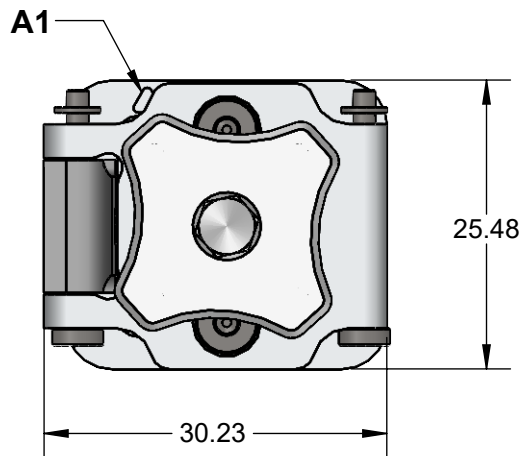
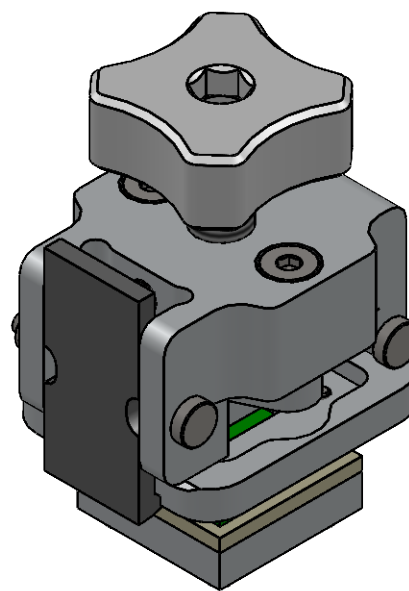
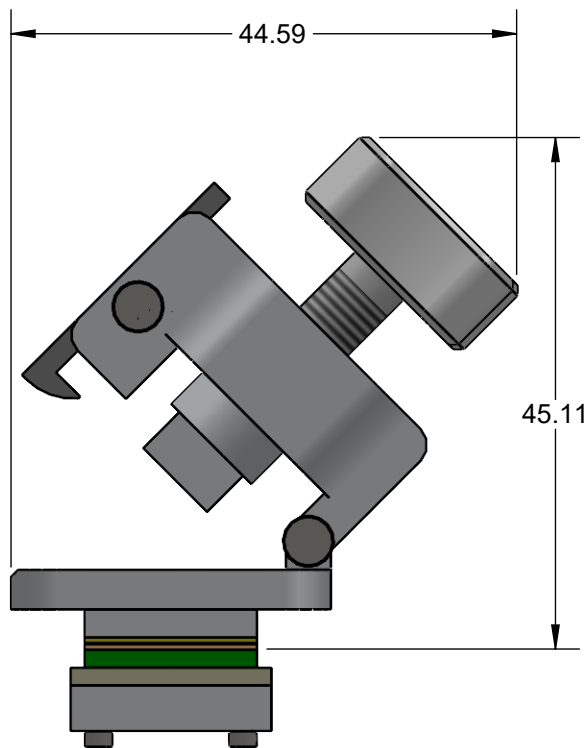
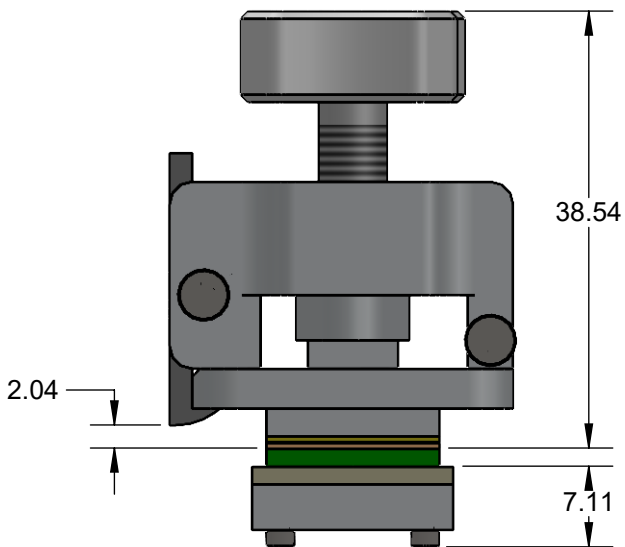


