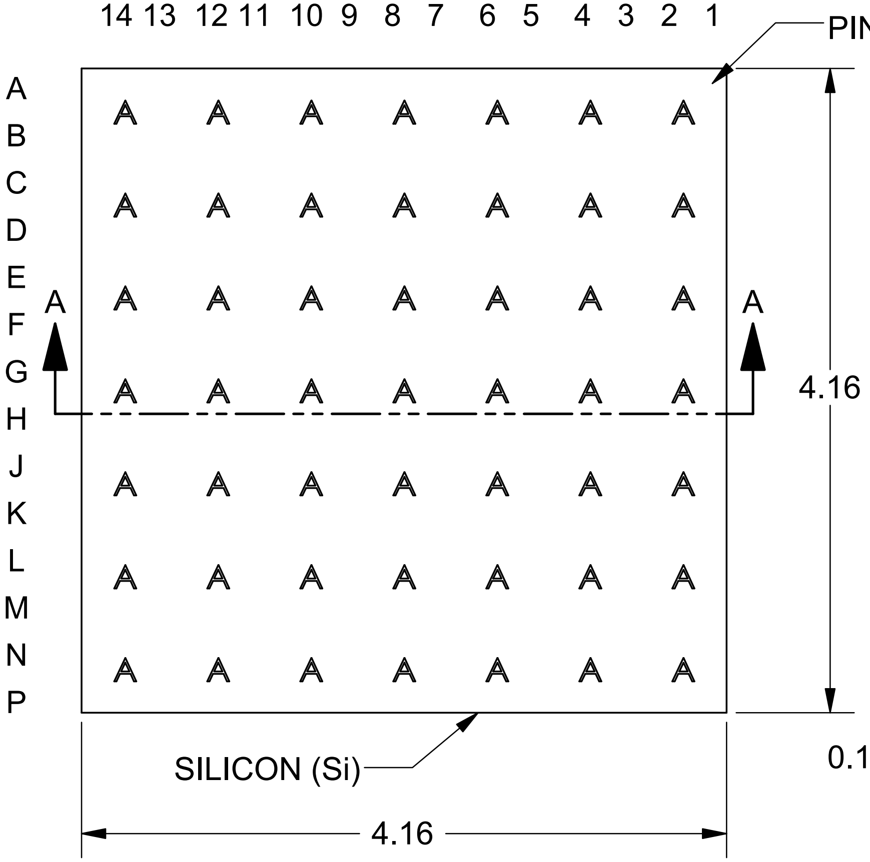
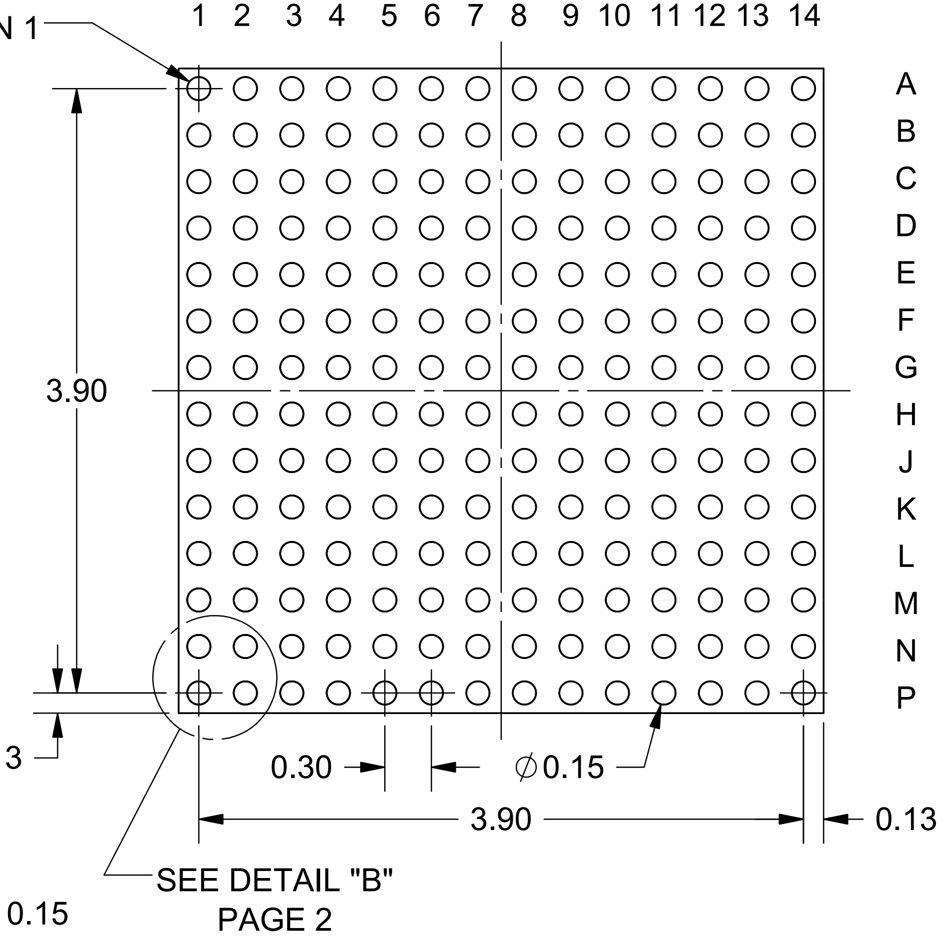
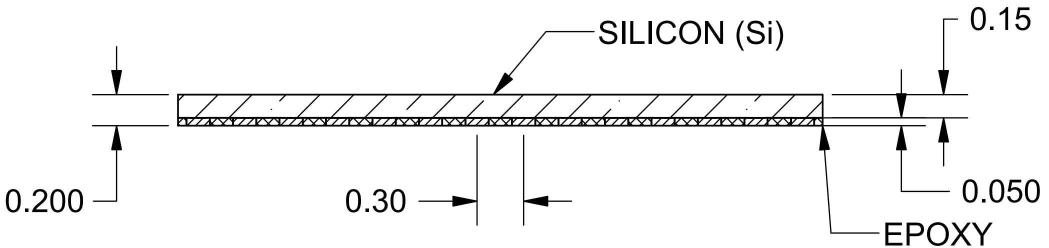
TOP VIEW



