AM-0.35 OPTO fabrication yield estimate

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OUTLINE

- 2006 engineering run wafers: quality of MIMO★-3 sensors
- 2007 engineering run wafers: quality of MIMO★-3 sensors
- Conclusion ⟶ .... under construction .....

Measurements performed

- *Probe station measurements performed on 7 wafers (and 2 series of diced sensors)*

  try assessing the AMS-0.35 OPTO fabrication yield

- *Measurements concentrated on MIMOSA-20 = MIMO★-3 (half of reticle, largest sensor)*

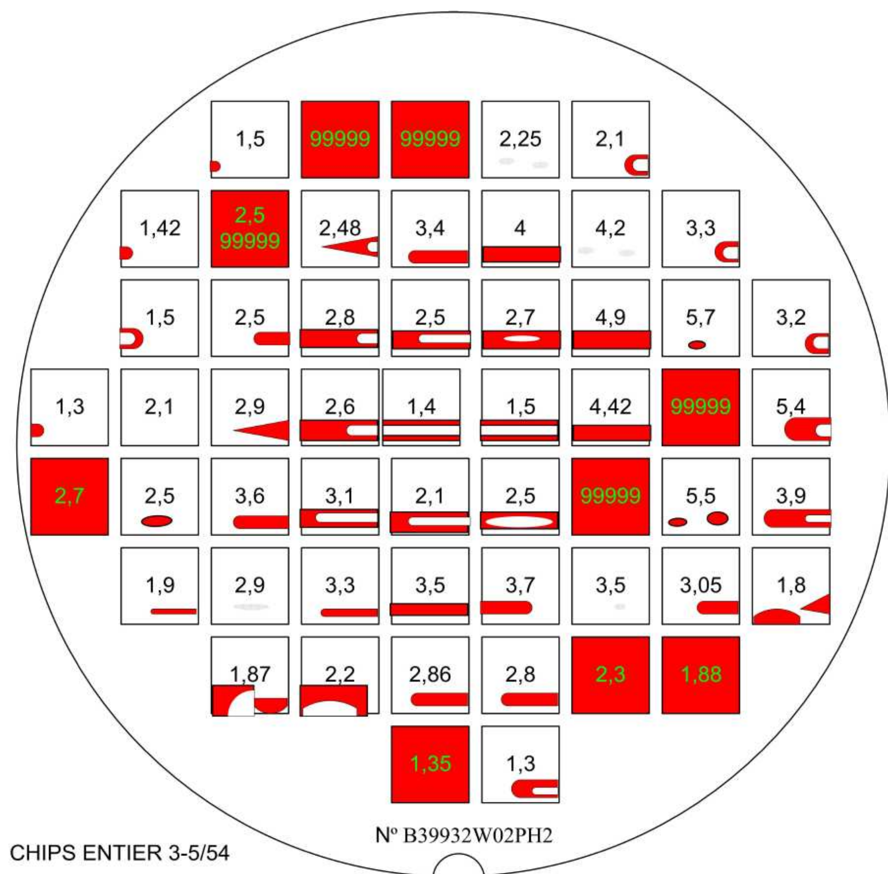
- *Main parametre measured: leakage current ⟼ 2 frames, with/without exposure to light (f.r.o.t. = 1.6 s)*

