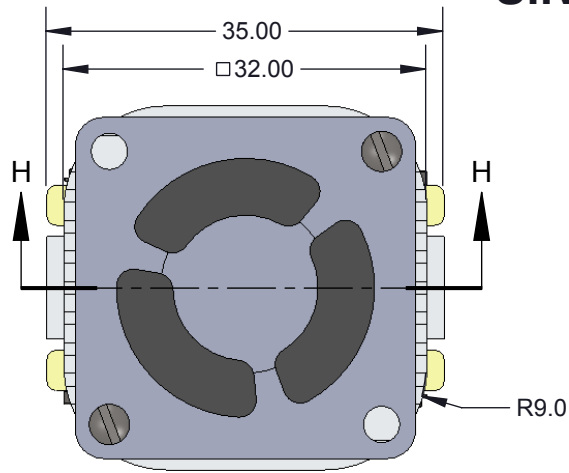


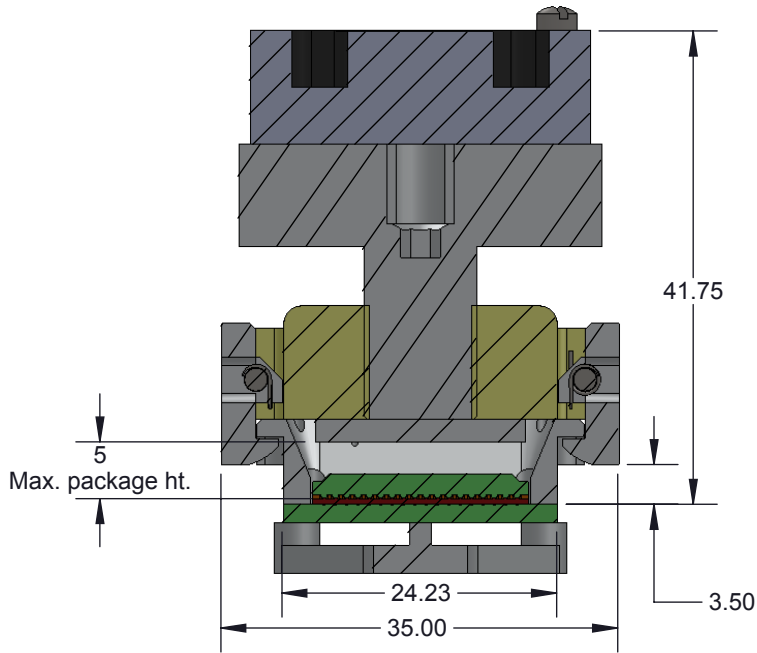
Silver Ball Matrix Socket

Features

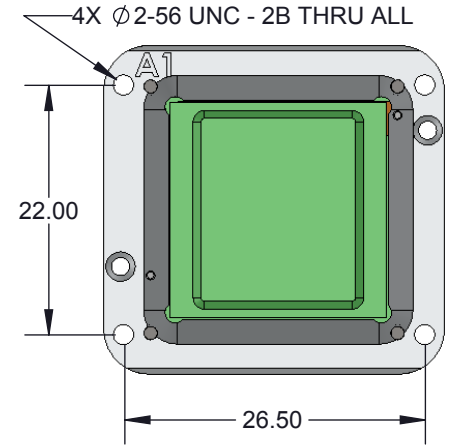
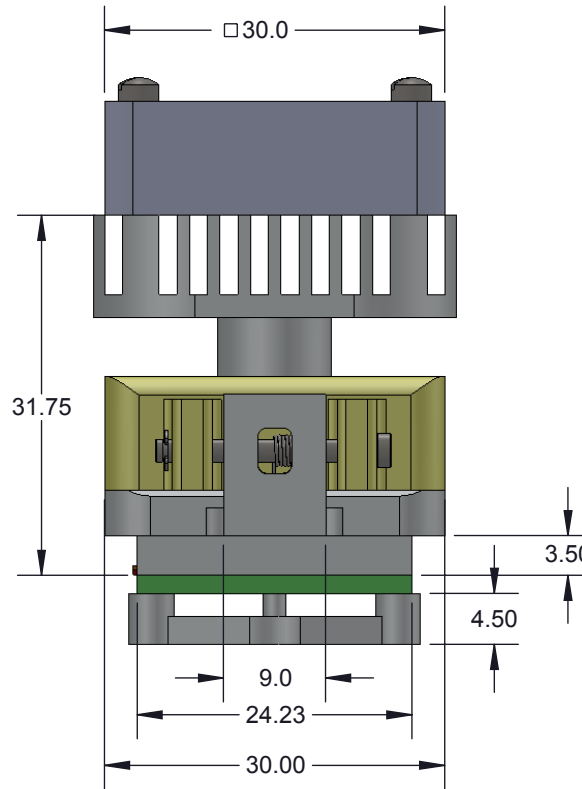
- Wide temperature range (-55C to +150C).
- Current rating at 14C temperature rise is 4 Amps per pin
- Excellent signal integrity at high frequencies.
- Low and stable contact resistance for reliable production yield.
- Highly compliant to accommodate wide co-planarity variations.



