FIG. 1

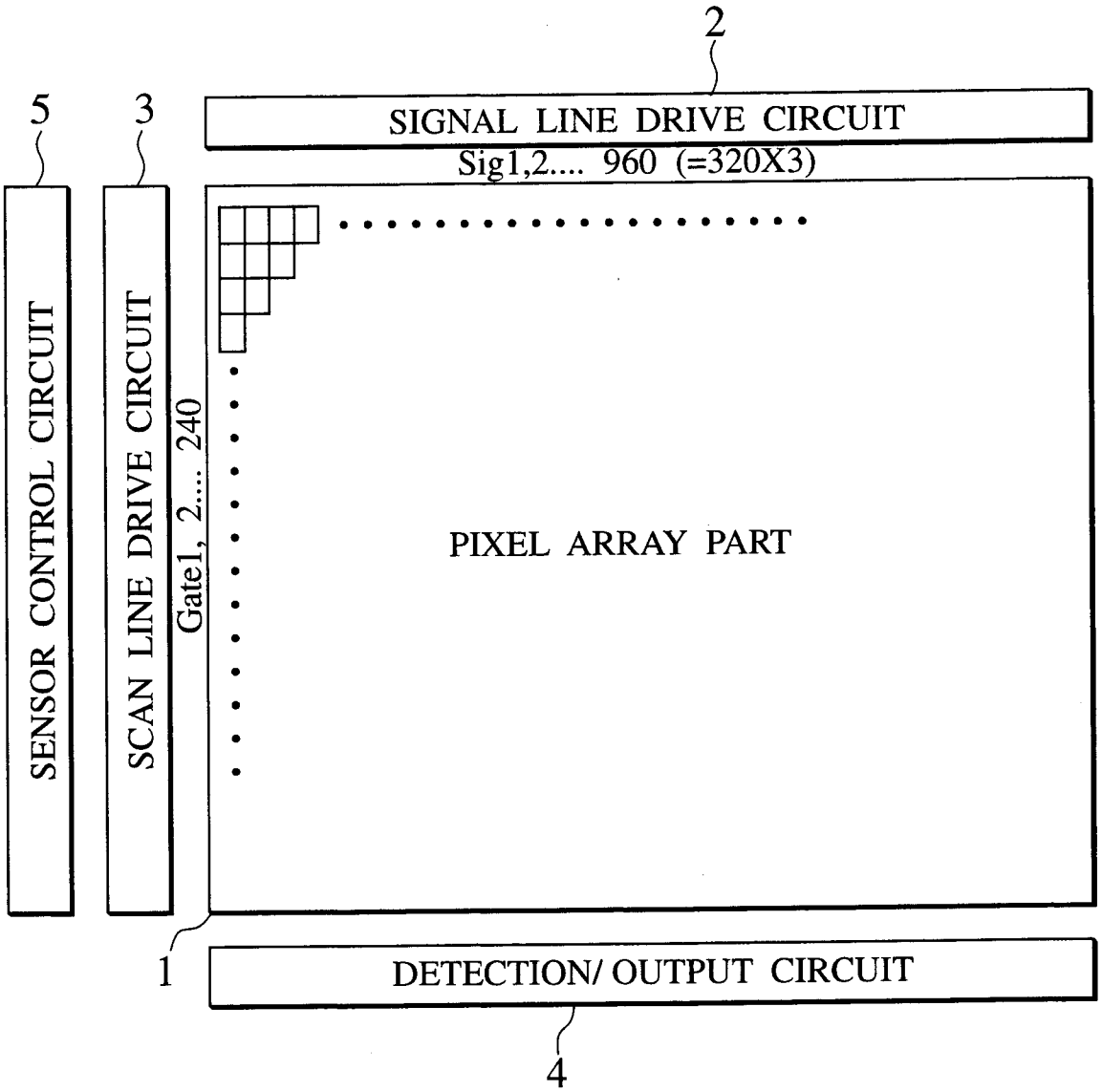

2
5
3
SIGNAL LINE DRIVE CIRCUIT
Sig1,2.... 960 (=320X3)
SENSOR CONTROL CIRCUIT
SCAN LINE DRIVE CIRCUIT
Gate1, 2.... 240
PIXEL ARRAY PART
1
DETECTION/ OUTPUT CIRCUIT
4

