

# Oasis-1 SHB SOVP LOGIC SCHEMATICS

OAS1H-0

VER 1.01

Aug/08/2013

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39.BLANK  
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42.BLANK  
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44.SATA BAY I/F CONN  
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46.AOU/USB POWER SWITCH  
47.GBE LAN CLARKVILLE  
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50.PCIE NGFF CARD SLOT  
51.MEDIA CARD CONTROLLER  
52.MEDIA CARD INTERFACE  
53.SMART CARD/3rd NGFF I/F  
54.AUDIO ALC3232  
55.AUDIO CONNECTOR  
56.AUDIO JACK SENSE  
57.AUDIO EXT MIC I/F  
58.AUDIO SPEAKER  
59.AUDIO BEEP  
60.DOCKING CONNECTOR  
61.MEC1633L(1/3)  
62.MEC1633L(2/3)  
63.MEC1633L(3/3)  
64.KEYBOARD CONNECTOR  
65.CLICK PAD/NFC/FPR CONNECTOR  
66.BLANK  
67.FAN CONNECTOR  
68.G-SENSOR  
69.TPM  
70.EEPROM/SMBUS SW

71.THINK ENGINE(1/2)  
72.THINK ENGINE(2/2)  
73.DC-IN  
74.BATTERY INPUT  
75.BATTERY CHARGER(BQ24760)  
76.CHARGER SELECTOR  
77.BATTERY MONITOR  
78.DC/DC VCC5M/VCC3M (TPS51220A)  
79.DC/DC VCCCPUCORE(TPS51631)  
80.DC/DC VCCCPUCORE(CSD97374)  
81.BLANK  
82.VCCCPUCORE DECOUPLING  
83.DC/DC VCCGFXCORE\_D (TPS51219)  
84.BLANK  
85.DC/DC VCC1R05AMT(VT384B)  
86.DC/DC VCC1R35A(VT387B)  
87.DC/DC VCC0R675B(TPS51200)  
88.DC/DC VCC1R5VIDEO(VT382B)  
89.DC/DC VCC1R05VIDEO\_PLL(TPS74801)  
90.BLANK  
91.BLANK  
92.DC/DC VCC1R5B(BD3551)  
93.LOAD SW PCH SUS  
94.LOAD SW LAN  
95.LOAD SW VIDEO  
96.LOAD SW B  
97.LOAD SW VCC5MUBAY  
98.LOAD SW WWAN & WLAN  
99.PTH FOR SCREW HOLES

		
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EC HISTORY

Oasis-1 SP ASSESS (BASE LOGIC :NZM5H-0 VER 0.44 May/18/2012)

SDV stage

VER.0.01 05/29/2012 APPLIED OA1\_SP\_EC001

VER.0.02 05/31/2012 APPLIED OA1\_SP\_EC002

VER.0.03 06/05/2012 APPLIED OA1\_SP\_EC003,004

VER.0.04 06/06/2012 APPLIED OA1\_SP\_EC005

VER.0.05 06/07/2012 APPLIED OA1\_SP\_EC006-010

VER.0.06 06/08/2012 APPLIED OA1\_SP\_EC011,012,014-016

VER.0.07 06/13/2012 APPLIED OA1\_SP\_EC017-019

VER.0.08 06/14/2012 APPLIED OA1\_SP\_EC020

VER.0.09 06/18/2012 APPLIED OA1\_SP\_EC021-024

VER.0.10 06/20/2012 APPLIED OA1\_SP\_EC025-027

VER.0.11 06/27/2012 APPLIED OA1\_SP\_EC028-040,042

VER.0.12 06/28/2012 APPLIED OA1\_SP\_EC043-055

VER.0.13 06/29/2012 APPLIED OA1\_SP\_EC056,057

VER.0.14 07/02/2012 APPLIED OA1\_SP\_EC058-062

VER.0.15 07/03/2012 APPLIED OA1\_SP\_EC063,064

VER.0.16 07/04/2012 APPLIED OA1\_SP\_EC065,066

VER.0.17 07/05/2012 APPLIED OA1\_SP\_EC069-073,075,078,079

VER.0.18 07/06/2012 APPLIED OA1\_SP\_EC067,068,074,076,077

VER.0.19 07/10/2012 APPLIED OA1\_SP\_EC080,081

VER.0.20 07/12/2012 APPLIED OA1\_SP\_EC082-087

VER.0.21 07/31/2012 APPLIED OA1\_MB\_SDV\_EC001\_0727

VER.0.22 08/03/2012 APPLIED OA1\_MB\_SDV\_EC002\_0803

VER.0.23 08/07/2012 APPLIED OA1\_MB\_SDV\_EC003\_0807

VER.0.24 08/10/2012 APPLIED OA1\_MB\_SDV\_EC004\_0810

08/14/2012 APPLIED OA1\_MB\_SDV\_EC005\_0814

VER.0.25 08/15/2012 APPLIED OA1\_MB\_SDV\_EC006\_0815

VER.0.26 08/17/2012 APPLIED OA1\_MB\_SDV\_EC007\_0817

VER.0.27 08/23/2012 APPLIED OA1\_MB\_SDV\_EC008\_0823

VER.0.28 08/28/2012 APPLIED OA1\_MB\_SDV\_EC009\_0828

VER.0.29 08/29/2012 APPLIED OA1\_MB\_SDV\_EC010\_0829

VER.0.30 08/31/2012 APPLIED OA1\_MB\_SDV\_EC011\_0831

VER.0.31 09/04/2012 APPLIED OA1\_MB\_SDV\_EC012\_0904

VER.0.32 09/06/2012 APPLIED OA1\_MB\_SDV\_EC013\_0906

VER.0.33 09/10/2012 APPLIED OA1\_MB\_SDV\_EC014\_0910

09/11/2012 APPLIED OA1\_MB\_SDV\_EC015\_0911

VER.0.34 09/12/2012 APPLIED OA1\_MB\_SDV\_EC016\_0912

VER.0.35 09/14/2012 APPLIED OA1\_MB\_SDV\_EC017\_0914

VER.0.36 09/20/2012 APPLIED OA1\_MB\_SDV\_EC018\_0920

09/21/2012 APPLIED OA1\_MB\_SDV\_EC019\_0921

VER.0.37 09/24/2012 APPLIED OA1\_MB\_SDV\_EC020\_0924

VER.0.38 09/26/2012 APPLIED OA1\_MB\_SDV\_EC021\_0926

VER.0.39 09/28/2012 APPLIED OA1\_MB\_SDV\_EC022\_0928

VER.0.40 10/02/2012 APPLIED OA1\_MB\_SDV\_EC023\_1002

VER.0.41 10/04/2012 APPLIED OA1\_MB\_SDV\_EC024\_1004

10/04/2012 APPLIED OA1\_MB\_SDV\_EC025\_1004a

10/05/2012 APPLIED OA1\_MB\_SDV\_EC026\_1005

VER.0.42 10/08/2012 APPLIED OA1\_MB\_SDV\_EC027\_1008

10/11/2012 APPLIED OA1\_MB\_SDV\_EC028\_1011

VER.0.43 10/16/2012 APPLIED OA1\_MB\_SDV\_EC029\_1015

VER.0.44 10/16/2012 APPLIED OA1\_MB\_SDV\_EC030\_1016

10/17/2012 APPLIED OA1\_MB\_SDV\_EC031\_1017

VER.0.45 10/18/2012 APPLIED OA1\_MB\_SDV\_EC032\_1018

VER.0.46 10/29/2012 APPLIED OA1\_MB\_SDV\_EC033\_1029

VER.0.47 11/02/2012 APPLIED OA1\_MB\_SDV\_EC034\_1102

MFVT stage

VER.1.01 11/22/2012 APPLIED OA1\_MB\_MFVT\_EC001\_1120

VER.1.02 12/03/2012 APPLIED OA1\_MB\_MFVT\_EC002\_1203

12/05/2012 APPLIED OA1\_MB\_MFVT\_EC003\_1205

VER.1.03 12/10/2012 APPLIED OA1\_MB\_MFVT\_EC004\_1210

FVT stage

VER.0.01 12/19/2012 APPLIED OA1\_MB\_FVT\_EC001\_1219

12/21/2012 APPLIED OA1\_MB\_FVT\_EC002\_1221

VER.0.02 12/21/2012 APPLIED OA1\_MB\_FVT\_EC003\_1221\_R1

12/25/2012 APPLIED OA1\_MB\_FVT\_EC004\_1225

VER.0.03 12/26/2012 APPLIED OA1\_MB\_FVT\_EC005\_1226

VER.0.04 12/27/2012 APPLIED OA1\_MB\_FVT\_EC006\_1227

VER.0.05 12/28/2012 APPLIED OA1\_MB\_FVT\_EC007\_1228

VER.0.06 01/03/2012 APPLIED ECR\_1R05VIDEO\_PLL discharge.ppt

RF\_EC\_FVT\_0103-oscar.ppt

VER.1.00 01/04/2012 APPLIED FVT gerber out

VER.1.01 01/08/2013 APPLIED OA1\_MB\_FVT\_EC008\_0108

OA1\_MB\_FVT\_EC008\_0108\_R1

VER.1.02 01/17/2013 APPLIED OA1\_MB\_FVT\_EC009\_0117

SIT stage

VER.0.01 02/06/2013 APPLIED OA1\_MB\_SIT\_EC001\_0206

VER.0.02 02/18/2013 APPLIED OA1\_MB\_SIT\_EC002\_0218

VER.0.03 02/25/2013 APPLIED OA1\_MB\_SIT\_EC003\_0225

VER.0.04 03/07/2013 APPLIED OA1\_MB\_SIT\_EC004\_0307

VER.0.05 03/08/2013 APPLIED OA1\_MB\_SIT\_EC005\_0308

VER.0.06 03/11/2013 APPLIED OA1\_MB\_SIT\_EC006\_0311

03/12/2013 APPLIED OA1\_MB\_SIT\_EC007\_0312

VER.0.07 03/13/2013 APPLIED OA1\_MB\_SIT\_EC008\_0313

03/14/2013 APPLIED RF\_EC\_SIT\_0305-Tony.pptx

Oasis EMC solution list on FVT stage 20130204

VER.0.08 03/14/2013 APPLIED OA1\_MB\_SIT\_EC009\_0314

VER.1.00 03/19/2013 APPLIED SIT gerber out

VER.1.01 03/25/2013 APPLIED OA1\_MB\_SIT\_EC010\_0325

VER.1.02 04/02/2013 Applied ECR\_20130416

SIT-v stage

VER.0.01 04/19/2013 APPLIED OA1\_MB\_SITV\_EC001\_0419

VER.0.02 04/25/2013 APPLIED OA1\_MB\_SITV\_EC002\_0425

VER.1.00 05/02/2013 Applied ECR\_20130502

VER.1.01 05/09/2013 APPLIED OA1\_MB\_SITV\_EC003\_05/09

05/10/2013 APPLIED OA1\_MB\_SITV\_EC004\_05/10

VER.1.02 05/20/2013 APPLIED ECR\_20130520

06/14/2013 APPLIED ECR\_20130614

SVT stage

VER.0.01 06/12/2013 APPLIED OA1\_MB\_SVT\_EC001\_0612

VER.0.02 06/18/2013 APPLIED OA1\_MB\_SVT\_EC002\_0618

06/18/2013 APPLIED OA1\_MB\_SVT\_EC003\_0618

VER.0.03 06/24/2013 APPLIED OA1\_MB\_SVT\_EC004\_0624

06/25/2013 APPLIED OA1\_MB\_SVT\_EC005\_0625

VER.1.00 06/26/2013 APPLIED OA1\_MB\_SVT\_EC006\_0626

06/26/2013 APPLIED OA1\_MB\_SVT\_EC007\_0626

VER.1.01 06/28/2013 APPLIED OA1\_MB\_SVT\_EC008\_0628

VER.1.02 07/11/2013 APPLIED OA1\_MB\_SVT\_EC009\_0711

SOVP stage

VER.1.00 08/06/2013 APPLIED ECR\_20130806

VER.1.01 08/08/2013 APPLIED ECR\_20130808

General BOM Structure

@ : No ASM for all model

UMA@ : ASM for UMA model, No ASM for SWG model

SWG@ : No ASM for UMA model, ASM for SWG model

CONN\_ASM@ : ASM connector

CONN\_NOASM@ : NO ASM connector

PLM@ : For PCB material

VRAM BOM Structure

M1G@ : ASM for SWG model with Micron 1G VRAM.

S1G@ : ASM for SWG model with Samsung 1G VRAM.

SPI ROM BOM Structure

SPI\_1ST@ : ASM for Winbond SPI ROM.

SPI\_2ND@ : ASM for Macronix SPI ROM.

BOM option

UMA :

PLM@ / UMA@ / CONN\_ASM@

SWG + Samsung 1G VRAM :

PLM@ / SWG@ / CONN\_ASM@ / X76\_S1G@

SWG + Micron 1G VRAM :

PLM@ / SWG@ / CONN\_ASM@ / X76\_M1G@

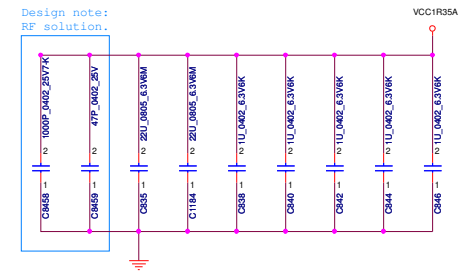
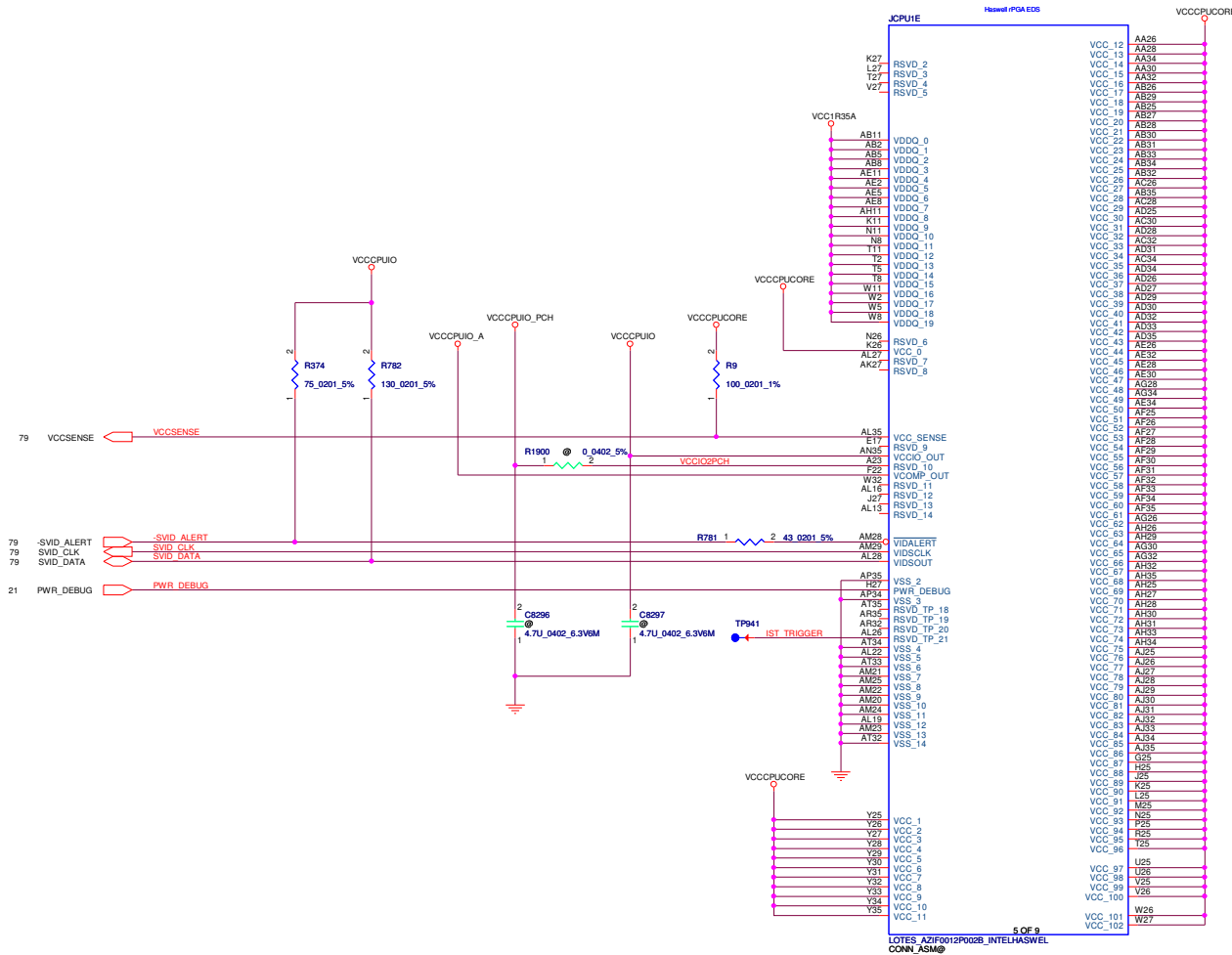


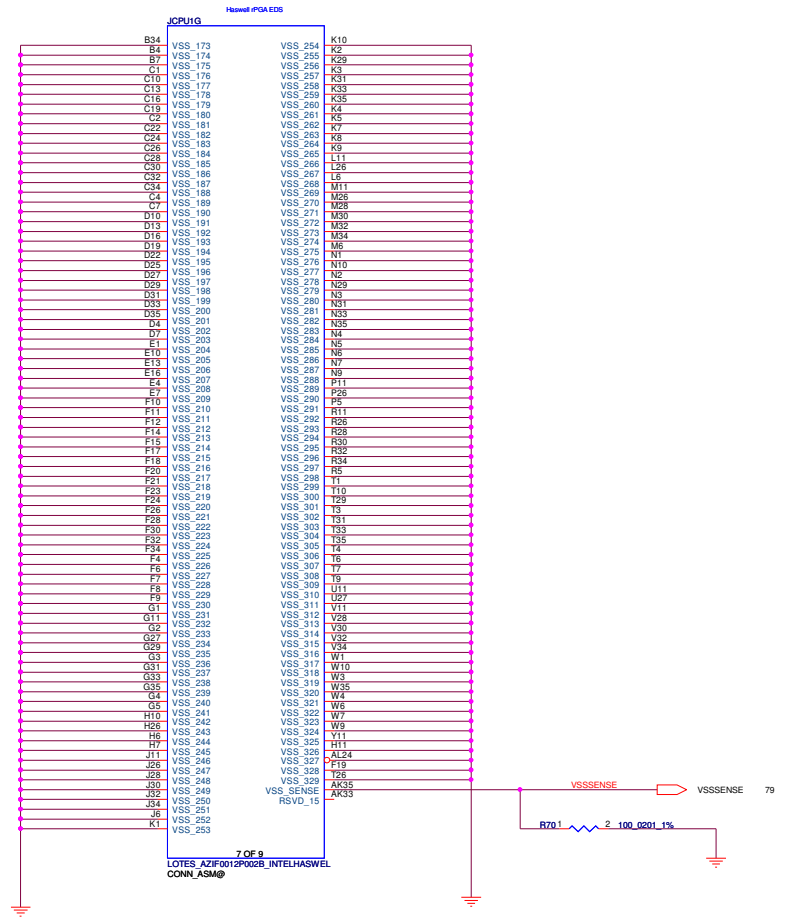
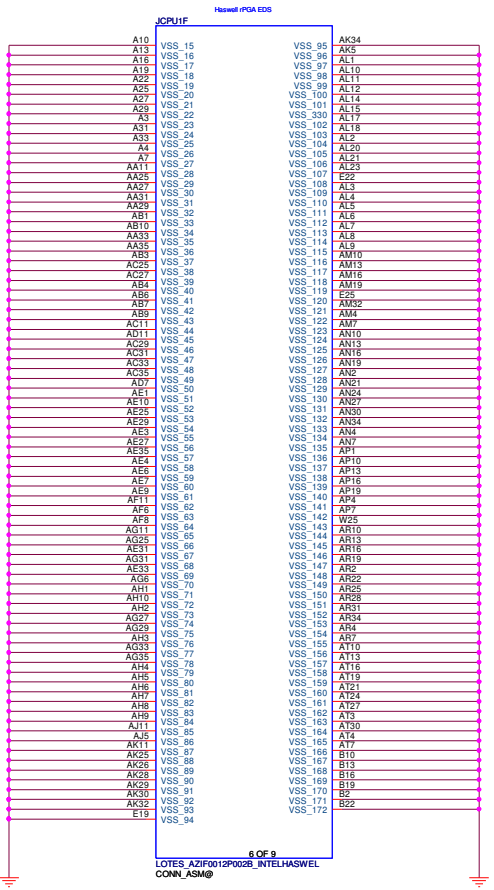














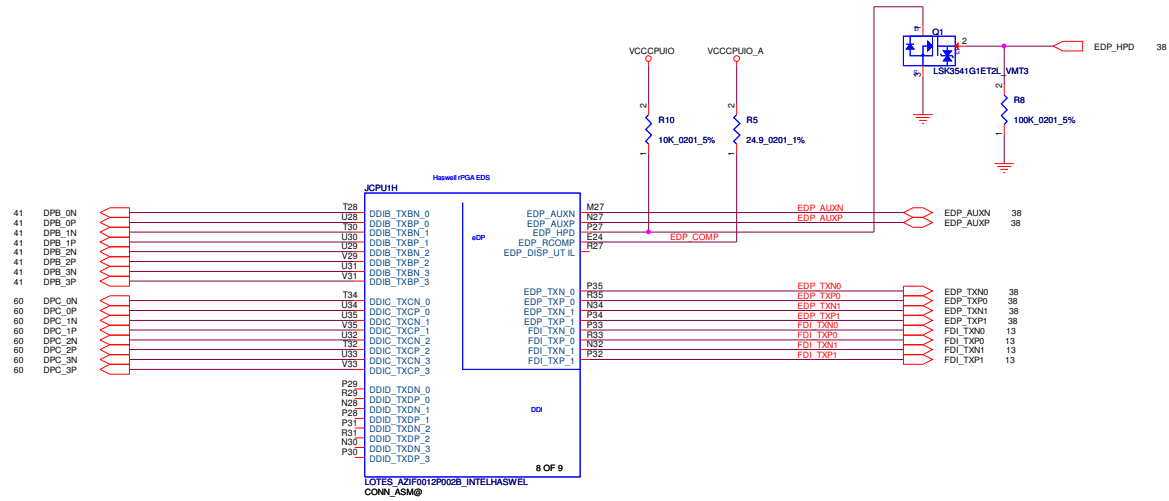




Table 11-4

Tamper	Enable	Disable
SW1	ASM	NO_ASM
R9248	ASM	NO_ASM
C8486	ASM	NO_ASM
D255	ASM	NO_ASM
R9291	ASM	NO_ASM



Table 11-1

32.768KHz 9pF 20ppm:  
KDS 1TJF090DP1A0004  
TXC 9H03200033  
Epson Q13FC1350000300

Table 11-2

SPKR TCO TIMER SYSTEM REBOOT	
HIGH	DISABLED (NO REBOOT)
LOW	ENABLED

Table 11-3

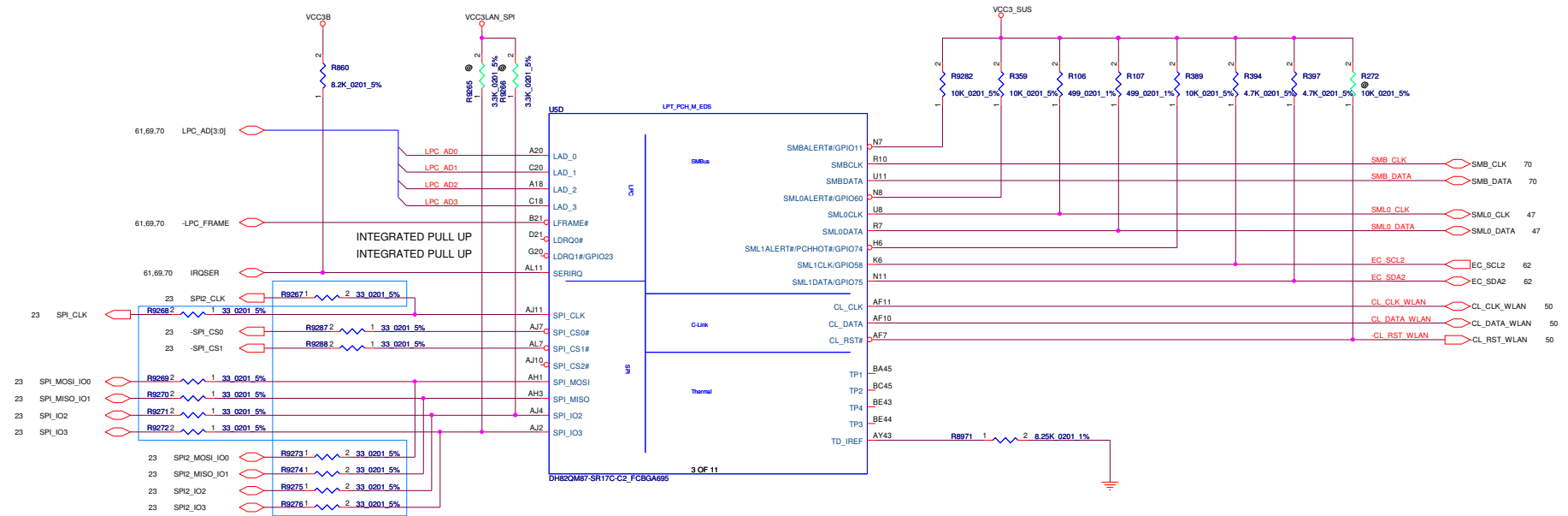
SATA Port Assignment

0	HDD Connector
1	NGFF WWAN Slot
2	Reserved
3	Reserved
4	NGFF Slot at Palmrest
5	Bay Connector

Table 11-4

GFX	SWG	UMA
R239	ASM	No-ASM
R996	No-ASM	ASM





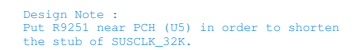




Table 15-1

GPIO8	INTEGRATED CLOCKING
HIGH	DISABLED(BTM)
LOW	ENABLED(FCIM)

