

<https://indico.bnl.gov/event/16766/>



Update on the Sensor Front

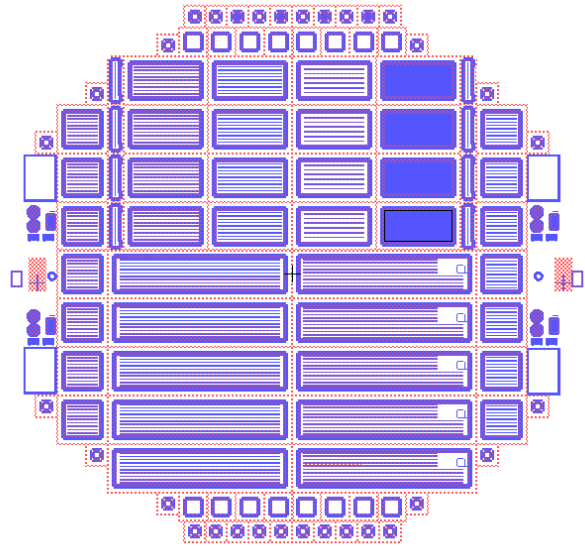
Gabriele Giacomini

8/31/2022



Layout #1

Two wafers done (passivation later this week) with new metal.
Tested BD: OK!

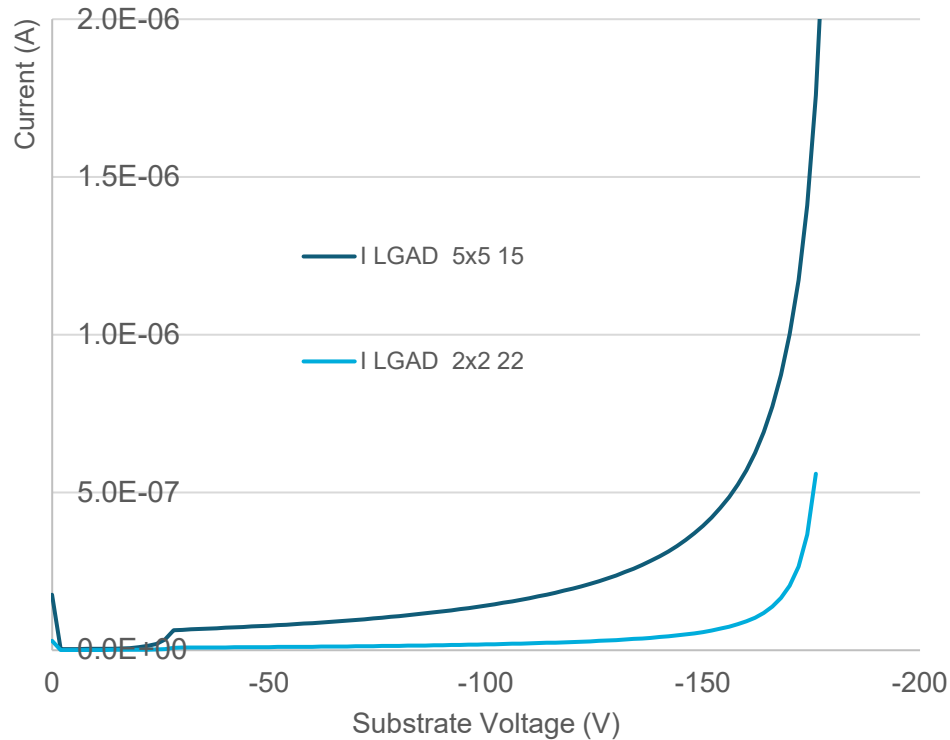


multiplicity	mm x mm	Pitch (um)	Gap (um)
7	5x5	500	400
7	5x5	500	450
4	5x10	500	400
4	5x10	500	450
4	5x10	700	600
4	5x10	Zig Zag	
5	5x25	500	400/450
5	5x25	500	400 (l=2 or 2.5cm)

