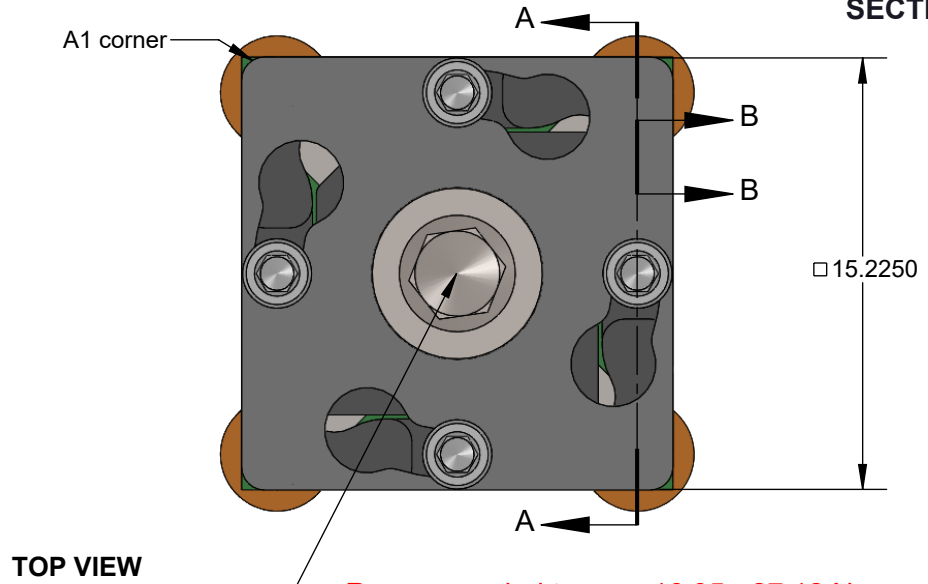


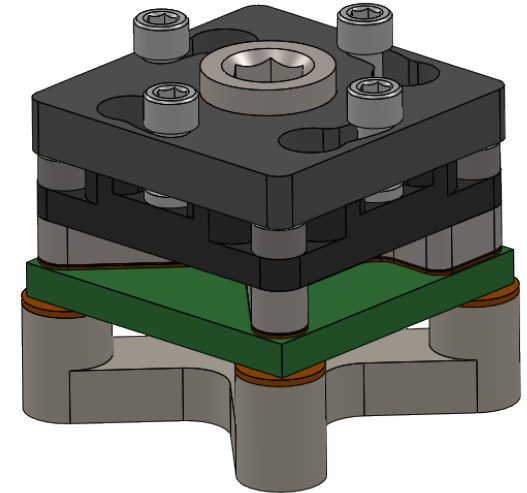
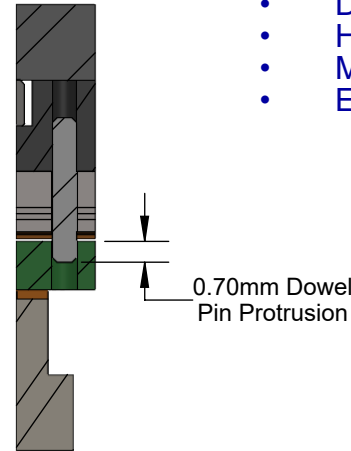
# GT Elastomer socket - Direct mount, solderless

## Features

- Direct mounts to target PCB with hardware.
- High speed, reliable connection
- Minimum real estate required
- Easily removable swivel socket lid

