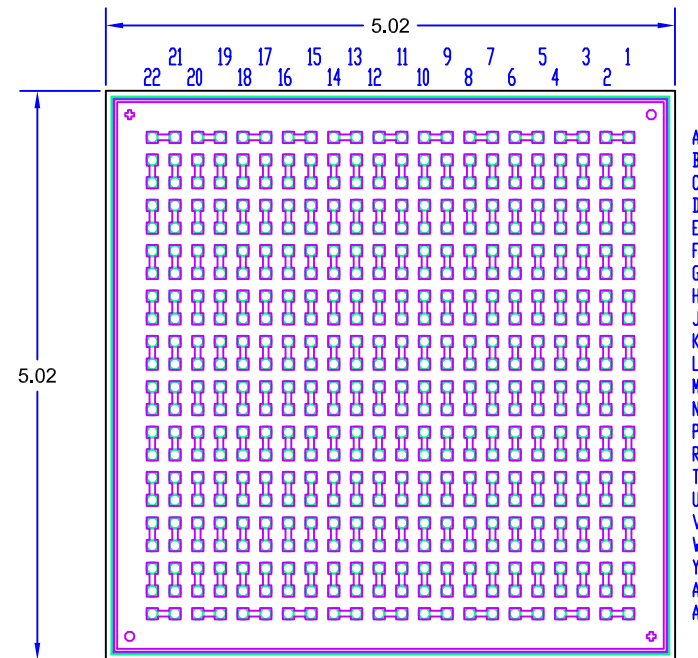


484 BUMP  
1024 DIE PER WAFER

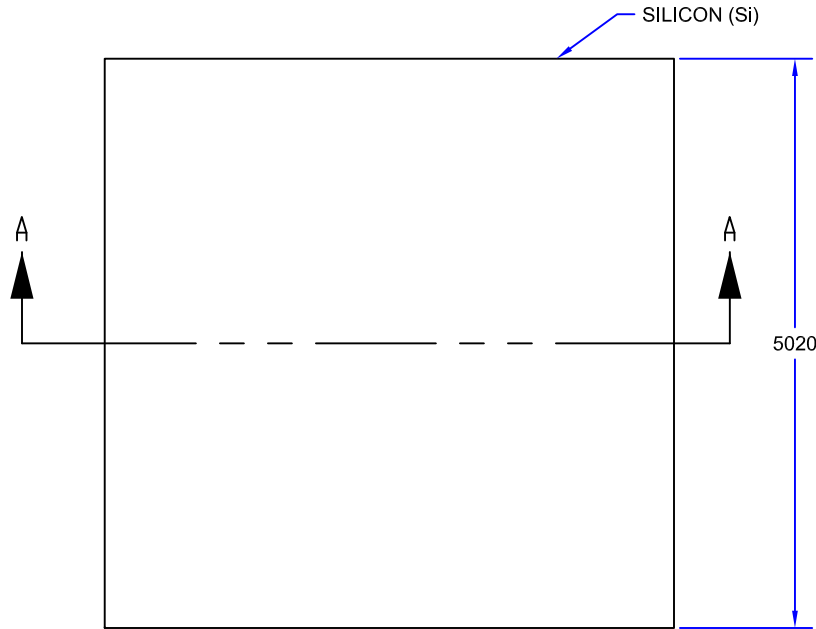
TYPICAL DIE  
484 BUMP  
SCALE=15:1



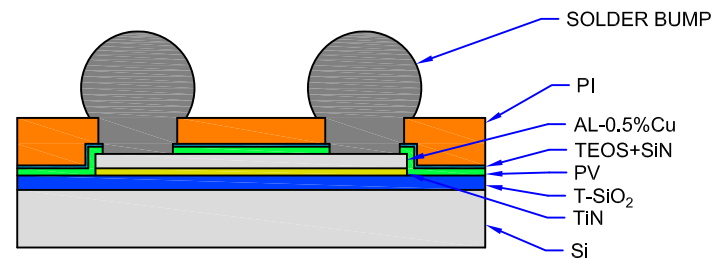
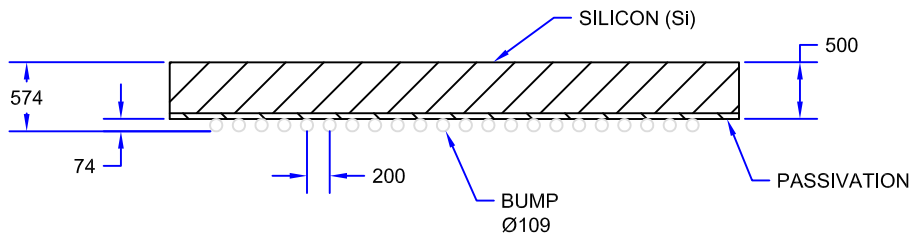
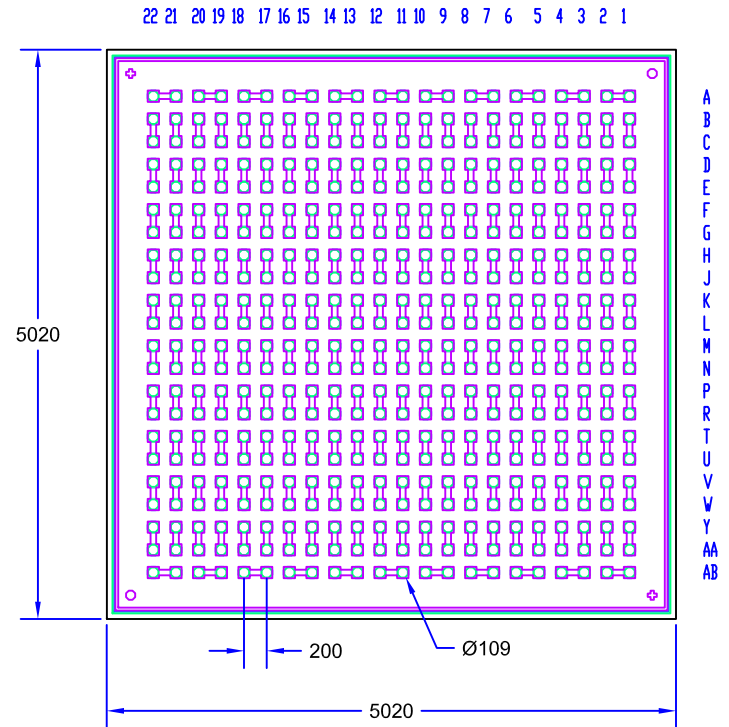
NOTES: (UNLESS OTHERWISE SPECIFIED)  
1) DIMENSIONS: MM [INCH].

APPROVALS		DATE	<b>TopLine®</b>			
DRAWN	J. HINES	3/20/2016				
ENG	M. HART	3/20/2016	TITLE FCW484G5C200-DC			
