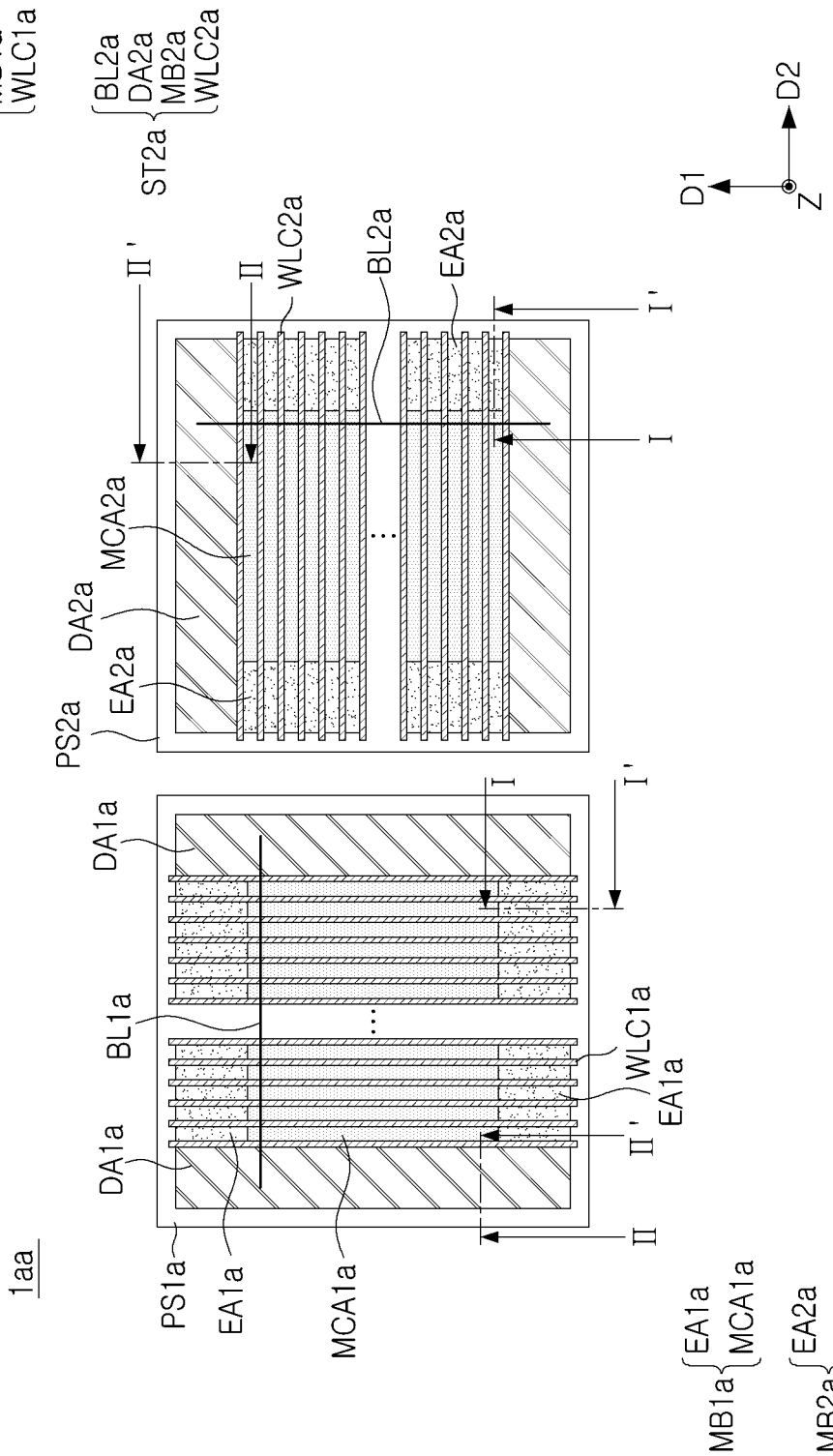

1aa
ST1a
BL1a
DA1a
MB1a
WLC1a
ST2a
BL2a
DA2a
MB2a
WLC2a
D1
D2
Z
II'
II
WLC2a
BL2a
EA2a
I'
I
MCA2a
DA2a
EA2a
PS2a
DA1a
BL1a
WLC1a
EA1a
DA1a
PS1a
EA1a
MCA1a
MB1a
EA1a
MCA1a
MB2a
EA2a
MCA2a

FIG. 1

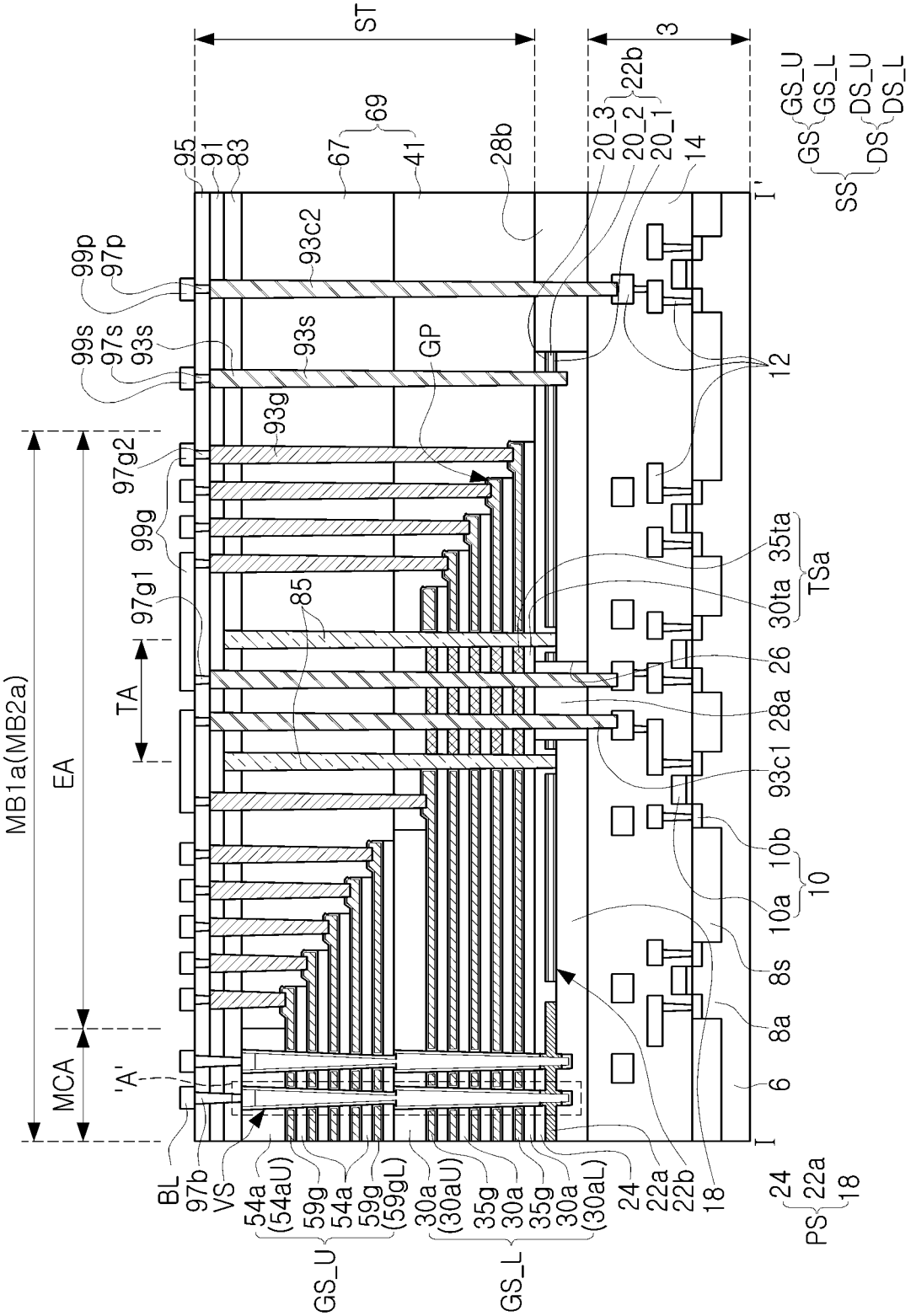

ST
3
MB1a(MB2a)
EA
MCA
TA
'A'
I
I'
BL
97b
VS
54a
(54aU)
59g
54a
59g
(59gL)
30a
(30aU)
35g
30a
35g
30a
(30aL)
24
22a
22b
18
GS_U
GS_L
PS
6
8a
8s
10a
10b
10
93c1
28a
26
30ta
35ta
TSa
85
97g1
99g
97g2
93g
GP
93s
97s
99s
93c2
97p
99p
95
91
83
67
69
41
28b
20_3
20_2
20_1
22b
14
12
GS_U
GS_L
GS
DS_U
DS_L
DS
SS

FIG. 2A

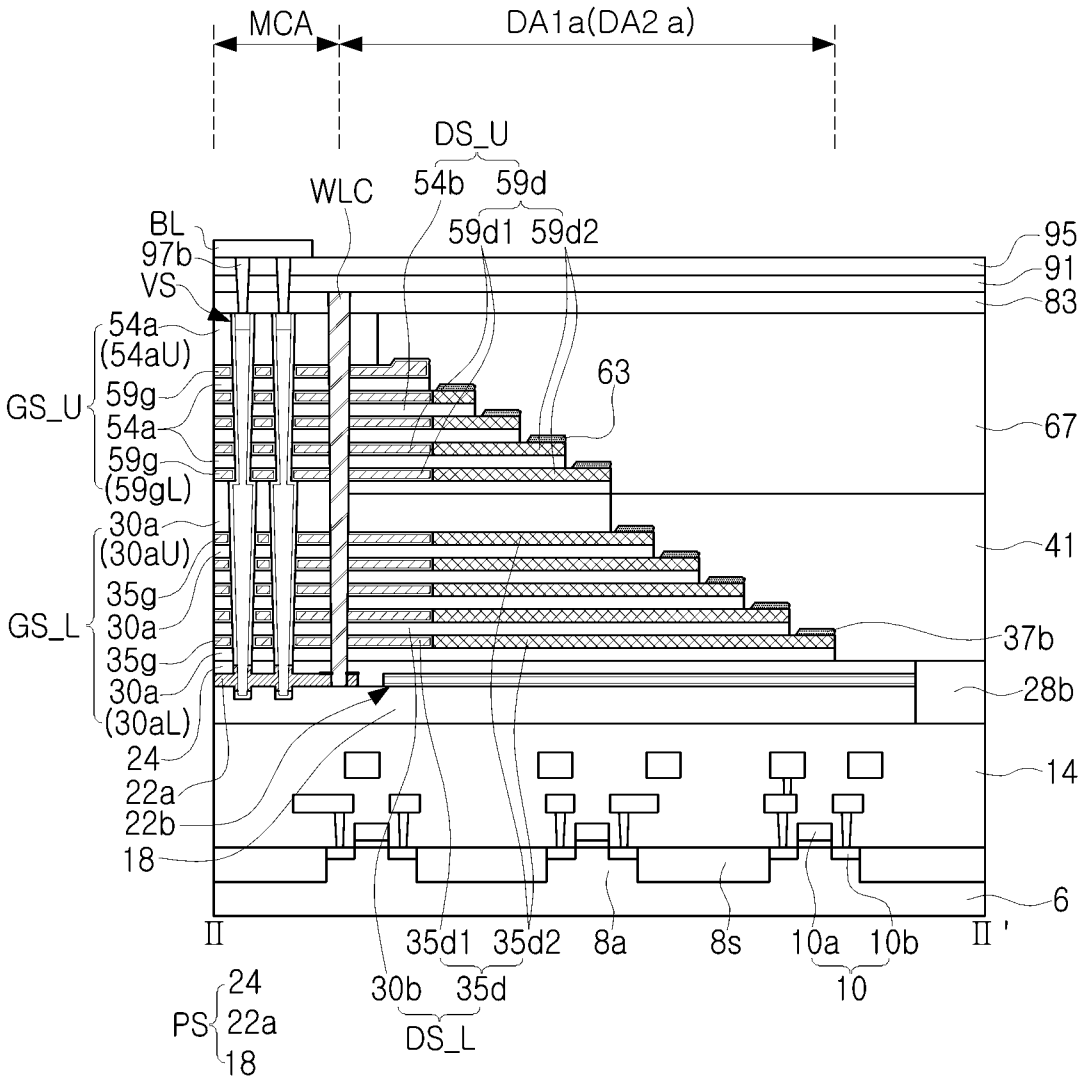

MCA
DA1a(DA2 a)
DS_U
WLC
54b
59d
59d1
59d2
BL
97b
VS
95
91
83
54a
(54aU)
GS_U
59g
54a
59g
(59gL)
63
67
30a
(30aU)
35g
GS_L
30a
35g
30a
(30aL)
41
37b
28b
24
22a
22b
18
14
6
II
II '
35d1
35d2
8a
8s
10a
10b
10
30b
35d
DS_L
PS
24
22a
18

