

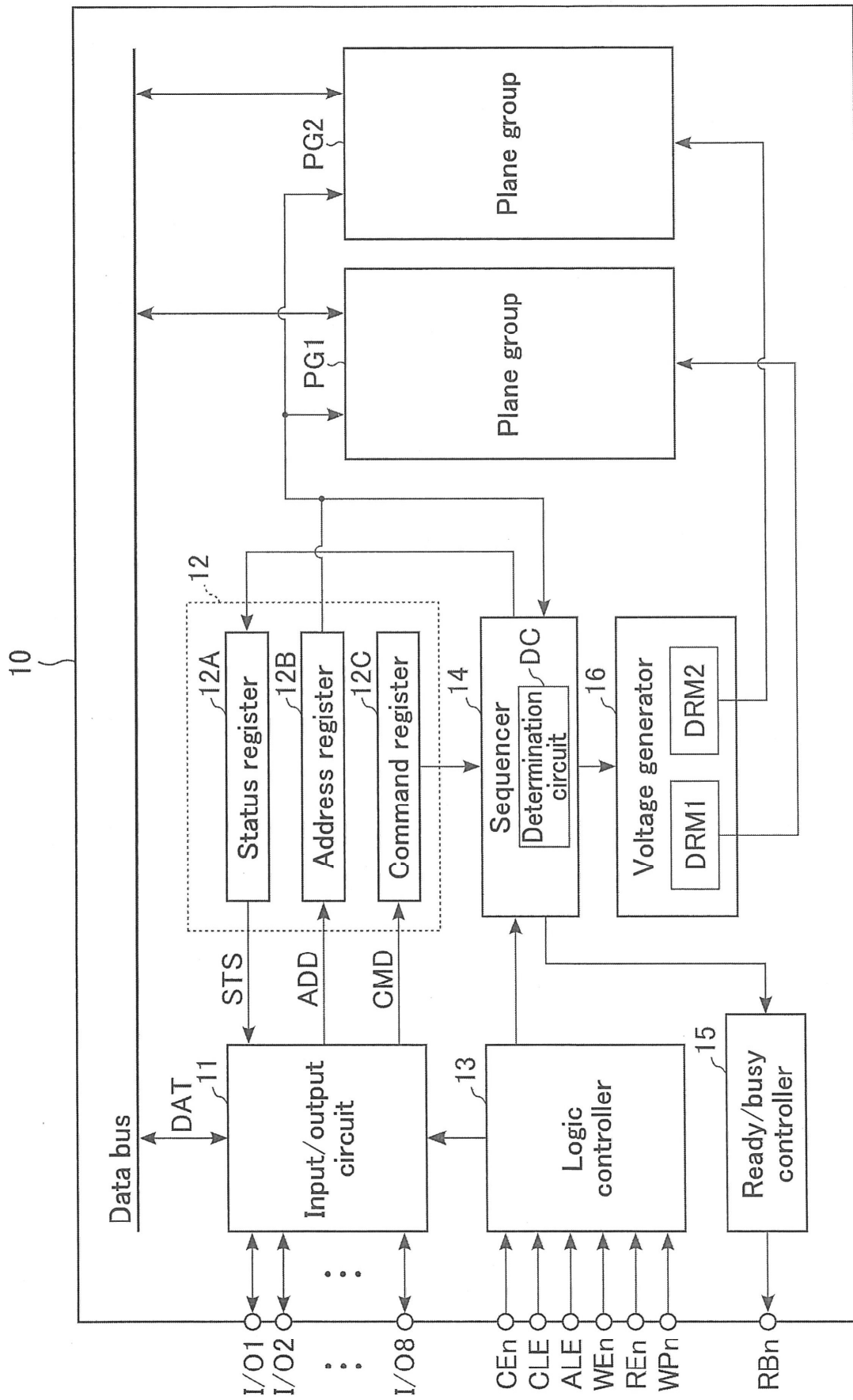


FIG. 1

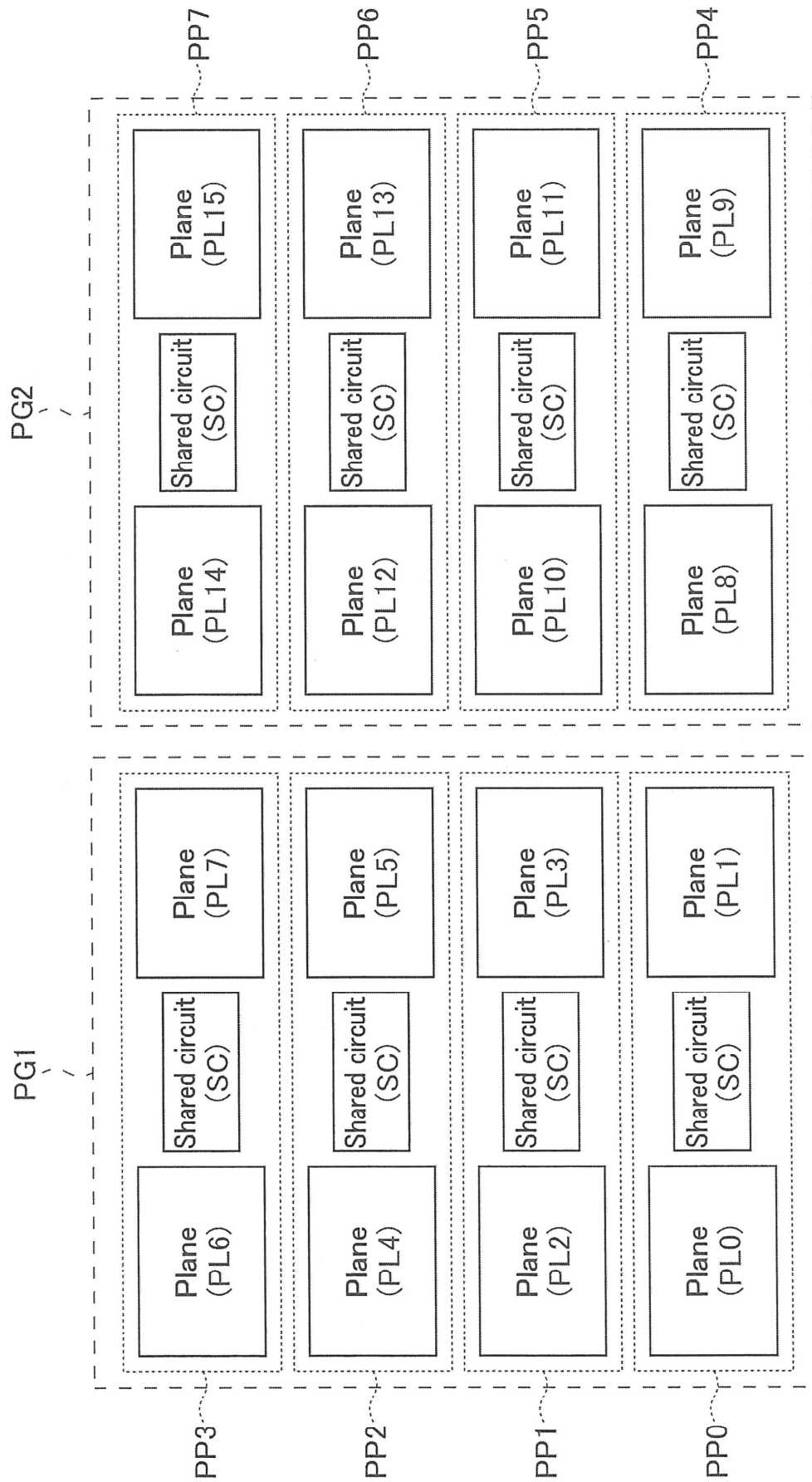


FIG. 2

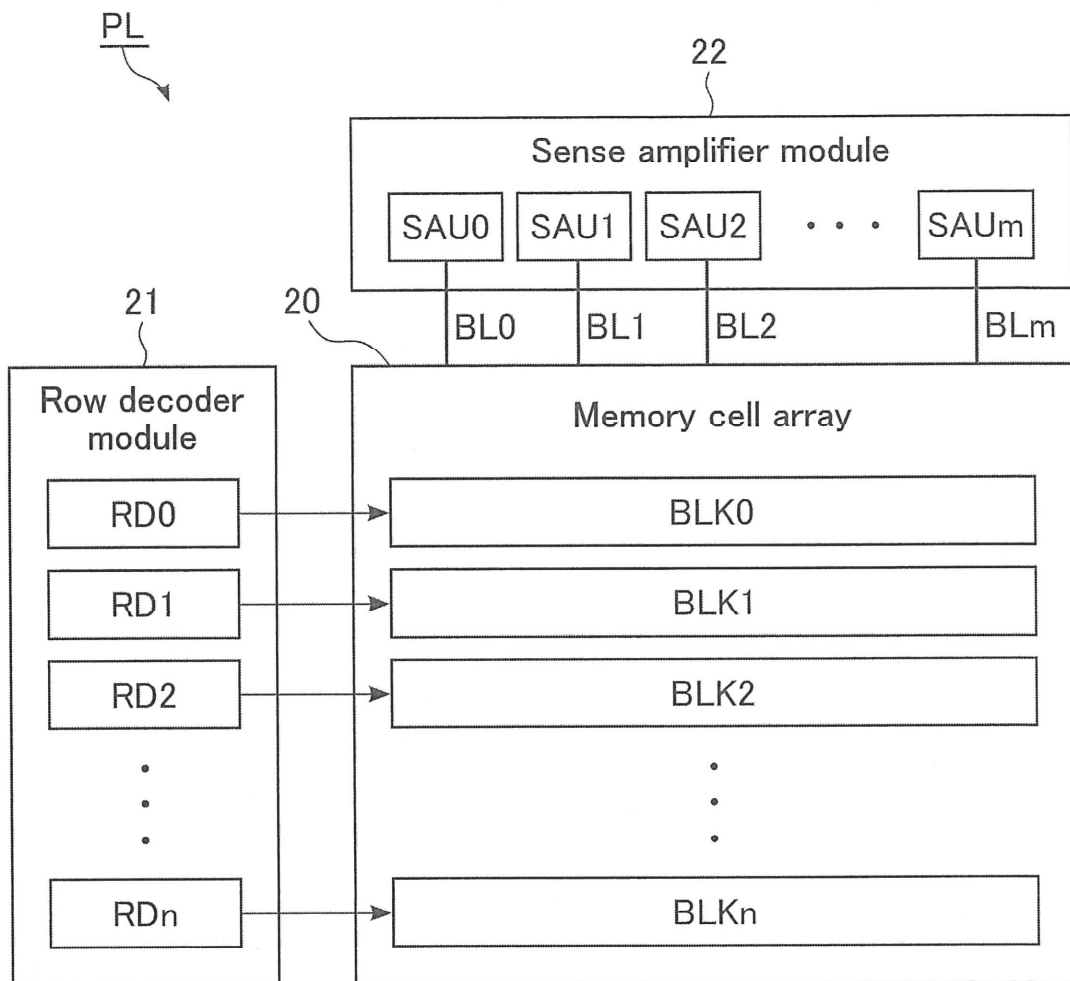


FIG. 3

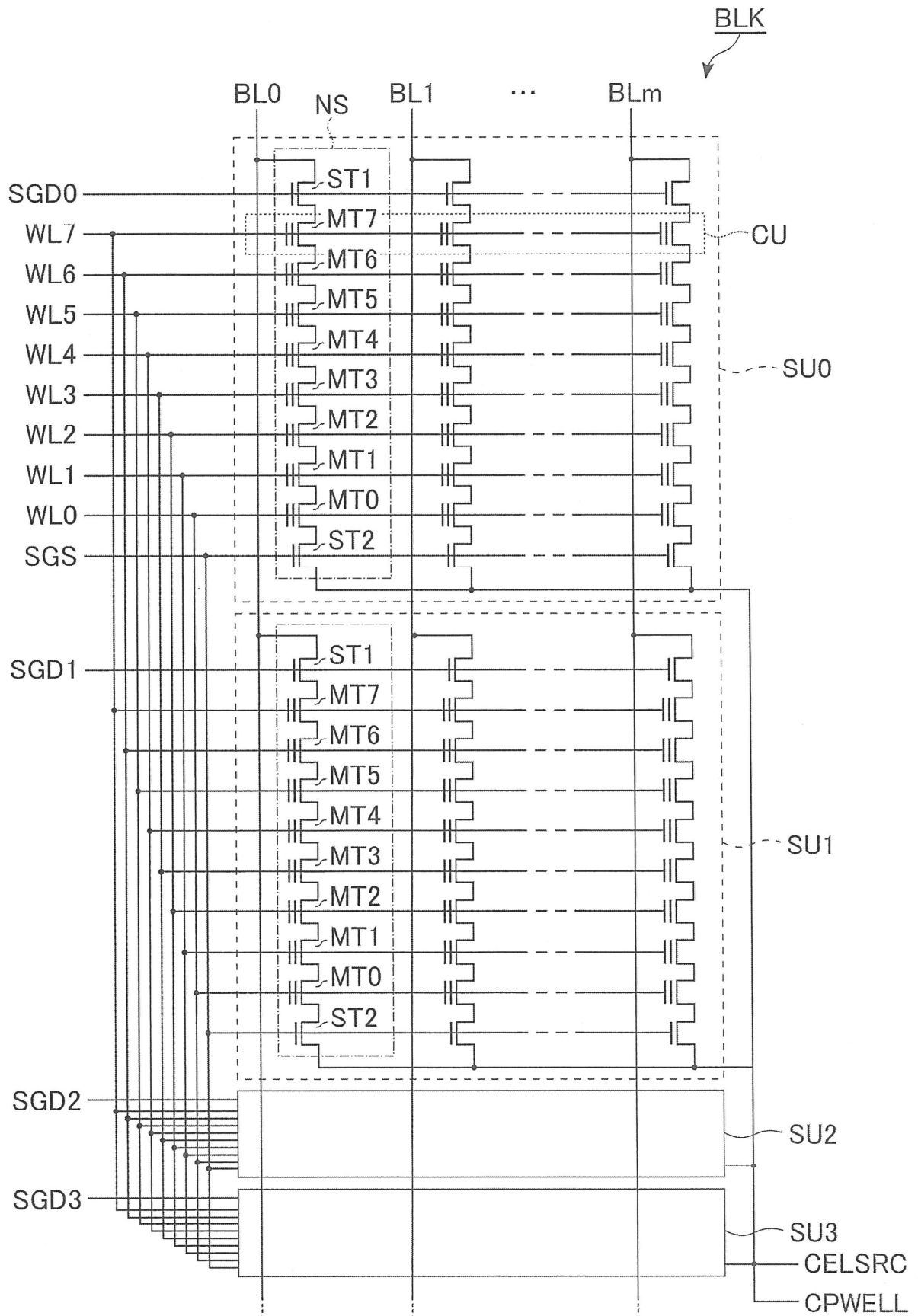


FIG. 4

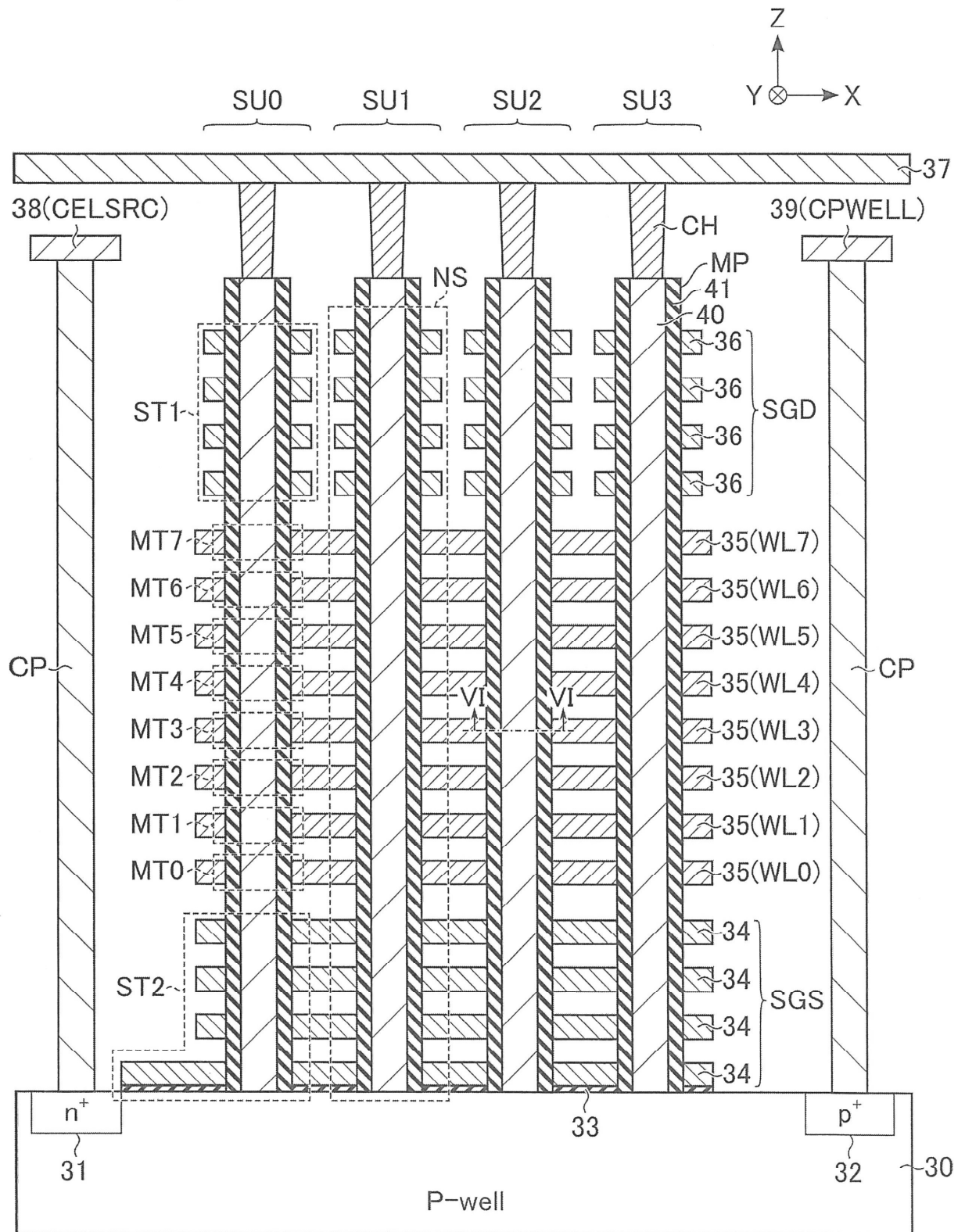


FIG. 5

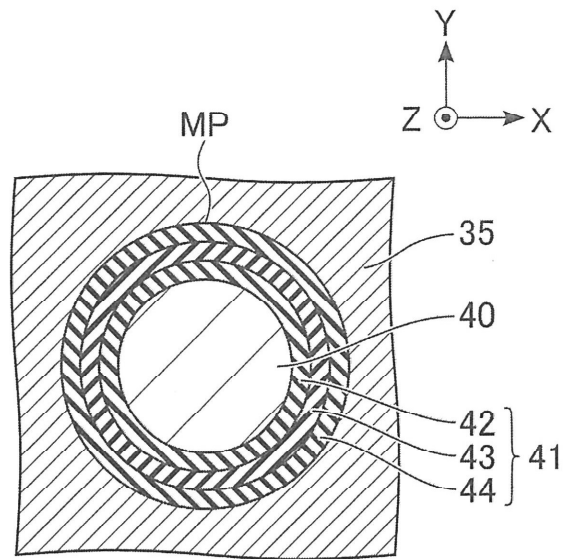


FIG. 6

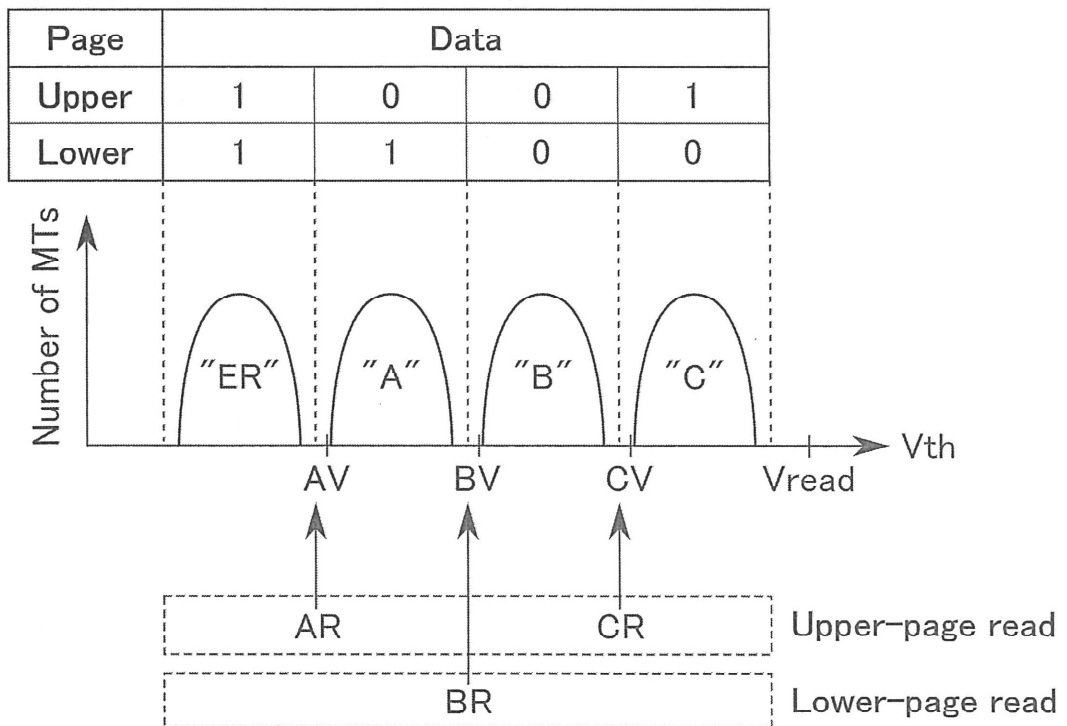


FIG. 7

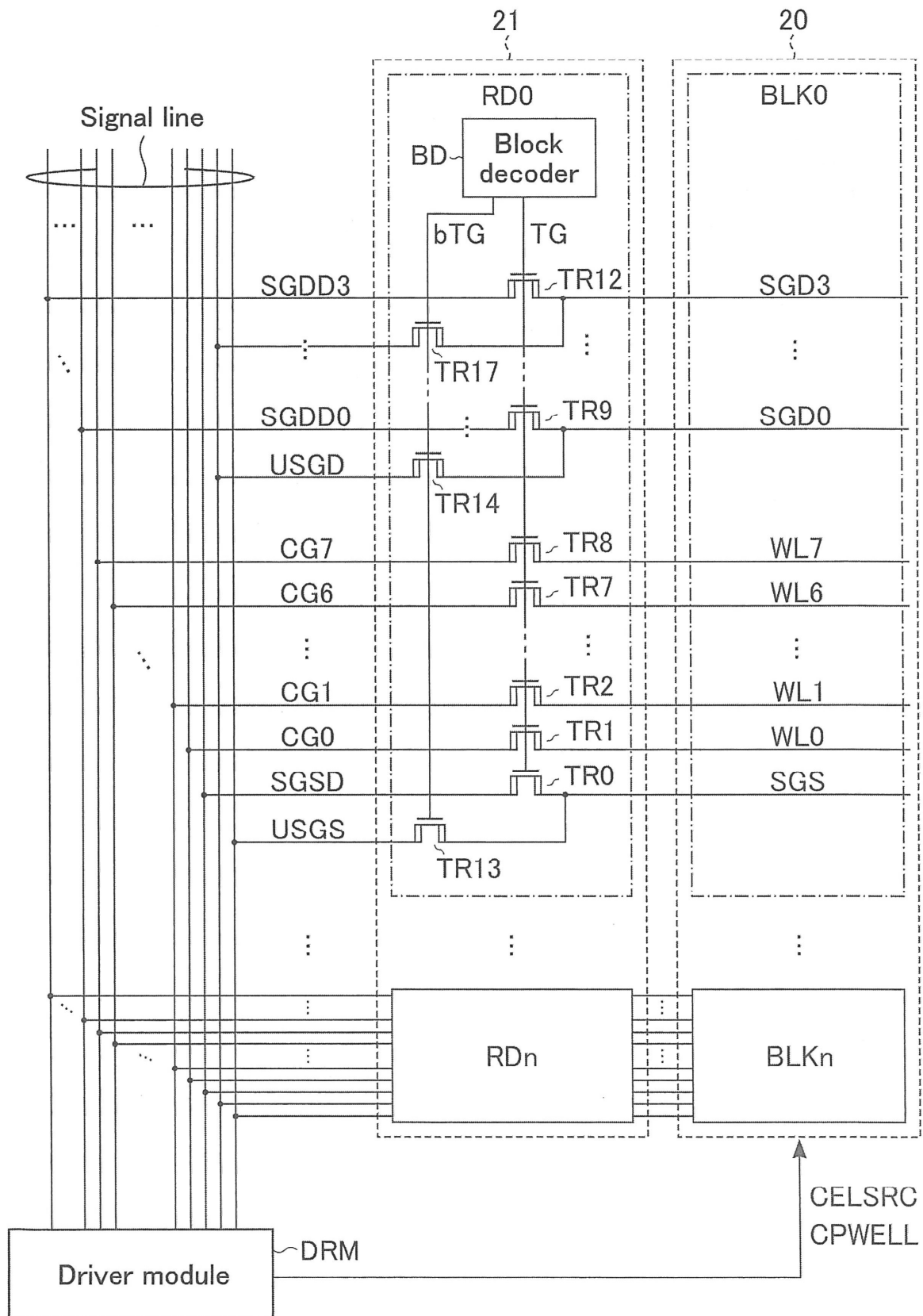
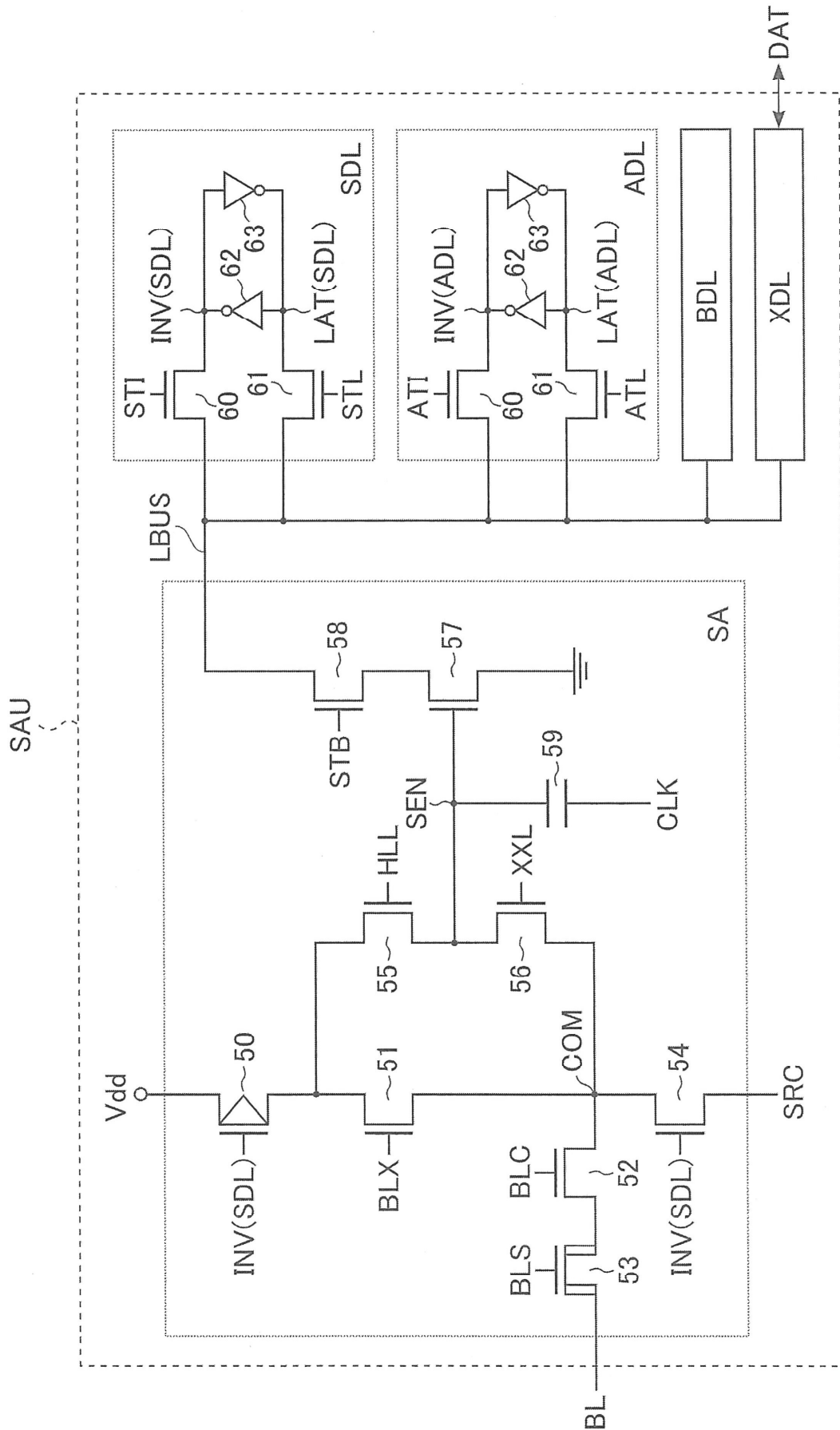


FIG. 8



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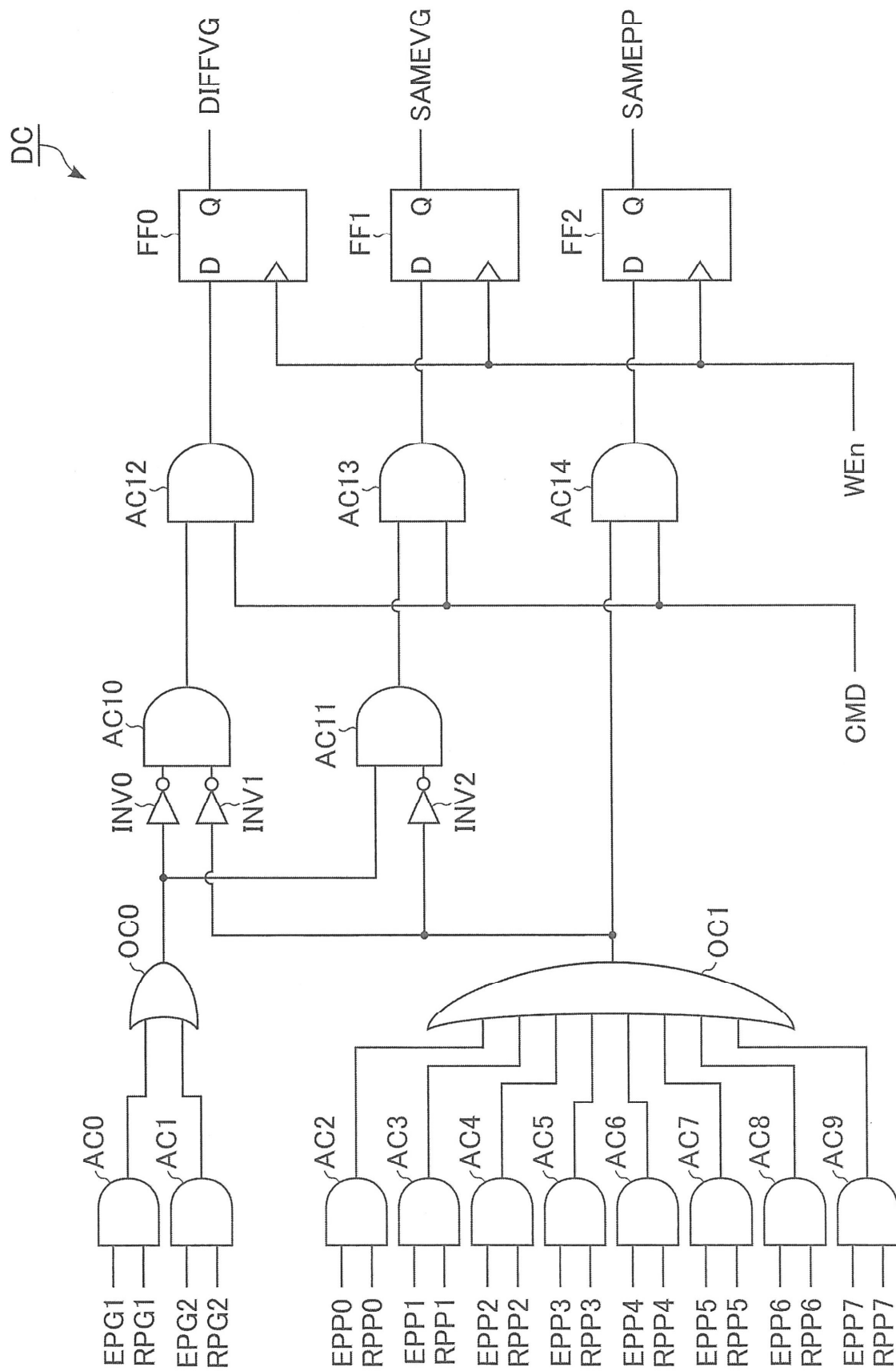


