FIG. 1

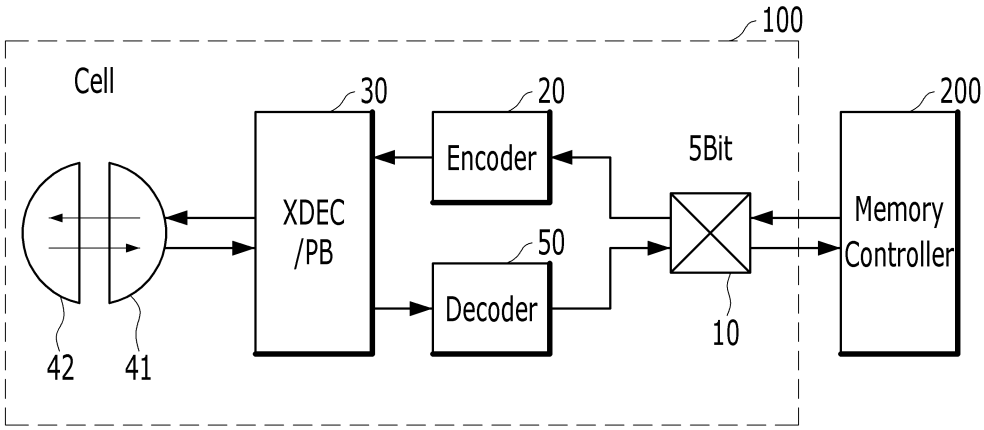

100
Cell
30
20
200
Encoder
5Bit
XDEC
/PB
Memory
Controller
50
Decoder
10
42
41

FIG. 2

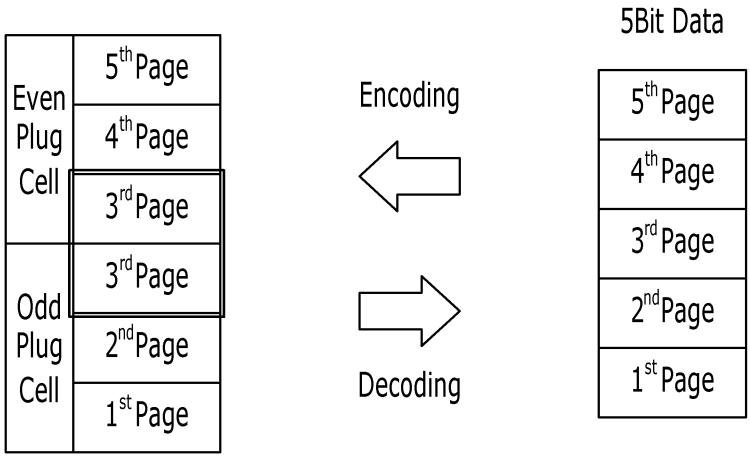

Even Plug Cell
5th Page
4th Page
3rd Page
Odd Plug Cell
3rd Page
2nd Page
1st Page
Encoding
Decoding
5Bit Data
5th Page
4th Page
3rd Page
2nd Page
1st Page

FIG. 3

Even cell plug		
Odd cell plug		
3rd Page Data	**0** / 1	**0 / 1**
Coding Data	0 (1st/5th Page Coding O)	1 (1st/5th Page Coding X)