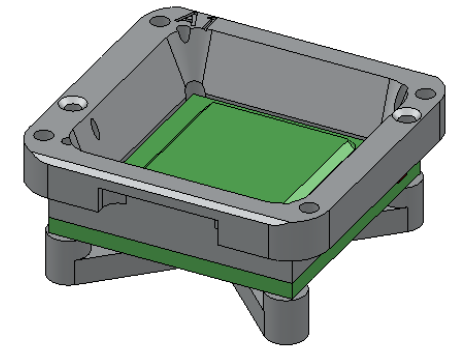
Top View



SECTION H-H



Without Lid




Without Lid

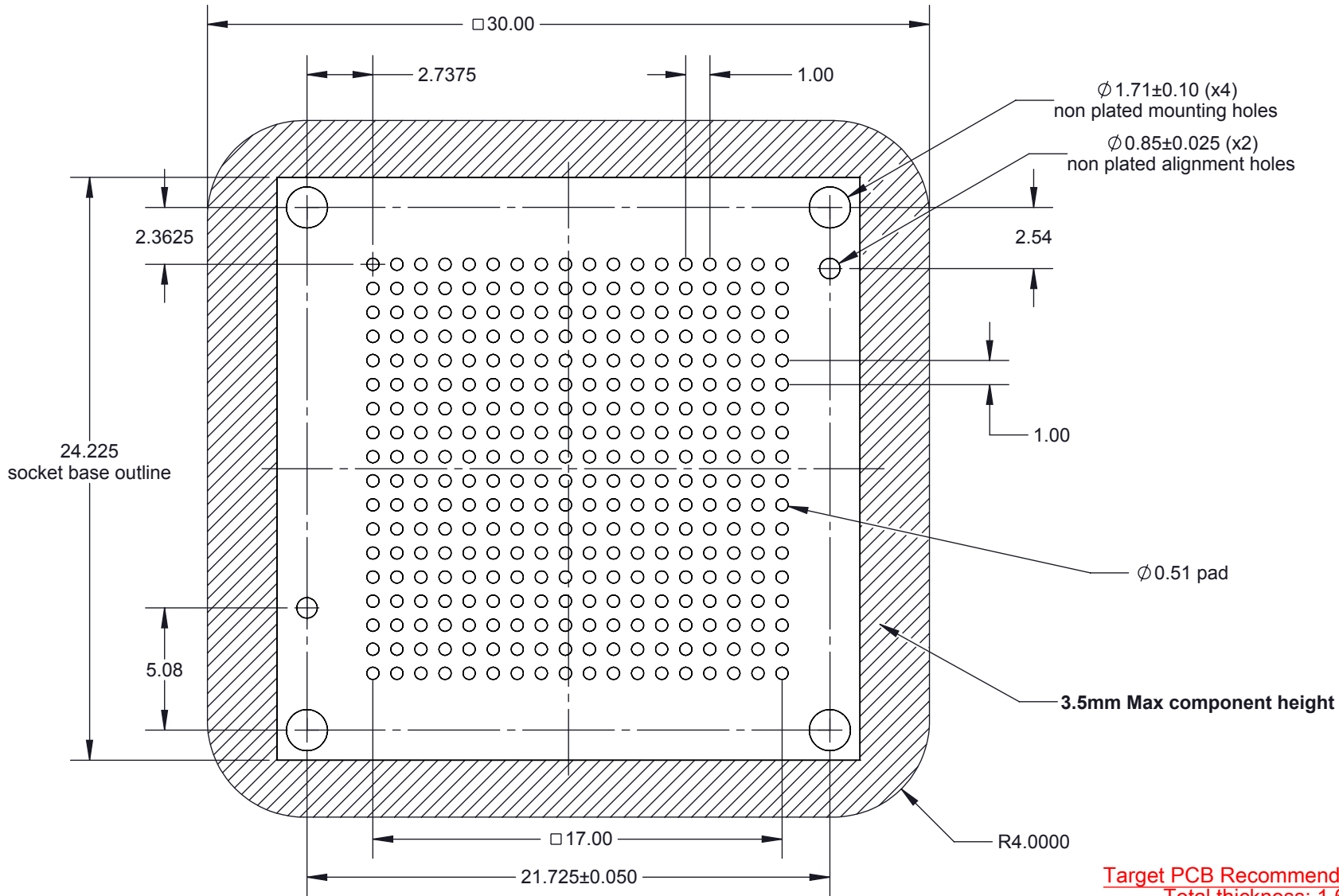
Description: Socket Specification

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.

 Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 61.00	STATUS: Released	SHEET: 1 OF 5	REV. A
		DRAWN BY: V. Panavala	SCALE: 3:2	
		FILE: SM-BGA-9019 Dwg	DATE: 11/15/2012	

Note: BGA pattern is not symmetrical with respect to the mounting holes.
It is shifted to the right by 0.375mm




