

TECHNIQUE TO REDUCE RANDOM TELEGRAPH SIGNAL(RTS) and I/f NOISE IN SILICON MOS DEVICES, CIRCUITS, AND SENSORS

INVENTORS

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PRIORITY DATA

This application claims the benefit of U.S. Provisional Patent Application Serial No. 61411376, filed on November 8, 2010, and which is incorporated herein by reference.

ABSTRACT

The effects of random telegraph noise signal(RTS) or equivalently I/f noise on MOS or CMOS devices, circuits and sensors is described. Techniques are disclosed for minimizing this RTS and low frequency noise in MOS or CMOS devices, integrated circuits, and sensors by minimizing the number of ionized impurity atoms in the wafer, substrate, well, pillar or fin behind the channel of the CMOS transistors. This serves to reduce the errors in devices, sensors and analog integrated circuits and error rates in digital integrated circuits and memories.

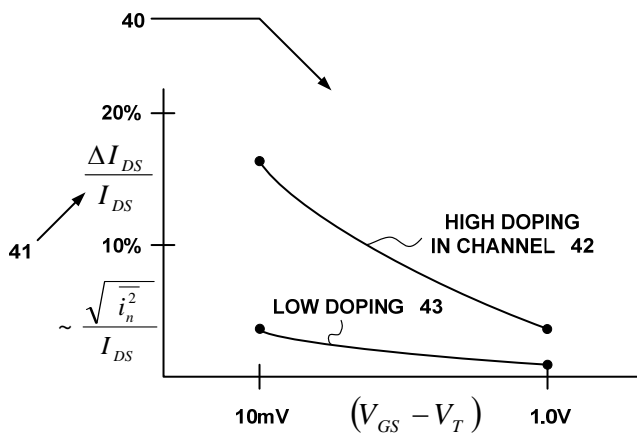


FIG. 4