


GHz BGA Socket - Direct mount, solderless

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
- Easily removable swivel socket lid

- △ 1 Socket base: Black anodized Aluminum. Thickness = 7.5mm.
- △ 2 Socket lid screw: Socket head cap, alloy steel with black oxide finish, 0-80 fine thread, 3/8" long.
- △ 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 = 0.75mm.
- △ 5 Ball Guide: Kapton polyimide.
- △ 6 Socket base screw: Socket head cap, Alloy steel with black oxide finish, 0-80 fine thread, 15.875mm long.
- △ 7 Heat Sink Lid: Aluminum
- △ 8 Insulation Plate: FR4/G10, 1.59mm thick.
- △ 9 Backing Plate: Anodized Aluminum 6.35mm thick.
- △ 10 Gap Pad: gap pad1500, 0.040" thick.

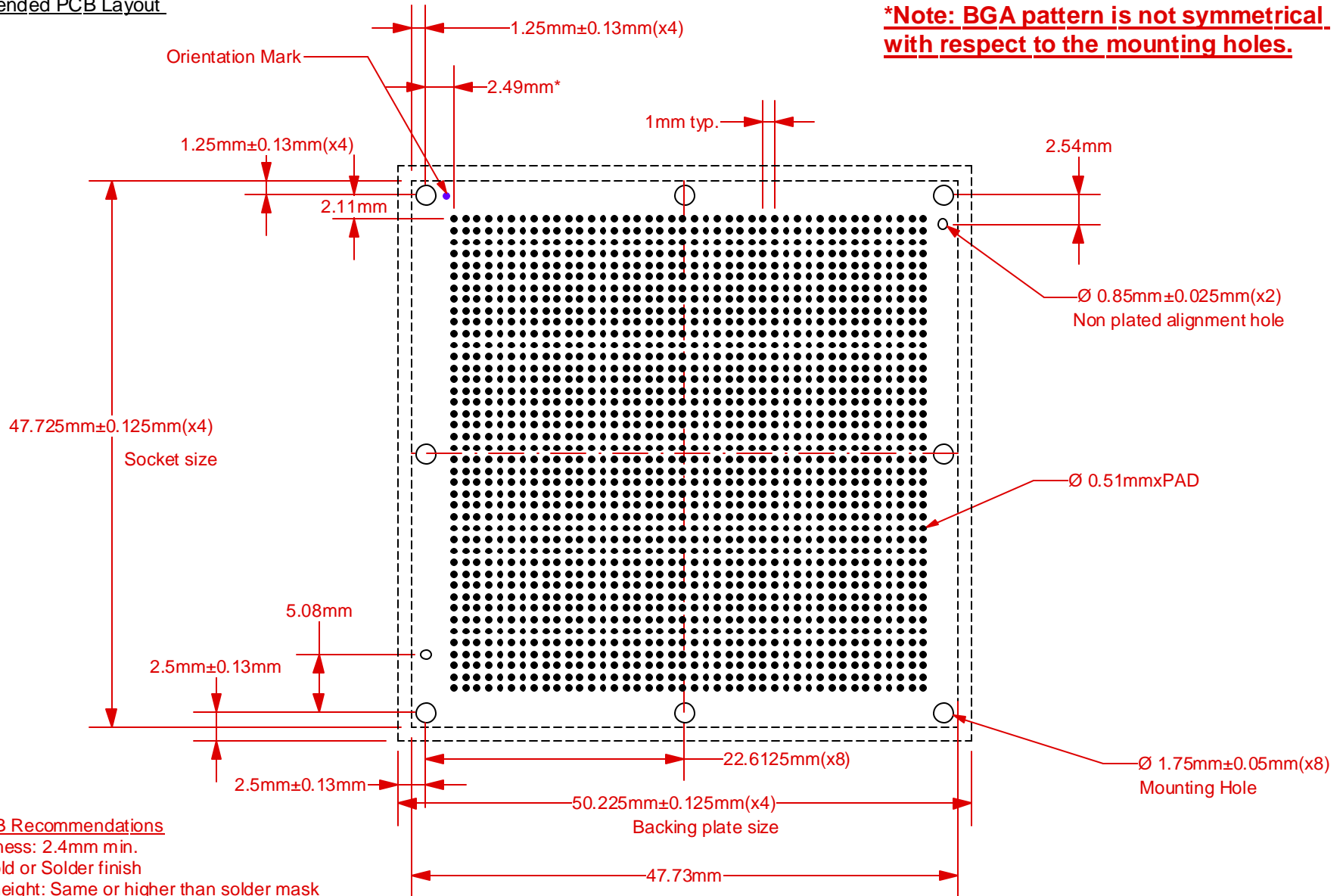
Socket lid screw: Socket head cap, Alloy steel with black oxide finish, 0-80 fine thread, 4.76mm long.

