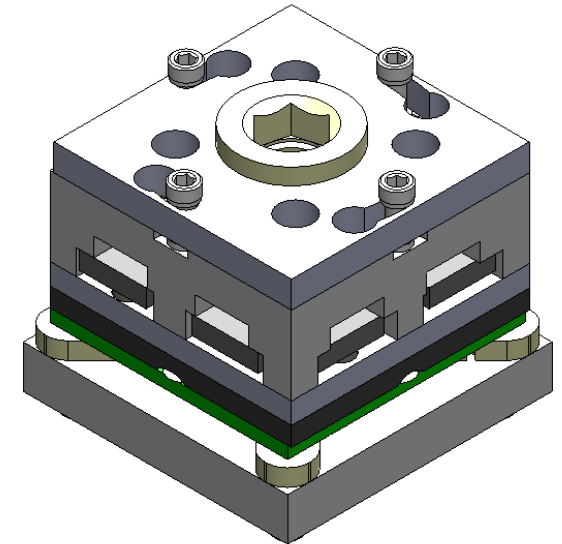
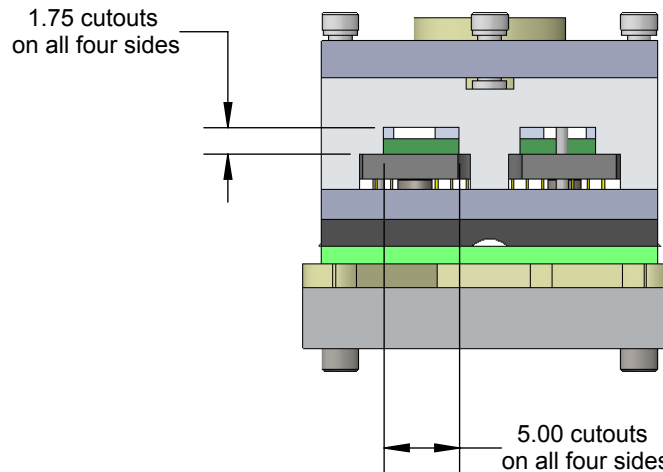
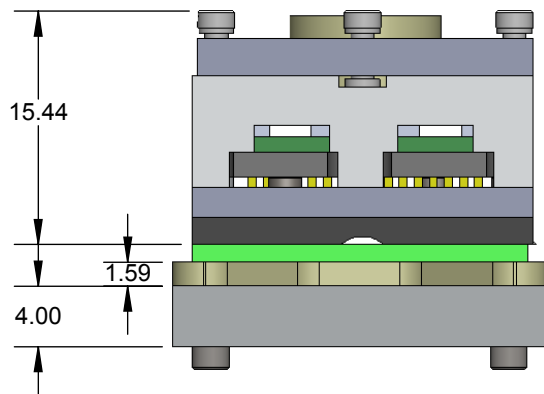
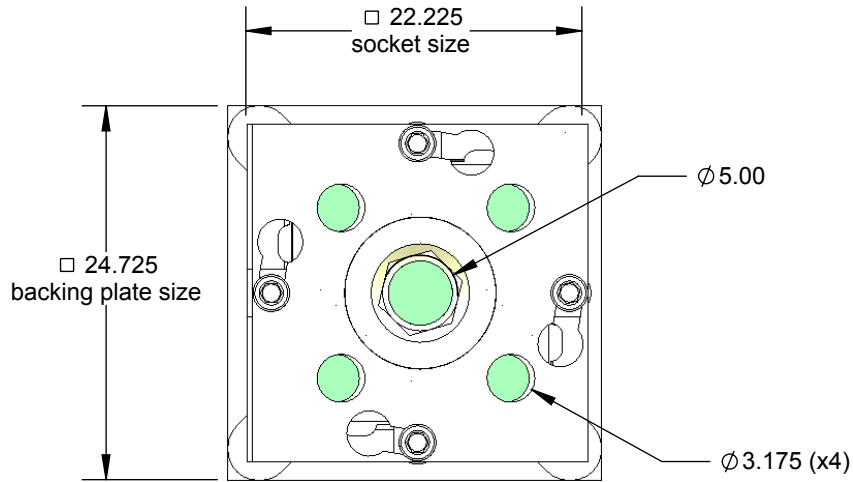


# SBT-QFN DIRECT MOUNT, SOLDERLESS SOCKET FOR BURN-IN AND TEST APPLICATIONS

## Features


- Wide temperature range (-55C to +180C).
- High current capability (up to 8A).
- 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.



