EK79001H

Rev. 1.3

DATA SHEET

1536-Output TFT LCD Source Driver with TCON

fitipower integrated technology Inc.

Table of Contents

Page

1. GENERAL DESCRIPTION 3
2. FEATURES 3
3. BLOCK DIAGRAM 4
4. PIN DESCRIPTION 9
   - 4.1. Value of wiring resistance to each pin 12
5. 3_WIRE SERIAL PORT INTERFACE 13
   - 5.1. 3-Wire Command Format 13
6. FUNCTION DESCRIPTION 16
   - 6.1. Power On/Off Sequence 16
   - 6.2. Power-On/Off Timing Sequence 16
   - 6.3. Input Data VS Output Channels 17
   - 6.4. Input Data VS Output Voltage 17
   - 6.5. Input Data and Output Voltage Reference Table 18
   - 6.6. Data Input Format for LVDS 20
   - 6.7. Data Input Format for TTL 21
   - 6.8. Parallel RGB Timing Characteristic 22
7. ELECTRICAL SPECIFICATION 26
   - 7.1. Absolute Maximum Ratings 26
   - 7.2. Recommended Operating Range 26
   - 7.3. DC Electrical Characteristics 27
   - 7.4. AC Electrical Characteristics 30
   - 7.5. Output Timing Table 33
8. SDRRS TIMING DIAGRAM 36
9. CHIP OUTLINE DIMENSIONS 37
   - 9.1. Alignment Mark 38
   - 9.2. Pad Coordinate 39
10. DEFINITIONS 55
    - 10.1. Data Sheet Status 55
    - 10.2. Life Support Application 55
11. REVISION HISTORY 55

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Single Chip 1536 Channel Source Driver with Timing Controller for 1024RGB × 600 TFT LCD

1. GENERAL DESCRIPTION

The EK79001 is a highly integrated solution for small size to middle size a-Si TFT-LCD panels. This chip integrates 1536ch dual gate mode source driver with LVDS and parallel RGB input interface.

2. FEATURES

- Special design for 1024RGBx600 TFT LCD Panel with LVDS/TTL interface
- Integrate 1536 channel source driver only for dual gate function
- Support bidirectional shift control (CMOS signal)
- Support panel resolution (HxV): 1024(RGB) x 768 , 1024(RGB) x 600 , 800(RGB) x 600, 800(RGB) x 480
- 8-bit resolution 256 gray-scale with Dithering (6 bits DAC + 2 bit FRC or HFRC)
- Support Pin Control function for Up/Down, Left/Right … control
- Power for digital circuit (VDD): 2.3V ~ 3.6V
- Power for analog circuit (AVDD): 8V ~ 13.5V
- Operating frequency: 71 MHz (Max.)
- Embedded Gamma Table for special custom request
- V1~V14 for adjusting Gamma correction
- 1 + 2 dot inversion architecture
- Built-In AUTO pattern
- Built-In VCOM Buffer
- Built-In SDRRS function
- Support no_clock detection
- COG package
- Chip size = 25000um x 700um
- Output bump pitch = 15um

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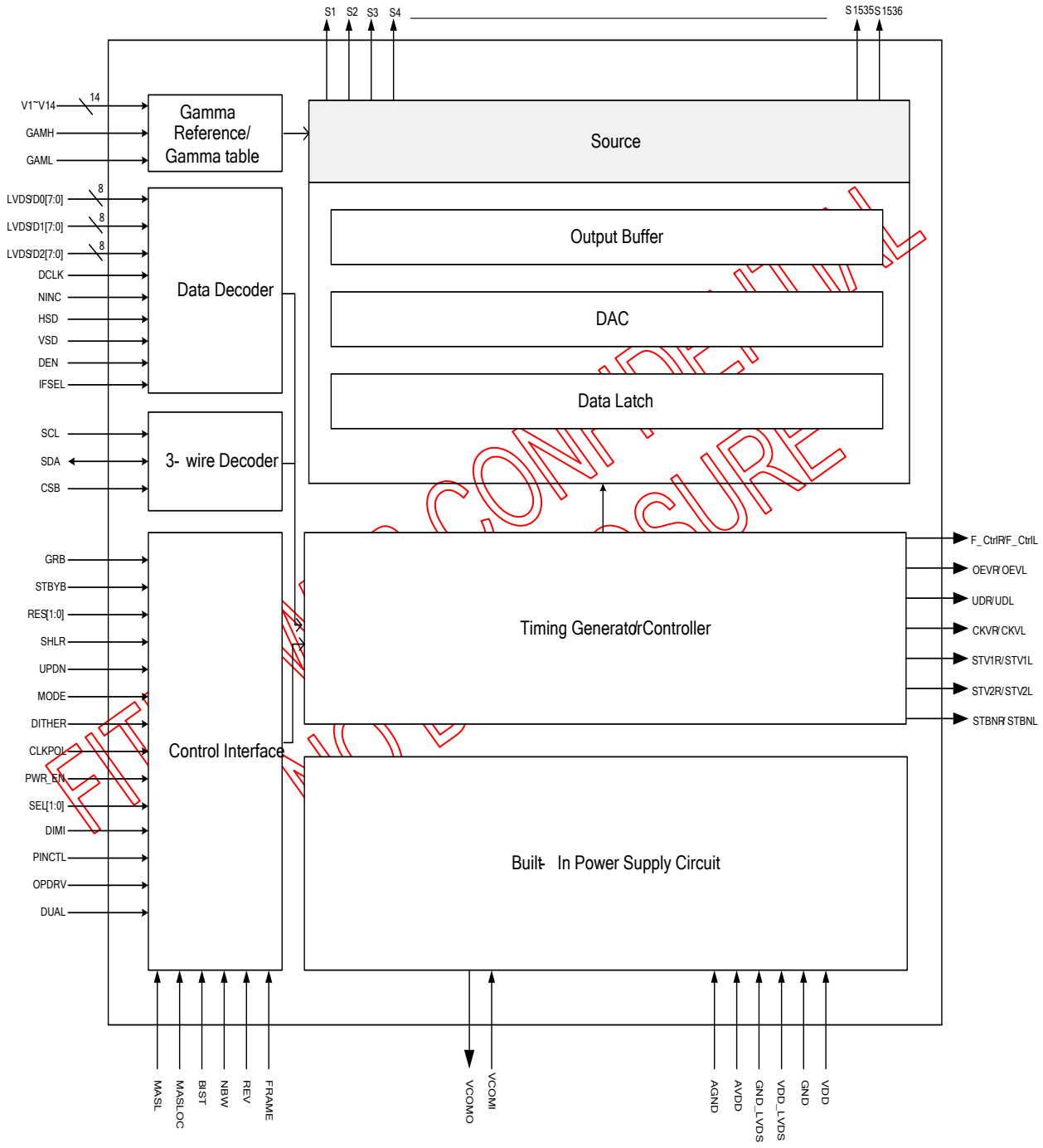
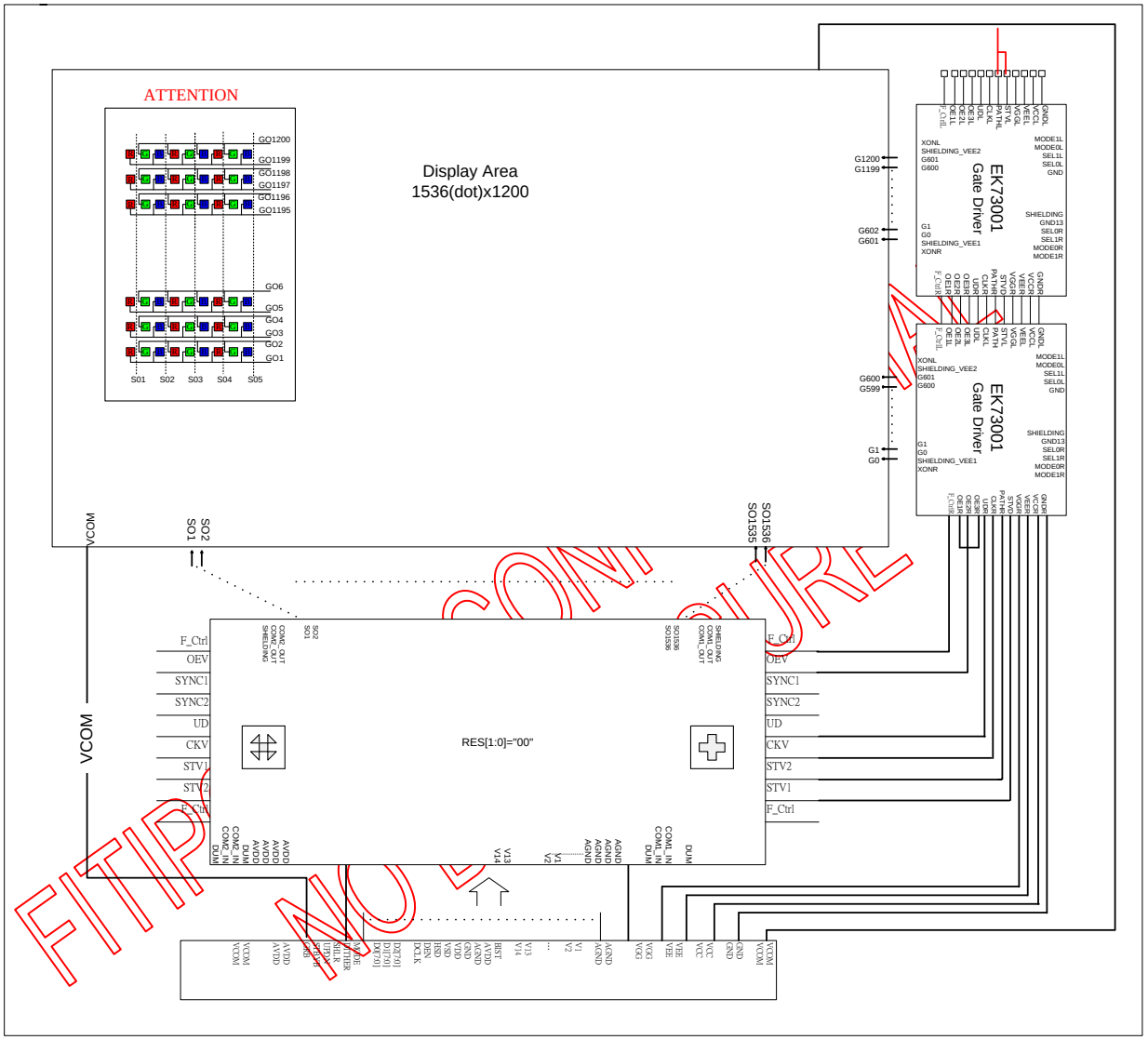
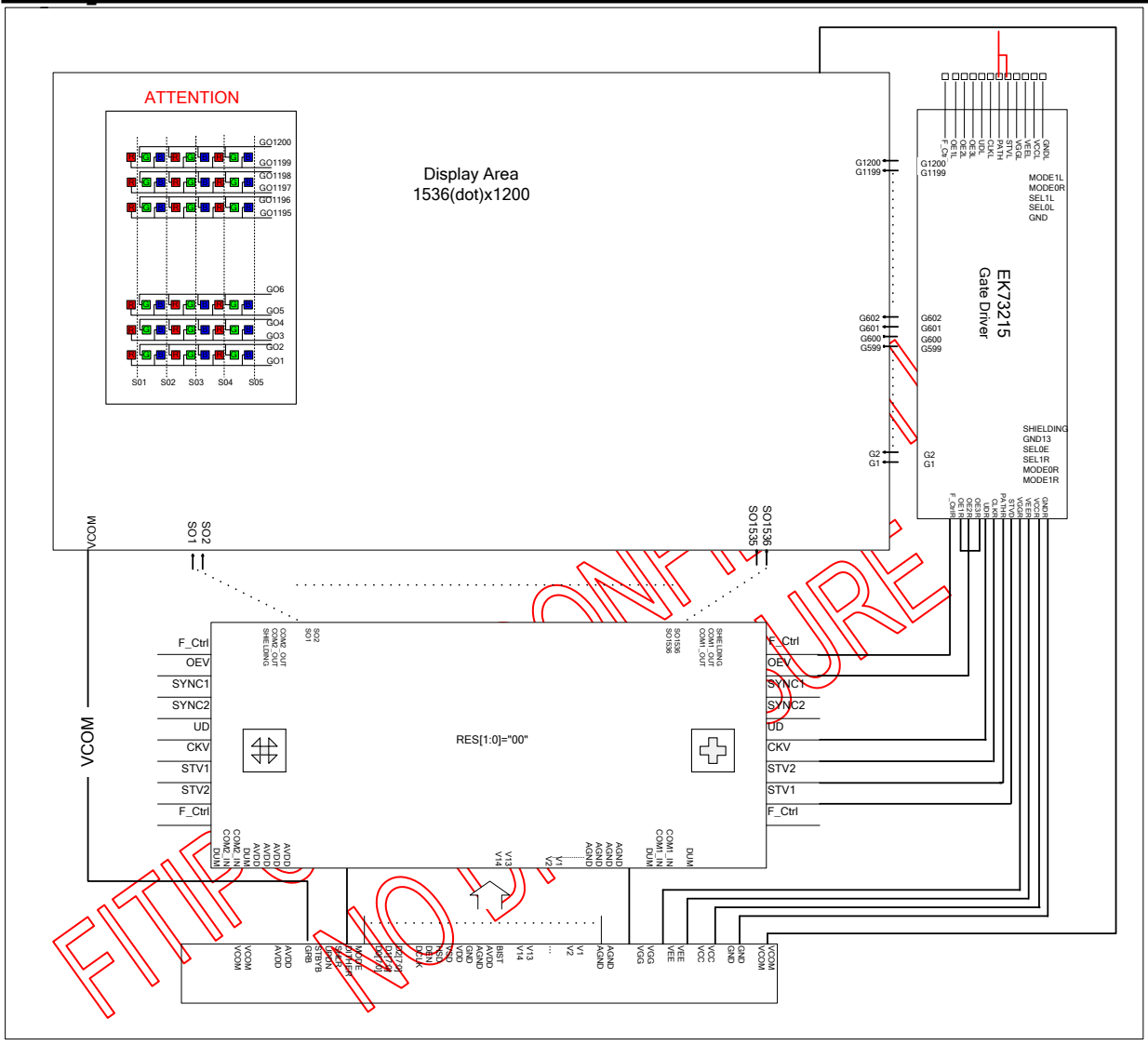
3. BLOCK DIAGRAM



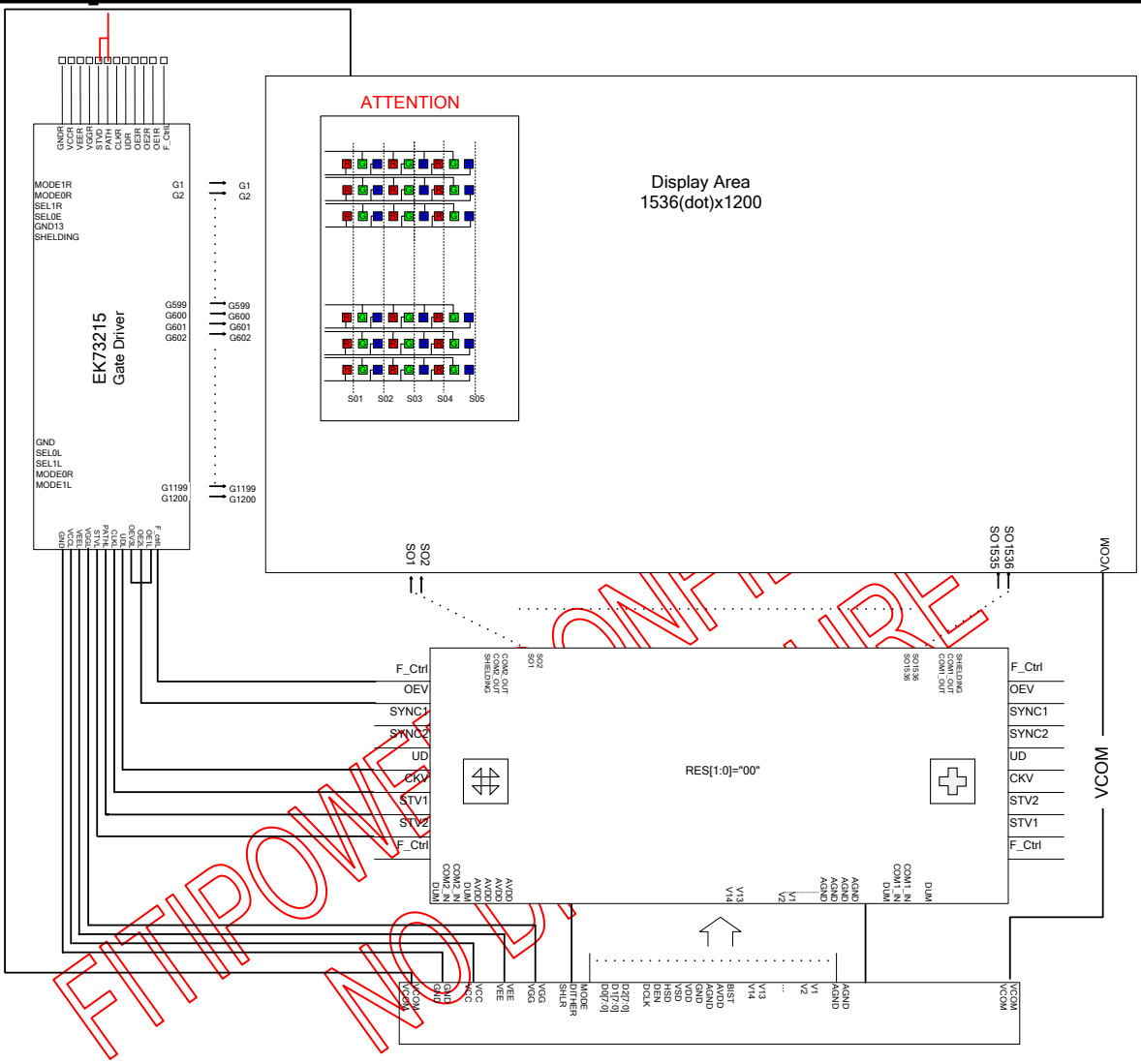
Block Diagram



Application Block Diagram-Dual Gate Application



Application Block Diagram-Dual Gate Application (gate at right side)



Application Block Diagram-Dual Gate Application (gate at left side)

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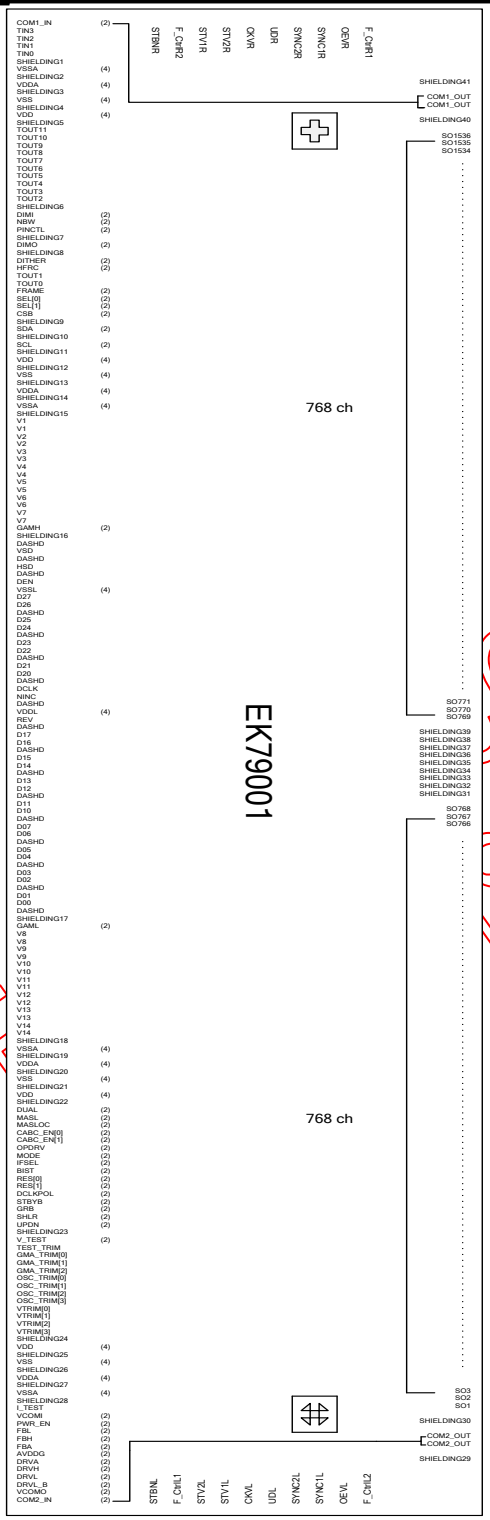

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Pad Sequence (Bump Side)

4. PIN DESCRIPTION

Pin Description

<table>
<tr><th>Pin Name</th><th>Pin Type</th><th>Description</th></tr>
<tr><td>D07~D00
D17~D10
D27~D20</td><td>Input</td><td>LVDS or Parallel RGB data Input. Select by “IFSEL” pin.
<table>
<tr><th>Pin name</th><th>TTL input mode
IFSEL=”L”</th><th>LVDS input mode
IFSEL=”H”</th></tr>
<tr><td>D2[0],D2[1]</td><td>B[0],B[1]</td><td>NIND0,PIND0</td></tr>
<tr><td>D2[2],D2[3]</td><td>B[2],B[3]</td><td>NIND1,PIND1</td></tr>
<tr><td>D2[4],D2[5]</td><td>B[4],B[5]</td><td>NIND2,PIND2</td></tr>
<tr><td>D2[6],D2[7]</td><td>B[6],B[7]</td><td>NIND3,PIND3</td></tr>
</table>
LVDS 6 bit data input: PIND[2:0], NIND[2:0].
D[07:00] = R[7:0] data; D[17:10] = G[7:0] data; D[27:20] = B[7:0] data.
For 18bit RGB interface, connect two LSB bits of all the R/G/B data buses to GND.
Note : D07~D00 -> SO1 , SO4 … SO1531 , SO1534
D17~D10 -> SO2 , SO5 … SO1532 , SO1535
D27~D20 -> SO3 , SO6 … SO1533 , SO1536
Please note the relation between RGB data and Color Filter sequence
Note: For LVDS interface, it’s necessary to put on external terminal resistor (on FPC or PCB board) between NIND0/PIND0, NIND1/PIND1, NIND2/PIND2, NIND3/PIND3, NINC/PINC.</td></tr>
<tr><td>DCLK</td><td>Input</td><td>Clock Input pin for LVDS or TTL mode. Select by “IFSEL” pin
<table>
<tr><th>Pin name</th><th>TTL input mode
IFSEL=”L”</th><th>LVDS input mode
IFSEL=”H”</th></tr>
<tr><td>DCLK</td><td>DCLK</td><td>PINC</td></tr>
</table>
Note: For LVDS interface, it’s necessary to put on external terminal resistor(on FPC or PCB board) between NIND0/PIND0, NIND1/PIND1, NIND2/PIND2, NIND3/PIND3, NINC/PINC.</td></tr>
<tr><td>NINC</td><td>Input</td><td>Negative LVDS differential clock input.
Note: For LVDS interface, it’s necessary to put on external terminal resistor (on FPC or PCB board) between NIND0/PIND0, NIND1/PIND1, NIND2/PIND2, NIND3/PIND3, NINC/PINC.</td></tr>
<tr><td>HSD</td><td>Input</td><td>Horizontal Sync input for TTL mode. Negative polarity.
(In LVDS interface connected HSD to FPC for pin setting
HSD=”L”:8 bit
HSD=”H”:6 bit)</td></tr>
<tr><td>VSD</td><td>Input</td><td>Vertical Sync input for TTL mode. Negative polarity.
(In LVDS Interface , connected to FPC and pull low)</td></tr>
<tr><td>DEN</td><td>Input</td><td>Data Input Enable. Active High to enable the data input bus under “DE Mode”. Normally pull low.</td></tr>
<tr><td>MODE</td><td>Input</td><td>DE / SYNC mode select under TTL mode. Normally pull high
H : DE mode.
L : HSD/VSD mode.</td></tr>
<tr><td>IFSEL</td><td>Input</td><td>IFSEL = L : TTL interface
IFSEL = H : LVDS interface</td></tr>
</table>

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Pin Name	Pin Type	Description
RES[1:0]	Input	RES[1:0]="01",for 1024(RGB)*768 display resolution RES[1:0]="00",for1024(RGB)*600 display resolution (Default) RES[1:0]="10",for 800(RGB)*600 display resolution (601~936 channel disable) RES[1:0]="11", for 800(RGB)*480 display resolution (601~936 channel disable)
DITHER	Input	Dithering function enable control. Normally pull low In LVDS 6-bit mode, IC don't care DITHER and HFRC setting. DITHER = "1", Enable internal dithering function DITHER = "0", Disable internal dithering function. If in LVDS 8-bit or TTL mode, IC will bypass D01/D00,D11/D10,D21/D20.
HFRC	Input	H-FRC selection. Normally pull low HFRC = H : H-FRC enable If "DITHER"="L",disable dithering function(HFRC and FRC disable)
DCLKPOL	Input	Input clock edge selection. Normally pull low CLKPOL = "1", Latch data at DCLK rising edge. CLKPOL = "0", Latch data at DCLK falling edge. (Default)
DUAL	Input	Reserve
V1~V14	Input	When INTERNAL Gamma Table is used. GAMH tied to AVDD, GAML tied to GND and V1~V14 pad are un-used. When using external gamma voltage, GAMH and GAML are floating , and V1~V14 are the external gamma correction points. The voltage of these pins must be: AGND<V14<V13<V12<V11<V10<V9<V8;V7<V6<V5<V4<V3<V2<V1<AVDD .
GAMH	Input	When using INTERNAL Gamma Table , tied to AVDD . Otherwise floating.
GAML	Input	When using INTERNAL Gamma Table , tied to GND . Otherwise floating.
GRB	Input	Global reset pin. Active Low to enter Reset State. Normally pull high. **It's necessary to connecting with an RC delay circuit for stability. (GRB delay VDD larger than 1ms)**
STBYB	Input	Standby mode, Normally pull high. STBYB = "1",normal operation STBYB = "0", timing controller, source driver will turn off, all output are High-Z
MASL	Input	Reserve
MASLOC	Input	Reserve
SHLR	Input	Source Right or Left sequence control. Normally pull high. SHLR = "L", shift left: last data = S1←S2←S3.....←S1536 = first data. SHLR = 'H' , shift right: first data = S1→S2→S3.....→S1536 = last data.
UPDN	Input	Gate Up or Down scan control. Normally pull low. UPDN = "L", STV2 output vertical start pulse and UD pin output logical "0" to Gate driver. UPDN = "H", STV1 output vertical start pulse and UD pin output logical "1" to Gate driver.

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<table>
<tr><th>Pin Name</th><th>Pin Type</th><th>Description</th></tr>
<tr><td>BIST</td><td>Input</td><td>Normal Operation/BIST pattern select. Normally pull low
BIST = H : BIST(DCLK input is not needed) BIST = L : Normal Operation</td></tr>
<tr><td>NBW</td><td>Input</td><td>Normally black or normally white setting. Normally pulled low. NBW = H : Normally black
NBW = L : Normally white</td></tr>
<tr><td>REV</td><td>Input</td><td>Controls whether the data of D00~D27 are inverted or not, normally pulled low.
When “REV”=1 these data will be inverted. EX. “00”→“ 3F”, “07”→“ 38”, “15”→“2A”, and so on.</td></tr>
<tr><td>FRAME</td><td>Input</td><td>Frame inverse or not select. Normally pull low.
FRAME = “1”, Uniform
FRAME = “0”, Frame inverse (Default)</td></tr>
<tr><td>SEL[1:0]</td><td>Input</td><td>Gate on sequence select. Normally pull low
<table>
<tr><th>SEL[0]</th><th>SEL[1]</th><th>Pin control function</th></tr>
<tr><td>1</td><td>1</td><td>Z+2</td></tr>
<tr><td>1</td><td>0</td><td>2</td></tr>
<tr><td>0</td><td>1</td><td>2</td></tr>
<tr><td>0</td><td>0</td><td>Z(default)</td></tr>
</table></td></tr>
<tr><td>OEVR/OEVL</td><td>Output</td><td>Gate driver control signal (BIST sync control)</td></tr>
<tr><td>SYNC1R/SYNC1L</td><td>Output</td><td>BIST sync control</td></tr>
<tr><td>SYNC2R/SYNC2L</td><td>Output</td><td>BIST sync control</td></tr>
<tr><td>UDR/UDL</td><td>Output</td><td>Gate driver control signal (BIST sync control)</td></tr>
<tr><td>CKVR/CKVL</td><td>Output</td><td>Gate driver control signal (BIST sync control)</td></tr>
<tr><td>STV1R/STV1L</td><td>Output</td><td>Gate driver control signal</td></tr>
<tr><td>STV2R/STV2L</td><td>Output</td><td>Gate driver control signal</td></tr>
<tr><td>STBNR/STBNL</td><td>Output</td><td>Gate driver control signal</td></tr>
<tr><td>F_CtrlR/F_CtrlL</td><td>Output</td><td>Gate driver control signal (For special Gate on sequence).
NOTE :In Dual Gate structure , connect this pin to gate driver’s F_Ctrl . And setting gate driver’s SEL[1:0] to “00”.</td></tr>
<tr><td>DIMI</td><td>Input</td><td>Brightness control signal. Normally pull high.</td></tr>
<tr><td>DIMO</td><td>Output</td><td>Backlight dimmer signal for external controller.
DIMO = “0”, Turn off external backlight controller
DIMO = “1”, Logical control signal to turn on external backlight controller</td></tr>
<tr><td>PINCTL</td><td>Input</td><td>Enable pin control function. Normally pull high
PINCTL=”0”, Disable pin control function.
The following pin will be inactive:
MODE,RES[1:0],DITHER,HFRC,DCLKPOL,SHLR,UPDN,BIST,NBW,
FRAME,SEL[1:0],OPDRV,PWR_EN.
PINCTL=”1”, Enable pin control function.
NOTE: The related 3-wire control register bit control will be disabled under PINCTL=”1”.</td></tr>
<tr><td>OPDRV</td><td>Input</td><td>Source OP driving selection. Normally pull low
OPDRV = H : 133%
OPDRV = L : normal</td></tr>
<tr><td>CSB</td><td>Input</td><td>Serial communication chip select. Normally pull high</td></tr>
<tr><td>SDA</td><td>Input/Output</td><td>Serial communication data input. Normally pull low</td></tr>
<tr><td>SCL</td><td>Input</td><td>Serial communication clock input. Normally pull low</td></tr>
</table>

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Pin Name	Pin Type	Description
AVDD	PI	Power supply for analog circuits
AGND	PI	Ground pins for analog circuits
VDD	PI	Power supply for digital circuits
GND	PI	Ground pins for digital circuits
VDD_LVDS	PI	LVDS power
GND_LVDS	PI	LVDS ground
PWR_EN	Input	POWER enable. Normally pull low PWR_EN = H , enable internal VCOM buffer PWR_EN = L , disable internal VCOM buffer
VCOMI	Input	VCOM buffer in
VCOMO	Output	VCOM buffer out
SO1~SO1536	Output	Source Driver Output Signals All outputs will be of unknown values under stand-by mode.
COM1_IN COM1_OUT	S	Internal link together between input side and output side
COM2_IN COM2_OUT	S	Internal link together between input side and output side.
TP	T	Float these pins for normal operation
SHIELDING	SH	Those pins are internally connected to the AGND. DO NOT connect to any WOA on the panel. Data Bus Shielding pad
DASHD	SH	Those pins are internally connected to the GND. RECOMMAND to add shielding lines on the FPC to reduce EMI.
DUM	Dummy	Dummy pads. Those pins are floating pads.

Note:
P: Power, D: Dummy, S: Shorted line, M: Mark, PI: Power input, PO: Power output,
T: Testing, SH: Shielding, PS: Power Setting, C: Capacitor pin.

EK79001 Pass Line Description:

Pass Line No:	Pad Name	
1	COM1_IN	COM1_OUT
2	COM2_IN	COM2_OUT

4.1. Value of wiring resistance to each pin

The recommended wiring resistance values are shown below. The wiring resistance values affect the current capacity of the power supply, so be sure to design using values that do not exceed those recommended.

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wiring resistance

Pin Name	Wiring Resistance value(Ω)	Pin Name	Wiring resistance value (Ω)
AVDD	<5	RES0	<100
AGND	<5	RES1	<100
VDD	<5	SHLR	<100
GND	<5	UPDN	<100
V1~V14	<5	BIST	<100
DRVx	<5	MODE	<100
FBx	<5	DCLKPOL	<100
VCOMI	<5	DIMO	<100
VCOMO	<5	IFSEL	<100
D00~D07	<5	F_Ctrlx	<100
D10~D17	<5	OEVx	<100
D20~D27	<5	UDx	<500
DCLK	<5	CKVx	<100
NINC	<5	STV1x	<100
VSD	<20	STV2x	<100
HSD	<20	STBNx	<500
DEN	<20	VGH	<50
GRB	<100	VGL	<30
STBYB	<100		
DITHER	<100		

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5. 3_WIRE SERIAL PORT INTERFACE

5.1. 3-Wire Command Format

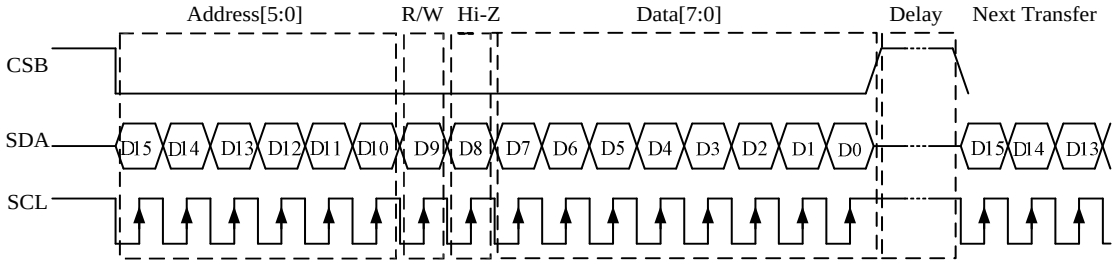
EK79001 use the 3-wire serial port as communication interface for all the function and parameter setting.

3-Wire communication can be bi-directional controlled by the “R/W” bit in address field. EK79001 3-Wire engine act as a “slave mode” for all the time, and will not issue any command to the 3-Wire bus itself.

Under read mode, 3-Wire engine will return the data during “Data phase”. The returned data should be latched at the rising edge of SCL by external controller. Data in the “Hi-Z phase” will be ignored by 3-Wire engine during write operation, and should be ignored during read operation also. During read operation, external controller should float SDA pin under “Hi-Z phase” and “Data phase”.

Each Read/Write operation should be exactly 16 bit. To prevent from incorrect setting of the internal register, any write operation with more or less than 16 bit data during a CSB Low period will be ignored by 3-Wire engine.

For prevent from incorrect setting of the internal register. Please refer to the section of “3-Wire Timing.



3-Wire timing chart

3-Wire Command Format

Bit	Description
D15~D10	Register Address [5:0].
D9	W/R control bit. “0” for Write; “1” for Read
D8	Hi-Z bit during read mode. Any data within this bits will be ignored during write mode
D7~D0	Data for the W/R operation to the address indicated by Address phase

3-Wire Write Format

MSB															LSB
D15	D14	D13	D12	D11	D10	D9	D8	D7	D6	D5	D4	D3	D2	D1	D0
Register Address[5:0]						0	X	Data(Issue by external controller)							

3-Wire Read Format

MSB															
D15	D14	D13	D12	D11	D10	D9	D8	D7	D6	D5	D4	D3	D2	D1	D0
Register Address[5:0]						1	Hi-Z	Data(Issue by 3-wire engine)							

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3-Wire Control Registers:

Following table list all the 3-Wire control registers and bit name definition for EK79001. Refer to the next section for detail register function description please.

Setting of all the 3-Wire registers will take effect at the coming falling edge of VSD except GRB and STB bit.

R0: System Control Register:

Designation	Address	Description
Mode	R0[0]	DE/SYNC mode select. MODE=”0”, HSD/VSD mode MODE=”1”, DE mode(default)
DCLKPOL	R0[1]	DCLK polarity control bit. DCLKPOL=”0”: Data sampling at DCLK falling edge. (Default) DCLKPOL=”1”: Data sampling at DCLK rising edge.
GRB	R0[2]	Global reset bit. GRB=”0”, The controller is in reset state. GRB=”1”, Normal operation. (Default)
STBYB	R0[3]	Standby mode selection bit. STBYB=”0”, Timing control, driver and DC-DC converter, are off, and all outputs are High-Z.

		STBYB=”1”, Normal operation. (Default)
UPDN	R0[4]	G Gate Up or Down scan control. UPDN = “0”, STV2 output vertical start pulse and UD pin output logical “0” to Gate driver. (Default) UPDN = “1”, STV1 output vertical start pulse and UD pin output logical “1” to Gate driver.
SHLR	R0[5]	Right/Left sequence control of source driver. SHLR=”0”, Shift left: Last data = S1<S2<S3<…<S960=First data SHLR=”1”, Shift right: First data = S1<S2<S3<…<S960=Last data(Default)
	R0[6]	Reserved

R1: System Control Register:

Designation	Address	Description
		Reserved
RES[1:0]	R1[2:1]	RES[1:0] = “01”, for 1024(RGB)*768 display resolution RES[1:0] = “00”, for 1024(RGB)*600 display resolution (default) RES[1:0] = “10”, for 800(RGB)*600 display resolution (601~936 channel disable) RES[1:0] = “11”, for 800(RGB)*480 display resolution (601~936 channel disable)
BIST	R1[3]	Normal Operation/BIST pattern select. BIST = H : BIST(DCLK input is not needed) BIST = L : Normal Operation (Default)
DITHER	R1[4]	Dithering function enable control. DITHER = “1”, Enable internal dithering function DITHER = “0”, Disable internal dithering function (Default)
HFRC	R1[5]	H-FRC selection HFRC = H : H-FRC enable HFRC = L : FRC enable (Default) If DITHER=”0”,disable dithering function(H-FRC and FRC disable)

R2: System Control Register:

Designation	Address	Description
		Reserved
NBW	R2[6]	Normally black or normally white setting. NBW=”H”: Normally black. NBW=”L”: Normally white(Default).
	R2[7]	Reserved

R3: Gate on sequence Controller Register:

Designation	Address	Description
SEL[1:0]	R3[1:0]	Gate on sequence select. SEL[0] / SEL[1] / Pin control function: 1 / 1 / Z+2 1 / 0 / 2 0 / 1 / 2 0 / 0 / Z(default)
FRAME	R3[2]	Frame inverse or not select. FRAME = “1”, Uniform FRAME = “0”, Frame inverse(Default)
		Reserved

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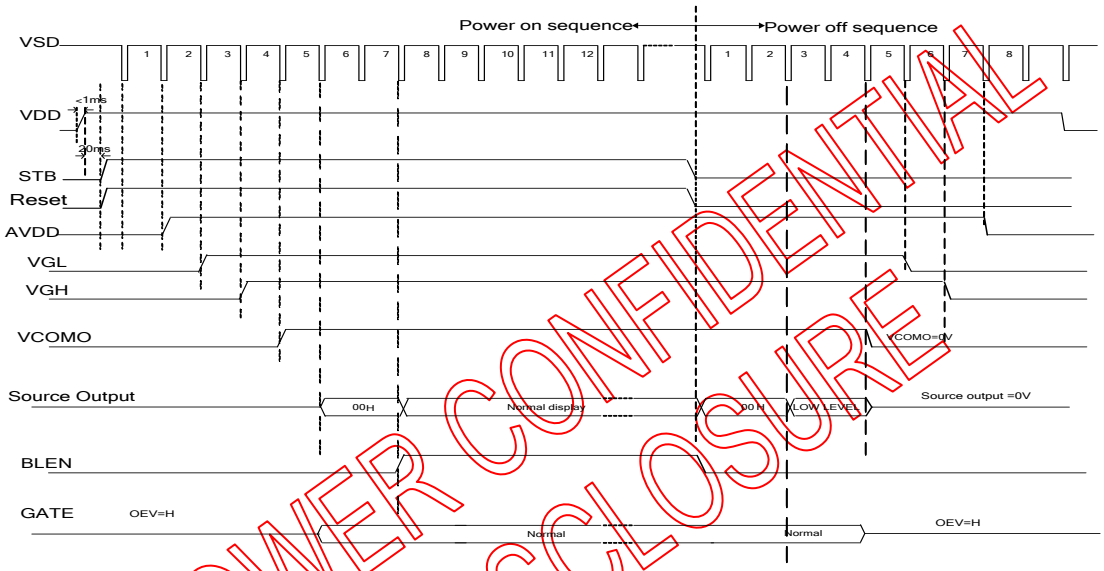
6. FUNCTION DESCRIPTION

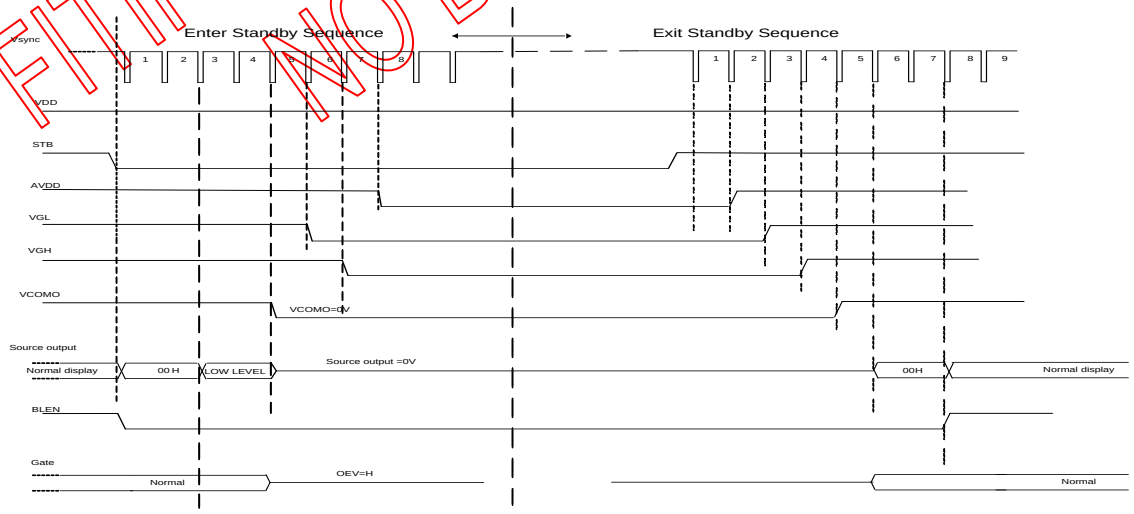
6.1. Power On/Off Sequence

In order to prevent IC from power on reset fail, the rising time (TPOR) of the digital power supply VDD should be maintained within the given specifications. Refer to “AC Characteristics” for more detail on timing.

6.2. Power-On/Off Timing Sequence



Power On/Off timing chart



Enter and Exit Standby Mode timing chart

Note: Low level=3Fh,when NBW=L(Normally white)
Low level=00h,when NBW=H(Normally black)

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6.3. Input Data VS Output Channels

SHLR="1",right shift

Output	SO1	SO2	SO3	---	SO1534	SO1535	SO1536
Order	First data			->	Last data		
Odd Line/ Gn	D07~D00	D27~D20	D17~D10	---	D07~D00	D27~D20	D17~D10
Odd Line/ Gn+1	D17~D10	D07~D00	D27~D20	---	D17~D10	D07~D00	D27~D20
Even Line/ Gn	D07~D00	D27~D20	D17~D10	---	D07~D00	D27~D20	D17~D10
Even Line/ Gn+1	D17~D10	D07~D00	D27~D20	---	D17~D10	D07~D00	D27~D20

SHLR="0",left shift

Output	SO1	SO2	SO3	---	SO1534	SO1535	SO1536
Order	Last data			<-	First data		
Odd Line/ Gn	D07~D00	D27~D20	D17~D10	---	D07~D00	D27~D20	D17~D10
Odd Line/ Gn+1	D17~D10	D07~D00	D27~D20	---	D17~D10	D07~D00	D27~D20
Even Line/ Gn	D07~D00	D27~D20	D17~D10	---	D07~D00	D27~D20	D17~D10
Even Line/ Gn+1	D17~D10	D07~D00	D27~D20	---	D17~D10	D07~D00	D27~D20

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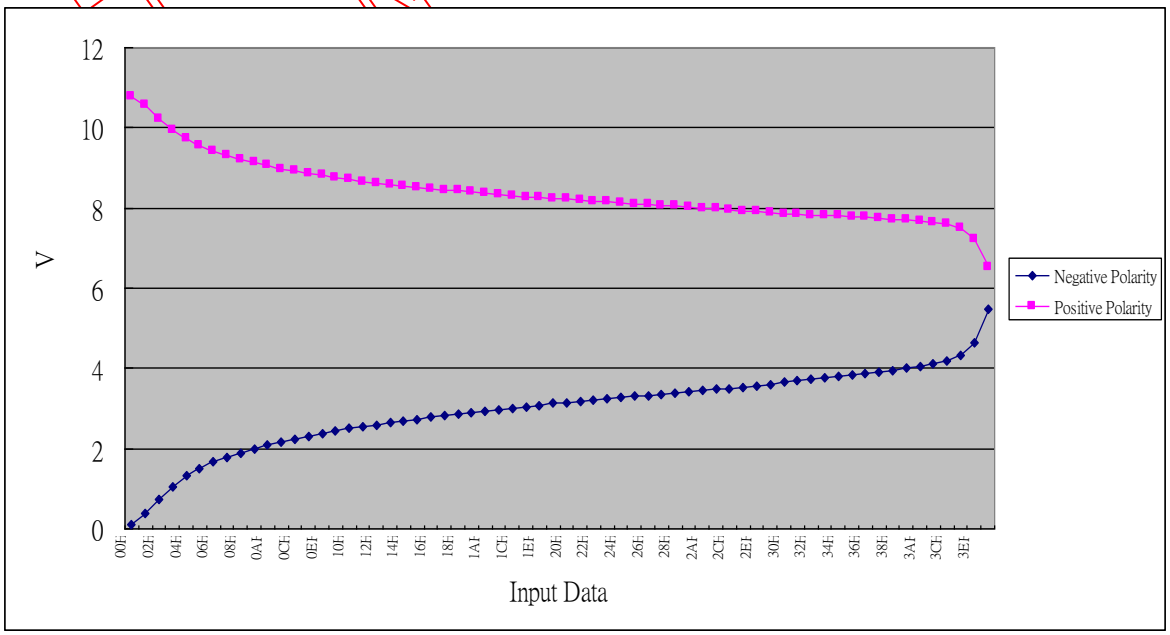
6.4. Input Data VS Output Voltage

The figure below shows the relationship between the input data and the output voltage. Refer to the following pages for the relative resistor values and voltage calculation method.

Gamma Tables very for each customer.



