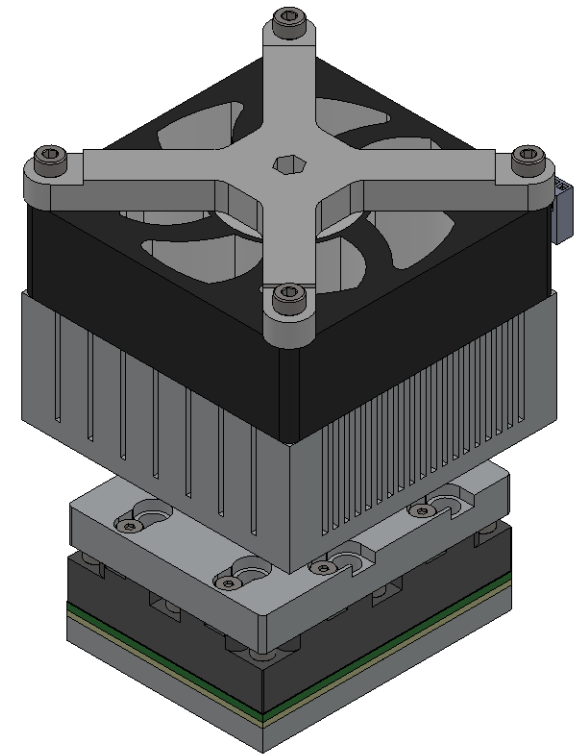
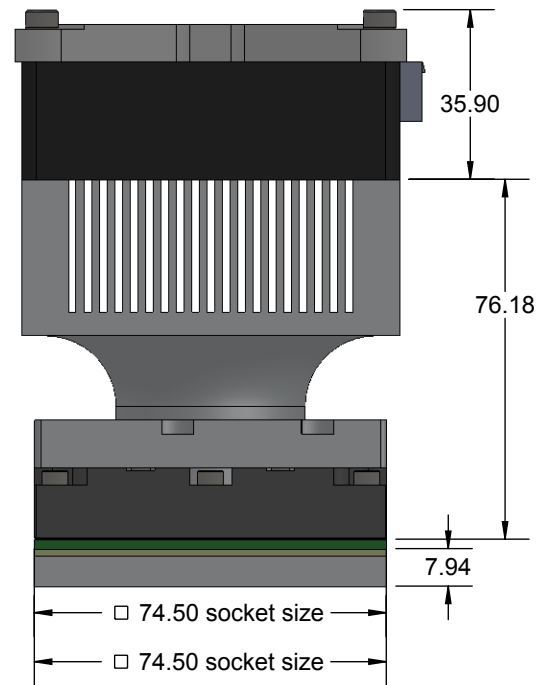
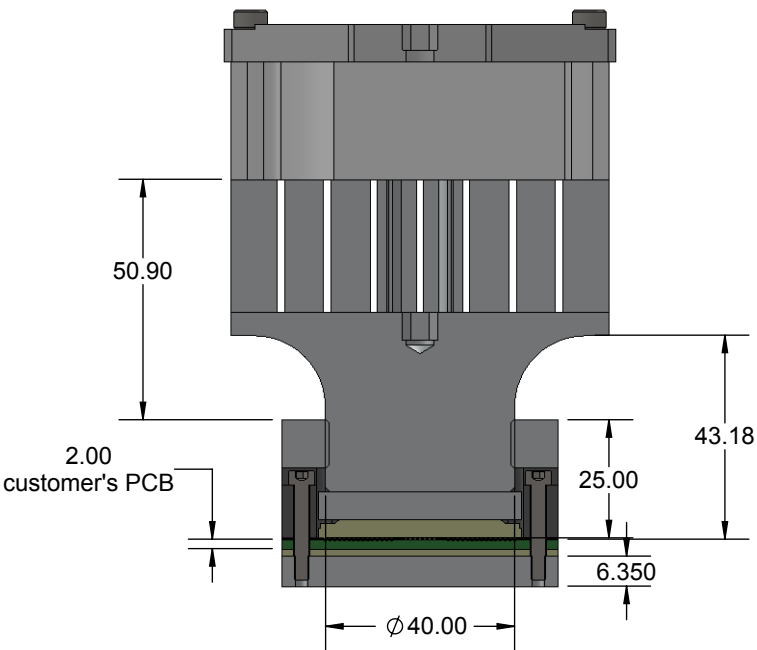
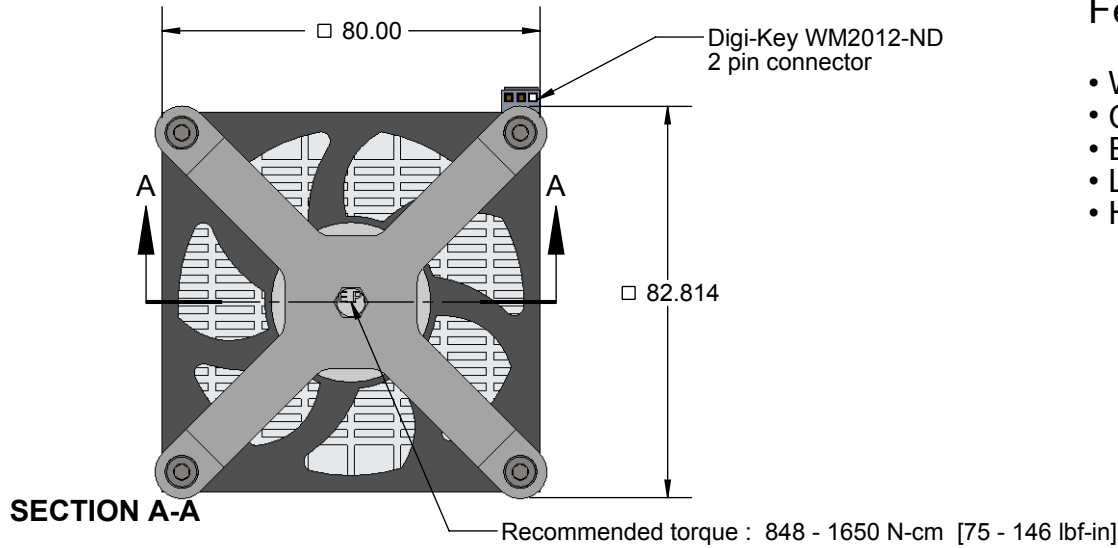


# GT BGA Socket - Direct mount, solderless

## Features


- Wide temperature range (-55C to +160°C).
- Current rating at 20C temperature rise is 5.4 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.



