

Title (en)
MICROWAVE PROPAGATION-MODE TRANSFORMER

Publication
EP 0122834 B1 19891129 (FR)

Application
EP 84400542 A 19840316

Priority
FR 8304484 A 19830318

Abstract (en)
[origin: US4636689A] This transformer (9) is formed by a waveguide, of approximately elliptical cross-section, and with increasing eccentricity (e) along the axis (z) of the transformer. This transformer (9) is connected on one side to the cavity (1) of a gyrotron (11) and on the other side to a section of guide (13) having the same cross-section as the final cross-section of the transformer and of which the cross-section is constant along the axis (z) of the transformer. The transformer receives from the gyrotron cavity a complex mode, of TE_{0n} type, and changes said mode into a mode in which the electrical field is approximately parallel to a given direction (z). A system of two mirrors (M3 and M4) enables a single beam of plane waves (19) to be obtained from the two beams of plane waves (14 and 15) obtained at the output of the section of waveguide (13).

IPC 1-7
H01J 23/027; **H01J 23/36**; **H01J 25/02**; **H01P 1/16**

IPC 8 full level
H01P 1/16 (2006.01); **H01J 23/027** (2006.01); **H01J 23/36** (2006.01); **H01J 25/02** (2006.01)

CPC (source: EP US)
H01J 23/027 (2013.01 - EP US); **H01J 23/36** (2013.01 - EP US); **H01J 25/02** (2013.01 - EP US)

Cited by
CN106450595A; EP0449174A3; EP0454540A1; FR2661559A1; EP0848409A1; FR2756970A1; US6025678A

Designated contracting state (EPC)
CH DE GB LI

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