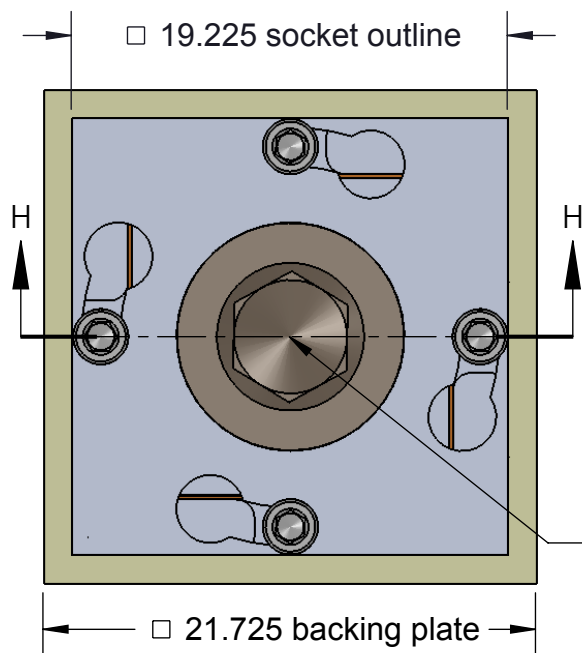


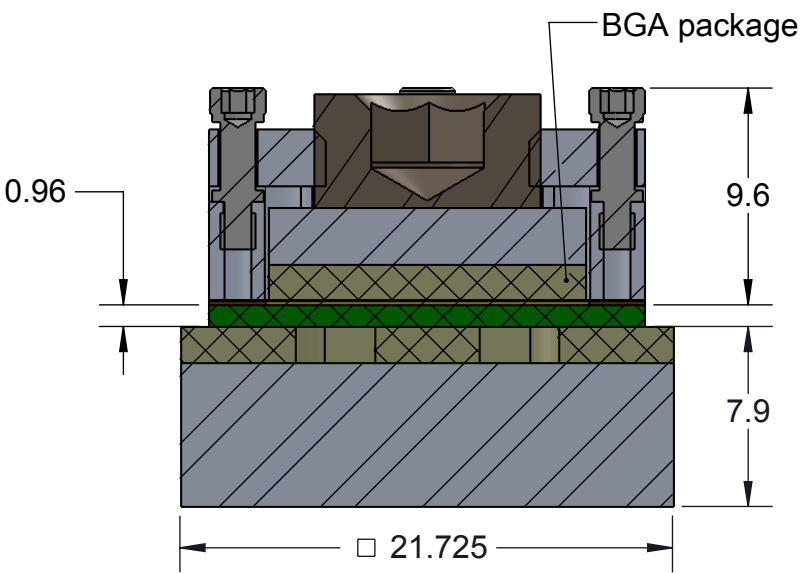
# 0.15mmGHz BGA DIRECT MOUNT, SOLDERLESS SOCKET FOR TEST APPLICATIONS



recommended torque is 4 in lb.

- 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 0.025nH.
  - Compression plate distributes forces evenly
  - Easily removable swivel socket lid

