

ABSTRACT**PROGRAMMABLE CODE STORE CIRCUITRY FOR A
NONVOLATILE SEMICONDUCTOR MEMORY DEVICE**

A flash memory device including programmable code store circuitry. The code store circuitry stores algorithms used by an array controller to erase and program a nonvolatile main memory array. The code store circuitry includes a nonvolatile instruction memory, which stores instructions. The code store circuitry also includes a number of support circuits, such as address decode circuitry, sense path circuitry, main array interface circuitry and several voltage generators. These circuits operate in several modes. In read mode, these support circuits ensure that the instruction data stored in the instruction memory is output to the array controller. In program and erase modes, the support circuits allow control of voltage level applied to the instruction memory and output of instruction to data to the user. In other words, these modes permit modification of the instruction memory. The support circuits are placed in the various modes via control signals output from control registers. Because these control registers are accessible to the device user, the user controls the mode in which the code store circuitry operates.



(Fig. 3)

