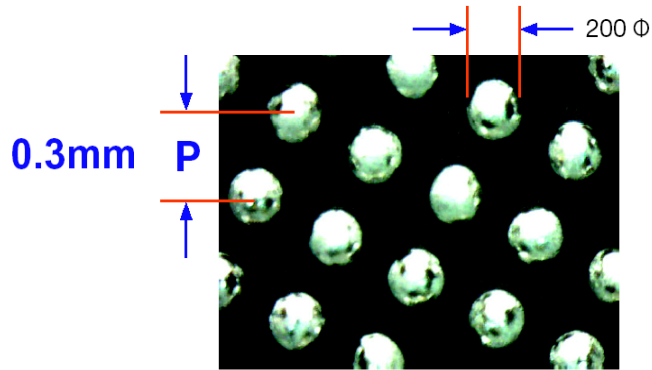
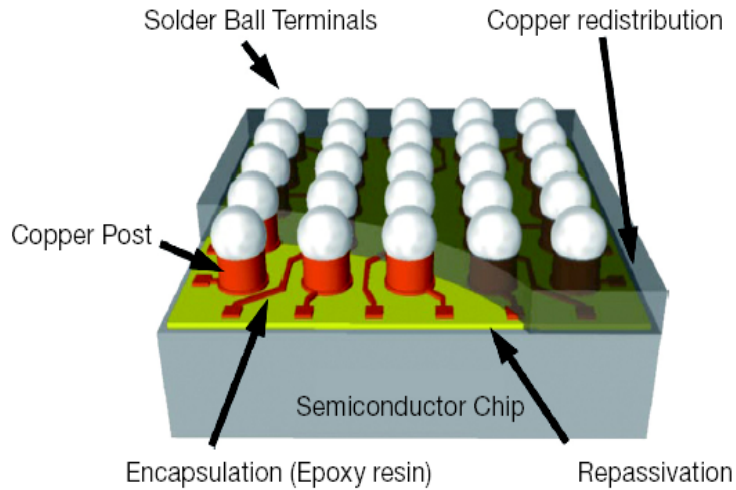
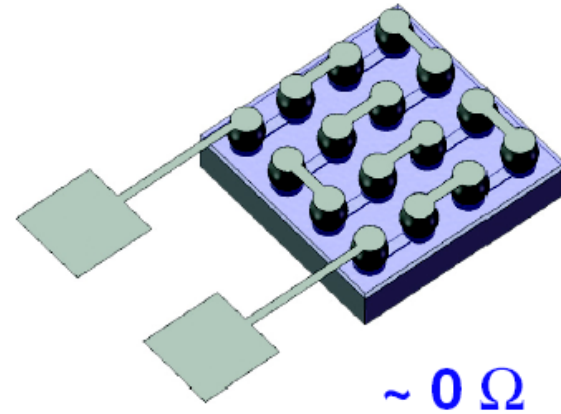


WLP OutLine Drawings

0.3mm Pitch



Daisy Chain



TOLERANCE UNLESS NOTED		APPROVALS	DATE	TopLine [®]			
XX	+/- 0.3	DRAWN J. Hines	12/28/2010				
X.XX	+/- 0.03			WLP16T.3C-DC048D			
X.XXX	+/- 0.003	ENG		16-BALL P=0.3mm (TEG0306)			
ANGLES	+/- 0.5°	MFG		SCALE	SIZE	DRAWING NO.	REV
ALL DIMENSIONS IN		QA		50:1	A	530482	A
INCHES <input type="checkbox"/> MILLIMETERS <input checked="" type="checkbox"/>		CUST		DO NOT SCALE DRAWING		SHEET 1 OF 2	
THIRD ANGLE PROJECTION		REVISED					

WLP Daisy Chain (Full Array)

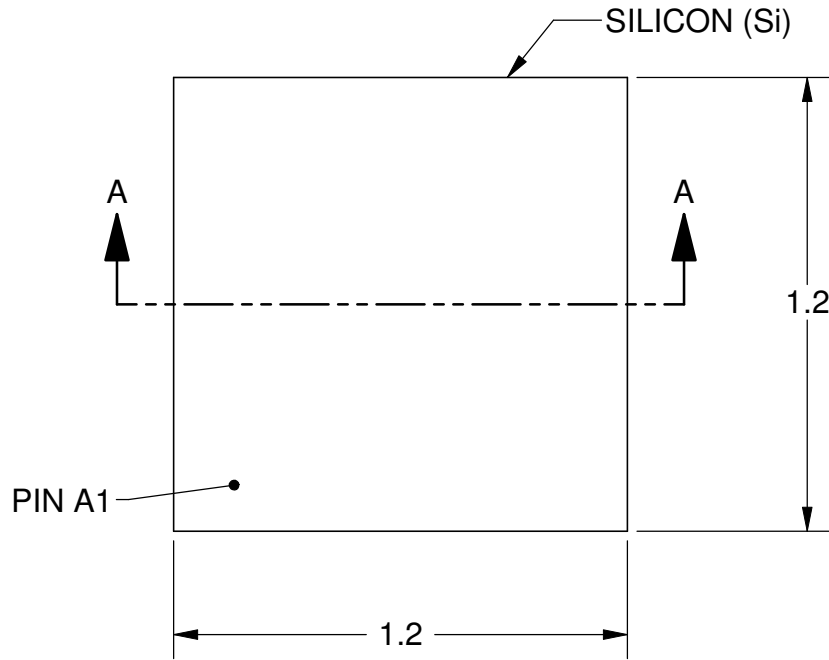
Ball Count	Ball Matrix	Daisy Chain	Body Size (mm) P=0.3mm	Page
16	4x4	DC048	1.2mm	3~4
36	6x6	DC067	1.8mm	5~6
64	8x8	DC088	2.4mm	7~8
100	10x10	DC108	3.0mm	9~10
144	12x12	DC127	3.6mm	11~12
196	14x14	DC148	4.2mm	13~14
256	16x16	DC168	4.8mm	15~16
400	20x20	DC208	6.0mm	17~18
676	26x26	DC260	7.8mm	19~20
900	30x30	DC307	9.0mm	21~22



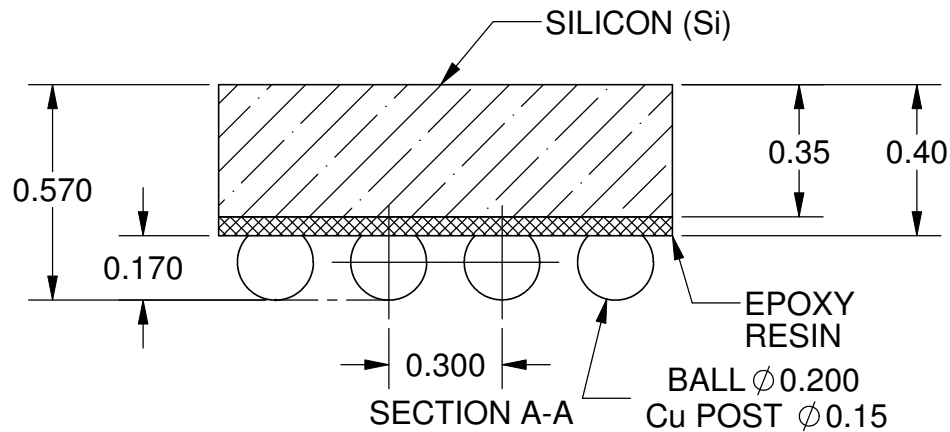
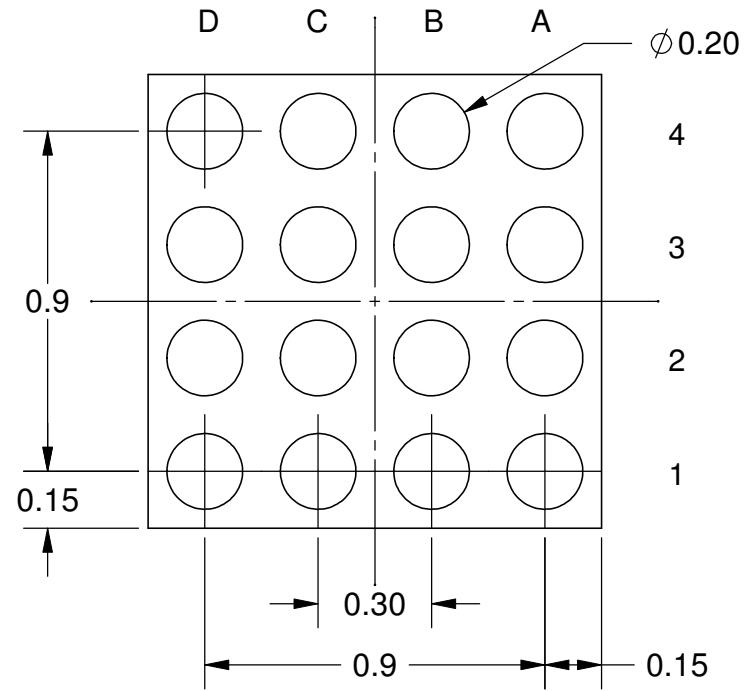
Contact: Sales@TopLine.tv
Tel 1-800-776-9888

More Details:
www.topline.tv/WLP.html

TOP VIEW




BALL VIEW



Notes: (Unless Otherwise Specified).

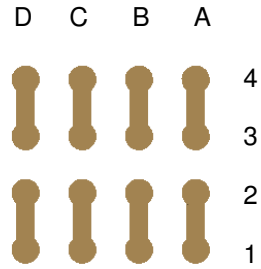
- 1) ALL DIMENSIONS ARE IN MM.
- 2) SOLDER BALL ALLOY:
STANDARD: SAC305 (Sn96.5/Ag3.0/Cu0.5).
SPECIAL: LF35 (Sn98.3/Ag1.2/Cu0.5).
- 3) BALL DIAMETER (BEFORE REFLOW): 0.20mm.
- 4) NON-SOLDER MASK DEFINED PAD.
- 5) PAD Cu DIAMETER: 0.15mm.
- 6) SUBSTRATE MATERIAL: Si (SILICON).
- 7) DAISY CHAIN PATTERN (SEE PAGE 2).

PART NUMBER TABLE				
PART NUMBER	BALL ALLOY	Pb-FREE	RoHS	Si DIE
WLP16T.3C-DC048D	Sn96.5/Ag3.0/Cu0.5	YES	YES	YES
WLP16T.3C1-DC048D	Sn98.3/Ag1.2/Cu0.5	YES	YES	YES

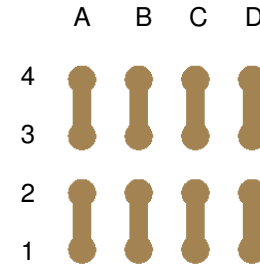
TOLERANCE UNLESS NOTED		APPROVALS		DATE				
X.X	+/- 0.3	DRAWN J. Hines		12/28/2010				
X.XX	+/- 0.03	ENG			TITLE			
X.XXX	+/- 0.003	MFG			WLP16T.3C-DC048D			
ANGLES +/- 0.5°		THIRD ANGLE PROJECTION			16-BALL P=0.3mm (TEG0306)			
ALL DIMENSIONS IN		QA			SCALE	SIZE	DRAWING NO.	REV
INCHES <input type="checkbox"/> MILLIMETERS <input checked="" type="checkbox"/>		CUST			50:1	A	530482	A
		REVISED			DO NOT SCALE DRAWING			SHEET 1 OF 2

DAISY CHAIN PATTERN

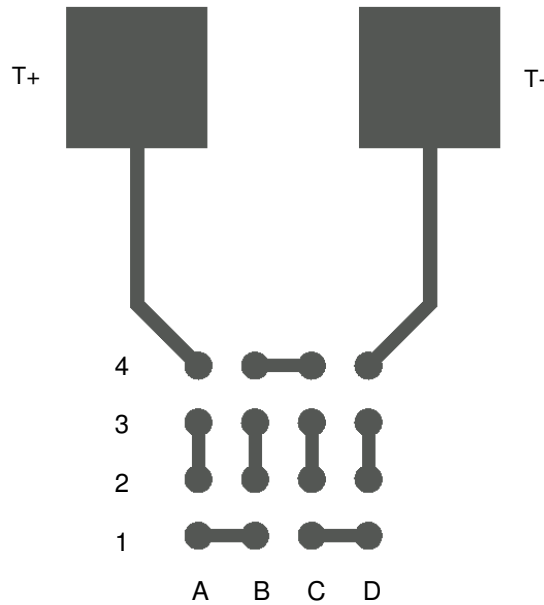
BALL VIEW



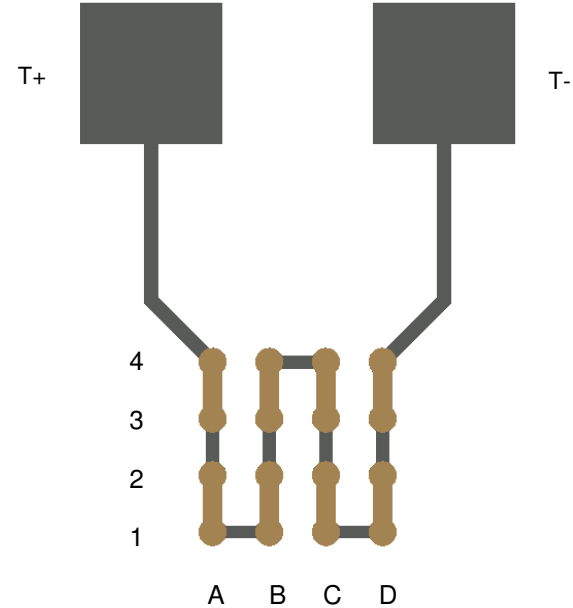
BOTTOM SIDE
(TOP X-RAY VIEW)



TOP VIEW



AFTER MOUNTING
TO TEST BOARD
(TOP X-RAY VIEW)



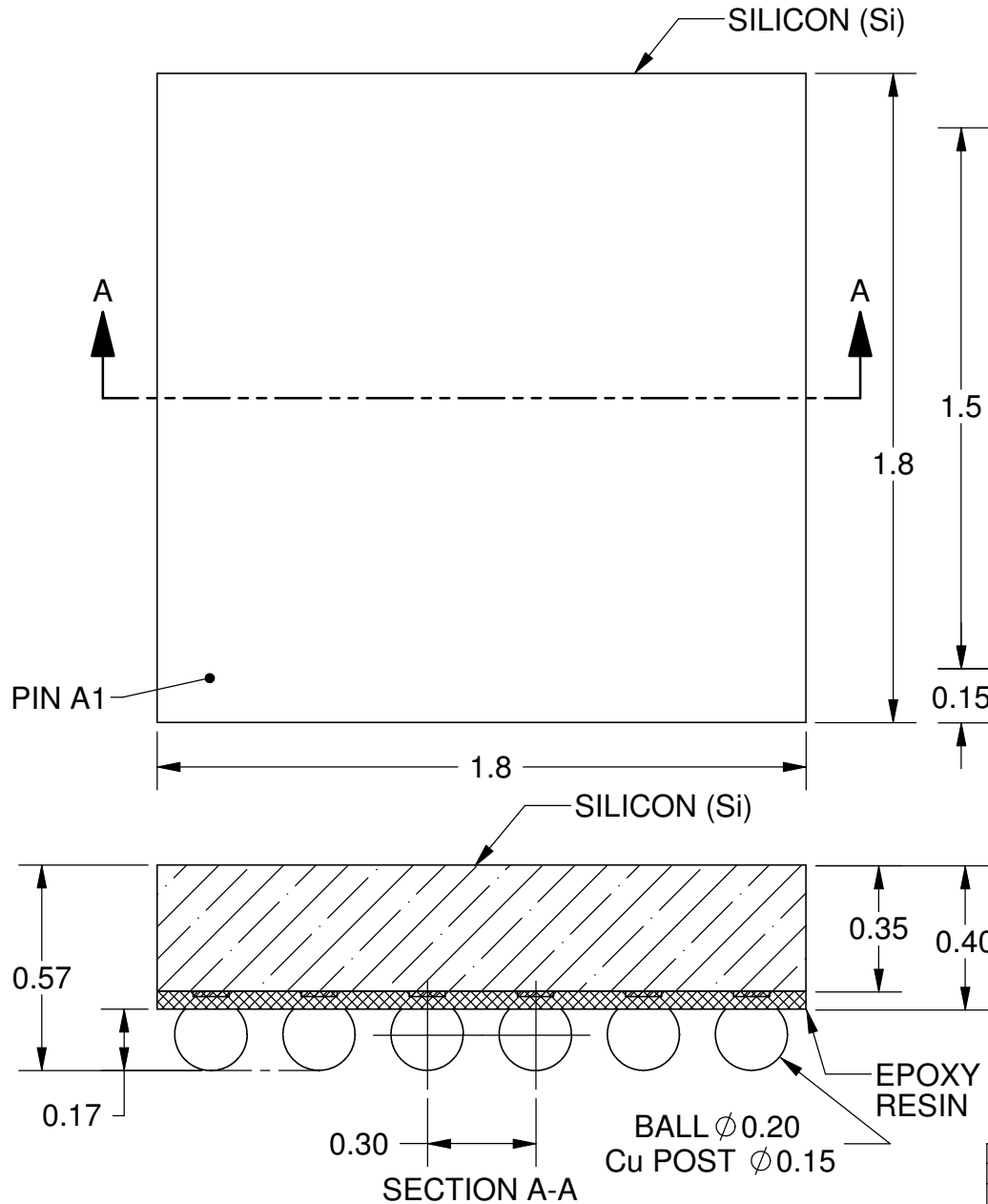
TEST VEHICLE BOARD

Notes:

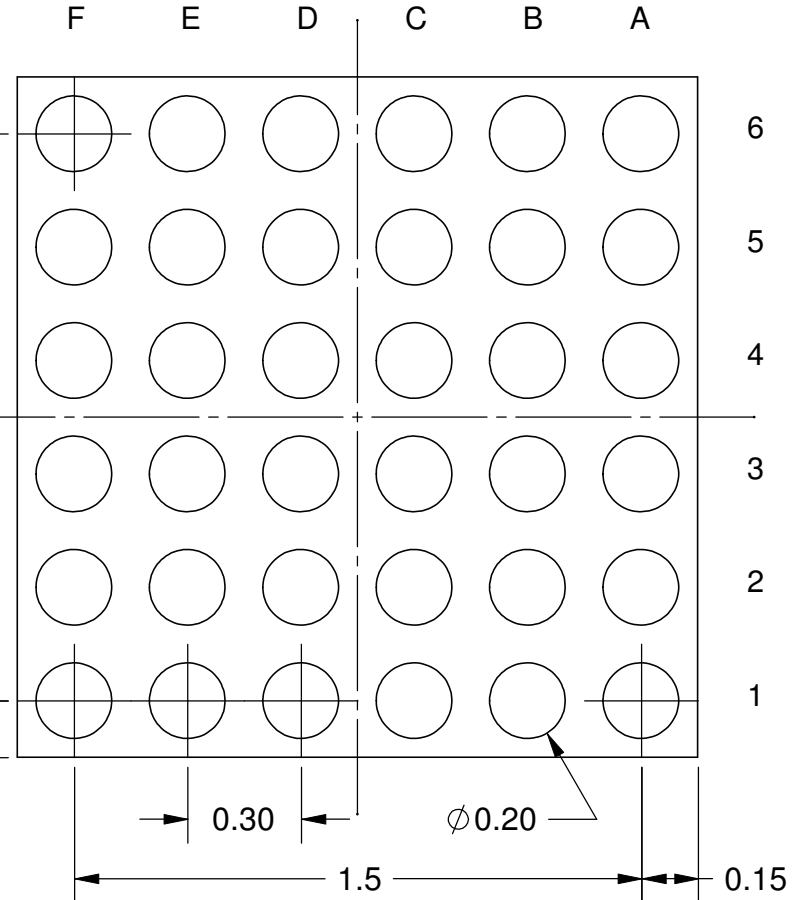
- 1) PCB BOARD DIMENSIONS ARE PRESENTED ONLY AS A GUIDELINE. DESIGNERS SHOULD USE THEIR OWN EXPERIENCE WHEN DESIGNING PCB.
- 2) PCB Cu BALL PAD DIAMETER 0.15mm (5.9mil).
- 3) PCB DAISY CHAIN TRACING LINE WIDTH 0.07mm (3mil).

TopLine ®			
TITLE WLP16T.3C-DC048D 16-BALL P=0.3mm (TEG0306)			
SCALE	SIZE	DRAWING NO.	REV
25:1	A	530482	A
DO NOT SCALE DRAWING			SHEET 2 OF 2

TOP VIEW



BALL VIEW



Notes: (Unless Otherwise Specified).

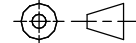
- 1) ALL DIMENSIONS ARE IN MM.
- 2) SOLDER BALL ALLOY:
STANDARD: SAC305 (Sn96.5/Ag3.0/Cu0.5).
SPECIAL: LF35 (Sn98.3/Ag1.2/Cu0.5).
- 3) BALL DIAMETER (BEFORE REFLOW): 0.20mm.
- 4) NON-SOLDER MASK DEFINED PAD.
- 5) PAD Cu DIAMETER: 0.15mm.
- 6) SUBSTRATE MATERIAL: Si (SILICON).
- 7) DAISY CHAIN PATTERN (SEE PAGE 2).

SECTION A-A

PART NUMBER TABLE				
PART NUMBER	BALL ALLOY	Pb-FREE	RoHS	Si DIE
WLP36T.3C-DC067D	Sn96.5/Ag3.0/Cu0.5	YES	YES	YES
WLP36T.3C1-DC067D	Sn98.3/Ag1.2/Cu0.5	YES	YES	YES

TOLERANCE UNLESS NOTED	
X.X	+/- 0.3
X.XX	+/- 0.03
X.XXX	+/- 0.003
ANGLES	+/- 0.5°
ALL DIMENSIONS IN	
<input type="checkbox"/> INCHES	<input checked="" type="checkbox"/> MILLIMETERS

THIRD ANGLE PROJECTION

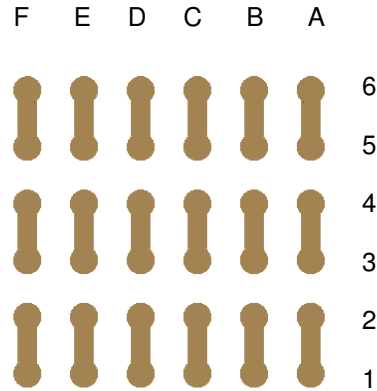


APPROVALS	DATE
DRAWN J. Hines	12/29/2010
ENG	
MFG	
QA	
CUST	
REVISED	

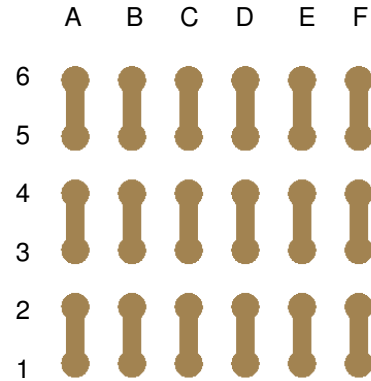
TopLine			
TITLE WLP36T.3C-DC067D 36-BALL P=0.3mm (TEG0306)			
SCALE 50:1	SIZE A	DRAWING NO. 530672	REV A
DO NOT SCALE DRAWING		SHEET 1 OF 2	

DAISY CHAIN PATTERN

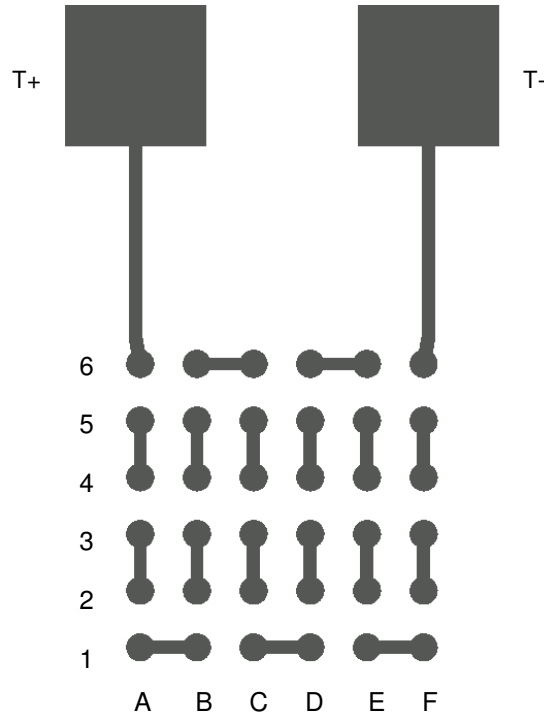
BALL VIEW



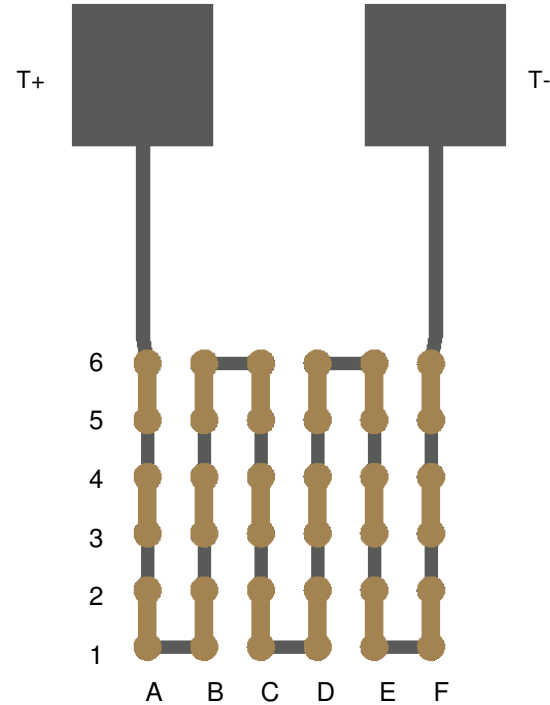
BOTTOM SIDE
(TOP X-RAY VIEW)



TOP VIEW



AFTER MOUNTING
TO TEST BOARD
(TOP X-RAY VIEW)



TEST VEHICLE BOARD

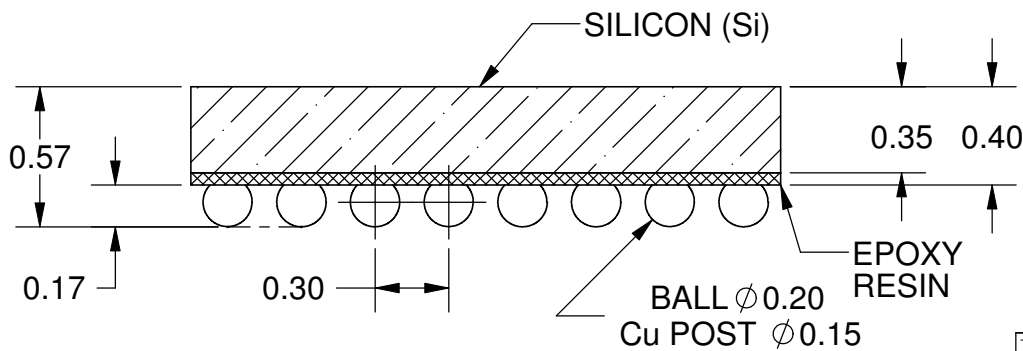
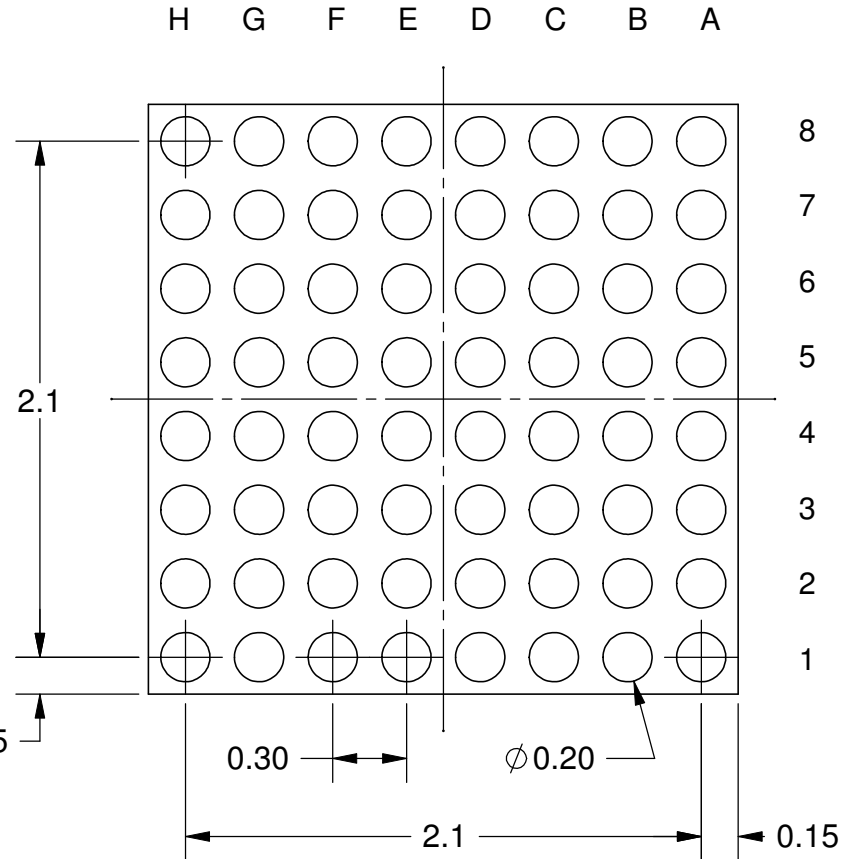
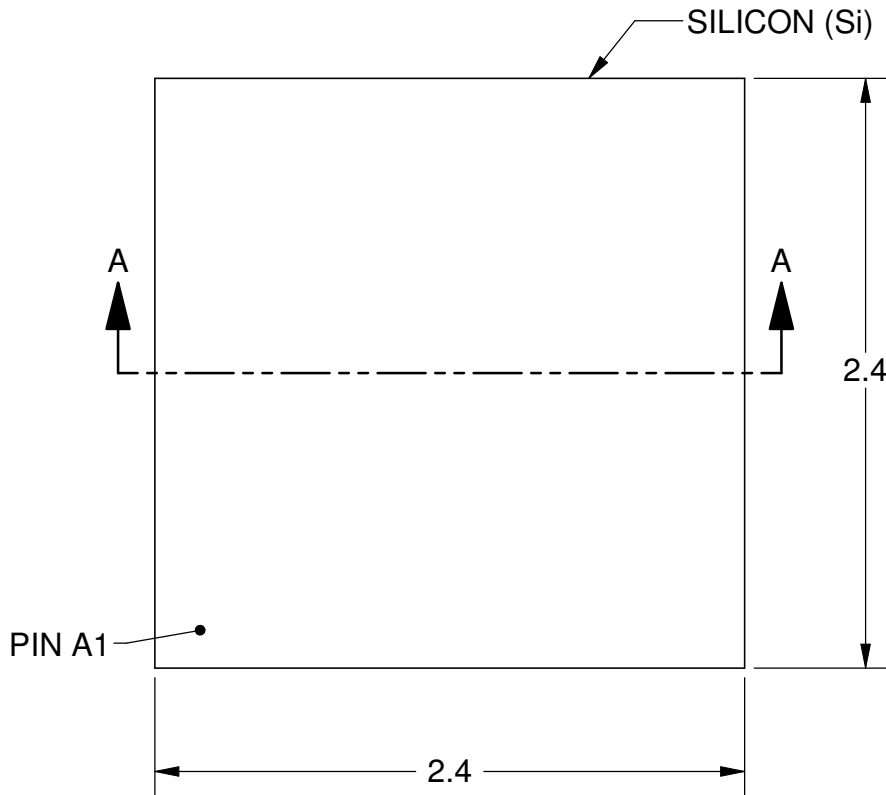
Notes:

- 1) PCB BOARD DIMENSIONS ARE PRESENTED ONLY AS A GUIDELINE. DESIGNERS SHOULD USE THEIR OWN EXPERIENCE WHEN DESIGNING PCB.
- 2) PCB Cu BALL PAD DIAMETER 0.15mm (9.8mil).
- 3) PCB DAISY CHAIN TRACING LINE WIDTH 0.07mm (3mil).

TopLine ®			
TITLE WLP36T.3C-DC067D 36-BALL P=0.3mm (TEG0306)			
SCALE 25:1	SIZE A	DRAWING NO. 530672	REV A
DO NOT SCALE DRAWING			SHEET 2 OF 2

TOP VIEW

BALL VIEW


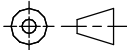


SECTION A-A

Notes: (Unless Otherwise Specified).