## Description: SBT-BGA Socket 17x17mm, 1mm, 16x16 array

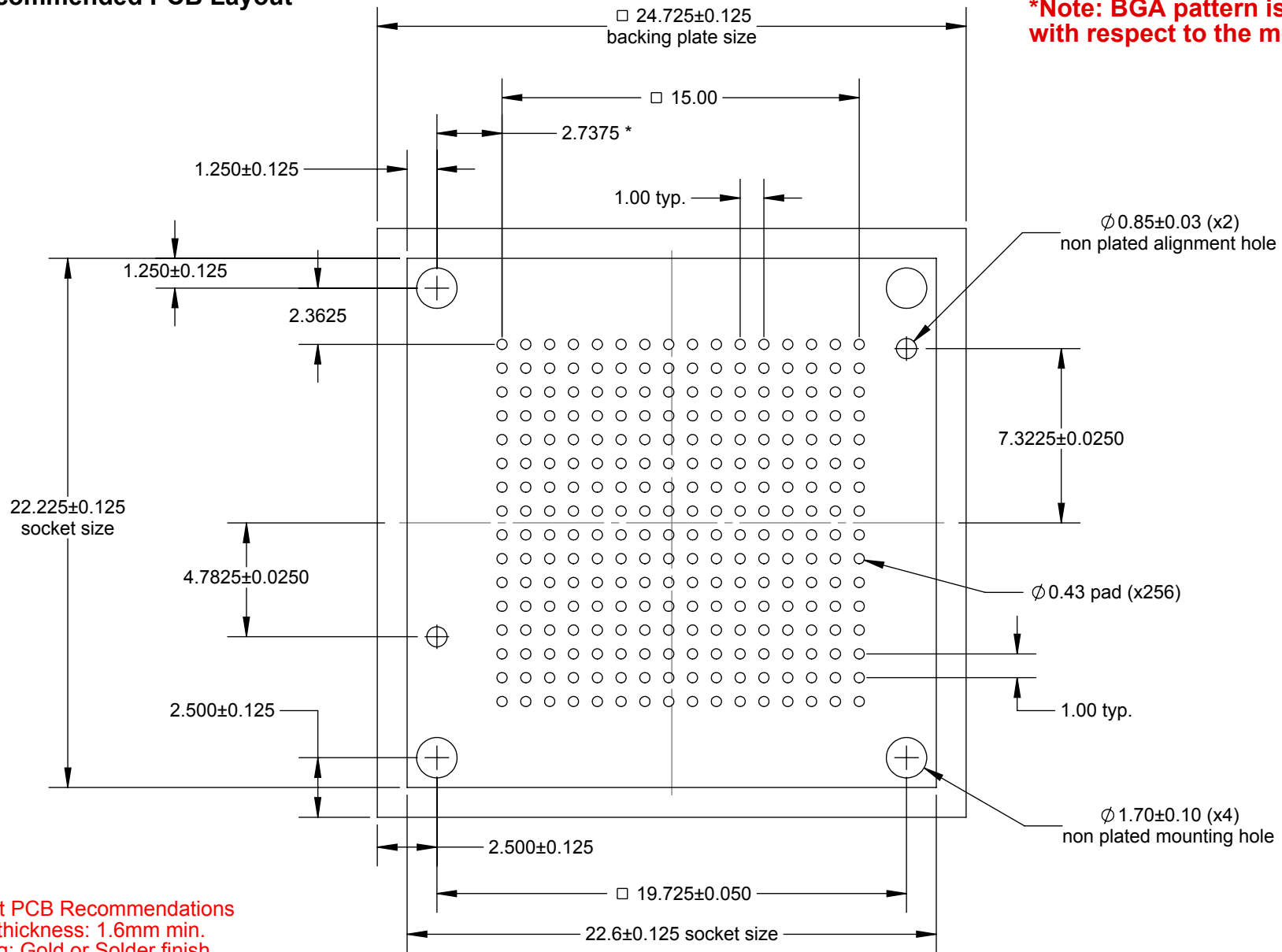
Primary dimension units are millimeters, Secondary dimension units are [inches].