Remark: AVDD-0.1 > V1 > V2> V3 > V4 > V5 > V6 > V7; V8 > V9 > V10 > V11 > V12 > V13 > V14 > AGND+0.1V

6.5. Input Data and Output Voltage Reference Table

Input Data and Output Voltage Reference Table

@AVDD=9.6V

V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	Unit
8.8512	8.4864	7.44	7.056	6.7776	6.336	5.5296	4.9536	4.0512	3.4176	3.0144	2.5632	1.296	0.8064	V

Data	Positive
00H	AVDD×0.922
01H	AVDD×0.884
02H	AVDD×0.860
03H	AVDD×0.843
04H	AVDD×0.832
05H	AVDD×0.822
06H	AVDD×0.815
07H	AVDD×0.809
08H	AVDD×0.803
09H	AVDD×0.798
0AH	AVDD×0.793
0BH	AVDD×0.789
0CH	AVDD×0.786
0DH	AVDD×0.782
0EH	AVDD×0.780
0FH	AVDD×0.777
10H	AVDD×0.775
11H	AVDD×0.772
12H	AVDD×0.769
13H	AVDD×0.767
14H	AVDD×0.764
15H	AVDD×0.761
16H	AVDD×0.759
17H	AVDD×0.756
18H	AVDD×0.753
19H	AVDD×0.751
1AH	AVDD×0.748
1BH	AVDD×0.745
1CH	AVDD×0.743
1DH	AVDD×0.741
1EH	AVDD×0.739
1FH	AVDD×0.737

Data	Positive
20H	AVDD×0.735
21H	AVDD×0.733
22H	AVDD×0.731
23H	AVDD×0.729
24H	AVDD×0.727
25H	AVDD×0.725
26H	AVDD×0.724
27H	AVDD×0.722
28H	AVDD×0.720
29H	AVDD×0.718
2AH	AVDD×0.716
2BH	AVDD×0.715
2CH	AVDD×0.713
2DH	AVDD×0.711
2EH	AVDD×0.709
2FH	AVDD×0.707
30H	AVDD×0.706
31H	AVDD×0.704
32H	AVDD×0.702
33H	AVDD×0.699
34H	AVDD×0.697
35H	AVDD×0.694
36H	AVDD×0.692
37H	AVDD×0.689
38H	AVDD×0.687
39H	AVDD×0.684
3AH	AVDD×0.681
3BH	AVDD×0.678
3CH	AVDD×0.674
3DH	AVDD×0.669
3EH	AVDD×0.66
3FH	AVDD×0.576

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Data	Negative
00H	AVDD×0.084
01H	AVDD×0.135
02H	AVDD×0.163
03H	AVDD×0.183
04H	AVDD×0.196
05H	AVDD×0.208
06H	AVDD×0.218
07H	AVDD×0.226
08H	AVDD×0.233
09H	AVDD×0.239
0AH	AVDD×0.245
0BH	AVDD×0.249
0CH	AVDD×0.254
0DH	AVDD×0.257
0EH	AVDD×0.260
0FH	AVDD×0.263
10H	AVDD×0.267
11H	AVDD×0.270
12H	AVDD×0.273
13H	AVDD×0.277
14H	AVDD×0.280
15H	AVDD×0.283
16H	AVDD×0.286
17H	AVDD×0.289
18H	AVDD×0.292
19H	AVDD×0.294
1AH	AVDD×0.297
1BH	AVDD×0.300
1CH	AVDD×0.303
1DH	AVDD×0.305
1EH	AVDD×0.308
1FH	AVDD×0.311

Data	Negative
20H	AVDD×0.314
21H	AVDD×0.316
22H	AVDD×0.319
23H	AVDD×0.321
24H	AVDD×0.324
25H	AVDD×0.327
26H	AVDD×0.329
27H	AVDD×0.332
28H	AVDD×0.335
29H	AVDD×0.337
2AH	AVDD×0.340
2BH	AVDD×0.342
2CH	AVDD×0.345
2DH	AVDD×0.348
2EH	AVDD×0.350
2FH	AVDD×0.353
30H	AVDD×0.356
31H	AVDD×0.358
32H	AVDD×0.362
33H	AVDD×0.365
34H	AVDD×0.369
35H	AVDD×0.372
36H	AVDD×0.376
37H	AVDD×0.379
38H	AVDD×0.383
39H	AVDD×0.387
3AH	AVDD×0.391
3BH	AVDD×0.396
3CH	AVDD×0.402
3DH	AVDD×0.409
3EH	AVDD×0.422
3FH	AVDD×0.516

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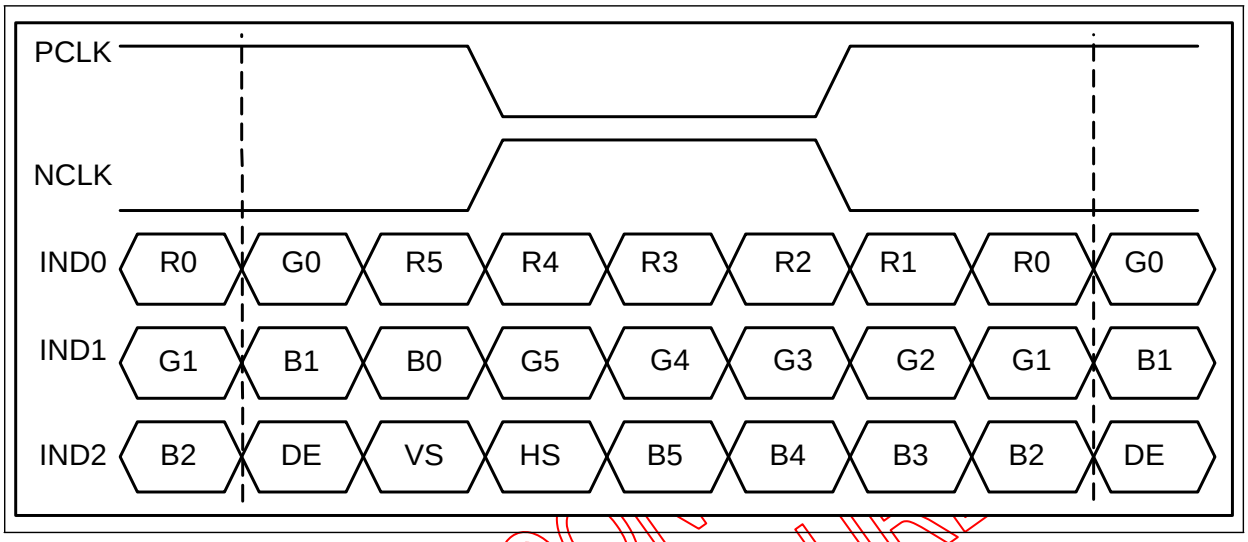
6.6. Data Input Format for LVDS

6.6.1. 6-bit LVDS input(HSD="H")



6-bit LVDS Input Timing chart

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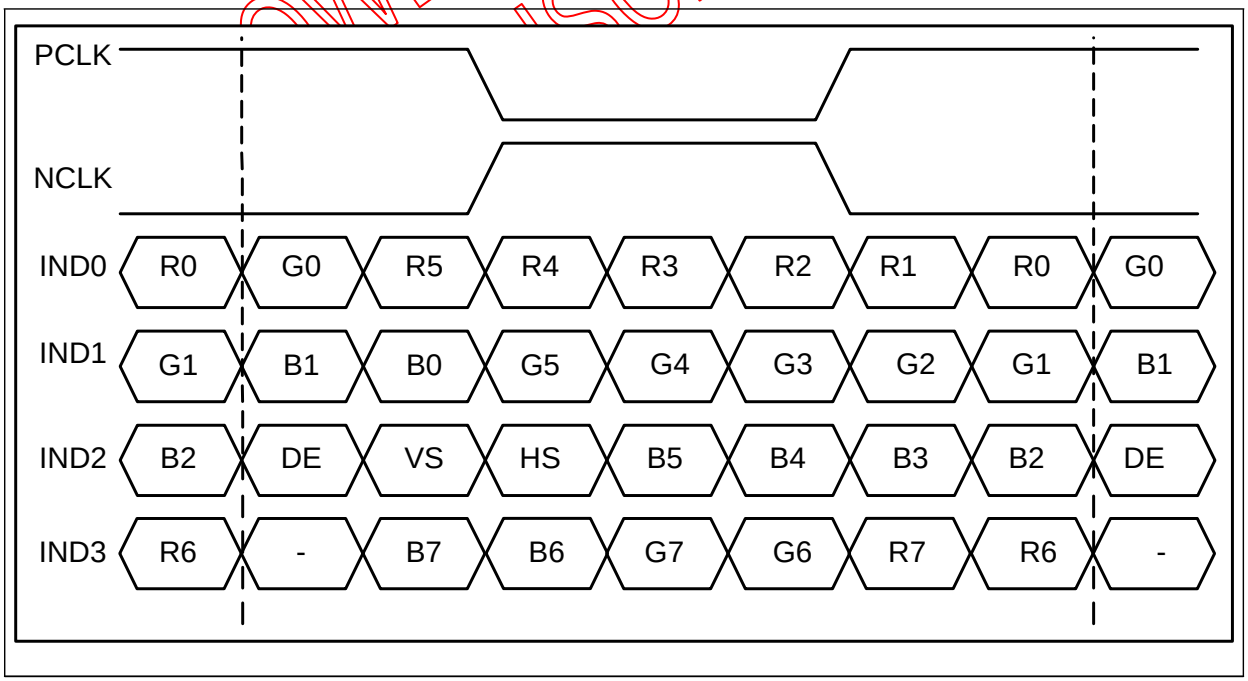
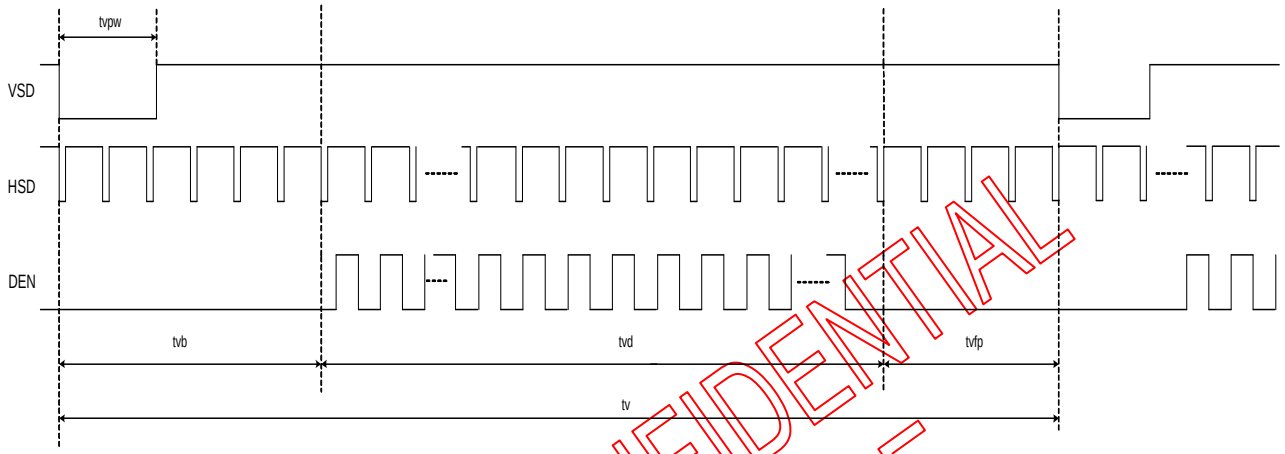
6.6.2. 8-bit LVDS input(HSD="L")



8-bit LVDS Input Timing chart

6.7. Data Input Format for TTL

6.7.1. Vertical input timing



Vertical input timing

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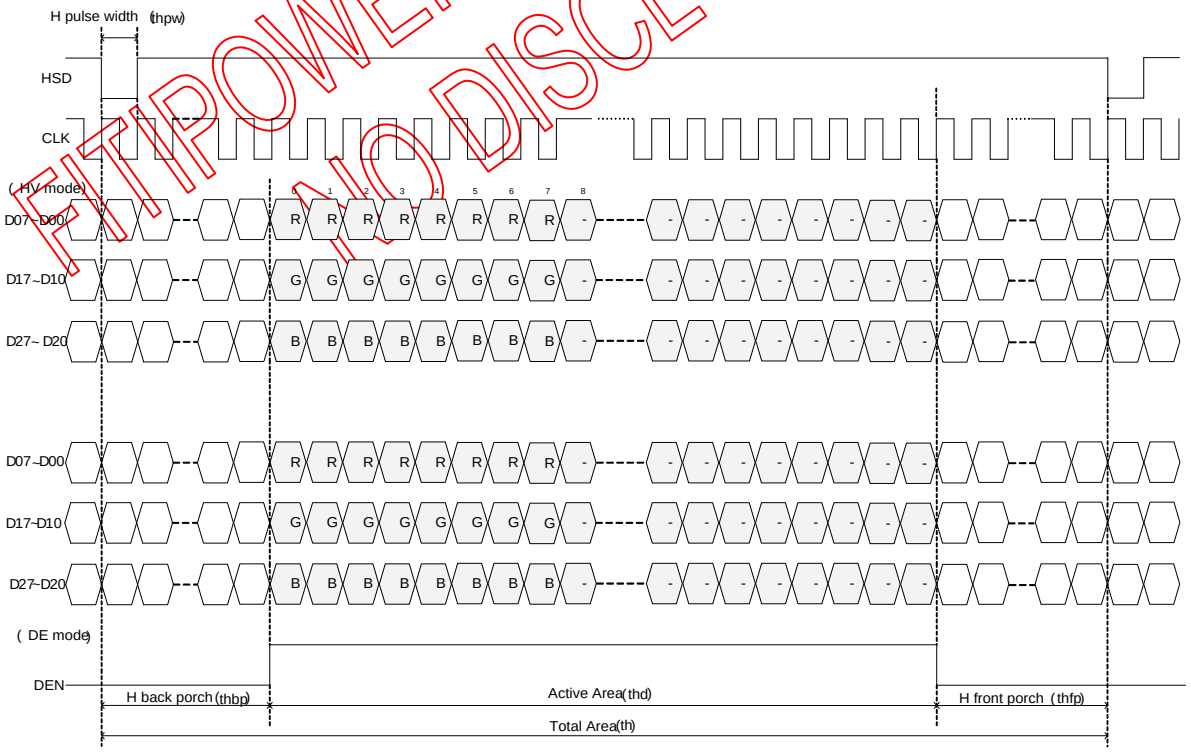
6.7.2. Horizontal input timing



Horizontal input timing

6.8. Parallel RGB Timing Characteristic

6.8.1. For 1024RGB x 768 panel

DE mode

DE mode					
Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
DCLK frequency @Frame rate=60hz	fclk	52	65	71	Mhz
Horizontal display area	thd		1024		DCLK
HSYNC period time	th	1114	1344	1400	DCLK
HSYNC blanking	thbp+thfp	90	320	376	DCLK
Vertical display area	tvd		768		H
VSYNC period time	tv	778	806	845	H
VSYNC blanking	tvb+tvfp	10	38	77	H

HV mode(1)

HV mode Horizontal input timing						
Parameter		Symbol	Value			Unit
Horizontal display area		thd	1024			DCLK
DCLK frequency@ Frame rate=60hz		fclk	Min.	Typ.	Max.	
			57	65	70.5	Mhz
1 Horizontal Line		th	1200	1344	1400	DCLK
HSYNC pulse width	Min.	thpw	1			
	Typ.		—			
	Max.		140			
HSYNC back porch		thbp	160	160	160	
HSYNC front porch		thfp	16	160	216	

HV mode(2)

Vertical input timing					
Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Vertical display area	tvd		768		H
VSYNC period time	tv	792	806	840	H
VSYNC pulse width	tvpw	1	—	20	H
VSYNC back porch	tvb	23	23	23	H
VSYNC front porch	tvfp	1	15	49	H

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6.8.2. For 1024RGB x 600 panel

DE mode

DE mode					
Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
DCLK frequency @Frame rate=60hz	fclk	40.8	51.2	67.2	Mhz
Horizontal display area	thd		1024		DCLK
HSYNC period time	th	1114	1344	1400	DCLK
HSYNC blanking	thb+thfp	90	320	376	DCLK
Vertical display area	tvd		600		H
VSYNC period time	tv	610	635	800	H
VSYNC blanking	tvb+tvfp	10	35	200	H

HV mode(1)

HV mode Horizontal input timing						
Parameter		Symbol	Value			Unit
Horizontal display area		thd	1024			DCLK
DCLK frequency@ Frame rate=60hz		fclk	Min.	Typ.	Max.	
			44.9	51.2	63	Mhz
1 Horizontal Line		th	1200	1344	1400	DCLK
HSYNC pulse width	Min.	thpw	1			
	Typ.		—			
	Max.		140			
HSYNC back porch		thbp	160	160	160	
HSYNC front porch		thfp	16	160	216	

HV mode(2)

Vertical input timing					
Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Vertical display area	tvd		600		H
VSYNC period time	tv	624	635	750	H
VSYNC pulse width	tvpw	1	—	20	H
VSYNC back porch	tvb	23	23	23	H
VSYNC front porch	tvfp	1	12	127	H

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6.8.3. For 800RGB x 600 panel

DE mode

DE mode					
Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
DCLK frequency @Frame rate=60hz	fclk	32.6	39.6	62.4	Mhz
Horizontal display area	thd		800		DCLK
HSYNC period time	th	890	1000	1300	DCLK
HSYNC blanking	thb+thfp	90	200	500	DCLK
Vertical display area	tvd		600		H
VSYNC period time	tv	610	660	800	H
VSYNC blanking	tvb+tvfp	10	60	200	H

HV mode(1)

HV mode Horizontal input timing						
Parameter		Symbol	Value			Unit
Horizontal display area		thd	800			DCLK
DCLK frequency@ Frame rate=60hz		fclk	Min.	Typ.	Max.	
			34.5	39.6	50.4	Mhz
1 Horizontal Line		th	900	1000	1200	DCLK
HSYNC pulse width	Min.	thpw	1			
	Typ.		—			
	Max.		40			
HSYNC back porch		thbp	88	88	88	
HSYNC front porch		thfp	12	112	312	

HV mode(2)

Vertical input timing					
Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Vertical display area	tvd		600		H
VSYNC period time	tv	640	660	700	H
VSYNC pulse width	tvpw	1	—	20	H
VSYNC back porch	tvb	39	39	39	H
VSYNC front porch	tvfp	1	21	61	H

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6.8.4. For 800RGB x 480 panel

DE mode

DE mode					
Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
DCLK frequency @Frame rate=60hz	fclk	26.2	29.2	54.6	Mhz
Horizontal display area	thd		800		DCLK
HSYNC period time	th	890	928	1300	DCLK
HSYNC blanking	thb+thfp	90	128	500	DCLK
Vertical display area	tvd		480		H
VSYNC period time	tv	490	525	700	H
VSYNC blanking	tvb+tvfp	10	45	220	H

HV mode(1)

HV mode Horizontal input timing						
Parameter		Symbol	Value			Unit
Horizontal display area		thd	800			DCLK
DCLK frequency@ Frame rate=60hz		fclk	Min.	Typ.	Max.	
			27.7	29.2	39.6	Mhz
1 Horizontal Line		th	900	928	1100	DCLK
HSYNC pulse width	Min.	thpw	1			DCLK
	Typ.		—			
	Max.		40			
HSYNC back porch		thbp	88	88	88	
HSYNC front porch		thfp	12	40	212	

HV mode(2)

Vertical input timing					
Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Vertical display area	tvd		480		H
VSYNC period time	tv	513	525	600	H
VSYNC pulse width	tvpw	1	—	3	H
VSYNC back porch	tvb	32	32	32	H
VSYNC front porch	tvfp	1	13	88	H

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7. ELECTRICAL SPECIFICATION

7.1. Absolute Maximum Ratings

VOLTAGE (TA = 25°C, GND = AGND = GND_LVDS = 0V)

	Min.	Max.	Unit
Digital Supply Voltage, VDD	-0.5	+5.0	V
Analog Supply Voltage, AVDD, V1~V14	-0.5	+15.0	V

TEMPERATURE

	Min.	Max.	Unit
Operating temperature	-20	+85	°C
Storage temperature	-55	+125	°C

Comments

Stresses above those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only. Functional operation of this device at these or any other conditions above those indicated in the operational sections of this specification is not implied and exposed to absolute maximum rating conditions for extended periods may affect device reliability.

7.2. Recommended Operating Range

Recommended Operating Range (TA = -20 to 85°C, GND = AGND = GND_LVDS = 0V)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Digital supply voltage	VDD	2.3	3.3	3.6	V
Analog supply voltage	AVDD	8	-	13.5	V
Digital input voltage	VIN	0	-	VDD	V

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7.3. DC Electrical Characteristics

DC Characteristics

(TA = -20 to 85°C, VDD = 2.3 to 3.6V, AVDD = 8 to 13.5V, GND = AGND = GND_LVDS = 0V)

7.3.1. TTL mode

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Low level input voltage	Vil	For the digital circuit	0	-	0.3×VDD	V
High level input voltage	Vih	For the digital circuit	0.7×VDD	-	VDD	V
Input leakage current	Ii	For the digital circuit	-	-	±1	μA
High level output voltage	Voh	Ioh= -400 μA	VDD-0.4	-	-	V
Low level output voltage	Vol	Iol= +400 μA	-	-	GND+0.4	V
Pull low/high resistor	Ri	For the digital input pin @ VDD=3.3V	200K	250K	300K	ohm
Digital Operation current	Idd	Fclk=65 MHz, FLD=50KHz, VDD=3.3V	-	15	25	mA
Digital Stand-by current	Ist1	Clock and all functions are stopped	-	10	50	μA
Analog Operating Current	Idda	No load, Fclk=65MHz, FLD=50KHz @ AVDD=10V,V1=8V, V14=0.4V	-	10	12	mA
Analog Stand-by current	Ist2	No load, Clock and all functions are Stopped	-	10	50	μA
Input level of V1 ~ V7	Vref1	Gamma correction voltage input	0.4*AVDD	-	AVDD-0.1	V
Input level of V8 ~ V14	Vref2	Gamma correction voltage input	0.1	-	0.6*AVDD	V
Output Voltage deviation	Vod1	Vo = AVSS+0.1V ~ AVSS+0.5V and Vo = AVDD-0.5V ~ AVDD-0.1V	-	±20	±35	mV
Output Voltage deviation	Vod2	Vo = AVSS+0.5V ~ AVDD-0.5V	-	±15	±20	mV
Output Voltage Offset between Chips	Voc	Vo = AVSS+0.5V ~ AVDD-0.5V	-	-	±20	mV
Dynamic Range of Output	Vdr	SO1 ~ SO1536	0.1	-	AVDD-0.1	V
Sinking Current of Outputs	IOLy	SO1 ~ SO1536; Vo=0.1V v.s 1.0V , AVDD=13.5V	80	-	-	uA
Driving Current of Outputs	IOHy	SO1 ~ SO1536; Vo=13.4V v.s 12.5V , AVDD=13.5V	80	-	-	uA
Resistance of Gamma Table	Rg	Rn: Internal gamma resistor	0.7*Rn	1.0*Rn	1.3*Rn	ohm

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7.3.2. LVDS mode(Receiver Differential :PIND0~PIND3,NIND0~NIND3,PINC,NINC)

LVDS DC characteristic

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Differential input high threshold voltage	RxVTH			+0.1V	V	RxVCM=1.2V
Differential input low threshold voltage	RxVTL	-0.1			V	
Input voltage range(single-end)	RxVIN	0		2.4	V	
Differential input common mode voltage	RxVCM	$\|V_{ID}\|/2$		2.4 -$\|V_{ID}\|/2$	V	
Differential input voltage	$\|V_{ID}\|$	0.2		0.6	V	
Differential input leakage current	RxVTH	-10		+10	V	
LVDS Digital Operating Current	Iddlvsd	-	40(TBD)	50	mA	Fclk=65Mhz, VDD=3.3V
LVDS Digital Standby Current	Istlvds	-	10(TBD)	50	uA	Clock & all functions are stop

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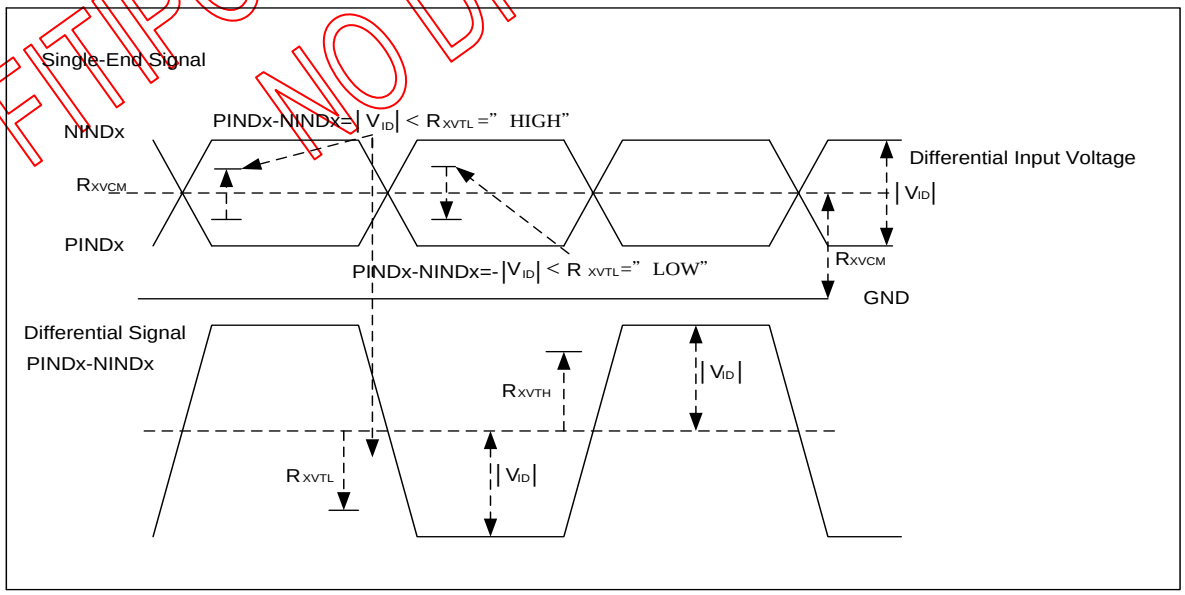

LVDS DC Characteristic

7.3.3. Power

Power

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
VCOM buffer input voltage	VCOMI	1	_	AVDD	V	
VCOM buffer output voltage	VCOMO	VCOMI-0.2	VCOMI	VCOMI+0.2	V	
VCOM buffer output current	IVCOM	_	_	10	mA	VCOMO= 5V vs 4.9V

