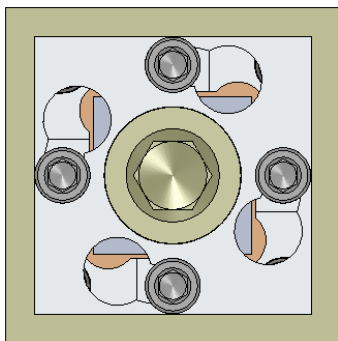


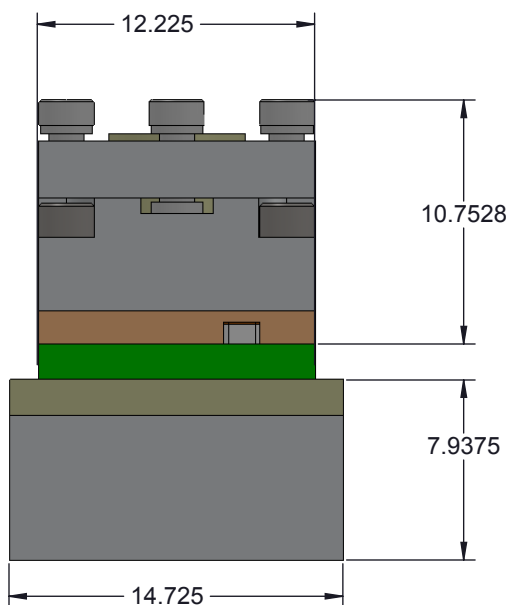
# SM-BGA DIRECT MOUNT, SOLDERLESS SOCKET FOR TEST APPLICATIONS

## Features

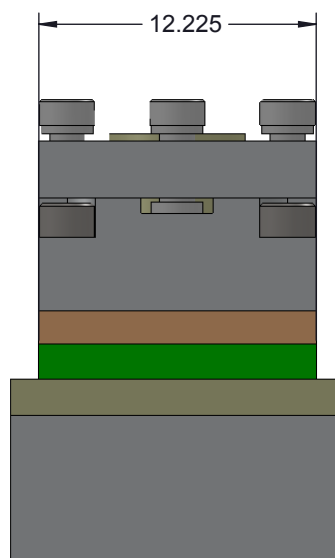
- Wide temperature range (-55C to +150C).
- High current capability (up to 4A).
- Excellent signal integrity at high frequencies.
- Low and stable contact resistance for reliable production yield.
- Highly compliant to accommodate wide co-planarity variations.



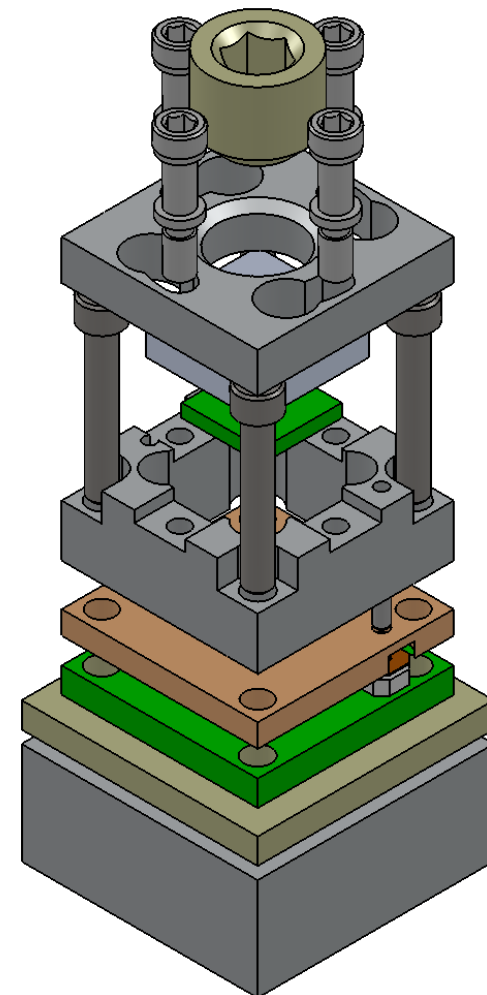
Top View



Front View



Side View



## Description: SM-BGA81 9x9 0.5mm Pitch

Primary dimension units are millimeters, Secondary dimension units are [inches].

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.

