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(22) 2002 11 29(65)
(43)(73) ()
10-9

(72) 9 1421-402

154-3 B-201

(74)

:

(54)

가 OLED , 가 3 가 OLED가
OLED
가 ,
OLED가 가
.

5

, OLED, , , ,

1 OLED
2 1 1
3 1 1
4 OLED 1
5 OLED
6 5 1
7 6
8 5 1
9 OLED
10 9
11 OLED

10: OLED, 12: OLED,
20, 20':, 22, 22':,
26: PWM, 28: /,
30, 30':, 32, 32':,
36:, 38: ,
40: OLED ,
D; , C: ,
PMT1 - PMT4: PMOSFET, NMT1, NMT2: NMOSFET
LS1 - LS3: , CC: ,
V_H: , V_{PRE}: ,
S1,...,Sn: , D1,...,Dm: ,
S_y: , D_x: ,
SR1,...,SRn: , XNOR1,...,XNORn: XNOR

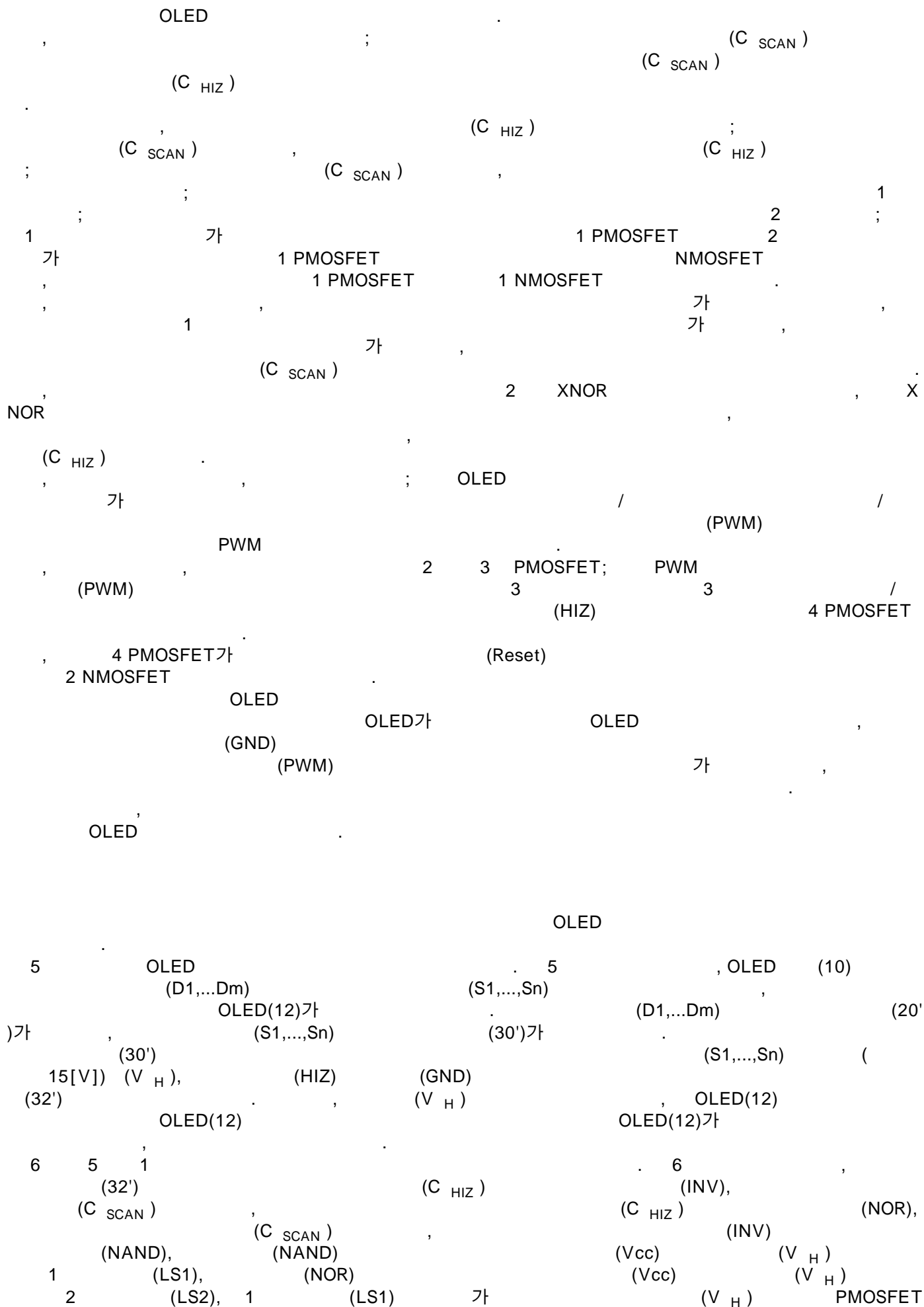
OLED
가 3
가
D
TV,).
가
가
(Organic Light Emitting Diode
) (, 'OLED ') . OLED 0.1[μm]
(Electron Transport Layer) ([ns]
Hole Transport Layer) 가 2
, OLED
OLED -
1 OLED
(10) (D1,...Dm) 1 (S1,...,Sn) , OLED
((1 R/G/B 1 (20)가 , OLED(12)가 (S1,...,Sn)
(D1,...Dm) (30)가
(30)
15[V]) (V_H) (S1,...,Sn) ((32)
2 1 1 (C SCAN)
(S_y) (V_H) (GND)

