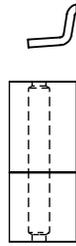
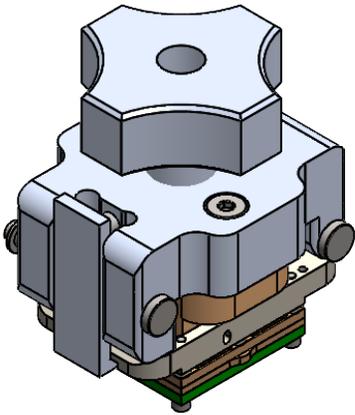


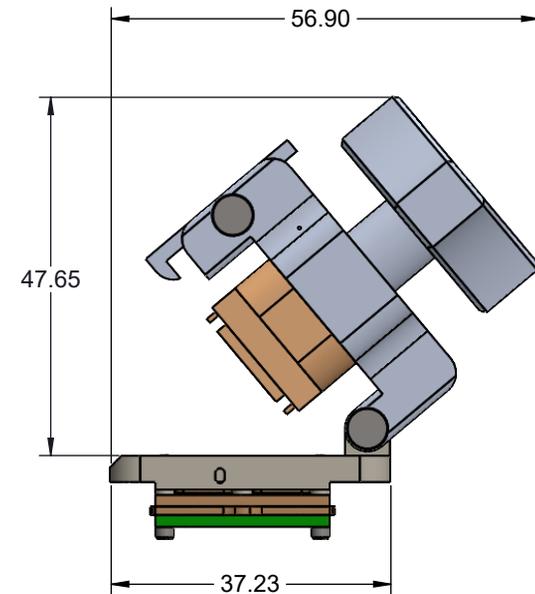
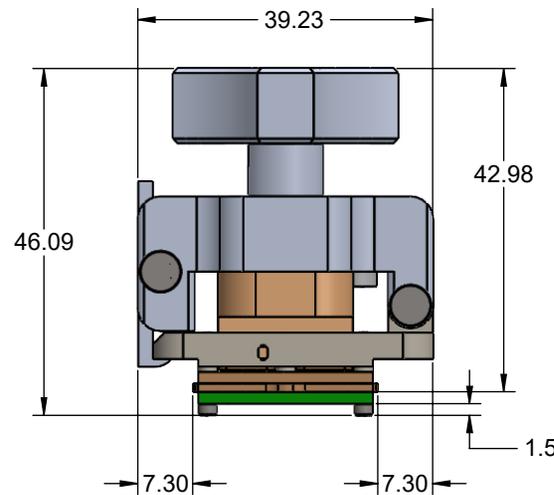
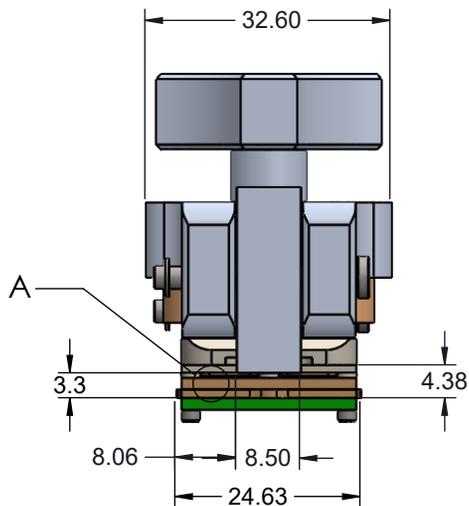
# CBT-QFE DIRECT MOUNT, SOLDERLESS SOCKET FOR BURN-IN AND TEST APPLICATIONS

