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(30)0016815.32000 07 07(GB)

(71)가 가

2 4 - 1

(72)218

(74)

:

(54)

,
V_T

p -
(OEL)
n -
,
V_T OEL

6

, OEL ,

가 . ,

(OEL) . , 가

가 . OEL

(TFT)

가 . OEL

가 . T_1 , 2 ,

T_2 . V_{Data} 1 OEL T_1 ,

가 n- TFT ($C_{storage}$) . p- TFT가 ,

TFT , OEL . ,

. TFT . TFT , TFT

. TFT 가 (V_T)

OEL

가 . ,

가 .

T_1 . T_2 OEL 가 .

T_3 T_2 , T_2

T_1 T_3 T_4 가 V_{GP} , 2

t_0 T_1 T_3 , T_4 (ON) T_4 , T_4 가 ,

T_1 T_3 (OFF) I_{DAT} 가 T_2 OEL .

T_3 , T_2 가 T_2 가

T_1 T_2 OEL T_2 T_3 T_1 , T

4가 V_{GP} , OEL 가 V_{DD} C_1 , T_2

가 , T_4 , T_2 - T_2 ,

2 V_{T2} 가

가 . T_2

2 t_2 t_5

가 . t_6 .

2 1 ,

. OEL ,

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1 , n -
p - 가 .

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, n - p - , n -
p - .

, n - p -
, , 1 2 1 , n - , p -
2 2 n - , p -

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, 1 가
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, 1 가
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2 , n -
p - .

p - , n - p - , n -
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, n - p - 가 1 , 가 n -
, p - , n - p -
2 2 , n - , p -
가

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3 , 1 12
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,

1 2 OEL .

2 OEL .

3 .

4 3 .

5 1 .

6 2 .

7 3 .

8 11 6 SPICE .

12 OEL .

13 OEL OEL .

14 .

15 .

16 .

17 RAM .

18 RAM .

19 .

3 OEL 2 T_{12} T_{15} T_{12} p-

OEL T_{15} n- , OEL

, TFT 가 (V_T) .

, V_T .

TFT , 가 TFT

V_T , p- n- TFT

OEL V_T , TFT, p- V_T TFT

, 3 .

4 T_{12} T_{15} V_T , V_{T1} , V_{T2} 3 OEL T_1
 V_1, V_2 V_D V_{DD} 가
5, T_{12} OEL T_{12} T_{15} 가 T_{12} n-
 $V_T = 0$ 가 , OEL 4 p- T_{12} n-
 T_{15} A , I_0 .
p- n- V_{T1} 가 , OEL (11)
B V_2 , OEL I_2 C .
OEL 4 .
5 . OEL
p- T_{12} n- T_{15} T_A T_B .
 C_{12} C_{15} , T_A T_B 가
 T_A T_B 1 V_2 T_A T_B 가
 C_{12} C_{15} . T_A T_B 가
 φ_1 φ_2 .
6 OEL
p- T_{12} n- T_{15} OEL
 T_{12} T_{15} C_1, C_2 T_1, T_3 T_6 T_{12} T_{15} T_1, T_6 T_4 .
 T_{12} T_{15} 가 T_1 T_6 V_{SEL} ,
 T_3 V_{SEL} V_{SEL} T_1 T_6 p- .
 V_{SEL} OEL .
6 가
가 , OEL 가
 T_{12} T_{15} 가 6 T_4 , T_1, T_3 T
6 t_0 t_6 , T_4 , T_1, T_3 T_6 V_{SEL}
 t_3 T_4 V_{GP} T_1 T_6 가 , p- T_{12} n-
 T_{15} 1 t_3 T_3 I_{DAT} T_{12} T_{15}
 C_1 C_2 6 가 V_{T12} V_{T15} .
 T_1, T_3 T_6 t_4 , 2
p- n- T_{12} T_{15} V_{DD} OEL
가 . OEL p- n- T_{12} T_{15} 4
. 7
6 T_3 I_{DAT} n-
p- T_{12} , 7
 T_{15} , 가 I_{DAT} 7
6 가 .
8 11 SPICE .

8 OEL, I_{DAT} , V_{GP} , V_{SEL} - 1volt, 0volt +1volt 3, ,
 0.3×10^{-4} 0volt, 0.6×10^{-4} 8 VT - 1volt, ,
 OEL 가 +1volt ,
 OEL 10 , 10 9
 V_T 0volt , V_T 가 - 1volt , OEL
 1.2% 가 , V_T 가 +1volt , V_T 가 0volt
 1.7% 가 10 . 8.7%
 ,
 11 $0.2\mu A$ $1.0\mu A$ I_{DAT} , p -
 n - OEL
 , p - n -
 , p - n -
 TFT n - p - OEL OEL
 , p - n - V_T
 . p - n -
 12 OEL 12 , (133)
 EL , (151) (121)
 n - - (122)
 , , -
 , 600 ,
 .
 (132) EL (131) Al , ITO (116), (hole)
 EL (133) . EL (131) , EL
 ITO Al (115)
 .
 (132) EL (133) (151) -
 . ITO (116) . ,
 .
 13
 TAB (220) RAM/ OEL (200), TFT (210),
 가 LSI(230) ,
 EL ,

Id equipment) ; , CCTV , DVD , ; (fie

, 가 .