FIG. 2

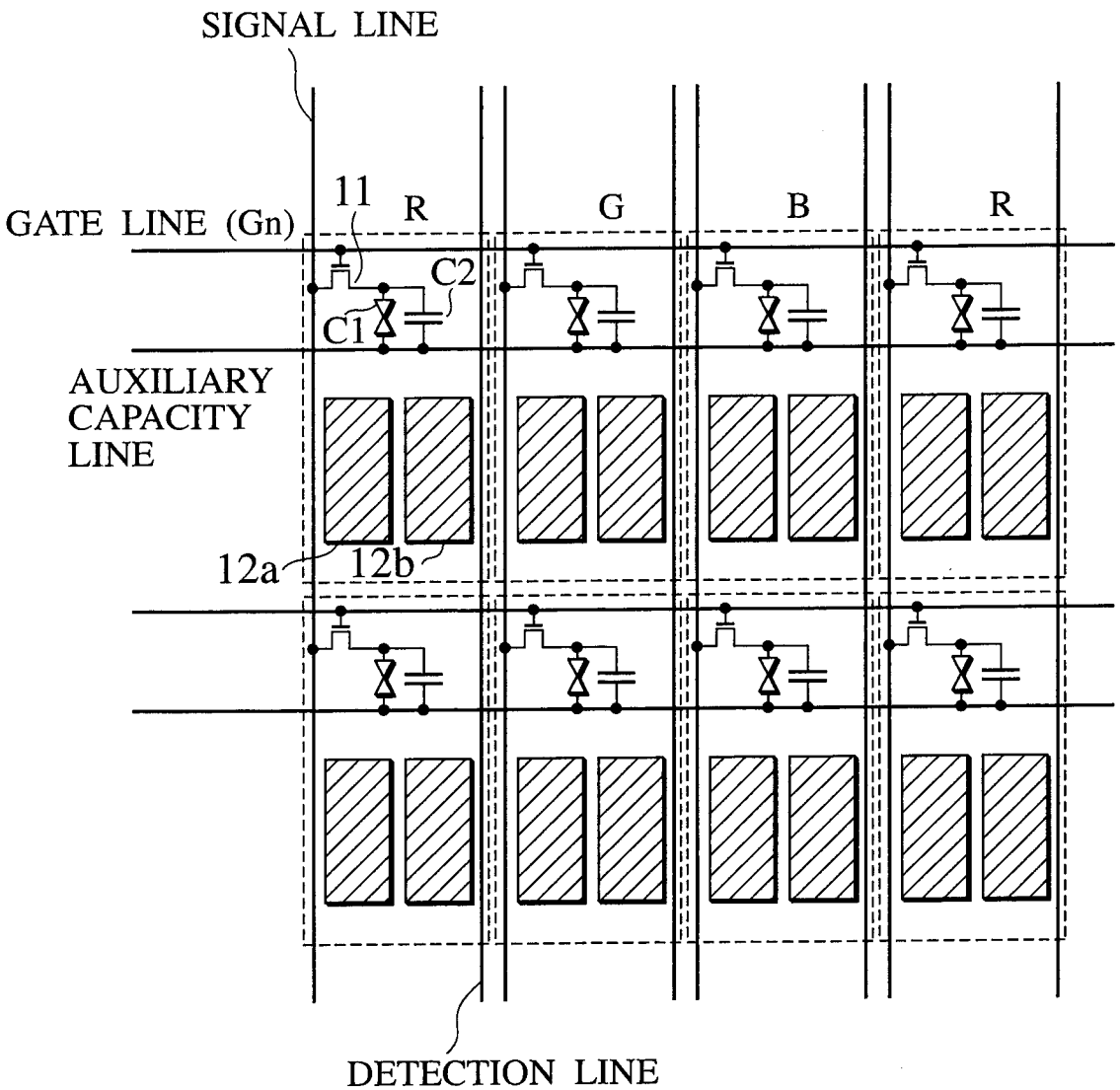

SIGNAL LINE
11
R
G
B
R
GATE LINE (Gn)
C2
C1
AUXILIARY
CAPACITY
LINE
12a
12b
DETECTION LINE

FIG. 3

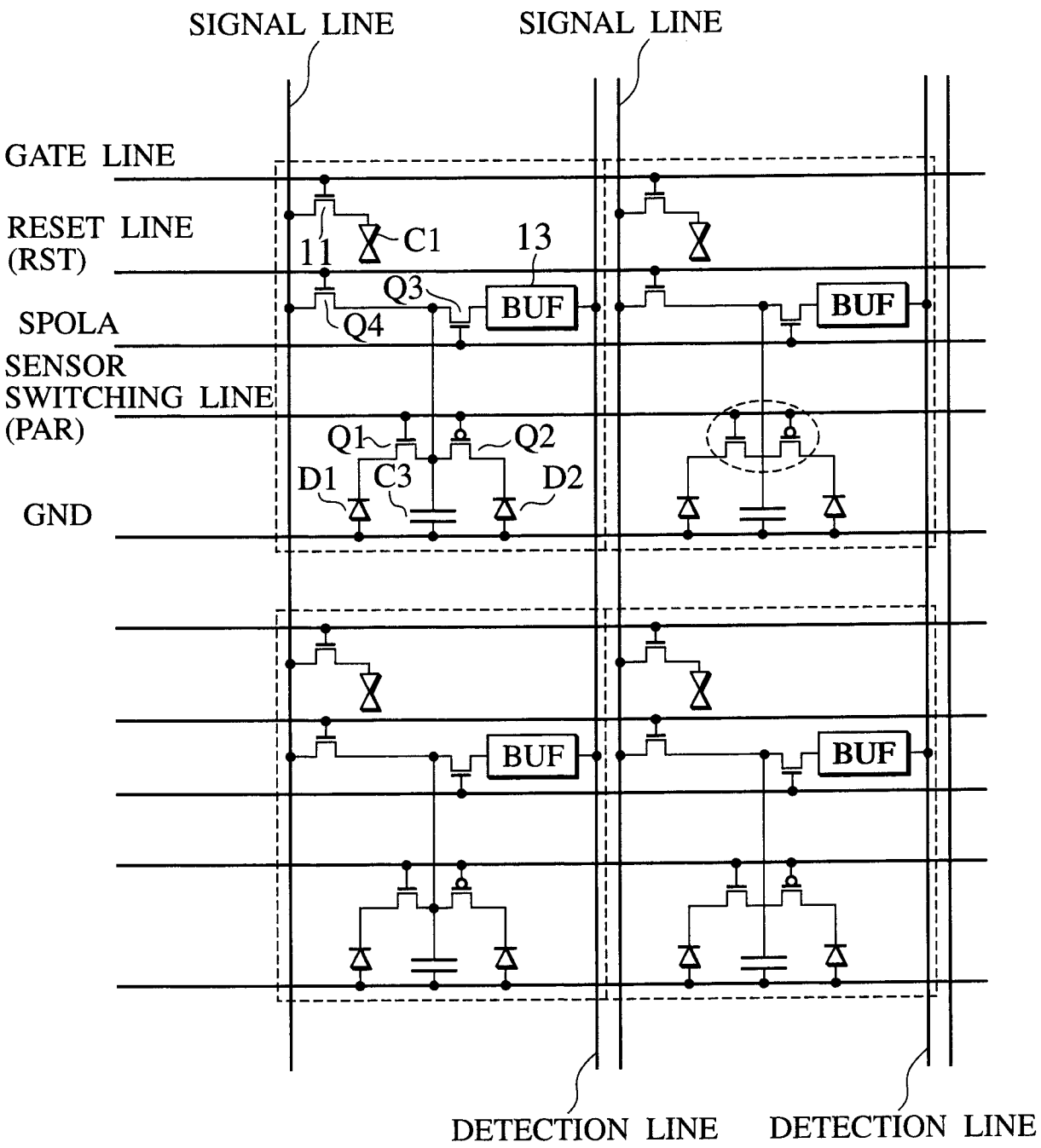

SIGNAL LINE
SIGNAL LINE
GATE LINE
RESET LINE (RST)
SPOLA
SENSOR SWITCHING LINE (PAR)
GND
11
C1
13
Q3
Q4
BUF
Q1
Q2
D1
C3
D2
DETECTION LINE
DETECTION LINE