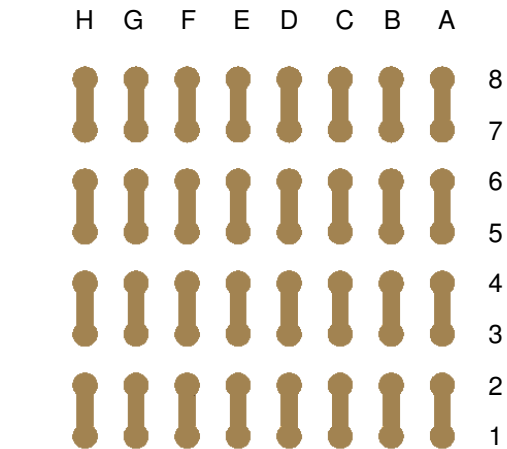
- 1) ALL DIMENSIONS ARE IN MM.
- 2) SOLDER BALL ALLOY:
STANDARD: SAC305 (Sn96.5/Ag3.0/Cu0.5).
SPECIAL: LF35 (Sn98.3/Ag1.2/Cu0.5).
- 3) BALL DIAMETER (BEFORE REFLOW): 0.20mm.
- 4) NON-SOLDER MASK DEFINED PAD.
- 5) PAD Cu DIAMETER: 0.15mm.
- 6) SUBSTRATE MATERIAL: Si (SILICON).
- 7) DAISY CHAIN PATTERN (SEE PAGE 2).

PART NUMBER TABLE				
PART NUMBER	BALL ALLOY	Pb-FREE	RoHS	Si DIE
WLP64T.3C-DC088D	Sn96.5/Ag3.0/Cu0.5	YES	YES	YES
WLP64T.3C1-DC088D	Sn98.3/Ag1.2/Cu0.5	YES	YES	YES

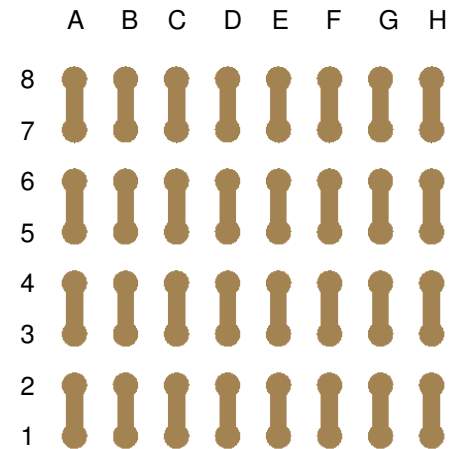
TOLERANCE UNLESS NOTED		APPROVALS		DATE				
X.X	+/- 0.3	DRAWN J. Hines		12/29/2010				
X.XX	+/- 0.03	ENG			TITLE			
X.XXX	+/- 0.003	MFG			WLP64T.3C-DC088D			
ANGLES +/- 0.5°		THIRD ANGLE PROJECTION			64-BALL P=0.3mm (TEG0306)			
ALL DIMENSIONS IN					SCALE	SIZE	DRAWING NO.	REV
<input type="checkbox"/> INCHES <input checked="" type="checkbox"/> MILLIMETERS		QA			32.5:1	A	530882	A
		CUST			DO NOT SCALE DRAWING		SHEET 1 OF 2	
		REVISED						

DAISY CHAIN PATTERN

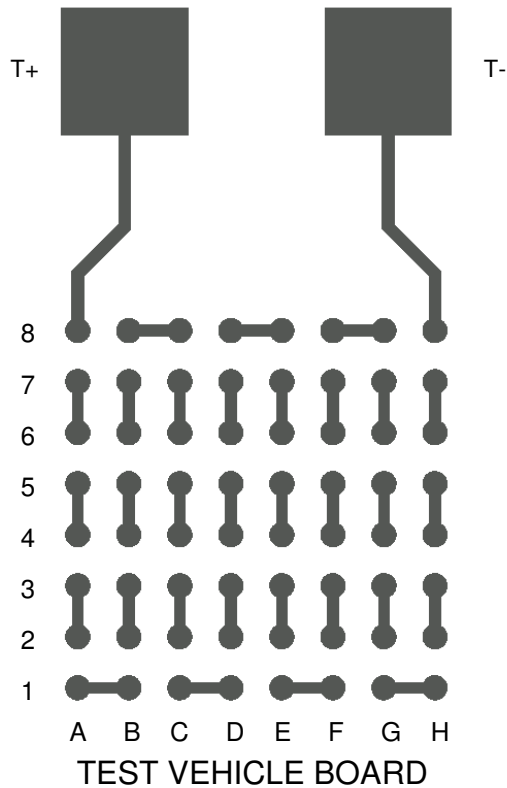
BALL VIEW



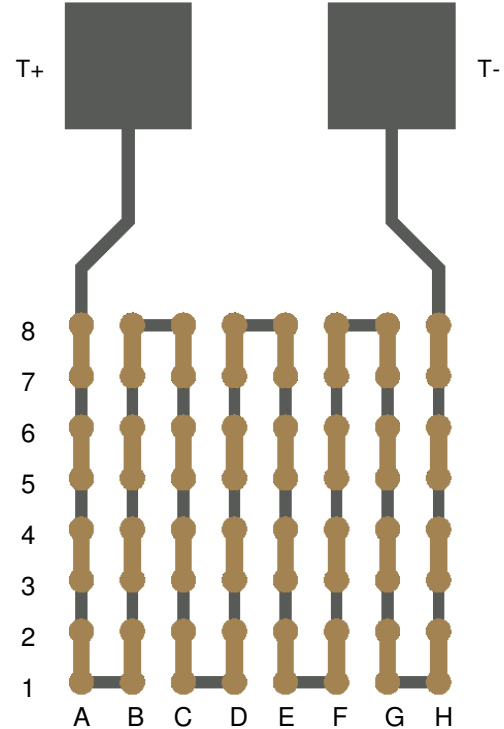
BOTTOM SIDE
(TOP X-RAY VIEW)



TOP VIEW



AFTER MOUNTING
TO TEST BOARD
(TOP X-RAY VIEW)

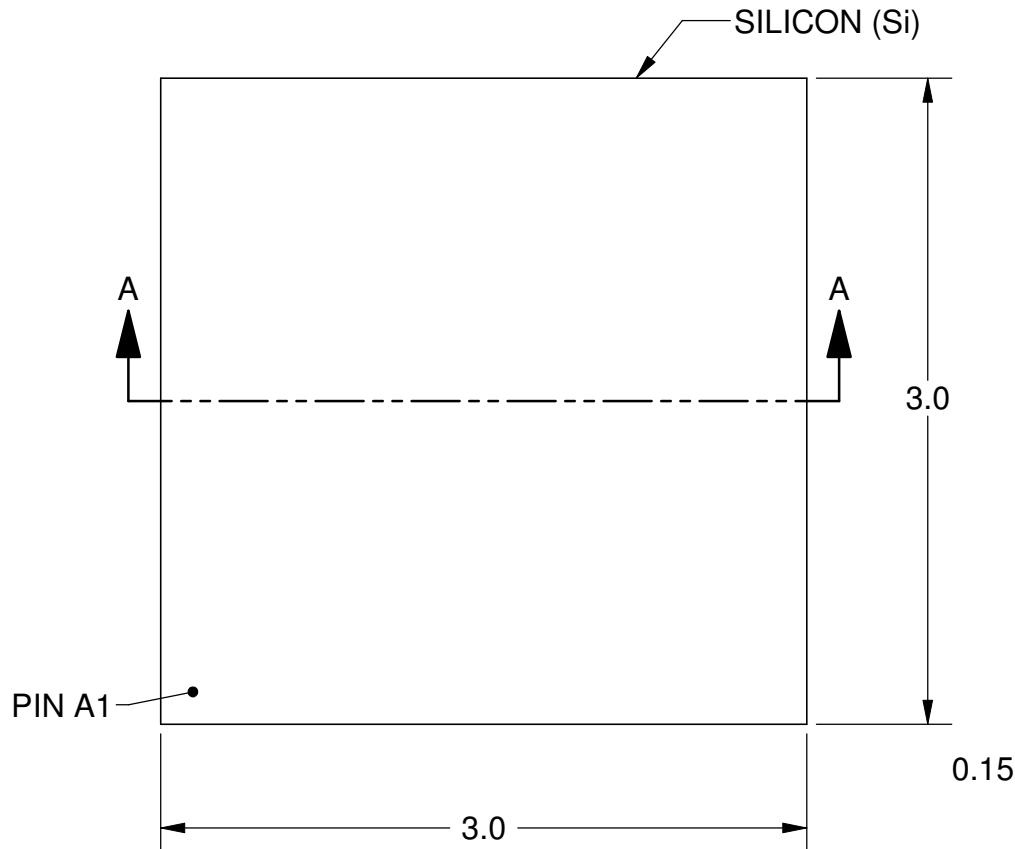


Notes:

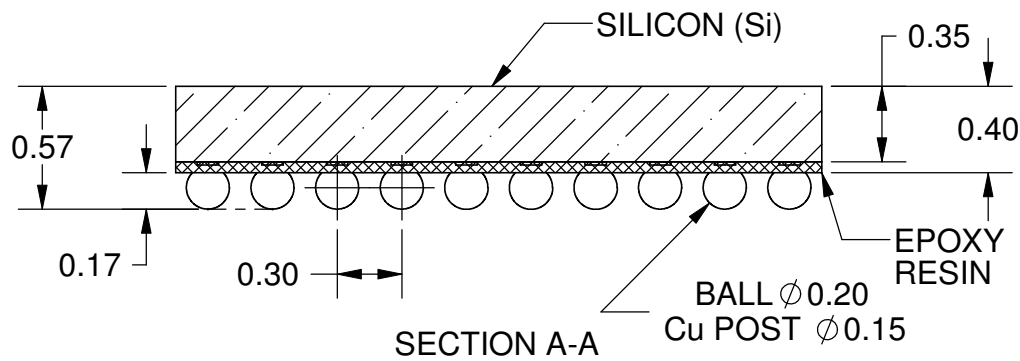
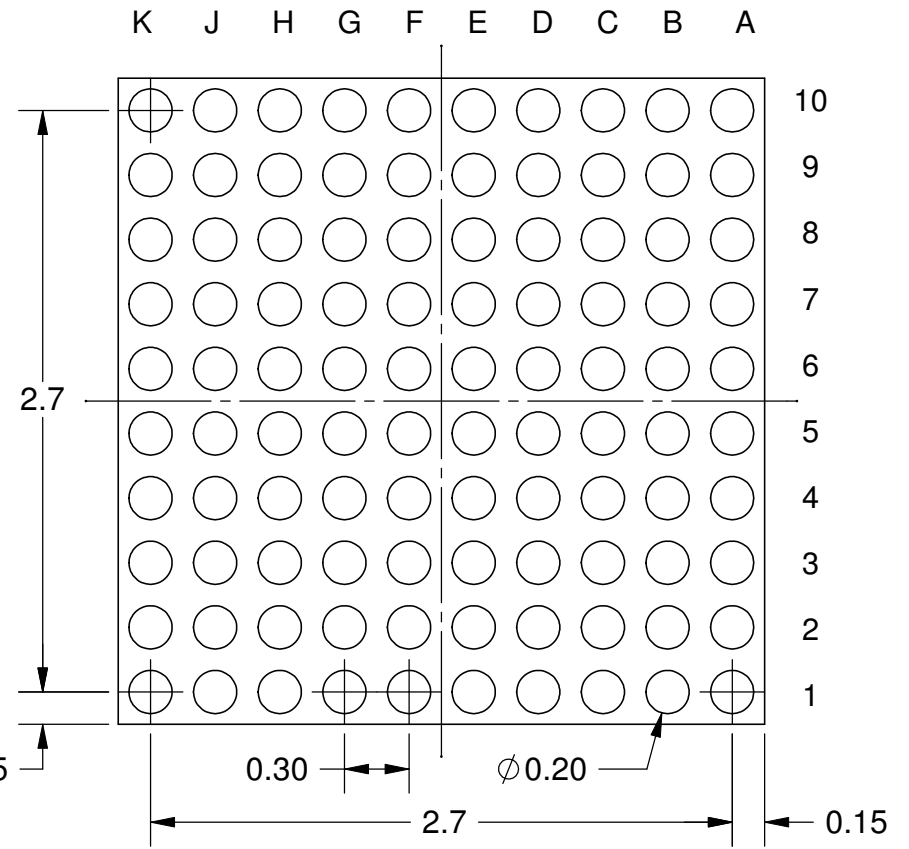
- 1) PCB BOARD DIMENSIONS ARE PRESENTED ONLY AS A GUIDELINE. DESIGNERS SHOULD USE THEIR OWN EXPERIENCE WHEN DESIGNING PCB.
- 2) PCB Cu BALL PAD DIAMETER 0.15mm (5.9mil).
- 3) PCB DAISY CHAIN TRACING LINE WIDTH 0.07mm (3mil).

TopLine ®			
TITLE WLP64T.3C-DC088D 64-BALL P=0.3mm (TEG0306)			
SCALE 22.5:1	SIZE A	DRAWING NO. 530882	REV A
DO NOT SCALE DRAWING		SHEET 2 OF 2	

TOP VIEW



BALL VIEW



Notes: (Unless Otherwise Specified).

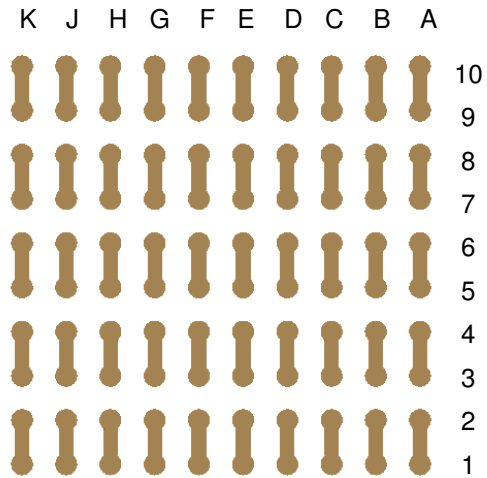
- 1) ALL DIMENSIONS ARE IN MM.
- 2) SOLDER BALL ALLOY:
STANDARD: SAC305 (Sn96.5/Ag3.0/Cu0.5).
SPECIAL: LF35 (Sn98.3/Ag1.2/Cu0.5).
- 3) BALL DIAMETER (BEFORE REFLOW): 0.20mm.
- 4) NON-SOLDER MASK DEFINED PAD.
- 5) PAD Cu DIAMETER: 0.15mm.
- 6) SUBSTRATE MATERIAL: Si (SILICON).
- 7) DAISY CHAIN PATTERN (SEE PAGE 2).

