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 (12) (A)

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 (22) 2002 01 18

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(71) 가 가
 5 7 1

(72) 5 7 1 가 가

(74)

:

(54) ,

, (PS) 가 , (PD₁ PD₅₂₈)
 (MSB₁ MSB₅₂₈) , (V_{DD}) , (GND)
 (1) 가 .

2

1 가 ,
 2 1 (42) ,
 3 (42) (44) ,

4	(42)	(45)	(48)	,
5	(42)	(46)	(47)	,
6	(42)	(46)	(47)	,
7	(47)	(64)		,
8	1			,
9	2	가		,
10	9	(82)		,
11	(82)	(85)		,
12	9			,
13		,		,
14		,		,
15			,	,
16	15	(3)		,
17	15	(5)		,
18	15	(13)		,
19	15	(17)		,
20	15	(18)	(19)	
,				
21	15			,
22	PHS		.	.

*

1 : 41, 43, 81, 84 :

42, 82 : 44, 85 :

45 : 46 :

47 : 48 :

64 : 70 :

83 :

, , , (palm) ,
 (PDA; Personal Digital Assistants), , PHS(Personal Handy - phon
 e System)

15 (1)

(1) , , (TFT)
 (1) ,
 () , , ()
 TFT, 가 , , .

, (1) , , (V_{com}) ,
 (D_R), (D_G), (D_B) ,
 가 , , (S_H) , (S_V)
 , , (1) , , (1)
 (normally - white) .

, (1) , (2), (3), (4), (5)
 (6)

(2) , , ASIC(Application Specific Integrated Circuit) , , 6
 (D_R), (D_G) (D_B) 18 (D₀₀ D₀₅ , D₁₀ D₁₅ D
 20 D₂₅) (5) , , (2) , (STB), (CLK), (DCLK),
 (S_H) (S_V) , , (INV) , , (3), (4), (STH),
 (POL), (STV) (6) .

(STB) (S_H) , , (CLK) , (DCLK)
 , , (5) (12)
 (STH) (SP₁ SP₁₇₆) (STB) (CLK) , , (STH) ,
 (S_H) (1) , , ,
 (POL) , , ,
 (POL) . 가, (STV) (S_V)

(5),	(16),	(17),	(12),	(13),	(14),
(12)	176	(delay)	(DFF)	(18)	(19)
.	.	(12) ,	(2)	-	(serial in - parallel out)
.	.	(STH)	.	(CLK)	,
176)	.	.	.	176	(2)
.	(SP ₁ SP ₁₇₆)
(13)	.	(2)	(D ₀₀ D ₀₅ , D ₁₀ D ₁₅ D ₂₀ D ₂₅)	(INV)	,
(2)	18	D ₀₅ , D ₁₀ D ₁₅ D ₂₀ D ₂₅)	(14)	.	18
(13)	.	.	(13) 18	(13 _{a1} 13 _{a18})	.
(13 _b)	.	(13 _b)	.	2	.
3 _b)	(2)	(INV ₁)	(CLK ₁)	(CLK)	(1)
a ₁ 13 _{a18})	,	가	.	(13 _{a1} 13 _{a18})	.
,	.	(13 _{a1})	.	가	.
.
DFF(20 ₁)	, 18	, DFF(20 ₁), (D ₀₀) (CLK ₁)	(21 ₁ , 22 ₁ 23 ₁)	(24 ₁)	
.	.	(21 ₁) DFF(20 ₁)	.	(24 ₁)	(24 _{1a} 24 _{1b})
.	.	(24 ₁), (INV ₁) 가 " H "	(24 _{1a}) 가	DFF(20 ₁)	
.	.	(INV ₁) 가 " L "	(24 _{1b}) 가	(21 ₁)	
.	.	(22 ₁) (24 ₁)	.	.	(23 ₁)
22 ₁)	.	.	(D ₀₀)	.	.
.
17	(14)	,	(12)	(SP ₁ SP ₁₇₆)	,
.	(13)	.	(D ₀₀ D ₀₅ , D ₁₀ D ₁₅ D ₂₀ D ₂₅)	(PD ₁ PD ₅₂₈)	
,	.	(16)	(15)	.	.
(15)	(2)	.	(STB)	(STB ₁)	,
(STB ₁)	.	.	(SWA)	.	(STB ₁)
(16)	.	.	(SWA)	(15)	.
D ₅₂₈)	,	(STB ₁)	.	(16)	(15)
(PD ₁ PD ₅₂₈)	.	.	(STB ₁) 가	.	.
.
.
(17)	, 19	,	(25 ₁ 25 ₆₃)	.	(25 ₁ 25 ₆₃)
,	.	(1)	가	.	(17)
(3)	.	(V _{I1} V _{I9})	,	(V _{I1}) (25 ₁)	,
(25 ₇ 25 ₈)	,	(V _{I3})	(25 ₁₅ 25 ₁₆)	,	(V _{I2})
(25 ₂₃ 25 ₂₄)	가	.	가,	(17)	,
(V _{I5})	(25 ₃₁ 25 ₃₂)	.	,	(V _{I6}) (25 ₃₉ 25 ₄₀)	,
(V _{I7})	(25 ₄₇ 25 ₄₈)	.	,	(V _{I8}) (25 ₅₅ 25 ₅₆)	,
(V _{I9})	(25 ₆₃)	가	,	(17) 9	,
(25 ₁ 25 ₆₃)	.	.	,	(1) 가	(V _{I1} V _{I9})
가	.	.	64	(V ₁ V ₆₄)	(V _{com})
.
17	(18)	,	(18 ₁ 18 ₅₂₈)	.	(18 ₁ 18 ₅)
28)	6	.	(PD ₁ PD ₅₂₈)	.	(17)
64	(V ₁ V ₆₄)	.	.	(19)	
.	(18 ₁ 18 ₅₂₈)	가	.	(18 ₁)	

(18₁) , 20 (MPX; 26), (transfer) (27₁ 27₆₄),
 (28₁ 28₆₄) . MPX(26) , 6 (PD₁) , 64
 (27₁ 27₆₄) . (27₁ 27₆₄) , P MOS (29_a) N
 MOS (29_b) , MPX(26) ,

(19) , 528 (19₁ 19₅₂₈) 528 , (19₁ 19₅₂₈) (30₁ 30₅₂)
 8) , (30₁ 30₅₂₈) (18) , ,
 (19) , (15) , (SWA) , (31₁ 31₅₂₈) ,
 (1) 가 . 20 , (PD₁) (31₁ 31₅₂₈) (S₁)
 (30₁) 가 .