FIG. 4

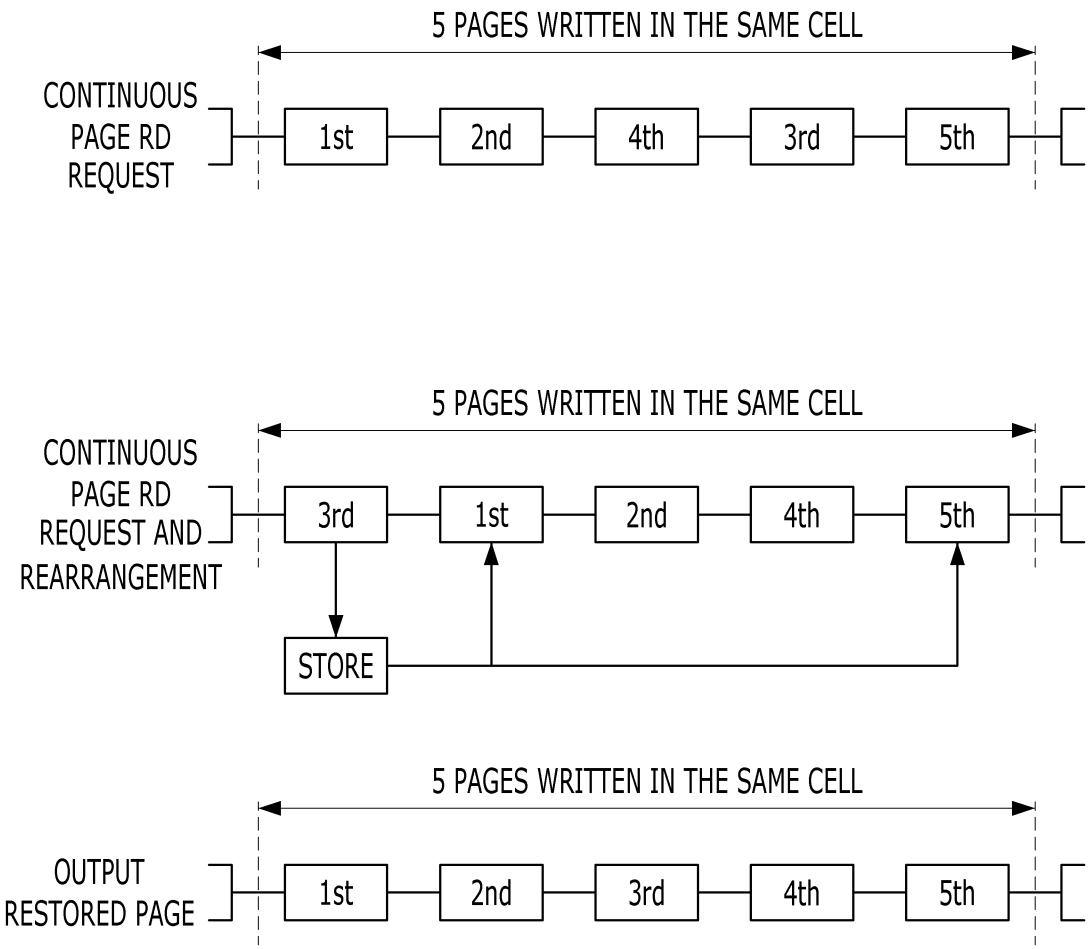
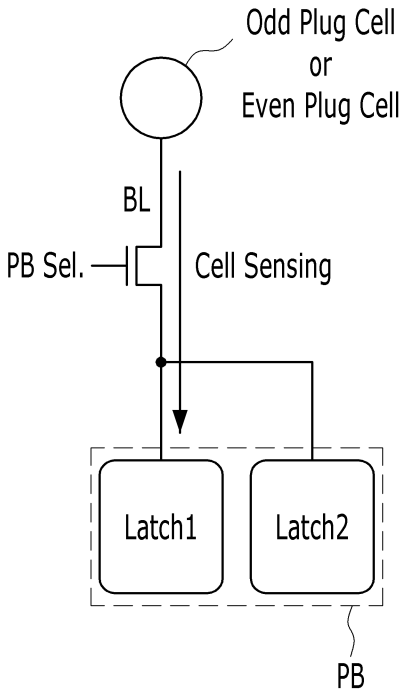

5 PAGES WRITTEN IN THE SAME CELL
CONTINUOUS PAGE RD REQUEST
1st
2nd
4th
3rd
5th
5 PAGES WRITTEN IN THE SAME CELL
CONTINUOUS PAGE RD REQUEST AND REARRANGEMENT
3rd
1st
2nd
4th
5th
STORE
5 PAGES WRITTEN IN THE SAME CELL
OUTPUT RESTORED PAGE
1st
2nd
3rd
4th
5th

