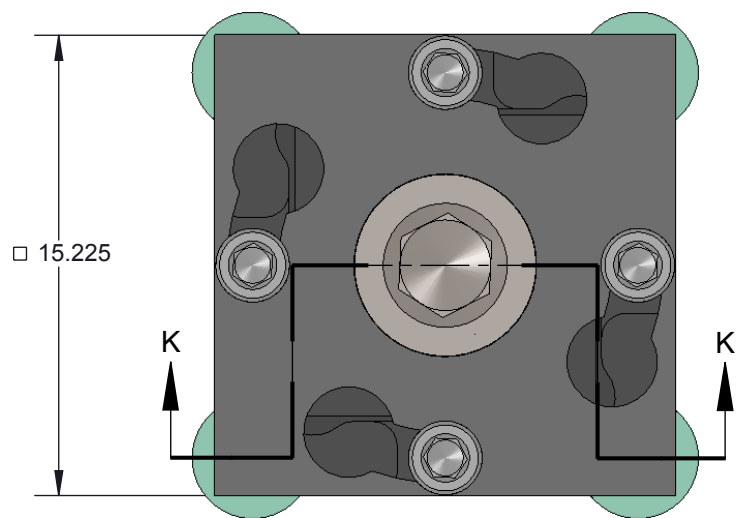


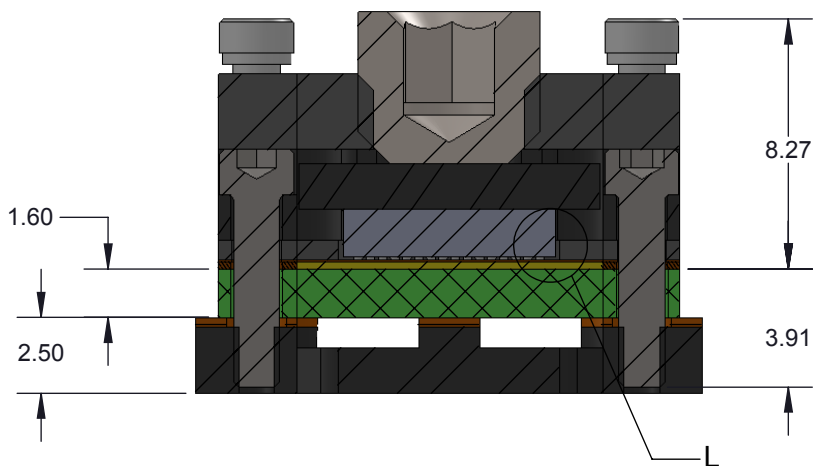
SG25-BGA DIRECT MOUNT, SOLDERLESS SOCKET FOR TEST APPLICATIONS

FEATURES:

- Directly mounts to target PCB (needs tooling holes) with hardware.
- Over 40GHz bandwidth @-1dB
- Low and stable contact resistance for reliable production yield.
- Self inductance under 0.05nH.
- Compression plate distributes forces evenly
- Easily removable swivel socket lid

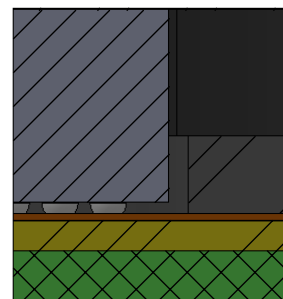
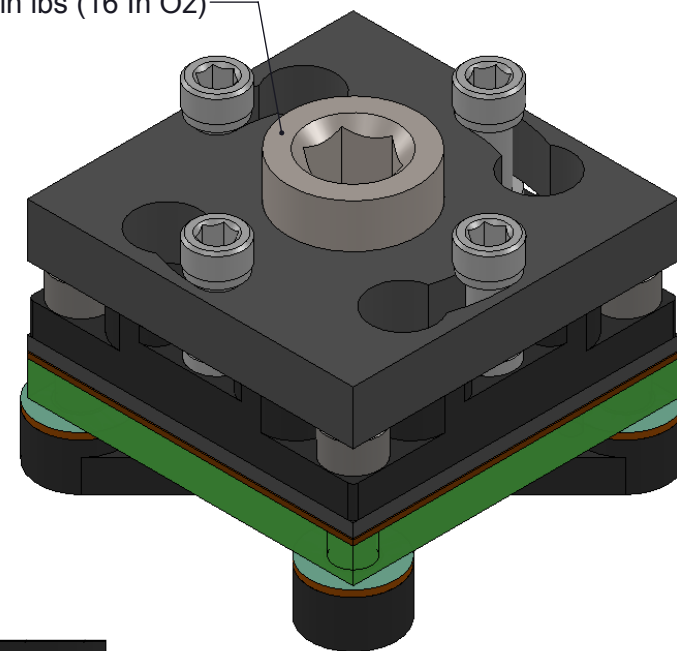


