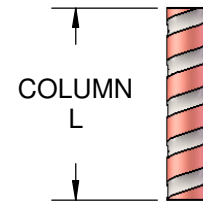
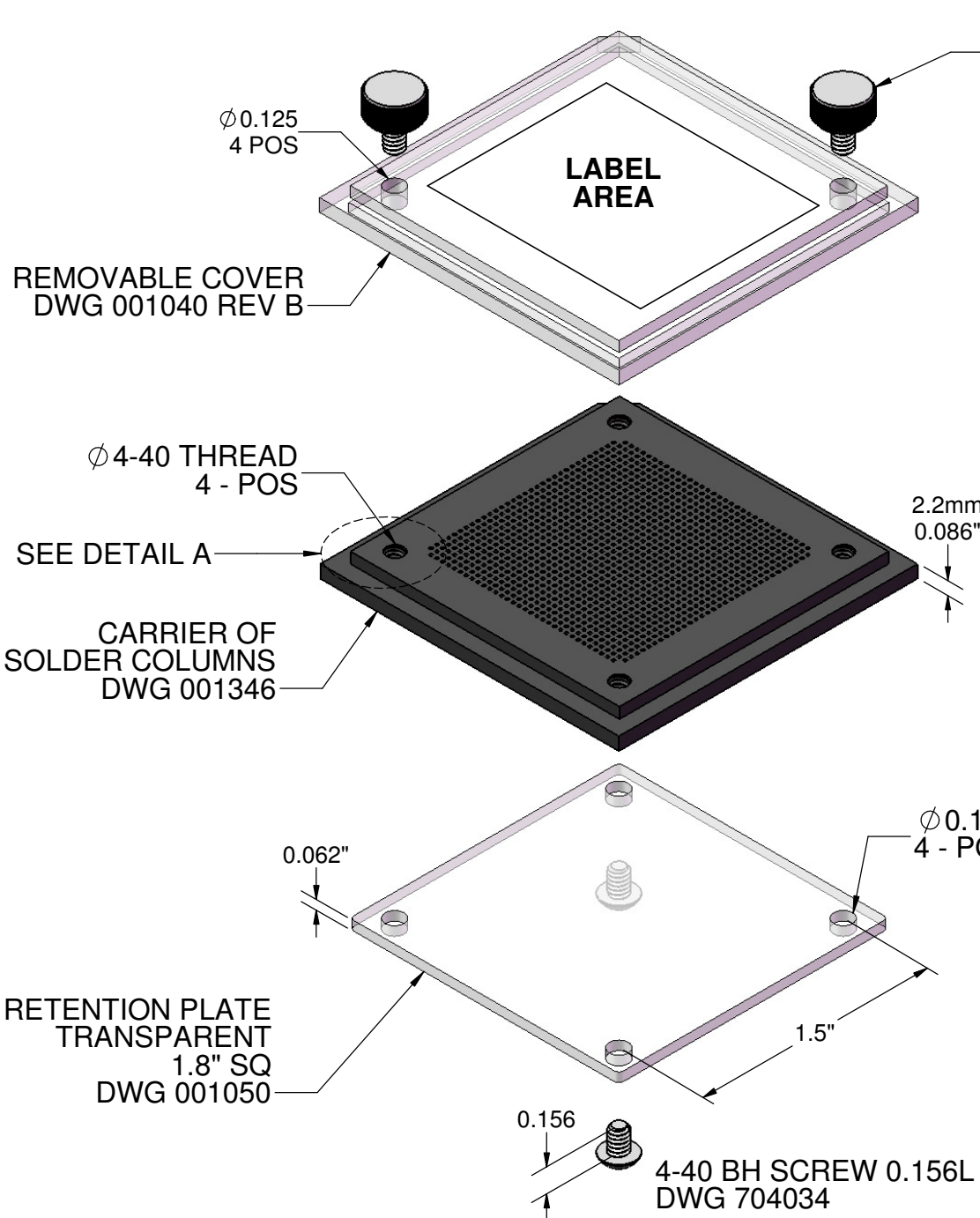
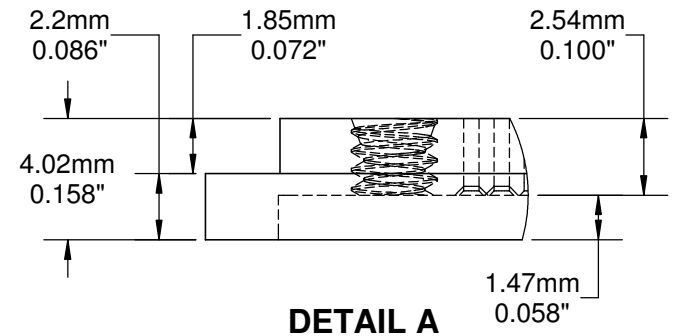