## Description: Socket for 43x59mm 41x57 1mm pitch BGA

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.

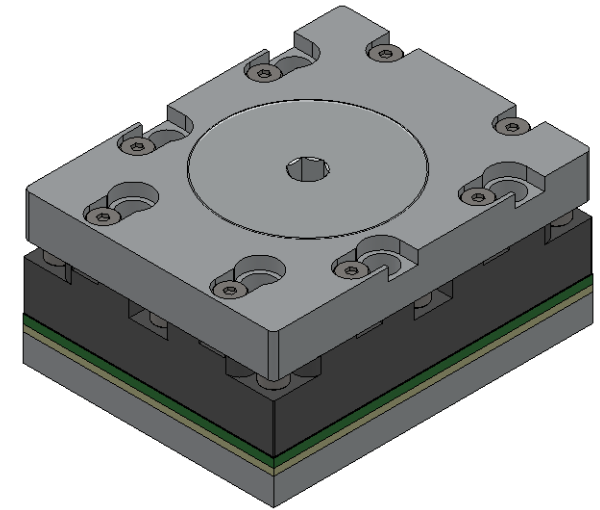
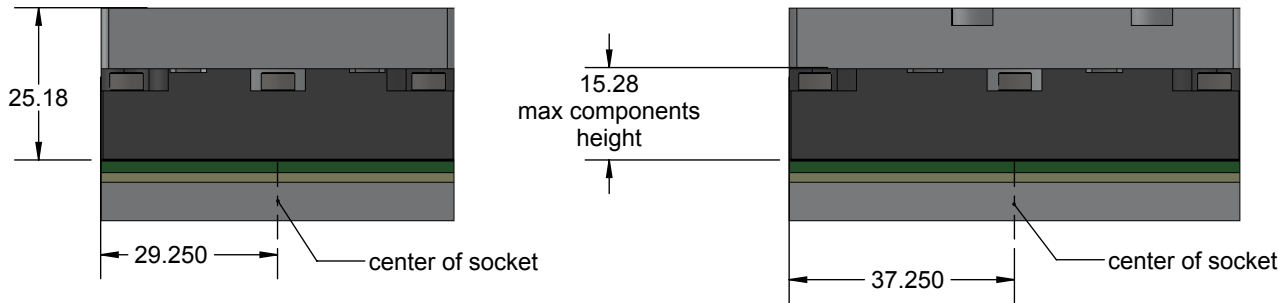
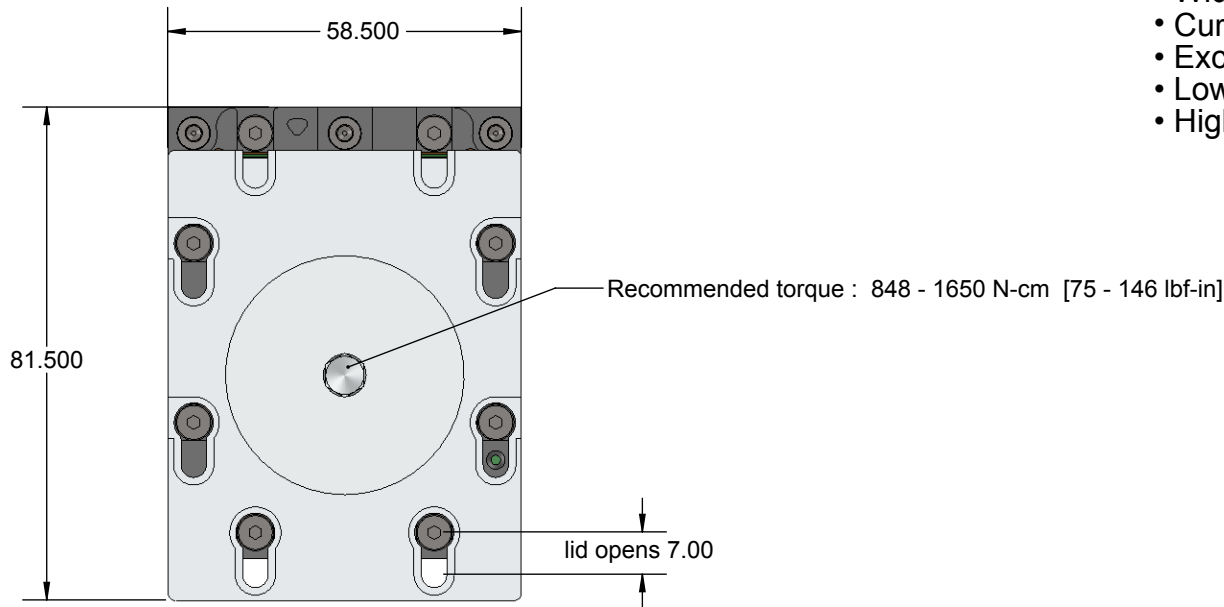
 <b>GT-BGA-2023 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 1088.96	STATUS: Released ENG: E. Smolentseva FILE: GT-BGA-2023 Dwg	SHEET: 1 OF 9 DRAWN BY: M. Raske DATE: 05/08/2015	REV. A SCALE: 1:1.6

# GT BGA Socket - Direct mount, solderless

Socket without heatsink and fan

## Features


- Wide temperature range (-55°C to +160°C).
- Current rating at 20°C temperature rise is 5.4 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.



