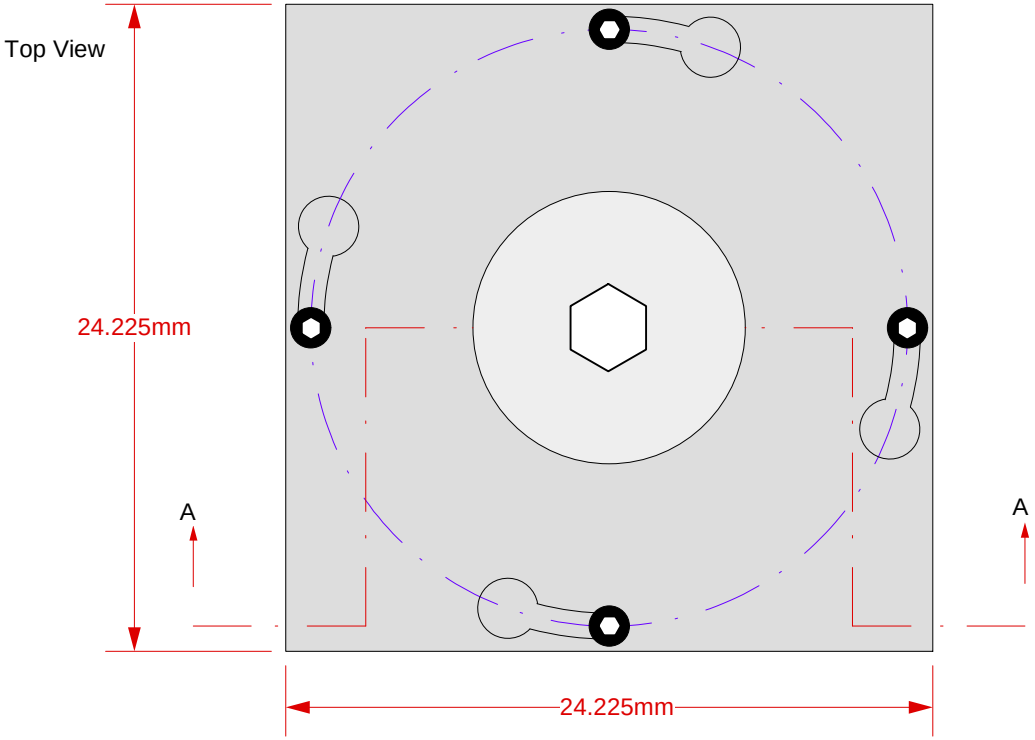
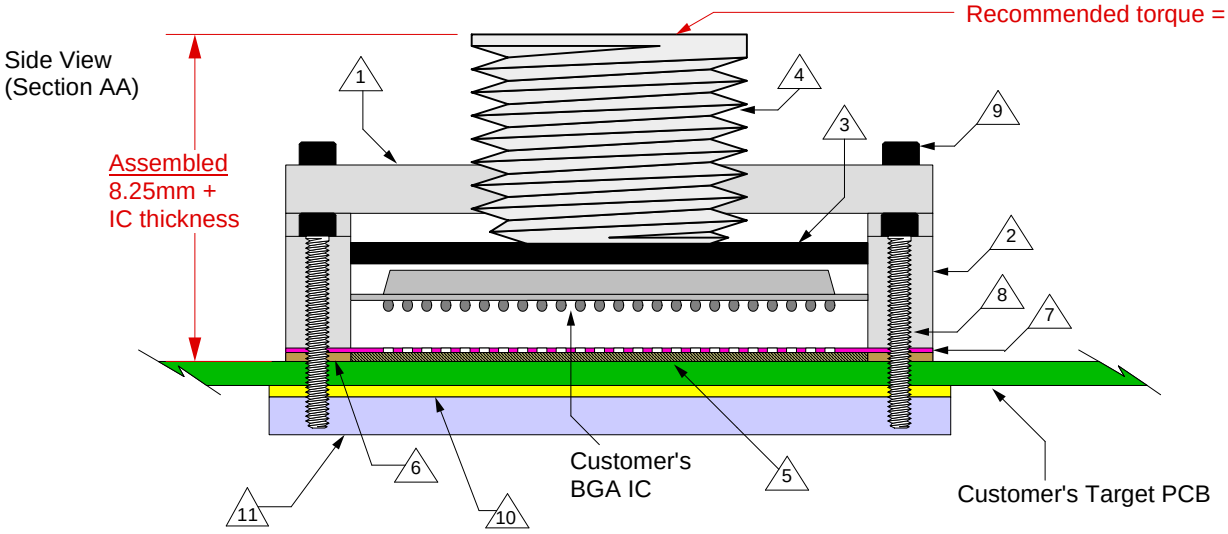
# GHz BGA Socket - Direct mount, solderless