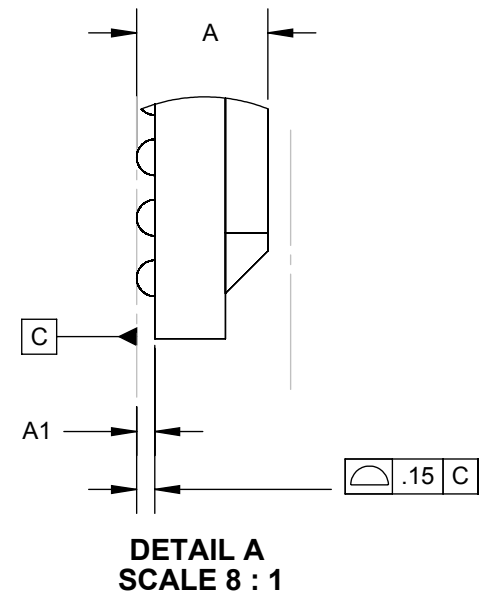
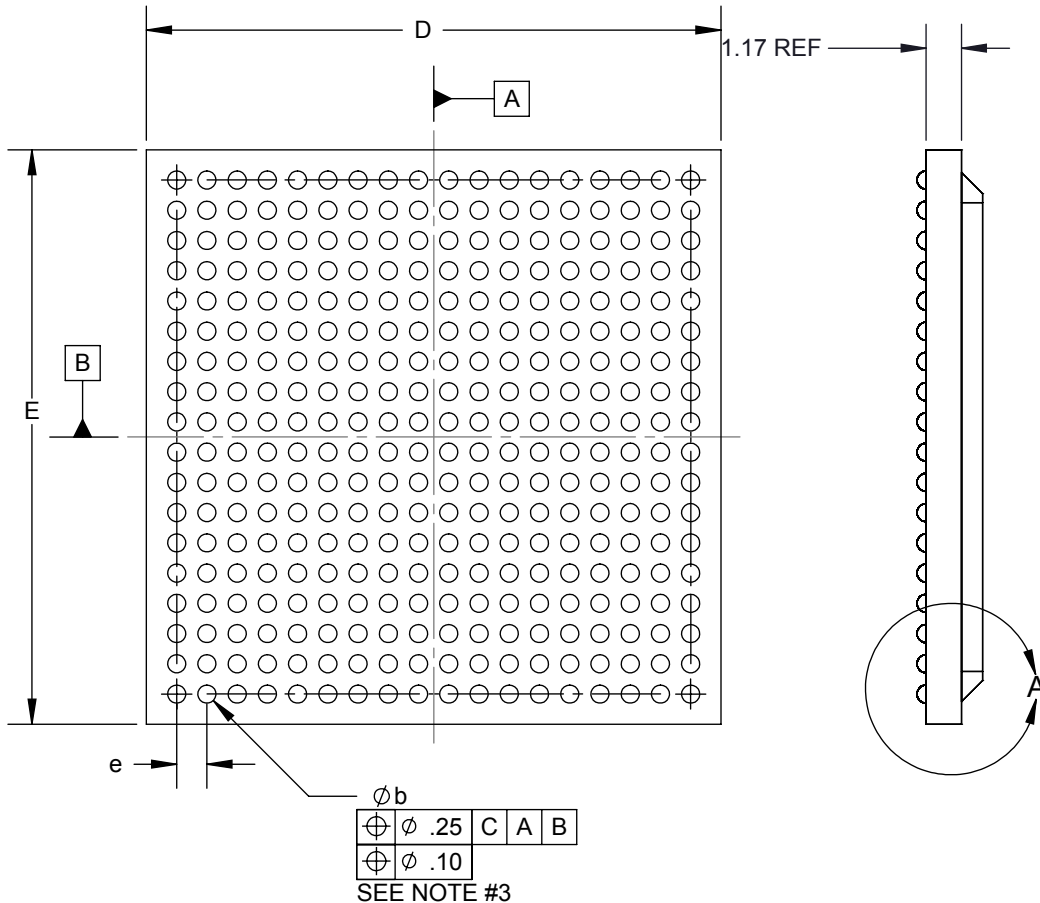
Target PCB Recommendations
 Total thickness: 1.6mm min.
 Plating: Gold or Solder finish
 PCB Pad height: same or higher than solder mask

Description: Recommended PCB Layout

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

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

 SM-BGA-9019 Drawing Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 61.00	STATUS: Released	SHEET: 2 OF 5	REV. A
		DRAWN BY: V. Panavala	SCALE: 4:1	
		FILE: SM-BGA-9019 Dwg	DATE: 11/15/2012	



DIM	Minimum	Maximum
A	1.00	5.00
A1	0.4	0.6
b	0.5	0.7
D	19.0 +/- 0.15mm	
E	19.0 +/- 0.15mm	
e	1.00	
ARRAY	18 x 18	
PIN COUNT	324	