# Clamshell GHz Socket - Direct mount, solderless



## 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
- Clamshell lid

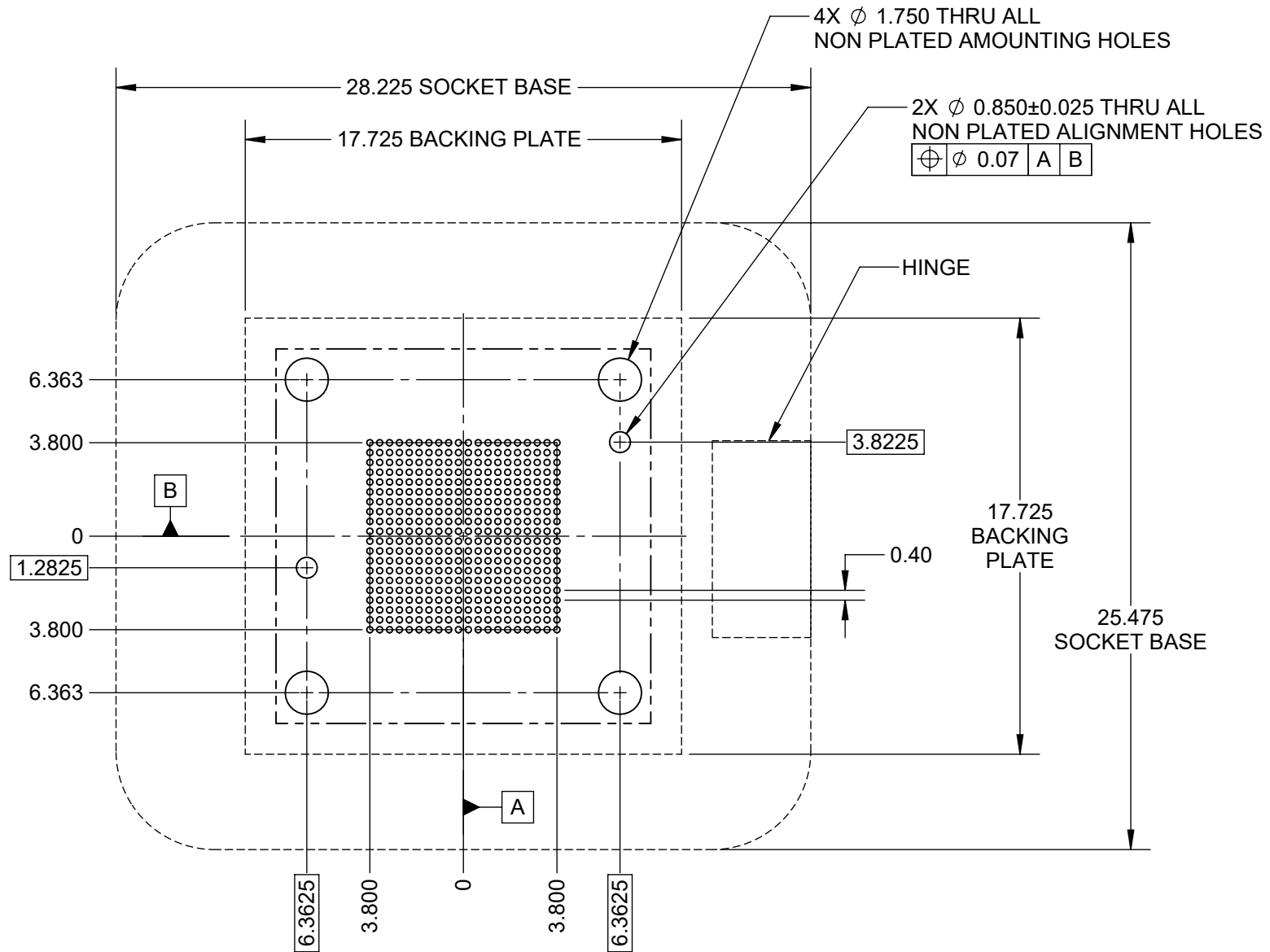


## Description: CG-BGA, 20X20, 0.4MM, 8MM IC

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>CG-BGA-5009 Drawing</b> ©2019 Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 42.71	STATUS: Released ENG: M. Fedde FILE: CG-BGA-5009 Dwg	SHEET: 1 OF 5 DRAWN BY: M. Raske DATE: 12/06/2019	REV. B SCALE: 3:2



