FIG. 1

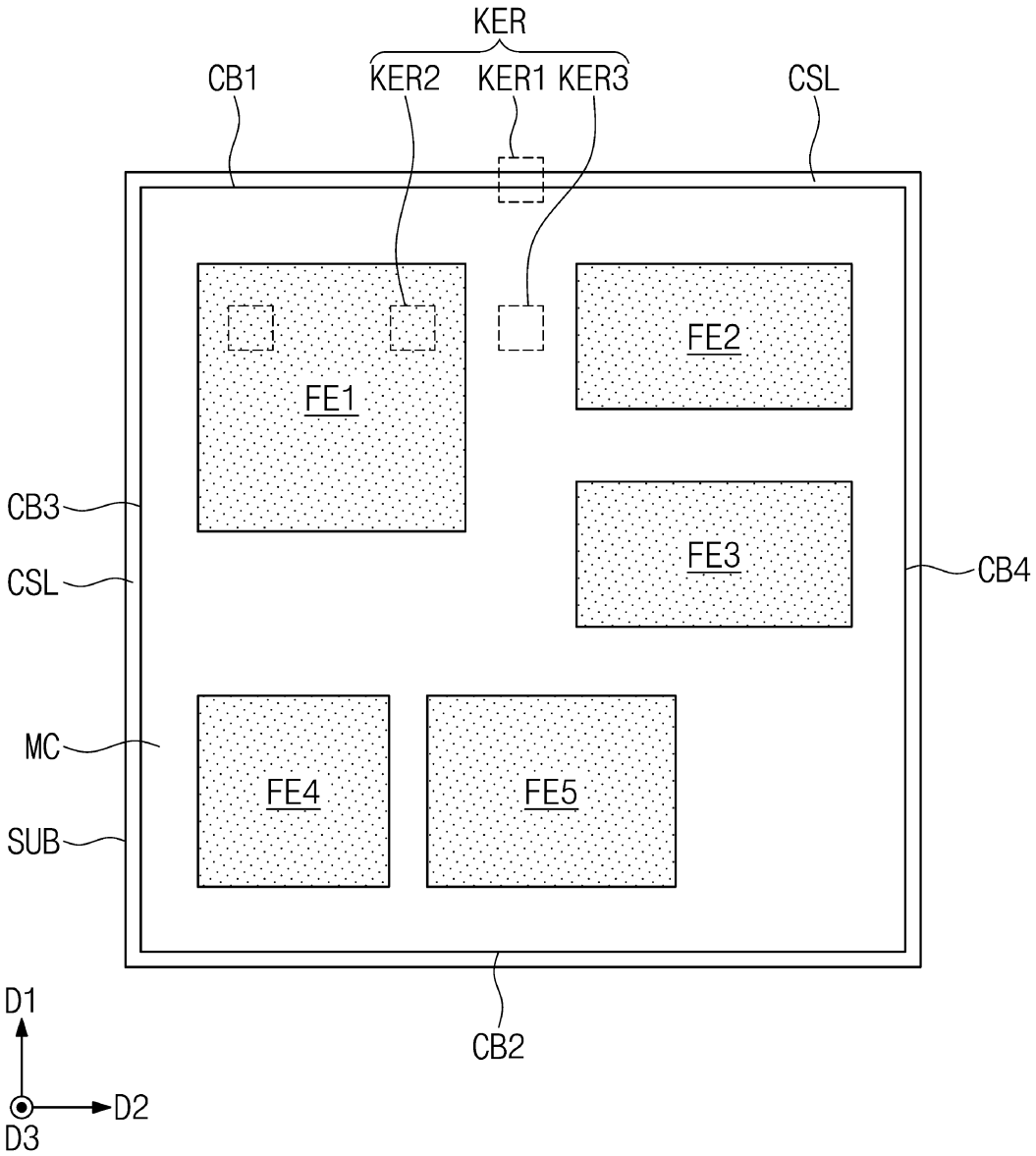

KER
CB1
KER2
KER1
KER3
CSL
FE1
FE2
FE3
FE4
FE5
CB3
CSL
CB4
MC
SUB
CB2
D1
D2
D3

FIG. 2

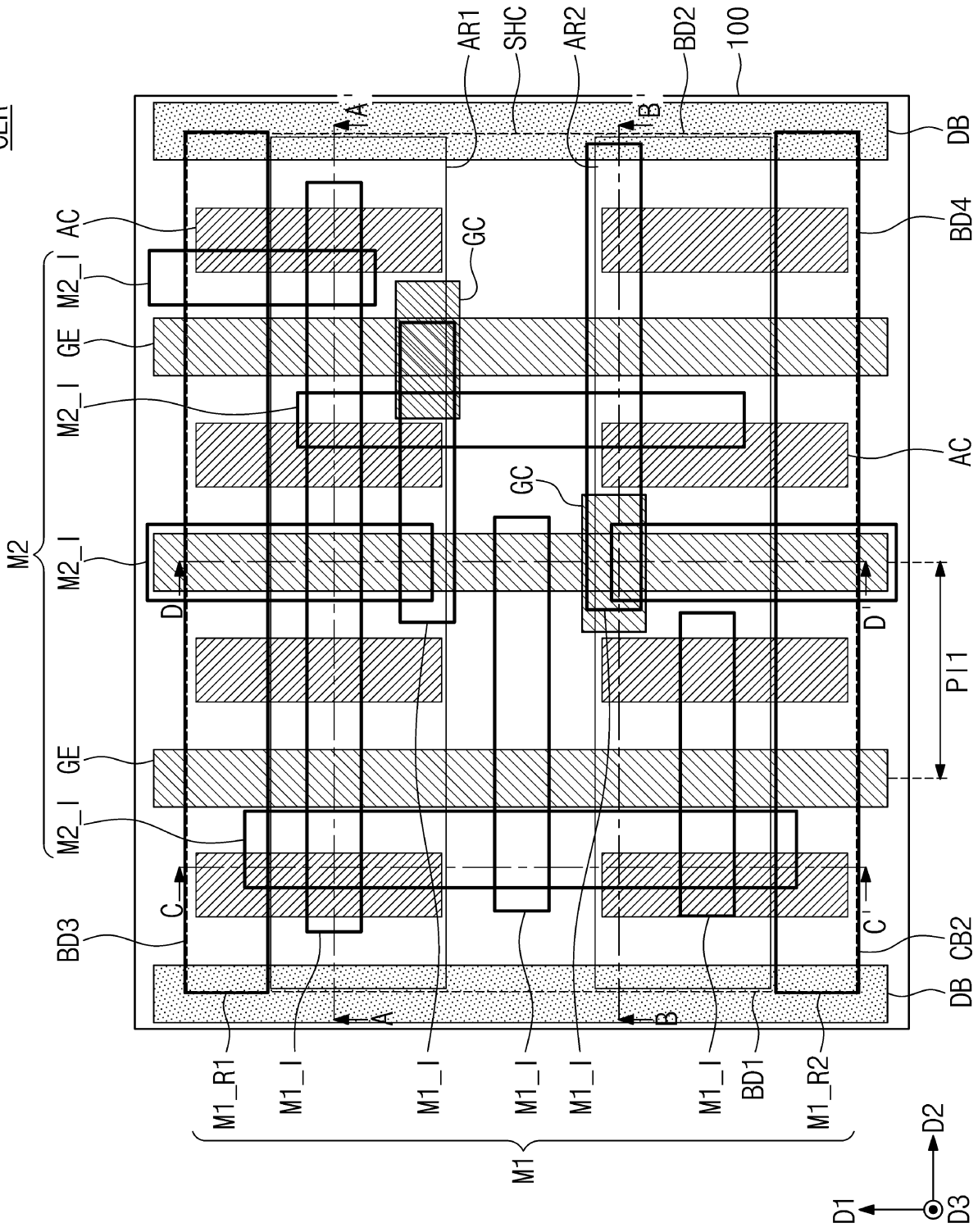

CER
M2
M2_I
AC
M2_I
GE
M2_I
M2_I
GE
M2_I
BD3
AR1
SHC
AR2
BD2
100
DB
BD4
AC
GC
GC
A
A
B
B
D
D'
C
C'
PI1
DB
CB2
M1_R1
M1_I
M1_I
M1_I
M1_I
M1_I
BD1
M1_R2
M1
D2
D1
D3

FIG. 3A

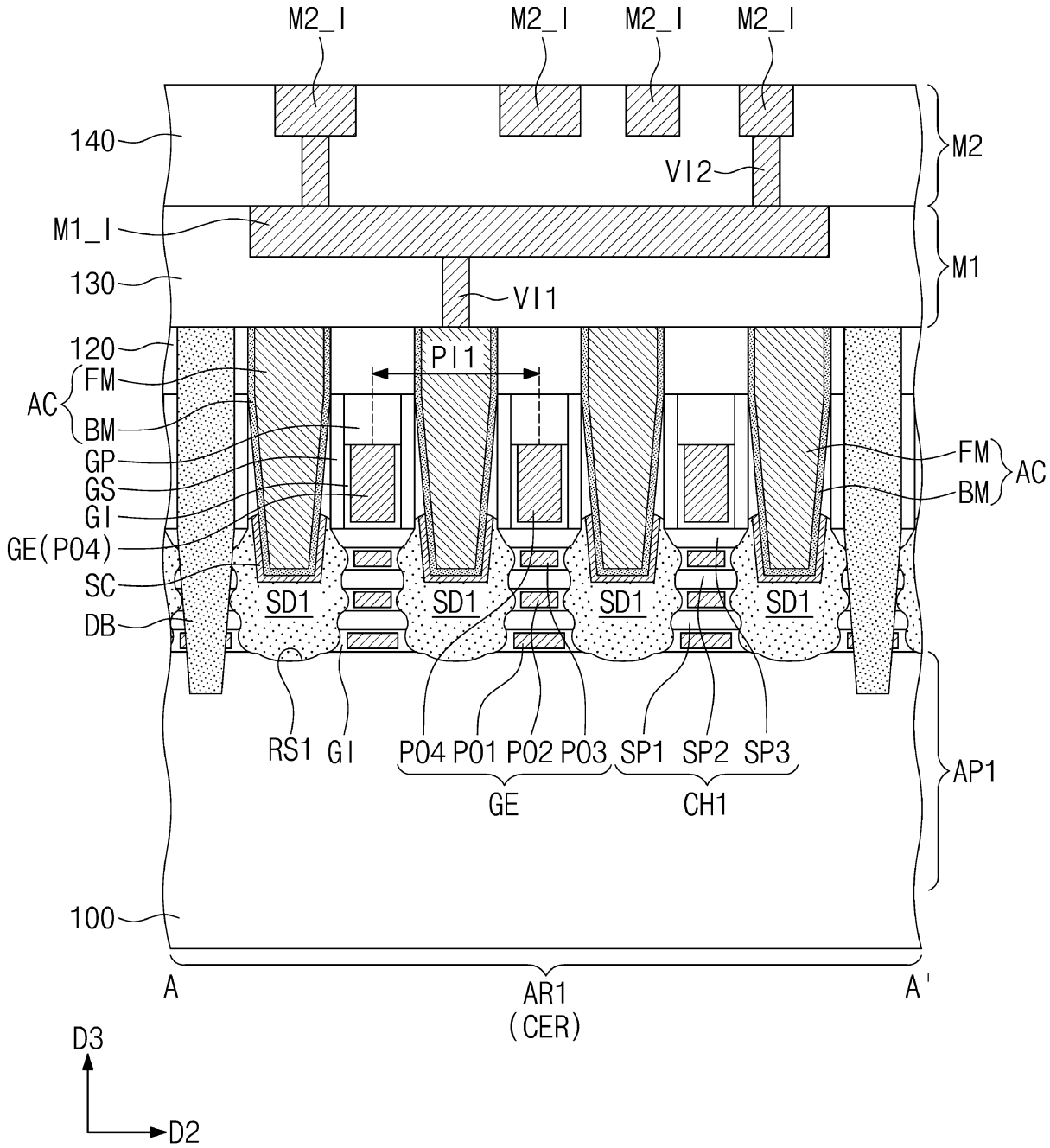

M2_I
M2_I
M2_I
M2_I
140
M2
VI2
M1_I
M1
130
VI1
120
PI1
AC
FM
BM
GP
GS
GI
GE(P04)
SC
DB
SD1
SD1
SD1
SD1
FM
BM
AC
RS1
GI
P04
P01
P02
P03
SP1
SP2
SP3
GE
CH1
AP1
100
A
AR1
(CER)
A'
D3
D2

FIG. 3B

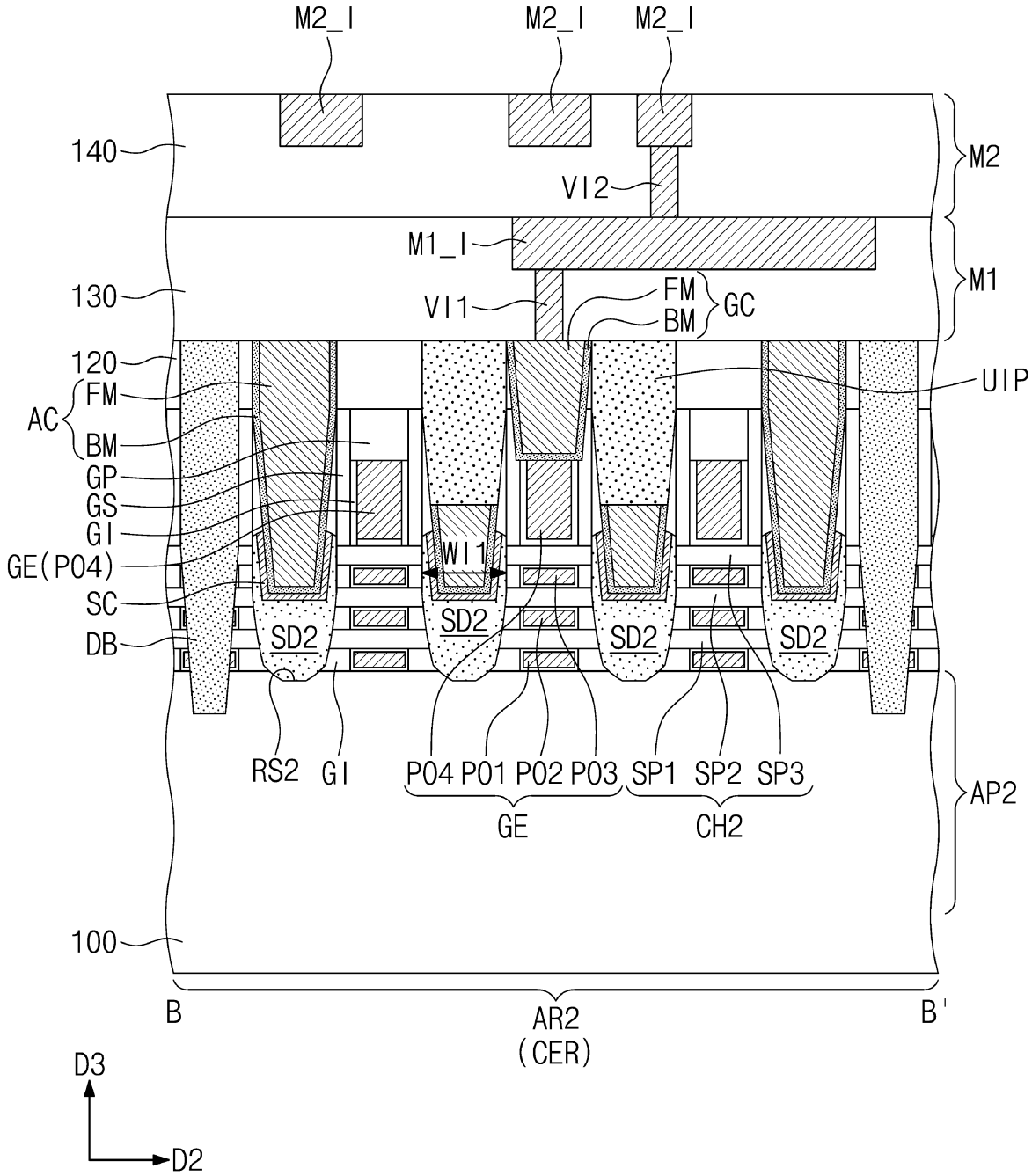

M2_I
M2_I
M2_I
140
M2
VI2
M1_I
M1
130
VI1
FM
BM
GC
120
UIP
AC
FM
BM
GP
GS
GI
GE(P04)
SC
DB
WI1
SD2
SD2
SD2
SD2
RS2
GI
P04 P01 P02 P03
SP1 SP2 SP3
GE
CH2
AP2
100
B
AR2
(CER)
B'
D3
D2

