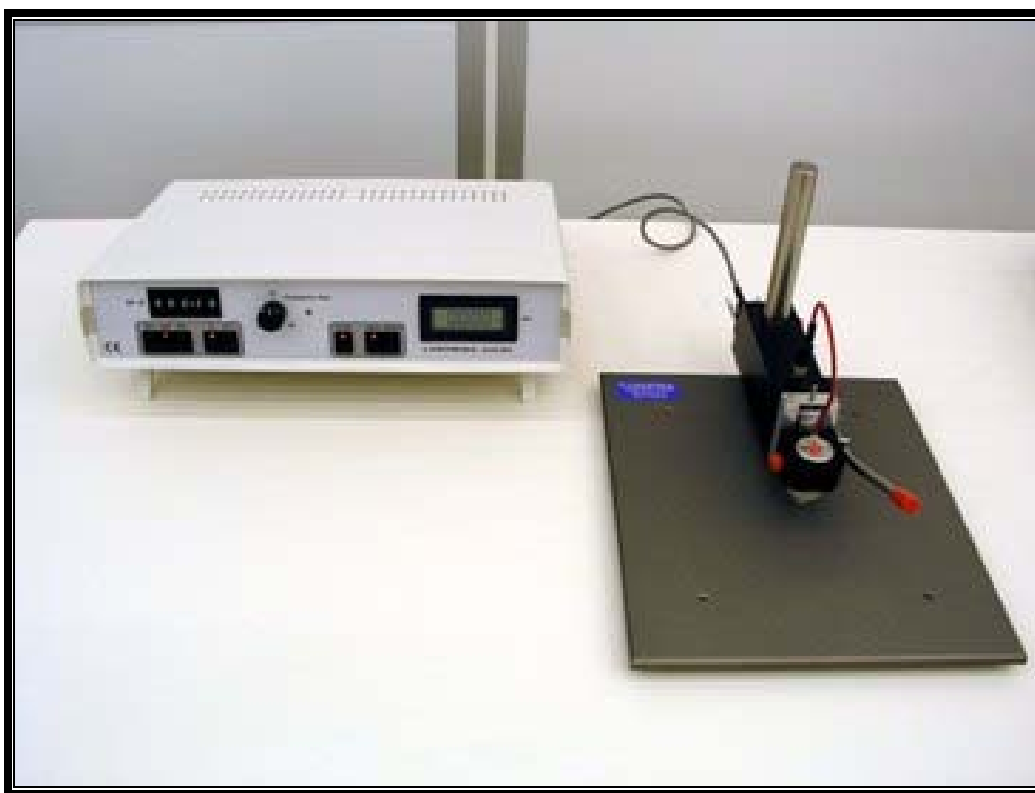


## Four Point Probes: Jandel RM2 Operation Manual



### Overview

The purpose of the four point probe is to measure the resistivity of samples by using the four point probe technique. The probe consists of four equally spaced tips which pass a current through the outer probes and measure the voltage across the two inner probes.

### **How it Works:**

Sheet Resistance assuming a semi-infinite thin sheet [ohms/square]

$$R_s = 4.532 \left( \frac{V}{I} \right)$$

Where V is the voltage in Volts and I is the current in Ohms

Bulk resistivity can be expressed by [ohms/cm]

$$\rho = R_s * t = 4.532 \frac{Vt}{I}$$

Where t is the thickness of film in cm.

Further explanation can be found at <http://www.four-point-probes.com/>

### **Operation:**

1. Place wafer on stage and lower probes onto the wafer.
2. Turn on the RM2. The unit will power up to standby state.
3. Set compliance voltage to 50V.
4. Enter the necessary current in terms of  $\mu\text{A}$
5. Press forward and screen will output voltage in terms of mV
6. Determine resistance by using above equations.
7. Raise probes from wafer and set RM2 to STBY.