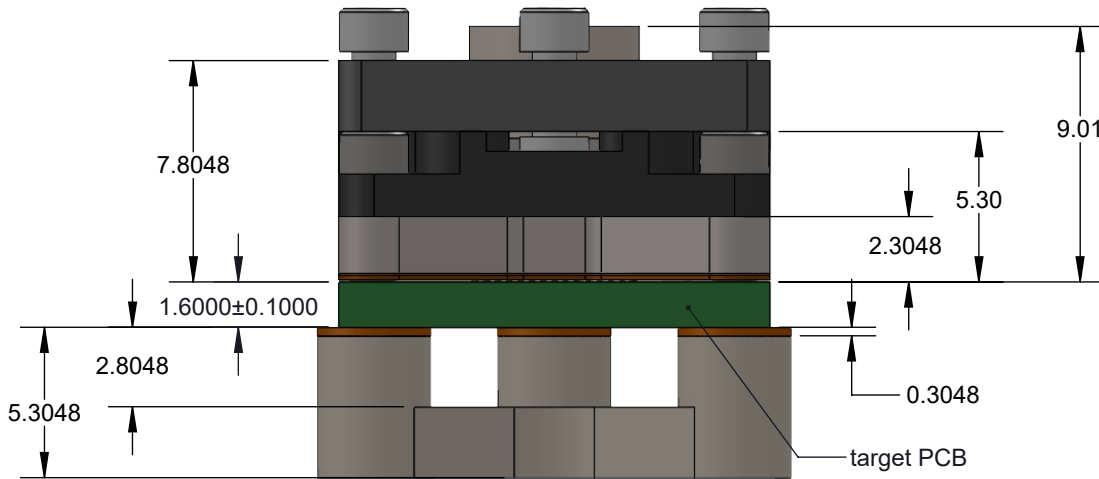


SECTION B-B

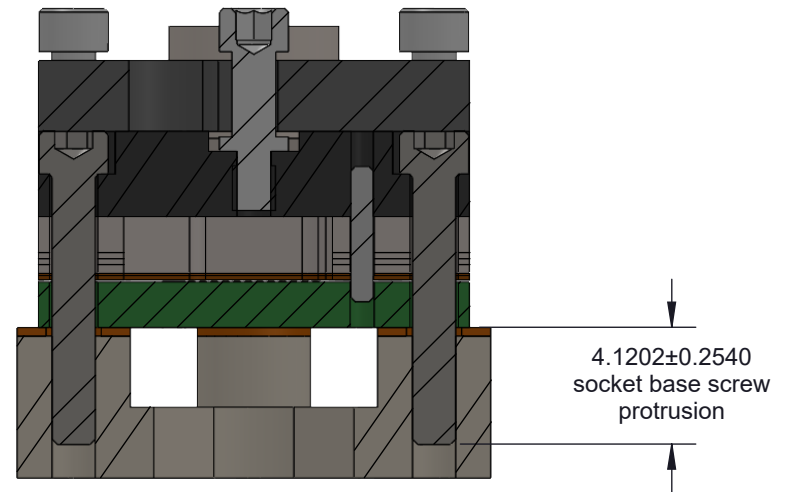


Recommended torque: 16.95 - 27.12 N-cm  
[1.5 - 2.4 lb-in]

