Abstracts

Dispersion of Nonlinear Elements as a Source of Electromagnetic Shock Structure (Letters)

R. Landauer. "Dispersion of Nonlinear Elements as a Source of Electromagnetic Shock Structure (Letters)." 1975 Transactions on Microwave Theory and Techniques 23.5 (May 1975 [T-MTT]): 452-453.

Electromagnetic shock structure in nonlinear capacitance transmission lines can be resolved, and the energy losses associated with shock propagation explained, by including a resistance in series with the nonlinear capacitance. This resistance is inevitably present as the circuit representation of the nonvanishing relaxation time for the establishment of polarization in the nonlinear dielectric. Karbowiak and Freeman have dismissed this viewpoint as "not tenable!" This is a rebuttal of that statement.

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