HuaQin Confidential

S540-15_NB8606_M/B Schematics Document

Intel WHL-U with DDR4 + N17S-G2

REV4.0

2019-01-02

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Page name: Cover page

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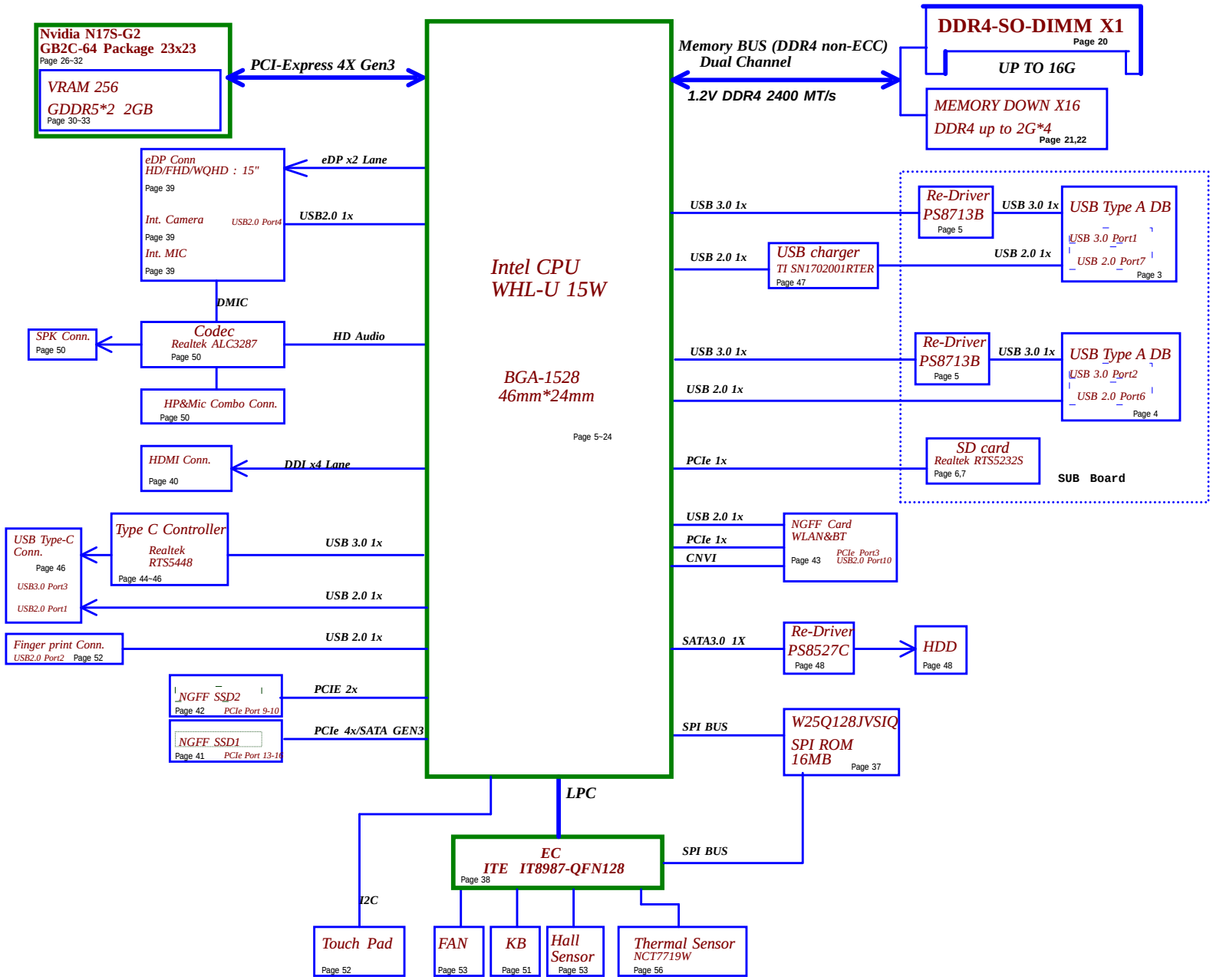

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Page name:	Block Diagram	
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MEM ID

HW_ID0	HW_ID1	HW_ID2	Description	Total
0	0	0	NA	NA
1	0	0	4x Micron 8Gbx16 MT40A512M16LY-075:E	4GB
0	1	0	4x Hynix 8Gbx16 H5AN8G6NCJR-VKC	4GB
1	1	0	4x Samsung 8Gbx16 K4A8G165WC-BCTD	4GB
0	0	1	4x 16Gb(reserve)	8GB
1	0	1	4x 16Gb(reserve)	8GB
0	1	1	4x 16Gb(reserve)	8GB

GPU ID

HW_ID3	HW_ID4	Description
0	0	UMA
1	1	N17S-G2
0	1	GTX1150 Max-Q
1	0	Reserve

Phase ID

HW_ID5	HW_ID6	Description
0	1	EVT
1	0	FVT
1	1	SIT
0	0	SVT&SOVP

Reserve ID

HW_ID7	Description
0	Reserve
1	Reserve

BOM Option Table

Item	BOM Option
DDR4 Memory Down	DDR4_MD
Discrete GPU Stuff	GPU
DGPU Serial Select	N16@/N17@
Not Stuff	ns
DDR4 Memory Down 4GB Group	DDR4_4G@
VRAM GDDR5 2GB Group	GDDR5_2GB@
GPU ID Select	GPU_ID
On board memory ID Select	Memory_ID
Finger Print component	FP

Voltage Rails

Power Plane	Description	S0	S3	S4/S5
+VBAT	Battery power supply	ON	ON	ON
+VSYS	AC or battery power rail for system	ON	ON	ON
+VCC3P3_LDO_OUT	3.3V LDO power rail	ON	ON	ON
+VCCRTC	Power supply for RTC	ON	ON	ON
+V5P0A	+5V Always power rail	ON	ON	ON
+V3P3A	+3.3V Always power rail	ON	ON	ON
+V1P8A	+1.8V Always power rail	ON	ON	ON
+V1P05A	+1.05V Always power rail	ON	ON	ON
+V1P2U_VDDQ	DDR4 +1.2V power rail	ON	ON	OFF
+V2P5U_VPP	DDR4 activating power supply	ON	ON	OFF
+VCCST	Sustain voltage for processor in Standby modes	ON	ON	OFF
+V5P0SX	System +5V power rail	ON	OFF	OFF
+V3P3SX	System +3.3V power rail	ON	OFF	OFF
+V1P8SX	System +1.8V power rail	ON	OFF	OFF
+VCCSTG_IO	CPU IO power rail	ON	OFF	OFF
+V_VDDQ_VTT	DDR +0.6V power rail for DDR terminator	ON	OFF	OFF
+VCC_SA	System Agent power rail	ON	OFF	OFF
+VCC_CORE	Processor IA Cores Power Rail	ON	OFF	OFF
+VCC_GT	Processor Graphics Power Rails	ON	OFF	OFF
+V1P8_V3P3_AON	+3.3V for N16/ +1.8V power rail for N17S(AON)	ON*1	OFF	OFF
+V1P8_V3P3_MAIN	+3.3V for N16/ +1.8V power rail for N17S(MAIN)	ON*1	OFF	OFF
+VGA_CORE	Core power for discrete GPU	ON*1	OFF	OFF
+1.0VGS	+1.05V for N16/ +1.0V power rail for N17S	ON*1	OFF	OFF
+1.35VGS	+1.35V power rail for GPU	ON*1	OFF	OFF

Note: 1.Above voltage rails are based AC mode.
2.ON*1 power rail is ON when DGPU is turned on.

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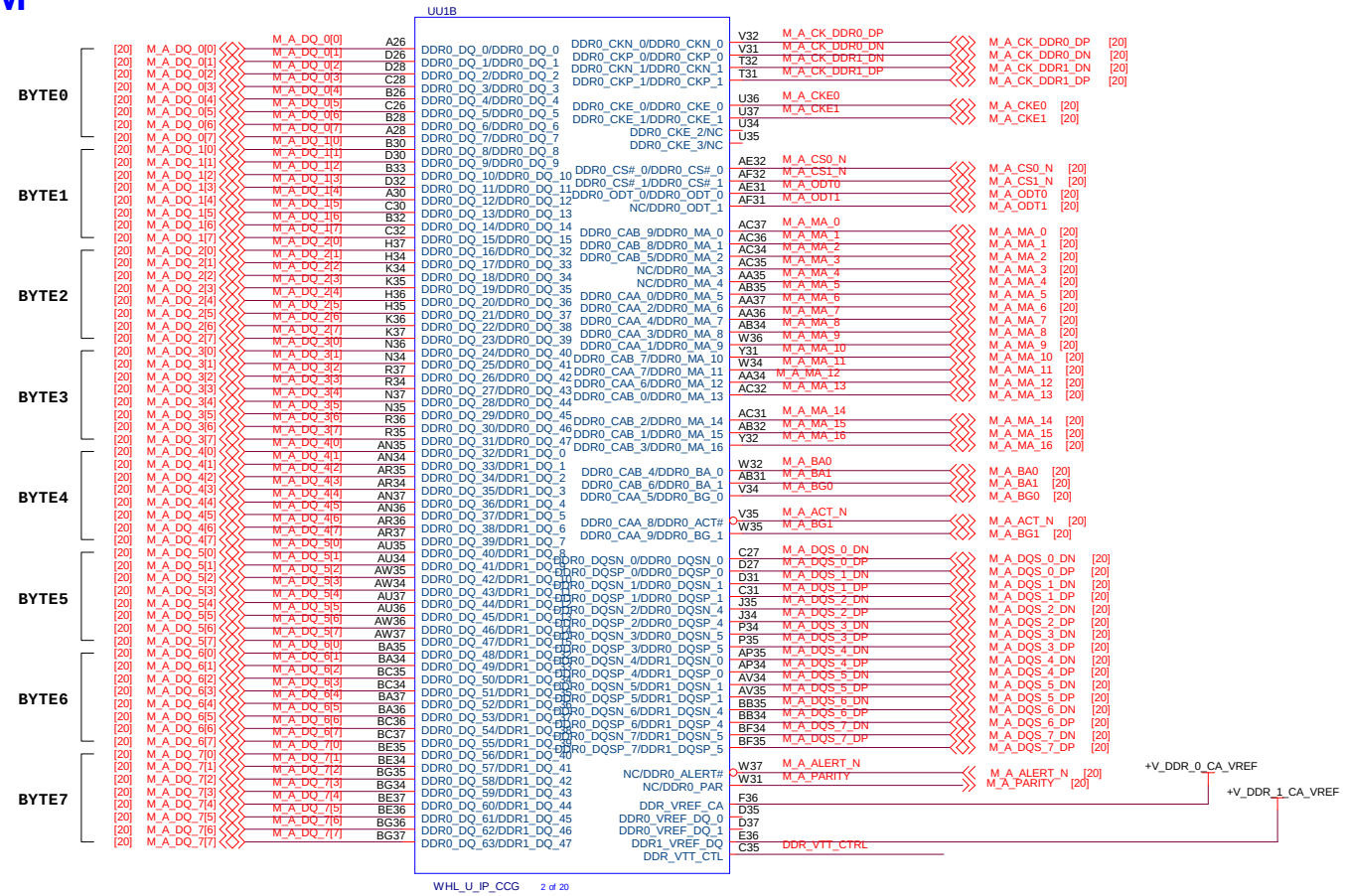
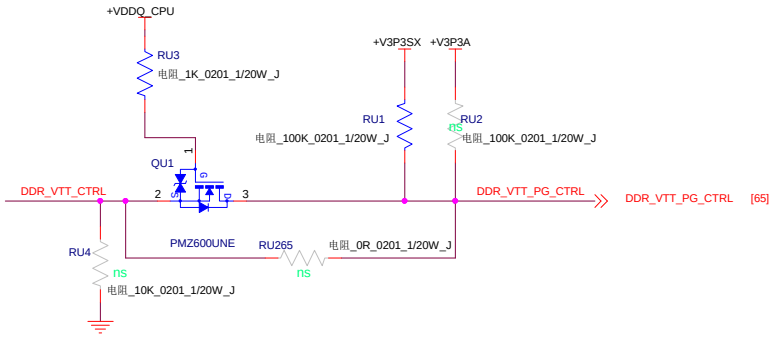
CHA_SODIMM





