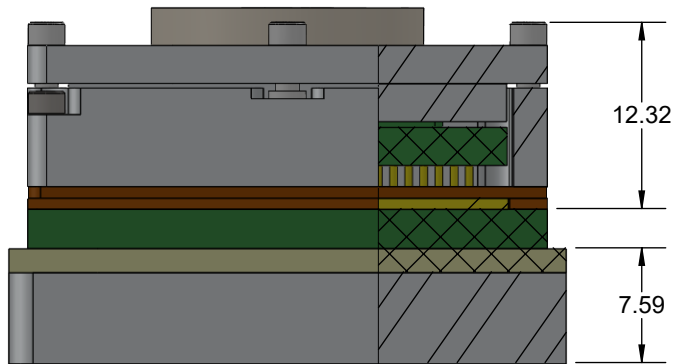
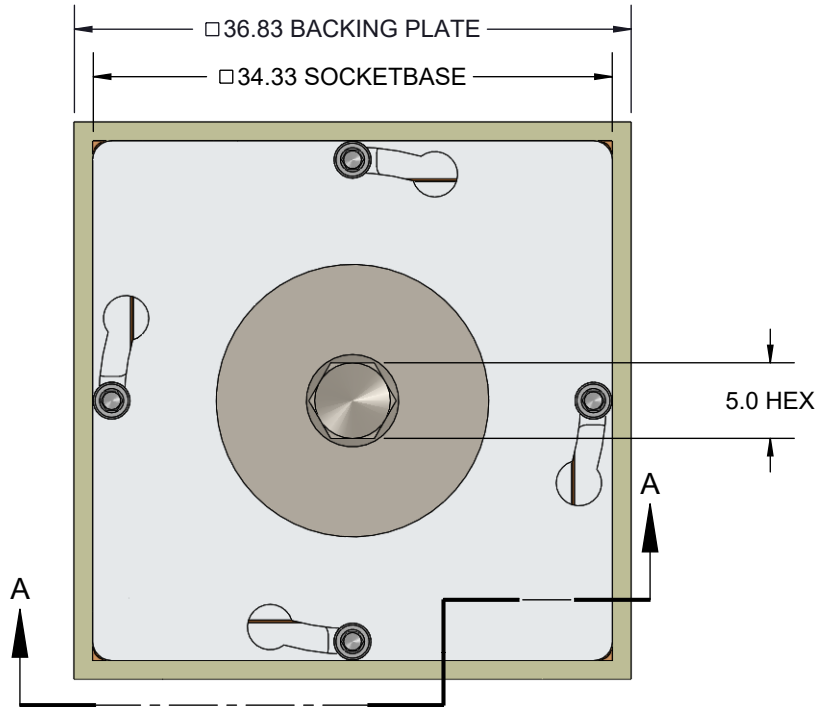


GHz CGA Socket - Direct mount, solderless

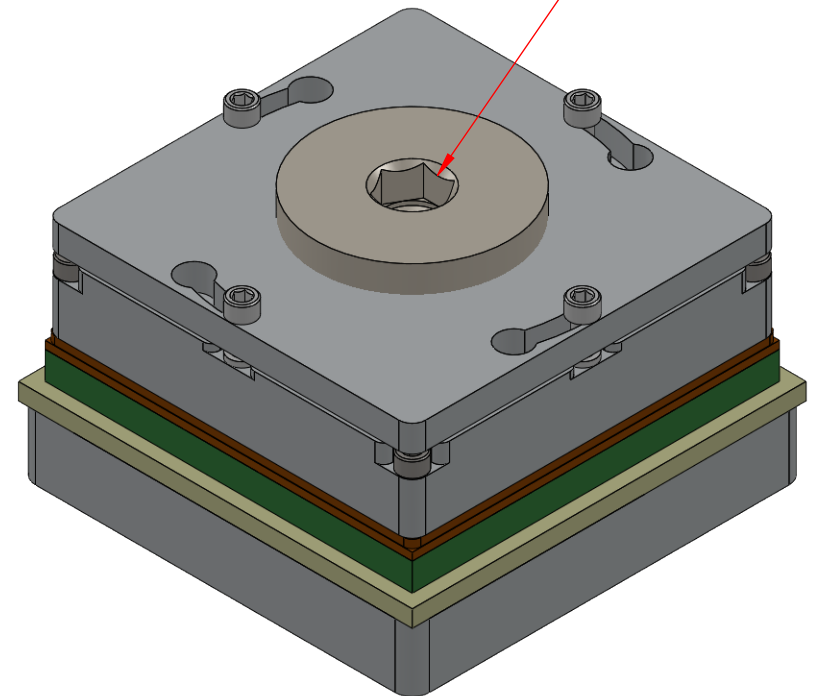
Features

- 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
- Easily removable swivel socket lid

