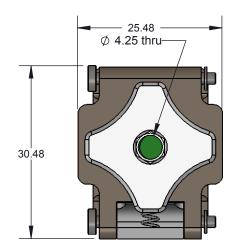
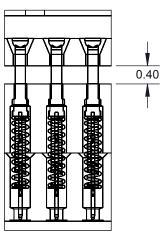
CBT-BGA DIRECT MOUNT, SOLDERLESS SOCKET FOR BURN-IN AND TEST APPLICATIONS

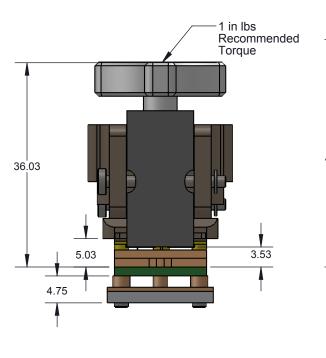


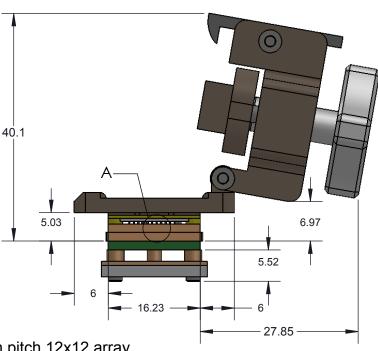


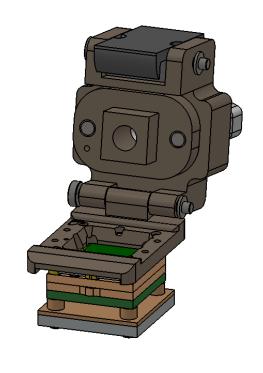
FFATURES:

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

DETAIL A SCALE 12:1







Description: CBT-BGA144 10x10mm 0.8mm pitch 12x12 array

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

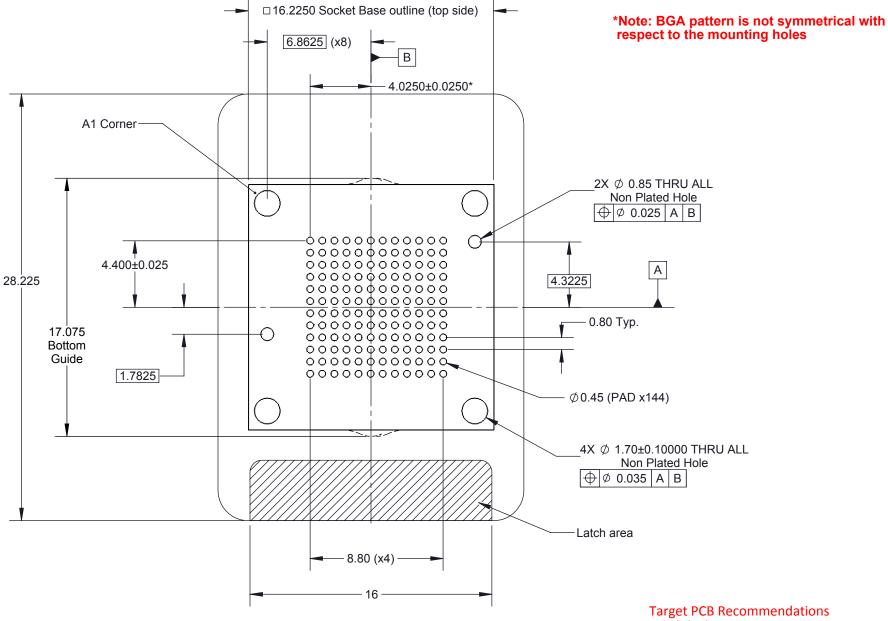
Tolerances: Hole diameters ±0.03mm [±0.001"], Pitches (from true position) ±0.025mm [±0.001"], substrate thickness tolerance ±10%, all other tolerances ±0.13mm [±0.005"] unless stated otherwise. Materials and specifications are subject to change without notice.

CB	т-в	GA-	602	4 D	raw	inç	9



Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com Material: N/A Finish: N/A Weight: 39.50

STATUS: Released	SHEET: 1 OF 5	REV. D
ENG: V. Panavala	DRAWN BY: V. Panavala	SCALE: 3:2
FILE: CBT-BGA-6024	DATE: 8/27/2012	



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.