Table 15-2

GPIO37	ME CRYPTO STRAP
HIGH	WITH CONFIDENTIALITY
LOW	NO CONFIDENTIALITY

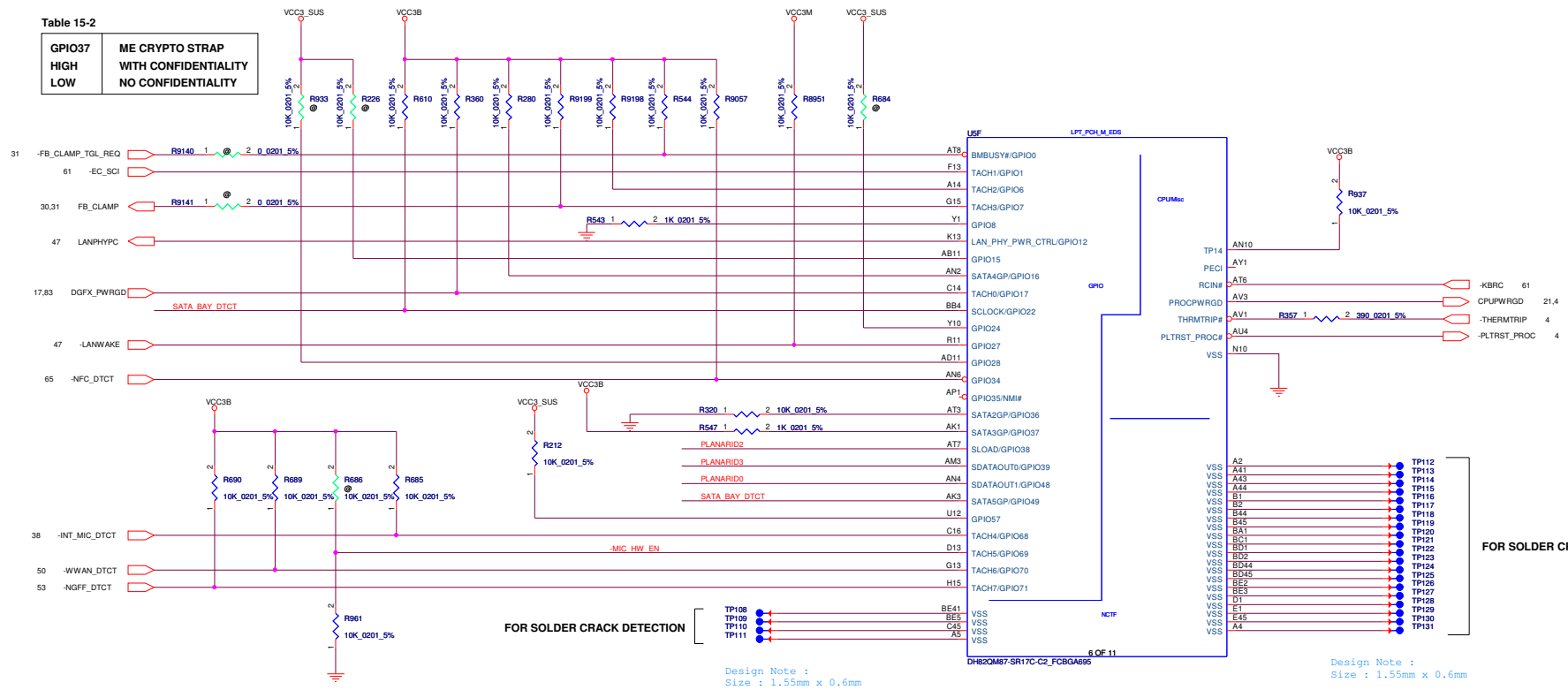
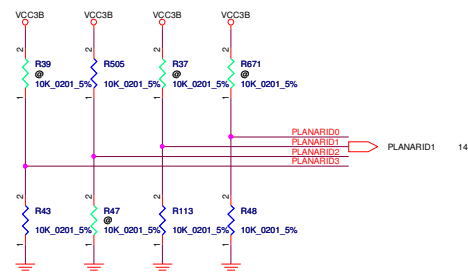


Table 15-3

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

Table 15-4

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



lenovo

Table 16-1

Flexible I/O Configuration				
I/O	High Speed Signals	Configuration	Net Name	Port Assignment
Port 1	USB3 1	USB3 1	USB3P1_SY50	USB 3.0 System Port 0
Port 2	USB3 2	USB3 2	USB3P2_SY51	USB 3.0 System Port 1
Port 3	USB3 5	USB3 5	USB3P5_DOCK	USB 3.0 Docking
Port 4	USB3 6	USB3 6	NC	Reserved
Port 5	PCIE 1/USB3 3	PCIE 1	PCIE1_MCC	Media Card Controller
Port 6	PCIE 2/USB3 4	PCIE 2	PCIE2_WLAN	NGFF WLAN Slot
Port 7	PCIE 3	PCIE 3	NC	Reserved
Port 8	PCIE 4	PCIE 4	PCIE4_GBE	GbE PHY
Port 9	PCIE 5	PCIE 5	NC	Reserved
Port 10	PCIE 6	PCIE 6	NC	Reserved
Port 11	PCIE 7	PCIE 7	NC	Reserved
Port 12	PCIE 8	PCIE 8	NC	Reserved
Port 13	SATA 4/PCIE 1	SATA 4	SATA4_3RD	NGFF Slot at Palmrest
Port 14	SATA 5/PCIE 2	SATA 5	SATA5_ODD	Bay Connector
Port 15	SATA 0	SATA 0	SATA0_HDD	HDD Connector
Port 16	SATA 1	SATA 1	SATA1_WWAN	NGFF WWAN Slot
Port 17	SATA 2	SATA 2	NC	Reserved
Port 18	SATA 3	SATA 3	NC	Reserved

Table 16-2

PCIe Port Assignment	
1	Media Card Controller
2	NGFF WLAN Slot
3	Reserved
4	GbE PHY
5	Reserved
6	Reserved
7	Reserved
8	Reserved

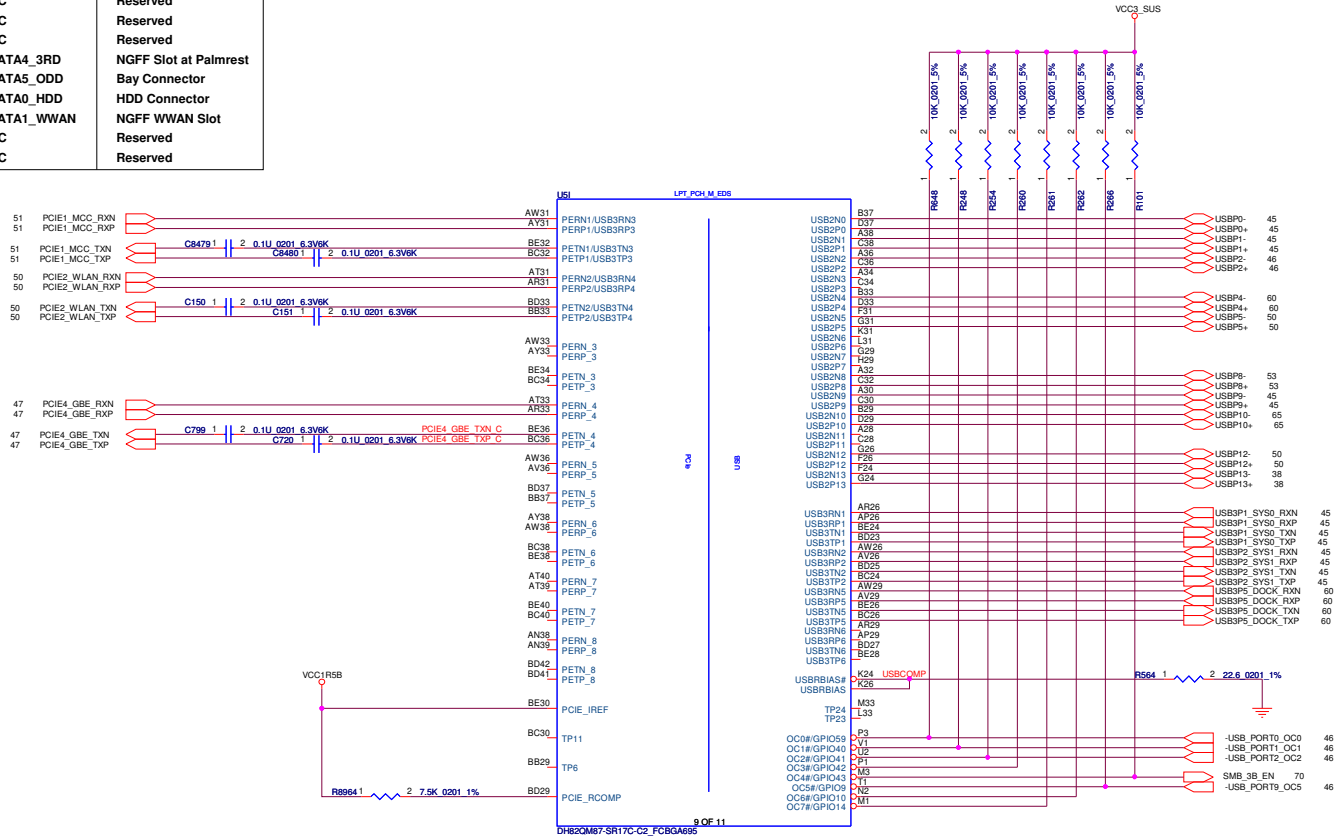


Table 16-3

USB 2.0 Port Assignment	
0	USB 3.0 System Port 0
1	USB 3.0 System Port 1
2	USB 2.0 System Port 2 (AOU)
3	Reserved
4	USB 3.0 Docking
5	NGFF WWAN Slot
6	Reserved
7	Reserved
8	Smart Card Slot
9	USB 2.0 System Port 3 (Debug)
10	Fingerprint Reader
11	Reserved
12	NGFF WLAN Slot
13	USB Camera

Table 16-4

USB 3.0 Port Assignment	
1	USB 3.0 System Port 0
2	USB 3.0 System Port 1
3	(N/A)
4	(N/A)
5	USB 3.0 Docking
6	Reserved



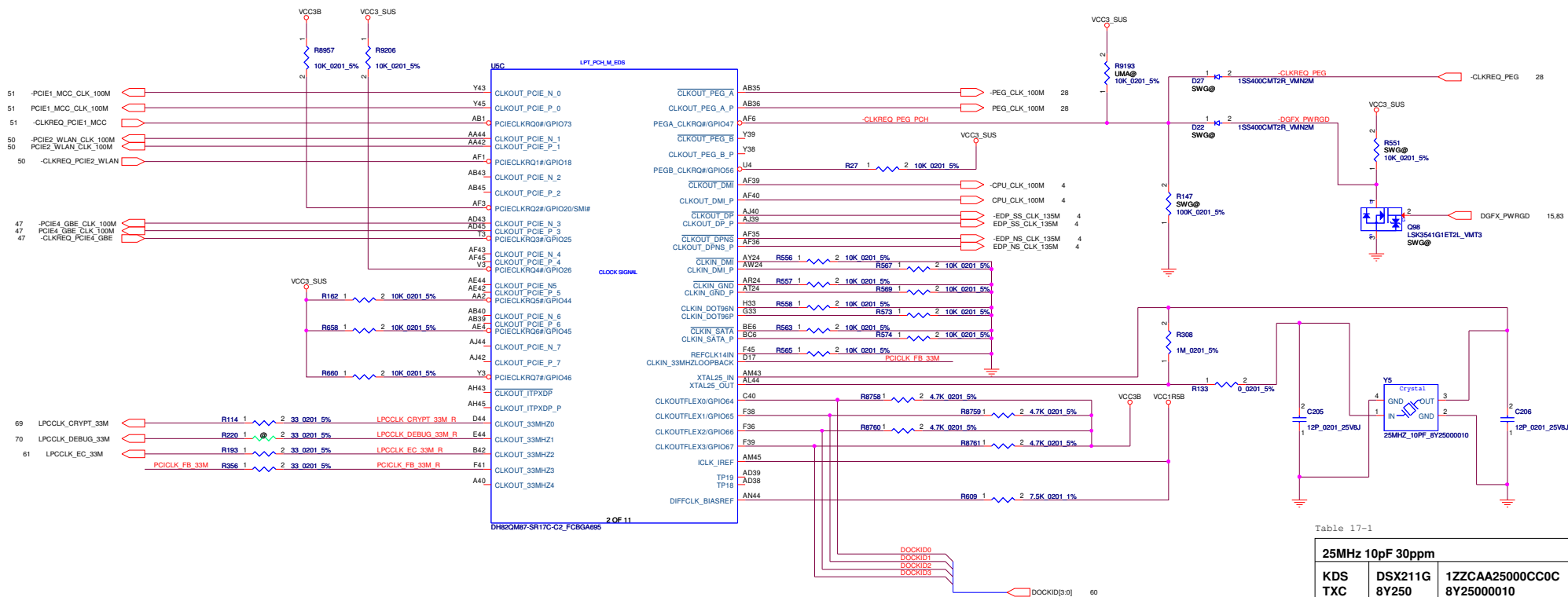


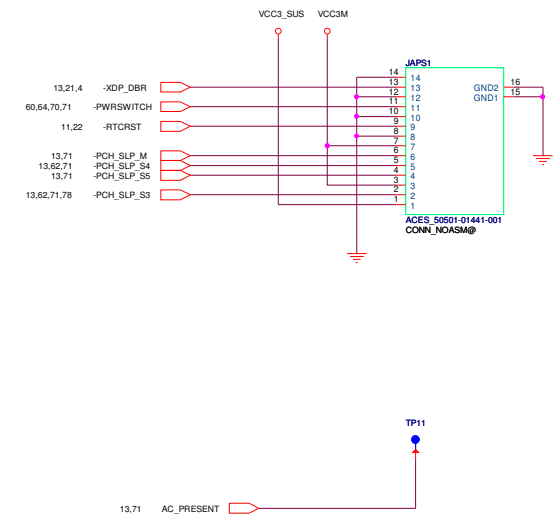
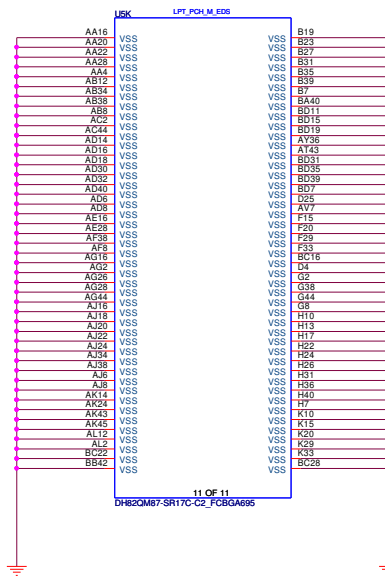
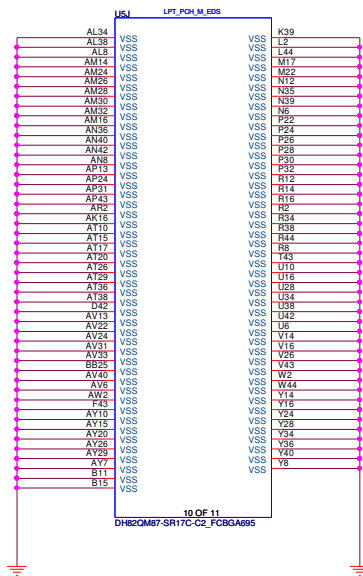
Table 17-1

25MHz 10pF 30ppm		
KDS	DSX211G	1ZZCAA25000CC0C
TXC	8Y250	8Y25000010
Epson	FA-128	Q22FA1280021400





## TEST PAD FOR METS/APS



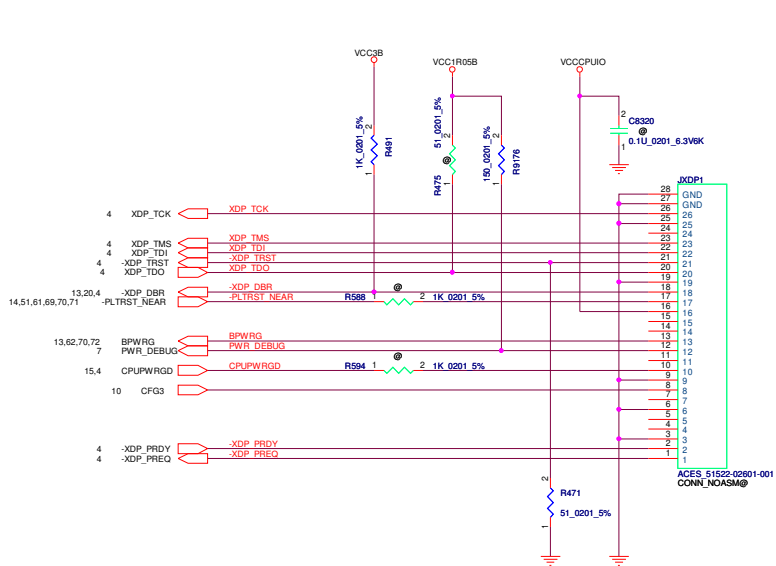


Table 21-1

SIGNAL	REF DES	ENABLE	DISABLE
TDO	R475	ASM	NO ASM
TRST#	R471	ASM	ASM
DBRST#	R491	ASM	ASM
RESET#	R588	ASM	NO ASM
CPUPWRGD	R594	ASM	NO ASM
PWR_DEBUG	R9176	ASM	ASM
	C8320	ASM	NO ASM
	JXDP1	ASM	NO ASM

↑  
LOGIC

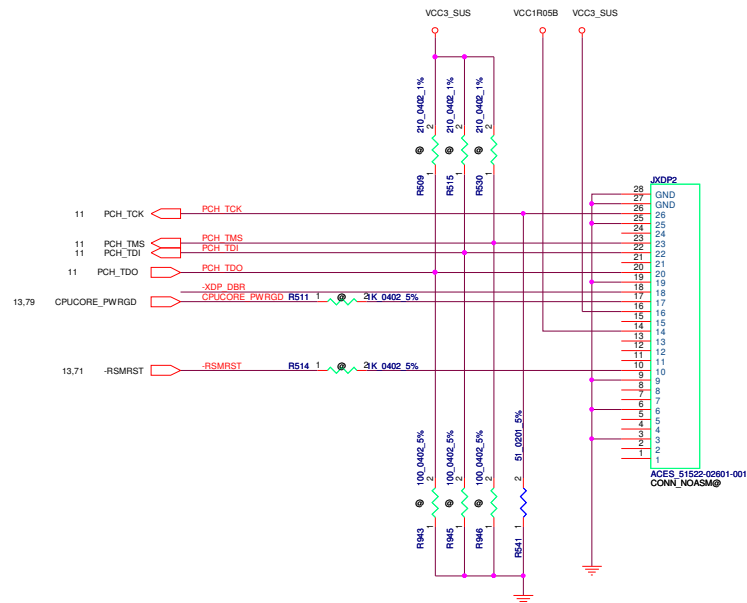
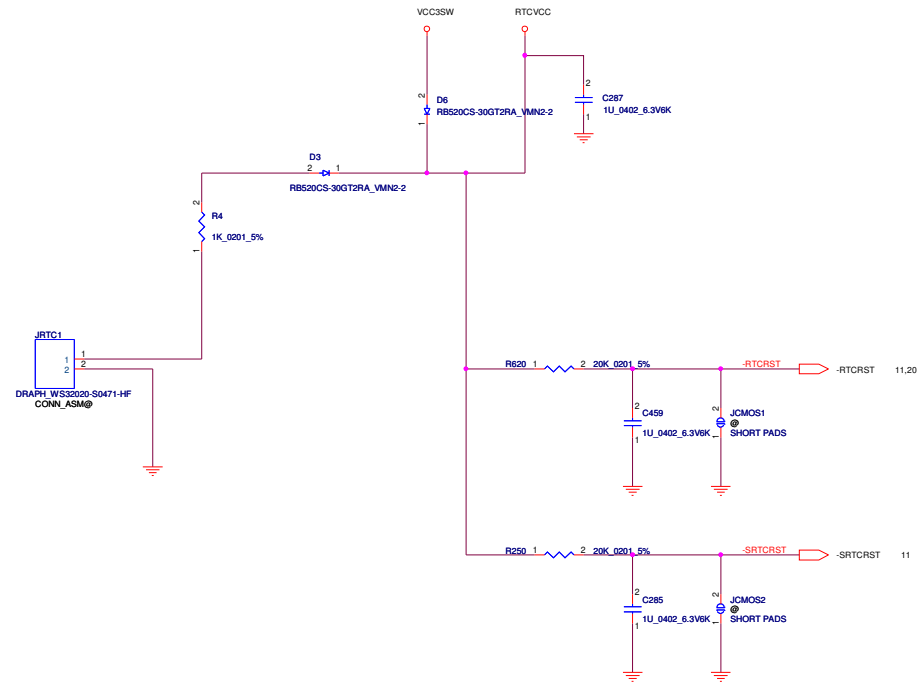


Table 21-2

SIGNAL	REF DES	ENABLE	DISABLE
TDO	R509 R943	220 100	NO ASM NO ASM
TMS	R530 R946	220 100	NO ASM NO ASM
TDI	R515 R945	220 100	NO ASM NO ASM
TCK	R541	51	51
CPUCORE_PWRGD	R511	ASM	NO ASM
-RSMRST	R514	ASM	NO ASM
	JXDP2	ASM	NO ASM

↑  
LOGIC



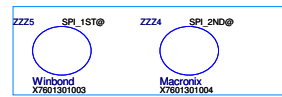
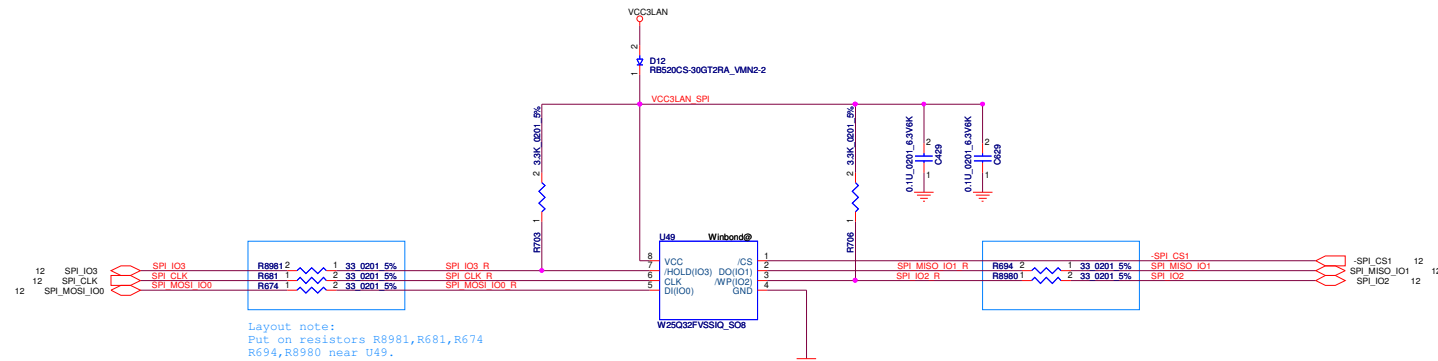
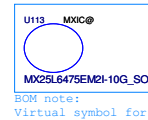
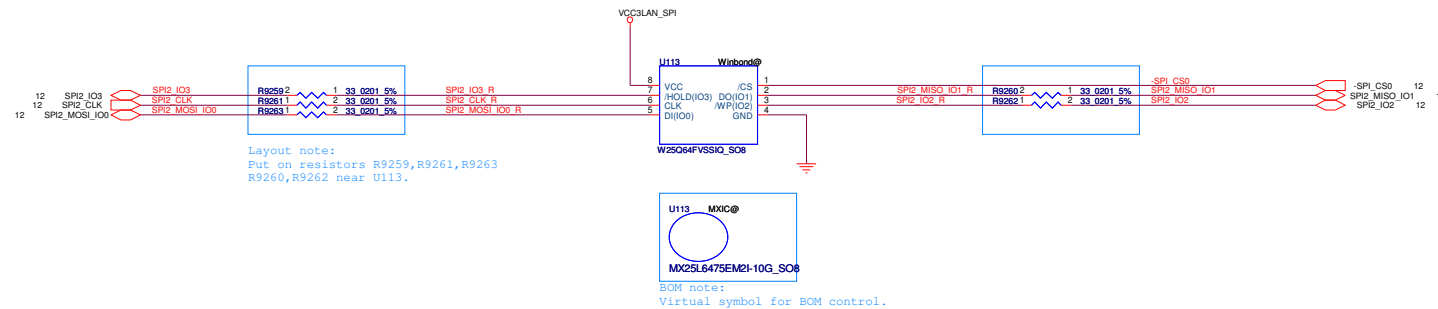


Table 23-1

SPI Configuration		Supplier	P/N
Single	Dual		
U113 (CS0#)		16MB Macronix Winbond (Numonyx)	MX25L12875FM2I-10G W25Q128FVSSIQ
	U113 (CS0#)	8MB Macronix Winbond (Numonyx)	MX25L6475EM2I-10G W25Q64FVSSIQ
	U49 (CS1#)	4MB Macronix Winbond (Numonyx)	MX25L3275EM2I-10G W25Q32FVSSIQ

LOGIC


Design Note:  
MX25Lxxx73E may be mixed from SIT.  
Don't mix it from FVT.