TOP VIEW



SECTION K-K

Recommended Torque
1.0 in lbs (16 In Oz)




DETAIL L
SCALE 16 : 1

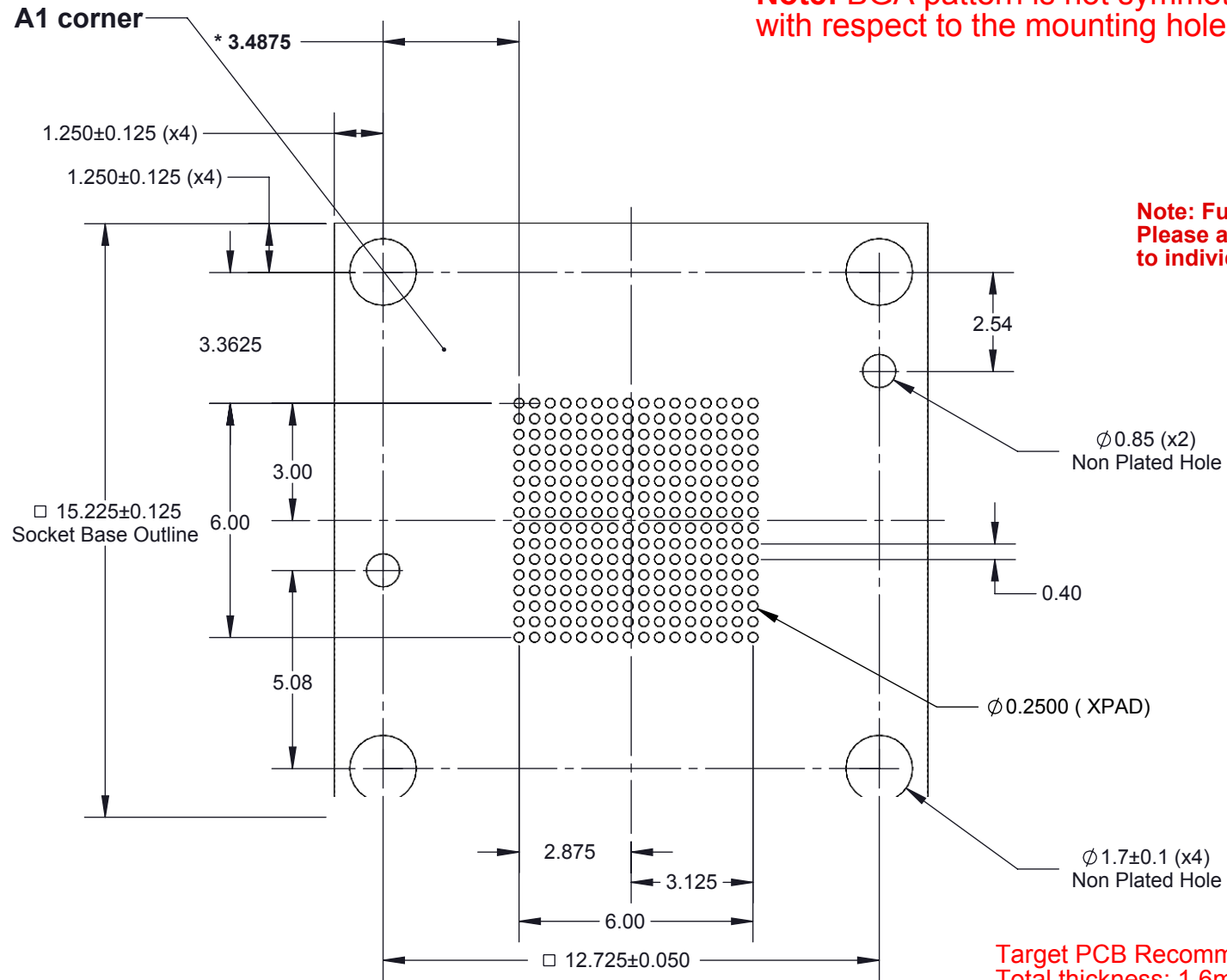
Description: SG25-BGA 7x7mm 0.4mm pitch 16x16 array

Primary dimension units are millimeters, Secondary dimension units are [inches], Weight is in grams.

