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(71) Applicant *(for all designated States except US)*: **ADVANCED MICRO DEVICES, INC.** [US/US]; One AMD Place, Mail Stop 68, P.O. Box 3453, Sunnyvale, CA 94088-3453 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **WIECZOREK, Karsten** [DE/DE]; Am Schulfeld 24, 01109 Dresden (DE). **FEUDEL, Thomas** [DE/DE]; Zillestrasse 13a, 01445 Radebeul (DE). **KAMMLER, Thorsten** [DE/DE]; Buchenstrasse 12c, 01458 Ottendorf-Okrilla (DE). **BUCHHOLTZ, Wolfgang** [DE/DE]; Am Bornberge 8, 01445 Radebeul (DE).

(74) Agent: **DRAKE, Paul, S.**; Advanced Micro Devices, Inc., 5204 East Ben White Boulevard, Mail Stop 562, Austin, TX 78741 (US).

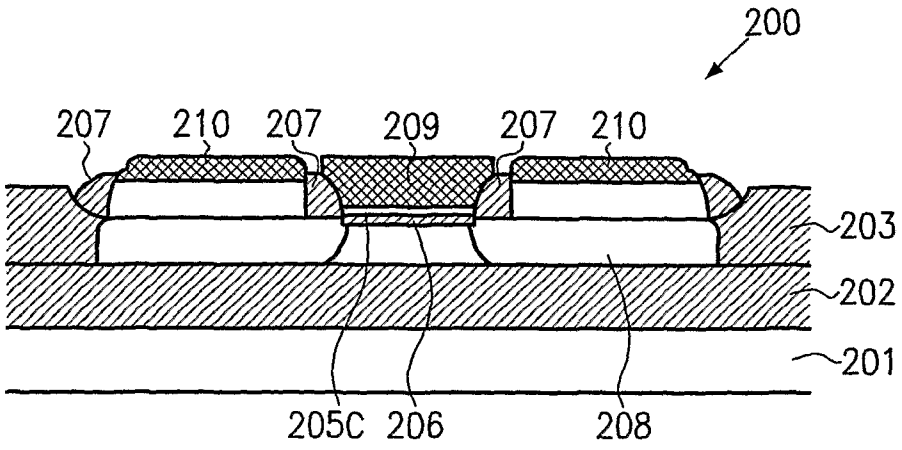
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(54) Title: FIELD EFFECT TRANSISTOR HAVING A DOPED GATE ELECTRODE WITH REDUCED GATE DEPLETION AND METHOD OF FORMING THE TRANSISTOR



(57) Abstract: By forming an implantation mask (220) prior to the definition of the drain and the source areas (208), an effective decoupling of the gate dopant concentration from that of the drain and source concentrations is achieved. Moreover, after removal of the implantation mask (220), the lateral dimension of the gate electrode (205) may be defined by well-established sidewall spacer (207) techniques, thereby providing a scaling advantage with respect to conventional approaches based on photolithography and anisotropic etching.

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