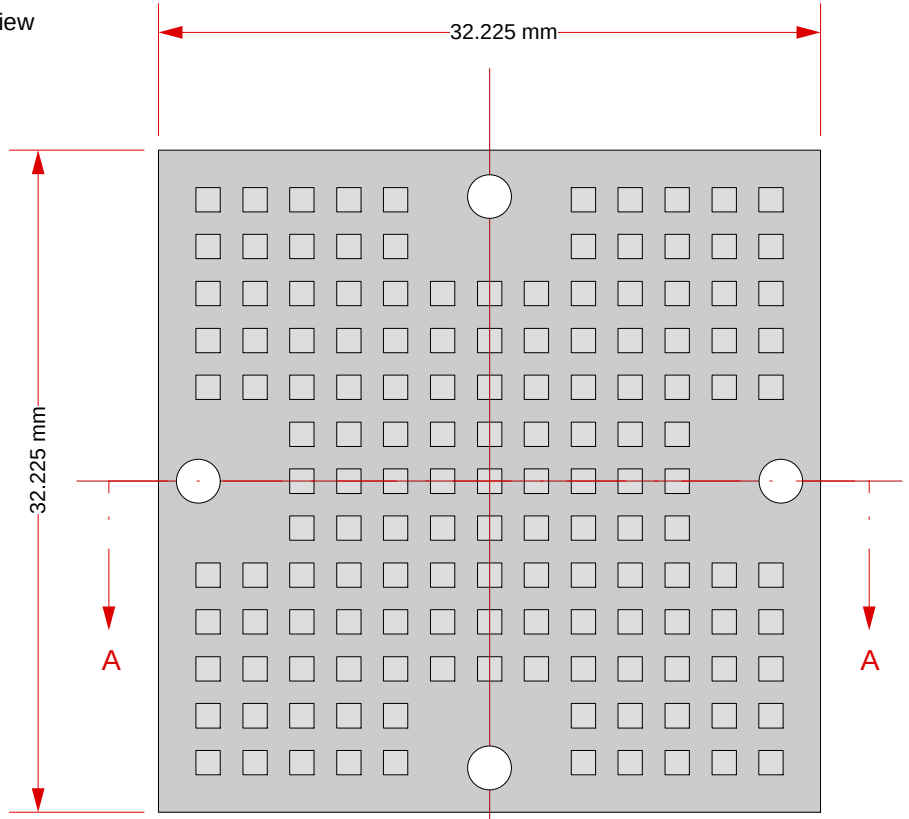
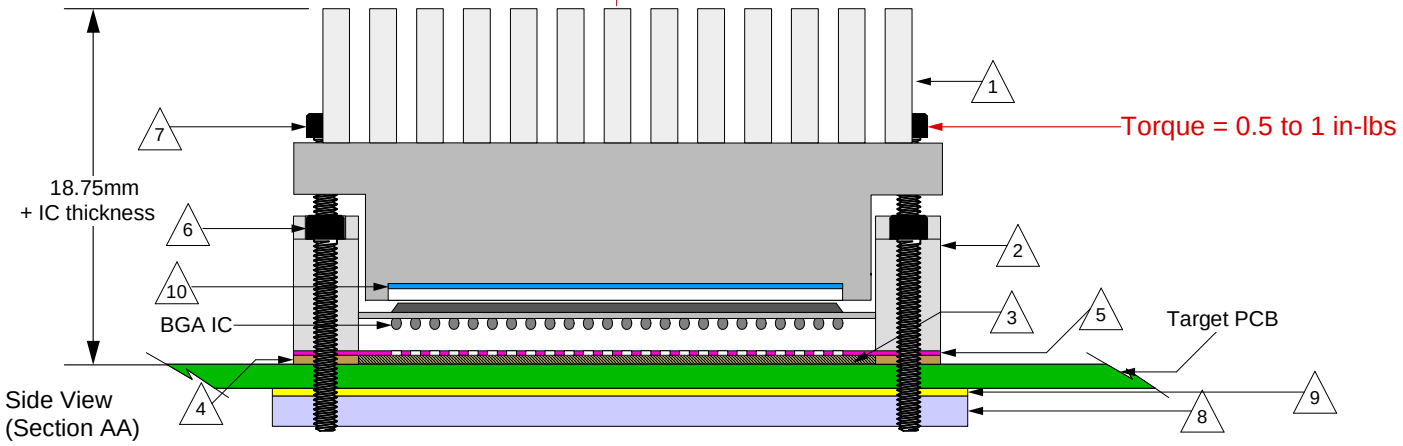
GHz BGA Socket - Direct mount, solderless

