FIG. 1

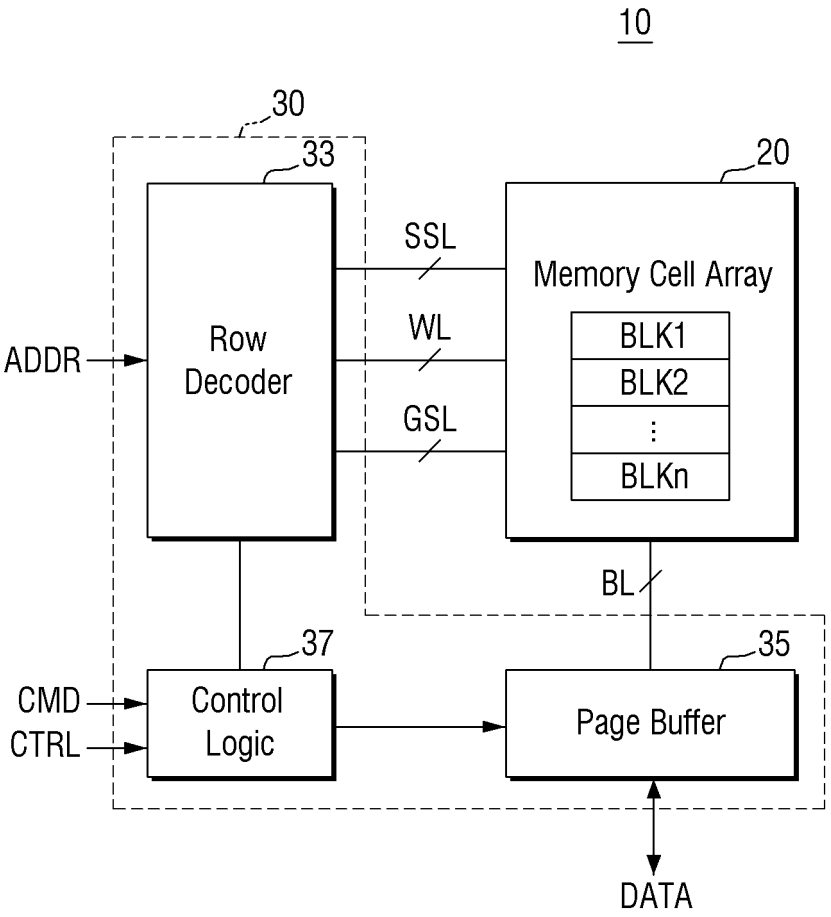

10
30
33
20
SSL
Memory Cell Array
ADDR
Row
Decoder
WL
BLK1
BLK2
GSL
BLKn
BL
37
35
CMD
CTRL
Control
Logic
Page Buffer
DATA

FIG. 2

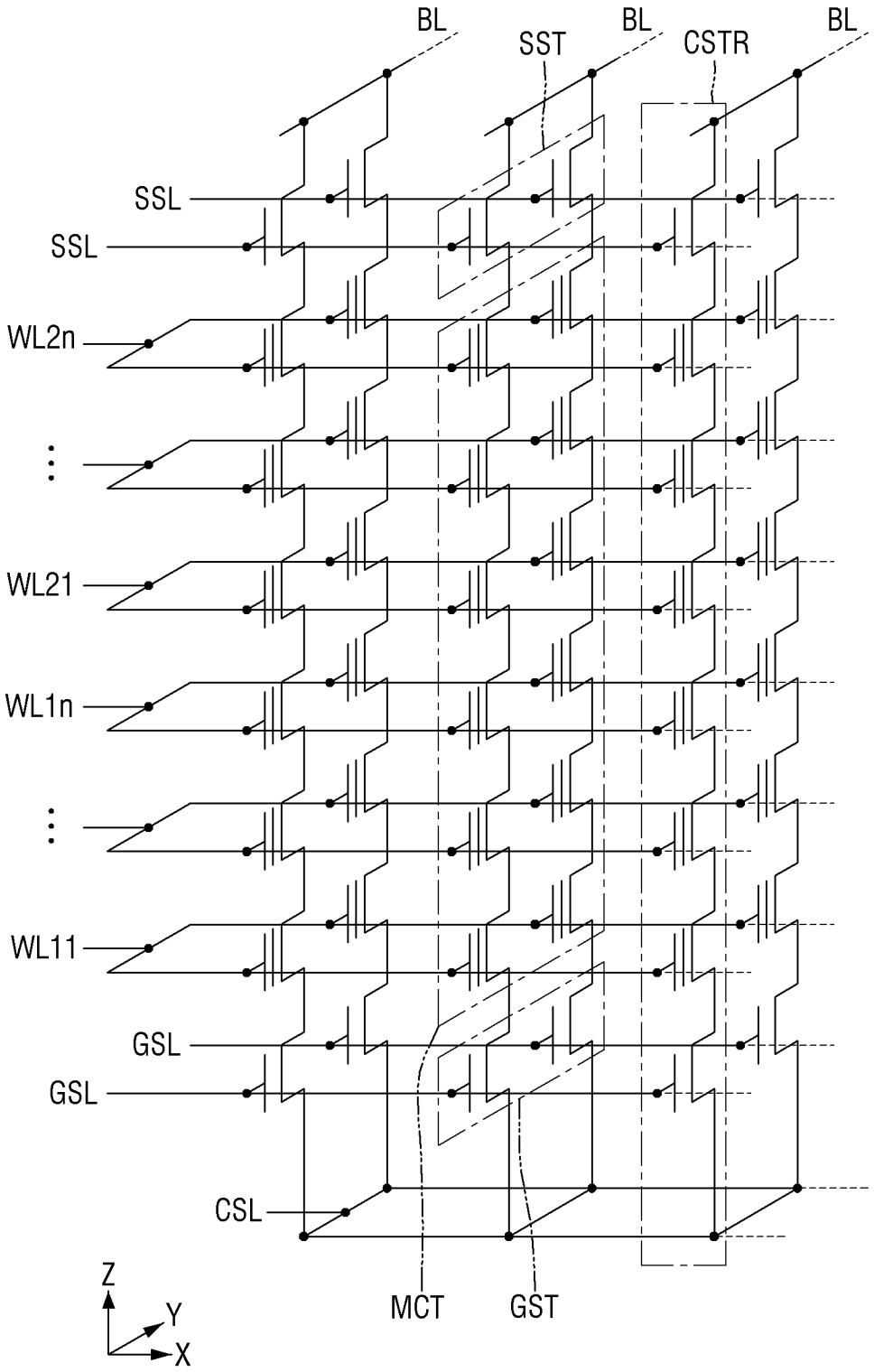

BL
SST
BL
CSTR
BL
SSL
SSL
WL2n
WL21
WL1n
WL11
GSL
GSL
CSL
MCT
GST
Z
Y
X

FIG. 3

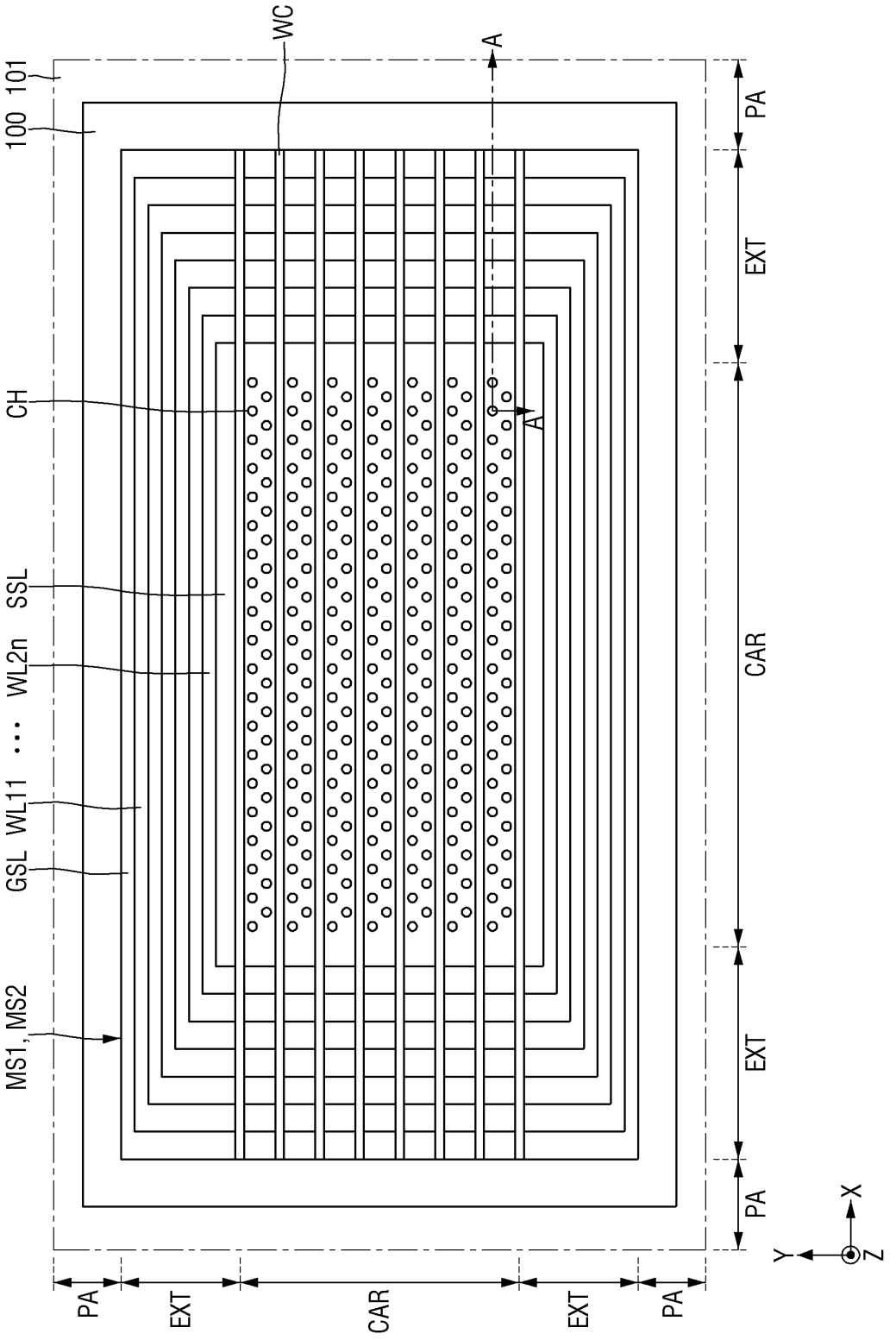

WC
A
101
100
PA
EXT
CH
A'
SSL
WL2n
CAR
WL11
GSL
EXT
MS1, MS2
PA
X
Y
Z
PA
EXT
CAR
EXT
PA

FIG. 4

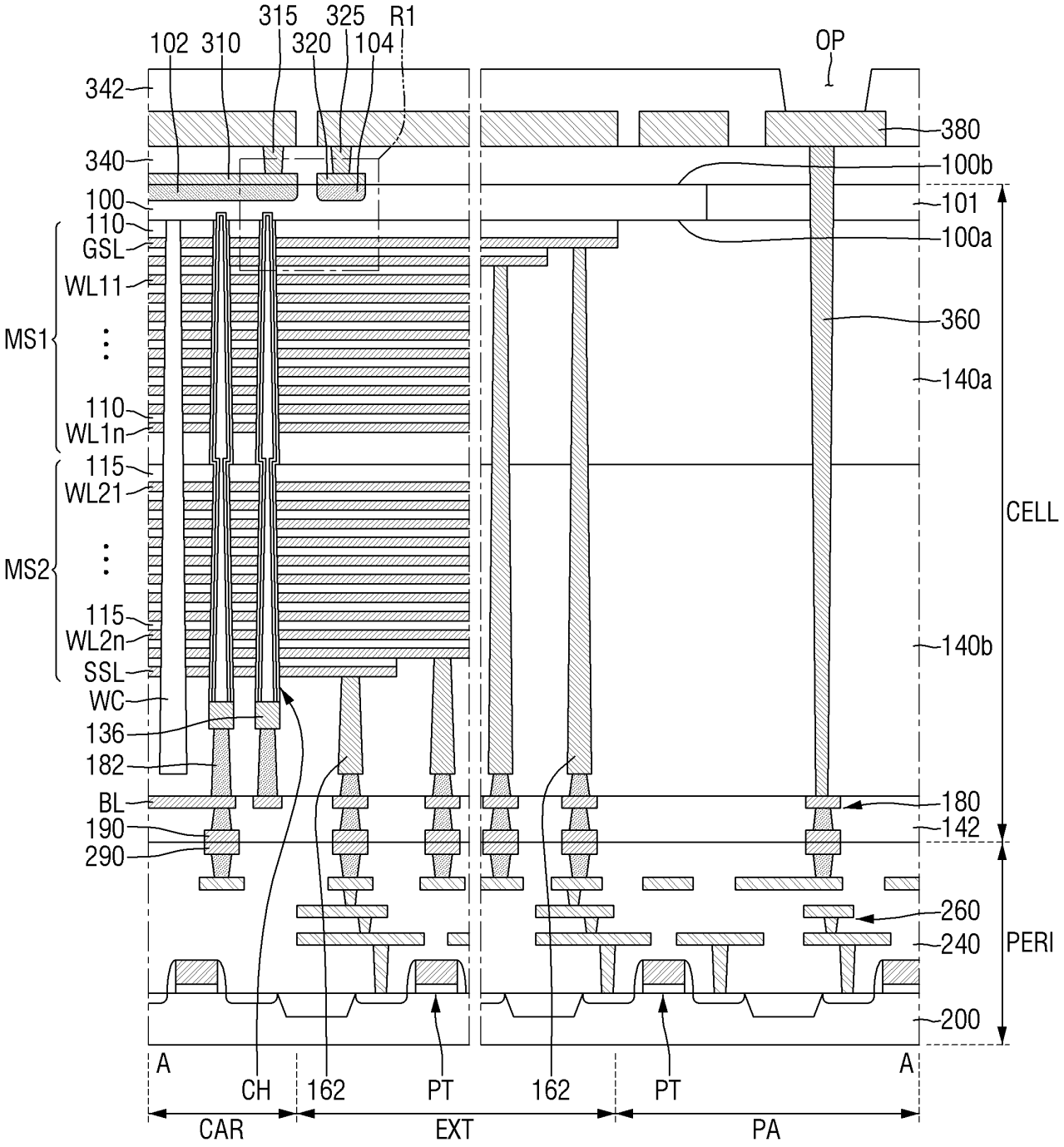

315
325
R1
102
310
320
104
OP
342
380
340
100b
100
101
110
GSL
100a
WL11
360
MS1
140a
110
WL1n
115
WL21
CELL
MS2
115
WL2n
140b
SSL
WC
136
182
BL
180
190
142
290
260
240
PERI
200
A
CH
162
PT
162
PT
A
CAR
EXT
PA

FIG. 5

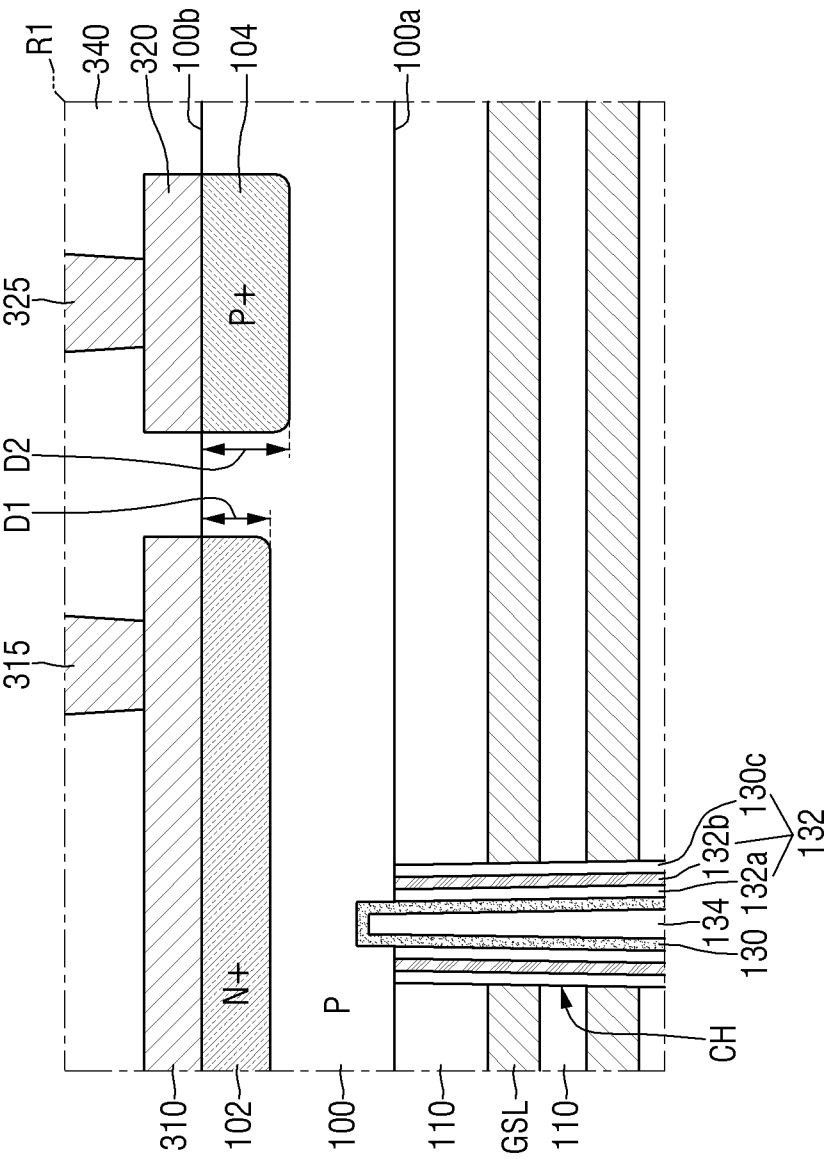

R1
340
320
100b
104
100a
325
P+
D2
D1
315
N+
P
CH
130c
132b
132a
132
134
130
310
102
100
110
GSL
110

