

# Rogue-2 SHB SVT LOGIC SCHEMATICS

**RG2SB-5**  
**VER 5.05**  
**Apr/11/2013**

BASE LOGIC :  
Rogue-2 SHB SIT-R VER 4.12 Mar/11/2013


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- 9.CPU(7/16) : LPC/SPI/SMBUS/C-LINK
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- 64.BLANK
- 65.VCCCPUCORE DECOUPLING
- 66.BLANK
- 67.DC/DC VCC1R05AMT(VT382B)
- 68.DC/DC VCC1R35A(VT387B)
- 69.DC/DC VCC0R675B(TPS51200)
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- 71.BLANK
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# EC HISTORY

ROGUE-2 SHB SVT  
(BASE LOGIC :RG2SB-4 VER 4.12 Mar/11/2013)

- VER.5.00 03/21/2013 APPLIED RG2SB\_SVT\_EC001-007
- VER.5.01 03/26/2013 APPLIED RG2SB\_SVT\_EC009
- VER.5.02 03/28/2013 APPLIED RG2SB\_SVT\_EC010
- VER.5.03 04/04/2013 APPLIED RG2SB\_SVT\_EC011
- VER.5.04 04/05/2013 APPLIED RG2SB\_SVT\_EC012-017
- VER.5.05 04/11/2013 APPLIED RG2SB\_SVT\_EC018

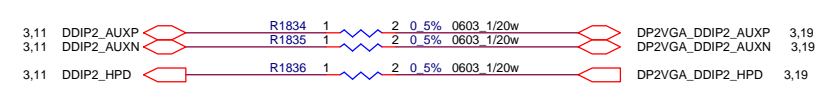
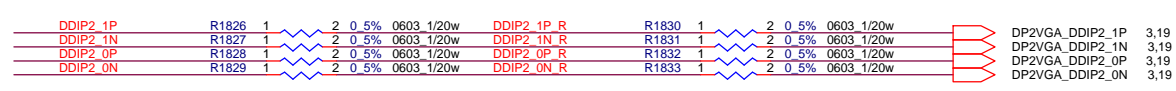
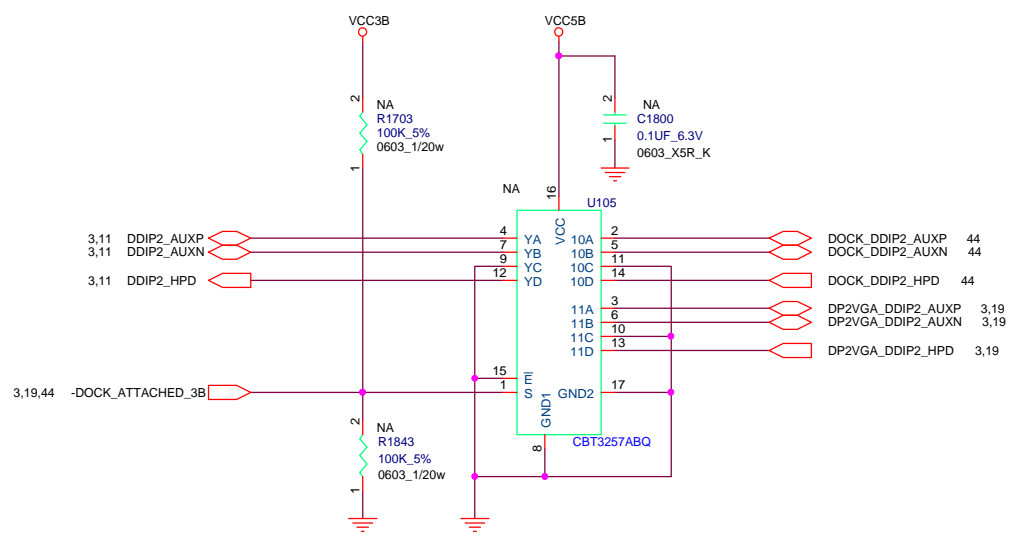
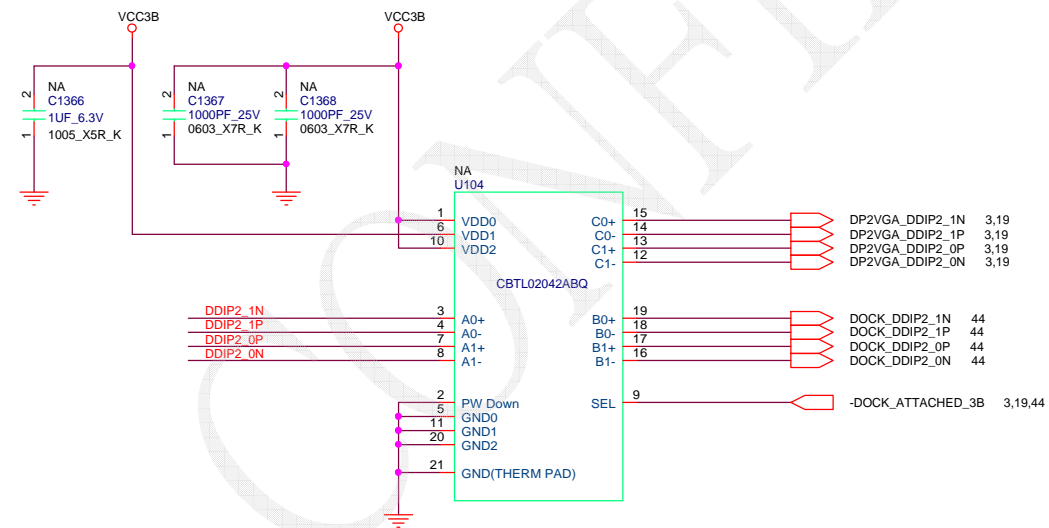
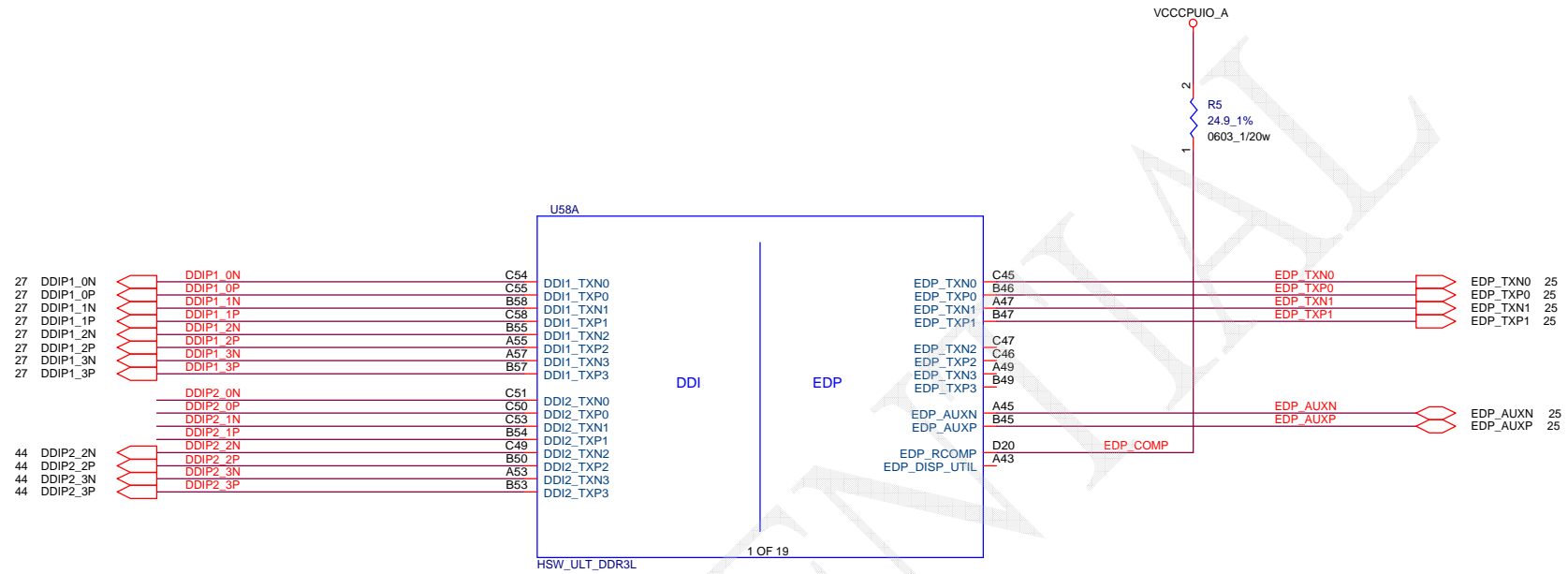
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Size: C	Document Number:	Rev: 5.05
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LOGIC

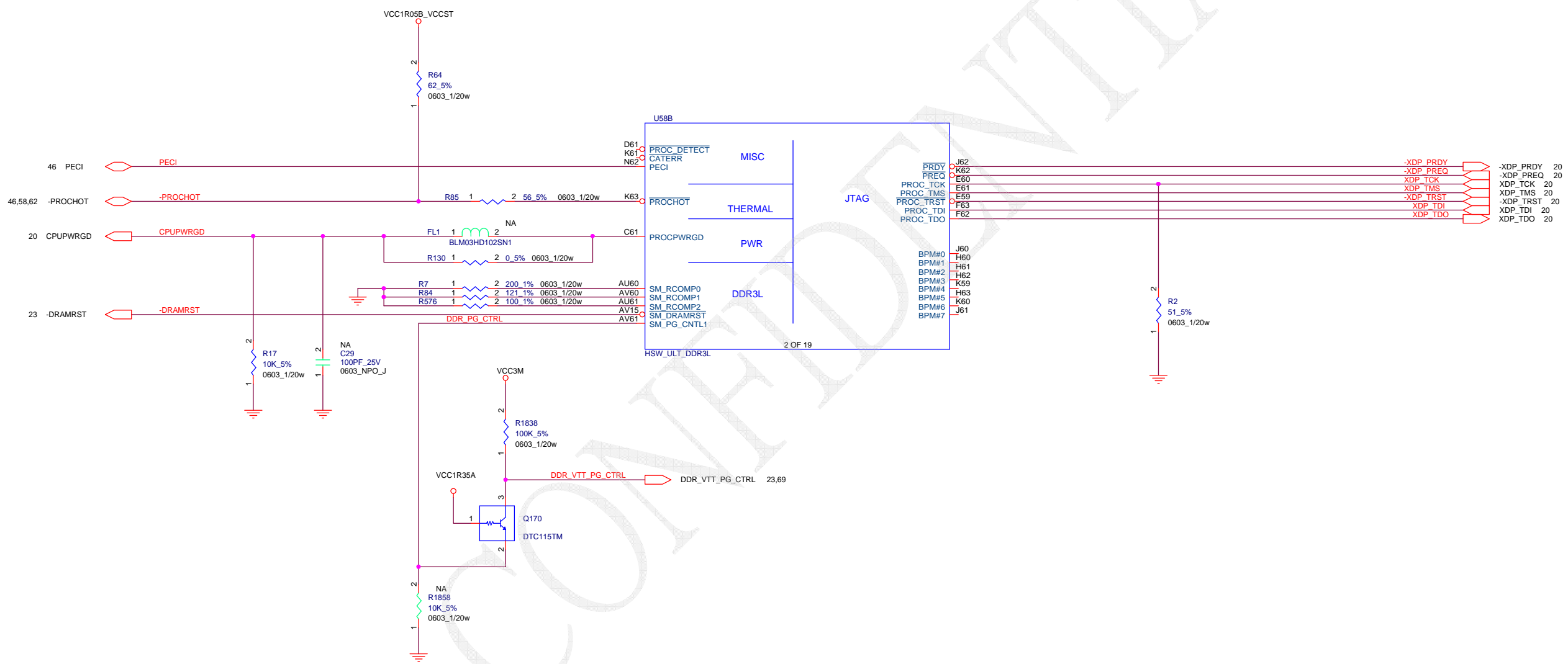
TABLE

ID	DOCKING SUPPORT	WIGIG SUPPORT	NON-SUPPORT
U104	ASM	ASM	NO ASM
C1366	ASM	ASM	NO ASM
C1367	ASM	ASM	NO ASM
C1368	ASM	ASM	NO ASM
U105	ASM	ASM	NO ASM
C1800	ASM	ASM	NO ASM
R1703	ASM	NO ASM	NO ASM
R1843	NO ASM	ASM	NO ASM
R1826	NO ASM	NO ASM	ASM
R1827	NO ASM	NO ASM	ASM
R1828	NO ASM	NO ASM	ASM
R1829	NO ASM	NO ASM	ASM
R1830	NO ASM	NO ASM	ASM
R1831	NO ASM	NO ASM	ASM
R1832	NO ASM	NO ASM	ASM
R1833	NO ASM	NO ASM	ASM
R1834	NO ASM	NO ASM	ASM
R1835	NO ASM	NO ASM	ASM
R1836	NO ASM	NO ASM	ASM



Near U104 on the opposite side

Near U105



23 M\_A\_DQ[63:0]

U58C

M_A_DQ0	AH63	SA_DQ0
M_A_DQ1	AH62	SA_DQ1
M_A_DQ2	AK63	SA_DQ2
M_A_DQ3	AK62	SA_DQ3
M_A_DQ4	AH61	SA_DQ4
M_A_DQ5	AH60	SA_DQ5
M_A_DQ6	AK61	SA_DQ6
M_A_DQ7	AK60	SA_DQ7
M_A_DQ8	AM63	SA_DQ8
M_A_DQ9	AM62	SA_DQ9
M_A_DQ10	AP63	SA_DQ10
M_A_DQ11	AP62	SA_DQ11
M_A_DQ12	AM61	SA_DQ12
M_A_DQ13	AM60	SA_DQ13
M_A_DQ14	AP61	SA_DQ14
M_A_DQ15	AP60	SA_DQ15
M_A_DQ16	AP58	SA_DQ16
M_A_DQ17	AR58	SA_DQ17
M_A_DQ18	AM57	SA_DQ18
M_A_DQ19	AK57	SA_DQ19
M_A_DQ20	AL58	SA_DQ20
M_A_DQ21	AK58	SA_DQ21
M_A_DQ22	AR57	SA_DQ22
M_A_DQ23	AN57	SA_DQ23
M_A_DQ24	AP55	SA_DQ24
M_A_DQ25	AR55	SA_DQ25
M_A_DQ26	AM54	SA_DQ26
M_A_DQ27	AK54	SA_DQ27
M_A_DQ28	AL55	SA_DQ28
M_A_DQ29	AK55	SA_DQ29
M_A_DQ30	AR54	SA_DQ30
M_A_DQ31	AN54	SA_DQ31
M_A_DQ32	AY58	SA_DQ32
M_A_DQ33	AW58	SA_DQ33
M_A_DQ34	AY56	SA_DQ34
M_A_DQ35	AW56	SA_DQ35
M_A_DQ36	AV58	SA_DQ36
M_A_DQ37	AU58	SA_DQ37
M_A_DQ38	AV56	SA_DQ38
M_A_DQ39	AU56	SA_DQ39
M_A_DQ40	AY54	SA_DQ40
M_A_DQ41	AW54	SA_DQ41
M_A_DQ42	AY52	SA_DQ42
M_A_DQ43	AW52	SA_DQ43
M_A_DQ44	AY54	SA_DQ44
M_A_DQ45	AU54	SA_DQ45
M_A_DQ46	AV52	SA_DQ46
M_A_DQ47	AU52	SA_DQ47
M_A_DQ48	AK40	SA_DQ48
M_A_DQ49	AK42	SA_DQ49
M_A_DQ50	AM43	SA_DQ50
M_A_DQ51	AK45	SA_DQ51
M_A_DQ52	AK45	SA_DQ52
M_A_DQ53	AK43	SA_DQ53
M_A_DQ54	AM40	SA_DQ54
M_A_DQ55	AM42	SA_DQ55
M_A_DQ56	AM46	SA_DQ56
M_A_DQ57	AK46	SA_DQ57
M_A_DQ58	AM49	SA_DQ58
M_A_DQ59	AK49	SA_DQ59
M_A_DQ60	AM48	SA_DQ60
M_A_DQ61	AK48	SA_DQ61
M_A_DQ62	AM51	SA_DQ62
M_A_DQ63	AK51	SA_DQ63

DDR CHANNEL A

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HSW\_ULI\_DDR3L

SA_CLK#0	AU37	-M_A_DDRCLK0_800M	-M_A_DDRCLK0_800M	23
SA_CLK#1	AW37	M_A_DDRCLK0_800M	M_A_DDRCLK0_800M	23
SA_CLK#1	AY36	-M_A_DDRCLK1_800M	-M_A_DDRCLK1_800M	23
SA_CLK#1	AY36	M_A_DDRCLK1_800M	M_A_DDRCLK1_800M	23
SA_CKE0	AU43	M_A_CKE0	M_A_CKE0	23
SA_CKE1	AW43	M_A_CKE1	M_A_CKE1	23
SA_CKE2	AY42			
SA_CKE3	AY43			
SA_CS#0	AP33	-M_A_CS0	-M_A_CS0	23
SA_CS#1	AR32	-M_A_CS1	-M_A_CS1	23
SA_ODT0	AP32			
SA_RAS	AY34	-M_A_RAS	-M_A_RAS	23
SA_WE	AW34	-M_A_WE	-M_A_WE	23
SA_CAS	AU34	-M_A_CAS	-M_A_CAS	23
SA_CAS	AU34	M_A_CAS	M_A_CAS	23
SA_BA0	AU35	M_A_BS0	M_A_BS0	23
SA_BA1	AV35	M_A_BS1	M_A_BS1	23
SA_BA2	AY41	M_A_BS2	M_A_BS2	23
SA_MA0	AU36	M_A_A0		
SA_MA1	AY37	M_A_A1		
SA_MA2	AR38	M_A_A2		
SA_MA3	AP36	M_A_A3		
SA_MA4	AU39	M_A_A4		
SA_MA5	AR36	M_A_A5		
SA_MA6	AV40	M_A_A6		
SA_MA7	AW39	M_A_A7		
SA_MA8	AY39	M_A_A8		
SA_MA9	AU40	M_A_A9		
SA_MA10	AP35	M_A_A10		
SA_MA11	AW41	M_A_A11		
SA_MA12	AU41	M_A_A12		
SA_MA13	AR35	M_A_A13		
SA_MA14	AV42	M_A_A14		
SA_MA15	AU42	M_A_A15		
SA_DQS#0	AJ61	-M_A_DQS0		
SA_DQS#1	AN62	-M_A_DQS1		
SA_DQS#2	AM58	-M_A_DQS2		
SA_DQS#3	AM55	-M_A_DQS3		
SA_DQS#4	AV57	-M_A_DQS4		
SA_DQS#5	AV53	-M_A_DQS5		
SA_DQS#6	AL43	-M_A_DQS6		
SA_DQS#7	AL48	-M_A_DQS7		
SA_DQSP0	AJ62	M_A_DQS0		
SA_DQSP1	AN61	M_A_DQS1		
SA_DQSP2	AN58	M_A_DQS2		
SA_DQSP3	AN55	M_A_DQS3		
SA_DQSP4	AW57	M_A_DQS4		
SA_DQSP5	AW53	M_A_DQS5		
SA_DQSP6	AL42	M_A_DQS6		
SA_DQSP7	AL49	M_A_DQS7		
SM_VREF_CA	AP49	DDR3_VREF_CA_M3	23	
SM_VREF_DQ0	AR51	DDR3_VREF_DQ_SA_M3	23	
SM_VREF_DQ1	AP51			

M\_A\_A[15:0] 23

-M\_A\_DQS[7:0] 23

M\_A\_DQS[7:0] 23

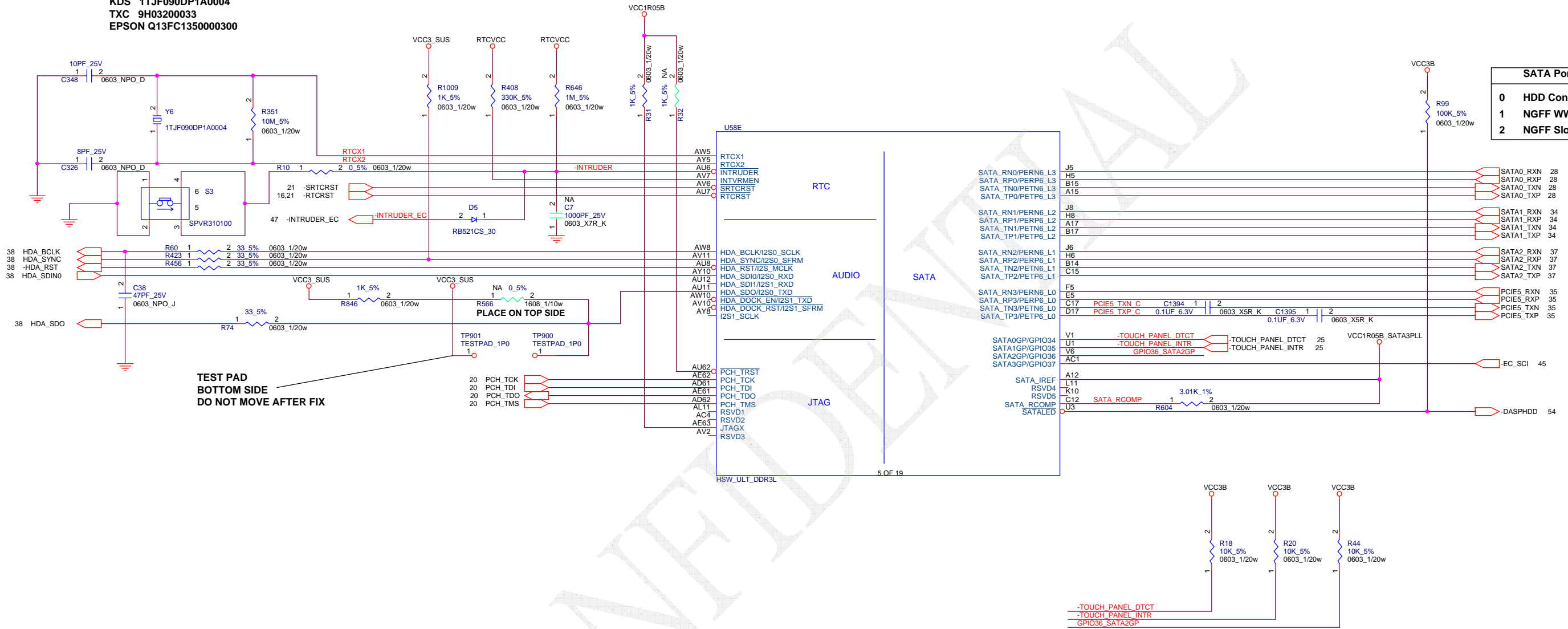
U58D

AY31	SB_DQ0	AM38
AW31	SB_DQ1	AN38
AY29	SB_DQ2	AK38
AW29	SB_DQ3	AL38
AV31	SB_DQ4	AY49
AU31	SB_DQ5	AU50
AV29	SB_DQ6	AW49
AU29	SB_DQ7	AV50
AY27	SB_DQ8	AM32
AW27	SB_DQ9	AK32
AY25	SB_DQ10	AL32
AW25	SB_DQ11	AM35
AV27	SB_DQ12	AK35
AU27	SB_DQ13	AM33
AV25	SB_DQ14	AL35
AU25	SB_DQ15	AM36
AM29	SB_DQ16	AU49
AK29	SB_DQ17	AP40
AL28	SB_DQ18	AR40
AK28	SB_DQ19	AP42
AR29	SB_DQ20	AR42
AN29	SB_DQ21	AR45
AR28	SB_DQ22	AP45
AP28	SB_DQ23	AW46
AN26	SB_DQ24	AY46
AR26	SB_DQ25	AY47
AR25	SB_DQ26	AL46
AP25	SB_DQ27	AK36
AK26	SB_DQ28	AV47
AM26	SB_DQ29	AU47
AK25	SB_DQ30	AK33
AL25	SB_DQ31	AR46
AY23	SB_DQ32	AP46
AU23	SB_DQ33	AW30
AW23	SB_DQ34	AV26
AY21	SB_DQ35	AN28
AW21	SB_DQ36	AN25
AU23	SB_DQ37	AW22
AV21	SB_DQ38	AV18
AU21	SB_DQ39	AN21
AY19	SB_DQ40	AN18
AW19	SB_DQ41	AV30
AY17	SB_DQ42	AW26
AW17	SB_DQ43	AM28
AV19	SB_DQ44	AM25
AU19	SB_DQ45	AV22
AV17	SB_DQ46	AV18
AU17	SB_DQ47	AN21
AR21	SB_DQ48	AN18
AR22	SB_DQ49	AV30
AL21	SB_DQ50	AW26
AM22	SB_DQ51	AM28
AN22	SB_DQ52	AM25
AP21	SB_DQ53	AV22
AK21	SB_DQ54	AV18
AK22	SB_DQ55	AM21
AN20	SB_DQ56	AM18
AR20	SB_DQ57	
AK18	SB_DQ58	
AL18	SB_DQ59	
AK20	SB_DQ60	
AM20	SB_DQ61	
AR18	SB_DQ62	
AP18	SB_DQ63	

DDR CHANNEL B

HSW\_ULI\_DDR3L

KDS 1TJF090DP1A0004  
 TXC 9H03200033  
 EPSON Q13FC1350000300

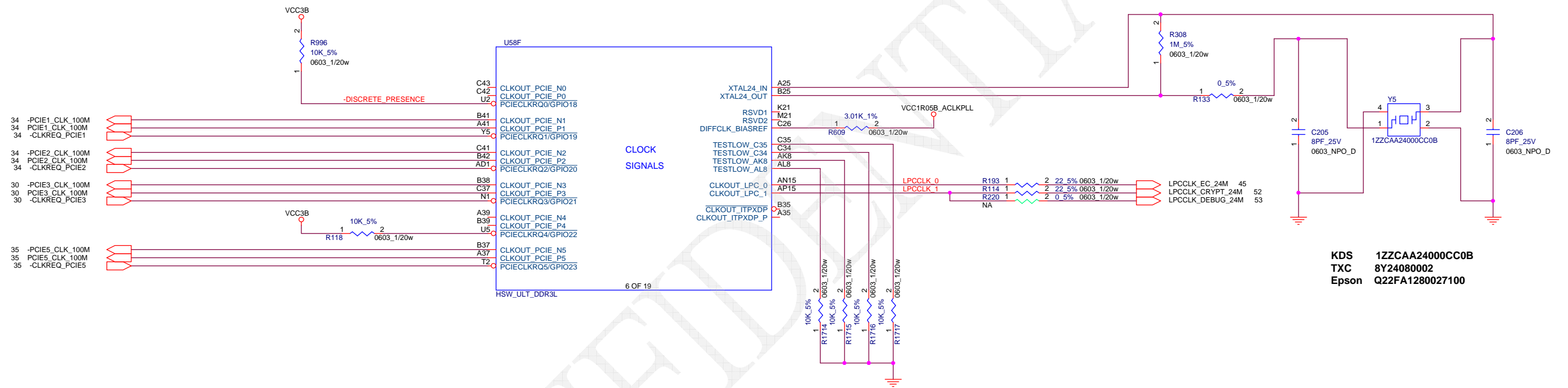


SATA Port Assignment	
0	HDD Connector
1	NGFF WWAN Slot
2	NGFF Slot at Palmrest

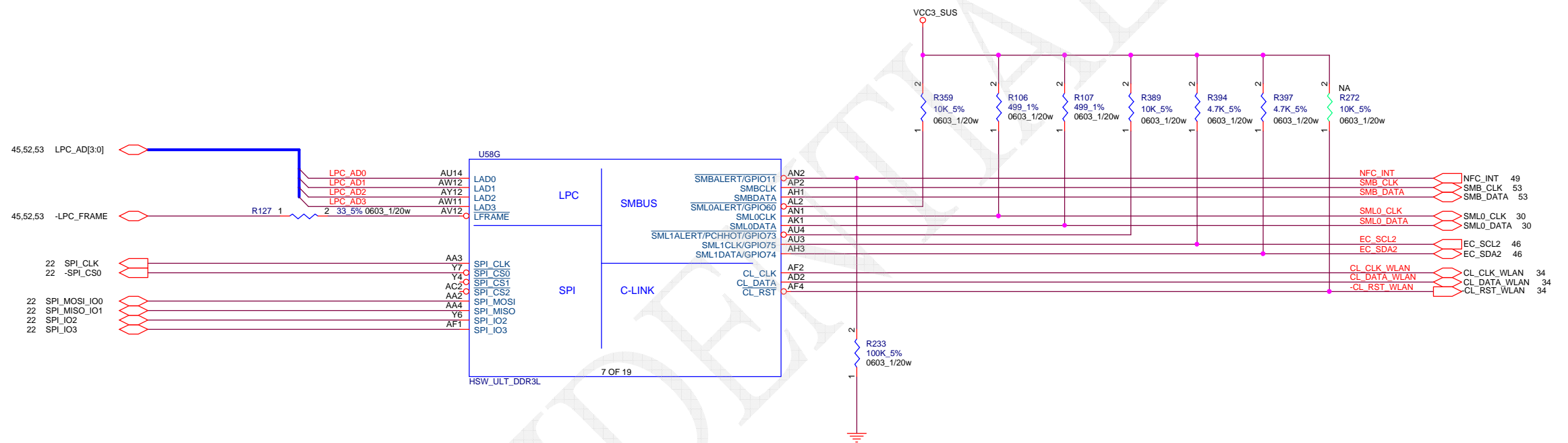
TEST PAD  
 BOTTOM SIDE  
 DO NOT MOVE AFTER FIX

PLACE ON TOP SIDE

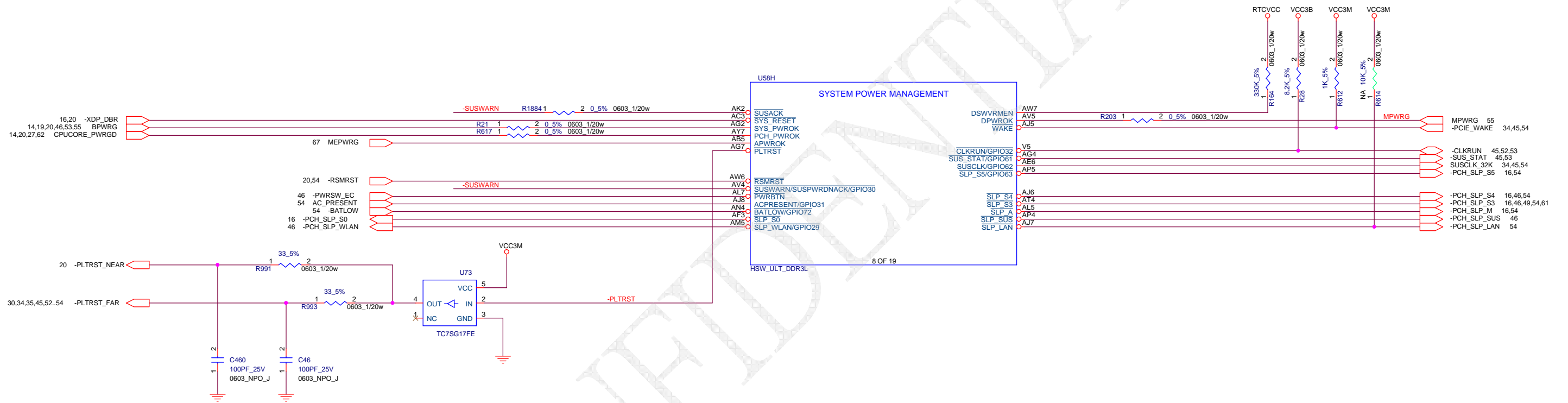


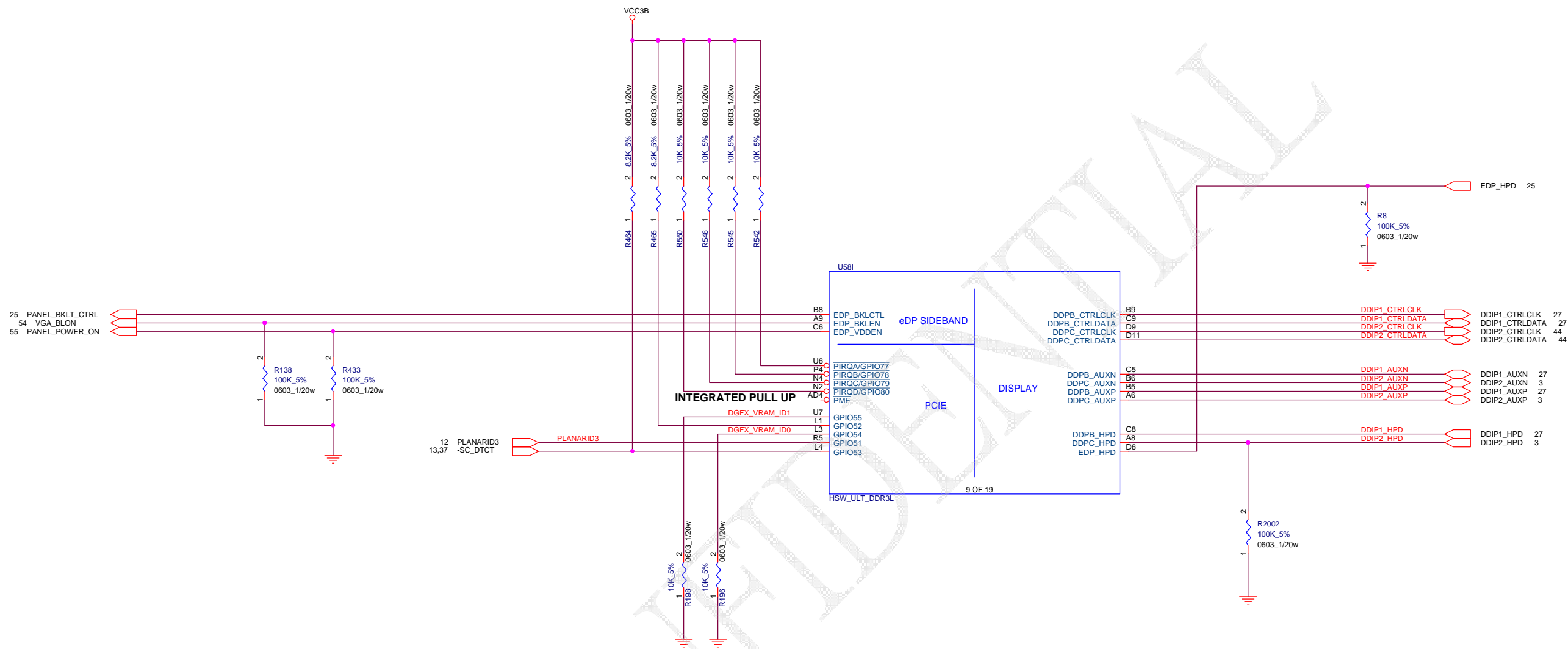






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TABLE

<b>GPIO15</b>	<b>ME CRYPTO STRAP</b>
<b>HIGH</b>	<b>WITH CONFIDENTIALITY</b>
<b>LOW</b>	<b>NO CONFIDENTIALITY</b>

TABLE

SPKR TCO TIMER SYSTEM REBOOT

<b>HIGH</b>	<b>DISABLED (NO REBOOT)</b>
<b>LOW</b>	<b>ENABLED</b>

TABLE

GPIO8 INTEGRATED CLOCKING

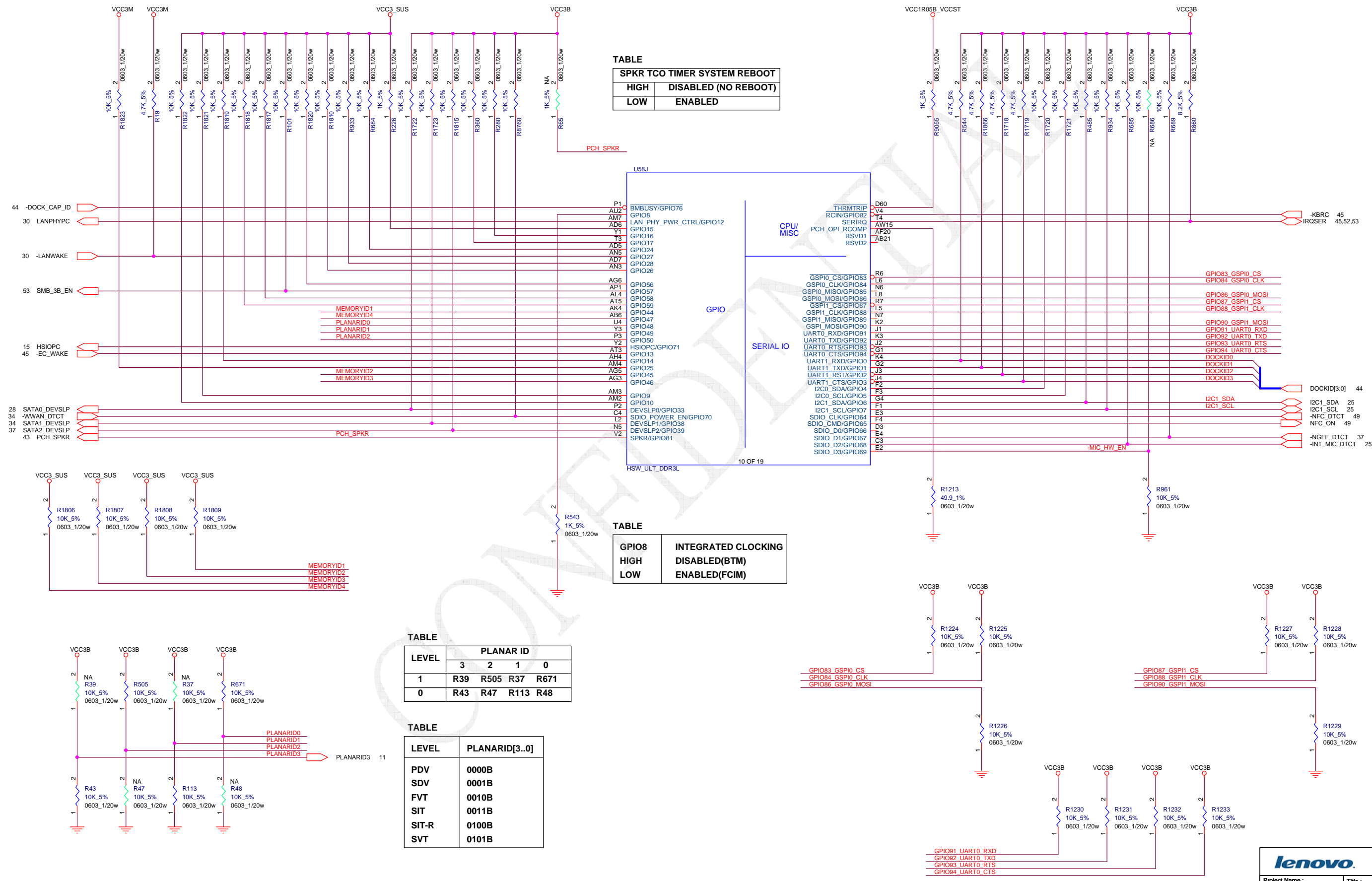
<b>HIGH</b>	<b>DISABLED(BTM)</b>
<b>LOW</b>	<b>ENABLED(FCIM)</b>