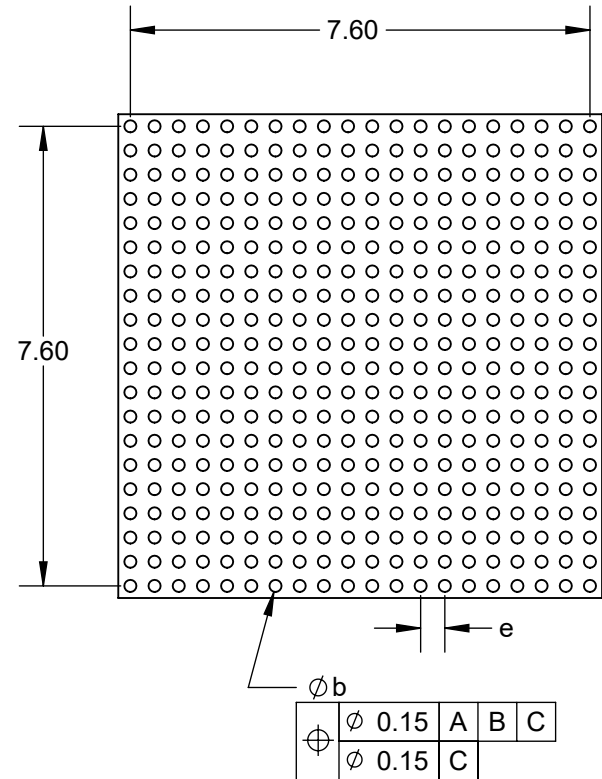
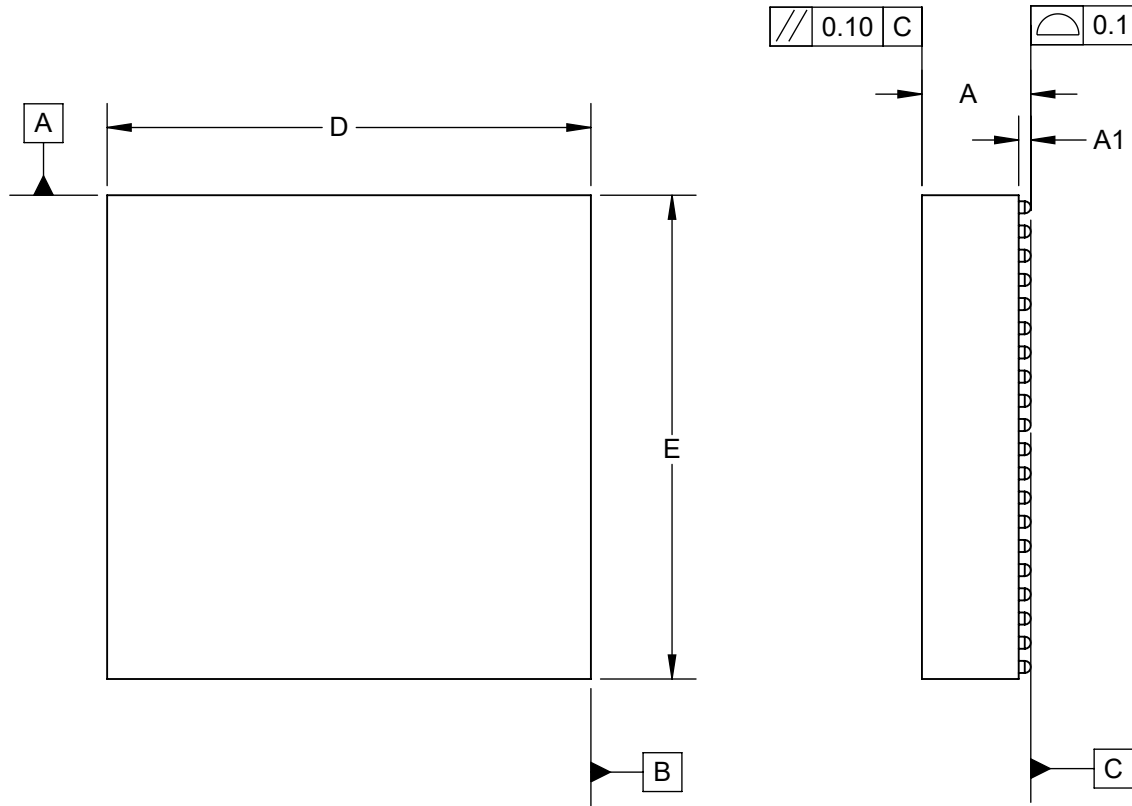
## Description: Recommended PCB Layout

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.

