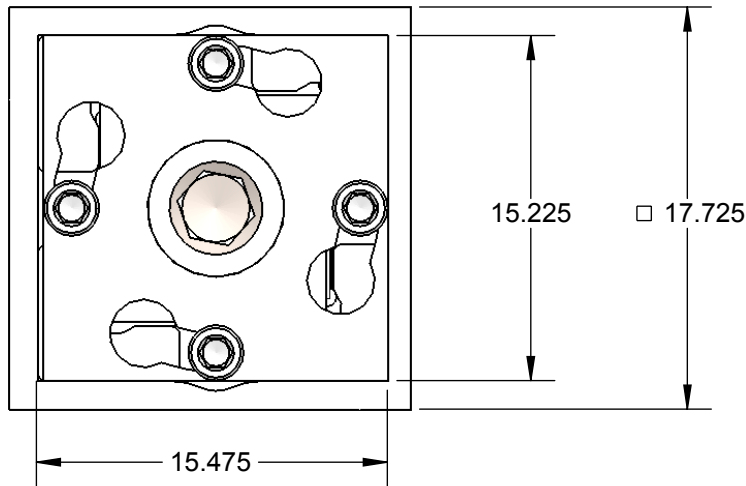


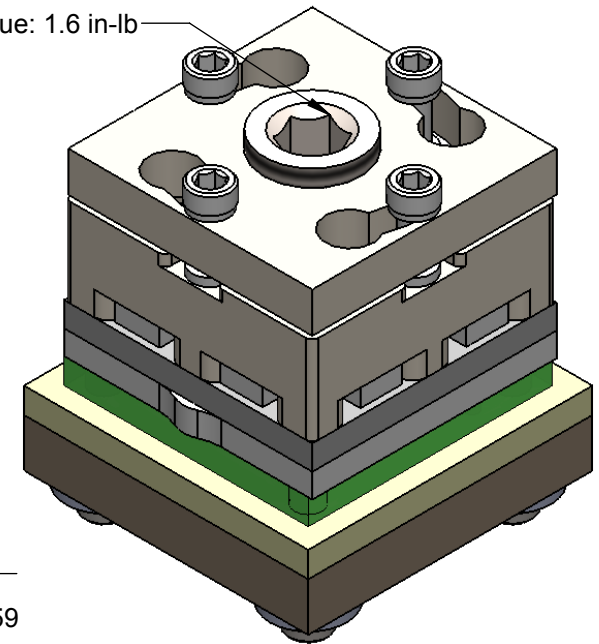
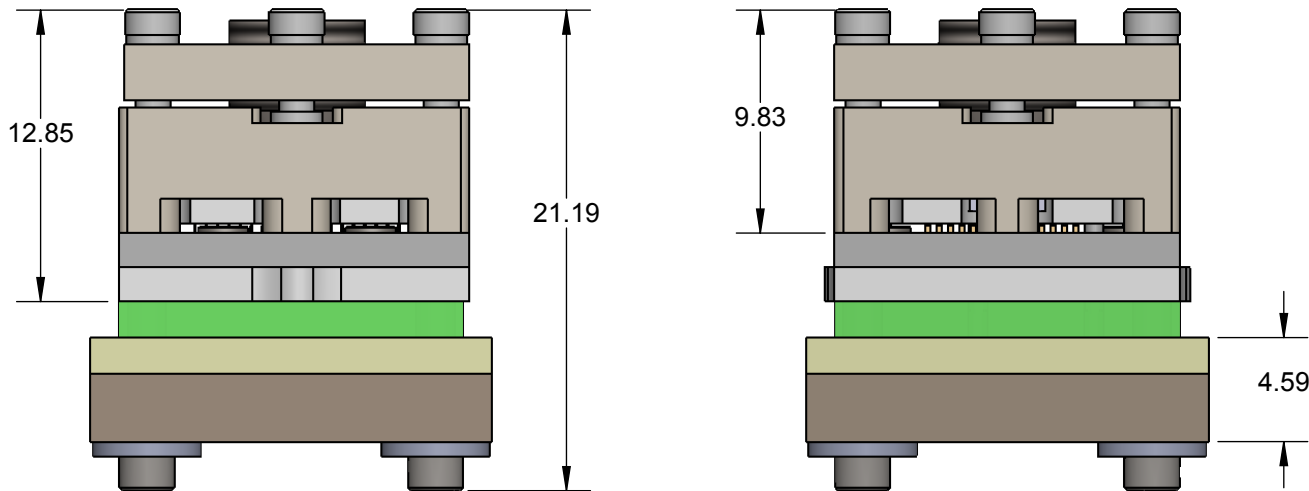
# SBT-BGA DIRECT MOUNT, SOLDERLESS SOCKET FOR BURN-IN AND TEST APPLICATIONS

