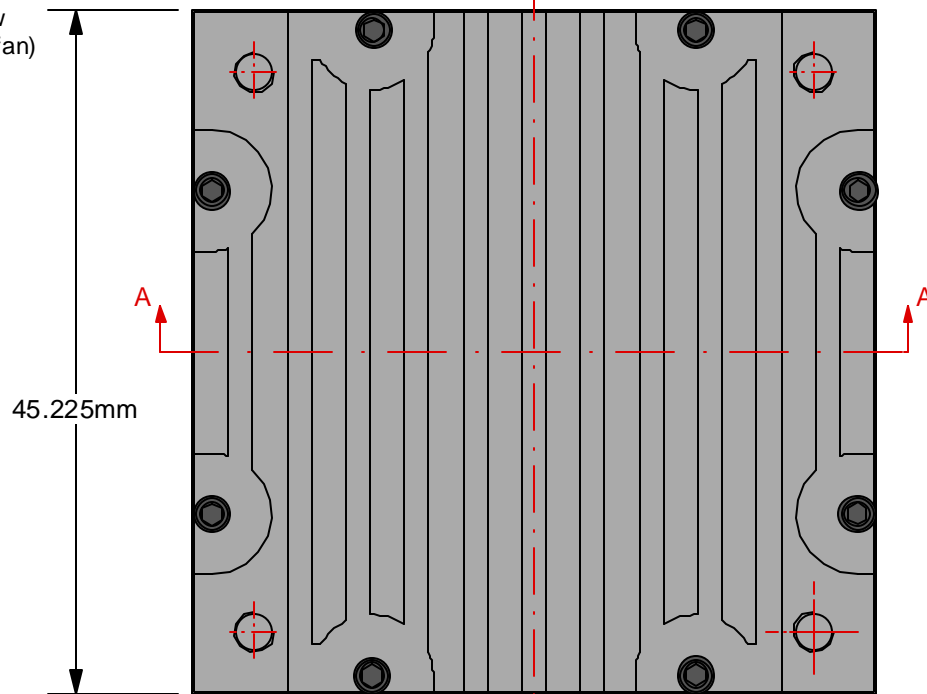


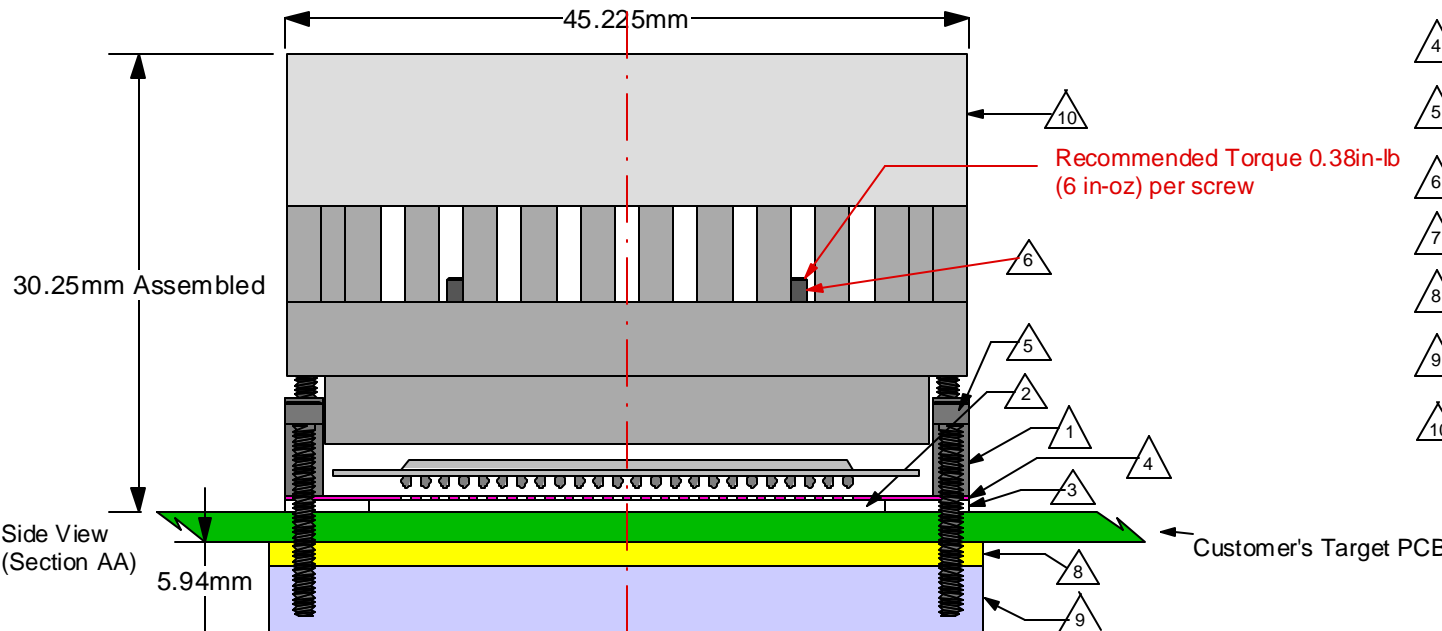
Top View
(without fan)



