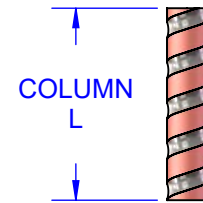
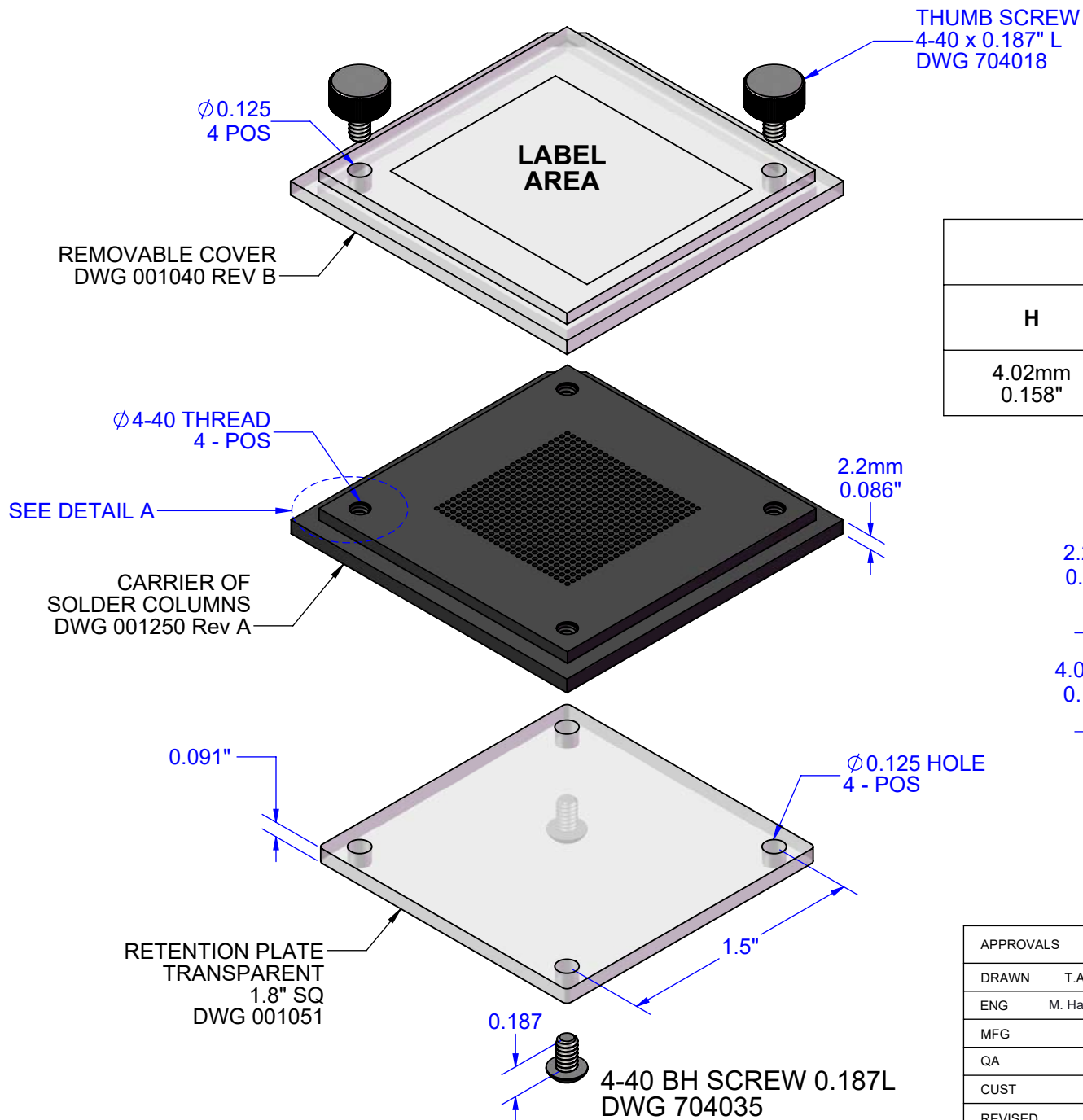
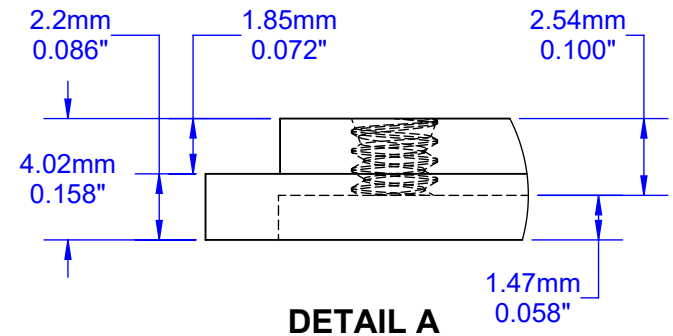