MFG			DAISY CHAIN BUMP WAFER 200UM			
QA			SCALE	SIZE	DRAWING NO.	REV
CUST			0.60:1	A	181848	A
REVISED			DO NOT SCALE DRAWING			SHEET 1 OF 9

### TOP VIEW



### BUMP VIEW



### SOLDER BUMP CROSS SECTION

#### NOTES:

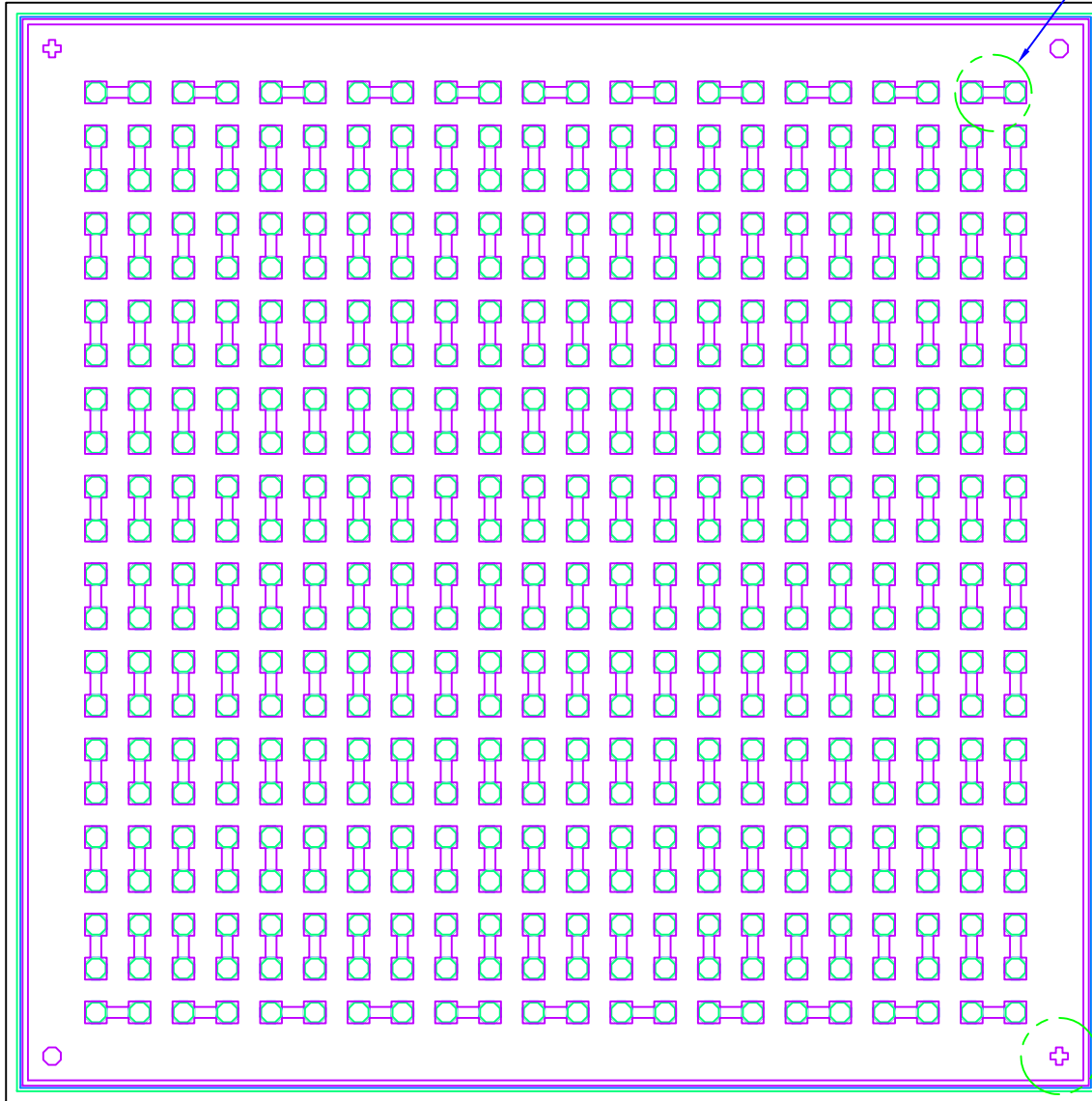
- 1) DIMENSIONS:  $\mu\text{M}$  (MICRON).
- 2) WAFER SIZE  $\varnothing 200$  MM ( $\varnothing 8$  INCH).
- 3) BUMP ALLOY: SAC305.
- 4) BUMP HEIGHT:  $74 \mu\text{M}$ .
- 5) BUMP DIAMETER:  $109 \mu\text{M}$ .



