

Measuring and analysis of Mpix sensors

- **Sensors:**

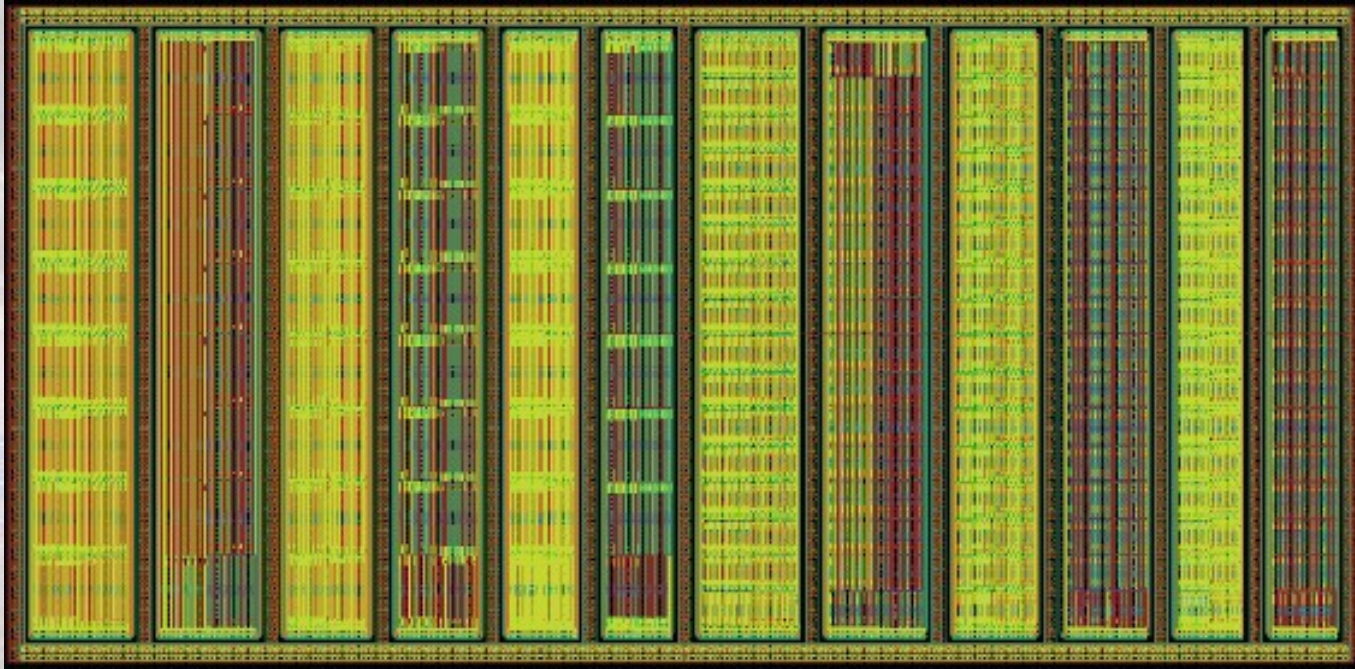
- FZ200N-07-Mpix-2
- FZ200P-10-Mpix-1
- FZ200Y-08-Mpix-1