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



- △ 1 Socket base: Black anodized 6061 Aluminum. Thickness = 6.5mm.
- △ 2 Elastomer: 40 micron dia gold plated brass filaments arranged symmetrically in a silicone rubber (63.5 degree angle). Thickness = 0.75mm.
- △ 3 Elastomer Guide: Cirlex or equivalent. Thickness = 0.75mm.
- △ 4 Ball Guide: Kapton polyimide.
- △ 5 Socket base screw: Socket head cap, alloy steel with black oxide finish, 0-80 fine thread, 1/2" long.
- △ 6 Socket lid screw: Socket head cap, alloy steel with black oxide finish, 0-80 fine thread, 3/8" long.
- △ 7 Heat Sink Lid: Aluminum
- △ 8 Insulation Plate: FR4/G10, 1.59mm thick.
- △ 9 Backing Plate: Stainless Steel Thickness = 4.35mm.
- △ 10 Fan: 45mmx45mmx10mm, 12V, 13CFM

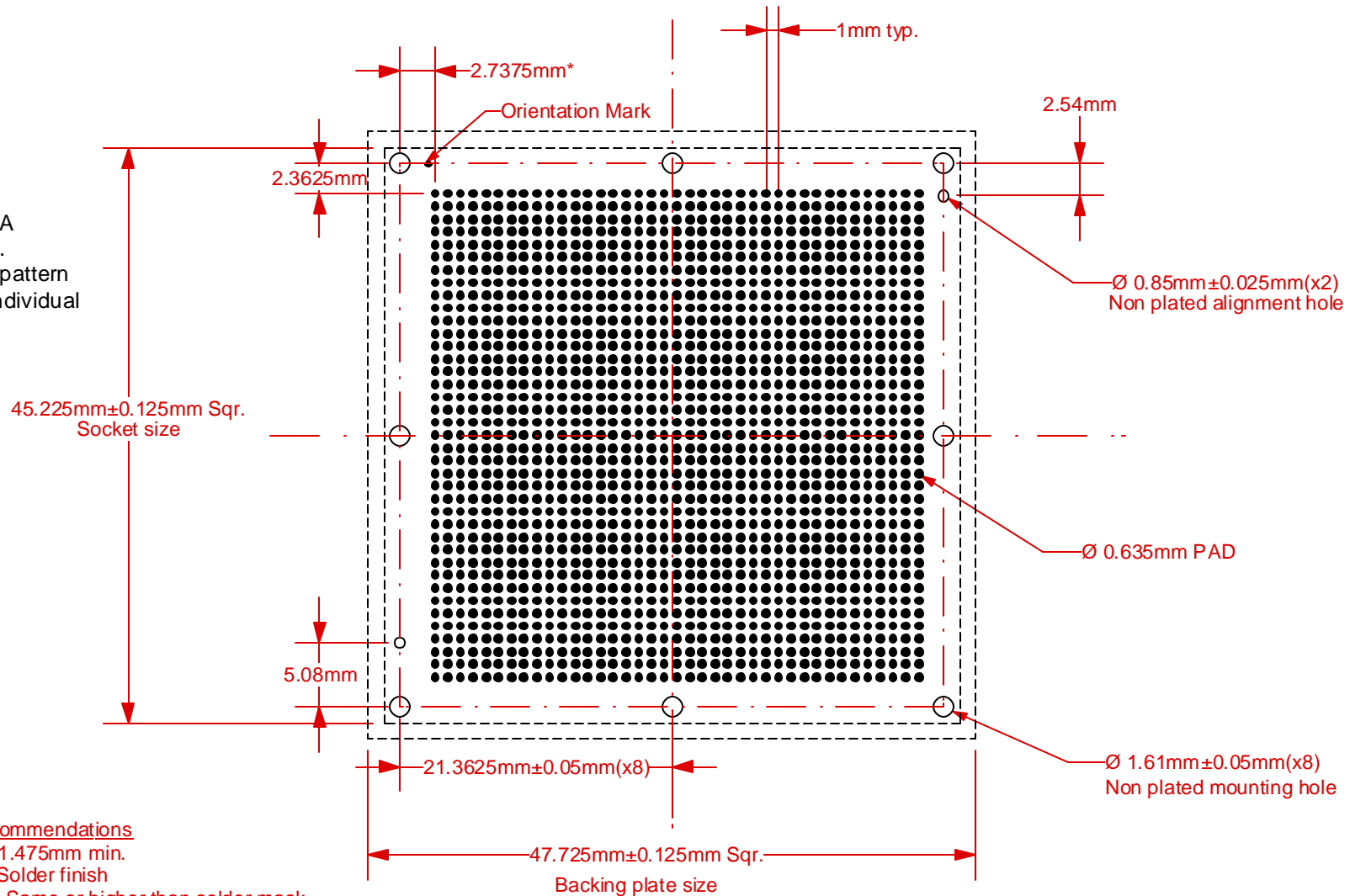
All tolerances: $\pm 0.125\text{mm}$ (unless stated otherwise). Materials and specifications are subject to change without notice.

	SG-BGA-6117 Drawing	Status: Released	Scale: -	Rev: B
	© 2004 IRONWOOD ELECTRONICS, INC. PO BOX 21151 ST. PAUL, MN 55121 Tele: (651) 452-8100 www.ironwoodelectronics.com	Drawing: H. Hansen	Date: 8/3/04	
		File: SG-BGA-6117 Dwg	Modified: 04/13/06, RP	

Recommended PCB Layout
Top View

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

Note: Full BGA pattern shown. Please adjust pattern according to individual requirements.




