UNITED STATES PATENT

Granted on September 29, 1998

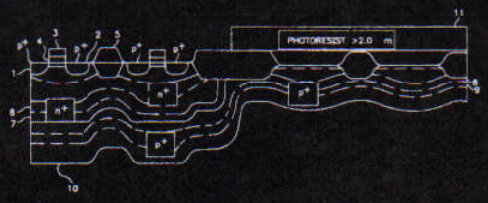
John O. Borland

INVENTOR

5,814,866

SEMICONDUCTOR DEVICE HAVING AT LEAST ONE FIELD OXIDE AREA AND CMOS VERTICALLY MODULATED WELLS (VMW) WITH A BURIED IMPLANTED LAYER FOR LATERAL ISOLATION HAVING A FIRST PORTION BELOW A WELL, A SECOND PORTION FORMING ANOTHER, ADJACENT WELL, AND A VERTICAL PO

The United States of America



1. A semiconductor device comprising in combination

a p-substrate having an impurity concentration of 10^{15}/cc and a surface having at least one field oxide area

a retrograde n-well therein having a high concentration portion having a concentration of about 10^{18}/cc extending between a depth of 1 micron and a depth of 2 microns, and extending parallel to said surface from a point under said field oxide area in a first direction.

The Commissioner of Patents and Trademarks has received an application for a patent for a new and useful invention. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law. Therefore, this

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Grants to the persons having title, the right to exclude others from making, using or selling the invention throughout the United States of America for the term of the patent.

Bruce Lehman — Marcia D. Campbell

Commissioner of Patents and Trademarks — Attest: