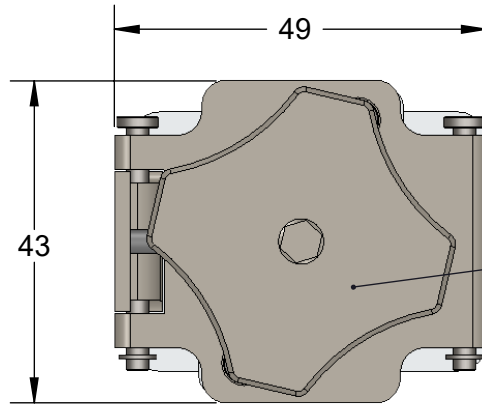


# CBT-BGA DIRECT MOUNT, SOLDERLESS SOCKET FOR BURN-IN AND TEST APPLICATIONS

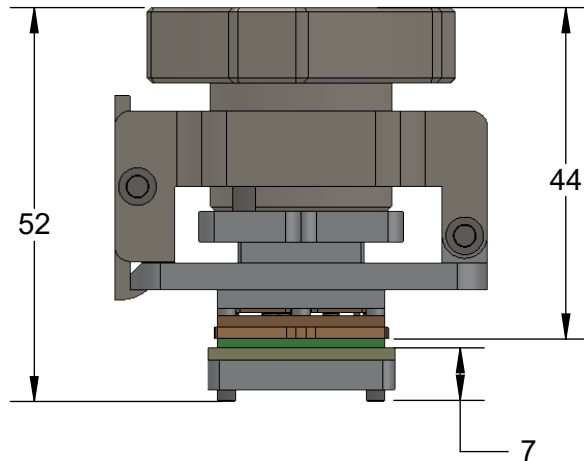
## FEATURES:

- Wide temperature range (-55C to +180C)
- High current capability (up to 4A)
- Excellent signal integrity at high frequencies
- Low and stable contact resistance for reliable production yield
- Highly compliant to accommodate wide co-planarity variations
- Automated probe manufacturing enables low cost and short lead time

