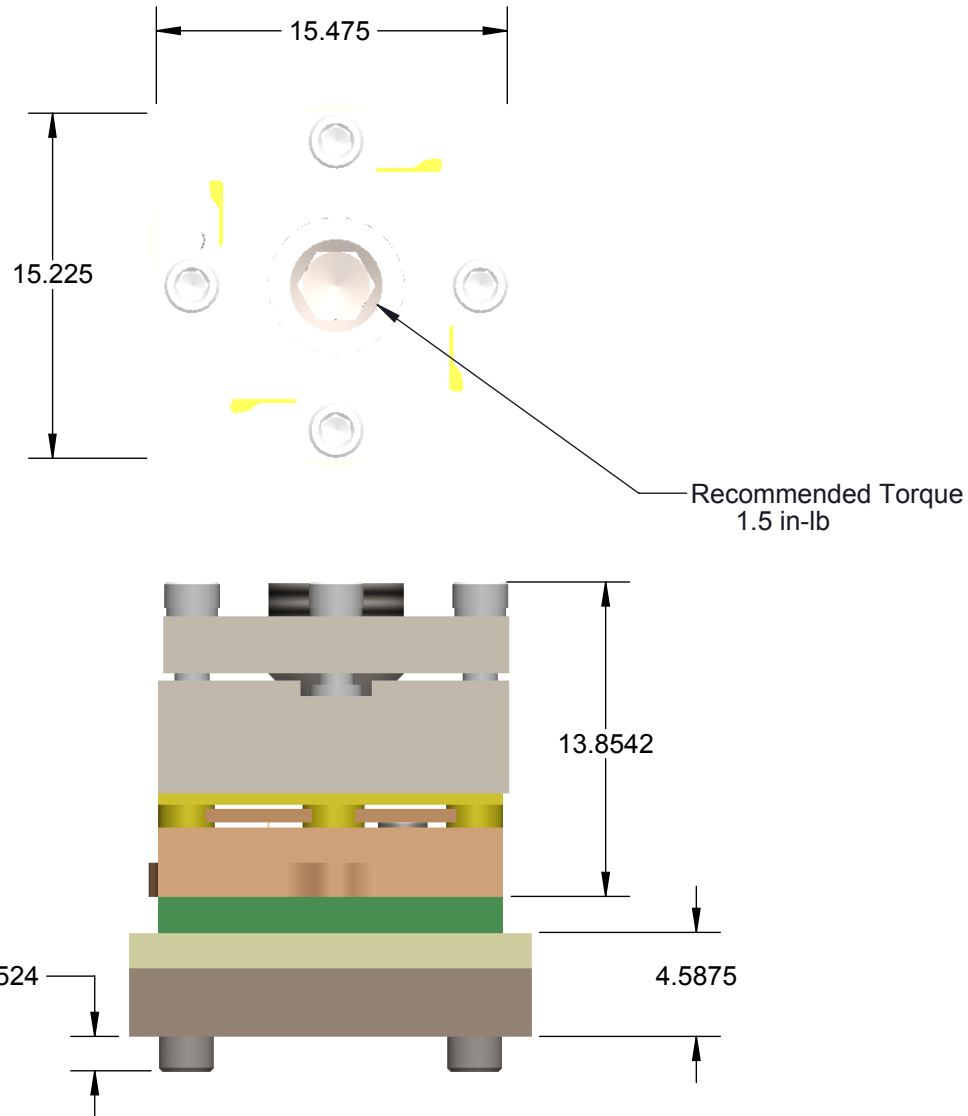
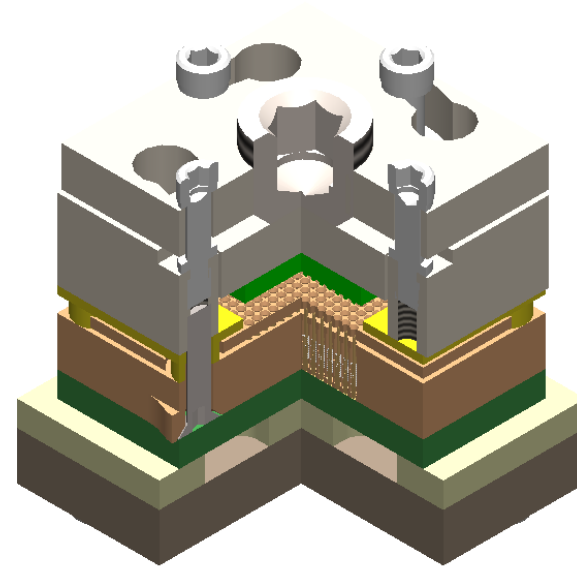


