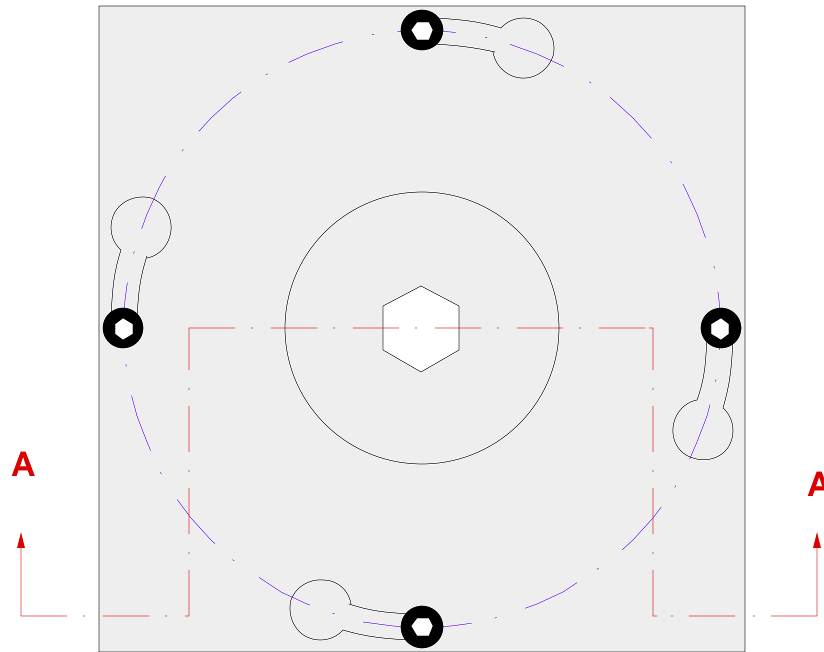
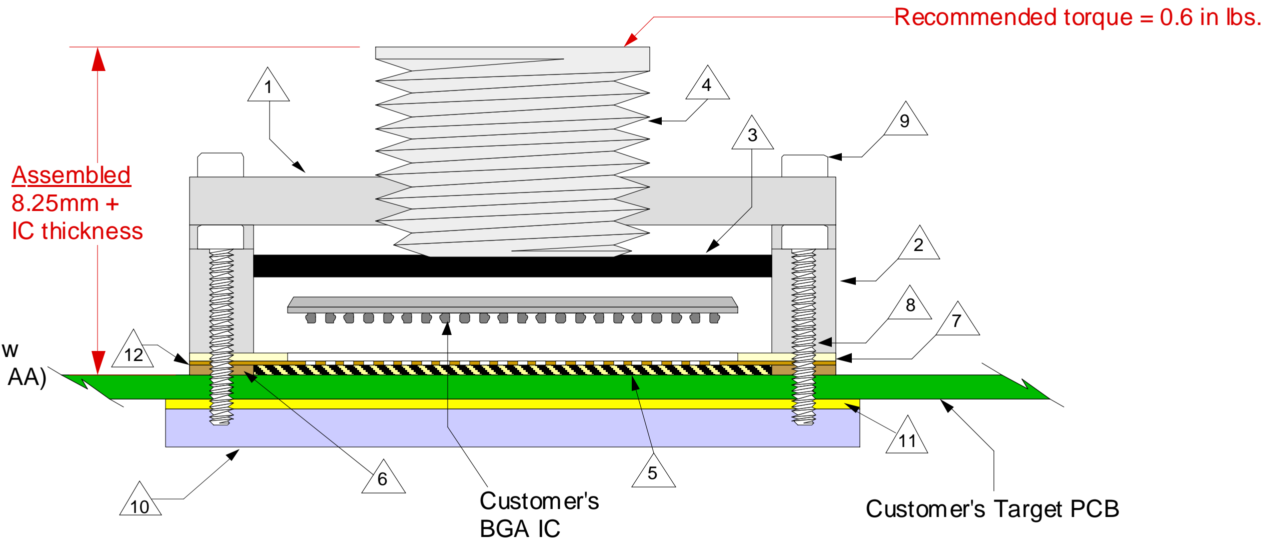
GHz BGA Socket - Direct mount, solderless