ASSEMBLY EXPLODED VIEW

U.S. PATENT No.
9,108,262 and 9,629,259



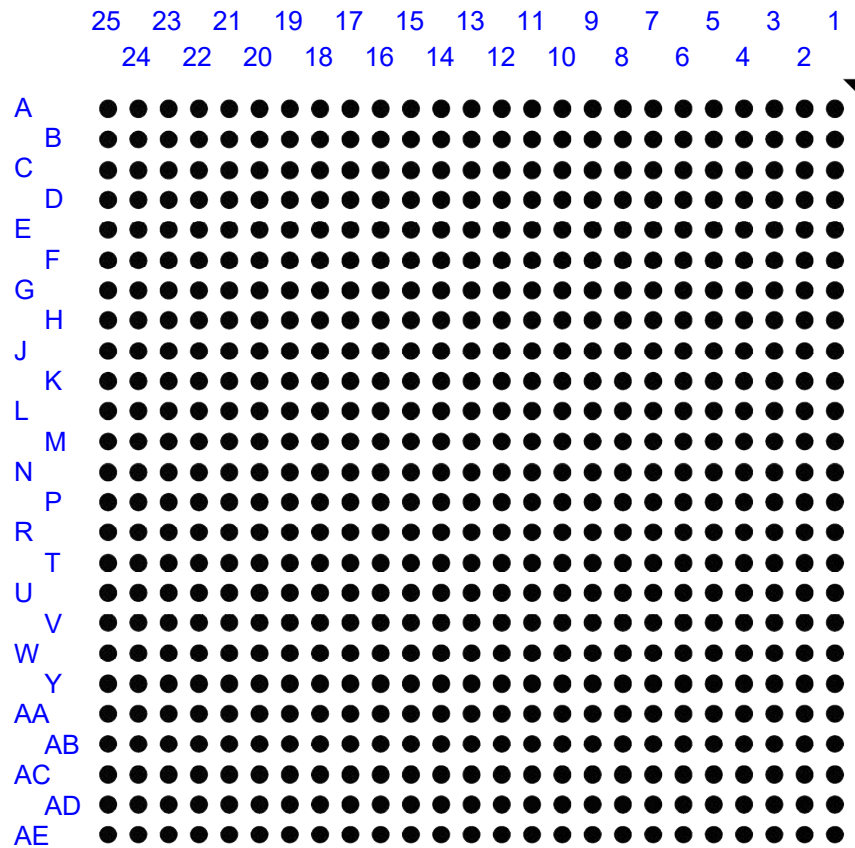
DIMENSION TABLE			
H	L MAX	W	DWG
4.02mm 0.158"	2.54mm 0.100"	1.82mm 0.072"	120254



APPROVALS	DATE	TopLine®			
DRAWN T. Au	2/13/2024				
ENG M. Hart	2/13/2024	TITLE FP625A FLIP-PACK® CCGA COLUMN CARRIER			
MFG		SCALE	SIZE	DRAWING NO.	REV
QA		1.25:1	A	001250	A
CUST		DO NOT SCALE DRAWING			SHEET 1 OF 11
REVISED					

PART NUMBER TABLE

FLIP-PACK®	Pins	Pitch	Matrix	COLUMN					Empty DWG	Filled DWG
				Alloy	Construction	Plating	Ø Dia	Length		
FP83C625E20x93A	625	1.0mm	25x25	Pb80	Cu Ribbon	SnPb	0.51mm	2.36mm	001250	832150
FP90U625E20x91A				Pb90	Plain			2.31mm		902150
FP17P625E20x50A				MCS	Micro Coil			1.27mm		172150



**BOTTOM
COUNTERSINK SIDE**

EXAMPLES OF COLUMNS

FP83



Pb80/Sn20
Cu RIBBON

FP90



Pb90/Sn10

FP17P
FP19G



Micro-Coil
Spring



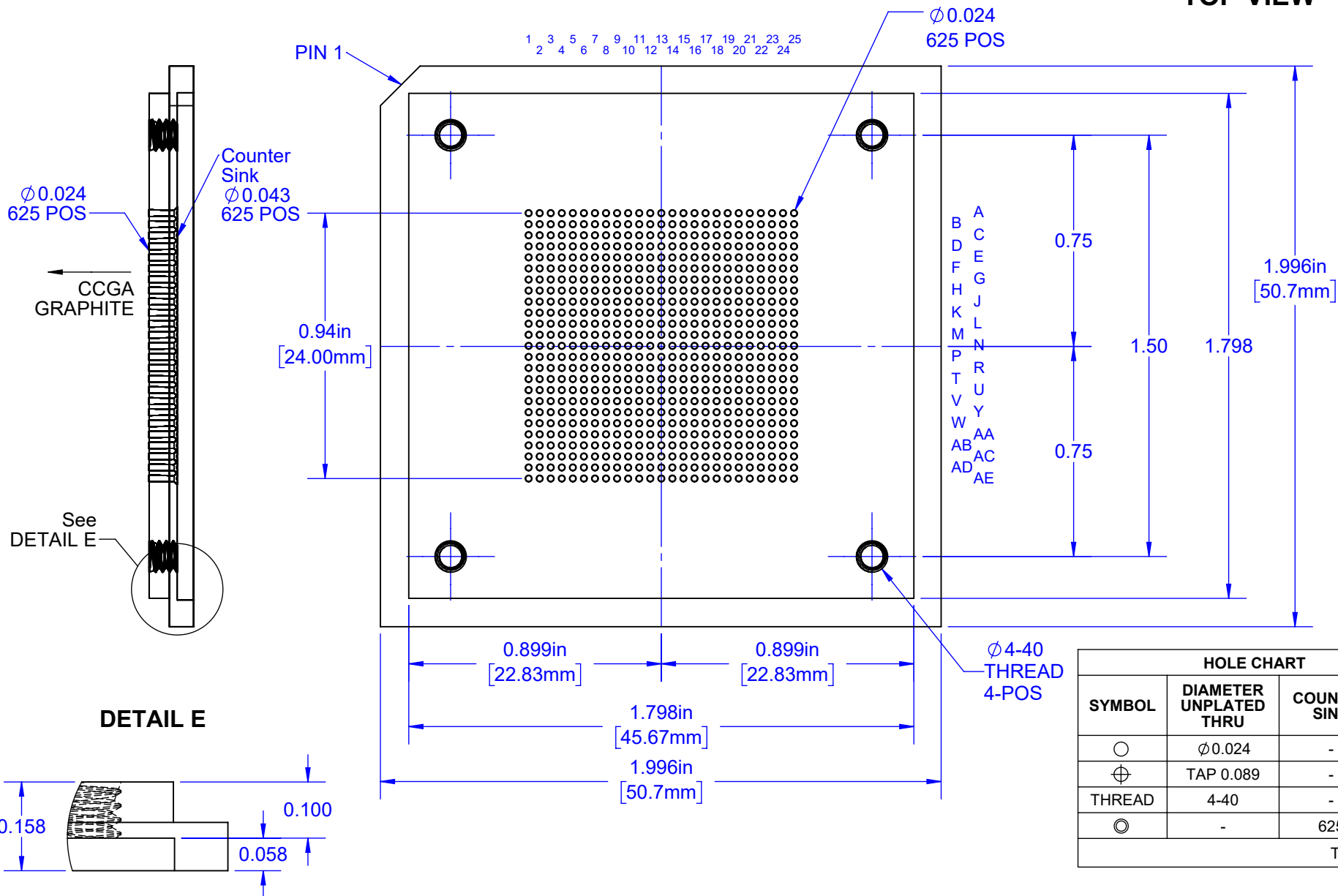
TITLE FP625A FLIP-PACK®
CCGA COLUMN CARRIER