PAD VIEW





SECTION A-A

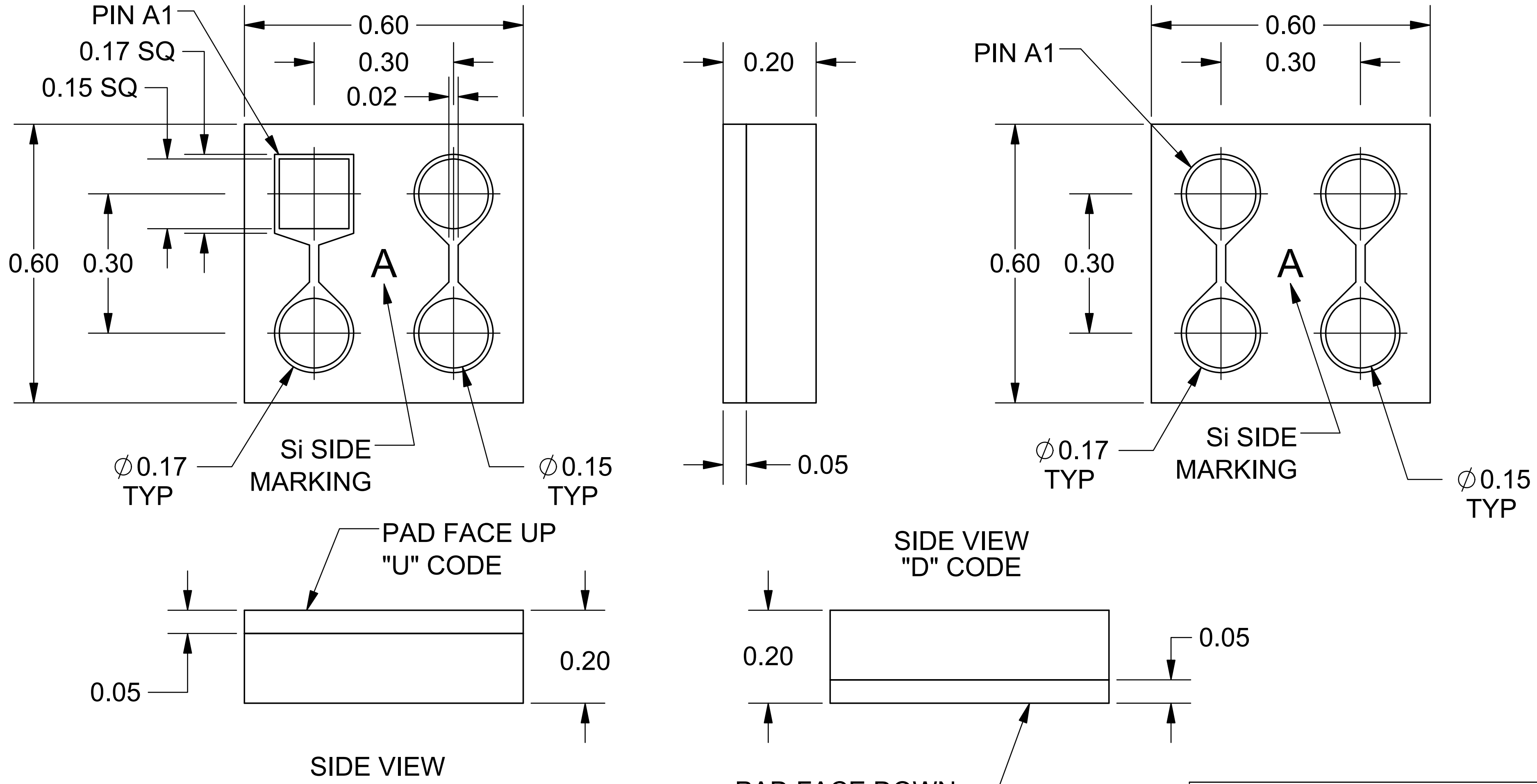
Notes: (Unless Otherwise Specified).
1) ALL DIMENSIONS ARE IN MM.
2) PAD ALLOY: Cu (50 µm THICK).
3) PAD Cu DIAMETER 0.15mm.
4) DIE MATERIAL: Si (SILICON).
5) DAISY CHAIN PATTERN (SEE PAGE 3).
6) PART NUMBER SUSTEM (SEE PAGE 4/5).

