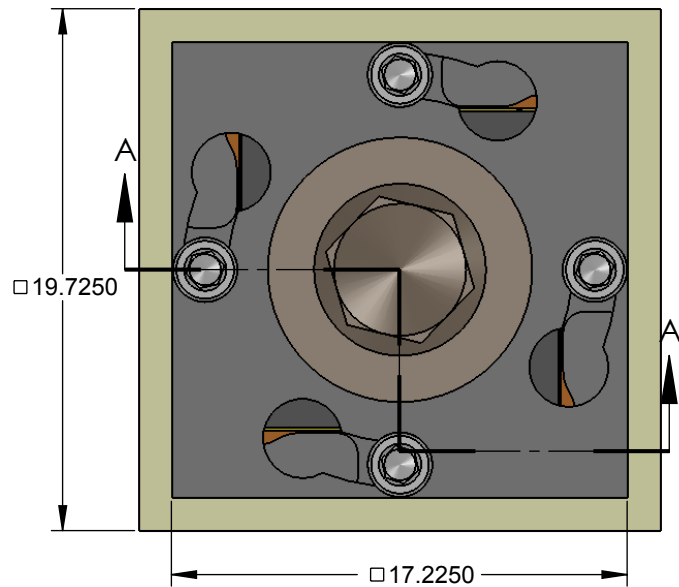


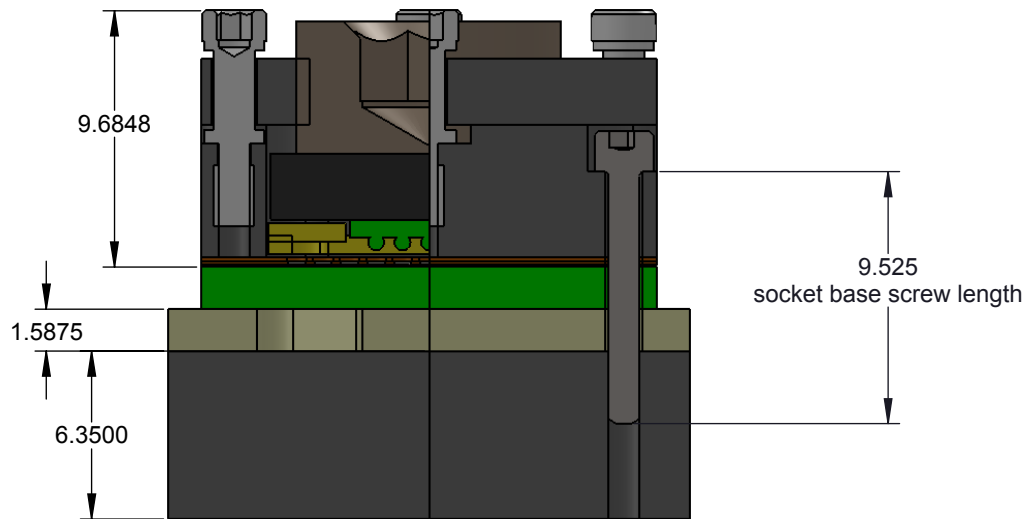
# GHz BGA SOCKET - direct mount, solderless

