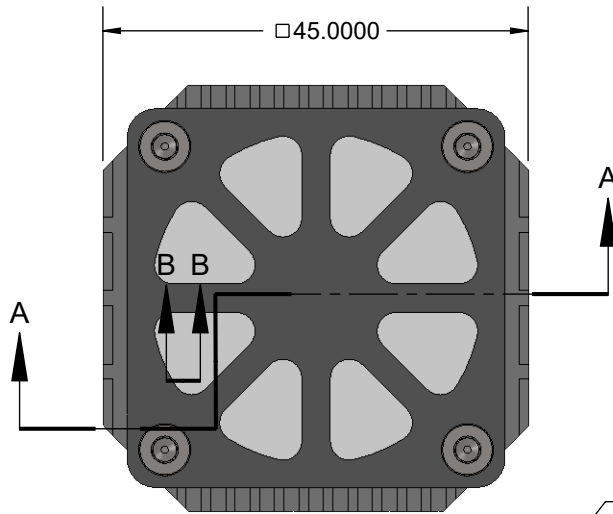


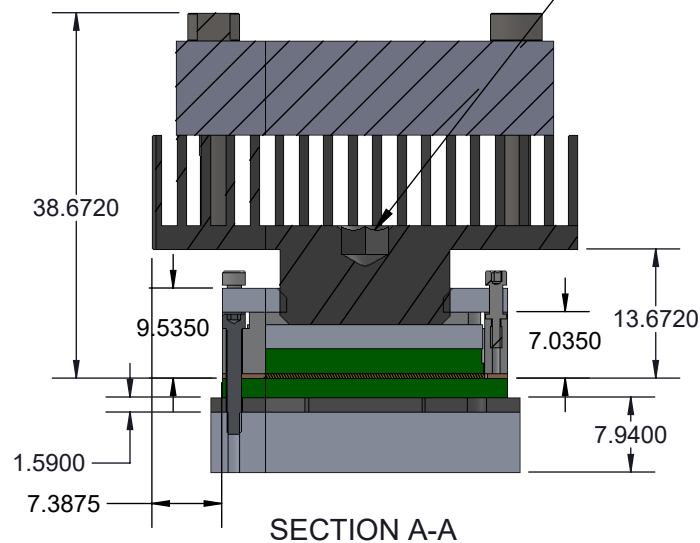
GHz BGA Socket - Direct mount, solderless

Features

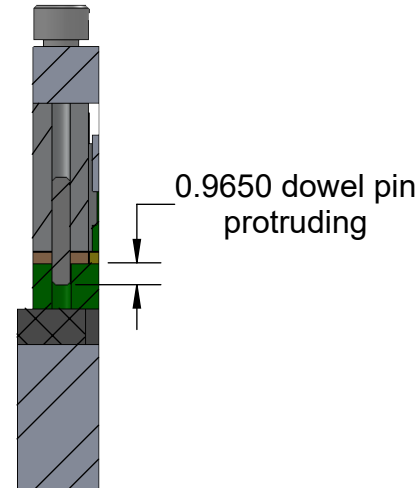
- Directly mounts to target PCB (needs tooling holes) with hardware
- High speed, reliable Elastomer connection
- Minimum real estate required
- Compression plate distributes forces evenly
- Ball guide prevents over compression of elastomer
- Easily removable swivel socket lid



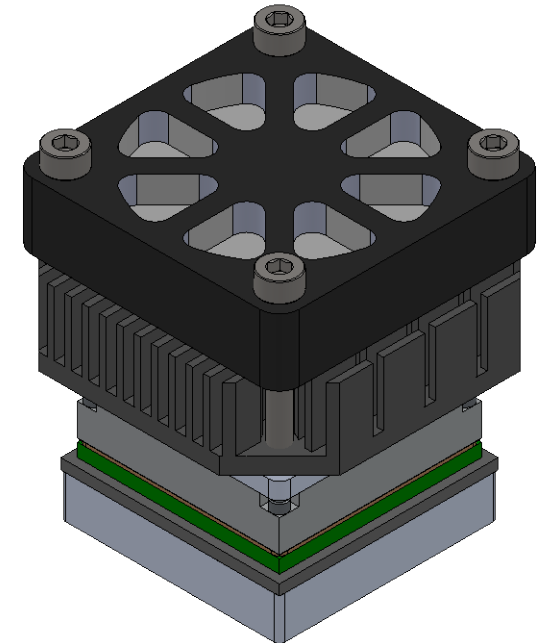
Required torque on heat sink is 113 Ncm (10 lbf in).
(see page 5 for instructions on assembly)