Target PCB Recommendations

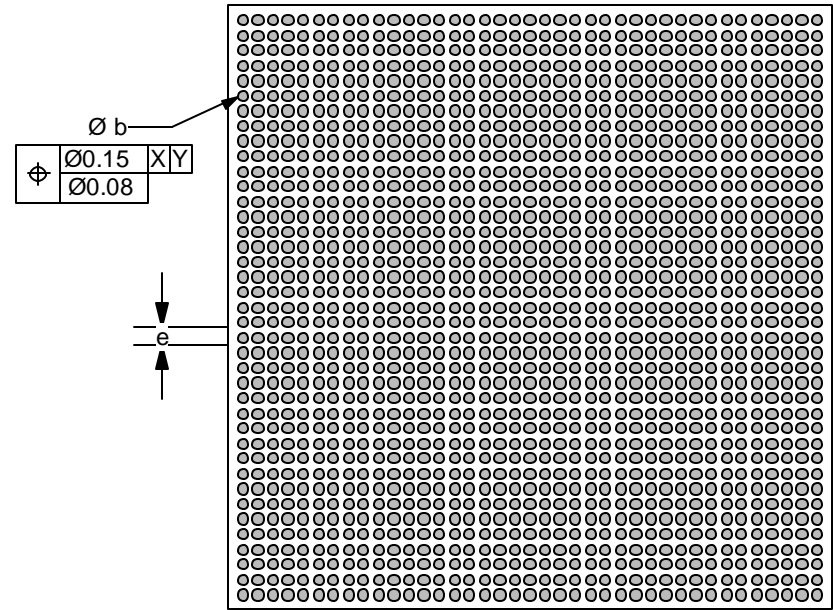
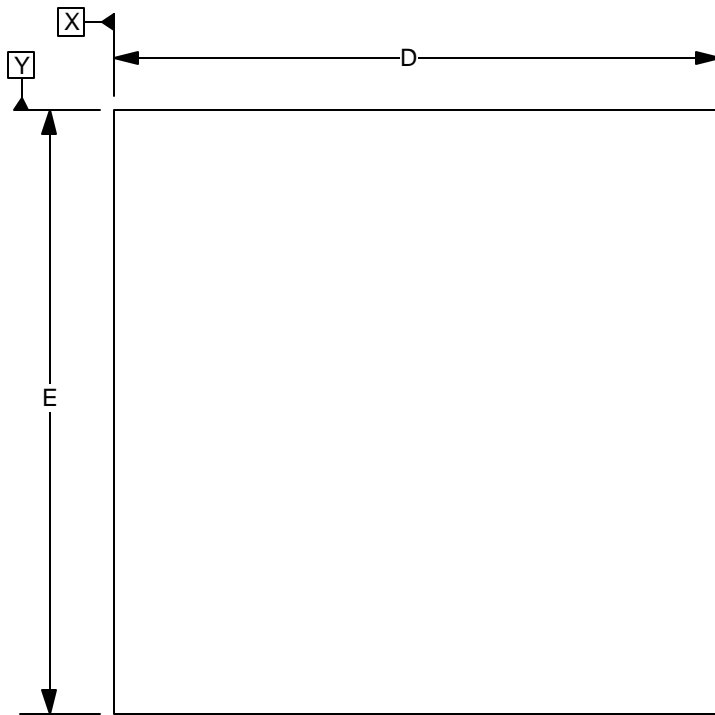
Total thickness: 1.475mm min.
Plating: Gold or Solder finish
PCB Pad height: Same or higher than solder mask

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

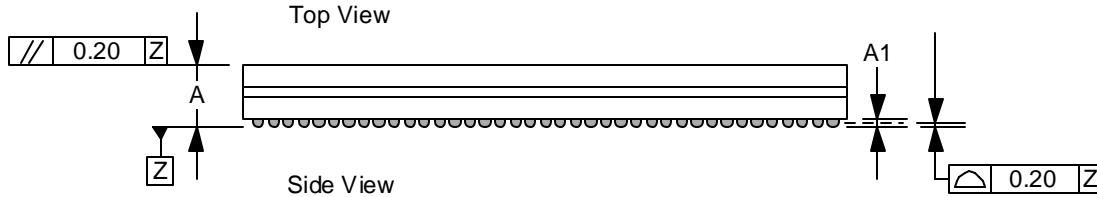
Recommended PCB Layout Tolerances: $\pm 0.025\text{mm}$ [$\pm 0.001"$] unless stated otherwise.

	SG-BGA-6117 Drawing		Status: Released	Scale: 2:1	Rev: B
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			File: SG-BGA-6117 Dwg		Modified: 04/13/06, RP

