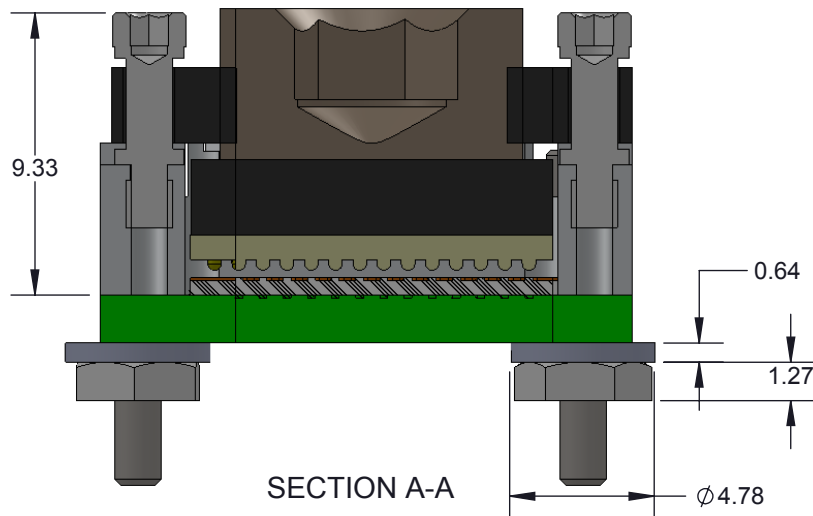
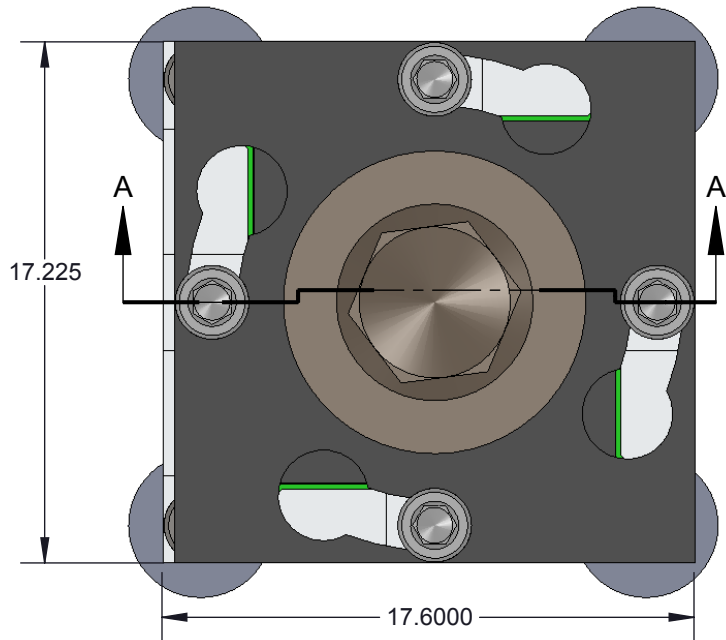


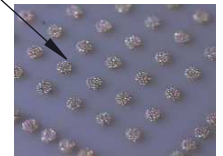
# SM-BGA DIRECT MOUNT, SOLDERLESS SOCKET FOR BURN-IN AND TEST APPLICATION

## Features

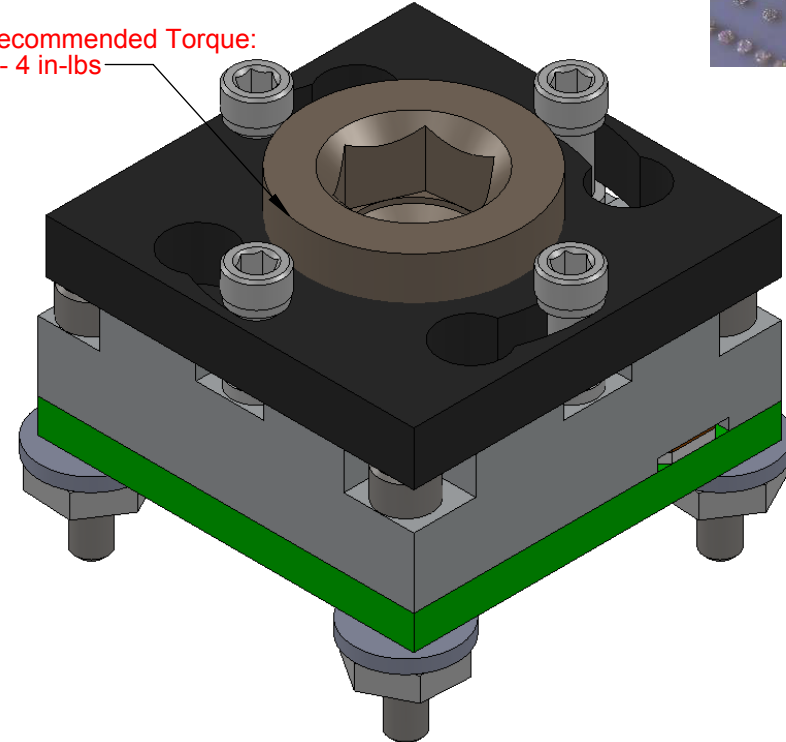
- Wide temperature range (-55C to +150C).
- Current capability is 4A per pin at 14C temperature rise.
- Over 40GHz bandwidth @-1dB for edge pins
- Low and stable contact resistance for reliable production yield.
- Self inductance under 0.21nH.
- Easily removable swivel socket lid



Silver ball matrix elastomer



Recommended Torque:  
3 - 4 in-lbs



DESCRIPTION: SM-BGA196 12X12mm 14x14 array 0.8mm pitch

Primary dimension units are millimeters. Secondary dimension units are [inches]. Tolerances: diameters  $\pm 0.03\text{mm}$  [ $\pm 0.001$ "], all other tolerances  $\pm 0.13\text{mm}$  [ $\pm 0.005$ "] unless stated otherwise. Materials and specifications are subject to change without notice.

## SM-BGA-9021 Drawing



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

WEIGHT:  
MATERIAL:  
FINISH:

STATUS: Released

DRAWN BY: S. Huang

File: SM-BGA-9021

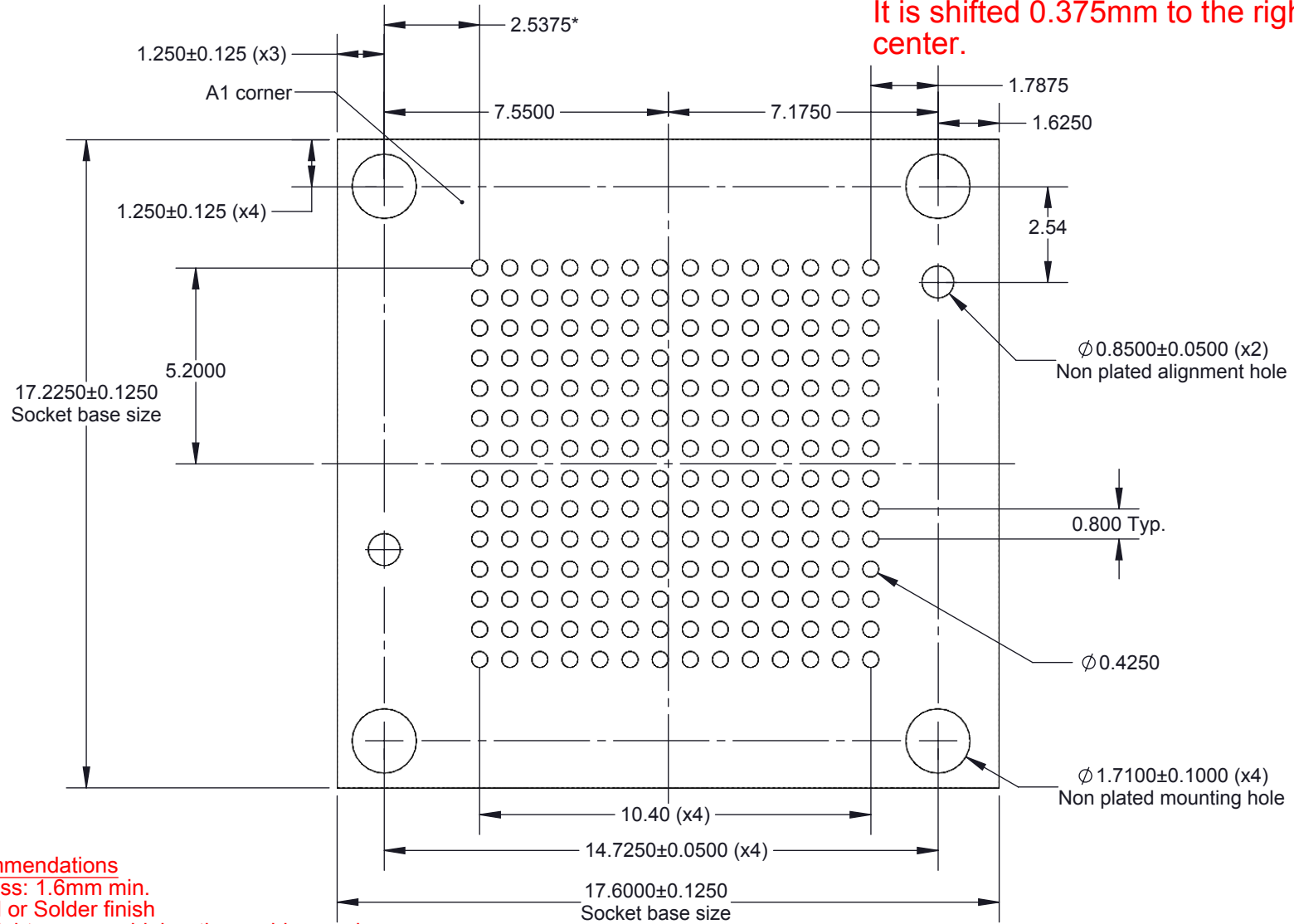
SHEET: 1 of 4

SCALE: 4:1

DATE: 11/16/12

REV. A

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




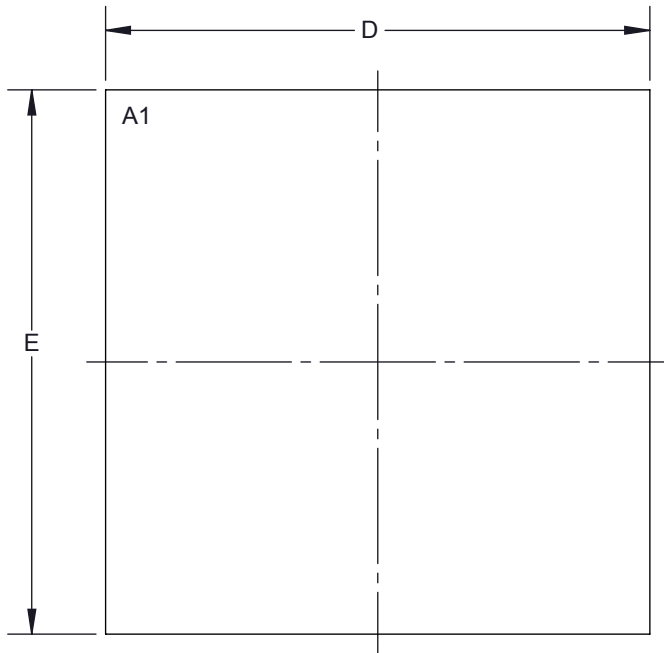
**Target PCB Recommendations**

- Total thickness: 1.6mm min.
- Plating: Gold or Solder finish
- PCB Pad height: same or higher than solder mask

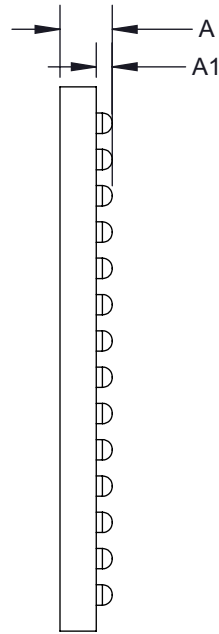
**DESCRIPTION: Recommended PCB Layout**

Primary dimension units are millimeters, Secondary dimension units are [inches].  
 Tolerances: diameters  $\pm 0.03\text{mm}$  [ $\pm 0.001$ "]; all other tolerances  $\pm 0.025\text{mm}$  [ $\pm 0.001$ "] unless stated otherwise.  
 Materials and specifications are subject to change without notice.