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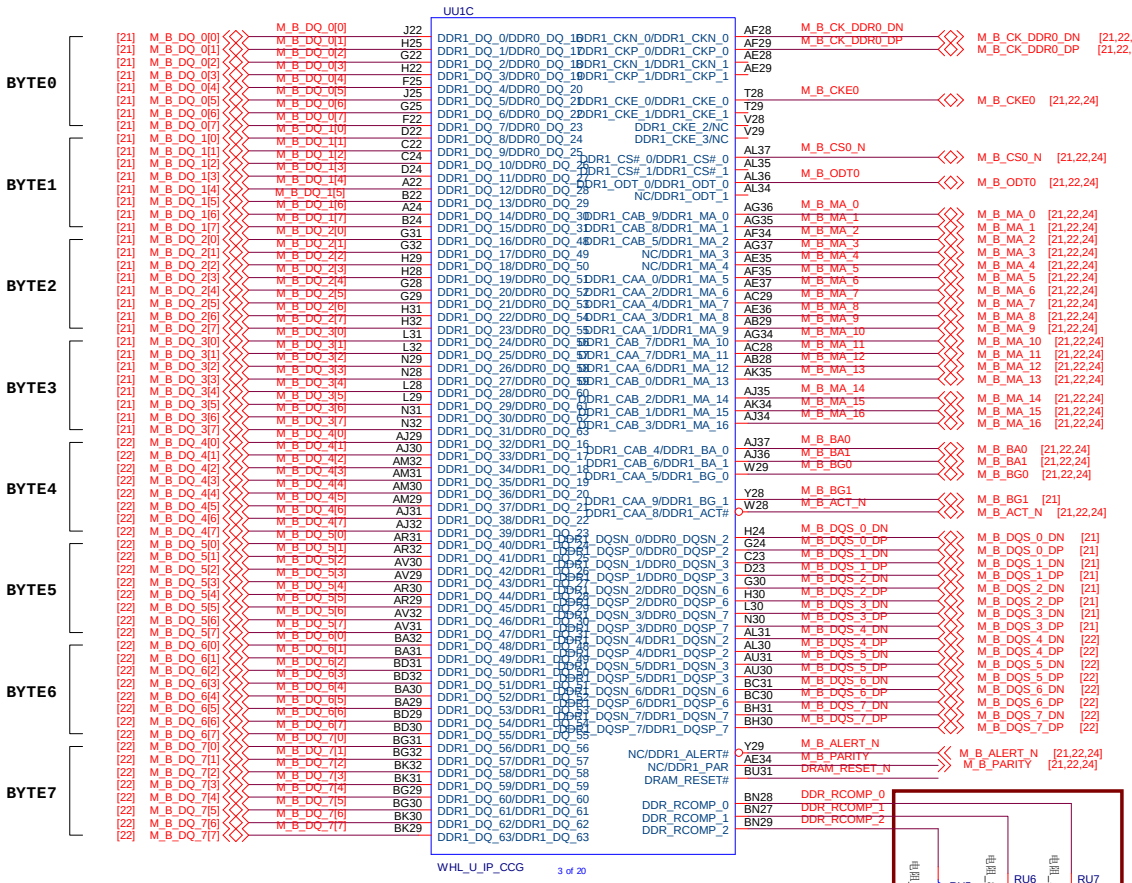
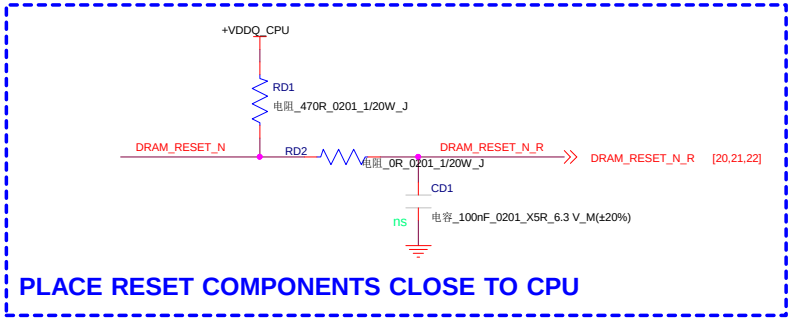
CHB_MD



1.change RU7 to 121Ω 2018 06 06



PLACE RESET COMPONENTS CLOSE TO CPU

BOM NOTE

CFL-U43e/WHLU42:
[0]:121
[1]:80.6
[2]:100
CNL-U22:
100/100/100

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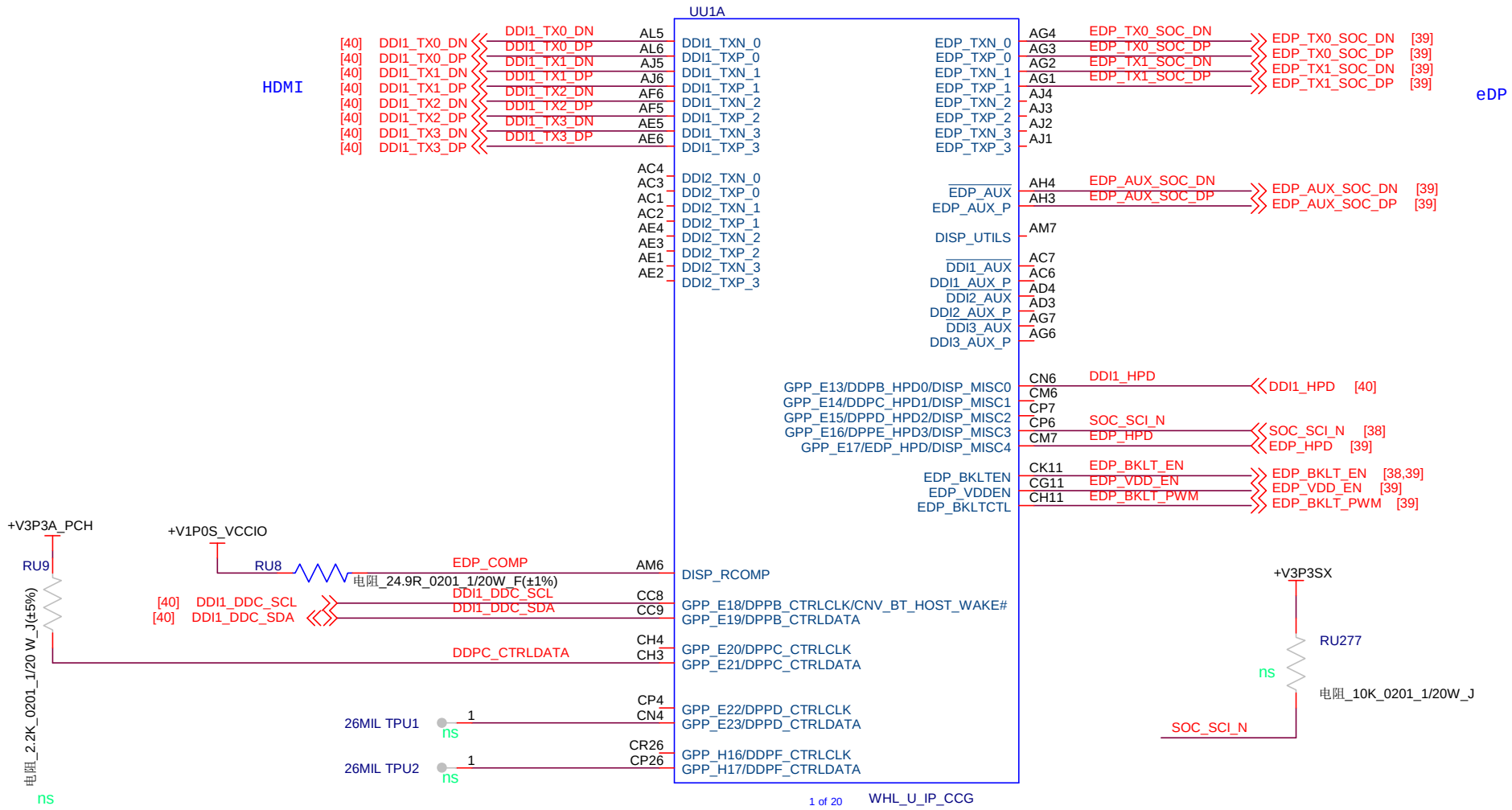