IRONWOOD PACKAGE CODE: BGA324G3

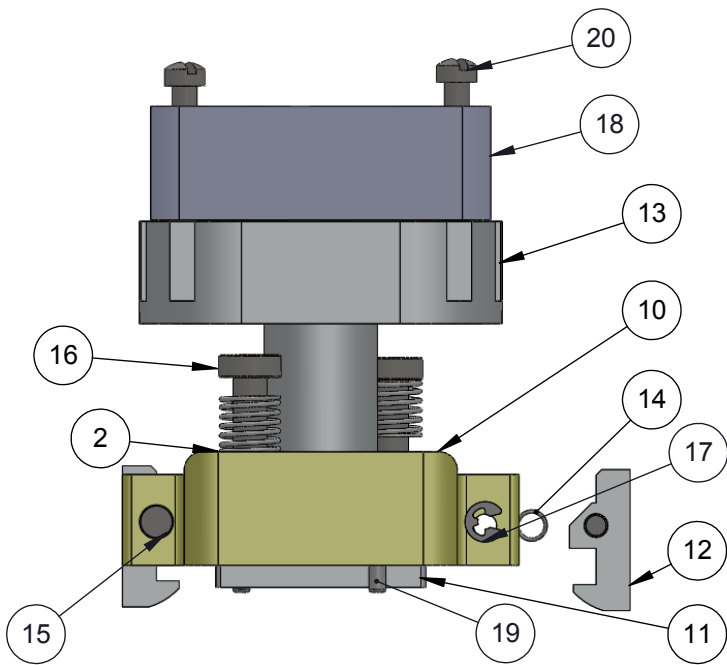
1. Dimensions are in millimeters.
2. Interpret dimensions and tolerances per ASME Y14.5M-1994.
3. Dimension b is measured at the maximum solder ball diameter, parallel to datum plane Z.
4. Datum Z (seating plane) is defined by the spherical crowns of the solder balls.