## 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




Recommended Torque: 1.6 in-lb



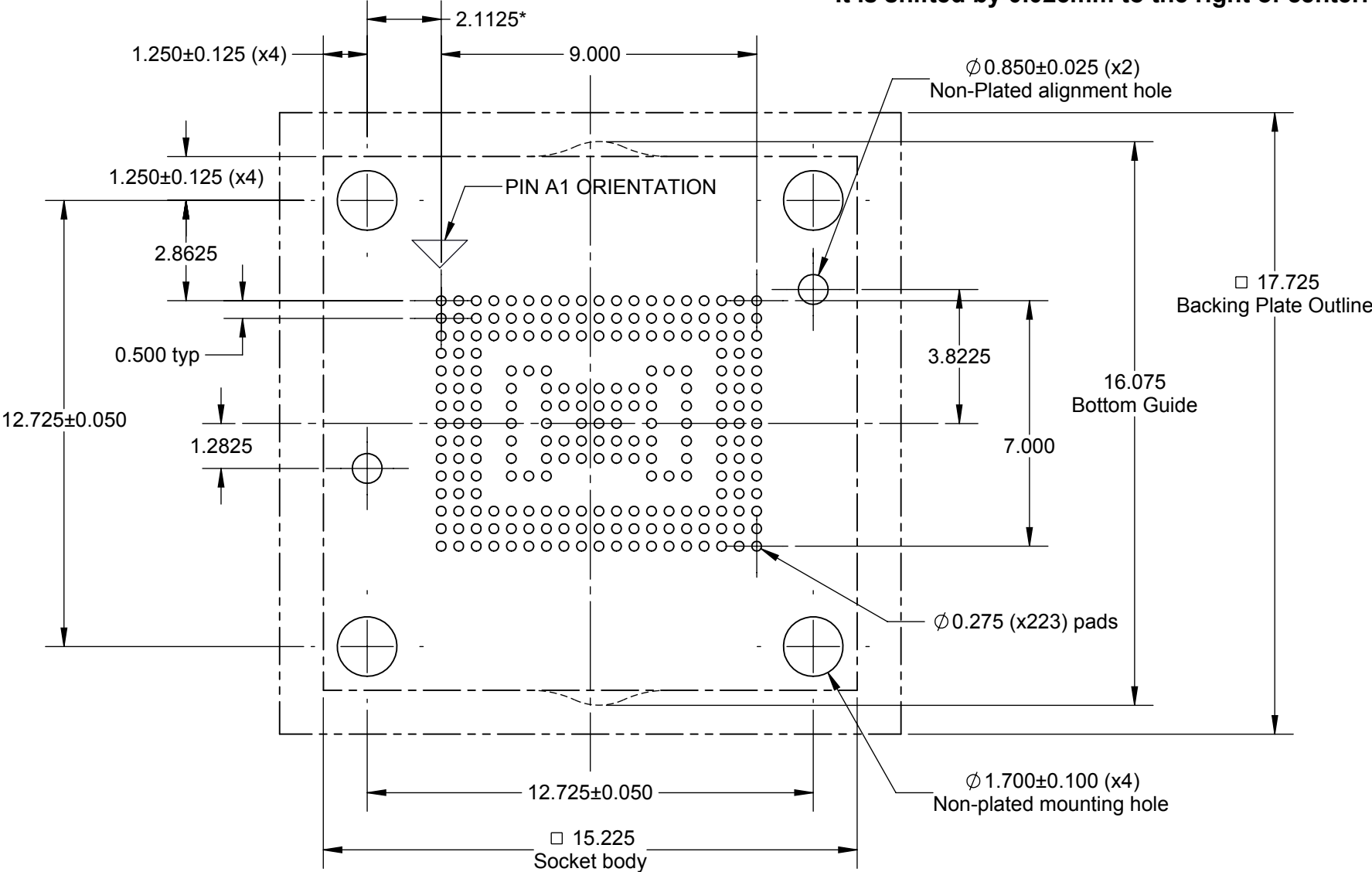
## Description: SBT-BGA 8mmx10mm 0.5mm pitch 19x15 array

