

Bitland Electronics Co.,LTD

Board name: Mother Board Schematic

Project name: S110

Version: REV:1.0

initial Date: 2011-05-07

New update:

1. System Block Diagram & Schematic page description;

2. Power Block Diagram & Discription;

3. Annotations & information;

4. Schematic modify Item and history;

5. Power on & off Sequence;

6. ACPI Mode Switch Timings;

7. Power On Sequence Map;

8. CLOCK Distribution;

9. Power Distribution;

Bitland Confidential

Hardware drawing by:

Hardware check by:

EMI Check by:

Power drawing by:

Power check by:

Manager Sign by:



Bitland Information Technology Co.,Ltd.

4-6F,#7Building,Xili Tongfuyu Industrial Town Nanshan District,Shenzhen

TITLE	Netbook
PAGE DETAIL	<Doc>

BITC_PN

S110

Rev

1.2

ID

POWER CONTROL

Size

B

Date

Sheet

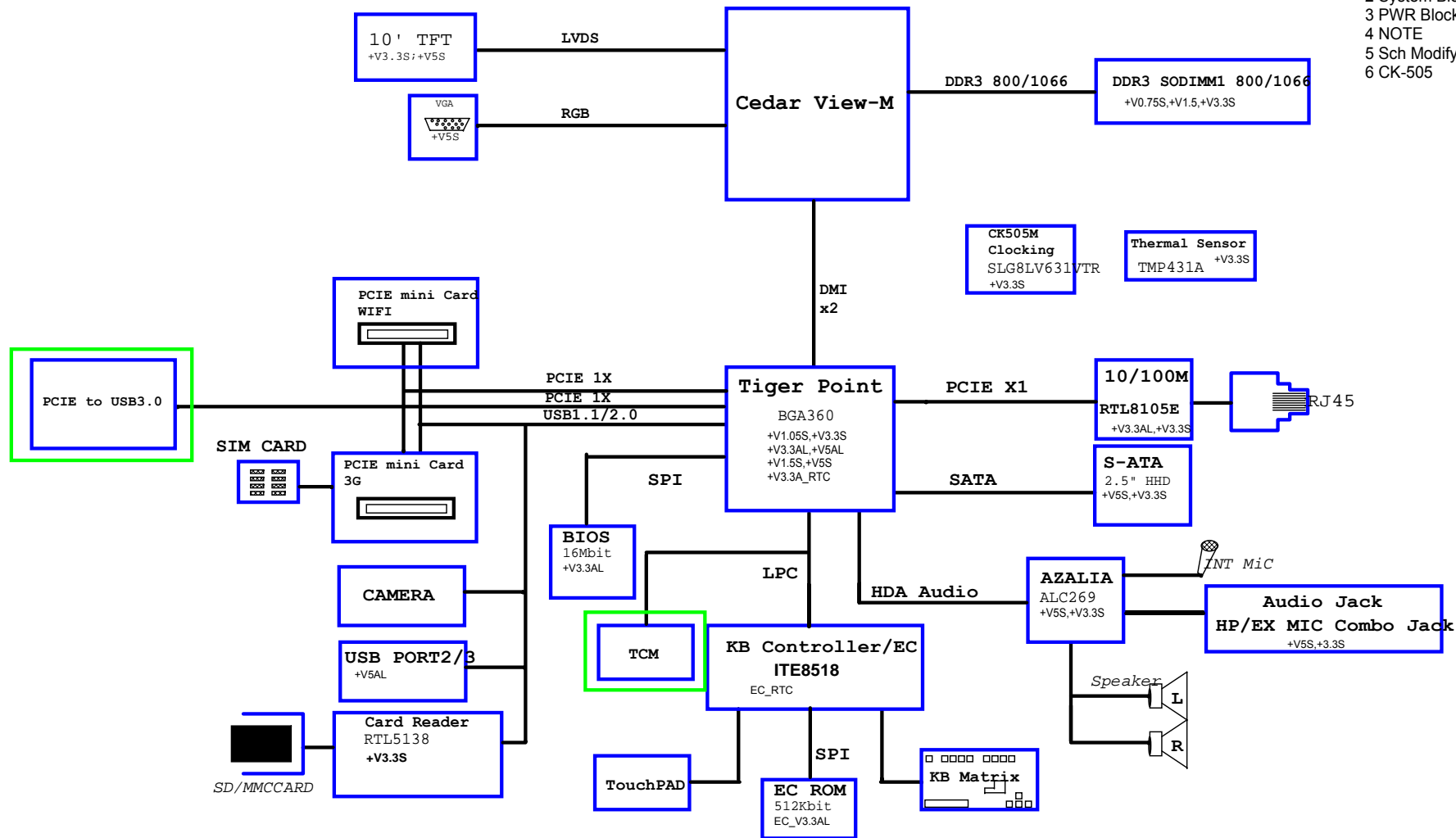
1 of 42

Bitland Electronics Co.,LTD

SYSTEM BLOCK Ver:C

CONTENT

- 1 Title
- 2 System Block & Index
- 3 PWR Block & description
- 4 NOTE
- 5 Sch Modify and history
- 6 CK-505



Bitland Information Technology Co.,Ltd.

4-6F, #7 Building, Xili Tongfuyu Industrial Town Nanshan District, Shenzhen

TITLE Netbook
PAGE DETAIL <Doc>

BITC_PN

S110

Rev

1.2

ID

SYSTEM BLOCK

Size

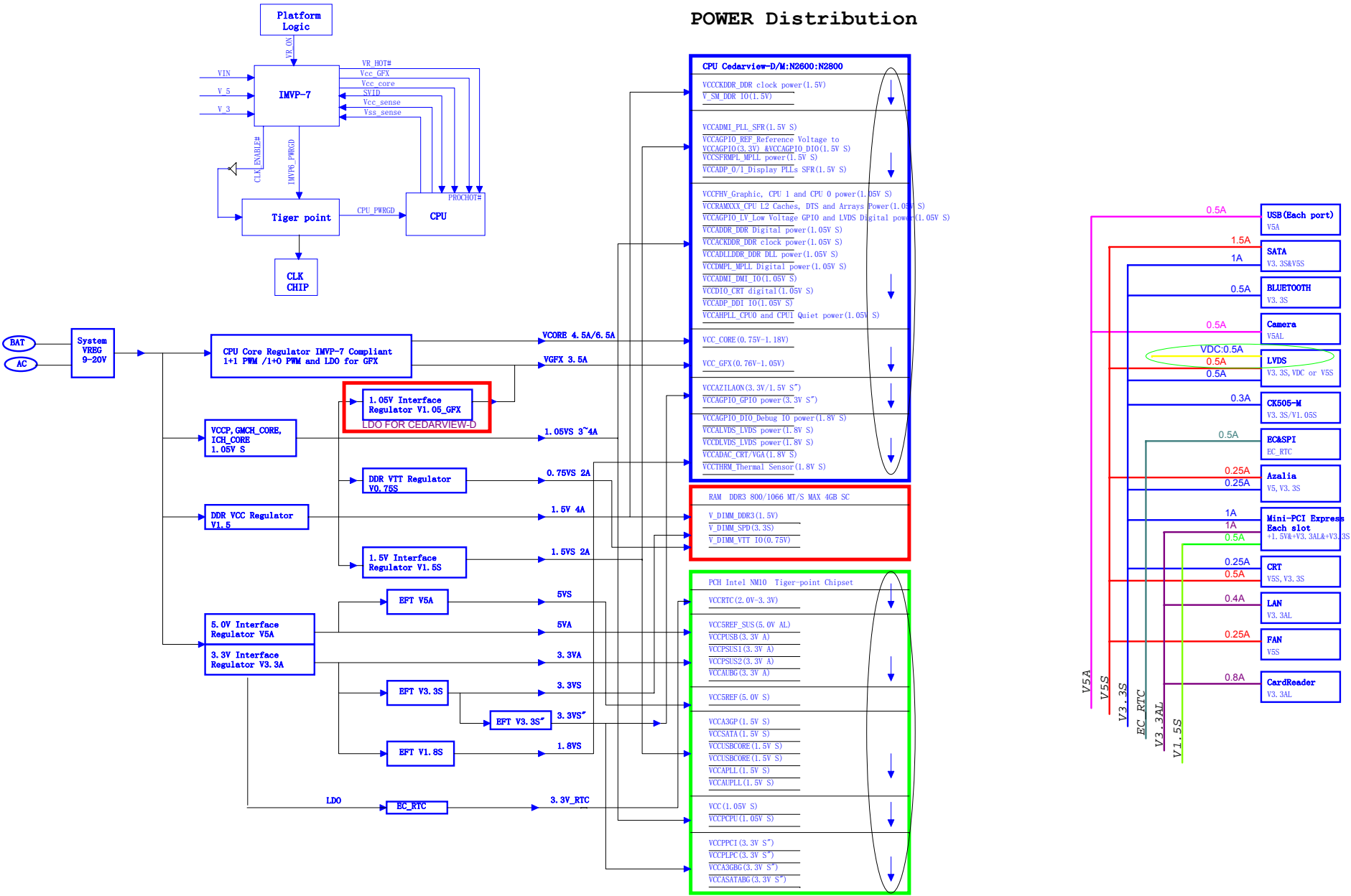
B

Date

Sheet

2 of 42

POWER Distribution



Voltage Rails

+VDC	Primary DC system power supply (9V-20V)
+VBATTERY	Battery Power supply (9-20V)
+VCC_CORE	SVID Core Voltage for CPU
+V1.05S	1.05V for Pineview & Tiger point core / FSB VTT
+V1.5	1.5V power rail for DDR3
+V0.75S	0.75V DDR3 Termination voltage
+V3.3AL	3.3V always on power rail
+V5AL	5V for ICH7-M's VCC5 Refsus
+V3.3S	3.3V main power rail
+V5S	5V main power rail
+VGFX	SVID Voltage for GFX
+V3.3_S0	Voltage for VCCA ZIL AON and VCCAGPIO_GPIO
+V1.8S	Voltage for Cpu

Board stack up description

PCB Layers	Trace Impedence:55ohm +/-15%
Top(Signal1)	
Power	
Ground	
Bottom(Signal4)	

USB Table

USB Port#	Function Description
0	
1	
2	
3	
4	
5	
6	
7	

I2C SMB Address

Device	Address	Hex	Master
Clock Generator	1101 001x	D2	PCH
SO-DIMM0	1010 000x	A0	PCH
CPU Thermal Sensor	1001 100x	98	KBC
Smart Battery	0001 011x	16	KBC
PCIE Slot	TBD	TBD	PCH

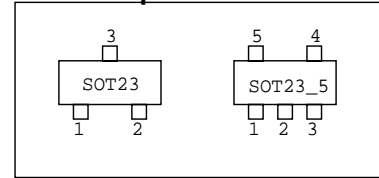
Power States

Signal	SLP_S3#	SLP_S4#	SLP_S5#	+V*ALW	+V*	+V*S	Clock
S0 (Full On)	HIGH	HIGH	HIGH	ON	ON	ON	ON
S3 (STM)	LOW	HIGH	HIGH	ON	ON	OFF	OFF
S4 (STD)	LOW	LOW	HIGH	ON	OFF	OFF	OFF
S5 (SoftOff)	LOW	LOW	LOW	ON	OFF	OFF	OFF

