(19) (KR)
(12) (B1)

(45) 2010 04 15
(11) 10-0952834
(24) 2010 04 06

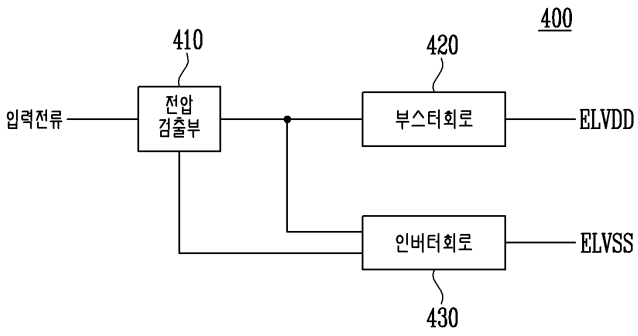
(51) Int. Cl.
G09G 3/30 (2006.01) *H02M 3/00* (2006.01)
G09G 3/32 (2006.01) *G09G 3/20* (2006.01)
(21) 10-2008-0076939
(22) 2008 08 06
2008 08 06
(65) 10-2010-0018254
(43) 2010 02 17
(56)
KR1020090021742 A
KR100859655 B1
KR1020060039987 A
: 14

(73)
24
(72)
508 SDI( )
(74)
:

(54) –

(57)

DC-DC
.
, 1
2 ,
2
DC-DC .
- 3



1

;

1 ;

2 ,

2 DC-DC

.

2

1 ,

1 ;

1

1 1 1 DC-DC .

3

2 ,

1 2

;

2 2 ;

2 2

DC-DC .

4

3 ,

1 2 1 2

PWM DC-DC .

5

4 ,

PWM

DC-DC .

6

1 ,

DC-DC .

7

4 ,

PWM DC-DC

.

8

, , 1 2 ;

;

;

1 2 DC-DC ,

DC-DC

;

1 ;

2 ,

2

.

9

8 ,

1 ;

1

1 .

10

9 ,

1 2

;

2 2 ;

2 2

.

11

10 ,

1 2 1 2

PWM .

12

11 ,

PWM

.

13

8 ,

.

14

11 ,

PWM

.

[0001] DC-DC , DC-DC

.

[0002] , (Cathode Ray Tube)

. (Liquid Crystal Display), (Field Emission Display), (Plasma Display Panel) (Organic Light Emitting Display) .

[0003]

(Organic Light Emitting Diode : OLED) .

[0004]

PDA, MP3 .

[0005] 1 . 1 ,

(Dm) (Sn) , 1 (M1), 2 (M2), (Cst)

(OLED) .

[0006] 1 (M1) 1 (ELVDD) (OLED) 1 (N1) . 2 (M2) (Dm) 1 (N1) (Sn) . (Cst) 1 1 (ELVDD) 2 1 (N1) . , (OLED) 1 (M1) 2 (ELVSS) .

[0007] (Dm) 1 (N1) 1 (N1) 1 (M1) 1 (ELVDD) 2 (ELVSS) . (OLED) .

[0008] 1 (ELVDD) 2 (ELVSS) , . , .

[0009] DC-DC .

[0010] 1 , , 1 2 , 2 DC-DC .

[0011] 2 , , , 1 2 ; ; ; 1 2 DC-DC , DC-DC ; 1 ; 2 , 2 .

[0012] DC-DC , DC-DC 2 .

[0013] , .

[0014] 2 . 2 , (100), (200), (300) DC-DC (400) .

[0015] (100) (101) (101) ( ) . , (100) n (S1,S2,...Sn-1,Sn) m (D1, D2,....Dm-1, Dm)

.

[0016] , (100) 1 (ELVDD) 2 (ELVSS) . , (100) , , 1 (ELVDD) 2 (ELVSS) .

[0017] (200) , , , (R,G,B data) . , (200) (100) (D1, D2,....Dm-1, Dm) (100) .

[0018] (300) , (S1,S2,...Sn-1,Sn) (100) . (101) (200) (101) .

[0019] DC-DC (400) 1 (ELVDD) 2 (ELVSS) . DC-DC (400) , 1 (ELVDD) 2 (ELVSS) . , . . , .

[0020] DC-DC (400) (410) . (410) , DC-DC (400) 2 (ELVSS) . , DC-DC (400) .