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-7019 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: Material <not specified> Finish: Weight: 9.43	STATUS: Released ENG: S. Faiz FILE: SBT-BGA-7019 Dwg	SHEET: 1 OF 5 DRAWN BY: M. Raske DATE: 02/25/2014	REV. B SCALE: 3:1

**\*Note: BGA pattern is not symmetrical with respect to the mounting holes. It is shifted by 0.025mm to the right of center.**

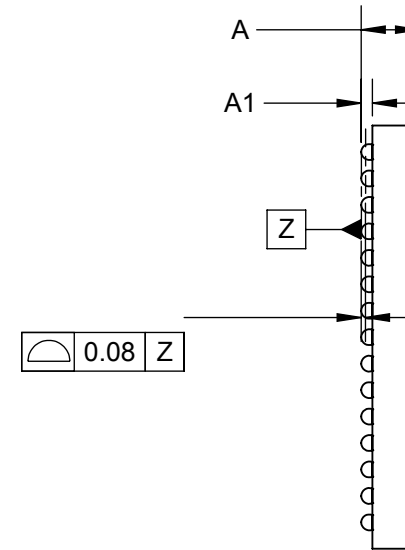
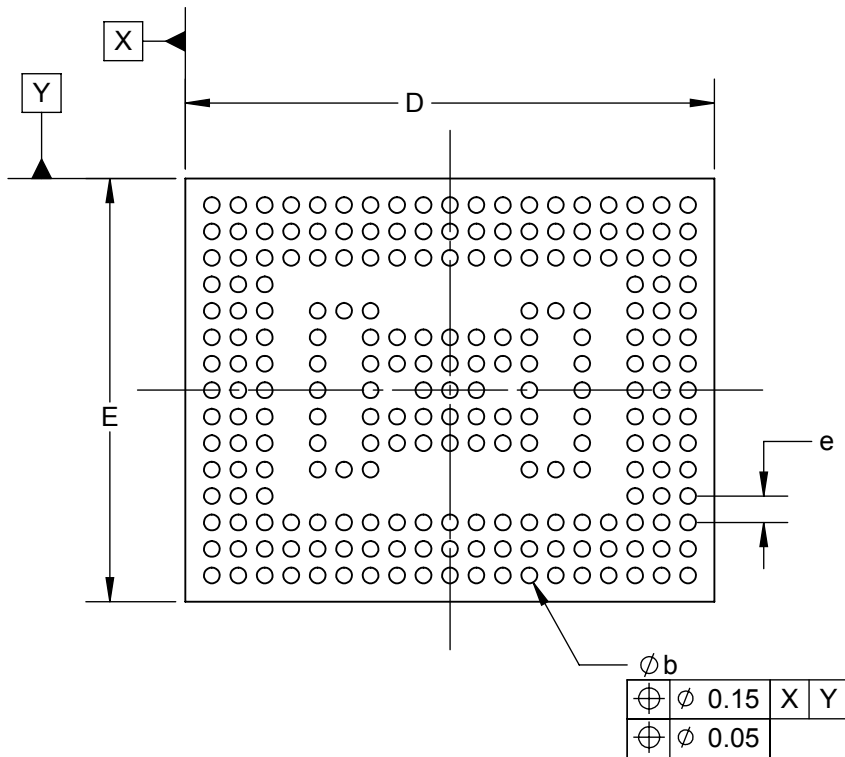


**Description: Recommended PCB Layout**

Primary dimension units are millimeters, Secondary dimension units are [inches], Weight is in grams.  
 Tolerances: Hole diameters ±0.0254mm [±0.001"]. Pitches (from true position) ±0.0762mm [±0.003"], substrate thickness tolerance ±10%, all other tolerances ±0.127mm [±0.005"] unless stated otherwise. Materials and specifications are subject to change without notice.