# ASSEMBLY EXPLODED VIEW FLIP-PACK<sup>®</sup> SYSTEM

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



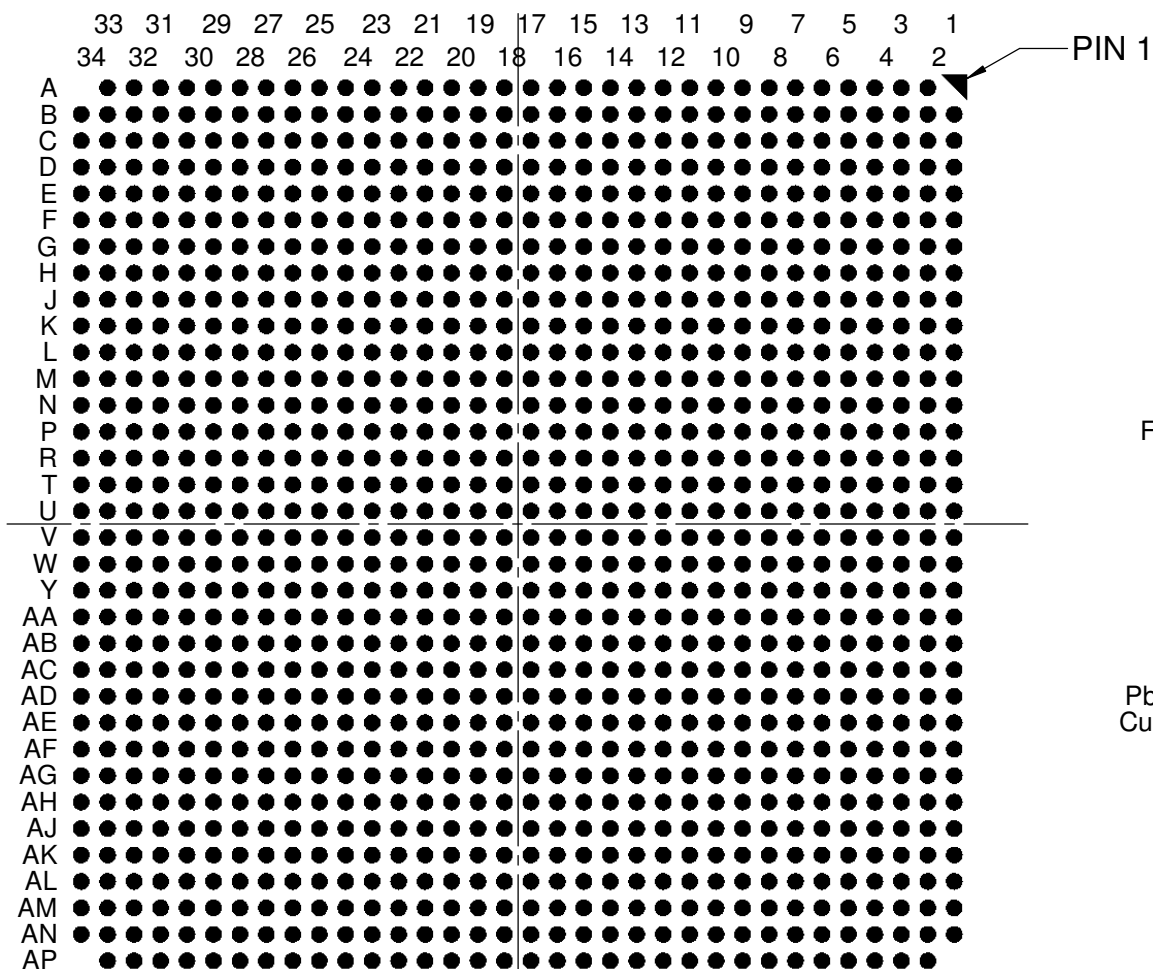
DIMENSION TABLE			
H	L MAX	W	DWG
4.02mm 0.158"	2.54mm 0.100"	1.82mm 0.072"	120254



APPROVALS	DATE				
DRAWN T. Au	8/8/2017				
ENG M. Hart	8/8/2017	TITLE FP1152B FLIP PACK			
MFG		SCALE 1.25:1	SIZE A	DRAWING NO. 001346	REV A
QA		DO NOT SCALE DRAWING			SHEET 1 OF 12
CUST					
REVISED					

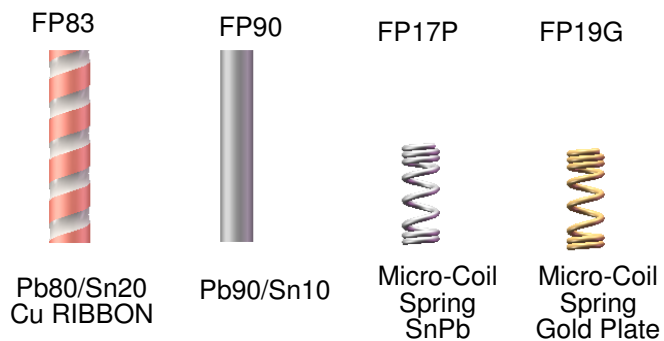
### PART NUMBER TABLE

FLIP-PACK®	Pins	Pitch	Matrix	COLUMN					Empty DWG	Filled DWG
				Alloy	Construction	Plating	∅ Dia	Length		
FP83C1152E15x91A FP90U1152E15x91A	1152	1.0mm	34x34	Pb80 Pb90	Cu Ribbon Wire	SnPb None	0.38mm	2.31mm	001346	831346 901346
FP17P1152E16x40A FP19G1152E16x40A	1152	1.0mm	34x34	BeCu BeCu	Micro Coil Micro Coil	SnPb Ni-Au	0.40mm	1.0mm	001346	171346 191346