TITLE			
FCW484G5C200-DC			
DAISY CHAIN BUMP WAFER 200UM			
SCALE	SIZE	DRAWING NO.	REV
15:1	A	181848	A
DO NOT SCALE DRAWING			SHEET 2 OF 9

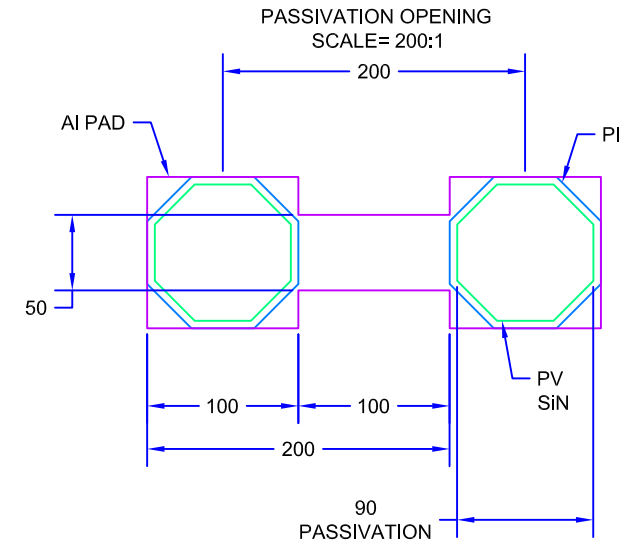
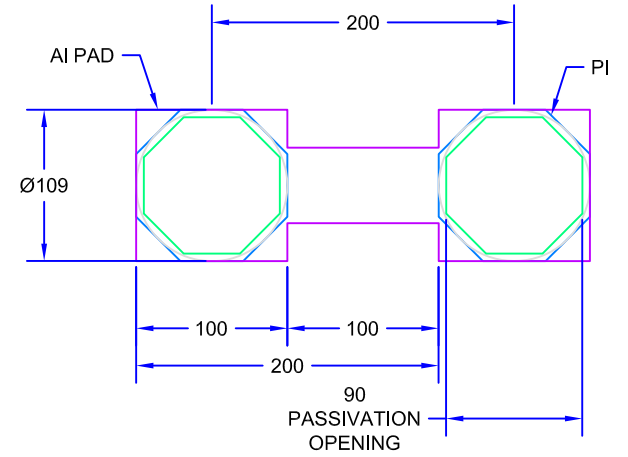
22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