 <p><b>CG-BGA-5009 Drawing</b> ©2019 Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com</p>	<p>Material: N/A Finish: N/A Weight: 9.71</p>	<p>STATUS: Released ENG: M. Fedde FILE: CG-BGA-5009 Dwg</p>	<p>SHEET: 2 OF 5 DRAWN BY: M. Raske DATE: 12/06/2019</p>	<p>REV. B SCALE: 4:1</p>

# Ironwood Package Code: BGA400P




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.

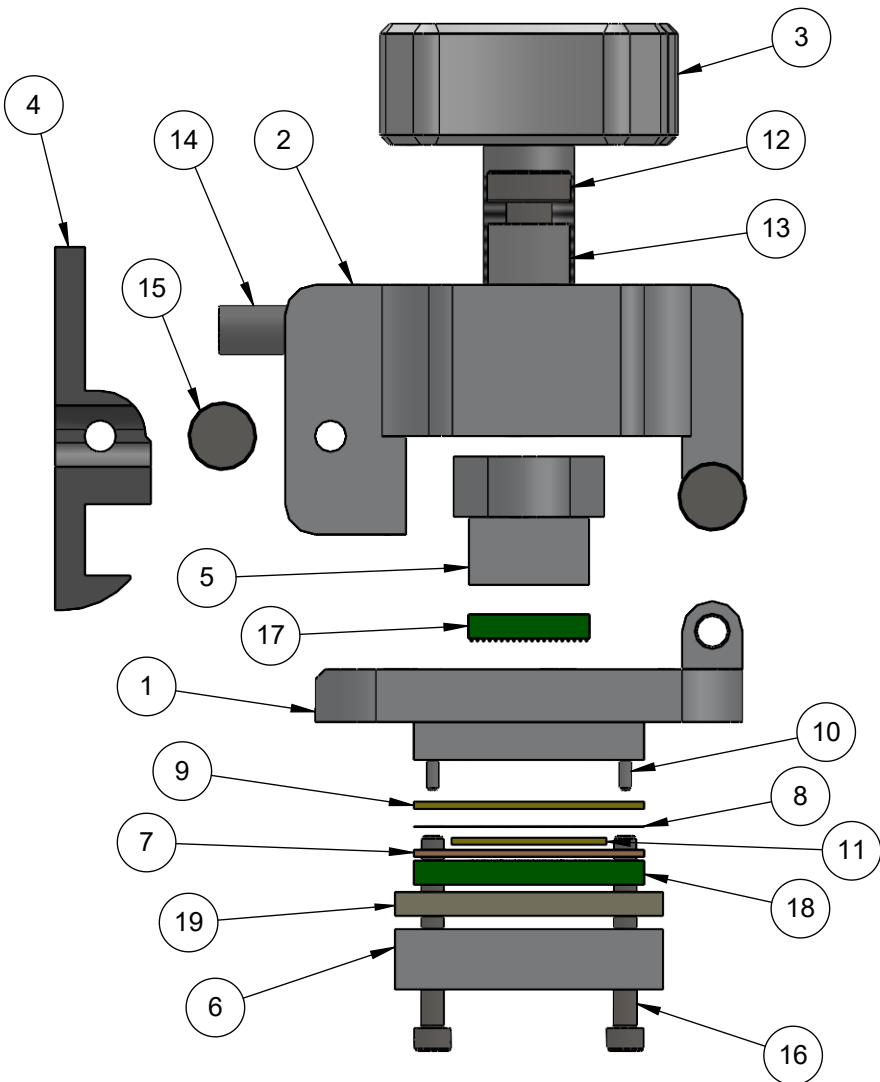
## Description: Compatible BGA

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

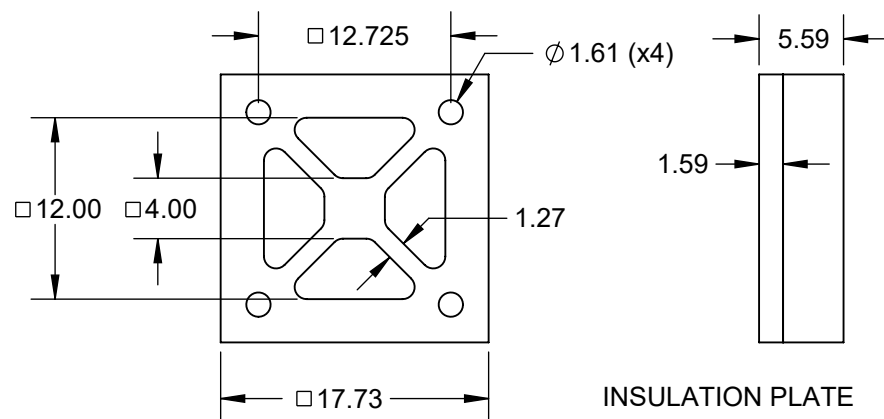
**Tolerances:** Hole diameters  $\pm 0.03\text{mm}$  [ $\pm 0.001$ "], Pitches (from true position)  $\pm 0.025\text{mm}$  [ $\pm 0.001$ "], substrate thickness tolerance  $\pm 10\%$ , all other tolerances  $\pm 0.13\text{mm}$  [ $\pm 0.005$ "] unless stated otherwise. Materials and specifications are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

DIM	Minimum	Maximum
A		2.5
A1	0.12	0.25
b	0.20	0.30
D	8.0 BSC	
E	8.0 BSC	
e	0.4	
ARRAY	20 X 20	

 <b>CG-BGA-5009 Drawing</b> ©2019 Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 9.71	STATUS: Released ENG: M. Fedde FILE: CG-BGA-5009 Dwg	SHEET: 3 OF 5 DRAWN BY: M. Raske DATE: 12/06/2019	REV. B SCALE: 8:1
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ITEM NO.	DESCRIPTION	Material
1	Socket Base	7075-T6 Aluminum Alloy
2	Clam Shell Lid	7075-T6 Aluminum Alloy
3	M6x1 fluted knob compression screw, Ni plated	7075-T6 Aluminum Alloy
4	Latch 6- 10mm Ni plated	7075-T6 Aluminum Alloy
5	Compression Plate	7075-T6 Aluminum Alloy