**BOTTOM  
COUNTERSINK SIDE**

#### EXAMPLES OF COLUMNS

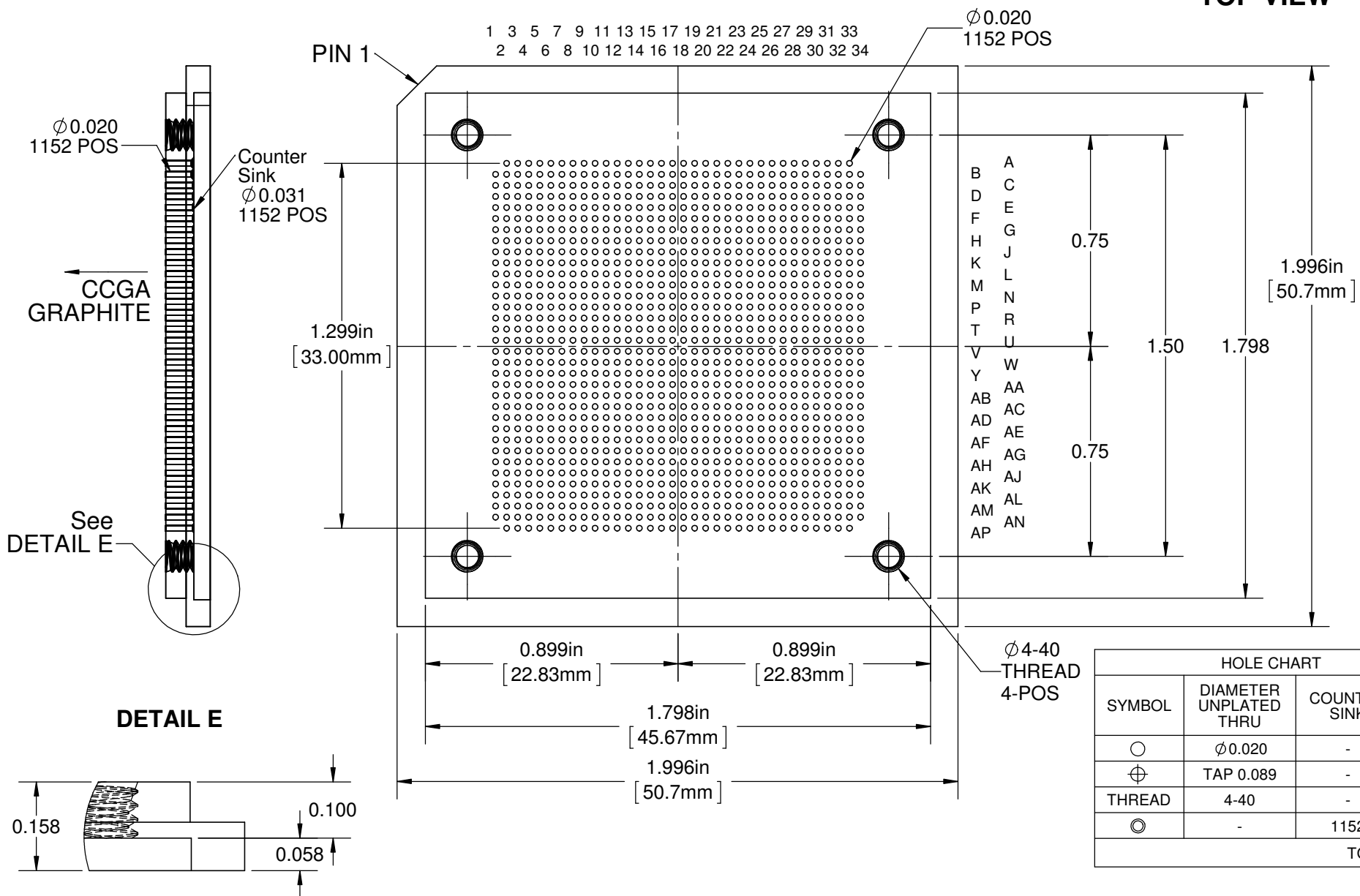


<b>TopLine®</b>			
TITLE FP1152B FLIP PACK			
SCALE NONE	SIZE A	DRAWING NO. 001346	REV A
DO NOT SCALE DRAWING			SHEET 2 OF 12

**SIDE**

**TOP VIEW**

**TOP VIEW**

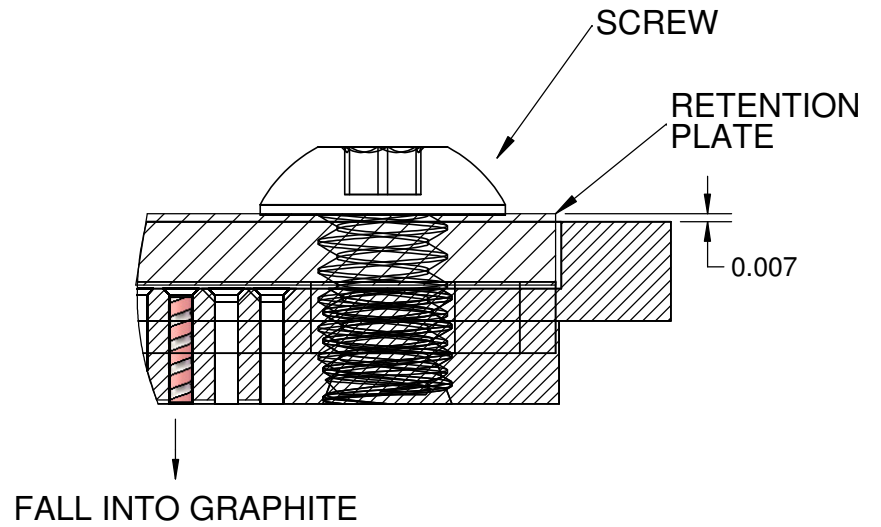
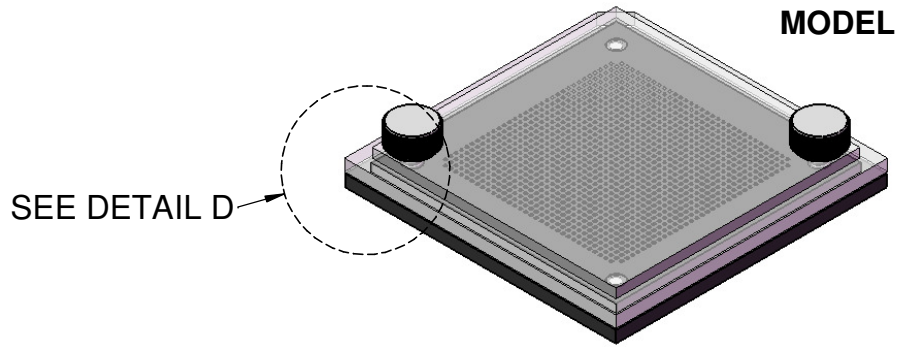
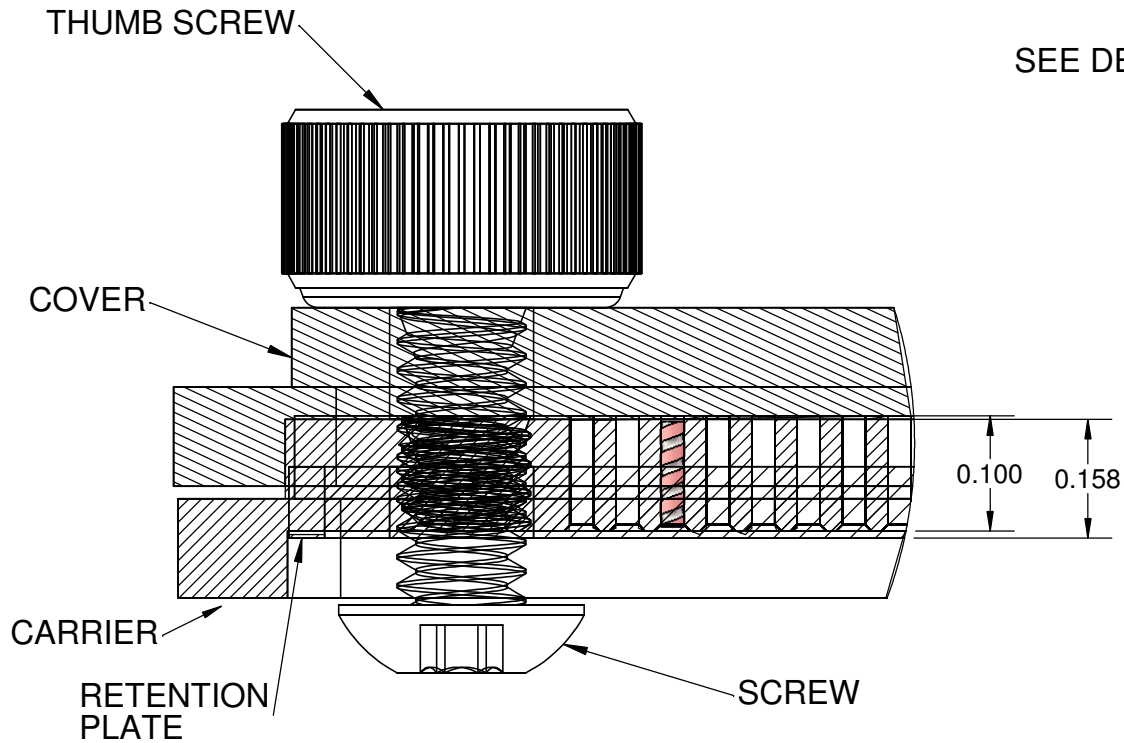