FIG. 2B

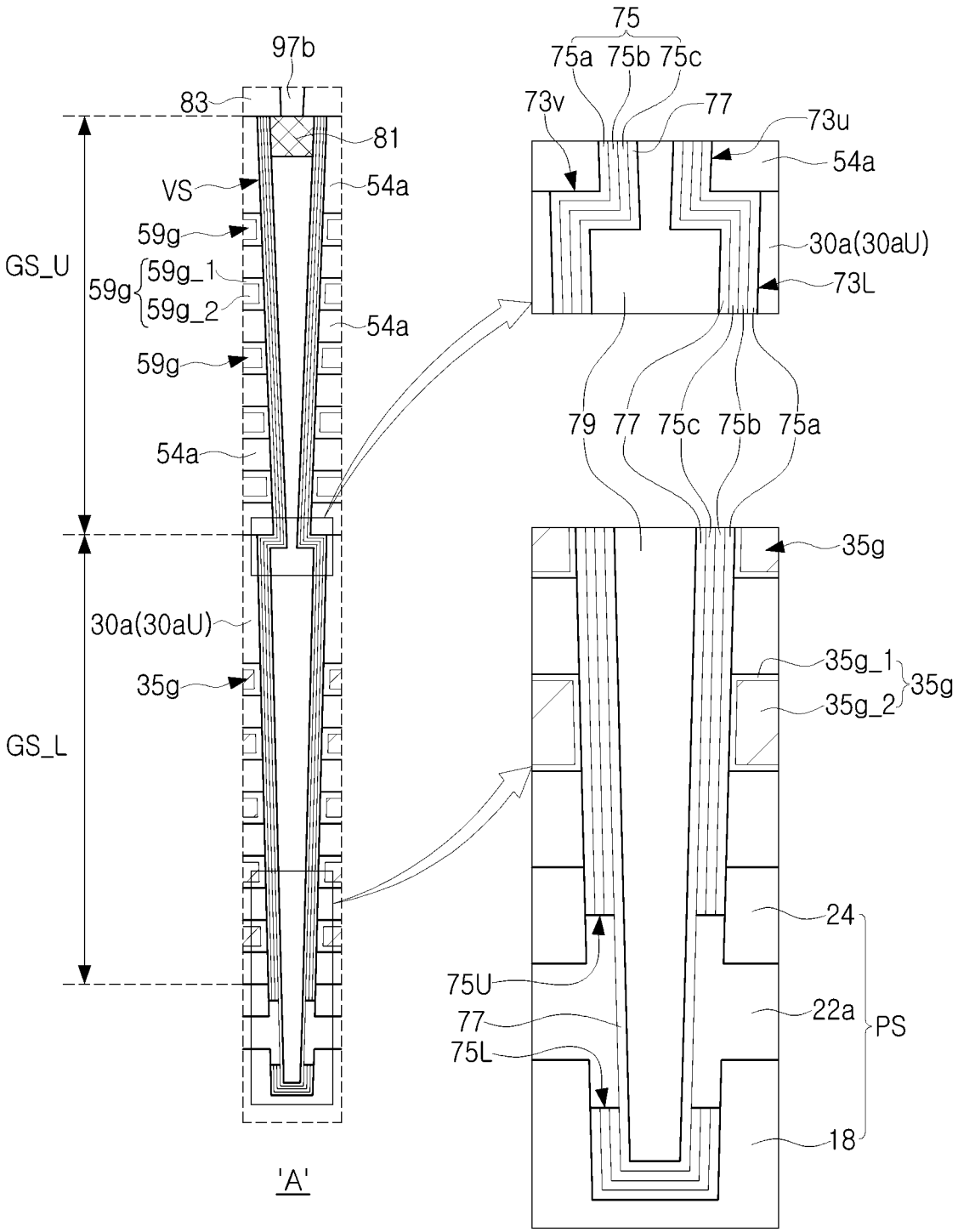

97b
83
81
VS
54a
59g
59g
59g_1
59g_2
54a
59g
54a
GS_U
30a(30aU)
35g
GS_L
'A'
75
75a 75b 75c
73v
77
73u
54a
30a(30aU)
73L
79 77 75c 75b 75a
35g
35g_1
35g_2
35g
24
75U
77
75L
22a
PS
18

FIG. 2C

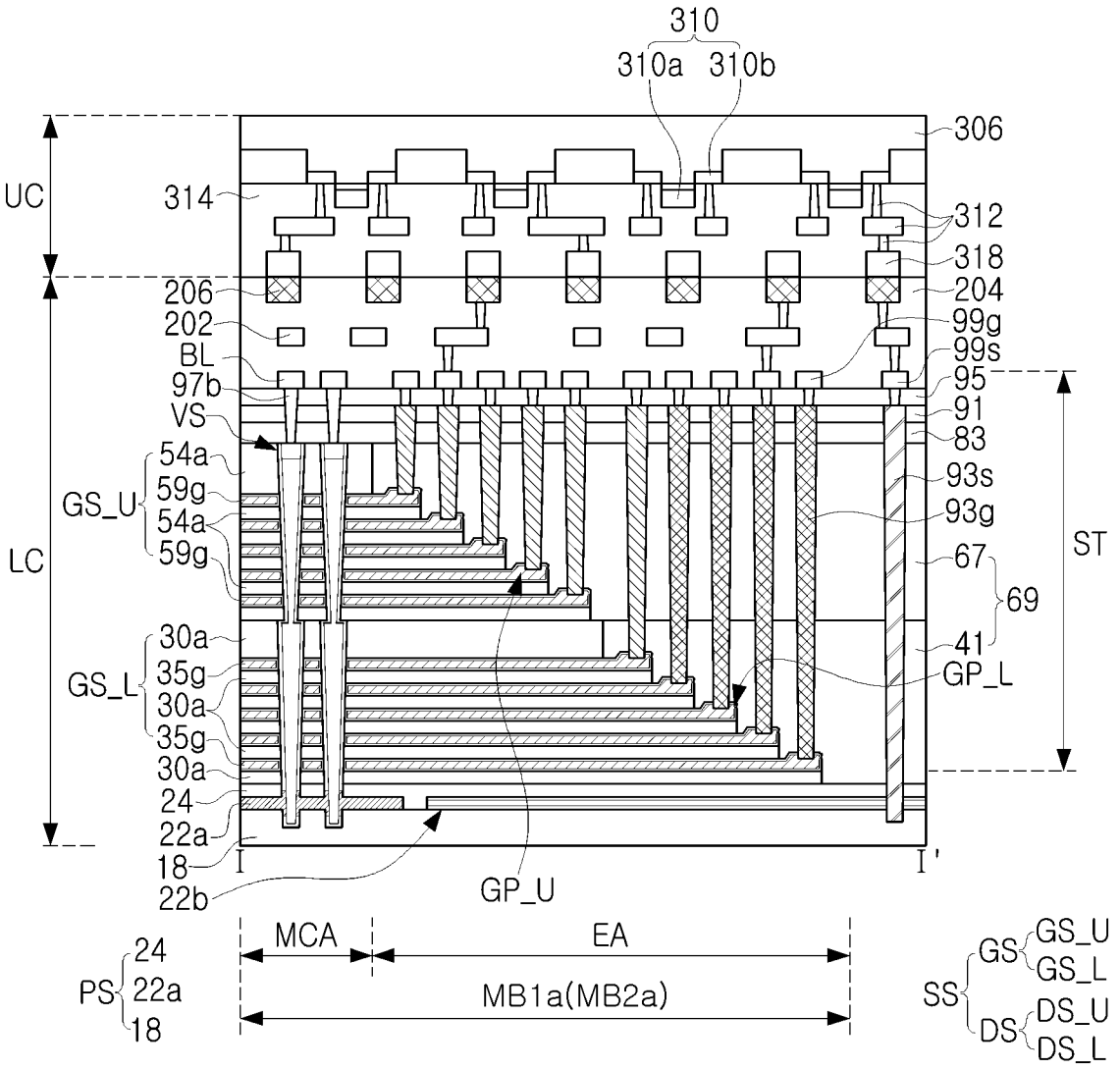

310
310a
310b
306
UC
314
312
318
206
204
202
99g
BL
99s
97b
95
VS
91
83
54a
93s
GS_U
59g
54a
93g
59g
67
ST
LC
69
30a
41
GS_L
35g
GP_L
30a
35g
30a
24
22a
18
I
I'
22b
GP_U
MCA
EA
24
PS
22a
MB1a(MB2a)
18
SS
GS
GS_U
GS_L
DS
DS_U
DS_L

FIG. 3

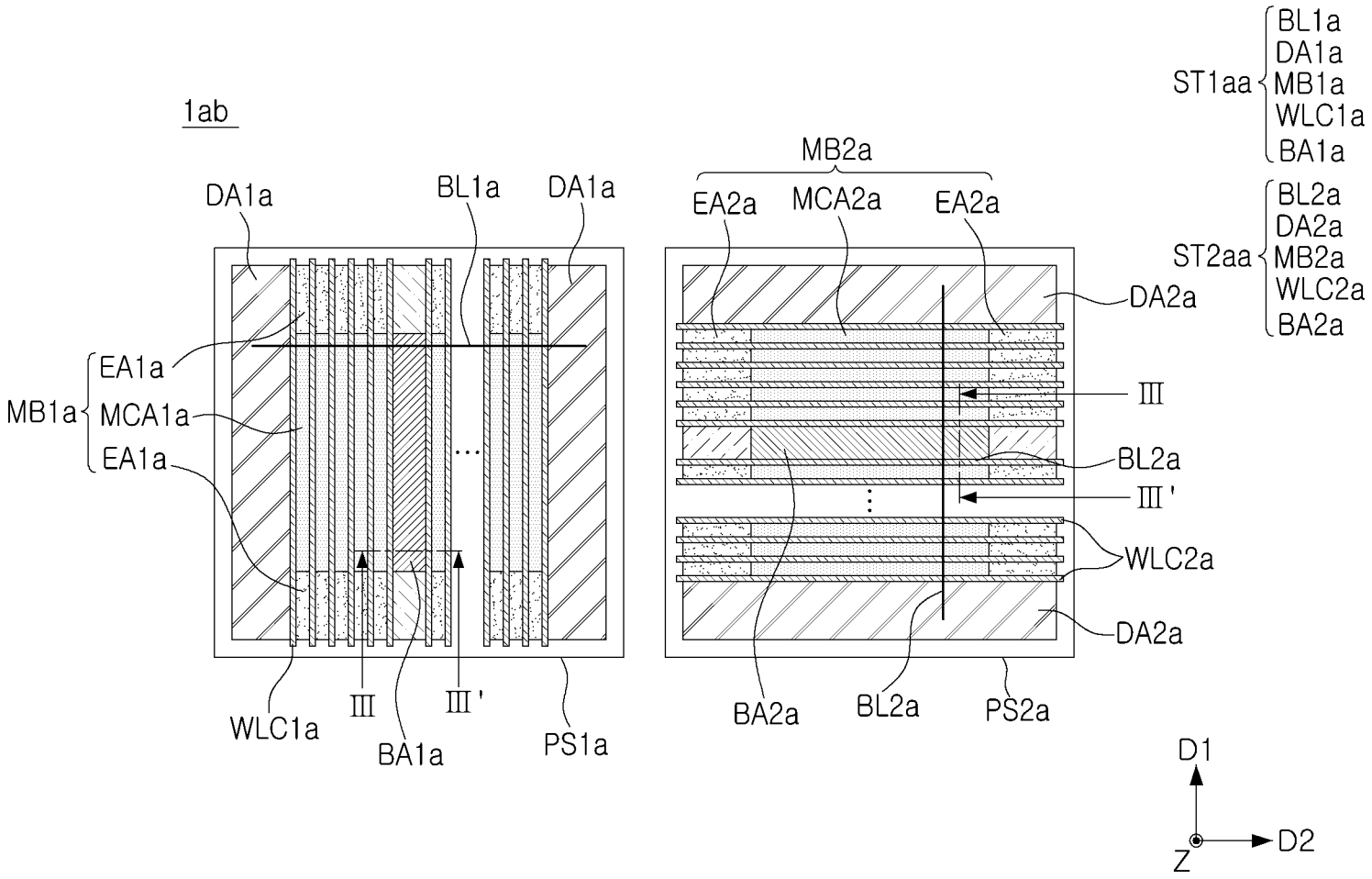

1ab
DA1a
BL1a
DA1a
EA1a
MB1a
MCA1a
EA1a
WLC1a
III
III'
BA1a
PS1a
MB2a
EA2a
MCA2a
EA2a
DA2a
III
BL2a
III'
WLC2a
DA2a
BA2a
BL2a
PS2a
ST1aa
BL1a
DA1a
MB1a
WLC1a
BA1a
ST2aa
BL2a
DA2a
MB2a
WLC2a
BA2a
D1
D2
Z

