

WD-2 AMD Logic Schematics

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30.BLANK

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60.BLANK

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73.DC/DC CPUCORE(NCP302035)

74.DC/DC VCCGFXCORE_I(NCP302035)

75.DC/DC VCCSA(NCP302035)

76.BLANK

77.BLANK

78.DC/DC VCC1R0_SUS(TPS51367RV)

79.LOAD SW VCCST & VCCSTG

80.DC/DC VCC1R2A/0R6B/2R5A(NB687)

81.BLANK

82.BLANK

83.DC/DC VCC1R8_SUS(BU90104GWZ)

84.BLANK

85.BLANK

86.BLANK

87.LOAD SW PCH SUS/TRACK POINT

88.LOAD SW LAN

89.LOAD SW B

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92.N17S-G1 (1/6) : PEG I/F

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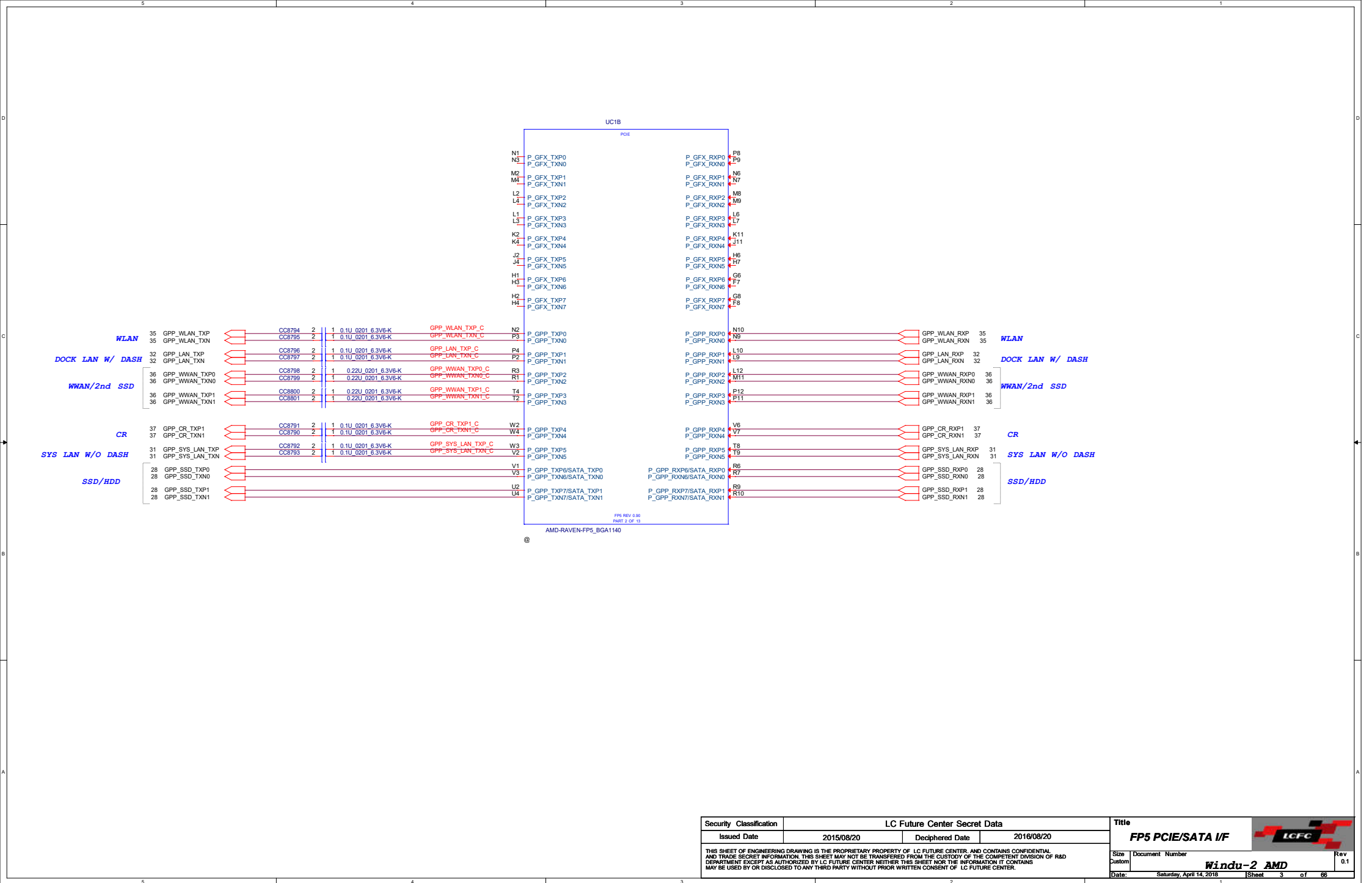
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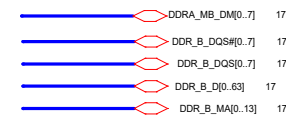
101.DC/DC VCCGFXCORE_D(NCP81278T)


102.DC/DC VCC1R35VIDEO(NB693)

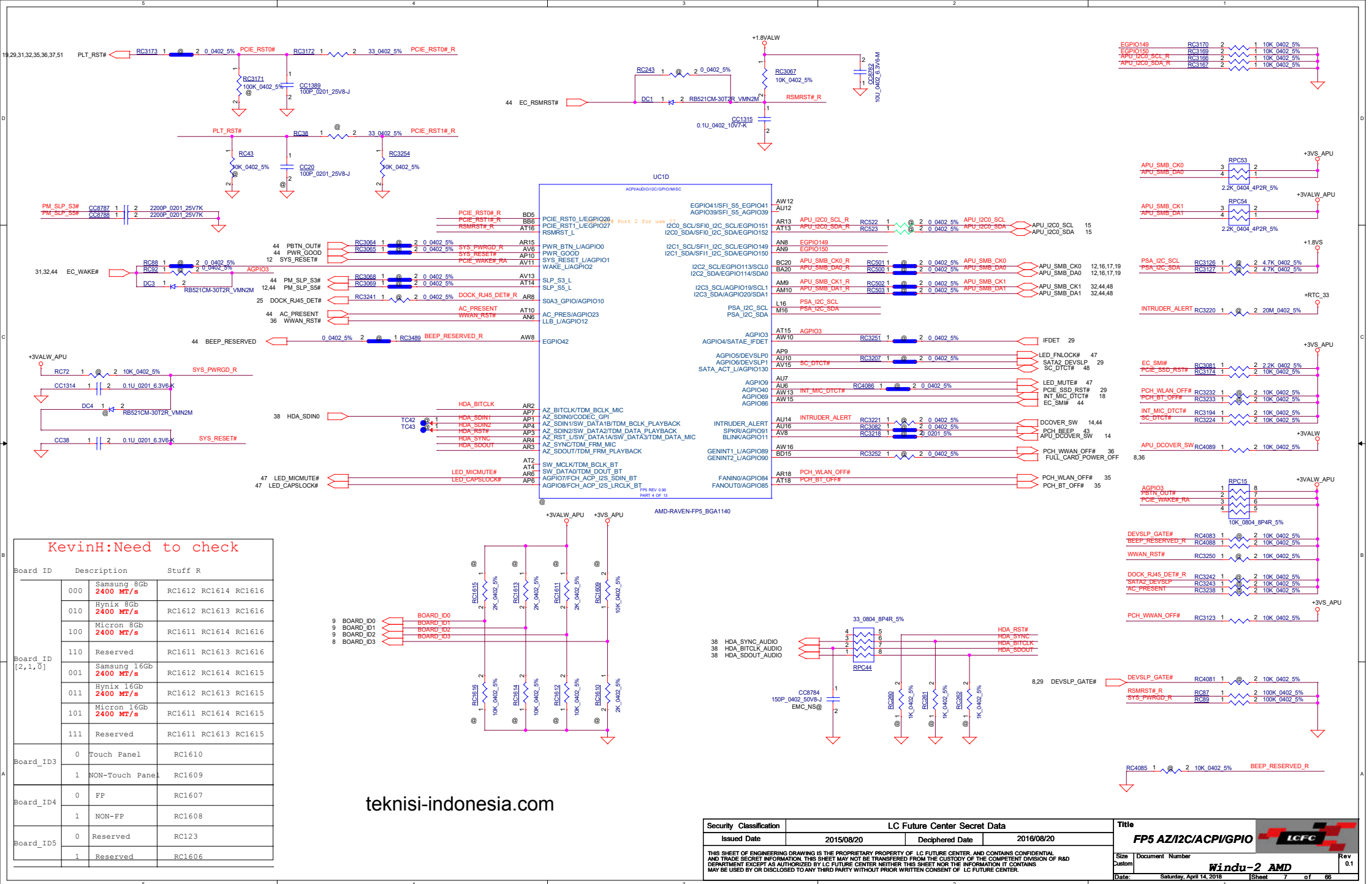
103.DC/DC VCC1R8VIDEO_AON(BD9B304QWZ)

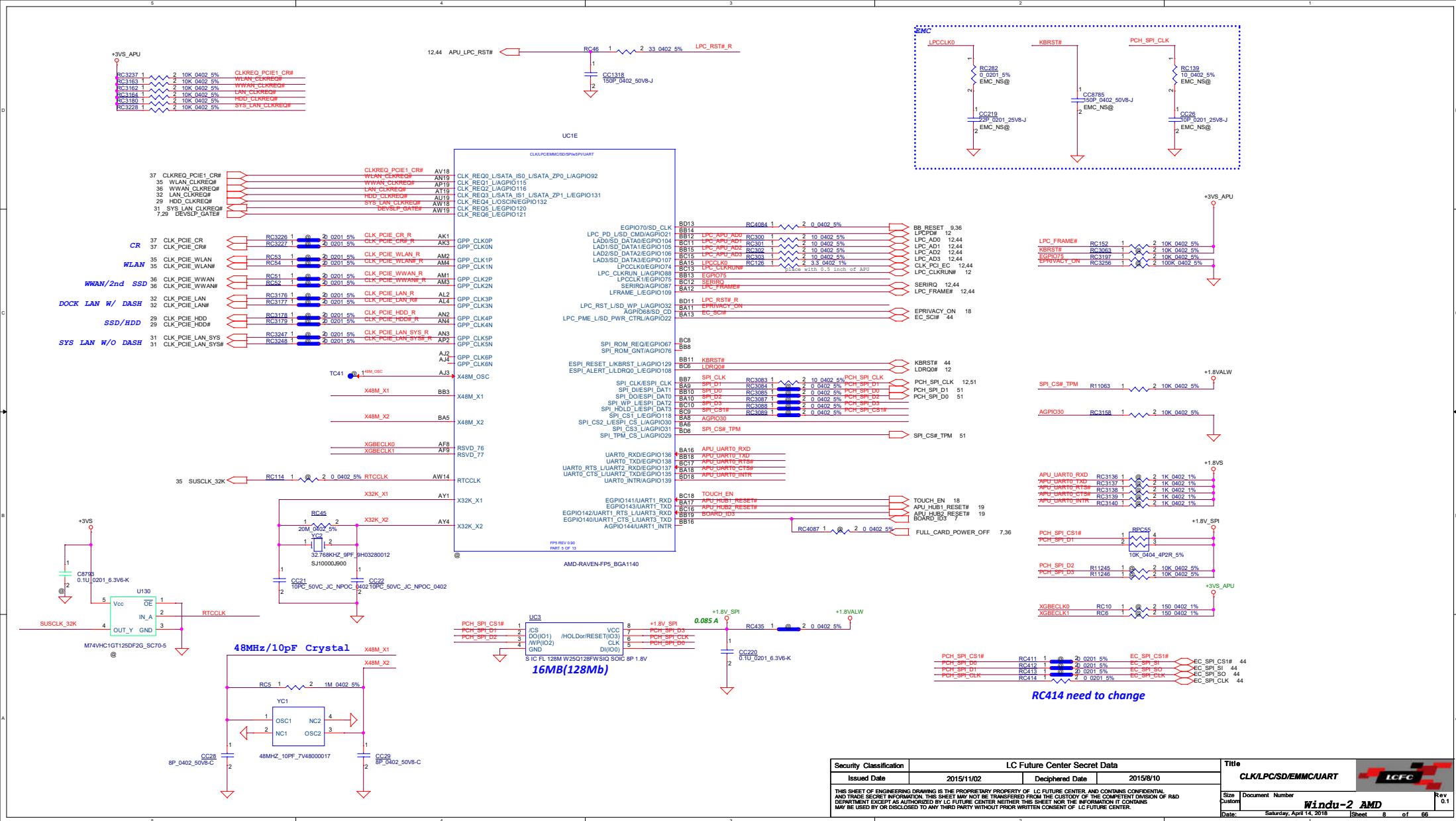
104.LOAD SW VIDEO

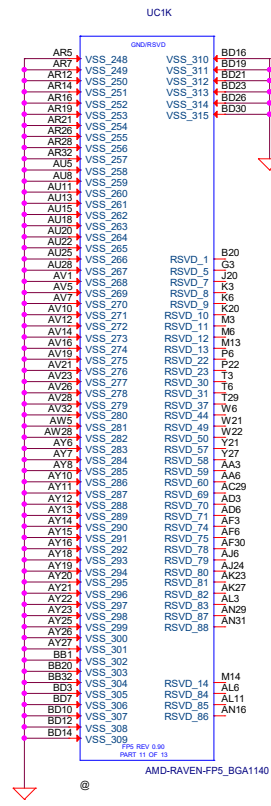
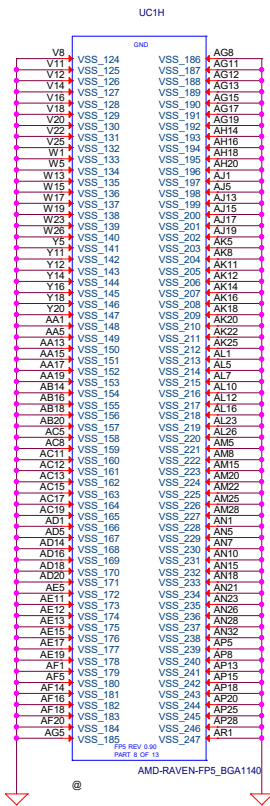
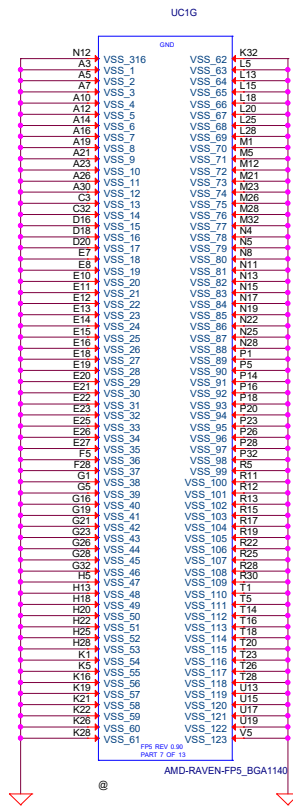





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Issued Date	2015/08/20	Deciphered Date	2016/08/20	FP5 Memory		
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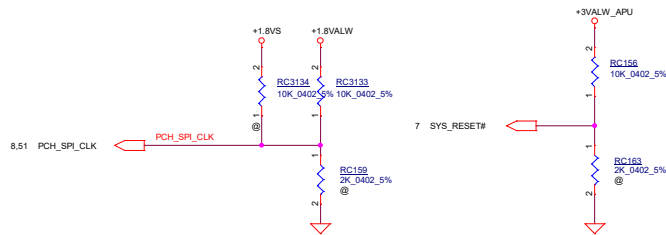






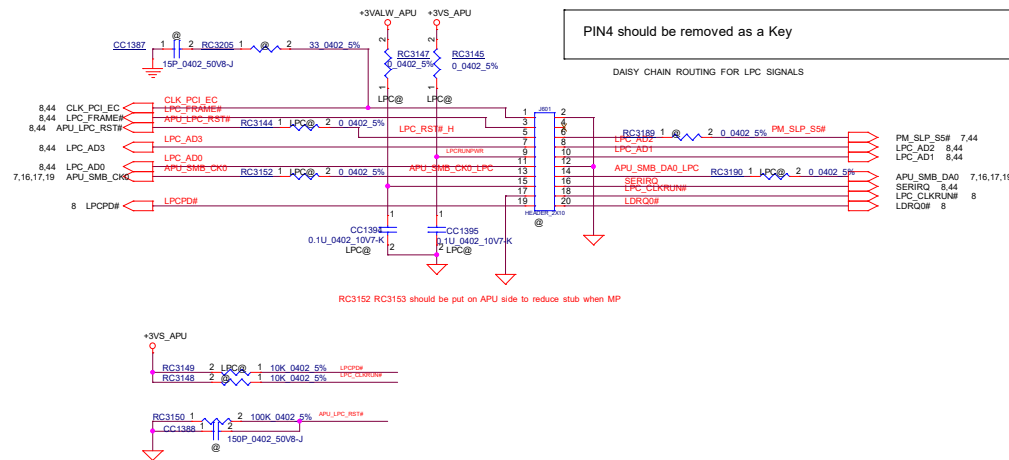
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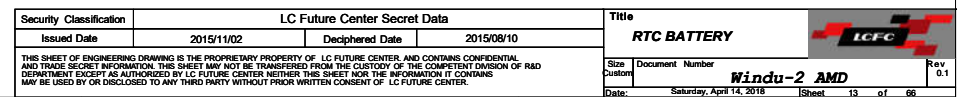
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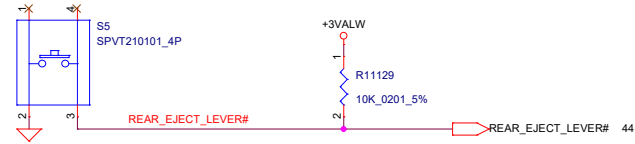
STRAP PINS	SYS_RESET#
PCH_SPI_CLK	1:USE 48MHZ CRYSTAL CLOCK AND GENERATE BOTH INTERNAL AND EXTERNAL CLOCKS(DEFAULT) 0:USE 100MHZ PCIE CLOCK AS REFERENCE CLOCK AND GENERATE INTERNAL CLOCKS ONLY
SYS_RESET#	1:NORMAL RESET MODE(DEFAULT) 0:SHORT RESET MODE