PART NUMBER TABLE

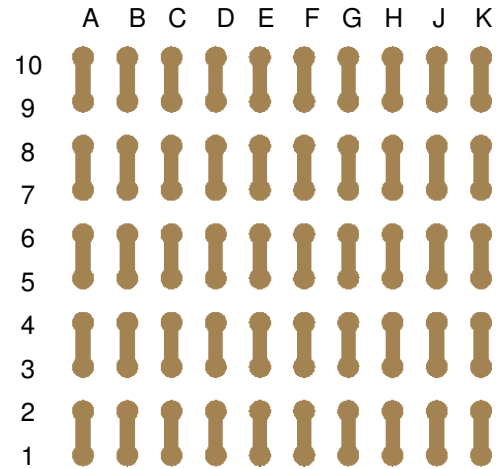
PART NUMBER	BALL ALLOY	Pb-FREE	RoHS	Si DIE
WLP100T.3C-DC108D	Sn96.5/Ag3.0/Cu0.5	YES	YES	YES
WLP100T.3C1-DC108D	Sn98.3/Ag1.2/Cu0.5	YES	YES	YES

TOLERANCE UNLESS NOTED		APPROVALS		DATE	TopLine [®]			
X.X	+/- 0.3	DRAWN J. Hines		12/29/2010				
X.XX	+/- 0.03	ENG			SCALE 28.5:1			
X.XXX	+/- 0.003	MFG			SIZE A		DRAWING NO. 531082	
ANGLES +/- 0.5°		QA			REV A			
ALL DIMENSIONS IN <input type="checkbox"/> INCHES <input checked="" type="checkbox"/> MILLIMETERS		CUST			DO NOT SCALE DRAWING			
THIRD ANGLE PROJECTION		REVISED			SHEET 1 OF 2			

BALL VIEW

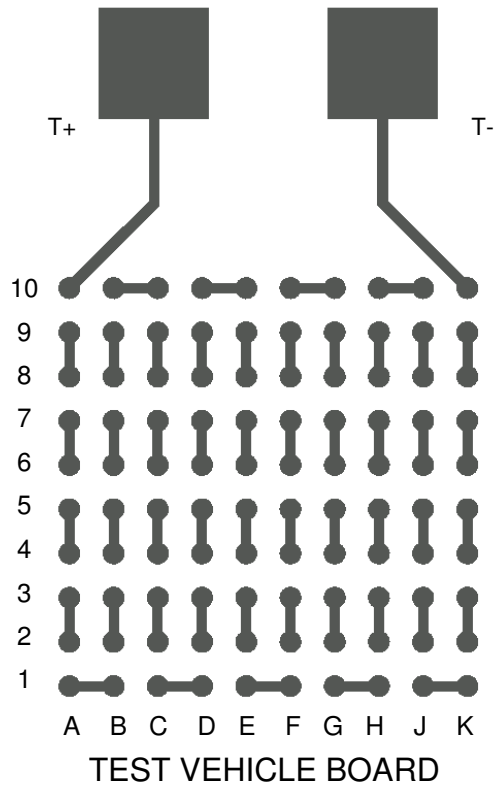


DAISY CHAIN PATTERN

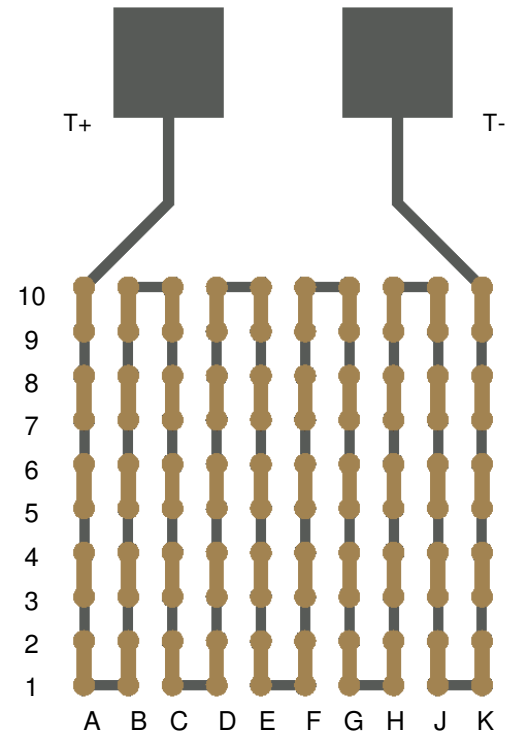


BOTTOM SIDE
(TOP X-RAY VIEW)

TOP VIEW



AFTER MOUNTING
TO TEST BOARD
(TOP X-RAY VIEW)



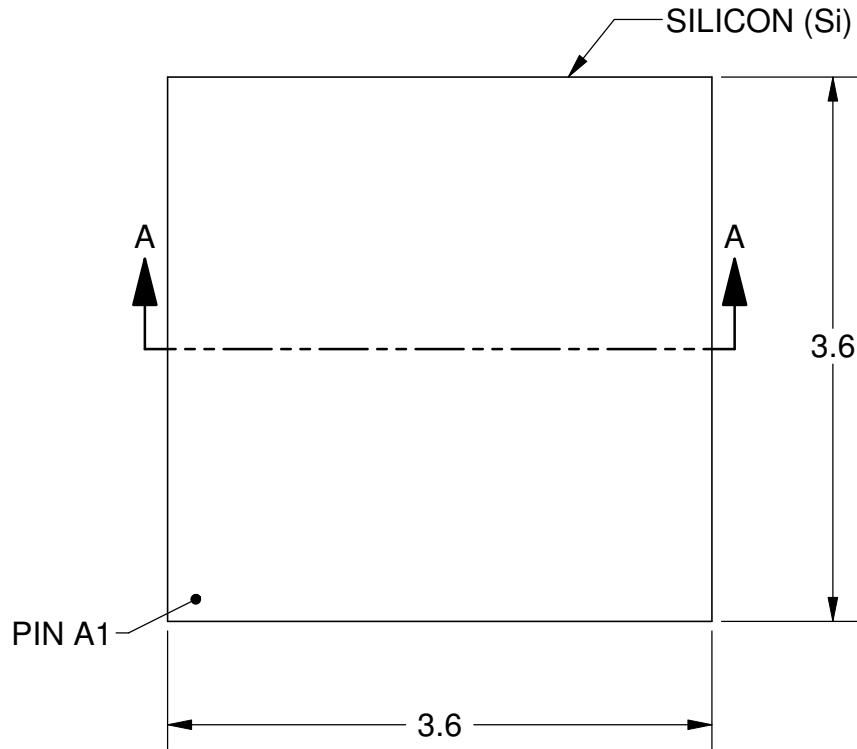
Notes:

- 1) PCB BOARD DIMENSIONS ARE PRESENTED ONLY AS A GUIDELINE. DESIGNERS SHOULD USE THEIR OWN EXPERIENCE WHEN DESIGNING PCB.
- 2) PCB Cu BALL PAD DIAMETER 0.15mm (5.9mil).
- 3) PCB DAISY CHAIN TRACING LINE WIDTH 0.07mm (3mil).

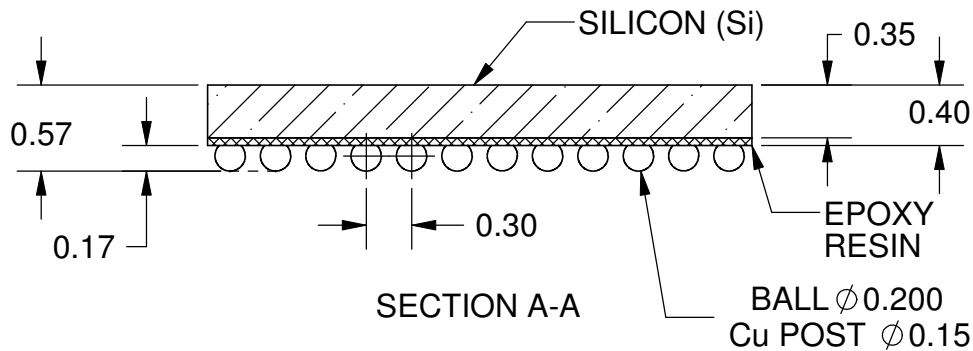
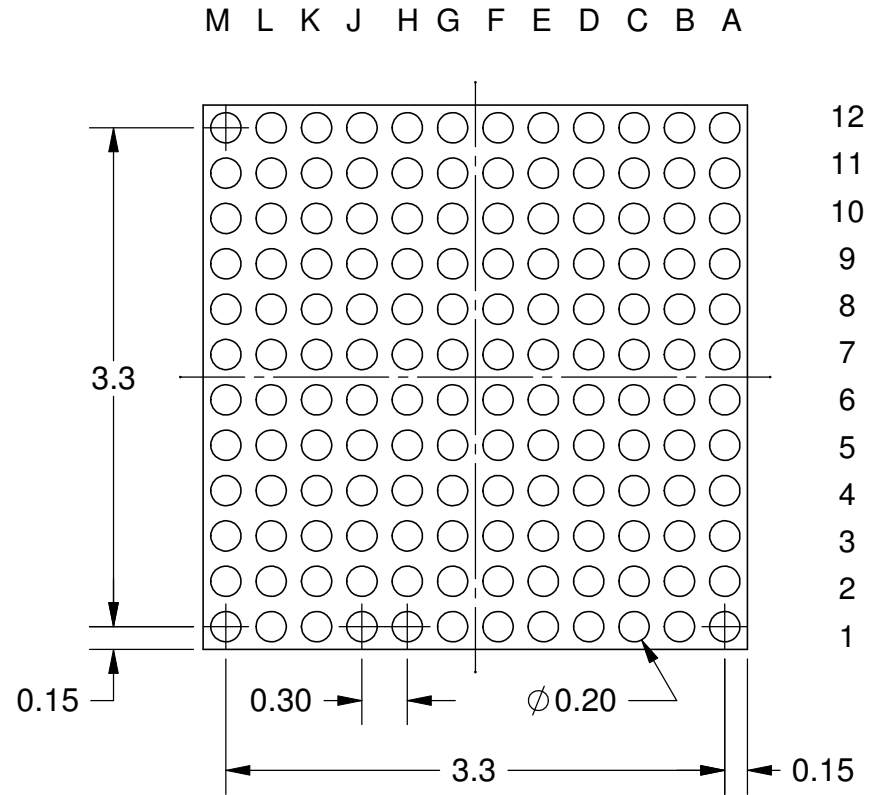
TopLine®

TITLE			
WLP100T.3C-DC108D			
100-BALL P=0.3mm (TEG0306)			
SCALE	SIZE	DRAWING NO.	REV
19.5:1	A	531082	A
DO NOT SCALE DRAWING			SHEET 2 OF 2

TOP VIEW




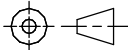
BALL VIEW



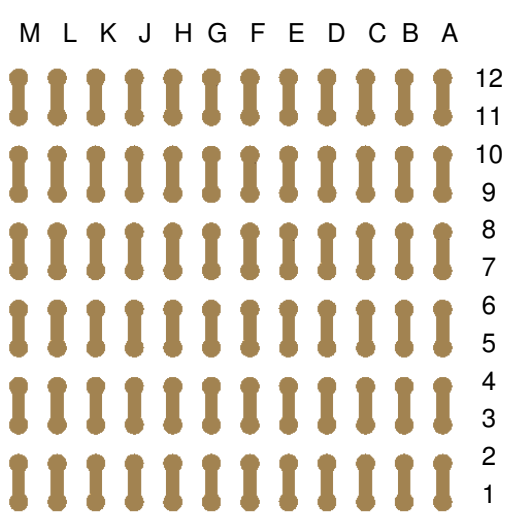
Notes: (Unless Otherwise Specified).

- 1) ALL DIMENSIONS ARE IN MM.
- 2) SOLDER BALL ALLOY:
STANDARD: SAC305 (Sn96.5/Ag3.0/Cu0.5).
SPECIAL: LF35 (Sn98.3/Ag1.2/Cu0.5).
- 3) BALL DIAMETER (BEFORE REFLOW): 0.20mm.
- 4) NON-SOLDER MASK DEFINED PAD.
- 5) PAD Cu DIAMETER: 0.15mm.
- 6) SUBSTRATE MATERIAL: Si (SILICON).
- 7) DAISY CHAIN PATTERN (SEE PAGE 2).

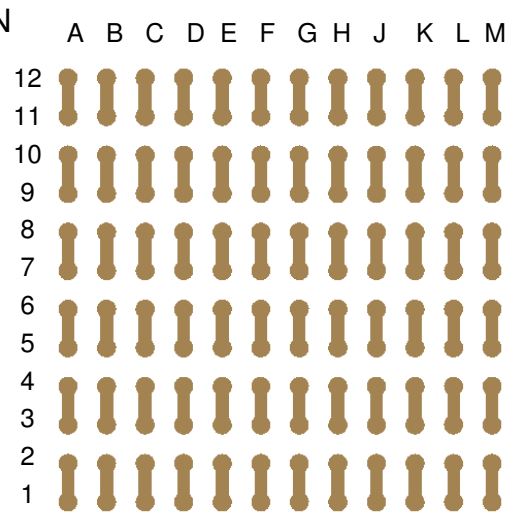
PART NUMBER TABLE				
PART NUMBER	BALL ALLOY	Pb-FREE	RoHS	Si DIE
WLP144T.3C-DC127D	Sn96.5/Ag3.0/Cu0.5	YES	YES	YES
WLP144T.3C1-DC127D	Sn98.3/Ag1.2/Cu0.5	YES	YES	YES

TOLERANCE UNLESS NOTED		APPROVALS		DATE				
X.X	+/- 0.3	DRAWN J. Hines		12/29/2010				
X.XX	+/- 0.03	ENG			TITLE			
X.XXX	+/- 0.003	MFG			WLP144T.3C-DC127D			
ANGLES +/- 0.5°		THIRD ANGLE PROJECTION			144-BALL P=0.3mm (TEG0306)			
ALL DIMENSIONS IN		<input type="checkbox"/> INCHES <input checked="" type="checkbox"/> MILLIMETERS			SCALE	SIZE	DRAWING NO.	REV
					20:1	A	531272	A
		REVISED			DO NOT SCALE DRAWING			SHEET 1 OF 2

BALL VIEW

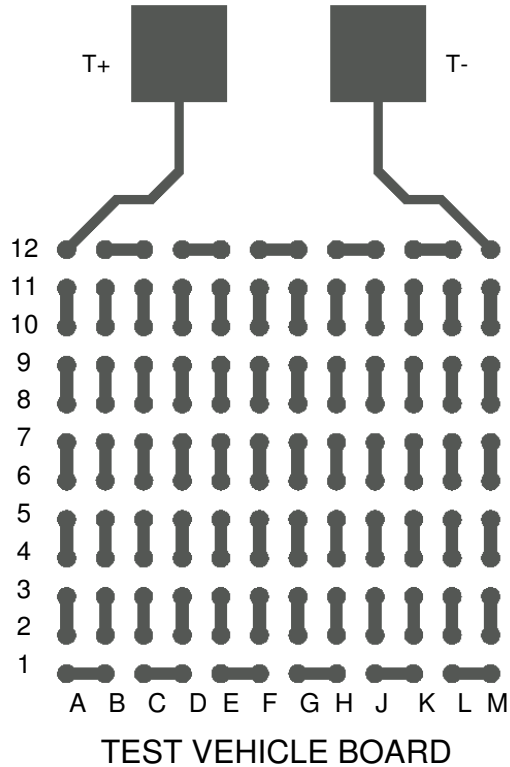


DAISY CHAIN PATTERN

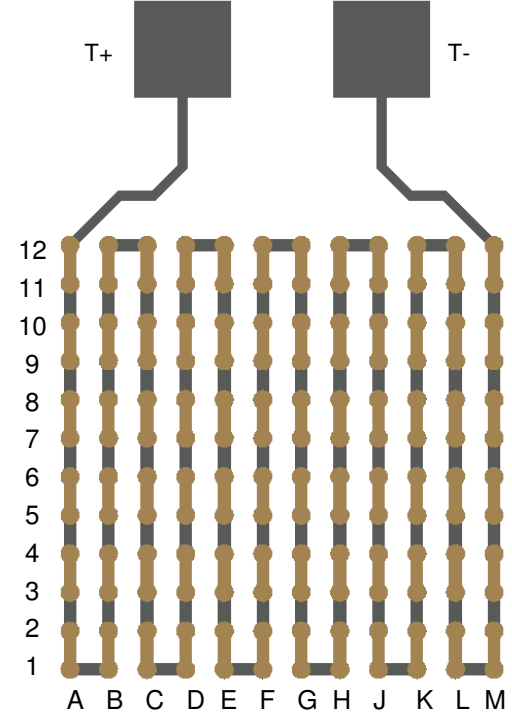


BOTTOM SIDE
(TOP X-RAY VIEW)

TOP VIEW



AFTER MOUNTING
TO TEST BOARD
(TOP X-RAY VIEW)



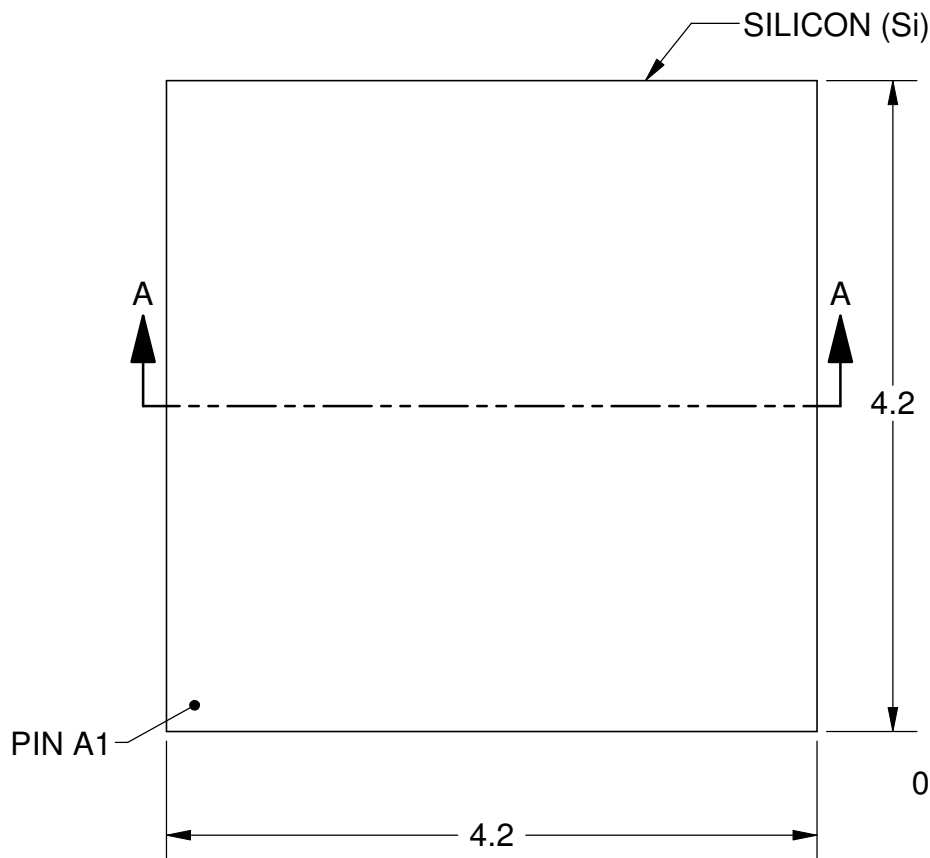
TEST VEHICLE BOARD

Notes:

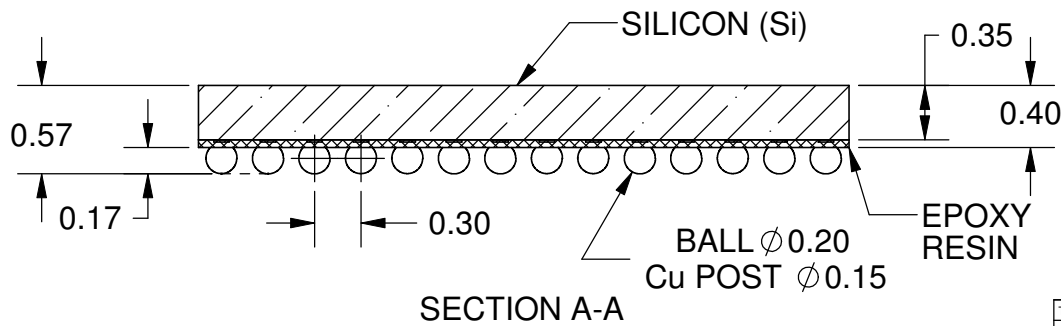
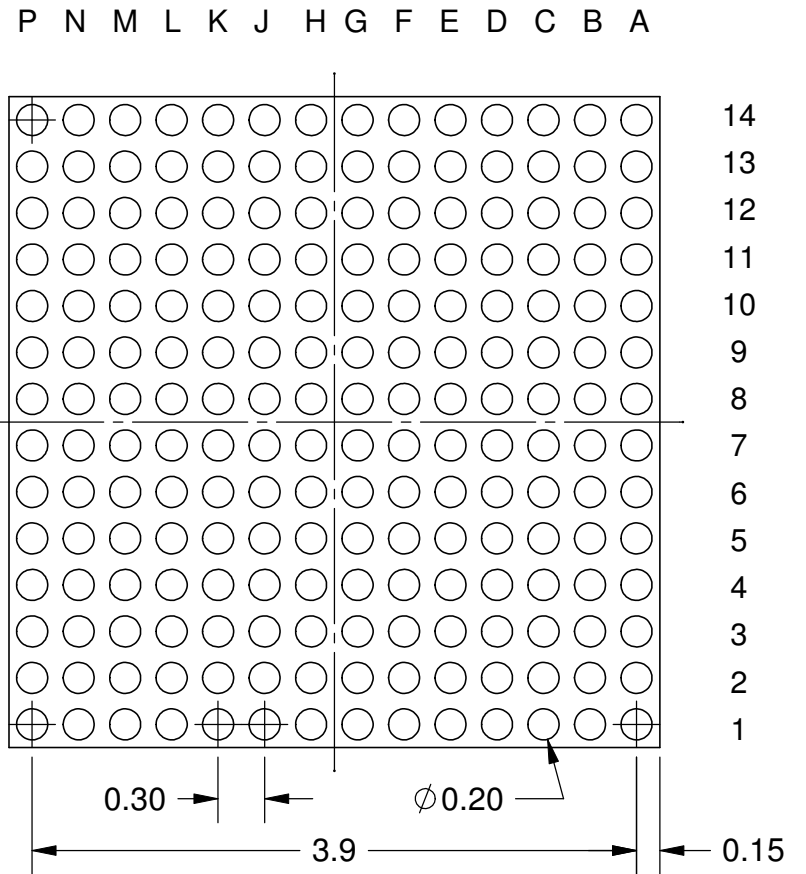
- 1) PCB BOARD DIMENSIONS ARE PRESENTED ONLY AS A GUIDELINE. DESIGNERS SHOULD USE THEIR OWN EXPERIENCE WHEN DESIGNING PCB.
- 2) PCB Cu BALL PAD DIAMETER 0.15mm (5.9mil).
- 3) PCB DAISY CHAIN TRACING LINE WIDTH 0.07mm (3mil).

TopLine ®			
TITLE WLP144T.3C-DC127D 144-BALL P=0.3mm (TEG0306)			
SCALE 17:1	SIZE A	DRAWING NO. 531272	REV A
DO NOT SCALE DRAWING		SHEET 2 OF 2	

TOP VIEW



BALL VIEW




Notes: (Unless Otherwise Specified).

- 1) ALL DIMENSIONS ARE IN MM.
- 2) SOLDER BALL ALLOY:
STANDARD: SAC305 (Sn96.5/Ag3.0/Cu0.5).
SPECIAL: LF35 (Sn98.3/Ag1.2/Cu0.5).
- 3) BALL DIAMETER (BEFORE REFLOW): 0.20mm.
- 4) NON-SOLDER MASK DEFINED PAD.
- 5) PAD Cu DIAMETER: 0.15mm.
- 6) SUBSTRATE MATERIAL: Si (SILICON).
- 7) DAISY CHAIN PATTERN (SEE PAGE 2).

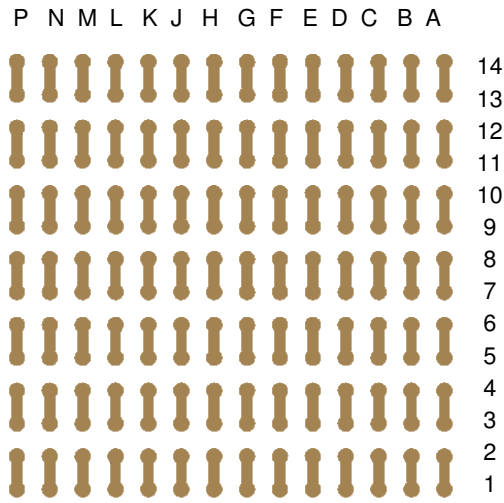
PART NUMBER TABLE

PART NUMBER	BALL ALLOY	Pb-FREE	RoHS	Si DIE
WLP196T.3C-DC148D	Sn96.5/Ag3.0/Cu0.5	YES	YES	YES
WLP196T.3C1-DC148D	Sn98.3/Ag1.2/Cu0.5	YES	YES	YES

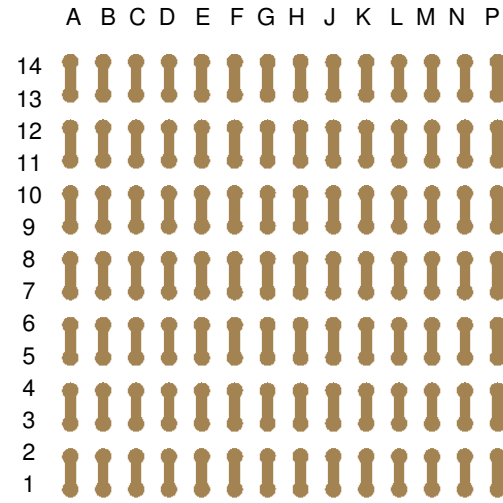
TOLERANCE UNLESS NOTED		APPROVALS		DATE				
X.X	+/- 0.3	DRAWN J. Hines		12/29/2010				
X.XX	+/- 0.03	ENG			TITLE			
X.XXX	+/- 0.003	MFG			WLP196T.3C-DC148D			
ANGLES +/- 0.5°		THIRD ANGLE PROJECTION			196-BALL P=0.3mm (TEG0306)			
ALL DIMENSIONS IN		QA			SCALE	SIZE	DRAWING NO.	REV
INCHES <input type="checkbox"/> MILLIMETERS <input checked="" type="checkbox"/>		CUST			20.5:1	A	531482	A
		REVISED			DO NOT SCALE DRAWING			SHEET 1 OF 2

DAISY CHAIN PATTERN

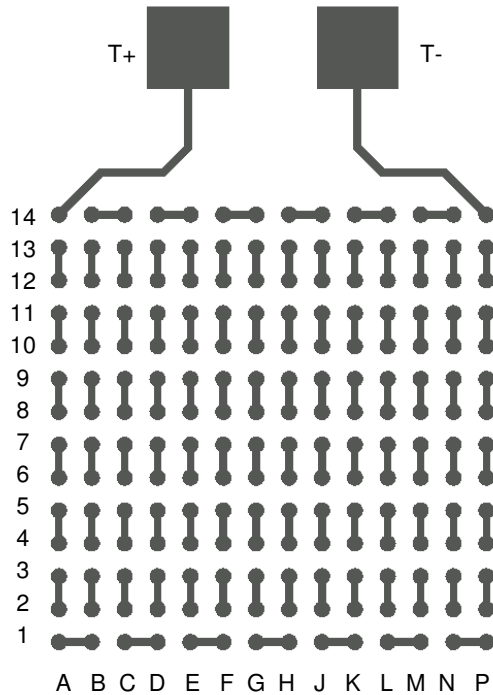
BALL VIEW



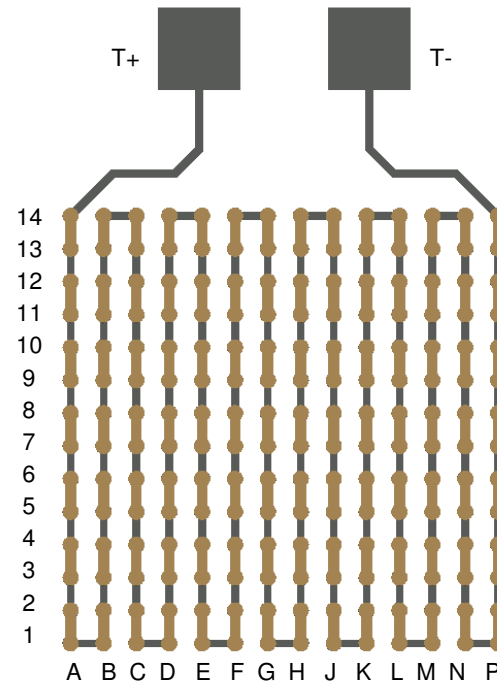
BOTTOM SIDE
(TOP X-RAY VIEW)



TOP VIEW



AFTER MOUNTING
TO TEST BOARD
(TOP X-RAY VIEW)



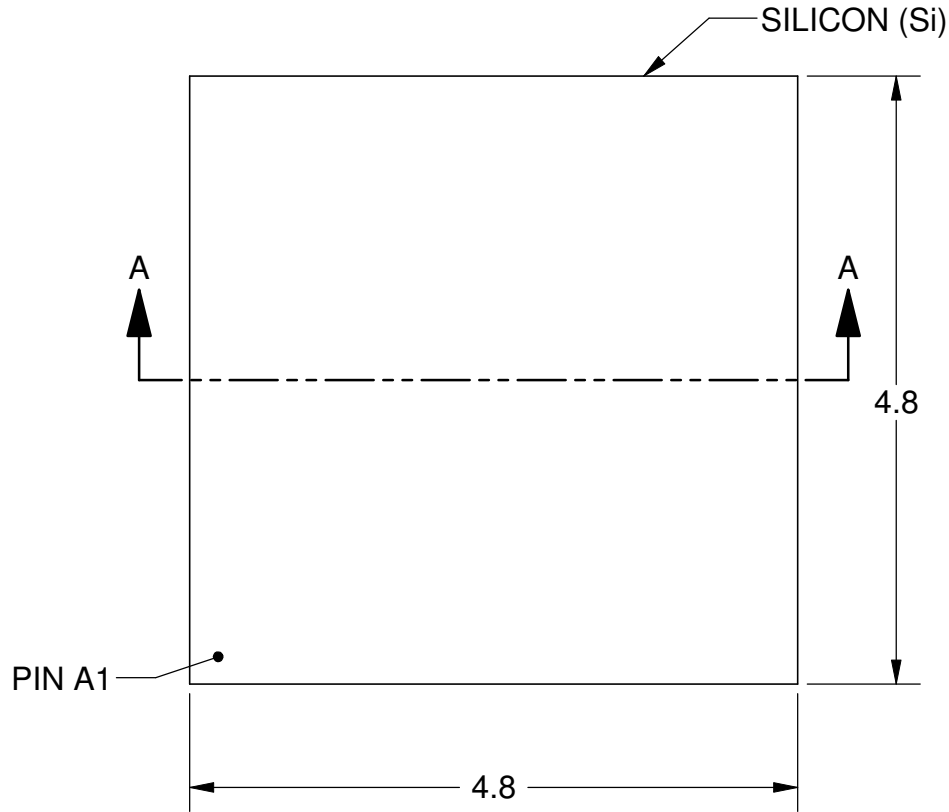
TEST VEHICLE BOARD

Notes:

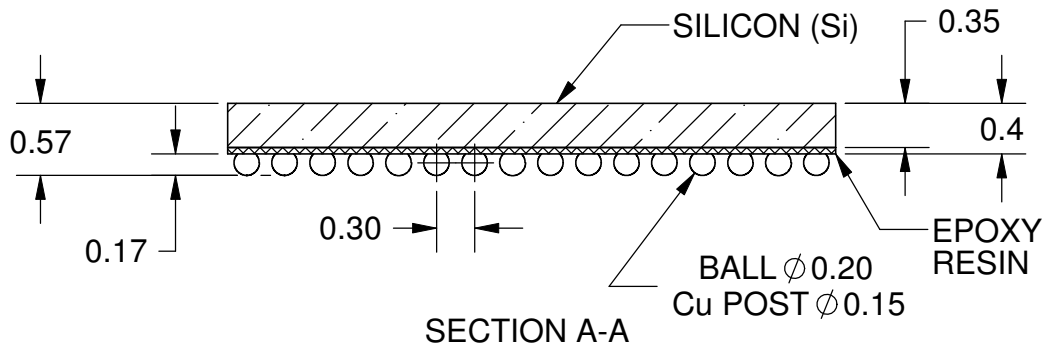
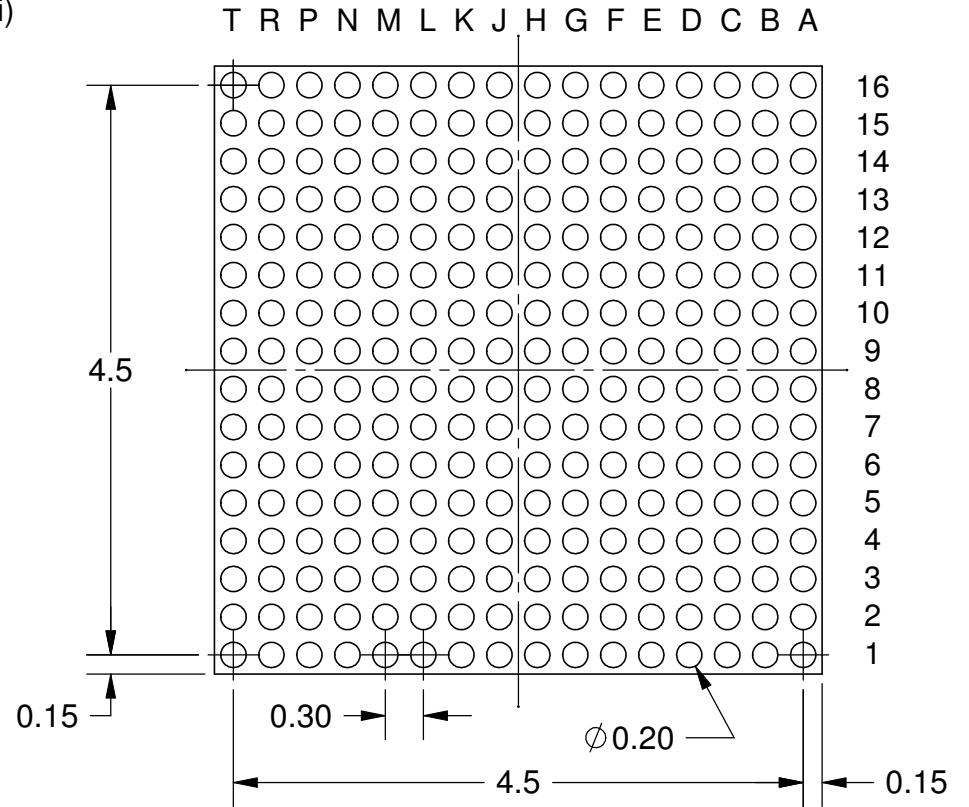
- 1) PCB BOARD DIMENSIONS ARE PRESENTED ONLY AS A GUIDELINE. DESIGNERS SHOULD USE THEIR OWN EXPERIENCE WHEN DESIGNING PCB.
- 2) PCB Cu BALL PAD DIAMETER 0.15mm (5.9mil).
- 3) PCB DAISY CHAIN TRACING LINE WIDTH 0.07mm (3mil).

