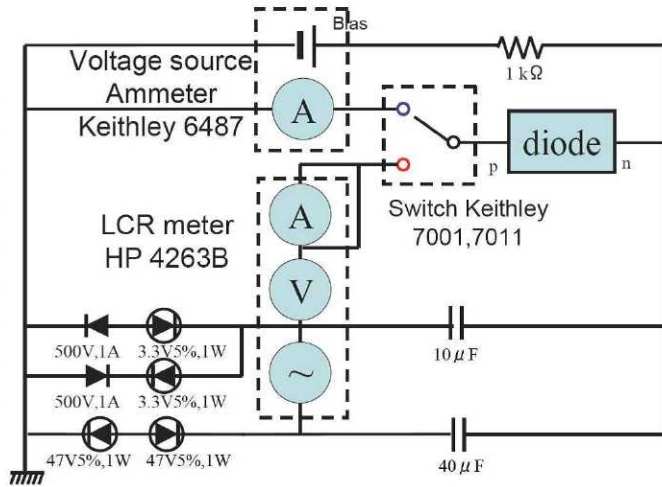
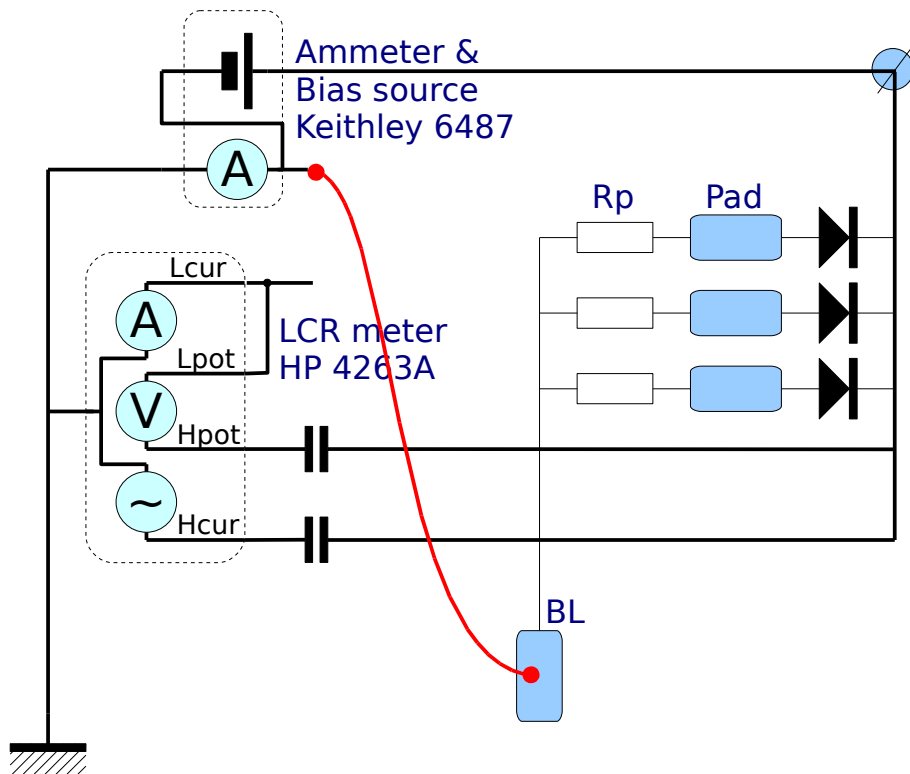