FIG. 4

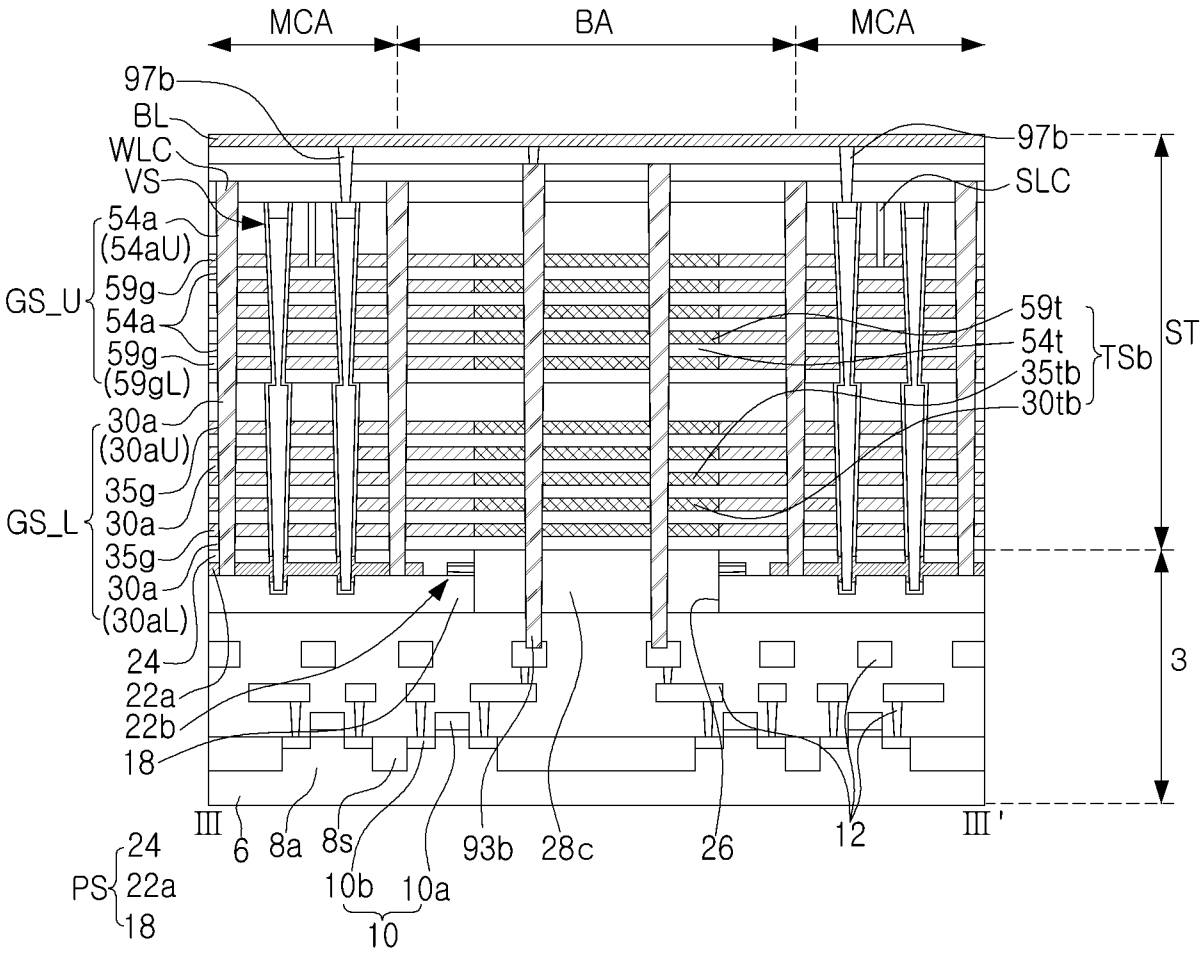

MCA
BA
MCA
97b
BL
WLC
VS
54a
(54aU)
59g
54a
59g
(59gL)
GS_U
30a
(30aU)
35g
30a
35g
30a
(30aL)
GS_L
24
22a
22b
18
97b
SLC
59t
54t
35tb
30tb
TSb
ST
3
III
6
8a
8s
93b
28c
26
12
III'
24
22a
18
PS
10b
10a
10

FIG. 5

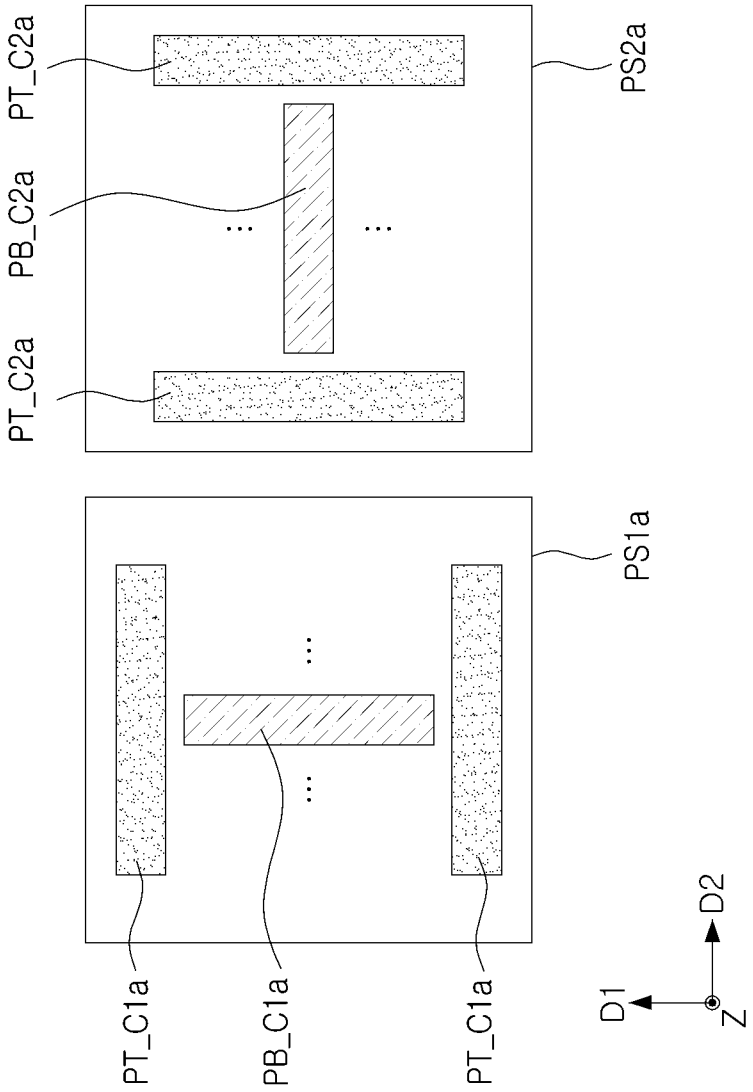


FIG. 6

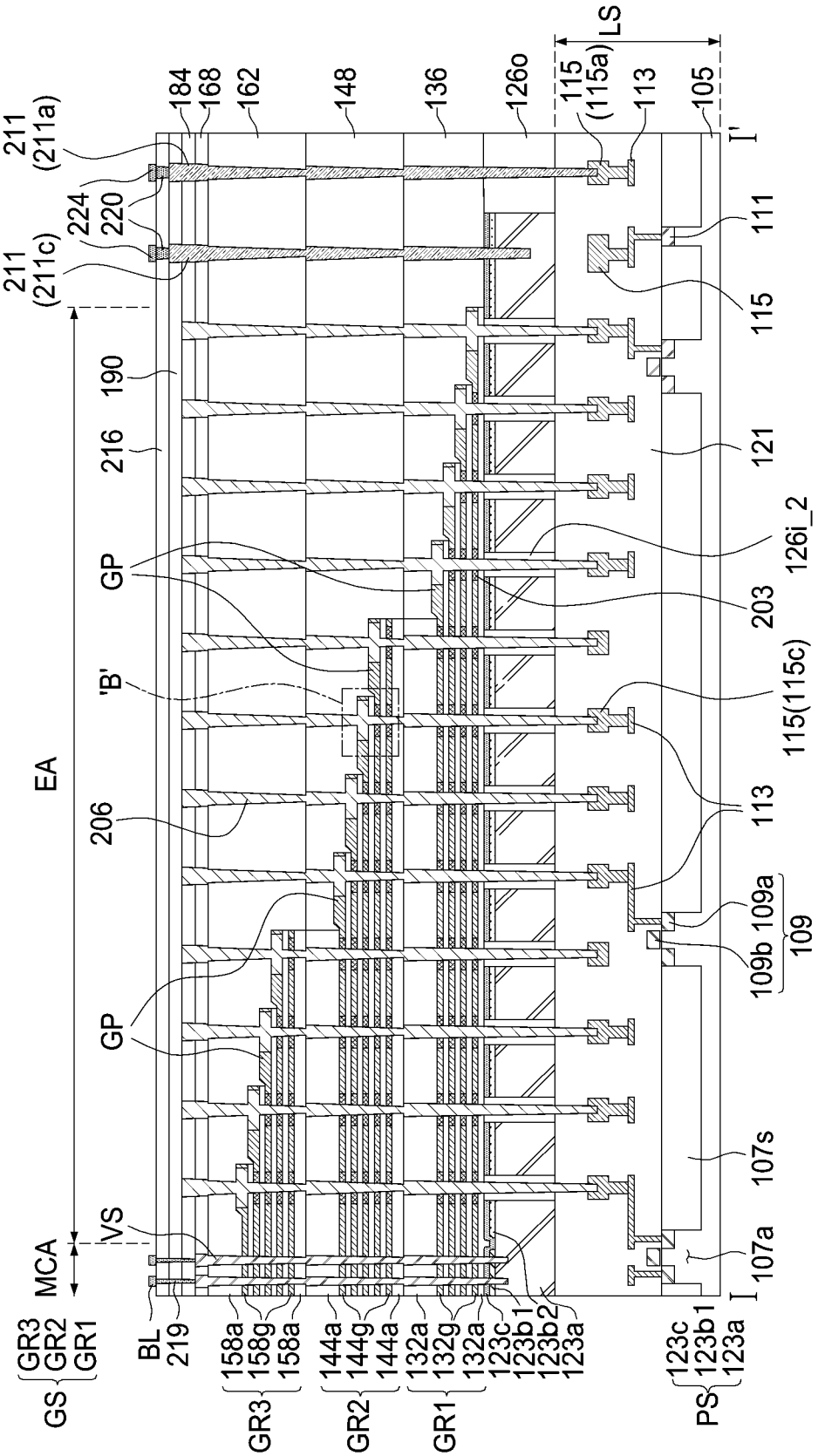

211
(211a)
224
220
211
(211c)
184
168
162
148
136
126o
115
(115a)
LS
113
105
I'
111
115
121
126i_2
203
115(115c)
113
109a
109
109b
107s
107a
I
123a
123b1
123c
PS
123a
123b2
123b1
123c
132a
144a
158a
GR1
GR2
GR3
GS
GR1
GR2
GR3
BL
219
158a
158g
158a
144a
144g
144a
132a
132g
132a
123c
123b1
123b2
123a
MCA
VS
EA
206
GP
'B'
GP
216
190