**Remove torque when device is not under test**



FRONT VIEW




SECTION A-A

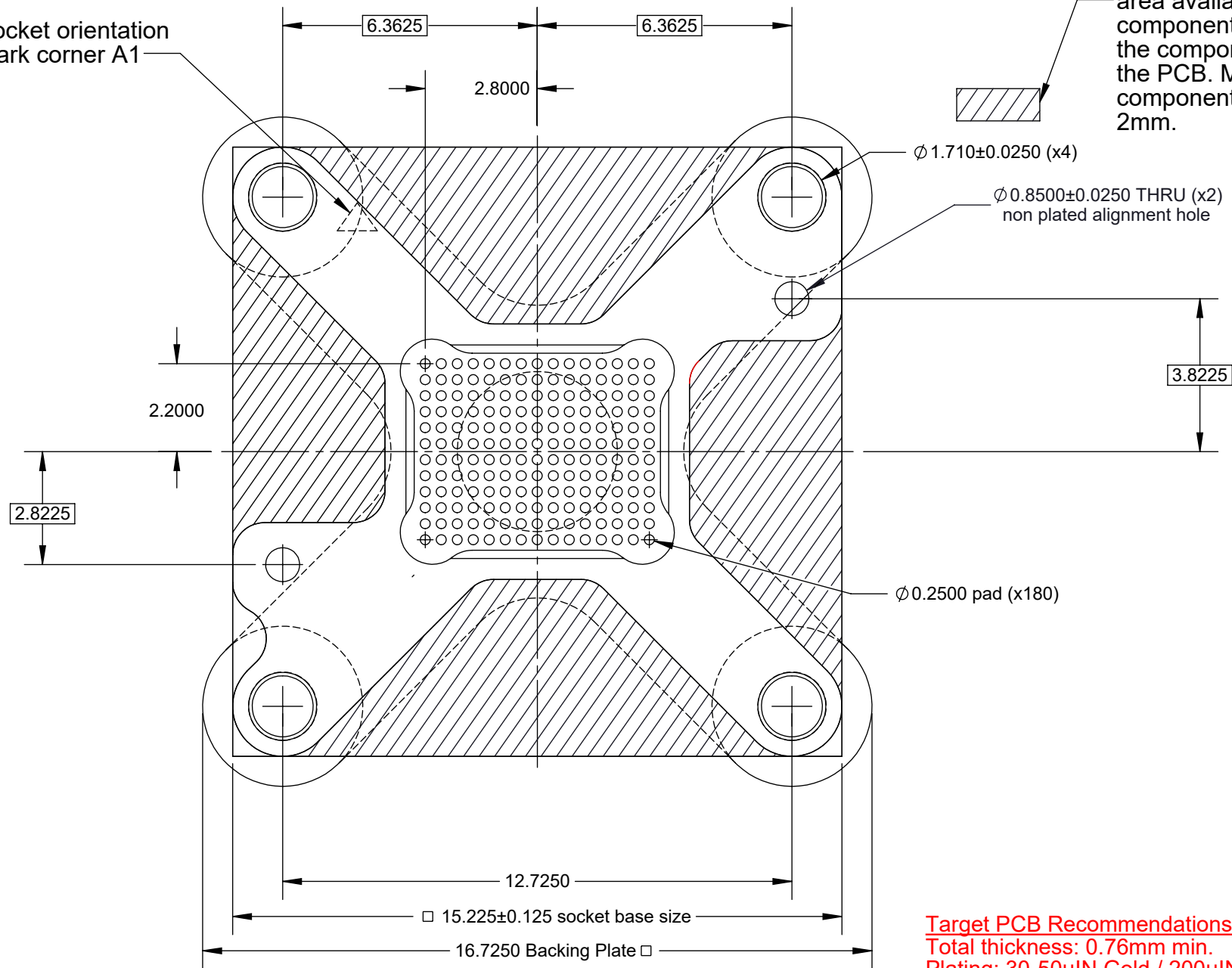
## Description: GT-BGA180, 6.066x4.866mm 15x12

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>GT-BGA-2046 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 6.55	STATUS: Released ENG: E. Smolentseva FILE: GT-BGA-2046 Dwg	SHEET: 1 OF 5 DRAWN BY: M. Raske DATE: 05/12/2016	REV. A SCALE: 3.75:1

Socket orientation mark corner A1



area available for component placement on the component side of the PCB. Maximum component height is 2mm.

Ø 1.710±0.0250 (x4)

Ø 0.8500±0.0250 THRU (x2)  
non plated alignment hole

3.8225

2.2000

2.8225

Ø 0.2500 pad (x180)

12.7250

□ 15.225±0.125 socket base size


16.7250 Backing Plate □

**Target PCB Recommendations**  
**Total thickness: 0.76mm min.**  
**Plating: 30-50µIN Gold / 200µIN electroless Nickel or Solder finish.**  
**No solder mask within 0.03" of contact pads.**  
**Solder mask height is less than 0.003" over the pads surface.**

