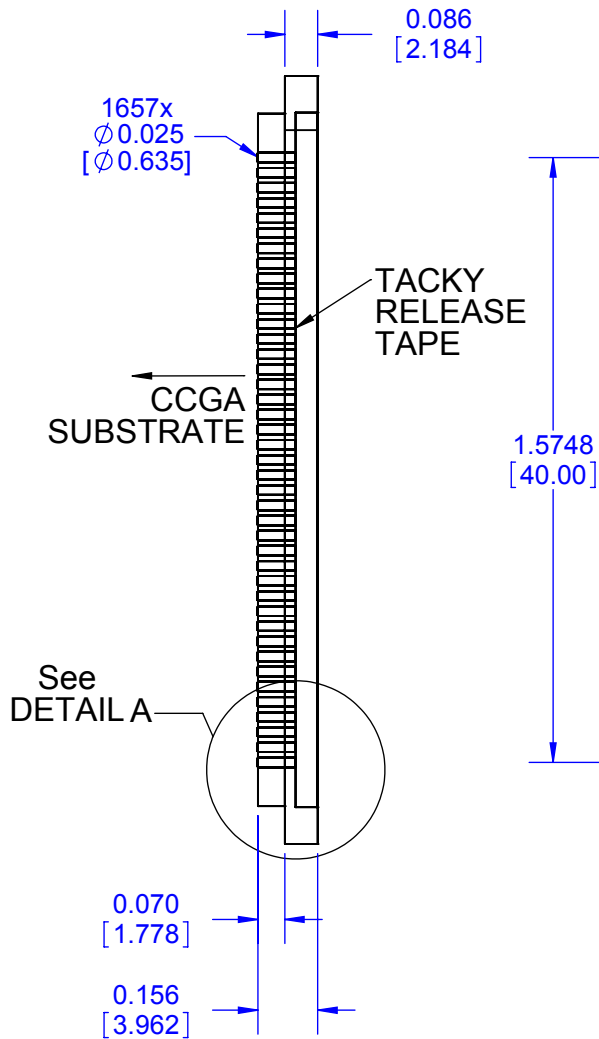


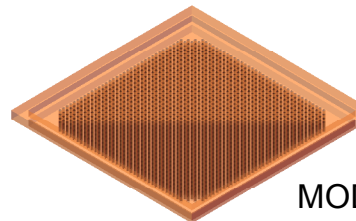
