METHOD FOR FORMING FULLY SILICIDED GATE ELECTRODES AND UNSILICIDED POLY RESISTORS

ABSTRACT

[0001] A method is disclosed for forming silicided gate electrodes and unsilicided poly resistors. After patterning a semiconductor material for the gate electrode and resistor structures, a first dielectric layer is used to protect a poly resistor that is not to be silicided, then a first silicidation is performed for partially siliciding the gate electrode of the transistor. If the gate electrode is thick, a second dielectric layer is used to protect the resistor that is not to be silicided, then a second silicidation is performed for fully siliciding the gate electrode.

Figure 3