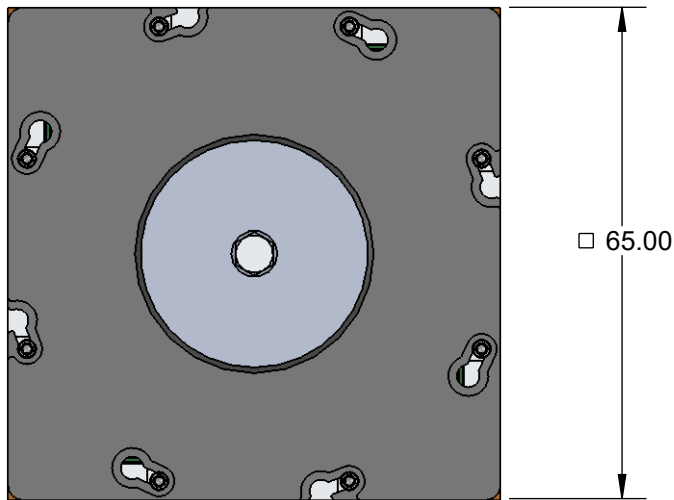


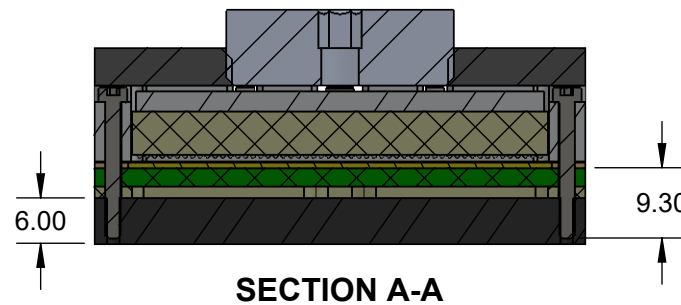
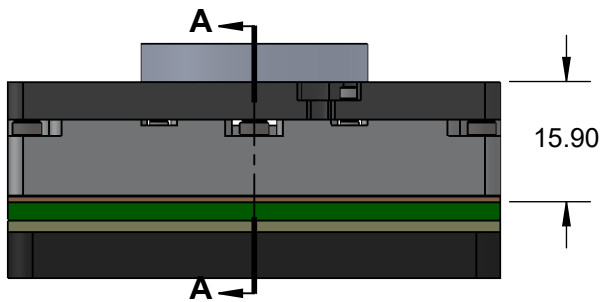
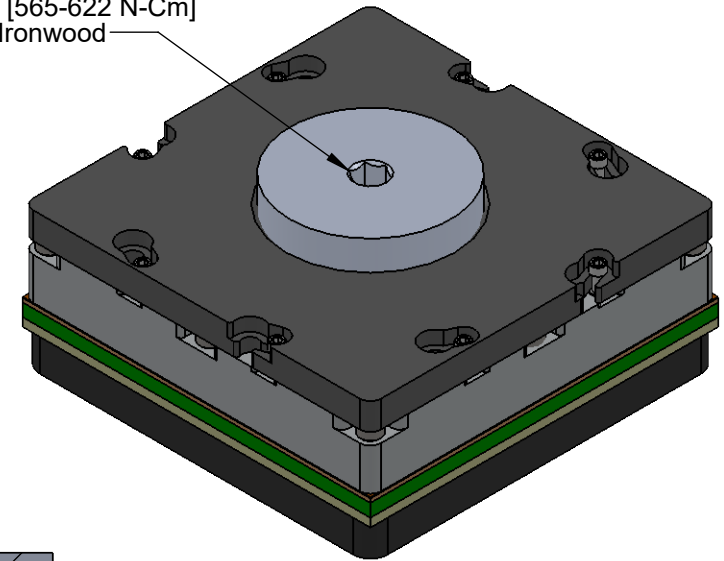
# SG-BGA DIRECT MOUNT, SOLDERLESS SOCKET

## 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



Required torque= 50-55 lbf-in [565-622 N-Cm]  
 Recommended tool: Contact Ironwood



## Description: SG-BGA skt 55x55mm 1mm 54x54array

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.