Compatible BGA Spec




Bottom View Array: 39x39

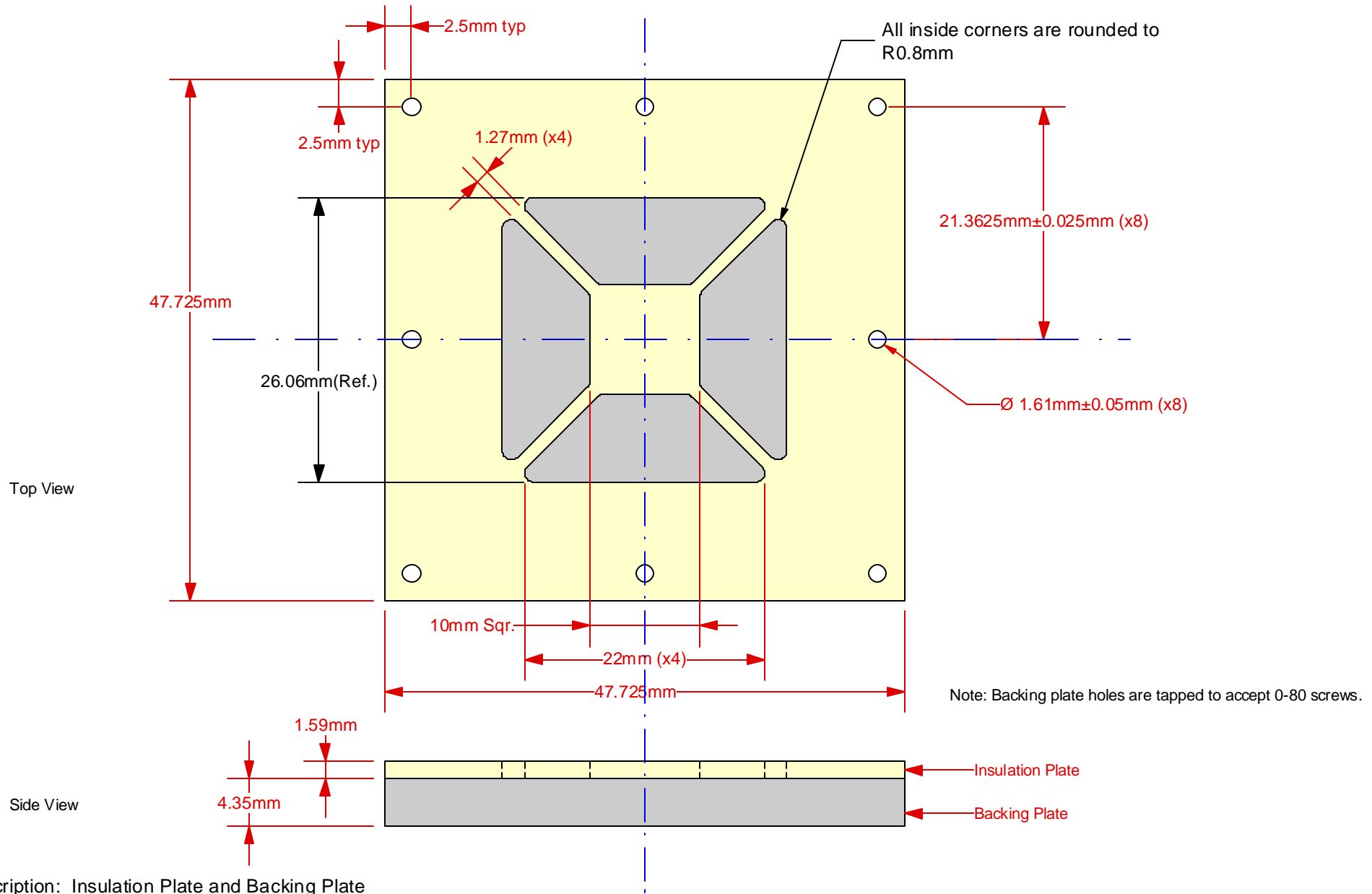


1. Dimensions are in millimeters.
 2. Interpret dimensions and tolerances per ASME Y14.5M-1994.
- Dimension b is measured at the maximum solder ball diameter, parallel to datum plane Z.
 - Datum Z (seating plane) is defined by the spherical crowns of the solder balls.
 - Parallelism measurement shall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


DIM	MIN	MAX
A		3.4
A1	0.4	0.6
b		0.70
D	40.0 BSC	
E	40.0 BSC	
e	1.0 BSC	

Array: 39x39

	SG-BGA-6117 Drawing	Status: Released	Scale: 2:1	Rev: B
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		File: SG-BGA-6117 Dwg	Modified: 04/13/06, RP	