LPC ROM EMULATOR HEADER

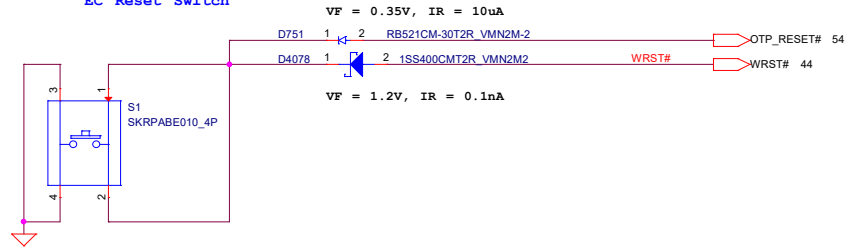




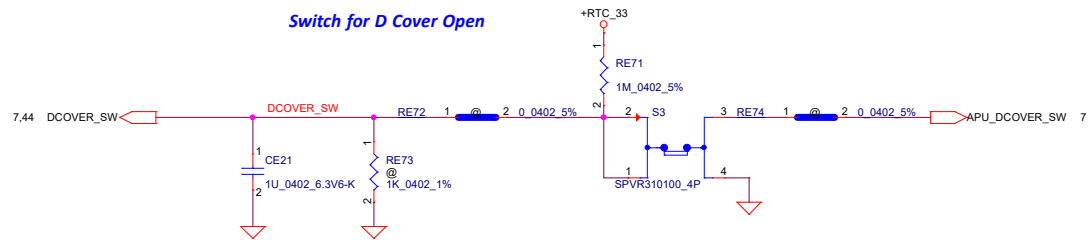
Rear Battery Switch




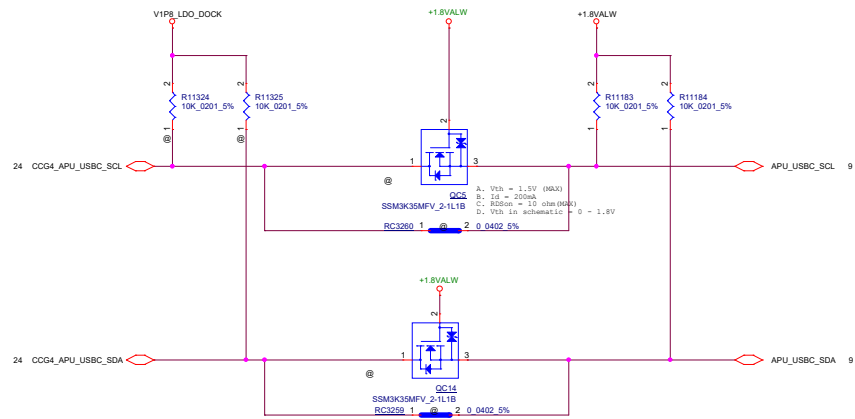
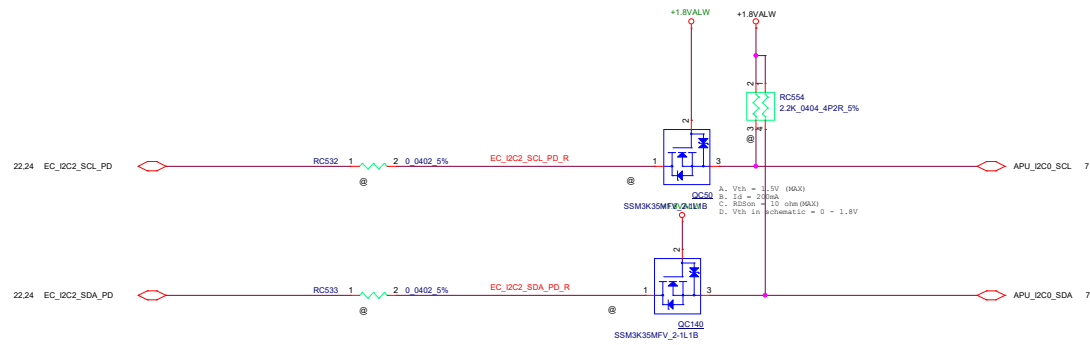
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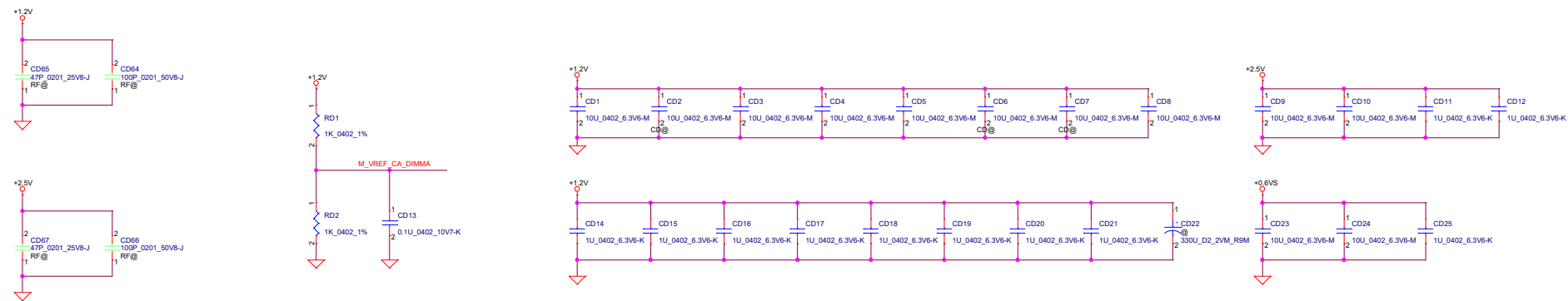


Switch for D Cover Open

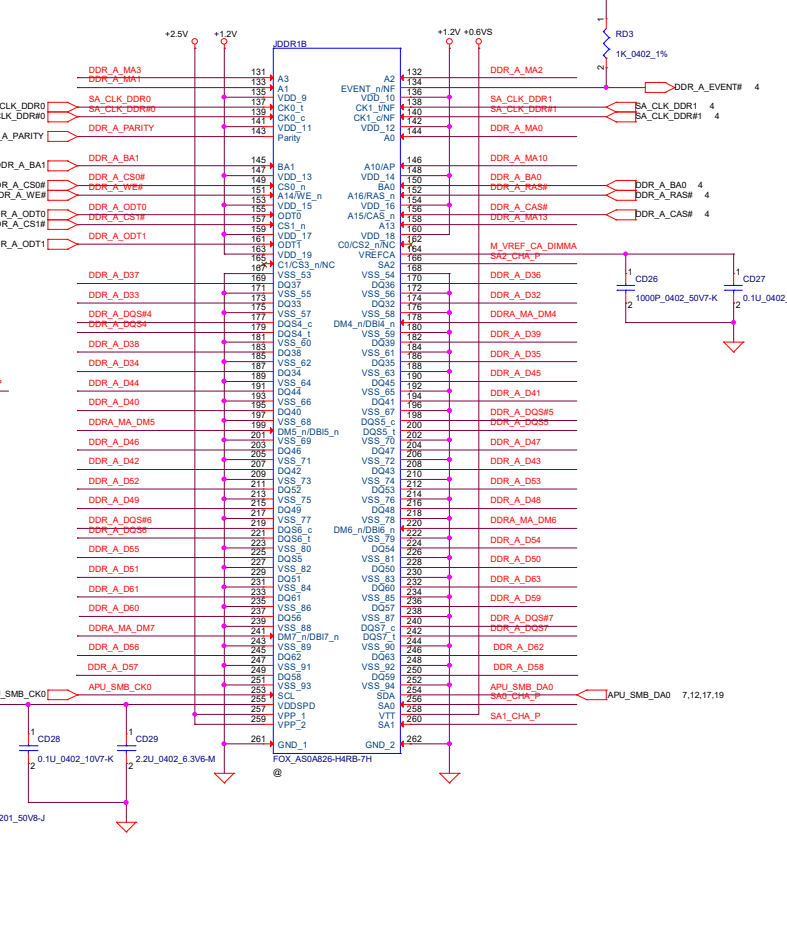
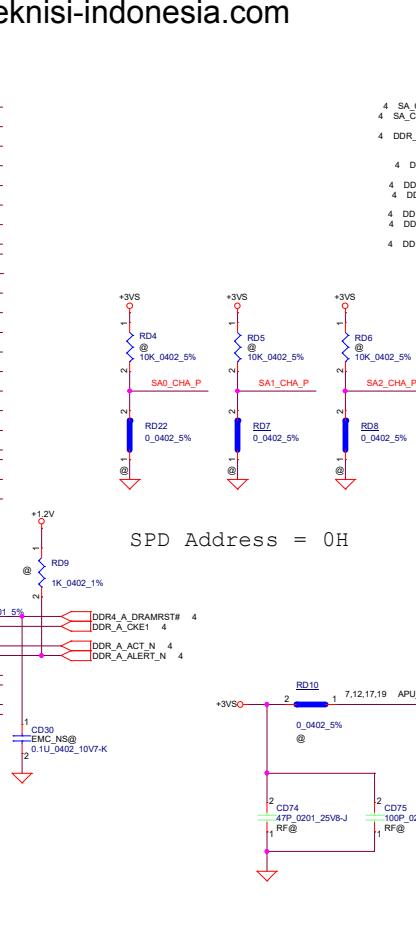
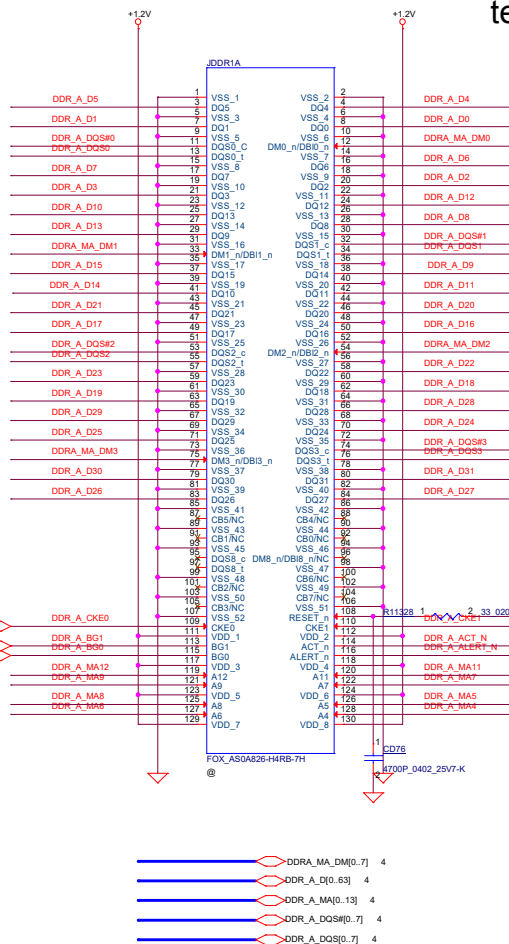


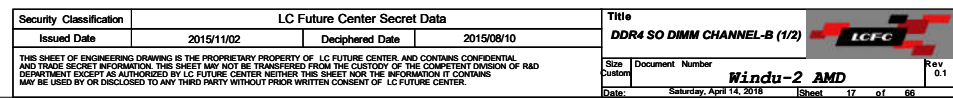
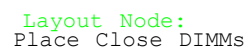
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Issued Date		Deciphered Date		USB TYPE-C SWITCH			
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9 USB_HUB1_DP

9 USB_HUB1_DN

USBP4+ 18

USBP4- 18

USBP6+ 35

USBP6- 35

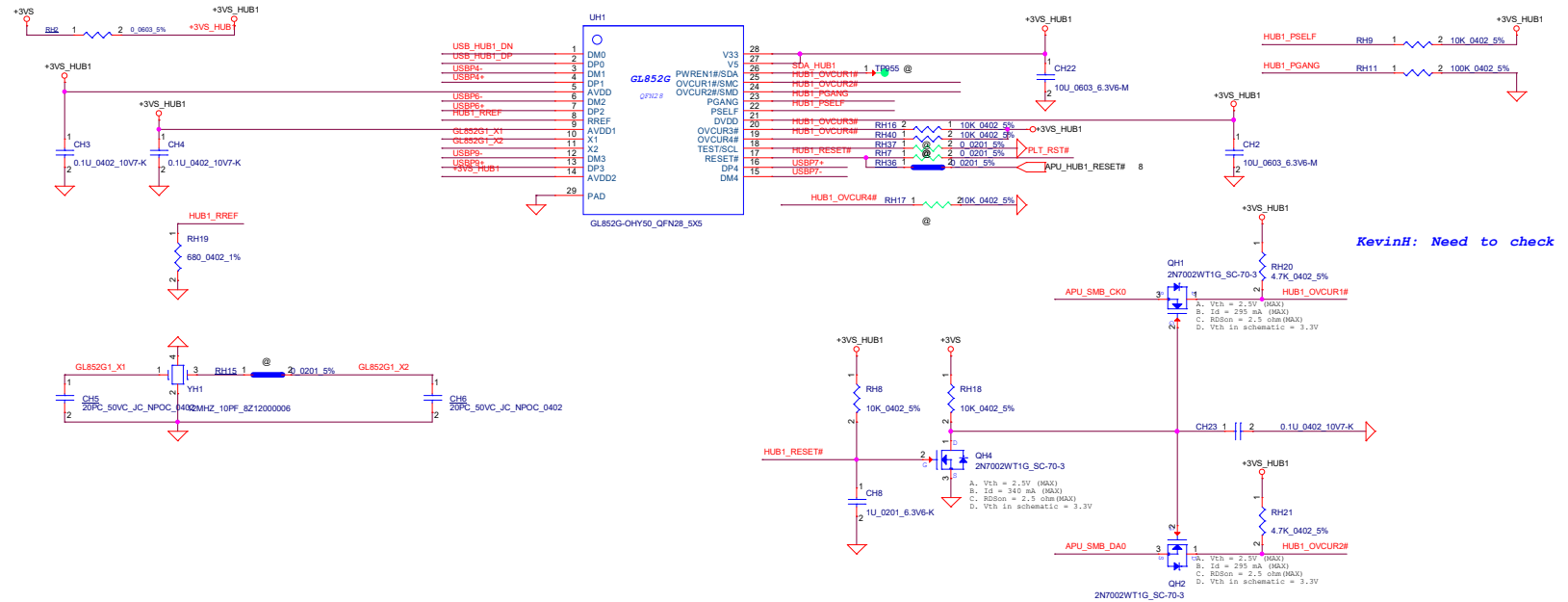
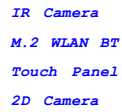
USBP9+ 18

USBP9- 18

USBP7+ 18

USBP7- 18

PORT1	IR Camera
PORT2	M.2 WLAN BT
PORT3	Touch Panel
PORT4	2D Camera



9 USB_HUB2_DP

9 USB_HUB2_DN

USBP6+ 48

USBP6- 48

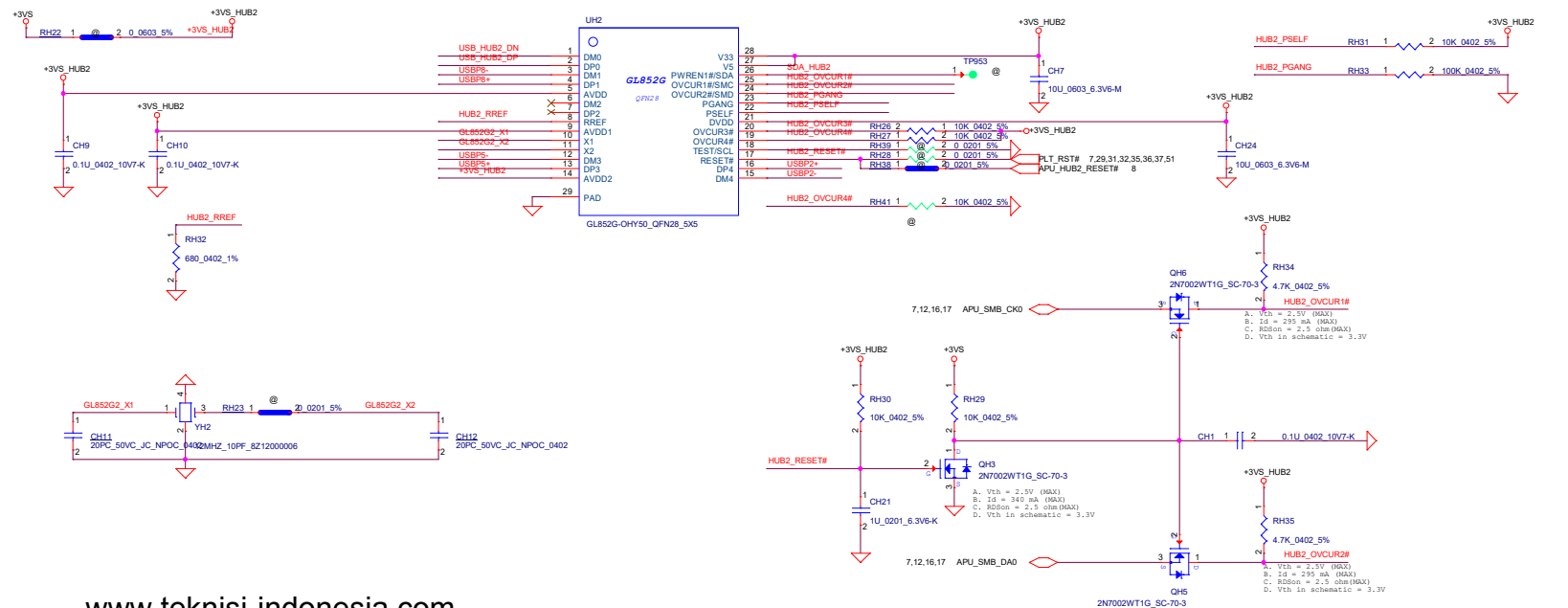
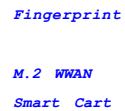
USBP5+ 36

USBP5- 36


USBP2+ 48

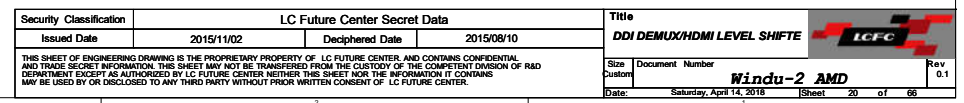
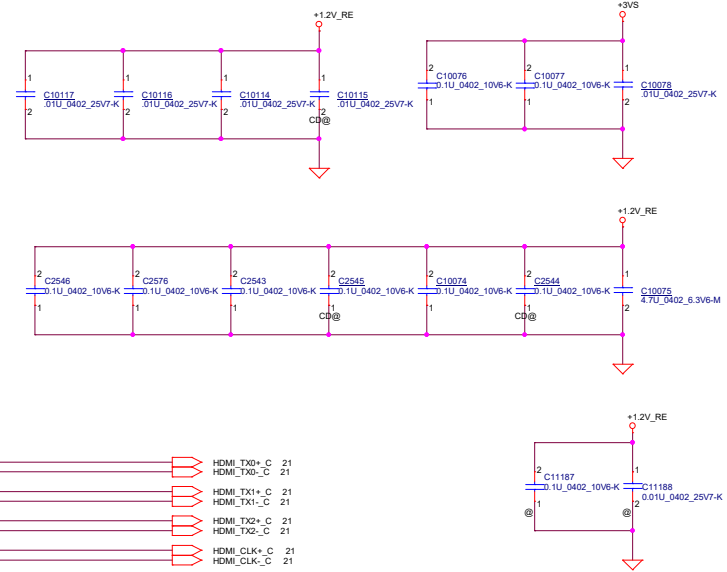
USBP2- 48

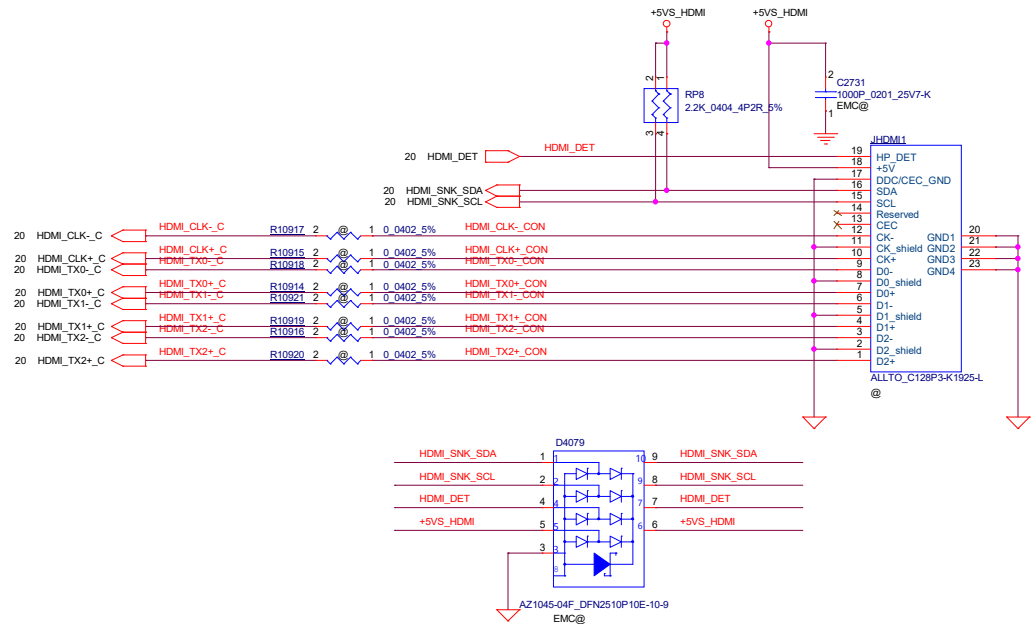
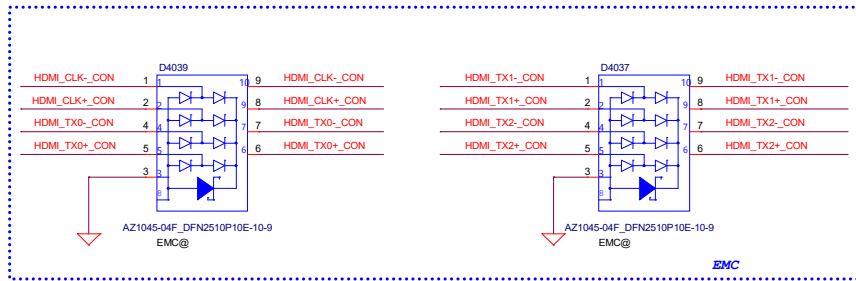
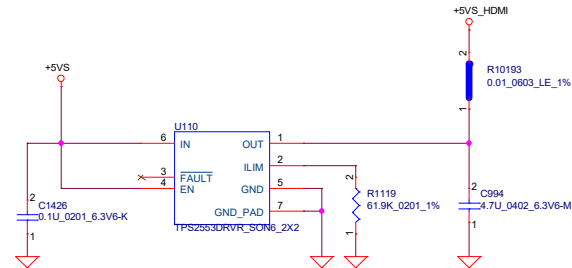
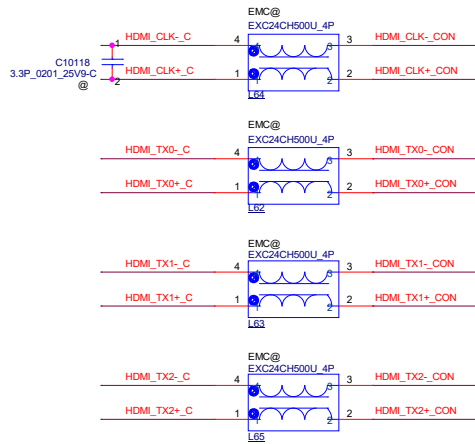
PORT1	Finger print
PORT3	M.2 WWAN
PORT4	smart card