Top View





Side View
(Section AA)

Features

- Directly mounts to target PCB (needs tooling holes) with hardware.
- High speed, reliable Elastomer connection
- Minimum real estate required
- Compression plate distributes forces evenly
- Ball guide prevents over compression of elastomer
- Heat sink lid for power dissipation

1	Heatsink Lid: Black anodized Aluminum. Thickness = 18mm.
2	Socket base: Black anodized Aluminum. Thickness = 5mm.
3	Elastomer: 40 micron dia gold plated brass filaments arranged symmetrically in a silicone rubber (63.5 degree angle). Thickness = 0.75mm.
4	Elastomer Guide: Cirlex or equivalent. Thickness = 0.725mm.
5	Ball Guide: Kapton polyimide. Thickness = 0.25mm.
6	Socket base screw: Socket head cap, Alloy steel with black oxide finish, 0-80 fine thread , 9.525mm long.
7	Socket lid screw: Shoulder screw, 18-8 SS, 0-80 fine thread.
8	Backing Plate: Black anodized 6061 Aluminum. Thickness = 6.35mm.
9	Insulation Plate: FR4/G10, Thickness = 1.59mm.

SG-BGA-6249 Drawing	Status: Released	Scale: 2:1	Rev: B
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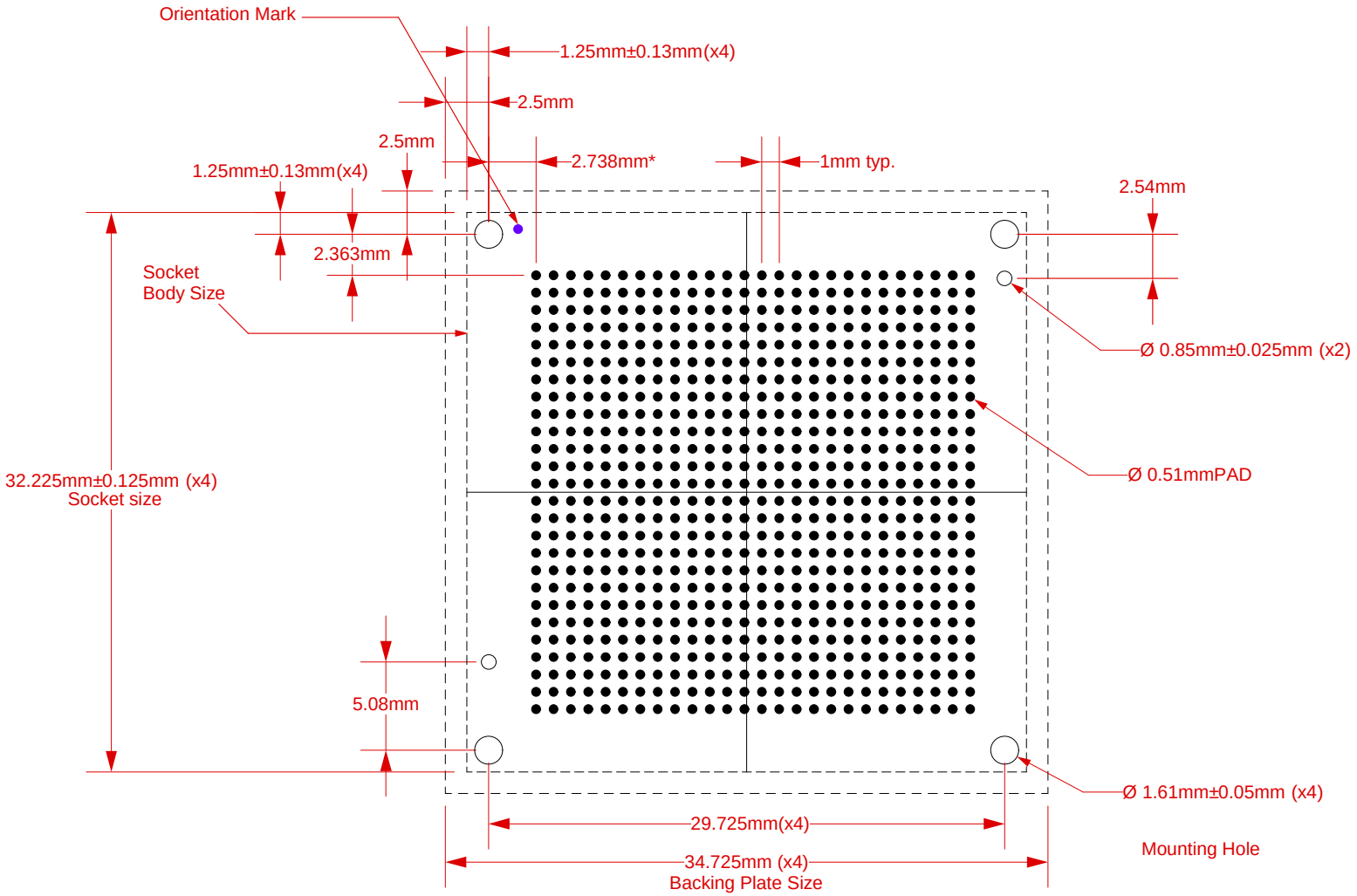
	File: SG-BGA-6249 Dwg	Modified: 5/19/09	

