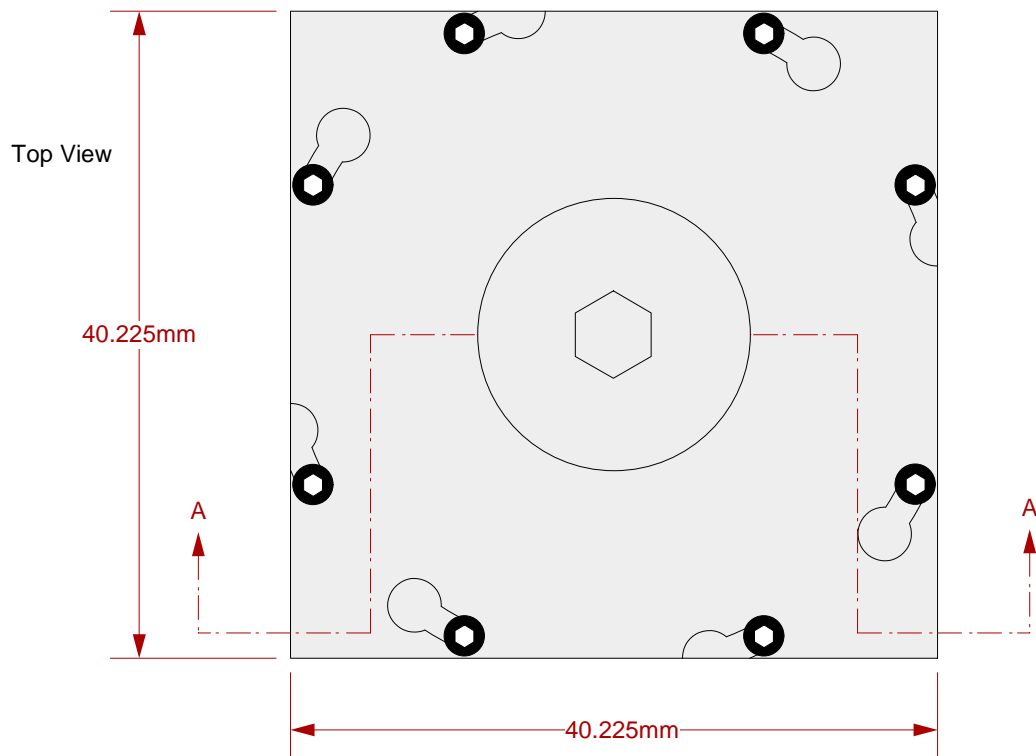


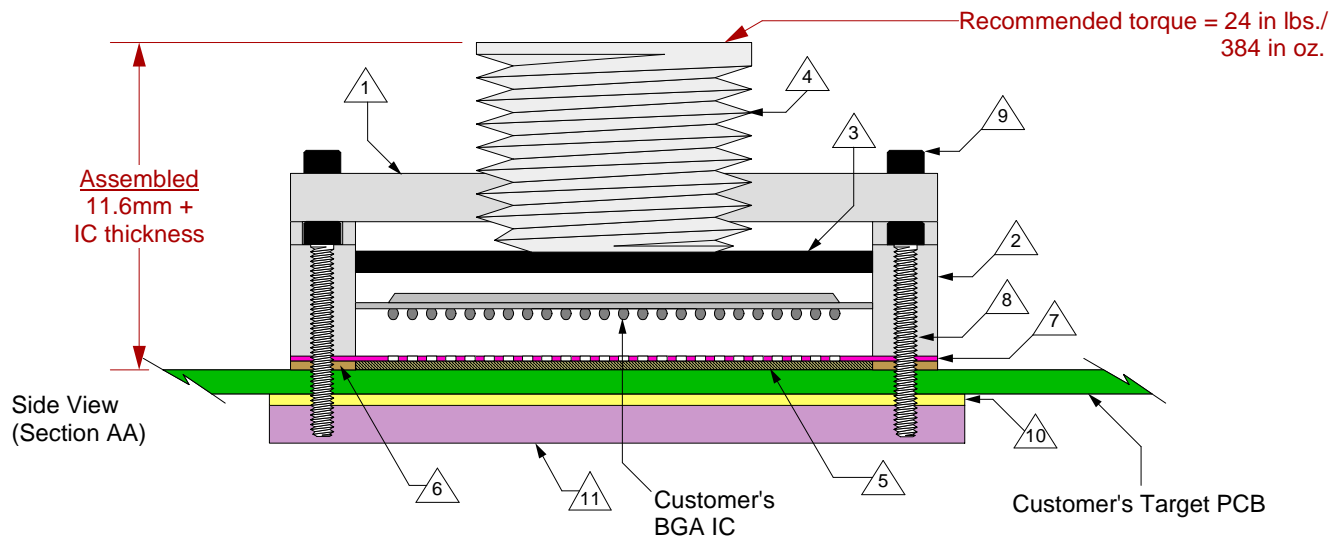
# GHz BGA Socket - Direct mount, solderless