## 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 8 : 1**



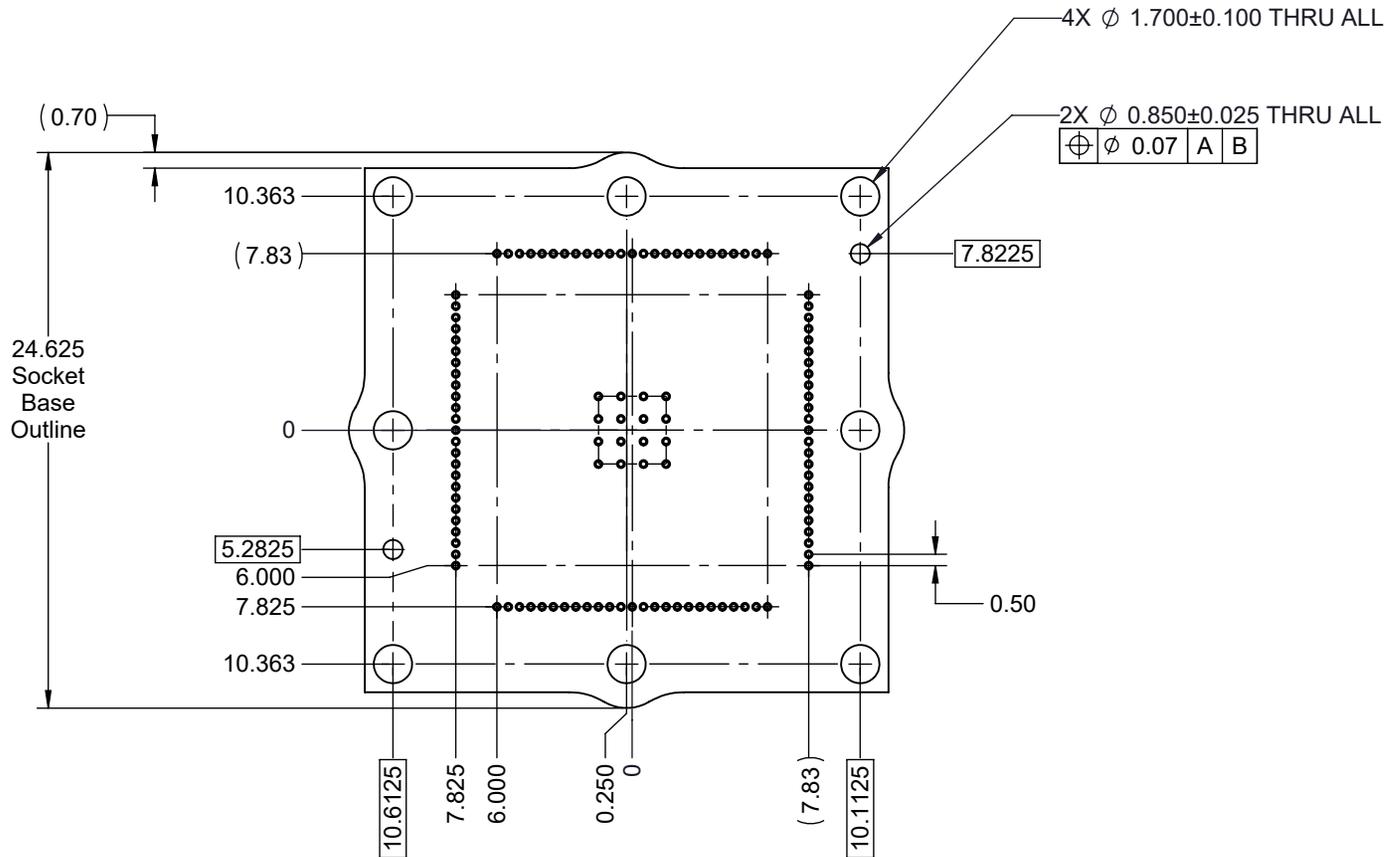
## Description: CBT-QFE100SE 0.5mm Pitch 16-16mm T-T

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-3000 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com	Material: Material <not specified> Finish: Weight: 65.90	STATUS: Quality Approval Pending	SHEET: 1 OF 5	REV. C
		ENG: V. Panavala	DRAWN BY: V. Panavala	SCALE: 1:1
		FILE: CBT-QFE-3000 Dwg	DATE: 5/28/2013	

