

ABSTRACT OF THE DISCLOSURE

METHODS FOR ENHANCING THE FORMATION OF NICKEL MONO-SILICIDE BY REDUCING THE FORMATION OF NICKEL DI-SILICIDE

Methods for reducing stress in silicon to enhance the formation of nickel monosilicide films formed thereon include a strain compensation source/drain implant process, a silicide formation process on an amorphous silicon layer, a strain compensating buried layer process, a strain compensating dielectric capping layer process during silicide formation, a two cycle anneal process during silicide formation, an excess nickel process to transform NiSi_2 to NiSi .

(FIG. 1A)