SBT-BGA DIRECT MOUNT, SOLDERLESS SOCKET FOR BURN-IN AND TEST APPLICATIONS




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

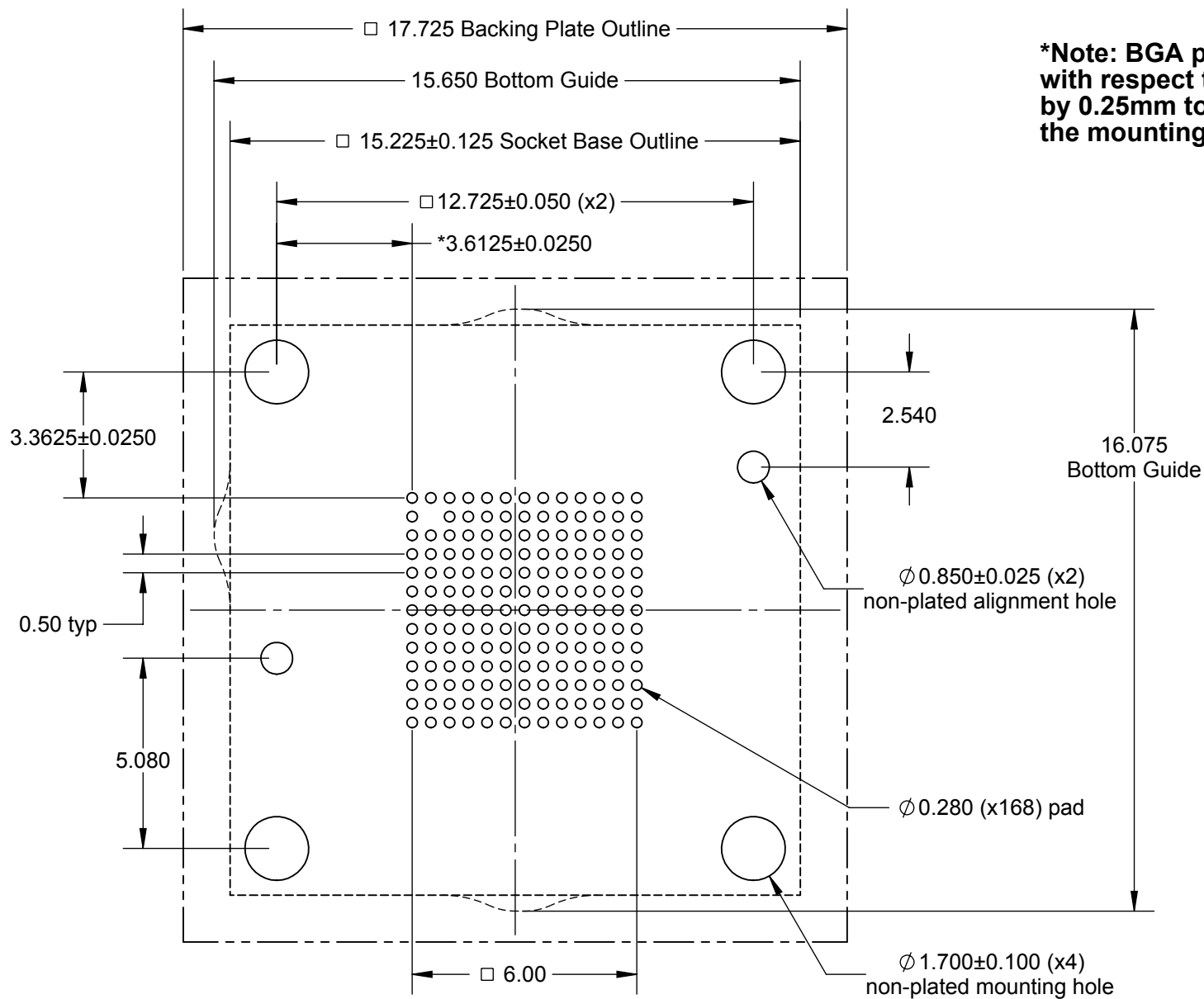


Description: SBT-BGA168 Socket for 7mm IC, 13x13 array, 0.5mm pitch

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.