### SM-BGA-9020 Drawing



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

Material: N/A  
Finish: N/A  
Weight: 8.63

STATUS: Released

DRAWN BY: B. Fedde

FILE: SM-BGA-9020

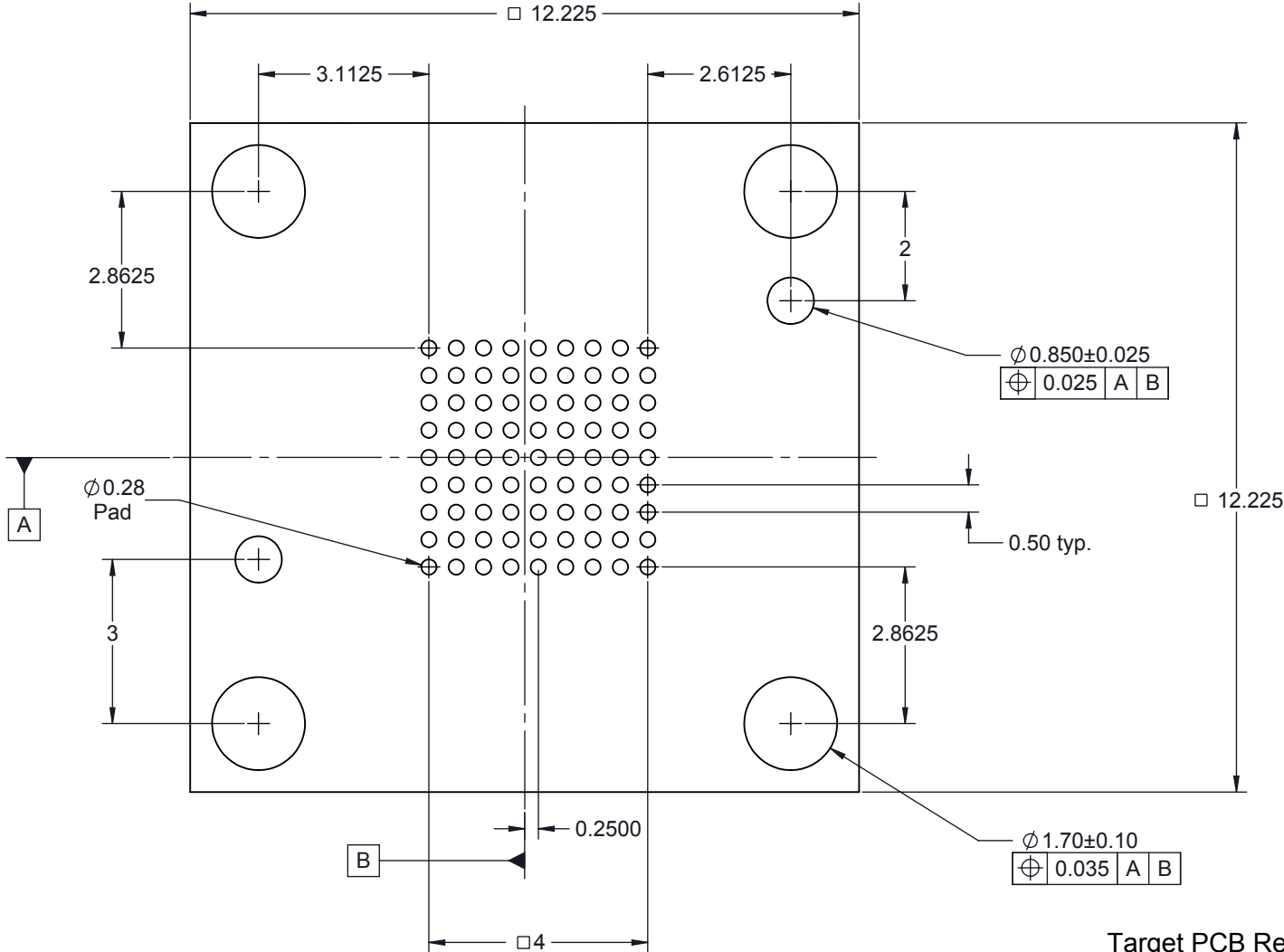
SHEET: 1 OF 4

SCALE: 3:1

DATE: 9/10/2012

REV. A


**\*Note: BGA pattern is not symmetrical with respect to the mounting holes.**



Target PCB Recommendations  
Total thickness: 1.5mm min.  
Plating: Gold or Solder finish