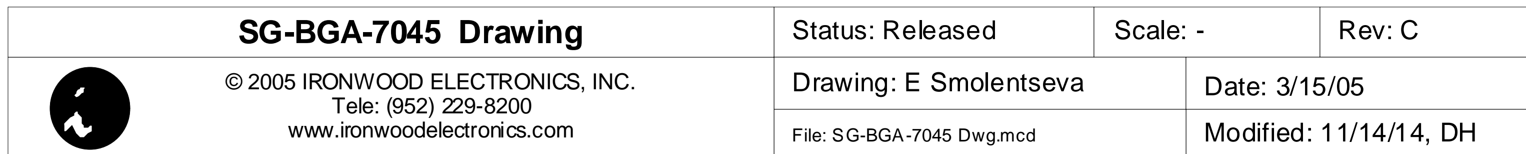


Features

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

#	Description
1	Socket Lid: Black anodized Aluminum. Thickness = 2.5mm.
2	Socket base: Black anodized Aluminum. Thickness = 5mm.
3	Compression Plate: Black anodized Aluminum. Thickness = 2.5mm.
4	Compression screw: Clear anodized Aluminum. Thickness = 5mm, Hex socket = 5mm.
5	Elastomer: 20 micron dia gold plated brass filaments arranged symmetrically in a silicone rubber (63.5 degree angle). Thickness = 0.5mm.
6	Elastomer Guide: Non-clad FR4. Thickness = 0.475mm.
7	IC guide: Torlon.
8	Socket base screw: Socket head cap, alloy steel with black oxide finish, 0-80 fine thread , 9.525mm long.
9	Socket lid screw: Shoulder screw, 18-8 SS, 0-80 fine thread.
10	Backing Plate: Aluminum. Thickness = 6.35mm
11	Insulating Plate: FR4. Thickness = 1.58mm.
12	Ball Guide: Kapton. Thickness = 0.003".





SG-BGA-7045 Drawing	Status: Released	Scale: -	Rev: C
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	File: SG-BGA-7045 Dwg.mcd	Modified: 11/14/14, DH	

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.**

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

14x14 array

Orientation Mark

*3.36mm

0.5mm typ.

3.11mm

2.54mm

17.73mm sqr.
Backing plate outline

15.225mm±0.125mm sqr.
Socket size

6.5mm

5.08mm

Ø 0.85mm±0.025mm (x2)
Non plated alignment hole

Ø 0.3mm pad (x196)

Ø 1.61mm±0.05mm (x4)
Non plated mounting hole

1.25mm±0.125mm (x4)

6.5mm

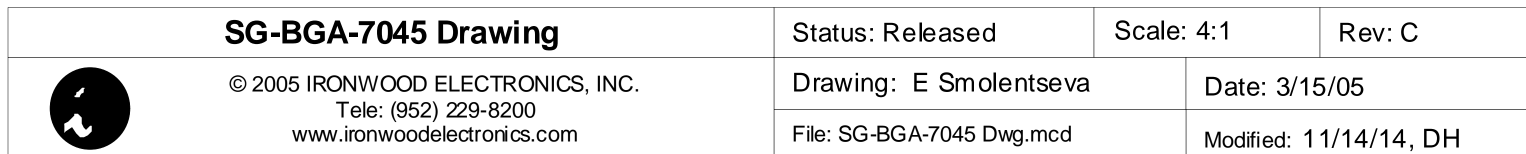
12.725mm (x4)

1.25mm±0.125mm (x4)