FIG. 10

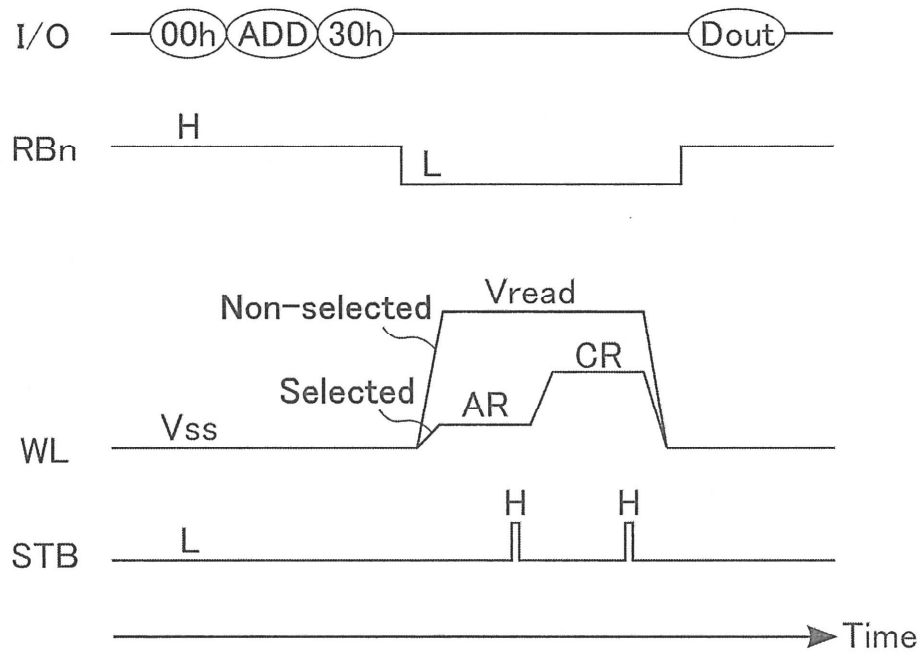
Read operation (upper page)

FIG. 11

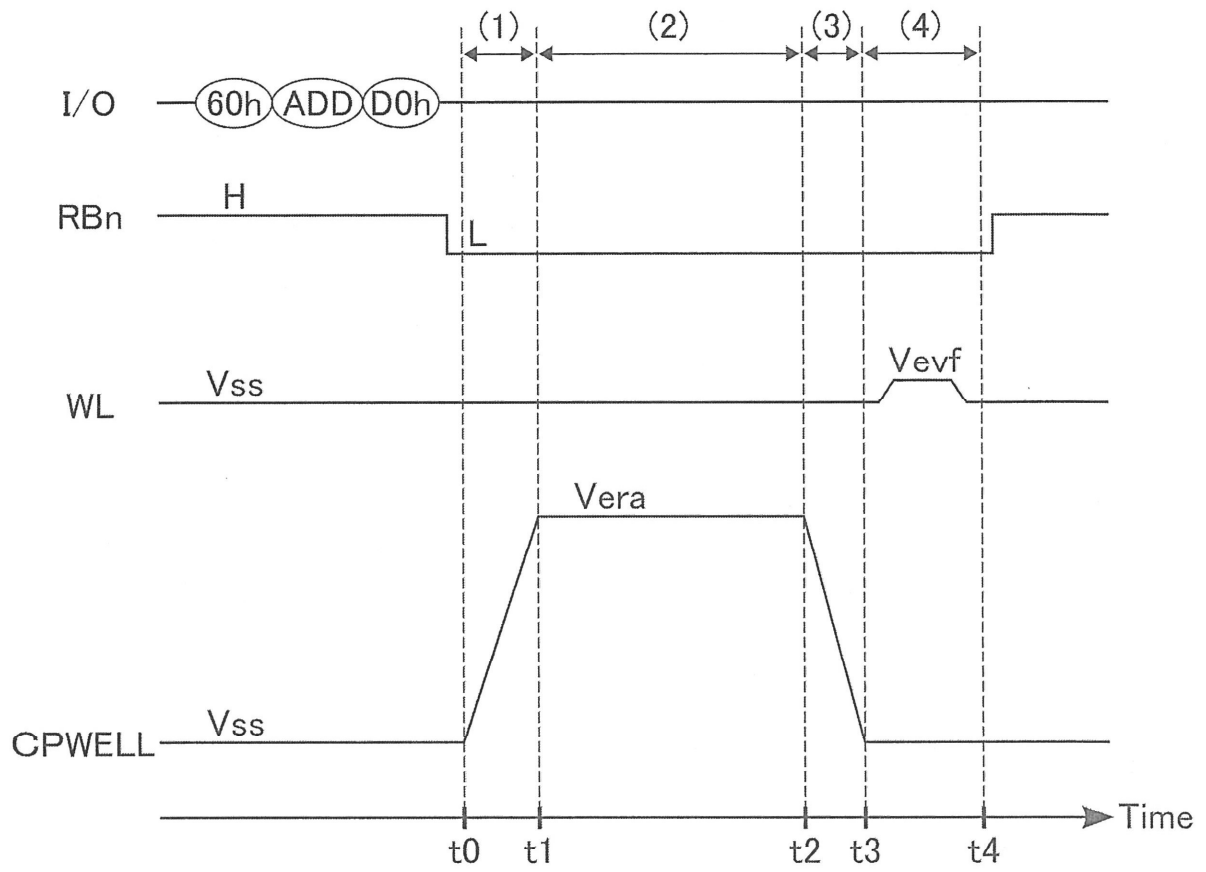
Erase operation (first embodiment)