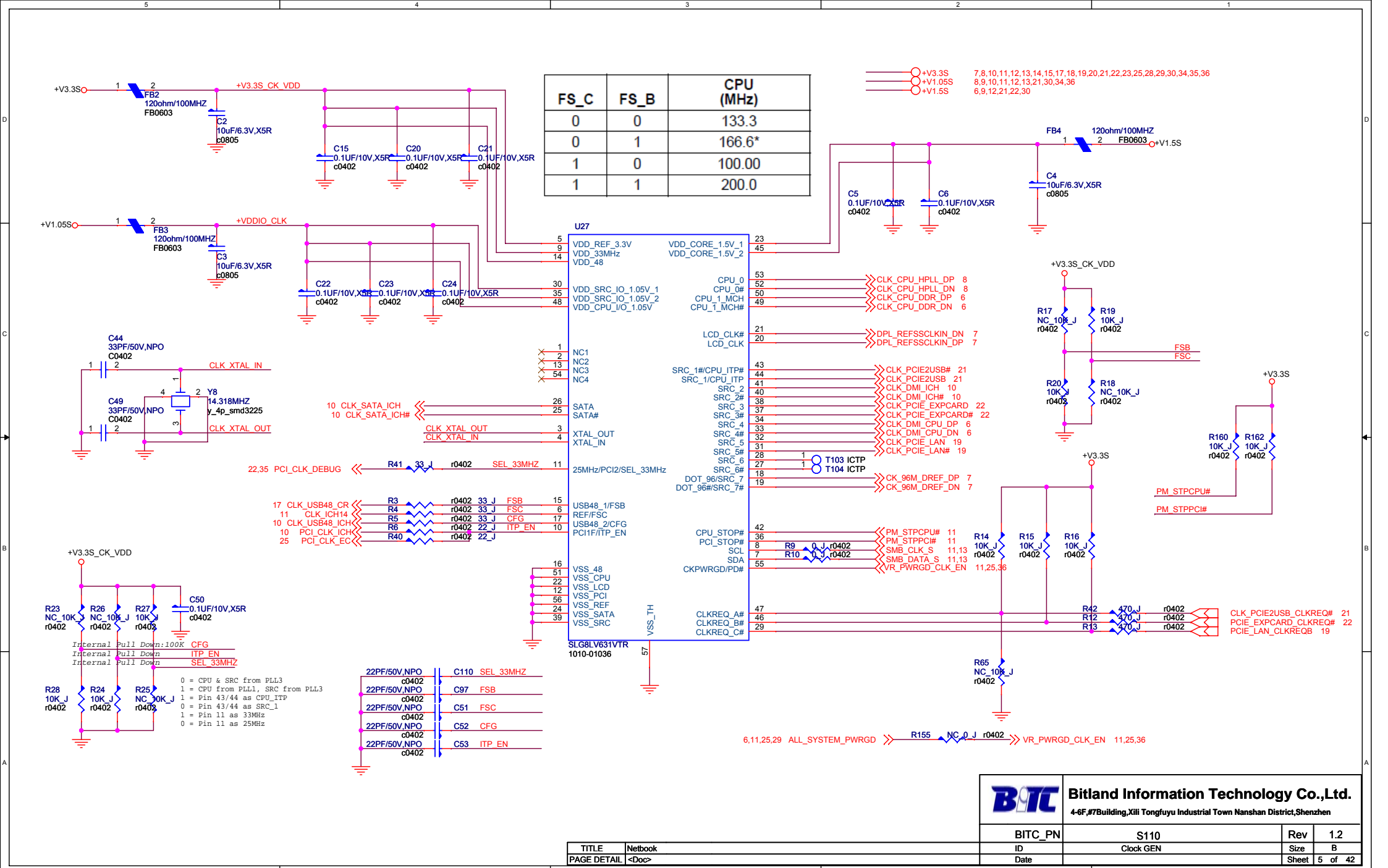
Wake up Events

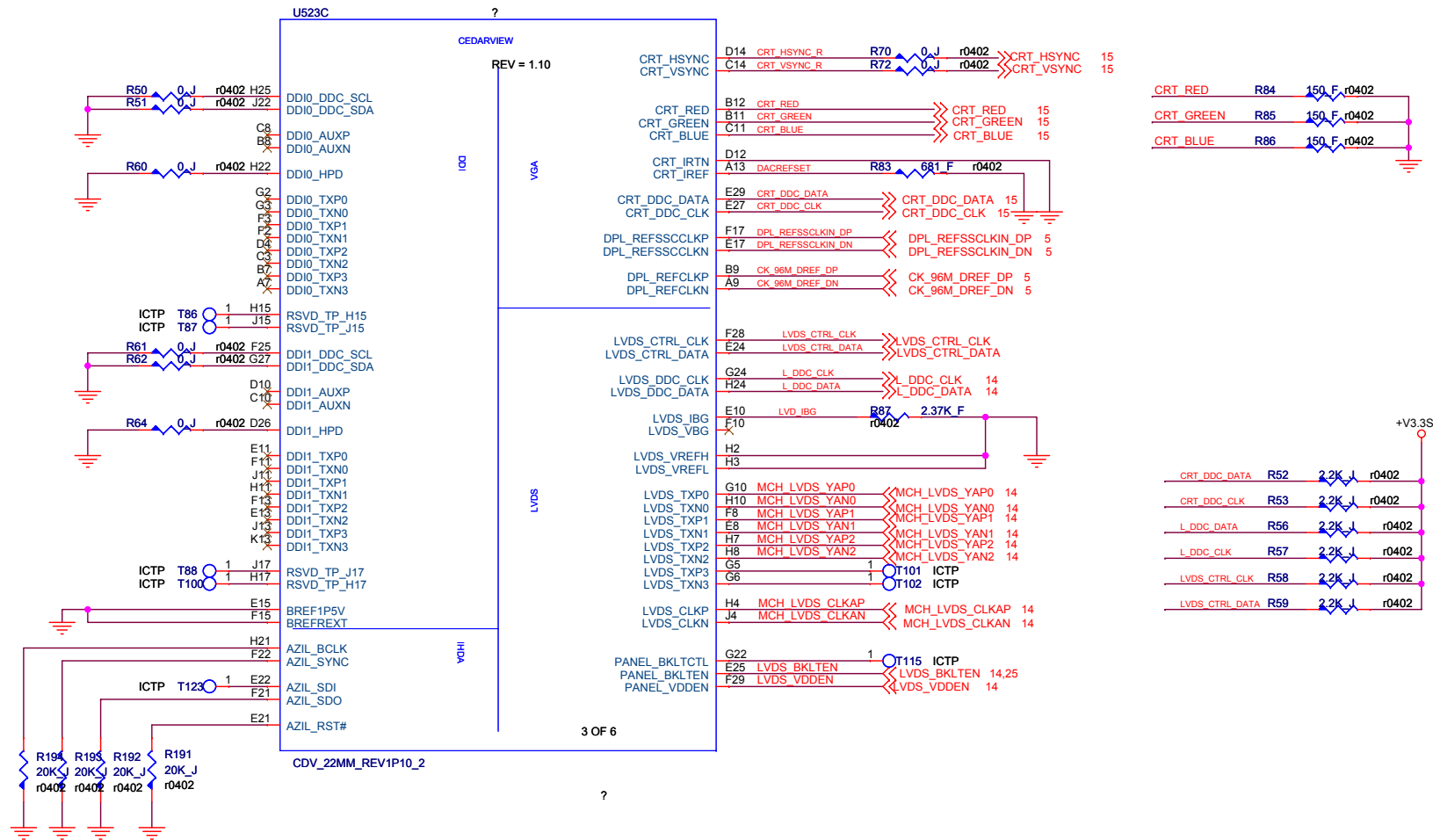
LID switch from EC
Power switch from EC


PCB Footprints



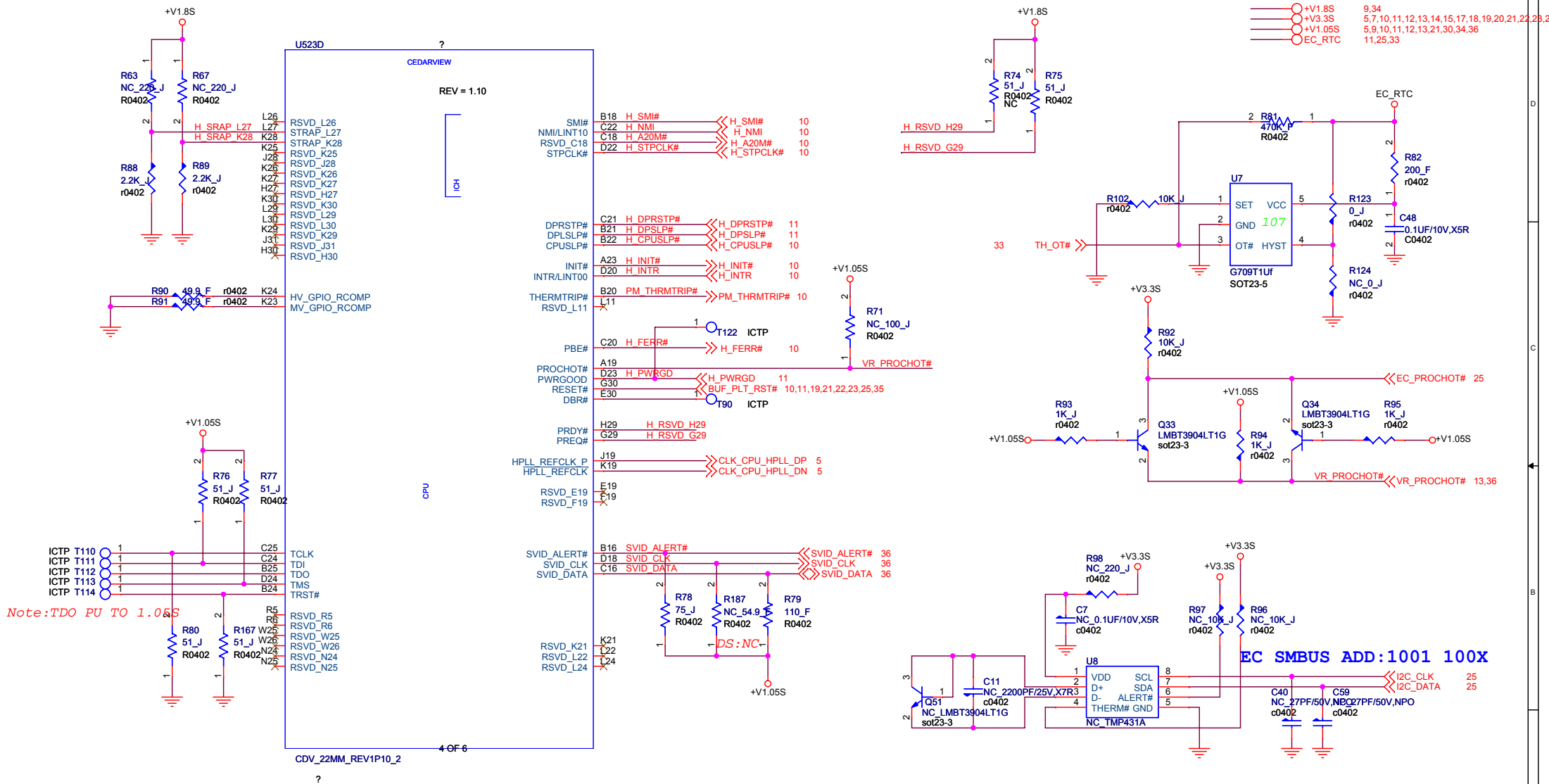
ns: Component marked "ns" is not stuff





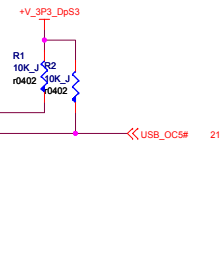
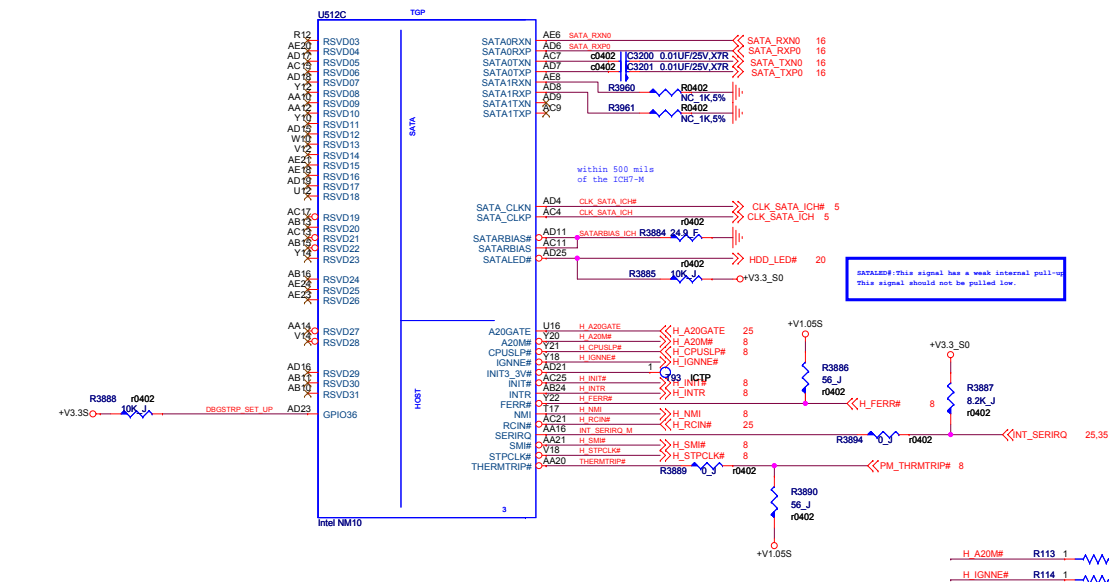
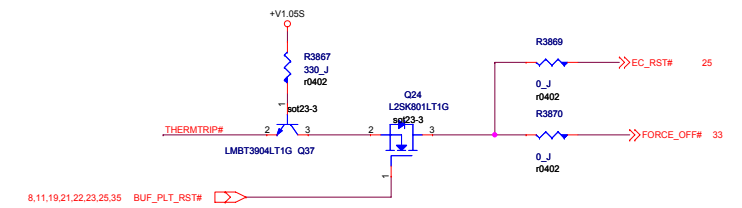
		Bitland Information Technology Co.,Ltd.	
		4-6F,#7Building,Xili Tongfuyu Industrial Town Nanshan District,Shenzhen	
BITC_PN	S110		Rev 1.2
ID	Cedarview-M DDI HDA LVDS VGA		Size B
Date			Sheet 7 of 42