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



### 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

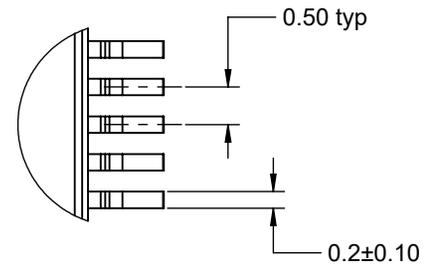
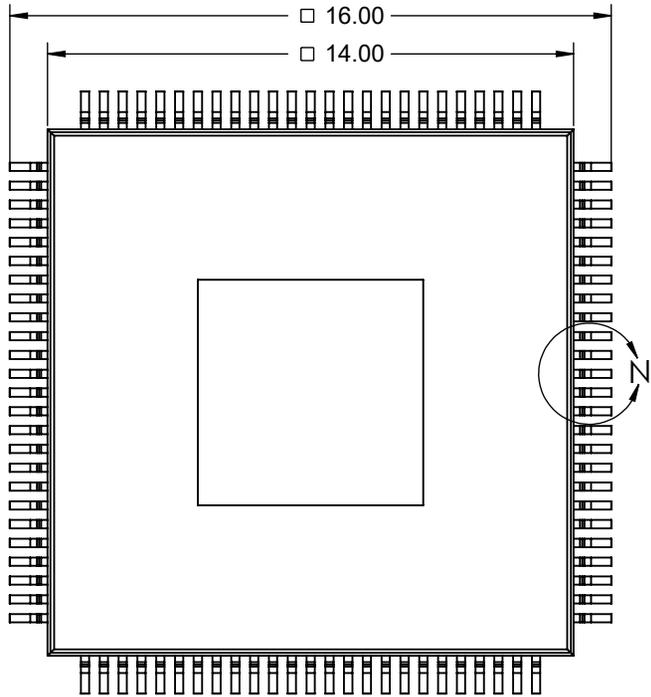
Total thickness: 1.6mm min.

Plating: Gold or Solder finish

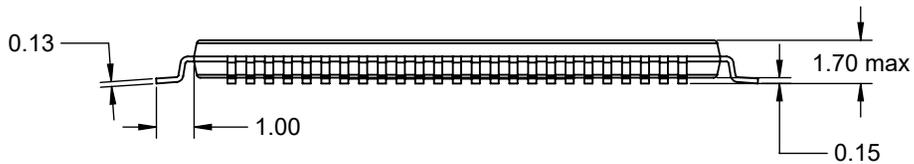
PCB Pad height: same or higher than solder mask

 <p><b>CBT-QFE-3000 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com</p>	<p>Material: Material &lt;not specified&gt; Finish: Weight: 65.90</p>	STATUS: Quality Approval Pending	SHEET: 2 OF 5	REV. C
		ENG: V. Panavala	DRAWN BY: V. Panavala	SCALE: 3:1
		FILE: CBT-QFE-3000 Dwg	DATE: 5/28/2013	

Ironwood Package codes accommodated					
Pkg. Code	Pins	Pitch	Body Size	Tip to tip	foot length
QFE100SE	100	0.5mm	14 mm x 14 mm	16 mm x 16 mm	0.6mm



