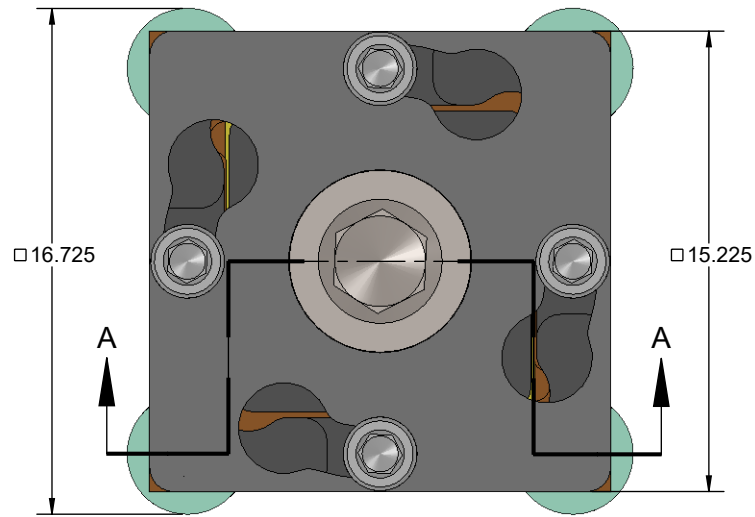


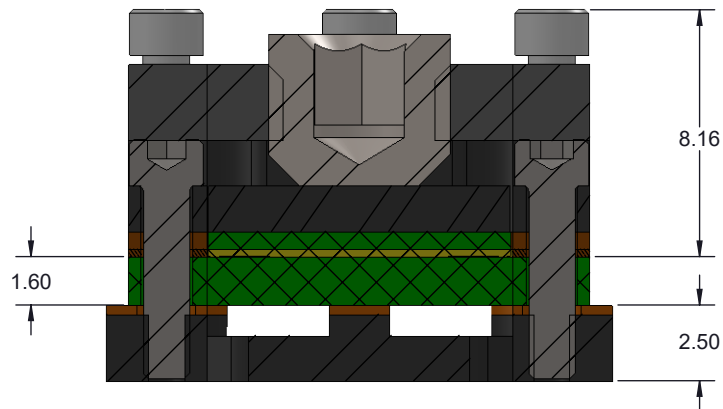
# SG25-BGA DIRECT MOUNT, SOLDERLESS SOCKET FOR TEST APPLICATIONS

## FEATURES:

- Directly mounts to target PCB (needs tooling holes) with hardware.
- Over 40GHz bandwidth @-1dB
- Low and stable contact resistance for reliable production yield.
- Self inductance under 0.05nH.
- Compression plate distributes forces evenly
- Easily removable swivel socket lid