DISPLAY PORT STRAP

	Strap	How to Enable Port	How to Disable Port
DDI Port 1	DDPB_CTRLDATA(L12)	Pull up to 3.3 V	No Connect
DDI Port 2	DDPC_CTRLDATA(N8)	Pull up to 3.3 V	No Connect

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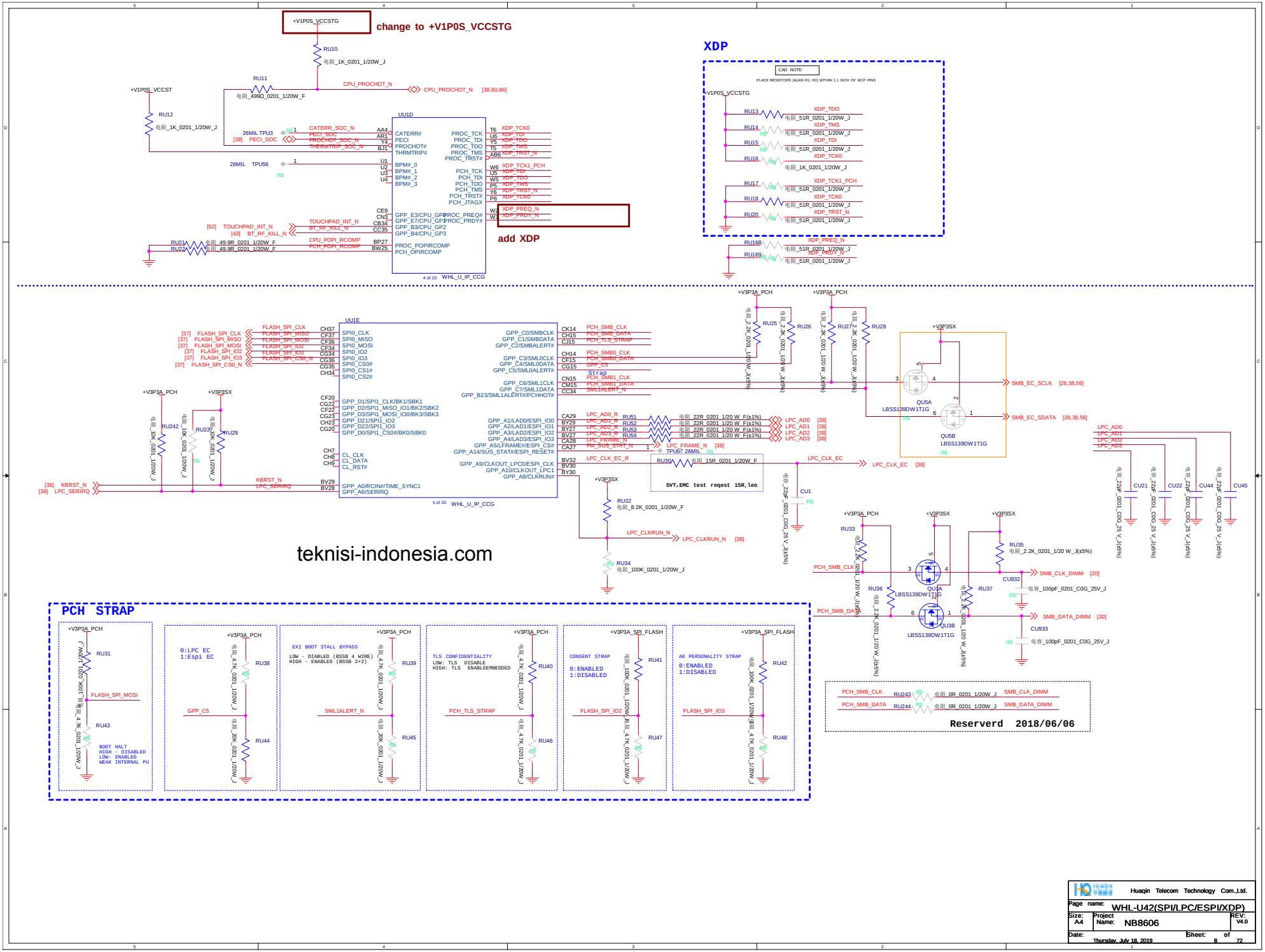
+V1P0S_VCCSTG
change to +V1P0S_VCCSTG
RU10
电阻_1K_0201_1/20W_J
RU11
电阻_499Ω_0201_1/20W_F
CPU_PROCHOT_N
CPU_PROCHOT_N [38,60,66]
+V1P0S_VCCST
RU12
电阻_1K_0201_1/20W_J
26MIL TPU3
[38] PECI_SOC
CATERR_SOC_N
PECI_SOC
PROCHOT_SOC_N
THERMTRIP_SOC_N
26MIL TPU56
UU1D
CATERR#
PECI
PROCHOT#
THRMTRIP#
BPM#_0
BPM#_1
BPM#_2
BPM#_3
PCH_TCK
PCH_TDI
PCH_TDO
PCH_TMS
PCH_TRST#
PCH_JTAGX
PROC_TCK
PROC_TDI
PROC_TDO
PROC_TMS
PROC_TRST#
XDP_TCK0
XDP_TDI
XDP_TDO
XDP_TMS
XDP_TRST_N
XDP_TCK1_PCH
XDP_PREQ_N
XDP_PRDY_N
GPP_E3/CPU_GP0
GPP_E7/CPU_GP1
GPP_B3/CPU_GP2
GPP_B4/CPU_GP3
PROC_POPIRCOMP
PCH_OPIRCOMP
add XDP
[52] TOUCHPAD_INT_N
[43] BT_RF_KILL_N
TOUCHPAD_INT_N
BT_RF_KILL_N
CPU_POPI_RCOMP
PCH_POPI_RCOMP
RU21 电阻_49.9R_0201_1/20W_F
RU22 电阻_49.9R_0201_1/20W_F
4 of 20 WHL_U_IP_CCG
XDP
CAD NOTE:
PLACE RESISTORS (ALIAS R1, R2) WITHIN 1.1 INCH OF MCP PINS
+V1P0S_VCCSTG
RU13 XDP_TDO 电阻_51R_0201_1/20W_J
RU14 XDP_TMS 电阻_51R_0201_1/20W_J
RU15 XDP_TDI 电阻_51R_0201_1/20W_J
RU16 XDP_TCK0 电阻_1K_0201_1/20W_J
RU17 XDP_TCK1_PCH 电阻_51R_0201_1/20W_J
RU18 XDP_TCK0 电阻_51R_0201_1/20W_J
RU20 XDP_TRST_N 电阻_51R_0201_1/20W_J
RU168 XDP_PREQ_N 电阻_51R_0201_1/20W_J
RU169 XDP_PRDY_N 电阻_51R_0201_1/20W_J
UU1E
SPI0_CLK
SPI0_MISO
SPI0_MOSI
SPI0_IO2
SPI0_IO3
SPI0_CS0#
SPI0_CS1#
SPI0_CS2#
FLASH_SPI_CLK
FLASH_SPI_MISO
FLASH_SPI_MOSI
FLASH_SPI_IO2
FLASH_SPI_IO3
FLASH_SPI_CS0_N
GPP_D1/SPI1_CLK/BK1/SBK1
GPP_D2/SPI1_MISO_IO1/BK2/SBK2
GPP_D3/SPI1_MOSI_IO0/BK3/SBK3
GPP_D21/SPI1_IO2
GPP_D22/SPI1_IO3
GPP_D0/SPI1_CS0#/BK0/SBK0
CL_CLK
CL_DATA
CL_RST#
GPP_A0/RCIN#/TIME_SYNC1
GPP_A6/SERIRQ
GPP_C0/SMBCLK
GPP_C1/SMBDATA
GPP_C2/SMBALERT#
GPP_C3/SML0CLK
GPP_C4/SML0DATA
GPP_C5/SML0ALERT#
GPP_C6/SML1CLK
GPP_C7/SML1DATA
GPP_B23/SML1ALERT#/PCHHOT#
GPP_A1/LAD0/ESPI_IO0
GPP_A2/LAD1/ESPI_IO1
GPP_A3/LAD2/ESPI_IO2
GPP_A4/LAD3/ESPI_IO3
GPP_A5/LFRAME#/ESPI_CS#
GPP_A14/SUS_STAT#/ESPI_RESET#
GPP_A9/CLKOUT_LPC0/ESPI_CLK
GPP_A10/CLKOUT_LPC1
GPP_A8/CLKRUN#
PCH_SMB_CLK
PCH_SMB_DATA
PCH_TLS_STRAP
PCH_SMB0_CLK
PCH_SMB0_DATA
GPP_C8
Strap
PCH_SMB1_CLK
PCH_SMB1_DATA
SML1ALERT_N
LPC_AD0_R
LPC_AD1_R
LPC_AD2_R
LPC_AD3_R
LPC_FRAME_N
PM_SUS_STAT_N
LPC_CLK_EC_R
5 of 20 WHL_U_IP_CCG
+V3P3A_PCH
+V3P3SX
RU25 电阻_2.2K_0201_1/20 W_J(±5%)
RU26 电阻_2.2K_0201_1/20 W_J(±5%)
RU27 电阻_2.2K_0201_1/20 W_J(±5%)
RU28 电阻_2.2K_0201_1/20 W_J(±5%)
QU5A LBSS139DW1T1G
QU5B LBSS139DW1T1G
SMB_EC_SCLK [26,38,56]
SMB_EC_SDATA [26,38,56]
RU242 电阻_10K_0201_1/20W_J
RU27 电阻_10K_0201_1/20W_J
RU29 电阻_10K_0201_1/20W_J
[38] KBRST_N
[38] LPC_SERIRQ
KBRST_N
LPC_SERIRQ
RU51 电阻_22R_0201_1/20 W_F(±1%)
RU52 电阻_22R_0201_1/20 W_F(±1%)
RU53 电阻_22R_0201_1/20 W_F(±1%)
RU54 电阻_22R_0201_1/20 W_F(±1%)
LPC_AD0 [38]
LPC_AD1 [38]
LPC_AD2 [38]
LPC_AD3 [38]
LPC_FRAME_N [38]
TPU67 26MIL
RU30 电阻_15R_0201_1/20W_F
SVT,EMC test reqest 15R,leo
LPC_CLK_EC
LPC_CLK_EC [38]
CU1 电容_22pF_0201_C0G_25 V_J(±5%)
RU32 电阻_8.2K_0201_1/20W_F
LPC_CLKRUN_N
LPC_CLKRUN_N [38]
RU34 电阻_100K_0201_1/20W_J
CU21 电容_22pF_0201_C0G_25 V_J(±5%)
CU22 电容_22pF_0201_C0G_25 V_J(±5%)
CU44 电容_22pF_0201_C0G_25 V_J(±5%)
CU45 电容_22pF_0201_C0G_25 V_J(±5%)
LPC_AD0
LPC_AD1
LPC_AD2