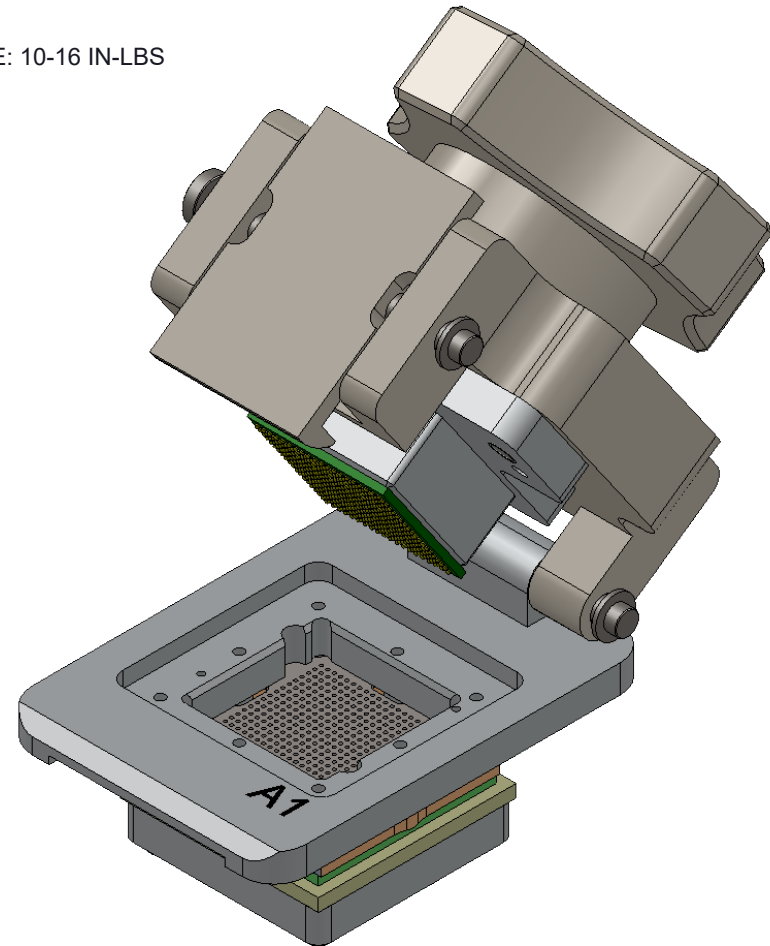


TOP VIEW

RECOMMENDED TORQUE: 10-16 IN-LBS




SIDE VIEW



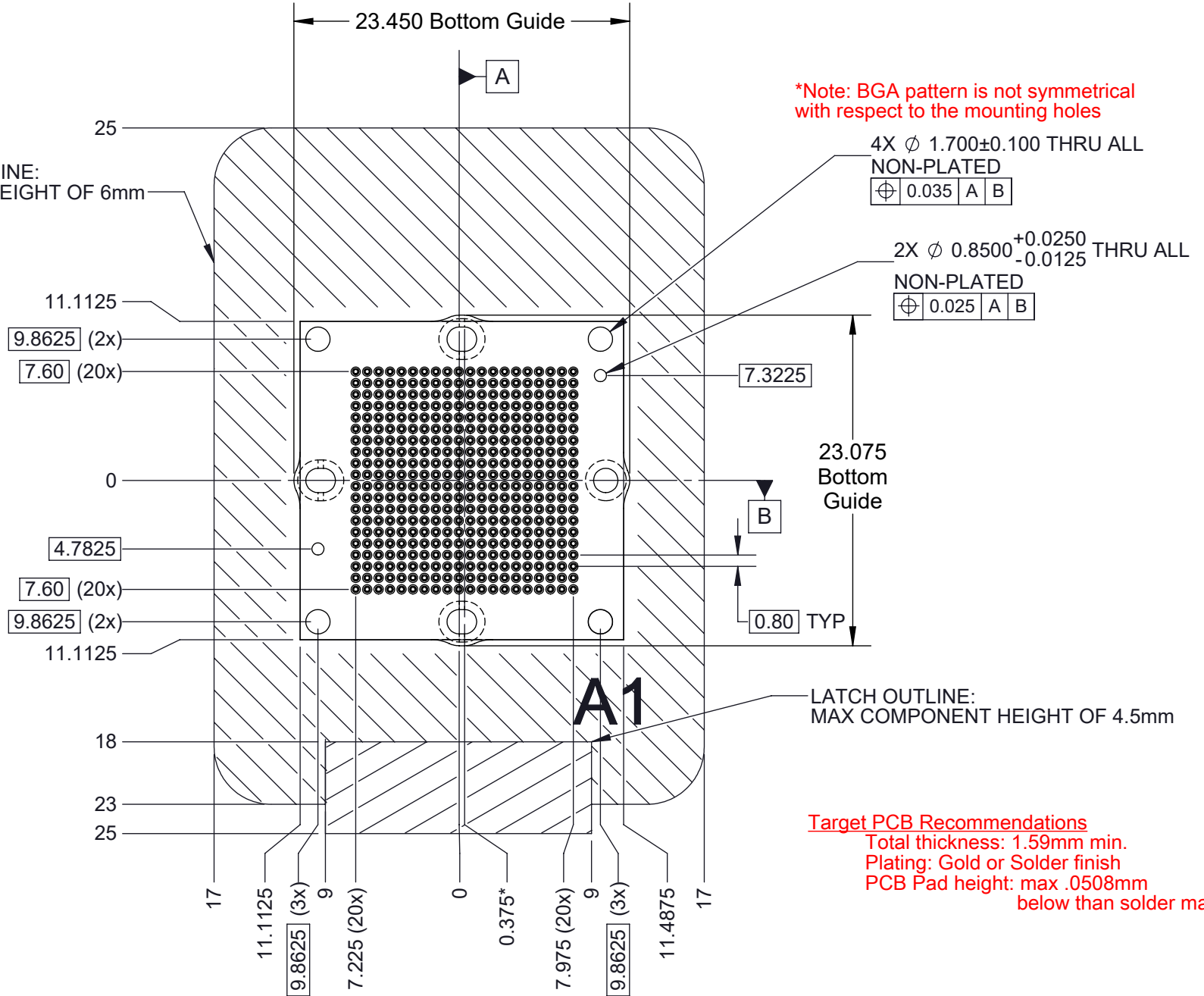
## Description: Socket Specification

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.