SCALE NONE	SIZE A	DRAWING NO. 001250	REV A
---------------	-----------	-----------------------	----------

SIDE

TOP VIEW

TOP VIEW



HOLE CHART			
SYMBOL	DIAMETER UNPLATED THRU	COUNTER SINK	QTY
○	Ø0.024	-	625
⊕	TAP 0.089	-	4
THREAD	4-40	-	4
◎	-	625	0
TOTAL			633

TopLine®

TITLE: FP625A FLIP-PACK®
CCGA COLUMN CARRIER

SCALE: 2:1	SIZE: A	DRAWING NO.: 001250	REV: A
------------	---------	---------------------	--------

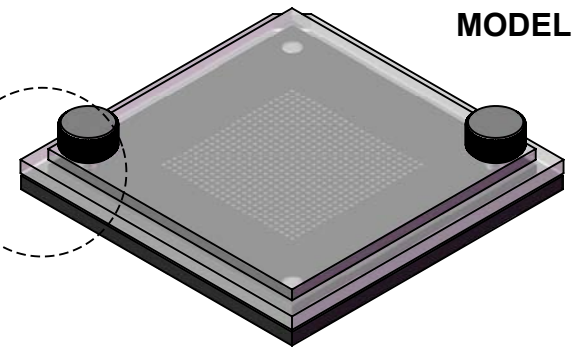
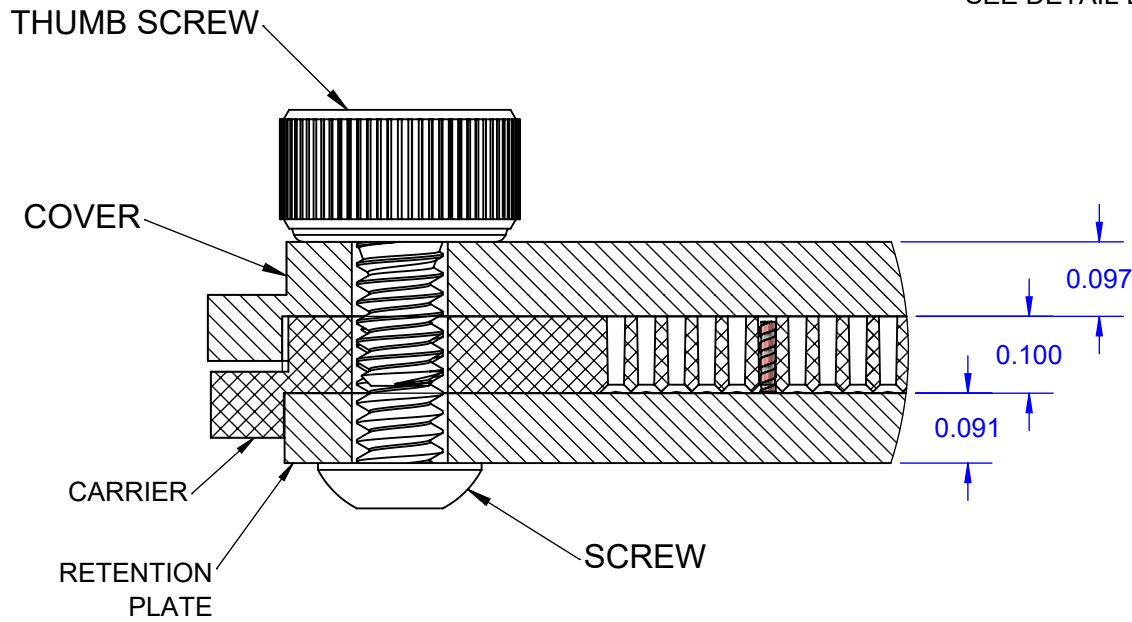
DO NOT SCALE DRAWING SHEET 3 OF 11

Notes: (Unless Otherwise Specified).
 1) MATERIAL: BLACK PLASTIC, CONDUCTIVE.
 2) DIMENSIONS : INCHES [MM].

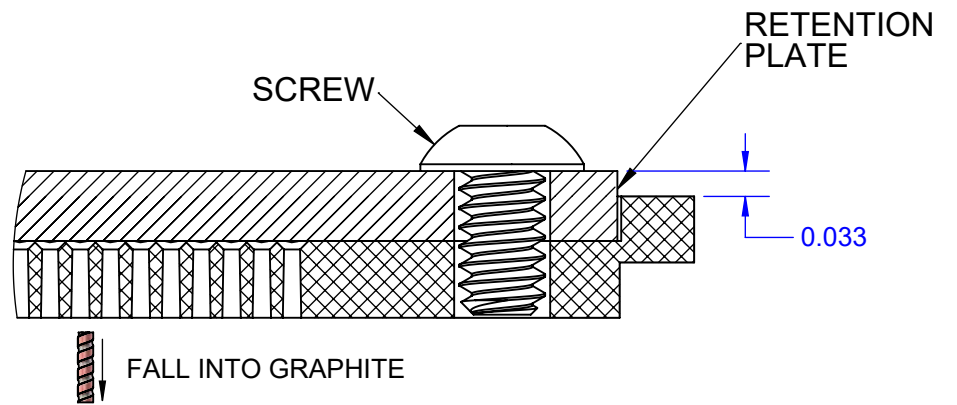
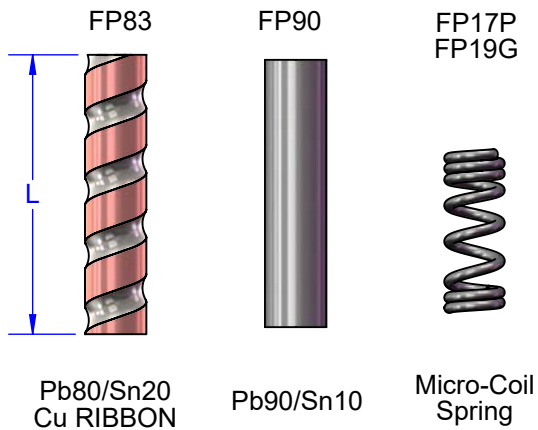
DETAIL D WITH COVER PLATE