, (1) , (2), (3), (4)
 (5) , 21 , (2), (STB) , (5) , (2) ,
 CLK) (CLK), 21(1) (STB), 21(2) (STB) , (5)
 . , (5) , (5) , (5)
 STH) (STH), 21(3) (POL) , (12) , (CLK)
 . , 176 (SP₁ SP₁₇₆) ,
 18 , (2) , 6 (D_R), (D_G) (5) , (D_B)
). (D₀₀ D₀₅ , D₁₀ D₁₅ D₂₀ D₂₅)

, 18 (D₀₀ D₀₅ , D₁₀ D₁₅ D₂₀ D₂₅) , (5) ,
 13) , (CLK) (CLK₁) (CLK₁) , (5)
 (D_{b0} D_{b5} , D_{b10} D_{b15} D_{b20} D_{b25}) , (14) , (D_{b0} D_{b5} ,
 D_{b10} D_{b15} D_{b20} D_{b25}) , (12) , (SP₁ SP₁₇₆)
 (PD₁ PD₅₂₈) , (14) , (STB₁)
 (16) ,

, 16 (3) , 21(3) (POL) 가 " H" , (8_a 9_a)
 (8_b 9_b) , (7₁) , (V_{DD}) 가
 (7₁₀) , (V_{I1} V_{I9}) (GND < V_{I9} < V_{I8} < V_{I7} < V_{I6} < V_{I5} < V_{I4} < V_{I3} < V_{I2} < V_{I1} < V_{DD}) , (V_{I1} V_{I9}) ,
 (11₁ 11₉) , (21(4) , 17 (5) , (17)
 , (17) , (V_{I1} V_{I9}) (V_{I1} V_{I9}) V_{DD} , (25₁ 25₆₃)
 , 64 GND 가 가 , (18) , V₁ V_{DD} , 가 가 , V₆₄ 가

, PHS , , 22 , (32), (33)
 (34) . (32) , (32_a),
 PHS 가 (32_b)
 . (33) , e - , WWW(World Wide Web) (34) , (34_a),
 (34_b)가 . , , (33)
 , (32) (34) , 가 (monochrome) 8
 , 8 , PHS

, (32) (34), (1), , 8 (33) 가 , (5) . , .

, (1) 가 , (1) 가 ,

PDA ,

가 . 가

가 가

, 3 , 2 , , 가

, 9 , 4, 7 8 ,
, 1 ;
1 , 2 ;
2 , 1 ; 가
, 1 2 .
가

, 10, 4, 7, 8, 9, , 가, , ;
常) 1, , / , 가;
3, ; 3, , , , ;
가 2, .

, 12 , 4 11 ,
, ; , ; , 1
, ; , ; , 1
2

, 13 , 4 11 ,
, , ; ,
, , ; 1 ; 1
1 , , 2 ;
, 1 , 2 ;

1

1

1 , 1 가 (1) , 1 (1)
 15 , 15 (2) (5) , (41)
 (42) 가 (3) .
 (1) 176 ~ 220 528 ~ 220

2 , (42) . . . , 17
가 , 2 (42) , 17 (15),
(16), (17), (18) (19) , (43), (44), (45), (46) (47) 가 . , 2
(42) , (48) 가 .

(43) , (41) (STB), (POL) (CM)
 (STB₁), (POL₁ POL₂), (CM₁ CM₂), (SWA),
 (S_{SWP} S_{SWN}) . (STB₁) (STB)
 (POL₁ POL₂) (POL) . . (CM₁)
 CM₂) (CM) . (SWA)
 (STB₁) , 8 " L"
 (S_{SWP} S_{SWN}) (48) 8 " L"
 . (43) (STB₁) (POL₁) (44) , (43)
 (POL₂), (CM₁) (SWA) (47) . , (43)
 (CM₂) (45) , (S_{SWP} S_{SWN}) (4)
 5) (48) .

, 8 , (43) " L" (CM₂)가 , MOS (V_{DD}) 가 (57)
 58) . , , 8 (56₁ 56₂₄₉) , 8
 , 가 (1) , (45) (42) (IC) ,
 (56₁ 56₂₄₉) (1) 가 - 가 , (56₁ 56₂₄₉) , IC
 2 (48) , 4 (S_{SWP} S_{SWN}) , (60_a 60_b) , (48) ,
 4) (V₁ V₆₄) (S_{SWP} S_{SWN}) , 8 , (V₁ V₆) " L"
 (1) (60_a) , 64 가 - (60_a) , (60_a) , (56₁ 56₂₄₉) , (43)
 4 (S_{SWP}) 가 " H" (V₁ V₆₄) , (56₁ 56₂₄₉) , 6
 (1) (60_b) , 64 가 - (60_b) , (60_b) , (56₁ 56₂₄₉) , (43)
 4 (S_{SWN}) 가 " H" (V₁ V₆₄) , (56₁ 56₂₄₉) , 6
 2 (46) , 5 (V₁ V₆₄) (46₁ 46₅₂₈) , (46₁ 46₅₂₈)
 (48) , 64 (46₁ 46₅₂₈) , 6 (V₁ V₆₄) (46₁ 46₅₂₈) , (46₁ 46₅₂₈) , (47)
 46₁)
 MOS (46₁) , 6 (MPX; 61), P MOS (62₁ 62₃₂) N
 MOS (63₁ 63₃₂) MPX(61) , 6 (PD'1) , 64
 MOS (62₁ 62₃₂) 63₁ 63₃₂) MOS (62₁ 62₃₂, 63₁ 6
 3₃₂) MPX(61) , 32 MOS (62 63) ,
 가 ,
 (47) , 5 , 528 (47₁ 47₅₂₈) (47₁ 47₅₂₈) (64)
 66₅₂₈), (67₁ 67₅₂₈), P MOS (65₁ 65₅₂₈), (65₁ 65₅₂₈) (66₁ 66₅₂₈)
 MOS (68₁ 68₅₂₈) N MOS (69₁ 69₅₂₈) (69₁ 69₅₂₈)

(65₁ 65₅₂₈) , , (46) , .
 , , , 8 , , (64) , .
 (66₁ 66₅₂₈) , , (SWA) / , 8 , .
 (SWA) . (67₁ 67₅₂₈) , (43) , .
 (CM₂) 가 "H" , , MOS (68₁ 68₅₂₈ 69₁ 69₅₂₈) , .
 , (66₁ 66₅₂₈) 가 . , (67₁ 67₅₂₈) , (POL)
 (1) (MSB₁ MSB₅₂₈) . , (67₁ 67₅₂₈) , (43)
 (CM₂) 가 "L" , , 8 , (POL) , (MS)
 B₁ MSB₅₂₈) , MOS (68₁ 68₅₂₈ 69₁ 69₅₂₈) , .
 (V_{DD}) (GND) (1) 가 , (V_{DD}) , 8 , (GND)
 , , 가 2 .