FIG. 5


Odd Plug Cell
or
Even Plug Cell
BL
PB Sel.
Cell Sensing
Latch1
Latch2
PB

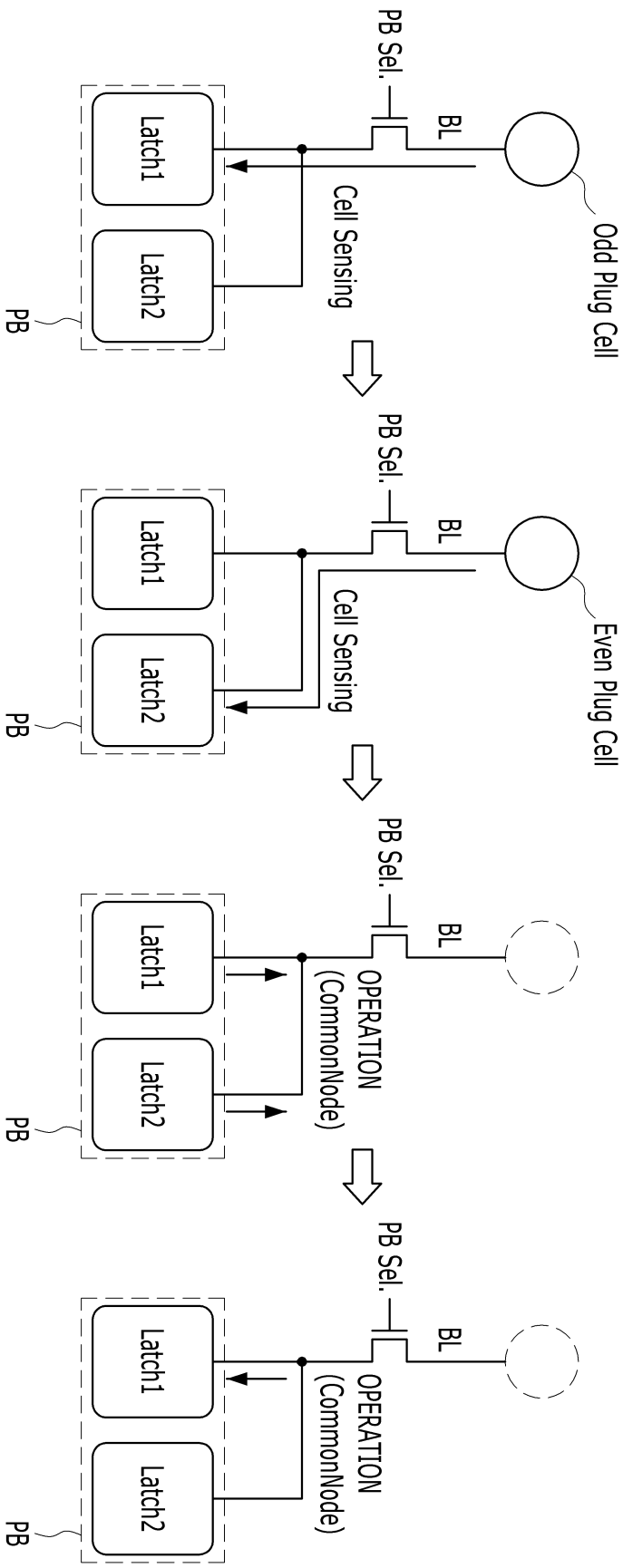

PB Sel.
BL
Odd Plug Cell
Cell Sensing
Latch1
Latch2
PB
PB Sel.
BL
Even Plug Cell
Cell Sensing
Latch1
Latch2
PB
PB Sel.
BL
OPERATION
(CommonNode)
Latch1
Latch2
PB
PB Sel.
BL
OPERATION
(CommonNode)
Latch1
Latch2
PB

