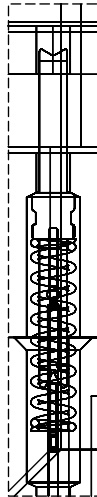
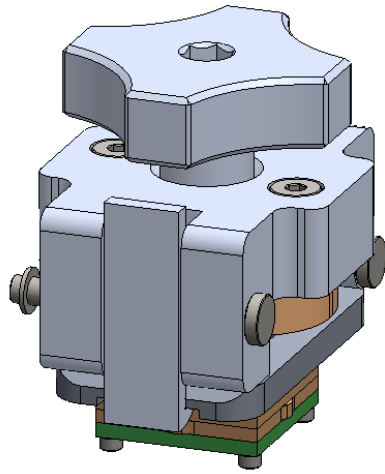


# CBT-QFE DIRECT MOUNT, SOLDERLESS SOCKET FOR BURN-IN AND TEST APPLICATIONS

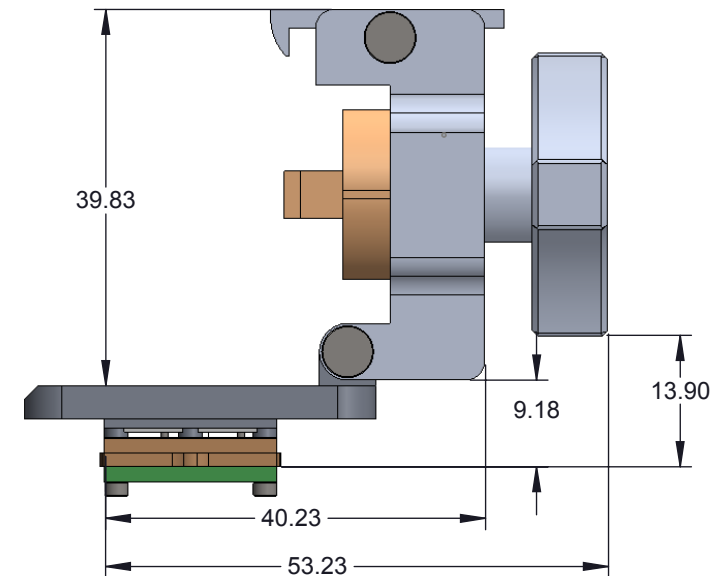
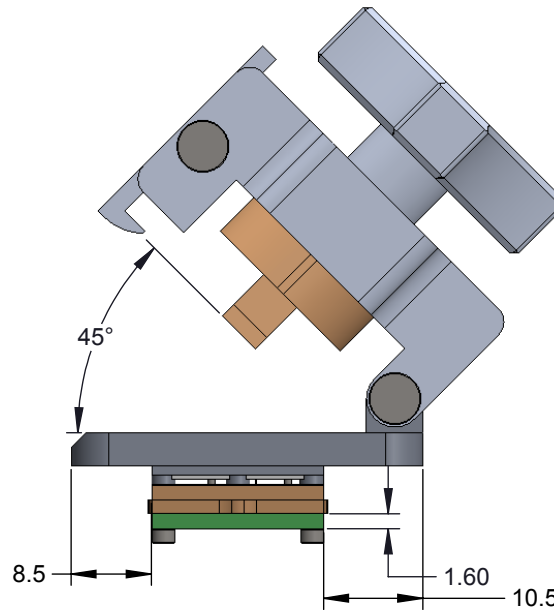
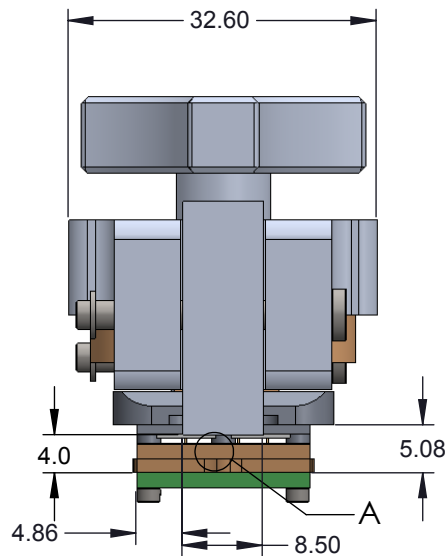
## Features

- Wide temperature range (-55C to +155C).
- High current capability (up to 2.2 A).
- 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.