## Features

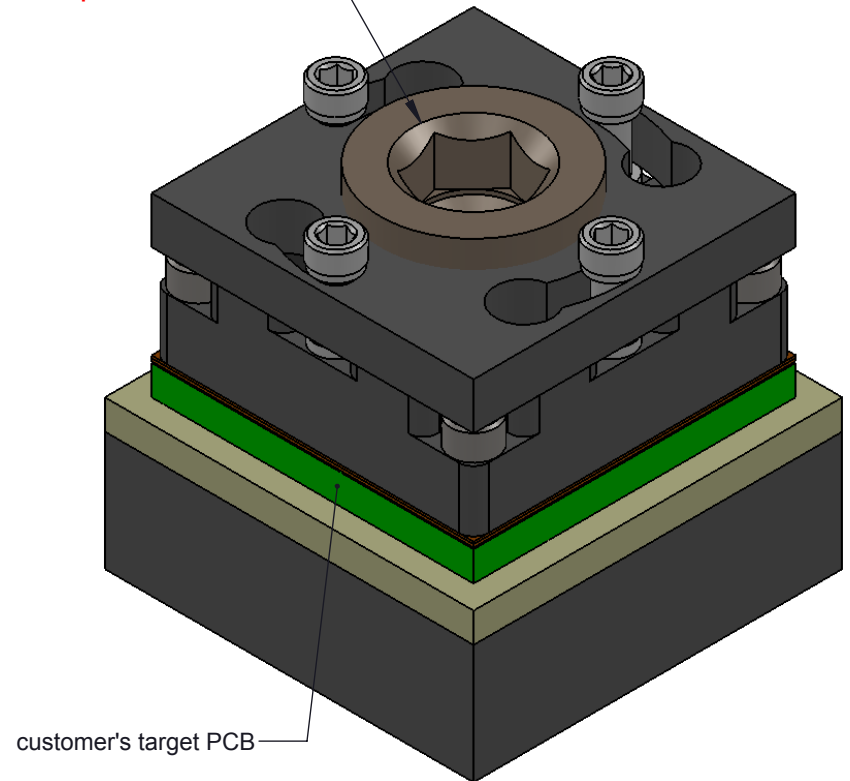
- Directly mounts to target PCB (needs tooling holes) with hardware
- High speed reliable elastomer connection
- Minimum real estate required
- Compression plate distributes forces evenly
- Easily removable swivel socket lid



Recommended torque = 2-3 in-lbs



SECTION A-A



## Description: GT-BGA 1mm pitch for 9x9mm IC with alternative positions

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.