LPC_AD3
RU33 电阻_2.2K_0201_1/20 W_J(±5%)
RU35 电阻_2.2K_0201_1/20 W_J(±5%)
RU36 电阻_2.2K_0201_1/20 W_J(±5%)
RU37 电阻_2.2K_0201_1/20 W_J(±5%)
PCH_SMB_CLK
PCH_SMB_DATA
QU3A LBSS139DW1T1G
QU3B LBSS139DW1T1G
SMB_CLK_DIMM [20]
SMB_DATA_DIMM [20]
CU932 电容_100pF_0201_C0G_25V_J
CU933 电容_100pF_0201_C0G_25V_J
PCH STRAP
+V3P3A_PCH
RU31 电阻_4.7K_0201_1/20W_J
FLASH_SPI_MOSI
RU43 电阻_4.7K_0201_1/20W_J
BOOT HALT
HIGH - DISABLED
LOW- ENABLED
WEAK INTERNAL PU
0:LPC EC
1:Espi EC
RU38 电阻_4.7K_0201_1/20W_J
GPP_C5
RU44 电阻_20K_0201_1/20W_J
EXI BOOT STALL BYPASS
LOW - DIABLED (BSSB 4 WIRE)
HIGH - ENABLED (BSSB 2+2)
RU39 电阻_4.7K_0201_1/20W_J
SML1ALERT_N
RU45 电阻_20K_0201_1/20W_J
TLS CONFIDENTIALITY
LOW: TLS DISABLE
HIGH: TLS ENABLEEMBEDDED
RU40 电阻_4.7K_0201_1/20W_J
PCH_TLS_STRAP
RU46 电阻_4.7K_0201_1/20W_J
+V3P3A_SPI_FLASH
CONSENT STRAP
0:ENABLED
1:DISABLED
RU41 电阻_100K_0201_1/20W_J
FLASH_SPI_IO2
RU47 电阻_4.7K_0201_1/20W_J
A0 PERSONALITY STRAP
0:ENABLED
1:DISABLED
RU42 电阻_100K_0201_1/20W_J
FLASH_SPI_IO3
RU48 电阻_4.7K_0201_1/20W_J
PCH_SMB_CLK
RU243 电阻_0R_0201_1/20W_J
SMB_CLK_DIMM
PCH_SMB_DATA
RU244 电阻_0R_0201_1/20W_J
SMB_DATA_DIMM
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Huaqin Telecom Technology Com.,Ltd.
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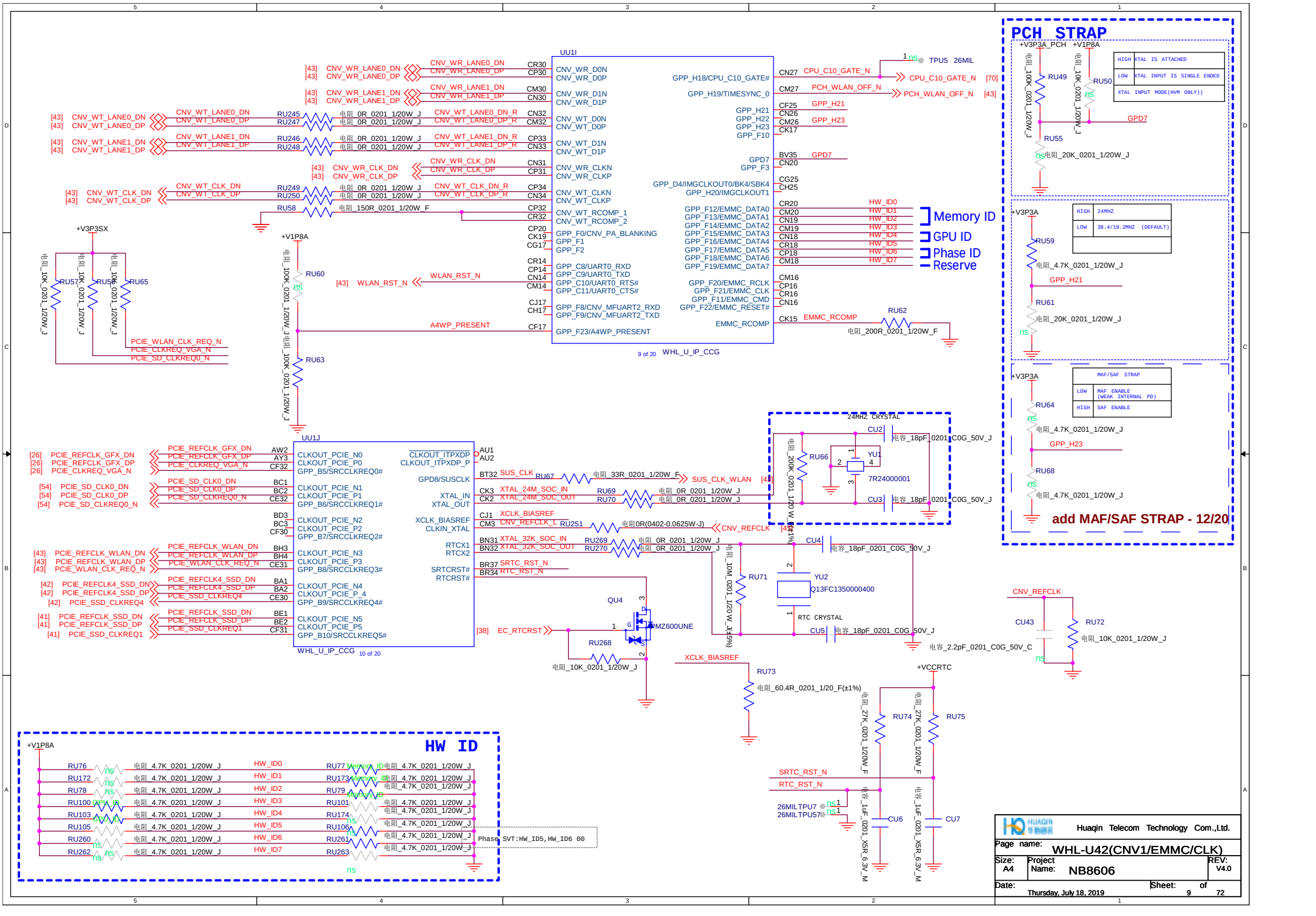
PCH STRAP
+V3P3A_PCH +V1P8A
RU49 RU50 GPD7 RU55
HIGH XTAL IS ATTACHED
LOW XTAL INPUT IS SINGLE ENDED
XTAL INPUT MODE(HVM ONLY))
+V3P3A
RU59 GPP_H21 RU61
HIGH 24MHZ
LOW 38.4/19.2MHZ (DEFAULT)
+V3P3A
RU64 GPP_H23 RU68
MAF/SAF STRAP
LOW MAF ENABLE (WEAK INTERNAL PD)
HIGH SAF ENABLE
add MAF/SAF STRAP - 12/20
UU1I
9 of 20 WHL_U_IP_CCG
CPU_C10_GATE_N
PCH_WLAN_OFF_N
GPD7
HW_ID0
HW_ID1
HW_ID2
HW_ID3
HW_ID4
HW_ID5
HW_ID6
HW_ID7
Memory ID
GPU ID
Phase ID
Reserve
EMMC_RCOMP
WLAN_RST_N
A4WP_PRESENT
UU1J
10 of 20 WHL_U_IP_CCG
24MHZ CRYSTAL
7R24000001
Q13FC1350000400
RTC CRYSTAL
SUS_CLK_WLAN
CNV_REFCLK
XCLK_BIASREF
EC_RTCRST
SRTC_RST_N
RTC_RST_N
HW ID
Phase SVT:HW_ID5,HW_ID6 00
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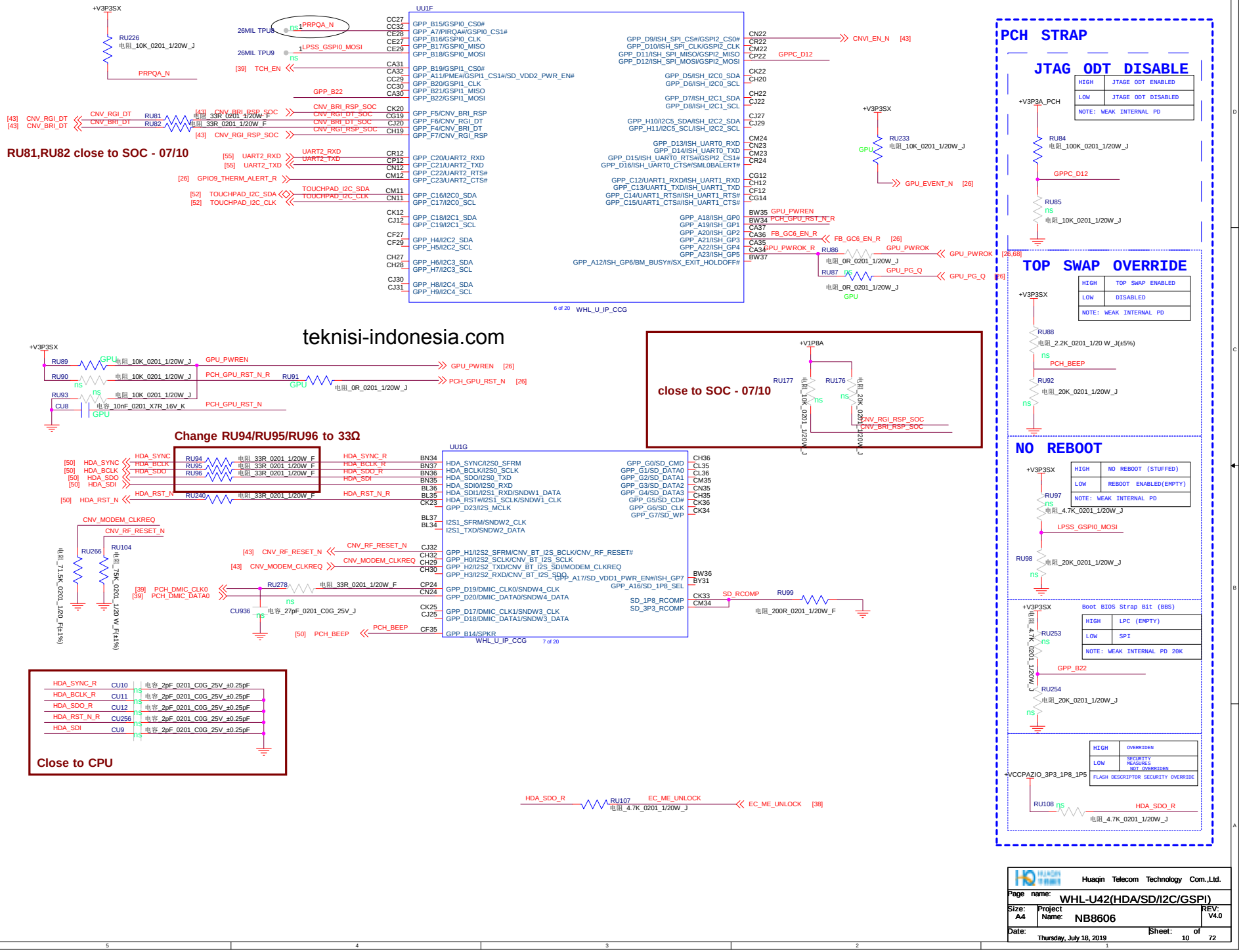
+V3P3SX
RU226
电阻_10K_0201_1/20W_J
PRPQA_N
26MIL TPU8
PRPQA_N
26MIL TPU9
LPSS_GSPI0_MOSI
[39] TCH_EN
UU1F
GPP_B15/GSPI0_CS0#
GPP_A7/PIRQA#/GSPI0_CS1#
GPP_B16/GSPI0_CLK
GPP_B17/GSPI0_MISO
GPP_B18/GSPI0_MOSI
GPP_B19/GSPI1_CS0#
GPP_A11/PME#/GSPI1_CS1#/SD_VDD2_PWR_EN#
GPP_B20/GSPI1_CLK
GPP_B21/GSPI1_MISO
GPP_B22/GSPI1_MOSI
GPP_B22
CNV_BRI_RSP_SOC
CNV_RGI_DT_SOC
CNV_BRI_DT_SOC
CNV_RGI_RSP_SOC
GPP_F5/CNV_BRI_RSP
GPP_F6/CNV_RGI_DT
GPP_F4/CNV_BRI_DT
GPP_F7/CNV_RGI_RSP
[43] CNV_RGI_DT
[43] CNV_BRI_DT
CNV_RGI_DT
CNV_BRI_DT
RU81
RU82
电阻_33R_0201_1/20W_F
电阻_33R_0201_1/20W_F
[43] CNV_RGI_RSP_SOC
RU81,RU82 close to SOC - 07/10
[55] UART2_RXD
[55] UART2_TXD
[26] GPIO9_THERM_ALERT_R
UART2_RXD
UART2_TXD
GPP_C20/UART2_RXD
GPP_C21/UART2_TXD
GPP_C22/UART2_RTS#
GPP_C23/UART2_CTS#
[52] TOUCHPAD_I2C_SDA
[52] TOUCHPAD_I2C_CLK
TOUCHPAD_I2C_SDA
TOUCHPAD_I2C_CLK
GPP_C16/I2C0_SDA
GPP_C17/I2C0_SCL
GPP_C18/I2C1_SDA
GPP_C19/I2C1_SCL
GPP_H4/I2C2_SDA
GPP_H5/I2C2_SCL
GPP_H6/I2C3_SDA
GPP_H7/I2C3_SCL
GPP_H8/I2C4_SDA
GPP_H9/I2C4_SCL
6 of 20
WHL_U_IP_CCG
GPP_D9/ISH_SPI_CS#/GSPI2_CS0#
GPP_D10/ISH_SPI_CLK/GSPI2_CLK
GPP_D11/ISH_SPI_MISO/GSPI2_MISO
GPP_D12/ISH_SPI_MOSI/GSPI2_MOSI
GPP_D5/ISH_I2C0_SDA
GPP_D6/ISH_I2C0_SCL
GPP_D7/ISH_I2C1_SDA
GPP_D8/ISH_I2C1_SCL