HOLE CHART			
SYMBOL	DIAMETER UNPLATED THRU	COUNTER SINK	QTY
○	∅0.020	-	1152
⊕	TAP 0.089	-	4
THREAD	4-40	-	4
◎	-	1152	1152
TOTAL			2308

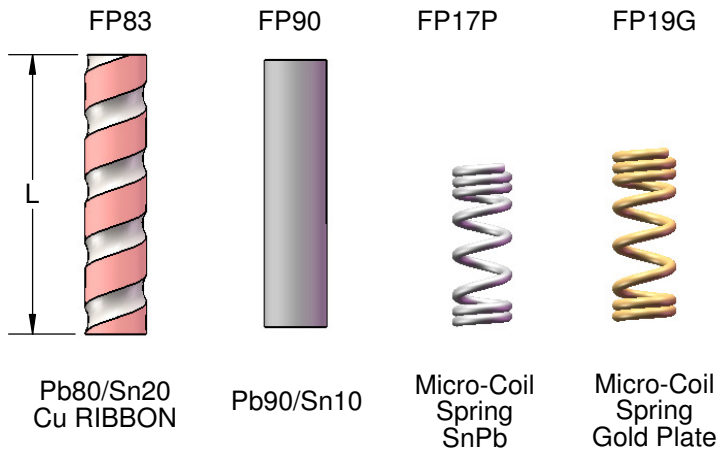
<b>TopLine®</b>			
TITLE FP1152B FLIP PACK			
SCALE 2:1	SIZE A	DRAWING NO. 001346	REV A
DO NOT SCALE DRAWING			SHEET 3 OF 12

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

# DETAIL D WITH COVER PLATE



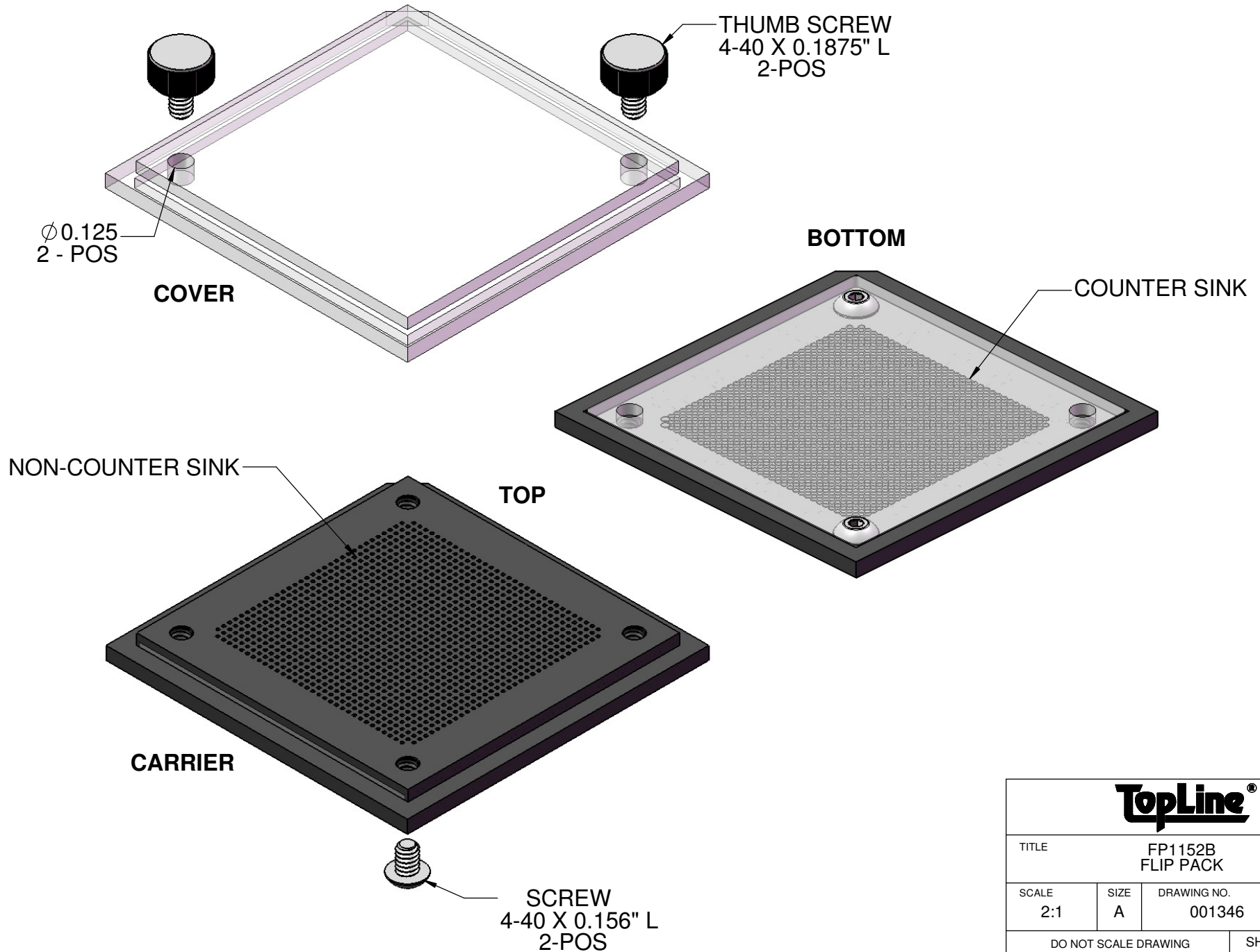
## EXAMPLE OF COLUMNS



<b>TopLine®</b>			
TITLE		FP1152B FLIP PACK	
SCALE	SIZE	DRAWING NO.	REV
7:1	A	001346	A
DO NOT SCALE DRAWING			SHEET 4 OF 12