## 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 Lid: Black anodized Aluminum. Thickness = 2.5mm.
- △ 2 Socket base: Black anodized Aluminum. Thickness = 10.0mm.
- △ 3 Compression Plate: Black anodized Aluminum. Thickness = 5.6mm.
- △ 4 Compression screw: Clear anodized 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 Elastomer Guide: Cirlex or equivalent. Thickness = 0.725mm.
- △ 7 Ball Guide: Kapton polyimide.
- △ 8 Socket base screw: Socket head cap, Alloy steel with black oxide finish, 0-80 fine thread, 15.9mm long.
- △ 9 Socket lid screw: Shoulder screw, 18-8 SS, 0-80 fine thread.
- △ 10 Insulation Plate: FR4/G10, Thickness = 1.59mm.
- △ 11 Backing Plate: Black anodized Aluminum. Thickness = 6.35mm.




Assembled  
11.6mm +  
IC thickness

Side View  
(Section AA)

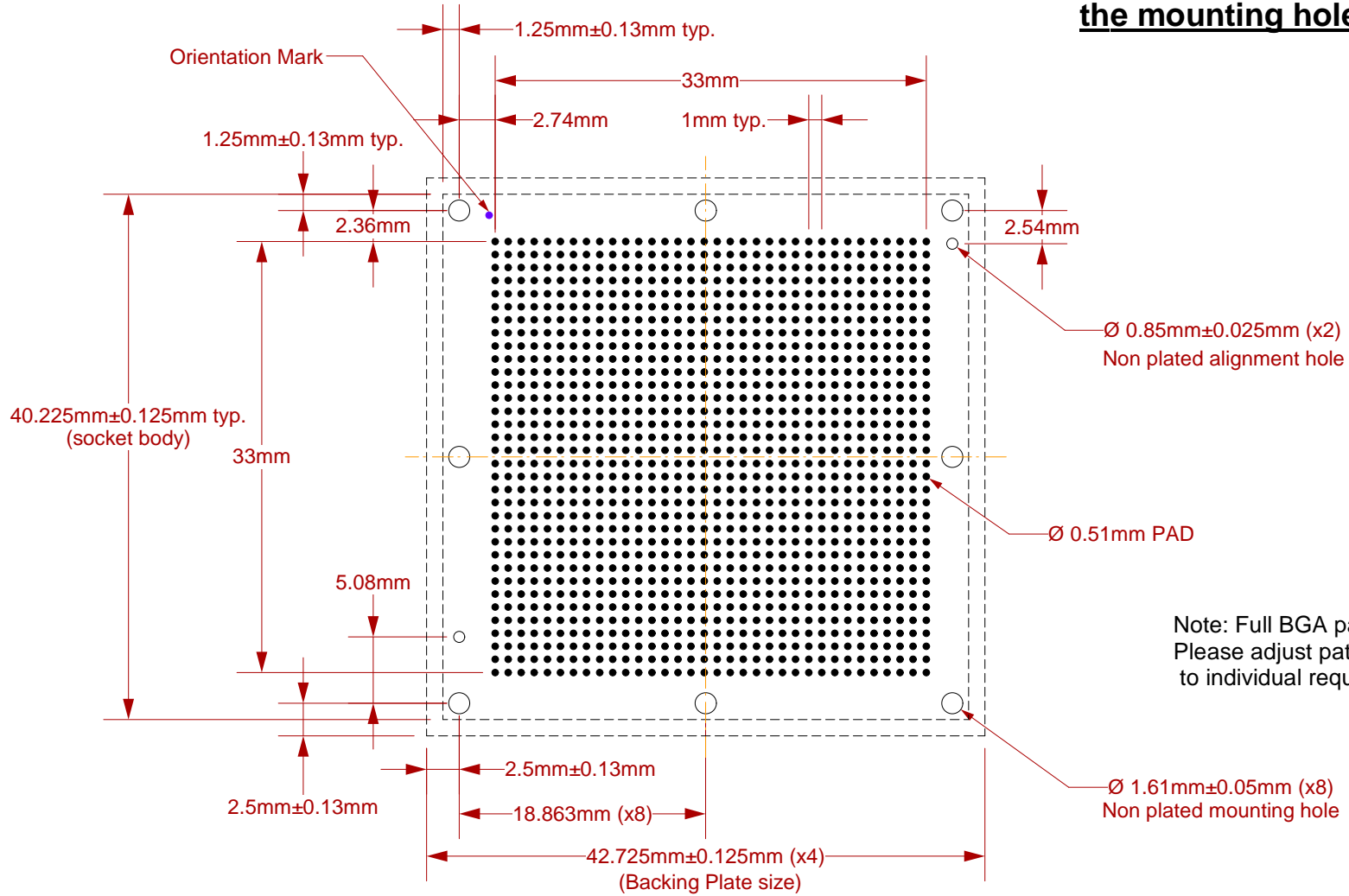
Customer's  
BGA IC

Customer's Target PCB

|  |                       |                       |        |
|--|-----------------------|-----------------------|--------|
| <br><b>SG-BGA-6091 Drawing</b><br>© 2009 IRONWOOD ELECTRONICS, INC.<br>11351 Rupp Drive, Suite 400, Burnsville, MN 55337<br>Tele: (952) 229-8200<br>www.ironwoodelectronics.com | Status: Released      | Scale: -              | Rev: D |