### GT-BGA-2005 Drawing



Ironwood Electronics, Inc.  
Tele: (800) 404-0204  
www.ironwoodelectronics.com

Material: N/A  
Finish: N/A  
Weight: 14.20

STATUS: Released

ENG: S. Huang

FILE: GT-BGA-2005 Dwg

SHEET: 1 OF 5

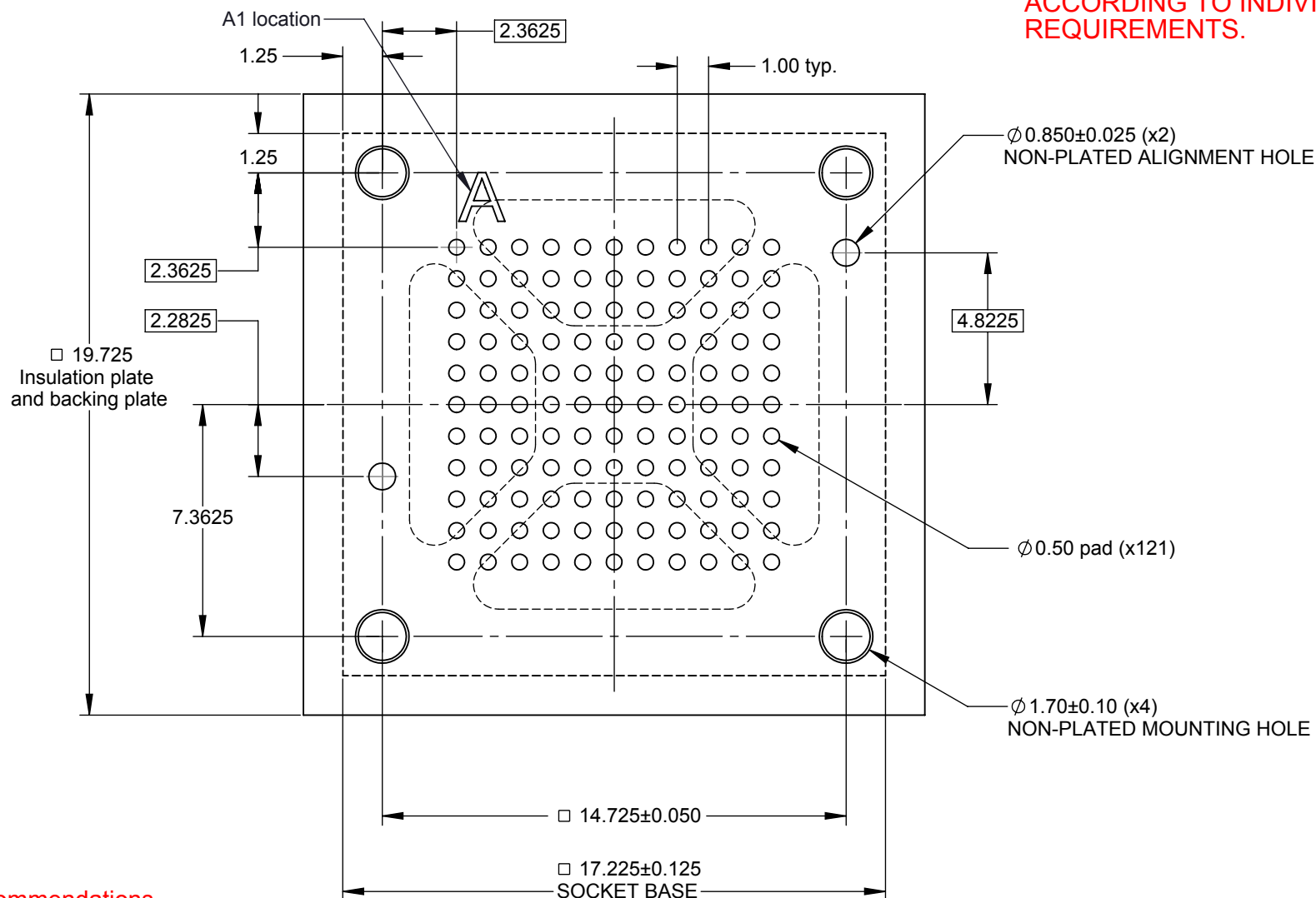
DRAWN BY: M. Raske

DATE: 1/7/2015

REV. A

SCALE: 3.5:1

**NOTE:**  
**FULL BGA PATTERN SHOWN.**  
**PLEASE ADJUST PATTERN**  
**ACCORDING TO INDIVIDUAL**  
**REQUIREMENTS.**



### Target PCB Recommendations

Total thickness: 0.864mm min.


