

Title (en)
PERIODIC PERMANENT-MAGNET FOCUSING SYSTEM FOR A TRAVELLING-WAVE TUBE

Publication
EP 0115042 B1 19870819 (DE)

Application
EP 83112932 A 19831221

Priority
DE 3248693 A 19821230

Abstract (en)
[origin: US4560904A] This invention refers to a traveling-wave tube with cylindrical evacuated sheath 3, which is surrounded by a permanent-magnet system including pole shoes 1 and magnet rings 2 inserted between the pole shoes, while pole shoes 1 inserted in evacuated sheath 3 and the parts of them that surround beam axis 7 are designed as small tubes 4. Every second pole shoe is coupled as an active pole shoe 1 to magnet ring 2, and pole shoes 5 that are inserted between are connected with evacuated sheath 3. This traveling-wave tube is capable of focusing with greater efficiency and at higher frequencies than existing systems. This invention also provides that active pole shoes 1, which are coupled to magnet rings 2, are made of magnetic metal and that at least front ends 8 of small tubes 4 are made of non-magnetic metal. In addition, pole shoes 5 inserted between are made of non-magnetic and their small tubes 6 of magnetic metal. According to this invention, the focusing system is used with high performance traveling-wave tubes.

IPC 1-7
H01J 23/087

IPC 8 full level
H01J 23/087 (2006.01)

CPC (source: EP US)
H01J 23/0873 (2013.01 - EP US)

Citation (examination)
WO 8102221 A1 19810806 - PASMANNIK V, et al

Designated contracting state (EPC)
DE GB IT

DOCDB simple family (publication)
EP 0115042 A1 19840808; EP 0115042 B1 19870819; DE 3248693 A1 19840705; DE 3373161 D1 19870924; US 4560904 A 19851224

DOCDB simple family (application)
EP 83112932 A 19831221; DE 3248693 A 19821230; DE 3373161 T 19831221; US 55152383 A 19831114