|  | Drawing: H. Hansen    | Date: 8/26/03         |        |
|  | File: SG-BGA-6091 Dwg | Modified: 7/21/09, AE |        |

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

**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: 2.4mm min.

Plating: Gold or Solder finish

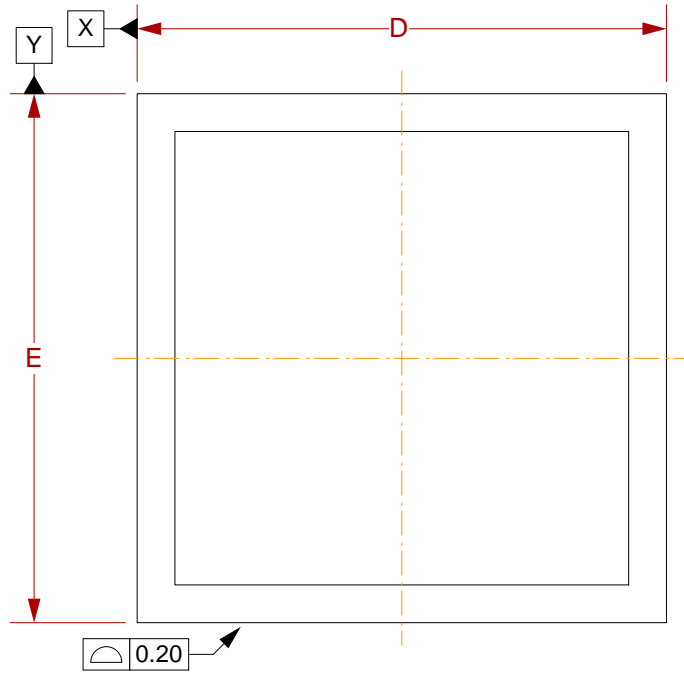
PCB Pad height: Same or higher than solder mask

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

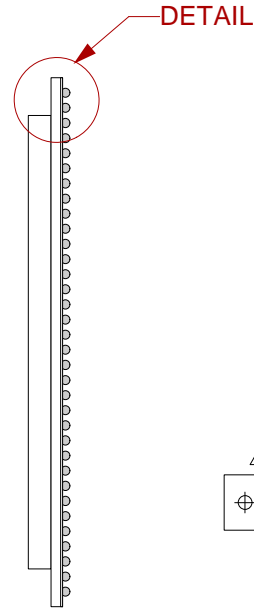
Recommended PCB Layout Tolerances:  $\pm 0.025\text{mm}$  [ $\pm 0.001''$ ] unless stated otherwise.

|   |   |                       |                       |               |
|---|---|-----------------------|-----------------------|---------------|
|  | <b>SG-BGA-6091 Drawing</b>  | Status: Released      | Scale: -              | Rev: D        |
|   | © 2009 IRONWOOD ELECTRONICS, INC.<br>11351 Rupp Drive, Suite 400, Burnsville, MN 55337<br>Tele: (952) 229-8200<br>www.ironwoodelectronics.com | Drawing: H. Hansen    |                       | Date: 8/26/03 |
|   |   | File: SG-BGA-6091 Dwg | Modified: 7/21/09, AE |               |

