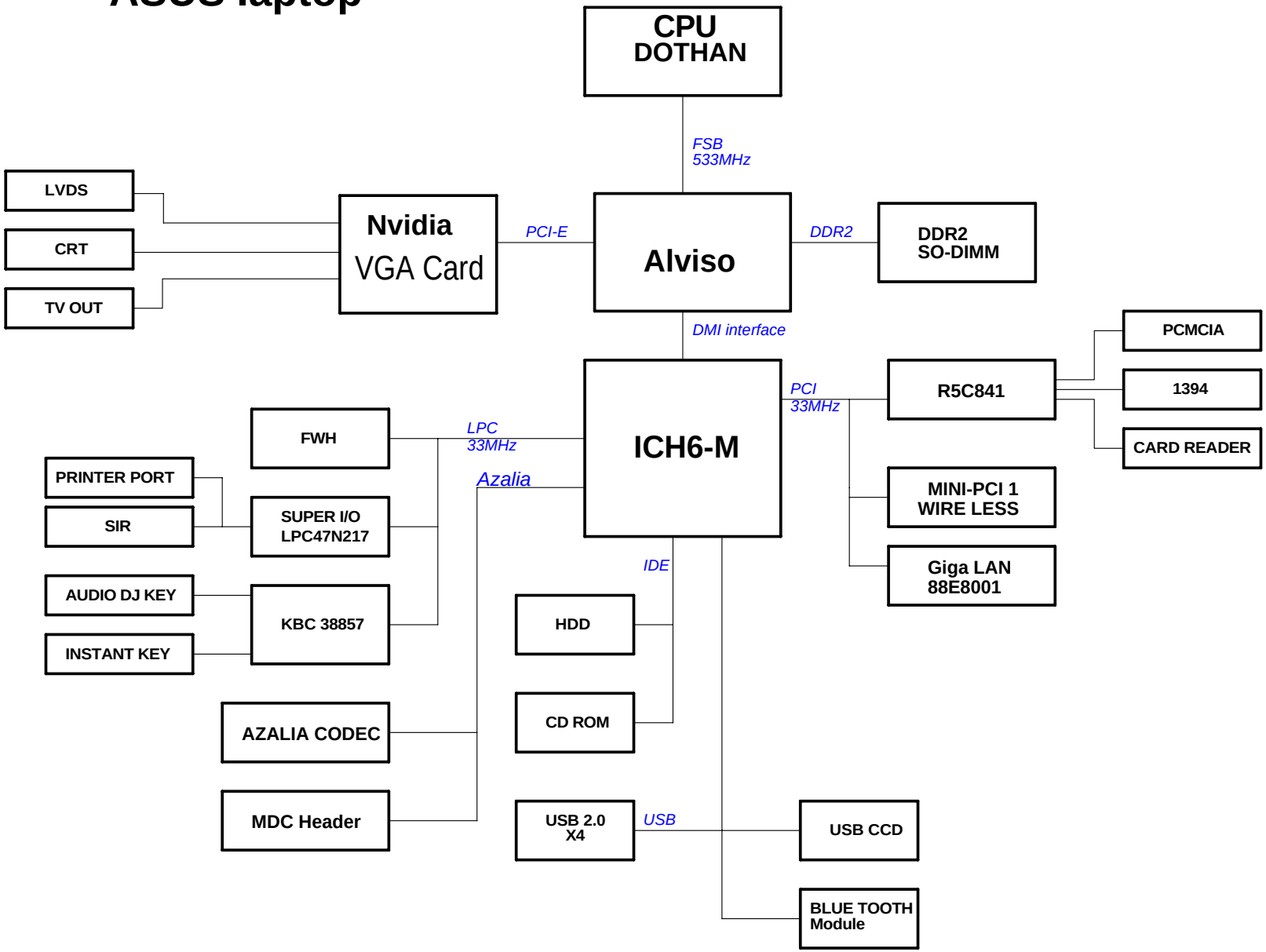
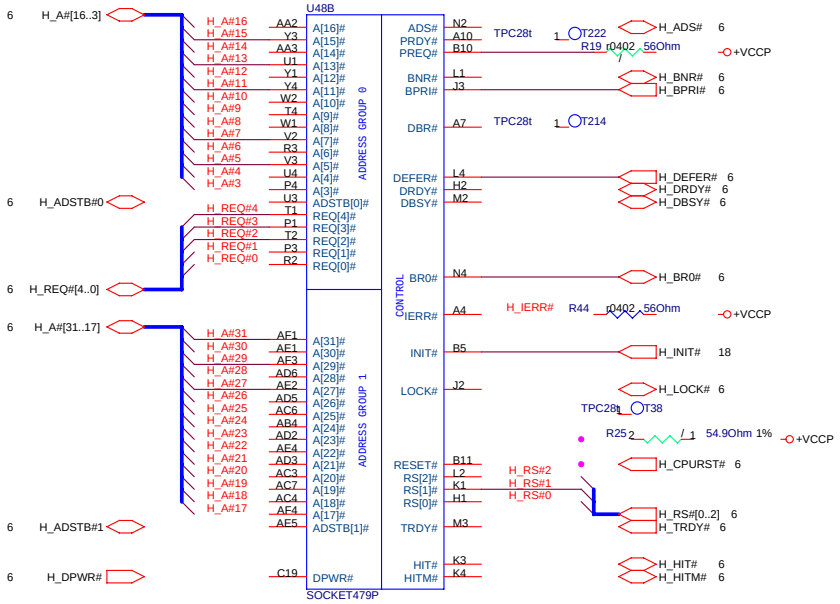
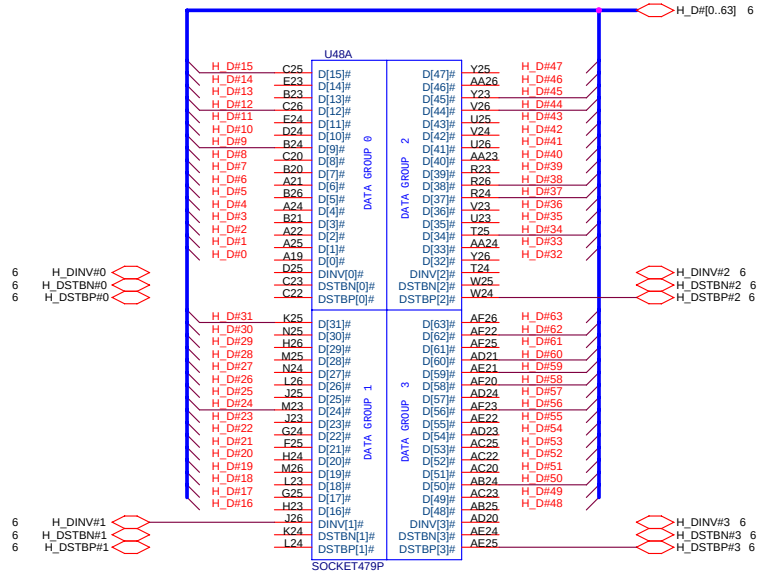
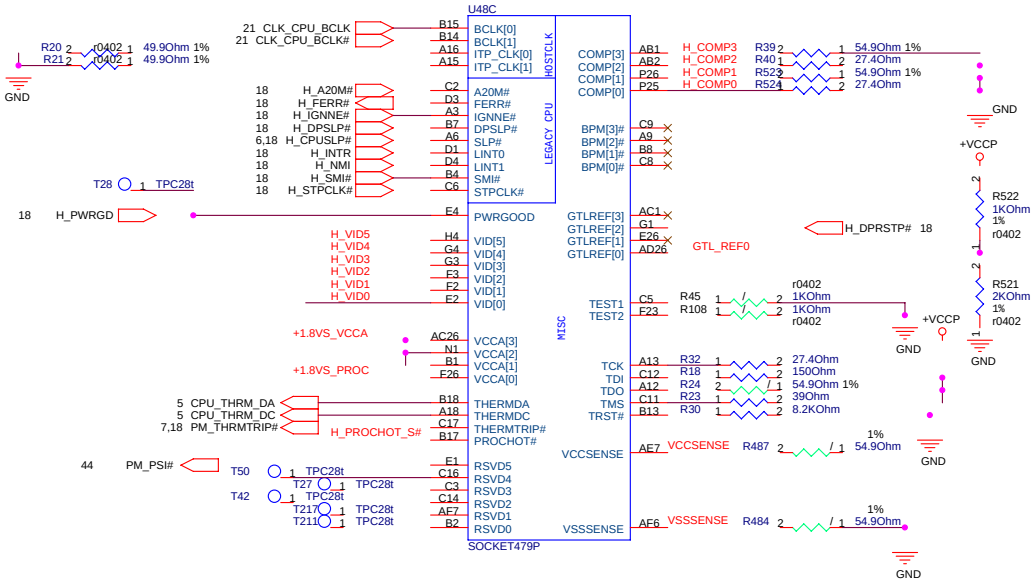
ASUS laptop


CPU
DOTHAN
FSB
533MHz
LVDS
CRT
TV OUT
Nvidia
VGA Card
PCI-E
Alviso
DDR2
DDR2
SO-DIMM
DMI interface
PCMCIA
1394
CARD READER
R5C841
PCI
33MHz
FWH
LPC
33MHz
ICH6-M
Azalia
PRINTER PORT
SIR
SUPER I/O
LPC47N217
MINI-PCI 1
WIRE LESS
Giga LAN
88E8001
IDE
AUDIO DJ KEY
INSTANT KEY
KBC 38857
HDD
CD ROM
AZALIA CODEC
MDC Header
USB 2.0
X4
USB
USB CCD
BLUE TOOTH
Module



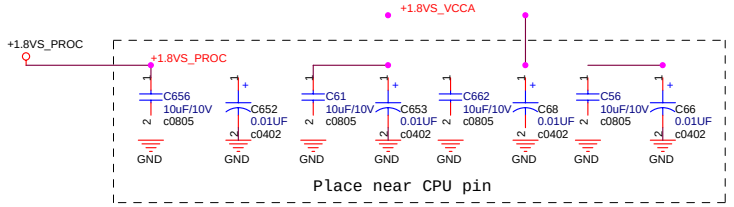




Layout note:
COMP0 and COMP2 need to be Zo=27.4ohm traces.
Best estimate is 18mil wide trace for outer layers and 14mil if on internal layer. See RDDP of Banias.
Traces should be shorter than 0.5". Refer to latest CS layout

COMP1, COMP3 should be routed as Zo=55ohm traces shorter than 0.5"

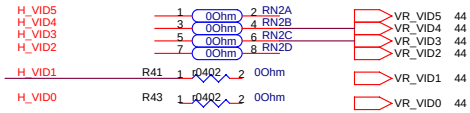
120mA / 20mil

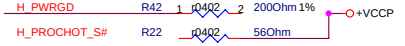


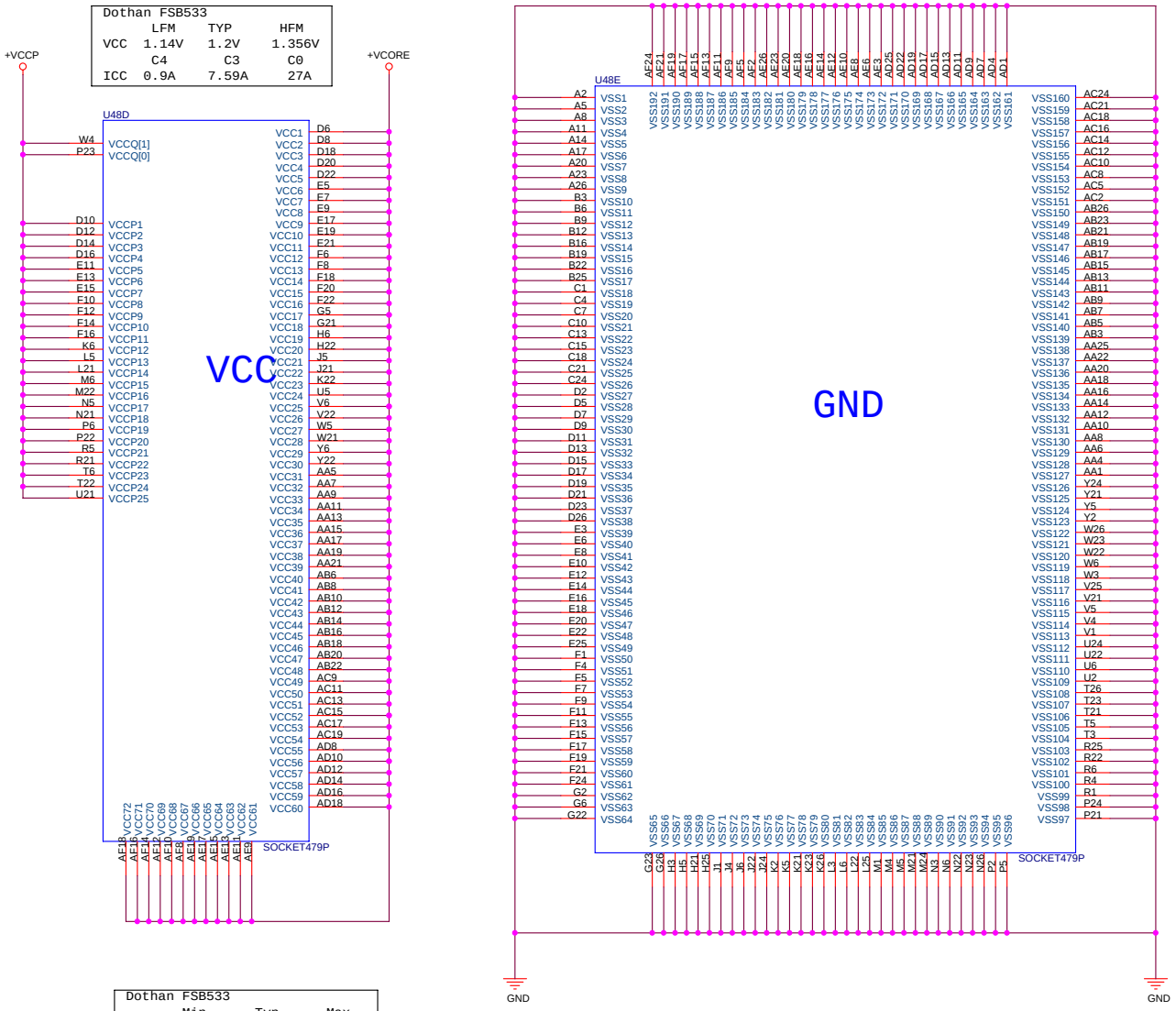
FSB 400MHz -> 1.8V
FSB 533MHz -> 1.5V

			A-STEP	B-STEP
Bclk	FSB	BSEL1	BSEL0	BSEL0
100	400	0	0	1
133	533	0	1	0

Dothan FSB533			
	Min	Typ	Max
VCCA	1.425V	1.5V	1.575V
	Min	Typ	Max
ICCA			120mA





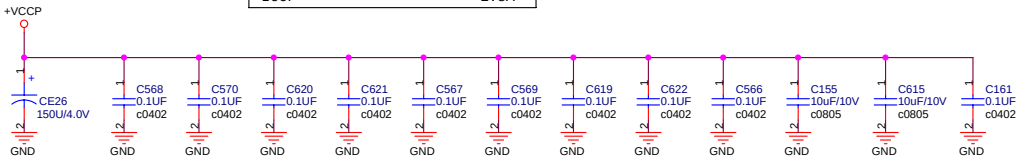


MOBILE DOTHAN VID TABLE

VID[5..0]	Voltage	VID[5..0]	Voltage
000000	1.708V	100000	1.196V
000001	1.692V	100001	1.180V
000010	1.676V	100010	1.164V
000011	1.660V	100011	1.148V
000100	1.644V	100100	1.132V
000101	1.628V	100101	1.116V
000110	1.612V	100110	1.100V
000111	1.596V	100111	1.084V
001000	1.580V	101000	1.068V
001001	1.564V	101001	1.052V
001010	1.548V	101010	1.036V
001011	1.532V	101011	1.020V
001100	1.516V	101100	1.004V
001101	1.500V	101101	0.988V
001110	1.484V	101110	0.972V
001111	1.468V	101111	0.956V
010000	1.452V	110000	0.940V
010001	1.436V	110001	0.924V
010010	1.420V	110010	0.908V
010011	1.404V	110011	0.892V
010100	1.388V	110100	0.876V
010101	1.372V	110101	0.860V
010110	1.356V	110110	0.844V
010111	1.340V	110111	0.828V
011000	1.324V	111000	0.812V
011001	1.308V	111001	0.796V
011010	1.292V	111010	0.780V
011011	1.276V	111011	0.764V
011100	1.260V	111100	0.748V
011101	1.244V	111101	0.732V
011110	1.228V	111110	0.716V
011111	1.212V	111111	0.700V

1.0V - 1.2V(+/- 5%)
S0-S1M: 2.5
A(CPU,MCH,ICH)

Dothan FSB533	Min	Typ	Max
VCCP	0.997V	1.05V	1.102V
	Min	Typ	Max
ICCP			2.5A



+VCCP (CPU) Decoupling Capacitor
(Place near CPU)

Fan Speed Control

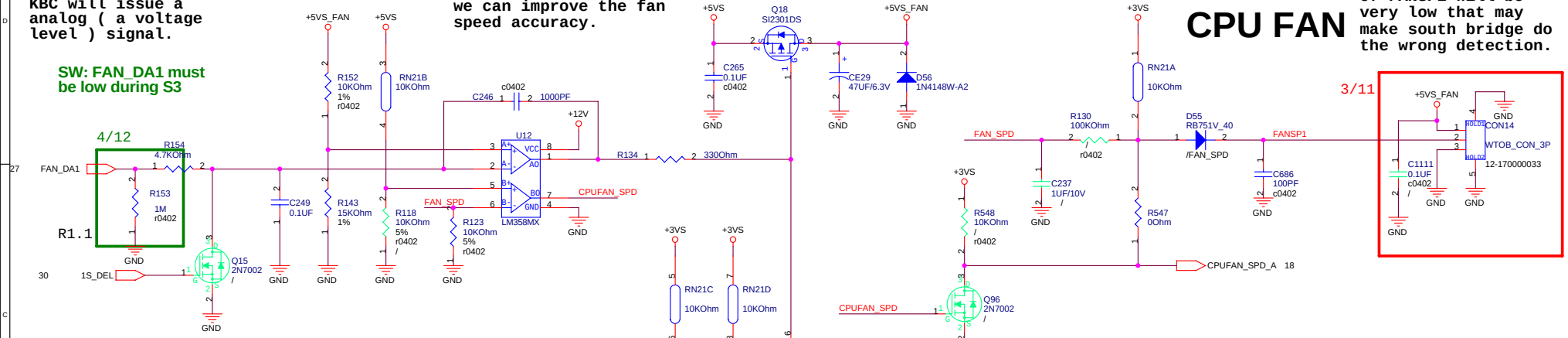
KBC will issue a analog (a voltage level) signal.

SW: FAN_DA1 must be low during S3

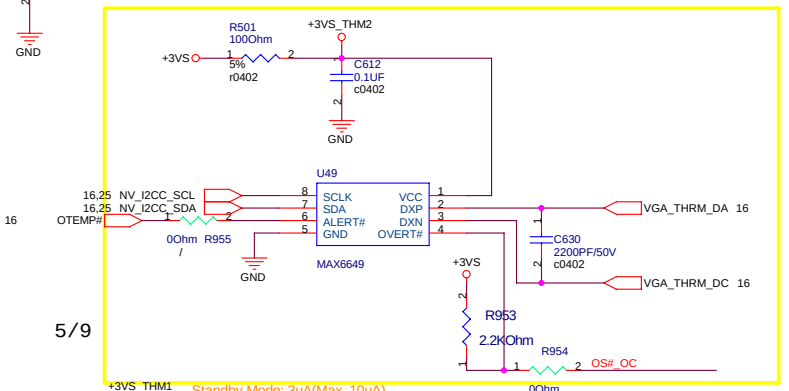
Using a OP AMP and fine-tuning the level, we can improve the fan speed accuracy.

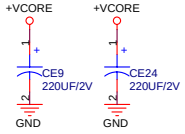
When fan speed is very slow, after RC integrator the level of FANSP1 will be very low that may make south bridge do the wrong detection.

CPU FAN

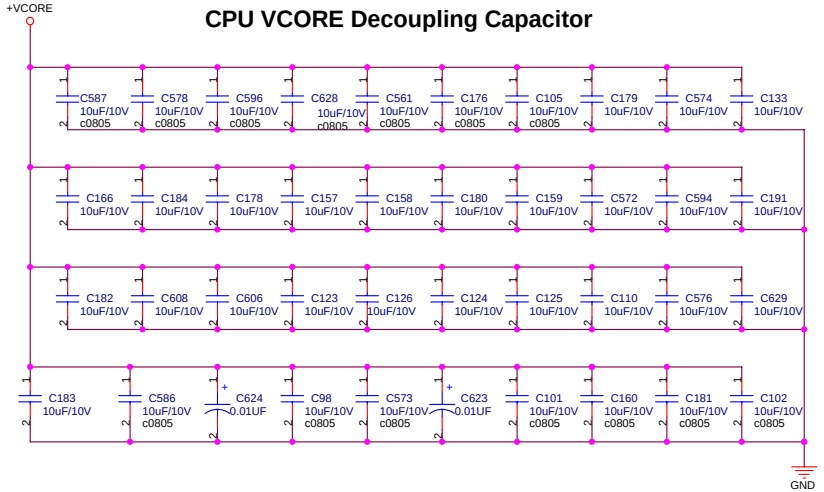


CPU FAN will be forced on:
1) Thermal Sensor Over-temperture
2) PROCHOT asserted(CPU)
3) WATCHDOG asserted(KBC)





CPU VCORE Decoupling Capacitor



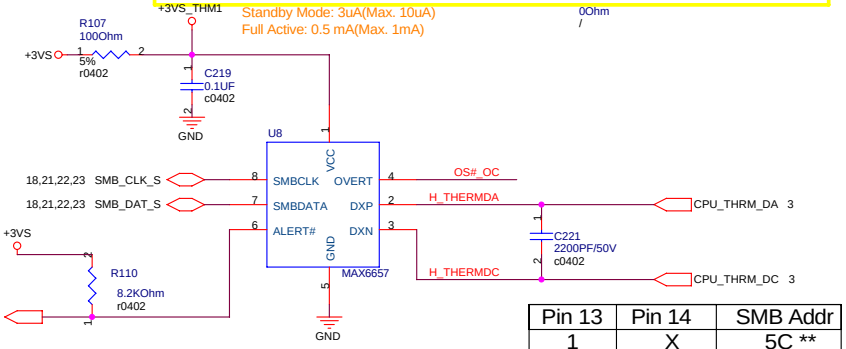
Mid Frequency Decoupling (Place around Processor)

High Frequency Decoupling (Place underneath Processor) using 10uF/6.3V X5R

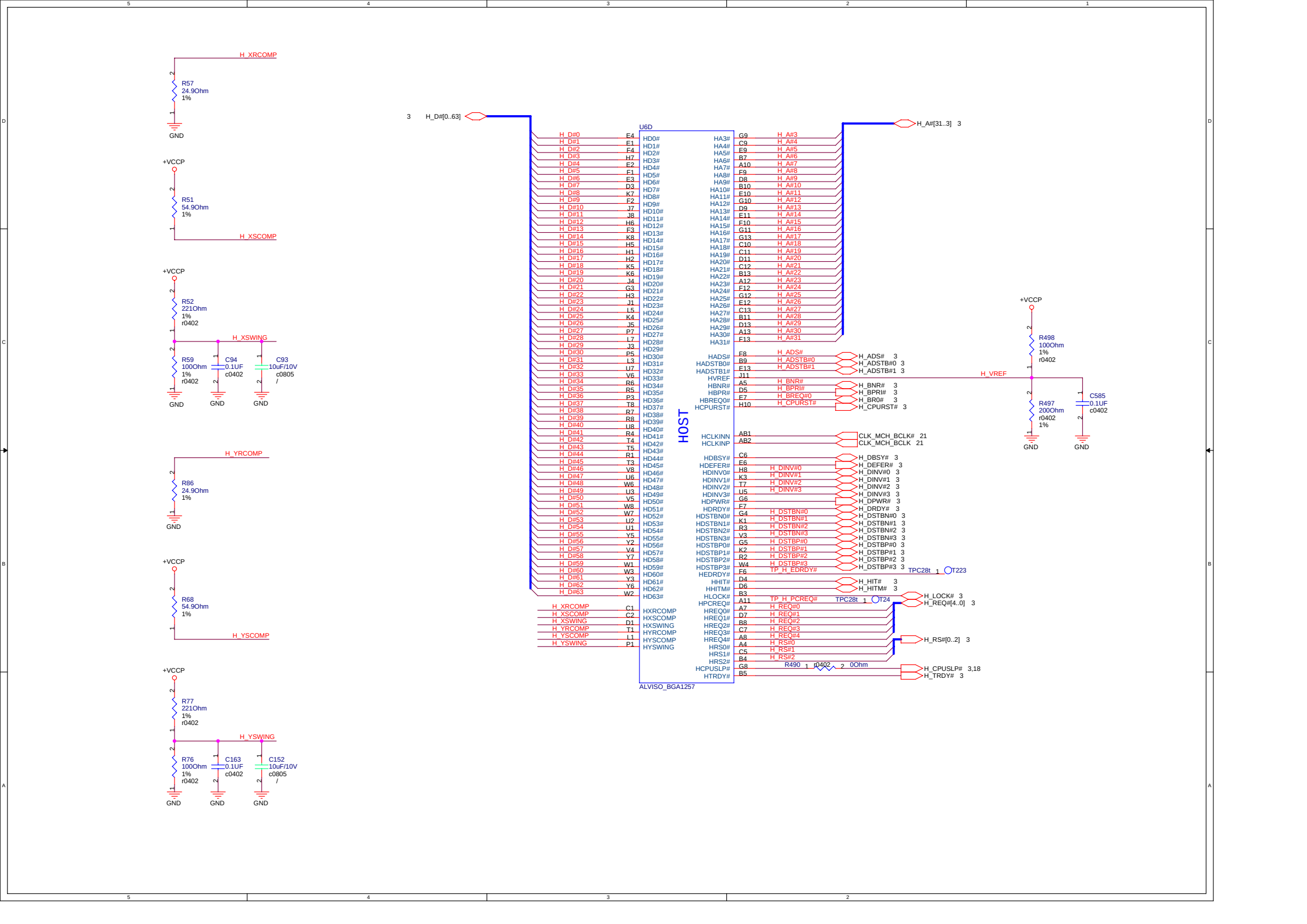
+VCORE Bulk Decoupling

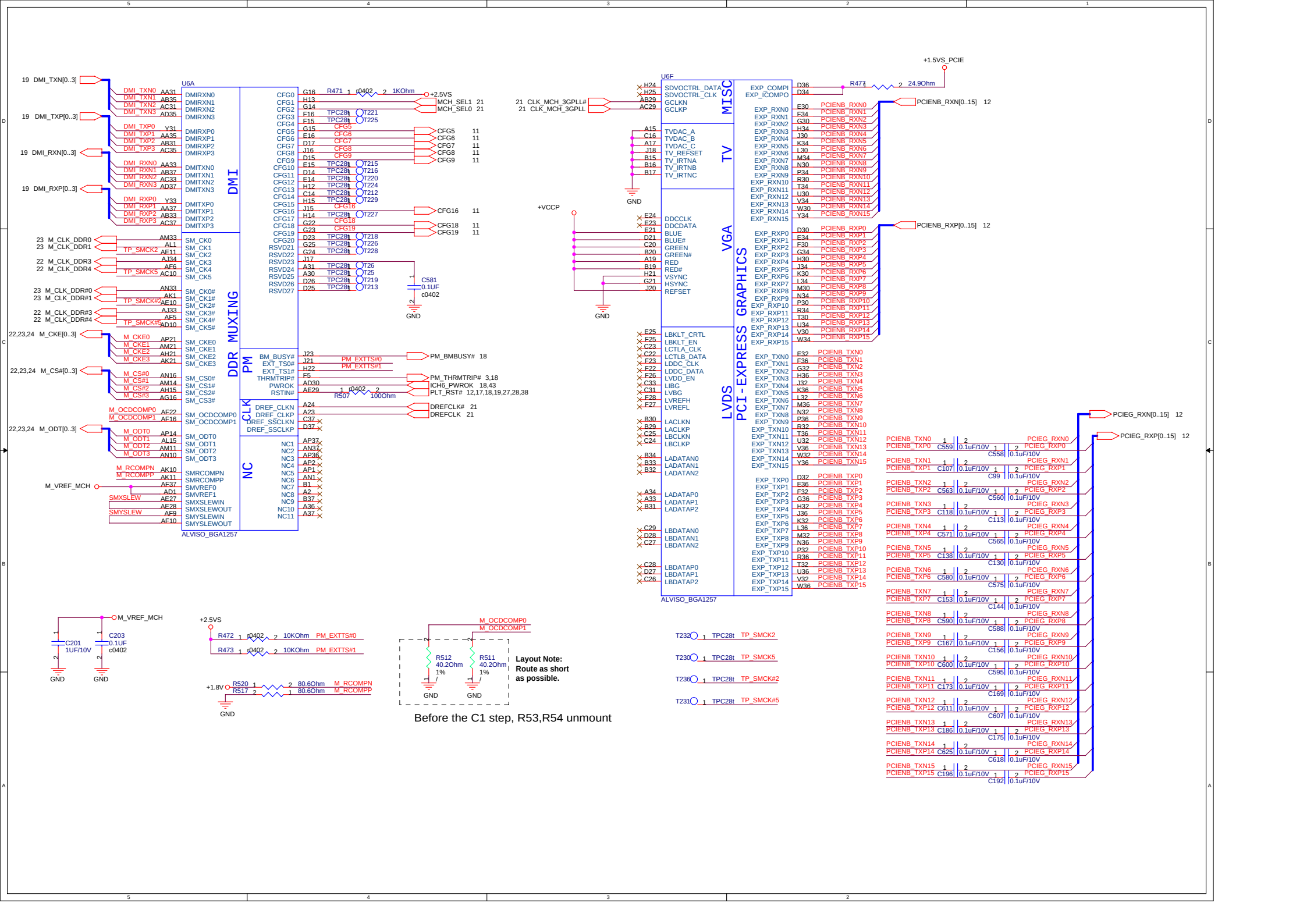
Close to Pin A18 & B18 of CPU

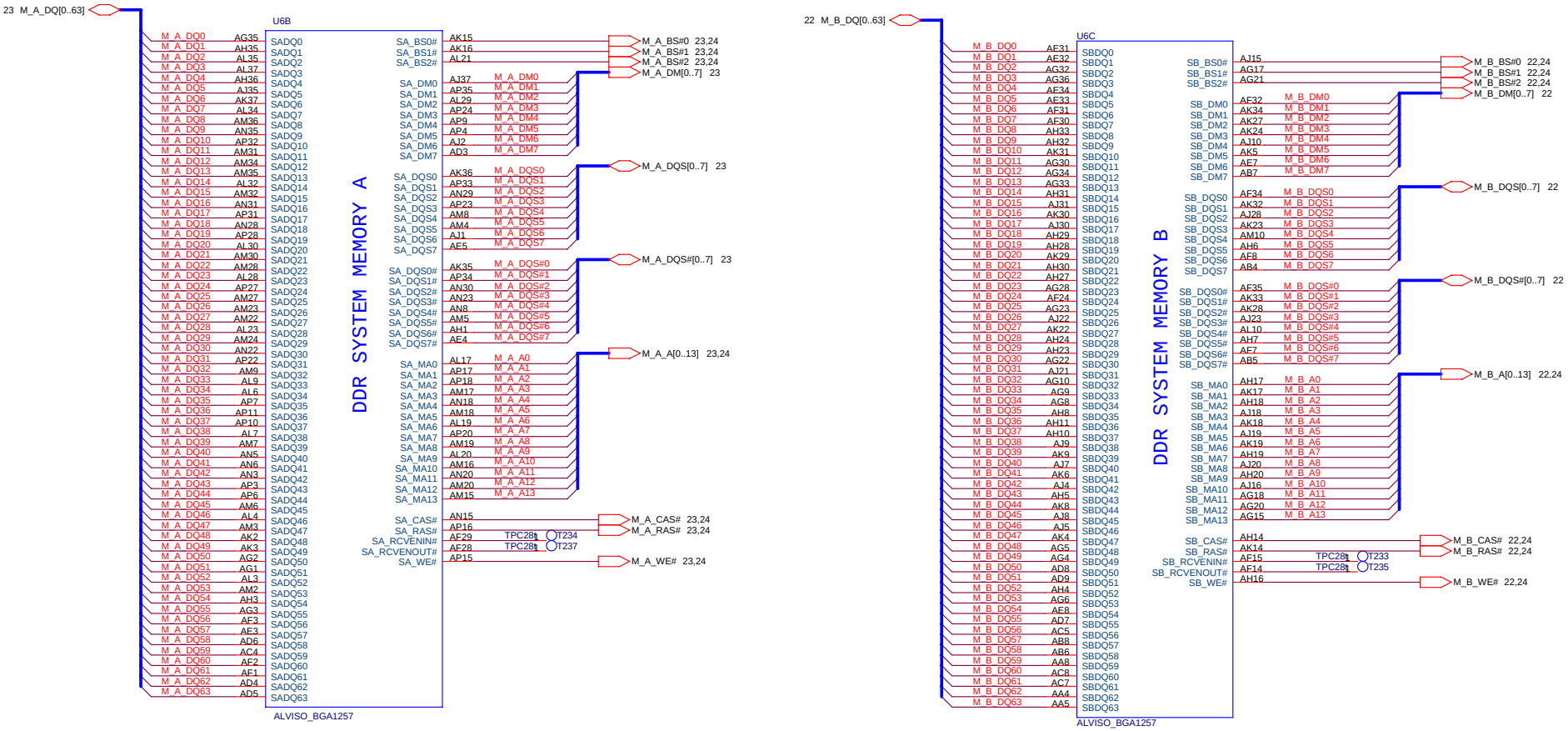
Four 200 uF are located in IMVP4

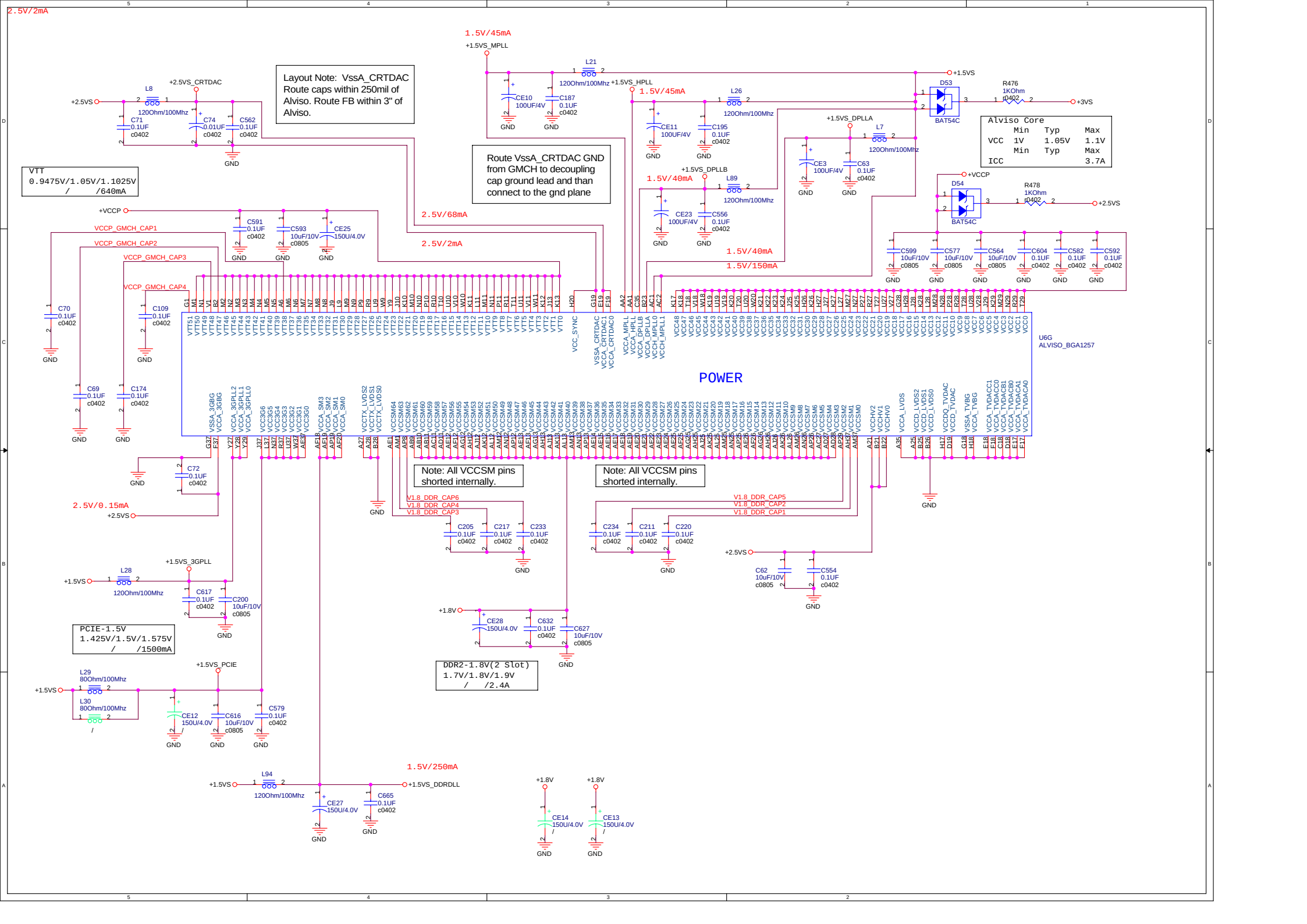


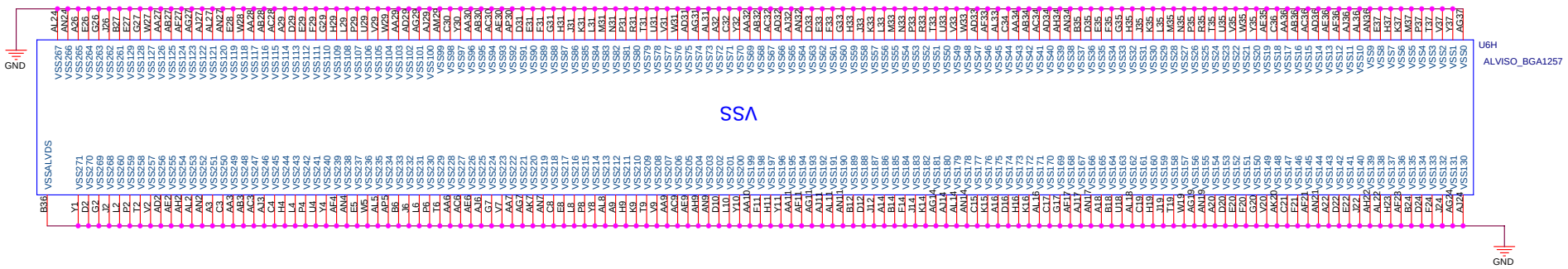
Pin 13	Pin 14	SMB Addr
1	X	5C **
0	1	5A
0	0	58