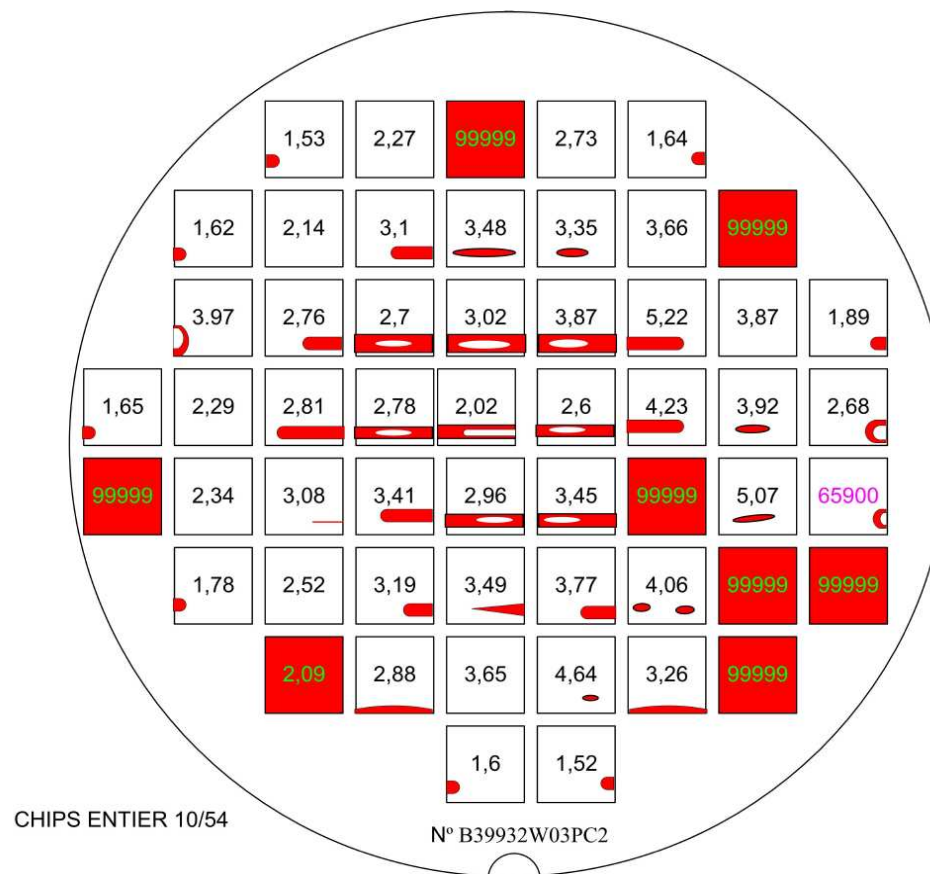
- *Wafers (to be) tested :*
  - 4 of the wafers fabricated in 2006 (2 epi-14 and 2 epi-20) + diced sensors of each epi
  - 3 of the wafers fabricated in 2007 (1 epi-14 and 2 epi-20 ?)