FIG. 3C

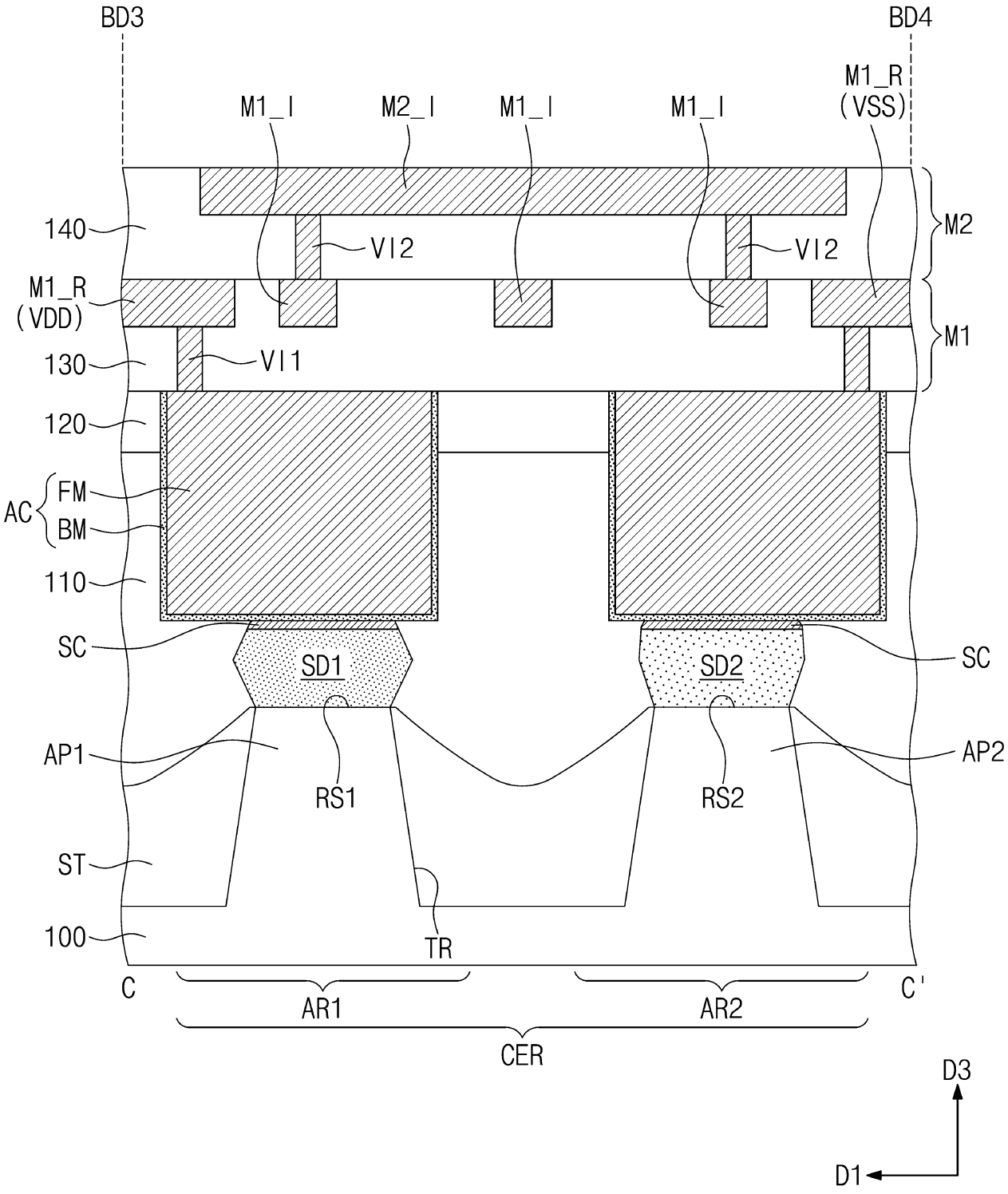

BD3
BD4
M1_I
M2_I
M1_I
M1_I
M1_R
(VSS)
140
VI2
VI2
M2
M1_R
(VDD)
M1
130
VI1
120
AC
FM
BM
110
SC
SD1
SD2
SC
AP1
RS1
RS2
AP2
ST
100
TR
C
C'
AR1
AR2
CER
D3
D1

FIG. 3D

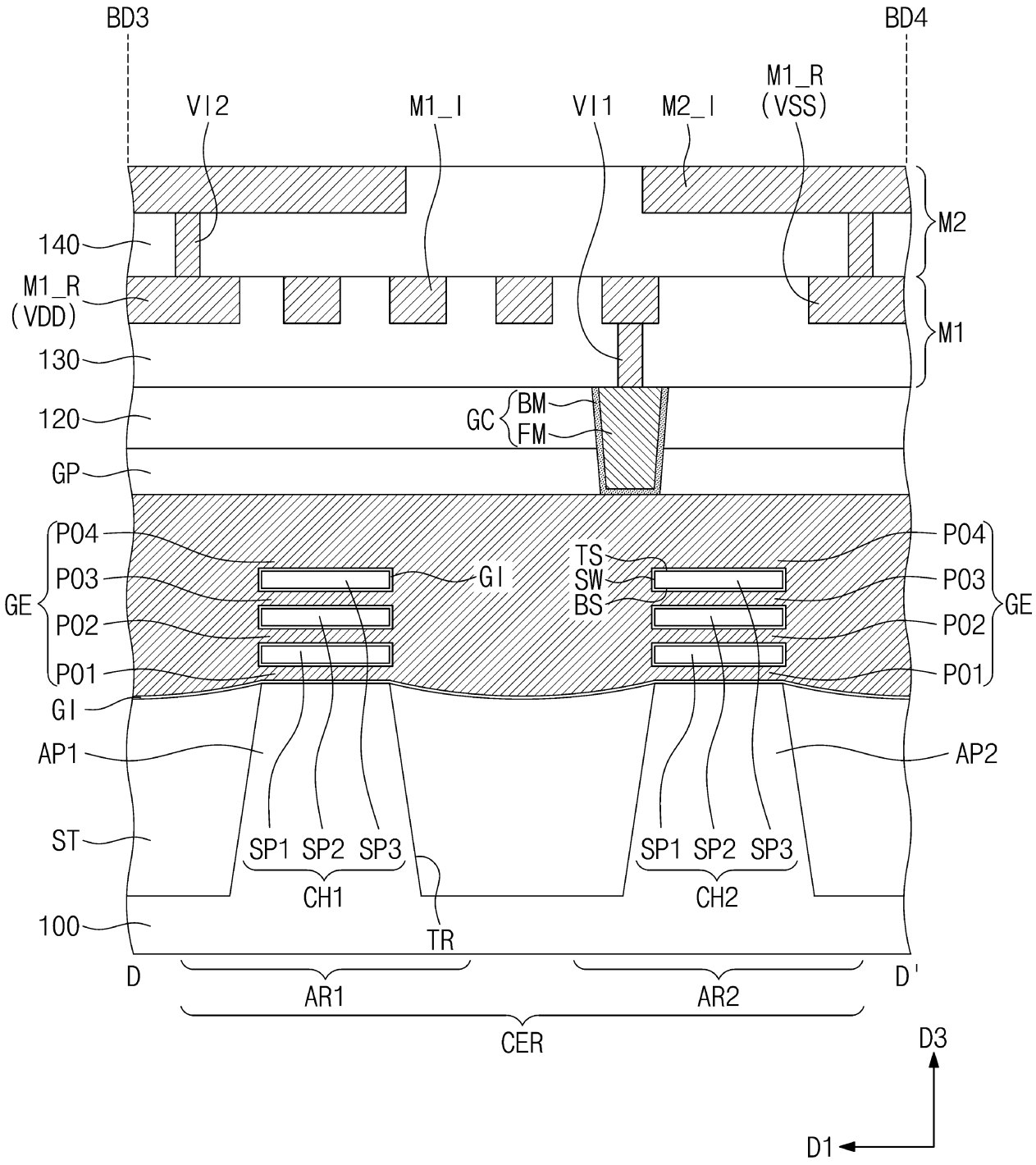

BD3
BD4
VI2
M1_I
VI1
M2_I
M1_R
(VSS)
M2
140
M1_R
(VDD)
M1
130
120
GC
BM
FM
GP
P04
P03
P02
P01
GE
GI
TS
SW
BS
AP1
AP2
ST
SP1 SP2 SP3
CH1
CH2
100
TR
D
D'
AR1
AR2
CER
D3
D1

FIG. 4

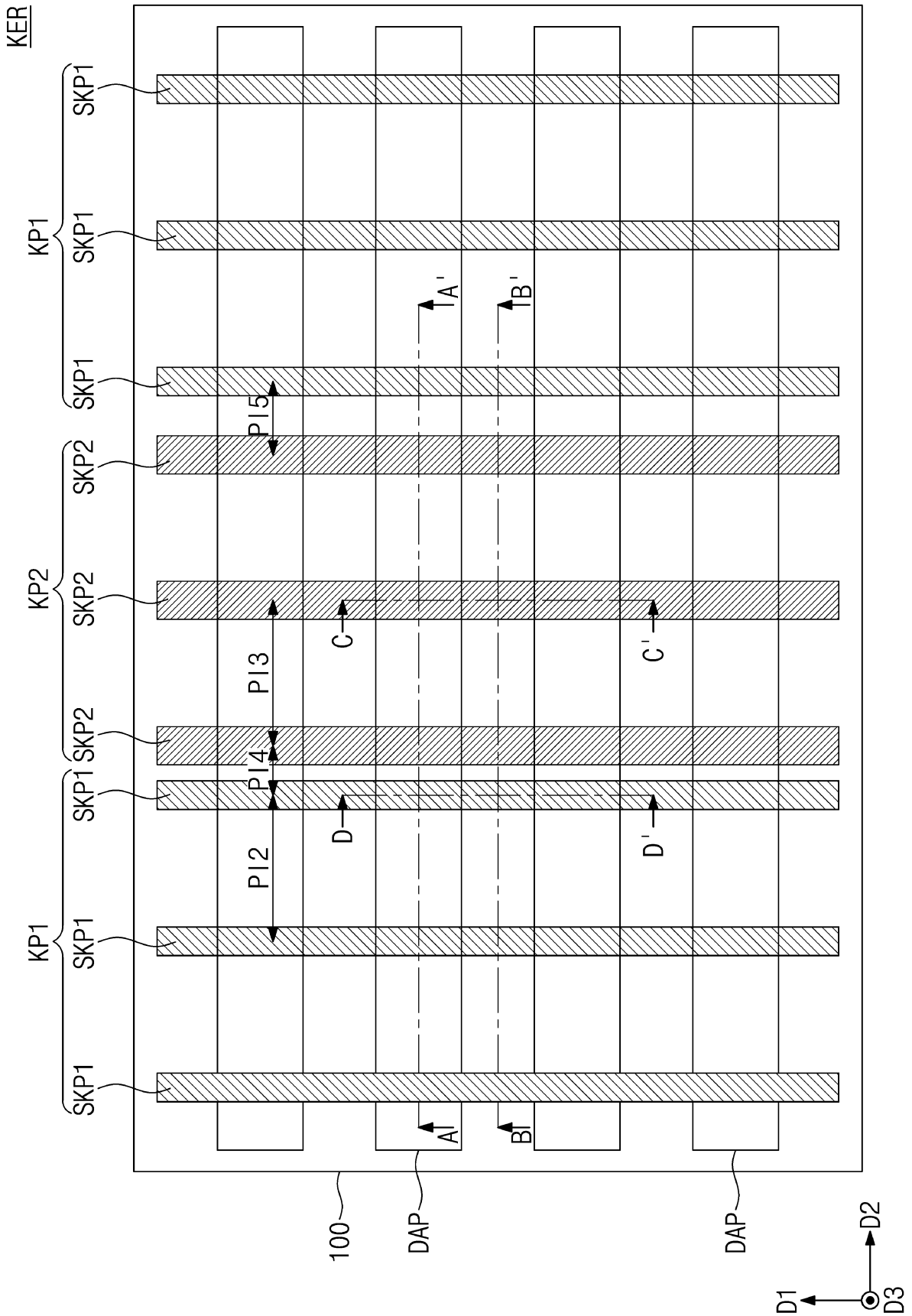

KER
KP1
KP2
SKP1
SKP2
PI2
PI3
PI4
PI5
A
A'
B
B'
C
C'
D
D'
100
DAP
DAP
D1
D2
D3

FIG. 5A

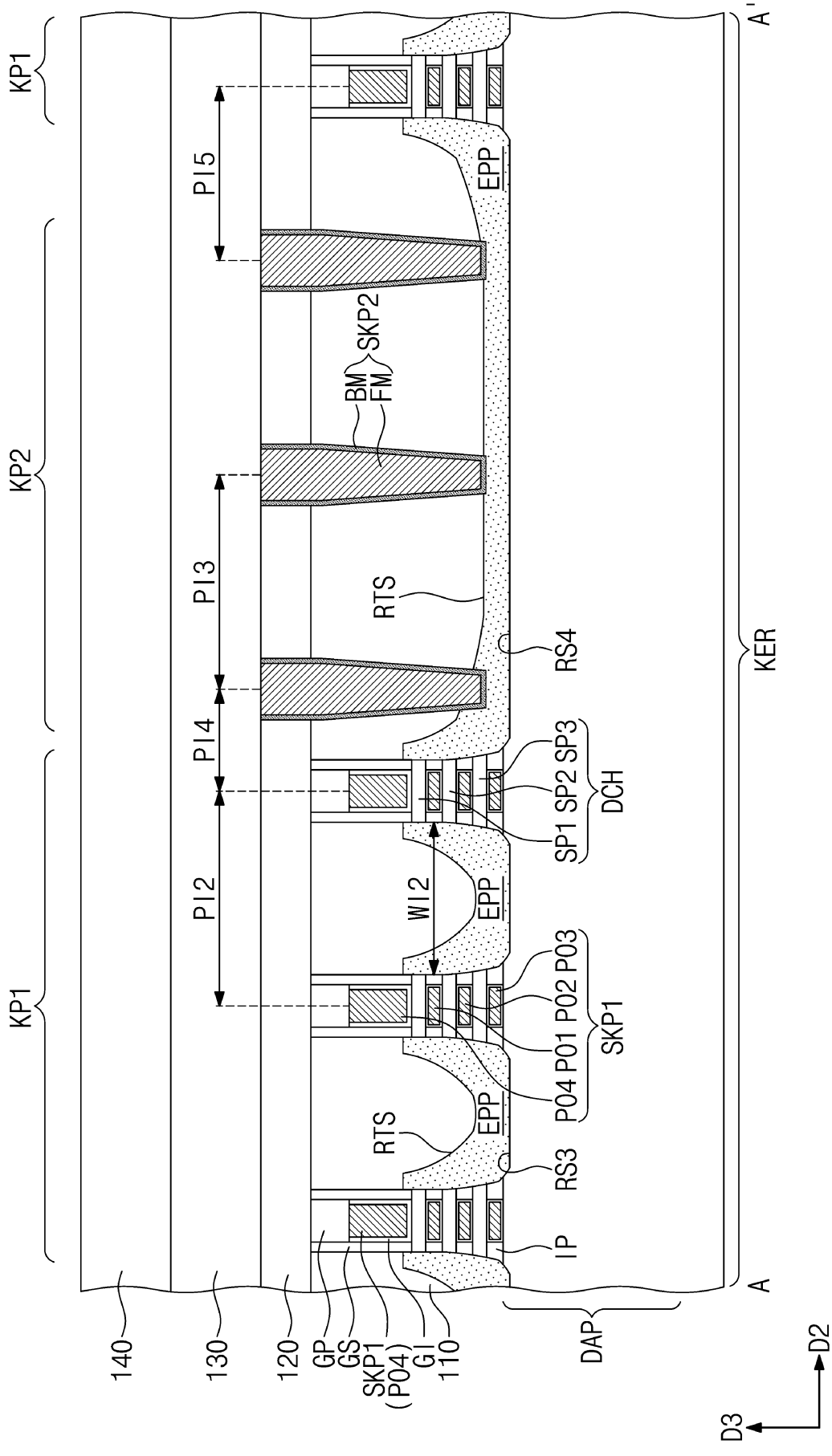

KP1
KP2
KP1
PI5
PI3
PI4
PI2
EPP
SKP2
BM
FM
RTS
RS4
SP1 SP2 SP3
DCH
KER
A'
WI2
EPP
P04 P01 P02 P03
SKP1
RTS
EPP
RS3
IP
A
140
130
120
GP
GS
SKP1
(P04)
GI
110
DAP
D3
D2