SECTION A-A




SECTION B-B
SCALE 3 : 1



Description: SG-BGA1086 25x25mm 37x37 0.65mm Heat Sink

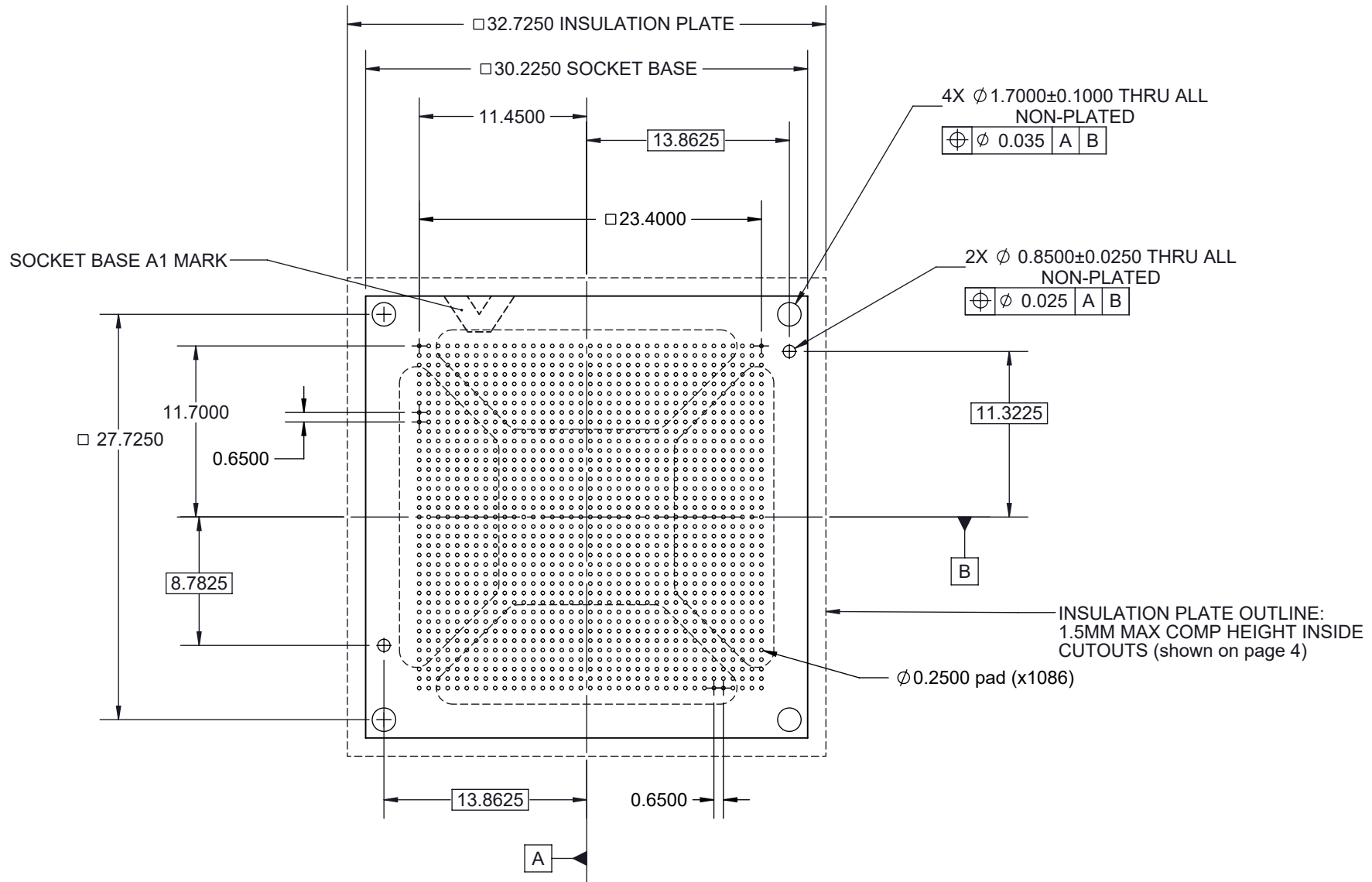
Primary dimension units are millimeters, Secondary dimension units are [inches], Weight is in grams.

