STANDARD CELL, STANDARD CELL ARRAY, AND SYSTEM AND METHOD FOR PLACING AND ROUTING STANDARD CELLS

ABSTRACT

A standard cell type LSI design comprises a VDD power supply terminal (118) formed of P-type diffused layer (112), a VSS power supply terminal (119) formed of N-type diffused layer (113), and input and output terminals formed of a first level metal (117). A plurality of standard cells form a standard cell array; VDD (1101) and VSS (1102) power supply lines formed of the first level metal extend along opposite sides of the array. A power supply line formed of diffused layer is extended from the power supply terminal to the power supply line and a contact hole (115) is formed at an overlapping portion between the power supply line of first level metal (117) and power supply line formed of diffused layer (112, 113). It is possible to place and route standard cells having different widths without hindrance, and to form an inter-cell connection in the device formation region between the power supply line and wiring area within the cell.

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FIG1A