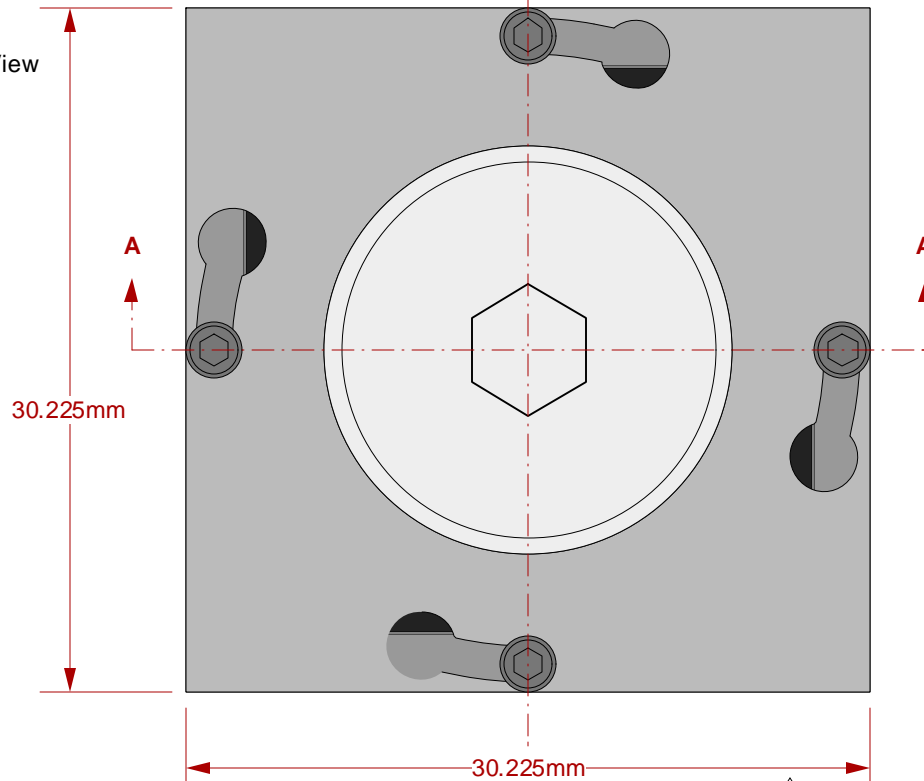


GHz BGA Socket - Epoxy mount, solderless

Top View

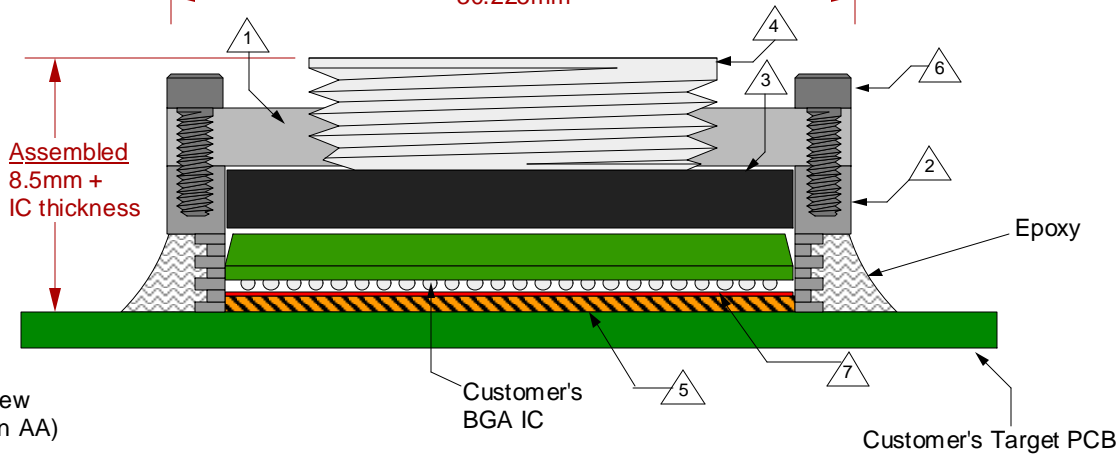


Features

- Directly mounts to target PCB (needs epoxy)
- High speed, reliable Elastomer connection
- Minimum real estate required
- Compression plate distributes forces evenly
- Easily removable socket lid

Assembled
8.5mm +
IC thickness

Side View
(Section AA)



- 1 Socket Lid: Black anodized 6061 Aluminum. Thickness = 2.5mm.
- 2 Socket base: Black anodized 6061 Aluminum. Thickness = 6.5mm.
- 3 Compression Plate: Black anodized 6061 Aluminum. Thickness = 2.5mm.
- 4 Compression screw: Clear anodized 6061 Aluminum. Thickness = 5mm, Hex socket = 5mm.
- 5 Elastomer: 40 micron dia gold plated brass filaments arranged symmetrically in a silicone rubber (63.5 degree angle). Thickness = 0.75mm.
- 6 Socket lid screw: Socket head cap, Alloy steel with black oxide finish, 0-80 fine thread, 4.76mm long.
- 7 Ball Guide: 0.010" thick Kapton

Note: Alignment guide for positioning socket base to target PCB will be supplied.