- *Measurements still under way ⟼ results shown are incomplete and preliminary*

2006 Wafer Results

- **2006 wafers with "14" μm epitaxial layer thickness**

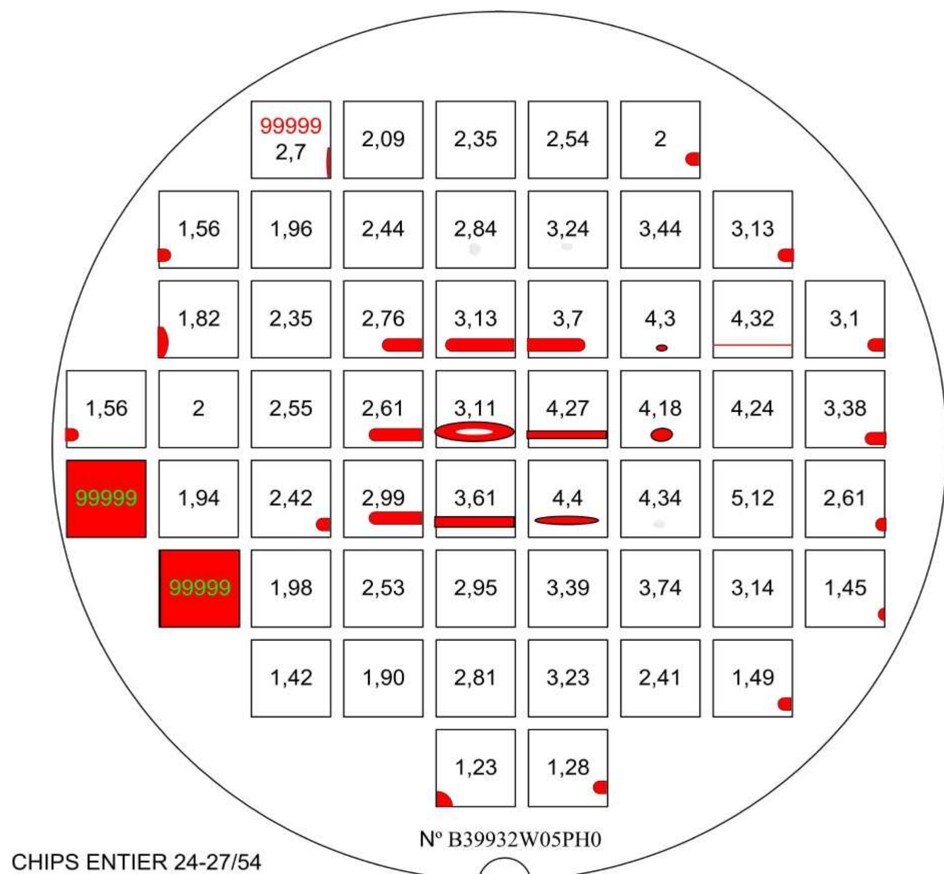




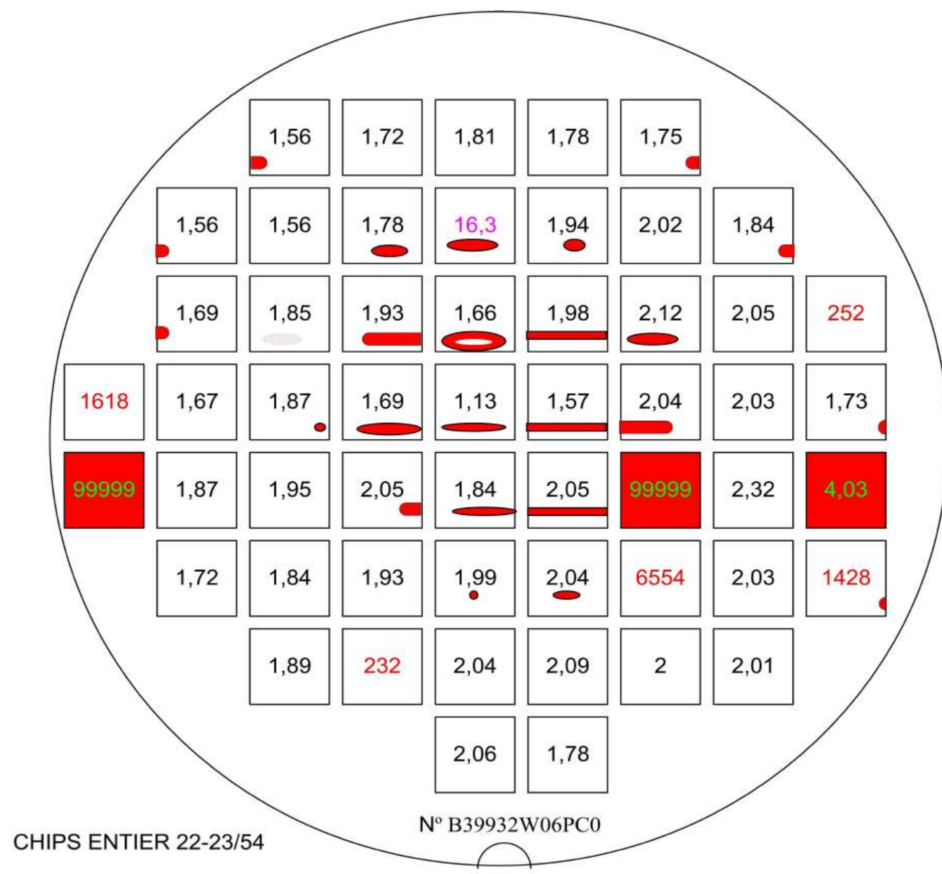
- **Ccl: very few good chips**

2006 Wafer Results

- **2006 wafers with "20" μm epitaxial layer thickness**



Wafer 2006 couche epi 20 um ?
Mimostar 3L
Leakage current of the chip in nano Ampere
and Dead zone