# FLIP PACK<sup>®</sup> MODEL

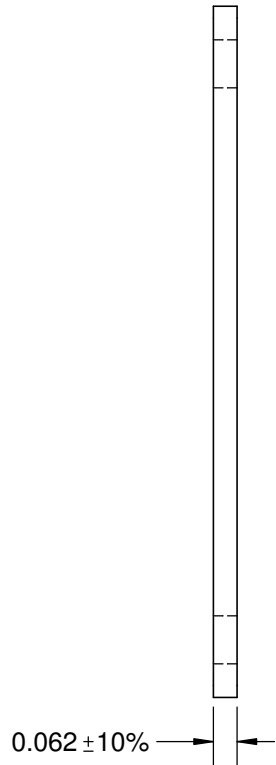
COVER 001040 REV B



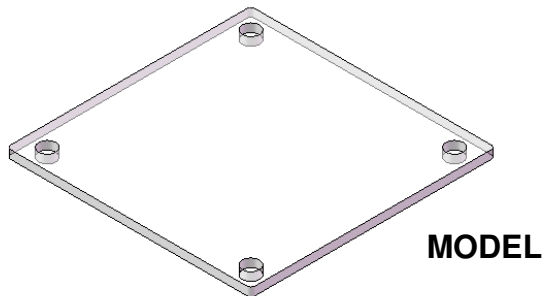
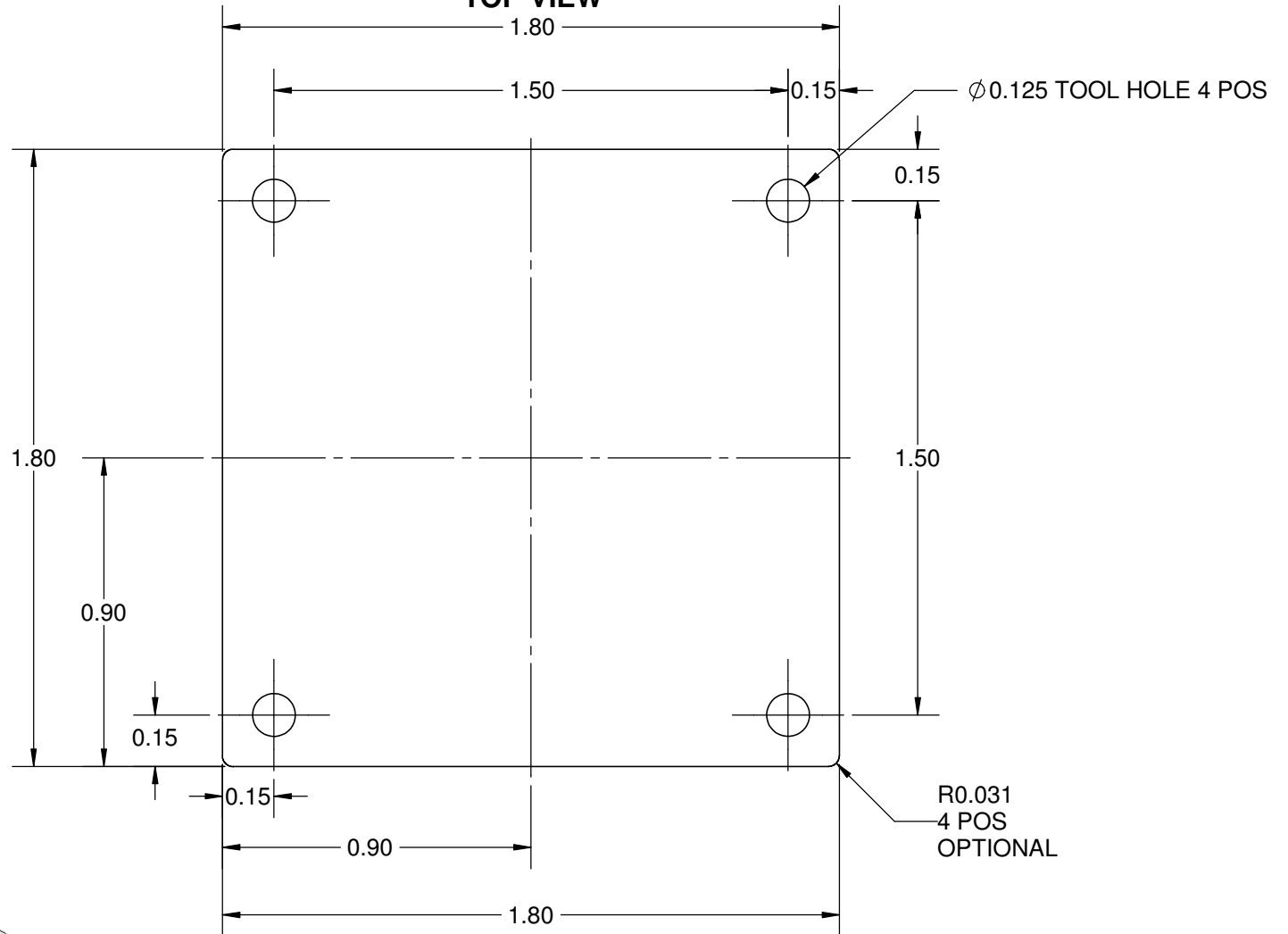
<b>TopLine<sup>®</sup></b>			
TITLE		FP1152B FLIP PACK	
SCALE	SIZE	DRAWING NO.	REV
2:1	A	001346	A
DO NOT SCALE DRAWING			SHEET 5 OF 12

