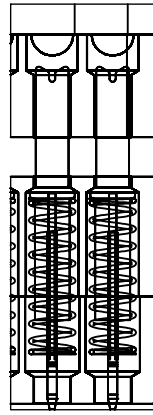
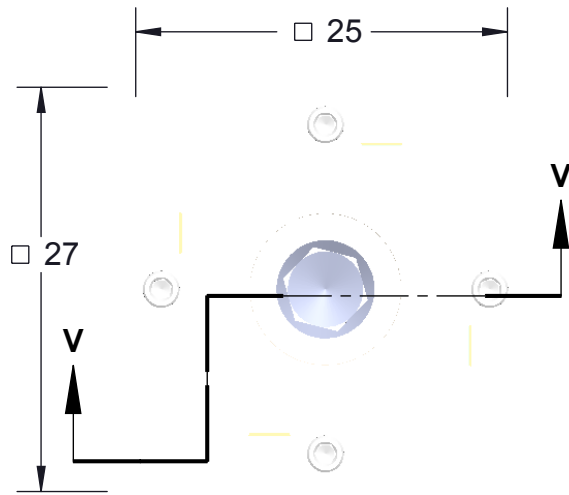


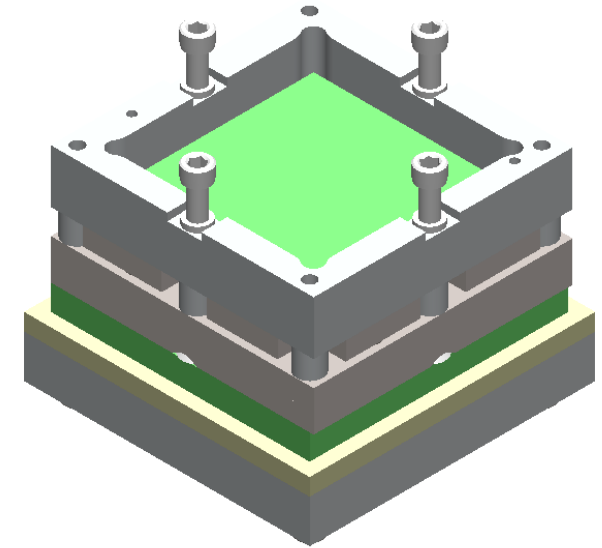
# SBT-BGA DIRECT MOUNT, SOLDERLESS SOCKET FOR BURN-IN AND TEST APPLICATIONS



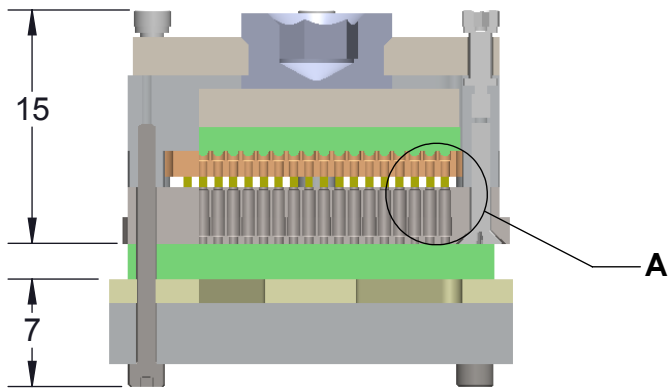
**DETAIL A**  
SCALE 8 : 1

## Features

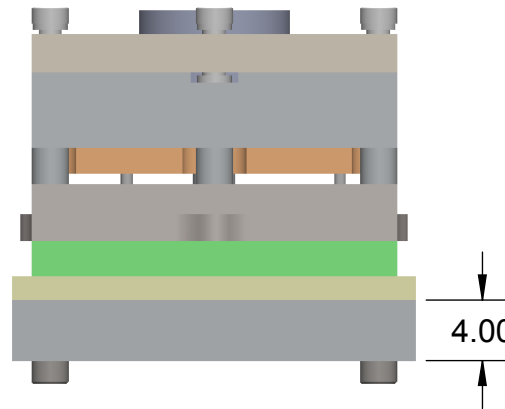
- Wide temperature range (-55C to +180C)
- High current capability (up to 4A)
- Excellent signal integrity at high frequencies
- Low and stable contact resistance for reliable production yield
- Highly compliant to accommodate wide co-planarity variations
- Automated probe manufacturing enables low cost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