FIG. 6

FIG. 7

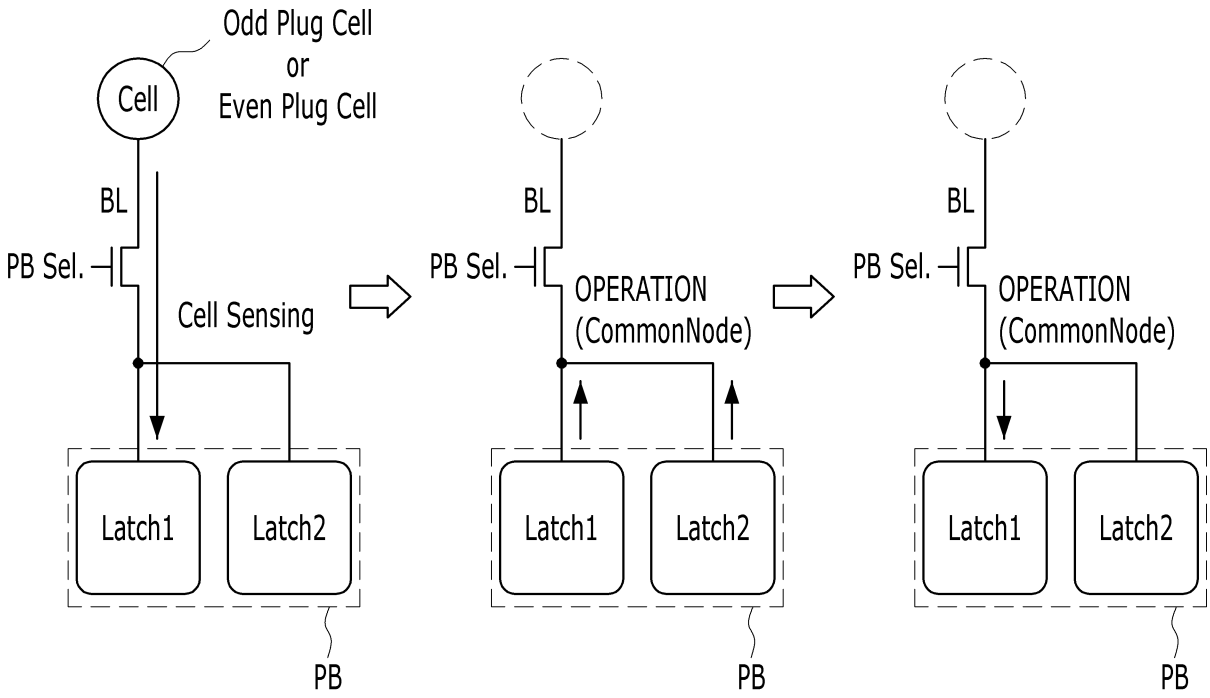

Odd Plug Cell
or
Even Plug Cell
Cell
BL
PB Sel.
Cell Sensing
Latch1
Latch2
PB
BL
PB Sel.
OPERATION
(CommonNode)
Latch1
Latch2
PB
BL
PB Sel.
OPERATION
(CommonNode)
Latch1
Latch2
PB