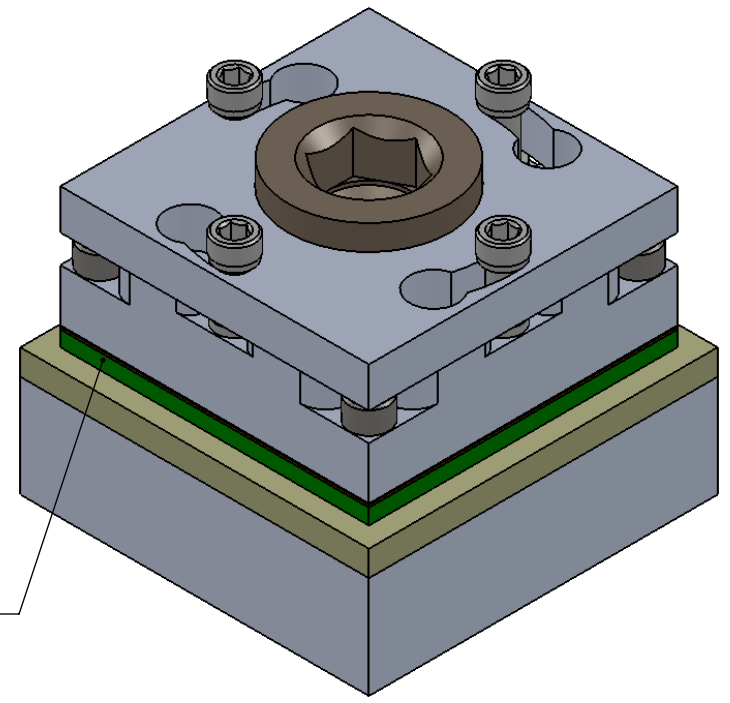
TOP VIEW




SECTION H-H

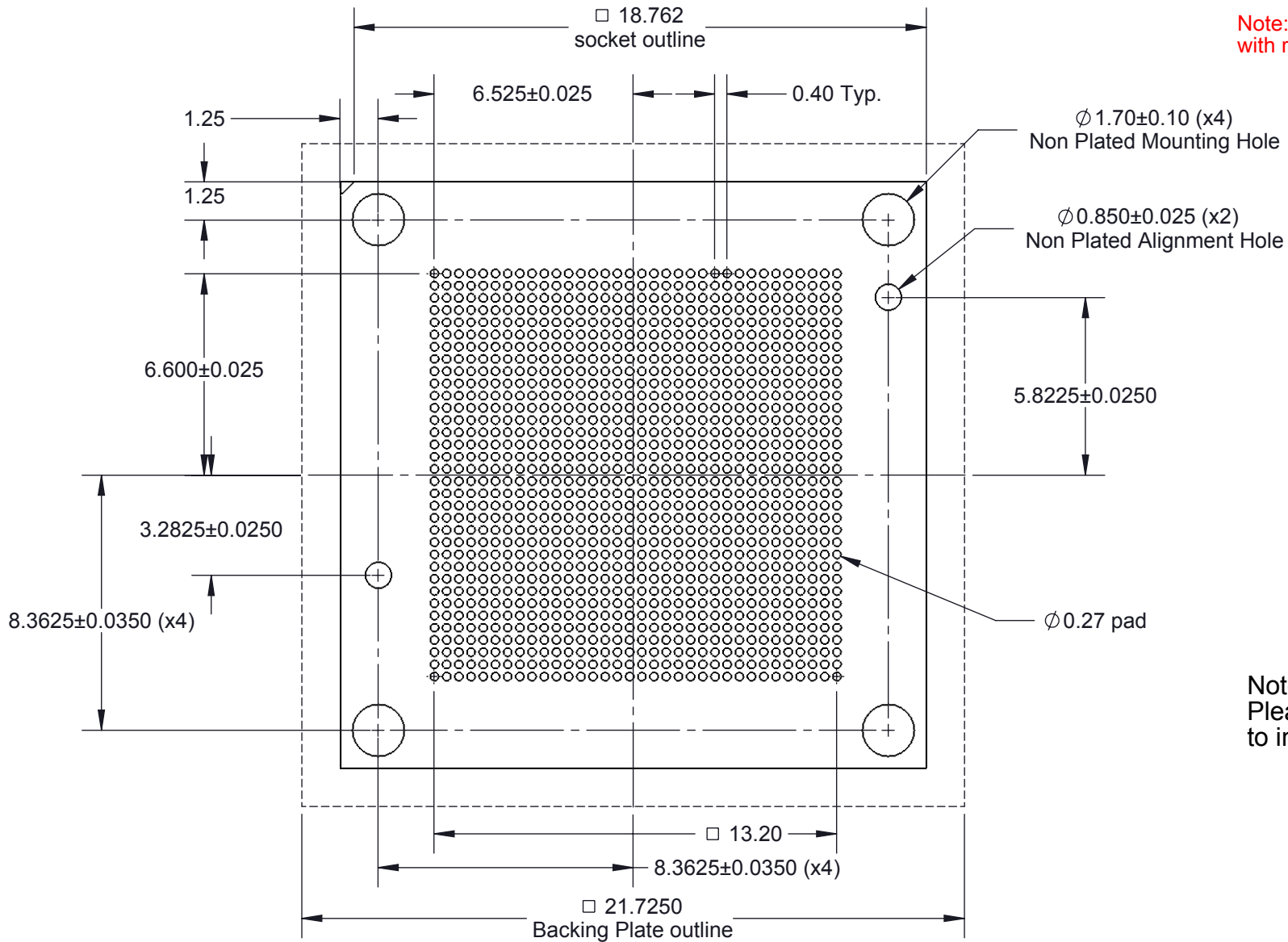
**Description: SG15-BGA 14x14mm, 34x34 0.4mm pitch**