3 1 1 (22) (CC) (GND) (32)가 / 1 (S1) n (Sn) (D1,...Dm) ,
 (22) , OLED(12) (Gray Scale) PWM(P (CC)
 ulse Width Modulation) (D1,...Dm) (C)
 , OLED(12) 가 1 (D) 가 (C)
 가 (D1,...Dm) PWM (C) 가 (D)가 가 ,
 (C) (Precharging) (22) ,
 4-6[V] (V_{PRE}) 1
 4 OLED
 (V_{sync}) 1 (V_{sync}) 4
 (n) (H_{sync})가 , (H_{sync})
 (D1,...Dm) 가 가 , (H_{sync})
 (C_{SCAN}) (32)가 1 (S1) (V_H) (C)
 GND) , (Precharge) (V_{PRE}) OLED(12) (D1,...Dm) (C)
 (D1,...Dm) (PWM) (22)가 (CC) (D1,...Dm) OLED(12)
 , OLED(12) PWM (Reset) (D1,...Dm)
 (GND) (22)가 (C) (C)
 n (Sn) 1 ,
 (D1,...Dm) OLED (C)가 (22)가 (C)
 OLED (10) 가 ,
 1) OLED

$$P_d = n * m * C * V_H^2 * f_{clk}$$

1 n , m , C , V_H
 가 OLED , f_{clk} (30) 가 1
 ,

가 2 , OLED
 LED 가 , 가 O
 , 3 OLED
 OLED
 OLED
 OLED가 OLED
 (HIZ) , (HIZ)
 , (HIZ)



(PMT1) 2 (LS2) 가 PMOSFET(PMT1)
 NMOSFET(NMT1) (S_y) PMOSFET(PMT1) NMOSFET(NMT
 1)
 '0' () (C_{SCAN}) (C_{HIZ})
 '1' 1 (LS1) 2 (LS2) (V_H) (S_y) (GND) PM
 OSFET(PMT1) NMOSFET(NMT1)
 가 (C_{SCAN}) '1' 가 (C_{HIZ}) '0'
 1 (LS1) 2 (LS2) '0' 가 (C_{HIZ}) '0'
 NMOSFET(NMT1) (S_y) (V_H) PMOSFET(PMT1)
 (C_{HIZ}) '1' 가 (C_{SCAN})
 (NAND) '1' 가 (NOR)
 '0' 가 PMOSFET(PMT1) NMOSFET(NMT1)가 (S_y)
) (HIZ) (floating)
 1

[1]

C _{SCAN}	C _{HIZ}	V _{NAND}	V _{NOR}	PMOSFET	NMOSFET	S _y
0	0	1	1	Off	On	GND
1	0	0	0	On	Off	V _H
0	1	1	0	Off	Off	HIZ
1	1	1	0	Off	Off	HIZ