	SG-BGA-6233 Drawing	Status: Released	Scale: -	Rev: B
	© 2007 IRONWOOD ELECTRONICS, INC. 11351 Rupp Dr. Suite 400 Burnsville, MN 55337 Tele: (952) 229-8200 www.ironwoodelectronics.com	Drawing: J. Glab	Date: 7/6/07	
		File: SG-BGA-6233 Dwg.mcd	Modified: 3/11/08	

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

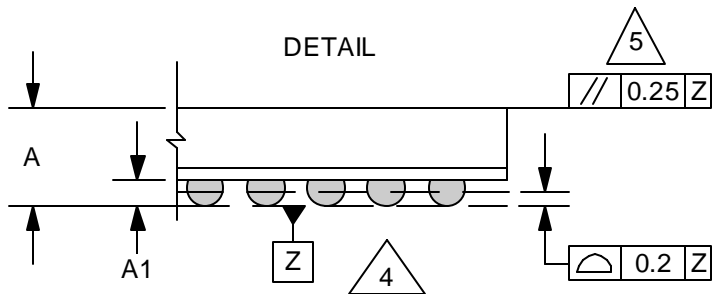
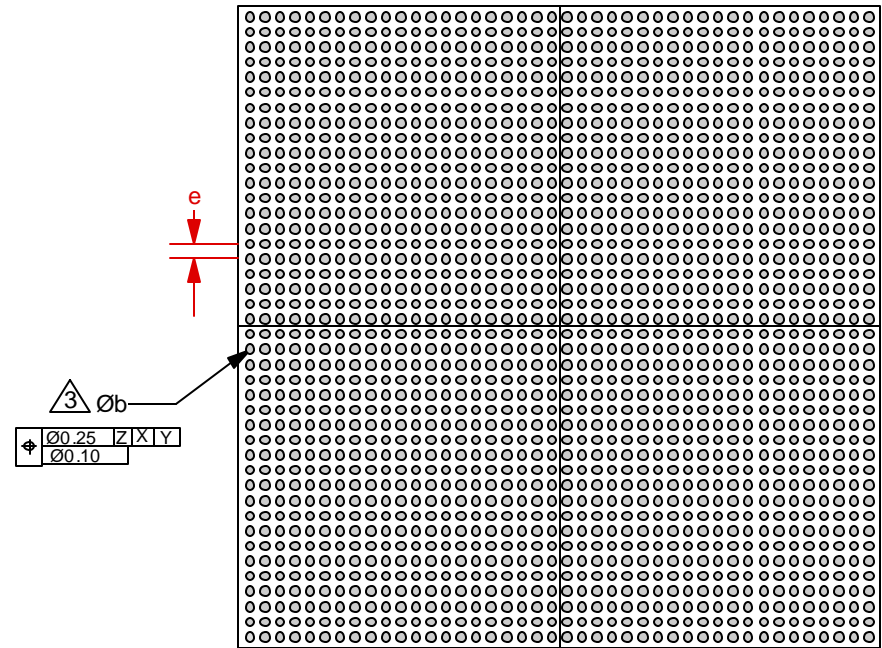
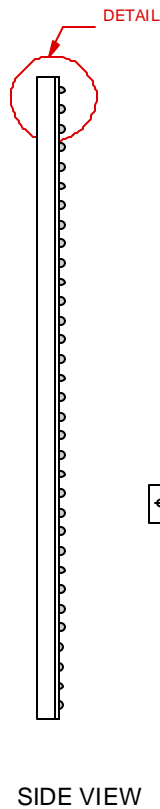
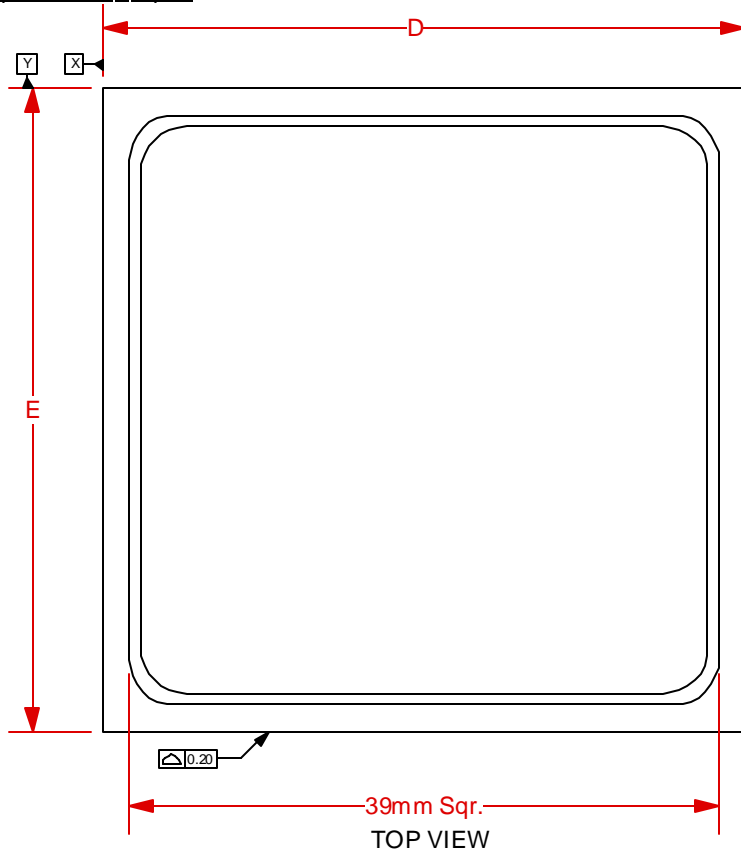
Total thickness: 2.4mm min.
Plating: Gold or Solder finish
PCB Pad height: Same or higher than solder mask