GPP_H10/I2C5_SDA/ISH_I2C2_SDA
GPP_H11/I2C5_SCL/ISH_I2C2_SCL
GPP_D13/ISH_UART0_RXD
GPP_D14/ISH_UART0_TXD
GPP_D15/ISH_UART0_RTS#/GSPI2_CS1#
GPP_D16/ISH_UART0_CTS#/SML0BALERT#
GPP_C12/UART1_RXD/ISH_UART1_RXD
GPP_C13/UART1_TXD/ISH_UART1_TXD
GPP_C14/UART1_RTS#/ISH_UART1_RTS#
GPP_C15/UART1_CTS#/ISH_UART1_CTS#
GPP_A18/ISH_GP0
GPP_A19/ISH_GP1
GPP_A20/ISH_GP2
GPP_A21/ISH_GP3
GPP_A22/ISH_GP4
GPP_A23/ISH_GP5
GPP_A12/ISH_GP6/BM_BUSY#/SX_EXIT_HOLDOFF#
CNVI_EN_N [43]
GPPC_D12
+V3P3SX
RU233
电阻_10K_0201_1/20W_J
GPU
GPU_EVENT_N [26]
GPU_PWREN
PCH_GPU_RST_N_R
FB_GC6_EN_R
GPU_PWROK_R
RU86
电阻_0R_0201_1/20W_J
GPU_PWROK
[25,68]
RU87
GPU_PG_Q
[26]
电阻_0R_0201_1/20W_J
GPU
PCH STRAP
JTAG ODT DISABLE
HIGH JTAGE ODT ENABLED
LOW JTAGE ODT DISABLED
NOTE: WEAK INTERNAL PD
+V3P3A_PCH
RU84
电阻_100K_0201_1/20W_J
GPPC_D12
RU85
电阻_10K_0201_1/20W_J
TOP SWAP OVERRIDE
HIGH TOP SWAP ENABLED
LOW DISABLED
NOTE: WEAK INTERNAL PD
+V3P3SX
RU88
电阻_2.2K_0201_1/20 W_J(±5%)
PCH_BEEP
RU92
电阻_20K_0201_1/20W_J
NO REBOOT
HIGH NO REBOOT (STUFFED)
LOW REBOOT ENABLED(EMPTY)
NOTE: WEAK INTERNAL PD
+V3P3SX
RU97
电阻_4.7K_0201_1/20W_J
LPSS_GSPI0_MOSI
RU98
电阻_20K_0201_1/20W_J
Boot BIOS Strap Bit (BBS)
HIGH LPC (EMPTY)
LOW SPI
NOTE: WEAK INTERNAL PD 20K
+V3P3SX
电阻_4.7K_0201_1/20W_J
RU253
GPP_B22
RU254
电阻_20K_0201_1/20W_J
HIGH OVERRIDEN
LOW SECURITY MEASURES NOT OVERRIDEN
FLASH DESCRIPTOR SECURITY OVERRIDE
+VCCPAZIO_3P3_1P8_1P5
RU108
电阻_4.7K_0201_1/20W_J
HDA_SDO_R
teknisi-indonesia.com
+V3P3SX
RU89
RU90
RU93
CU8
电阻_10K_0201_1/20W_J
电阻_10K_0201_1/20W_J
电阻_10K_0201_1/20W_J
电容_10nF_0201_X7R_16V_K
GPU_PWREN
PCH_GPU_RST_N_R
RU91
电阻_0R_0201_1/20W_J
PCH_GPU_RST_N
GPU_PWREN [26]
PCH_GPU_RST_N [26]
+V1P8A
close to SOC - 07/10
RU177
RU176
电阻_10K_0201_1/20W_J
电阻_20K_0201_1/20W_J
CNV_RGI_RSP_SOC
CNV_BRI_RSP_SOC
Change RU94/RU95/RU96 to 33Ω
UU1G
[50] HDA_SYNC
[50] HDA_BCLK
[50] HDA_SDO
[50] HDA_SDI
[50] HDA_RST_N
RU94
RU95
RU96
RU240
电阻_33R_0201_1/20W_F
HDA_SYNC_R
HDA_BCLK_R
HDA_SDO_R
HDA_SDI
HDA_RST_N_R
HDA_SYNC/I2S0_SFRM
HDA_BCLK/I2S0_SCLK
HDA_SDO/I2S0_TXD
HDA_SDI0/I2S0_RXD
HDA_SDI1/I2S1_RXD/SNDW1_DATA
HDA_RST#/I2S1_SCLK/SNDW1_CLK
GPP_D23/I2S_MCLK
I2S1_SFRM/SNDW2_CLK
I2S1_TXD/SNDW2_DATA
GPP_G0/SD_CMD
GPP_G1/SD_DATA0
GPP_G2/SD_DATA1
GPP_G3/SD_DATA2
GPP_G4/SD_DATA3
GPP_G5/SD_CD#
GPP_G6/SD_CLK
GPP_G7/SD_WP
CNV_MODEM_CLKREQ
CNV_RF_RESET_N
RU266
RU104
电阻_71.5K_0201_1/20_F(±1%)
电阻_75K_0201_1/20 W_F(±1%)
[43] CNV_RF_RESET_N
[43] CNV_MODEM_CLKREQ
GPP_H1/I2S2_SFRM/CNV_BT_I2S_BCLK/CNV_RF_RESET#
GPP_H0/I2S2_SCLK/CNV_BT_I2S_SCLK
GPP_H2/I2S2_TXD/CNV_BT_I2S_SDI/MODEM_CLKREQ
GPP_H3/I2S2_RXD/CNV_BT_I2S_SDO
[39] PCH_DMIC_CLK0
[39] PCH_DMIC_DATA0
RU278
电阻_33R_0201_1/20W_F
CU936
电容_27pF_0201_C0G_25V_J
GPP_D19/DMIC_CLK0/SNDW4_CLK
GPP_D20/DMIC_DATA0/SNDW4_DATA
GPP_D17/DMIC_CLK1/SNDW3_CLK
GPP_D18/DMIC_DATA1/SNDW3_DATA
[50] PCH_BEEP
PCH_BEEP
GPP_B14/SPKR
7 of 20
WHL_U_IP_CCG
GPP_A17/SD_VDD1_PWR_EN#/ISH_GP7
GPP_A16/SD_1P8_SEL
SD_1P8_RCOMP
SD_3P3_RCOMP
SD_RCOMP
RU99
电阻_200R_0201_1/20W_F
HDA_SYNC_R
HDA_BCLK_R
HDA_SDO_R
HDA_RST_N_R
HDA_SDI
CU10
CU11
CU12
CU256
CU9
电容_2pF_0201_C0G_25V_±0.25pF
Close to CPU
HDA_SDO_R
RU107
电阻_4.7K_0201_1/20W_J
EC_ME_UNLOCK
EC_ME_UNLOCK [38]
Huaqin Telecom Technology Com.,Ltd.
Page name: WHL-U42(HDA/SD/I2C/GSPI)
Size: A4
Project Name: NB8606
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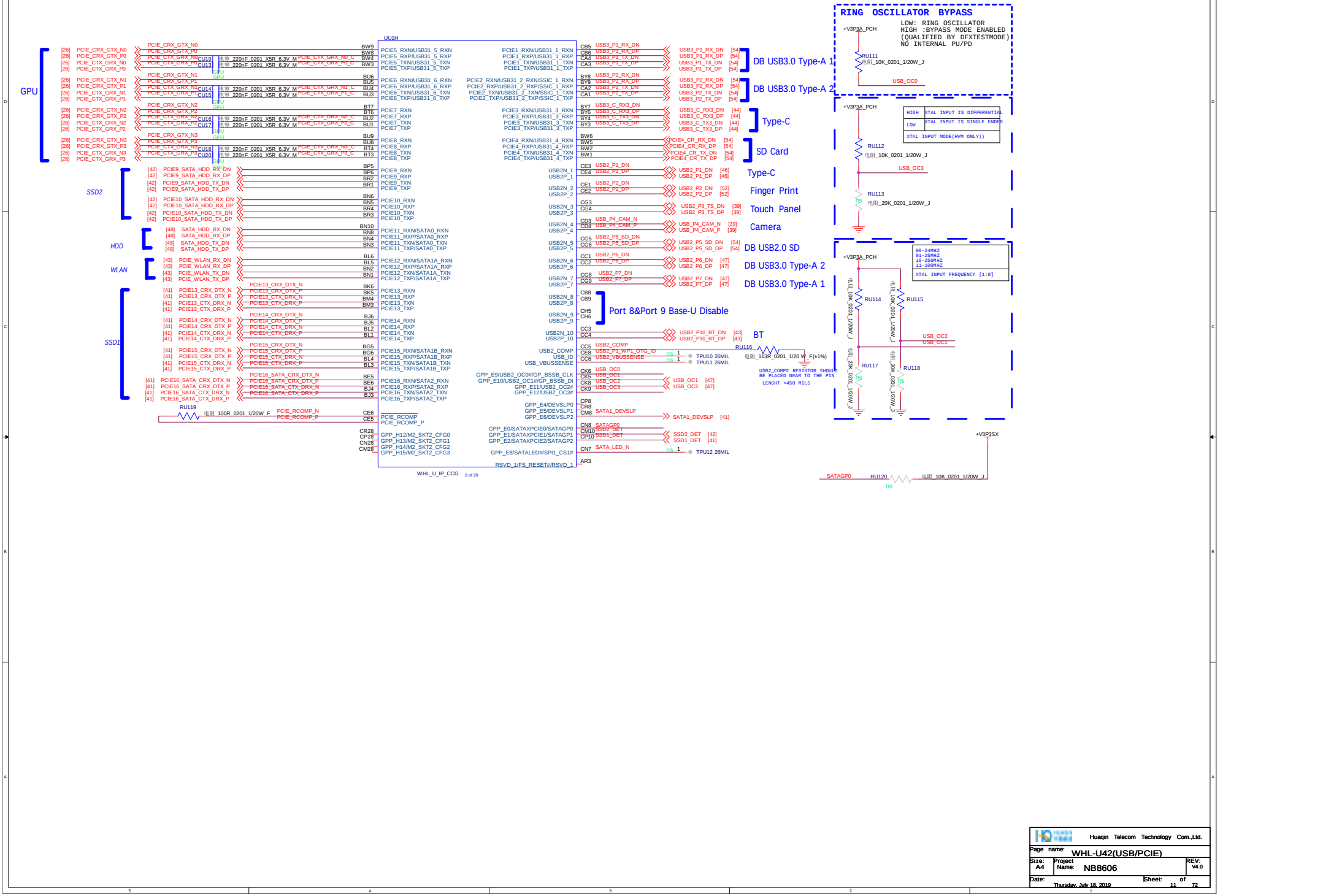