SBT-BGA-7014 Drawing  Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: Material <not specified> Finish: Weight: 10.26	STATUS: Released ENG: M.A. Fedde FILE: SBT-BGA-7014 Dwg	SHEET: 1 OF 5 DRAWN BY: M. Raske DATE: 9/12/13	REV. B SCALE: 3:1
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***Note: BGA pattern is not symmetrical with respect to the mounting holes. It is offset by 0.25mm to the right of center with respect to the mounting holes.**

Description: Recommended PCB Layout

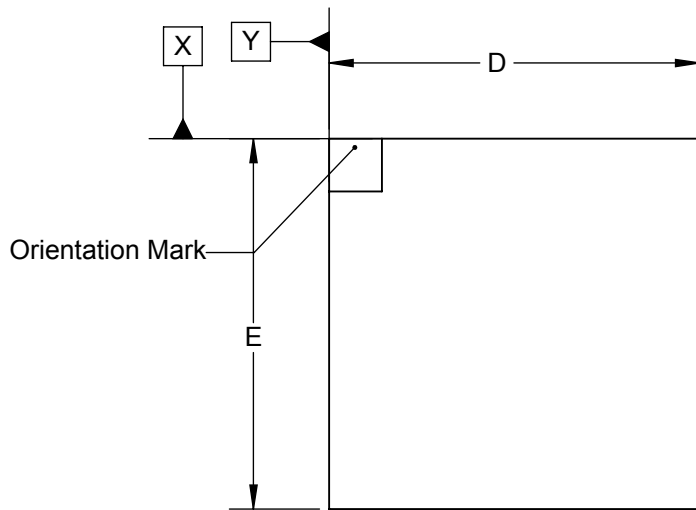
Primary dimension units are millimeters, Secondary dimension units are [inches], Weight is in grams.

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.

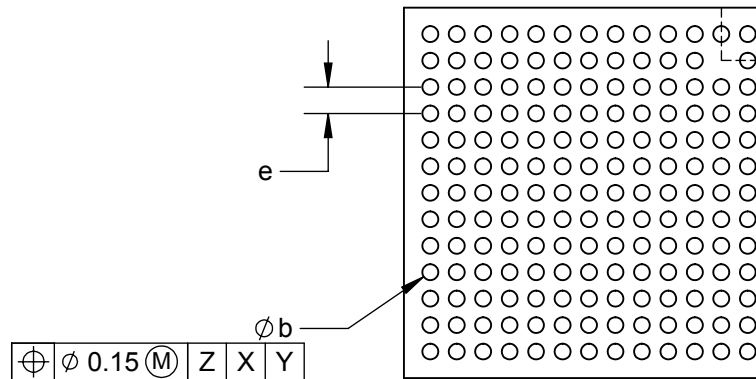
Target PCB Recommendations
 Total thickness: 1.6mm min.
 Plating: Gold or Solder finish
 PCB Pad height: same or higher than solder mask

SBT-BGA-7014 Drawing  Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: Material <not specified> Finish: Weight: 10.26	STATUS: Released ENG: M.A. Fedde FILE: SBT-BGA-7014 Dwg	SHEET: 2 OF 5 DRAWN BY: M. Raske DATE: 9/12/13	REV. B SCALE: 6:1

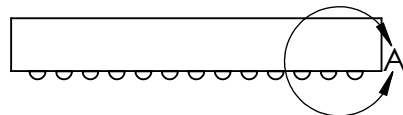
Ironwood Package Code: BGA168J



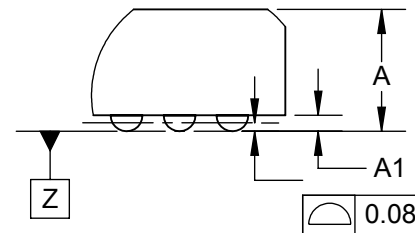
TOP VIEW



BOTTOM VIEW



SIDE VIEW



DETAIL A
SCALE 14 : 1


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 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.