Characterization Of Stripixel Sensors With Integrated Resistors



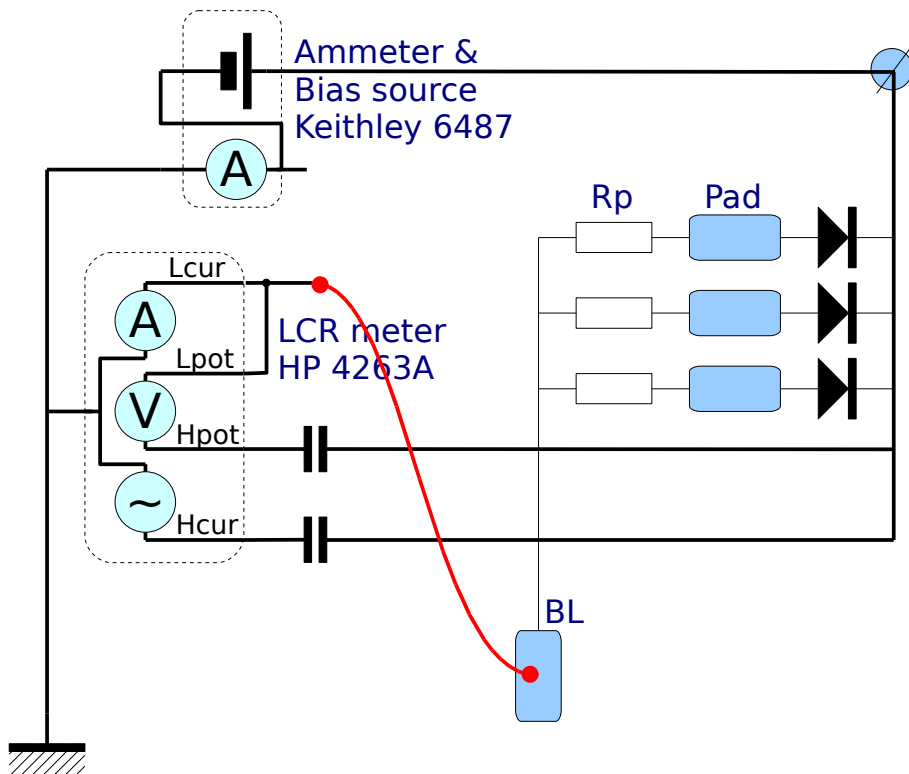
General connections, as it was done at PHOBOS and PHENIX SVTX.

IV Measurement of a HalfPlane



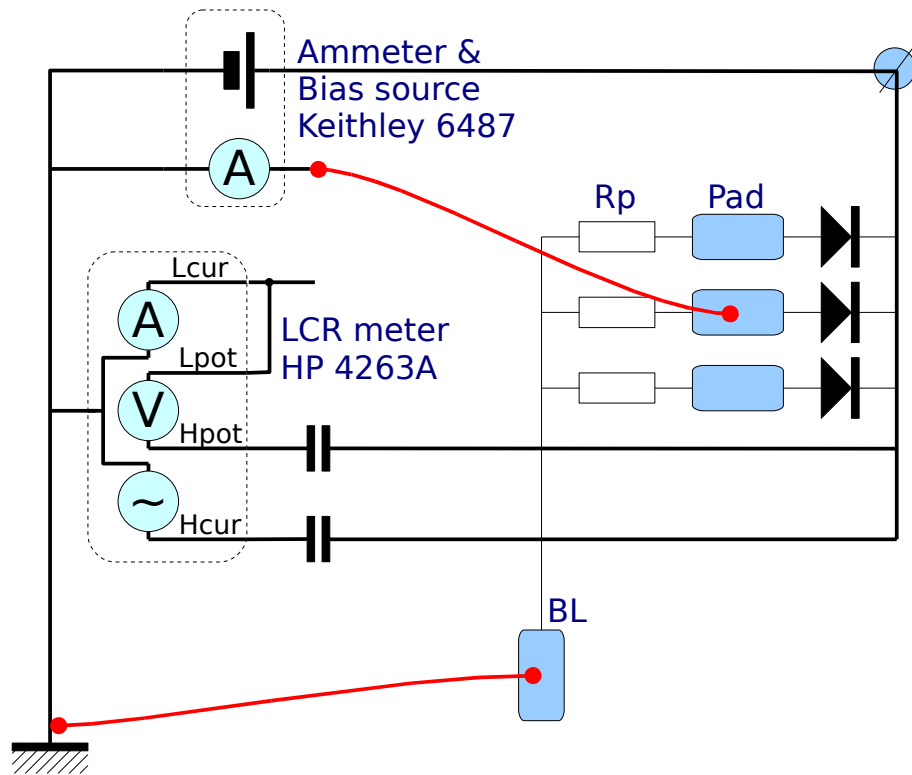
1. Make measurement with both half-planes connected to ammeter.
2. Measure both, inversely biased and direct biased branches of the IV curve. From direct biased branch we can extract the parallel R_p .
3. Make 2 measurements of one plane with other plane a) grounded, b) floating.

