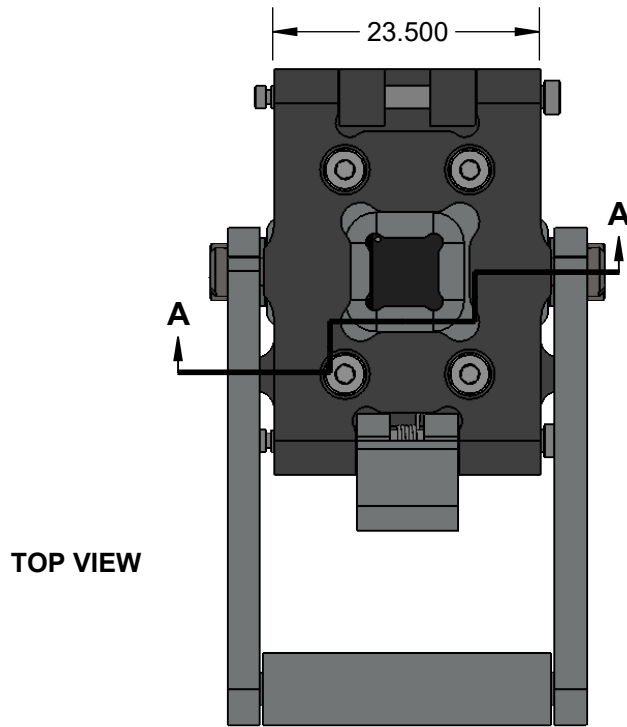
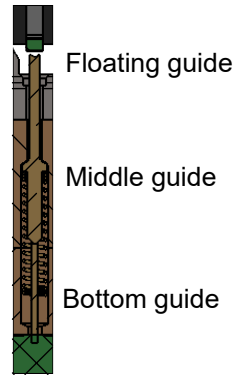


