Abstracts

Electric Screen Jauman Absorber Design Algorithms

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The electric screen Jauman absorber is a stratified cascade of dielectric spacers, interlaced with resistive sheets, which is effective in reducing specular reflection from flat or moderately curved conducting surfaces. A literature survey of the period up to 1993 may be found in [2], while the topic has also received more recent attention, e.g., [3]-[9]. Usually, the dielectric constant of the identical spacers is assumed known a priori, and the design problem is to find the sheet surface resistivities that will yield an absorption behavior which meets certain design criteria. This paper presents detail on three efficient and dedicated synthesis algorithms that synthesize absorbers with Butterworth, Equiripple, and Chebyshev absorption properties and should be seen as complementary to the introductory discussion in [2]. To the authors' knowledge, the Chebyshev solutions solve the fundamental problem for the first time.

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