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.



target PCB

 Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: Material <not specified> Finish: Weight: 17.11	STATUS: Released	SHEET: 1 OF 4	REV. A
		ENG: V. Panavala	DRAWN BY: V. Panavala	SCALE: 3:1
		FILE: SG15-BGA-1000	DATE: 1/10/2015	




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

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

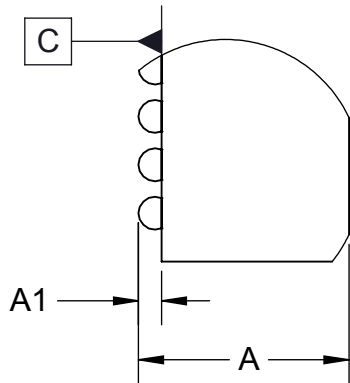
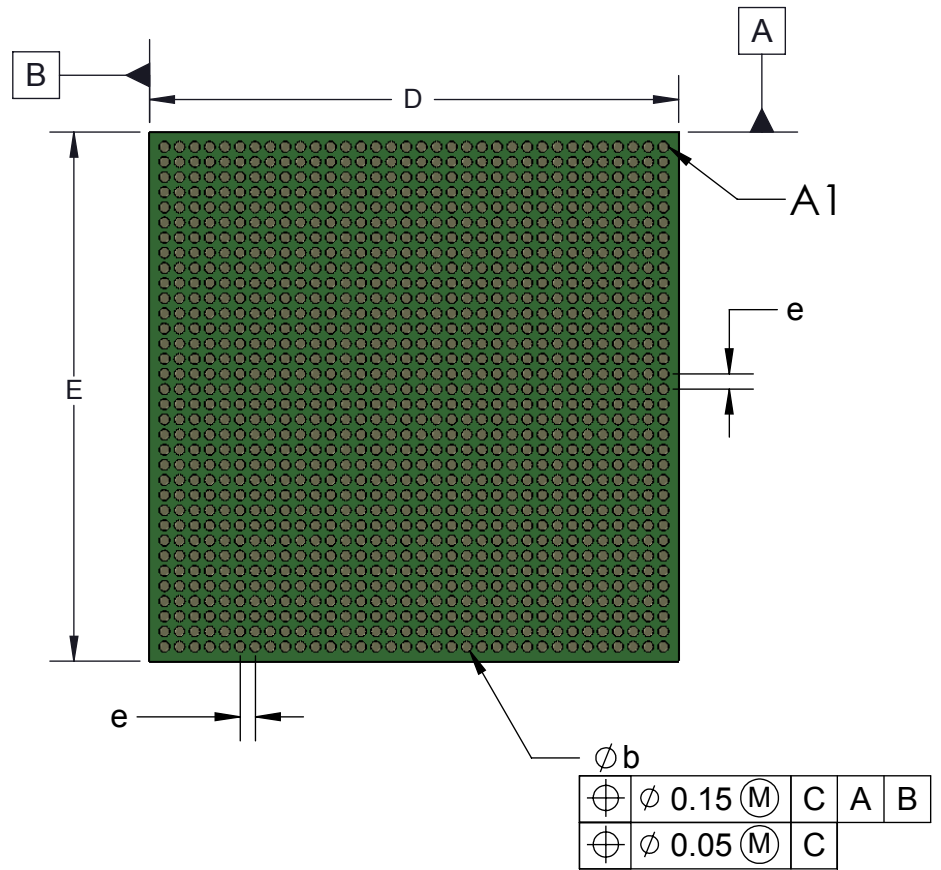
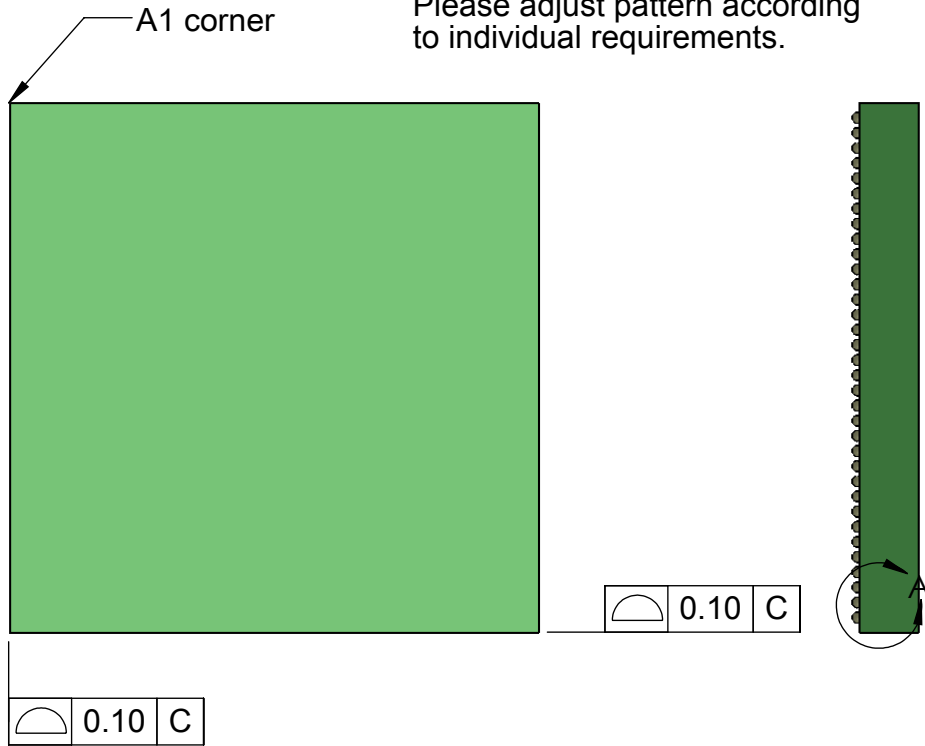
**Target PCB Recommendations**  
 Total thickness: 1.6mm min.  
 Plating: ENIPIG, Solder Finish, Hard Gold  
 PCB Pad height: Same or 0.001"-0.002" lower than solder mask is acceptable  
 Solder mask opening: 0.013"