FIG. 12

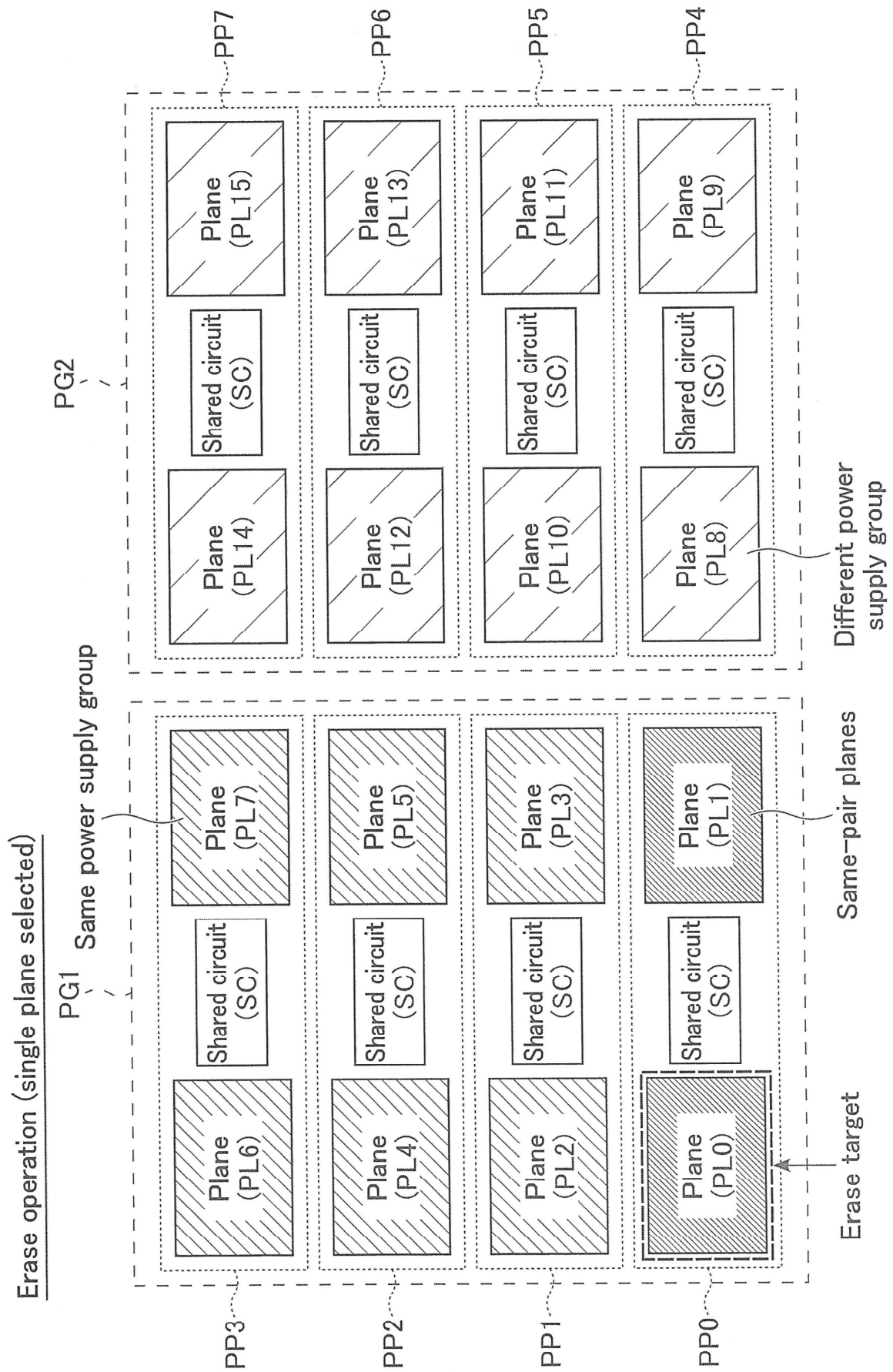


FIG. 13

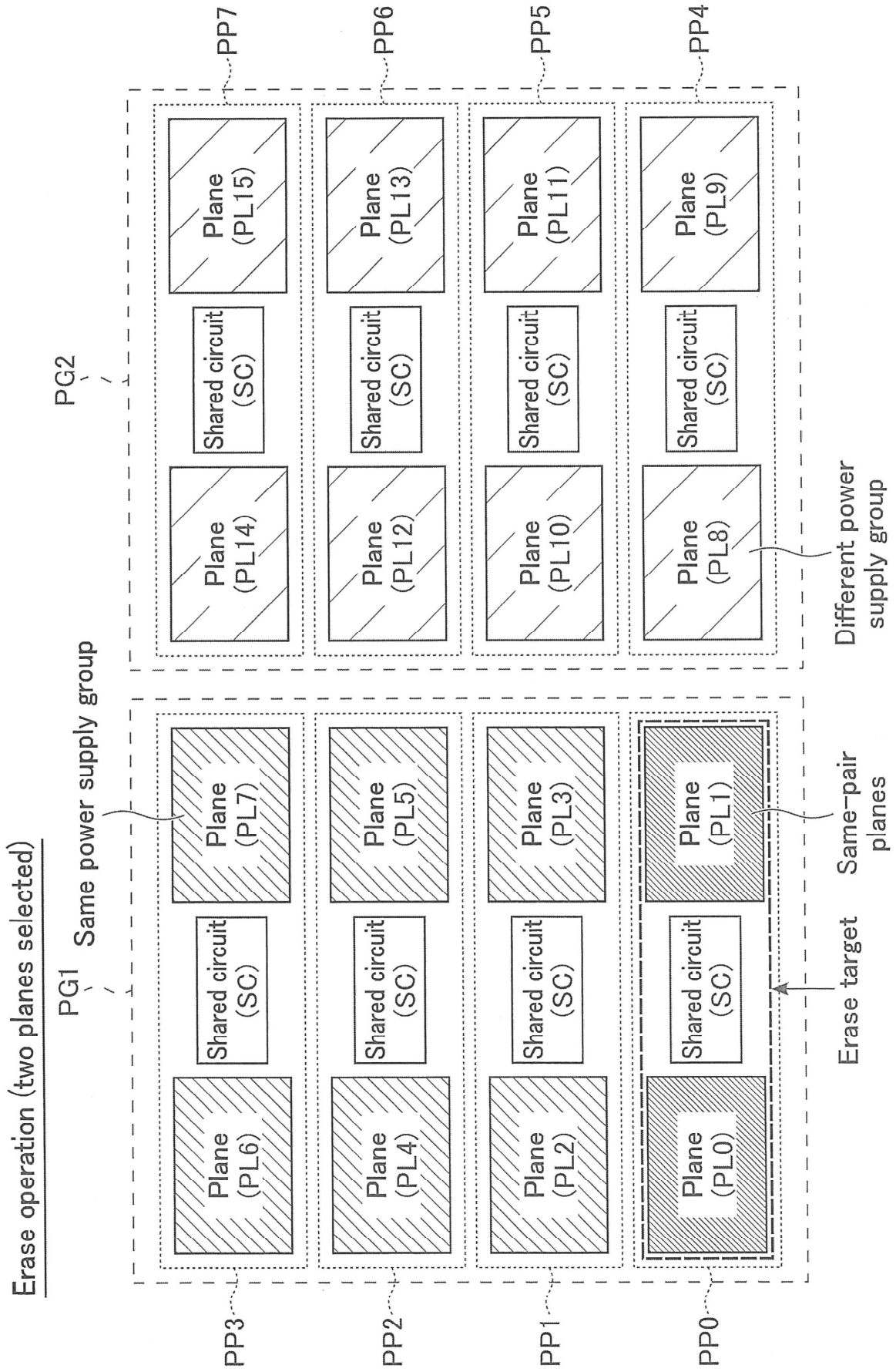


FIG. 14

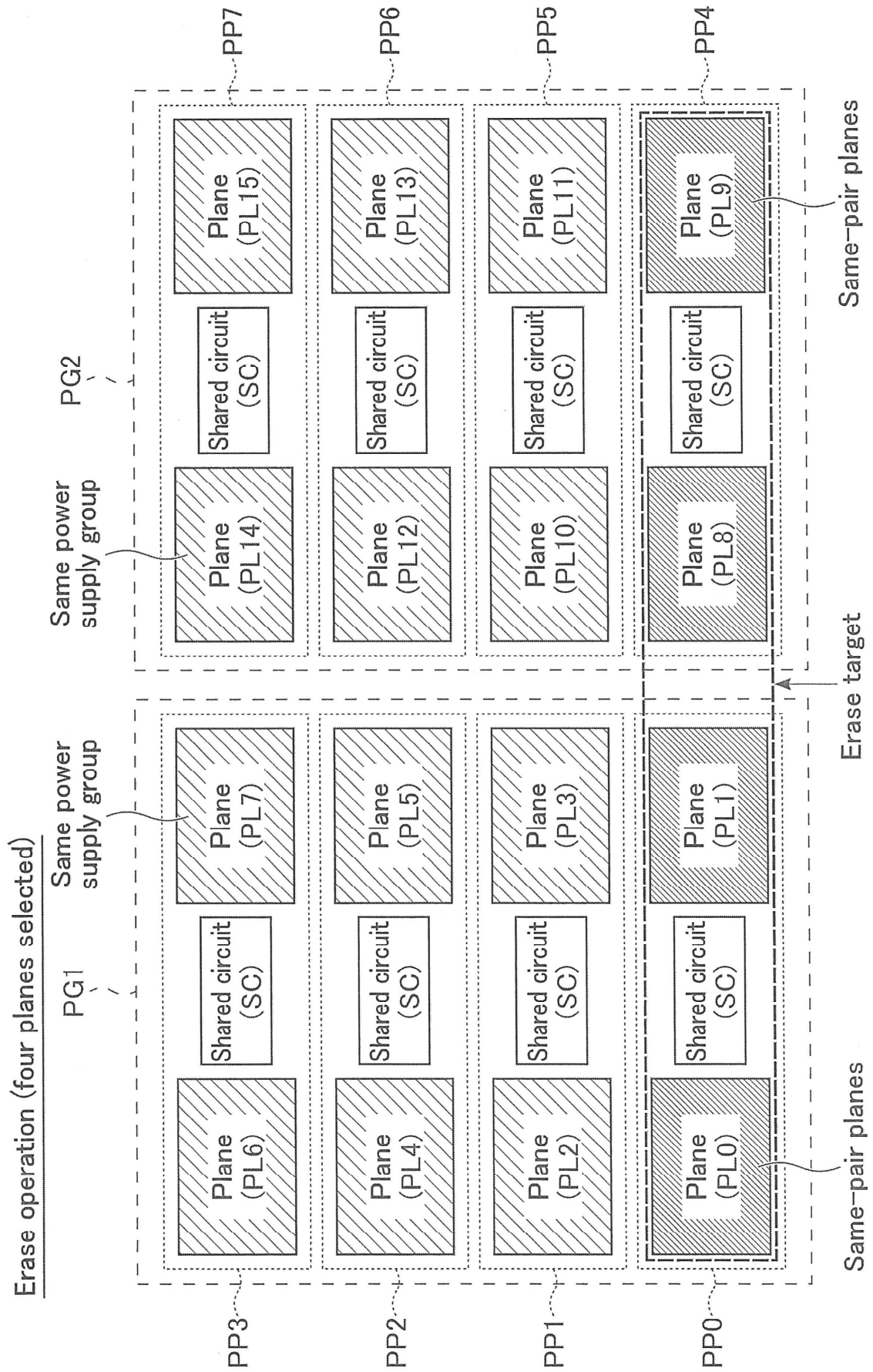


FIG. 15

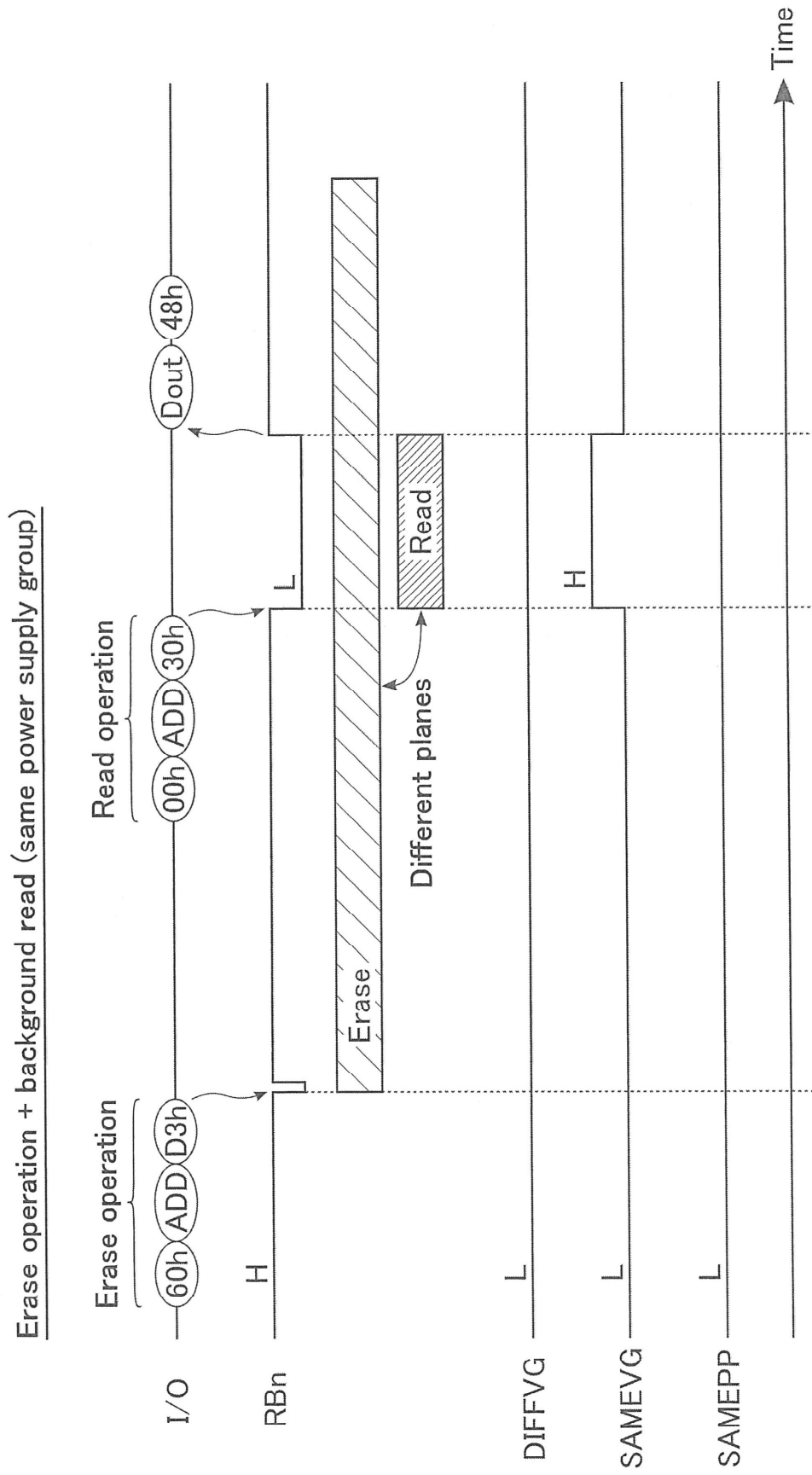


FIG. 16

Background read (same power supply group)
 [Voltage rise period: no suspension]

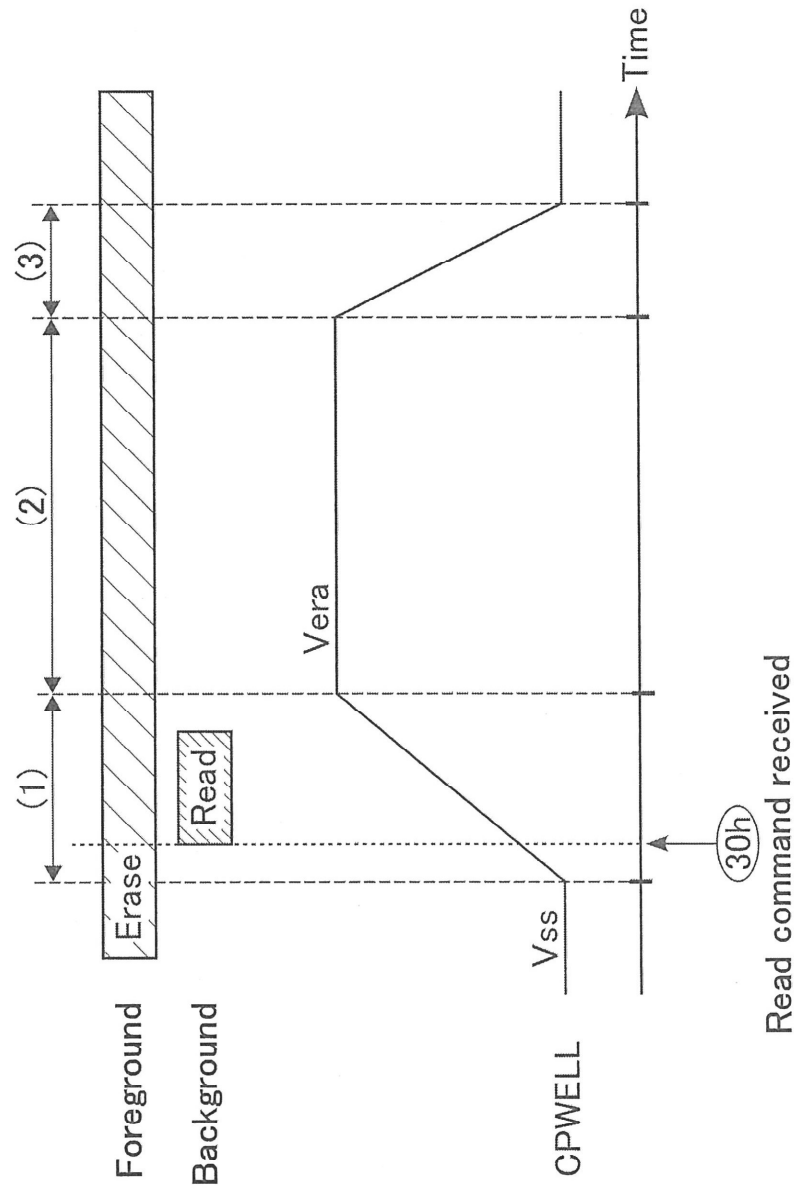


FIG. 17

Background read (same power supply group)
 [Voltage rise period: voltage raising stopped]

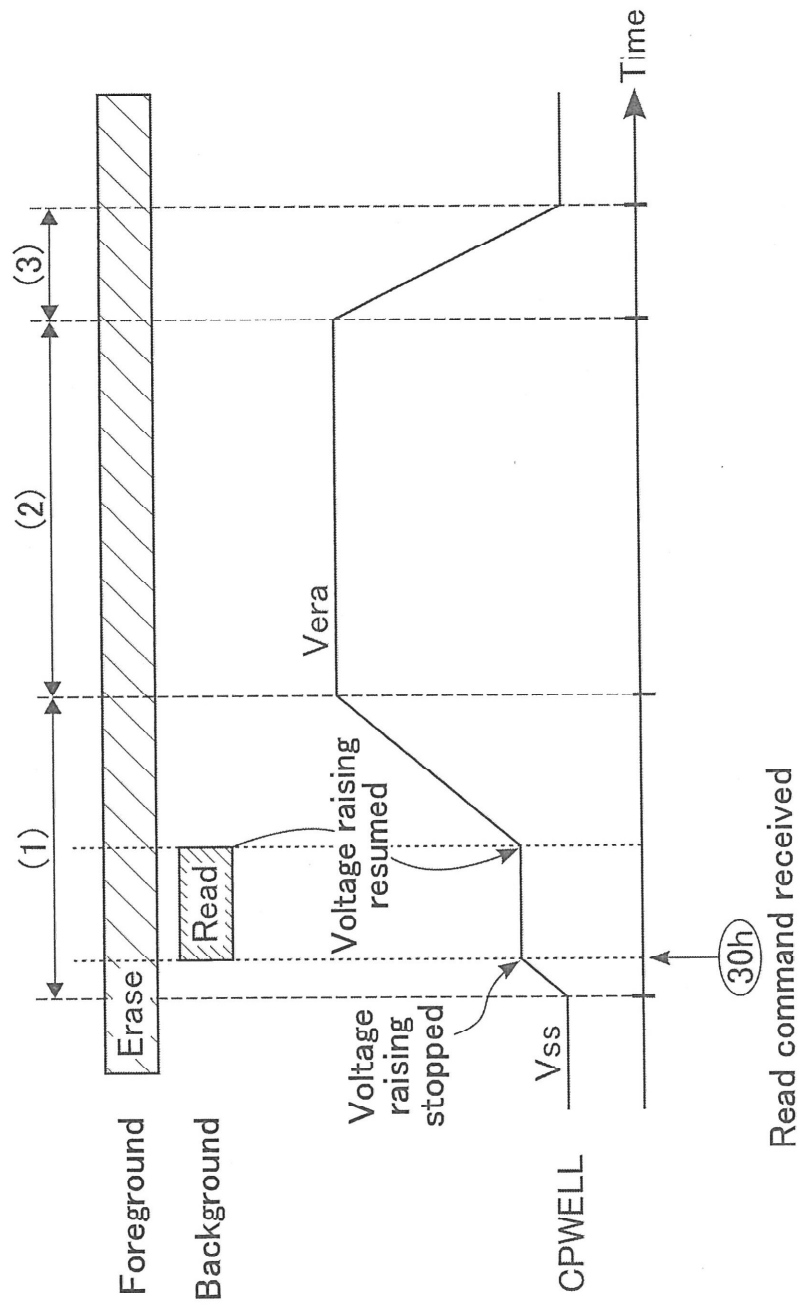


FIG. 18

Background read (same power supply group)
 [Voltage rise period: read suspend]

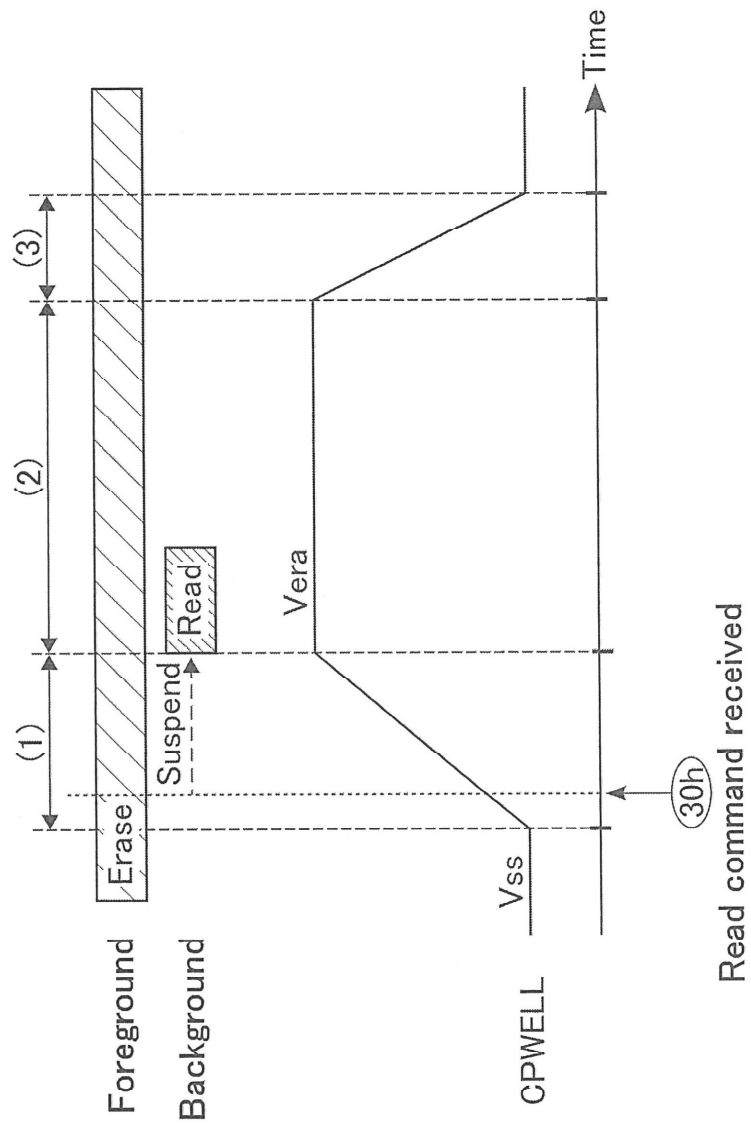


FIG. 19

Background read (same power supply group)
[Erase period: no suspension]

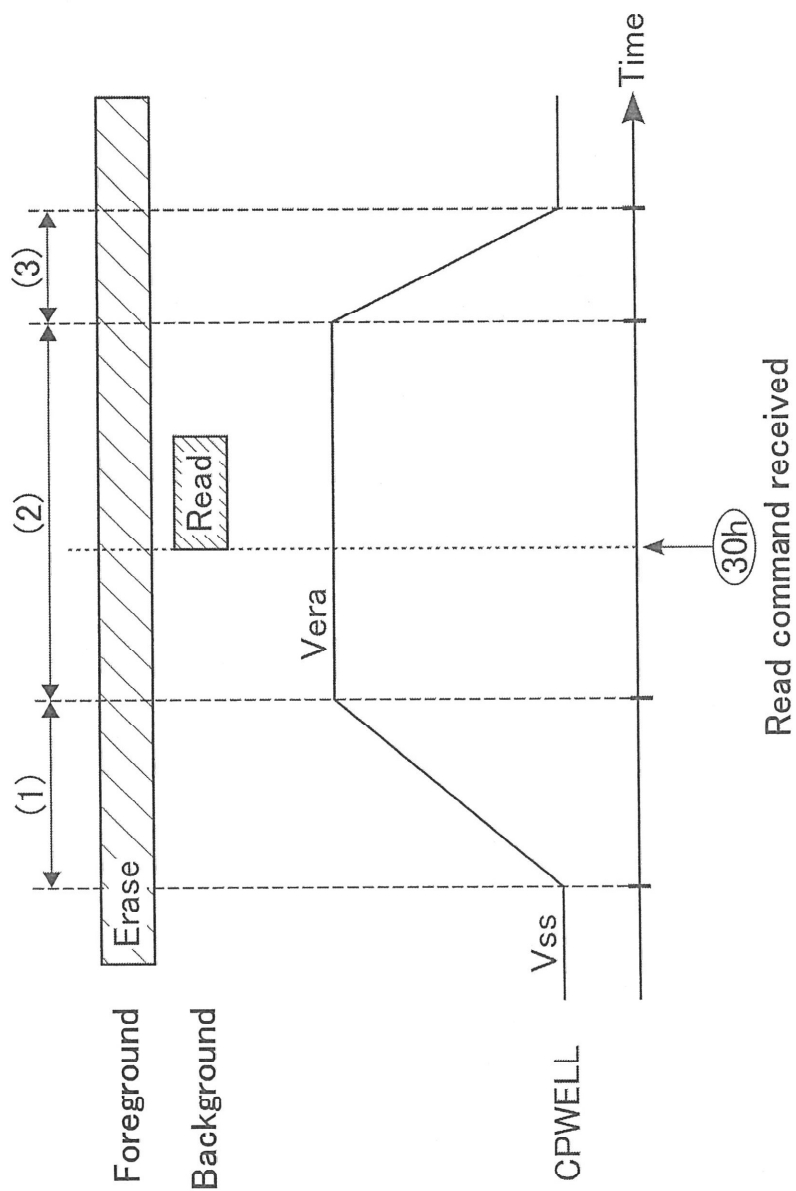


FIG. 20

Background read (same power supply group)
 [Erase period: read suspend]