< 1: >

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14 (1106) (1104) . , (1100) (1102)
(1106) (1106)

< 2: >

, . 15
(1200) (1202), (1204), (1206), (100)
(100)

< 3: >

, OEL . 16

(1300)
(CCD)
(1300) (1302) OEL (100) CCD
(100)
CCD (1304) (1302) ()

OEL (100) , CCD
가 (1308) (1300) , (13
12) (1314)가 (1302) ,
(1430) (1440) (1312) (1314)
(1308) (1430)
(1440)

14 , 15 16
OEL , / , , ,
, TV , POS(point - of - sales)
OEL 가

가 , RAM, , DNA , (night vision)

17 RAM . 17 MH .

18 RAM . 18 MH .

19 . 19 MH

MR .

가

(57)

1.

n -

p -

2.

1

n -

p -

3.

2

n -

p -

n -

p -

4.

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 n - 가 p -
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1 1 , 2 2

32.

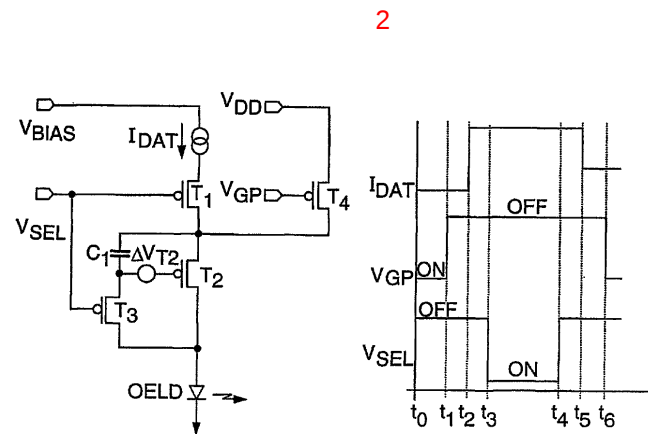
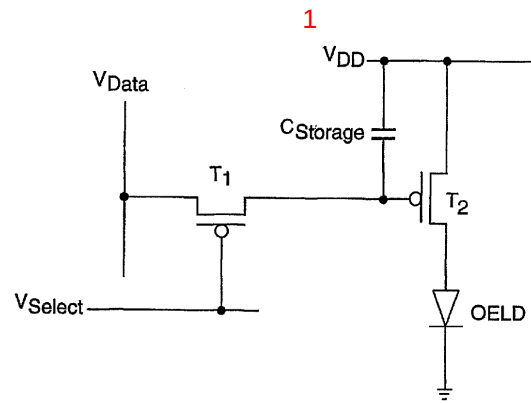
31 ,
1 2

33.

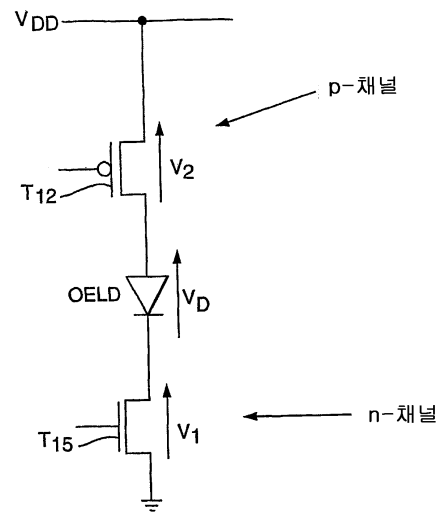
32 ,
가 1 2

34.