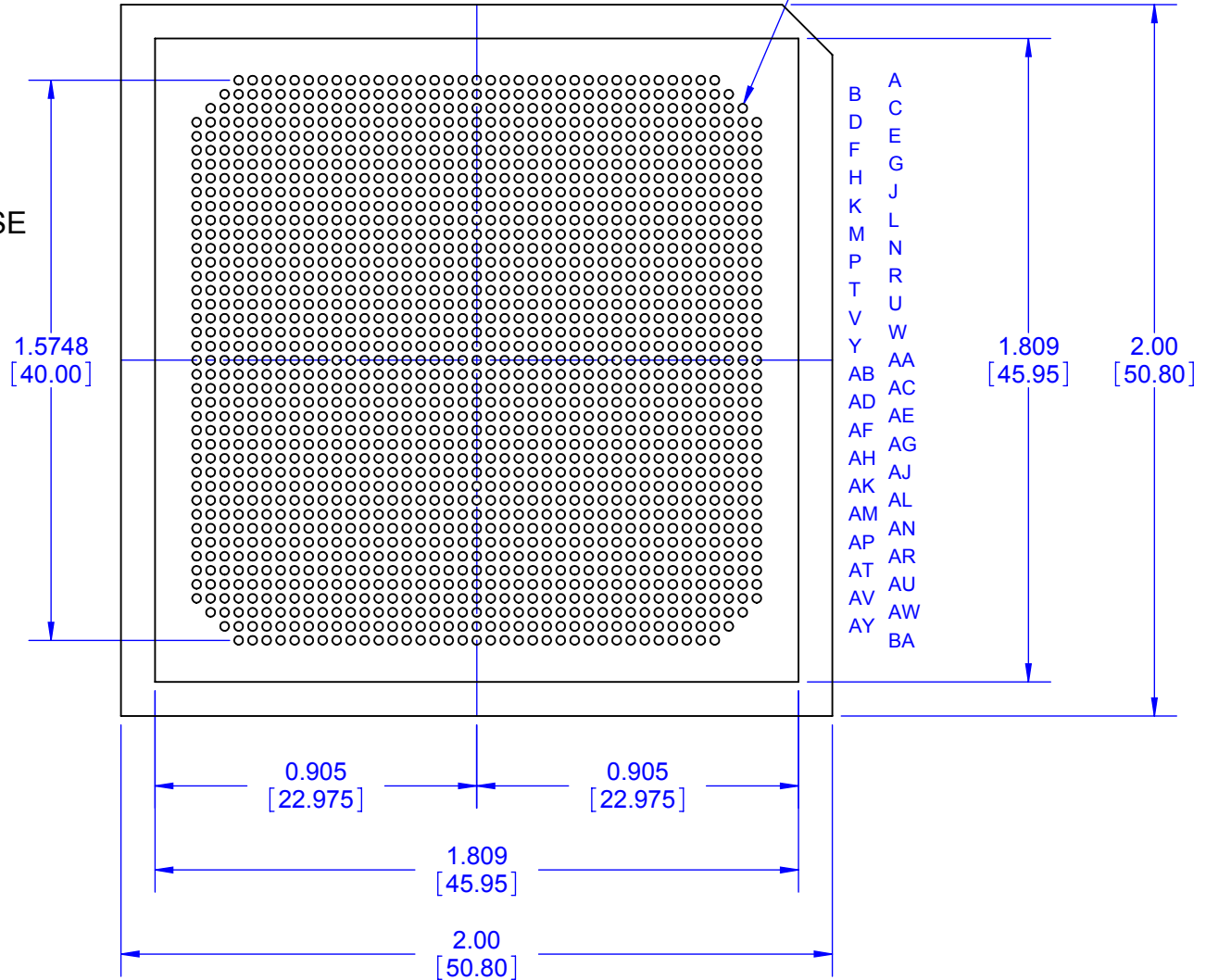
SIDE

