Abstracts

Power loss associated with conducting and superconducting rough interfaces

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In recent work, a generalized impedance boundary condition for two-dimensional conducting rough interfaces was derived. In this study, the impedance boundary condition is used to calculate the power loss associated with conducting rough interfaces. Results for two-dimensional conducting and superconducting roughness profiles are shown in this paper, and comparisons to other results in the literature are given. The importance of these roughness effects in microwave and millimeter-wave integrated circuits is also discussed. Suggestions are made to extend this study to three dimensional random rough interfaces.

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