CBT-BGA-6024 Drawing

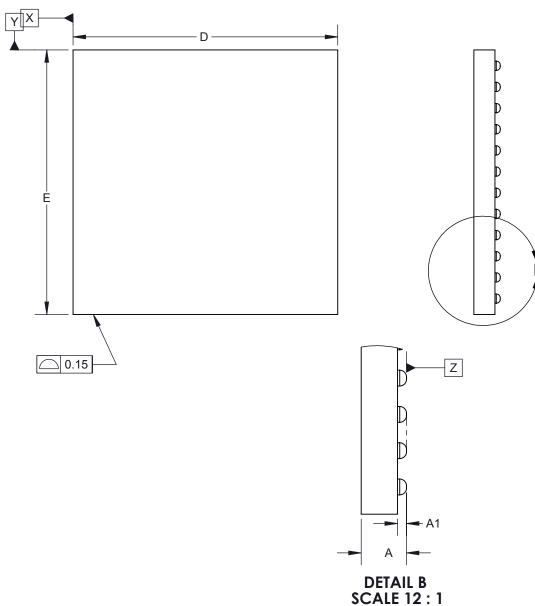
Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodélectronics.com Material: N/A Finish: N/A Weight: 39.50

STATUS: Released	SHEET: 2 OF 5	REV. D
ENG: V. Panavala	DRAWN BY: V. Panavala	SCALE: 4:1
FILE: CBT-BGA-6024	DATE: 8/27/2012	

Total thickness: 1.6mm min.

Plating: Gold or Solder finish

Ironwood Package Code: BGA144J



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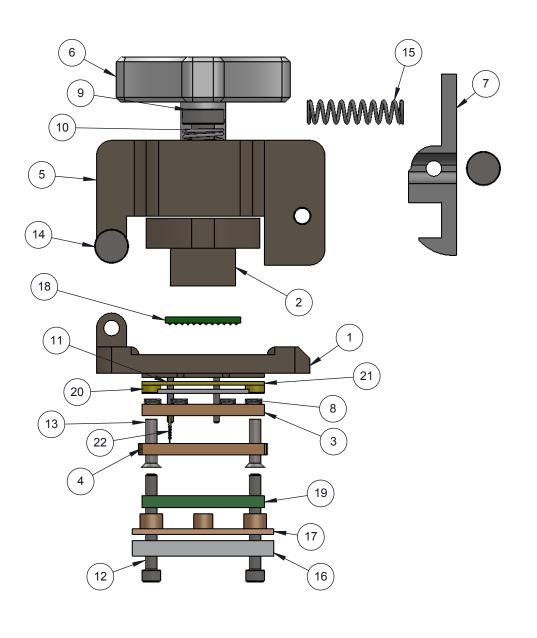
DIM	Minimum	Maximum	
Α		2.1	
A1	0.28		
b	0.2	0.5	
D	10 BSC		
Е	10 BSC		
е	0.8 BSC		
PIN COUN	Γ	144	

Description: Compatible BGA

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.

CE	BT-BGA-6024 Drawing	Material: N/A	STATUS: Released	SHEET: 3 OF 5	REV. D
	Ironwood Electronics, Inc.	800) 404-0204 Weight: 39.50	ENG: V. Panavala	DRAWN BY: V. Panavala	SCALE: 7:1
TOP	www.ironwoodelectronics.com		FILE: CBT-BGA-6024	DATE: 8/27/2012	



Description: Socket Assy, detail

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.

CBT-BGA-6024 Drawing

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Ironwood Electronics, Inc. Tele: (800) 404-0204 www.ironwoodelectronics.com Material: N/A Finish: N/A Weight: 39.50

