

(19)  
(12)

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(A)

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2004 07 05

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(22) 2002 12 26

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(72) 305 701

1488-39 502

(74)

:

(54)

가 , / 가 , 가  
가 , 가 , 가  
가 DC , 가 .

6b

1 AMOLED(Active Matrix type Organic Light Emitting Diode Device)

2 .

3 2 I-I .

4 .

5 1 .

6a, 6b , 6a , 2 , 6b 6a IV-IV .  
 7 3 .  
 8 4 .  
 < >  
 210 : 212 :  
 214 : 216 :  
 218a, 218b : , 218 :  
 220 : 222 : 1  
 224 : 2 ch1, ch2 : 1, 2  
 Va, Vb : 1, 2  
 VIa, VIb : 1, 2  
 VII :

(Organic Light Emitting Diode Device ; , AMOLED ) ,  
 (Dual Panel Type) (Thin Film Transistor) .  
 가 (FPD ; Flat Panel Display) , 가  
 가 (LCD ; Liquid Crystal Display Device)가 가 ,  
 가 가 (contrast), , .  
 , 가 가 가 , .  
 , 가 가 가 .  
 , ncapsulation) 가 , PDP(Plasma Display Panel) (e  
 , 가 가 , 가 가 가 .  
 , ( , AMOLED )  
 1 AMOLED .

1 (powersupply line)  
(pixel area)

2 (addressing element)

(switchi  
(storage capa

ng TFT)가  
citor ; , C<sub>ST</sub> )가  
(current source element)  
(Electroluminescent Diode)가

(C<sub>ST</sub>)

, AMOLED (addressing)  
AMOLED  
2 AMOLED (s  
storage capacitance)가

2

(36) 1 (42) (12) 1 (12) 2 (36)  
(12) (30) , (14) (T<sub>S</sub>)가 (36) (26) , (T<sub>S</sub>)  
(14), (26) (30) (26) (22)

(T<sub>S</sub>) (42) (T<sub>D</sub>)가  
(T<sub>D</sub>) (12) (16)  
(30) (16) , (16)  
(28, 32) , (36) (28, 32)  
(24) (16),

(42) (28) (44)  
(32) 1 (54)

1 (54) 1  
(30) (42) (34)  
(34) (42) (C<sub>ST</sub>) (34)

3 2 I-I

(20) (10) (16) (16) (24a), (24  
b) (20) (16) (24)  
(28, 32) (24)

(28, 32) (24a) (ch)  
(16), (24), (28, 32) (T<sub>D</sub>)  
(T<sub>D</sub>) (28) (46) 가  
(48) , (48) (46) (28)  
(44) , (44) (48)  
(32) (50) 가 (52)

(52) (50) (32) 1 (54)

DC (direct current stress)가 (charge trapping)

가 가

(20) PECVD(plasma Enhanced chemical vapor deposition) (16)

가 (void) , DC 가 (II)

가 가

4 2

1 (70) 1, 2 (70, 90)

(80) , (80) (T<sub>D</sub>) (T<sub>D</sub>)

1 (72) , 1 (72)

(74) , (74) 2 (76)

1, 2 (72, 76) 1, 2 (72, 76) 1 (72) (74)

(E) , (74)

2 (90) , 2 (90) (E) (92)

)가 (92)

(94)가

(94)가 2 (90) 2 (76)

1, 2 (70, 90) 가 (85)

가

가 , 1,000

가 가 가

가

2

가

(環)

가

1, 2

) , 1, 2

1 ( ) 2 (

1, 2  
가 (環)

;

;

1, 2

1, 2

1 1  
2

1

1

2

2

(a-Si)

2

(n+ a-Si)

1 2

1  
1, 2

2

1, 2

1, 2

가

-- 1 --

5 1

1, 2 (110, 150)

1 (110, 150)  
(140)  
(142)

(140)

(T<sub>D</sub>)  
(T<sub>D</sub>)

(142)

(142)

(T<sub>D</sub>)

(T<sub>D</sub>)

(112),  
(142)

(114),  
(118)

(116)

(118)

2 (150)

1 (152)  
(156a, 156b, 156c)  
2 (162)

1 (152)  
(160)

(160)

58) (156a, 156b, 156c) (160) 1 (152) 1 (154)  
 , 2 (162) 2

1 (152) , 2 (162) , 1 (154)  
 , 2 (158)