TOLERANCE UNLESS NOTED		APPROVALS		DATE	TopLine			
X.X	+/- 0.3							
X.XX	+/- 0.03	DRAWN	J. Hines	3/24/2017				
X.XXX	+/- 0.003							
ANGLES	+/- 0.5°	ENG	M. Hart	3/24/2017	TITLE	eWLP196T.3-DC148D 196L P=0.3mm		
ALL DIMENSIONS IN ☐ INCHES ☒ MILLIMETERS		MFG						
THIRD ANGLE PROJECTION		QA			SCALE 20.5:1	SIZE A	DRAWING NO. 631480	REV B
		CUST						
		REVISED			DO NOT SCALE DRAWING		SHEET 1 OF 9	

DETAIL B
COPPER POST
SQUARE AND ROUND
PRIOR TO DICING

OPTION SQ
SQUARE POST

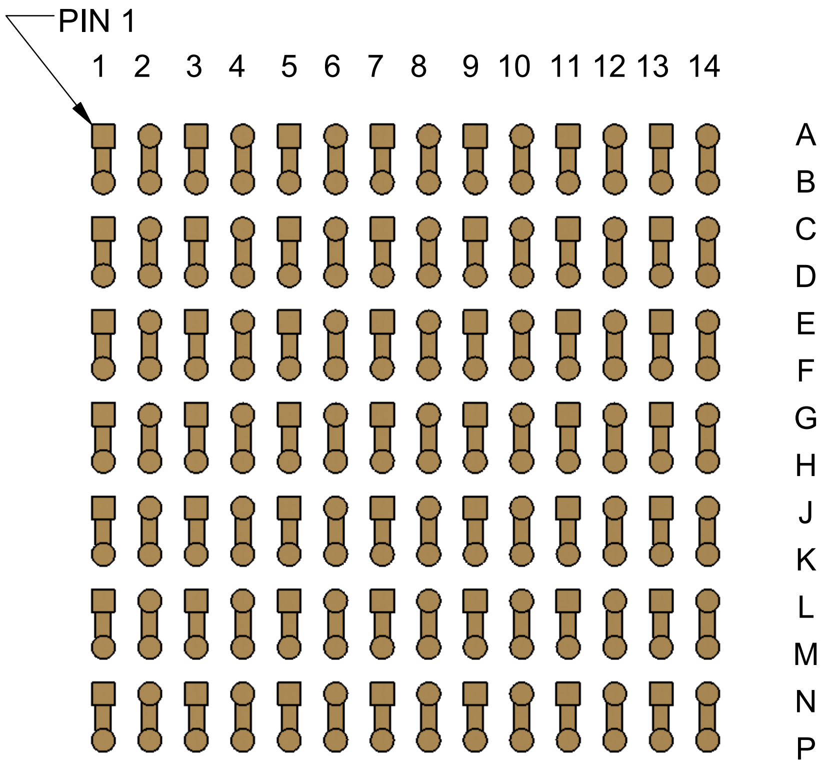
OPTION STANDARD
ROUND POST



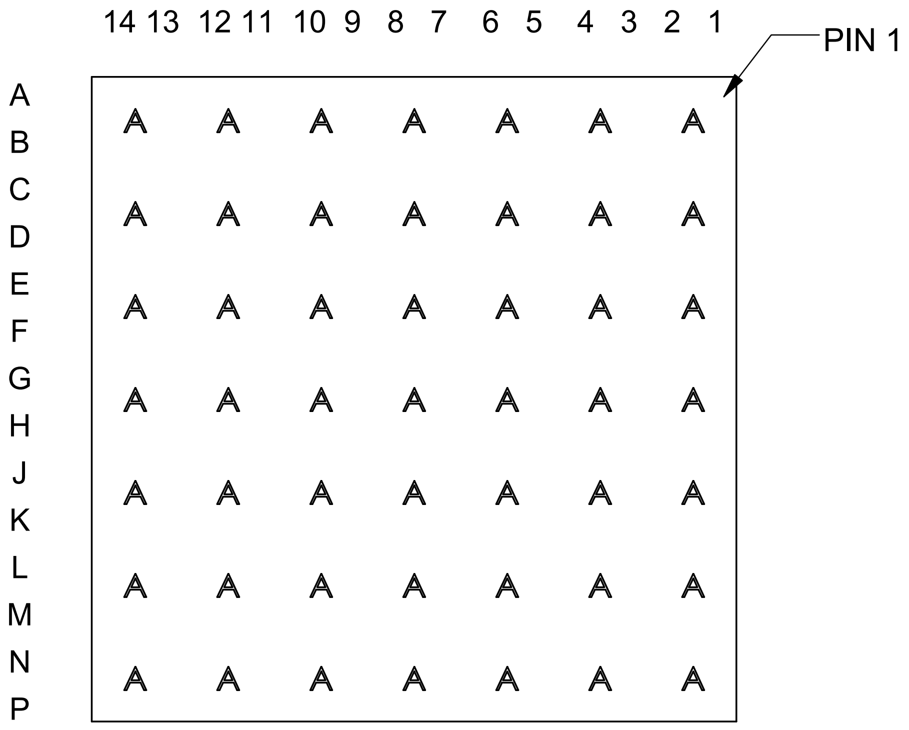
TITLE eWLP196T.3-DC148D 196L P=0.3mm			
SCALE 75:1	SIZE A	DRAWING NO. 631480	REV B
DO NOT SCALE DRAWING	SHEET 2 OF 9		