- **Measurement:**

- IVBiasRing
- CVBiasRing
- Cint
- Rint
- Ctotal
- Itotal
- RBias



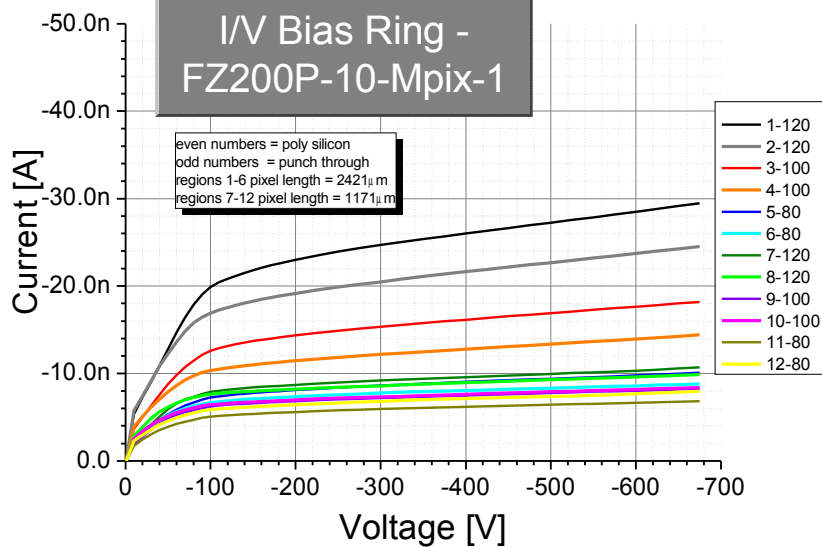
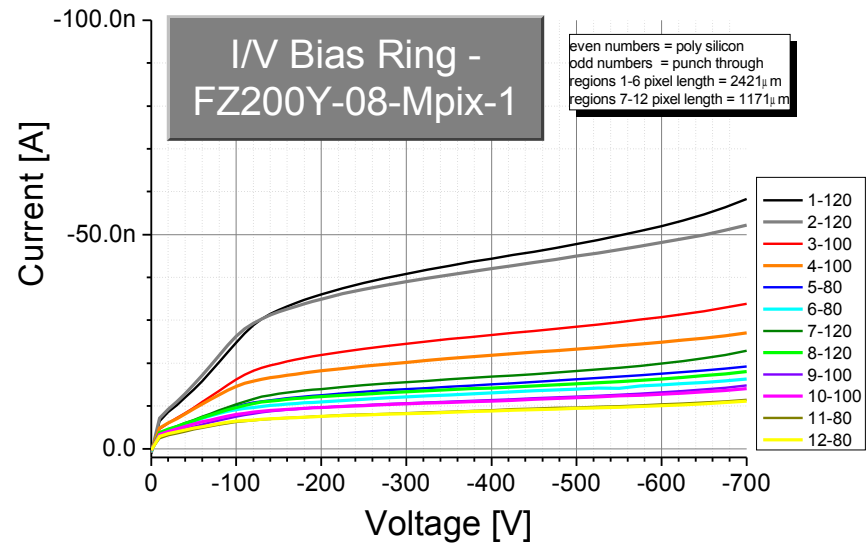
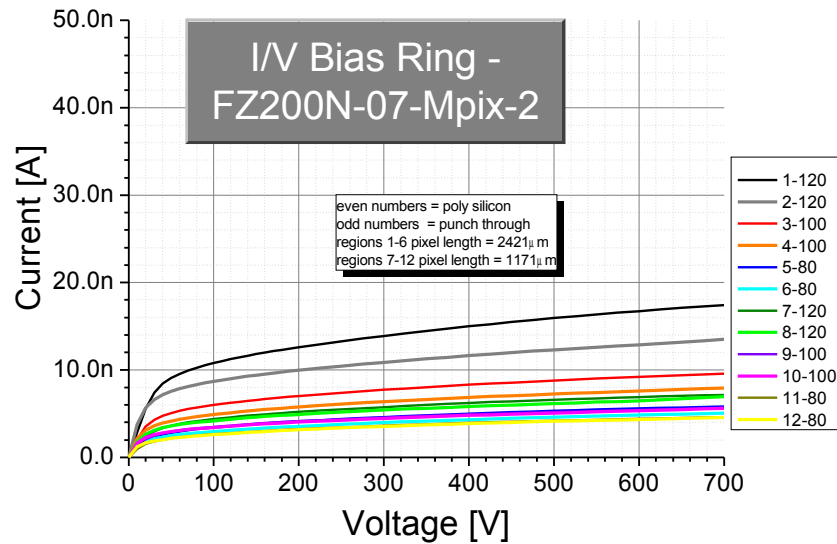
Multi-pixel sensor



