

# **FLIP CHIP**

## **Daisy Chain Patterns**



**95 Highway 22 W. - Milledgeville, GA 31061**

**Tel 1-800-776-9888**

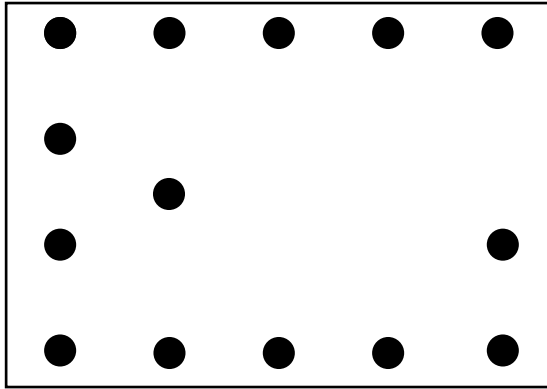
**email [sales@topline.tv](mailto:sales@topline.tv)**

**web [www.topline.tv](http://www.topline.tv)**

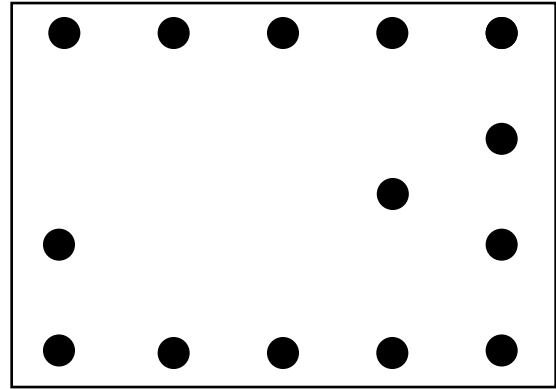
BUMP	PITCH	BUMP DIA.	BODY SIZE	BUMP MAT'L	REF	BUMP VIEW	PAGE
<b>FC14C2.9x2.3N635 - Discontinued</b>							
14	635µm	165µm	2.9 x 2.3mm	Ni	CS		3 - 4
<b>FC21C3.8E460/690</b>							
21	460~690µm	160µm	3.8mm SQ	Sn63	PST2		5 - 6
<b>FC48D6.3E457</b>							
48	457µm	178µm	6.3mm SQ	Sn63	FBT250		7 - 8
<b>FC88G5.08E204</b>							
88	204µm	102µm	5.08mm SQ	Sn63	PB8 2x2		9 - 10
<b>FC96D12.7E457</b>							
96	457µm	178µm	12.7mm SQ	Sn63	FBT500		11 - 12
<b>FC176G10E204</b>							
176	204µm	102µm	10.2mm SQ	Sn63	PB8-4x4		13 - 14
<b>FC220G10x15E204</b>							
220	204µ m	102µ m	10.2 x 15.25µ m	Sn63	PB8-4x6		15 - 16
<b>FC317G5.08E254</b>							
317	254µm	102µm	5.08mm SQ	Sn63	FA10-2x2		17 - 18
<b>FC1268G10E254</b>							
1268	254µ m	135µ m	10.2mm SQ	Sn63	FA10-4x4		19 - 20
<b>Part Numbering System</b>							21
<b>CFCW48D6.3E457</b>							22
<b>Tray Quantity</b>							23
<b>Test Vehicle Board</b>							24

<u>BUMP</u>	<u>PITCH</u>	<u>BUMP DIA.</u>	<u>BODY SIZE</u>	<u>BUMP MAT'L</u>	<u>REF</u>
14	635µm	165µm	2.9 x 2.3mm	Ni/Au	CS

### BALL VIEW



### X-RAY VIEW



### PCB VIEW

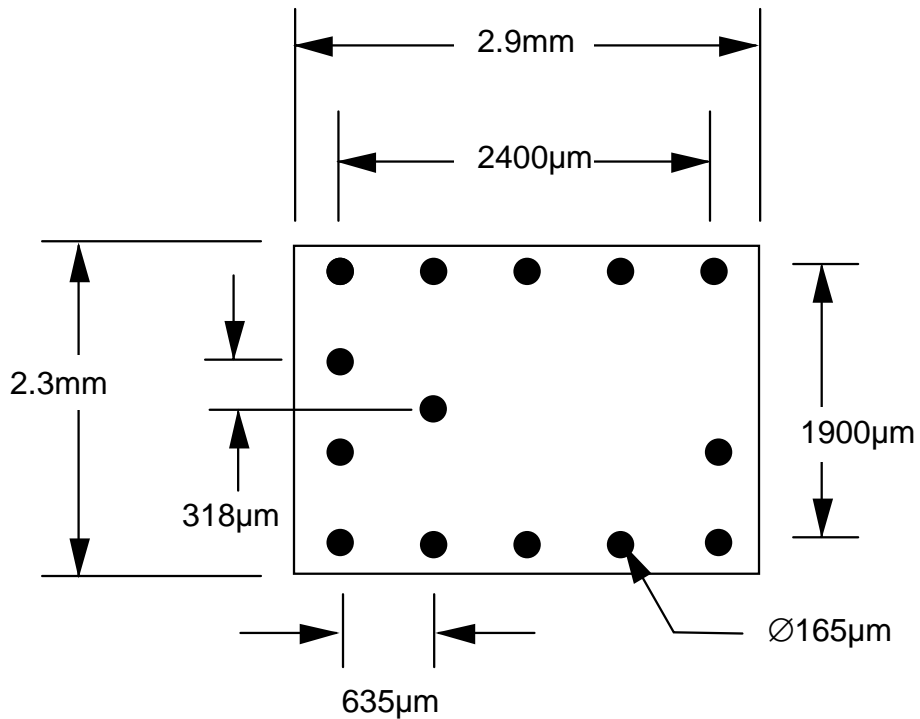
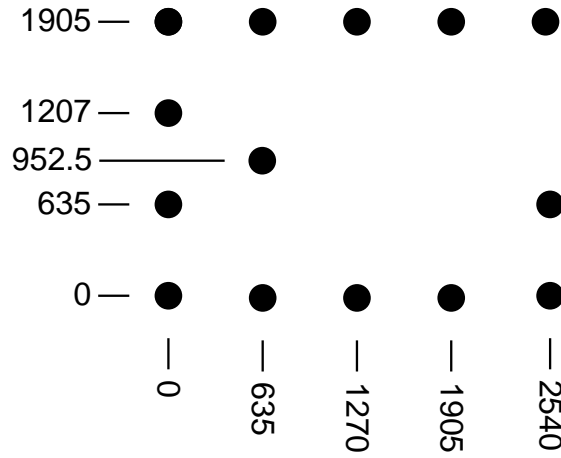
### AFTER MOUNTING TO TEST BOARD

# FC14C2.9x2.3N635



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<u>BUMP</u>	<u>PITCH</u>	<u>BUMP DIA.</u>	<u>BODY SIZE</u>	<u>BUMP MAT'L</u>	<u>REF</u>
14	635 $\mu$ m	165 $\mu$ m	2.9 x 2.3mm	Ni-Au	CS

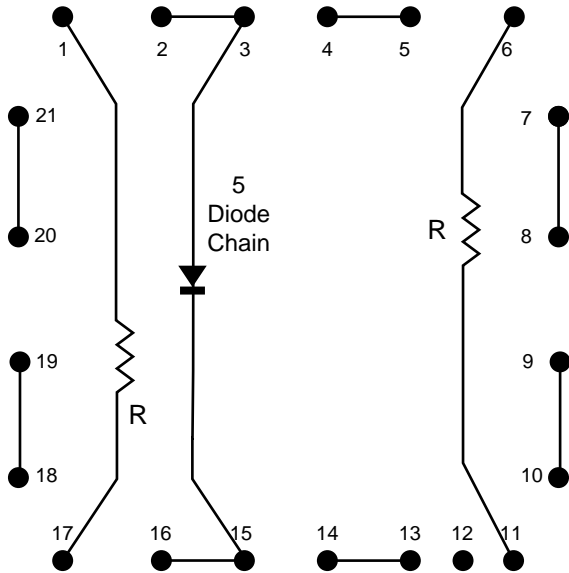


## BUMP VIEW

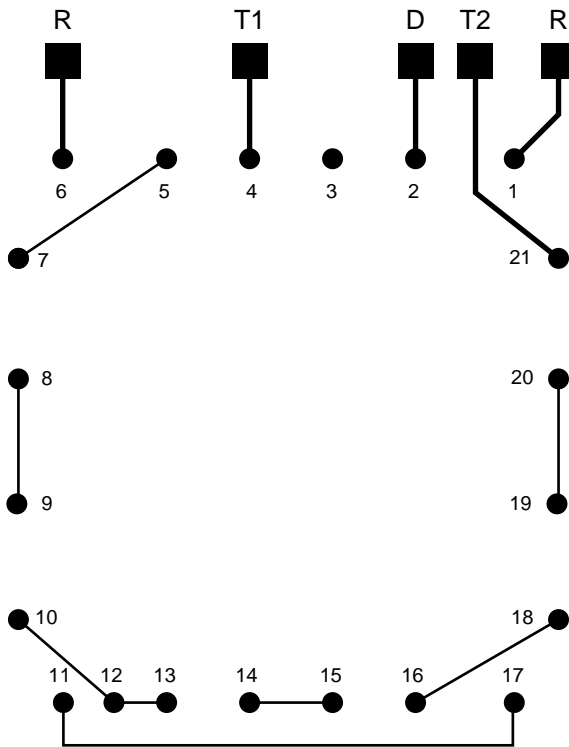
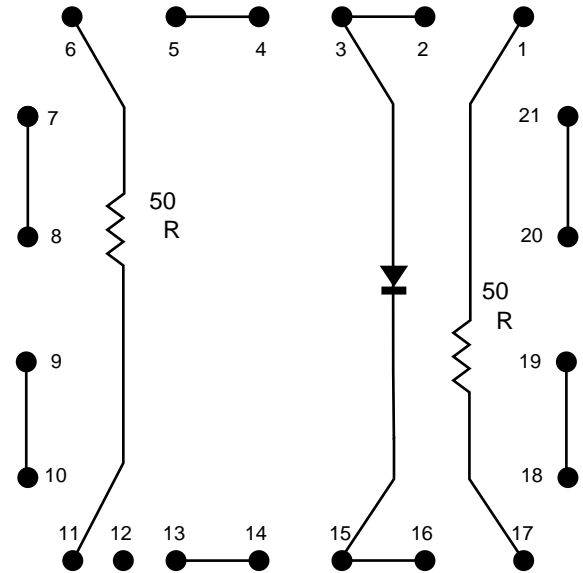
Dimension in  $\mu$ m (1000 $\mu$ m = 1.0mm)

<u>BUMP</u>	<u>PITCH</u>	<u>BUMP DIA.</u>	<u>BODY SIZE</u>	<u>BUMP MAT'L</u>	<u>REF</u>
21	460~690µm	160µm	3.8mm SQ	Sn63	PST2