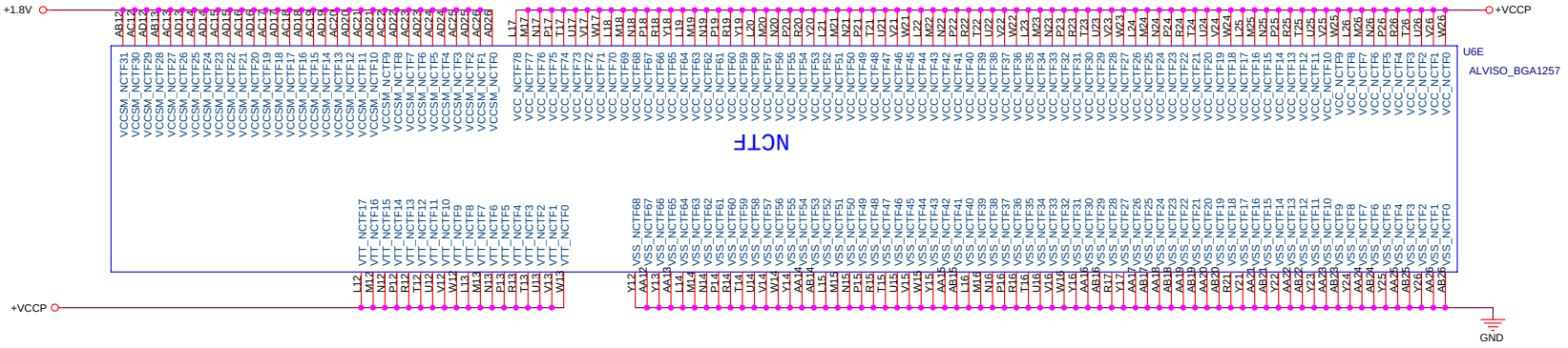

H_XRCOMP
R57
24.9Ohm
1%
GND
+VCCP
R51
54.9Ohm
1%
H_XSCOMP
+VCCP
R52
221Ohm
1%
r0402
H_XSWING
R59
100Ohm
1%
r0402
C94
0.1UF
c0402
C93
10uF/10V
c0805
/
GND
GND
GND
H_YRCOMP
R86
24.9Ohm
1%
GND
+VCCP
R68
54.9Ohm
1%
H_YSCOMP
+VCCP
R77
221Ohm
1%
r0402
H_YSWING
R76
100Ohm
1%
r0402
C163
0.1UF
c0402
C152
10uF/10V
c0805
/
GND
GND
GND
3
H_D#[0..63]
U6D
H_D#0 E4 HD0#
H_D#1 F1 HD1#
H_D#2 F4 HD2#
H_D#3 H7 HD3#
H_D#4 E2 HD4#
H_D#5 F1 HD5#
H_D#6 E3 HD6#
H_D#7 D3 HD7#
H_D#8 K7 HD8#
H_D#9 F2 HD9#
H_D#10 J7 HD10#
H_D#11 J8 HD11#
H_D#12 H6 HD12#
H_D#13 F3 HD13#
H_D#14 K8 HD14#
H_D#15 H5 HD15#
H_D#16 H1 HD16#
H_D#17 H2 HD17#
H_D#18 K5 HD18#
H_D#19 K6 HD19#
H_D#20 J4 HD20#
H_D#21 G3 HD21#
H_D#22 H3 HD22#
H_D#23 J1 HD23#
H_D#24 L5 HD24#
H_D#25 K4 HD25#
H_D#26 J5 HD26#
H_D#27 P7 HD27#
H_D#28 L7 HD28#
H_D#29 J3 HD29#
H_D#30 P5 HD30#
H_D#31 L3 HD31#
H_D#32 U7 HD32#
H_D#33 V6 HD33#
H_D#34 R6 HD34#
H_D#35 R5 HD35#
H_D#36 P3 HD36#
H_D#37 T8 HD37#
H_D#38 R7 HD38#
H_D#39 R8 HD39#
H_D#40 U8 HD40#
H_D#41 R4 HD41#
H_D#42 T4 HD42#
H_D#43 T5 HD43#
H_D#44 R1 HD44#
H_D#45 T3 HD45#
H_D#46 V8 HD46#
H_D#47 U6 HD47#
H_D#48 W6 HD48#
H_D#49 U3 HD49#
H_D#50 V5 HD50#
H_D#51 W8 HD51#
H_D#52 W7 HD52#
H_D#53 U2 HD53#
H_D#54 U1 HD54#
H_D#55 Y5 HD55#
H_D#56 Y2 HD56#
H_D#57 V4 HD57#
H_D#58 Y7 HD58#
H_D#59 W1 HD59#
H_D#60 W3 HD60#
H_D#61 Y3 HD61#
H_D#62 Y6 HD62#
H_D#63 W2 HD63#
H_XRCOMP C1 HXRCOMP
H_XSCOMP C2 HXSCOMP
H_XSWING D1 HXSWING
H_YRCOMP T1 HYRCOMP
H_YSCOMP L1 HYSCOMP
H_YSWING P1 HYSWING
HOST
HA3# G9 H_A#3
HA4# C9 H_A#4
HA5# E9 H_A#5
HA6# B7 H_A#6
HA7# A10 H_A#7
HA8# F9 H_A#8
HA9# D8 H_A#9
HA10# B10 H_A#10
HA11# E10 H_A#11
HA12# G10 H_A#12
HA13# D9 H_A#13
HA14# E11 H_A#14
HA15# F10 H_A#15
HA16# G11 H_A#16
HA17# G13 H_A#17
HA18# C10 H_A#18
HA19# C11 H_A#19
HA20# D11 H_A#20
HA21# C12 H_A#21
HA22# B13 H_A#22
HA23# A12 H_A#23
HA24# F12 H_A#24
HA25# G12 H_A#25
HA26# E12 H_A#26
HA27# C13 H_A#27
HA28# B11 H_A#28
HA29# D13 H_A#29
HA30# A13 H_A#30
HA31# F13 H_A#31
H_A#[31..3] 3
HADS# F8 H_ADS#
HADSTB0# B9 H_ADSTB#0
HADSTB1# E13 H_ADSTB#1
HVREF J11
HBNR# A5 H_BNR#
HBPR# D5 H_BPRI#
HBREQ0# E7 H_BREQ#0
HCPURST# H10 H_CPURST#
H_ADS# 3
H_ADSTB#0 3
H_ADSTB#1 3
H_BNR# 3
H_BPRI# 3
H_BR0# 3
H_CPURST# 3
H_VREF
+VCCP
R498
100Ohm
1%
r0402
R497
200Ohm
r0402
1%
C585
0.1UF
c0402
GND
GND
HCLKINN AB1
HCLKINP AB2
CLK_MCH_BCLK# 21
CLK_MCH_BCLK 21
HDBSY# C6 H_DBSY# 3
HDEFER# E6 H_DEFER# 3
HDINV0# H8 H_DINV#0 H_DINV#0 3
HDINV1# K3 H_DINV#1 H_DINV#1 3
HDINV2# T7 H_DINV#2 H_DINV#2 3
HDINV3# U5 H_DINV#3 H_DINV#3 3
HDPWR# G6 H_DPWR# 3
HDRDY# F7 H_DRDY# 3
HDSTBN0# G4 H_DSTBN#0 H_DSTBN#0 3
HDSTBN1# K1 H_DSTBN#1 H_DSTBN#1 3
HDSTBN2# R3 H_DSTBN#2 H_DSTBN#2 3
HDSTBN3# V3 H_DSTBN#3 H_DSTBN#3 3
HDSTBP0# G5 H_DSTBP#0 H_DSTBP#0 3
HDSTBP1# K2 H_DSTBP#1 H_DSTBP#1 3
HDSTBP2# R2 H_DSTBP#2 H_DSTBP#2 3
HDSTBP3# W4 H_DSTBP#3 H_DSTBP#3 3
HEDRDY# F6 TP_H_EDRDY# TPC28t 1 T223
HHIT# D4 H_HIT# 3
HHITM# D6 H_HITM# 3
HLOCK# B3 H_LOCK# 3
HPCREQ# A11 TP_H_PCREQ# TPC28t 1 T24
HREQ0# A7 H_REQ#0 H_REQ#[4..0] 3
HREQ1# D7 H_REQ#1
HREQ2# B8 H_REQ#2
HREQ3# C7 H_REQ#3
HREQ4# A8 H_REQ#4
HRS0# A4 H_RS#0 H_RS#[0..2] 3
HRS1# C5 H_RS#1
HRS2# B4 H_RS#2
HCPUSLP# G8 R490 1 r0402 2 0Ohm H_CPUSLP# 3,18
HTRDY# B5 H_TRDY# 3
ALVISO_BGA1257


U6A
DMI
DDR MUXING
PM
CLK
NC
ALVISO_BGA1257
U6F
MISC
TV
VGA
LVDS
PCI-EXPRESS GRAPHICS
ALVISO_BGA1257
+1.5VS_PCIE
+2.5VS
+1.8V
+VCCP
GND
Layout Note:
Route as short
as possible.
Before the C1 step, R53,R54 unmount


23 M_A_DQ[0..63]
U6B
DDR SYSTEM MEMORY A
ALVISO_BGA1257
M_A_BS#0 23,24
M_A_BS#1 23,24
M_A_BS#2 23,24
M_A_DM[0..7] 23
M_A_DQS[0..7] 23
M_A_DQS#[0..7] 23
M_A_A[0..13] 23,24
M_A_CAS# 23,24
M_A_RAS# 23,24
M_A_WE# 23,24
TPC28
T234
T237
22 M_B_DQ[0..63]
U6C
DDR SYSTEM MEMORY B
ALVISO_BGA1257
M_B_BS#0 22,24
M_B_BS#1 22,24
M_B_BS#2 22,24
M_B_DM[0..7] 22
M_B_DQS[0..7] 22
M_B_DQS#[0..7] 22
M_B_A[0..13] 22,24
M_B_CAS# 22,24
M_B_RAS# 22,24
M_B_WE# 22,24
T233
T235


2.5V/2mA
1.5V/45mA
+1.5VS_MPLL
L21
120Ohm/100Mhz
+1.5VS_HPLL
1.5V/45mA
L26
120Ohm/100Mhz
+1.5VS
D53
BAT54C
R476
1KOhm
r0402
+3VS
Alviso Core
Min Typ Max
VCC 1V 1.05V 1.1V
Min Typ Max
ICC 3.7A
Layout Note: VssA_CRTDAC Route caps within 250mil of Alviso. Route FB within 3" of Alviso.
Route VssA_CRTDAC GND from GMCH to decoupling cap ground lead and than connect to the gnd plane
+2.5VS_CRTDAC
L8
120Ohm/100Mhz
C71 0.1UF c0402
C74 0.01UF c0402
C562 0.1UF c0402
+2.5VS
GND
VTT
0.9475V/1.05V/1.025V
/ /640mA
2.5V/68mA
2.5V/2mA
1.5V/40mA
1.5V/150mA
+1.5VS_DPLLA
L7
120Ohm/100Mhz
CE3 100UF/4V
C63 0.1UF c0402
+1.5VS_DPLLB
L89
120Ohm/100Mhz
CE23 100UF/4V
C556 0.1UF c0402
CE10 100UF/4V
C187 0.1UF c0402
CE11 100UF/4V
C195 0.1UF c0402
+VCCP
D54
BAT54C
R478
1KOhm
r0402
+2.5VS
VCCP_GMCH_CAP1
VCCP_GMCH_CAP2
VCCP_GMCH_CAP3
VCCP_GMCH_CAP4
C591 0.1UF c0402
C593 10uF/10V c0805
CE25 150U/4.0V
C599 10uF/10V c0805
C577 10uF/10V c0805
C564 10uF/10V c0805
C604 0.1UF c0402
C582 0.1UF c0402
C592 0.1UF c0402
C70 0.1UF c0402
C109 0.1UF c0402
C69 0.1UF c0402
C174 0.1UF c0402
U6G
ALVISO_BGA1257
POWER
C72 0.1UF c0402
2.5V/0.15mA
Note: All VCCSM pins shorted internally.
Note: All VCCSM pins shorted internally.
V1.8_DDR_CAP6
V1.8_DDR_CAP4
V1.8_DDR_CAP3
V1.8_DDR_CAP5
V1.8_DDR_CAP2
V1.8_DDR_CAP1
C205 0.1UF c0402
C217 0.1UF c0402
C233 0.1UF c0402
C234 0.1UF c0402
C211 0.1UF c0402
C220 0.1UF c0402
C62 10uF/10V c0805
C554 0.1UF c0402
+1.5VS_3GPLL
L28
120Ohm/100Mhz
C617 0.1UF c0402
C200 10uF/10V c0805
PCIE-1.5V
1.425V/1.5V/1.575V
/ /1500mA
+1.8V
CE28 150U/4.0V
C632 0.1UF c0402
C627 10uF/10V c0805
DDR2-1.8V(2 Slot)
1.7V/1.8V/1.9V
/ /2.4A
+1.5VS_PCIE
L29
80Ohm/100Mhz
L30
80Ohm/100Mhz
CE12 150U/4.0V
C616 10uF/10V c0805
C579 0.1UF c0402
1.5V/250mA
L94
120Ohm/100Mhz
+1.5VS_DDRDLL
CE27 150U/4.0V
C665 0.1UF c0402
+1.8V
CE14 150U/4.0V
+1.8V
CE13 150U/4.0V

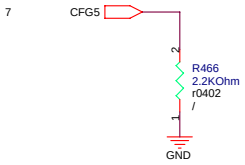

GND
VSS
VSSALVDS
U6H
ALVISO_BGA1257
GND


+1.8V
+VCCP
NCTF
U6E
ALVISO_BGA1257
+VCCP
GND

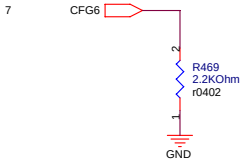
CFG[17..3] have internal pullup resistors.
CFG[19..18] have internal pulldown resistors.
SDVOCRTL_DATA has internal pulldown resistors.

SDVOCRTL_DATA :
LOW = No SDVO device present
(Default)

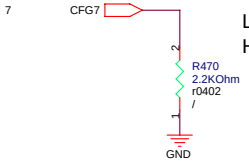
CFG5 : LOW = DMI X 2
HIGH = DMI X 4 (Default)



CFG6 : LOW = DDR2 SDRAM
HIGH = DDR SDRAM (Default)

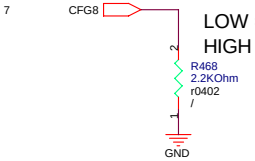


CFG7 : CPU STRAP



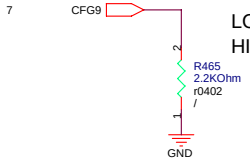
LOW = Mobile Prescott
HIGH = Dothan CPU (Default)

CFG8 : PCI-X POWER Saving



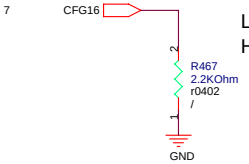
LOW = PCI-X POWER Saving
HIGH (Default)

CFG9 : PCIE GRAPHIC LANE



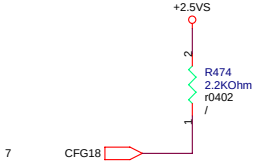
LOW = REVERSE LANE
HIGH = NORMAL OPERATION (Default)

CFG16 : FSB DYNAMIC ODT



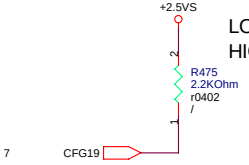
LOW = Dynamic ODT Disabled
HIGH = Dynamic ODT Enabled (Default)

CFG18 : VCC SELECT

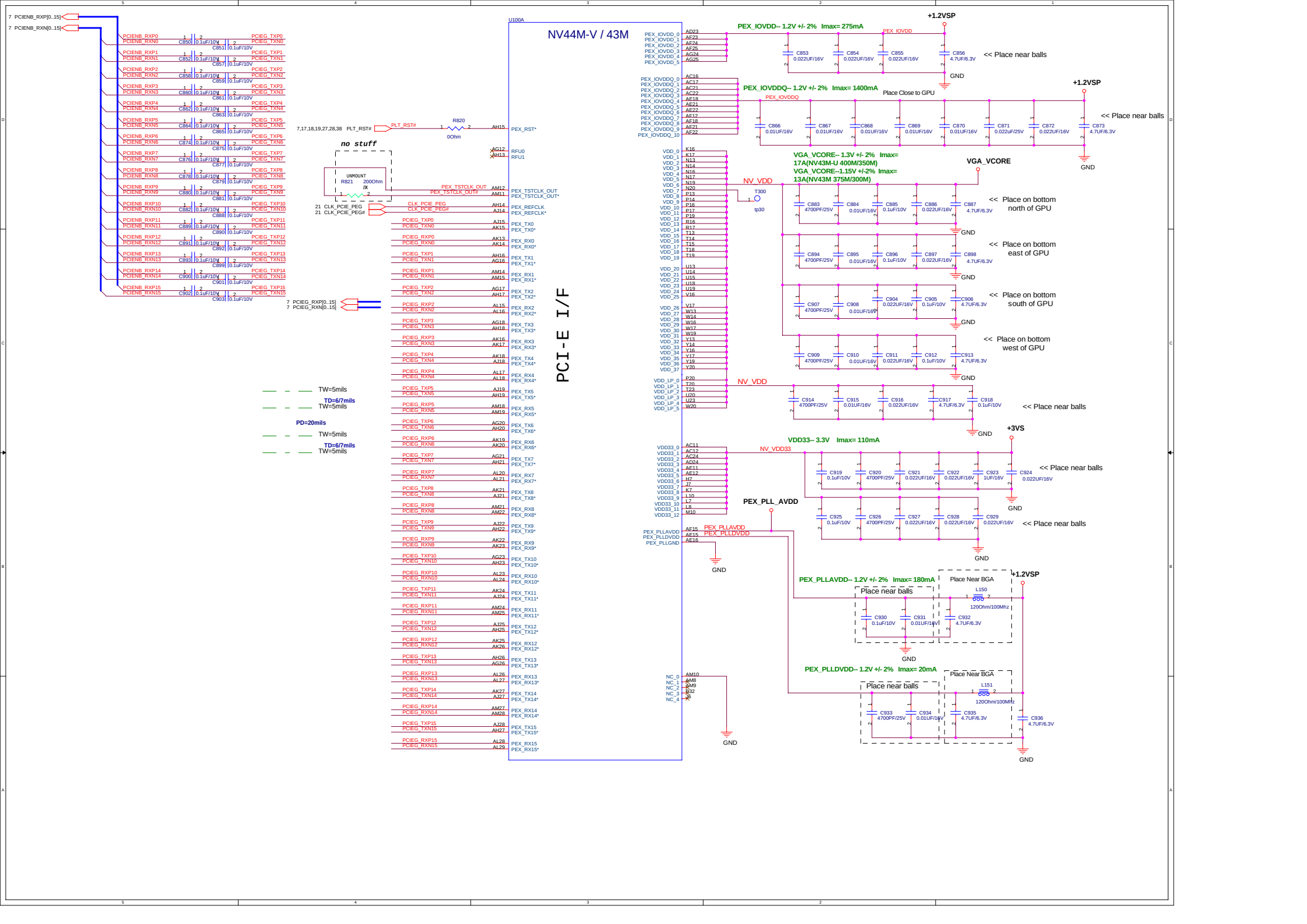


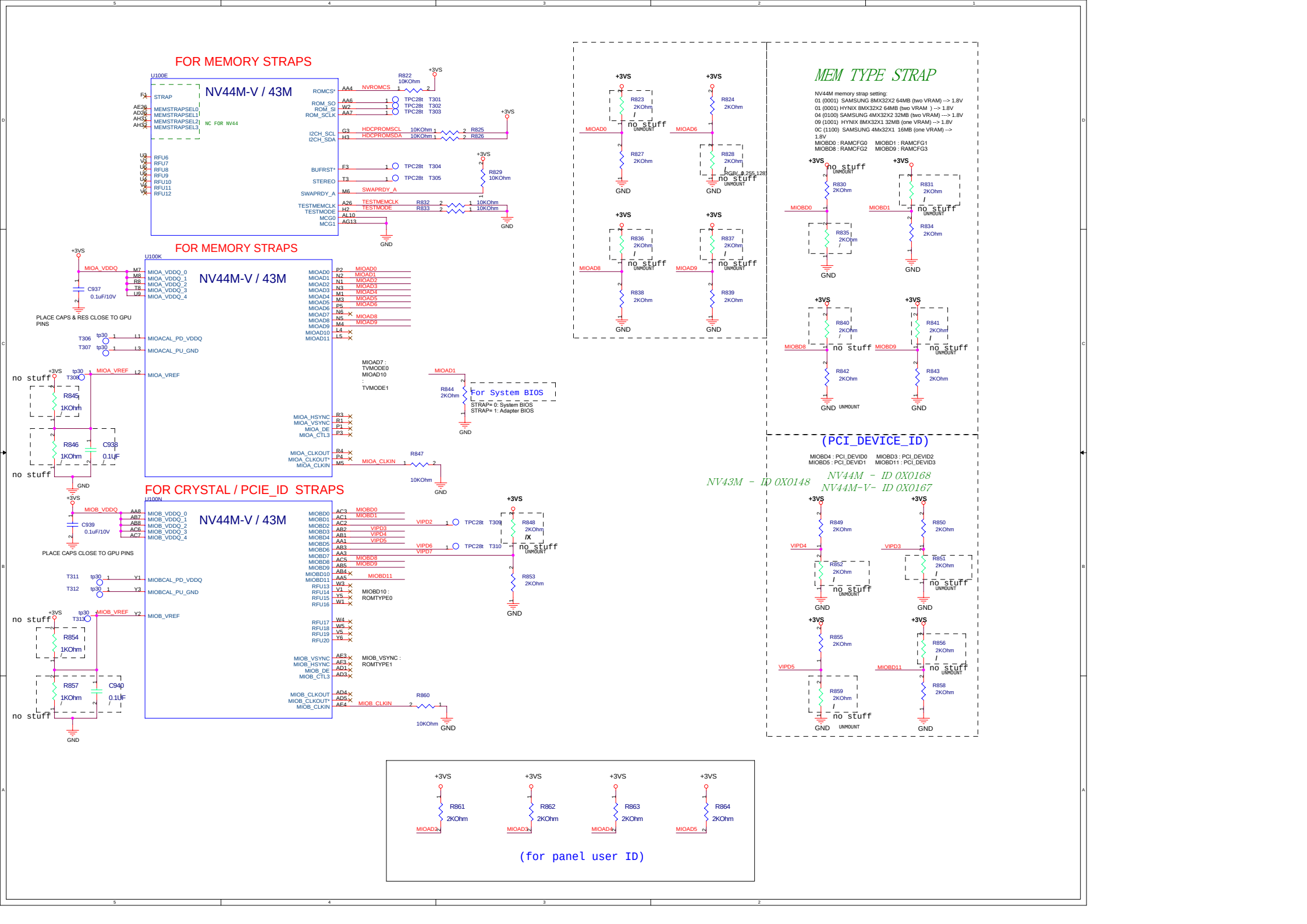
LOW = 1.05V (Default)
HIGH = 1.5V

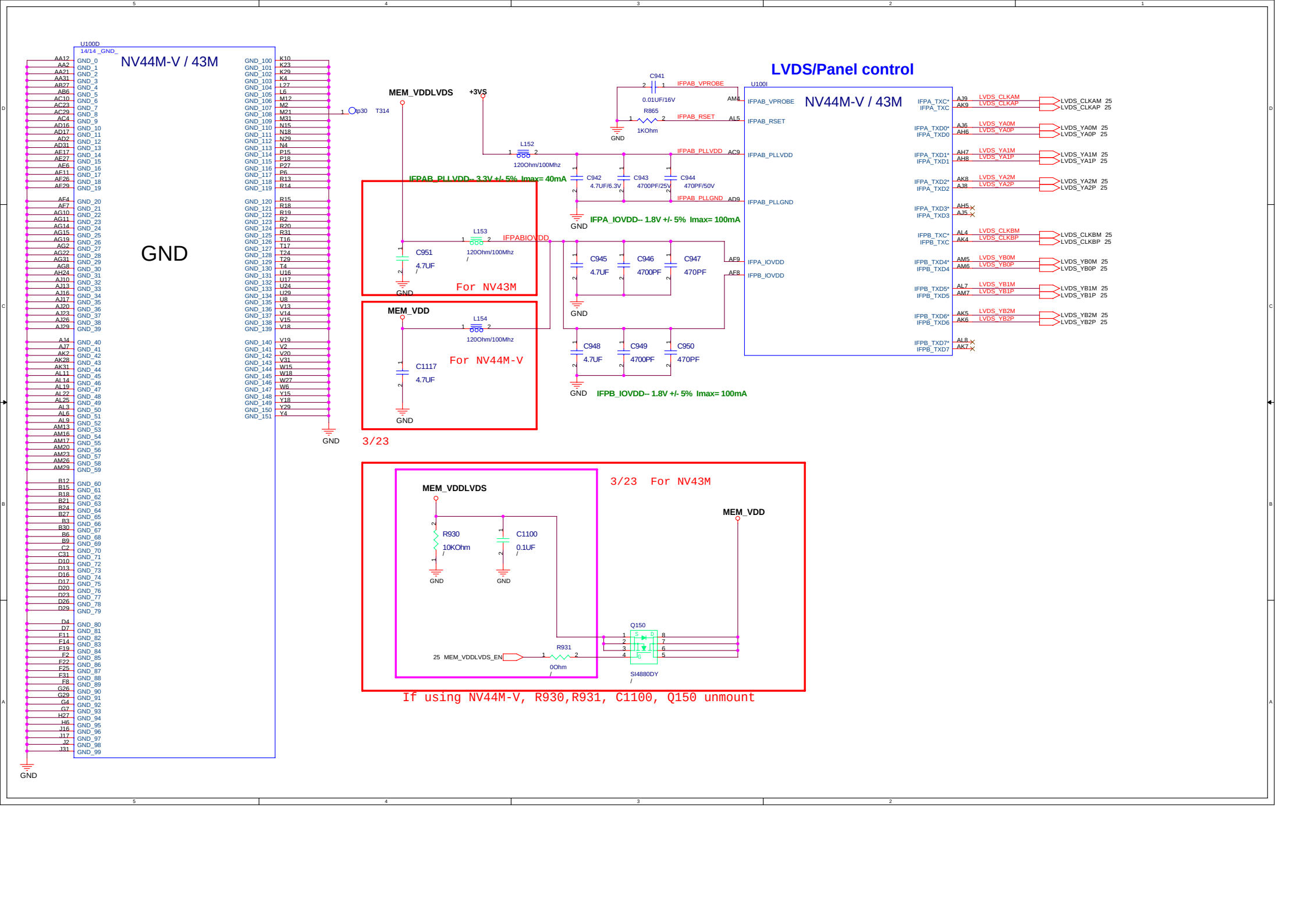
CFG19 : VTT SELECT



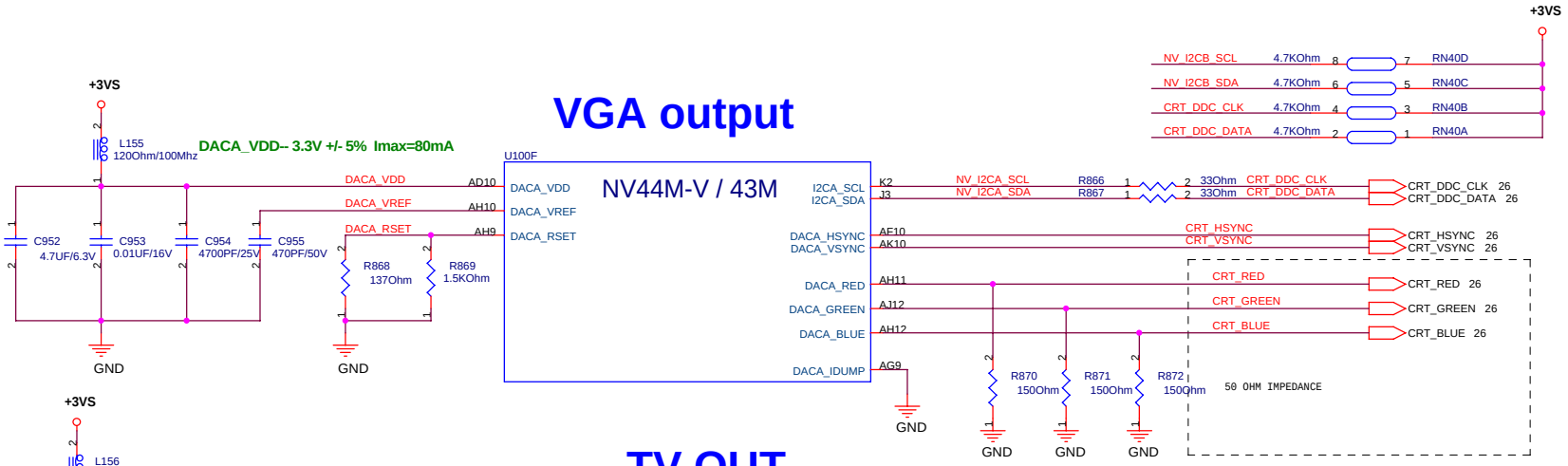
LOW = 1.05V (Default)
HIGH = 1.2V


NV44M-V / 43M
PCI-E I/F
U100A
+1.2VSP
+3VS
GND
NV_VDD
VGA_VCORE
PEX_PLL_AVDD
PEX_IOVDD-- 1.2V +/- 2% Imax= 275mA
PEX_IOVDDQ-- 1.2V +/- 2% Imax= 1400mA
VGA_VCORE-- 1.3V +/- 2% Imax= 17A(NV43M-U 400M/350M)
VGA_VCORE--1.15V +/-2% Imax= 13A(NV43M 375M/300M)
VDD33-- 3.3V Imax= 110mA
PEX_PLLAVDD-- 1.2V +/- 2% Imax= 180mA
PEX_PLLDVDD-- 1.2V +/- 2% Imax= 20mA
Place near balls
Place Close to GPU
Place Near BGA
<< Place near balls
<< Place on bottom north of GPU
<< Place on bottom east of GPU
<< Place on bottom south of GPU
<< Place on bottom west of GPU
no stuff
UNMOUNT
TW=5mils
TD=6/7mils
PD=20mils

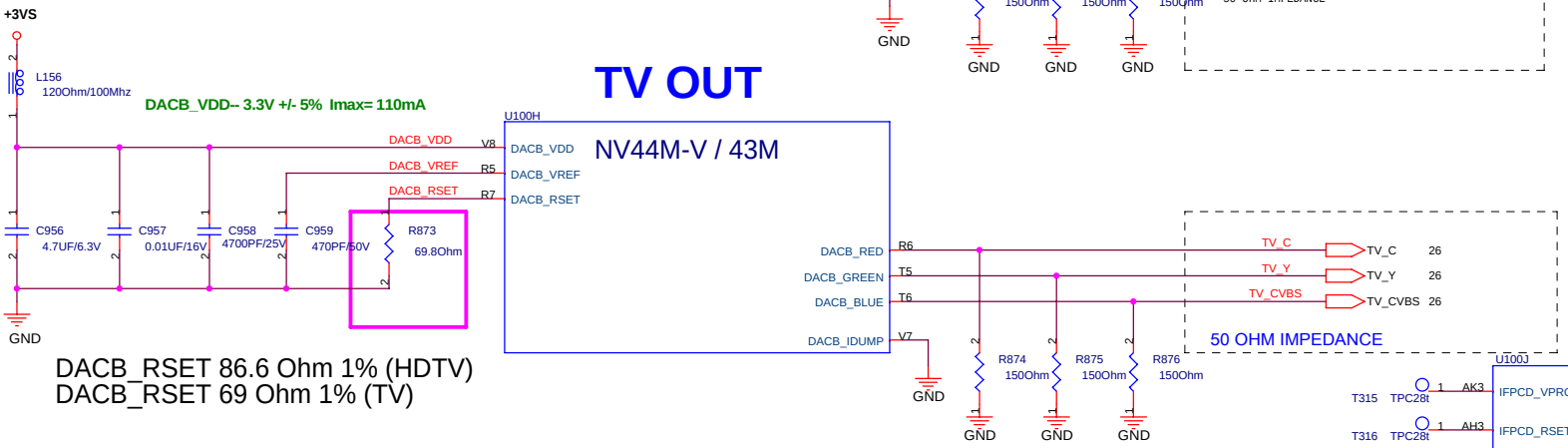

FOR MEMORY STRAPS
U100E
NV44M-V / 43M
STRAP
MEMSTRAPSEL0
MEMSTRAPSEL1
MEMSTRAPSEL2
MEMSTRAPSEL3
NC FOR NV44
RFU6
RFU7
RFU8
RFU9
RFU10
RFU11
RFU12
ROMCS*
ROM_SO
ROM_SI
ROM_SCLK
I2CH_SCL
I2CH_SDA
BUFRST*
STEREO
SWAPRDY_A
TESTMEMCLK
TESTMODE
MCG0
MCG1
NVROMCS
HDCPROMSCL
HDCPROMSDA
SWAPRDY_A
TESTMEMCLK
TESTMODE
R822 10KOhm
R825
R826
R829 10KOhm
R832
R833
TPC28t T301
TPC28t T302
TPC28t T303
TPC28t T304
TPC28t T305
+3VS
GND
FOR MEMORY STRAPS
U100K
NV44M-V / 43M
MIOA_VDDQ
MIOA_VDDQ_0
MIOA_VDDQ_1
MIOA_VDDQ_2
MIOA_VDDQ_3
MIOA_VDDQ_4
C937 0.1uF/10V
PLACE CAPS & RES CLOSE TO GPU PINS
MIOACAL_PD_VDDQ
MIOACAL_PU_GND
MIOA_VREF
R845 1KOhm
R846 1KOhm
C938 0.1UF
no stuff
MIOAD0
MIOAD1
MIOAD2
MIOAD3
MIOAD4
MIOAD5
MIOAD6
MIOAD7
MIOAD8
MIOAD9
MIOAD10
MIOAD11
MIOAD7 : TVMODE0
MIOAD10 : TVMODE1
R844 2KOhm
For System BIOS
STRAP= 0: System BIOS
STRAP= 1: Adapter BIOS
MIOA_HSYNC
MIOA_VSYNC
MIOA_DE
MIOA_CTL3
MIOA_CLKOUT
MIOA_CLKOUT*
MIOA_CLKIN
R847 10KOhm
FOR CRYSTAL / PCIE_ID STRAPS
U100N
NV44M-V / 43M
MIOB_VDDQ
MIOB_VDDQ_0
MIOB_VDDQ_1
MIOB_VDDQ_2
MIOB_VDDQ_3
MIOB_VDDQ_4
C939 0.1uF/10V
PLACE CAPS CLOSE TO GPU PINS
MIOBCAL_PD_VDDQ
MIOBCAL_PU_GND
MIOB_VREF
R854 1KOhm
R857 1KOhm
C940 0.1UF
MIOBD0
MIOBD1
MIOBD2
MIOBD3
MIOBD4
MIOBD5
MIOBD6
MIOBD7
MIOBD8
MIOBD9
MIOBD10
MIOBD11
MIOBD10 : ROMTYPE0
MIOB_VSYNC : ROMTYPE1
MIOB_VSYNC
MIOB_HSYNC
MIOB_DE
MIOB_CTL3
MIOB_CLKOUT
MIOB_CLKOUT*
MIOB_CLKIN
VIPD2
VIPD3
VIPD4
VIPD5
VIPD6
VIPD7
R848 2KOhm
R853 2KOhm
R860 10KOhm
TPC28t T309
TPC28t T310
MEM TYPE STRAP
NV44M memory strap setting:
01 (0001) SAMSUNG 8MX32X2 64MB (two VRAM) --> 1.8V
01 (0001) HYNIX 8MX32X2 64MB (two VRAM) --> 1.8V
04 (0100) SAMSUNG 4MX32X2 32MB (two VRAM) --> 1.8V
09 (1001) HYNIX 8MX32X1 32MB (one VRAM) --> 1.8V
0C (1100) SAMSUNG 4Mx32X1 16MB (one VRAM) --> 1.8V
MIOBD0 : RAMCFG0
MIOBD1 : RAMCFG1
MIOBD8 : RAMCFG2
MIOBD9 : RAMCFG3
R823 2KOhm
R824 2KOhm
R827 2KOhm
R828 2KOhm
R836 2KOhm
R837 2KOhm
R838 2KOhm
R839 2KOhm
R830 2KOhm
R831 2KOhm
R834 2KOhm
R835 2KOhm
R840 2KOhm
R841 2KOhm
R842 2KOhm
R843 2KOhm
RGB(0,255,128)
no stuff
UNMOUNT
(PCI_DEVICE_ID)
MIOBD4 : PCI_DEVID0
MIOBD5 : PCI_DEVID1
MIOBD3 : PCI_DEVID2
MIOBD11 : PCI_DEVID3
NV43M - ID 0X0148
NV44M - ID 0X0168
NV44M-V- ID 0X0167
R849 2KOhm
R850 2KOhm
R851 2KOhm
R852 2KOhm
R855 2KOhm
R856 2KOhm
R858 2KOhm
R859 2KOhm
(for panel user ID)
R861 2KOhm
R862 2KOhm
R863 2KOhm
R864 2KOhm


U100D
14/14 _GND_
NV44M-V / 43M
GND
LVDS/Panel control
U100I
NV44M-V / 43M
MEM_VDDLVDS
+3VS
MEM_VDD
IFPAB_PLLVDD-- 3.3V +/- 5% Imax= 40mA
IFPA_IOVDD-- 1.8V +/- 5% Imax= 100mA
IFPB_IOVDD-- 1.8V +/- 5% Imax= 100mA
For NV43M
For NV44M-V
3/23
3/23 For NV43M
If using NV44M-V, R930,R931, C1100, Q150 unmount

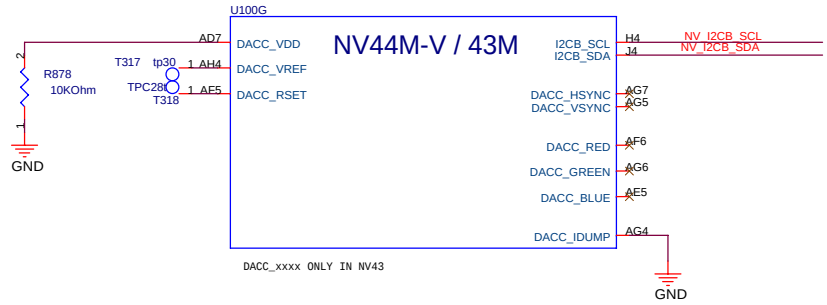
VGA output

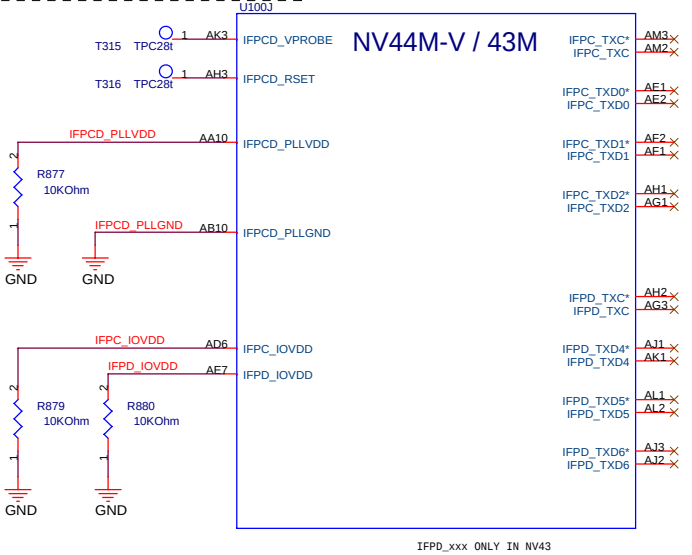


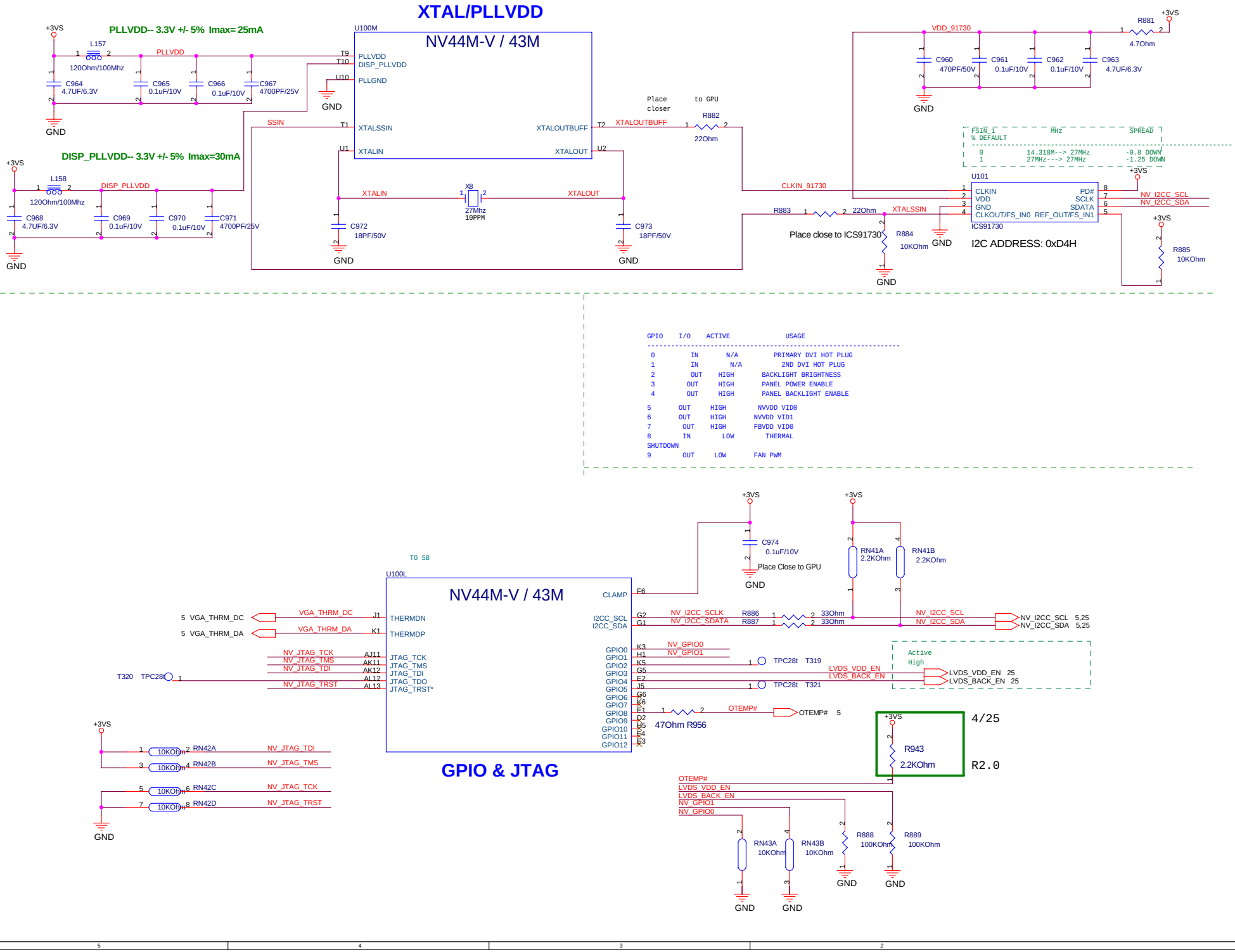
TV OUT



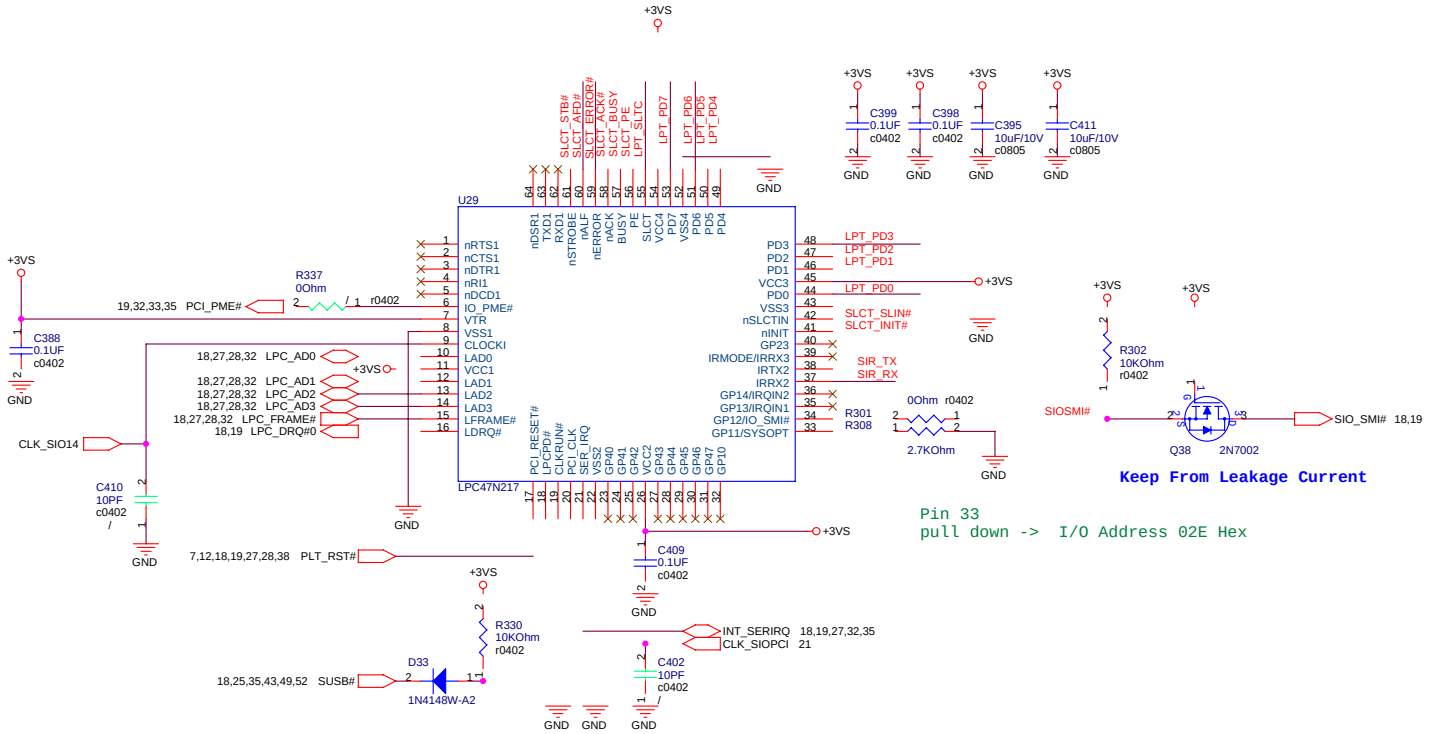
DACB_RSET 86.6 Ohm 1% (HDTV)
DACB_RSET 69 Ohm 1% (TV)