[0021] , 2 (ELVSS) (Saturation region) , 1 . , 2 (ELVSS) 2~3V . , 2 (ELVSS) 2 (ELVSS) . 2 (ELVSS) (-5.4V), . , 2 (ELVSS) (-3.4V) . , 2 (ELVSS) DC-DC (400) .

[0022] 3 DC-DC . 3 , DC-DC (400) (410), (420) (430) .

[0023] (410) . (420) 1 (ELVDD) . , (430) 2 (ELVSS) . , (430) (410) 2 (ELVSS) . , (430) 2 (ELVSS) 2 (ELVSS) .

[0024] 4 3 DC-DC . 4 , DC-DC (400) (C) , (410) , 1 (L1) , 1 (L1) 1 (L1)

1 (T1) , 1 (T1) 1 (L1)
2 (T2) , 2 (T2) 2 (T2) 2 (L1) , (Vref) Vref (440), Vref (440) 2 (L2) 2 (ELVSS) 1 2 (R1,R2) 1 2 (T1,T2) PWM (450) . PWM (450) 1 (R1) 2 (R2) Vref (440) (Vref) .

[0025] Vref (440) .

[0026] , PWM (450) 1 ( ) . , PWM (450) (410) (Vref) . , (Vref) 2 (ELVSS) .

1

[0027]

	Vin( )	Vref	ELVSS
1	4.2<Vin<=4.5V	Vref+1	-5.5V
2	2.9<Vin<=4.2V	Vref	-5.1V
3	2.7<Vin<=2.9V	Vref-1	-4.6V
4	2.5<Vin<=2.7V	Vref-2	-4.1V
5	2.3<Vin<=2.5V	Vref-3	-3.6V
6	2.1<Vin<=2.3V	Vref-4	-3.1V

[0028] , , .

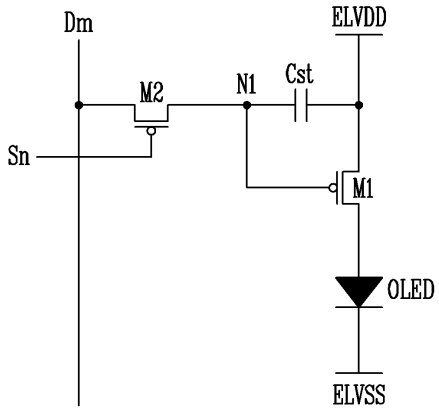
[0029] 1 .

[0030] 2 .

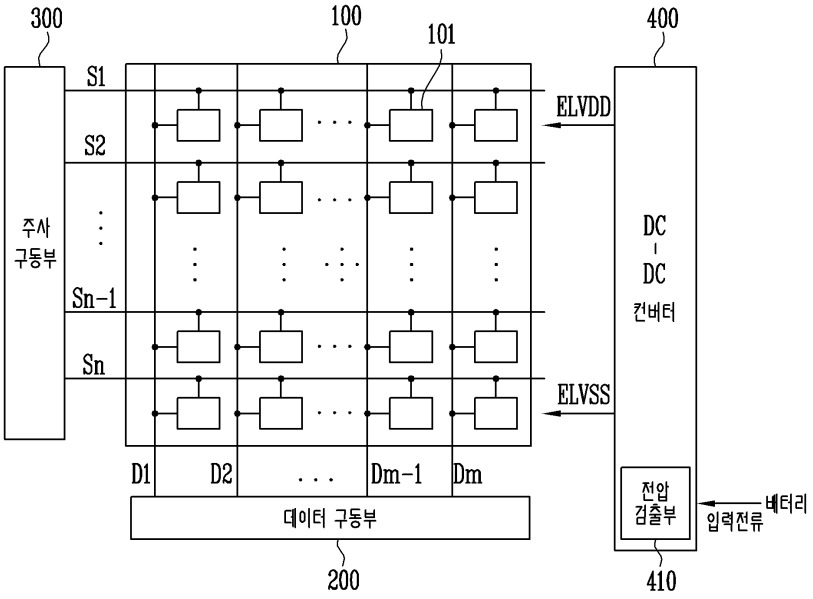
[0031] 3 DC-DC .

[0032] 4 3 DC-DC .

