ABSTRACT OF THE DISCLOSURE

Semiconductor Device and
Process for Producing the Same

To provide a semiconductor device having a large allowable current, a demanded withstand voltage, and small output capacitance and resistance, the semiconductor device comprises a semiconductor layer formed on a semiconductor substrate, and the semiconductor layer includes a first conductivity type-drain region, a second conductivity type-well region apart from the drain region, a first conductivity type-source region in the well region apart from one end of the well region on the side of the drain region, a first conductivity type-drift region formed between one end of the well region and the drain region and in contact with the well region and the drain region, respectively, and a gate electrode formed spaced a gate oxide layer and on the well region located between the drift region and the source region; and the impurity concentration of the drift region decreases in the lateral direction and also in the vertical direction, respectively, as the distance from the drain region increases.

Fig. 1A & B