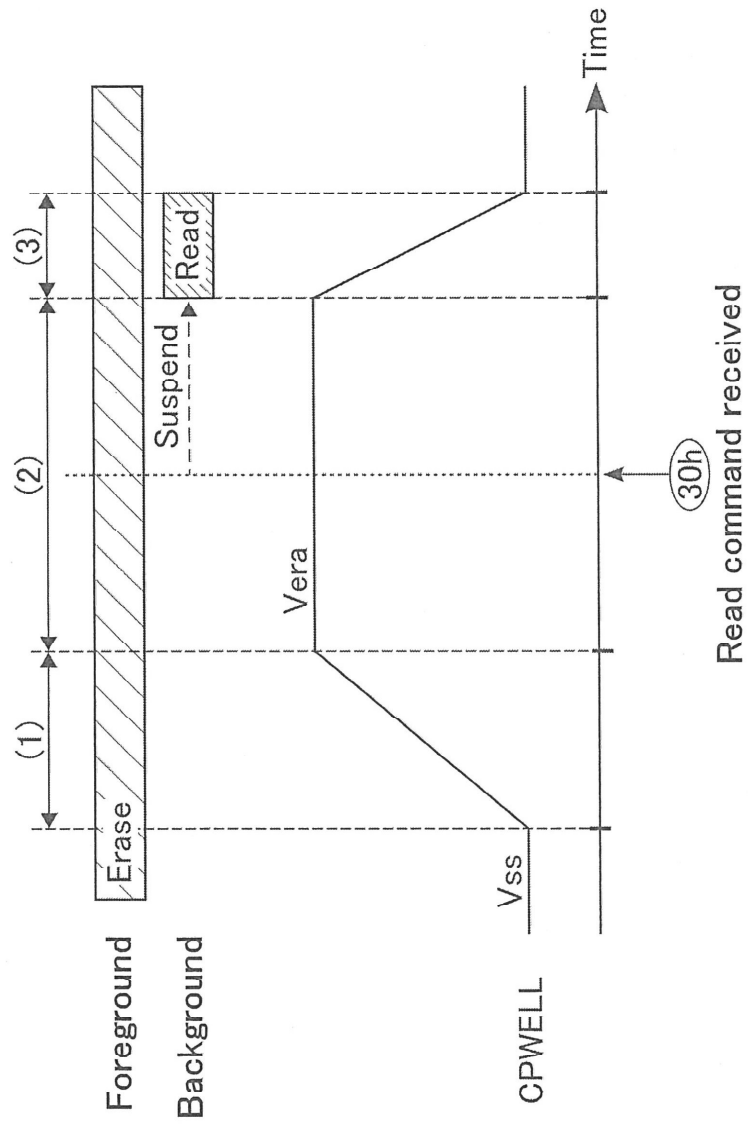


FIG. 21

Background read (same power supply group)
[Voltage drop period: no suspension]

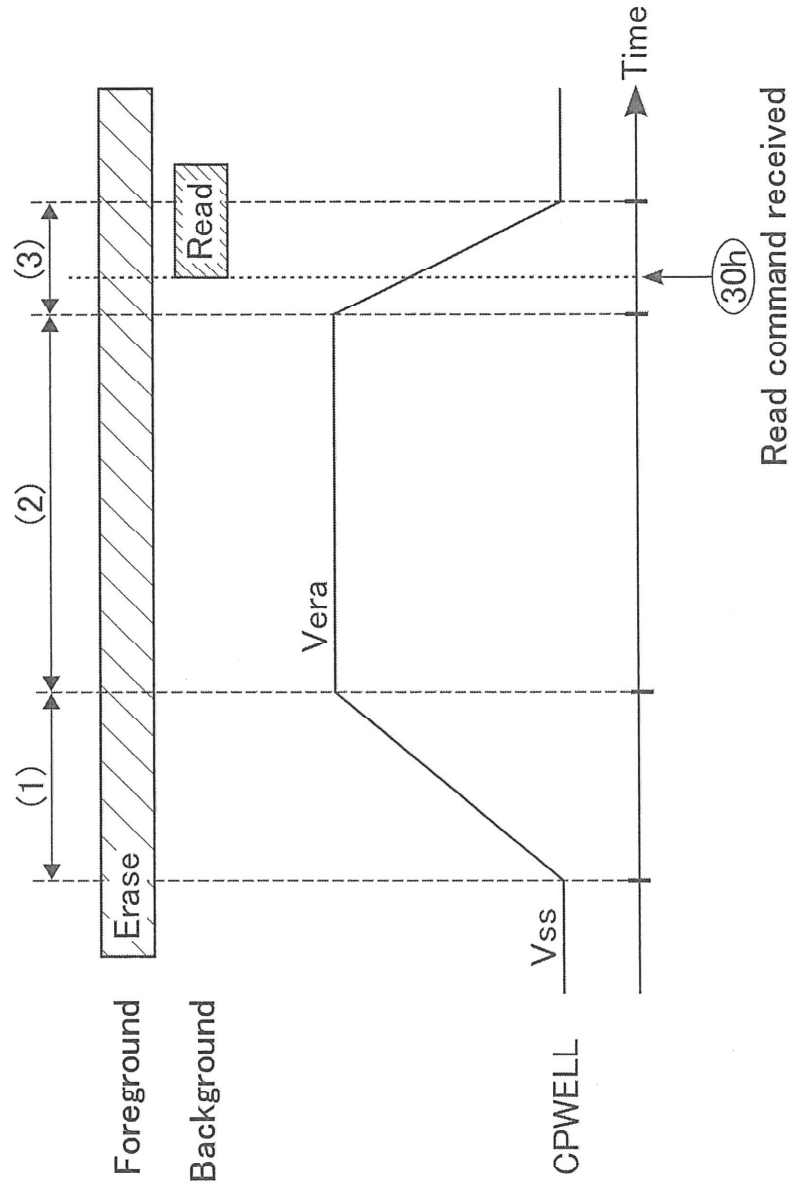


FIG. 22

Background read (same power supply group)
[Voltage drop period: read suspend]

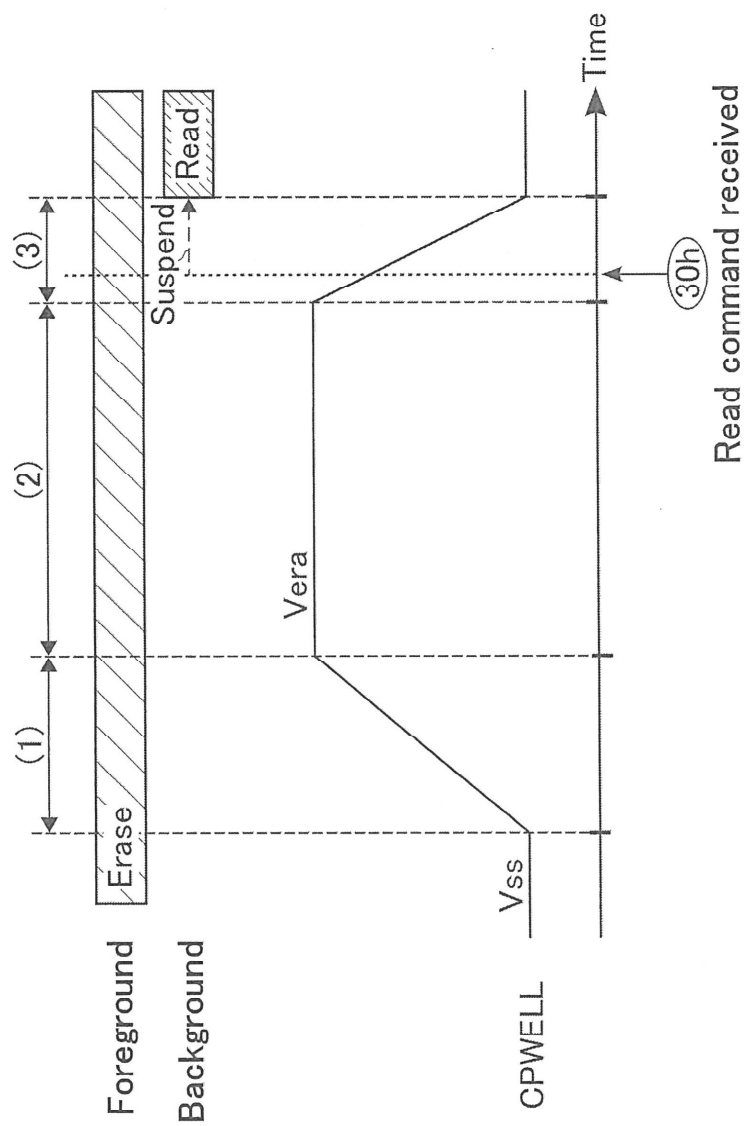


FIG. 23

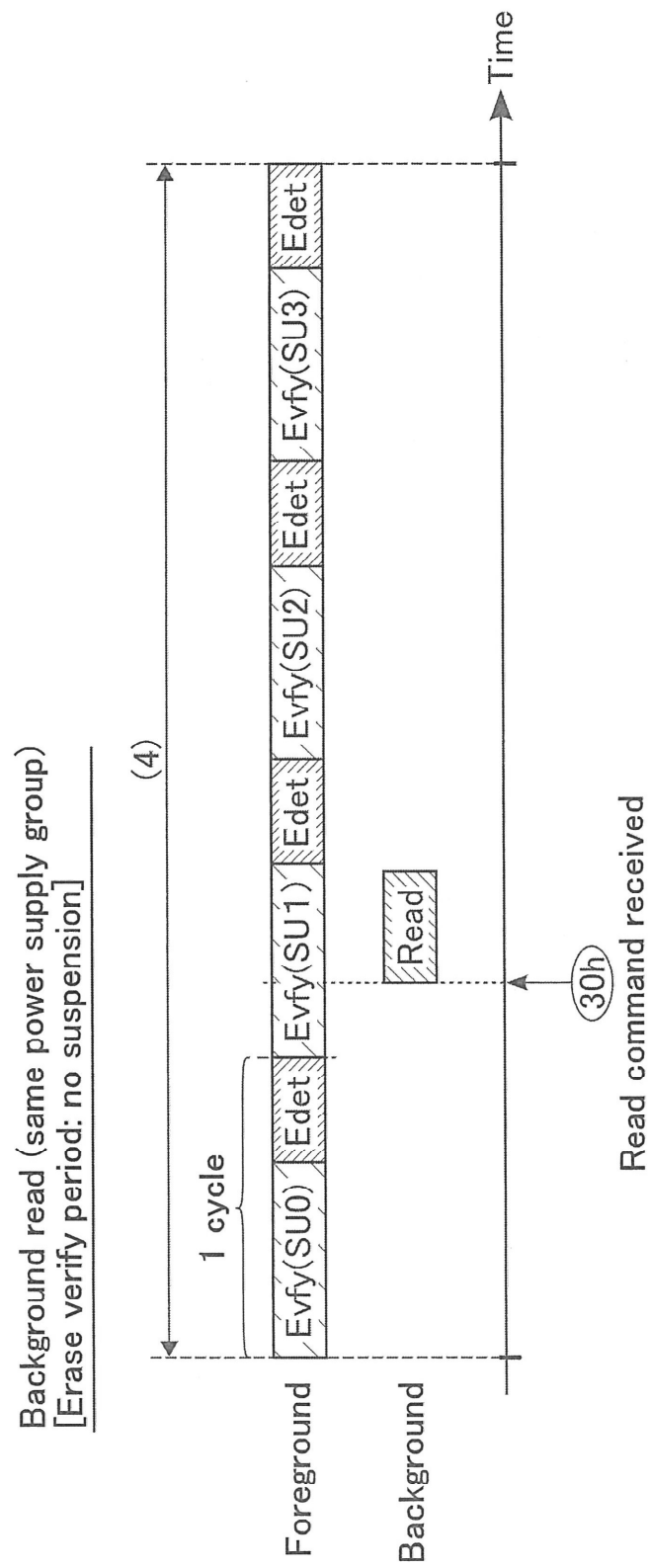


FIG. 24

Background read (same power supply group)
[Erase verify period: single cycle suspension]

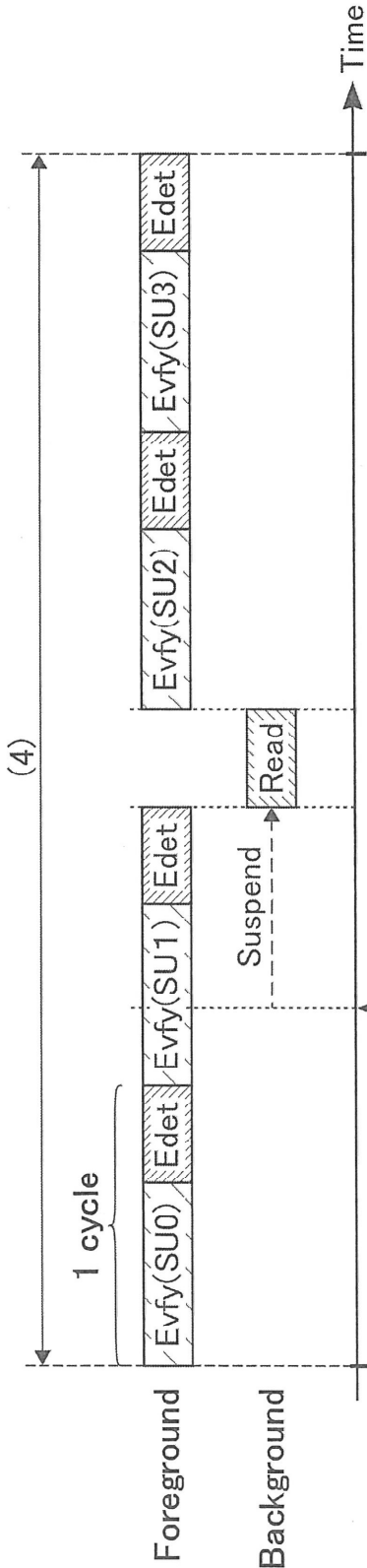


FIG. 25

Erase operation + background read (different power supply group)