FIG. 6

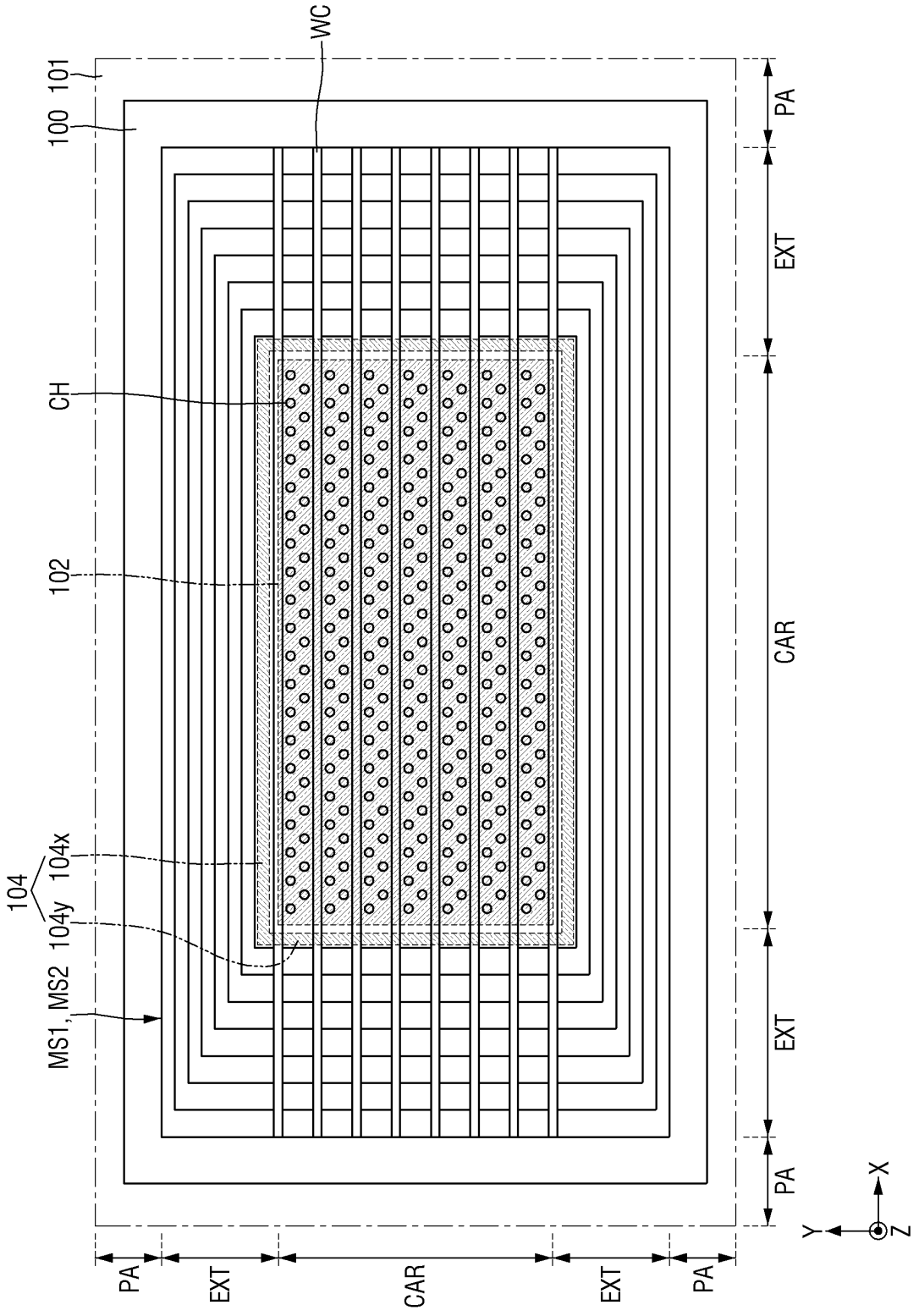

WC
101
100
CH
102
104
104x
104y
MS1, MS2
PA
EXT
CAR
EXT
PA
PA
EXT
CAR
EXT
PA
X
Y
Z

FIG. 7

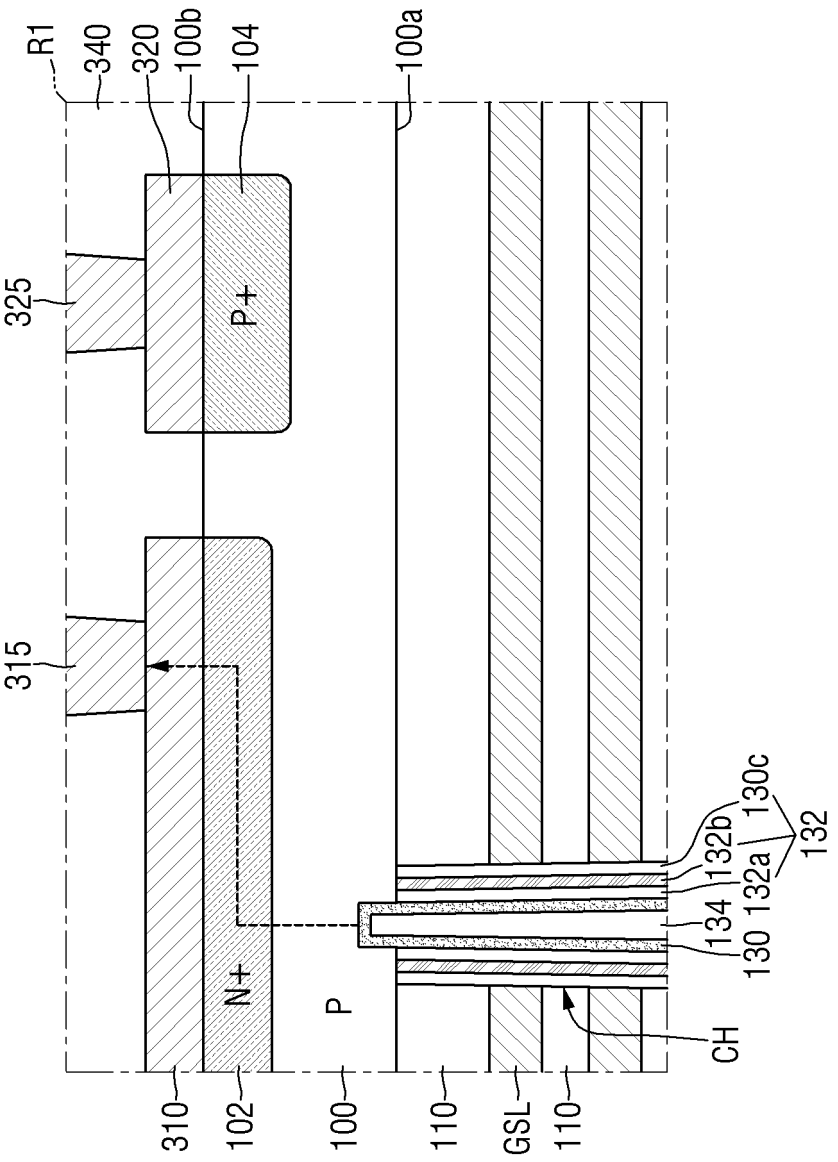

R1
340
320
100b
104
100a
325
P+
315
N+
P
CH
130c
132b
132a
132
134
130
310
102
100
110
GSL
110

FIG. 8

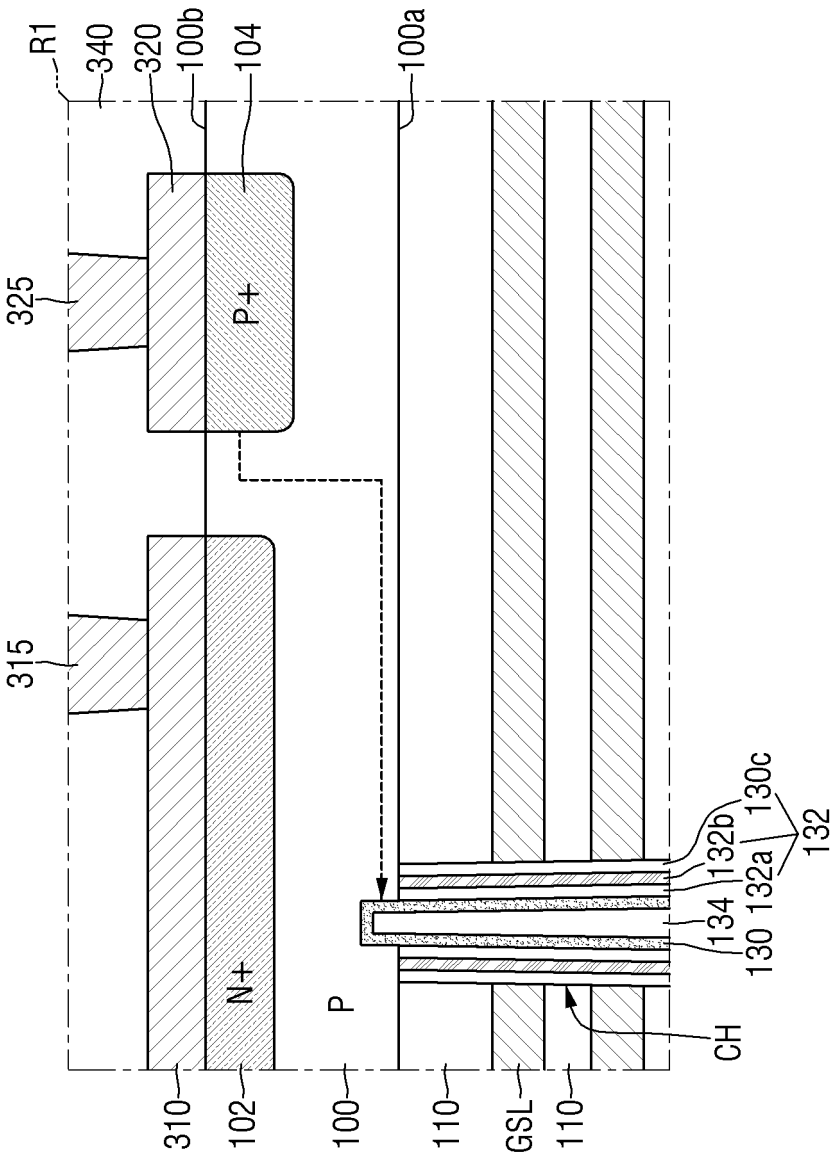

R1
340
320
100b
104
100a
325
P+
315
N+
P
310
102
100
110
GSL
110
CH
130
134
132a
132b
130c
132

FIG. 9

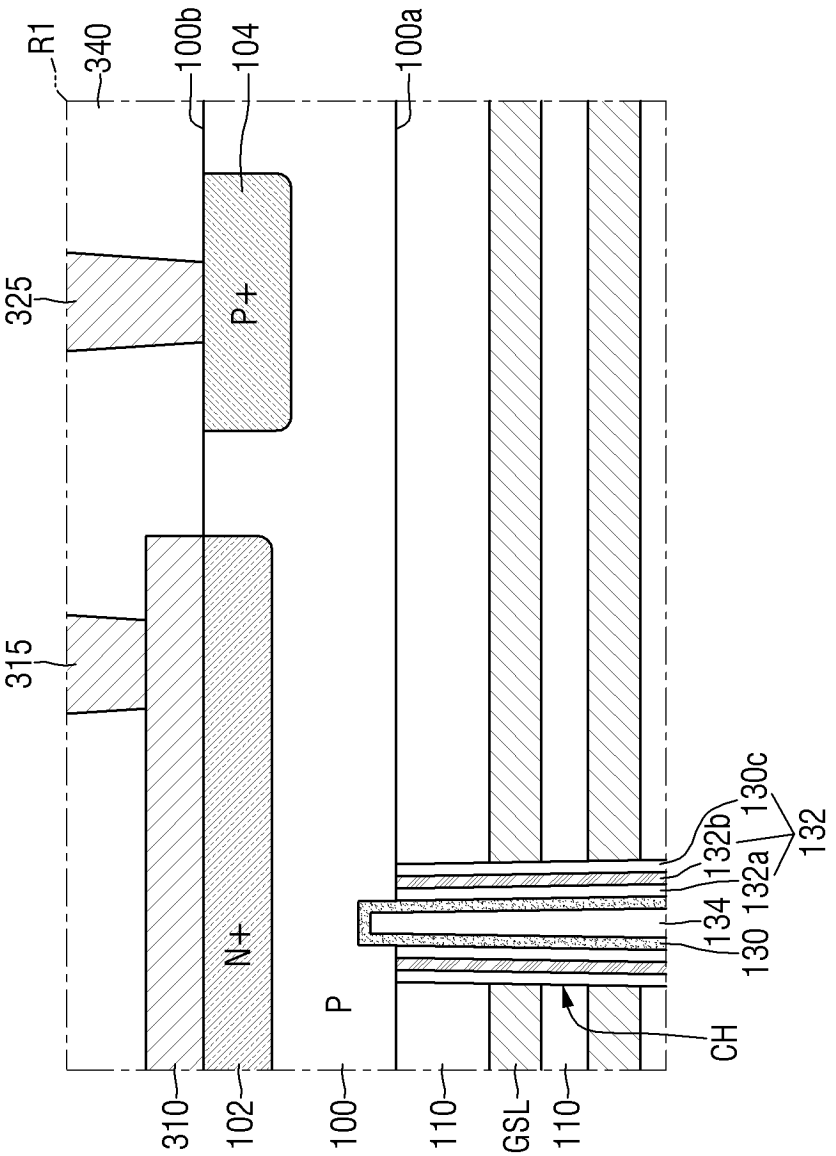

R1
340
100b
104
100a
325
P+
315
N+
P
CH
130c
132b
132a
132
134
130
310
102
100
110
GSL
110

FIG. 10

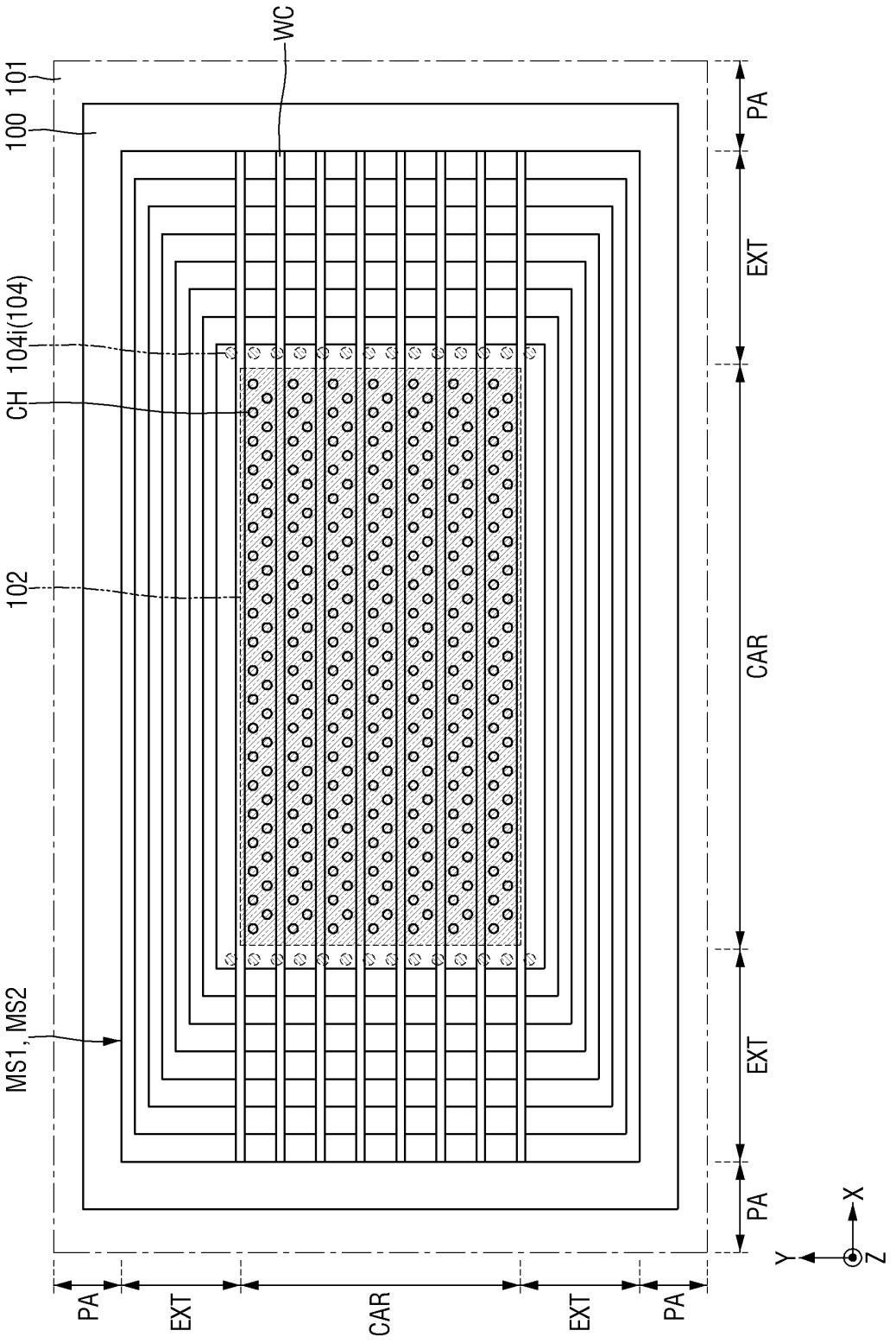

WC
100 101
CH 104i(104)
102
MS1, MS2
PA
EXT
CAR
EXT
PA
PA
EXT
CAR
EXT
PA
Y
X
Z

FIG. 11

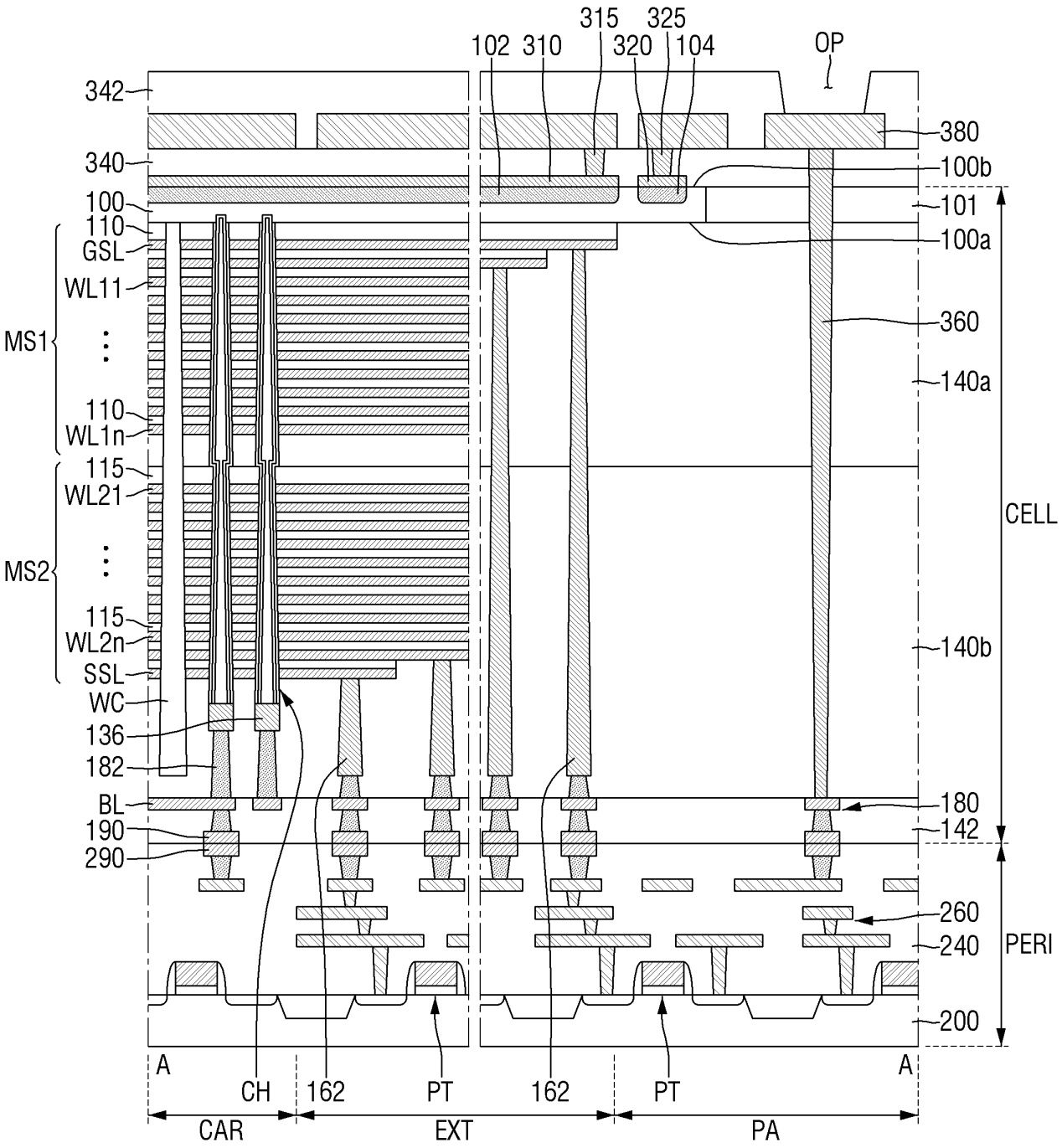

315
325
102
310
320
104
OP
342
380
340
100b
100
101
110
GSL
100a
WL11
360
MS1
140a
110
WL1n
115
WL21
CELL
MS2
115
WL2n
140b
SSL
WC
136
182
BL
180
190
142
290
260
240
PERI
200
A
A
CH
162
PT
162
PT
CAR
EXT
PA