TOP VIEW



41 39 37 35 33 31 29 27 25 23 21 19 17 15 13 11 9 7 5 3 1
40 38 36 34 32 30 28 26 24 22 20 18 16 14 12 10 8 6 4 2

1657 POS
Ø0.025
[Ø0.635]



MODEL

NOTES:
1. DIMENSIONS INCHES [MM].
2. SHOWN WITH MAXIMUM ARRAY.

TopLine®

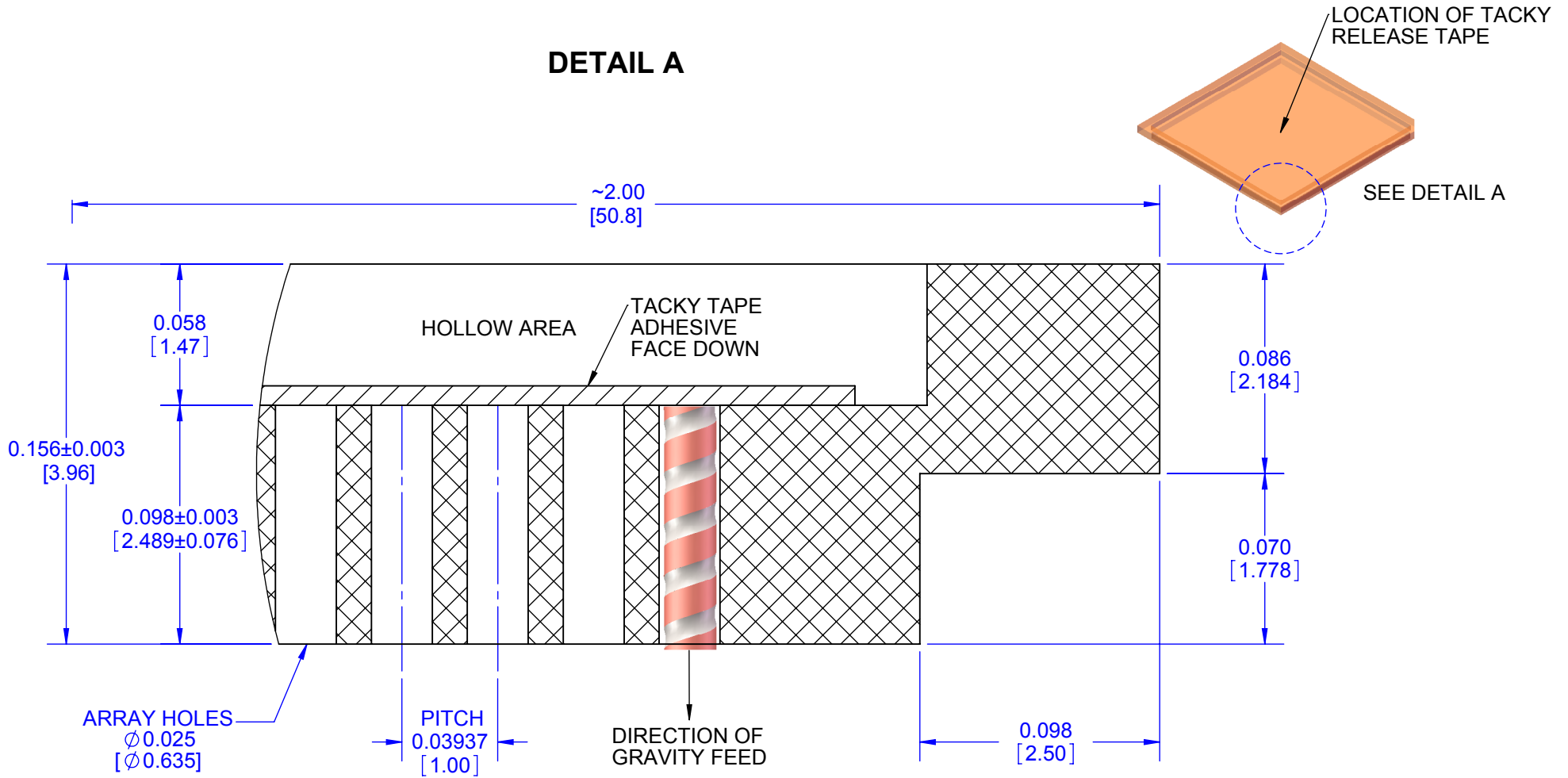
TITLE PP1657 PIN-PACK™
CCGA COLUMN CARRIER