Plating: Gold or Solder finish

PCB Pad height: same or higher than solder mask

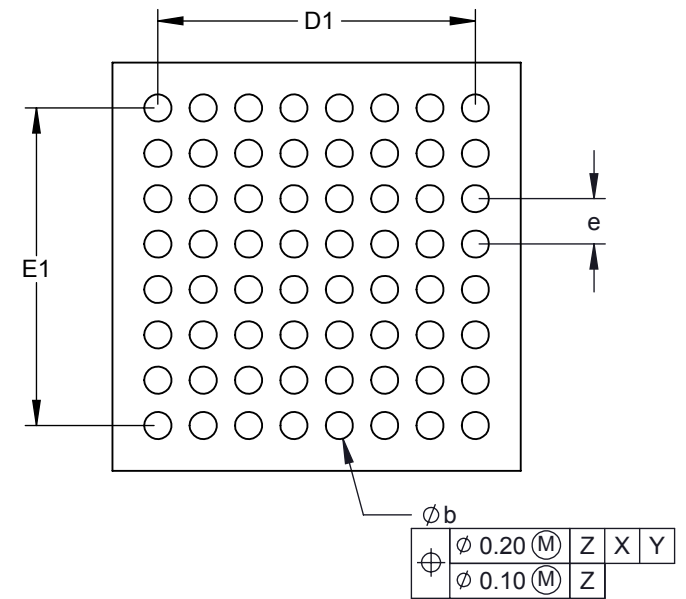
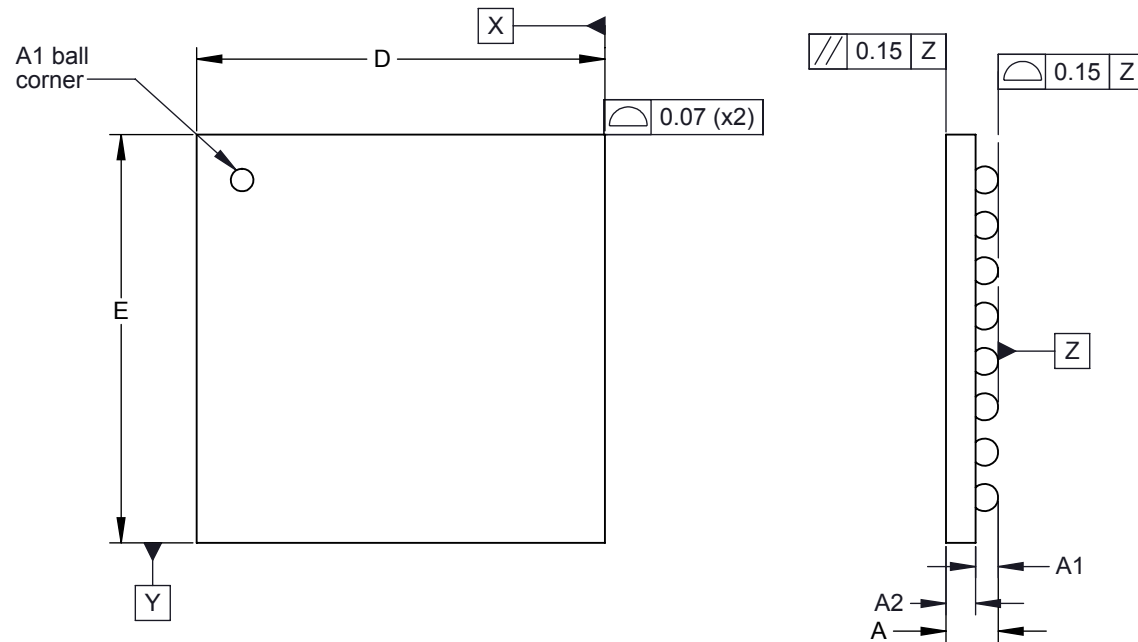
### Description: Recommended PCB layout

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>GT-BGA-2005 Drawing</b>  Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 14.20	STATUS: Released	SHEET: 2 OF 5	REV. A
		ENG: S. Huang	DRAWN BY: M. Raske	SCALE: 5:1
		FILE: GT-BGA-2005 Dwg	DATE: 1/7/2015	

## Ironwood Package Code: BGA64E



DIM	MIN	NOM	MAX
A	1.10	1.20	1.30
A1	0.40	0.50	0.60
A2	0.60	0.70	0.80
b	0.50	0.60	0.70
D	9.00 BSC		
E	9.00 BSC		
D1	7.00		
E1	7.00		
e	1.00 BSC		