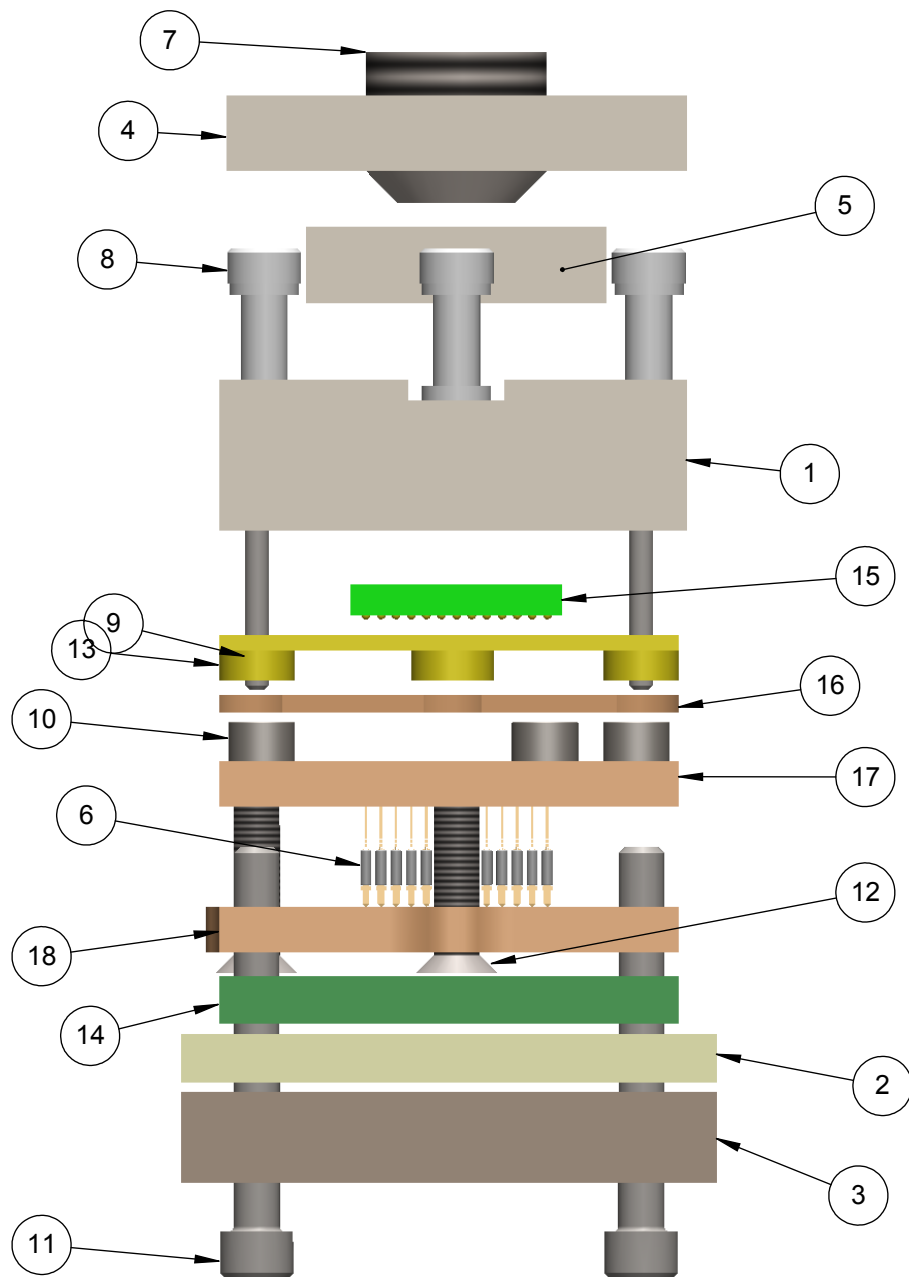
Description: Compatible BGA

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.