SCALE 2:1	SIZE A	DRAWING NO. 001410	REV A
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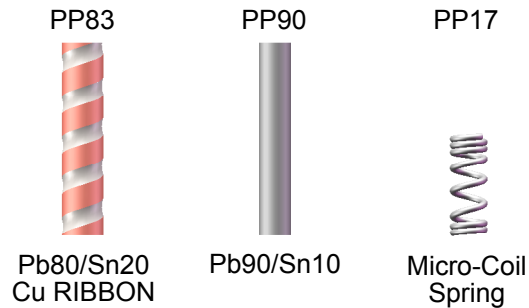
DO NOT SCALE DRAWING

SHEET 1 OF 8

DETAIL A



EXAMPLES OF COLUMNS

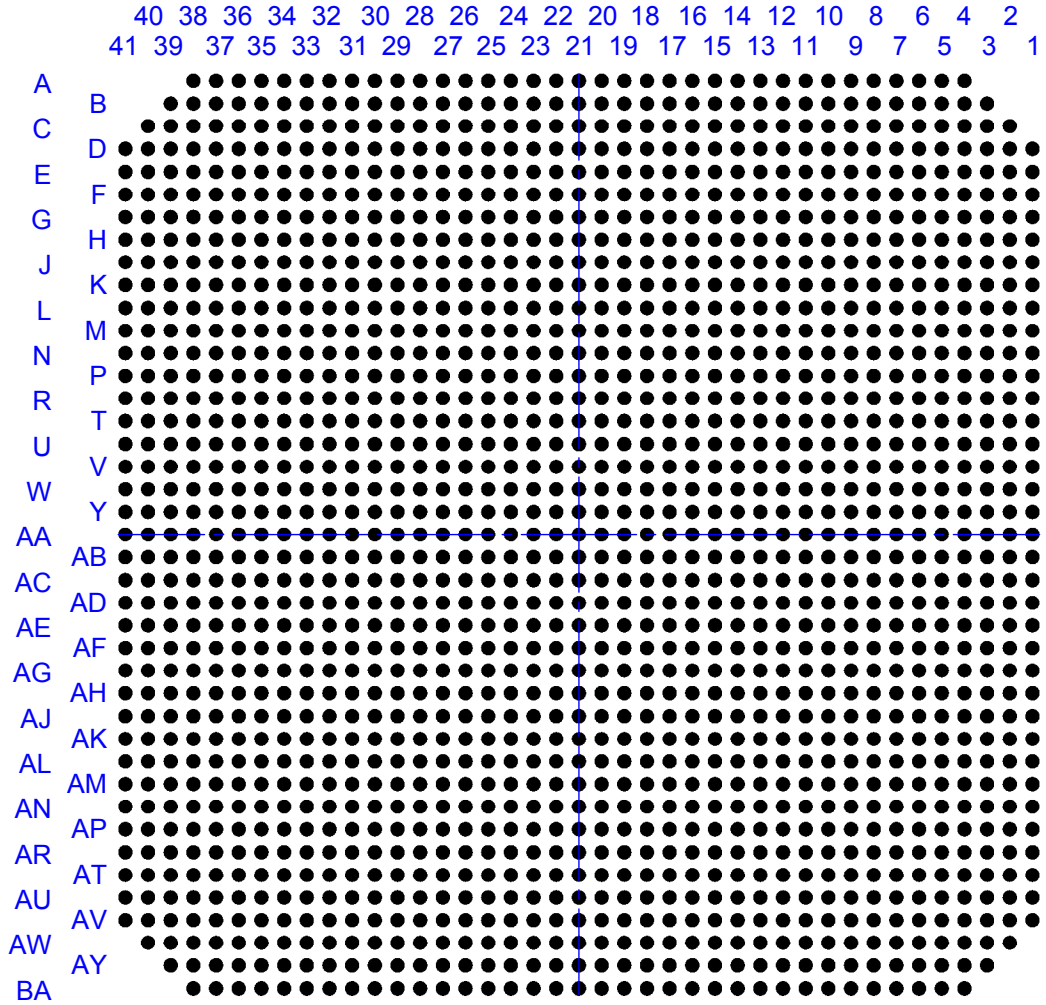


NOTES:
1. DIMENSIONS INCHES [MM].

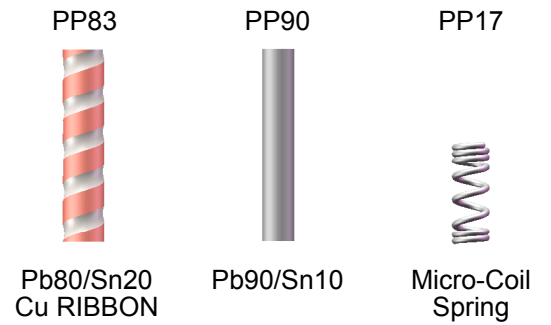
TopLine®			
TITLE PP1657 PIN-PACK™ CCGA COLUMN CARRIER			
SCALE 16:1	SIZE A	DRAWING NO. 001410	REV A
DO NOT SCALE DRAWING			SHEET 2 OF 8

PART NUMBER TABLE

PIN-PACK™	Pins	Pitch	Matrix	COLUMN				Empty DWG	Filled DWG
				Alloy	Construction	∅ Dia	Length		
PP83C1657E20x100A PP90U1657E20x100A PP17P1657E20x50A	1657	1.0mm	41x41	Pb80 Pb90 MCS	Cu Ribbon Plain Micro Coil	0.51mm	2.54mm 2.54mm 1.27mm	001410	831410 901410 171410