FIG. 4

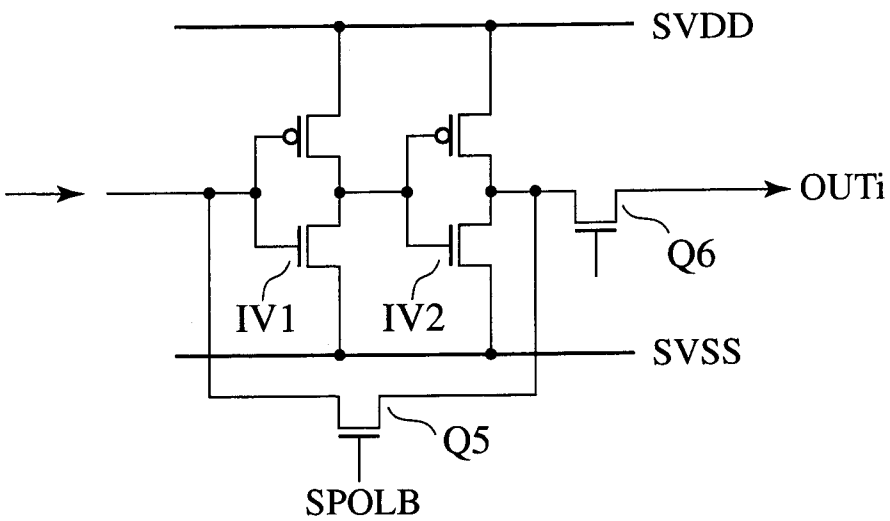


FIG. 5

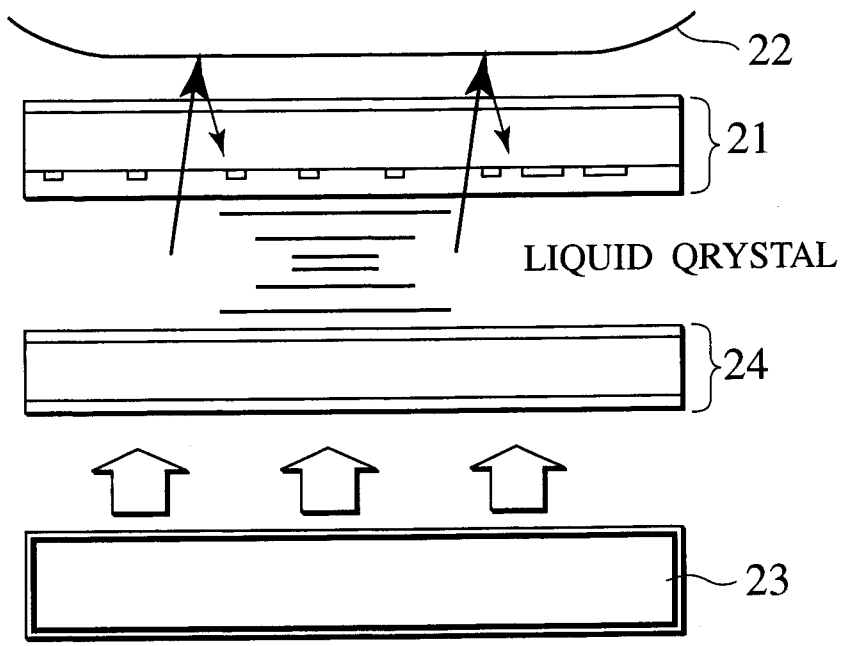


FIG. 6

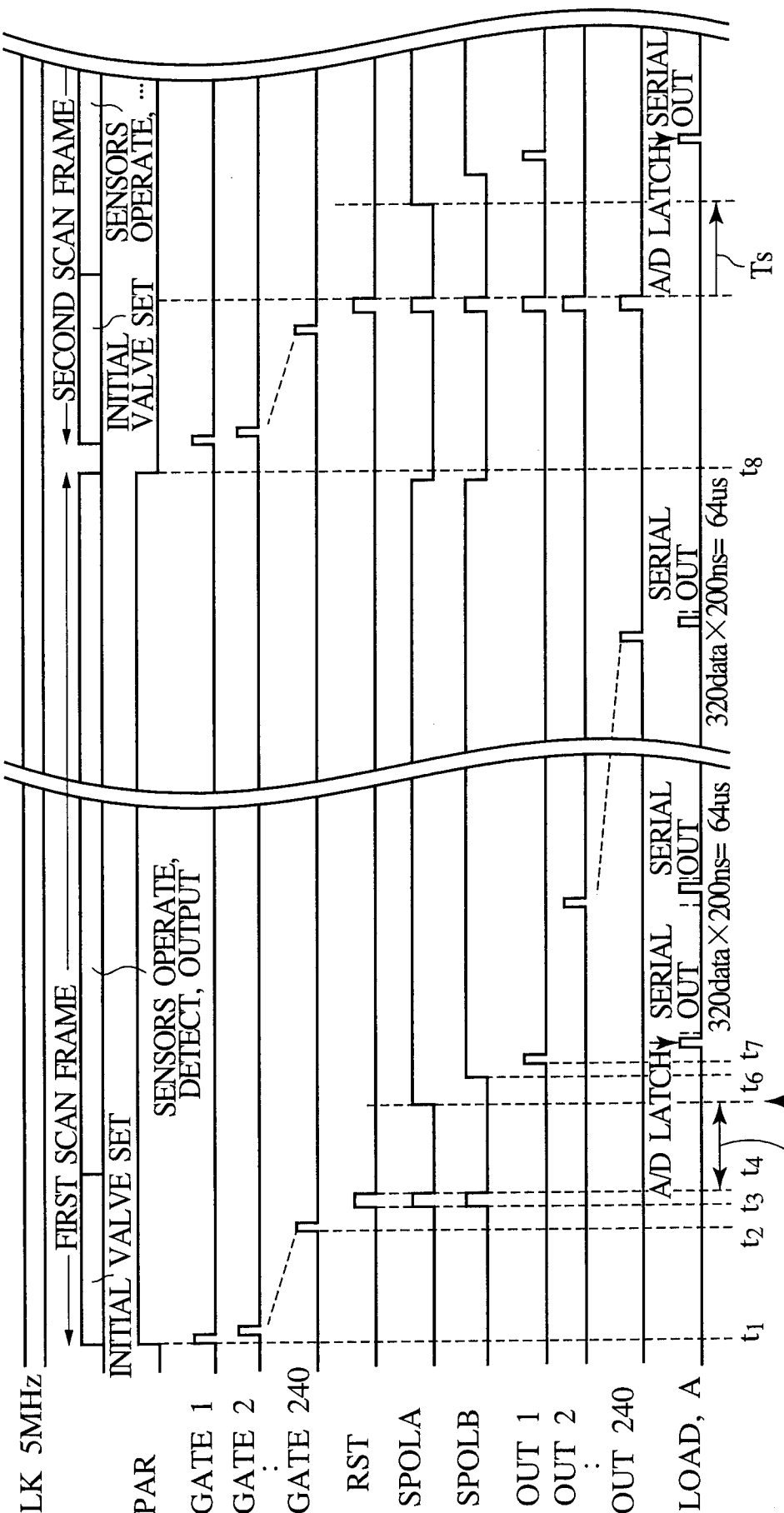

CLK 5MHz
PAR
GATE 1
GATE 2
GATE 240
RST
SPOLA
SPOLB
OUT 1
OUT 2
OUT 240
LOAD, A
FIRST SCAN FRAME
SECOND SCAN FRAME
INITIAL VALVE SET
SENSORS OPERATE, DETECT, OUTPUT
INITIAL VALVE SET
SENSORS OPERATE, ...
A/D LATCH
SERIAL OUT
320data×200ns= 64us
Ts
t1 t2 t3 t4 t5 t6 t7 t8
Ts : PERIOD OF THE ACCUMULATED CHARGE DECREASE
STORE THE ACCUMULATED CHARGE TO THE BUF