TopLine ®			
TITLE WLP196T.3C-DC148D 196-BALL P=0.3mm (TEG0306)			
SCALE 14.5:1	SIZE A	DRAWING NO. 531482	REV A
DO NOT SCALE DRAWING		SHEET 2 OF 2	

TOP VIEW



BALL VIEW



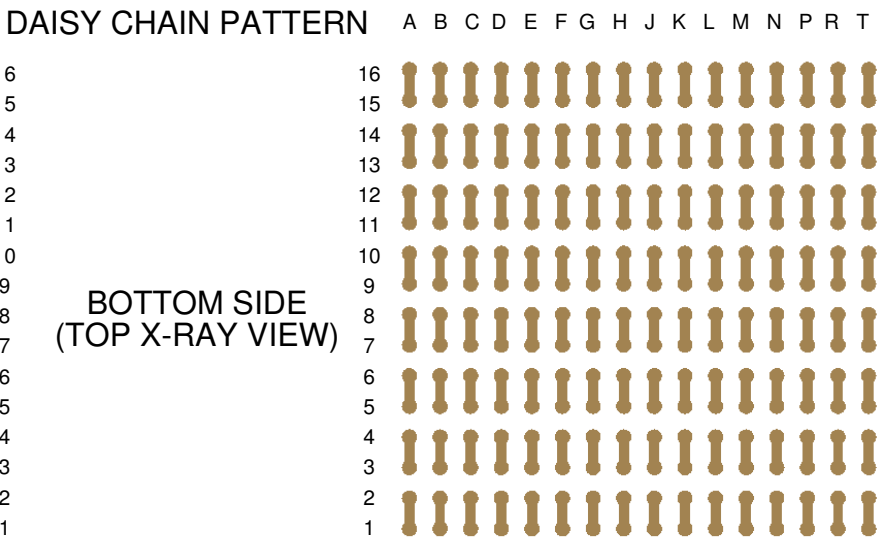
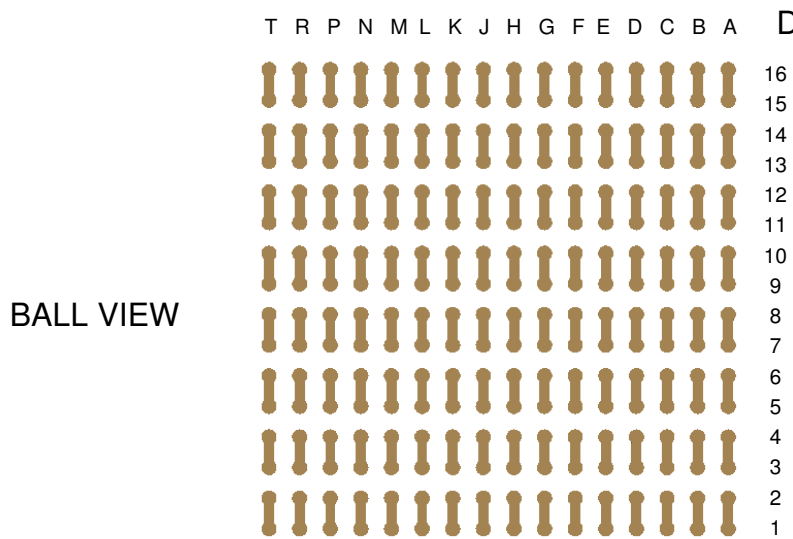
Notes: (Unless Otherwise Specified).

- 1) ALL DIMENSIONS ARE IN MM.
- 2) SOLDER BALL ALLOY:
STANDARD: SAC305 (Sn96.5/Ag3.0/Cu0.5).
SPECIAL: LF35 (Sn98.3/Ag1.2/Cu0.5).
- 3) BALL DIAMETER (BEFORE REFLOW): 0.25mm.
- 4) NON-SOLDER MASK DEFINED PAD.
- 5) PAD Cu DIAMETER: 0.20mm.
- 6) SUBSTRATE MATERIAL: Si (SILICON).
- 7) DAISY CHAIN PATTERN (SEE PAGE 2).

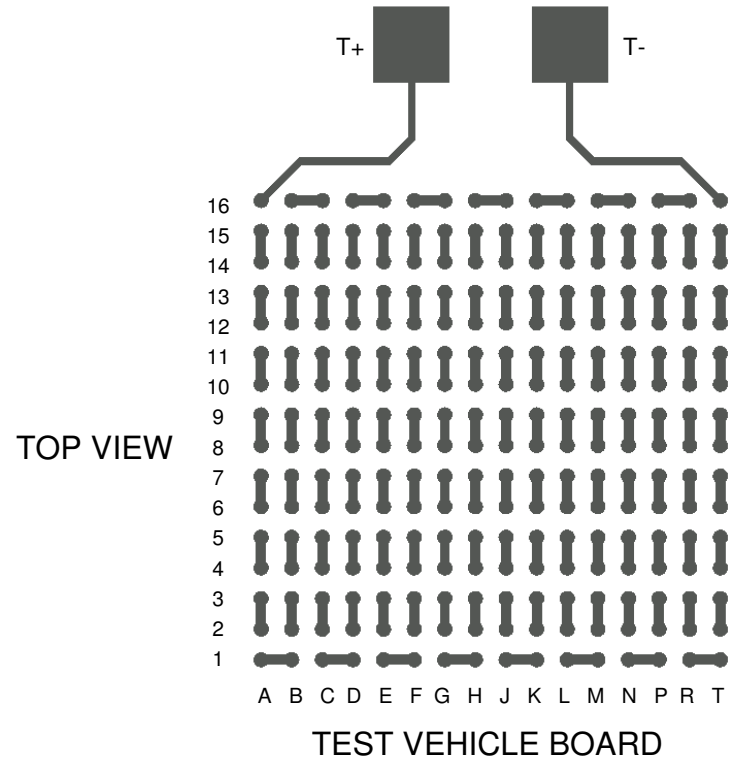
PART NUMBER TABLE

PART NUMBER	BALL ALLOY	Pb-FREE	RoHS	Si DIE
WLP256T.3C-DC168D	Sn96.5/Ag3.0/Cu0.5	YES	YES	YES
WLP256T.3C1-DC168D	Sn98.3/Ag1.2/Cu0.5	YES	YES	YES

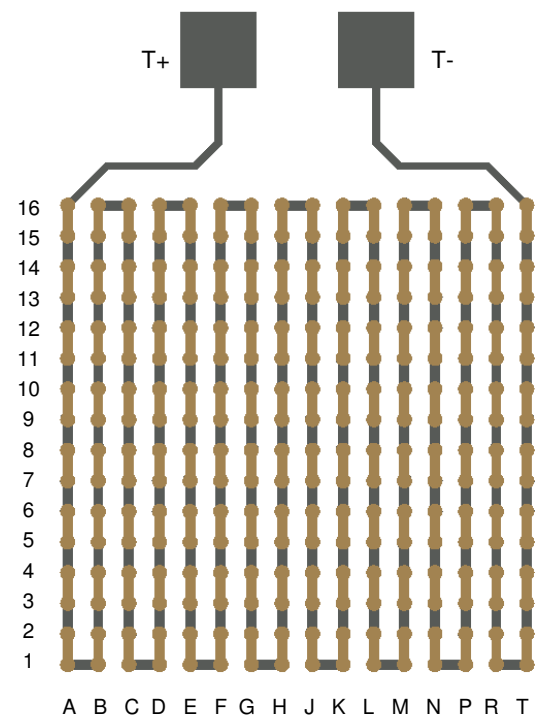
TOLERANCE UNLESS NOTED		APPROVALS		DATE	TopLine [®]			
X.X	+/- 0.3	DRAWN J. Hines		12/28/2010				
X.XX	+/- 0.03	ENG			TITLE WLP256T.3C-DC168D			
X.XXX	+/- 0.003	MFG			256-BALL P=0.3mm (TEG0306)			
ANGLES +/- 0.5°		THIRD ANGLE PROJECTION			SCALE	SIZE	DRAWING NO.	REV
ALL DIMENSIONS IN					16.75:1	A	531682	A
<input type="checkbox"/> INCHES <input checked="" type="checkbox"/> MILLIMETERS				REVISED	DO NOT SCALE DRAWING		SHEET 1 OF 2	



**BOTTOM SIDE
(TOP X-RAY VIEW)**



**AFTER MOUNTING
TO TEST BOARD
(TOP X-RAY VIEW)**

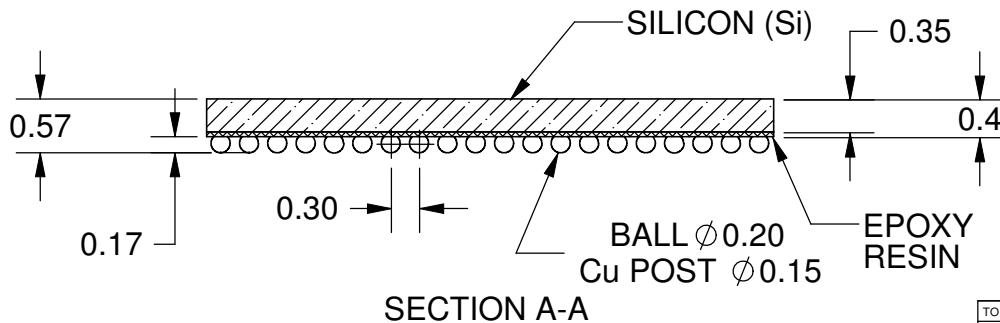
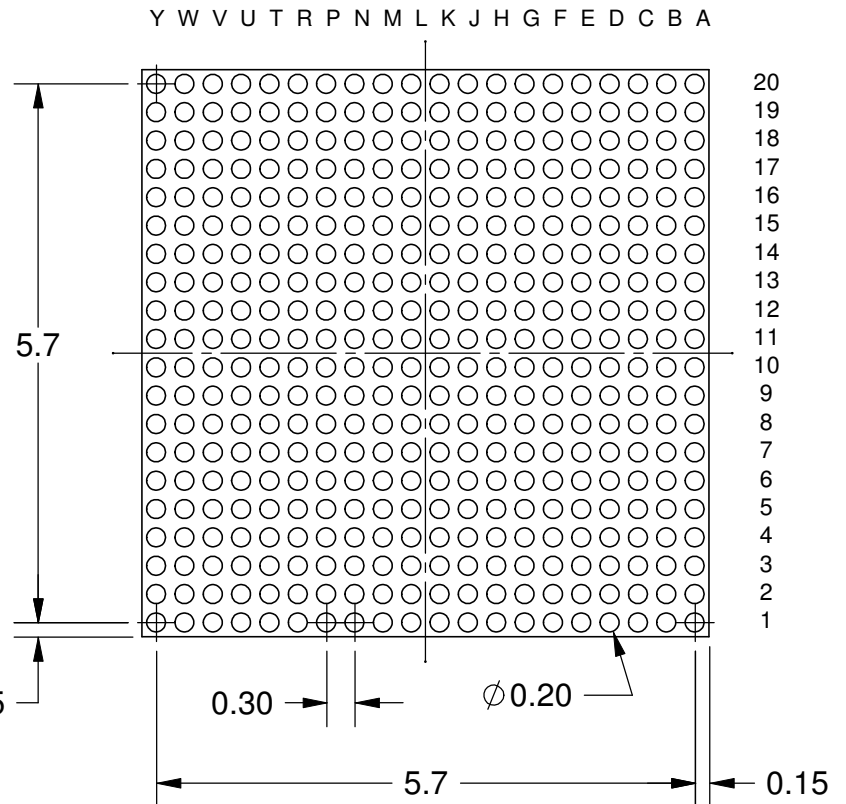
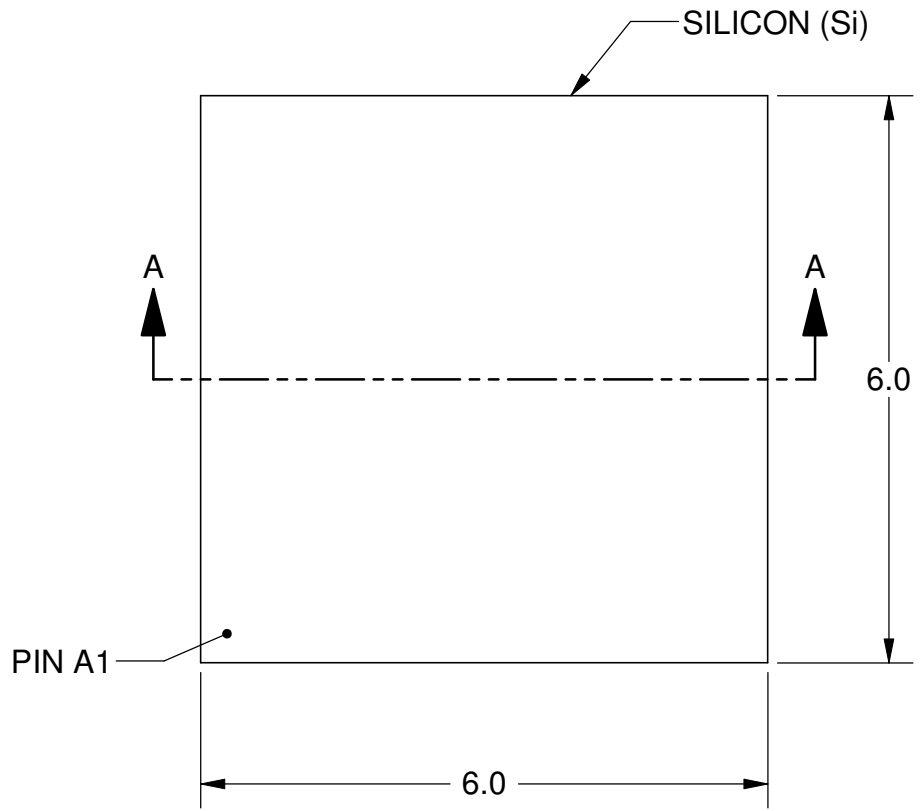


- Notes:**
- 1) PCB BOARD DIMENSIONS ARE PRESENTED ONLY AS A GUIDELINE. DESIGNERS SHOULD USE THEIR OWN EXPERIENCE WHEN DESIGNING PCB.
 - 2) PCB Cu BALL PAD DIAMETER 0.15mm (5.9mil).
 - 3) PCB DAISY CHAIN TRACING LINE WIDTH 0.10mm (3.9mil).

TopLine ®			
TITLE WLP256T.3C-DC168D 256-BALL P=0.3mm (TEG0306)			
SCALE 13.5:1	SIZE A	DRAWING NO. 531682	REV A
DO NOT SCALE DRAWING		SHEET 2 OF 2	

TOP VIEW

BALL VIEW


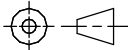


Notes: (Unless Otherwise Specified).

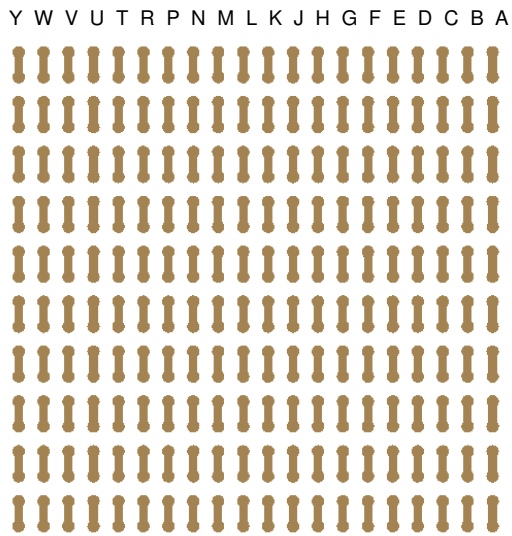
- 1) ALL DIMENSIONS ARE IN MM.
- 2) SOLDER BALL ALLOY:
STANDARD: SAC305 (Sn96.5/Ag3.0/Cu0.5).
SPECIAL: LF35 (Sn98.3/Ag1.2/Cu0.5).
- 3) BALL DIAMETER (BEFORE REFLOW): 0.20mm.
- 4) NON-SOLDER MASK DEFINED PAD.
- 5) PAD Cu DIAMETER: 0.15mm.
- 6) SUBSTRATE MATERIAL: Si (SILICON).
- 7) DAISY CHAIN PATTERN (SEE PAGE 2).