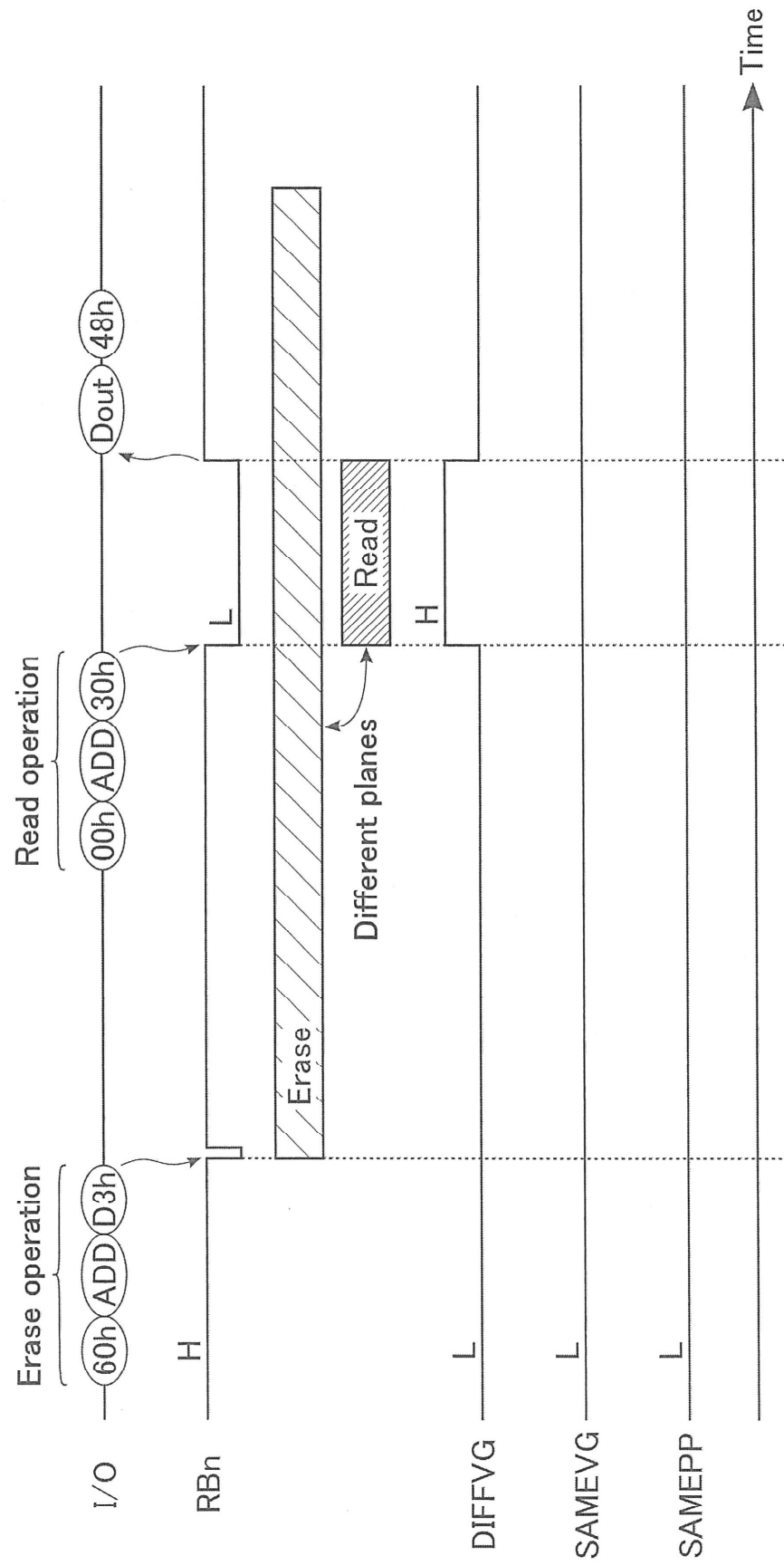


FIG. 26

Erase operation + suspend read (same-pair plane)

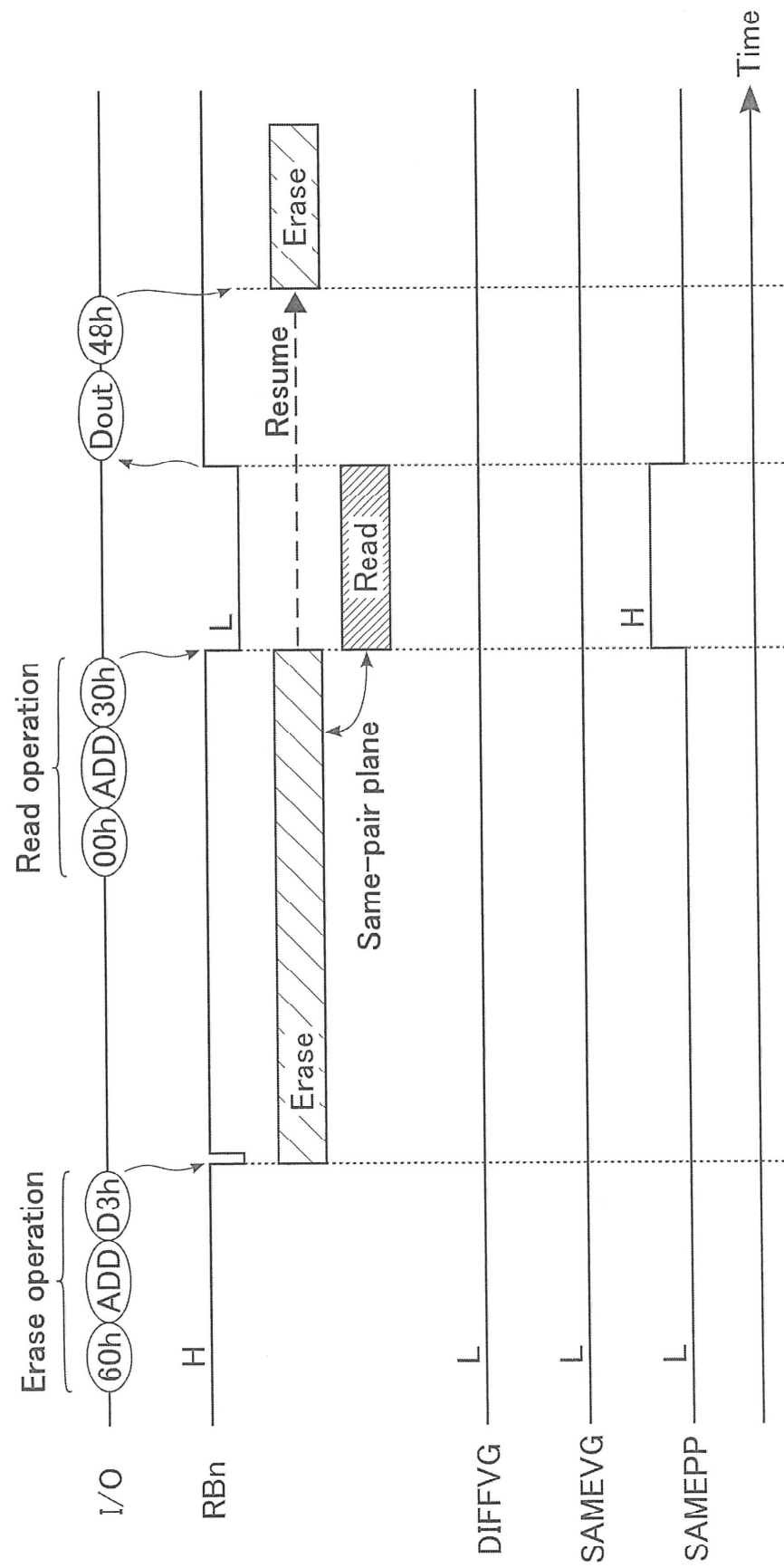


FIG. 27

Suspend read (same-pair plane)
[Erase period: no rewinding]

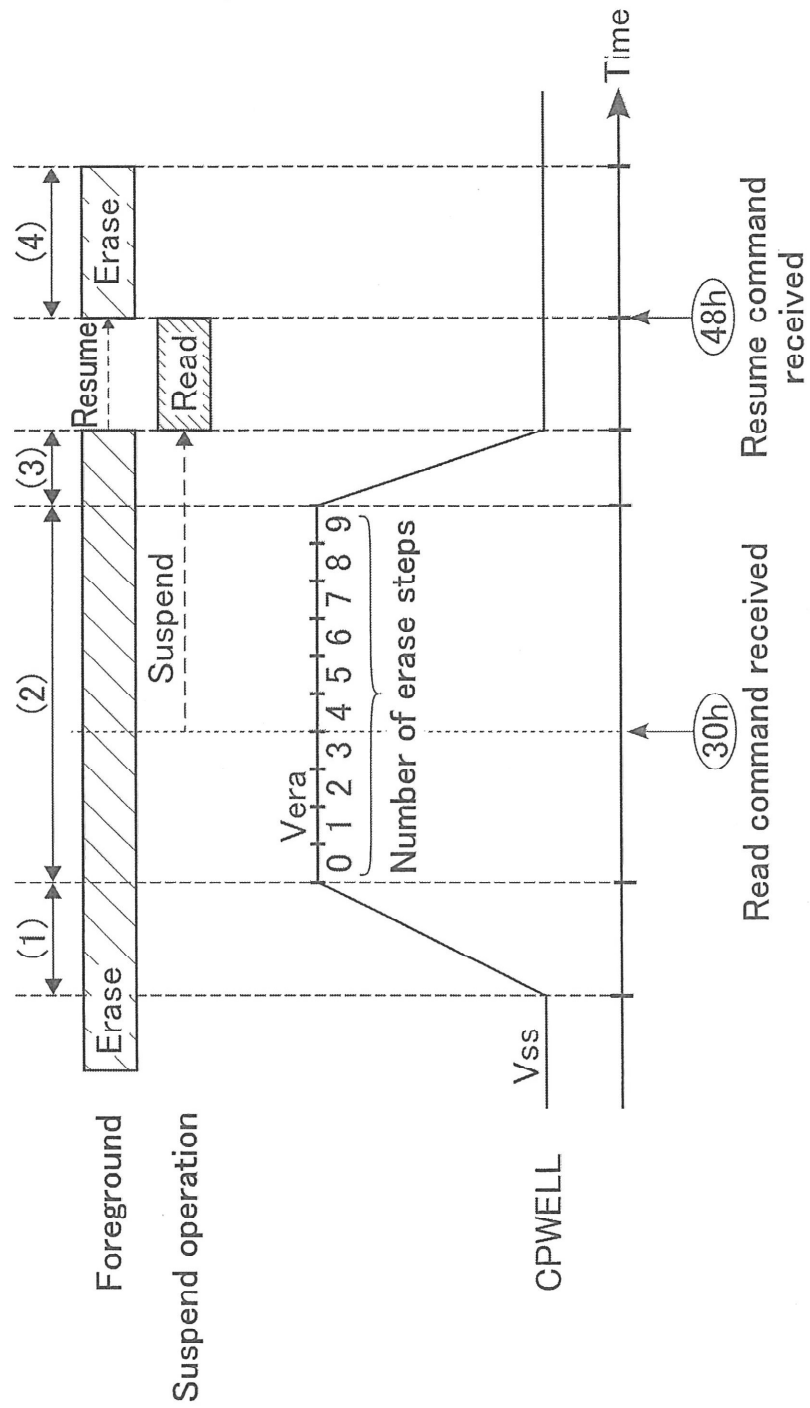


FIG. 28

Suspend read (same-pair plane)
 [Erase period: stop immediately]

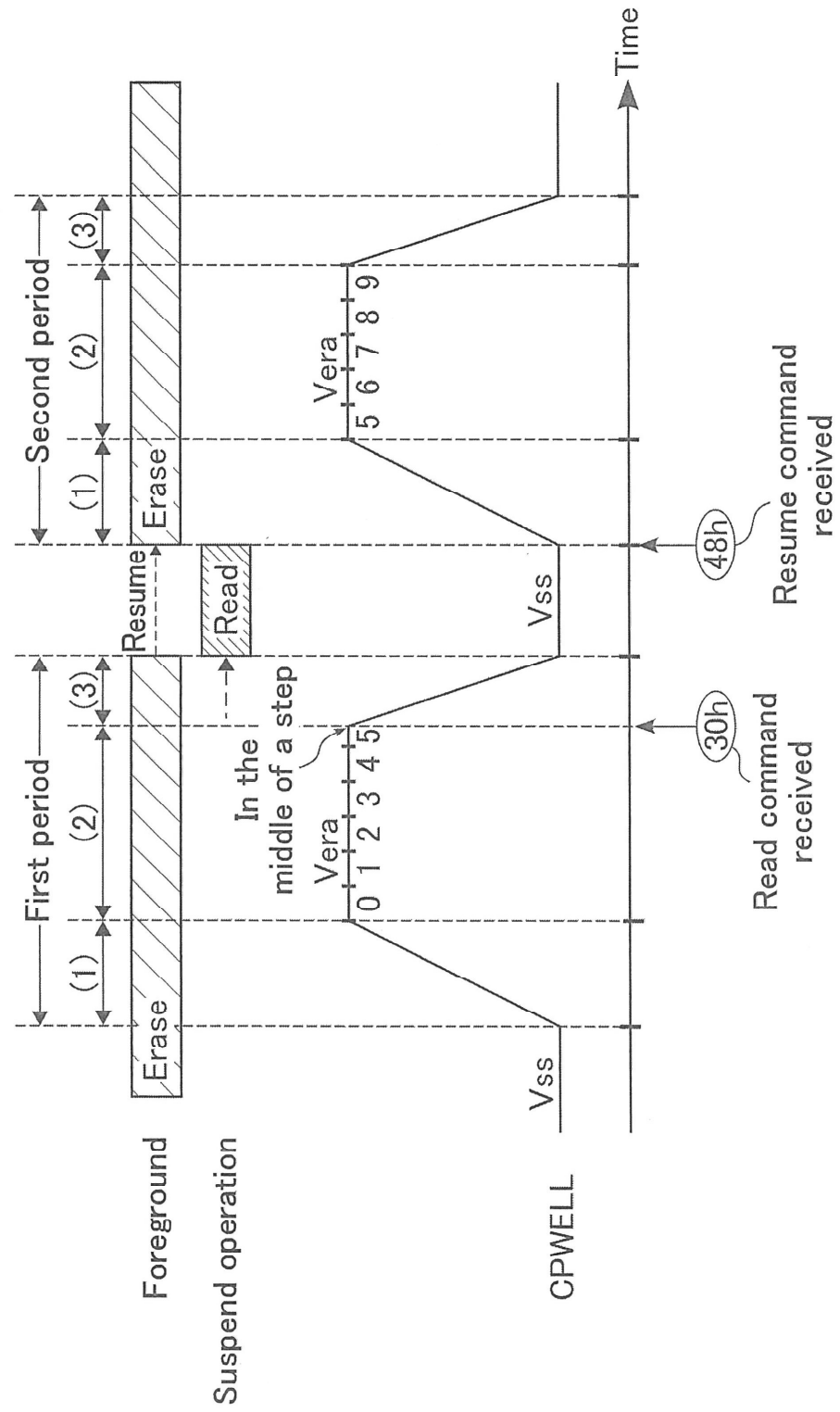


FIG. 29

Suspend read (same-pair plane)
 [Erase period: 1 step of suspend]

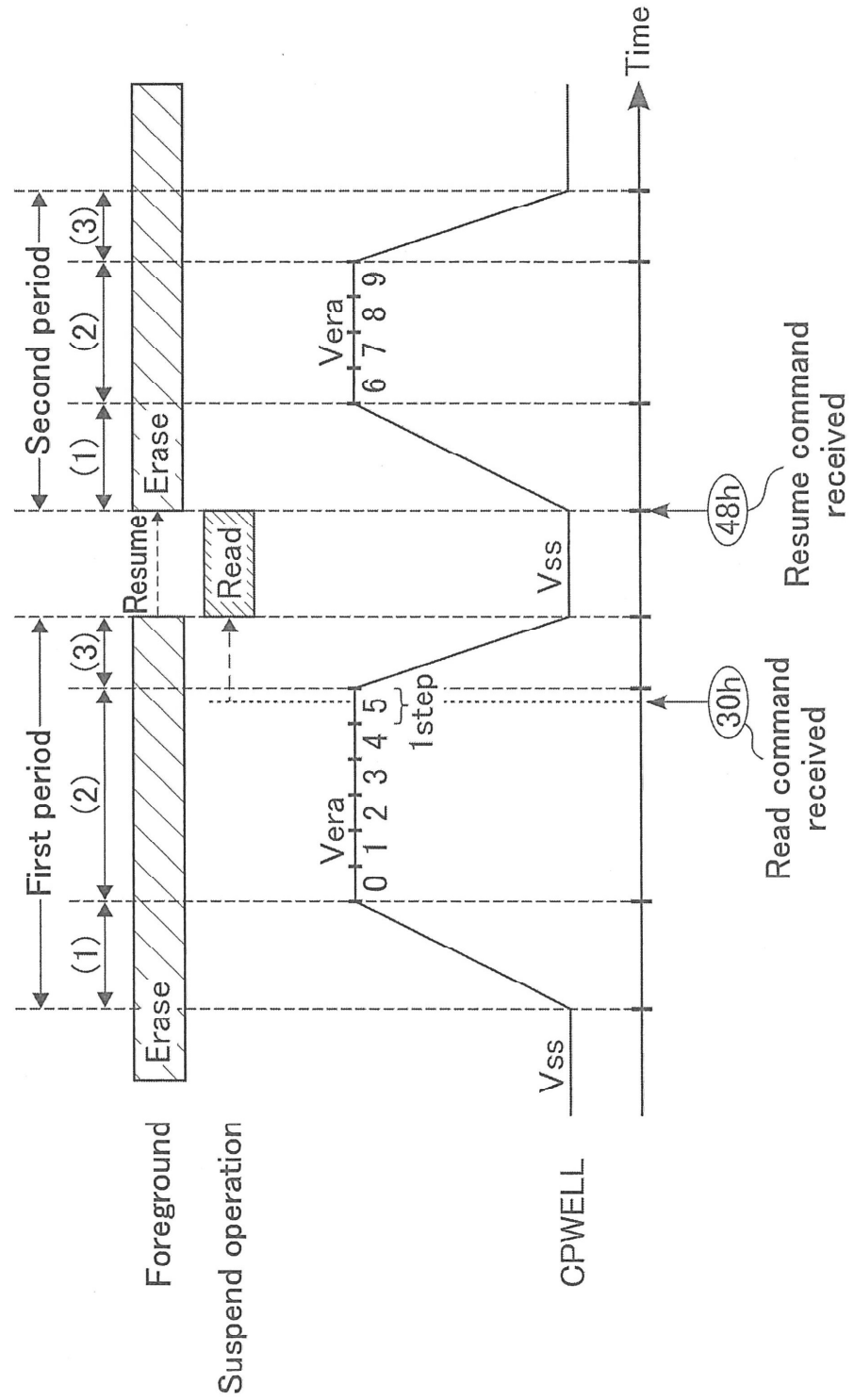


FIG. 30

Suspend read (same-pair plane)
[Erase period: 2 steps of suspend]