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Size: A4	Project Name: NB8606	REV: V4.0	
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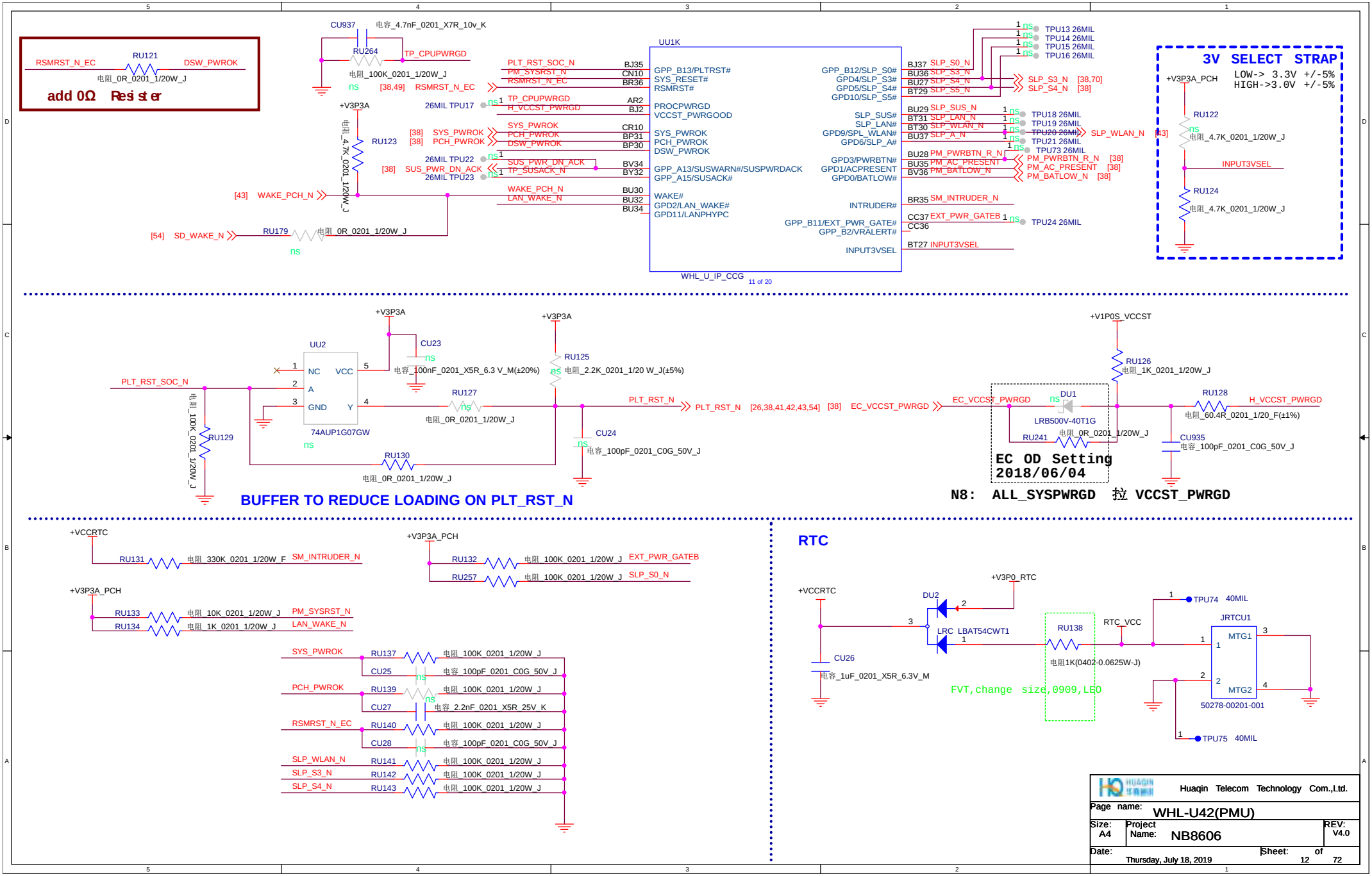
RSMRST_N_EC
RU121
DSW_PWROK
电阻_0R_0201_1/20W_J
add 0Ω Resister
CU937
电容_4.7nF_0201_X7R_10v_K
RU264
TP_CPUPWRGD
电阻_100K_0201_1/20W_J
[38,49] RSMRST_N_EC
+V3P3A
RU123
电阻_4.7K_0201_1/20W_J
[43] WAKE_PCH_N
[54] SD_WAKE_N
RU179
电阻_0R_0201_1/20W_J
26MIL TPU17
26MIL TPU22
26MIL TPU23
[38] SYS_PWROK
[38] PCH_PWROK
[38] SUS_PWR_DN_ACK
PLT_RST_SOC_N
PM_SYSRST_N
RSMRST_N_EC
TP_CPUPWRGD
H_VCCST_PWRGD
SYS_PWROK
PCH_PWROK
DSW_PWROK
SUS_PWR_DN_ACK
TP_SUSACK_N
WAKE_PCH_N
LAN_WAKE_N
UU1K
GPP_B13/PLTRST#
SYS_RESET#
RSMRST#
PROCPWRGD
VCCST_PWRGOOD
SYS_PWROK
PCH_PWROK
DSW_PWROK
GPP_A13/SUSWARN#/SUSPWRDACK
GPP_A15/SUSACK#
WAKE#
GPD2/LAN_WAKE#
GPD11/LANPHYPC
BJ35
CN10
BR36
AR2
BJ2
CR10
BP31
BP30
BV34
BV32
BU30
BU32
BU34
GPP_B12/SLP_S0#
GPD4/SLP_S3#
GPD5/SLP_S4#
GPD10/SLP_S5#
SLP_SUS#
SLP_LAN#
GPD9/SPL_WLAN#
GPD6/SLP_A#
GPD3/PWRBTN#
GPD1/ACPRESENT
GPD0/BATLOW#
INTRUDER#
GPP_B11/EXT_PWR_GATE#
GPP_B2/VRALERT#
INPUT3VSEL
BJ37 SLP_S0_N
BU36 SLP_S3_N
BU27 SLP_S4_N
BT29 SLP_S5_N
BU29 SLP_SUS_N
BT31 SLP_LAN_N
BT30 SLP_WLAN_N
BU37 SLP_A_N
BU28 PM_PWRBTN_R_N
BU35 PM_AC_PRESENT
BV36 PM_BATLOW_N
BR35 SM_INTRUDER_N
CC37 EXT_PWR_GATEB
CC36
BT27 INPUT3VSEL
WHL_U_IP_CCG
11 of 20
TPU13 26MIL
TPU14 26MIL
TPU15 26MIL
TPU16 26MIL
SLP_S3_N [38,70]
SLP_S4_N [38]
TPU18 26MIL
TPU19 26MIL
TPU20 26MIL
TPU21 26MIL
TPU73 26MIL
SLP_WLAN_N [43]
PM_PWRBTN_R_N [38]
PM_AC_PRESENT [38]
PM_BATLOW_N [38]
TPU24 26MIL
3V SELECT STRAP
+V3P3A_PCH
LOW-> 3.3V +/-5%
HIGH->3.0V +/-5%
RU122
电阻_4.7K_0201_1/20W_J
INPUT3VSEL
RU124
电阻_4.7K_0201_1/20W_J
UU2
NC
VCC
A
GND
Y
74AUP1G07GW
CU23
电容_100nF_0201_X5R_6.3 V_M(±20%)
RU125
电阻_2.2K_0201_1/20 W_J(±5%)
RU127
电阻_0R_0201_1/20W_J
RU129
电阻_100K_0201_1/20W_J
RU130
电阻_0R_0201_1/20W_J
CU24
电容_100pF_0201_C0G_50V_J
PLT_RST_N
PLT_RST_N [26,38,41,42,43,54] [38]
EC_VCCST_PWRGD
BUFFER TO REDUCE LOADING ON PLT_RST_N
+V1P0S_VCCST
RU126
电阻_1K_0201_1/20W_J
DU1
LRB500V-40T1G
RU241
电阻_0R_0201_1/20W_J
RU128
电阻_60.4R_0201_1/20_F(±1%)
H_VCCST_PWRGD
CU935
电容_100pF_0201_C0G_50V_J
EC OD Setting
2018/06/04
N8: ALL_SYSPWRGD 拉 VCCST_PWRGD
+VCCRTC
RU131
电阻_330K_0201_1/20W_F
SM_INTRUDER_N
+V3P3A_PCH
RU132
电阻_100K_0201_1/20W_J
EXT_PWR_GATEB
RU257
电阻_100K_0201_1/20W_J
SLP_S0_N
RU133
电阻_10K_0201_1/20W_J
PM_SYSRST_N
RU134
电阻_1K_0201_1/20W_J
LAN_WAKE_N
SYS_PWROK
RU137
电阻_100K_0201_1/20W_J
CU25
电容_100pF_0201_C0G_50V_J