7 6
 (CC) (22') (HIZ) (D1,...Dm)
 8 5 1
 (22') 2
 PMOSFET(PMT2),(PMT3), (CC), (PWT)
 (V_H) 3 (LS3) 3 (LS3) / (D_x)
) 가 PMOSFET(PMT4) (Reset) (D_x) NMOSFET
)가 NMOSFET
 9 OLED (20'), (30') 9 OLED (20') (30')
 (PWM CLK, Data CLK) (Display Data) (Vsync, Hsync) OLED
 (40)
 (20') (22';
), OLED (40) (data CLK)
 OLED (40) R,G,B (Display Data), (D1,...,Dm)
) 가 / (28) / (28)
 PWM (26) OLED (40) PWM (26) PWM
 (PWM CLK)
 (30') (32';
), OLED (40) (Hsync)
 (S1,...,Sn) (C_{SCAN}) (38) (38)
 (C_{SCAN}) (C_{SCAN}) (C_{HIZ})
 (22') (36)
 10 9 (n)
 (38) (SR1,...,SRn)가 (S
 R1) (SR1,...,SRn) OLED (40) (Hsync)가 (Vsync)가 1 (S
 (SR1,...,SRn) (SR_y) (32')

(C_{SCAN})
...,SRn)

(36) 2 가
XNOR (XNOR_y)
(SR_{y+1})

(n) XNOR (XNOR1,...,XNOR
(SR_y) (32')

(C_{HIZ})

11 OLED
11 OLED

(V_{sync}) 1 (V_{sync})
(n) (H_{sync})가
(D1,...Dm) 가 가
(V_{sync})가 (30') 1 (SR1)
(H_{sync})가 , 1
(SR1) (V_{sync}) (H_{sync}) (

C_{SCAN}) '0' (32') 1 (C_{SCAN}) 1 X
NOR (XNOR1) , 1 XNOR (XNOR1) 2
(SR2) 1 XNOR (XNOR1)
(C_{HIZ}) '0' 가 , 2 (SR2,...,SRn)
XNOR (XNOR2,...,XNORn) '1' 가
(C_{SCAN}) (32')가 1
1 (S1) (C_{HIZ}) (HIZ), (GND)
(PWM) 1 (H1) PWM (26)
(D1,...Dm) (22') PMOSFET(PMT4)가
OLED(12) PWM (CC)
OLED(12) (D1,...Dm)
(HIZ) (S1) 2
(HIZ) 2 , 2, (S2,...,Sn) 3 4

[2]

	SR (C _{SCAN})	XNOR 1	XNOR 2	XNOR (C _{HIZ})	S _y
1	0	0	1	0	GND
2	1	1	1	1	HIZ

D) 2 (S2) (HIZ), (GN
OLED(12)가
(C_{SCAN}) (32')가 1 (S1) (V_H) (C_{HIZ})
OLED(12) (C) OLED(12) (refresh)

[3]

	SR (C _{SCAN})	XNOR 1	XNOR 2	XNOR (C _{HIZ})	S _y
1	1	1	0	0	V _H
2	0	0	1	1	GND
3	1	1	1	1	HIZ

3 (S2) (S3) (GND) OLED(12)가 2
(V_H) OLED(12) (C)가 ,

(S1) OLED(12) (Sn) OLED(12)가 (C_{HIZ}) (HIZ) 1
4 .

[4]

	SR (C _{SCAN})	XNOR 1	XNOR 2	XNOR (C _{HIZ})	S _y
1	1	1	1	1	HIZ
2	1	1	0	0	V _H
3	0	0	1	0	GND
4	1	1	1	1	HIZ

(GND) OLED (S_y) (V_H) (S_{y+1}) (HIZ)
(S_y) (S_{y+2}) (C) OLED(12) (S_y) (V_H) (GND)
(HIZ) (C)가 (HIZ) OLED (S_y) (V_H) (GND)
(V_H) OLED 1 (GND) OLED 1 OLED
2 2/n 가

$$P_d = 2 * m * C * V_H^2 * f_{clk}$$

2 C OLED(12) , m , V_H 가
, f_{clk} (30') OLED (n)가 160 128X160 가
OLED 1/80
OLED 가

PWM OLED 가 가 ,
가 가 .