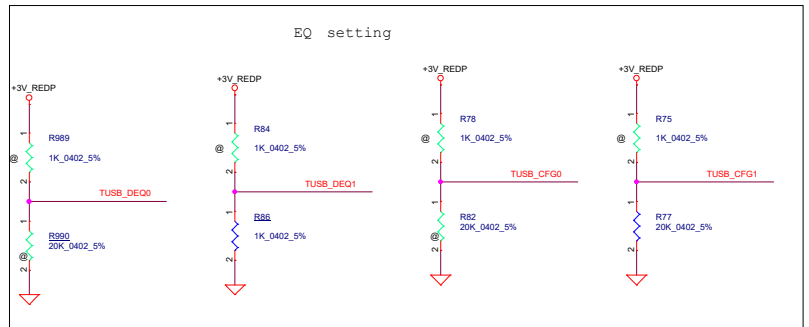
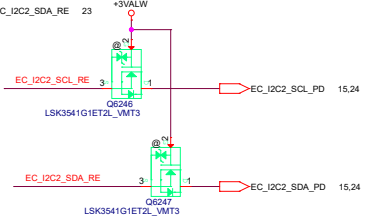
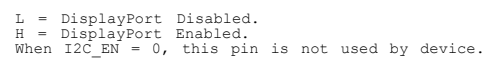
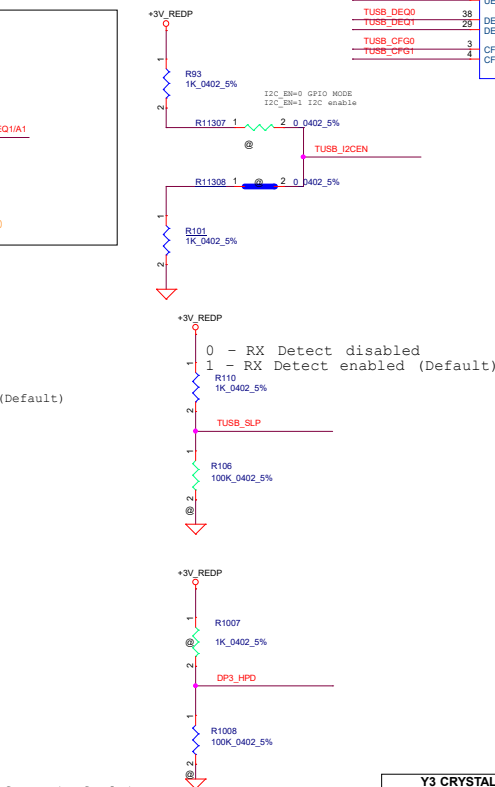
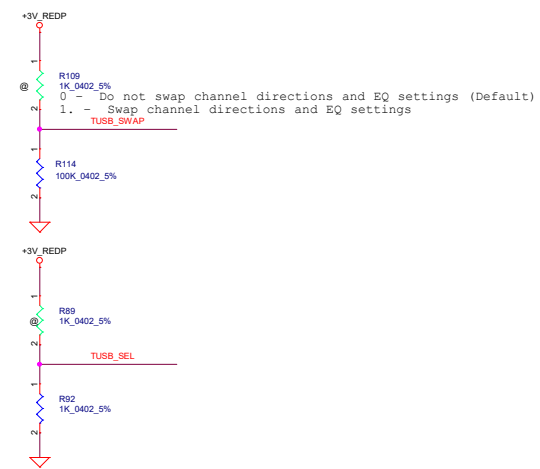


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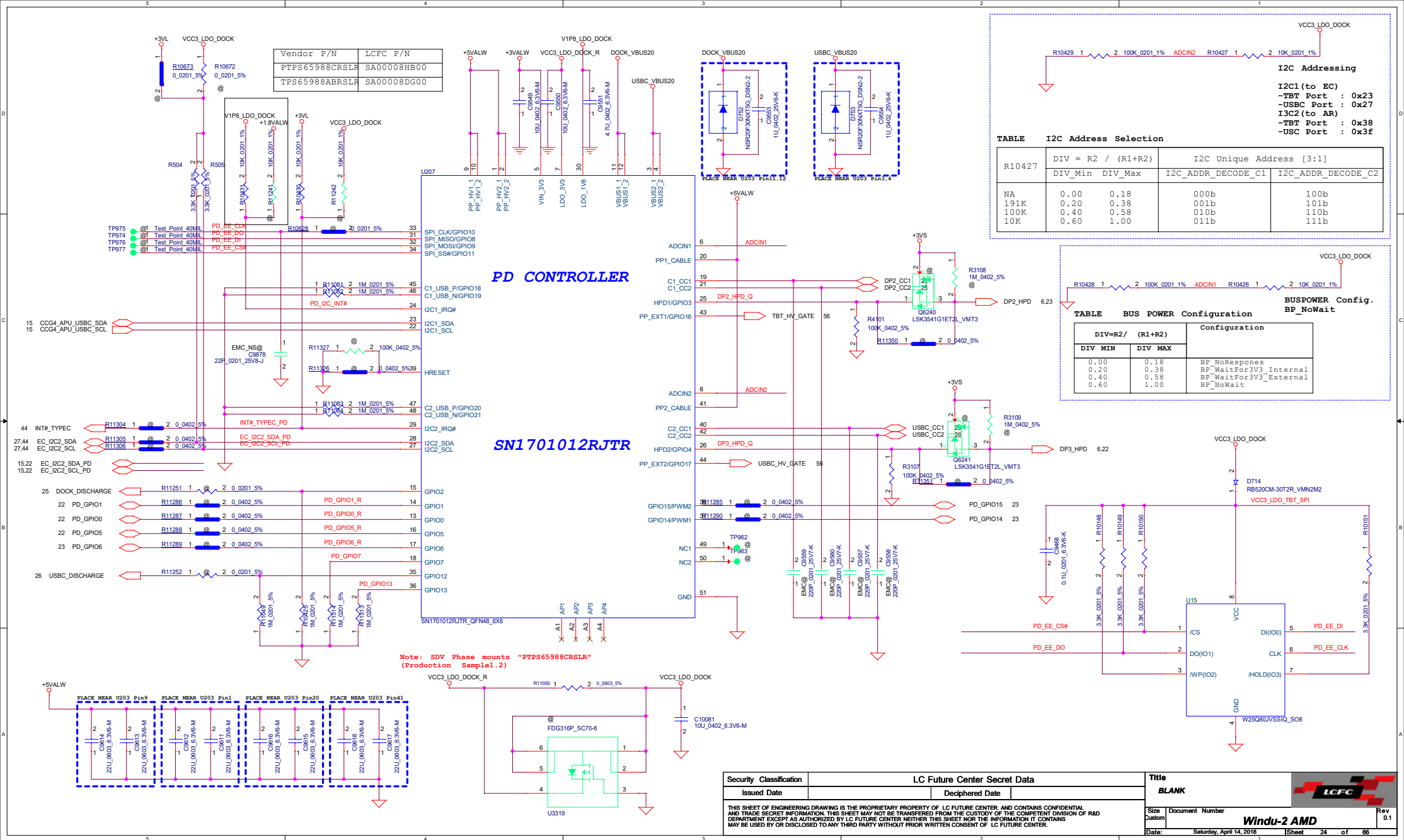



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0 = 3.3-V configuration I/O voltage, 3.3-V I2C interface (Default)
1 = 1.8-V configuration I/O voltage, 1.8-V I2C interface
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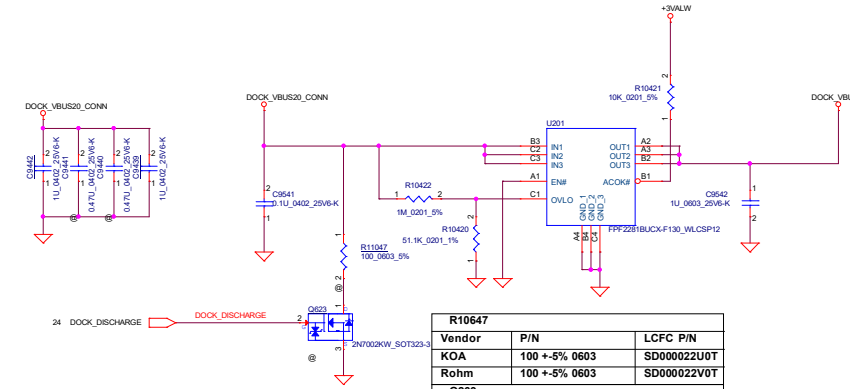
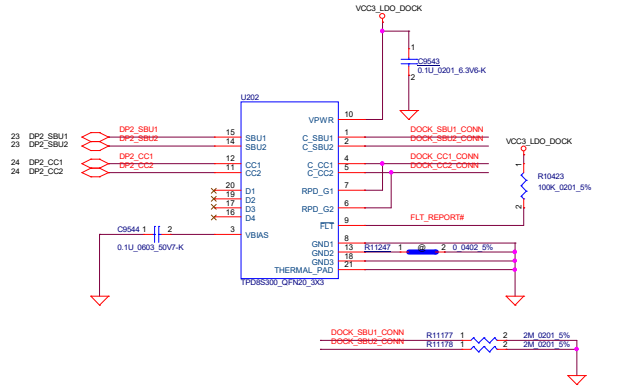
Y3 CRYSTAL 25MHZ 18PF 30PPM		
Vendor	P/N	LCFC P/N
TXC	8Y25000004	SJ10000H00J
KDS	1ZZHAE25000CC0F	SJ10000P300

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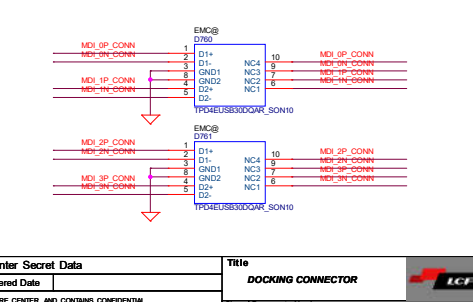
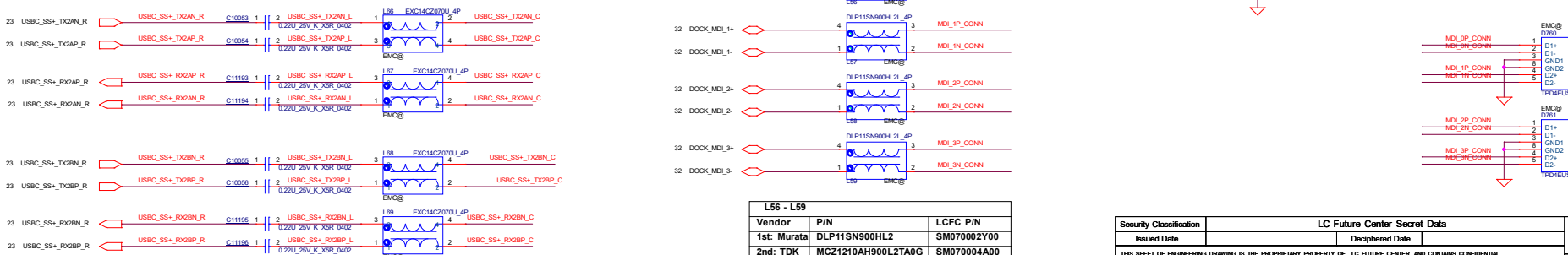
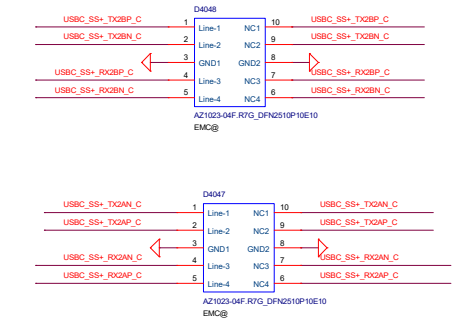
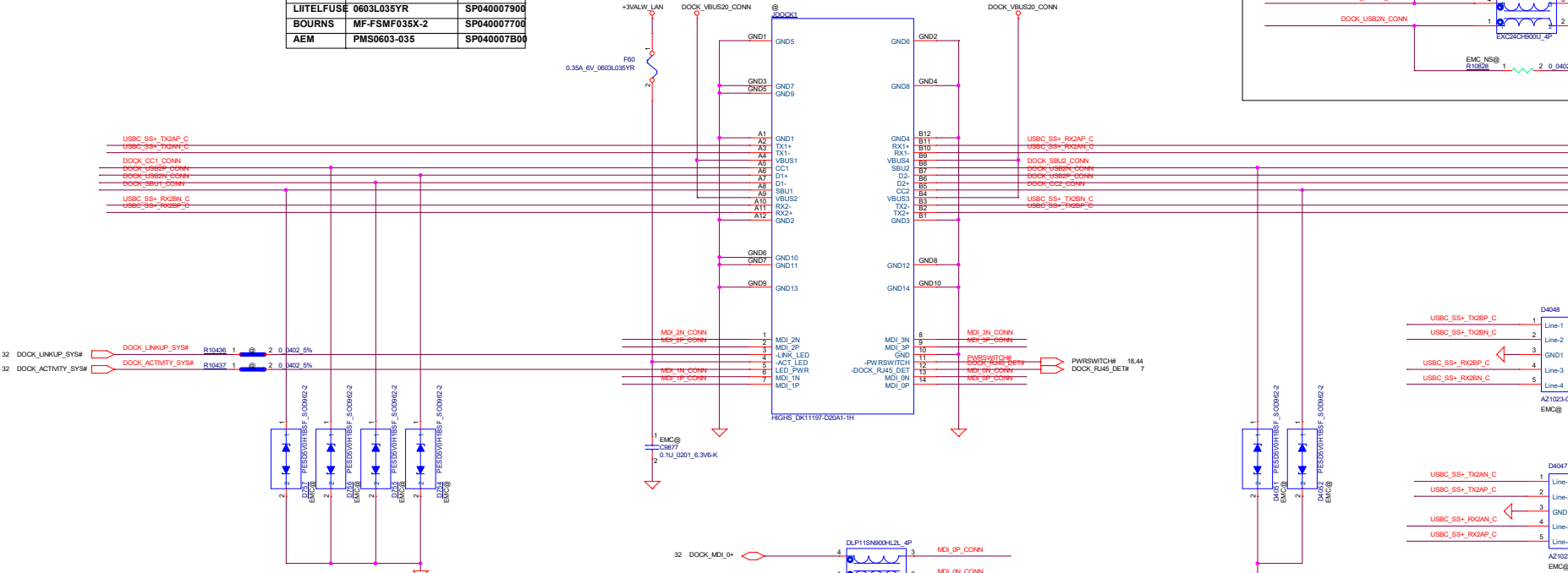
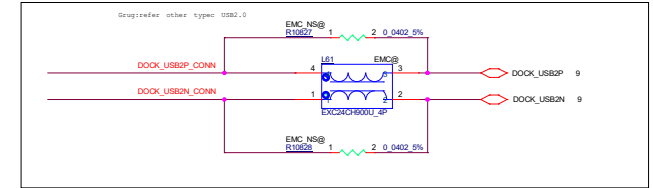
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Size Custom	Document Number			Rev	
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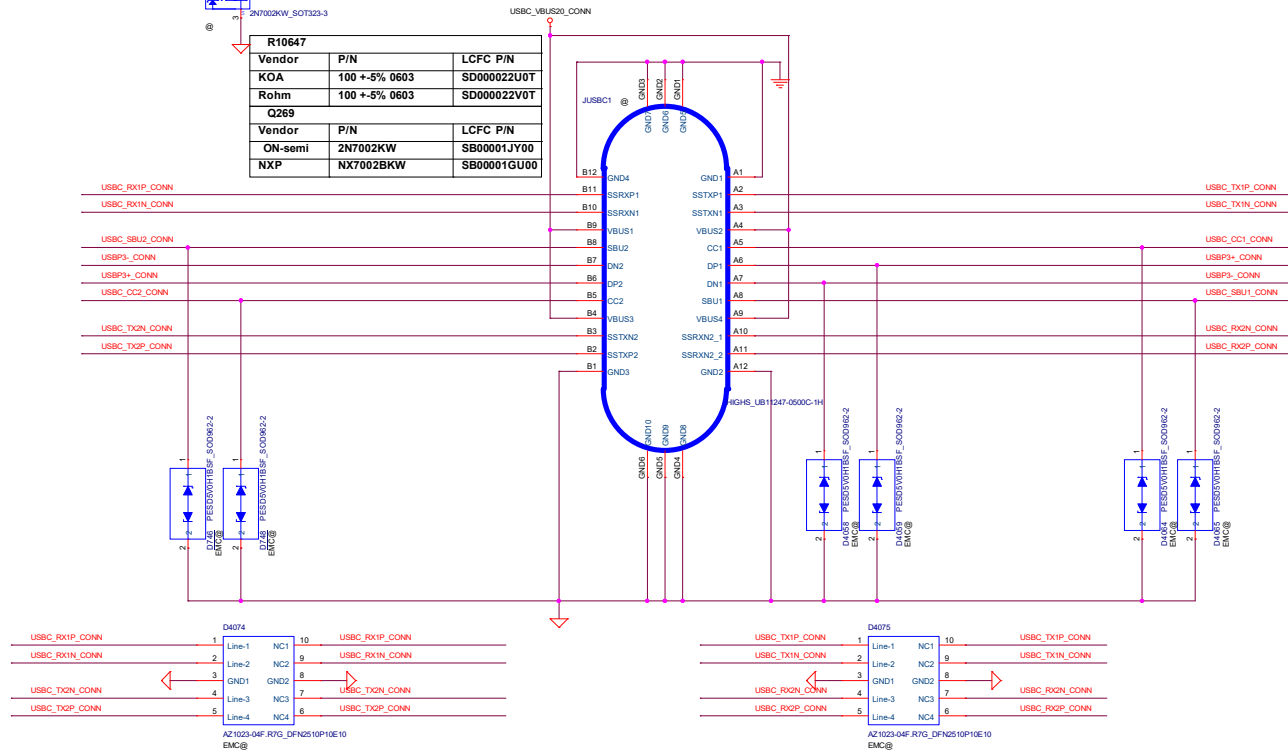
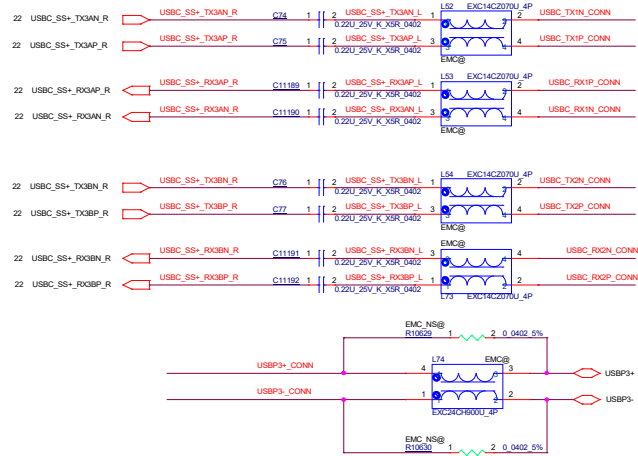
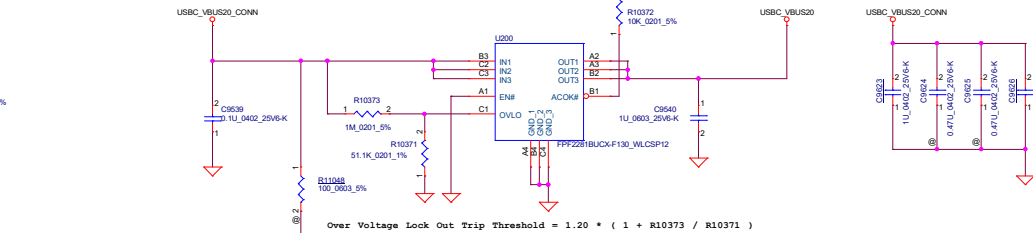
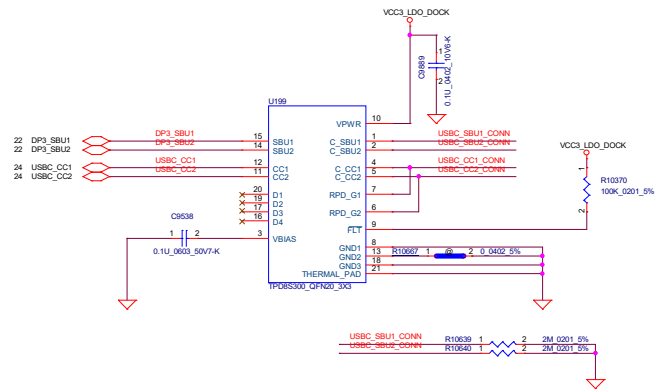