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>SBT-BGA-6023 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: Material <not specified> Finish: Weight: 20.97	STATUS: Released DRAWN BY: D. Hauer FILE: SBT-BGA-6023 Dwg	SHEET: 1 OF 7 SCALE: 2:1 DATE: 09/08/2012	REV. A

# Recommended PCB Layout

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




**Target PCB Recommendations**  
 Total thickness: 1.6mm min.  
 Plating: Gold or Solder finish.  
 PCB pad height: Same or higher than solder mask.

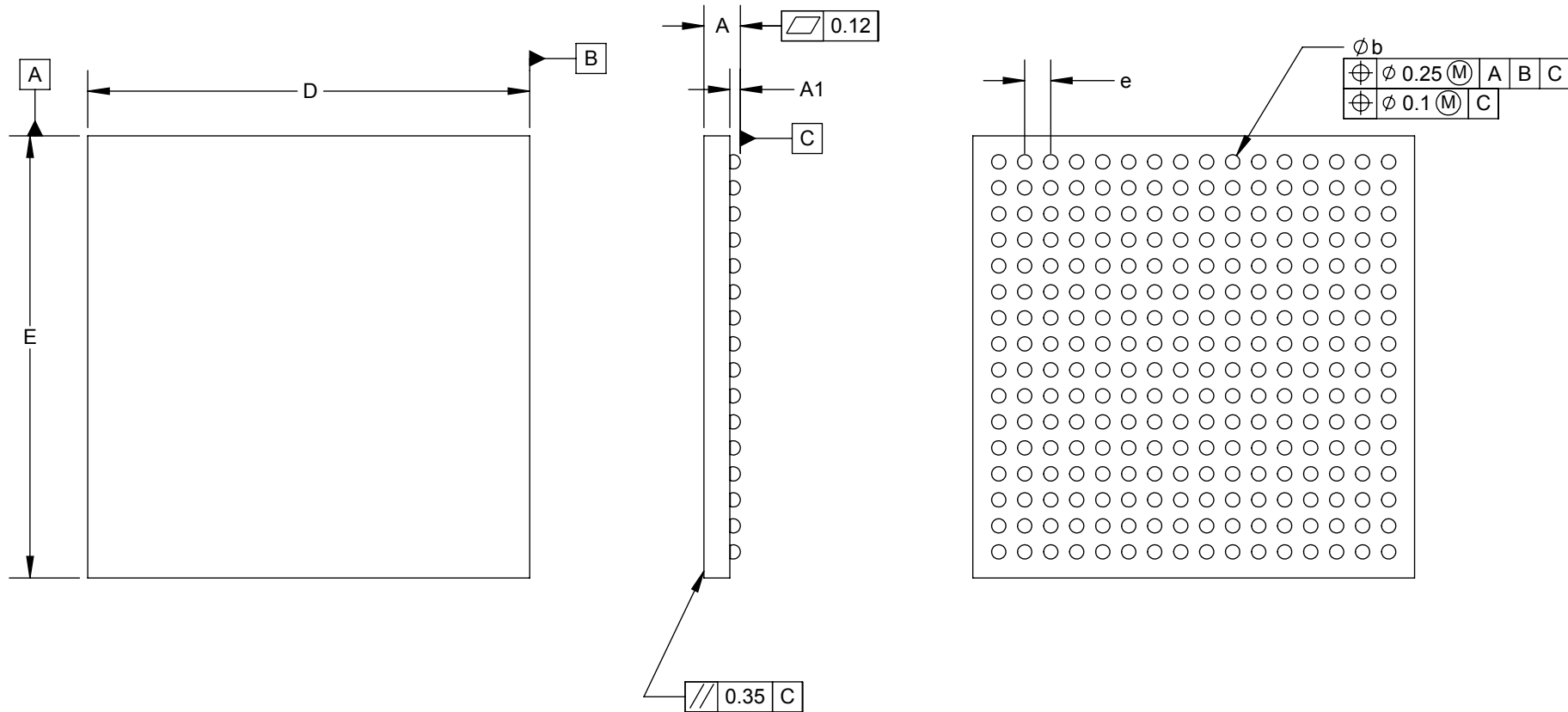
## Description: SBT-BGA Socket 17x17mm, 1mm, 16x16 array