All tolerances: ±0.125mm (unless stated otherwise). Materials and specifications are subject to change without notice.

Recommended PCB Layout
Top View

***Note: BGA pattern is not symmetrical with respect to the mounting holes.**



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

NOTE: Steel backing plate may be required based on end user's application

Recommended PCB Layout Tolerances: ±0.025mm [±0.001"] unless stated otherwise.

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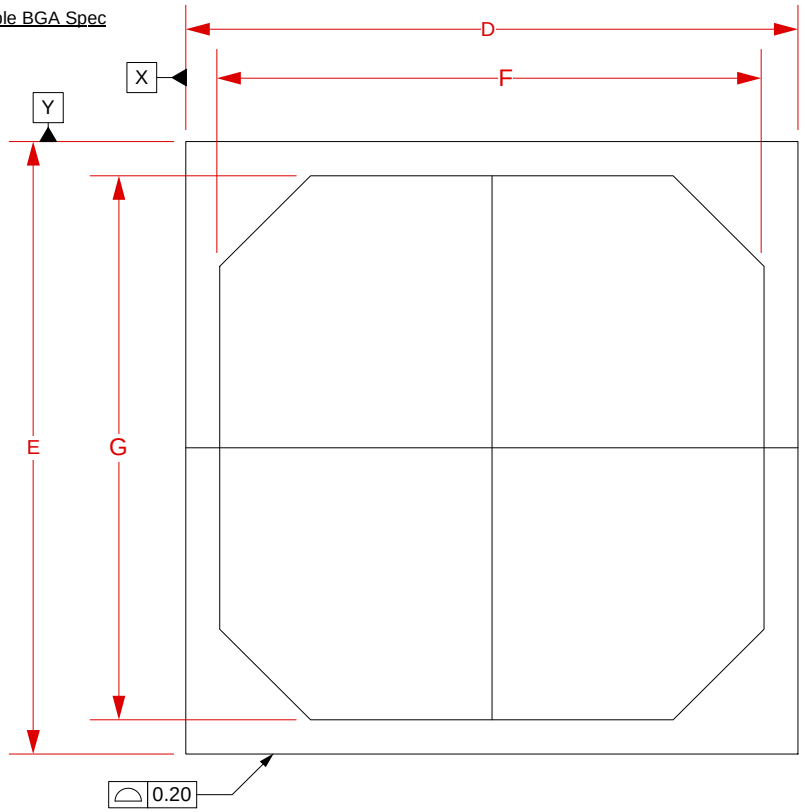