MODEL

SEE DETAIL D



EXAMPLE OF COLUMNS



TopLine[®]

TITLE FP625A FLIP-PACK[®]
CCGA COLUMN CARRIER

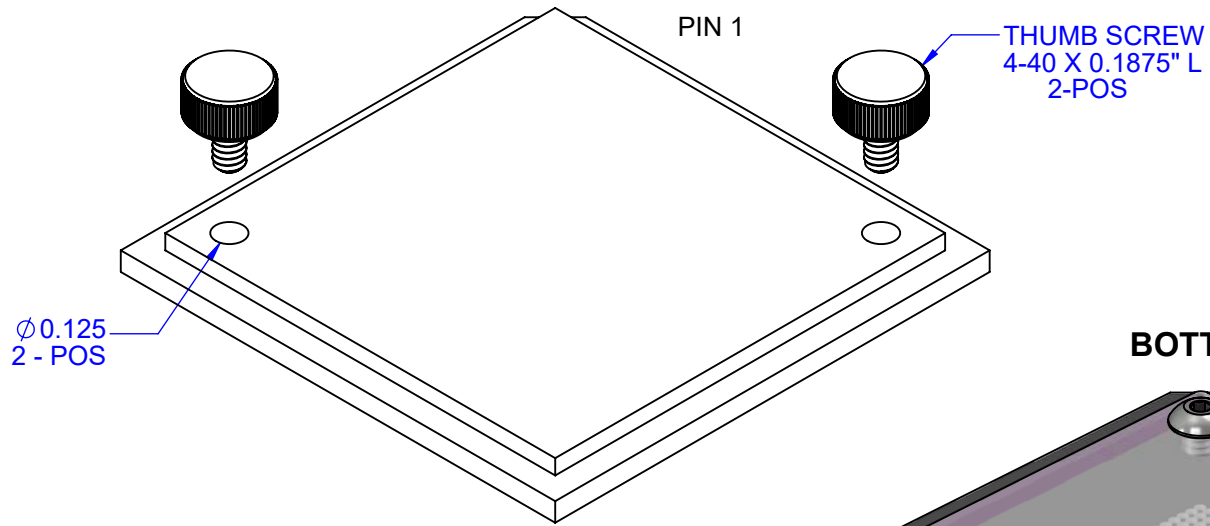
SCALE 4:1	SIZE A	DRAWING NO. 001250	REV A
--------------	-----------	-----------------------	----------

