

The memory cell characteristics of the FBC (**F**loating **B**ody **C**ell) have been experimentally verified by using 0.175 μ m cell array for the first time. The most important device characteristics for realizing the FBC is the threshold voltage difference (ΔV_{th}) of the cell transistor between “1” state and “0” state. A ΔV_{th} of 0.4V has been obtained, which leads to 99.77% function bit yield of 96Kbit ADM (**A**rray **D**iagnostic **M**onitor). The retention time of 5sec has been realized at the room temperature.