 (65₁ 65₅₂₈) , (64) , .
 1) OS (68₁ 69₁) (47₁) 가 . (65₁), (66₁), 6 , (PD)
 (67₁), M
 (SWA) 가 "H"

 7 , (64) , .
 (72) N MOS (73) (64) , .
 (70), (71), P MOS
 (43) , .
 (CM₂) 가 "H" , , , .
 (CM₂) 가 "L" , , 8 , , .
 (CM₂) 가 "H" , MOS (72 73) 가 , (65 1) MOS , (CM₂) 가 "
 L" , , MOS (74 75) (72 73) , , (74 75)

 , (1) , .
 1) (42) , 8 , (41), (4)

 [1] (PS) 가 "L"

 (PS) 가 "L" , (1) , .
 가 , , , (WWW)
 L" (PS) , , , (41) , "H" 가 . , (41) , "
 8(2) (42) , , , (41) , (CLK), 8(1) (CM) , (STB),
 8(3) (POL) (STB) (42) (42) , , , (41)
 15 6 (D_R), (D_G), (D_B) 18 (D₀₀ D₀₅, D₁₀ D
 D₂₀ D₂₅) (42) , .

(POL) " H" (42) (CM) (43) , (41) (STB₁), (POL₁) (STB),
 SWN) (CM₁ CM₂), 8(6) (CM₁) (43) , (STB₁) (SWA), (POL₁) POL₂), " H"
 , (POL₂), (CM₂) (45) (47) (S_{SWP} S_{SWN}) (44) (43)
 8)

, (42) (12) , (CLK₁) (STH)
 (D₀₀ D₀₅, D₁₀ D₁₅ D₂₀ D₂₅), 176 (SP₁ SP₁₇₆) , 18
 K₁) (CLK₁) (13) , (CLK₁) (CL
 (14) . (D'₀₀ D'₀₅, D'₁₀ D'₁₅ D'₂₀ D'₂₅) , (D'₀₀ D'₀₅, D'₁₀ D'₁₅ D'₂₀ D'₂₅)
 (SP₁ SP₁₇₆) (PD₁ PD₅₂₈) (12) (14)
 , (STB₁) (44) , (51₁ 51₅₂₈)(44)
 3 51₁)

(44) (51₁ 51₅₂₈) (PD₁ PD₅₂₈) , 8
 (3) (POL)가 " H" (52₁ 52₅₂₈) (52₁ 52₅₂₈) 3V 5V
 (52₁ 52₅₂₈) (53_{1a} 53_{528a}) (53_{1a} 53_{528a}) (54₁ 54₅₂₈) , (55₁ 55₅₂₈)
 (51₅₂₈) (PD₁ PD₅₂₈) (PD₁ PD₅₂₈) , (52₁ 52₅₂₈) , 3V 5V
 , (53₁ 53₅₂₈) (53_{1b} 53_{528b}) (53_{1b} 53_{528b}) (54₁ 54₅₂₈) , (44) ,
 (55₁ 55₅₂₈) (PD₁ PD₅₂₈) (MSB₁ MSB₅₂₈) ,

, 4 (45) , (43) " H" (CM
 2)가 , MOS (57 58) (57 58) , (V_{DD}) , (V_{DD}) (56₁ 56₂₄₉)
 49) 251 (56₁ 56₂)

, 8(3) (POL)가 " H" (43) " H" (S_{SWP})
 " L" (S_{SWN})가 (48) (48) , (60_a) (60_b)
 . (56₁ 56₂₄₉) (V₁ V₆₄) , (46) 64

, (46) (46₁ 46₅₂₈) , MPX(61)가 6
 (PD₁ PD₅₂₈) , 64 MOS (62₁ 62₃₂ 63₁ 63₃₂)
 , MOS , (47) (65₁ 65₅₂₈) ,

, 5 (47) , (43) " H" (C
 M₂)가 . , 7 (64) , (43) " H"
 S (72 73) , (70) (70) (70) (70) , (70) (70) , MO
 5) (67₁ 67₅₂₈) , MOS (68₁ 68₅₂₈ 69₁ 69₅₂₈) (74 7
 , (47₁ 47₅₂₈) .

, (46) (46₁ 46₅₂₈) , , (65₁ 65₅₂₈) , , (65₁ 65₅₂₈) ,
 , , (47) (65₁ 65₅₂₈) . , , (SWA, 8(6) (S₁ S₅₂₈)
 , 8(1) (66₁ 66₅₂₈) , , , ,
) (1) , , ,
 8(7) , (PD₁) " 000000" (S₁) 가
 , 3 (44₁) , (PD₁) " 000000" , (PD'₁) " 000000"
 , , (46₁) , MPX(61) (V_{DD}) 가 (V₁) (S₁) (S₁)
 , MOS (62₁) , , (STB) 가 " H" (S₁) (1)
 S₁) 8(7) , , (47₁) , , ,
 , (66₁) 가 , , ,
 (POL) , 8(4) (V_{com}) (GND) (1)
 (1) 가 , , ,
 , 8(3) (POL) 가 " L" , , , (44) (51₁ 51₅₂₈)
 528) 3V 5V , , (53₁ 53₅₂₈) , (52₁ 52₅₂₈) (54₁ 54₅₂₈)
 28) , , (55₁ 55₅₂₈) , (PD'₁ PD₅₂₈) (53_{1b} 53_{528b}) (54₁ 54₅)
 (44) , , (PD'₁ PD₅₂₈) (MSB₁ MSB₅₂₈) , ,
 ,
 , 4 (45) , , , (43) " H" (CM₂)
 가 , MOS (57 58) , , , (56₁ 56₂₄₉) (56₁ 56₂₄₉)
 (V_{DD}) 가 251 , ,
 ,
 가, 8(3) (POL) 가 " L" , , , (43) " L" (48) (48)
 S_{SWP}) " H" (S_{SWN}) 가 , , , (60_a) (6)
 , , (S_{SWP} S_{SWN}) , , ,
 0_b) , , (56₁ 56₂₄₉) , , , 64
 , , (V₁ V₆₄) , , ,
 ,
 , (46) (46₁ 46₅₂₈) , , MPX(61) 6
 (PD'₁ PD₅₂₈) , 64 MOS (62₁ 62₃₂ 63₁ 63₃₂)
 , , MOS , , ,
 , , , , , (47) (6)
 5₁ 65₅₂₈) , , , , , (65₁ 65₅₂₈) , , 8(1) (STB) 가
 , , , , , (SWA, 8(6)) , , , (66₁ 66₅₂₈) , ,
 , , , , ,
 , , , , ,
 8(7) , (PD₁) " 000000" (S₁) 가
 , 3 (44₁) , (PD₁) " 000000" , " 111111"
 (PD'₁) , , , , (PD'₁) " "
 111111" , MOS (63₃₂) , , , (GND) 가 (V₆)
 4) (S₁) , , , , (POL) , 8(4)
 , , , , (V_{com}) (V_{DD}) (1) , ,
 , , , ,
 (1)

