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ABSTRACT

A METHOD FOR OBTAINING CLEAN SILICON SURFACES FOR SEMICONDUCTOR MANUFACTURING

A method of preparing a silicon surface for a subsequent processing said such as thermal oxidation, or metal silicide formation, via use of a novel wet chemical clean procedure, has been developed. The novel wet chemical clean procedure is comprised of three specific stages, with the first stage featuring the removal of organic contaminants and the growth of a native oxide layer on the silicon surface. A second stage features removal of the native oxide layer and removal of metallic contaminants from the silicon surface, while the third stage is used to dry the silicon surface. The novel wet chemical clean procedure is performed in less time, and using less chemicals, then counterpart wet chemical cleans also used for the preparation of silicon surfaces for subsequent processing steps.

Figure 1