Tolerances: Hole diameters $\pm 0.03\text{mm}$ [$\pm 0.001''$], Pitches (from true position) $\pm 0.025\text{mm}$ [$\pm 0.001''$], substrate thickness tolerance $\pm 10\%$, all other tolerances $\pm 0.13\text{mm}$ [$\pm 0.005''$] unless stated otherwise. Materials and specifications are subject to change without notice.

| | | | | | |
|---|-------------------------------------|--|--|--|------------------------------|
|  <p>©2015 Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com</p> | <p>SG25-BGA-2002 Drawing</p> | <p>Material: Material <not specified> Finish: Weight: 5.56</p> | <p>STATUS: Released ENG: V. Panavala FILE: SG25-BGA-2002</p> | <p>SHEET: 1 OF 4 DRAWN BY: V. Panavala DATE: 1/17/15</p> | <p>REV. A SCALE: 4:1</p> |
|---|-------------------------------------|--|--|--|------------------------------|

Note: BGA pattern is not symmetrical with respect to the mounting holes, it is offset 0.125mm




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

Target PCB Recommendations
 Total thickness: 1.6mm min.
 Plating: ENIG, Solder Finish, Hard Gold
 PCB Pad height: Same or 0.001"-0.002" lower than solder mask is acceptable
 Solder mask opening: 0.013"