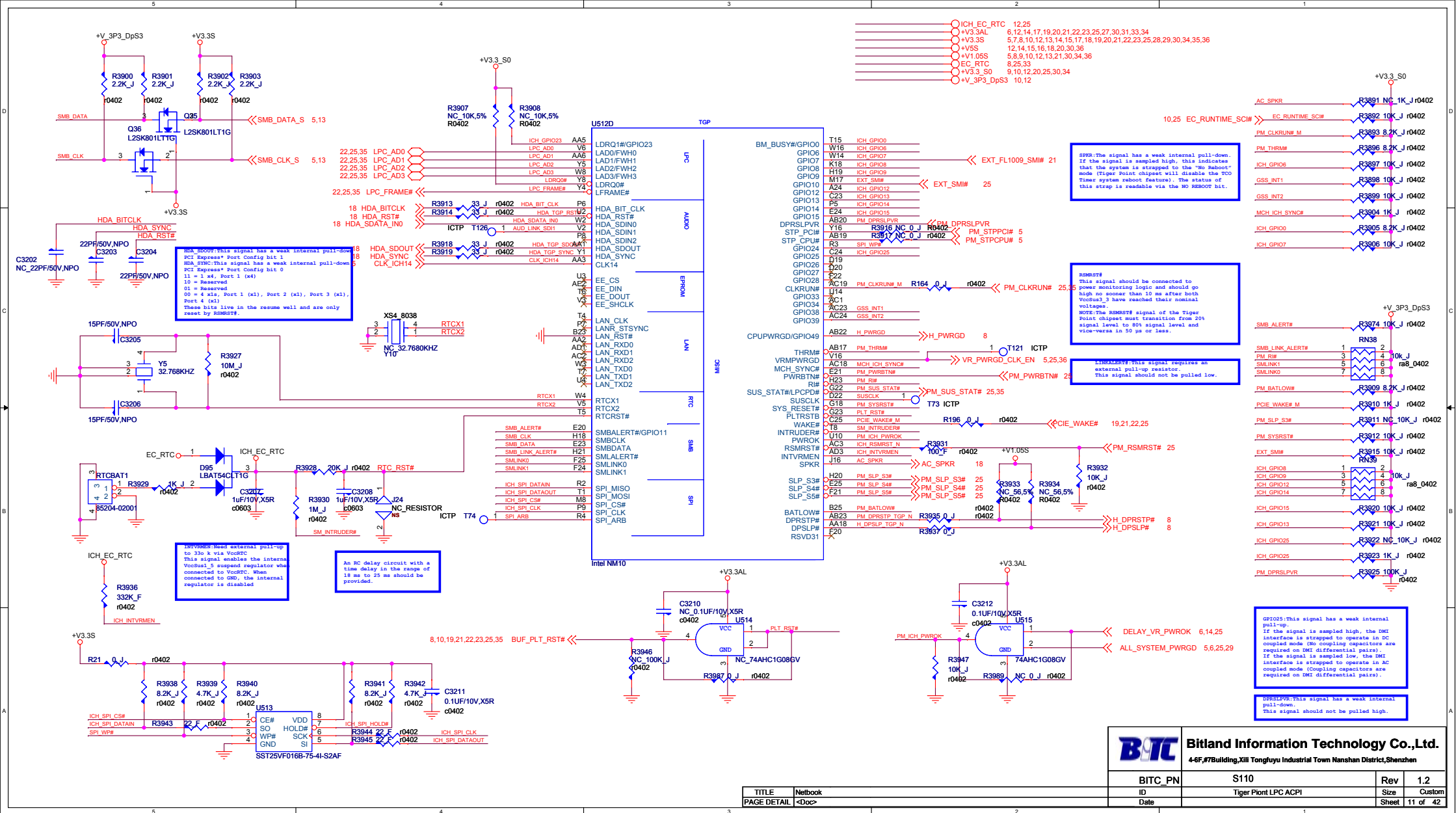
TITLE	Netbook
PAGE DETAIL	<Doc>

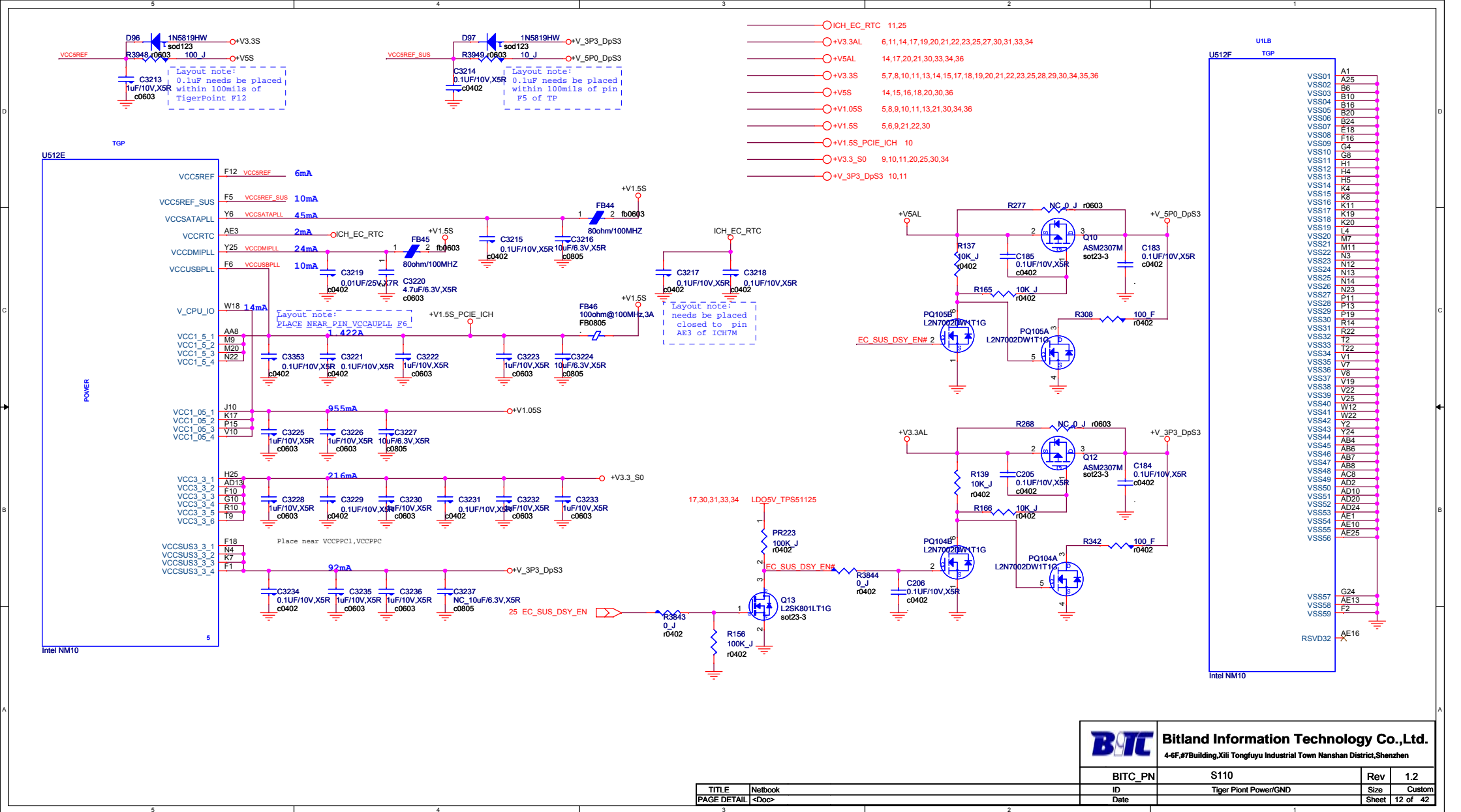


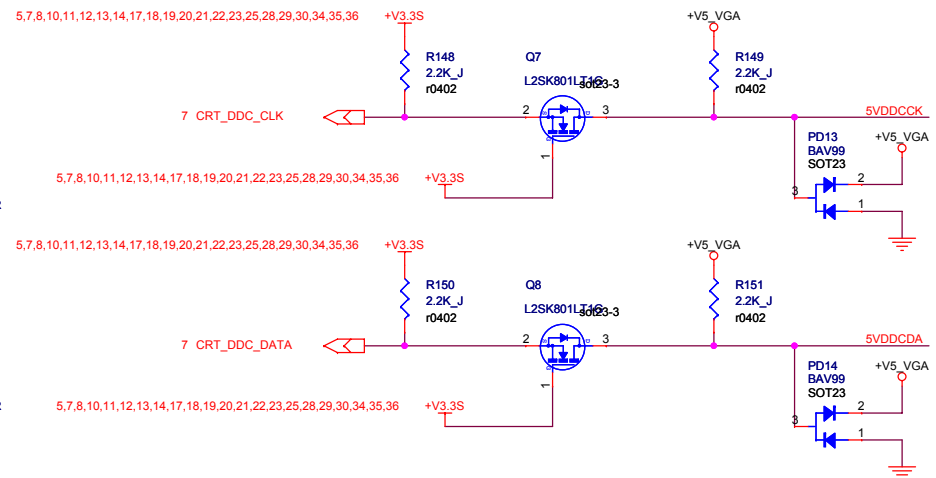
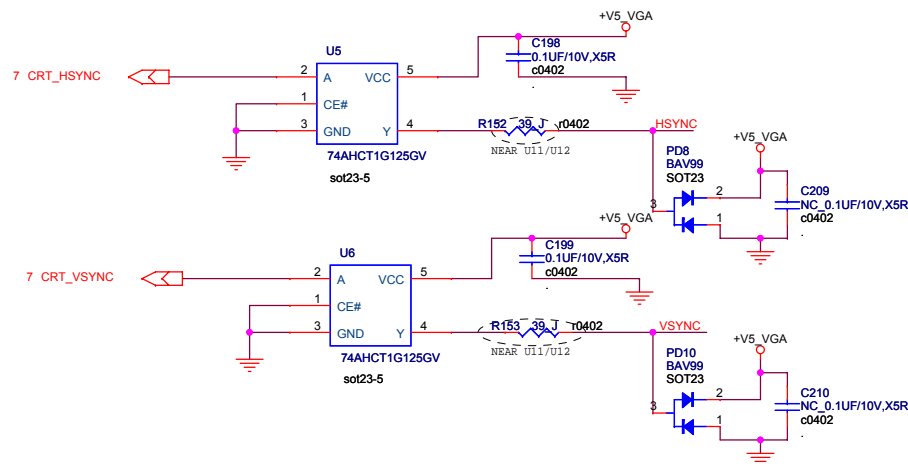
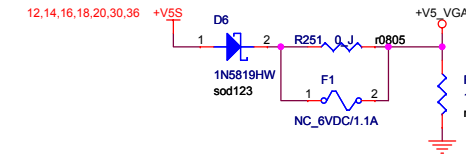
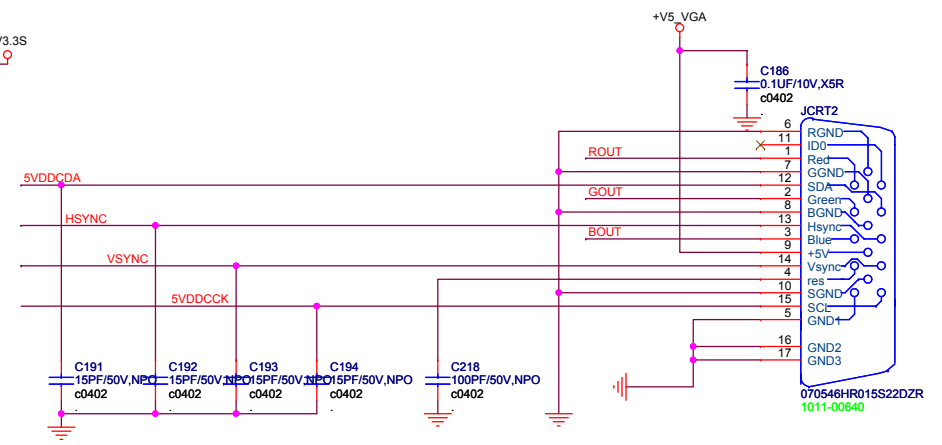
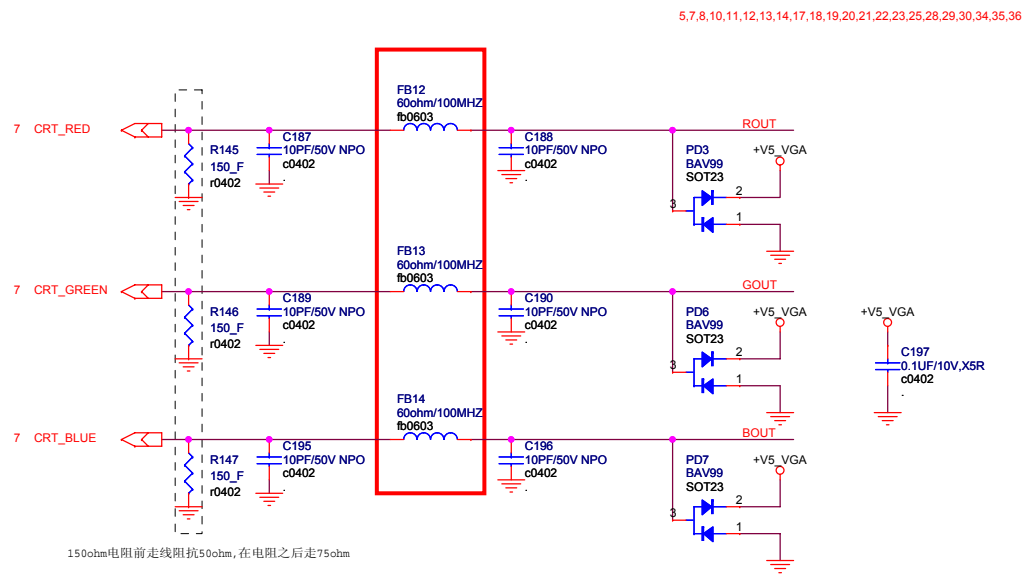
4.5A/6.5A
3.5A
0.8A/1.25A
125mA
150mA
450/750mA
10mA

US23F		US23F	
CEDARVIEW		CEDARVIEW	
A11	VSS01	H19	VSS01
A16	VSS02	H26	VSS02
A21	VSS03	H28	VSS03
A25	VSS04	H29	VSS04
AA1	VSS05	J10	VSS05
AA10	VSS06	J2	VSS06
AA11	VSS07	J21	VSS07
AA19	VSS08	J30	VSS08
AA21	VSS09	K15	VSS09
AA23	VSS10	K3	VSS10
AA26	VSS11	K7	VSS11
AA27	VSS12	K8	VSS12
AA29	VSS13	K9	VSS13
AA7	VSS14	L1	VSS14
AA9	VSS15	L10	VSS15
AB15	VSS16	L13	VSS16
AB17	VSS17	L23	VSS17
AB23	VSS18	L25	VSS18
AB29	VSS19	L26	VSS19
AC1	VSS20	L7	VSS20
AC10	VSS21	L31	VSS21
AC11	VSS22	M4	VSS22
AC13	VSS23	N10	VSS23
AC22	VSS24	N14	VSS24
AC28	VSS25	N19	VSS25
AC4	VSS26	N21	VSS26
AD10	VSS27	N22	VSS27
AD21	VSS28	N23	VSS28
AD24	VSS29	N26	VSS29
AD28	VSS30	N27	VSS30
AD5	VSS31	N28	VSS31
AE1	VSS32	N7	VSS32
AE10	VSS33	N16	VSS33
AE11	VSS34	P4	VSS34
AE15	VSS35	P15	VSS35
AE17	VSS36	P18	VSS36
AE18	VSS37	T14	VSS37
AE3	VSS38	T18	VSS38
AE31	VSS39	T3	VSS39
AF11	VSS40	U5	VSS40
AF13	VSS41	U6	VSS41
AF21	VSS42	U9	VSS42
AF24	VSS43	V2	VSS43
AF28	VSS44	W10	VSS44
AF7	VSS45	W14	VSS45
AG22	VSS46	W19	VSS46
AG5	VSS47	W2	VSS47
AH28	VSS48	W21	VSS48
AF28	VSS49	W22	VSS49
AH6	VSS50	W23	VSS50
AH9	VSS51	W24	VSS51
A2	VSS52	W27	VSS52
A3	VSS53	W30	VSS53
AK13	VSS54	W5	VSS54
AK19	VSS55	W6	VSS55
AK28	VSS56	W4	VSS56
AK9	VSS57	Y4	VSS57
AL13	VSS58		
AL19	VSS59	A27	VSS148
AL23	VSS60	A29	VSS149
AL25	VSS61	A3	VSS150
AL7	VSS62	AH1	VSS151
B10	VSS63	A11	VSS152
B14	VSS64	A31	VSS153
B19	VSS65	AK1	VSS154
B23	VSS66	AK2	VSS155
B27	VSS67	AK30	VSS156
C26	VSS68	AK31	VSS157
C30	VSS69	AL2	VSS158
C7	VSS70	AL29	VSS159
D19	VSS71	AL3	VSS160
D28	VSS72	AL30	VSS161
D8	VSS73	AL5	VSS162
D9	VSS74	B2	VSS163
E2	VSS75	B3	VSS164
E5	VSS76	B31	VSS165
E7	VSS77	C1	VSS166
F24	VSS78	C31	VSS167
F4	VSS79	C31	VSS168
G1	VSS80	E1	VSS169
G11	VSS81		
G13	VSS82	L14	VSS83
G15	VSS83	D13	VSS84
G17	VSS84		
G19	VSS85		
G4	VSS86		
G31	VSS87		
G8	VSS88		
H13	VSS89		
	VSS90		







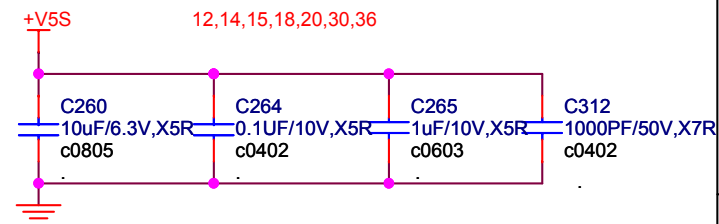
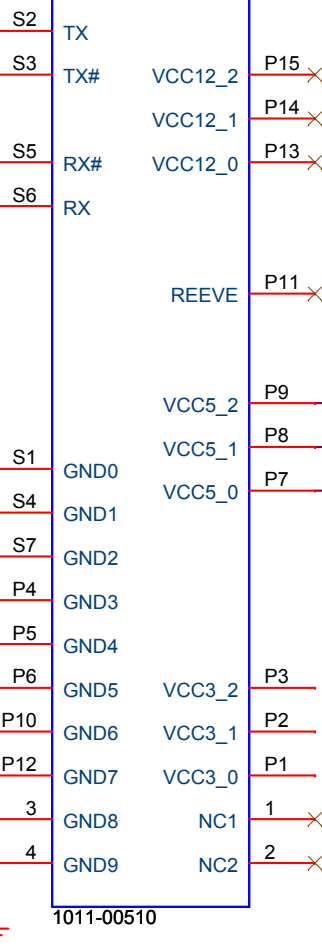


LD2722F-S8FL6
SATA_HDD1
sata_ld2722f-s8fl6

Close to connector as possible as the same distance to connector

10 SATA_TXP0
10 SATA_TXN0
10 SATA_RXN0
10 SATA_RXP0

0.01UF/25V,X7R
C262 c0402
0.01UF/25V,X7R
C263 c0402



12,14,15,18,20,30,36

SATA_B1
Screw 2*11mm

SATA_B2
Screw 2*11mm



Bitland Information Technology Co.,Ltd.

