Abstracts

The Extended Theory of the Manley-Rowe's Energy Relations in Nonlinear Elements and Nonlinear Lossless Medium (Correspondence)

H. Iwasawa. "The Extended Theory of the Manley-Rowe's Energy Relations in Nonlinear Elements and Nonlinear Lossless Medium (Correspondence)." 1960 Transactions on Microwave Theory and Techniques 8.4 (Jul. 1960 [T-MTT]): 459-460.

Energy relations for a lumped nonlinear reactance excited by two different fundamental frequencies were derived by J. M. Manley and H. E. Rowe. R. H. Pautell developed the energy relations in a nonlinear resistive element. Furthermore, H. A. Haus extended the Manley-Rowe's energy relations to a nonlinear Iossless medium excited by two fundamental frequencies. This paper extends the Manley-Rowe relations in the case of a lumped nonlinear element (lossless reactance and resistive element) and nonlinear lossless reciprocal medium excited by k numbers of fundamental frequencies, wherein the extended relations consist of k independent equations.

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