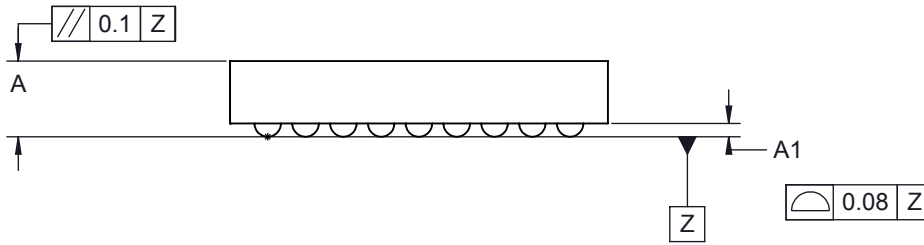
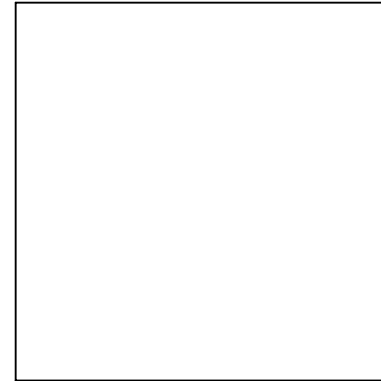
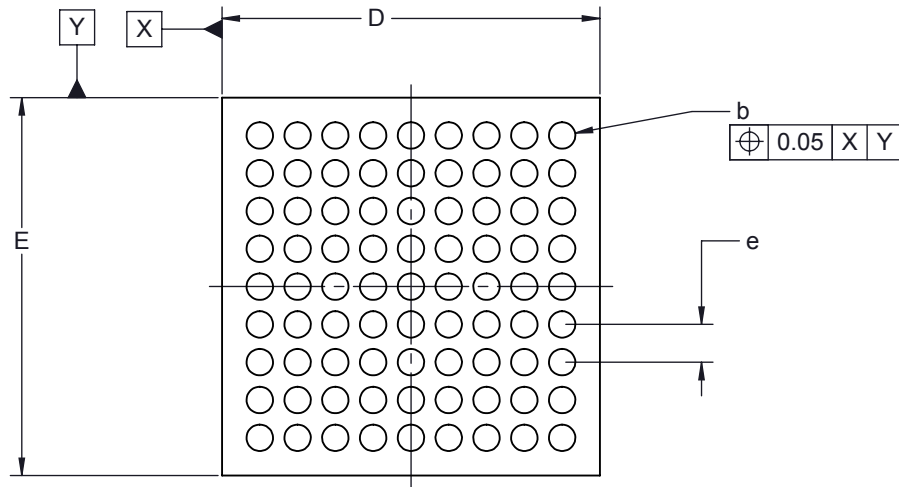
**Description: Recommended PCB layout**

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>SM-BGA-9020 Drawing</b>	Material: N/A Finish: N/A Weight: 8.63	STATUS: Released	SHEET: 2 OF 4	REV. A
		DRAWN BY: B. Fedde	SCALE: 8:1	
		FILE: SM-BGA-9020	DATE: 9/10/2012	

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

# IRONWOOD PACKAGE CODE: BGA81F1




DIM	MIN	MAX
A		1.0
A1	0.15	0.25
b	0.25	0.35
D	5.0 BSC	
E	5.0 BSC	
e	0.5 BSC	

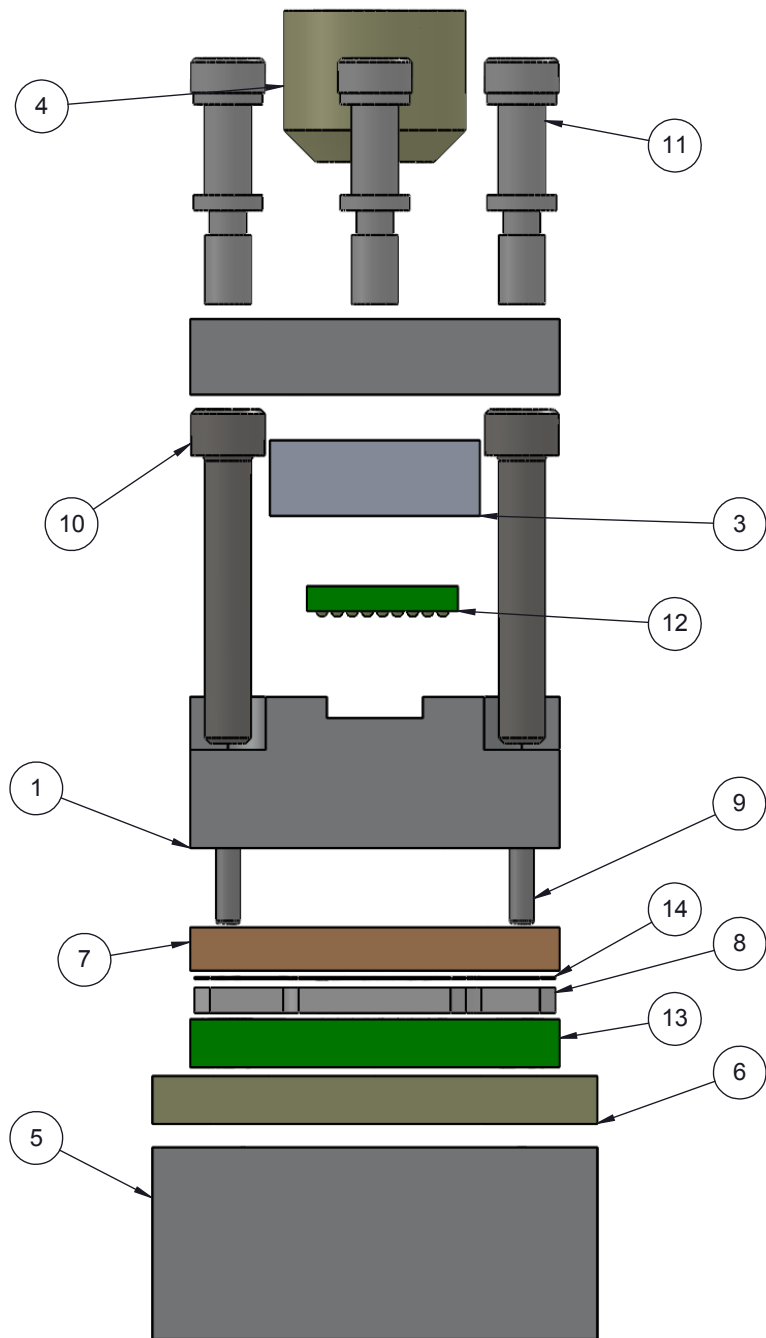
1. Dimensions are in millimeters.
2. Interpret dimensions and tolerances per ASME Y14.5M-1994.
3. Dimension b is measured at the maximum solder ball diameter, parallel to datum plane Z.
4. Datum Z (seating plane) is defined by the spherical crowns of the solder balls.
5. Parallelism measurement shall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

