ABSTRACT

SIDEWALL POLYMER ON POLYCIDE GATE FOR LDD STRUCTURE

A method for forming an LDD structure using a polymeric spacer on a polysilicon or a polycide gate is described. A layer of gate silicon oxide is provided over the surface of a semiconductor substrate. A polysilicon or polycide layer is provided overlying the gate silicon oxide layer. The polysilicon or polycide layer is covered with a photoresist layer which is patterned to form a mask. The polysilicon or polycide layer is etched away where it is not covered by the mask to form gate electrodes whereby a polymer is formed on the sidewalls of the mask and the gate electrodes. First ions are implanted into the semiconductor substrate not covered by the mask and the polymer to form source and drain regions. The polymer and mask are removed. Second ions are implanted into the semiconductor substrate whereby lightly doped source and drain regions are formed within the semiconductor substrate which was covered by the polymer completing the formation of a lightly doped source and drain structure in the fabrication of an integrated circuit device.

(FIGURE 1 IS SUGGESTED FOR PUBLICATION)