**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

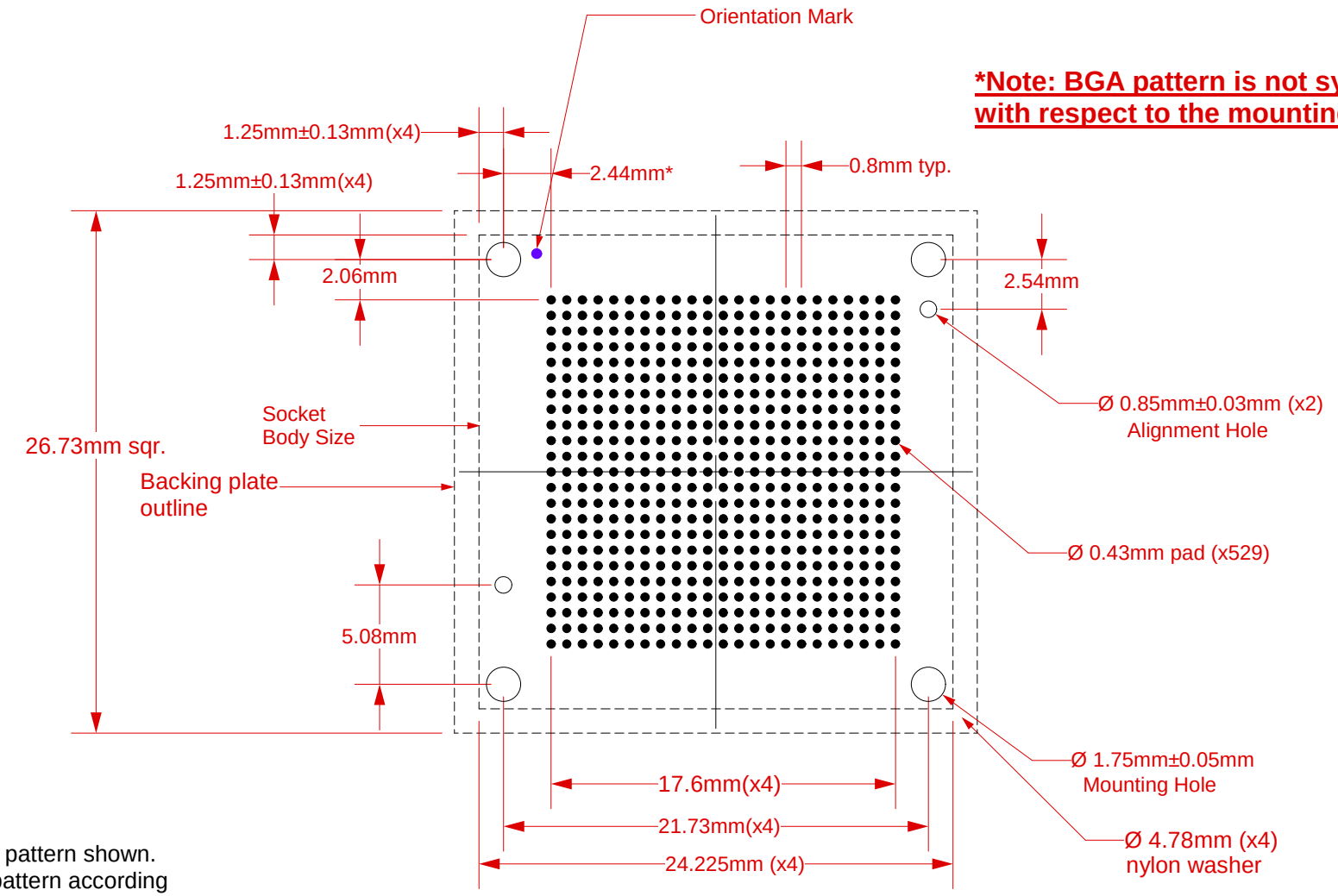



| | |
|---|---|
| 1 | Socket Lid: Black anodized Aluminum. Thickness = 2.5mm. |
| 2 | Socket base: Black anodized Aluminum. Thickness = 6.5mm. |
| 3 | Compression Plate: Black anodized Aluminum. Thickness = 2.5mm. |
| 4 | Compression screw: Clear anodized Aluminum. Thickness = 5mm, Hex socket = 5mm. |
| 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: Non-clad FR4. 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 , 12.7mm long. |
| 9 | Socket lid screw: Shoulder screw, 18-8 SS, 0-80 fine thread. |
| 10 | Insulation Plate: FR4/G10, 1.59mm thick. |
| 11 | Backing Plate: Anodized Aluminum 6.35mm thick. |

| | | | |
|---|---|---|---|
| **SG-BGA-6220 Drawing** | Status: Released | Scale: - | Rev: B |
| <br>11351 Rupp Dr. Suite 400, Burnsville MN 55337<br>Tele: (952) 229-8200<br>www.ironwoodelectronics.com | Drawing: J. Glab | Date: 3/14/07 | |
| | File: SG-BGA-6220 Dwg.mcd | Modified: 7/20/09, AE | |