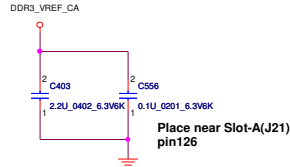
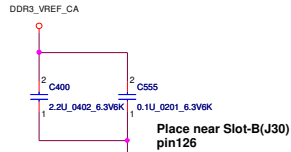
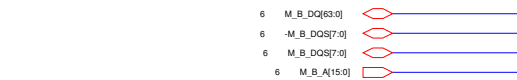




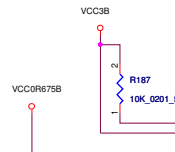
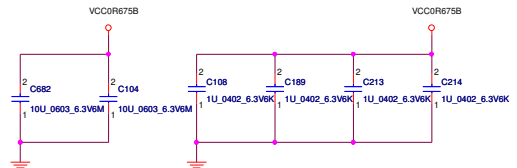


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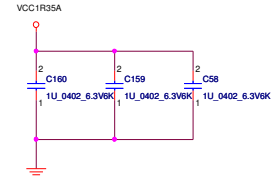
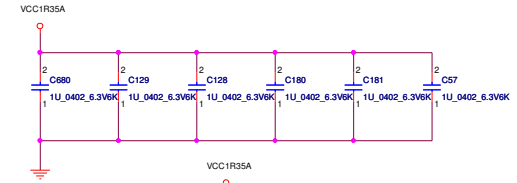
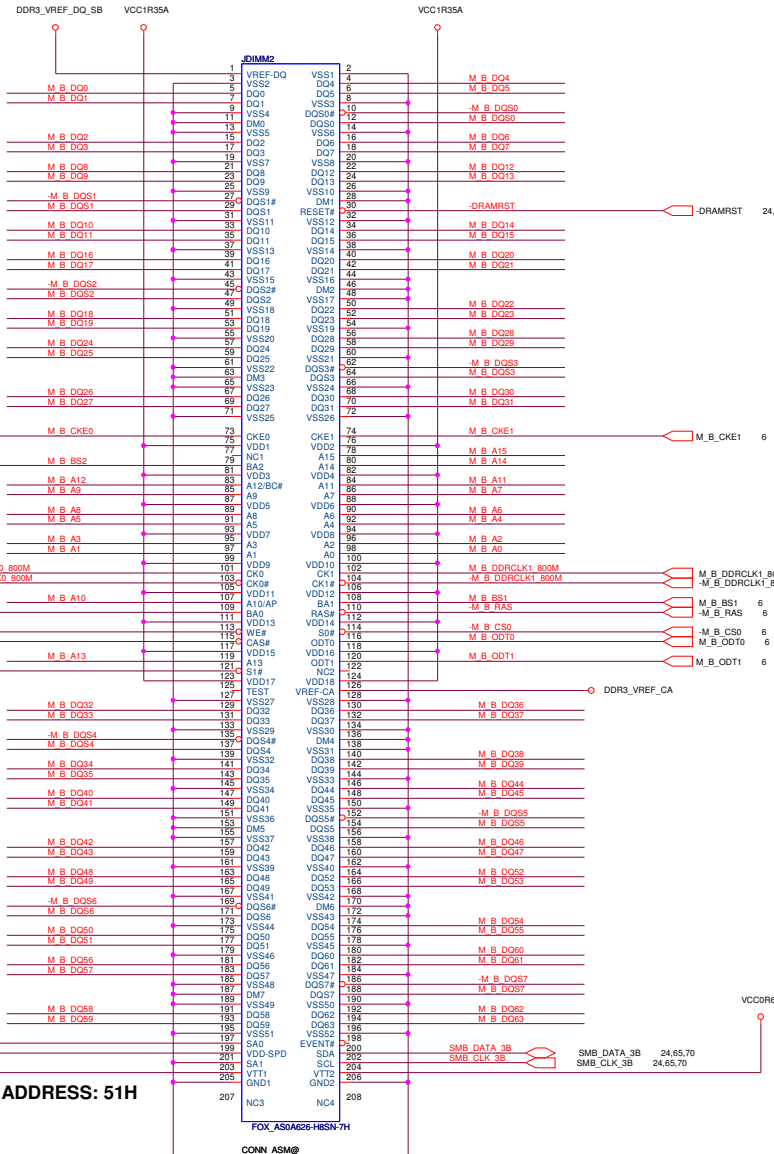
		
Project Name : CRIST SP ASSESS		Title : BLANK
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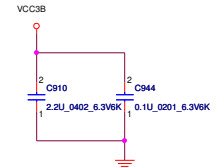
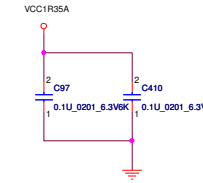
Place near Slot-A(J21)  
pin126



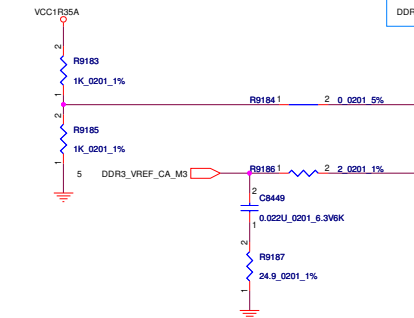
SPD ADDRESS: 51H

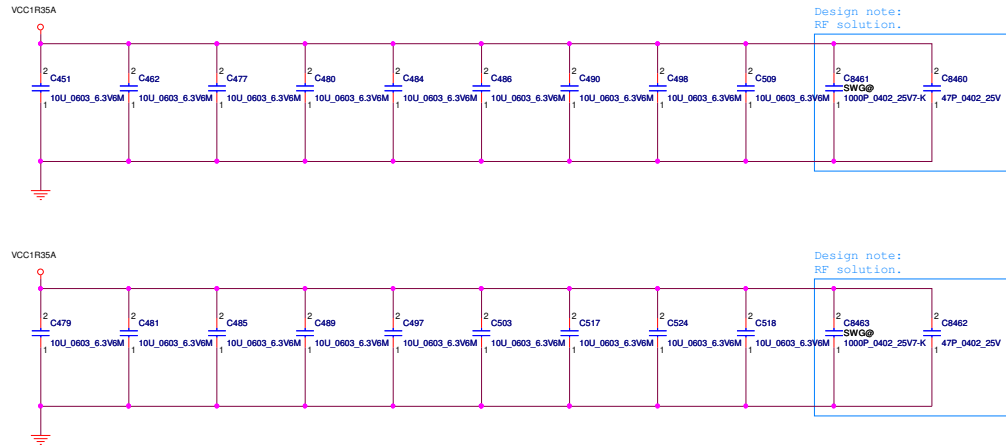
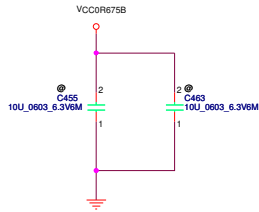


PLACE 1UF NEAR VCC1R35A PIN.



Layout note:  
trace width / spacing = 20/20mils



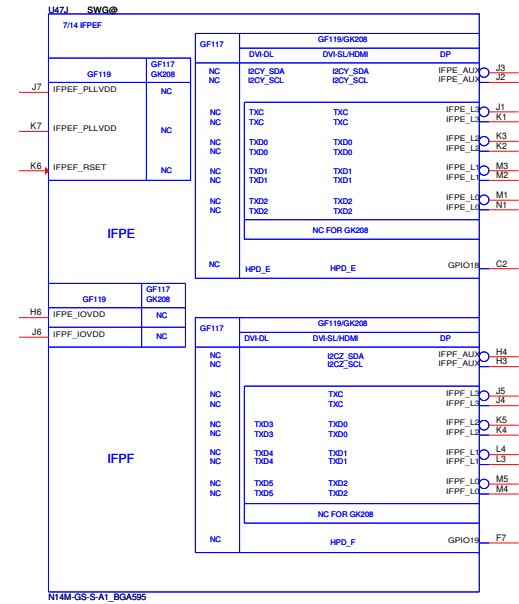
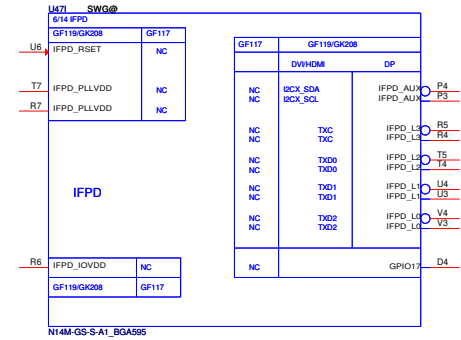
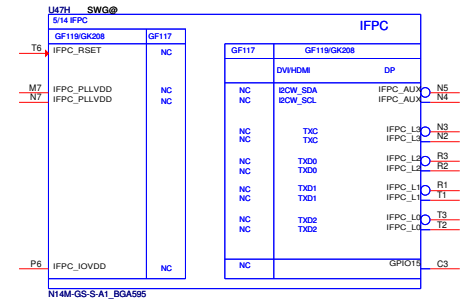
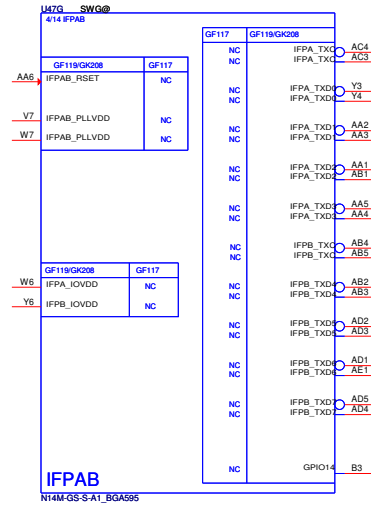


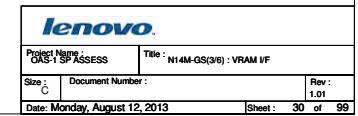
BOM note:  
Virtual symbol for BOM control.

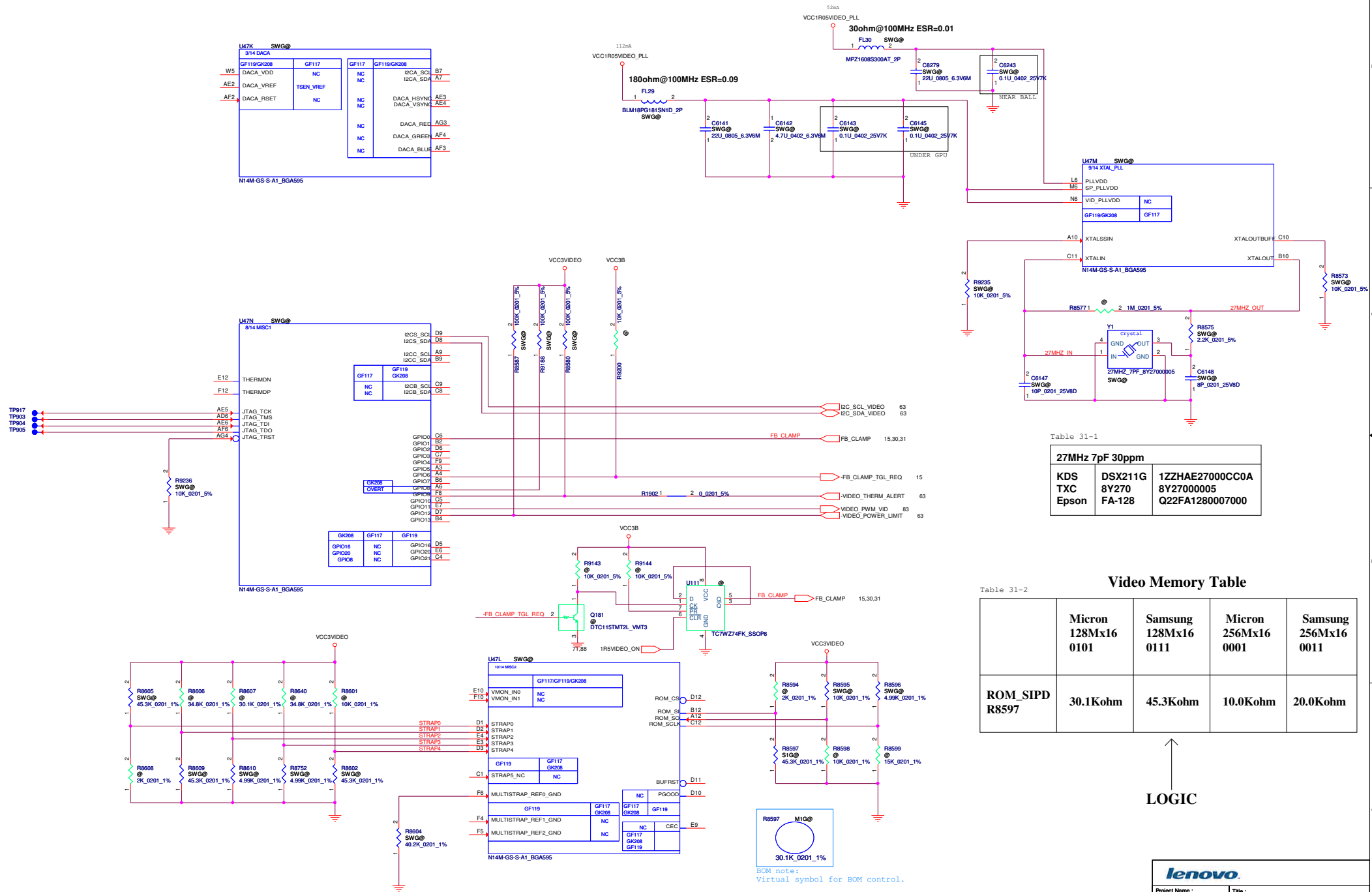


BOM note:  
Virtual symbol for BOM control.

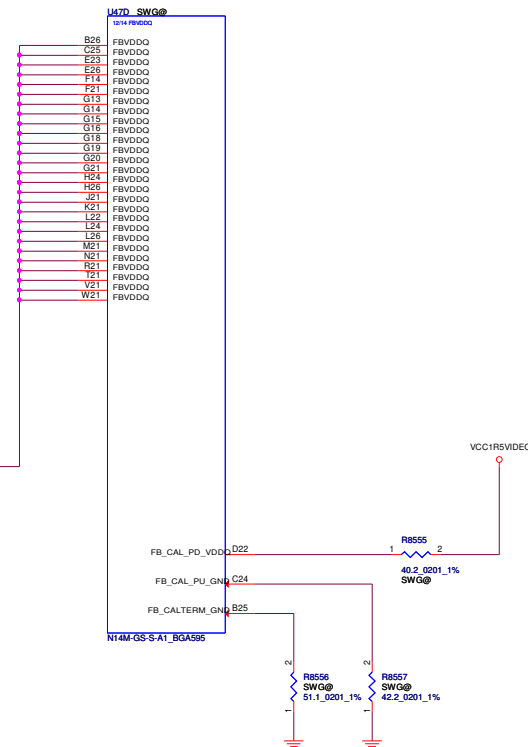
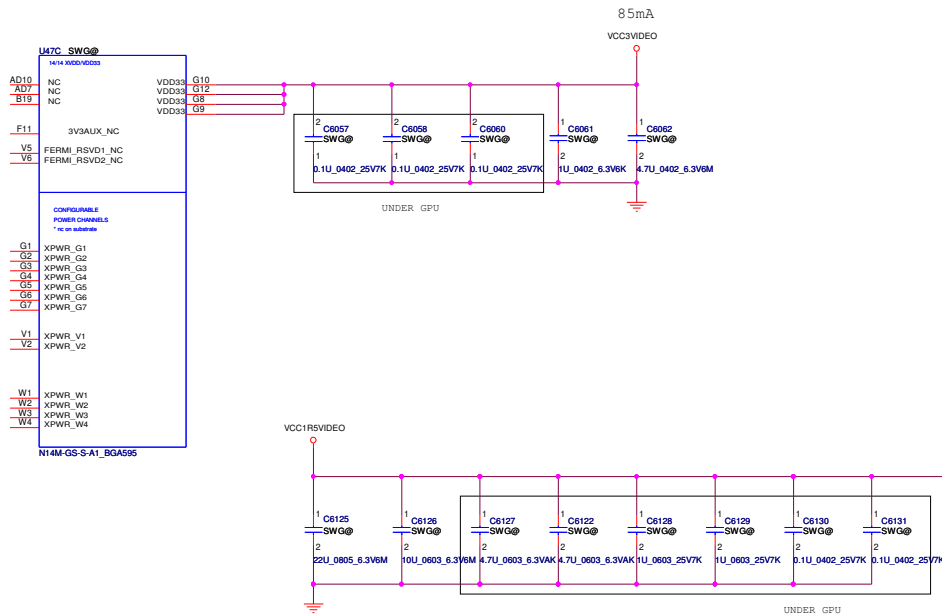
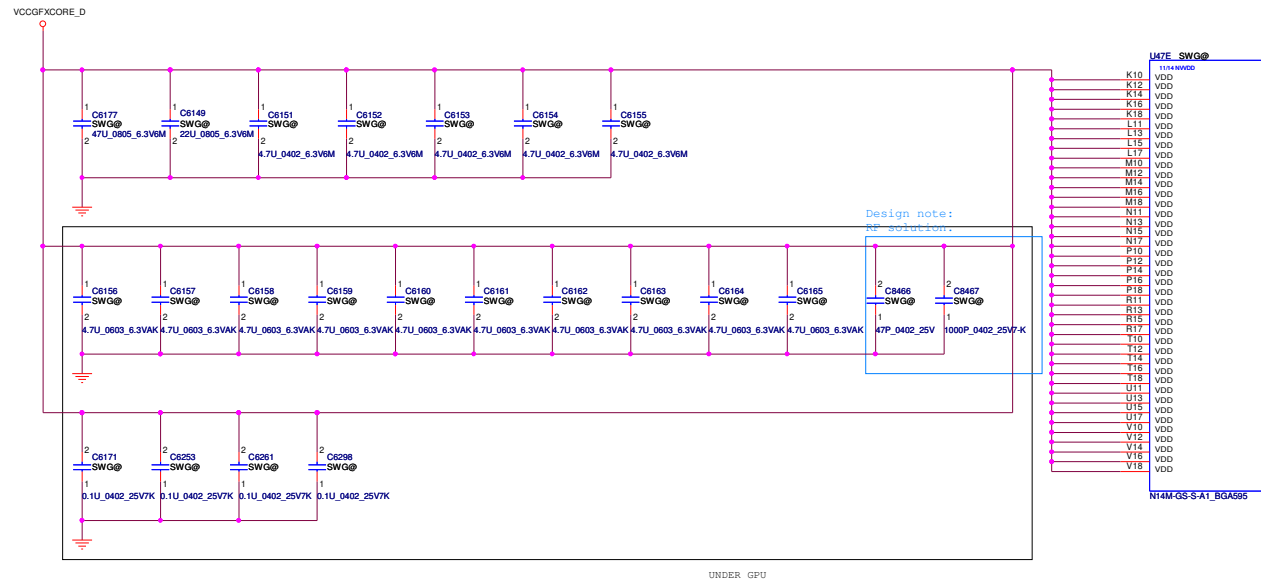






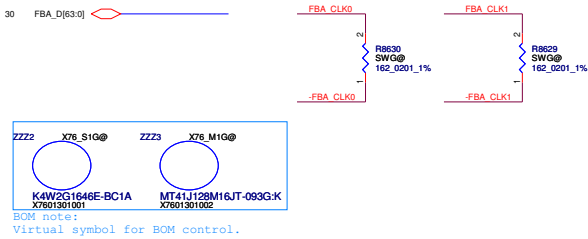


BOM note:  
Virtual symbol for BOM control.









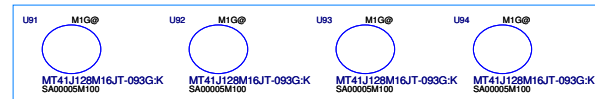
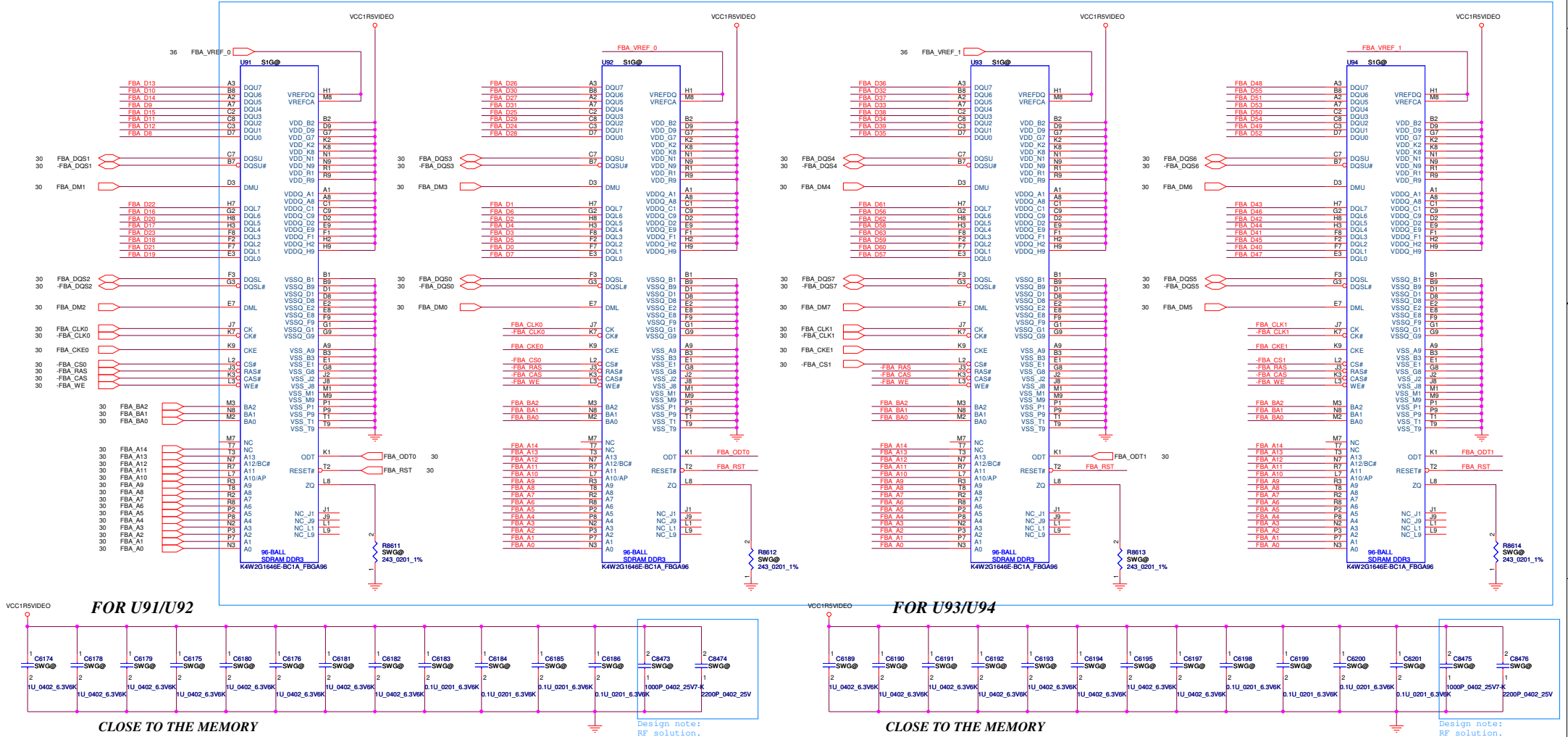
### FB CMD mapping Mode D-N14x

Table 34-1 DDR3 Video Memory


	Micron 2GBITS (128Mx16)	Samsung 2GBITS (128Mx16)	Micron 4GBITS (256Mx16)	Samsung 4GBITS (256Mx16)
U91				
U92				
U93				
U94				

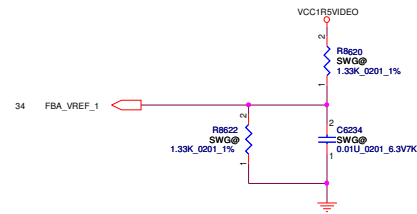
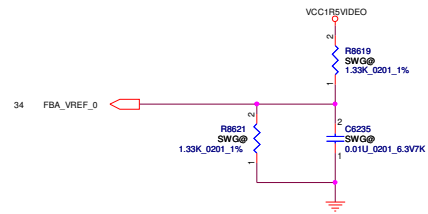
LOGIC

Design Note:  
10mm \* 14mm package has to be used for layout assessment.