TABLE

LEVEL	PLANAR ID			
	3	2	1	0
1	R39	R505	R37	R671
0	R43	R47	R113	R48

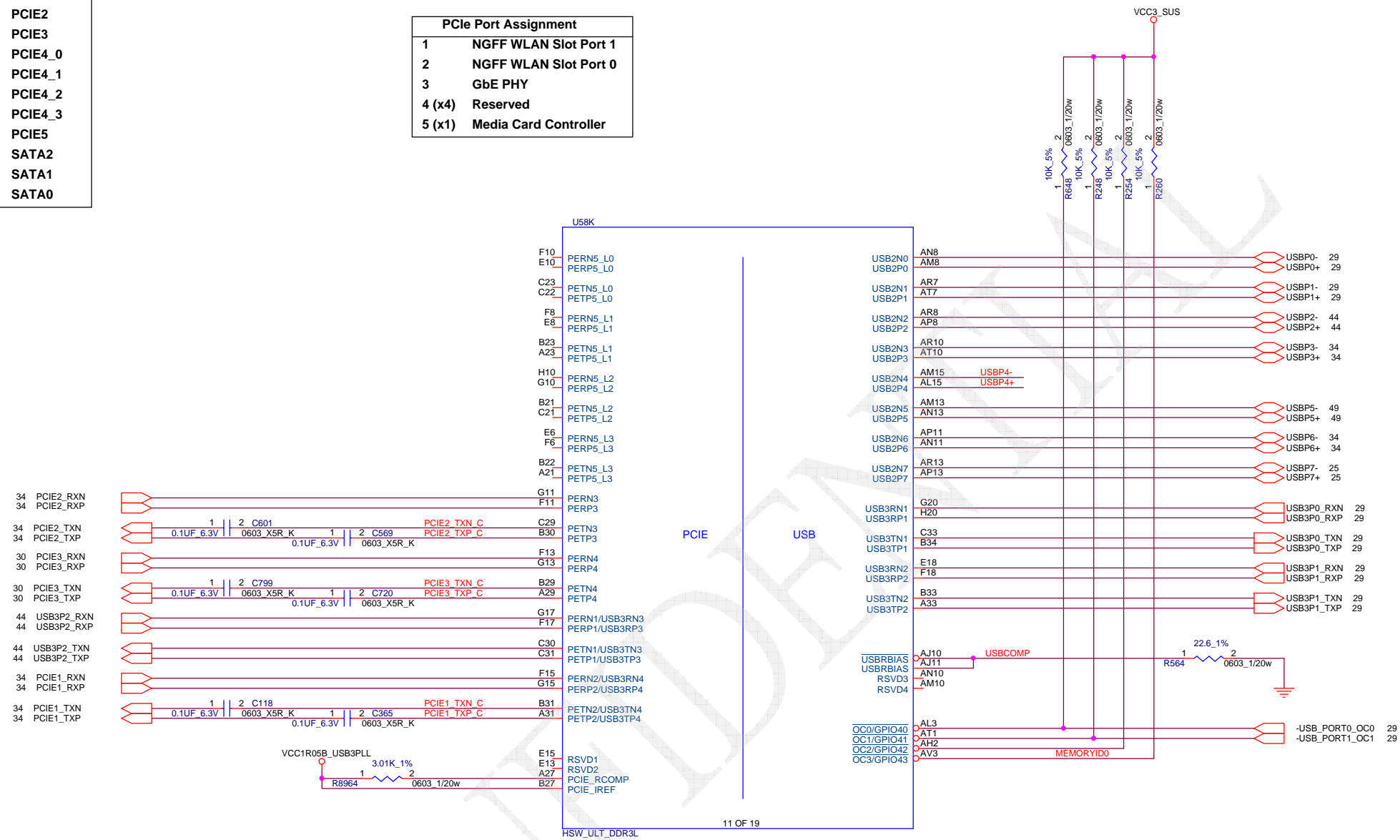
TABLE

LEVEL	PLANARID[3..0]
PDV	0000B
SDV	0001B
FVT	0010B
SIT	0011B
SIT-R	0100B
SVT	0101B



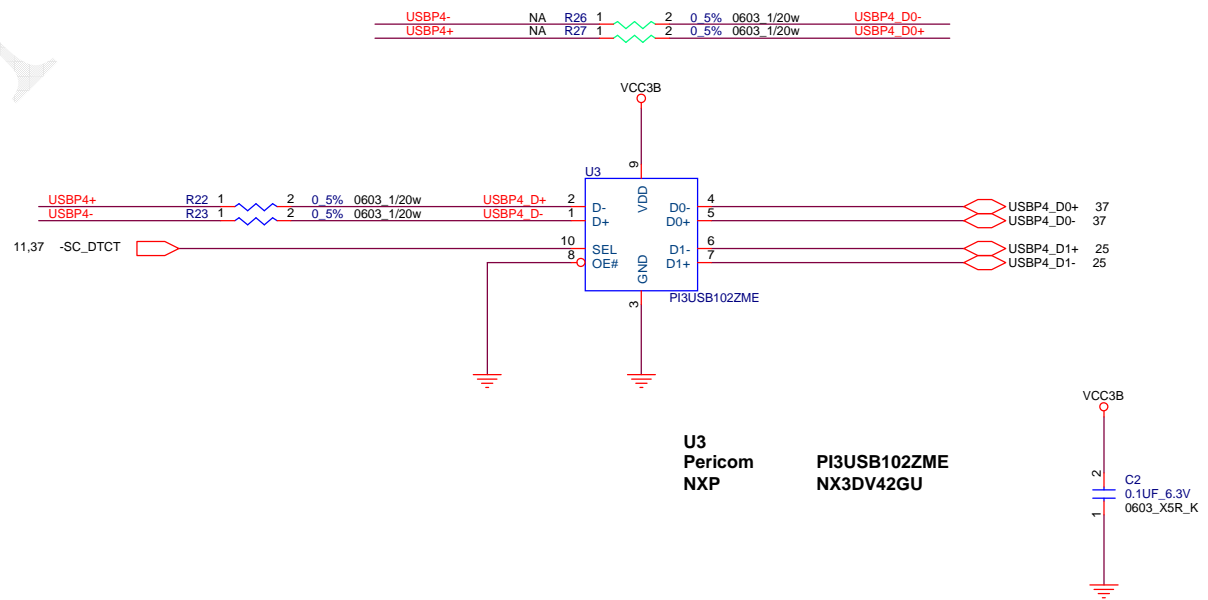
Flexible I/O Configuration			
I/O	High Speed Signals	Configuration	Net Name
Port 1	USB3 1	USB3 1	USB3P0
Port 2	USB3 2	USB3 2	USB3P1
Port 3	PCIE 1/USB3 3	USB3 3	USB3P2
Port 4	PCIE 2/USB3 4	PCIE 2	PCIE1
Port 5	PCIE 3	PCIE 3	PCIE2
Port 6	PCIE 4	PCIE 4	PCIE3
Port 7	PCIE 5 L0	PCIE 5 L0	PCIE4_0
Port 8	PCIE 5 L1	PCIE 5 L1	PCIE4_1
Port 9	PCIE 5 L2	PCIE 5 L2	PCIE4_2
Port 10	PCIE 5 L3	PCIE 5 L3	PCIE4_3
Port 11	PCIE 6 L0	PCIE 6 L0	PCIE5
Port 12	SATA 2/PCIE 6 L1	SATA 2	SATA2
Port 13	SATA 1/PCIE 6 L2	SATA 1	SATA1
Port 14	SATA 0/PCIE 6 L3	SATA 0	SATA0

PCIe Port Assignment	
1	NGFF WLAN Slot Port 1
2	NGFF WLAN Slot Port 0
3	GbE PHY
4 (x4)	Reserved
5 (x1)	Media Card Controller

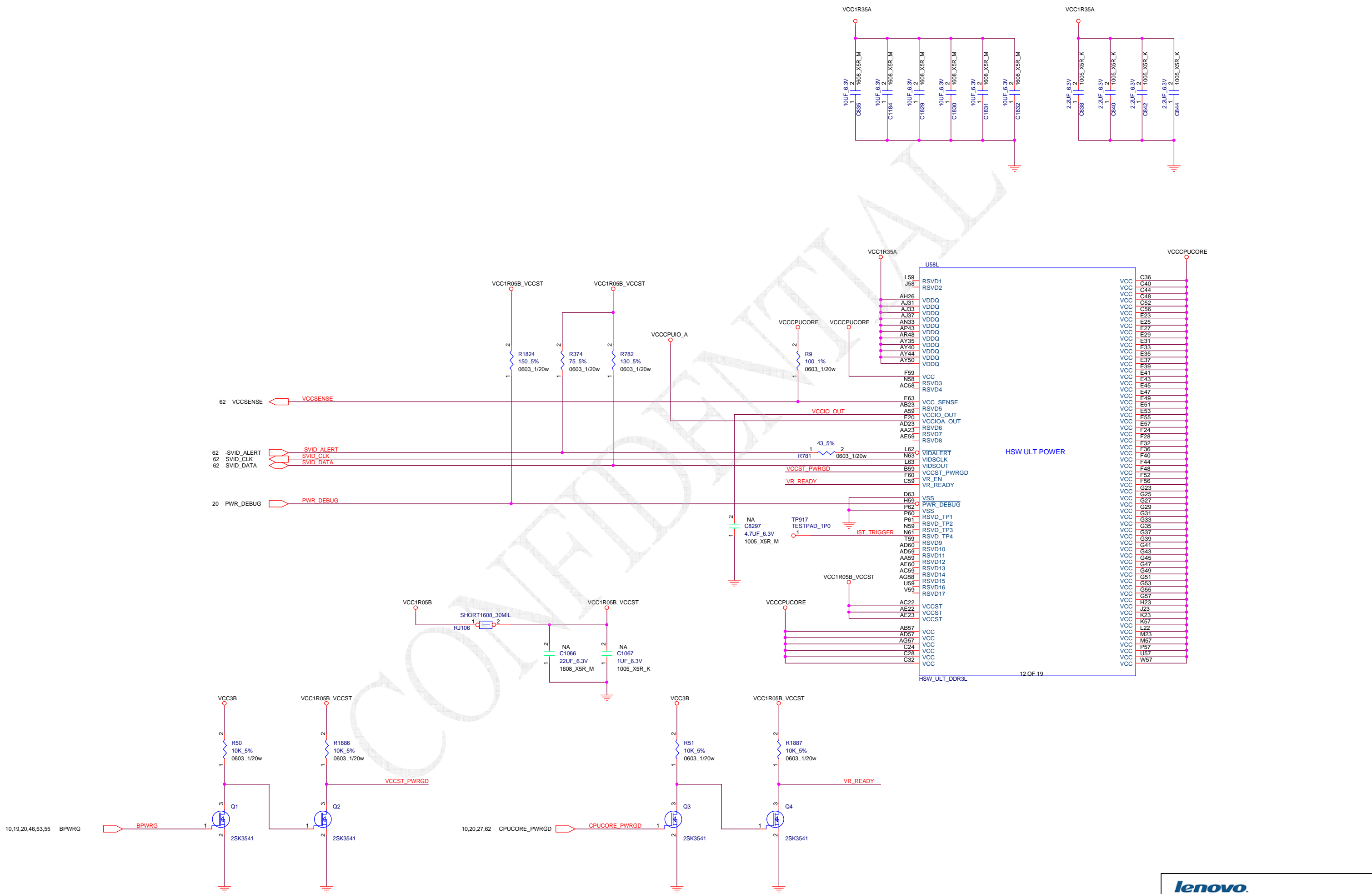


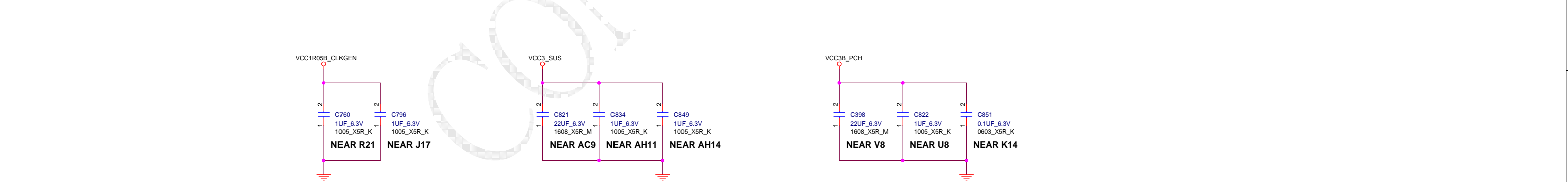
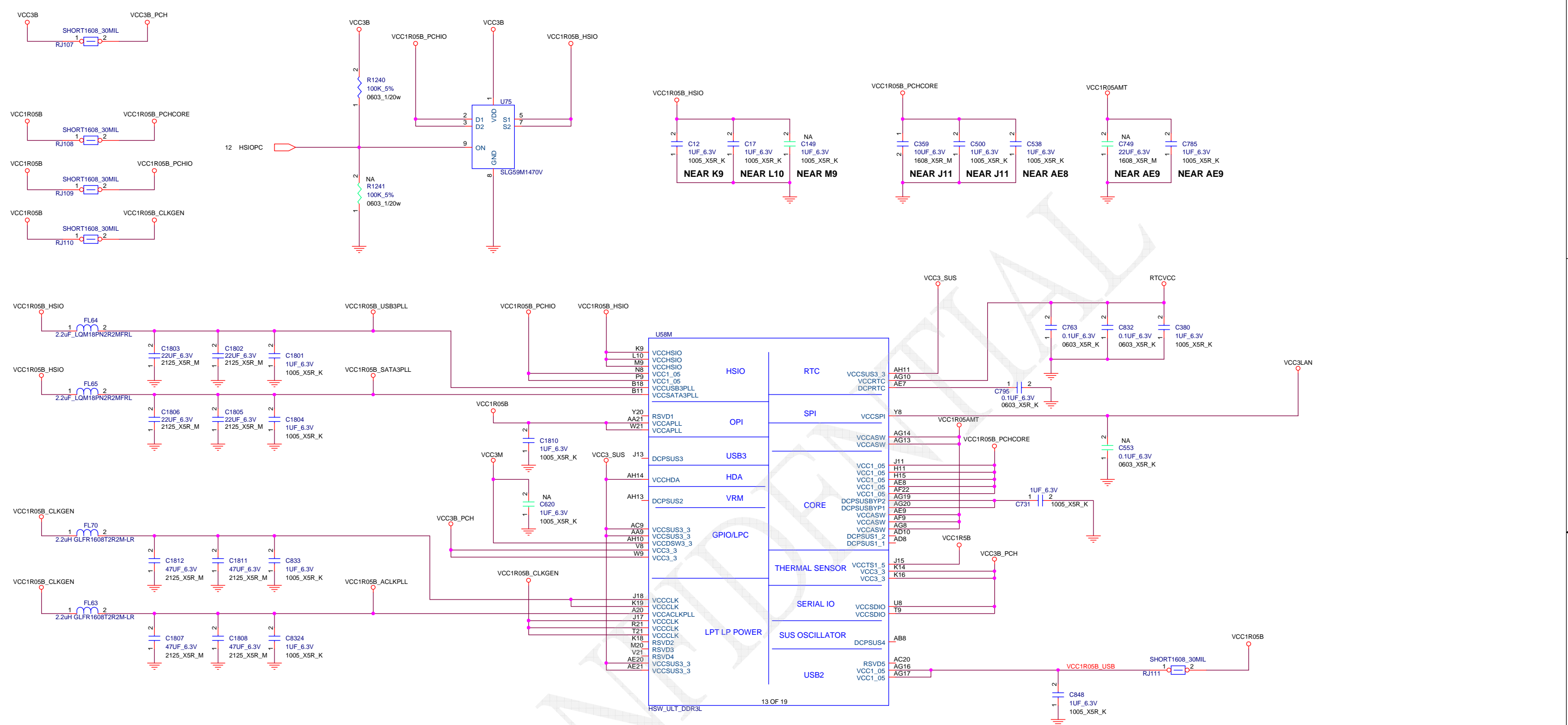
USB Port Assignment	
0	USB 3.0 System Port (AOU)
1	USB 3.0 System Port (Debug)
2	USB 3.0 Docking
3	NGFF WWAN Slot
4	Smart Card Slot or Touch Panel
5	Fingerprint Reader
6	NGFF WLAN Slot
7	USB Camera

USB 3.0 Port Assignment	
0	USB 3.0 System Port (AOU)
1	USB 3.0 System Port (Debug)
2	USB 3.0 Docking

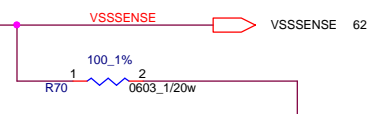
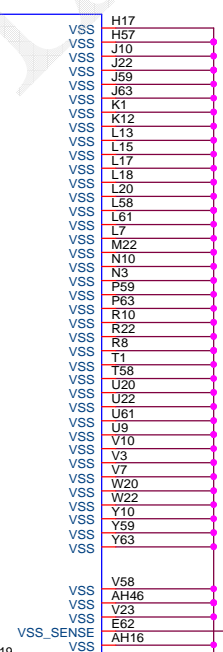
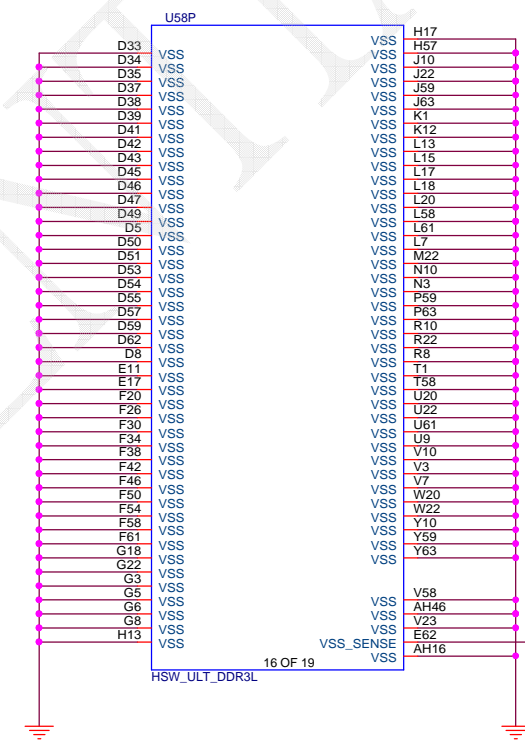
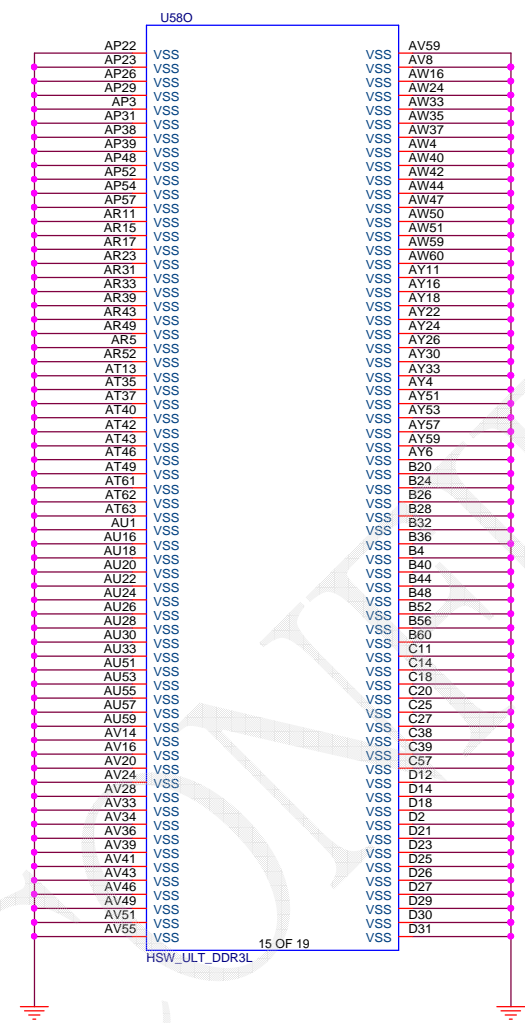
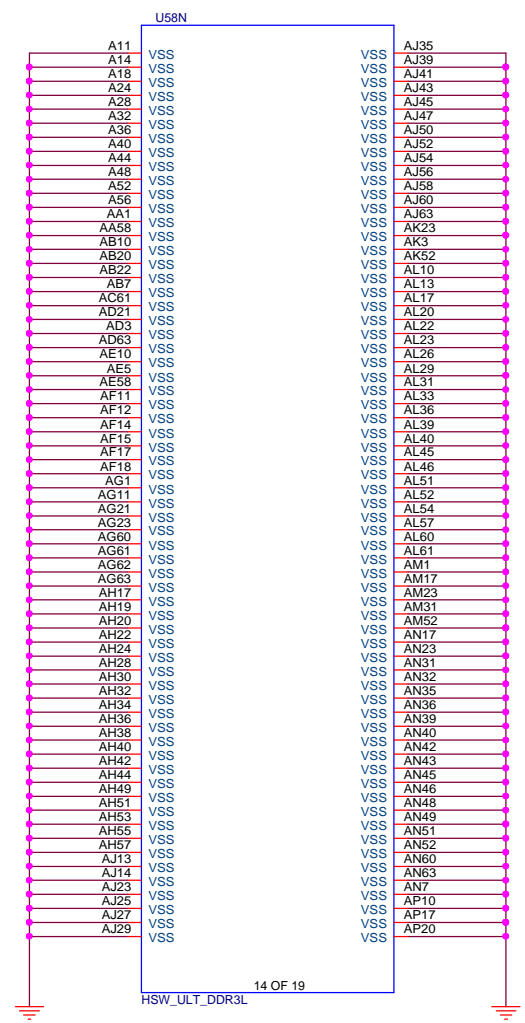
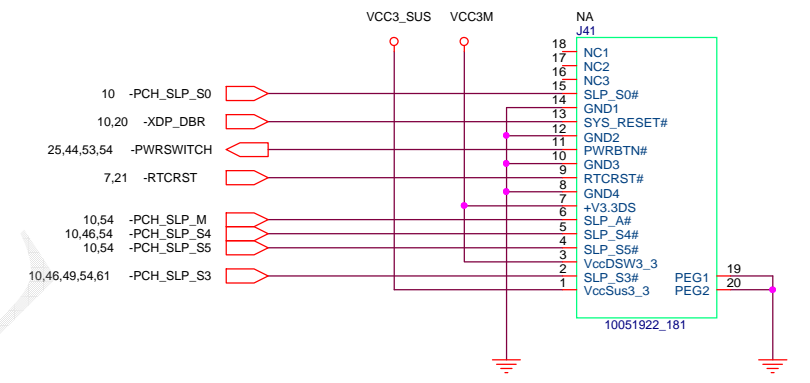


Device Selection	
0	Smart Card Slot
1	Touch Panel

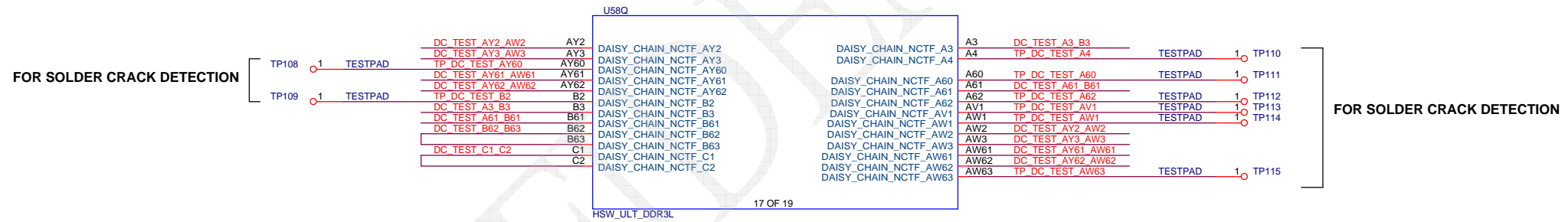




# APS/PETS Interface

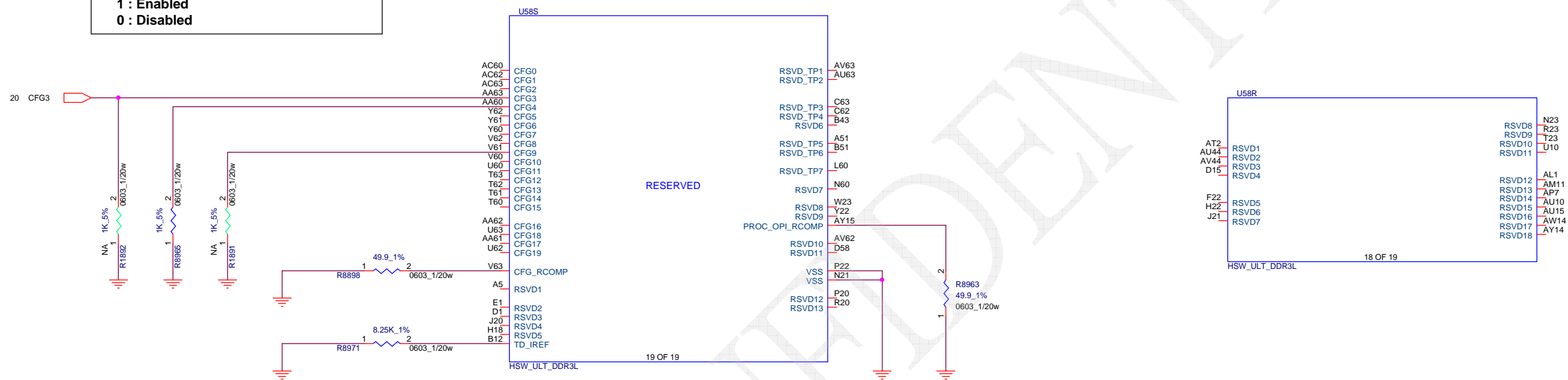


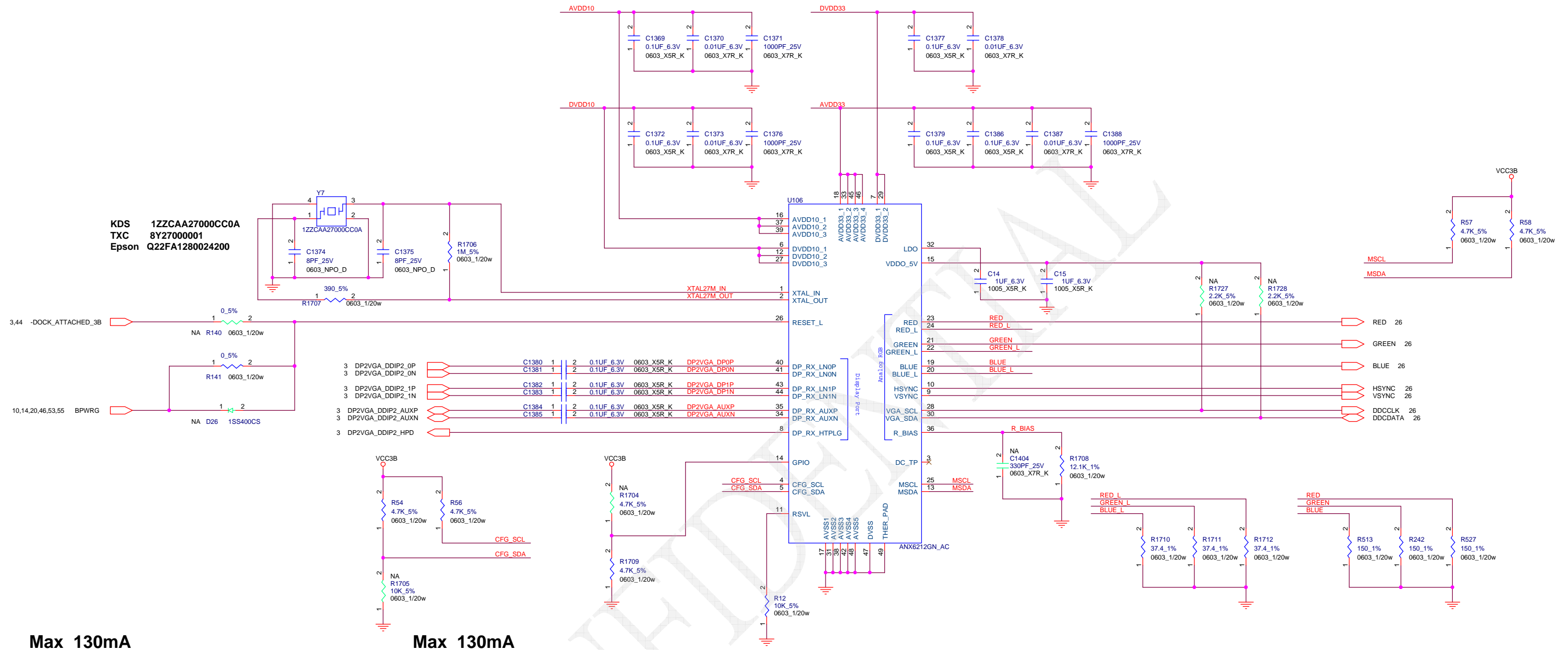




TABLE

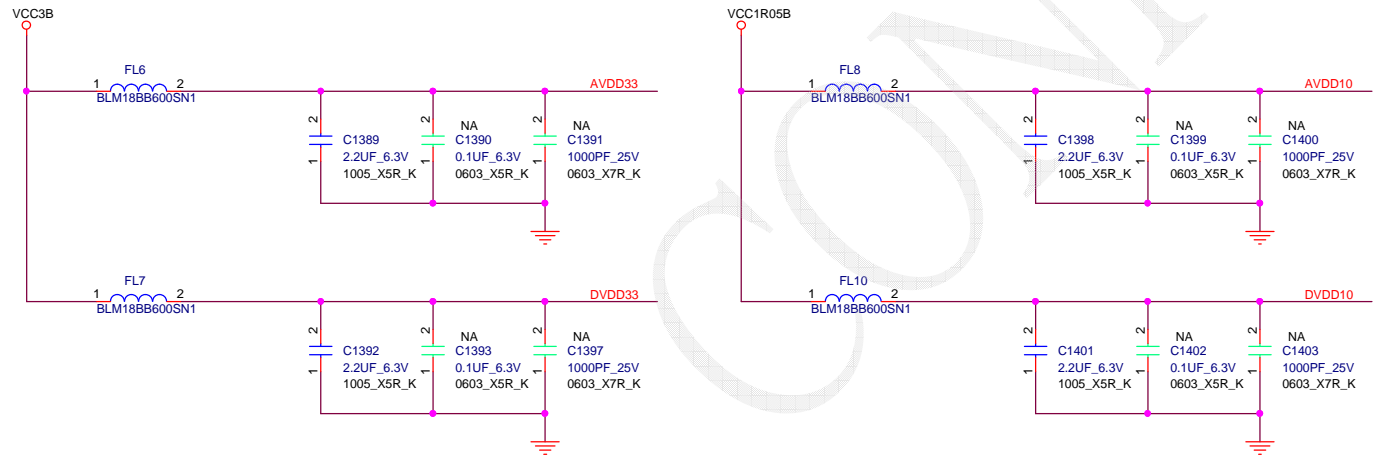
<b>CFG4 : Display Port Presence</b> 1 : Disabled 0 : Enabled
<b>CFG9 : SVID Bus Communication</b> 1 : Enabled 0 : Disabled





Max 130mA

Max 130mA



2.2uF, 0.1uF, 1000pF : Near filter

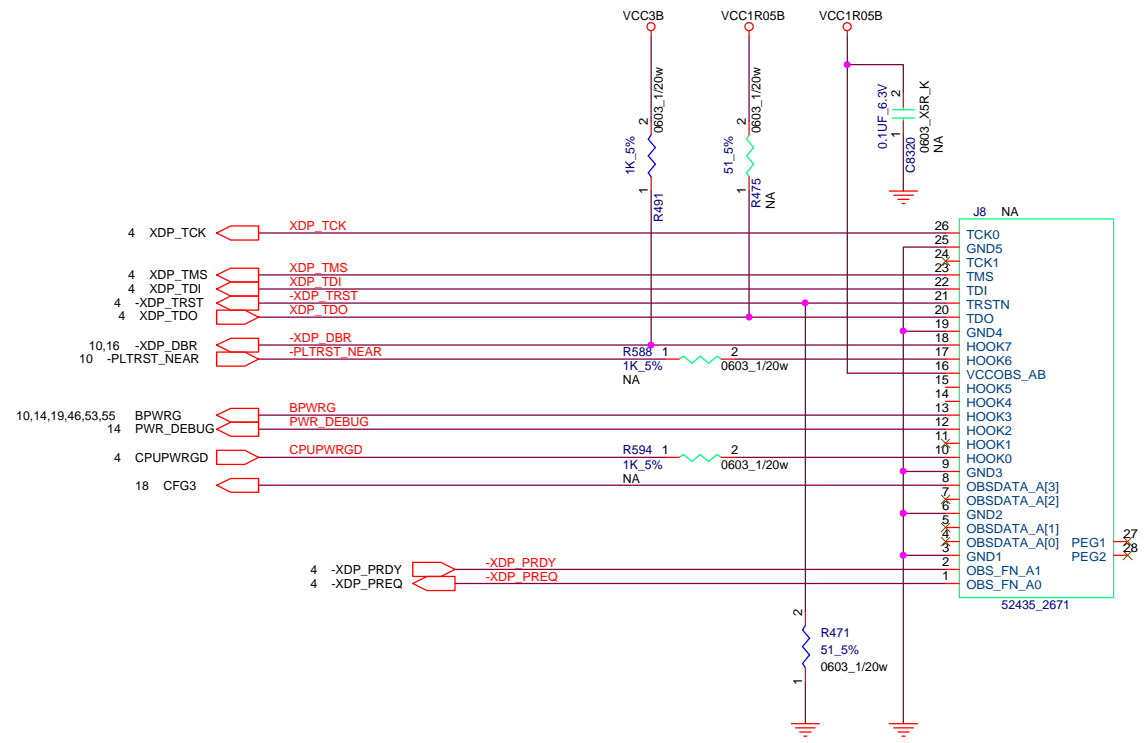


TABLE NOTE: J8 "ASM" FOR PDV ONLY.

