# Fin-Array-FET on bulk silicon for sub-100 nm Trench Capacitor DRAM

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Fin gate array transistor (Fin-Array-FET) fabricated on bulk silicon substrate is applied to the DRAM cell with the deep trench capacitor. Fin-Array-FET is designed by using the 3-D process simulator and the 3-D device simulator. The device performance is evaluated by the electrical measurement of the test structure. It is demonstrated that Fin-Array-FET is the best candidate for the future high-speed DRAM cell by the sub-100 nm technologies.