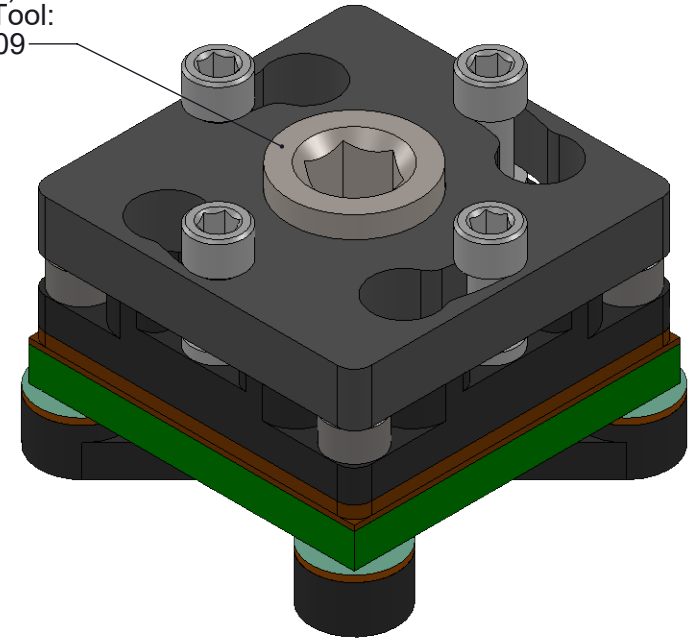


TOP VIEW



SECTION A-A


Required Torque:  
0.112 Nm(1in-lbf)  
Recommended Tool:  
TI-Torquedriver-09



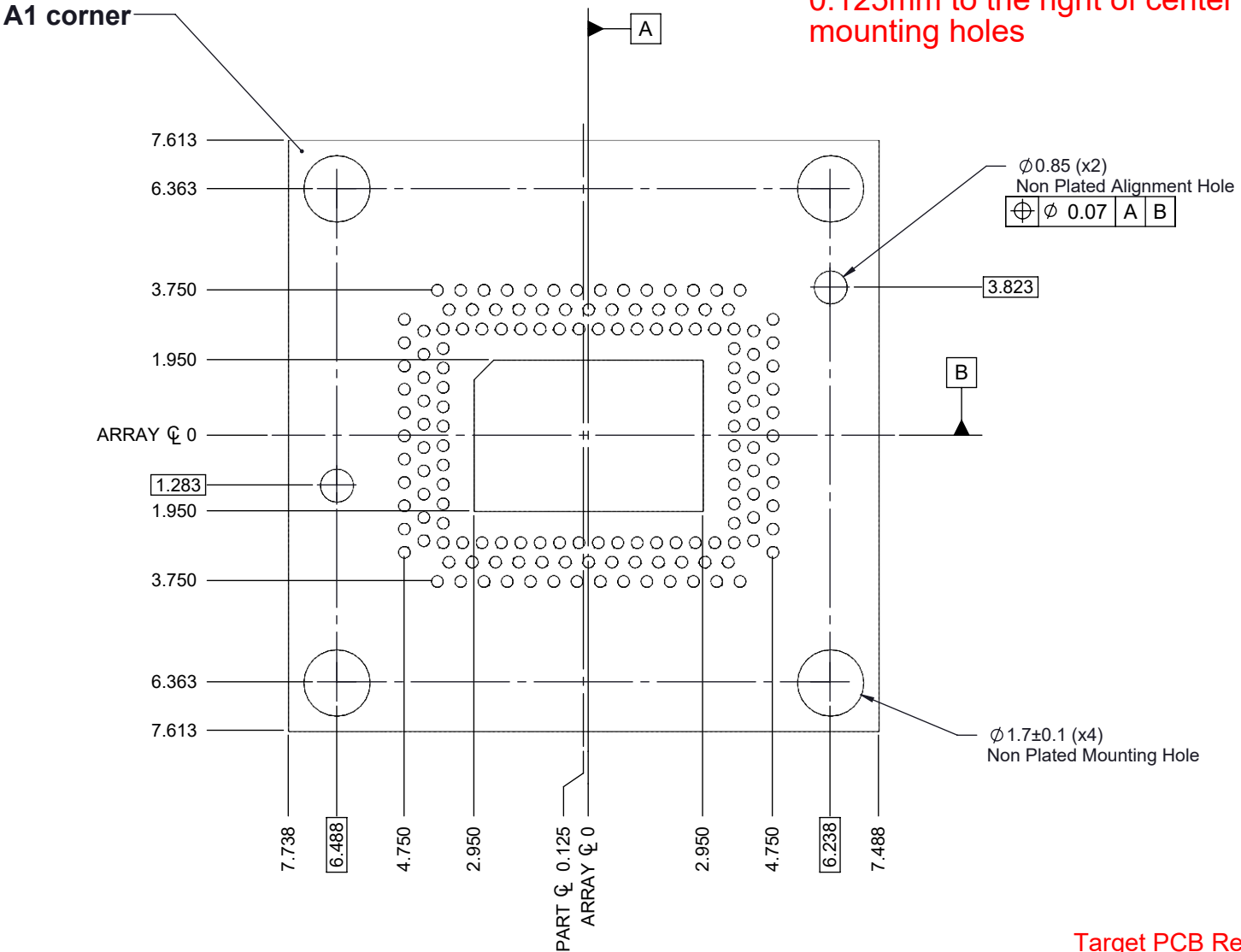
## Description: SG25-QFN148, 10x8mm

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.

 ©2016 Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: Material <not specified> Finish: Weight: 5.66	STATUS: Released	SHEET: 1 OF 4	REV. A
		ENG: M.A. Fedde	DRAWN BY: M. Raske	SCALE: 4:1
		FILE: SG25-QFN-2007 Dwg	DATE: 10/19/2017	


**Note:** BGA pattern is not symmetrical with respect to the mounting holes, it is offset 0.125mm to the right of center with respect to the mounting holes