Array: 8x 8

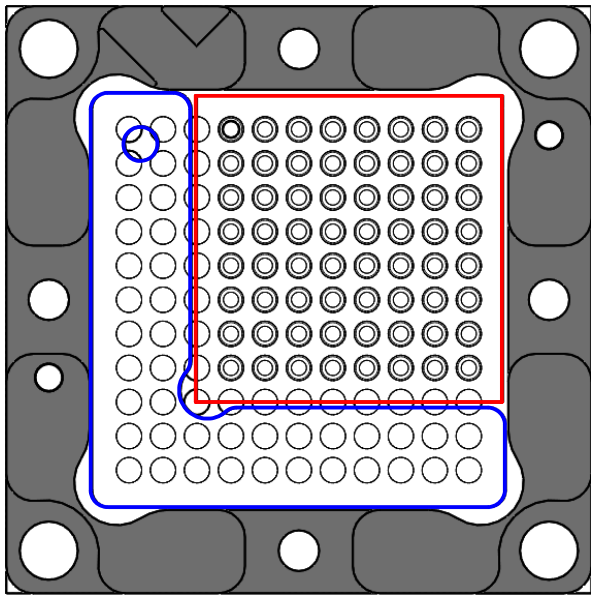
1. Dimensions are in millimeters.
2. Interpret dimensions and tolerances per ASME Y14.5M-1994.
3. Dimension b is measured at the maximum solder ball diameter, parallel to datum plane Z.
4. Datum Z (seating plane) is defined by the spherical crowns of the solder balls.
5. Parallelism measurement shall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

### Description: BGA

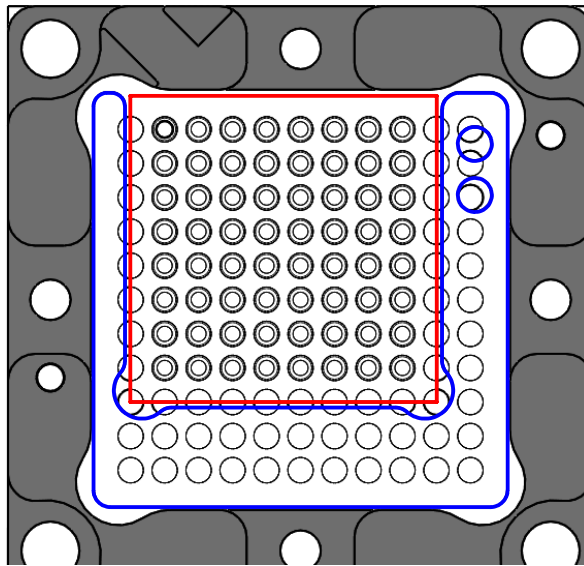
Primary dimension units are millimeters, Secondary dimension units are [inches], Weight is in grams.

**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.

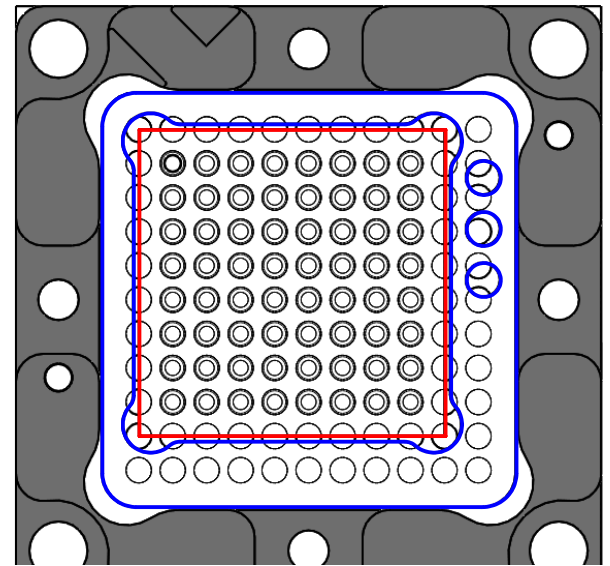
 <b>GT-BGA-2005 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 14.20	STATUS: Released	SHEET: 3 OF 5	REV. A
		ENG: S. Huang	DRAWN BY: M. Raske	SCALE: 6:1
		FILE: GT-BGA-2005 Dwg	DATE: 1/7/2015	