## Description: BGA

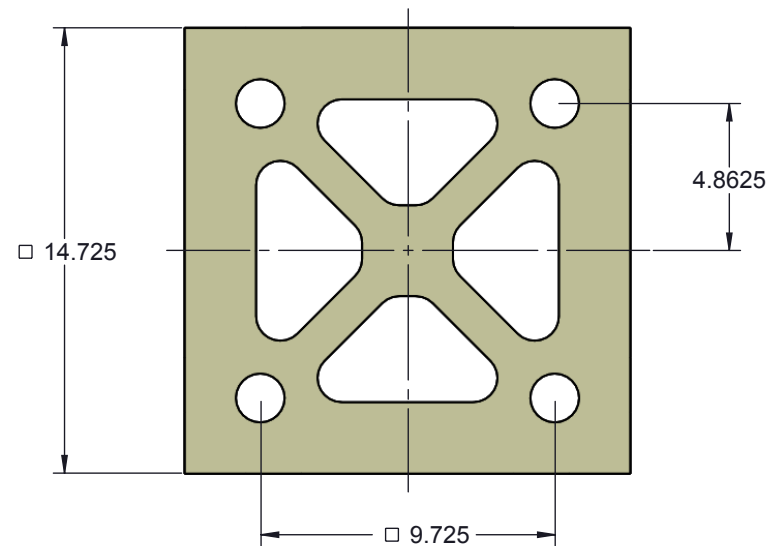
Primary dimension units are millimeters, Secondary dimension units are [inches], Weight is in grams.

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>SM-BGA-9020 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 8.63	STATUS: Released DRAWN BY: B. Fedde FILE: SM-BGA-9020	SHEET: 3 OF 4 SCALE: 10:1 DATE: 9/10/2012	REV. A



ITEM NO.	DESCRIPTION	Material	Default/QTY.
1	Socket Base	7075-T6 Aluminum Alloy	1
2	Socket Lid 7mm	7075-T6 Aluminum Alloy	1
3	Compression Plate 7x7mm	7075-T6 Aluminum Alloy	1
4	Compression Screw M6x1	Stainless Steel (18-8)	1
5	Backing Plate	7075-T6 Aluminum Alloy	1
6	Insulation Plate 7mm	FR4 Standard	1
7	5mm SM IC Guide	Ultem 1000	1
8	SM Interposer BGA 81 0.5mm	Silmat	1
9	Dowel Pin, 1/32" x 3/16", SS	Chrome Stainless Steel	2
10	#0-80 X .375 LG, SOC HD CAP SCREW, ALLOY STL, BLK OXIDE	Alloy Steel	4
11	#0-80 Shoulder Screw, 0.090" thread length	Stainless Steel (303)	4
12	Test Chip 9 x 9 0.5mm Pitch	FR4 Standard	1
13	Test PCB 5X5mm 9X9 0.5mm Pitch	FR4 High temp	1
14	Ball Guide, 9x9 BGA 0.5 pitch	Kapton Polyimide/Cirlex	1




**Insulation Plate**

**Description: Skt, Insulation Plate, Pin Det**

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.

 <b>SM-BGA-9020 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 8.63	STATUS: Released DRAWN BY: B. Fedde FILE: SM-BGA-9020	SHEET: 4 OF 4 SCALE: 4:1 DATE: 9/10/2012	REV. A
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