### SG-BGA-6469 Drawing



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

Material: N/A  
 Finish: N/A  
 Weight: 240.91

STATUS: Released

ENG: S. Huang

FILE: SG-BGA-6469 Dwg

SHEET: 1 OF 4

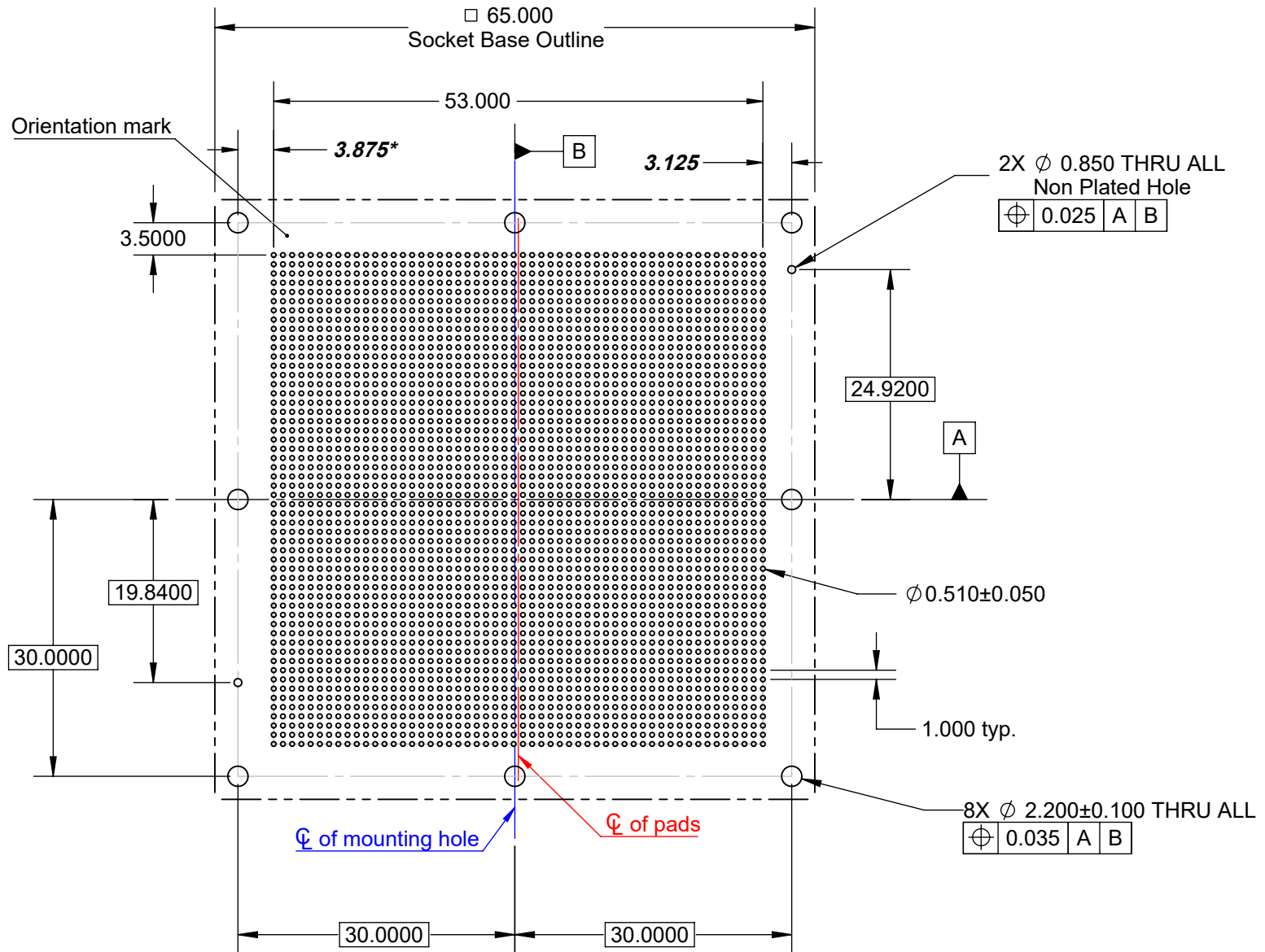
DRAWN BY: M. Raske

DATE: 03/06/2018

REV. A

SCALE: 1:1

**\*Note: BGA pattern is not symmetrical with respect to the mounting holes. It is shifted by 0.375mm to the right of center.**