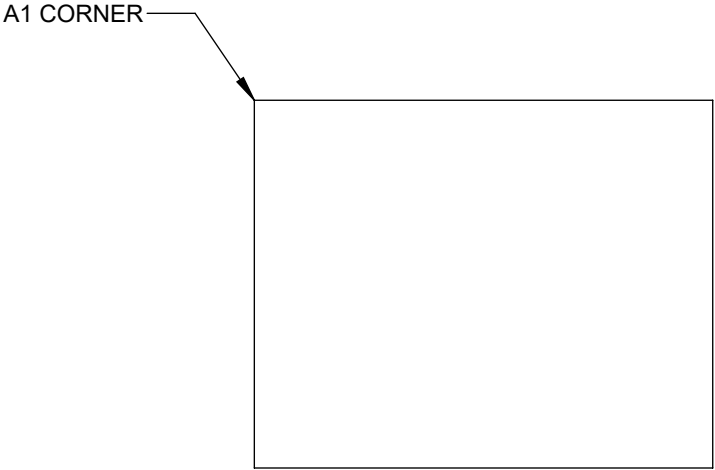
### Description: Recommended PCB Layout

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

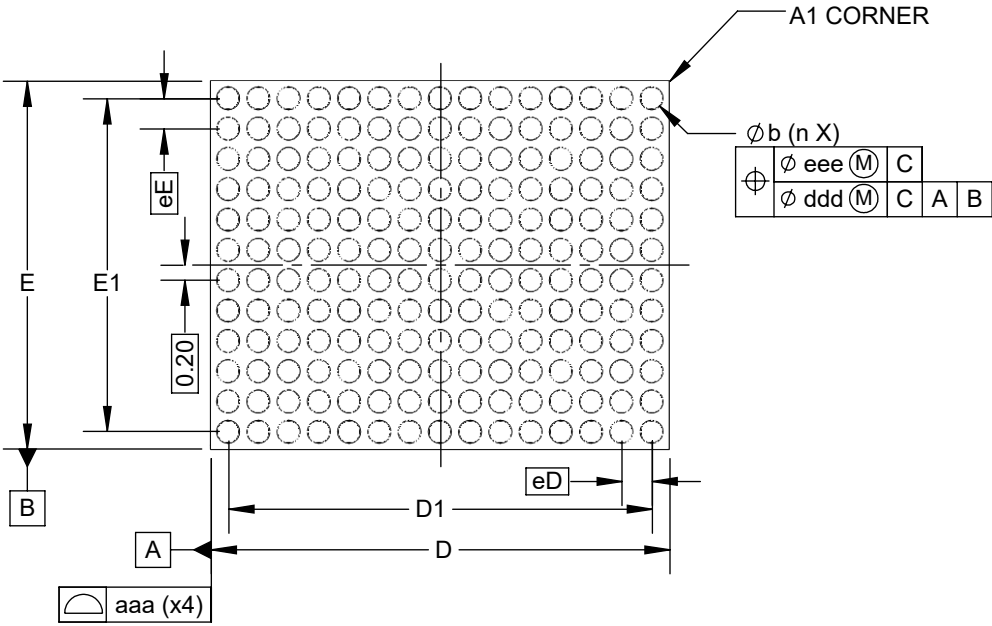
Tolerances: Hole diameters ±0.0254mm [±0.001"]. Pitches (from true position) ±0.0762mm [±0.003"], substrate thickness tolerance ±10%, all other tolerances ±0.127mm [±0.005"] unless stated otherwise. Materials and specifications are subject to change without notice.

 <p>©2015 Ironwood Electronics, Inc.          Tele: (800) 404-0204          www.ironwoodelectronics.com</p>	<p><b>GT-BGA-2046 Drawing</b></p>	<p>Material: N/A          Finish: N/A          Weight: 6.55</p>	<p>STATUS: Released          ENG: E. Smolentseva          FILE: GT-BGA-2046 Dwg</p>	<p>SHEET: 2 OF 5          DRAWN BY: M. Raske          DATE: 05/12/2016</p>	<p>REV. A          SCALE: 7:1</p>
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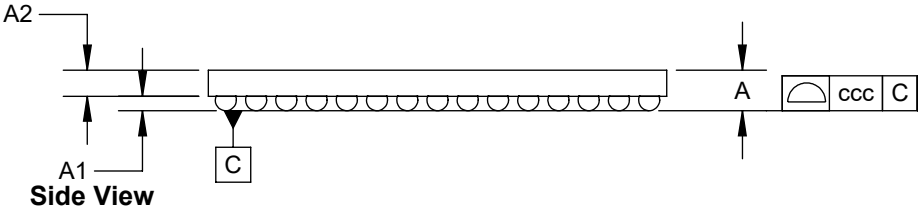
Ironwood Package code BGA180D



