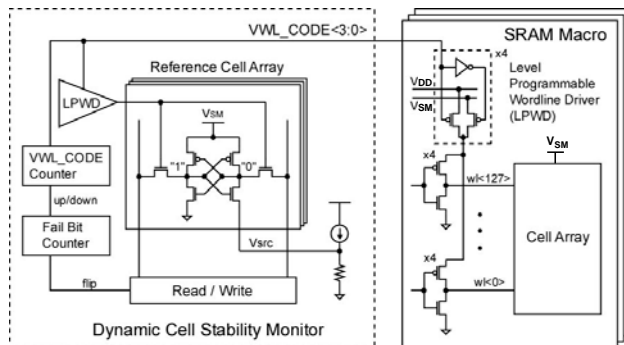


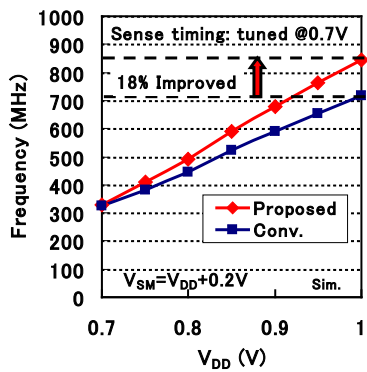
(Reference)

1. Circuit for monitoring SRAM memory cell characteristics



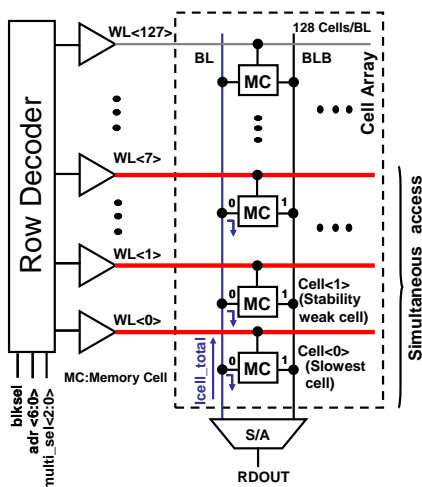
Toshiba's new circuit monitors SRAM cells and achieves stable operation by optimizing the wordline voltage when the operating voltage and temperature vary.

2. Technique for optimizing the memory read timing in a wide operating voltage range



As the operating voltage increases, activation timing improves. An 18% improvement in operating frequency is achieved at 1.0 V.

3. Technique for operating SRAM cells at low voltage by read/write of the same data in multiple cells



Whereas the conventional technique selects wordlines one by one, the new technique simultaneously activates eight wordlines to read/write the same data, preventing the malfunction at low voltage.