METHOD FOR PROVIDING DUAL WORKFUNCTION DOPING AND PROTECTIVE INSULATING CAP

ABSTRACT

A method for providing dual work function doping and borderless array diffusion contacts includes providing a semiconductor substrate (15), a gate insulator (10), a conductor (11, 12) on the gate insulator, an insulating cap (13) on the conductor (11, 12) and insulating spacers (30) on sidewalls of a portion of the conductor (11, 12) and the insulating cap (13). The method also includes doping portions of the semiconductor substrate (5) and the conductor (11) with a first conductive type and other portions with a second conductive type. The conductor may be annealed such that dopants of the first and second conductive types spread over the respective conductors.

Fig 10

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