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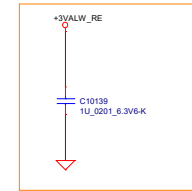
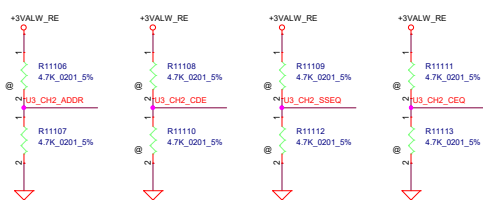


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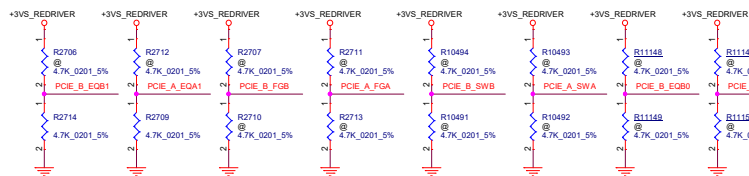
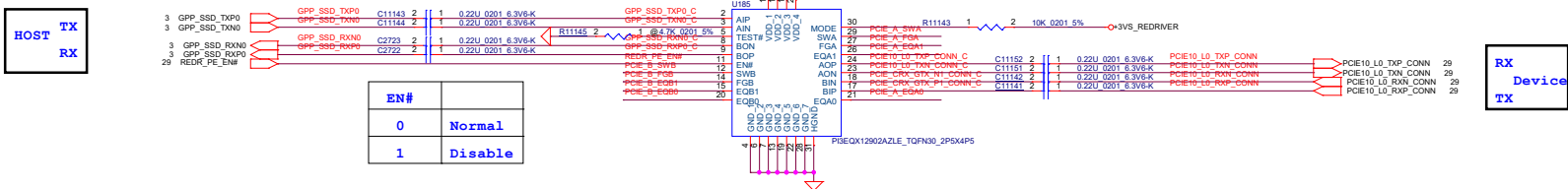
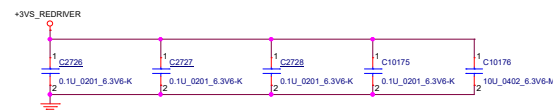
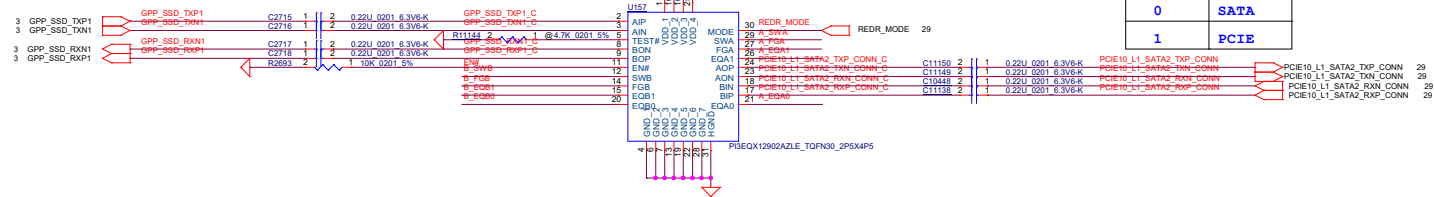


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Place close to PS8801 DCI power pin (Pin 37)

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	@3GHz	@4GHz
GND	6.3 dB	8.7 dB
Open	4.7 dB (Default)	6.7 dB (Default)
VDD	8.2 dB	10.8 dB

GND	-2.5 dB
Open	0 dB (Default)
VDD	-4 dB

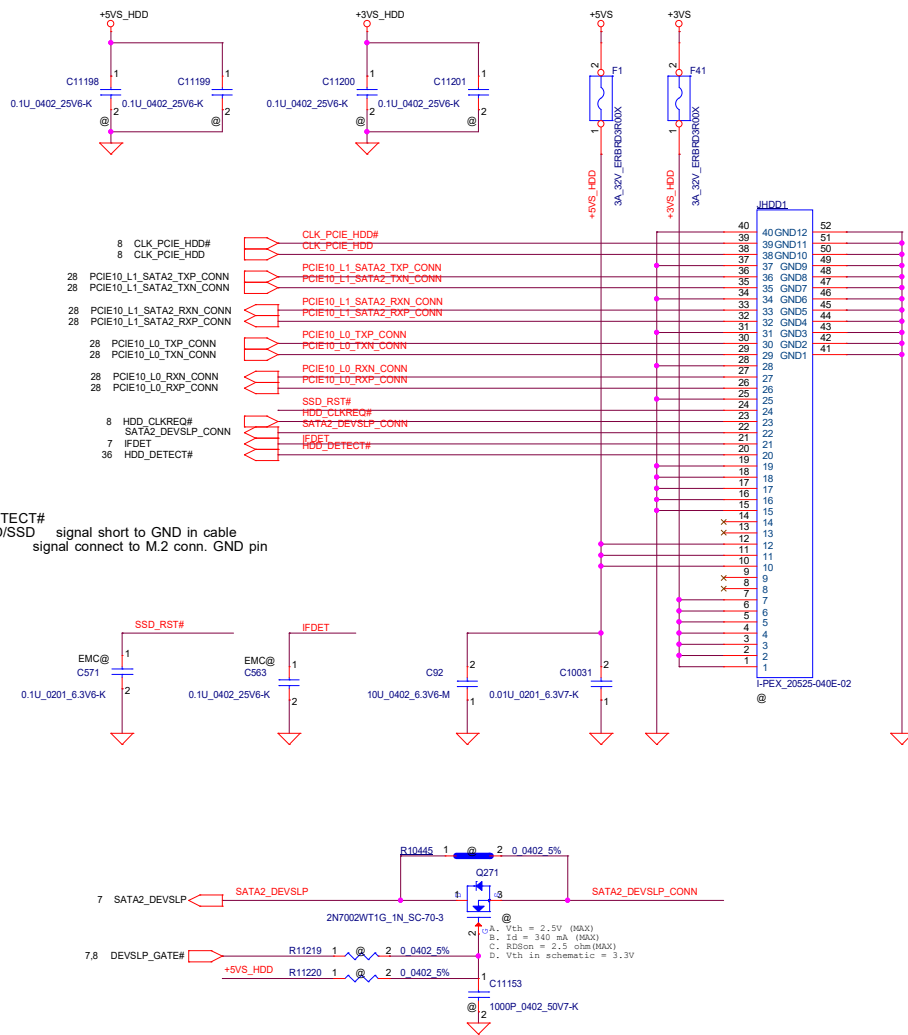
← LOGIC

EN#	MODE	Mode
Low	Low	SATA Application
Low	High	PCIe Application
High	X	Disable

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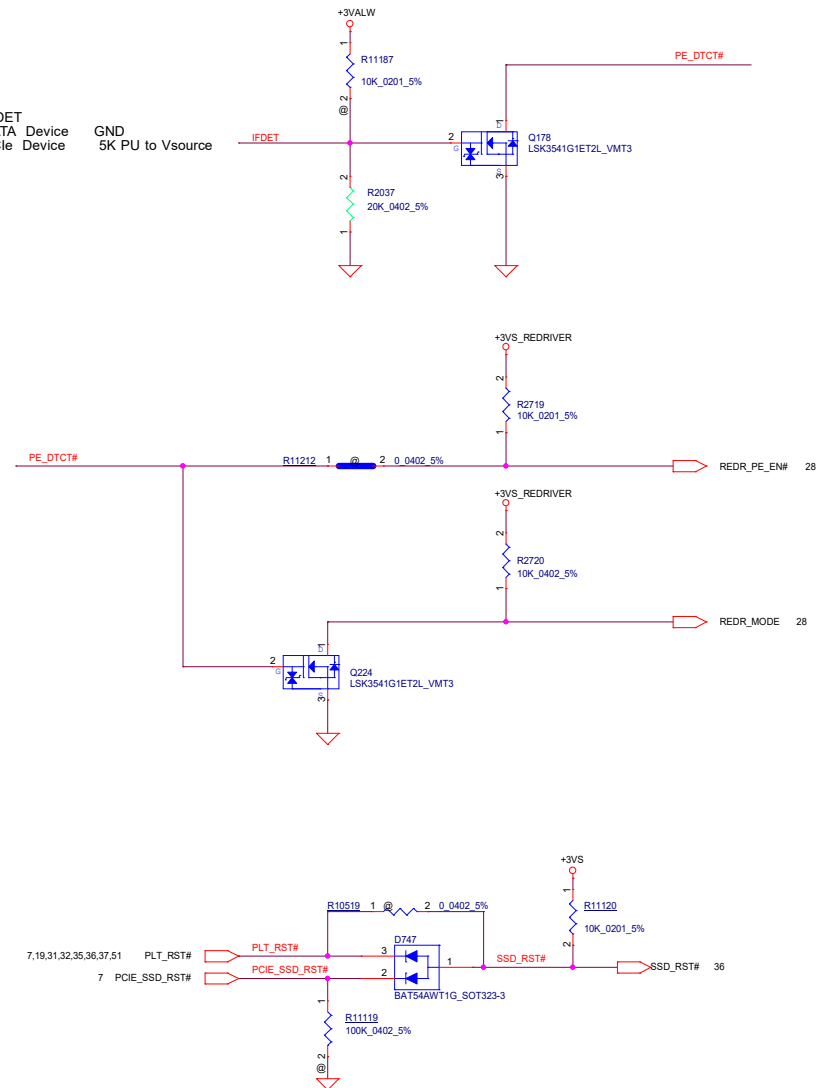
Size	Document Number
Custom	Windu-2 AMD

Rev
0.




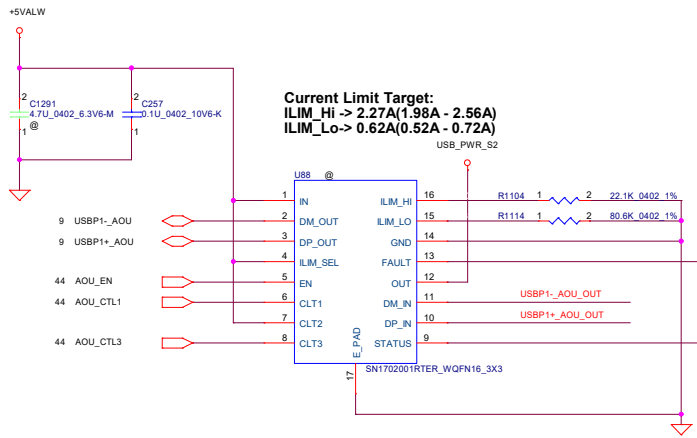
HDD_DETECT#
2.5" HDD/SSD signal short to GND in cable
M.2 SSD signal connect to M.2 conn. GND pin

IFDET
SATA Device
PCIe Device
GND
5K PU to Vsource



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Issued Date		Deciphered Date		SATA EXPRESS CONNECTOR				
2015/11/02		2015/08/10						
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				Document Number				
				Custom		Windu-2 AMD		0.1
				Date		Saturday, April 14, 2018		Sheet
								29 of 66



Current Limit Target:
 ILIM_HI -> 2.27A(1.98A - 2.56A)
 ILIM_LO -> 0.62A(0.52A - 0.72A)

TABLE of USB Charge IC (U88)		
Vendor	P/N	LCFC P/N
TI	SN1702001RTER	SA00008HF00
Pericom	PI5USB2546ZHEX	SA000066I00

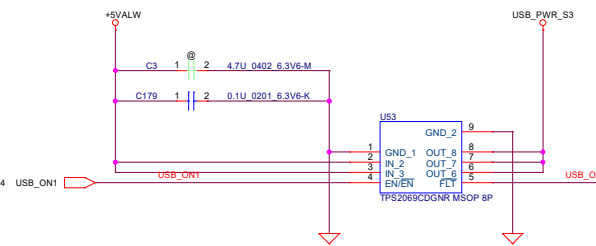
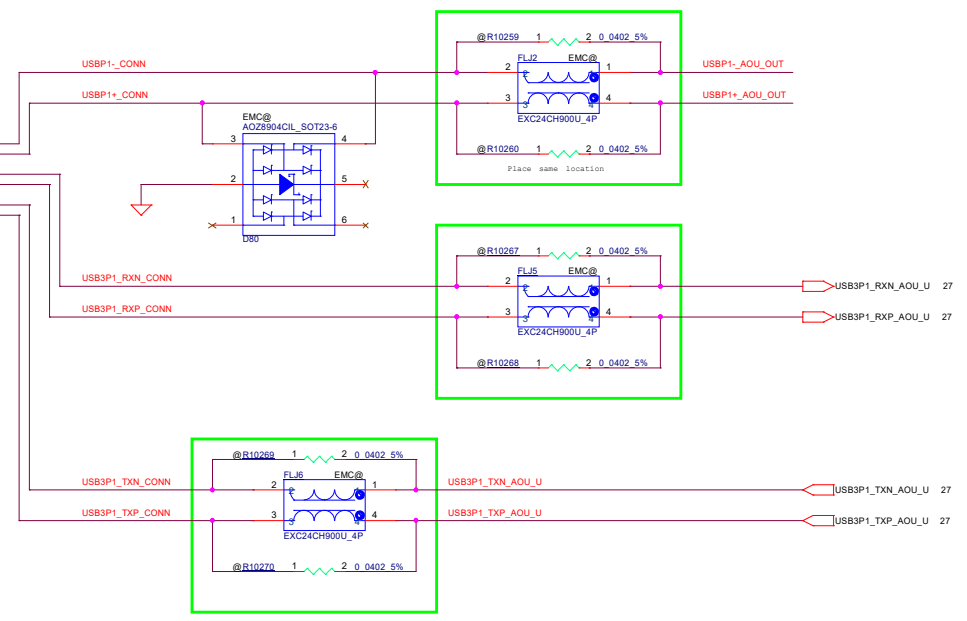
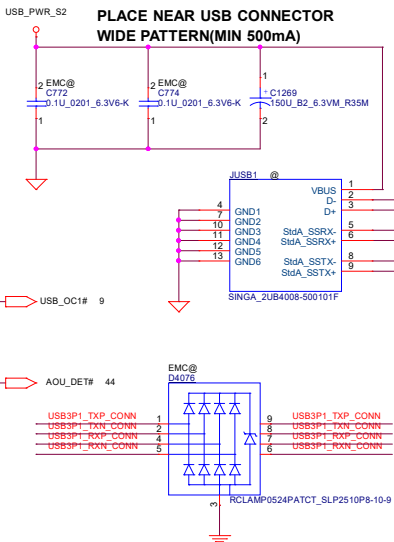
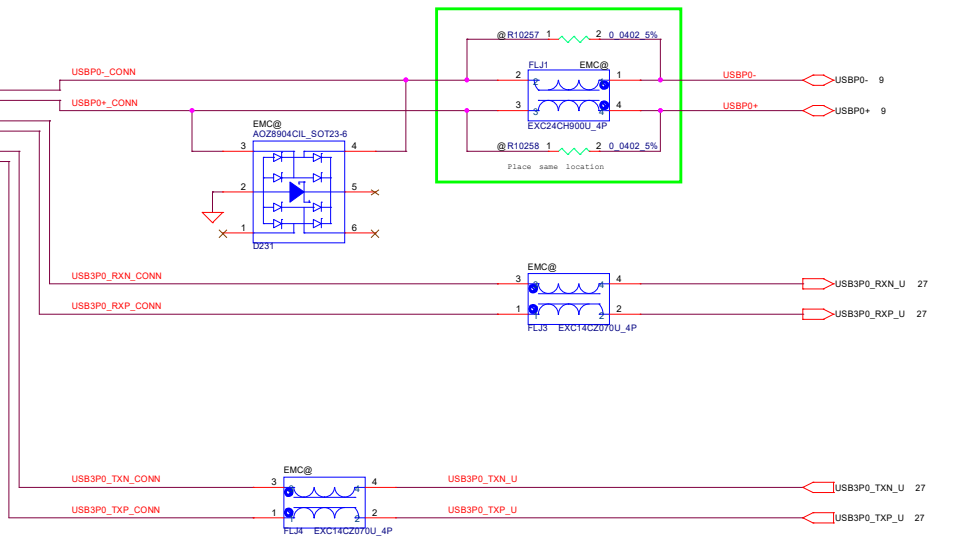
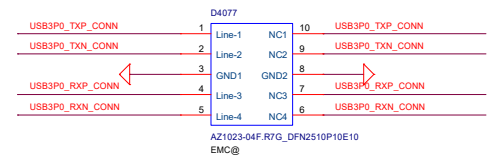
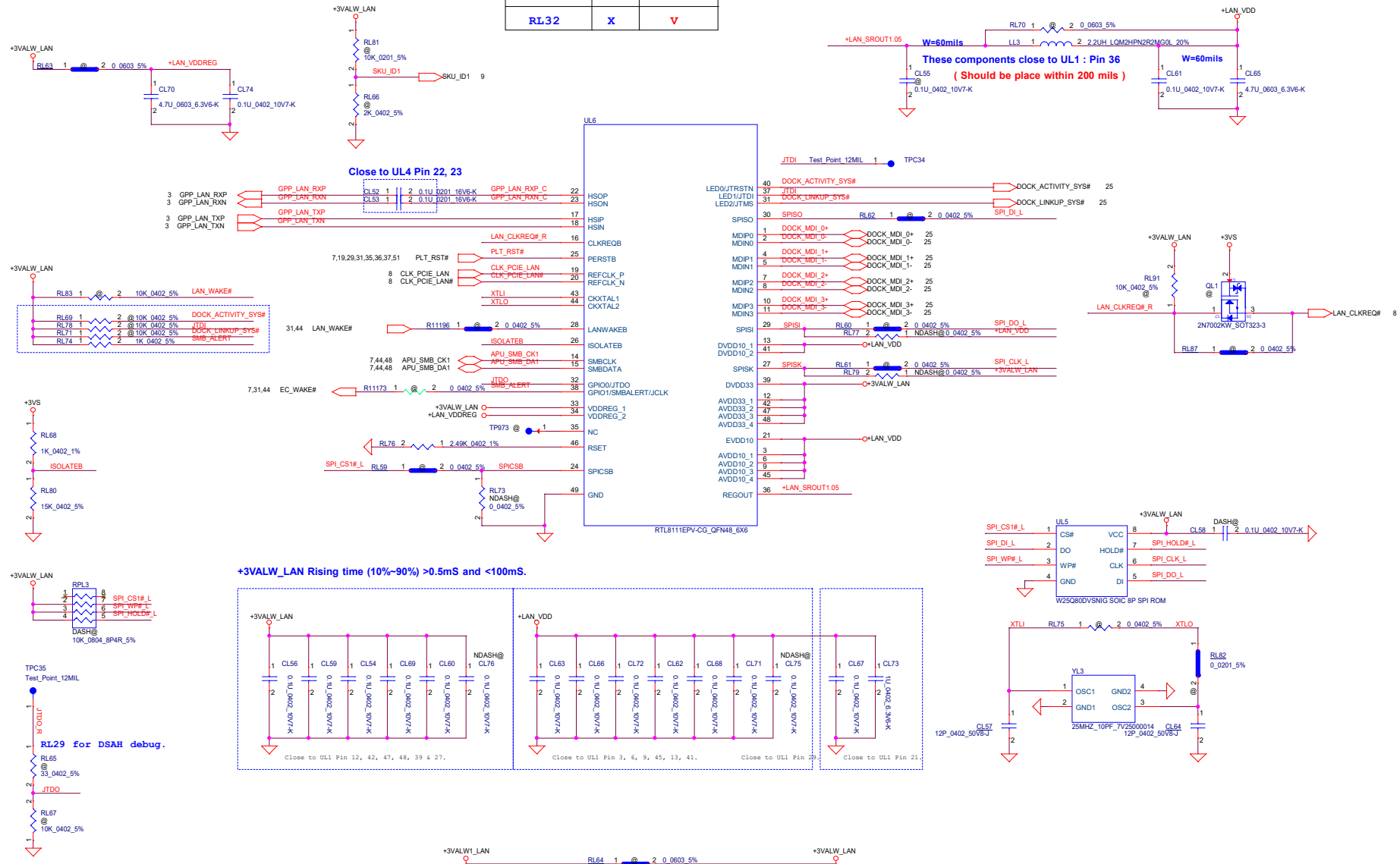



TABLE of USB3.0 Single (U53)		
Vendor	P/N	LCFC P/N
TI	TPS2069CDGNR	SA00005TE00
Rohm	BD82032FVJ-GE2	SA000084S00

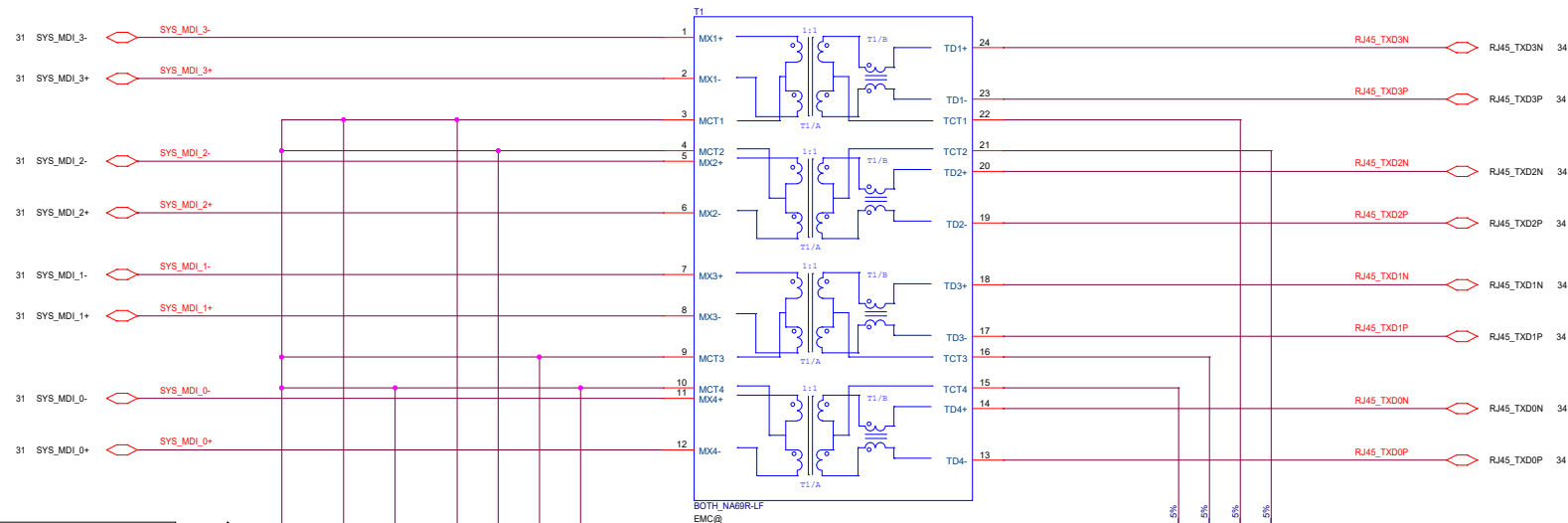


KevinH: USB3.1 GEN2 common choke follow TINY5, NEED CONFIRM

SKU_ID1	DASH	Non-DASH
RL31	V	X
RL32	X	V



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Issued Date		Deciphered Date		GBE LAN SWITCH		
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Size C		Document Number		Windu-2 AMD		Rev 0.1
Date:		Saturday, April 14, 2018		Sheet 32 of 66		



THE WIDTH OF THESE TRACE SHOULD BE WIDER THAN 35MIL TO PREVENT VOLTAGE DROP.