### Description: Recommended PCB Layout

Primary dimension units are millimeters, Secondary dimension units are [inches], Weight is in grams.  
 Tolerances: Hole diameters  $\pm 0.03\text{mm}$  [ $\pm 0.001"$ ], 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.

 <b>SG15-BGA-1000 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: Material <not specified> Finish: Weight: 17.11	STATUS: Released	SHEET: 2 OF 4	REV. A
		ENG: V. Panavala	DRAWN BY: V. Panavala	SCALE: 5:1
		FILE: SG15-BGA-1000	DATE: 1/10/2015	

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



**DETAIL A**  
**SCALE 16 : 1**


DIM	Minimum	Maximum
A		2.5
A1	0.15	0.23
b	0.20	0.30
D	14.0 BSC	
E	14.0 BSC	
e	0.4	
ARRAY	34x34	
PIN COUNT	1156	

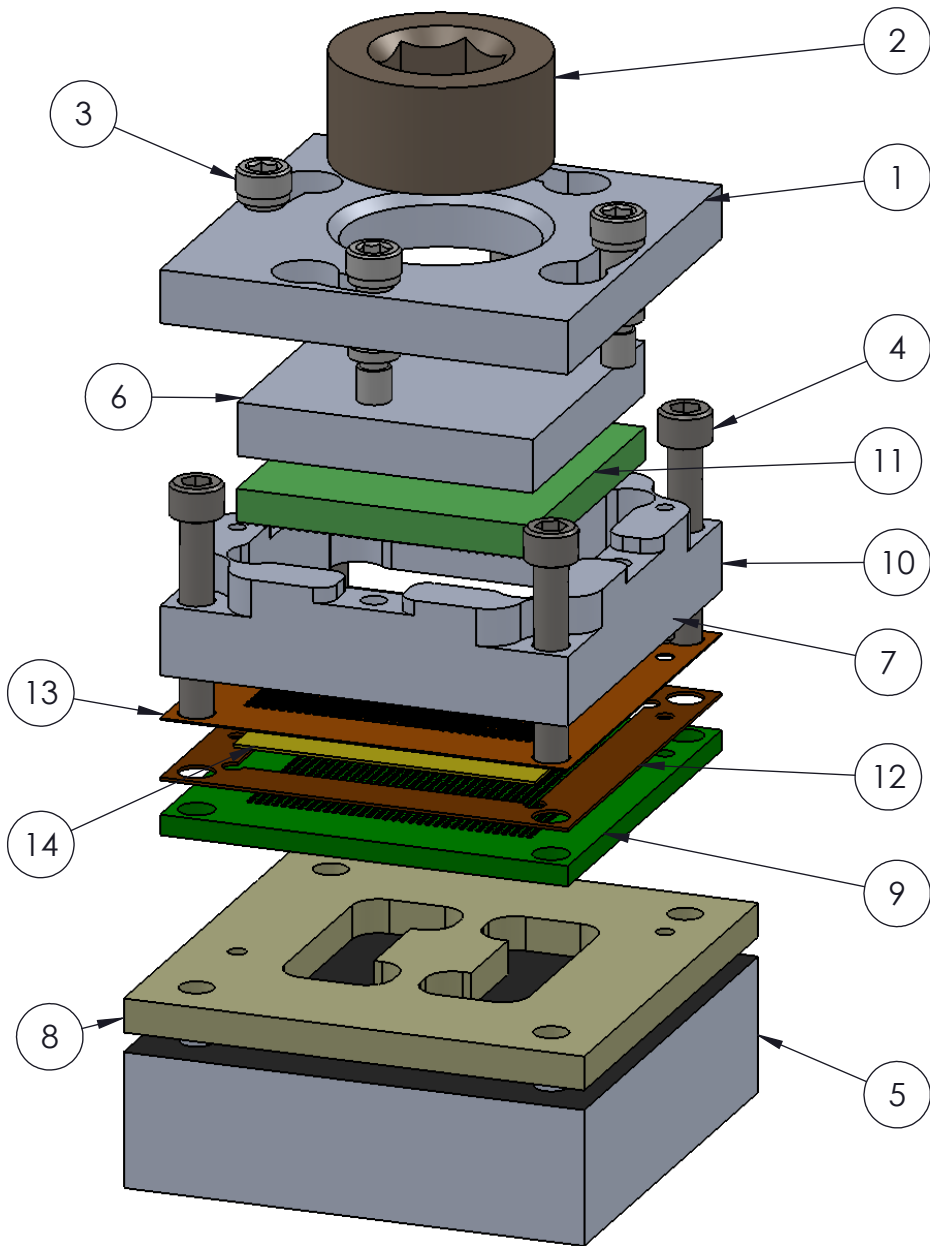
1. Dimensions are in millimeters.
2. Interpret dimensions and tolerances per ASME Y14.5M-1994.
3. Dimension b is measured at the maximum solder ball diameter, parallel to datum plane C.
4. Datum C (seating plane) is defined by the spherical crowns of the solder balls.
5. Parallelism measurement shall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