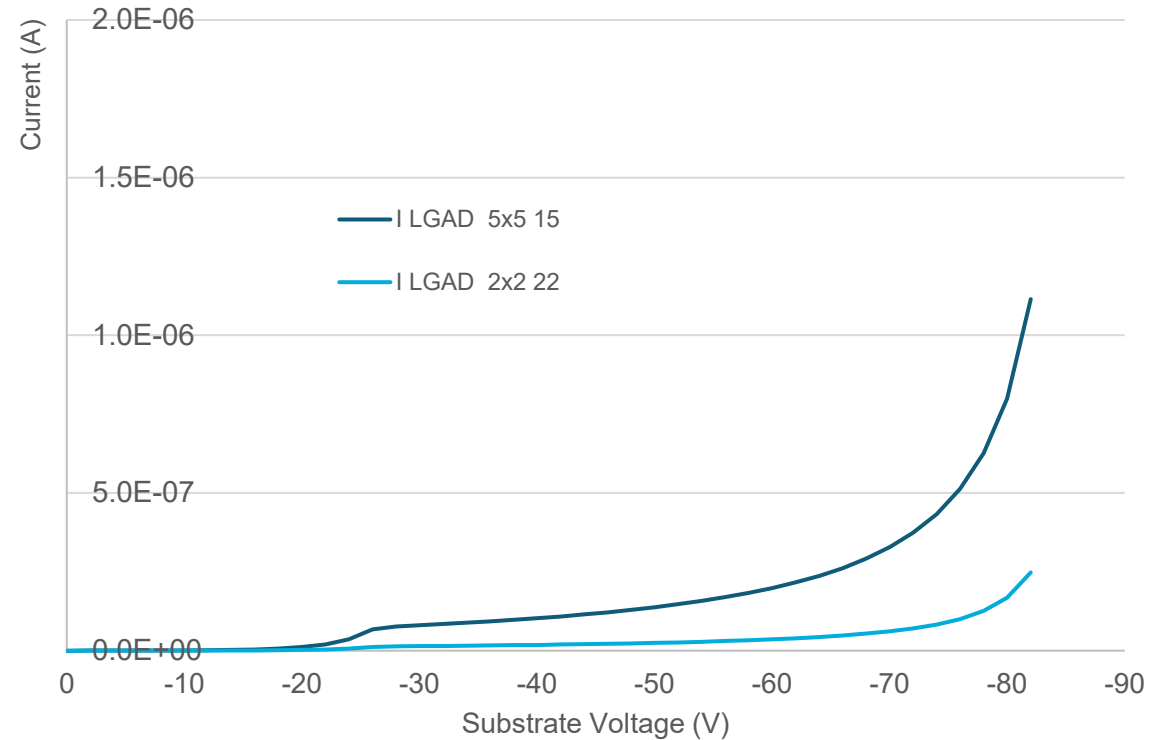
Layout #1

Two wafers done (passivation later this week) with new metal.
Tested BD: OK!

w3051 - 50um thick



w3075 - 20um thick



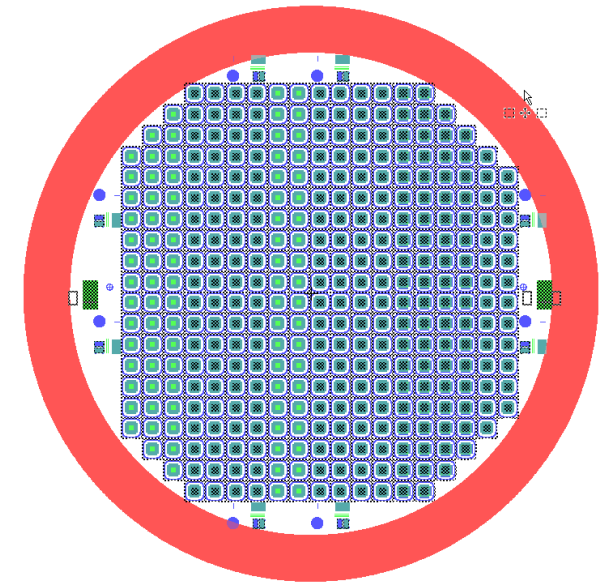
Plan:

- Put polyimide passivation on these wafers, then dice/test/distribute
- send out the other two wafers with an adjusted gain dose (+0.5%?)
- Send out samples for SIMS