2 CBT Compression Plate 10mm IC 7075-T6 Aluminum 3 Middle guide BGA144 0.8mm pitch 12x12 array Semitron MDS 4 Bottom guide BGA144 0.8mm pitch 12x12 array Semitron MDS 5 Clam Shell Socket Lid 10mm IC 7075-T6 Aluminum 6 M6x1 fluted knob compression screw 4.25mm thru hole 7075-T6 Aluminum 7 Latch 6- 10mm Ni plated 7075-T6 Aluminum 8 Floating Guide Spring Alloy Steel (SS 9 Screw, M3 x 12mm, Low Head Cap, SS 18-8 Stainless St 10 Spring Clamshell lid assembly Steel Music Will Dowel pin, 1/32" X 1/4", SS Stainless Steel (11 Public Miller Mill	ITEM NO.	Description	Material
Middle guide BGA144 0.8mm pitch 12x12 array Bottom guide BGA144 0.8mm pitch 12x12 array Semitron MDS Clam Shell Socket Lid 10mm IC 7075-T6 Aluminum M6x1 fluted knob compression screw 4.25mm thru hole Latch 6- 10mm Ni plated Floating Guide Spring Alloy Steel (St. Spring Clamshell lid assembly Spring Clamshell lid assembly Steel Music William Book of Michael Steel (Inc. 12 array) Mo-80x0.25", 90 deg., head pin guide screw, Peek material Hinge Pin and Snap Ring, 2mm OD, 19mm long, SS Stainless Steel (Inc. 15 array of North-Tale Music Wire, 1/2" Precision Compression Spring, Zinc-Plated Music Wire, 1/2" Backing Plate 11mm IC mmm thick, Floating guide BGA144 IC 10mm 0.8mm 12x12 array PCB 0.8mm pitch 12x12 array High Temp FR PCB 0.8mm pitch 12x12 array PEEK Ceramic find Ind. Spring, SBT-BGA 0.5mm-0.8mm 18.725 18.725 19. Precision Compression Spring Clamshell limm IC with posts Torlon 4203 SBT Pin, SBT-BGA 0.5mm-0.8mm	1	CBT Socket Base 11mm	7075-T6 Aluminum Alloy
Bottom guide BGA144 0.8mm pitch 12x12 array Semitron MDS Clam Shell Socket Lid 10mm IC 7075-T6 Aluminum M6x1 fluted knob compression screw 4.25mm thru hole To75-T6 Aluminum Latch 6- 10mm Ni plated Floating Guide Spring Alloy Steel (SS Screw, M3 x 12mm, Low Head Cap, SS Spring Clamshell lid assembly Spring Clamshell lid assembly Steel Music W Dowel pin, 1/32" X 1/4", SS Stainless Steel (11 #0-80 x 0.5, SH Cap Screw Alloy Steel #0-80 x 0.5, SH Cap Screw Hinge Pin and Snap Ring, 2mm OD, 19mm long, SS Stainless Steel (feel) Precision Compression Spring, Zinc-Plated Music Wire, 1/2" Ength, .12" OD, .016" Wire Backing Plate 11mm IC mmm thick, To75-T6 Alumium Spost Insulation Plate 11mm IC Ultern 1000 BGA144 IC 10mm 0.8mm 12x12 array High Temp FR PCB 0.8mm pitch 12x12 array PCB 0.8mm pitch 12x12 array PEEK Ceramic file IC Guide 10mm IC with posts Torlon 4203 SBT Pin, SBT-BGA 0.5mm-0.8mm	2	CBT Compression Plate 10mm IC	7075-T6 Aluminum Alloy
Clam Shell Socket Lid 10mm IC M6x1 fluted knob compression screw 4.25mm thru hole M6x1 fluted knob compression screw 4.25mm thru hole To75-T6 Aluminum Latch 6- 10mm Ni plated Floating Guide Spring Alloy Steel (SS 9 Screw, M3 x 12mm, Low Head Cap, SS 18-8 Stainless St 10 Spring Clamshell lid assembly Dowel pin, 1/32" X 1/4", SS Stainless Steel (11 #0-80 x 0.5, SH Cap Screw Alloy Steel #0-80X0.25", 90 deg., head pin guide screw, Peek material Hinge Pin and Snap Ring, 2mm OD, 19mm long, SS Stainless Steel (fee material Hinge Pin and Snap Ring, 2mm OD, 