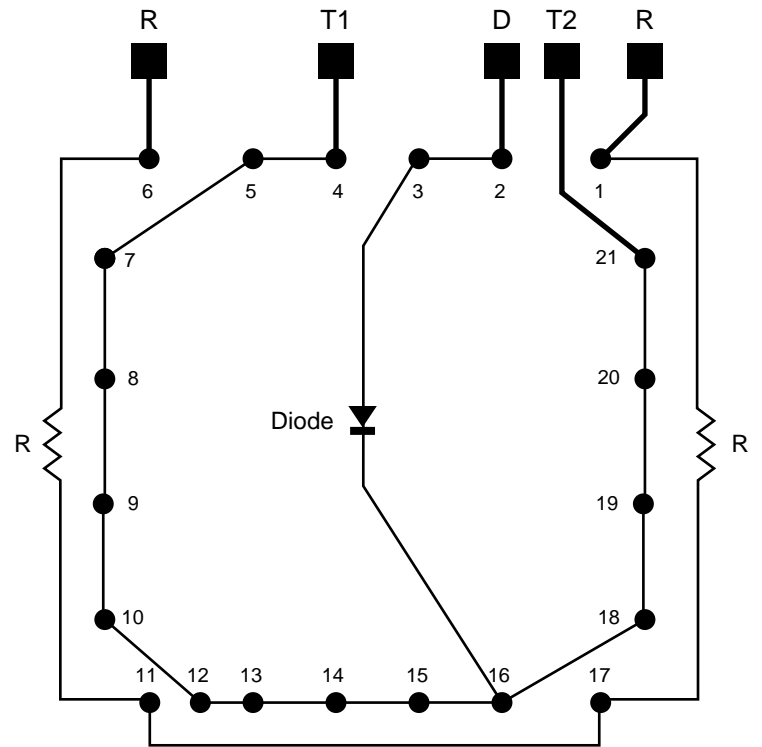
**BALL VIEW**



**X-RAY VIEW**



**PCB VIEW**



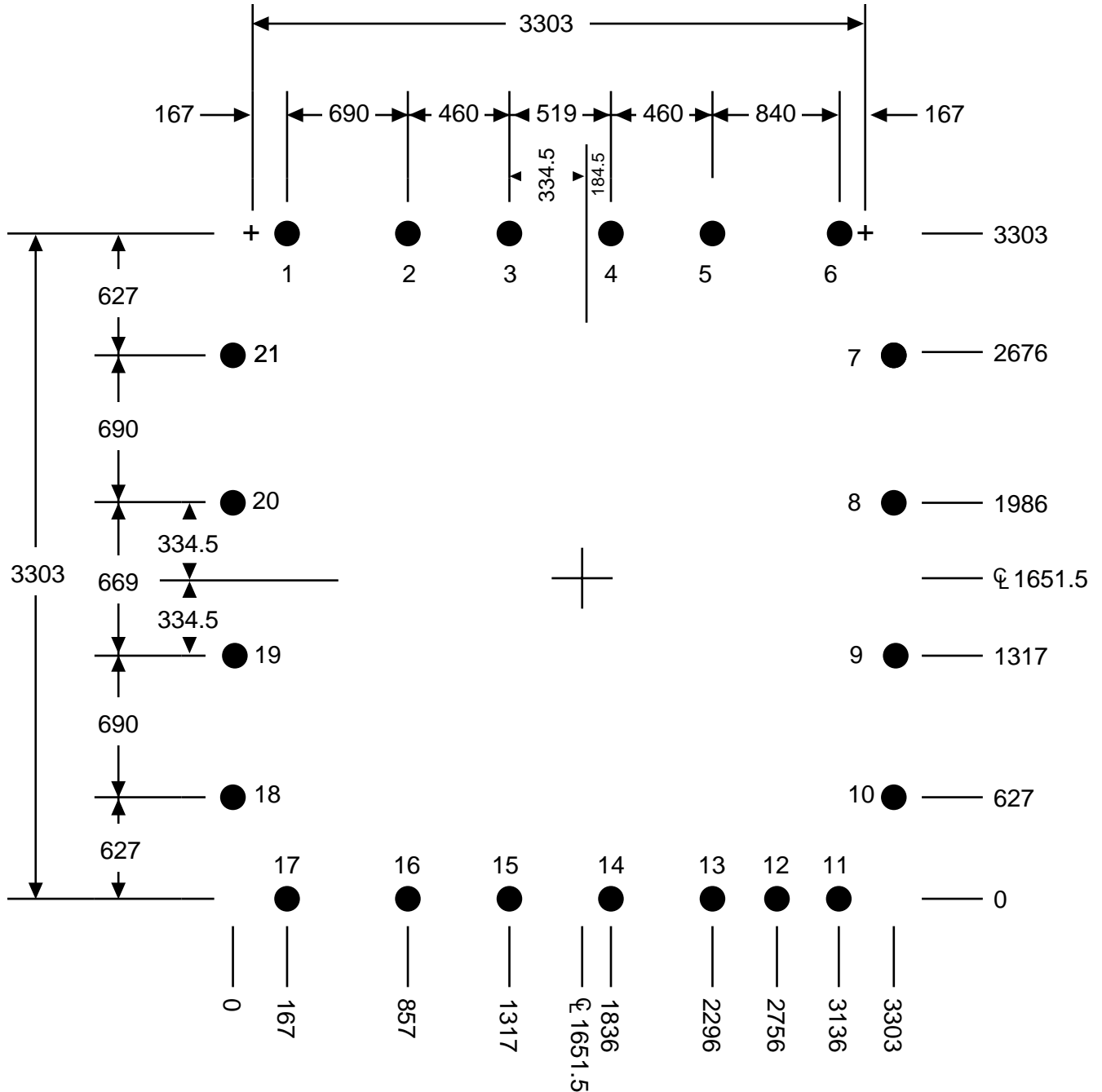
**AFTER MOUNTING TO TEST BOARD**

# FC21C3.8E460/690



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BUMP	PITCH	BUMP DIA.	BODY SIZE	BUMP MAT'L	REF
21	460~690 $\mu$ m	160 $\mu$ m	3.8mm SQ	Sn63	PST2

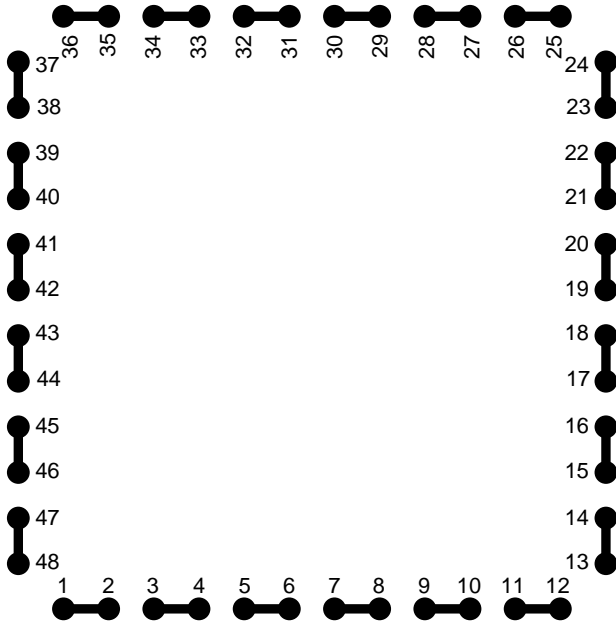


## BUMP VIEW

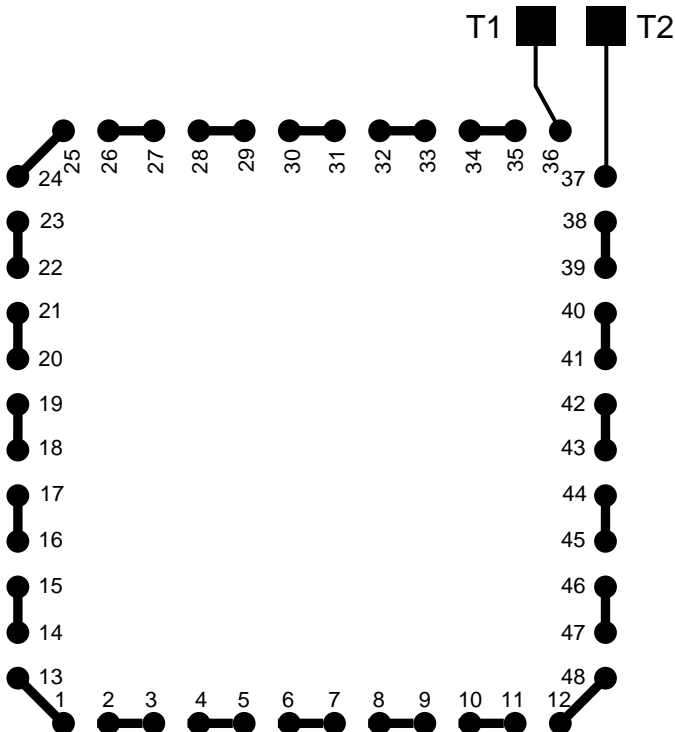
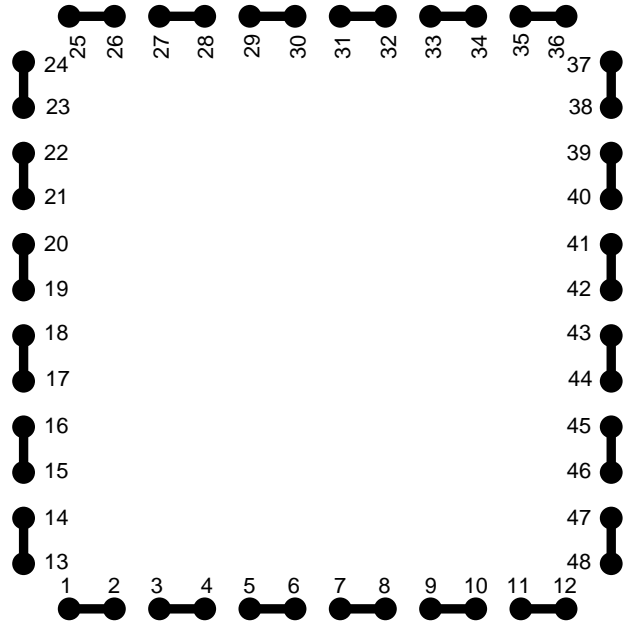
Dimension in  $\mu$ m (1000 $\mu$ m = 1.0mm)

<u>BUMP</u>	<u>PITCH</u>	<u>BUMP DIA.</u>	<u>BODY SIZE</u>	<u>BUMP MAT'L</u>	<u>REF</u>
48	457µm	190µm	6.3mm SQ	Sn63	FBT250