FIG. 7A

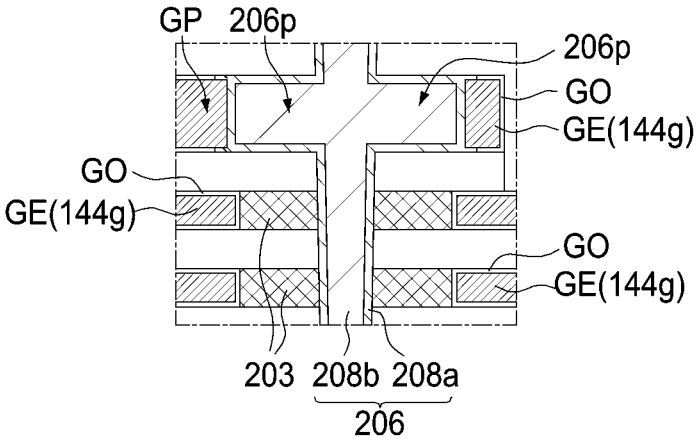


FIG. 7B

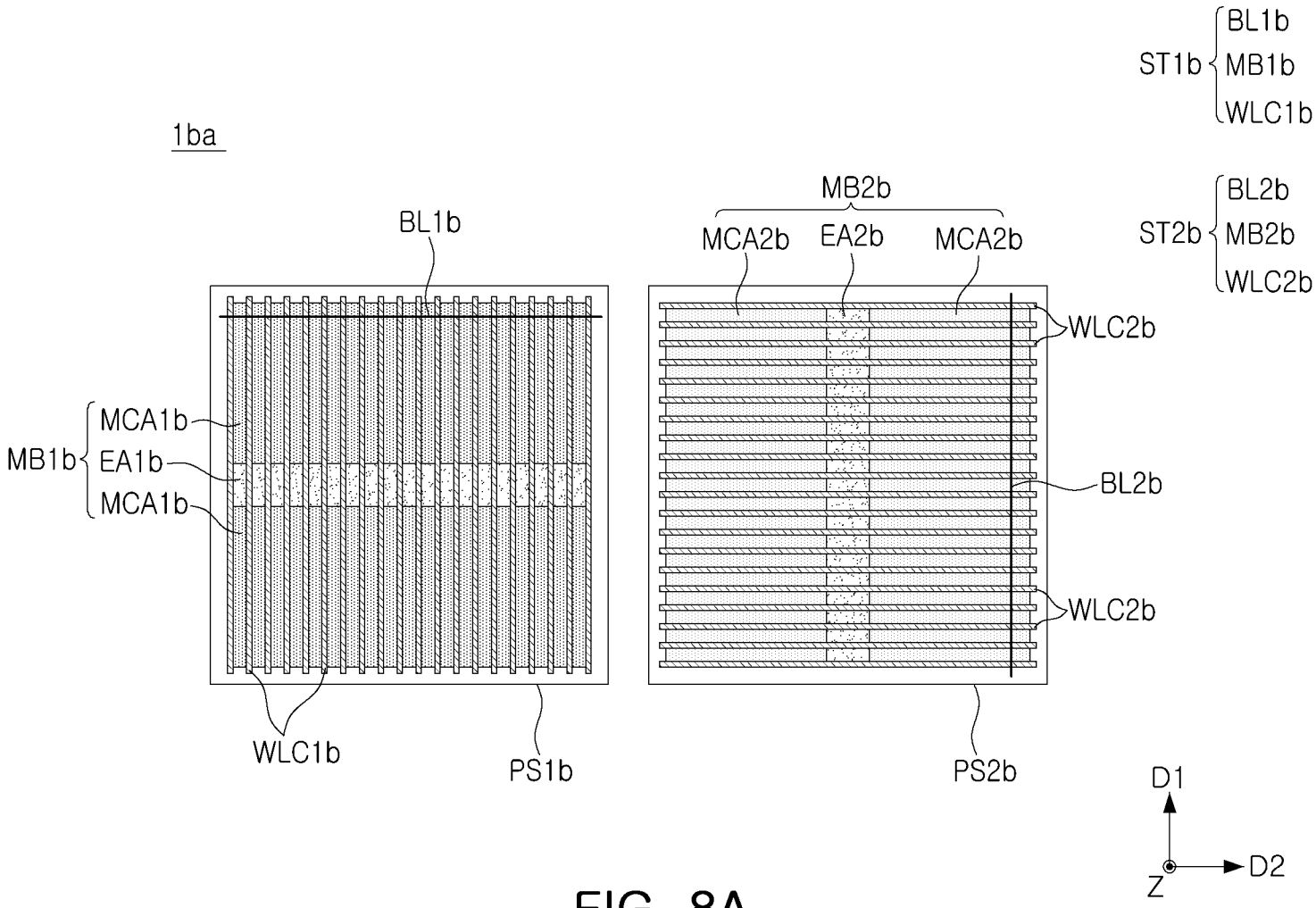

1ba
ST1b
BL1b
MB1b
WLC1b
ST2b
BL2b
MB2b
WLC2b
MB2b
MCA2b
EA2b
MCA2b
BL1b
MB1b
MCA1b
EA1b
MCA1b
WLC2b
BL2b
WLC2b
WLC1b
PS1b
PS2b
D1
D2
Z

FIG. 8A

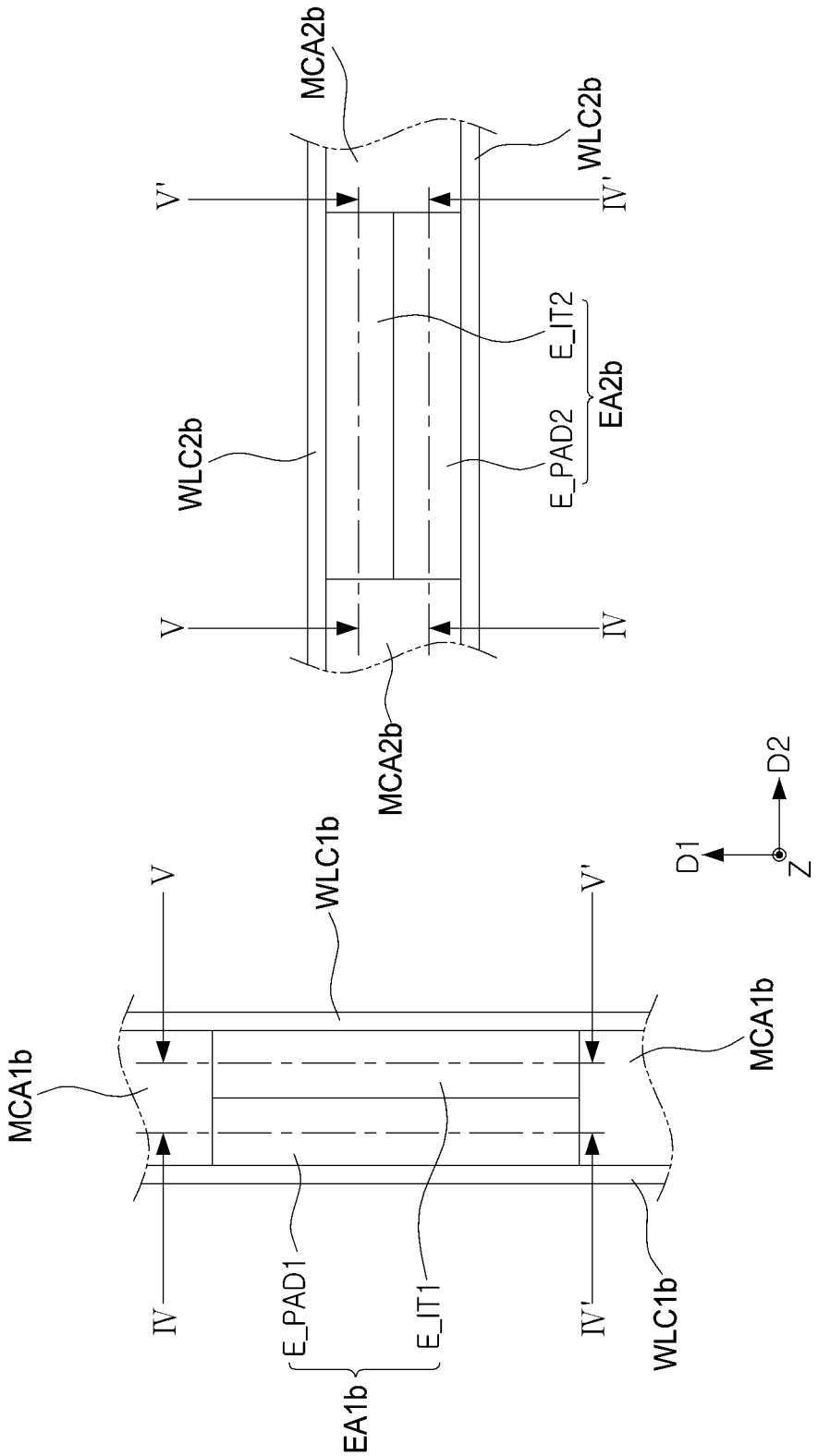

MCA2b
WLC2b
V'
IV'
E_IT2
E_PAD2
EA2b
WLC2b
V
IV
MCA2b
D1
D2
Z
V
WLC1b
V'
MCA1b
MCA1b
IV
E_PAD1
E_IT1
IV'
WLC1b
EA1b

FIG. 8B

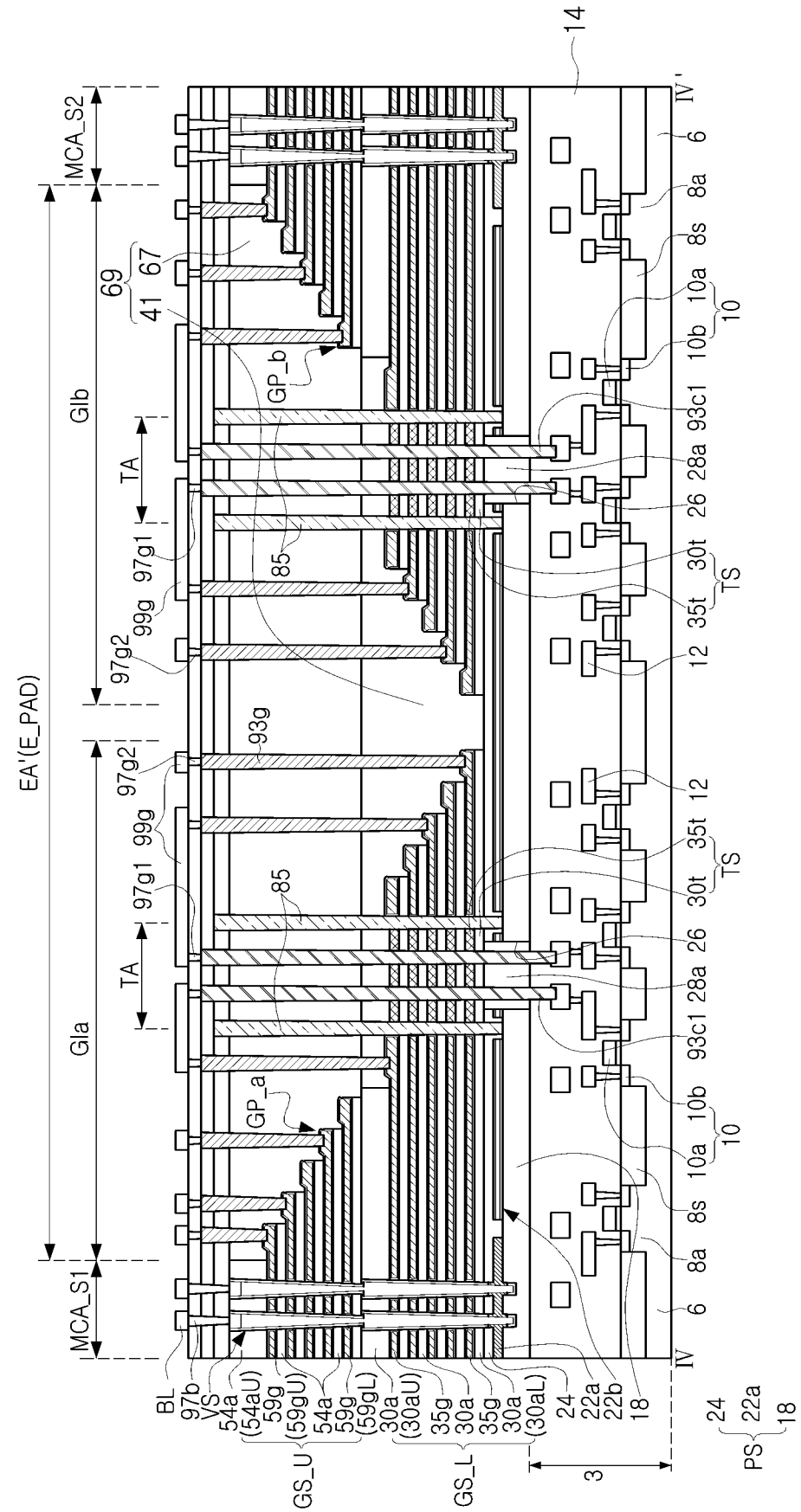

EA'(E_PAD)
MCA_S2
MCA_S1
Glb
Gla
TA
TA
69
67
41
97g2
99g
97g1
85
93g
GP_b
GP_a
14
IV'
IV
6
8a
8s
10a
10b
10
93c1
28a
26
30t
35t
TS
12
BL
97b
VS
54a
(54aU)
59g
(59gU)
54a
59g
(59gL)
30a
(30aU)
35g
30a
35g
30a
(30aL)
24
22a
22b
18
GS_U
GS_L
3
PS