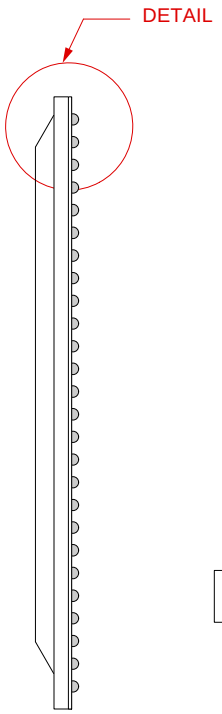
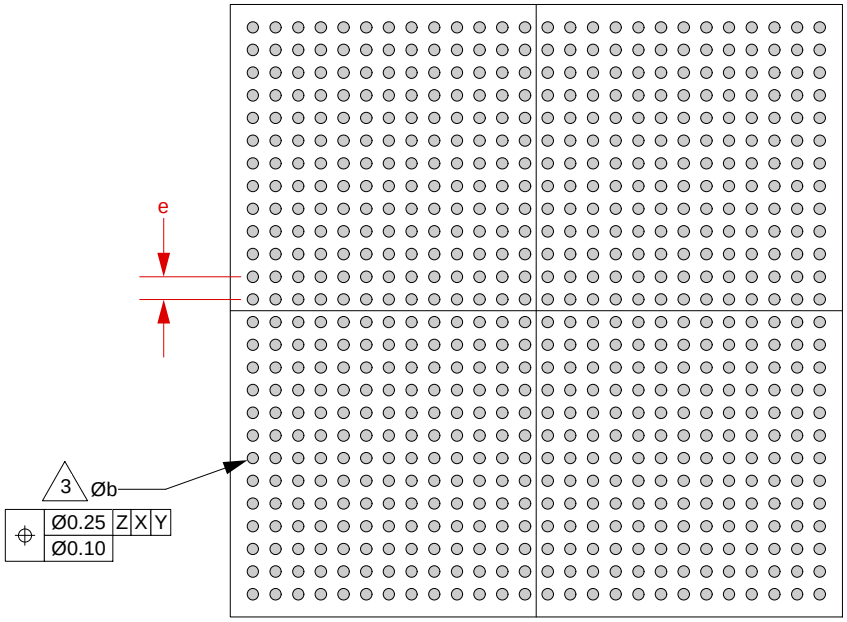
Compatible BGA Spec



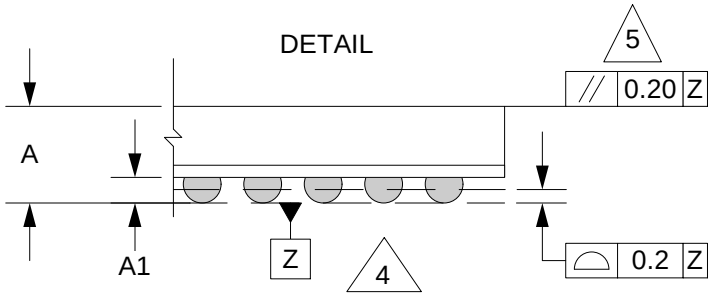
TOP VIEW



SIDE VIEW



BOTTOM VIEW



1. Dimensions are in millimeters.
2. Interpret dimensions and toleraces per ASME Y14.5M-1994.

3 Dimension b is measured at the maximum solder ball diameter, parallel to datum plame 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		2.5
A1	0.4	0.6
b		0.70
D	27.00 BSC	
E	27.00 BSC	
F	24.00 BSC	
G	24.00 BSC	
e	1.0 BSC	