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7.4. AC Electrical Characteristics

(TA = -20 to 85°C, VDD = 2.3 to 3.6V, AVDD = 8 to 13.5V, GND = AGND = 0V)

TTL mode

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
VDD Power On Slew rate	TPOR	From 0V to 90% VDD	1	-	20	ms
RST pulse width	TRST	DCLK = 65MHz	50	-	-	us
DCLK cycle time	Tcph	-	14	-	-	ns
DCLK pulse duty	Tcwh	-	40	50	60	%
VSD setup time	Tvst	-	5	-	-	ns
VSD hold time	Tvhd	-	5	-	-	ns
HSD setup time	Thst	-	5	-	-	ns
HSD hold time	Thhd	-	5	-	-	ns
Data set-up time	Tdsu	D0[7:0], D1[7:0], D2[7:0] to DCLK	5	-	-	ns
Data hold time	Tdhd	D0[7:0], D1[7:0], D2[7:0] to DCLK	5	-	-	ns
DE setup time	Tesu	-	5	-	-	ns
DE hold time	Tehd	-	5	-	-	ns
Output stable time	Tsst	Dual gate	-	-	3	us

LVDS mode

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Clock Frequency	R_{xFCLK}		20	-	71	MHz
Input data skew margin	T_{RSKM}	|VID|=400mV R_{xVCM}=1.2V R_{xFCLK}=71MHz	500			ps
Clock High Time	T_{LVCH}			4/(7* R_{xFCLK})		ns ns
Clock Low Time	T_{LVCL}			3/(7* R_{xFCLK})		ns
PLL wake-up-time	T_{enPLL}				150	us

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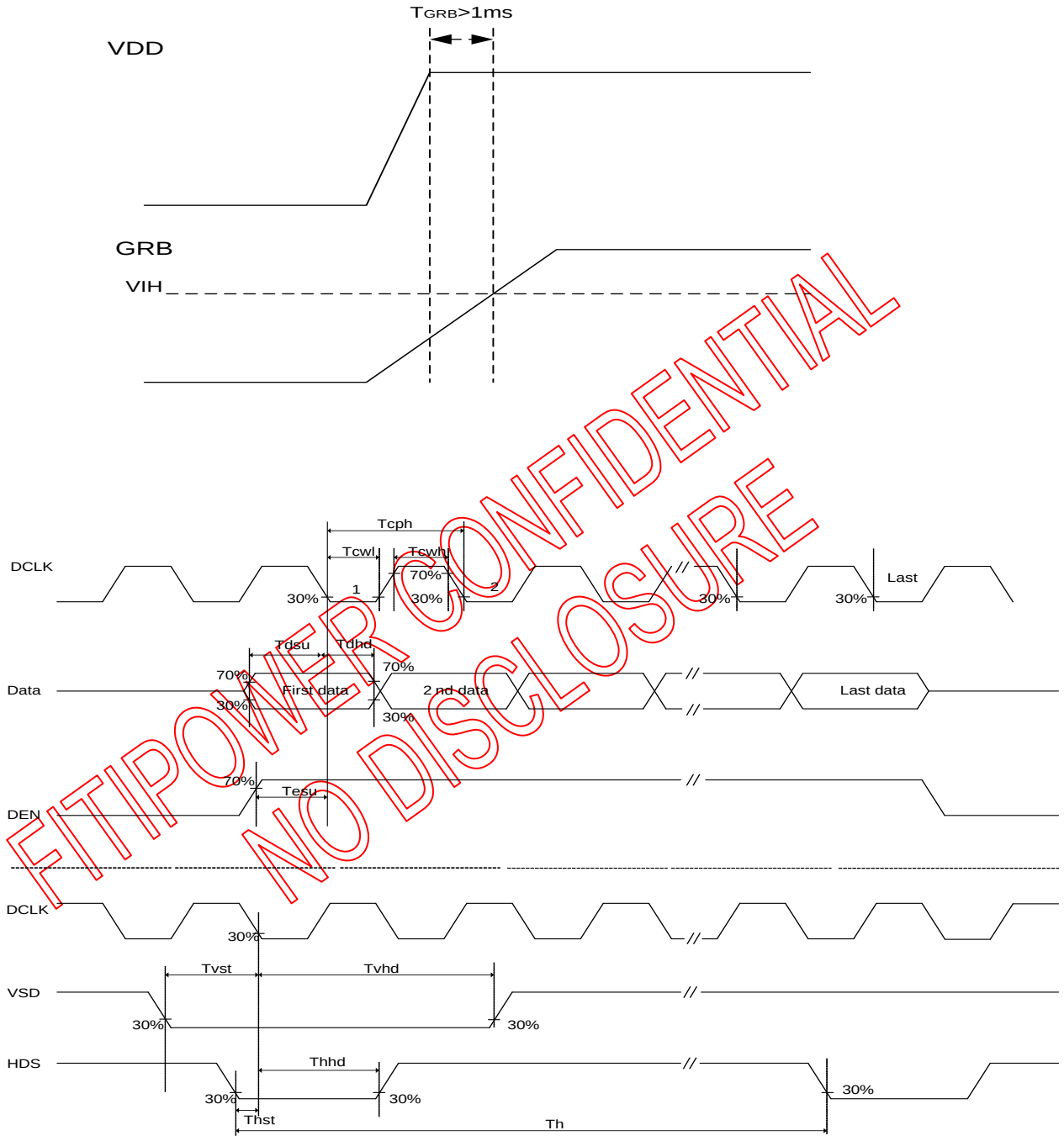

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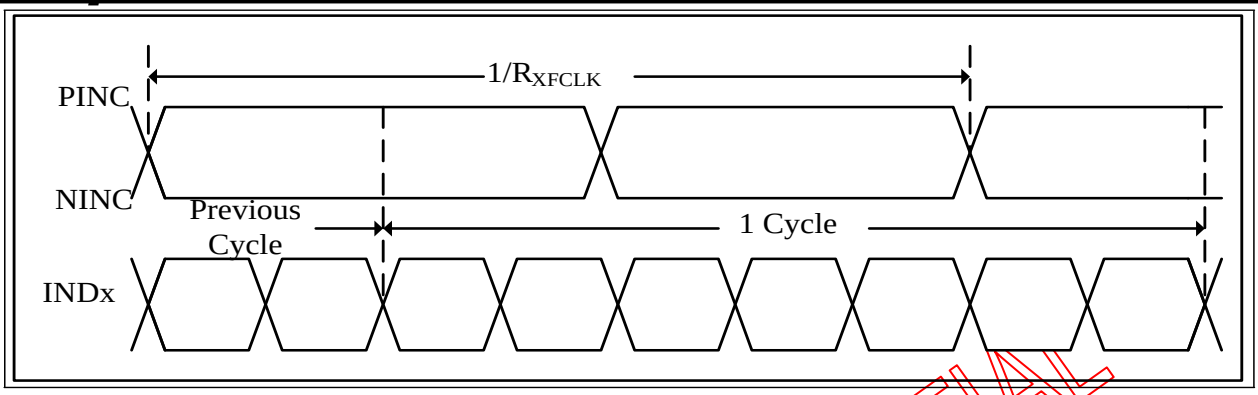
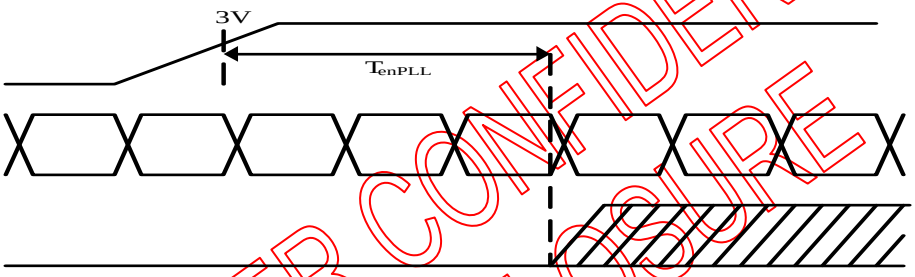
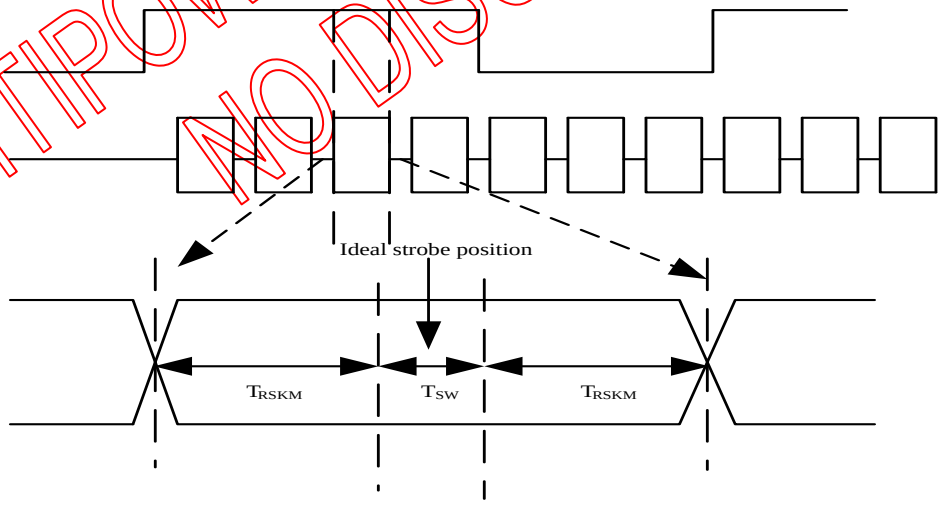
Parallel Input Clock and Data timing



LVDS timing(1)



LVDS timing(2)



TSW :Receiver strobe position
TRSKM:Receiver strobe margin

LVDS timing(3)

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7.5. Output Timing Table

Output Timing Table

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
DCLK frequency	Fclk	-	65	71	MHz	VDD =2.3~3.6V
DCLK cycle time	Tclk	14.1	15.4		ns	
DCLK pulse duty	Tcwh	40	50	60	%	Tclk
Time from HSD to Source Output	Thso	-	64	-	DCLK	
Time from HSD to LD	Thld	-	64	-	DCLK	
Time from HSD to STV	Thstv	-	2	-	DCLK	
Time from HSD to CKV	Thckv	-	20	-	DCLK	
Time from HSD to OEV	Thoev	-	4	-	DCLK	
LD pulse width	Twld	-	10	-	DCLK	
CKV pulse width	Twckv	-	66	-	DCLK	
OEV pulse width	Twoev	-	74	-	DCLK	

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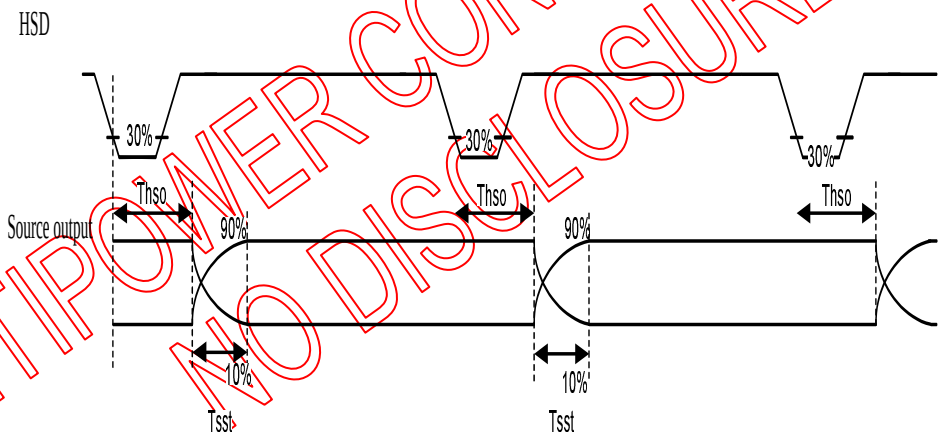
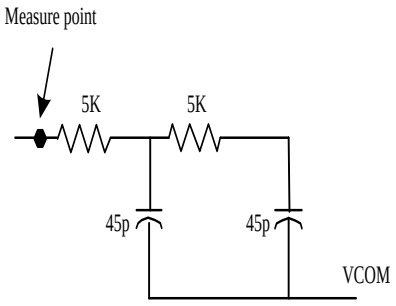
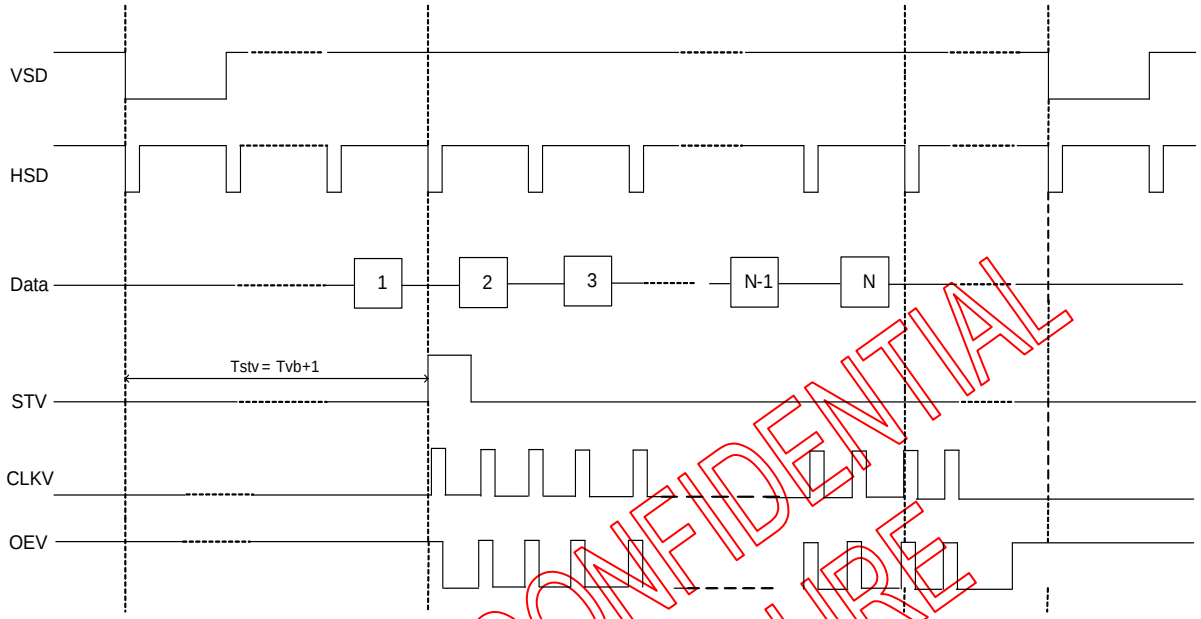




Source Output Timing

7.5.1. Vertical Timing Diagram HV mode



Vertical Timing Diagram HV mode

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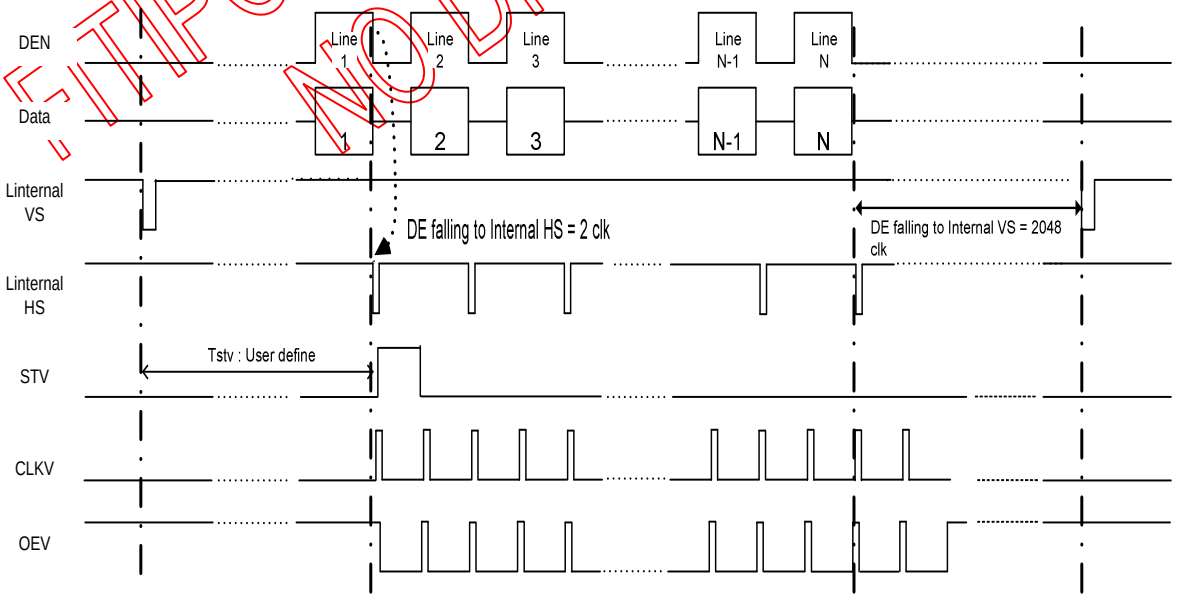
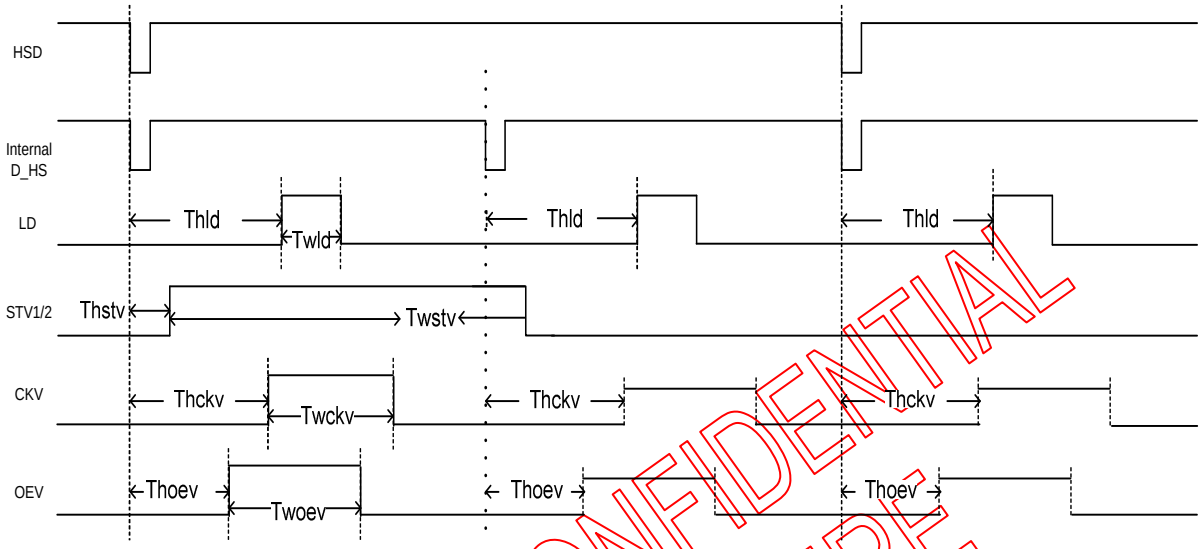
7.5.2. Vertical Timing Diagram DE mode



Vertical Timing Diagram DE mode

7.5.3. Gate output timing diagram



Gate output timing diagram

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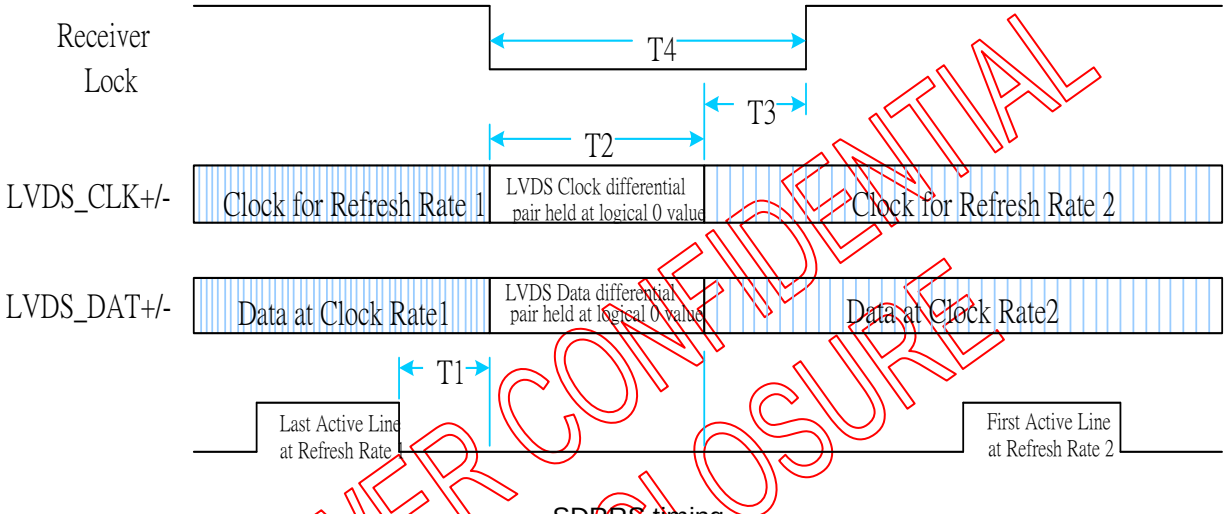
8. SDRRS TIMING DIAGRAM

SDRRS(seamless display refresh rate switching)

When Showing the still picture.it is accept to refresh rate from 60Hz to low refresh rate (for example 40Hz).The purpose is mainly for power saving. INTEL defined a timing chart switch between different refresh rate.Following this timing chart,the switch between different refresh rates is seamless for end user.