FIG. 9A

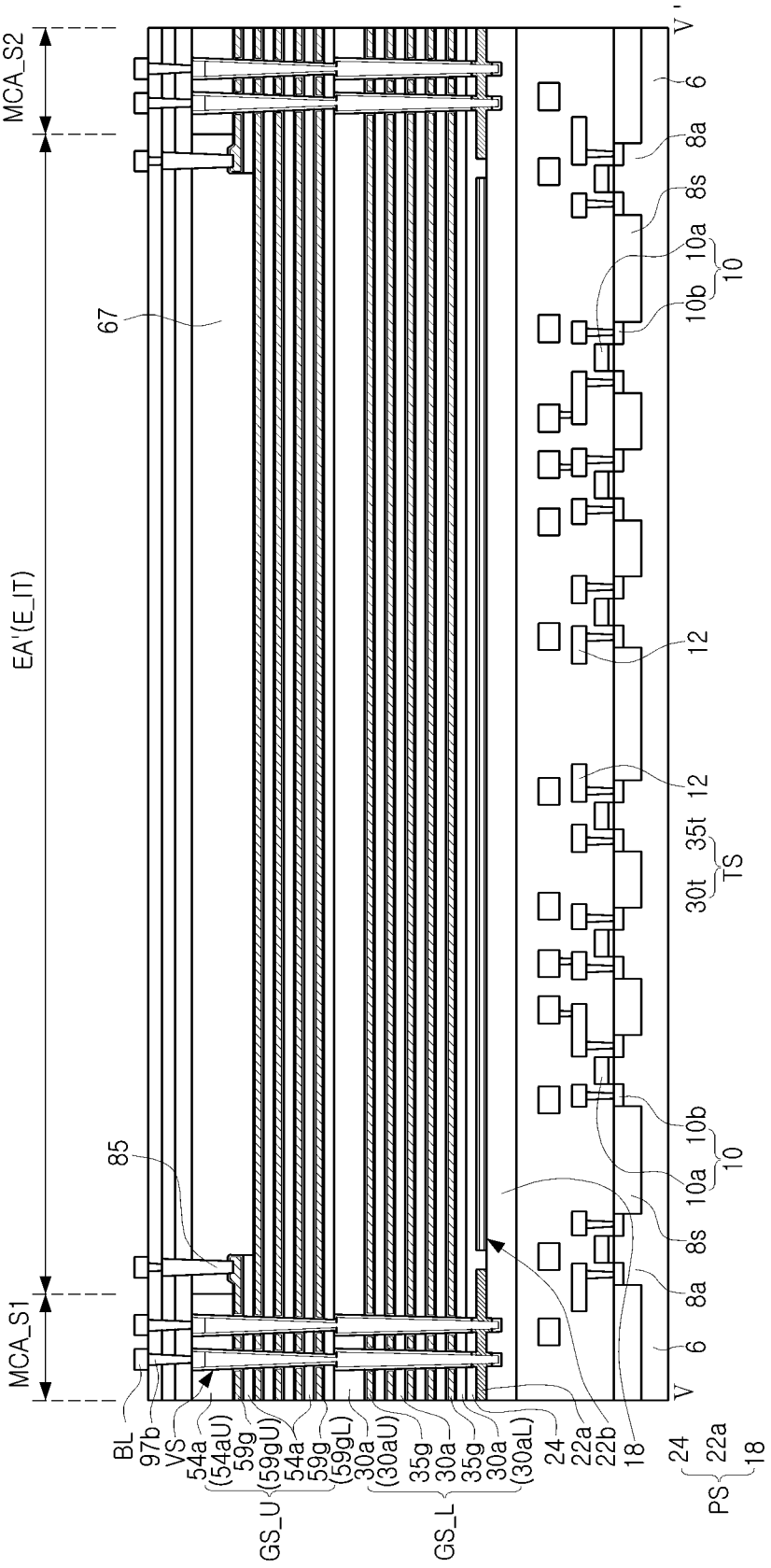

MCA_S2
EA'(E_IT)
MCA_S1
67
85
V'
6
8a
8s
10a
10b
10
12
12
30t
35t
TS
10b
10a
10
8s
8a
6
V
BL
97b
VS
54a
(54aU)
59g
(59gU)
54a
59g
(59gL)
30a
(30aU)
35g
30a
35g
30a
(30aL)
24
22a
22b
18
GS_U
GS_L
24
22a
18
PS

FIG. 9B

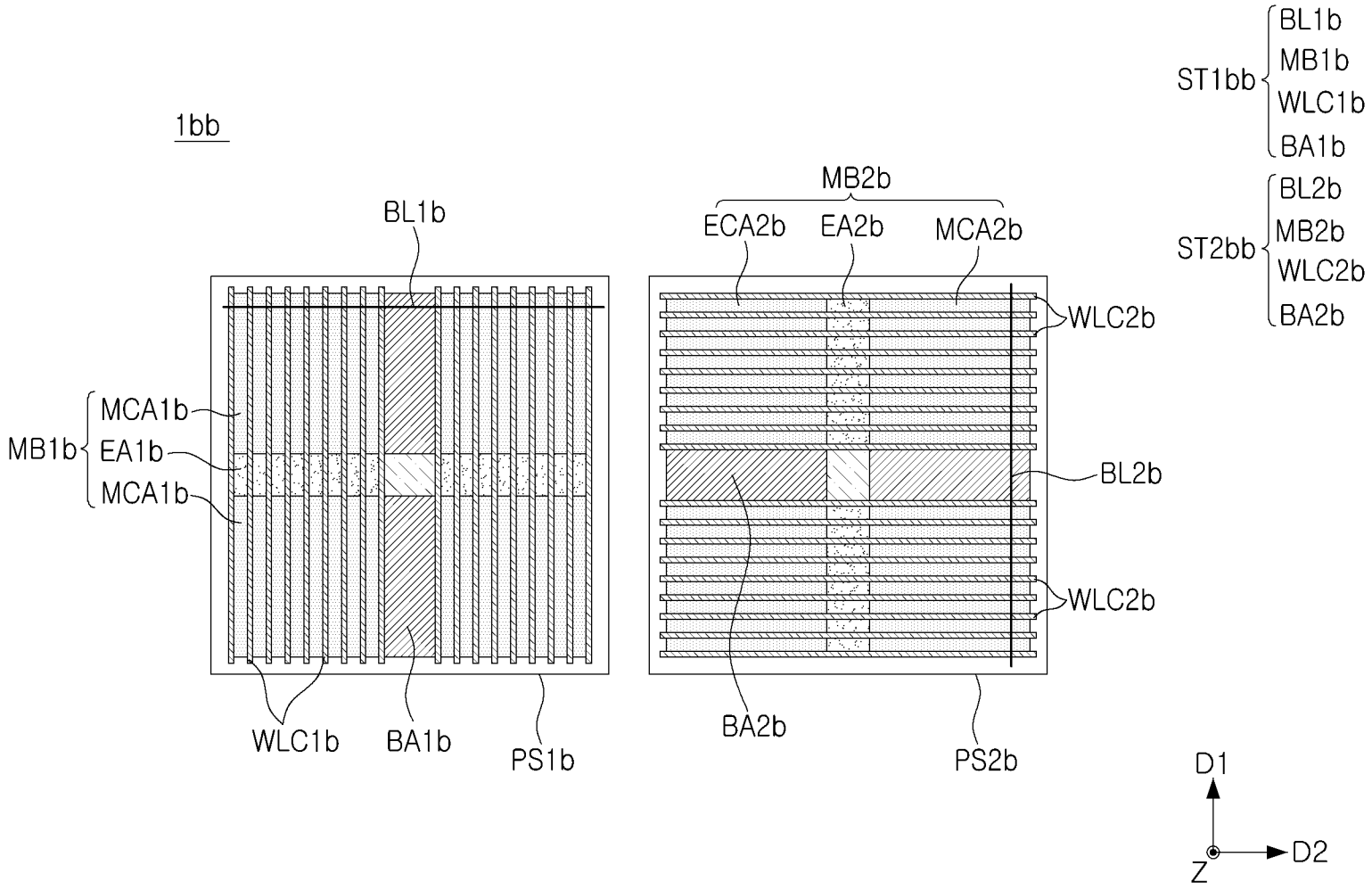

1bb
BL1b
MB2b
ECA2b
EA2b
MCA2b
ST1bb
BL1b
MB1b
WLC1b
BA1b
ST2bb
BL2b
MB2b
WLC2b
BA2b
WLC2b
MCA1b
MB1b
EA1b
MCA1b
BL2b
WLC2b
WLC1b
BA1b
PS1b
BA2b
PS2b
D1
D2
Z