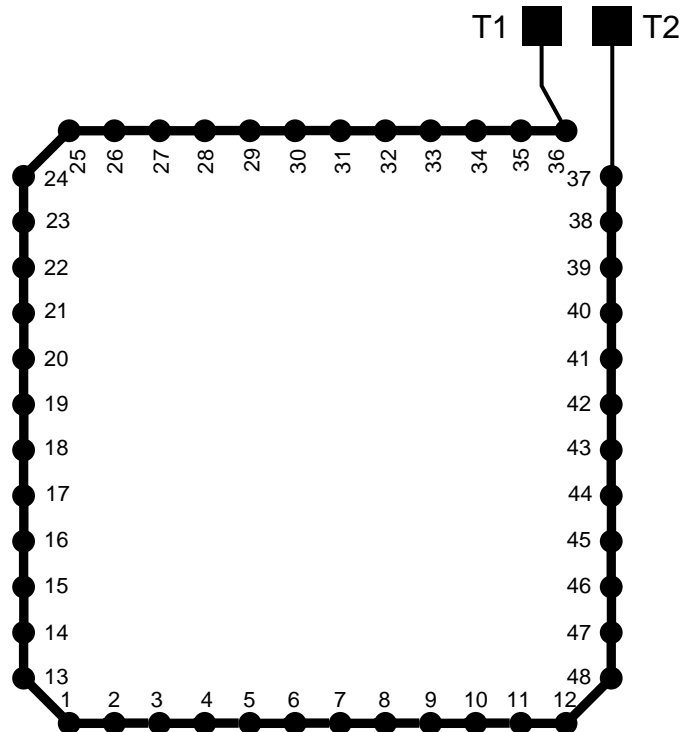
**BALL VIEW**



**X-RAY VIEW**



**PCB VIEW**



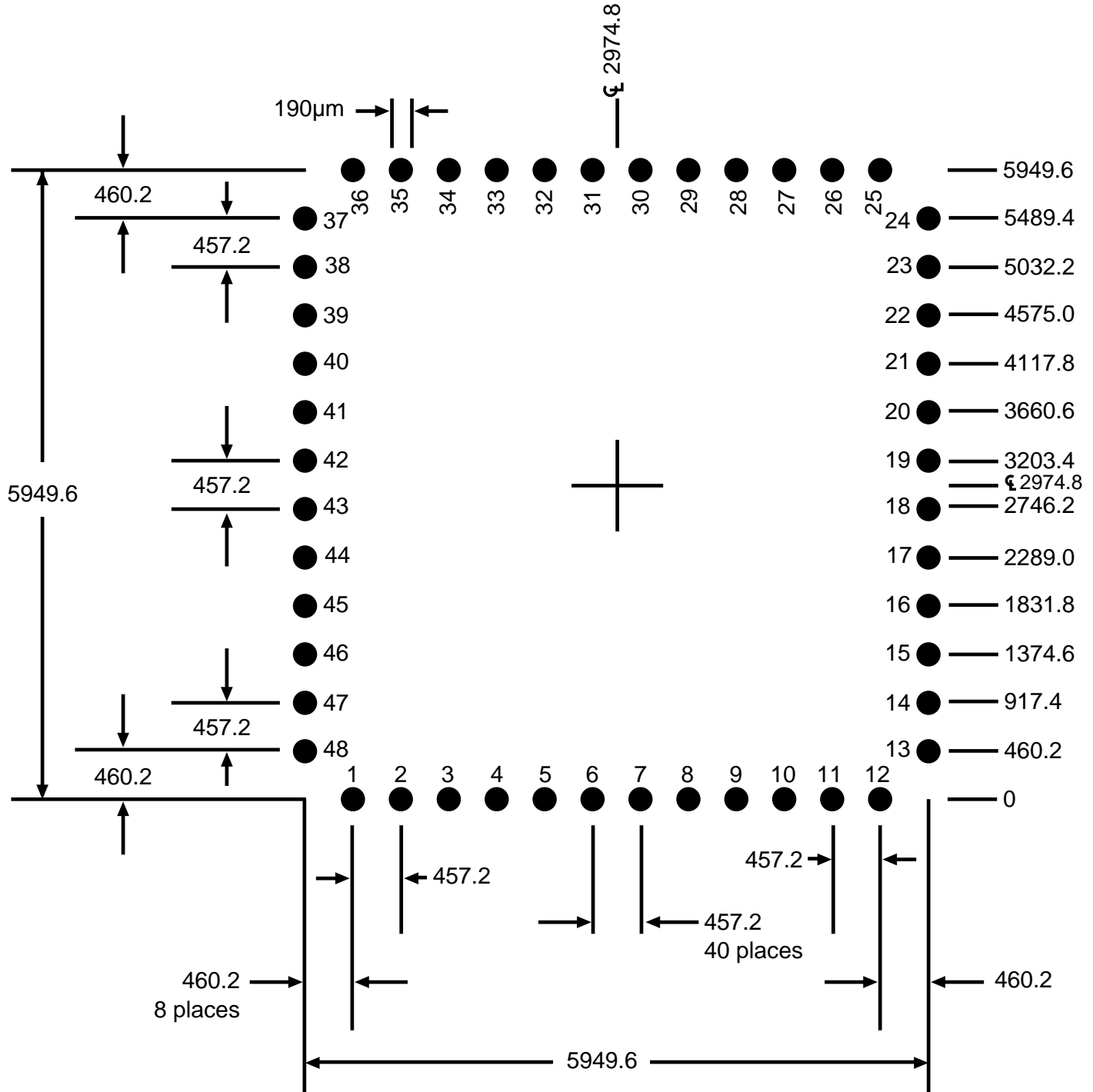
**AFTER MOUNTING TO TEST BOARD**

# FC48D6.3E457



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<u>BUMP</u>	<u>PITCH</u>	<u>BUMP DIA.</u>	<u>BODY SIZE</u>	<u>BUMP MAT'L</u>	<u>REF</u>
48	457μm	190μm	6.3mm SQ	Sn63	FBT250



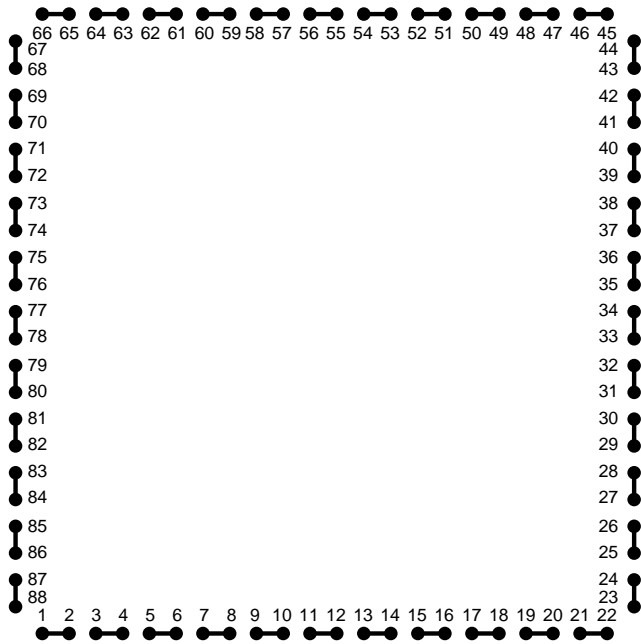
## BUMP VIEW

Dimension in μm (1000μm = 1.0mm)

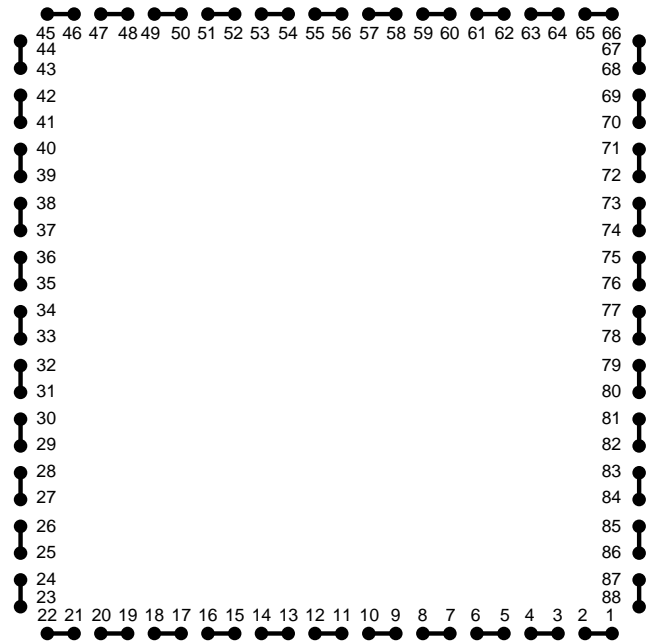


<u>BUMP</u>	<u>PITCH</u>	<u>BUMP DIA.</u>	<u>BODY SIZE</u>	<u>BUMP MAT'L</u>	<u>REF</u>
88	204µm	135µm	5.08mm SQ	Sn63	PB8 2x2