FIG. 5B

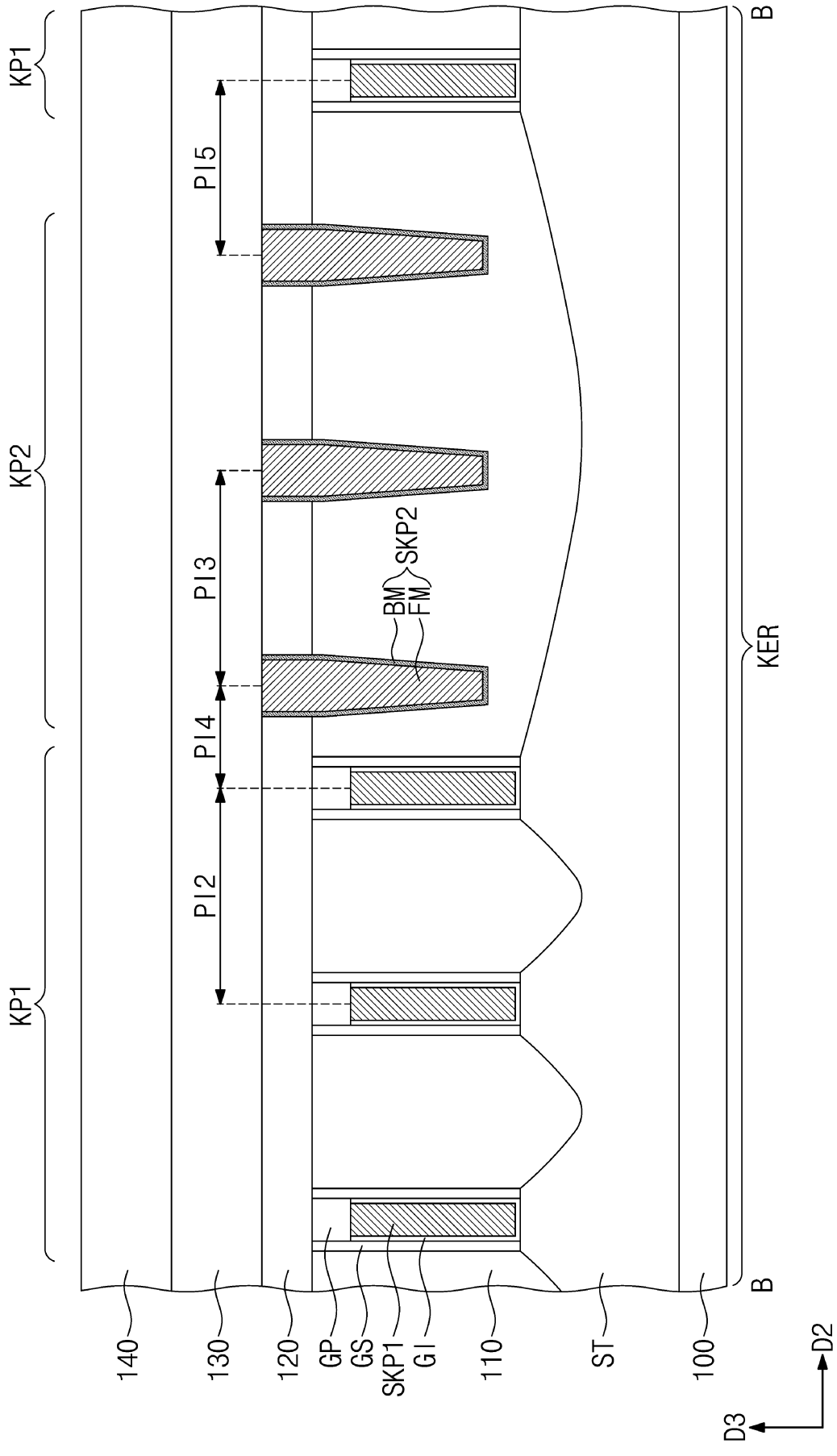

KP1
KP2
KP1
PI5
PI3
PI4
PI2
BM
FM
SKP2
KER
B'
B
140
130
120
GP
GS
SKP1
GI
110
ST
100
D3
D2

FIG. 5C

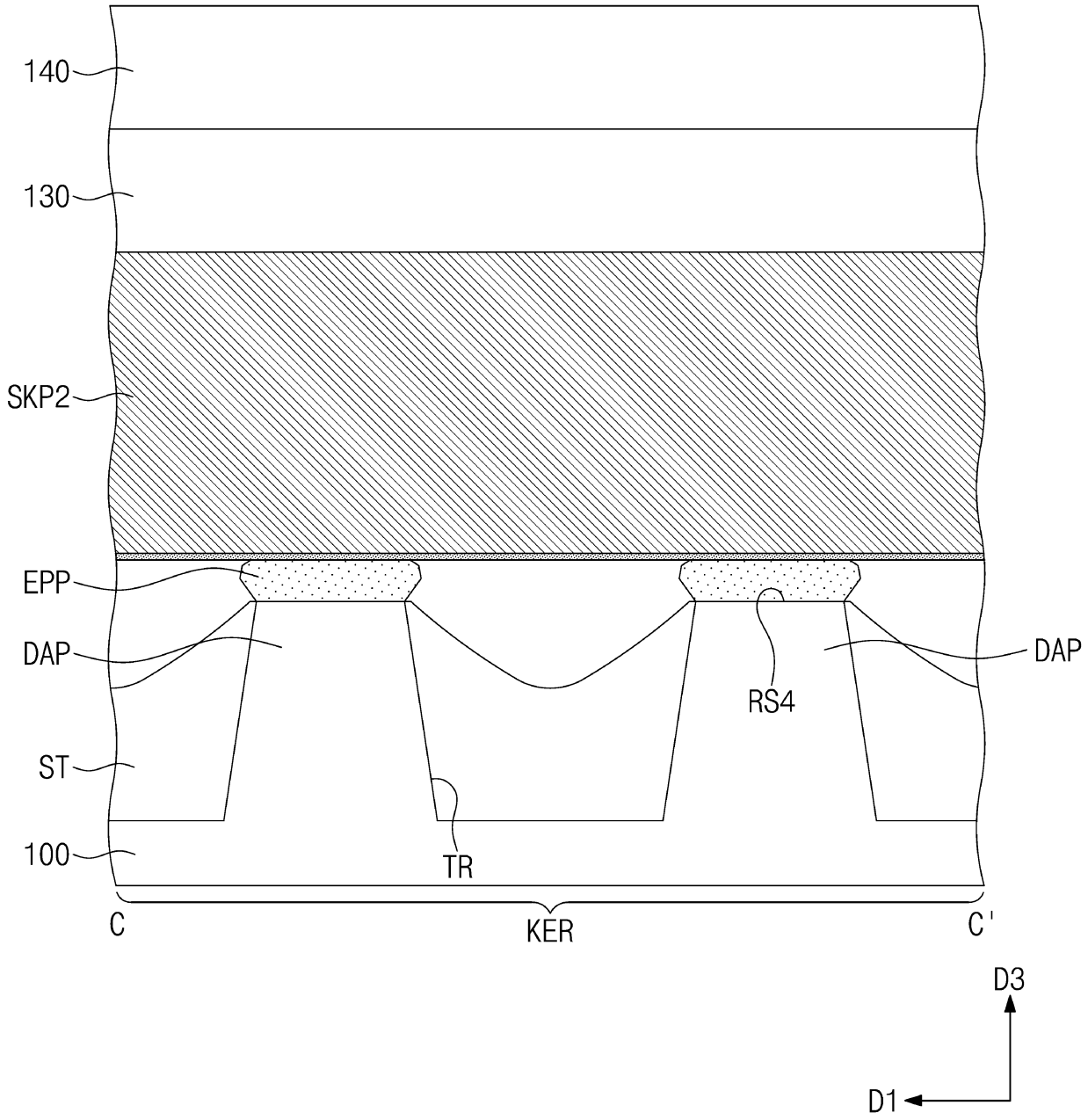


FIG. 5D

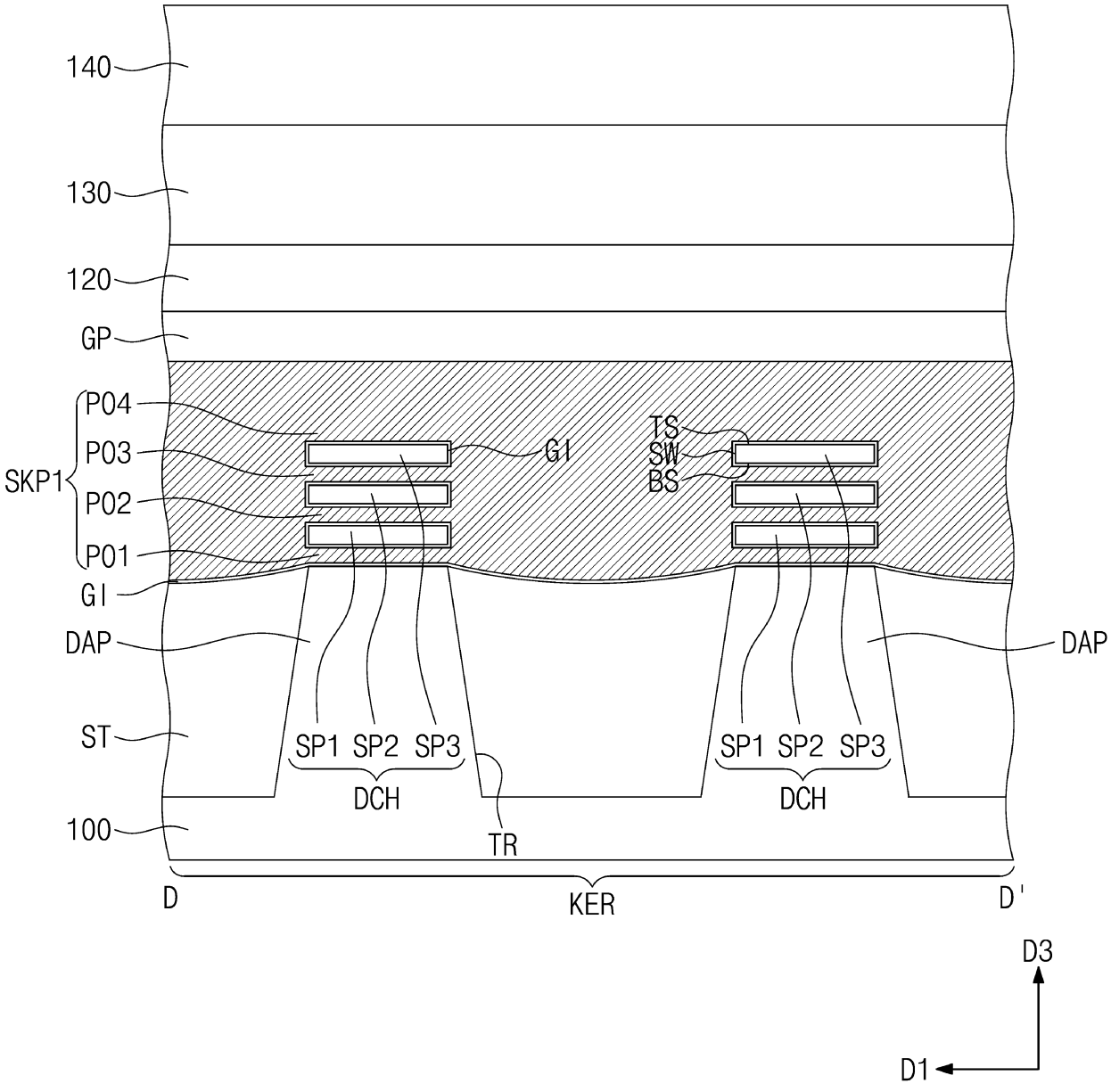

140
130
120
GP
SKP1
P04
P03
P02
P01
GI
DAP
ST
100
TS
SW
BS
SP1 SP2 SP3
DCH
TR
D
KER
D'
D3
D1

FIG. 6

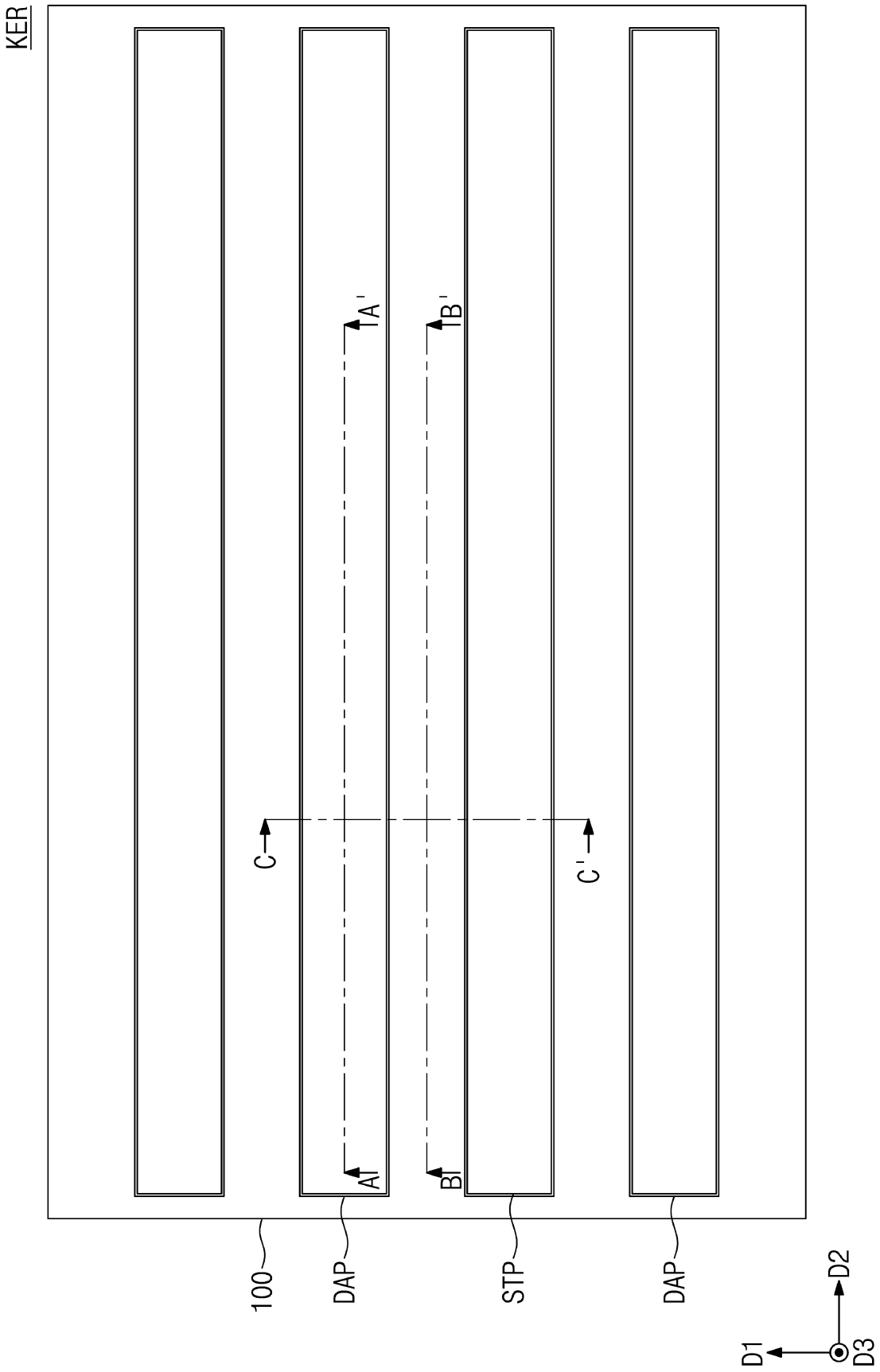


FIG. 7A

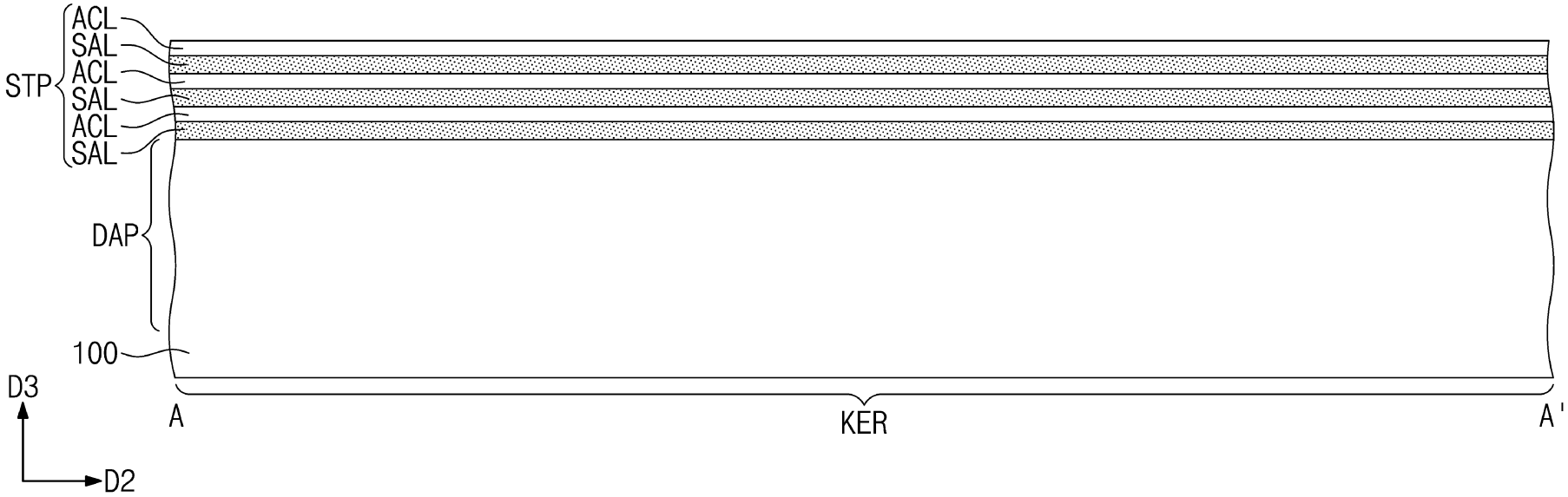

ACL
SAL
ACL
SAL
ACL
SAL
STP
DAP
100
D3
D2
A
KER
A'