4-6F,#7Building,Xili Tongfuyu Industrial Town Nanshan District,Shenzhen

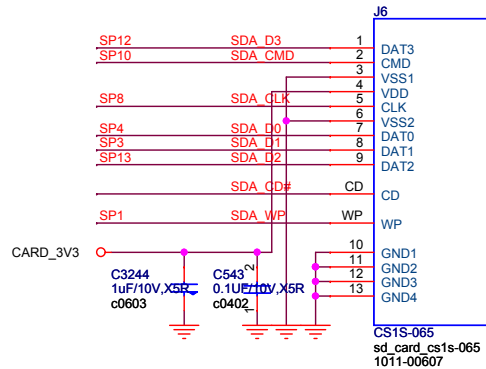
TITLE	Netbook	BITC_PN	S110	Rev	1.2
PAGE DETAIL	<Doc>	ID	SATA CONN	Size	A
		Date		Sheet	16 of 42

+V3.3S 5,7,8,10,11,12,13,14,15,18,19,20,21,22,23,25,28,29,30,34,35,36

10 USB_CR_PN4 USB CR PN4
10 USB_CR_PP4 USB CR PP4

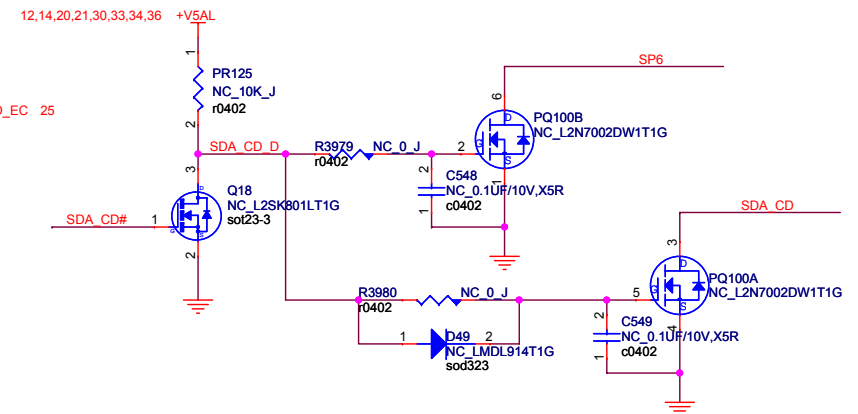
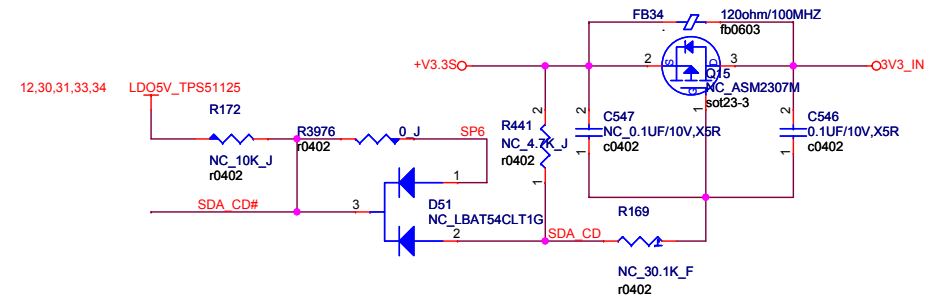
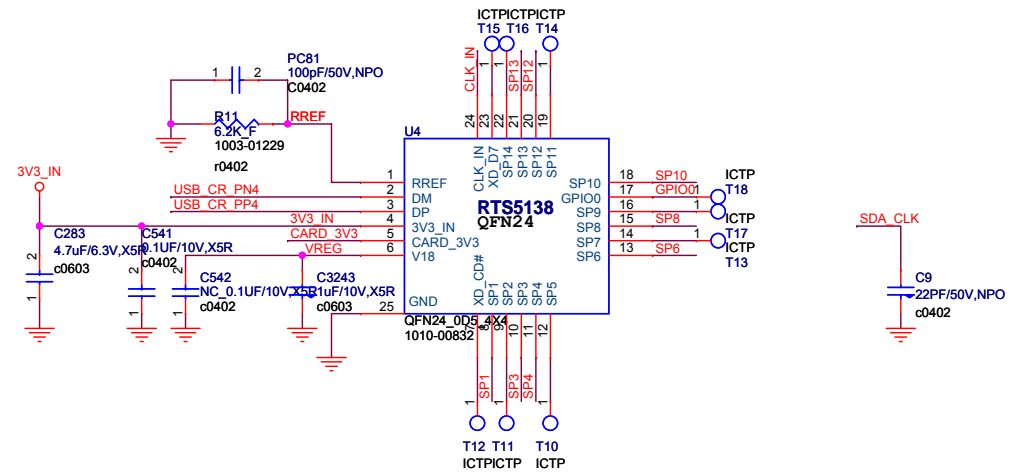
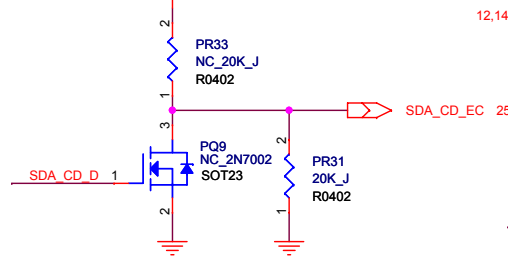
5 CLK_USB48_CR R3973 0 J CLK IN
C8 22PF/50V,NPO c0402

SDA D3
SDA D0
SDA D1
SDA D2
C14 NC_22PF/50V,NPO c0402
C10 NC_22PF/50V,NPO c0402
C12 NC_22PF/50V,NPO c0402
C13 NC_22PF/50V,NPO c0402



Internal SD/MMC Card CN

6,11,12,14,19,20,21,22,23,25,27,30,31,33,34 +V3.3AL



Bitland Information Technology Co.,Ltd.

4-6F,#7Building,Xili Tongfuyu Industrial Town Nanshan District,Shenzhen

TITLE Netbook
PAGE DETAIL <Doc>

BITC_PN

S110

Rev

1.2

ID

CARDREADER

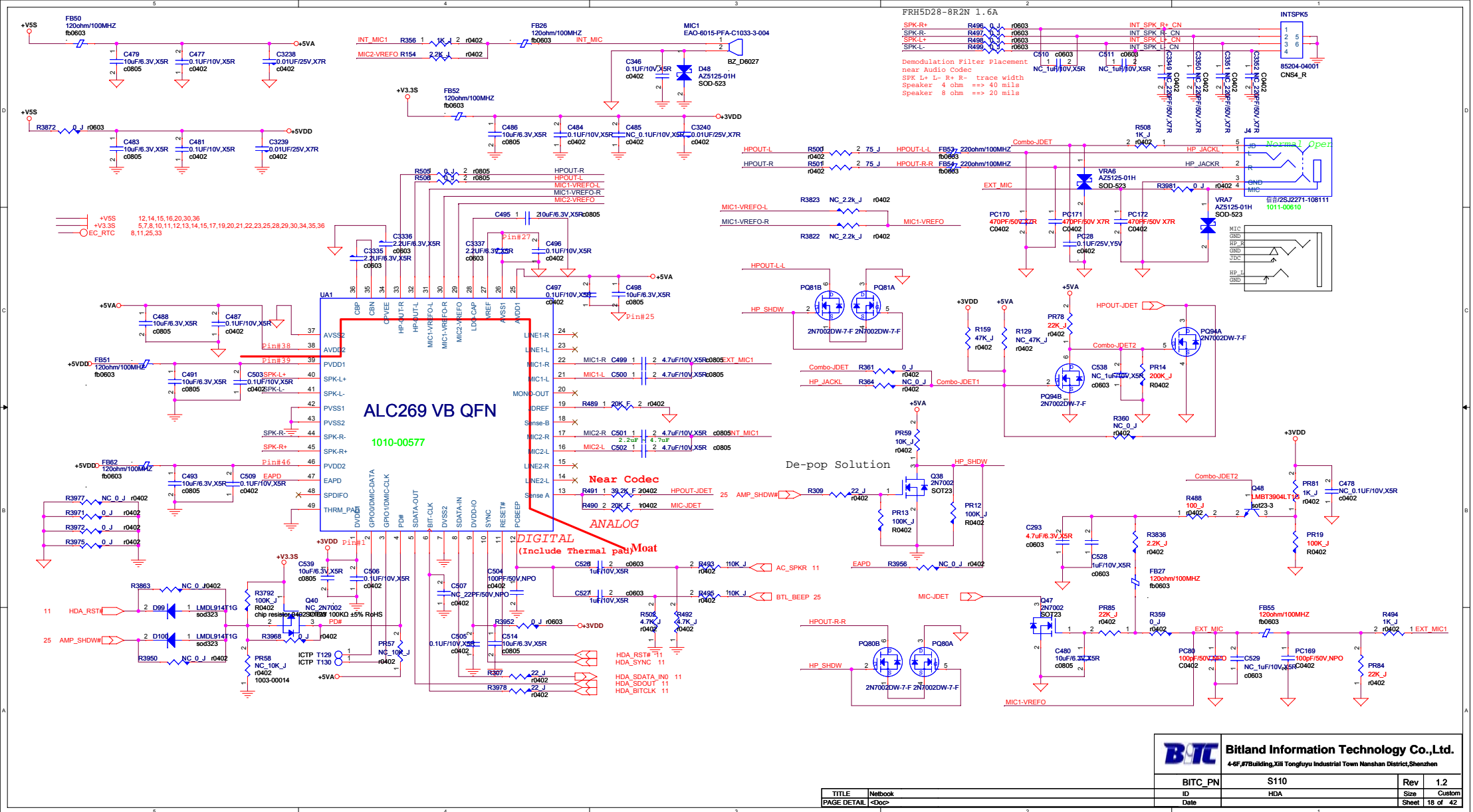
Size

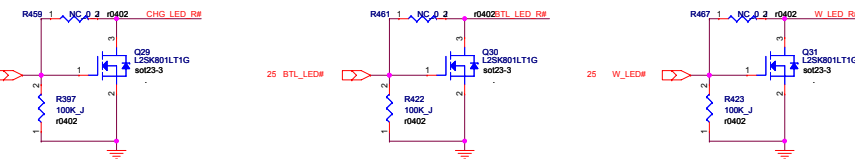
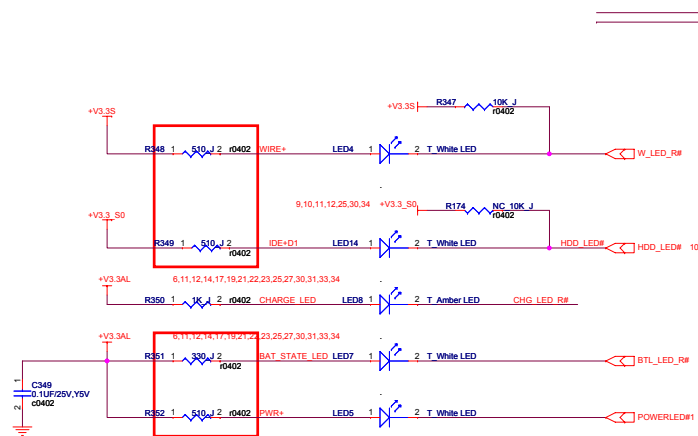
B

Date

Sheet

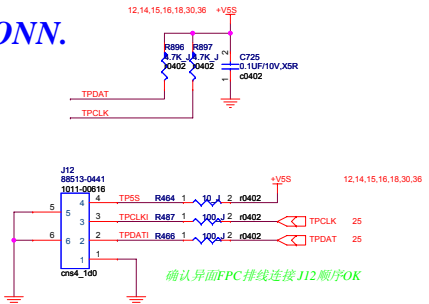
17 of 42



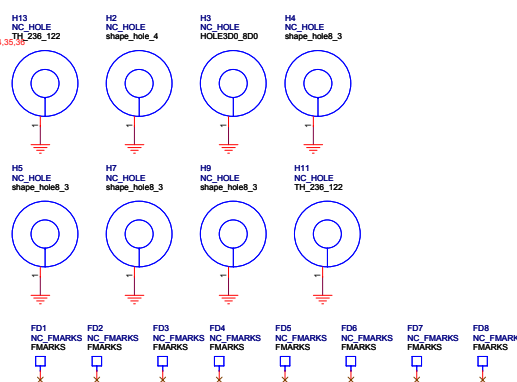


LED MB

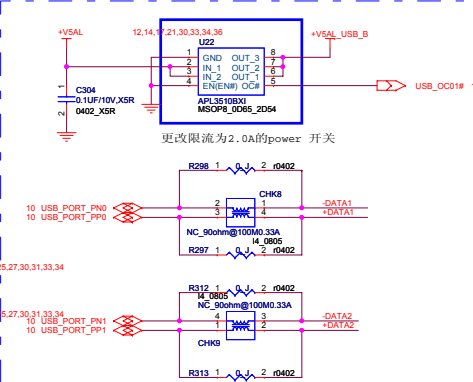
TOUCHPAD CONN.