5. Parallelism measurement shall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

Description: Compatible BGA

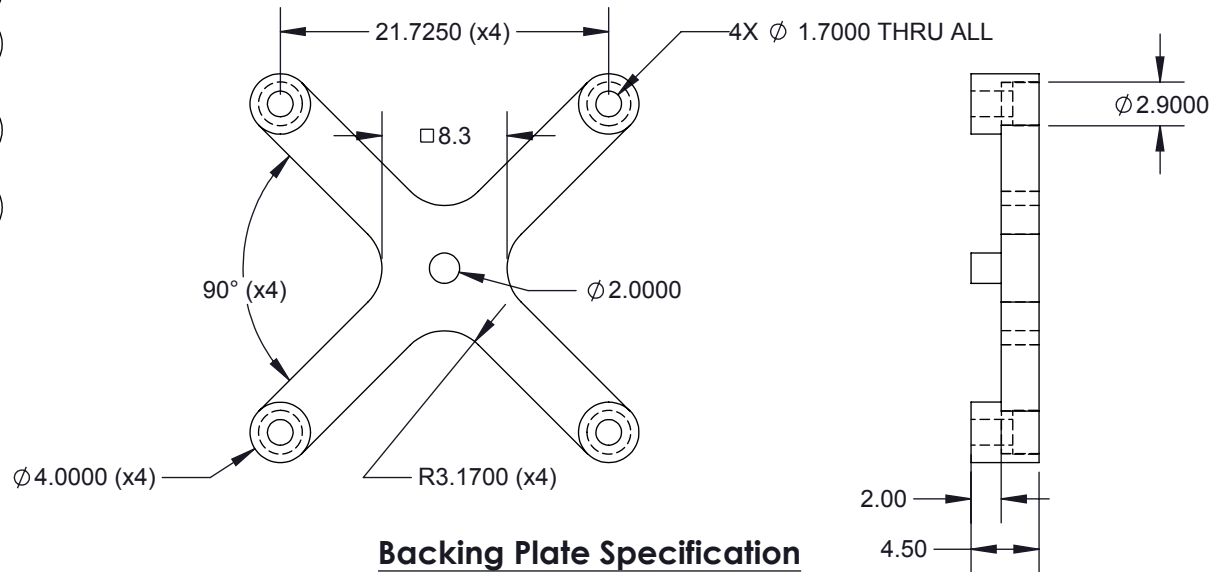
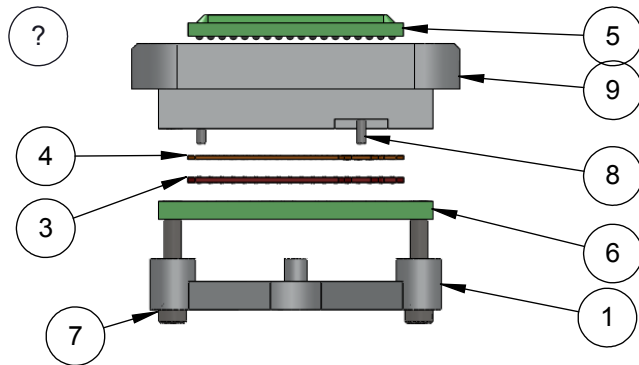
Primary dimension units are millimeters. Secondary dimension units are [inches]. Weight is in grams.