SG-BGA-6147 Drawing

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Status: Released

Scale: -

Rev: D

Drawing: H. Hansen

Date: 7/12/05

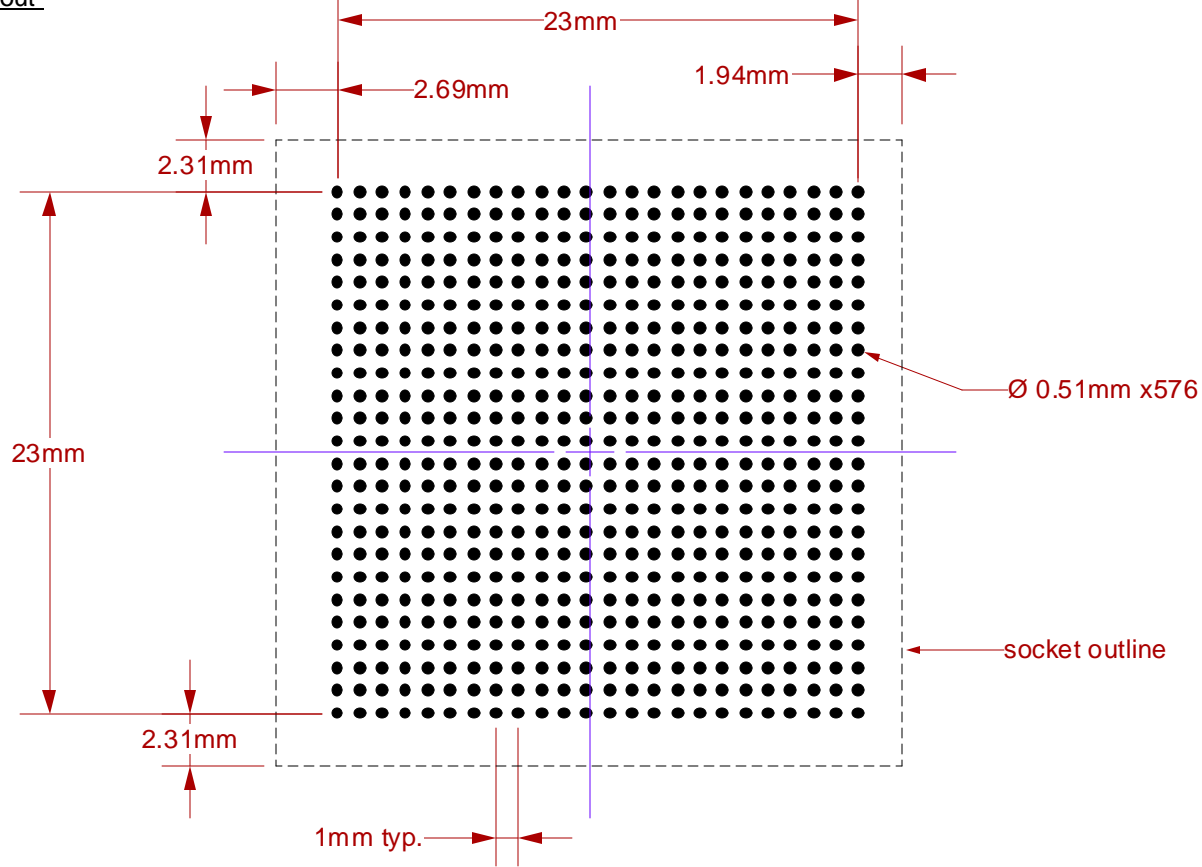
File: SG-BGA-6147 Dwg

Modified: 07/31/14

All tolerances: $\pm 0.125\text{mm}$ (unless stated otherwise). Materials and specifications are subject to change without notice.