**DETAIL N**  
**SCALE 10 : 1**

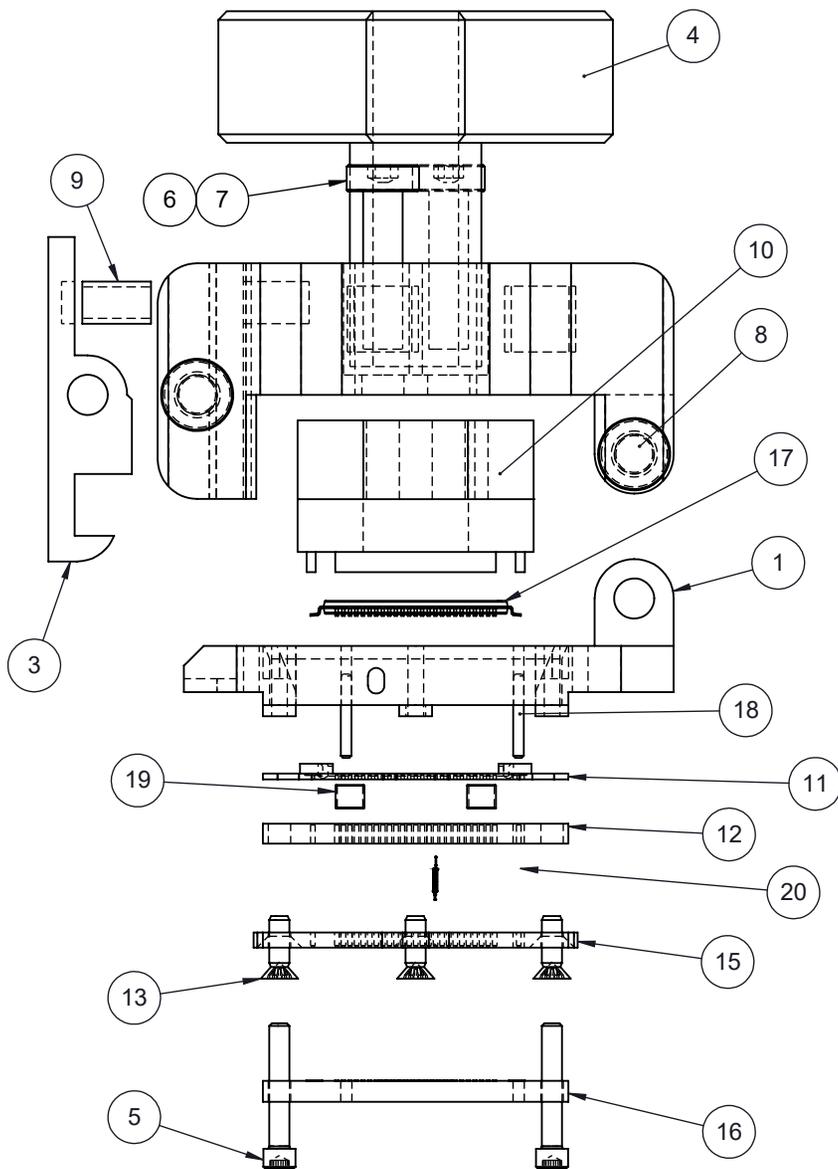


**Description: QFE100 TEST CHIP**

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.

 <p><b>CBT-QFE-3000 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com</p>	<p>Material: Material &lt;not specified&gt; Finish: Weight: 65.90</p>	STATUS: Quality Approval Pending	SHEET: 3 OF 5	REV. C
		ENG: V. Panavala	DRAWN BY: V. Panavala	SCALE: 5:1
		FILE: CBT-QFE-3000 Dwg	DATE: 5/28/2013	



ITEM NO.	DESCRIPTION	Material
1	CBT Socket Base 18mm 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 with hole	7075-T6 Aluminum Alloy
5	#0-80 X .375 LG, SOC HD CAP SCREW, ALLOY STL, BLK OXIDE	Alloy Steel
6	Spring Clamshell lid assembly	Steel Music Wire
7	Screw, M3 x 12mm, Low Head Cap, SS	18-8 Stainless Steel
8	Hinge Pin and Snap Ring, 3mm OD, 25mm long, SS	Stainless Steel (ferritic)
9	Precision Compression Spring, Zinc-Plated Music Wire, 1/2" Length, .12" OD, .016" Wire	Zinc Plated Music Wire
10	QFE100 clamshell socket compression Plate; 18mm	Ultem
11	CBT-QFE100SE Floating spring pin guide	Semitron MDS 100
12	Middle guide QFE100SE 16x16mm T-T	Semitron MDS 100
13	Screw, #0-80 X .188", Flat, SS	Stainless Steel (18-8)
14	SBT Pin, 0.4mm pitch	N/A
15	Bottom CBT pin guide QFE100SE	Semitron MDS 100
16	QFE100SE PCB	Material <not specified>
17	QFE100SE chip	
18	Dowel pin, 1/32" X 1/4", SS	Stainless Steel (18-8)
19	Floating Guide Spring	Alloy Steel (SS)
20	SBT Pin, 0.4mm pitch	N/A

**Instructions:**

- Drop the QFE package in the socket and make sure the QFE leads are sitting inside the guide slots of the floating guide(item14)
- Turn the fluted knob screw(item 3) until it contacts the QFE chip.
- From that point screw needs four turns to get the desired compression. Or Turn the fluted knob( item 3) screw until the floating guide( item 14) bottoms out on the Middle guide(item 15)

**Description: Socket Spec**

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.

 <p><b>CBT-QFE-3000 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com</p>	<p>Material: Material &lt;not specified&gt; Finish: Weight: 65.90</p>	STATUS: Quality Approval Pending	SHEET: 4 OF 5	REV. C
		ENG: V. Panavala	DRAWN BY: V. Panavala	SCALE: 1.75:1
		FILE: CBT-QFE-3000 Dwg	DATE: 5/28/2013	

Rev	Date	Initials	Description
A	05/28/13	VP	Original
B	2/18/16	MR	Updated to correct errors per ELS
C	2/3/21	MR	corrected layout page per MAF

### Description: Revisions

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-3000 Drawing</b> Ironwood Electronics, Inc. Tele: (800) 404-0204 <a href="http://www.ironwoodelectronics.com">www.ironwoodelectronics.com</a>	Material: Finish: Weight:	STATUS: Quality Approval Pending	SHEET: 5 OF 5	REV. C
		ENG: V. Panavala	DRAWN BY: V. Panavala	SCALE: 1.75:1
		FILE: CBT-QFE-3000 Dwg	DATE: 5/28/2013	