C303 SHOULD BE PLACED AS CLOSE TO MAGNETICS AS POSSIBLE.

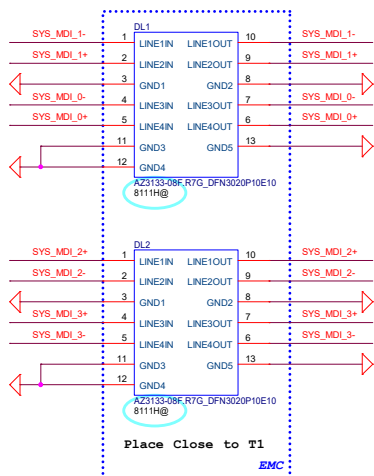
DL1/DL2
1'S PN:SC300003M00

ESD REASON

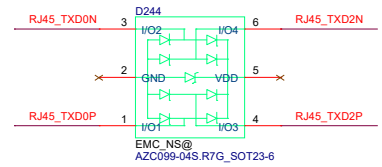
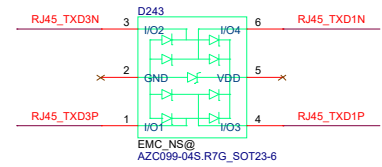
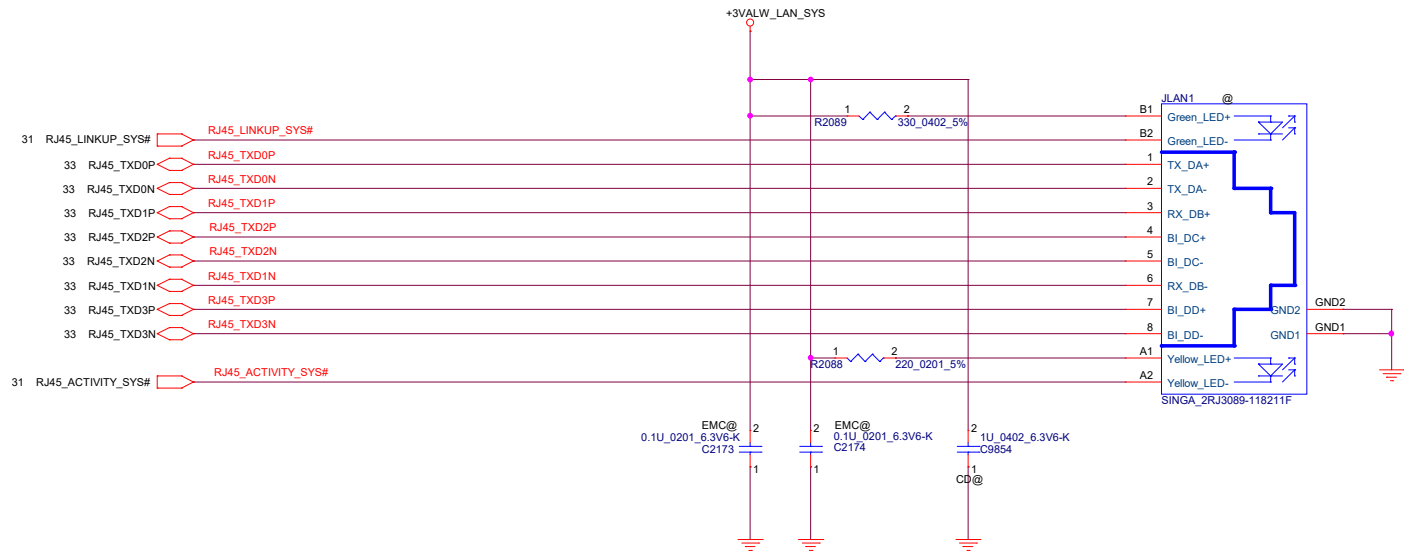
TABLE of Transformer (T1)		
Vendor	P/N	LCFC P/N
BOTHAND	NA69R-LF	SP050008B00
TAIMAG	IH-189-A	SP050007V0J

PATTERN MUST BE SHORT AND WIDE.

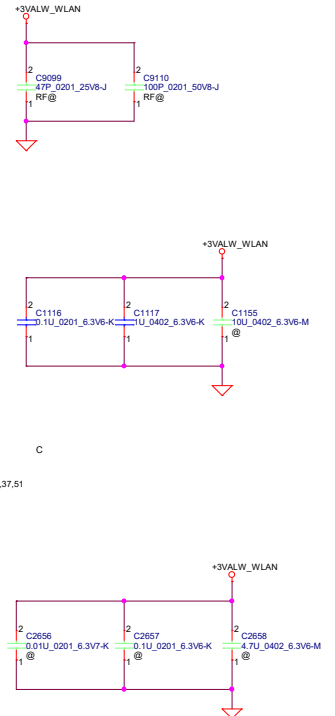
HIGH VOLTAGE
10PF CAP
IS OPTIONAL




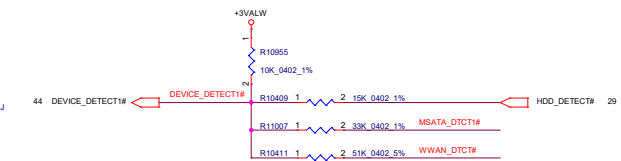
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3.2H CONNECTOR



Security Classification		LC Future Center Secret Data		Title		
Issued Date	2015/11/02	Deciphered Date	2015/09/10	M.2 SOCKET 1 MODULE I/F		
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				Date	Saturday, April 14, 2018	Sheet 3 of 66



Vcc	3.3V					
R10408	10K +/- 1%					
DEVICE_DETECT#	1.9928V	1.6843V	1.7822V	2.7754V	2.5448V	3.3V
HDD_DETECT#	V	V	V	X	X	X
MSATA_DTCT#	X	V	X	X	V	X
WWAN_DTCT#	X	X	V	V	X	X

TYPE-B NGFF CARD FOR WWAN

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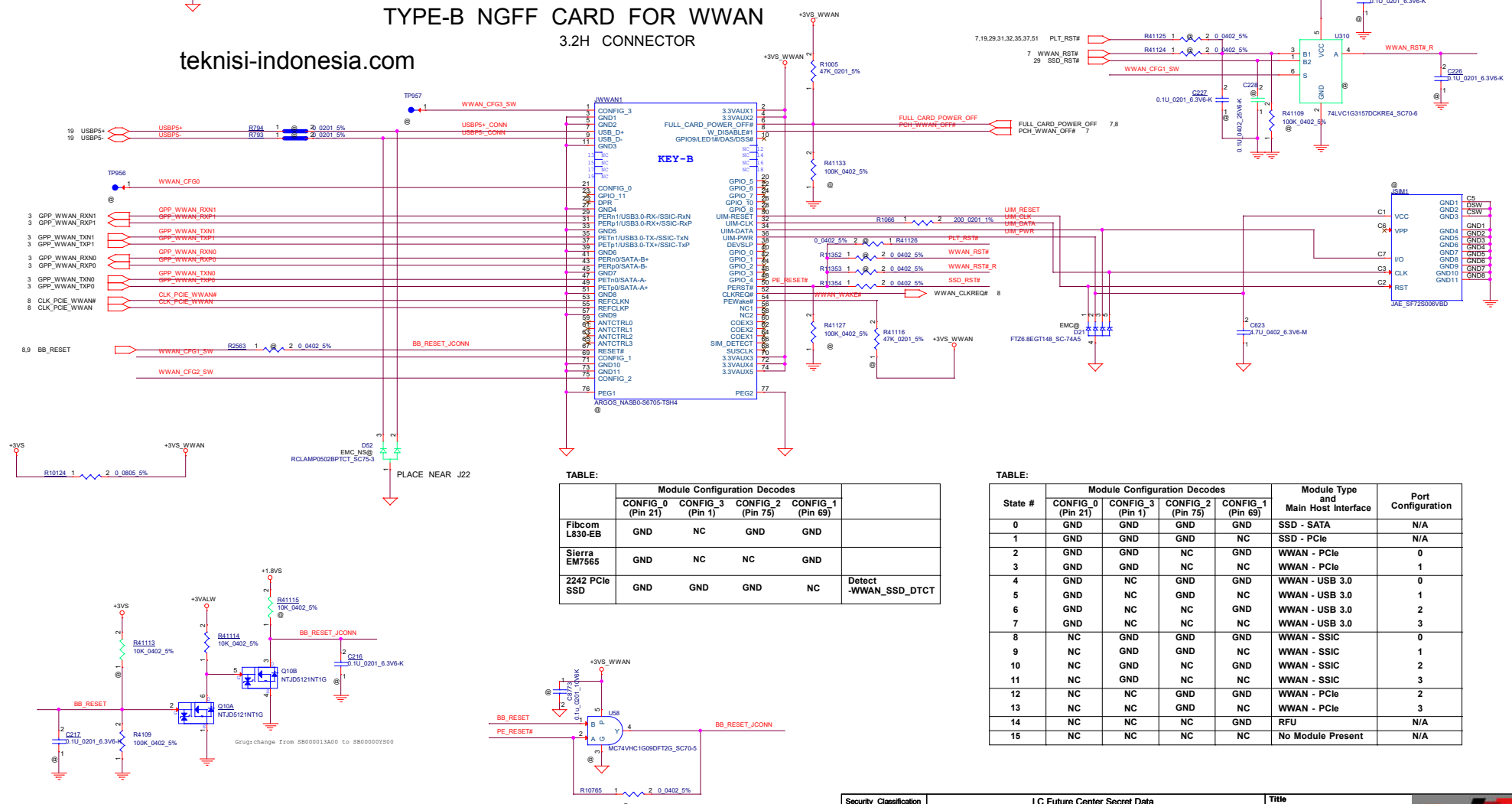


TABLE:

	Module Configuration Decodes			
	CONFIG_0 (Pin 21)	CONFIG_3 (Pin 1)	CONFIG_2 (Pin 75)	CONFIG_1 (Pin 69)
Fibcom L830-EB	GND	NC	GND	GND
Sierra EM7565	GND	NC	NC	GND
2242 PCIe SSD	GND	GND	GND	NC
				Detect -WWAN_SSD_DTC

TABLE:

State #	Module Configuration Decodes				Module Type and Main Host Interface	Port Configuration
	CONFIG_0 (Pin 21)	CONFIG_3 (Pin 1)	CONFIG_2 (Pin 75)	CONFIG_1 (Pin 69)		
0	GND	GND	GND	GND	SSD - SATA	N/A
1	GND	GND	GND	NC	SSD - PCIe	N/A
2	GND	GND	NC	GND	WWAN - PCIe	0
3	GND	GND	NC	NC	WWAN - PCIe	1
4	GND	NC	GND	GND	WWAN - USB 3.0	0
5	GND	NC	GND	NC	WWAN - USB 3.0	1
6	GND	NC	NC	GND	WWAN - USB 3.0	2
7	GND	NC	NC	NC	WWAN - USB 3.0	3
8	NC	GND	GND	GND	WWAN - SSIC	0
9	NC	GND	GND	NC	WWAN - SSIC	1
10	NC	GND	NC	GND	WWAN - SSIC	2
11	NC	GND	NC	NC	WWAN - SSIC	3
12	NC	NC	GND	GND	WWAN - PCIe	2
13	NC	NC	GND	NC	WWAN - PCIe	3
14	NC	NC	NC	GND	RFU	N/A
15	NC	NC	NC	NC	No Module Present	N/A

Security Classification	LC Future Center Secret Data		
Issued Date	2015/11/02	Deciphered Date	2015/8/10

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Title		
M.2 SOCKET 2 MODULE I/F		
Size Custom	Document Number	Rev 0.1
Windu-2 AMD		
Date	Schedule	Sheet
April 14 2018	April 14 2018	96 of 98

TABLE

Dock support		
	SUPPORT	NON-SUPPORT
R1235	NO ASM	NO ASM
R1236	ASM	NO ASM
R1237	ASM	NO ASM
R1238	ASM	NO ASM

↑
LOGIC

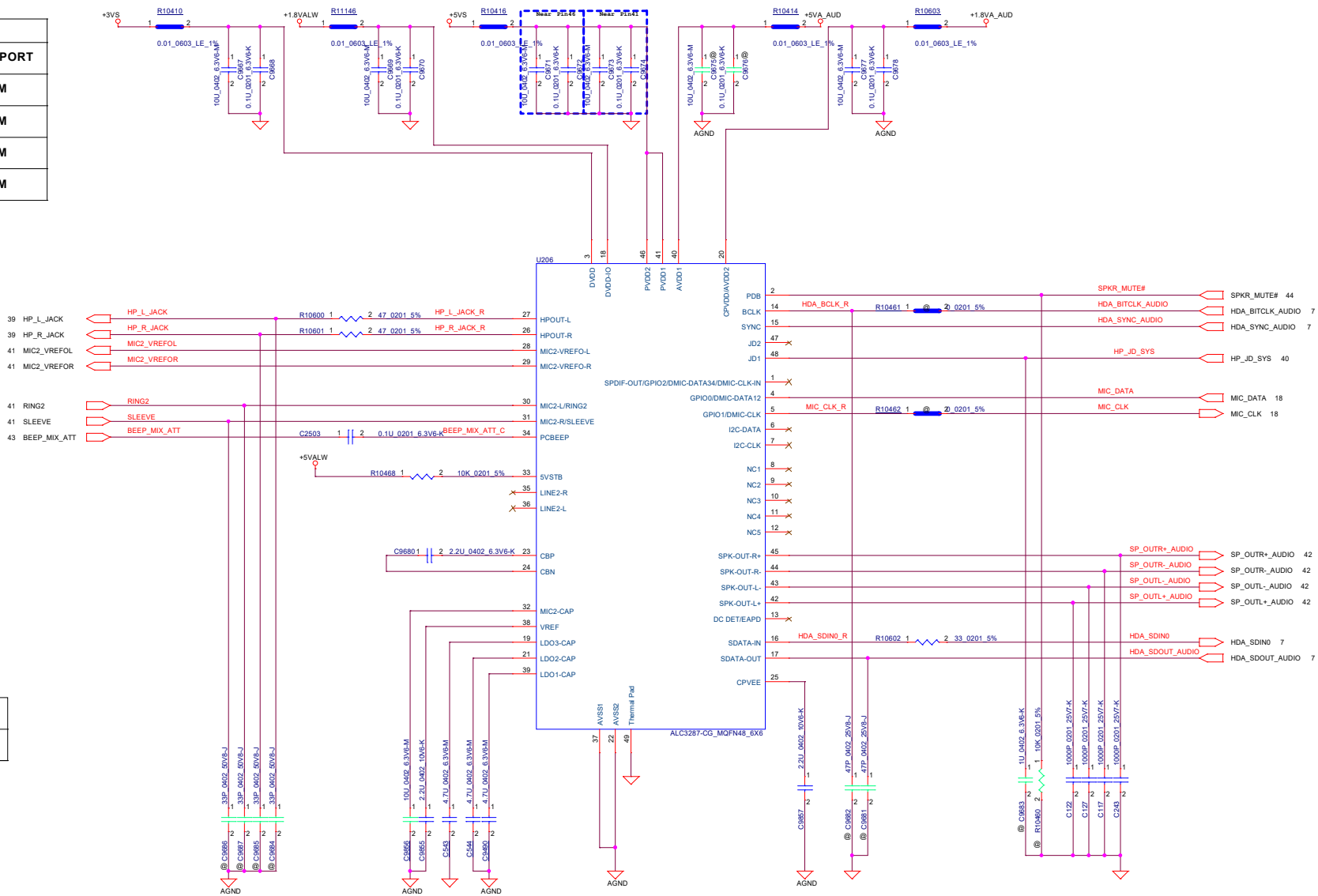
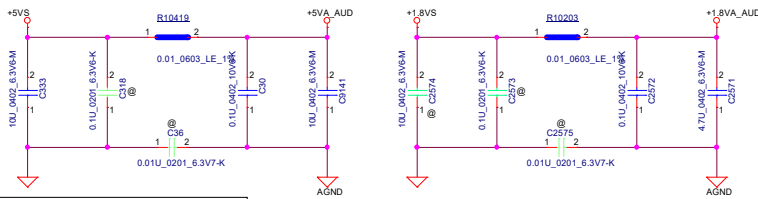