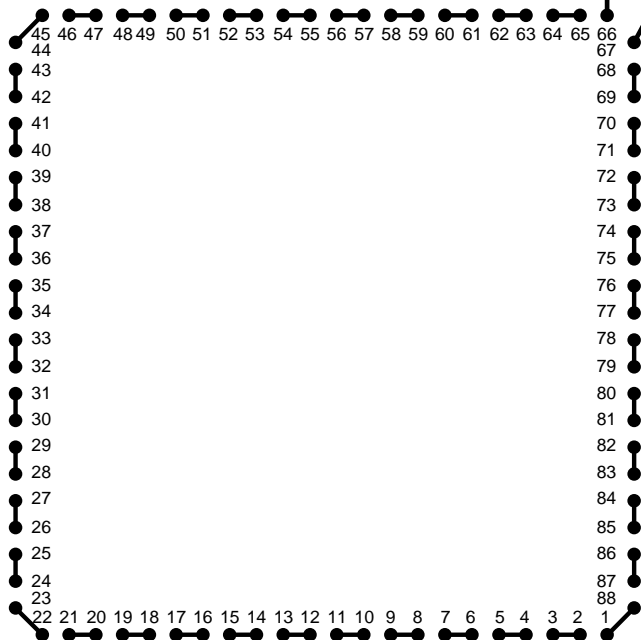
**BALL VIEW**



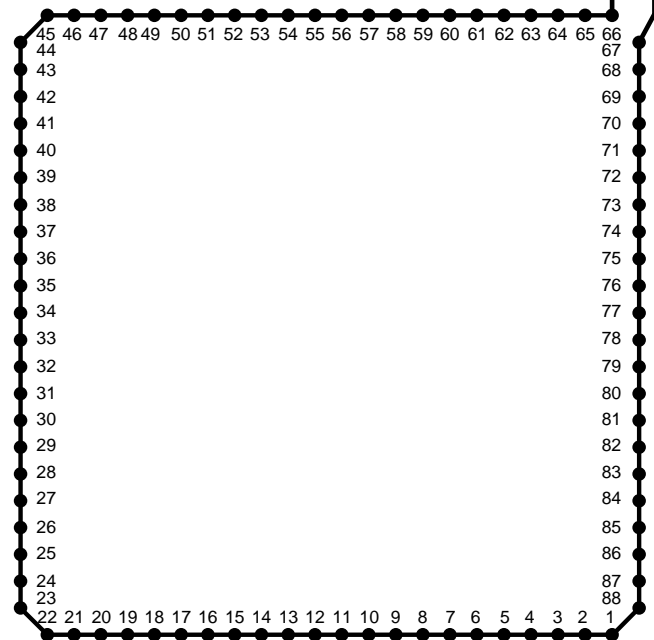
**X-RAY VIEW**



**T1 T2**



**T1 T2**



**PCB VIEW**

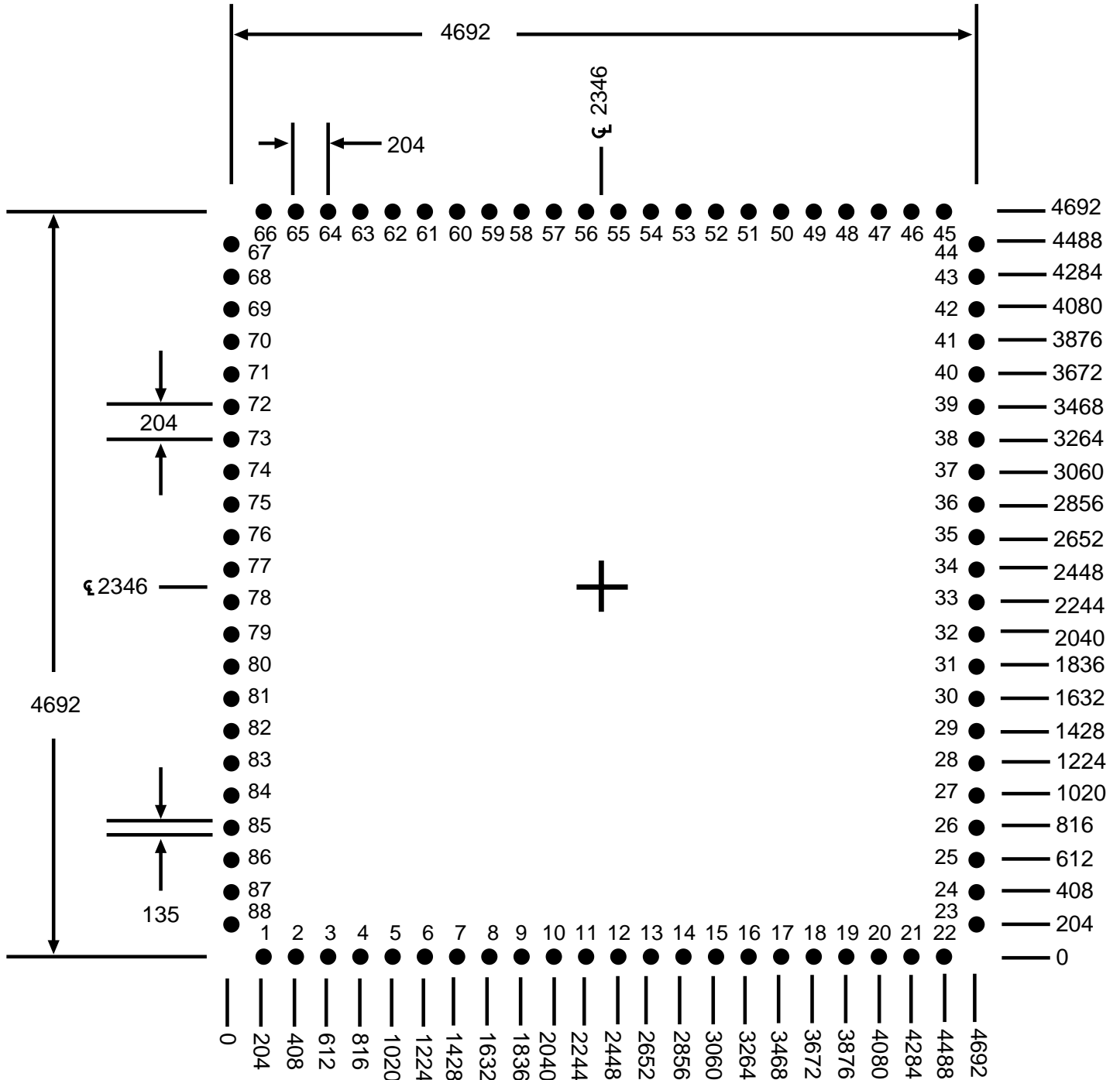
**AFTER MOUNTING TO TEST BOARD**

# FC88G5.08E204



BUMP	PITCH	BUMP DIA.	BODY SIZE	BUMP MAT'L	REF
88	204μm	135μm	5.08mm SQ	Sn63	PB8 2x2

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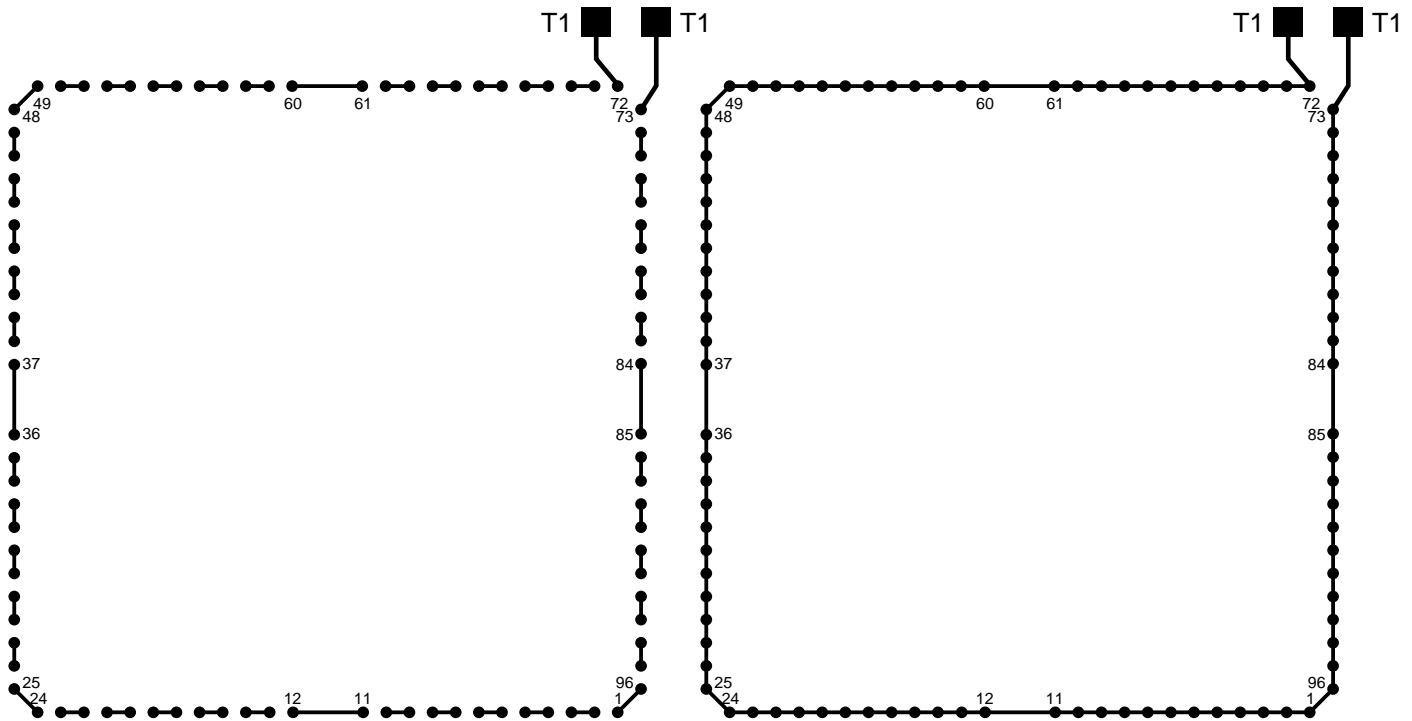
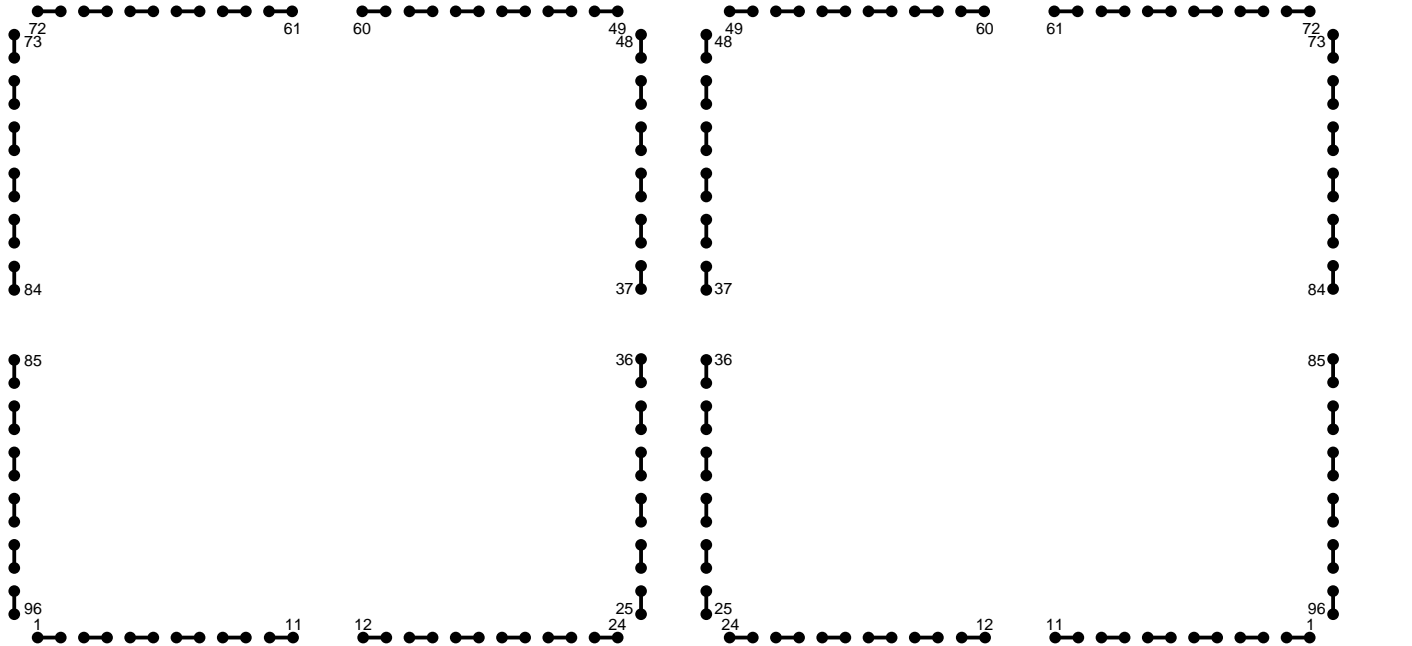
## BUMP VIEW

Dimension in μm (1000μm = 1.0mm)

<u>BUMP</u>	<u>PITCH</u>	<u>BUMP DIA.</u>	<u>BODY SIZE</u>	<u>BUMP MAT'L</u>	<u>REF</u>
96	457µm	190µm	12.7mm SQ	Sn63	FBT500

**BALL VIEW**

**X-RAY VIEW**



**PCB VIEW**

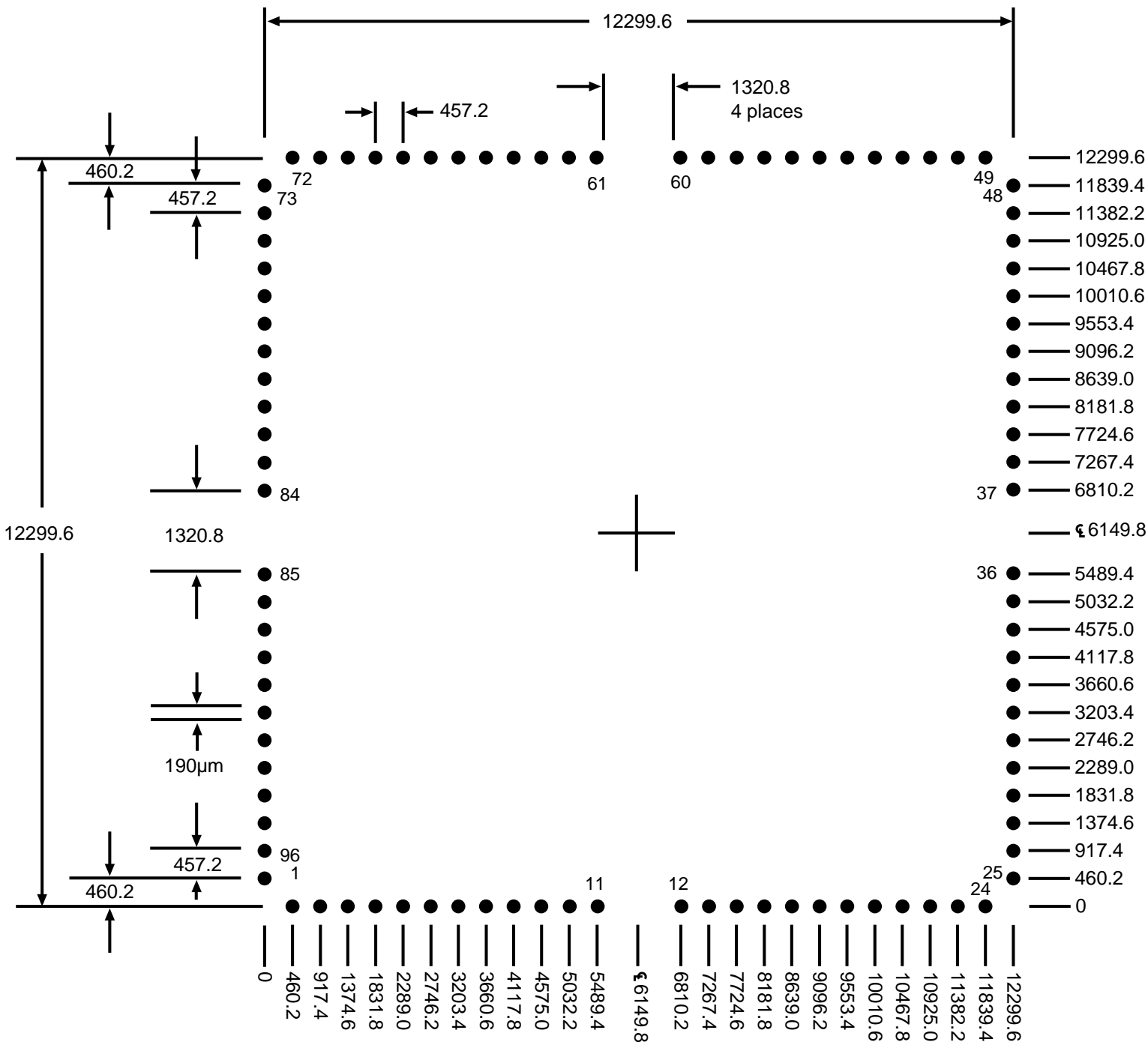
**AFTER MOUNTING TO TEST BOARD**

# FC96D12.7E457



BUMP	PITCH	BUMP DIA.	BODY SIZE	BUMP MAT'L	REF
96	457μm	190μm	12.7mm SQ	Sn63	FBT500

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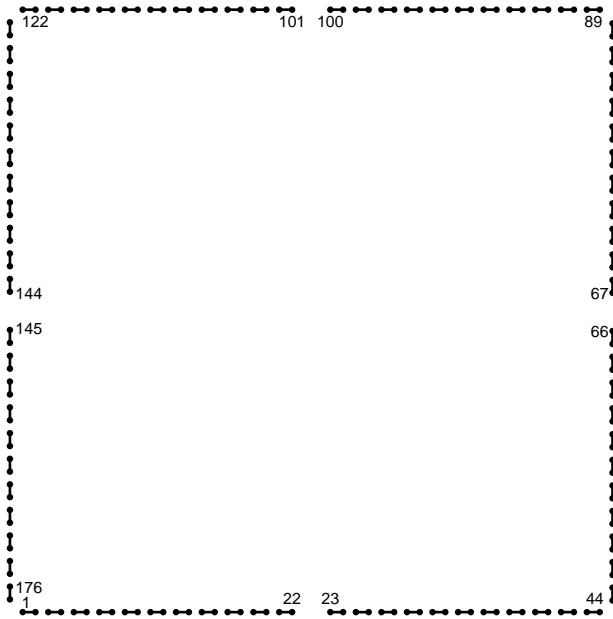