SIGNAL	REF DES	ENABLE	DISABLE
TDO	R475	ASM	NO ASM
TRST#	R471	ASM	ASM
DBRST#	R491	ASM	ASM
RESET#	R588	ASM	NO ASM
PWRGD	R594	ASM	NO ASM
	C8320	ASM	NO ASM
	J8	ASM	NO ASM

↑  
LOGIC

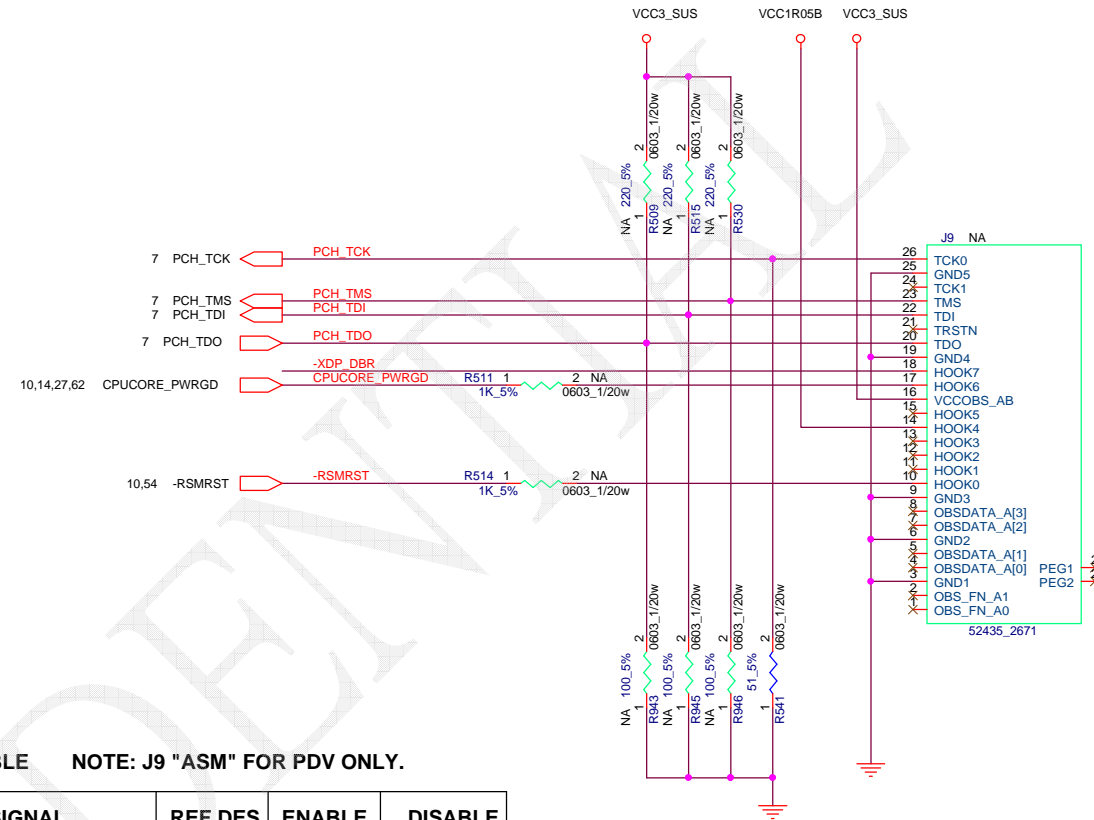
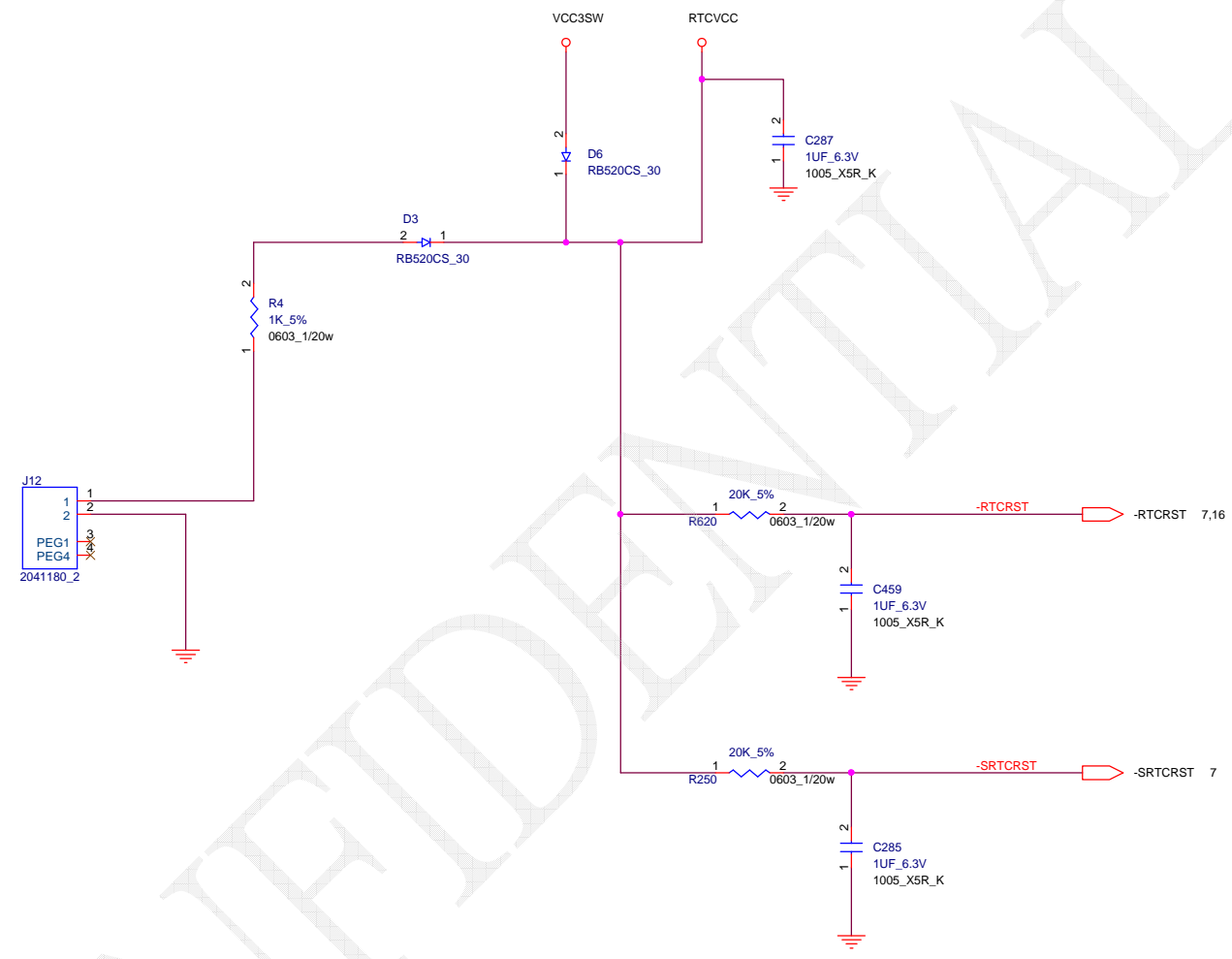


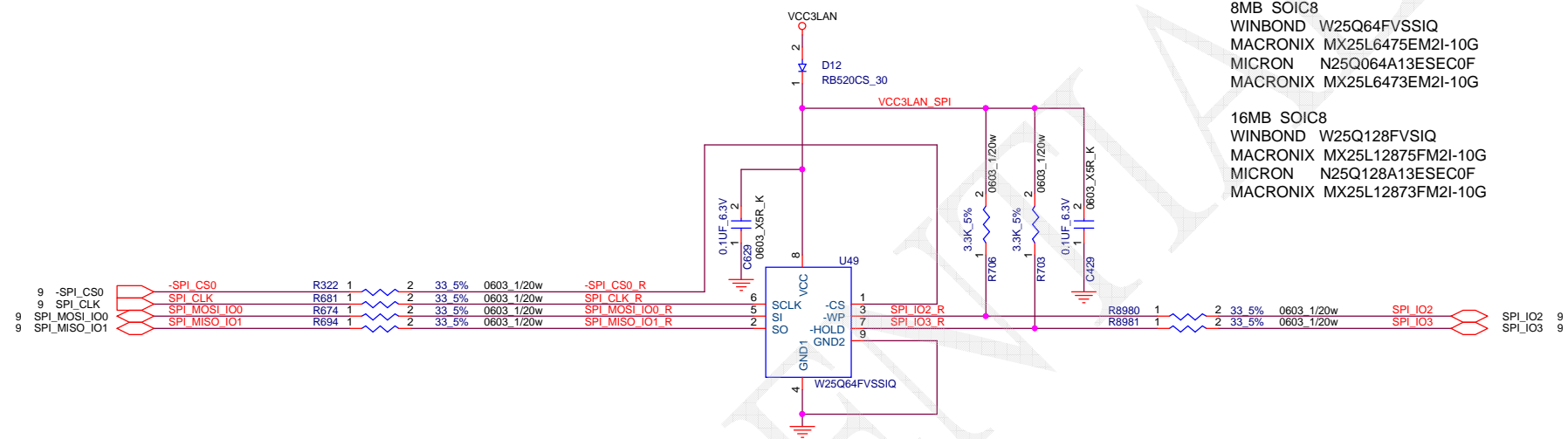
TABLE NOTE: J9 "ASM" FOR PDV ONLY.

SIGNAL	REF DES	ENABLE	DISABLE
TDO	R509	220	NO ASM
	R943	100	NO ASM
TMS	R530	220	NO ASM
	R946	100	NO ASM
TDI	R515	220	NO ASM
	R945	100	NO ASM
TCK	R541	51	51
CPUCORE_PWRGD	R511	ASM	NO ASM
-RSMRST	R514	ASM	NO ASM
	J9	ASM	NO ASM

↑  
LOGIC



CONFIDENTIAL



TABLE

SPI	Wolverine-1 (Corporate)	Rogue-2 with Dock (Corporate)	Rogue-2 w/o Dock (Consumer)
U49	16MB	16MB	8MB

↑  
LOGIC

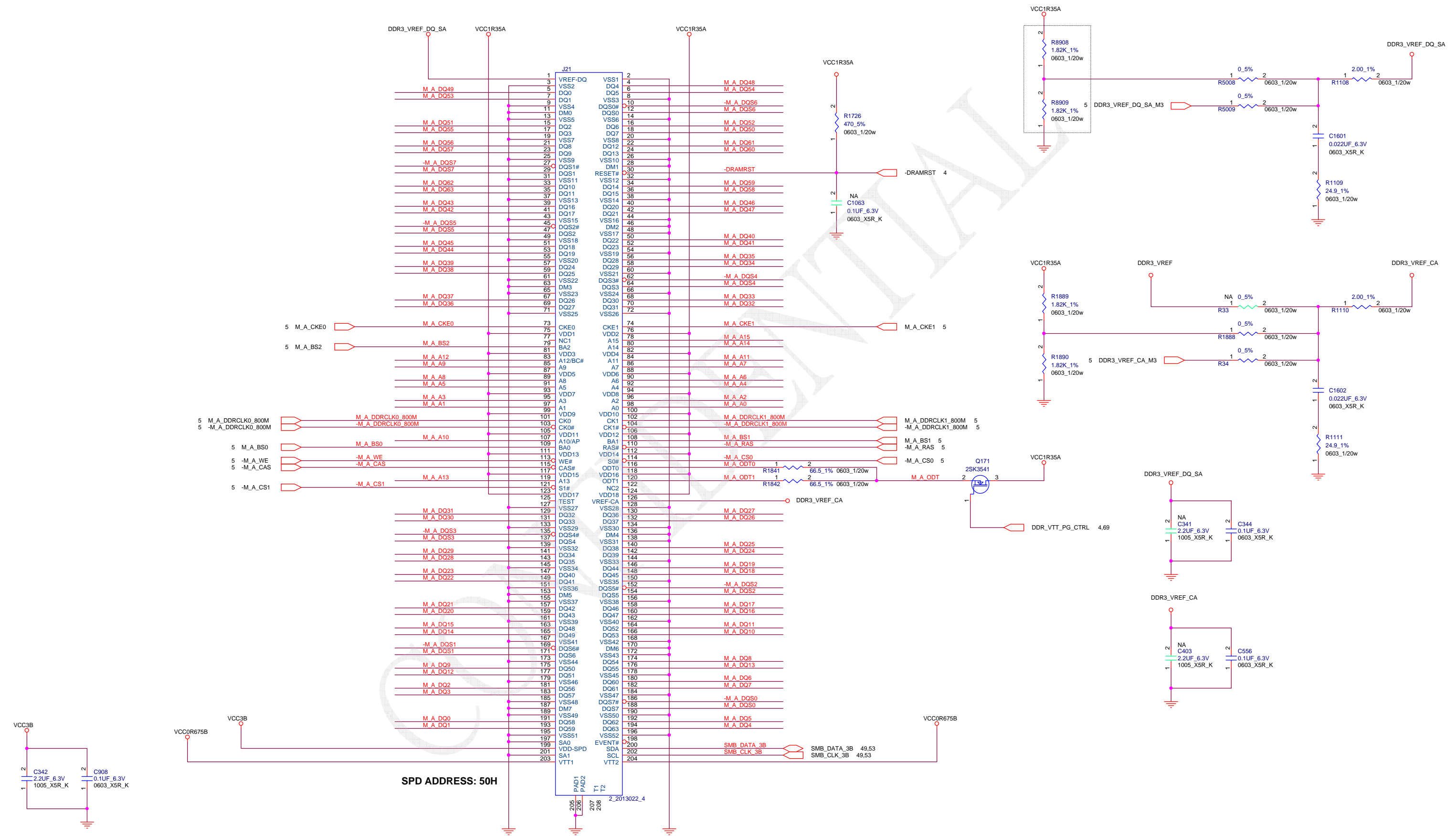
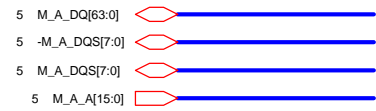
8MB SOIC8  
 WINBOND W25Q64FVSSIQ  
 MACRONIX MX25L6475EM2I-10G  
 MICRON N25Q064A13ESEC0F  
 MACRONIX MX25L6473EM2I-10G

16MB SOIC8  
 WINBOND W25Q128FVSIQ  
 MACRONIX MX25L12875FM2I-10G  
 MICRON N25Q128A13ESEC0F  
 MACRONIX MX25L12873FM2I-10G

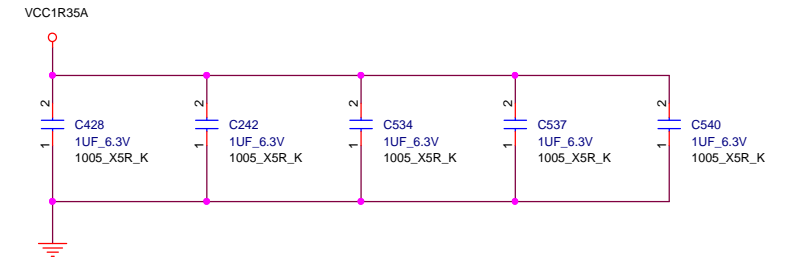
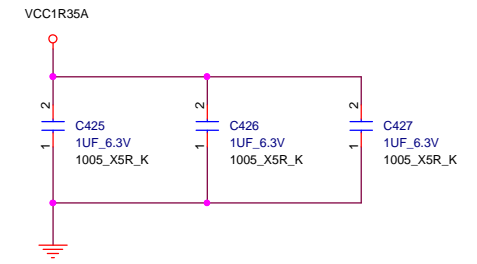
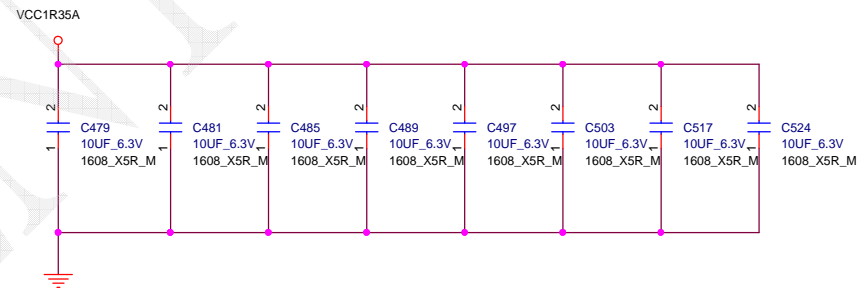
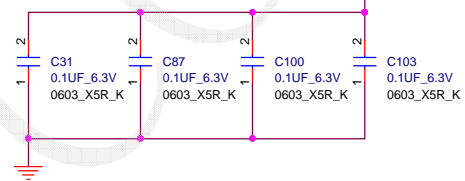
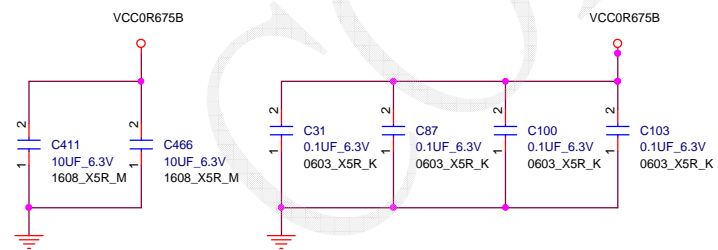
TABLE

SF100 PIN HEADER INTERFACE (TOP VIEW)							
1	VCC	D12.1	GND	GND	2		
3	CS#	R322.2	R681.2	CLK	4		
5	MISO	R694.2	R674.2	MOSI	6		
7	(KEY)	N/A	N/A	(RESET)	8		

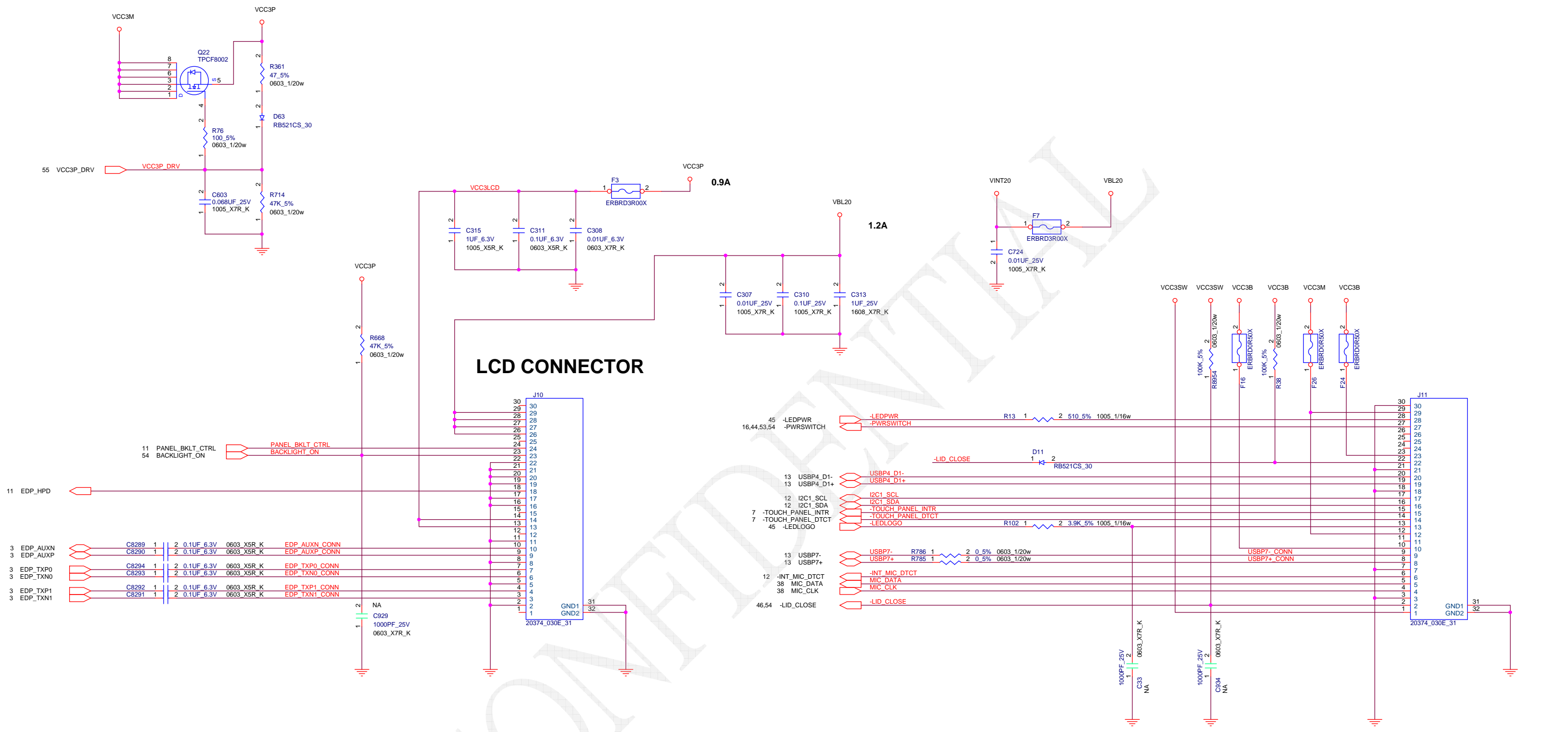




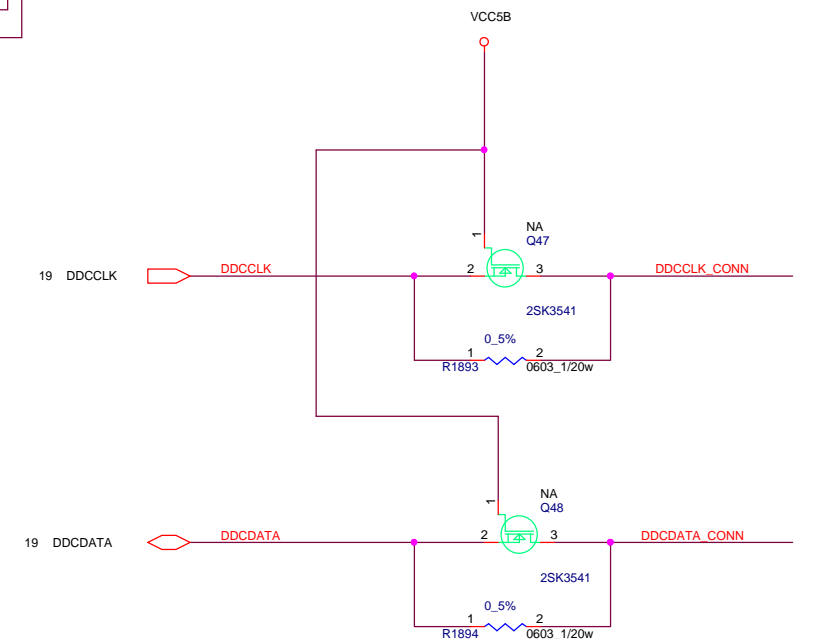
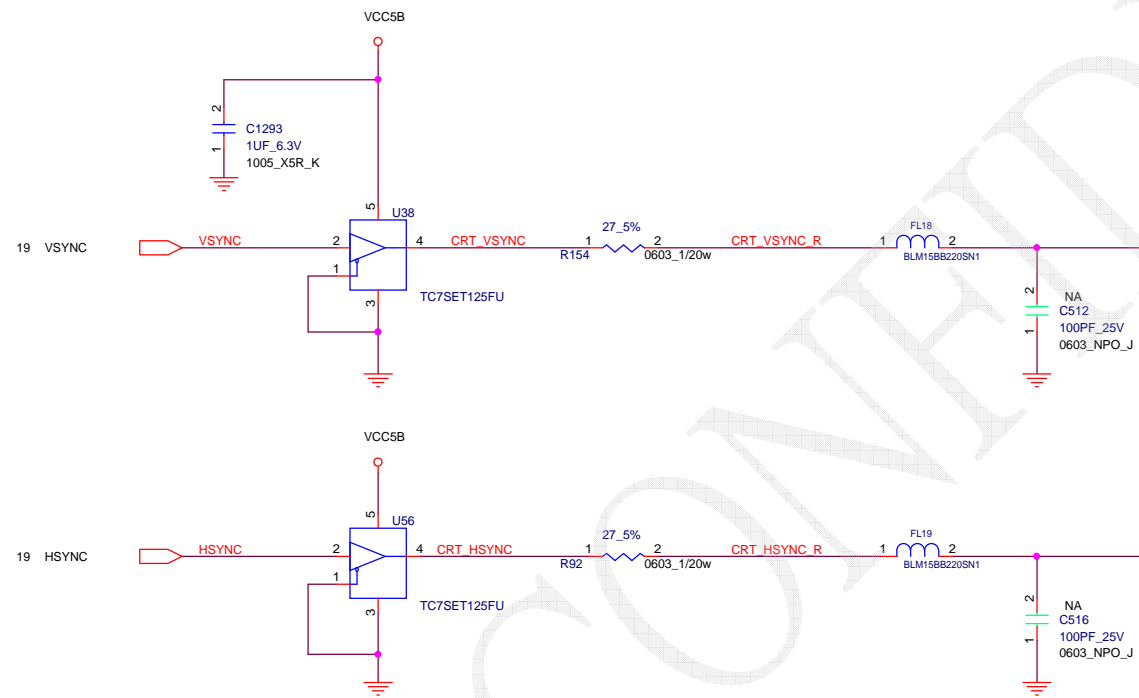
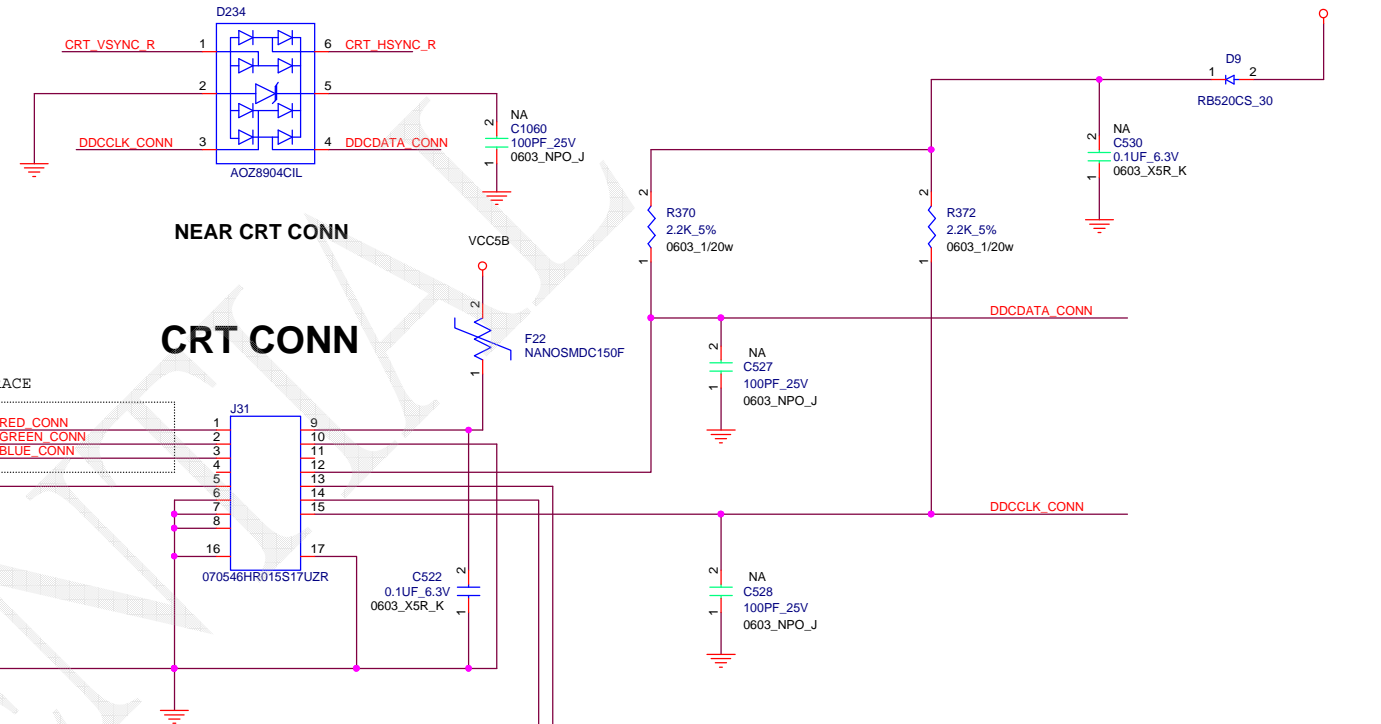
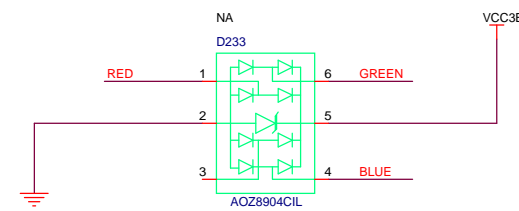
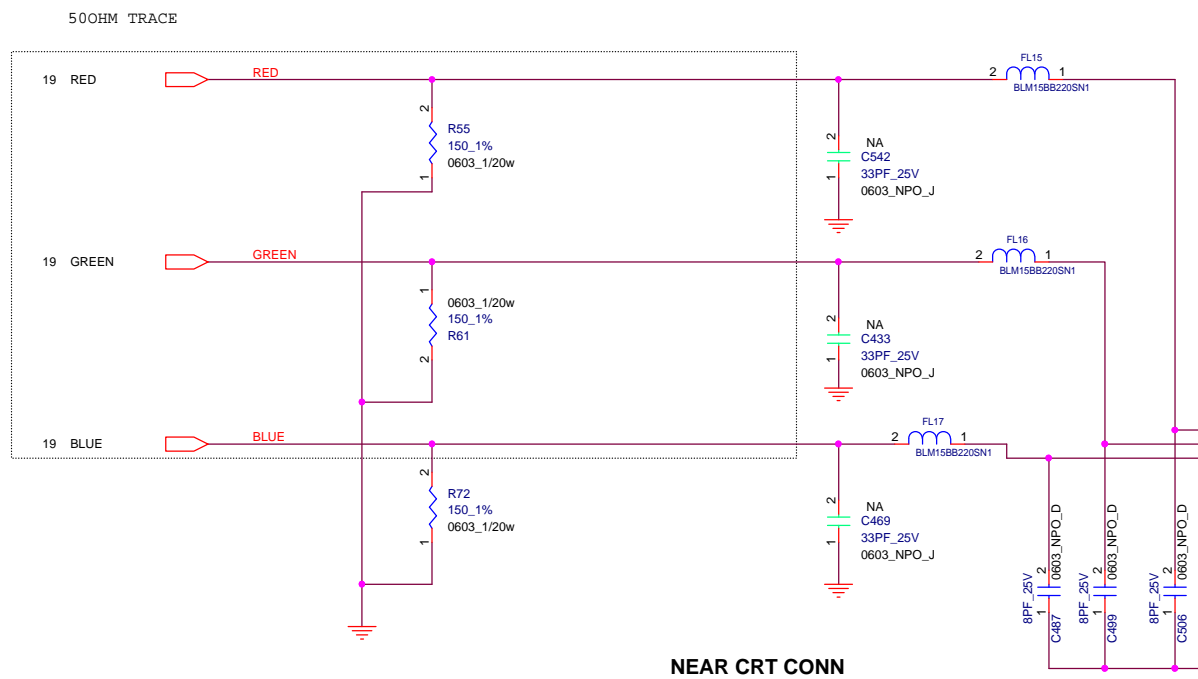
SPD ADDRESS: 50H





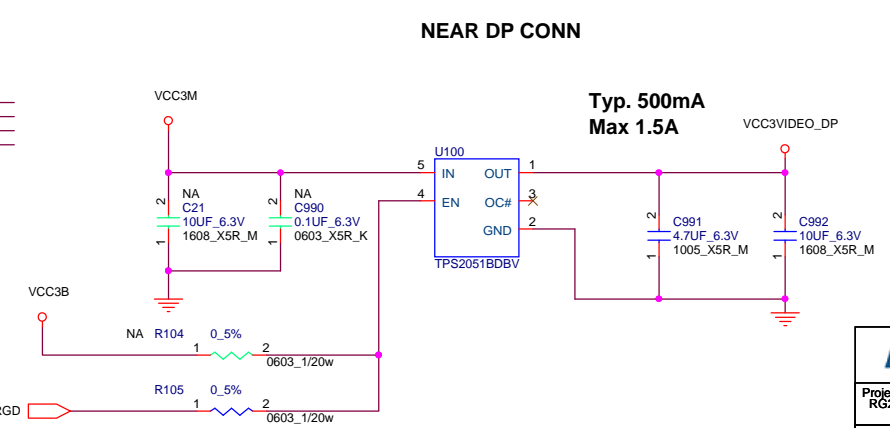
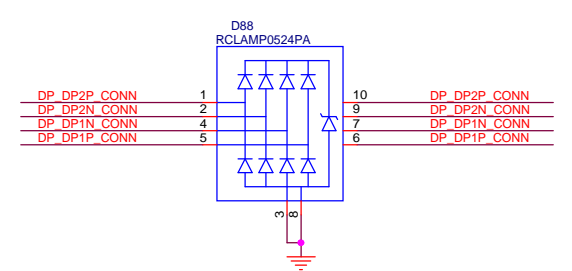
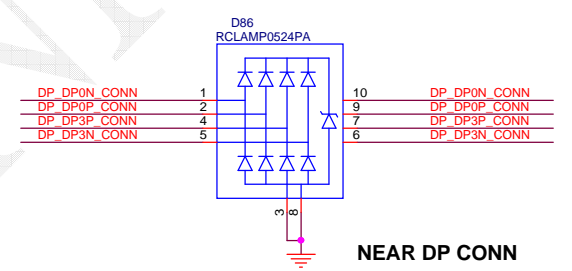
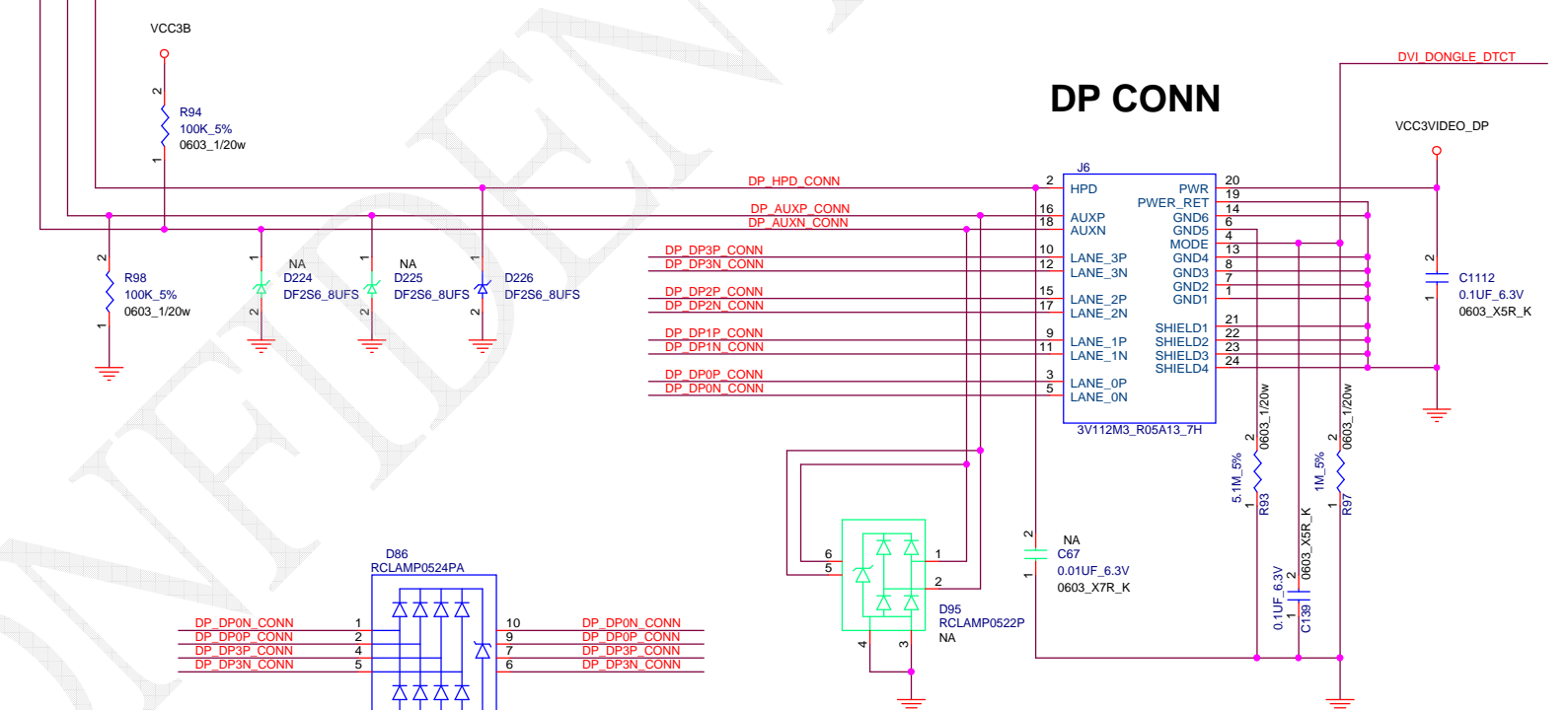
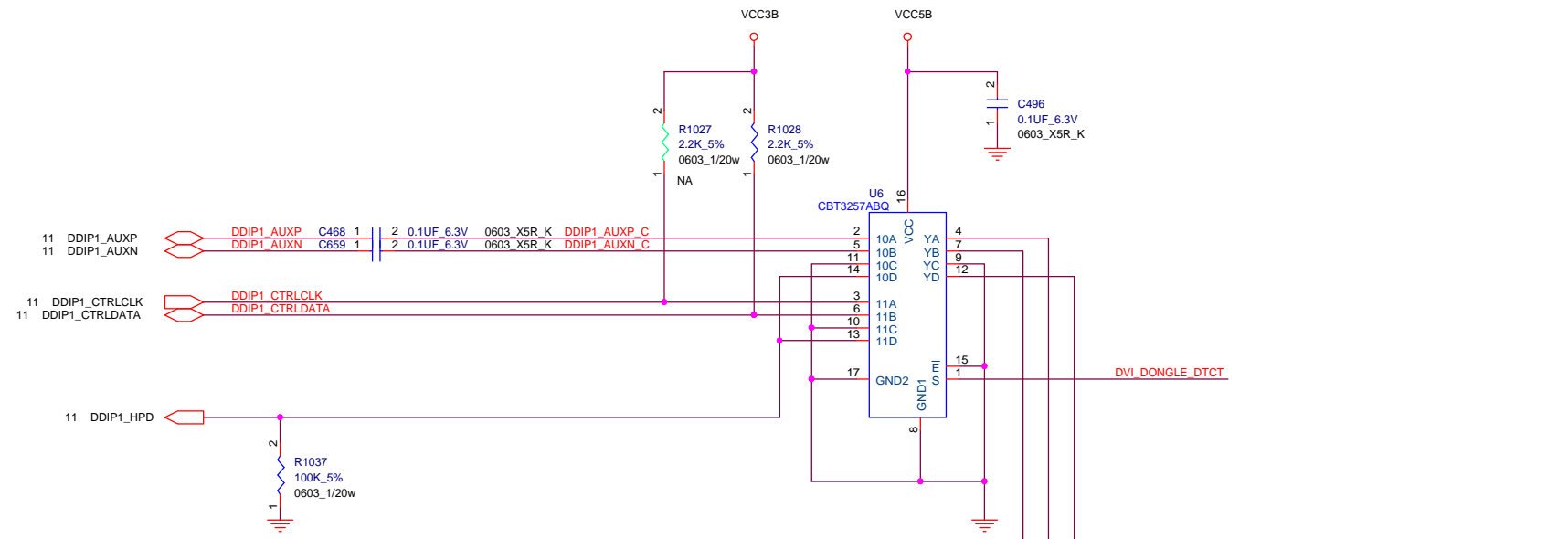