DETAIL A  
SCALE 16 : 1

Recommended torque is 0.5 in lbs on compression screw.



**Description:** CBT-SO8 10.16x4.57mm (4.57mm sq body ) 1.27mm pitch SOIC8

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-SO-4000 Drawing



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

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

STATUS: Released

ENG: S. Huang

FILE: CBT-SO-4000 Dwg

SHEET: 1 OF 4

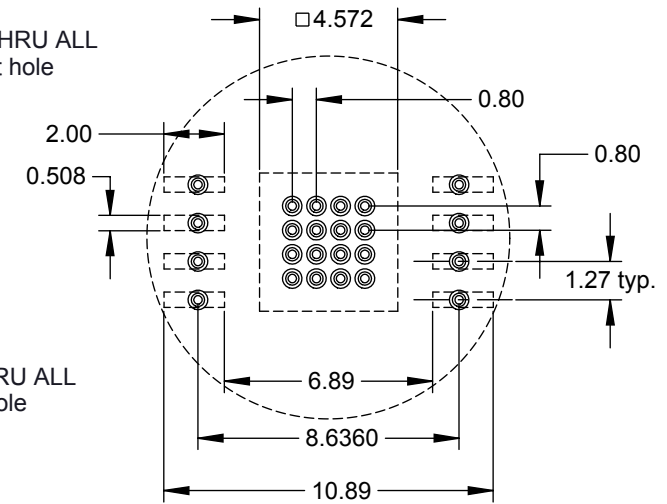
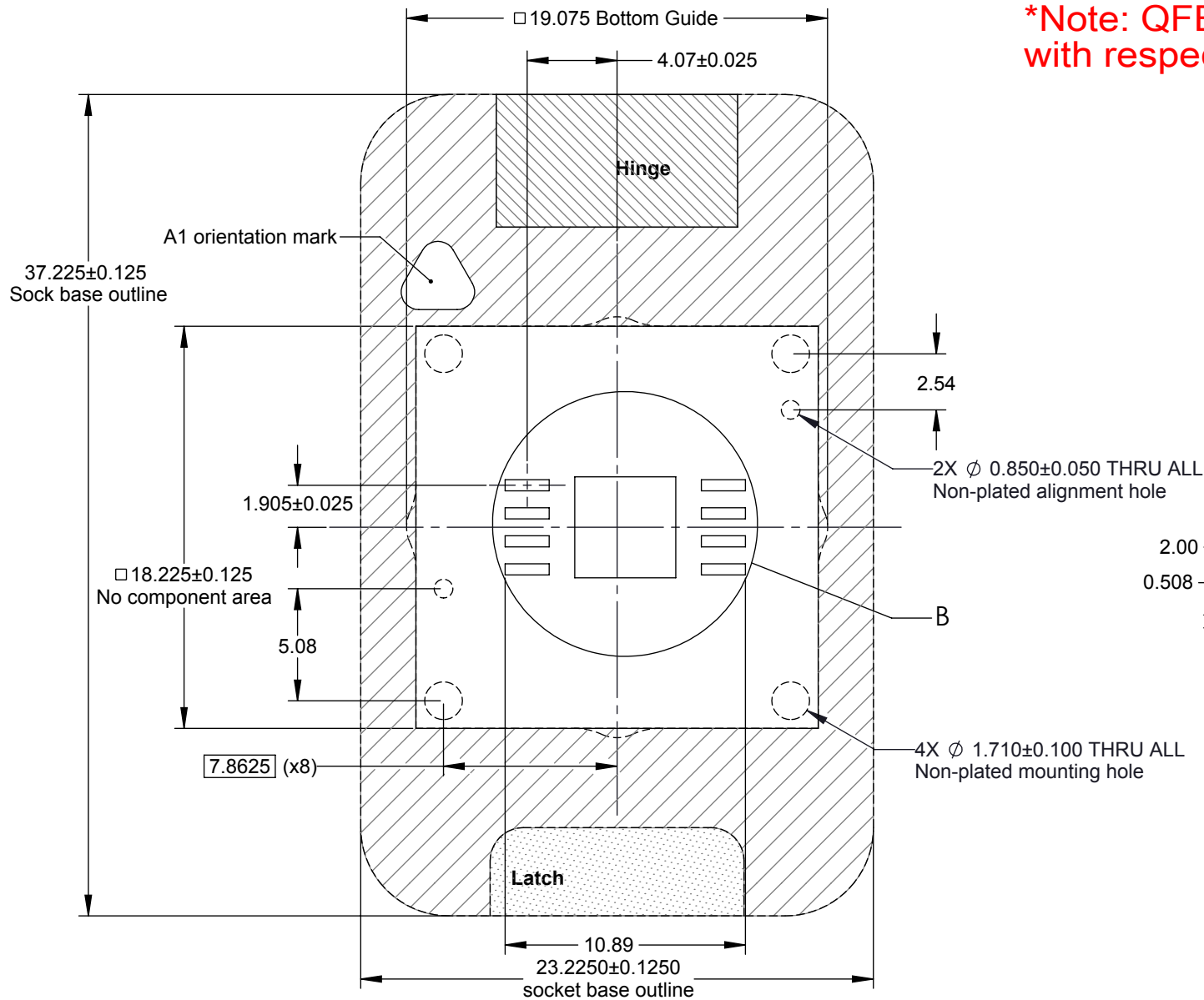
DRAWN BY: M. Raske