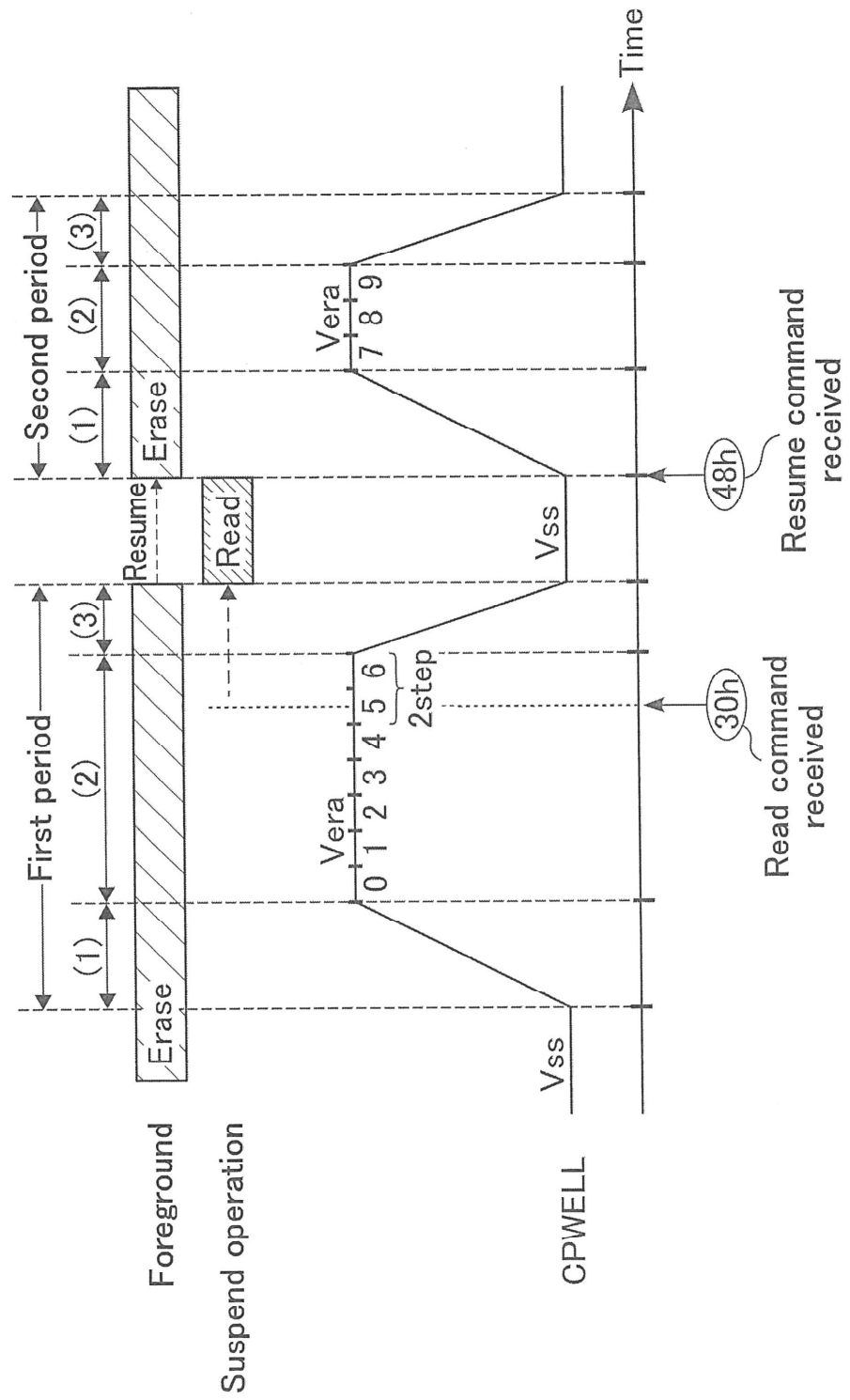


FIG. 31

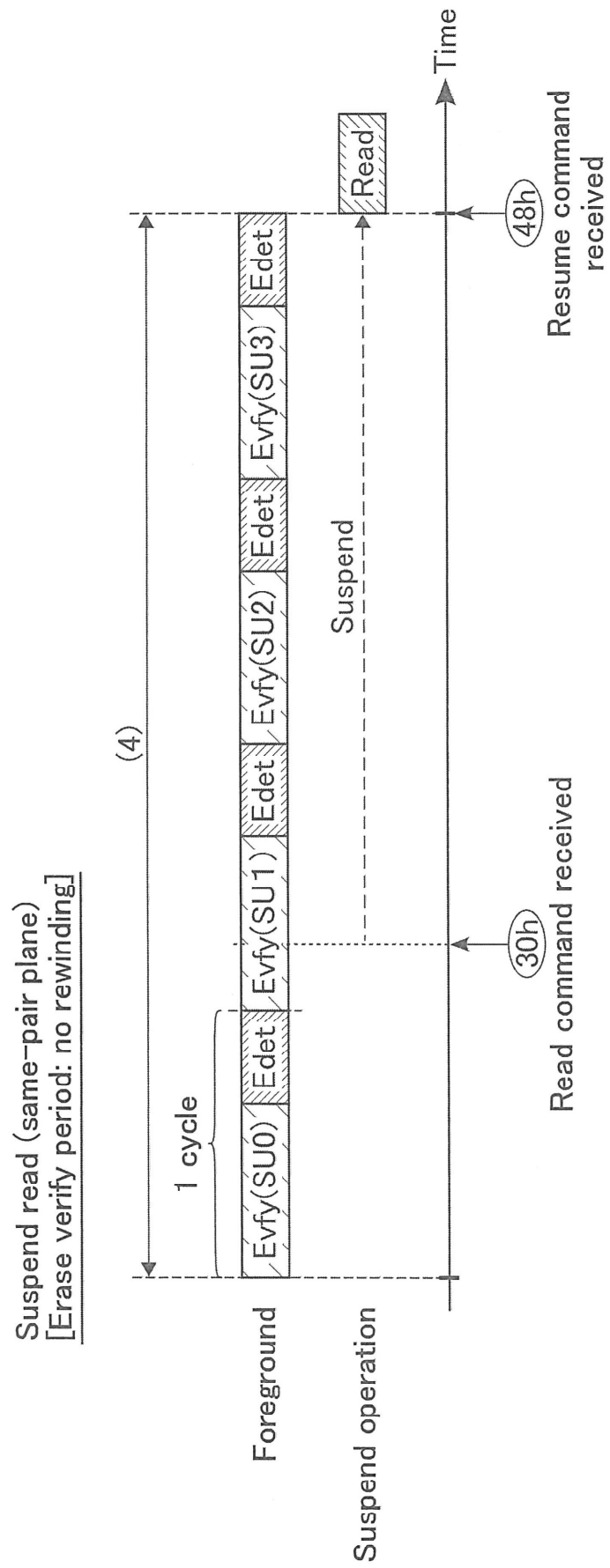


FIG. 32

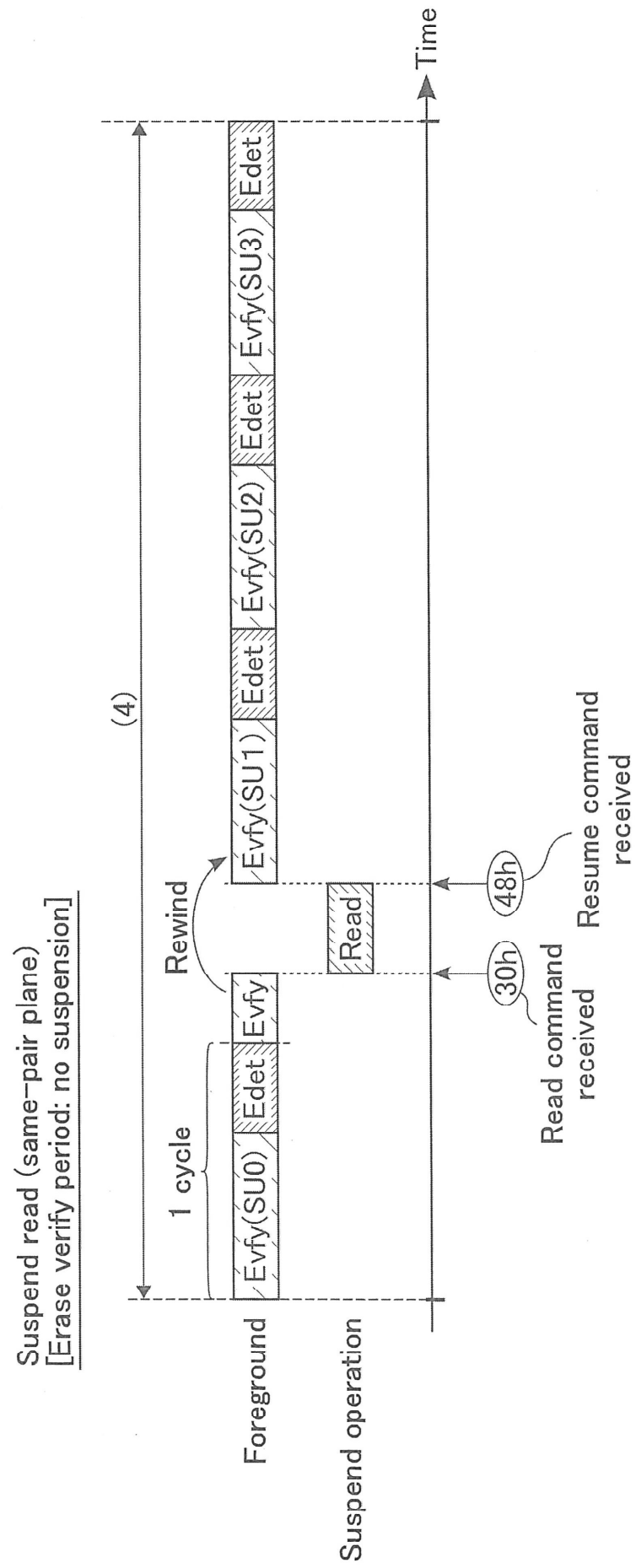


FIG. 33

Erase operation + suspend read (comparative example of first embodiment)