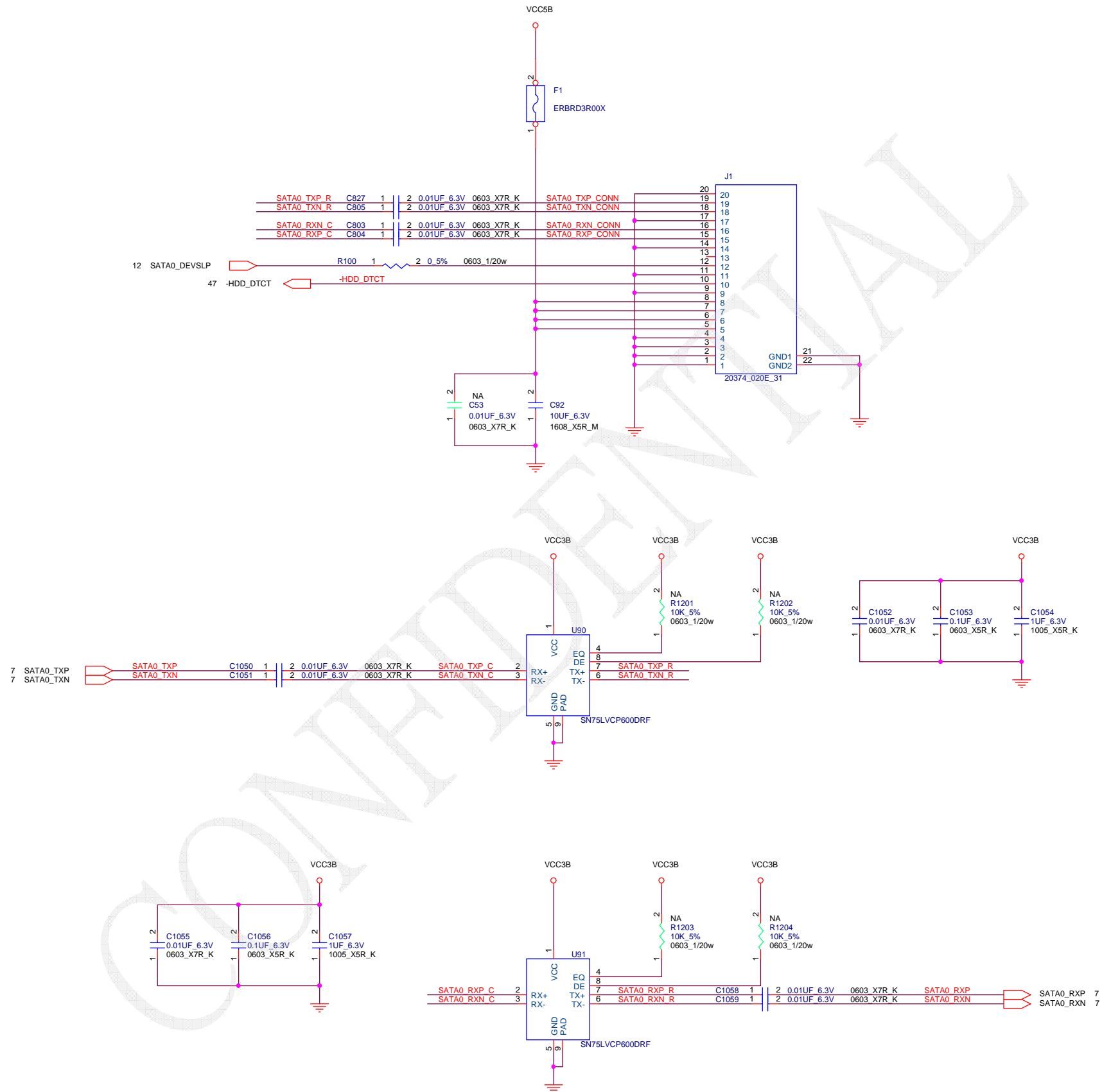
# LCD CONNECTOR



FOR SYSTEM DP NEAR DP CONN

3	DDIP1_3N	C339	1	2	0.1UF_6.3V	0603_X5R_K	DP_DP3N_CONN
3	DDIP1_3P	C323	1	2	0.1UF_6.3V	0603_X5R_K	DP_DP3P_CONN
3	DDIP1_2N	C312	1	2	0.1UF_6.3V	0603_X5R_K	DP_DP2N_CONN
3	DDIP1_2P	C317	1	2	0.1UF_6.3V	0603_X5R_K	DP_DP2P_CONN
3	DDIP1_1N	C277	1	2	0.1UF_6.3V	0603_X5R_K	DP_DP1N_CONN
3	DDIP1_1P	C276	1	2	0.1UF_6.3V	0603_X5R_K	DP_DP1P_CONN
3	DDIP1_0N	C218	1	2	0.1UF_6.3V	0603_X5R_K	DP_DP0N_CONN
3	DDIP1_0P	C226	1	2	0.1UF_6.3V	0603_X5R_K	DP_DP0P_CONN





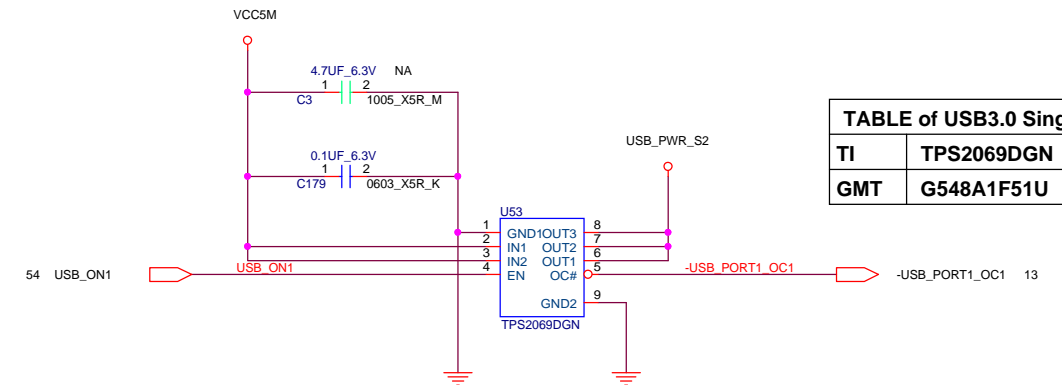
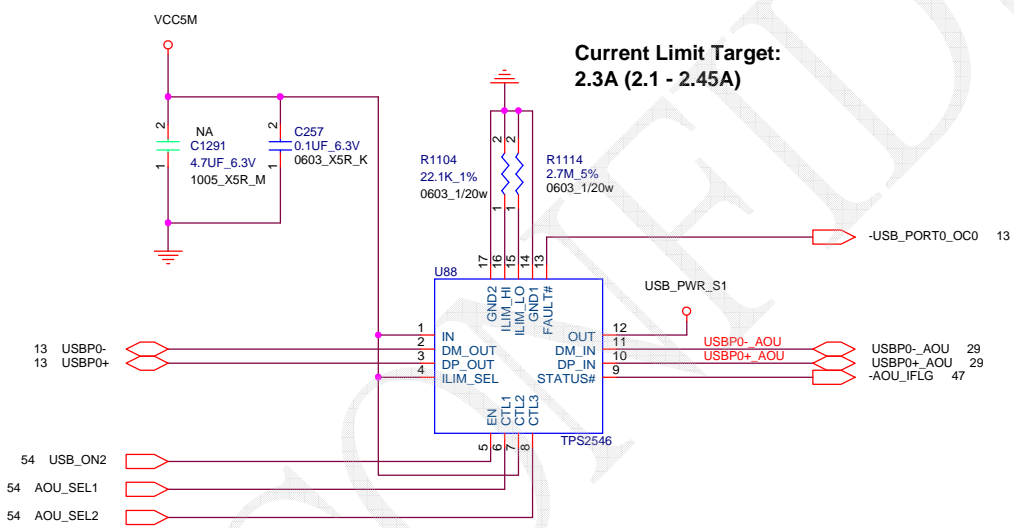
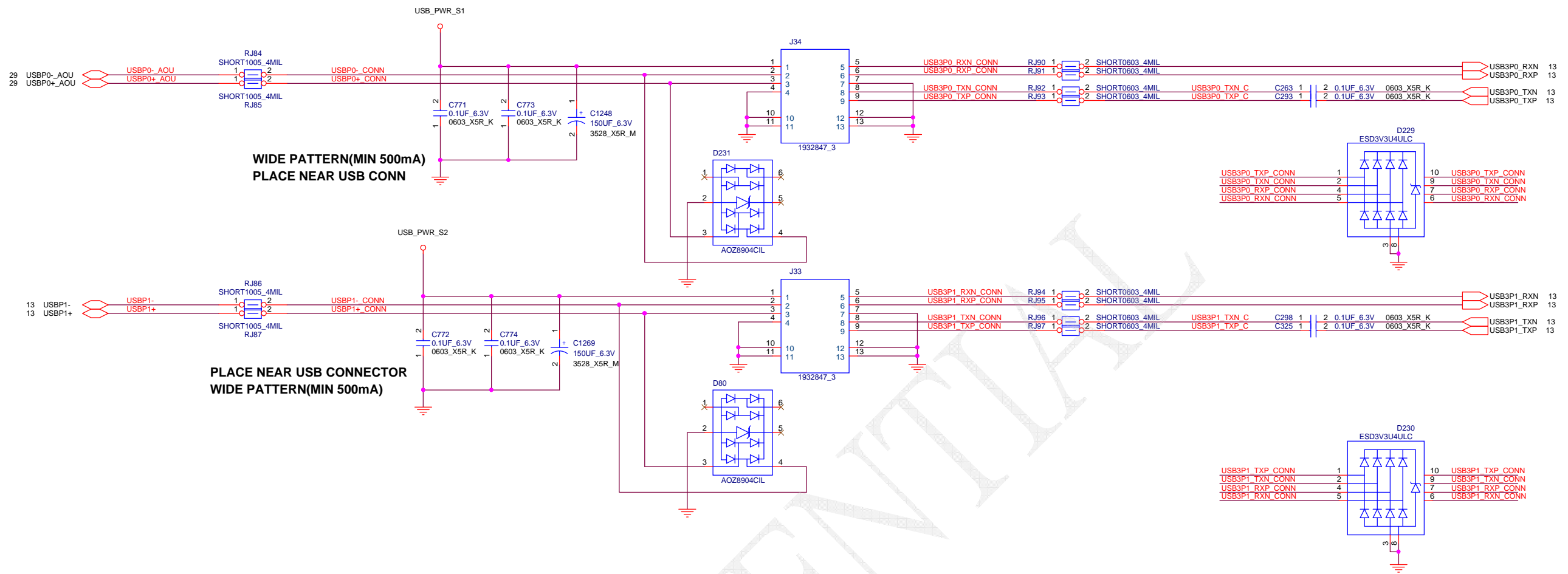
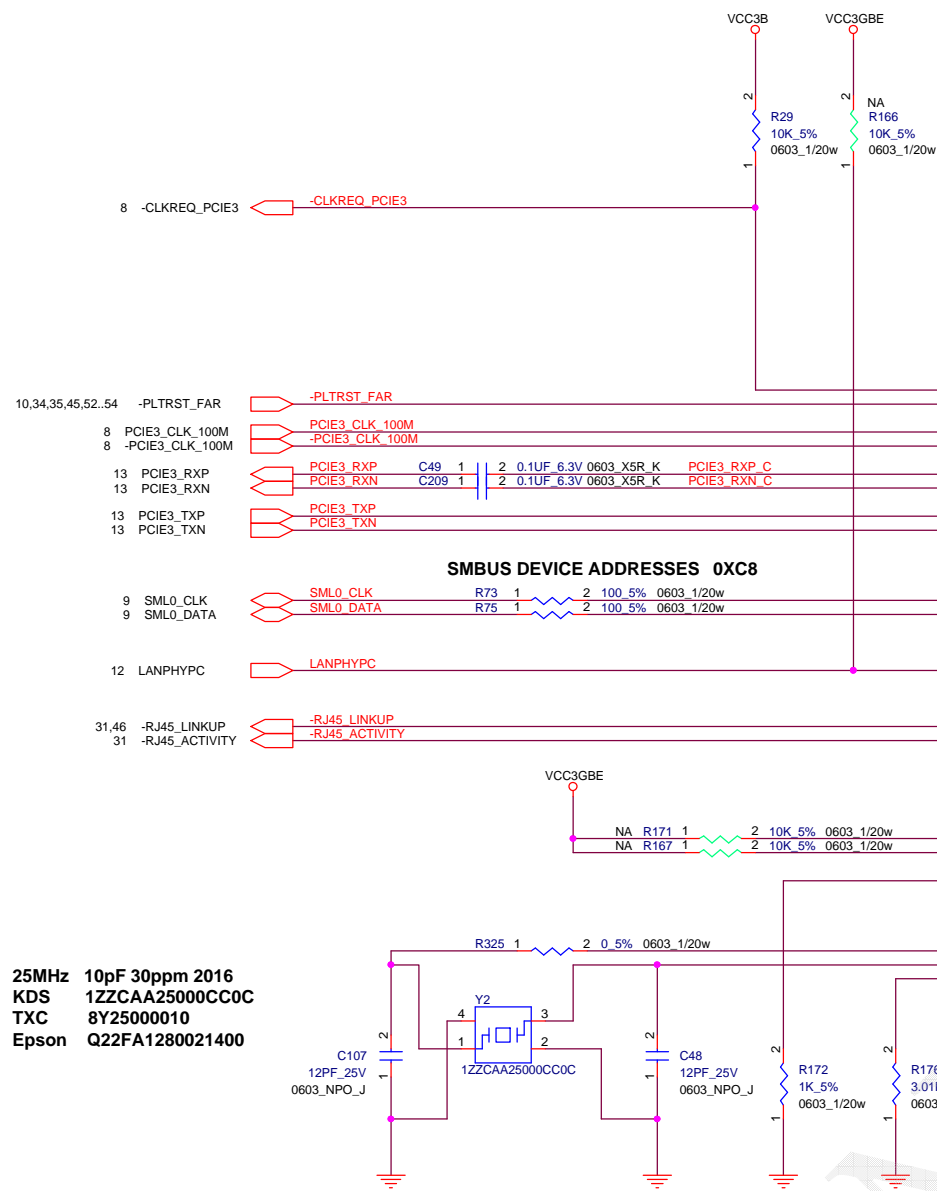


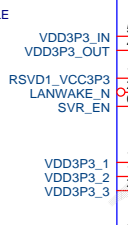
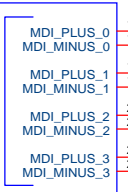
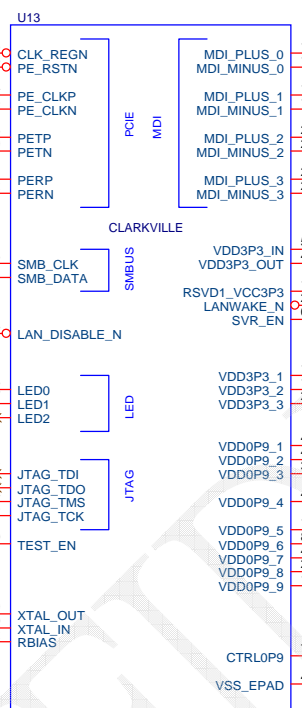
TABLE of USB3.0 Single	
TI	TPS2069DGN
GMT	G548A1F51U





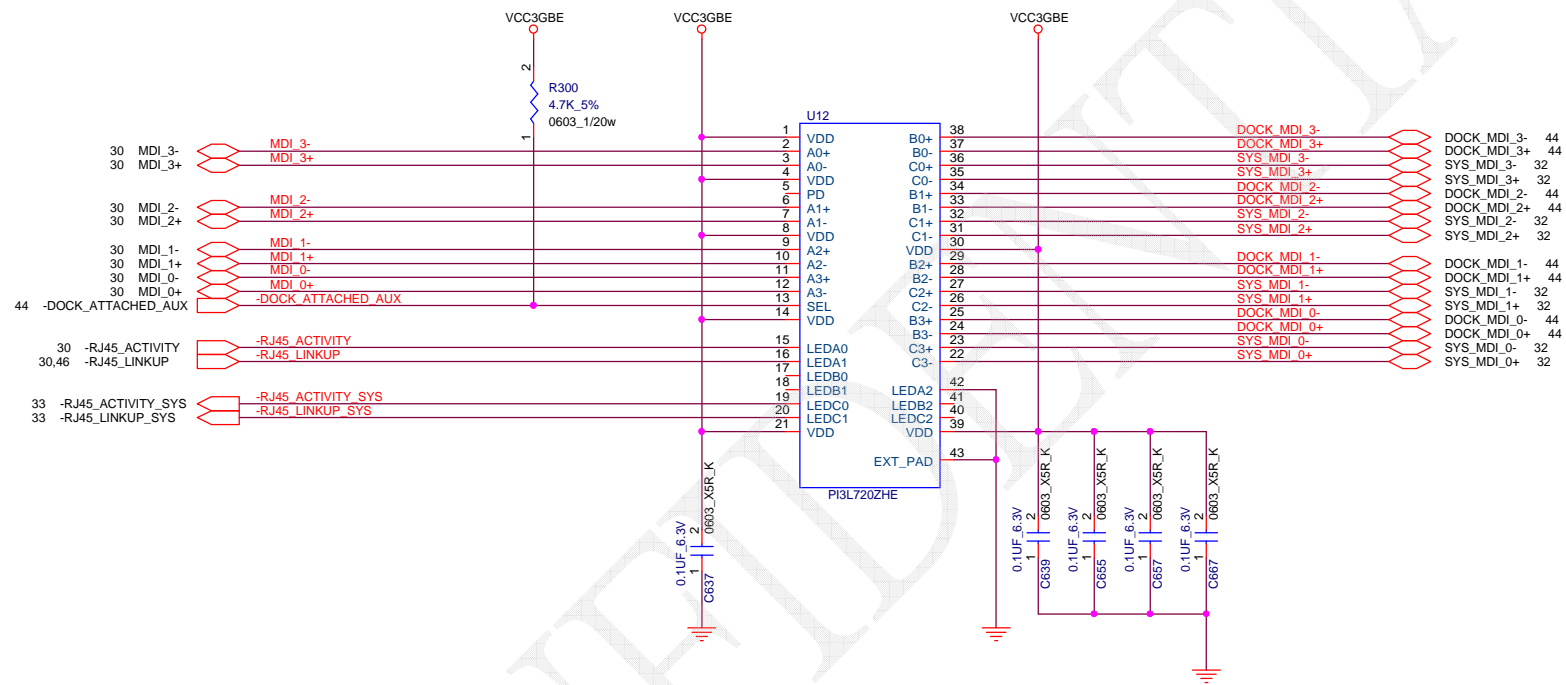
TABLE

GbE PHY	Wolverine-1 (Corporate)	Rogue-2 with Dock (Corporate)	Rogue-2 w/o Dock (Consumer)
U13	WGI218LM	WGI218LM	WGI218V

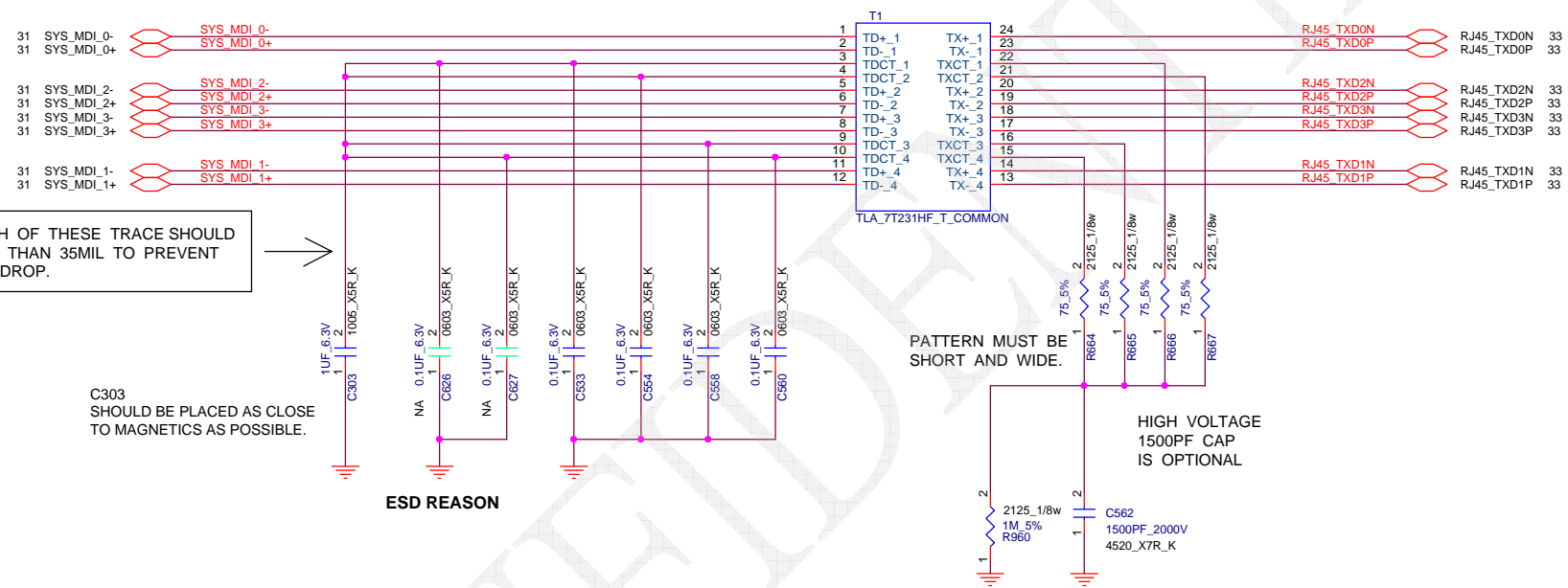


KEEP SHORT AND WIDE PATTERN

25MHz 10pF 30ppm 2016  
KDS 1ZZCAA25000CC0C  
TXC 8Y25000010  
Epson Q22FA1280021400



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

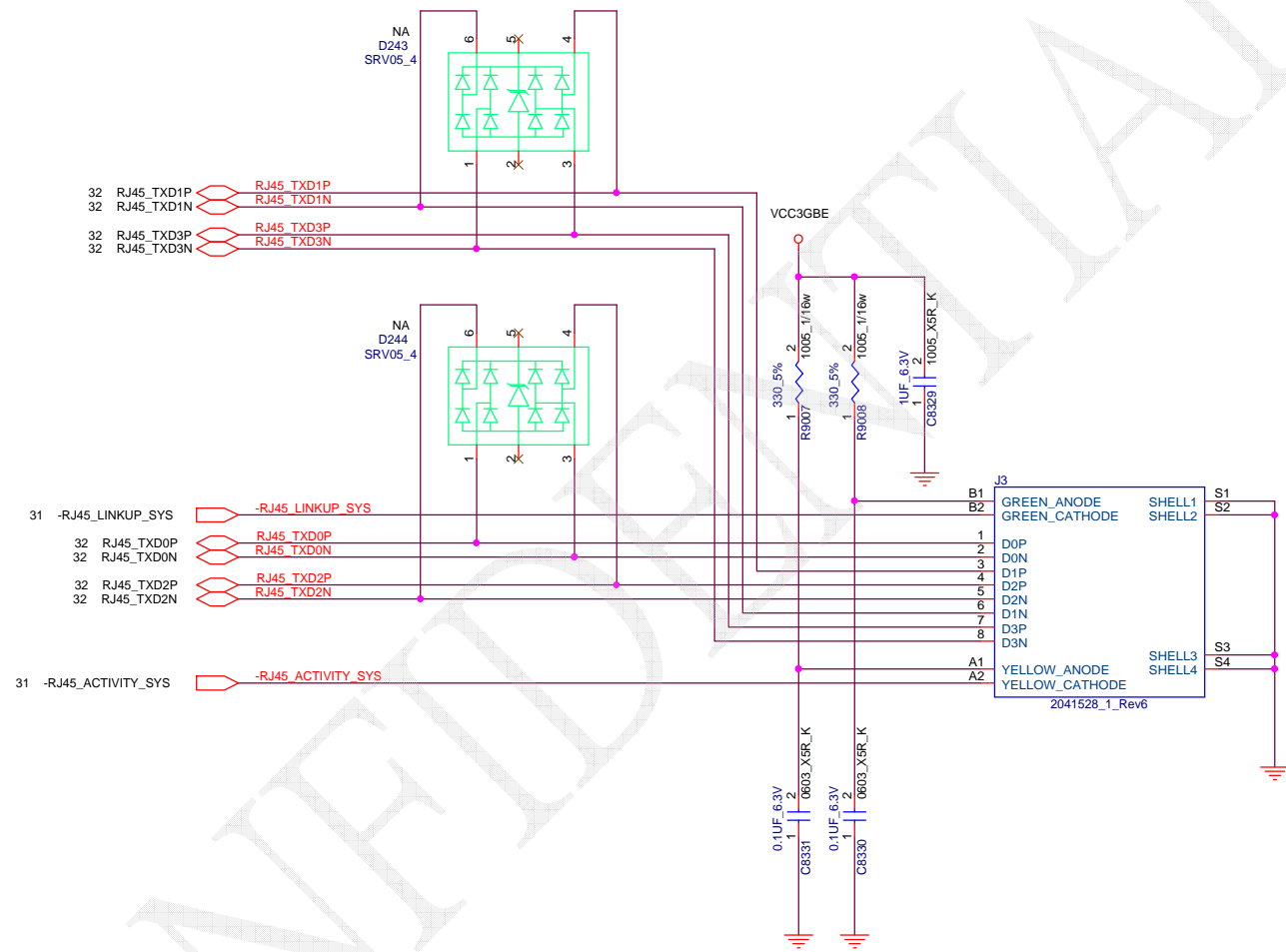
C303 SHOULD BE PLACED AS CLOSE TO MAGNETICS AS POSSIBLE.

ESD REASON

PATTERN MUST BE SHORT AND WIDE.

HIGH VOLTAGE 1500PF CAP IS OPTIONAL

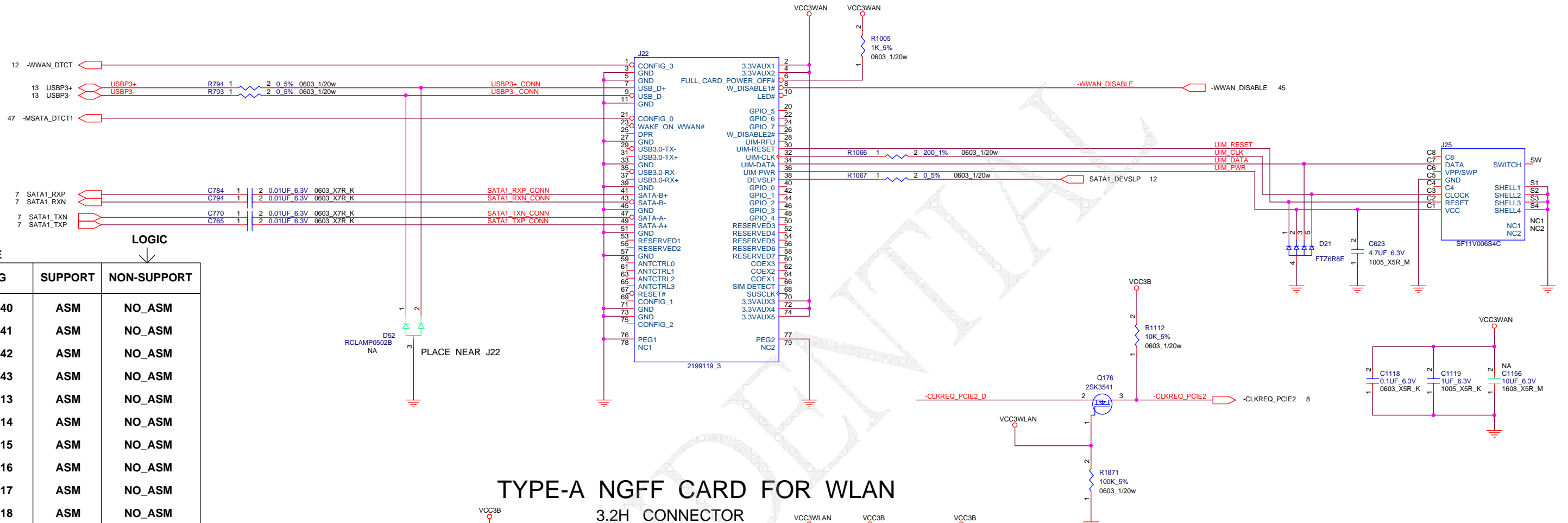




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# TYPE-B NGFF CARD FOR WWAN/SSD

## 3.2H CONNECTOR

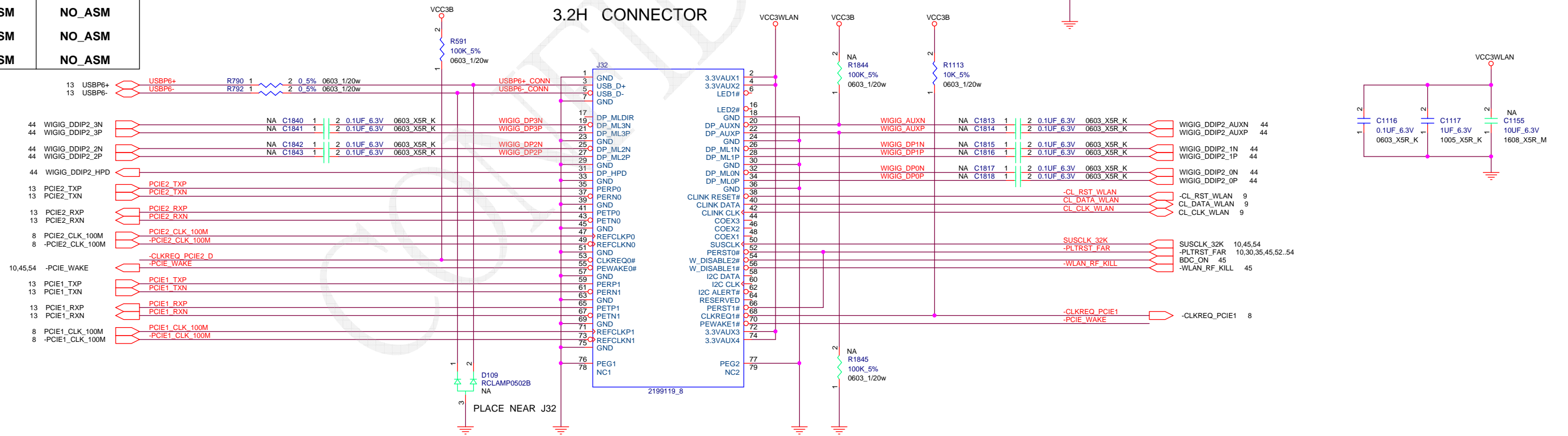


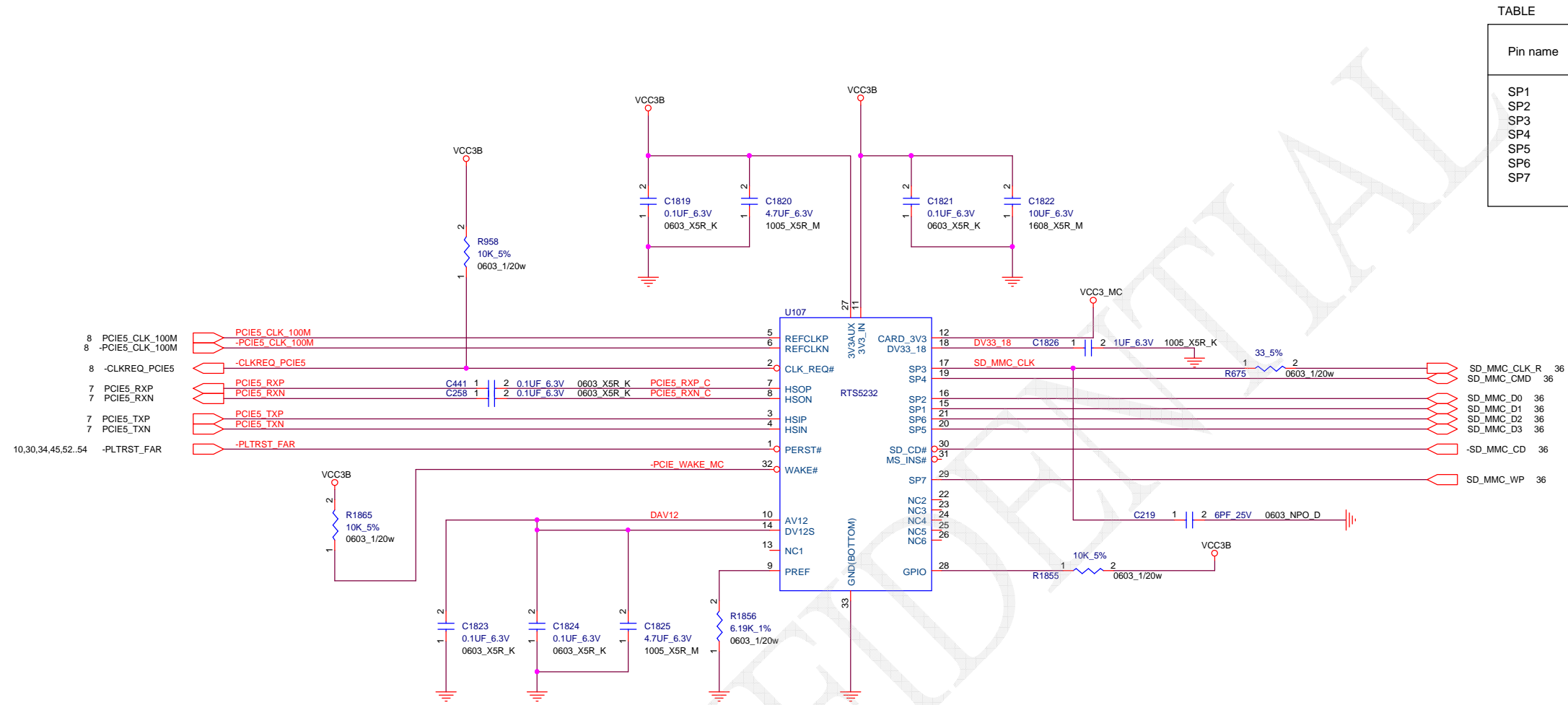
**TABLE**

WIGIG	SUPPORT	NON-SUPPORT
C1840	ASM	NO_ASM
C1841	ASM	NO_ASM
C1842	ASM	NO_ASM
C1843	ASM	NO_ASM
C1813	ASM	NO_ASM
C1814	ASM	NO_ASM
C1815	ASM	NO_ASM
C1816	ASM	NO_ASM
C1817	ASM	NO_ASM
C1818	ASM	NO_ASM
R1844	ASM	NO_ASM
R1845	ASM	NO_ASM