FIG. 10A

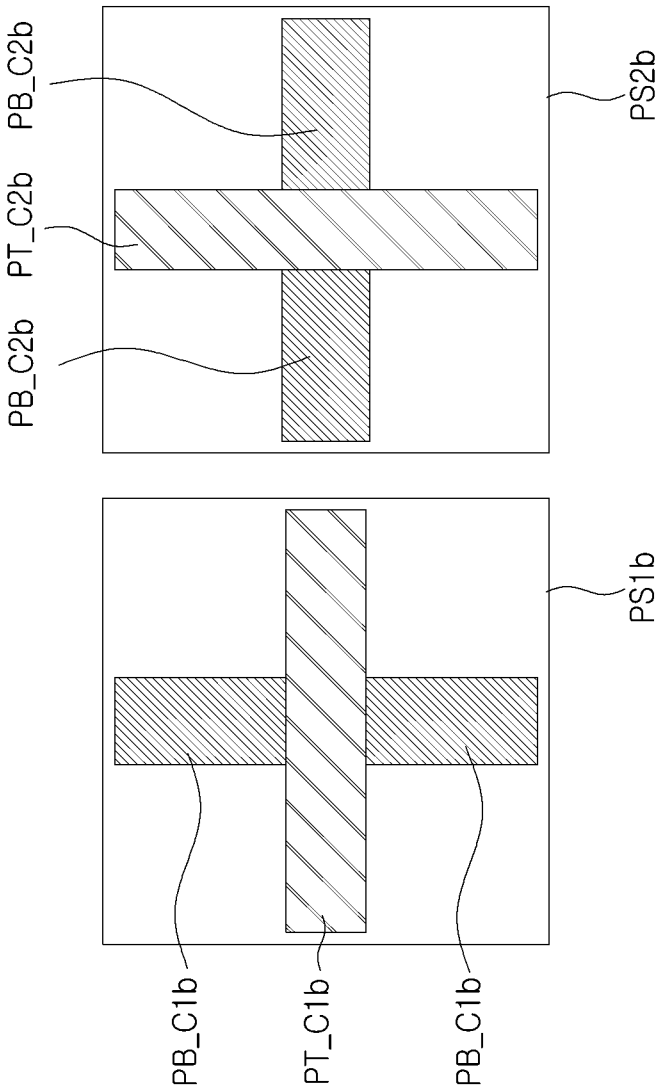


FIG. 10B

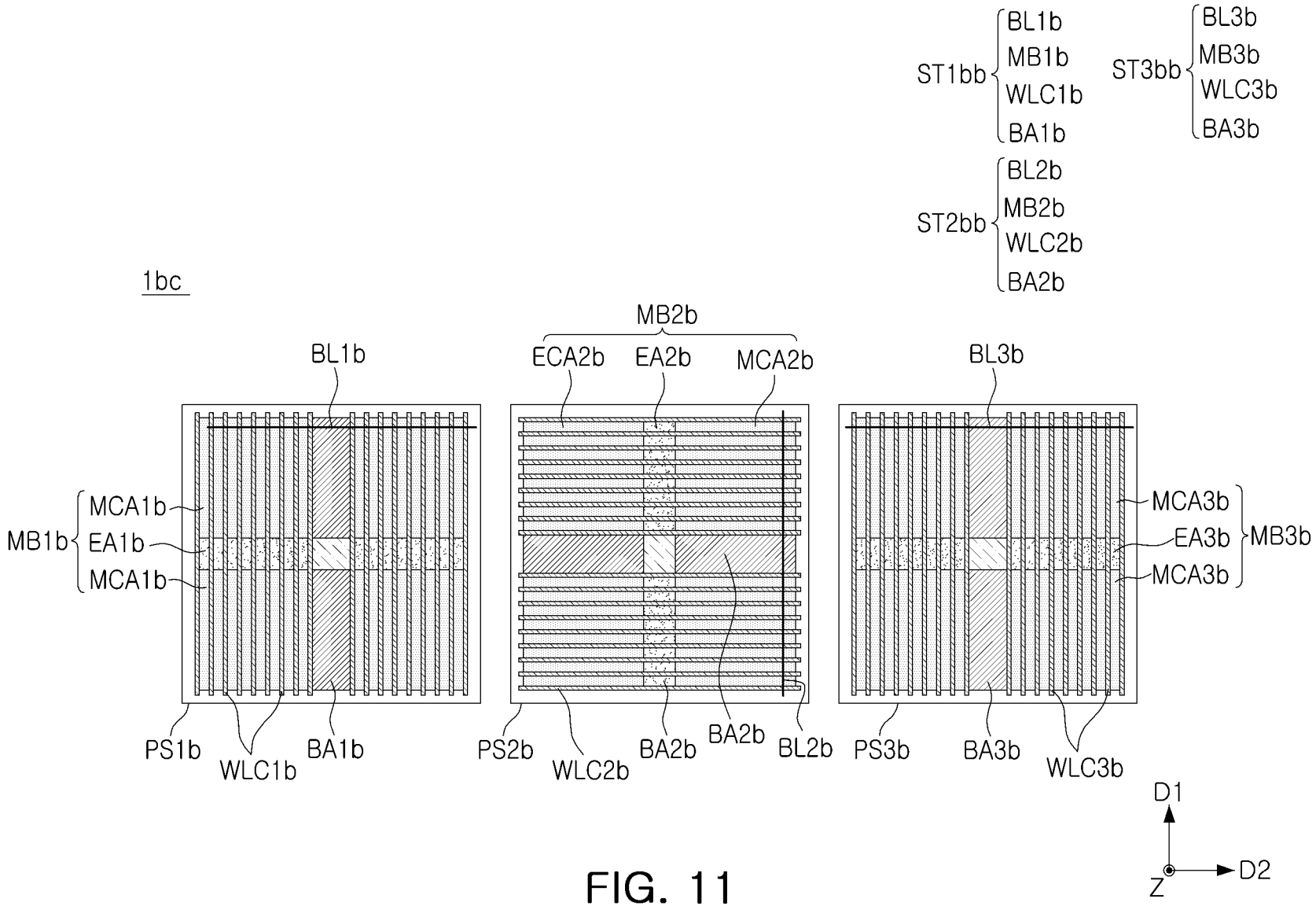

ST1bb
BL1b
MB1b
WLC1b
BA1b
ST3bb
BL3b
MB3b
WLC3b
BA3b
ST2bb
BL2b
MB2b
WLC2b
BA2b
1bc
MB2b
ECA2b
EA2b
MCA2b
BL1b
BL3b
MB1b
MCA1b
EA1b
MCA1b
MCA3b
EA3b
MCA3b
MB3b
PS1b
WLC1b
BA1b
PS2b
WLC2b
BA2b
BA2b
BL2b
PS3b
BA3b
WLC3b
D1
D2
Z

FIG. 11

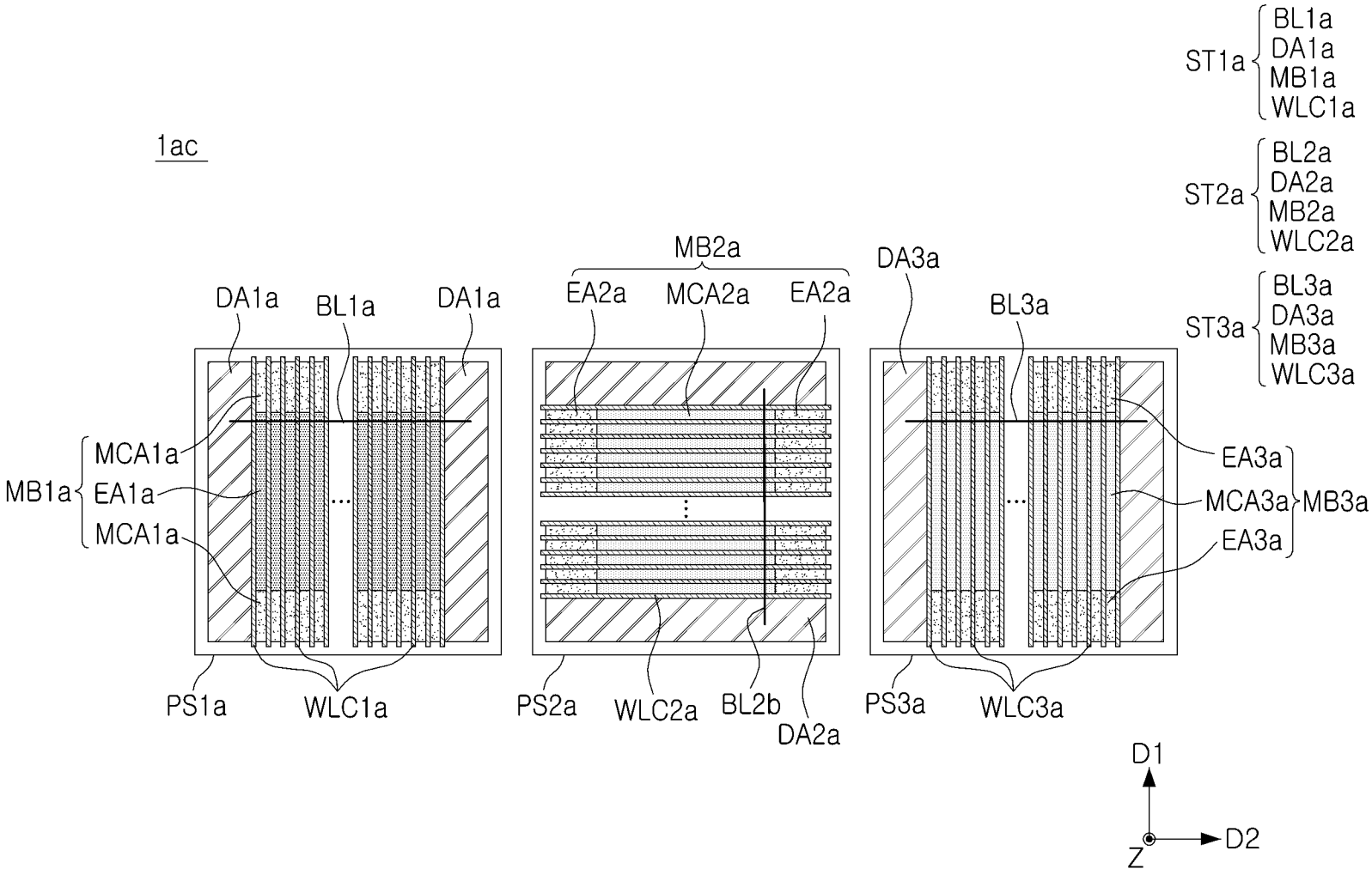

1ac
ST1a
BL1a
DA1a
MB1a
WLC1a
ST2a
BL2a
DA2a
MB2a
WLC2a
ST3a
BL3a
DA3a
MB3a
WLC3a
MB2a
DA3a
DA1a
BL1a
DA1a
EA2a
MCA2a
EA2a
BL3a
EA3a
MCA3a
MB3a
EA3a
MB1a
MCA1a
EA1a
MCA1a
PS1a
WLC1a
PS2a
WLC2a
BL2b
DA2a
PS3a
WLC3a
D1
D2
Z

FIG. 12

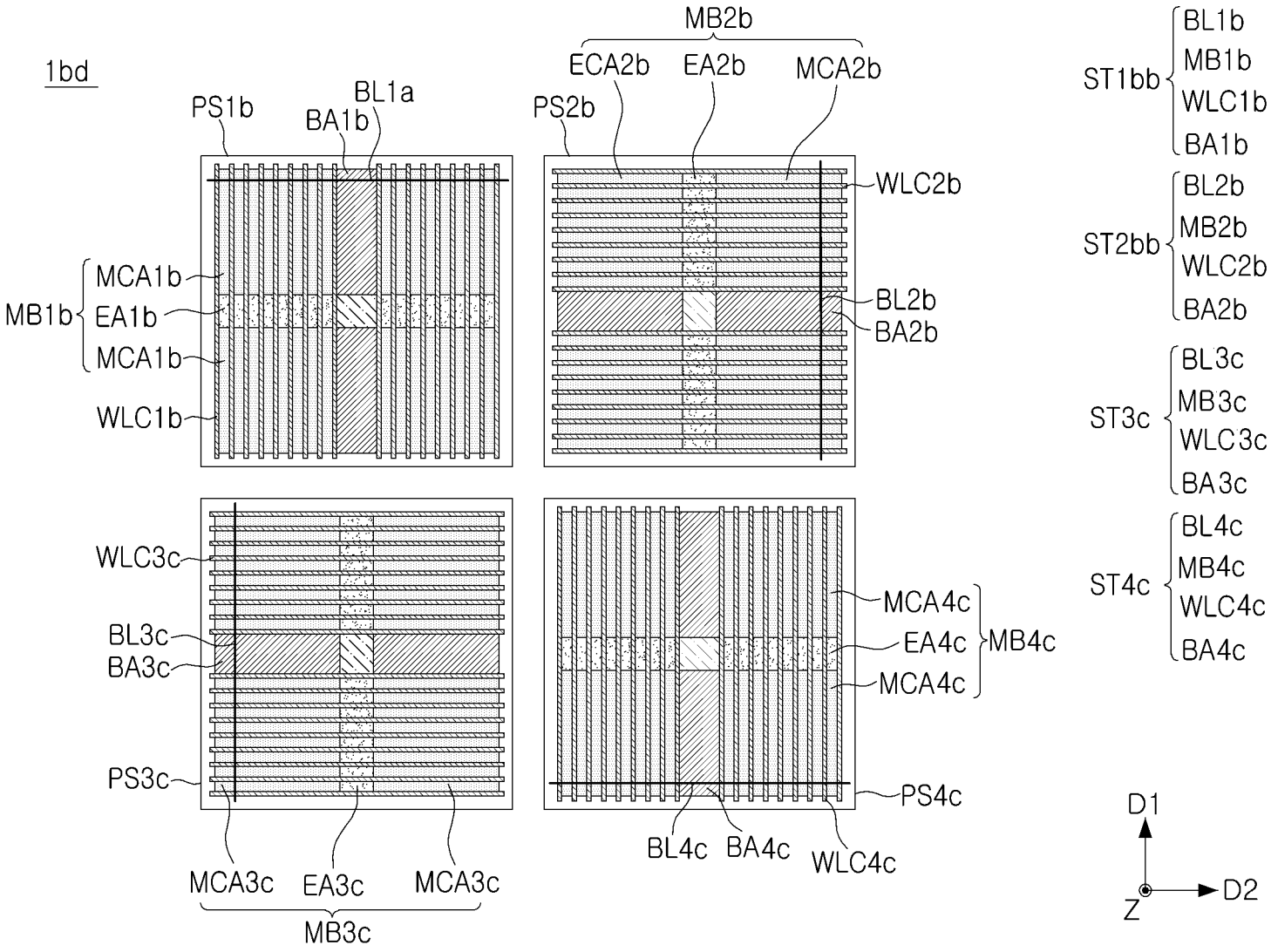

1bd
PS1b
BA1b
BL1a
MB2b
ECA2b
EA2b
MCA2b
PS2b
WLC2b
MB1b
MCA1b
EA1b
MCA1b
WLC1b
BL2b
BA2b
WLC3c
BL3c
BA3c
PS3c
MCA4c
EA4c
MCA4c
MB4c
PS4c
MCA3c
EA3c
MCA3c
MB3c
BL4c
BA4c
WLC4c
ST1bb
BL1b
MB1b
WLC1b
BA1b
ST2bb
BL2b
MB2b
WLC2b
BA2b
ST3c
BL3c
MB3c
WLC3c
BA3c
ST4c
BL4c
MB4c
WLC4c
BA4c
D1
D2
Z

