Photo-BCB process using 4024-40 BCB

1. Deposit 180nm PECVD SiN for good adhesion of BCB.
2. Take out small BCB bottle from freezer and warm up overnight
3. Place sample in PEII at 100W, 300mT for 20s
4. Dip HCl:DI 1:10 for 60s, Rinse in DI 60s, Blow Dry
5. Apply AP3000 BCB Adhesion promoter, wait 30sec, and then spin 3krpm for 30sec
6. Spin BCB ( step1:500rpm-400rpm/s-10sec ; step2:4000rpm-1000rpm/s-30sec)
7. Soft Bake@80C/90sec
8. Expose 2.2” in Autostep200 with focus 0
9. PEB @55C/30sec\
10. Immediately do puddle development using POLOS spinner program "7" ( step1: 500rpm-10sec; step2:4000rpm-400rpm/s-60sec)
    1. Apply DS2100 BCB developer on quarter, wait 60sec, then run program “7”
    2. While it is spinning @500rpm/10sec gently apply DS2100 (drop by drop in the center of the quarter)-Rinsing step (first part of recipe 7 described above)
    3. Spin dry at 4000rpm/60sec (second part of recipe 7)
    4. Repeat steps 10(a-c) one or two more times until development is complete.
11. Bake@90C/60sec to further dry out DS2100
12. Measure with dektak before curing
13. Final Cure in BLUE M Oven:
    1. Program#5
    2. Purge oven with N2(for 1/2hr)before loading sample for curing
    3. Edit the program
    4. ramp up to 50C-5min( time in program is 0.05 for 5min)
    5. soak@50C-5min
    6. ramp up to 100C-15min( time in program is 0.15 for 15min)
    7. soak@50C-15min
    8. ramp up to 150C-15min
    9. soak@150C-15min
    10. ramp up to 250C-1hour( time in program is 1.00 for 1hour)
    11. soak@250C-1hour
    12. Load sample in oven (using Al boat or on bottom tray directly), DO NOT cover it.
    13. Close the door, leave a note that BCB is baking!
    14. Make sure N2 in ON( 60-70)
    15. Run the program( P5, run)
    16. Wait few minutes to check if it is running and if T is going UP!
    17. CURING takes 4hours
    18. COOLING DOWN takes several hours (overnight is good)
    19. DO NOT OPEN door while it is cooling down! OK to open at 150C.
14. Note: If you will use metal on the BCB Deposit 1000-1500A SiN on BCB for metal adhesion.