# RETENTION BOTTOM PLATE DWG 001050

**SIDE VIEW**



**TOP VIEW**



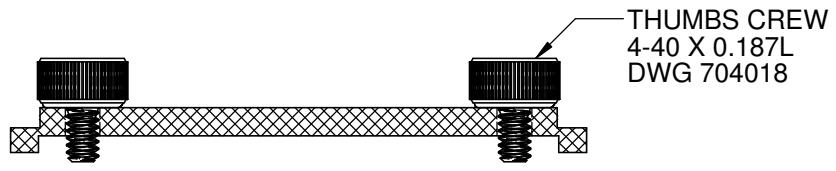
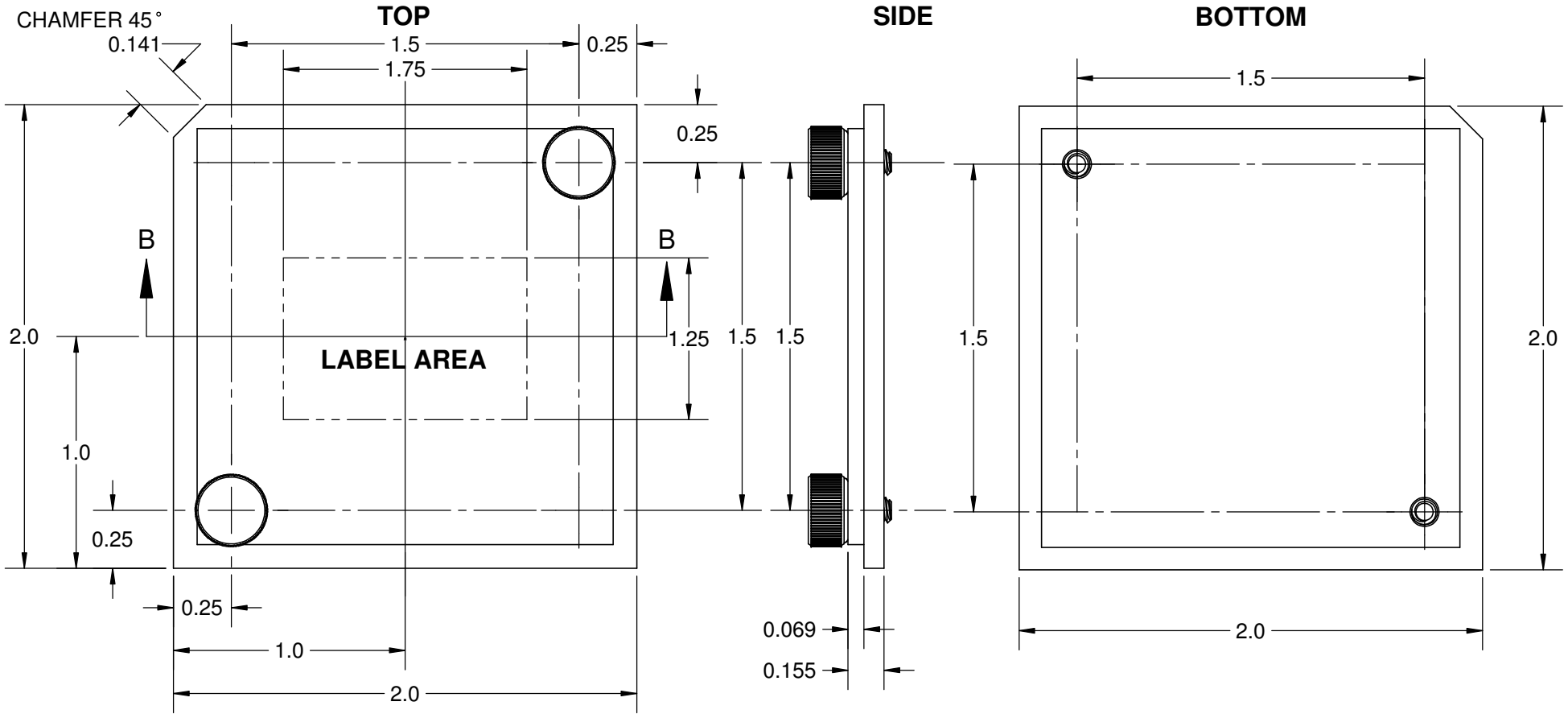
**NOTES:**

1. DIMENSIONS INCHES UNLESS OTHERWISE STATED.
2. MATERIAL CLEAR PC-300 POLYCARBONATE (ESD SAFE).
3. STATIC DISIPATIVE  $10^6 \sim 10^8 \Omega$ .

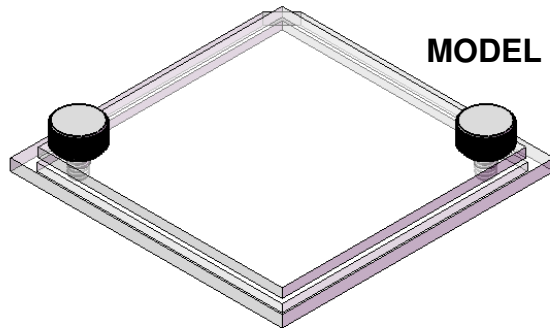
**TopLine®**

TITLE		RETENTION PLATE	
SCALE	SIZE	DRAWING NO.	REV
2:1	A	001050	A
DO NOT SCALE DRAWING		SHEET 6 OF 12	

# COVER 001040 REV B



**SECTION B-B**

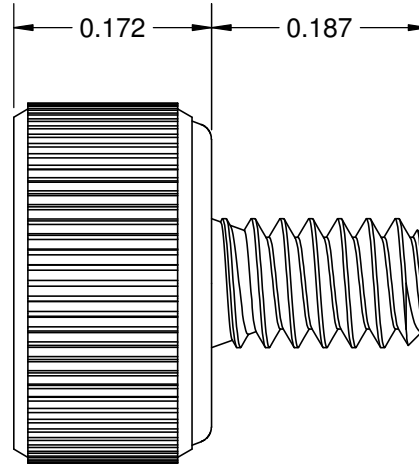
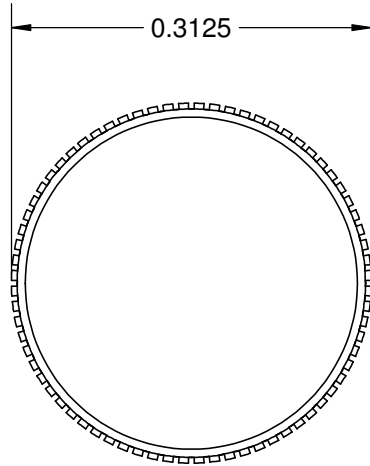


Notes: (Unless Otherwise Specified).

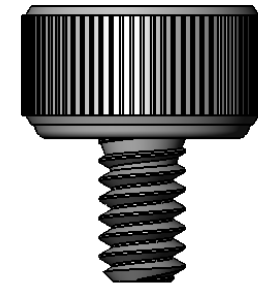
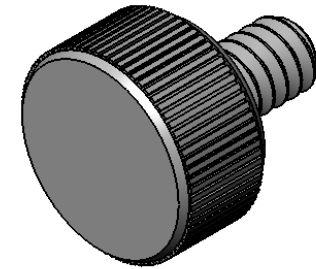
- 1) DIMENSIONS: INCH.
- 2) MATERIAL: TRANSPARENT PMMA PLASTIC.
- 3) ANTISTATIC:  $10^{12}\Omega$  SURFACE RESISTANCE.

