METHOD FOR FORMING SILICON/GERMANIUM CONTAINING DRAIN/SOURCE REGIONS IN TRANSISTORS WITH REDUCED SILICON/GERMANIUM LOSS

ABSTRACT

By providing a protection layer on a silicon/germanium material of high germanium concentration, a corresponding loss of strained semiconductor material may be significantly reduced or even completely avoided. The protection layer may be formed prior to critical cleaning processes and may be maintained until the formation of metal suicide regions. Hence, high performance gain of P-type transistors may be accomplished without requiring massive overfill during the selective epitaxial growth process.

Figure 2b