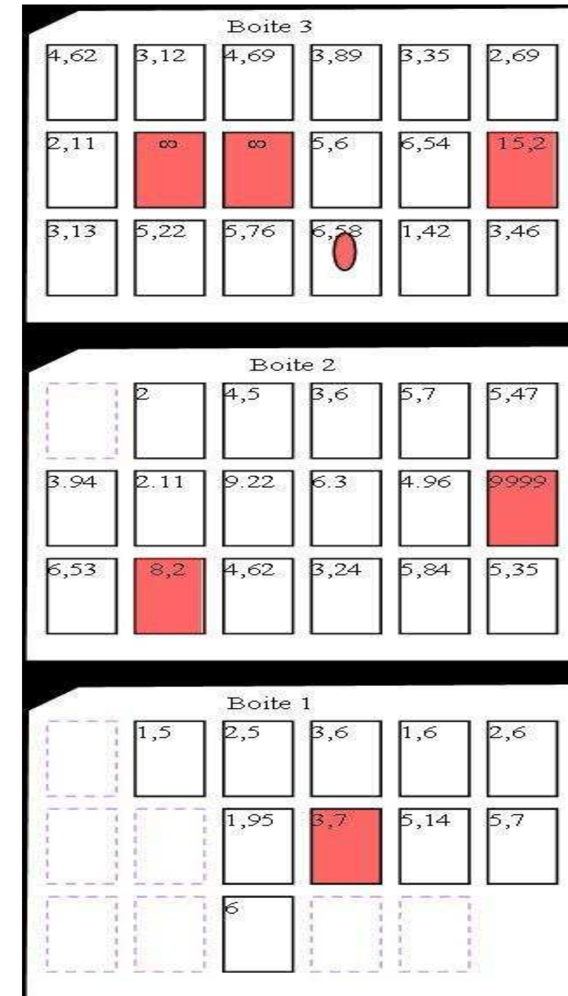


Wafer 2006 couche epi 20 um ?
Mimostar 3L
Leakage current of the chip in nano Ampere
and Dead zone

- **Ccl: large fraction of good chips**

2006 Dices Chips Results

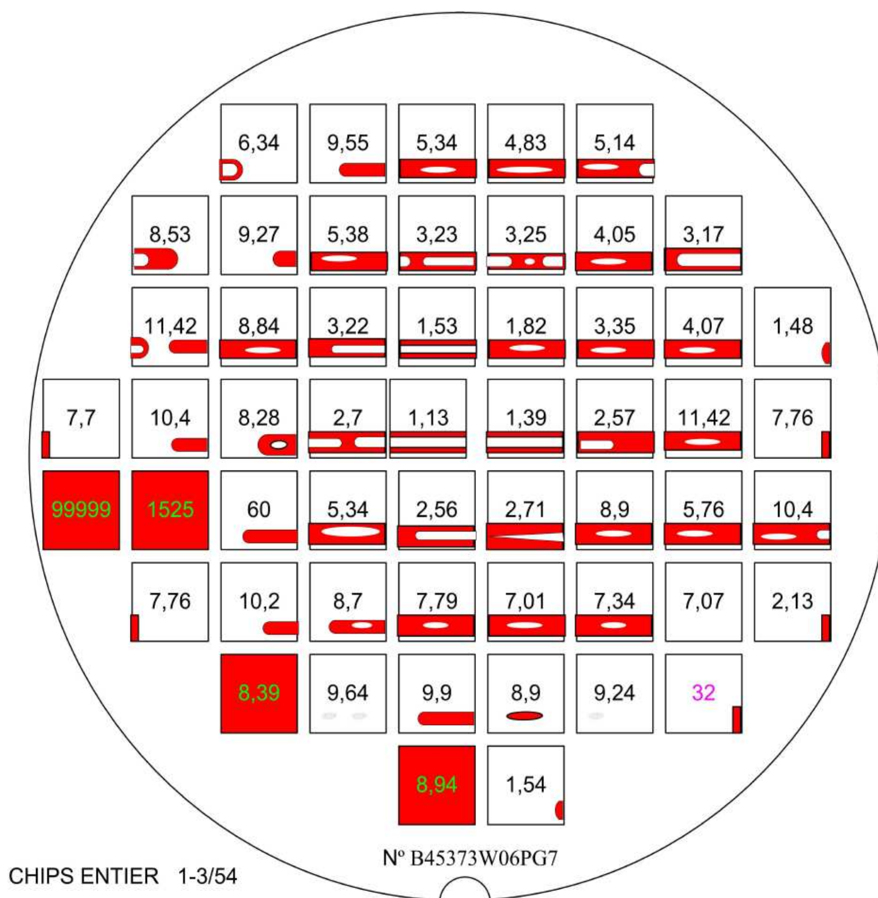
- **First 2006 wafers with "14" and "20" μm epitaxial layer thickness $\rightarrowtail$ diced**



- **"14" μm large fraction of** BAD **chips** **"20" μm : large fraction** GOOD **chips**

2007 Wafer Results

- 2007 wafer with "20" μm epitaxial layer thickness



- Ccl: very few good chips