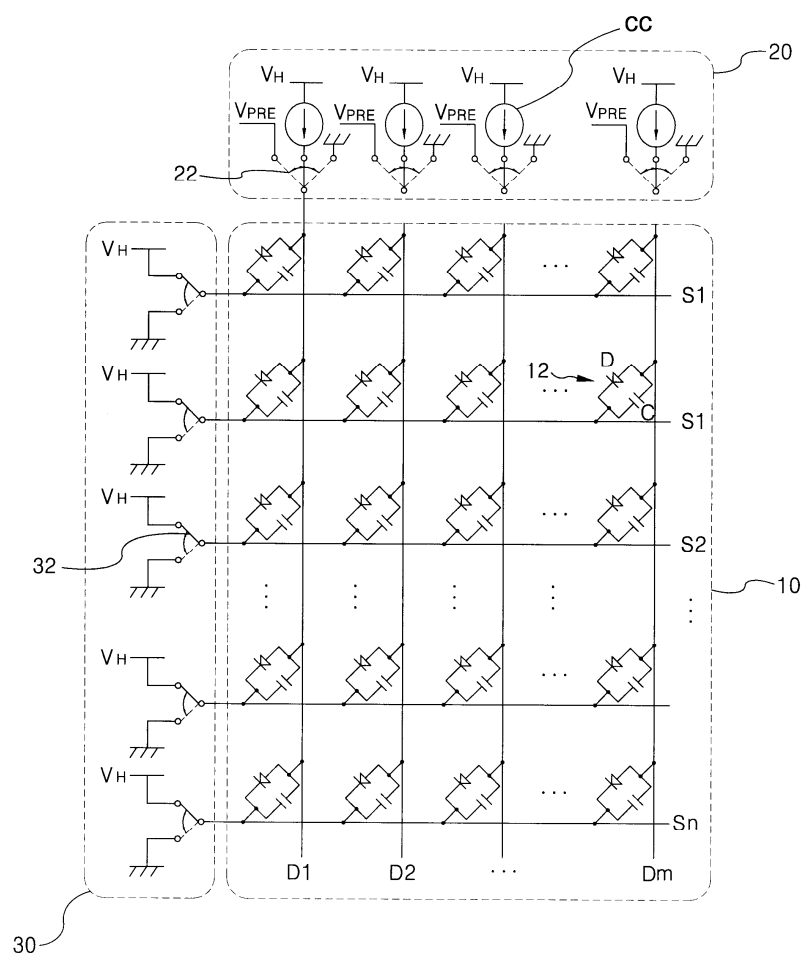
(57)

- 1.
- 2.
- 3.
- 4.

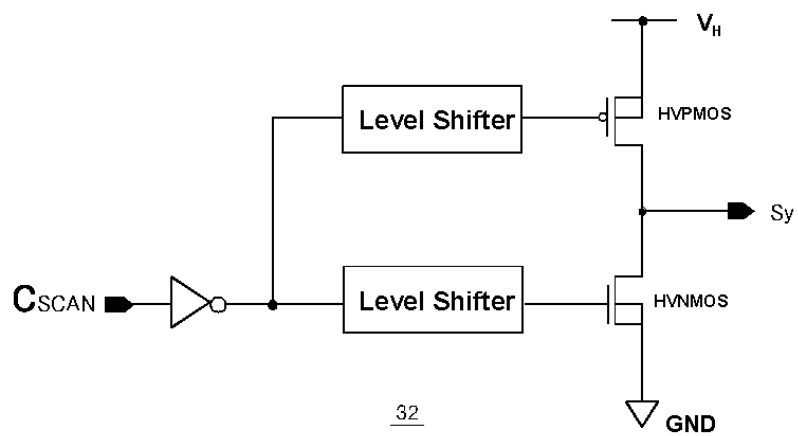
OLED가
OLED ,
(HIZ)
;

(HIZ)
(CSCAN)
(CSCAN)
(CHIZ)
OLED
5.
4
(C_{HIZ})
(C_{SCAN})
(C_{SCAN})
(C_{HI})
1
2
1 PMOSFET
1 PMOSFET
1 NMOSFET
NMO
SFET
OLED
6.
4
1
가
가
가
가
(C_{SCAN})
OLED
7.
6
XNOR
(C_{HIZ})
OLED
8.
4
OLED
가
PWM)
PWM
OLED
9.
8
2 3 PMOSFET;
PWM (PWM)
3
(HIZ)
4 PMOSFET
OLED
10.
9
4 PMOSFET가
2 NMOSFET
(Reset)
OLED
11.
12.