FIG. 7A

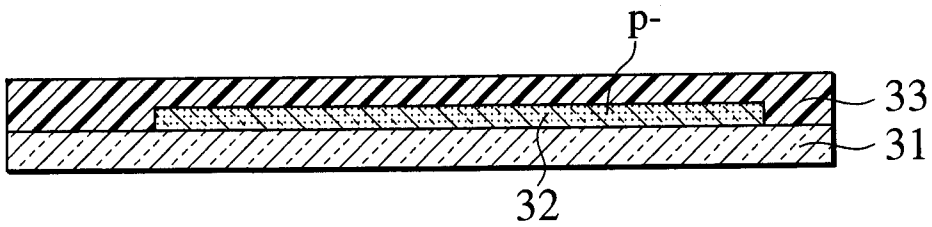


FIG. 7B

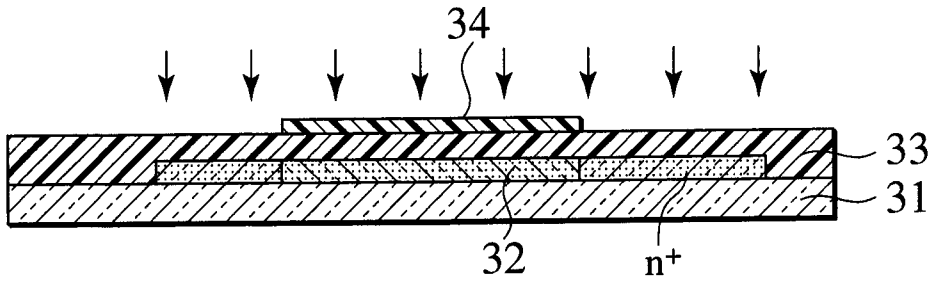


FIG. 7C

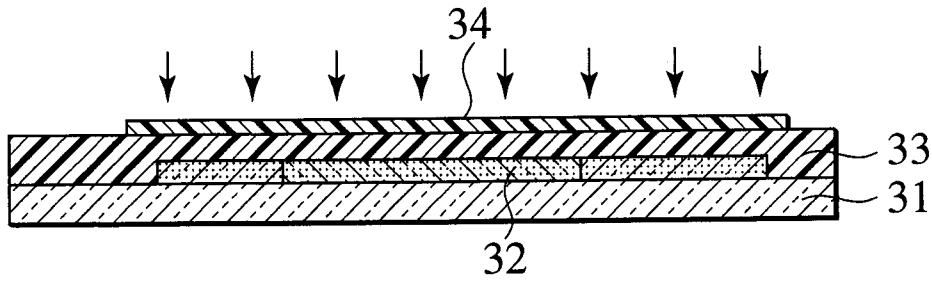


FIG. 7D

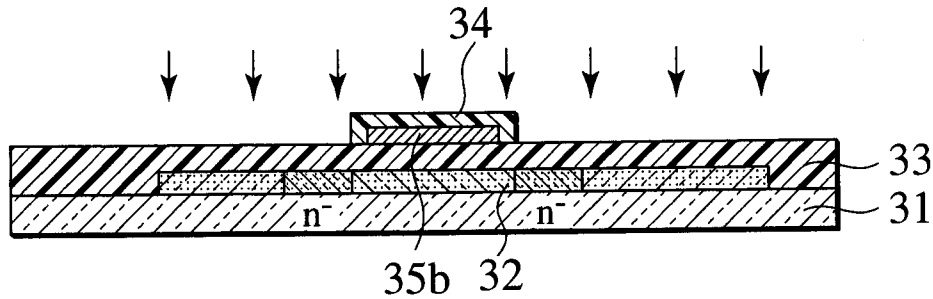


FIG. 7E

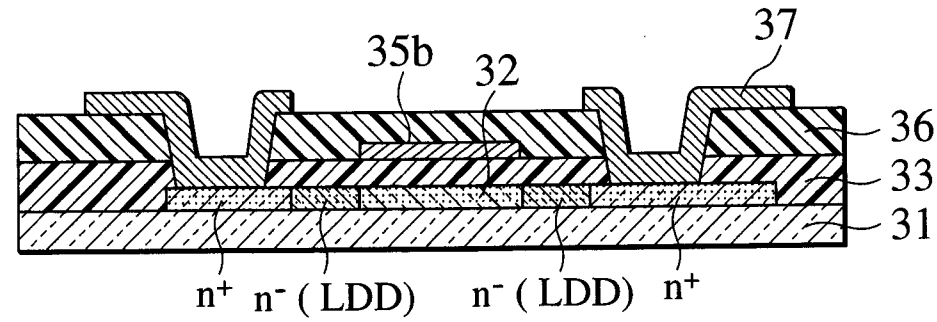


FIG. 8A

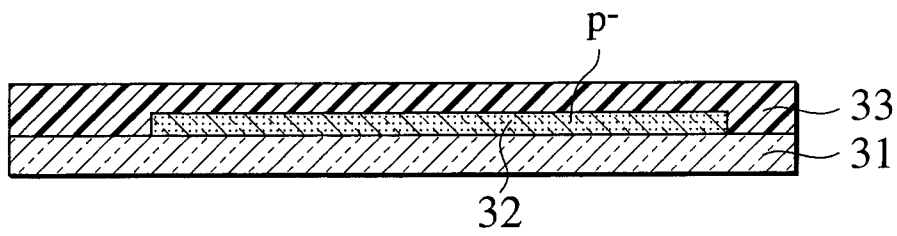


FIG. 8B

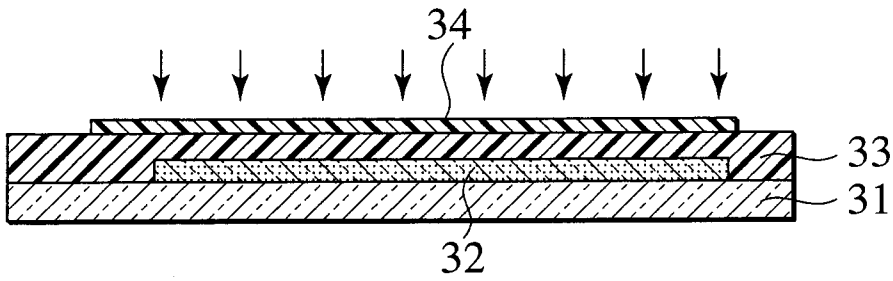


FIG. 8C

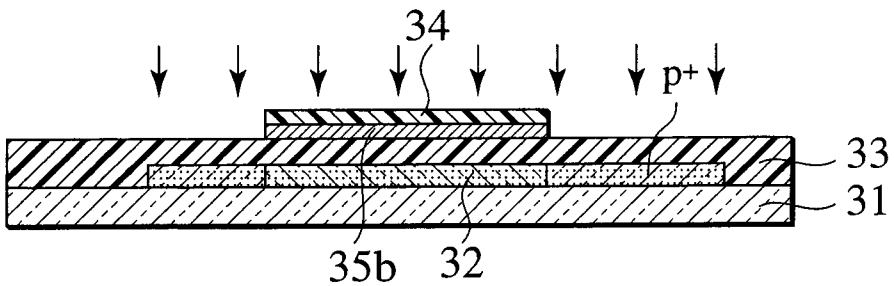


FIG. 8D