SDRRS timing

T1-Min delay from start of vertical blank to start of timing change:2 lines(HSYNC periods)
T2-Max delay for clock to transition to new frequency:100us
T3-Max receiver lock delay from stable clock: Display specific
T4-Max period during which panel maintains display(T2+T3): Display specific

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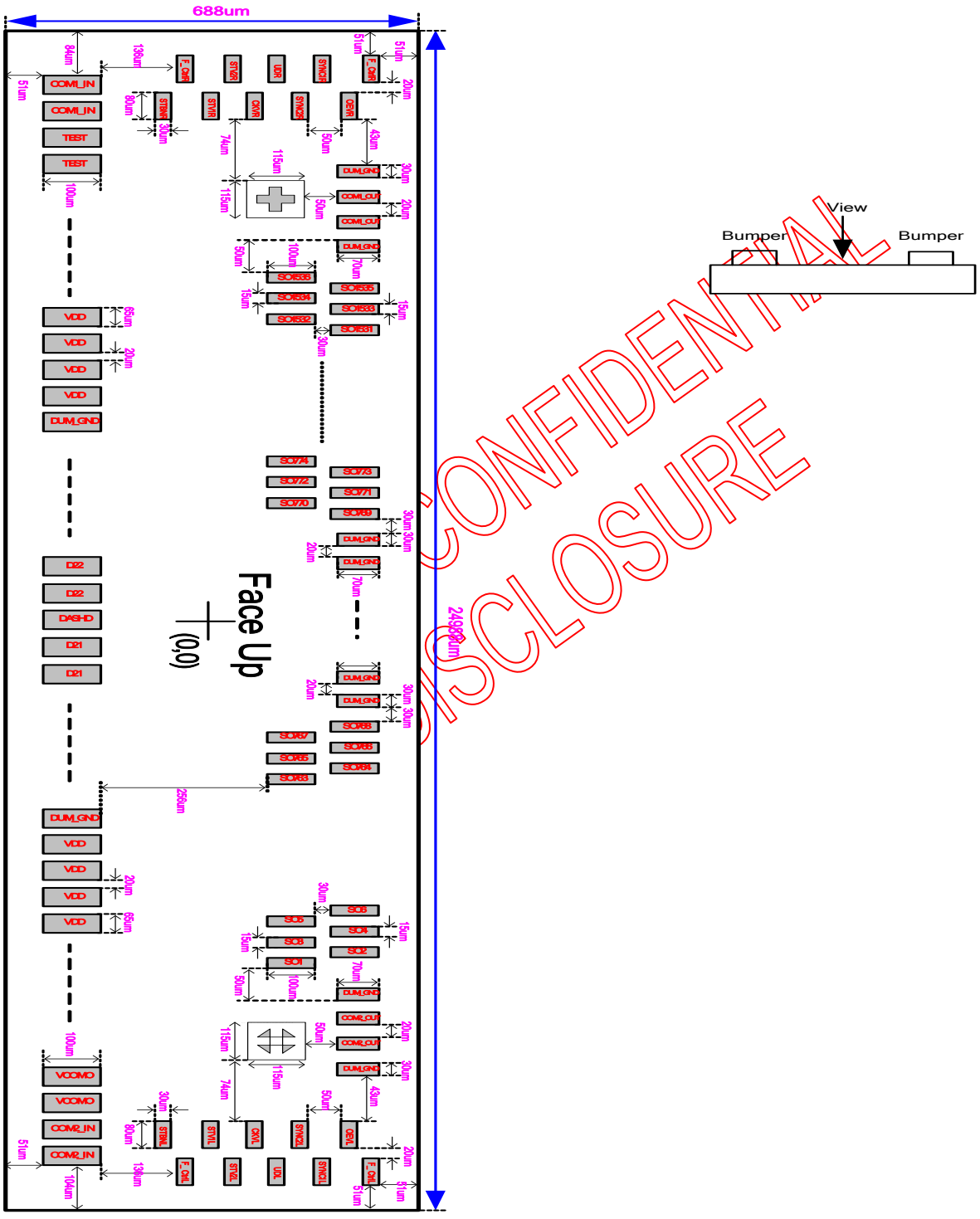
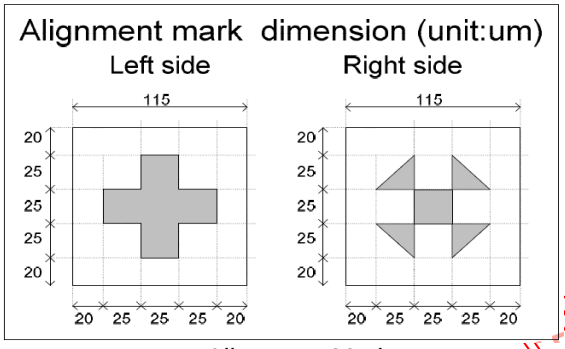
9. CHIP OUTLINE DIMENSIONS



Chip Outline Dimensions

9.1. Alignment Mark



Alignment Mark

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9.2. Pad Coordinate

Pad Num	Pad name	X	Y	W	H
1	COM1_IN	-12377.5	-243	65	100
2	COM1_IN	-12292.5	-243	65	100
3	TP[1]	-12207.5	-243	65	100
4	TP[2]	-12122.5	-243	65	100
5	TP[3]	-12037.5	-243	65	100
6	TP[4]	-11952.5	-243	65	100
7	SHIELDING	-11867.5	-243	65	100
8	AGND	-11782.5	-243	65	100
9	AGND	-11697.5	-243	65	100
10	AGND	-11612.5	-243	65	100
11	AGND	-11527.5	-243	65	100
12	SHIELDING	-11442.5	-243	65	100
13	AVDD	-11357.5	-243	65	100
14	AVDD	-11272.5	-243	65	100
15	AVDD	-11187.5	-243	65	100
16	AVDD	-11102.5	-243	65	100
17	SHIELDING	-11017.5	-243	65	100
18	GND	-10932.5	-243	65	100
19	GND	-10847.5	-243	65	100
20	GND	-10762.5	-243	65	100
21	GND	-10677.5	-243	65	100
22	SHIELDING	-10592.5	-243	65	100
23	VDD	-10507.5	-243	65	100
24	VDD	-10422.5	-243	65	100
25	VDD	-10337.5	-243	65	100
26	VDD	-10252.5	-243	65	100
27	SHIELDING	-10167.5	-243	65	100
28	TP[5]	-10082.5	-243	65	100
29	TP[6]	-9997.5	-243	65	100
30	TP[7]	-9912.5	-243	65	100
31	TP[8]	-9827.5	-243	65	100
32	TP[9]	-9742.5	-243	65	100
33	TP[10]	-9657.5	-243	65	100
34	TP[11]	-9572.5	-243	65	100
35	TP[12]	-9487.5	-243	65	100
36	TP[13]	-9402.5	-243	65	100
37	TP[14]	-9317.5	-243	65	100
38	SHIELDING	-9232.5	-243	65	100
39	TP[15]	-9147.5	-243	65	100
40	TP[16]	-9062.5	-243	65	100
41	NBW	-8977.5	-243	65	100
42	NBW	-8892.5	-243	65	100
43	PINCTL	-8807.5	-243	65	100
44	PINCTL	-8722.5	-243	65	100
45	SHIELDING	-8637.5	-243	65	100
46	TP[17]	-8552.5	-243	65	100
47	TP[18]	-8467.5	-243	65	100
48	SHIELDING	-8382.5	-243	65	100
49	DITHER	-8297.5	-243	65	100
50	DITHER	-8212.5	-243	65	100
51	HFRC	-8127.5	-243	65	100
52	HFRC	-8042.5	-243	65	100
53	TP[19]	-7957.5	-243	65	100
54	TP[20]	-7872.5	-243	65	100
55	FRAME	-7787.5	-243	65	100
56	FRAME	-7702.5	-243	65	100
57	SEL[0]	-7617.5	-243	65	100
58	SEL[0]	-7532.5	-243	65	100
59	SEL[1]	-7447.5	-243	65	100
60	SEL[1]	-7362.5	-243	65	100

Pad Num	Pad name	X	Y	W	H
61	CSB	-7277.5	-243	65	100
62	CSB	-7192.5	-243	65	100
63	SHIELDING	-7107.5	-243	65	100
64	SDA	-7022.5	-243	65	100
65	SDA	-6937.5	-243	65	100
66	SHIELDING	-6852.5	-243	65	100
67	SCL	-6767.5	-243	65	100
68	SCL	-6682.5	-243	65	100
69	SHIELDING	-6597.5	-243	65	100
70	VDD	-6512.5	-243	65	100
71	VDD	-6427.5	-243	65	100
72	VDD	-6342.5	-243	65	100
73	VDD	-6257.5	-243	65	100
74	SHIELDING	-6172.5	-243	65	100
75	GND	-6087.5	-243	65	100
76	GND	-6002.5	-243	65	100
77	GND	-5917.5	-243	65	100
78	GND	-5832.5	-243	65	100
79	SHIELDING	-5747.5	-243	65	100
80	AVDD	-5662.5	-243	65	100
81	AVDD	-5577.5	-243	65	100
82	AVDD	-5492.5	-243	65	100
83	AVDD	-5407.5	-243	65	100
84	SHIELDING	-5322.5	-243	65	100
85	AGND	-5237.5	-243	65	100
86	AGND	-5152.5	-243	65	100
87	AGND	-5067.5	-243	65	100
88	AGND	-4982.5	-243	65	100
89	SHIELDING	-4897.5	-243	65	100
90	V1	-4812.5	-243	65	100
91	V1	-4727.5	-243	65	100
92	V2	-4642.5	-243	65	100
93	V2	-4557.5	-243	65	100
94	V3	-4472.5	-243	65	100
95	V3	-4387.5	-243	65	100
96	V4	-4302.5	-243	65	100
97	V4	-4217.5	-243	65	100
98	V5	-4132.5	-243	65	100
99	V5	-4047.5	-243	65	100
100	V6	-3962.5	-243	65	100
101	V6	-3877.5	-243	65	100
102	V7	-3792.5	-243	65	100
103	V7	-3707.5	-243	65	100
104	GAMH	-3622.5	-243	65	100
105	GAMH	-3537.5	-243	65	100
106	SHIELDING	-3452.5	-243	65	100
107	DASHD	-3367.5	-243	65	100
108	VSD	-3282.5	-243	65	100
109	DASHD	-3197.5	-243	65	100
110	HSD	-3112.5	-243	65	100
111	DASHD	-3027.5	-243	65	100
112	DEN	-2942.5	-243	65	100
113	GND_LVDS	-2857.5	-243	65	100
114	GND_LVDS	-2772.5	-243	65	100
115	GND_LVDS	-2687.5	-243	65	100
116	GND_LVDS	-2602.5	-243	65	100
117	D27	-2517.5	-243	65	100
118	D26	-2432.5	-243	65	100
119	DASHD	-2347.5	-243	65	100
120	D25	-2262.5	-243	65	100

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Pad Num	Pad name	X	Y	W	H
121	D24	-2177.5	-243	65	100
122	DASHD	-2092.5	-243	65	100
123	D23	-2007.5	-243	65	100
124	D22	-1922.5	-243	65	100
125	DASHD	-1837.5	-243	65	100
126	D21	-1752.5	-243	65	100
127	D20	-1667.5	-243	65	100
128	DASHD	-1582.5	-243	65	100
129	DCLK	-1497.5	-243	65	100
130	NINC	-1412.5	-243	65	100
131	DASHD	-1327.5	-243	65	100
132	VDD_LVDS	-1242.5	-243	65	100
133	VDD_LVDS	-1157.5	-243	65	100
134	VDD_LVDS	-1072.5	-243	65	100
135	VDD_LVDS	-987.5	-243	65	100
136	REV	-902.5	-243	65	100
137	DASHD	-817.5	-243	65	100
138	D17	-732.5	-243	65	100
139	D16	-647.5	-243	65	100
140	DASHD	-562.5	-243	65	100
141	D15	-477.5	-243	65	100
142	D14	-392.5	-243	65	100
143	DASHD	-307.5	-243	65	100
144	D13	-222.5	-243	65	100
145	D12	-137.5	-243	65	100
146	DASHD	-52.5	-243	65	100
147	D11	32.5	-243	65	100
148	D10	117.5	-243	65	100
149	DASHD	202.5	-243	65	100
150	D07	287.5	-243	65	100
151	D06	372.5	-243	65	100
152	DASHD	457.5	-243	65	100
153	D05	542.5	-243	65	100
154	D04	627.5	-243	65	100
155	DASHD	712.5	-243	65	100
156	D03	797.5	-243	65	100
157	D02	882.5	-243	65	100
158	DASHD	967.5	-243	65	100
159	D01	1052.5	-243	65	100
160	D00	1137.5	-243	65	100
161	DASHD	1222.5	-243	65	100
162	SHIELDING	1307.5	-243	65	100
163	GAML	1392.5	-243	65	100
164	GAML	1477.5	-243	65	100
165	V8	1562.5	-243	65	100
166	V8	1647.5	-243	65	100
167	V9	1732.5	-243	65	100
168	V9	1817.5	-243	65	100
169	V10	1902.5	-243	65	100
170	V10	1987.5	-243	65	100
171	V11	2072.5	-243	65	100
172	V11	2157.5	-243	65	100
173	V12	2242.5	-243	65	100
174	V12	2327.5	-243	65	100
175	V13	2412.5	-243	65	100
176	V13	2497.5	-243	65	100
177	V14	2582.5	-243	65	100
178	V14	2667.5	-243	65	100
179	SHIELDING	2752.5	-243	65	100
180	AGND	2837.5	-243	65	100

Pad Num	Pad name	X	Y	W	H
181	AGND	2922.5	-243	65	100
182	AGND	3007.5	-243	65	100
183	AGND	3092.5	-243	65	100
184	SHIELDING	3177.5	-243	65	100
185	AVDD	3262.5	-243	65	100
186	AVDD	3347.5	-243	65	100
187	AVDD	3432.5	-243	65	100
188	AVDD	3517.5	-243	65	100
189	SHIELDING	3602.5	-243	65	100
190	GND	3687.5	-243	65	100
191	GND	3772.5	-243	65	100
192	GND	3857.5	-243	65	100
193	GND	3942.5	-243	65	100
194	SHIELDING	4027.5	-243	65	100
195	VDD	4112.5	-243	65	100
196	VDD	4197.5	-243	65	100
197	VDD	4282.5	-243	65	100
198	VDD	4367.5	-243	65	100
199	SHIELDING	4452.5	-243	65	100
200	DUAL	4537.5	-243	65	100
201	DUAL	4622.5	-243	65	100
202	MASL	4707.5	-243	65	100
203	MASL	4792.5	-243	65	100
204	MASLOC	4877.5	-243	65	100
205	MASLOC	4962.5	-243	65	100
206	TP[21]	5047.5	-243	65	100
207	TP[22]	5132.5	-243	65	100
208	TP[23]	5217.5	-243	65	100
209	TP[24]	5302.5	-243	65	100
210	OPDRV	5387.5	-243	65	100
211	OPDRV	5472.5	-243	65	100
212	MODE	5557.5	-243	65	100
213	MODE	5642.5	-243	65	100
214	IFSEL	5727.5	-243	65	100
215	IFSEL	5812.5	-243	65	100
216	BIST	5897.5	-243	65	100
217	BIST	5982.5	-243	65	100
218	RES[0]	6067.5	-243	65	100
219	RES[0]	6152.5	-243	65	100
220	RES[1]	6237.5	-243	65	100
221	RES[1]	6322.5	-243	65	100
222	DCLKPOL	6407.5	-243	65	100
223	DCLKPOL	6492.5	-243	65	100
224	STBYB	6577.5	-243	65	100
225	STBYB	6662.5	-243	65	100
226	GRB	6747.5	-243	65	100
227	GRB	6832.5	-243	65	100
228	SHLR	6917.5	-243	65	100
229	SHLR	7002.5	-243	65	100
230	UPDN	7087.5	-243	65	100
231	UPDN	7172.5	-243	65	100
232	SHIELDING	7257.5	-243	65	100
233	TP[25]	7342.5	-243	65	100
234	TP[26]	7427.5	-243	65	100
235	TP[27]	7512.5	-243	65	100
236	TP[28]	7597.5	-243	65	100
237	TP[29]	7682.5	-243	65	100
238	TP[30]	7767.5	-243	65	100
239	TP[31]	7852.5	-243	65	100
240	TP[32]	7937.5	-243	65	100

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Pad Num	Pad name	X	Y	W	H
241	TP[33]	8022.5	-243	65	100
242	TP[34]	8107.5	-243	65	100
243	TP[35]	8192.5	-243	65	100
244	TP[36]	8277.5	-243	65	100
245	TP[37]	8362.5	-243	65	100
246	TP[38]	8447.5	-243	65	100
247	SHIELDING	8532.5	-243	65	100
248	VDD	8617.5	-243	65	100
249	VDD	8702.5	-243	65	100
250	VDD	8787.5	-243	65	100
251	VDD	8872.5	-243	65	100
252	SHIELDING	8957.5	-243	65	100
253	GND	9042.5	-243	65	100
254	GND	9127.5	-243	65	100
255	GND	9212.5	-243	65	100
256	GND	9297.5	-243	65	100
257	SHIELDING	9382.5	-243	65	100
258	AVDD	9467.5	-243	65	100
259	AVDD	9552.5	-243	65	100
260	AVDD	9637.5	-243	65	100
261	AVDD	9722.5	-243	65	100
262	SHIELDING	9807.5	-243	65	100
263	AGND	9892.5	-243	65	100
264	AGND	9977.5	-243	65	100
265	AGND	10062.5	-243	65	100
266	AGND	10147.5	-243	65	100
267	SHIELDING	10232.5	-243	65	100
268	TP[39]	10317.5	-243	65	100
269	VCOMI	10402.5	-243	65	100
270	VCOMI	10487.5	-243	65	100
271	PWR_EN	10572.5	-243	65	100
272	PWR_EN	10657.5	-243	65	100
273	TP[40]	10742.5	-243	65	100
274	TP[41]	10827.5	-243	65	100
275	TP[42]	10912.5	-243	65	100
276	TP[43]	10997.5	-243	65	100
277	TP[44]	11082.5	-243	65	100
278	TP[45]	11167.5	-243	65	100
279	TP[46]	11252.5	-243	65	100
280	TP[47]	11337.5	-243	65	100
281	TP[48]	11422.5	-243	65	100
282	TP[49]	11507.5	-243	65	100
283	TP[50]	11592.5	-243	65	100
284	TP[51]	11677.5	-243	65	100
285	TP[52]	11762.5	-243	65	100
286	TP[53]	11847.5	-243	65	100
287	TP[54]	11932.5	-243	65	100
288	TP[55]	12017.5	-243	65	100
289	VCOMO	12102.5	-243	65	100
290	VCOMO	12187.5	-243	65	100
291	COM2_IN	12272.5	-243	65	100
292	COM2_IN	12357.5	-243	65	100
293	STBNL	12303	-82	80	30
294	F_CtrlL	12403	-42	80	30
295	STV2L	12303	-2	80	30
296	STV1L	12403	38	80	30
297	CKVL	12303	78	80	30
298	UDL	12403	118	80	30
299	SYNC2L	12303	158	80	30
300	SYNC1L	12403	198	80	30

Pad Num	Pad name	X	Y	W	H
301	OEVL	12303	238	80	30
302	F_CtrlL	12403	278	80	30
303	SHIELDING	12205	258	30	70
304	COM2_OUT	12155	258	30	70
305	COM2_OUT	12105	258	30	70
306	SHIELDING	12055	258	30	70
307	SO[1]	12012.5	113	15	100
308	SO[2]	11997.5	243	15	100
309	SO[3]	11982.5	113	15	100
310	SO[4]	11967.5	243	15	100
311	SO[5]	11952.5	113	15	100
312	SO[6]	11937.5	243	15	100
313	SO[7]	11922.5	113	15	100
314	SO[8]	11907.5	243	15	100
315	SO[9]	11892.5	113	15	100
316	SO[10]	11877.5	243	15	100
317	SO[11]	11862.5	113	15	100
318	SO[12]	11847.5	243	15	100
319	SO[13]	11832.5	113	15	100
320	SO[14]	11817.5	243	15	100
321	SO[15]	11802.5	113	15	100
322	SO[16]	11787.5	243	15	100
323	SO[17]	11772.5	113	15	100
324	SO[18]	11757.5	243	15	100
325	SO[19]	11742.5	113	15	100
326	SO[20]	11727.5	243	15	100
327	SO[21]	11712.5	113	15	100
328	SO[22]	11697.5	243	15	100
329	SO[23]	11682.5	113	15	100
330	SO[24]	11667.5	243	15	100
331	SO[25]	11652.5	113	15	100
332	SO[26]	11637.5	243	15	100
333	SO[27]	11622.5	113	15	100
334	SO[28]	11607.5	243	15	100
335	SO[29]	11592.5	113	15	100
336	SO[30]	11577.5	243	15	100
337	SO[31]	11562.5	113	15	100
338	SO[32]	11547.5	243	15	100
339	SO[33]	11532.5	113	15	100
340	SO[34]	11517.5	243	15	100
341	SO[35]	11502.5	113	15	100
342	SO[36]	11487.5	243	15	100
343	SO[37]	11472.5	113	15	100
344	SO[38]	11457.5	243	15	100
345	SO[39]	11442.5	113	15	100
346	SO[40]	11427.5	243	15	100
347	SO[41]	11412.5	113	15	100
348	SO[42]	11397.5	243	15	100
349	SO[43]	11382.5	113	15	100
350	SO[44]	11367.5	243	15	100
351	SO[45]	11352.5	113	15	100
352	SO[46]	11337.5	243	15	100
353	SO[47]	11322.5	113	15	100
354	SO[48]	11307.5	243	15	100
355	SO[49]	11292.5	113	15	100
356	SO[50]	11277.5	243	15	100
357	SO[51]	11262.5	113	15	100
358	SO[52]	11247.5	243	15	100
359	SO[53]	11232.5	113	15	100
360	SO[54]	11217.5	243	15	100

FITIPOWER CONFIDENTIAL
NO DISCLOSURE

Pad Num	Pad name	X	Y	W	H
361	SO[55]	11202.5	113	15	100
362	SO[56]	11187.5	243	15	100
363	SO[57]	11172.5	113	15	100
364	SO[58]	11157.5	243	15	100
365	SO[59]	11142.5	113	15	100
366	SO[60]	11127.5	243	15	100
367	SO[61]	11112.5	113	15	100
368	SO[62]	11097.5	243	15	100
369	SO[63]	11082.5	113	15	100
370	SO[64]	11067.5	243	15	100
371	SO[65]	11052.5	113	15	100
372	SO[66]	11037.5	243	15	100
373	SO[67]	11022.5	113	15	100
374	SO[68]	11007.5	243	15	100
375	SO[69]	10992.5	113	15	100
376	SO[70]	10977.5	243	15	100
377	SO[71]	10962.5	113	15	100
378	SO[72]	10947.5	243	15	100
379	SO[73]	10932.5	113	15	100
380	SO[74]	10917.5	243	15	100
381	SO[75]	10902.5	113	15	100
382	SO[76]	10887.5	243	15	100
383	SO[77]	10872.5	113	15	100
384	SO[78]	10857.5	243	15	100
385	SO[79]	10842.5	113	15	100
386	SO[80]	10827.5	243	15	100
387	SO[81]	10812.5	113	15	100
388	SO[82]	10797.5	243	15	100
389	SO[83]	10782.5	113	15	100
390	SO[84]	10767.5	243	15	100
391	SO[85]	10752.5	113	15	100
392	SO[86]	10737.5	243	15	100
393	SO[87]	10722.5	113	15	100
394	SO[88]	10707.5	243	15	100
395	SO[89]	10692.5	113	15	100
396	SO[90]	10677.5	243	15	100
397	SO[91]	10662.5	113	15	100
398	SO[92]	10647.5	243	15	100
399	SO[93]	10632.5	113	15	100
400	SO[94]	10617.5	243	15	100
401	SO[95]	10602.5	113	15	100
402	SO[96]	10587.5	243	15	100
403	SO[97]	10572.5	113	15	100
404	SO[98]	10557.5	243	15	100
405	SO[99]	10542.5	113	15	100
406	SO[100]	10527.5	243	15	100
407	SO[101]	10512.5	113	15	100
408	SO[102]	10497.5	243	15	100
409	SO[103]	10482.5	113	15	100
410	SO[104]	10467.5	243	15	100
411	SO[105]	10452.5	113	15	100
412	SO[106]	10437.5	243	15	100
413	SO[107]	10422.5	113	15	100
414	SO[108]	10407.5	243	15	100
415	SO[109]	10392.5	113	15	100
416	SO[110]	10377.5	243	15	100
417	SO[111]	10362.5	113	15	100
418	SO[112]	10347.5	243	15	100
419	SO[113]	10332.5	113	15	100
420	SO[114]	10317.5	243	15	100

Pad Num	Pad name	X	Y	W	H
421	SO[115]	10302.5	113	15	100
422	SO[116]	10287.5	243	15	100
423	SO[117]	10272.5	113	15	100
424	SO[118]	10257.5	243	15	100
425	SO[119]	10242.5	113	15	100
426	SO[120]	10227.5	243	15	100
427	SO[121]	10212.5	113	15	100
428	SO[122]	10197.5	243	15	100
429	SO[123]	10182.5	113	15	100
430	SO[124]	10167.5	243	15	100
431	SO[125]	10152.5	113	15	100
432	SO[126]	10137.5	243	15	100
433	SO[127]	10122.5	113	15	100
434	SO[128]	10107.5	243	15	100
435	SO[129]	10092.5	113	15	100
436	SO[130]	10077.5	243	15	100
437	SO[131]	10062.5	113	15	100
438	SO[132]	10047.5	243	15	100
439	SO[133]	10032.5	113	15	100
440	SO[134]	10017.5	243	15	100
441	SO[135]	10002.5	113	15	100
442	SO[136]	9987.5	243	15	100
443	SO[137]	9972.5	113	15	100
444	SO[138]	9957.5	243	15	100
445	SO[139]	9942.5	113	15	100
446	SO[140]	9927.5	243	15	100
447	SO[141]	9912.5	113	15	100
448	SO[142]	9897.5	243	15	100
449	SO[143]	9882.5	113	15	100
450	SO[144]	9867.5	243	15	100
451	SO[145]	9852.5	113	15	100
452	SO[146]	9837.5	243	15	100
453	SO[147]	9822.5	113	15	100
454	SO[148]	9807.5	243	15	100
455	SO[149]	9792.5	113	15	100
456	SO[150]	9777.5	243	15	100
457	SO[151]	9762.5	113	15	100
458	SO[152]	9747.5	243	15	100
459	SO[153]	9732.5	113	15	100
460	SO[154]	9717.5	243	15	100
461	SO[155]	9702.5	113	15	100
462	SO[156]	9687.5	243	15	100
463	SO[157]	9672.5	113	15	100
464	SO[158]	9657.5	243	15	100
465	SO[159]	9642.5	113	15	100
466	SO[160]	9627.5	243	15	100
467	SO[161]	9612.5	113	15	100
468	SO[162]	9597.5	243	15	100
469	SO[163]	9582.5	113	15	100
470	SO[164]	9567.5	243	15	100
471	SO[165]	9552.5	113	15	100
472	SO[166]	9537.5	243	15	100
473	SO[167]	9522.5	113	15	100
474	SO[168]	9507.5	243	15	100
475	SO[169]	9492.5	113	15	100
476	SO[170]	9477.5	243	15	100
477	SO[171]	9462.5	113	15	100
478	SO[172]	9447.5	243	15	100
479	SO[173]	9432.5	113	15	100
480	SO[174]	9417.5	243	15	100

