

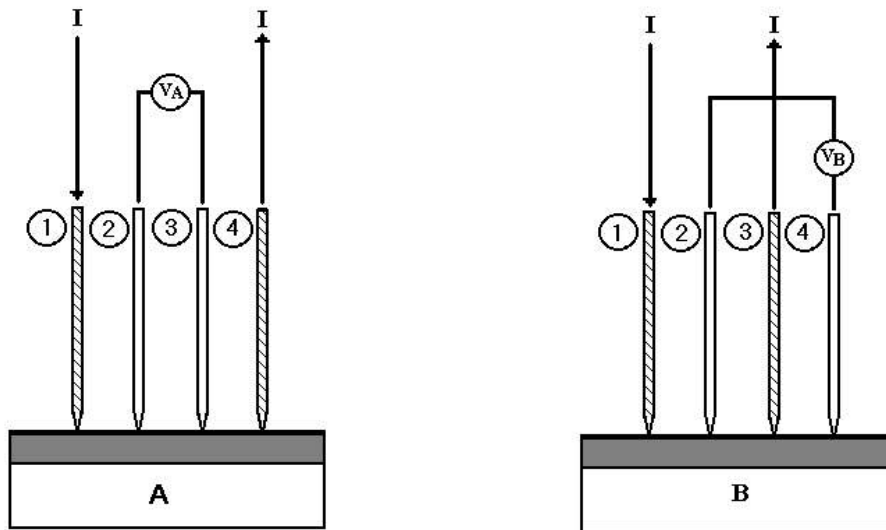
Dual Configuration

The Dual Configuration method measures current in both + and – polarity and in two different pin configurations as follows:

(1). Configuration A

Measure the Voltage V_{a23} and the Current I_{a14} in the Traditional configuration as noted in figure a.

Repeat the measurement in the reverse direction. V_{a32} and I_{a41} .



(2) Configuration B

Measure the Voltage V_{b24} and the Current I_{b13} in the traditional configuration as noted in figure b.

Repeat the measurement in the reverse direction. V_{b42} and I_{b31} .

Then

$$R_a = (V_{a23}/I_{a14} + V_{a32}/I_{a41})/2$$

$$R_b = (V_{b24}/I_{b13} + V_{b42}/I_{b31})/2$$

The Dual Configuration correction constant, K_a is:

$$K_a = -14.696 + 25.173(R_a/R_b) - 7.872(R_a/R_b)^2$$

The average resistance of the film or R_s (ohms) is :

$$R_s = R_a \times K_a = \{ -14.696 + 25.173(R_a/R_b) - 7.872(R_a/R_b)^2 \} \times R_a$$