FIG. 8

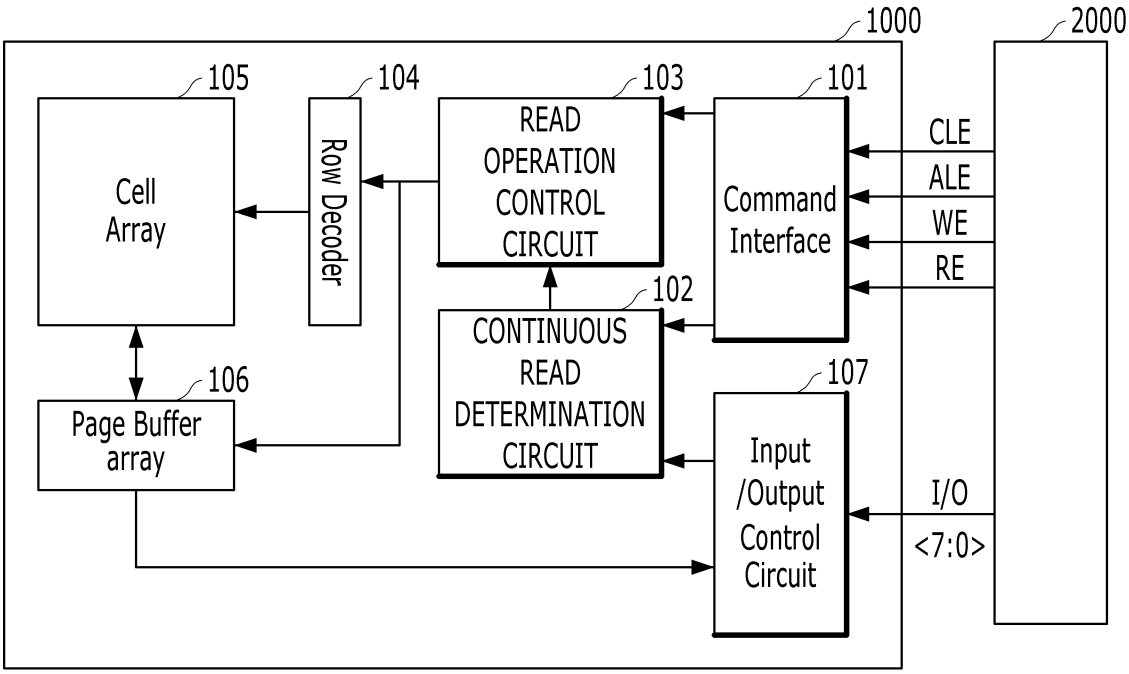
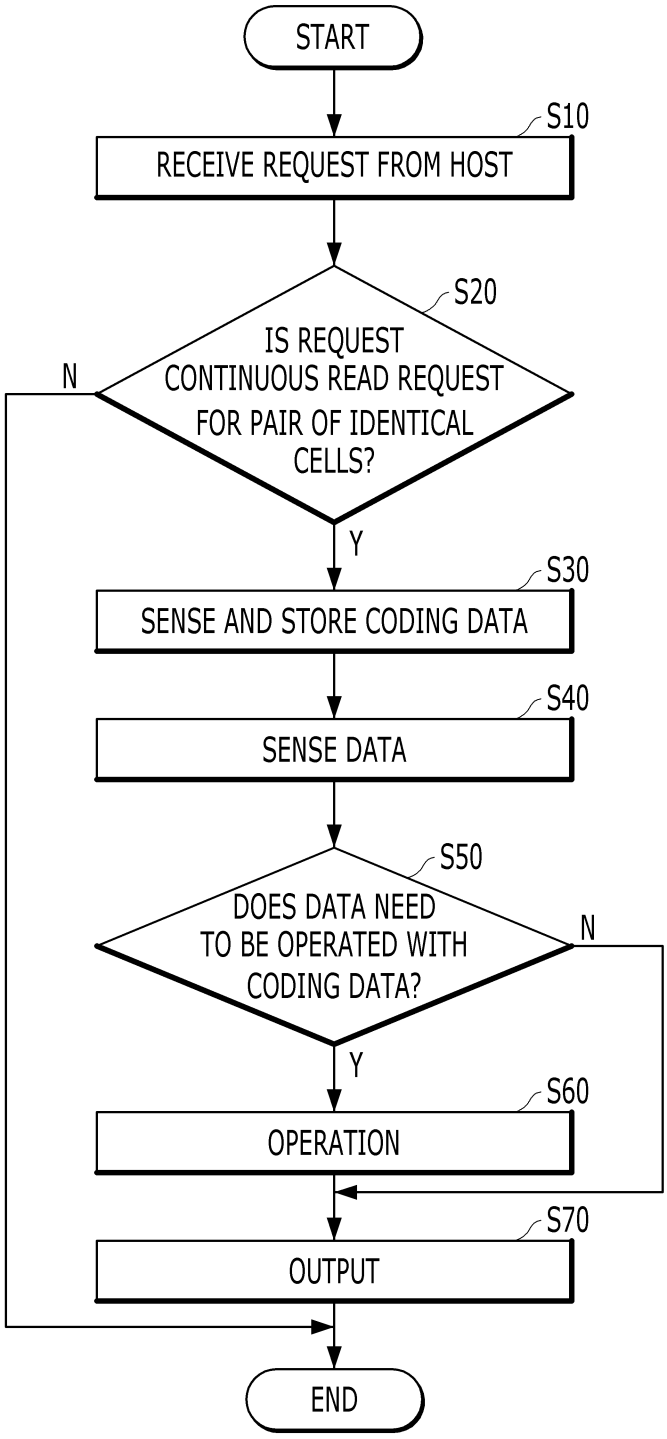

1000
2000
105
104
103
101
Cell Array
Row Decoder
READ OPERATION CONTROL CIRCUIT
Command Interface
CLE
ALE
WE
RE
102
CONTINUOUS READ DETERMINATION CIRCUIT
106
107
Page Buffer array
Input /Output Control Circuit
I/O <7:0>

FIG. 9


START
S10
RECEIVE REQUEST FROM HOST
S20
IS REQUEST CONTINUOUS READ REQUEST FOR PAIR OF IDENTICAL CELLS?
N
Y
S30
SENSE AND STORE CODING DATA
S40
SENSE DATA
S50
DOES DATA NEED TO BE OPERATED WITH CODING DATA?
N
Y
S60
OPERATION
S70
OUTPUT
END