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

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

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Compatible BGA Spec



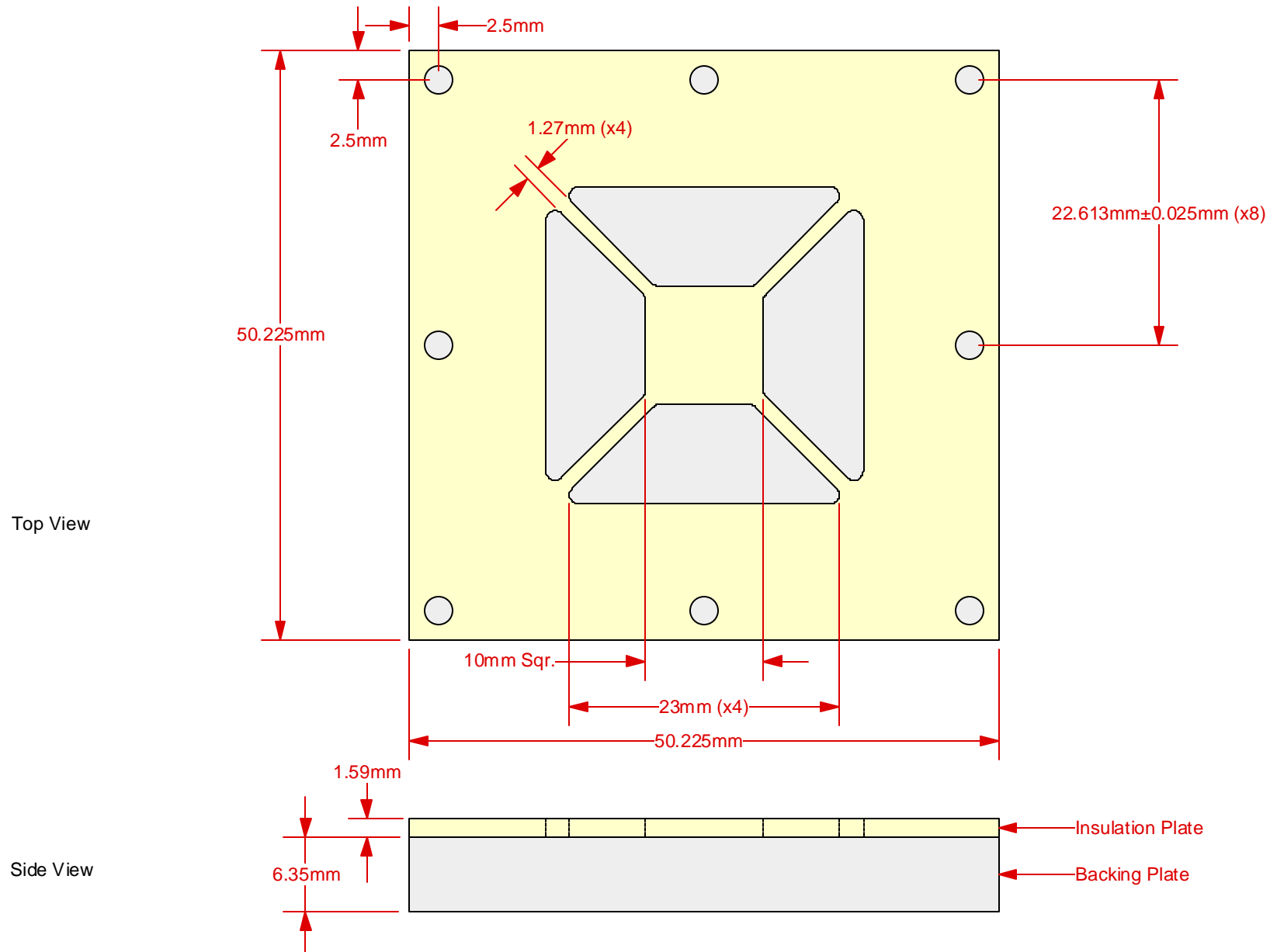
- Dimensions are in millimeters.
 - Interpret dimensions and tolerances per ASME Y14.5M-1994.
- $\triangle 3$ Dimension b is measured at the maximum solder ball diameter, parallel to datum plane Z.
 - $\triangle 4$ Datum Z (seating plane) is defined by the spherical crowns of the solder balls.
 - $\triangle 5$ Parallelism measurement shall exclude any effect of mark on top surface of package.


