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Title

Electron-optical system of terahertz gyrotron

Source

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Abstract

A gun with the magnetic-field cusp in the anode-cathode gap is developed. A near-axis beam with an electron energy of 50-80 keV, a current of up to 0.7 A, a pitch factor of 1.5, and a relatively small spread of rotational velocities is generated using the gun in magnetic field of 10.5-14 T. The gyrotron with a working frequency of up to 1.0 THz that operates at the third cyclotron harmonic is demonstrated for the first time. (20 References).