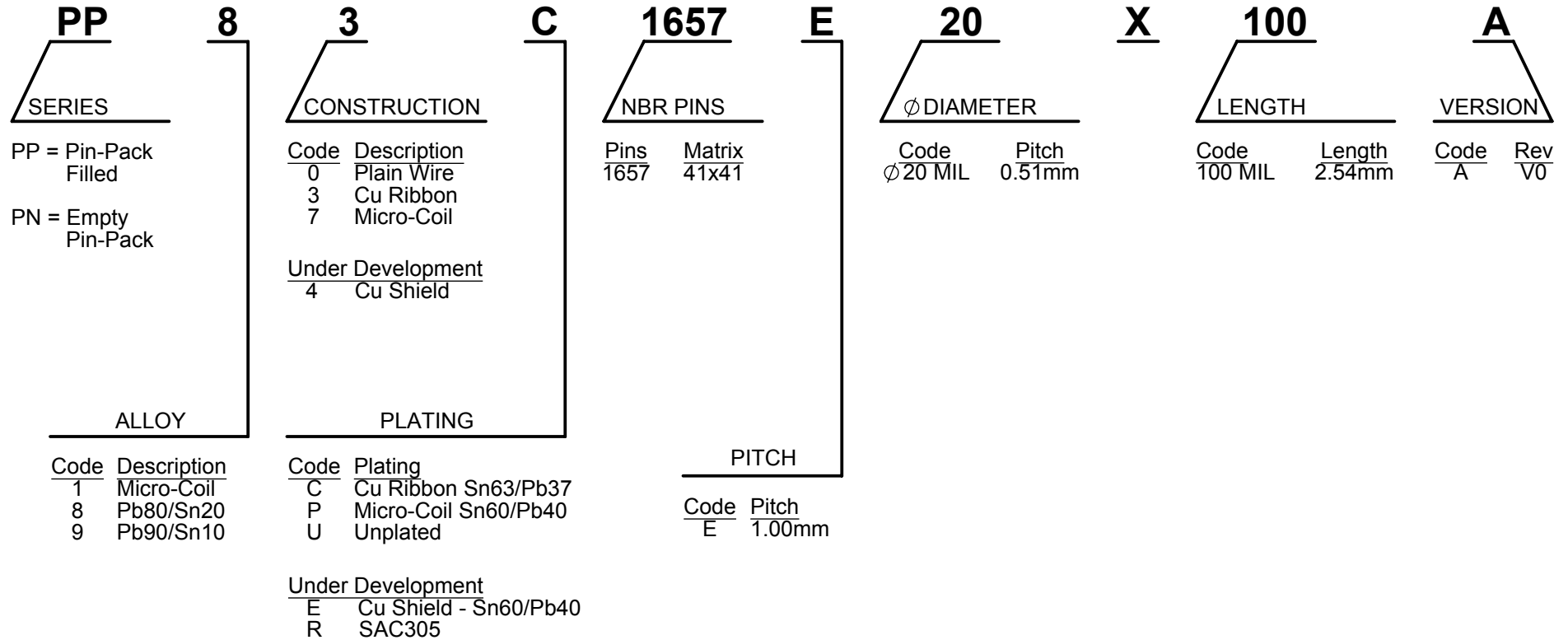


EXAMPLES OF COLUMNS

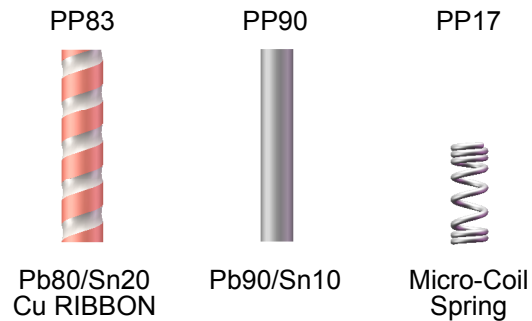


TopLine®			
TITLE PP1657 PIN-PACK™ CCGA COLUMN CARRIER			
SCALE NONE	SIZE A	DRAWING NO. 001410	REV A
DO NOT SCALE DRAWING			SHEET 3 OF 8

PIN-PACK™ PART NUMBERING SYSTEM



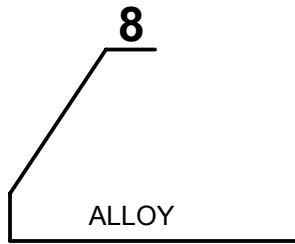
EXAMPLES OF COLUMNS



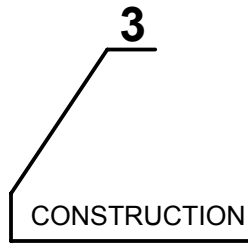
NOTE 1: PP83, PP90 and PP93 REQUIRES TRIMMING TO FINISHED LENGTH.
 NOTE 2: COLUMN 2.54mm TO BE TRIMMED TO 2.21mm AFTER ATTACHMENT.

TopLine®			
TITLE PP1657 PIN-PACK™ CCGA COLUMN CARRIER			
SCALE 10:1	SIZE A	DRAWING NO. 001410	REV A
DO NOT SCALE DRAWING			SHEET 4 OF 8

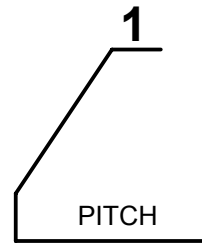
PIN-PACK™ DRAWING NUMBERING SYSTEM



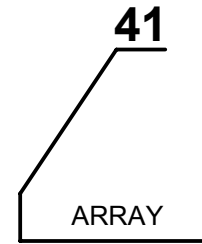
Code	Description
00	Empty
1	Micro-Coil
8	Pb80/Sn20
9	Pb90/Sn10



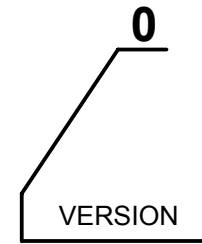
Code	Description
0	Plain Wire
3	Cu Ribbon
7	Micro-Coil