DATE: 10/24/2013

REV. B

SCALE: 1.25:1

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



Pin location detail

**DETAIL B  
SCALE 4 : 1**

## 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.

## Target PCB Recommendations

Total thickness: 1.6mm min.

Plating: Gold or Solder finish

PCB Pad height: same or higher than solder mask

### CBT-SO-4000 Drawing



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

Material: ERROR!Material  
Finish: ERROR!Finish  
Weight: ERROR!Weight

STATUS: Released

ENG: S. Huang

FILE: CBT-SO-4000 Dwg

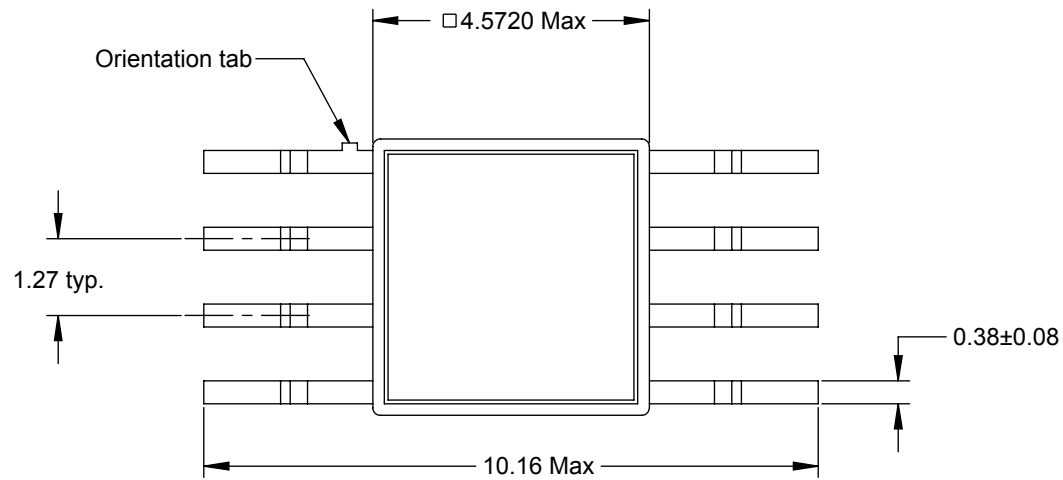
SHEET: 2 OF 4

DRAWN BY: M. Raske

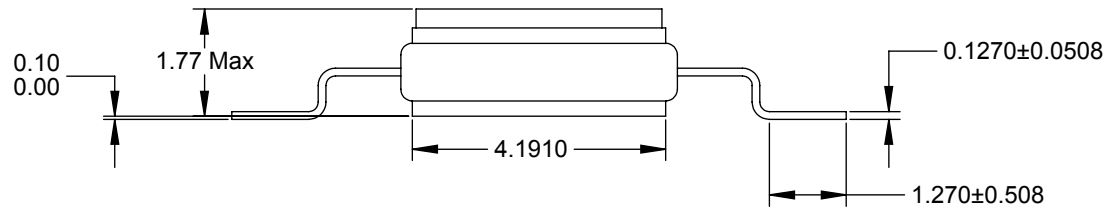
DATE: 10/24/2013

REV. B

SCALE: 3.5:1



TOP VIEW




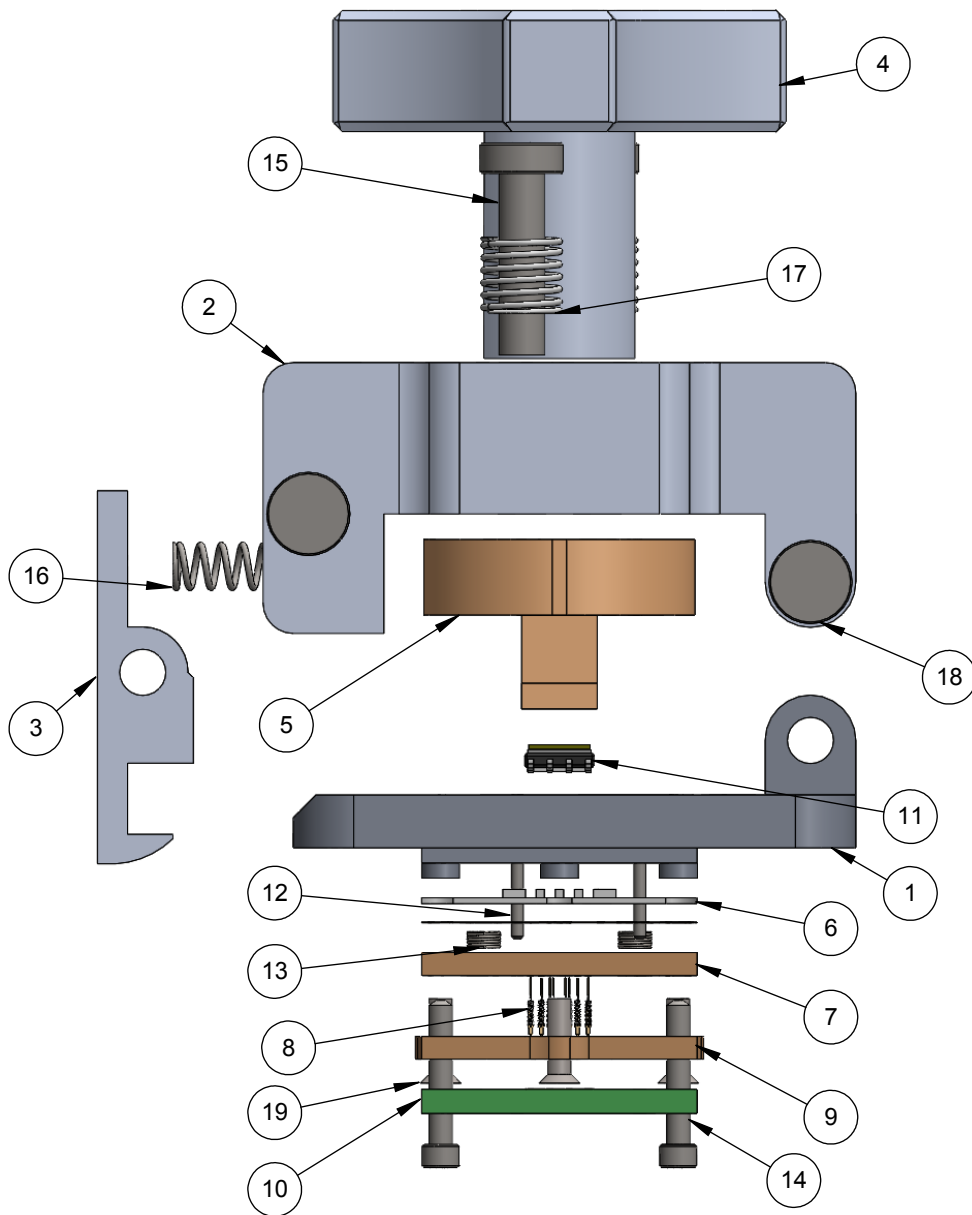
SIDE VIEW

## Description: SO8 TEST CHIP

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-SO-4000 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 <a href="http://www.ironwoodelectronics.com">www.ironwoodelectronics.com</a>	Material: N/A Finish: N/A Weight:	STATUS: Released	SHEET: 3 OF 4	REV. B