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

 SG-BGA-9002 Drawing Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 89.51	STATUS: Released ENG: E. Smolentseva FILE: SG-BGA-9002 Dwg	SHEET: 1 OF 5 DRAWN BY: M. Raske DATE: 06/24/2016	REV. A SCALE: 5:4

Note: Full BGA pattern shown.
Please adjust pattern according to individual requirements.

***Note: BGA pattern is not symmetrical with respect to the mounting/alignment holes. Pattern is shifted 0.25 to right of center**



Description: Recommended PCB Layout

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


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

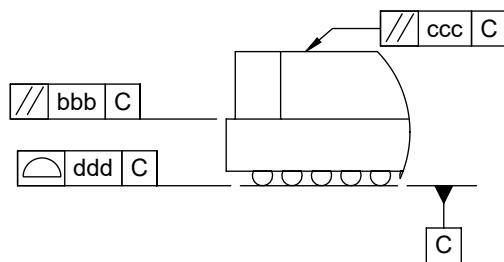
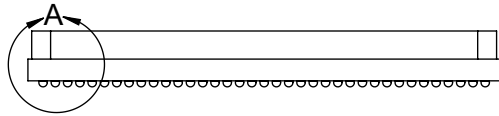
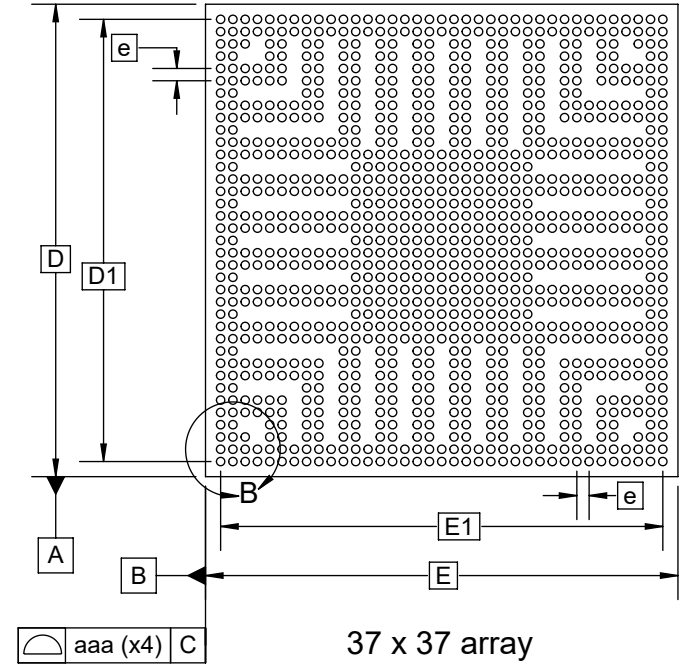
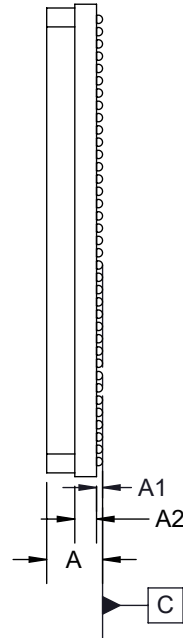
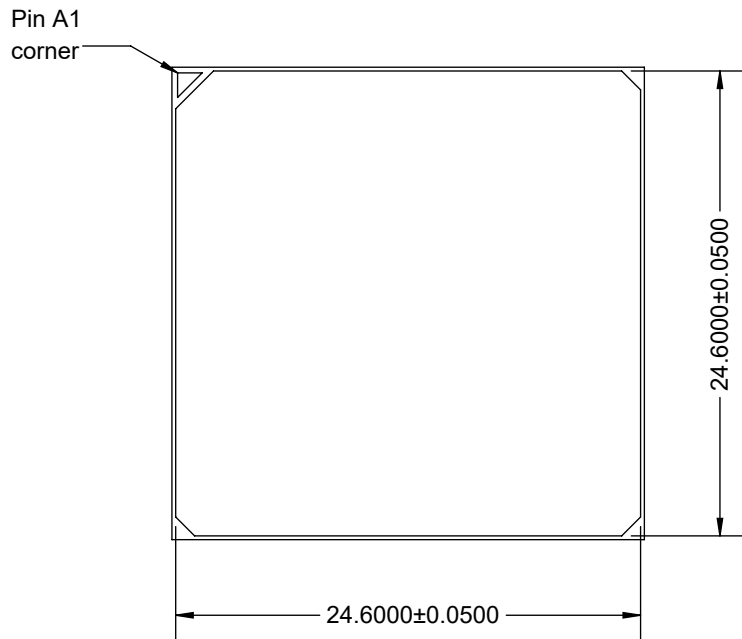
Target PCB Recommendations