FIG. 12

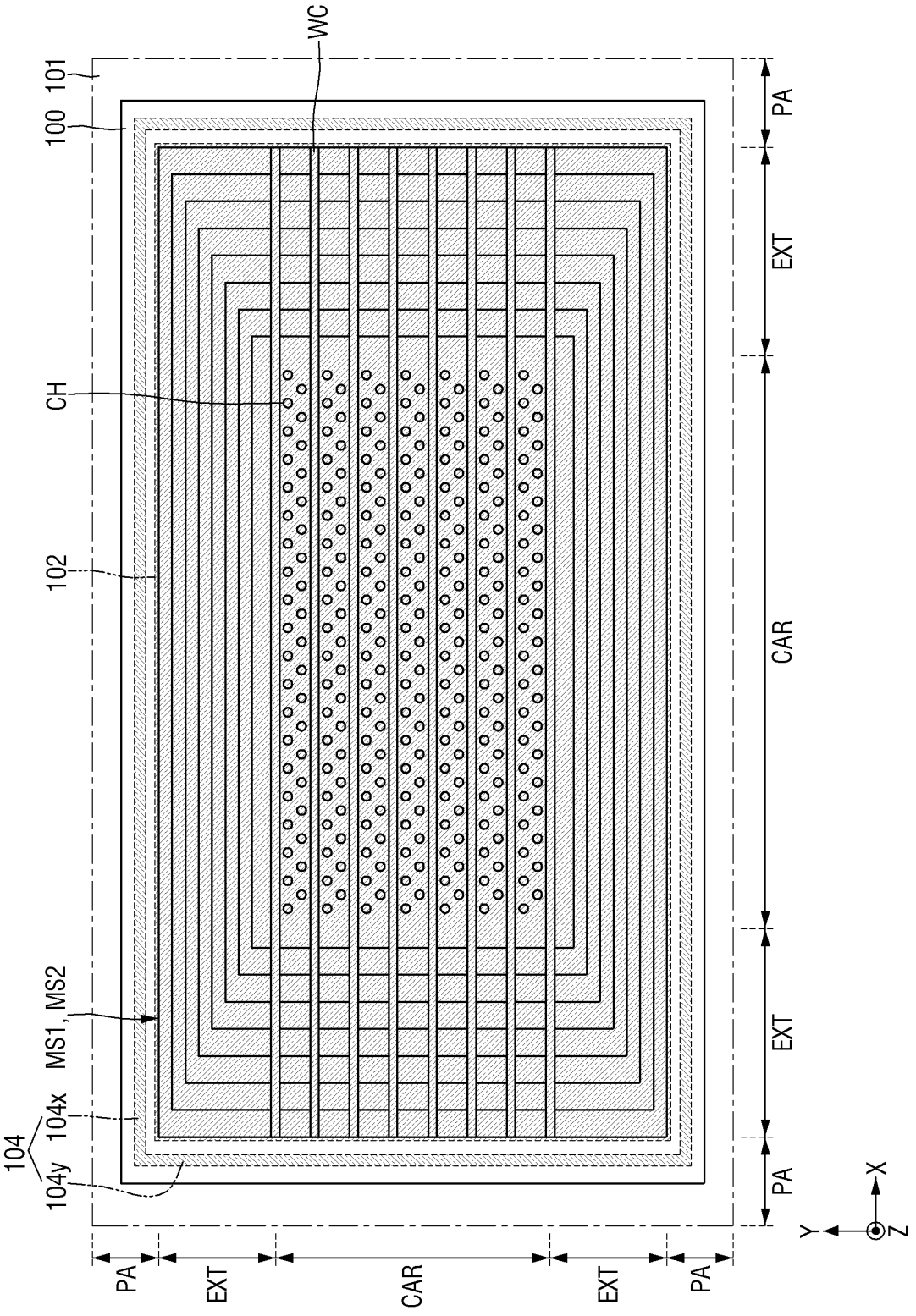

WC
101
100
CH
102
MS1, MS2
104x
104
104y
PA
EXT
CAR
EXT
PA
PA
EXT
CAR
EXT
PA
X
Y
Z

FIG. 13

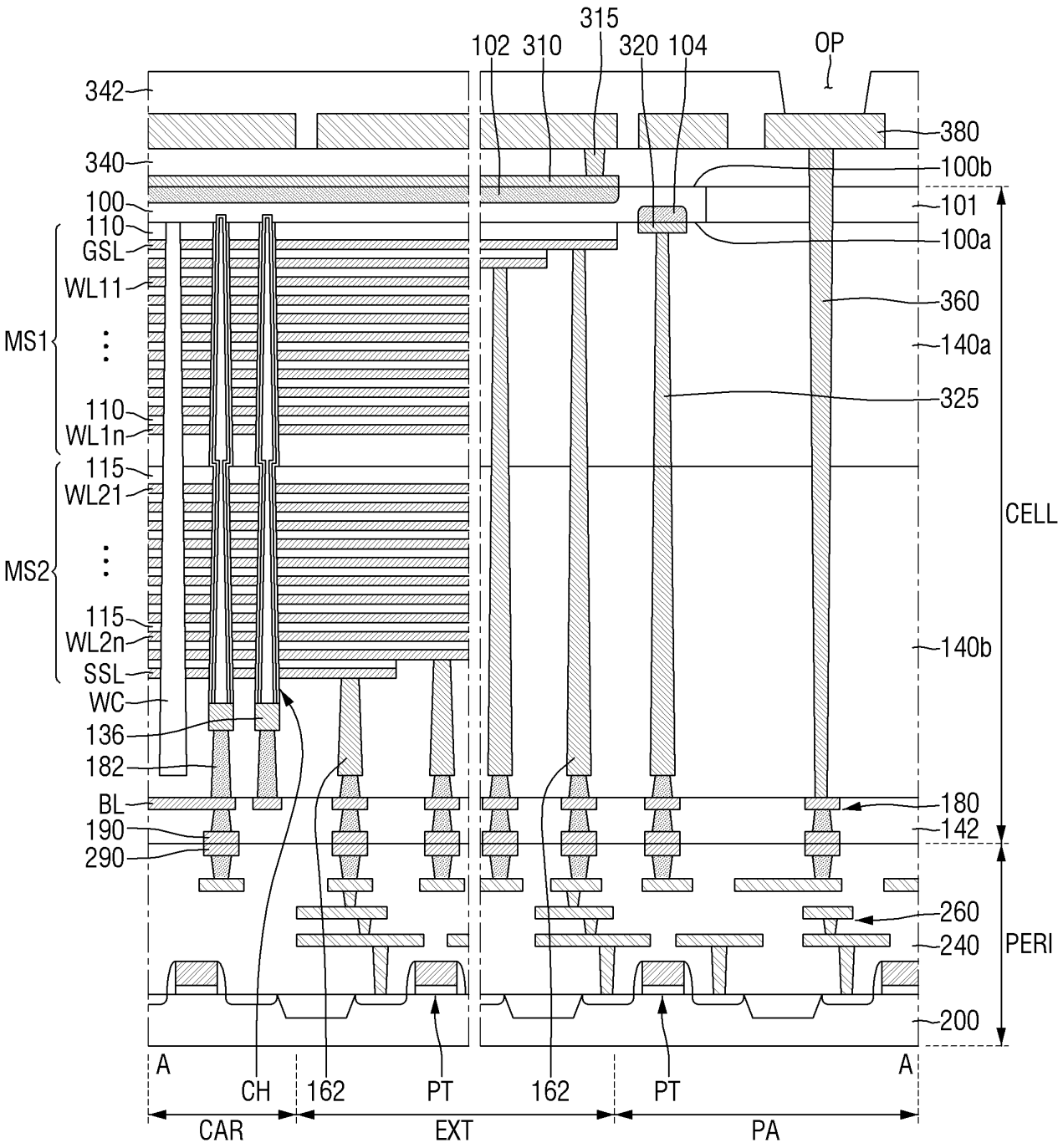

315
102
310
320
104
OP
342
380
340
100b
100
101
110
GSL
100a
WL11
360
MS1
140a
325
110
WL1n
115
WL21
CELL
MS2
115
WL2n
140b
SSL
WC
136
182
BL
180
190
142
290
260
240
PERI
200
A
CH
162
PT
162
PT
A
CAR
EXT
PA

FIG. 14

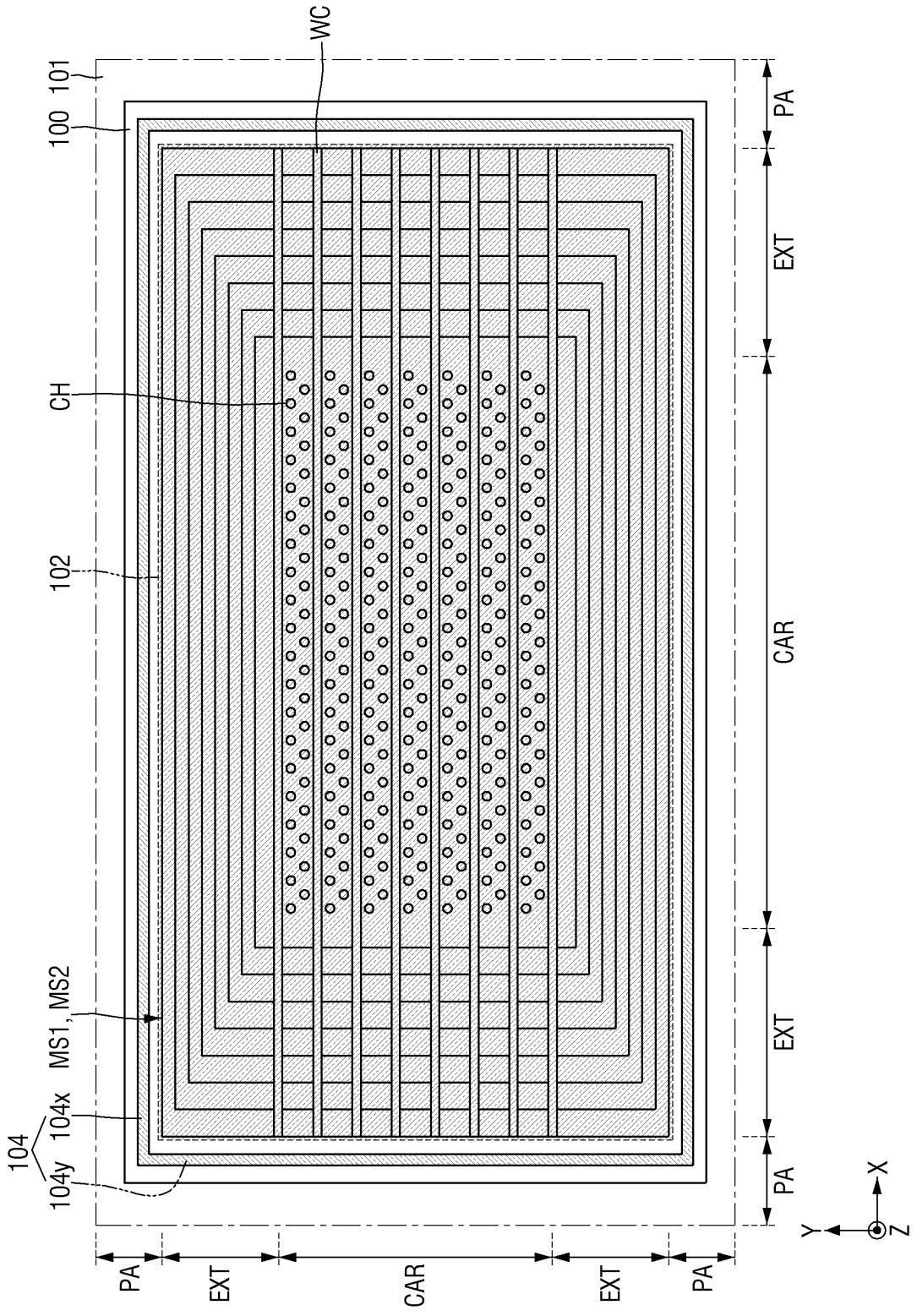

WC
101
100
CH
102
MS1, MS2
104
104x
104y
PA
EXT
CAR
EXT
PA
PA
EXT
CAR
EXT
PA
X
Y
Z

FIG. 15

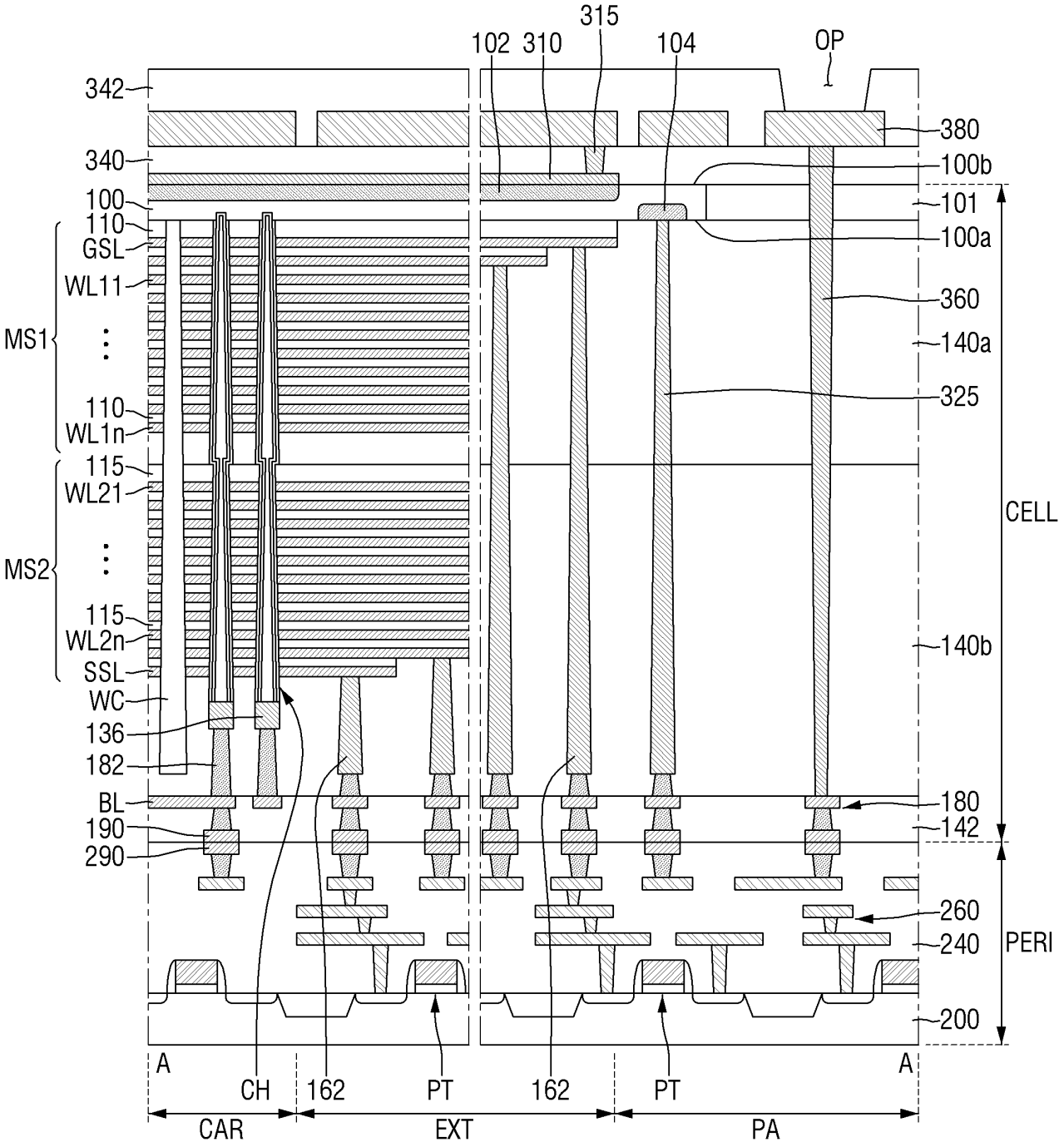

315
102
310
104
OP
342
380
340
100b
100
101
110
GSL
100a
WL11
360
MS1
140a
110
325
WL1n
115
WL21
CELL
MS2
115
140b
WL2n
SSL
WC
136
182
180
BL
142
190
290
260
240
PERI
200
A
CH
162
PT
162
PT
A
CAR
EXT
PA