DIM	MIN	MAX
A		3.5
A1	0.40	0.60
b		0.70
D	42.50 BSC	
E	42.50 BSC	
e	1.0 BSC	

Array: 42x42

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Description: Backing Plate with Insulation Plate

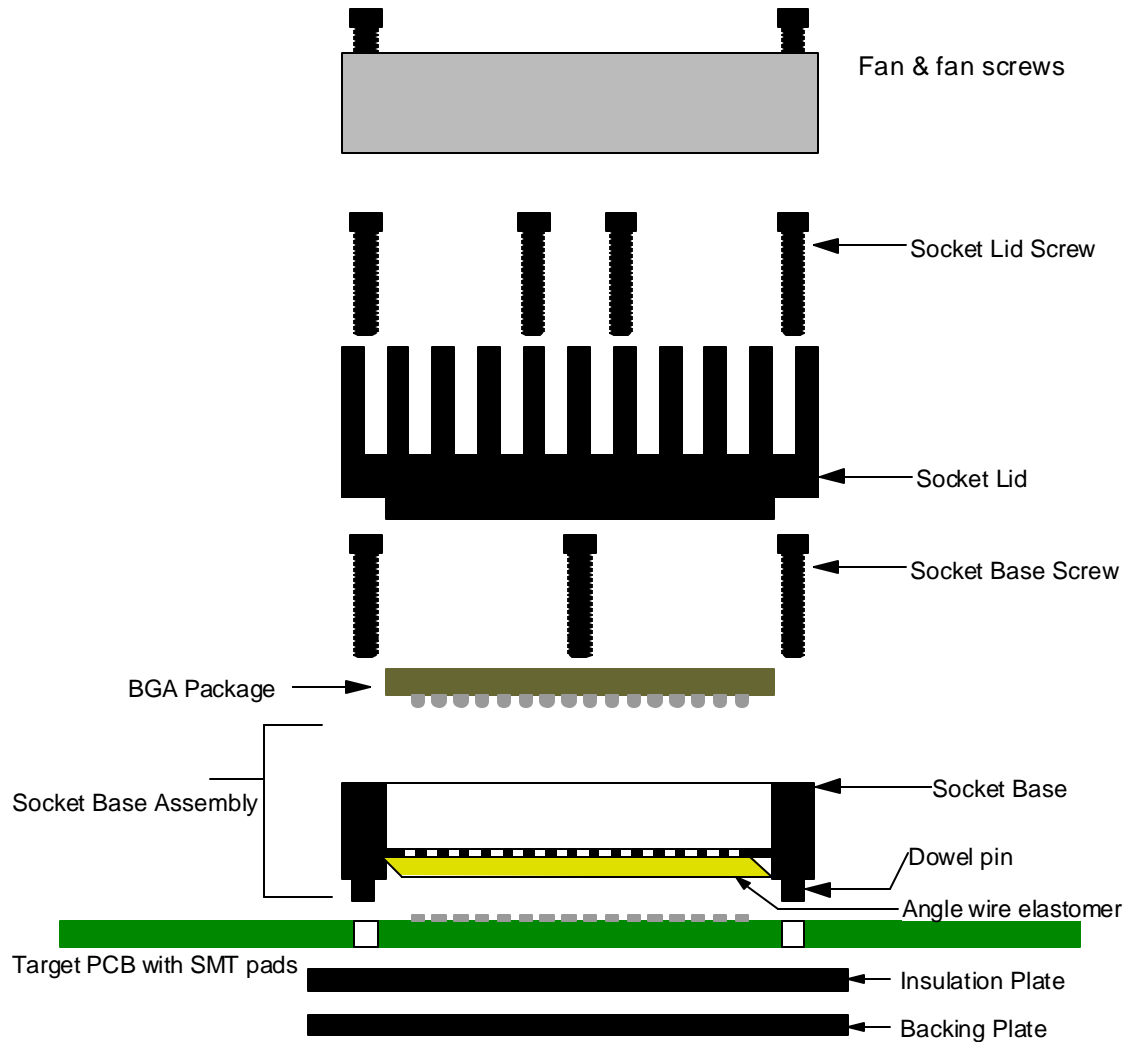


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All dimensions are in mm.
 All tolerances are +/- 0.125mm.
 (Unless stated otherwise)


SG-BGA-6233 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 (2 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 torque of .5-1 in-lb per lid screw in gradual increments on all lid screws in X-fashion .
5. Mount fan on top of heat sink lid using fan screws.

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