 <b>CBT-BGA-6036 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 129.30	STATUS: Released ENG: B. Schatz FILE: CBT-BGA-6036 Dwg	SHEET: 1 OF 5 DRAWN BY: M. Raske DATE: 02/14/2014	REV. B SCALE: 1:1

SOCKET BASE OUTLINE:  
MAX COMPONENT HEIGHT OF 6mm




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

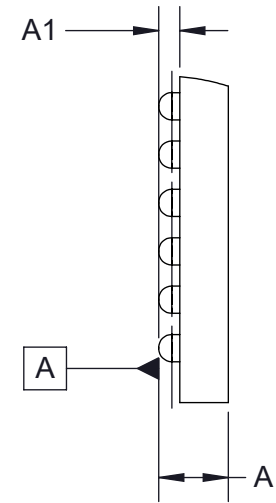
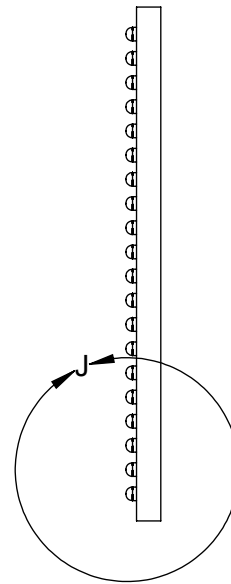
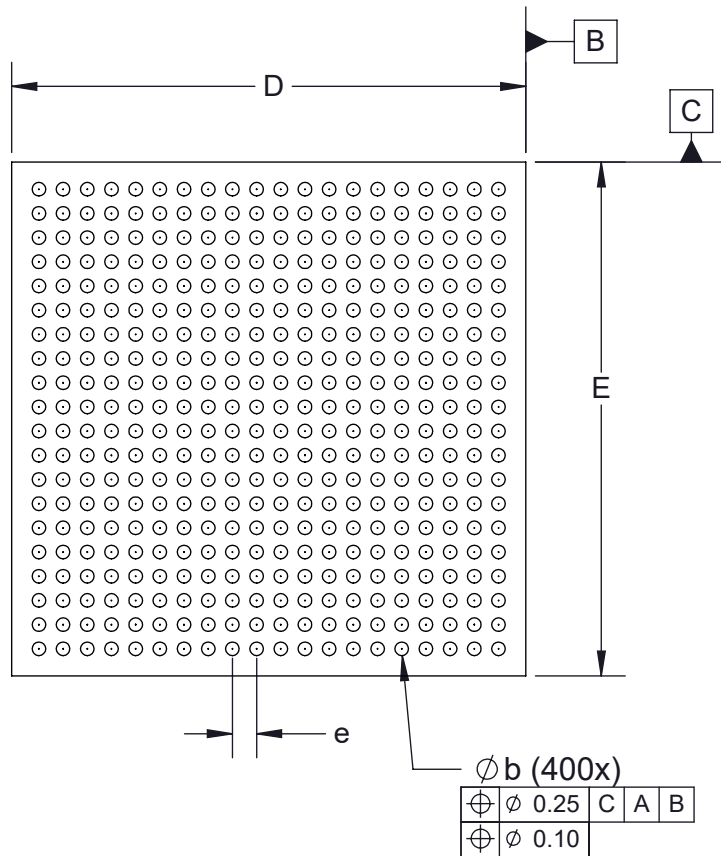
**Target PCB Recommendations**  
 Total thickness: 1.59mm min.  
 Plating: Gold or Solder finish  
 PCB Pad height: max .0508mm  
 below than solder mask

### 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>CBT-BGA-6036 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 129.30	STATUS: Released ENG: B. Schatz FILE: CBT-BGA-6036 Dwg	SHEET: 2 OF 5 DRAWN BY: M. Raske DATE: 02/14/2014	REV. B SCALE: 5:2



DETAIL J  
SCALE 8 : 1

**IRONWOOD PACKAGE CODE: BGA400H**


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.