# TYPE-A NGFF CARD FOR WLAN

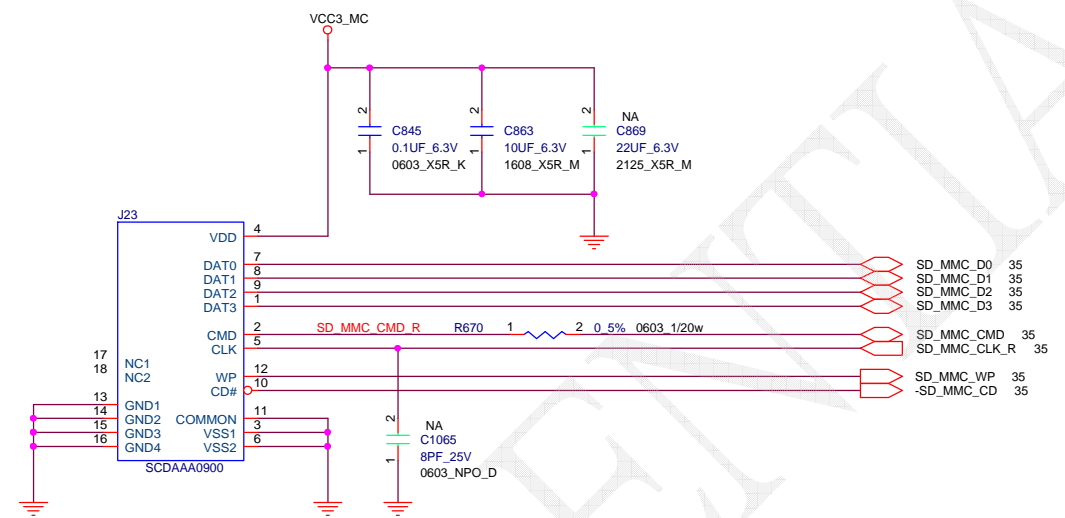
## 3.2H CONNECTOR



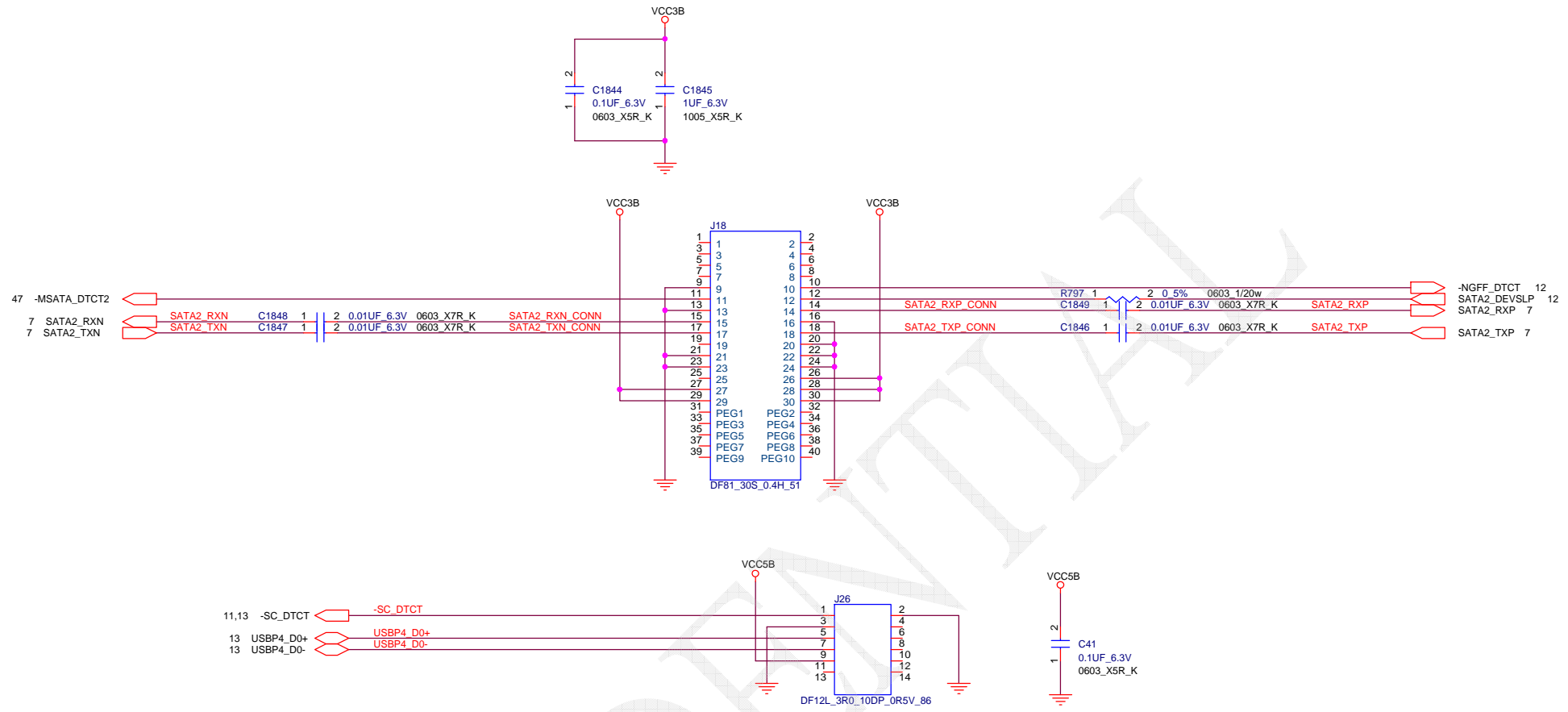


TABLE

Pin name	SD/MMC	MEMORSTICK
SP1	SD_D1	MS_D1
SP2	SD_D0	MS_D0
SP3	SD_CLK	MS_D2
SP4	SD_CMD	MS_D3
SP5	SD_D3	MS_D1
SP6	SD_D2	MS_CLK
SP7		



CONFIDENTIAL



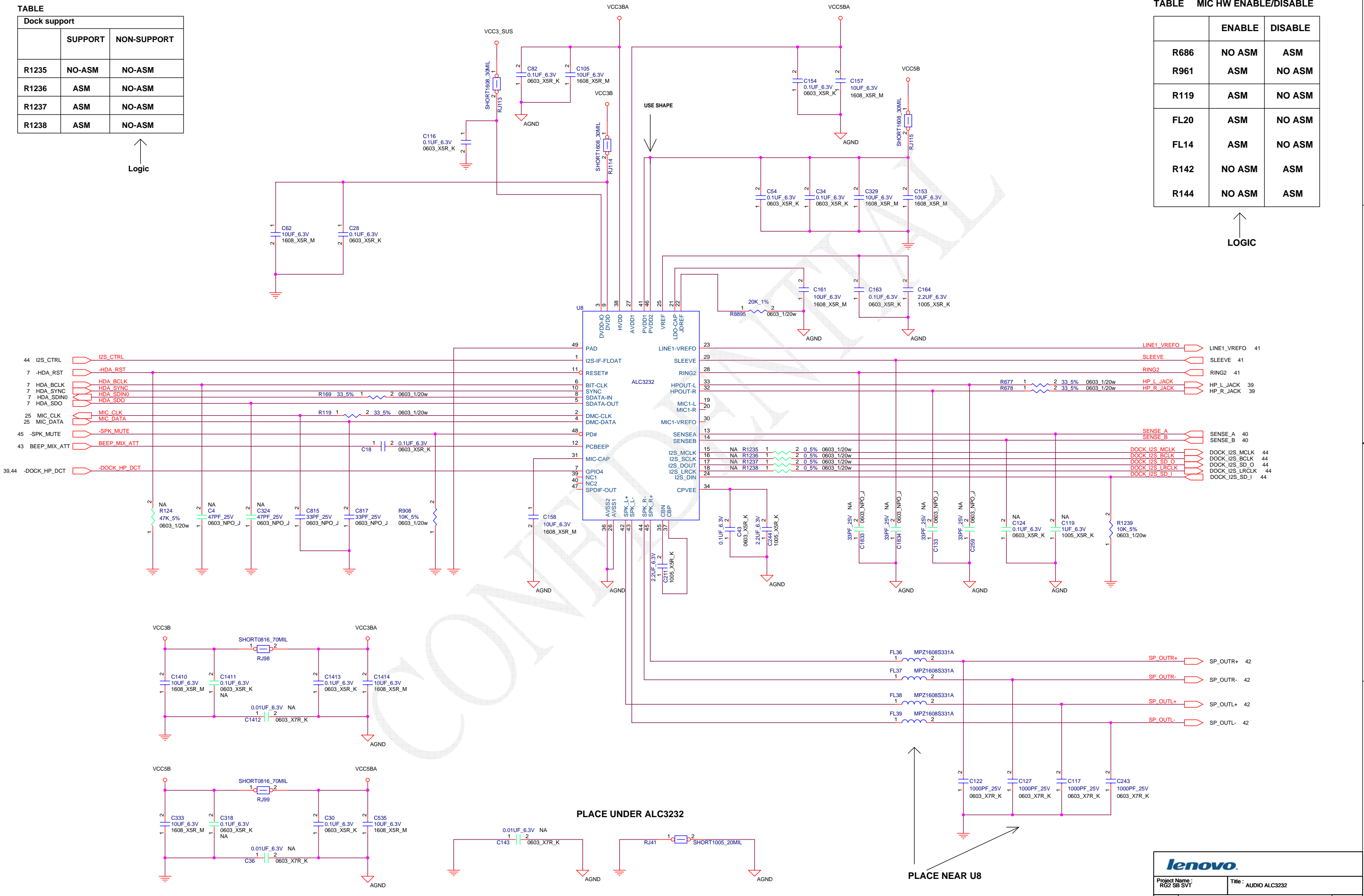
Dock support		
	SUPPORT	NON-SUPPORT
R1235	NO-ASM	NO-ASM
R1236	ASM	NO-ASM
R1237	ASM	NO-ASM
R1238	ASM	NO-ASM

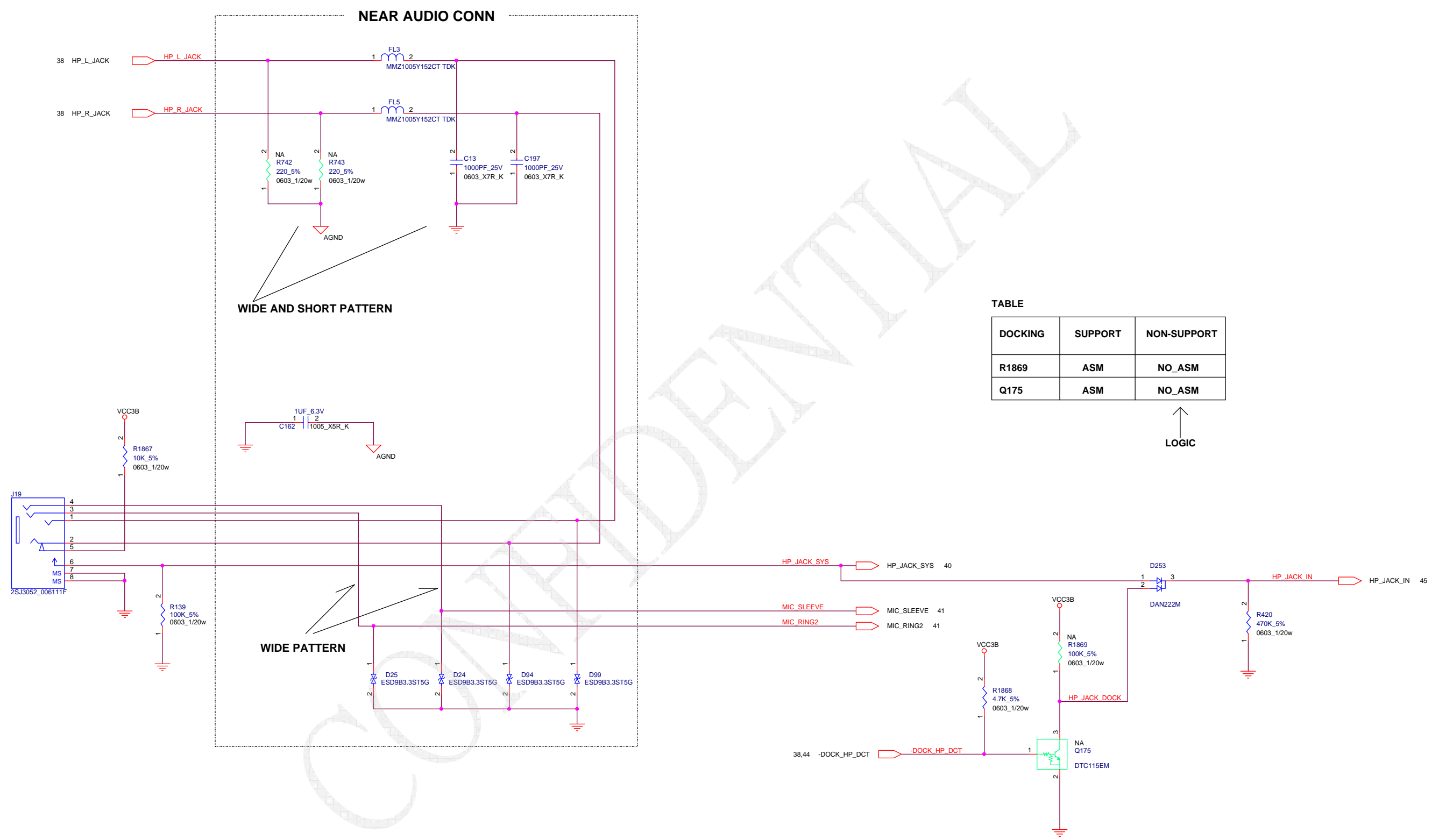
Logic ↑

TABLE MIC HW ENABLE/DISABLE

	ENABLE	DISABLE
R686	NO ASM	ASM
R961	ASM	NO ASM
R119	ASM	NO ASM
FL20	ASM	NO ASM
FL14	ASM	NO ASM
R142	NO ASM	ASM
R144	NO ASM	ASM

Logic ↑

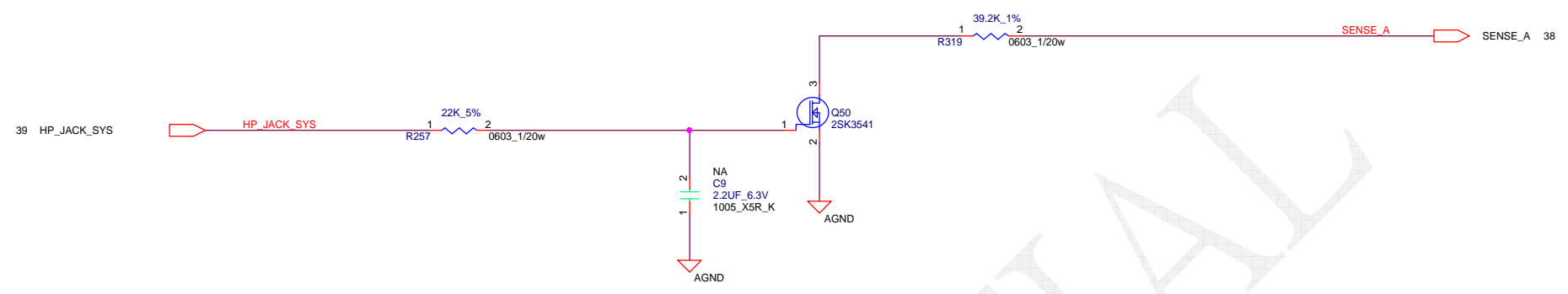
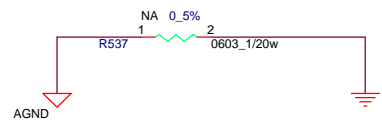




TABLE

DOCKING	SUPPORT	NON-SUPPORT
R1869	ASM	NO_ASM
Q175	ASM	NO_ASM

↑  
LOGIC



TABLE

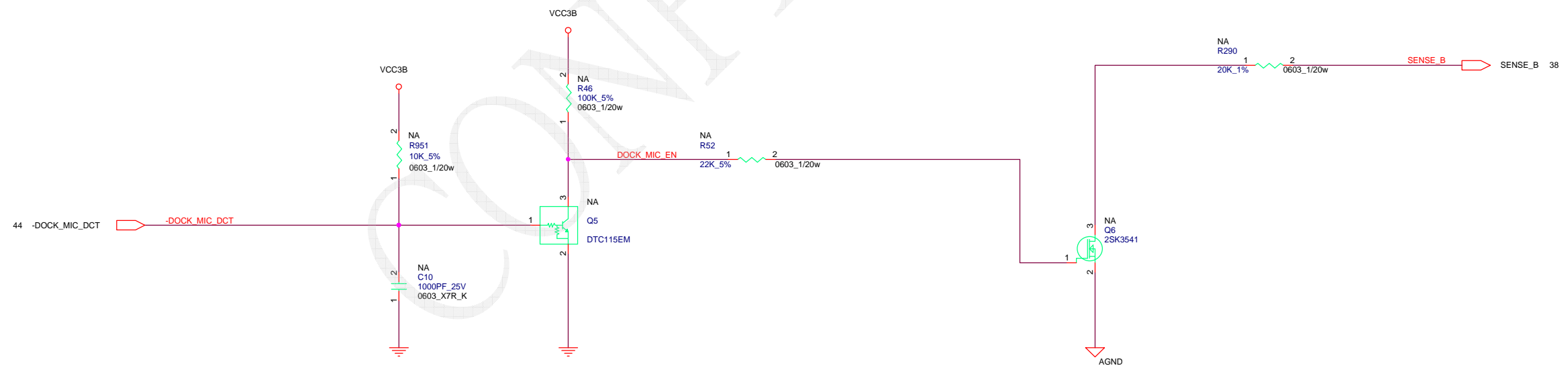
DOCKING	SUPPORT	NON-SUPPORT
R951	ASM	NO_ASM
R290	ASM	NO_ASM
R46	ASM	NO_ASM
Q5	ASM	NO_ASM
R52	ASM	NO_ASM
Q6	ASM	NO_ASM

↑  
LOGIC

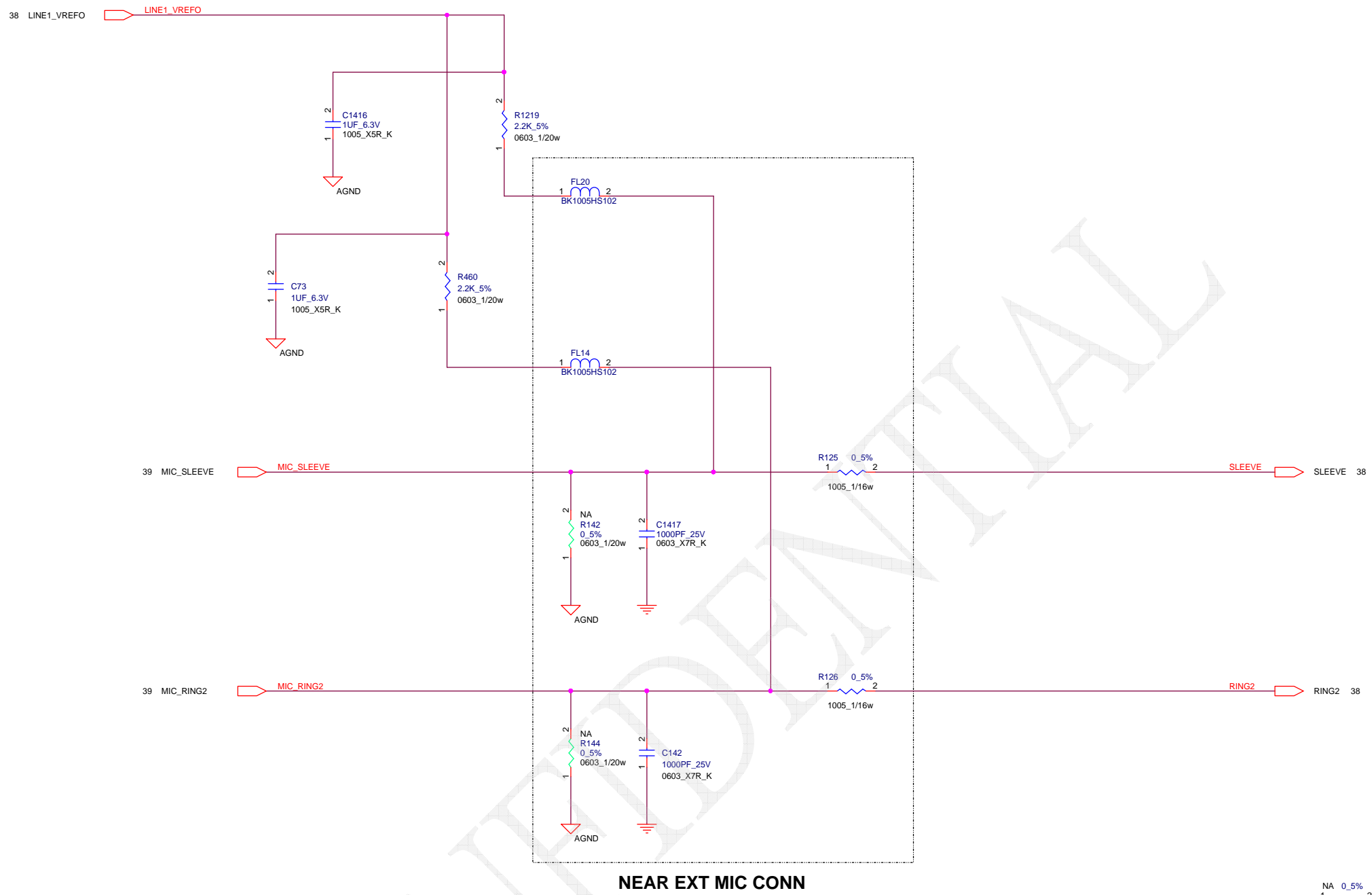
TABLE DOCKING MIC HW ENABLE/DISABLE

	ENABLE	DISABLE
R951	ASM	NO_ASM
R290	ASM	NO_ASM
R46	ASM	NO_ASM
Q5	ASM	NO_ASM
R52	ASM	NO_ASM
Q6	ASM	NO_ASM

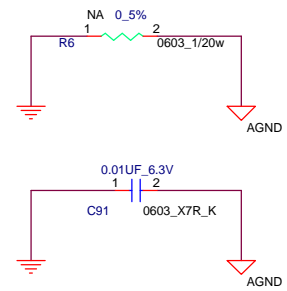
↑  
LOGIC

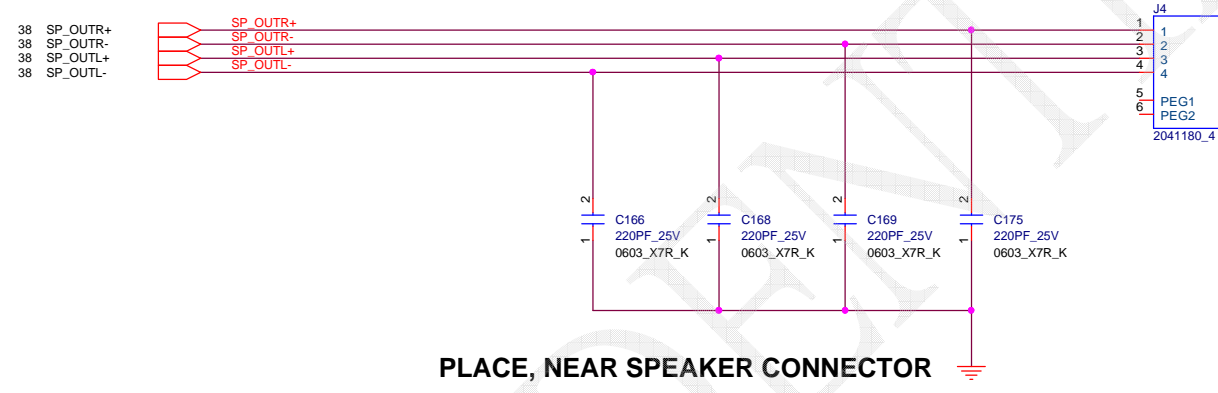




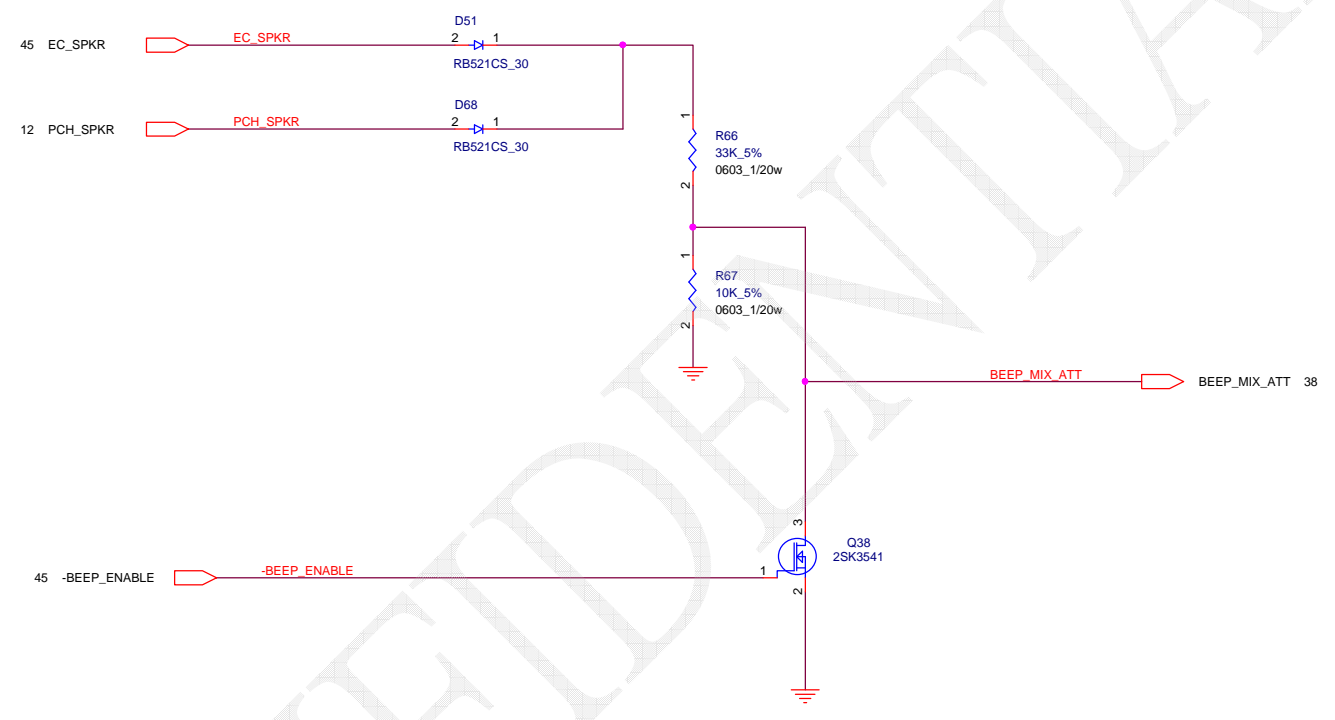


NEAR EXT MIC CONN



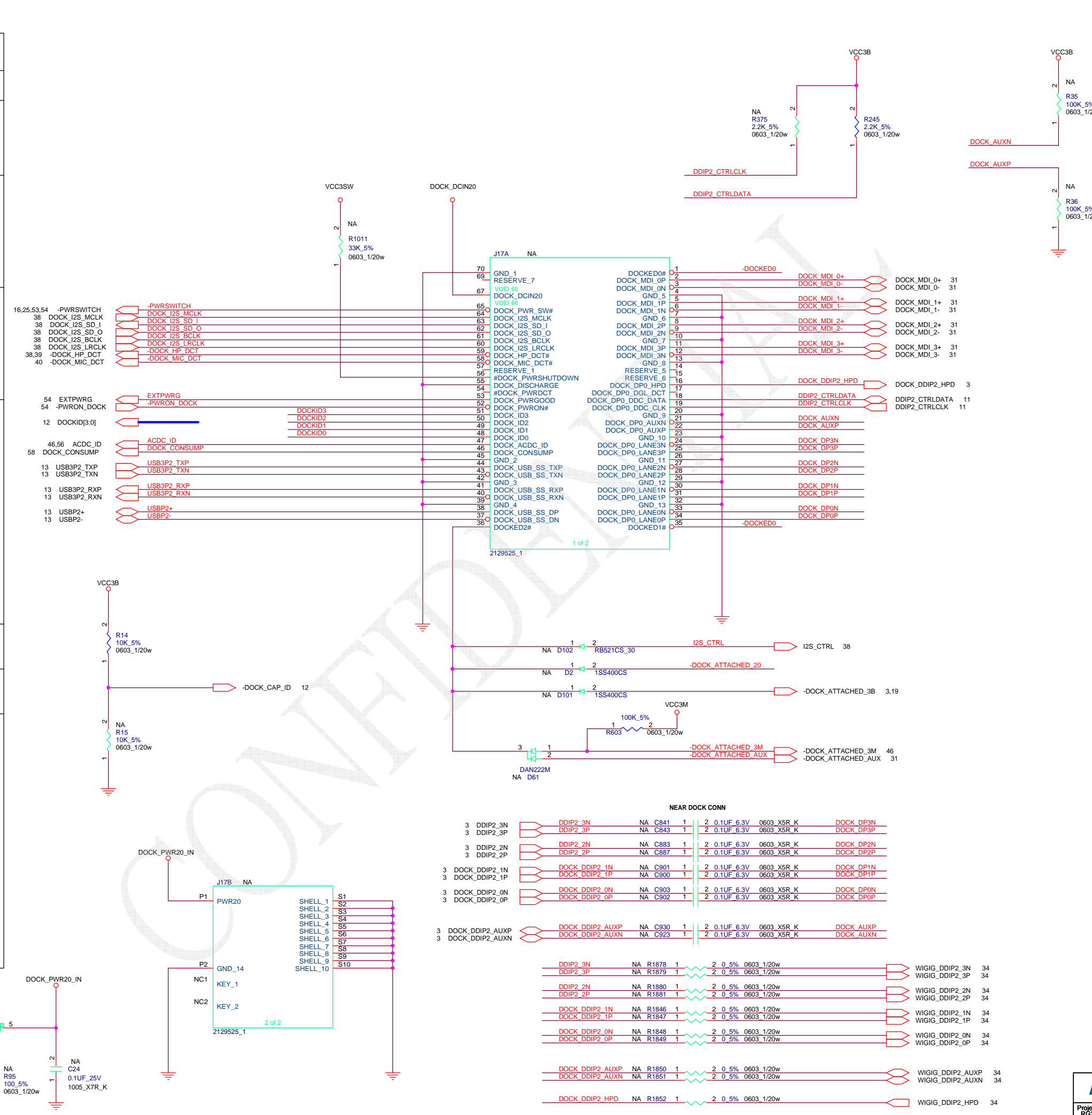


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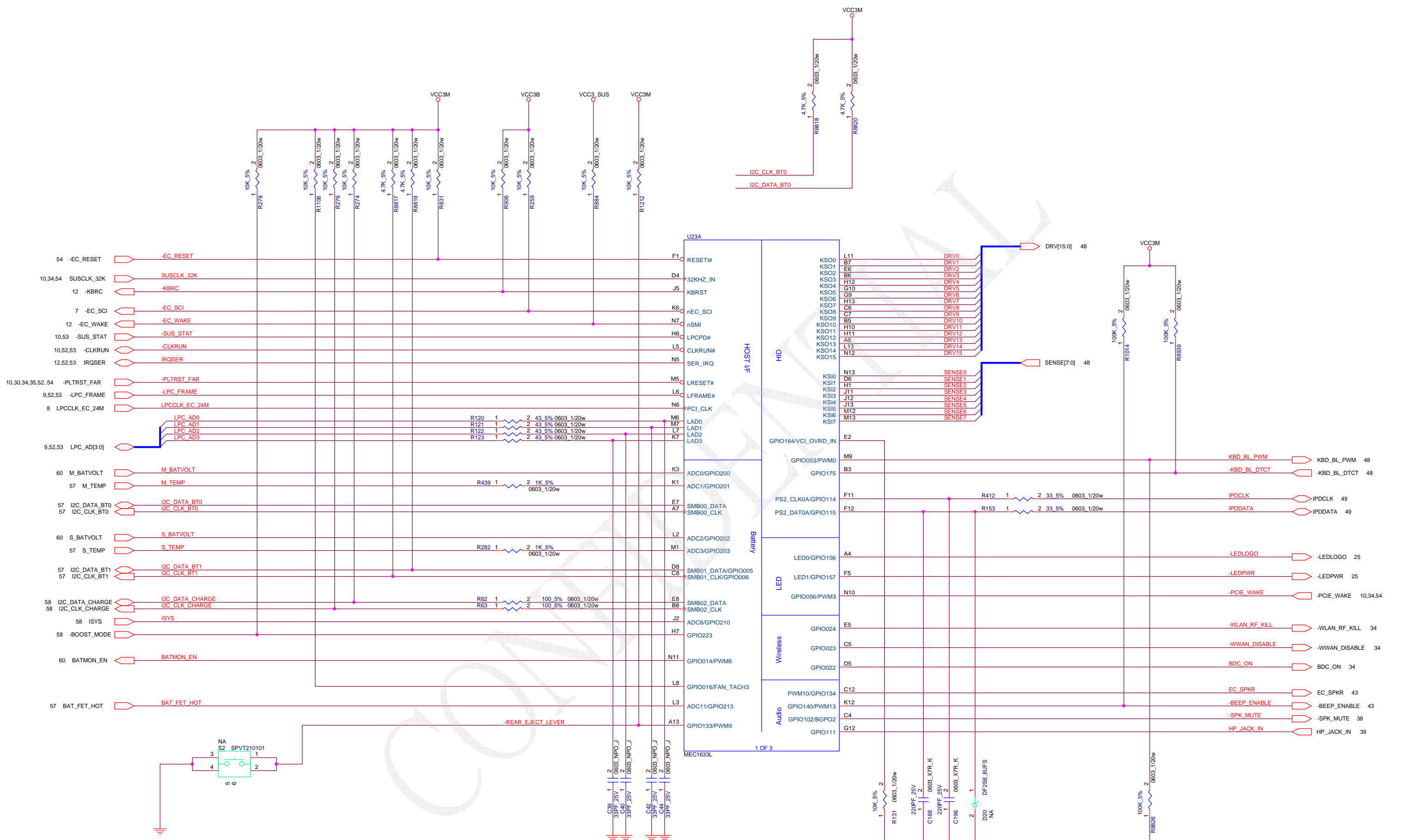