$$, \quad (V_1 \quad V_{64}) \quad (48) \quad (60_a \quad 60_b) \quad / \\ (S_{SWN}) \quad , \quad (S_{SWP}) \quad , \quad (\text{不定})$$

[2] (PS)가 "H"

		(PS)가 " H"				
8		(8)	. 8	가 .	, ,	(1) 가
	e -			가 .	, ,	" H"
	(PS)	, 8(5)	, " L"		(CM)	
(42)	.	(41),	(CLK), 8(1)		(STB), 8(2)	
	(STB)	(CLK)			(STH), 8(3)	
	(POL)	(42)	.	,	(41),	
6		(D _R),	(D _G),	(D _B) 18	(D ₀₀ D ₀₅ , D ₁₀ D ₁₅	
D ₂₀ D ₂₅)		(42)	(42)	().		
		(42)	(43),	(41)	(STB ₁),	(STB),
(POL)	" L"	(CM)	,	(STB ₁),	(POL ₁ POL ₂), " L"	
	(CM ₁ CM ₂),	8(6)	" L"	(SWA),	" L"	
	(S _{SWP} S _{SWN})	.	,	(STB ₁)	(POL ₁)	
(44)	,	(POL ₂),	(CM ₁)	(SWA)	(47)	
.	,	(43)	(CM ₂)	(45)	,	(S _{SWP}
S _{SWN})		(48)	.	.	.	
,		(42)	(12),	(CLK ₁)	,	(STH)
		, 176		(SP ₁ SP ₁₇₆)	.	, 18
CLK ₁)	(D ₀₀ D ₀₅ , D ₁₀ D ₁₅ D ₂₀ D ₂₅)	,	,	(13),	(CLK ₁)	(
25)	(CLK ₁)		,	,	(D' ₀₀ D' ₀₅ , D' ₁₀ D' ₁₅ D' ₂₀ D' ₂₅)	
(12)	(14)	.	(D' ₀₀ D' ₀₅ , D' ₁₀ D' ₁₅ D' ₂₀ D' ₂₅)	,	(PD ₁ PD ₅₂₈)	
(14)		(SP ₁ SP ₁₇₆)			(44)	,
51 ₅₂₈ , 3	51 ₁)			.	.	(51 ₁
		(44)	(51 ₁ 51 ₅₂₈)		(PD ₁ PD ₅₂₈)	,
8(3)	(POL)가 " H"	,	,	(52 ₁ 52 ₅₂₈)	3V	5V
	(53 ₁ 53 ₅₂₈)	(53 _{1a} 53 _{528a})	,	(54 ₁ 54 ₅₂₈)	,	(55 ₁ 55 ₅₂₈)
51 ₅₂₈)	(PD ₁ PD ₅₂₈)	.	,	(POL)가 " L"	,	(51 ₁
	(PD ₁ PD ₅₂₈)	,	,	(52 ₁ 52 ₅₂₈)	3V	5V
,	(53 ₁ 53 ₅₂₈)	(53 _{1b} 53 _{528b})	,	(54 ₁ 54 ₅₂₈)	,	,
(55 ₁ 55 ₅₂₈)	(PD ₁ PD ₅₂₈)	(MSB ₁ MSB ₅₂₈)	.	(44)	,	,
(PD' ₁ PD ₅₂₈)			.			
,	4	(45)	,	(43)	" L"	(CM
_2)가	, MOS	(57 58)	,	,	,	
	(V _{DD})	가	,	,	,	
,	8	(1)	,	,	8	
.	,	(48)	,	(43)	" L"	
S _{SWN})		가	.	.	.	

, (PD₁ PD₅₂₈) (46) , 64 (46₁ 46₅₂₈) , MPX(61) 6
 , , MOS (62₁ 62₃₂ 63₁ 63₃₂)
 , (46₁ 46₅₂₈) 가 (47₁ 47₅₂₈) 가 ,
 , , 5 (47) , , (43) "L" (M
 CM₂) 가 . , 7 (64) , (70)
 OS (72 73) , (47₁ 47₅₂₈) , (65₁ 65₅₂₈) MOS
 (74 75) , (66₁ 66₅₂₈) "L"
 , (MSB₁ MSB₅₂₈) (67₁ 67₅₂₈) , (44) (PD'₁ PD₅₂₈)
 9₁ 69₅₂₈) "H" (POL) MOS (68₁ 68₅₂₈) 6
 가 . , (V_{DD}) (GND) (1)
 , 8(7) , (PD₁) "000000" (S₁) 가
 , 3 (44₁) , (PD₁) "000000" (PD'₁)
 000000" (MSB₁) "0" (47₁) , (PD'₁) "
 (V_{DD}) (S₁) (POL) MOS (68₁) 가 ,
 8(4) (V_{com}) (GND) (1) 가
 . , (1)
 , 8(3) (POL) 가 "L" , (44) (51₁ 51₅
 28) , (PD₁ PD₅₂₈) , (52₁ 52₅₂₈) 3
 V 5V , (53₁ 53₅₂₈) , (53_{1b} 53_{528b}) (54₁ 54₅₂₈)
 , (55₁ 55₅₂₈) , (PD'₁ PD₅₂₈)
 , (PD'₁ PD₅₂₈) (MSB₁ MSB₅₂₈)
 , 4 (45) , (43) "L" (CM₂)
 가 , MOS (57 58) , , ,
 (V_{DD}) 가 , , ,
 , (43) "L" (S_{SWP} S_{SWN}) , ,
 , , ,
 , (PD'₁ PD₅₂₈) (46) , 64 (46₁ 46₅₂₈) , MPX(61) 6
 , , MOS (62₁ 62₃₂ 63₁ 63₃₂)
 , (46₁ 46₅₂₈) 가 (47₁ 47₅₂₈) 가 ,
 , , 5 (47) , , (43) "L" (M
 CM₂) 가 . , 7 (64) , (70)
 OS (72 73) , (47₁ 47₅₂₈) , (65₁ 65₅₂₈) MOS
 (74 75) , (66₁ 66₅₂₈) "L"
 , (MSB₁ MSB₅₂₈) (67₁ 67₅₂₈) , (44) (PD'₁ PD₅₂₈)
 1 69₅₂₈) "L" (POL) MOS (68₁ 68₅₂₈) 69
 가 . , (V_{DD}) (GND) (1)

