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(21)	10-2003-0027087		
(22)	2003 04 29		
(71)		416	
(72)		202 602	
	1161	5	505 206
(74)			
	:		
(54)			

		가	.
가	2	,	2
2			1
		,	.
		,	.
2			
1		.	
2	1	.	
3	2	.	
4	2	.	
5	1	.	

< >

100 : 1 200 : 2

300 : 350 :

351 : 1 352 : 2

353 : 1 354 : 2

355 : 356 :

370 : 400 : FPC

1, 1, 2, 1, 1

1, 1, 1, 2, 2

(Thin Film Transistor; , TFT)가

가 1, 2

가

가

가

TFT 가

가 TFT 가

가

가 ,

1

2

2

가

1

2

1

2

가

1

2

1

1 (200) (300)

1 (100)

2 (200)

1 (100), (100)

2

(300)

(DA)

(DA)

1 2

(SA1, SA2)

(DA) (GL)

1 (D1)

2 (D2)

(DL)

TFT(110) (GL) m

(DL)

(CIC)가

n m 1

(DA)

1 (SA1) n

(350)가 (DL)

2 (SA2) m

(DA)

(GL)

(370)

2 (SA1)

(300)

(370)

(300)

(Flexible Printed Circuit Board; , FPC)(400)

FPC(400)

(370) m (DL)
 (350) (370) (350) (370)
 n (GL)
 2 1 , 3 2 , n
 2 (350) (SRC1 ~ SRCn+1) n (SRC1 ~ SRCn) 1
 (SRCn+1) (SRCn+1)
 (SRC1 ~ SRCn) (SRCn+1) (CK), 1 (GOUT), 2
 (SOUT), (IN) (CT) (CK) 1 (CKS) (SR
 C1 ~ SRCn) (CKS) 2 (CKBS)가 (SRCn+1) 1 (CKS)가
 (SRC1, SRC3) (SRC2, SRC4, SRCn) 2 (CKBS)가
 1 (GOUT) 1 2 (CKS, CKBS) , 2
 (SOUT) 1 2 (CKS, CKBS) 1
 (GOUT) 가 (DA) n (SRCn+1) 1 (GOUT)
 (IN) 2 (SOUT)
 (CT) 2 (SOUT)
 (SRC1) 가 (S
 RC1 ~ SRCn) (SRC1) (IN) (ST)가 , (CT)
 (SRCn+1) 가 (SRCn+1)
 (VDD) (SRC1 ~ SRCn) (VSS)
 2 3 , 1 2 (CKS, CKBS) 가 (ST)
 (SRC1)가 (ST)가
 (SRC1) 1 (GOUT) 1 (G_OUT1
)가 TFT 가 (G_OUT1)가
 (SRC1) 2 (SOUT) 1 (S_OUT1)
 가 (GOUT) 2 (SOUT) 가
 (S_OUT1)가 (SRC2) (IN)
 1 (G_OUT1)가 (SRC2)
 가 (SRC2) 1 (GOUT) 2 (G_OUT2)
 2 (S-OUT2) (SOUT) 2 (S_OUT2)가 2 (SRC3)
 (IN) (SRC1) (CT)

(GOUT, SOUT) 2 (S_OUT2) 1 (G_OUT1) 1 (SRC1) 1 2 (S_OUT1)가
 RC2) 1 2 (SRC1) 1 2 (GOUT, SOUT) 2 (G_OUT2) 2 (S
 3) (S_OUT2)가 3 (S_OUT3) (S_OUT3) (G_OUT
 , n (SRC1 ~ SRCn) 가
 4 2
 4 (355) 1 (351), 2 (352), 1 (353), 2 (354),
 1 (351) (CK) 1 2 1 (GOUT) (SO
 2 (352) (CK) 1 2 2
 1 (351) 1 (N1) (CK) 2 (CK)
 352) 1 (GOUT) 1 NMOS (T1) (CK) 2 (N1)
 2 (SOUT) 2 NMOS (T2) (CK)
 1 2 NMOS (T1, T2) 3.5μm 1 NMOS 1 NMOS
 (T1) 110μm 2 NMOS (T2) 1 NMOS (T1)
 1/10 100μm
 1 (353) 1 (351)가 - 1 (GOUT)
 1 2 (354) 2 (352)가 -
 - 2 (SOUT) 1 2
 1 (353) 2 (N2) 1 (GOUT)
 354) (VSS) 3 NMOS (T3) 2 (SOUT) (N2)
 2 (VSS) 4 NMOS (T4)
 3 4 NMOS (T3, T4) 3.5μm 3 NMOS 3 NMOS
 (T3) 2035μm 4 NMOS (T4) 3 NMOS (T3) 1/
 100μm
 (355) 5 7 NMOS (T5, T6, T7) 1 2 (351, 3
 52) -
 5 NMOS (T5) (IN) (VDD)
 (T7) 1 (N1) 6 NMOS (T6) 7 NMOS
 (VSS) 1 (N1) 3 (N3) 3 (N3)
 5 7 NMOS (T5 ~ T7) 3.5μm 5 NMOS
 (T5) 300μm 6 7 NMOS (T6, T7) 50μm
 (356) 8 12 NMOS (T8, T9, T10, T11, T12) 1 2
 (351, 352) - 1 2 (353, 354) -