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BLANK

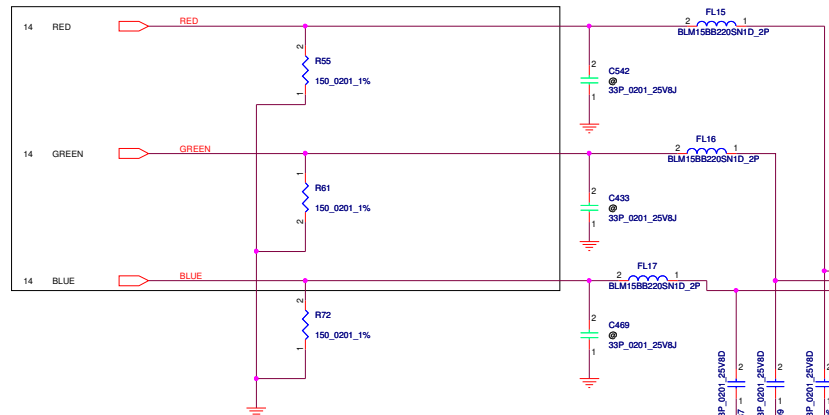
		
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50OHM TRACE



NEAR CRT CONN

75OHM TRACE

CRT RED CONN  
CRT GREEN CONN  
CRT BLUE CONN

CRT CONN

NEAR CRT CONN

NEAR CRT CONN

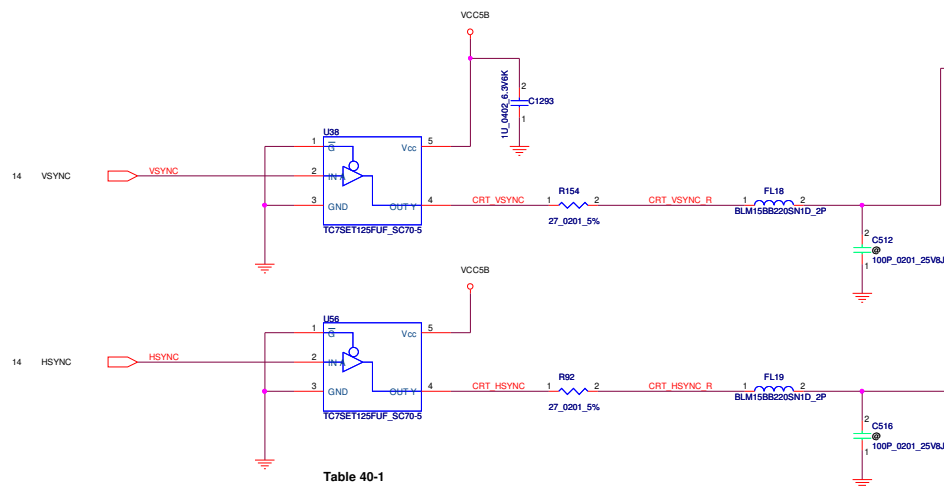
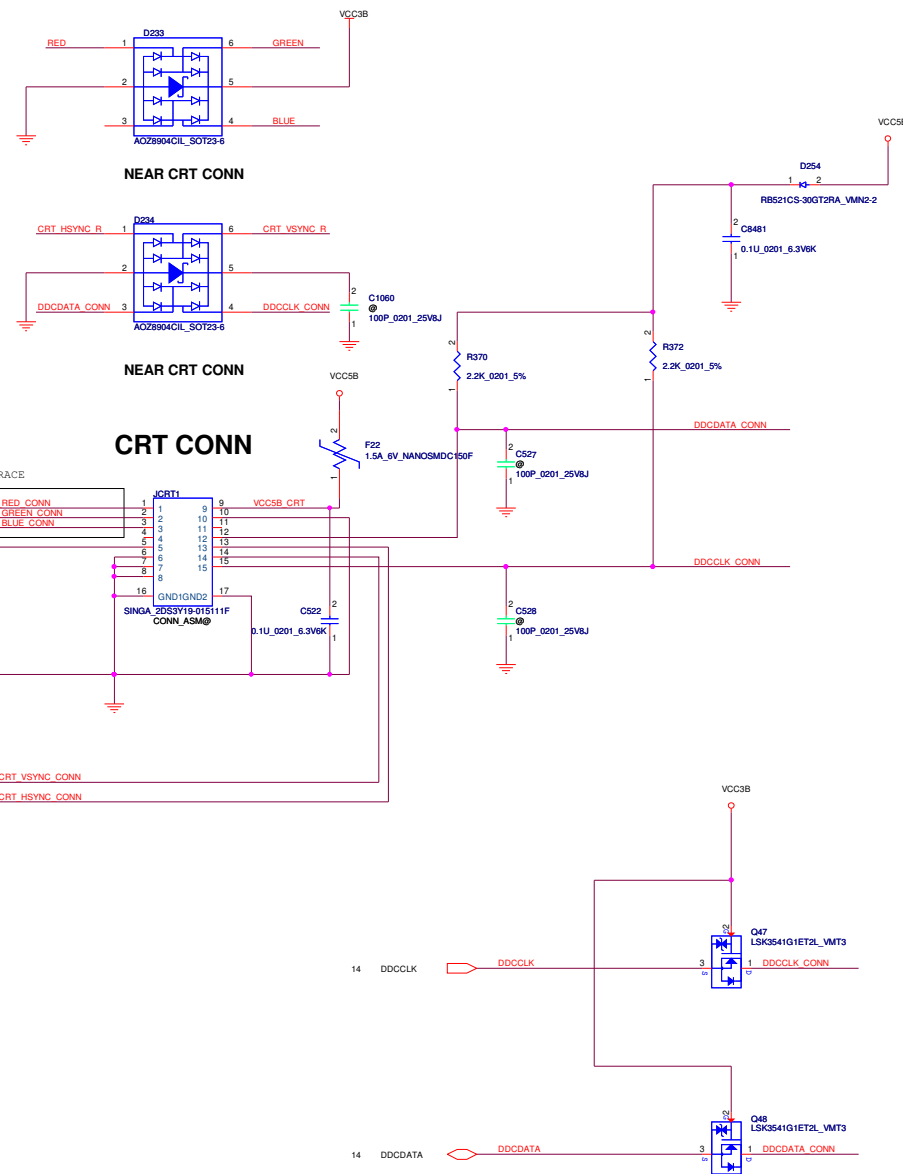
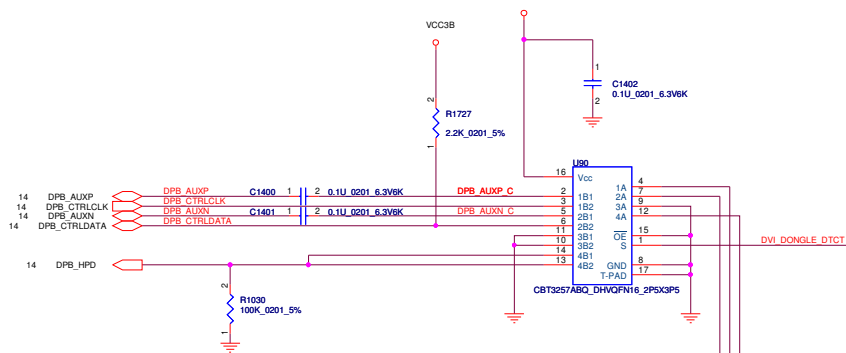


Table 40-1

CRT Sync Buffer table (U38, U56)	
TOSHIBA	TC7SET125FU
NXP	74AHCT1G125GW



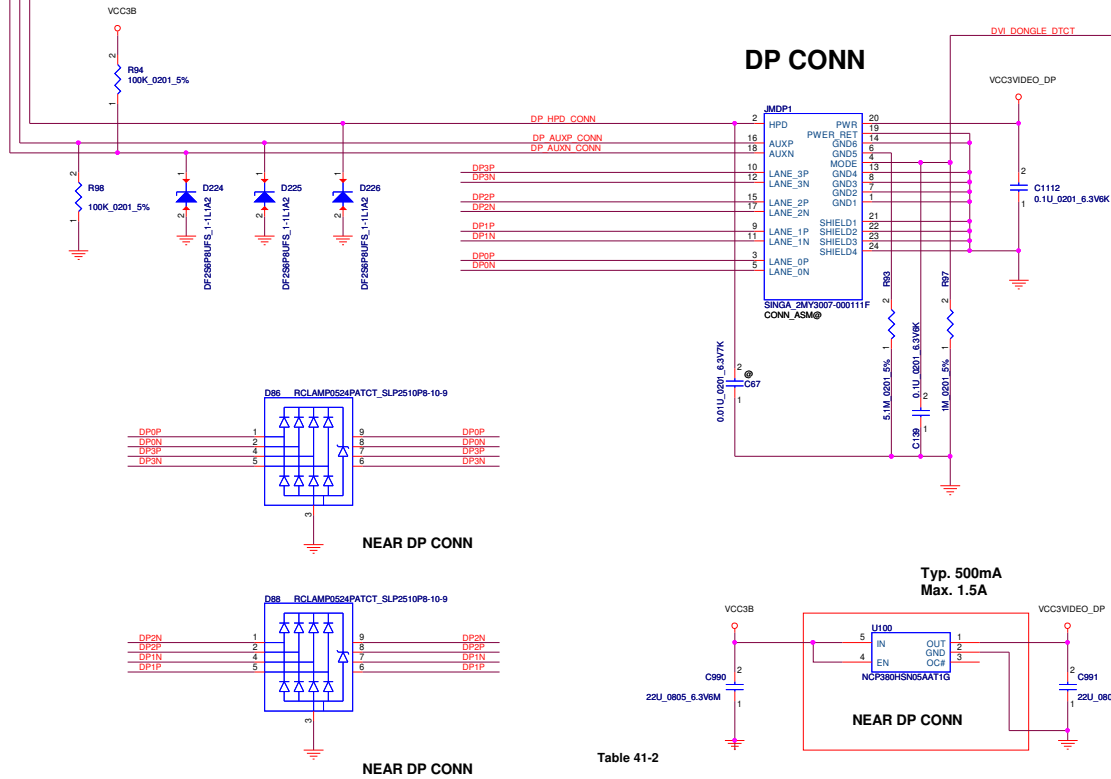




Design Note:  
To check the direction of  
body diode with vendor.

Table 41-1

U90 assignment	
NXP	CBT3257ABQ
ON-Semi	74FST3257MNTWG



FOR SYSTEM DP NEAR DP CONN

9	DPB_3N	C339	1	2	0.1U_0201_6.3V6K	DP3N
9	DPB_3P	C329	1	2	0.1U_0201_6.3V6K	DP3P
9	DPB_2N	C312	1	2	0.1U_0201_6.3V6K	DP2N
9	DPB_2P	C317	1	2	0.1U_0201_6.3V6K	DP2P
9	DPB_1N	C277	1	2	0.1U_0201_6.3V6K	DP1N
9	DPB_1P	C226	1	2	0.1U_0201_6.3V6K	DP1P
9	DPB_0N	C218	1	2	0.1U_0201_6.3V6K	DP0N
9	DPB_0P	C226	1	2	0.1U_0201_6.3V6K	DP0P

DP CONN

Design note:  
EMI solution, put D253 close JMDP1.

NEAR DP CONN

NEAR DP CONN


Typ. 500mA  
Max. 1.5A

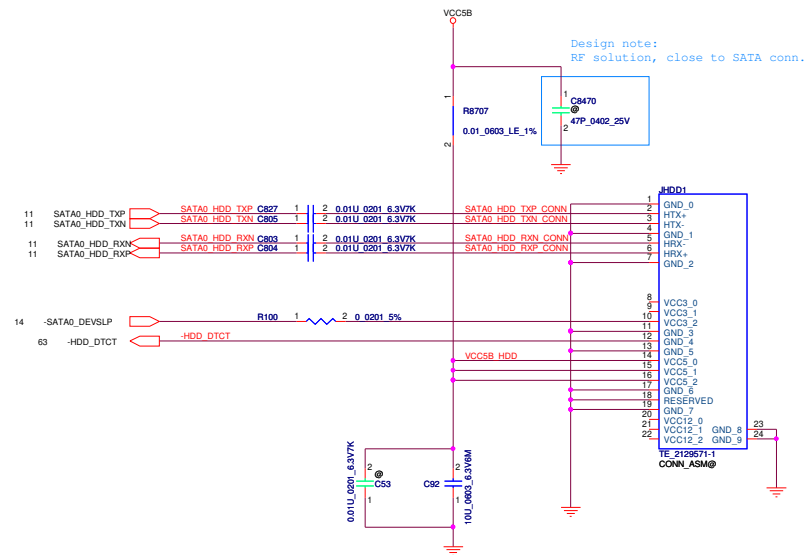
NEAR DP CONN

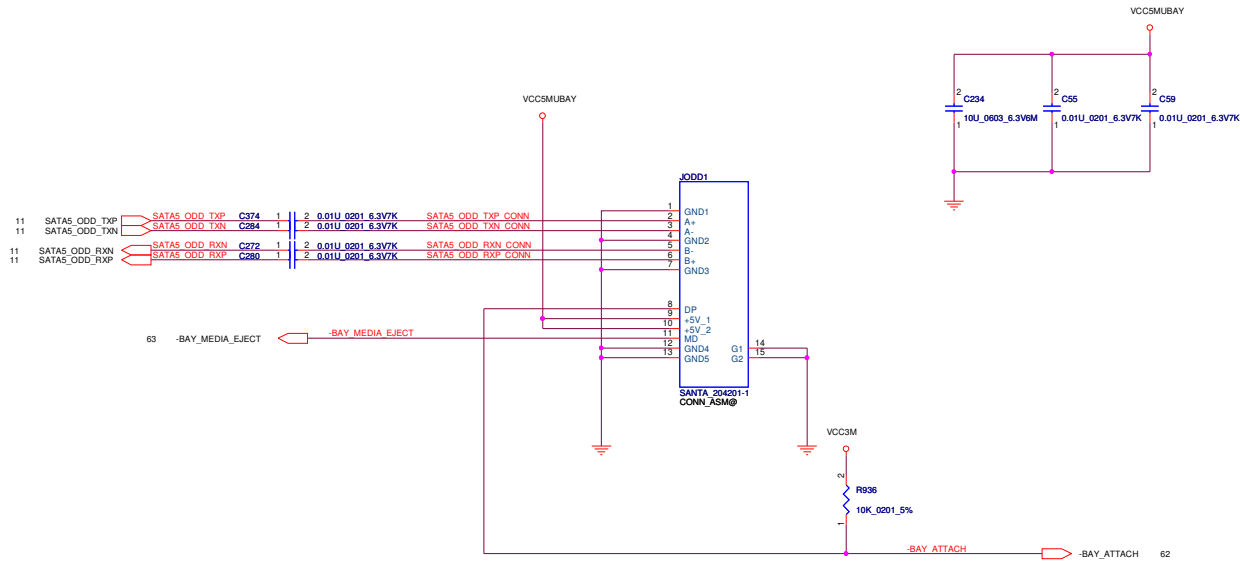
Table 41-2

U100 assignment	
TI	TPS2530
ON-Semi	NCP380HSN05AAT1G

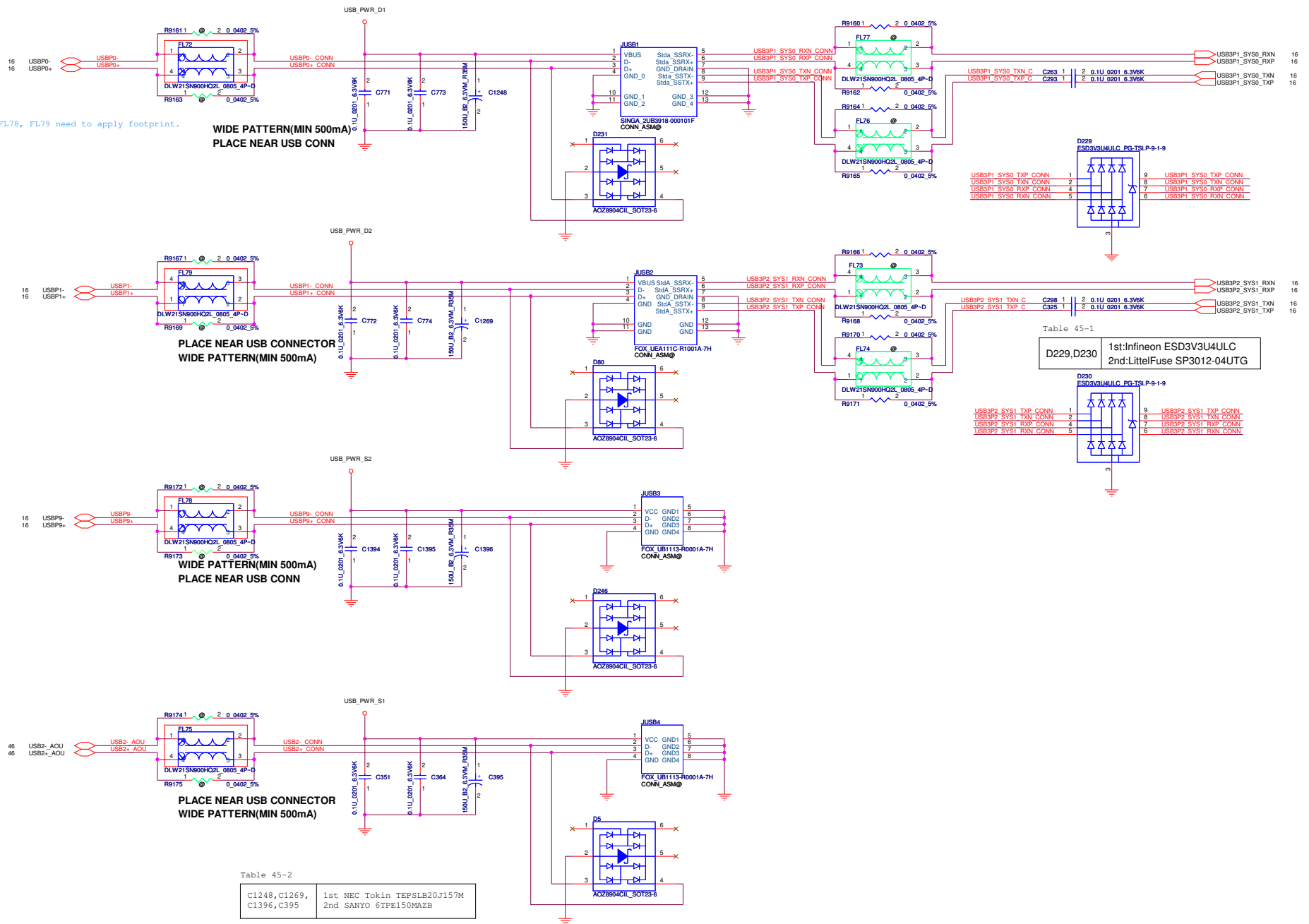
BLANK

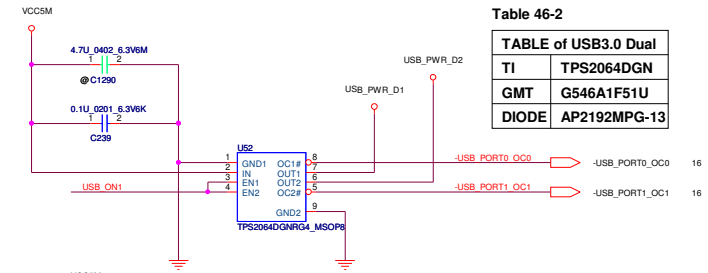
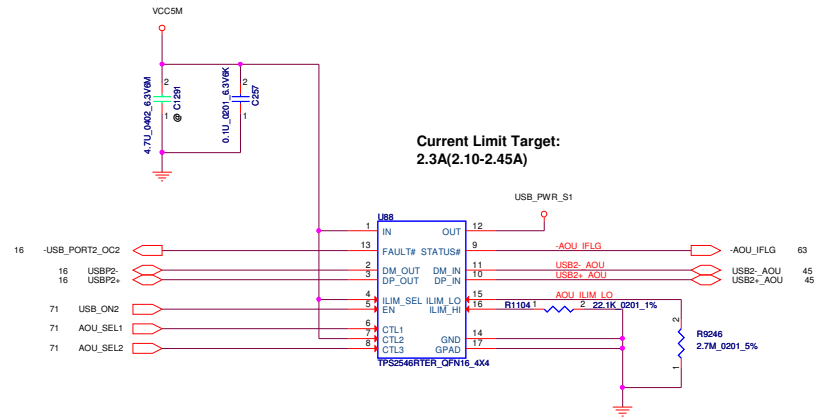
		
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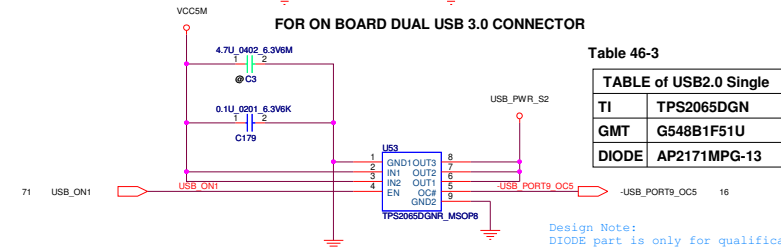


Layout note:  
FL72, FL75, FL78, FL79 need to apply footprint.





FOR ON BOARD DUAL USB 3.0 CONNECTOR



FOR ON BOARD SINGLE USB 2.0 CONNECTOR

Design Note:  
DIODE part is only for qualification purpose.  
It will be dropped before SVT if GCM does not approve.

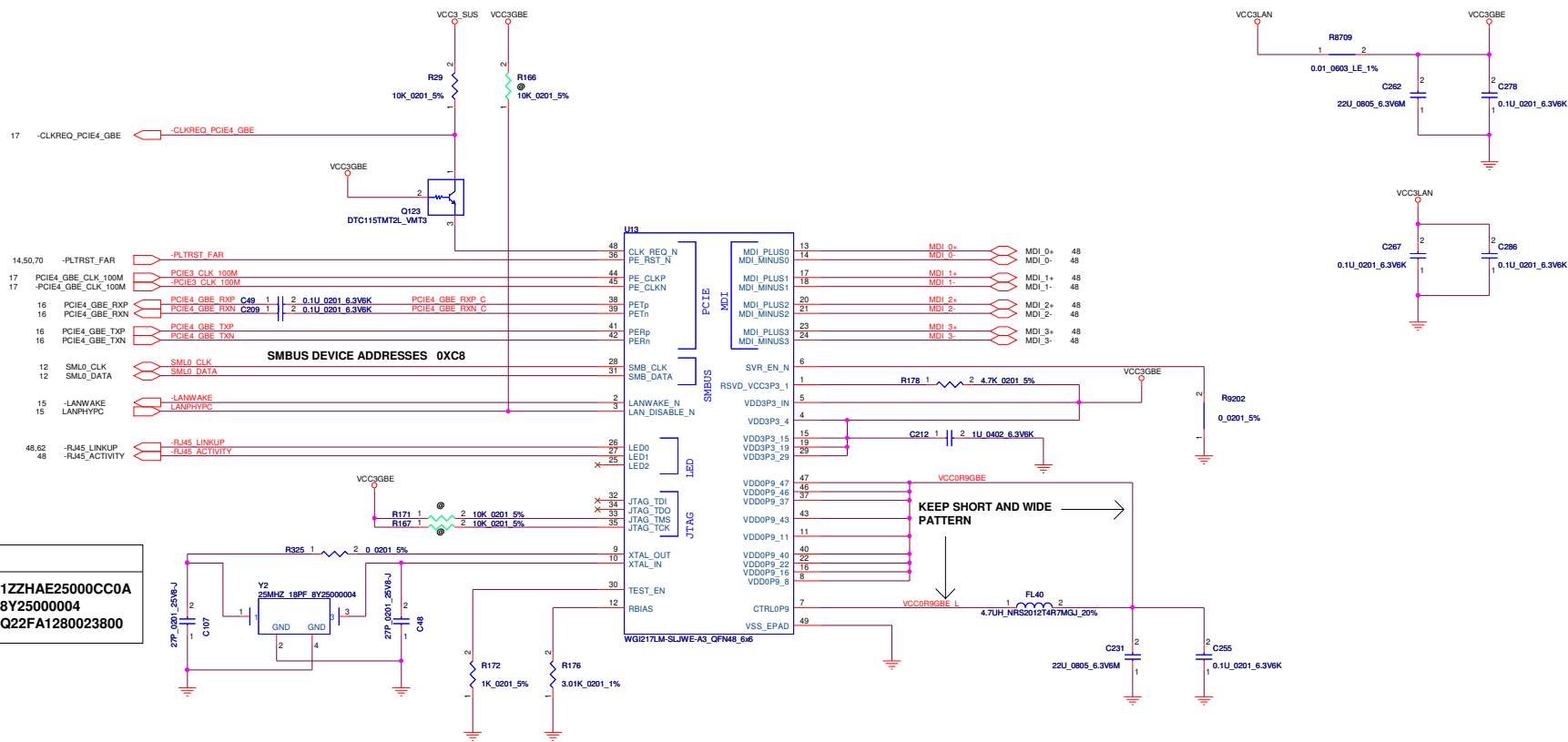



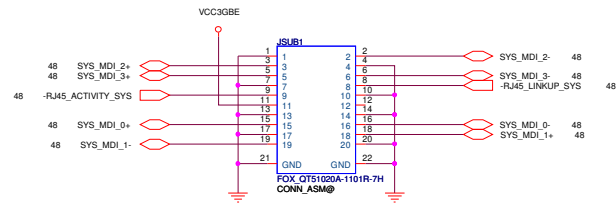
Table 47-1

25MHz 18pF 30ppm		
KDS	DSX211G	1ZZHAE25000CC0A
TXC	8Y250	8Y25000004
Epson	FA-128	Q22FA1280023800

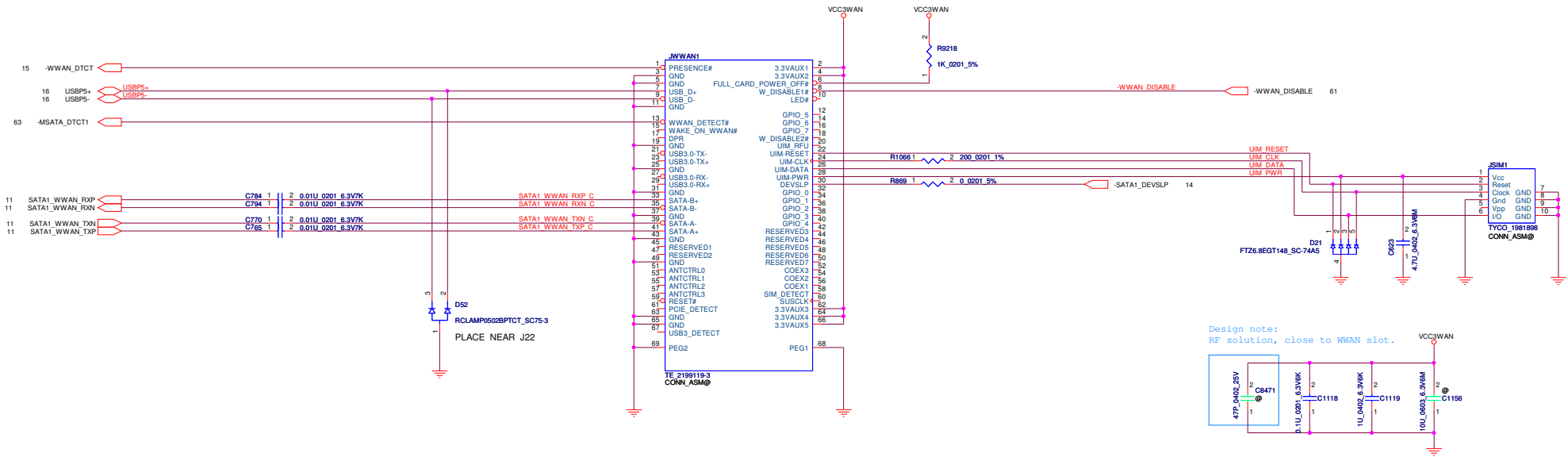


		
Project Name : OAS-1 SP ASSES		Title : GBE LAN SWITCH
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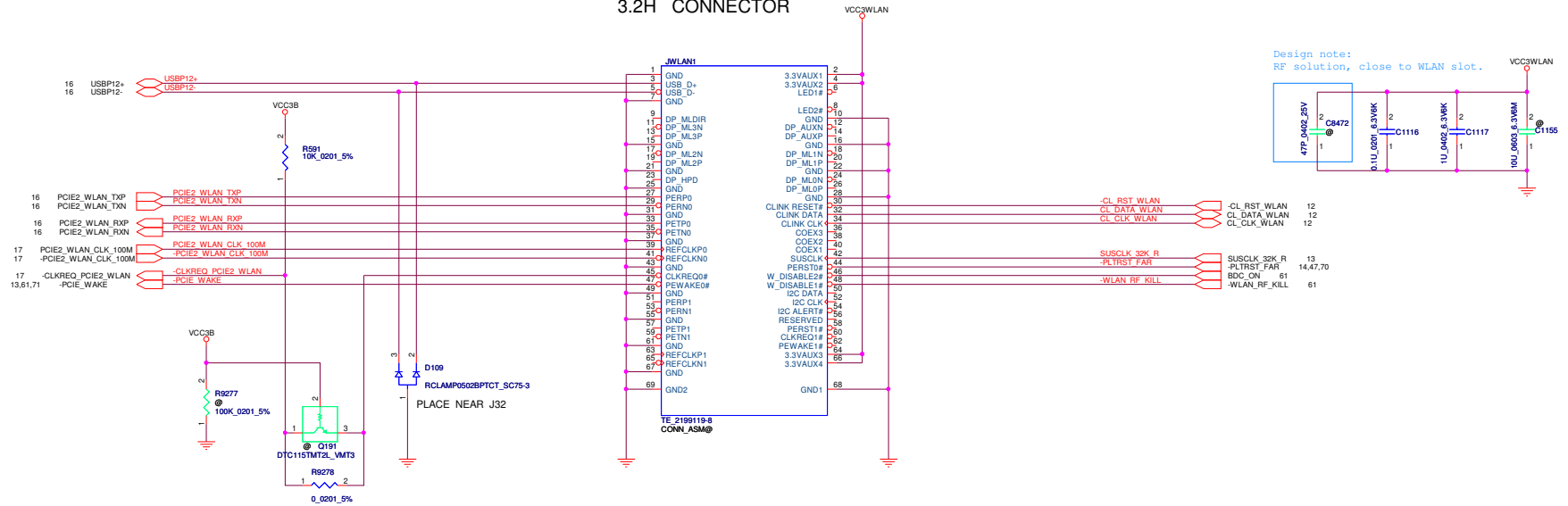


