

Title (en)
Quasi-optical gyrotron.

Title (de)
Quasi-optisches Gyrotron.

Title (fr)
Gyrotron quasi-optique.

Publication
EP 0393485 A1 19901024 (DE)

Application
EP 90106906 A 19900410

Priority
CH 149089 A 19890419

Abstract (en)
A quasi-optical gyrotron for generating electromagnetic radiation in the form of mm-waves has a plurality of high power resonators (6, 7). The resonators (6, 7) each comprise two mirrors (12a, 12b and 12c, 12d respectively) located on a resonator longitudinal axis (10, 11) aligned at right angles to the electron beam axis (1). In this case, the electron beam axis (1) is provided by the path of the electrons which are forced into gyration by a static magnetic field. The resonator longitudinal axes (10, 11) are located essentially in a common plane, at right angles to the electron beam axis (1), and enclose an angle α , which is greater than zero. <IMAGE>

Abstract (de)
Ein quasi-optisches Gyrotron zur Erzeugung von elektromagnetischer Strahlung in Form von mm-Wellen hat mehrere Resonatoren (6, 7) hoher Leistung. Die Resonatoren (6, 7) umfassen je zwei, auf einer senkrecht zur Elektronenstrahlachse (1) ausgerichteten Resonatorlängsachse (10, 11) liegende Spiegel (12a, 12b resp. 12c, 12d). Die Elektronenstrahlachse (1) ist dabei durch die Bahn der mit einem statischen Magnetfeld zur Gyration gezwungenen Elektronen gegeben. Die Resonatorlängsachsen (10, 11) liegen im wesentlichen in einer zur Elektronenstrahlachse (1) senkrechten, gemeinsamen Ebene und schliessen einen Winkel α grösser null ein.

IPC 1-7
H01J 25/02

IPC 8 full level
H01J 25/00 (2006.01); **H01J 25/02** (2006.01)

CPC (source: EP US)
H01J 25/025 (2013.01 - EP US)

Citation (search report)

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- [A] INTERNATIONAL JOURNAL OF INFRARED AND MILLIMETER WAVES vol. 7, no. 11, 1986, Plenum Publishing Corporation Seiten 1813 - 1822; A. PERRENOUD et al.: "Low power measurements of the quality factor of an open resonator with stepped mirrors"
- [A] INTERNATIONAL JOURNAL OF ELECTRONICS. vol. 61, no. 6, Dezember 1986, LONDON GB Seiten 715 - 727; G. Mourier et al.: "A 100 GHz gyrotron-results and future prospects "

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