Total thickness: 2mm.

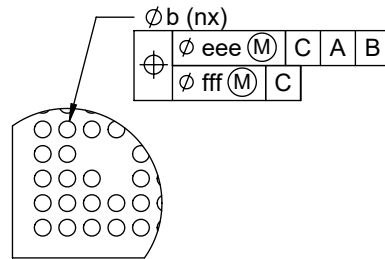
Plating: Gold or Solder finish

PCB Pad height: Same or higher than solder mask

 SG-BGA-9002 Drawing Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 89.51	STATUS: Released ENG: E. Smolentseva FILE: SG-BGA-9002 Dwg	SHEET: 2 OF 5 DRAWN BY: M. Raske DATE: 06/24/2016	REV. A SCALE: 5:2



DETAIL A
SCALE 6 : 1




DETAIL B
SCALE 5 : 1

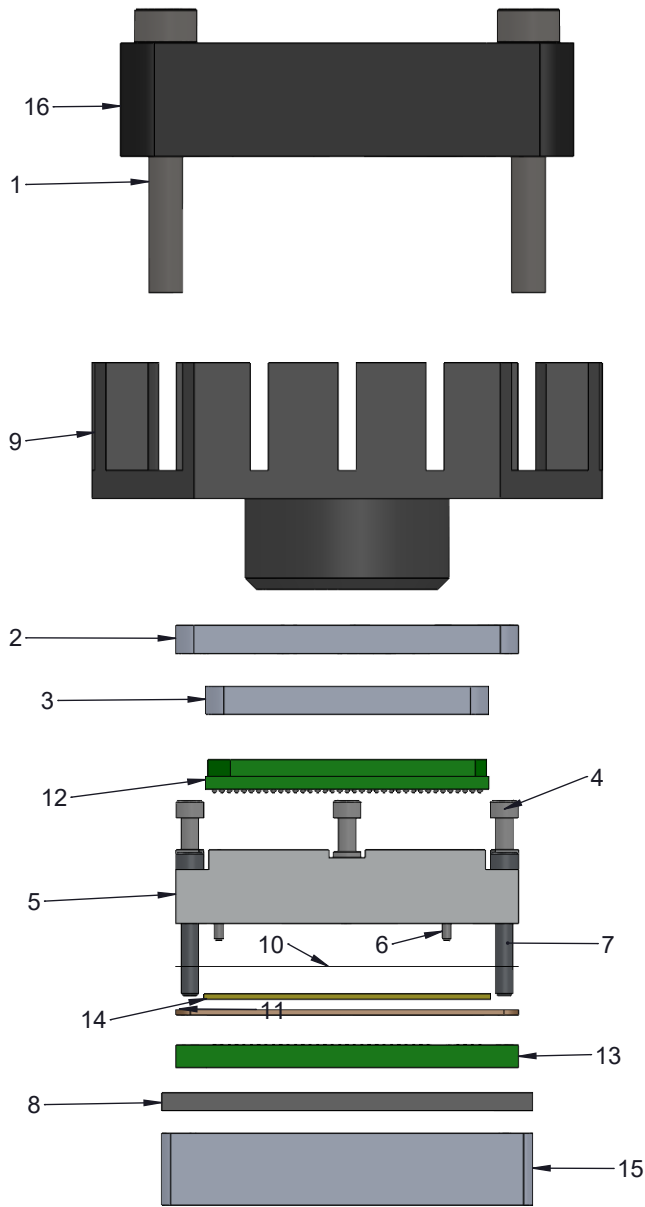
DIM	MIN	NOM	MAX
A	2.707	2.957	3.207
A1	0.270		0.370
A2	1.150 REF		
E	25.000		
D	25.000		
b	0.350		0.450
e	0.650 BSC		
n	1086		
E1	23.400 BSC		
D1	23.400 BSC		
aaa	0.200		
bbb	0.250		
ccc	0.350		
ddd	0.250		
eee	0.250		
fff	0.100		