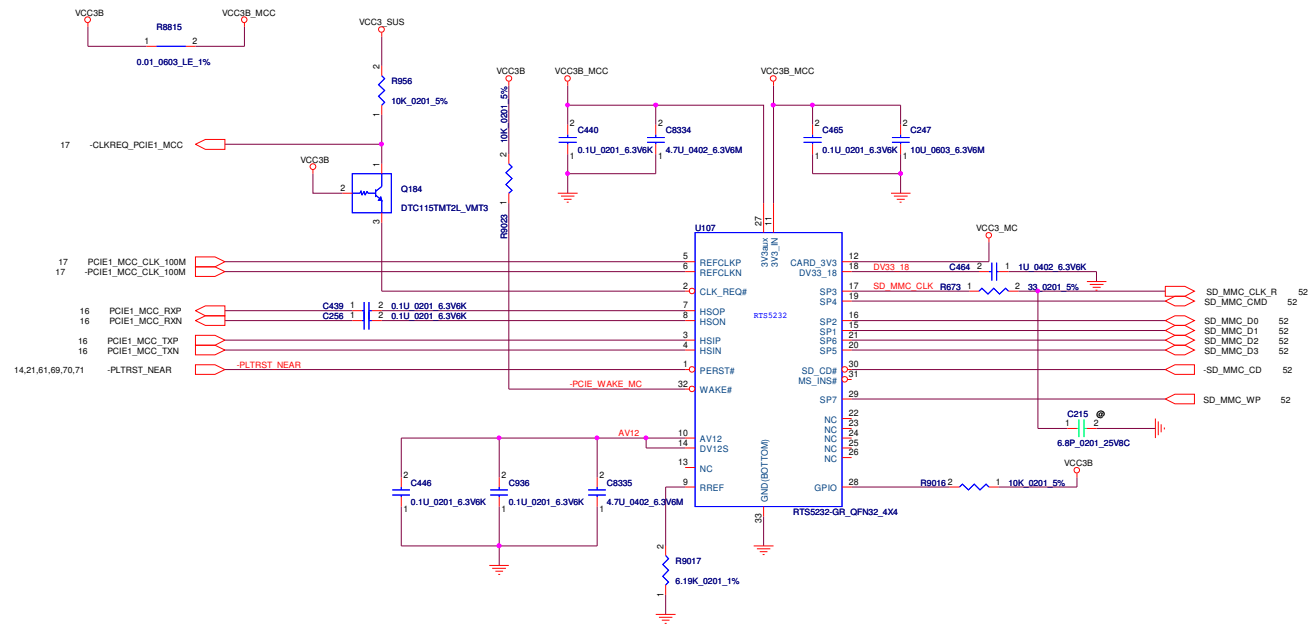


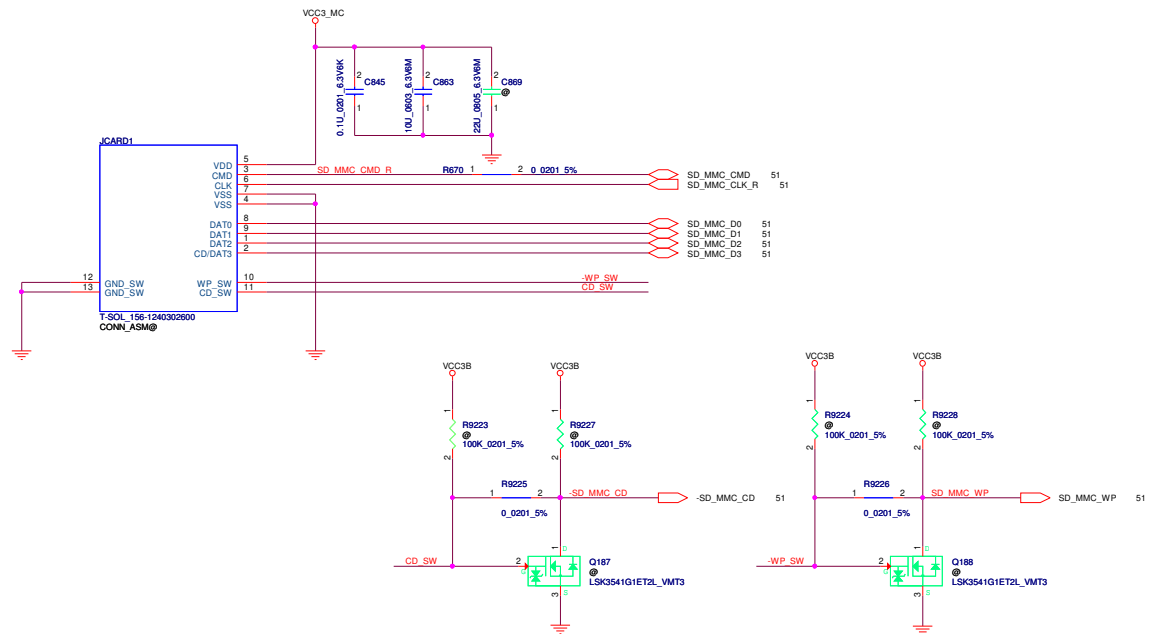
# TYPE-B NGFF CARD FOR WWAN/SSD 3.2H CONNECTOR

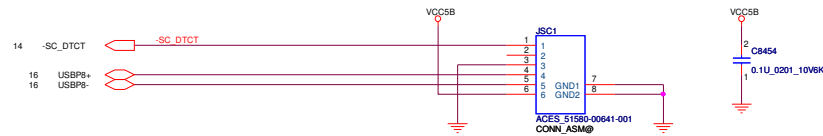


# TYPE-A NGFF CARD FOR WLAN 3.2H CONNECTOR



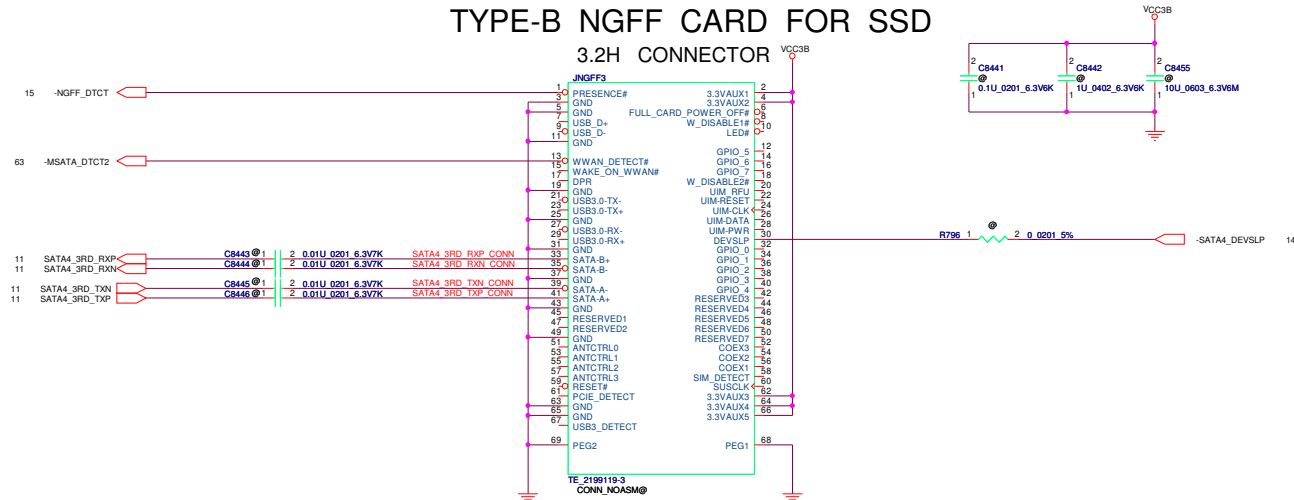


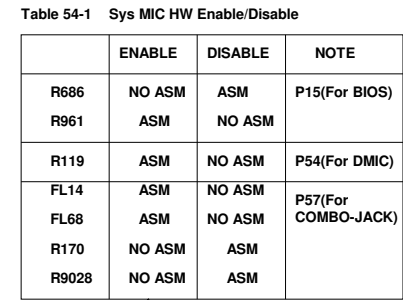




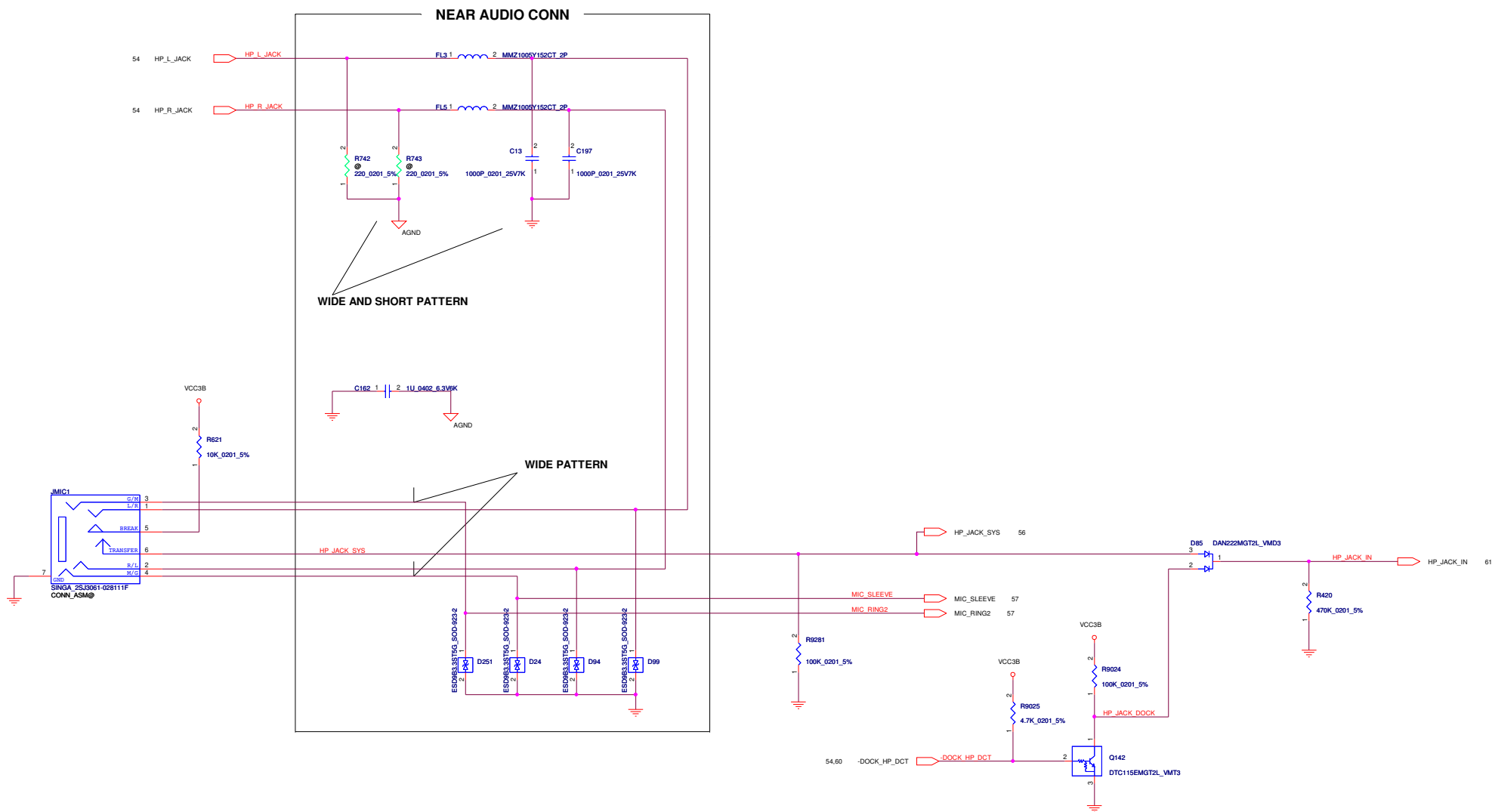
## TYPE-B NGFF CARD FOR SSD

### 3.2H CONNECTOR





<b>lenovo</b>			
Project Name : OAS-1 SP ASSES		Title : AUDIO ALC3232	
Size : C	Document Number :		Rev : 1.01
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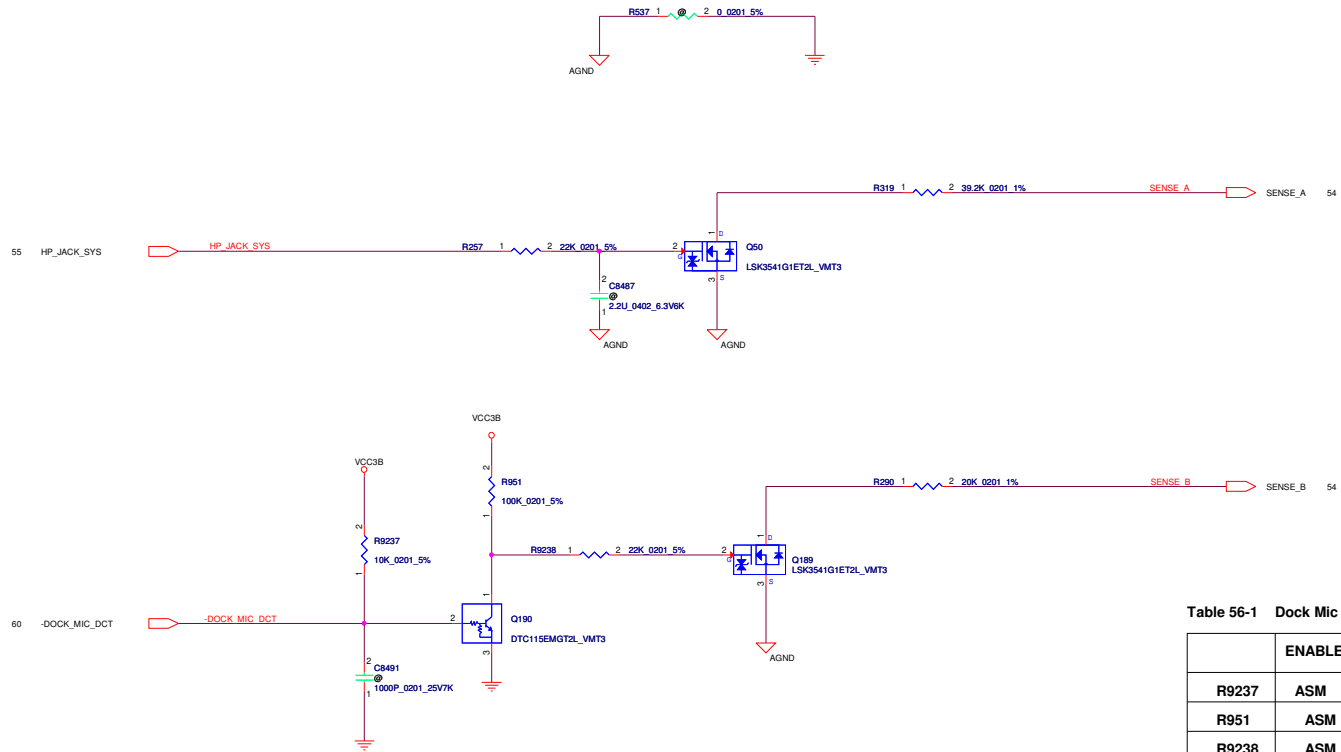
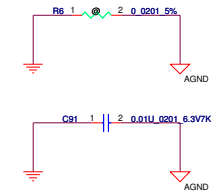
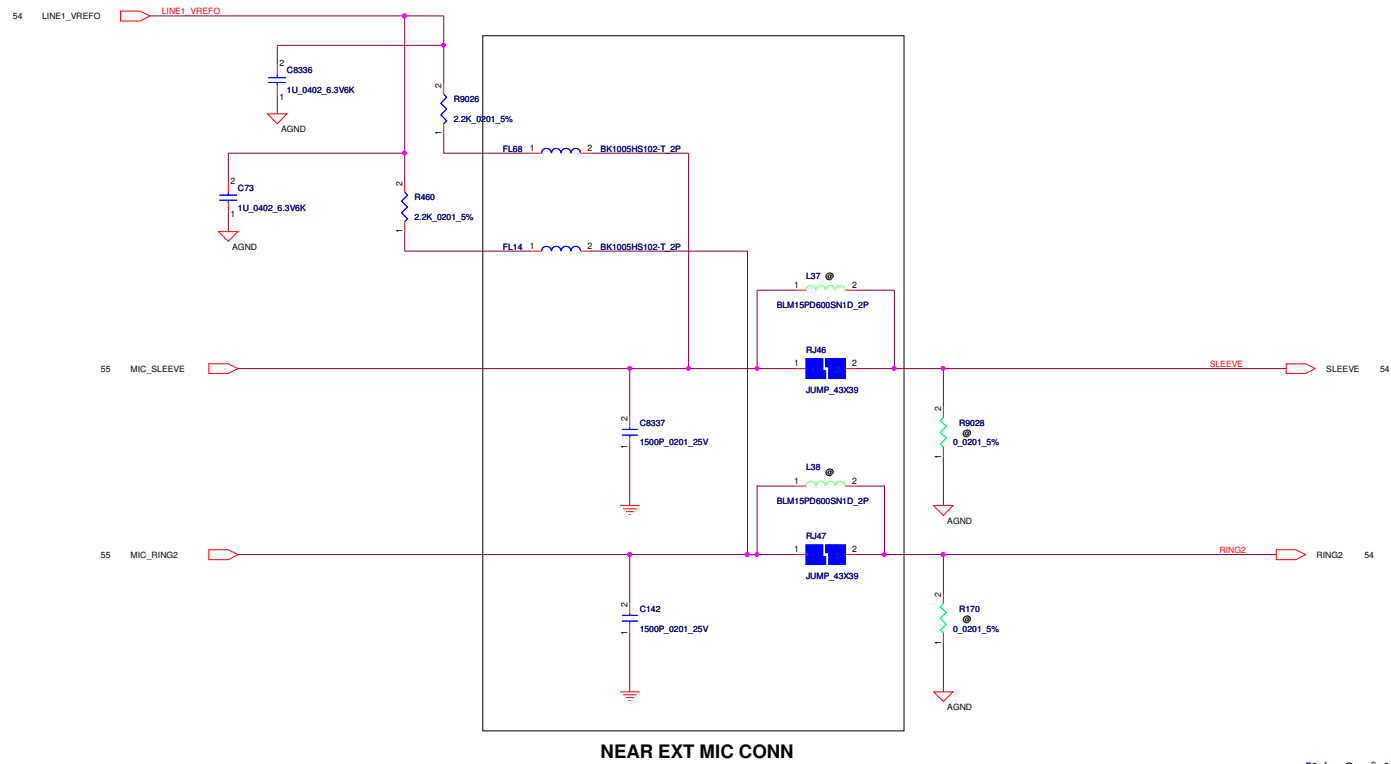


Table 56-1 Dock Mic HW Enable/Disable

	ENABLE	DISABLE
R9237	ASM	NO ASM
R951	ASM	NO ASM
R9238	ASM	NO ASM
R290	ASM	NO ASM
Q190	ASM	NO ASM
Q189	ASM	NO ASM

Logic





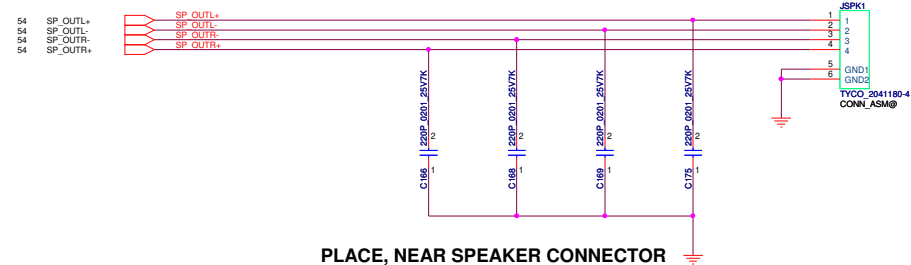
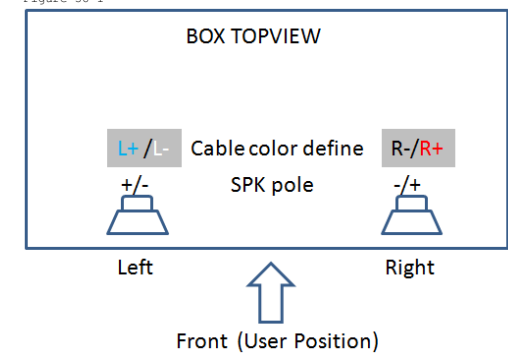
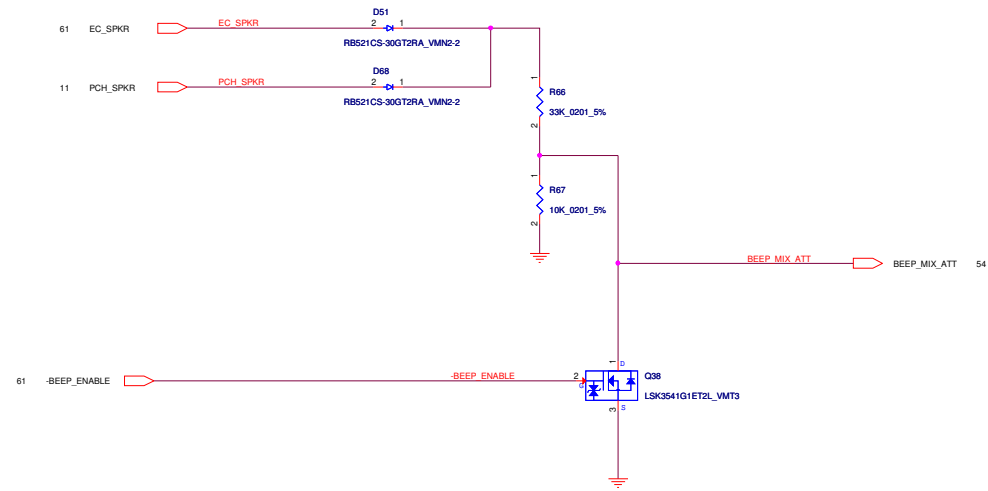