## BUMP VIEW

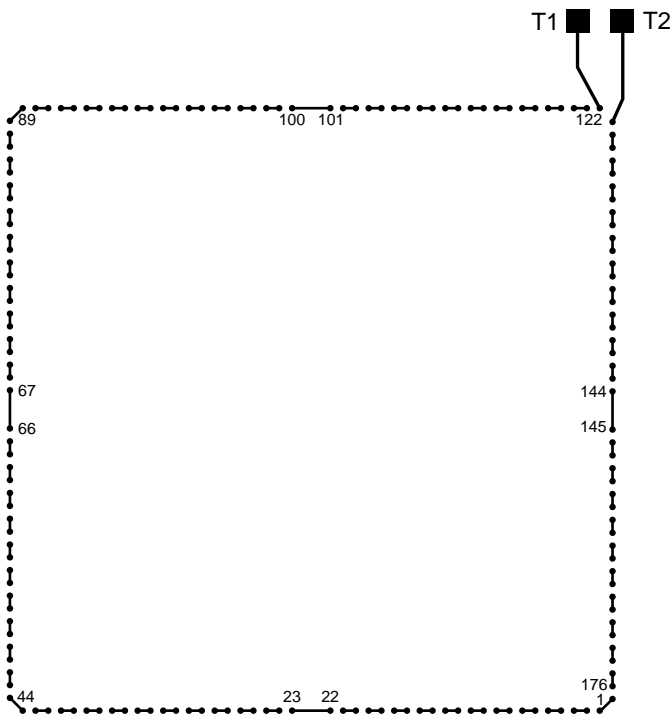
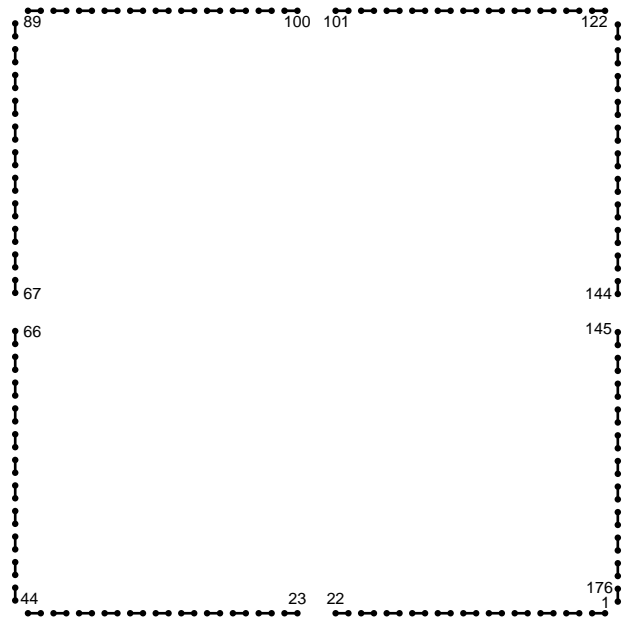
Dimension in μm (1000μm = 1.0mm)

<u>BUMP</u>	<u>PITCH</u>	<u>BUMP DIA.</u>	<u>BODY SIZE</u>	<u>BUMP MAT'L</u>	<u>REF</u>
176	204μm	135μm	10.2mm SQ	Sn63	PB8-4x4

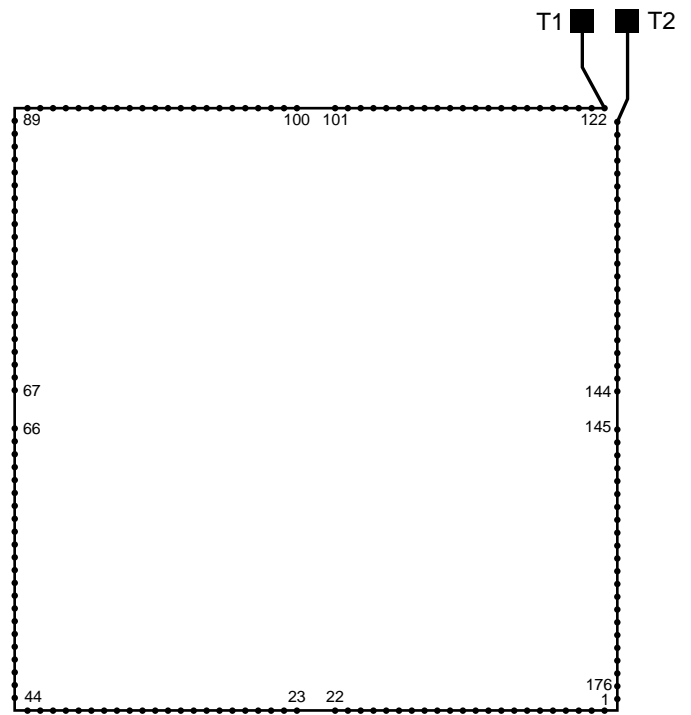
**BALL VIEW**



**X-RAY VIEW**



**PCB VIEW**



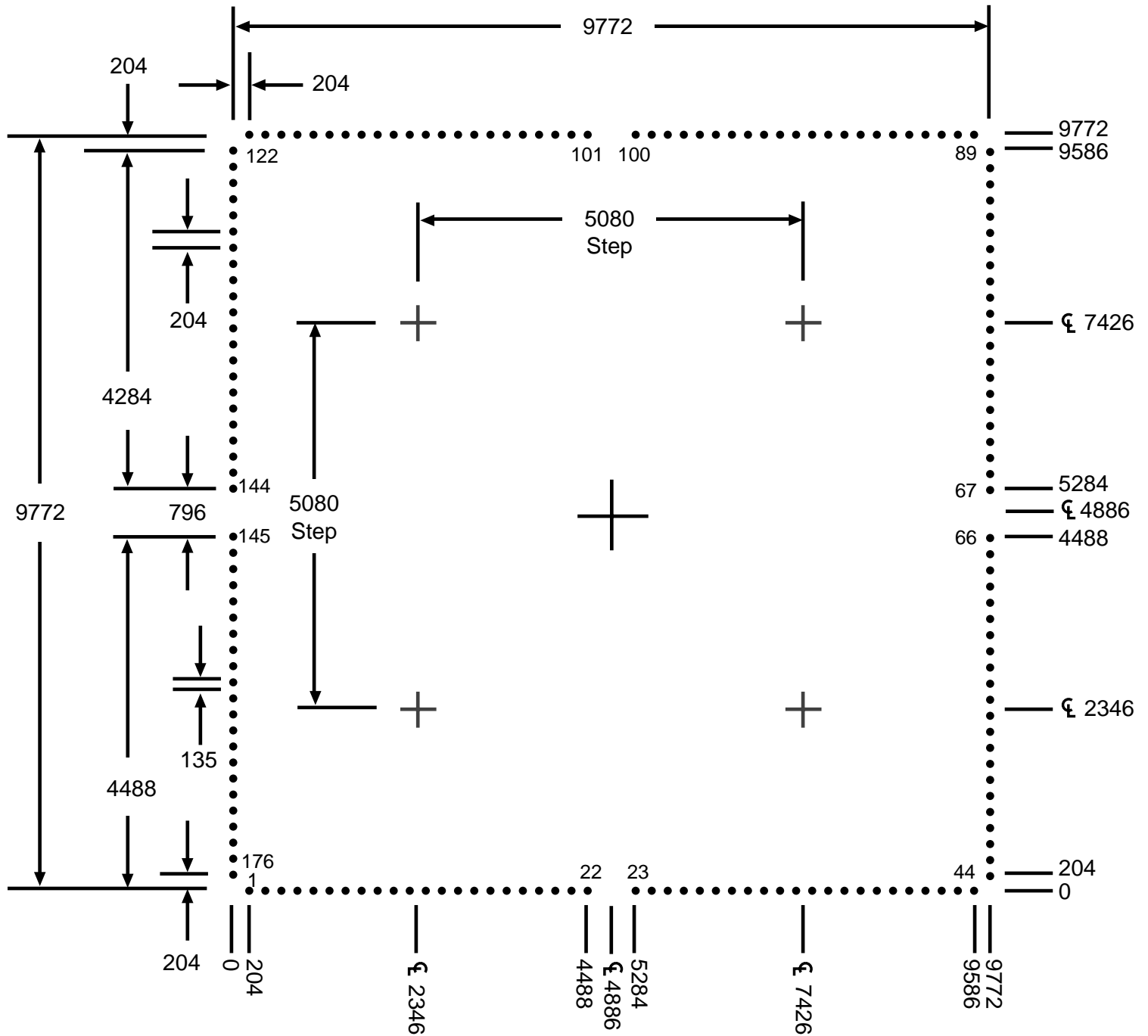
**AFTER MOUNTING TO TEST BOARD**

# FC176G10E204



<u>BUMP</u>	<u>PITCH</u>	<u>BUMP DIA.</u>	<u>BODY SIZE</u>	<u>BUMP MAT'L</u>	<u>REF</u>
176	204μm	135μm	10.2mm SQ	Sn63	PB8-4x4

TEL 1-800-776-9888  
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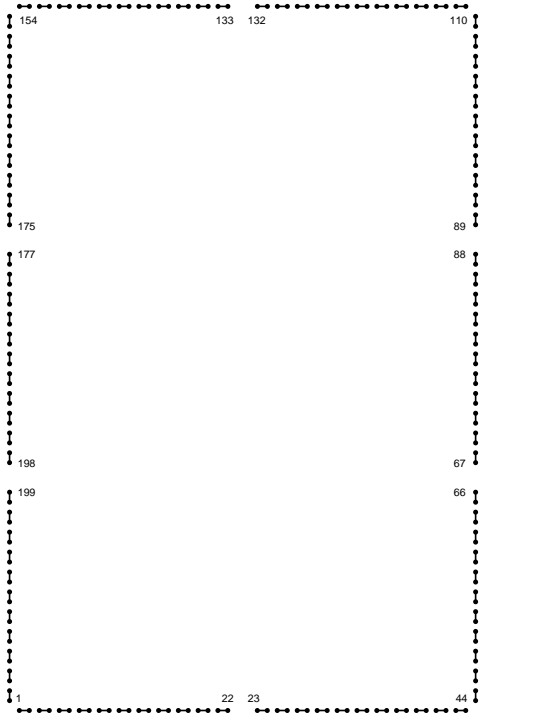


## BUMP VIEW

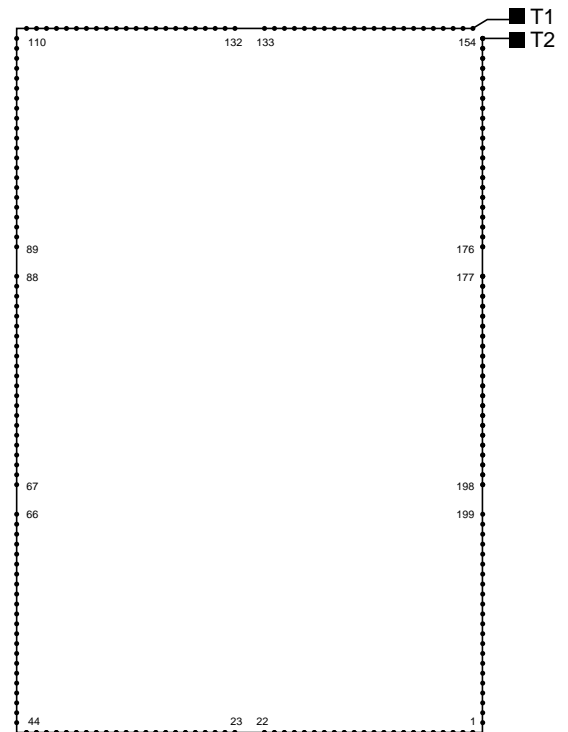
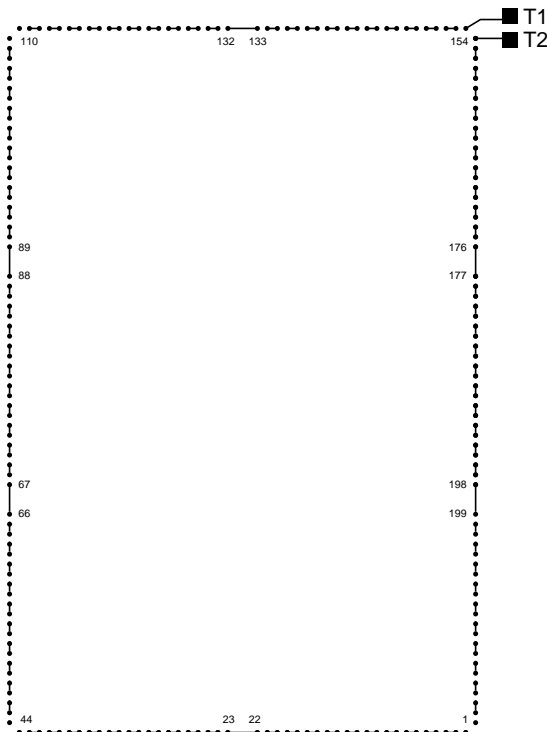
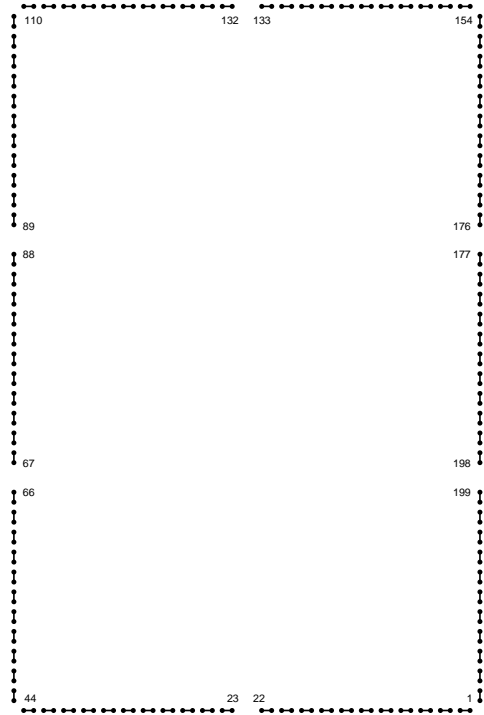
Dimension in μm (1000μm = 1.0mm)