A  
B  
C  
D  
E  
F  
G  
H  
J  
K  
L  
M  
N  
P  
R  
T  
U  
V  
W  
Y  
AA  
AB



SEE DETAIL A

DETAIL A  
SOLDER BUMP PAD  
SCALE= 200:1

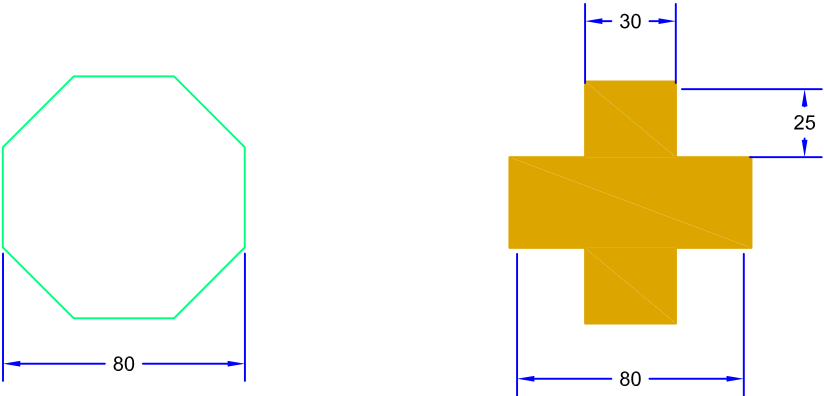


SEE DETAIL B

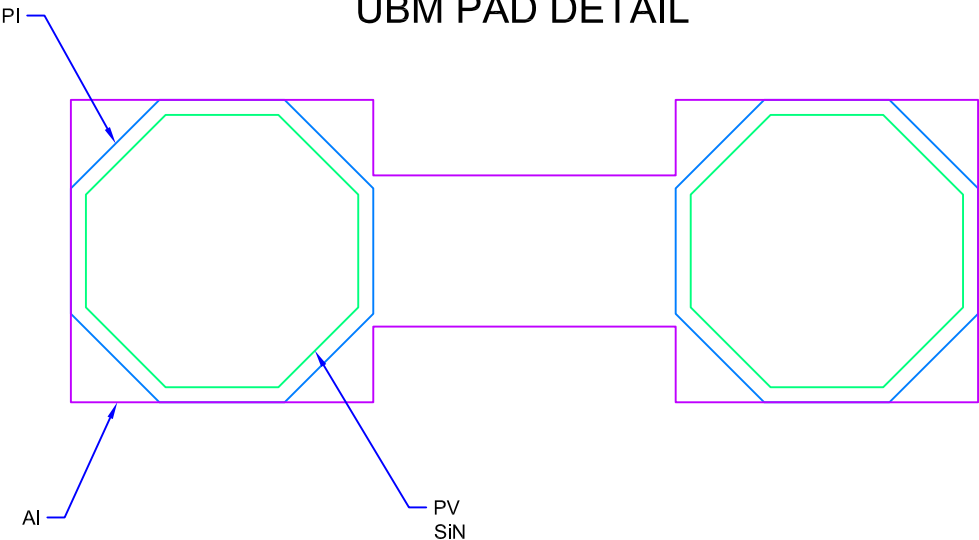
NOTES:  
1) DIMENSIONS:  $\mu\text{M}$  (MICRON).

<b>TopLine®</b>			
TITLE FCW484G5C200-DC DAISY CHAIN BUMP WAFER 200UM			
SCALE	SIZE	DRAWING NO.	REV
30:1	A	181848	A
DO NOT SCALE DRAWING			SHEET 3 OF 9