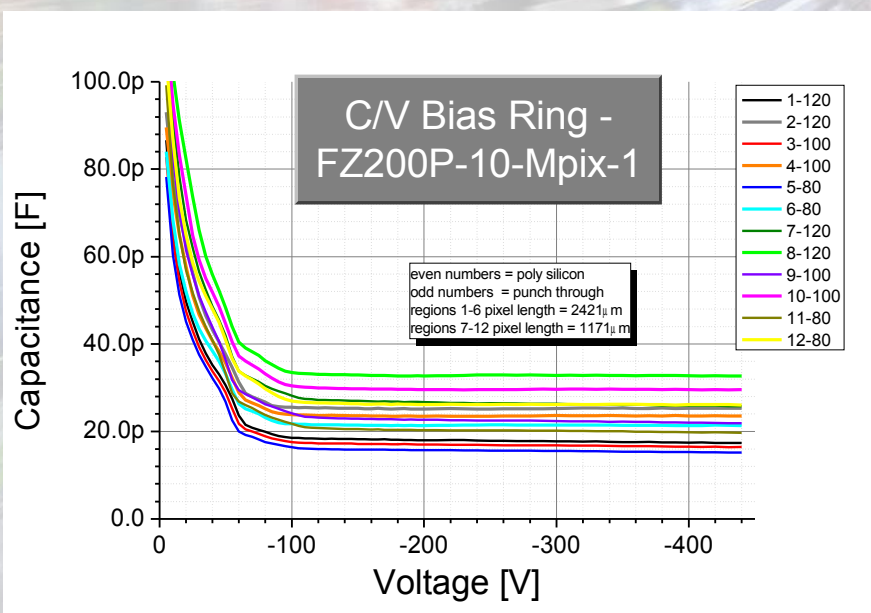
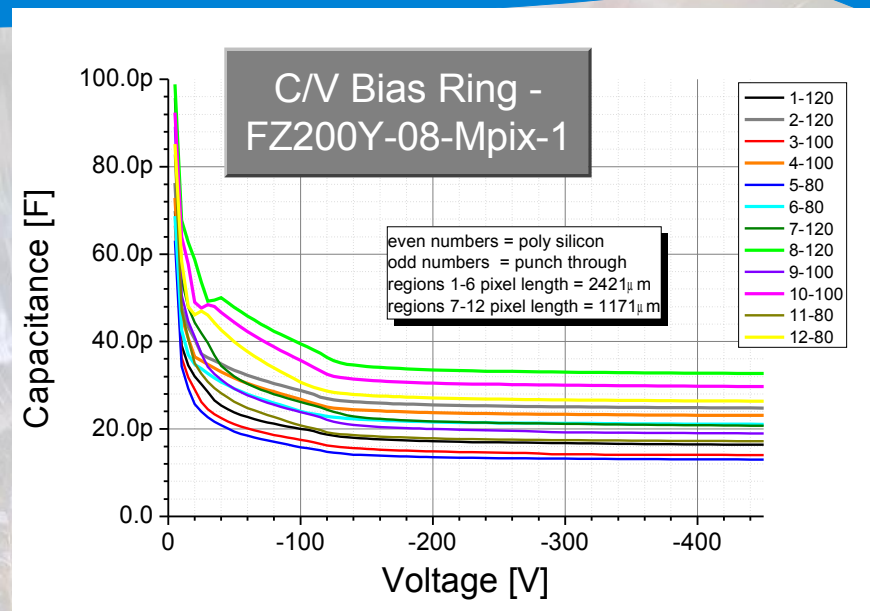
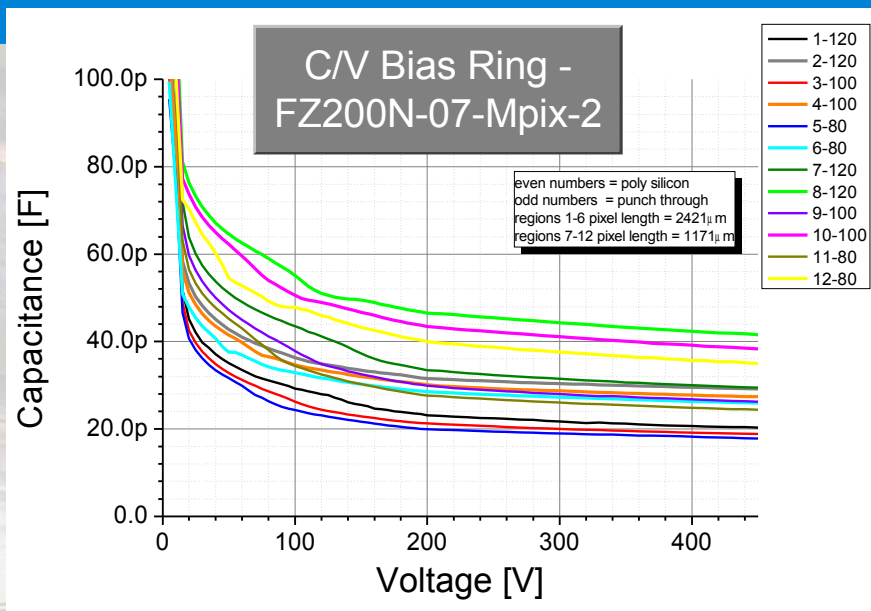
12 regions (3 ratios w/p, 2 diff. Pixel lengths, 2 diff. Bias)