## Description: Socket for 43x59mm 41x57 1mm pitch BGA

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

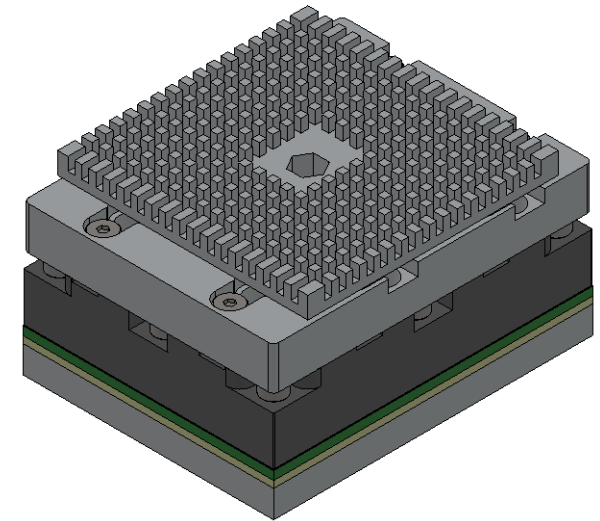
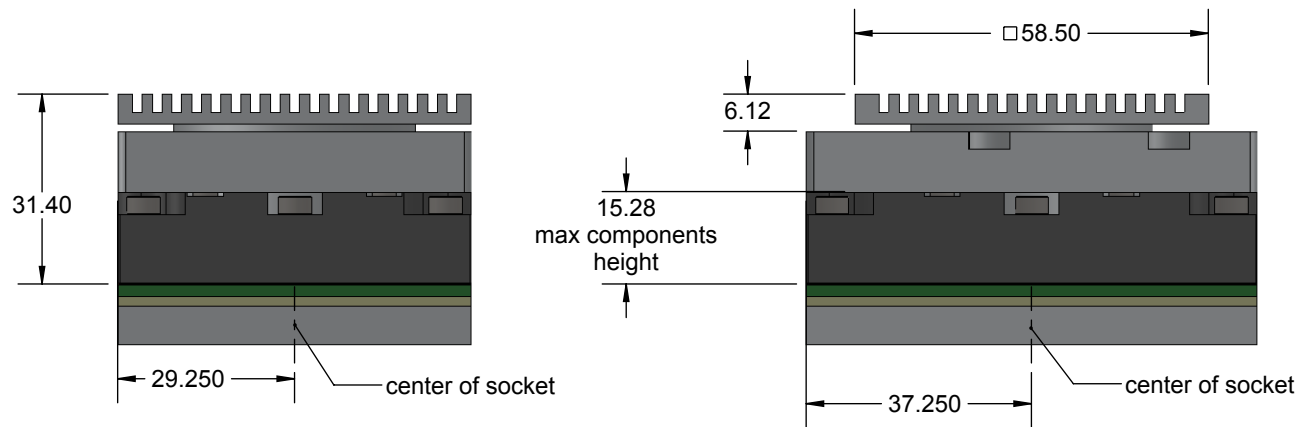
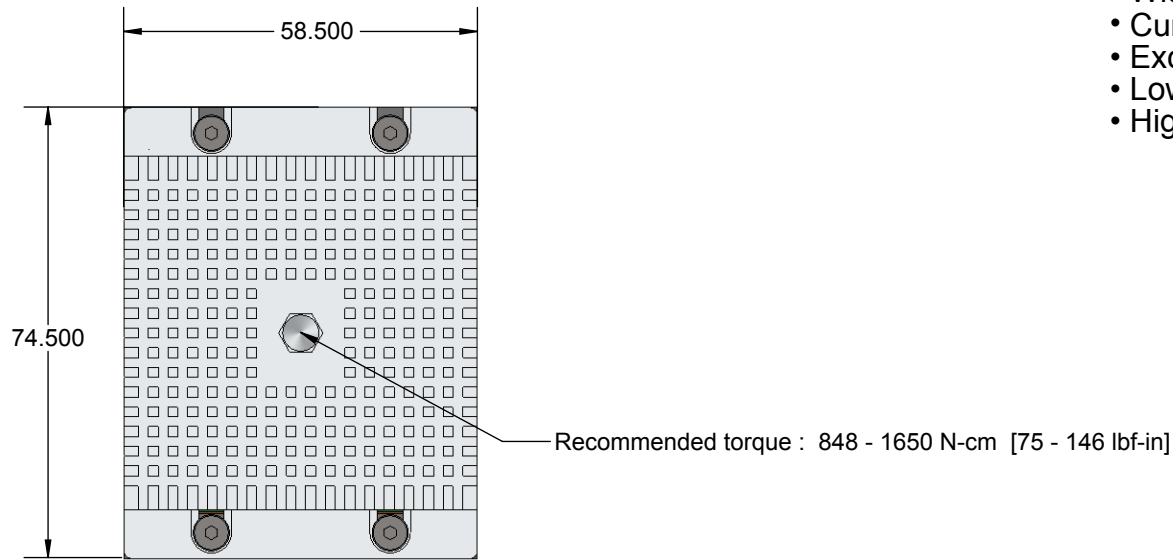
Tolerances: Hole diameters  $\pm 0.0254\text{mm}$  [ $\pm 0.001$ "]. Pitches (from true position)  $\pm 0.0762\text{mm}$  [ $\pm 0.003$ "], substrate thickness tolerance  $\pm 10\%$ , all other tolerances  $\pm 0.127\text{mm}$  [ $\pm 0.005$ "] unless stated otherwise. Materials and specifications are subject to change without notice.