# OPEN TOP LEVER LID CBT-QFE DIRECT MOUNT, SOLDERLESS SOCKET FOR BURN-IN AND TEST APPLICATIONS



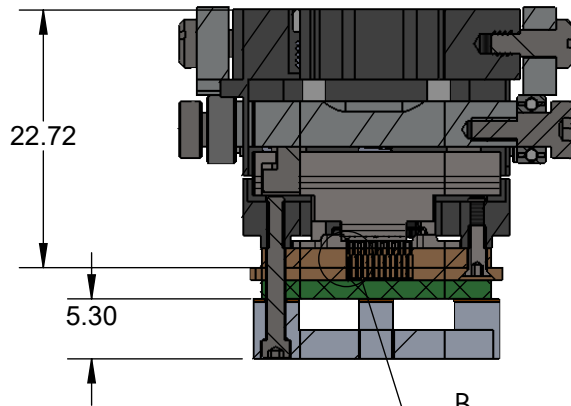
TOP VIEW



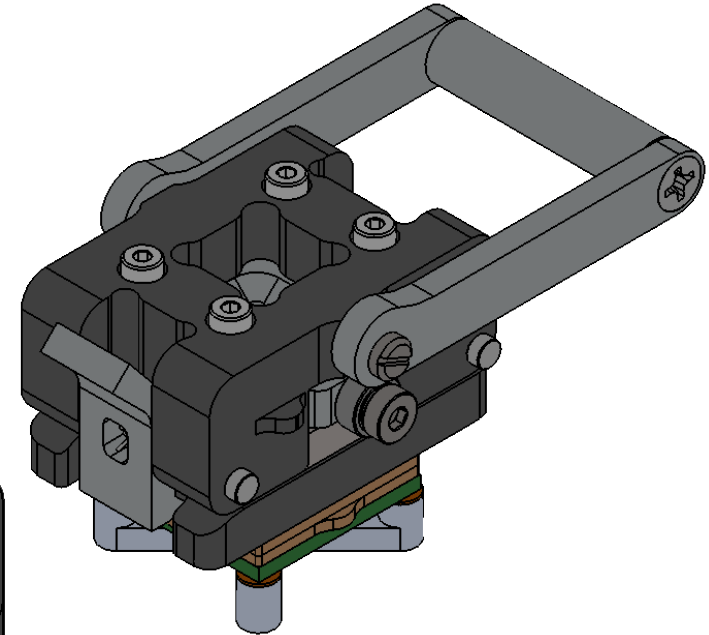
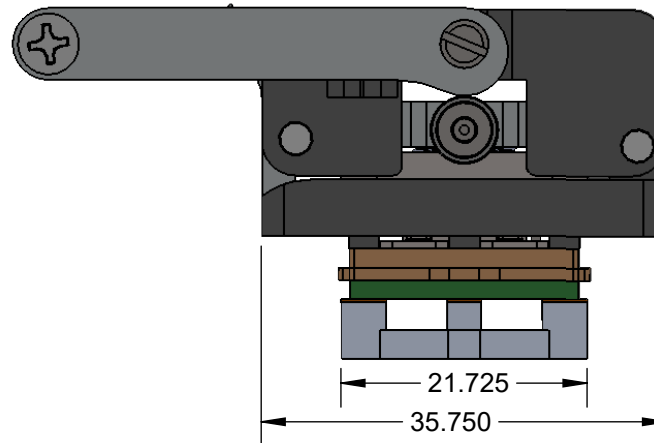
DETAIL B  
SCALE 10 : 1

## FEATURES:

- Wide temperature range (-55C to +180C )
- 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
- Automated probe manufacturing enables low cost and short lead time



SECTION A-A



**Description:** Open Top CBT socket for 0.5mm pitch 7mm sq 9mm tip-tip 48 pin QFP package

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.