Required Torque: 7.5 to 10.0 lbf-in [85 to 113 N-cm]
Recommended Tool: TL-TORQUEDRIVER-02




SECTION A-A



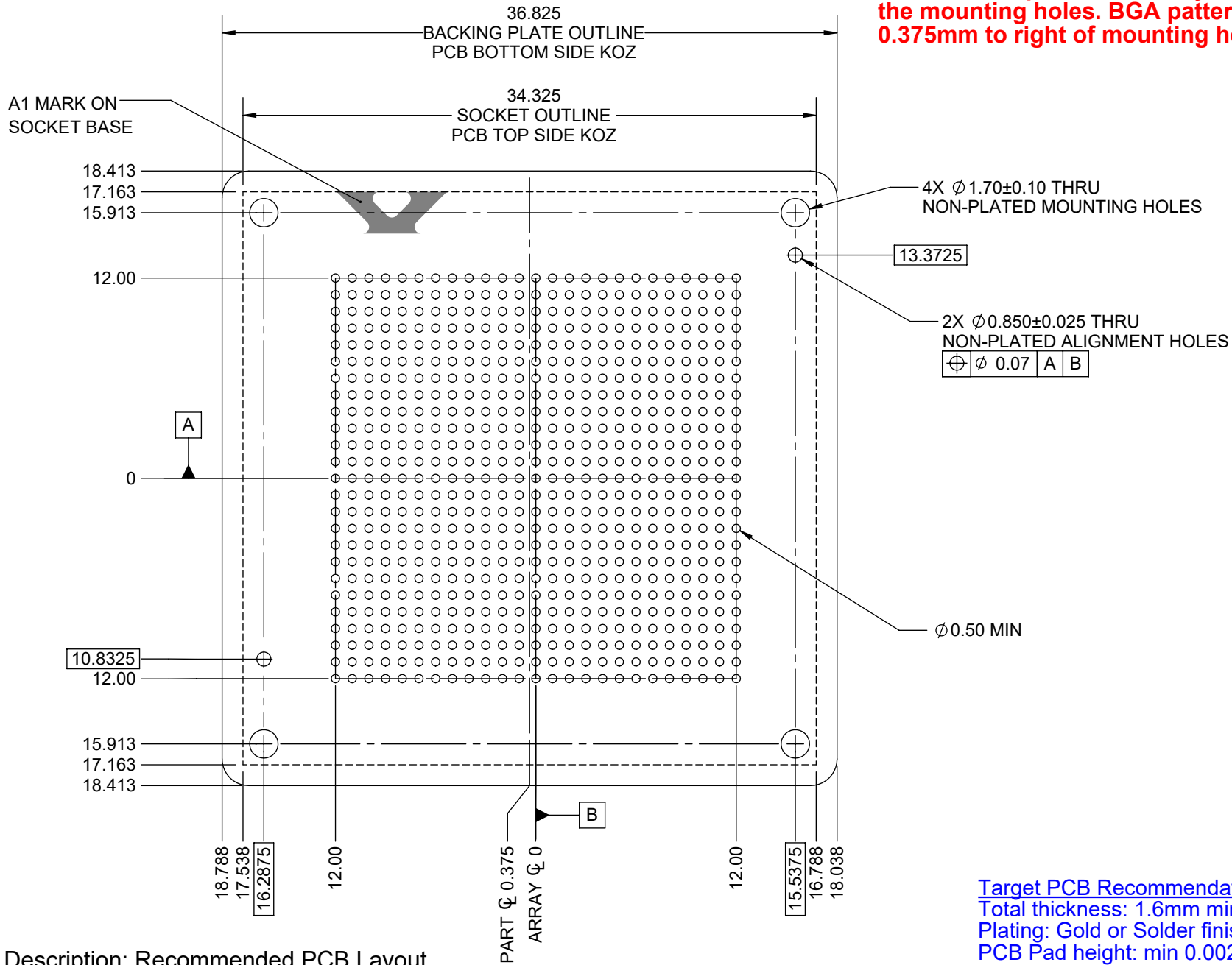
Description: SG-CGA625, 29x29mm, 25x25 Array, 1mm Pitch

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

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

| | | | | |
|---|--|--|---|----------------------|
|  C18061 Drawing Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com | Material: N/A Finish: N/A Weight: 59.543 | STATUS: Released ENG: M. Newby FILE: SG-CGA-6003 Dwg | SHEET: 1 OF 4 DRAWN BY: M. Raske DATE: 03/07/2019 | REV. A SCALE: 2:1 |
| | | | | |

***NOTE: BGA pattern is not symmetric with respect to the mounting holes. BGA pattern centerline is shifted 0.375mm to right of mounting hole centerline.**



Description: Recommended PCB Layout

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.

Target PCB Recommendations

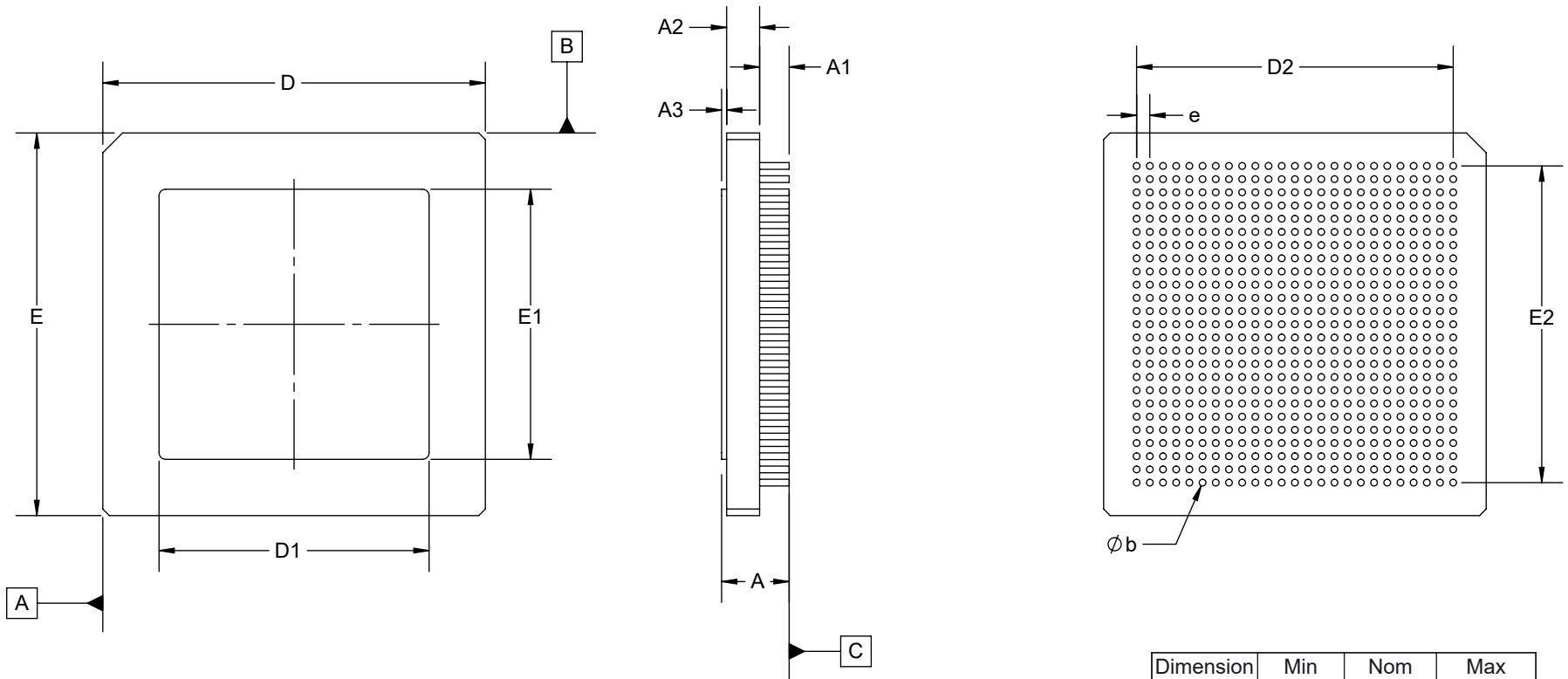
Total thickness: 1.6mm min.