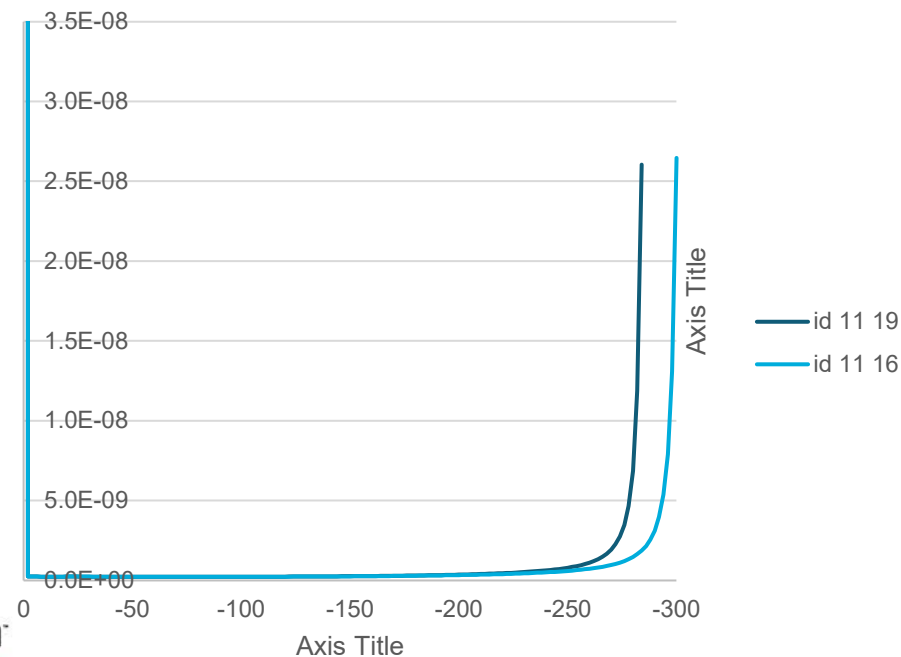
DC LGAD

In parallel, two wafers (20 and 50um thick) of DC LGAD

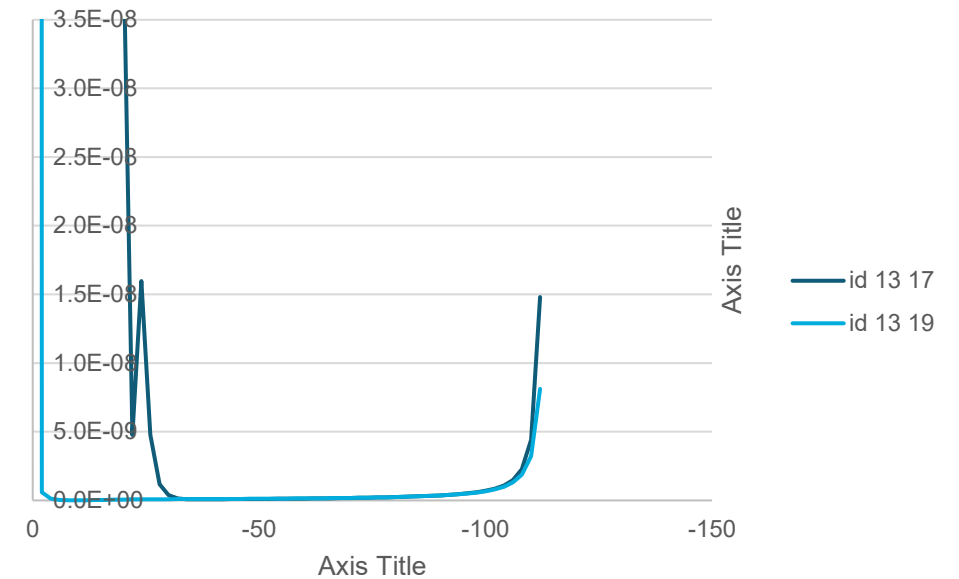
- different mask set;
- P dose x 50;
- gain dose recalibrated
- 1.3 mm x 1.3mm devices



w 3052 DC LGAD
50um thick



w3076 - DC LGAD
20 um thick



Layout #2

Layout finalized and we'll send out the gds to Photronics today.

Starting wafers: 50, 30, 20 um thick substrates

EICROC bump-bond compatible

Metal not designed yet,
but lithos can start with:

- 1- JTE
- 2- Nresistive
- 3- gain
- 4- contacts

2cm x 0.5cm

0.5cm x 0.5cm

0.2cm x 0.2cm

Compatible with EICROC

+ test structures

