A METHOD TO FORM HIGH K DIELECTRIC AND SILICIDE TO REDUCE POLY DEPLETION BY USING A SACRIFICIAL METAL BETWEEN OXIDE AND GATE

ABSTRACT

A method of forming a gate comprising the following steps. A substrate is provided. A pre-gate structure is formed over the substrate. The pre-gate structure includes a sacrificial metal layer between an upper gate conductor layer and a lower gate dielectric layer. The pre-gate structure is annealed to form the gate. The gate comprising: an upper silicide layer formed from a portion of the sacrificial metal layer and a portion of the upper gate conductor layer from the anneal; and a lower metal oxide layer formed from a portion of the gate dielectric layer and a portion of the sacrificial metal layer from the anneal.

Figure 3



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