Array 26x26

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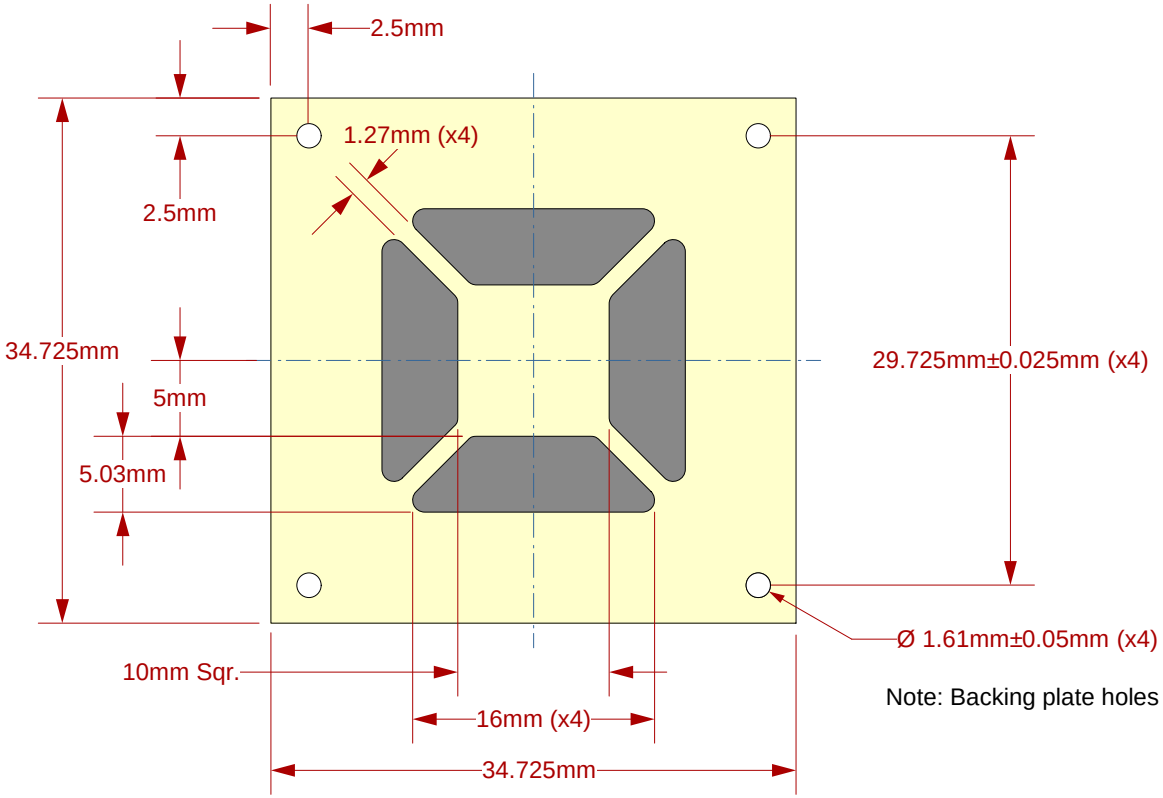
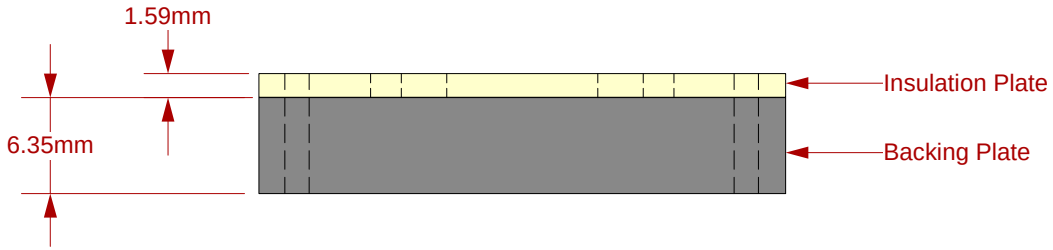
Top View



Note: Backing plate holes are tapped to accept 0-80 screws.