SECTION A-A

PART NUMBER TABLE				
PART NUMBER	BALL ALLOY	Pb-FREE	RoHS	Si DIE
WLP400T.3C-DC208D	Sn96.5/Ag3.0/Cu0.5	YES	YES	YES
WLP400T.3C1-DC208D	Sn98.3/Ag1.2/Cu0.5	YES	YES	YES

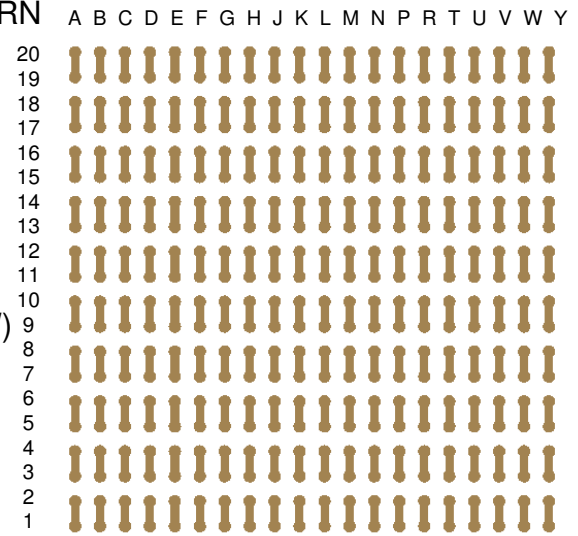
TOLERANCE UNLESS NOTED		APPROVALS		DATE				
X.X	+/- 0.3	DRAWN J. Hines		12/28/2010				
X.XX	+/- 0.03	ENG			TITLE			
X.XXX	+/- 0.003	MFG			WLP400T.3C-DC208D			
ANGLES +/- 0.5°		THIRD ANGLE PROJECTION			400-BALL P=0.3mm (TEG0306)			
ALL DIMENSIONS IN					SCALE	SIZE	DRAWING NO.	REV
<input type="checkbox"/> INCHES <input checked="" type="checkbox"/> MILLIMETERS		QA CUST REVISED			12.5:1	A	532082	A
DO NOT SCALE DRAWING							SHEET 1 OF 2	

BALL VIEW

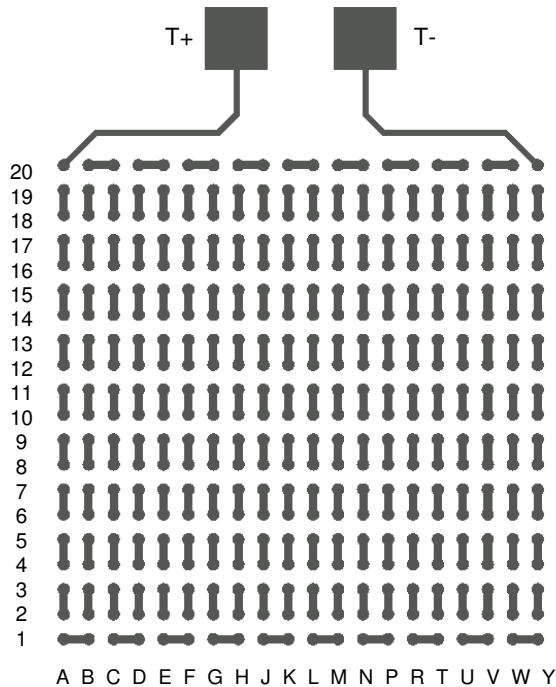


DAISY CHAIN PATTERN

BOTTOM SIDE
(TOP X-RAY VIEW)

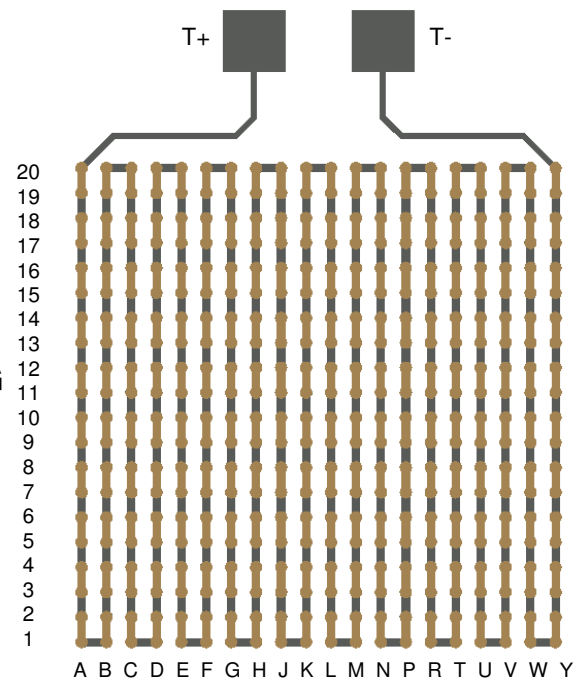


TOP VIEW



TEST VEHICLE BOARD

AFTER MOUNTING
TO TEST BOARD
(TOP X-RAY VIEW)

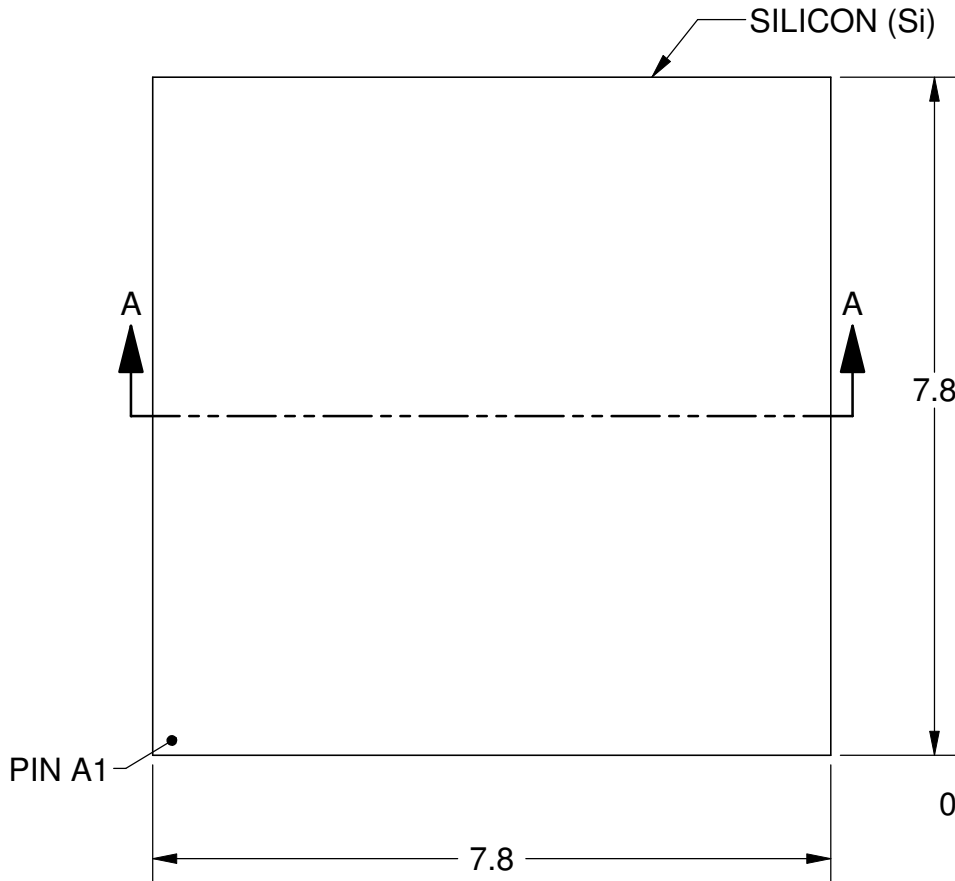


Notes:

- 1) PCB BOARD DIMENSIONS ARE PRESENTED ONLY AS A GUIDELINE. DESIGNERS SHOULD USE THEIR OWN EXPERIENCE WHEN DESIGNING PCB.
- 2) PCB Cu BALL PAD DIAMETER 0.15mm (5.9mil).
- 3) PCB DAISY CHAIN TRACING LINE WIDTH 0.10mm (3.9mil).

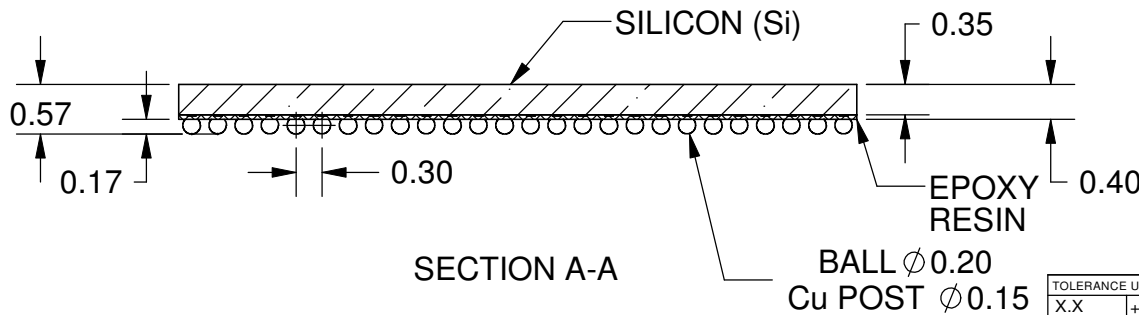
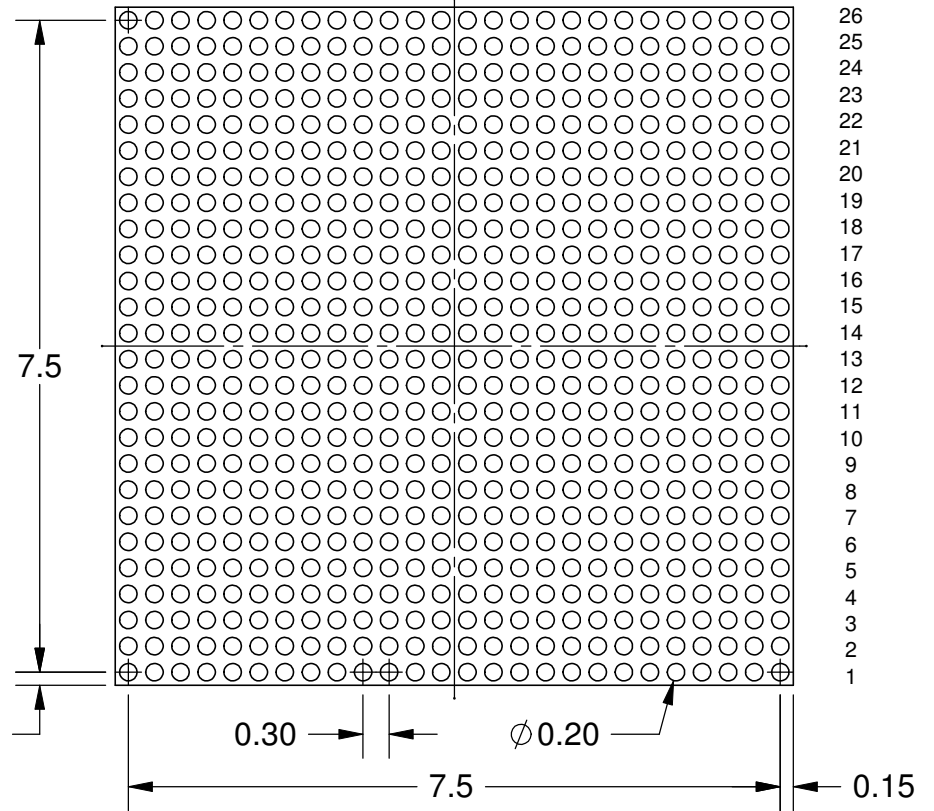
TopLine ®			
TITLE WLP400T.3C-DC208D 400-BALL P=0.3mm (TEG0306)			
SCALE 11:1	SIZE A	DRAWING NO. 532082	REV A
DO NOT SCALE DRAWING		SHEET 2 OF 2	

TOP VIEW



BALL VIEW

AF AD AB YW V U T R P N M L K J H G F E D C B A
AE AC AA



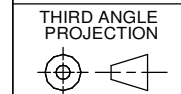
Notes: (Unless Otherwise Specified).

- 1) ALL DIMENSIONS ARE IN MM.
- 2) SOLDER BALL ALLOY:
STANDARD: SAC305 (Sn96.5/Ag3.0/Cu0.5).
SPECIAL: LF35 (Sn98.3/Ag1.2/Cu0.5).
- 3) BALL DIAMETER (BEFORE REFLOW): 0.20mm.
- 4) NON-SOLDER MASK DEFINED PAD.
- 5) PAD Cu DIAMETER: 0.15mm.
- 6) SUBSTRATE MATERIAL: Si (SILICON).
- 7) DAISY CHAIN PATTERN (SEE PAGE 2).

PART NUMBER TABLE

PART NUMBER	BALL ALLOY	Pb-FREE	RoHS	Si DIE
WLP676T.3C-DC260D	Sn96.5/Ag3.0/Cu0.5	YES	YES	YES
WLP676T.3C1-DC260D	Sn98.3/Ag1.2/Cu0.5	YES	YES	YES

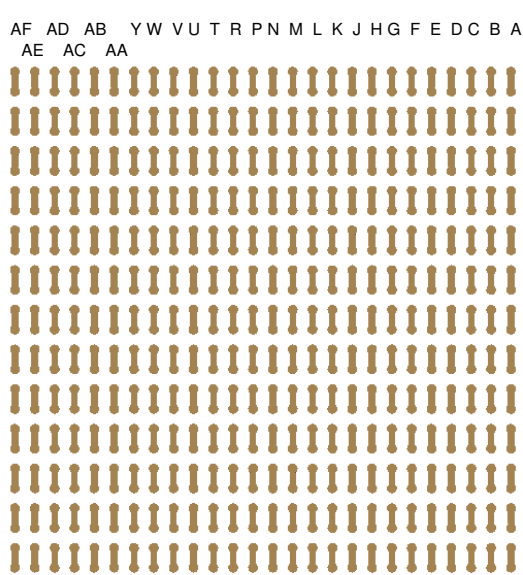
TOLERANCE UNLESS NOTED	
X.X	+/- 0.3
X.XX	+/- 0.03
X.XXX	+/- 0.003
ANGLES +/- 0.5°	
ALL DIMENSIONS IN	
<input type="checkbox"/> INCHES	<input checked="" type="checkbox"/> MILLIMETERS



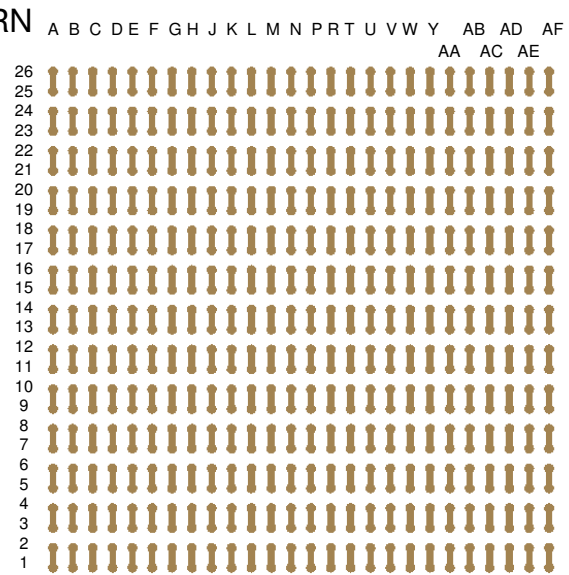
APPROVALS	DATE
DRAWN J. Hines	12/29/2010
ENG	
MFG	
QA	
CUST	
REVISED	

TopLine ®			
TITLE WLP676T.3C-DC260D 676-BALL P=0.3mm (TEG0306)			
SCALE 11.5:1	SIZE A	DRAWING NO. 532602	REV A
DO NOT SCALE DRAWING			SHEET 1 OF 2