 <b>GT-BGA-2023 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 1088.96	STATUS: Released ENG: E. Smolentseva FILE: GT-BGA-2023 Dwg	SHEET: 2 OF 9 DRAWN BY: M. Raske DATE: 05/08/2015	REV. A SCALE: 1:1.25

# GT BGA Socket - Direct mount, solderless

## Features


- Wide temperature range (-55C to +160°C).
- Current rating at 20C temperature rise is 5.4 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.

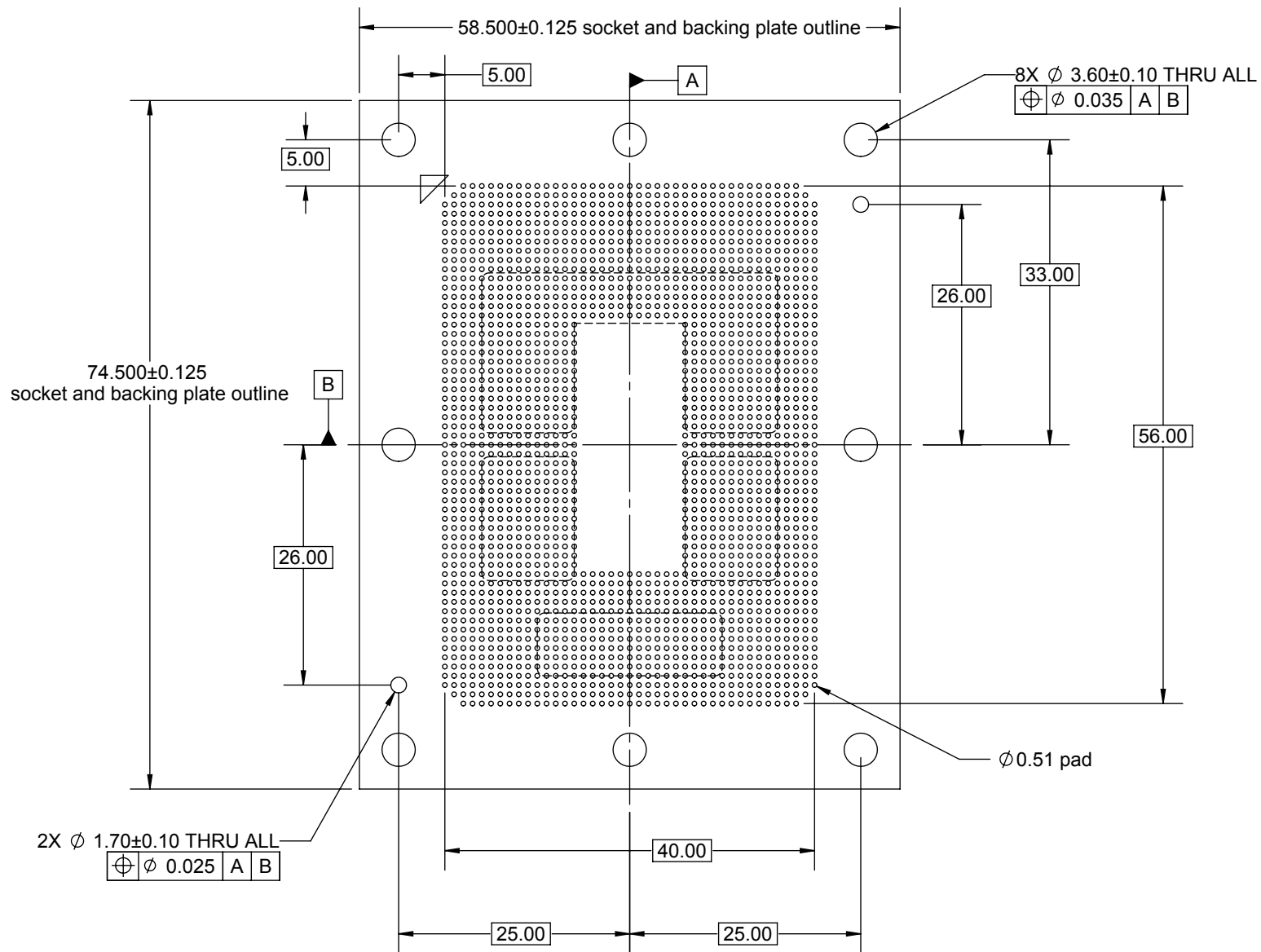


## Description: Socket for 43x59mm 41x57 1mm pitch BGA

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>GT-BGA-2023 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 1088.96	STATUS: Released ENG: E. Smolentseva FILE: GT-BGA-2023 Dwg	SHEET: 3 OF 9 DRAWN BY: M. Raske DATE: 05/08/2015	REV. A SCALE: 1:1.25



