

Abstracts

Practical Considerations in the Design of a High-Power 1-mm Gyromonotron

J.D. Silverstein, M.E. Read, K.R. Chu and A.T. Drobot. "Practical Considerations in the Design of a High-Power 1-mm Gyromonotron." 1980 Transactions on Microwave Theory and Techniques 28.9 (Sep. 1980 [T-MTT]): 962-966.

A second harmonic gyromonotron has been designed to have an output of 4 kW at a frequency of 240 GHz, and to operate with an overall efficiency of 14 percent. The design method utilized a detailed theory of the gyrotron oscillator and an electron orbit computer code. Particular attention was paid to the problem of mode competition in the oscillator cavity. Although a particular design example is considered, the method is of general interest.

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