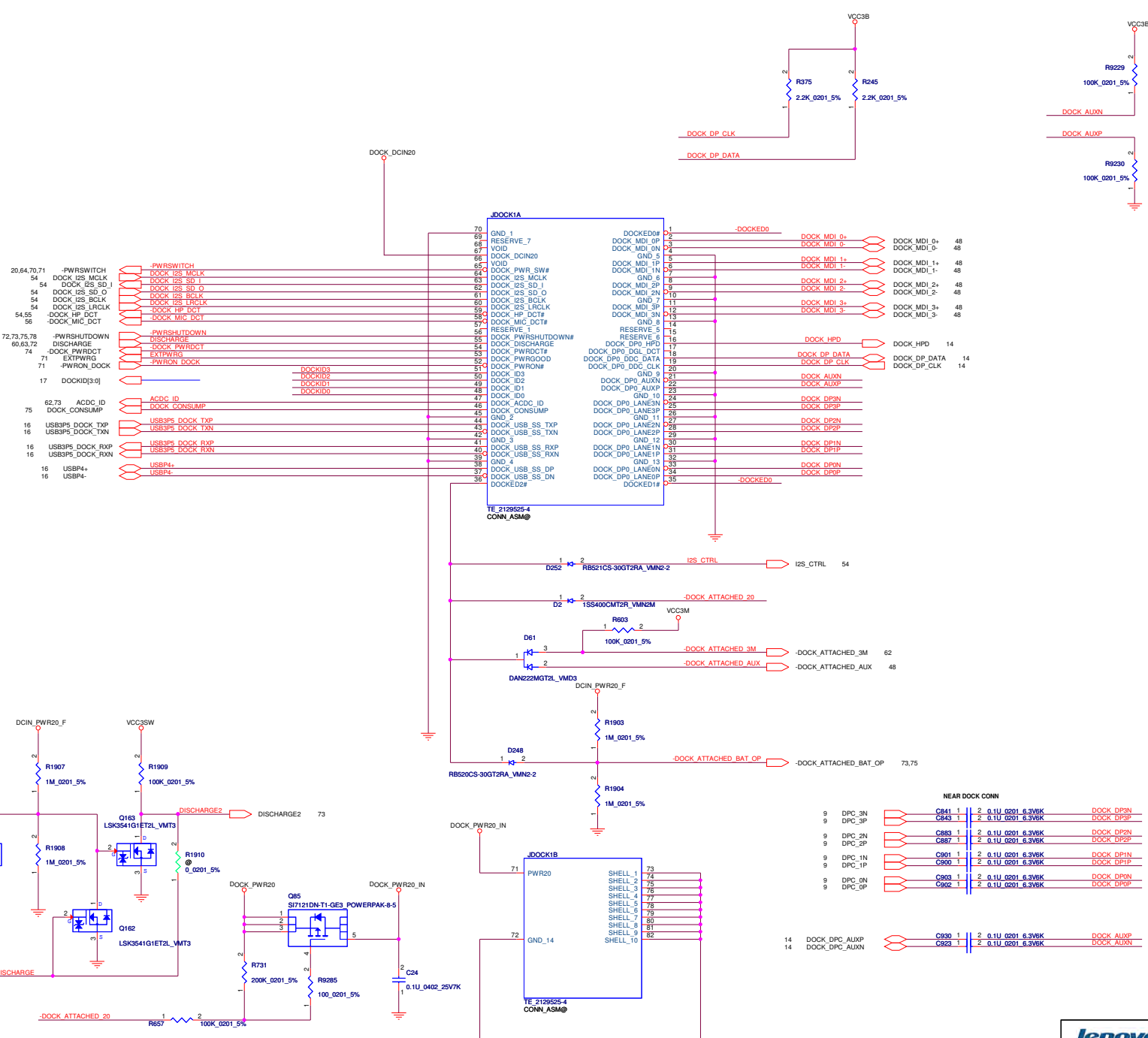
Table 58-1

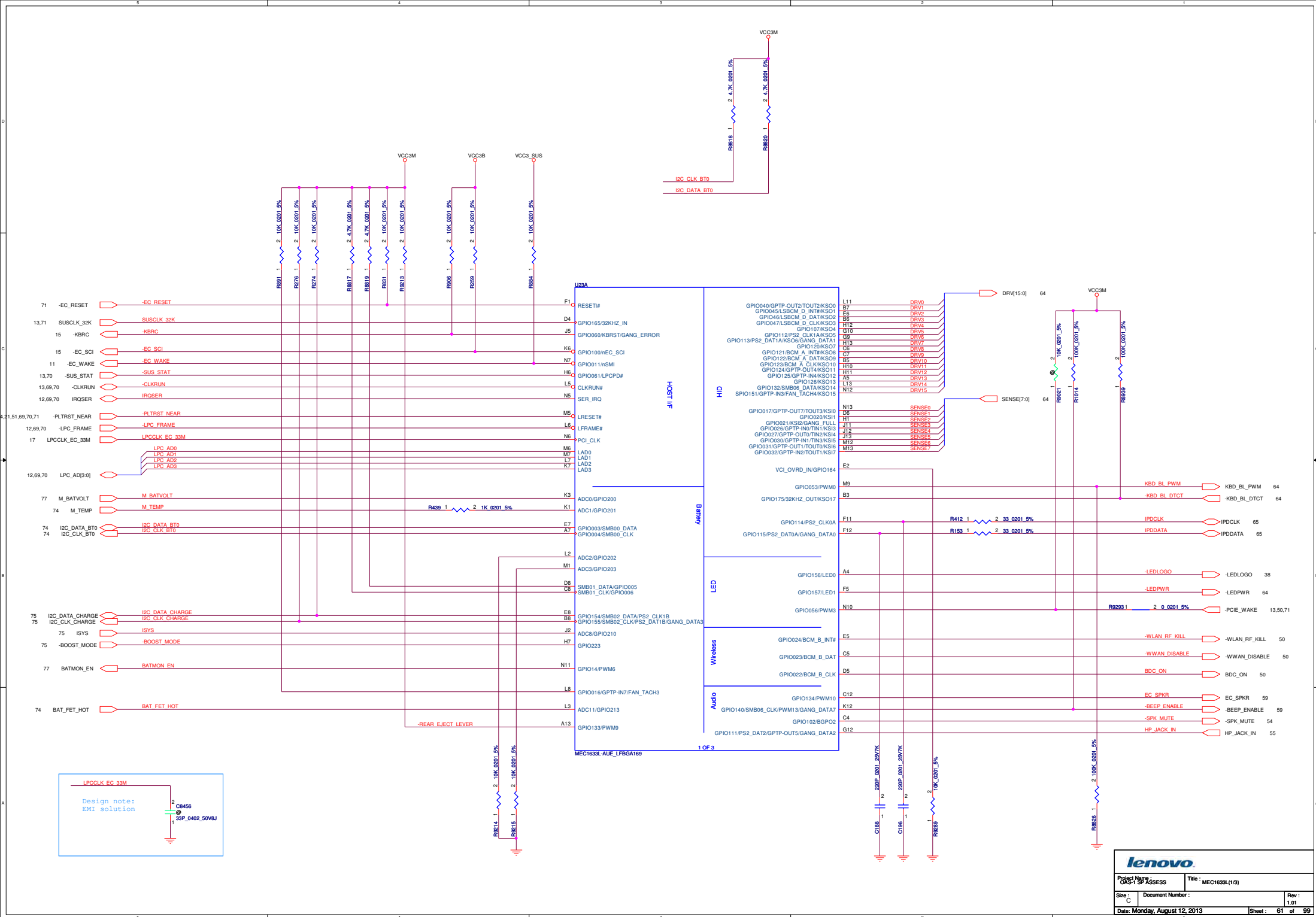
Assign	Netname	Cable Color
Pin 1	SP_OUTL+	Blue
Pin 2	SP_OUTL-	White
Pin 3	SP_OUTR-	Black
Pin 4	SP_OUTR+	Red

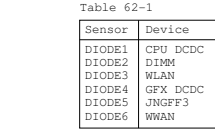
Figure 58-1





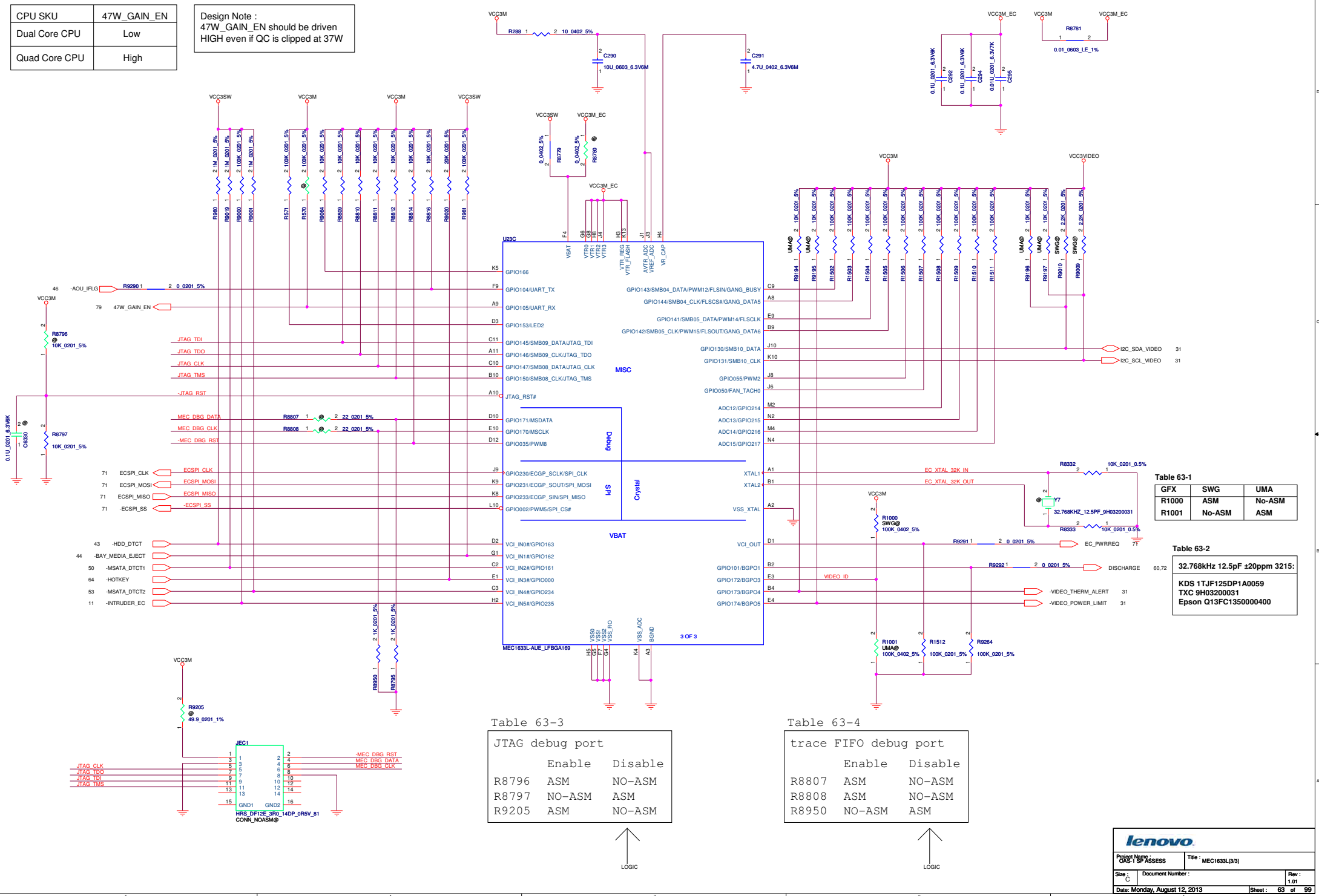






CPU SKU	47W_GAIN_EN
Dual Core CPU	Low
Quad Core CPU	High

Design Note :  
47W\_GAIN\_EN should be driven  
HIGH even if QC is clipped at 37W

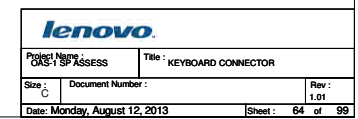
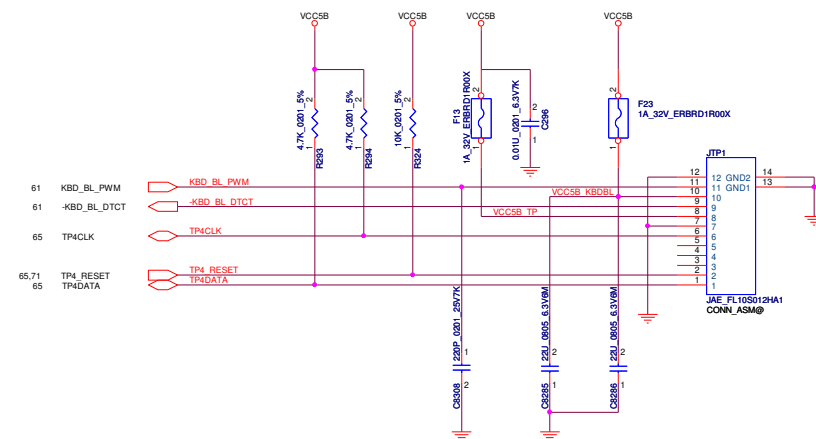


GFX	SWG	UMA
R1000	ASM	No-ASM
R1001	No-ASM	ASM

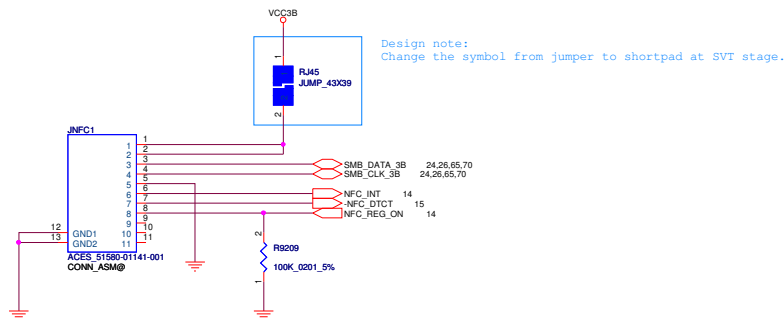
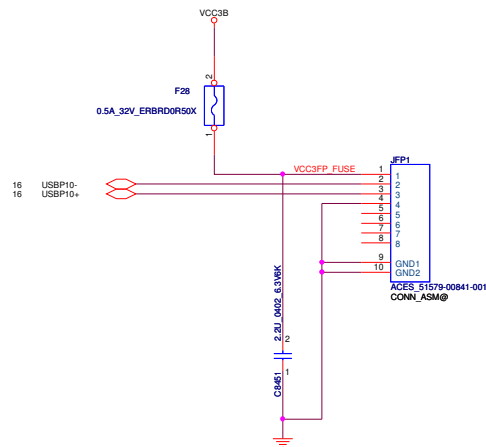
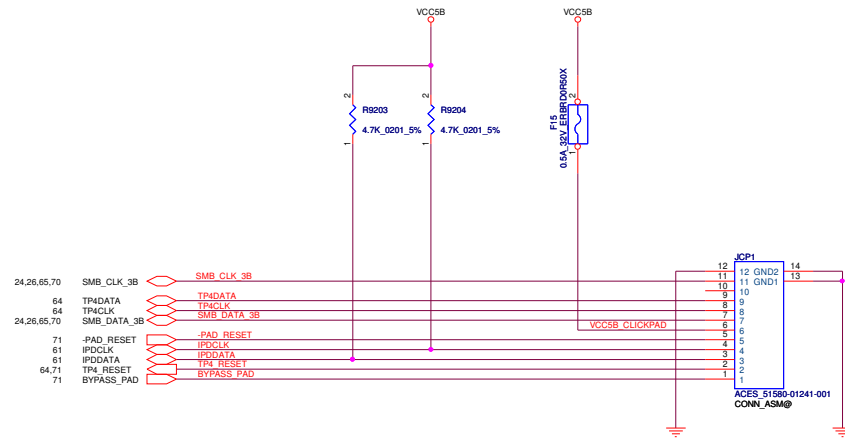
32.768kHz 12.5pF  $\pm 20$ ppm 3215:  
KDS 1TJF125DP1A0059  
TXC 9H03200031  
Epson Q13FC1350000400

JTAG debug port		
	Enable	Disable
R8796	ASM	NO-ASM
R8797	NO-ASM	ASM
R9205	ASM	NO-ASM


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

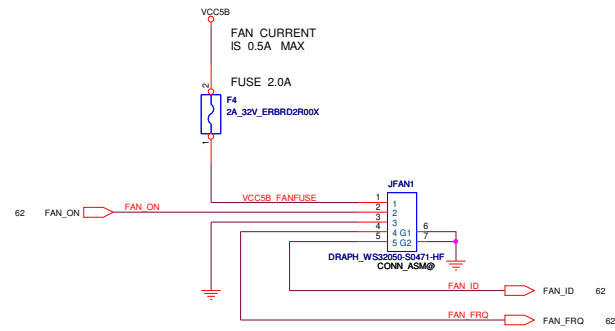






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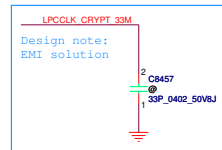
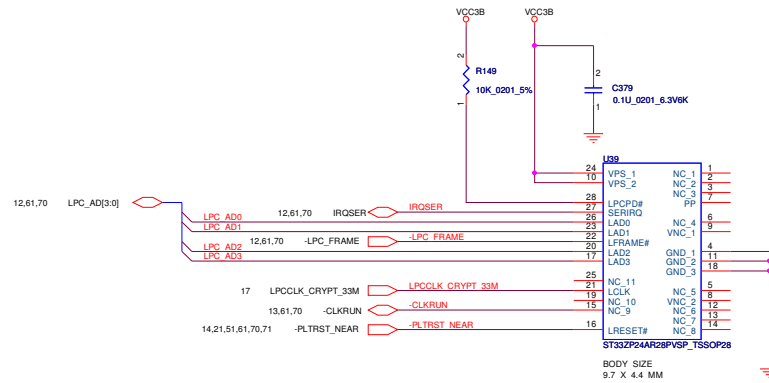


Table 70-1

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

LOGIC

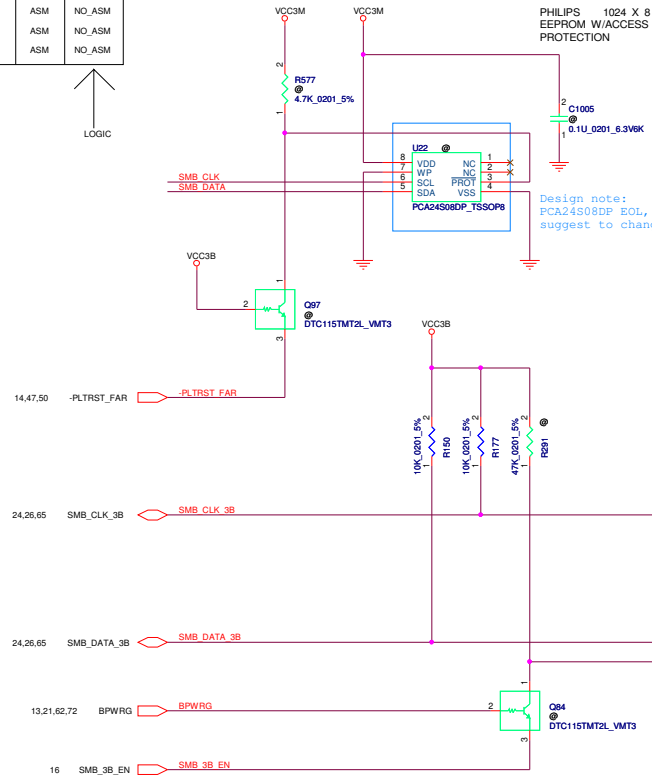


Table 70-2

REF	DES	ENABLE	DISABLE
JDB1	ASM		NO_ASM
R220	ASM		NO_ASM

LOGIC

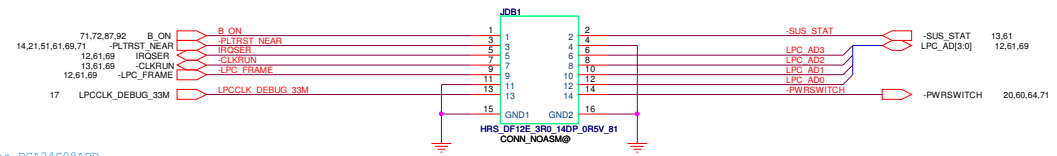


Table 70-3

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

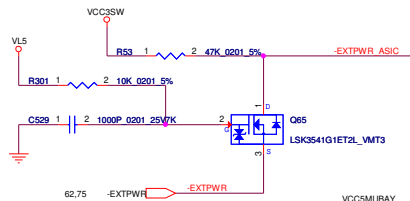


Table 71-1

ThinkEngine (U101)	
Toshiba	TB62D516FG
Rohm	BD4177KUT

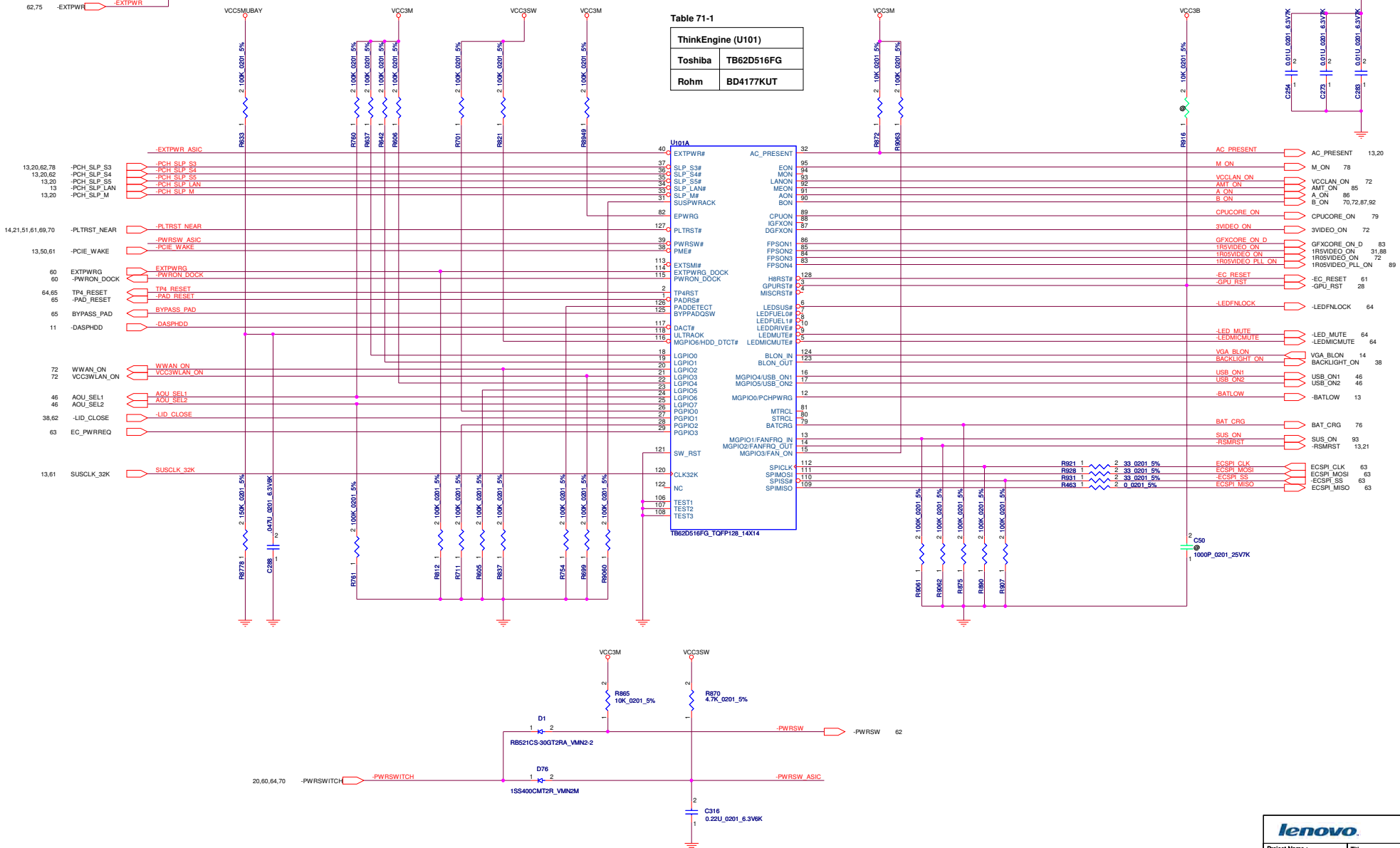






TABLE 73-1

Fuse (PF2)	
Littlefuse	0429007.WRMLHF
Cooper	3216FF7-R
AEM	F1206HI7000V024TM

Design Note:  
AEM part is only for qualification purpose.  
It will be dropped before SVT if GCM is not approved.

DCIN

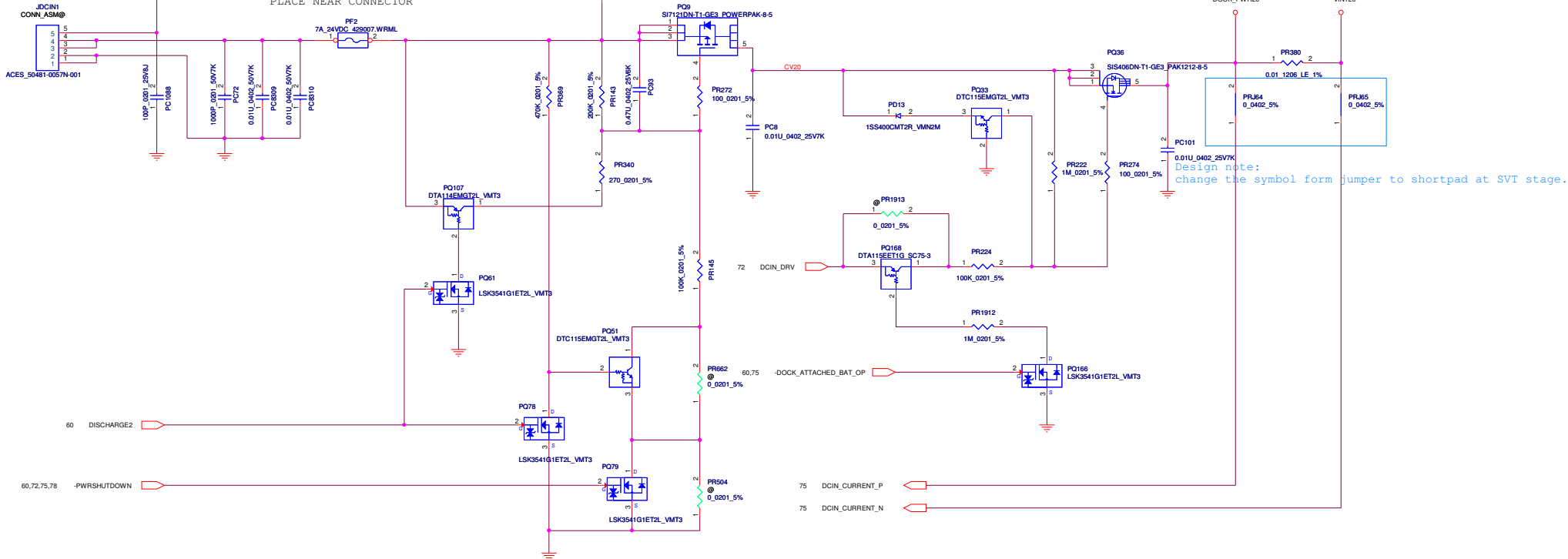


TABLE 73-1

PEAK SHIFT	YES	NO
PR662	NO-ASM	ASM
PR369	ASM	NO-ASM
PQ78	ASM	NO-ASM
PQ51	ASM	NO-ASM

↑  
LOGIC

TABLE 74-1

Cooper TR/3216FF10-R

Littlefuse 0501010.WR

AEM FL206HB10V024TM

MAIN BAT CONN

ACES\_53001-00771-001

WIDE PATTERN

10A 24V TR3216FF10-R

PR272 1 2 100.0201\_5%

PR271 1 2 100.0201\_5%

M2\_DRV 72

BAT\_PWR12

VCC3M

VINT20

0.01uF 0402\_25V7K

PC22

PR1917 0.0201\_5%

PR641 750K\_0201\_5%

PC723 1500P\_0402\_50V

PR270 100.0201\_5%

PD79 1SS400CMT2R\_VMN2M

PR640 27K\_0201\_5%

PC34 Si7128BNTYGE\_POWERPAK12B2-8-5

PR483 510K\_0201\_5%

PR275 100.0201\_5%

PC723 1500P\_0402\_50V

PR641 750K\_0201\_5%

PR1917 0.0201\_5%

PC22 0.01uF 0402\_25V7K

VINT20

BAT\_PWR12

M2\_DRV

ACES\_53001-00771-001

WIDE PATTERN

10A 24V TR3216FF10-R

PR272 1 2 100.0201\_5%

PR271 1 2 100.0201\_5%

M2\_DRV 72

BAT\_PWR12

VCC3M

VINT20

0.01uF 0402\_25V7K

PC22

PR1917 0.0201\_5%

PR641 750K\_0201\_5%

PC723 1500P\_0402\_50V

PR270 100.0201\_5%

PD79 1SS400CMT2R\_VMN2M

PR640 27K\_0201\_5%

PC34 Si7128BNTYGE\_POWERPAK12B2-8-5

PR483 510K\_0201\_5%

PR275 100.0201\_5%

PC723 1500P\_0402\_50V

PR641 750K\_0201\_5%

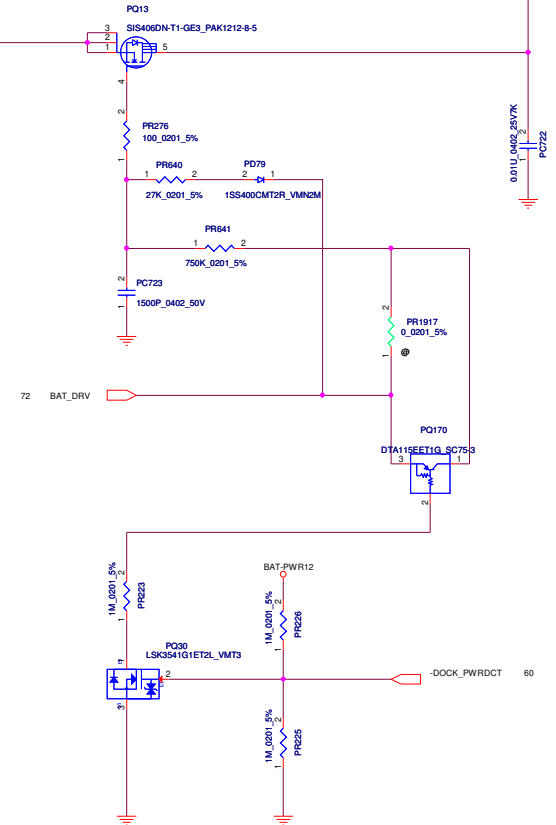
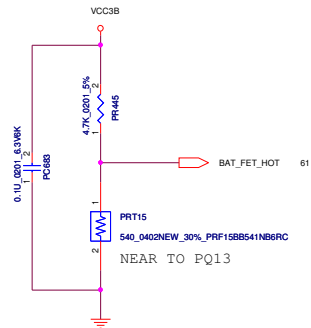
PR1917 0.0201\_5%

PC22 0.01uF 0402\_25V7K

VINT20

BAT\_PWR12

M2\_DRV



BOM note:  
Virtual symbol for BOM control.