 <b>SBT-BGA-7019 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: Material <not specified> Finish: Weight: 9.43	STATUS: Released	SHEET: 2 OF 5	REV. B
		ENG: S. Faiz	DRAWN BY: M. Raske	SCALE: 6:1
		FILE: SBT-BGA-7019 Dwg	DATE: 02/25/2014	

# Ironwood Package Code: BGA223A




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 X.
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.

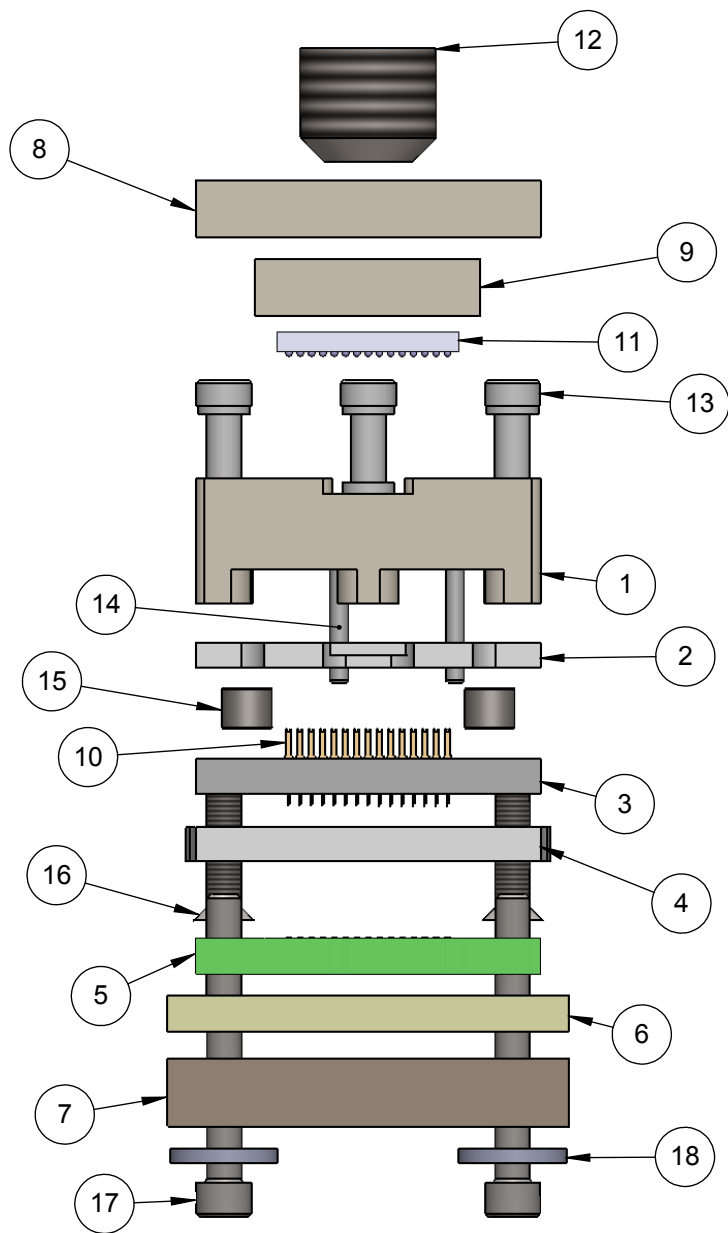
DIM	Minimum	Maximum
A	---	1.20
A1	0.16	0.26
b	---	0.30
D	10.00 BSC	
E	8.00 BSC	
e	0.50 BSC	
ARRAY	19X15	
PIN COUNT	223	

## 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-7019 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: Material <not specified> Finish: Weight: 9.43	STATUS: Released ENG: S. Faiz FILE: SBT-BGA-7019 Dwg	SHEET: 3 OF 5 DRAWN BY: M. Raske DATE: 02/25/2014	REV. B SCALE: 7:1




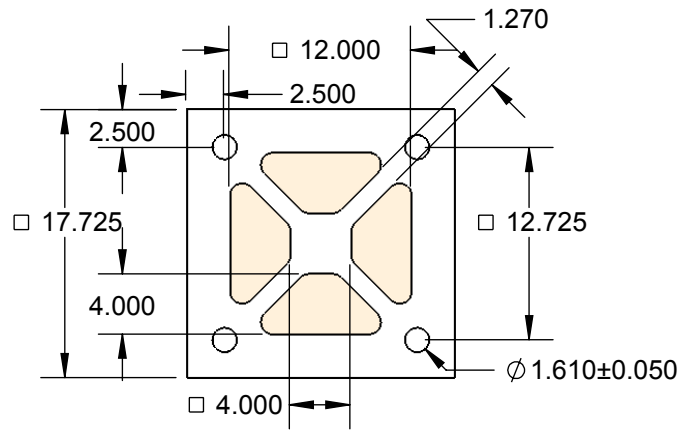
## Description: Socket Assy, Insulation Plate