Plating: Gold or Solder finish

PCB Pad height: min 0.002" above solder mask

| | | | | |
|---|---|-----------------------|--------------------|------------|
|  <p>C18061 Drawing Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com</p> | <p>Material: N/A Finish: N/A Weight: 59.543</p> | STATUS: Released | SHEET: 2 OF 4 | REV. A |
| | | ENG: M. Newby | DRAWN BY: M. Raske | SCALE: 3:1 |
| | | FILE: SG-CGA-6003 Dwg | DATE: 03/07/2019 | |

625 pin column grid array, 1.0mm pitch



Dimensions are in millimeters.

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


| Dimension | Min | Nom | Max |
|-----------|-------|-------|-------|
| A | 4.77 | 5.12 | 5.47 |
| A1 | 2.16 | 2.24 | 2.31 |
| A2 | 2.25 | 2.50 | 2.75 |
| A3 | 0.36 | 0.38 | 0.41 |
| b | 0.48 | 0.51 | 0.52 |
| D | 28.85 | 29.00 | 29.15 |
| D1 | 20.40 | 20.47 | 20.55 |
| D2 | 23.90 | 24.00 | 24.10 |
| E | 28.85 | 29.00 | 29.15 |
| E1 | 20.40 | 20.47 | 20.55 |
| E2 | 23.90 | 24.00 | 24.10 |
| e | 0.92 | 1.00 | 1.08 |