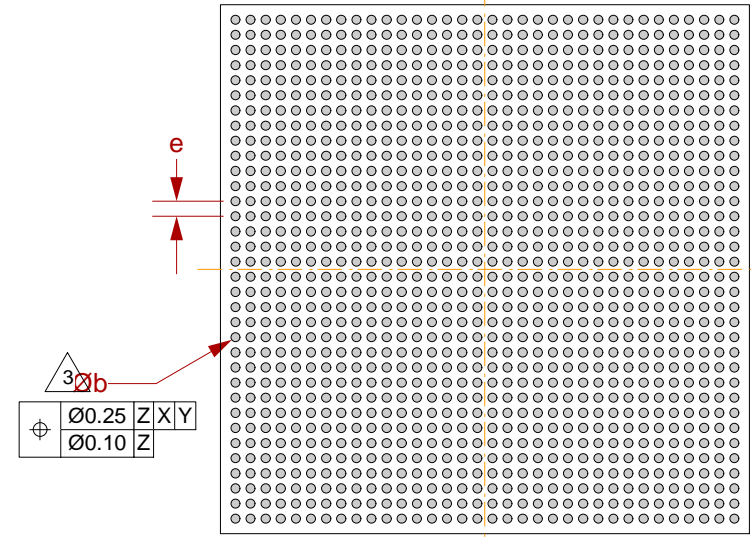
Compatible BGA Spec



TOP VIEW

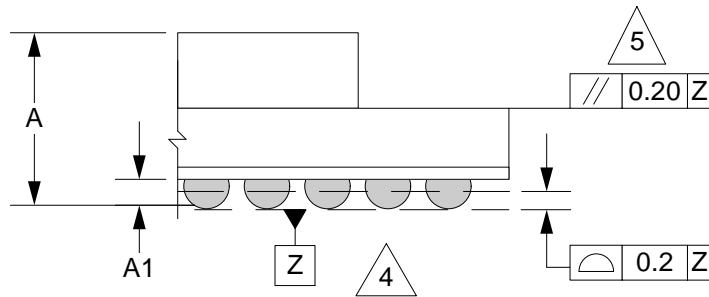


SIDE VIEW



BOTTOM VIEW


DETAIL



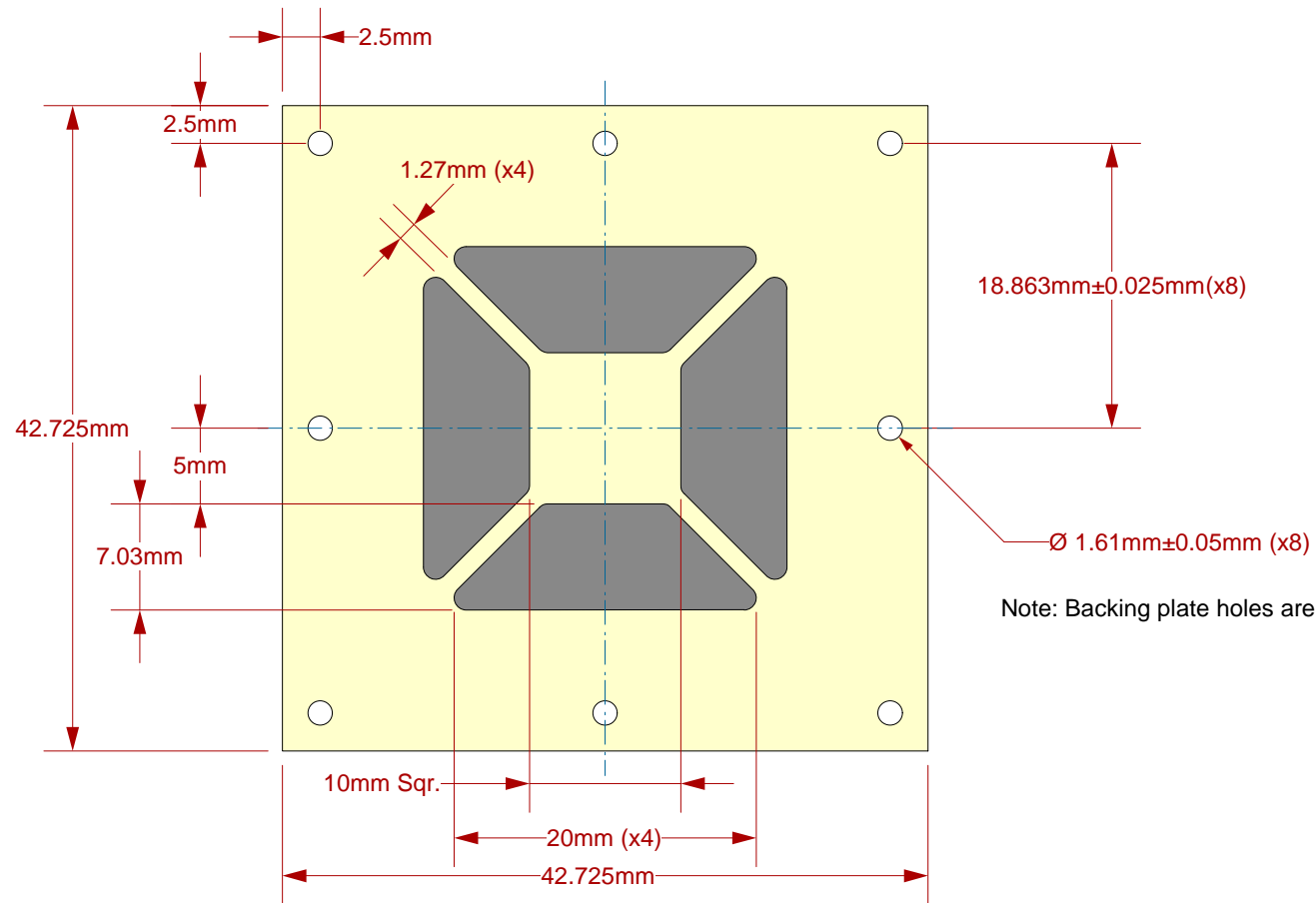
1. Dimensions are in millimeters.
  2. Interpret dimensions and tolerances per ASME Y14.5M-1994.
- Dimension b is measured at the maximum solder ball diameter, parallel to datum plane Z.
  - Datum Z (seating plane) is defined by the spherical crowns of the solder balls.
  - Parallelism measurement shall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

