# PROCEDURE FOR ESTIMATING THE CONTRIBUTION OF INTERFACE SCATTERING OF ELECTRONS TO THE SPECIFIC RESISTANCE AND THE TEMPERATURE COEFFICIENT OF RESISTANCE OF FILMS

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S u m m a r y

A procedure, which allows the contribution of electron scattering at the interlayer interface to the specific resistance of Cu-based thin film systems to be estimated, has been proposed. The method of estimation is based on the comparison of the specific resistances and the temperature coefficients of resistance (TCR) measured for single- and two-layer films with identical thicknesses, and provided that the film deposition conditions, the types and the concentrations of defects (monitored by comparing the defect spectra calculated making use of the Vand technique), and the concentrations of grains with crystal structure defects (monitored by the method of transmission microscopy) are identical for both experimental configurations. The interface between two layers was simulated by interrupting the film deposition for some time. It has been demonstrated that the interface scattering increases the specific resistance by 12—21% and simultaneously decreases the TCR by 9—20%, if the thickness of the film system falls within the interval 60—90 nm.