Top View



Bottom View




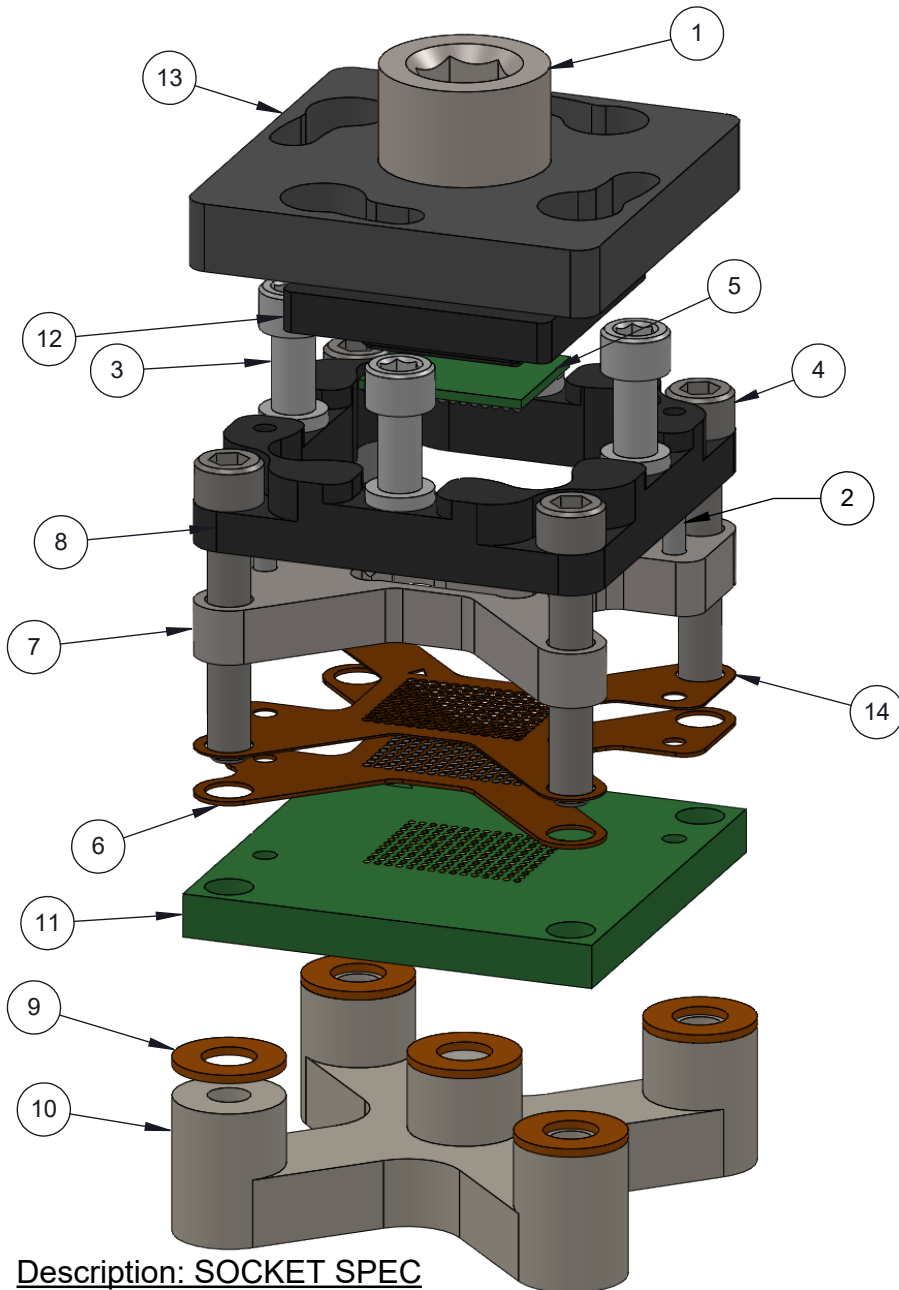
Side View

	MIN	NOM	MAX
A	0.520	0.560	0.600
A1	0.160		0.220
A2	0.345±0.025		
D	6.066 BSC		
E	4.866 BSC		
b	0.240	0.270	0.300
eD	0.400		
eE	0.400		
n	180		
D1	5.600 BSC		
E1	4.400 BSC		
aaa	0.030		
ccc	0.050		
ddd			
eee			