### Description: Recommended PCB Layout

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


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

### Target PCB Recommendations

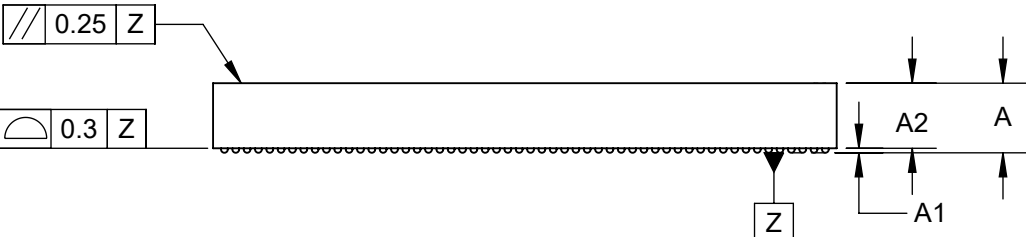
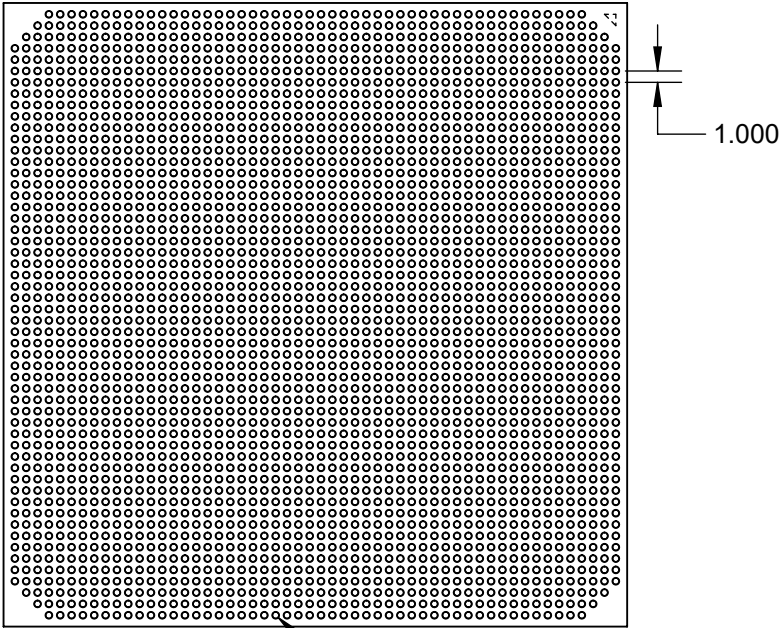
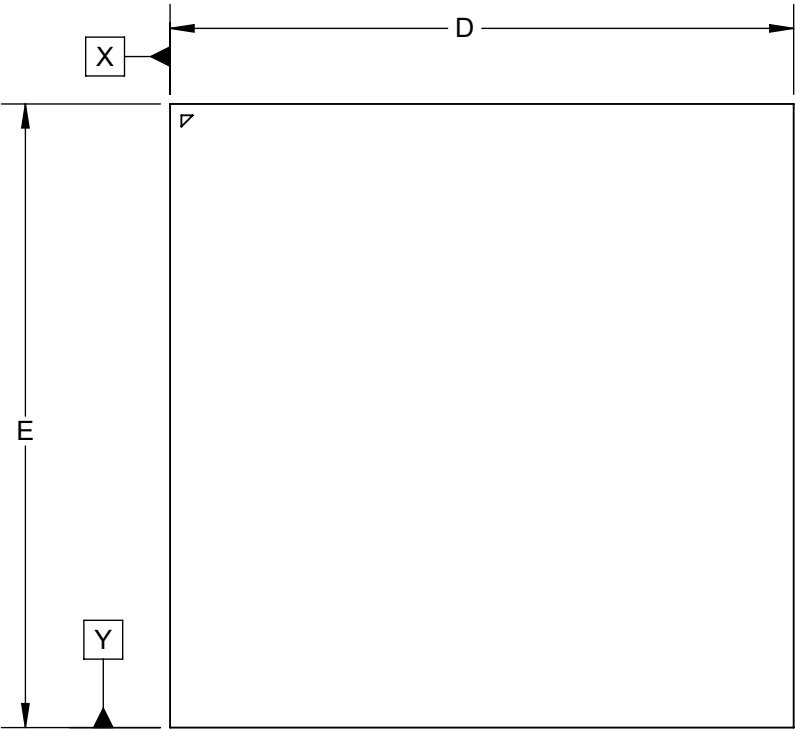
Total thickness: 2mm min.