FIG. 16

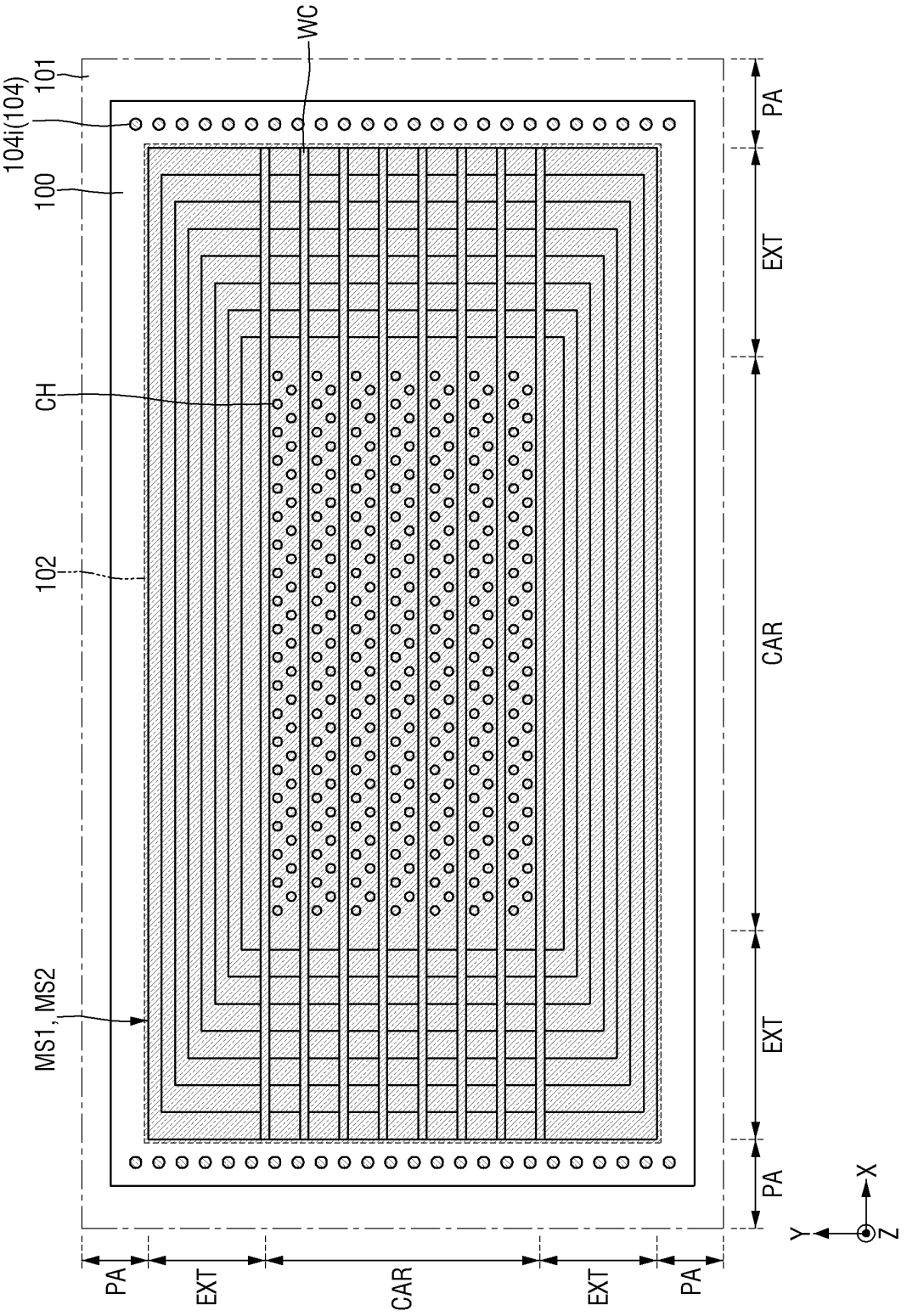

WC
101
104i(104)
100
CH
102
MS1, MS2
PA
EXT
CAR
EXT
PA
PA
EXT
CAR
EXT
PA
X
Y
Z

FIG. 17

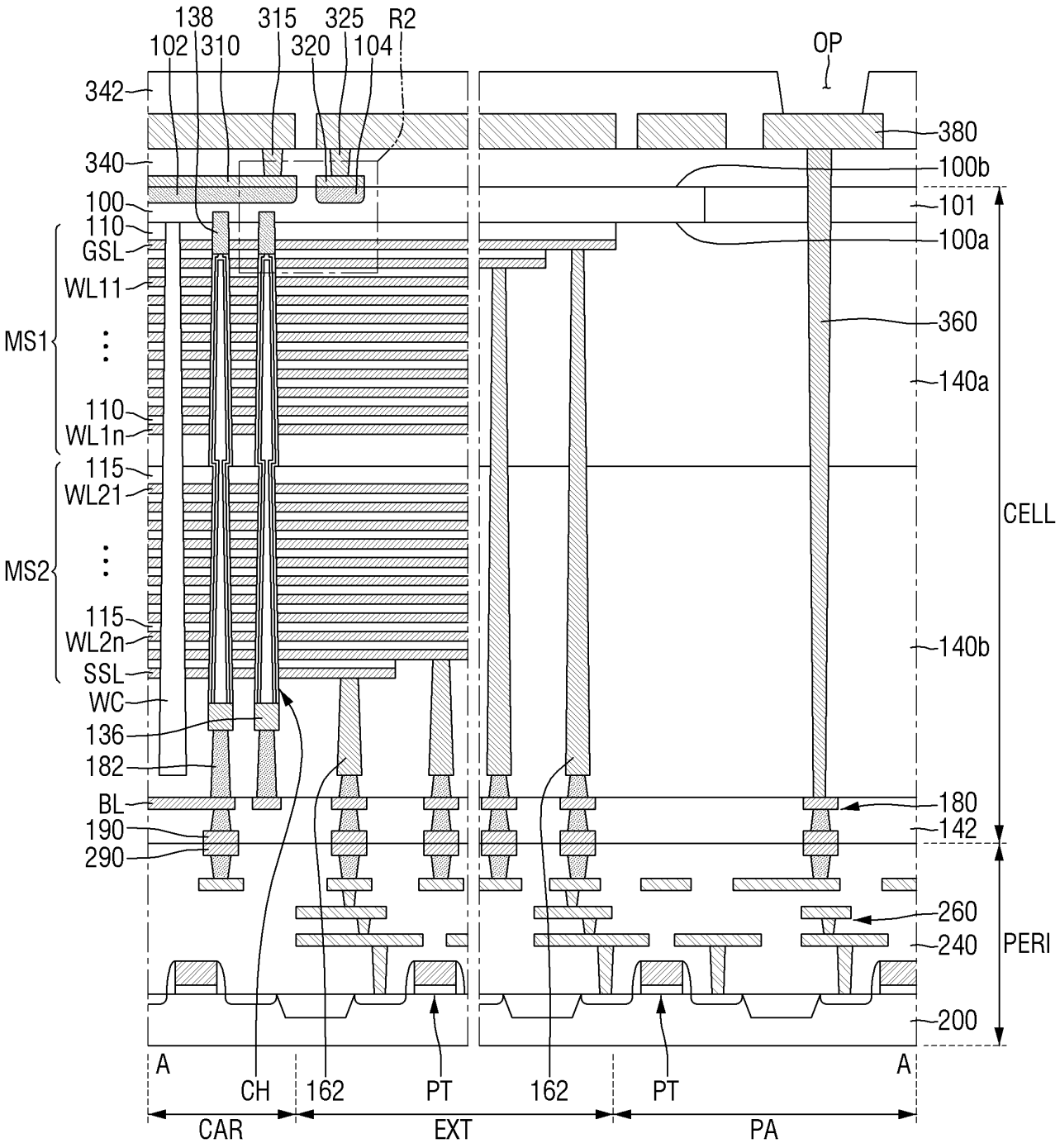

138
315
325
R2
102
310
320
104
OP
342
380
340
100b
100
101
110
GSL
100a
WL11
MS1
360
140a
110
WL1n
115
WL21
CELL
MS2
115
WL2n
140b
SSL
WC
136
182
BL
180
190
142
290
260
240
PERI
200
A
CH
162
PT
162
PT
A
CAR
EXT
PA

FIG. 18

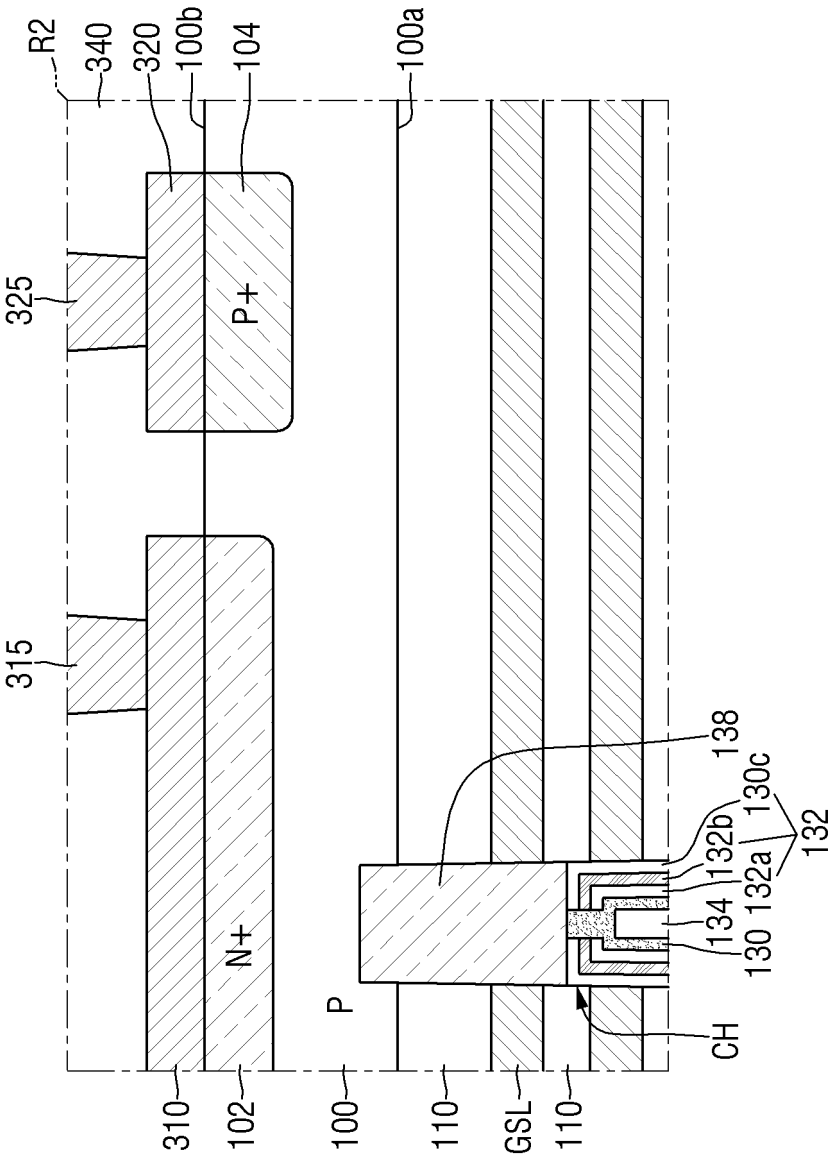

R2
340
320
100b
104
100a
325
P+
315
N+
P
138
130c
132b
132a
132
134
130
CH
310
102
100
110
GSL
110

FIG. 19

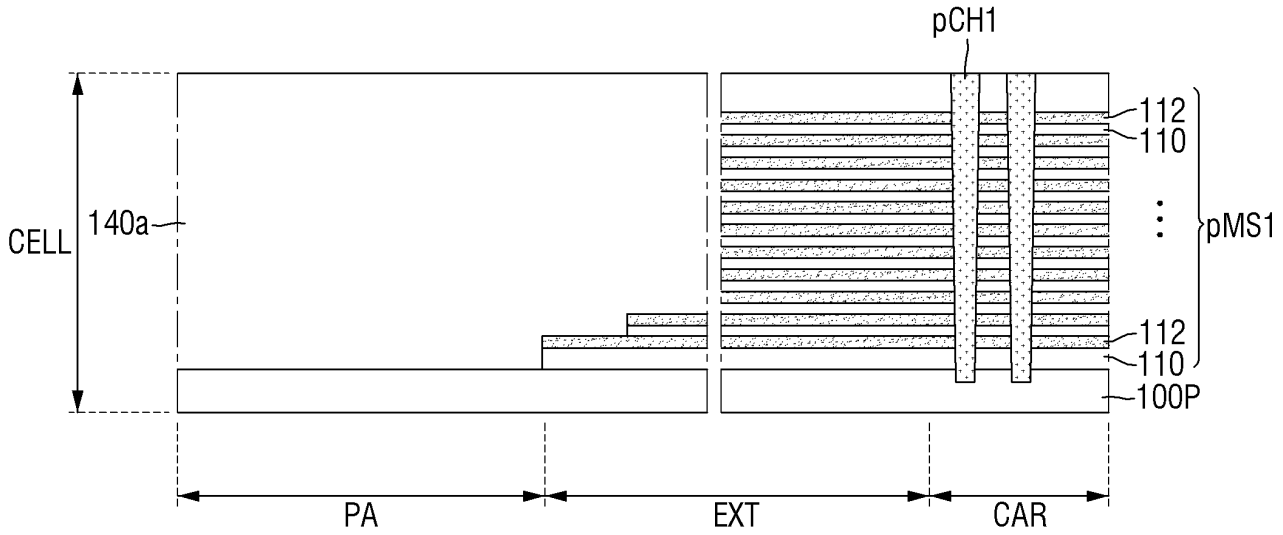


FIG. 20

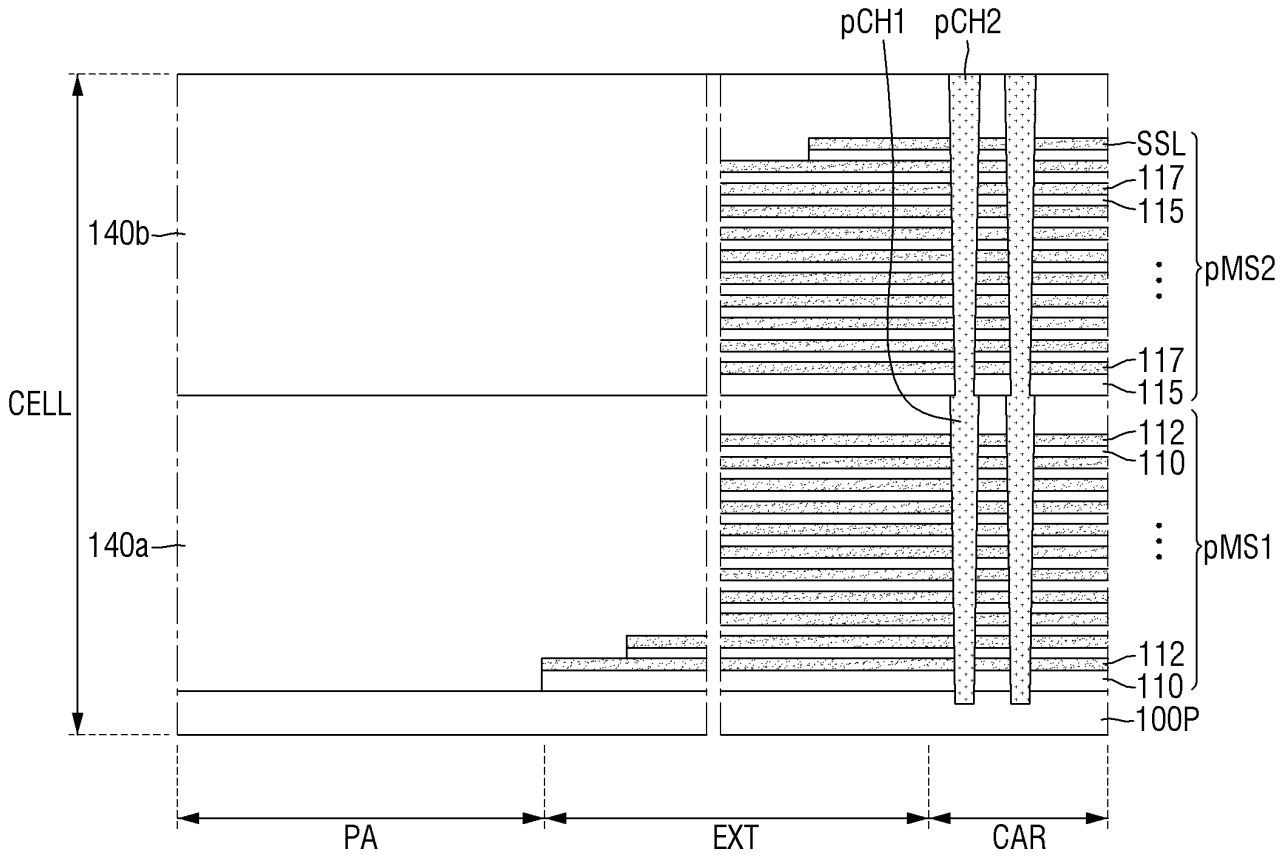

pCH1
pCH2
SSL
117
115
pMS2
117
115
112
110
pMS1
112
110
100P
140b
140a
CELL
PA
EXT
CAR