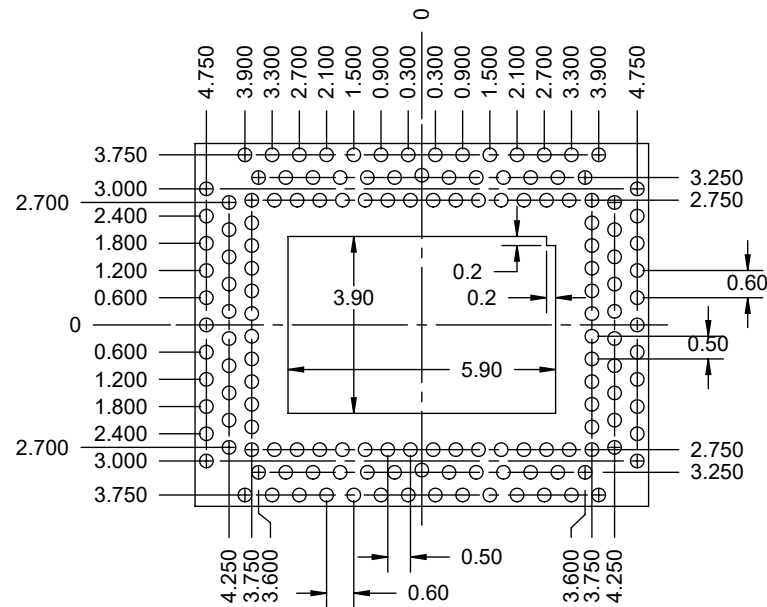
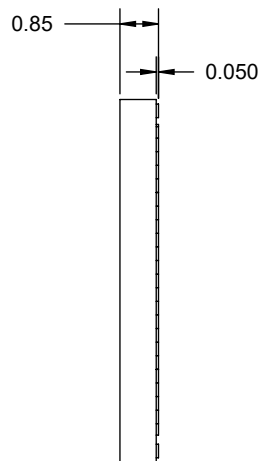
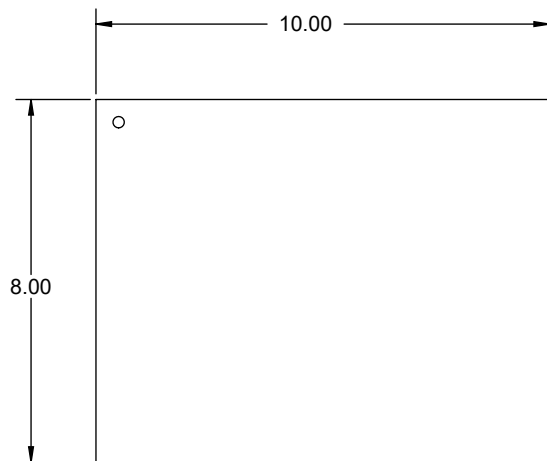


**Description: Recommended PCB Layout**

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: ENIPIG, Solder Finish, Hard Gold  
 PCB Pad height: Same or 0.001"-0.002" lower than solder mask is acceptable  
 Solder mask opening: 0.013"

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		ENG: M.A. Fedde	DRAWN BY: M. Raske	SCALE: 6:1
		FILE: SG25-QFN-2007 Dwg	DATE: 10/19/2017	




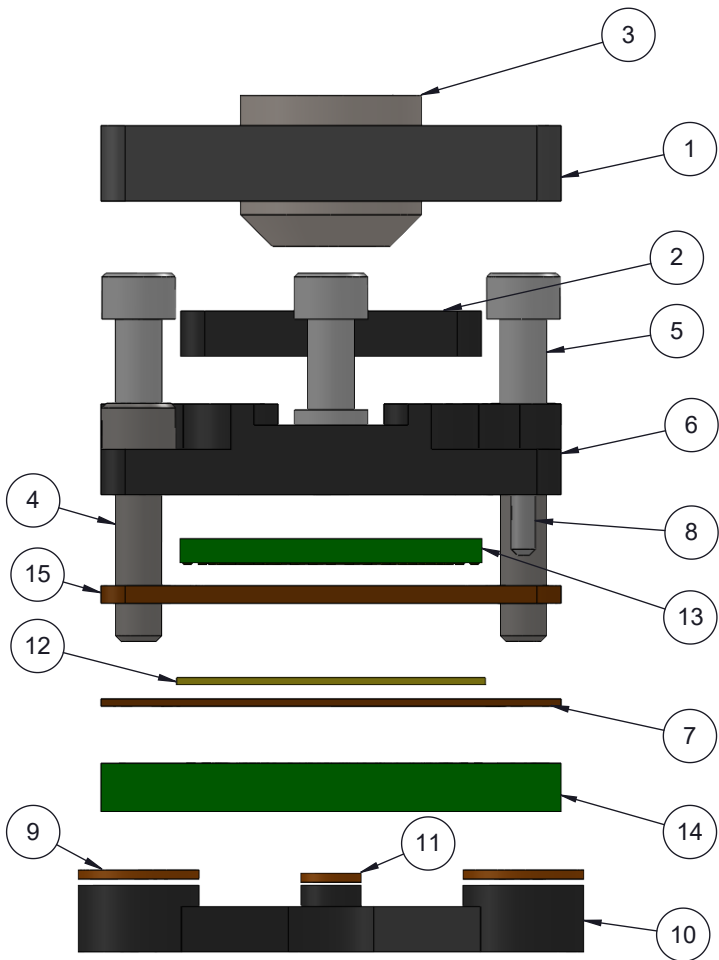
1. Dimensions are in millimeters.
2. Interpret dimensions and tolerances per ASME Y14.5M-1994.
3. Dimension b is measured at the maximum solder ball diameter, parallel to datum plane Z.
4. Datum Z (seating plane) is defined by the spherical crowns of the solder balls.
5. Parallelism measurement shall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