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

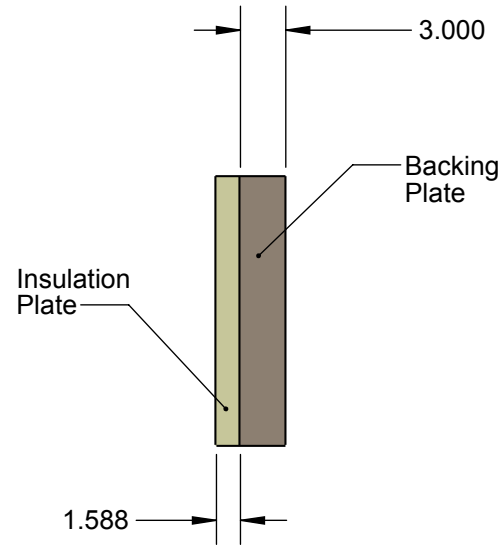
**Tolerances:** Hole diameters  $\pm 0.03\text{mm}$  [ $\pm 0.001"$ ], Pitches (from true position)  $\pm 0.025\text{mm}$  [ $\pm 0.001"$ ], substrate thickness tolerance  $\pm 10\%$ , all other tolerances  $\pm 0.13\text{mm}$  [ $\pm 0.005"$ ] unless stated otherwise. Materials and specifications are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

PART NUMBER	Description	Material
M2423	Socket Base SBT BGA 10x10	7075-T6 Alumium Alloy
P8372A	Floating Guide SBT-BGA 10mmX8mm, 0.5 pitch, 19 X15 array	Semitron MDS 100
P8370A	Middle guide for SBT-BGA 10mmX8mm, 0.5 pitch, 19 X15 array	Semitron MDS 100
P8371A	Bottom Guide SBT-BGA 10mmX8mm, 0.5 pitch, 19 X15 array	Semitron MDS 100
P13041	Test board, daisy chain, for 8x10mm body, 0.5mm, 19x15 array	FR4
P5196A	Insulation Plate	FR4 High temp
M2902	Backing Plate, 17.73 X 17.73 x 3mm	7075-T6 Aluminum Alloy
M2763	Socket Lid	7075-T6 Aluminum Alloy
M2764	Compression Plate	7075-T6 Aluminum Alloy
P-P196A	SBT Pin, SBT-BGA 0.5mm-0.8mm	
BGA196A	BGA test chip, 8x10mm body, 0.5mm, 19x15 array	
M1146	Compression Screw M6x1	Stainless Steel (18-8)
R2823	#0-80 Shoulder Screw, 0.062" thread length	Stainless Steel (303)
R2465	Dowel pin, 1/32" x 5/16", SS	Chrome Stainless Steel
R2145	Floating Guide Spring	Alloy Steel (SS)
R3200	#0-80, 90 deg., head pin guide screw, Peek material 5.5715mm overall Length	PEEK unfilled
R3213	#0-80 x 0.5, SH Cap Screw	18-8 Stainless Steel
R1492	Washer, #0 x .025", Nylon	Nylon 6/6

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		ENG: S. Faiz	DRAWN BY: M. Raske	SCALE: 3:1
		FILE: SBT-BGA-7019 Dwg	DATE: 02/25/2014	



**Backing and Insulation Plate**  
Scale 2:1




**SBT PIN**  
Scale 16:1

Rev	Date	Initials	Description
B	2/5/15	RP/MR	P-P196A was P-P149A, R3200 was R1391

### 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-7019 Drawing</b> ©2015 Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: Material <not specified> Finish: Weight: 9.43	STATUS: Released	SHEET: 5 OF 5	REV. B
		ENG: S. Faiz	DRAWN BY: M. Raske	SCALE: 3:1
		FILE: SBT-BGA-7019 Dwg	DATE: 02/25/2014	