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

All dimensions are in mm unless stated otherwise

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



SG-BGA-7045 Drawing	Status: Released	Scale: 4:1	Rev: C
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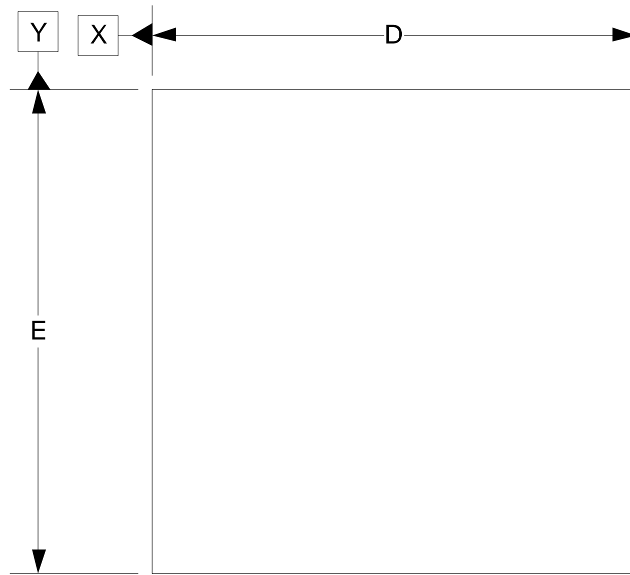
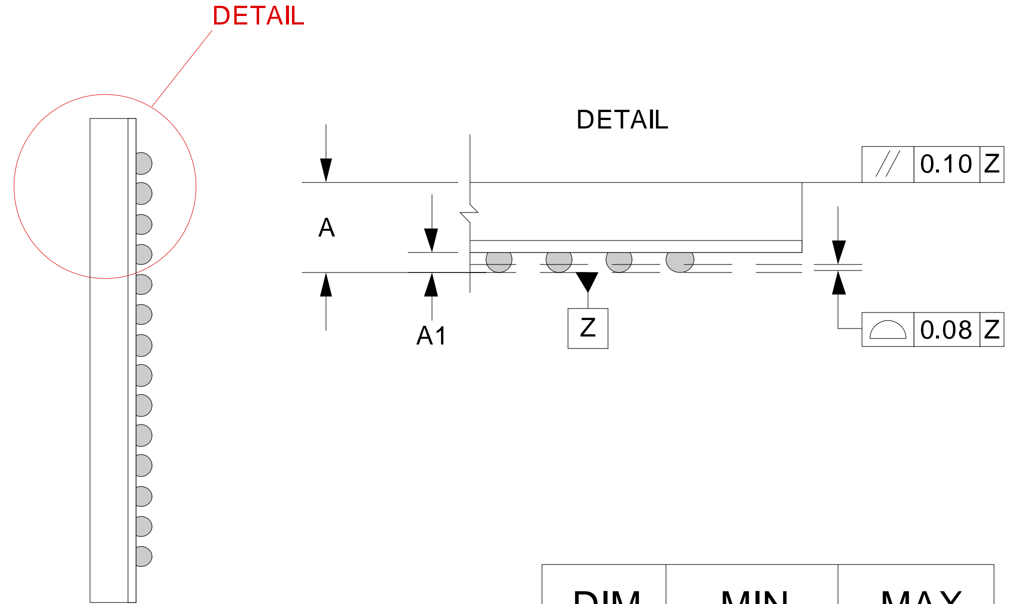
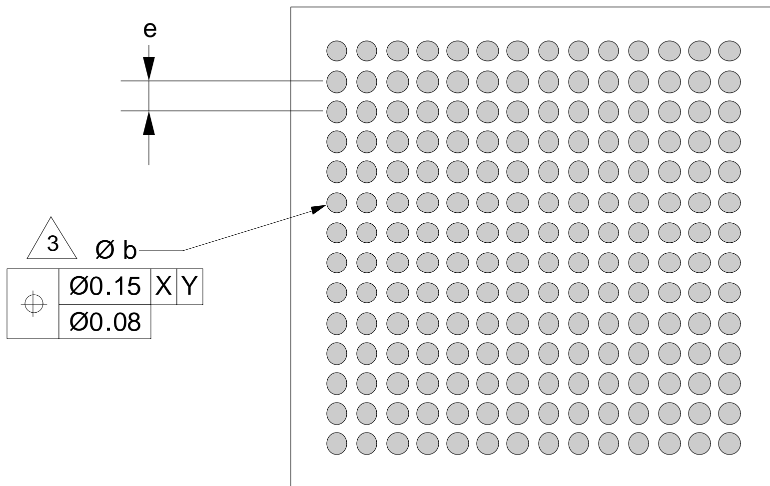
Compatible BGA Spec







1. Dimensions are in millimeters.
2. Interpret dimensions and tolerances per ASME Y14.5M-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		1.1
A1	0.15	0.25
b		0.35
D	8.0 BSC	
E	8.0 BSC	
e	0.5 BSC	

