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SELF-ALIGNED SILICIDE PROCESS FOR SILICON SIDEWALL SOURCE AND DRAIN CONTACTS AND STRUCTURE FORMED THEREBY

ABSTRACT OF THE DISCLOSURE

A method (and structure formed thereby) of forming a metal silicide contact on a non-planar silicon containing region having controlled consumption of the silicon containing region, includes forming a blanket metal layer over the silicon containing region, forming a silicon layer over the metal layer, etching anisotropically and selectively with respect to the metal the silicon layer, reacting the metal with silicon at a first temperature to form a metal silicon alloy, etching unreacted portions of the metal layer, annealing at a second temperature to form an alloy of metal-Si_2, and selectively etching the unreacted silicon layer.

Fig. 5

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