region	1	2	3	4	5	6	7	8	9	10	11	12
p+/n+	28	28	23	23	18	18	28	28	23	23	18	18
alu	41	41	36	36	31	31	41	41	36	36	31	31
length alu	2421	2421	2421	2421	2421	2421	1171	1171	1171	1171	1171	1171
pitch	120	120	100	100	80	80	120	120	100	100	80	80

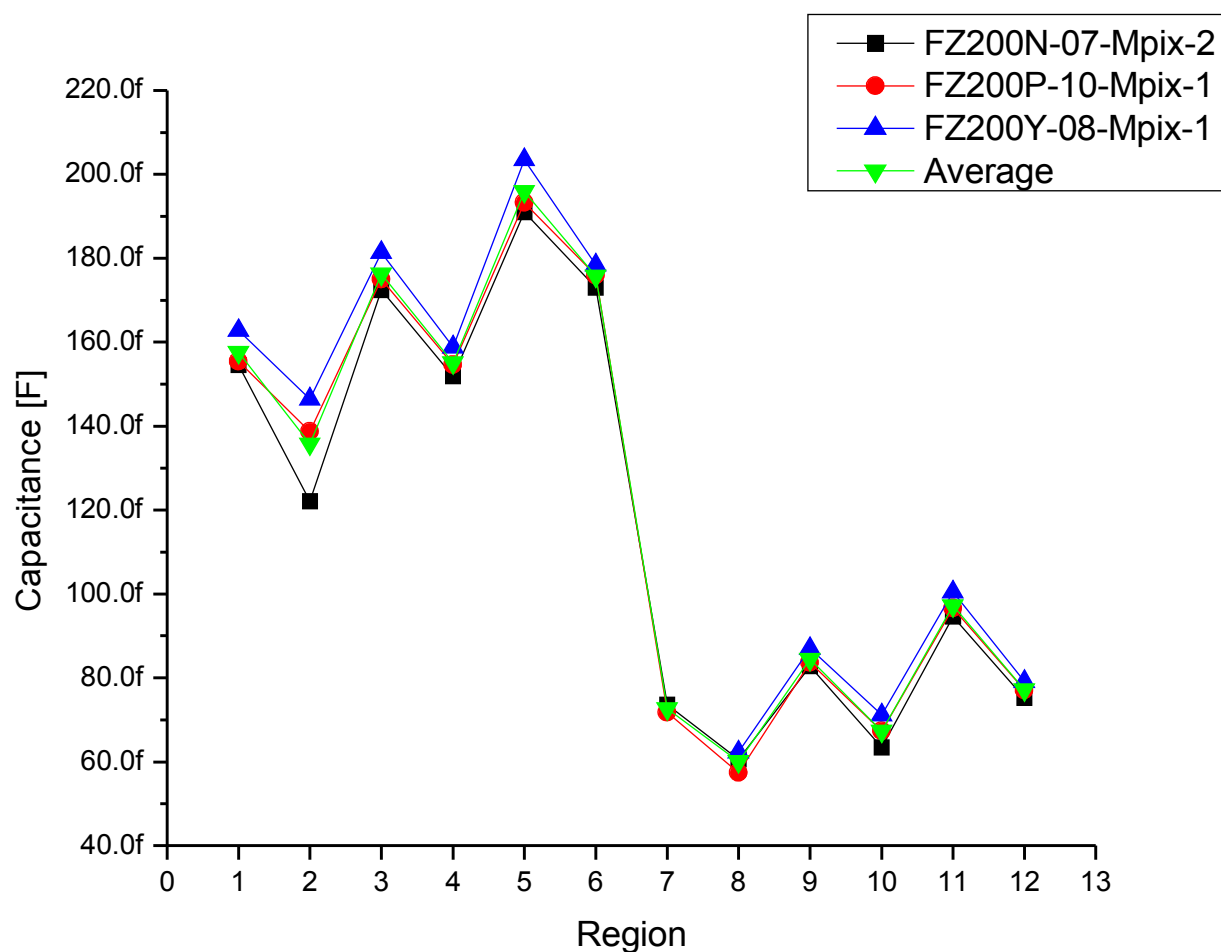
IV BiasRing



CV BiasRing



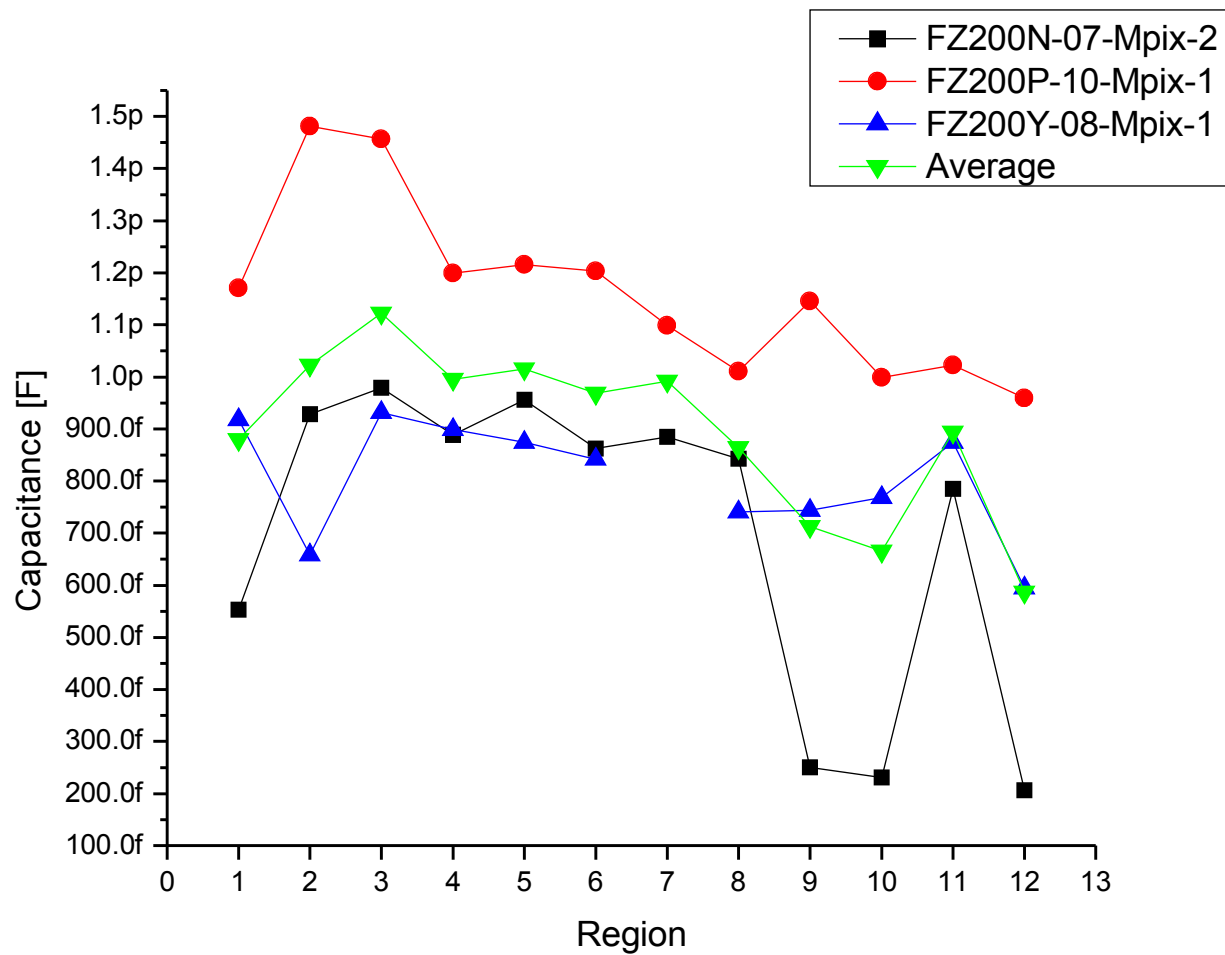
Cint @ 450V



