

عنوان مقاله:

Investigating variations of the electron beam voltage on the traveling wave tube output power in the different frequencies

محل انتشار:

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خلاصه مقاله:

Abstract In the present research, the effect of variations of the electron beam voltage on the output power is studied. In order to develop the study, this problem was investigated at different frequencies, which are the products of nonlinear behavior of the traveling wave tube (TWT) in response to the input frequency. Moreover, for a more realistic understanding, the tubes were considered with two linear and nonlinear responses to the input frequency. The TWT output power was calculated in linear and nonlinear modes, at different frequencies using the numerical solution of the mathematical equations of the Lagrangian model. Then, the output power in terms of distance and beam voltage in different frequencies was plotted and compared. The results revealed that the effects of variations of voltage on the .output power were more proper in a single-mode TWT in comparison with a multimode one

کلمات کلیدی:

Beam voltage, Output Power, Nonlinear, Traveling wave tube

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