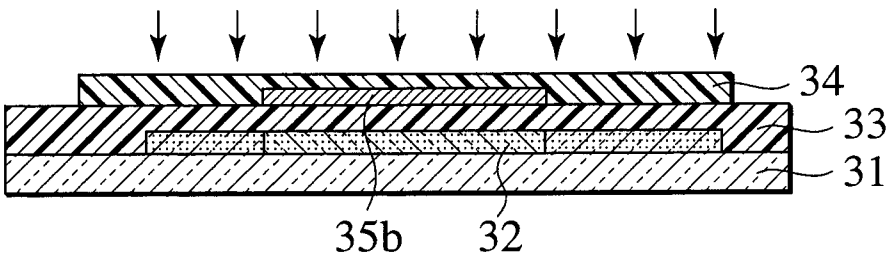


FIG. 8E

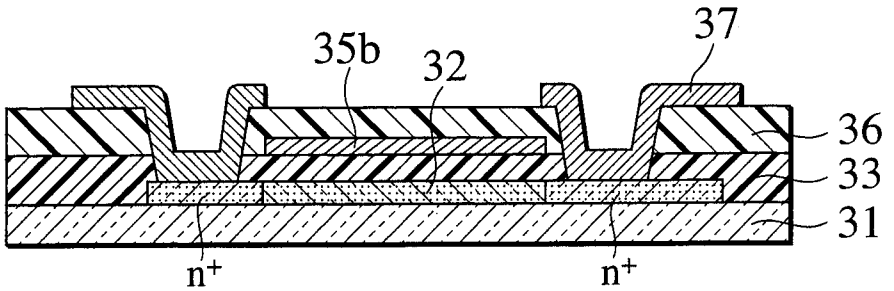


FIG. 9A

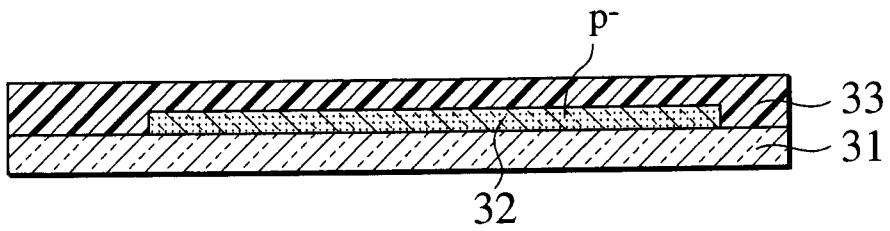


FIG. 9B

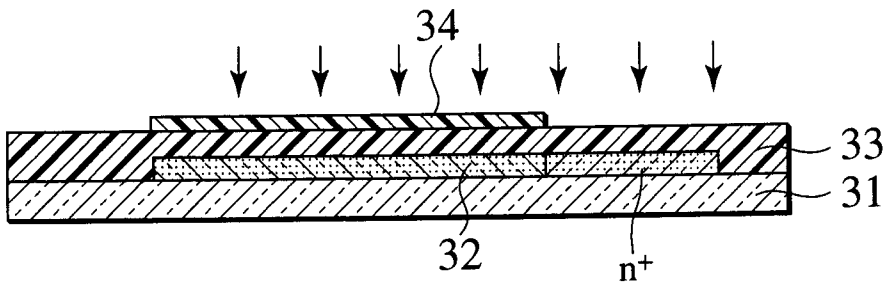


FIG. 9C

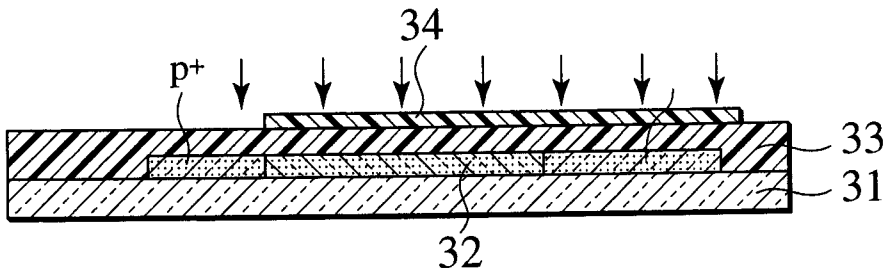


FIG. 9D

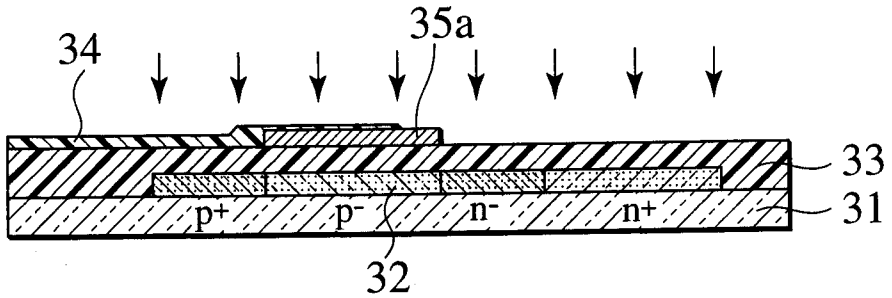


FIG. 9E

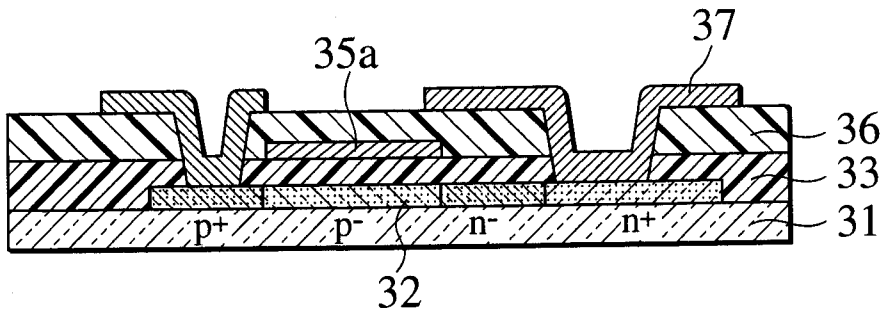


FIG. 10

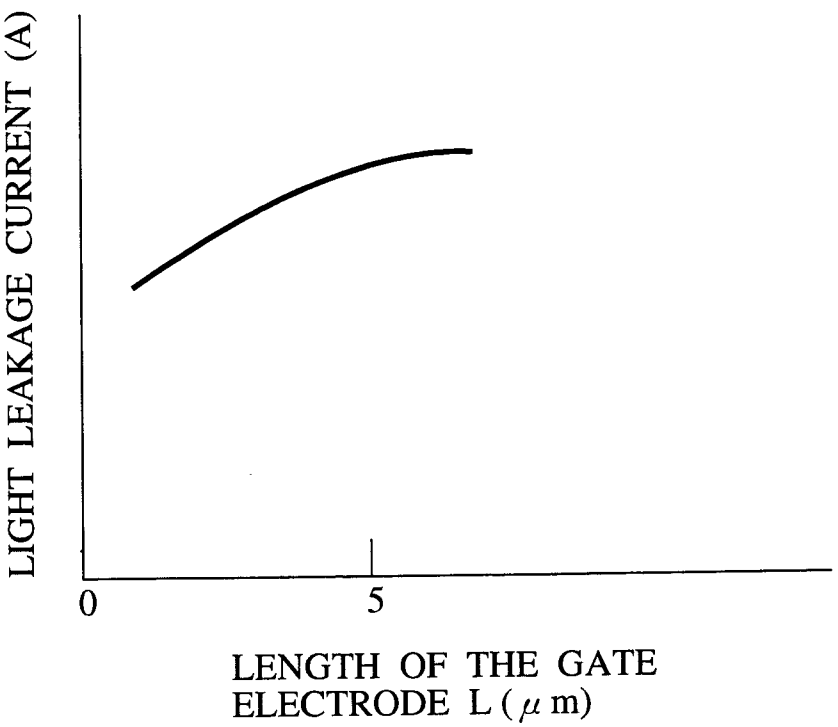


FIG. 11A

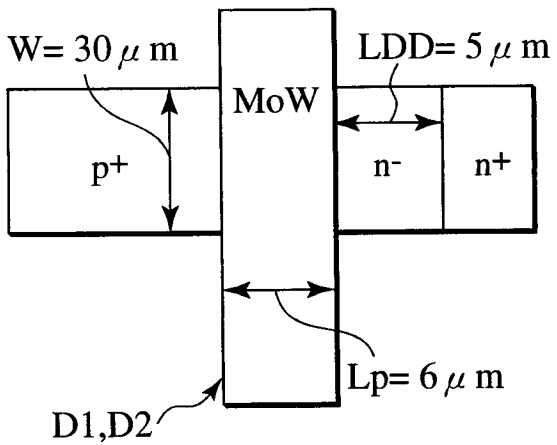