DAISY CHAIN PATTERN
SHOWN WITH SQUARE PADS

PAD VIEW



SILICON Si VIEW

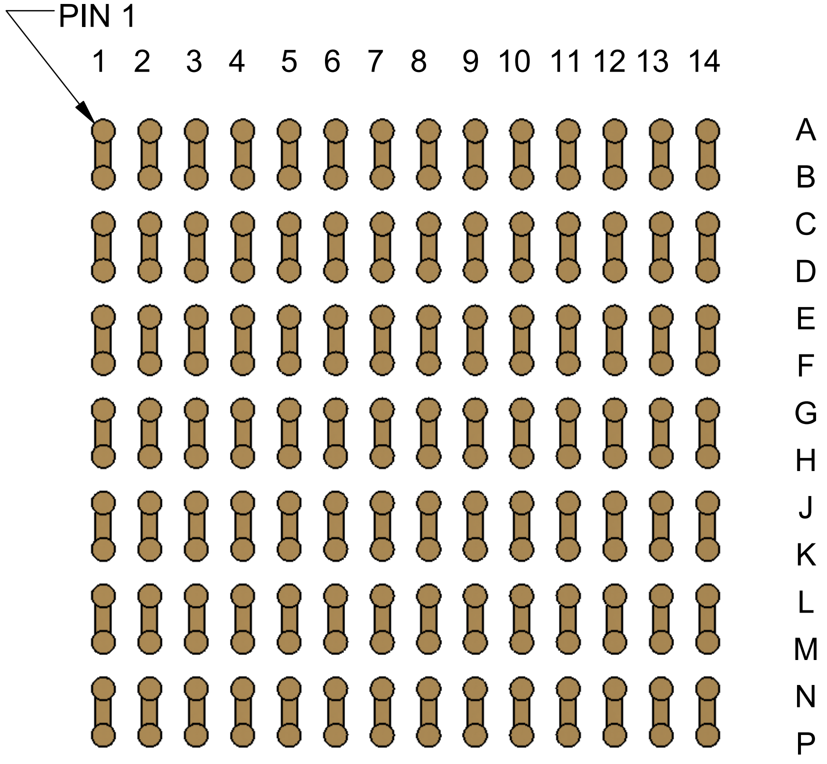


TopLine

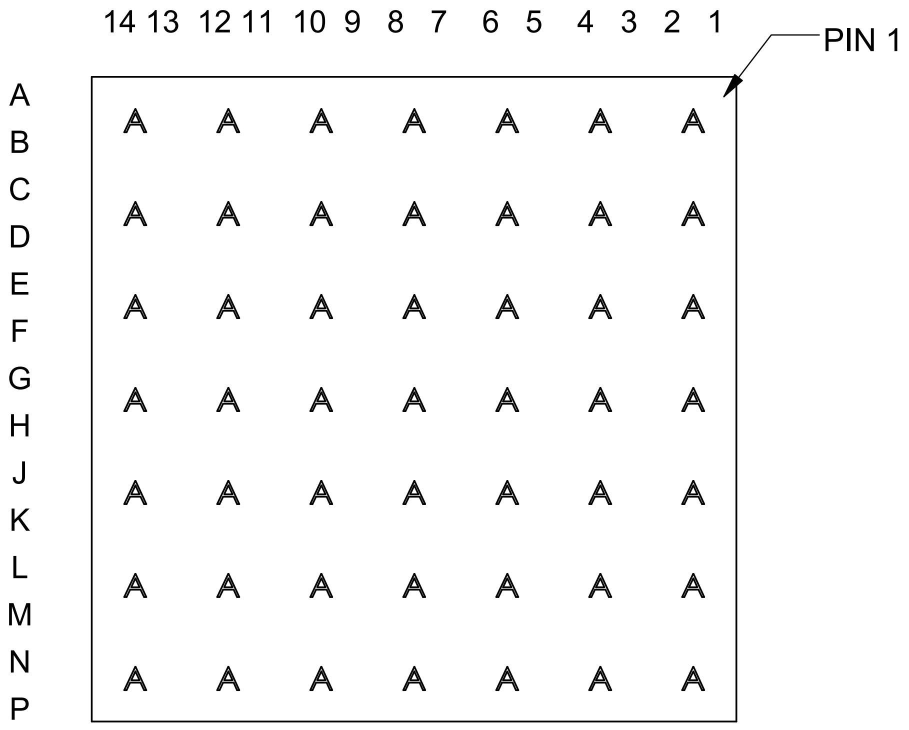
TITLE	eWLP196T.3-DC148D 196L P=0.3mm		
SCALE 20.5:1	SIZE A	DRAWING NO. 631480	REV B
DO NOT SCALE DRAWING		SHEET 3 OF 9	