FIG. 21

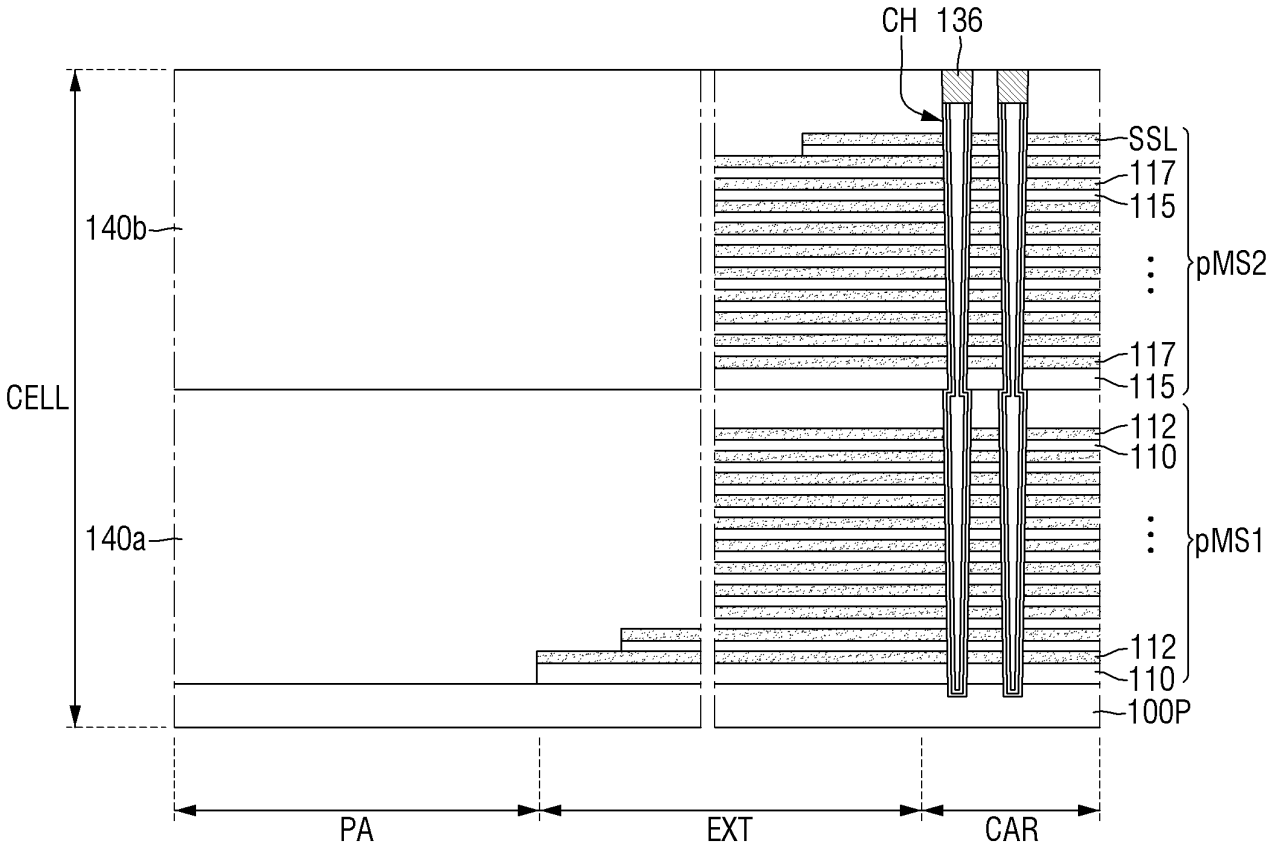

CH
136
SSL
117
115
pMS2
117
115
112
110
pMS1
112
110
100P
140b
CELL
140a
PA
EXT
CAR

FIG. 22

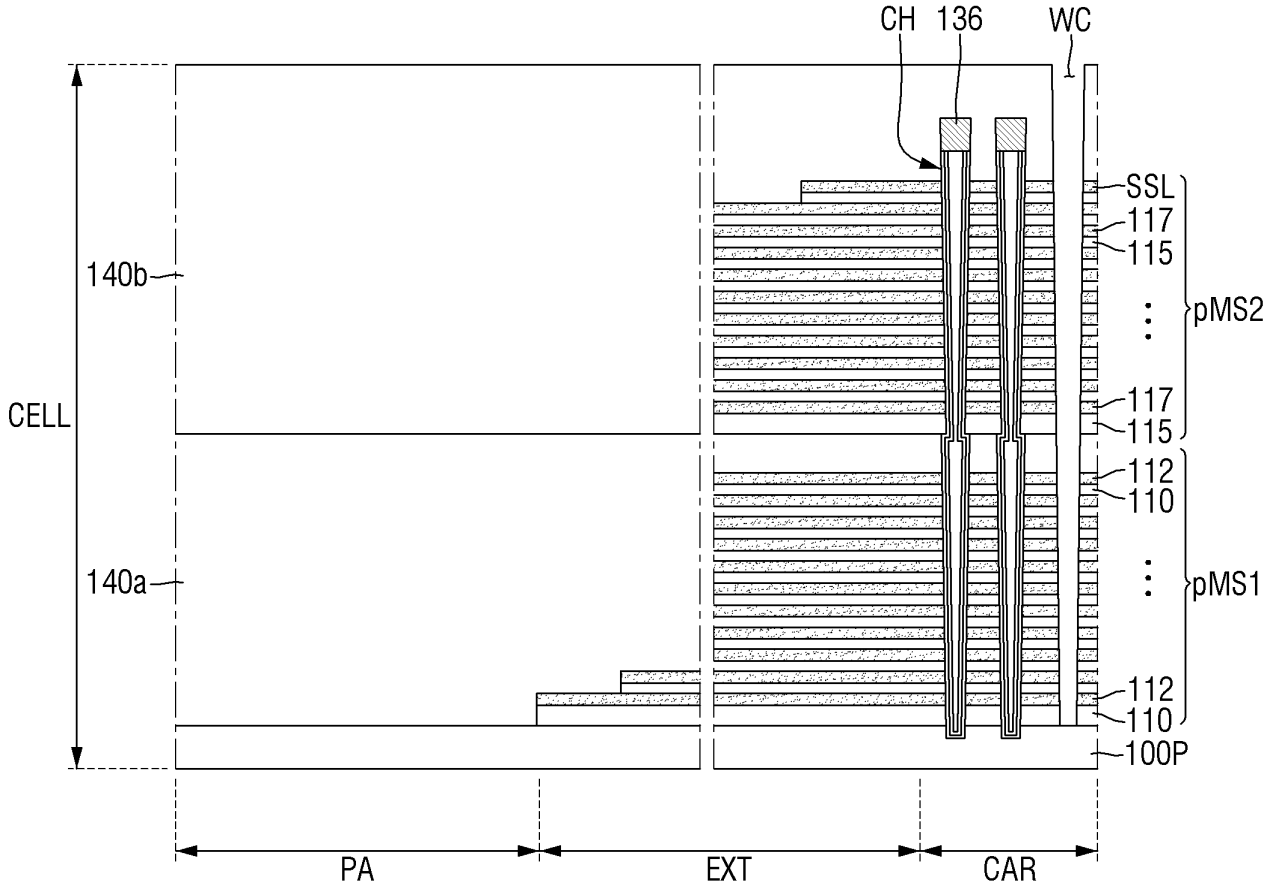

CH
136
WC
SSL
117
115
pMS2
117
115
112
110
pMS1
112
110
100P
140b
140a
CELL
PA
EXT
CAR

FIG. 23

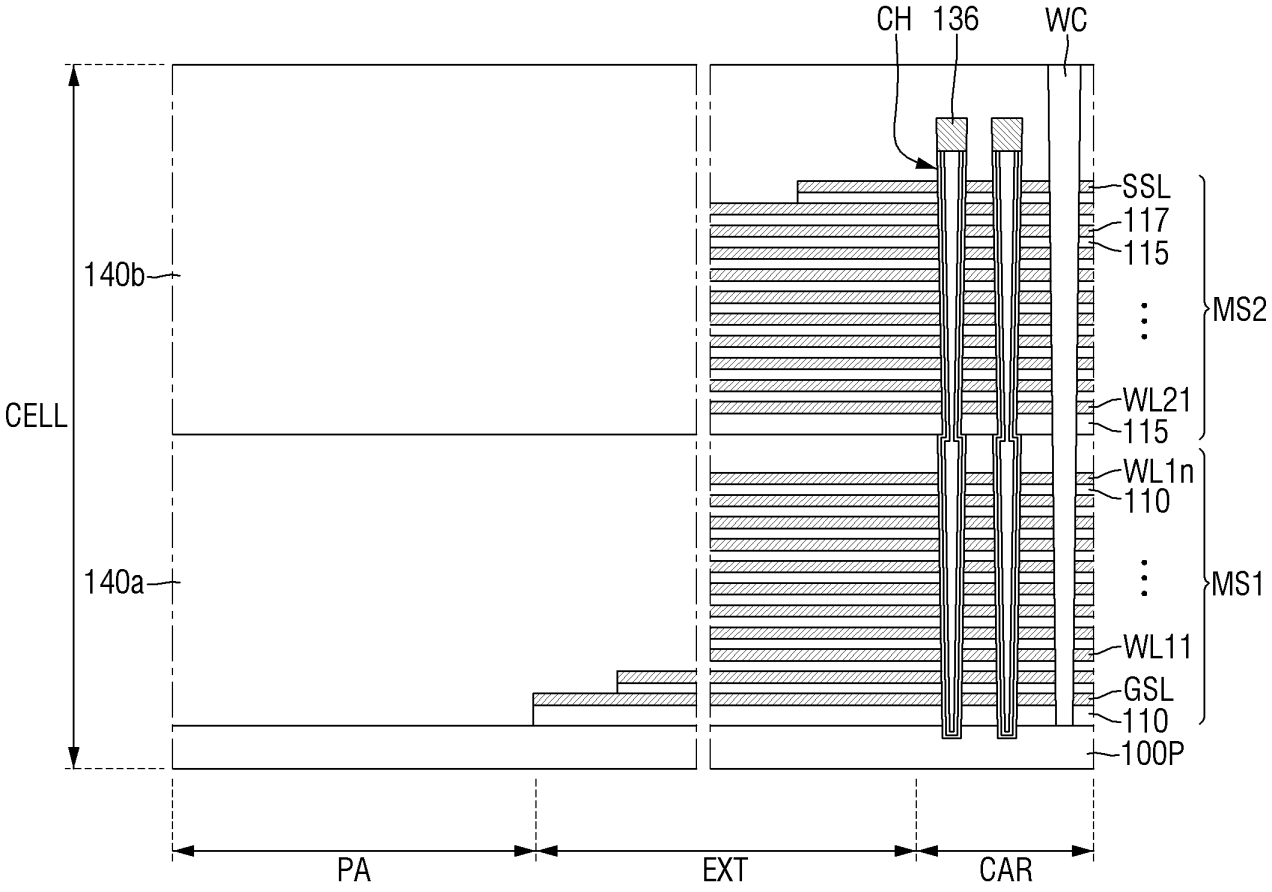

CH
136
WC
SSL
117
115
MS2
140b
CELL
WL21
115
WL1n
110
140a
MS1
WL11
GSL
110
100P
PA
EXT
CAR

FIG. 24

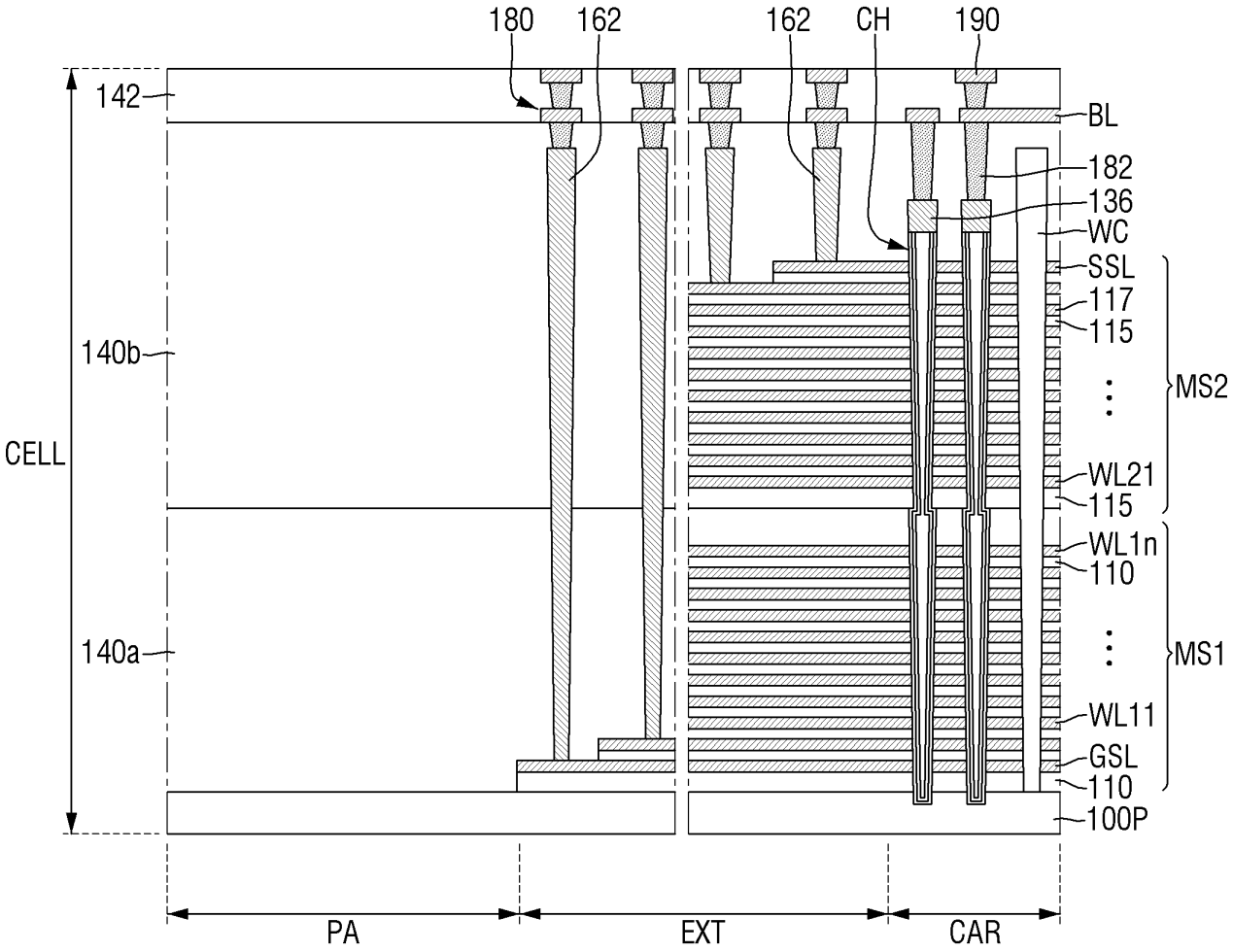

180
162
162
CH
190
142
BL
182
136
WC
SSL
117
115
140b
MS2
CELL
WL21
115
WL1n
110
140a
MS1
WL11
GSL
110
100P
PA
EXT
CAR

FIG. 25

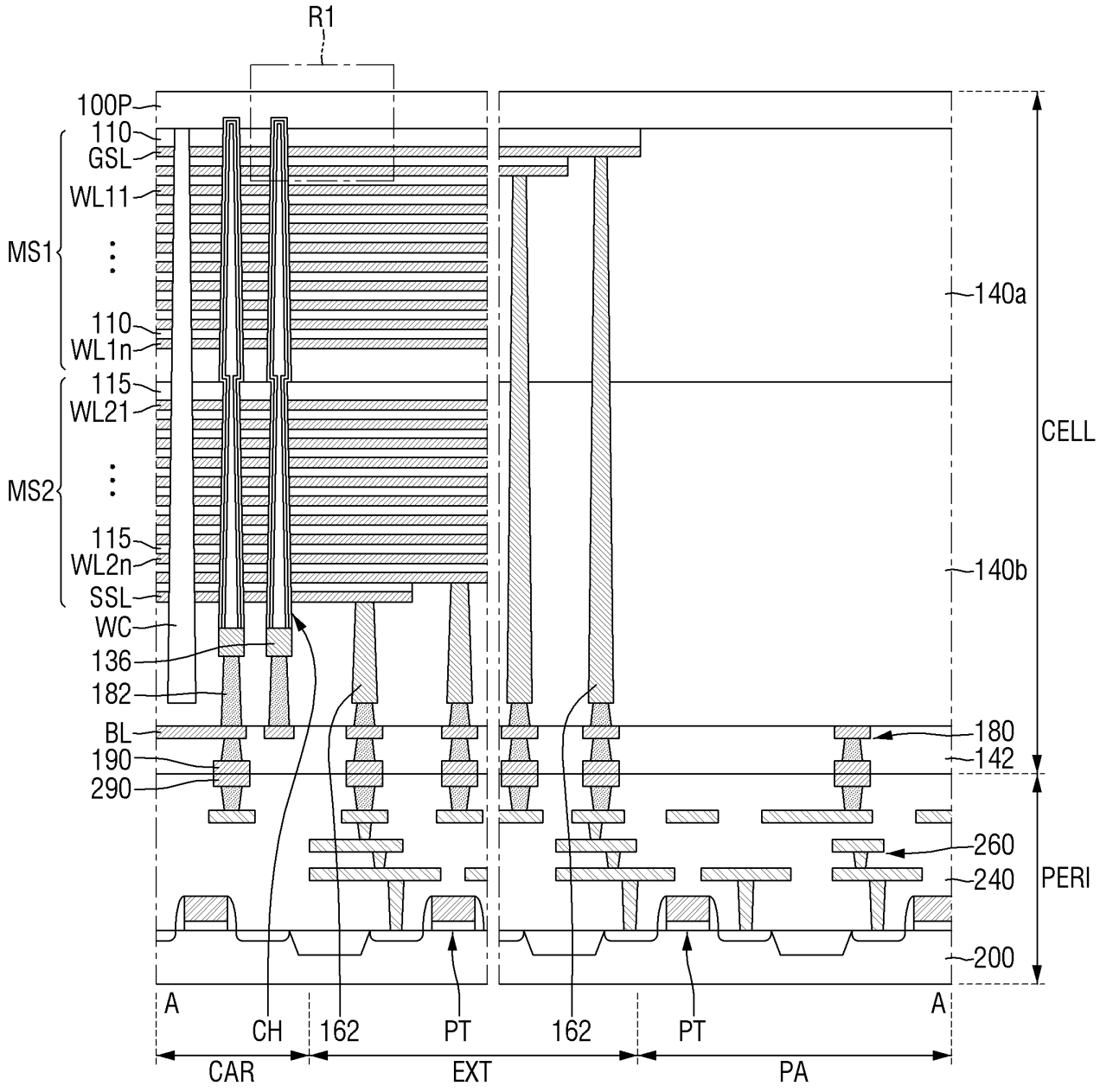

R1
100P
110
GSL
WL11
MS1
110
WL1n
115
WL21
MS2
115
WL2n
SSL
WC
136
182
BL
190
290
140a
CELL
140b
180
142
260
240
PERI
200
A
CH
162
PT
162
PT
A
CAR
EXT
PA