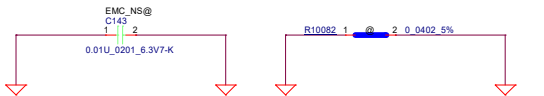
TABLE MIC HW ENABLE/DISABLE

	ENABLE	DISABLE
R961	ASM	NO ASM

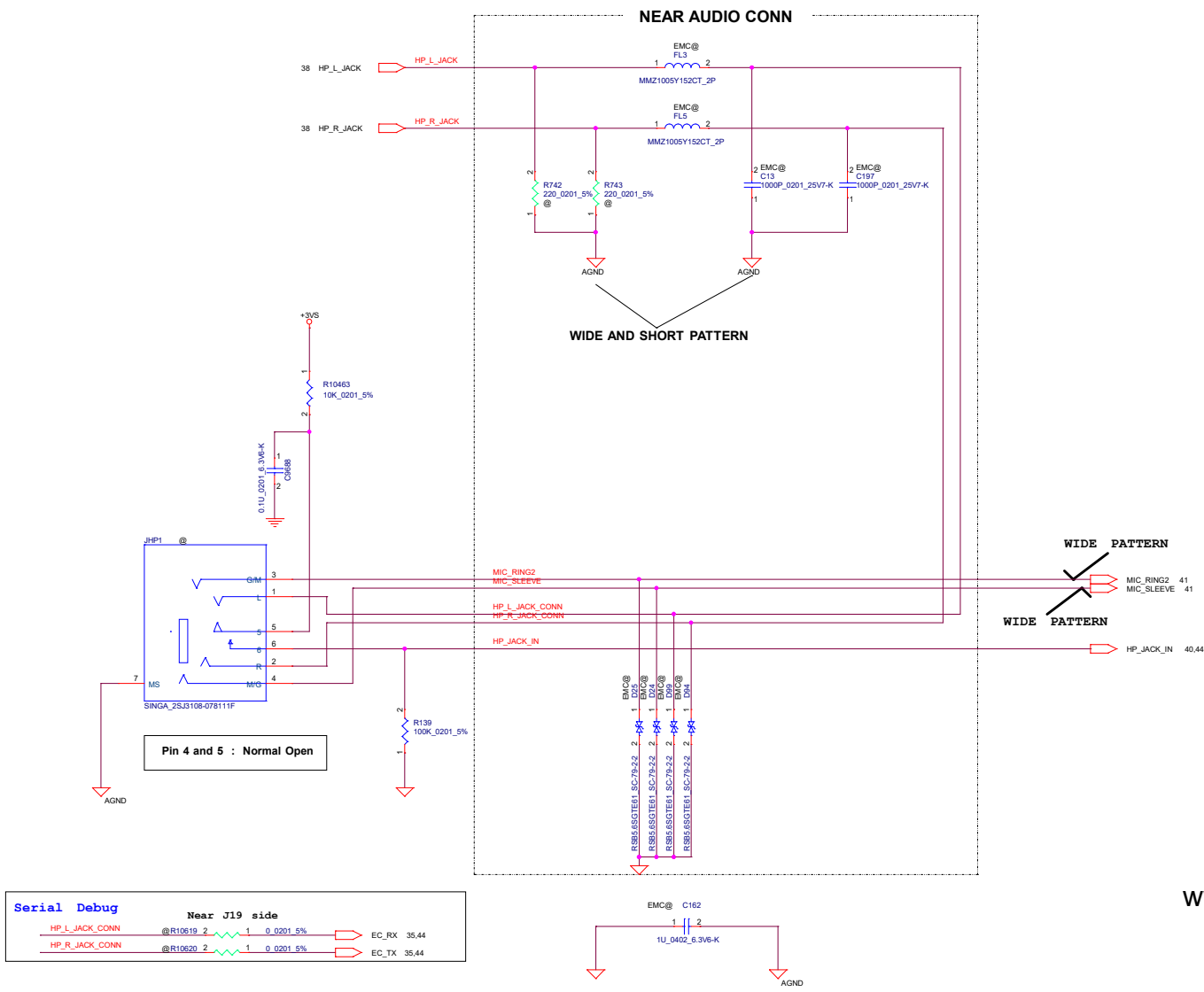
↑
LOGIC



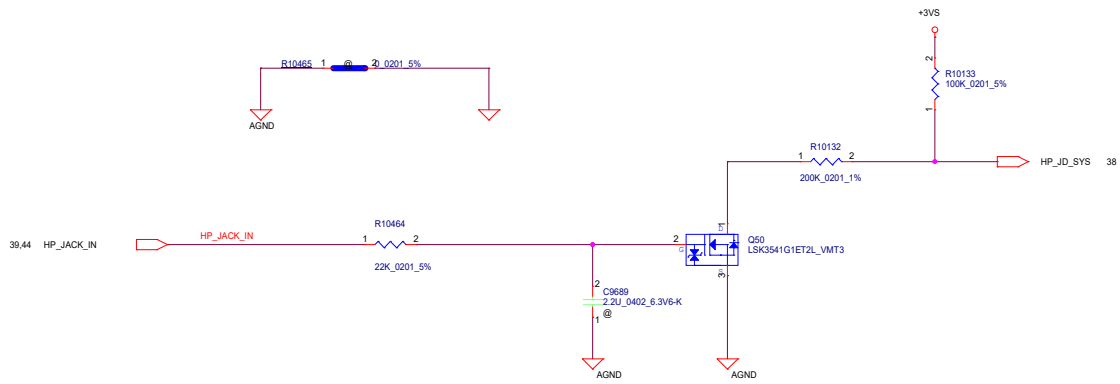
PLACE UNDER ALC3287

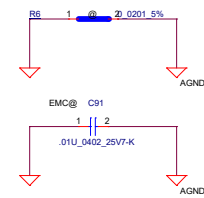
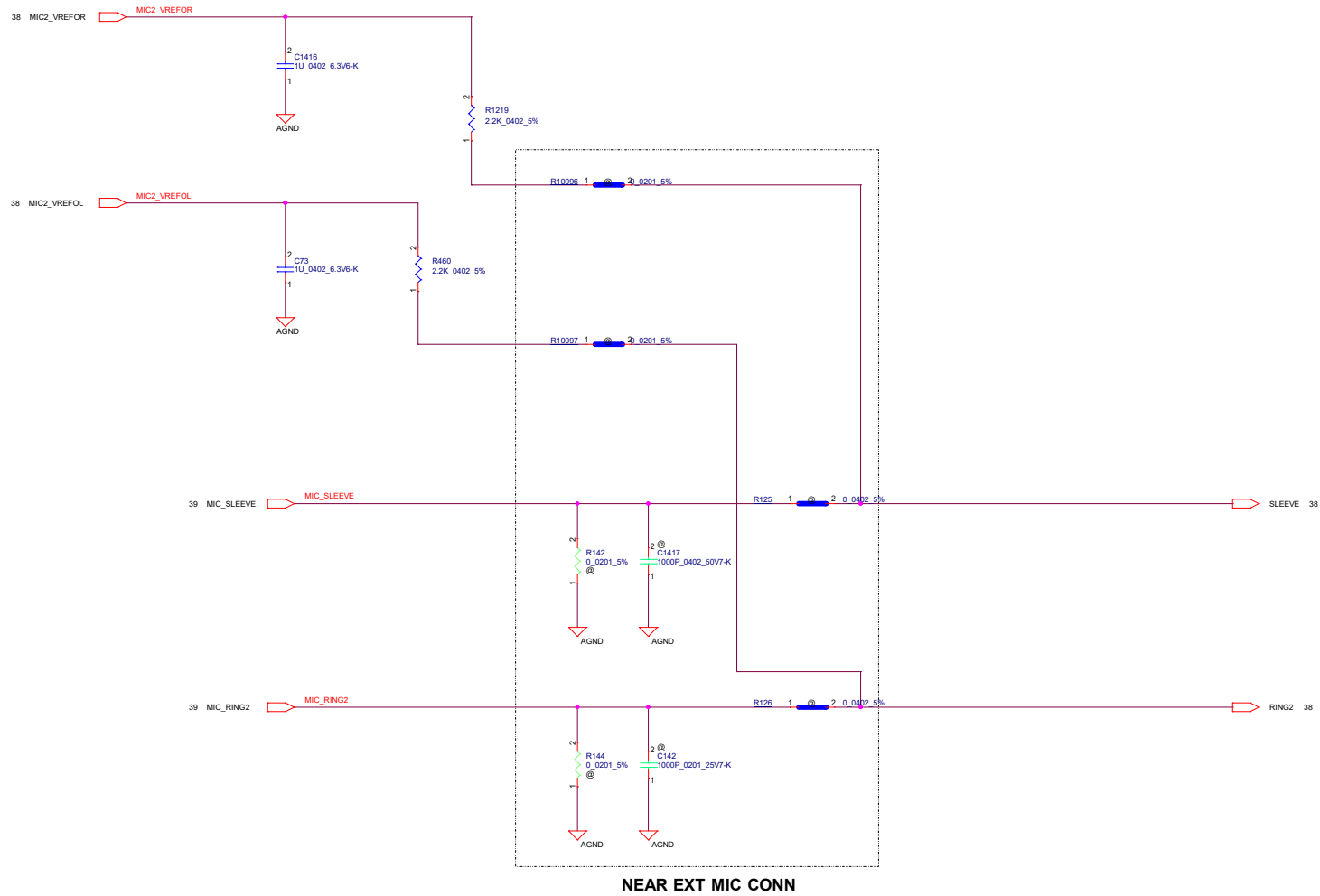


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Issued Date	2015/11/02	Deciphered Date	2015/8/10	Size	Document Number	Rev
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Date:	Saturday, April 14, 2018	Sheet				

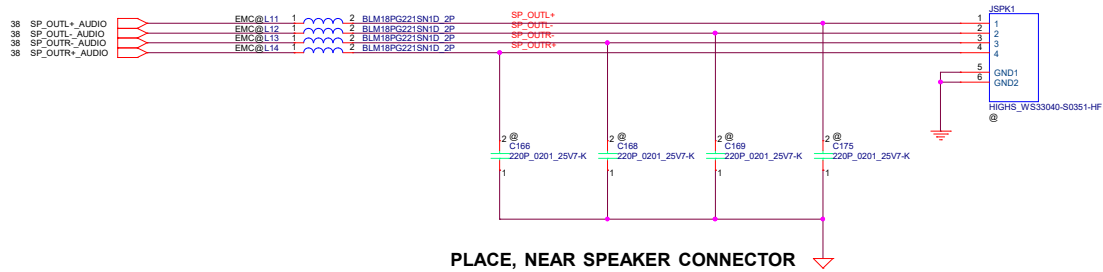


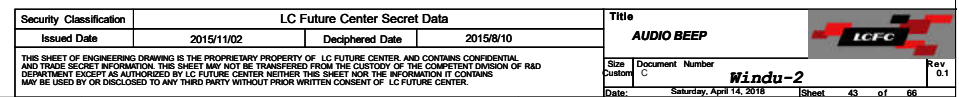
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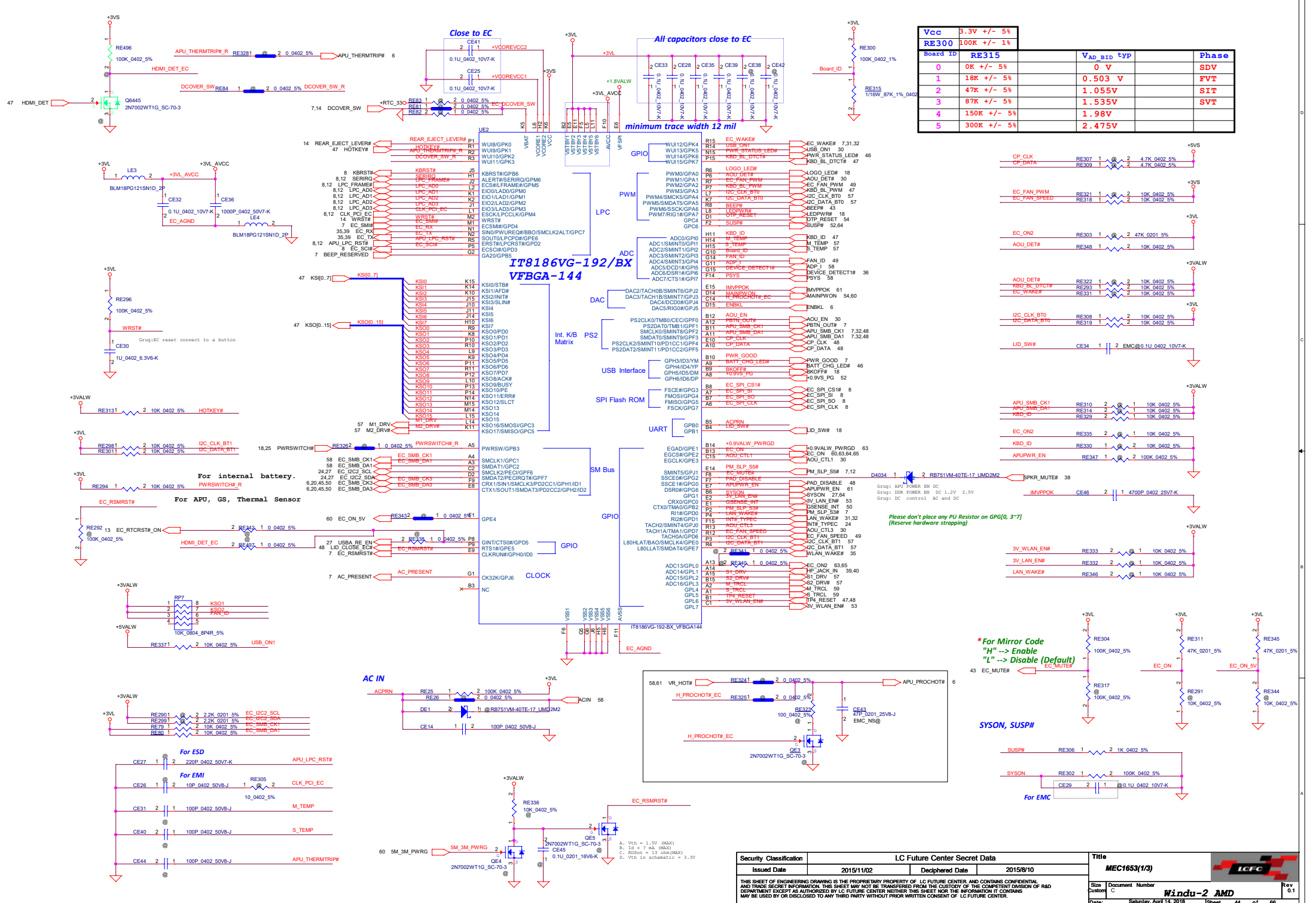




NEAR EXT MIC CONN



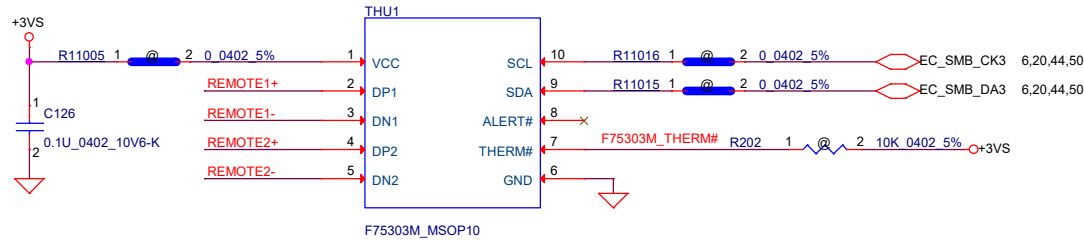




Vcc	3.3V +/- 5%			
RE300	100K +/- 1%			
Board ID	RE315	V _{AD_BID} typ		Phase
0	0K +/- 5%	0 V		SDV
1	18K +/- 5%	0.503 V		FVT
2	47K +/- 5%	1.055V		SIT
3	87K +/- 5%	1.535V		SVT
4	150K +/- 5%	1.98V		
5	300K +/- 5%	2.475V		

*For Mirror Code
"H" -> Enable
"L" -> Disable (Default)

Thermal Sensor placed nearby SO-DIMM



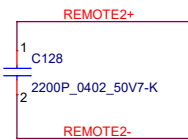
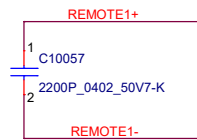
Address 1001_101xb

Internal pull up 1.2K to 1.5V

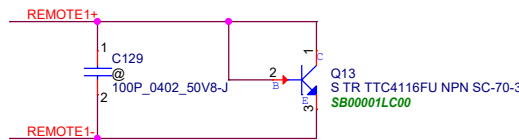
R for init i d t her md shut do wnte mp

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Close to THU1



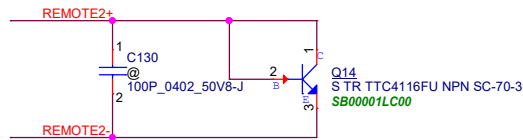
Close to FIN




KevinH: Manual update PN to MMBT3904TT1G

REMOTE2+/-:
Trace width/space:10/10 mil
Trace length:<8"

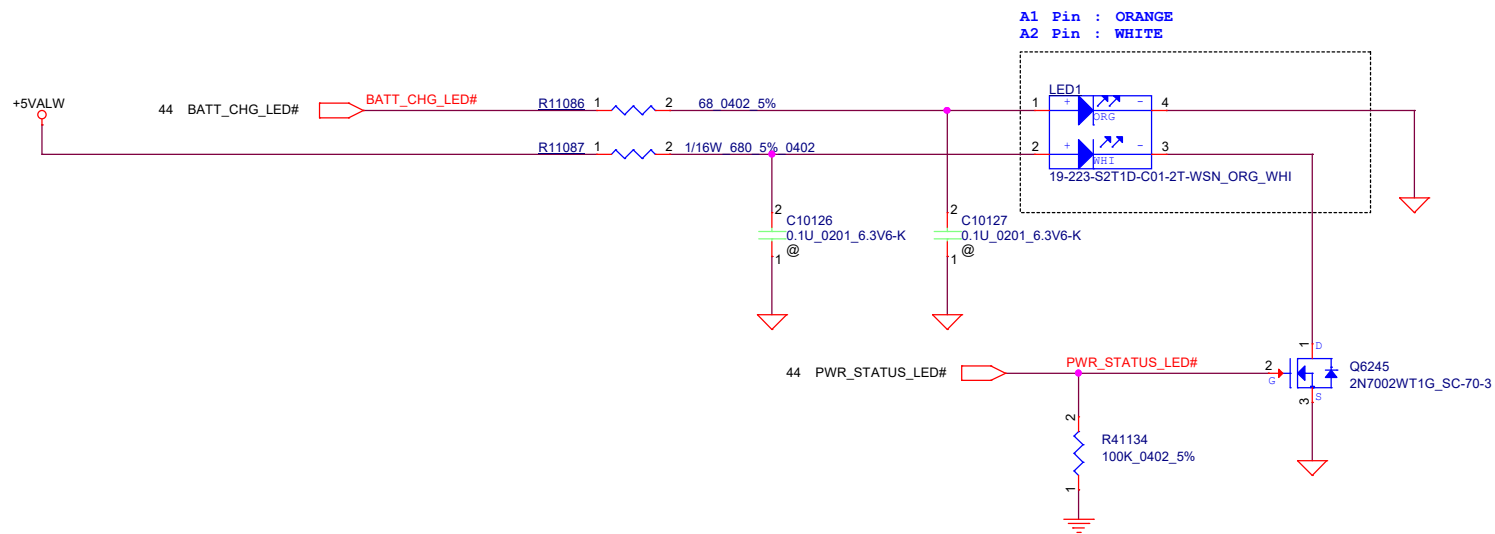
Close CHARGER




KevinH: Manual update PN to MMBT3904TT1G

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Issued Date		Deciphered Date		USB PD CONNTROLLER (2/2)				
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				Size	Document Number	Winda-2 AMD	Rev	
				3			0.1	
				Date:	Saturday, April 14, 2018		Sheet	45 of 66