2

9 , 2 가 (1) . . . 9 (1)
 1 , 1 (41), (42) (6) , (8)
 1), (82) (83)가 . .
 , (1) 176 × 220 , 528 × 220

(81) , ASIC , (41)가
(PI) , , (PM), (BW) (PC)
(82) 가 . (PI) , " H" (PS)가
, " H" , (1) , , (1)
, " H" , (PM) , (82)
, " L" , (BW) ,
, (PC) , (1)
(PI)가 " H" , (81) , (PS)
, " H" , (CM)

10 (82) . . , 2 (82) , 2 (43)
 (44) , (84) (85) 가
 (84) , (43) 가 , (81) (PM) (BW)
 , (PM₁) (BW₁) (PM₁) (PM)
 , (BW₁) (BW)
 .
 (85) , (84) (STB₁) , (14)
 , (PD₁ PD₅₂₈) , (STB₁) 가 , , (PM₁) ,
 , (PD₁ PD₅₂₈) . , (85) , (84) (BW₁)
 (PD₁ PD₅₂₈) , (85) , (POL₁) ,
 . 가, (85) , (PD₁ PD₅₂₈) , (46)

11 (85₁) . 11 (85₁) . 3 (51₁)
 (52₁) , (86₁) 가 (86₁) , (PM₁) 가 "L" (86
 86_{1a}) 가 (57₁) , (PM₁) 가 "H" (86
_{1b}) 가 (84) (BW₁) .

9 (83) , (PC)가 "L" , (81)

	(85)	(51 ₁ 51 ₅₂₈)	(PD ₁ PD ₅₂₈)
12(6)		(PM)가 "H"	(84)
(BW ₁)가	(86 ₁ 86 ₅₂₈)	(86 _{1b} 86 _{528b})	(52 ₁ 52 ₅₂₈)
3V	5V	(BW ₁) "L"	(52 ₁ 52 ₅₂₈)
H"		(52 ₁ 52 ₅₂₈)	12(3) (POL)가 "
(55 ₁ 55 ₅₂₈)	(53 ₁ 53 ₅₂₈)	(53 _{1b} 53 _{528b})	(54 ₁ 54 ₅₂₈)
가 "H"		(PD ₁ PD ₅₂₈)	12(6) (PM)
(52 ₁ 52 ₅₂₈)	(POL)가 "L"		
53 _{528b})	3V 5V		
	(54 ₁ 54 ₅₂₈)	(55 ₁ 55 ₅₂₈)	(53 _{1b} (PD ₁ PD ₅₂₈)
	(85)	(PD ₁ PD ₅₂₈)	(MSB ₁ MSB ₅₂₈)

, (82) , 1 (PS)가 " H"
 (PC)가 " H" (42) , , (83) . , (81)
 (STV) , , (1)
 가 . . , 22 (33) ,
 6 (D_R), (D_G), 가(D_B)가 ,
 (1) , , (33)
 가 , , (83)가 (1)
 가 . , 가 , ,

, , (1)
, , 12 13
(flicker) 가

, (STV) "L" (13(2)) (PS) "H" (13(3)) 13(1)
 가 . , (CM) "L" (13(2)) (CM) "H" (13(3)) 14(a)
 , (1) 8 , (CM) (1)
 3(3)) , 14(b) , (CM) 13(1) (STV) ,
 13(4) 13(5) (1) 14(c) (CM) , 13(5)
 (1) 가 8 , 가 . , (CM) 13(5)
 , 14(d) , (1) 가 8 ,
 가 .

, , , , , 8 , , , 16 , 32 , , 16 , ,
., , , (PD) 2 , 32 , , (PD) 3

, 2 , 8 , 가 , , , ,

, 가 . , , , , , , PDA, , PH

, , ,
가 , ,
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(57)

1.

가

가

가

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7.

5 6 , 2 , 1 가

8.

4 7 , , ;

가 , ; ;

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9.

4 , 7 8 , , ,

1 ; ,

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2 ; ,

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가

, 1 2

1 2 , , 1 2
 , , ,

가

10.

4 , 7 , 8 9 , , ,

1 , / , 가
3 ;

3 , , , 2 2

11.

10 , , , 가

12.

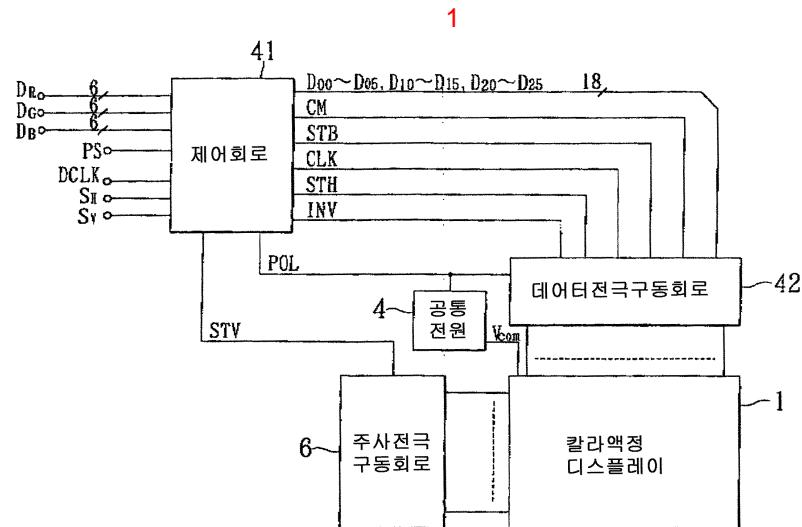
4 11 ,

13.