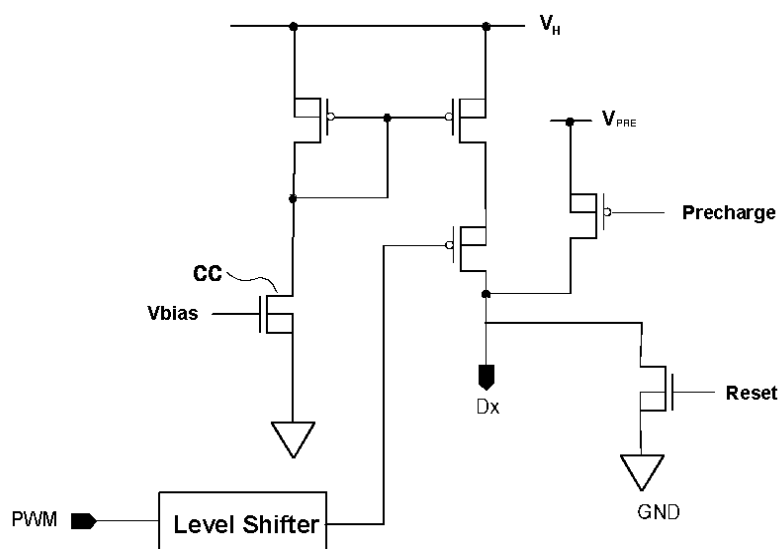
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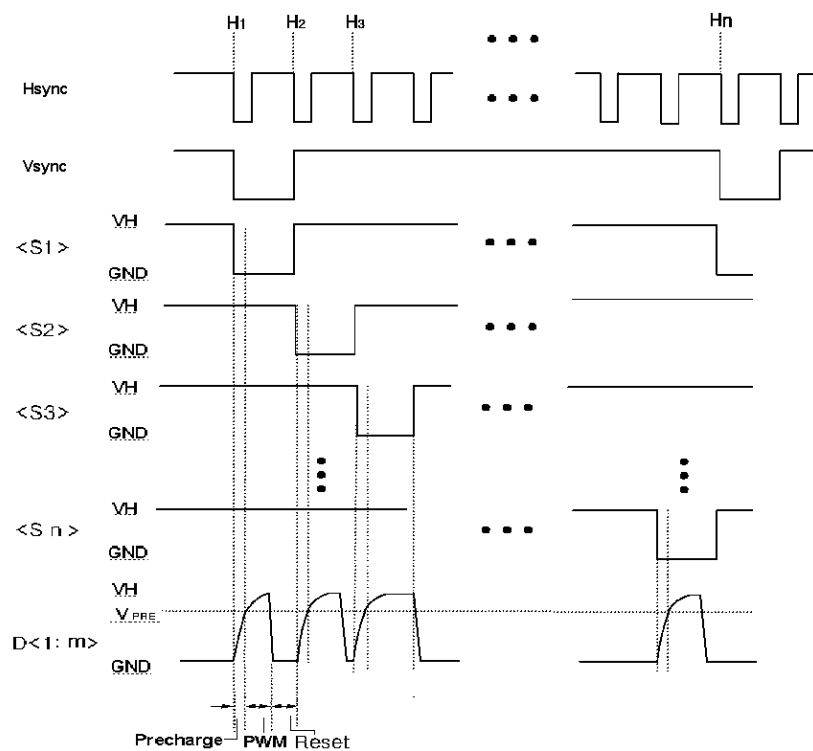
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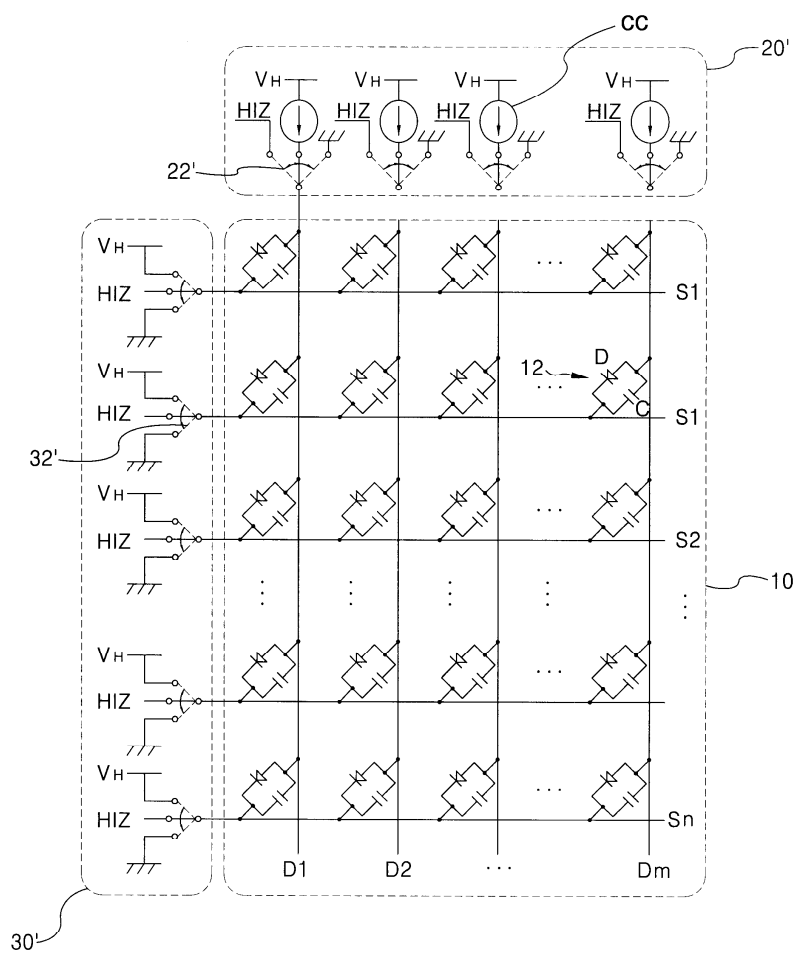