PCH_PWROK
RU139
电阻_100K_0201_1/20W_J
CU27
电容_2.2nF_0201_X5R_25V_K
RSMRST_N_EC
RU140
电阻_100K_0201_1/20W_J
CU28
电容_100pF_0201_C0G_50V_J
SLP_WLAN_N
RU141
电阻_100K_0201_1/20W_J
SLP_S3_N
RU142
电阻_100K_0201_1/20W_J
SLP_S4_N
RU143
电阻_100K_0201_1/20W_J
RTC
+V3P0_RTC
DU2
LRC LBAT54CWT1
RU138
电阻1K(0402-0.0625W-J)
RTC_VCC
CU26
电容_1uF_0201_X5R_6.3V_M
FVT,change size,0909,LEO
TPU74 40MIL
JRTCU1
MTG1
MTG2
50278-00201-001
TPU75 40MIL
Huaqin Telecom Technology Com.,Ltd.
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Size: A4
Project Name: NB8606
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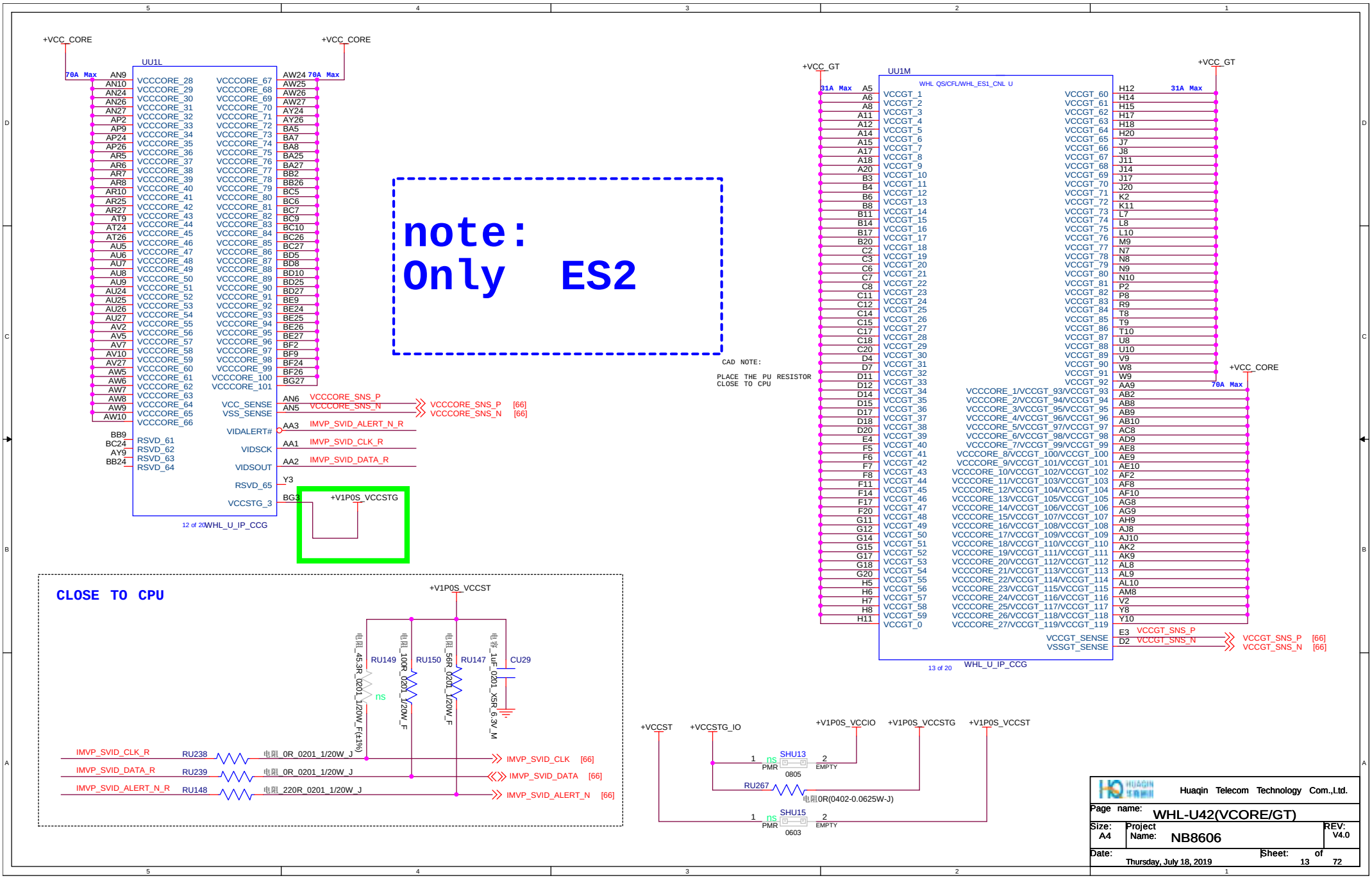
+VCC_CORE
+VCC_CORE
UU1L
70A Max
AN9
AN10
AN24
AN26
AN27
AP2
AP9
AP24
AP26
AR5
AR6
AR7
AR8
AR10
AR25
AR27
AT9
AT24
AT26
AU5
AU6
AU7
AU8
AU9
AU24
AU25
AU26
AU27
AV2
AV5
AV7
AV10
AV27
AW5
AW6
AW7
AW8
AW9
AW10
VCCCORE_28
VCCCORE_29
VCCCORE_30
VCCCORE_31
VCCCORE_32
VCCCORE_33
VCCCORE_34
VCCCORE_35
VCCCORE_36
VCCCORE_37
VCCCORE_38
VCCCORE_39
VCCCORE_40
VCCCORE_41
VCCCORE_42
VCCCORE_43
VCCCORE_44
VCCCORE_45
VCCCORE_46
VCCCORE_47
VCCCORE_48
VCCCORE_49
VCCCORE_50
VCCCORE_51
VCCCORE_52
VCCCORE_53
VCCCORE_54
VCCCORE_55
VCCCORE_56
VCCCORE_57
VCCCORE_58
VCCCORE_59
VCCCORE_60
VCCCORE_61
VCCCORE_62
VCCCORE_63
VCCCORE_64
VCCCORE_65
VCCCORE_66
VCCCORE_67
VCCCORE_68
VCCCORE_69
VCCCORE_70
VCCCORE_71
VCCCORE_72
VCCCORE_73
VCCCORE_74
VCCCORE_75
VCCCORE_76
VCCCORE_77
VCCCORE_78
VCCCORE_79
VCCCORE_80
VCCCORE_81
VCCCORE_82
VCCCORE_83
VCCCORE_84
VCCCORE_85
VCCCORE_86
VCCCORE_87
VCCCORE_88
VCCCORE_89
VCCCORE_90
VCCCORE_91
VCCCORE_92
VCCCORE_93
VCCCORE_94
VCCCORE_95
VCCCORE_96
VCCCORE_97
VCCCORE_98
VCCCORE_99
VCCCORE_100
VCCCORE_101
AW24
AW25
AW26
AW27
AY24
AY26
BA5
BA7
BA8
BA25
BA27
BB2
BB26
BC5
BC6
BC7
BC9
BC10
BC26
BC27
BD5
BD8
BD10
BD25
BD27
BE9
BE24
BE25
BE26
BE27
BF2
BF9
BF24
BF26
BG27
AN6
AN5
VCC_SENSE
VSS_SENSE
VCCORE_SNS_P
VCCORE_SNS_N
VCCORE_SNS_P [66]
VCCORE_SNS_N [66]
AA3
IMVP_SVID_ALERT_N_R
VIDALERT#
AA1
IMVP_SVID_CLK_R
VIDSCK
AA2
IMVP_SVID_DATA_R
VIDSOUT
Y3
RSVD_65
BG3
VCCSTG_3
+V1P0S_VCCSTG
BB9
BC24
AY9
BB24
RSVD_61
RSVD_62
RSVD_63
RSVD_64
12 of 20
WHL_U_IP_CCG
note:
Only ES2
CAD NOTE:
PLACE THE PU RESISTOR
CLOSE TO CPU
+VCC_GT
UU1M
WHL QS/CFL/WHL_ES1_CNL U
31A Max
A5
A6
A8
A11
A12
A14
A15
A17
A18
A20
B3
B4
B6
B8
B11
B14
B17
B20
C2
C3
C6
C7
C8
C11
C12
C14
C15
C17
C18
C20
D4
D7
D11
D12
D14
D15
D17
D18
D20
E4
F5
F6
F7
F8
F11
F14
F17
F20
G11
G12
G14
G15
G17
G18
G20
H5
H6
H7
H8
H11
VCCGT_1
VCCGT_2
VCCGT_3
VCCGT_4
VCCGT_5
VCCGT_6
VCCGT_7
VCCGT_8