## CBT-QFE-3009 Drawing



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

Material: N/A  
Finish: N/A  
Weight: 44.52

STATUS: Released

ENG: S. Huang

FILE: CBT-QFE-3009 Dwg

SHEET: 1 OF 5

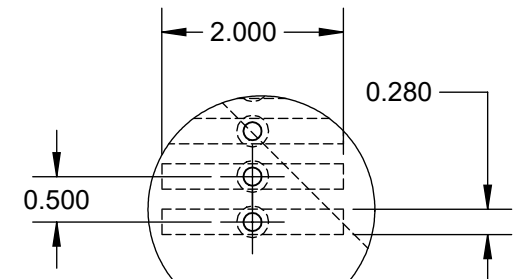
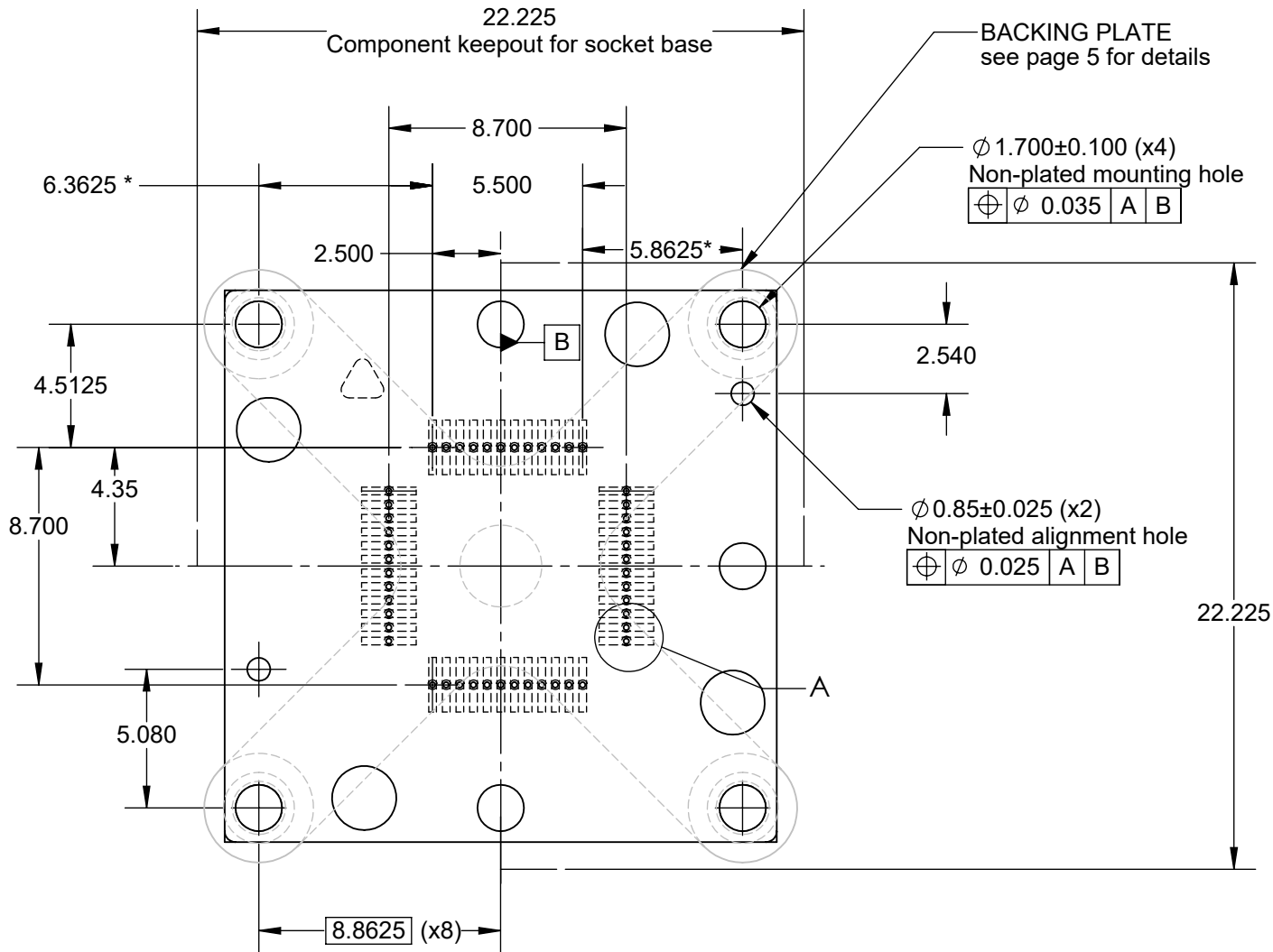
DRAWN BY: M. Raske

DATE: 06/02/2016

REV. A

SCALE: 1.5:1

**\*Note: IC pattern is not symmetrical with respect to the mounting holes. It is shifted by 0.25mm to the right. of center.**



**DETAIL A  
SCALE 12 : 1**

## 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.

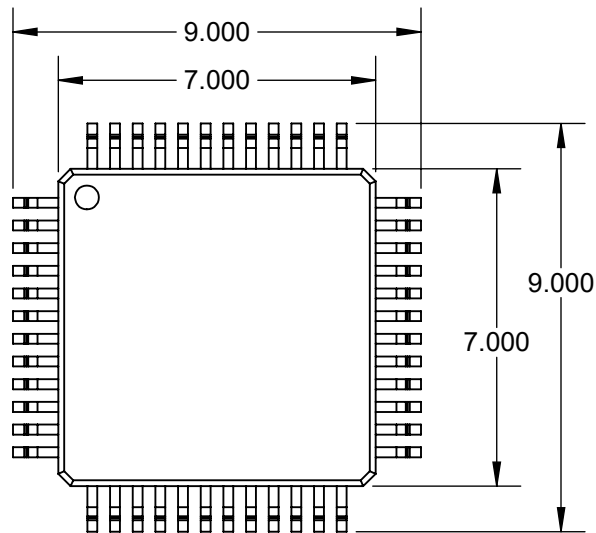
## Target PCB Design Recommendations:

Total thickness: 1.59mm min.

