A Study of Injection Efficiency Performance in P-Flash Memories for Different S/D Engineerings

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ABSTRACT

The scall-down technology of integrated circuit change with each passing day for that the semiconductor technology develop continually . According to the internet is in vogue and the telecommunication develop vigorously, it will be more and more important for the demand of complex figure of the requirement for the personal computer , the most popular memory is flash memory . It is because that voice and data processing of pronunciation. So we need to develop much higher speed central processing unit (CPU) and micro-controller . Only faster, cheaper and more electricity-saving memory can show the characteristic of high speed circuit. Besides the DRAM and SRAM flash memory has advantages of non-volatility,electricity-saving and smaller size . Especially suit for portable data which needs to save for a long time. Injection efficiency performance in the P-Flash memories for different S/D engineerings will be investigated in this work . The performance of injection efficiency responds to programming time as well as the device is good or not. There are two ways to improve injection efficiency. One is change the way to program as well as the different bias conditions. The other one is to be improved their structure. With different S/D profiles , four kinds of cell structures were develop for the flash memory , and the corresponding injection efficiency of these devices were also to be explained in term of lateral and vertical electrical fields . Furthermore , not only good performance but also good reliability, such as the endurance, are important factors for the non-volatile memories.

Keywords : SRAM ; DRAM ; Flash Memery

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