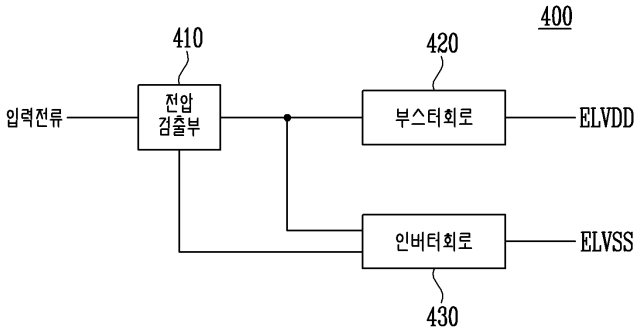
1


Dm
ELVDD
M2
N1
Cst
Sn
M1
OLED
ELVSS

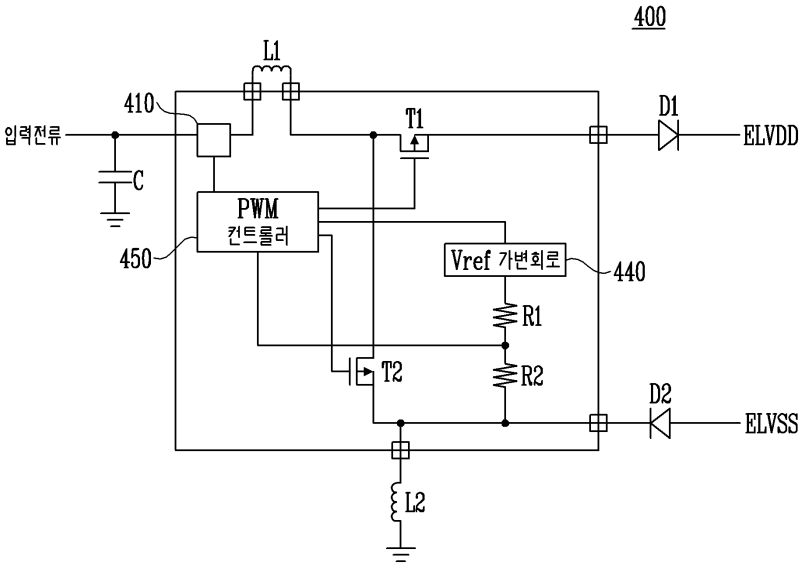
2


300
100
101
400
S1
S2
Sn-1
Sn
주사
구동부
ELVDD
DC
-
DC
컨버터
ELVSS
D1
D2
Dm-1
Dm
전압
검출부
배터리
입력전류
데이터 구동부
200
410

3


400
410
420
입력전류
전압
검출부
부스터회로
ELVDD
인버터회로
ELVSS
430

4


400
L1
410
T1
D1
입력전류
ELVDD
C
PWM
컨트롤러
450
Vref 가변회로
440
R1
T2
R2
D2
ELVSS
L2

专利名称(译)	DC-DC转换器和使用其的有机发光显示器		
公开(公告)号	KR1020100018254A	公开(公告)日	2010-02-17
申请号	KR1020080076939	申请日	2008-08-06
[标]申请(专利权)人(译)	三星显示有限公司		
申请(专利权)人(译)	三圣母工作显示有限公司		
当前申请(专利权)人(译)	三圣母工作显示有限公司		
[标]发明人	SUNGCHEON PARK 박성천		
发明人	박성천		
IPC分类号	G09G3/30 G09G3/20 H02M3/00 G09G3/32		
CPC分类号	H02M3/155 Y10T307/406		
代理人(译)	SHIN，YOUNG MOO		
其他公开文献	KR100952834B1		
外部链接	Espacenet		

摘要(译)

本发明的目的是提供一种DC-DC转换器，其改变所传递的接地功率的电压并且其中效率提高，并且有机电致发光显示装置使用该DC-DC转换器到有机发光二极管。本发明提供DC-DC转换器和使用该DC-DC转换器的有机电致发光显示装置，包括逆变器电路，该逆变器电路被通知检测输入电压的电压电平的电压检测部分，以及升压电路和被通知的输入电压。输入电压和升压电压并产生第一电源并输出和反相并产生第二电源，并输出并对应于从电压检测部分找到的输入电压的电压电平并控制第二电压的电压电平电源和电压电平输出。