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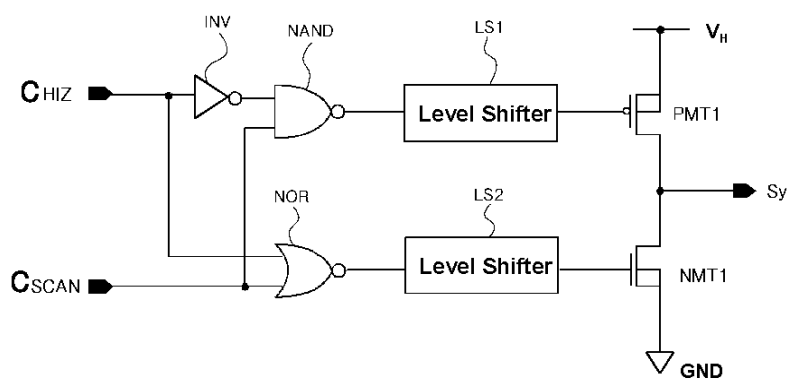
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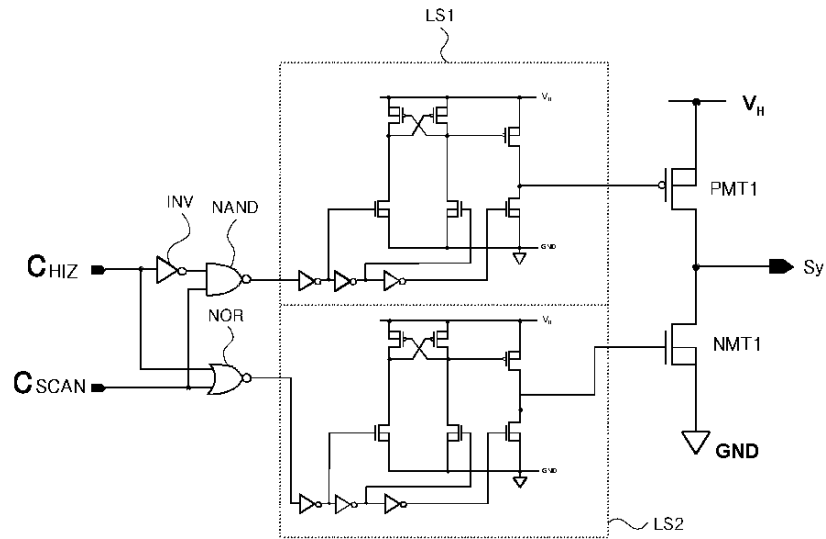
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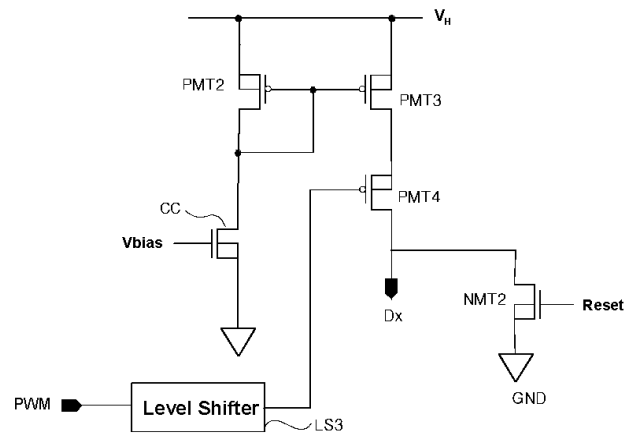