FIG. 7B

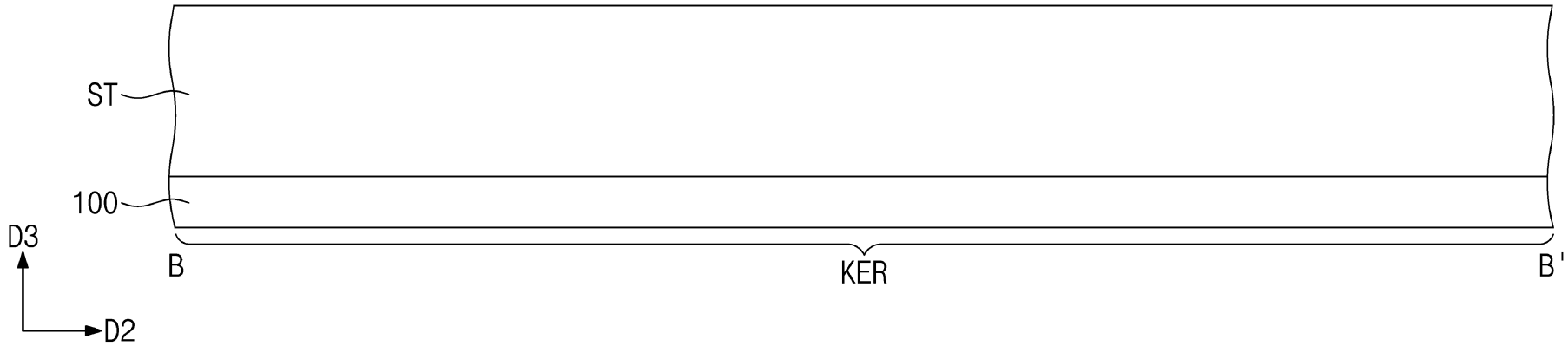

ST
100
D3
D2
B
KER
B'