FIG. 11B

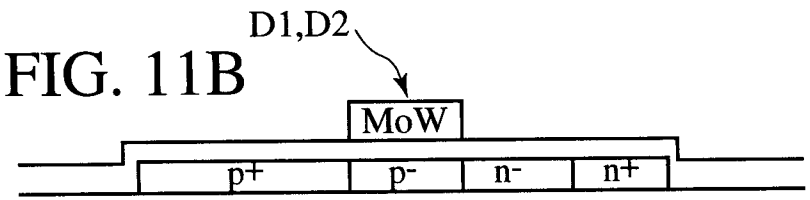


FIG. 12A

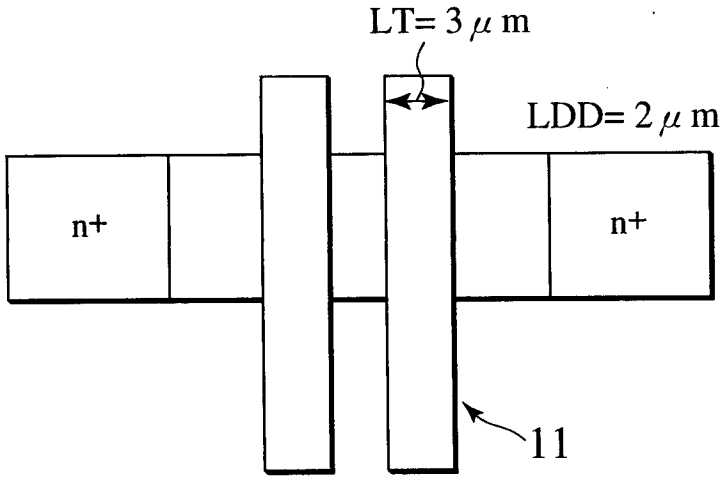


FIG. 12B

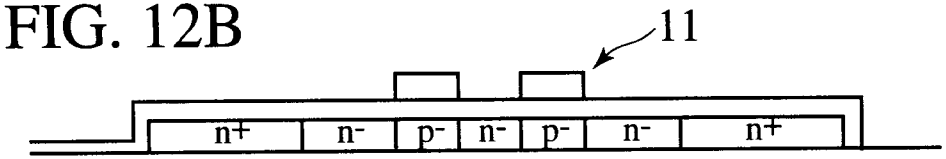


FIG. 13B

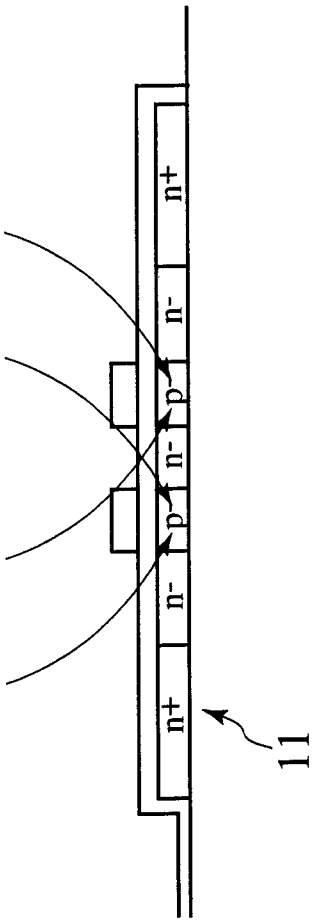


FIG. 13A

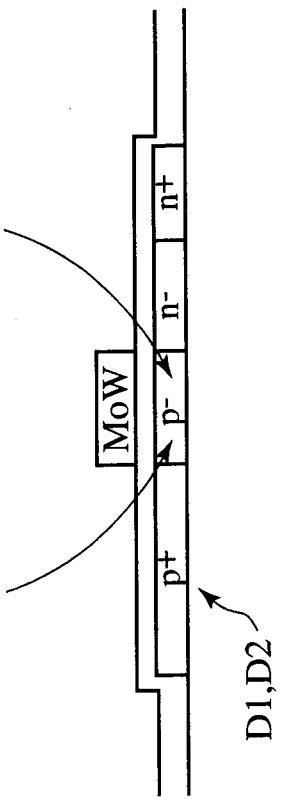


FIG. 14

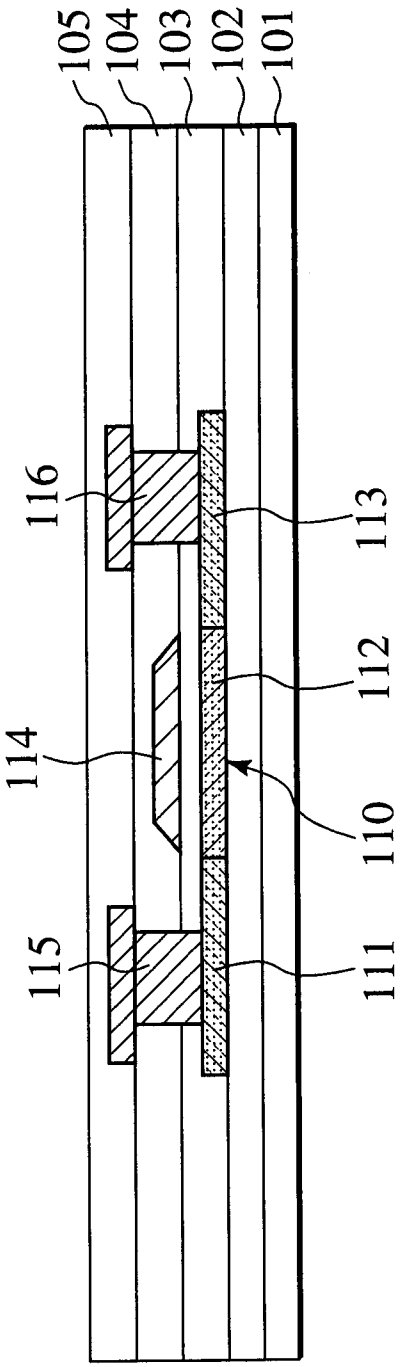


FIG. 15

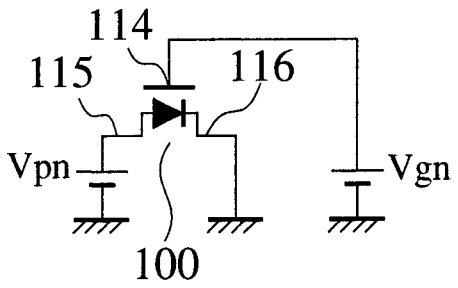


FIG. 16

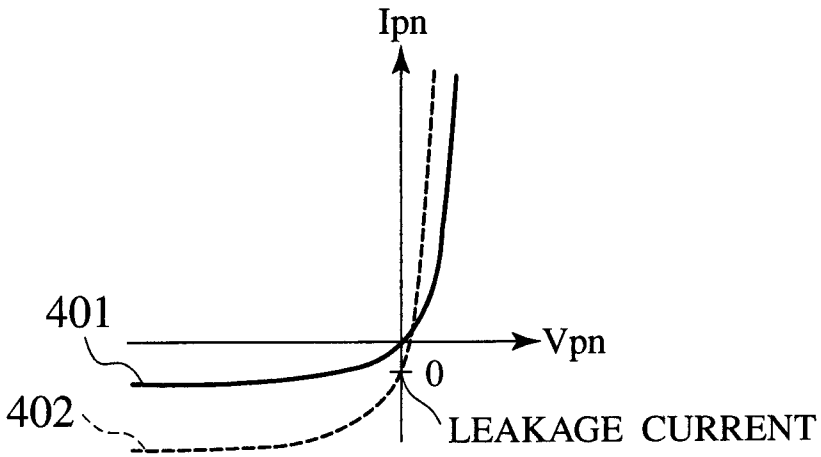


FIG. 17