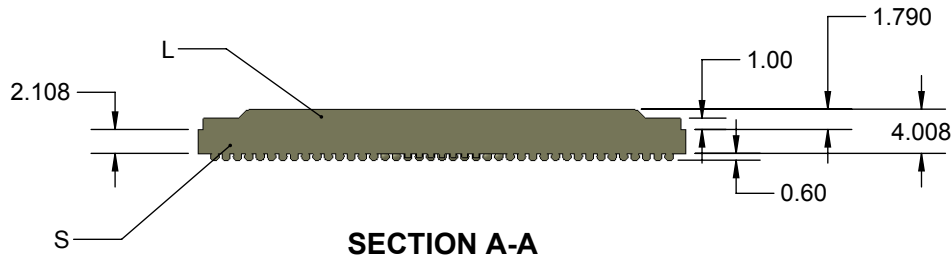
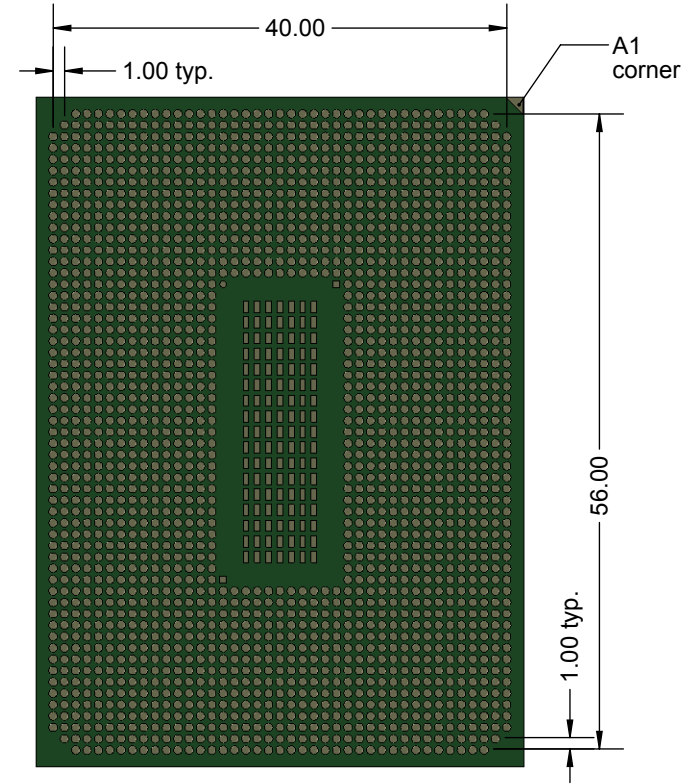
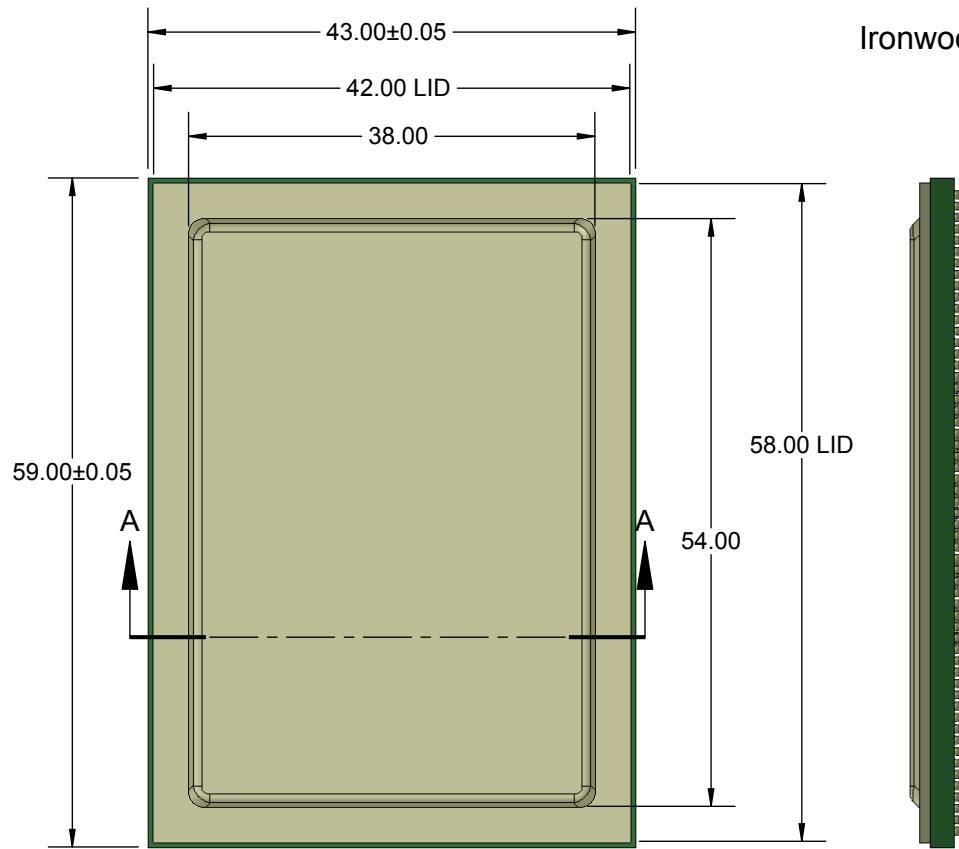
## Description: Recommended PCB Layout

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.

 <p><b>GT-BGA-2023 Drawing</b>          Ironwood Electronics, Inc.          Tele: (800) 404-0204          www.ironwoodelectronics.com</p>	<p>Material: N/A          Finish: N/A          Weight: 1088.96</p>	<p>STATUS: Released          ENG: E. Smolentseva          FILE: GT-BGA-2023 Dwg</p>	<p>SHEET: 4 OF 9          DRAWN BY: M. Raske          DATE: 05/08/2015</p>	<p>REV. A          SCALE: 1.5:1</p>

# Ironwood Package Code BGA2028A




Dimensions are in millimeters.