FIG. 7C

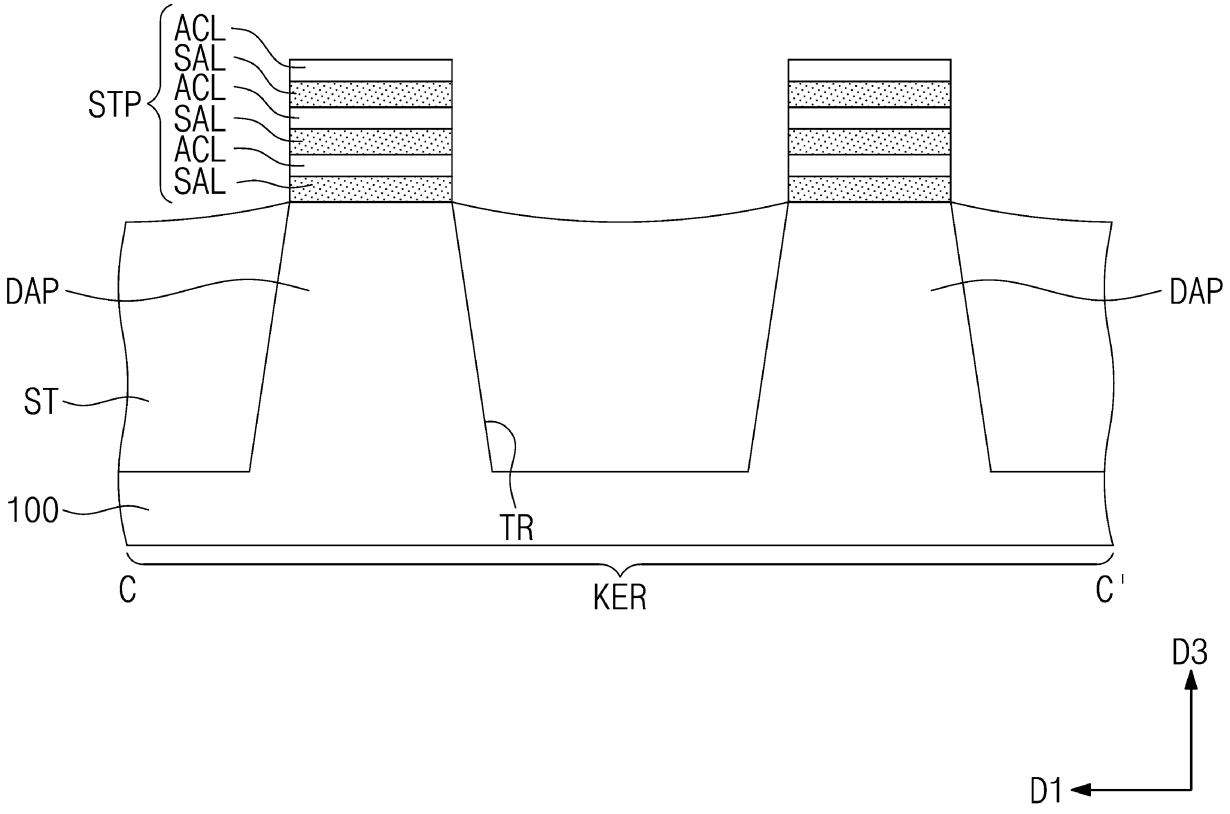


FIG. 8

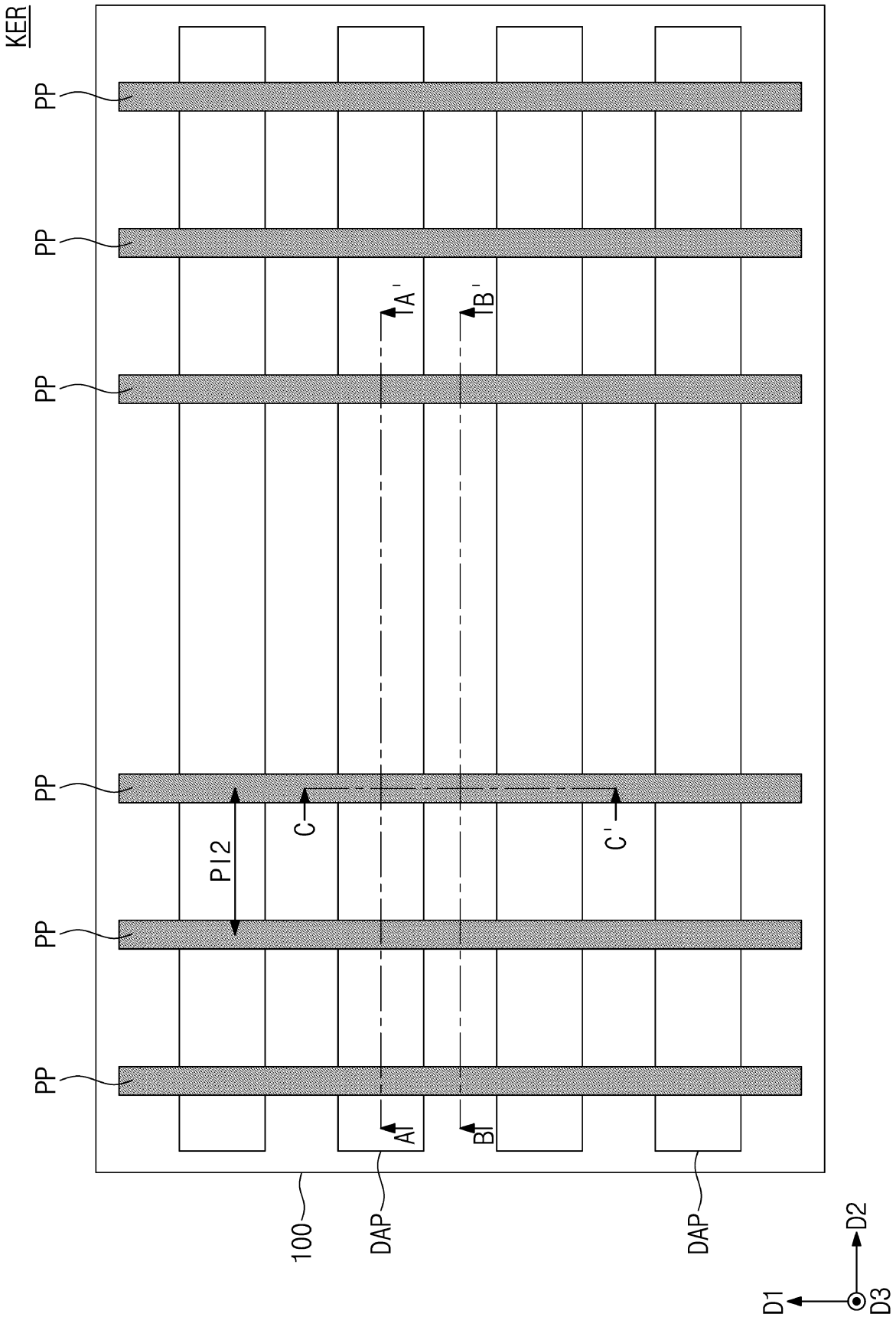


FIG. 9A

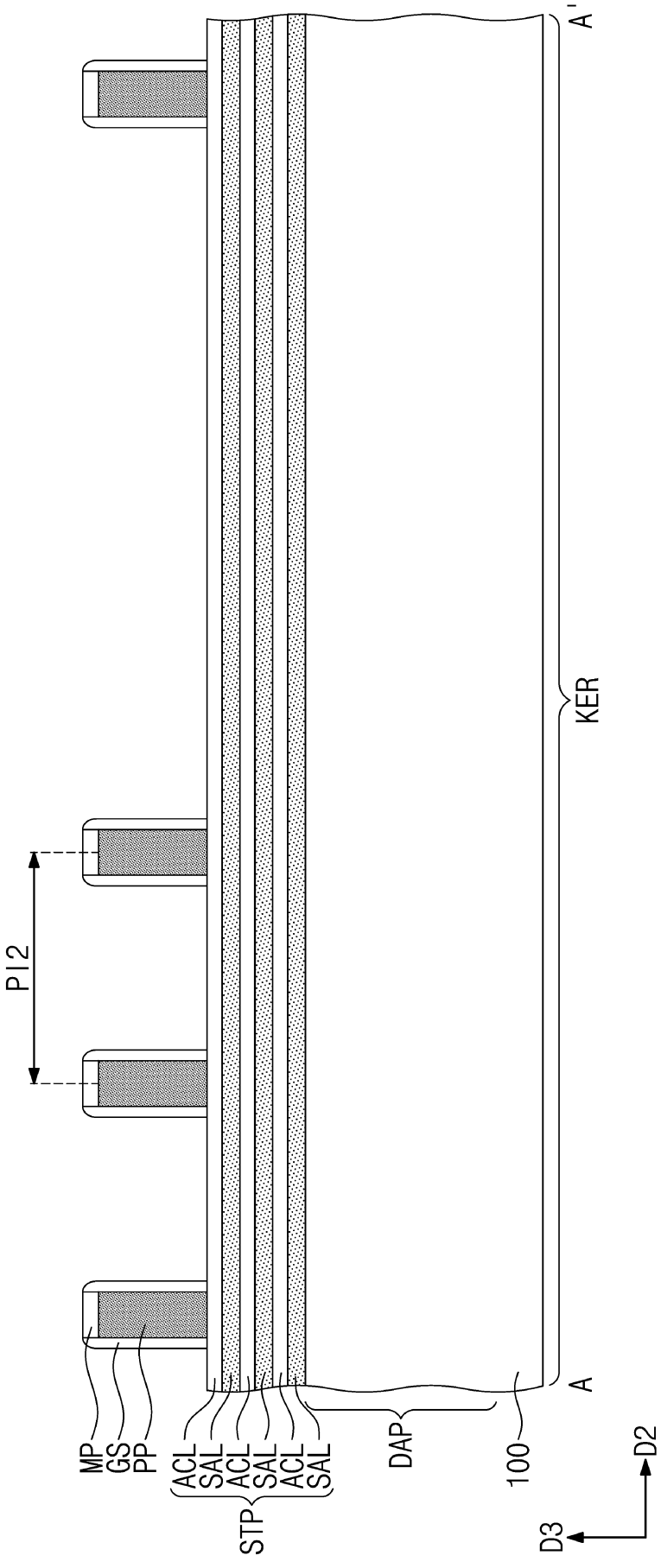


FIG. 9B

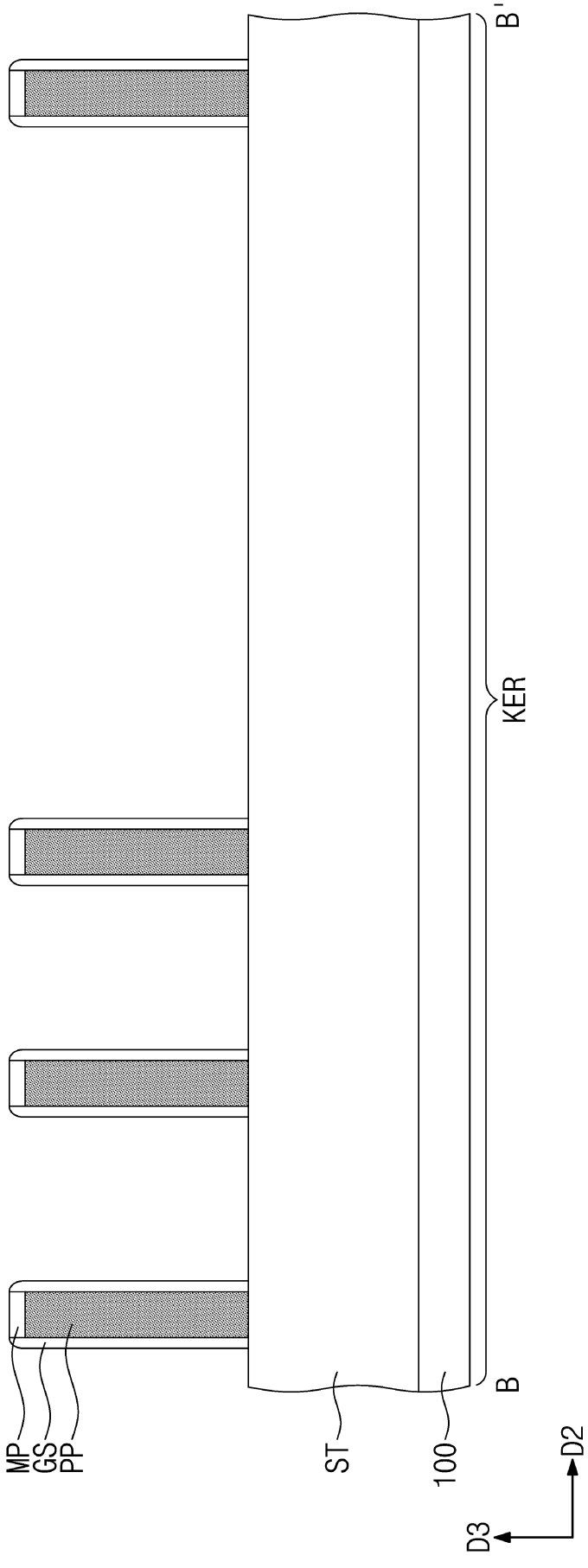


FIG. 9C

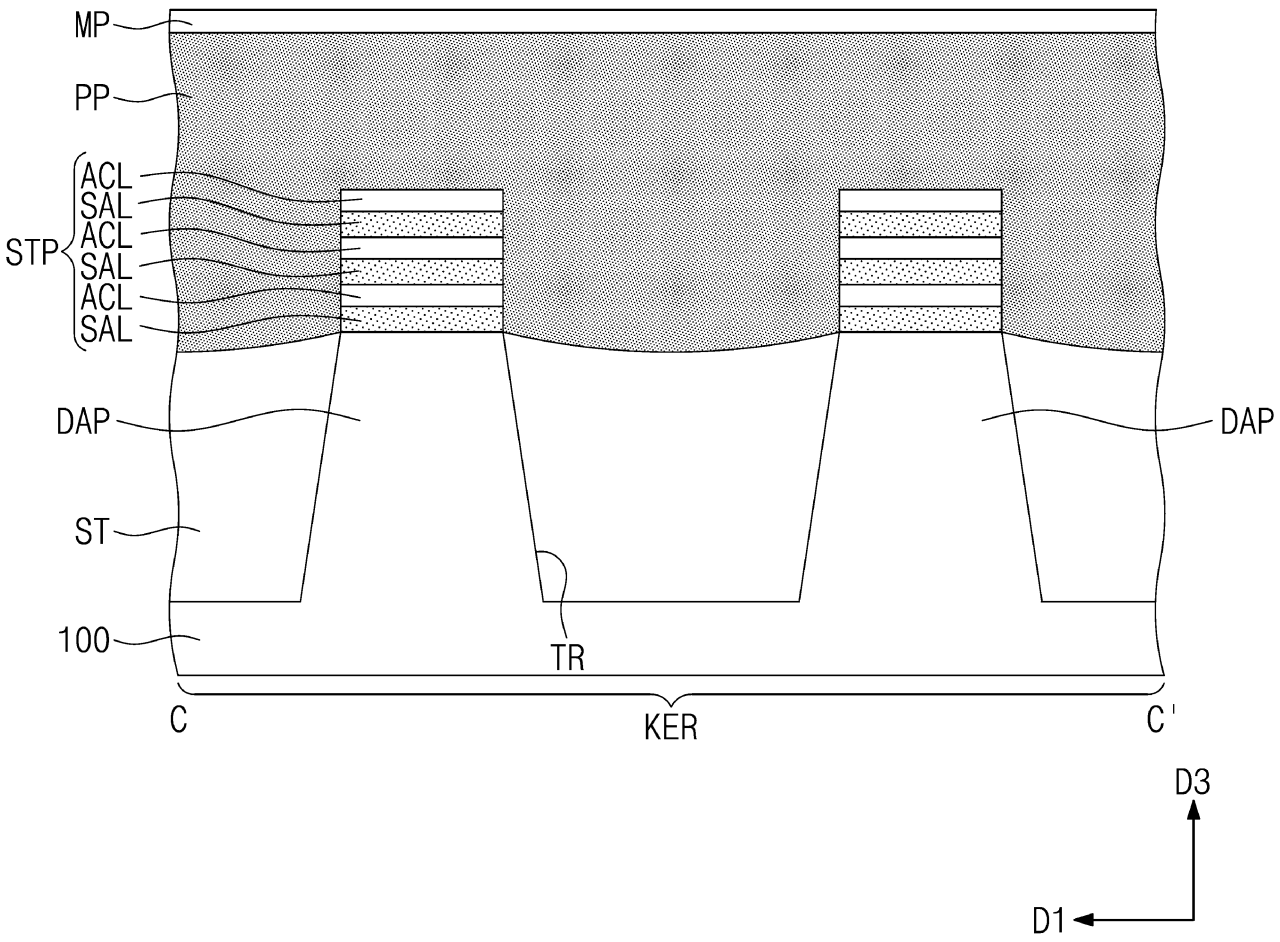


FIG. 10

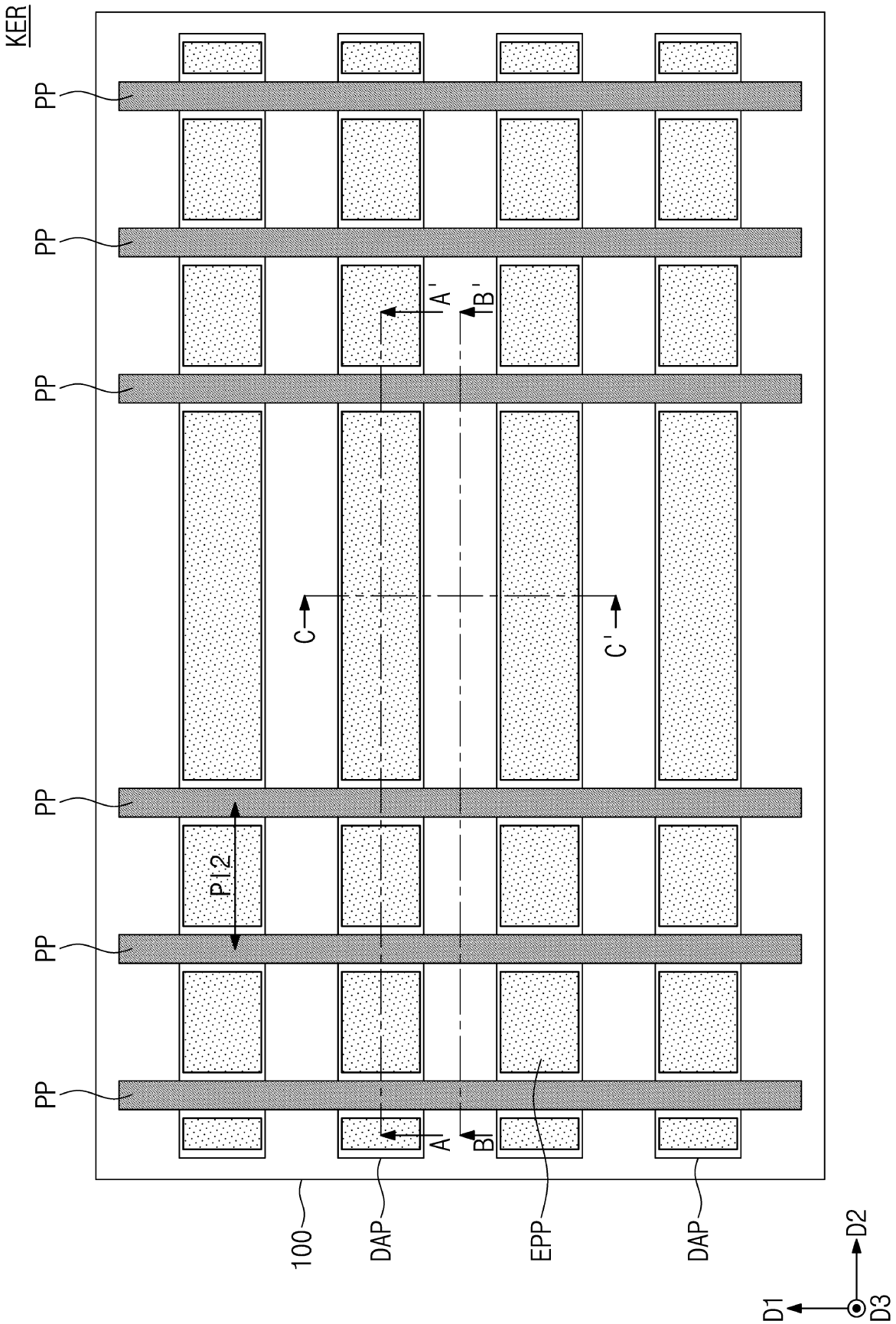


FIG. 11A

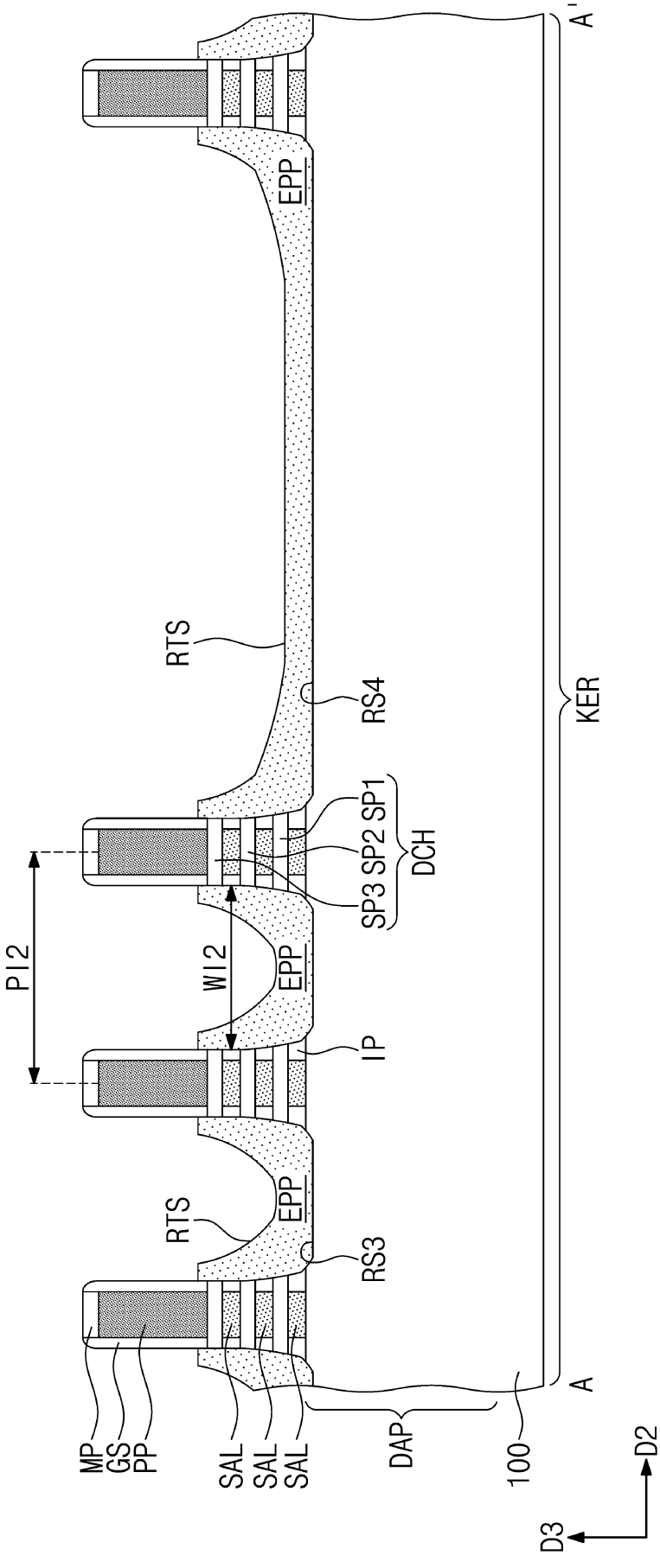

A'
EPP
RTS
RS4
SP3 SP2 SP1
DCH
KER
PI2
WI2
EPP
IP
RTS
EPP
RS3
MP
GS
PP