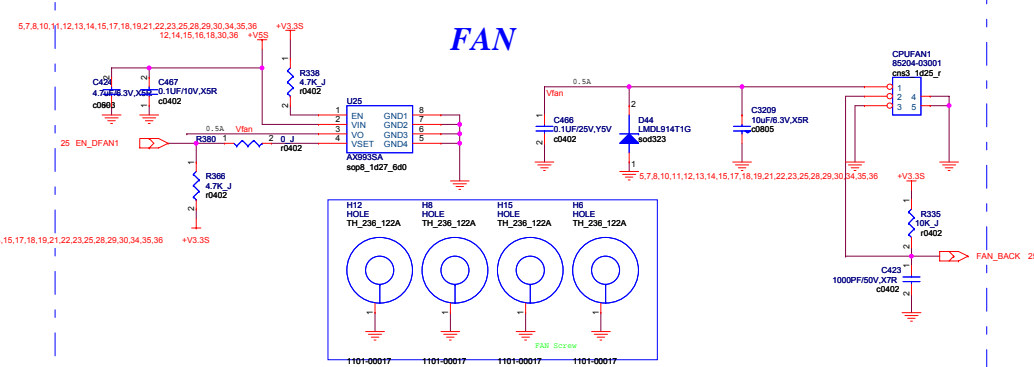
确认异面PC排线连接J12顺序OK



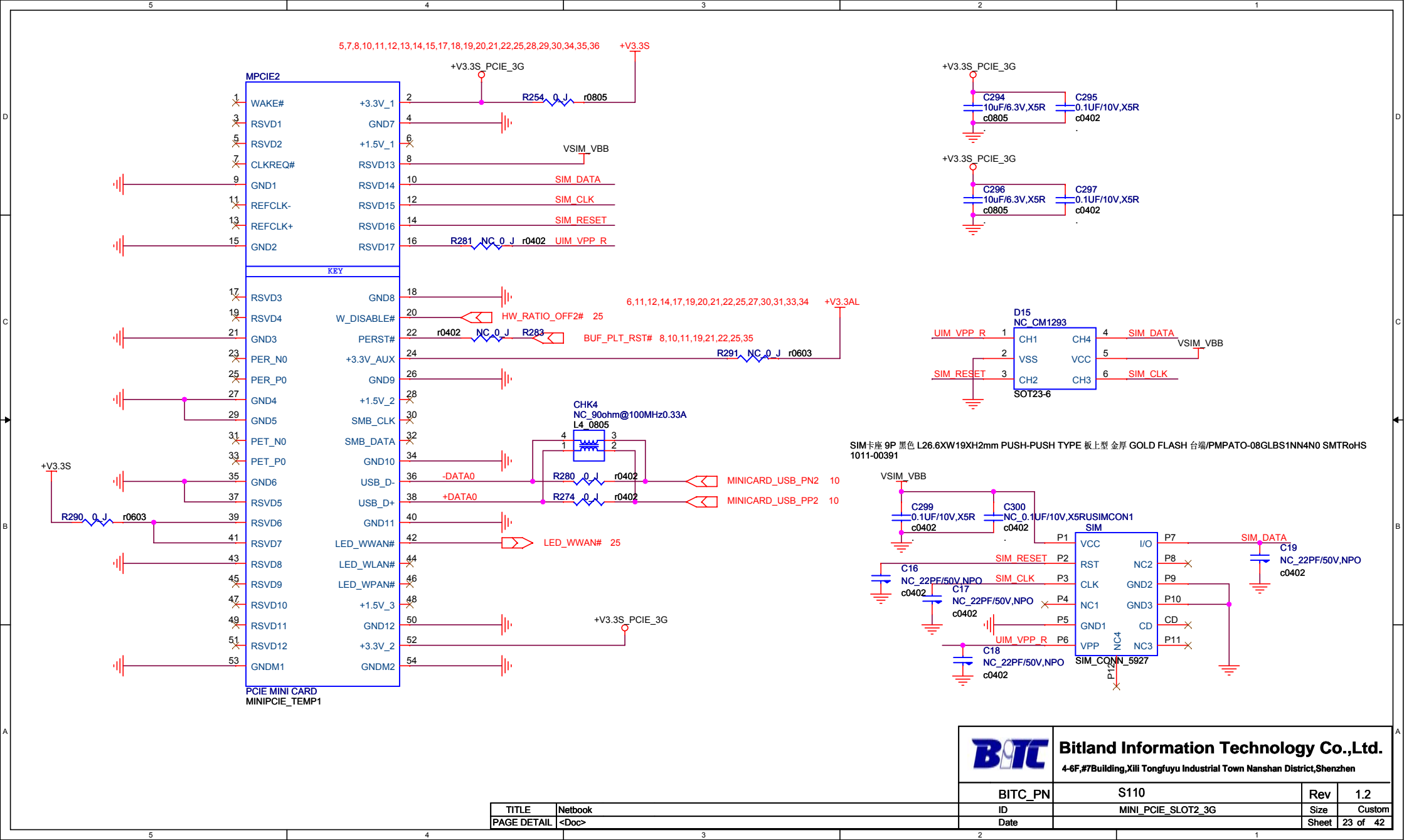
HOLE/MARK

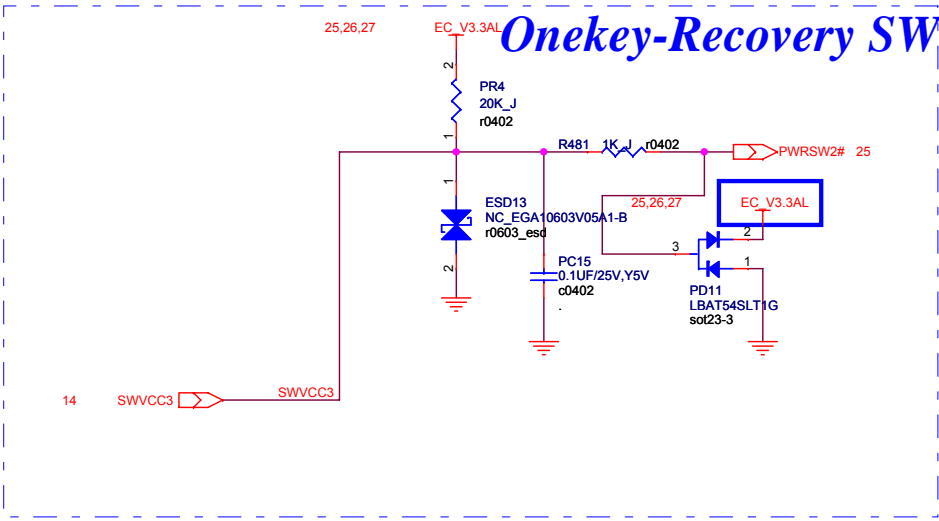
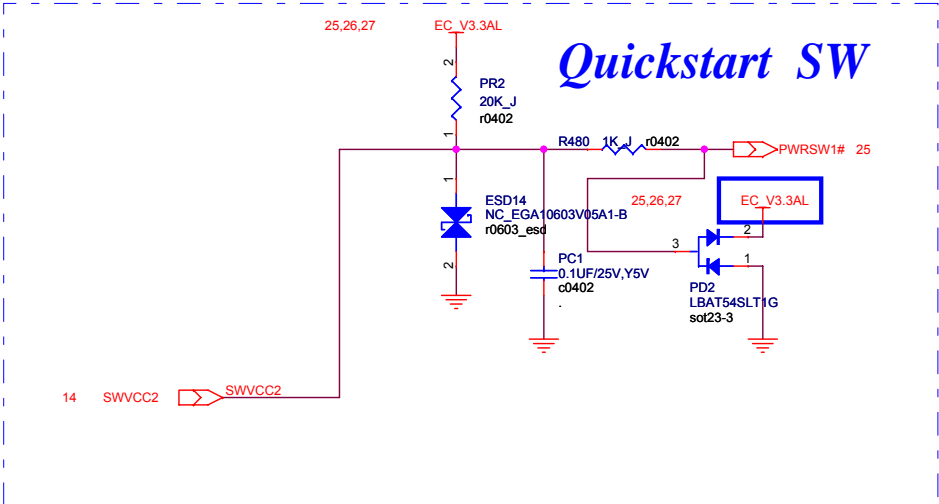
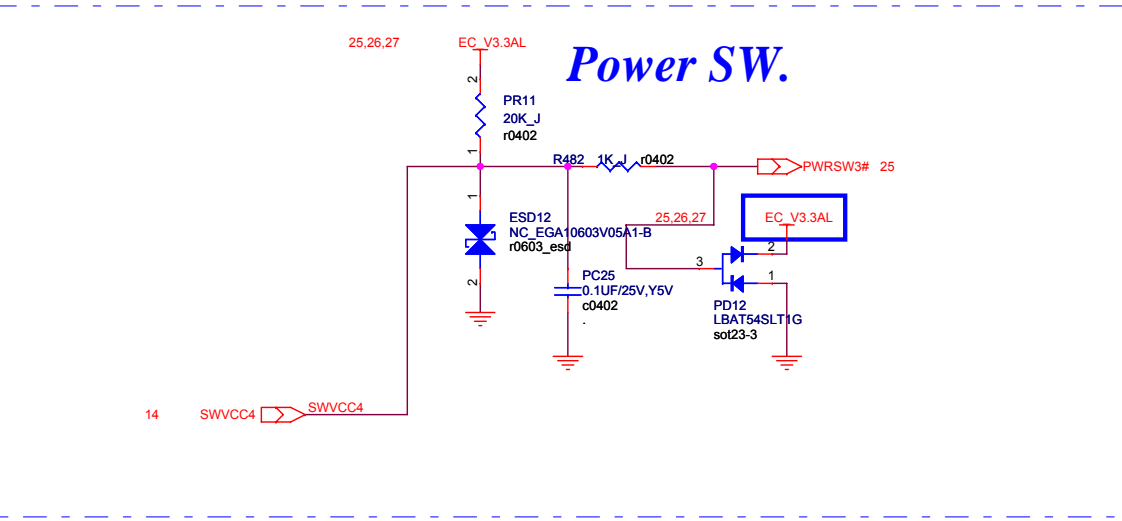


RJ45 DB CONN.



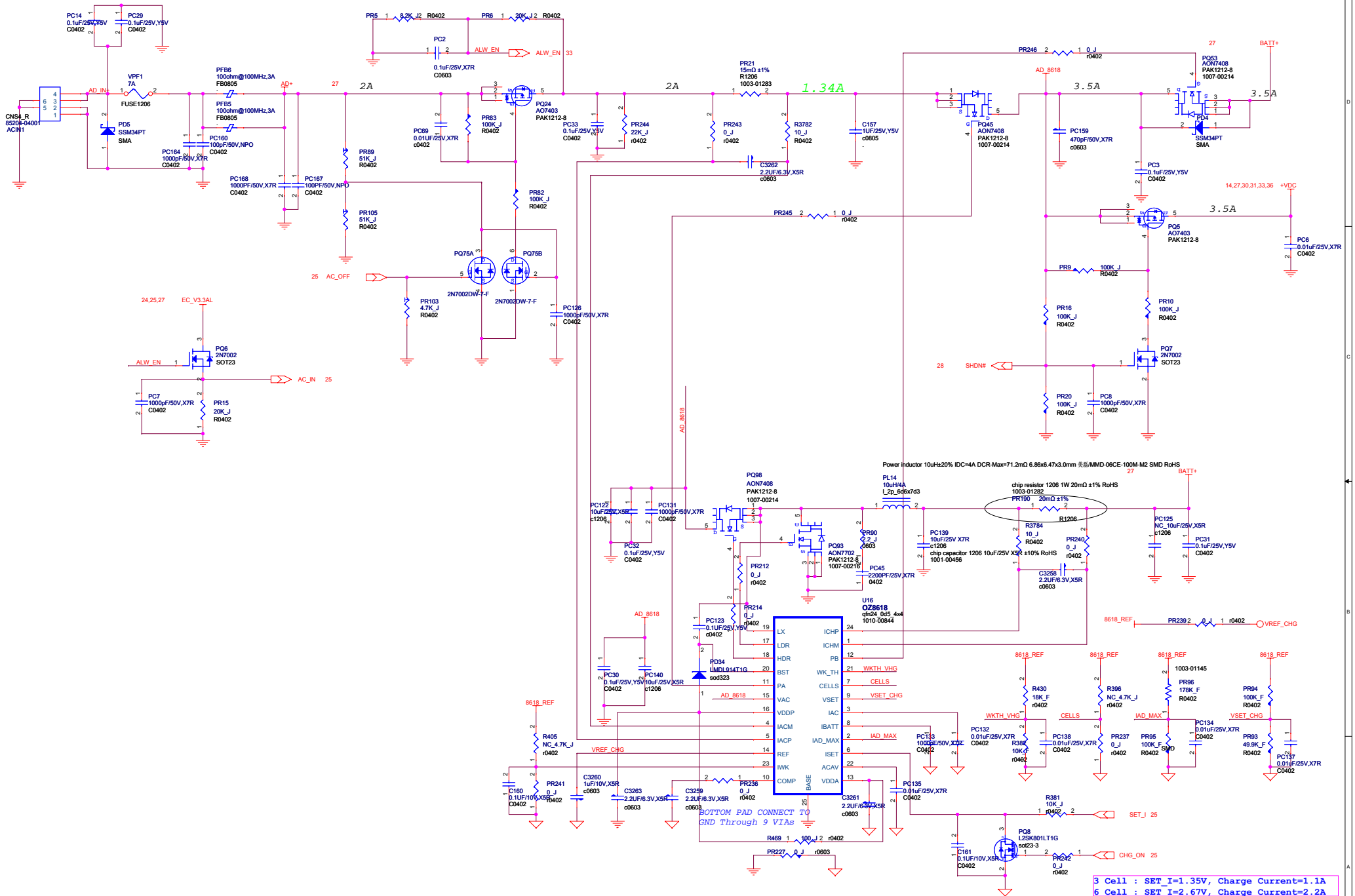
FAN





BITC Bitland Information Technology Co.,Ltd. 4-6F, #7 Building, Xili Tongfuyu Industrial Town Nanshan District, Shenzhen			
BITC_PN	S110	Rev	1.2
ID	USB_LID_BWRBTN	Size	B
Date		Sheet	24 of 42