CAD note:  
According to MFVT EC006,  
show part description when  
new symbol announce.

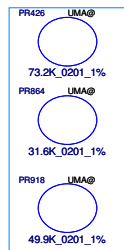
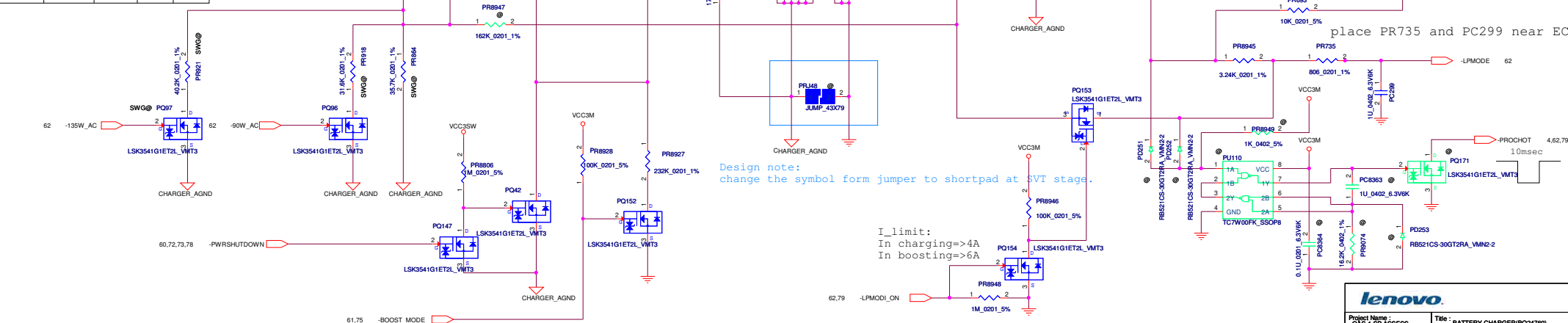


TABLE 75-1

	SWG	UMA
PR426	44.2K	73.2K
PR864	35.7K	31.6K
PR918	31.6K	49.9K
PR921	40.2K	DY
PQ97	ASM	DY

TABLE 75-2

AC Adapter	-135W_AC	-90W_AC	System Power Limit
	SWG	UMA	
135W	L	L	135W 90W
90W	H	L	90W 90W
65W	H	H	65W 65W



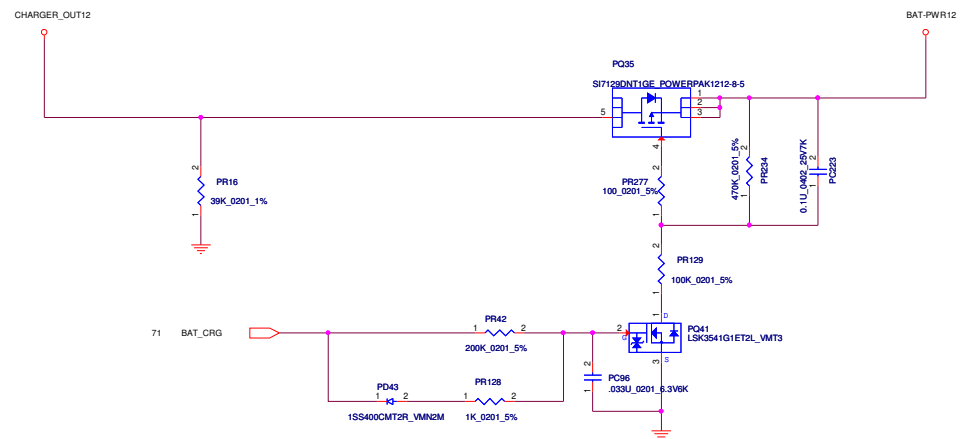
All the input MLCCs on 20V must be placed symmetrically on Top and Bottom.

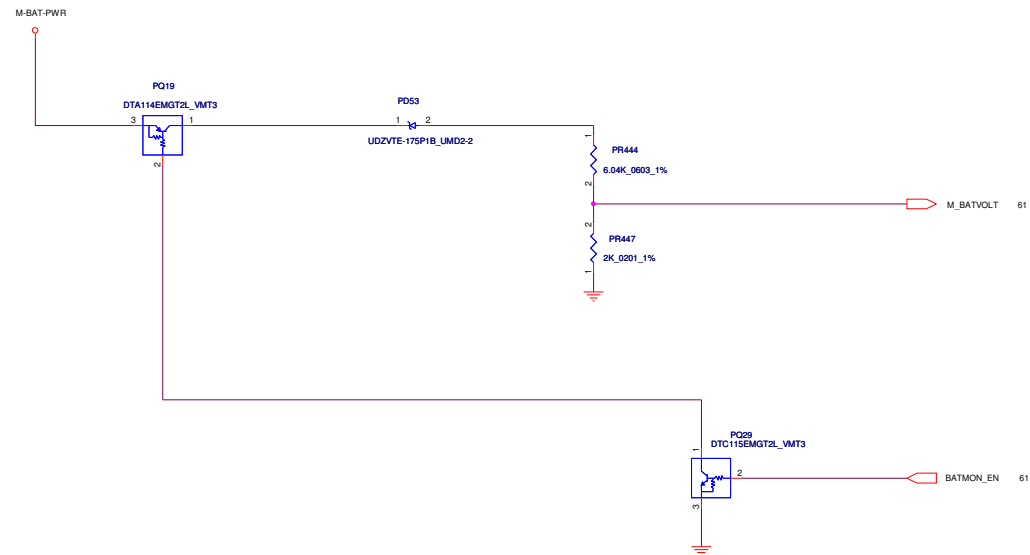
Design note:  
change the symbol form jumper to shortpad at SVT stage.

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

place PR735 and PC299 near EC

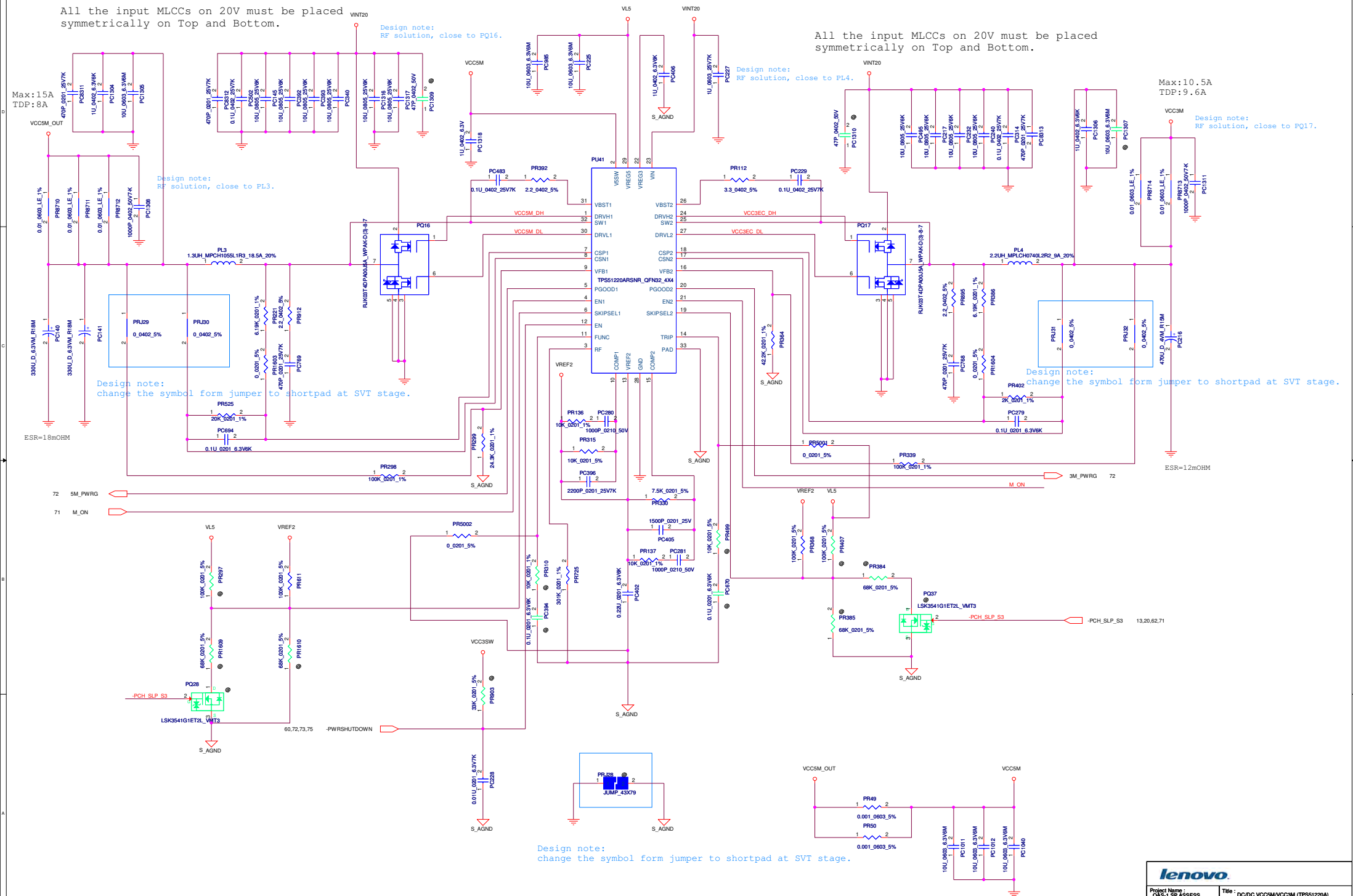
I limit:  
In charging=>4A  
In boosting=>6A

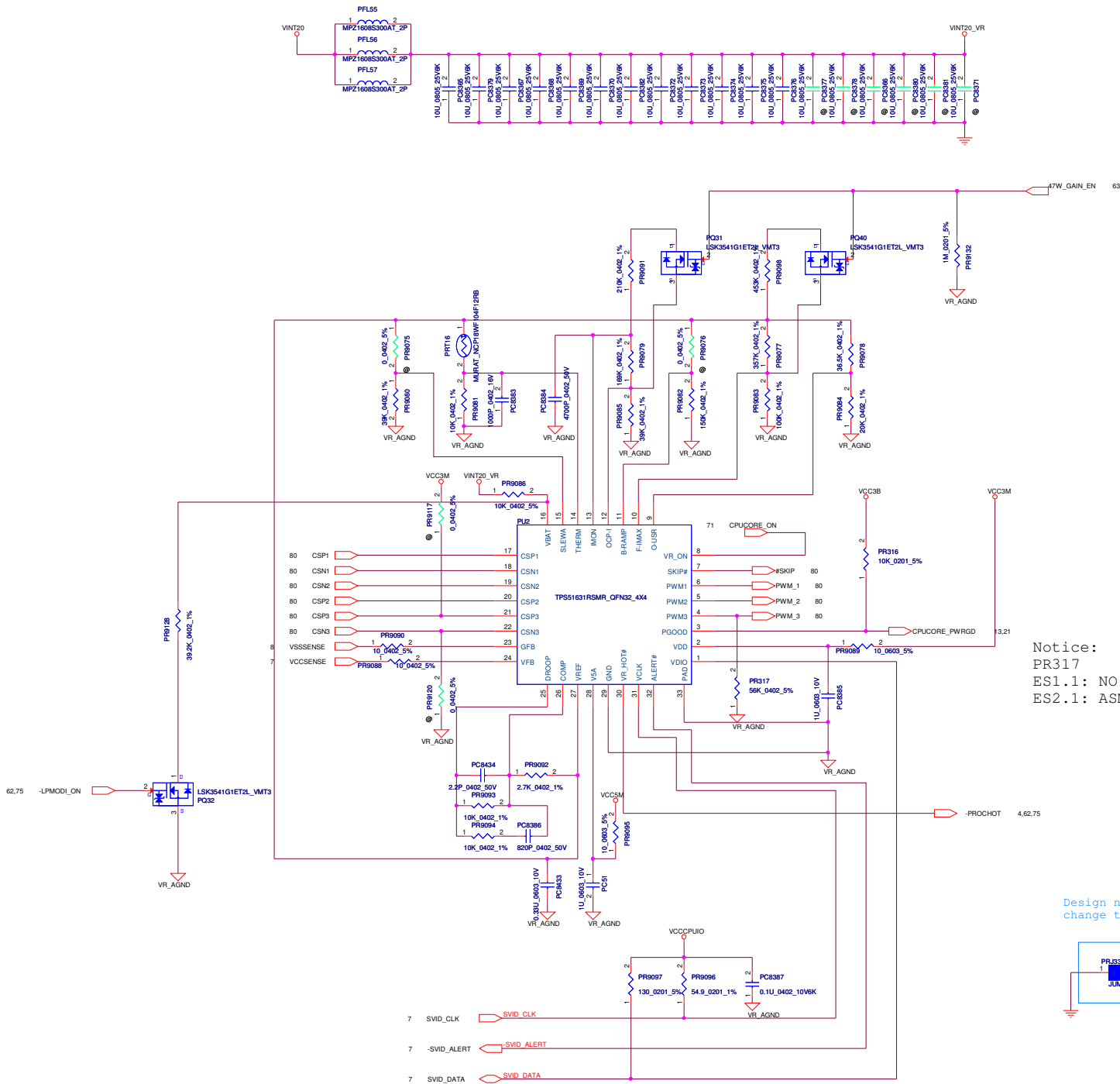




All the input MLCCs on 20V must be placed symmetrically on Top and Bottom.

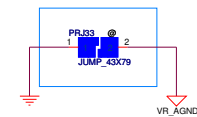
All the input MLCCs on 20V must be placed symmetrically on Top and Bottom.

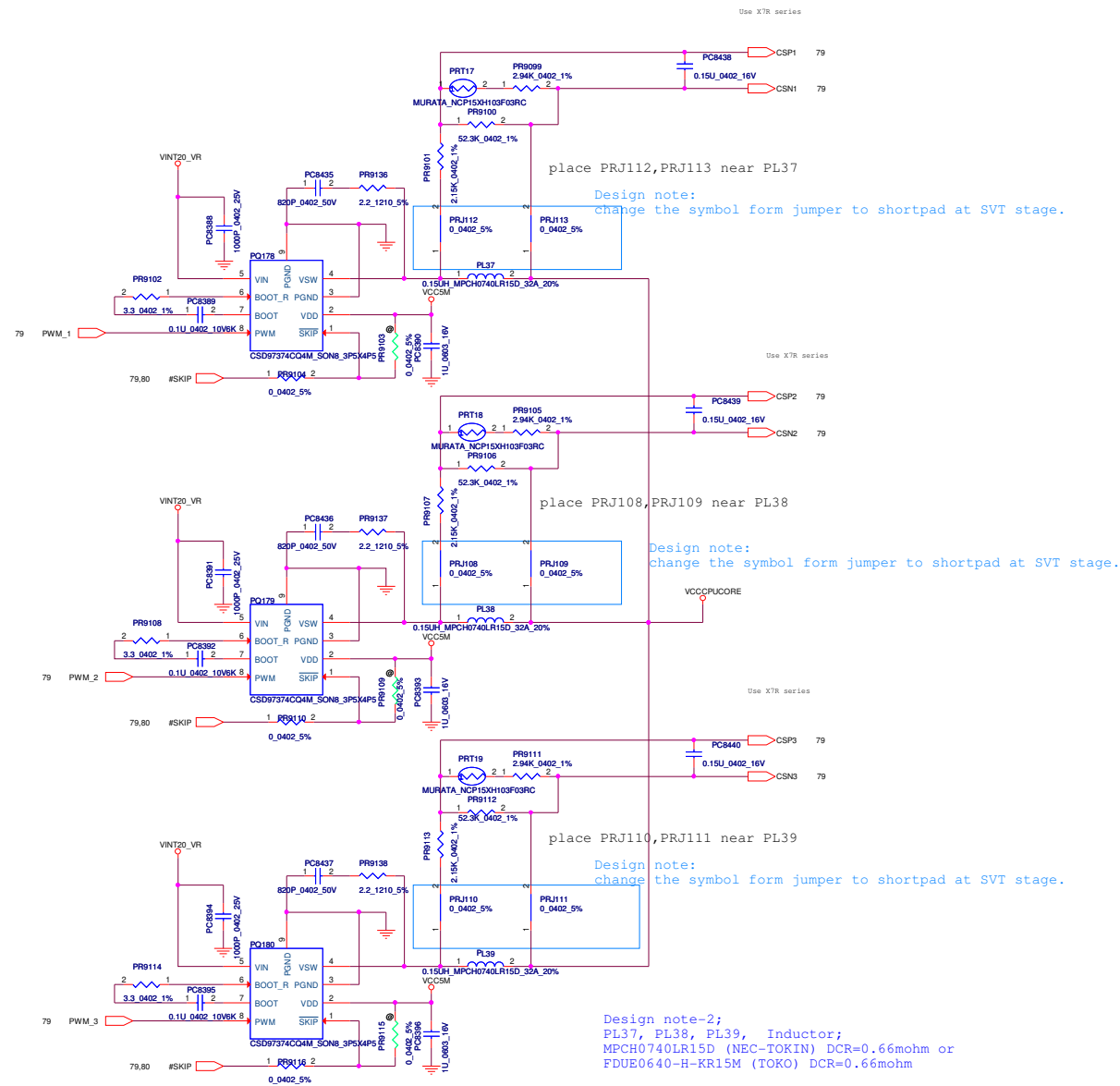




Notice:  
 PR317  
 ES1.1: NO ASM (OSR disable)  
 ES2.1: ASM (OSR enable)

Design note:  
 change the symbol form jumper to shortpad at SVT stage.

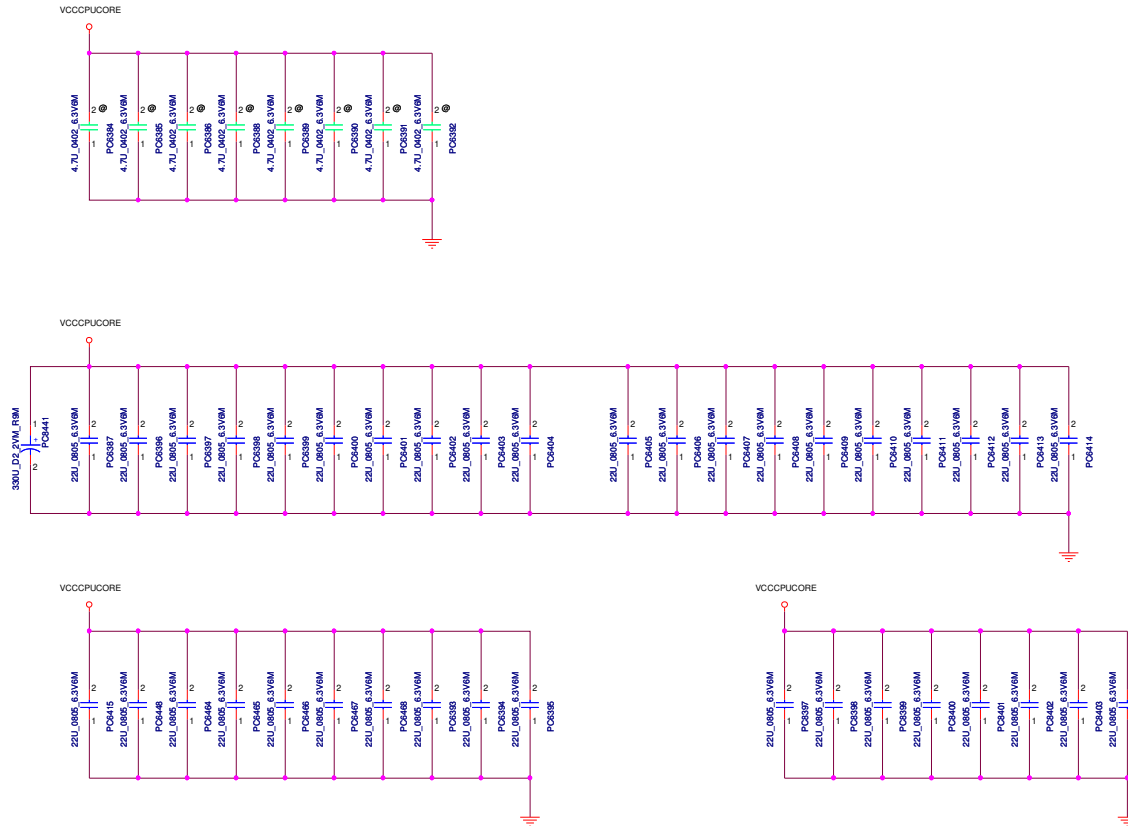




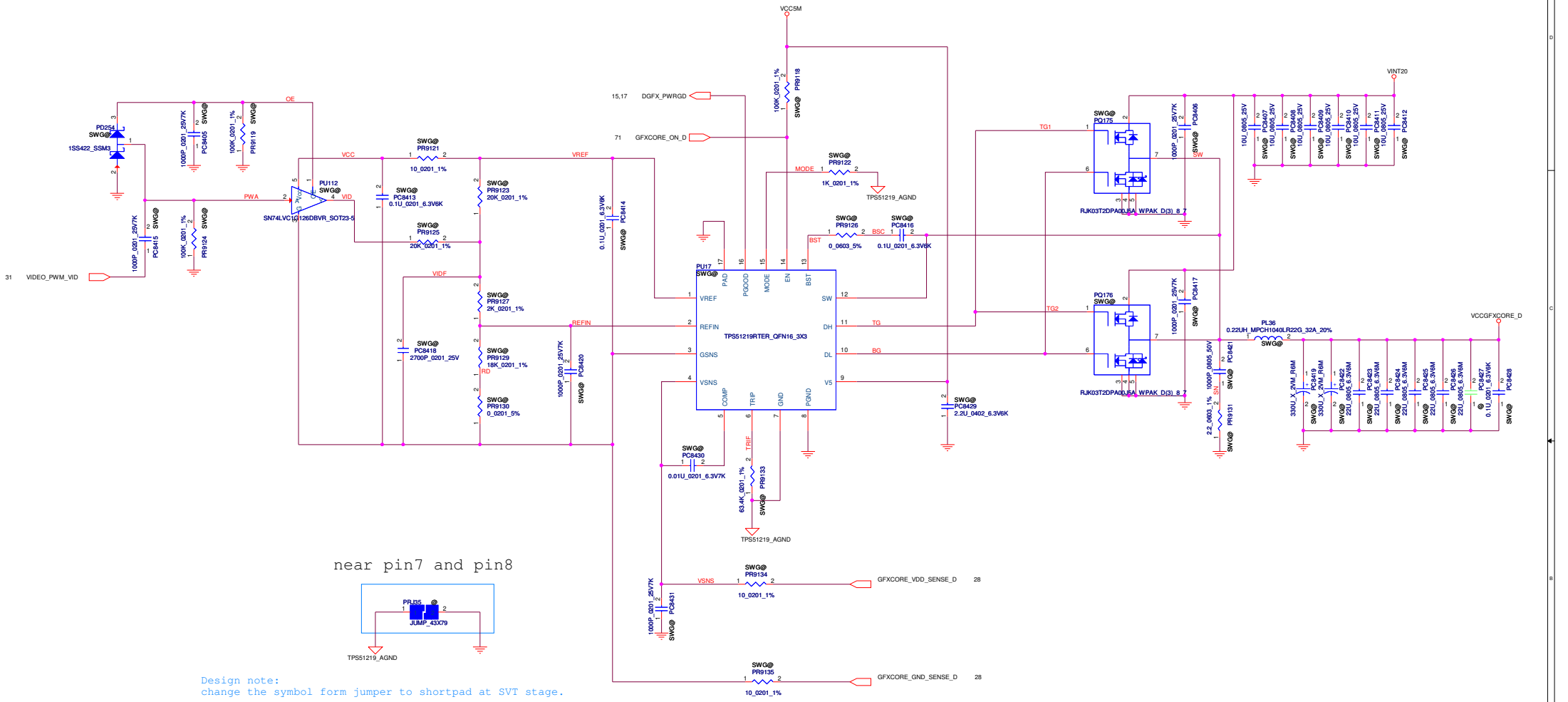


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Project Name : CRIST SP ASSESS		Title : BLANK
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38pcs 22uF for VCCCPUCORE



near pin7 and pin8


Design note:  
change the symbol form jumper to shortpad at SVT stage.

