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ABSTRACT

A METHOD OF BLOCKING NITROGEN FROM THICK GATE OXIDE DURING DUAL GATE CMP

In accordance with the objectives of the invention a new method is provided for the creation of layers of gate oxide having an unequal thickness Active surface regions are defined over the surface of a substrate, a thick layer of gate oxide is grown over the active surface. A selective etch is applied to the thick layer of gate oxide, selectively reducing the thickness of the thick layer of gate oxide to the required thickness of a thin layer of gate oxide. The layer of thick gate oxide is blocked from exposure. N_2 atoms are implanted into the exposed surface of the thin layer of oxide, rapid thermal processing is performed and the blocking mask is removed from the surface of the thick layer of gate oxide. A high concentration of nitride has now been provided in the thin layer of gate oxide

FIGURE 7

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