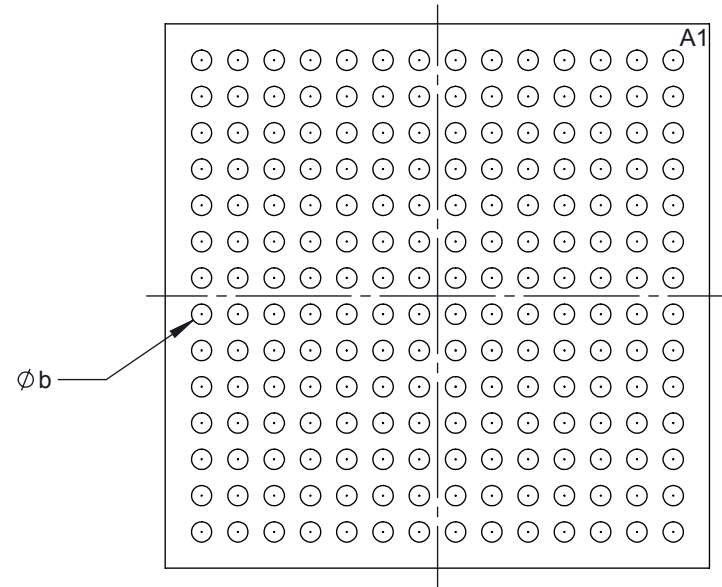
 Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com		STATUS: Released		SHEET: 2 of 4		REV. A	
		WEIGHT: MATERIAL: FINISH:		DRAWN BY: S. Huang		SCALE: 6:1	
		File: SM-BGA-9021		DATE: 11/16/12			



**TOP VIEW**



**SIDE VIEW**



**BOTTOM VIEW**

**Ironwood Package Code: BGA196E**

1. Dimensions are in millimeters.
2. Interpret dimensions and tolerances per ASME Y14.5-1994.
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		1
A1	0.3	
b	0.4	
D	12.00	
E	12.00	
e	0.80	
Pin	14 x 14 array	