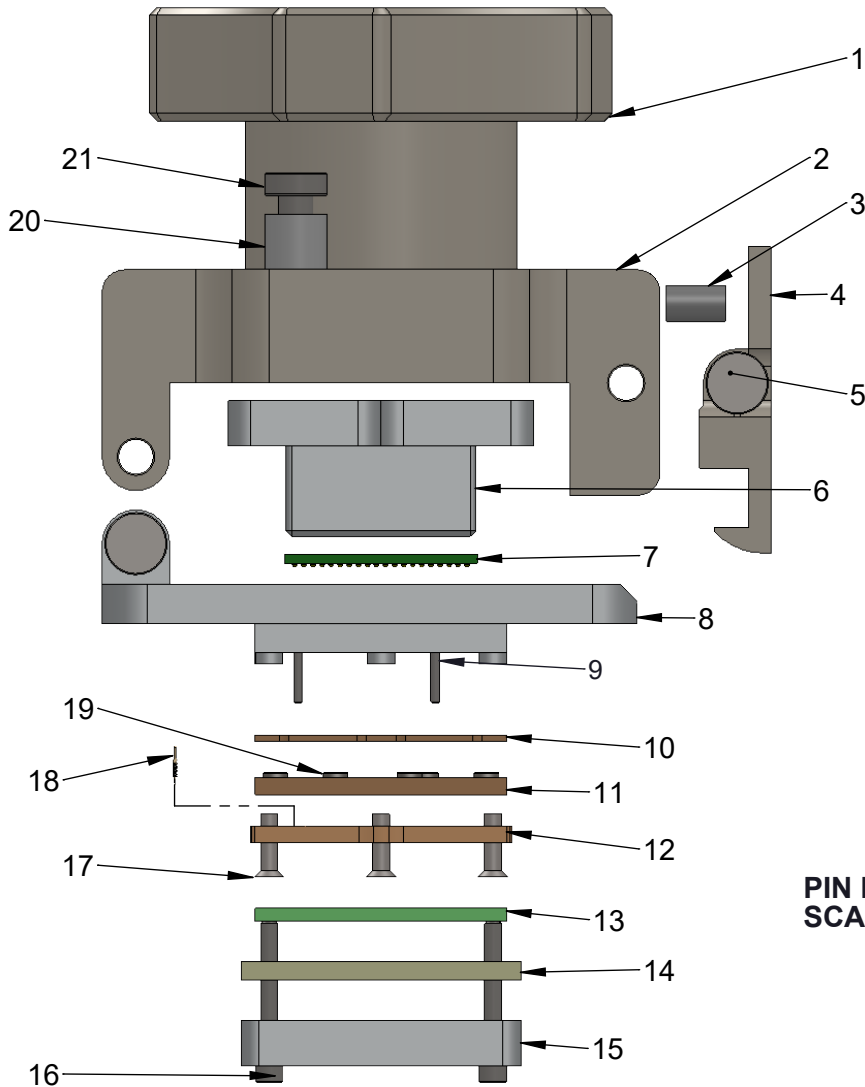
DIM	Minimum	Maximum
A	-	4.0
A1	0.2	0.4
b	-	0.5
D	17.0 +/- 0.2mm	
E	17.0 +/- 0.2mm	
e	0.80	
ARRAY	20 x 20	
PIN COUNT	400	