BALL VIEW

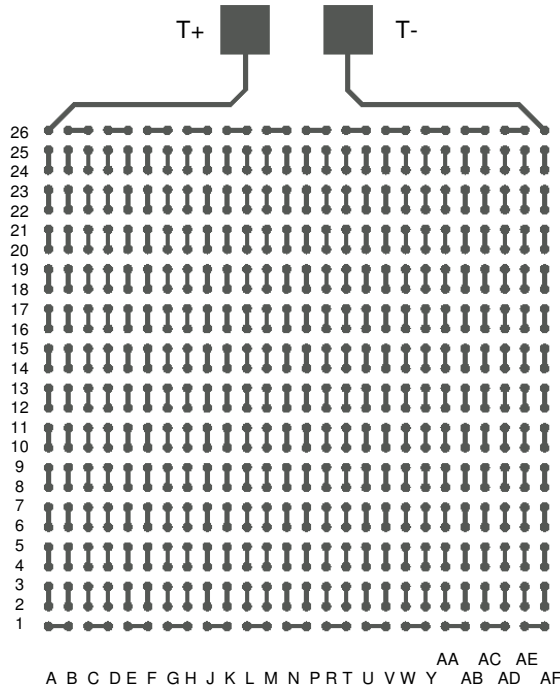


DAISY CHAIN PATTERN

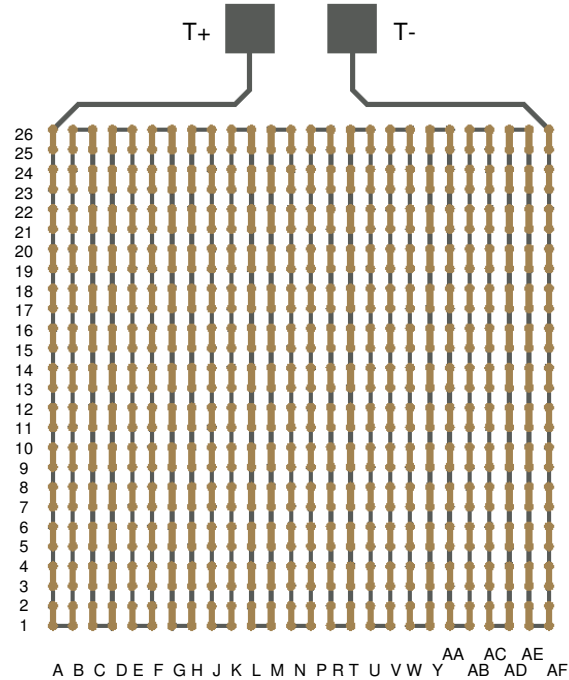


BOTTOM SIDE
(TOP X-RAY VIEW)

TOP VIEW



AFTER MOUNTING
TO TEST BOARD
(TOP X-RAY VIEW)



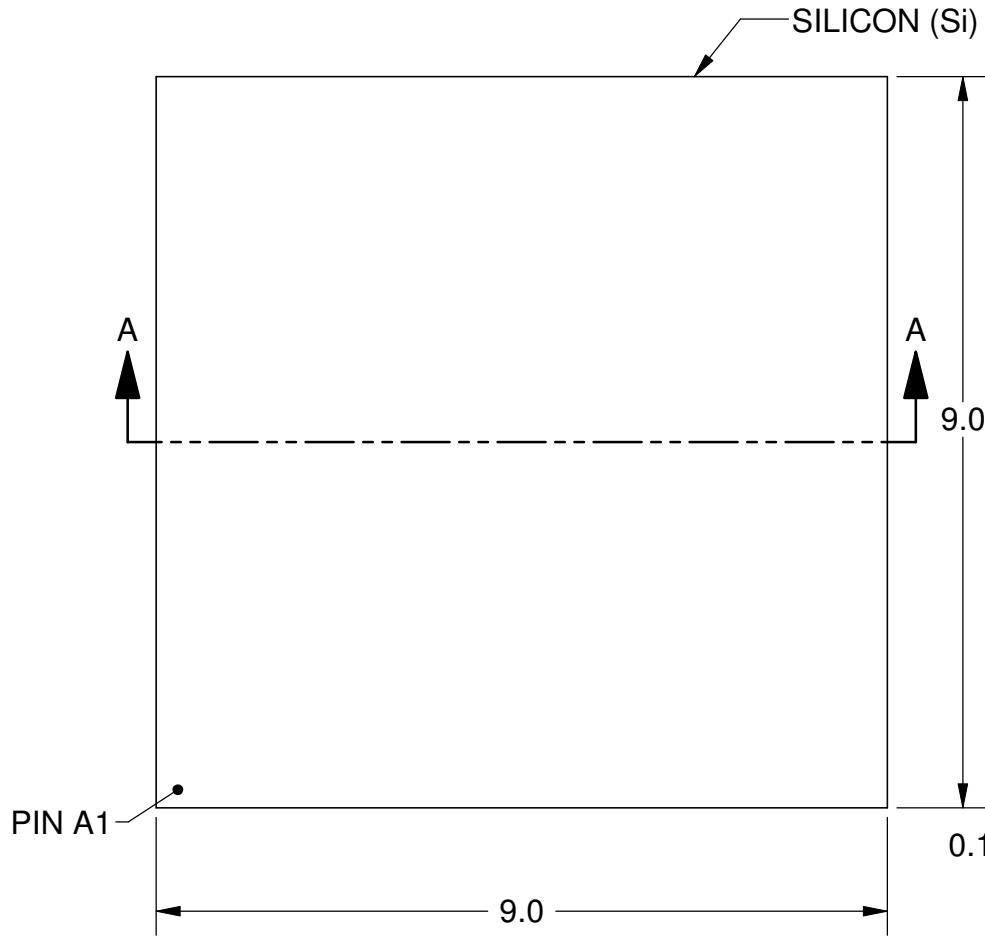
TEST VEHICLE BOARD

Notes:

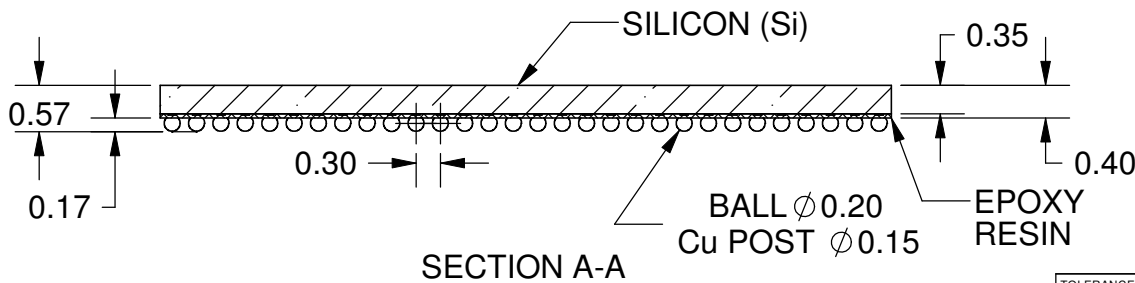
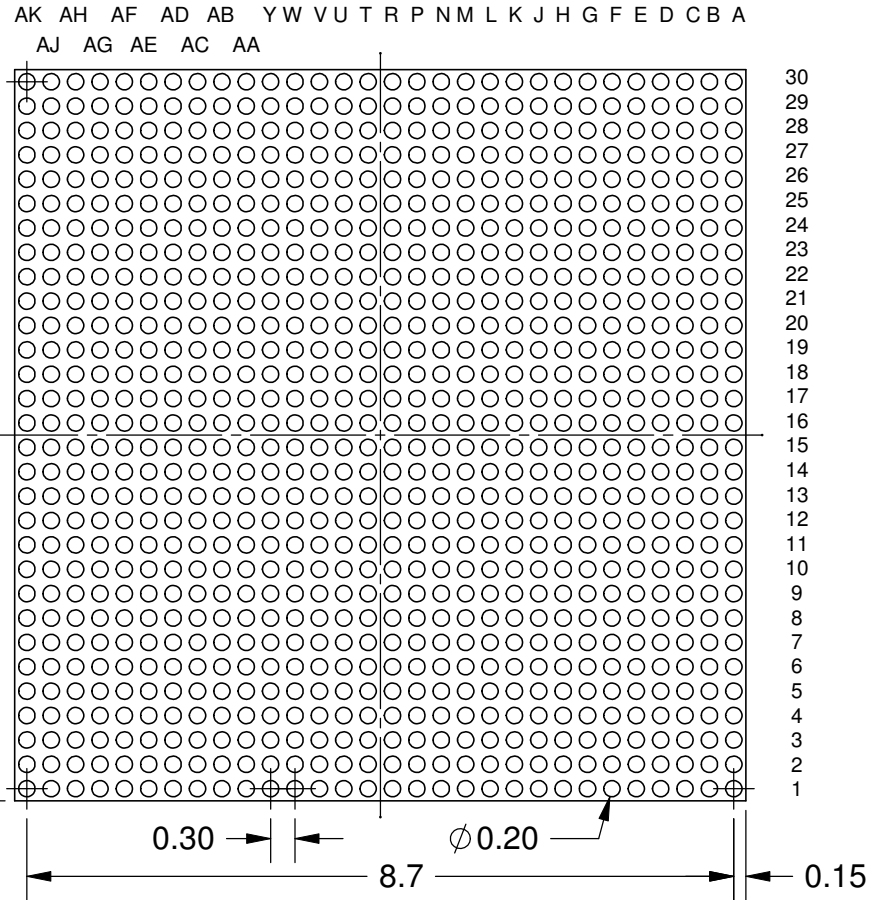
- 1) PCB BOARD DIMENSIONS ARE PRESENTED ONLY AS A GUIDELINE. DESIGNERS SHOULD USE THEIR OWN EXPERIENCE WHEN DESIGNING PCB.
- 2) PCB Cu BALL PAD DIAMETER 0.15mm (5.9mil).
- 3) PCB DAISY CHAIN TRACING LINE WIDTH 0.07mm (3mil).

TopLine ®			
TITLE WLP676T.3C-DC260D 676-BALL P=0.3mm (TEG0306)			
SCALE 8.75:1	SIZE A	DRAWING NO. 532602	REV A
DO NOT SCALE DRAWING		SHEET 2 OF 2	

TOP VIEW



BALL VIEW



Notes: (Unless Otherwise Specified).

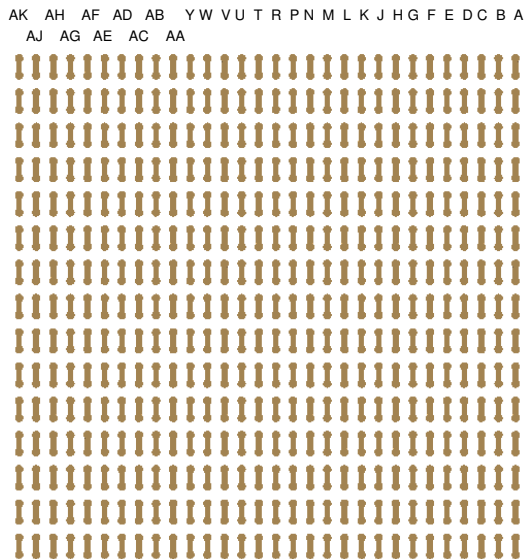
- 1) ALL DIMENSIONS ARE IN MM.
- 2) SOLDER BALL ALLOY:
STANDARD: SAC305 (Sn96.5/Ag3.0/Cu0.5).
SPECIAL: LF35 (Sn98.3/Ag1.2/Cu0.5).
- 3) BALL DIAMETER (BEFORE REFLOW): 0.20mm.
- 4) NON-SOLDER MASK DEFINED PAD.
- 5) PAD Cu DIAMETER: 0.15mm.
- 6) SUBSTRATE MATERIAL: Si (SILICON).
- 7) DAISY CHAIN PATTERN (SEE PAGE 2).

PART NUMBER TABLE

PART NUMBER	BALL ALLOY	Pb-FREE	RoHS	Si DIE
WLP900T.3C-DC307D	Sn96.5/Ag3.0/Cu0.5	YES	YES	YES
WLP900T.3C1-DC307D	Sn98.3/Ag1.2/Cu0.5	YES	YES	YES

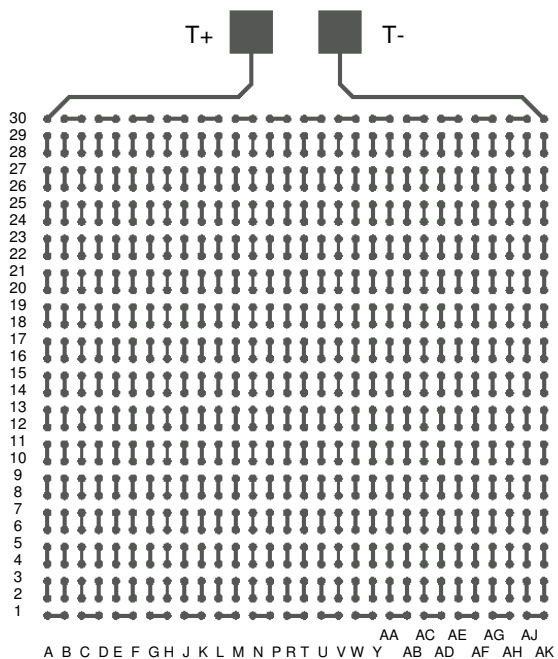
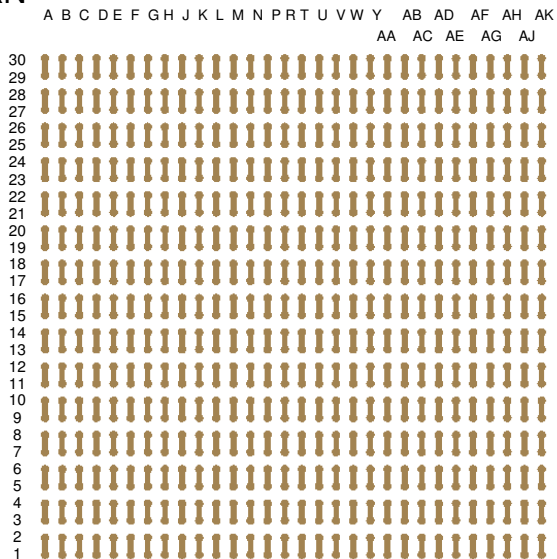
TOLERANCE UNLESS NOTED		APPROVALS		DATE	TopLine [®]			
X.X	+/- 0.3	DRAWN J. Hines		12/29/2010				
X.XX	+/- 0.03	ENG			TITLE WLP900T.3C-DC307D			
X.XXX	+/- 0.003	MFG			900-BALL P=0.3mm (TEG0306)			
ANGLES +/- 0.5°		THIRD ANGLE PROJECTION			SCALE 10.75:1	SIZE A	DRAWING NO. 533072	REV A
ALL DIMENSIONS IN		<input type="checkbox"/> INCHES <input checked="" type="checkbox"/> MILLIMETERS			DO NOT SCALE DRAWING		SHEET 1 OF 2	

DAISY CHAIN PATTERN



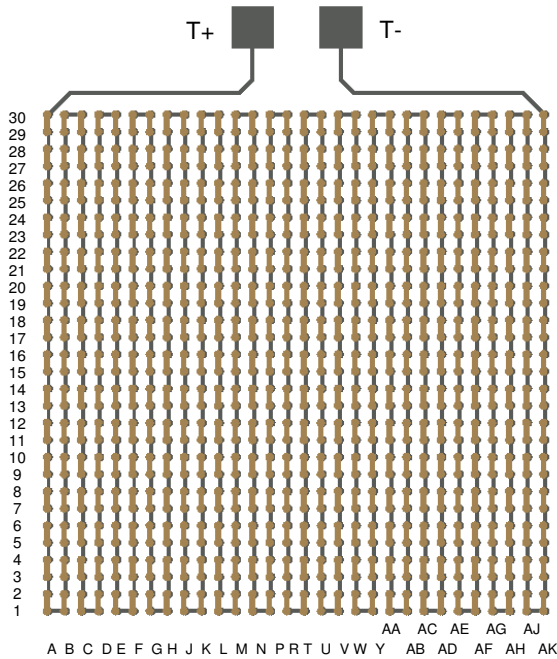
BALL VIEW

BOTTOM SIDE
(TOP X-RAY VIEW)



TOP VIEW

AFTER MOUNTING
TO TEST BOARD
(TOP X-RAY VIEW)



TEST VEHICLE BOARD

Notes:

- 1) PCB BOARD DIMENSIONS ARE PRESENTED ONLY AS A GUIDELINE. DESIGNERS SHOULD USE THEIR OWN EXPERIENCE WHEN DESIGNING PCB.
- 2) PCB Cu BALL PAD DIAMETER 0.15mm (5.9mil).
- 3) PCB DAISY CHAIN TRACING LINE WIDTH 0.07mm (3mil).

TopLine ®			
TITLE WLP900T.3C-DC307D 900-BALL P=0.3mm (TEG0306)			
SCALE 7.55:1	SIZE A	DRAWING NO. 533072	REV A
DO NOT SCALE DRAWING		SHEET 2 OF 2	