

Beam-quality and guiding-magnetic-field requirements for a high-power traveling-wave amplifier operating at 35 GHz

L. Schächter

Electrical Engineering Department, Technion, Israel Institute of Technology, Haifa 32000, Israel

J. A. Nation

School of Electrical Engineering, Cornell University, Ithaca, New York 14853

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A two-dimensional quasianalytic model has been developed for the investigation of the performance of a high-efficiency traveling-wave amplifier operating at 35 GHz. Simulations indicate that a relative energy spread of less than 5% is sufficient to reach high efficiency. It is also shown that there is an optimal guiding magnetic field for a given geometry of the slow-wave structure. [S1063-651X(98)11206-0]

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