## Description: Compatible LGA

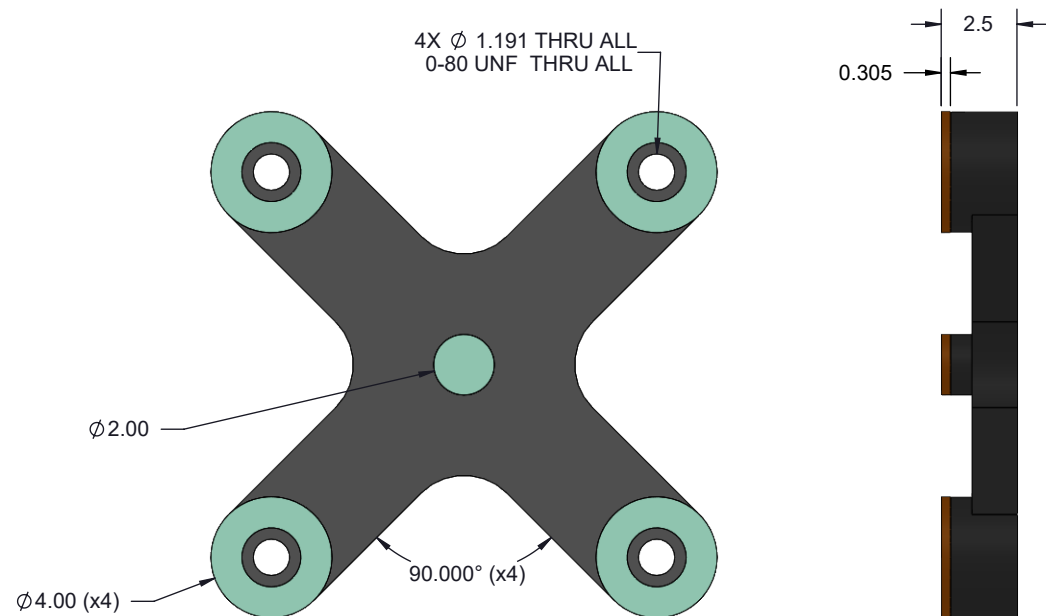
Primary dimension units are millimeters, Secondary dimension units are [inches], Weight is in grams.

**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>SG25-QFN-2007 Drawing</b> ©2016 Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: Material <not specified>	STATUS: Released	SHEET: 3 OF 4	REV. A
		Finish: Weight: 5.66	ENG: M.A. Fedde	DRAWN BY: M. Raske	SCALE: 6:1
			FILE: SG25-QFN-2007 Dwg	DATE: 10/19/2017	



ITEM NO.	DESCRIPTION	Material
1	Socket Lid	7075-T6 Aluminum Alloy
2	Compression Plate 9.95 x 1.5mm	7075-T6 Aluminum Alloy
3	Compression Screw M6x1	Stainless Steel (18-8)
4	#0-80 X .25 LG, SOC HD CAP SCREW, ALLOY STL, BLK OXIDE	Alloy Steel
5	#0-80 Shoulder Screw, 1.59mm thread length	Stainless Steel (303)
6	GHz Socket Base 10mm IC 3mm Thk	7075-T6 Aluminum Alloy
7	Elastomer Guide for 10mm IC 0.25mm	Kapton Polyimide/Cirlex
8	Alignment Pin 1/32" dia. x 1/8" lng	Chrome Stainless Steel
9	Insulating washer, 4mm OD.	Kapton Polyimide/Cirlex
10	10x10mm 5 post backing plate	7075-T6 Aluminum Alloy
11	Insulating disk, 2mm OD with 2 mil thk Adesive	Kapton Polyimide/Cirlex
12	0.25mm thick, 0.05x 0.05mm pitch, 10mm sqr, Z-axis conductive angled elastomer	20 Micron dia gold plated brass filaments arranged symettrically in a silicon rubber (63.5 degree angle)
13	Test Chip	FR4
14	Test PCB	FR4
15	IC GDE QFN, 10X8 MULTI PITCH	Kapton Polyimide/Cirlex/Ultem




## Description: Socket Specification

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 Plate Specification

 <p><b>SG25-QFN-2007 Drawing</b> ©2016 Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com</p>	<p>Material: Material &lt;not specified&gt; Finish: Weight: 5.66</p>	STATUS: Released	SHEET: 4 OF 4	REV. A
		ENG: M.A. Fedde	DRAWN BY: M. Raske	SCALE: 4:1
		FILE: SG25-QFN-2007 Dwg	DATE: 10/19/2017	