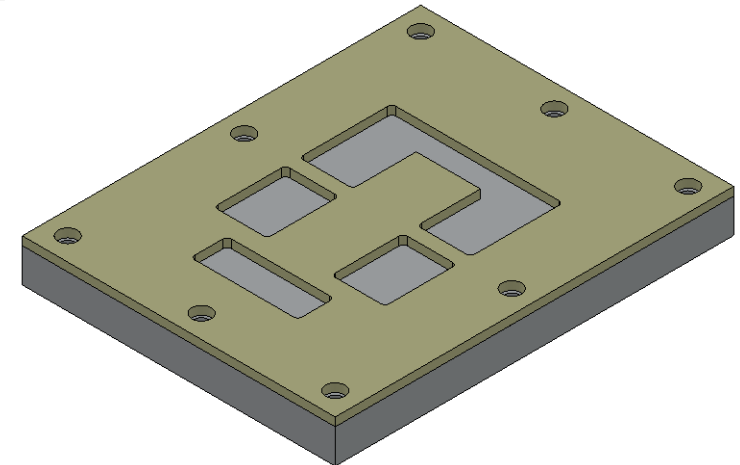
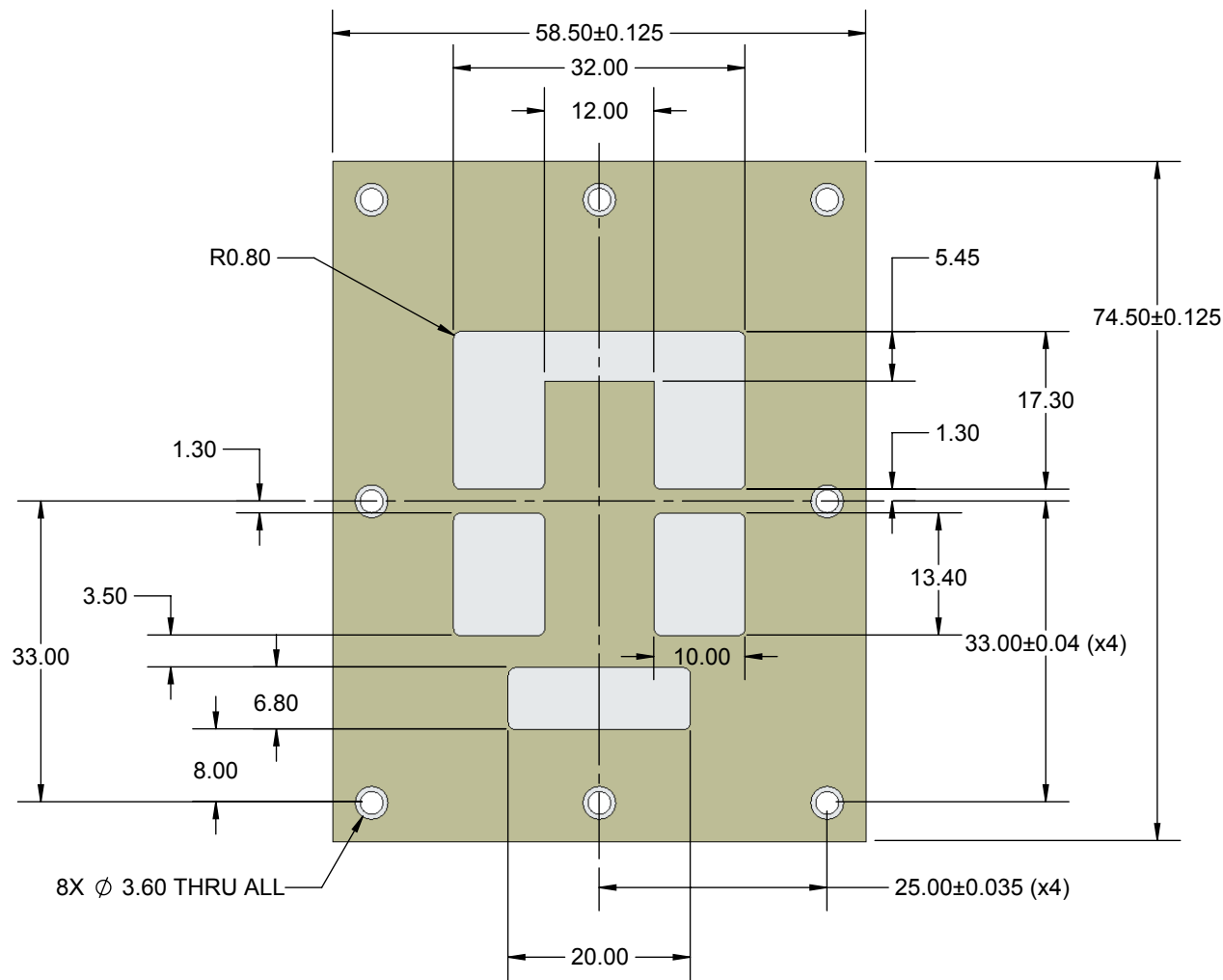
1. Interpret dimensions and tolerances per ASME Y14.5M-1994.
2. Dimension b is measured at the maximum solder ball diameter, parallel to datum plane Z.
3. Datum Z (seating plane) is defined by the spherical crowns of the solder balls.
4. Parallelism measurement shall exclude any effect of mark on top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

## Description: Compatible Device

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>GT-BGA-2023 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 1088.96	STATUS: Released ENG: E. Smolentseva FILE: GT-BGA-2023 Dwg	SHEET: 5 OF 9 DRAWN BY: M. Raske DATE: 05/08/2015	REV. A SCALE: 1.5:1



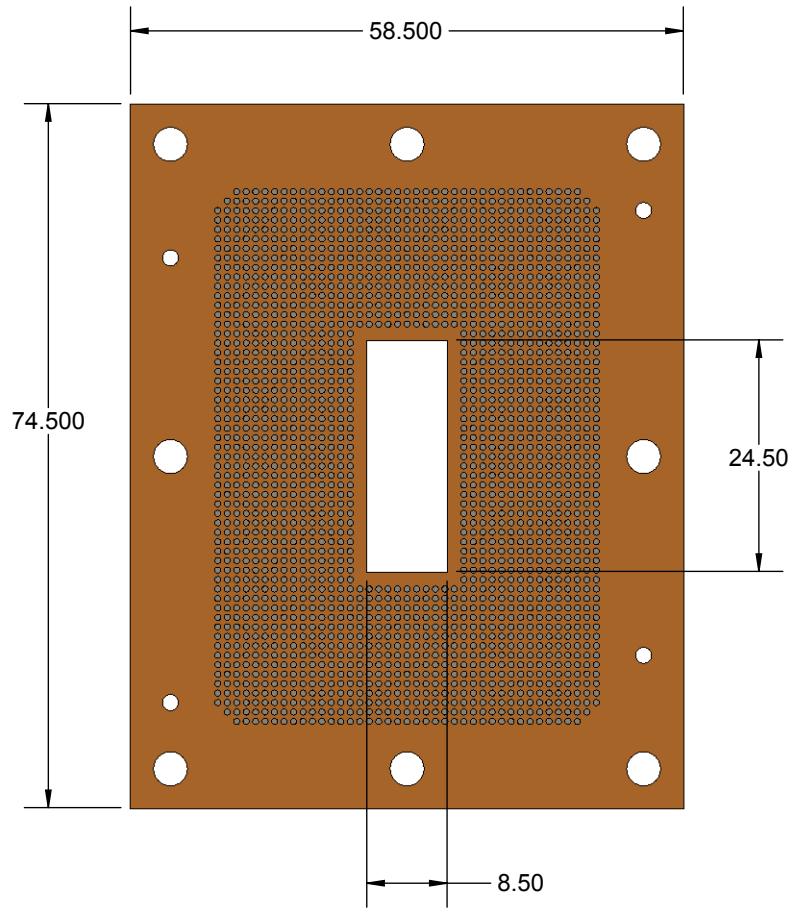
## Description: Socket, Backing Plate Detail