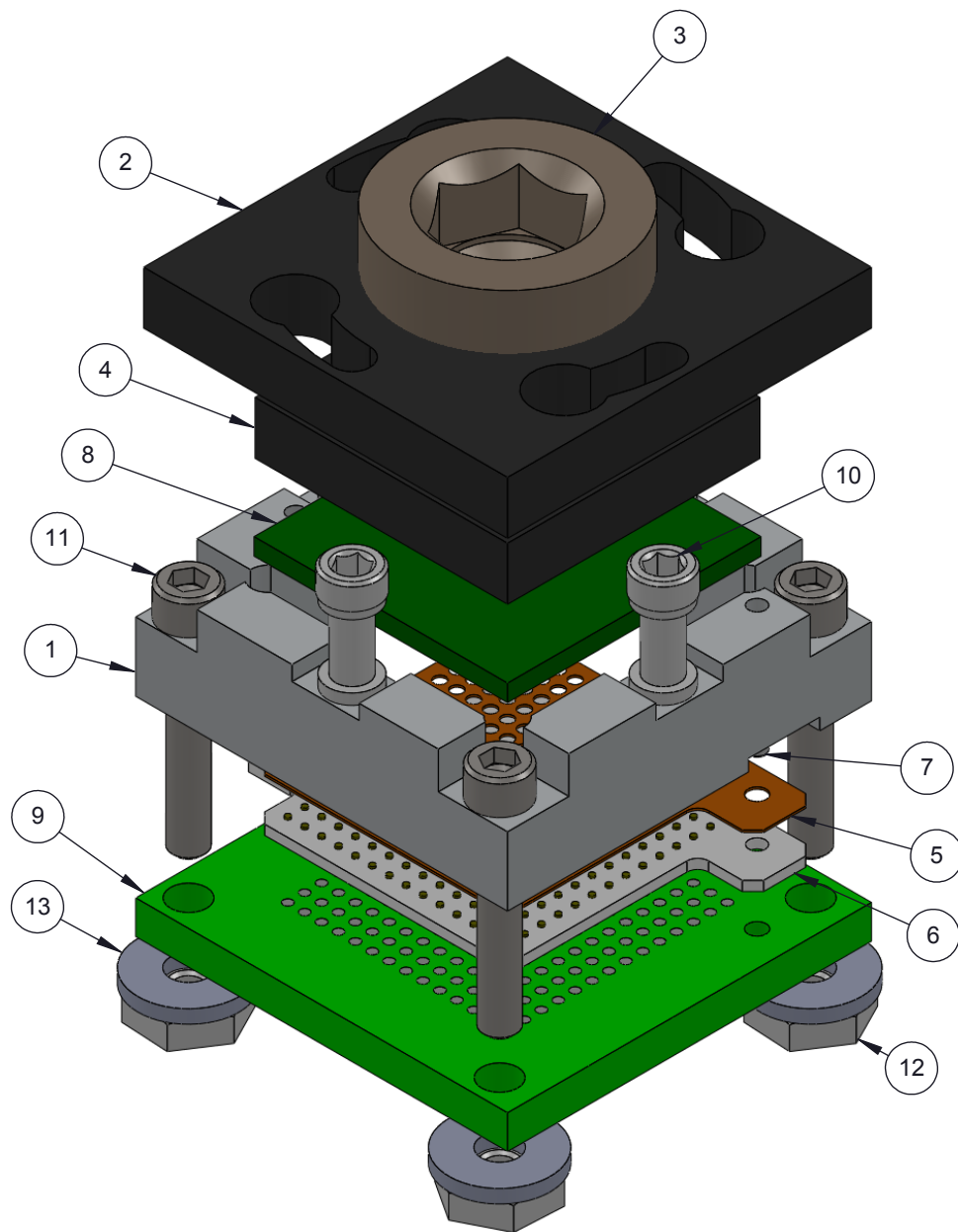
**DESCRIPTION: Compatible BGA**

Primary dimension units are millimeters, Secondary dimension units are [inches].

Tolerances: diameters  $\pm 0.03\text{mm}$  [ $\pm 0.001$ "], all other tolerances  $\pm 0.13\text{mm}$  [ $\pm 0.005$ "] unless stated otherwise.

Materials and specifications are subject to change without notice.

<b>SM-BGA-9021 Drawing</b>		STATUS: Released	SHEET: 3 of 4	REV. A
 Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	WEIGHT: MATERIAL: FINISH:	DRAWN BY: S. Huang	SCALE: 6:1	
		File: SM-BGA-9021	DATE: 11/16/12	




ITEM NO.	DESCRIPTION	Material
1	SM Socket Base for 12x12mm IC	7075-T6 Aluminum Alloy
2	Socket Lid 12mm	7075-T6 Alumium Alloy
3	Compression Screw M10	7075-T6 Alumium Alloy
4	Compression Plate	7075-T6 Aluminum Alloy
5	Ball Guide, SM, 12mm, 14x14 array	Kapton Polyimide/Cirlex
6	SM Contactor	Silmat
7	Dowel Pin, 1/32" x 3/16", SS	Chrome Stainless Steel
8	BGA196 ,0.8mm Pitch	FR4
9	Target PCB BGA196	Custom Plastic
10	#0-80 Shoulder Screw, 0.062" thread length	Stainless Steel (303)
11	#0-80 X .375 LG, SOC HD CAP SCREW, ALLOY STL, BLK OXIDE	Alloy Steel
12	Nut, #0-80, SS	Stainless Steel (18-8)
13	Washer, #0 x .025", Nylon	Nylon 6/6

Rev	Date	Initials	Description
A	-	-	Original

**DESCRIPTION: Socket Specification**

Primary dimension units are millimeters, Secondary dimension units are [inches].  
 Tolerances: diameters ±0.03mm [±0.001"], all other tolerances ±0.13mm [±0.005"] unless stated otherwise.  
 Materials and specifications are subject to change without notice.

 Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	WEIGHT: MATERIAL: FINISH:	STATUS: Released		SHEET: 4 of 4	REV. A
		DRAWN BY: S. Huang		SCALE: 4:1	
		File: SM-BGA-9021		DATE: 11/16/12	