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

Recommended PCB Layout
Top View



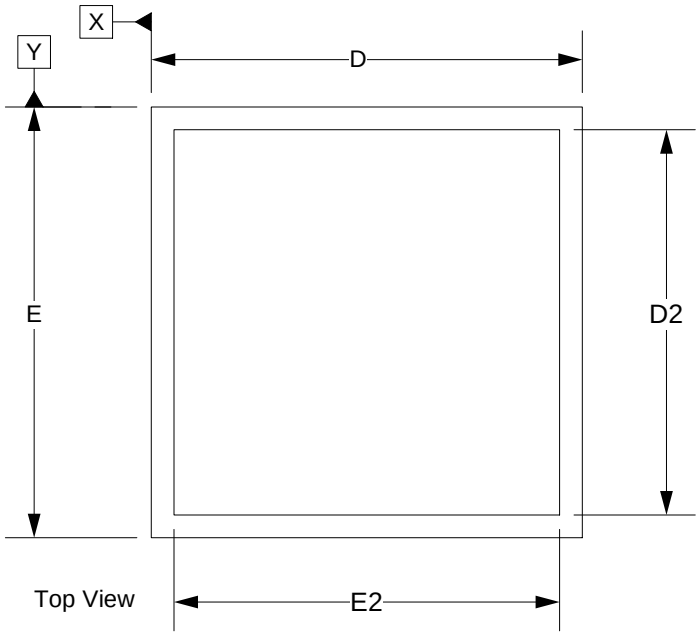

Note: Full BGA pattern shown.
Please adjust pattern according to individual requirements.

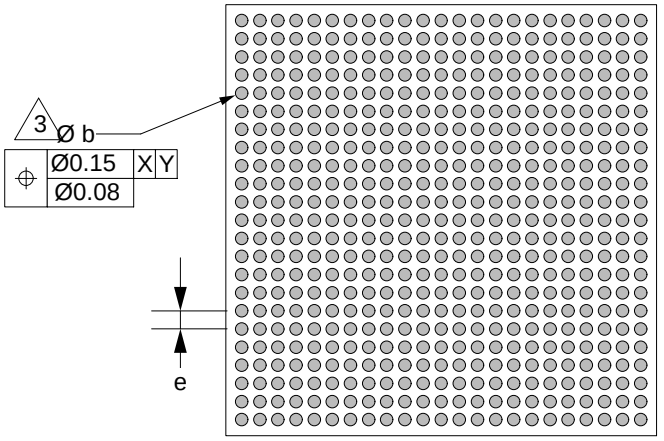
Target PCB Recommendations
Total thickness: 1.6mm min.
Plating: Gold or Solder finish
PCB Pad height: Same or higher than solder mask

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

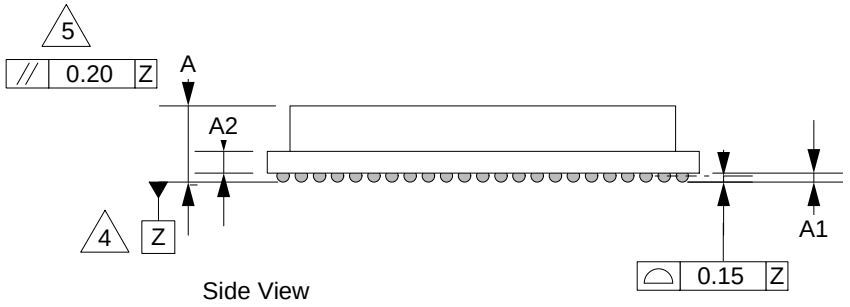
Recommended PCB Layout Tolerances: ±0.025mm [±0.001"] unless stated otherwise.

| SG-BGA-6220 Drawing | Status: Released | Scale: 3:1 | Rev: B |
|---|---|---|---|
| <br>11351 Rupp Dr. Suite 400, Burnsville MN 55337<br>Tele: (952) 229-8200<br>www.ironwoodelectronics.com | Drawing: J. Glab | Date: 3/14/07 | |
| | File: SG-BGA-6220 Dwg.mcd | Modified: 7/20/09, AE | |