Description: Compatible Device

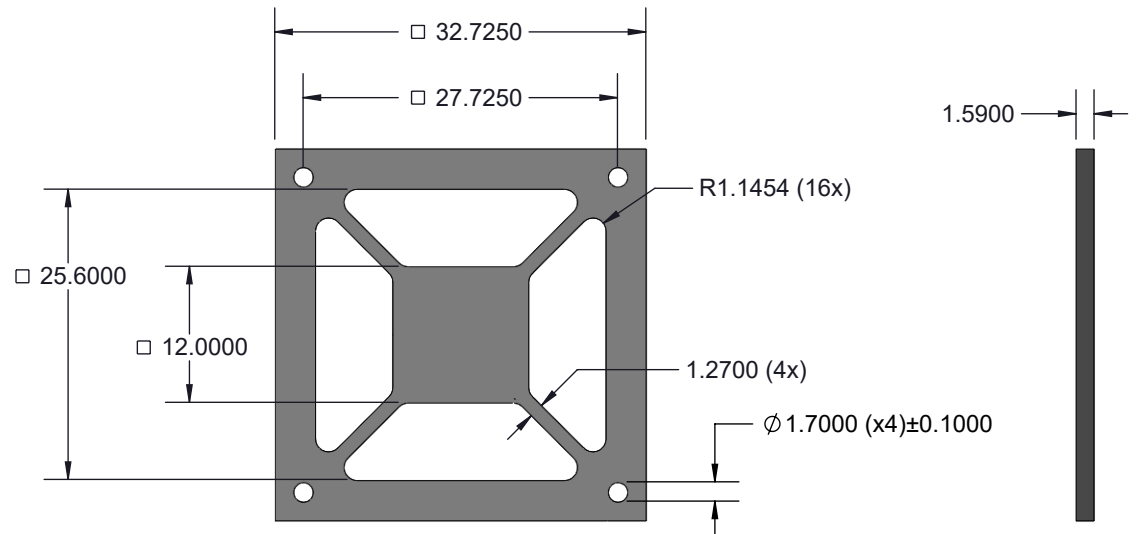
Primary dimension units are millimeters, Secondary dimension units are [inches], Weight is in grams.

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.

 SG-BGA-9002 Drawing Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 89.51	STATUS: Released ENG: E. Smolentseva FILE: SG-BGA-9002 Dwg	SHEET: 3 OF 5 DRAWN BY: M. Raske DATE: 06/24/2016	REV. A SCALE: 2.5:1



ITEM NO.	Description	Material
1	Screw, M3 x 0.5mm, 22mm lg, Low Head Cap, SS	
2	Socket Lid, 25x25mm IC size	7075-T6 Aluminum Alloy
3	Compression Plate, 25x25mm IC	7075-T6 Aluminum Alloy
4	#0-80 Shoulder Screw, 2.29mm thread length	Stainless Steel (303)
5	Socket Base	7075-T6 Aluminum Alloy
6	Dowel Pin, 1/32" x 3/16", SS	Chrome Stainless Steel
7	#0-80 X 7/16" LG, SOC HD CAP SCREW	Stainless Steel (304)
8	Insulation Plate	High temp Substrate
9	Compression Screw	7075-T6 Aluminum Alloy
10	Ball Guide	Kapton Polyimide/Cirlex
11	Elastomer Guide 25mm IC	Kapton Polyimide/Cirlex/Ultem
12	Test Chip	Material <not specified>
13	Test PCB	Material <not specified>
14	0.5mm thick, 0.075x0.075mm pitch pitch, 50mm sq, Z-axis conductive angled elastomer	20 Micron dia gold plated brass filaments arranged symettrically in a silicon rubber (63.5 degree angle), Thickness: 0.5mm
15	Backing Plate 25x25mm	7075-T6 Aluminum Alloy
16	Fan 40X10MM 5VDC 0.9W 7.0CFM 27 DBA 2 wire	Plastic UL: 94V-0