<b>TopLine®</b>			
TITLE		FP1152B FLIP PACK	
SCALE	SIZE	DRAWING NO.	REV
3:2	A	001346	A
DO NOT SCALE DRAWING			SHEET 7 OF 12

# 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**

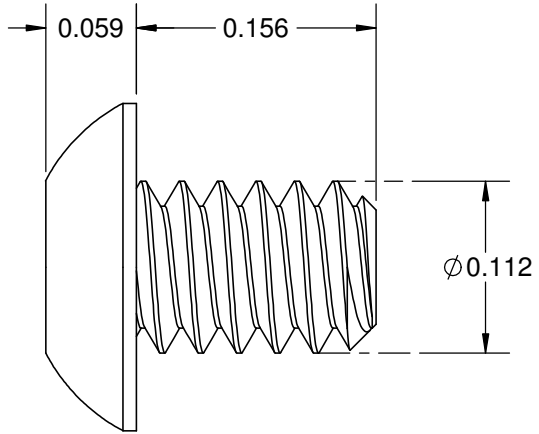
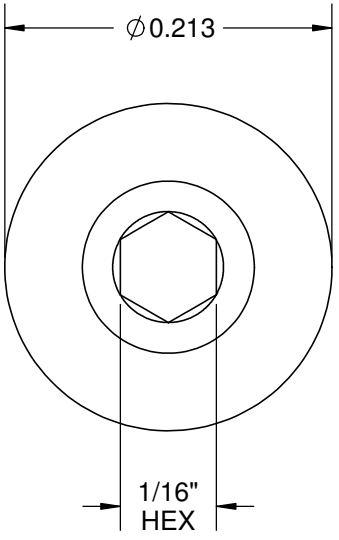
SCALE 6:1	SIZE A	DRAWING NO. 704018	REV A
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DO NOT SCALE DRAWING

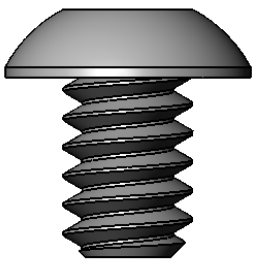
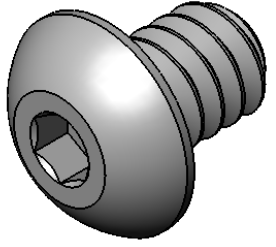
SHEET 8 OF 12



# HARDWARE CAP SCREW



## MODELS

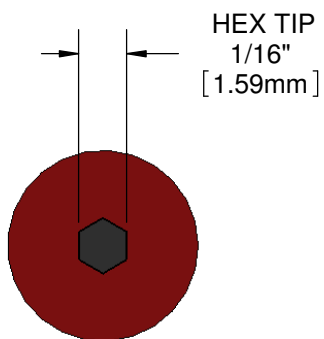
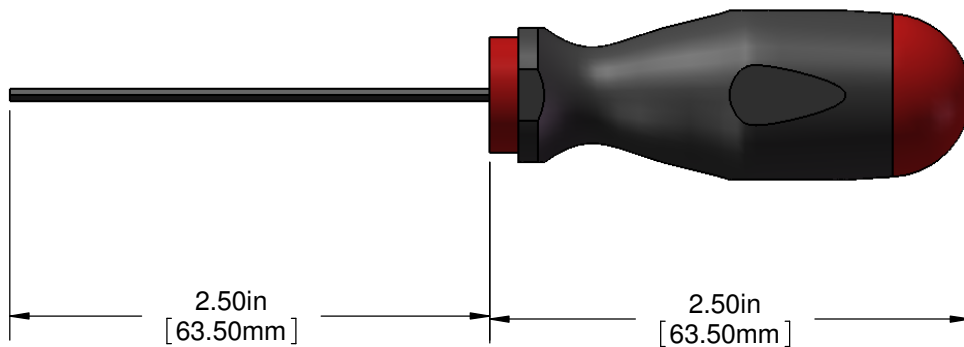
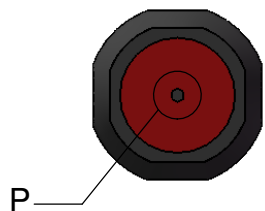


- NOTES: (UNLESS OTHERWISE SPECIFIED)  
 1. DIMENSIONS INCHES.  
 2. MATERIAL: SEE TABLE.  
 3. COLOR: SEE TABLE.

DRILL TABLE						
MATERIAL	COLOR	THREAD	CL HOLE DIA	TAP HOLE DIA	L	DWG
STAINLESS	STAINLESS	4-40	0.125	0.089	0.156	704034

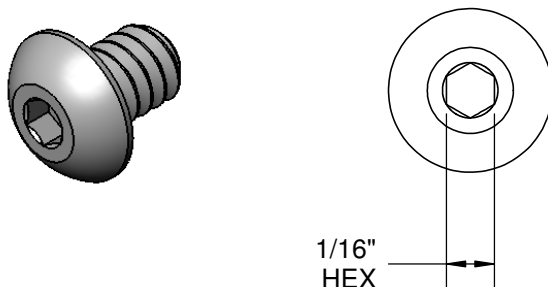
<b>TopLine®</b>			
TITLE <b>BUTTON HEAD SCREW 4-40 THREAD</b>			
SCALE 8:1	SIZE A	DRAWING NO. 704034	REV A
DO NOT SCALE DRAWING			SHEET 9 OF 12