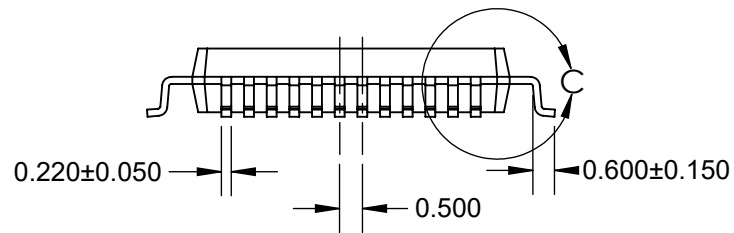
Plating: Gold or Solder finish

<b>CBT-QFE-3009 Drawing</b>  Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 44.52	STATUS: Released ENG: S. Huang FILE: CBT-QFE-3009 Dwg	SHEET: 2 OF 5 DRAWN BY: M. Raske DATE: 06/02/2016	REV. A SCALE: 4:1
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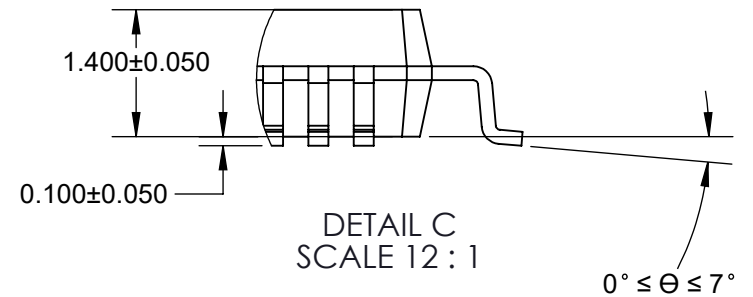
## Ironwood package code: QFE48SB



TOP VIEW



FRONT VIEW




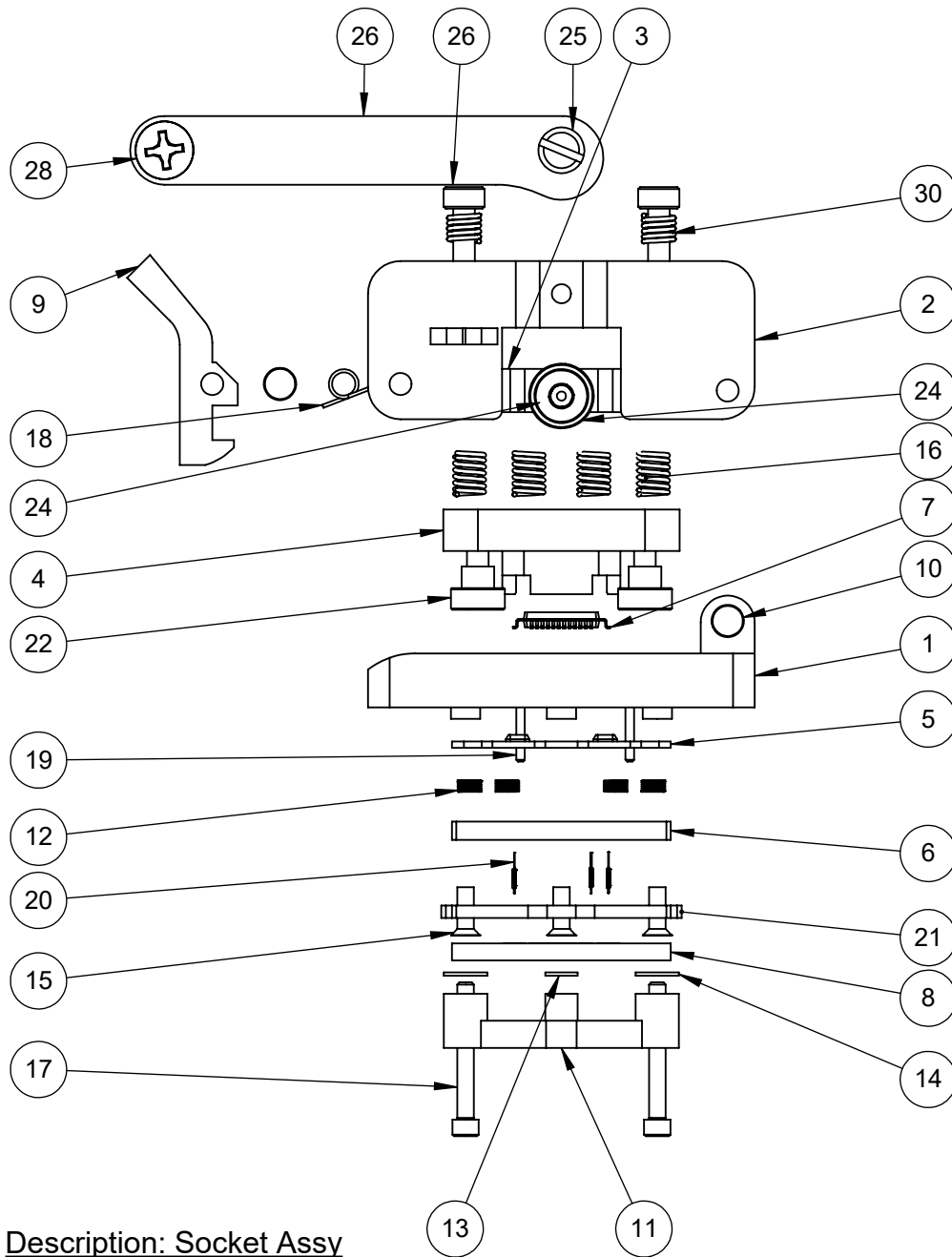
1. Dimensions are in millimeters.
2. Interpret dimensions and tolerances per ASME Y14.5M-1994.
3. Dimension b is measured at the maximum solder ball diameter, parallel to datum plane Z.
4. Datum Z (seating plane) is defined by the spherical crowns of the solder balls.
5. Parallelism measurement shall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