Code	Pitch
1	1.0mm



Code	Matrix
41	41x41



Code	Rev
0	1657 PINS Ø0.51mm

Under Development

4	Cu + Sn60/Pb40
5	Cu + SAC
6	Sn60/Pb40

EXAMPLES OF COLUMNS

PP83



Pb80/Sn20
Cu RIBBON

PP90



Pb90/Sn10

PP17



Micro-Coil
Spring

TopLine®

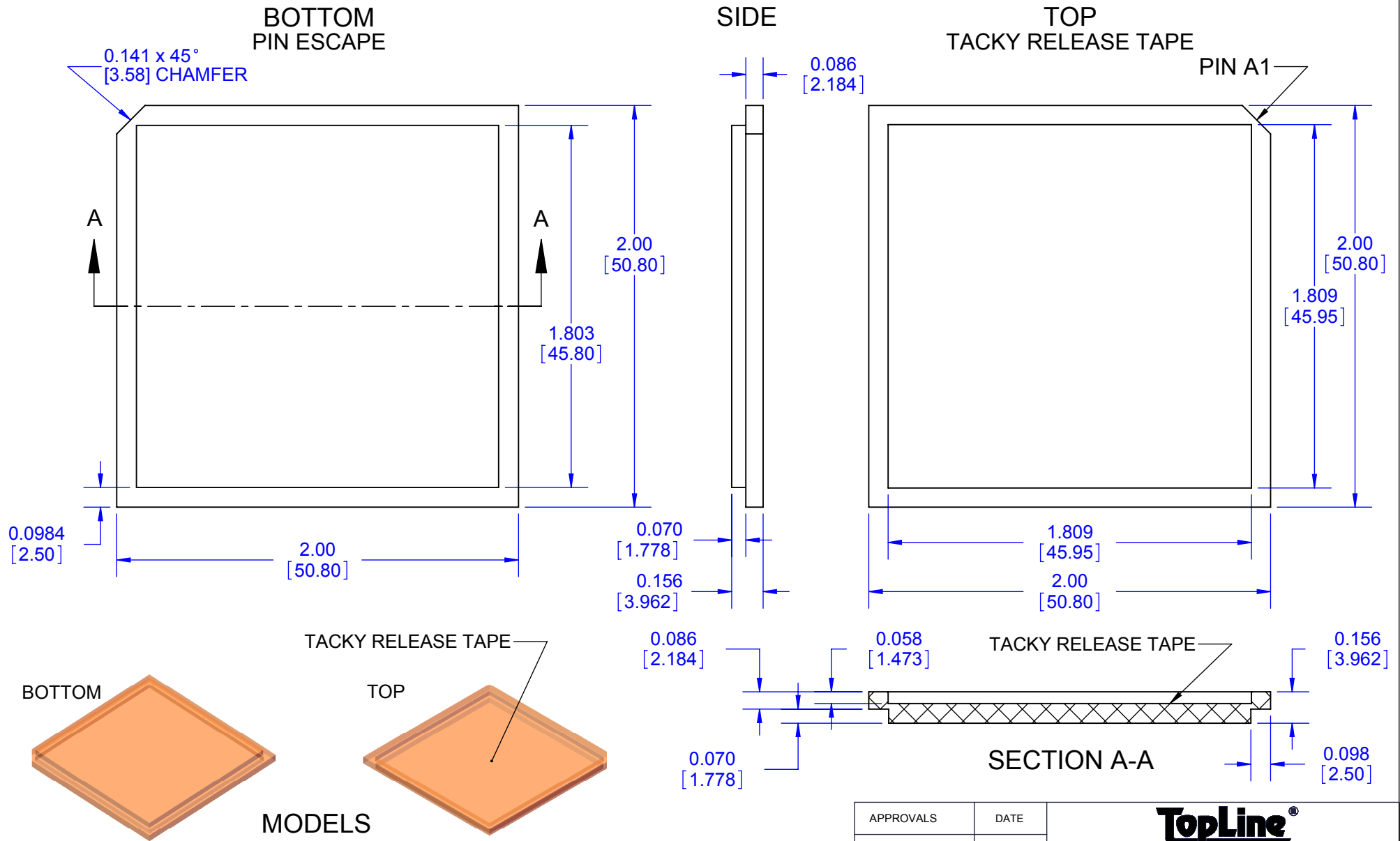
TITLE PP1657 PIN-PACK™
CCGA COLUMN CARRIER

