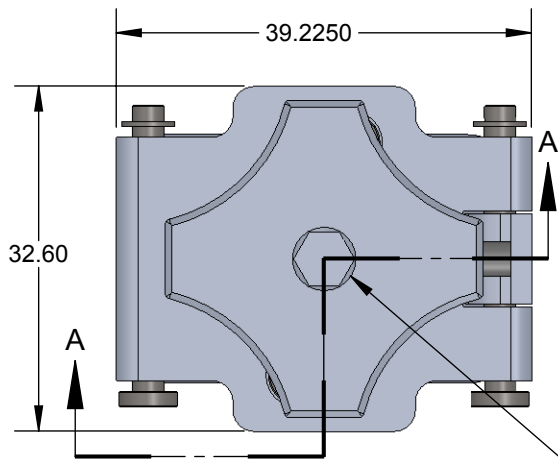


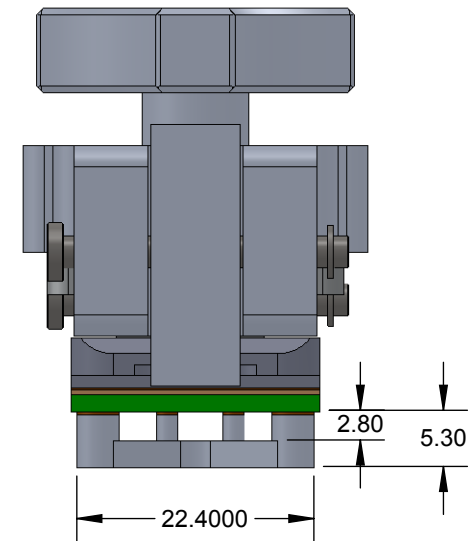
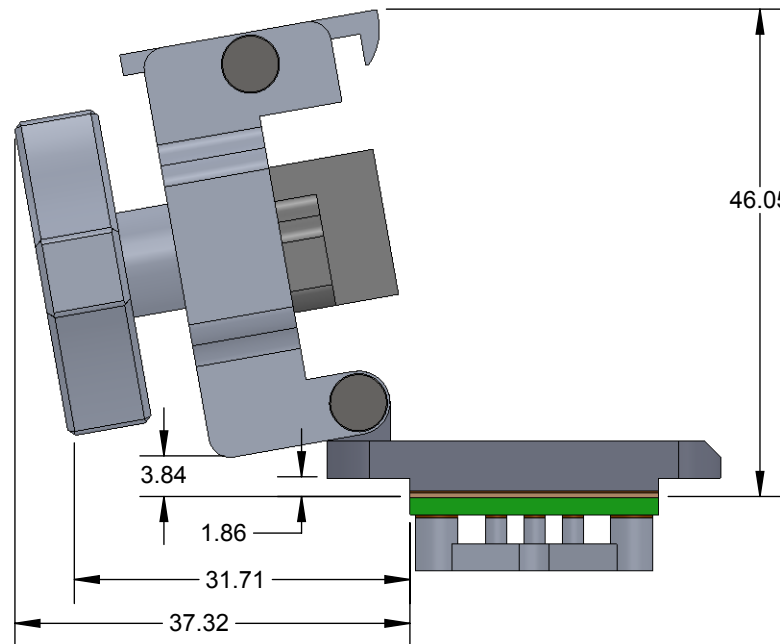
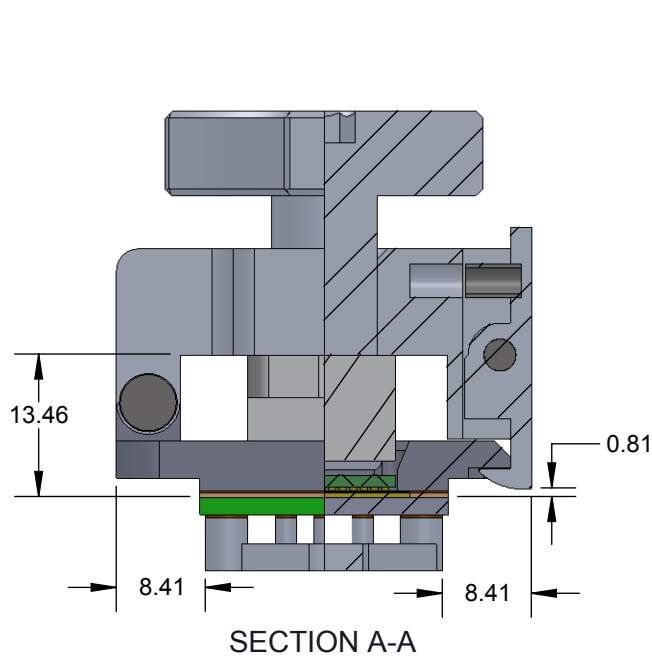
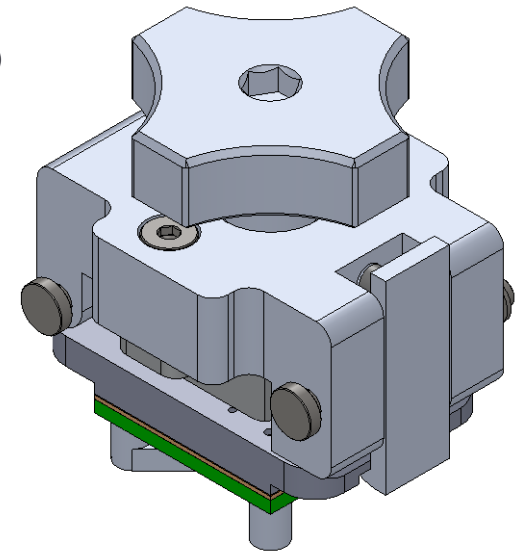
Clamshell GHz Socket- Direct mount, solderless

