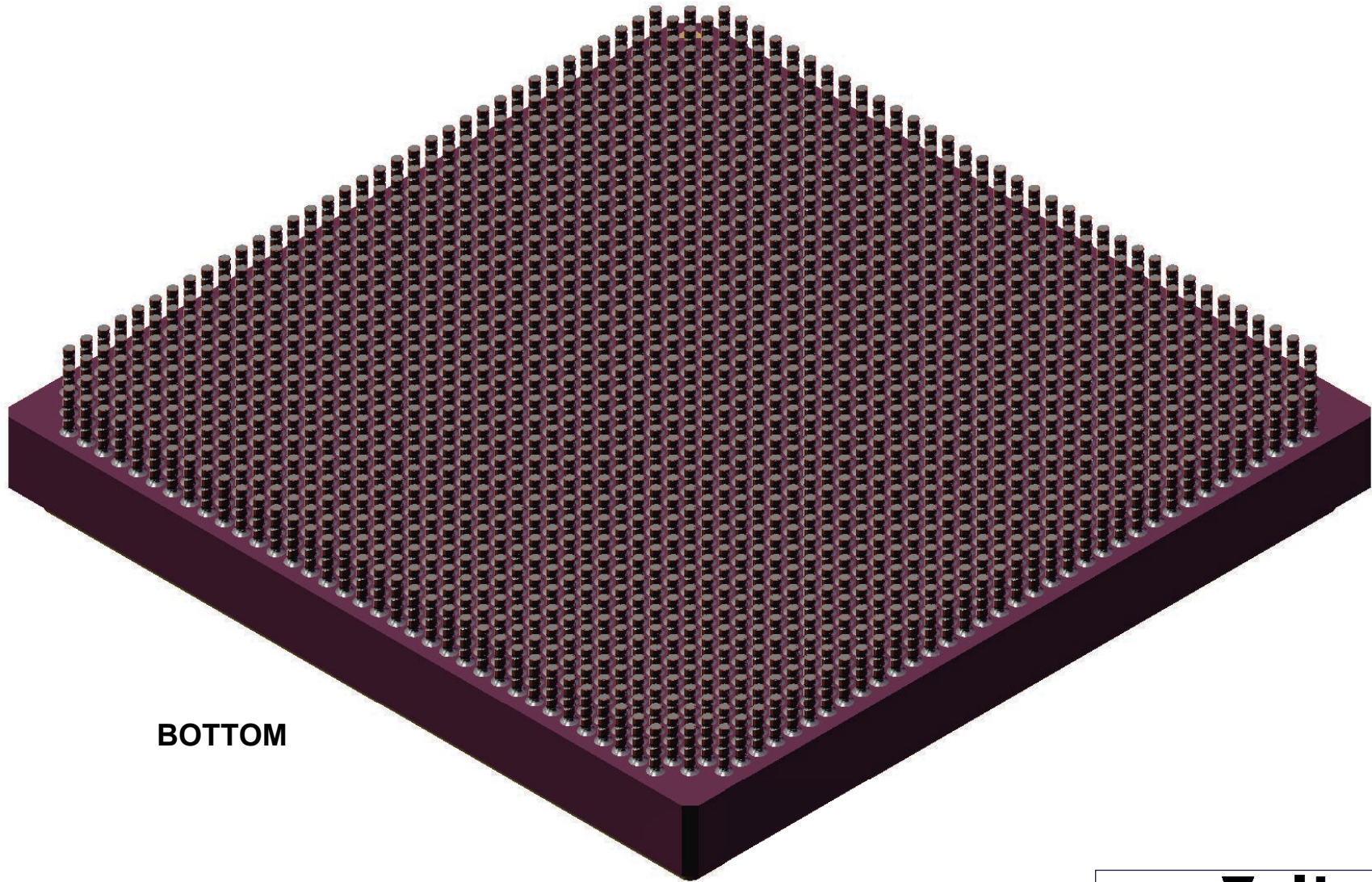
MODEL CCGA1509T1.0-DC396D  
Pb80 Sn20 COLUMNS

TOP



|                            |      |  |               |
|----------------------------|------|--|---------------|
| <b>TopLine<sup>®</sup></b> |      |  |               |
| TITLE                      |      | CCGA1509T1.0-DC396D<br>COLUMN GRID ARRAY |               |
| SCALE                      | SIZE | DRAWING NO.                              | REV           |
| 4:1                        | A    | 160183                                   | A             |
| DO NOT SCALE DRAWING       |      |  | SHEET 9 OF 10 |

**CCGA1509T1.0-DC396D  
Pb80 Sn20 COLUMNS**



**BOTTOM**

**TopLine®**

TITLE CCGA1509T1.0-DC396D  
COLUMN GRID ARRAY

|              |           |                       |          |
|--------------|-----------|-----------------------|----------|
| SCALE<br>4:1 | SIZE<br>A | DRAWING NO.<br>160183 | REV<br>A |
|--------------|-----------|-----------------------|----------|

DO NOT SCALE DRAWING

SHEET 10 OF 10