### Description: Compatible 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>CBT-QFE-3009 Drawing</b>  Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 44.52	STATUS: Released ENG: S. Huang FILE: CBT-QFE-3009 Dwg	SHEET: 3 OF 5 DRAWN BY: M. Raske DATE: 06/02/2016	REV. A SCALE: 6:1
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### Description: Socket Assy

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.

ITEM NO.	DESCRIPTION	Material
1	CBT socket base lever lid	7075-T6 Alumium Alloy
2	Lid, lever design	7075-T6 Alumium Alloy
3	Top Compression plate QFE48 9x9mm T-T, 0.5mm pitch	7075-T6 Aluminum Alloy
4	Bottom Compression plate QFE48 9x9mm T-T, 0.5mm pitch	PEEK
5	Floating pin guide QFE48 9x9mm T-T, 0.5mm pitch	PEEK
6	Middle pin guide QFE48 9x9mm T-T, 0.5mm pitch	Semitron MDS 100
7	9x9mm tip to tip, 7x7mm body size 0.5mm pitch QFE48	FR4 High temp
8	Test PCB, QFE48, 9mm tip to tio, 0.5mm pitch 7mm body size	FR4 High temp
9	Clamshell Latch Snap Lid Socket	7075-T6 Alumium Alloy
10	Hinge Pin, 2mm OD, 24mm Lg, SS	Stainless Steel (303)
11	Ni plt 5 POST BACKING PLATE 15MM	7075-T6 Aluminum Alloy
12	Floating Guide Spring	Alloy Steel (SS)
13	Insulating washer, 3mm OD.	Kapton Polyimide/Cirlex
14	Insulating washer, 4mm OD.	Kapton Polyimide/Cirlex
15	#0-80, 90 deg., head pin guide screw, Peek material	PEEK unfilled
16	302SS Comp. Spring .375" Length, .125" OD, .016" Wire Dia.	Material <not specified>
17	#0-80 x 0.5, SH Cap Screw	18-8 Stainless Steel
18	Coil Spring, 180 0.109" OD, SS	Stainless Steel (302)
19	Dowel pin, 1/32" X 1/4", SS	Stainless Steel (18-8)
20	Stamped Pin, 0.4mm SBT-BGA	N/A
21	Bottom pin guide QFE48 9x9mm T-T, 0.5mm pitch	Semitron MDS 100
22	18 SS Shoulder Screw, 3 mm Dia. x 2mm Long Shoulder, M2 Thread	18-8 Stainless Steel
23	18 SS Shoulder Screw, 3 mm Dia. x 3mm Long Shoulder, M2 Thread	18-8 Stainless Steel
24	Bearing 3mm shaft, 6mm OD, 2.5mm Width	
25	Shoulder Screw; 3/32" Shoulder dia., 1/8" long, 2-56 Thread	Stainless Steel (18-8)
26	Custom 60° movement cam handle	7075-T6 Aluminum Alloy
27	Aluminum Standoff 6.35x25.4 #4-40 tap	6061-T4 (SS)
28	Flat Hd phillips 4-40 x 5/16" long 82deg hd	
29	Socket Head Cap Screw M2 8mm long	Stainless Steel (316)
30	Zinc-Plated Steel precision compression spring 125"OD 0.25" length 0.016" wire diameter	Material <not specified>