DAISY CHAIN PATTERN
SHOWN WITH ROUND PADS

PAD VIEW



SILICON Si VIEW



TopLine

TITLE	eWLP196T.3-DC148D 196L P=0.3mm		
SCALE 20.5:1	SIZE A	DRAWING NO. 631480	REV B
DO NOT SCALE DRAWING	SHEET 4 OF 9		

PART NUMBERING SYSTEM

eWLP 196 T .3 - DC148 D 2 Q

SERIES

eWLP = WITHOUT BALL
WLP = WITH SOLDER BALL

NUMBER OF PADS

196 PADS

PACKAGING

CODE	PACKAGE
W =	2" TRAY
T =	4" TRAY
E =	TAPE & REEL
U =	UV TAPE & RING
X=	WAFFER CARRIER

PAD PITCH

.3 = 0.3mm

PAD PATTERN

DAISY CHAIN DRAWING

DIE

D = PAD DOWN
U = PAD UP

DIE THICKNESS

CODE	THICKNESS
2 =	200 µm
3 =	360 µm

PAD PIN 1

CODE	SHAPE
BLANK =	ROUND
Q =	SQUARE

TopLine®

TITLE	eWLP196T.3-DC148D 196L P=0.3mm		
SCALE 20.5:1	SIZE A	DRAWING NO. 631480	REV B
DO NOT SCALE DRAWING		SHEET 5 OF 9	

PART NUMBER TABLE

DWG	PART NUMBER	DIE THICKNESS	PAD PIN 1	PAD UP/DOWN	PACKAGING
SQUARE PIN 1 PAD					
131487	eWLP196W.3-DC148U2Q	200 µm	SQ	UP	2-INCH TRAY
131488	eWLP196W.3-DC148D2Q	200 µm	SQ	DOWN	2-INCH TRAY
131489	eWLP196T.3-DC148U2Q	200 µm	SQ	UP	4-INCH TRAY
131480	eWLP196T.3-DC148D2Q	200 µm	SQ	DOWN	4-INCH TRAY
131481	eWLP196E.3-DC148D2Q	200 µm	SQ	DOWN	TAPE & REEL
131482	eWLP196E.3-DC148D2Q	200 µm	SQ	DOWN	CUT TAPE
131483	eWLP196U.3-DC148U2Q	200 µm	SQ	UP	SAWN WAFER - UV TAPE & RING
131485	eWLP196X.3-DC148U2Q	200 µm	SQ	UP	UNSAWN WAFER

DWG	PART NUMBER	DIE THICKNESS	PAD PIN 1	PAD UP/DOWN	PACKAGING
ROUND PIN 1 PAD					
631487	eWLP196W.3-DC148U2	200 µm	ROUND	UP	2-INCH TRAY
631488	eWLP196W.3-DC148D2	200 µm	ROUND	DOWN	2-INCH TRAY
631489	eWLP196T.3-DC148U2	200 µm	ROUND	UP	4-INCH TRAY
631480	eWLP196T.3-DC148D2	200 µm	ROUND	DOWN	4-INCH TRAY
631481	eWLP196E.3-DC148D2	200 µm	ROUND	DOWN	TAPE & REEL
631482	eWLP196E.3-DC148D2	200 µm	ROUND	DOWN	CUT TAPE
631483	eWLP196U.3-DC148U2	200 µm	ROUND	UP	SAWN WAFER - UV TAPE & RING
631485	eWLP196X.3-DC148U2	200 µm	ROUND	UP	UNSAWN WAFER

DWG	PART NUMBER	DIE THICKNESS	PAD PIN 1	PAD UP/DOWN	PACKAGING
ROUND PIN 1 PAD					
731487	eWLP196W.3-DC148U3	360 µm	ROUND	UP	2-INCH TRAY
731488	eWLP196W.3-DC148D3	360 µm	ROUND	DOWN	2-INCH TRAY
731489	eWLP196T.3-DC148U3	360 µm	ROUND	UP	4-INCH TRAY
731480	eWLP196T.3-DC148D3	360 µm	ROUND	DOWN	4-INCH TRAY
731481	eWLP196E.3-DC148D3	360 µm	ROUND	DOWN	TAPE & REEL
731482	eWLP196E.3-DC148D3	360 µm	ROUND	DOWN	CUT TAPE
731483	eWLP196U.3-DC148U3	360 µm	ROUND	UP	SAWN WAFER - UV TAPE & RING
731485	eWLP196X.3-DC148U3	360 µm	ROUND	UP	UNSAWN WAFER