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

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.

 <p><b>SBT-BGA-6023 Drawing</b>                  Ironwood Electronics, Inc.                  Tele: (800) 404-0204                  www.ironwoodelectronics.com</p>	<p>Material: Material &lt;not specified&gt;                  Finish:                  Weight: 20.97</p>	STATUS: Released	SHEET: 2 OF 7	REV. A
		DRAWN BY: D. Hauer	SCALE: 2:1	
		FILE: SBT-BGA-6023 Dwg	DATE: 09/08/2012	

# Compatible BGA IC



## Ironwood Package Code : BGA256E4


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.

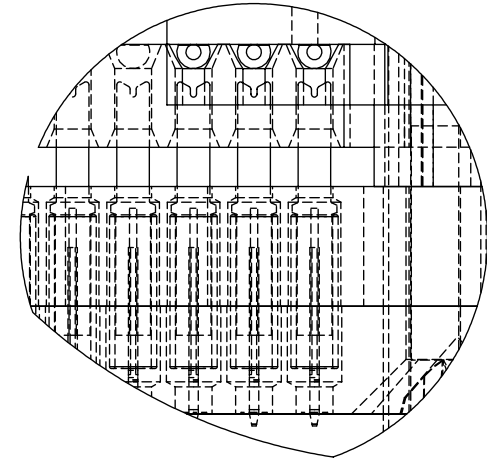
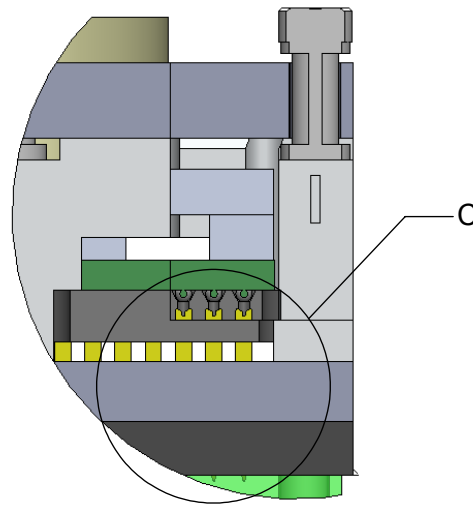
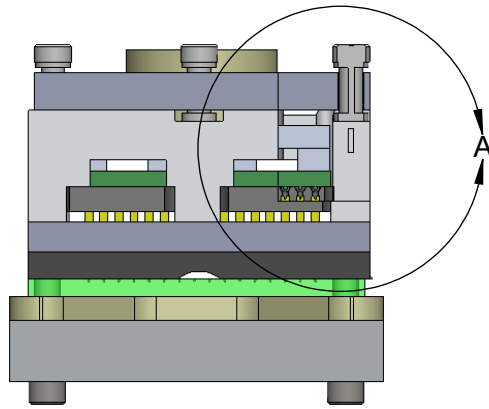
### Description: SBT-BGA Socket 17x17mm, 1mm, 16x16 array

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

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.