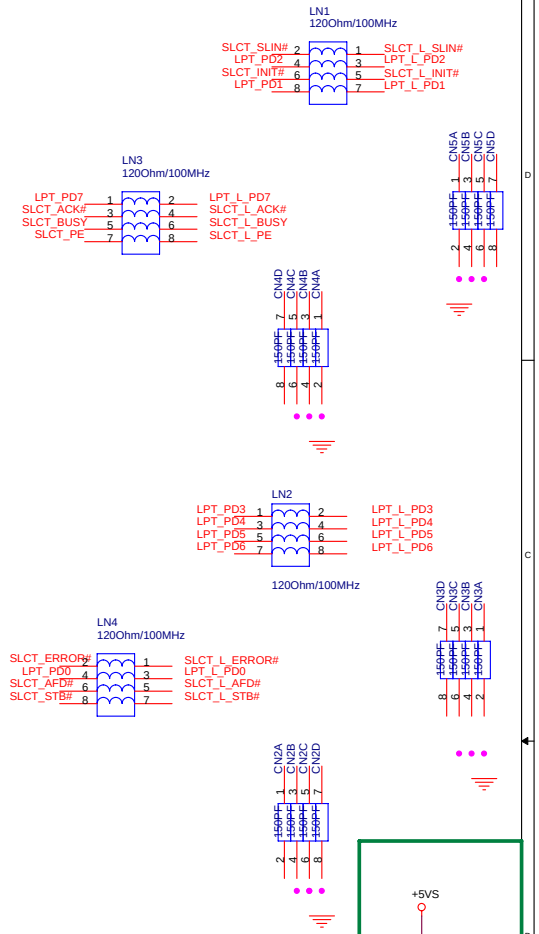




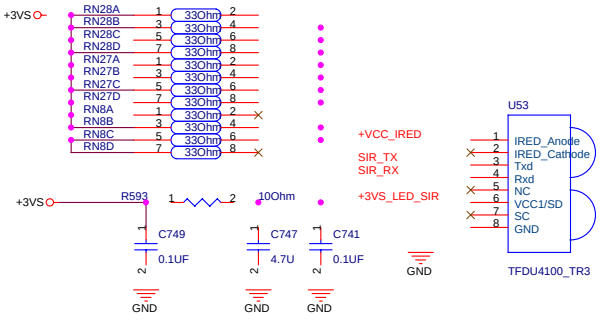

XTAL/PLLVDD
PLLVDD-- 3.3V +/- 5% Imax= 25mA
DISP_PLLVDD-- 3.3V +/- 5% Imax=30mA
U100M
NV44M-V / 43M
PLLVDD
DISP_PLLVDD
PLLGND
XTALSSIN
XTALIN
XTALOUT
XTALOUTBUFF
SSIN
Place closer to GPU
R882
22Ohm
CLKIN_91730
R883
22Ohm
Place close to ICS91730
R884
10KOhm
U101
ICS91730
I2C ADDRESS: 0xD4H
R881
4.7Ohm
R885
10KOhm
FSIN_1 % DEFAULT
MHz
SPREAD
0 14.318M--> 27MHz -0.8 DOWN
1 27MHz---> 27MHz -1.25 DOWN
GPIO I/O ACTIVE USAGE
0 IN N/A PRIMARY DVI HOT PLUG
1 IN N/A 2ND DVI HOT PLUG
2 OUT HIGH BACKLIGHT BRIGHTNESS
3 OUT HIGH PANEL POWER ENABLE
4 OUT HIGH PANEL BACKLIGHT ENABLE
5 OUT HIGH NVVDD VID0
6 OUT HIGH NVVDD VID1
7 OUT HIGH FBVDD VID0
8 IN LOW THERMAL SHUTDOWN
9 OUT LOW FAN PWM
TO SB
U100L
NV44M-V / 43M
GPIO & JTAG
THERMDN
THERMDP
JTAG_TCK
JTAG_TMS
JTAG_TDI
JTAG_TDO
JTAG_TRST*
CLAMP
I2CC_SCL
I2CC_SDA
NV_I2CC_SCLK
NV_I2CC_SDATA
NV_GPIO0
NV_GPIO1
LVDS_VDD_EN
LVDS_BACK_EN
OTEMP#
47Ohm R956
Active High
Place Close to GPU
RN41A 2.2KOhm
RN41B 2.2KOhm
R886 33Ohm
R887 33Ohm
RN42A 10KOhm
RN42B 10KOhm
RN42C 10KOhm
RN42D 10KOhm
RN43A 10KOhm
RN43B 10KOhm
R888 100KOhm
R889 100KOhm
R943 2.2KOhm
4/25
R2.0

Super I/O

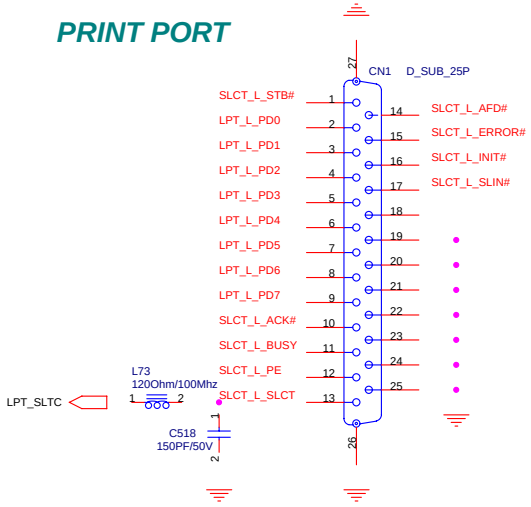


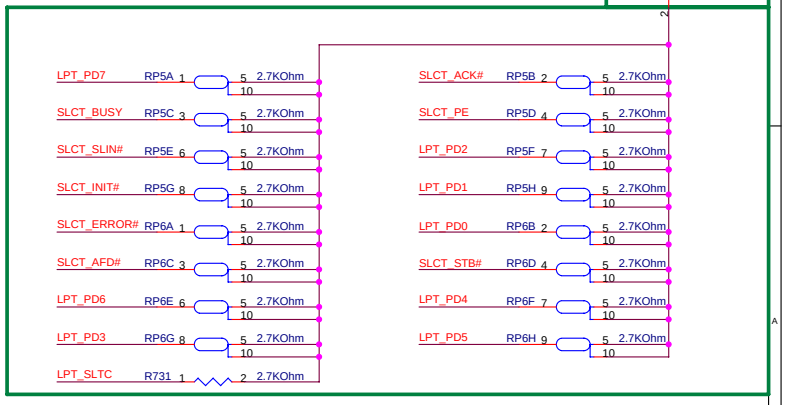


SIR



PRINT PORT





Unused SATA pin
- Connect RX, RBIAS, CLK to GND
- Leave TX, LED# as NC

PLACE WITHIN 500mils of ICH6 ball

INTERNAL PULL-UP
PULL-DOWN :
RESERVED

INTERNAL PULL-DOWN
PULL-UP : NO REBOOT

TP_3 INTERNAL PULL-UP
PULL-DOWN : PCI
Express Port chain test

* 56 within 1" from the ICH6-M pins
* 75 W pull-up to VCCP within 2" from the series resistor

RTC CMOS CLEAR

DELAY 18~25ms

U24C

ICH6_M

U24D

ICH6_M

PLT_RST#
ICH6,Alviso/M26/KBC/FWH/HDD

U24A

ICH6_M

U24B

ICH6_M

PLACE within 500 mils of ICH.
5.5mil/8mil

PLACE within 500 mils of ICH.

INTERNAL PULL-DOWN SIGNALS :
AC_BITCLK , AC_RST# , AC_SDIN[2:0] , AC_SDOUT , AC_SYNC , DPSLPVR , LAN_CLK , PDD[7] , SDD[7] , PDDREQ , SDDREQ , SPKR , USB[7:0][P,N]

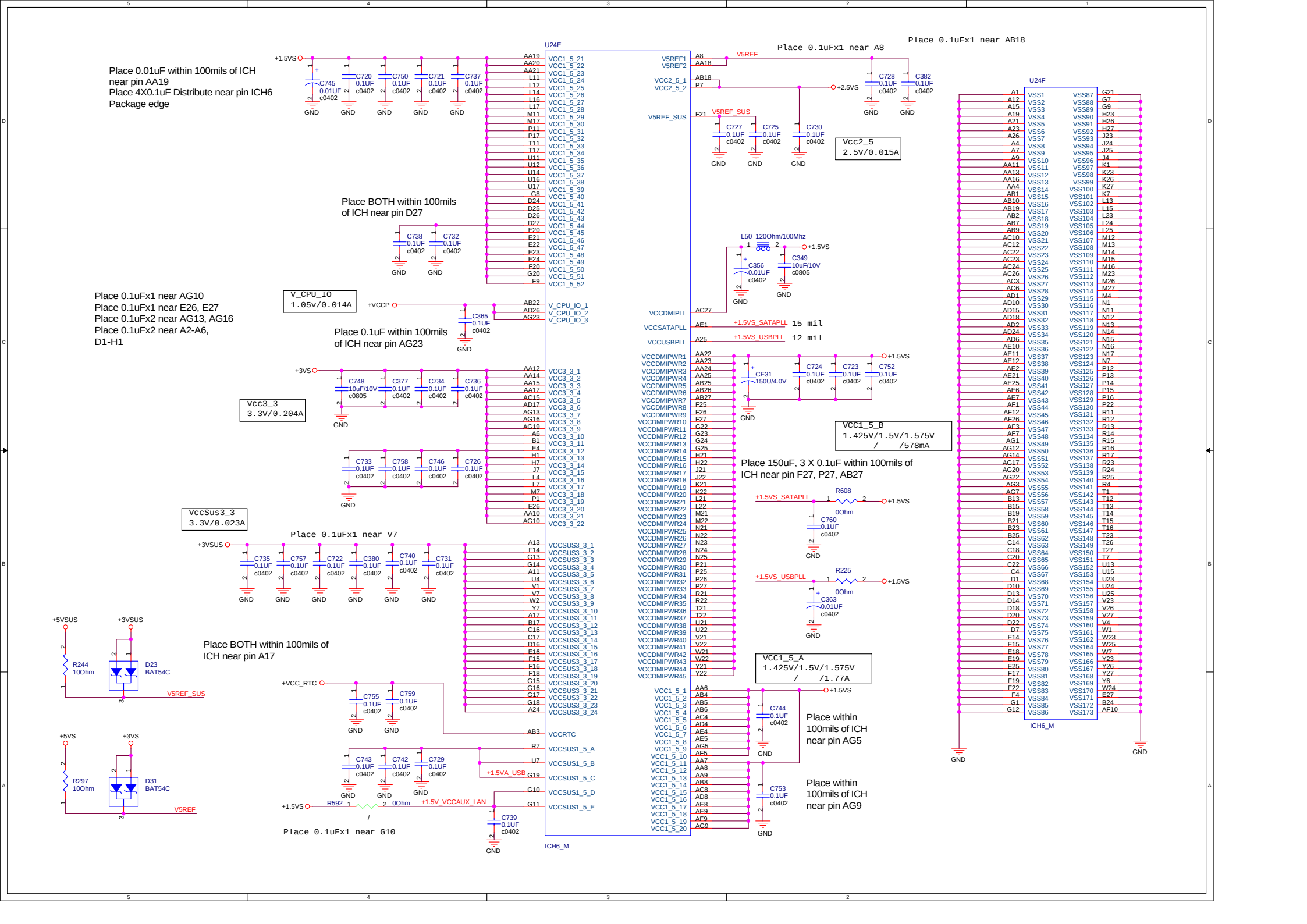
INTERNAL PULL-UP SIGNALS :
EE_DIN , EE_DOUT , GNT[B:A]# , GNT[5]# , GPIO[17:16] , LAD[3:0]# , LDRQ[1:0] , LAN_RXD[2:0] , PME# , PWRBTN#

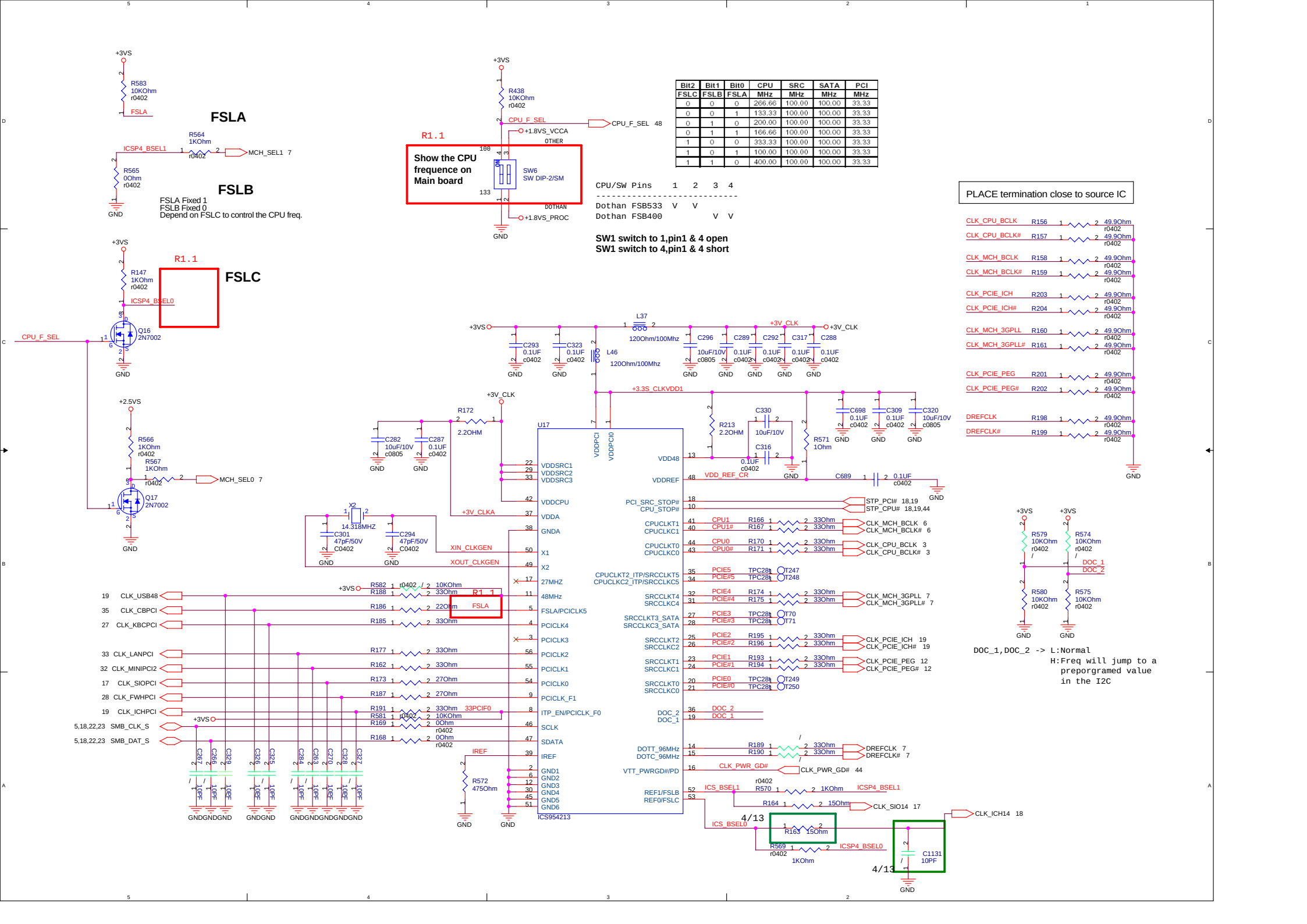
3/17

PCB_VID 0 1 2
MB V1.0 0 0 0
PCB_VID3 : PROJECT CODE

INTERNAL PULL-UP
PULL-DOWN : Boot BIOS destination select

INTERNAL PULL-UP
PULL-DOWN :TOP-BLOCK SWAP


Place 0.01uF within 100mils of ICH near pin AA19
Place 4X0.1uF Distribute near pin ICH6 Package edge
Place BOTH within 100mils of ICH near pin D27
Place 0.1uFx1 near AG10
Place 0.1uFx1 near E26, E27
Place 0.1uFx2 near AG13, AG16
Place 0.1uFx2 near A2-A6, D1-H1
V_CPU_IO 1.05v/0.014A
Place 0.1uF within 100mils of ICH near pin AG23
Vcc3_3 3.3V/0.204A
VccSus3_3 3.3V/0.023A
Place 0.1uFx1 near V7
Place BOTH within 100mils of ICH near pin A17
Place 0.1uFx1 near G10
Place 0.1uFx1 near A8
Place 0.1uFx1 near AB18
Vcc2_5 2.5V/0.015A
VCC1_5_B 1.425V/1.5V/1.575V / /578mA
Place 150uF, 3 X 0.1uF within 100mils of ICH near pin F27, P27, AB27
VCC1_5_A 1.425V/1.5V/1.575V / /1.77A
Place within 100mils of ICH near pin AG5
Place within 100mils of ICH near pin AG9
U24E
U24F
ICH6_M
ICH6_M



Bit2	Bit1	Bit0	CPU	SRC	SATA	PCI
FSLC	FSLB	FSLA	MHz	MHz	MHz	MHz
0	0	0	266.66	100.00	100.00	33.33
0	0	1	133.33	100.00	100.00	33.33
0	1	0	200.00	100.00	100.00	33.33
0	1	1	166.66	100.00	100.00	33.33
1	0	0	333.33	100.00	100.00	33.33
1	0	1	100.00	100.00	100.00	33.33
1	1	0	400.00	100.00	100.00	33.33

NO STUFF *

M_CLK_DDR3

C303
10PF PLACE NEAR SO-DIMM_0
c0402
/

M_CLK_DDR#3

M_CLK_DDR4

C302
10PF PLACE NEAR SO-DIMM_0
c0402
/

M_CLK_DDR#4

4/13

8,24 M_B_A[0..13]

M_B_DQ[0..63] 8

CON15B

M_B_A0 B102 B:A0
M_B_A1 B101 B:A1
M_B_A2 B100 B:A2
M_B_A3 B99 B:A3
M_B_A4 B98 B:A4
M_B_A5 B97 B:A5
M_B_A6 B94 B:A6
M_B_A7 B92 B:A7
M_B_A8 B93 B:A8
M_B_A9 B91 B:A9
M_B_A10 B105 B:A10/AP
M_B_A11 B90 B:A11
M_B_A12 B89 B:A12
M_B_A13 B116 B:A13
B86 B:A14
B84 B:A15
B85 B:A16_BA2

8,24 M_B_BS#2 B107 B:BA0
8,24 M_B_BS#0 B106 B:BA1
8,24 M_B_BS#1 B110 B:S0#
7,24 M_CS#2 B115 B:S1#
7,24 M_CS#3 B30 B:CK0
7 M_CLK_DDR3 B32 B:CK0#
7 M_CLK_DDR#3 B164 B:CK1
7 M_CLK_DDR4 B166 B:CK1#
7 M_CLK_DDR#4 B79 B:CKE0
7,24 M_CKE2 B80 B:CKE1
7,24 M_CKE3 B113 B:CBS#
8,24 M_B_CAS# B108 B:RAS#
8,24 M_B_RAS# B109 B:WE#
8,24 M_B_WE# B198 B:SA0
B200 B:SA1
5,18,21,23 SMB_CLK_S B197 B:SCL
5,18,21,23 SMB_DAT_S B195 B:SDA

R181 10KOhm r0402
R180 10KOhm r0402
+3VS
GND

7,24 M_ODT2 B114 B:ODT0
7,24 M_ODT3 B119 B:ODT1
8 M_B_DM[0..7]

M_B_DM0 B10 B:DM0
M_B_DM1 B26 B:DM1
M_B_DM2 B52 B:DM2
M_B_DM3 B67 B:DM3
M_B_DM4 B130 B:DM4
M_B_DM5 B147 B:DM5
M_B_DM6 B170 B:DM6
M_B_DM7 B185 B:DM7

8 M_B_DQS[0..7]

M_B_DQS0 B13 B:DQS0
M_B_DQS1 B31 B:DQS1
M_B_DQS2 B51 B:DQS2
M_B_DQS3 B70 B:DQS3
M_B_DQS4 B131 B:DQS4
M_B_DQS5 B148 B:DQS5
M_B_DQS6 B169 B:DQS6
M_B_DQS7 B188 B:DQS7

8 M_B_DQS#[0..7]

M_B_DQS#0 B11 B:DQS0#
M_B_DQS#1 B29 B:DQS1#
M_B_DQS#2 B49 B:DQS2#
M_B_DQS#3 B68 B:DQS3#
M_B_DQS#4 B129 B:DQS4#
M_B_DQS#5 B146 B:DQS5#
M_B_DQS#6 B167 B:DQS6#
M_B_DQS#7 B186 B:DQS7#

B5 B:DQ0 M_B_DQ1
B7 B:DQ1 M_B_DQ0
B17 B:DQ2 M_B_DQ2
B19 B:DQ3 M_B_DQ6
B4 B:DQ4 M_B_DQ5
B6 B:DQ5 M_B_DQ4
B14 B:DQ6 M_B_DQ7
B16 B:DQ7 M_B_DQ3
B23 B:DQ8 M_B_DQ9
B25 B:DQ9 M_B_DQ13
B35 B:DQ10 M_B_DQ11
B37 B:DQ11 M_B_DQ10
B20 B:DQ12 M_B_DQ12
B22 B:DQ13 M_B_DQ8
B36 B:DQ14 M_B_DQ15
B38 B:DQ15 M_B_DQ14
B43 B:DQ16 M_B_DQ16
B45 B:DQ17 M_B_DQ17
B55 B:DQ18 M_B_DQ19
B57 B:DQ19 M_B_DQ18
B44 B:DQ20 M_B_DQ21
B46 B:DQ21 M_B_DQ20
B56 B:DQ22 M_B_DQ22
B58 B:DQ23 M_B_DQ23
B61 B:DQ24 M_B_DQ29
B63 B:DQ25 M_B_DQ24
B73 B:DQ26 M_B_DQ30
B75 B:DQ27 M_B_DQ26
B62 B:DQ28 M_B_DQ28
B64 B:DQ29 M_B_DQ25
B74 B:DQ30 M_B_DQ27
B76 B:DQ31 M_B_DQ31
B123 B:DQ32 M_B_DQ32
B125 B:DQ33 M_B_DQ36
B135 B:DQ34 M_B_DQ38
B137 B:DQ35 M_B_DQ35
B124 B:DQ36 M_B_DQ33
B126 B:DQ37 M_B_DQ37
B134 B:DQ38 M_B_DQ39
B136 B:DQ39 M_B_DQ34
B141 B:DQ40 M_B_DQ44
B143 B:DQ41 M_B_DQ40
B151 B:DQ42 M_B_DQ47
B153 B:DQ43 M_B_DQ43
B140 B:DQ44 M_B_DQ45
B142 B:DQ45 M_B_DQ41
B152 B:DQ46 M_B_DQ46
B154 B:DQ47 M_B_DQ42
B157 B:DQ48 M_B_DQ53
B159 B:DQ49 M_B_DQ49
B173 B:DQ50 M_B_DQ50
B175 B:DQ51 M_B_DQ51
B158 B:DQ52 M_B_DQ48
B160 B:DQ53 M_B_DQ52
B174 B:DQ54 M_B_DQ54
B176 B:DQ55 M_B_DQ55
B179 B:DQ56 M_B_DQ57
B181 B:DQ57 M_B_DQ59
B189 B:DQ58 M_B_DQ62
B191 B:DQ59 M_B_DQ56
B180 B:DQ60 M_B_DQ61
B182 B:DQ61 M_B_DQ60
B192 B:DQ62 M_B_DQ58
B194 B:DQ63 M_B_DQ63

B111 B:VDD2
B117 B:VDD3
B95 B:VDD5
B81 B:VDD7
B87 B:VDD9
B103 B:VDD10

B47 B:VSS1
B133 B:VSS2
B183 B:VSS3
B77 B:VSS4
B71 B:VSS9
B121 B:VSS11
B193 B:VSS14
B41 B:VSS18
B53 B:VSS19
B59 B:VSS22
B65 B:VSS23

B127 B:VSS26
B139 B:VSS27
B145 B:VSS29
B165 B:VSS30
B171 B:VSS31
B177 B:VSS33
B187 B:VSS34
B9 B:VSS37
B21 B:VSS38
B33 B:VSS39
B155 B:VSS40
B3 B:VSS47
B15 B:VSS48
B27 B:VSS49
B39 B:VSS50
B149 B:VSS51
B161 B:VSS52

B199 B:VDDSPD

B83 B:NC1
B120 B:NC2
B50 B:NC3
B69 B:NC4
B163 B:NCTEST

B1 B:VREF

M_VREF_DIMM0

VREF -> 10/10 mils

DDR_DIMM_331P

Layout Note: Place these High-Freq decoupling Caps near the GMCH

+1.8V
C637 0.1UF c0402
C635 0.1UF c0402
C633 0.1UF c0402
C636 0.1UF c0402
GND

Layout Note: Place these resistors near the GMCH

+1.8V
C638 2.2uF/6.3V
C631 2.2uF/6.3V
C667 2.2uF/6.3V
C644 2.2uF/6.3V
C670 2.2uF/6.3V
GND

Layout Note: Place these Caps near SO DIMM 0

+1.8V
C354 0.1UF c0402
C355 0.1UF c0402
C352 0.1UF c0402
C353 0.1UF c0402
GND

+3VS
C332 0.1UF c0402
C331 0.1UF c0402
GND

C340 2.2uF/6.3V
C333 0.1UF c0402
GND

Layout Note: Place these Caps near SO DIMM 0

NO STUFF *

M_CLK_DDR0

C697 10PF PLACE NEAR SO-DIMM_1 c0402 / M_CLK_DDR#0

M_CLK_DDR1

C696 10PF PLACE NEAR SO-DIMM_1 c0402 / M_CLK_DDR#1

4/13

8,24 M_A_A[0..13]

M_A_BS#2

M_A_DQ[0..63] 8

CON15A

R577 10KOhm r0402

R576 10KOhm r0402

GND

5,18,21,22 SMB_CLK_S

5,18,21,22 SMB_DAT_S

M_ODT0

M_ODT1

8 M_A_DM[0..7]

8 M_A_DQS[0..7]

8 M_A_DQS#[0..7]

Layout Note: Place these Caps near SO DIMM 1

+1.8V

C693 0.1UF c0402

C692 0.1UF c0402

C694 0.1UF c0402

C695 0.1UF c0402

+3VS

C700 0.1UF c0402

C699 0.1UF c0402

M_VREF_DIMM1

VREF -> 10/10 mils

C322 2.2uF/6.3V

C319 0.1UF c0402

DDR_DIMM_1

Layout Note: Place these Caps near SO DIMM 1

+1.8V

C357 2.2uF/6.3V

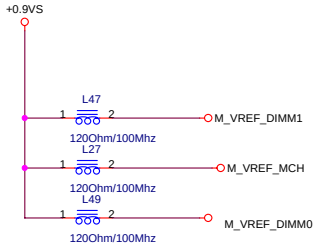
C691 2.2uF/6.3V

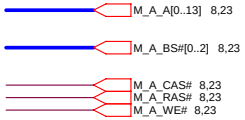
C690 2.2uF/6.3V

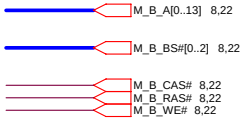
C358 2.2uF/6.3V

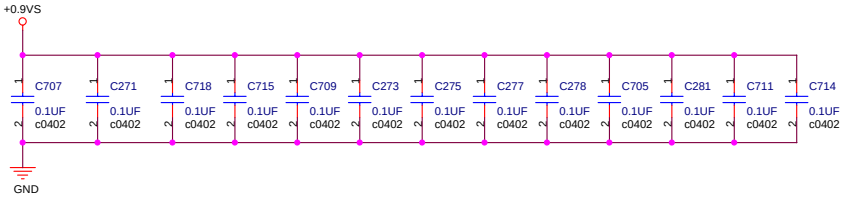
C359 2.2uF/6.3V

SO-DIMM 1 is placed father from the GMCH than SO-DIMM 0

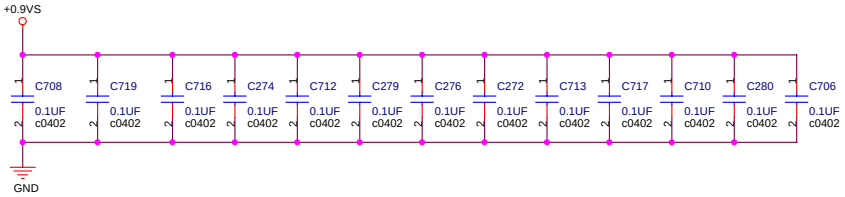




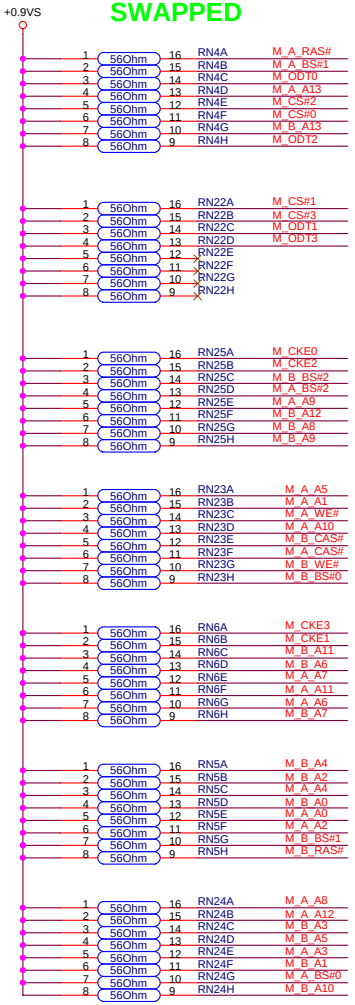




Layout note: Place one cap close to every 2 pullup resistors terminated to +0.9VS

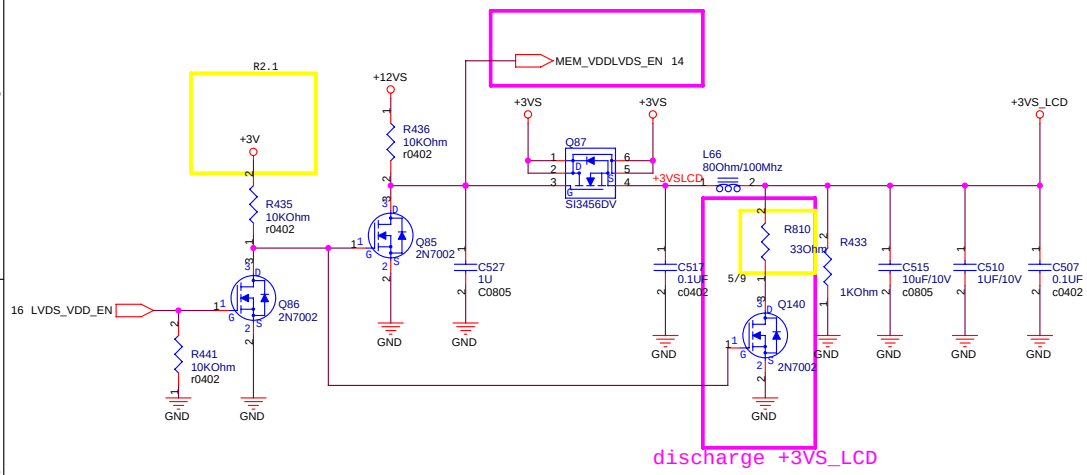


SWAPPED

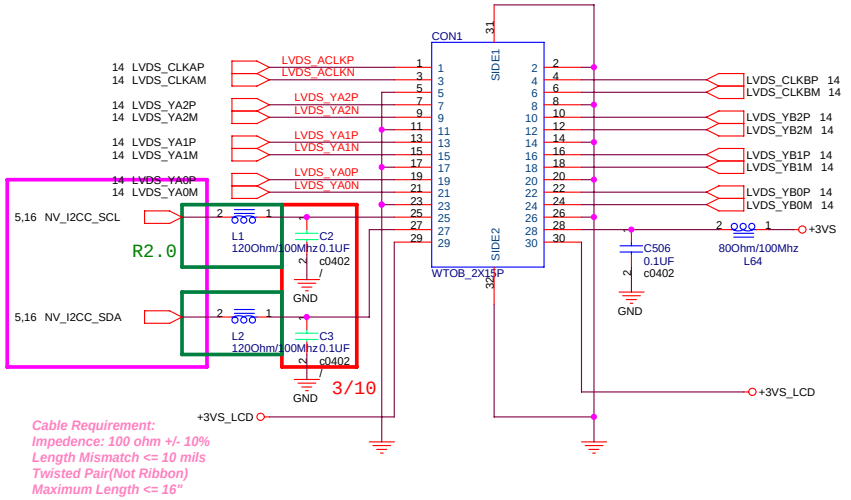


LCD Power

3V-3.6V
Full Active: 410 mA(Max. 500 mA)



LCD LVDS Interface

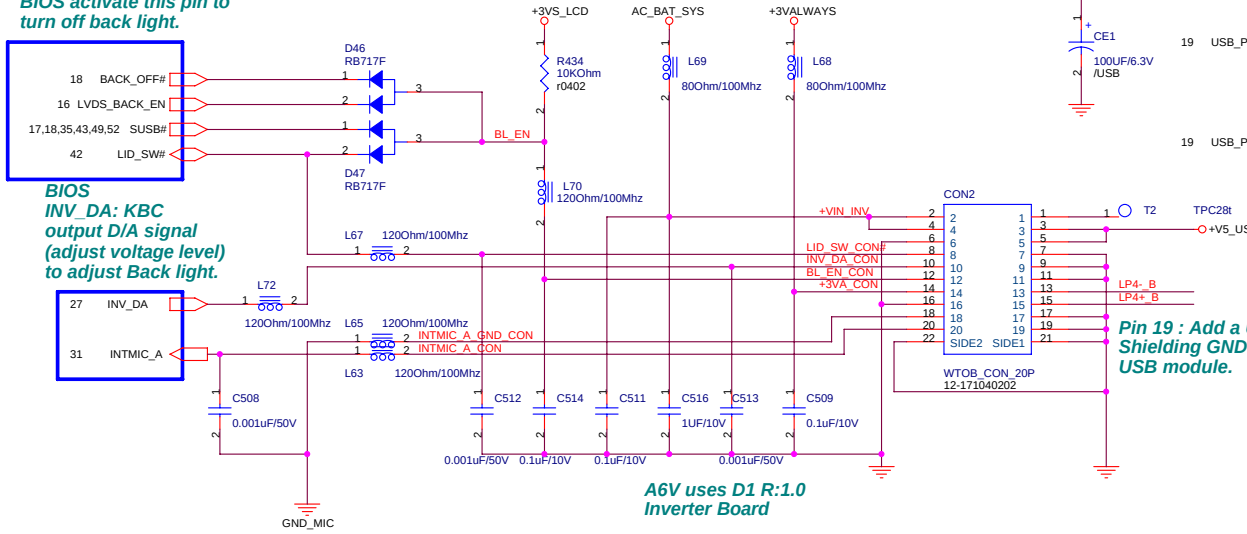


Cable Requirement:
Impedence: 100 ohm +/- 10%
Length Mismatch <= 10 mils
Twisted Pair(Not Ribbon)
Maximum Length <= 16"

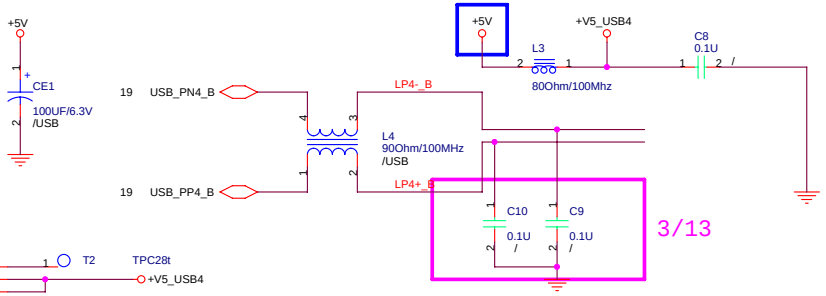
INVERTER Interface

BIOS
BACK_OFF#: When user pushs "Fn+F7" button, BIOS activate this pin to turn off back light.

BIOS
INV_DA: KBC output D/A signal (adjust voltage level) to adjust Back light.