FIG. 26

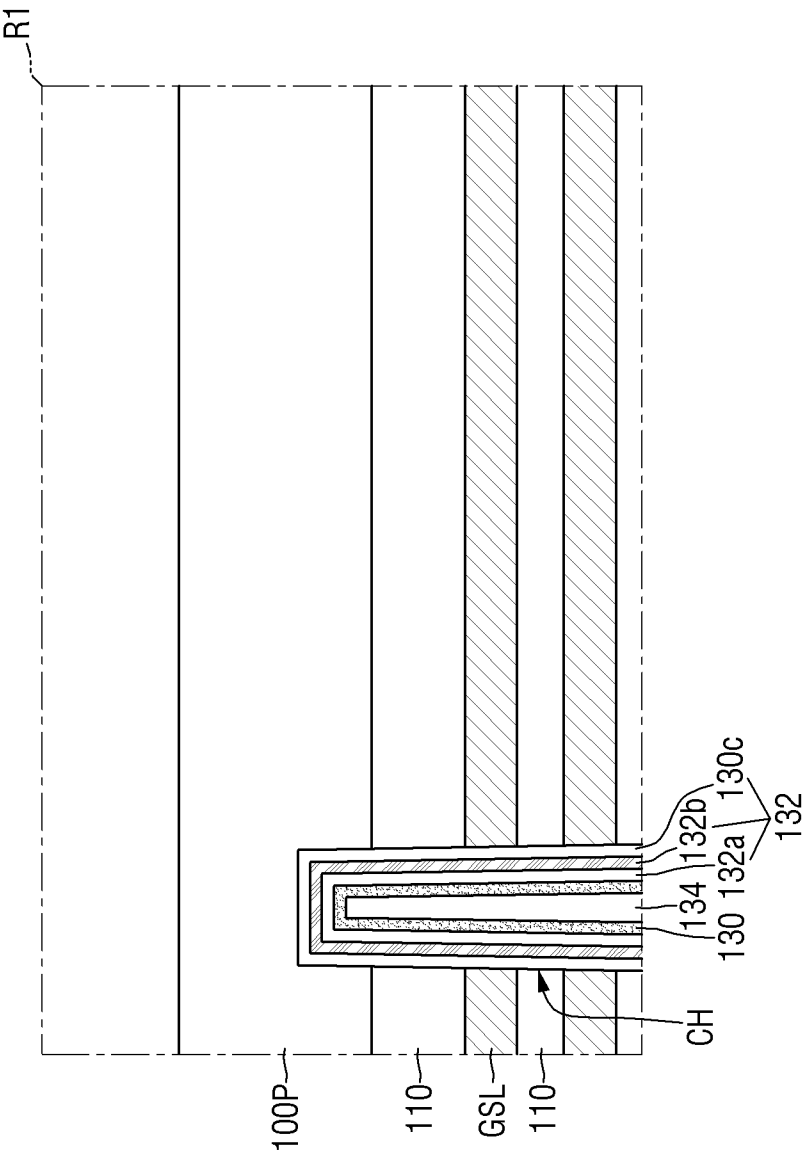


FIG. 27

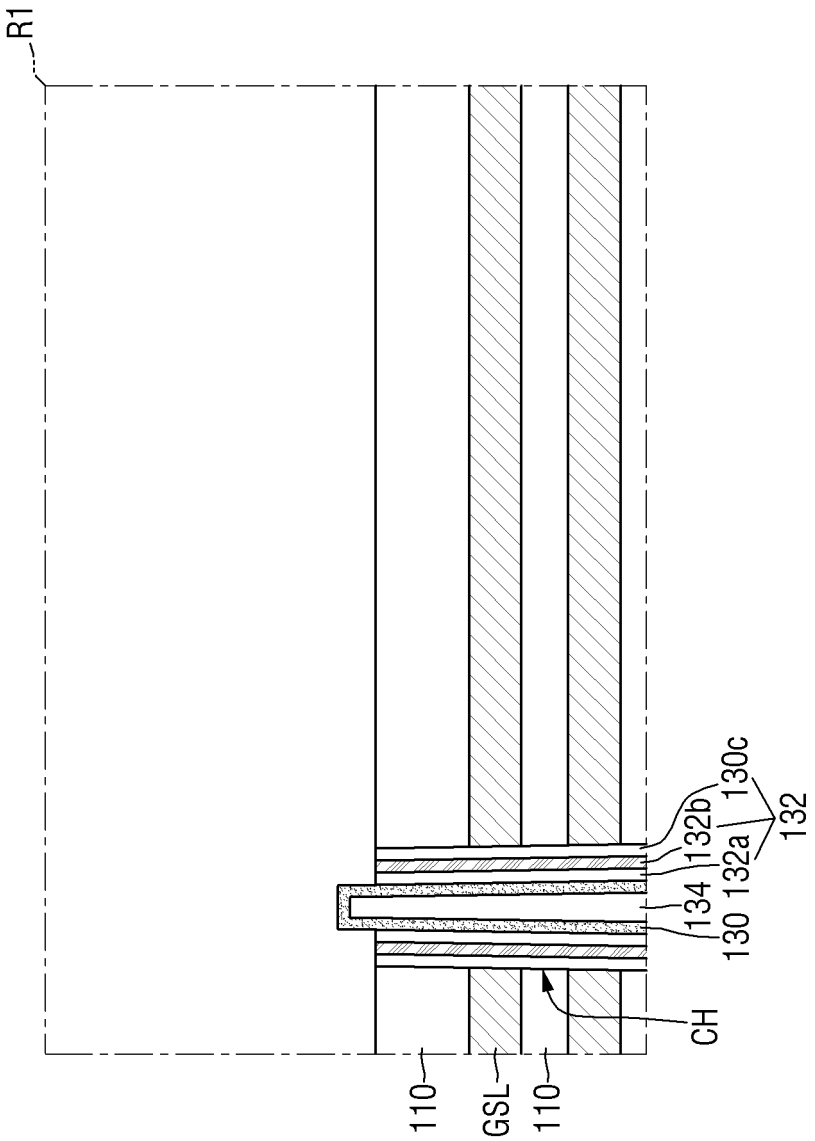


FIG. 28

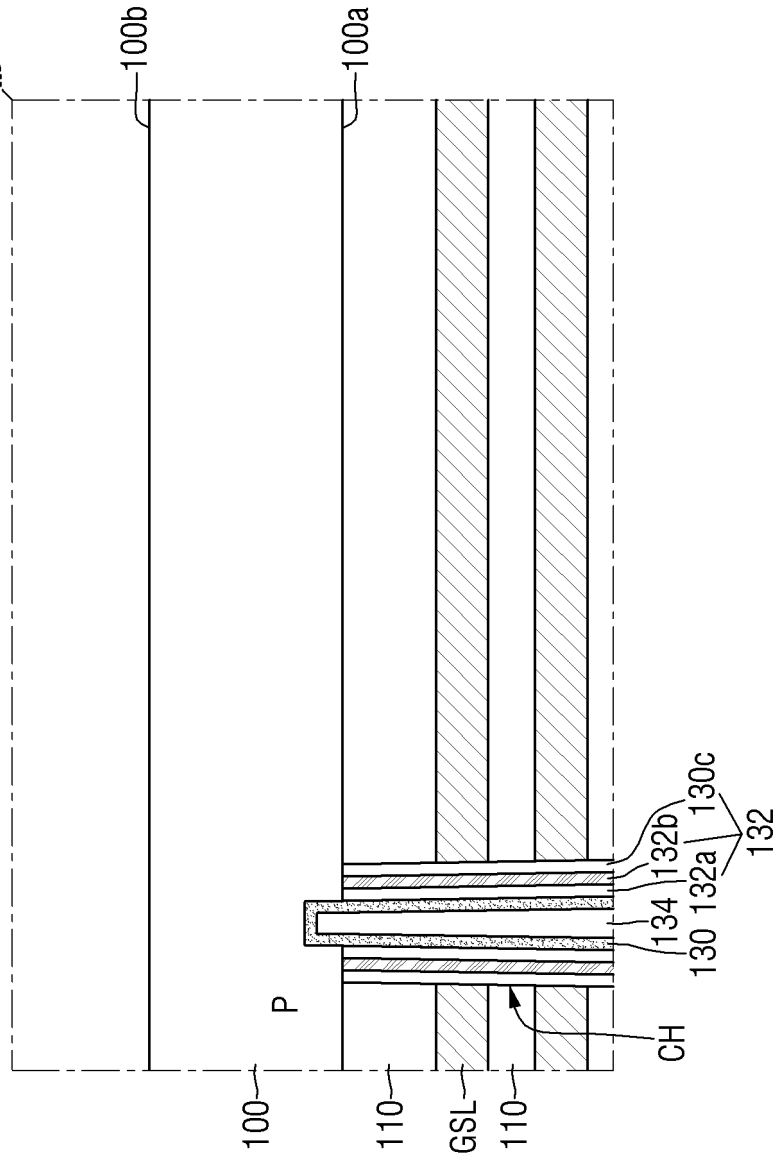


FIG. 29

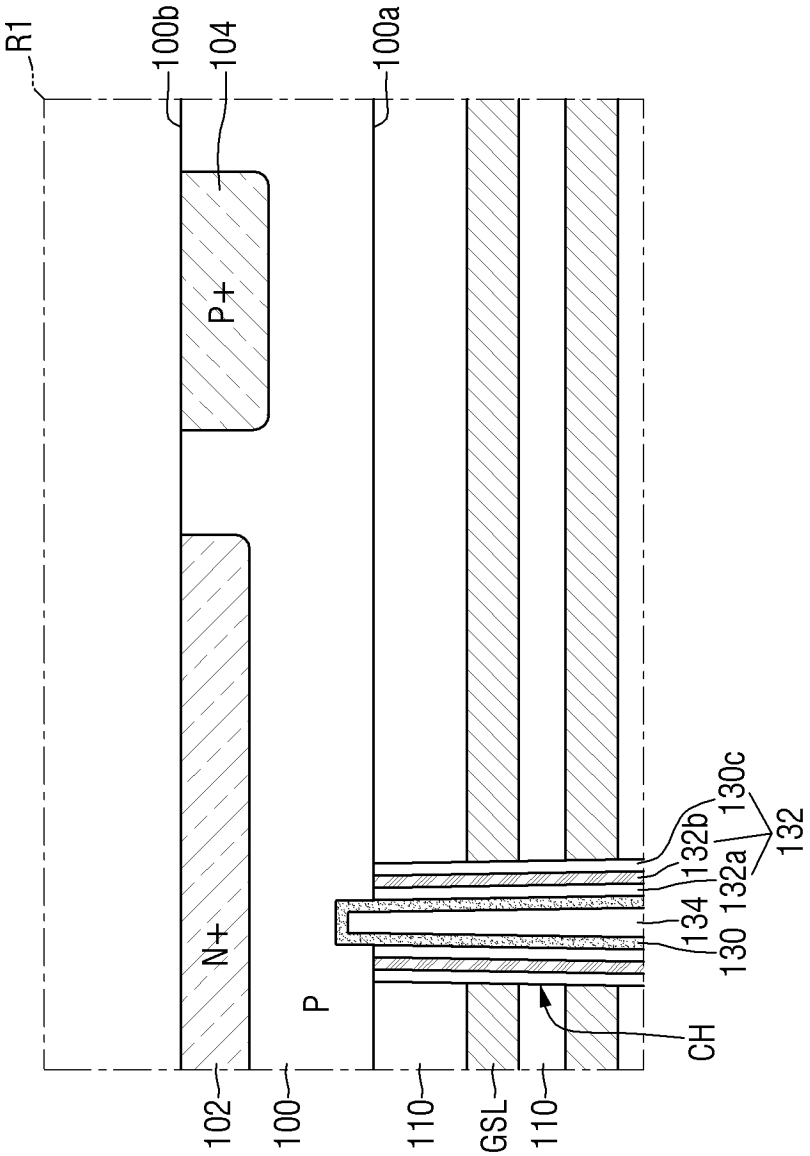

R1
100b
104
100a
P+
N+
P
CH
130c
132b
132a
132
134
130
102
100
110
GSL
110

FIG. 30

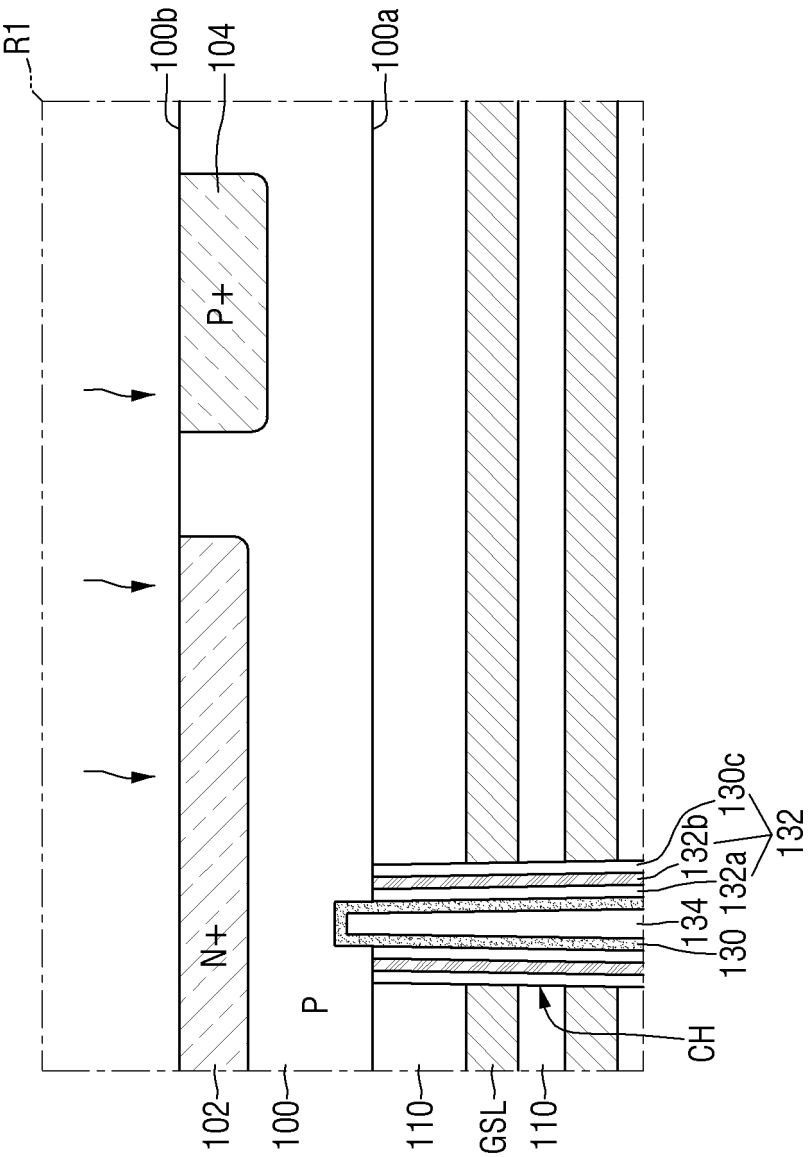

R1
100b
104
100a
P+
N+
P
102
100
110
GSL
110
CH
130
134
132a
132b
130c
132

FIG. 31

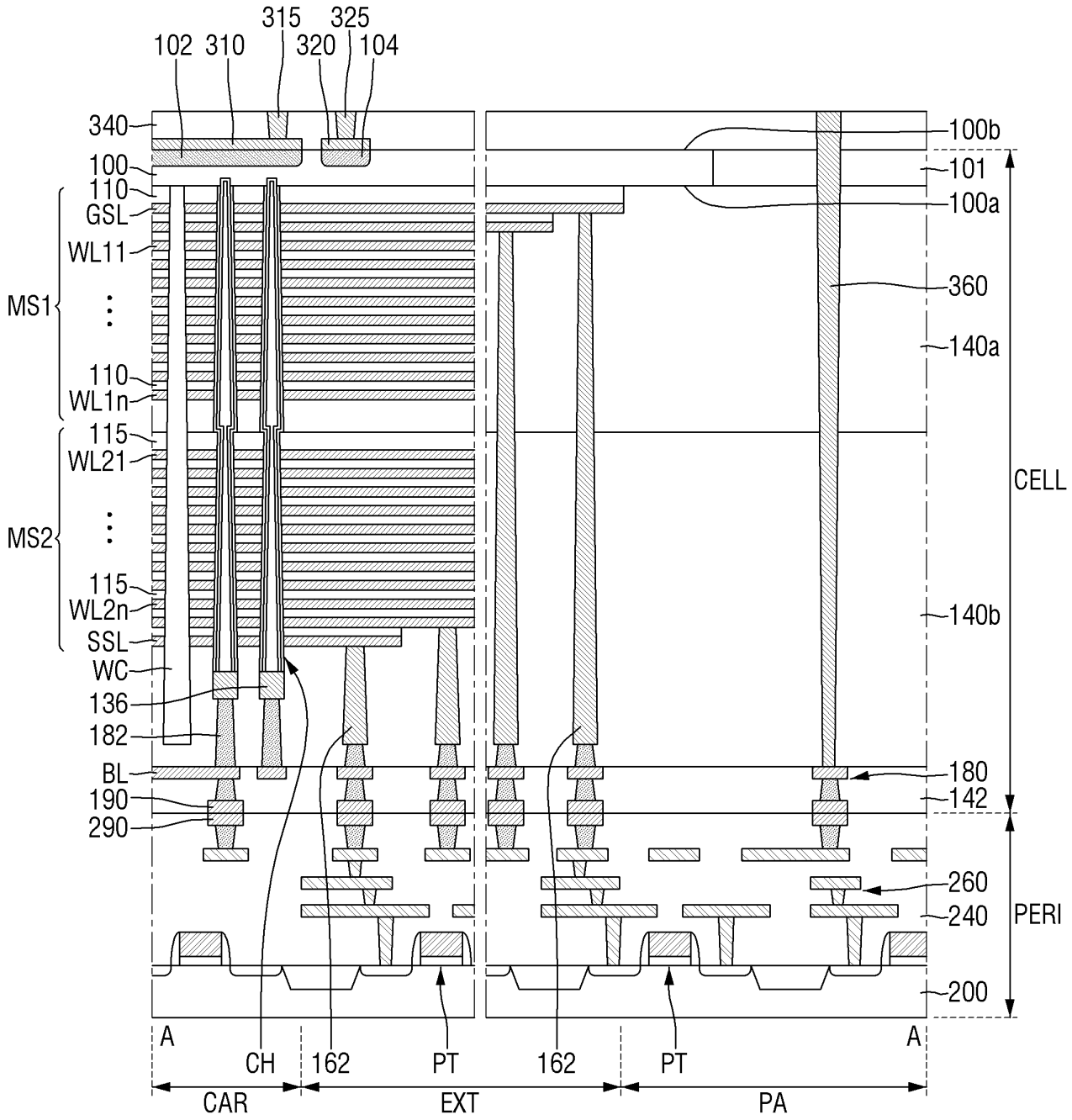

315
325
102
310
320
104
340
100
110
GSL
WL11
MS1
110
WL1n
115
WL21
MS2
115
WL2n
SSL
WC
136
182
BL
190
290
100b
101
100a
360
140a
CELL
140b
180
142
260
240
PERI
200
A
CH
162
PT
162
PT
A
CAR
EXT
PA