DO NOT SCALE DRAWING

SHEET 4 OF 11

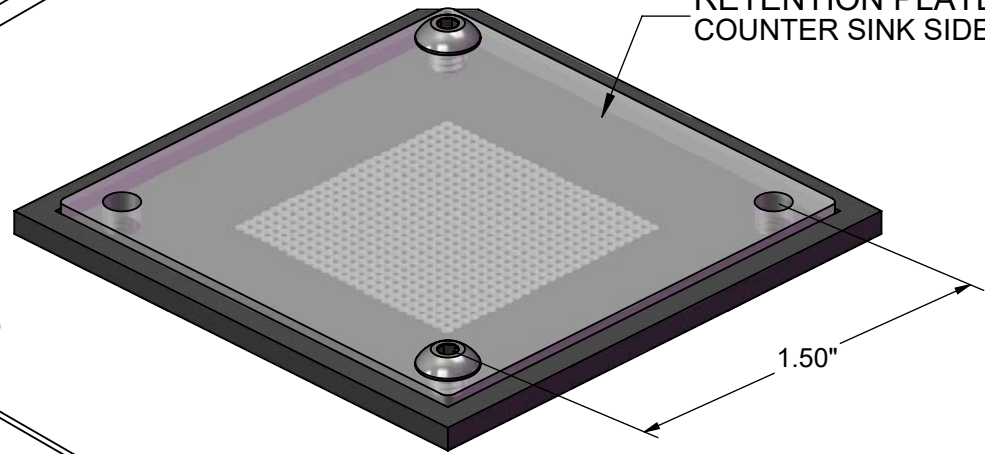
FLIP PACK® MODEL

COVER 001040 REV B



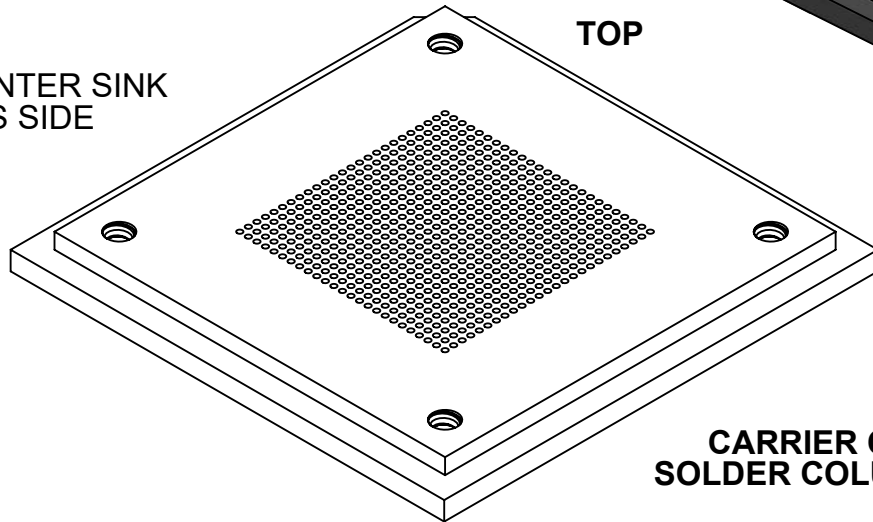
BOTTOM

RETENTION PLATE 001051
COUNTER SINK SIDE



NO COUNTER SINK
THIS SIDE

TOP



TopLine®

TITLE FP625A FLIP-PACK®
CCGA COLUMN CARRIER

SCALE	SIZE	DRAWING NO.	REV
2:1	A	001250	A

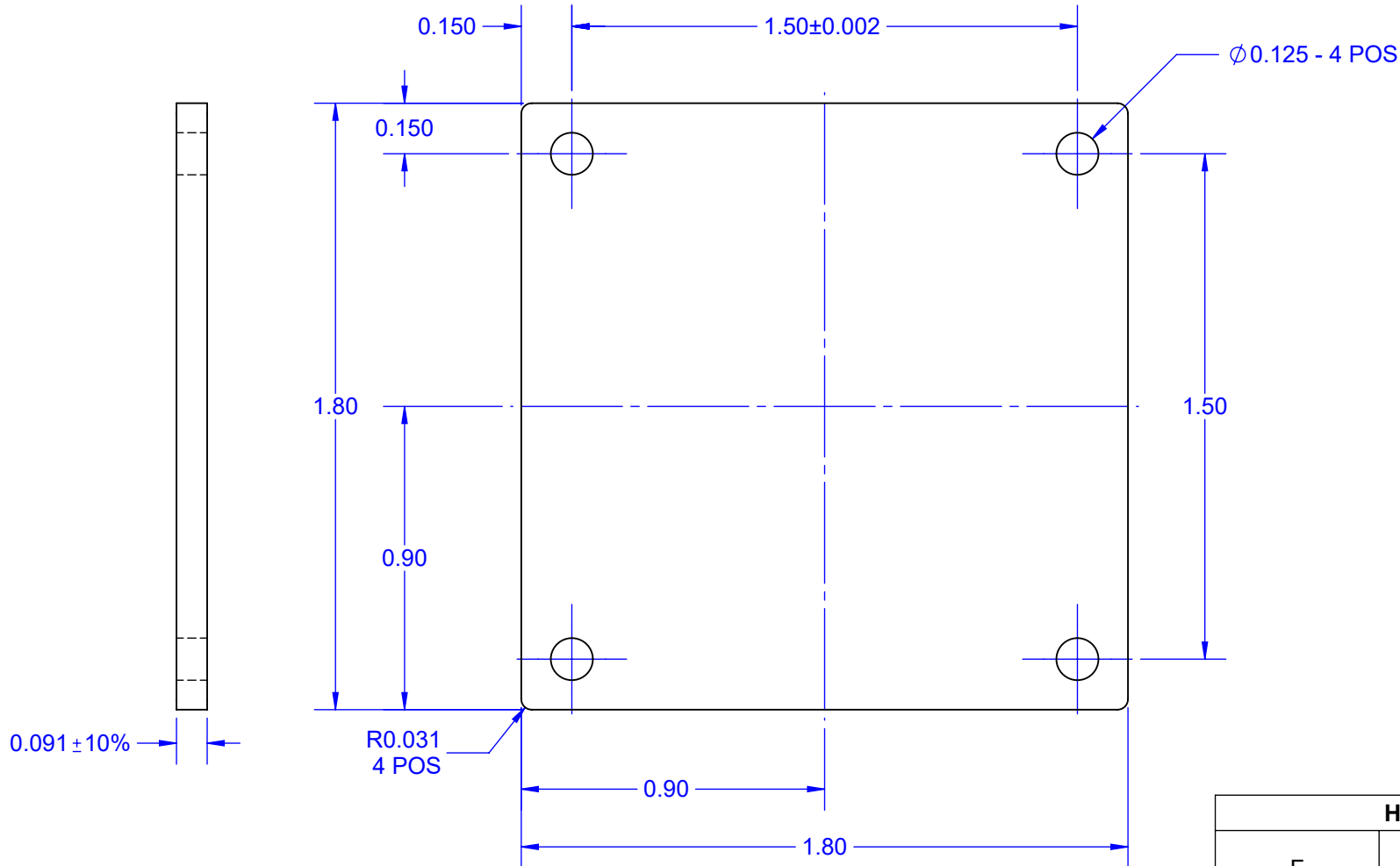
DO NOT SCALE DRAWING

SHEET 5 OF 11

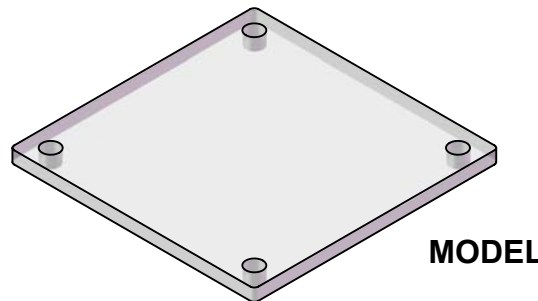
BOTTOM RETENTION PLATE

SIDE VIEW

TOP VIEW



HOLE CHART		
F	DIAMETER UNPLATED	QTY HOLES
+	$\phi 0.125$	4



MODEL

NOTES: (Unless Otherwise Specified).

- 1) DIMENSIONS INCH.
- 2) MATERIAL: CLEAR PC-300 POLYCARBONATE.
- 3) STATIC DISIPATIVE $10^6 \sim 10^8 \Omega$. (ESD SAFE).
- 4) HOLE BREAK OUT ALLOWED.