**Socket View without Lid**




**SECTION V-V**



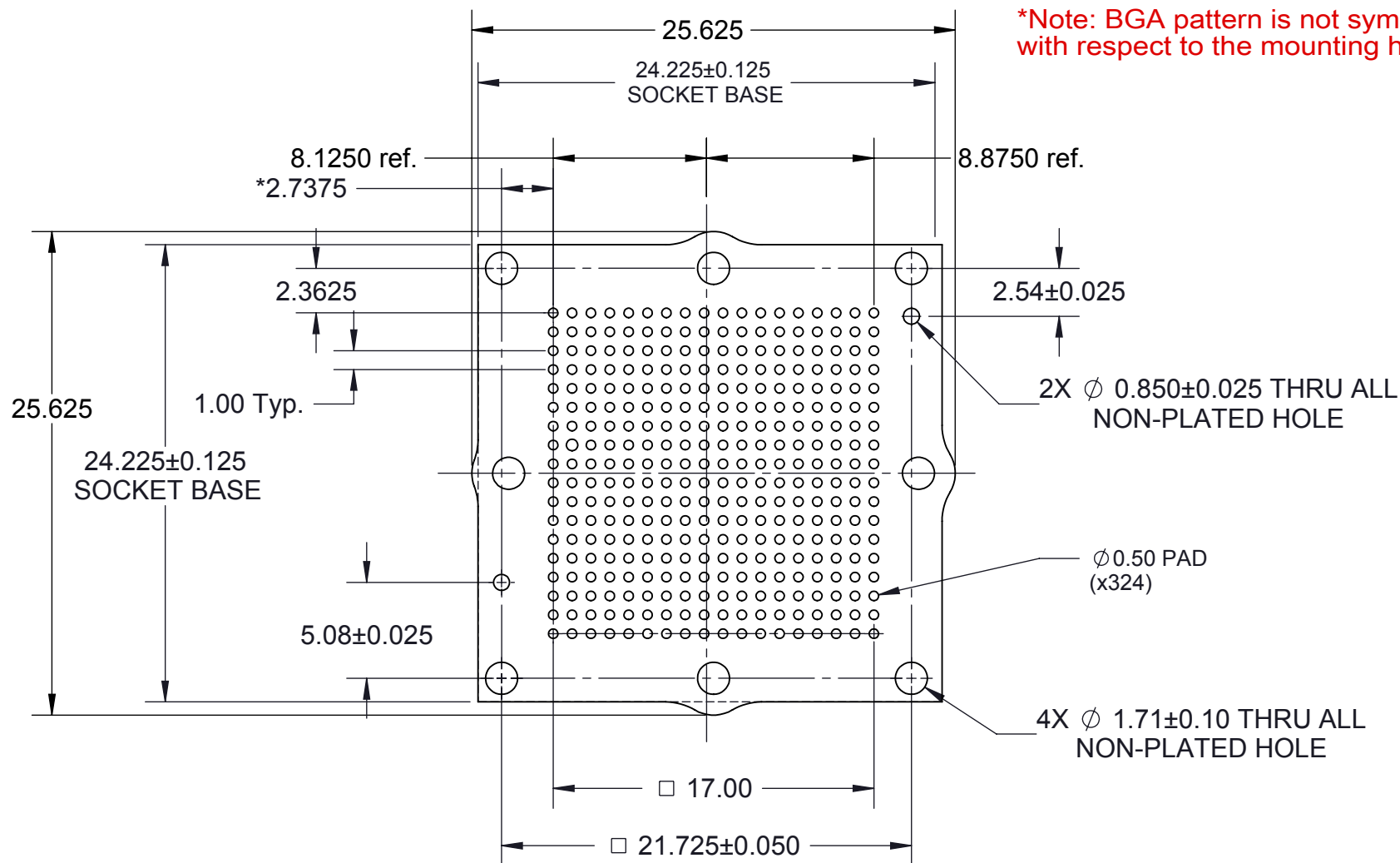
## Description: SBT-BGA Socket, 19M, 1.00MM, 18 x 18 Array

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>SBT-BGA-6005 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: -	STATUS: Released	SHEET: 1 OF 5	REV. C
	Finish: -	ENG: B. Schatz	DRAWN BY: B. Schatz	SCALE: 2:1
	Weight: 25.48	FILE: SBT-BGA-6005	DATE: 7/12/10	