Description: Socket, Backing Plate Detail

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

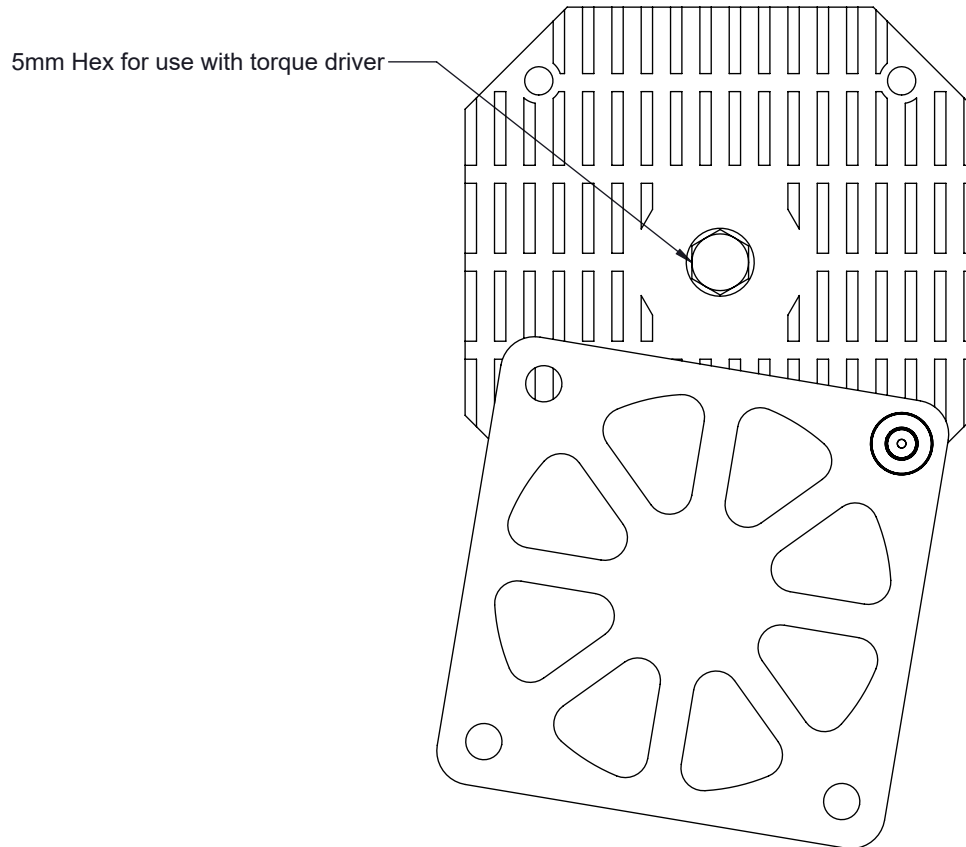
Tolerances: Hole diameters $\pm 0.03\text{mm}$ [± 0.001 "], Pitches (from true position) $\pm 0.025\text{mm}$ [± 0.001 "], substrate thickness tolerance $\pm 10\%$, all other tolerances $\pm 0.13\text{mm}$ [± 0.005 "] unless stated otherwise. Materials and specifications are subject to change without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

INSULATION PLATE DETAIL

 SG-BGA-9002 Drawing Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 89.51	STATUS: Released	SHEET: 4 OF 5	REV. A
		ENG: E. Smolentseva	DRAWN BY: M. Raske	SCALE: 3:2
		FILE: SG-BGA-9002 Dwg	DATE: 06/24/2016	

User instructions:


1. Screw heatsink fan assembly onto socket lid until compression plate is encountered.
2. Remove three fan screws from the heat sink using 2.5 mm hex key.
3. Rotate the fan 90 degrees as shown to access the hex slot on the heat sink screw.
4. Using an appropriate torque driver apply recommended torque from page 1 to heat sink screw.
5. Place the fan back in position and fasten the screws using a 2.5 mm hex key.



Description: User Instructions

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

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

 SG-BGA-9002 Drawing	Material: N/A Finish: N/A Weight: 89.51	STATUS: Released	SHEET: 5 OF 5	REV. A
		ENG: E. Smolentseva	DRAWN BY: M. Raske	SCALE: 3:2
Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com		FILE: SG-BGA-9002 Dwg	DATE: 06/24/2016	