FIG. 32

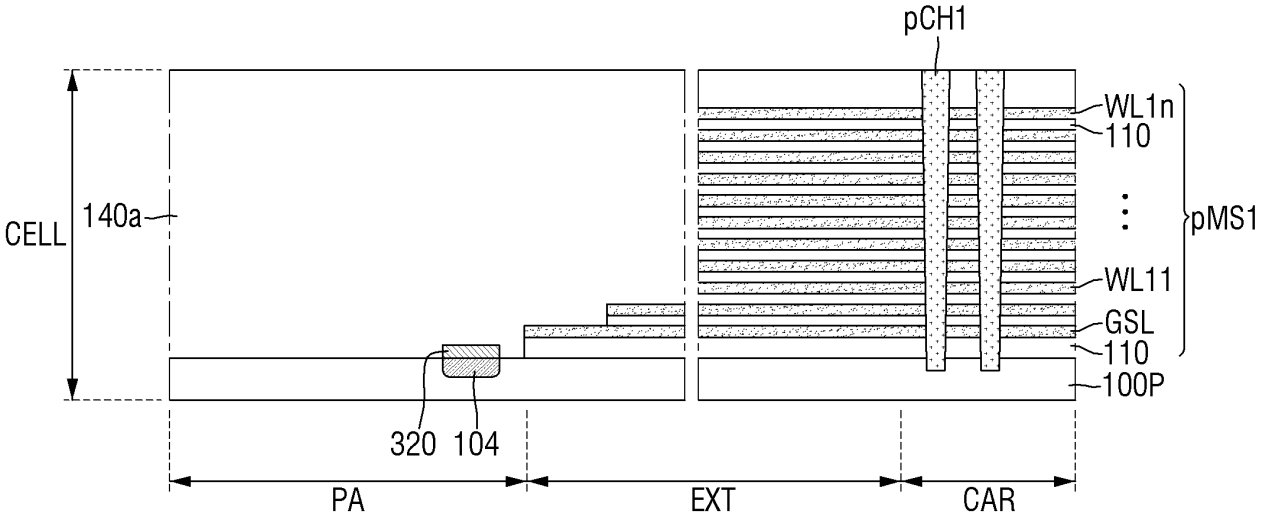

pCH1
WL1n
110
pMS1
WL11
GSL
110
100P
CELL
140a
320
104
PA
EXT
CAR

FIG. 33

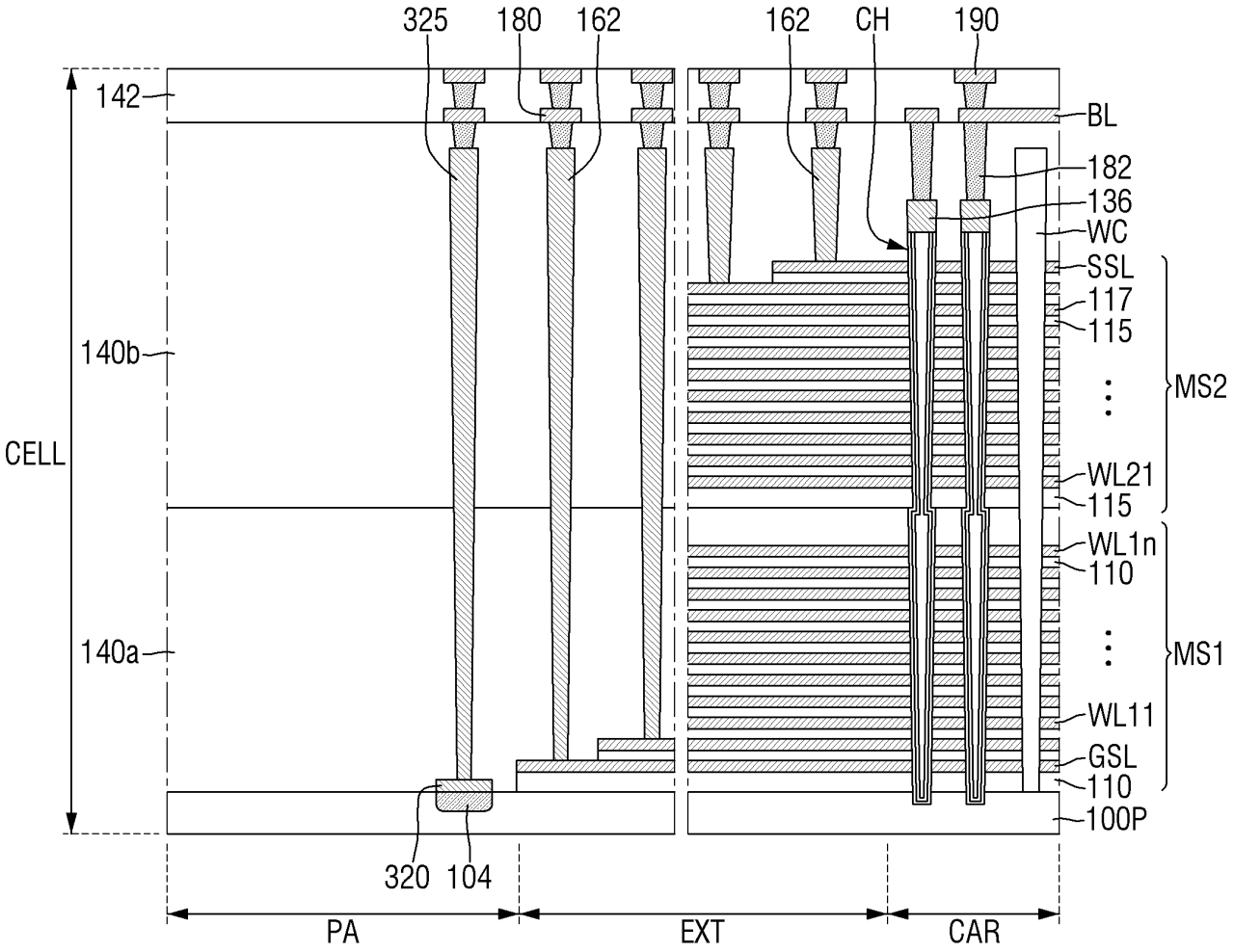

325
180
162
162
CH
190
142
BL
182
136
WC
SSL
117
115
140b
MS2
CELL
WL21
115
WL1n
110
140a
MS1
WL11
GSL
110
100P
320
104
PA
EXT
CAR

FIG. 34

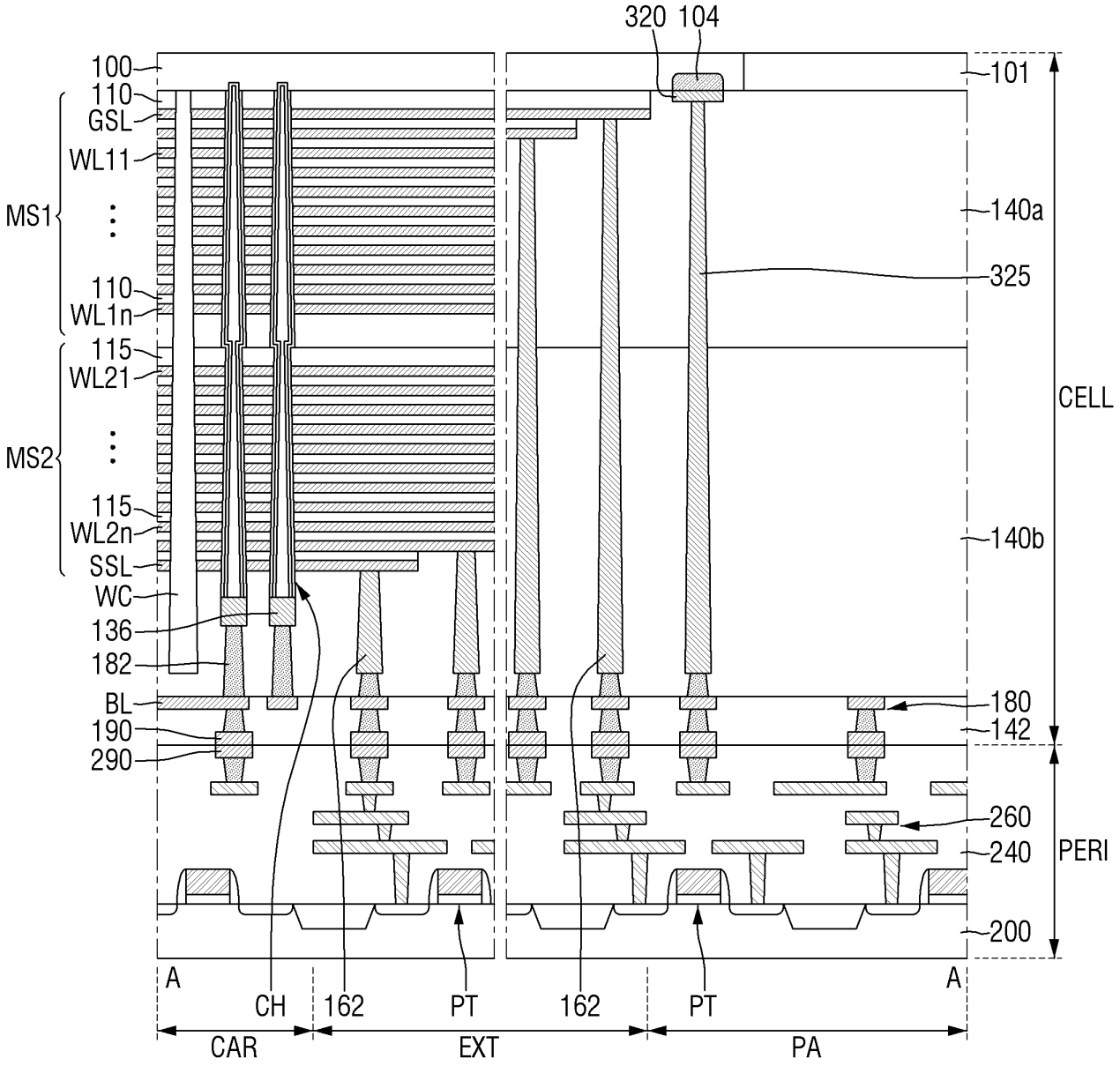

320
104
100
110
GSL
WL11
MS1
110
WL1n
115
WL21
MS2
115
WL2n
SSL
WC
136
182
BL
190
290
101
140a
325
CELL
140b
180
142
260
240
PERI
200
A
CH
162
PT
162
PT
A
CAR
EXT
PA

FIG. 35

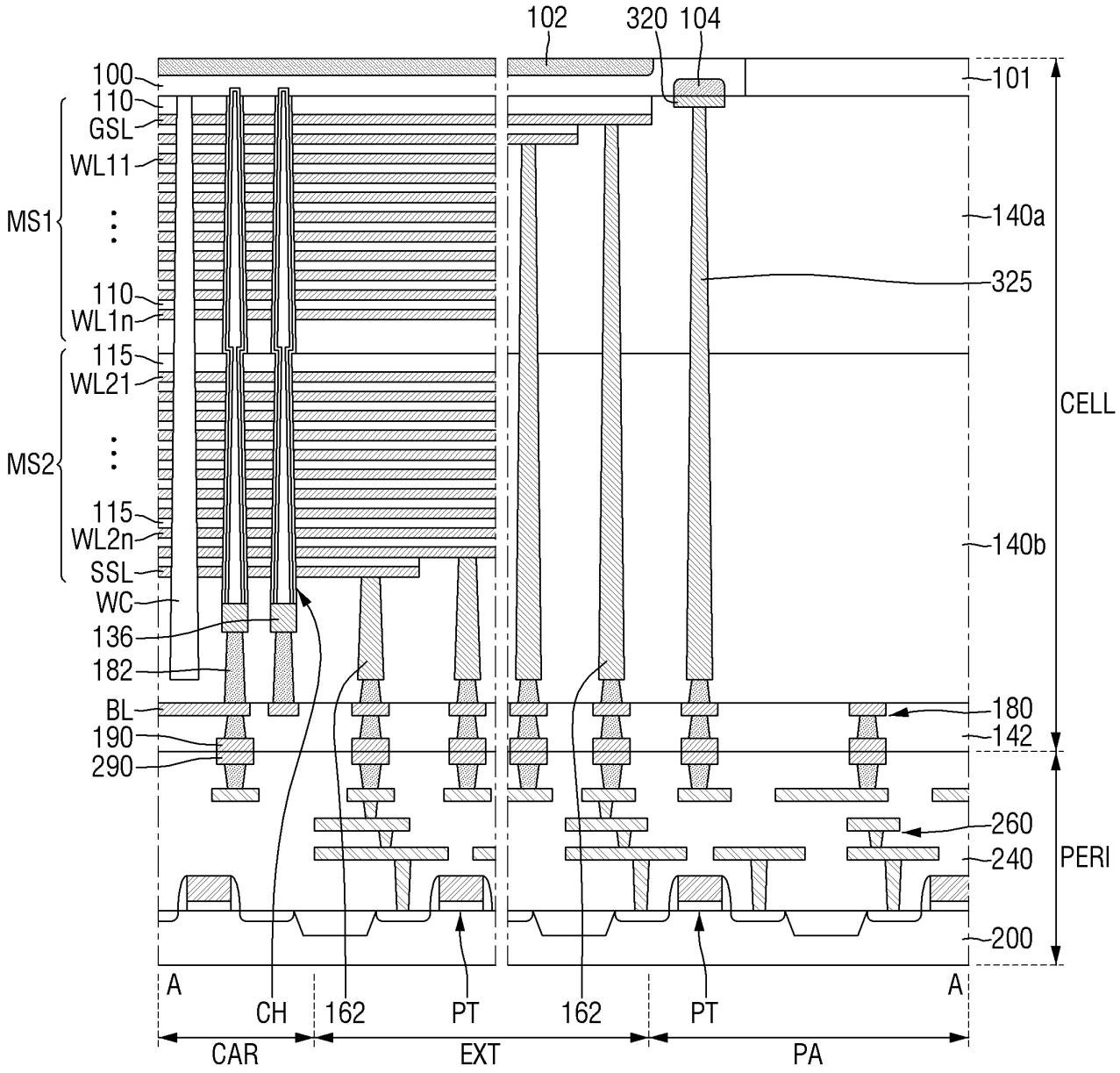

102
320
104
100
110
GSL
WL11
MS1
110
WL1n
115
WL21
MS2
115
WL2n
SSL
WC
136
182
BL
190
290
101
140a
325
CELL
140b
180
142
260
240
PERI
200
A
CH
162
PT
162
PT
A
CAR
EXT
PA

FIG. 36

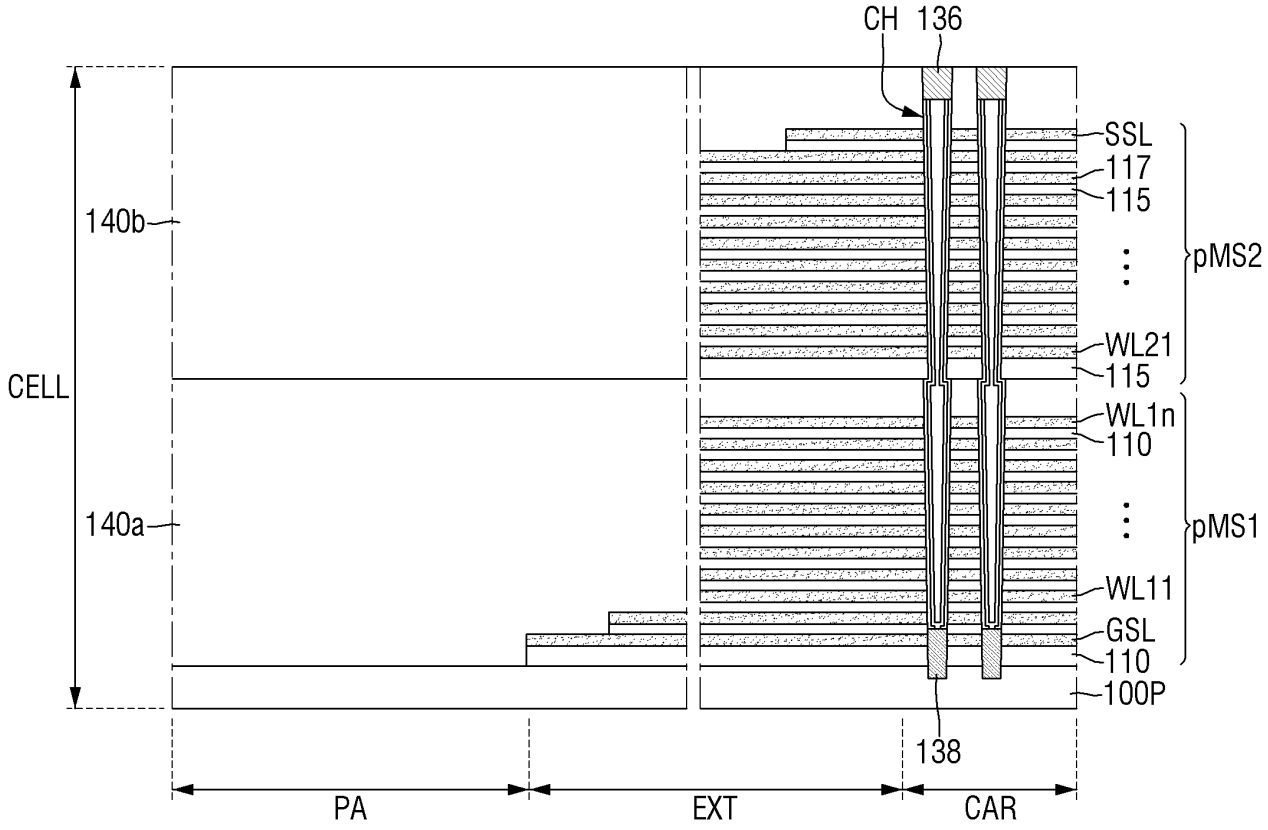

CH
136
SSL
117
115
pMS2
WL21
115
WL1n
110
pMS1
WL11
GSL
110
100P
138
140b
140a
CELL
PA
EXT
CAR

FIG. 37

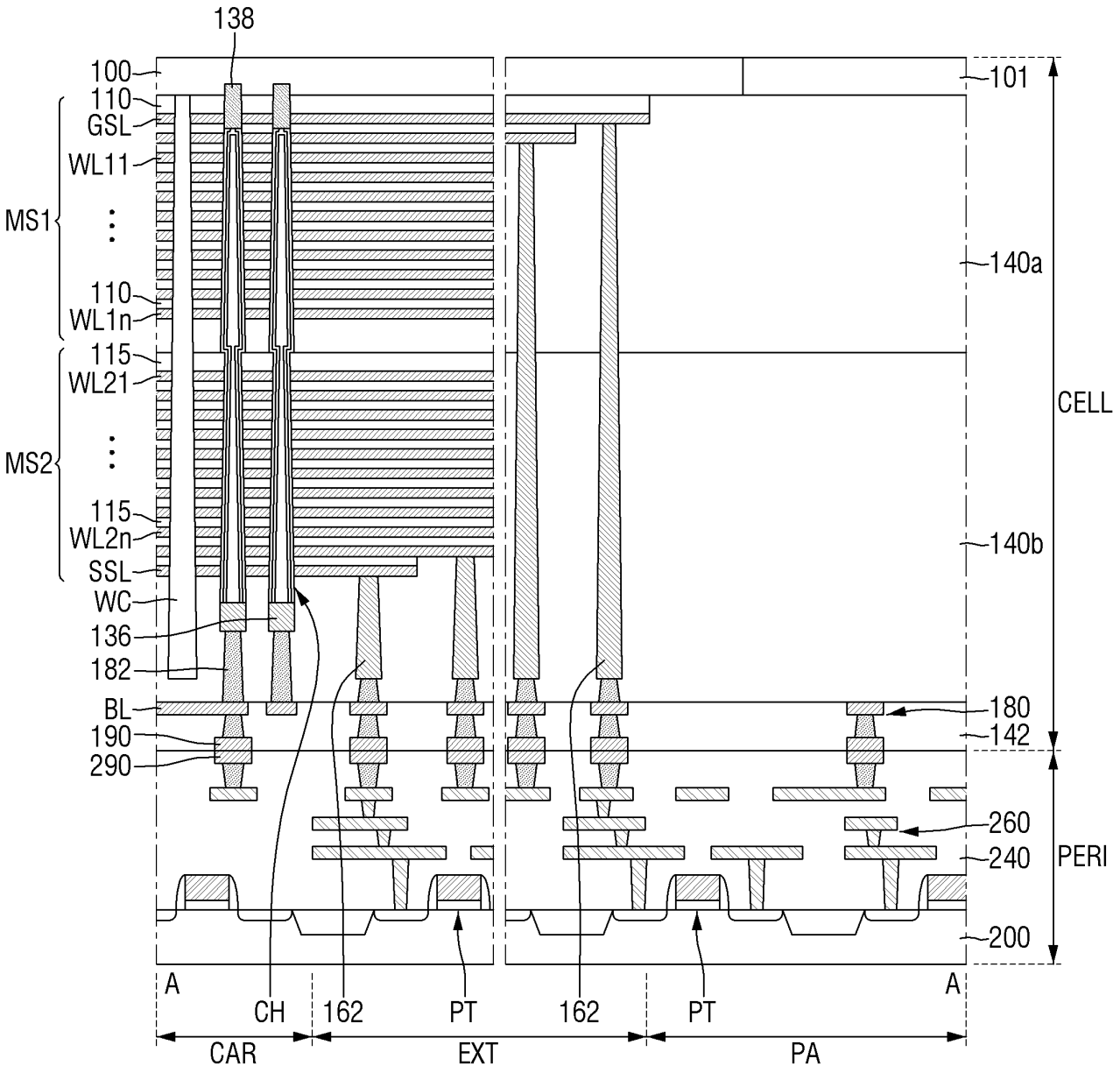

138
100
110
GSL
WL11
MS1
110
WL1n
115
WL21
MS2
115
WL2n
SSL
WC
136
182
BL
190
290
101
140a
CELL
140b
180
142
260
240
PERI
200
A
CH
162
PT
162
PT
A
CAR
EXT
PA