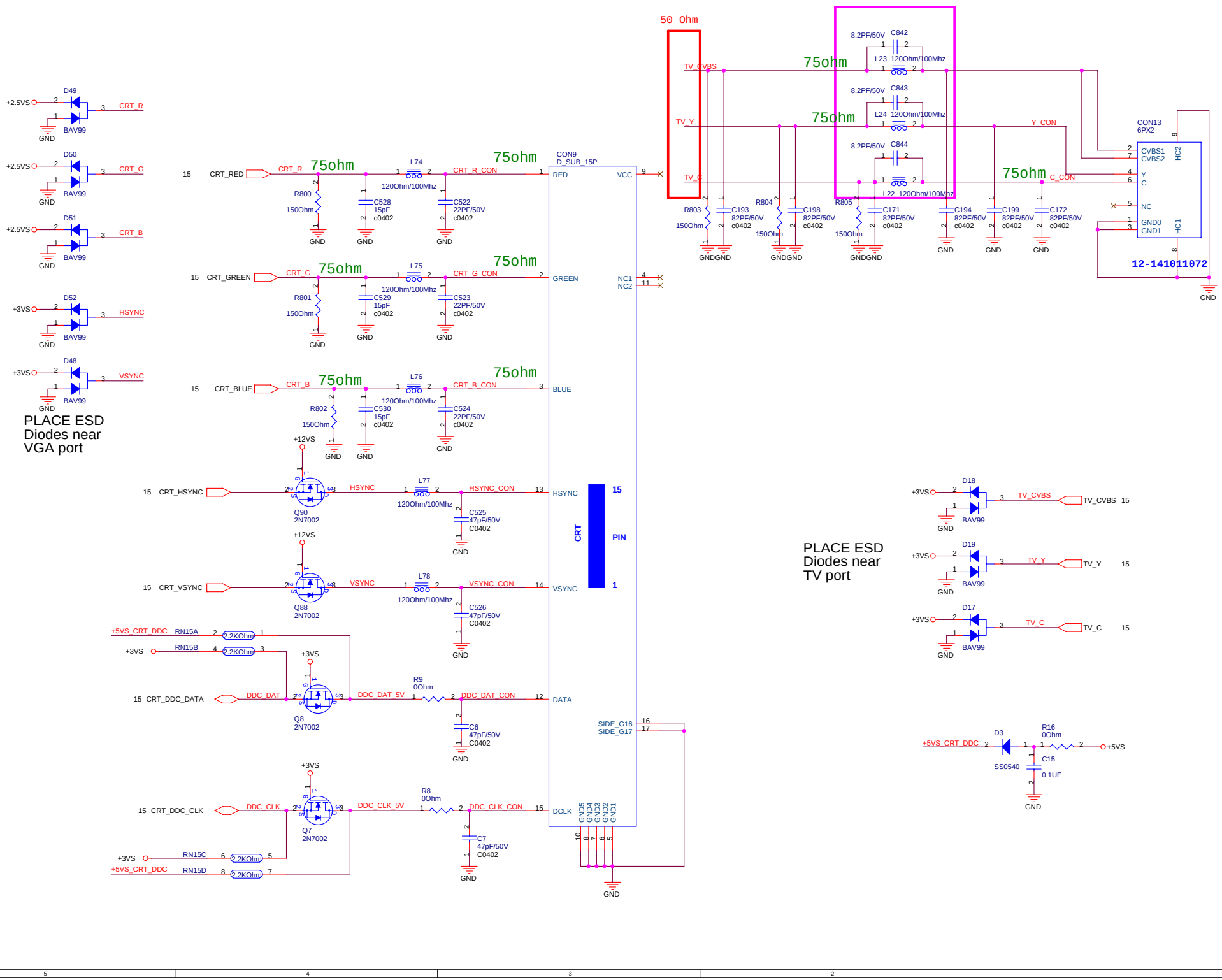
A6V uses D1 R:1.0 Inverter Board

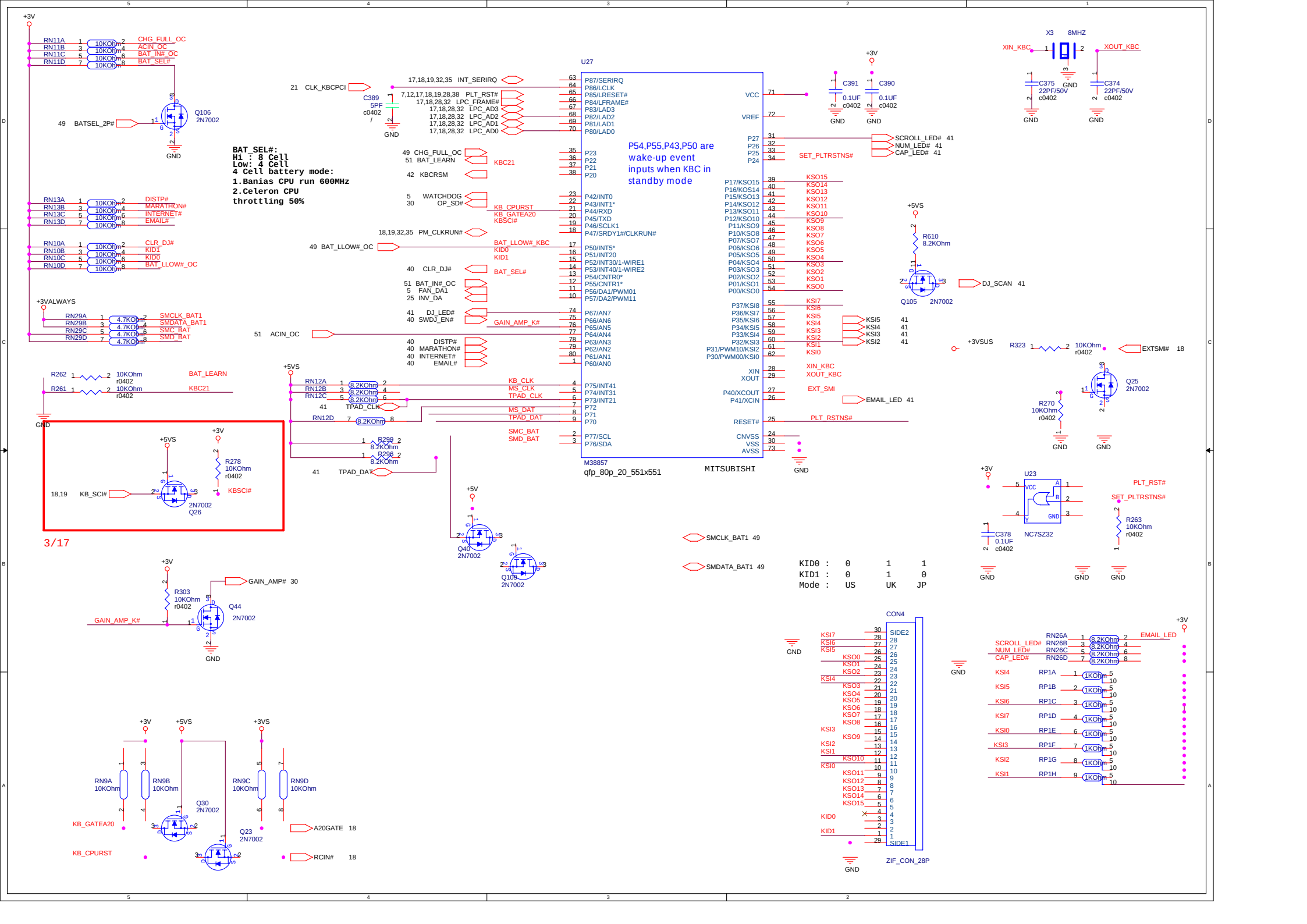


Pin 19 : Add a USB 2.0 Shielding GND cable to USB module.

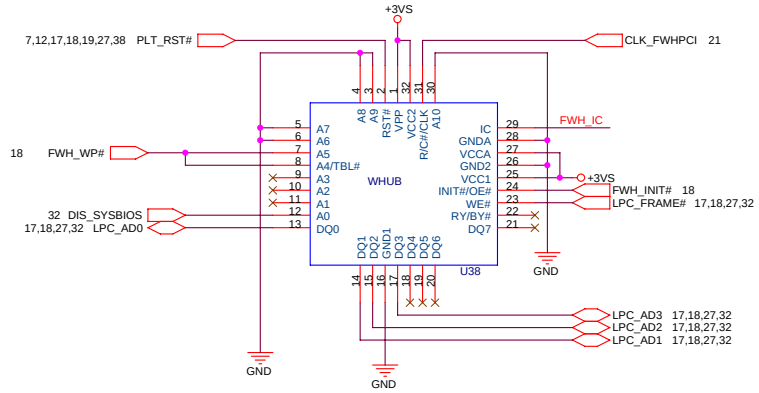
USB PORT 4 for USB CAMERA

A6V doesn't support USB WLAN function!


50 Ohm
75ohm
CON9
D_SUB_15P
CON13
6PX2
12-141011072
PLACE ESD
Diodes near
VGA port
PLACE ESD
Diodes near
TV port
CRT
PIN
15
1
D49
D50
D51
D52
D48
D18
D19
D17
D3
BAV99
SS0540
Q90
Q88
Q8
Q7
2N7002
CRT_R
CRT_G
CRT_B
HSYNC
VSYNC
TV_CVBS
TV_Y
TV_C
Y_CON
C_CON
CRT_RED
CRT_GREEN
CRT_BLUE
CRT_HSYNC
CRT_VSYNC
CRT_DDC_DATA
CRT_DDC_CLK
+2.5VS
+3VS
+12VS
+5VS
+5VS_CRT_DDC
GND
RED
GREEN
BLUE
HSYNC
VSYNC
DATA
DCLK
VCC
NC1
NC2
SIDE_G16
SIDE_G17
GND5
GND4
GND3
GND2
GND1
CVBS1
CVBS2
Y
C
NC
GND0
GND1
HC1
HC2
L74
L75
L76
L77
L78
L23
L24
L22
120Ohm/100Mhz
R800
R801
R802
R803
R804
R805
150Ohm
R9
R8
R16
0Ohm
C528
C529
C530
C193
C198
C171
C194
C199
C172
15pF
82PF/50V
c0402
C522
C523
C524
C525
C526
C6
C7
C15
22PF/50V
47pF/50V
C0402
0.1UF
C842
C843
C844
8.2PF/50V
RN15A
RN15B
RN15C
RN15D
2.2KOhm

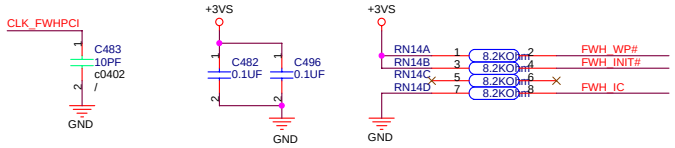

BAT_SEL#:
Hi : 8 Cell
Low: 4 Cell
4 Cell battery mode:
1.Banias CPU run 600MHz
2.Celeron CPU
throttling 50%
P54,P55,P43,P50 are wake-up event inputs when KBC in standby mode
U27
M38857
qfp_80p_20_551x551
MITSUBISHI
3/17
KID0 : 0 1 1
KID1 : 0 1 0
Mode : US UK JP

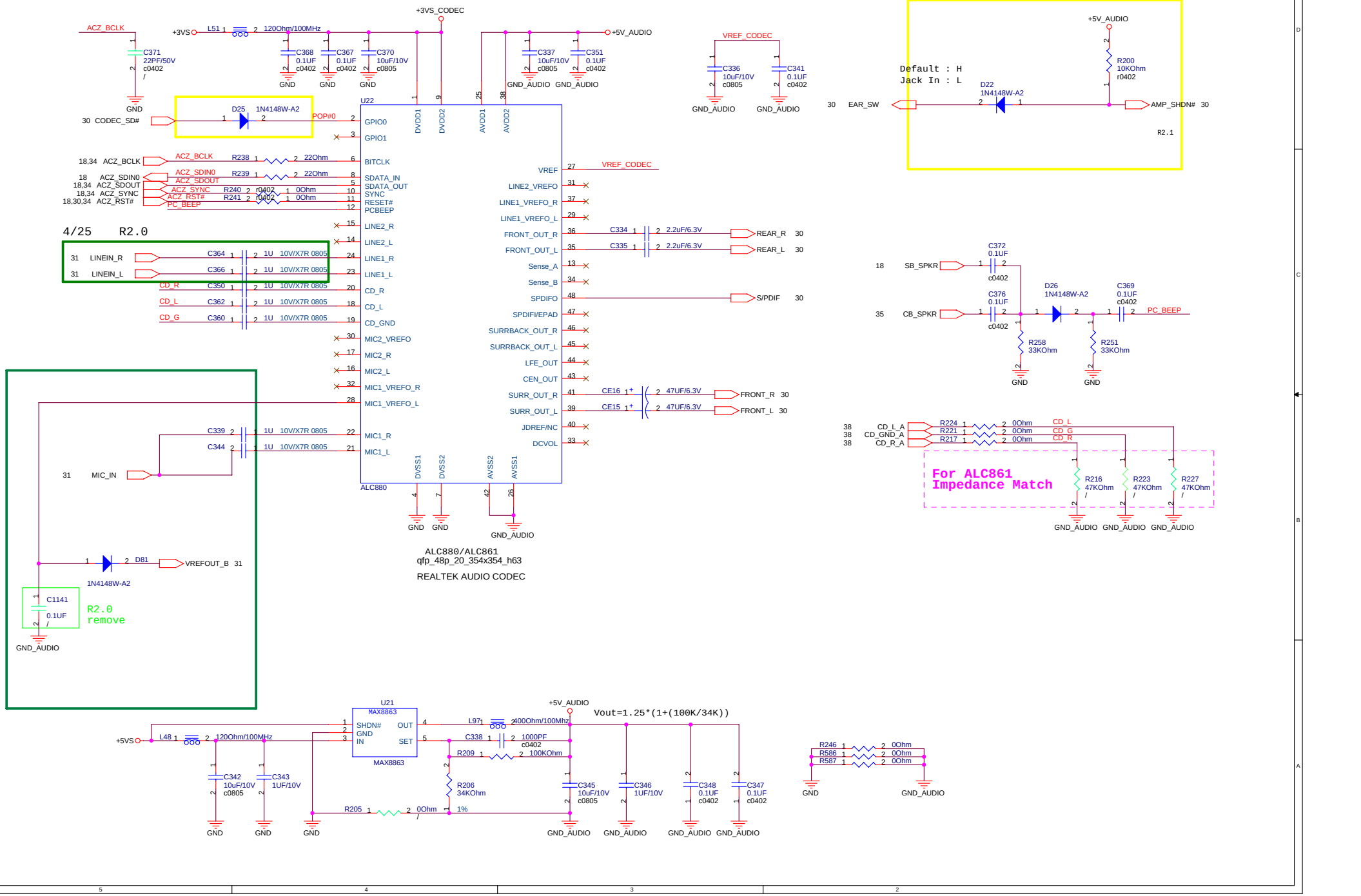
FWH

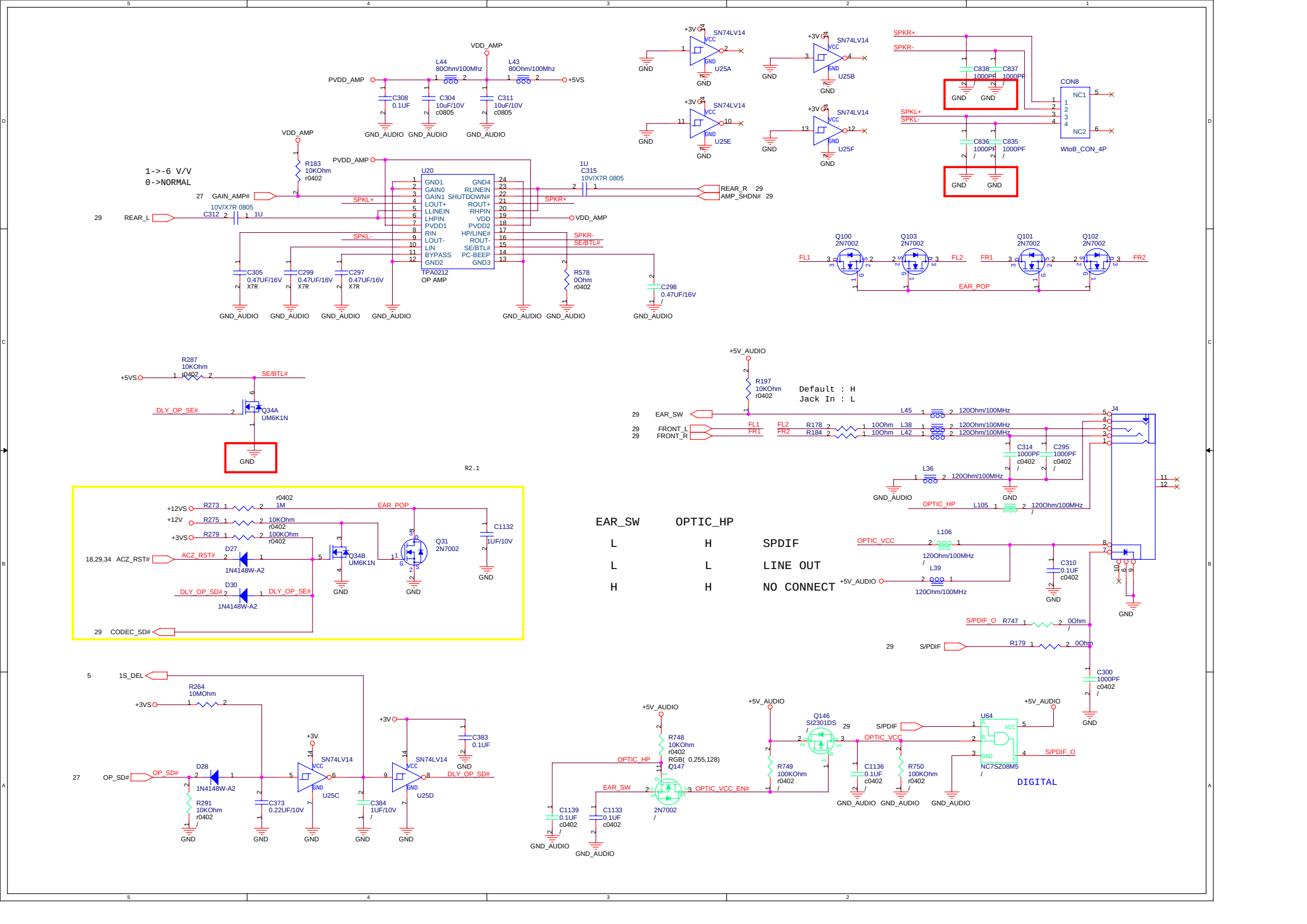


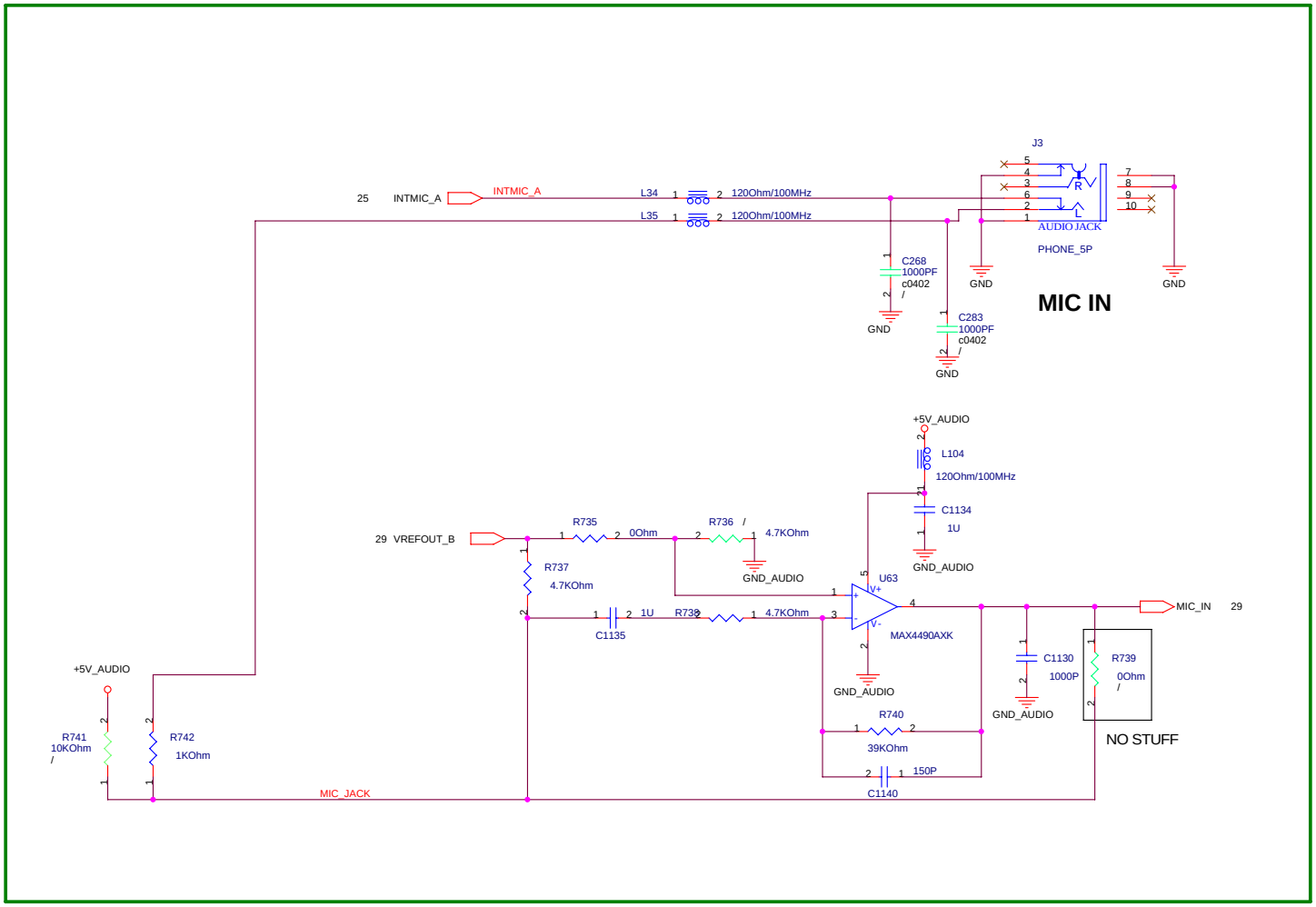
PLCC32 Socket Part Number :
12-043000321

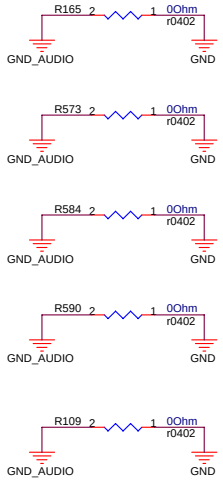
SST FWH/LPC Part Number :
05-001017122(燒)



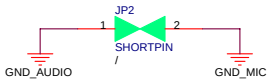

ACZ_BCLK
+3VS
L51 120Ohm/100MHz
+3VS_CODEC
+5V_AUDIO
C371 22PF/50V c0402 /
C368 0.1UF c0402
C367 0.1UF c0402
C370 10uF/10V c0805
C337 10uF/10V c0805
C351 0.1UF c0402
GND
GND_AUDIO
VREF_CODEC
C336 10uF/10V c0805
C341 0.1UF c0402
D25 1N4148W-A2
30 CODEC_SD#
POP#0
U22
GPIO0
GPIO1
DVDD1
DVDD2
AVDD1
AVDD2
18,34 ACZ_BCLK
R238 22Ohm
BITCLK
18 ACZ_SDIN0
R239 22Ohm
SDATA_IN
18,34 ACZ_SDOUT
SDATA_OUT
18,34 ACZ_SYNC
R240 0Ohm
SYNC
18,30,34 ACZ_RST#
R241 0Ohm
RESET#
PC_BEEP
PCBEEP
VREF
VREF_CODEC
LINE2_VREFO
LINE1_VREFO_R
LINE1_VREFO_L
4/25 R2.0
31 LINEIN_R
C364 1U 10V/X7R 0805
LINE2_R
31 LINEIN_L
C366 1U 10V/X7R 0805
LINE1_R
CD_R
C350 1U 10V/X7R 0805
LINE1_L
CD_L
C362 1U 10V/X7R 0805
CD_R
CD_G
C360 1U 10V/X7R 0805
CD_L
CD_GND
FRONT_OUT_R
C334 2.2uF/6.3V
REAR_R 30
FRONT_OUT_L
C335 2.2uF/6.3V
REAR_L 30
Sense_A
Sense_B
SPDIFO
S/PDIF 30
SPDIF/EPAD
SURRBACK_OUT_R
SURRBACK_OUT_L
LFE_OUT
CEN_OUT
SURR_OUT_R
CE16 47UF/6.3V
FRONT_R 30
SURR_OUT_L
CE15 47UF/6.3V
FRONT_L 30
JDREF/NC
DCVOL
MIC2_VREFO
MIC2_R
MIC2_L
MIC1_VREFO_R
MIC1_VREFO_L
C339 1U 10V/X7R 0805
C344 1U 10V/X7R 0805
31 MIC_IN
MIC1_R
MIC1_L
DVSS1
DVSS2
AVSS2
AVSS1
ALC880
ALC880/ALC861
qfp_48p_20_354x354_h63
REALTEK AUDIO CODEC
1 2 D81
VREFOUT_B 31
1N4148W-A2
C1141 0.1UF /
R2.0 remove
GND_AUDIO
Default : H
Jack In : L
30 EAR_SW
D22 1N4148W-A2
R200 10KOhm r0402
AMP_SHDN# 30
R2.1
18 SB_SPKR
C372 0.1UF c0402
35 CB_SPKR
C376 0.1UF c0402
D26 1N4148W-A2
C369 0.1UF c0402
PC_BEEP
R258 33KOhm
R251 33KOhm
38 CD_L_A
38 CD_GND_A
38 CD_R_A
R224 0Ohm
R221 0Ohm
R217 0Ohm
CD_L
CD_G
CD_R
For ALC861
Impedance Match
R216 47KOhm /
R223 47KOhm /
R227 47KOhm /
U21
MAX8863
SHDN#
GND
IN
OUT
SET
+5VS
L48 120Ohm/100MHz
L97 600Ohm/100Mhz
Vout=1.25*(1+(100K/34K))
C338 1000PF c0402
R209 100KOhm
R206 34KOhm
R205 0Ohm 1%
C342 10uF/10V c0805
C343 1UF/10V
C345 10uF/10V c0805
C346 1UF/10V
C348 0.1UF c0402
C347 0.1UF c0402
R246 0Ohm
R586 0Ohm
R587 0Ohm

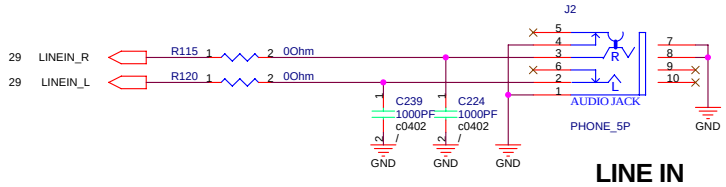

VDD_AMP
L44 80Ohm/100Mhz
L43 80Ohm/100Mhz
PVDD_AMP
+5VS
C308 0.1UF
C304 10uF/10V c0805
C311 10uF/10V c0805
GND_AUDIO
SN74LV14
U25A
U25B
U25E
U25F
GND
SPKR+
SPKR-
SPKL+
SPKL-
C838 1000PF
C837 1000PF
C836 1000PF
C835 1000PF
CON8
NC1
NC2
WtoB_CON_4P
1->-6 V/V
0->NORMAL
R183 10KOhm r0402
GAIN_AMP#
REAR_L
C312 10V/X7R 0805 1U
U20
GND1
GAIN0
GAIN1
LOUT+
LINEIN
LHPIN
PVDD1
RIN
LOUT-
LIN
BYPASS
GND2
GND4
RLINEIN
SHUTDOWN#
ROUT+
RHPIN
VDD
PVDD2
HP/LINE#
ROUT-
SE/BTL#
PC-BEEP
GND3
TPA0212
OP AMP
C315 10V/X7R 0805 1U
REAR_R
AMP_SHDN#
C305 0.47UF/16V X7R
C299 0.47UF/16V X7R
C297 0.47UF/16V X7R
R578 0Ohm r0402
C298 0.47UF/16V
Q100 2N7002
Q103 2N7002
Q101 2N7002
Q102 2N7002
FL1
FL2
FR1
FR2
EAR_POP
R287 10KOhm r0402
SE/BTL#
DLY_OP_SE#
Q34A UM6K1N
R2.1
+12VS
+12V
+3VS
R273 r0402 1M
R275 10KOhm r0402
R279 100KOhm r0402
ACZ_RST#
18,29,34 ACZ_RST#
D27 1N4148W-A2
Q34B UM6K1N
Q31 2N7002
C1132 1UF/10V
DLY_OP_SD#
D30 1N4148W-A2
29 CODEC_SD#
+5V_AUDIO
R197 10KOhm r0402
Default : H
Jack In : L
29 EAR_SW
29 FRONT_L
29 FRONT_R
R178 10Ohm
R184 10Ohm
L45 120Ohm/100MHz
L38 120Ohm/100MHz
L42 120Ohm/100MHz
L36 120Ohm/100MHz
L105 120Ohm/100MHz
J4
C314 1000PF c0402
C295 1000PF c0402
OPTIC_HP
EAR_SW OPTIC_HP
L H SPDIF
L L LINE OUT
H H NO CONNECT
OPTIC_VCC
L106 120Ohm/100MHz
L39 120Ohm/100MHz
C310 0.1UF c0402
S/PDIF_O
R747 0Ohm
29 S/PDIF
R179 0Ohm
C300 1000PF c0402
5 1S_DEL
R264 10MOhm
OP_SD#
27 OP_SD#
D28 1N4148W-A2
R291 10KOhm r0402
C373 0.22UF/10V
C384 1UF/10V
C383 0.1UF
U25C
U25D
DLY_OP_SD#
R748 10KOhm r0402 RGB(0,255,128) Q147
OPTIC_VCC_EN#
2N7002
Q146 SI2301DS
R749 100KOhm r0402
R750 100KOhm r0402
C1136 0.1UF c0402
C1139 0.1UF c0402
C1133 0.1UF c0402
U64
NC7SZ08M5
DIGITAL

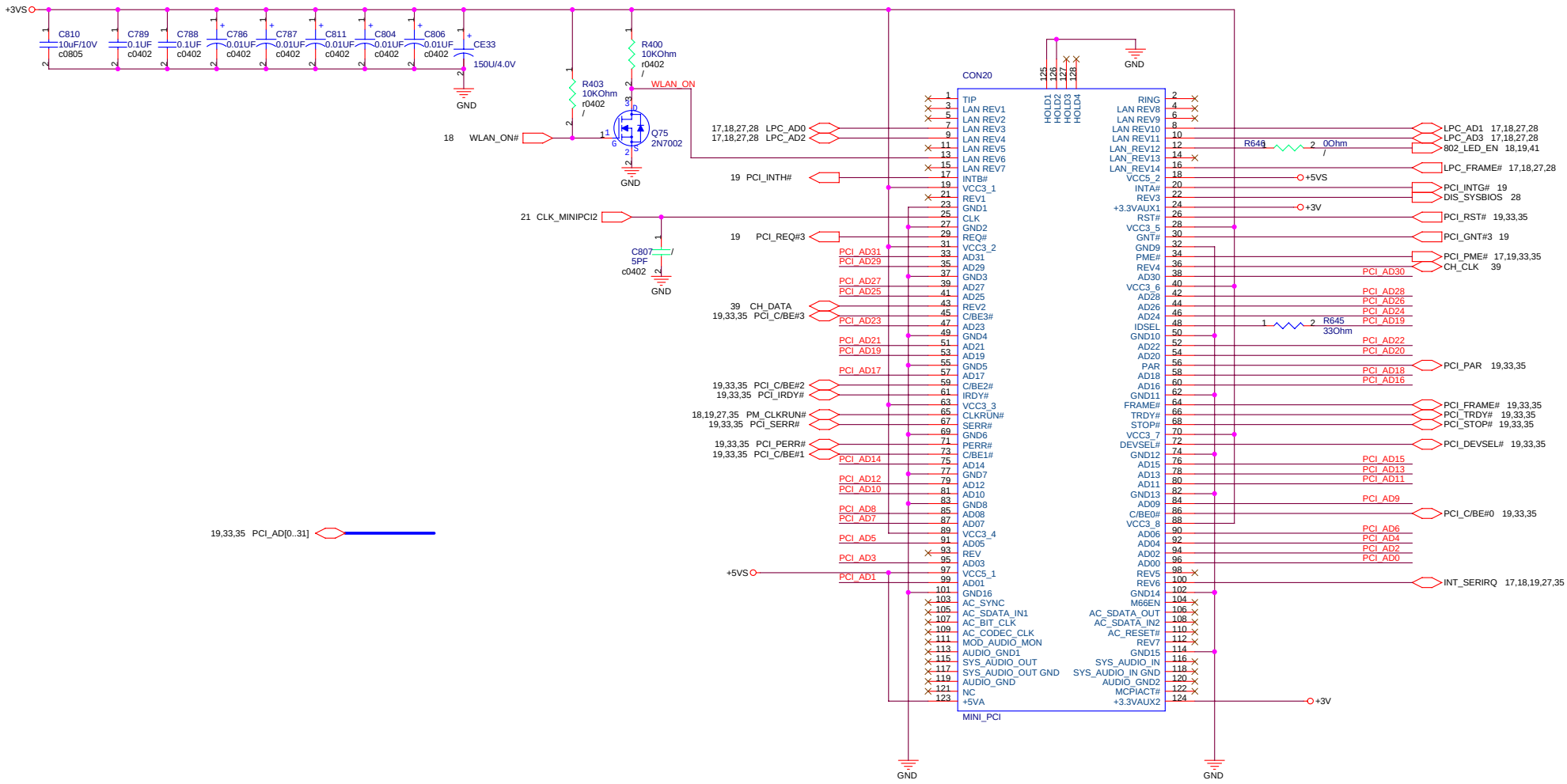


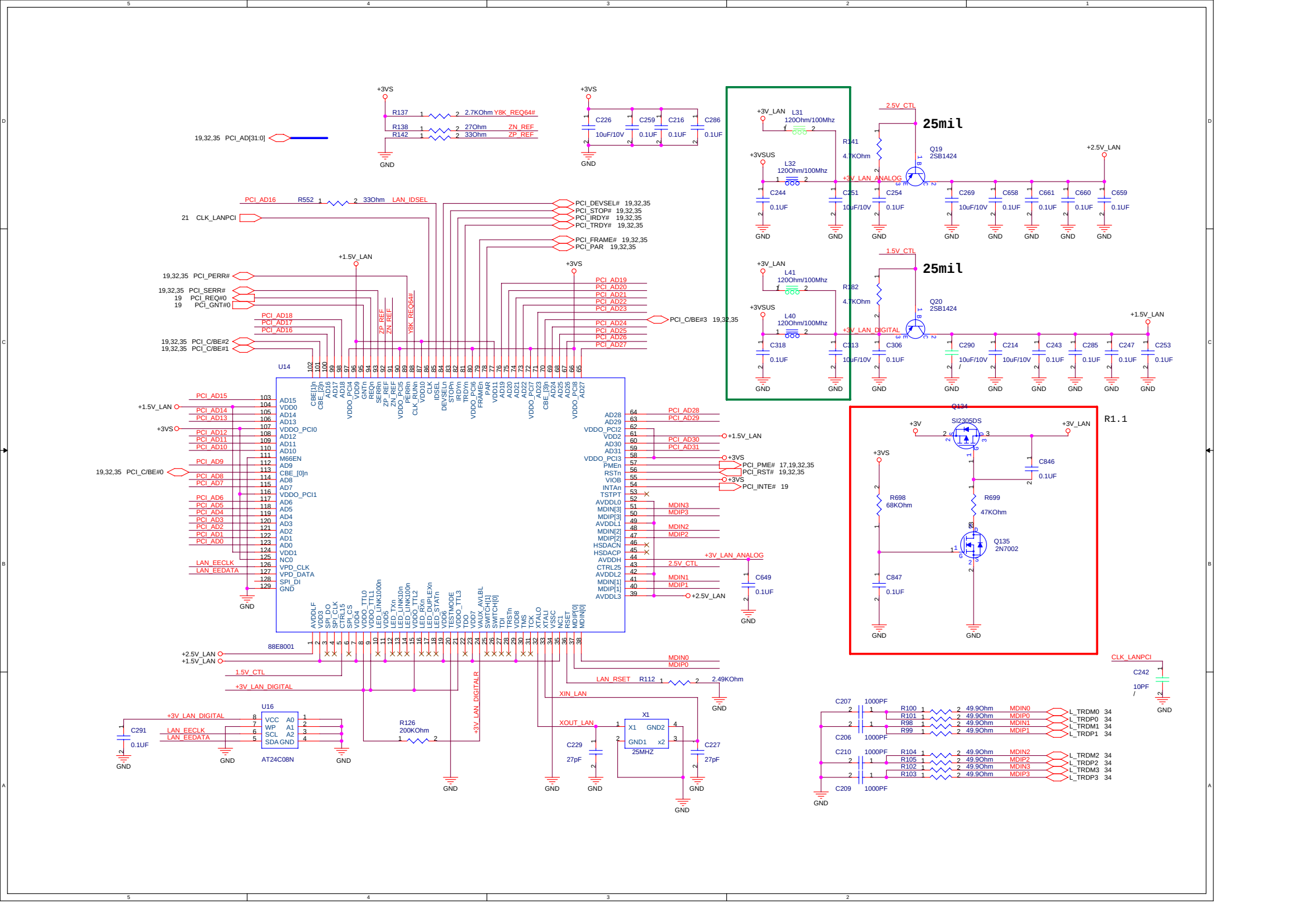


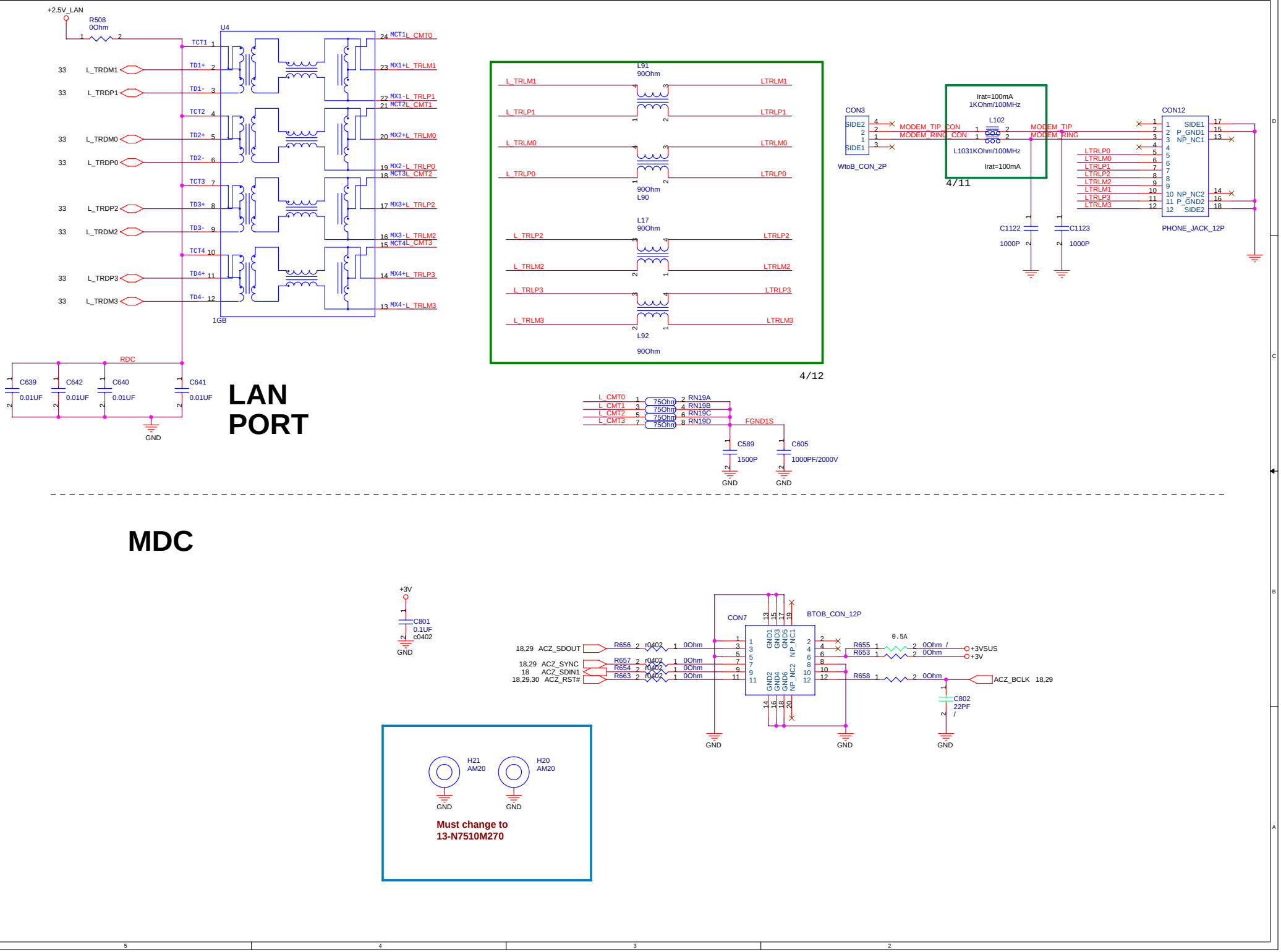
INTMIC_A:GND_AUDIO : W/P/X = 12/5/15mils