Plating: Gold or Solder finish

PCB Pad height: Same or higher than solder mask

 <b>SG-BGA-6469 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 240.91	STATUS: Released ENG: S. Huang FILE: SG-BGA-6469 Dwg	SHEET: 2 OF 4 DRAWN BY: M. Raske DATE: 03/06/2018	REV. A SCALE: 3:2

Ironwood Package Code: BGA2892A



$\phi$	$\phi$ 0.25 (M)	X	Y	Z
$\phi$	0.10 (M)	X		

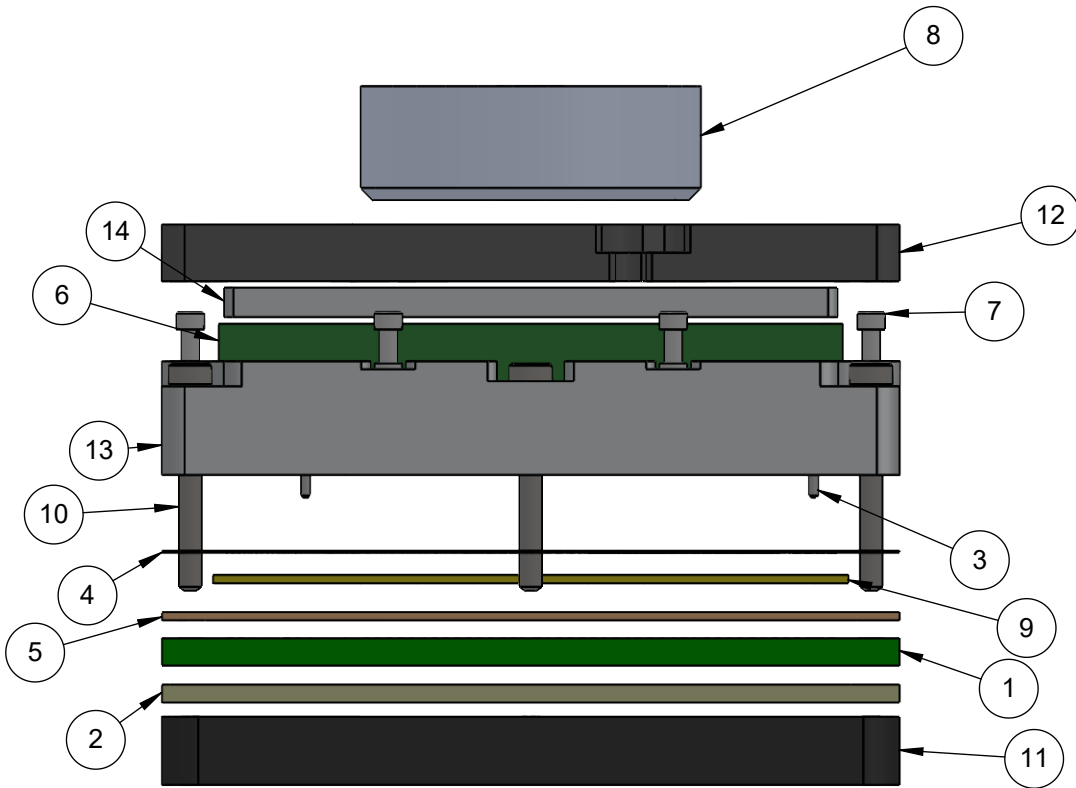
1. Dimensions are in millimeters.
2. Interpret dimensions and tolerances per ASME Y14.5M-1994.
3. Dimension b is measured at the maximum solder ball diameter, parallel to datum plane Z.
4. Datum Z (seating plane) is defined by the spherical crowns of the solder balls.
5. Parallelism measurement shall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