Side View



Description: Backing Plate with Insulation Plate

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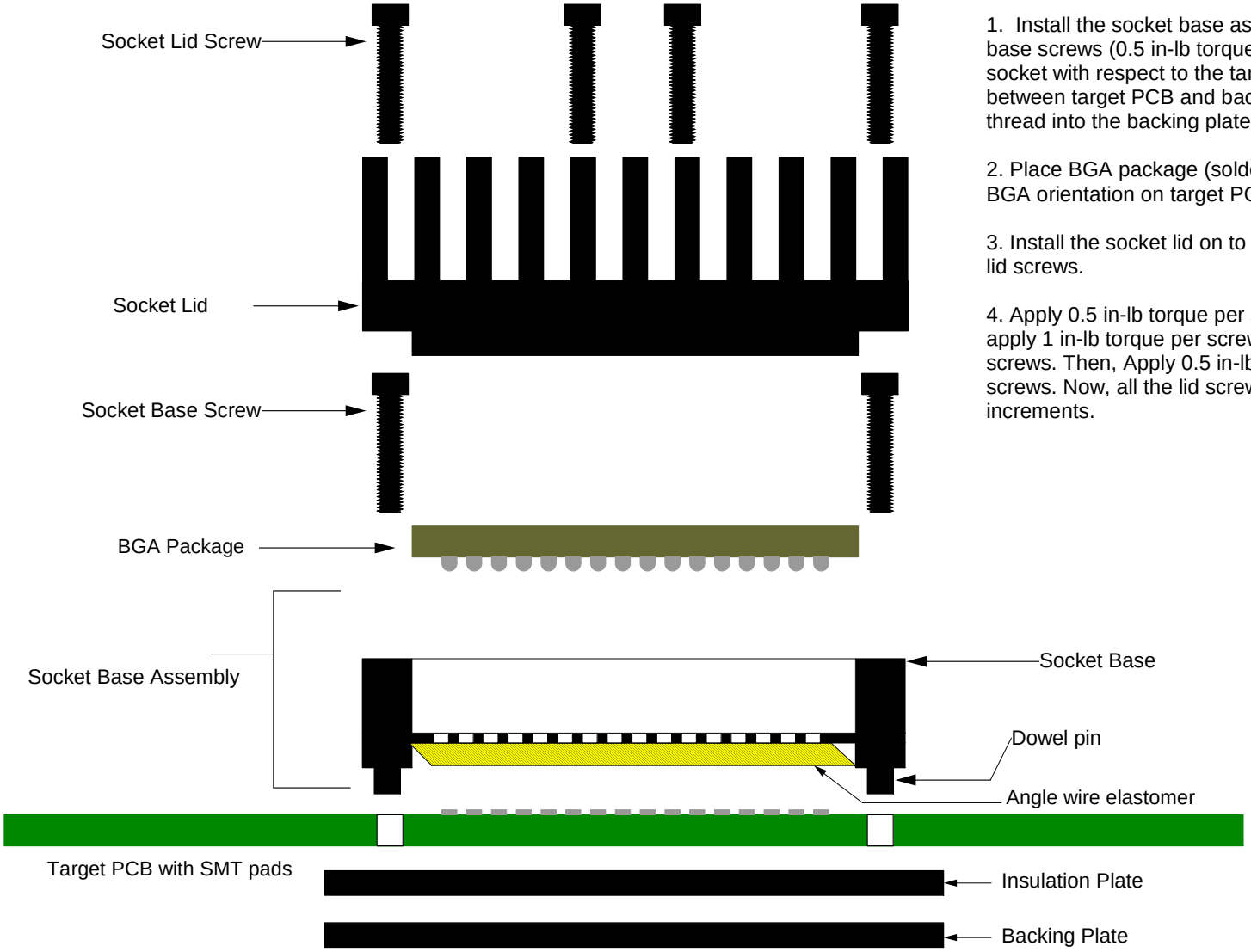
All dimensions are in mm.
All tolerences are +/- 0.125mm.
(Unless stated otherwise)

Socket (direct mount - hardware)
User Instructions

Tooling holes have to be designed into the target PCB for this version of the GHz BGA socket



1. Install the socket base assembly on the target PCB with the socket base screws (0.5 in-lb torque per screw). Check orientation of the socket with respect to the target PCB. Place insulation plate in between target PCB and backing plate. Socket base screws will thread into the backing plate.

2. Place BGA package (solder ball side down) into the socket. NOTE: BGA orientation on target PCB is critical.

3. Install the socket lid on to the socket base assembly using socket lid screws.

4. Apply 0.5 in-lb torque per screw on two opposite lid screws. Then, apply 1 in-lb torque per screw on the remaining two opposite lid screws. Then, Apply 0.5 in-lb torque per screw on the initial two lid screws. Now, all the lid screws have 1 in-lb torque applied in gradual increments.

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