FIG. 13

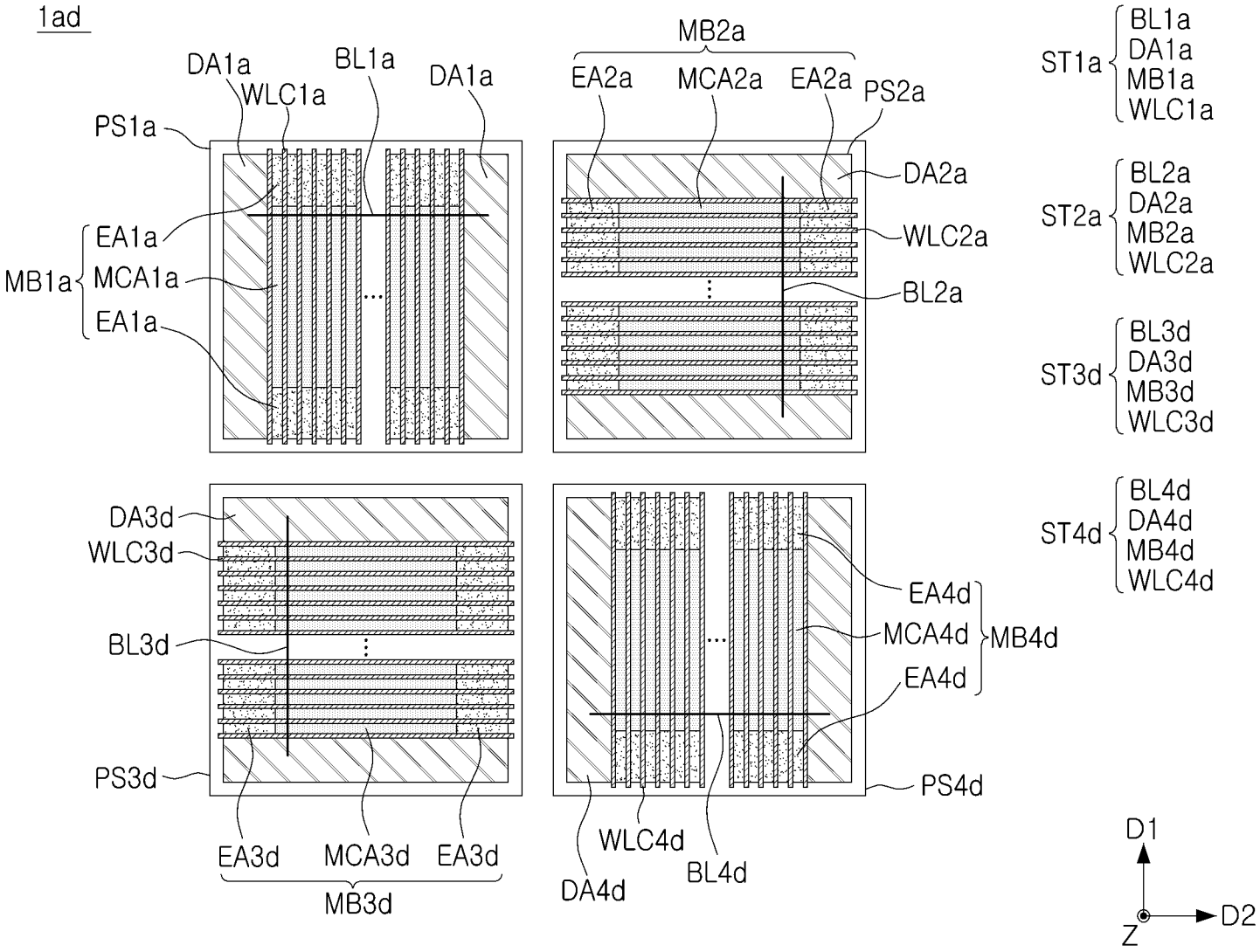

1ad
DA1a
WLC1a
BL1a
DA1a
PS1a
MB2a
EA2a
MCA2a
EA2a
PS2a
ST1a
BL1a
DA1a
MB1a
WLC1a
EA1a
MB1a
MCA1a
EA1a
DA2a
WLC2a
BL2a
ST2a
BL2a
DA2a
MB2a
WLC2a
ST3d
BL3d
DA3d
MB3d
WLC3d
DA3d
WLC3d
BL3d
PS3d
EA3d
MCA3d
EA3d
MB3d
EA4d
MCA4d
EA4d
MB4d
PS4d
WLC4d
BL4d
DA4d
ST4d
BL4d
DA4d
MB4d
WLC4d
D1
D2
Z

FIG. 14

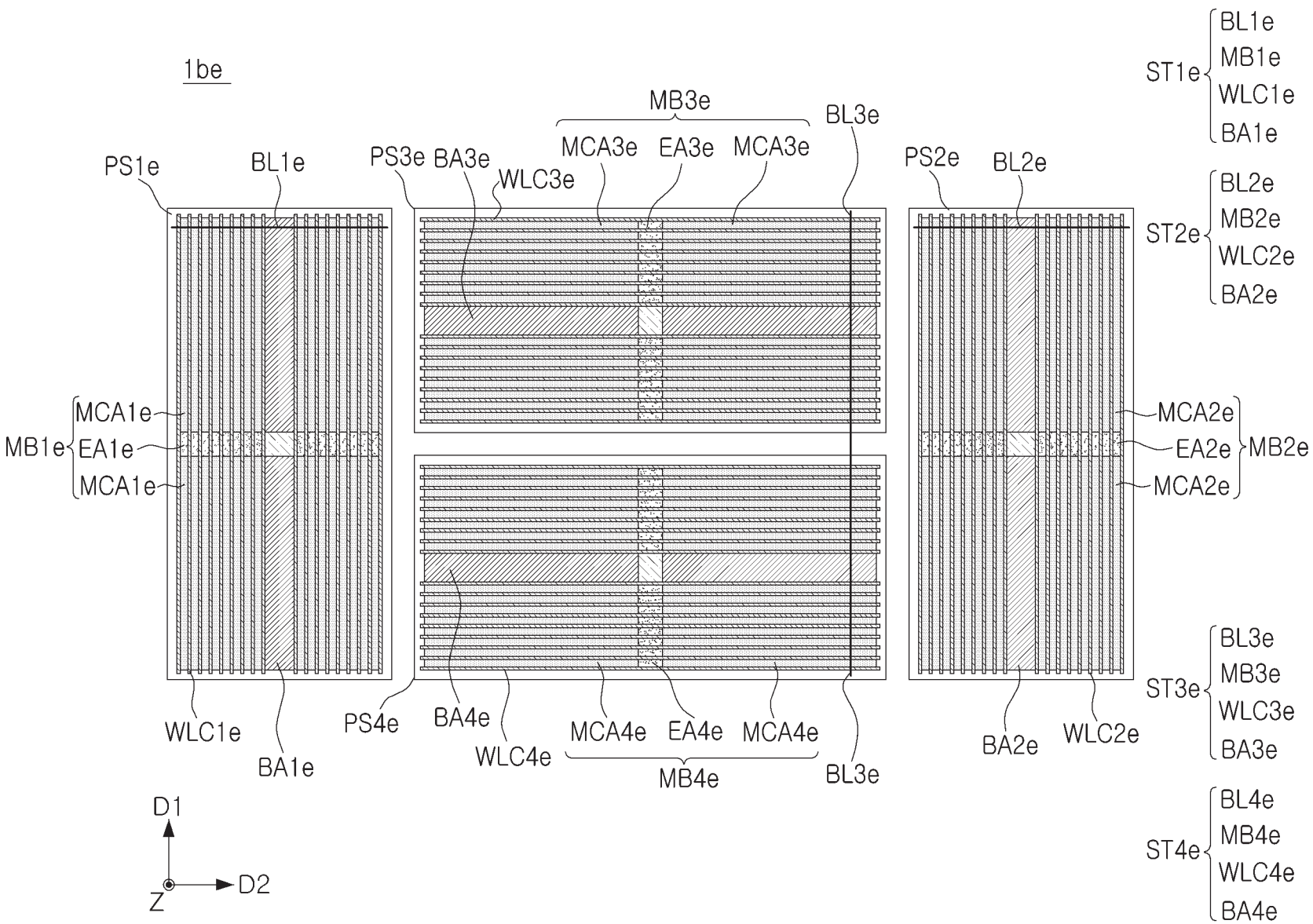

1be
ST1e
BL1e
MB1e
WLC1e
BA1e
MB3e
BL3e
MCA3e
EA3e
MCA3e
PS1e
BL1e
PS3e
BA3e
WLC3e
PS2e
BL2e
ST2e
BL2e
MB2e
WLC2e
BA2e
MCA1e
MB1e
EA1e
MCA1e
MCA2e
EA2e
MB2e
MCA2e
WLC1e
BA1e
PS4e
BA4e
WLC4e
MCA4e
EA4e
MCA4e
MB4e
BL3e
BA2e
WLC2e
ST3e
BL3e
MB3e
WLC3e
BA3e
ST4e
BL4e
MB4e
WLC4e
BA4e
D1
D2
Z

FIG. 15

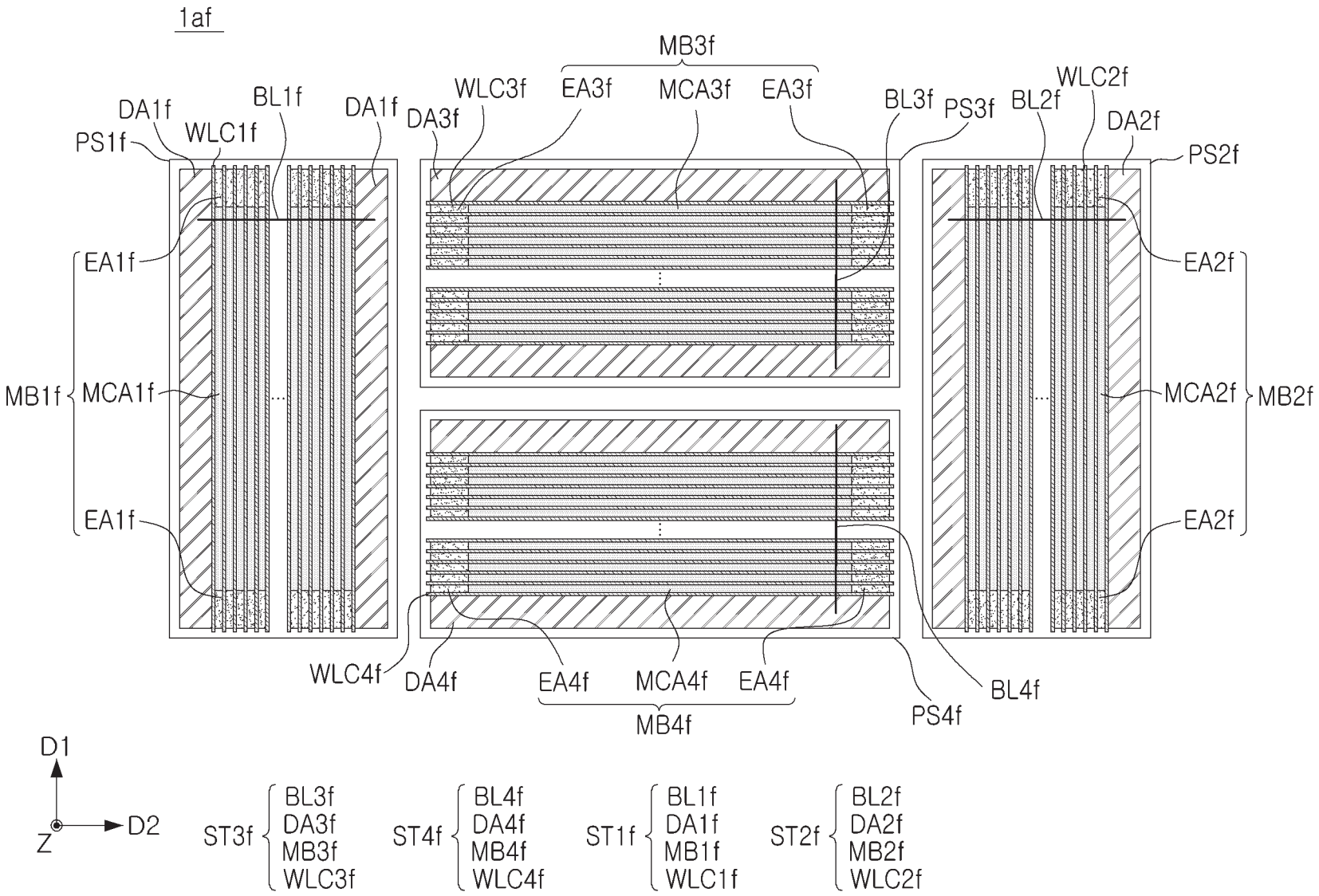

1af
MB3f
DA1f
BL1f
DA1f
WLC3f
EA3f
MCA3f
EA3f
BL3f
PS3f
BL2f
WLC2f
PS1f
WLC1f
DA3f
DA2f
PS2f
EA1f
EA2f
MB1f
MCA1f
MCA2f
MB2f
EA1f
EA2f
WLC4f
DA4f
EA4f
MCA4f
EA4f
BL4f
MB4f
PS4f
D1
D2
Z
ST3f
BL3f
DA3f
MB3f
WLC3f
ST4f
BL4f
DA4f
MB4f
WLC4f
ST1f
BL1f
DA1f
MB1f
WLC1f
ST2f
BL2f
DA2f
MB2f
WLC2f