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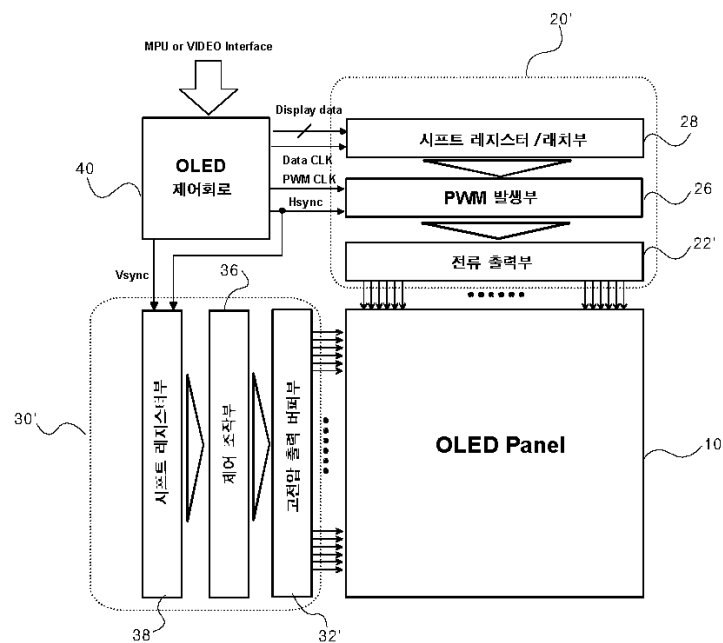
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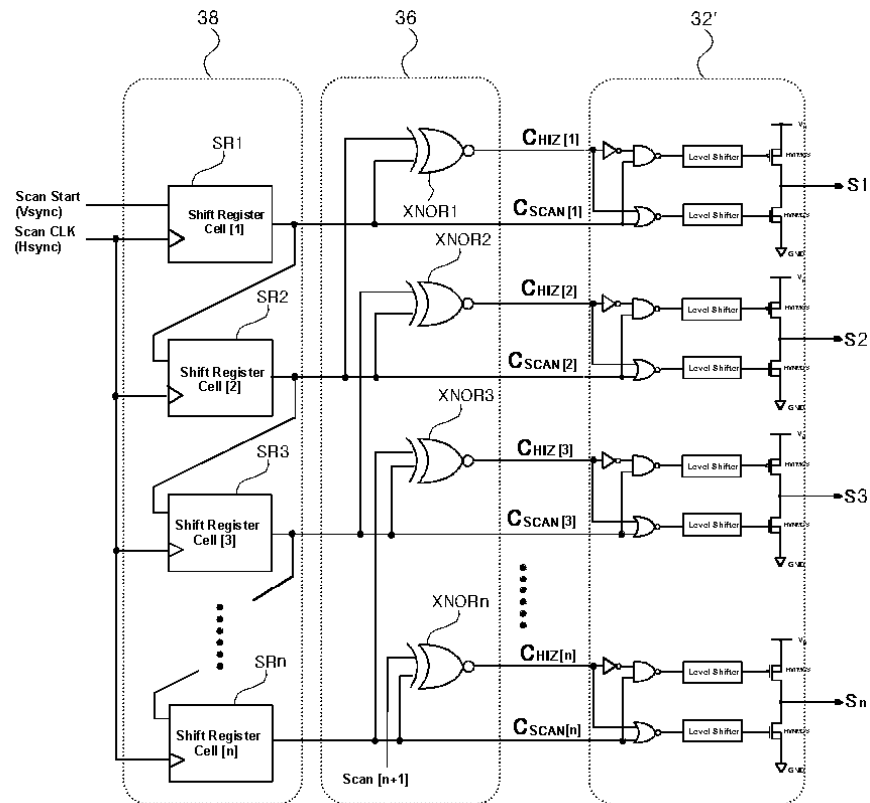
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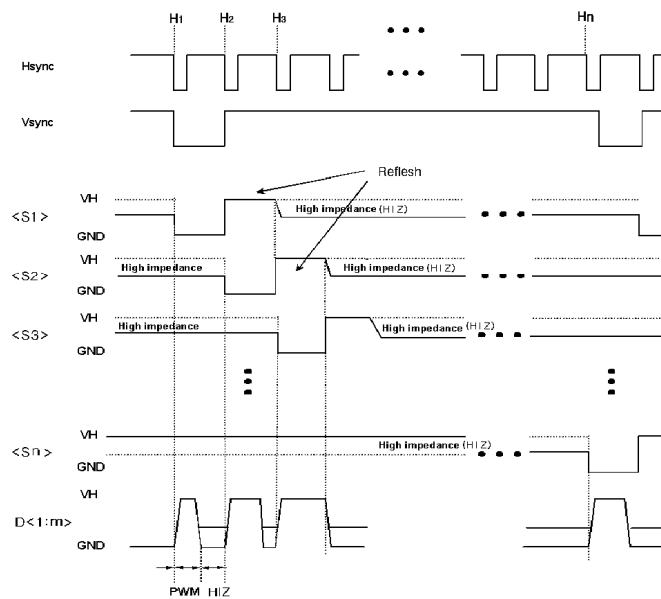
9