FITIPOWER CONFIDENTIAL
NO DISCLOSURE

Pad Num	Pad name	X	Y	W	H
481	SO[175]	9402.5	113	15	100
482	SO[176]	9387.5	243	15	100
483	SO[177]	9372.5	113	15	100
484	SO[178]	9357.5	243	15	100
485	SO[179]	9342.5	113	15	100
486	SO[180]	9327.5	243	15	100
487	SO[181]	9312.5	113	15	100
488	SO[182]	9297.5	243	15	100
489	SO[183]	9282.5	113	15	100
490	SO[184]	9267.5	243	15	100
491	SO[185]	9252.5	113	15	100
492	SO[186]	9237.5	243	15	100
493	SO[187]	9222.5	113	15	100
494	SO[188]	9207.5	243	15	100
495	SO[189]	9192.5	113	15	100
496	SO[190]	9177.5	243	15	100
497	SO[191]	9162.5	113	15	100
498	SO[192]	9147.5	243	15	100
499	SO[193]	9132.5	113	15	100
500	SO[194]	9117.5	243	15	100
501	SO[195]	9102.5	113	15	100
502	SO[196]	9087.5	243	15	100
503	SO[197]	9072.5	113	15	100
504	SO[198]	9057.5	243	15	100
505	SO[199]	9042.5	113	15	100
506	SO[200]	9027.5	243	15	100
507	SO[201]	9012.5	113	15	100
508	SO[202]	8997.5	243	15	100
509	SO[203]	8982.5	113	15	100
510	SO[204]	8967.5	243	15	100
511	SO[205]	8952.5	113	15	100
512	SO[206]	8937.5	243	15	100
513	SO[207]	8922.5	113	15	100
514	SO[208]	8907.5	243	15	100
515	SO[209]	8892.5	113	15	100
516	SO[210]	8877.5	243	15	100
517	SO[211]	8862.5	113	15	100
518	SO[212]	8847.5	243	15	100
519	SO[213]	8832.5	113	15	100
520	SO[214]	8817.5	243	15	100
521	SO[215]	8802.5	113	15	100
522	SO[216]	8787.5	243	15	100
523	SO[217]	8772.5	113	15	100
524	SO[218]	8757.5	243	15	100
525	SO[219]	8742.5	113	15	100
526	SO[220]	8727.5	243	15	100
527	SO[221]	8712.5	113	15	100
528	SO[222]	8697.5	243	15	100
529	SO[223]	8682.5	113	15	100
530	SO[224]	8667.5	243	15	100
531	SO[225]	8652.5	113	15	100
532	SO[226]	8637.5	243	15	100
533	SO[227]	8622.5	113	15	100
534	SO[228]	8607.5	243	15	100
535	SO[229]	8592.5	113	15	100
536	SO[230]	8577.5	243	15	100
537	SO[231]	8562.5	113	15	100
538	SO[232]	8547.5	243	15	100
539	SO[233]	8532.5	113	15	100
540	SO[234]	8517.5	243	15	100

Pad Num	Pad name	X	Y	W	H
541	SO[235]	8502.5	113	15	100
542	SO[236]	8487.5	243	15	100
543	SO[237]	8472.5	113	15	100
544	SO[238]	8457.5	243	15	100
545	SO[239]	8442.5	113	15	100
546	SO[240]	8427.5	243	15	100
547	SO[241]	8412.5	113	15	100
548	SO[242]	8397.5	243	15	100
549	SO[243]	8382.5	113	15	100
550	SO[244]	8367.5	243	15	100
551	SO[245]	8352.5	113	15	100
552	SO[246]	8337.5	243	15	100
553	SO[247]	8322.5	113	15	100
554	SO[248]	8307.5	243	15	100
555	SO[249]	8292.5	113	15	100
556	SO[250]	8277.5	243	15	100
557	SO[251]	8262.5	113	15	100
558	SO[252]	8247.5	243	15	100
559	SO[253]	8232.5	113	15	100
560	SO[254]	8217.5	243	15	100
561	SO[255]	8202.5	113	15	100
562	SO[256]	8187.5	243	15	100
563	SO[257]	8172.5	113	15	100
564	SO[258]	8157.5	243	15	100
565	SO[259]	8142.5	113	15	100
566	SO[260]	8127.5	243	15	100
567	SO[261]	8112.5	113	15	100
568	SO[262]	8097.5	243	15	100
569	SO[263]	8082.5	113	15	100
570	SO[264]	8067.5	243	15	100
571	SO[265]	8052.5	113	15	100
572	SO[266]	8037.5	243	15	100
573	SO[267]	8022.5	113	15	100
574	SO[268]	8007.5	243	15	100
575	SO[269]	7992.5	113	15	100
576	SO[270]	7977.5	243	15	100
577	SO[271]	7962.5	113	15	100
578	SO[272]	7947.5	243	15	100
579	SO[273]	7932.5	113	15	100
580	SO[274]	7917.5	243	15	100
581	SO[275]	7902.5	113	15	100
582	SO[276]	7887.5	243	15	100
583	SO[277]	7872.5	113	15	100
584	SO[278]	7857.5	243	15	100
585	SO[279]	7842.5	113	15	100
586	SO[280]	7827.5	243	15	100
587	SO[281]	7812.5	113	15	100
588	SO[282]	7797.5	243	15	100
589	SO[283]	7782.5	113	15	100
590	SO[284]	7767.5	243	15	100
591	SO[285]	7752.5	113	15	100
592	SO[286]	7737.5	243	15	100
593	SO[287]	7722.5	113	15	100
594	SO[288]	7707.5	243	15	100
595	SO[289]	7692.5	113	15	100
596	SO[290]	7677.5	243	15	100
597	SO[291]	7662.5	113	15	100
598	SO[292]	7647.5	243	15	100
599	SO[293]	7632.5	113	15	100
600	SO[294]	7617.5	243	15	100

FITIPOWER CONFIDENTIAL
NO DISCLOSURE

Pad Num	Pad name	X	Y	W	H
601	SO[295]	7602.5	113	15	100
602	SO[296]	7587.5	243	15	100
603	SO[297]	7572.5	113	15	100
604	SO[298]	7557.5	243	15	100
605	SO[299]	7542.5	113	15	100
606	SO[300]	7527.5	243	15	100
607	SO[301]	7512.5	113	15	100
608	SO[302]	7497.5	243	15	100
609	SO[303]	7482.5	113	15	100
610	SO[304]	7467.5	243	15	100
611	SO[305]	7452.5	113	15	100
612	SO[306]	7437.5	243	15	100
613	SO[307]	7422.5	113	15	100
614	SO[308]	7407.5	243	15	100
615	SO[309]	7392.5	113	15	100
616	SO[310]	7377.5	243	15	100
617	SO[311]	7362.5	113	15	100
618	SO[312]	7347.5	243	15	100
619	SO[313]	7332.5	113	15	100
620	SO[314]	7317.5	243	15	100
621	SO[315]	7302.5	113	15	100
622	SO[316]	7287.5	243	15	100
623	SO[317]	7272.5	113	15	100
624	SO[318]	7257.5	243	15	100
625	SO[319]	7242.5	113	15	100
626	SO[320]	7227.5	243	15	100
627	SO[321]	7212.5	113	15	100
628	SO[322]	7197.5	243	15	100
629	SO[323]	7182.5	113	15	100
630	SO[324]	7167.5	243	15	100
631	SO[325]	7152.5	113	15	100
632	SO[326]	7137.5	243	15	100
633	SO[327]	7122.5	113	15	100
634	SO[328]	7107.5	243	15	100
635	SO[329]	7092.5	113	15	100
636	SO[330]	7077.5	243	15	100
637	SO[331]	7062.5	113	15	100
638	SO[332]	7047.5	243	15	100
639	SO[333]	7032.5	113	15	100
640	SO[334]	7017.5	243	15	100
641	SO[335]	7002.5	113	15	100
642	SO[336]	6987.5	243	15	100
643	SO[337]	6972.5	113	15	100
644	SO[338]	6957.5	243	15	100
645	SO[339]	6942.5	113	15	100
646	SO[340]	6927.5	243	15	100
647	SO[341]	6912.5	113	15	100
648	SO[342]	6897.5	243	15	100
649	SO[343]	6882.5	113	15	100
650	SO[344]	6867.5	243	15	100
651	SO[345]	6852.5	113	15	100
652	SO[346]	6837.5	243	15	100
653	SO[347]	6822.5	113	15	100
654	SO[348]	6807.5	243	15	100
655	SO[349]	6792.5	113	15	100
656	SO[350]	6777.5	243	15	100
657	SO[351]	6762.5	113	15	100
658	SO[352]	6747.5	243	15	100
659	SO[353]	6732.5	113	15	100
660	SO[354]	6717.5	243	15	100

Pad Num	Pad name	X	Y	W	H
661	SO[355]	6702.5	113	15	100
662	SO[356]	6687.5	243	15	100
663	SO[357]	6672.5	113	15	100
664	SO[358]	6657.5	243	15	100
665	SO[359]	6642.5	113	15	100
666	SO[360]	6627.5	243	15	100
667	SO[361]	6612.5	113	15	100
668	SO[362]	6597.5	243	15	100
669	SO[363]	6582.5	113	15	100
670	SO[364]	6567.5	243	15	100
671	SO[365]	6552.5	113	15	100
672	SO[366]	6537.5	243	15	100
673	SO[367]	6522.5	113	15	100
674	SO[368]	6507.5	243	15	100
675	SO[369]	6492.5	113	15	100
676	SO[370]	6477.5	243	15	100
677	SO[371]	6462.5	113	15	100
678	SO[372]	6447.5	243	15	100
679	SO[373]	6432.5	113	15	100
680	SO[374]	6417.5	243	15	100
681	SO[375]	6402.5	113	15	100
682	SO[376]	6387.5	243	15	100
683	SO[377]	6372.5	113	15	100
684	SO[378]	6357.5	243	15	100
685	SO[379]	6342.5	113	15	100
686	SO[380]	6327.5	243	15	100
687	SO[381]	6312.5	113	15	100
688	SO[382]	6297.5	243	15	100
689	SO[383]	6282.5	113	15	100
690	SO[384]	6267.5	243	15	100
691	SO[385]	6252.5	113	15	100
692	SO[386]	6237.5	243	15	100
693	SO[387]	6222.5	113	15	100
694	SO[388]	6207.5	243	15	100
695	SO[389]	6192.5	113	15	100
696	SO[390]	6177.5	243	15	100
697	SO[391]	6162.5	113	15	100
698	SO[392]	6147.5	243	15	100
699	SO[393]	6132.5	113	15	100
700	SO[394]	6117.5	243	15	100
701	SO[395]	6102.5	113	15	100
702	SO[396]	6087.5	243	15	100
703	SO[397]	6072.5	113	15	100
704	SO[398]	6057.5	243	15	100
705	SO[399]	6042.5	113	15	100
706	SO[400]	6027.5	243	15	100
707	SO[401]	6012.5	113	15	100
708	SO[402]	5997.5	243	15	100
709	SO[403]	5982.5	113	15	100
710	SO[404]	5967.5	243	15	100
711	SO[405]	5952.5	113	15	100
712	SO[406]	5937.5	243	15	100
713	SO[407]	5922.5	113	15	100
714	SO[408]	5907.5	243	15	100
715	SO[409]	5892.5	113	15	100
716	SO[410]	5877.5	243	15	100
717	SO[411]	5862.5	113	15	100
718	SO[412]	5847.5	243	15	100
719	SO[413]	5832.5	113	15	100
720	SO[414]	5817.5	243	15	100

FITIPOWER CONFIDENTIAL
NO DISCLOSURE

Pad Num	Pad name	X	Y	W	H
721	SO[415]	5802.5	113	15	100
722	SO[416]	5787.5	243	15	100
723	SO[417]	5772.5	113	15	100
724	SO[418]	5757.5	243	15	100
725	SO[419]	5742.5	113	15	100
726	SO[420]	5727.5	243	15	100
727	SO[421]	5712.5	113	15	100
728	SO[422]	5697.5	243	15	100
729	SO[423]	5682.5	113	15	100
730	SO[424]	5667.5	243	15	100
731	SO[425]	5652.5	113	15	100
732	SO[426]	5637.5	243	15	100
733	SO[427]	5622.5	113	15	100
734	SO[428]	5607.5	243	15	100
735	SO[429]	5592.5	113	15	100
736	SO[430]	5577.5	243	15	100
737	SO[431]	5562.5	113	15	100
738	SO[432]	5547.5	243	15	100
739	SO[433]	5532.5	113	15	100
740	SO[434]	5517.5	243	15	100
741	SO[435]	5502.5	113	15	100
742	SO[436]	5487.5	243	15	100
743	SO[437]	5472.5	113	15	100
744	SO[438]	5457.5	243	15	100
745	SO[439]	5442.5	113	15	100
746	SO[440]	5427.5	243	15	100
747	SO[441]	5412.5	113	15	100
748	SO[442]	5397.5	243	15	100
749	SO[443]	5382.5	113	15	100
750	SO[444]	5367.5	243	15	100
751	SO[445]	5352.5	113	15	100
752	SO[446]	5337.5	243	15	100
753	SO[447]	5322.5	113	15	100
754	SO[448]	5307.5	243	15	100
755	SO[449]	5292.5	113	15	100
756	SO[450]	5277.5	243	15	100
757	SO[451]	5262.5	113	15	100
758	SO[452]	5247.5	243	15	100
759	SO[453]	5232.5	113	15	100
760	SO[454]	5217.5	243	15	100
761	SO[455]	5202.5	113	15	100
762	SO[456]	5187.5	243	15	100
763	SO[457]	5172.5	113	15	100
764	SO[458]	5157.5	243	15	100
765	SO[459]	5142.5	113	15	100
766	SO[460]	5127.5	243	15	100
767	SO[461]	5112.5	113	15	100
768	SO[462]	5097.5	243	15	100
769	SO[463]	5082.5	113	15	100
770	SO[464]	5067.5	243	15	100
771	SO[465]	5052.5	113	15	100
772	SO[466]	5037.5	243	15	100
773	SO[467]	5022.5	113	15	100
774	SO[468]	5007.5	243	15	100
775	SO[469]	4992.5	113	15	100
776	SO[470]	4977.5	243	15	100
777	SO[471]	4962.5	113	15	100
778	SO[472]	4947.5	243	15	100
779	SO[473]	4932.5	113	15	100
780	SO[474]	4917.5	243	15	100

Pad Num	Pad name	X	Y	W	H
781	SO[475]	4902.5	113	15	100
782	SO[476]	4887.5	243	15	100
783	SO[477]	4872.5	113	15	100
784	SO[478]	4857.5	243	15	100
785	SO[479]	4842.5	113	15	100
786	SO[480]	4827.5	243	15	100
787	SO[481]	4812.5	113	15	100
788	SO[482]	4797.5	243	15	100
789	SO[483]	4782.5	113	15	100
790	SO[484]	4767.5	243	15	100
791	SO[485]	4752.5	113	15	100
792	SO[486]	4737.5	243	15	100
793	SO[487]	4722.5	113	15	100
794	SO[488]	4707.5	243	15	100
795	SO[489]	4692.5	113	15	100
796	SO[490]	4677.5	243	15	100
797	SO[491]	4662.5	113	15	100
798	SO[492]	4647.5	243	15	100
799	SO[493]	4632.5	113	15	100
800	SO[494]	4617.5	243	15	100
801	SO[495]	4602.5	113	15	100
802	SO[496]	4587.5	243	15	100
803	SO[497]	4572.5	113	15	100
804	SO[498]	4557.5	243	15	100
805	SO[499]	4542.5	113	15	100
806	SO[500]	4527.5	243	15	100
807	SO[501]	4512.5	113	15	100
808	SO[502]	4497.5	243	15	100
809	SO[503]	4482.5	113	15	100
810	SO[504]	4467.5	243	15	100
811	SO[505]	4452.5	113	15	100
812	SO[506]	4437.5	243	15	100
813	SO[507]	4422.5	113	15	100
814	SO[508]	4407.5	243	15	100
815	SO[509]	4392.5	113	15	100
816	SO[510]	4377.5	243	15	100
817	SO[511]	4362.5	113	15	100
818	SO[512]	4347.5	243	15	100
819	SO[513]	4332.5	113	15	100
820	SO[514]	4317.5	243	15	100
821	SO[515]	4302.5	113	15	100
822	SO[516]	4287.5	243	15	100
823	SO[517]	4272.5	113	15	100
824	SO[518]	4257.5	243	15	100
825	SO[519]	4242.5	113	15	100
826	SO[520]	4227.5	243	15	100
827	SO[521]	4212.5	113	15	100
828	SO[522]	4197.5	243	15	100
829	SO[523]	4182.5	113	15	100
830	SO[524]	4167.5	243	15	100
831	SO[525]	4152.5	113	15	100
832	SO[526]	4137.5	243	15	100
833	SO[527]	4122.5	113	15	100
834	SO[528]	4107.5	243	15	100
835	SO[529]	4092.5	113	15	100
836	SO[530]	4077.5	243	15	100
837	SO[531]	4062.5	113	15	100
838	SO[532]	4047.5	243	15	100
839	SO[533]	4032.5	113	15	100
840	SO[534]	4017.5	243	15	100

FITIPOWER CONFIDENTIAL
NO DISCLOSURE

Pad Num	Pad name	X	Y	W	H
841	SO[535]	4002.5	113	15	100
842	SO[536]	3987.5	243	15	100
843	SO[537]	3972.5	113	15	100
844	SO[538]	3957.5	243	15	100
845	SO[539]	3942.5	113	15	100
846	SO[540]	3927.5	243	15	100
847	SO[541]	3912.5	113	15	100
848	SO[542]	3897.5	243	15	100
849	SO[543]	3882.5	113	15	100
850	SO[544]	3867.5	243	15	100
851	SO[545]	3852.5	113	15	100
852	SO[546]	3837.5	243	15	100
853	SO[547]	3822.5	113	15	100
854	SO[548]	3807.5	243	15	100
855	SO[549]	3792.5	113	15	100
856	SO[550]	3777.5	243	15	100
857	SO[551]	3762.5	113	15	100
858	SO[552]	3747.5	243	15	100
859	SO[553]	3732.5	113	15	100
860	SO[554]	3717.5	243	15	100
861	SO[555]	3702.5	113	15	100
862	SO[556]	3687.5	243	15	100
863	SO[557]	3672.5	113	15	100
864	SO[558]	3657.5	243	15	100
865	SO[559]	3642.5	113	15	100
866	SO[560]	3627.5	243	15	100
867	SO[561]	3612.5	113	15	100
868	SO[562]	3597.5	243	15	100
869	SO[563]	3582.5	113	15	100
870	SO[564]	3567.5	243	15	100
871	SO[565]	3552.5	113	15	100
872	SO[566]	3537.5	243	15	100
873	SO[567]	3522.5	113	15	100
874	SO[568]	3507.5	243	15	100
875	SO[569]	3492.5	113	15	100
876	SO[570]	3477.5	243	15	100
877	SO[571]	3462.5	113	15	100
878	SO[572]	3447.5	243	15	100
879	SO[573]	3432.5	113	15	100
880	SO[574]	3417.5	243	15	100
881	SO[575]	3402.5	113	15	100
882	SO[576]	3387.5	243	15	100
883	SO[577]	3372.5	113	15	100
884	SO[578]	3357.5	243	15	100
885	SO[579]	3342.5	113	15	100
886	SO[580]	3327.5	243	15	100
887	SO[581]	3312.5	113	15	100
888	SO[582]	3297.5	243	15	100
889	SO[583]	3282.5	113	15	100
890	SO[584]	3267.5	243	15	100
891	SO[585]	3252.5	113	15	100
892	SO[586]	3237.5	243	15	100
893	SO[587]	3222.5	113	15	100
894	SO[588]	3207.5	243	15	100
895	SO[589]	3192.5	113	15	100
896	SO[590]	3177.5	243	15	100
897	SO[591]	3162.5	113	15	100
898	SO[592]	3147.5	243	15	100
899	SO[593]	3132.5	113	15	100
900	SO[594]	3117.5	243	15	100

Pad Num	Pad name	X	Y	W	H
901	SO[595]	3102.5	113	15	100
902	SO[596]	3087.5	243	15	100
903	SO[597]	3072.5	113	15	100
904	SO[598]	3057.5	243	15	100
905	SO[599]	3042.5	113	15	100
906	SO[600]	3027.5	243	15	100
907	SO[601]	3012.5	113	15	100
908	SO[602]	2997.5	243	15	100
909	SO[603]	2982.5	113	15	100
910	SO[604]	2967.5	243	15	100
911	SO[605]	2952.5	113	15	100
912	SO[606]	2937.5	243	15	100
913	SO[607]	2922.5	113	15	100
914	SO[608]	2907.5	243	15	100
915	SO[609]	2892.5	113	15	100
916	SO[610]	2877.5	243	15	100
917	SO[611]	2862.5	113	15	100
918	SO[612]	2847.5	243	15	100
919	SO[613]	2832.5	113	15	100
920	SO[614]	2817.5	243	15	100
921	SO[615]	2802.5	113	15	100
922	SO[616]	2787.5	243	15	100
923	SO[617]	2772.5	113	15	100
924	SO[618]	2757.5	243	15	100
925	SO[619]	2742.5	113	15	100
926	SO[620]	2727.5	243	15	100
927	SO[621]	2712.5	113	15	100
928	SO[622]	2697.5	243	15	100
929	SO[623]	2682.5	113	15	100
930	SO[624]	2667.5	243	15	100
931	SO[625]	2652.5	113	15	100
932	SO[626]	2637.5	243	15	100
933	SO[627]	2622.5	113	15	100
934	SO[628]	2607.5	243	15	100
935	SO[629]	2592.5	113	15	100
936	SO[630]	2577.5	243	15	100
937	SO[631]	2562.5	113	15	100
938	SO[632]	2547.5	243	15	100
939	SO[633]	2532.5	113	15	100
940	SO[634]	2517.5	243	15	100
941	SO[635]	2502.5	113	15	100
942	SO[636]	2487.5	243	15	100
943	SO[637]	2472.5	113	15	100
944	SO[638]	2457.5	243	15	100
945	SO[639]	2442.5	113	15	100
946	SO[640]	2427.5	243	15	100
947	SO[641]	2412.5	113	15	100
948	SO[642]	2397.5	243	15	100
949	SO[643]	2382.5	113	15	100
950	SO[644]	2367.5	243	15	100
951	SO[645]	2352.5	113	15	100
952	SO[646]	2337.5	243	15	100
953	SO[647]	2322.5	113	15	100
954	SO[648]	2307.5	243	15	100
955	SO[649]	2292.5	113	15	100
956	SO[650]	2277.5	243	15	100
957	SO[651]	2262.5	113	15	100
958	SO[652]	2247.5	243	15	100
959	SO[653]	2232.5	113	15	100
960	SO[654]	2217.5	243	15	100

FITIPOWER CONFIDENTIAL
NO DISCLOSURE

Pad Num	Pad name	X	Y	W	H
961	SO[655]	2202.5	113	15	100
962	SO[656]	2187.5	243	15	100
963	SO[657]	2172.5	113	15	100
964	SO[658]	2157.5	243	15	100
965	SO[659]	2142.5	113	15	100
966	SO[660]	2127.5	243	15	100
967	SO[661]	2112.5	113	15	100
968	SO[662]	2097.5	243	15	100
969	SO[663]	2082.5	113	15	100
970	SO[664]	2067.5	243	15	100
971	SO[665]	2052.5	113	15	100
972	SO[666]	2037.5	243	15	100
973	SO[667]	2022.5	113	15	100
974	SO[668]	2007.5	243	15	100
975	SO[669]	1992.5	113	15	100
976	SO[670]	1977.5	243	15	100
977	SO[671]	1962.5	113	15	100
978	SO[672]	1947.5	243	15	100
979	SO[673]	1932.5	113	15	100
980	SO[674]	1917.5	243	15	100
981	SO[675]	1902.5	113	15	100
982	SO[676]	1887.5	243	15	100
983	SO[677]	1872.5	113	15	100
984	SO[678]	1857.5	243	15	100
985	SO[679]	1842.5	113	15	100
986	SO[680]	1827.5	243	15	100
987	SO[681]	1812.5	113	15	100
988	SO[682]	1797.5	243	15	100
989	SO[683]	1782.5	113	15	100
990	SO[684]	1767.5	243	15	100
991	SO[685]	1752.5	113	15	100
992	SO[686]	1737.5	243	15	100
993	SO[687]	1722.5	113	15	100
994	SO[688]	1707.5	243	15	100
995	SO[689]	1692.5	113	15	100
996	SO[690]	1677.5	243	15	100
997	SO[691]	1662.5	113	15	100
998	SO[692]	1647.5	243	15	100
999	SO[693]	1632.5	113	15	100
1000	SO[694]	1617.5	243	15	100
1001	SO[695]	1602.5	113	15	100
1002	SO[696]	1587.5	243	15	100
1003	SO[697]	1572.5	113	15	100
1004	SO[698]	1557.5	243	15	100
1005	SO[699]	1542.5	113	15	100
1006	SO[700]	1527.5	243	15	100
1007	SO[701]	1512.5	113	15	100
1008	SO[702]	1497.5	243	15	100
1009	SO[703]	1482.5	113	15	100
1010	SO[704]	1467.5	243	15	100
1011	SO[705]	1452.5	113	15	100
1012	SO[706]	1437.5	243	15	100
1013	SO[707]	1422.5	113	15	100
1014	SO[708]	1407.5	243	15	100
1015	SO[709]	1392.5	113	15	100
1016	SO[710]	1377.5	243	15	100
1017	SO[711]	1362.5	113	15	100
1018	SO[712]	1347.5	243	15	100
1019	SO[713]	1332.5	113	15	100
1020	SO[714]	1317.5	243	15	100