19mm long, SS Stainless Steel (fee material Backing Plate 11mm IC mmm thick, Feecision Compression Spring, Zinc-Plated Music Wire, 1/2" Zinc Plated Music Mire, 1/2" Cop, .016" Wire Backing Plate 11mm IC mmm thick, Fopst Insulation Plate 11mm IC Ultem 1000 BGA144 IC 10mm 0.8mm 12x12 array Material <not of="" pos<="" post="" specified="" td="" the="" to=""><td>3</td><td>Middle guide BGA144 0.8mm pitch 12x12 array</td><td>Semitron MDS 100</td></not>	3	Middle guide BGA144 0.8mm pitch 12x12 array	Semitron MDS 100
6 M6x1 fluted knob compression screw 4.25mm thru hole 7	4	Bottom guide BGA144 0.8mm pitch 12x12 array	Semitron MDS 100
Floating Guide Spring Rloy Steel (SS Screw, M3 x 12mm, Low Head Cap, SS 18-8 Stainless St 10 Spring Clamshell lid assembly Steel Music Will Dowel pin, 1/32" X 1/4", SS Stainless Steel (1 #0-80 x 0.5, SH Cap Screw Alloy Steel Music Will Hinge Pin and Snap Ring, 2mm OD, 19mm long, SS Stainless Steel (feet beat the stainless Steel (feet bea	5	Clam Shell Socket Lid 10mm IC	7075-T6 Aluminum Alloy
Floating Guide Spring Alloy Steel (SS 18-8 Stainless St 10 Spring Clamshell lid assembly Steel Music Will Dowel pin, 1/32" X 1/4", SS Stainless Steel (11 40-80 x 0.5, SH Cap Screw Alloy Steel 13 #0-80X0.25", 90 deg., head pin guide screw, Peek material PEEK unfilled Music Wire, 1/2" Zinc Plated Music Wire, 1/2" Zinc Plated Music Length, .12" OD, .016" Wire 16 Backing Plate 11mm IC mmm thick, 7075-T6 Alumium Spot Insulation Plate 11mm IC Ultem 1000 18 BGA144 IC 10mm 0.8mm 12x12 array Material <not 0.5mm-0.8mm="" 1="" 18.725<="" 20="" 4203="" alignment="" of="" pin,="" posts="" sbt="" sbt-bga="" specified="" td="" the="" torlon="" with=""><td>6</td><td>M6x1 fluted knob compression screw 4.25mm thru hole</td><td>7075-T6 Aluminum Alloy</td></not>	6	M6x1 fluted knob compression screw 4.25mm thru hole	7075-T6 Aluminum Alloy
9 Screw, M3 x 12mm, Low Head Cap, SS 18-8 Stainless St 10 Spring Clamshell lid assembly Steel Music Wi 11 Dowel pin, 1/32" X 1/4", SS Stainless Steel {1} 12 #0-80 x 0.5, SH Cap Screw Alloy Steel 13 #0-80X0.25", 90 deg., head pin guide screw, Peek material 14 Hinge Pin and Snap Ring, 2mm OD, 19mm long, SS Stainless Steel {fe} 15 Precision Compression Spring, Zinc-Plated Music Wire, 1/2" Zinc Plated Music Length, .12" OD, .016" Wire 16 Backing Plate 11mm IC mmm thick, 7075-T6 Alumium 17 5 post Insulation Plate 11mm IC 18 BGA144 IC 10mm 0.8mm 12x12 array 19 PCB 0.8mm pitch 12x12 array 19 PCB 0.8mm pitch 12x12 array 19 PCB 0.8mm pitch 12x12 array 20 Floating guide BGA144 0.8mm pitch 12x12 array 21 IC Guide 10mm IC with posts 22 SBT Pin, SBT-BGA 0.5mm-0.8mm 24 0.75	7	Latch 6- 10mm Ni plated	7075-T6 Aluminum Alloy
Spring Clamshell lid assembly Steel Music Williams Steel (1) Dowel pin, 1/32" X 1/4", SS Stainless Steel (1) #0-80 x 0.5, SH Cap Screw Alloy Steel #0-80 x 0.5, SH Cap Screw PEEK unfilled #0-80 x 0.5, SH Cap Screw Alloy Steel #0-80 x 0.5, SH Cap Screw #0-80 x 0.5, SH Cap S	8	Floating Guide Spring	Alloy Steel (SS)