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
- Clamshell lid



Recommended torque = 1 in lbs



Description: CG-BGA 14x14mm 1mm pitch 13x13 array BGA168 custom footprint

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

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.

CG-BGA-4020 Specification



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

Material: Material <not specified>
Finish: N/A
Weight: 69.63

STATUS: Released

DRAWN BY: M. Raske

FILE: CG-BGA-4020 Dwg

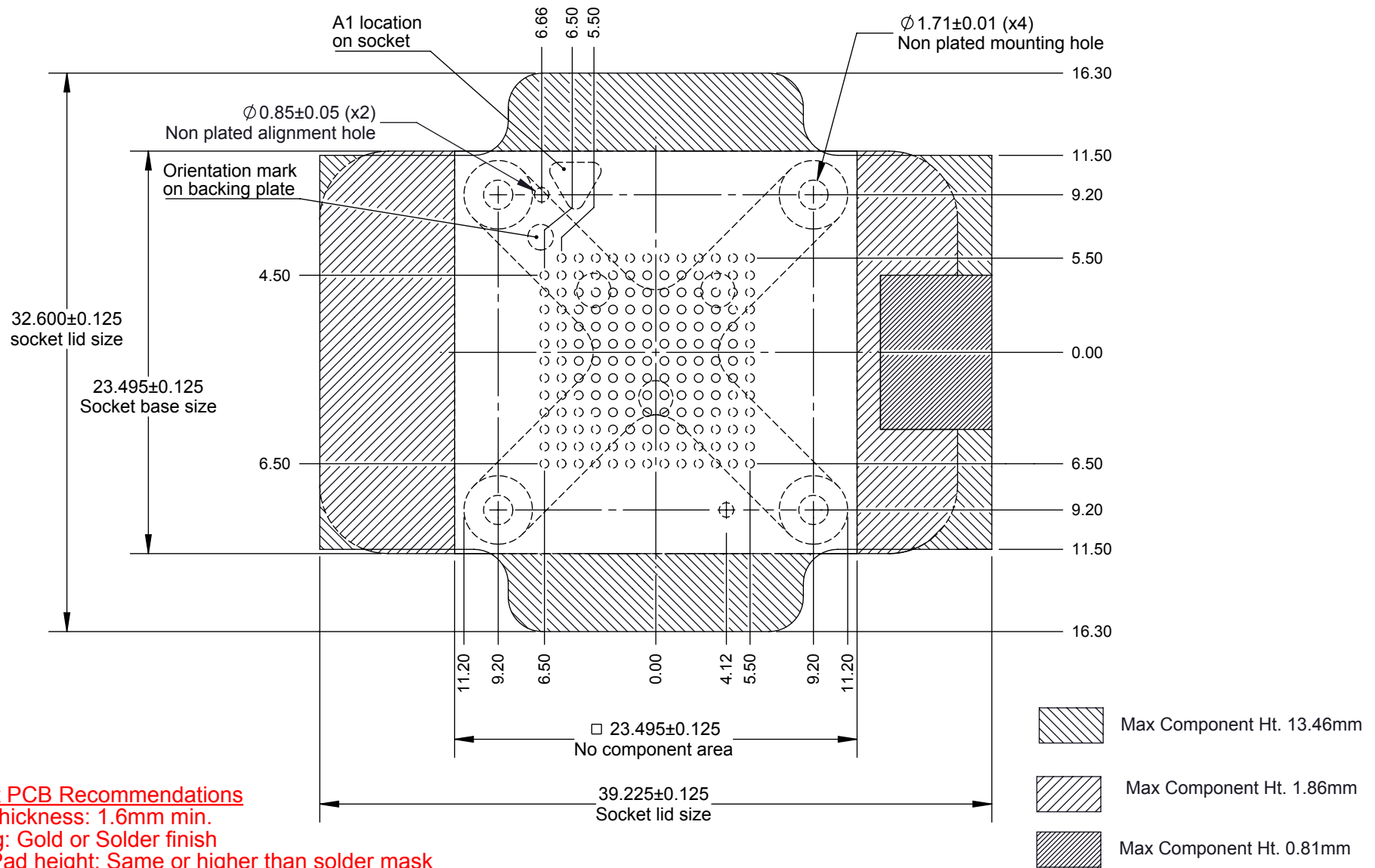
SHEET: 1 OF 4

SCALE: 1.4:1

DATE: 05/09/2014

REV. A

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




Target PCB Recommendations

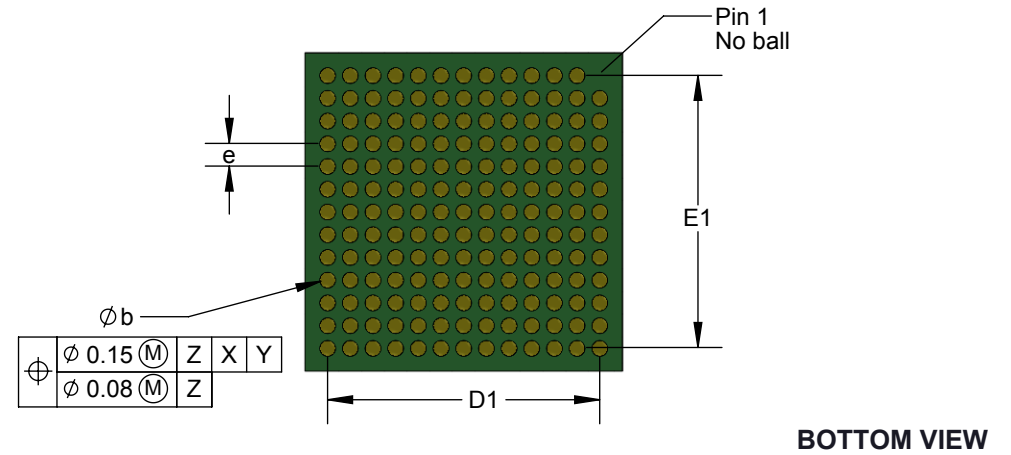
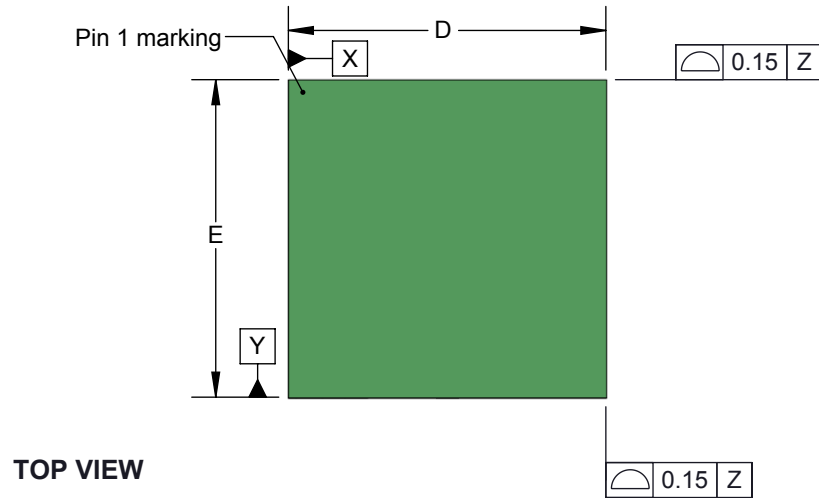
Total thickness: 1.6mm min.
 Plating: Gold or Solder finish
 PCB Pad height: Same or higher than solder mask