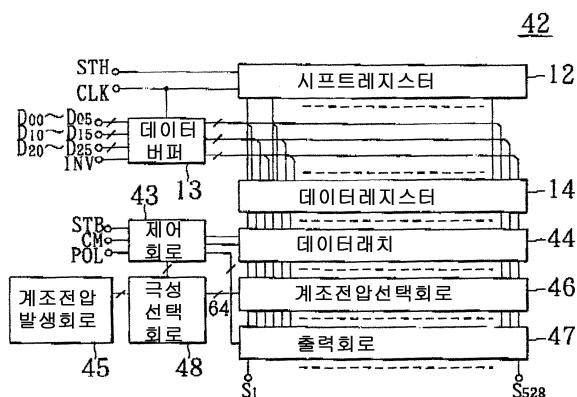
4 11 .

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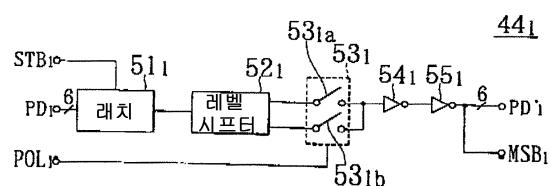
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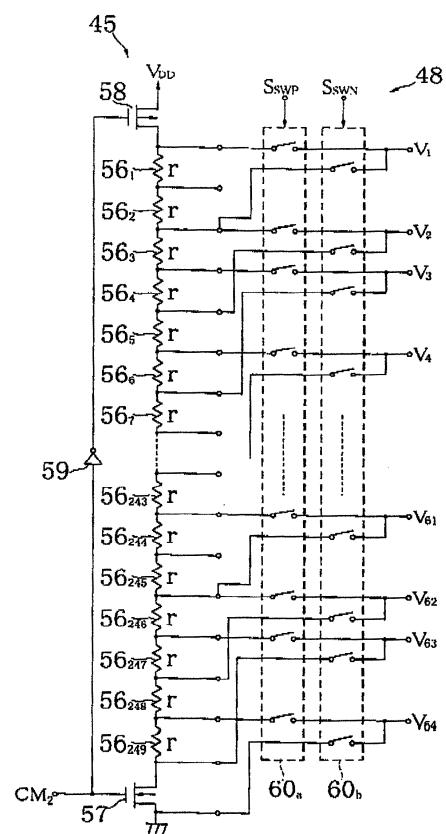


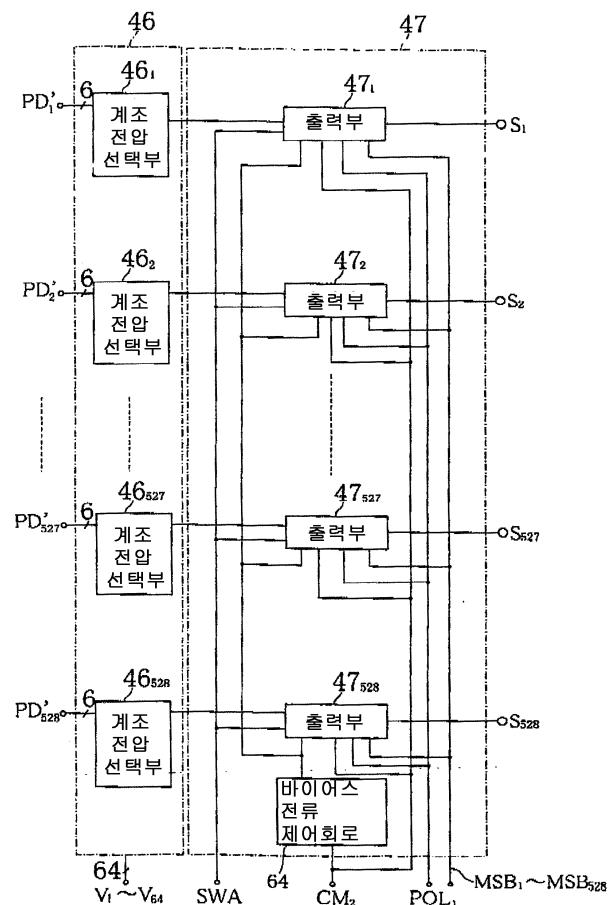
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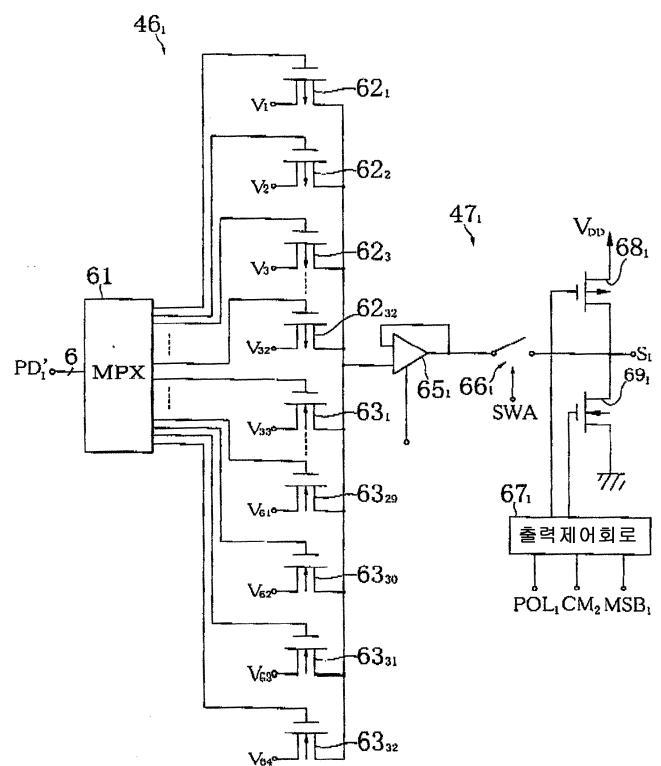
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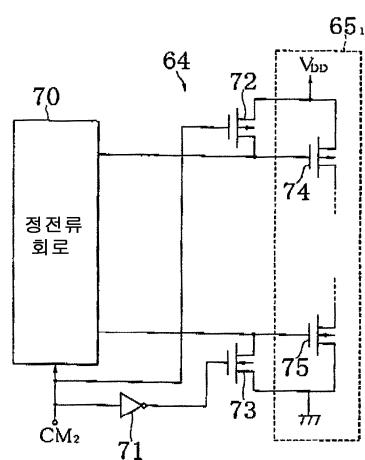