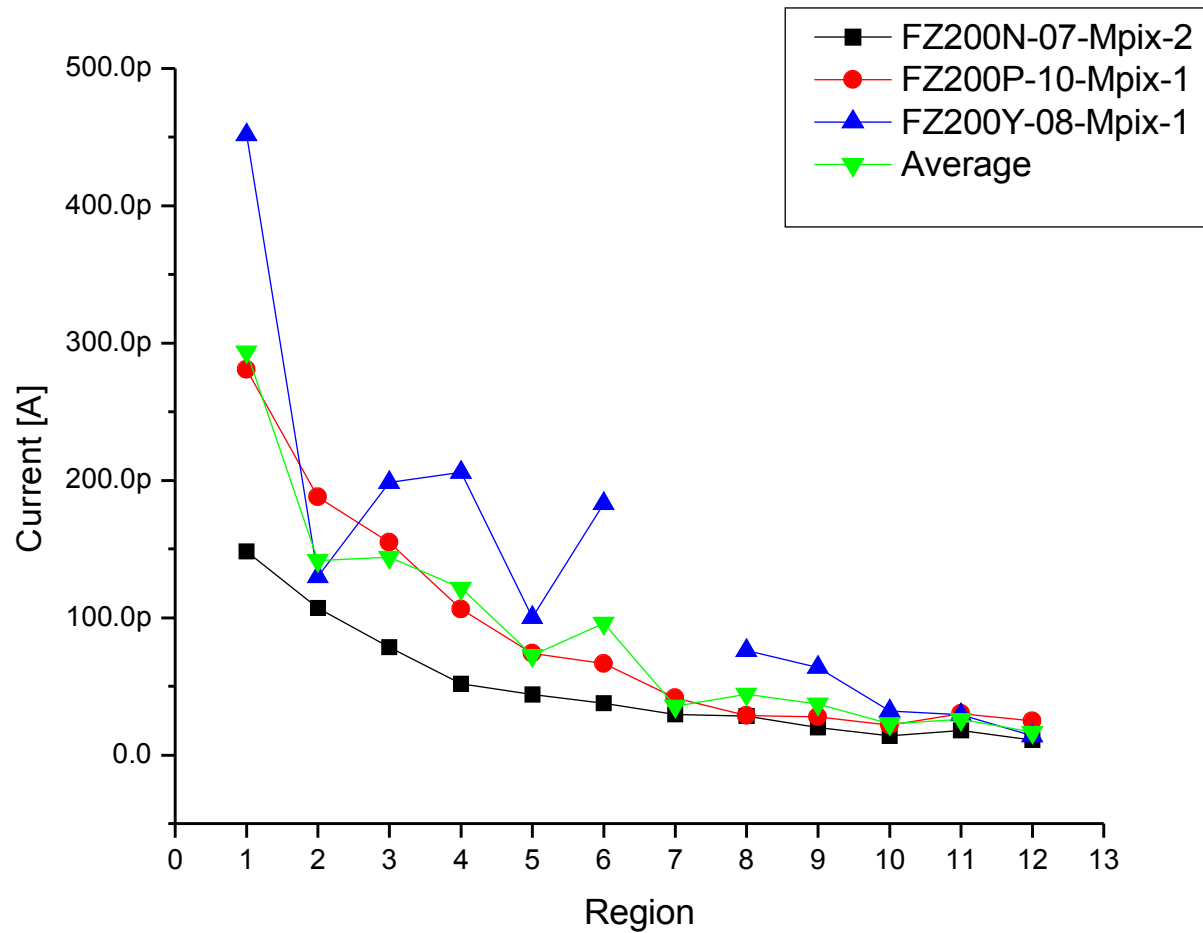
- $C \sim A/d$
- For Poly-silicon capacitance is lower than punch through
- Results are expected in every types of sensors (N, P, Y)