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




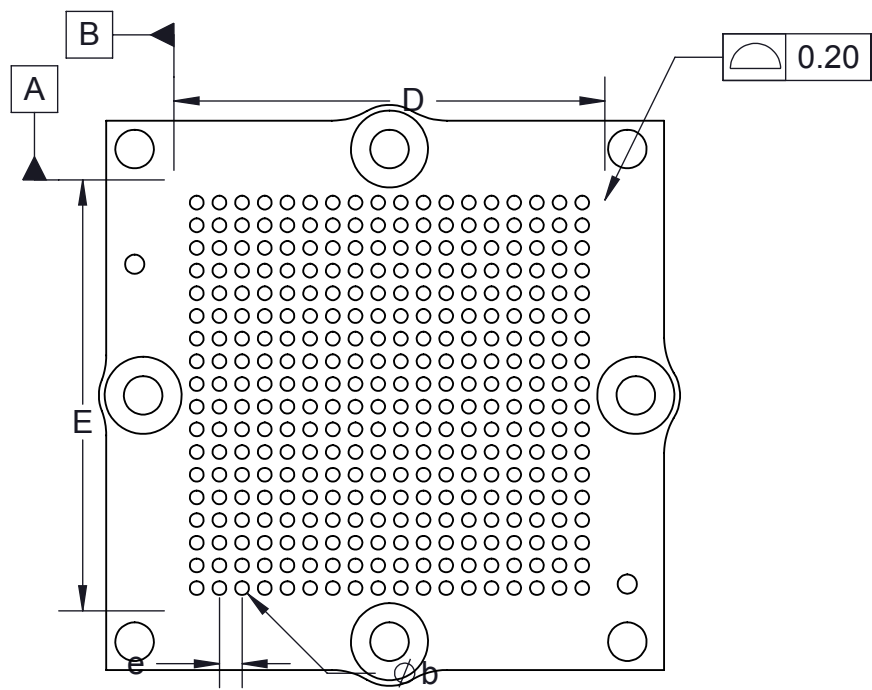
**Target PCB Recommendations**  
 Total thickness: 1.6mm min.  
 Plating: Gold or Solder finish  
 PCB Pad height: Same or higher than solder mask

### Description: Recommended PCB Layout

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

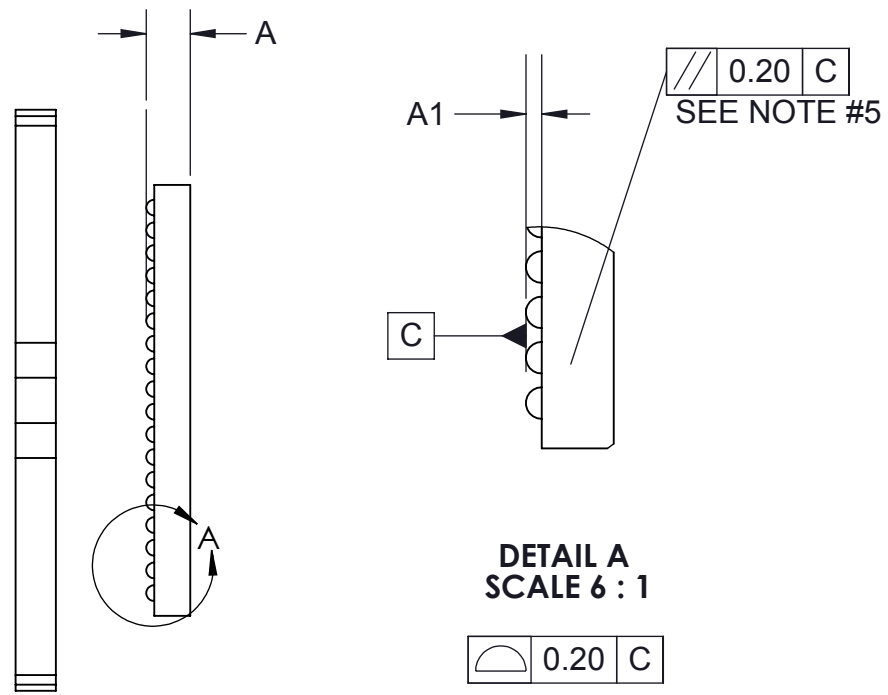
Tolerances: Hole diameters  $\pm 0.03\text{mm}$  [ $\pm 0.001"$ ], Pitches (from true position)  $\pm 0.025\text{mm}$  [ $\pm 0.001"$ ], substrate thickness tolerance  $\pm 10\%$ , all other tolerances  $\pm 0.13\text{mm}$  [ $\pm 0.005"$ ] unless stated otherwise. Materials and specifications are subject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