# DETAIL "B" FIDUCIAL



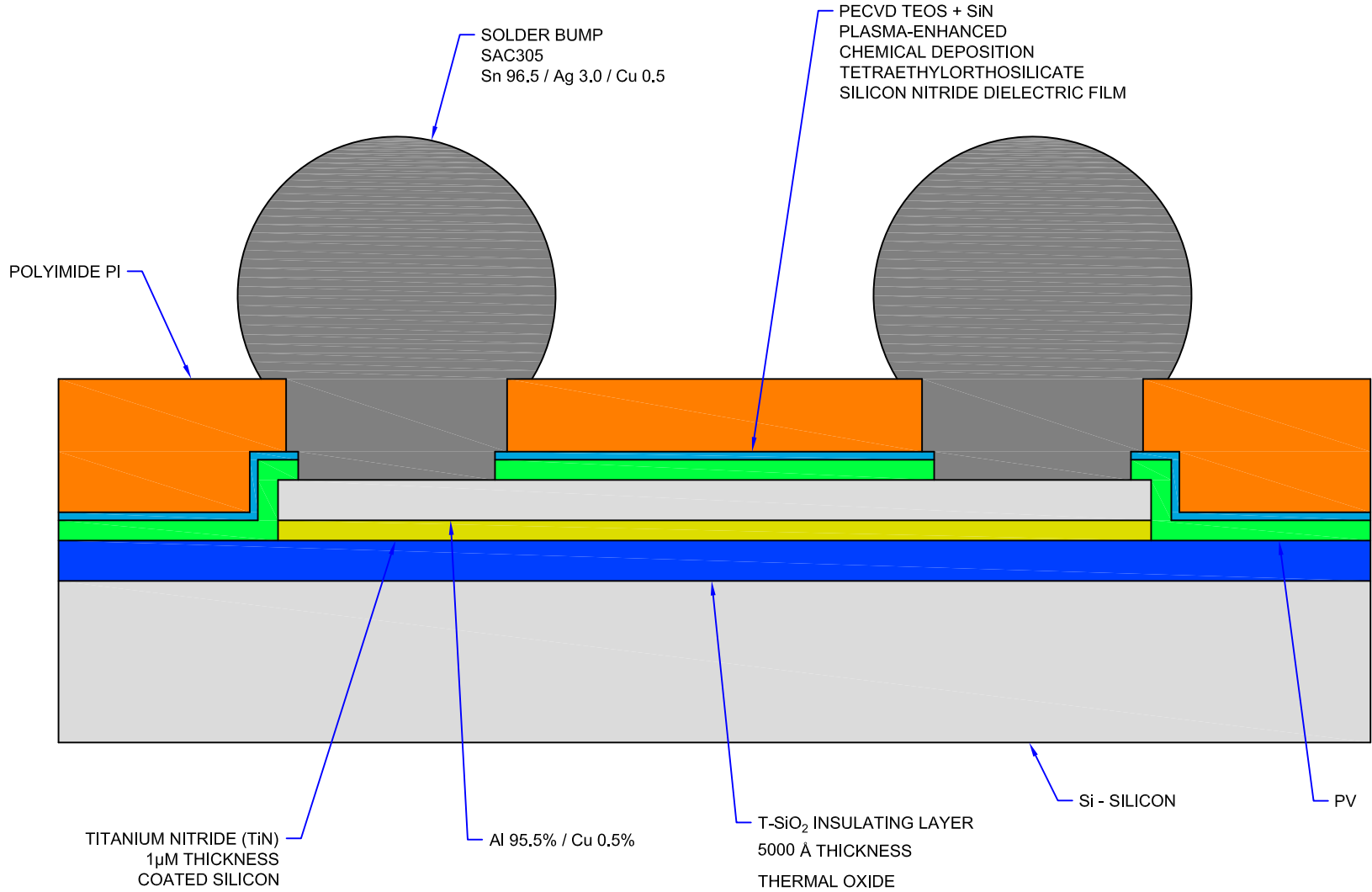
# UBM PAD DETAIL



NOTES:  
1) DIMENSIONS:  $\mu\text{M}$  (MICRON).

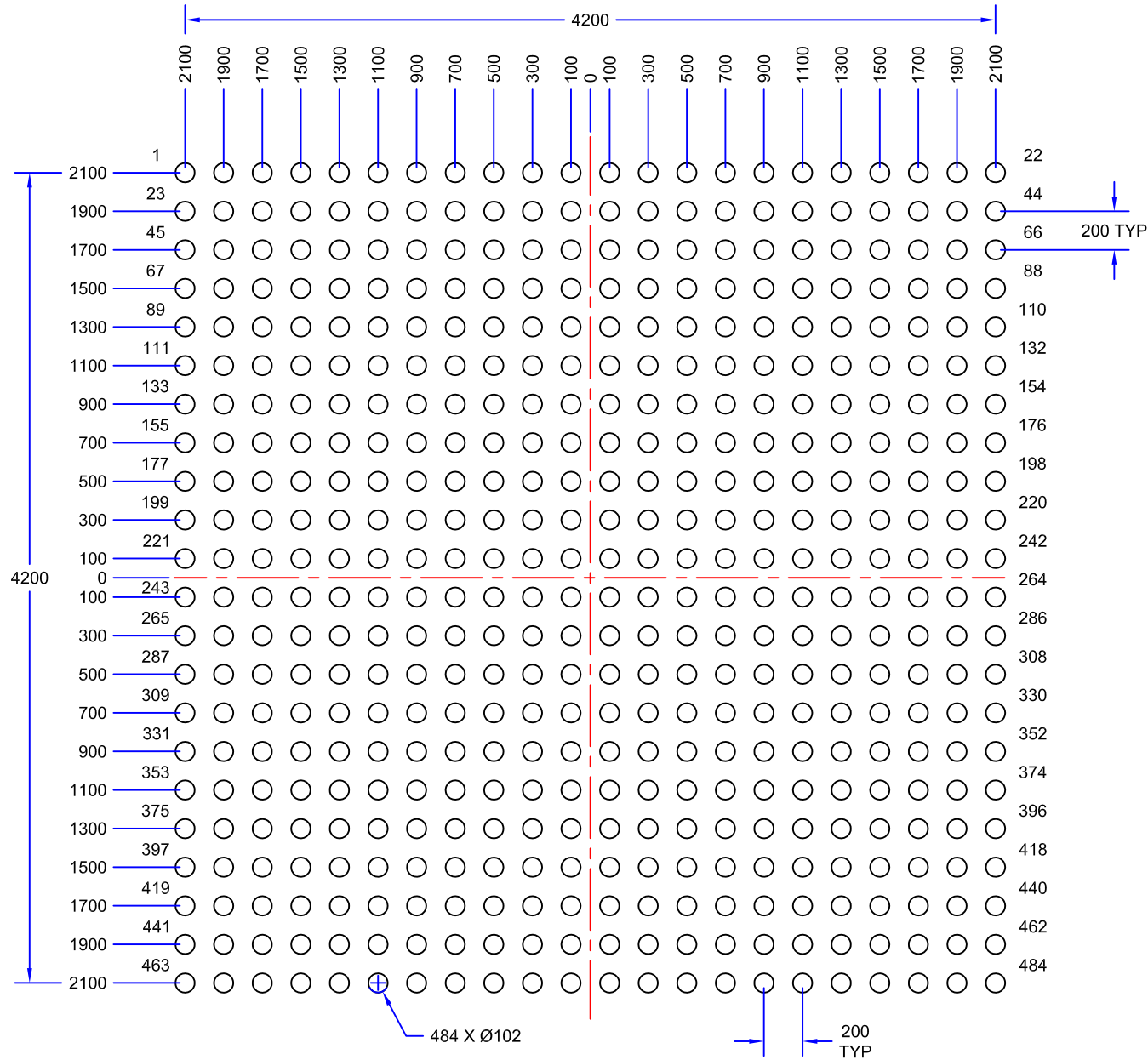
<b>TopLine<sup>®</sup></b>			
TITLE    FCW484G5C200-DC DAISY CHAIN BUMP WAFER 200UM			
SCALE	SIZE	DRAWING NO.	REV
400:1	A	181848	A
DO NOT SCALE DRAWING			SHEET 4 OF 9