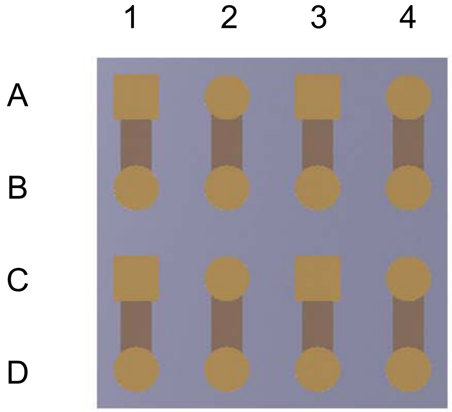
TopLine®

TITLE eWLP196T.3-DC148D
196L P=0.3mm

SCALE	SIZE	DRAWING NO.	REV
20.5:1	A	631480	B

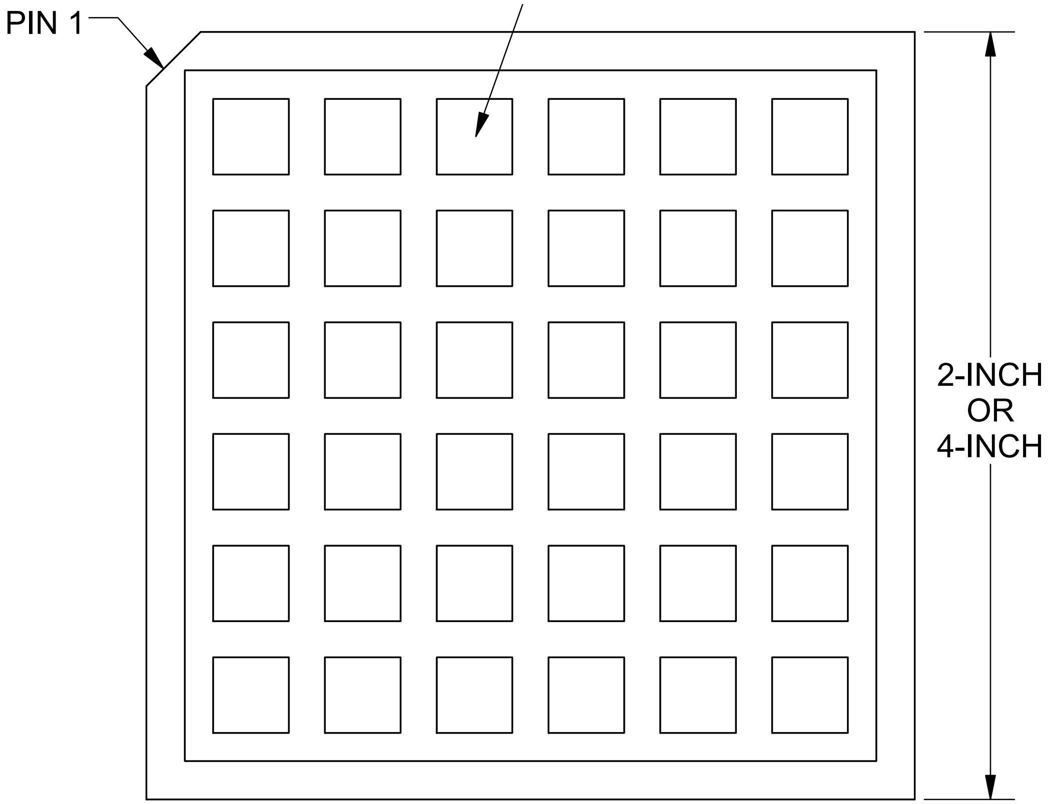
DO NOT SCALE DRAWING

SQ PAD UPPER LEFT DAISY CHAIN SIMULATION SCALE= 40:1



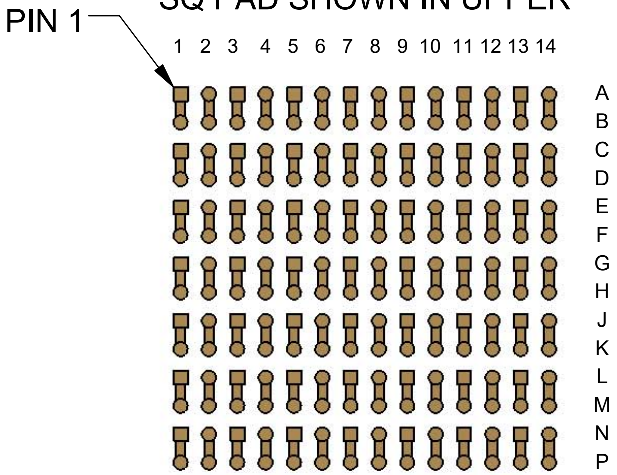
PAD SIDE UP ORIENTATION WAFFLE PACK

TYPICAL WAFFLE PACK
IC CHIP TRAY
SCALE = 2:1



NUMBER OF POCKETS WILL CHANGE
BASED ON THE SIZE OF THE WLP CHIP

DAISY CHAIN WITH SQ PAD SHOWN IN UPPER



Notes: (Unless Otherwise Specified).

1) EXAMPLE OF TOP SIDE LASER MARKING.
2) ORIENT LETTERS FOR LOCATION OF PIN A1 CORNER.
3) ALLOWABLE LETTER MARKING: A, F, T, M, L, Y, AND P.
4) SINGLE LETTER IS REPEATED MULTIPLE TIMES ACROSS TOP SIDE.
5) DAISY CHAIN IS HIDDEN UNDER RESIN ON BALL SIZE.
6) TOP SIDE DOES NOT HAVE A DOT FOR LOCATION OF PIN A1.
7) LETTERS ARE NOT MARKED ON BOTTOM (BALL) SIDE.

