

Title (en)

ELECTRONS ACCELERATOR, AND MILLIMETER AND INFRA-MILLIMETER WAVES GENERATOR INCLUDING THE SAME

Publication

EP 0049198 B1 19841114 (FR)

Application

EP 81401482 A 19810924

Priority

FR 8020714 A 19800926

Abstract (en)

[origin: US4571524A] An electron beam device which includes a vacuum enclosure which houses an electron gun for producing an annular beam of helically rotating electrons, an iris-loaded waveguide which is supplied with high frequency power and serves to create a high frequency electromagnetic field along the axis of the beam which has a longitudinal electric field component along the beam axis, and a resonator which abstracts high frequency energy from the beam. A coil surrounds the vacuum enclosure to provide a magnetic field of increasing strength with distance downstream in the region of the iris-loaded waveguides whereby the angular velocity of the electrons in the beam is increased with little change in the axial velocity.

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