Description: Recommended PCB Layout

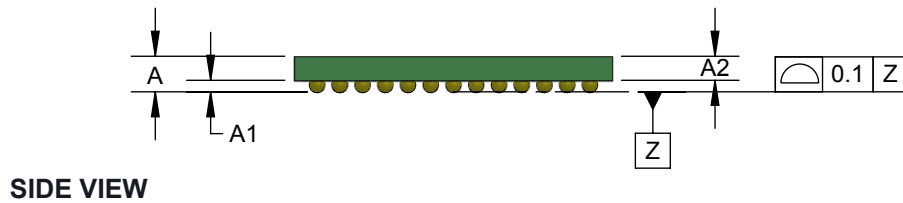
Primary dimension units are millimeters, Secondary dimension units are [inches], Weight is in grams.
 Tolerances: Hole diameters $\pm 0.03\text{mm}$ [$\pm 0.001''$], Pitches (from true position) $\pm 0.025\text{mm}$ [$\pm 0.001''$], substrate thickness tolerance $\pm 10\%$, all other tolerances $\pm 0.13\text{mm}$ [$\pm 0.005''$] unless stated otherwise. Materials and specifications are subject to change without notice.

 CG-BGA-4020 Drawing Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: Material <not specified> Finish: N/A Weight: 69.63	STATUS: Released ENG: S. Huang FILE: CG-BGA-4020 Dwg	SHEET: 2 OF 4 DRAWN BY: M. Raske DATE: 05/09/2014	REV. A SCALE: 3:1

Ironwood package code: BGA168K



ϕ	ϕ 0.15 (M)	Z	X	Y
	ϕ 0.08 (M)	Z		



DIM	NOM
A	1.56
A1	0.508
D	14.00
D1	12.00
E	14.00
E1	12.00
b	0.60
e	1.00


Array: 13x13

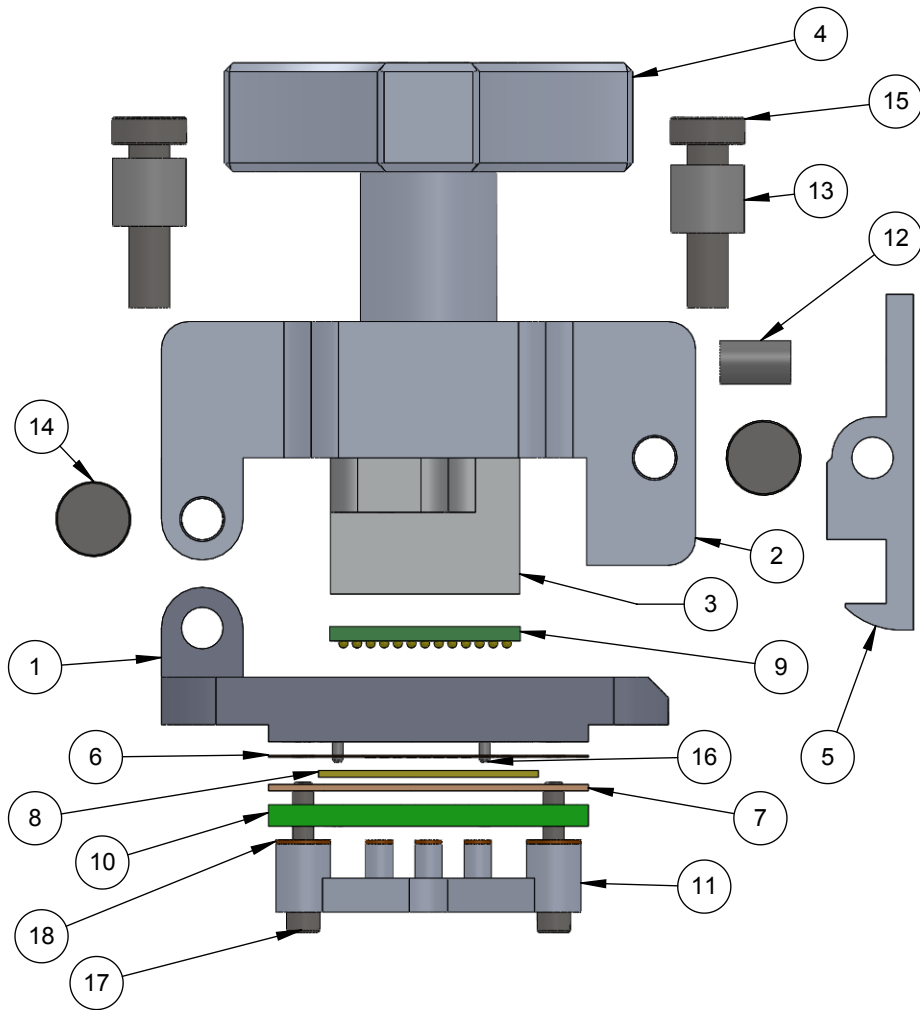
1. Dimensions are in millimeters.
2. Interpret dimensions and tolerances per ASME Y14.5-1994.
3. Dimension b is measured at the maximum solder ball diameter, parallel to datum plane Z.
4. Datum Z (seating plane) is defined by the spherical crowns of the solder balls.
5. Parallelism measurement shall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