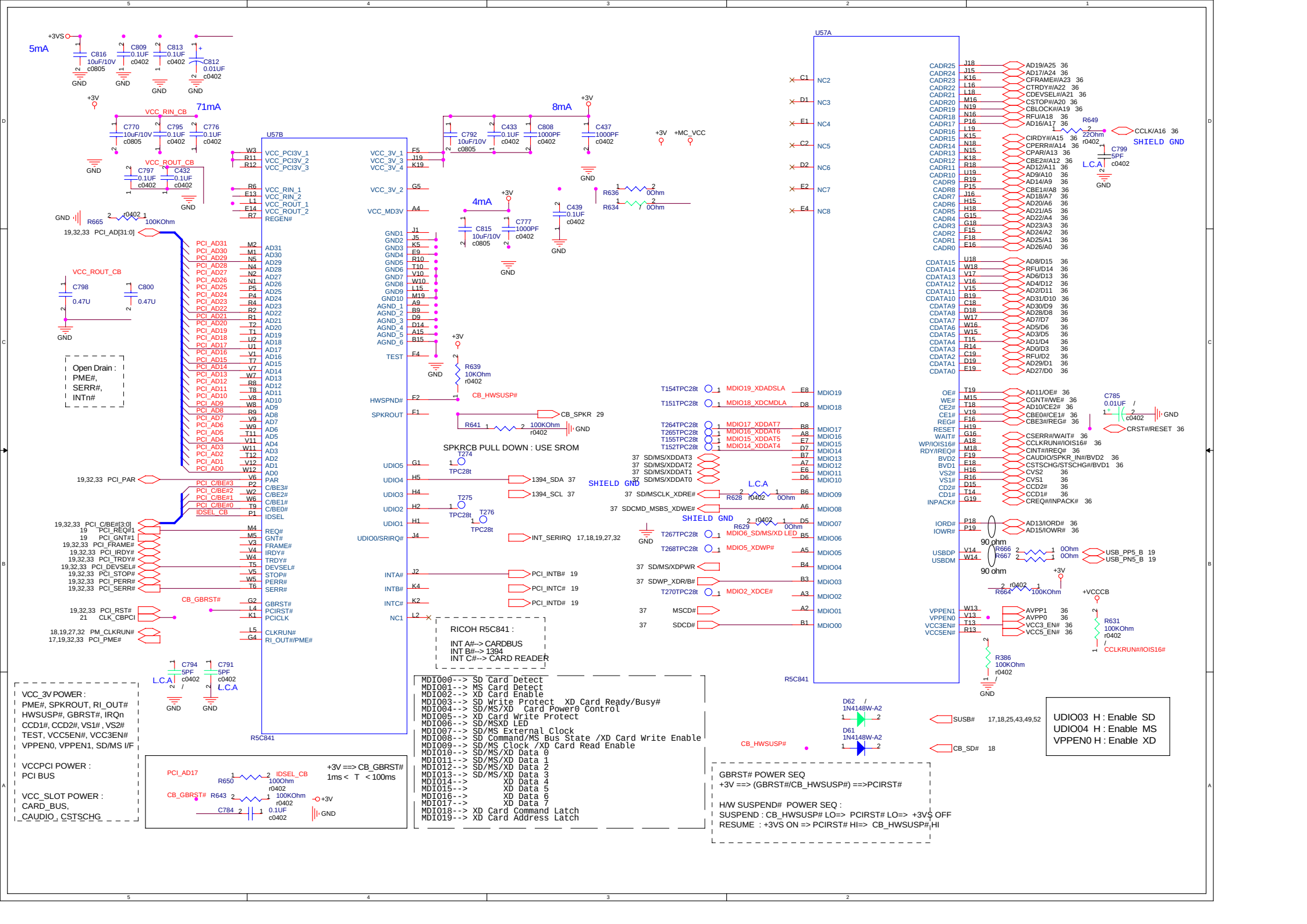


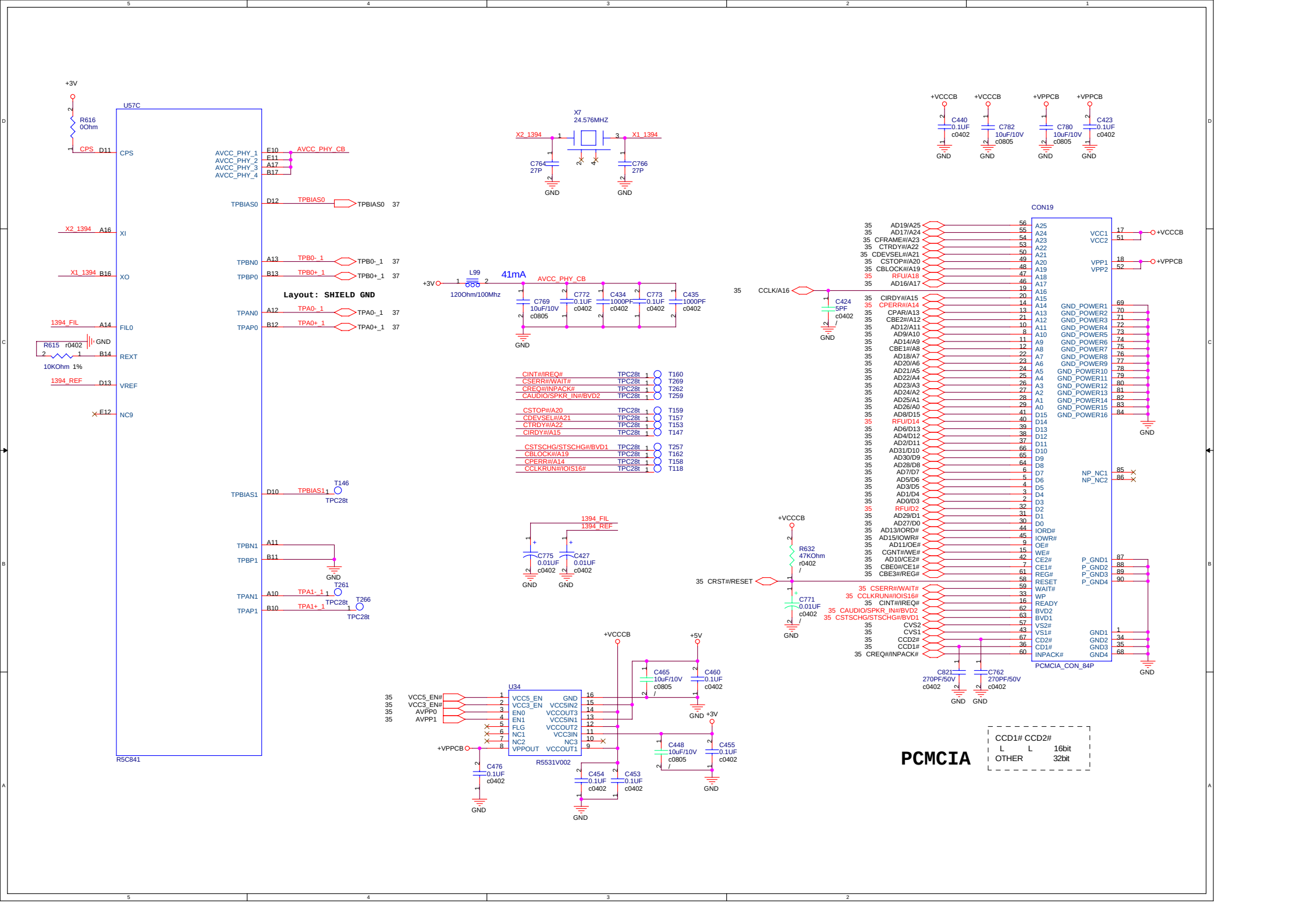


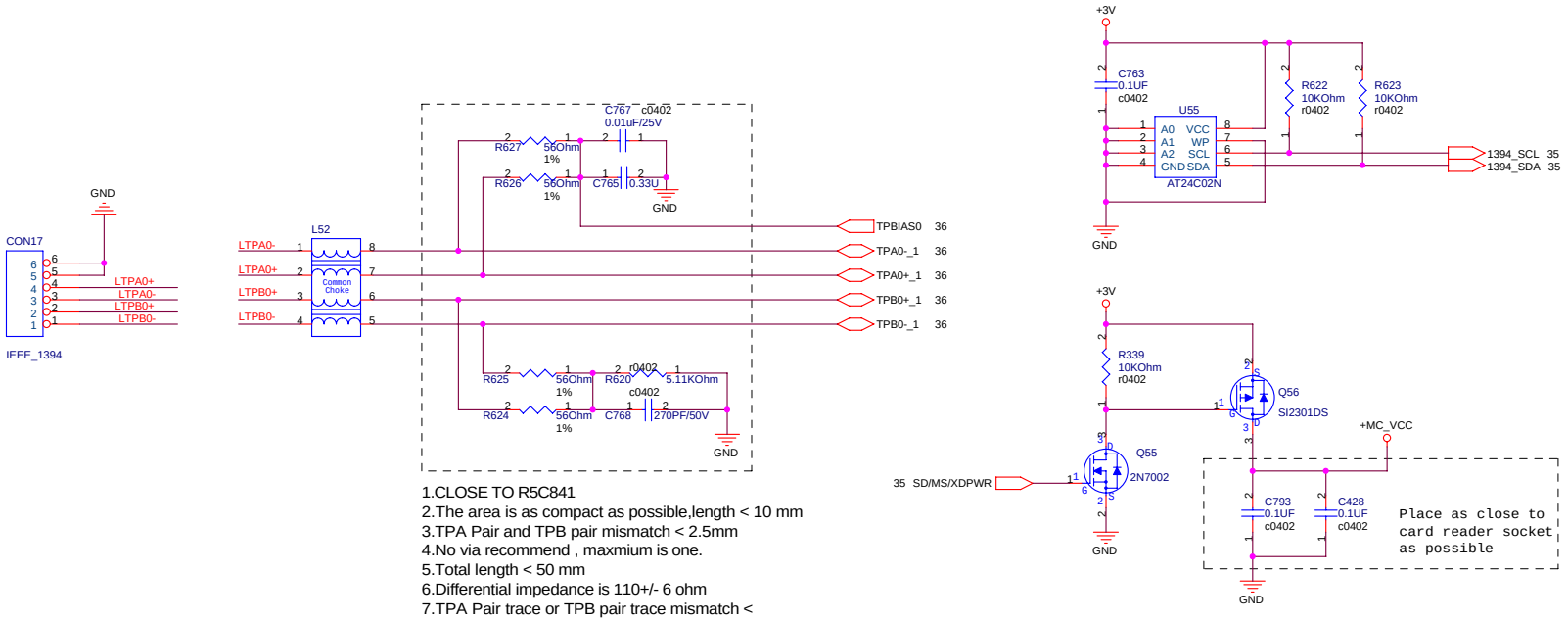

+3VS
C810 10uF/10V c0805
C789 0.1UF c0402
C788 0.1UF c0402
C786 0.01UF c0402
C787 0.01UF c0402
C811 0.01UF c0402
C804 0.01UF c0402
C806 0.01UF c0402
CE33 150U/4.0V
GND
R403 10KOhm r0402 /
R400 10KOhm r0402 /
WLAN_ON
18 WLAN_ON#
Q75 2N7002
GND
21 CLK_MINIPCI2
C807 5PF c0402 /
GND
19 PCI_INTH#
19 PCI_REQ#3
39 CH_DATA
19,33,35 PCI_C/BE#3
19,33,35 PCI_C/BE#2
19,33,35 PCI_IRDY#
18,19,27,35 PM_CLKRUN#
19,33,35 PCI_SERR#
19,33,35 PCI_PERR#
19,33,35 PCI_C/BE#1
19,33,35 PCI_AD[0..31]
+5VS
17,18,27,28 LPC_AD0
17,18,27,28 LPC_AD2
CON20
MINI_PCI
TIP
LAN REV1
LAN REV2
LAN REV3
LAN REV4
LAN REV5
LAN REV6
LAN REV7
INTB#
VCC3_1
REV1
GND1
CLK
GND2
REQ#
VCC3_2
AD31
AD29
GND3
AD27
AD25
REV2
C/BE3#
AD23
GND4
AD21
AD19
GND5
AD17
C/BE2#
IRDY#
VCC3_3
CLKRUN#
SERR#
GND6
PERR#
C/BE1#
AD14
GND7
AD12
AD10
GND8
AD08
AD07
VCC3_4
AD05
REV
AD03
VCC5_1
AD01
GND16
AC_SYNC
AC_SDATA_IN1
AC_BIT_CLK
AC_CODEC_CLK
MOD_AUDIO_MON
AUDIO_GND1
SYS_AUDIO_OUT
SYS_AUDIO_OUT GND
AUDIO_GND
NC
+5VA
HOLD1
HOLD2
HOLD3
HOLD4
RING
LAN REV8
LAN REV9
LAN REV10
LAN REV11
LAN_REV12
LAN_REV13
LAN_REV14
VCC5_2
INTA#
REV3
+3.3VAUX1
RST#
VCC3_5
GNT#
GND9
PME#
REV4
AD30
VCC3_6
AD28
AD26
AD24
IDSEL
GND10
AD22
AD20
PAR
AD18
AD16
GND11
FRAME#
TRDY#
STOP#
VCC3_7
DEVSEL#
GND12
AD15
AD13
AD11
GND13
AD09
C/BE0#
VCC3_8
AD06
AD04
AD02
AD00
REV5
REV6
GND14
M66EN
AC_SDATA_OUT
AC_SDATA_IN2
AC_RESET#
REV7
GND15
SYS_AUDIO_IN
SYS_AUDIO_IN GND
AUDIO_GND2
MCPIACT#
+3.3VAUX2
R646 0Ohm /
+5VS
+3V
R645 33Ohm
+3V
LPC_AD1 17,18,27,28
LPC_AD3 17,18,27,28
802_LED_EN 18,19,41
LPC_FRAME# 17,18,27,28
PCI_INTG# 19
DIS_SYSBIOS 28
PCI_RST# 19,33,35
PCI_GNT#3 19
PCI_PME# 17,19,33,35
CH_CLK 39
PCI_AD30
PCI_AD28
PCI_AD26
PCI_AD24
PCI_AD19
PCI_AD22
PCI_AD20
PCI_PAR 19,33,35
PCI_AD18
PCI_AD16
PCI_FRAME# 19,33,35
PCI_TRDY# 19,33,35
PCI_STOP# 19,33,35
PCI_DEVSEL# 19,33,35
PCI_AD15
PCI_AD13
PCI_AD11
PCI_AD9
PCI_C/BE#0 19,33,35
PCI_AD6
PCI_AD4
PCI_AD2
PCI_AD0
INT_SERIRQ 17,18,19,27,35
GND
GND
GND


19,32,35 PCI_AD[31:0]
+3VS
R137 2.7KOhm Y8K_REQ64#
R138 27Ohm ZN_REF
R142 33Ohm ZP_REF
GND
C226 10uF/10V
C259 0.1UF
C216 0.1UF
C286 0.1UF
+3V_LAN
L31 120Ohm/100Mhz
2.5V_CTL
25mil
R241 4.7KOhm
Q19 2SB1424
+3VSUS
L32 120Ohm/100Mhz
+3V_LAN_ANALOG
+2.5V_LAN
C244 0.1UF
C251 10uF/10V
C254 0.1UF
C269 10uF/10V
C658 0.1UF
C661 0.1UF
C660 0.1UF
C659 0.1UF
L41 120Ohm/100Mhz
1.5V_CTL
R382 4.7KOhm
Q20 2SB1424
L40 120Ohm/100Mhz
+3V_LAN_DIGITAL
+1.5V_LAN
C318 0.1UF
C313 10uF/10V
C306 0.1UF
C290 10uF/10V
C214 10uF/10V
C243 0.1UF
C285 0.1UF
C247 0.1UF
C253 0.1UF
PCI_AD16
R552 33Ohm LAN_IDSEL
21 CLK_LANPCI
PCI_DEVSEL# 19,32,35
PCI_STOP# 19,32,35
PCI_IRDY# 19,32,35
PCI_TRDY# 19,32,35
PCI_FRAME# 19,32,35
PCI_PAR 19,32,35
19,32,35 PCI_PERR#
19,32,35 PCI_SERR#
19 PCI_REQ#0
19 PCI_GNT#0
PCI_AD18
PCI_AD17
PCI_AD16
19,32,35 PCI_C/BE#2
19,32,35 PCI_C/BE#1
ZP_REF
ZN_REF
Y8K_REQ64#
PCI_AD19
PCI_AD20
PCI_AD21
PCI_AD22
PCI_AD23
PCI_C/BE#3 19,32,35
PCI_AD24
PCI_AD25
PCI_AD26
PCI_AD27
U14
88E8001
PCI_AD15
PCI_AD14
PCI_AD13
PCI_AD12
PCI_AD11
PCI_AD10
PCI_AD9
19,32,35 PCI_C/BE#0
PCI_AD8
PCI_AD7
PCI_AD6
PCI_AD5
PCI_AD4
PCI_AD3
PCI_AD2
PCI_AD1
PCI_AD0
LAN_EECLK
LAN_EEDATA
PCI_AD28
PCI_AD29
PCI_AD30
PCI_AD31
PCI_PME# 17,19,32,35
PCI_RST# 19,32,35
PCI_INTE# 19
MDIN3
MDIP3
MDIN2
MDIP2
MDIN1
MDIP1
MDIN0
MDIP0
+3V_LAN_ANALOG
2.5V_CTL
C649 0.1UF
+2.5V_LAN
+1.5V_LAN
1.5V_CTL
+3V_LAN_DIGITAL
LAN_RSET R112 2.49KOhm
XIN_LAN
XOUT_LAN
R126 200KOhm
U16
AT24C08N
C291 0.1UF
X1 25MHZ
C229 27pF
C227 27pF
Q134 SI2305DS
R1.1
R698 68KOhm
R699 47KOhm
Q135 2N7002
C846 0.1UF
C847 0.1UF
CLK_LANPCI
C242 10PF
C207 1000PF
C206 1000PF
C210 1000PF
C209 1000PF
R100 49.9Ohm MDIN0
R101 49.9Ohm MDIP0
R98 49.9Ohm MDIN1
R99 49.9Ohm MDIP1
R104 49.9Ohm MDIN2
R105 49.9Ohm MDIP2
R102 49.9Ohm MDIN3
R103 49.9Ohm MDIP3
L_TRDM0 34
L_TRDP0 34
L_TRDM1 34
L_TRDP1 34
L_TRDM2 34
L_TRDP2 34
L_TRDM3 34
L_TRDP3 34

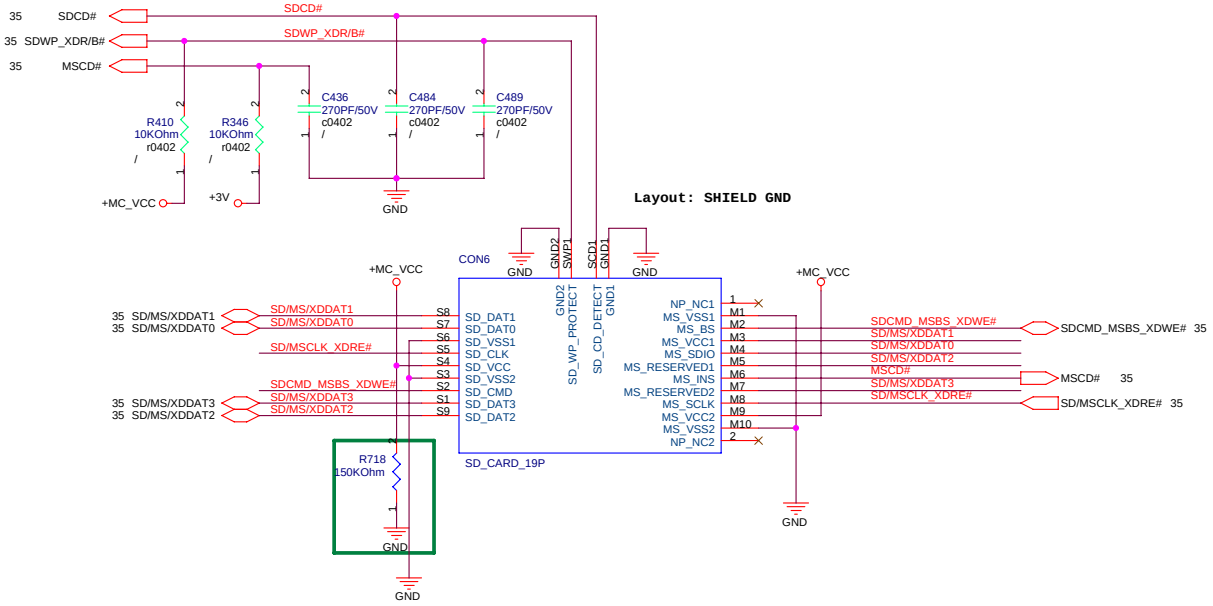

+2.5V_LAN
R508
0Ohm
U4
TCT1
TD1+
TD1-
TCT2
TD2+
TD2-
TCT3
TD3+
TD3-
TCT4
TD4+
TD4-
33 L_TRDM1
33 L_TRDP1
33 L_TRDM0
33 L_TRDP0
33 L_TRDP2
33 L_TRDM2
33 L_TRDP3
33 L_TRDM3
MCT1L_CMT0
MX1+L_TRLM1
MX1-L_TRLP1
MCT2L_CMT1
MX2+L_TRLM0
MX2-L_TRLP0
MCT3L_CMT2
MX3+L_TRLP2
MX3-L_TRLM2
MCT4L_CMT3
MX4+L_TRLP3
MX4-L_TRLM3
1GB
RDC
C639 0.01UF
C642 0.01UF
C640 0.01UF
C641 0.01UF
GND
LAN PORT
L91 90Ohm
L_TRLM1
L_TRLP1
L_TRLM0
L_TRLP0
LTRLM1
LTRLP1
LTRLM0
LTRLP0
90Ohm L90
L17 90Ohm
L_TRLP2
L_TRLM2
L_TRLP3
L_TRLM3
LTRLP2
LTRLM2
LTRLP3
LTRLM3
L92 90Ohm
4/12
CON3
SIDE2
SIDE1
WtoB_CON_2P
MODEM_TIP_CON
MODEM_RING_CON
Irat=100mA
1KOhm/100MHz
L102
L1031KOhm/100MHz
Irat=100mA
4/11
MODEM_TIP
MODEM_RING
C1122 1000P
C1123 1000P
CON12
SIDE1
P_GND1
NP_NC1
NP_NC2
P_GND2
SIDE2
PHONE_JACK_12P
LTRLP0
LTRLM0
LTRLP1
LTRLP2
LTRLM2
LTRLM1
LTRLP3
LTRLM3
L_CMT0
L_CMT1
L_CMT2
L_CMT3
75Ohm RN19A
75Ohm RN19B
75Ohm RN19C
75Ohm RN19D
FGND1S
C589 1500P
C605 1000PF/2000V
GND
MDC
+3V
C801 0.1UF c0402
18,29 ACZ_SDOUT
18,29 ACZ_SYNC
18 ACZ_SDIN1
18,29,30 ACZ_RST#
R656 r0402 0Ohm
R657 r0402 0Ohm
R654 r0402 0Ohm
R663 r0402 0Ohm
CON7
BTOB_CON_12P
GND1
GND3
GND5
NP_NC1
GND2
GND4
GND6
NP_NC2
0.5A
R655 0Ohm /
R653 0Ohm
+3VSUS
+3V
R658 0Ohm
ACZ_BCLK 18,29
C802 22PF /
H21 AM20
H20 AM20
Must change to
13-N7510M270


5mA
71mA
8mA
4mA
U57B
U57A
R5C841
Open Drain : PME#, SERR#, INTn#
SPKRCB PULL DOWN : USE SROM
RICOH R5C841 :
INT A#--> CARDBUS
INT B#--> 1394
INT C#--> CARD READER
MDIO00--> SD Card Detect
MDIO01--> MS Card Detect
MDIO02--> XD Card Enable
MDIO03--> SD Write Protect XD Card Ready/Busy#
MDIO04--> SD/MS/XD Card Power0 Control
MDIO05--> XD Card Write Protect
MDIO06--> SD/MSXD LED
MDIO07--> SD/MS External Clock
MDIO08--> SD Command/MS Bus State /XD Card Write Enable
MDIO09--> SD/MS Clock /XD Card Read Enable
MDIO10--> SD/MS/XD Data 0
MDIO11--> SD/MS/XD Data 1
MDIO12--> SD/MS/XD Data 2
MDIO13--> SD/MS/XD Data 3
MDIO14--> XD Data 4
MDIO15--> XD Data 5
MDIO16--> XD Data 6
MDIO17--> XD Data 7
MDIO18--> XD Card Command Latch
MDIO19--> XD Card Address Latch
VCC_3V POWER : PME#, SPKROUT, RI_OUT# HWSUSP#, GBRST#, IRQn CCD1#, CCD2#, VS1# , VS2# TEST, VCC5EN#, VCC3EN# VPPEN0, VPPEN1, SD/MS I/F
VCCPCI POWER : PCI BUS
VCC_SLOT POWER : CARD_BUS, CAUDIO , CSTSCHG
+3V ==> CB_GBRST# 1ms < T < 100ms
GBRST# POWER SEQ
+3V ==> (GBRST#/CB_HWSUSP#) ==>PCIRST#
H/W SUSPEND# POWER SEQ :
SUSPEND : CB_HWSUSP# LO=> PCIRST# LO=> +3VS OFF
RESUME : +3VS ON => PCIRST# HI=> CB_HWSUSP# HI
UDIO03 H : Enable SD
UDIO04 H : Enable MS
VPPEN0 H : Enable XD
SHIELD GND
L.C.A


+3V
R616
0Ohm
CPS
U57C
CPS D11
AVCC_PHY_1 E10
AVCC_PHY_2 E11
AVCC_PHY_3 A17
AVCC_PHY_4 B17
AVCC_PHY_CB
TPBIAS0 D12
TPBIAS0 37
X2_1394 A16
XI
X1_1394 B16
XO
TPBN0 A13
TPBP0 B13
TPB0-_1 37
TPB0+_1 37
Layout: SHIELD GND
1394_FIL A14
FIL0
R615 r0402
10KOhm 1%
REXT B14
1394_REF D13
VREF
E12
NC9
TPAN0 A12
TPAP0 B12
TPA0-_1 37
TPA0+_1 37
TPBIAS1 D10
TPBIAS1
T146
TPC28t
TPBN1 A11
TPBP1 B11
TPAN1 A10
TPAP1 B10
TPA1-_1
TPA1+_1
T261
T266
R5C841
X7
24.576MHZ
X2_1394
X1_1394
C764
27P
C766
27P
L99
120Ohm/100Mhz
41mA
C769
10uF/10V
c0805
C772
0.1UF
c0402
C434
1000PF
c0402
C773
0.1UF
c0402
C435
1000PF
c0402
CINT#/IREQ#
CSERR#/WAIT#
CREQ#/INPACK#
CAUDIO/SPKR_IN#/BVD2
CSTOP#/A20
CDEVSEL#/A21
CTRDY#/A22
CIRDY#/A15
CSTSCHG/STSCHG#/BVD1
CBLOCK#/A19
CPERR#/A14
CCLKRUN#/IOIS16#
TPC28t
T160
T269
T262
T259
T159
T157
T153
T147
T257
T162
T158
T118
C775
0.01UF
c0402
C427
0.01UF
c0402
U34
R5531V002
VCC5_EN
VCC3_EN
EN0
EN1
FLG
NC1
NC2
VPPOUT
GND
VCC5IN2
VCCOUT3
VCC5IN1
VCCOUT2
VCC3IN
NC3
VCCOUT1
VCC5_EN#
VCC3_EN#
AVPP0
AVPP1
C465
10uF/10V
c0805
C460
0.1UF
c0402
C448
10uF/10V
c0805
C455
0.1UF
c0402
C476
0.1UF
c0402
C454
0.1UF
c0402
C453
0.1UF
c0402
+VCCCB
+5V
+VPPCB
C440
0.1UF
c0402
C782
10uF/10V
c0805
C780
10uF/10V
c0805
C423
0.1UF
c0402
CON19
PCMCIA_CON_84P
CCLK/A16
C424
5PF
c0402
CRST#/RESET
R632
47KOhm
r0402
C771
0.01UF
c0402
C821
270PF/50V
c0402
C762
270PF/50V
c0402
PCMCIA
CCD1# CCD2#
L L 16bit
OTHER 32bit
GND



1.CLOSE TO R5C841
2.The area is as compact as possible,length < 10 mm
3.TPA Pair and TPB pair mismatch < 2.5mm
4.No via recommend , maxmium is one.
5.Total length < 50 mm
6.Differential impedance is 110+/- 6 ohm
7.TPA Pair trace or TPB pair trace mismatch < 1.25mm



HDD

HD_CSEL : Pull-Down, HDD as Master

+5VS
R601 1 2 10KOhm IDE_DIAG
R598 1 2 470Ohm HD_CSEL
GND

18 IDE_PDD[15:0]
IDE_PDD0
IDE_PDD1
IDE_PDD2
IDE_PDD3
IDE_PDD4
IDE_PDD5
IDE_PDD6
IDE_PDD7
IDE_PDD8
IDE_PDD9
IDE_PDD10
IDE_PDD11
IDE_PDD12
IDE_PDD13
IDE_PDD14
IDE_PDD15

+5VS
R606 10KOhm r0402
R602 10KOhm r0402
IDERST#
Q104A UM6K1N
Q104B UM6K1N
7,12,17,18,19,27,28 PLT_RST#
GND GND

CON18
IDERST#
IDE_PDD7
IDE_PDD8
IDE_PDD6
IDE_PDD9
IDE_PDD5
IDE_PDD10
IDE_PDD4
IDE_PDD11
IDE_PDD3
IDE_PDD12
IDE_PDD2
IDE_PDD13
IDE_PDD1
IDE_PDD14
IDE_PDD0
IDE_PDD15
NP_NC3 NP_NC1 GND1
18 IDE_PDDREQ
18 IDE_PDIOW#
18 IDE_PDIOR#
18 IDE_PIORDY
18 IDE_PDDACK#
18 INT_IRQ14
18 IDE_PDA1
18 IDE_PDA0
18 IDE_PDA2
18 IDE_PDCS1#
18 IDE_PDCS3#
HD_CSEL
IDE_DIAG
IDE_PDASP#
GND2 NP_NC2 NP_NC4
HDD_CON_44P
12-160500442
ALLTOP

+5VS L98 220Ohm/100Mhz
CE32 47UF/6.3V
C756 10uF/10V c0805
C754 0.1UF c0402
GND GND GND GND GND

+5VS
R603 4.7KOhm
R597 0Ohm
IDE_PDASP#
IDE_LED# 41

CD-ROM

+5VS
R588 470Ohm CD_CSEL
R589 470Ohm
CE30 47UF/6.3V
C701 10uF/10V c0805
C702 0.1UF c0402
GND GND GND GND

CON16
cd_rom_50p
P_GND2 54 52 NP_NC2
CD_CSEL
IDE_PDCS3#
IDE_PDA2
IDE_DIAG
IDE_PDDACK#
IDE_PDIOR#
IDE_PDDREQ
IDE_PDD15
IDE_PDD14
IDE_PDD13
IDE_PDD12
IDE_PDD11
IDE_PDD10
IDE_PDD9
IDE_PDD8
IDE_PDASP#
IDE_PDCS1#
IDE_PDA0
IDE_PDA1
INT_IRQ14
IDE_PIORDY
IDE_PDIOW#
IDE_PDD0
IDE_PDD1
IDE_PDD2
IDE_PDD3
IDE_PDD4
IDE_PDD5
IDE_PDD6
IDE_PDD7
IDERST#
29 CD_R_A
CD_GND_A 29
CD_L_A 29
P_GND1 53 51 NP_NC1
12-160210502
ALLTOP
GND GND

C704 0.1UF c0402
C703 10uF/10V c0805
GND GND

SCSEL : Pull-Up, CDROM as Slave, Pull-Down, CDROM as Master

U19 EMI_SPRING_PAD
U18 EMI_SPRING_PAD
GND

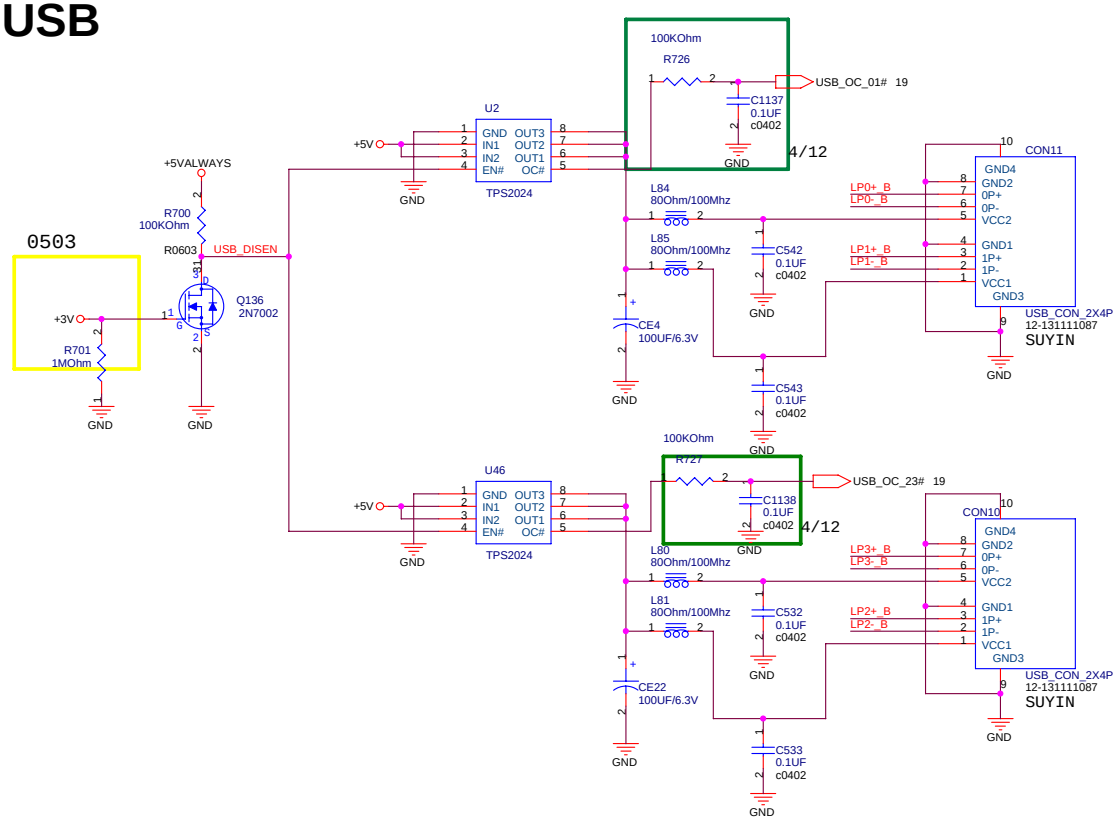
H17 C91D91N
H16 C91D91N
H19 C91D91N
H23 C91D91N
H4 C91D91N
H5 C91D91N
H24 C91D91N
H25 C91D91N
H14 C91D91N
H18 C91D91N
H7 C79D79N
H6 C91D91N
H22 C79D79N

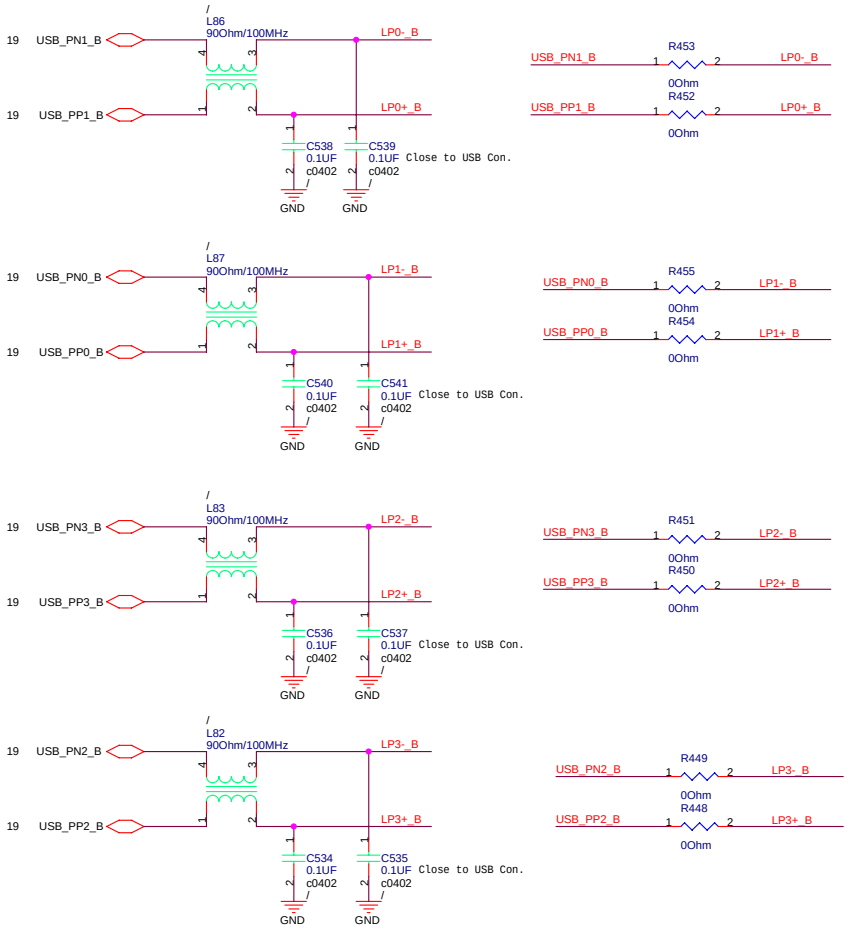
3/15

H10 C268B178D138
H11 C268B178D138
H12 C268B178D138
H13 C268B178D138
GND
CPU

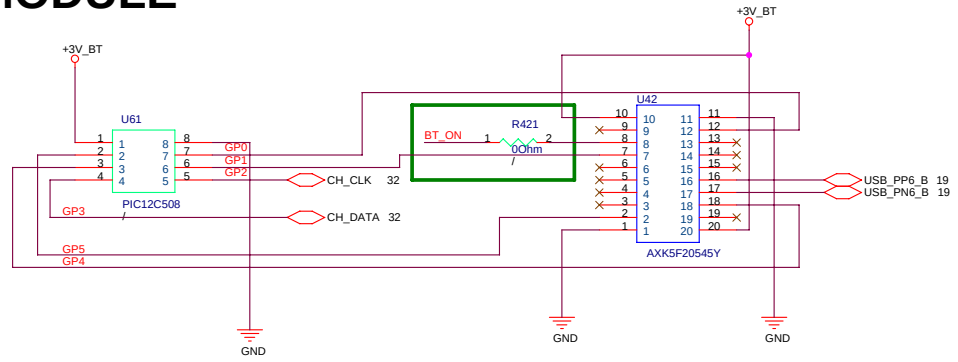
H26 C217D130
H15 C217D130
H9 C217D130
H8 C217D130
VGA

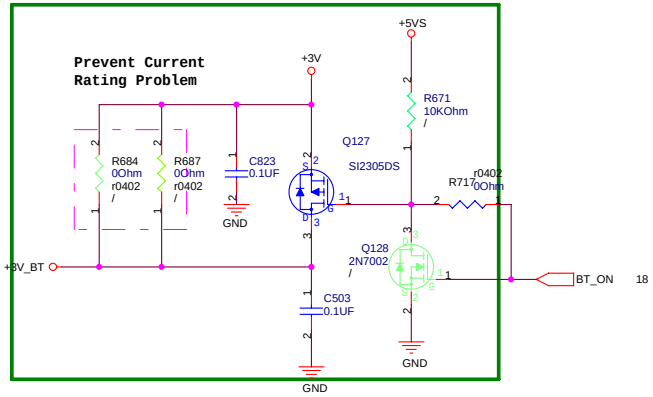
USB





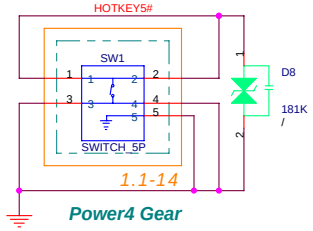
BLUE TOOTH MODULE



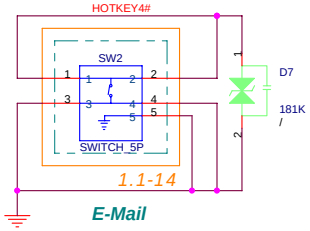


FUNCTION KEY

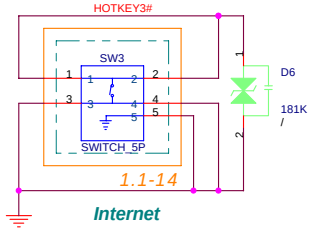
Uses 5-pin switch to improve ESD margin.