# MATERIALS AND CONSTRUCTION



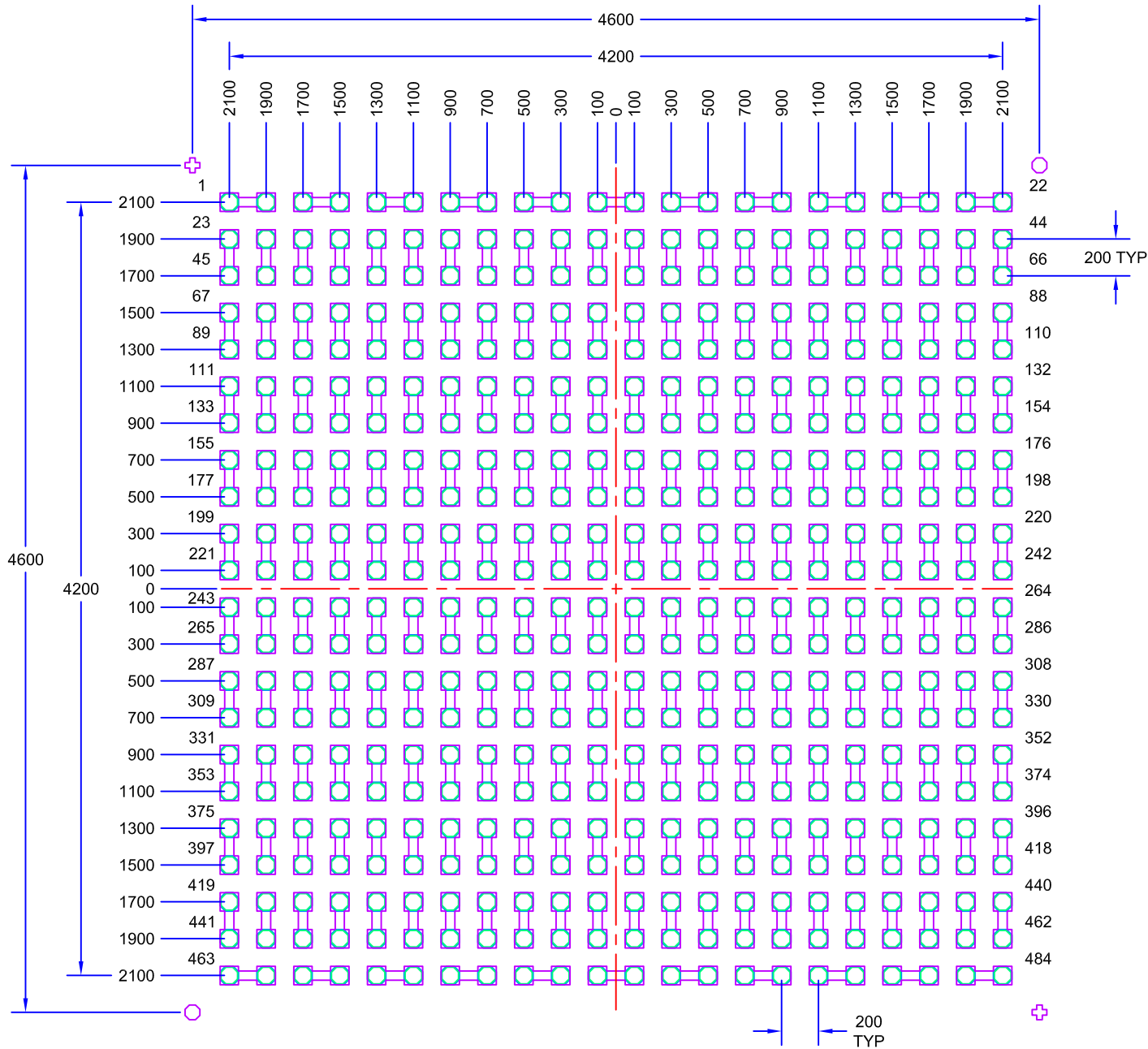
<b>TopLine®</b>			
TITLE FCW484G5C200-DC DAISY CHAIN BUMP WAFER 200UM			
SCALE	SIZE	DRAWING NO.	REV
500:1	A	181848	A
DO NOT SCALE DRAWING			SHEET 5 OF 9