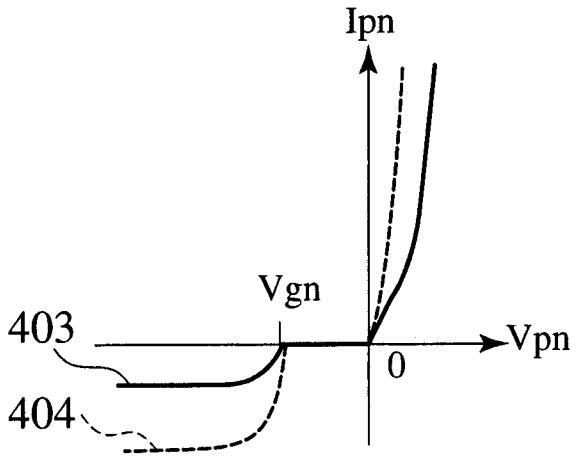


FIG. 18

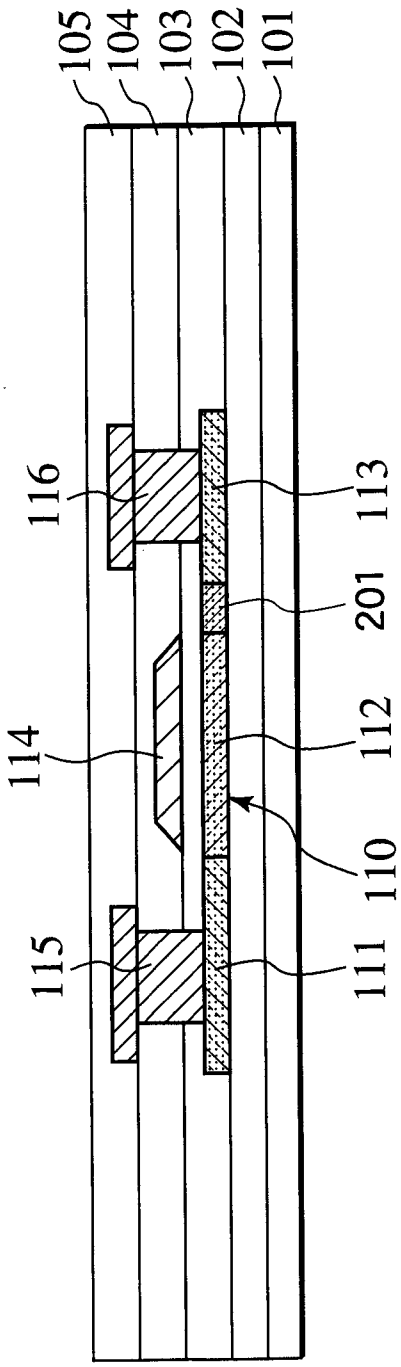


FIG. 19

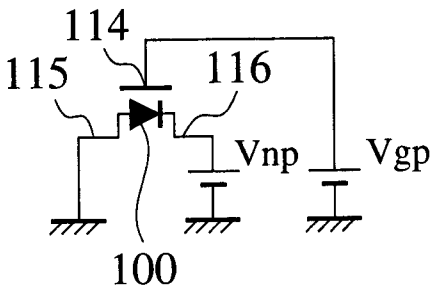


FIG. 20

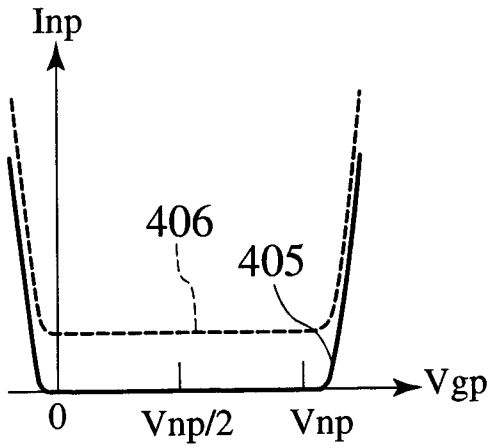


FIG. 21

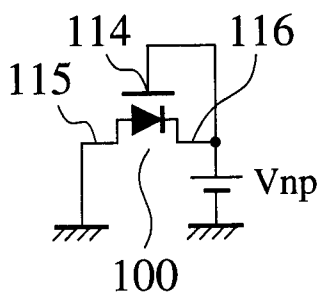


FIG. 22

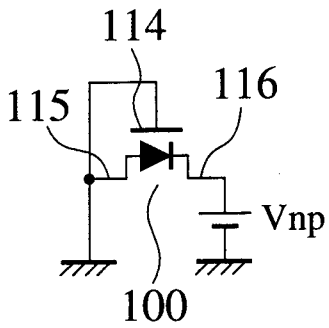


FIG. 23

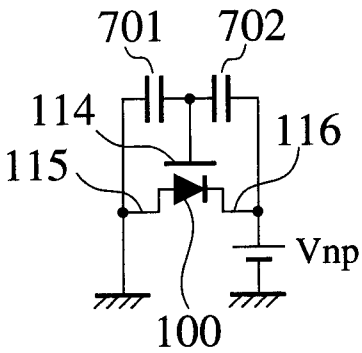


FIG. 24

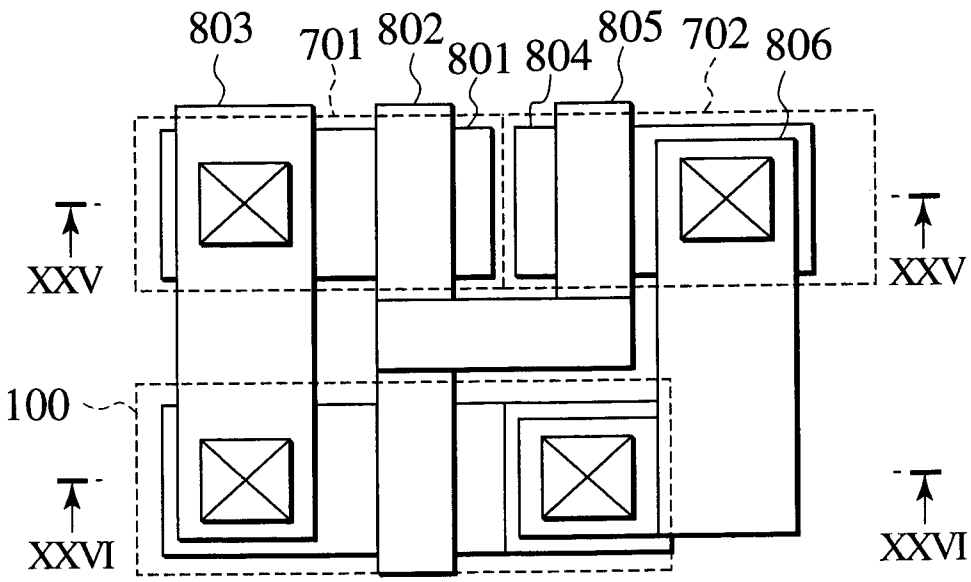


FIG. 25

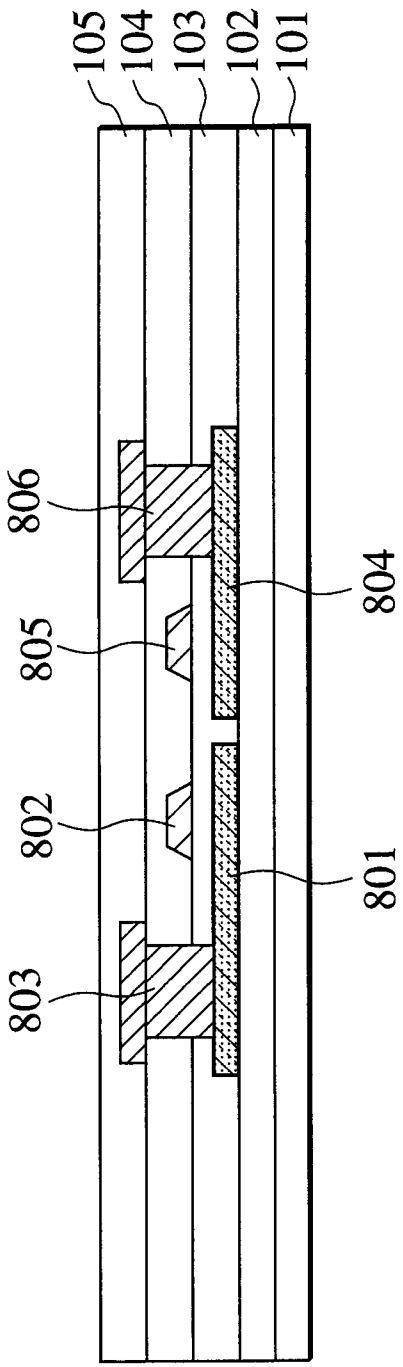