DIM	Minimum	Nominal	Maximum
A	5.94	6.24	6.54
A1	0.40	0.5	0.60
A2	5.44	5.74	6.04
b	0.50	0.6	0.70
D	55.0 BSC		
E	55.0 BSC		
e	1.00 BSC		
ARRAY	54x54		
PIN COUNT			2892

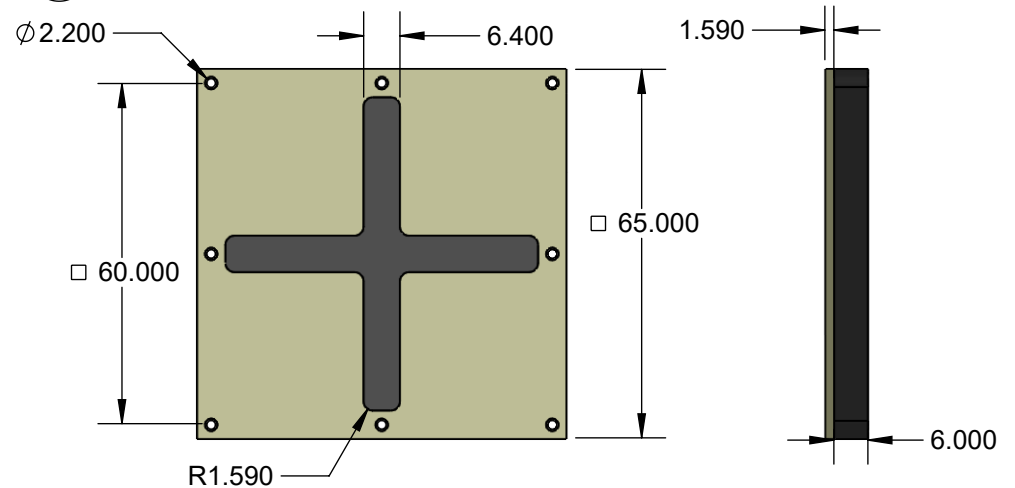
Description: Compatible BGA

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.

 <b>SG-BGA-6469 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 240.91	STATUS: Released ENG: S. Huang FILE: SG-BGA-6469 Dwg	SHEET: 3 OF 4 DRAWN BY: M. Raske DATE: 03/06/2018	REV. A SCALE: 3:2
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ITEM NO.	Description	Material
1	PCB 54x54array 1mm pitch	FR4
2	Insulation Plate 55mm	FR4 High temp
3	Alignment Pin 1/32" dia. x 1/8" lng	Chrome Stainless Steel
4	Ball Guide 54x54array 1mm pitch	Kapton Polyimide/Cirlex
5	Elastomer Guide 55mm IC	Kapton Polyimide/Cirlex/Ultem
6	BGA device 55x55mm, 54x54array 1mm pitch	High Temp FR4
7	#0-80 Shoulder Screw, 2.29mm thread length	Stainless Steel (303)
8	Compression Screw, M30 10mm Thick with 4mm diameter hole	7075-T6 Aluminum Alloy
9	0.75mm thick 0.1mm pitch 63 deg angled elastomer	SG Elastomer
10	Screw, M2x0.4 x 18mm, Cap, SS, Min 16mm Thread	Stainless Steel (18-8)
11	Backing Plate 55mm IC	7075-T6 Aluminum Alloy
12	Socket Lid for 55mm IC	7075-T6 Aluminum Alloy
13	Swivel Socket Base 55x55mm IC 10mm ht	7075-T6 Aluminum Alloy
14	Compression Plate for 55mm IC	7075-T6 Aluminum Alloy




**BACKING AND INSULATION PLATE**

### Description: Socket Assy, Insulation Plate

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>SG-BGA-6469 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 240.91	STATUS: Released	SHEET: 4 OF 4	REV. A
		ENG: S. Huang	DRAWN BY: M. Raske	SCALE: 3:2
		FILE: SG-BGA-6469 Dwg	DATE: 03/06/2018	