ABSTRACT

Method for Forming PLDD Structure With Minimized Lateral Dopant Diffusion

A method for forming a MOSFET having an LDD structure with minimal lateral dopant diffusion is described. A gate electrode is provided overlying a gate dielectric layer on a semiconductor substrate. Dielectric spacers are formed on sidewalls of the gate electrode. Source and drain regions are formed associated with the gate electrode. The gate electrode and source and drain regions are silicided. Thereafter, the spacers are removed to expose the semiconductor substrate. LDD regions are formed using plasma doping in the exposed semiconductor substrate between the source and drain regions and the gate electrode to complete formation of an LDD structure in the fabrication of an integrated circuit device.

Fig. 6