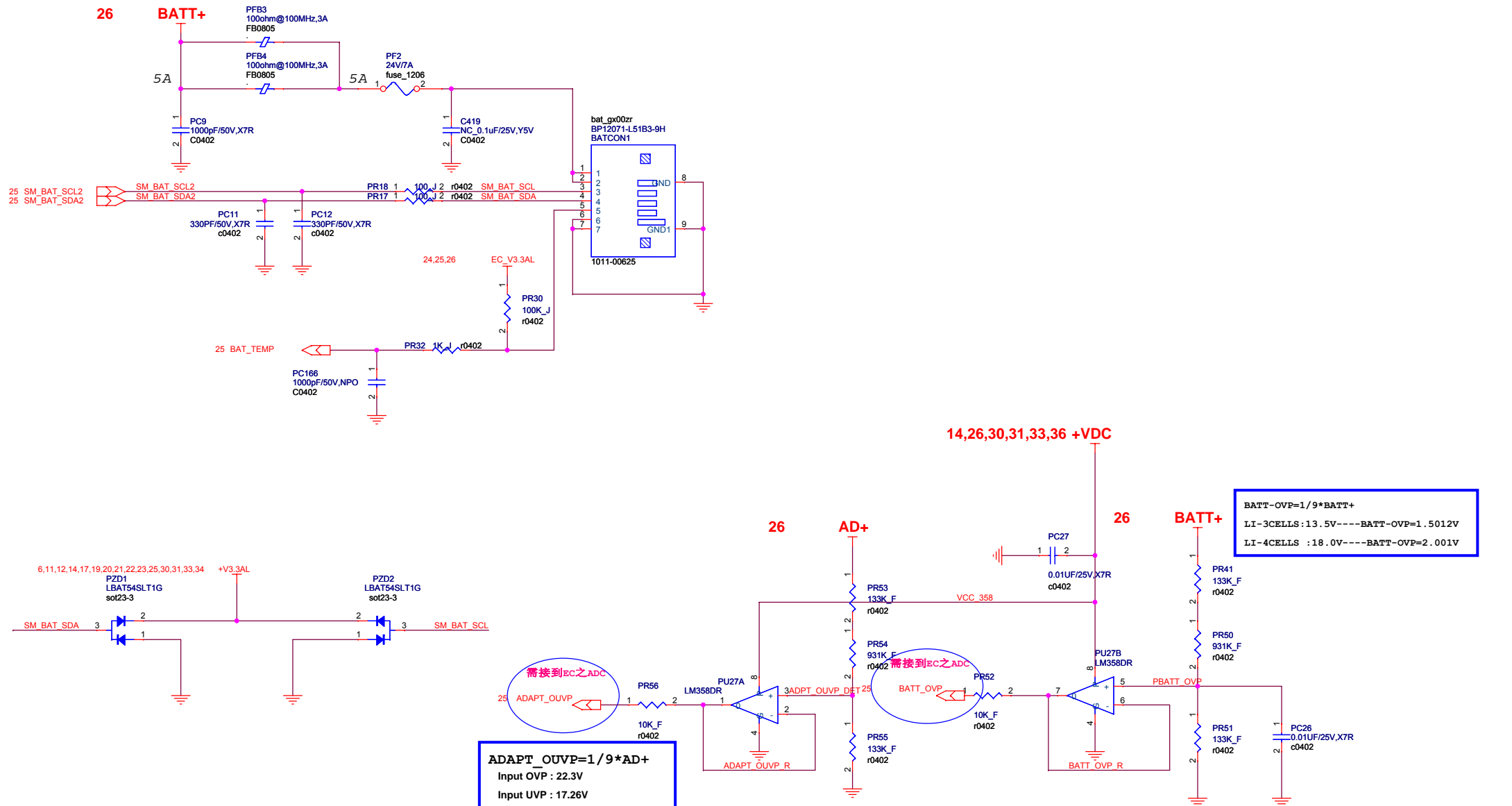
TITLE	Netbook
PAGE DETAIL	<Doc>




3 Cell : SET_I=1.35V, Charge Current=1.1A
6 Cell : SET_I=2.67V, Charge Current=2.2A

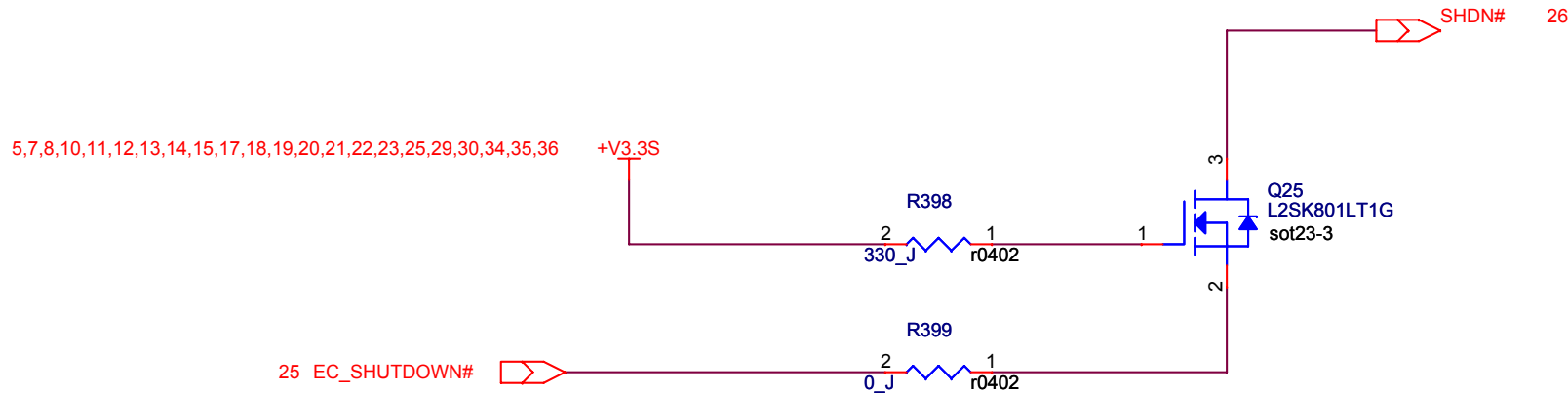
BITC Bitland Information Technology Co.,Ltd. 4-6F,7Building,XIII Tongshu Industrial Town Nanshan District,Shenzhen			
BITC_PN	S110	Rev	1.2
ID	ADAPTER	Size	C
Date		Sheet	26 of 42


TITLE	Netbook
PAGE DETAIL	<Doc>



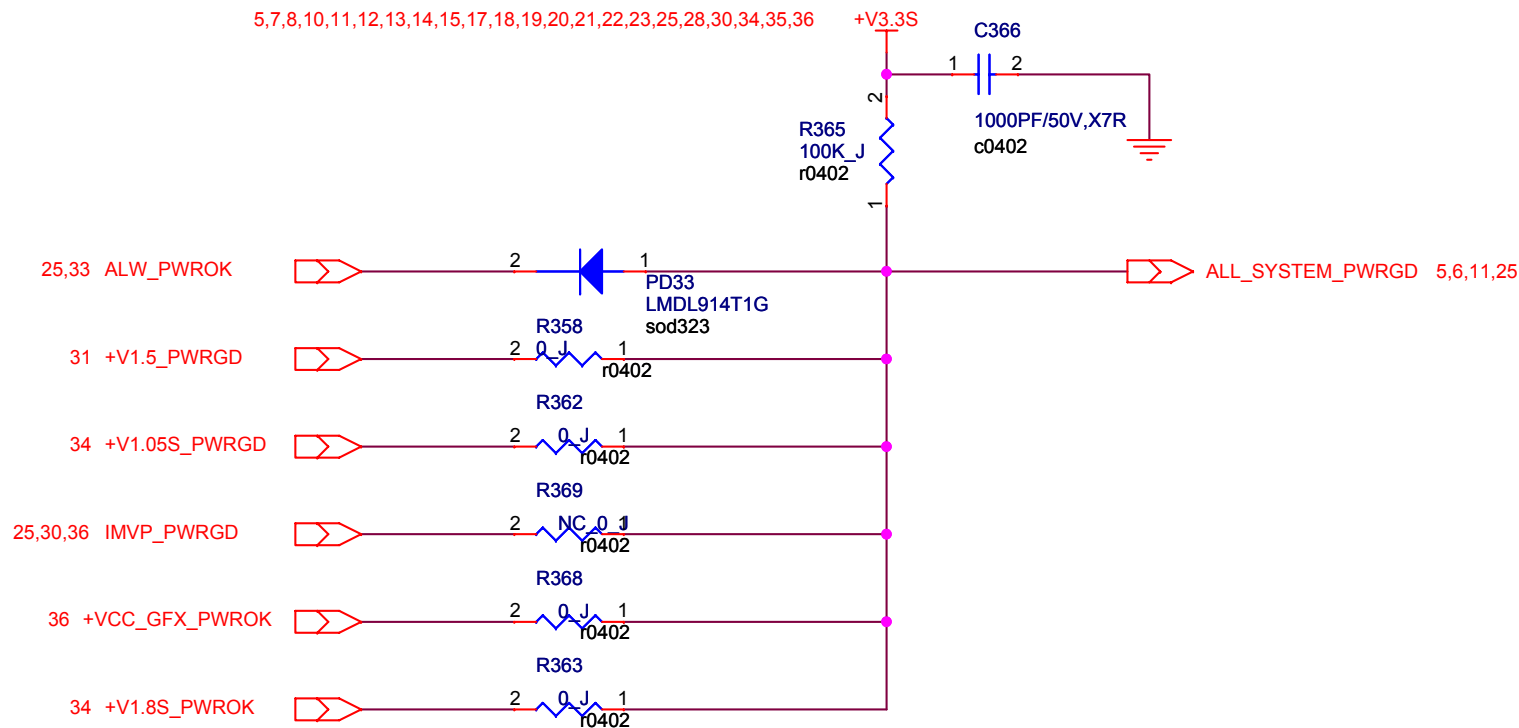
 Bitland Information Technology Co.,Ltd. 4-FF,#7Building,XIII Tongfuyu Industrial Town Nanshan District,Shenzhen			
BITC_PN	S110	Rev	1.2
ID	BATTERY	Size	A3
Date		Sheet	27 of 42

TITLE	Netbook
PAGE DETAIL	<Doc>



		Bitland Information Technology Co.,Ltd. 4-6F,#7Building,Xili Tongfuyu Industrial Town Nanshan District,Shenzhen		
BITC_PN		S110	Rev	1.2
ID		THERMAL PROTECT	Size	A
Date			Sheet	28 of 42

TITLE	Netbook
PAGE DETAIL	<Doc>

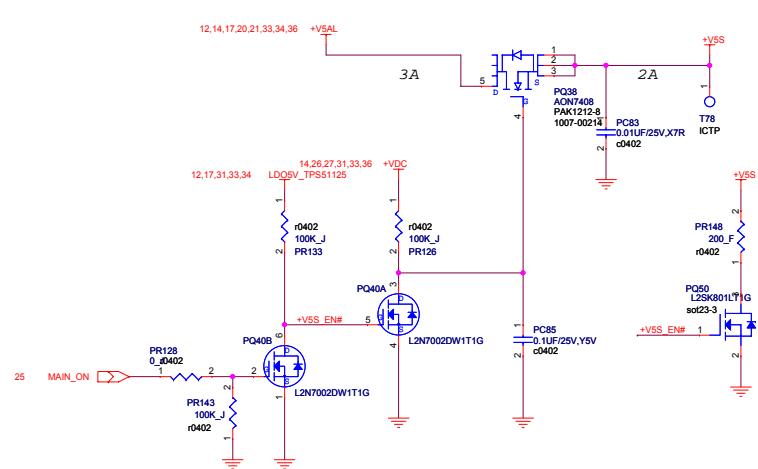


Bitland Information Technology Co.,Ltd.

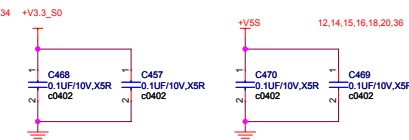
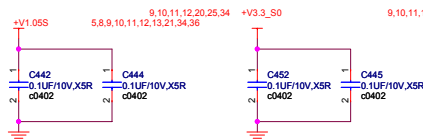
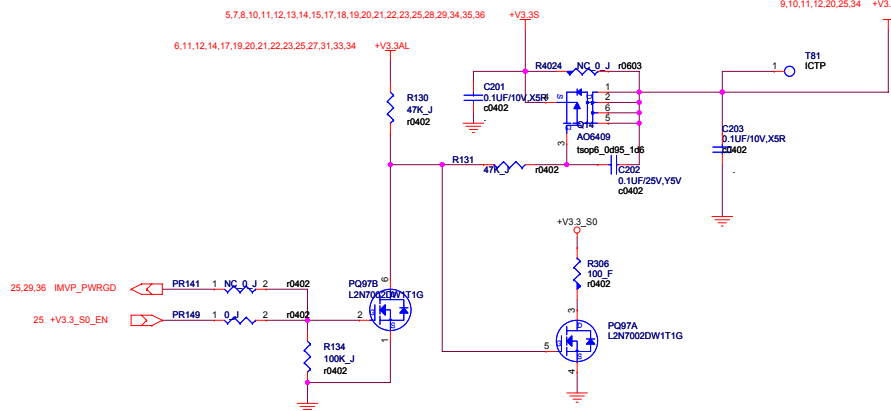
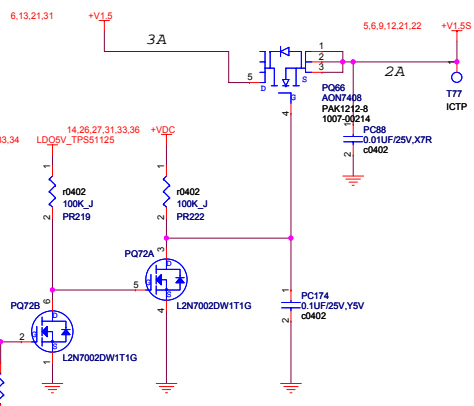
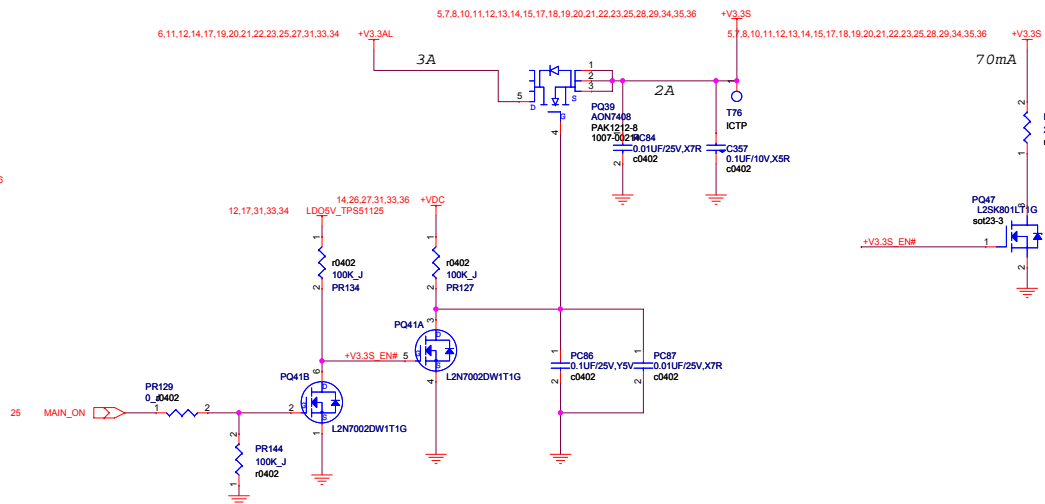
4-6F,#7Building,Xili Tongfuyu Industrial Town Nanshan District,Shenzhen