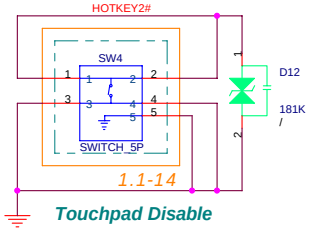
Power4 Gear



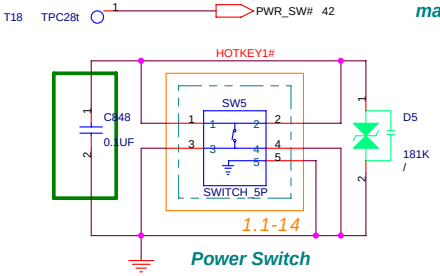
E-Mail



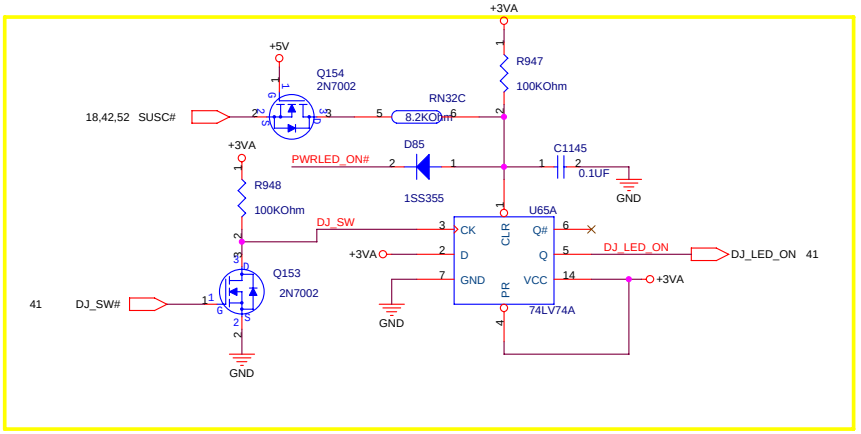
Internet

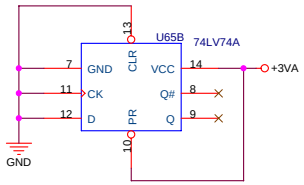


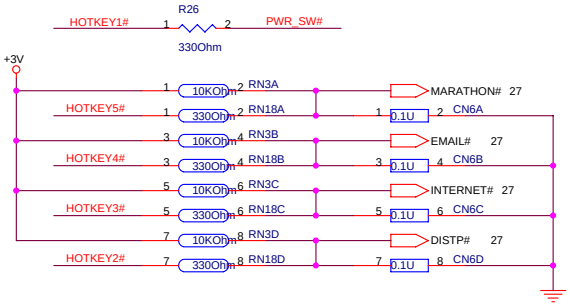
Touchpad Disable



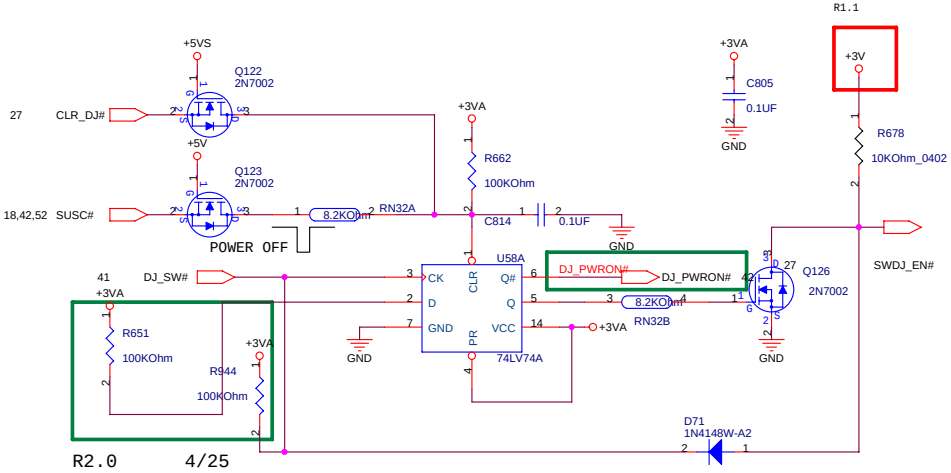
Power Switch



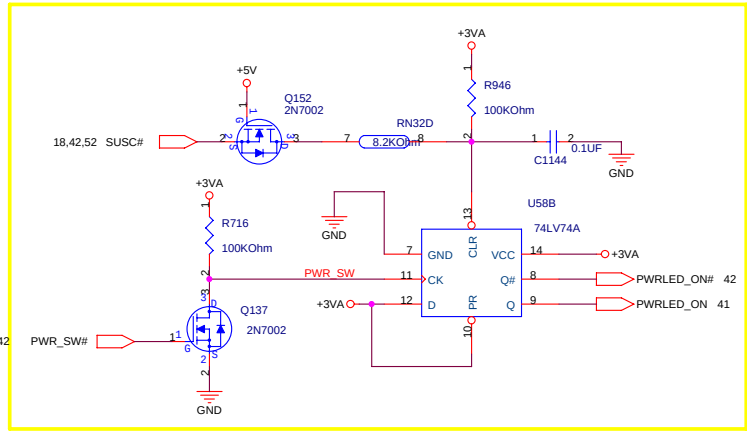


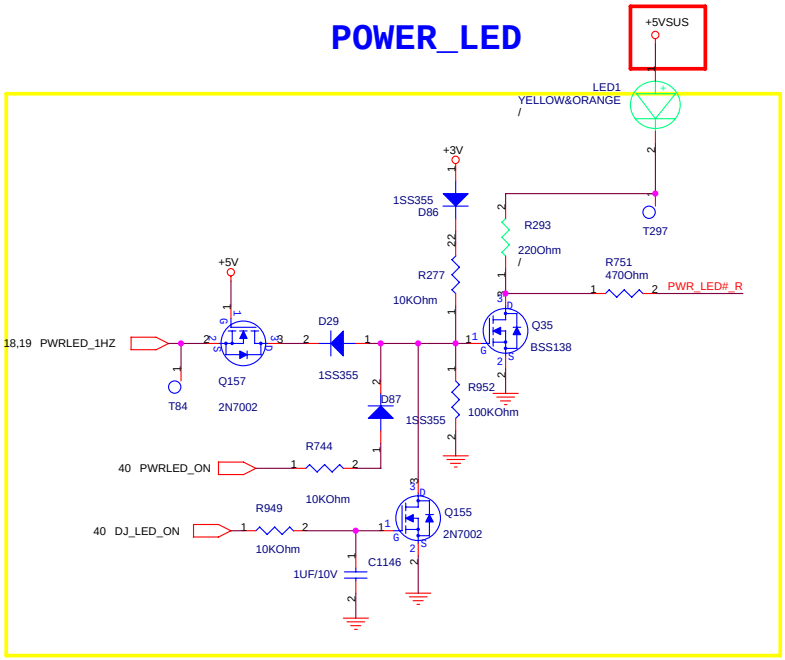


5/4

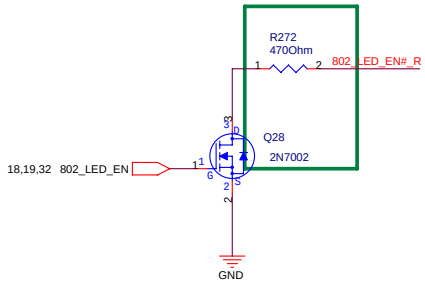


5/4



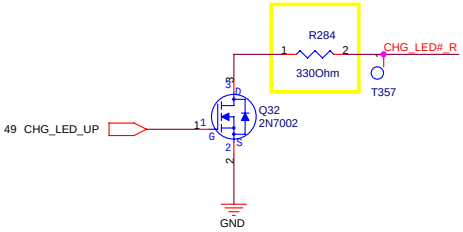


R2.0

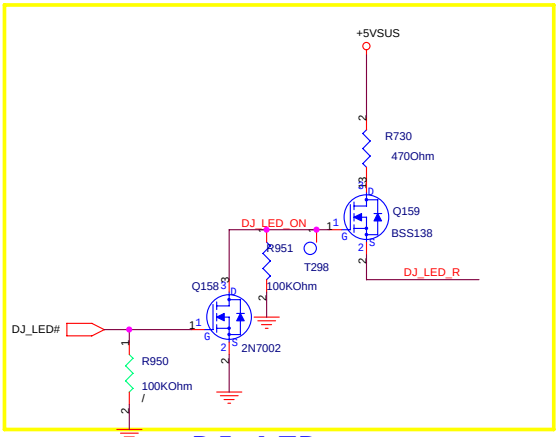


802_LED

5/3 R2.0

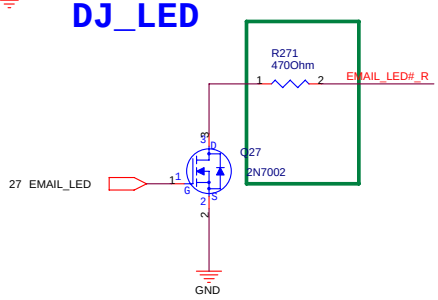


CHG_LED



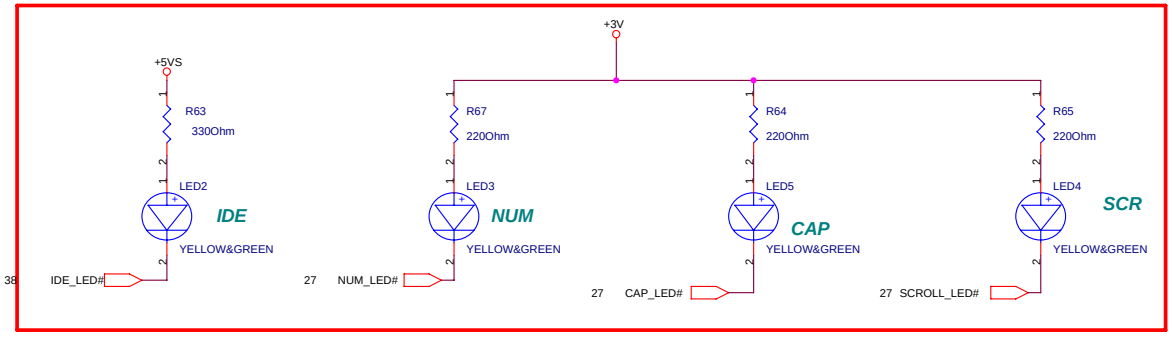
5/4

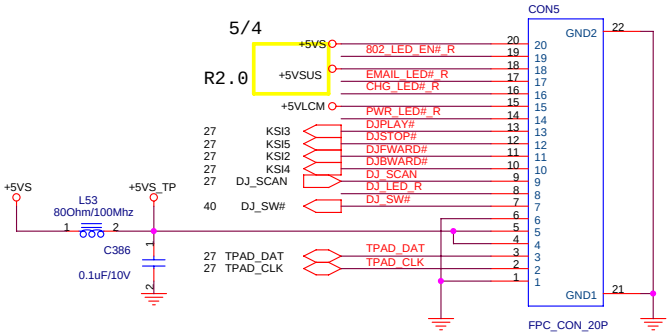
DJ_LED

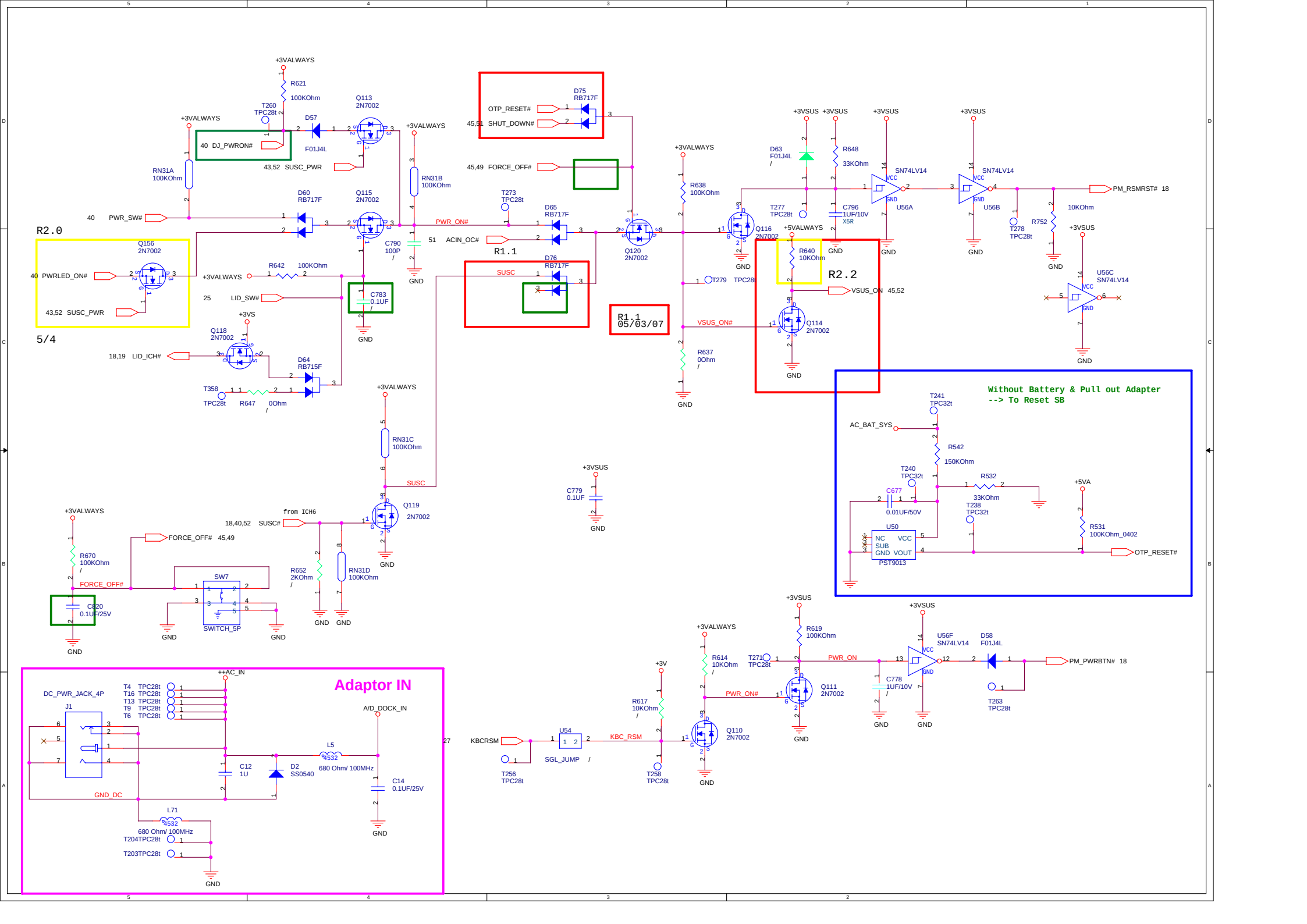


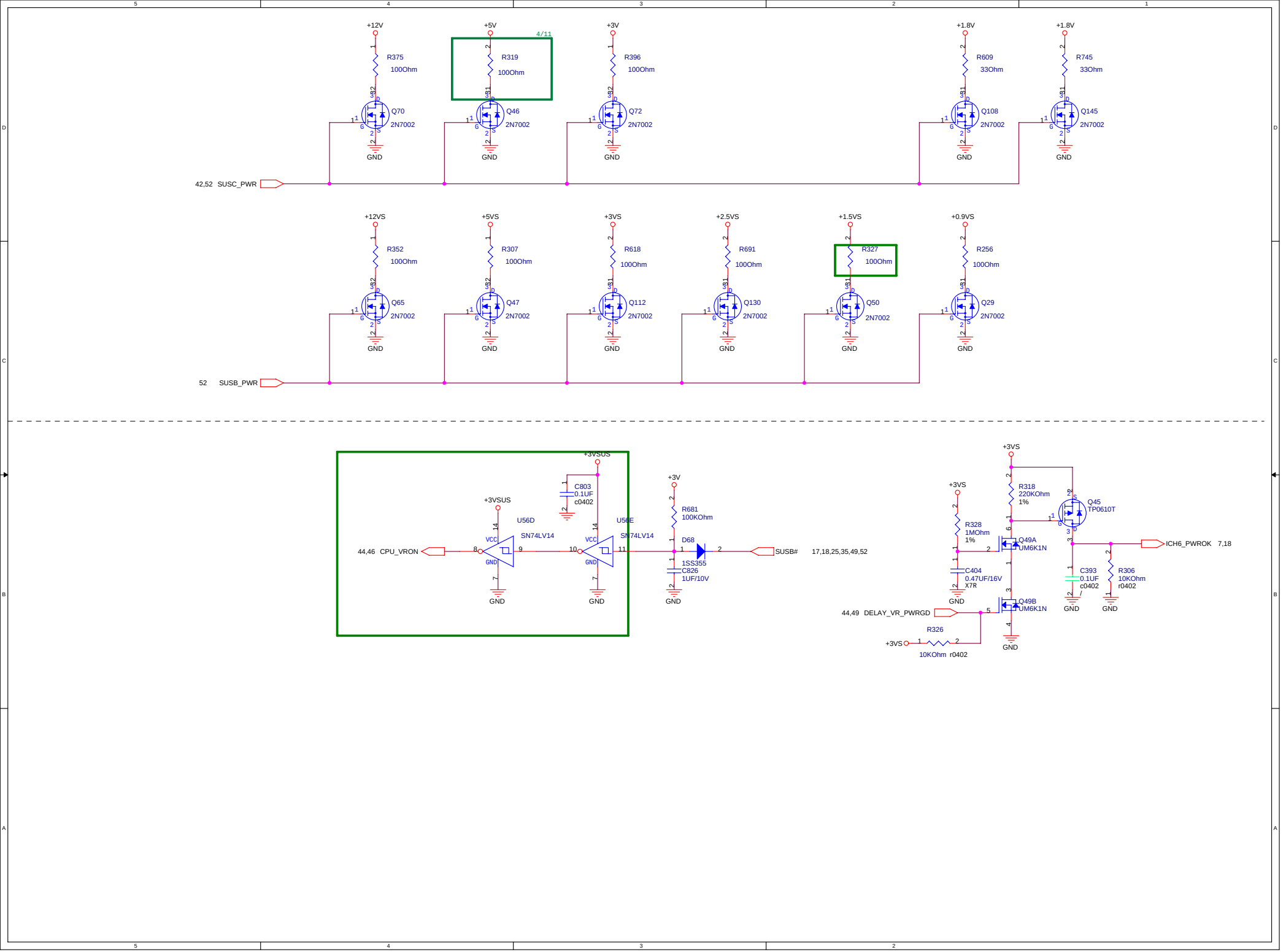
EMAIL_LED

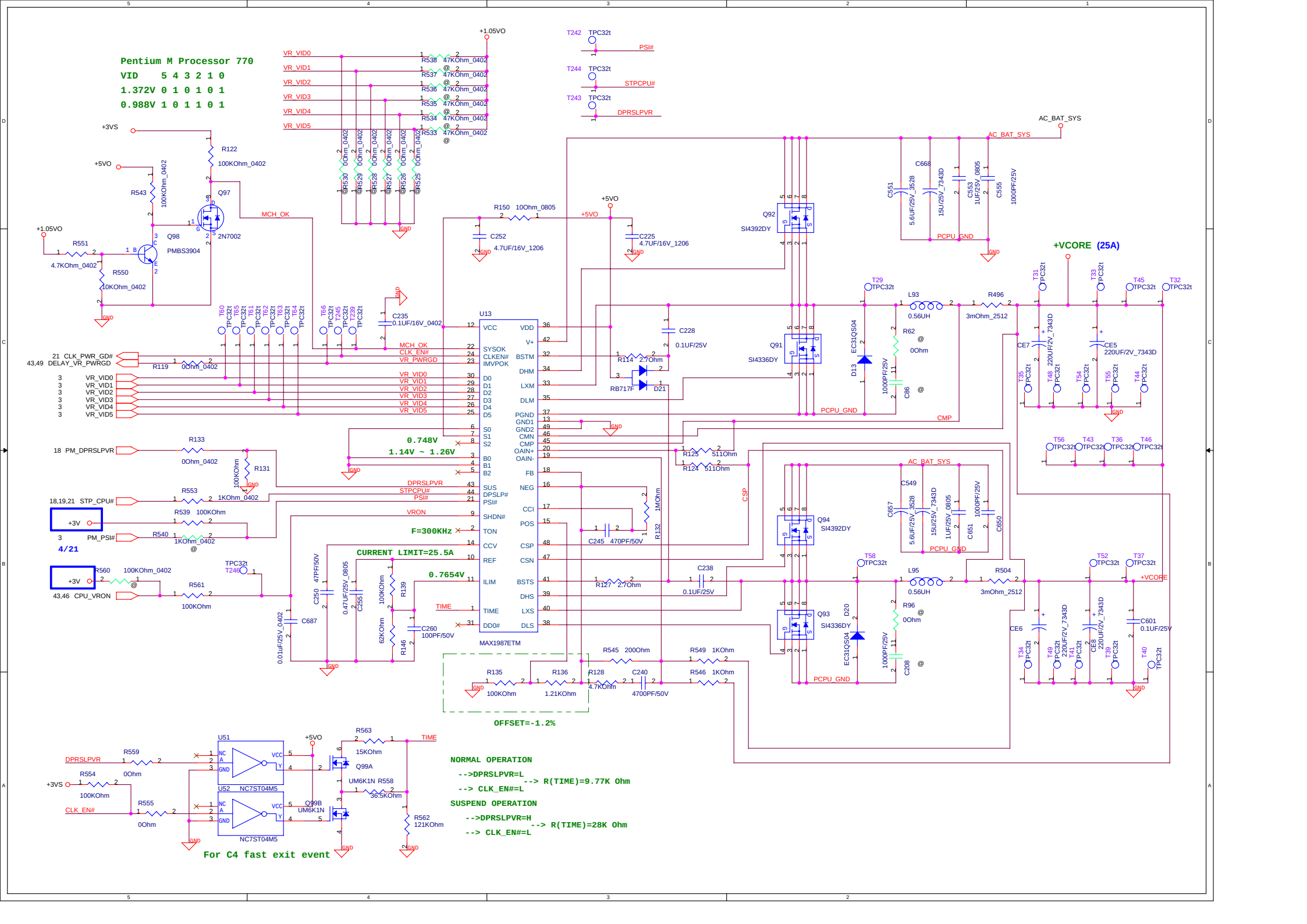
R1.1

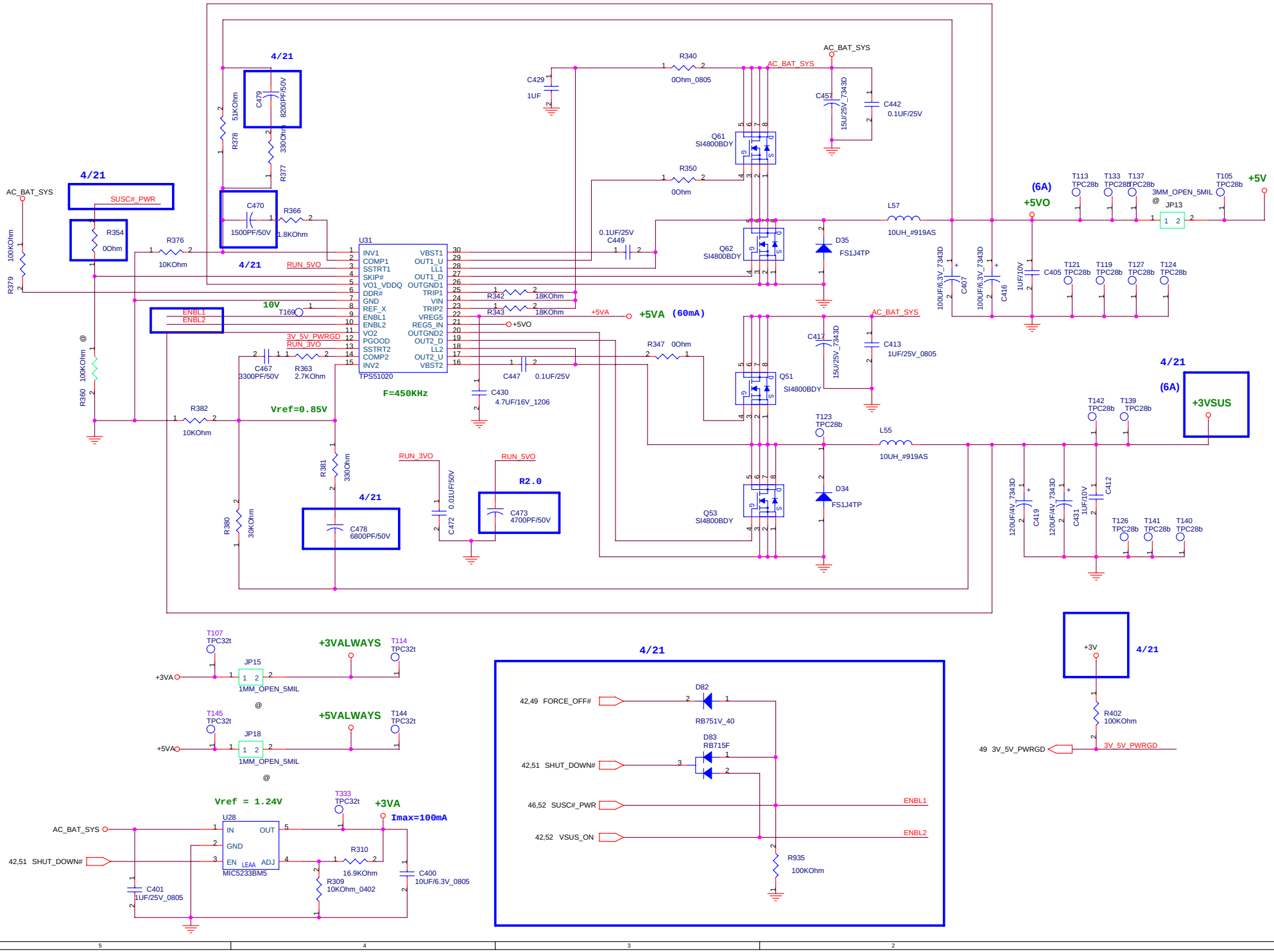


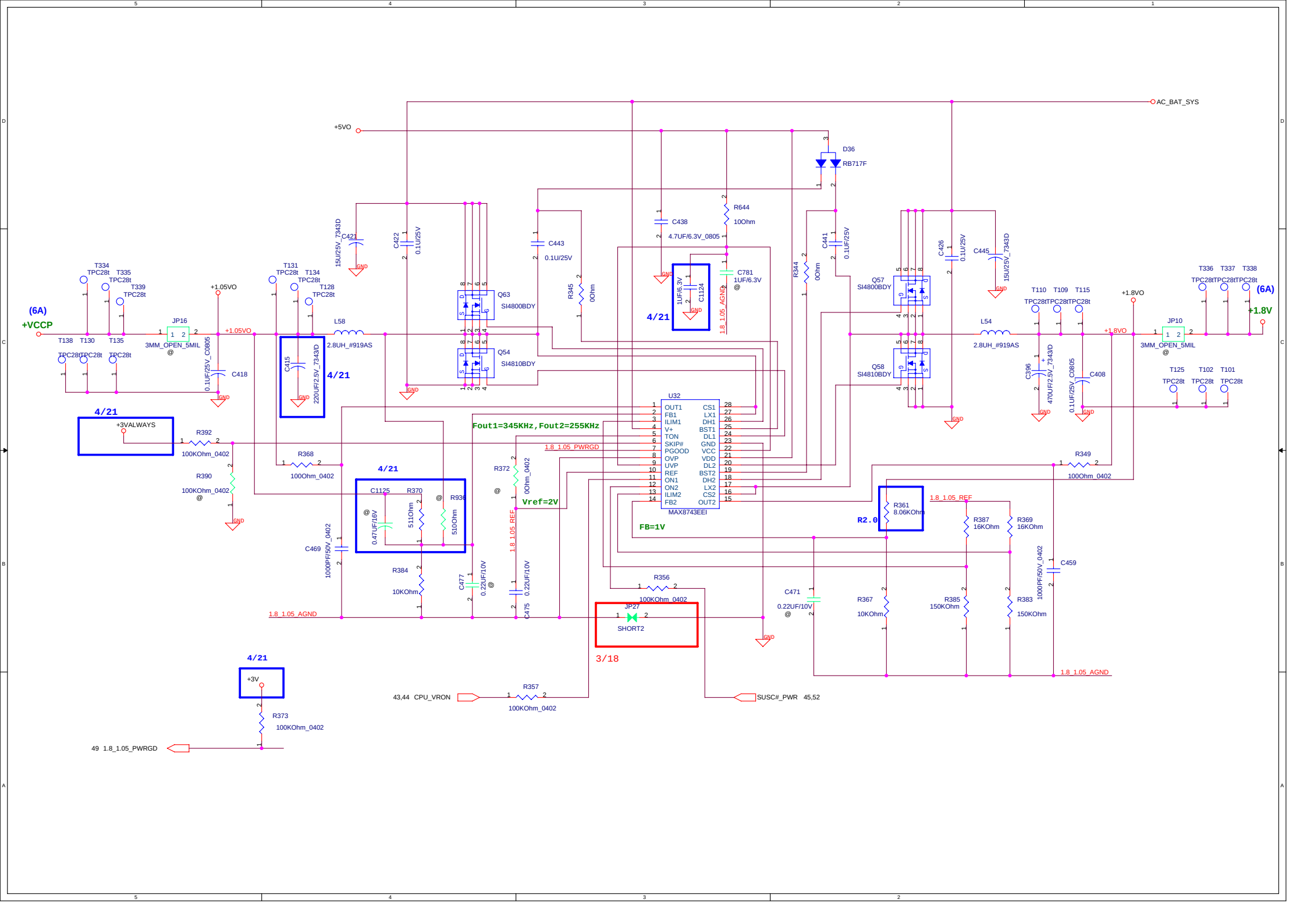


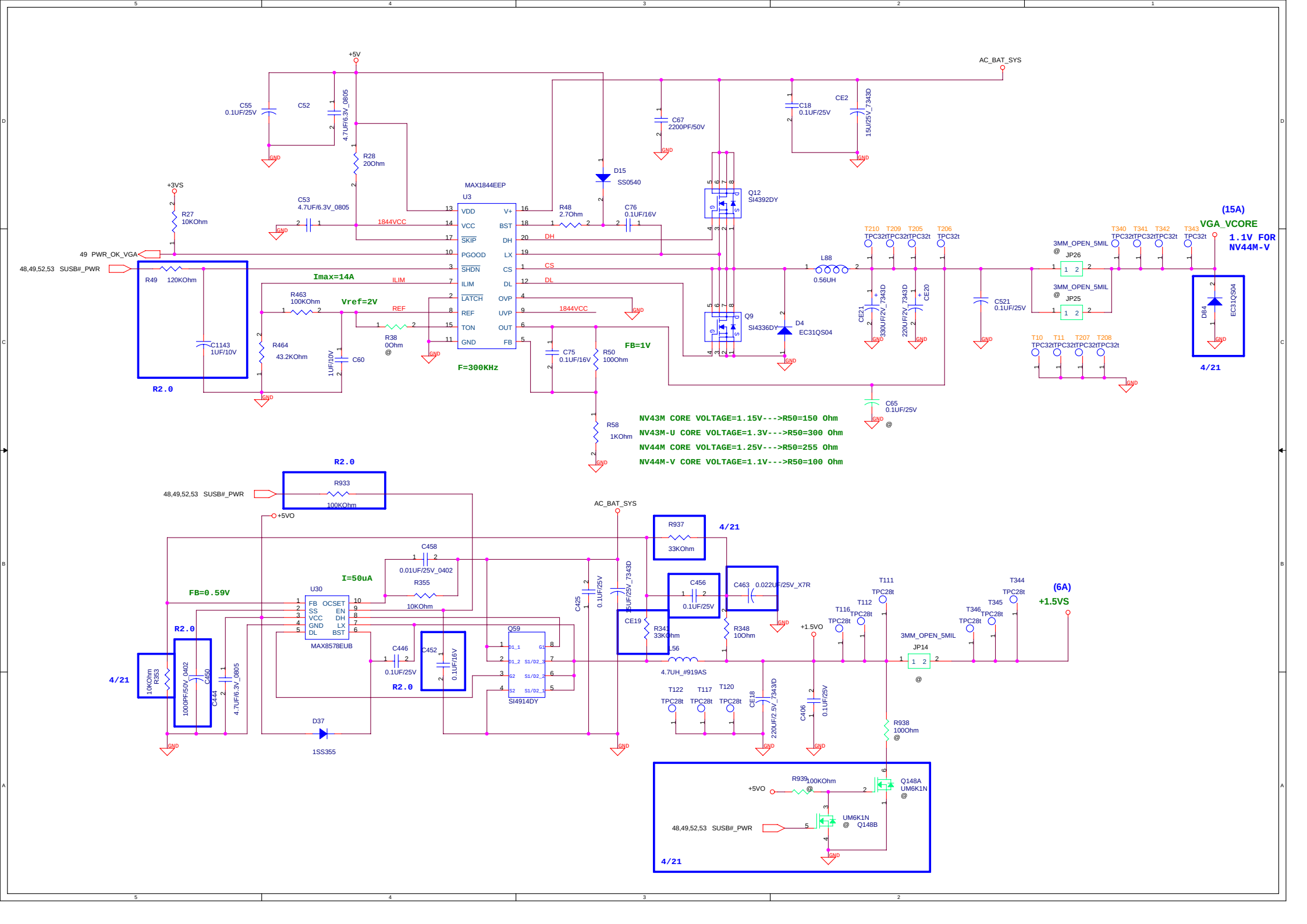

R2.0
5/4
R1.1
R1.1
05/03/07
R2.2
Without Battery & Pull out Adapter
--> To Reset SB
Adaptor IN
+3VALWAYS
+3VSUS
+5VALWAYS
GND
PWR_ON#
PWR_ON
SUSC
SUSC#
VSUS_ON
VSUS_ON#
FORCE_OFF#
OTP_RESET#
SHUT_DOWN#
ACIN_OC#
PWRLED_ON#
PWR_SW#
LID_SW#
LID_ICH#
DJ_PWRON#
SUSC_PWR
KBC_RSM
KBCRSM
SGL_JUMP
PM_RSMRST#
PM_PWRBTN#
OTP_RESET#
AC_BAT_SYS
++AC_IN
A/D_DOCK_IN
GND_DC
DC_PWR_JACK_4P
SWITCH_5P
PST9013
SN74LV14
R621 100KOhm
R638 100KOhm
R648 33KOhm
R640 10KOhm
R637 0Ohm
R642 100KOhm
R647 0Ohm
R670 100KOhm
R652 2KOhm
R542 150KOhm
R532 33KOhm
R531 100KOhm_0402
R619 100KOhm
R614 10KOhm
R617 10KOhm
R752 10KOhm
RN31A 100KOhm
RN31B 100KOhm
RN31C 100KOhm
RN31D 100KOhm
C790 100P
C783 0.1UF
C779 0.1UF
C677 0.01UF/50V
C796 1UF/10V
C778 1UF/10V
C820 0.1UF/25V
C12 1U
C14 0.1UF/25V
L5 680 Ohm/ 100MHz
L71 680 Ohm/ 100MHz
D57 F01J4L
D63 F01J4L
D58 F01J4L
D60 RB717F
D65 RB717F
D76 RB717F
D75 RB717F
D64 RB715F
D2 SS0540
Q113 2N7002
Q115 2N7002
Q116 2N7002
Q120 2N7002
Q156 2N7002
Q118 2N7002
Q119 2N7002
Q114 2N7002
Q111 2N7002
Q110 2N7002
T260 TPC28t
T273 TPC28t
T277 TPC28t
T279 TPC28t
T358 TPC28t
T241 TPC32t
T240 TPC32t
T238 TPC32t
T271 TPC28t
T278 TPC28t
T256 TPC28t
T258 TPC28t
T263 TPC28t
T4 TPC28t
T16 TPC28t
T13 TPC28t
T9 TPC28t
T6 TPC28t
T204TPC28t
T203TPC28t
U56A
U56B
U56C
U56F
U50
U54
J1
SW7

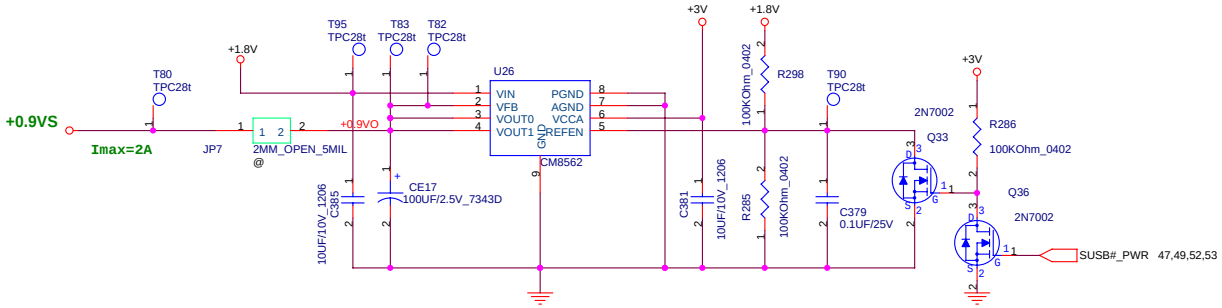

+12V
+5V
4/11
+3V
+1.8V
+1.8V
R375
100Ohm
R319
100Ohm
R396
100Ohm
R609
33Ohm
R745
33Ohm
Q70
2N7002
Q46
2N7002
Q72
2N7002
Q108
2N7002
Q145
2N7002
GND
42,52 SUSC_PWR
+12VS
+5VS
+3VS
+2.5VS
+1.5VS
+0.9VS
R352
100Ohm
R307
100Ohm
R618
100Ohm
R691
100Ohm
R327
100Ohm
R256
100Ohm
Q65
2N7002
Q47
2N7002
Q112
2N7002
Q130
2N7002
Q50
2N7002
Q29
2N7002
52 SUSB_PWR
+3VSUS
C803
0.1UF
c0402
U56D
U56E
SN74LV14
VCC
GND
44,46 CPU_VRON
R681
100KOhm
D68
1SS355
C826
1UF/10V
SUSB#
17,18,25,35,49,52
R318
220KOhm
1%
Q45
TP0610T
R328
1MOhm
1%
Q49A
UM6K1N
Q49B
UM6K1N
C404
0.47UF/16V
X7R
C393
0.1UF
c0402
R306
10KOhm
r0402
ICH6_PWROK 7,18
44,49 DELAY_VR_PWRGD
R326
10KOhm r0402

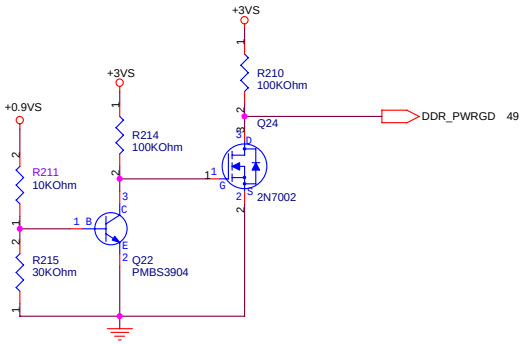

Pentium M Processor 770
VID 5 4 3 2 1 0
1.372V 0 1 0 1 0 1
0.988V 1 0 1 1 0 1
+1.05VO
VR_VID0
VR_VID1
VR_VID2
VR_VID3
VR_VID4
VR_VID5
R538 47KOhm_0402
R537 47KOhm_0402
R536 47KOhm_0402
R535 47KOhm_0402
R534 47KOhm_0402
R533 47KOhm_0402
R530 0Ohm_0402
R529 0Ohm_0402
R528 0Ohm_0402
R527 0Ohm_0402
R526 0Ohm_0402
R525 0Ohm_0402
T242 TPC32t
PSI#
T244 TPC32t
STPCPU#
T243 TPC32t
DPRSLPVR
AC_BAT_SYS
+3VS
+5VO
R122 100KOhm_0402
R543 100KOhm_0402
Q97
MCH_OK
Q98 2N7002
+1.05VO
R551 4.7KOhm_0402
PMBS3904
R550 10KOhm_0402
R150 10Ohm_0805
C252 4.7UF/16V_1206
C225 4.7UF/16V_1206
Q92 SI4392DY
C551 5.6UF/25V_3528
C668 15U/25V_7343D
C553 1UF/25V_0805
C555 1000PF/25V
PCPU_GND
+VCORE (25A)
T29 TPC32t
L93 0.56UH
R496 3mOhm_2512
T31 TPC32t
T33 TPC32t
T45 TPC32t
T32 TPC32t
C235 0.1UF/16V_0402
U13
MAX1987ETM
VCC
SYSOK
CLKEN#
IMVPOK
D0
D1
D2
D3
D4
D5
S0
S1
S2
B0
B1
B2
SUS
DPSLP#
PSI#
SHDN#
TON
CCV
REF
ILIM
TIME
DD0#
VDD
V+
BSTM
DHM
LXM
DLM
PGND
GND1
GND2
CMN
CMP
OAIN+
OAIN-
FB
NEG
CCI
POS
CSP
CSN
BSTS
DHS
LXS
DLS
C228 0.1UF/25V
R114 2.7Ohm
RB717F D21
Q91 SI4336DY
EC31QS04 D13
R62 0Ohm
C86 1000PF/25V
CE7 220UF/2V_7343D
CE5 220UF/2V_7343D
T35 T48 T54 T55 T44
T56 T43 T36 T46
21 CLK_PWR_GD#
43,49 DELAY_VR_PWRGD
R119 0Ohm_0402
MCH_OK
CLK_EN#
VR_PWRGD
0.748V
1.14V ~ 1.26V
R125 511Ohm
R124 511Ohm
18 PM_DPRSLPVR
R133 0Ohm_0402
R131 100KOhm
DPRSLPVR
STPCPU#
PSI#
18,19,21 STP_CPU#
R553 1KOhm_0402
3 PM_PSI#
R540 1KOhm_0402
R539 100KOhm
4/21
VRON
F=300KHz
CURRENT LIMIT=25.5A
0.7654V
TIME
C245 470PF/50V
R132 1MOhm
C238 0.1UF/25V
R127 2.7Ohm
Q94 SI4392DY
C549 5.6UF/25V_3528
C657 15U/25V_7343D
C651 1UF/25V_0805
C650 1000PF/25V
T58 TPC32t
L95 0.56UH
R504 3mOhm_2512
T52 T37 TPC32t
+VCORE
Q93 SI4336DY
D20 EC31QS04
R96 0Ohm
C208
CE6 CE8 220UF/2V_7343D
C601 0.1UF/25V
T34 T49 T41 T39 T40
R560 100KOhm_0402
+3V
43,46 CPU_VRON
R561 100KOhm
TPC32t T246
C250 47PF/50V
C255 0.47UF/25V_0805
R139 100KOhm
62KOhm R146
C260 100PF/50V
C687 0.01UF/25V_0402
R135 100KOhm
R136 1.21KOhm
R128 4.7KOhm
C240 4700PF/50V
R545 200Ohm
R549 1KOhm
R546 1KOhm
OFFSET=-1.2%
U51
U52 NC7ST04M5
NC7ST04M5
R559 0Ohm
R554 100KOhm
R555 0Ohm
DPRSLPVR
CLK_EN#
R563 15KOhm
Q99A
UM6K1N R558 36.5KOhm
Q99B UM6K1N
R562 121KOhm
TIME
For C4 fast exit event
NORMAL OPERATION
-->DPRSLPVR=L
--> R(TIME)=9.77K Ohm
--> CLK_EN#=L
SUSPEND OPERATION
-->DPRSLPVR=H
--> R(TIME)=28K Ohm
--> CLK_EN#=L