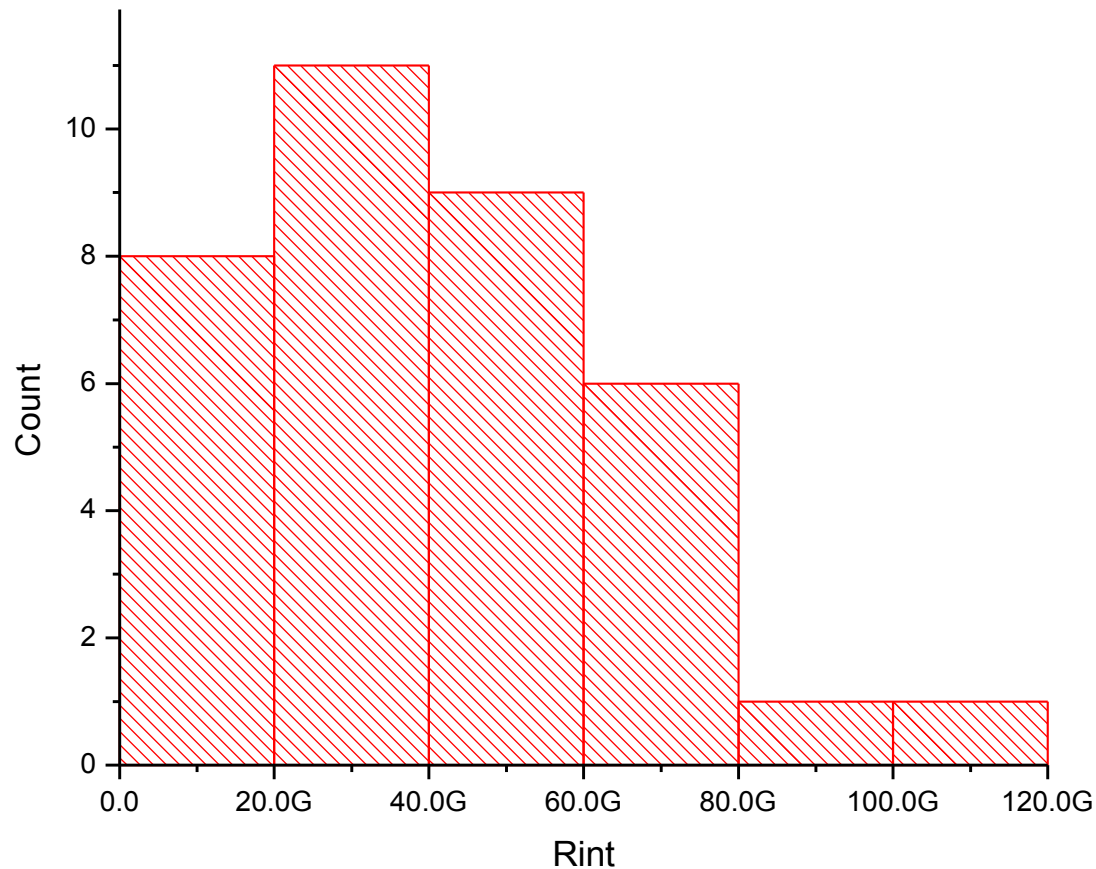
C_{total} @ 450V



$I_{\text{total}} @ 450\text{V}$



Interpixel resistance



- Minimum value: 5.2GΩ
- Maximum value: 100GΩ