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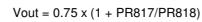
		
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Size : C	Document Number :	Rev : 1.01
Date: Monday, August 12, 2013		Sheet : 84 of 99

PU28 Assignment	
UMA	VT382BFCX-ADJ-001
SWG	VT384BFCX-ADJ-001

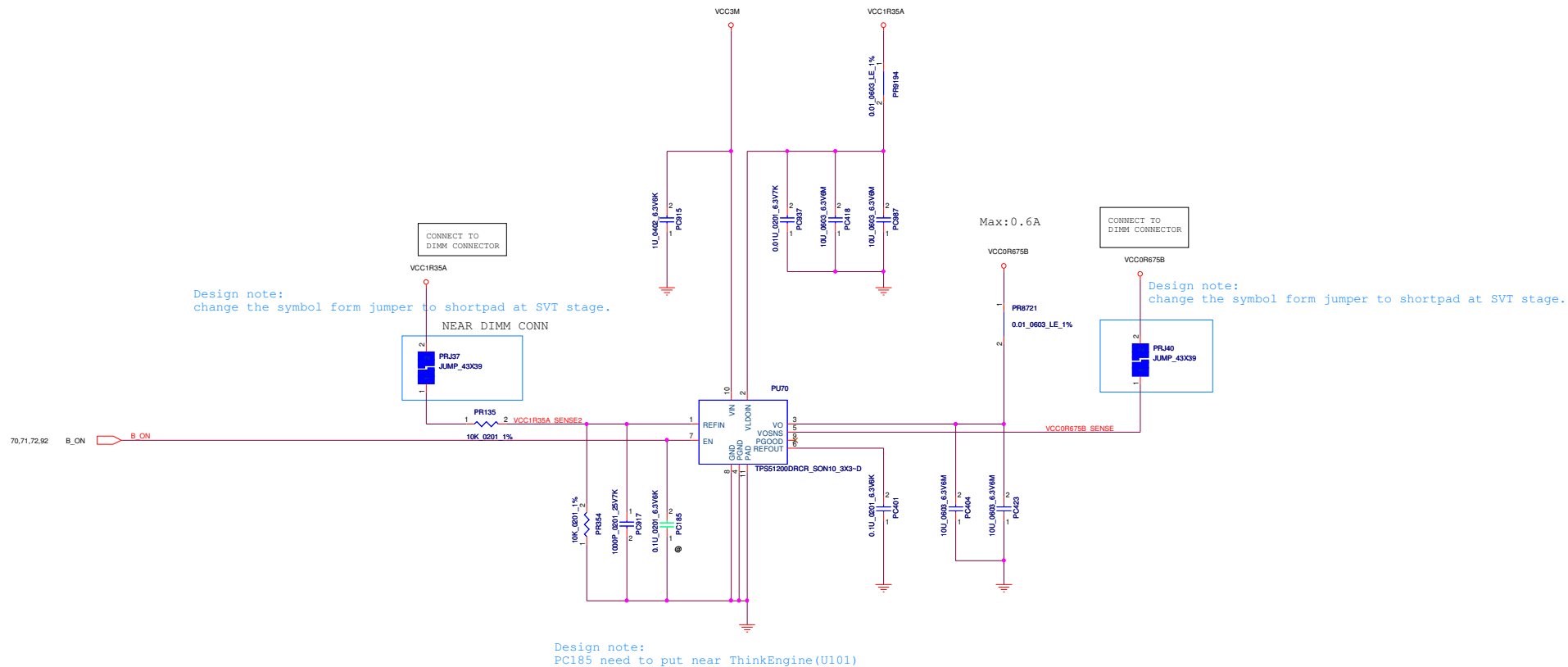
PU28      UMA®

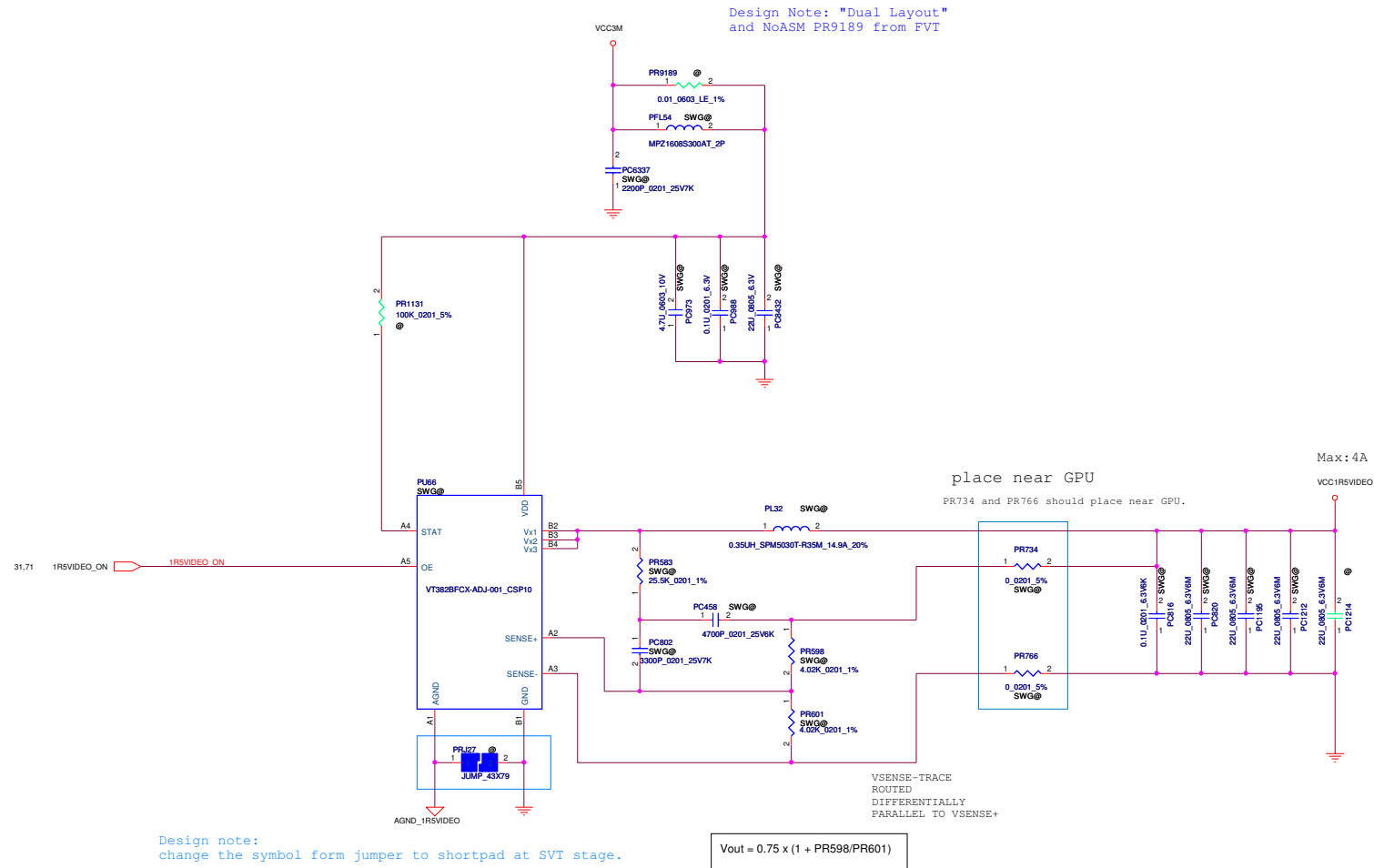


VT382BFCX-ADJ-001\_CSP10

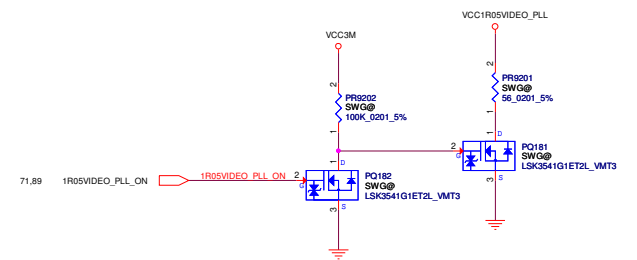
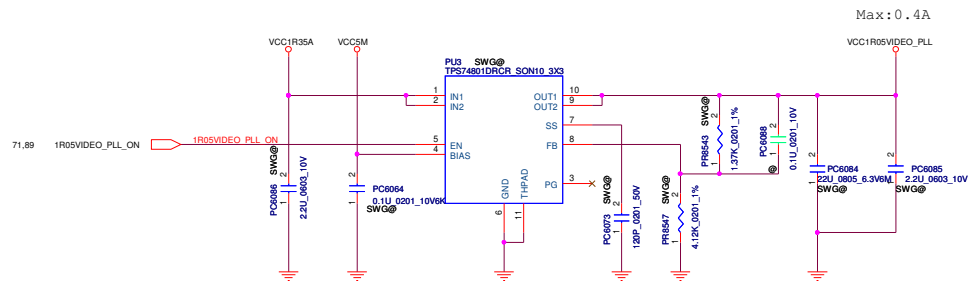












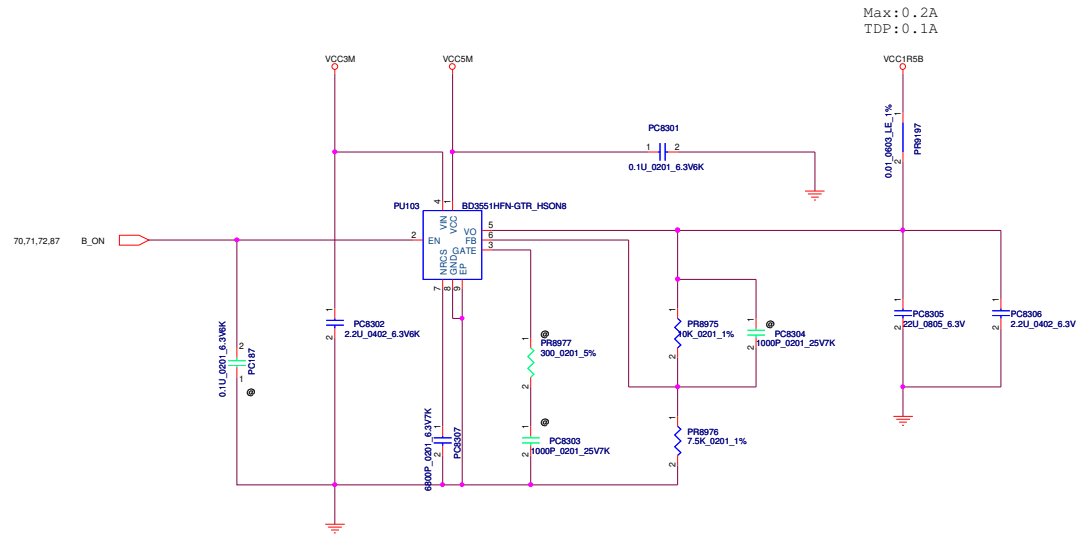


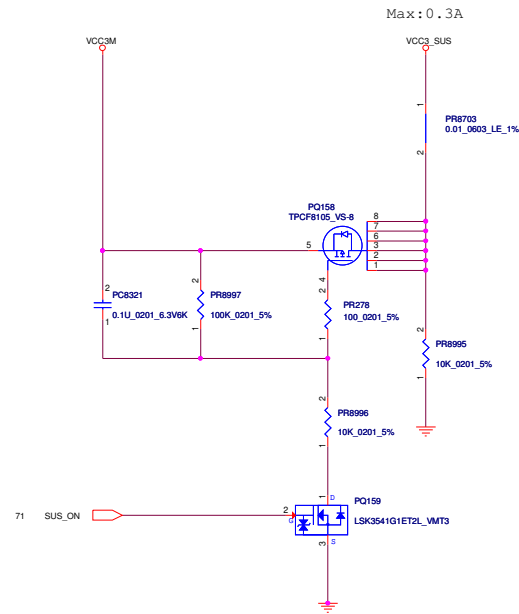
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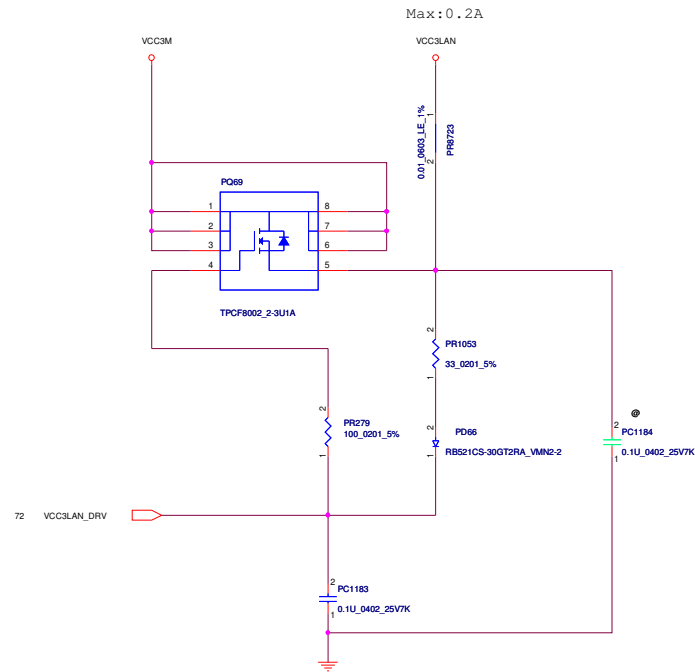
		
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Date: Monday, August 12, 2013		Sheet : 90 of 99

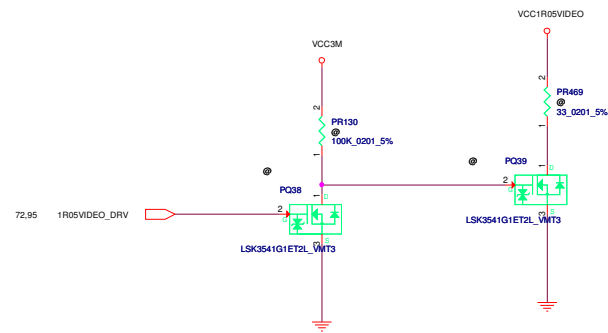
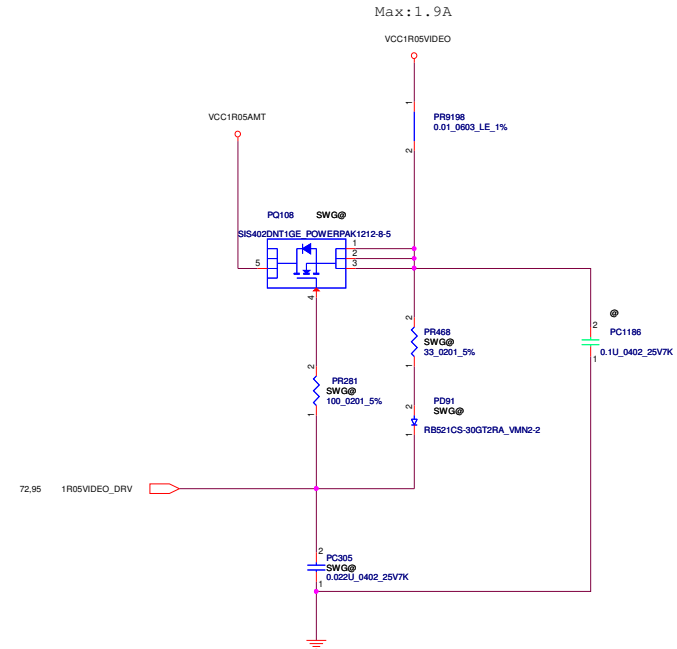
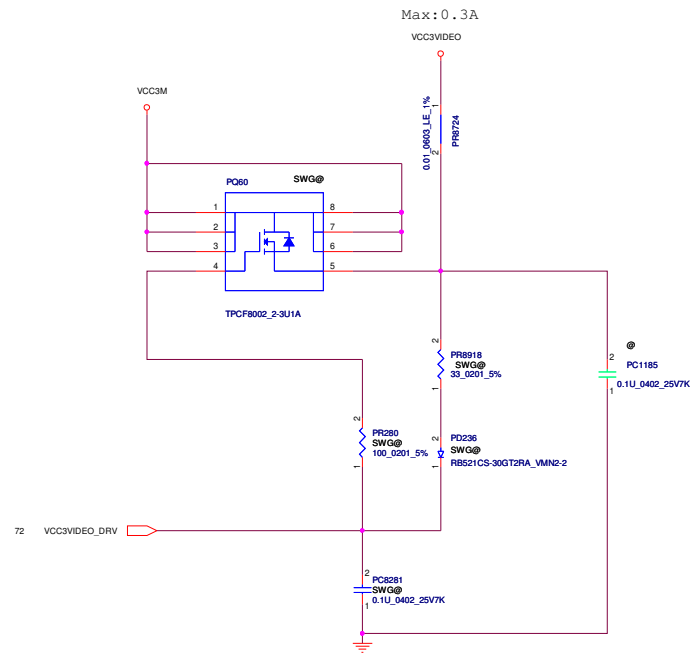
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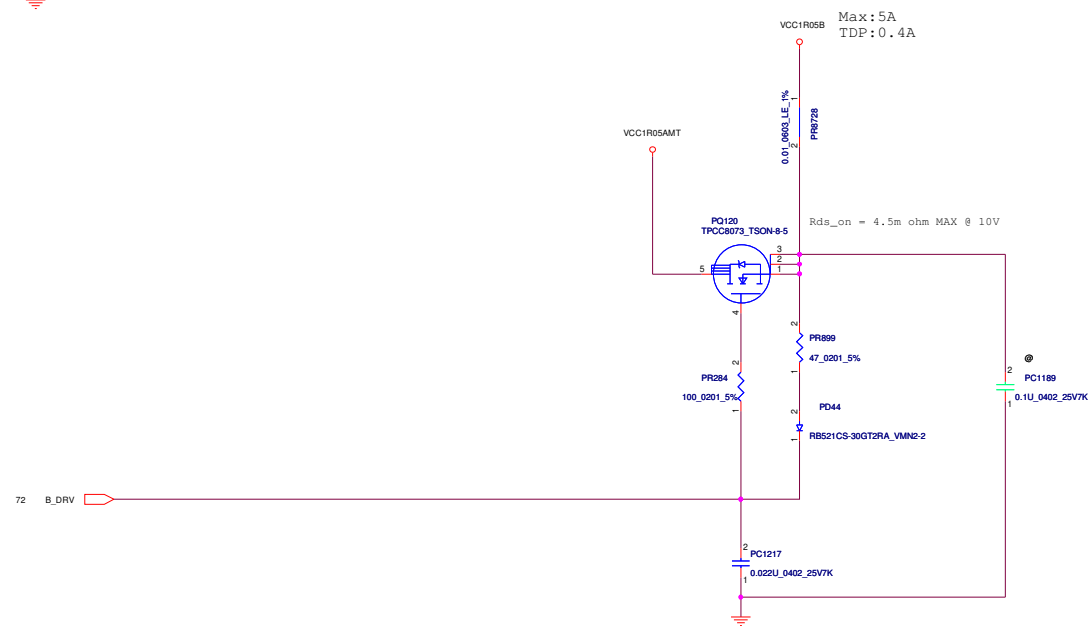
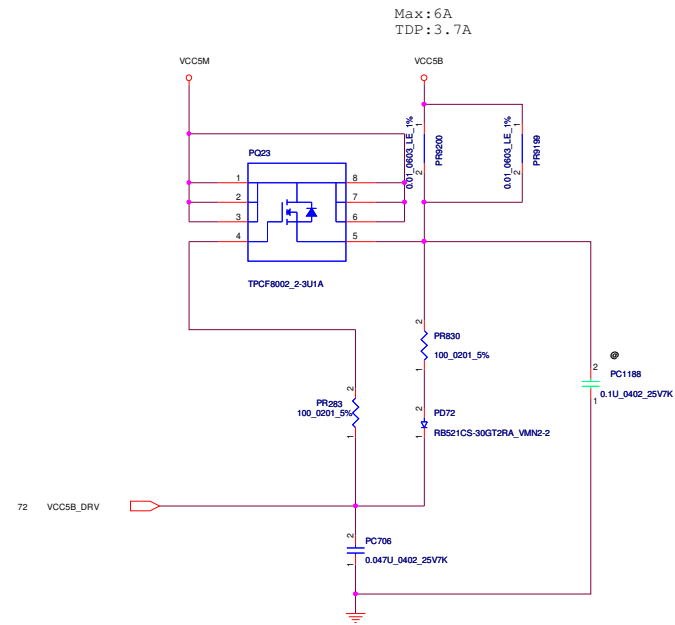
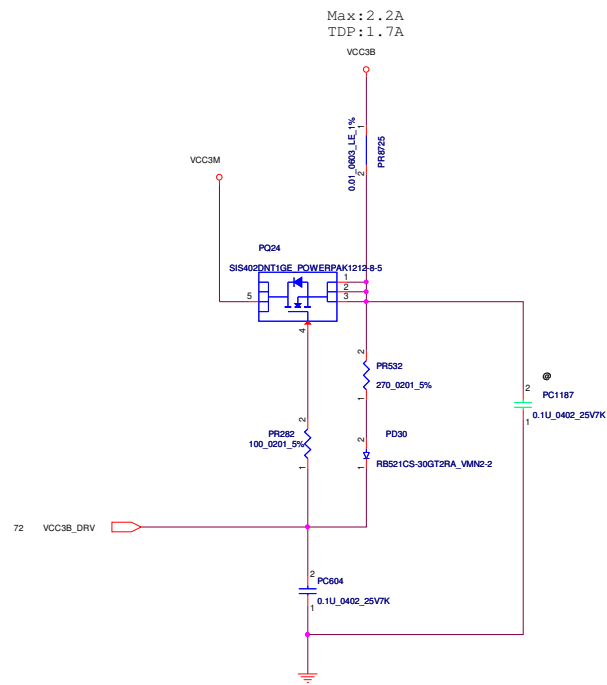
		
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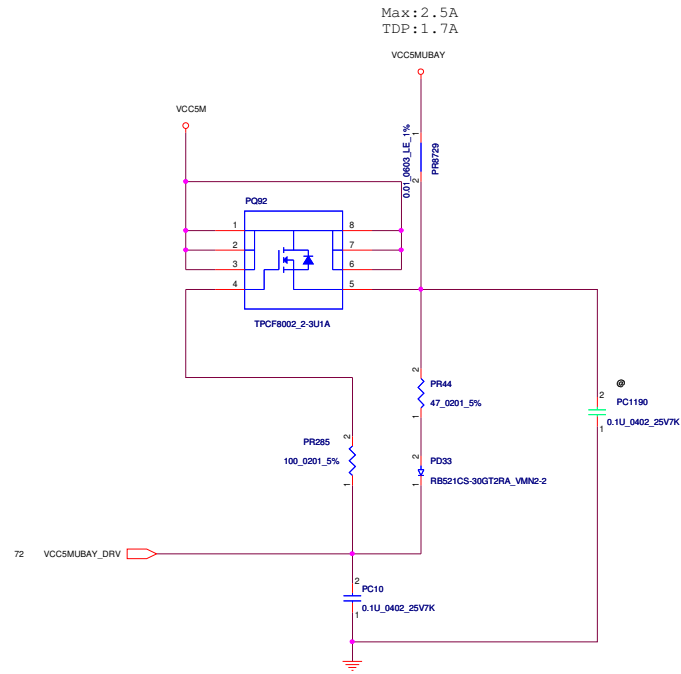












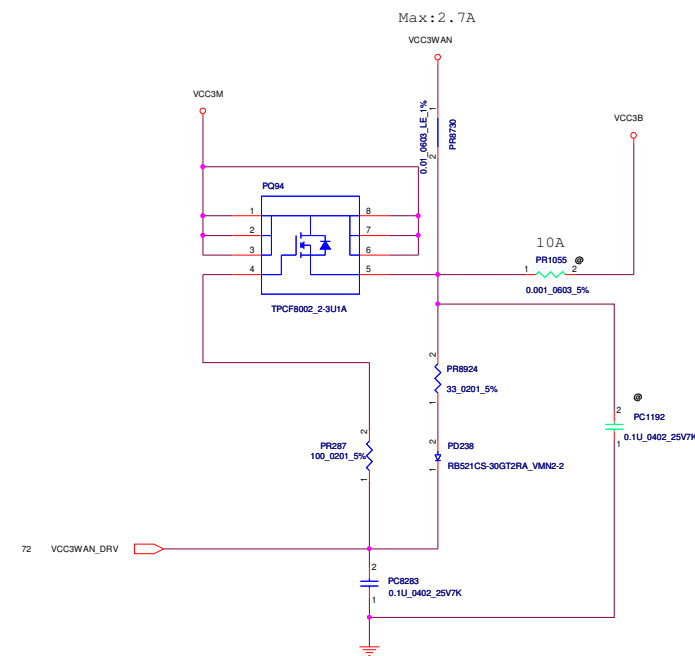
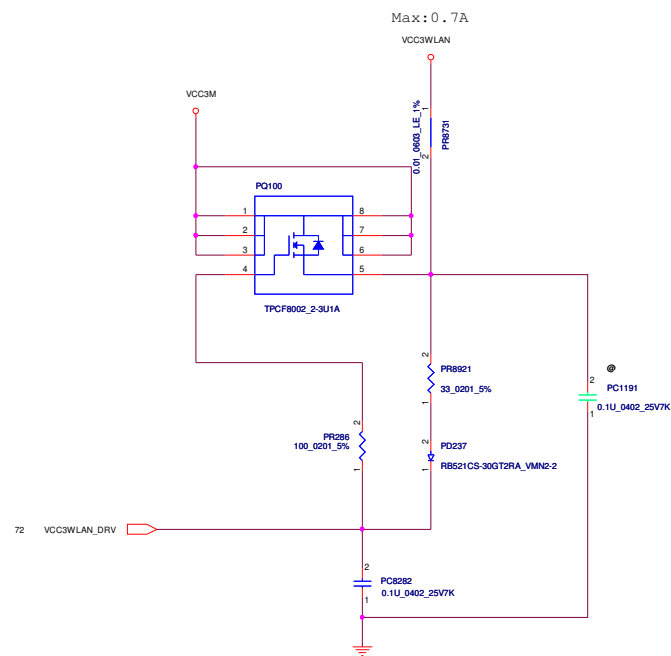


TABLE 98-1

AOAC	YES	NO
PR1055	NO-ASM	ASM
PQ94	ASM	NO-ASM
PR8924	ASM	NO-ASM
PC8283	ASM	NO-ASM
PD238	ASM	NO-ASM

↑  
LOGIC


PTH FOR SCREW HOLE


NPTH


FID  
Board Area


FID  
Component Area


- FD1


 NC, NO CONNECT TO ANY.
- FD2

 NC, NO CONNECT TO ANY.
- FD3

 NC, NO CONNECT TO ANY.
- FD4

 NC, NO CONNECT TO ANY.
- FD5

 NC, NO CONNECT TO ANY.
- FD6

 NC, NO CONNECT TO ANY.