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ID	DOCKING SUPPORT	WIGIG SUPPORT	NON-SUPPORT
J17	ASM	NO ASM	NO ASM
R375	ASM	NO ASM	NO ASM
R245	ASM	ASM	ASM
R1011	ASM	NO ASM	NO ASM
D2	ASM	NO ASM	NO ASM
D101	ASM	NO ASM	NO ASM
R603	ASM	ASM	ASM
D61	ASM	NO ASM	NO ASM
D102	ASM	NO ASM	NO ASM
C24	ASM	NO ASM	NO ASM
Q85	ASM	NO ASM	NO ASM
R95	ASM	NO ASM	NO ASM
R731	ASM	NO ASM	NO ASM
R657	ASM	NO ASM	NO ASM
C841	ASM	NO ASM	NO ASM
C843	ASM	NO ASM	NO ASM
C883	ASM	NO ASM	NO ASM
C887	ASM	NO ASM	NO ASM
C901	ASM	NO ASM	NO ASM
C900	ASM	NO ASM	NO ASM
C903	ASM	NO ASM	NO ASM
C902	ASM	NO ASM	NO ASM
C930	ASM	NO ASM	NO ASM
C923	ASM	NO ASM	NO ASM
R35	ASM	NO ASM	NO ASM
R36	ASM	NO ASM	NO ASM
R14	NO_ASM	ASM	ASM
R15	ASM	NO_ASM	NO_ASM
R1878	NO_ASM	ASM	NO_ASM
R1879	NO_ASM	ASM	NO_ASM
R1880	NO_ASM	ASM	NO_ASM
R1881	NO_ASM	ASM	NO_ASM
R1846	NO_ASM	ASM	NO_ASM
R1847	NO_ASM	ASM	NO_ASM
R1848	NO_ASM	ASM	NO_ASM
R1849	NO_ASM	ASM	NO_ASM
R1850	NO_ASM	ASM	NO_ASM
R1851	NO_ASM	ASM	NO_ASM
R1852	NO_ASM	ASM	NO_ASM



Part	Value	Location	Notes
DDIP2_3N	2 0.1UF 6.3V	NA C841	DOCK_DP3N
DDIP2_3P	2 0.1UF 6.3V	NA C843	DOCK_DP3P
DDIP2_2N	2 0.1UF 6.3V	NA C883	DOCK_DP2N
DDIP2_2P	2 0.1UF 6.3V	NA C887	DOCK_DP2P
DOCK_DDIP2_1N	2 0.1UF 6.3V	NA C901	DOCK_DP1N
DOCK_DDIP2_1P	2 0.1UF 6.3V	NA C900	DOCK_DP1P
DOCK_DDIP2_0N	2 0.1UF 6.3V	NA C903	DOCK_DP0N
DOCK_DDIP2_0P	2 0.1UF 6.3V	NA C902	DOCK_DP0P
DOCK_DDIP2_AUXP	2 0.1UF 6.3V	NA C930	DOCK_AUXP
DOCK_DDIP2_AUXN	2 0.1UF 6.3V	NA C923	DOCK_AUXN
DDIP2_3N	2 0.5% 0603 1/20w	NA R1878	WIGIG_DDIP2_3N
DDIP2_3P	2 0.5% 0603 1/20w	NA R1879	WIGIG_DDIP2_3P
DDIP2_2N	2 0.5% 0603 1/20w	NA R1880	WIGIG_DDIP2_2N
DDIP2_2P	2 0.5% 0603 1/20w	NA R1881	WIGIG_DDIP2_2P
DOCK_DDIP2_1N	2 0.5% 0603 1/20w	NA R1846	WIGIG_DDIP2_1N
DOCK_DDIP2_1P	2 0.5% 0603 1/20w	NA R1847	WIGIG_DDIP2_1P
DOCK_DDIP2_0N	2 0.5% 0603 1/20w	NA R1848	WIGIG_DDIP2_0N
DOCK_DDIP2_0P	2 0.5% 0603 1/20w	NA R1849	WIGIG_DDIP2_0P
DOCK_DDIP2_AUXP	2 0.5% 0603 1/20w	NA R1850	WIGIG_DDIP2_AUXP
DOCK_DDIP2_AUXN	2 0.5% 0603 1/20w	NA R1851	WIGIG_DDIP2_AUXN
DOCK_DDIP2_HPD	2 0.5% 0603 1/20w	NA R1852	WIGIG_DDIP2_HPD

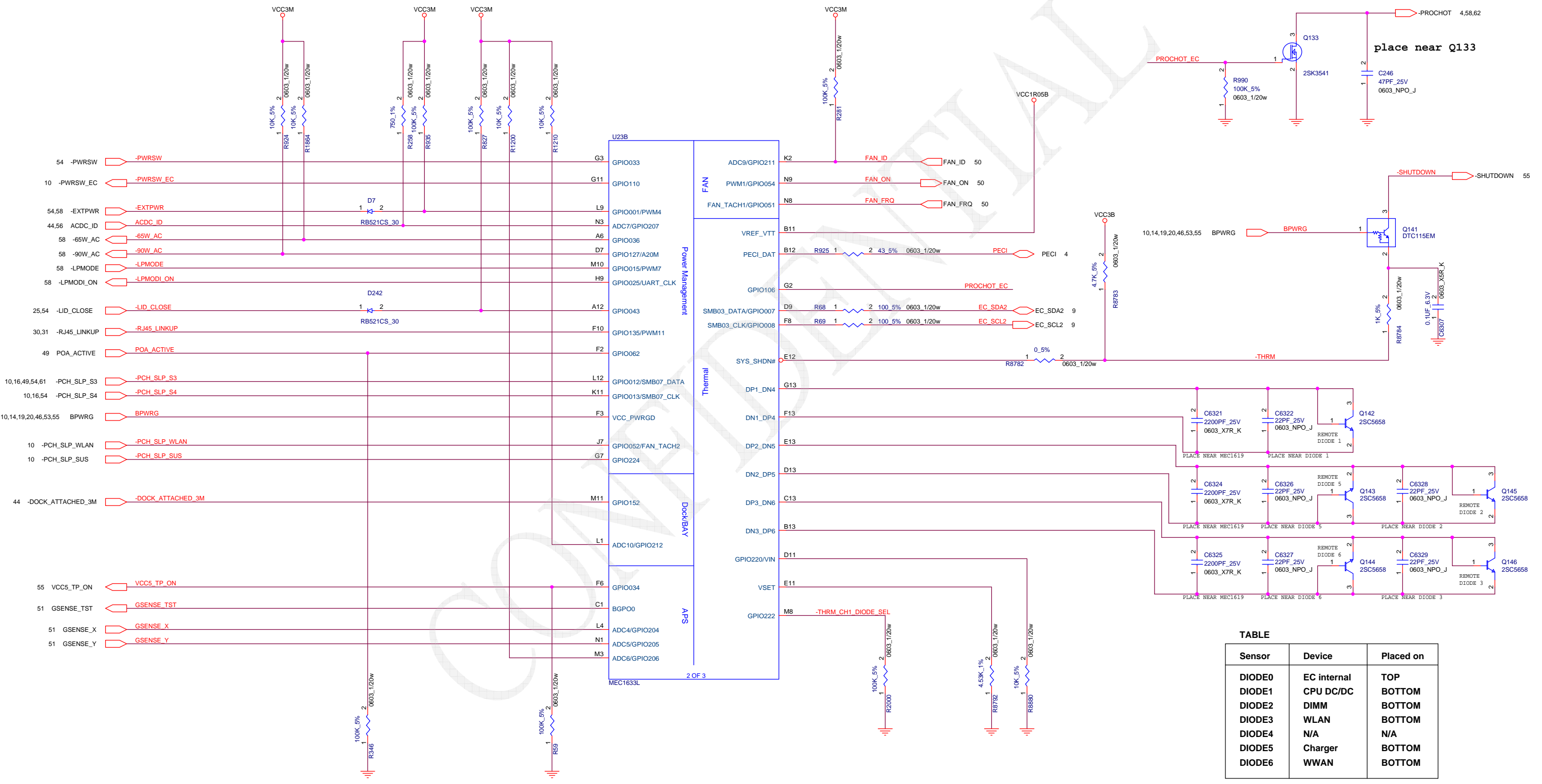


**TABLE**

Swappable Rear Battery			
	Wolverine-1 (Support)	Rogue-2 with Dock (Non-Support)	Rogue-2 w/o Dock (Non-Support)
S2	ASM	ASM	NO-ASM

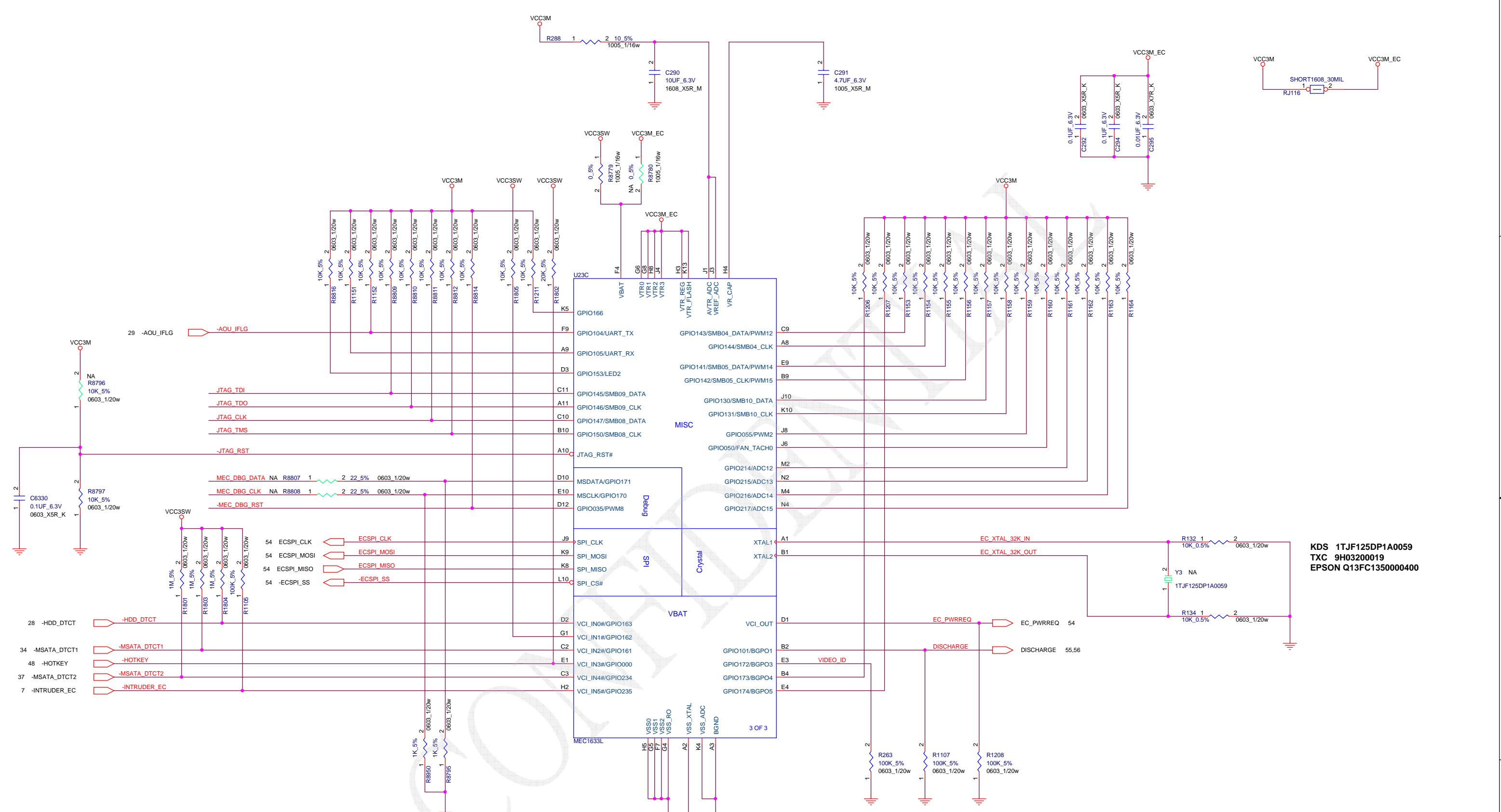
↑  
LOGIC

R258: 750\_1% for New AC Adapter



**TABLE**

Sensor	Device	Placed on
DIODE0	EC internal	TOP
DIODE1	CPU DC/DC	BOTTOM
DIODE2	DIMM	BOTTOM
DIODE3	WLAN	BOTTOM
DIODE4	N/A	N/A
DIODE5	Charger	BOTTOM
DIODE6	WWAN	BOTTOM



KDS 1TJF125DP1A0059  
 TXC 9H03200019  
 EPSON Q13FC1350000400

TABLE

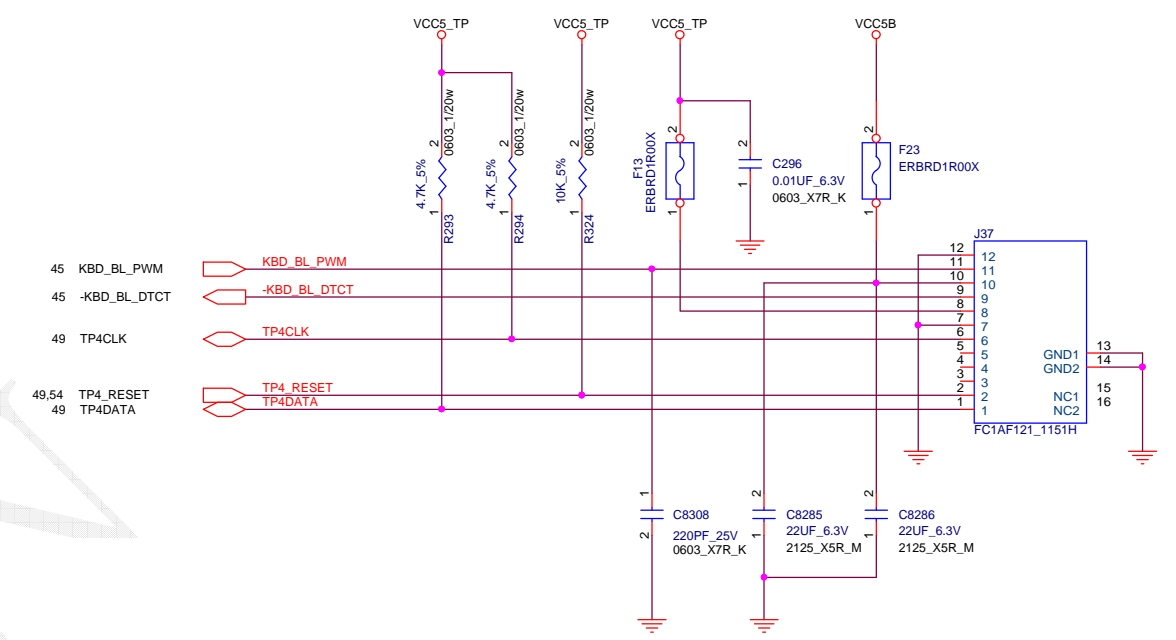
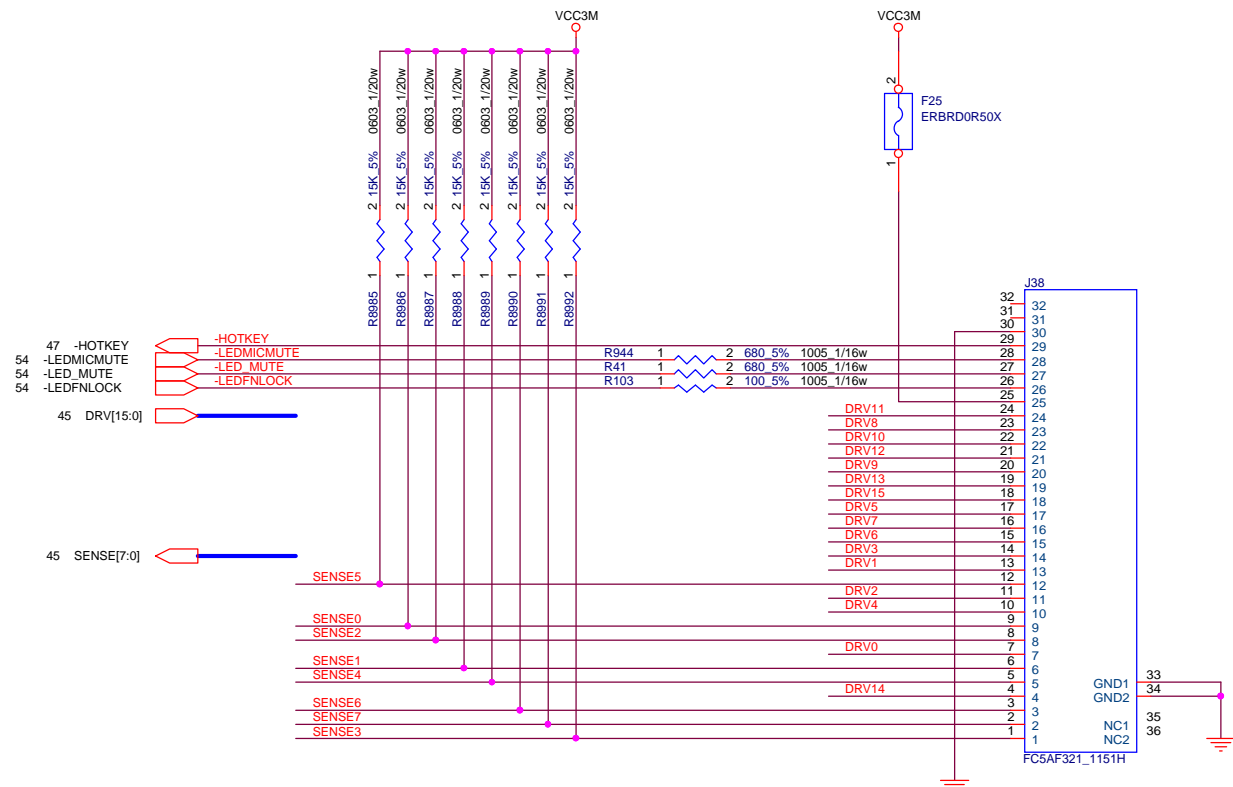
JTAG debug port		
	Enable	Disable
R8796	ASM	NO-ASM
R8797	NO-ASM	ASM
R8830	ASM	NO-ASM

TABLE

trace FIFO debug port		
	Enable	Disable
R8807	ASM	NO-ASM
R8808	ASM	NO-ASM
R8950	NO-ASM	ASM

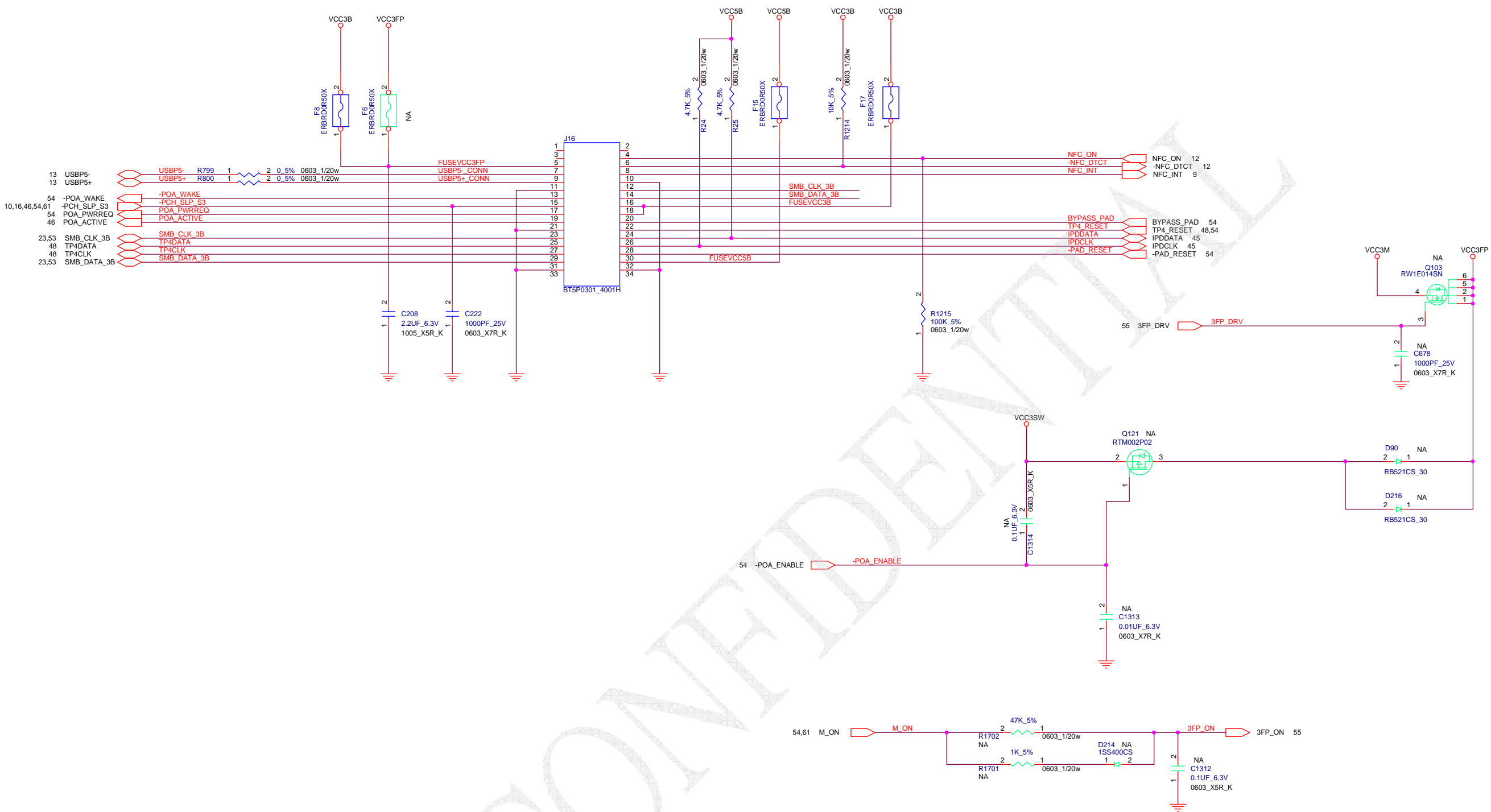
LOGIC

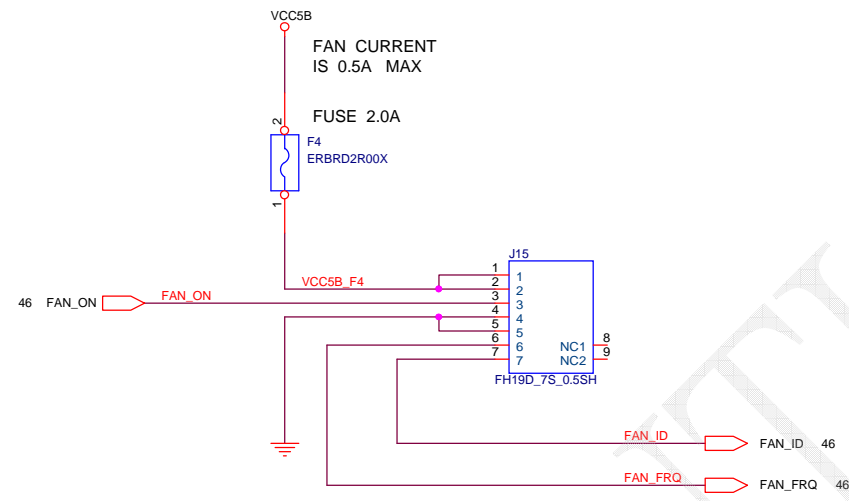
LOGIC



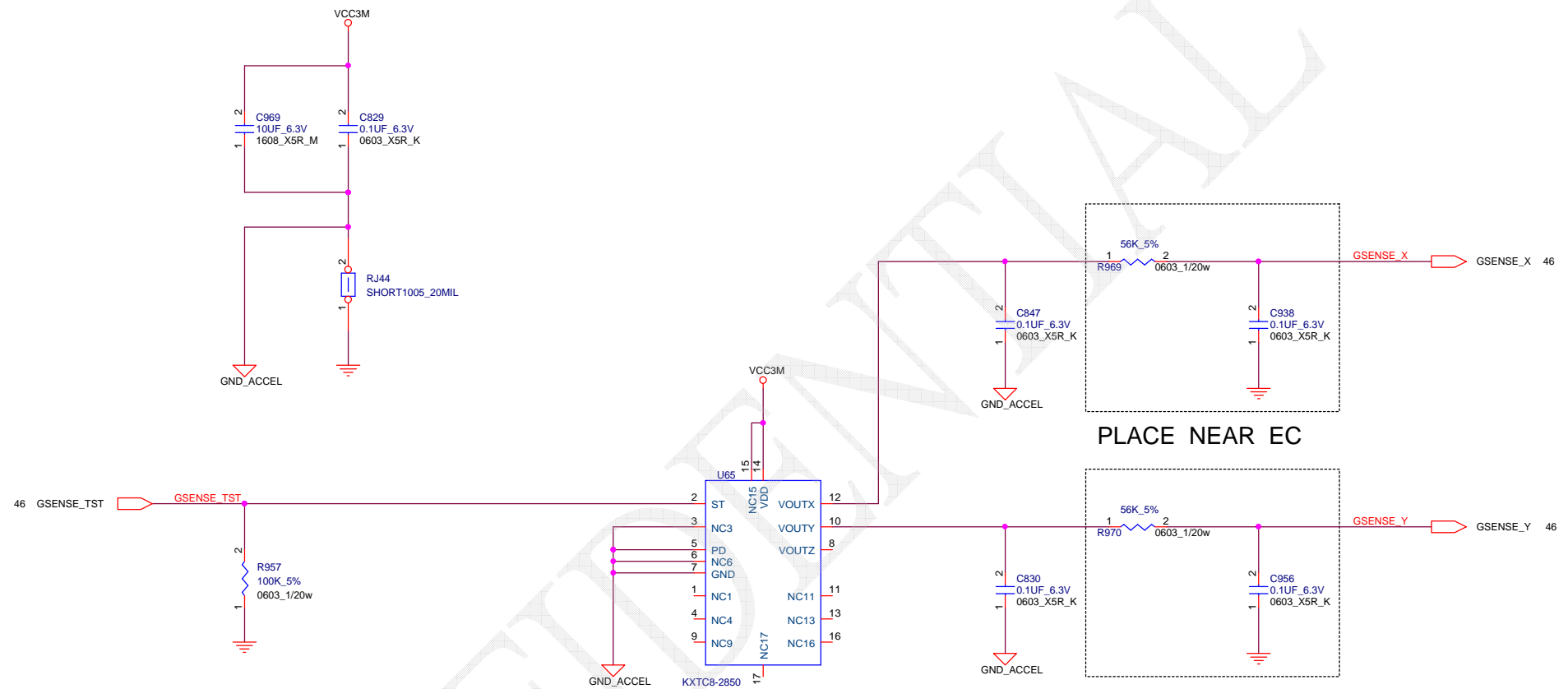
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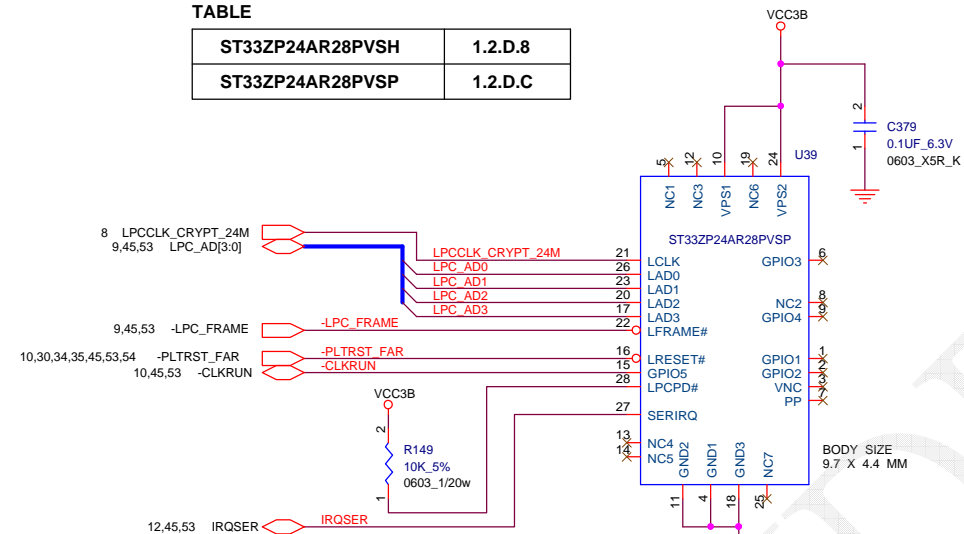
LOGIC  
↓

TABLE

	LIS34AL KXTC8-2850	NO ACC.
R957	ASM	ASM
U65	ASM	NO_ASM
C829	ASM	NO_ASM
C969	ASM	NO_ASM
C830	ASM	NO_ASM
C847	ASM	NO_ASM
R969	56K	NO_ASM
C938	ASM	NO_ASM
R970	56K	NO_ASM
C956	ASM	NO_ASM

TABLE

ST33ZP24AR28PVSH	1.2.D.8
ST33ZP24AR28PVSP	1.2.D.C

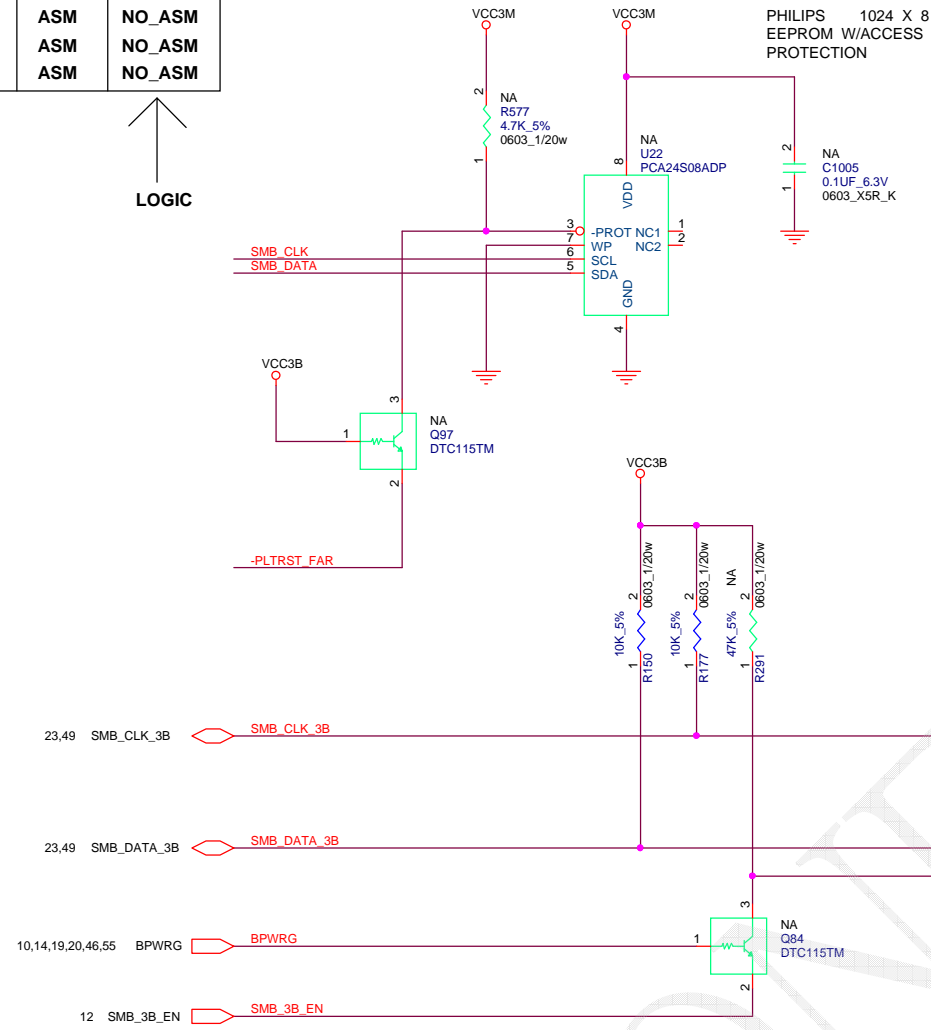


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TABLE

EEPROM	U22	U23
U22	ASM	NO_ASM
C1005	ASM	NO_ASM
R577	ASM	NO_ASM
Q97	ASM	NO_ASM

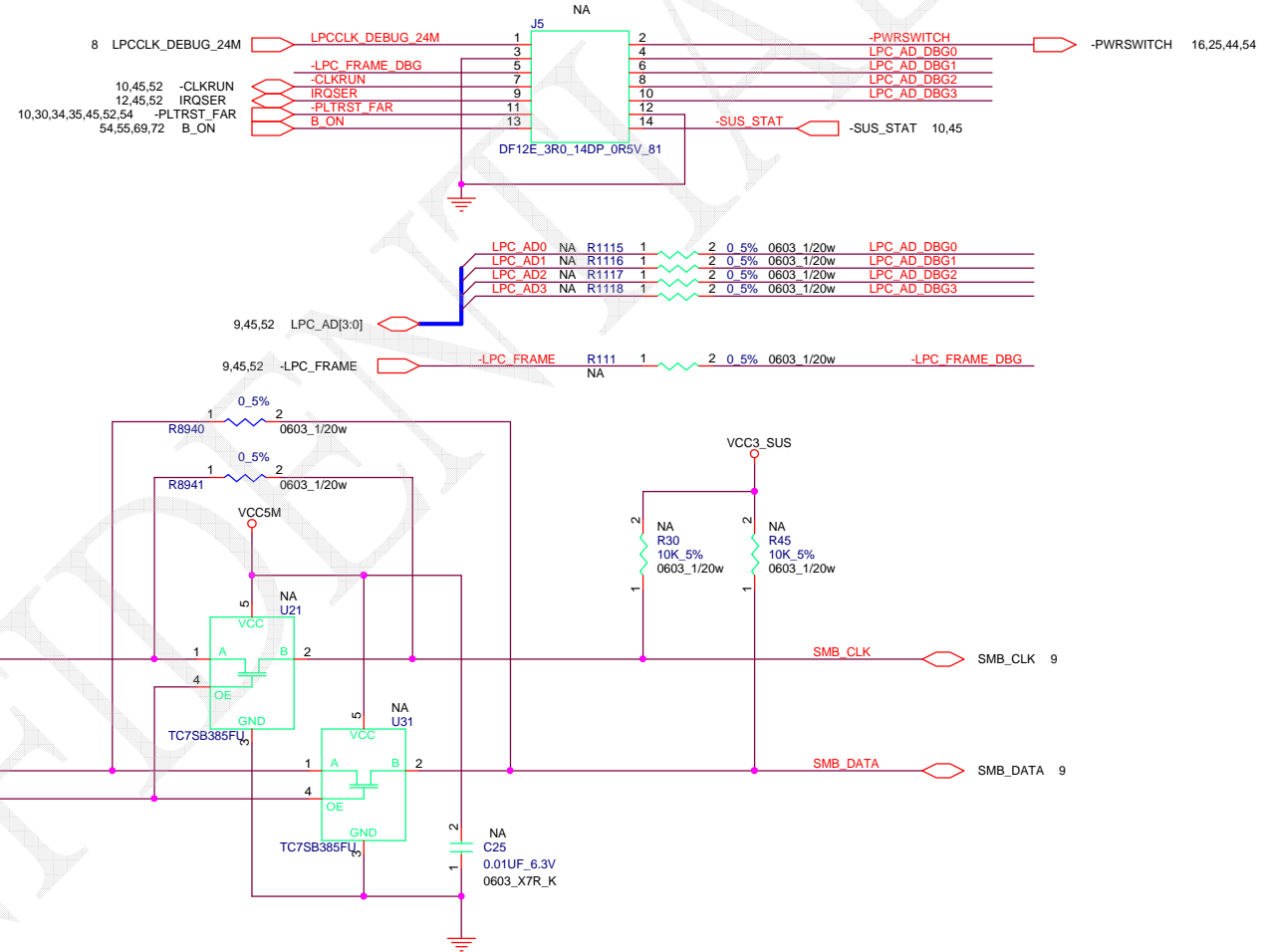
LOGIC



TABLE

REF DES	ENABLE	DISABLE
J5	ASM	NO_ASM
R1115	ASM	NO_ASM
R1116	ASM	NO_ASM
R1117	ASM	NO_ASM
R1118	ASM	NO_ASM
R111	ASM	NO_ASM
R220	ASM	NO_ASM