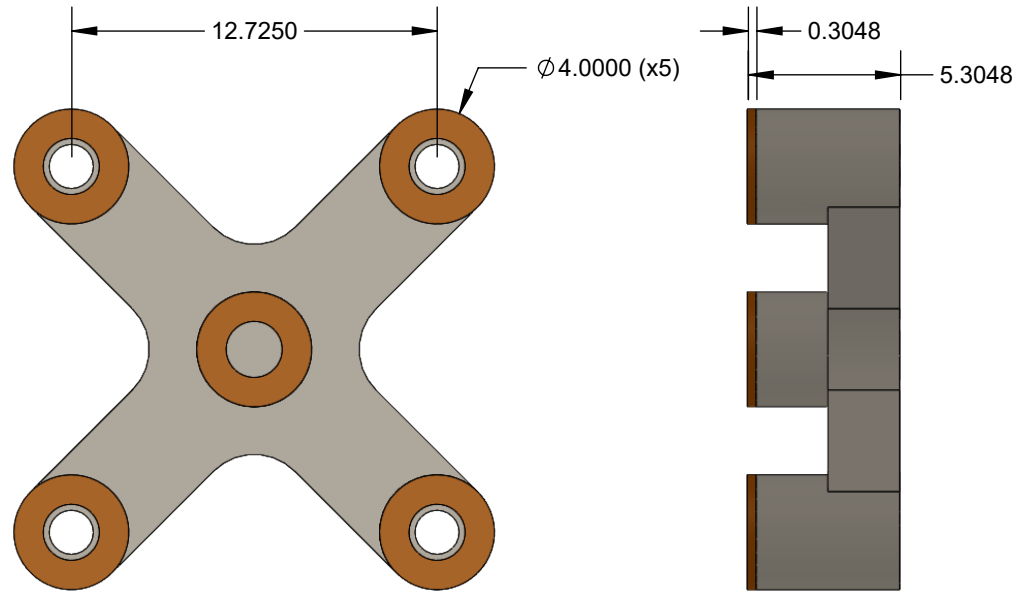
Description: BGA

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.

 ©2015 Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	GT-BGA-2046 Drawing	Material: N/A Finish: N/A Weight: 6.55	STATUS: Released	SHEET: 3 OF 5	REV. A
			ENG: E. Smolentseva	DRAWN BY: M. Raske	SCALE: 10:1
			FILE: GT-BGA-2046 Dwg	DATE: 05/12/2016	



ITEM NO.	DESCRIPTION	Material
1	Compression Screw M6x1	Stainless Steel (18-8)
2	Dowel Pin, 1/32" x 3/16", SS	Chrome Stainless Steel
3	#0-80 Shoulder Screw, 1.59mm thread length	Stainless Steel (303)
4	#0-80 X .375 LG, SOC HD CAP SCREW, ALLOY STL, BLK OXIDE	Alloy Steel
5	Customer's device	FR4 Standard
6	GT elastomer for 6.066x4.866 15x12 BGA180	N/A
7	IC Guide 6.066x4.866mm	PEEK
8	Socket base	7075-T6 Aluminum Alloy
9	Insulating washer, 4mm OD.	Kapton Polyimide/Cirlex
10	10x10mm 5 post backing plate	7075-T6 Aluminum Alloy
11	Customer's target PCB	Material <not specified>
12	Compression Plate	7075-T6 Aluminum Alloy
13	Socket Lid	7075-T6 Aluminum Alloy
14	Ball Guide 15x12 0.4mm pitch	Kapton Polyimide/Cirlex