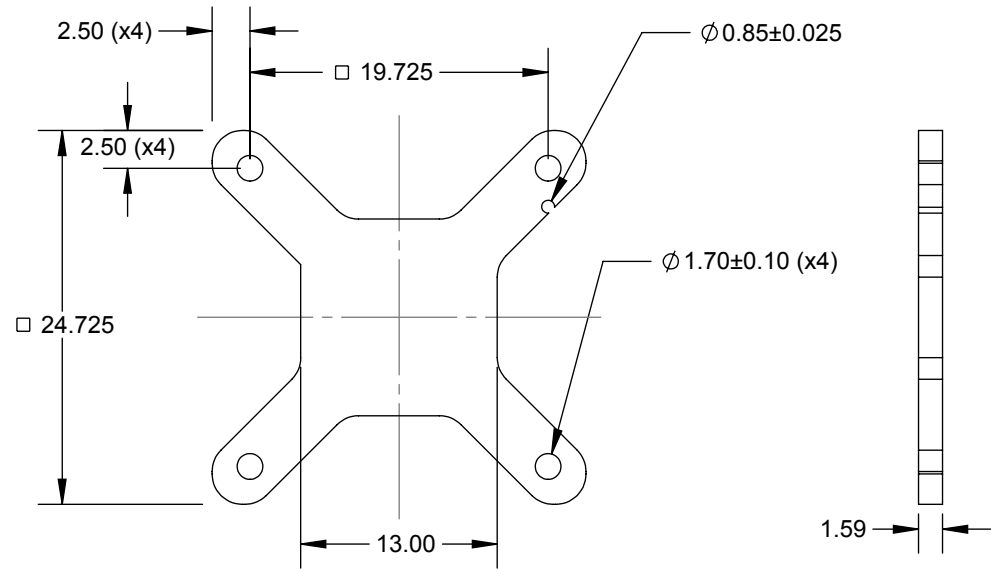
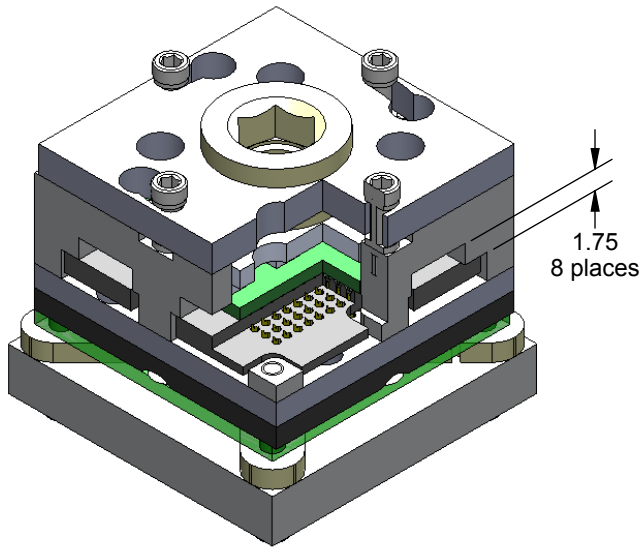
DIM	Minimum	Maximum
A		1.55
A1	0.35	0.45
b	0.45	0.55
D	17mm $\pm$ 0.2mm	
E	17mm $\pm$ 0.2mm	
e	1.00 BSC	
ARRAY SIZE	16 X 16	
PIN COUNT	256	

 <b>SBT-BGA-6023 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: Material <not specified> Finish: Weight: 20.97	STATUS: Released	SHEET: 3 OF 7	REV. A
		DRAWN BY: D. Hauer	SCALE: 4:1	
		FILE: SBT-BGA-6023 Dwg	DATE: 09/08/2012	



**DETAIL A**  
**SCALE 4 : 1**

**DETAIL C**  
**SCALE 8 : 1**



**Insulating Plate Detail**

**Description: SBT-BGA Socket 17x17mm, 1mm, 16x16 array**

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**SBT-BGA-6023 Drawing**



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Tele: (800) 404-0204  
www.ironwoodelectronics.com