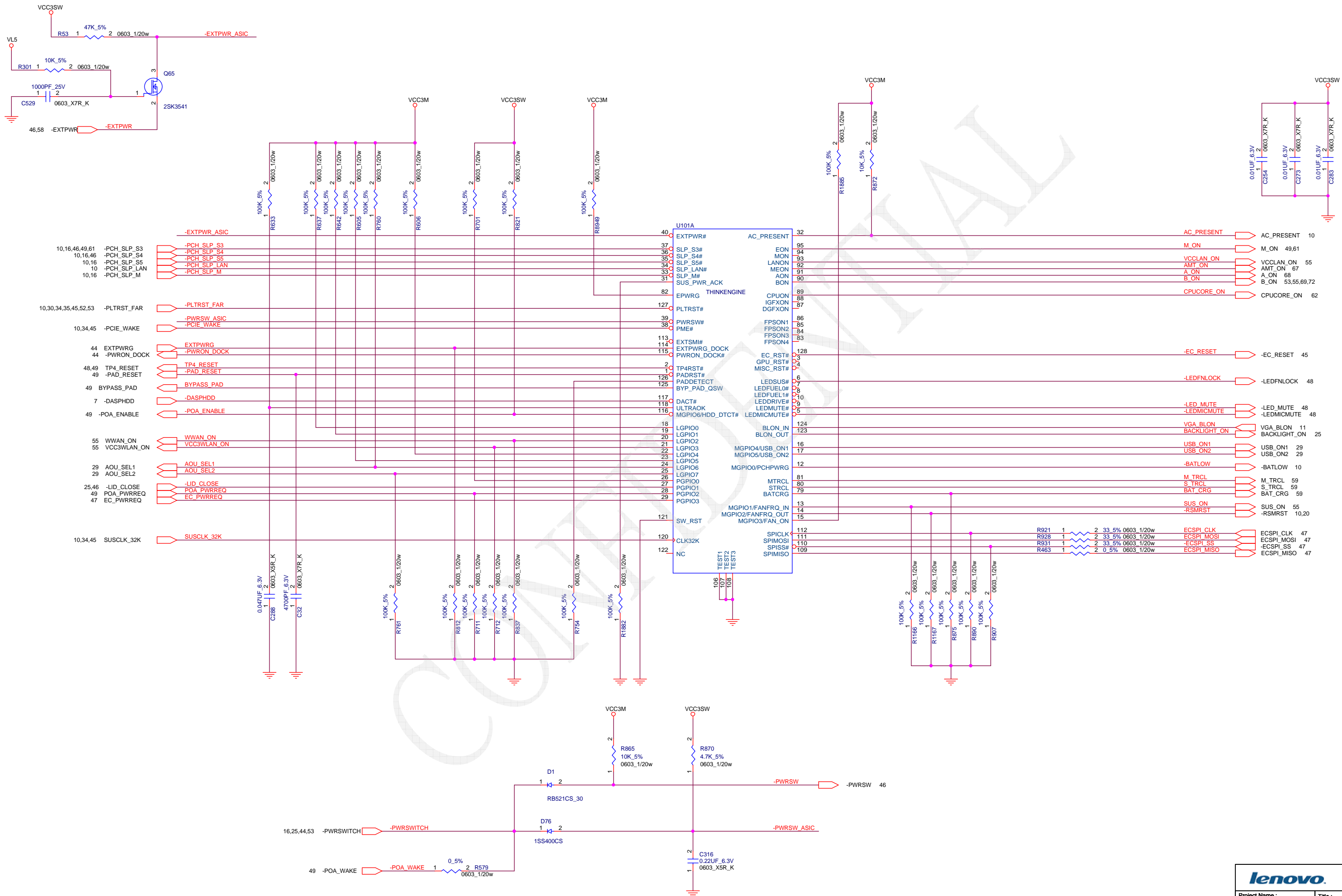
LOGIC



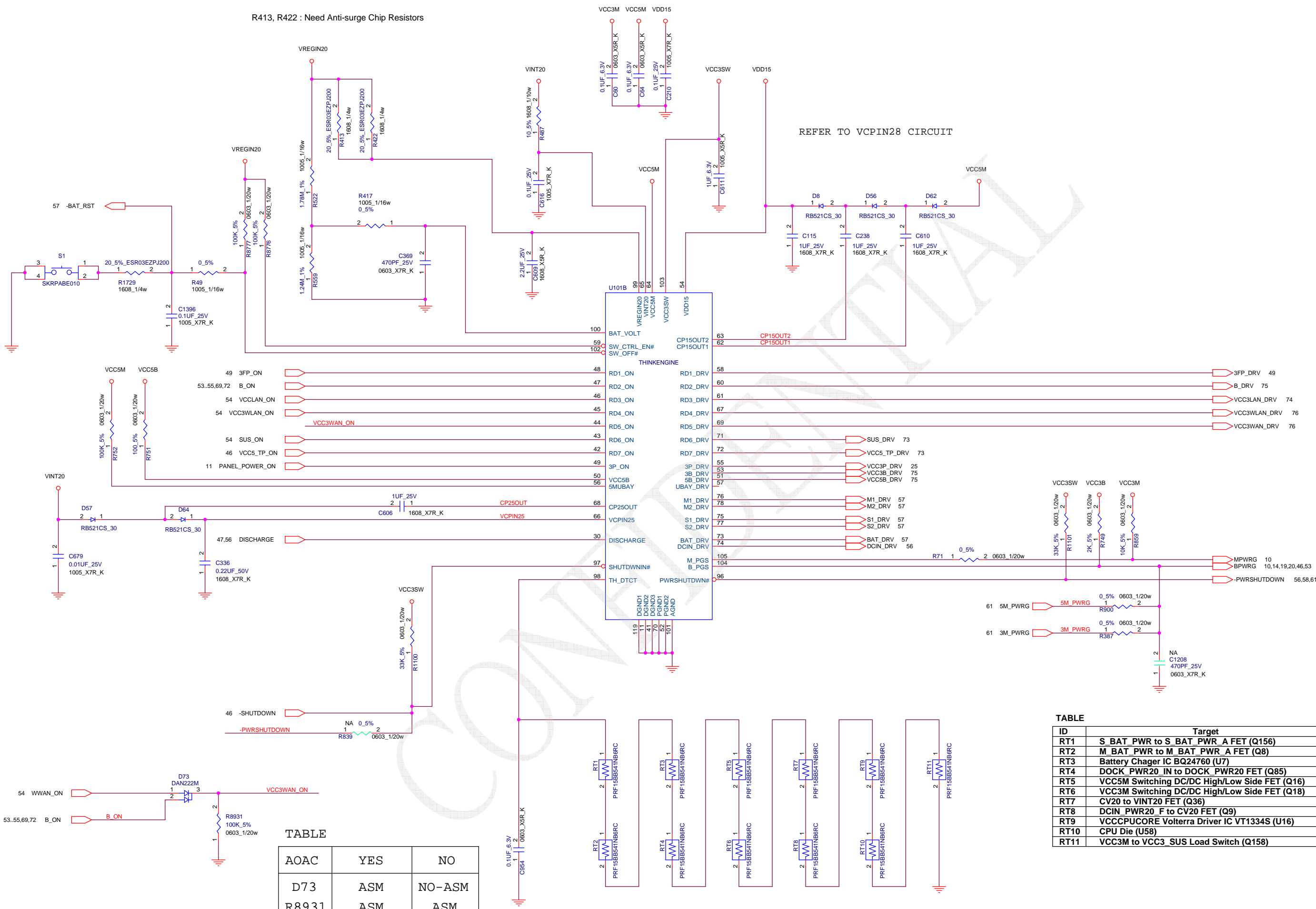
TABLE

EEPROM	U22	U23
U21	ASM	NO_ASM
U31	ASM	NO_ASM
C25	ASM	NO_ASM
R291	ASM	NO_ASM
Q84	ASM	NO_ASM
R8941	NO_ASM	ASM
R8940	NO_ASM	ASM
R30	ASM	NO_ASM
R45	ASM	NO_ASM

LOGIC



R413, R422 : Need Anti-surge Chip Resistors



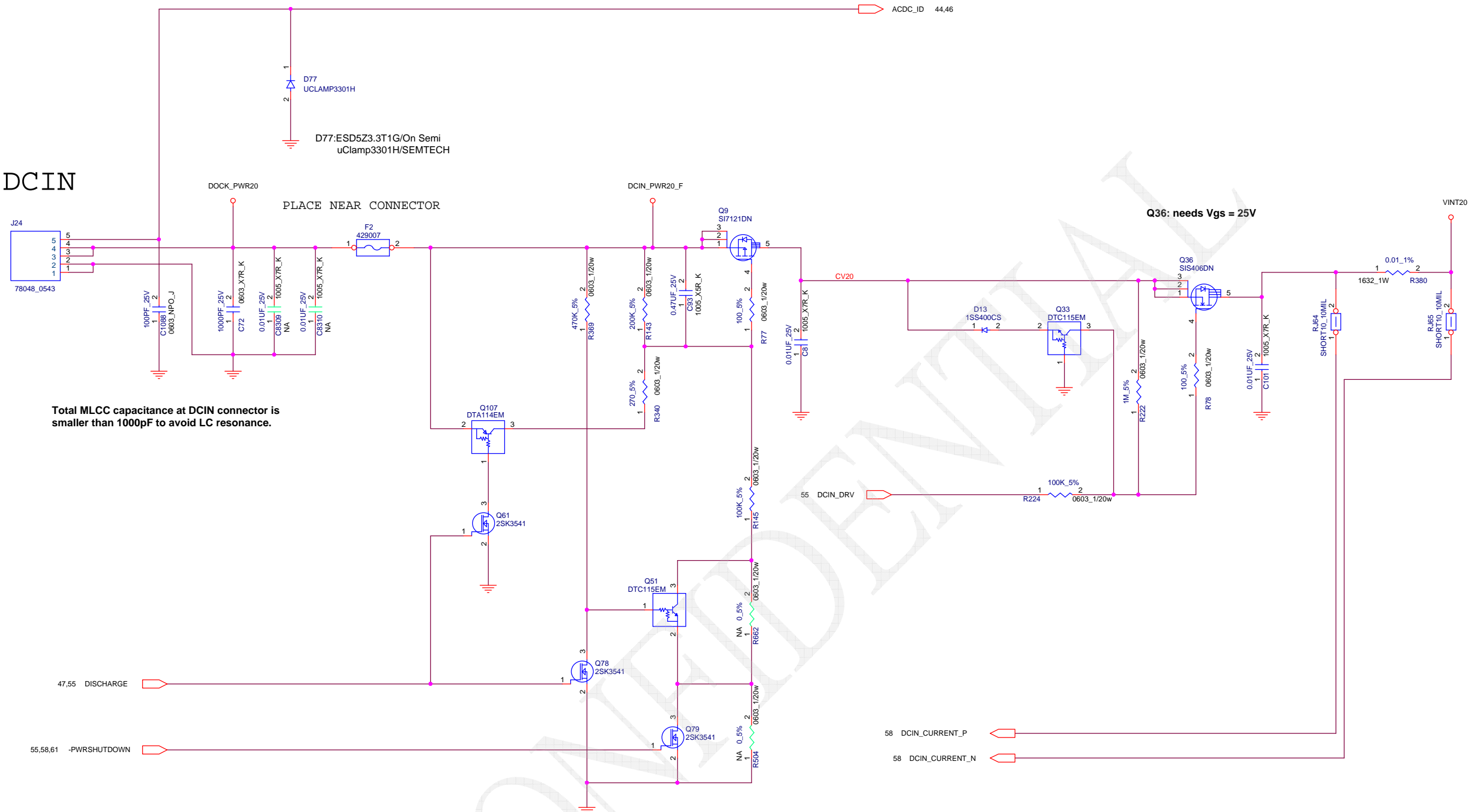
REFER TO VCPIN28 CIRCUIT

AOAC	YES	NO
D73	ASM	NO-ASM
R8931	ASM	ASM
	100K-ohm	0-ohm

↑  
LOGIC

ID	Target
RT1	S_BAT_PWR to S_BAT_PWR_A FET (Q156)
RT2	M_BAT_PWR to M_BAT_PWR_A FET (Q8)
RT3	Battery Chager IC BQ24760 (U7)
RT4	DOCK_PWR20_IN to DOCK_PWR20 FET (Q85)
RT5	VCC5M Switching DC/DC High/Low Side FET (Q16)
RT6	VCC3M Switching DC/DC High/Low Side FET (Q18)
RT7	CV20 to VINT20 FET (Q36)
RT8	DCIN_PWR20_F to CV20 FET (Q9)
RT9	VCCCPUCORE Volterra Driver IC VT1334S (U16)
RT10	CPU Die (U58)
RT11	VCC3M to VCC3_SUS Load Switch (Q158)

# DCIN



Total MLCC capacitance at DCIN connector is smaller than 1000pF to avoid LC resonance.

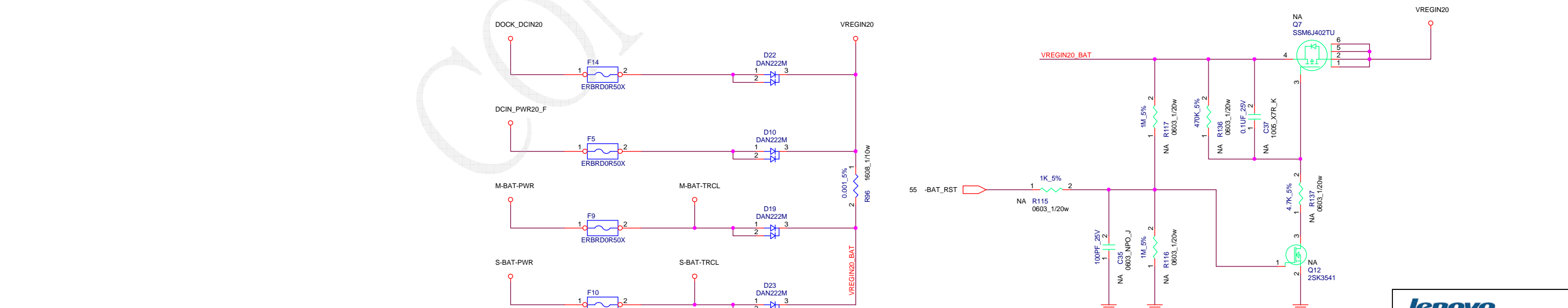
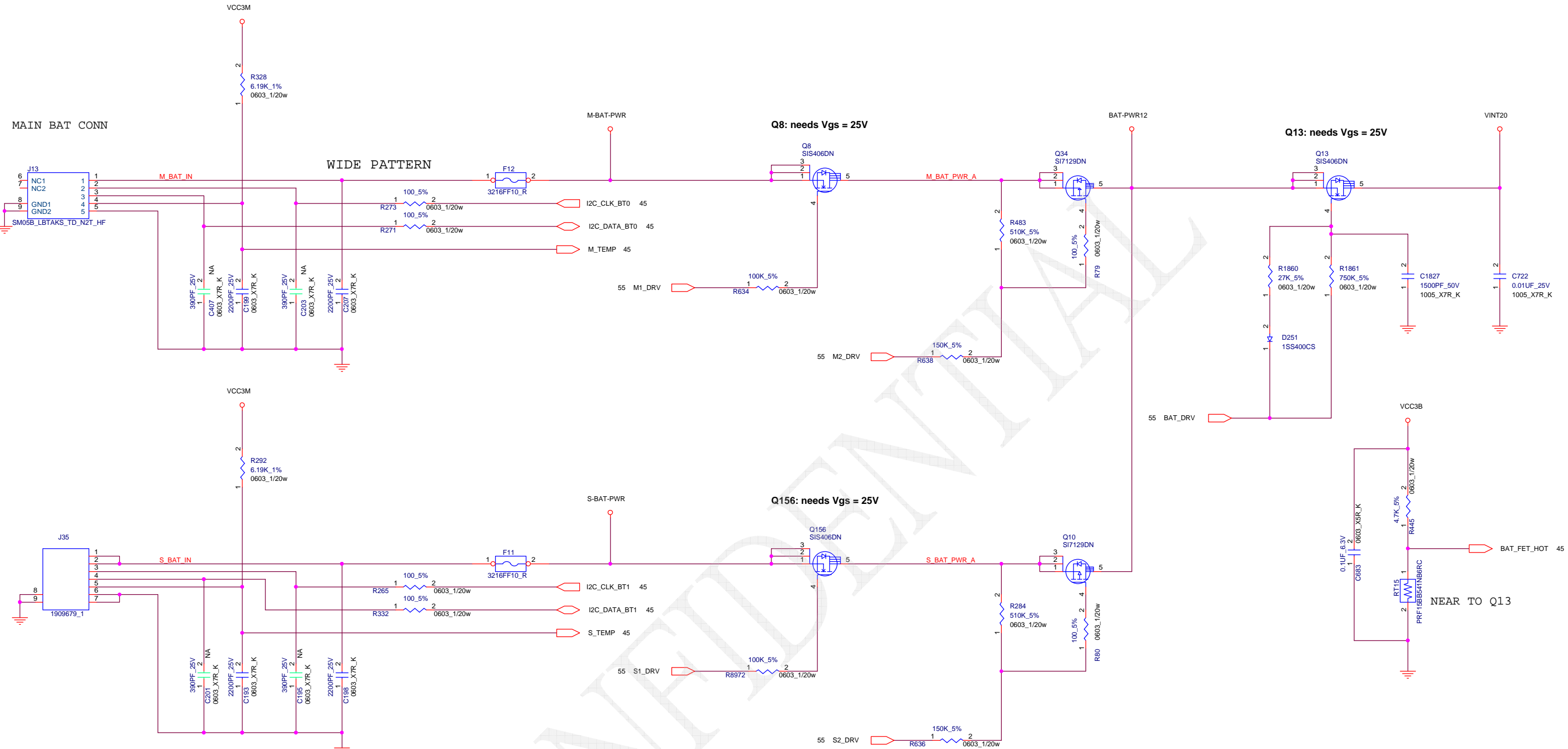
PLACE NEAR CONNECTOR

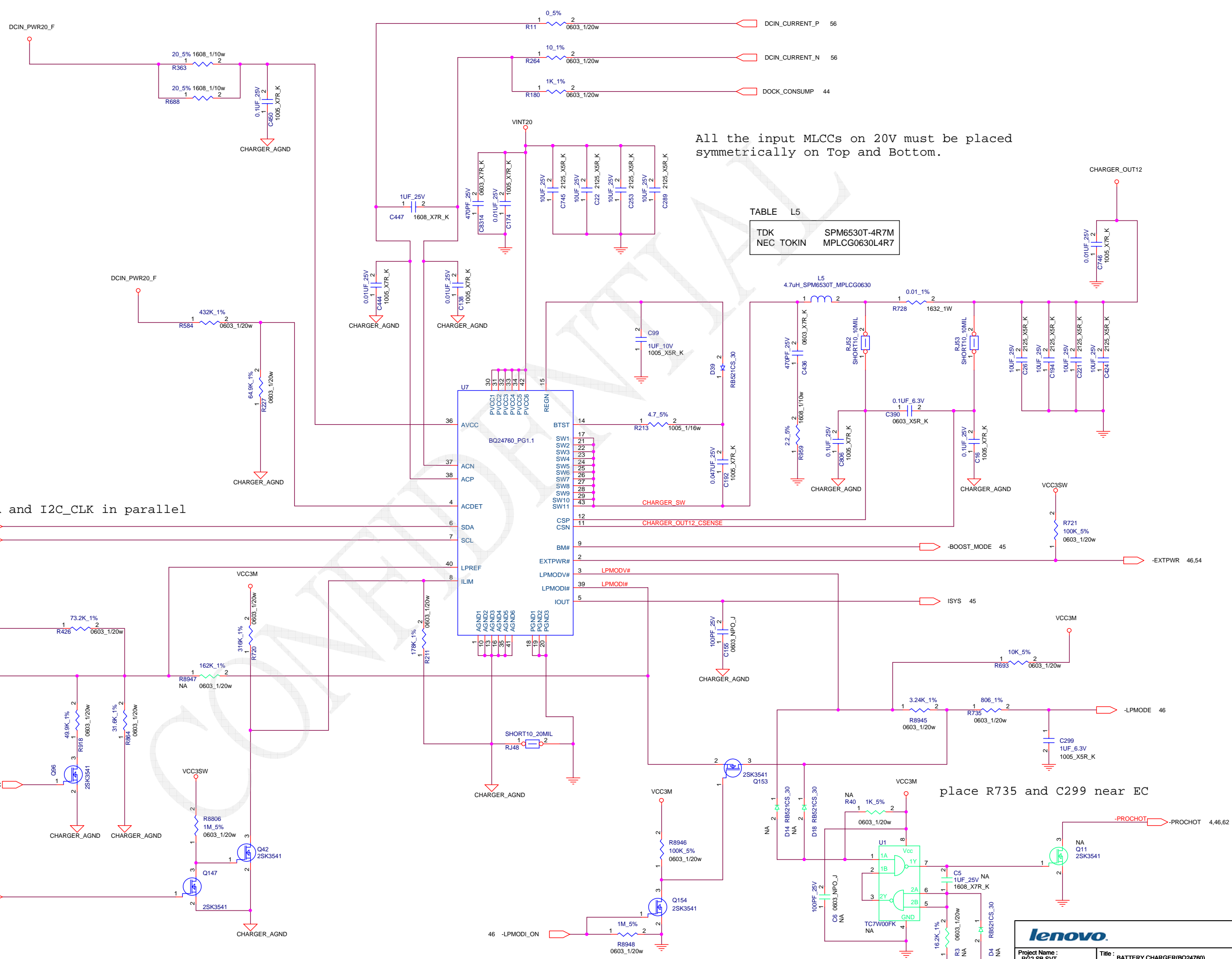
TABLE

PEAK SHIFT	YES	NO
R662	NO-ASM	ASM
R369	ASM	NO-ASM
Q78	ASM	NO-ASM
Q51	ASM	NO-ASM

LOGIC







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

TABLE L5

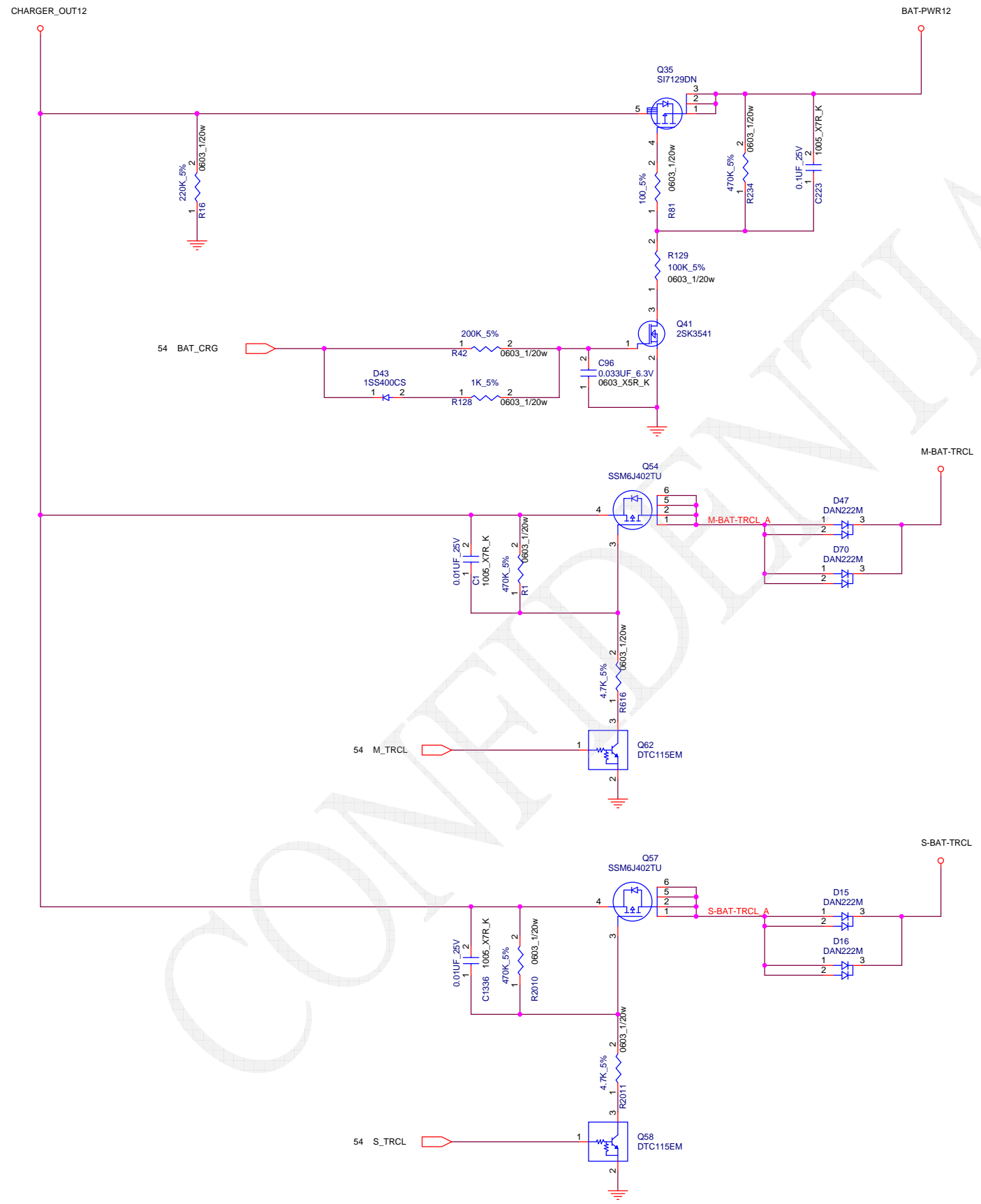
TDK	SPM6530T-4R7M
NEC	MPLCG0630L4R7

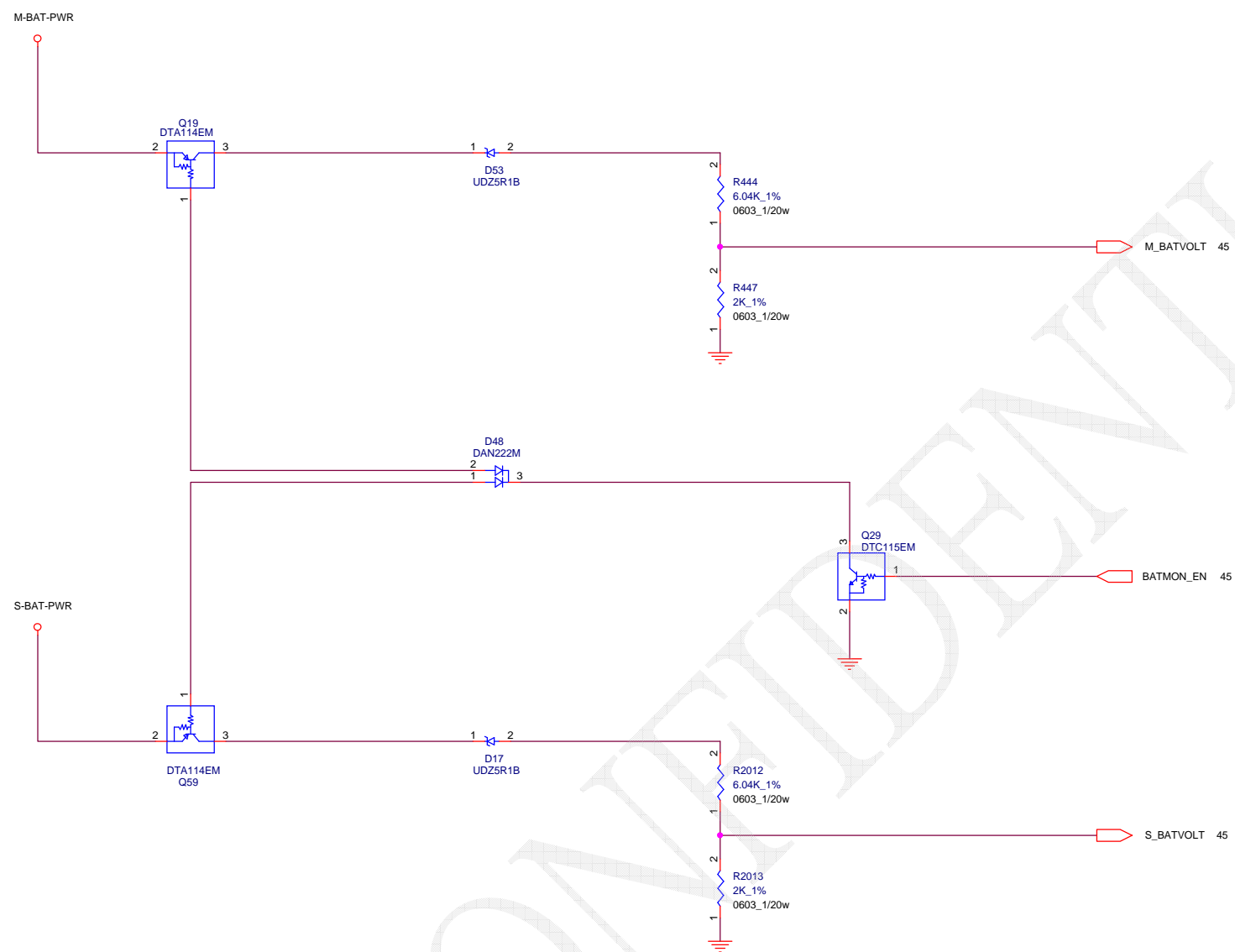
to connect lines of I2C\_DATA and I2C\_CLK in parallel

place R735 and C299 near EC

**lenovo**

Project Name : RG2 SB SVT	Title : BATTERY CHARGER(BQ24760)
Size : C	Document Number :
Date : Thursday, April 11, 2013	Rev : 5.05
Sheet : 58	of 77





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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.

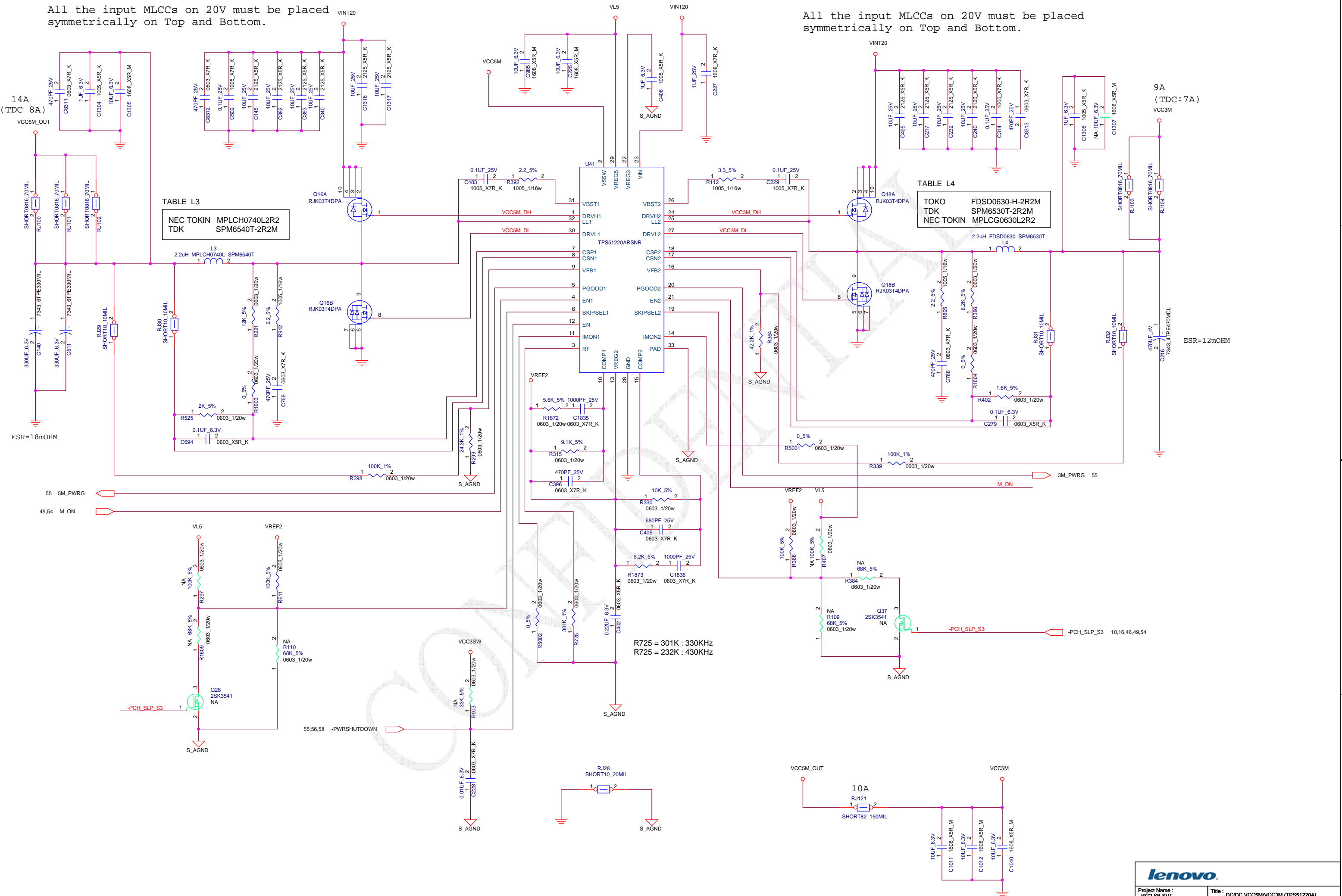


TABLE L3

NEC TOKIN	MPLCH0740L2R2
TDK	SPM6540T-2R2M

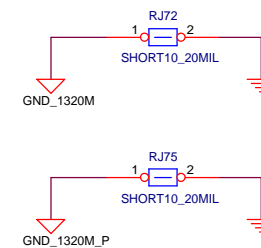
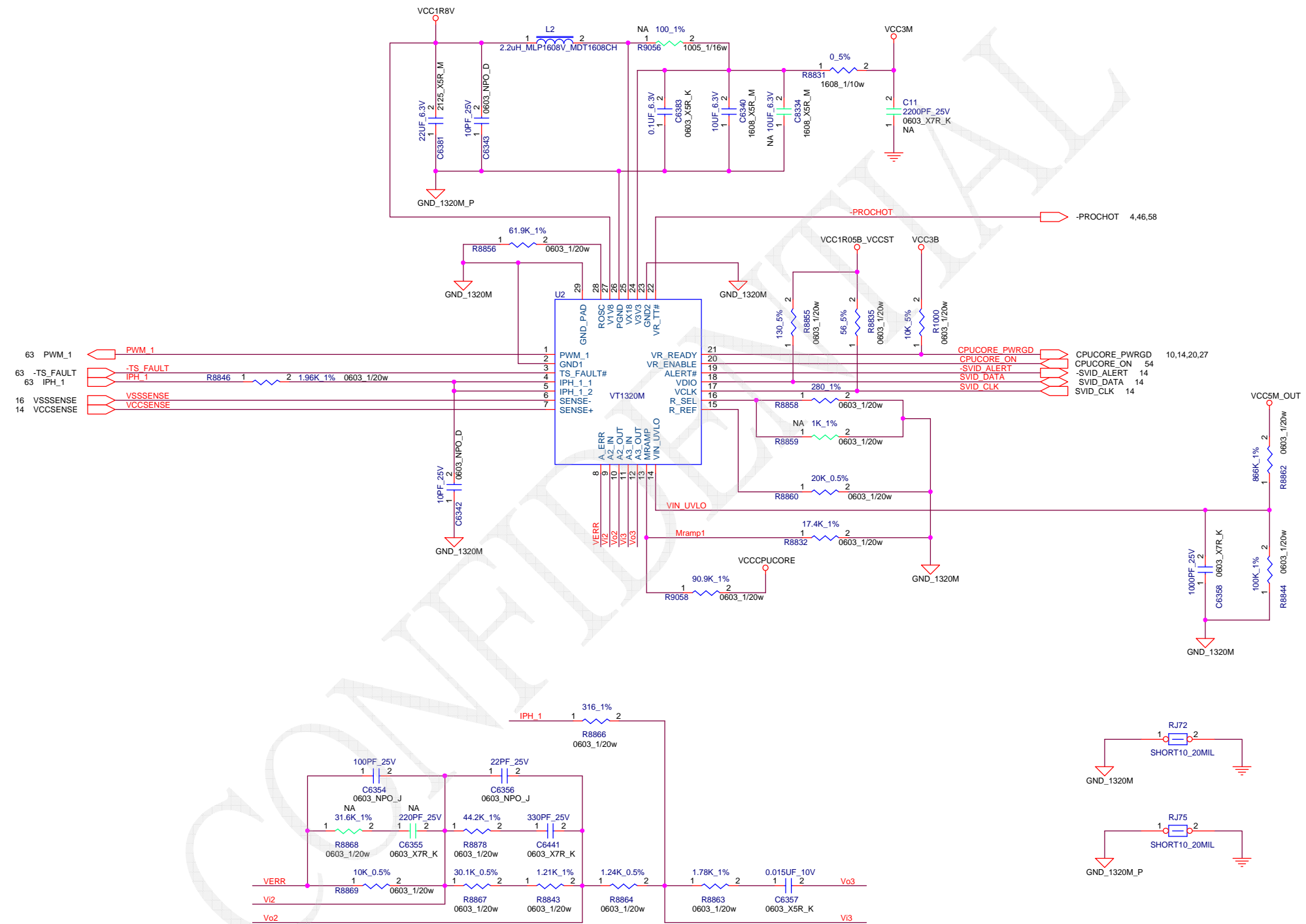
TABLE L4

