# Charge-Transferred Presensing and Efficiently Precharged Negative Word-Line Schemes for Low-Voltage DRAMs


## ABSTRACT

A 256Mb SDRAM is implemented with a 0.12$\mu$m technology to verify two circuit schemes suitable for mobile application. A charge transferred presensing is proposed to achieve fast low-voltage sensing and robust operation. With a precharge disabler for productivity, new negative word-line scheme is also proposed to bypass the majority of discharging current to VSS without switching control.