1, 2 (152, 162) 1, 2 (152, 162) (160)  
 (E)

T D) 가 (142) 2 (162) (142) 2 (162) (158)

1, 2 (110, 150) 가 (170) , 1, 2 (110, 150)

(142) (E) (140)

, 3 2

가 / 가 가

-- 2 --

6a, 6b 2  
 , 6a , 6b 6a IV-IV

6a (212)가 (環) (214) (214) (214)  
 (218) (218) (214) (212)  
 (220) (220) (218)  
 1, 2 (222, 224)

, 1, 2 (222, 224) (214)

1 (222) (220) 1 (214)  
 (Va) , (218), 1 (222) (220) 1 (T1)  
 2 (224) (220) (220) 2 (T2)

(Vb) , (218), 2 (224) (220) 2 (210)

6b (212) 가 1, 2 (214) (212) (210)  
 (214) 1 (Va), (214) 2 (Vb)

(214) (216) (216)  
 (212) (212) 1, 2 (Va, Vb) (218)  
 (218) (220) (220)  
 (220) (218) (214)  
 1, 2 (222, 224)

1 (218) (218a) (218b)  
 (222) (220) 1 (VIa) 2 (224)  
 (220) 2 (VIb) , 1, 2 (VIa, VIb) (218a)

218b) (218a) , (218a) 1, 2

(ch1, ch2)



, ;  
, ;

1, 2

1, 2

**2.**

1 ,  
1 , 1  
1 2 , , 1 2 1 1 , , 2  
2 , , 2 2 2 1 1 , , 2

**3.**

1 ,  
, (a-Si) , (n+ a-Si)