14 X 14 array

All dimensions are in mm unless stated otherwise

SG-BGA-7045 Drawing	Status: Released	Scale: 1:0.125	Rev: C
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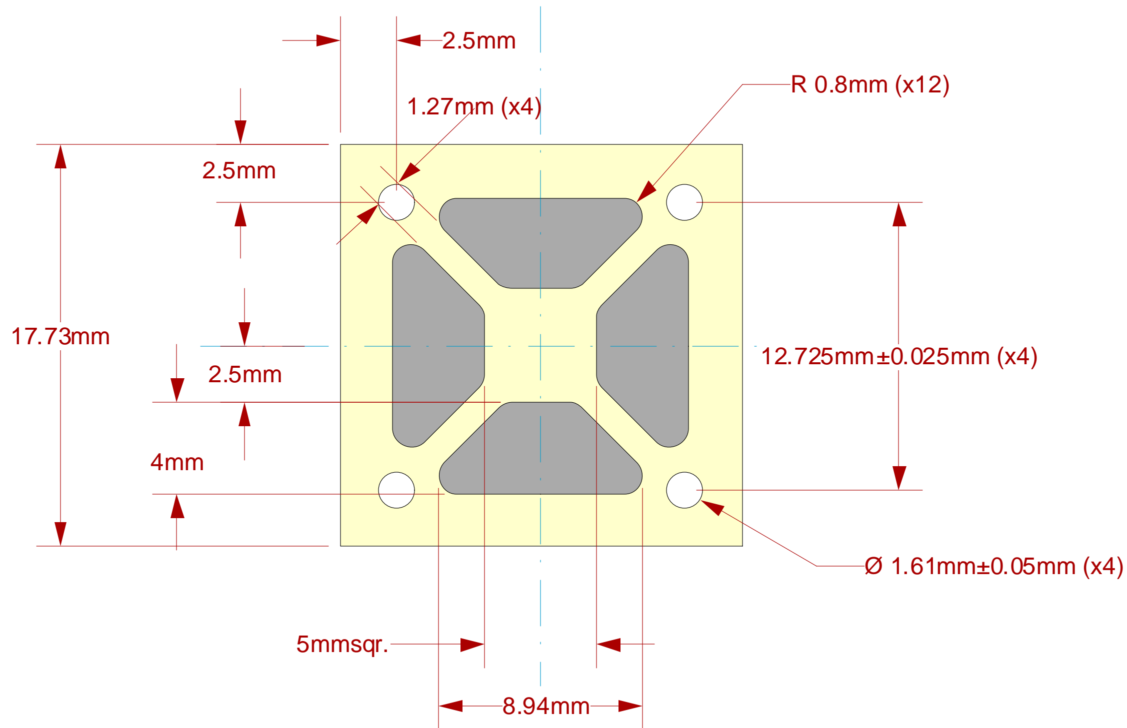
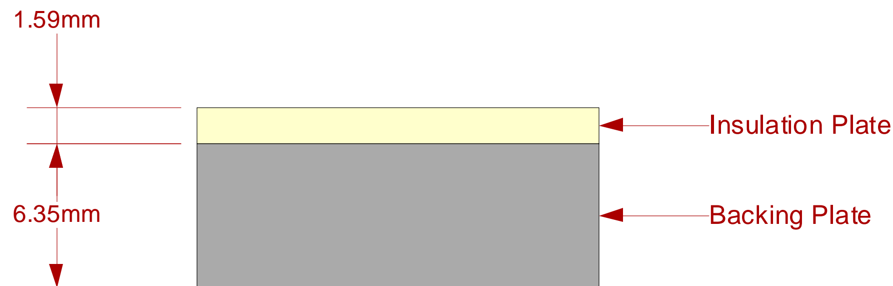
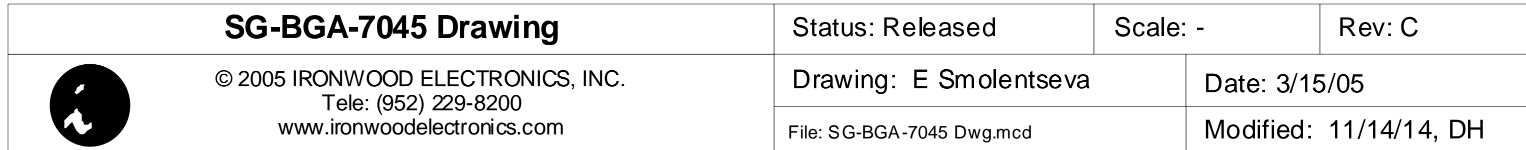
	File: SG-BGA-7045 Dwg.mcd	Modified: 11/14/14, DH	





All dimensions are in mm unless stated otherwise



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