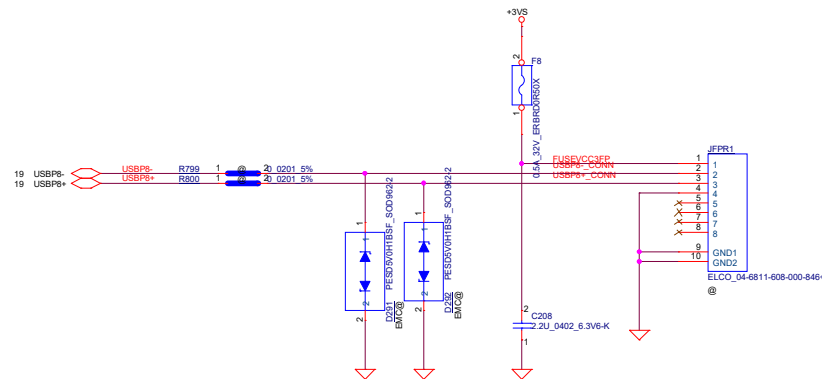
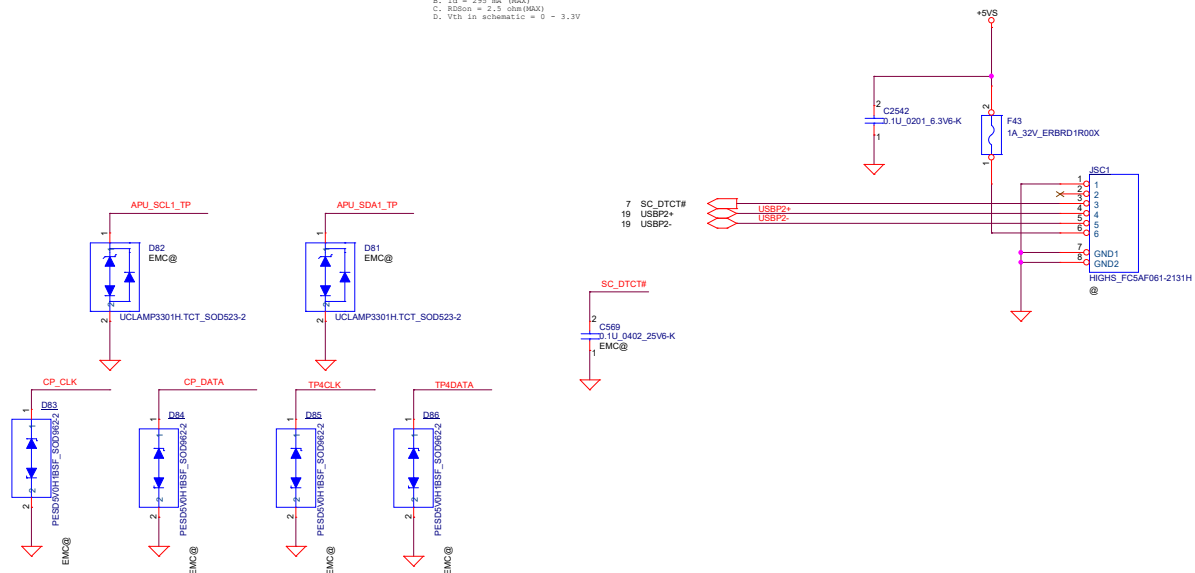
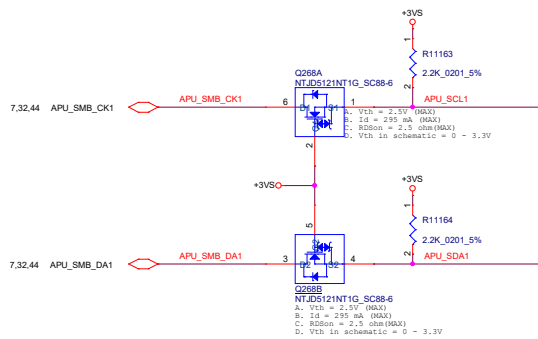
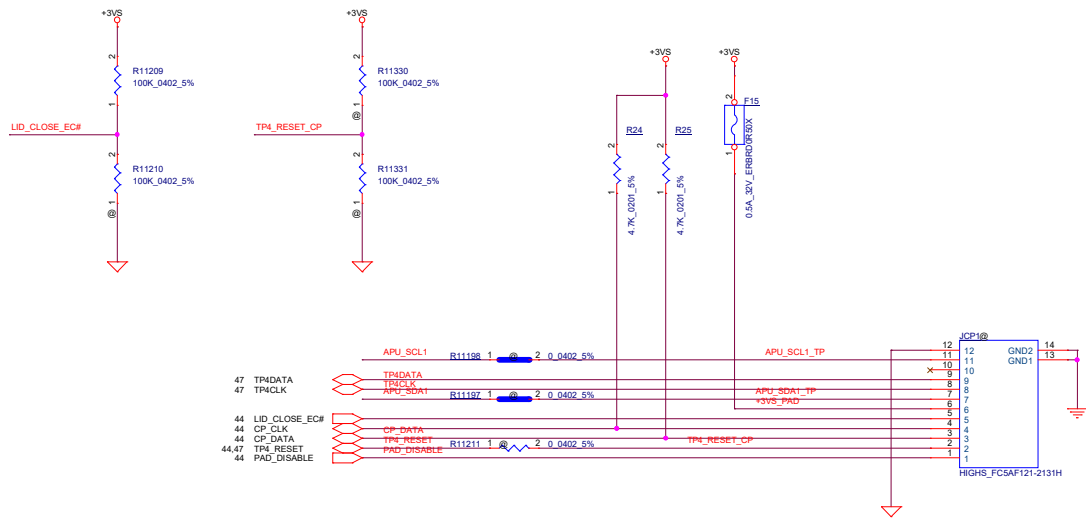
Windu-2 AMD




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Issued Date		Deciphered Date		USB PD CONNTROLLER (2/2)		
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Size		Document Number		Windu-2 AMD		Rev
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Windu-2 AMD



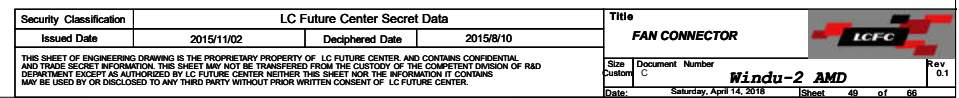


PLACE NEAR J48

Security Classification		LC Future Center Secret Data		Title	
Issued Date		2015/11/02		Deciphered Date	
		2015/8/10		TOUCH PAD/NFC/FPR	
					
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Size		Document Number		Rev	
		C		0.1	
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		Windu-2 AMD			



Windu-2 AMD



TABLE

P/N	ADDR_SEL	Address
BMA255	H	32h (W) & 33h (R)
	L	30h (W) & 31h (R)
KX022-1020	H	3Eh (W) & 3Fh (R)
	L	3Ch (W) & 3Dh (R)

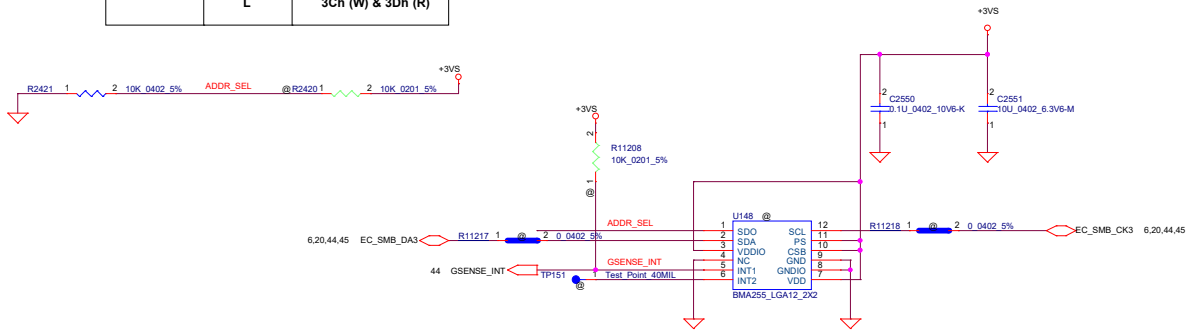
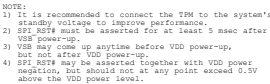
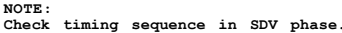

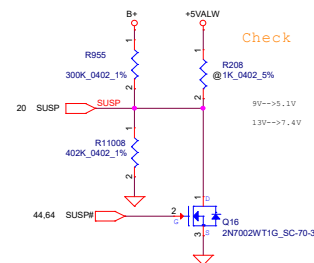
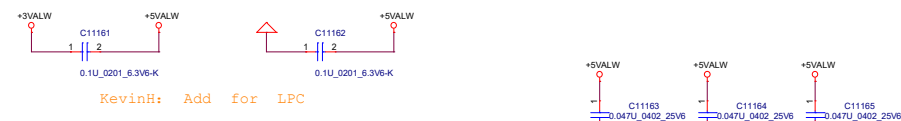


TABLE of G-Sensor (U148)

Vendor	P/N	LCFC P/N
BOSCH	BMA255	SA00005YJ00
Kionix	KX022-1020	SA000081E00

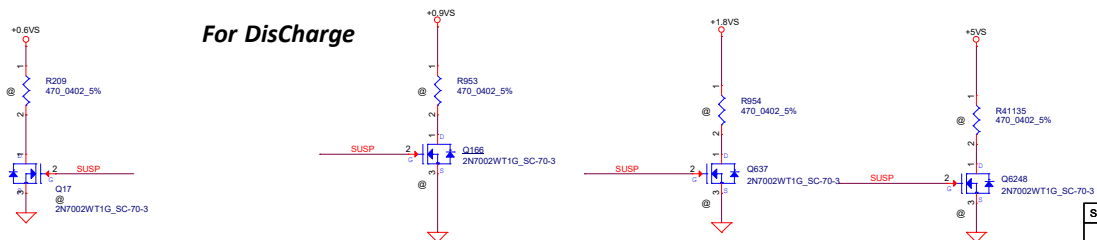
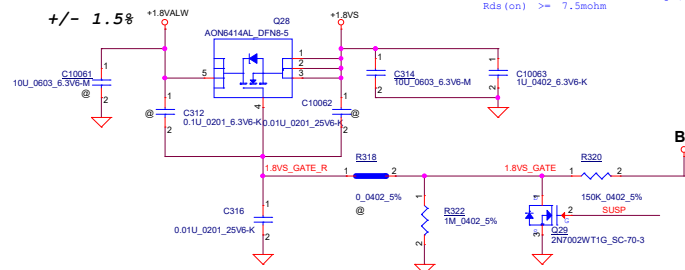



Security Classification				LC Future Center Secret Data				Title					
Issued Date		2015/11/02		Deciphered Date		2015/8/10		DISCRETE TPM 2.0					
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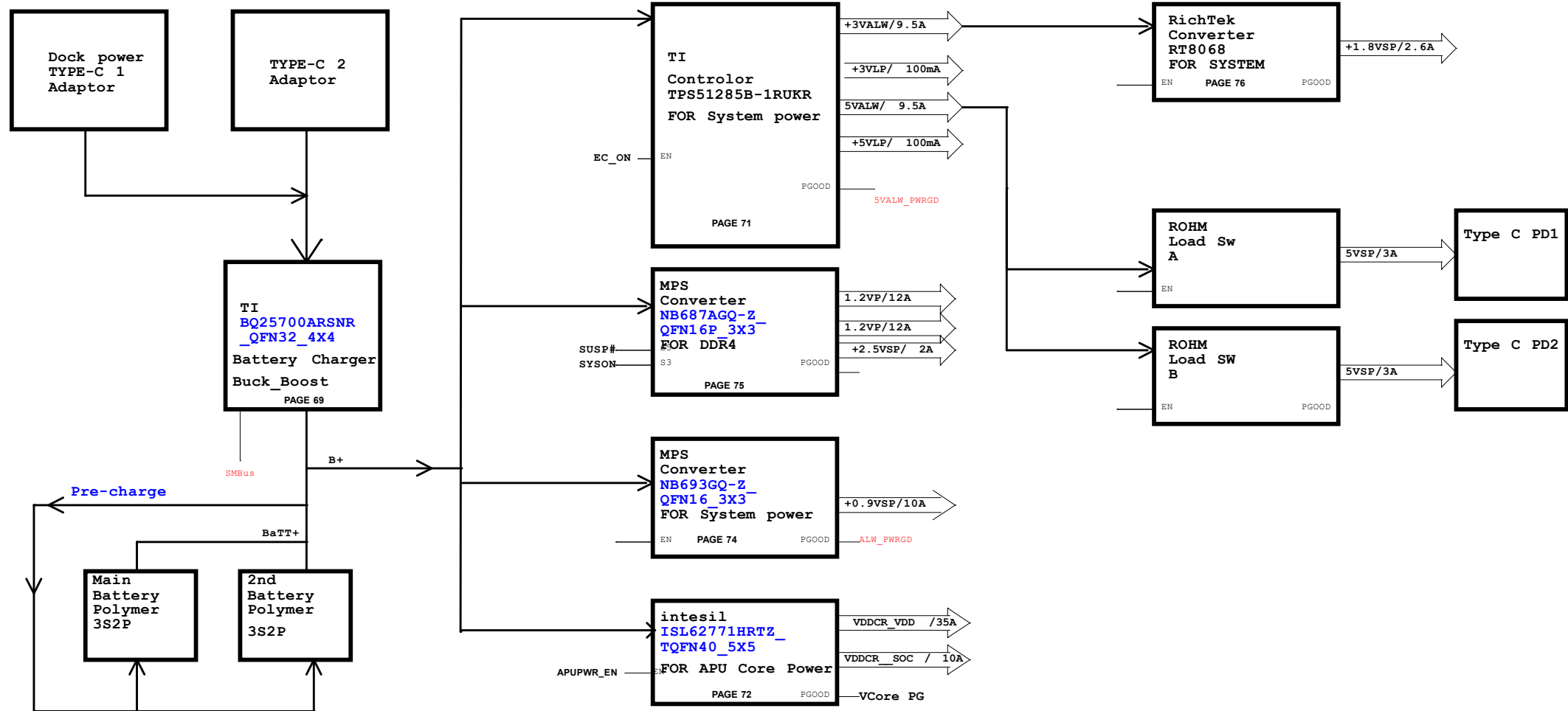


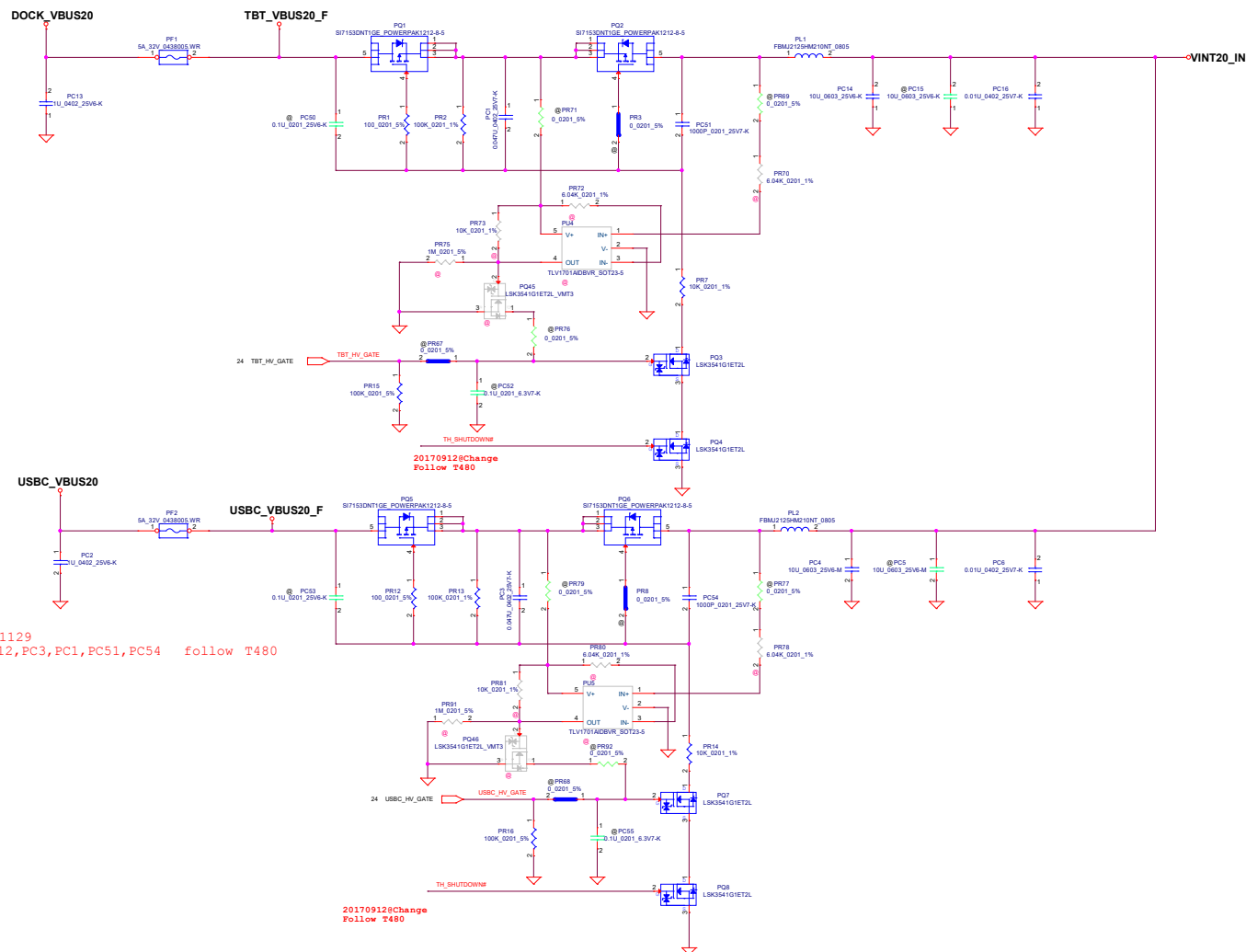
+1.8VALW to +1.8VS 2A request

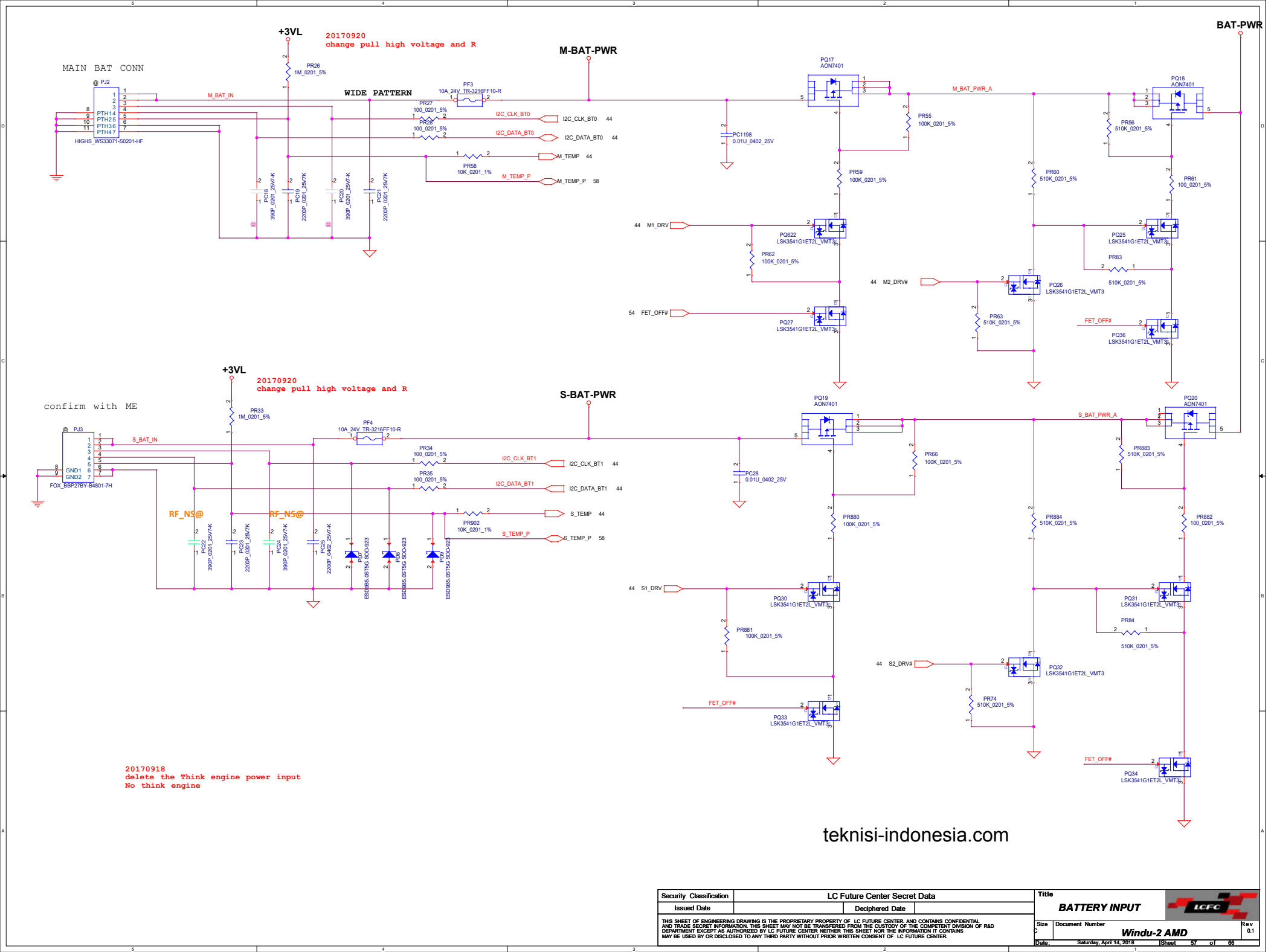
Load MOS N MOS Id =< 40A Vgs(th) Max >= 2.6V
Rds(on) >= 7.5mohm



Security Classification			LC Future Center Secret Data		Title			
Issued Date			Deciphered Date		LOAD SW B			
2012/11/01			2013/12/31					
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<p>Saturday, April 14, 2018</p>					<p>Windu-2 AMD</p>			



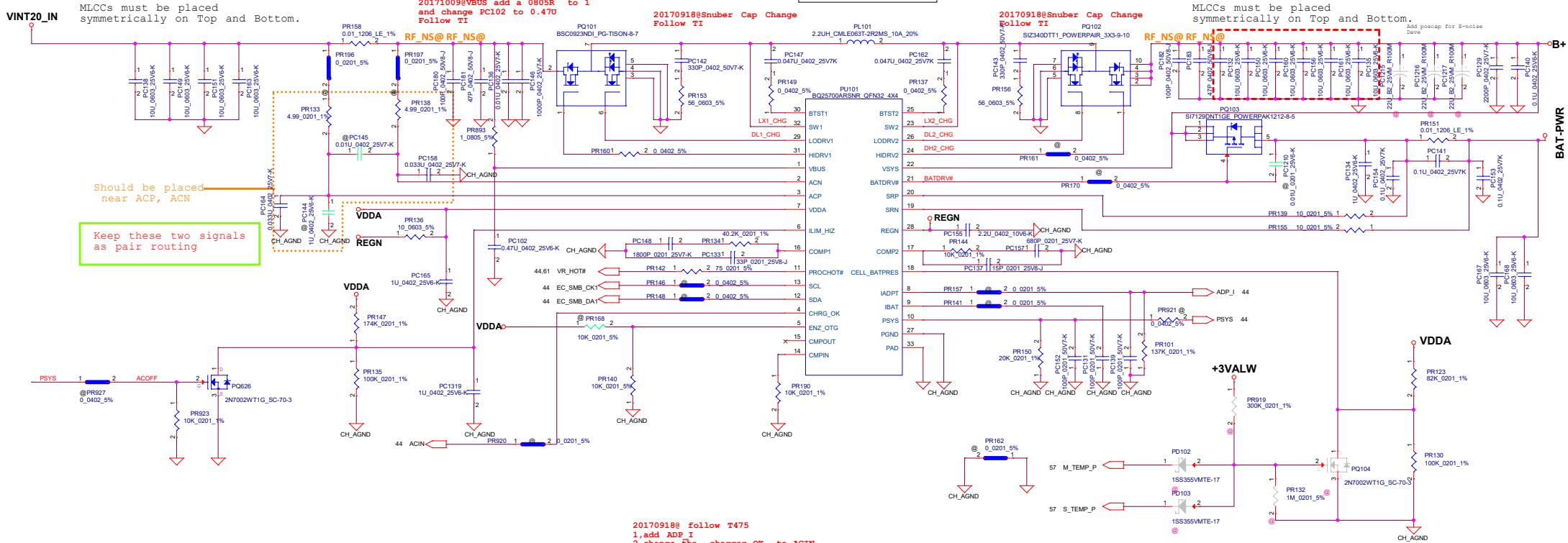




1,snubber PC142PR133,PC143,PR156 delete EMC9
2,PC131,PC141 delete EMC9
3,PC129,PC140 delete EMC9

Table PL101

TOKO : FDSD0630-H-2R2M
Cyttec : CMLE063T-2R2MS



MLCCs must be placed symmetrically on Top and Bottom.