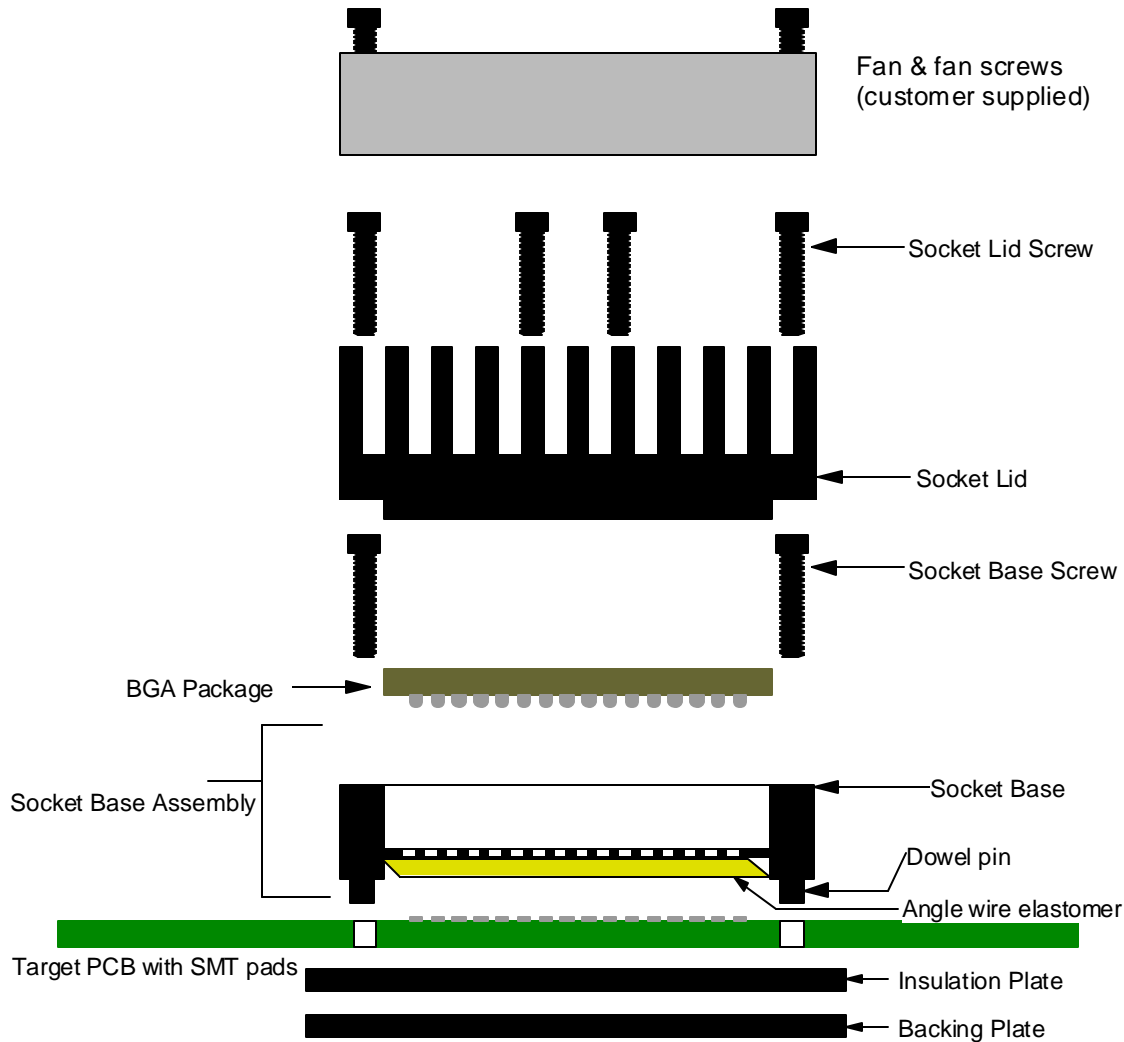


Description: Insulation Plate and Backing Plate

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		Drawing: H. Hansen	Date: 8/3/04	
		File: SG-BGA-6117 Dwg	Modified: 04/13/06, RP	


SG-BGA-6117 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 2, 3, and 3.5 in-oz 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.

	SG-BGA-6117 Drawing	Status: Released	Scale: 2:1	Rev: B
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		File: SG-BGA-6117 Dwg	Modified: 04/13/06, RP	