Title (en)

Travelling-wave tube with a gas-tight coupling arrangement between its slow-wave circuit and an external microwave circuit.

Title (de)

Wanderfeld-Röhre mit einer gasdichten Kopplungsvorrichtung zwischen ihrer Verzögerungsleitung und einer aussen gelegenen Mikrowellenschaltung.

Title (fr)

Tube à onde progressive muni d'un dispositif de couplage étanche entre sa ligne à retard et circuit hyperfréquence externe.

Publication

EP 0364335 A1 19900418 (FR)

Application

EP 89402725 A 19891003

Priority

FR 8813342 A 19881011

Abstract (en)

[origin: JPH02165544A] PURPOSE: To shorten the time for pump treatment by making a microwave window non permeable to a gas and fixing the window in a traveling-wave tube which is non permeable to a gas. CONSTITUTION: Being provided with a delay line 1 sheathed with a sheath 4 and a coupling pin 12 to couple the delay line 1 and a transmission wire of an outside microwave circuit, a travelling-wave tube is also provided with an inner conductor core having an end face and the coupling pin 12 has a coupling face arranged so as to face to the end face of the conductor core of the transmission line. The travelling-wave tube is extended between the coupling face of the coupling pin 12 and the end face of the conductor core and comprises a microwave window 18 having its wall permeable to microwave energy. The microwave window 18 is nonpermeable to a gas and fixed in the travelling-wave tube which is nonpermeable to a gas. Consequently, in the case a gas existing in the travelling-wave tube is pump-treated, only the travelling-wave tube is put in vacuum state and the time to be taken for the operation can be remarkably shortened.

Abstract (fr)

Dans un tube à onde progressive dont la ligne à retard (1) est couplée à une ligne de transmission (2) d'un circuit hyperfréquence externe par un doigt de couplage (12) ayant une surface de couplage située en vis-à-vis d'une surface d'extrémité de la ligne de transmission (2), une fenêtre hyperfréquence (18) s'étend entre la surface de couplage du doigt de couplage (12) et la surface d'extrémité de la ligne de transmission (2). Cette fenêtre (18) est perméable à l'énergie hyperfréquence et imperméable aux gaz. Elle est fixée de façon étanche au tube à onde progressive.

IPC 1-7

H01J 23/42; H01J 23/50

IPC 8 full level

H01J 23/24 (2006.01); **H01J 23/40** (2006.01); **H01J 23/42** (2006.01); **H01J 23/50** (2006.01)

CPC (source: EP US)

H01J 23/42 (2013.01 - EP US); **H01J 23/50** (2013.01 - EP US)

Citation (search report)

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Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

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DOCDB simple family (application)

EP 89402725 A 19891003; FR 8813342 A 19881011; JP 26317189 A 19891011; US 41932689 A 19891010