| DIM | MIN      | MAX  |
|-----|----------|------|
| A   |          | 6.2  |
| A1  | 0.77     | 0.82 |
| b   |          | 0.85 |
| D   | 35.0 BSC |      |
| E   | 35.0 BSC |      |
| e   | 1.00 BSC |      |

Array 34x34

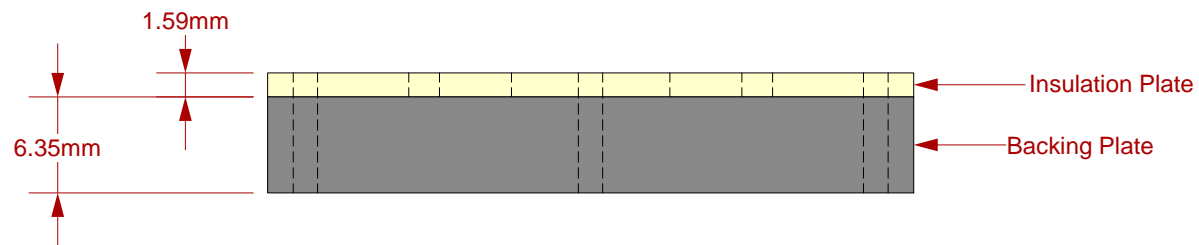
|  |                       |          |                       |
|--|-----------------------|----------|-----------------------|
|  <p><b>SG-BGA-6091 Drawing</b></p> <p>© 2009 IRONWOOD ELECTRONICS, INC.<br/>         11351 Rupp Drive, Suite 400, Burnsville, MN 55337<br/>         Tele: (952) 229-8200<br/>         www.ironwoodelectronics.com</p> | Status: Released      | Scale: - | Rev: D                |
|  | Drawing: H. Hansen    |          | Date: 8/26/03         |
|  | File: SG-BGA-6091 Dwg |          | Modified: 7/21/09, AE |

Top View




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

Side View



Description: Insulation Plate and Backing Plate

|   |                                   |                         |                 |                              |
|---|-----------------------------------|-------------------------|-----------------|------------------------------|
|  <p>© 2009 IRONWOOD ELECTRONICS, INC.<br/>11351 Rupp Drive, Suite 400, Burnsville, MN 55337<br/>Tele: (952) 229-8200<br/>www.ironwoodelectronics.com</p> | <p><b>SG-BGA-6091 Drawing</b></p> | <p>Status: Released</p> | <p>Scale: -</p> | <p>Rev: D</p>                |
|   | <p>Drawing: H. Hansen</p>         | <p>Date: 8/26/03</p>    |                 | <p>Modified: 7/21/09, AE</p> |
| <p>File: SG-BGA-6091 Dwg</p>  |                                   |                         |                 |                              |

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