NiP Qualifying Measurements / Rate Check

Coupon dummy with a small strip of red plater’s tape in the center.

OR

Using the pre-exisiting M2/NS monitors Cu pads. (Full size wafer)

DUMMY

1. Once the Dummy has been plated remove the red plater’s tape from the center of the wafer piece.
2. We want to measure the step height of the masked area.
   1. This is done on the profilometer tool. Currently using the P-11 in 1-150.
3. Center the dummy on the profilometer chuck.
   1. Orient the rectangularly masked area vertically.
4. Engage the vacuum.
   1. Toggle switch on the front of tool.
5. On screen select “MAN LOAD”.
   1. This will move the chuck into position.
6. Select “FOCUS”.
   1. This may take a moment.
7. Once focused ensure you have the correct recipe selected.
   1. “NIP-DUM”
8. To change recipe select “Cancel” – “RECIPE” – “Recipe” – “Open” – “NIP-DUM” – “OK”
   1. Correct recipe is now loaded.
9. Select the “XY View” icon.
   1. Ready to measure.
10. Measure across the Top, Center, and Bottom of the masked area.
    1. For each site you want to have two data points.
       1. Left and right step differentials.

M2 Monitor

1. We want to measure the before and after plating step heights for the M2 FTA 3 Cu pads.
   1. This should give us a good idea as to how much Ni has been plated over the Cu.
2. Place the wafer on the profilometer chuck.
   1. Orient the wafer NOTCH LEFT.
3. Engage the vacuum.
   1. Toggle switch on the front of tool.
4. On screen select “MAN LOAD”.
   1. This will move the chuck into position.
5. Select “FOCUS”.
   1. This may take a moment.
6. Once focused ensure you have the correct recipe selected.
   1. “CJ2D”
7. To change recipe select “Cancel” – “RECIPE” – “Recipe” – “Open” – “CJ2D” – “OK”
   1. Correct recipe is now loaded.
8. Select the “XY View” icon.
   1. Ready to measure.
9. Pre and Post measurement site coordinates:

|  |  |  |
| --- | --- | --- |
| Site | X | Y |
| Center | -1279 | -1895 |
| Mid | -802 | +37004 |
| Edge | -314 | +75905 |

* + Use the two pads on the right and left sides of the FTA 3 site as the field.

1. Once you have a Pre and Post set of data points you can calculate the amount of Ni plated.