20171009@VBUS add a 0805R to 1 and change PC102 to 0.47U Follow TI

20170918@Snubber Cap Change Follow TI

20170918@Snubber Cap Change Follow TI

MLCCs must be placed symmetrically on Top and Bottom.

Should be placed near ACP, ACN

Keep these two signals as pair routing

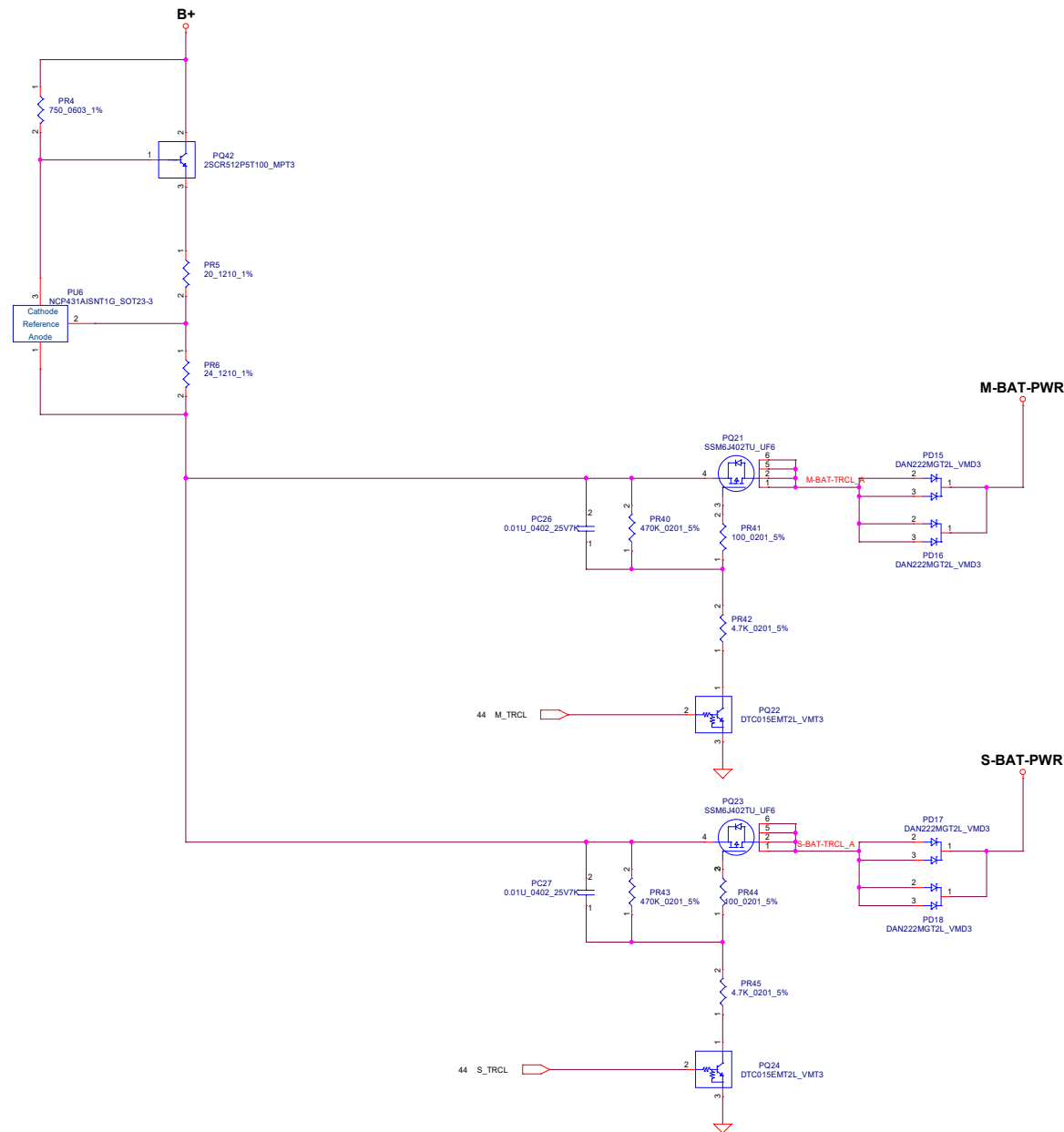
20170918 follow T475
1,add ADP I
2,change the charger OK to ACIN
3,change the Call pres to T475
20171204 follow T475
add PQ626PR924,,PR925

IDPM	V (ILIM)	PR147
500mA	1.2V	402K
1.0A	1.4V	332K
1.5A	1.6V	280K
2.0A	1.8V	237K
3.0A	2.2V	174K
3.25A	2.3V	162K

← LOGIC

# of CELL	VCELL_PRES	PR154
1-CELL	1.5V	301K
2-CELL	2.5V	140K
3-CELL	3.5V	71.5K
4-CELL	4.5V	33.2K

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Issued Date	Deciphered Date			BATTERY CHARGER(BQ25700A)	
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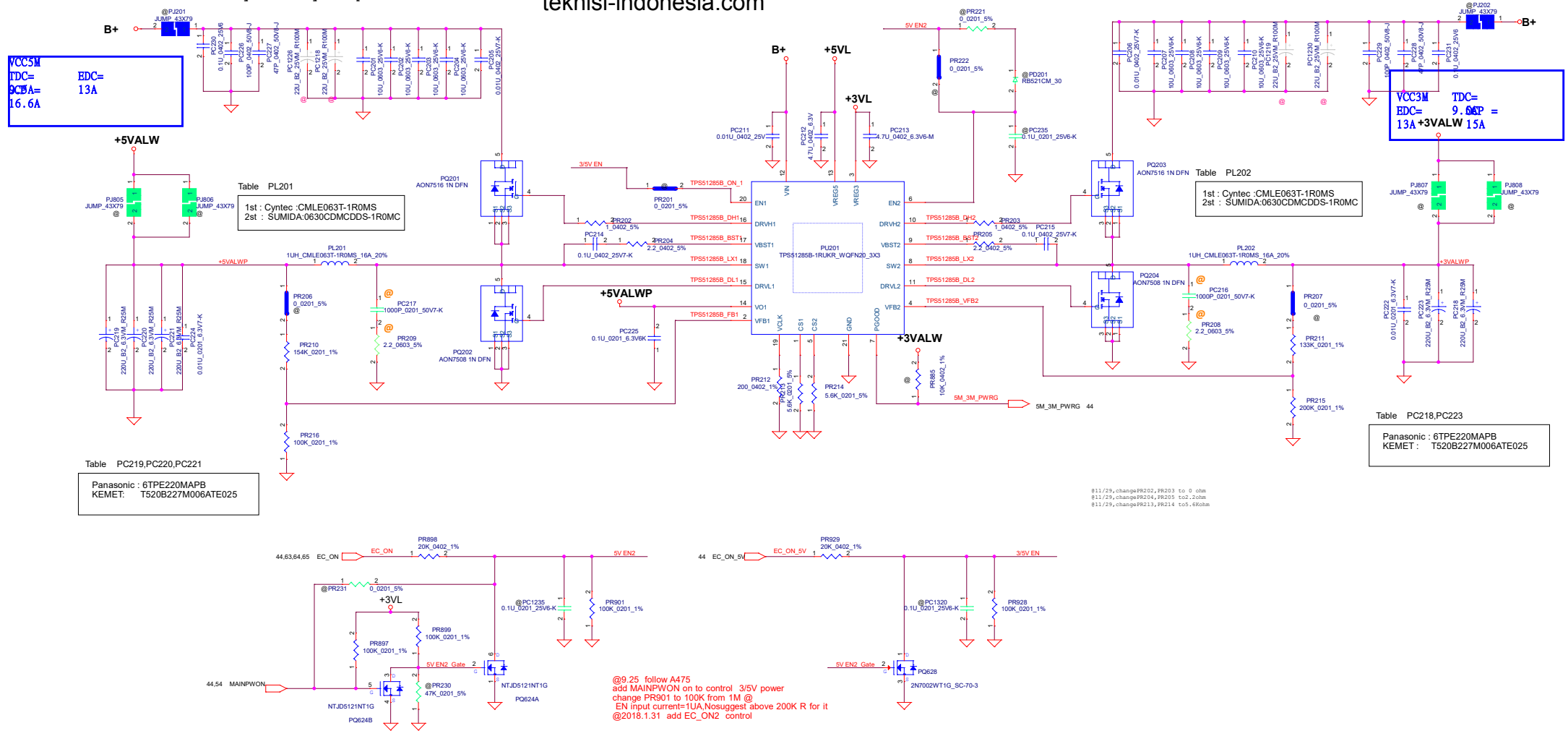


1,PC206,,PC229,PC228,PC226PC227,PC230 PC231PC222,PC224 delete EMC@
2,change snnuber EMC-NS@ to @

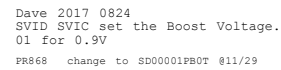
teknisi-indonesia.com


All the input MLCCs on 20V must be placed symmetrically on Top and Bottom.

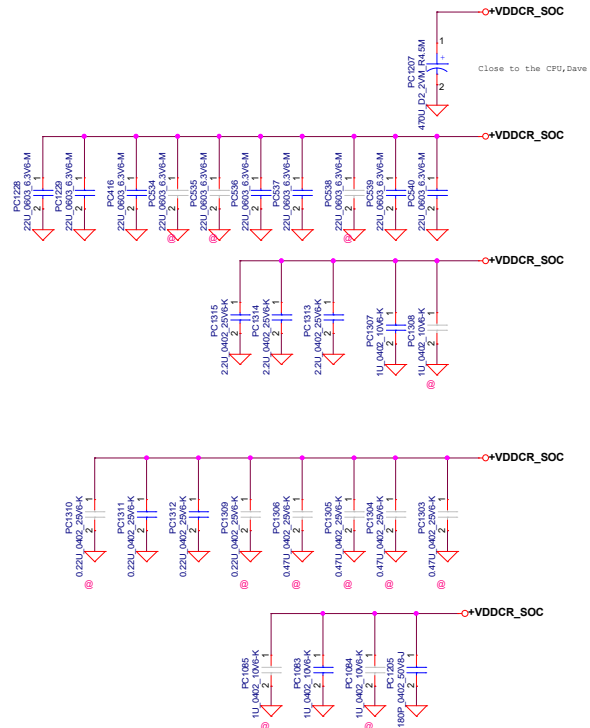
All the input MLCCs on 20V must be placed symmetrically on Top and Bottom.



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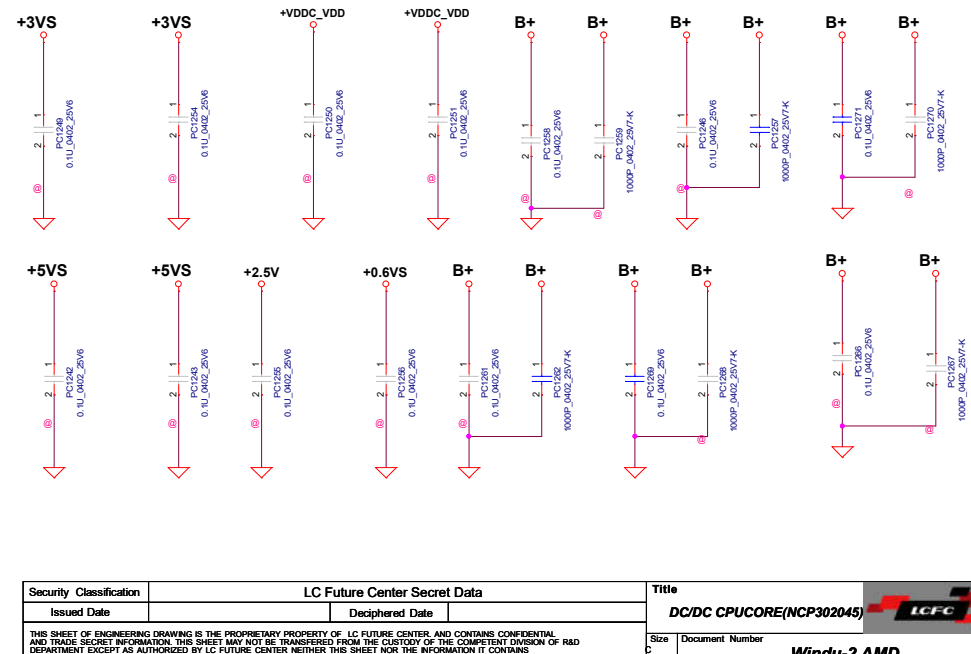



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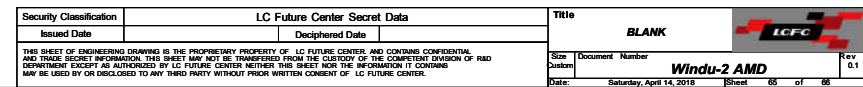


The image displays 16 circuit diagrams arranged in a 4x4 grid, each representing a different power supply configuration. Each diagram includes a title, a schematic with components like capacitors and resistors, and a red arrow indicating the output. The diagrams are:

- Row 1:**
 - +VDDCR_SOC:** A circuit with a capacitor PC1232 (2200P_0201_25V7K) connected to ground.
 - BAT-PWR:** A circuit with a capacitor PC1234 (2200P_0201_25V7K) connected to ground.
 - +3VALW1_LAN:** A circuit with a capacitor PC1235 (0.1u_0402_25V6) connected to ground.
 - +3VS:** A circuit with a capacitor PC1247 (0.1u_0402_25V6) connected to ground.
 - +3VS:** A circuit with a capacitor PC1248 (0.1u_0402_25V6) connected to ground.
- Row 2:**
 - BAT-PWR:** A circuit with two capacitors, PC1233 (1000P_0402_50V7-K) and PC1265 (0.1u_0402_25V6), connected to ground.
 - BAT-PWR:** A circuit with two capacitors, PC1263 (1000P_0402_50V7-K) and PC1264 (0.1u_0402_25V6), connected to ground.
 - +1.2V:** A circuit with a capacitor PC1239 (0.1u_0402_25V6) connected to ground.
 - +1.2V:** A circuit with a capacitor PC1239 (0.1u_0402_25V6) connected to ground.
 - +1.8VALW:** A circuit with a capacitor PC1241 (0.1u_0402_25V6) connected to ground.
- Row 3:**
 - +0.9VS:** A circuit with a capacitor PC1241 (0.1u_0402_25V6) connected to ground.
 - +0.9VS:** A circuit with a capacitor PC1241 (0.1u_0402_25V6) connected to ground.
 - +0.9VS:** A circuit with a capacitor PC1241 (0.1u_0402_25V6) connected to ground.
 - +0.9VS:** A circuit with a capacitor PC1241 (0.1u_0402_25V6) connected to ground.
 - +0.9VS:** A circuit with a capacitor PC1241 (0.1u_0402_25V6) connected to ground.



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UC1 ZEN7@
S IC RAVEN RIDGE YM270BC4T4MFB 2.2G PR
SA00008ZH00

UC1 ZEN5@
S IC RAVEN RIDGE YM250BC4T4MFB 2G BGA PR
SA00008ZJ00

UC1 ZEN3@
S IC RAVEN RIDGE YM230BC4T4MFB 2G BGA PR
SA00008ZK00

ZZZ1
PCB EA481 NM-B711 NS-B711/B712
DAZ19500100

ZZZ2
HDMI LOGO
RO00000040J

U88 AOU_TI@
S IC SN1702001RTER WQFN 16P USB CHARGING
SA00008HF00

U88 AOU_PERI@
S IC PI5USB2546HZHDEX UQFN CONTROLLER
SA000094700

U148 GSE_BOS@
S IC BMA255 LGA12P G-SENSOR
SA00005YJ00

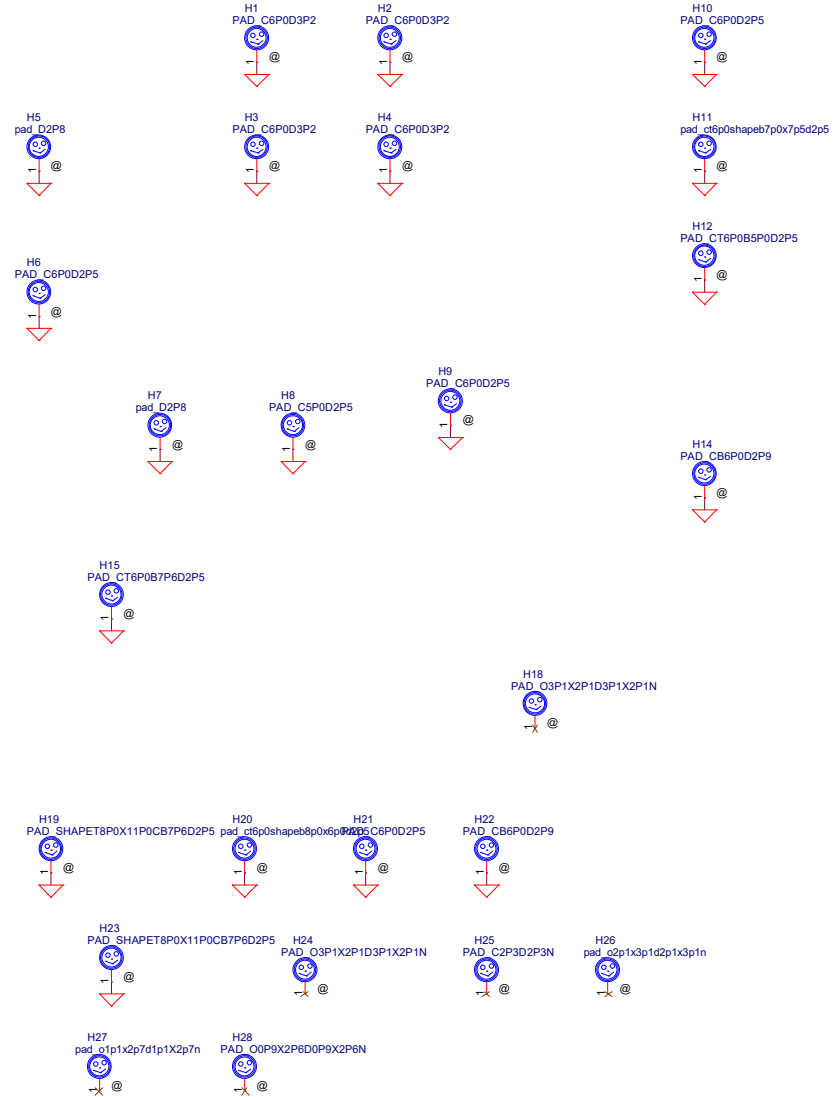
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S IC KX022-1020 LGA 12P G-SENSOR
SA000081E00

UTPM1 TPM_INF@
S IC SLB9670VQ2.0FW7.63 VQFN 32P TPM
SA000075L50

UTPM1 TPM_ST@
S IC ST33HTPH2E32AHB4 VQFN 32P TPM 2.0
SA000089E10

UC3 ROM_W@
S IC FL 128M W25Q128FWSIQ SOIC 8P 1.8V
SA00008E400

UC3 ROM_M@
S IC FL 128M MX25U12873FM2L-10G SOP 8P
SA000089J00



PCB Fedcal Mark PAD