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

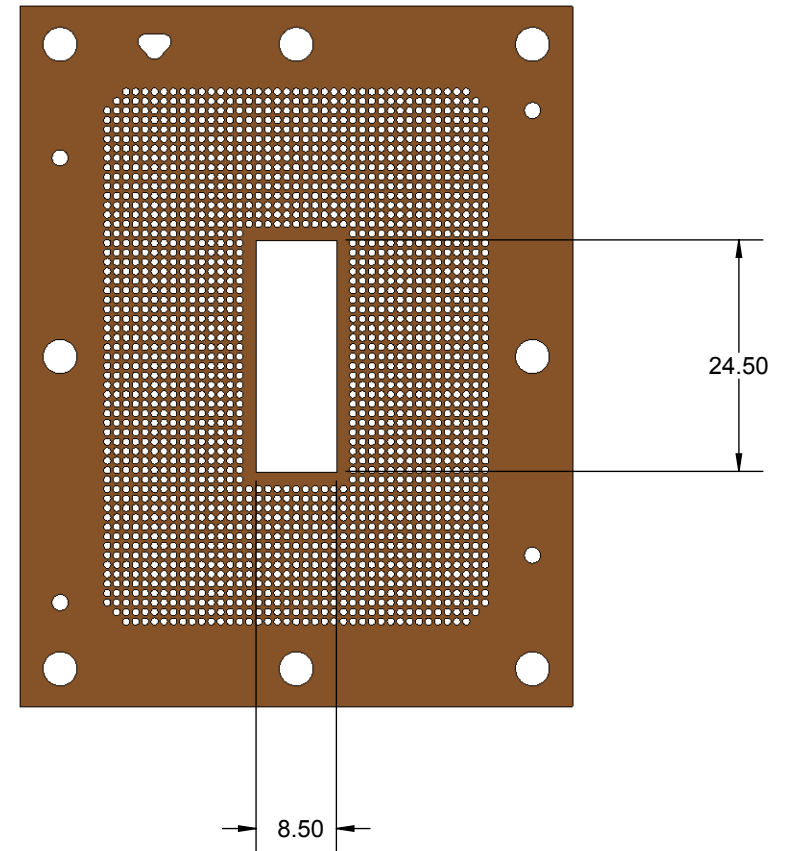
Tolerances: Hole diameters  $\pm 0.03\text{mm}$  [ $\pm 0.001$ "], Pitches (from true position)  $\pm 0.025\text{mm}$  [ $\pm 0.001$ "], substrate thickness tolerance  $\pm 10\%$ , all other tolerances  $\pm 0.13\text{mm}$  [ $\pm 0.005$ " unless stated otherwise. Materials and specifications are subject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

 <b>GT-BGA-2023 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 1088.96	STATUS: Released ENG: E. Smolentseva FILE: GT-BGA-2023 Dwg	SHEET: 6 OF 9 DRAWN BY: M. Raske DATE: 05/08/2015	REV. A SCALE: 1.25:1