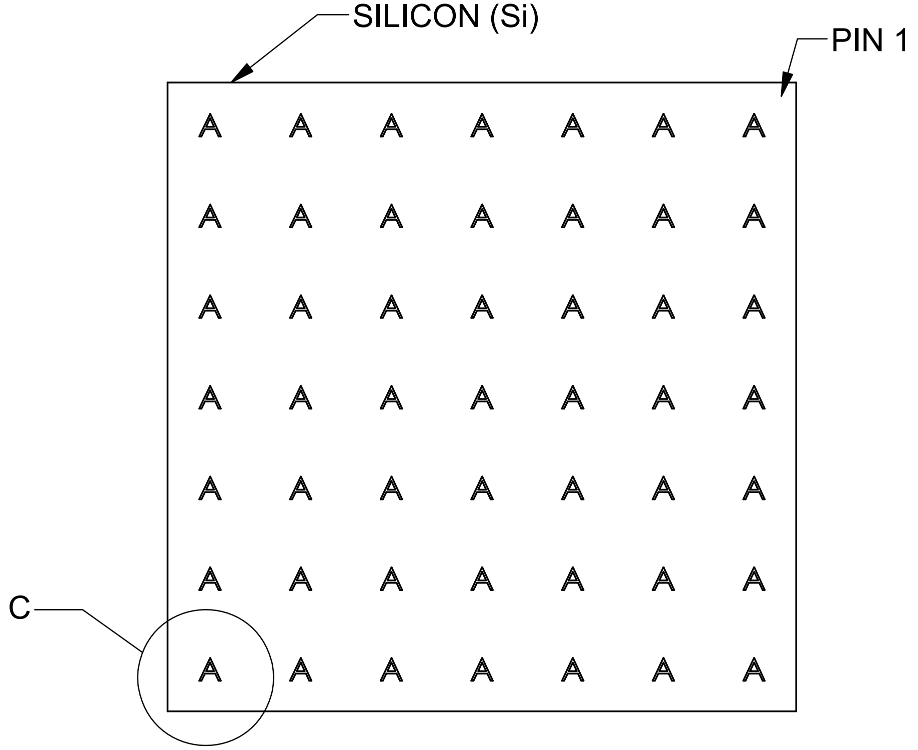
MARKING CODE

PITCH	LETTER
0.3MM	A
0.4MM	F
0.5MM	P

TopLine®

TITLE	eWLP196T.3-DC148D 196L P=0.3mm		
SCALE 12.5:1	SIZE A	DRAWING NO. 631480	REV B
DO NOT SCALE DRAWING		SHEET 7 OF 9	

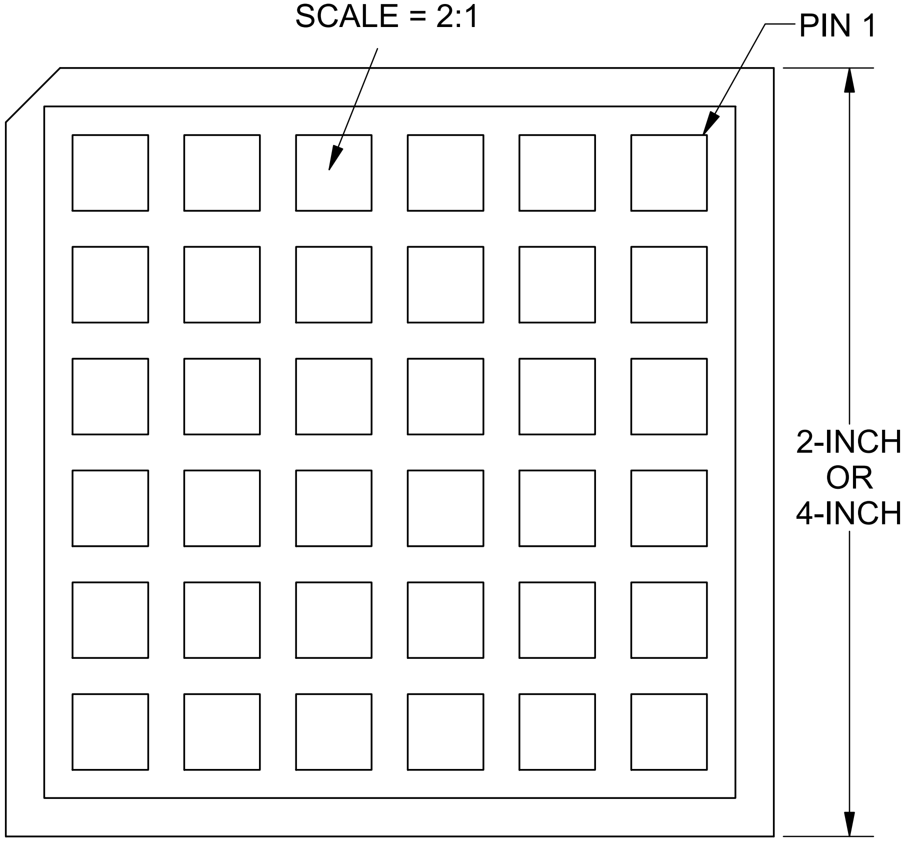
TOP VIEW



EXAMPLE ORIENTATION
OF MARKINGS ON eWLP

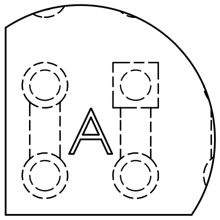
PAD SIDE DOWN ORIENTATION
WAFFLE PACK

TYPICAL WAFFLE PACK
IC CHIP TRAY
SCALE = 2:1



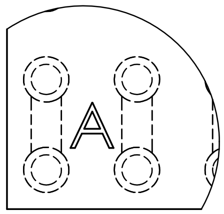
NUMBER OF POCKETS WILL CHANGE
BASED ON THE SIZE OF THE WLP CHIP

DAISY CHAIN VIEWED THRU DIE



DAISY CHAIN
ORIENTATION

DETAIL C
SCALE 40 : 1
SQUARE PAD



DAISY CHAIN
ORIENTATION

DETAIL C
SCALE 40 : 1
ROUND PAD

Notes: (Unless Otherwise Specified).

1) EXAMPLE OF TOP SIDE LASER MARKING.
2) ORIENT LETTERS FOR LOCATION OF PIN A1 CORNER.
3) ALLOWABLE LETTER MARKING: A, F, T, M, L, Y, AND P.
4) SINGLE LETTER IS REPEATED MULTIPLE TIMES ACROSS TOP SIDE.
5) DAISY CHAIN IS HIDDEN UNDER RESIN ON BALL SIZE.
6) TOP SIDE DOES NOT HAVE A DOT FOR LOCATION OF PIN A1.
7) LETTERS ARE NOT MARKED ON BOTTOM (BALL) SIDE.

