Title (en)

Travelling-wave tube provided with a brazed helix delay line structure.

Title (de)

Wanderfeldröhre mit einer Verzögerungsleitung, die eine gelötete Spirale enthält.

Title (fr)

Tube à ondes progressives muni d'une ligne à retard à hélice brasée.

Publication

EP 0394094 A1 19901024 (FR)

Application

EP 90400972 A 19900410

Priority

FR 8905321 A 19890421

Abstract (en)

The invention relates to a travelling-wave tube with helix (20). The helix (20) is mounted in a metal sleeve (22) and is kept centred by at least three dielectric bars (23). Parts (29) of the helix are in contact with the bars. The helix (20) is produced from a thin strip of a metal which is a good conductor of heat and electricity. The thin strip, instead of having a rectangular right cross-section now has a T-shaped right cross-section, at least in the region of all the parts (29) of the helix in contact with the bars (23). The foot of the T is brazed to the bars (23). This structure avoids the risk of electric arcs in the region of brazing beads situated opposite one another on two consecutive turns of the helix. <??>The invention applies to travelling-wave tubes operating in a wide band and at high average and/or high peak powers. <IMAGE>

IPC 1-7

H01J 23/26

IPC 8 full level

H01J 23/26 (2006.01)

CPC (source: EP US)

H01J 23/26 (2013.01 - EP US)

Citation (search report)

- [Y] US 4185225 A 19800122 - DOEHLER OSKAR F [US], et al
- [Y] EP 0129314 A2 19841227 - STANDARD TELEPHONES CABLES LTD [GB]
- [A] I.E.D.M., San Francisco, CA, 13-15 décembre 1982 pages 18-21, IEEE, New York, US; R.M. PHILLIPS: "Some surprising helical interaction circuits...

Cited by

CN111081509A

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

EP 0394094 A1 19901024; FR 2646285 A1 19901026; JP H02301938 A 19901214; US 5132591 A 19920721

DOCDB simple family (application)

EP 90400972 A 19900410; FR 8905321 A 19890421; JP 10510390 A 19900420; US 50548890 A 19900406