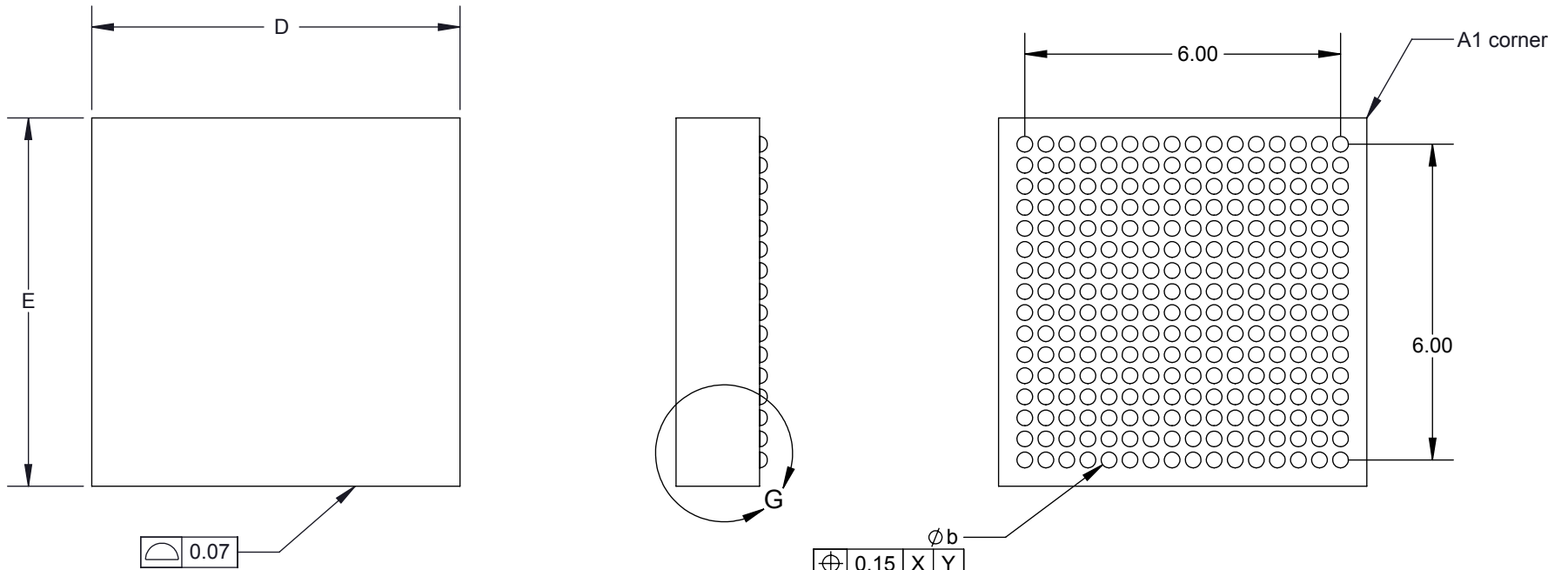
Description: Recommended PCB Layout

Primary dimension units are millimeters, Secondary dimension units are [inches], Weight is in grams.

Tolerances: Hole diameters $\pm 0.0254\text{mm}$ [$\pm 0.001"$]. Pitches (from true position) $\pm 0.0762\text{mm}$ [$\pm 0.003"$], substrate thickness tolerance $\pm 10\%$, all other tolerances $\pm 0.127\text{mm}$ [$\pm 0.005"$] unless stated otherwise. Materials and specifications are subject to change without notice.

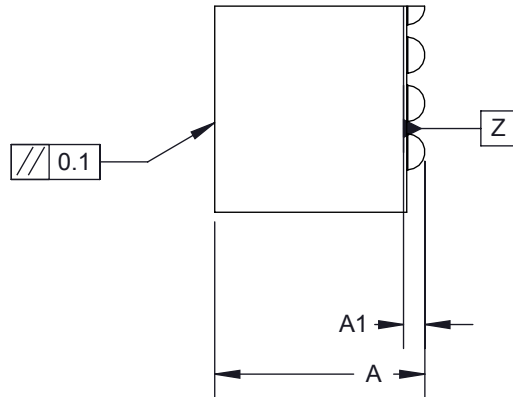
| | | | | | |
|--|---|---|---|----------------------|--|
|  SG25-BGA-2002 Drawing ©2015 Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com | Material: Material <not specified> Finish: Weight: 5.56 | STATUS: Released ENG: V. Panavala FILE: SG25-BGA-2002 | SHEET: 2 OF 4 DRAWN BY: V. Panavala DATE: 1/17/15 | REV. A SCALE: 6:1 | |
| | | | | | |
| | | | | | |
| | | | | | |

IRONWOOD PACKAGE CODE: BGA256A



0.07

$\oplus 0.15$ X Y
 $\oplus 0.05$




| DIM | Minimum | Maximum |
|-----------|---------|---------|
| A | 0.9 | 2.0 |
| A1 | 0.14 | 0.24 |
| b | | 0.30 |
| D | 7.0 BSC | |
| E | 7.0 BSC | |
| e | 0.4 BSC | |
| ARRAY | 16X16 | |
| PIN COUNT | 256 | |