MARKING CODE

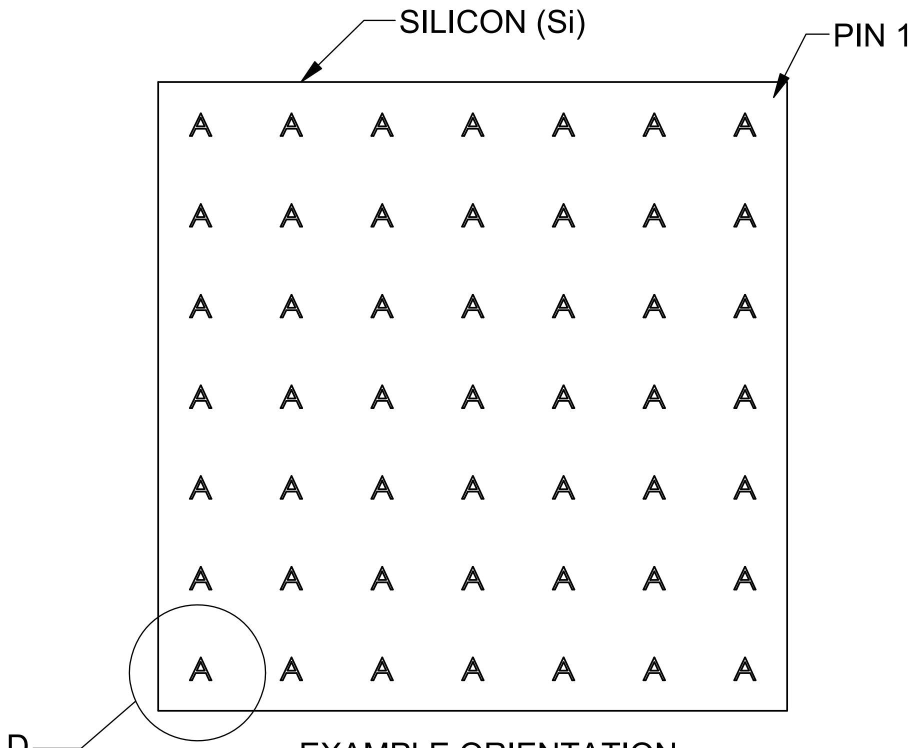
PITCH	LETTER
0.3MM	A
0.4MM	F
0.5MM	P

TopLine

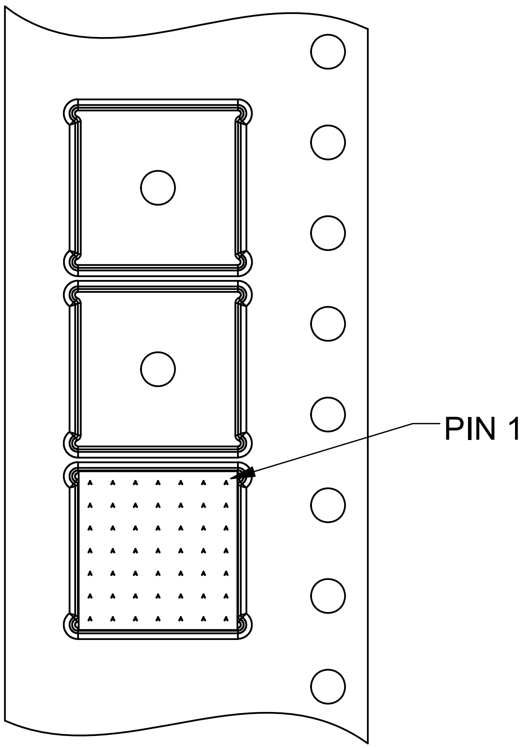
TITLE	eWLP196T.3-DC148D 196L P=0.3mm		
SCALE 20:1	SIZE A	DRAWING NO. 631480	REV B
DO NOT SCALE DRAWING		SHEET 8 OF 9	

eWLP ORIENTATION
TAPE AND REEL

TOP VIEW

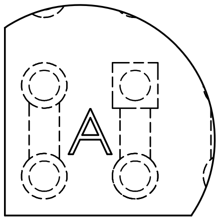


EXAMPLE ORIENTATION
OF MARKINGS ON eWLP



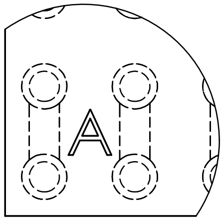
DIRECTION OF FEED

DAISY CHAIN VIEWED THRU DIE



DAISY CHAIN
ORIENTATION

DETAIL D
SCALE 40 : 1
SQUARE PAD



DAISY CHAIN
ORIENTATION

DETAIL D
SCALE 40 : 1
ROUND PAD

Notes: (Unless Otherwise Specified).
1) EXAMPLE OF TOP SIDE LASER MARKING.
2) ORIENT LETTERS FOR LOCATION OF PIN A1 CORNER.
3) ALLOWABLE LETTER MARKING: A, F, T, M, L, Y, AND P.
4) SINGLE LETTER IS REPEATED MULTIPLE TIMES ACROSS TOP SIDE.
5) DAISY CHAIN IS HIDDEN UNDER RESIN ON PAD SIZE.
6) TOP SIDE DOES NOT HAVE A DOT FOR LOCATION OF PIN A1.
7) LETTERS ARE NOT MARKED ON BOTTOM PAD SIDE.

MARKING CODE

PITCH	LETTER
0.3MM	A
0.4MM	F
0.5MM	P

TopLine®

TITLE	eWLP196T.3-DC148D 196L P=0.3mm		
SCALE 20:1	SIZE A	DRAWING NO. 631480	REV B
DO NOT SCALE DRAWING		SHEET 9 OF 9	