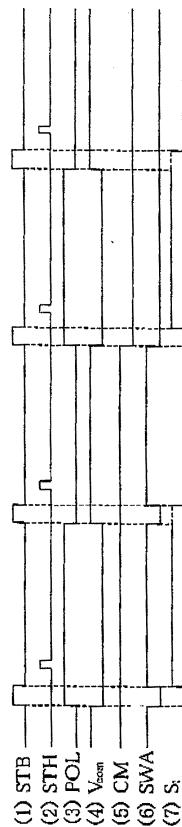
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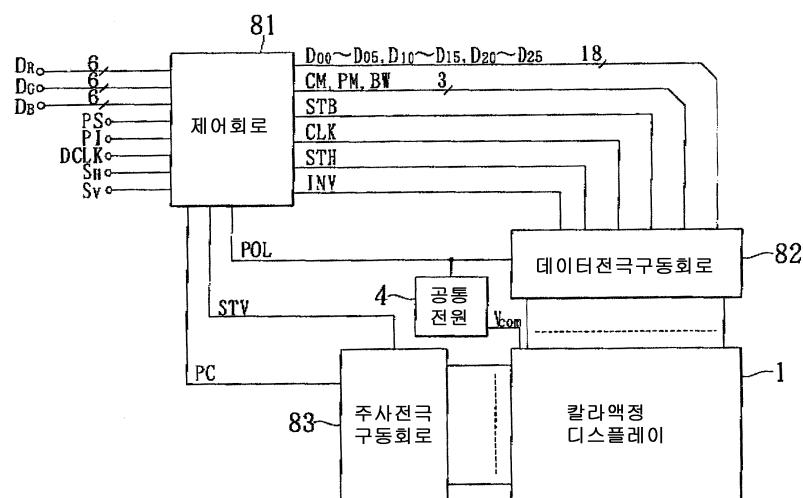
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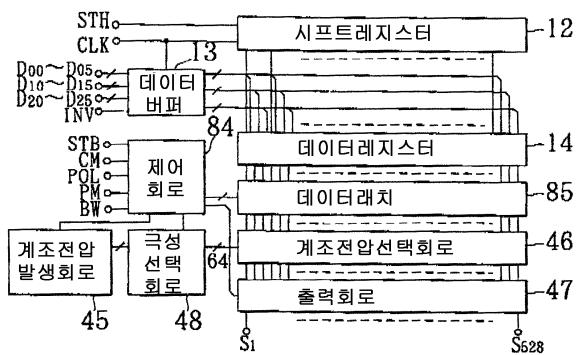
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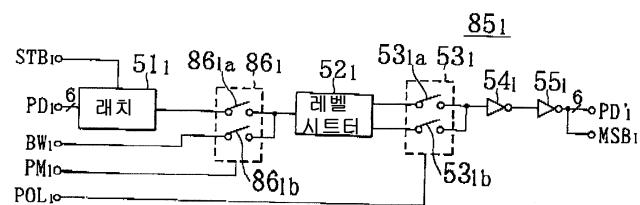
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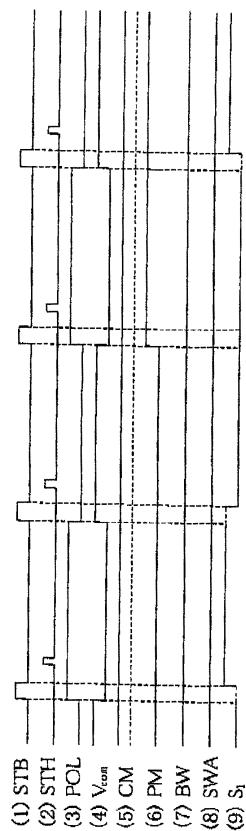
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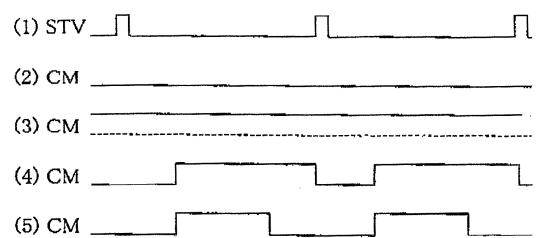
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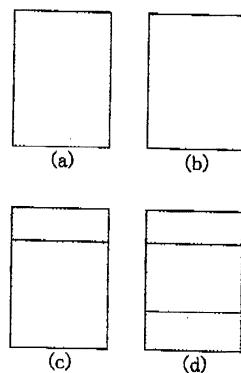
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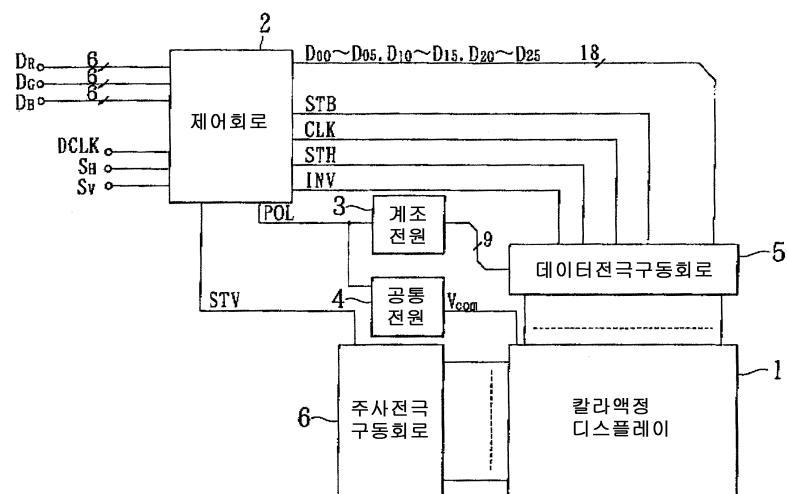
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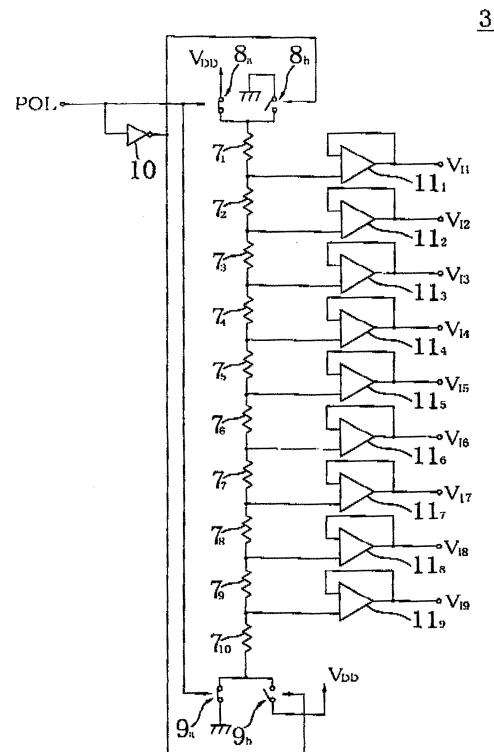
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15