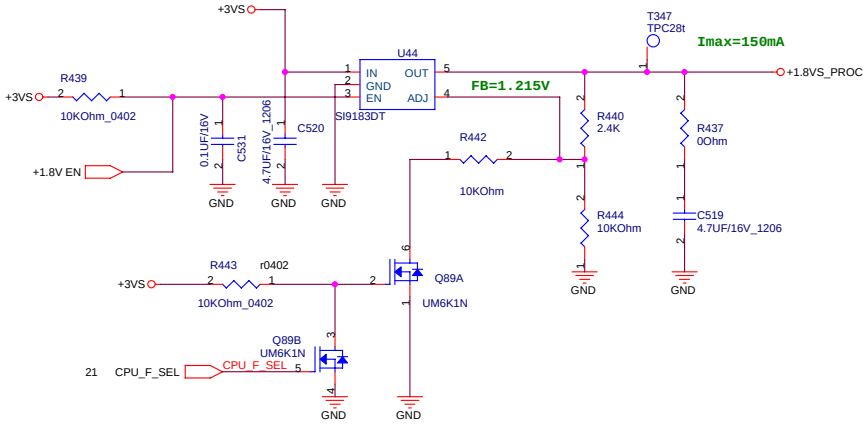

4/21
AC_BAT_SYS
SUSC#_PWR
R354
0Ohm
100KOhm
R379
R376
10KOhm
RUN_5VO
C470
1500PF/50V
R366
1.8KOhm
R378
51KOhm
C479
8200PF/50V
R377
330Ohm
U31
INV1
COMP1
SSTRT1
SKIP#
VO1_VDDQ
DDR#
GND
REF_X
ENBL1
ENBL2
VO2
PGOOD
SSTRT2
COMP2
INV2
VBST1
OUT1_U
LL1
OUT1_D
OUTGND1
TRIP1
VIN
TRIP2
VREG5
REG5_IN
OUTGND2
OUT2_D
LL2
OUT2_U
VBST2
TPS51020
F=450KHz
ENBL1
ENBL2
10V
T169
3V_5V_PWRGD
RUN_3VO
C467
3300PF/50V
R363
2.7KOhm
R360
100KOhm
R382
10KOhm
Vref=0.85V
R381
330Ohm
R380
30KOhm
C478
6800PF/50V
RUN_3VO
C472
0.01UF/50V
RUN_5VO
R2.0
C473
4700PF/50V
C429
1UF
R340
0Ohm_0805
AC_BAT_SYS
C457
15U/25V_7343D
C442
0.1UF/25V
Q61
SI4800BDY
R350
0Ohm
C449
0.1UF/25V
Q62
SI4800BDY
D35
FS1J4TP
L57
10UH_#919AS
(6A)
+5VO
T113 TPC28b
T133 TPC28b
T137 TPC28b
3MM_OPEN_5MIL
JP13
T105 TPC28b
+5V
C407
100UF/6.3V_7343D
C416
1UF/10V
C405
T121 TPC28b
T119 TPC28b
T127 TPC28b
T124 TPC28b
R342
18KOhm
R343
18KOhm
+5VA
+5VA (60mA)
+5VO
C430
4.7UF/16V_1206
C447
0.1UF/25V
R347
0Ohm
AC_BAT_SYS
C417
15U/25V_7343D
C413
1UF/25V_0805
Q51
SI4800BDY
4/21
(6A)
+3VSUS
T142 TPC28b
T139 TPC28b
T123 TPC28b
L55
10UH_#919AS
D34
FS1J4TP
Q53
SI4800BDY
C419
120UF/4V_7343D
C431
1UF/10V
C412
T126 TPC28b
T141 TPC28b
T140 TPC28b
T107 TPC32t
+3VALWAYS
T114 TPC32t
+3VA
JP15
1MM_OPEN_5MIL
T145 TPC32t
+5VALWAYS
T144 TPC32t
+5VA
JP18
1MM_OPEN_5MIL
Vref = 1.24V
T333 TPC32t
+3VA
Imax=100mA
U28
IN
OUT
GND
EN
LEAA
ADJ
MIC5233BM5
AC_BAT_SYS
42,51 SHUT_DOWN#
C401
1UF/25V_0805
R310
16.9KOhm
R309
10KOhm_0402
C400
10UF/6.3V_0805
4/21
42,49 FORCE_OFF#
D82
RB751V_40
D83
RB715F
42,51 SHUT_DOWN#
46,52 SUSC#_PWR
42,52 VSUS_ON
ENBL1
ENBL2
R935
100KOhm
4/21
+3V
R402
100KOhm
49 3V_5V_PWRGD
3V_5V_PWRGD


(6A)
+VCCP
T334 TPC28t
T335 TPC28t
T339 TPC28t
T138 TPC28t
T130 TPC28t
T135 TPC28t
JP16
3MM_OPEN_5MIL
@
+1.05VO
0.1UF/25V_C0805
C418
GND
T131 TPC28t
T134 TPC28t
T128 TPC28t
L58
2.8UH_#919AS
C415
220UF/2.5V_7343D
4/21
+5VO
15U/25V_7343D
C421
C422
0.1U/25V
Q63
SI4800BDY
Q54
SI4810BDY
R345
0Ohm
C443
0.1U/25V
C438
4.7UF/6.3V_0805
R644
10Ohm
D36
RB717F
C441
0.1UF/25V
R344
0Ohm
1UF/6.3V
C1124
C781
1UF/6.3V
@
1.8_1.05_AGND
AC_BAT_SYS
Q57
SI4800BDY
Q58
SI4810BDY
C426
0.1U/25V
C445
15U/25V_7343D
L54
2.8UH_#919AS
T110 TPC28t
T109 TPC28t
T115 TPC28t
C396
470UF/2.5V_7343D
C408
0.1UF/25V_C0805
+1.8VO
JP10
3MM_OPEN_5MIL
T336 TPC28t
T337 TPC28t
T338 TPC28t
(6A)
+1.8V
T125 TPC28t
T102 TPC28t
T101 TPC28t
+3VALWAYS
R392
100KOhm_0402
R390
100KOhm_0402
@
R368
100Ohm_0402
Fout1=345KHz,Fout2=255KHz
1.8_1.05_PWRGD
U32
OUT1
FB1
ILIM1
V+
TON
SKIP#
PGOOD
OVP
UVP
REF
ON1
ON2
ILIM2
FB2
CS1
LX1
DH1
BST1
DL1
GND
VCC
VDD
DL2
BST2
DH2
LX2
CS2
OUT2
MAX8743EEI
FB=1V
R372
0Ohm_0402
@
Vref=2V
1.8_1.05_REF
C1125
@
0.47UF/16V
R370
511Ohm
R936
@
510Ohm
C469
1000PF/50V_0402
R384
10KOhm
C477
0.22UF/10V
@
C475
0.22UF/10V
1.8_1.05_AGND
R356
100KOhm_0402
JP27
SHORT2
3/18
R361
8.06KOhm
R2.0
1.8_1.05_REF
R387
16KOhm
R369
16KOhm
R349
100Ohm_0402
C459
1000PF/50V_0402
C471
0.22UF/10V
@
R367
10KOhm
R385
150KOhm
R383
150KOhm
1.8_1.05_AGND
43,44 CPU_VRON
R357
100KOhm_0402
SUSC#_PWR 45,52
+3V
R373
100KOhm_0402
49 1.8_1.05_PWRGD


+5V
AC_BAT_SYS
C55
0.1UF/25V
C52
4.7UF/6.3V_0805
R28
20Ohm
C67
2200PF/50V
C18
0.1UF/25V
CE2
15U/25V_7343D
D15
SS0540
Q12
SI4392DY
+3VS
R27
10KOhm
C53
4.7UF/6.3V_0805
MAX1844EEP
U3
VDD
VCC
SKIP
PGOOD
SHDN
ILIM
LATCH
REF
TON
GND
V+
BST
DH
LX
CS
DL
OVP
UVP
OUT
FB
1844VCC
R48
2.7Ohm
C76
0.1UF/16V
49 PWR_OK_VGA
48,49,52,53 SUSB#_PWR
R49 120KOhm
C1143
1UF/10V
Imax=14A
ILIM
R463
100KOhm
Vref=2V
REF
R464
43.2KOhm
1UF/10V
C60
R38
0Ohm
@
F=300KHz
C75
0.1UF/16V
R50
100Ohm
FB=1V
Q9
SI4336DY
D4
EC31QS04
L88
0.56UH
CE21
330UF/2V_7343D
220UF/2V_7343D
CE20
C521
0.1UF/25V
C65
0.1UF/25V
@
R58
1KOhm
R2.0
T210 T209 T205 T206
TPC32t TPC32t TPC32t TPC32t
3MM_OPEN_5MIL
@ JP26
3MM_OPEN_5MIL
@ JP25
T340 T341 T342 T343
TPC32t TPC32t TPC32t TPC32t
(15A)
VGA_VCORE
1.1V FOR
NV44M-V
T10 T11 T207 T208
TPC32t TPC32t TPC32t TPC32t
D84
EC31QS04
4/21
NV43M CORE VOLTAGE=1.15V--->R50=150 Ohm
NV43M-U CORE VOLTAGE=1.3V--->R50=300 Ohm
NV44M CORE VOLTAGE=1.25V--->R50=255 Ohm
NV44M-V CORE VOLTAGE=1.1V--->R50=100 Ohm
R2.0
R933
100KOhm
48,49,52,53 SUSB#_PWR
+5VO
AC_BAT_SYS
R937
33KOhm
4/21
C458
0.01UF/25V_0402
R355
10KOhm
I=50uA
FB=0.59V
U30
FB
SS
VCC
GND
DL
OCSET
EN
DH
LX
BST
MAX8578EUB
C425
0.1UF/25V
150UF/25V_7343D
CE19
C456
0.1UF/25V
C463
0.022UF/25V_X7R
R341
33KOhm
R348
10Ohm
4.7UH_#919AS
C446
0.1UF/25V
C452
0.1UF/16V
Q59
SI4914DY
R2.0
4/21
10KOhm
R353
1000PF/50V_0402
C450
C444
4.7UF/6.3V_0805
D37
1SS355
T111
TPC28t
T112
TPC28t
T116
TPC28t
T344
TPC28t
T345
TPC28t
T346
TPC28t
3MM_OPEN_5MIL
JP14
@
(6A)
+1.5VS
+1.5VO
T122 T117 T120
TPC28t TPC28t TPC28t
CE18
220UF/2.5V_7343D
C406
0.1UF/25V
R938
100Ohm
@
R939
100KOhm
@
Q148A
UM6K1N
@
UM6K1N
@ Q148B
48,49,52,53 SUSB#_PWR
4/21

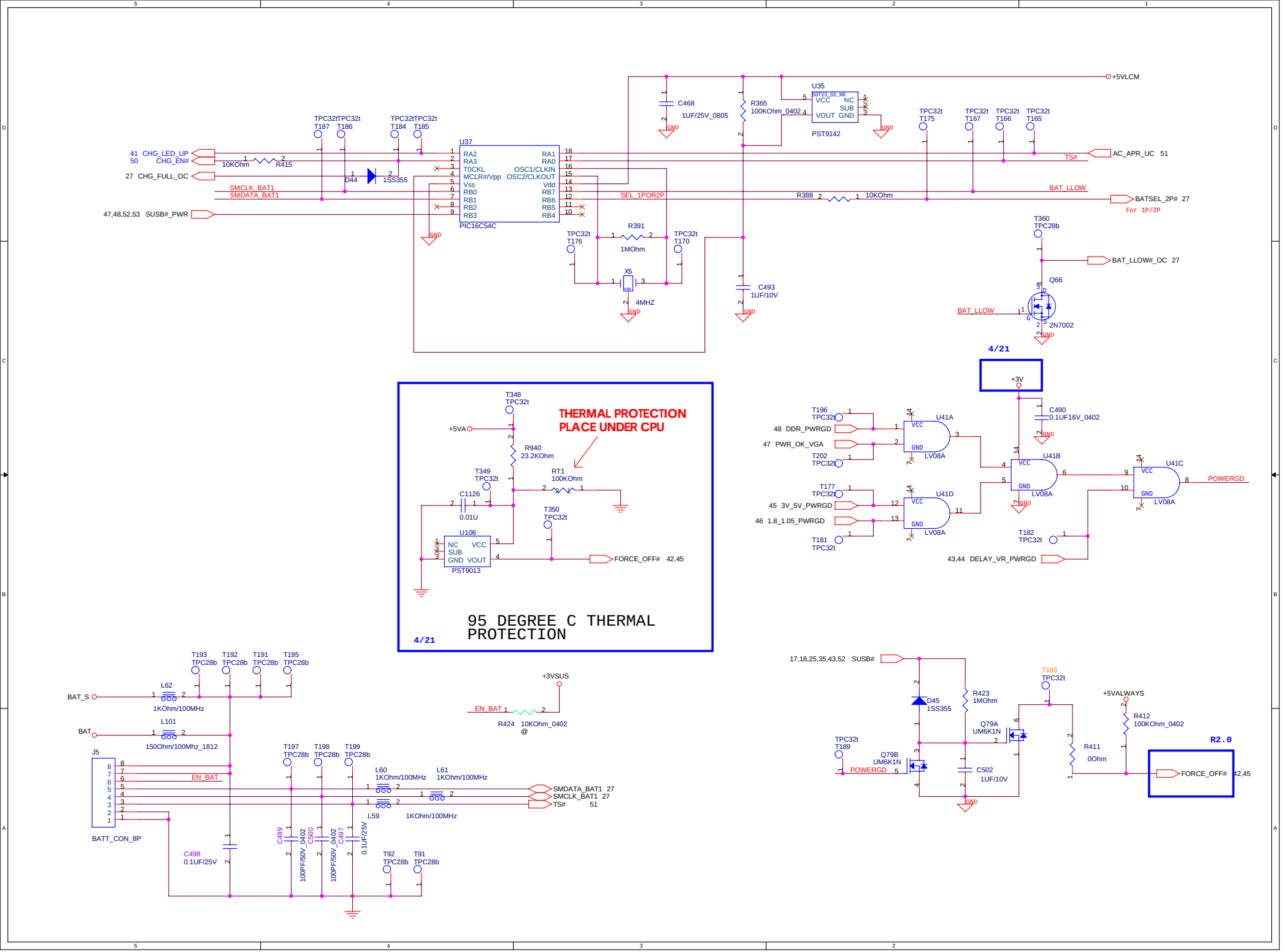


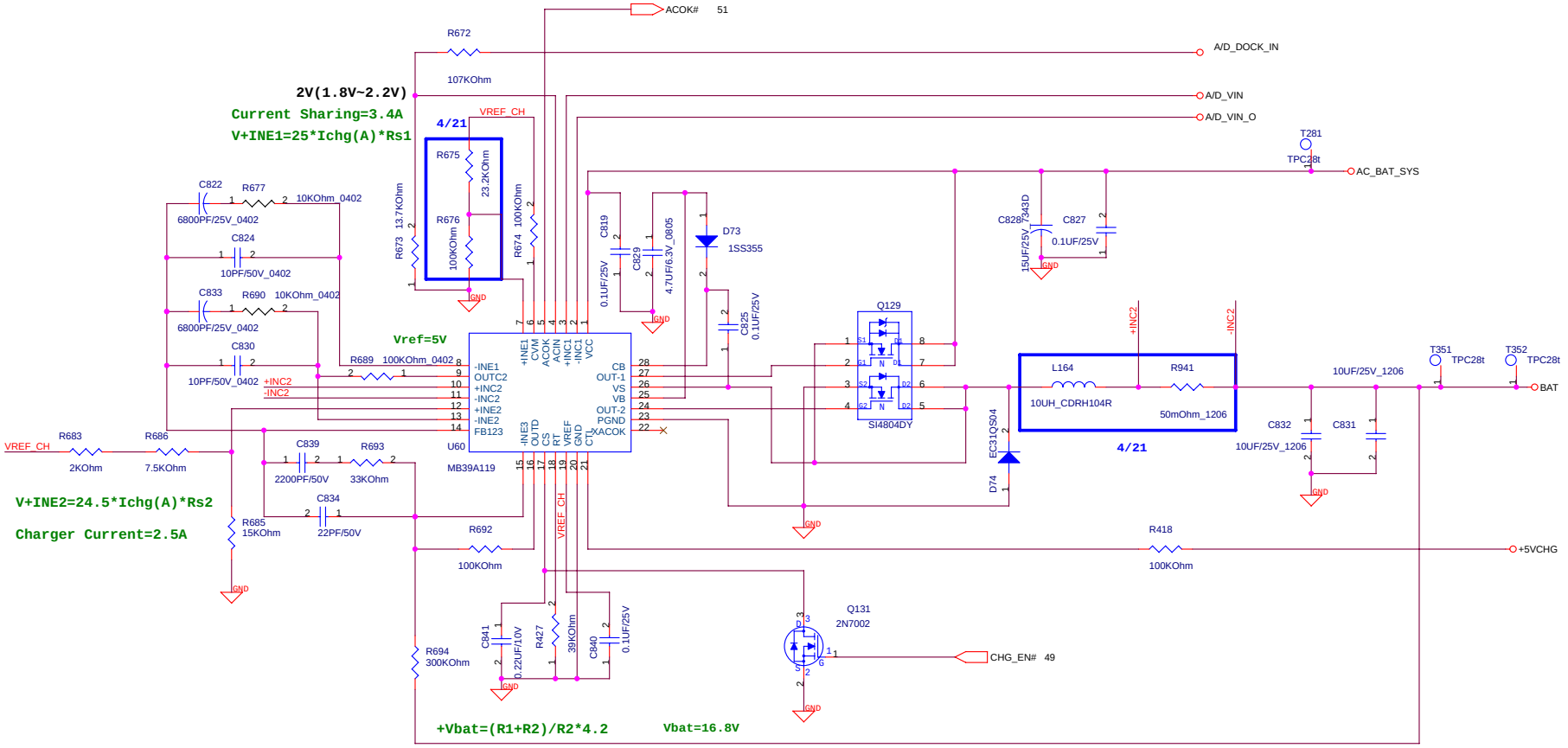


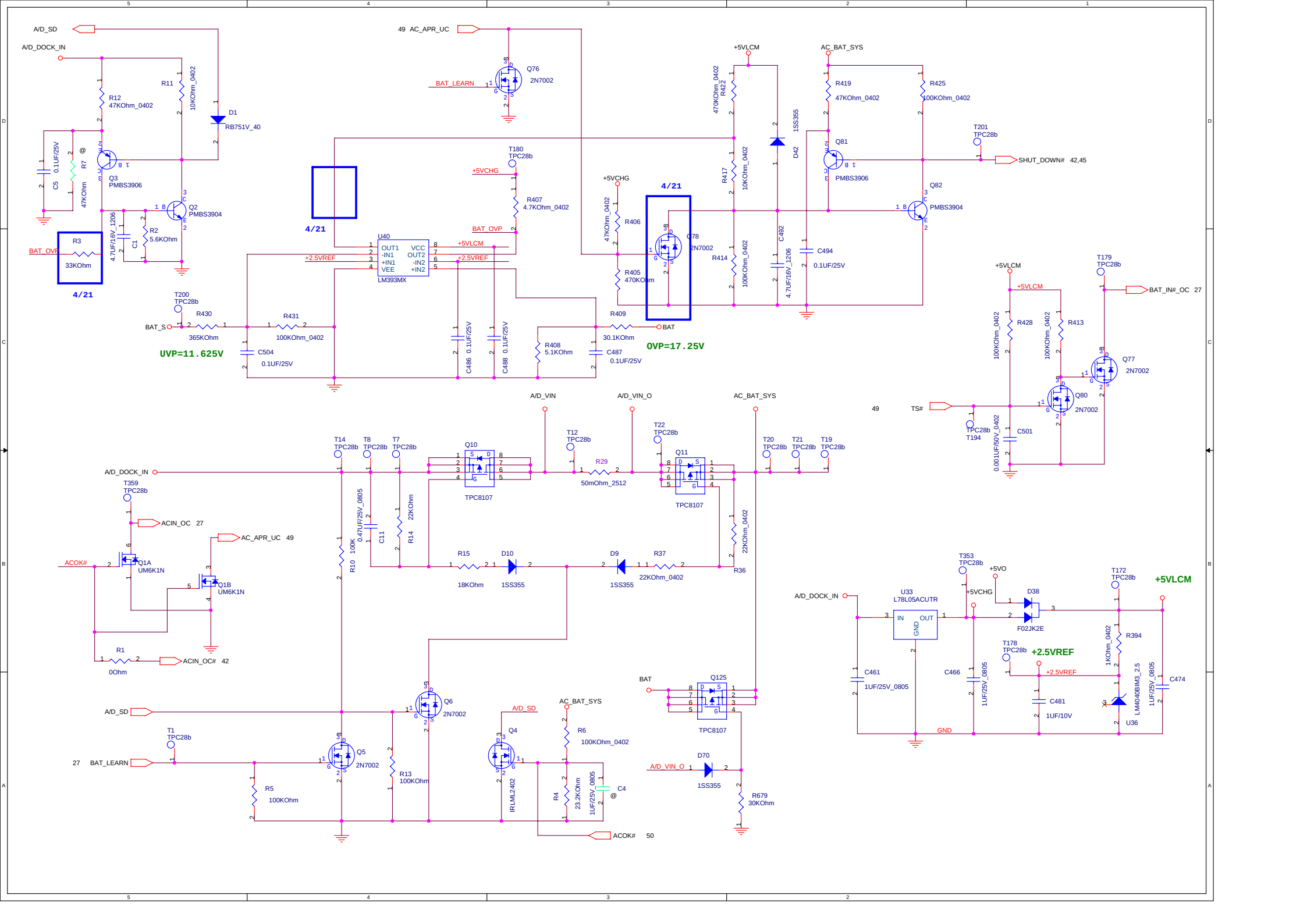


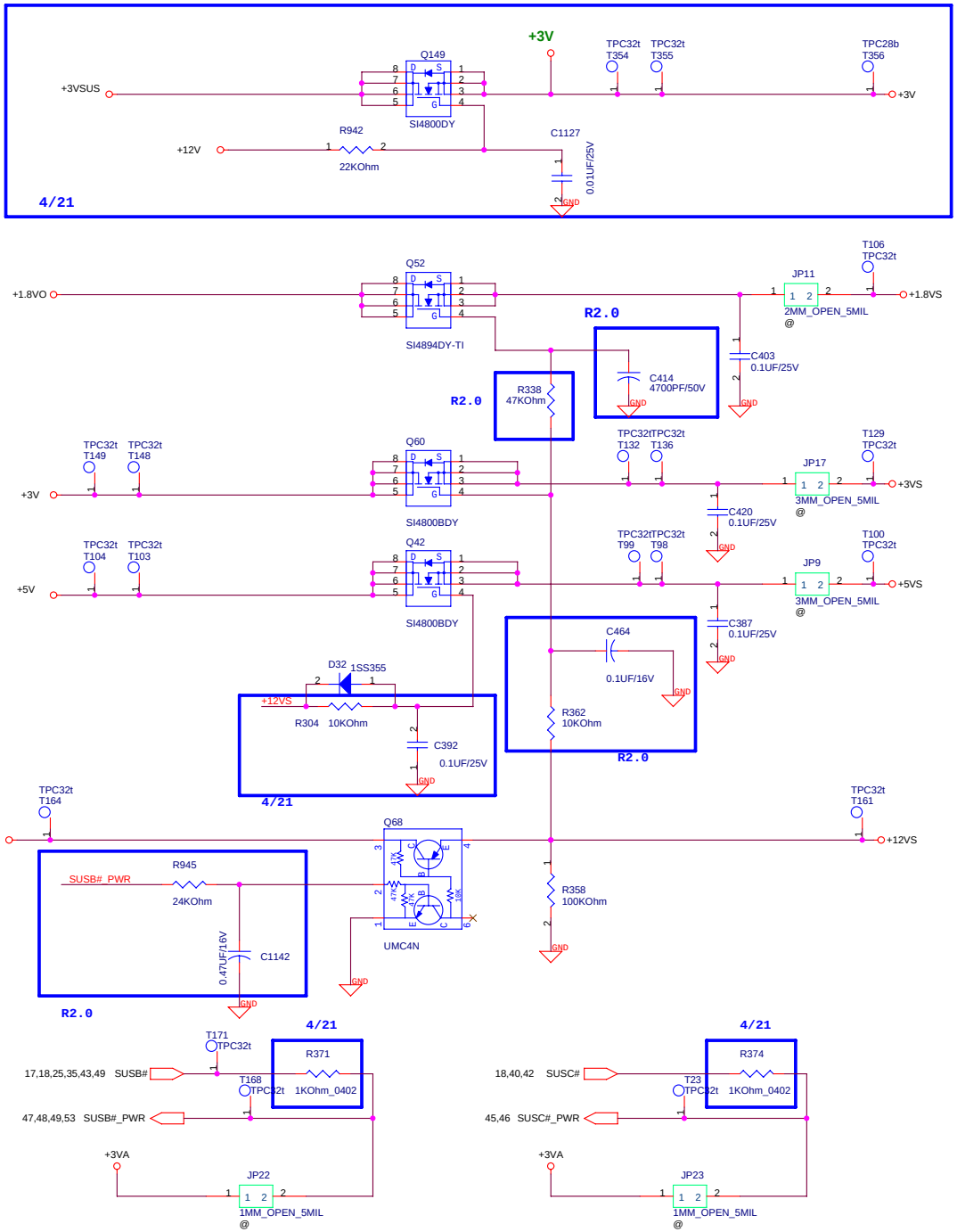
CPU_F_SEL-->H, OUT=1.5V (FSB=533MHz)

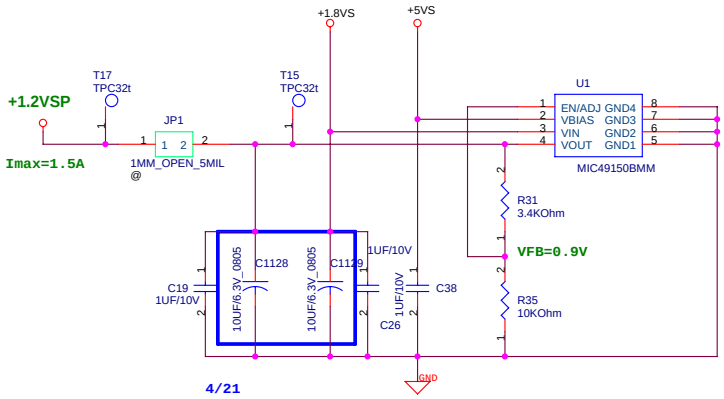
CPU_F_SEL-->L, OUT=1.8V (FSB=400MHz)

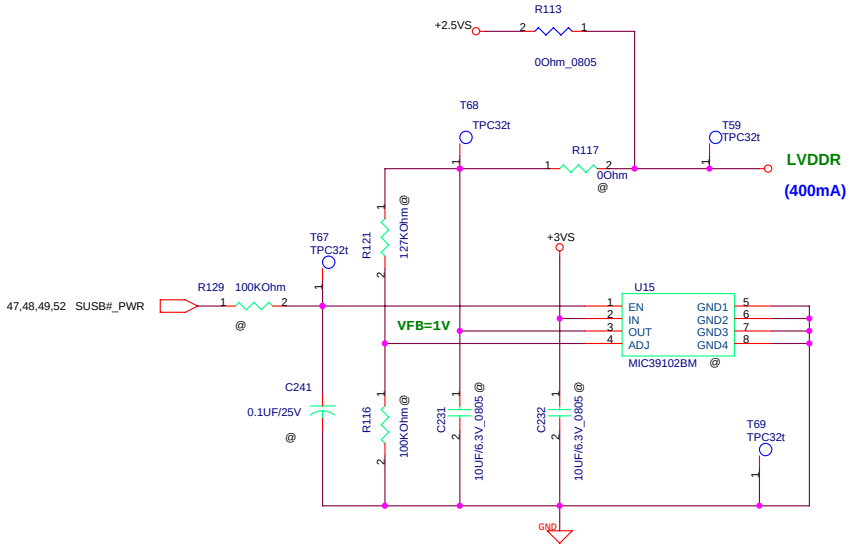

41 CHG_LED_UP
50 CHG_EN#
27 CHG_FULL_OC
SMCLK_BAT1
SMDATA_BAT1
47,48,52,53 SUSB#_PWR
10KOhm
R415
D44
1SS355
U37
PIC16C54C
RA2
RA3
T0CKL
MCLR#/Vpp
Vss
RB0
RB1
RB2
RB3
RA1
RA0
OSC1/CLKIN
OSC2/CLKOUT
Vdd
RB7
RB6
RB5
RB4
C468
1UF/25V_0805
R365
100KOhm_0402
U35
PST9142
+5VLCM
TS#
AC_APR_UC 51
BAT_LLOW
BATSEL_2P# 27
For 1P/2P
SEL_1POR2P
R388
10KOhm
R391
1MOhm
X5
4MHZ
C493
1UF/10V
T360
TPC28b
BAT_LLOW#_OC 27
Q66
2N7002
BAT_LLOW
THERMAL PROTECTION
PLACE UNDER CPU
+5VA
R940
23.2KOhm
RT1
100KOhm
C1126
0.01U
U106
PST9013
FORCE_OFF# 42,45
95 DEGREE C THERMAL PROTECTION
4/21
+3V
C490
0.1UF16V_0402
48 DDR_PWRGD
47 PWR_OK_VGA
45 3V_5V_PWRGD
46 1.8_1.05_PWRGD
U41A
U41B
U41C
U41D
LV08A
POWERGD
43,44 DELAY_VR_PWRGD
BAT_S
BAT
L62
1KOhm/100MHz
L101
150Ohm/100Mhz_1812
J5
BATT_CON_8P
EN_BAT
C498
0.1UF/25V
C499
100PF/50V_0402
C500
100PF/50V_0402
C497
0.1UF/25V
L60
1KOhm/100MHz
L61
1KOhm/100MHz
L59
1KOhm/100MHz
SMDATA_BAT1 27
SMCLK_BAT1 27
TS# 51
+3VSUS
EN_BAT
R424
10KOhm_0402
@
17,18,25,35,43,52 SUSB#
D45
1SS355
R423
1MOhm
Q79A
UM6K1N
Q79B
UM6K1N
C502
1UF/10V
R411
0Ohm
R412
100KOhm_0402
+5VALWAYS
R2.0
FORCE_OFF# 42,45


ACOK# 51
R672
107KOhm
A/D_DOCK_IN
A/D_VIN
A/D_VIN_O
2V(1.8V~2.2V)
Current Sharing=3.4A
V+INE1=25*Ichg(A)*Rs1
4/21
VREF_CH
R675
23.2KOhm
R676
100KOhm
R673 13.7KOhm
R674 100KOhm
GND
T281
TPC28t
AC_BAT_SYS
C822
6800PF/25V_0402
R677
10KOhm_0402
C824
10PF/50V_0402
C833
6800PF/25V_0402
R690 10KOhm_0402
C830
10PF/50V_0402
+INC2
-INC2
Vref=5V
R689 100KOhm_0402
U60
MB39A119
-INE1
OUTC2
+INC2
-INC2
+INE2
-INE2
FB123
+INE1
CVM
ACOK
ACIN
+INC1
-INC1
VCC
CB
OUT-1
VS
VB
OUT-2
PGND
XACOK
-INE3
OUTD
CS
RT
VREF
GND
CTL
C819
0.1UF/25V
C829
4.7UF/6.3V_0805
D73
1SS355
C825
0.1UF/25V
C828
15UF/25V_7343D
C827
0.1UF/25V
Q129
SI4804DY
L164
10UH_CDRH104R
R941
50mOhm_1206
EC31QS04
D74
10UF/25V_1206
C832
C831
T351
T352
TPC28t
BAT
R683
2KOhm
R686
7.5KOhm
C839
2200PF/50V
R693
33KOhm
C834
22PF/50V
V+INE2=24.5*Ichg(A)*Rs2
Charger Current=2.5A
R685
15KOhm
R692
100KOhm
R418
100KOhm
+5VCHG
C841
0.22UF/10V
R427
39KOhm
C840
0.1UF/25V
R694
300KOhm
Q131
2N7002
CHG_EN# 49
+Vbat=(R1+R2)/R2*4.2
Vbat=16.8V

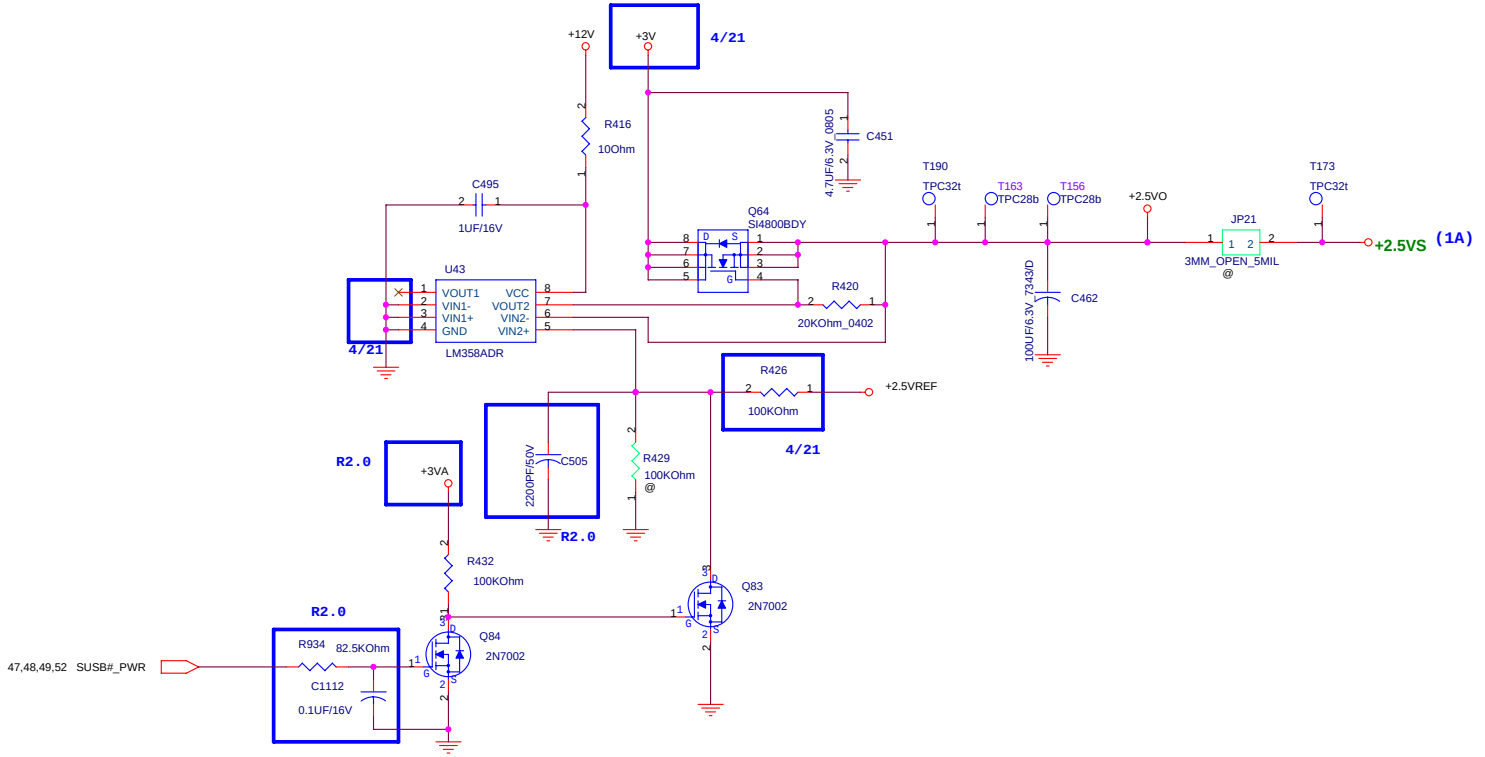

A/D_SD
A/D_DOCK_IN
R12
47KOhm_0402
R11
10KOhm_0402
D1
RB751V_40
C5
0.1UF/25V
R7
@
47KOhm
Q3
PMBS3906
Q2
PMBS3904
R2
5.6KOhm
C1
4.7UF/16V_1206
R3
33KOhm
BAT_OVP
4/21
49 AC_APR_UC
BAT_LEARN
Q76
2N7002
T180
TPC28b
+5VCHG
R407
4.7KOhm_0402
BAT_OVP
U40
OUT1
-IN1
+IN1
VEE
VCC
OUT2
-IN2
+IN2
LM393MX
+5VLCM
+2.5VREF
T200
TPC28b
BAT_S
R430
365KOhm
R431
100KOhm_0402
C504
0.1UF/25V
C486
0.1UF/25V
C488
0.1UF/25V
R408
5.1KOhm
C487
0.1UF/25V
R409
30.1KOhm
BAT
UVP=11.625V
OVP=17.25V
+5VCHG
R406
47KOhm_0402
R405
470KOhm
Q78
2N7002
4/21
+5VLCM
AC_BAT_SYS
470KOhm_0402
R422
R417
10KOhm_0402
R414
100KOhm_0402
D42
1SS355
R419
47KOhm_0402
R425
100KOhm_0402
Q81
PMBS3906
Q82
PMBS3904
C492
4.7UF/16V_1206
C494
0.1UF/25V
T201
TPC28b
SHUT_DOWN# 42,45
T179
TPC28b
BAT_IN#_OC 27
R428
100KOhm_0402
R413
100KOhm_0402
Q77
2N7002
Q80
2N7002
49 TS#
T194
TPC28b
C501
0.001UF/50V_0402
A/D_VIN
A/D_VIN_O
AC_BAT_SYS
T14
TPC28b
T8
TPC28b
T7
TPC28b
T12
TPC28b
R29
50mOhm_2512
T22
TPC28b
T20
TPC28b
T21
TPC28b
T19
TPC28b
Q10
TPC8107
Q11
TPC8107
A/D_DOCK_IN
T359
TPC28b
ACIN_OC 27
AC_APR_UC 49
ACOK#
Q1A
UM6K1N
Q1B
UM6K1N
R1
0Ohm
ACIN_OC# 42
R10
100K
C11
0.47UF/25V_0805
R14
22KOhm
R15
18KOhm
D10
1SS355
D9
1SS355
R37
22KOhm_0402
R36
22KOhm_0402
A/D_SD
T1
TPC28b
27 BAT_LEARN
Q5
2N7002
Q6
2N7002
R5
100KOhm
R13
100KOhm
Q4
IRLML2402
R6
100KOhm_0402
R4
23.2KOhm
C4
@
1UF/25V_0805
ACOK# 50
BAT
Q125
TPC8107
D70
1SS355
A/D_VIN_O
R679
30KOhm
T353
TPC28b
+5VO
+5VCHG
D38
F02JK2E
U33
L78L05ACUTR
IN
OUT
GND
C461
1UF/25V_0805
C466
1UF/25V_0805
T178
TPC28b
+2.5VREF
C481
1UF/10V
T172
TPC28b
+5VLCM
R394
1KOhm_0402
LM4040BIM3_2.5
U36
C474
1UF/25V_0805
GND