**Description: Compatible BGA**

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

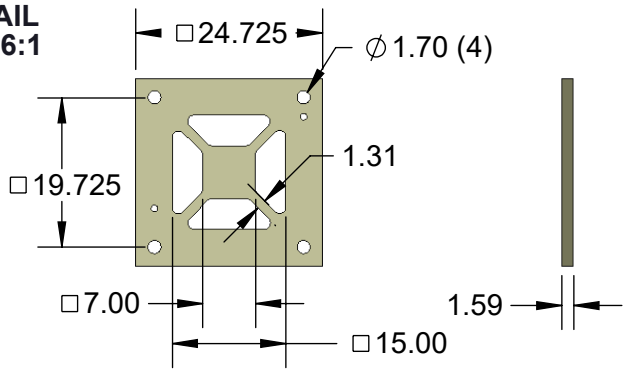
Tolerances: Hole diameters  $\pm 0.03\text{mm}$  [ $\pm 0.001"$ ], Pitches (from true position)  $\pm 0.025\text{mm}$  [ $\pm 0.001"$ ], substrate thickness tolerance  $\pm 10\%$ , all other tolerances  $\pm 0.13\text{mm}$  [ $\pm 0.005"$ ] unless stated otherwise. Materials and specifications are subject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

 <b>CBT-BGA-6036 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 129.30	STATUS: Released ENG: B. Schatz FILE: CBT-BGA-6036 Dwg	SHEET: 3 OF 5 DRAWN BY: M. Raske DATE: 02/14/2014	REV. B SCALE: 4:1



ITEM #	Description	Material
1	Compression Screw	7075-T6 Aluminum Alloy
2	Socket Lid	7075-T6 Aluminum Alloy
3	Precision Compression Spring	Zinc Plated Music Wire
4	Latch	7075-T6 Aluminum Alloy
5	Hinge Pin and Snap Ring	AISI 1045 Steel
6	Compression Plate	7075-T6 Aluminum Alloy
7	BGA400 0.8mm Pitch	FR4
8	Socket Base	7075-T6 Aluminum Alloy
9	Dowel pin	Stainless Steel (18-8)
10	Floating Guide	Semitron MDS 100
11	Middle Guide	Semitron MDS 100
12	Bottom Pogo Guide	Semitron MDS 100
13	Target PCB	Material <not specified>
14	Insulation Plate	High Temp FR4
15	Backing Plate	7075-T6 Aluminum Alloy
16	0-80 Socket Head Cap Screw	Alloy Steel
17	0-80 Flat Head Screw	PEEK unfilled
18	Pogo Pin	
19	Pin Guide Spring	Alloy Steel (SS)
20	Spring Clamshell lid assembly	Steel Music Wire
21	M3 Socket Head Cap Screw	18-8 Stainless Steel


PIN DETAIL  
SCALE 16:1



INSULATION PLATE DETAIL

**Description: Socket Assy, Insulation Plate**

Primary dimension units are millimeters, Secondary dimension units are [inches], Weight is in grams.  
 Tolerances: Hole diameters ±0.03mm [±0.001"], Pitches (from true position) ±0.025mm [±0.001"], substrate thickness tolerance ±10%, all other tolerances ±0.13mm [±0.005"] unless stated otherwise. Materials and specifications are subject to change without notice.


 <b>CBT-BGA-6036 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 129.30	STATUS: Released	SHEET: 4 OF 5	REV. B
		ENG: B. Schatz	DRAWN BY: M. Raske	SCALE: 3:2
		FILE: CBT-BGA-6036 Dwg	DATE: 02/14/2014	

Rev	Date	Initials	Description
B	3/24/15	RP/MR	Changed spring pin and guides to new design, dowel pin protrusion adjusted, if needed, metal screws replaced with plastic screws, if needed. Contact Ironwood for details.

## Description: Sheet1

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.

 <b>CBT-BGA-6036 Drawing</b> ©2015 Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	<b>Material:</b> <b>Finish:</b> <b>Weight:</b>	STATUS: Released	SHEET: 5 OF 5	REV. B
		ENG: B. Schatz	DRAWN BY: M. Raske	SCALE: 3:2
		FILE: CBT-BGA-6036 Dwg	DATE: 02/14/2014	