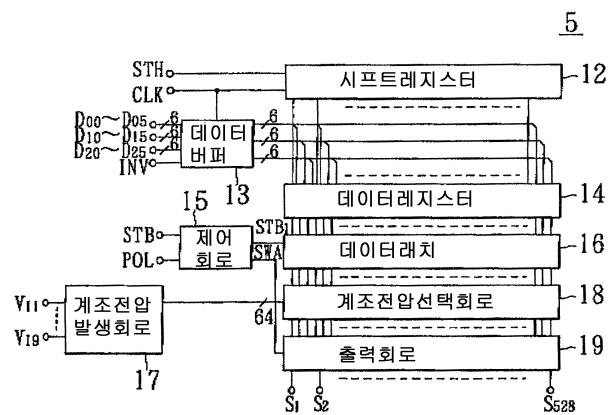


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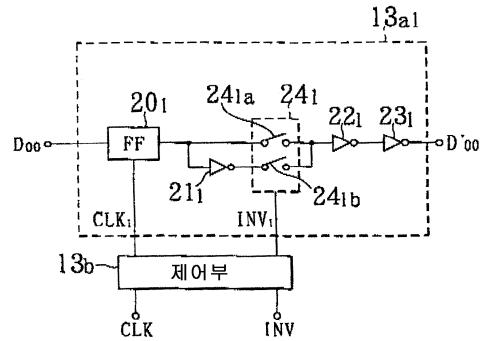
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17

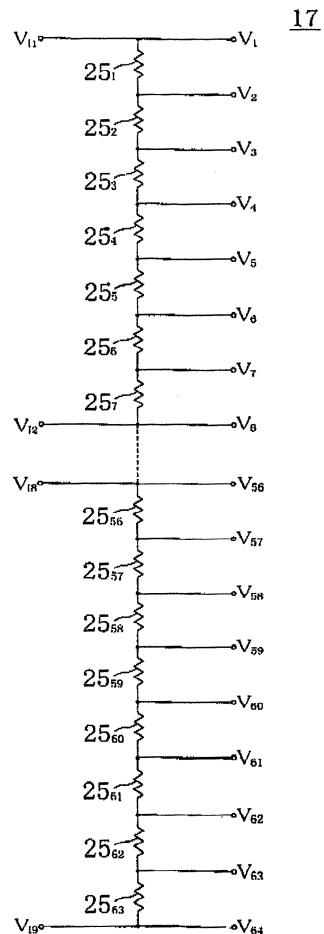


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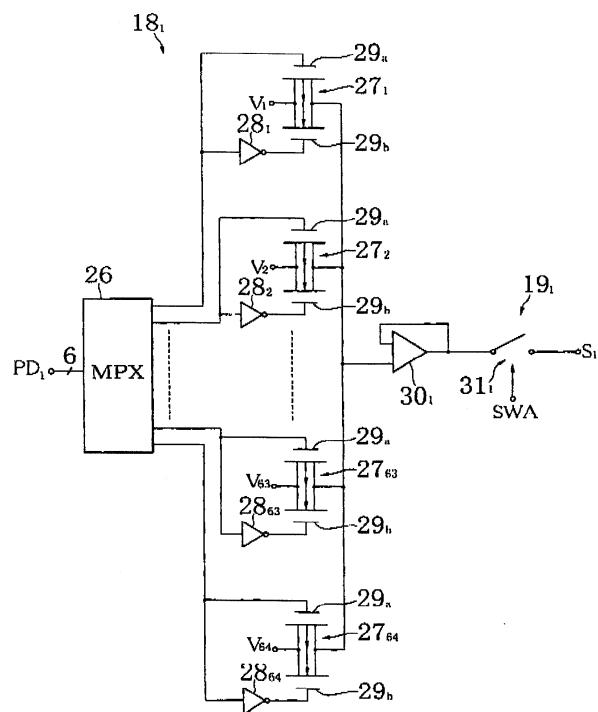
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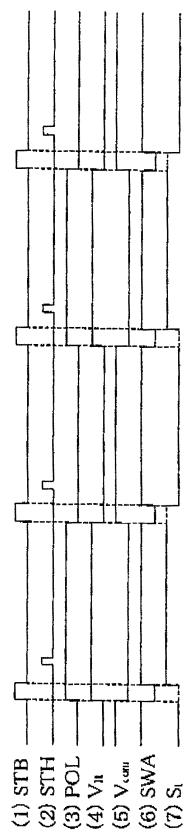
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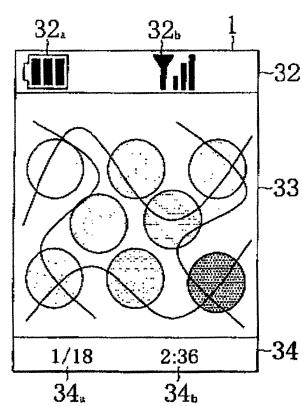
20



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专利名称(译)	彩色液晶显示器的驱动方法，驱动电路和便携式电子设备		
公开(公告)号	KR1020020062224A	公开(公告)日	2002-07-25
申请号	KR1020020003124	申请日	2002-01-18
[标]申请(专利权)人(译)	瑞萨电子株式会社		
申请(专利权)人(译)	瑞萨电子株式会社		
当前申请(专利权)人(译)	瑞萨电子株式会社		
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IPC分类号	G09G3/36 G09G3/20 G02F1/133		
CPC分类号	G09G2310/027 G09G3/3688 G09G2330/021 G09G3/3607 G09G2340/0428 G09G3/3696 G09G2320/0276 G09G3/3614 G09G3/3648		
代理人(译)	JO , EUI JE		
优先权	2001012540 2001-01-19 JP		
其他公开文献	KR100576788B1		
外部链接	Espacenet		

摘要(译)

当提供省电模式信号PS时，彩色液晶显示器的驱动方法用于在利用显示屏执行小型彩色液晶显示器的行反转驱动或帧反转驱动的情况下降低功耗，以彩色液晶显示器1的相应数据电极作为数据信号，所选择的电源电压VDD或接地电压GND基于数据线1至PD528的每个MSB1至MSB528。

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