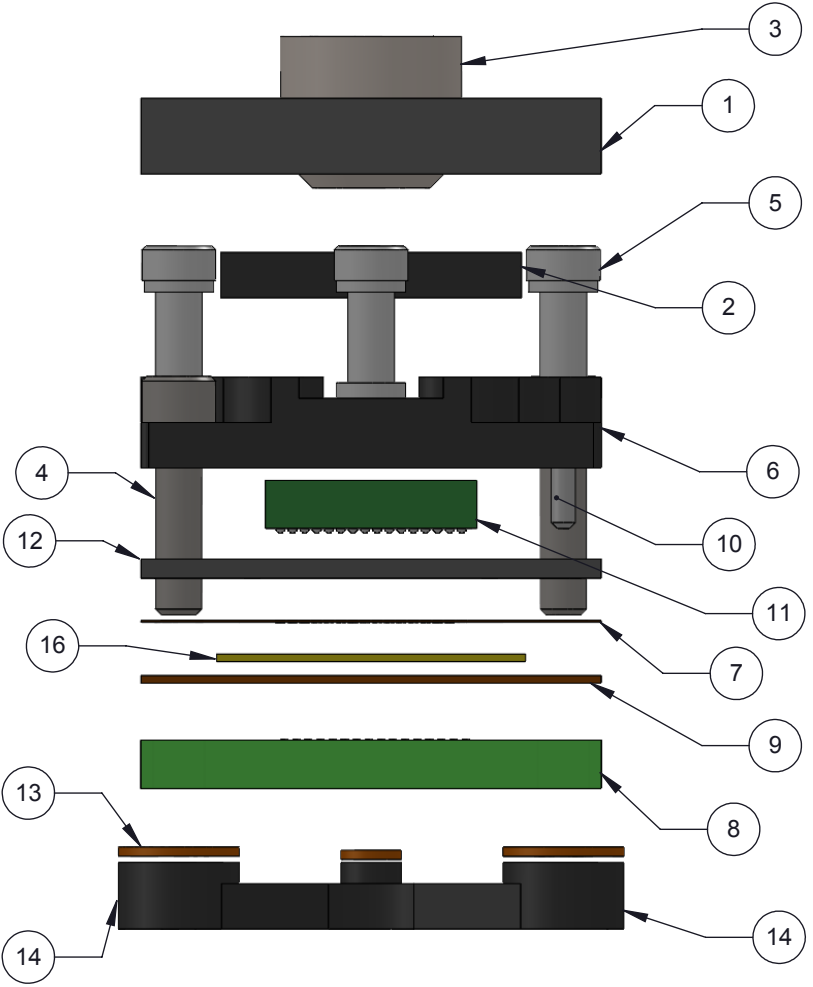
1. Dimensions are in millimeters.
2. Interpret dimensions and tolerances per ASME Y14.5M-1994.
3. Dimension b is measured at the maximum solder ball diameter, parallel to datum plane Z.
4. Datum Z (seating plane) is defined by the spherical crowns of the solder balls.
5. Parallelism measurement shall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

Description: Compatible BGA

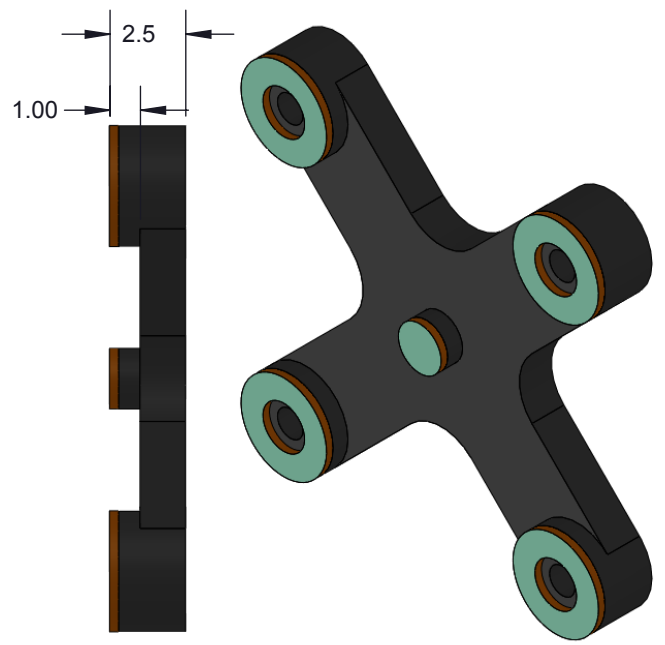
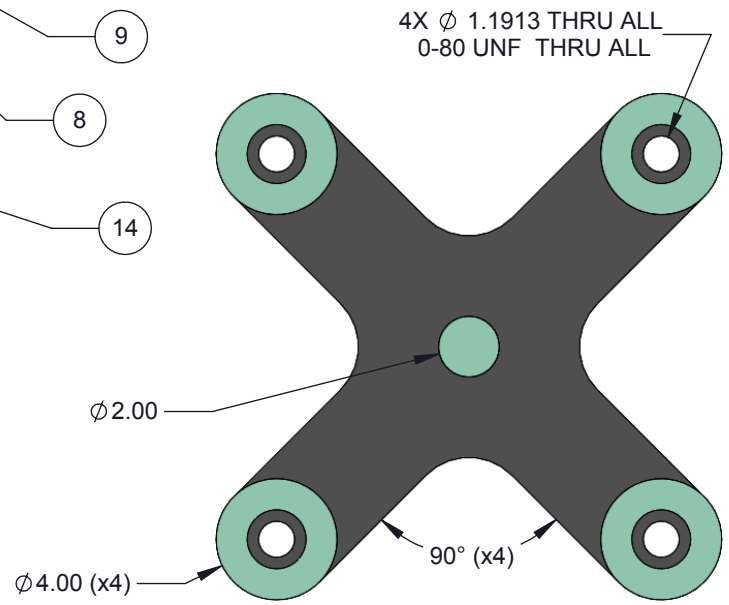
Primary dimension units are millimeters, Secondary dimension units are [inches], Weight is in grams.