 <b>SBT-BGA-6005 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: - Finish: - Weight: 25.48	STATUS: Released	SHEET: 2 OF 5	REV. C
		ENG: B. Schatz	DRAWN BY: B. Schatz	SCALE: 3:1
		FILE: SBT-BGA-6005	DATE: 7/12/10	



$\oplus$	$\phi$	0.25	C	A	B
$\oplus$	$\phi$	0.10			

SEE NOTE #3




**Ironwood package Code: BGA324G**

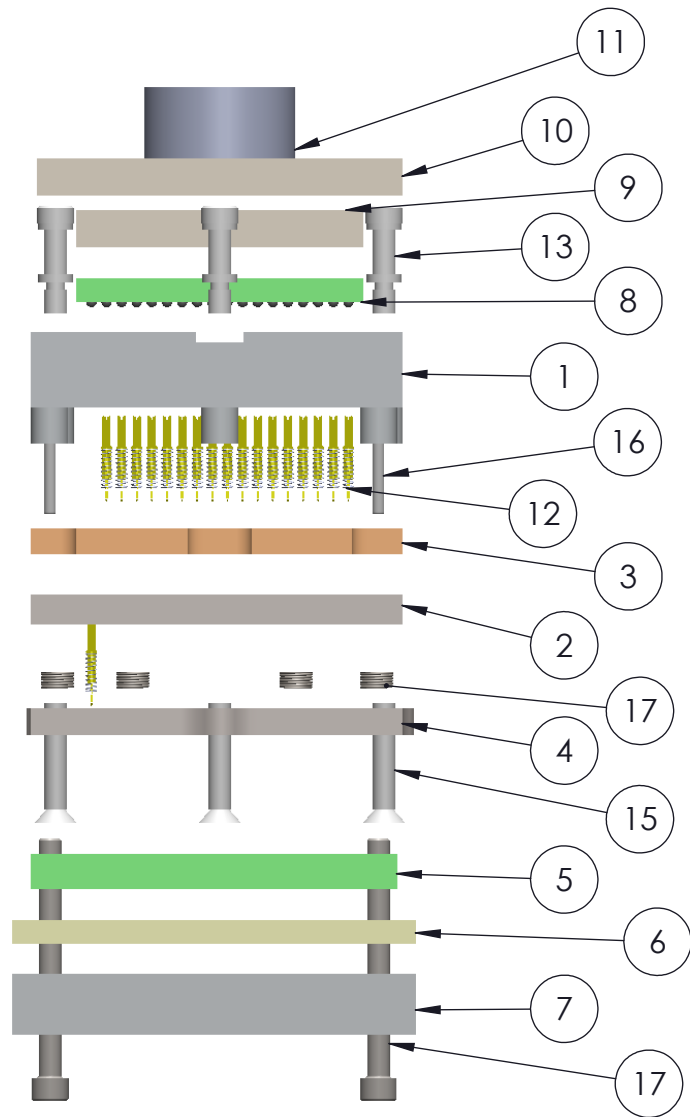
1. Dimensions are in millimeters.
2. Interpret dimensions and tolerances per ASME Y14.5M-1994.
3. Dimension b is measured at the maximum solder ball diameter, parallel to datum plane Z.
4. Datum C (seating plane) is defined by the spherical crowns of the solder balls.
5. Parallelism measurement shall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

DIM	Minimum	Maximum
A		3.00
A1	0.3	0.6
b		0.7
D	19.0 BSC	
E	19.0 BSC	
e	1.00 BSC	
ARRAY SIZE	18 X 18	
PIN COUNT	324	