CV and Rp Measurements of Half-Plane



1. Direct bias, LCR in R mode should give the same R_p parallel.
2. Inverted bias LCR in C_p mode at low frequencies should give total capacitance.
3. Make 2 measurements of one plane with other plane a) grounded, b) floating.

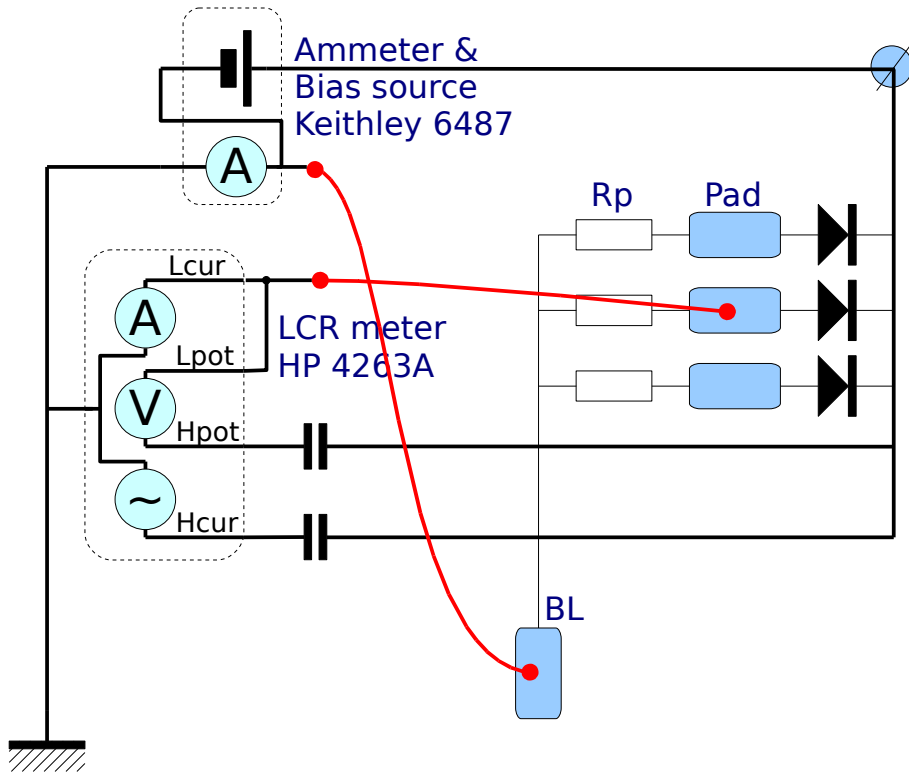
IV Measurement of Single Strips



Source polarity – positive (inverted bias).

1. Other half-plane biased.
2. Other half-plane floating.
3. Other half-plane biased, BL disconnected.

CV Measurement Of Single Strips



Source polarity – positive (inverted bias).