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.

 <p>Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com</p>	<p>Material: N/A Finish: N/A Weight: 61.00</p>	<p>STATUS: Released</p>	<p>SHEET: 3 OF 5</p>	<p>REV. A</p>
		<p>DRAWN BY: V. Panavala</p>	<p>SCALE: 4:1</p>	
		<p>FILE: SM-BGA-9019 Dwg</p>	<p>DATE: 11/15/2012</p>	



ITEM NO.	DESCRIPTION	Material
1	Backing PLate 19mm IC 5 post	7075-T6 Aluminum Alloy
2	Spring Clamshell lid assembly	Steel Music Wire
3	SM interposer for 19mm 18x18 1mm pitch BGA324	Silmat
4	Ball Guide for 19mm 18x18, 1mm pitch BGA324	Kapton Polyimide/Cirlex
5	BGA324 19mm 1mm pitch 18x18 array	Material <not specified>
6	Customer's target PCB	Material <not specified>
7	#0-80 X .313 LG, SOC HD CAP SCREW, ALLOY STL, BLK OXIDE	Alloy Steel
8	Dowel Pin, 1/32" x 3/16" SS	Chrome Stainless Steel
9	Socket Base Clam shell double latch socket 19mm IC	7075-T6 Aluminum Alloy
10	Socket Lid clamshell double latch 19mm IC	7075-T6 Aluminum Alloy
11	Compression plate 19mm IC	7075-T6 Aluminum Alloy
12	Clamshell Latch Snap Lid Socket	7075-T6 Aluminum Alloy
13	Heat Sink for Clamshell socket M10 Threads	7075-T6 Aluminum Alloy
14	Torsion Spring, 180 0.109" OD, Ccw/Rh	Steel Music Wire
15	2mm diameter Hinge Pin, 20 mm long	Alloy Steel
16	Screw, M3 x 10mm, Low Head Cap, SS	18-8 Stainless Steel
17	Snap ring for 2mm Hinge pin 0.15" OD	
18	Fan: 30x30x10mm 5V 5.5 CFM 0.6 watts	Material <not specified>
19	Dowel Pin, 1.5mm x 4mm, SS	Chrome Stainless Steel
20	Fillister hd, 2-56, 1/2" lg, 18-8 SS	Stainless Steel (18-8)