TITLE	Netbook
PAGE DETAIL	<Doc>

BITC_PN	S110	Rev	1.2
ID	ALL_SYSTEM_PWRGD	Size	A
Date		Sheet	29 of 42



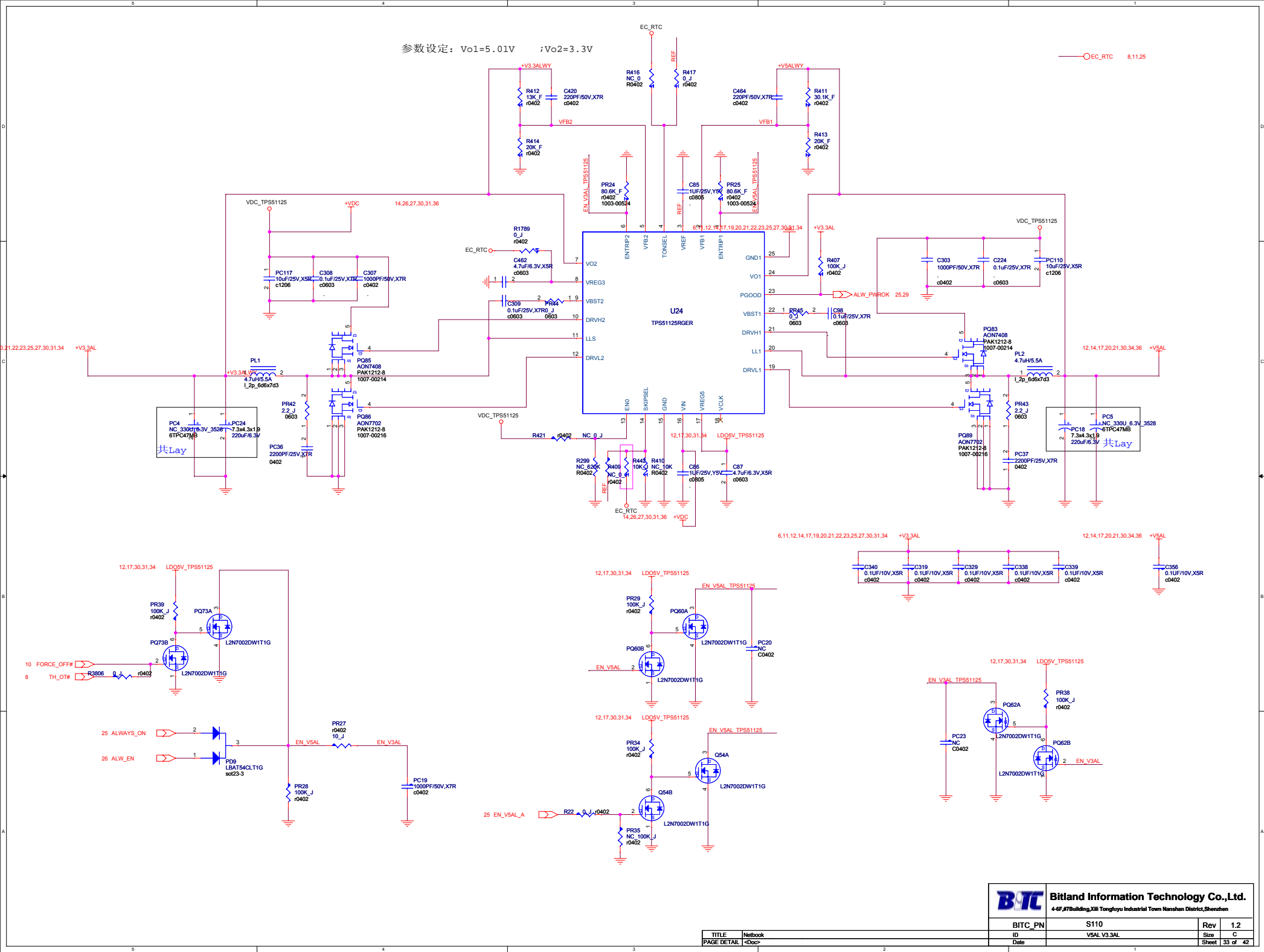
12,14,15,16,18,20,36

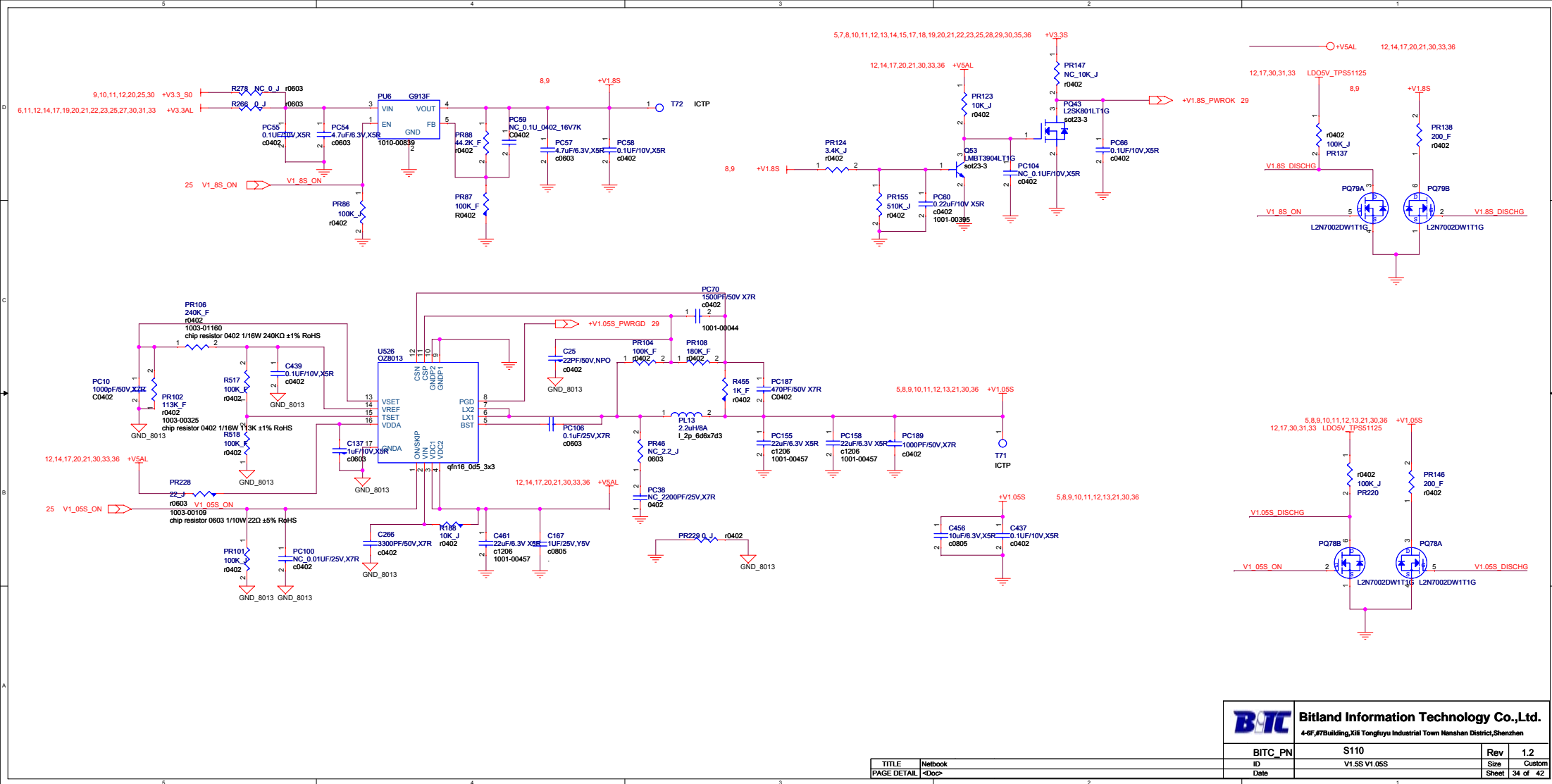


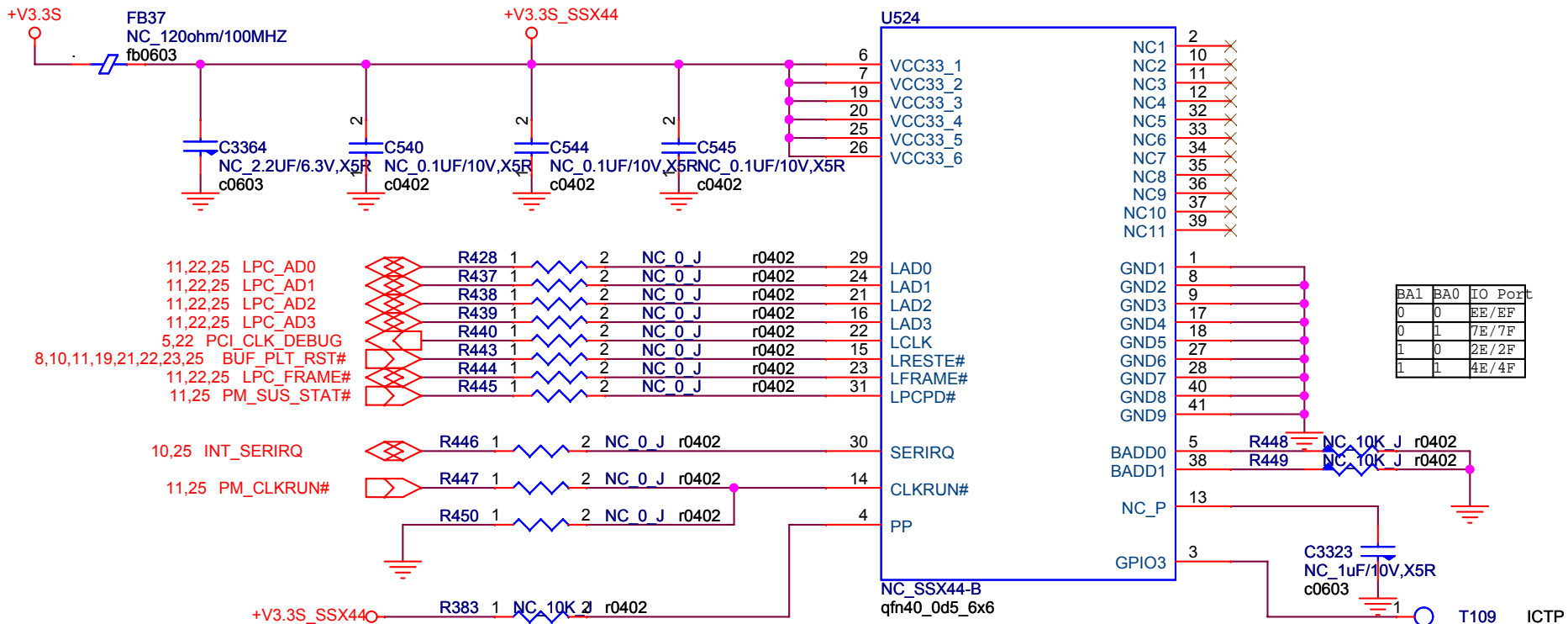



Bitland Information Technology Co.,Ltd.
4-6F,#7Building,Xili Tongfuyu Industrial Town Nanshan District,Shenzhen

TITLE	Netbook	BITC_PN	S110	Rev	1.2
PAGE DETAIL	<Doc>	ID	Blank	Size	B
		Date		Sheet	32 of 42

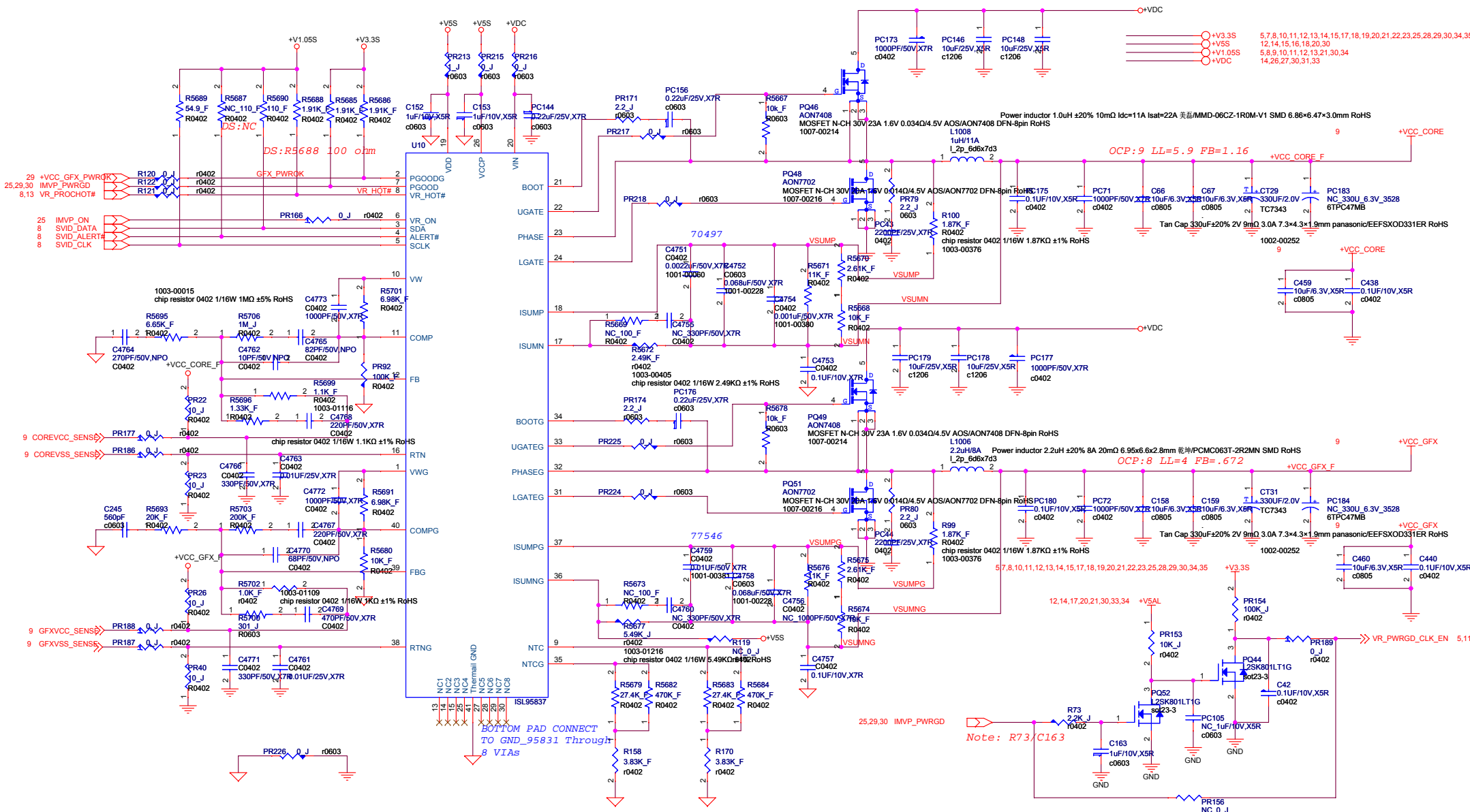







		Bitland Information Technology Co.,Ltd. 4-6F,#7Building,Xili Tongfuyu Industrial Town Nanshan District,Shenzhen	
BITC_PN	S110	Rev	1.2
ID	TCM Module SSX44-B	Size	A
Date		Sheet	35 of 42

TITLE	Netbook
PAGE DETAIL	<Doc>



+V3.3S
+VSS
+V1.05S
+VDC

5,7,8,10,11,12,13,14,15,17,18,19,20,21,22,23,25,28,29,30,34,35
12,14,15,16,18,20,30
5,8,9,10,11,12,13,21,30,34
14,26,27,30,31,33

		Bitland Information Technology Co.,Ltd.	
4-6F,7Building,Xili Tongfuyu Industrial Town Nanshan District,Shenzhen			
BITC_PN		S110	Rev 1.2
ID	CPU VCORE	Size	Custom
Date		Sheet	36 of 42

