Abstracts

Microwave Measurement of Surface Resistance by the Parallel-Plate Dielectric Resonator Method

A.P. Mourachkine and A.R.F. Barel. "Microwave Measurement of Surface Resistance by the Parallel-Plate Dielectric Resonator Method." 1995 Transactions on Microwave Theory and Techniques 43.3 (Mar. 1995 [T-MTT]): 544-551.

Analysis and experimental results are presented for a parallel-plate dielectric resonator method to measure the surface resistance of conducting or superconducting plates. In the present paper, three main questions are considered in detail: the influence of the relative sizes of the conducting or superconducting plates on the measured value of the surface resistance R/sub s/, the influence of the shape of the plates on the R/sub s/ measurement, and how to interpret obtained results. Measurements were made at resonant frequencies of 14.1-14.5 GHz in a temperature range between 77 and 300 K.

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