SCALE	SIZE	DRAWING NO.	REV
10:1	A	001410	A

DO NOT SCALE DRAWING

SHEET 5 OF 8

PIN-PACK™ OUTLINE

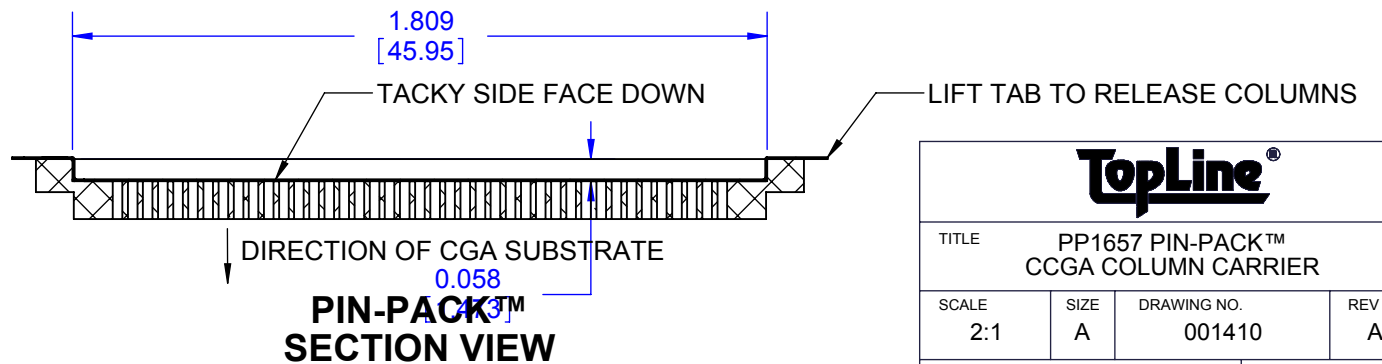
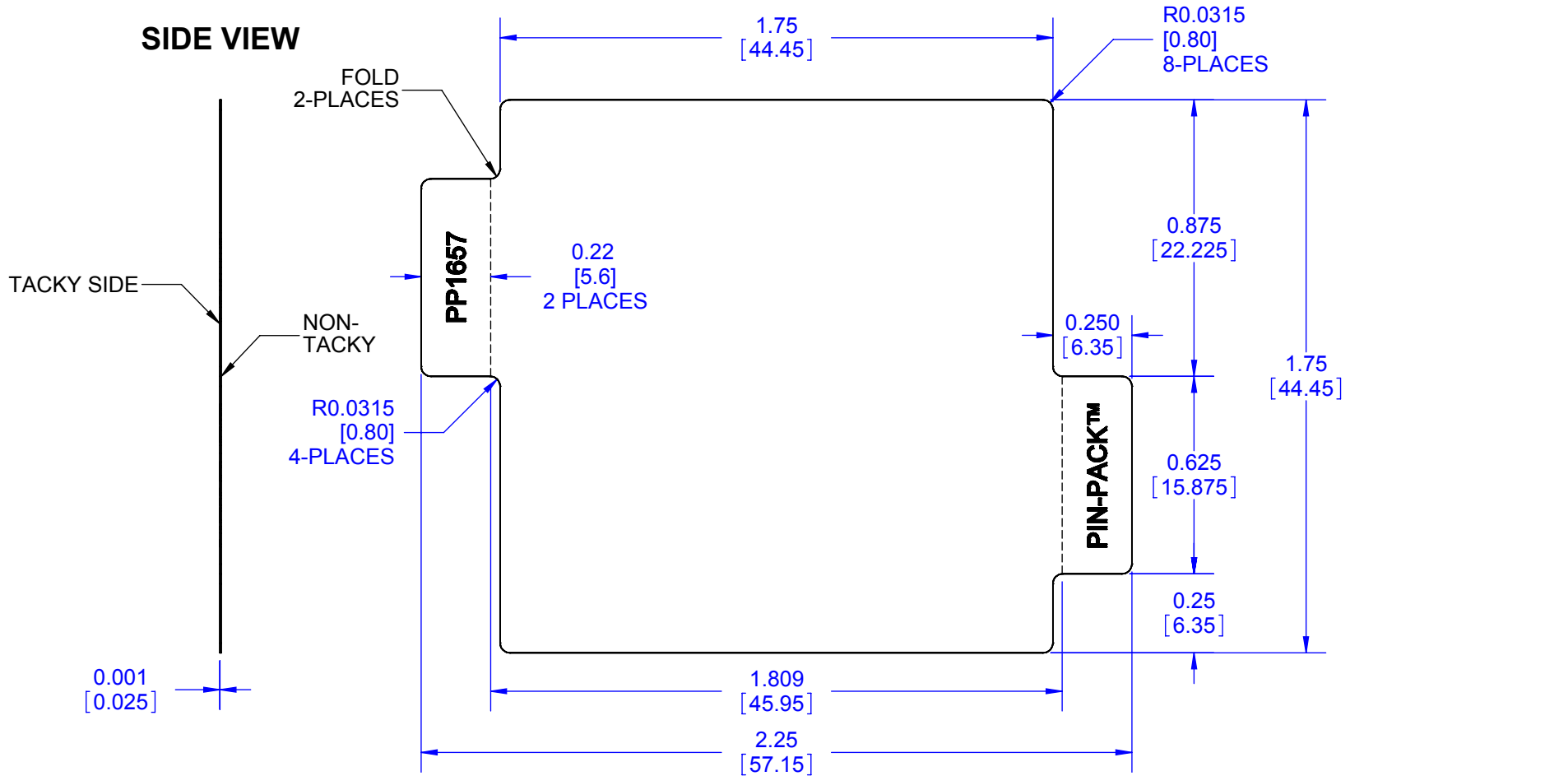


NOTES:

1. DIMENSIONS INCHES [MM].
2. SHOWN WITHOUT HOLES FOR CLARITY.
3. PIN-PACK™ IS TRADEMARK OF TOPLINE.
4. PIN-PACK™ PATENT PENDING.