10



11



专利名称(译)	有机电致发光器件显示器驱动装置和方法		
公开(公告)号	KR100432554B1	公开(公告)日	2004-05-12
申请号	KR1020020075470	申请日	2002-11-29
申请(专利权)人(译)	哈纳美光公司		
当前申请(专利权)人(译)	哈纳美光公司		
[标]发明人	SHIN HONGJAE 신흥재 KWACK KAEDAL 곽계달		
发明人	신흥재 곽계달		
IPC分类号	G09G3/30 H01L51/50 H05B33/14 G09G3/32 G09G3/10 G09G3/20		
CPC分类号	G09G2320/0252 G09G2330/021 G09G3/3216 G09G3/3266		
外部链接	Espacenet		

摘要(译)

在无源矩阵型OLED显示面板驱动装置中，扫描驱动电路具有三态输出，当扫描驱动电路进行扫描操作时，选择的阴极线接地，一个，并通过用于初始化电荷的像素的刷新操作之后除去寄生电容分量切换到高电压状态，操作用于维持高阻抗状态和非选择共阴极线阻抗状态阳极线OLED的降低电容组件作为相关联的数据驱动电路上的负载，通过在预定的电压或多个使用的电压源维持在短时间内阳极线之后，而不使用使用被施加到数据的电流源的预充电方法中，OLED是即使发光所需的电流足够，被填充在提供一种有机发光显示装置的驱动装置和方法，以提高操作速度减少数据驱动器电路的功率消耗。五 指数方面 有机，OLED，手动，预充电，高阻抗，浮动，电容

