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Inside NAND Flash Memories

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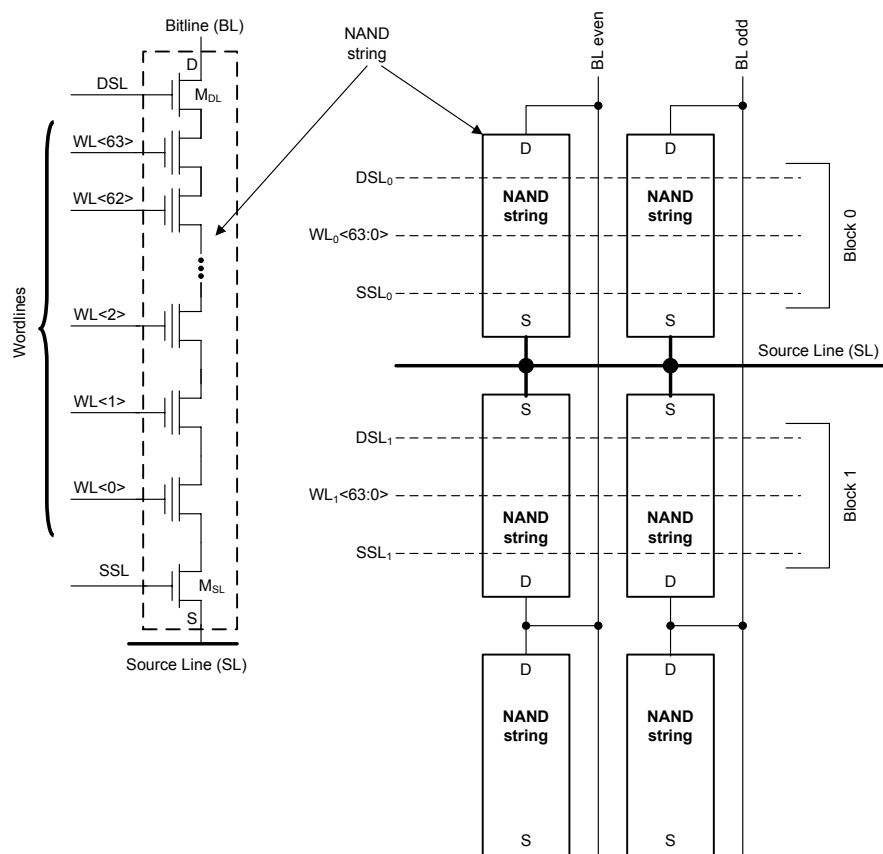


Fig. 2.2. NAND string (left) and NAND array (right)

Logical pages are made up by cells belonging to the same wordline. The number of pages per wordline is related to the storage capabilities of the memory cell. Depending on the number of storage levels, Flash memories are referred to in different ways: SLC memories store 1 bit per cell, MLC memories (Chap. 10) store 2 bits per cell, 8LC memories (Chap. 16) store 3 bits per cell and 16LC memories (Chap. 16) store 4 bits per cell.

If we consider the SLC case with interleaved architecture (Chap. 8), even and odd cells form two different pages. For example, a SLC device with 4 kB page has a wordline of 65,536 cells.

Of course, in the MLC case there are four pages as each cell stores one *Least Significant Bit* (LSB) and one *Most Significant Bit* (MSB). Therefore, we have:

- MSB and LSB pages on even bitlines
- MSB and LSB pages on odd bitlines

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