TopLine[®]

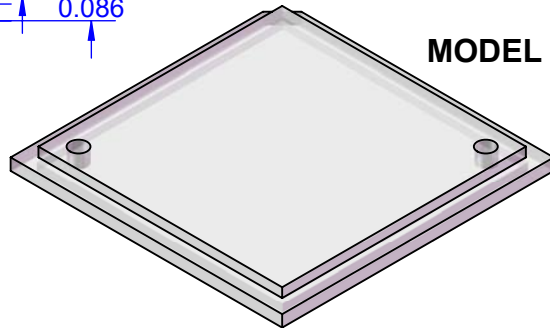
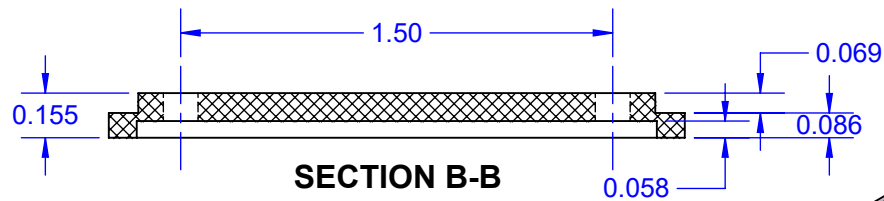
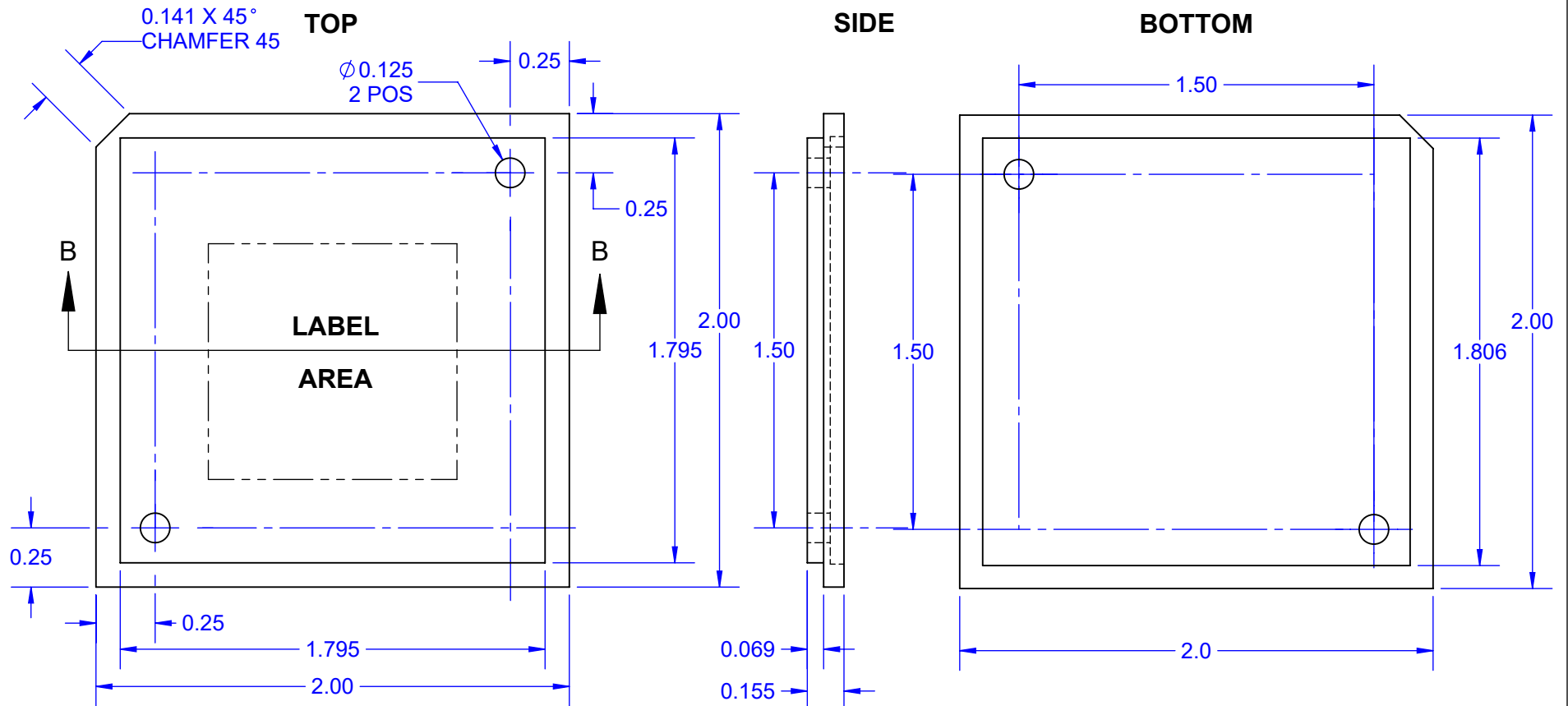
TITLE FP1.8-BOTTOM-1.5B
BOTTOM RETENTION PLATE