<u>BUMP</u>	<u>PITCH</u>	<u>BUMP DIA.</u>	<u>BODY SIZE</u>	<u>BUMP MAT'L</u>	<u>REF</u>
220	204µm	135µm	10.2 x 15.25µm	Sn63	PB8-4x6

**BALL VIEW**



**X-RAY VIEW**



**PCB VIEW**

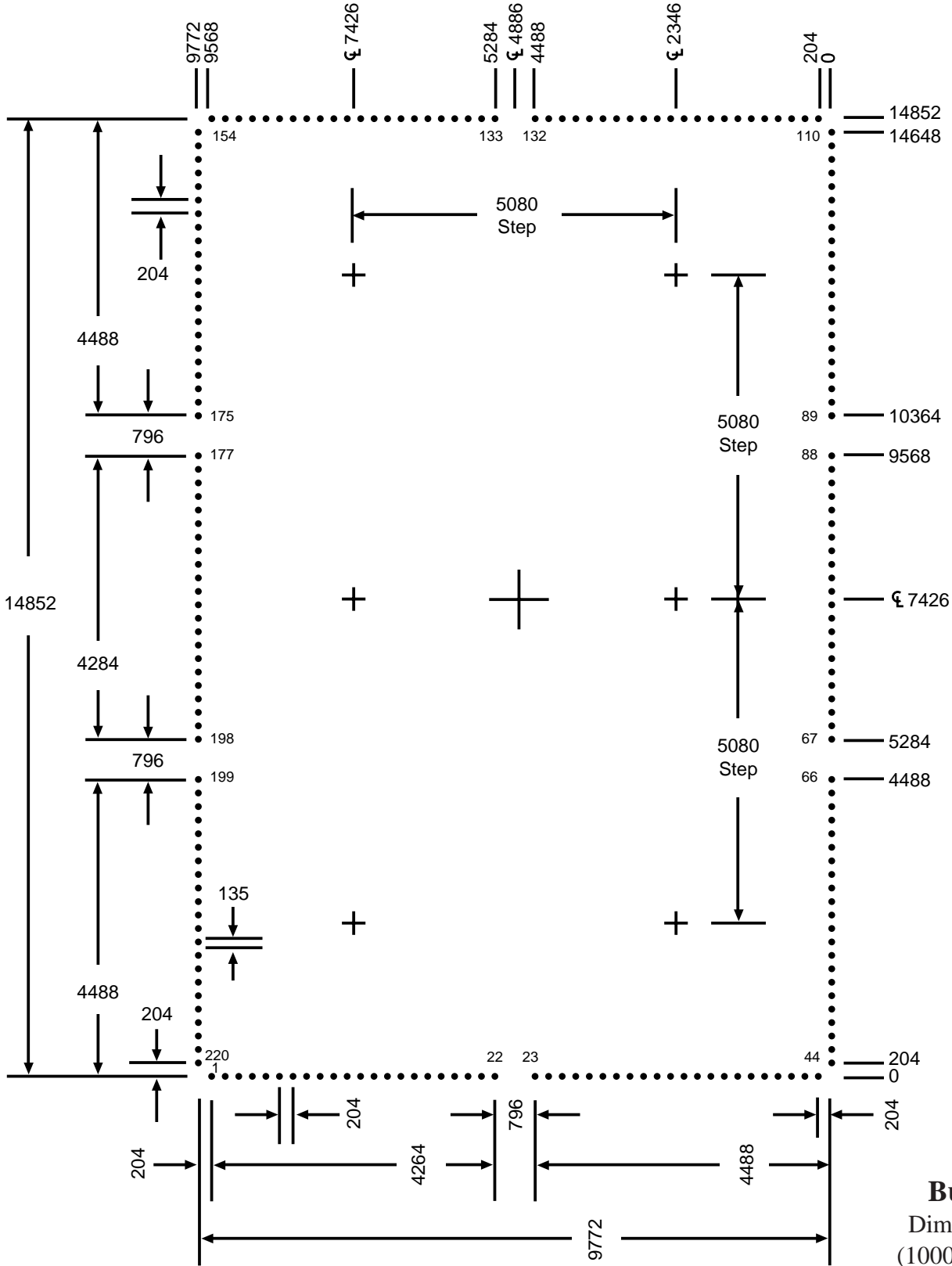
**AFTER MOUNTING TO TEST BOARD**

# FC220G10x15E204



TEL 1-800-776-9888  
info@topline.tv

BUMP	PITCH	BUMP DIA.	BODY SIZE	BUMP MAT'L	REF
220	204 $\mu$ m	135 $\mu$ m	10.2 x 15.25 $\mu$ m	Sn63	PB8-4x6

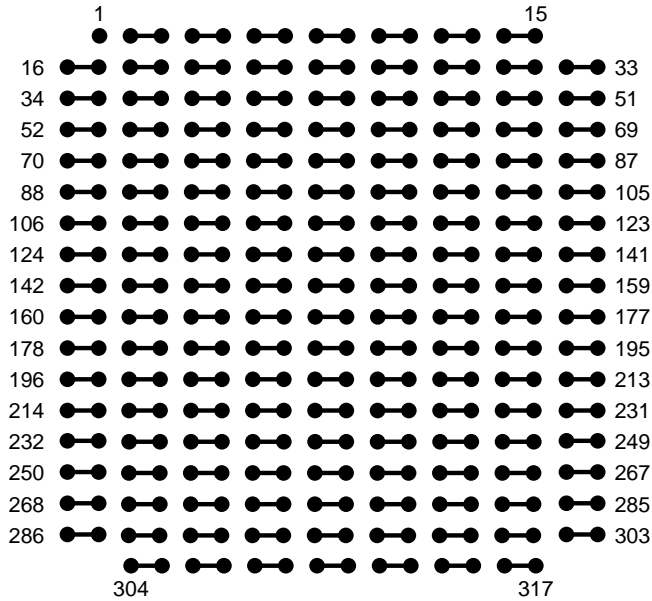


**BUMP VIEW**  
Dimension in  $\mu$ m  
(1000 $\mu$ m = 1.0mm)

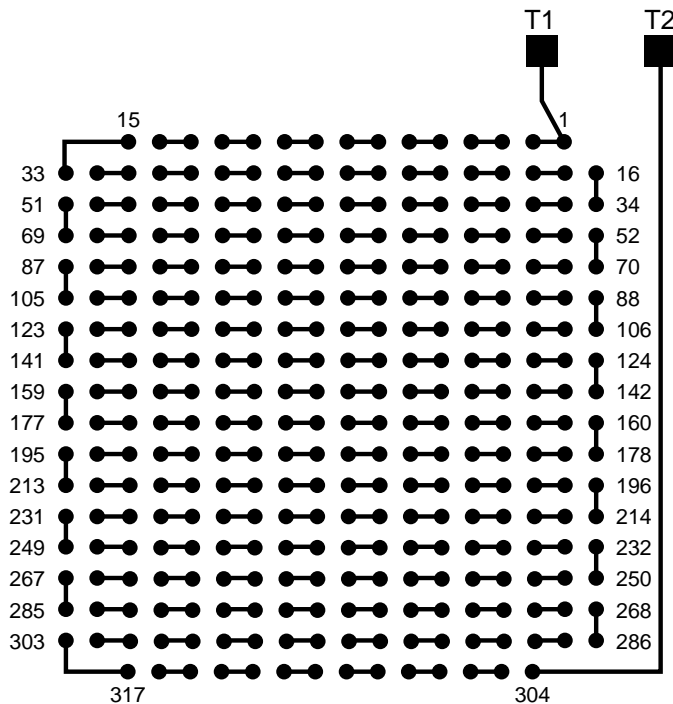
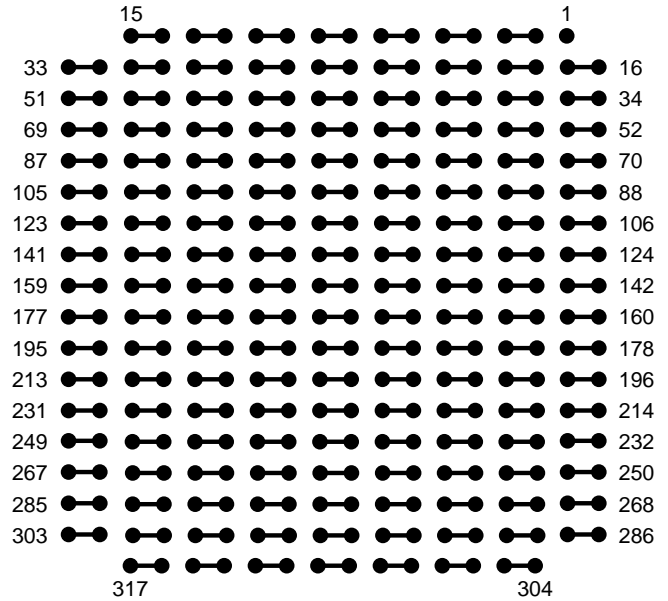


<u>BUMP</u>	<u>PITCH</u>	<u>BUMP DIA.</u>	<u>BODY SIZE</u>	<u>BUMP MAT'L</u>	<u>REF</u>
317	254µm	135µm	5.08mm SQ	Sn63	FA10-2x2

