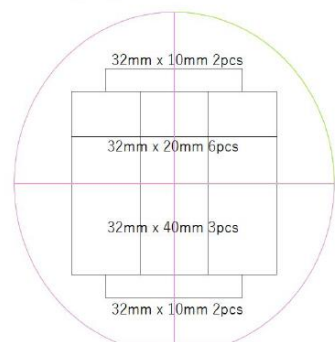


New HPK Production – 2nd

- Strip sensor
 - Four 30-um thick wafers, no issue,
 - Four 50-um thick wafers, only 33x11 mm “work”: if the die have early breakdown than expected breakdown voltage (e.g. ~190V for 50um sensor) they just marked fail. Should re-test and judge by yourself

Wafer layout plan



Strip Sensors

Make ALL the strip sensors with

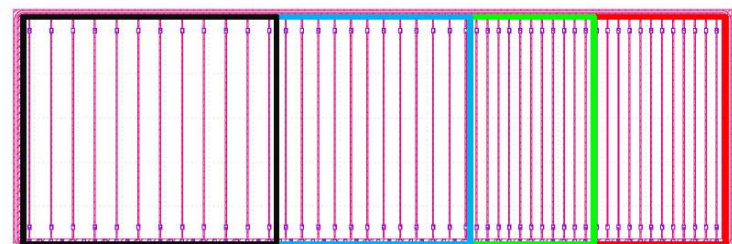
- 12xN strips with 500 um pitch, 1 cm length, 40 um width

12xN strips with 500 um pitch, 1 cm length, 50 um width

12xN strips with 750 um pitch, 1 cm length, 50 um width

12xN strips with 1000 um pitch, 1 cm length, 50 um width

while the sensor area will still be 3.2*1, 3.2*2 or 3.2*4 cm²

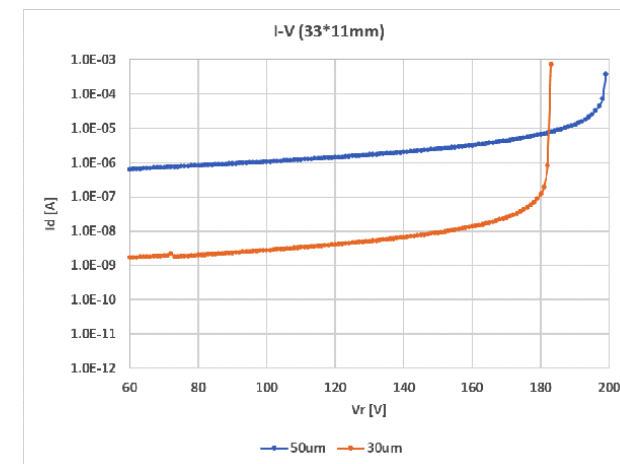


5/1/2024

Zhenyu Ye @ LBNL/UIC

1

	type	OK chip					
		33*11(4pcs)	%	33*21(6pcs)	%	33*41(3pcs)	%
50um	W/No.1	1	25%	0	0%	0	0%
	W/No.2	4	100%	0	0%	0	0%
	W/No.3	2	50%	0	0%	0	0%
	W/No.4	1	25%	0	0%	0	0%
	W/No.5	1	25%	0	0%	0	0%
	W/No.6	3	75%	0	0%	0	0%
	W/No.7	2	50%	0	0%	0	0%
	W/No.8	2	50%	0	0%	0	0%
	W/No.9	2	50%	0	0%	0	0%
	W/No.10	1	25%	0	0%	0	0%
	W/No.11	2	50%	1	17%	0	0%
	W/No.12	1	25%	2	33%	0	0%
30um	W/No.13	3	75%	4	67%	2	67%
	W/No.14	3	75%	3	50%	0	0%
	W/No.15	4	100%	5	83%	2	67%
	W/No.16	3	75%	1	17%	0	0%
	W/No.17	4	100%	5	83%	1	33%
	W/No.18	2	50%	2	33%	0	0%
	W/No.19	4	100%	5	83%	1	33%
	W/No.20	4	100%	3	50%	1	33%
	W/No.21	4	100%	3	50%	1	33%
	W/No.22	4	100%	5	83%	1	33%
	W/No.23	4	100%	5	83%	3	100%
	W/No.24	3	75%	5	83%	1	33%



- Pixel sensor (two 20 and two 30-um wafers)
 - Paperwork is nearly complete to set up the contract between Jlab and UIC for the sensor purchase
 - Probably take 3-4 months to place the order by UIC, production and shipping by HPK, Japan

Test Beam Requests

- Requests to be primary user at Fermilab
 - December 4-17, 2024: new HPK strip (and pixel) sensors
 - Feb 19-March 4, 2025: new HPK pixel (and strip) sensors, EICROC0, FCFDv1.1(?)
 - May 14-27, 2025: EICROC0+pixel sensor, FCFDv1.1+strip sensor?
- Opportunity for beam test at Jlab
 - Feb or April 2025?