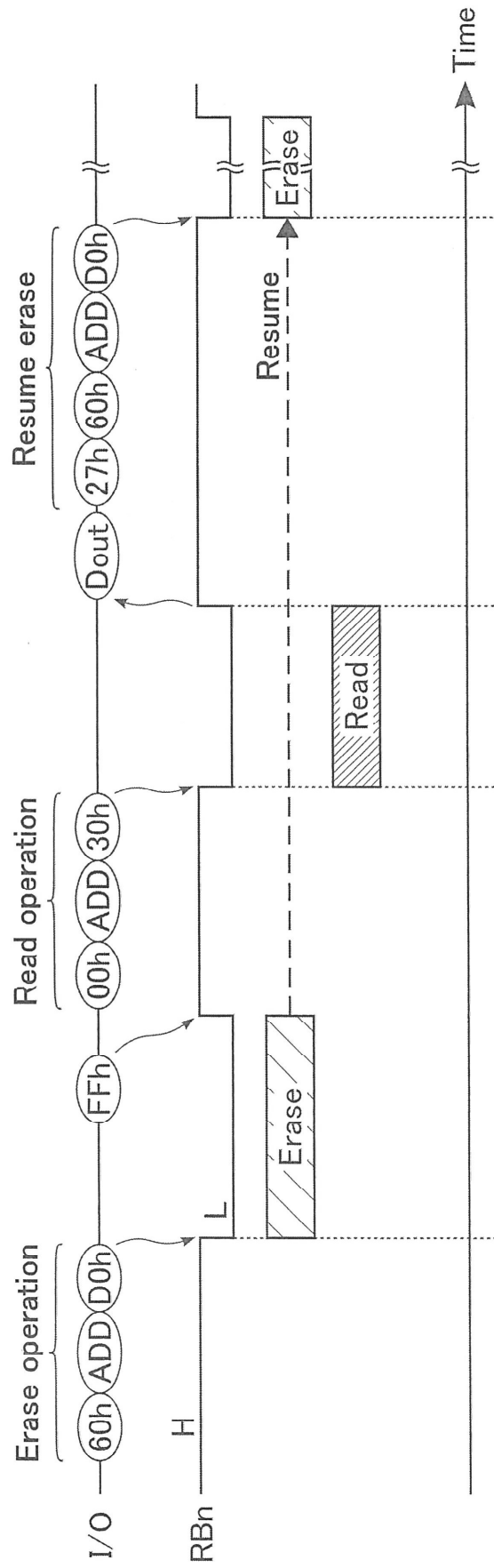


FIG. 34

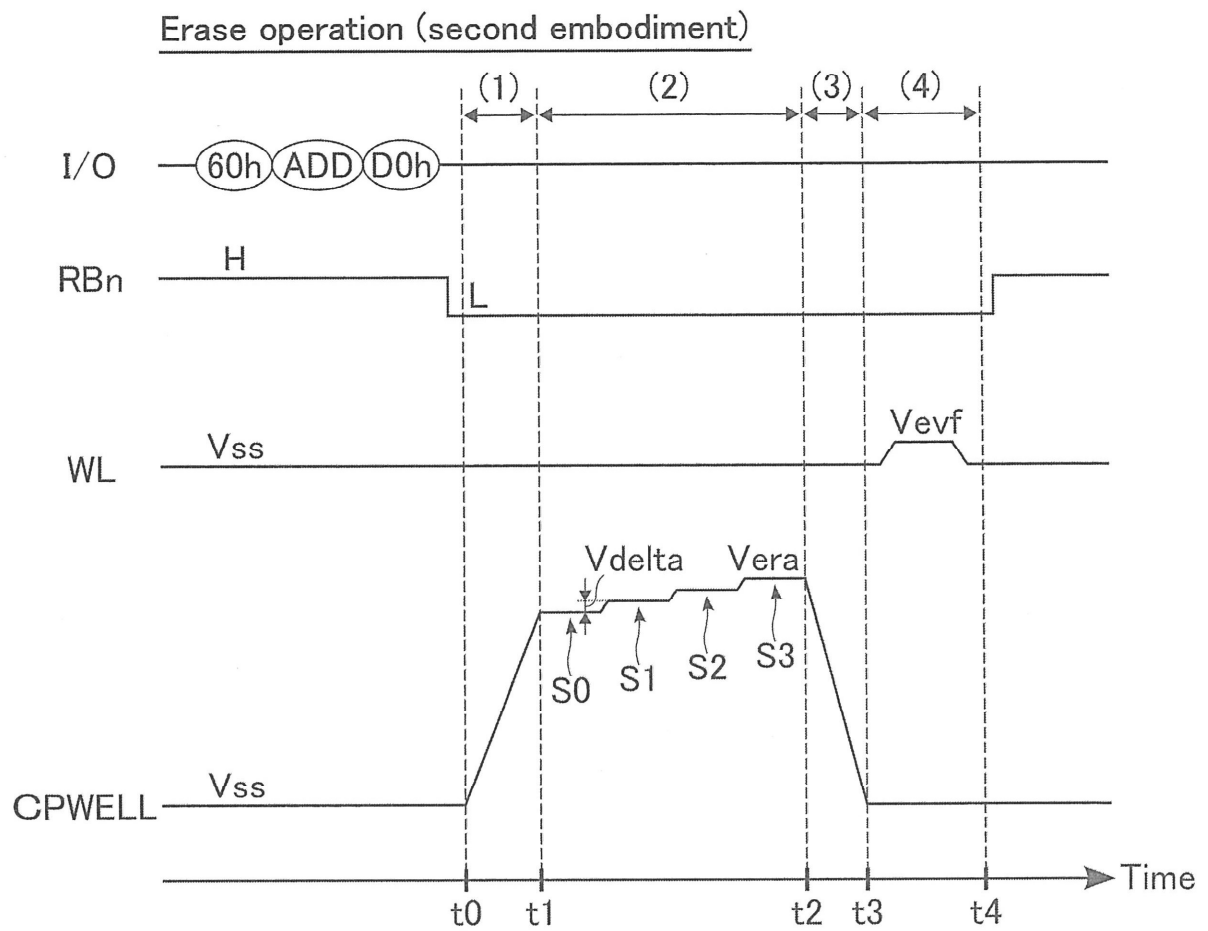
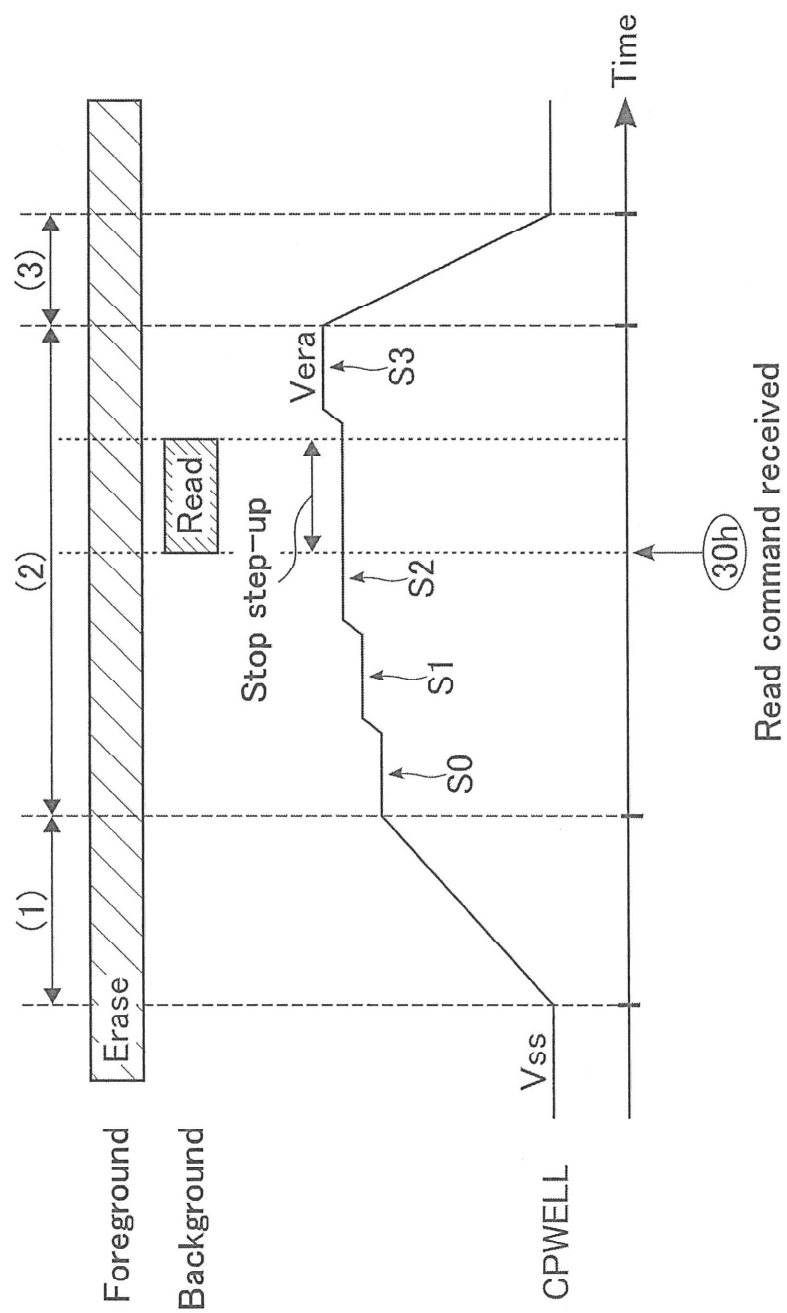


FIG. 35

Background read (same power supply group)
[Erase period: stop step-up]



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Erase operation + suspend read (same-pair plane)

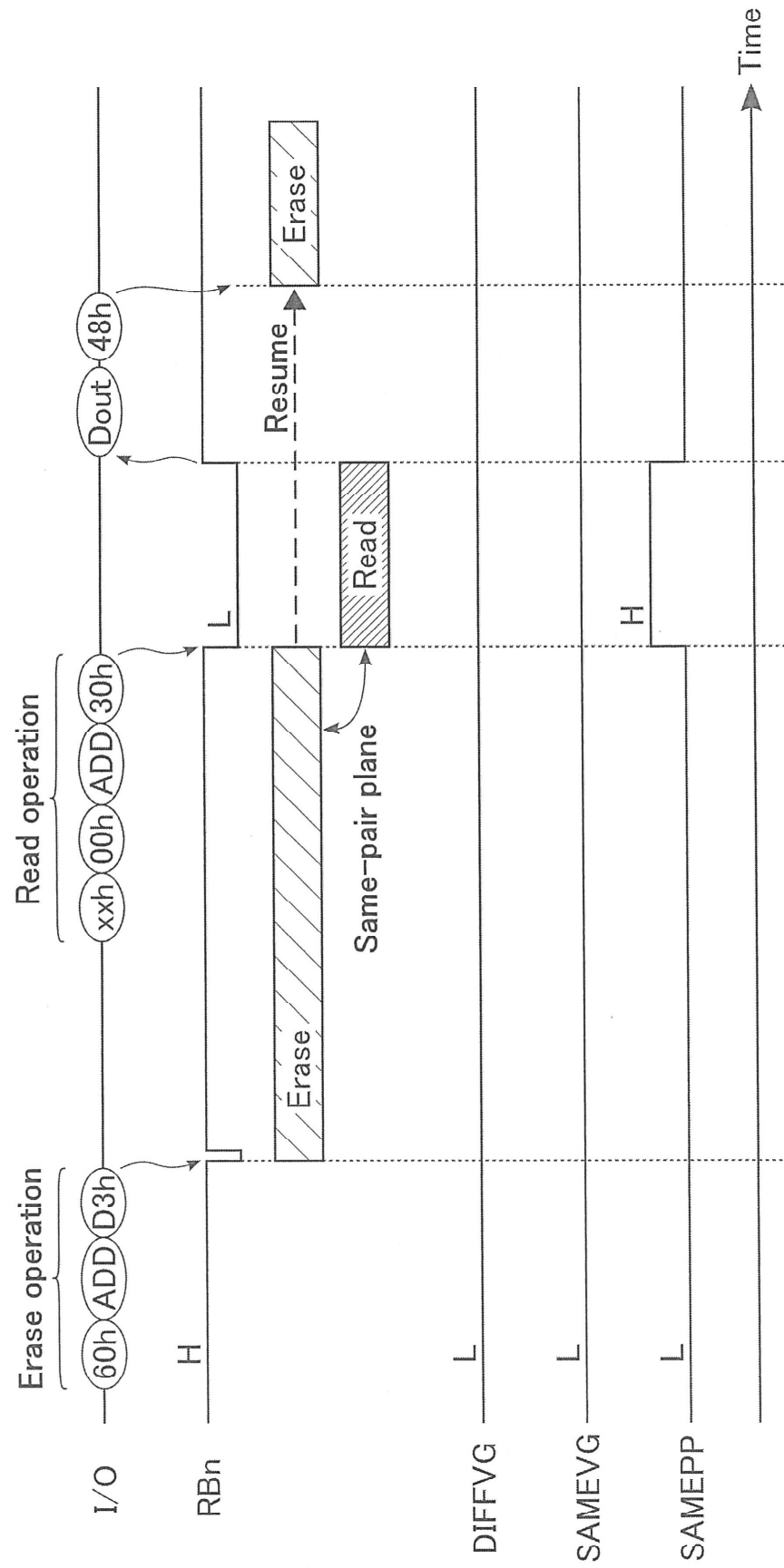


FIG. 37

Erase operation + suspend read (same-pair plane)

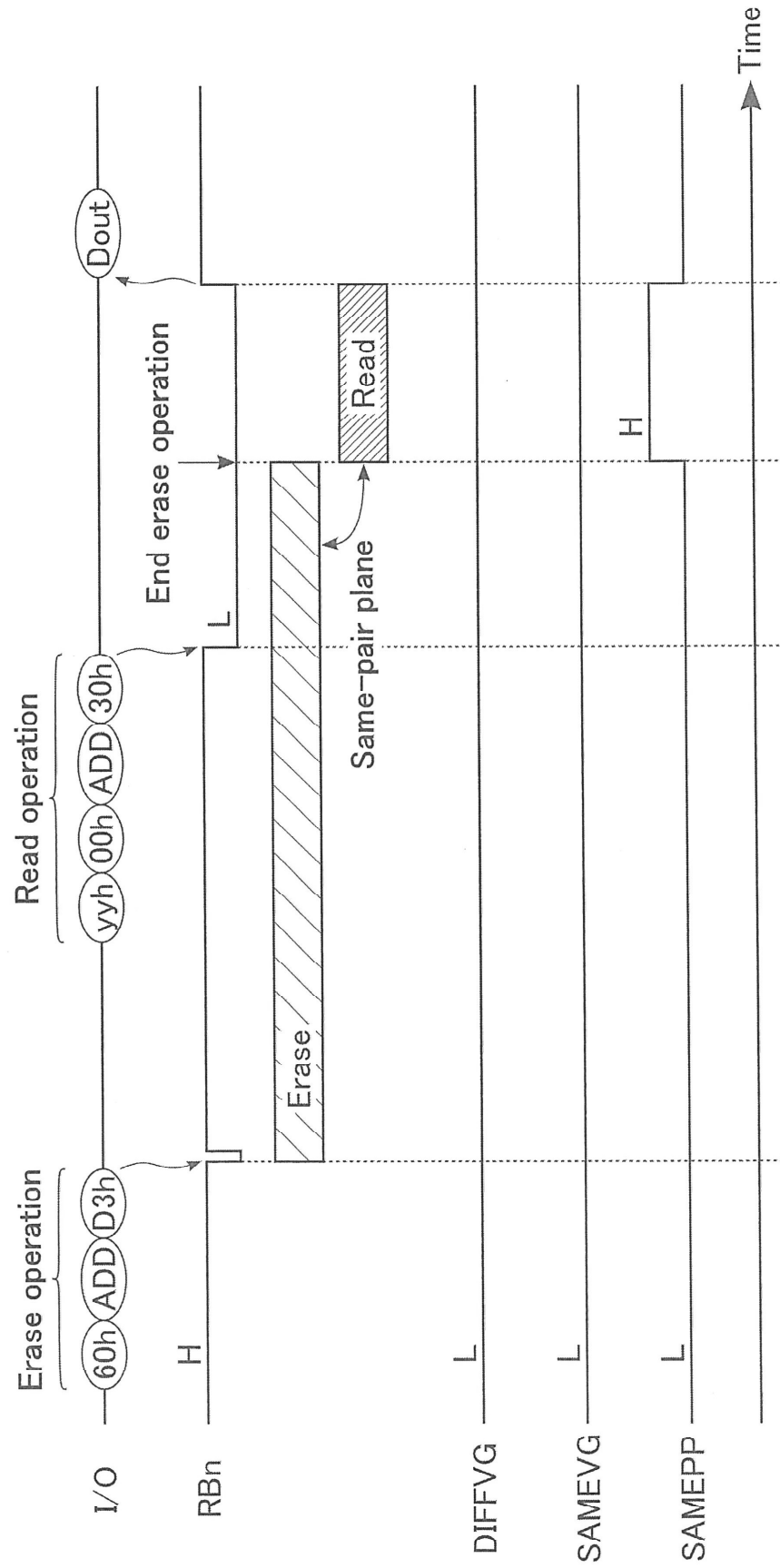


FIG. 38

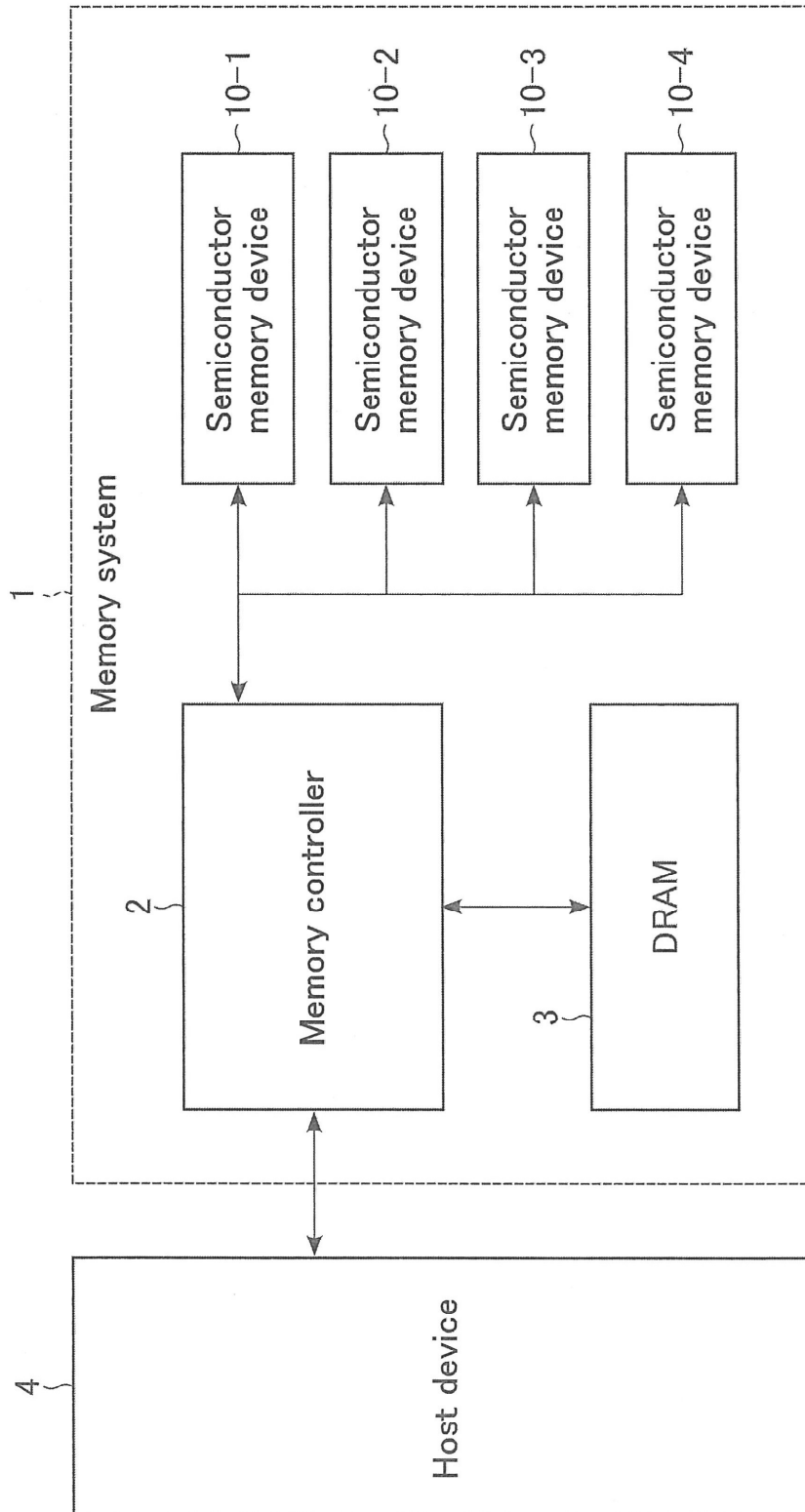


FIG. 39