SAL
SAL
SAL
DAP
100
A
D3
D2

FIG. 11B

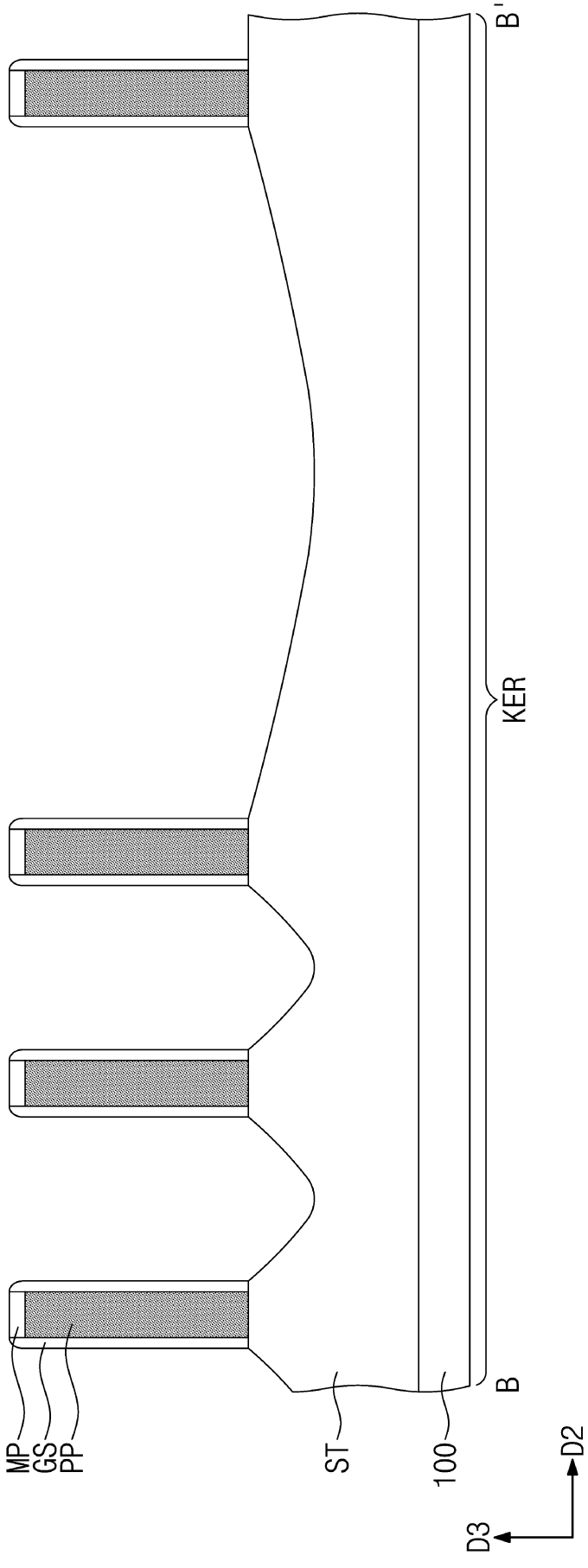


FIG. 11C

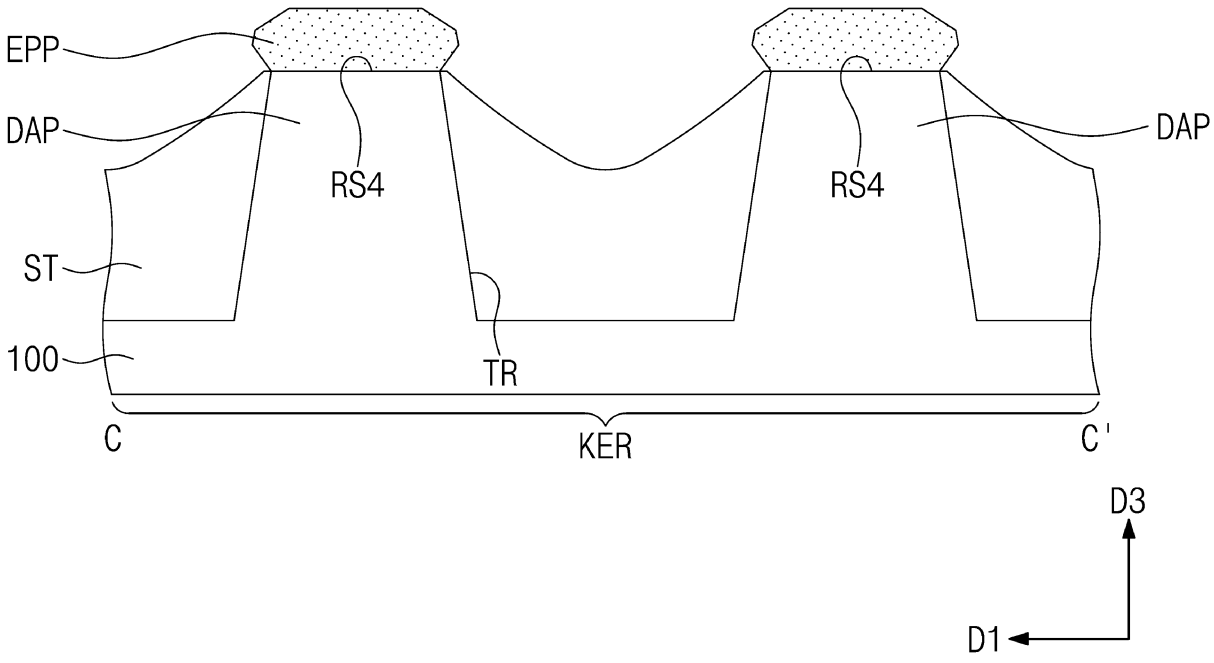


FIG. 12

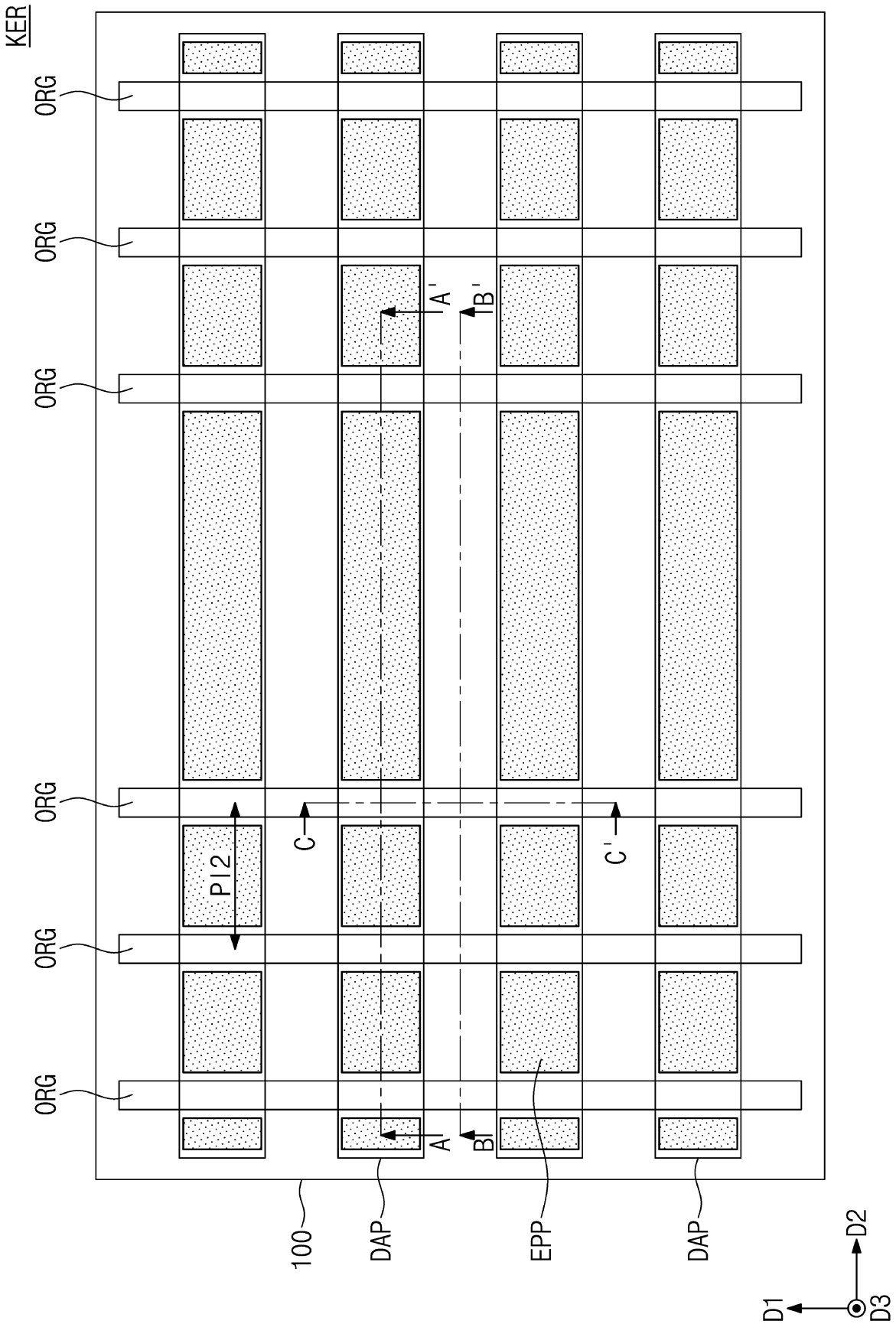


FIG. 13A

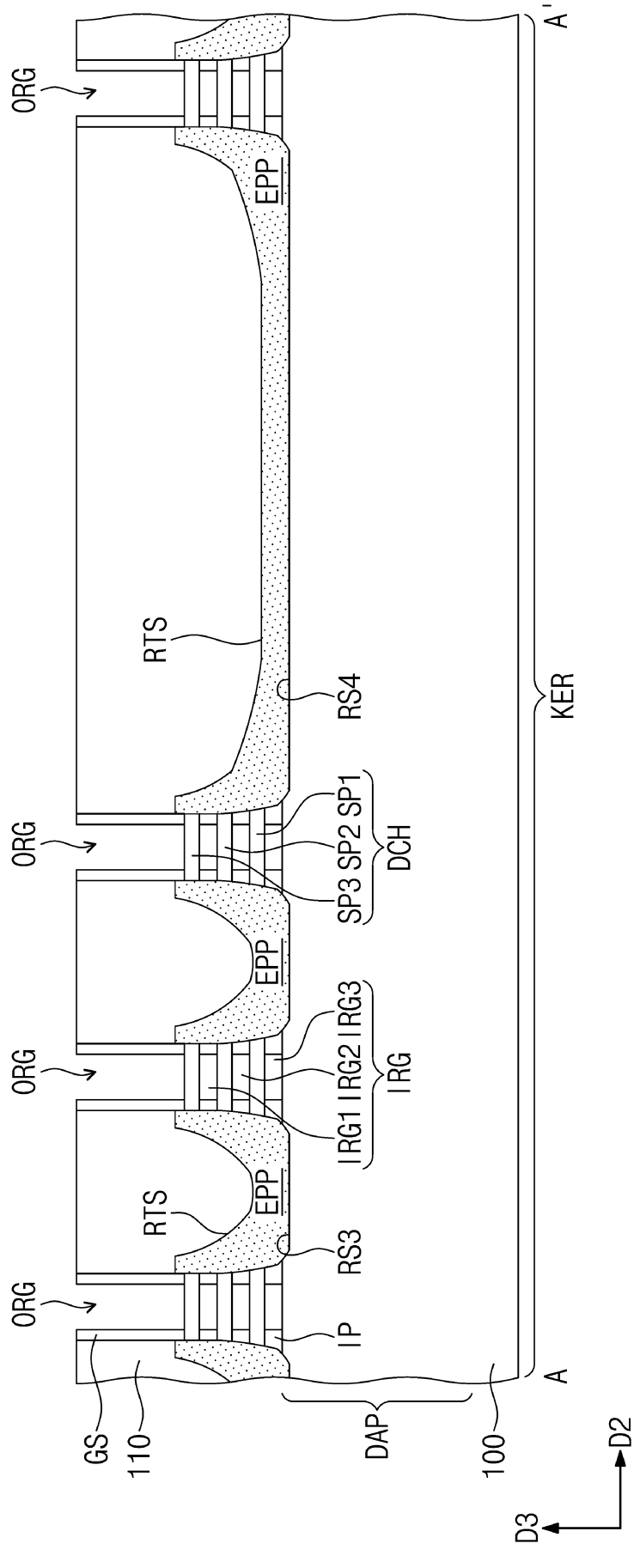

ORG
EPP
RTS
RS4
SP3 SP2 SP1
DCH
IRG1 IRG2 IRG3
IRG
RS3
IP
A
A'
KER
GS
110
DAP
100
D3
D2

FIG. 13B

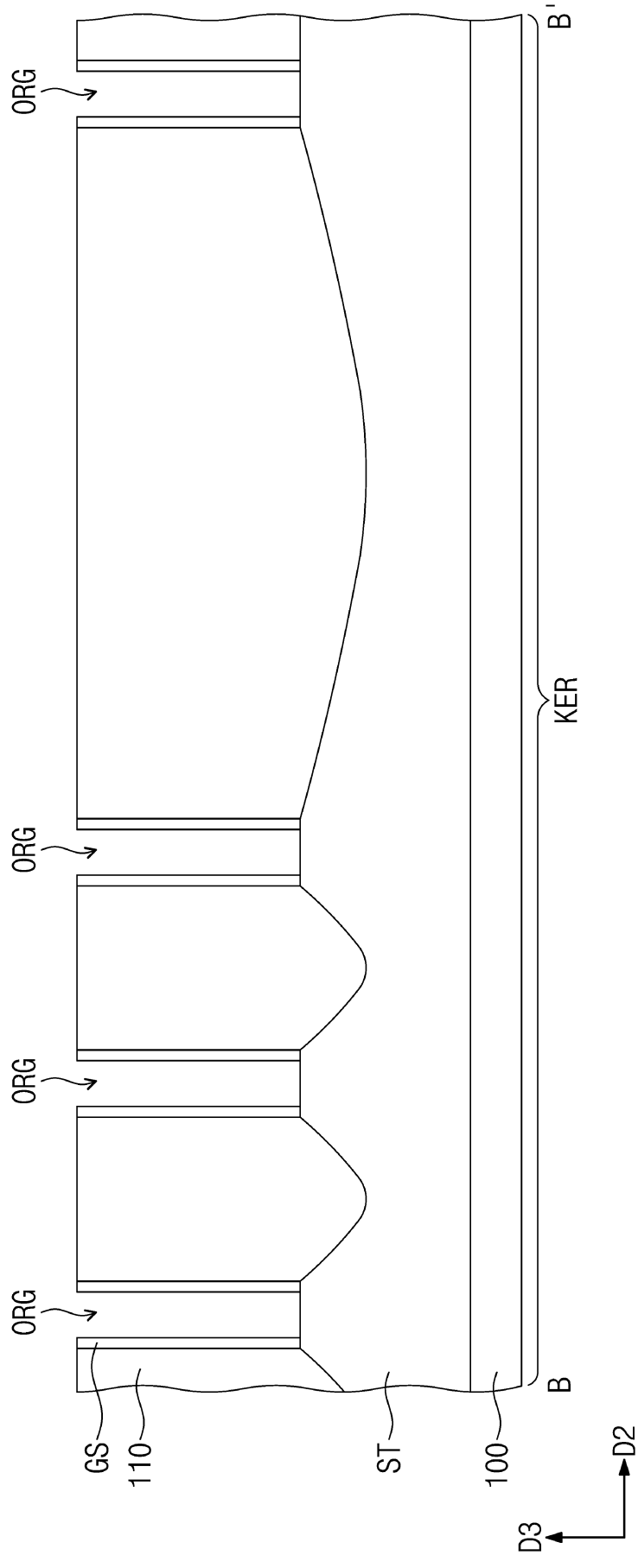


FIG. 13C

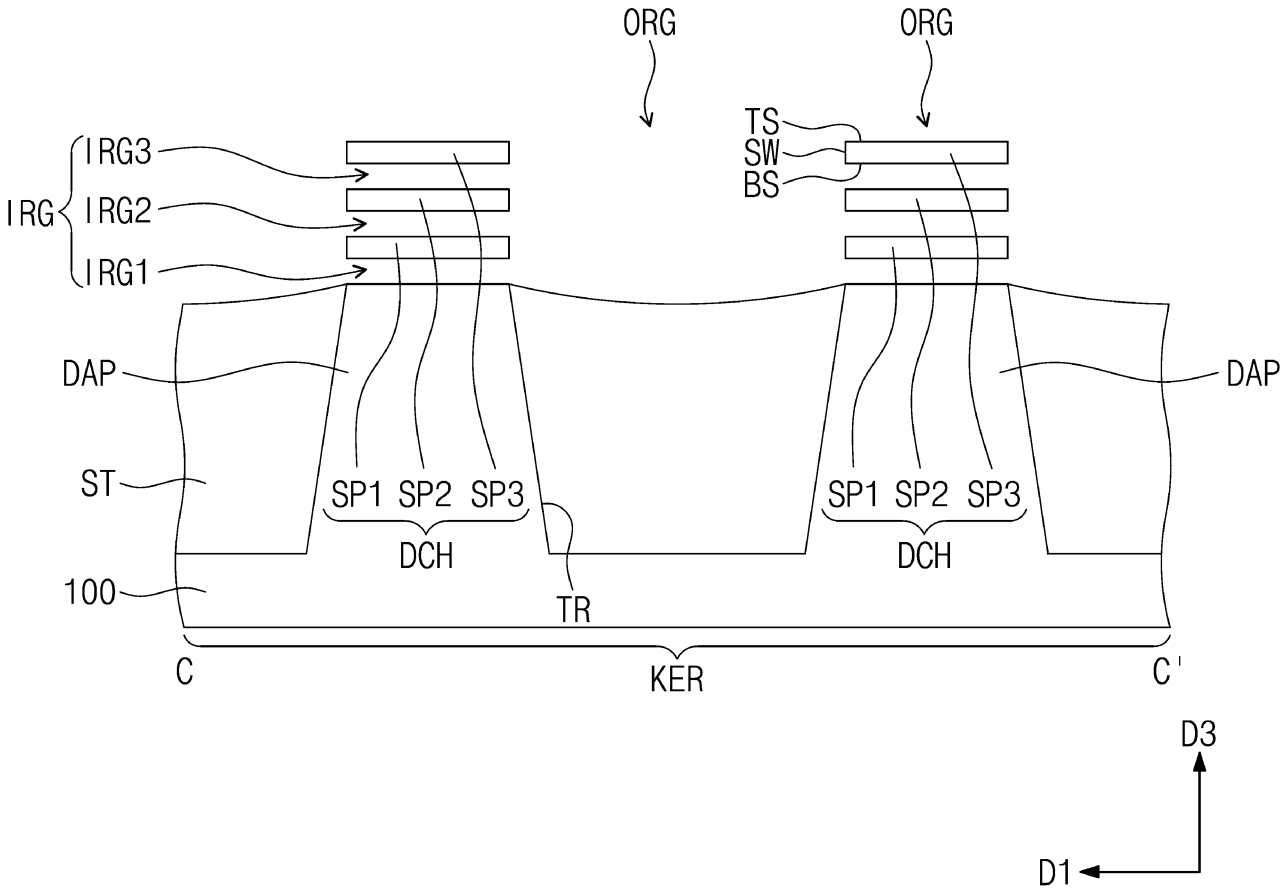