Material: Material <not specified>  
Finish:  
Weight: 20.97

STATUS: Released

DRAWN BY: D. Hauer

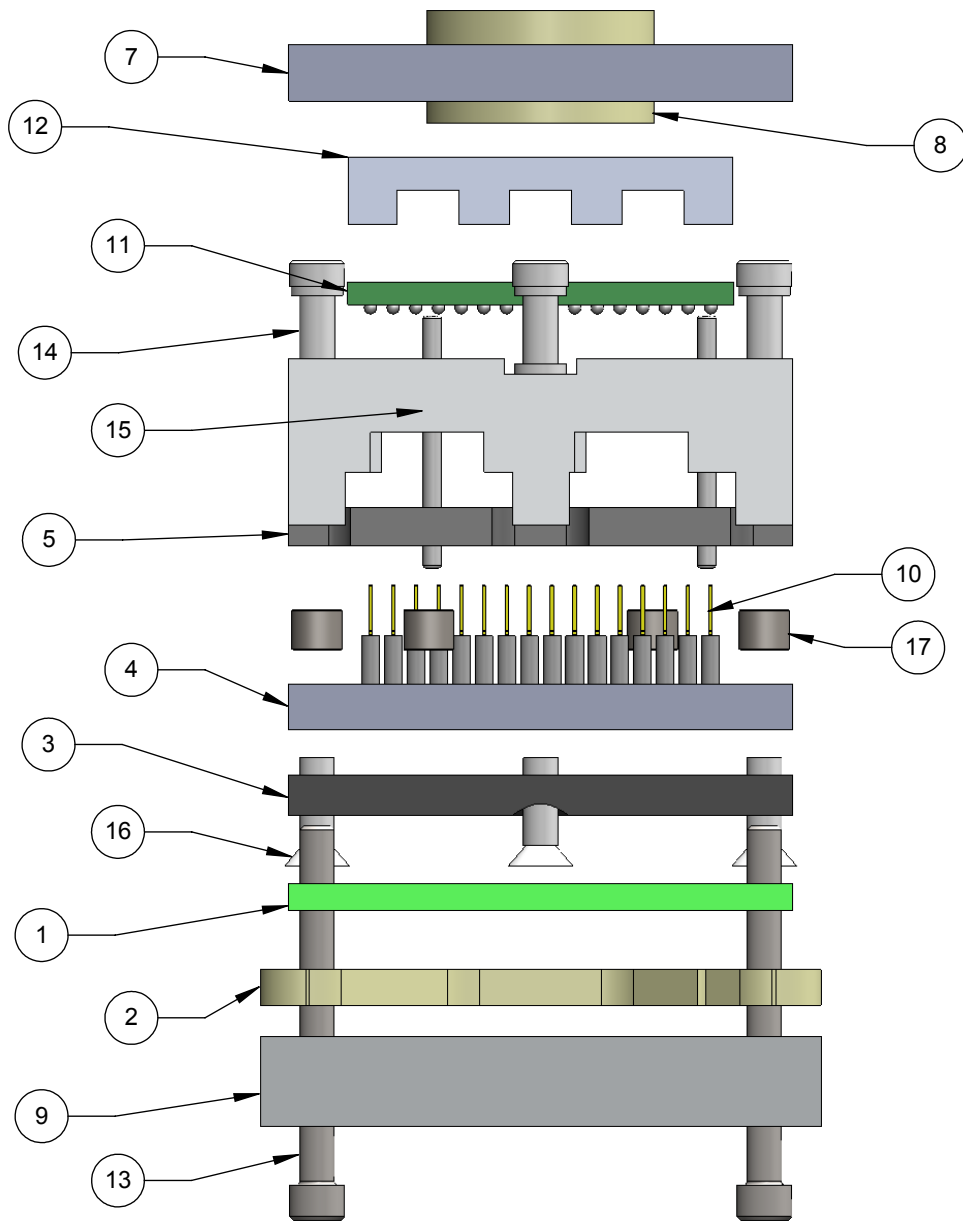
FILE: SBT-BGA-6023 Dwg

SHEET: 4 OF 7

SCALE: 2:1

DATE: 09/08/2012

REV. A



ITEM NO.	Description	Material	Full View/QTY.
1	TARGET PCB	High Temp FR4	1
2	Insulation Plate for 17x17mm IC	FR4 Standard	1
3	Bottom Pogo Guide BGA256 1mm pitch	PEEK Ceramic filled	1
4	Middle Pogo Guide BGA256 1mm pitch	PEEK Ceramic filled	1
5	Floating Guide BGA256 1mm pitch	PEEK Ceramic filled	1
6	Socket Base, SBT BGA, 17x17	7075-T6 Aluminum Alloy	1
7	SBT skt lid 17mm IC	7075-T6 Aluminum Alloy	1
8	Compression Screw M10 with 4.25mm dia hole	7075-T6 (SN)	1
9	Backing Plate	7075-T6 Aluminum Alloy	1
10	Pogo Pin, 1mm Pitch SBT BGA pin		256
11	TEST CHIP	High Temp FR4	1
12	SBT Ni plit compression plate 17mm IC	7075-T6 Aluminum Alloy	1
13	#0-80 X .625 LG, SOC HD CAP SCREW, ALLOY STL, BLK OXIDE	Alloy Steel	4
14	#0-80 Shoulder Screw, 0.062" thread length	Stainless Steel (303)	4
15	Dowel Pin, 1/32" dia, 7/16" Long, 18-8 SS	Chrome Stainless Steel	2
16	Screw, #0-80 X .188", Flat, SS	Stainless Steel (18-8)	4
17	Floating Guide Spring	Alloy Steel (SS)	4

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#### SBT-BGA-6023 Drawing



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Material: Material <not specified>  
 Finish:  
 Weight: 20.97