Dowel pin, 1/32" X 1/4", SS Stainless Steel (1) #0-80 x 0.5, SH Cap Screw Alloy Steel #0-80 x 0.5, SH Cap Screw Alloy Steel #0-80 x 0.5, SH Cap Screw PEEK unfilled #0-80 x 0.5, SH Cap Screw Alloy Steel PEEK unfilled #0-80 x 0.5, SH Cap Screw Alloy Steel PEEK unfilled #0-80 x 0.5, SH Cap Screw Alloy Steel PEEK unfilled #0-80 x 0.5, SH Cap Screw Alloy Steel PEEK unfilled #0-80 x 0.5, SH Cap Screw Alloy Steel PEEK unfilled #0-80 x 0.5, SH Cap Screw Alloy Steel PEEK unfilled #0-80 x 0.5, SH Cap Screw Alloy Steel PEEK unfilled #0-80 x 0.5, SH Cap Screw Alloy Steel PEEK unfilled #0-80 x 0.5 Stainless Steel (1) #0-80 x 0.5 Stainless Steel #0-80 x 0.5 Stainless Stainless #0-80 x 0.5 Stainless Stainless #0-80 x 0.5 Stainless Stainless #0-80 x 0.5 Stainless #0-80 x 0.5 Stainless #0-80 x 0.5 Stainless #0-80 x 0.5 Sta	9	Screw, M3 x 12mm, Low Head Cap, SS	18-8 Stainless Steel
#0-80 x 0.5, SH Cap Screw #0-80X0.25", 90 deg., head pin guide screw, Peek material #14 Hinge Pin and Snap Ring, 2mm OD, 19mm long, SS Stainless Steel (feet longth, .12" OD, .016" Wire #15 Precision Compression Spring, Zinc-Plated Music Wire, 1/2" Zinc Plated Music Length, .12" OD, .016" Wire #16 Backing Plate 11mm IC mmm thick, To75-T6 Alumium #17 S post Insulation Plate 11mm IC Ultem 1000 #18 BGA144 IC 10mm 0.8mm 12x12 array Material <not #18.725<="" 0.8mm="" 10mm="" 12x12="" 4203="" array="" bga144="" by="" ceramic="" find="" fr="" guide="" high="" ic="" longton="" pcb="" peek="" pitch="" posts="" specified="" td="" temp="" torlon="" with=""><td>10</td><td>Spring Clamshell lid assembly</td><td>Steel Music Wire</td></not>	10	Spring Clamshell lid assembly	Steel Music Wire
#0-80X0.25", 90 deg., head pin guide screw, Peek material Hinge Pin and Snap Ring, 2mm OD, 19mm long, SS Stainless Steel (fee Is Precision Compression Spring, Zinc-Plated Music Wire, 1/2" Length, .12" OD, .016" Wire Backing Plate 11mm IC mmm thick, 7075-T6 Alumium IS post Insulation Plate 11mm IC Ultem 1000 BEGA 144 IC 10mm 0.8mm 12x12 array Material <not 0.5mm-0.8mm="" 0.8mm="" 10mm="" 12x12="" 18.725<="" 4203="" array="" fr="" guide="" high="" ic="" is="" pcb="" pin,="" pitch="" posts="" sbt="" sbt-bga="" specified="" td="" temp="" torlon="" with=""><td>11</td><td>Dowel pin, 1/32" X 1/4", SS</td><td>Stainless Steel (18-8)</td></not>	11	Dowel pin, 1/32" X 1/4", SS	Stainless Steel (18-8)
Material Hinge Pin and Snap Ring, 2mm OD, 19mm long, SS Stainless Steel (fermal line) Precision Compression Spring, Zinc-Plated Music Wire, 1/2" Length, .12" OD, .016" Wire Racking Plate 11mm IC mmm thick, Foost Insulation Plate 11mm IC BGA144 IC 10mm 0.8mm 12x12 array Material <not 0.5mm-0.8mm="" 0.8mm="" 10mm="" 12x12="" 18.725<="" 4203="" array="" ceramic="" fit="" fr="" guide="" high="" ic="" pcb="" peek="" pin,="" pitch="" posts="" sbt="" sbt-bga="" specified="" td="" temp="" torlon="" with=""><td>12</td><td>#0-80 x 0.5, SH Cap Screw</td><td>Alloy Steel</td></not>	12	#0-80 x 0.5, SH Cap Screw	Alloy Steel