# PAD LOCATION SHOWN BUMP VIEW DIMENSIONS IN MICRON ( $\mu\text{M}$ )



<b>TopLine®</b>			
TITLE    FCW484G5C200-DC DAISY CHAIN BUMP WAFER 200UM			
SCALE	SIZE	DRAWING NO.	REV
30:1	A	181848	A
DO NOT SCALE DRAWING			SHEET 6 OF 9

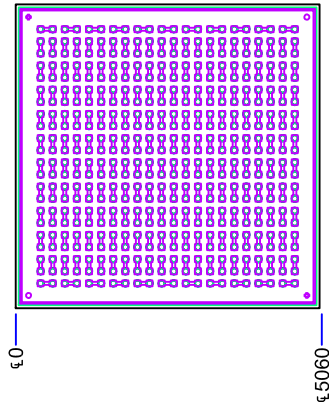
# PAD LOCATION DIMENSIONS IN MICRON ( $\mu\text{M}$ )



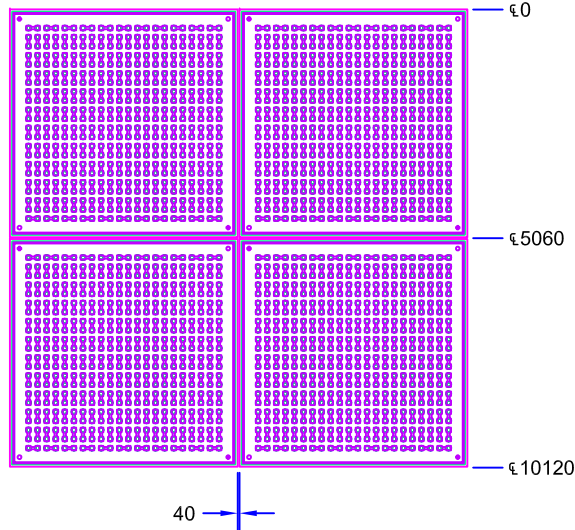
<b>TopLine®</b>			
TITLE    FCW484G5C200-DC DAISY CHAIN BUMP WAFER 200UM			
SCALE	SIZE	DRAWING NO.	REV
500:1	A	181848	A
DO NOT SCALE DRAWING			SHEET 7 OF 9