SCALE	SIZE	DRAWING NO.	REV
2:1	A	001051	A

DO NOT SCALE DRAWING

SHEET 6 OF 11

COVER 001040 REV B



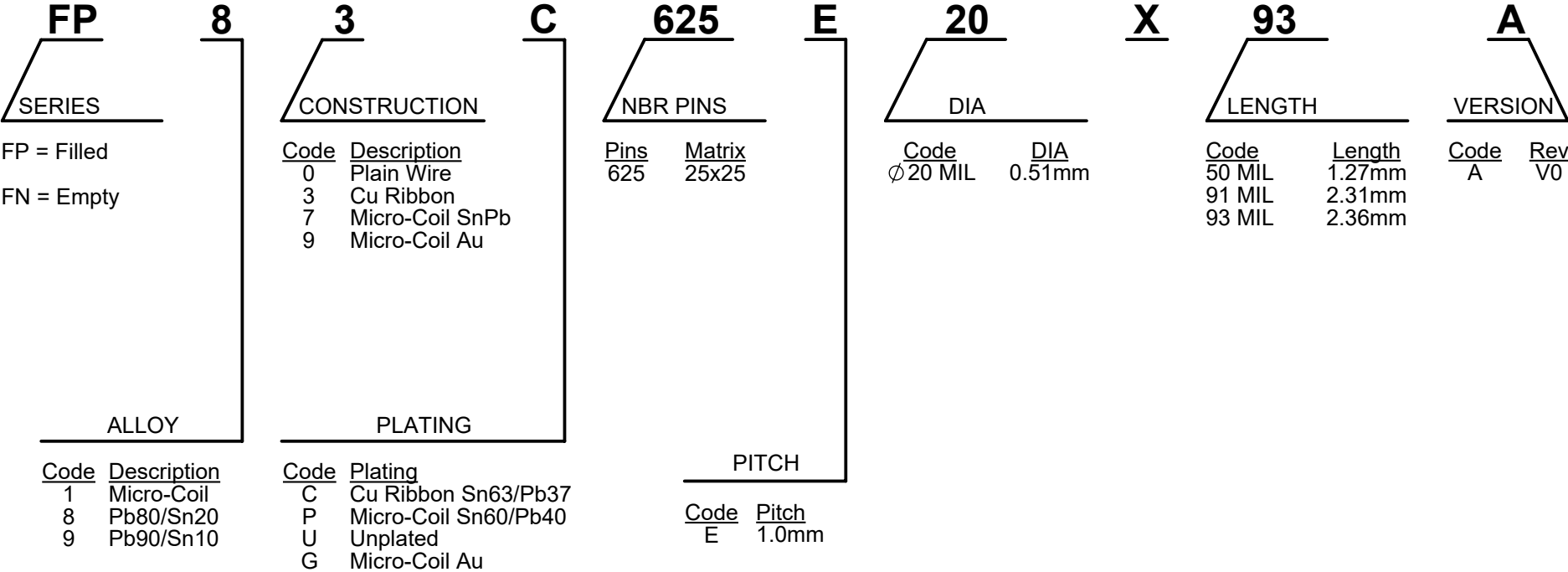
HOLE CHART		
SYMBOL	DIAMETER UNPLATED	QTY HOLES
+	Ø0.125	2

Notes: (Unless Otherwise Specified).

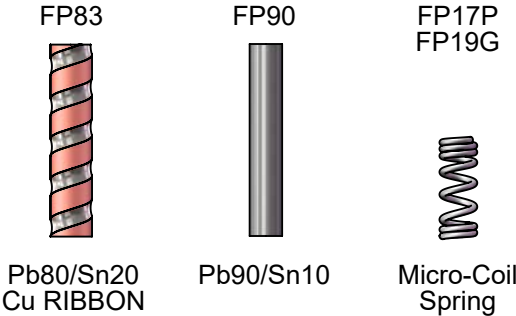
- 1) DIMENSIONS: INCH.
- 2) MATERIAL: TRANSPARENT PMMA PLASTIC.
- 3) ANTISTATIC: $10^{12} \Omega$ SURFACE RESISTANCE.

TopLine®			
TITLE FLIP-PACK® TOP COVER 2-INCH 1.50 SPACE			
SCALE 3:2	SIZE A	DRAWING NO. 001040	REV B
DO NOT SCALE DRAWING			SHEET 7 OF 11

FLIP-PACK® PART NUMBERING SYSTEM



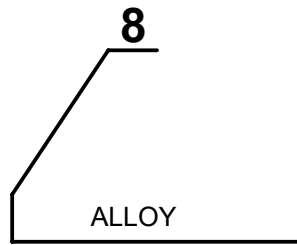
EXAMPLES OF COLUMNS



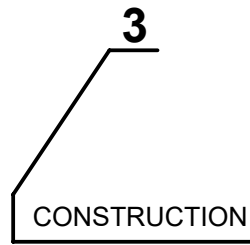
NOTE: COLUMN TO BE TRIMMED TO 2.21mm AFTER ATTACHMENT.

TopLine®			
TITLE FP625A FLIP-PACK® CCGA COLUMN CARRIER			
SCALE 10:1	SIZE A	DRAWING NO. 001250	REV A
DO NOT SCALE DRAWING			SHEET 8 OF 11

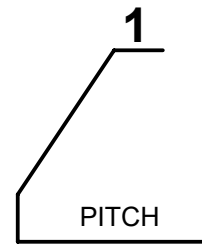
FLIP-PACK® DRAWING NUMBERING SYSTEM



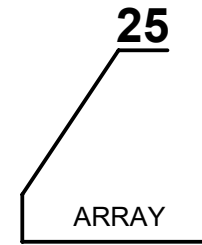
<u>Code</u>	<u>Description</u>
00	Empty
1	Micro-Coil
8	Pb80/Sn20
9	Pb90/Sn10



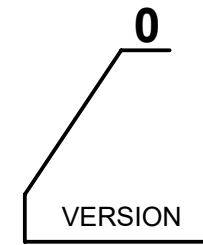
<u>Code</u>	<u>Description</u>
0	Plain Wire
3	Cu Ribbon
7	Micro-Coil SnPb
9	Micro-Coil Au