TOKO	FSD0630-H-2R2M
TDK	SPM6530T-2R2M
NEC TOKIN	MPLCG0630L2R2

R725 = 301K : 330KHz  
R725 = 232K : 430KHz

TABLE L2

TDK	MLP1608V2R2B
TOKO	MDT1608-CH2R2N



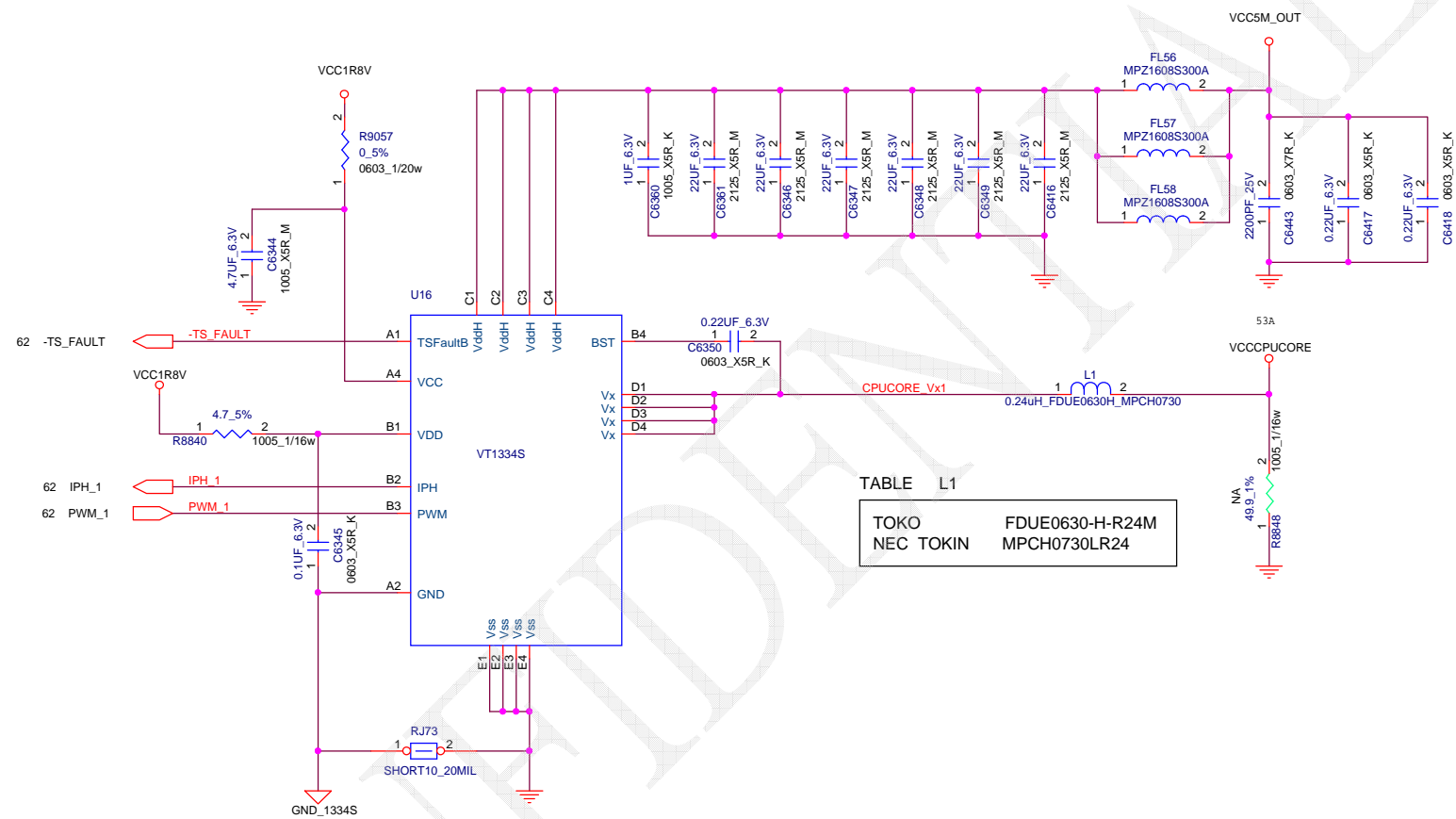


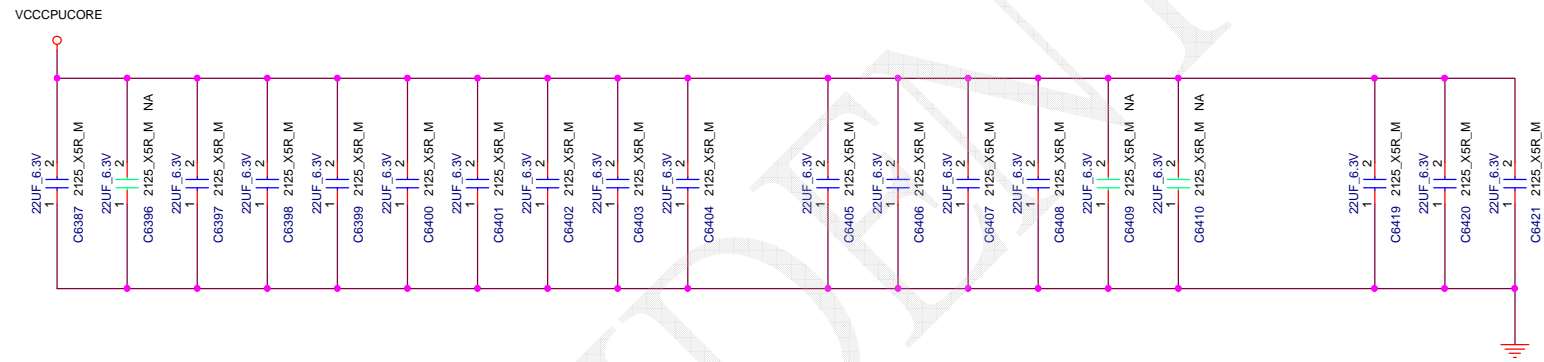
TABLE L1

TOKO	FDUE0630-H-R24M
NEC TOKIN	MPCH0730LR24

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16pcs 22uF for VCCCPUCORE

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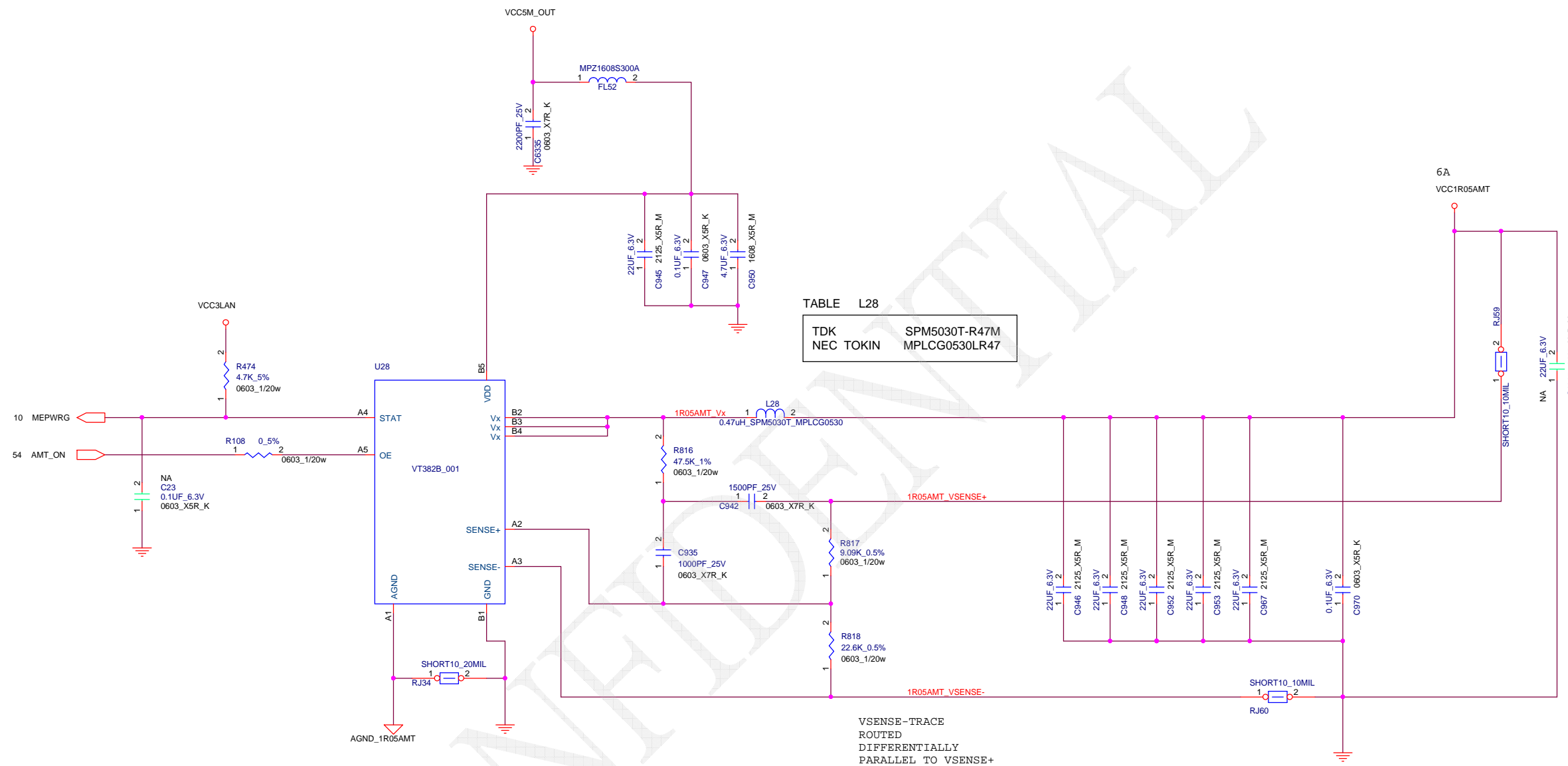


TABLE L28

TDK	SPM5030T-R47M
NEC TOKIN	MPLCG0530LR47

$$V_{out} = 0.75 \times (1 + R817/R818)$$

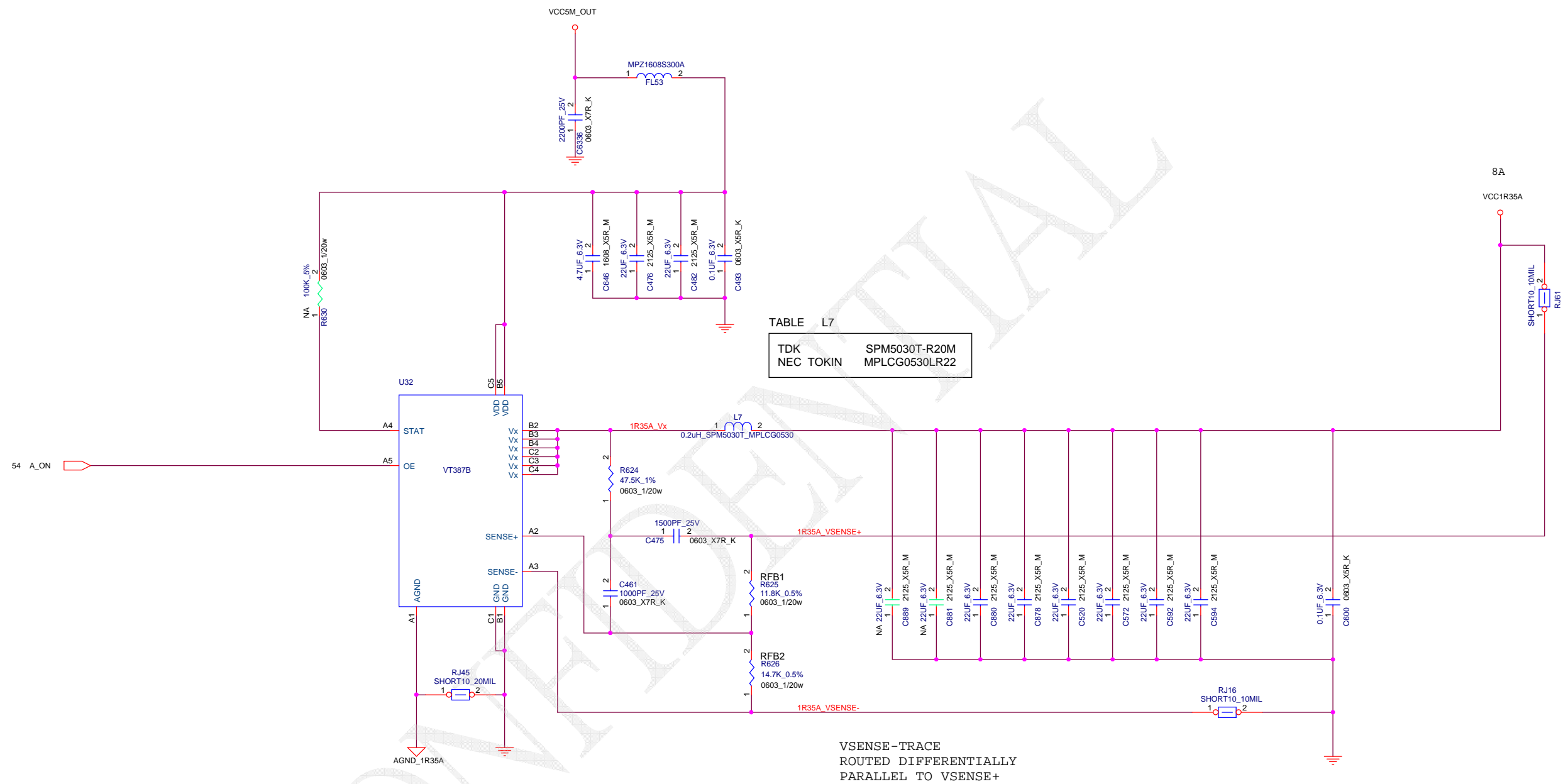


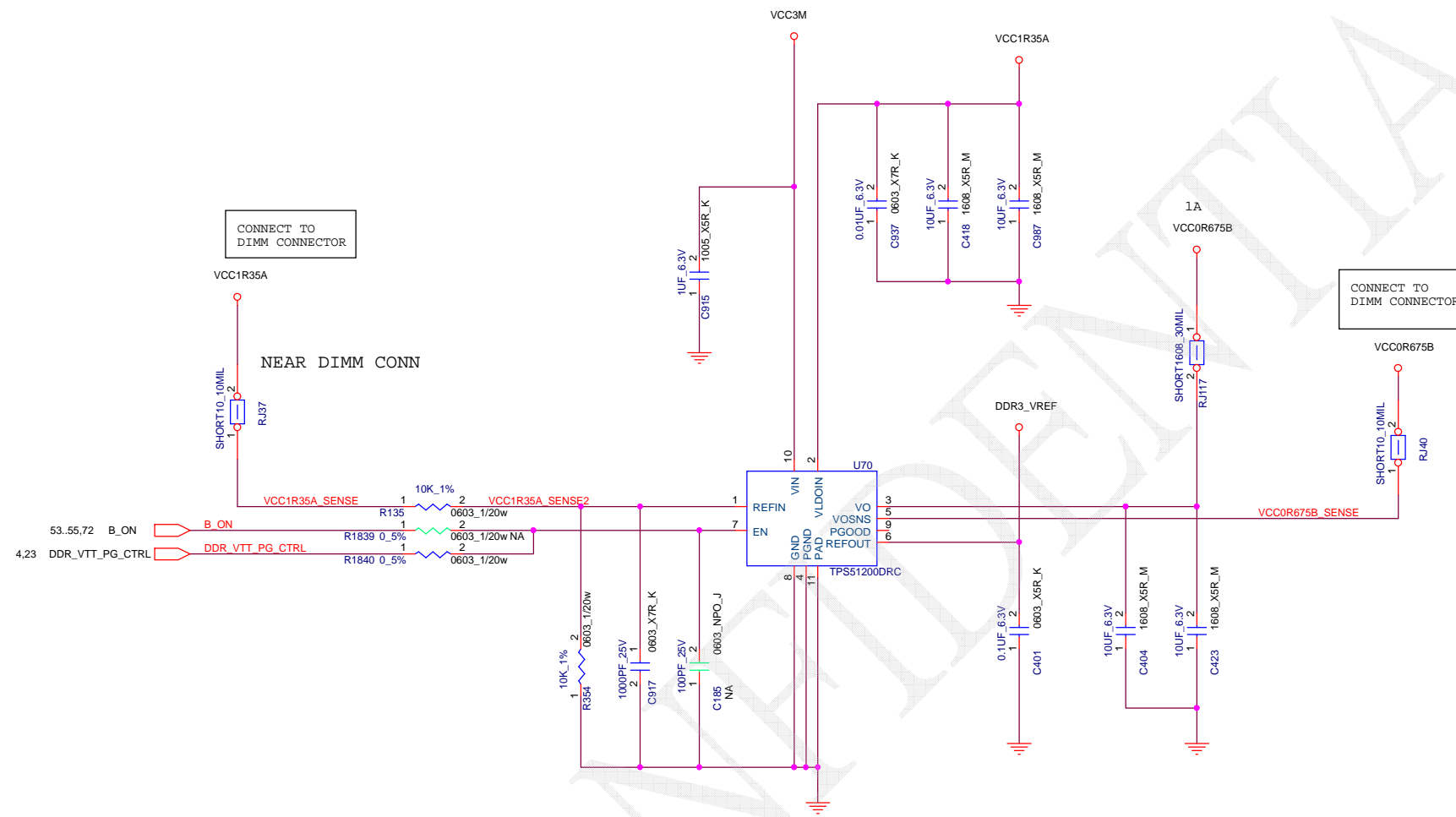
TABLE L7

TDK	SPM5030T-R20M
NEC TOKIN	MPLCG0530LR22

VSENSE-TRACE  
ROUTED DIFFERENTIALLY  
PARALLEL TO VSENSE+

$$V_{out} = 0.75 \times (1 + (R_{FB1} / R_{FB2}))$$

RFB1	RFB2
11.8K	14.7K for 1.35V
13.3K	13.3K for 1.50V

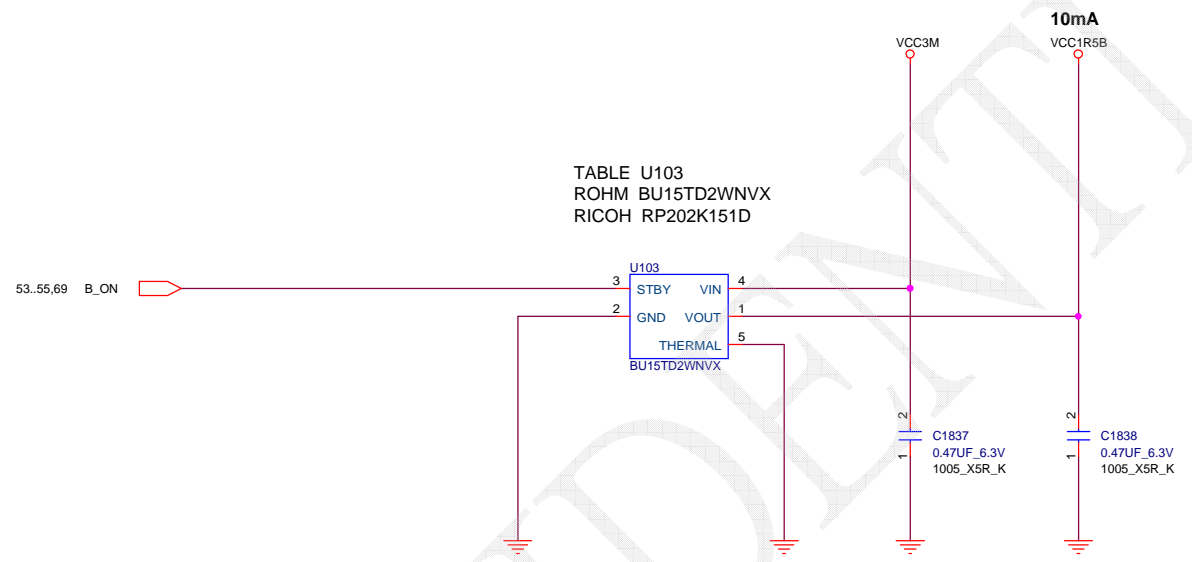


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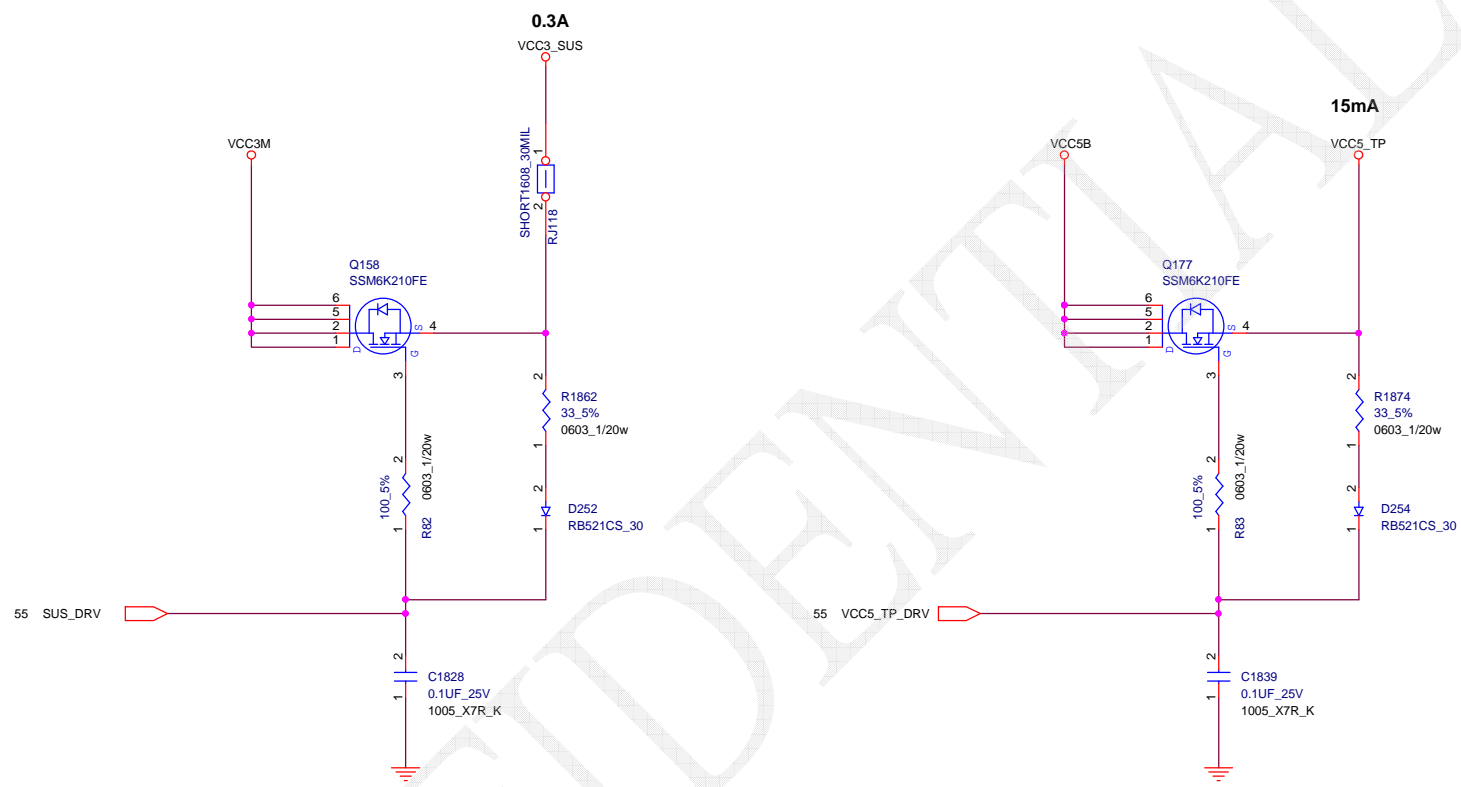
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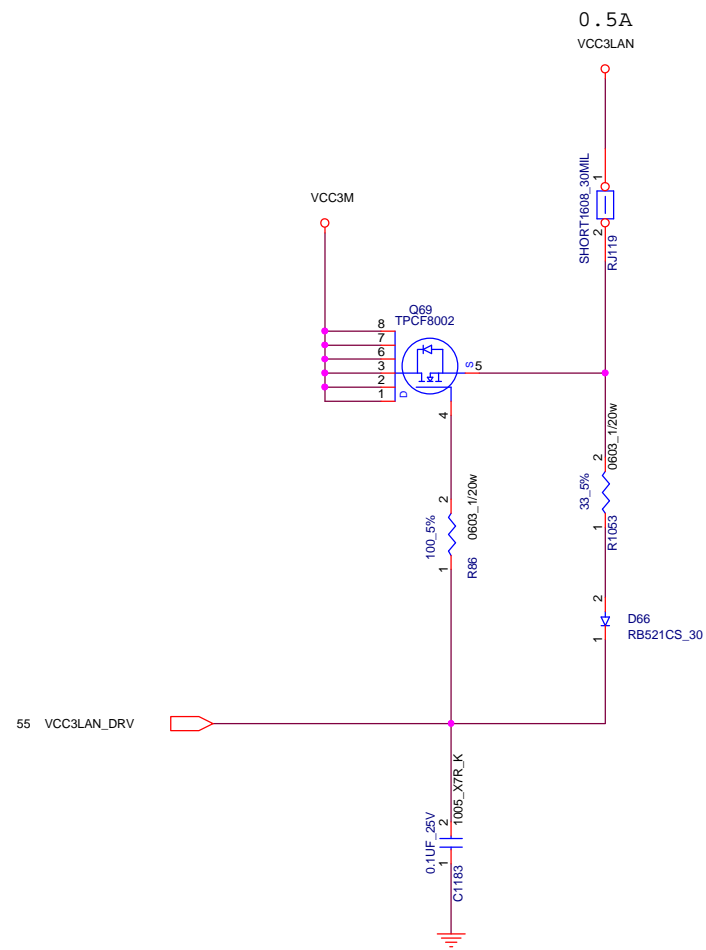


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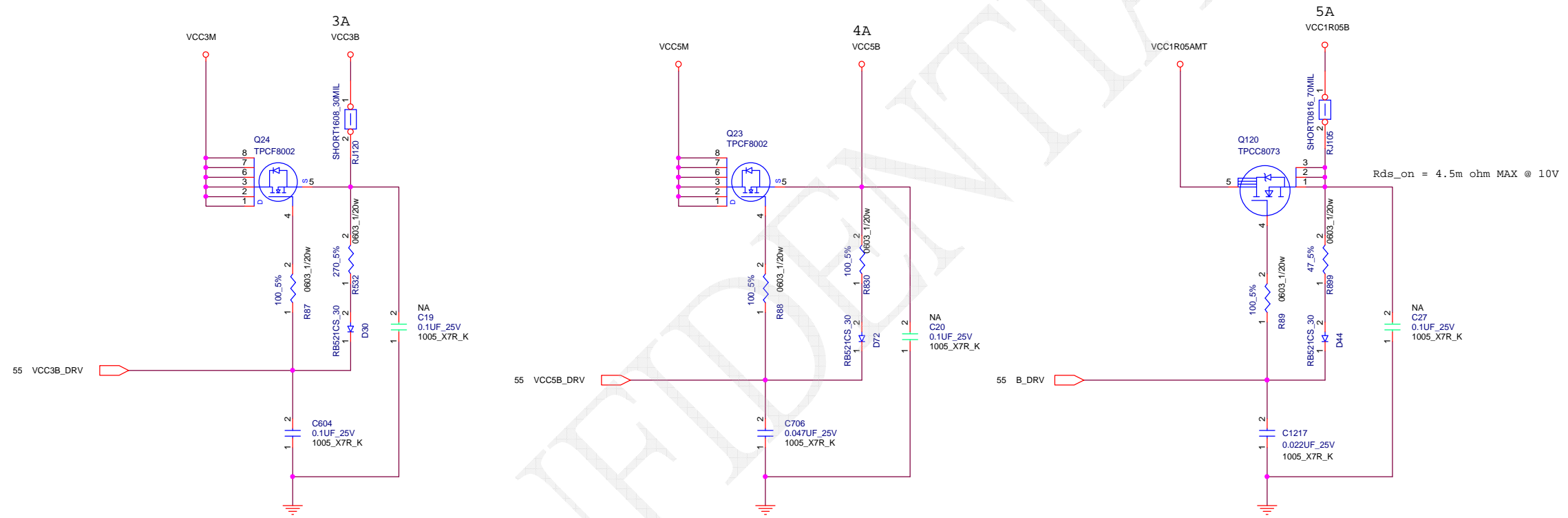


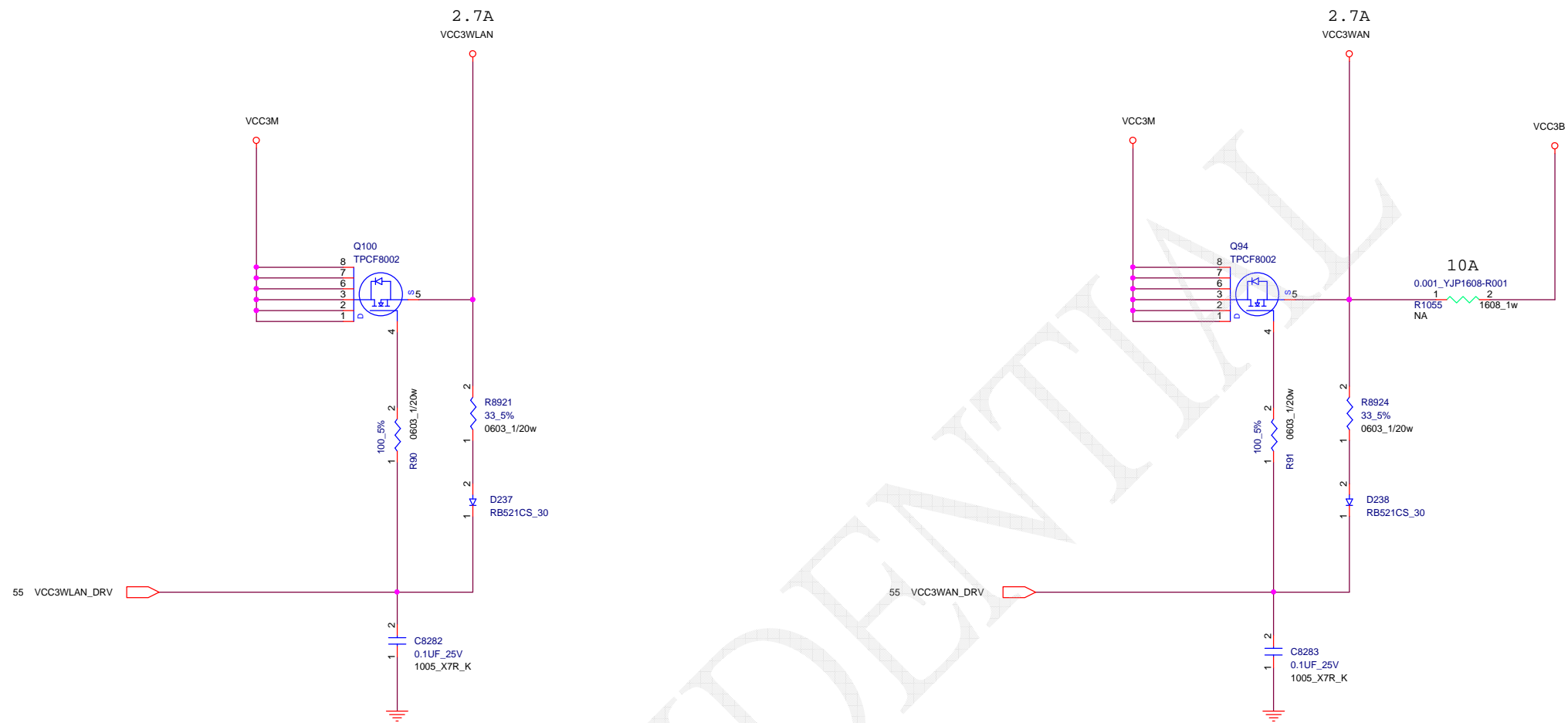


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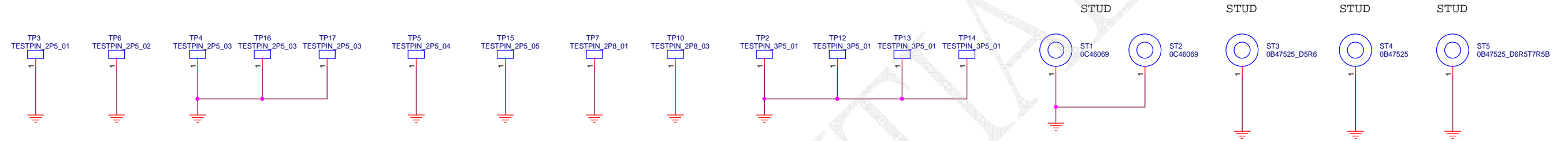
TABLE

AOAC	YES	NO
R1055	NO-ASM	ASM
Q94	ASM	NO-ASM
R8924	ASM	NO-ASM
R8926	ASM	NO-ASM
C8283	ASM	NO-ASM
D238	ASM	NO-ASM

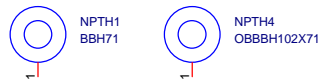
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LOGIC

PTH FOR SCREW HOLE

Value	Hole Dia	Pad Dia		QTY
		TOP	BOTTOM	
TESTPIN_2P5_01	2.5	6.5	6.5	1
TESTPIN_2P5_02	2.5	6.5	8	1
TESTPIN_2P5_03	2.5	6.6	6.6	3
TESTPIN_2P5_04	2.5	6.5	5	1
TESTPIN_2P5_05	2.5	6.5	8x7.5	1
TESTPIN_2P8_01	2.8	6.5	6.5	1
TESTPIN_2P8_03	2.8	7	7.5	1
TESTPIN_3P5_01	3.5	7	6.5	4
0C46069	2.8	6.5	6.5	2
0B47525_D5R6	3.4	5.6		1
0B47525	3.4	6.6		1
0B47525_D6R5TB	3.4	6.5	6.5	1



NPTH



FID Board Area

- FD1: 1 NC, NO CONNECT TO ANY.
- FD2: 1 NC, NO CONNECT TO ANY.
- FD3: 1 NC, NO CONNECT TO ANY.
- FD4: 1 NC, NO CONNECT TO ANY.
- FD5: 1 NC, NO CONNECT TO ANY.
- FD6: 1 NC, NO CONNECT TO ANY.

FID Component Area

- CF1: 1 NC, NO CONNECT TO ANY.
- CF2: 1 NC, NO CONNECT TO ANY.
- CF3: 1 NC, NO CONNECT TO ANY.
- CF4: 1 NC, NO CONNECT TO ANY.
- CF5: 1 NC, NO CONNECT TO ANY.
- CF6: 1 NC, NO CONNECT TO ANY.
- CF7: 1 NC, NO CONNECT TO ANY.
- CF8: 1 NC, NO CONNECT TO ANY.
- CF9: 1 NC, NO CONNECT TO ANY.
- CF10: 1 NC, NO CONNECT TO ANY.
- CF11: 1 NC, NO CONNECT TO ANY.
- CF12: 1 NC, NO CONNECT TO ANY.
- CF13: 1 NC, NO CONNECT TO ANY.
- CF14: 1 NC, NO CONNECT TO ANY.
- CF15: 1 NC, NO CONNECT TO ANY.
- CF16: 1 NC, NO CONNECT TO ANY.
- CF17: 1 NC, NO CONNECT TO ANY.
- CF18: 1 NC, NO CONNECT TO ANY.
- CF19: 1 NC, NO CONNECT TO ANY.
- CF20: 1 NC, NO CONNECT TO ANY.
- CF21: 1 NC, NO CONNECT TO ANY.
- CF22: 1 NC, NO CONNECT TO ANY.
- CF27: 1 NC, NO CONNECT TO ANY.
- CF28: 1 NC, NO CONNECT TO ANY.