**Description: SOCKET SPEC**

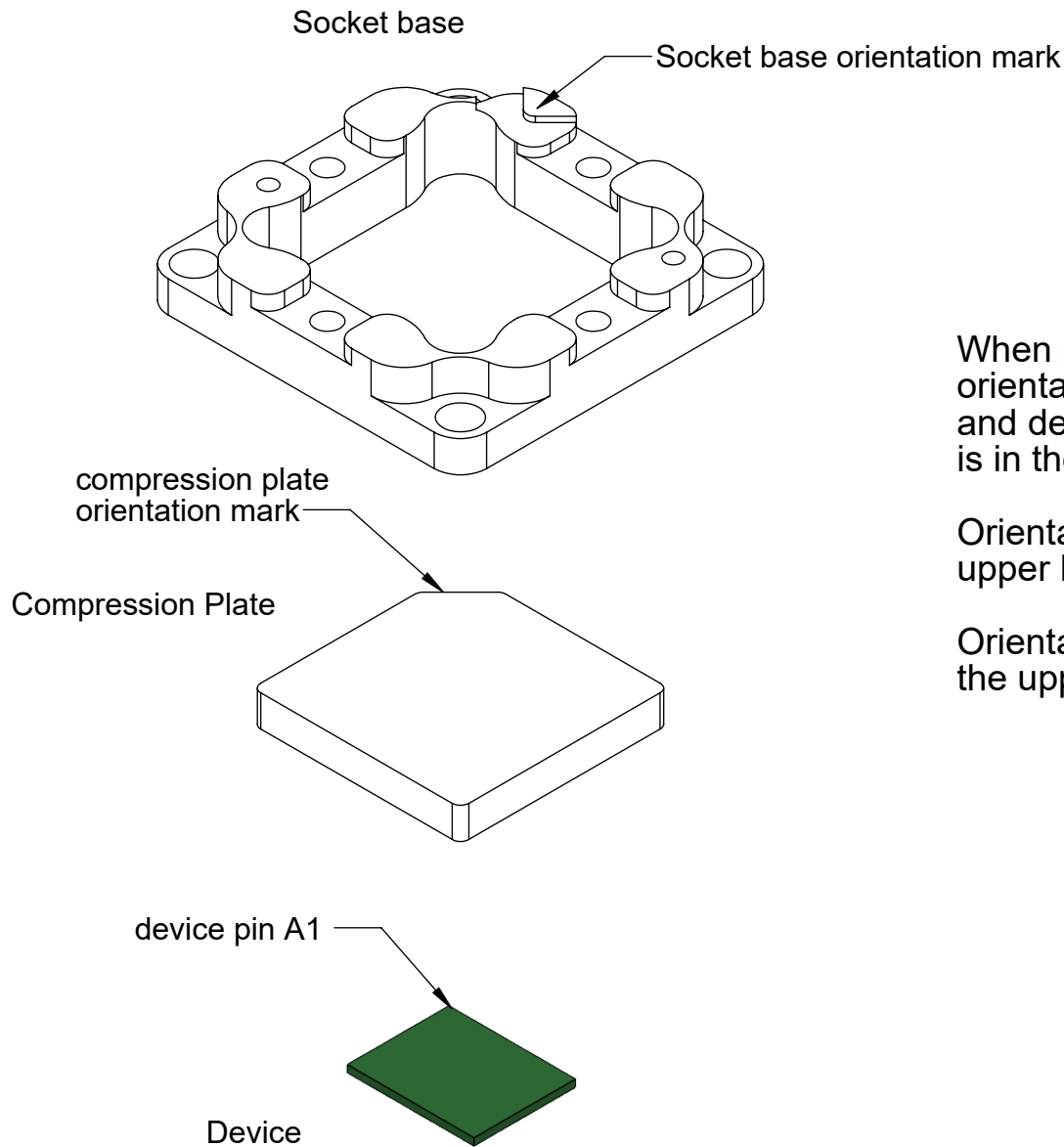
Primary dimension units are millimeters, Secondary dimension units are [inches], Weight is in grams.

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.

**Backing and insulation plate specification**

Note: Backing plate holes are tapped to accept 0-80 screws.

 <p><b>GT-BGA-2046 Drawing</b> ©2015 Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com</p>	<p>Material: N/A Finish: N/A Weight: 6.55</p>	<p>STATUS: Released ENG: E. Smolentseva FILE: GT-BGA-2046 Dwg</p>	<p>SHEET: 4 OF 5 DRAWN BY: M. Raske DATE: 05/12/2016</p>	<p>REV. A SCALE: 3.8:1</p>
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When placing BGA device inside the socket, note orientation of the socket base, compression plate and device. Pin A1 orientation mark on the device is in the upper left corner if looking from the top.

Orientation mark on the socket base is in the upper left corner if looking from the top.

Orientation mark on the compression plate is on the upper left corner if looking from the top.

## Description: User instructions

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.

Rev	Date	Initials	Description
A	9/2/2015	JV	Original
STATUS: Released			SHEET: 5 OF 5
ENG: E. Smolentseva			DRAWN BY: M. Raske
FILE: GT-BGA-2046 Dwg			DATE: 05/12/2016
			REV. A
			SCALE: 4:1

### GT-BGA-2046 Drawing



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

Material: N/A  
Finish: N/A  
Weight: 6.55