ORG
ORG
TS
SW
BS
IRG3
IRG
IRG2
IRG1
DAP
DAP
ST
SP1 SP2 SP3
SP1 SP2 SP3
DCH
DCH
100
TR
C
KER
C'
D3
D1

FIG. 14

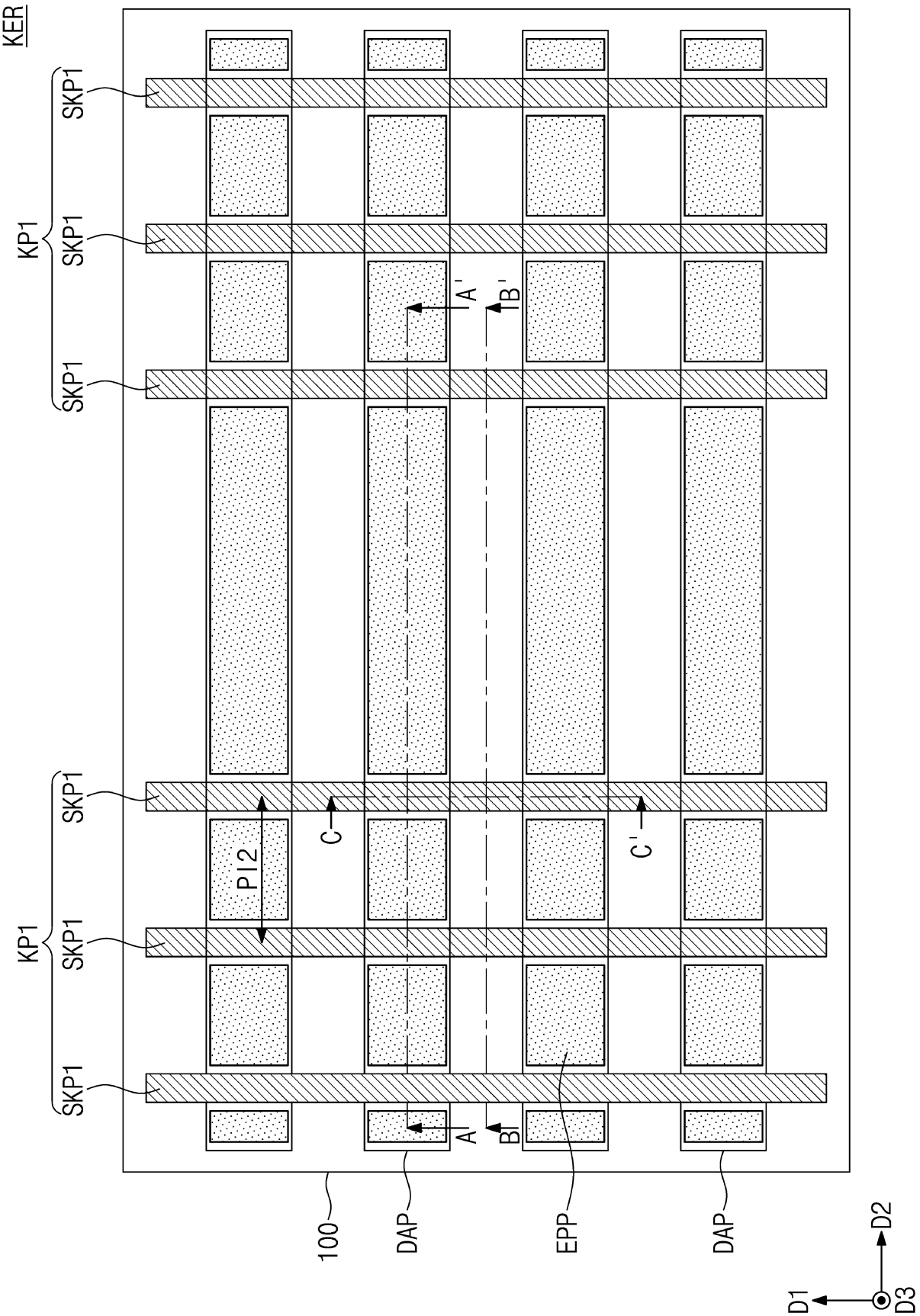

KER
KP1
SKP1
SKP1
SKP1
KP1
SKP1
SKP1
SKP1
KP1
SKP1
SKP1
PI2
C
C'
A'
B'
A
B
100
DAP
EPP
DAP
D1
D2
D3

FIG. 15A

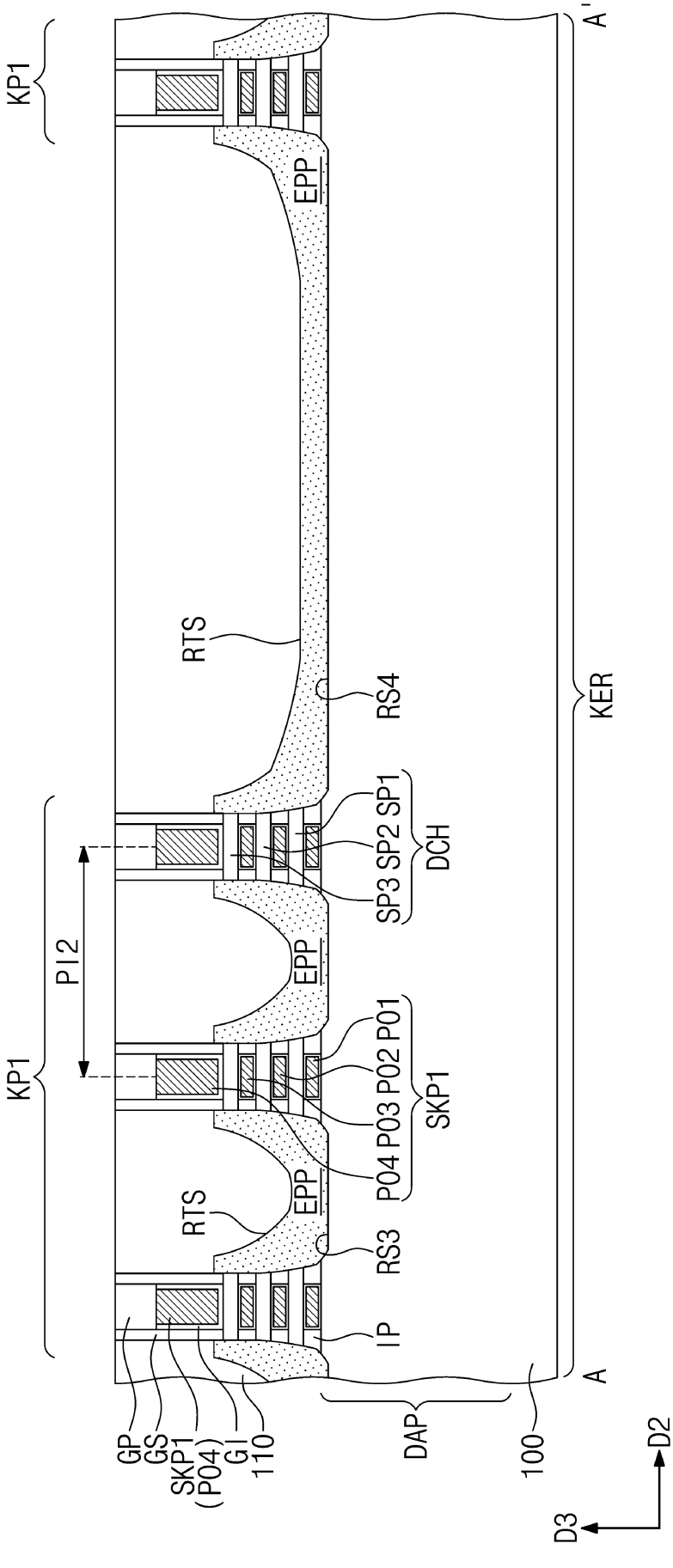

KP1
EPP
RTS
RS4
SP3 SP2 SP1
DCH
KER
A'
P12
KP1
EPP
P04 P03 P02 P01
SKP1
RTS
EPP
RS3
IP
A
GP
GS
SKP1
(P04)
GI
110
DAP
100
D3
D2