FIG. 26

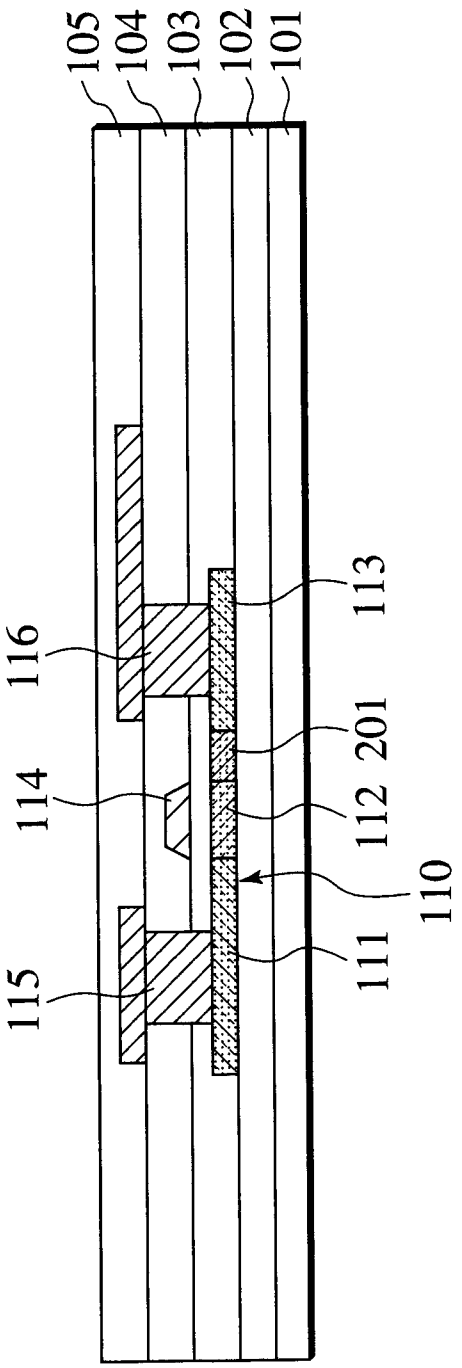


FIG. 27

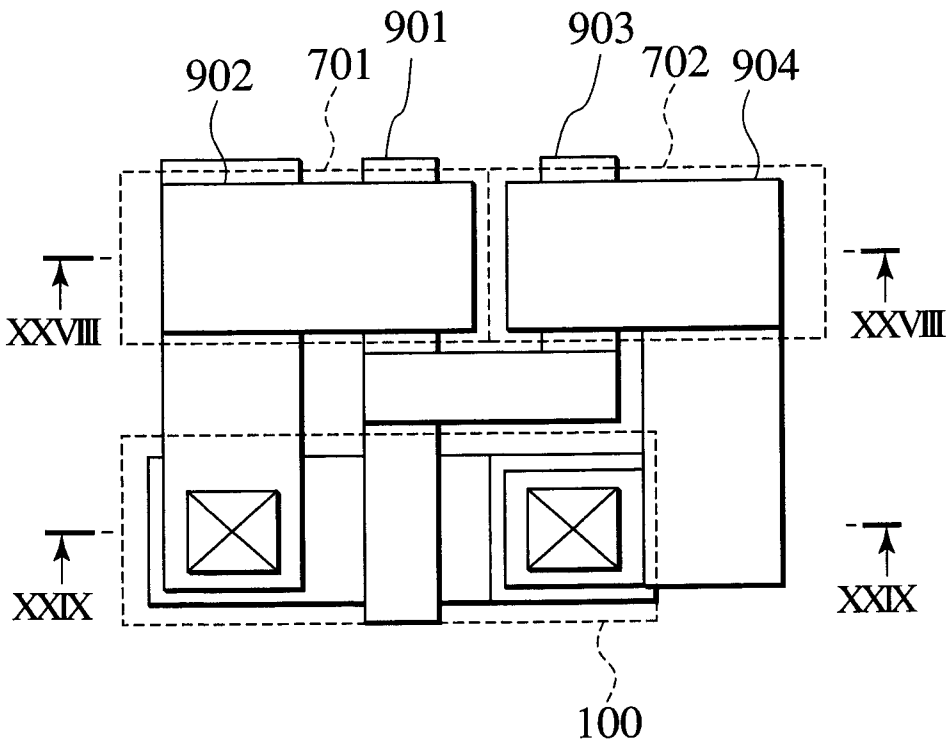


FIG. 28

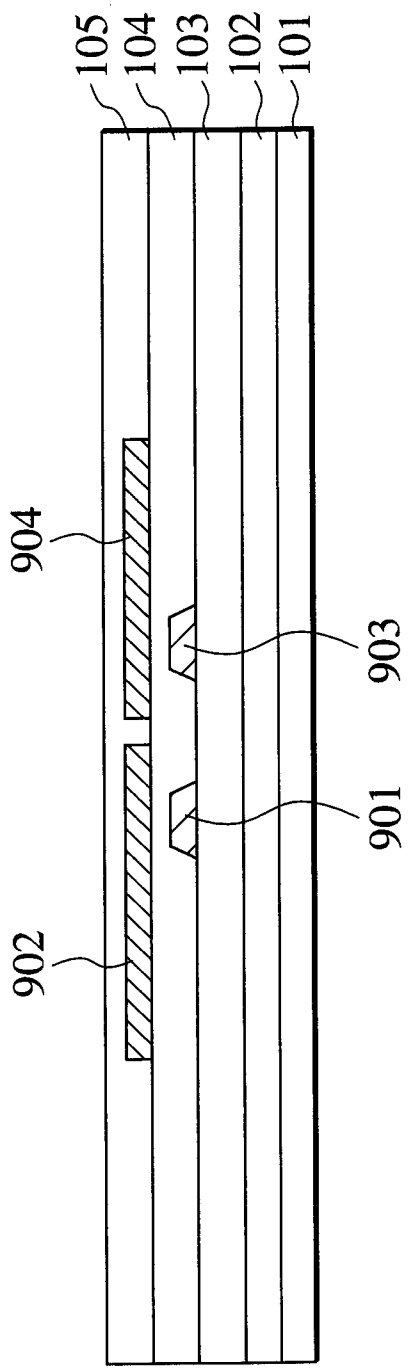


FIG. 29

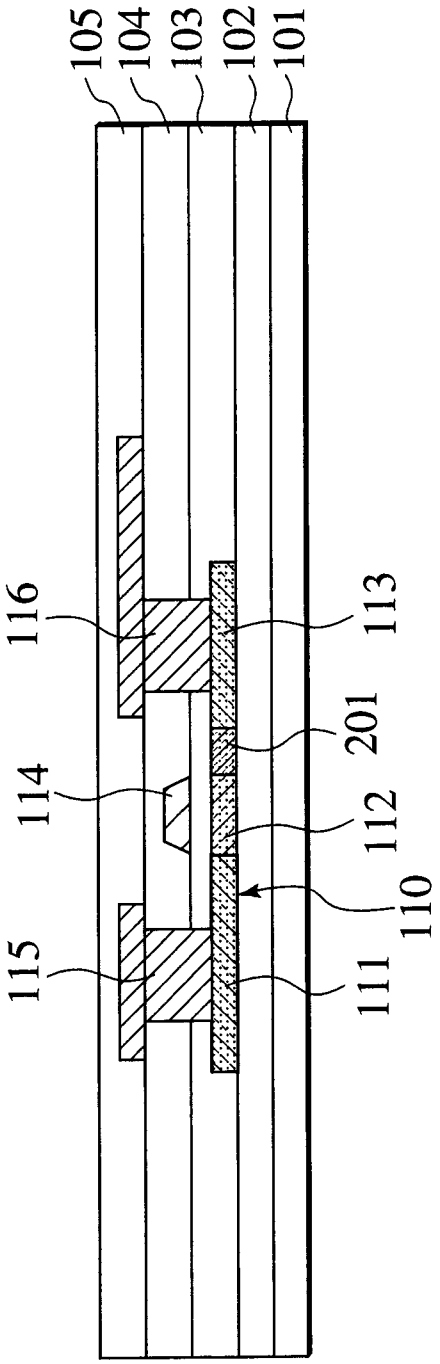


FIG. 30

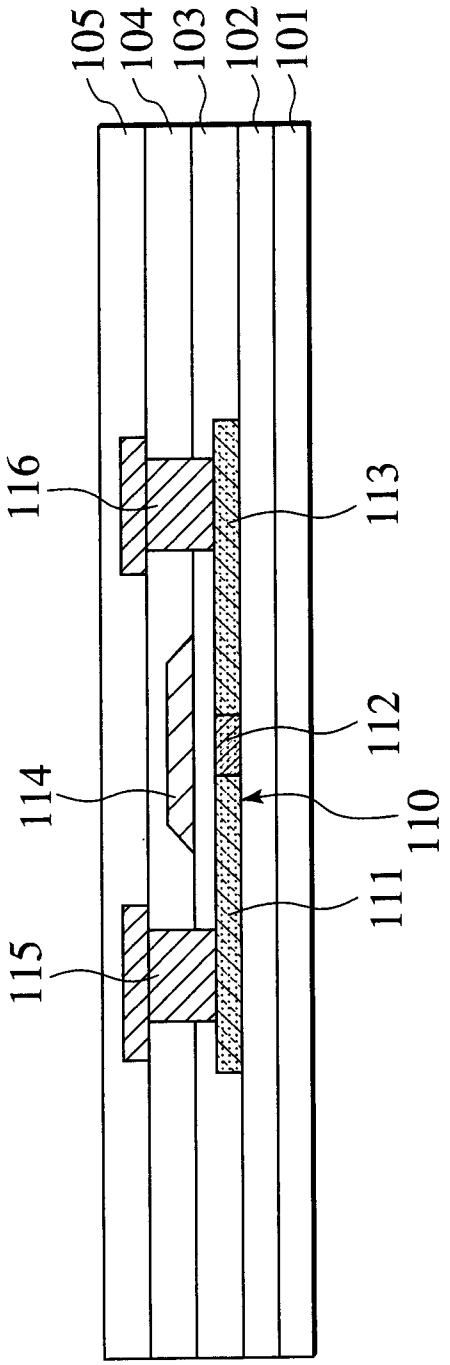


FIG. 31

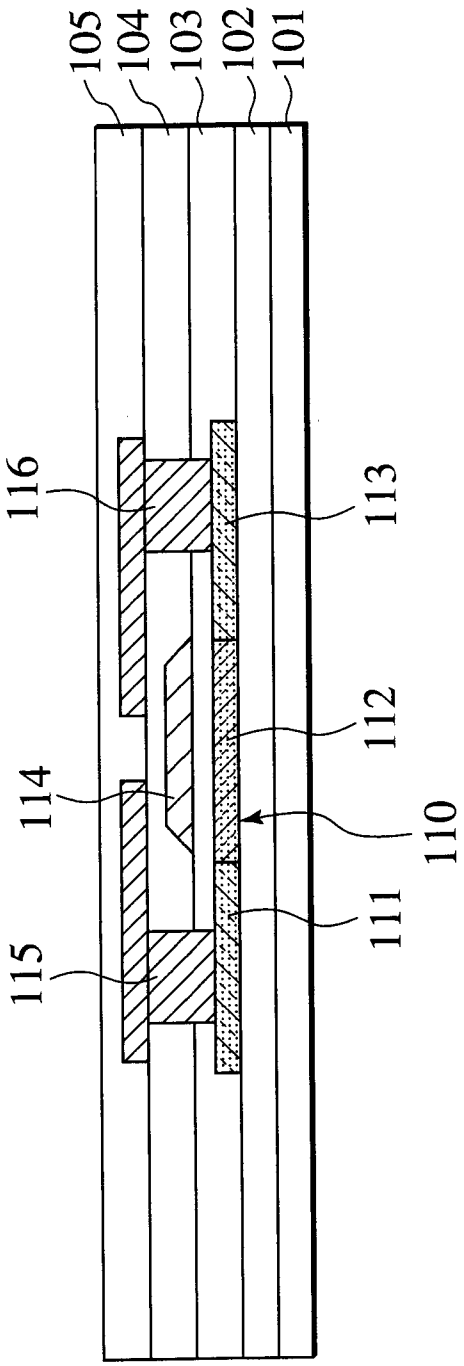
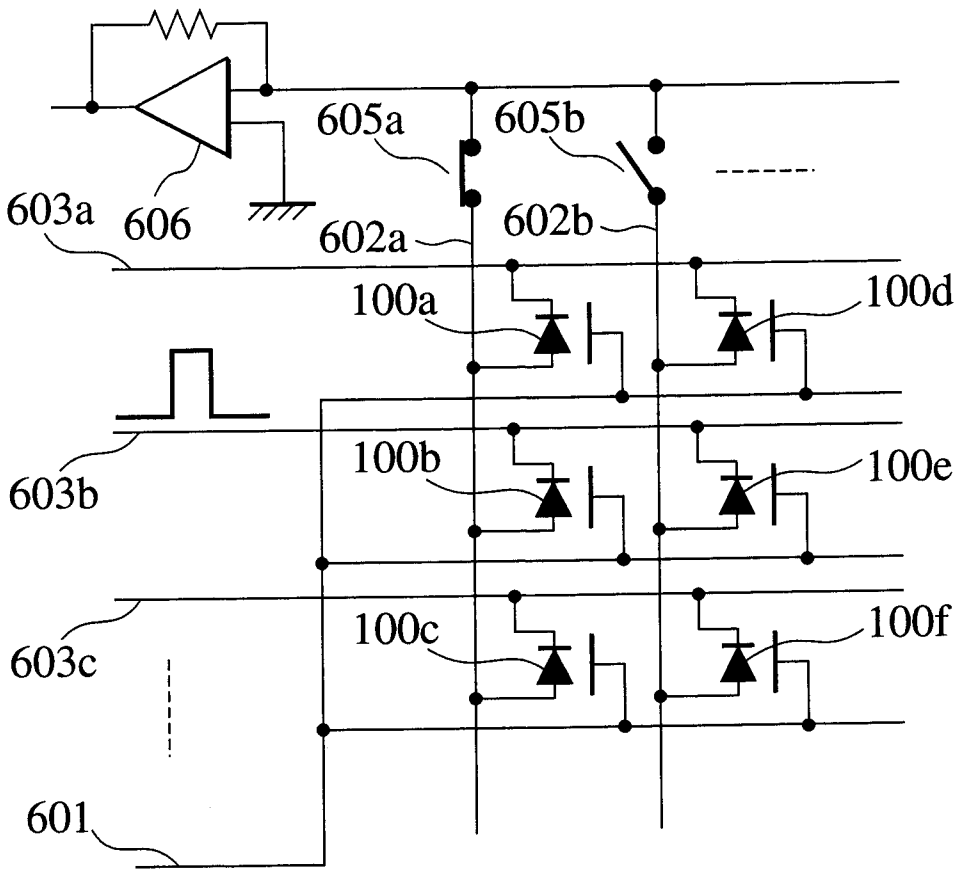


FIG. 32


605a
605b
603a
606
602a
602b
100a
100d
603b
100b
100e
603c
100c
100f
601