

Reflection of Electromagnetic Waves from Rough Waveguides (Short Papers)

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The reflection coefficient of a section of randomly rough waveguide is calculated by using a coordinate transformation developed by Mallick and Sanyal. We perform a perturbation analysis, assuming that the amplitude of the roughness is small compared to the average width of the waveguide. A drastic difference at long wavelengths between TEM on the one hand and TE and TM on the other has been found.

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