FIG. 16

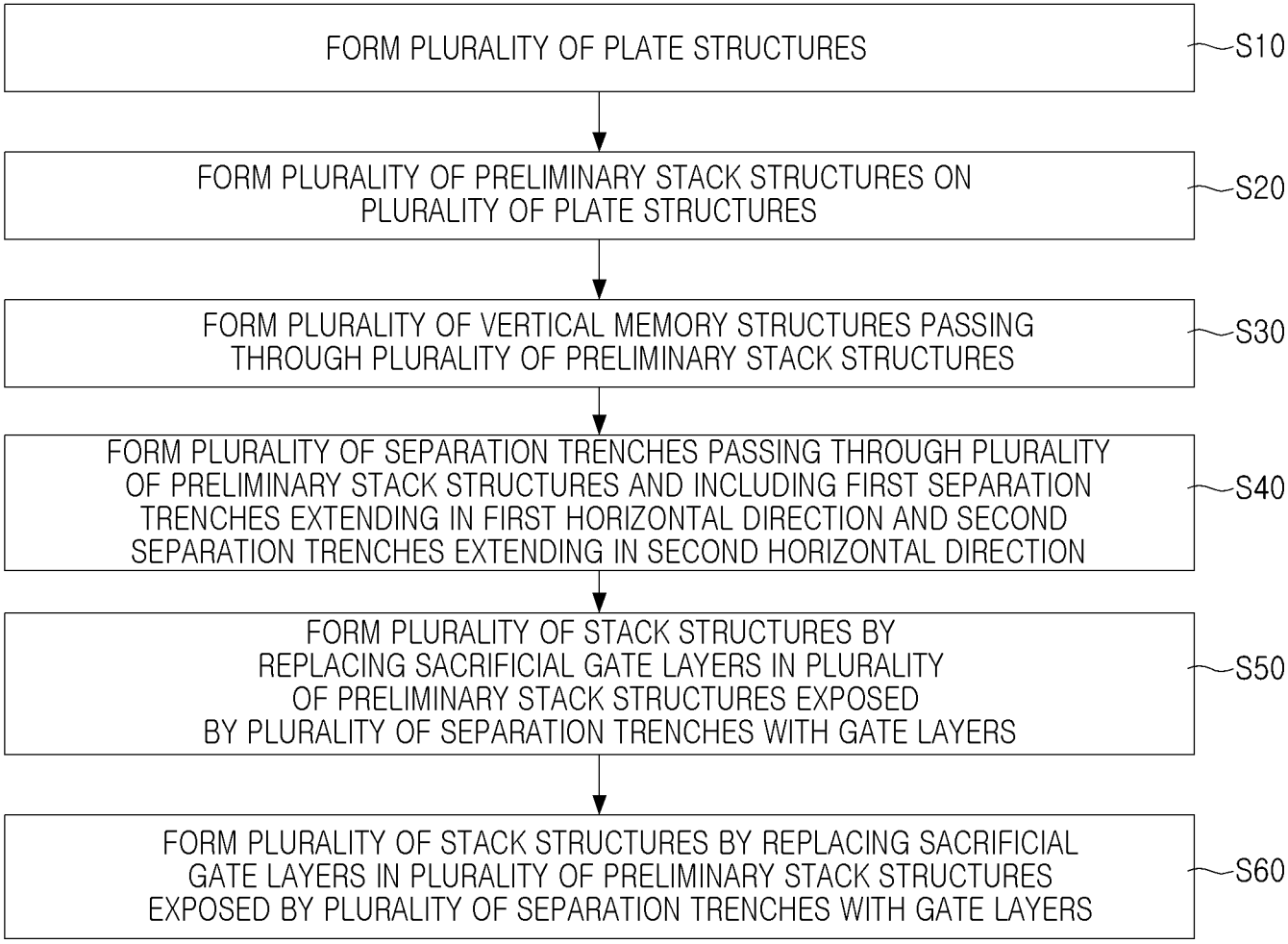

FORM PLURALITY OF PLATE STRUCTURES
S10
FORM PLURALITY OF PRELIMINARY STACK STRUCTURES ON PLURALITY OF PLATE STRUCTURES
S20
FORM PLURALITY OF VERTICAL MEMORY STRUCTURES PASSING THROUGH PLURALITY OF PRELIMINARY STACK STRUCTURES
S30
FORM PLURALITY OF SEPARATION TRENCHES PASSING THROUGH PLURALITY OF PRELIMINARY STACK STRUCTURES AND INCLUDING FIRST SEPARATION TRENCHES EXTENDING IN FIRST HORIZONTAL DIRECTION AND SECOND SEPARATION TRENCHES EXTENDING IN SECOND HORIZONTAL DIRECTION
S40
FORM PLURALITY OF STACK STRUCTURES BY REPLACING SACRIFICIAL GATE LAYERS IN PLURALITY OF PRELIMINARY STACK STRUCTURES EXPOSED BY PLURALITY OF SEPARATION TRENCHES WITH GATE LAYERS
S50
FORM PLURALITY OF STACK STRUCTURES BY REPLACING SACRIFICIAL GATE LAYERS IN PLURALITY OF PRELIMINARY STACK STRUCTURES EXPOSED BY PLURALITY OF SEPARATION TRENCHES WITH GATE LAYERS
S60

FIG. 17

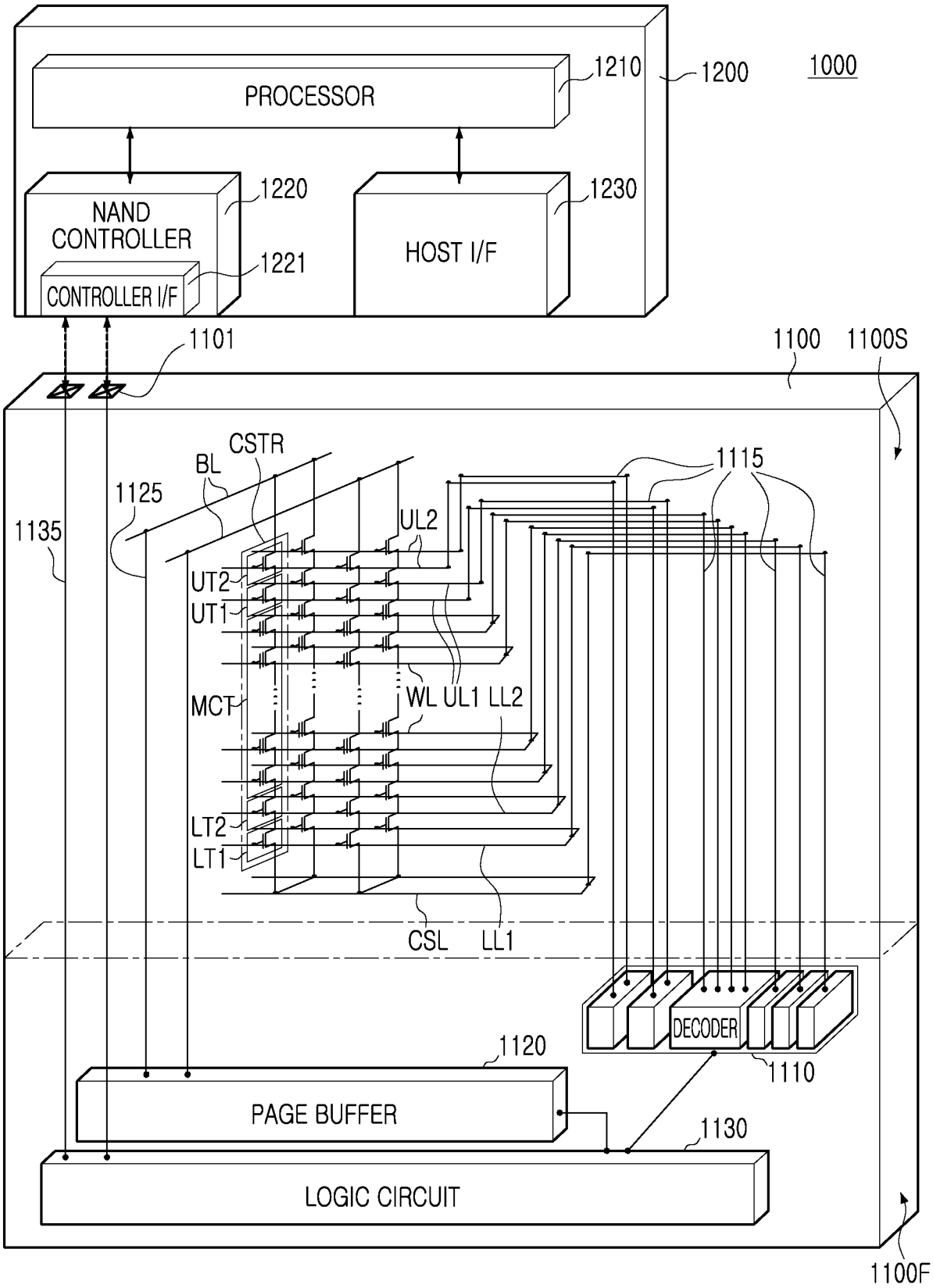

PROCESSOR
1210
1200
1000
NAND CONTROLLER
1220
CONTROLLER I/F
1221
HOST I/F
1230
1101
1100
1100S
CSTR
BL
1125
1135
UL2
1115
UT2
UT1
MCT
WL UL1 LL2
LT2
LT1
CSL
LL1
DECODER
1120
1110
PAGE BUFFER
1130
LOGIC CIRCUIT
1100F

FIG. 18

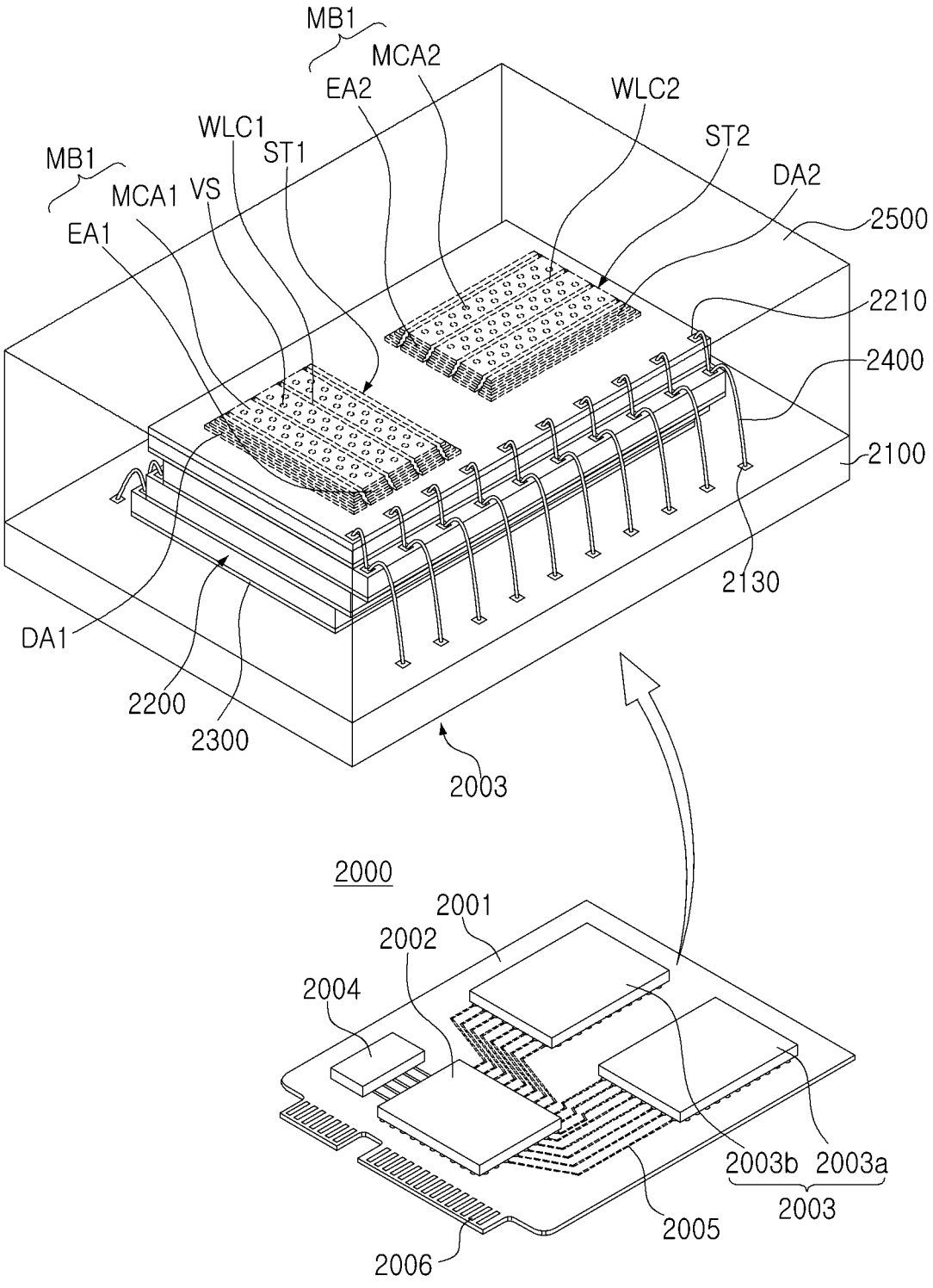

MB1
MCA2
EA2
WLC2
WLC1
ST1
ST2
MB1
MCA1
VS
DA2
EA1
2500
2210
2400
2100
2130
DA1
2200
2300
2003
2000
2001
2002
2004
2003b
2003a
2003
2005
2006

FIG. 19