SCREW DRIVER  
HEX 1-16



DETAIL P  
SCALE 4 : 1

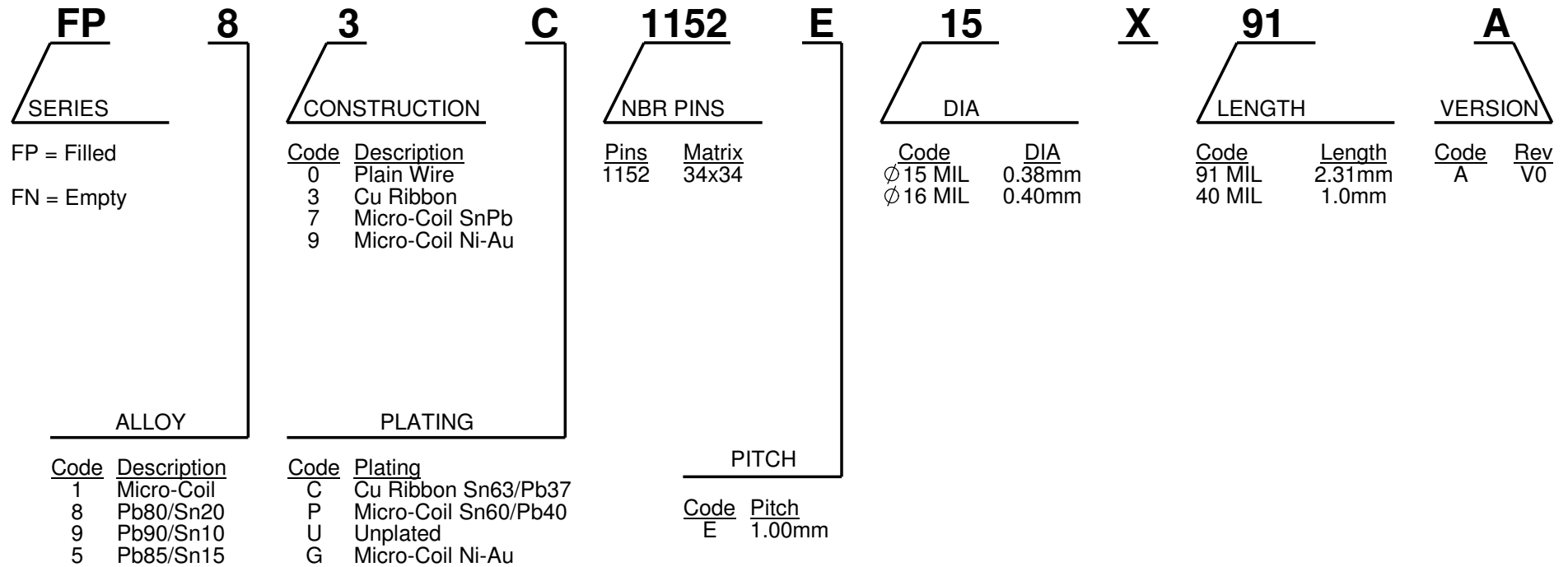
EXAMPLE SCREW  
HEX 1/16"  
SCALE = 4:1



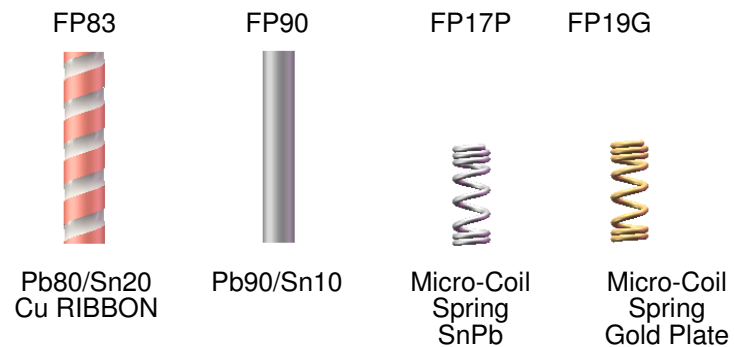
NOTES: (UNLESS OTHERWISE SPECIFIED).  
1) DIMENSIONS: INCH [MM].

APPROVALS	DATE	<b>TopLine</b> ®			
DRAWN	6/12/016				
ENG M. Hart	6/12/016	TITLE			
MFG					
QA		SCALE	SIZE	DRAWING NO.	REV
CUST		1:1	A	704000	A
REVISED		DO NOT SCALE DRAWING			SHEET 10 OF 12

# FLIP-PACK<sup>®</sup> PART NUMBERING SYSTEM



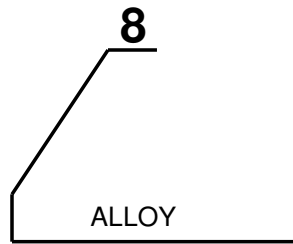
## EXAMPLES OF COLUMNS



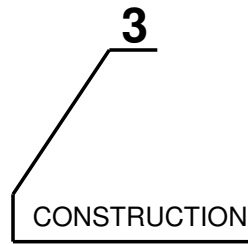
NOTE 1: PP83, PP90 and PP93 REQUIRES TRIMMING TO FINISHED LENGTH.  
NOTE 2: COLUMN 2.54mm TO BE TRIMMED TO 2.21mm AFTER ATTACHMENT.

TopLine <sup>®</sup>			
TITLE		FP1152B FLIP PACK	
SCALE	SIZE	DRAWING NO.	REV
10:1	A	001346	A
DO NOT SCALE DRAWING			SHEET 11 OF 12

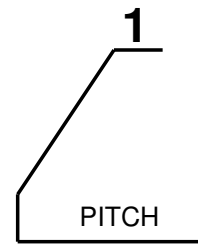
# FLIP-PACK<sup>®</sup> DRAWING NUMBERING SYSTEM



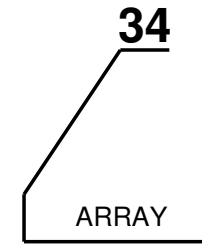
<u>Code</u>	<u>Description</u>
00	Empty
1	Micro-Coil
8	Pb80/Sn20
9	Pb90/Sn10
5	Pn85/Sn15



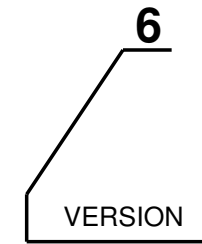
<u>Code</u>	<u>Description</u>
0	Plain Wire
3	Cu Ribbon
7	Micro-Coil SnPb
9	Micro-Coil Ni-Au



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



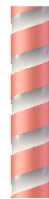
<u>Code</u>	<u>Matrix</u>
34	34x34



<u>Code</u>	<u>Rev</u>
6	1152 PINS

## EXAMPLES OF COLUMNS

FP83



Pb80/Sn20  
Cu RIBBON

FP90



Pb90/Sn10

FP17P



Micro-Coil  
Spring  
SnPb

FP19G



Micro-Coil  
Spring  
Gold Plate

**TopLine<sup>®</sup>**

TITLE FP1152B  
FLIP PACK

SCALE 10:1	SIZE A	DRAWING NO. 001346	REV A
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DO NOT SCALE DRAWING

SHEET 12 OF 12