Title (en)

CLOSELY SPACED ELECTRODES WITH A UNIFORM GAP

Title (de)

DICHT ANGEORDNETE ELEKTRODEN MIT EINHEITLICHER LÜCKE

Title (fr)

ELECTRODES ETROITEMENT ESPACEES PAR UN ENTREFER UNIFORME

Publication

EP 1984625 A2 20081029 (EN)

Application

EP 07756398 A 20070122

Priority

- US 2007060871 W 20070122
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- US 84126206 P 20060830

Abstract (en)

[origin: WO2007100941A2] An improved design for maintaining separation between electrodes in tunneling, diode, thermionic, thermophotovoltaic and other devices is disclosed. At least one electrode is made from flexible material. A magnetic field is present to combine with the current flowing in the flexible electrode and generate a force that counterbalances the electrostatic force or other attracting forces between the electrodes. The balancing of forces allows the separation and parallelism between the electrodes to be maintained at a very small spacing without requiring the use of multiple control systems, actuators, or other manipulating means, or spacers. The shape of one or both electrodes is designed to maintain a constant separation over the entire overlapping area of the electrodes. The end result is an electronic device that maintains two closely spaced parallel electrodes in stable equilibrium with a uniform gap therebetween over a large area in a simple configuration for simplified manufacturability and use to convert heat to electricity or electricity to cooling.

IPC 8 full level

H02N 3/00 (2006.01); **F25B 21/02** (2006.01); **H01J 21/08** (2006.01)

CPC (source: EP KR)

F25B 21/00 (2013.01 - EP); **H01J 1/88** (2013.01 - EP); **H01J 21/08** (2013.01 - EP); **H01J 45/00** (2013.01 - EP); **H02N 10/00** (2013.01 - KR); F25B 2321/003 (2013.01 - EP); Y02B 30/00 (2013.01 - EP)

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