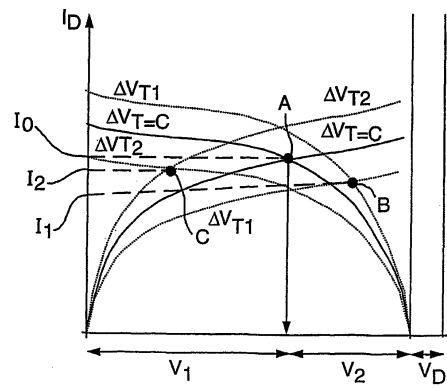
33 ,
1 2 2



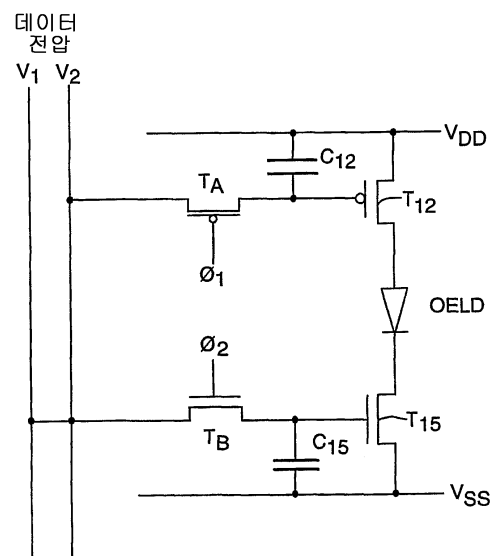
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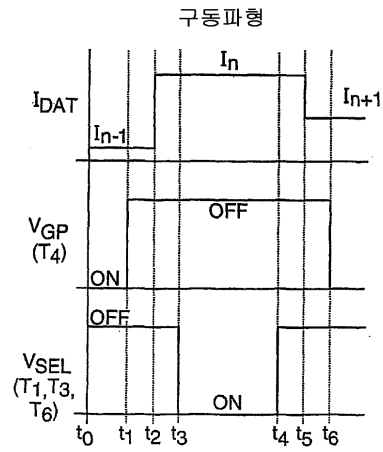
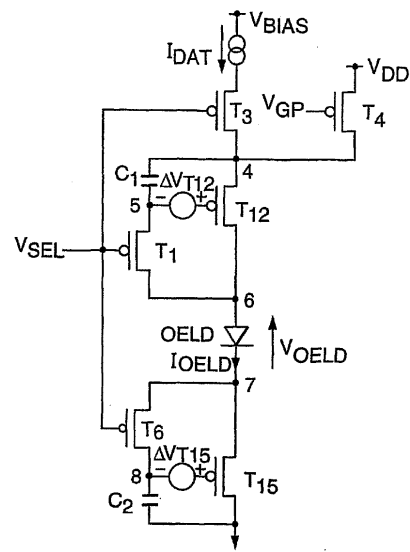
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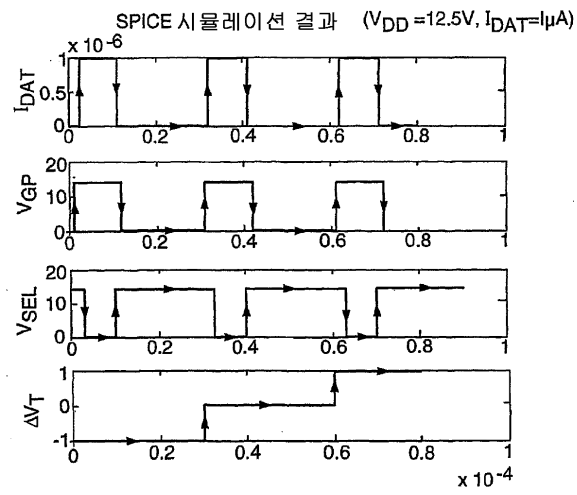
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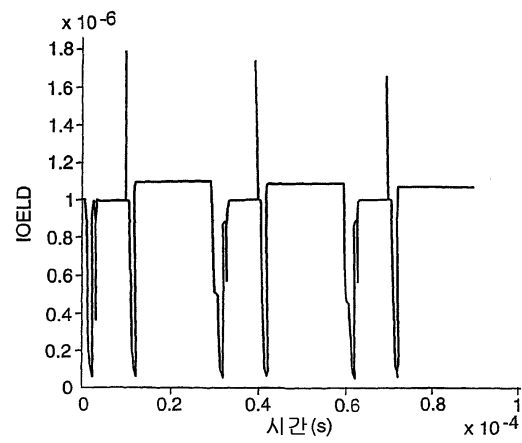
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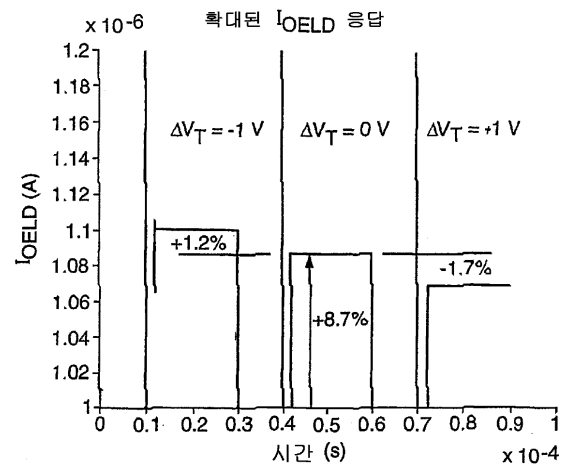
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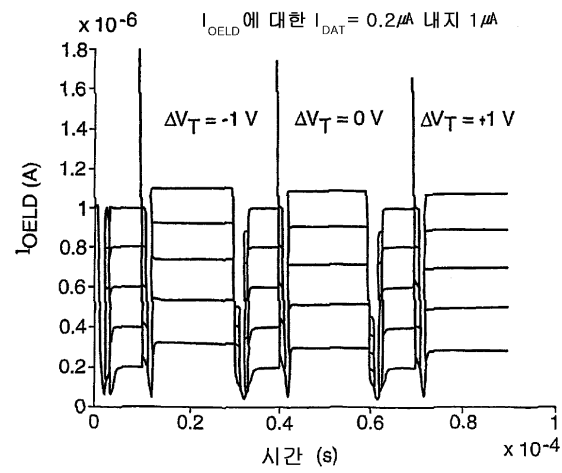
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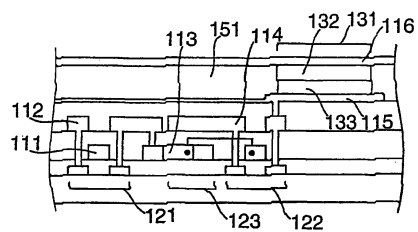