FIG. 15B

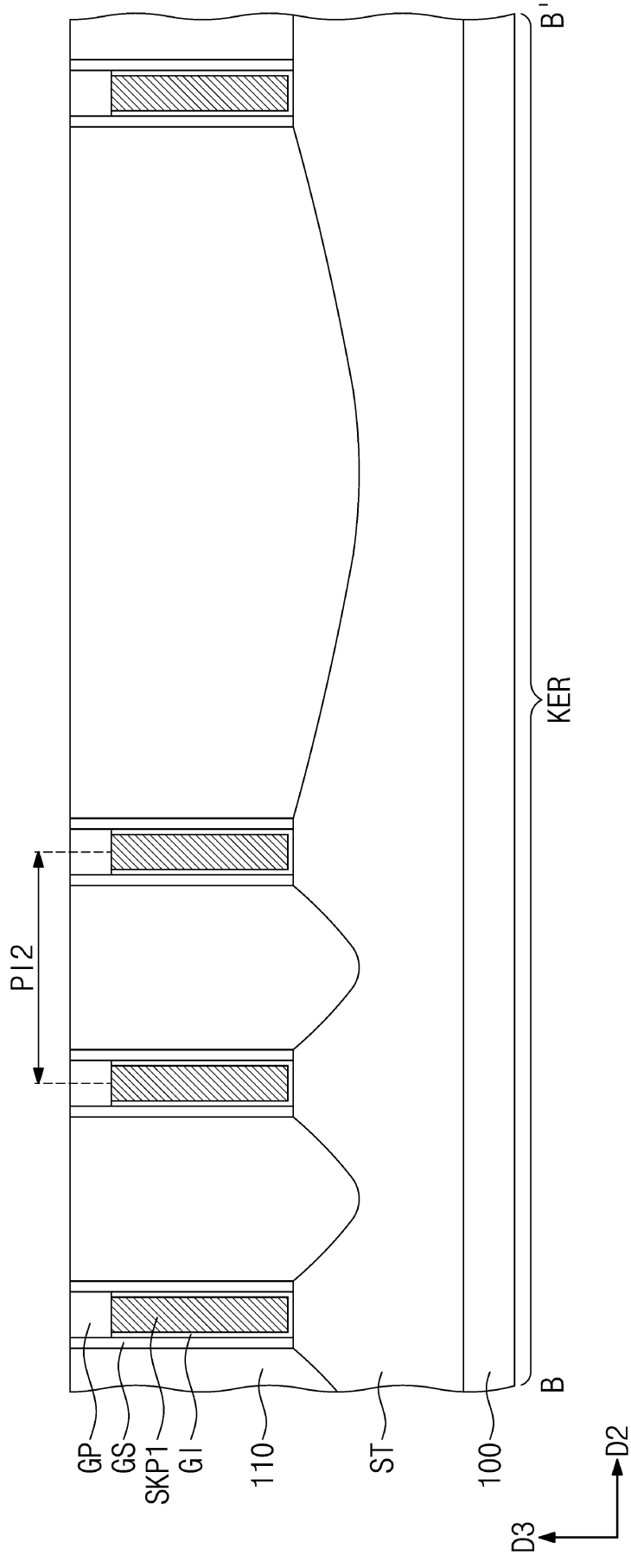


FIG. 15C

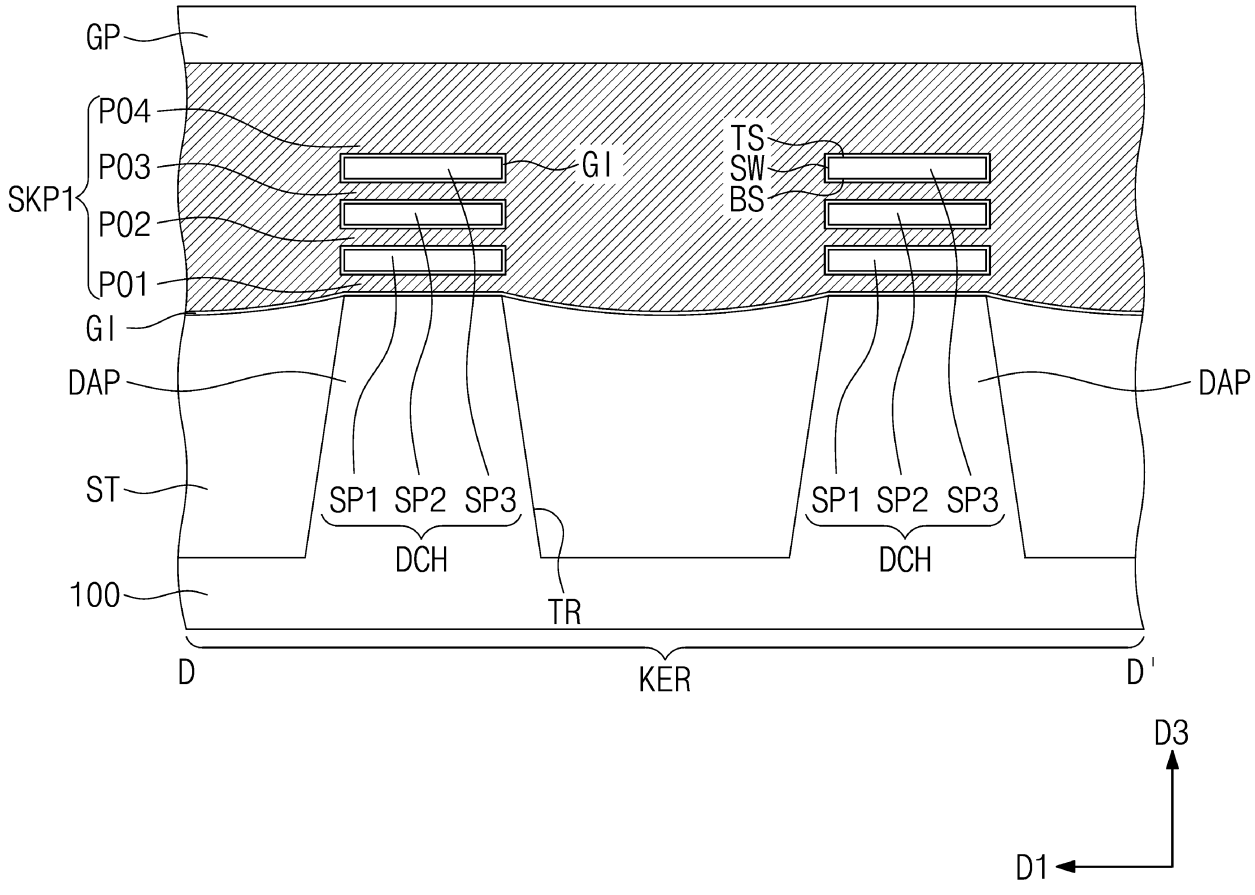

GP
P04
P03
P02
P01
SKP1
GI
DAP
ST
100
GI
TS
SW
BS
DAP
SP1 SP2 SP3
DCH
SP1 SP2 SP3
DCH
TR
D
KER
D'
D3
D1

FIG. 16

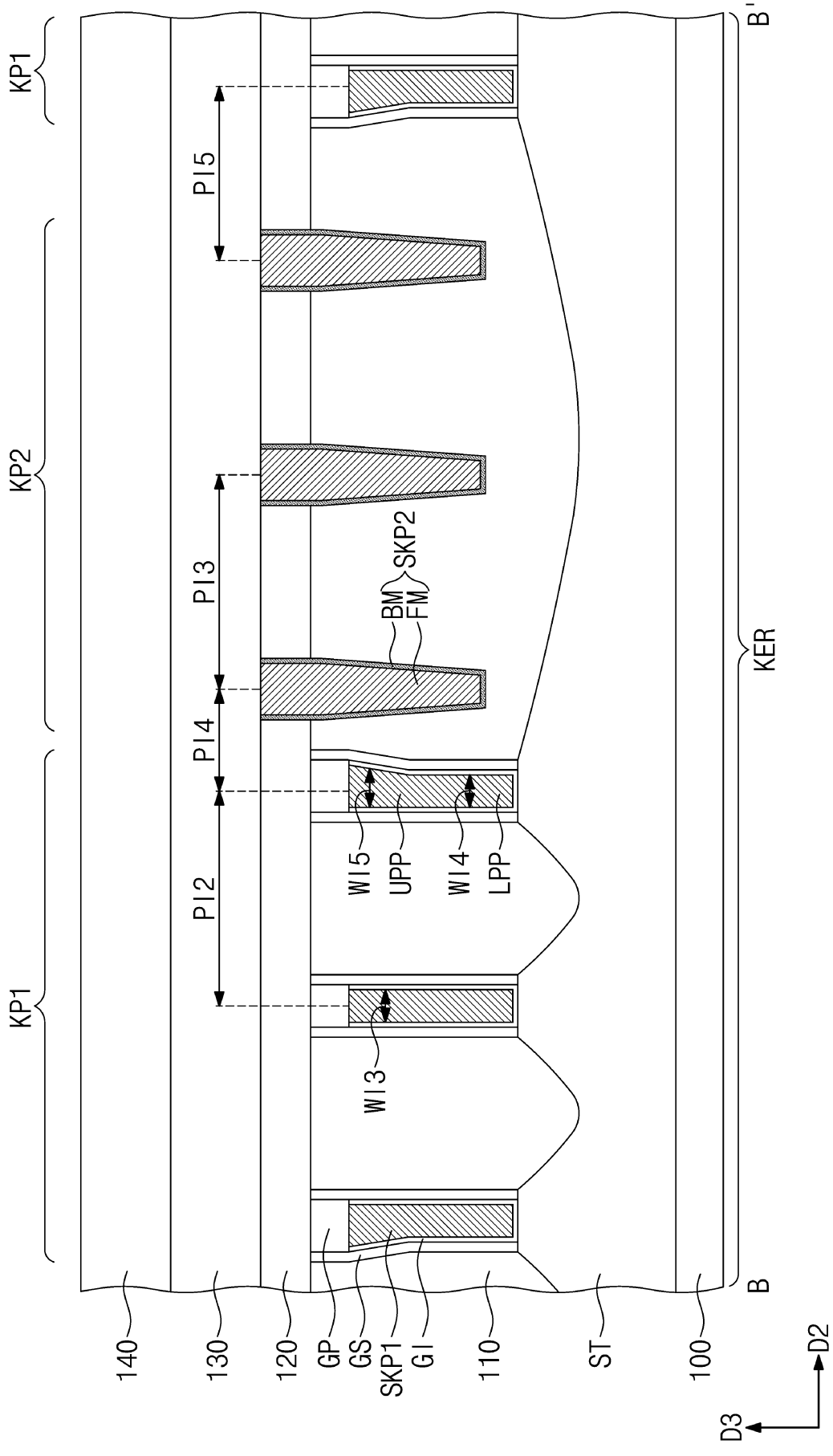

KP1
KP2
KP1
PI5
PI3
PI4
PI2
BM
FM
SKP2
W15
UPP
W14
LPP
W13
KER
B'
B
140
130
120
GP
GS
SKP1
GI
110
ST
100
D3
D2

FIG. 17A

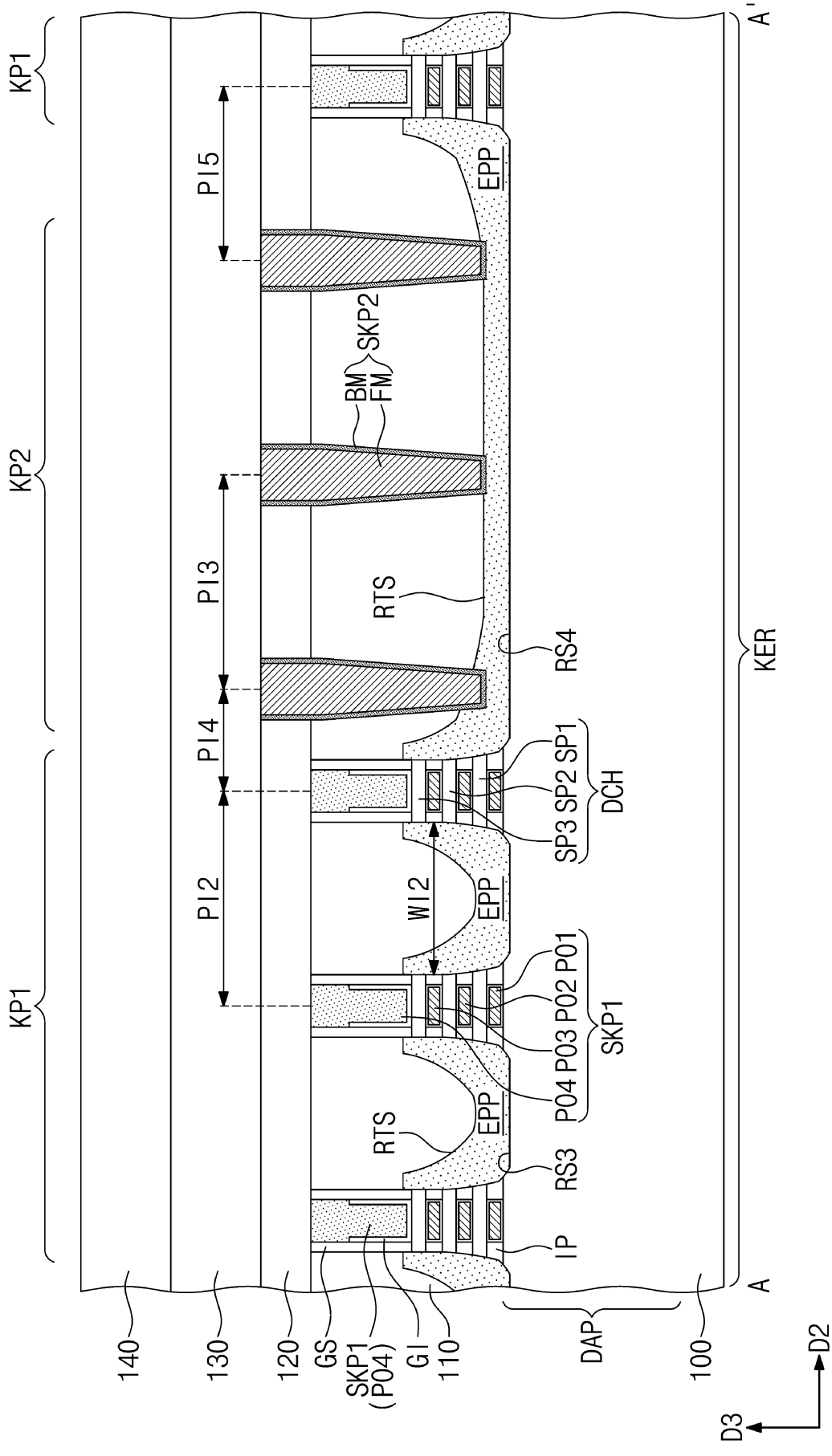

KP1
KP2
KP1
PI5
PI3
PI4
PI2
EPP
SKP2
BM
FM
RTS
RS4
SP1
SP2
SP3
DCH
WI2
EPP
P01
P02
P03
P04
SKP1
EPP
RTS
RS3
IP
KER
A'
A
140
130
120
GS
SKP1
(P04)
GI
110
DAP
100
D3
D2

FIG. 17B

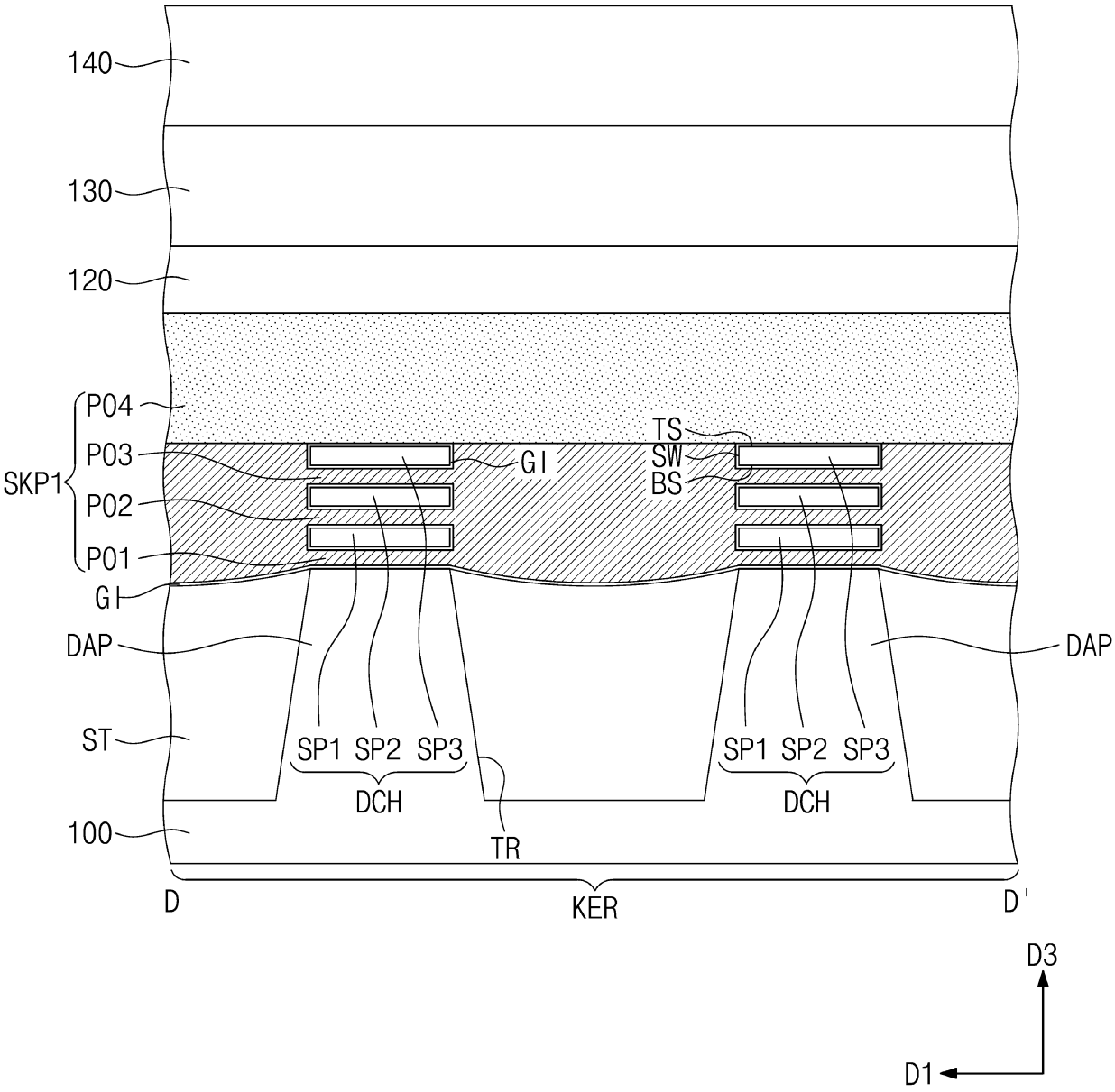

140
130
120
SKP1
P04
P03
P02
P01
GI
TS
SW
BS
DAP
DAP
ST
SP1 SP2 SP3
DCH
SP1 SP2 SP3
DCH
TR
100
D
KER
D'
D3
D1

FIG. 18

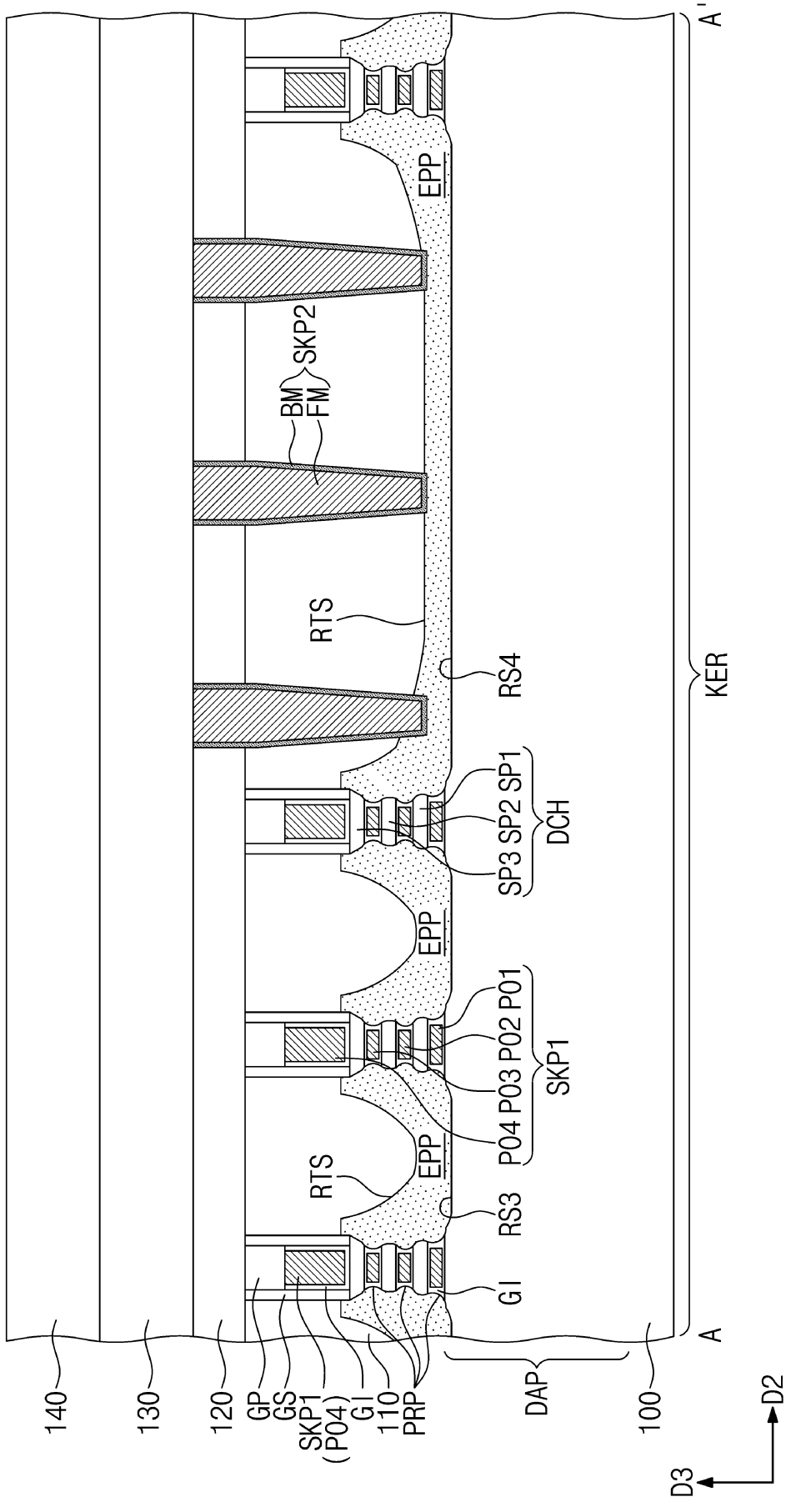
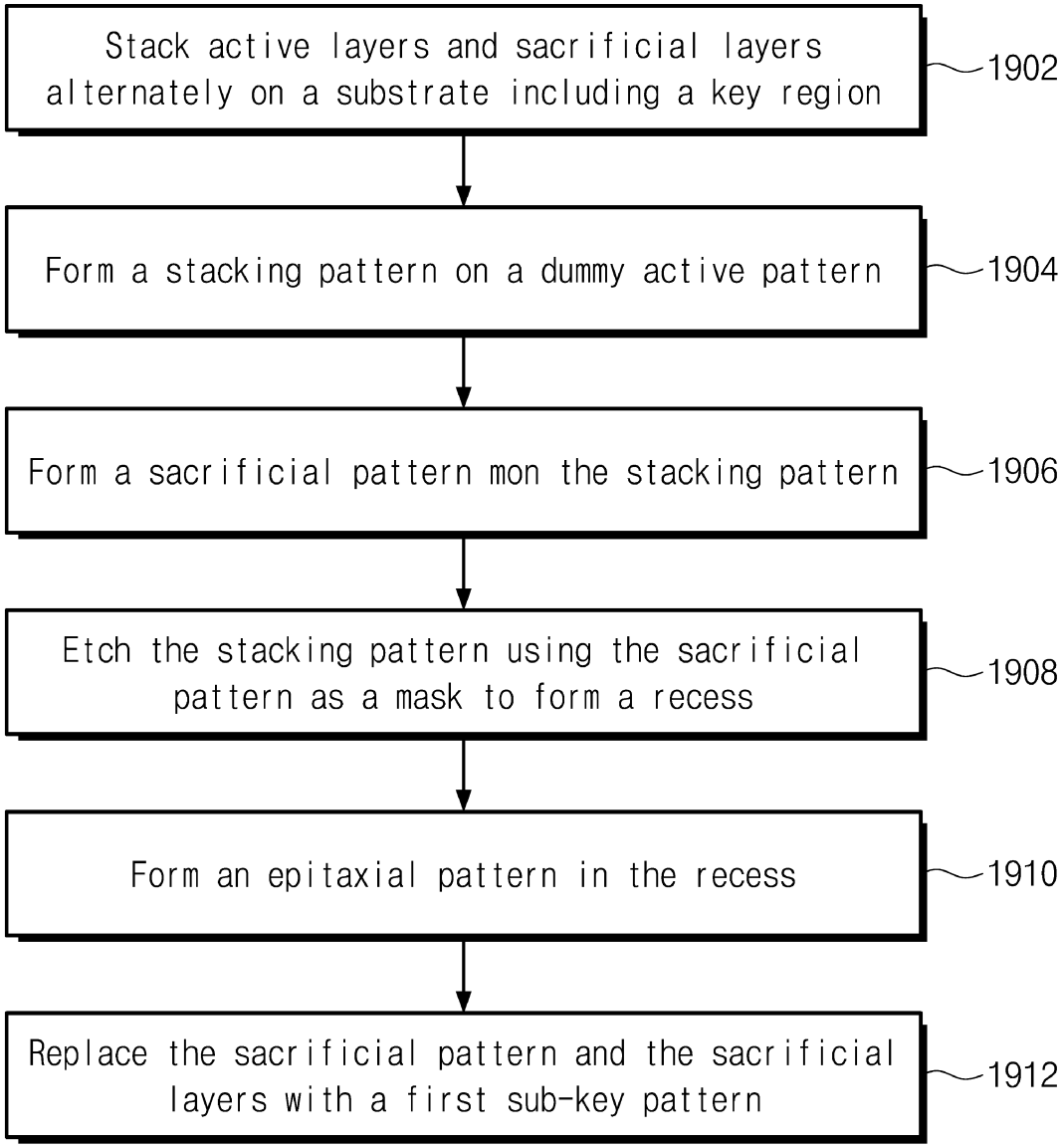

140
130
120
GP
GS
SKP1
(P04)
GI
110
PRP
DAP
100
A
A'
KER
RS4
RS3
RTS
RTS
EPP
EPP
EPP
EPP
BM
FM
SKP2
SP3 SP2 SP1
DCH
P04 P03 P02 P01
SKP1
GI
D3
D2

FIG. 19


Stack active layers and sacrificial layers alternately on a substrate including a key region
1902
Form a stacking pattern on a dummy active pattern
1904
Form a sacrificial pattern mon the stacking pattern
1906
Etch the stacking pattern using the sacrificial pattern as a mask to form a recess
1908
Form an epitaxial pattern in the recess
1910
Replace the sacrificial pattern and the sacrificial layers with a first sub-key pattern
1912