Pad Num	Pad name	X	Y	W	H
1021	SO[715]	1302.5	113	15	100
1022	SO[716]	1287.5	243	15	100
1023	SO[717]	1272.5	113	15	100
1024	SO[718]	1257.5	243	15	100
1025	SO[719]	1242.5	113	15	100
1026	SO[720]	1227.5	243	15	100
1027	SO[721]	1212.5	113	15	100
1028	SO[722]	1197.5	243	15	100
1029	SO[723]	1182.5	113	15	100
1030	SO[724]	1167.5	243	15	100
1031	SO[725]	1152.5	113	15	100
1032	SO[726]	1137.5	243	15	100
1033	SO[727]	1122.5	113	15	100
1034	SO[728]	1107.5	243	15	100
1035	SO[729]	1092.5	113	15	100
1036	SO[730]	1077.5	243	15	100
1037	SO[731]	1062.5	113	15	100
1038	SO[732]	1047.5	243	15	100
1039	SO[733]	1032.5	113	15	100
1040	SO[734]	1017.5	243	15	100
1041	SO[735]	1002.5	113	15	100
1042	SO[736]	987.5	243	15	100
1043	SO[737]	972.5	113	15	100
1044	SO[738]	957.5	243	15	100
1045	SO[739]	942.5	113	15	100
1046	SO[740]	927.5	243	15	100
1047	SO[741]	912.5	113	15	100
1048	SO[742]	897.5	243	15	100
1049	SO[743]	882.5	113	15	100
1050	SO[744]	867.5	243	15	100
1051	SO[745]	852.5	113	15	100
1052	SO[746]	837.5	243	15	100
1053	SO[747]	822.5	113	15	100
1054	SO[748]	807.5	243	15	100
1055	SO[749]	792.5	113	15	100
1056	SO[750]	777.5	243	15	100
1057	SO[751]	762.5	113	15	100
1058	SO[752]	747.5	243	15	100
1059	SO[753]	732.5	113	15	100
1060	SO[754]	717.5	243	15	100
1061	SO[755]	702.5	113	15	100
1062	SO[756]	687.5	243	15	100
1063	SO[757]	672.5	113	15	100
1064	SO[758]	657.5	243	15	100
1065	SO[759]	642.5	113	15	100
1066	SO[760]	627.5	243	15	100
1067	SO[761]	612.5	113	15	100
1068	SO[762]	597.5	243	15	100
1069	SO[763]	582.5	113	15	100
1070	SO[764]	567.5	243	15	100
1071	SO[765]	552.5	113	15	100
1072	SO[766]	537.5	243	15	100
1073	SO[767]	522.5	113	15	100
1074	SO[768]	507.5	243	15	100
1075	SHIELDING	455	258	30	70
1076	SHIELDING	405	258	30	70
1077	SHIELDING	355	258	30	70
1078	SHIELDING	50	258	30	70
1079	SHIELDING	0	258	30	70
1080	SHIELDING	-50	258	30	70

FITIPOWER CONFIDENTIAL
NO DISCLOSURE

Pad Num	Pad name	X	Y	W	H
1081	SHIELDING	-355	258	30	70
1082	SHIELDING	-405	258	30	70
1083	SHIELDING	-455	258	30	70
1084	SO[769]	-507.5	243	15	100
1085	SO[770]	-522.5	113	15	100
1086	SO[771]	-537.5	243	15	100
1087	SO[772]	-552.5	113	15	100
1088	SO[773]	-567.5	243	15	100
1089	SO[774]	-582.5	113	15	100
1090	SO[775]	-597.5	243	15	100
1091	SO[776]	-612.5	113	15	100
1092	SO[777]	-627.5	243	15	100
1093	SO[778]	-642.5	113	15	100
1094	SO[779]	-657.5	243	15	100
1095	SO[780]	-672.5	113	15	100
1096	SO[781]	-687.5	243	15	100
1097	SO[782]	-702.5	113	15	100
1098	SO[783]	-717.5	243	15	100
1099	SO[784]	-732.5	113	15	100
1100	SO[785]	-747.5	243	15	100
1101	SO[786]	-762.5	113	15	100
1102	SO[787]	-777.5	243	15	100
1103	SO[788]	-792.5	113	15	100
1104	SO[789]	-807.5	243	15	100
1105	SO[790]	-822.5	113	15	100
1106	SO[791]	-837.5	243	15	100
1107	SO[792]	-852.5	113	15	100
1108	SO[793]	-867.5	243	15	100
1109	SO[794]	-882.5	113	15	100
1110	SO[795]	-897.5	243	15	100
1111	SO[796]	-912.5	113	15	100
1112	SO[797]	-927.5	243	15	100
1113	SO[798]	-942.5	113	15	100
1114	SO[799]	-957.5	243	15	100
1115	SO[800]	-972.5	113	15	100
1116	SO[801]	-987.5	243	15	100
1117	SO[802]	-1002.5	113	15	100
1118	SO[803]	-1017.5	243	15	100
1119	SO[804]	-1032.5	113	15	100
1120	SO[805]	-1047.5	243	15	100
1121	SO[806]	-1062.5	113	15	100
1122	SO[807]	-1077.5	243	15	100
1123	SO[808]	-1092.5	113	15	100
1124	SO[809]	-1107.5	243	15	100
1125	SO[810]	-1122.5	113	15	100
1126	SO[811]	-1137.5	243	15	100
1127	SO[812]	-1152.5	113	15	100
1128	SO[813]	-1167.5	243	15	100
1129	SO[814]	-1182.5	113	15	100
1130	SO[815]	-1197.5	243	15	100
1131	SO[816]	-1212.5	113	15	100
1132	SO[817]	-1227.5	243	15	100
1133	SO[818]	-1242.5	113	15	100
1134	SO[819]	-1257.5	243	15	100
1135	SO[820]	-1272.5	113	15	100
1136	SO[821]	-1287.5	243	15	100
1137	SO[822]	-1302.5	113	15	100
1138	SO[823]	-1317.5	243	15	100
1139	SO[824]	-1332.5	113	15	100
1140	SO[825]	-1347.5	243	15	100

Pad Num	Pad name	X	Y	W	H
1141	SO[826]	-1362.5	113	15	100
1142	SO[827]	-1377.5	243	15	100
1143	SO[828]	-1392.5	113	15	100
1144	SO[829]	-1407.5	243	15	100
1145	SO[830]	-1422.5	113	15	100
1146	SO[831]	-1437.5	243	15	100
1147	SO[832]	-1452.5	113	15	100
1148	SO[833]	-1467.5	243	15	100
1149	SO[834]	-1482.5	113	15	100
1150	SO[835]	-1497.5	243	15	100
1151	SO[836]	-1512.5	113	15	100
1152	SO[837]	-1527.5	243	15	100
1153	SO[838]	-1542.5	113	15	100
1154	SO[839]	-1557.5	243	15	100
1155	SO[840]	-1572.5	113	15	100
1156	SO[841]	-1587.5	243	15	100
1157	SO[842]	-1602.5	113	15	100
1158	SO[843]	-1617.5	243	15	100
1159	SO[844]	-1632.5	113	15	100
1160	SO[845]	-1647.5	243	15	100
1161	SO[846]	-1662.5	113	15	100
1162	SO[847]	-1677.5	243	15	100
1163	SO[848]	-1692.5	113	15	100
1164	SO[849]	-1707.5	243	15	100
1165	SO[850]	-1722.5	113	15	100
1166	SO[851]	-1737.5	243	15	100
1167	SO[852]	-1752.5	113	15	100
1168	SO[853]	-1767.5	243	15	100
1169	SO[854]	-1782.5	113	15	100
1170	SO[855]	-1797.5	243	15	100
1171	SO[856]	-1812.5	113	15	100
1172	SO[857]	-1827.5	243	15	100
1173	SO[858]	-1842.5	113	15	100
1174	SO[859]	-1857.5	243	15	100
1175	SO[860]	-1872.5	113	15	100
1176	SO[861]	-1887.5	243	15	100
1177	SO[862]	-1902.5	113	15	100
1178	SO[863]	-1917.5	243	15	100
1179	SO[864]	-1932.5	113	15	100
1180	SO[865]	-1947.5	243	15	100
1181	SO[866]	-1962.5	113	15	100
1182	SO[867]	-1977.5	243	15	100
1183	SO[868]	-1992.5	113	15	100
1184	SO[869]	-2007.5	243	15	100
1185	SO[870]	-2022.5	113	15	100
1186	SO[871]	-2037.5	243	15	100
1187	SO[872]	-2052.5	113	15	100
1188	SO[873]	-2067.5	243	15	100
1189	SO[874]	-2082.5	113	15	100
1190	SO[875]	-2097.5	243	15	100
1191	SO[876]	-2112.5	113	15	100
1192	SO[877]	-2127.5	243	15	100
1193	SO[878]	-2142.5	113	15	100
1194	SO[879]	-2157.5	243	15	100
1195	SO[880]	-2172.5	113	15	100
1196	SO[881]	-2187.5	243	15	100
1197	SO[882]	-2202.5	113	15	100
1198	SO[883]	-2217.5	243	15	100
1199	SO[884]	-2232.5	113	15	100
1200	SO[885]	-2247.5	243	15	100

FITIPOWER CONFIDENTIAL
NO DISCLOSURE

Pad Num	Pad name	X	Y	W	H
1201	SO[886]	-2262.5	113	15	100
1202	SO[887]	-2277.5	243	15	100
1203	SO[888]	-2292.5	113	15	100
1204	SO[889]	-2307.5	243	15	100
1205	SO[890]	-2322.5	113	15	100
1206	SO[891]	-2337.5	243	15	100
1207	SO[892]	-2352.5	113	15	100
1208	SO[893]	-2367.5	243	15	100
1209	SO[894]	-2382.5	113	15	100
1210	SO[895]	-2397.5	243	15	100
1211	SO[896]	-2412.5	113	15	100
1212	SO[897]	-2427.5	243	15	100
1213	SO[898]	-2442.5	113	15	100
1214	SO[899]	-2457.5	243	15	100
1215	SO[900]	-2472.5	113	15	100
1216	SO[901]	-2487.5	243	15	100
1217	SO[902]	-2502.5	113	15	100
1218	SO[903]	-2517.5	243	15	100
1219	SO[904]	-2532.5	113	15	100
1220	SO[905]	-2547.5	243	15	100
1221	SO[906]	-2562.5	113	15	100
1222	SO[907]	-2577.5	243	15	100
1223	SO[908]	-2592.5	113	15	100
1224	SO[909]	-2607.5	243	15	100
1225	SO[910]	-2622.5	113	15	100
1226	SO[911]	-2637.5	243	15	100
1227	SO[912]	-2652.5	113	15	100
1228	SO[913]	-2667.5	243	15	100
1229	SO[914]	-2682.5	113	15	100
1230	SO[915]	-2697.5	243	15	100
1231	SO[916]	-2712.5	113	15	100
1232	SO[917]	-2727.5	243	15	100
1233	SO[918]	-2742.5	113	15	100
1234	SO[919]	-2757.5	243	15	100
1235	SO[920]	-2772.5	113	15	100
1236	SO[921]	-2787.5	243	15	100
1237	SO[922]	-2802.5	113	15	100
1238	SO[923]	-2817.5	243	15	100
1239	SO[924]	-2832.5	113	15	100
1240	SO[925]	-2847.5	243	15	100
1241	SO[926]	-2862.5	113	15	100
1242	SO[927]	-2877.5	243	15	100
1243	SO[928]	-2892.5	113	15	100
1244	SO[929]	-2907.5	243	15	100
1245	SO[930]	-2922.5	113	15	100
1246	SO[931]	-2937.5	243	15	100
1247	SO[932]	-2952.5	113	15	100
1248	SO[933]	-2967.5	243	15	100
1249	SO[934]	-2982.5	113	15	100
1250	SO[935]	-2997.5	243	15	100
1251	SO[936]	-3012.5	113	15	100
1252	SO[937]	-3027.5	243	15	100
1253	SO[938]	-3042.5	113	15	100
1254	SO[939]	-3057.5	243	15	100
1255	SO[940]	-3072.5	113	15	100
1256	SO[941]	-3087.5	243	15	100
1257	SO[942]	-3102.5	113	15	100
1258	SO[943]	-3117.5	243	15	100
1259	SO[944]	-3132.5	113	15	100
1260	SO[945]	-3147.5	243	15	100

Pad Num	Pad name	X	Y	W	H
1261	SO[946]	-3162.5	113	15	100
1262	SO[947]	-3177.5	243	15	100
1263	SO[948]	-3192.5	113	15	100
1264	SO[949]	-3207.5	243	15	100
1265	SO[950]	-3222.5	113	15	100
1266	SO[951]	-3237.5	243	15	100
1267	SO[952]	-3252.5	113	15	100
1268	SO[953]	-3267.5	243	15	100
1269	SO[954]	-3282.5	113	15	100
1270	SO[955]	-3297.5	243	15	100
1271	SO[956]	-3312.5	113	15	100
1272	SO[957]	-3327.5	243	15	100
1273	SO[958]	-3342.5	113	15	100
1274	SO[959]	-3357.5	243	15	100
1275	SO[960]	-3372.5	113	15	100
1276	SO[961]	-3387.5	243	15	100
1277	SO[962]	-3402.5	113	15	100
1278	SO[963]	-3417.5	243	15	100
1279	SO[964]	-3432.5	113	15	100
1280	SO[965]	-3447.5	243	15	100
1281	SO[966]	-3462.5	113	15	100
1282	SO[967]	-3477.5	243	15	100
1283	SO[968]	-3492.5	113	15	100
1284	SO[969]	-3507.5	243	15	100
1285	SO[970]	-3522.5	113	15	100
1286	SO[971]	-3537.5	243	15	100
1287	SO[972]	-3552.5	113	15	100
1288	SO[973]	-3567.5	243	15	100
1289	SO[974]	-3582.5	113	15	100
1290	SO[975]	-3597.5	243	15	100
1291	SO[976]	-3612.5	113	15	100
1292	SO[977]	-3627.5	243	15	100
1293	SO[978]	-3642.5	113	15	100
1294	SO[979]	-3657.5	243	15	100
1295	SO[980]	-3672.5	113	15	100
1296	SO[981]	-3687.5	243	15	100
1297	SO[982]	-3702.5	113	15	100
1298	SO[983]	-3717.5	243	15	100
1299	SO[984]	-3732.5	113	15	100
1300	SO[985]	-3747.5	243	15	100
1301	SO[986]	-3762.5	113	15	100
1302	SO[987]	-3777.5	243	15	100
1303	SO[988]	-3792.5	113	15	100
1304	SO[989]	-3807.5	243	15	100
1305	SO[990]	-3822.5	113	15	100
1306	SO[991]	-3837.5	243	15	100
1307	SO[992]	-3852.5	113	15	100
1308	SO[993]	-3867.5	243	15	100
1309	SO[994]	-3882.5	113	15	100
1310	SO[995]	-3897.5	243	15	100
1311	SO[996]	-3912.5	113	15	100
1312	SO[997]	-3927.5	243	15	100
1313	SO[998]	-3942.5	113	15	100
1314	SO[999]	-3957.5	243	15	100
1315	SO[1000]	-3972.5	113	15	100
1316	SO[1001]	-3987.5	243	15	100
1317	SO[1002]	-4002.5	113	15	100
1318	SO[1003]	-4017.5	243	15	100
1319	SO[1004]	-4032.5	113	15	100
1320	SO[1005]	-4047.5	243	15	100

FITIPOWER CONFIDENTIAL
NO DISCLOSURE

Pad Num	Pad name	X	Y	W	H
1321	SO[1006]	-4062.5	113	15	100
1322	SO[1007]	-4077.5	243	15	100
1323	SO[1008]	-4092.5	113	15	100
1324	SO[1009]	-4107.5	243	15	100
1325	SO[1010]	-4122.5	113	15	100
1326	SO[1011]	-4137.5	243	15	100
1327	SO[1012]	-4152.5	113	15	100
1328	SO[1013]	-4167.5	243	15	100
1329	SO[1014]	-4182.5	113	15	100
1330	SO[1015]	-4197.5	243	15	100
1331	SO[1016]	-4212.5	113	15	100
1332	SO[1017]	-4227.5	243	15	100
1333	SO[1018]	-4242.5	113	15	100
1334	SO[1019]	-4257.5	243	15	100
1335	SO[1020]	-4272.5	113	15	100
1336	SO[1021]	-4287.5	243	15	100
1337	SO[1022]	-4302.5	113	15	100
1338	SO[1023]	-4317.5	243	15	100
1339	SO[1024]	-4332.5	113	15	100
1340	SO[1025]	-4347.5	243	15	100
1341	SO[1026]	-4362.5	113	15	100
1342	SO[1027]	-4377.5	243	15	100
1343	SO[1028]	-4392.5	113	15	100
1344	SO[1029]	-4407.5	243	15	100
1345	SO[1030]	-4422.5	113	15	100
1346	SO[1031]	-4437.5	243	15	100
1347	SO[1032]	-4452.5	113	15	100
1348	SO[1033]	-4467.5	243	15	100
1349	SO[1034]	-4482.5	113	15	100
1350	SO[1035]	-4497.5	243	15	100
1351	SO[1036]	-4512.5	113	15	100
1352	SO[1037]	-4527.5	243	15	100
1353	SO[1038]	-4542.5	113	15	100
1354	SO[1039]	-4557.5	243	15	100
1355	SO[1040]	-4572.5	113	15	100
1356	SO[1041]	-4587.5	243	15	100
1357	SO[1042]	-4602.5	113	15	100
1358	SO[1043]	-4617.5	243	15	100
1359	SO[1044]	-4632.5	113	15	100
1360	SO[1045]	-4647.5	243	15	100
1361	SO[1046]	-4662.5	113	15	100
1362	SO[1047]	-4677.5	243	15	100
1363	SO[1048]	-4692.5	113	15	100
1364	SO[1049]	-4707.5	243	15	100
1365	SO[1050]	-4722.5	113	15	100
1366	SO[1051]	-4737.5	243	15	100
1367	SO[1052]	-4752.5	113	15	100
1368	SO[1053]	-4767.5	243	15	100
1369	SO[1054]	-4782.5	113	15	100
1370	SO[1055]	-4797.5	243	15	100
1371	SO[1056]	-4812.5	113	15	100
1372	SO[1057]	-4827.5	243	15	100
1373	SO[1058]	-4842.5	113	15	100
1374	SO[1059]	-4857.5	243	15	100
1375	SO[1060]	-4872.5	113	15	100
1376	SO[1061]	-4887.5	243	15	100
1377	SO[1062]	-4902.5	113	15	100
1378	SO[1063]	-4917.5	243	15	100
1379	SO[1064]	-4932.5	113	15	100
1380	SO[1065]	-4947.5	243	15	100

Pad Num	Pad name	X	Y	W	H
1381	SO[1066]	-4962.5	113	15	100
1382	SO[1067]	-4977.5	243	15	100
1383	SO[1068]	-4992.5	113	15	100
1384	SO[1069]	-5007.5	243	15	100
1385	SO[1070]	-5022.5	113	15	100
1386	SO[1071]	-5037.5	243	15	100
1387	SO[1072]	-5052.5	113	15	100
1388	SO[1073]	-5067.5	243	15	100
1389	SO[1074]	-5082.5	113	15	100
1390	SO[1075]	-5097.5	243	15	100
1391	SO[1076]	-5112.5	113	15	100
1392	SO[1077]	-5127.5	243	15	100
1393	SO[1078]	-5142.5	113	15	100
1394	SO[1079]	-5157.5	243	15	100
1395	SO[1080]	-5172.5	113	15	100
1396	SO[1081]	-5187.5	243	15	100
1397	SO[1082]	-5202.5	113	15	100
1398	SO[1083]	-5217.5	243	15	100
1399	SO[1084]	-5232.5	113	15	100
1400	SO[1085]	-5247.5	243	15	100
1401	SO[1086]	-5262.5	113	15	100
1402	SO[1087]	-5277.5	243	15	100
1403	SO[1088]	-5292.5	113	15	100
1404	SO[1089]	-5307.5	243	15	100
1405	SO[1090]	-5322.5	113	15	100
1406	SO[1091]	-5337.5	243	15	100
1407	SO[1092]	-5352.5	113	15	100
1408	SO[1093]	-5367.5	243	15	100
1409	SO[1094]	-5382.5	113	15	100
1410	SO[1095]	-5397.5	243	15	100
1411	SO[1096]	-5412.5	113	15	100
1412	SO[1097]	-5427.5	243	15	100
1413	SO[1098]	-5442.5	113	15	100
1414	SO[1099]	-5457.5	243	15	100
1415	SO[1100]	-5472.5	113	15	100
1416	SO[1101]	-5487.5	243	15	100
1417	SO[1102]	-5502.5	113	15	100
1418	SO[1103]	-5517.5	243	15	100
1419	SO[1104]	-5532.5	113	15	100
1420	SO[1105]	-5547.5	243	15	100
1421	SO[1106]	-5562.5	113	15	100
1422	SO[1107]	-5577.5	243	15	100
1423	SO[1108]	-5592.5	113	15	100
1424	SO[1109]	-5607.5	243	15	100
1425	SO[1110]	-5622.5	113	15	100
1426	SO[1111]	-5637.5	243	15	100
1427	SO[1112]	-5652.5	113	15	100
1428	SO[1113]	-5667.5	243	15	100
1429	SO[1114]	-5682.5	113	15	100
1430	SO[1115]	-5697.5	243	15	100
1431	SO[1116]	-5712.5	113	15	100
1432	SO[1117]	-5727.5	243	15	100
1433	SO[1118]	-5742.5	113	15	100
1434	SO[1119]	-5757.5	243	15	100
1435	SO[1120]	-5772.5	113	15	100
1436	SO[1121]	-5787.5	243	15	100
1437	SO[1122]	-5802.5	113	15	100
1438	SO[1123]	-5817.5	243	15	100
1439	SO[1124]	-5832.5	113	15	100
1440	SO[1125]	-5847.5	243	15	100

