

Materials/chemicals/pharmaceuticals/battery materials

Evaluation of material characteristics and properties, R&amp;D, experimentation

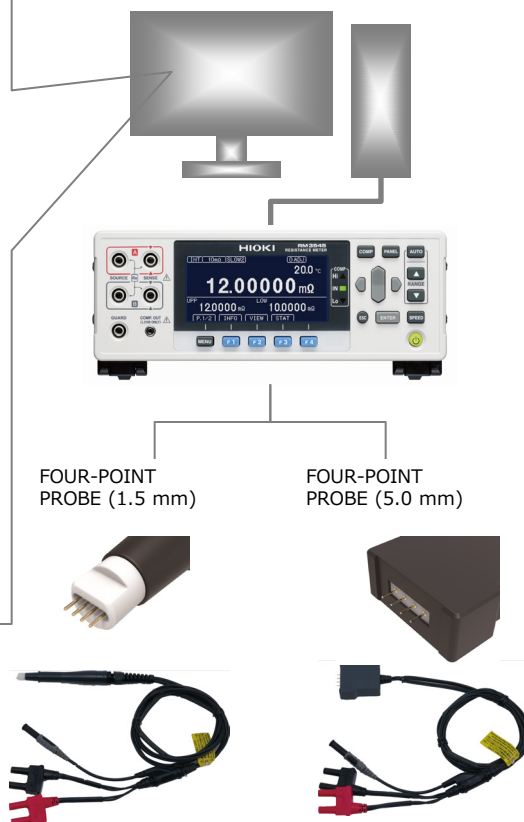
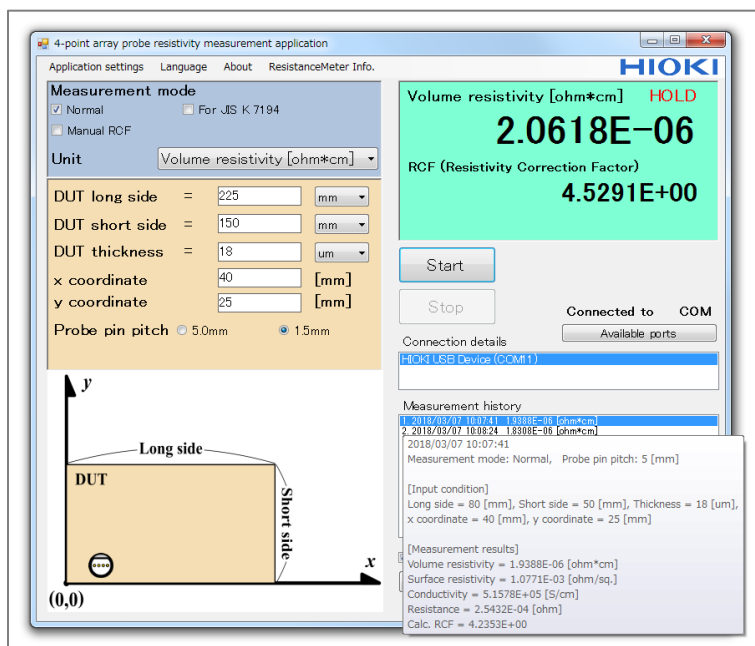
## Measuring volume resistivity and surface resistivity of conductive materials using the four-point method

The four-point method can be used to measure volume resistivity, surface resistivity, and conductivity.

Four-terminal measurement using four-point probes can be used to calculate volume resistivity and surface resistivity (sheet resistance). Four-point probe measurement is made possible by the Resistance Meter RM3545, four-point probes, and a desktop application.

### Highlights

- Four-point probes are available in two variants with probe spacing of 1.5 mm and 5.0 mm.
- Measured parameters include volume resistivity, surface resistivity, and conductivity. Resistance values can also be chosen as a reference value.
- The application displays a correction coefficient calculated based on the entered sample dimensions and measurement position coordinates.
- The application provides a JIS K 7194-compliant\* measurement mode (when using 5.0 mm-spaced probes).
- The application provides convenient functionality for displaying probing position guides, displaying a measurement history, and outputting measurement results as a CSV file.
- Low resistance values are measured with basic accuracy of 0.006% and a maximum resolution of 0.01  $\mu\Omega$  (as per the RM3545's specifications), allowing volume resistivity to be calculated with a high degree of precision.



\*Please contact for more information about standard compliance.

Note: Four-point probes are available on a special-order basis. Please contact Hioki via the following form:

HIOKI E.E. CORPORATION <https://www.hioki.com/en/contact/form/>

## Products used

1. Resistance Meter RM3545
2. FOUR-POINT PROBE (5.0 mm)
3. FOUR-POINT PROBE (1.5 mm)

Information valid as of February 2018.

Specifications and pricing are subject to change and revision without notice.