

Title (en)
METAL-INSULATOR VARACTOR DEVICES

Title (de)
METALL-ISOLATOR-VARACTOR-BAUELEMENTE

Title (fr)
DISPOSITIFS VARACTOR METAL-ISOLANT

Publication
EP 1779440 A4 20090415 (EN)

Application
EP 05769417 A 20050707

Priority

- US 2005024207 W 20050707
- US 58649304 P 20040708
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Abstract (en)
[origin: WO2006014574A2] A varactor is configured with first and second conducting layers, spaced apart from one another such that a given voltage can be applied across the first and second conducting layers. Further, an insulator arrangement includes at least one insulator layer disposed between the first and second conducting layers, configured to cooperate with the first and second conducting layers to produce a charge pool which changes responsive to changes in the given voltage such that a device capacitance value between the first and second conducting layers changes responsive to the given voltage. The insulator arrangement can include one layer, two distinct layers or more than two distinct layers. One or more of the layers can be an amorphous material. A zero-bias voltage version of the varactor is also described.

IPC 8 full level
H01L 27/08 (2006.01); **H01L 21/02** (2006.01); **H01L 29/88** (2006.01); **H01L 29/93** (2006.01)

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Citation (search report)

- [DX] US 2002171078 A1 20021121 - ELIASSON BLAKE J [US], et al
- [X] US 2004100817 A1 20040527 - SUBRAMANIAN CHITRA K [US], et al
- [A] US 5019530 A 19910528 - KLEINSASSER ALAN W [US], et al
- [A] US 3613011 A 19711012 - WOOD PAUL W
- [A] US 5895934 A 19990420 - HARVEY JAMES F [US], et al
- See references of WO 2006014574A2

Designated contracting state (EPC)
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DOCDB simple family (publication)
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