PAGE 1 OF 4


Recommended PCB Layout
Top View

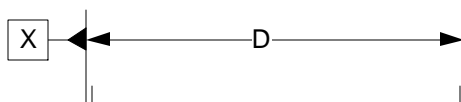


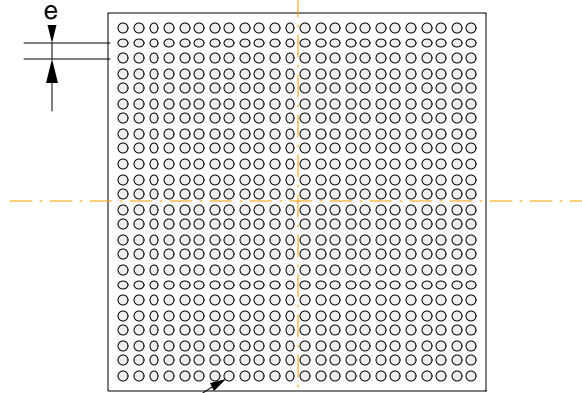
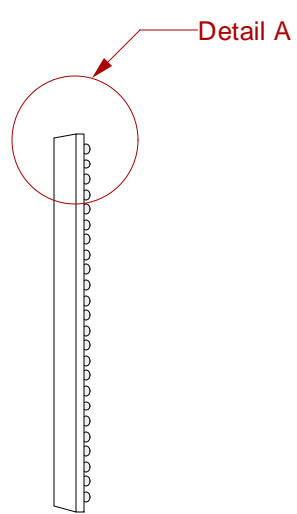
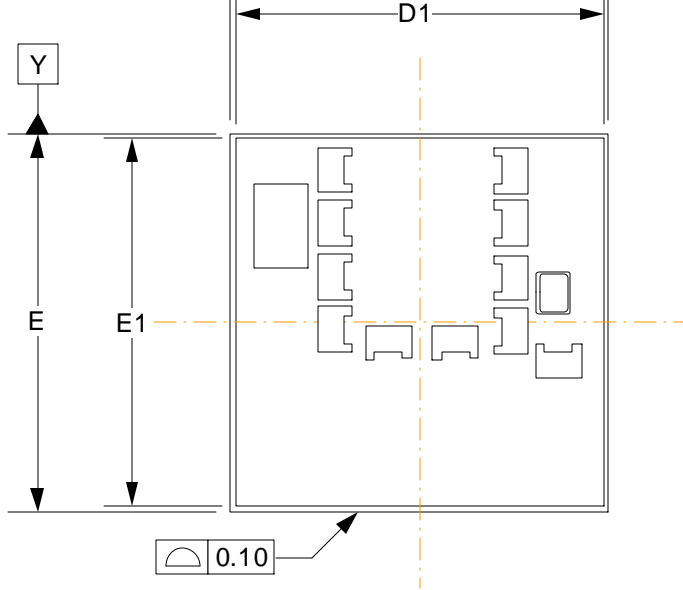
Target PCB Recommendations

Total thickness: 1.6mm min.
Plating: Gold or Solder finish
PCB Pad height: Same or higher than solder mask

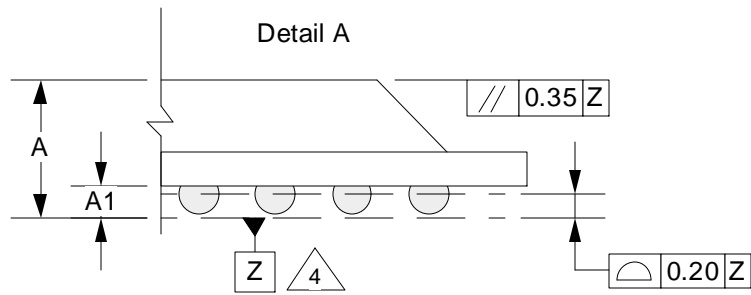
Recommended PCB Layout Tolerances: $\pm 0.025\text{mm}$ [$\pm 0.001"$] unless stated otherwise.

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	<p>Drawing: H. Hansen</p>			<p>Date: 7/12/05</p>	
	<p>File: SG-BGA-6147 Dwg</p>			<p>Modified: 07/31/14</p>	






⊕	3	∅ b	Z	X	Y
		∅0.25	Z		
		∅0.10	Z		



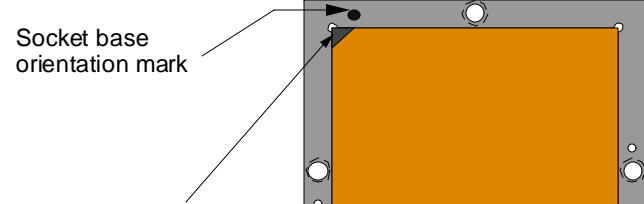
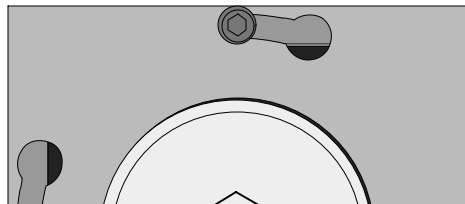
1. Dimensions are in millimeters.
 2. Interpret dimensions and tolerances per ASME Y 14.5M-1994.
- 3. Dimension b is measured at the maximum solder ball diameter, parallel to datum plane Z.
 - 4. Datum Z (seating plane) is defined by the spherical crowns of the solder balls.
 - 5. Parallelism measurement shall exclude any effect of mark on top surface of package.