STATUS: Released

DRAWN BY: D. Hauer

FILE: SBT-BGA-6023 Dwg

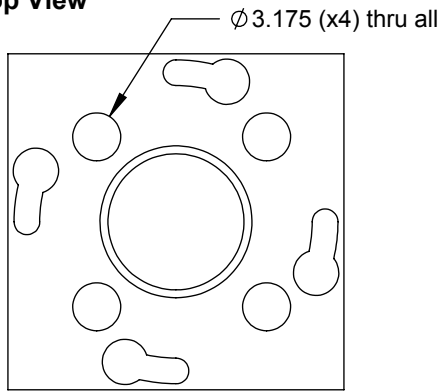
SHEET: 5 OF 7

SCALE: 2:1

DATE: 09/08/2012

REV. A

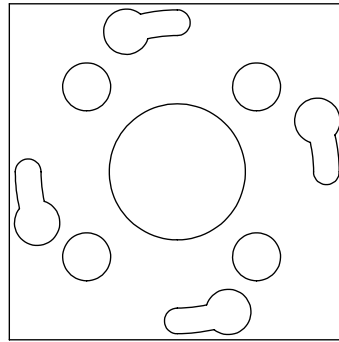
**Top View**



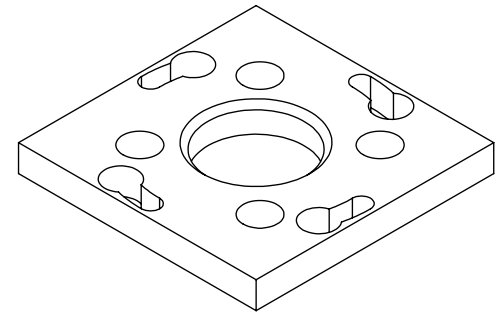
**Side View**



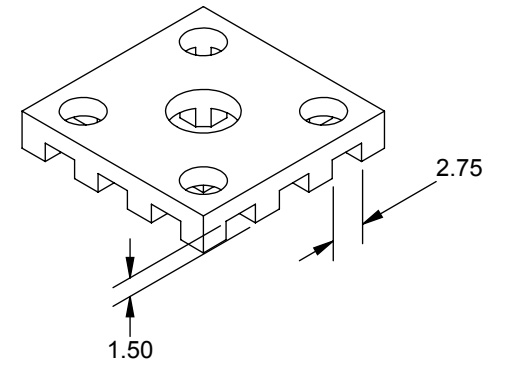
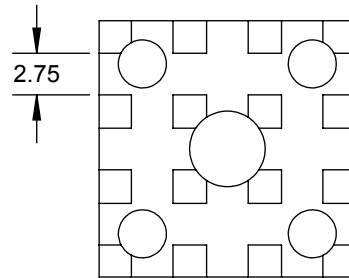
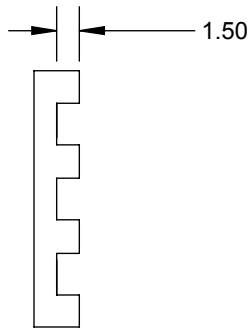
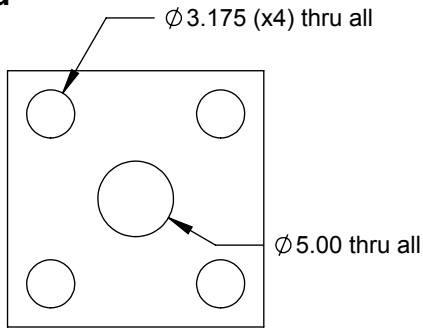
**Bottom View**



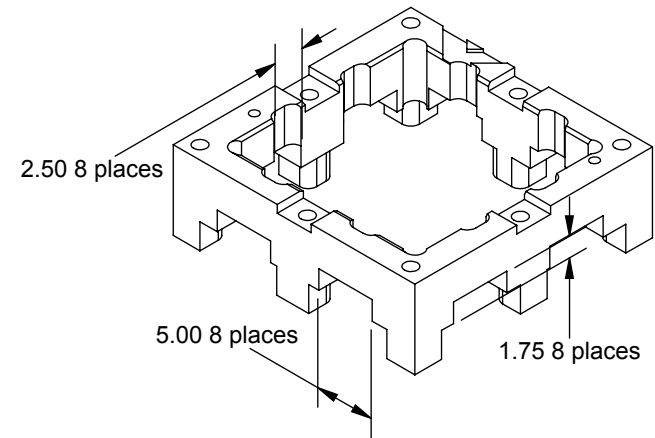
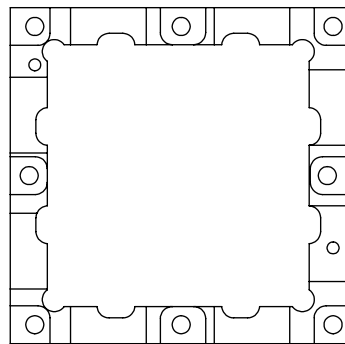
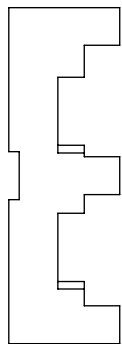
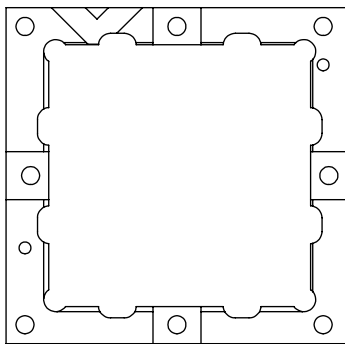
**Isometric View**



**Socket Lid**



**Compression Plate**



**Socket base**

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**SBT-BGA-6023 Drawing**



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Tele: (800) 404-0204  
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Material: Material <not specified>  
Finish:  
Weight: 20.97

STATUS: Released

DRAWN BY: D. Hauer

FILE: SBT-BGA-6023 Dwg

SHEET: 6 OF 7

SCALE: 1:1

DATE: 09/08/2012


REV. A

Rev	Date	Initials	Description
A	09/08/12	DH	Original

**Description:**

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

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>Specification</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 <a href="http://www.ironwoodelectronics.com">www.ironwoodelectronics.com</a>	<b>Material:</b> <b>Finish:</b> <b>Weight:</b>	STATUS: Released	SHEET: 7 OF 7	REV. A
		DRAWN BY: D. Hauer	SCALE: 1:1	
		FILE: SBT-BGA-6023 Dwg	DATE: 09/08/2012	