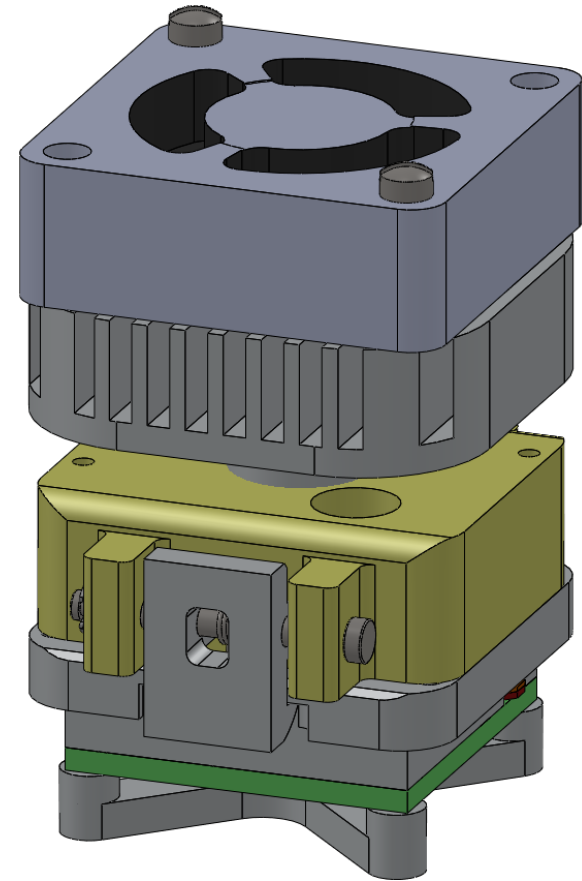
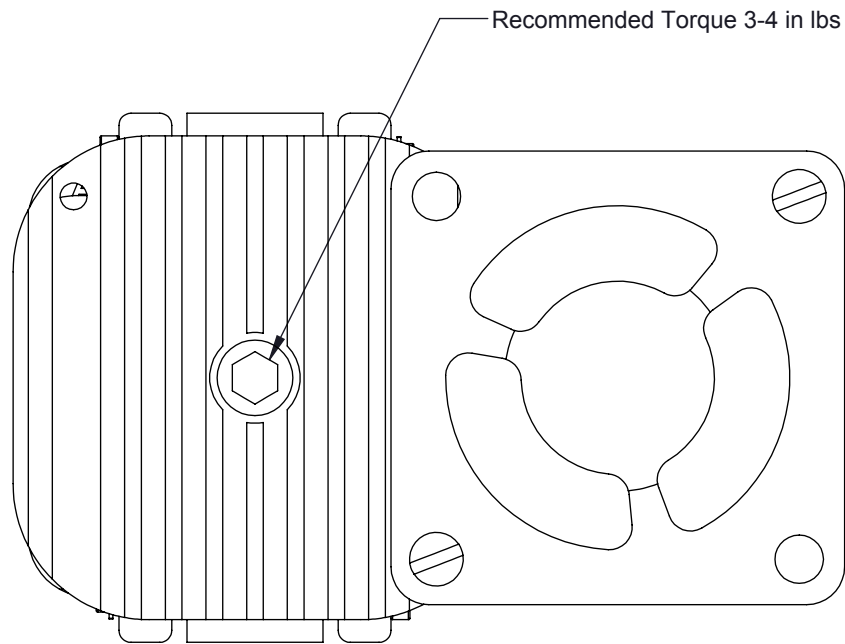
Backing Plate Specification

Description: Socket Assy, Insulation Plate

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

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

 <p>SM-BGA-9019 Drawing Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com</p>	<p>Material: N/A Finish: N/A Weight: 61.00</p>	STATUS: Released	SHEET: 4 OF 5	REV. A
		DRAWN BY: V. Panavala	SCALE: 1:1	
		FILE: SM-BGA-9019 Dwg	DATE: 11/15/2012	




User Instructions:

1. Using a flat screw driver remove a fan screw and turn the fan 90 degrees clockwise to access the hex slot on the heat sink screw.
2. Using a torque driver apply 3-4 in lbs torque.
3. Rotate the fan to the original position and fasten the screw.

Description: User instructions

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

Tolerances: Hole diameters $\pm 0.03\text{mm}$ [$\pm 0.001''$], 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.

 <p>SM-BGA-9019 Drawing Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com</p>	<p>Material: N/A Finish: N/A Weight: 61.00</p>	STATUS: Released	SHEET: 5 OF 5	REV. A
		DRAWN BY: V. Panavala	SCALE: 2:1	
		FILE: SM-BGA-9019 Dwg	DATE: 11/15/2012	