FITIPOWER CONFIDENTIAL
NO DISCLOSURE

Pad Num	Pad name	X	Y	W	H
1441	SO[1126]	-5862.5	113	15	100
1442	SO[1127]	-5877.5	243	15	100
1443	SO[1128]	-5892.5	113	15	100
1444	SO[1129]	-5907.5	243	15	100
1445	SO[1130]	-5922.5	113	15	100
1446	SO[1131]	-5937.5	243	15	100
1447	SO[1132]	-5952.5	113	15	100
1448	SO[1133]	-5967.5	243	15	100
1449	SO[1134]	-5982.5	113	15	100
1450	SO[1135]	-5997.5	243	15	100
1451	SO[1136]	-6012.5	113	15	100
1452	SO[1137]	-6027.5	243	15	100
1453	SO[1138]	-6042.5	113	15	100
1454	SO[1139]	-6057.5	243	15	100
1455	SO[1140]	-6072.5	113	15	100
1456	SO[1141]	-6087.5	243	15	100
1457	SO[1142]	-6102.5	113	15	100
1458	SO[1143]	-6117.5	243	15	100
1459	SO[1144]	-6132.5	113	15	100
1460	SO[1145]	-6147.5	243	15	100
1461	SO[1146]	-6162.5	113	15	100
1462	SO[1147]	-6177.5	243	15	100
1463	SO[1148]	-6192.5	113	15	100
1464	SO[1149]	-6207.5	243	15	100
1465	SO[1150]	-6222.5	113	15	100
1466	SO[1151]	-6237.5	243	15	100
1467	SO[1152]	-6252.5	113	15	100
1468	SO[1153]	-6267.5	243	15	100
1469	SO[1154]	-6282.5	113	15	100
1470	SO[1155]	-6297.5	243	15	100
1471	SO[1156]	-6312.5	113	15	100
1472	SO[1157]	-6327.5	243	15	100
1473	SO[1158]	-6342.5	113	15	100
1474	SO[1159]	-6357.5	243	15	100
1475	SO[1160]	-6372.5	113	15	100
1476	SO[1161]	-6387.5	243	15	100
1477	SO[1162]	-6402.5	113	15	100
1478	SO[1163]	-6417.5	243	15	100
1479	SO[1164]	-6432.5	113	15	100
1480	SO[1165]	-6447.5	243	15	100
1481	SO[1166]	-6462.5	113	15	100
1482	SO[1167]	-6477.5	243	15	100
1483	SO[1168]	-6492.5	113	15	100
1484	SO[1169]	-6507.5	243	15	100
1485	SO[1170]	-6522.5	113	15	100
1486	SO[1171]	-6537.5	243	15	100
1487	SO[1172]	-6552.5	113	15	100
1488	SO[1173]	-6567.5	243	15	100
1489	SO[1174]	-6582.5	113	15	100
1490	SO[1175]	-6597.5	243	15	100
1491	SO[1176]	-6612.5	113	15	100
1492	SO[1177]	-6627.5	243	15	100
1493	SO[1178]	-6642.5	113	15	100
1494	SO[1179]	-6657.5	243	15	100
1495	SO[1180]	-6672.5	113	15	100
1496	SO[1181]	-6687.5	243	15	100
1497	SO[1182]	-6702.5	113	15	100
1498	SO[1183]	-6717.5	243	15	100
1499	SO[1184]	-6732.5	113	15	100
1500	SO[1185]	-6747.5	243	15	100

Pad Num	Pad name	X	Y	W	H
1501	SO[1186]	-6762.5	113	15	100
1502	SO[1187]	-6777.5	243	15	100
1503	SO[1188]	-6792.5	113	15	100
1504	SO[1189]	-6807.5	243	15	100
1505	SO[1190]	-6822.5	113	15	100
1506	SO[1191]	-6837.5	243	15	100
1507	SO[1192]	-6852.5	113	15	100
1508	SO[1193]	-6867.5	243	15	100
1509	SO[1194]	-6882.5	113	15	100
1510	SO[1195]	-6897.5	243	15	100
1511	SO[1196]	-6912.5	113	15	100
1512	SO[1197]	-6927.5	243	15	100
1513	SO[1198]	-6942.5	113	15	100
1514	SO[1199]	-6957.5	243	15	100
1515	SO[1200]	-6972.5	113	15	100
1516	SO[1201]	-6987.5	243	15	100
1517	SO[1202]	-7002.5	113	15	100
1518	SO[1203]	-7017.5	243	15	100
1519	SO[1204]	-7032.5	113	15	100
1520	SO[1205]	-7047.5	243	15	100
1521	SO[1206]	-7062.5	113	15	100
1522	SO[1207]	-7077.5	243	15	100
1523	SO[1208]	-7092.5	113	15	100
1524	SO[1209]	-7107.5	243	15	100
1525	SO[1210]	-7122.5	113	15	100
1526	SO[1211]	-7137.5	243	15	100
1527	SO[1212]	-7152.5	113	15	100
1528	SO[1213]	-7167.5	243	15	100
1529	SO[1214]	-7182.5	113	15	100
1530	SO[1215]	-7197.5	243	15	100
1531	SO[1216]	-7212.5	113	15	100
1532	SO[1217]	-7227.5	243	15	100
1533	SO[1218]	-7242.5	113	15	100
1534	SO[1219]	-7257.5	243	15	100
1535	SO[1220]	-7272.5	113	15	100
1536	SO[1221]	-7287.5	243	15	100
1537	SO[1222]	-7302.5	113	15	100
1538	SO[1223]	-7317.5	243	15	100
1539	SO[1224]	-7332.5	113	15	100
1540	SO[1225]	-7347.5	243	15	100
1541	SO[1226]	-7362.5	113	15	100
1542	SO[1227]	-7377.5	243	15	100
1543	SO[1228]	-7392.5	113	15	100
1544	SO[1229]	-7407.5	243	15	100
1545	SO[1230]	-7422.5	113	15	100
1546	SO[1231]	-7437.5	243	15	100
1547	SO[1232]	-7452.5	113	15	100
1548	SO[1233]	-7467.5	243	15	100
1549	SO[1234]	-7482.5	113	15	100
1550	SO[1235]	-7497.5	243	15	100
1551	SO[1236]	-7512.5	113	15	100
1552	SO[1237]	-7527.5	243	15	100
1553	SO[1238]	-7542.5	113	15	100
1554	SO[1239]	-7557.5	243	15	100
1555	SO[1240]	-7572.5	113	15	100
1556	SO[1241]	-7587.5	243	15	100
1557	SO[1242]	-7602.5	113	15	100
1558	SO[1243]	-7617.5	243	15	100
1559	SO[1244]	-7632.5	113	15	100
1560	SO[1245]	-7647.5	243	15	100

FITIPOWER CONFIDENTIAL
NO DISCLOSURE

Pad Num	Pad name	X	Y	W	H
1561	SO[1246]	-7662.5	113	15	100
1562	SO[1247]	-7677.5	243	15	100
1563	SO[1248]	-7692.5	113	15	100
1564	SO[1249]	-7707.5	243	15	100
1565	SO[1250]	-7722.5	113	15	100
1566	SO[1251]	-7737.5	243	15	100
1567	SO[1252]	-7752.5	113	15	100
1568	SO[1253]	-7767.5	243	15	100
1569	SO[1254]	-7782.5	113	15	100
1570	SO[1255]	-7797.5	243	15	100
1571	SO[1256]	-7812.5	113	15	100
1572	SO[1257]	-7827.5	243	15	100
1573	SO[1258]	-7842.5	113	15	100
1574	SO[1259]	-7857.5	243	15	100
1575	SO[1260]	-7872.5	113	15	100
1576	SO[1261]	-7887.5	243	15	100
1577	SO[1262]	-7902.5	113	15	100
1578	SO[1263]	-7917.5	243	15	100
1579	SO[1264]	-7932.5	113	15	100
1580	SO[1265]	-7947.5	243	15	100
1581	SO[1266]	-7962.5	113	15	100
1582	SO[1267]	-7977.5	243	15	100
1583	SO[1268]	-7992.5	113	15	100
1584	SO[1269]	-8007.5	243	15	100
1585	SO[1270]	-8022.5	113	15	100
1586	SO[1271]	-8037.5	243	15	100
1587	SO[1272]	-8052.5	113	15	100
1588	SO[1273]	-8067.5	243	15	100
1589	SO[1274]	-8082.5	113	15	100
1590	SO[1275]	-8097.5	243	15	100
1591	SO[1276]	-8112.5	113	15	100
1592	SO[1277]	-8127.5	243	15	100
1593	SO[1278]	-8142.5	113	15	100
1594	SO[1279]	-8157.5	243	15	100
1595	SO[1280]	-8172.5	113	15	100
1596	SO[1281]	-8187.5	243	15	100
1597	SO[1282]	-8202.5	113	15	100
1598	SO[1283]	-8217.5	243	15	100
1599	SO[1284]	-8232.5	113	15	100
1600	SO[1285]	-8247.5	243	15	100
1601	SO[1286]	-8262.5	113	15	100
1602	SO[1287]	-8277.5	243	15	100
1603	SO[1288]	-8292.5	113	15	100
1604	SO[1289]	-8307.5	243	15	100
1605	SO[1290]	-8322.5	113	15	100
1606	SO[1291]	-8337.5	243	15	100
1607	SO[1292]	-8352.5	113	15	100
1608	SO[1293]	-8367.5	243	15	100
1609	SO[1294]	-8382.5	113	15	100
1610	SO[1295]	-8397.5	243	15	100
1611	SO[1296]	-8412.5	113	15	100
1612	SO[1297]	-8427.5	243	15	100
1613	SO[1298]	-8442.5	113	15	100
1614	SO[1299]	-8457.5	243	15	100
1615	SO[1300]	-8472.5	113	15	100
1616	SO[1301]	-8487.5	243	15	100
1617	SO[1302]	-8502.5	113	15	100
1618	SO[1303]	-8517.5	243	15	100
1619	SO[1304]	-8532.5	113	15	100
1620	SO[1305]	-8547.5	243	15	100

Pad Num	Pad name	X	Y	W	H
1621	SO[1306]	-8562.5	113	15	100
1622	SO[1307]	-8577.5	243	15	100
1623	SO[1308]	-8592.5	113	15	100
1624	SO[1309]	-8607.5	243	15	100
1625	SO[1310]	-8622.5	113	15	100
1626	SO[1311]	-8637.5	243	15	100
1627	SO[1312]	-8652.5	113	15	100
1628	SO[1313]	-8667.5	243	15	100
1629	SO[1314]	-8682.5	113	15	100
1630	SO[1315]	-8697.5	243	15	100
1631	SO[1316]	-8712.5	113	15	100
1632	SO[1317]	-8727.5	243	15	100
1633	SO[1318]	-8742.5	113	15	100
1634	SO[1319]	-8757.5	243	15	100
1635	SO[1320]	-8772.5	113	15	100
1636	SO[1321]	-8787.5	243	15	100
1637	SO[1322]	-8802.5	113	15	100
1638	SO[1323]	-8817.5	243	15	100
1639	SO[1324]	-8832.5	113	15	100
1640	SO[1325]	-8847.5	243	15	100
1641	SO[1326]	-8862.5	113	15	100
1642	SO[1327]	-8877.5	243	15	100
1643	SO[1328]	-8892.5	113	15	100
1644	SO[1329]	-8907.5	243	15	100
1645	SO[1330]	-8922.5	113	15	100
1646	SO[1331]	-8937.5	243	15	100
1647	SO[1332]	-8952.5	113	15	100
1648	SO[1333]	-8967.5	243	15	100
1649	SO[1334]	-8982.5	113	15	100
1650	SO[1335]	-8997.5	243	15	100
1651	SO[1336]	-9012.5	113	15	100
1652	SO[1337]	-9027.5	243	15	100
1653	SO[1338]	-9042.5	113	15	100
1654	SO[1339]	-9057.5	243	15	100
1655	SO[1340]	-9072.5	113	15	100
1656	SO[1341]	-9087.5	243	15	100
1657	SO[1342]	-9102.5	113	15	100
1658	SO[1343]	-9117.5	243	15	100
1659	SO[1344]	-9132.5	113	15	100
1660	SO[1345]	-9147.5	243	15	100
1661	SO[1346]	-9162.5	113	15	100
1662	SO[1347]	-9177.5	243	15	100
1663	SO[1348]	-9192.5	113	15	100
1664	SO[1349]	-9207.5	243	15	100
1665	SO[1350]	-9222.5	113	15	100
1666	SO[1351]	-9237.5	243	15	100
1667	SO[1352]	-9252.5	113	15	100
1668	SO[1353]	-9267.5	243	15	100
1669	SO[1354]	-9282.5	113	15	100
1670	SO[1355]	-9297.5	243	15	100
1671	SO[1356]	-9312.5	113	15	100
1672	SO[1357]	-9327.5	243	15	100
1673	SO[1358]	-9342.5	113	15	100
1674	SO[1359]	-9357.5	243	15	100
1675	SO[1360]	-9372.5	113	15	100
1676	SO[1361]	-9387.5	243	15	100
1677	SO[1362]	-9402.5	113	15	100
1678	SO[1363]	-9417.5	243	15	100
1679	SO[1364]	-9432.5	113	15	100
1680	SO[1365]	-9447.5	243	15	100

FITIPOWER CONFIDENTIAL
NO DISCLOSURE

Pad Num	Pad name	X	Y	W	H
1681	SO[1366]	-9462.5	113	15	100
1682	SO[1367]	-9477.5	243	15	100
1683	SO[1368]	-9492.5	113	15	100
1684	SO[1369]	-9507.5	243	15	100
1685	SO[1370]	-9522.5	113	15	100
1686	SO[1371]	-9537.5	243	15	100
1687	SO[1372]	-9552.5	113	15	100
1688	SO[1373]	-9567.5	243	15	100
1689	SO[1374]	-9582.5	113	15	100
1690	SO[1375]	-9597.5	243	15	100
1691	SO[1376]	-9612.5	113	15	100
1692	SO[1377]	-9627.5	243	15	100
1693	SO[1378]	-9642.5	113	15	100
1694	SO[1379]	-9657.5	243	15	100
1695	SO[1380]	-9672.5	113	15	100
1696	SO[1381]	-9687.5	243	15	100
1697	SO[1382]	-9702.5	113	15	100
1698	SO[1383]	-9717.5	243	15	100
1699	SO[1384]	-9732.5	113	15	100
1700	SO[1385]	-9747.5	243	15	100
1701	SO[1386]	-9762.5	113	15	100
1702	SO[1387]	-9777.5	243	15	100
1703	SO[1388]	-9792.5	113	15	100
1704	SO[1389]	-9807.5	243	15	100
1705	SO[1390]	-9822.5	113	15	100
1706	SO[1391]	-9837.5	243	15	100
1707	SO[1392]	-9852.5	113	15	100
1708	SO[1393]	-9867.5	243	15	100
1709	SO[1394]	-9882.5	113	15	100
1710	SO[1395]	-9897.5	243	15	100
1711	SO[1396]	-9912.5	113	15	100
1712	SO[1397]	-9927.5	243	15	100
1713	SO[1398]	-9942.5	113	15	100
1714	SO[1399]	-9957.5	243	15	100
1715	SO[1400]	-9972.5	113	15	100
1716	SO[1401]	-9987.5	243	15	100
1717	SO[1402]	-10002.5	113	15	100
1718	SO[1403]	-10017.5	243	15	100
1719	SO[1404]	-10032.5	113	15	100
1720	SO[1405]	-10047.5	243	15	100
1721	SO[1406]	-10062.5	113	15	100
1722	SO[1407]	-10077.5	243	15	100
1723	SO[1408]	-10092.5	113	15	100
1724	SO[1409]	-10107.5	243	15	100
1725	SO[1410]	-10122.5	113	15	100
1726	SO[1411]	-10137.5	243	15	100
1727	SO[1412]	-10152.5	113	15	100
1728	SO[1413]	-10167.5	243	15	100
1729	SO[1414]	-10182.5	113	15	100
1730	SO[1415]	-10197.5	243	15	100
1731	SO[1416]	-10212.5	113	15	100
1732	SO[1417]	-10227.5	243	15	100
1733	SO[1418]	-10242.5	113	15	100
1734	SO[1419]	-10257.5	243	15	100
1735	SO[1420]	-10272.5	113	15	100
1736	SO[1421]	-10287.5	243	15	100
1737	SO[1422]	-10302.5	113	15	100
1738	SO[1423]	-10317.5	243	15	100
1739	SO[1424]	-10332.5	113	15	100
1740	SO[1425]	-10347.5	243	15	100

Pad Num	Pad name	X	Y	W	H
1741	SO[1426]	-10362.5	113	15	100
1742	SO[1427]	-10377.5	243	15	100
1743	SO[1428]	-10392.5	113	15	100
1744	SO[1429]	-10407.5	243	15	100
1745	SO[1430]	-10422.5	113	15	100
1746	SO[1431]	-10437.5	243	15	100
1747	SO[1432]	-10452.5	113	15	100
1748	SO[1433]	-10467.5	243	15	100
1749	SO[1434]	-10482.5	113	15	100
1750	SO[1435]	-10497.5	243	15	100
1751	SO[1436]	-10512.5	113	15	100
1752	SO[1437]	-10527.5	243	15	100
1753	SO[1438]	-10542.5	113	15	100
1754	SO[1439]	-10557.5	243	15	100
1755	SO[1440]	-10572.5	113	15	100
1756	SO[1441]	-10587.5	243	15	100
1757	SO[1442]	-10602.5	113	15	100
1758	SO[1443]	-10617.5	243	15	100
1759	SO[1444]	-10632.5	113	15	100
1760	SO[1445]	-10647.5	243	15	100
1761	SO[1446]	-10662.5	113	15	100
1762	SO[1447]	-10677.5	243	15	100
1763	SO[1448]	-10692.5	113	15	100
1764	SO[1449]	-10707.5	243	15	100
1765	SO[1450]	-10722.5	113	15	100
1766	SO[1451]	-10737.5	243	15	100
1767	SO[1452]	-10752.5	113	15	100
1768	SO[1453]	-10767.5	243	15	100
1769	SO[1454]	-10782.5	113	15	100
1770	SO[1455]	-10797.5	243	15	100
1771	SO[1456]	-10812.5	113	15	100
1772	SO[1457]	-10827.5	243	15	100
1773	SO[1458]	-10842.5	113	15	100
1774	SO[1459]	-10857.5	243	15	100
1775	SO[1460]	-10872.5	113	15	100
1776	SO[1461]	-10887.5	243	15	100
1777	SO[1462]	-10902.5	113	15	100
1778	SO[1463]	-10917.5	243	15	100
1779	SO[1464]	-10932.5	113	15	100
1780	SO[1465]	-10947.5	243	15	100
1781	SO[1466]	-10962.5	113	15	100
1782	SO[1467]	-10977.5	243	15	100
1783	SO[1468]	-10992.5	113	15	100
1784	SO[1469]	-11007.5	243	15	100
1785	SO[1470]	-11022.5	113	15	100
1786	SO[1471]	-11037.5	243	15	100
1787	SO[1472]	-11052.5	113	15	100
1788	SO[1473]	-11067.5	243	15	100
1789	SO[1474]	-11082.5	113	15	100
1790	SO[1475]	-11097.5	243	15	100
1791	SO[1476]	-11112.5	113	15	100
1792	SO[1477]	-11127.5	243	15	100
1793	SO[1478]	-11142.5	113	15	100
1794	SO[1479]	-11157.5	243	15	100
1795	SO[1480]	-11172.5	113	15	100
1796	SO[1481]	-11187.5	243	15	100
1797	SO[1482]	-11202.5	113	15	100
1798	SO[1483]	-11217.5	243	15	100
1799	SO[1484]	-11232.5	113	15	100
1800	SO[1485]	-11247.5	243	15	100

FITIPOWER CONFIDENTIAL
NO DISCLOSURE

Pad Num	Pad name	X	Y	W	H
1801	SO[1486]	-11262.5	113	15	100
1802	SO[1487]	-11277.5	243	15	100
1803	SO[1488]	-11292.5	113	15	100
1804	SO[1489]	-11307.5	243	15	100
1805	SO[1490]	-11322.5	113	15	100
1806	SO[1491]	-11337.5	243	15	100
1807	SO[1492]	-11352.5	113	15	100
1808	SO[1493]	-11367.5	243	15	100
1809	SO[1494]	-11382.5	113	15	100
1810	SO[1495]	-11397.5	243	15	100
1811	SO[1496]	-11412.5	113	15	100
1812	SO[1497]	-11427.5	243	15	100
1813	SO[1498]	-11442.5	113	15	100
1814	SO[1499]	-11457.5	243	15	100
1815	SO[1500]	-11472.5	113	15	100
1816	SO[1501]	-11487.5	243	15	100
1817	SO[1502]	-11502.5	113	15	100
1818	SO[1503]	-11517.5	243	15	100
1819	SO[1504]	-11532.5	113	15	100
1820	SO[1505]	-11547.5	243	15	100
1821	SO[1506]	-11562.5	113	15	100
1822	SO[1507]	-11577.5	243	15	100
1823	SO[1508]	-11592.5	113	15	100
1824	SO[1509]	-11607.5	243	15	100
1825	SO[1510]	-11622.5	113	15	100
1826	SO[1511]	-11637.5	243	15	100
1827	SO[1512]	-11652.5	113	15	100
1828	SO[1513]	-11667.5	243	15	100
1829	SO[1514]	-11682.5	113	15	100
1830	SO[1515]	-11697.5	243	15	100
1831	SO[1516]	-11712.5	113	15	100
1832	SO[1517]	-11727.5	243	15	100
1833	SO[1518]	-11742.5	113	15	100
1834	SO[1519]	-11757.5	243	15	100
1835	SO[1520]	-11772.5	113	15	100
1836	SO[1521]	-11787.5	243	15	100
1837	SO[1522]	-11802.5	113	15	100
1838	SO[1523]	-11817.5	243	15	100
1839	SO[1524]	-11832.5	113	15	100
1840	SO[1525]	-11847.5	243	15	100
1841	SO[1526]	-11862.5	113	15	100
1842	SO[1527]	-11877.5	243	15	100
1843	SO[1528]	-11892.5	113	15	100
1844	SO[1529]	-11907.5	243	15	100
1845	SO[1530]	-11922.5	113	15	100
1846	SO[1531]	-11937.5	243	15	100
1847	SO[1532]	-11952.5	113	15	100
1848	SO[1533]	-11967.5	243	15	100
1849	SO[1534]	-11982.5	113	15	100
1850	SO[1535]	-11997.5	243	15	100
1851	SO[1536]	-12012.5	113	15	100
1852	SHIELDING	-12055	258	30	70
1853	COM1_OUT	-12105	258	30	70
1854	COM1_OUT	-12155	258	30	70
1855	SHIELDING	-12205	258	30	70
1856	F_CtrlR	-12403	278	80	30
1857	OEVR	-12303	238	80	30
1858	SYNC1R	-12403	198	80	30
1859	SYNC2R	-12303	158	80	30
1860	UDR	-12403	118	80	30

Pad Num	Pad name	X	Y	W	H
1861	CKVR	-12303	78	80	30
1862	STV2R	-12403	38	80	30
1863	STV1R	-12303	-2	80	30
1864	F_CtrlR	-12403	-42	80	30
1865	STBNR	-12303	-82	80	30

ALM_L	-12131.5	115.5
ALM_R	12131.5	115.5

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10. DEFINITIONS

10.1. Data Sheet Status

Preliminary Data Sheet	This data sheet contains preliminary data; supplementary data may be published later.
Data Sheet	This data sheet contains final product specifications.

Contents in the document are subject to change without notice.

10.2. Life Support Application

These products are not designed for use in life support appliances, devices, or systems where malfunction of these products can reasonably be expected to result in personal injury. fitipower customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify fitipower for any damages resulting from such improper use or sale.

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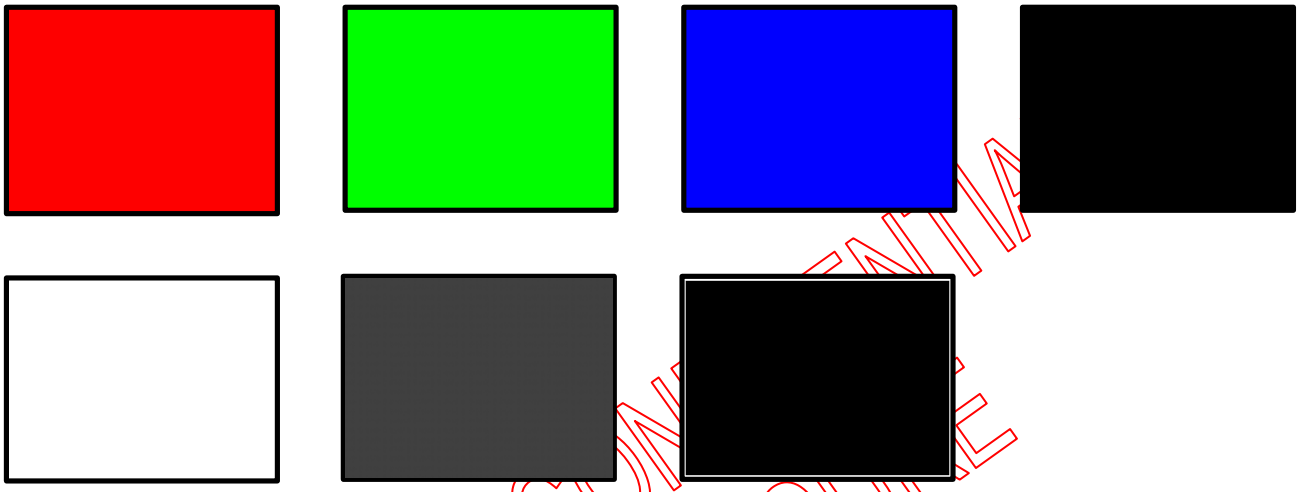
11. REVISION HISTORY

Reversion	Content	Date
1.0	New Issue.	2016/12/01
1.1	Revise power on off sequence	2018/04/17
1.2	Update Pad Coordinate(page36~53) Update wiring resistance(page12)	2018/10/29
1.3	Add panel structure gate at left side (page 7)	2019/01/10

Appendix A : BIST pattern

R→G→B→Black→White→Flicker pattern→Black background with white out frame



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