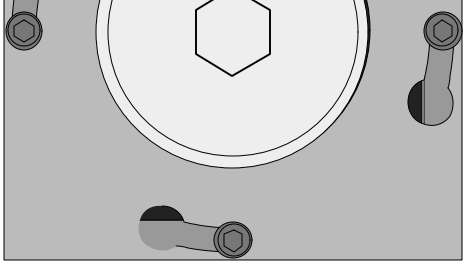
DIM	MIN	MAX
A	2.144	2.452
A1	0.4	0.6
b		0.78
D	25.00 BSC	
D1	24.33 BSC	
E	25.00 BSC	
E1	24.33 BSC	
e	1.00 BSC	

24 x 24 array

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	<p>Drawing: H. Hansen</p>	<p>Date: 7/12/05</p>		
	<p>File: SG-BGA-6147 Dwg</p>	<p>Modified: 07/31/14</p>		

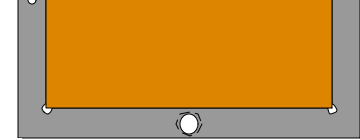
PAGE 3 OF 4



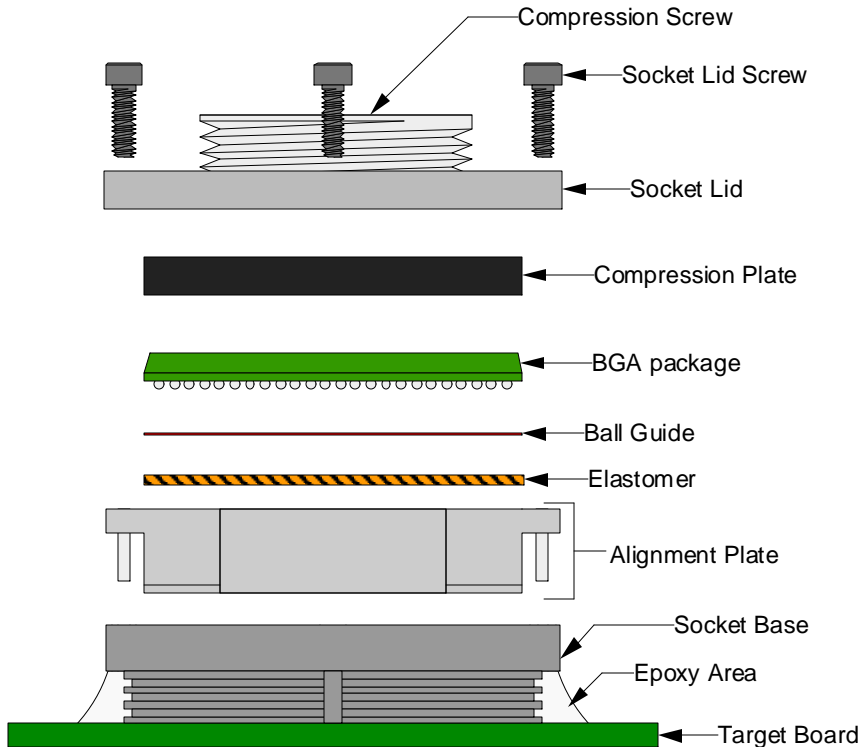
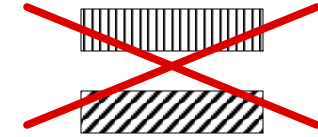


Top View Alignment Plate

Elastomer Orientation mark



When elastomer orientation mark is on upper left corner, side view of elastomer should be



User Instructions:

1. Insert alignment plate dowel pins into socket base. Place alignment plate + socket base assembly onto target board.
2. Align holes on alignment plate with four corner pads on target board, hold socket base on to board tightly with finger and put a drop of super glue on each corner. Let it dry, remove the alignment plate, then run a bead of epoxy around socket base and let it cure for 24 hours at room temperature. Recommended epoxy: DP420 (3M brand, 15 min work life). Other equivalent epoxies can be substituted. Cure at room temperature. **Note: Do not cure in the oven.**
3. Place elastomer inside the socket base cavity (direction and orientation are critical) as shown above.
4. Place ball guide into the socket base cavity.
5. Place BGA package and compression plate into the socket base cavity.
6. Assemble socket lid onto socket base with socket lid screws.
7. Assemble compression screw into socket lid and apply 3.5 in-lb torque.

SG-BGA-6147 Drawing

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