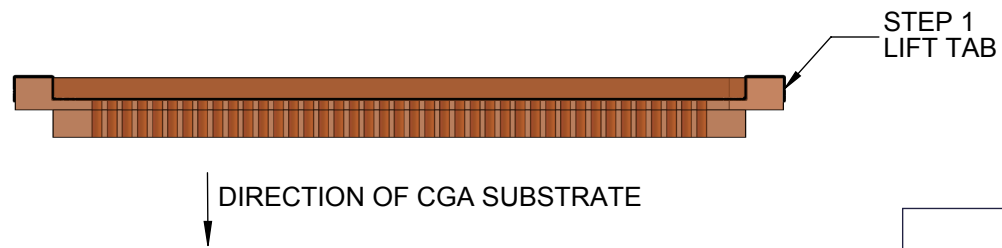
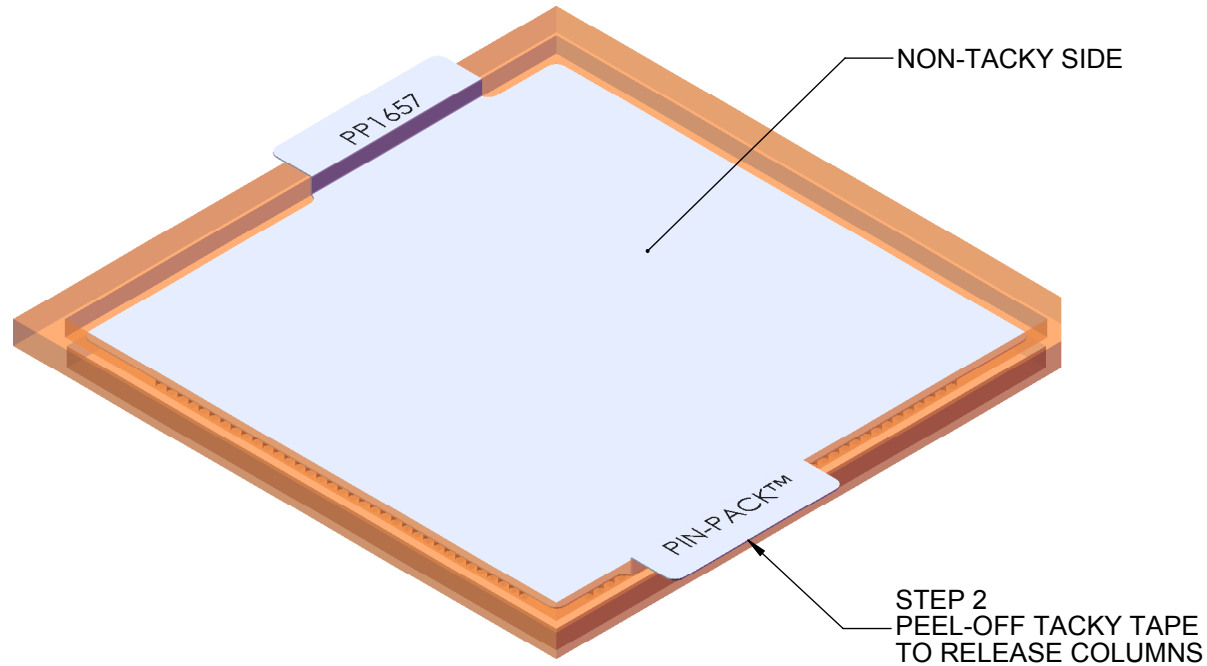
APPROVALS	DATE	TopLine®			
DRAWN T.Au	10/02/14				
ENG M. Hart	10/02/14	TITLE PP1657 PIN-PACK™ CCGA COLUMN CARRIER			
MFG		SCALE	SIZE	DRAWING NO.	REV
QA		3:2	A	001410	A
CUST		DO NOT SCALE DRAWING			SHEET 6 OF 8
REVISED					

TACKY RELEASE TAPE TOP VIEW



TopLine®			
TITLE PP1657 PIN-PACK™ CCGA COLUMN CARRIER			
SCALE 2:1	SIZE A	DRAWING NO. 001410	REV A
DO NOT SCALE DRAWING			SHEET 7 OF 8

TACKY RELEASE TAPE MODEL



TopLine®			
TITLE PP1657 PIN-PACK™ CCGA COLUMN CARRIER			
SCALE 2:1	SIZE A	DRAWING NO. 001410	REV A
DO NOT SCALE DRAWING			SHEET 8 OF 8