8 NMOS (T8) 3 (N3) 9 NMOS (T9) (VS
 VDD) 1 (N1) 2 (N2) 2 (N2) (IN)
 S) 2 (N2) 10 NMOS (T10) (VSS)
 11 NMOS (T11) 2 (N2) 12 NMOS (T12) 1 (N1)
 N1) (VSS) (CT)
 8 12 NMOS (T8 ~ T12) 3.5 μ m 8
 10 NMOS (T8, T10) 100 μ m 9 NMOS (T9) 150 μ m
 11 NMOS (T11) 100 μ m 12 NMOS (T12) 150 μ m
 (IN) 2 (SOUT) 가 5
 NMOS (T5)가 - 1 (N1) 가 (N1) 가
 1 NMOS (T1) 2 NMOS (T2)가 - 1 2 (T7, T9)가
 GOUT, SOUT) 가
 6 NMOS (T6) - 1 (N1) 가
 7 NMOS (T7)가 - 3 (N3) 가
 3 (N3) 가 8 NMOS (T8) - 9 NMOS (T9) 1
 2 (N2) (VDD) 2 (N2) (VSS)
 (N1) 가 (T3, T4) -
 3 4 NMOS (CT) 2 (SOUT) 가
 12 NMOS (T12)가 - 1 (N1) (VSS)
 1 (N1) 가 7 9 NMOS (T7, T9)가
 2 (N2) 가 3 4 NMOS (T3, T4)가 -
 1 2 (GOUT, SOUT) (VSS)
 10 11 NMOS (T10, T11) 2 (N2) 가
 1 (N1)
 5 1
 2 5 (300) (DA) (GL)
) TFT(110)가 (DL) TFT(110) (GL) (D
 L) (Clc)가
 (DA) 1 (SA1) (GL)
 (SA2) (350)가 (DA) (370) 2
 (DL)
 (370) (DL) (370)
 (350) (350) (350) (350)
 0) (370)
 GL)
 (ST), 1 (CKS), 2 (CKBS), (VSS) (VD

D) (370) (300) (ST) (C
 (STT), 1 (CKS) 1 (CKT), 2 (VSST)
 KBS) 2 (CKBT), (VSS)
 (VDD) (VDDT)가 .

n+1) (STT) (350) (SRC1) (STC
 (SRCn+1) 1 (CKT) (SRC1, SRC3)
 (SRC2, SRC4) (CK) , 2 (CKBT)
 (CK)
 , (VSST) (SRC1 ~ SRCn) (SRCn+1)
 (VSS) (SRCn+1) , (VDDT) (SRC1 ~ SRCn)
 (VDD)
 , (300) (370)
 (350) .

1 2 가 ,

(57)

1.

가 ,

;

1 ;

2 ;

2 ;

2

2.

1 , ,

1 ;

1 , 2

3.

1
가 ,

4.

1 , ,
;

5.

1 , ,

1 1 ;

2 2 ;

1 가 - - 1
1 ;

2 가 - - 2
2 ;

1 2 - ;

1 2 - 1 2 -

6.

5 , 1 1 1 NMOS ,

2 1 NMOS 2 2 NMOS ,
;

7.

5 , 1 3 NMOS , 1

2 3 NMOS 4 NMOS , 2
;

8.

5 , ,
5 NMOS ; ,

6 NMOS ;

1 , 6 NMOS ,

7 NMOS

9.

8

6 NMOS

1

8 NMOS

1

9 NMOS

1

1

10 NMOS

1

11 NMOS

1

10.

9

12 NMOS

1

11.

1

2

2

2

가

12.

11

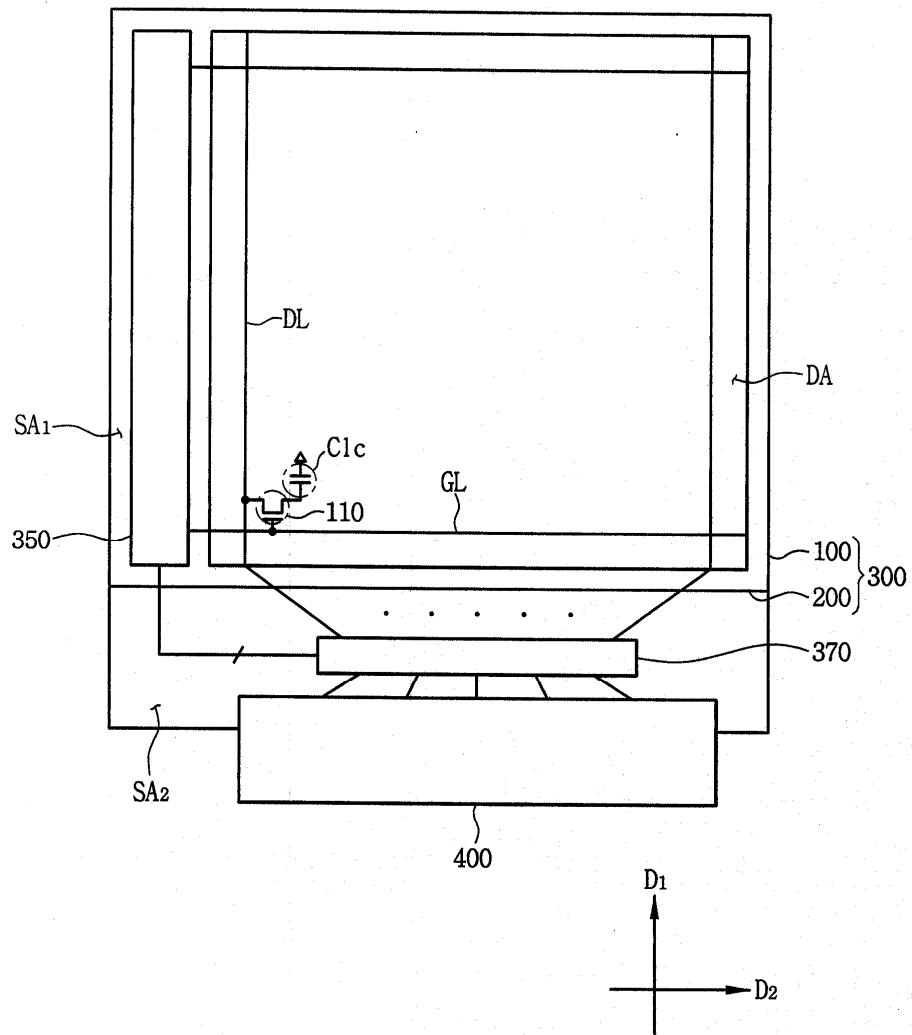
13.

12

14.

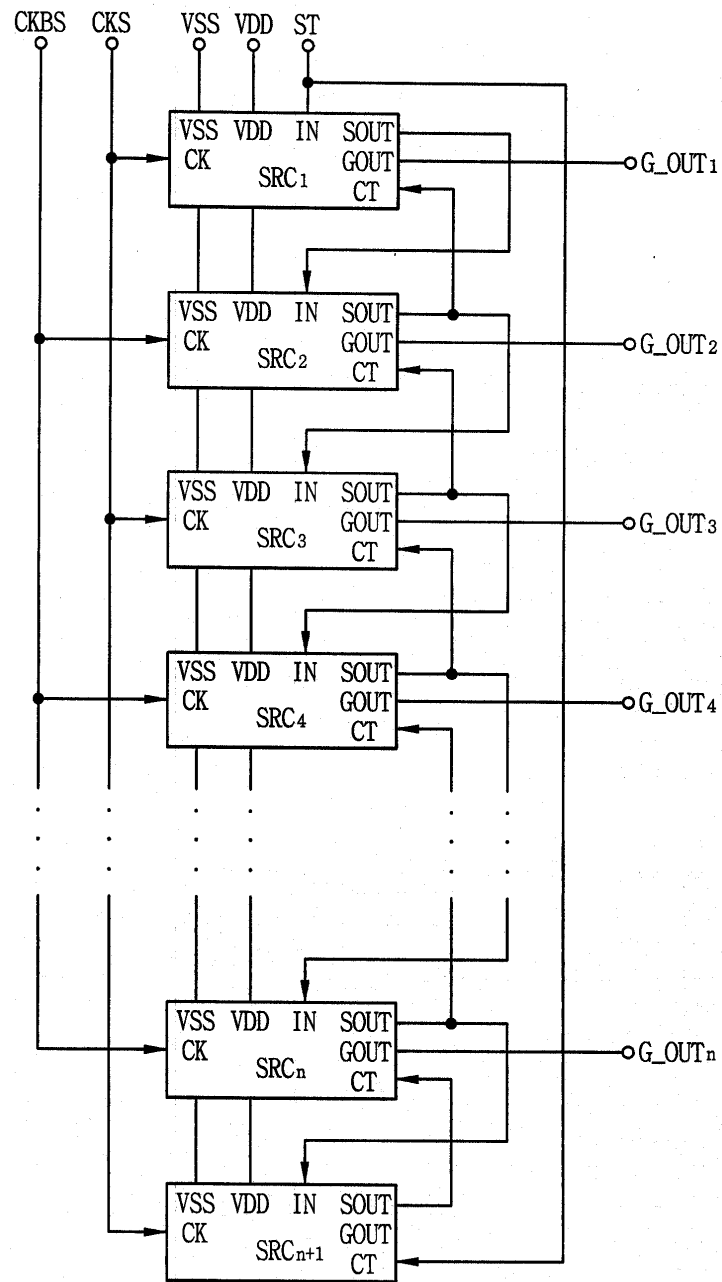
13

1

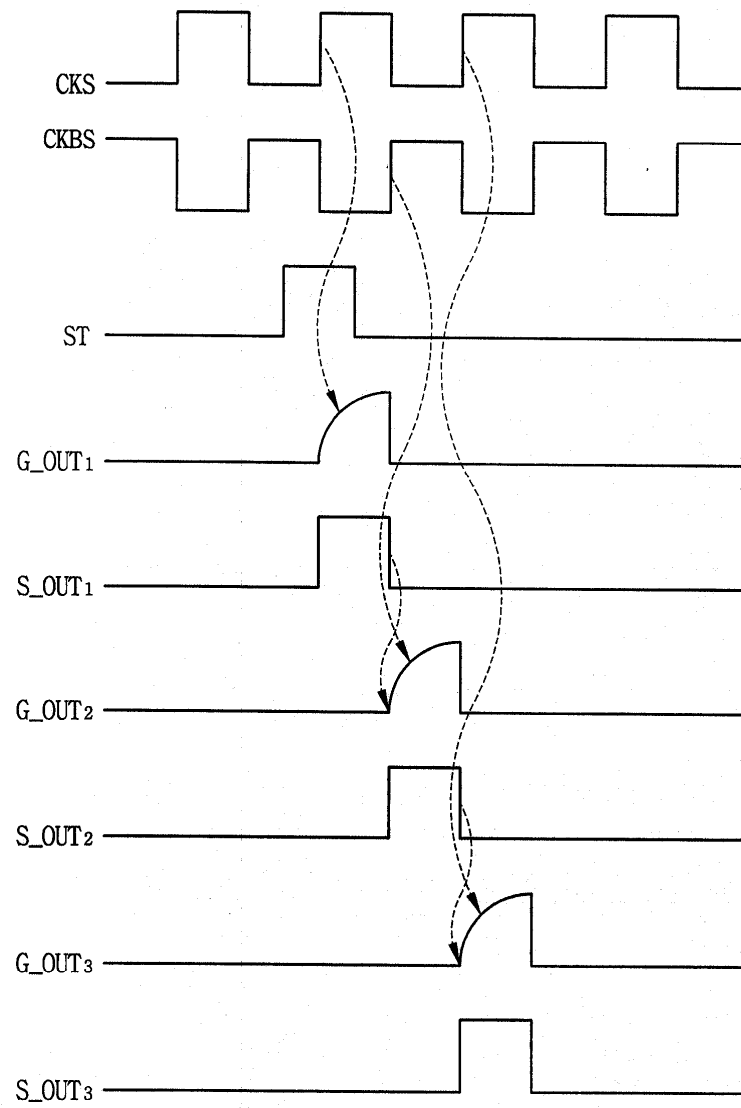


2

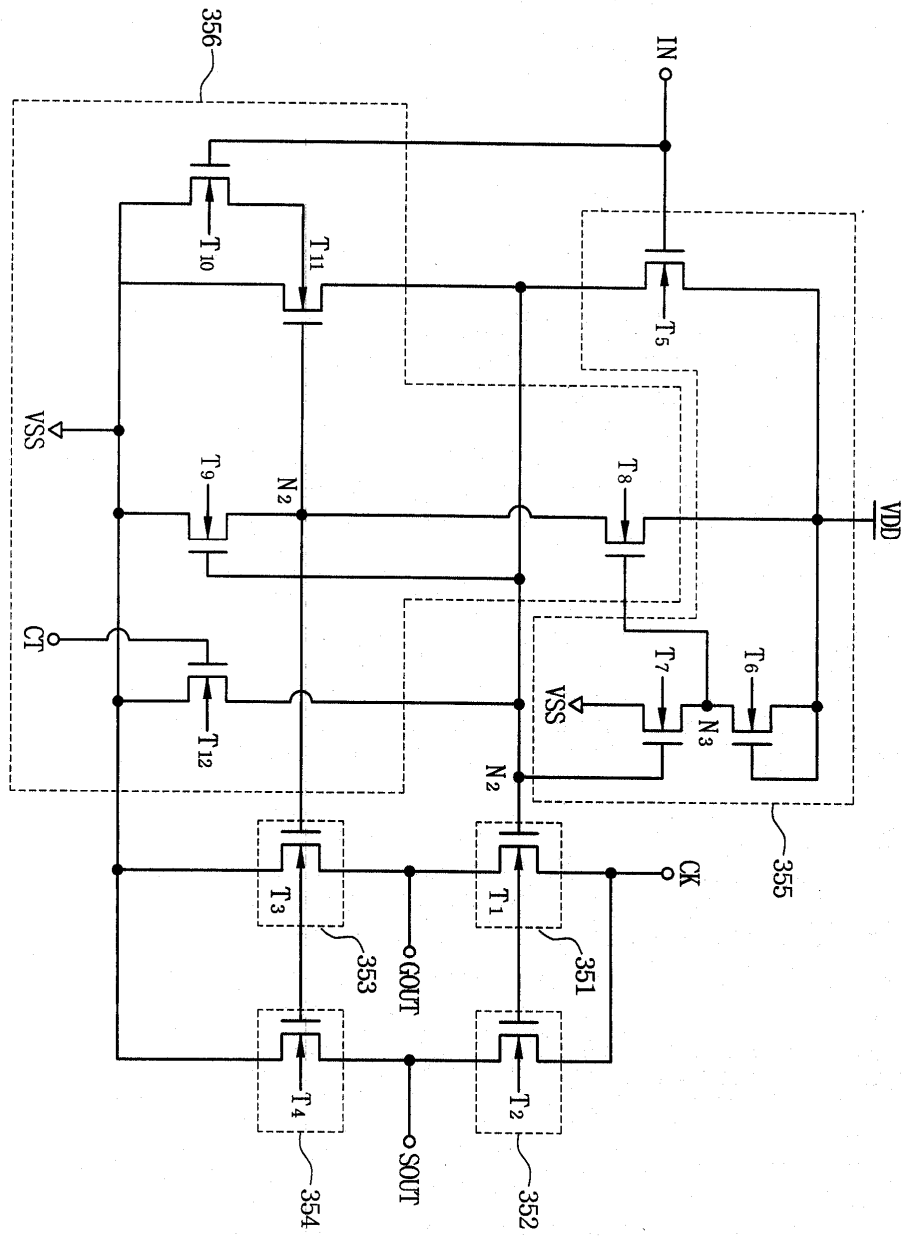
350

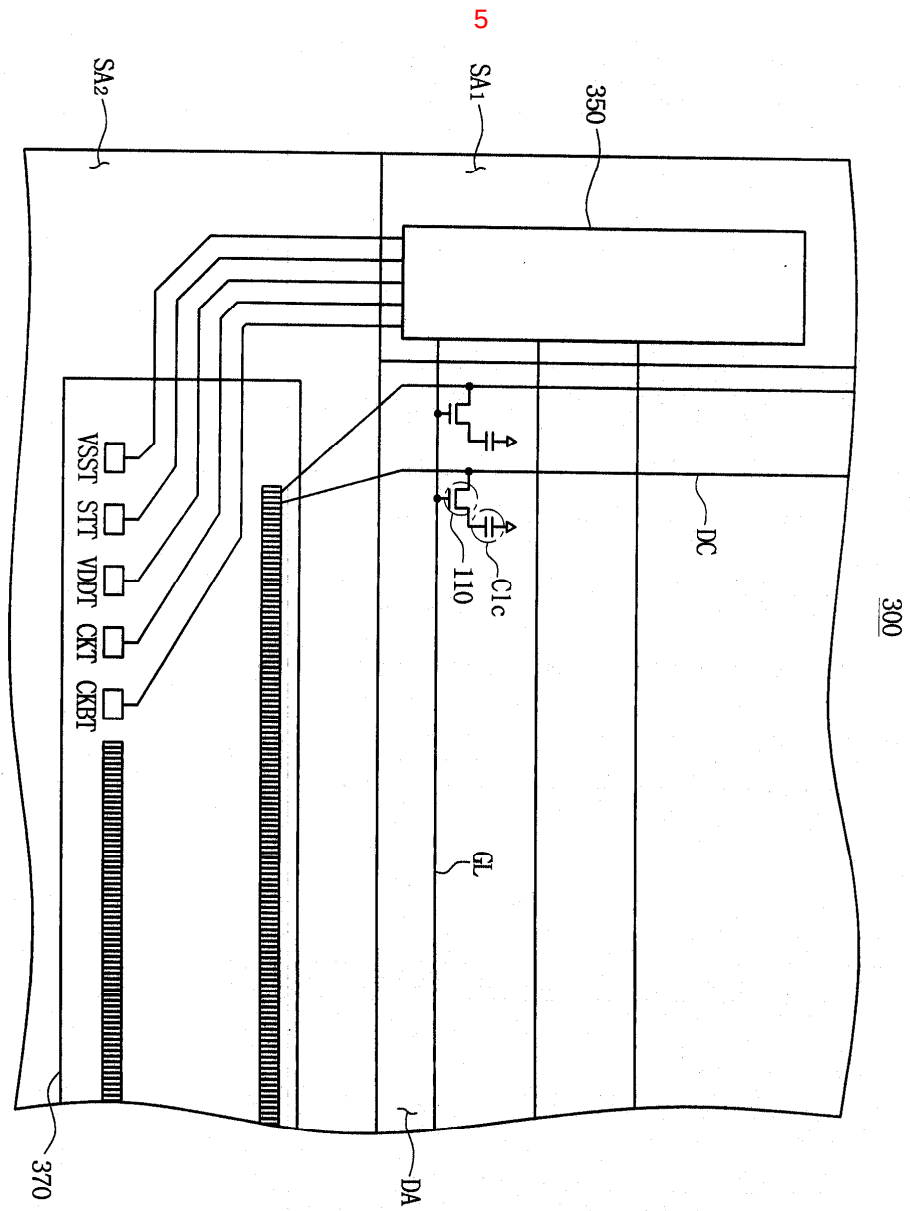


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4





专利名称(译)	栅极驱动电路和具有该栅极驱动电路的液晶显示装置		
公开(公告)号	KR1020040092775A	公开(公告)日	2004-11-04
申请号	KR1020030027087	申请日	2003-04-29
[标]申请(专利权)人(译)	三星电子株式会社		
申请(专利权)人(译)	三星电子有限公司		
当前申请(专利权)人(译)	三星电子有限公司		
[标]发明人	JEON JIN 전진 KIM HYUNGGUEL 김형걸		
发明人	전진 김형걸		
IPC分类号	G09G3/36		
代理人(译)	PARK , YOUNG WOO		
其他公开文献	KR100930491B1		
外部链接	Espacenet		

摘要(译)

公开了改善性能特性的栅极驱动电路和具有该栅极驱动电路的液晶显示器。它包括多个级，栅极驱动电路彼此连接，栅极驱动信号连续输出到多条栅极线。每级包括时钟信号，该时钟信号是从下一级的第二输出端输出的级驱动信号和输入从第二输出端输出的级驱动信号的输入端的控制端，输入所提供的时钟信号终端，第一输出端，输出时钟信号作为栅极驱动信号，第二输出端输出时钟信号作为级驱动信号，以及该剪切。因此，可以改善栅极驱动电路的性能特性。由此可以改善液晶显示器的指示特性。