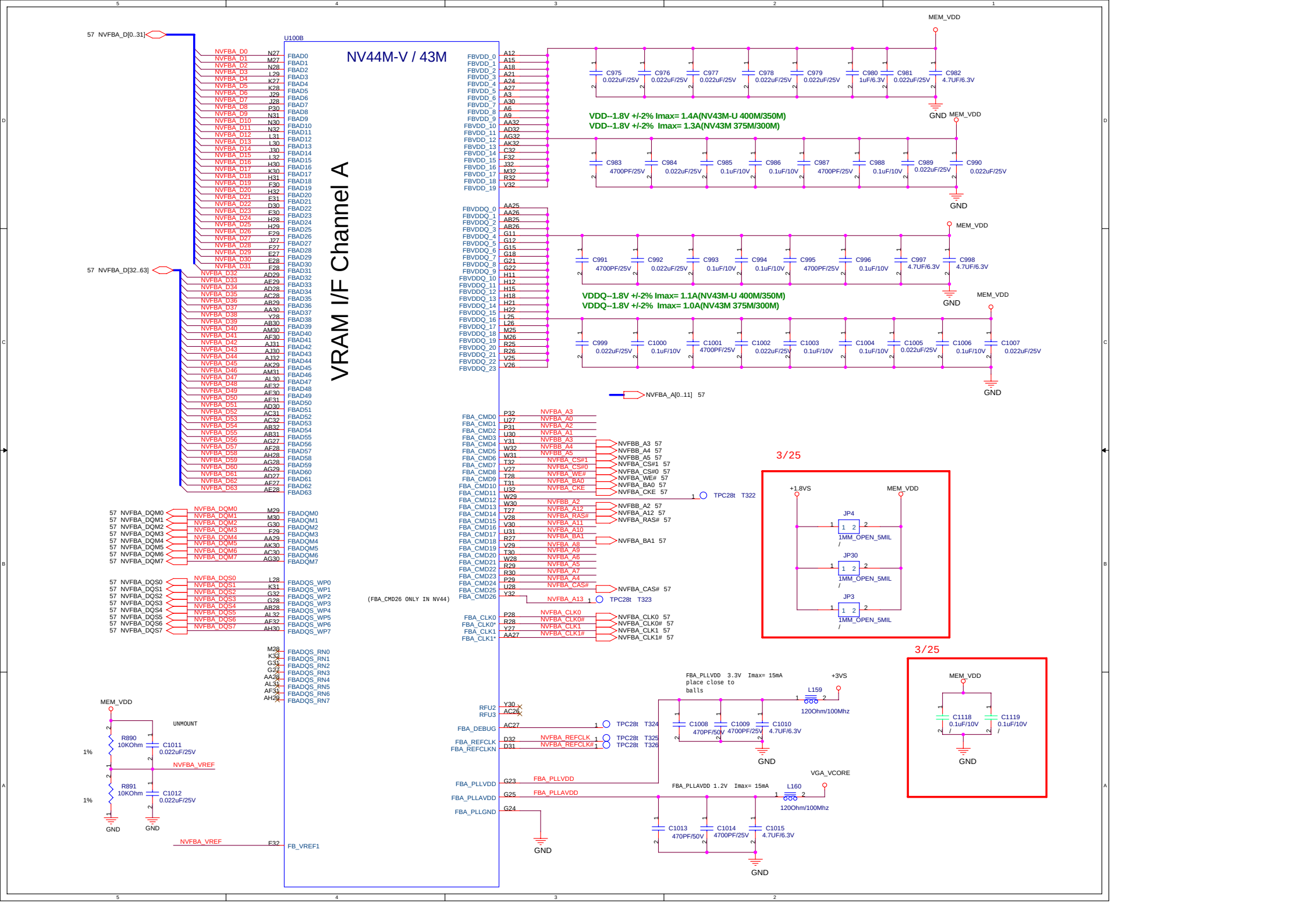

+3V
Q149
SI4800DY
+3VSUS
+3V
TPC32t T354
TPC32t T355
TPC28b T356
R942
22KOhm
+12V
C1127
0.01UF/25V
4/21
+5VA
Q151
UMC4N
T150
TPC32t
+5VSUS (10mA)
42,45 VSUS_ON
Q52
SI4894DY-TI
+1.8VO
+1.8VS
JP11
2MM_OPEN_5MIL
T106
TPC32t
C403
0.1UF/25V
R2.0
C414
4700PF/50V
R338
47KOhm
Q60
SI4800BDY
+3V
+3VS
JP17
3MM_OPEN_5MIL
T129
TPC32t
C420
0.1UF/25V
Q42
SI4800BDY
+5V
+5VS
JP9
3MM_OPEN_5MIL
T100
TPC32t
C387
0.1UF/25V
C464
0.1UF/16V
R362
10KOhm
D32
1SS355
+12VS
R304
10KOhm
C392
0.1UF/25V
4/21
R2.0
TPC32t T164
TPC32t T161
+12V
+12VS
Q68
UMC4N
R945
SUSB#_PWR
24KOhm
C1142
0.47UF/16V
R358
100KOhm
R2.0
4/21
T171
TPC32t
17,18,25,35,43,49 SUSB#
T168
TPC32t
47,48,49,53 SUSB#_PWR
R371
1KOhm_0402
+3VA
JP22
1MM_OPEN_5MIL
4/21
18,40,42 SUSC#
T23
TPC32t
45,46 SUSC#_PWR
R374
1KOhm_0402
+3VA
JP23
1MM_OPEN_5MIL
4/21
AC_BAT_SYS
C491
0.1UF/25V
U39
MIC5233BM5
IN
OUT
GND
EN
ADJ
LEAA
SUSC#_PWR
R932
100KOhm
FB=1.24V
R395
845KOhm
R393
95.3KOhm
T174
TPC32t
+12V
Imax=100mA
C480
1UF/25V_0805
+3VA
R398
100KOhm
R401
100KOhm
43 SUSB_PWR
42,43 SUSC_PWR
Q71B
UM6K1N
SUSB#_PWR
Q74A
UM6K1N
SUSC#_PWR

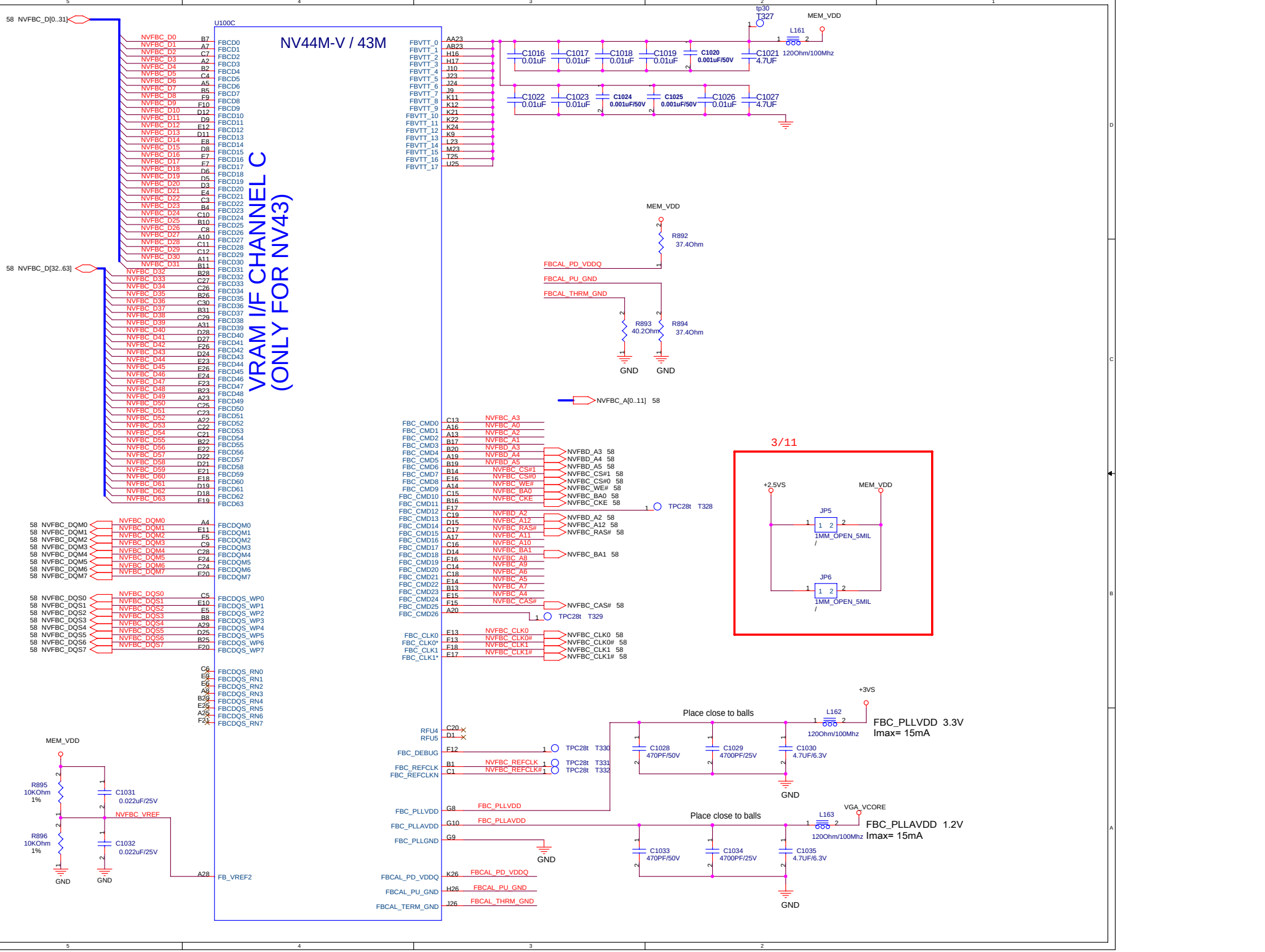

+1.8VS
+5VS
+1.2VSP
T17
TPC32t
T15
TPC32t
JP1
1 2
1MM_OPEN_5MIL
@
Imax=1.5A
U1
EN/ADJ GND4
VBIAS GND3
VIN GND2
VOUT GND1
MIC49150BMM
R31
3.4KOhm
VFB=0.9V
R35
10KOhm
C1128
C1129
10UF/6.3V_0805
10UF/6.3V_0805
C19
1UF/10V
C26
1UF/10V
1UF/10V
C38
GND
4/21

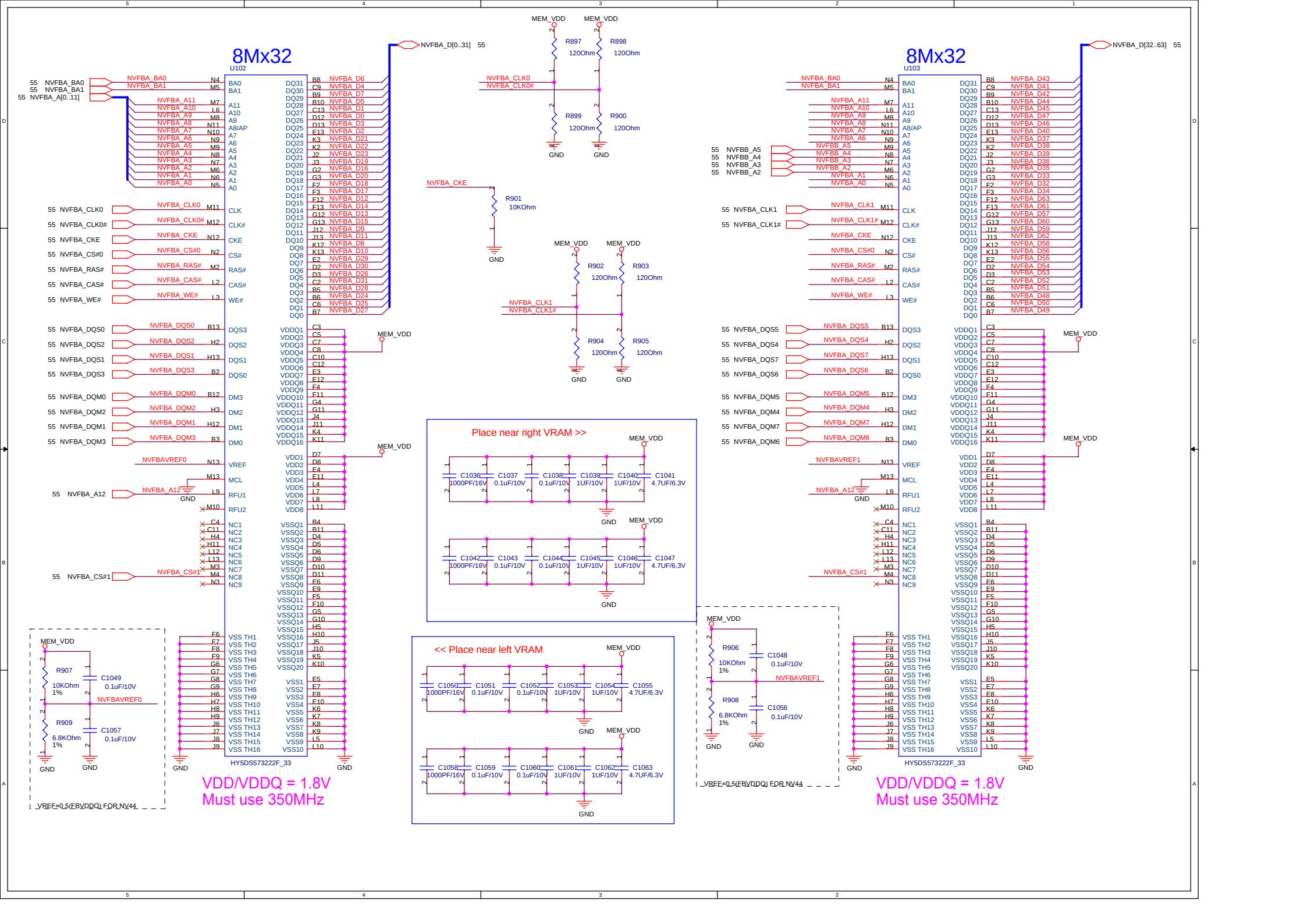

+2.5VS
R113
0Ohm_0805
T68
TPC32t
T59
TPC32t
R117
0Ohm
@
LVDDR
(400mA)
T67
TPC32t
R121
127KOhm @
+3VS
47,48,49,52 SUSB#_PWR
R129 100KOhm
@
VFB=1V
U15
EN GND1
IN GND2
OUT GND3
ADJ GND4
MIC39102BM @
C241
0.1UF/25V
@
R116
100KOhm @
C231
10UF/6.3V_0805 @
C232
10UF/6.3V_0805 @
T69
TPC32t
GND

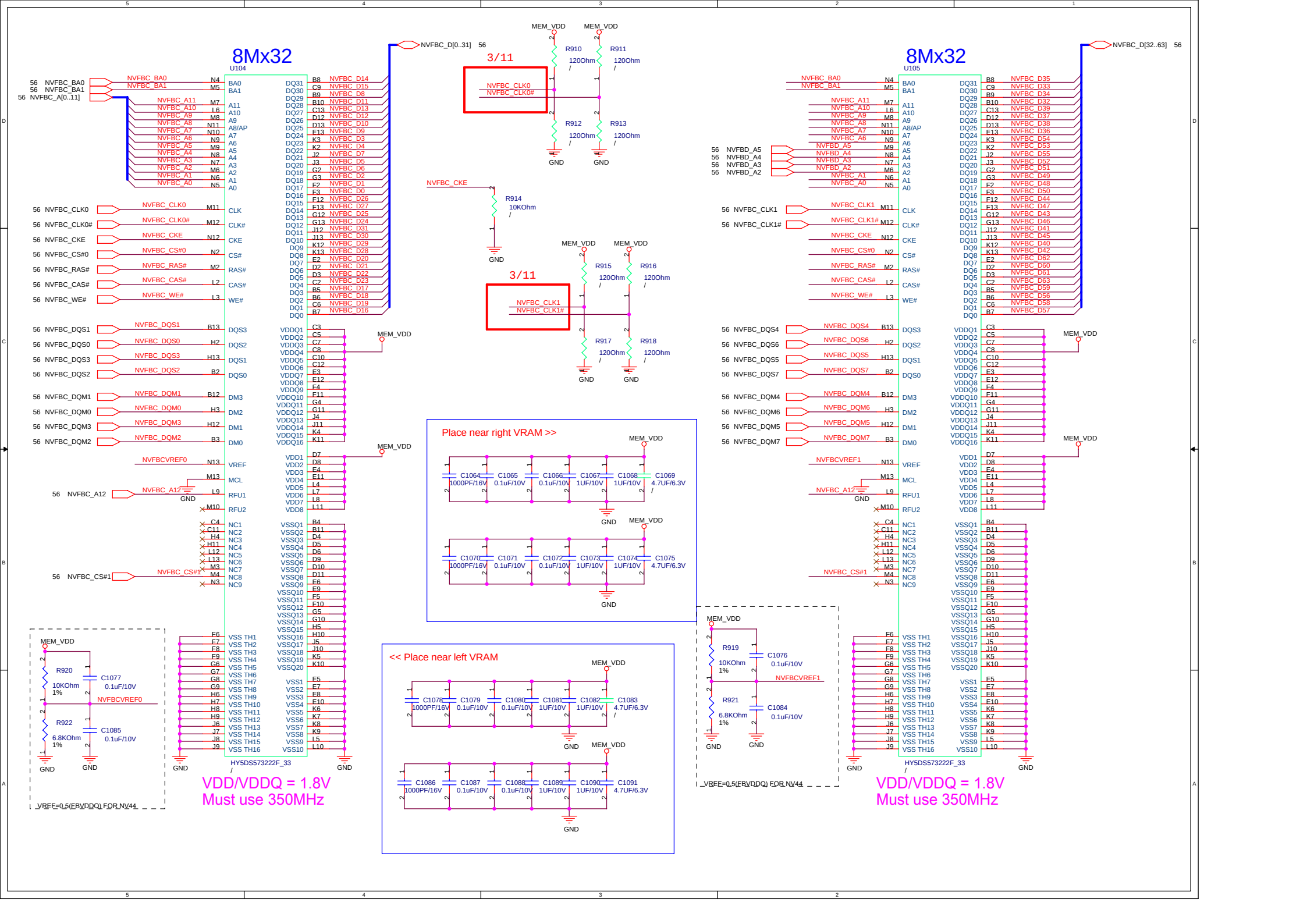
VGA PART


+12V
+3V
4/21
R416
10Ohm
C495
1UF/16V
C451
4.7UF/6.3V_0805
Q64
SI4800BDY
T190
TPC32t
T163
TPC28b
T156
TPC28b
+2.5VO
JP21
1 2
3MM_OPEN_5MIL
@
T173
TPC32t
+2.5VS (1A)
U43
VOUT1 VCC
VIN1- VOUT2
VIN1+ VIN2-
GND VIN2+
LM358ADR
4/21
R420
20KOhm_0402
C462
100UF/6.3V_7343/D
R426
100KOhm
+2.5VREF
4/21
R2.0
+3VA
C505
2200PF/50V
R2.0
R429
100KOhm
@
R432
100KOhm
R2.0
Q83
2N7002
Q84
2N7002
47,48,49,52 SUSB#_PWR
R934 82.5KOhm
C1112
0.1UF/16V


U100B
NV44M-V / 43M
VRAM I/F Channel A
57 NVFBA_D[0..31]
57 NVFBA_D[32..63]
NVFBA_D0 N27 FBAD0
NVFBA_D1 M27 FBAD1
NVFBA_D2 N28 FBAD2
NVFBA_D3 L29 FBAD3
NVFBA_D4 K27 FBAD4
NVFBA_D5 K28 FBAD5
NVFBA_D6 J29 FBAD6
NVFBA_D7 J28 FBAD7
NVFBA_D8 P30 FBAD8
NVFBA_D9 N31 FBAD9
NVFBA_D10 N30 FBAD10
NVFBA_D11 N32 FBAD11
NVFBA_D12 L31 FBAD12
NVFBA_D13 L30 FBAD13
NVFBA_D14 J30 FBAD14
NVFBA_D15 L32 FBAD15
NVFBA_D16 H30 FBAD16
NVFBA_D17 K30 FBAD17
NVFBA_D18 H31 FBAD18
NVFBA_D19 E30 FBAD19
NVFBA_D20 H32 FBAD20
NVFBA_D21 E31 FBAD21
NVFBA_D22 D30 FBAD22
NVFBA_D23 E30 FBAD23
NVFBA_D24 H28 FBAD24
NVFBA_D25 H29 FBAD25
NVFBA_D26 E29 FBAD26
NVFBA_D27 J27 FBAD27
NVFBA_D28 F27 FBAD28
NVFBA_D29 E27 FBAD29
NVFBA_D30 E28 FBAD30
NVFBA_D31 F28 FBAD31
NVFBA_D32 AD29 FBAD32
NVFBA_D33 AE29 FBAD33
NVFBA_D34 AD28 FBAD34
NVFBA_D35 AC28 FBAD35
NVFBA_D36 AB29 FBAD36
NVFBA_D37 AA30 FBAD37
NVFBA_D38 Y28 FBAD38
NVFBA_D39 AB30 FBAD39
NVFBA_D40 AM30 FBAD40
NVFBA_D41 AF30 FBAD41
NVFBA_D42 AJ31 FBAD42
NVFBA_D43 AJ30 FBAD43
NVFBA_D44 AJ32 FBAD44
NVFBA_D45 AK29 FBAD45
NVFBA_D46 AM31 FBAD46
NVFBA_D47 AL30 FBAD47
NVFBA_D48 AE32 FBAD48
NVFBA_D49 AE30 FBAD49
NVFBA_D50 AE31 FBAD50
NVFBA_D51 AD30 FBAD51
NVFBA_D52 AC31 FBAD52
NVFBA_D53 AC32 FBAD53
NVFBA_D54 AB32 FBAD54
NVFBA_D55 AB31 FBAD55
NVFBA_D56 AG27 FBAD56
NVFBA_D57 AE28 FBAD57
NVFBA_D58 AH28 FBAD58
NVFBA_D59 AG28 FBAD59
NVFBA_D60 AG29 FBAD60
NVFBA_D61 AD27 FBAD61
NVFBA_D62 AE27 FBAD62
NVFBA_D63 AE28 FBAD63
57 NVFBA_DQM0 NVFBA_DQM0 M29 FBADQM0
57 NVFBA_DQM1 NVFBA_DQM1 M30 FBADQM1
57 NVFBA_DQM2 NVFBA_DQM2 G30 FBADQM2
57 NVFBA_DQM3 NVFBA_DQM3 F29 FBADQM3
57 NVFBA_DQM4 NVFBA_DQM4 AA29 FBADQM4
57 NVFBA_DQM5 NVFBA_DQM5 AK30 FBADQM5
57 NVFBA_DQM6 NVFBA_DQM6 AC30 FBADQM6
57 NVFBA_DQM7 NVFBA_DQM7 AG30 FBADQM7
57 NVFBA_DQS0 NVFBA_DQS0 L28 FBADQS_WP0
57 NVFBA_DQS1 NVFBA_DQS1 K31 FBADQS_WP1
57 NVFBA_DQS2 NVFBA_DQS2 G32 FBADQS_WP2
57 NVFBA_DQS3 NVFBA_DQS3 G28 FBADQS_WP3
57 NVFBA_DQS4 NVFBA_DQS4 AB28 FBADQS_WP4
57 NVFBA_DQS5 NVFBA_DQS5 AL32 FBADQS_WP5
57 NVFBA_DQS6 NVFBA_DQS6 AE32 FBADQS_WP6
57 NVFBA_DQS7 NVFBA_DQS7 AH30 FBADQS_WP7
M28 FBADQS_RN0
K32 FBADQS_RN1
G31 FBADQS_RN2
G27 FBADQS_RN3
AA28 FBADQS_RN4
AL31 FBADQS_RN5
AF31 FBADQS_RN6
AH29 FBADQS_RN7
MEM_VDD
UNMOUNT
R890 10KOhm 1%
C1011 0.022uF/25V
NVFBA_VREF
R891 10KOhm 1%
C1012 0.022uF/25V
GND
NVFBA_VREF F32 FB_VREF1
FBVDD_0 A12
FBVDD_1 A15
FBVDD_2 A18
FBVDD_3 A21
FBVDD_4 A24
FBVDD_5 A27
FBVDD_6 A3
FBVDD_7 A30
FBVDD_8 A6
FBVDD_9 A9
FBVDD_10 AA32
FBVDD_11 AD32
FBVDD_12 AG32
FBVDD_13 AK32
FBVDD_14 C32
FBVDD_15 F32
FBVDD_16 J32
FBVDD_17 M32
FBVDD_18 R32
FBVDD_19 V32
C975 0.022uF/25V
C976 0.022uF/25V
C977 0.022uF/25V
C978 0.022uF/25V
C979 0.022uF/25V
C980 1uF/6.3V
C981 0.022uF/25V
C982 4.7UF/6.3V
VDD--1.8V +/-2% Imax= 1.4A(NV43M-U 400M/350M)
VDD--1.8V +/-2% Imax= 1.3A(NV43M 375M/300M)
C983 4700PF/25V
C984 0.022uF/25V
C985 0.1uF/10V
C986 0.1uF/10V
C987 4700PF/25V
C988 0.1uF/10V
C989 0.022uF/25V
C990 0.022uF/25V
FBVDDQ_0 AA25
FBVDDQ_1 AA26
FBVDDQ_2 AB25
FBVDDQ_3 AB26
FBVDDQ_4 G11
FBVDDQ_5 G12
FBVDDQ_6 G15
FBVDDQ_7 G18
FBVDDQ_8 G21
FBVDDQ_9 G22
FBVDDQ_10 H11
FBVDDQ_11 H12
FBVDDQ_12 H15
FBVDDQ_13 H18
FBVDDQ_14 H21
FBVDDQ_15 H22
FBVDDQ_16 L25
FBVDDQ_17 L26
FBVDDQ_18 M25
FBVDDQ_19 M26
FBVDDQ_20 R25
FBVDDQ_21 R26
FBVDDQ_22 V25
FBVDDQ_23 V26
C991 4700PF/25V
C992 0.022uF/25V
C993 0.1uF/10V
C994 0.1uF/10V
C995 4700PF/25V
C996 0.1uF/10V
C997 4.7UF/6.3V
C998 4.7UF/6.3V
VDDQ--1.8V +/-2% Imax= 1.1A(NV43M-U 400M/350M)
VDDQ--1.8V +/-2% Imax= 1.0A(NV43M 375M/300M)
C999 0.022uF/25V
C1000 0.1uF/10V
C1001 4700PF/25V
C1002 0.022uF/25V
C1003 0.1uF/10V
C1004 0.1uF/10V
C1005 0.022uF/25V
C1006 0.1uF/10V
C1007 0.022uF/25V
NVFBA_A[0..11] 57
FBA_CMD0 P32 NVFBA_A3
FBA_CMD1 U27 NVFBA_A0
FBA_CMD2 P31 NVFBA_A2
FBA_CMD3 U30 NVFBA_A1
FBA_CMD4 Y31 NVFBA_A3
FBA_CMD5 W32 NVFBB_A4
FBA_CMD6 W31 NVFBB_A5
FBA_CMD7 T32 NVFBA_CS#1
FBA_CMD8 V27 NVFBA_CS#0
FBA_CMD9 T28 NVFBA_WE#
FBA_CMD10 T31 NVFBA_BA0
FBA_CMD11 U32 NVFBA_CKE
FBA_CMD12 W29
FBA_CMD13 W30 NVFBB_A2
FBA_CMD14 T27 NVFBA_A12
FBA_CMD15 V28 NVFBA_RAS#
FBA_CMD16 V30 NVFBA_A11
FBA_CMD17 U31 NVFBA_A10
FBA_CMD18 R27 NVFBA_BA1
FBA_CMD19 V29 NVFBA_A8
FBA_CMD20 T30 NVFBA_A9
FBA_CMD21 W28 NVFBA_A6
FBA_CMD22 R29 NVFBA_A5
FBA_CMD23 R30 NVFBA_A7
FBA_CMD24 P29 NVFBA_A4
FBA_CMD25 U28 NVFBA_CAS#
FBA_CMD26 Y32 NVFBA_A13
(FBA_CMD26 ONLY IN NV44)
NVFBB_A3 57
NVFBB_A4 57
NVFBB_A5 57
NVFBA_CS#1 57
NVFBA_CS#0 57
NVFBA_WE# 57
NVFBA_BA0 57
NVFBA_CKE 57
NVFBB_A2 57
NVFBA_A12 57
NVFBA_RAS# 57
NVFBA_BA1 57
NVFBA_CAS# 57
TPC28t T322
TPC28t T323
3/25
+1.8VS
MEM_VDD
JP4
1MM_OPEN_5MIL
JP30
1MM_OPEN_5MIL
JP3
1MM_OPEN_5MIL
FBA_CLK0 P28 NVFBA_CLK0
FBA_CLK0* R28 NVFBA_CLK0#
FBA_CLK1 Y27 NVFBA_CLK1
FBA_CLK1* AA27 NVFBA_CLK1#
NVFBA_CLK0 57
NVFBA_CLK0# 57
NVFBA_CLK1 57
NVFBA_CLK1# 57
RFU2 Y30
RFU3 AC26
FBA_DEBUG AC27
FBA_REFCLK D32 NVFBA_REFCLK
FBA_REFCLKN D31 NVFBA_REFCLK#
TPC28t T324
TPC28t T325
TPC28t T326
FBA_PLLVDD 3.3V Imax= 15mA
place close to balls
+3VS
L159
120Ohm/100Mhz
C1008 470PF/50V
C1009 4700PF/25V
C1010 4.7UF/6.3V
GND
FBA_PLLVDD G23 FBA_PLLVDD
FBA_PLLAVDD G25 FBA_PLLAVDD
FBA_PLLGND G24
FBA_PLLAVDD 1.2V Imax= 15mA
VGA_VCORE
L160
120Ohm/100Mhz
C1013 470PF/50V
C1014 4700PF/25V
C1015 4.7UF/6.3V
3/25
C1118 0.1uF/10V
C1119 0.1uF/10V


U100C
NV44M-V / 43M
VRAM I/F CHANNEL C
(ONLY FOR NV43)
58 NVFBC_D[0..31]
58 NVFBC_D[32..63]
NVFBC_D0 B7 FBCD0
NVFBC_D1 A7 FBCD1
NVFBC_D2 C7 FBCD2
NVFBC_D3 A2 FBCD3
NVFBC_D4 B2 FBCD4
NVFBC_D5 C4 FBCD5
NVFBC_D6 A5 FBCD6
NVFBC_D7 B5 FBCD7
NVFBC_D8 F9 FBCD8
NVFBC_D9 F10 FBCD9
NVFBC_D10 D12 FBCD10
NVFBC_D11 D9 FBCD11
NVFBC_D12 E12 FBCD12
NVFBC_D13 D11 FBCD13
NVFBC_D14 E8 FBCD14
NVFBC_D15 D8 FBCD15
NVFBC_D16 E7 FBCD16
NVFBC_D17 E7 FBCD17
NVFBC_D18 D6 FBCD18
NVFBC_D19 D5 FBCD19
NVFBC_D20 D3 FBCD20
NVFBC_D21 E4 FBCD21
NVFBC_D22 C3 FBCD22
NVFBC_D23 B4 FBCD23
NVFBC_D24 C10 FBCD24
NVFBC_D25 B10 FBCD25
NVFBC_D26 C9 FBCD26
NVFBC_D27 A10 FBCD27
NVFBC_D28 C11 FBCD28
NVFBC_D29 C12 FBCD29
NVFBC_D30 A11 FBCD30
NVFBC_D31 B11 FBCD31
NVFBC_D32 B28 FBCD32
NVFBC_D33 C27 FBCD33
NVFBC_D34 C26 FBCD34
NVFBC_D35 B26 FBCD35
NVFBC_D36 C30 FBCD36
NVFBC_D37 B31 FBCD37
NVFBC_D38 C29 FBCD38
NVFBC_D39 A31 FBCD39
NVFBC_D40 D28 FBCD40
NVFBC_D41 D27 FBCD41
NVFBC_D42 F26 FBCD42
NVFBC_D43 D24 FBCD43
NVFBC_D44 E23 FBCD44
NVFBC_D45 E26 FBCD45
NVFBC_D46 E24 FBCD46
NVFBC_D47 E23 FBCD47
NVFBC_D48 B23 FBCD48
NVFBC_D49 A23 FBCD49
NVFBC_D50 C25 FBCD50
NVFBC_D51 C23 FBCD51
NVFBC_D52 A22 FBCD52
NVFBC_D53 C22 FBCD53
NVFBC_D54 C21 FBCD54
NVFBC_D55 B22 FBCD55
NVFBC_D56 E22 FBCD56
NVFBC_D57 D22 FBCD57
NVFBC_D58 D21 FBCD58
NVFBC_D59 E21 FBCD59
NVFBC_D60 E18 FBCD60
NVFBC_D61 D19 FBCD61
NVFBC_D62 D18 FBCD62
NVFBC_D63 E19 FBCD63
58 NVFBC_DQM0 NVFBC_DQM0 A4 FBCDQM0
58 NVFBC_DQM1 NVFBC_DQM1 E11 FBCDQM1
58 NVFBC_DQM2 NVFBC_DQM2 E5 FBCDQM2
58 NVFBC_DQM3 NVFBC_DQM3 C9 FBCDQM3
58 NVFBC_DQM4 NVFBC_DQM4 C28 FBCDQM4
58 NVFBC_DQM5 NVFBC_DQM5 F24 FBCDQM5
58 NVFBC_DQM6 NVFBC_DQM6 C24 FBCDQM6
58 NVFBC_DQM7 NVFBC_DQM7 E20 FBCDQM7
58 NVFBC_DQS0 NVFBC_DQS0 C5 FBCDQS_WP0
58 NVFBC_DQS1 NVFBC_DQS1 E10 FBCDQS_WP1
58 NVFBC_DQS2 NVFBC_DQS2 E5 FBCDQS_WP2
58 NVFBC_DQS3 NVFBC_DQS3 B8 FBCDQS_WP3
58 NVFBC_DQS4 NVFBC_DQS4 A29 FBCDQS_WP4
58 NVFBC_DQS5 NVFBC_DQS5 D25 FBCDQS_WP5
58 NVFBC_DQS6 NVFBC_DQS6 B25 FBCDQS_WP6
58 NVFBC_DQS7 NVFBC_DQS7 F20 FBCDQS_WP7
C6 FBCDQS_RN0
E9 FBCDQS_RN1
E6 FBCDQS_RN2
A8 FBCDQS_RN3
B29 FBCDQS_RN4
E25 FBCDQS_RN5
A25 FBCDQS_RN6
F21 FBCDQS_RN7
MEM_VDD
R895 10KOhm 1%
C1031 0.022uF/25V
NVFBC_VREF
R896 10KOhm 1%
C1032 0.022uF/25V
GND
GND
A28 FB_VREF2
FBVTT_0 AA23
FBVTT_1 AB23
FBVTT_2 H16
FBVTT_3 H17
FBVTT_4 J10
FBVTT_5 J23
FBVTT_6 J24
FBVTT_7 J9
FBVTT_8 K11
FBVTT_9 K12
FBVTT_10 K21
FBVTT_11 K22
FBVTT_12 K24
FBVTT_13 K9
FBVTT_14 L23
FBVTT_15 M23
FBVTT_16 T25
FBVTT_17 U25
C1016 0.01uF
C1017 0.01uF
C1018 0.01uF
C1019 0.01uF
C1020 0.001uF/50V
C1021 4.7UF
C1022 0.01uF
C1023 0.01uF
C1024 0.001uF/50V
C1025 0.001uF/50V
C1026 0.01uF
C1027 4.7UF
tp30
T327
MEM_VDD
L161
120Ohm/100Mhz
MEM_VDD
R892 37.4Ohm
FBCAL_PD_VDDQ
FBCAL_PU_GND
FBCAL_THRM_GND
R893 40.2Ohm
R894 37.4Ohm
GND
GND
NVFBC_A[0..11] 58
FBC_CMD0 C13 NVFBC_A3
FBC_CMD1 A16 NVFBC_A0
FBC_CMD2 A13 NVFBC_A2
FBC_CMD3 B17 NVFBC_A1
FBC_CMD4 B20 NVFBD_A3
FBC_CMD5 A19 NVFBD_A4
FBC_CMD6 B19 NVFBD_A5
FBC_CMD7 B14 NVFBC_CS#1
FBC_CMD8 E16 NVFBC_CS#0
FBC_CMD9 A14 NVFBC_WE#
FBC_CMD10 C15 NVFBC_BA0
FBC_CMD11 B16 NVFBC_CKE
FBC_CMD12 F17
FBC_CMD13 C19 NVFBD_A2
FBC_CMD14 D15 NVFBC_A12
FBC_CMD15 C17 NVFBC_RAS#
FBC_CMD16 A17 NVFBC_A11
FBC_CMD17 C16 NVFBC_A10
FBC_CMD18 D14 NVFBC_BA1
FBC_CMD19 F16 NVFBC_A8
FBC_CMD20 C14 NVFBC_A9
FBC_CMD21 C18 NVFBC_A6
FBC_CMD22 E14 NVFBC_A5
FBC_CMD23 B13 NVFBC_A7
FBC_CMD24 E15 NVFBC_A4
FBC_CMD25 F15 NVFBC_CAS#
FBC_CMD26 A20
NVFBD_A3 58
NVFBD_A4 58
NVFBD_A5 58
NVFBC_CS#1 58
NVFBC_CS#0 58
NVFBC_WE# 58
NVFBC_BA0 58
NVFBC_CKE 58
TPC28t T328
NVFBD_A2 58
NVFBC_A12 58
NVFBC_RAS# 58
NVFBC_A11
NVFBC_BA1 58
NVFBC_CAS# 58
TPC28t T329
FBC_CLK0 E13 NVFBC_CLK0
FBC_CLK0* F13 NVFBC_CLK0#
FBC_CLK1 F18 NVFBC_CLK1
FBC_CLK1* E17 NVFBC_CLK1#
NVFBC_CLK0 58
NVFBC_CLK0# 58
NVFBC_CLK1 58
NVFBC_CLK1# 58
3/11
+2.5VS
MEM_VDD
JP5
1MM_OPEN_5MIL
JP6
1MM_OPEN_5MIL
RFU4 C20
RFU5 D1
FBC_DEBUG F12
TPC28t T330
FBC_REFCLK B1 NVFBC_REFCLK
FBC_REFCLKN C1 NVFBC_REFCLK#
TPC28t T331
TPC28t T332
FBC_PLLVDD G8 FBC_PLLVDD
FBC_PLLAVDD G10 FBC_PLLAVDD
FBC_PLLGND G9
GND
FBCAL_PD_VDDQ K26 FBCAL_PD_VDDQ
FBCAL_PU_GND H26 FBCAL_PU_GND
FBCAL_TERM_GND J26 FBCAL_THRM_GND
+3VS
Place close to balls
L162
120Ohm/100Mhz
FBC_PLLVDD 3.3V
Imax= 15mA
C1028 470PF/50V
C1029 4700PF/25V
C1030 4.7UF/6.3V
GND
VGA_VCORE
Place close to balls
L163
120Ohm/100Mhz
FBC_PLLAVDD 1.2V
Imax= 15mA
C1033 470PF/50V
C1034 4700PF/25V
C1035 4.7UF/6.3V
GND


8Mx32
U102
NVFBA_D[0..31] 55
NVFBA_BA0
NVFBA_BA1
NVFBA_A[0..11]
NVFBA_CLK0
NVFBA_CLK0#
NVFBA_CKE
NVFBA_CS#0
NVFBA_RAS#
NVFBA_CAS#
NVFBA_WE#
NVFBA_DQS0
NVFBA_DQS2
NVFBA_DQS1
NVFBA_DQS3
NVFBA_DQM0
NVFBA_DQM2
NVFBA_DQM1
NVFBA_DQM3
NVFBAVREF0
NVFBA_A12
NVFBA_CS#1
MEM_VDD
GND
R897 120Ohm
R898 120Ohm
R899 120Ohm
R900 120Ohm
R901 10KOhm
R902 120Ohm
R903 120Ohm
R904 120Ohm
R905 120Ohm
Place near right VRAM >>
C1036 1000PF/16V
C1037 0.1uF/10V
C1038 0.1uF/10V
C1039 1UF/10V
C1040 1UF/10V
C1041 4.7UF/6.3V
C1042 1000PF/16V
C1043 0.1uF/10V
C1044 0.1uF/10V
C1045 1UF/10V
C1046 1UF/10V
C1047 4.7UF/6.3V
<< Place near left VRAM
C1050 1000PF/16V
C1051 0.1uF/10V
C1052 0.1uF/10V
C1053 1UF/10V
C1054 1UF/10V
C1055 4.7UF/6.3V
C1058 1000PF/16V
C1059 0.1uF/10V
C1060 0.1uF/10V
C1061 1UF/10V
C1062 1UF/10V
C1063 4.7UF/6.3V
R907 10KOhm 1%
C1049 0.1uF/10V
R909 6.8KOhm 1%
C1057 0.1uF/10V
VREF=0.5(FBVDDQ) FOR NV44
HY5DS573222F_33
VDD/VDDQ = 1.8V
Must use 350MHz
8Mx32
U103
NVFBA_D[32..63] 55
NVFBB_A5
NVFBB_A4
NVFBB_A3
NVFBB_A2
NVFBA_CLK1
NVFBA_CLK1#
NVFBA_DQS5
NVFBA_DQS4
NVFBA_DQS7
NVFBA_DQS6
NVFBA_DQM5
NVFBA_DQM4
NVFBA_DQM7
NVFBA_DQM6
NVFBAVREF1
R906 10KOhm 1%
C1048 0.1uF/10V
R908 6.8KOhm 1%
C1056 0.1uF/10V
VREF=0.5(FBVDDQ) FOR NV44
HY5DS573222F_33
VDD/VDDQ = 1.8V
Must use 350MHz


8Mx32
U104
8Mx32
U105
3/11
3/11
NVFBC_D[0..31] 56
NVFBC_D[32..63] 56
NVFBC_BA0
NVFBC_BA1
NVFBC_A[0..11]
NVFBC_CLK0
NVFBC_CLK0#
NVFBC_CKE
NVFBC_CS#0
NVFBC_RAS#
NVFBC_CAS#
NVFBC_WE#
NVFBC_DQS1
NVFBC_DQS0
NVFBC_DQS3
NVFBC_DQS2
NVFBC_DQM1
NVFBC_DQM0
NVFBC_DQM3
NVFBC_DQM2
NVFBCVREF0
NVFBC_A12
NVFBC_CS#1
NVFBC_CLK1
NVFBC_CLK1#
NVFBD_A5
NVFBD_A4
NVFBD_A3
NVFBD_A2
NVFBC_DQS4
NVFBC_DQS6
NVFBC_DQS5
NVFBC_DQS7
NVFBC_DQM4
NVFBC_DQM6
NVFBC_DQM5
NVFBC_DQM7
NVFBCVREF1
MEM_VDD
GND
R910 120Ohm
R911 120Ohm
R912 120Ohm
R913 120Ohm
R914 10KOhm
R915 120Ohm
R916 120Ohm
R917 120Ohm
R918 120Ohm
Place near right VRAM >>
C1064 1000PF/16V
C1065 0.1uF/10V
C1066 0.1uF/10V
C1067 1UF/10V
C1068 1UF/10V
C1069 4.7UF/6.3V
C1070 1000PF/16V
C1071 0.1uF/10V
C1072 0.1uF/10V
C1073 1UF/10V
C1074 1UF/10V
C1075 4.7UF/6.3V
<< Place near left VRAM
C1078 1000PF/16V
C1079 0.1uF/10V
C1080 0.1uF/10V
C1081 1UF/10V
C1082 1UF/10V
C1083 4.7UF/6.3V
C1086 1000PF/16V
C1087 0.1uF/10V
C1088 0.1uF/10V
C1089 1UF/10V
C1090 1UF/10V
C1091 4.7UF/6.3V
R919 10KOhm 1%
C1076 0.1uF/10V
R921 6.8KOhm 1%
C1084 0.1uF/10V
R920 10KOhm 1%
C1077 0.1uF/10V
R922 6.8KOhm 1%
C1085 0.1uF/10V
HY5DS573222F_33
VDD/VDDQ = 1.8V
Must use 350MHz
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Must use 350MHz
VREF=0.5(FBVDDQ) FOR NV44
VREF=0.5(FBVDDQ) FOR NV44