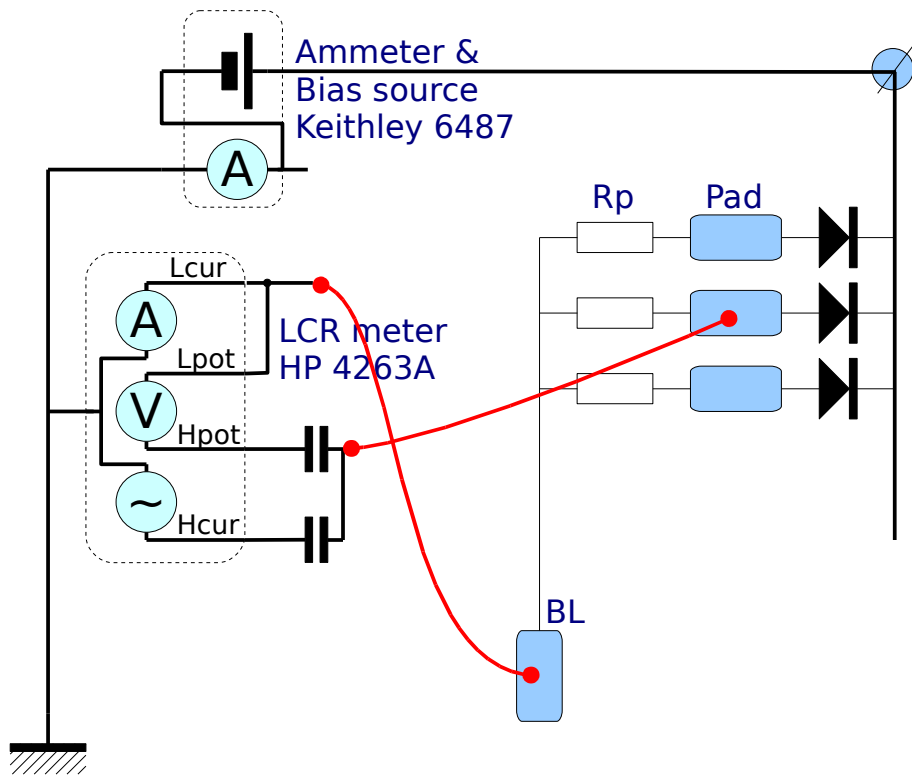
LCR meter should be in Cp-D, Cp-Q or Cp-G mode. It is better for high impedances, greater than 10 Kohm.

Impedance of the strip = $1/(6.28*f*C)$, for 30 pF = $5*10^9 / f$ Ohm.

To eliminate shunting effect of the Rp the frequency should be as low as possible. I.E. At 100 Hz the strip impedance could be as low as 50 MOhm.

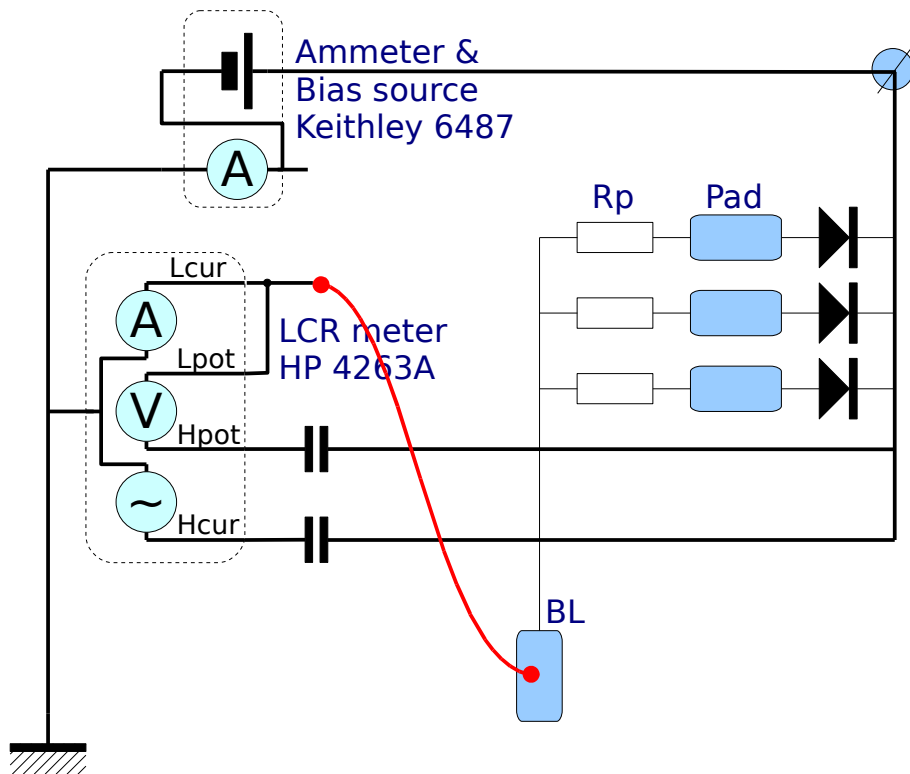
1. Measure at several frequencies to check the effect of Rp.
2. Try to ground neighboring strips.

Measurement Of R_p Of Single Strips



Source polarity – positive.

HalfPlane Measurements



4. Direct bias, LCR in R mode should give the same R_p parallel.
5. Inverted bias LCR in C_p mode at low frequencies should give total capacitance.