Description: Compatible BGA

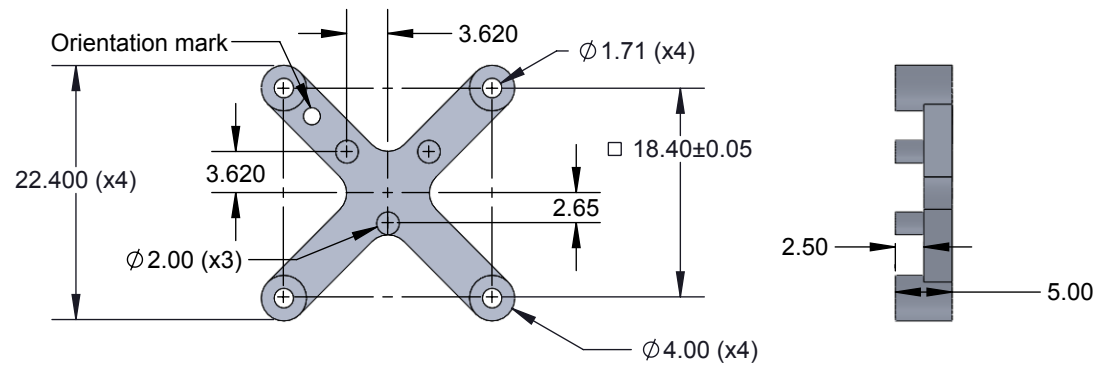
Primary dimension units are millimeters, Secondary dimension units are [inches], Weight is in grams.

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.

 CG-BGA-4020 Drawing Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: Material <not specified> Finish: N/A Weight: 69.63	STATUS: Released	SHEET: 3 OF 4	REV. A
		ENG: S. Huang	DRAWN BY: M. Raske	SCALE: 3:1
		FILE: CG-BGA-4020 Dwg	DATE: 05/09/2014	



ITEM NO.	DESCRIPTION	Material
1	Custom socket base 14mm IC	7075-T6 Aluminum Alloy
2	Clam shell lid for 17mm IC	7075-T6 Aluminum Alloy
3	Custom compression plate for 14mm IC	7075-T6 Aluminum Alloy
4	M10 Compression Screw	7075-T6 Aluminum Alloy
5	Clamshell Latch	7075-T6 Aluminum Alloy
6	Ball Guide 13x13 array 1mm pitch custom footprint	Kapton Polyimide/Cirlex
7	Elastomer Guide custom footprint	Ultem 1000
8	0.5mm thick, 0.05x 0.05mm pitch, 50mm sq, Z-axis conductive angled elastomer	20 Micron dia gold plated brass filaments arranged symetrically in a silicon rubber (63.5 degree angle), Thickness: 0.5mm
9	Customer's BGA device	FR4 High temp
10	Test PCB 14x14mm 13x13 array 1mm pitch custom footprint	Material <not specified>
11	Custom Clamshell Backing Plate	7075-T6 Aluminum Alloy
12	Precision Compression Spring, Zinc-Plated Music Wire, 1/2" Length, .12" OD, .016" Wire	Zinc Plated Music Wire
13	Spring Clamshell lid assembly	Steel Music Wire
14	Hinge Pin and Snap Ring, 3mm OD, 25mm long, SS	Stainless Steel (ferritic)
15	Screw, M3 x 12mm, Low Head Cap, SS	18-8 Stainless Steel
16	Dowel Pin, 1/32" x 3/16", SS	Chrome Stainless Steel
17	#0-80 X .375 LG, SOC HD CAP SCREW, ALLOY STL, BLK OXIDE	Alloy Steel
18	Insulating washer, 4mm OD.	Kapton Polyimide/Cirlex
19	Insulating disk, 2mm OD with 2 mil thk Adesive	Kapton Polyimide/Cirlex




Backing Plate Top View

Backing Plate Side View

Description: Skt and Backing plate Detail

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

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

 CG-BGA-4020 Drawing Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: Material <not specified> Finish: N/A Weight: 69.63	STATUS: Released	SHEET: 4 OF 4	REV. A
		ENG: S. Huang	DRAWN BY: M. Raske	SCALE: 1.8:1
		FILE: CG-BGA-4020 Dwg	DATE: 05/09/2014	