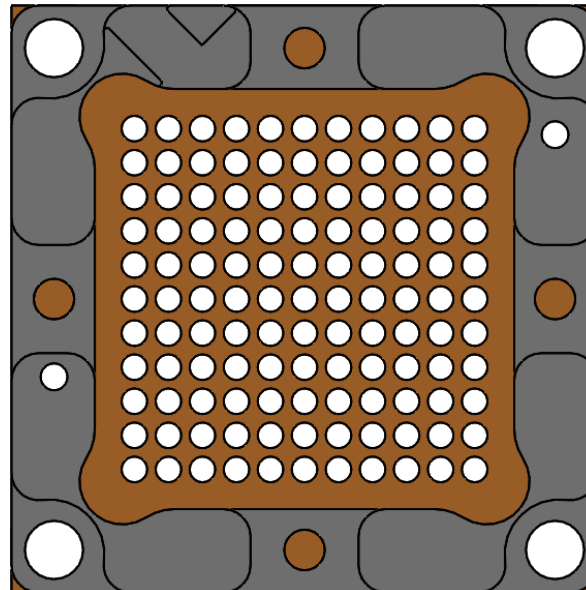
IC Guide I



IC Guide II



IC Guide III



Socket opening

## Description: IC guide 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.

### GT-BGA-2005 Drawing



Ironwood Electronics, Inc.  
Tele: (800) 404-0204  
www.ironwoodelectronics.com

Material: N/A  
Finish: N/A  
Weight: 14.20

STATUS: Released

ENG: S. Huang

FILE: GT-BGA-2005 Dwg

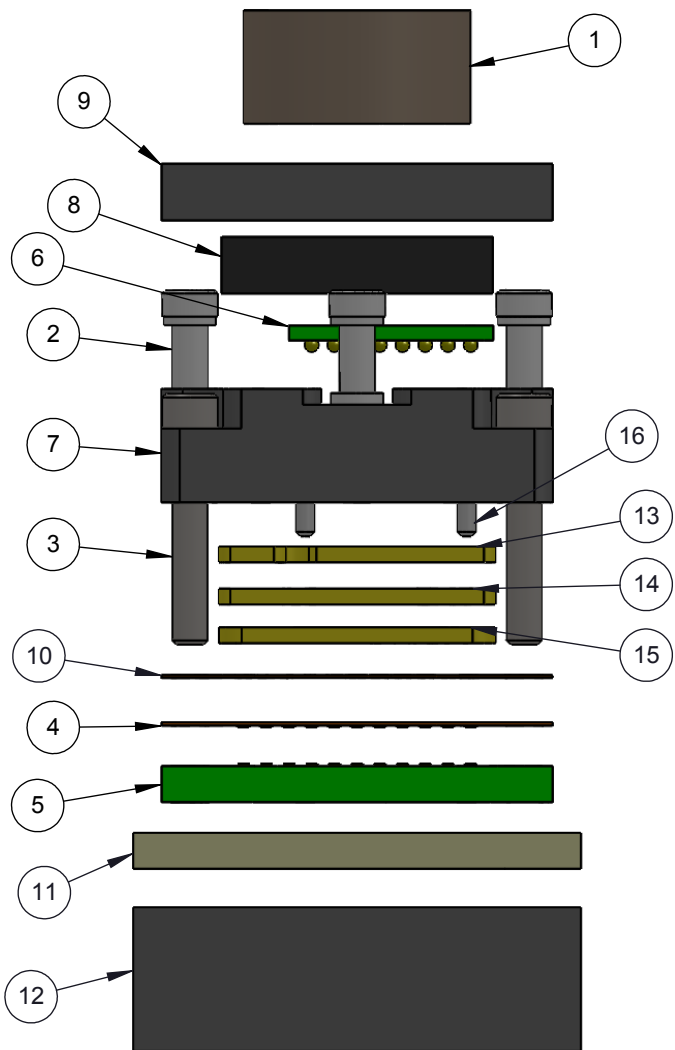
SHEET: 4 OF 5

DRAWN BY: M. Raske

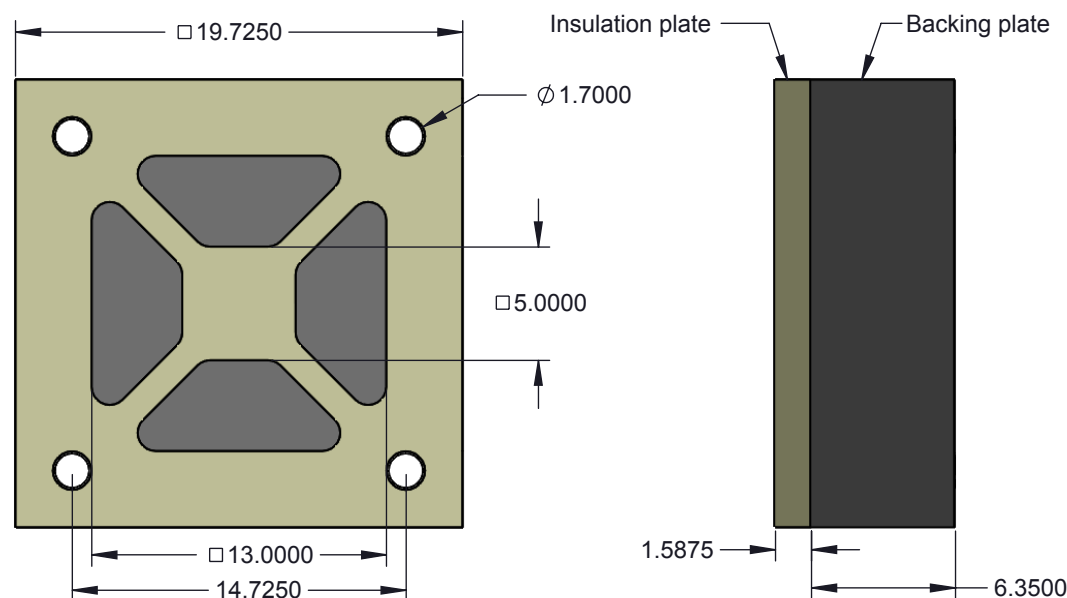
DATE: 1/7/2015

REV. A

SCALE: 4.5:1



ITEM NO.	DESCRIPTION	Material
1	Compression Screw M10	7075-T6 Alumium Alloy
2	#0-80 Shoulder Screw, 0.090" thread length	Stainless Steel (303)
3	#0-80 X .375 LG, SOC HD CAP SCREW, ALLOY STL, BLK OXIDE	Alloy Steel
4	GT Elastomer 1mm pitch 11x11 array	Conductive Elastomer
5	Customer's target PCB	FR4 High temp
6	Customer's IC 1mm pitch 9x9mm IC 8x8 array	FR4 High temp
7	GHz Socket Base 12mm IC	7075-T6 Aluminum Alloy
8	Compression Plate	7075-T6 Aluminum Alloy
9	Socket Lid 12mm	7075-T6 Alumium Alloy
10	Ball Guide 1mm pitch 11x11array	Kapton Polyimide/Cirlex
11	Insulation Plate	FR4 High temp
12	Backing Plate	7075-T6 Aluminum Alloy
13	IC guide 9x9mm IC Alternative position I	Torlon 4203
14	IC guide 9x9mm IC Alternative position II	Torlon 4203
15	IC guide 9x9mm IC Alternative position III	Torlon 4203
16	Alignment Pin 1/32" dia. x 1/8" lng	Chrome Stainless Steel




**Insulation plate and Backing Plate**

## Description: Skt, Insulation Plate, Pin Det

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>GT-BGA-2005 Drawing</b>		STATUS: Released	SHEET: 5 OF 5	REV. A
 Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A	ENG: S. Huang	DRAWN BY: M. Raske	SCALE: 3:1
	Finish: N/A	FILE: GT-BGA-2005 Dwg	DATE: 1/7/2015	
	Weight: 14.20			