**4.**

3 ,  
1 2 , 1, 2 1 , 2 ,  
1, 2

**5.**

1 ,  
1, 2 가

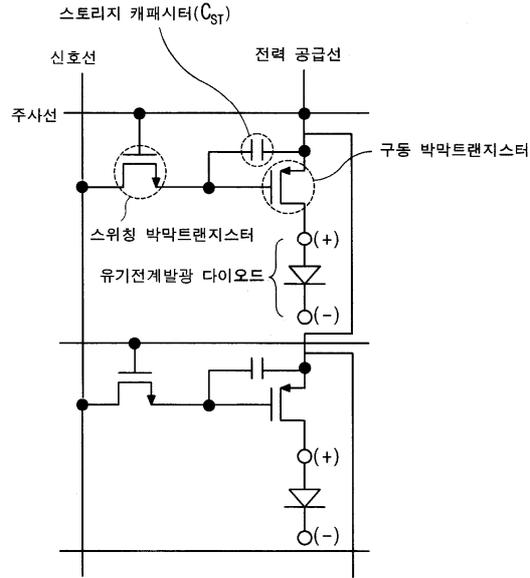
**6.**

5 ,  
,

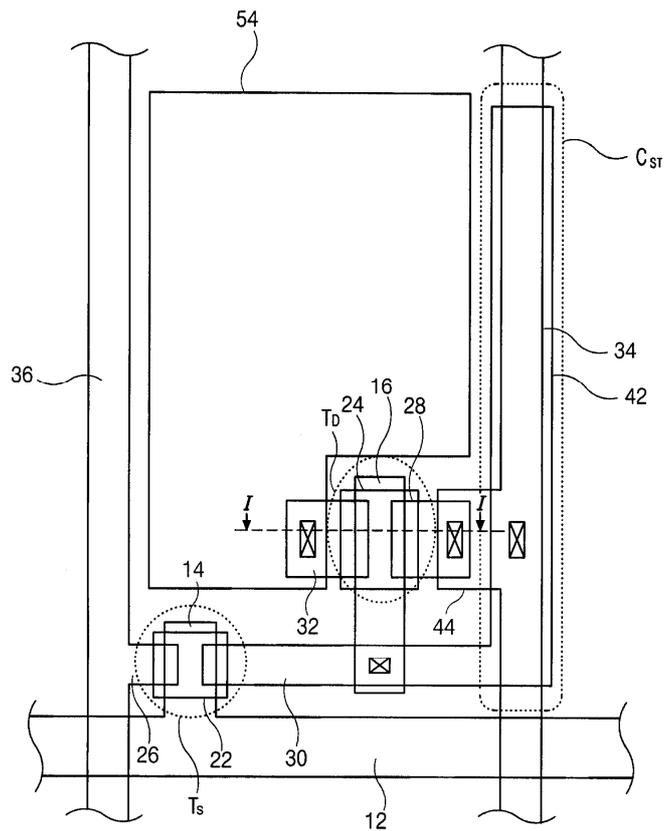
**7.**

1 ,  
,

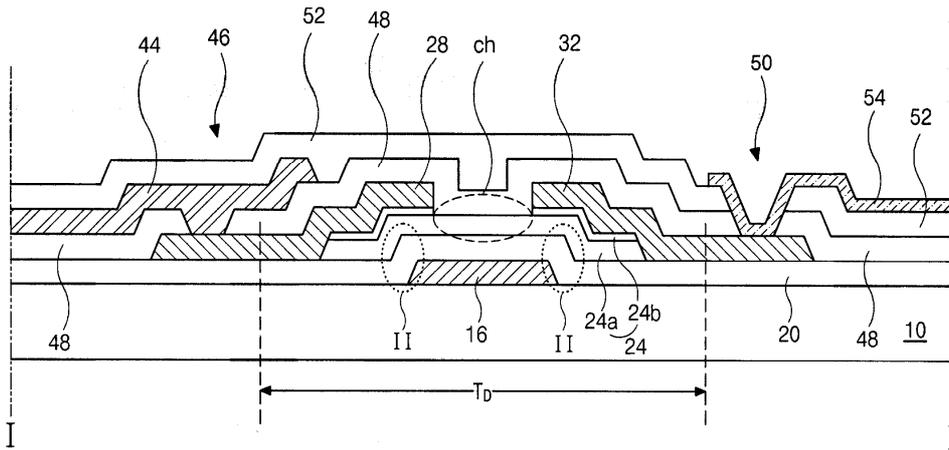
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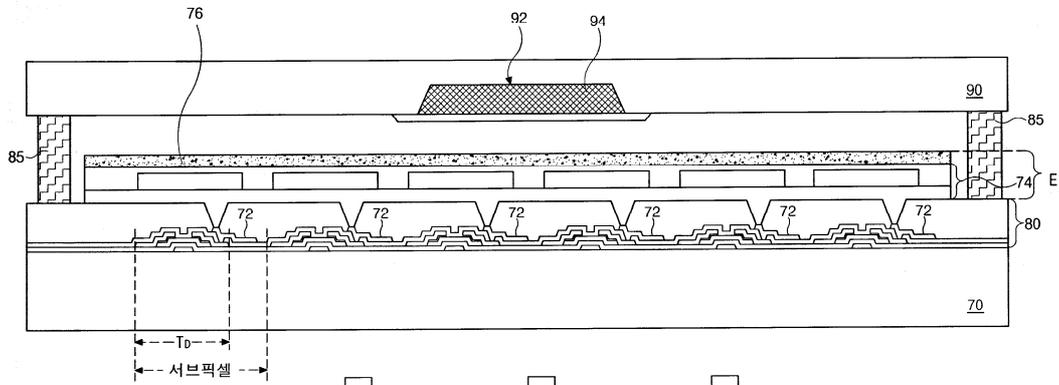
2