Bottom View




Side View

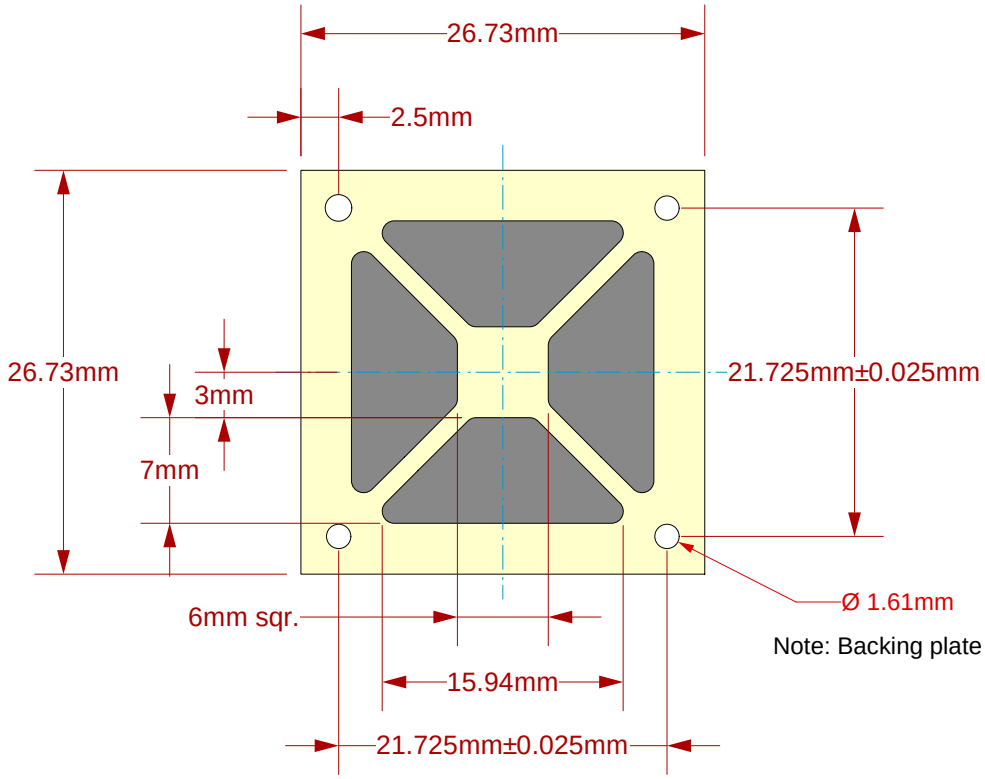
1. Dimensions are in millimeters.
2. Interpret dimensions and tolerances per ASME Y14.5M-1994.
3. Dimension b is measured at the maximum solder ball diameter, parallel to datum plane Z.
4. Datum Z (seating plane) is defined by the spherical crowns of the solder balls.
5. Parallelism measurement shall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

| DIM | MIN | MAX |
|---|---|---|
| A | | 3.5 |
| A1 | 0.35 | 0.45 |
| A2 | 1.09 | |
| b | 0.45 | 0.55 |
| D | 18.9 | 19.1 |
| D2 | 16.9 | 17.1 |
| E | 18.1 | 19.1 |
| E2 | 16.9 | 17.1 |
| e | 0.8 BSC | |

Array: 23 X 23

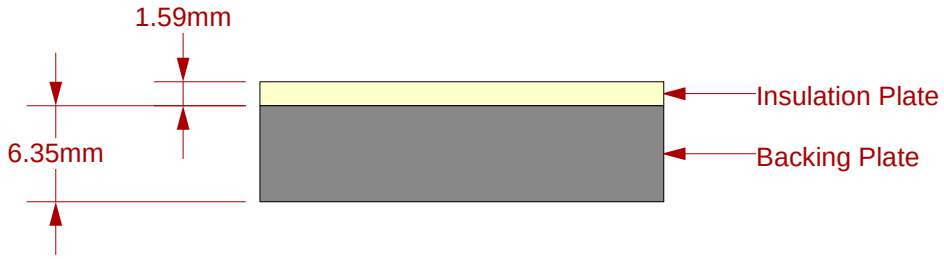
| SG-BGA-6220 Drawing | Status: Released | Scale: - | Rev: B |
|---|---|---|---|
| <br>11351 Rupp Dr. Suite 400, Burnsville MN 55337<br>Tele: (952) 229-8200<br>www.ironwoodelectronics.com | Drawing: J. Glab | Date: 3/14/07 | |
| | File: SG-BGA-6220 Dwg.mcd | Modified: 7/20/09, AE | |

Top View




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

Side View




Description: Backing Plate with Insulation Plate

| SG-BGA-6220 Drawing | Status: Released | Scale: - | Rev: B |
|---|---|---|---|
| <br>11351 Rupp Dr. Suite 400, Burnsville MN 55337<br>Tele: (952) 229-8200<br>www.ironwoodelectronics.com | Drawing: J. Glab | Date: 3/14/07 | |
| | File: SG-BGA-6220 Dwg.mcd | Modified: 7/20/09, AE | |

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