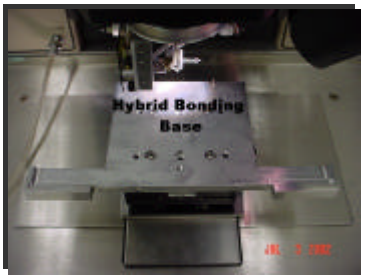
Hybrid Bonding operation Manual

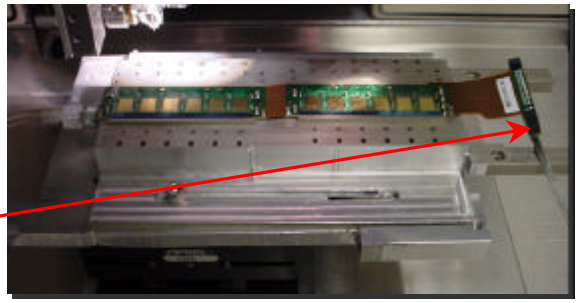
Lawrence Berkeley National Laboratory
Rhonda Witharm Version 1.0, July 16 2002

Revision History
V1.0 Original Version 16-July-2002

1. Bonder set up: Place hybrid bonding base on bonder jack and check for level.



2. Align hybrid on vacuum fixture with the fan out near operator, set vacuum. Position vacuum fixture to the extreme left or right until it stops. Tighten screw. This will place six chips in the center of the bonder travel.

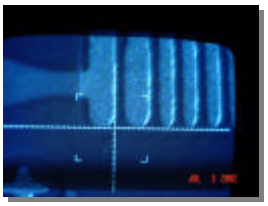


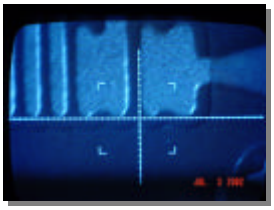
3. Connect grounding strap to hybrid connector.

4. Set power according to bonder log book. Place four test bonds on gold pad at bottom of hybrid. Pull test bonds before bonding chips. Breaking should exceed 9 grams.

5. Load program #00000031.This is a two-chip program. Line up the reference points for both chips. Before running program check Z height, it should be 2400. Run Program.

a. ref pt 2
b. left side chip 2





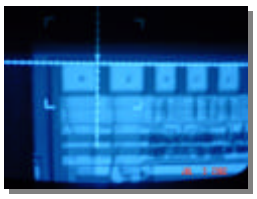
a. xyo, ref pt 1

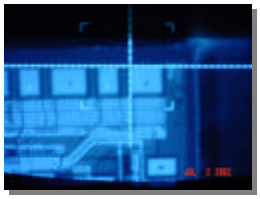
b. right side chip 2

Front row is bonded from chip to hybrid with the first bond power at 2.1 and the second bond at 2.3. The loop height is 300.

The sides of the chip are bonded in reverse in order for the clamp to clear the components.

a. ref pt 4
b. left side chip2





a.ref pt 3

6. Visually inspect bonds. Replace any that were missed.