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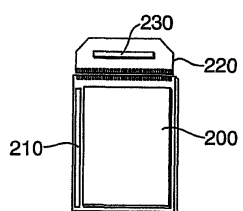
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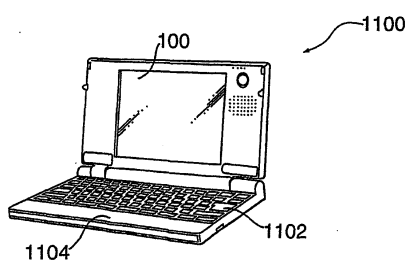
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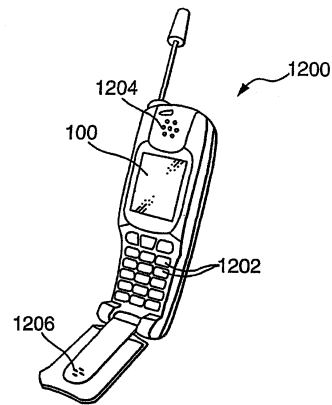
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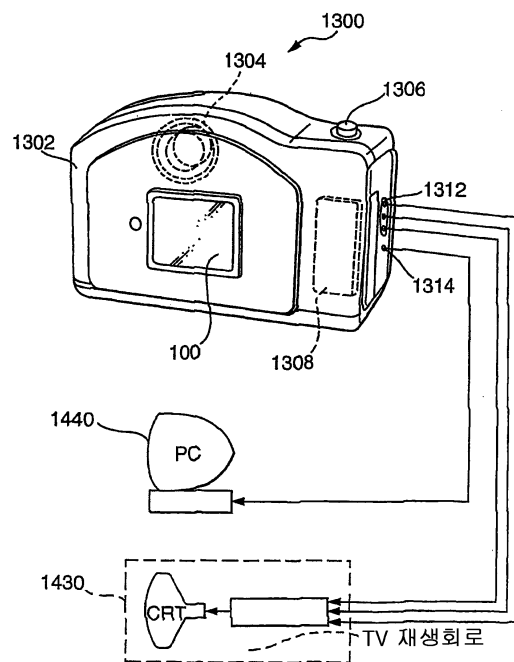
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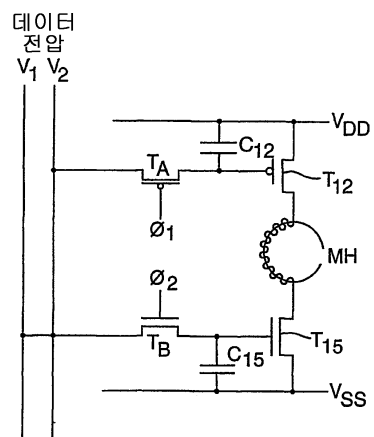
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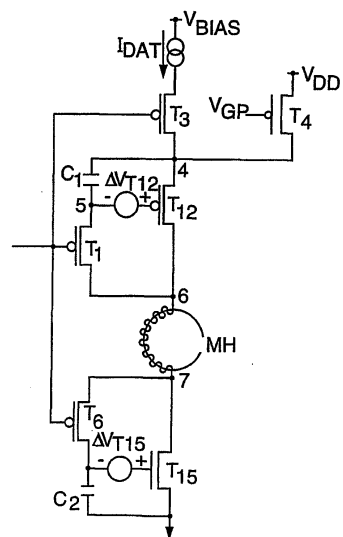
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