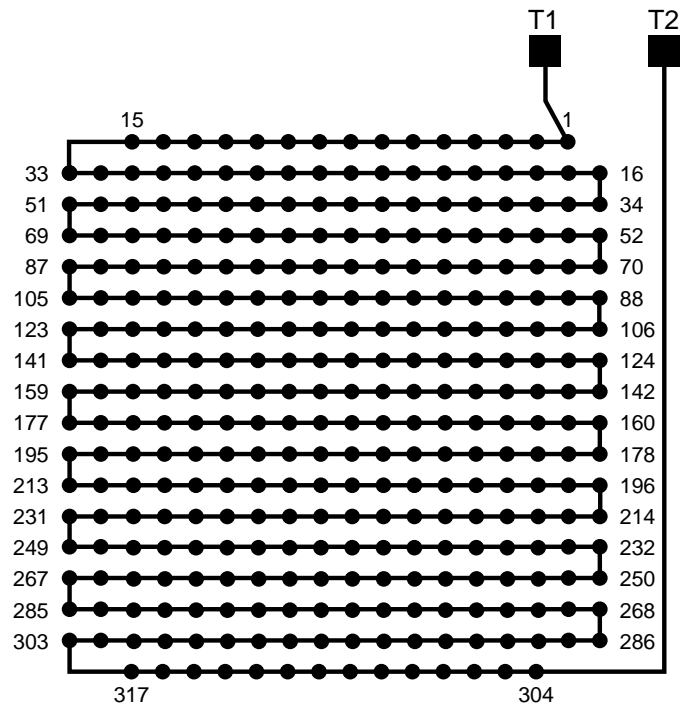
**BALL VIEW**



**X-RAY VIEW**



**PCB VIEW**



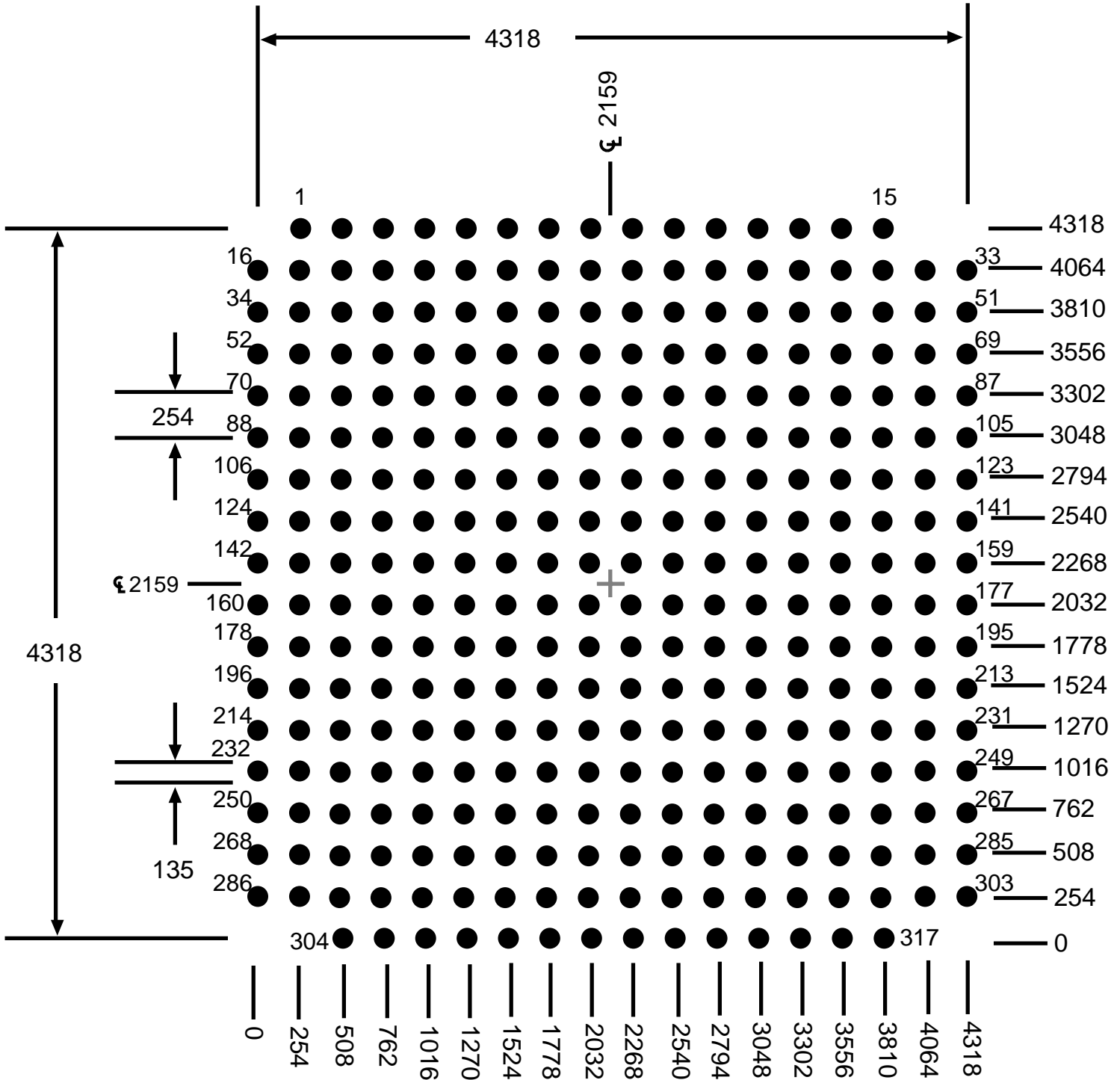
**AFTER MOUNTING TO TEST BOARD**

# FC317G5.08E254



BUMP	PITCH	BUMP DIA.	BODY SIZE	BUMP MAT'L	REF
317	254μm	135μm	5.08mm SQ	Sn63	FA10-2x2

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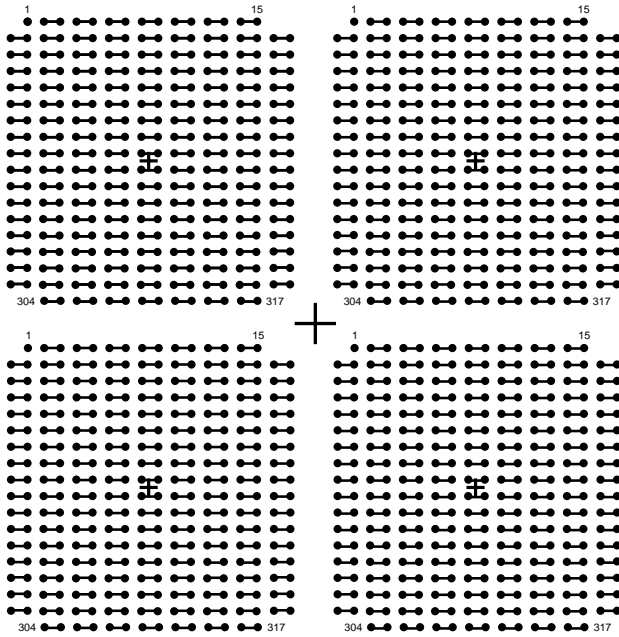


## BUMP VIEW

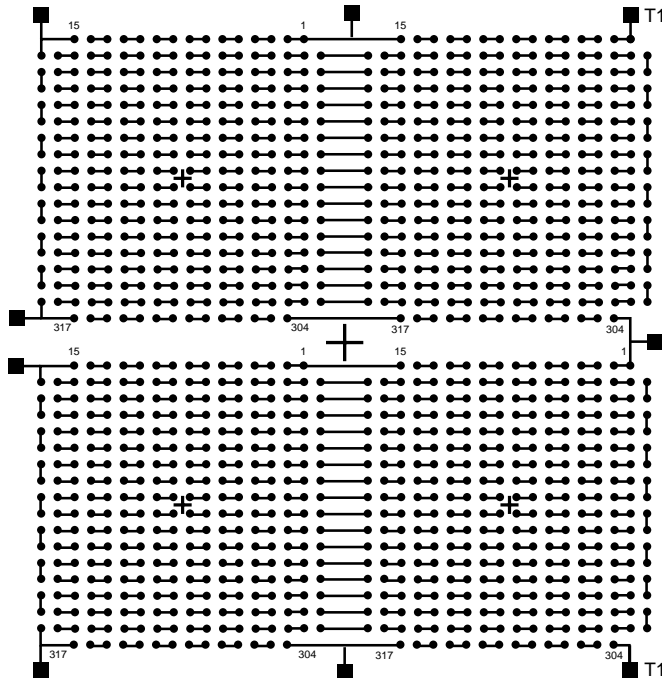
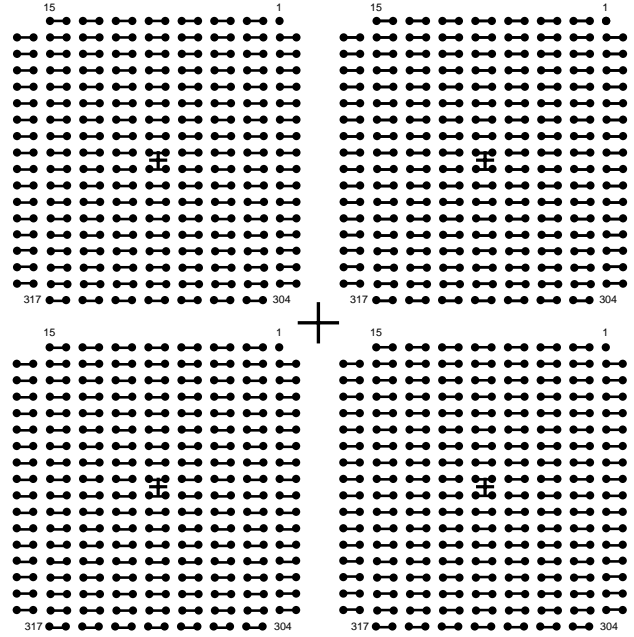
Dimension in μm (1000μm = 1.0mm)

<u>BUMP</u>	<u>PITCH</u>	<u>BUMP DIA.</u>	<u>BODY SIZE</u>	<u>BUMP MAT'L</u>	<u>REF</u>
1268	254µm	135µm	10.2mm SQ	Sn63	FA10-4x4