**Interposer (top view)**




**Ball Guide (top view)**

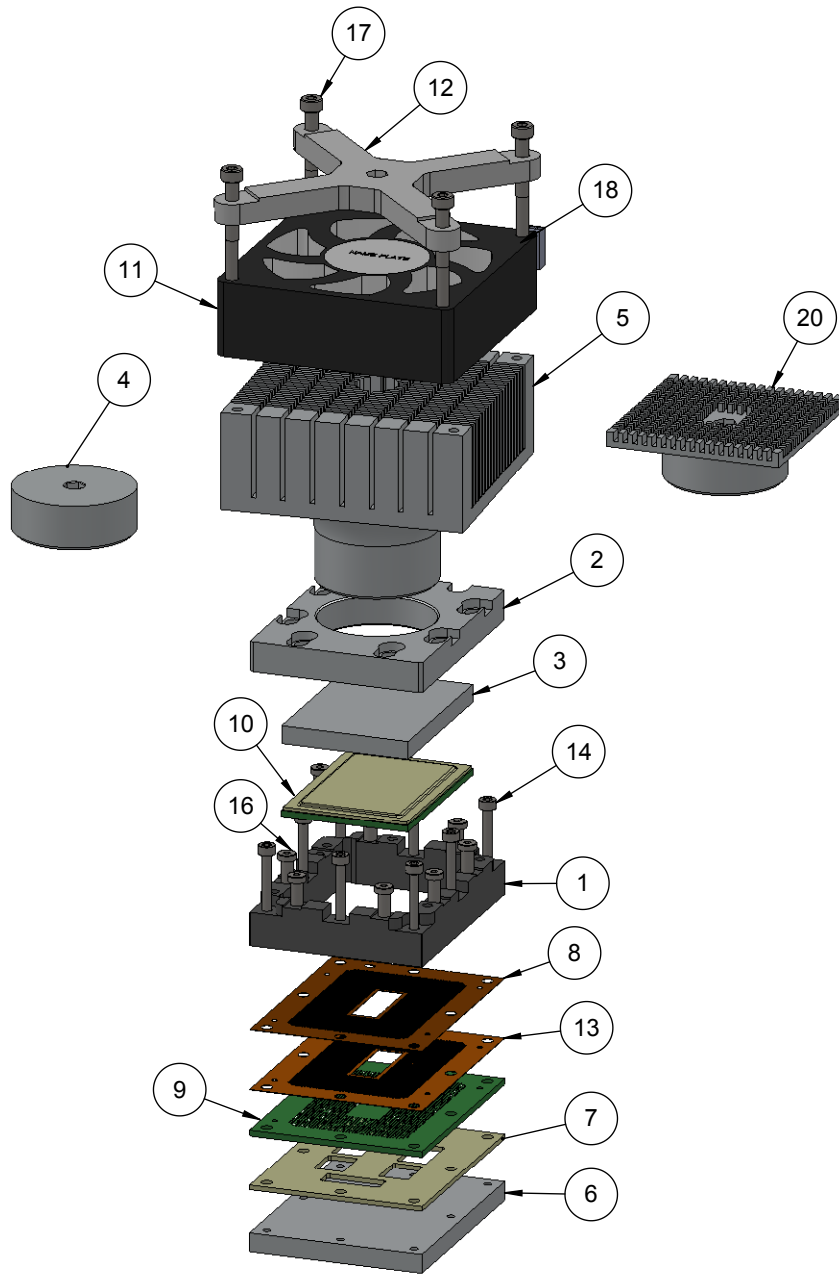


**Description: Interposer and Ball Guide**

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><b>GT-BGA-2023 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com</p>	<p>Material: N/A Finish: N/A Weight: 1088.96</p>	STATUS: Released	SHEET: 7 OF 9	REV. A
		ENG: E. Smolentseva	DRAWN BY: M. Raske	SCALE: 1.25:1
		FILE: GT-BGA-2023 Dwg	DATE: 05/08/2015	




ITEM NO.	DESCRIPTION	Material
1	Socket Base	7075-T6 Aluminum Alloy
2	Socket lid	7075-T6 Aluminum Alloy
3	Compression Plate	7075-T6 Aluminum Alloy
4	Compression Screw, M40	7075-T6 Aluminum Alloy
5	Heatsink compression Screw	7075-T6 Aluminum Alloy
6	Backing plate	7075-T6 Aluminum Alloy
7	Insulating plate	FR4 Standard
8	Ball Guide	Kapton Polyimide/Cirlex
9	Customer's target PCB	FR4 Standard
10	Customer's device	FR4 Standard
11	Fan 80x25, 40.2CFM 12V	Plastic (UL 94V-0)
12	Torquing bracket	Stainless Steel (303)
13	GT Elastomer 43x59mm IC 1mm pitch 41x57 array	Conductive Elastomer
14	Screw, M3 x 0.5mm, 20mm lg, Low Head Cap, SS	Stainless Steel (18-8)
15	Dowel Pin, 1/16" x 3/16", SS	Chrome Stainless Steel
16	Low Profile Shoulder Screw, M3 THRD, 4mm shoulder dia., 18-8SS	Stainless Steel (18-8)
17	Socket Head Cap Screw, M4x0.7, 40mm lg	Alloy Steel
18	3 pin connectot housing 0.1 with ramp	Nylon 101
19	Crimp Terminal 22-30 GA Wire	Brass
20	Heatsink compression Screw	7075-T6 Alumium Alloy

## Description: Socket assembly

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>GT-BGA-2023 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 1088.96	STATUS: Released ENG: E. Smolentseva FILE: GT-BGA-2023 Dwg	SHEET: 8 OF 9 DRAWN BY: M. Raske DATE: 05/08/2015	REV. A SCALE: 1:2.4



# To apply the torque specified on page 1 you would need additional tools (not included with the socket, but could be purchased separately)

## ACDelco ARM601-3 3/8-Inch Digital Torque Wrench

24 - 444 in lb torque range

Item Weight 2.8 pounds

Product Dimensions 1.5 x 1.5 x 12.2 inches

Batteries: 4 AAA batteries required. (included)

Ironwood Part number R3902



## Square Drive Hex Insert Bit Holder

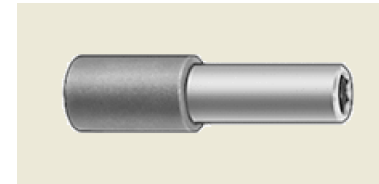
Magnetic Plain End, 3/8" Female Square Drive, 1/4" Hex

Length 2 1/8"

Magnetic Plain End

Use with male square-drive tools. Made of steel.

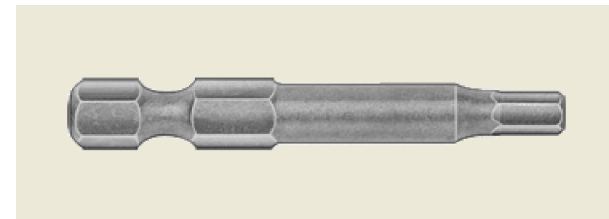
Ironwood Part number R3903



## Bit Adapter

1/4" x 1/4" Hex Shank Socket Head Insert Bit, 2" long


Ironwood Part number R3916



## Description: Accessories

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>GT-BGA-2023 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: Finish: Weight:	STATUS: Released	SHEET: 9 OF 9	REV. A
		ENG: E. Smolentseva	DRAWN BY: M. Raske	SCALE: 1:2.4
		FILE: GT-BGA-2023 Dwg	DATE: 05/08/2015	