TITLE OF INVENTION: DEVICE AND METHOD TO DETERMINE SHEET RESISTANCE

ABSTRACT

The subject of the present invention is a device and method for determining sheet resistance, more particularly a device and method for determining the sheet resistance of a layer separated by a space charge region, based on measuring photovoltage. The device according to the invention comprises a measuring head comprising at least one light source (2), the light of which can be applied to the surface of a sample (S), and at least two electric potential sensors (3). The device further comprises an amplifier (4) in signal communication connection with the at least two electric potential sensors (3), and a processing unit (6) in data communication connection with the amplifier (4), the processing unit (6) being adapted to determine the sheet resistance based on a difference signal of the at least two electric potential sensors (3). According to the invention, the device is characterized in that the amplifier (4) is adapted to generate the difference signal of the at least two electric potential sensors (3) and to amplify it. In the method according to the invention, the sample (S) to be inspected is illuminated in at least one spot, an electric potential due to said illumination is measured in the vicinity of the illuminated spot at least at two locations by at least two electric potential sensors (3), and the sheet resistance is then calculated from the measured electric potentials using a predetermined function. The method according to the invention is of the essence that the difference of the electric potentials is determined and amplified prior to determining the sheet resistance.

Figure 1