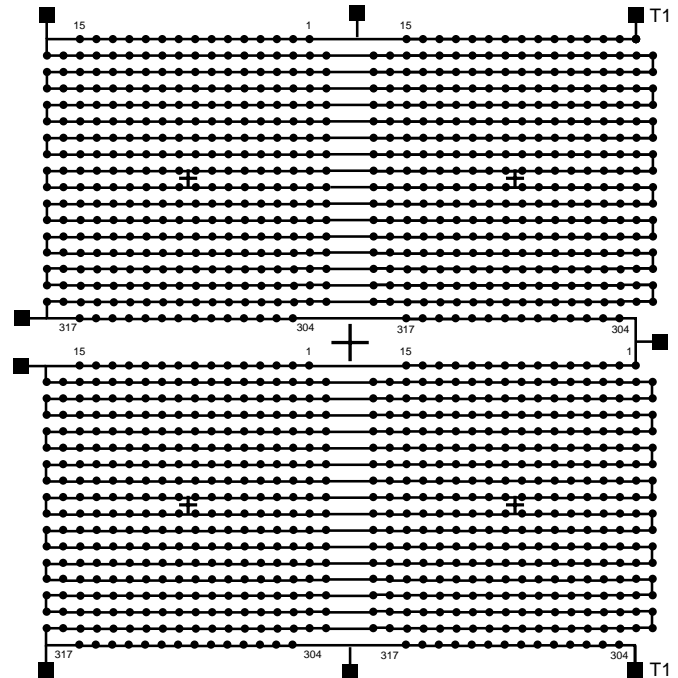
## BALL VIEW



## X-RAY VIEW



## PCB VIEW



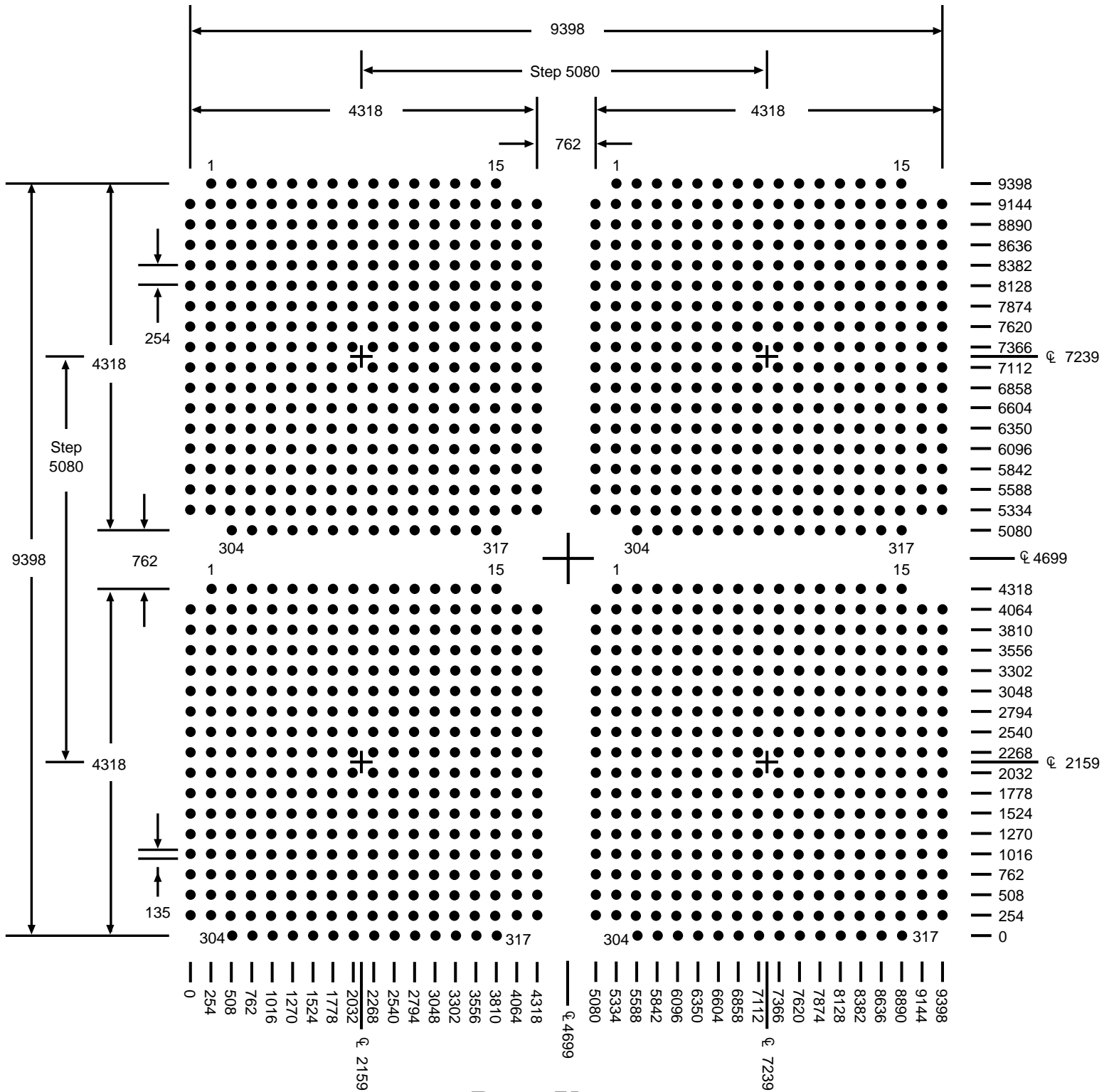
## AFTER MOUNTING TO TEST BOARD

# FC1268G10E254



BUMP	PITCH	BUMP DIA.	BODY SIZE	BUMP MAT'L	REF
1268	254μm	135μm	10.2mm SQ	Sn63	FA10-4x4

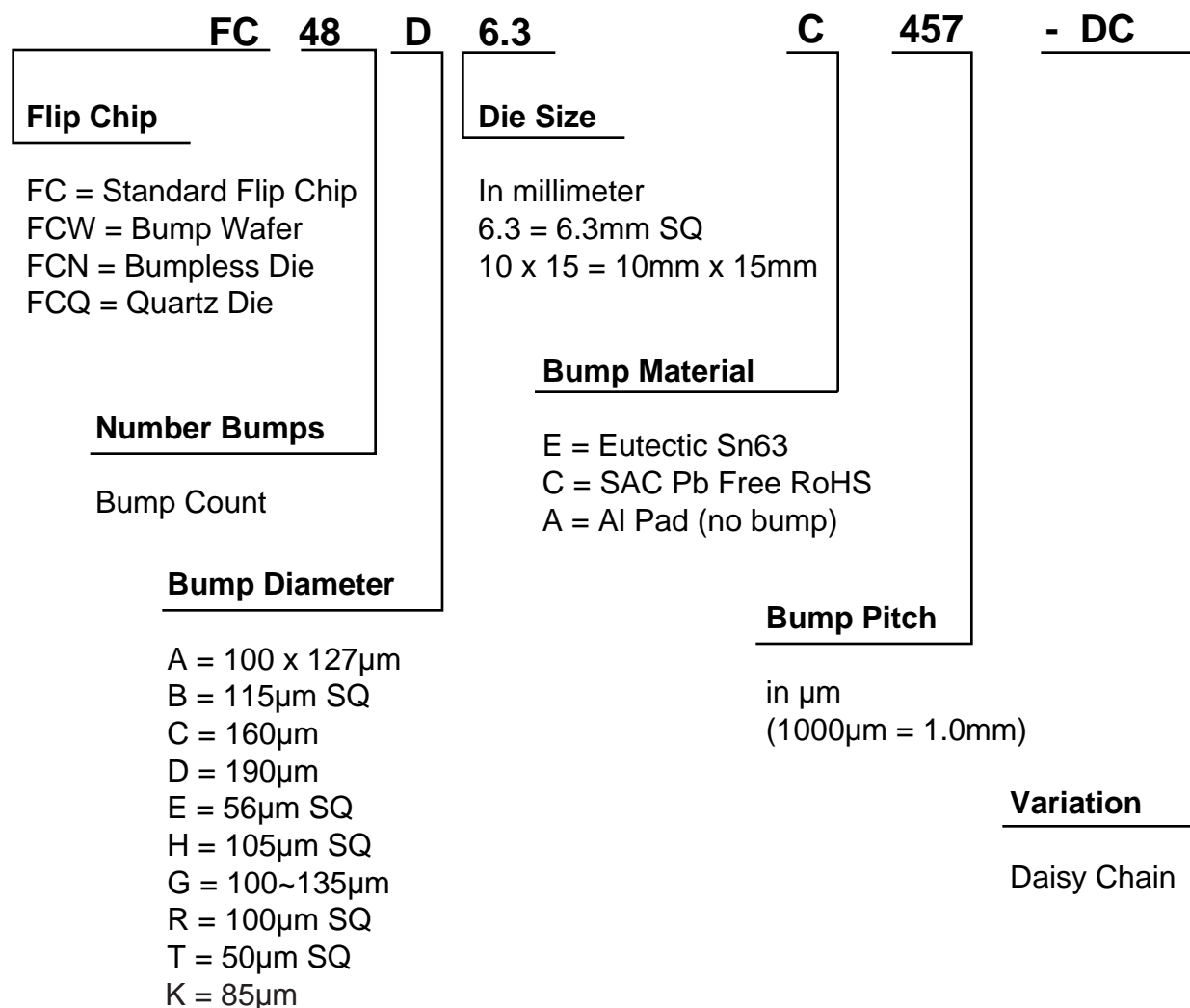
TEL 1-800-776-9888  
info@topline.tv



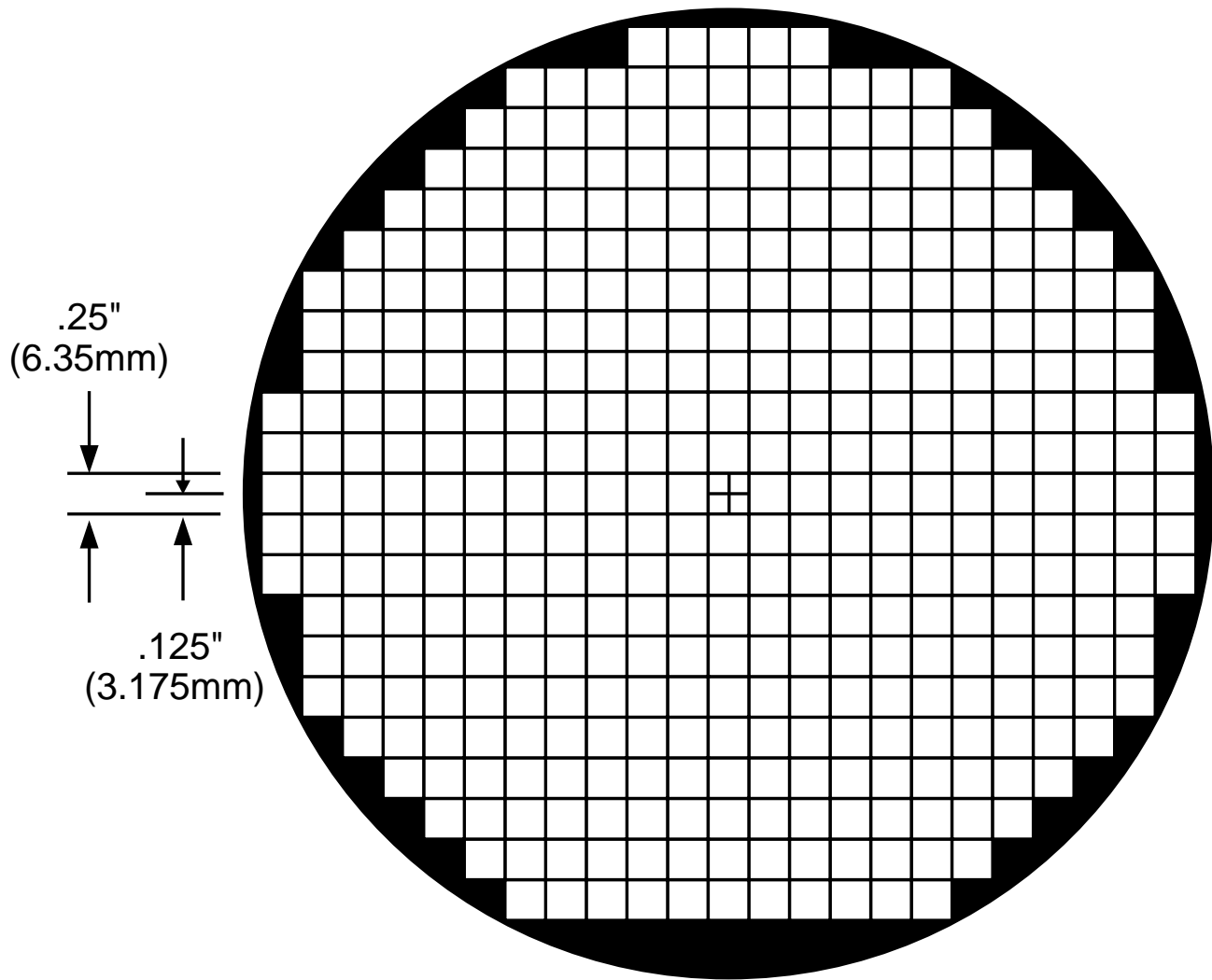
## BUMP VIEW

Dimension in μm (1000μm = 1.0mm)

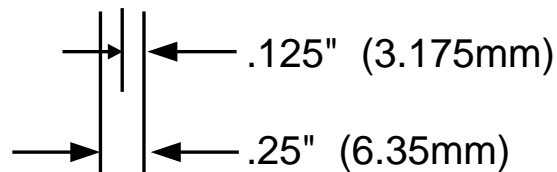
# FLIP CHIP PART NUMBERING SYSTEM



**6-INCH WAFER**  
**CFCW48D6.3E457**  
**YIELD 396**

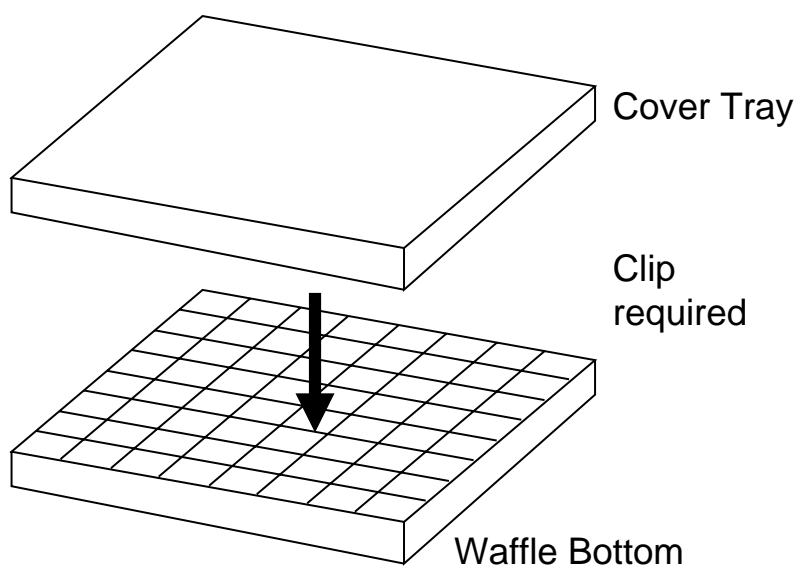


Yield
5
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13
11



## FLIP CHIP TRAY QUANTITY

Part Number	2" Waffle Tray	4" Waffle Trays	5" Wafer Unsawn Wafer
FC2853 15mm Sq	4	16	25
FC5072 20mm Sq	4	9	18
FC48 6.3mm Sq	25	100	236
FC88 5.08mm Sq	36	144	340
FC96 12.7mm Sq	9	25	46
FC176 10mm Sq	9	49	80
FC220 15x20mm	9	20	45
FC317 5.08mm Sq	36	144	340
FC1268 10mm Sq	9	49	80



# FLIP CHIP TEST VEHICLE BOARD

FLIP CHIP	BOARD PART NUMBER				NOTES
	LAMINATE BOARD	CERAMIC BOARD	GERBER FILE	PLACEMENT FILE	
FC14	NA	NA	NA	NA	
FC21	NA	NA	NA	NA	
FC48	909001 -	- 908001	909005 none	909004 none	back side for FC96 -
FC88	902001	NA	902005	902004	
FC96	907001 -	- 906001	907005 none	907004 none	front side for FC48 -
FC176	901001	NA	901005	901004	
FC220	904001	NA	904005	904004	
FC317	903001	NA	903005	903004	
FC1268	NA	NA	NA	NA	