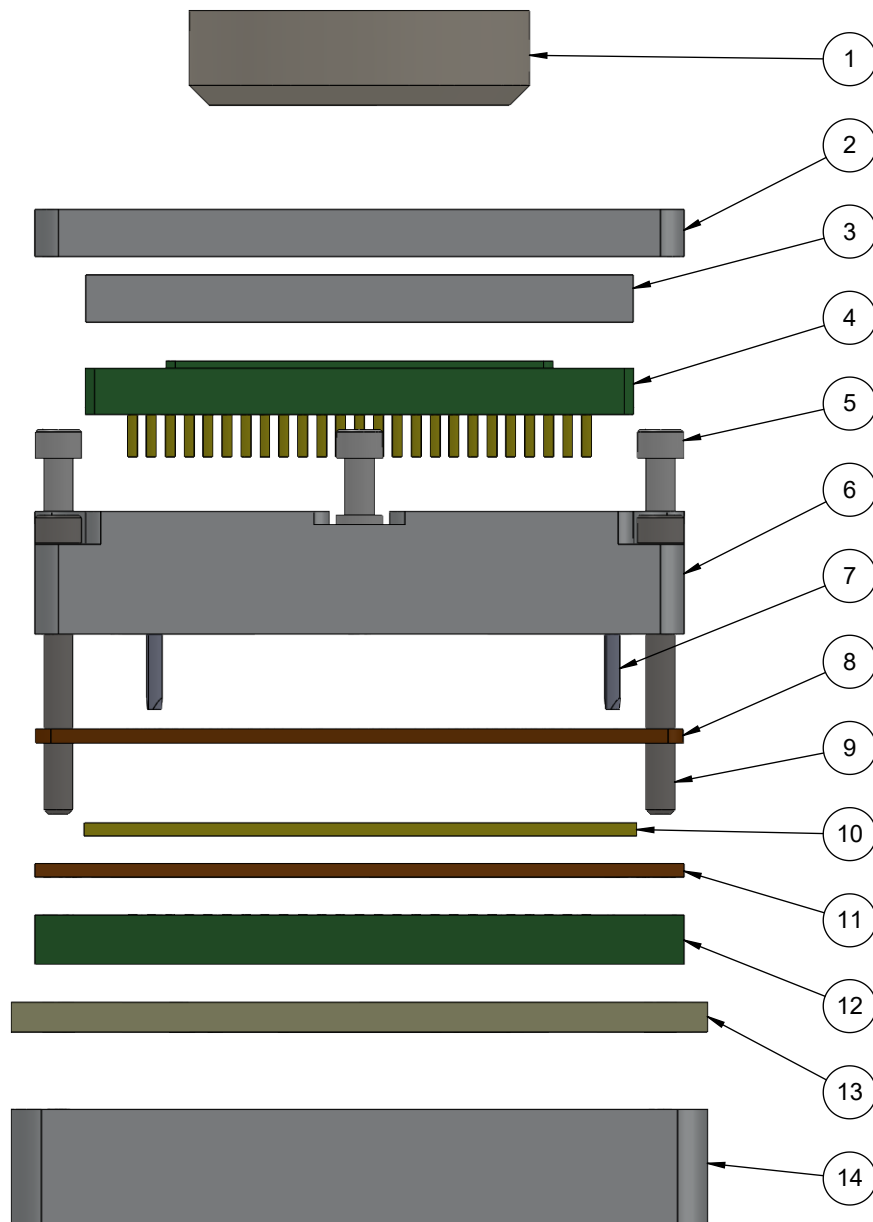
Description: Compatible Device

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

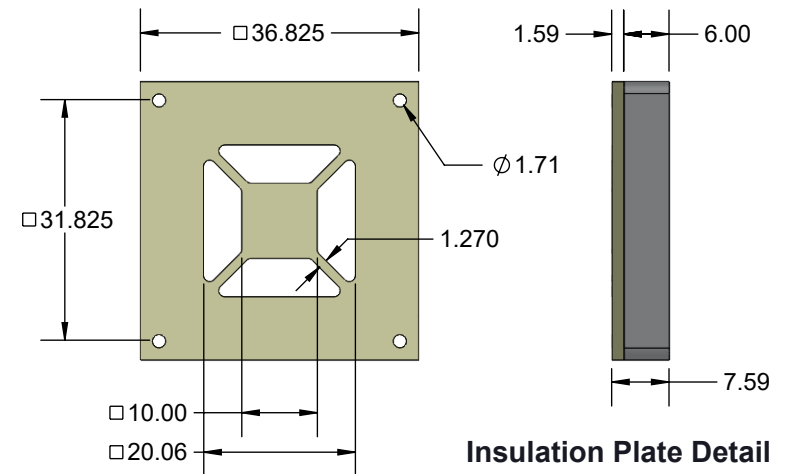
Tolerances: Hole diameters $\pm 0.03\text{mm}$ [$\pm 0.001"$], Pitches (from true position) $\pm 0.025\text{mm}$ [$\pm 0.001"$], substrate thickness tolerance $\pm 10\%$, all other tolerances $\pm 0.13\text{mm}$ [$\pm 0.005"$] unless stated otherwise. Materials and specifications are subject to change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

Array: 28 x 28

| | | | | |
|---|--|-----------------------|--------------------|------------|
|  C18061 Drawing Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com | Material: N/A Finish: N/A Weight: 59.543 | STATUS: Released | SHEET: 3 OF 4 | REV. A |
| | | ENG: M. Newby | DRAWN BY: M. Raske | SCALE: 2:1 |
| | | FILE: SG-CGA-6003 Dwg | DATE: 03/07/2019 | |




| ITEM NO. | Description | Material |
|----------|--|---|
| 1 | Compression Screw, M18 | 7075-T6 Aluminum Alloy |
| 2 | Socket Lid | 7075-T6 Aluminum Alloy |
| 3 | Compression Plate 28.95 x 2.5mm | 7075-T6 Aluminum Alloy |
| 4 | CGA625 Device, 29x29mm, 25x25 Array, 1.00mm Pitch | N / A |
| 5 | #0-80 Shoulder Screw, 2.29mm thread length | Stainless Steel (303) |
| 6 | Socket Base | 7075-T6 Aluminum Alloy |
| 7 | Coiled spring pin, 1/32" diameter, 1/4" length | Stainless Steel |
| 8 | IC Guide, 29x29mm, 25x25 Array, 1.00mm Pitch, CGA625 | Kapton Polyimide/Cirlex |
| 9 | 0-80 9/16" Socket Head Cap Screw | Stainless Steel (18-8) |
| 10 | Elastomer 0.75mm thick 40 Micron gold plated filaments arranged symmetrically in a silicone rubber (63.5 degree angle) | 20 Micron dia gold plated brass filaments arranged symmetrically in a silicone rubber (63.5 degree angle) |
| 11 | Elastomer Guide 29mm IC | Kapton Polyimide/Cirlex/Ultem |
| 12 | Test PCB, 29x29mm, 25x25 Array, 1.00mm Pitch, BGA625 | N / A |
| 13 | Insulation Plate | FR4 |
| 14 | Backing Plate | 7075-T6 Aluminum Alloy |



Insulation Plate Detail

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.

| | | | | |
|---|----------------|-----------------------|--------------------|------------|
|  C18061 Drawing Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com | Material: N/A | STATUS: Released | SHEET: 4 OF 4 | REV. A |
| | Finish: N/A | ENG: M. Newby | DRAWN BY: M. Raske | SCALE: 5:2 |
| | Weight: 59.543 | FILE: SG-CGA-6003 Dwg | DATE: 03/07/2019 | |
| | | | | |