

A CRITICAL ANALYSIS OF SCHELKUNOFF'S FORMALISM IN EMC

P. OGRUȚAN¹ L.E. ACIU¹ A. MAILAT¹

Abstract: *The widespread success of Schelkunoff's formalism from electromagnetic compatibility, also known in literature as the transmission line model or the method of the impedance is due to the physical and mathematical isomorphism from which it originates that exists between the equations describing the behavior of an infinite plane screen in free space characterized by the macroscopic material parameters ϵ , μ , σ and the equations of the coaxial transmission line. The Schelkunoff model has some limitations, the arguments with respect to these being presented in this paper.*

Key words: *electromagnetic compatibility, Schelkunoff model, shielding effectiveness, limits.*

¹ Dept. of Electrical Engineering and Computer Science, Transilvania University of Braşov.