DIM	Minimum	Maximum
A	---	1.20
A1	0.15	0.25
b	0.25	0.35
D	7.00 BSC	
E	7.00 BSC	
e	0.50 BSC	
ARRAY	13 X13	
PIN COUNT	168	

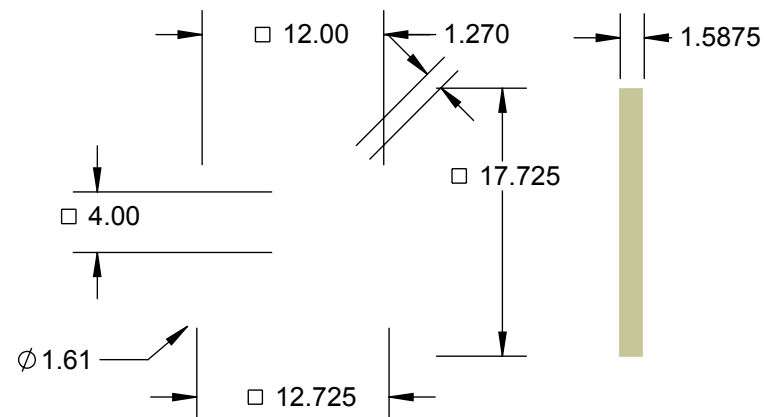
 SBT-BGA-7014 Drawing Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: Material <not specified> Finish: Weight: 10.26	STATUS: Released	SHEET: 3 OF 5	REV. B
		ENG: M.A. Fedde	DRAWN BY: M. Raske	SCALE: 7:1
		FILE: SBT-BGA-7014 Dwg	DATE: 9/12/13	



ITEM NO.	Description	Material
1	Socket Base SBT BGA 10x10	7075-T6 Alumium Alloy
2	Insulation Plate	FR4 High temp
3	Backing Plate, 17.73 X 17.73 x 3mm	7075-T6 Aluminum Alloy
4	Socket Lid	7075-T6 Aluminum Alloy
5	Compression Plate	7075-T6 Aluminum Alloy
6	SBT Pin, SBT-BGA 0.5mm-0.8mm	
7	Compression Screw M6x1	Stainless Steel (18-8)
8	#0-80 Shoulder Screw, 0.062" thread length	Stainless Steel (303)
9	Dowel pin, 1/32" X 1/4", SS	Stainless Steel (18-8)
10	Floating Guide Spring	Alloy Steel (SS)
11	#0-80 x 0.5, SH Cap Screw	Alloy Steel
12	#0-80X0.25", 90 deg., head pin guide screw, Peek material	PEEK unfilled
13	SBT-BGA IC guide 7x7mm	Torlon 4203
14	PCB BGA144 0.5mm pitch	FR4 High temp
15	Test Chip 7x7mm 13x13 0.5mm	FR4 High temp
16	Floating Guide SBT-BGA 7mm, 0.5mm pitch 13x13 array	Semitron MDS 100
17	SBT-BGA Middle Guide 7x7mm, 0.5mm pitch, 13x13 array	Semitron MDS 100
18	SBT-BGA Bottom guide 7x7mm, 0.5mm Pitch, 13x13 array	Semitron MDS 100



SBT PIN
16 :1 SCALE



Insulation Plate
2:1 Scale

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.

SBT-BGA-7014 Drawing		STATUS: Released		SHEET: 4 OF 5		REV. B	
Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com		Material: Material <not specified> Finish: Weight: 10.26		ENG: M.A. Fedde		DRAWN BY: M. Raske	
		FILE: SBT-BGA-7014 Dwg		DATE: 9/12/13		SCALE: 4:1	

Rev	Date	Initials	Description
B	2/10/15	RP/MR	P-P196A was P-P149A (updated spring pin type)

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.

 SBT-BGA-7014 Drawing ©2015 Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: Finish: Weight:	STATUS: Released	SHEET: 5 OF 5	REV. B
		ENG: M.A. Fedde	DRAWN BY: M. Raske	SCALE: 3:1
		FILE: SBT-BGA-7014 Dwg	DATE: 9/12/13	