Precision Compression Spring, Zinc-Plated Music Wire, 1/2" Zinc Plated Music Length, .12" OD, .016" Wire 16 Backing Plate 11mm IC mmm thick, 7075-T6 Alumium 17 5 post Insulation Plate 11mm IC Ultem 1000 18 BGA144 IC 10mm 0.8mm 12x12 array Material <not 0.5mm-0.8mm="" 0.8mm="" 10mm="" 12x12="" 20="" 21="" 22="" 4203="" <="" array="" bga144="" ceramic="" fit="" floating="" fr="" guide="" high="" ic="" pcb="" peek="" pin,="" pitch="" posts="" sbt="" sbt-bga="" specified="" td="" temp="" torlon="" with=""><td>13</td><td></td><td>PEEK unfilled</td></not>	13		PEEK unfilled
Backing Plate 11mm IC mmm thick, 7075-T6 Alumium 7075-T6 Alumi	14	Hinge Pin and Snap Ring, 2mm OD, 19mm long, SS	Stainless Steel (ferritic)
17 5 post Insulation Plate 11mm IC Ultem 1000 18 BGA144 IC 10mm 0.8mm 12x12 array Material <not 0.5mm-0.8mm<="" 0.8mm="" 10mm="" 12x12="" 19="" 20="" 21="" 22="" 4203="" array="" bga144="" ceramic="" fit="" floating="" fr="" guide="" high="" ic="" pcb="" peek="" pin,="" pitch="" posts="" sbt="" sbt-bga="" specified="" td="" temp="" torlon="" with=""><td>15</td><td>Precision Compression Spring, Zinc-Plated Music Wire, 1/2" Length, .12" OD, .016" Wire</td><td>Zinc Plated Music Wire</td></not>	15	Precision Compression Spring, Zinc-Plated Music Wire, 1/2" Length, .12" OD, .016" Wire	Zinc Plated Music Wire
BGA144 IC 10mm 0.8mm 12x12 array Material <not of="" po<="" post="" specific="" td="" the="" to=""><td>16</td><td>Backing Plate 11mm IC mmm thick,</td><td>7075-T6 Alumium Alloy</td></not>	16	Backing Plate 11mm IC mmm thick,	7075-T6 Alumium Alloy
PCB 0.8mm pitch 12x12 array High Temp FR PEEK Ceramic fi IC Guide 10mm IC with posts Torlon 4203 BT Pin, SBT-BGA 0.5mm-0.8mm 18.725 13.725	17	5 post Insulation Plate 11mm IC	Ultem 1000
20 Floating guide BGA144 0.8mm pitch 12x12 array PEEK Ceramic fit 21 IC Guide 10mm IC with posts Torlon 4203 22 SBT Pin, SBT-BGA 0.5mm-0.8mm — □ 18.725 — □ 13.725 — □ 0.75	18	BGA144 IC 10mm 0.8mm 12x12 array	Material <not specified=""></not>
21 IC Guide 10mm IC with posts 22 SBT Pin, SBT-BGA 0.5mm-0.8mm ——————————————————————————————————	19	PCB 0.8mm pitch 12x12 array	High Temp FR4
22 SBT Pin, SBT-BGA 0.5mm-0.8mm ——————————————————————————————————	20	Floating guide BGA144 0.8mm pitch 12x12 array	PEEK Ceramic filled
□ 18.725 □ 13.725 □ 0.75	21	IC Guide 10mm IC with posts	Torlon 4203
□ 13.725 □ □ 0.75	22	SBT Pin, SBT-BGA 0.5mm-0.8mm	
Φ Ø1.70		□ 13.725	

Insulation plate Specification

STATUS: Released	SHEET: 4 OF 5	REV. D
ENG: V. Panavala	DRAWN BY: V. Panavala	SCALE: 2:1
FILE: CBT-BGA-6024	DATE: 8/27/2012	

Rev	Date	Initials	Description
А	08/27/12	VP	Original
В	02/18/14	DH	Change current rating of pin
С	11/13/14	DH	Changed IC Guide material from Ultem to Torlon
D	3/26/15	RP/MR	redesign for new spring pin

Description: Revision History

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

<u>Tolerances:</u> 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.

CBT-BGA-6024 Drawing	Material:	STATUS: Released	SHEET: 5 OF 5	REV. D
Ironwood Electronics, Inc. Tele: (800) 404-0204	Finish: Weight:	ENG: V. Panavala	DRAWN BY: V. Panavala	SCALE: 2:1
www.ironwoodelectronics.com		FILE: CBT-BGA-6024	DATE: 8/27/2012	