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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)*: **PAN, James, N.** [US/US]; 3 Mountain View Knolls Drive, #D, Fishkill, NY 12524 (US). **PELLERIN, John, G.** [US/US]; 11 Creekside Road, Hopewell Junction, NY 12533 (US). **CHEEK, Jon, D.** [US/US]; 9 Ellen's Way, Wallkill, NY 12589 (US).

(74) Agent: **DRAKE, Paul, S.**; One AMD Place, Mail Stop 68, P.O. Box 3453, Sunnyvale, CA 94088-3453 (US).

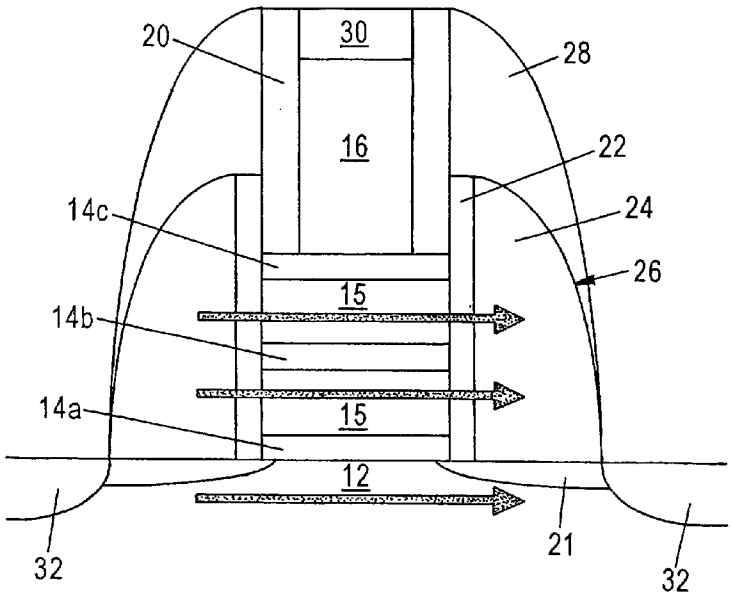
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(54) Title: LOW-POWER MULTIPLE-CHANNEL FULLY DEPLETED QUANTUM WELL CMOSFETS



(57) Abstract: A multiple-channel semiconductor device has fully or partially depleted quantum wells and is especially useful in ultra large scale integration devices, such as CMOSFETs. Multiple channel regions (15) are provided on a substrate (12) with a gate electrode (16) formed on the uppermost channel region (15), separated by a gate oxide (14c), for example. The vertical stacking of multiple channels (15) and the gate electrode (16) permit increased drive current in a semiconductor device without increasing the silicon area occupied by the device.

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