<u>Code</u>	<u>Pitch</u>
1	1.0mm



<u>Code</u>	<u>Matrix</u>
25	25x25



<u>Code</u>	<u>Rev</u>
0	625 Pins

EXAMPLES OF COLUMNS

FP83



Pb80/Sn20
Cu RIBBON

FP90



Pb90/Sn10

FP17P
FP19G



Micro-Coil
Spring

TopLine®

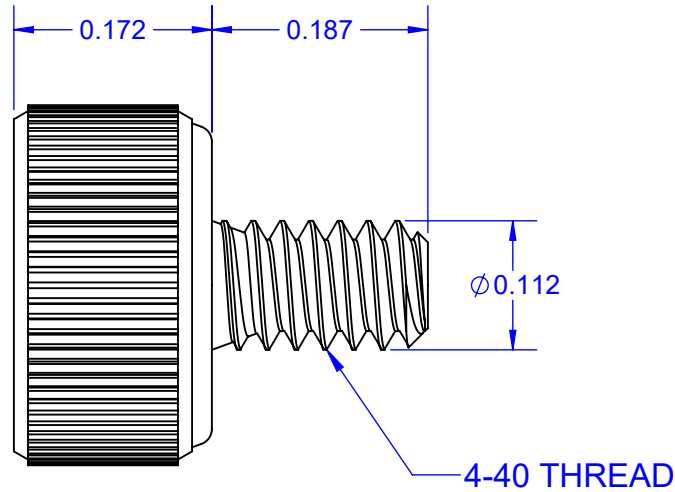
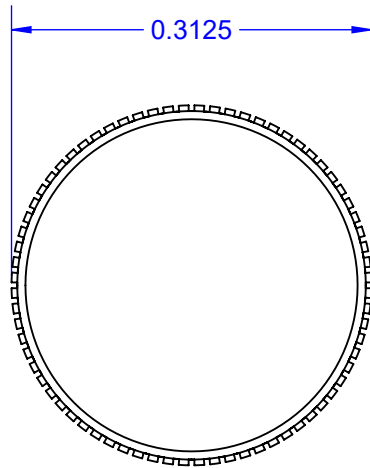
TITLE FP625A FLIP-PACK®
CCGA COLUMN CARRIER

SCALE	SIZE	DRAWING NO.	REV
10:1	A	001250	A

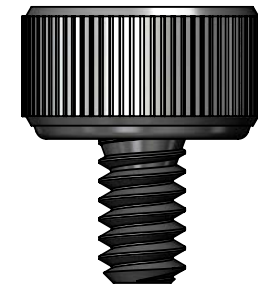
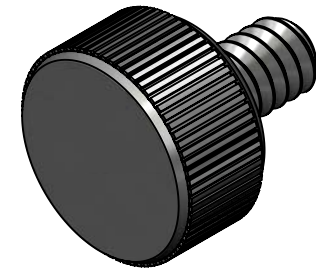
DO NOT SCALE DRAWING

SHEET 9 OF 11

HARDWARE PLASTIC KNURLED HEAD THUMB SCREW



MODELS



- NOTES:**
1. DIMENSIONS INCHES (UNLESS OTHERWISE SPECIFIED).
 2. SHAFT MATERIAL 18-8 STAINLESS STEEL.
 3. HEAD: PLASTIC.
 4. COLOR: BLACK.

DRILL TABLE

HEAD COLOR	THREAD	MAX OD	TAP DRILL Start Hole	CL HOLE Loose Fit	L SHAFT	DWG
BLACK	4-40	0.112"	0.089"	0.136"	0.187	704018

TopLine®

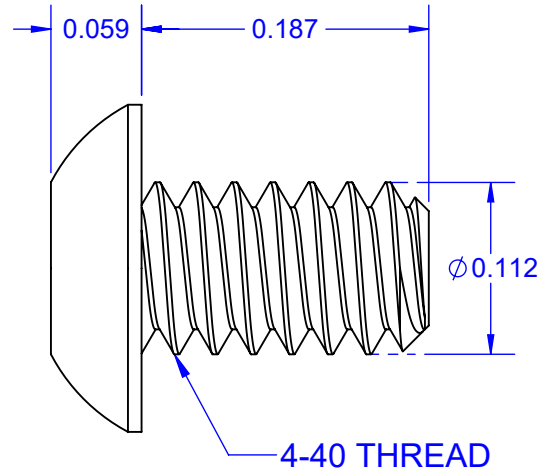
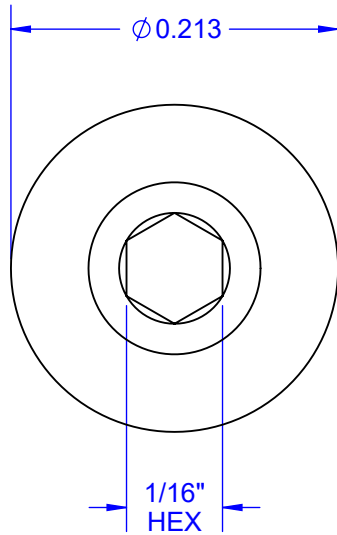
TITLE **KNURL THUMB SCREW
4-40 PLASTIC HEAD**

SCALE 6:1	SIZE A	DRAWING NO. 704018	REV A
--------------	-----------	-----------------------	----------

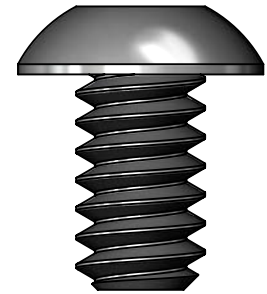
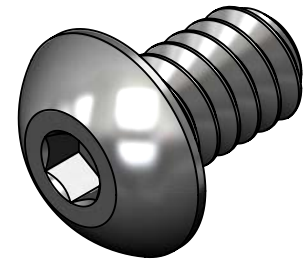
DO NOT SCALE DRAWING

SHEET 10 OF 11

BUTTON HEAD SCREW




MODELS



- NOTES: (UNLESS OTHERWISE SPECIFIED)
 1. DIMENSIONS INCHES.
 2. MATERIAL: SEE TABLE.
 3. COLOR: SEE TABLE.

DRILL TABLE						
MATERIAL	COLOR	THREAD	MAX OD	TAP DRILL Start Hole	L	DWG
8-18	STAINLESS	4-40	0.112"	0.089"	0.187"	704035

			
TITLE BUTTON HEAD CAP SCREW 4-40x .187" (1/16 HEX)			
SCALE 8:1	SIZE A	DRAWING NO. 704035	REV A
DO NOT SCALE DRAWING			SHEET 11 OF 11