### Description: Compatible BGA

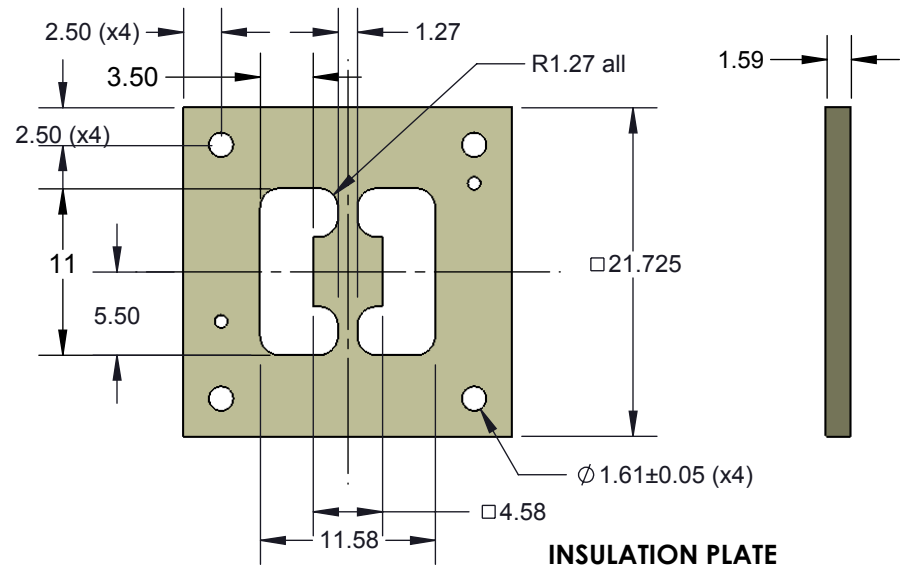
Primary dimension units are millimeters, Secondary dimension units are [inches], Weight is in grams.

Tolerances: Hole diameters  $\pm 0.03\text{mm}$  [ $\pm 0.001"$ ], 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><b>SG15-BGA-1000 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com</p>	<p>Material: Material &lt;not specified&gt; Finish: Weight: 17.11</p>	STATUS: Released	SHEET: 3 OF 4	REV. A
		ENG: V. Panavala	DRAWN BY: V. Panavala	SCALE: 5:1
		FILE: SG15-BGA-1000	DATE: 1/10/2015	



ITEM NO.	Description	Material
1	GHz Swivel Socket Lid, 14mm IC	7075-T6 Aluminum Alloy
2	Compression Screw M10	7075-T6 Alumium Alloy
3	#0-80 Shoulder Screw, 0.062" thread length	Stainless Steel (303)
4	#0-80 X .375 LG, SOC HD CAP SCREW, ALLOY STL, BLK OXIDE	Alloy Steel
5	Backing Plate, 21.725 X 21.725	7075-T6 Aluminum Alloy
6	Compression Plate, 13.95 X 13.95	7075-T6 Aluminum Alloy
7	Alignment Pin 1/32" dia. x 1/8" lng	Chrome Stainless Steel
8	Insulation Plate	FR4 Standard
9	Target PCB	Material <not specified>
10	Socket Base BGA 14x14	7075-T6 Aluminum Alloy
11	Customer's BGA 0.4mm pitch 34x34 array 14mm	High Temp FR4
12	Elastomer Guide 14mm IC 0.15mm thk	Kapton Polyimide/Cirlex
13	Ball guide 34x34 0.4mm pitch	Kapton Polyimide
14	0.15mm thick, 0.05x 0.05mm pitch, 50mm sq, Z-axis conductive angled elastomer	20 Micron dia gold plated brass filaments arranged symetrically in a silicon rubber (63.5 degree angle), Thickness: 0.5mm



### Description: Socket Specification

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.

#### SG15-BGA-1000 Drawing



Ironwood Electronics, Inc.  
 Tele: (800) 404-0204  
 www.ironwoodelectronics.com

Material: Material <not specified>  
 Finish:  
 Weight: 17.11

STATUS: Released

ENG: V. Panavala

FILE: SG15-BGA-1000

SHEET: 4 OF 4

DRAWN BY: V. Panavala

DATE: 1/10/2015

REV. A

SCALE: 1:1