			ENG: S. Huang	DRAWN BY: M. Raske	SCALE: 8:1
			FILE: CBT-SO-4000 Dwg	DATE: 10/24/2013	



ITEM NO.	DESCRIPTION	Material
1	CBT Socket Base 13mm W posts	7075-T6 Aluminum Alloy
2	Clam shell lid for 17mm IC	7075-T6 Aluminum Alloy
3	Clamshell Latch	7075-T6 Aluminum Alloy
4	M10 Compression Screw	7075-T6 Aluminum Alloy
5	SO8 clamshell socket compression Plate	Ultem 1000
6	CBT-SO8 Floating spring pin guide	PEEK Ceramic filled
7	Middle guide SO8 1.27mm pitch 10.16x5.47mm	Semitron MDS 100
8	SBT Pin, SBT-BGA 0.5mm-0.8mm	
9	Bottom CBT pin guide SO8	Semitron MDS 100
10	SO8 PCB	FR4 High temp
11	CFE SO8 chip 1.27mm pitch 10.16mm T-T 4.57mm sq BD	Glass/Metal Hermetic
12	Dowel pin, 1/32" X 1/4", SS	Stainless Steel (18-8)
13	Floating Guide Spring	Alloy Steel (SS)
14	18-8 Stainless Steel Socket Head Cap Screw 0-80 3/8" length	Stainless Steel (18-8)
15	Screw, M3 x 12mm, Low Head Cap, SS	18-8 Stainless Steel
16	Precision Compression Spring, Zinc-Plated Music Wire, 1/2" Length, .12" OD, .016" Wire	Zinc Plated Music Wire
17	Spring Clamshell lid assembly	Steel Music Wire
18	Hinge Pin and Snap Ring, 3mm OD, 25mm long, SS	Stainless Steel (ferritic)
19	#0-80, 90 deg., head pin guide screw, Peek material 5.5715mm overall Length	PEEK unfilled
20	Pin orientation guide SO8 1.27mm pitch 10.16x5.47mm	Kapton Polyimide/Cirlex

#### Instructions:


- Drop the SO package in the socket and make sure the SO leads are sitting inside the guide slots of the floating guide(item 6)
- Turn the fluted knob screw(item 4) until it contacts the SO chip.
- From that point screw needs 0.5 in lbs to get the desired compression. Or Turn the fluted knob( item 4) screw until the floating guide(item 6) bottoms out on the Middle guide(item 7)

#### Description: Socket Spec

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.

Rev	Date	Initials	Description
B	3/12/15	RP/MR	P-P196A was P-P149A, R3200 was R1391

<b>CBT-SO-4000 Drawing</b>		STATUS: Released		SHEET: 4 OF 4		REV. B	
 Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: N/A Finish: N/A Weight:		ENG: S. Huang	DRAWN BY: M. Raske		SCALE: 5:1	
			FILE: CBT-SO-4000 Dwg	DATE: 10/24/2013			