TITLE	Netbook
PAGE DETAIL	<Doc>

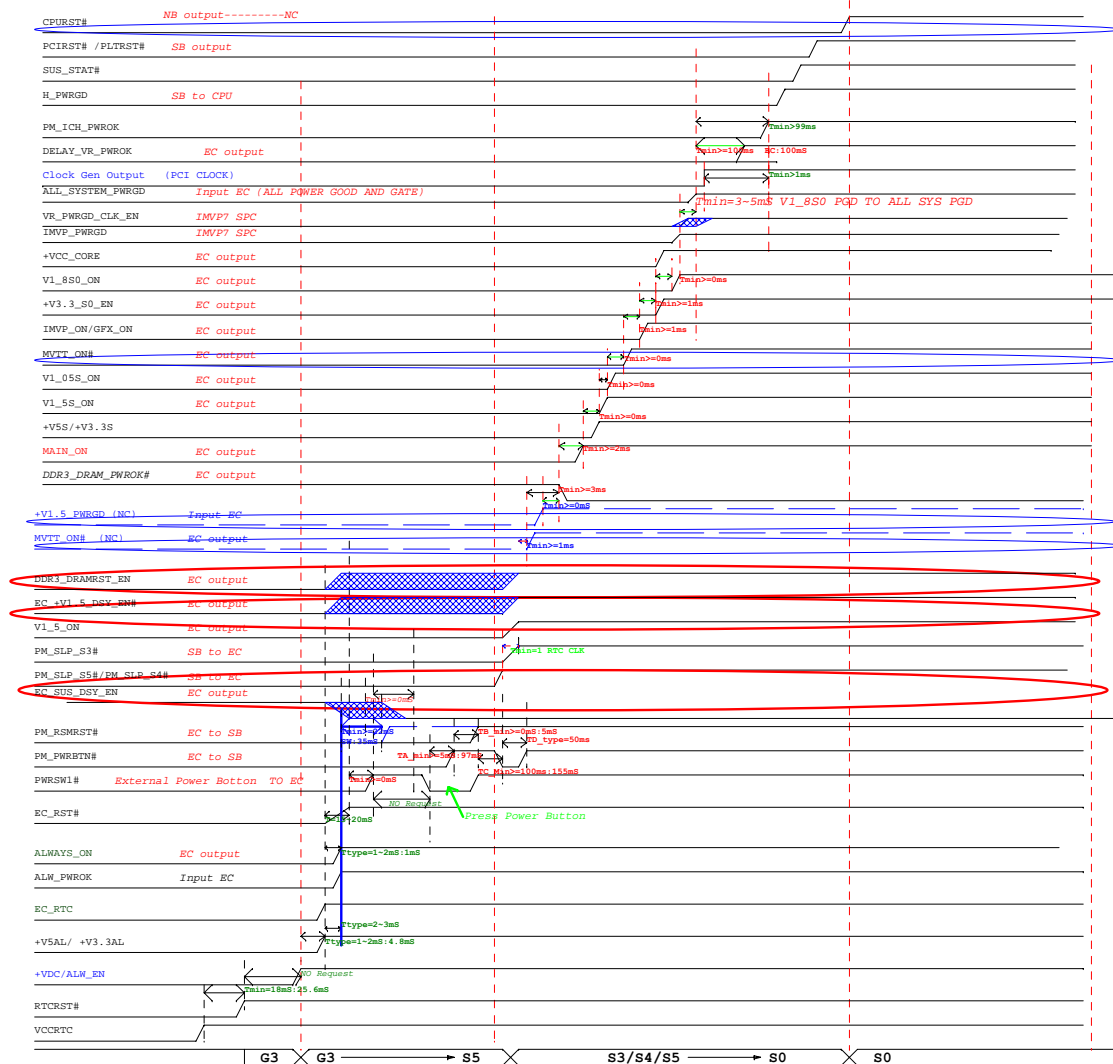
20110507 S110 Rev1.0 Release.
20110616 S110 Rev1.1
1. Page9 Add R106 .R286
2. Page14 Add D53
3. Page21 change FL1000G-E to FL1009
4. Page33 PR24/PR25 change to 80.6K
5. Page34 Add PR108 180K
6. Page36 change R5672.R5677.R5699.R5702 Value
20110801 S110 Rev1.2



Bitland Information Technology Co.,Ltd.
4-6F,#7Building,Xili Tongfuyu Industrial Town Nanshan District,Shenzhen

TITLE	Netbook	BITC_PN	S110	Rev	1.2
PAGE DETAIL	<Doc>	ID	CHANGE LIST HISTORY	Size	A3
		Date		Sheet	37 of 42

BM51XX Power On/Off Sequence Specification(Adapter Mode) G3-S5-S4-S3-S0

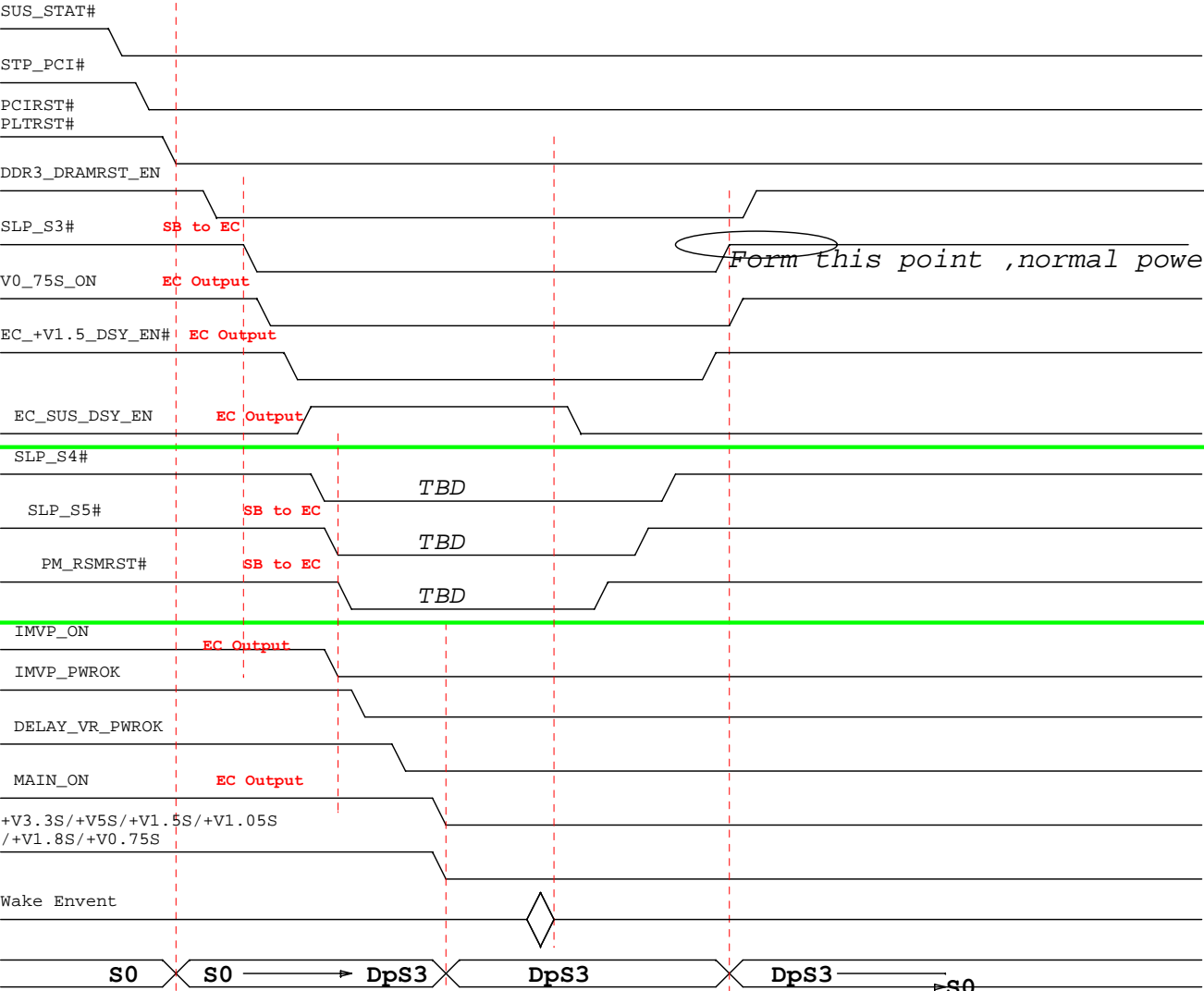


The diagram illustrates the timing of the SLP_S3# and SLP_S4# signals relative to other system signals. The signals are shown as digital waveforms. A red dashed line marks a specific timing point. The bottom of the diagram shows a sequence of states: S0, S0, S3/S4/S5, S5, and G3.

 条纹填充区域表示在这段时间任意一个时间点达到要求电平都OK

 条纹填充区域表示在这段时间任意一个时间点达到要求电平都OK

BM51XX Power On/Off Sequence Specification(Only for Battery Mode) S0-DSY S3-S0

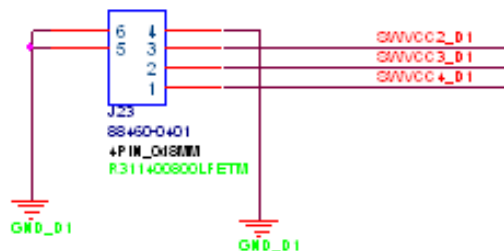


This section will tbd~~~

BITC		Bitland Information Technology Co.,Ltd.	
		4-6F,#7Building,Xili Tongfuyu Industrial Town Nanshan District,Shenzhen	
BITC_PN	S110	Rev	1.2
ID	DC DSY Power Sequence	Size	B
Date		Sheet	40 of 42

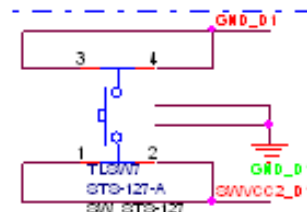
TITLE	Netbook
PAGE DETAIL	<Doc>

onboard stereo microphone

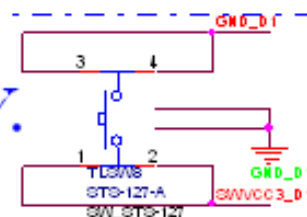


FD11
NO_FMARKS
FMARKS

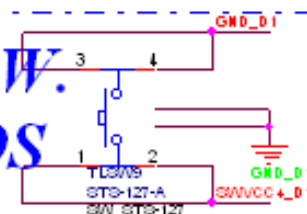
Power SW.



Retrieval SW.



Quickstart SW.
For Meego OS



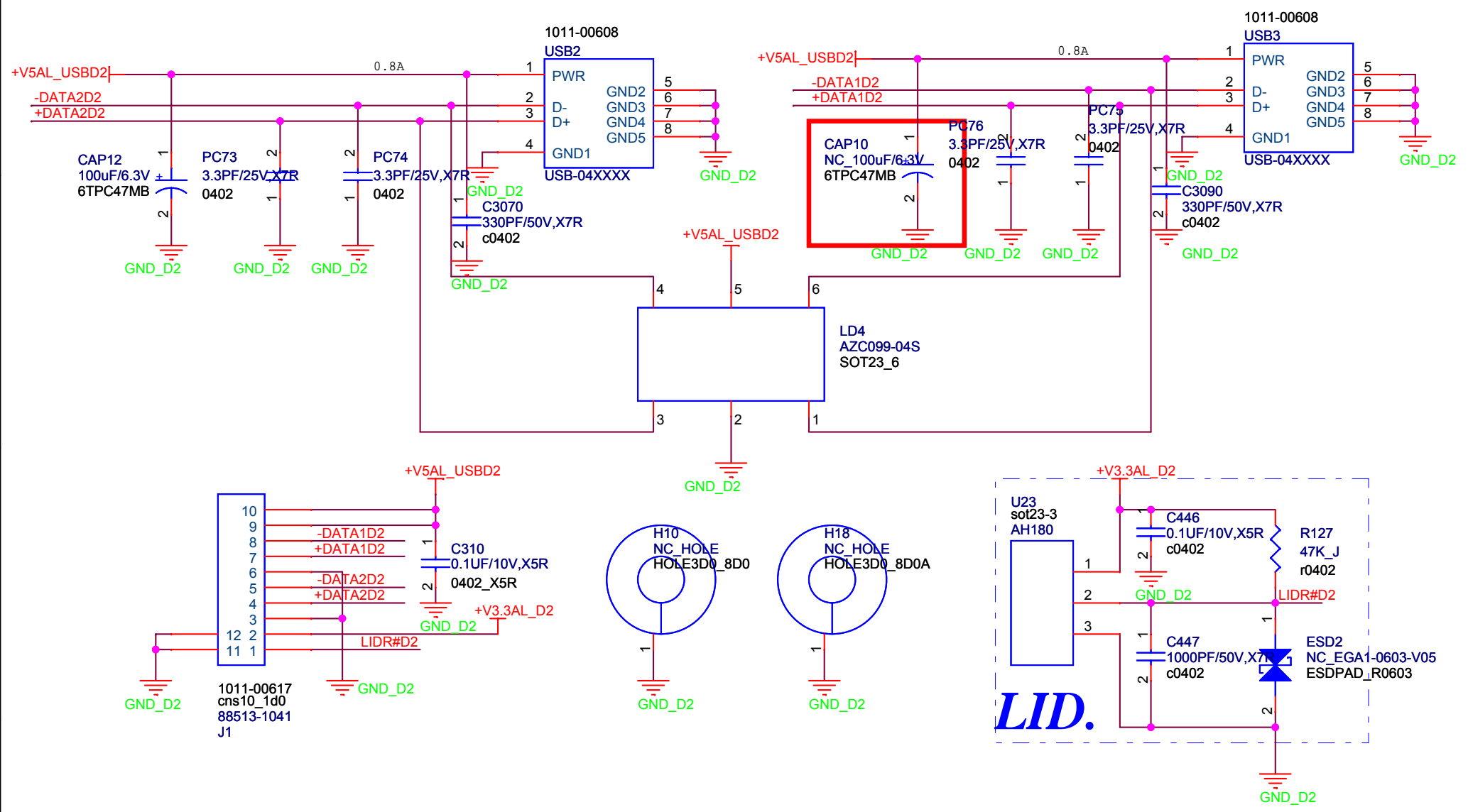
Power Switch DB




Bitland Information Technology Co.,Ltd.

4-6F,#7Building,Xili Tongfuyu Industrial Town Nanshan District,Shenzhen

TITLE	Netbook	BITC_PN	S110	Rev	1.2
PAGE DETAIL	<Doc>	ID	DB LED/MIC	Size	A
		Date		Sheet	41 of 42



USB/LID DB

		Bitland Information Technology Co.,Ltd.	
		4-6F,#7Building,Xili Tongfuyu Industrial Town Nanshan District,Shenzhen	
BITC_PN	S110	Rev	1.2
ID	DB USB/LID-SW	Size	A
Date		Sheet	42 of 42

TITLE	Netbook
PAGE DETAIL	<Doc>