Abstracts

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

It is pointed out that if the classical method of weak solution is to be used for the solution of the problem, then it is necessary to include a resistive element of a sufficient magnitude. This also is a feature of Landauer's work. The solution so obtained is accurate under well-defined conditions, and among others, it can be shown that energy losses associated with the shock front can be accounted for by that resistance. However, it is inconsequential to assume that as the value of the resistive element is reduced to zero, the energy balance continues to hold. This requires a separate proof. An exact analysis based on a series of experimental results and computer modeling shows that the classical discrepancy can be accounted for in a different way.

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