### CBT-QFE-3009 Drawing



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www.ironwoodelectronics.com

Material: N/A  
Finish: N/A  
Weight: 44.52

STATUS: Released

ENG: S. Huang

FILE: CBT-QFE-3009 Dwg

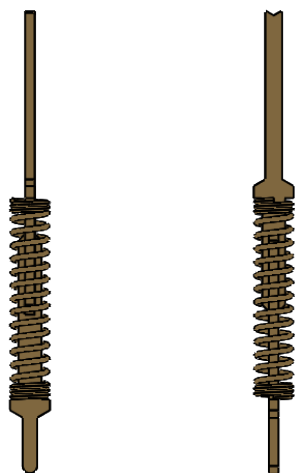
SHEET: 4 OF 5

DRAWN BY: M. Raske

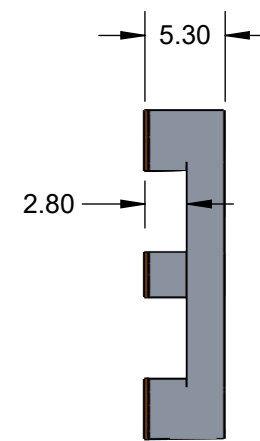
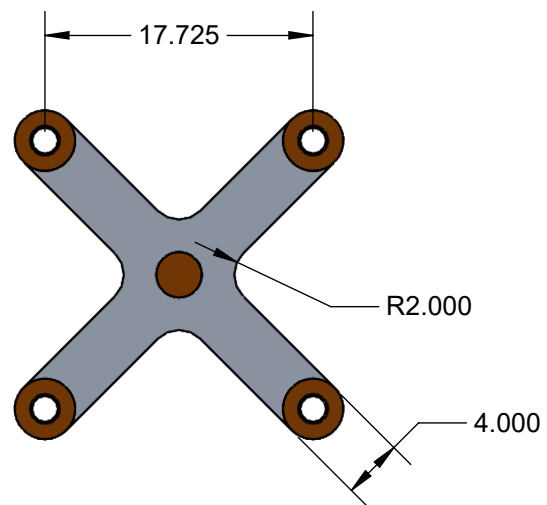
DATE: 06/02/2016

REV. A

SCALE: 1.5:1



**PIN DETAIL  
SCALE 16:1**




**BACKING PLATE DETAIL**

## Description: PIN, BACKING PLT 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>CBT-QFE-3009 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight: 44.52	STATUS: Released	SHEET: 5 OF 5	REV. A
			ENG: S. Huang	DRAWN BY: M. Raske	SCALE: 2:1
			FILE: CBT-QFE-3009 Dwg	DATE: 06/02/2016	