Tolerances: Hole diameters $\pm 0.0254\text{mm}$ [$\pm 0.001"$], Pitches (from true position) $\pm 0.0762\text{mm}$ [$\pm 0.003"$], substrate thickness tolerance $\pm 10\%$, all other tolerances $\pm 0.127\text{mm}$ [$\pm 0.005"$] unless stated otherwise. Materials and specifications are subject to change without notice.

| | | | | |
|--|--|---------------------|-----------------------|------------|
|  <p>SG25-BGA-2002 Drawing ©2015 Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com</p> | <p>Material: Material <not specified> Finish: Weight: 5.56</p> | STATUS: Released | SHEET: 3 OF 4 | REV. A |
| | | ENG: V. Panavala | DRAWN BY: V. Panavala | SCALE: 8:1 |
| | | FILE: SG25-BGA-2002 | DATE: 1/17/15 | |
| | | | | |




| ITEM NO. | DESCRIPTION | Material |
|----------|--|--|
| 1 | Socket Lid | 7075-T6 Aluminum Alloy |
| 2 | Compression Plate 9.95 x 1.5mm | 7075-T6 Aluminum Alloy |
| 3 | Compression Screw M6x1 | Stainless Steel (18-8) |
| 4 | #0-80 X .25 LG, SOC HD CAP SCREW, ALLOY STL, BLK OXIDE | Alloy Steel |
| 5 | #0-80 Shoulder Screw, 0.062" thread length | Stainless Steel (303) |
| 6 | GHz Socket Base 10mm IC 3mm Thk | 7075-T6 Aluminum Alloy |
| 7 | Ball Guide | Kapton Polyimide/Cirlex |
| 8 | PCB 7x7mm 0.4mm pitch 16x16 array 0.125mm offset | FR4 |
| 9 | Elastomer Guide for 10mm IC 0.25mm | Kapton Polyimide/Cirlex |
| 10 | Alignment Pin 1/32" dia. x 1/8" lng | Chrome Stainless Steel |
| 11 | Test Chip | Material <not specified> |
| 12 | IC Guide 7mm IC | Torlon 4203 |
| 13 | Insulating washer, 4mm OD. | Kapton Polyimide/Cirlex |
| 14 | 10x10mm 5 post backing plate | 7075-T6 Aluminum Alloy |
| 15 | Insulating disk, 2mm OD with 2 mil thk Adesive | Kapton Polyimide/Cirlex |
| 16 | 0.25mm thick, 0.05x 0.05mm pitch, 10mm sqr, Z-axis conductive angled elastomer | 20 Micron dia gold plated brass filaments arranged symettrically in a silicon rubber (63.5 degree angle) |



Description: Socket Specification

Primary dimension units are millimeters, Secondary dimension units are [inches], Weight is in grams.
 Tolerances: Hole diameters $\pm 0.0254\text{mm}$ [$\pm 0.001"$], Pitches (from true position) $\pm 0.0762\text{mm}$ [$\pm 0.003"$], substrate thickness tolerance $\pm 10\%$, all other tolerances $\pm 0.127\text{mm}$ [$\pm 0.005"$] unless stated otherwise. Materials and specifications are subject to change without notice.

Backing Plate Specification

| | | | | |
|--|---|---|---|----------------------|
|  SG25-BGA-2002 Drawing ©2015 Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com | Material: Material <not specified> Finish: Weight: 5.56 | STATUS: Released ENG: V. Panavala FILE: SG25-BGA-2002 | SHEET: 4 OF 4 DRAWN BY: V. Panavala DATE: 1/17/15 | REV. A SCALE: 4:1 |
|--|---|---|---|----------------------|