# DICING DIMENSIONS IN MICRON ( $\mu\text{M}$ )

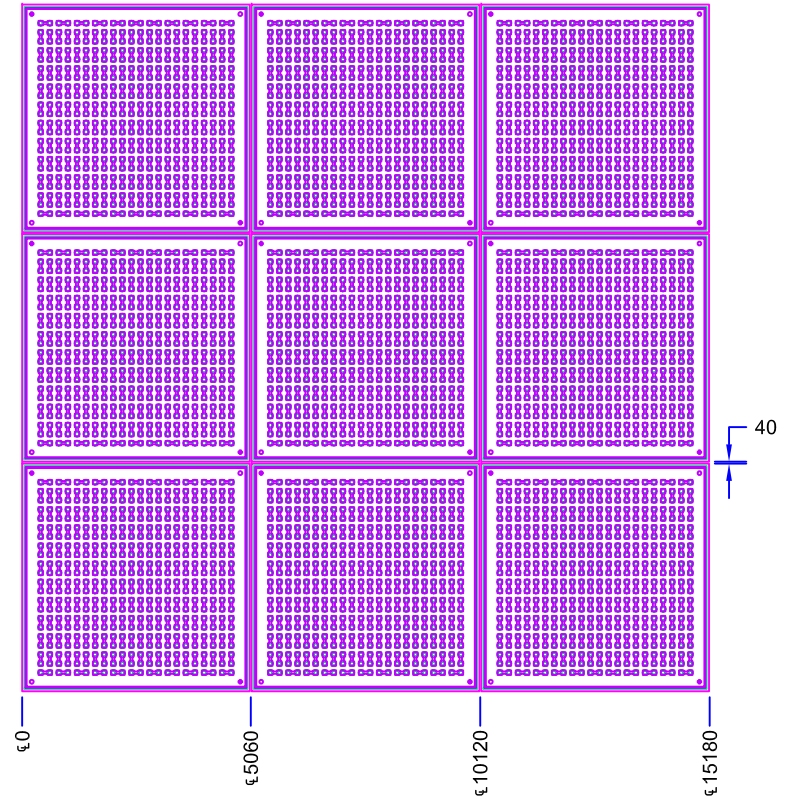
484 - 5X5MM  
SCALE = 8:1



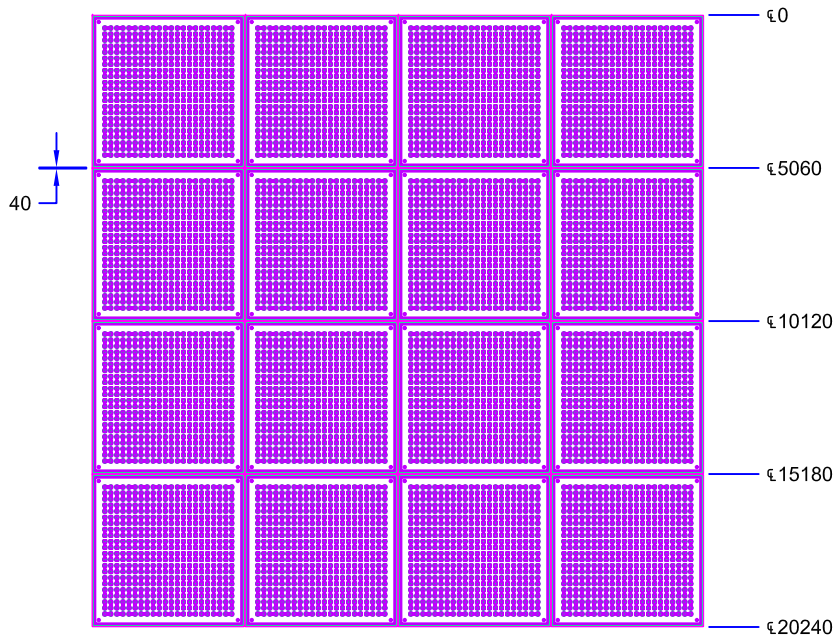
1936 - 10X10MM  
SCALE = 6:1



4356 - 15X15MM  
SCALE = 6:1



7744 - 20X20MM  
SCALE = 4:1



<b>TopLine®</b>			
TITLE FCW484G5C200-DC DAISY CHAIN BUMP WAFER 200UM			
SCALE	SIZE	DRAWING NO.	REV
SHOWN	A	181848	A
DO NOT SCALE DRAWING			SHEET 8 OF 9



# PART NUMBERING SYSTEM

**FC**

**484**

**G**

**5**

**C**

**200 - OPTION**

**- DC - PACKAGING**

## FLIP CHIP

FC = STANDARD FLIP CHIP  
 FCW - BUMPED WAGER\*  
 FCN = BUMPLESS CHIP  
 FCWN = BUMPLESS WAFER\*

\* 200MM WAFER

## NUMBER OF BUMPS

484	1X
1936	4X
4356	9X
7744	16X

## BUMP DIAMETER

DIAMETER Ø109 µM  
 HEIGHT 74 µM

## DIE SIZE

BUMP	MM
484	5MM
1936	10MM
4356	15MM
7744	20MM

## BUMP MATERIAL

C = LEAD FREE SAC  
 A = AI PAD (BUMPLESS)  
 FOR WIREBONDING

## BUMP PITCH

µM

## DIE THINNING

CODE	µM	INCH
NONE	508	.020"
BG430	430	.017"
BG360	360	.014"
BG250	250	.010"

## DAISY CHAIN

## OPTIONS

BLANK = TRAY (STANDARD)

BUMP	TRAY	QTY
484	2-INCH	36PCS
1936	4-INCH	49PCS
4356	4-INCH	25PCS
7744	4-INCH	9PCS

TR = TAPE & REEL

UV = UV TAPE  
 WAFER RING  
 NT = NON UV TAPE  
 WAFER RING



TITLE			
FCW484G5C200-DC			
DAISY CHAIN BUMP WAFER 200UM			
SCALE	SIZE	DRAWING NO.	REV
NONE	A	181848	A
DO NOT SCALE DRAWING			SHEET 9 OF 9