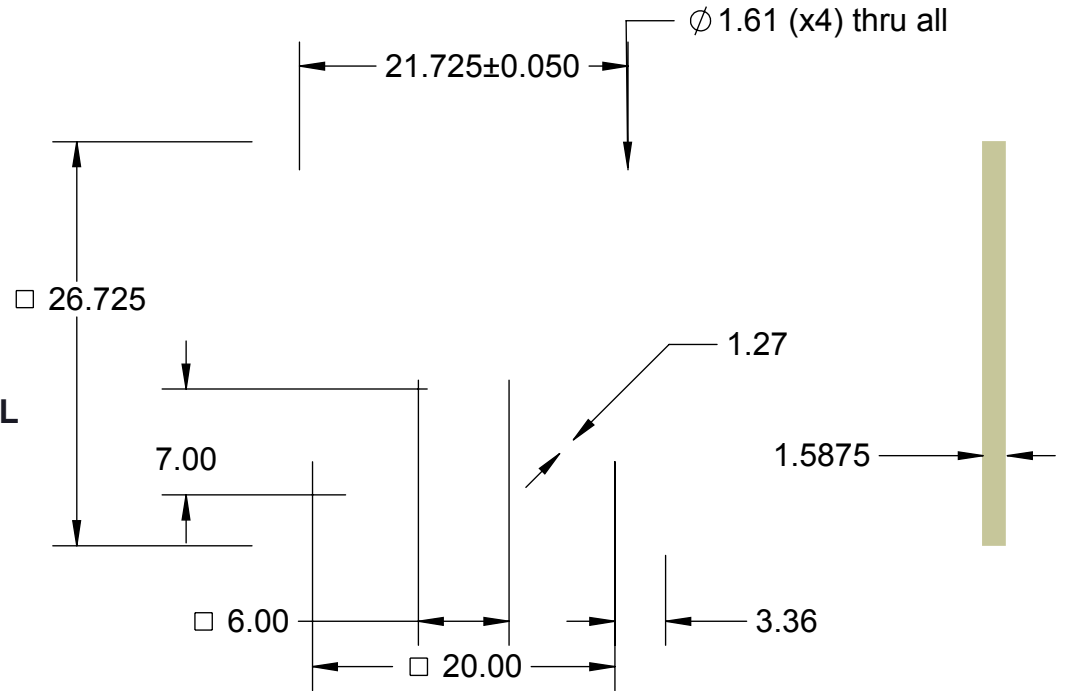
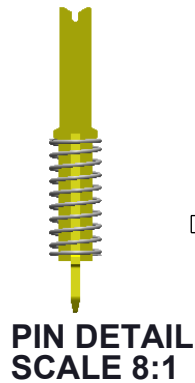
**Description: Compatible BGA**

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>SBT-BGA-6005 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: - Finish: - Weight: 25.48	STATUS: Released ENG: B. Schatz FILE: SBT-BGA-6005	SHEET: 3 OF 5 DRAWN BY: B. Schatz DATE: 7/12/10	REV. C SCALE: 3:1



ITEM NO.	Description	Material
1	Socket Base 19MM	7075-T6, Plate (SS)
2	Middle Guide 19MM, 18 x 18 ARRAY, 1.0MM	PEEK Ceramic filled
3	Floating Guide 19MM, 18 x 18 ARRAY, 1.0MM	PEEK Ceramic filled
4	Bottom Guide 19MM, 18 x 18 ARRAY, 1mm PITCH	PEEK Ceramic filled
5	Test PCB, 19MM (SBT-BGA-6005)	Material <not specified>
6	Insulation Plate	FR4 Standard
7	Backing Plate 19mm	7075-T6, Plate (SS)
8	Test Chip, 19MM (SBT-BGA-6005)	Material <not specified>
9	Compression Plate 19MM	7075-T6 Alumium Alloy
10	Socket Lid 19MM, M10 THD	7075-T6 Alumium Alloy
11	Compression Screw M10	7075-T6 Alumium Alloy
12	Pogo Pin, 1mm Pitch SBT BGA pin	
13	#0-80 Shoulder Screw, 0.062" thread length	Stainless Steel (303)
15	Screw, #0-80 X .313", Flat, SS	Material <not specified>
16	Dowel Pin, 1/32" x 3/8", SS	Chrome Stainless Steel
17	Floating Guide Spring	Alloy Steel (SS)
17	#0-80 X .625 LG, SOC HD CAP SCREW, ALLOY STL, BLK OXIDE	Alloy Steel




### INSULATION PLATE DETAIL

### Description: BOM/ Pin Detail

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>SBT-BGA-6005 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: -	STATUS: Released	SHEET: 4 OF 5	REV. C
	Finish: -	ENG: B. Schatz	DRAWN BY: B. Schatz	SCALE: 2:1
	Weight: 25.48	FILE: SBT-BGA-6005	DATE: 7/12/10	

Rev	Date	Initials	Description
A	7/12/10	VP	Original
B	7/13/13	BHS	Moved posts from middle guide and added those to socket base
C	03/12/15	GL/DH	Updated PCB layout page to add bump outs.

## Description: Revisions

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>SBT-BGA-6005 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. C
		ENG: B. Schatz	DRAWN BY: B. Schatz	SCALE: 2:1
		FILE: SBT-BGA-6005	DATE: 7/12/10	