FIG. 38

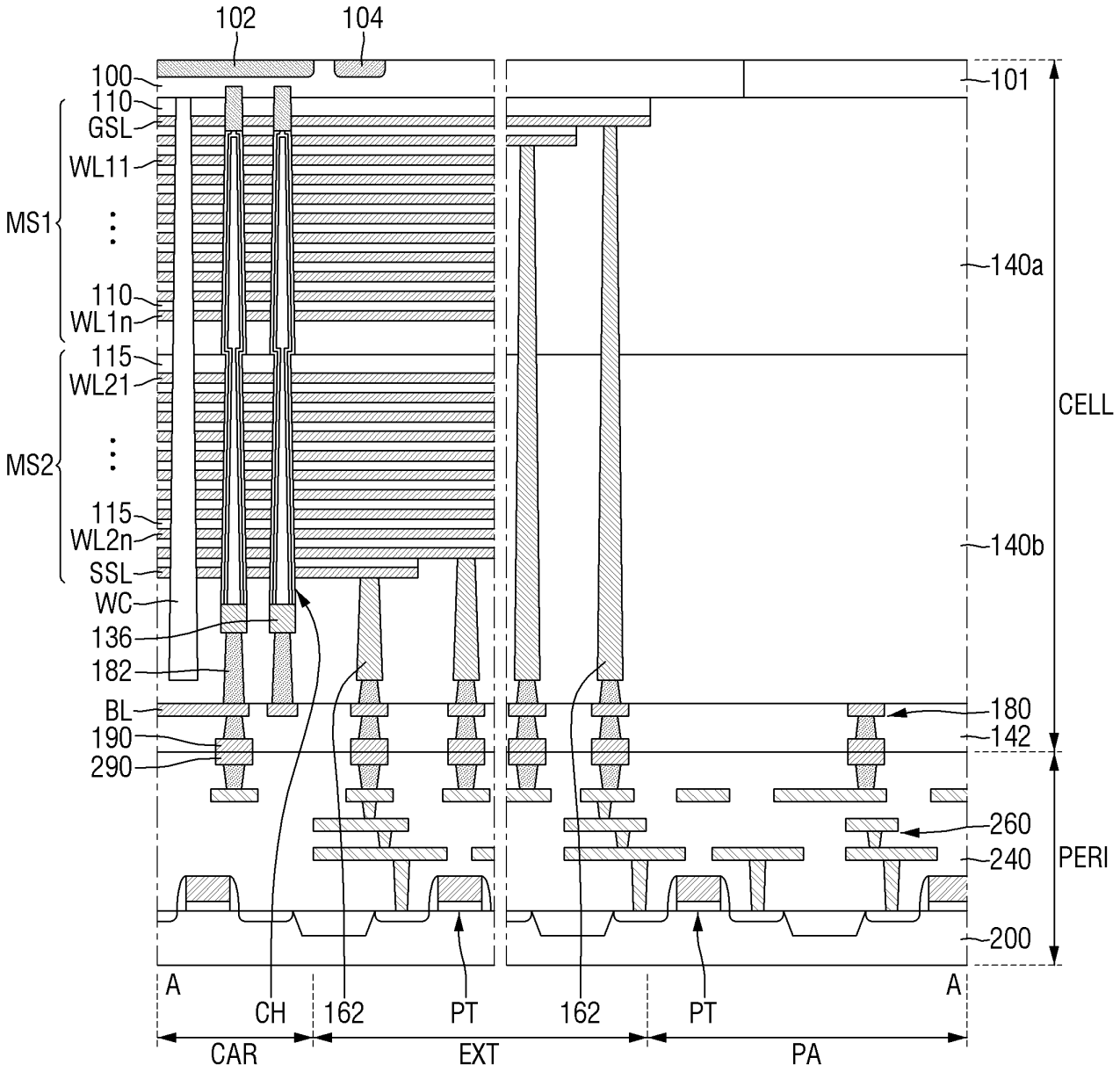

102
104
100
110
GSL
WL11
MS1
110
WL1n
115
WL21
MS2
115
WL2n
SSL
WC
136
182
BL
190
290
101
140a
CELL
140b
180
142
260
240
PERI
200
A
CH
162
PT
162
PT
A
CAR
EXT
PA

FIG. 39

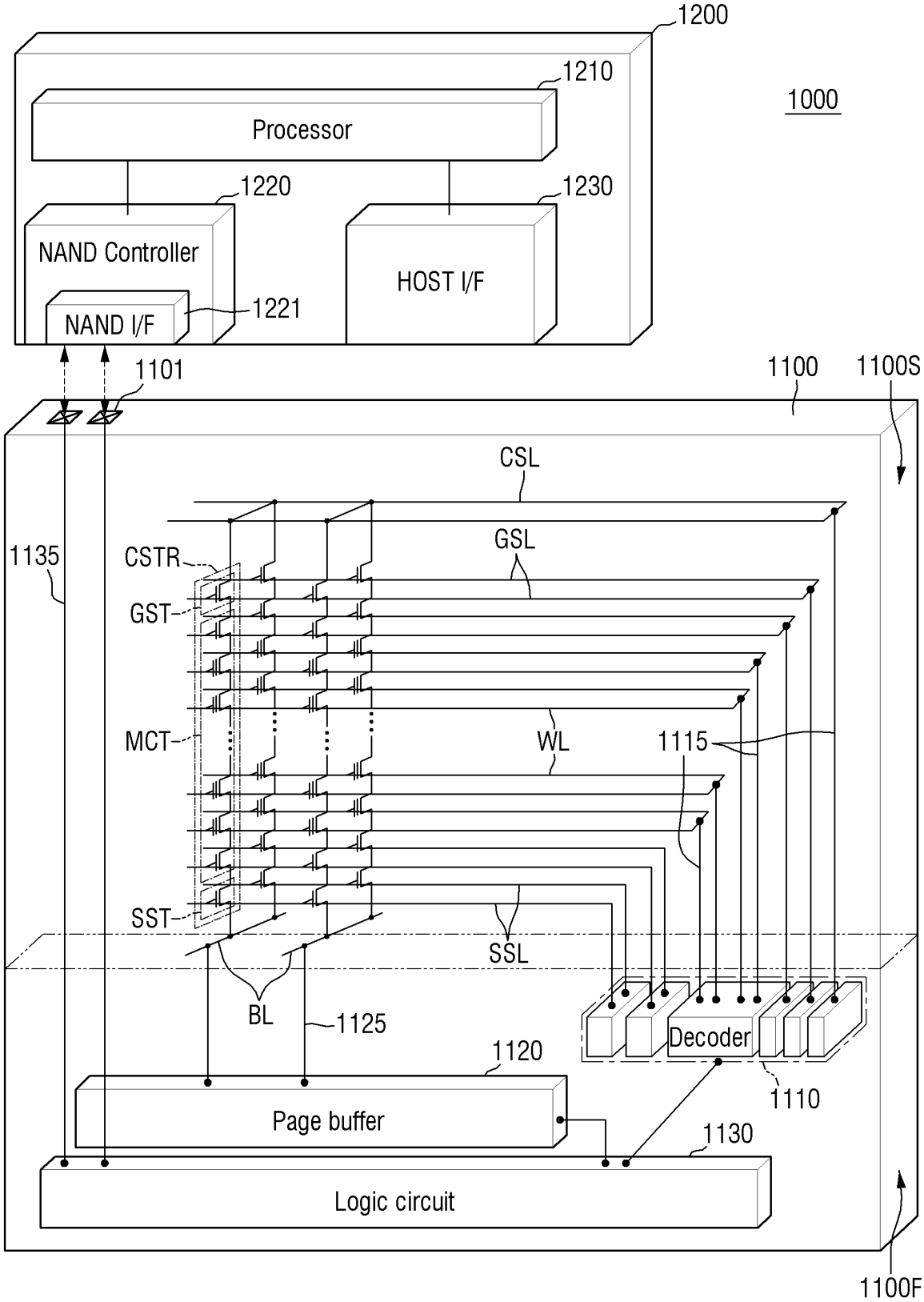

1200
1210
Processor
1000
1220
1230
NAND Controller
HOST I/F
NAND I/F
1221
1101
1100
1100S
CSL
GSL
1135
CSTR
GST
MCT
WL
1115
SST
SSL
BL
1125
Decoder
1120
1110
Page buffer
1130
Logic circuit
1100F

FIG. 40

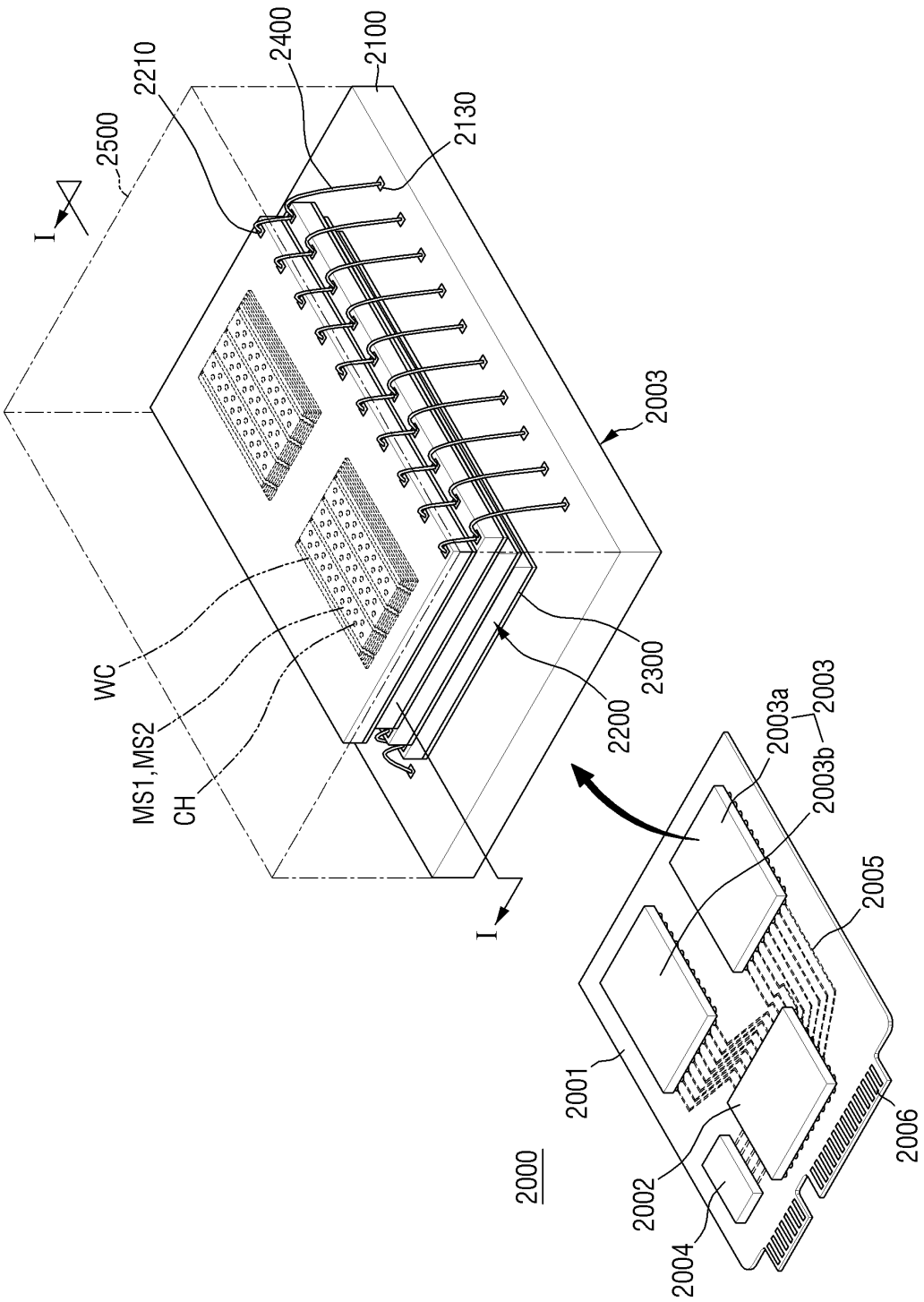
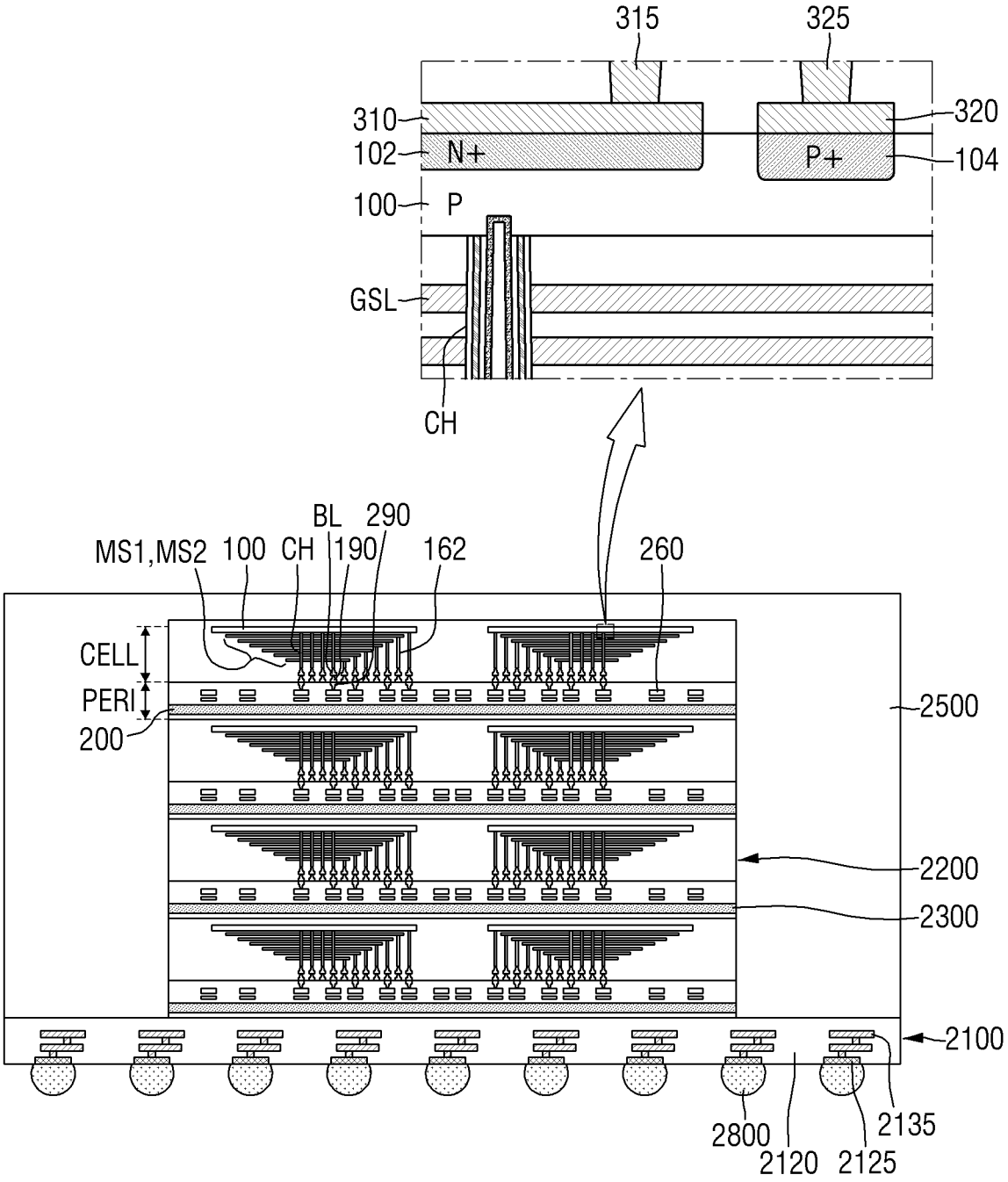

2500
2210
2400
2100
2130
I
WC
MS1,MS2
CH
2003
2300
2200
I
2000
2003a
2003b
2003
2005
2001
2002
2004
2006

FIG. 41


315
325
310
320
102
N+
P+
104
100
P
GSL
CH
BL
290
MS1,MS2
100
CH
190
162
260
CELL
PERI
200
2500
2200
2300
2100
2800
2120
2125
2135