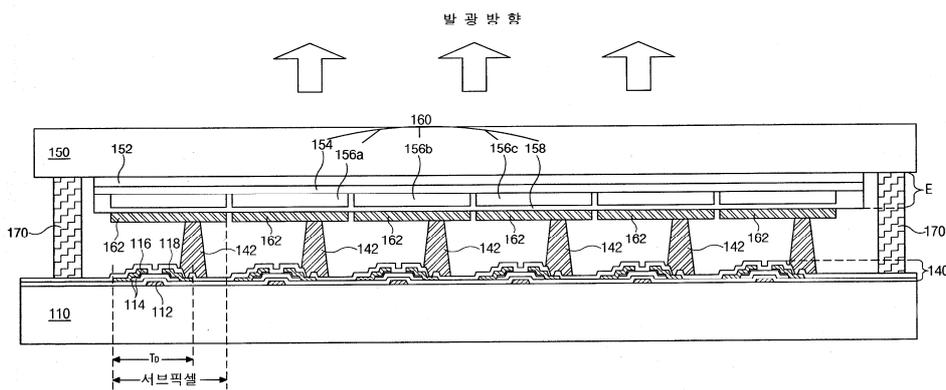
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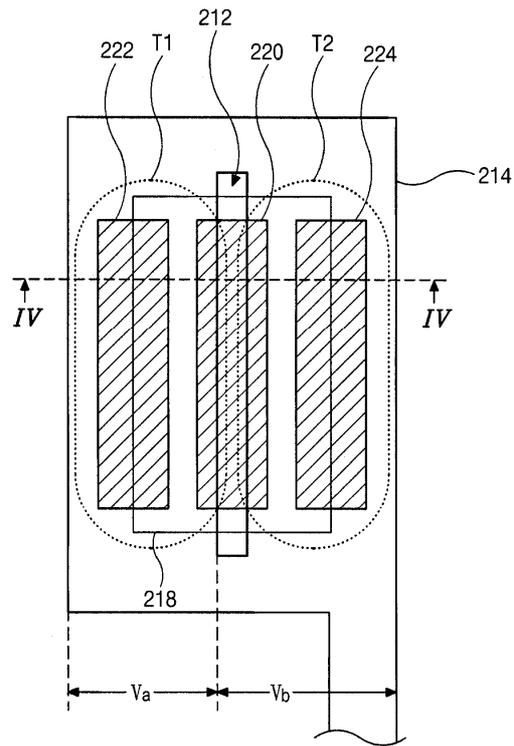
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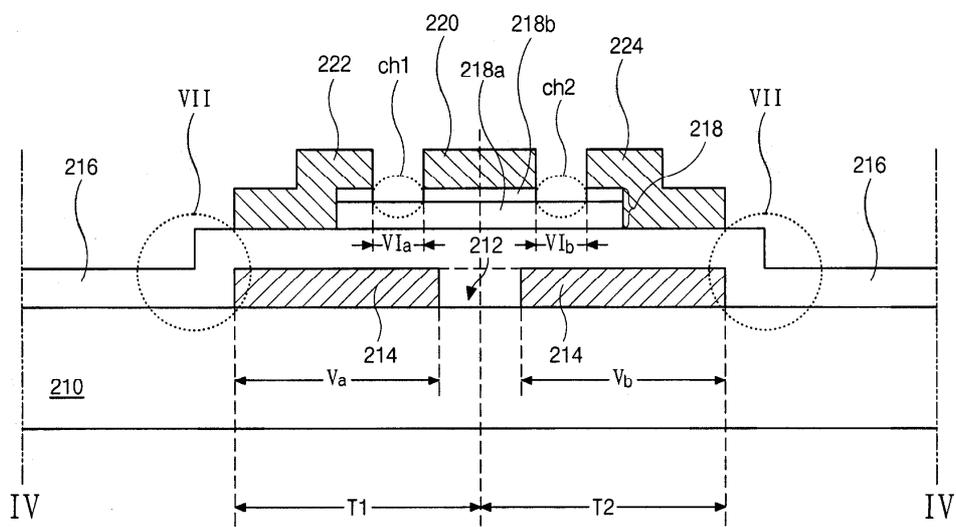
5



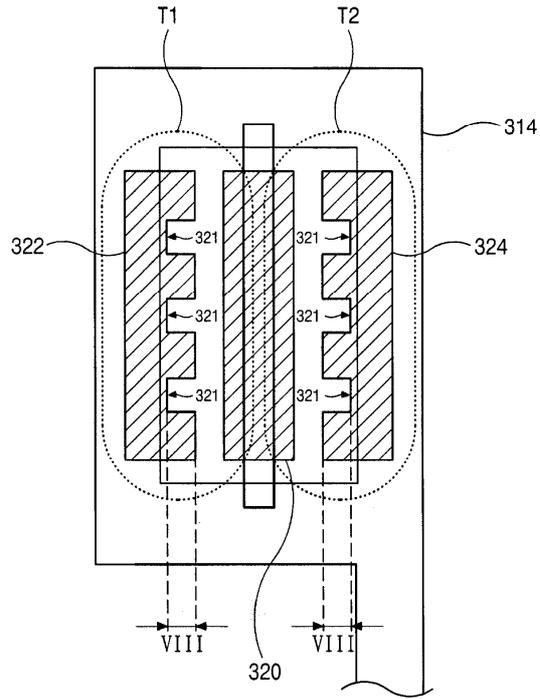
6a



6b



7



8