6	Backing Plate	7075-T6 Alumium Alloy
7	Elastomer Guide 10x10mm	Ultem
8	Ball Guide	Kapton Polyimide/Cirlex
9	IC Guide	Torlon 4203
10	Dowel Pin, 1/32" x 3/16", SS	Chrome Stainless Steel
11	Elastomer, 0.5 thk	20 Micron dia gold plated brass filaments arranged symettrically in a silicon rubber (63.5 degree angle), Thickness: 0.5mm
12	Screw, M3 x 12mm, Low Head Cap, SS	18-8 Stainless Steel
13	Spring Clamshell lid assembly	Steel Music Wire
14	Precision Compression Spring, Zinc-Plated Music Wire, 1/2" Length, .12" OD, .016" Wire	Zinc Plated Music Wire
15	Hinge Pin and Snap Ring, 2mm OD, 19mm long, SS	Stainless Steel (ferritic)
16	#0-80 x 0.5, SH Cap Screw	Alloy Steel
17	TST CHP 8MM, 20X20, 0.4MM	Material <not specified>
18	TST PCB 8MM, 20X20, 0.4MM	Material <not specified>
19	Insulation Plate	FR5 / G11 natural color



### Description: Socket Assy, Insulation Plate

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>CG-BGA-5009 Drawing</b> ©2019 Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 9.71	STATUS: Released ENG: M. Fedde FILE: CG-BGA-5009 Dwg	SHEET: 4 OF 5 DRAWN BY: M. Raske DATE: 12/06/2019	REV. B SCALE: 2:1

Rev	Date	Initials	Description
B	12/11/19	MF	replaced insulation plate, VW to SW

## Description: Revision History

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>CG-BGA-5009 Drawing</b> ©2019 Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	<b>Material:</b> <b>Finish:</b> <b>Weight:</b>	STATUS: Released	SHEET: 5 OF 5	REV. B
		ENG: M. Fedde	DRAWN BY: M. Raske	SCALE: 3:1
		FILE: CG-BGA-5009 Dwg	DATE: 12/06/2019	