VCCGT_9
VCCGT_10
VCCGT_11
VCCGT_12
VCCGT_13
VCCGT_14
VCCGT_15
VCCGT_16
VCCGT_17
VCCGT_18
VCCGT_19
VCCGT_20
VCCGT_21
VCCGT_22
VCCGT_23
VCCGT_24
VCCGT_25
VCCGT_26
VCCGT_27
VCCGT_28
VCCGT_29
VCCGT_30
VCCGT_31
VCCGT_32
VCCGT_33
VCCGT_34
VCCGT_35
VCCGT_36
VCCGT_37
VCCGT_38
VCCGT_39
VCCGT_40
VCCGT_41
VCCGT_42
VCCGT_43
VCCGT_44
VCCGT_45
VCCGT_46
VCCGT_47
VCCGT_48
VCCGT_49
VCCGT_50
VCCGT_51
VCCGT_52
VCCGT_53
VCCGT_54
VCCGT_55
VCCGT_56
VCCGT_57
VCCGT_58
VCCGT_59
VCCGT_0
VCCGT_60
VCCGT_61
VCCGT_62
VCCGT_63
VCCGT_64
VCCGT_65
VCCGT_66
VCCGT_67
VCCGT_68
VCCGT_69
VCCGT_70
VCCGT_71
VCCGT_72
VCCGT_73
VCCGT_74
VCCGT_75
VCCGT_76
VCCGT_77
VCCGT_78
VCCGT_79
VCCGT_80
VCCGT_81
VCCGT_82
VCCGT_83
VCCGT_84
VCCGT_85
VCCGT_86
VCCGT_87
VCCGT_88
VCCGT_89
VCCGT_90
VCCGT_91
VCCGT_92
VCCGT_93
VCCGT_94
VCCGT_95
VCCGT_96
VCCGT_97
VCCGT_98
VCCGT_99
VCCGT_100
VCCGT_101
VCCGT_102
VCCGT_103
VCCGT_104
VCCGT_105
VCCGT_106
VCCGT_107
VCCGT_108
VCCGT_109
VCCGT_110
VCCGT_111
VCCGT_112
VCCGT_113
VCCGT_114
VCCGT_115
VCCGT_116
VCCGT_117
VCCGT_118
VCCGT_119
H12
H14
H15
H17
H18
H20
J7
J8
J11
J14
J17
J20
K2
K11
L7
L8
L10
M9
N7
N8
N9
N10
P2
P8
R9
T8
T9
T10
U8
U10
V9
W8
W9
AA9
AB2
AB8
AB9
AB10
AC8
AD9
AE8
AE9
AE10
AF2
AF8
AF10
AG8
AG9
AH9
AJ8
AJ10
AK2
AK9
AL8
AL9
AL10
AM8
V2
Y8
Y10
E3
D2
VCCGT_SNS_P
VCCGT_SNS_N
VCCGT_SNS_P [66]
VCCGT_SNS_N [66]
VCCGT_SENSE
VSSGT_SENSE
13 of 20
WHL_U_IP_CCG
+VCC_CORE
70A Max
CLOSE TO CPU
+V1P0S_VCCST
电阻_45.3R_0201_1/20W_F(±1%)
电阻_100R_0201_1/20W_F
电阻_56R_0201_1/20W_F
电容_1uF_0201_X5R_6.3V_M
RU149
RU150
RU147
CU29
ns
IMVP_SVID_CLK_R
RU238
电阻_0R_0201_1/20W_J
IMVP_SVID_CLK [66]
IMVP_SVID_DATA_R
RU239
电阻_0R_0201_1/20W_J
IMVP_SVID_DATA [66]
IMVP_SVID_ALERT_N_R
RU148
电阻_220R_0201_1/20W_J
IMVP_SVID_ALERT_N [66]
+VCCST
+VCCSTG_IO
+V1P0S_VCCIO
+V1P0S_VCCSTG
+V1P0S_VCCST
SHU13
SHU15
PMR
EMPTY
0805
0603
RU267
电阻0R(0402-0.0625W-J)
Huaqin Telecom Technology Com.,Ltd.
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Size: A4
Project Name: NB8606
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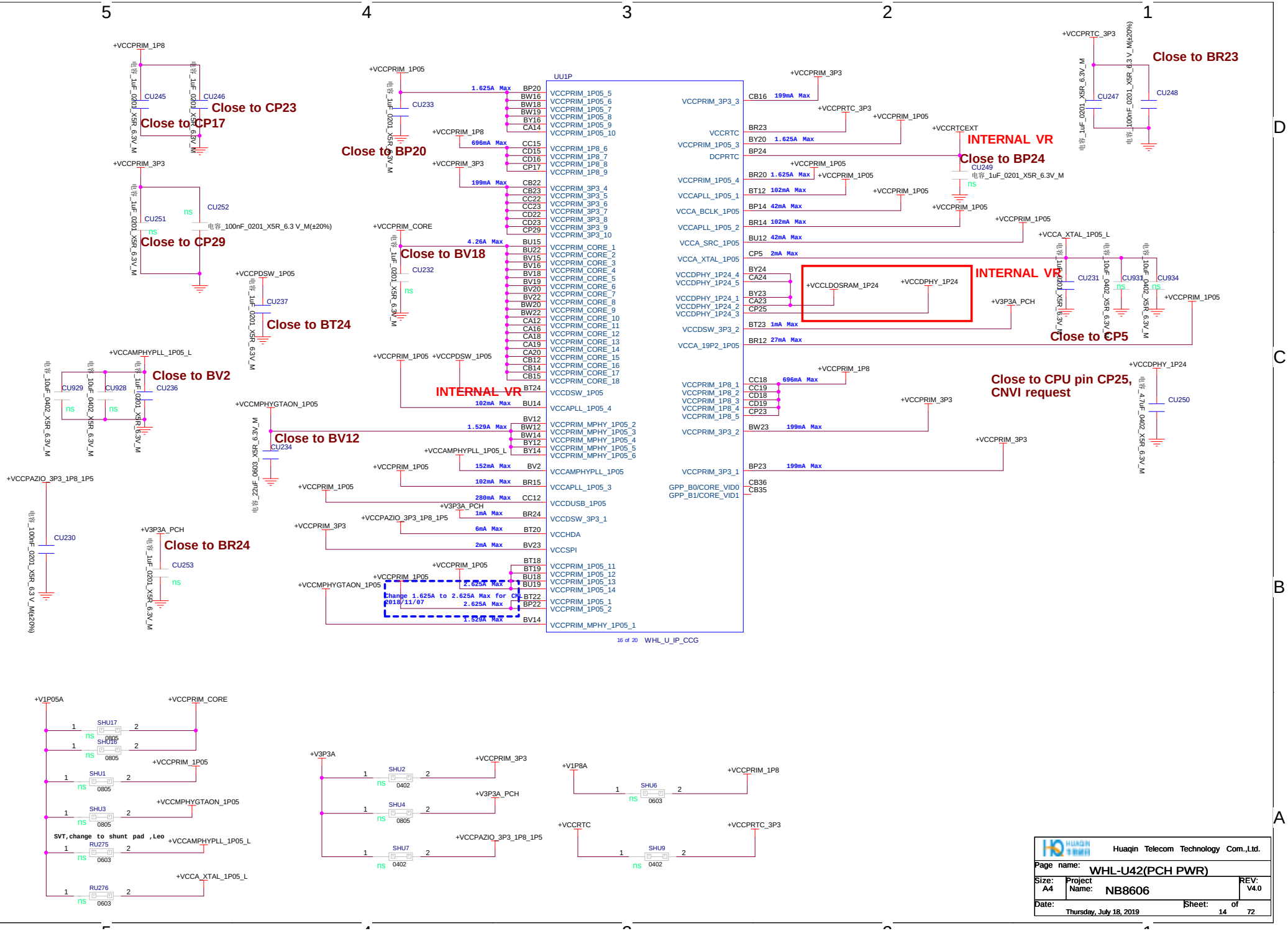
UU1P
WHL_U_IP_CCG
Close to CP23
Close to CP17
Close to CP29
Close to BP20
Close to BV18
Close to BT24
Close to BV2
Close to BV12
Close to BR24
Close to BR23
Close to BP24
Close to CP5
INTERNAL VR
INTERNAL VR
Close to CPU pin CP25, CNVI request
Change 1.625A to 2.625A Max for CNL 2018/11/07
SVT,change to shunt pad ,Leo
Huaqin Telecom Technology Com.,Ltd.
Page name: WHL-U42(PCH PWR)
Size: A4
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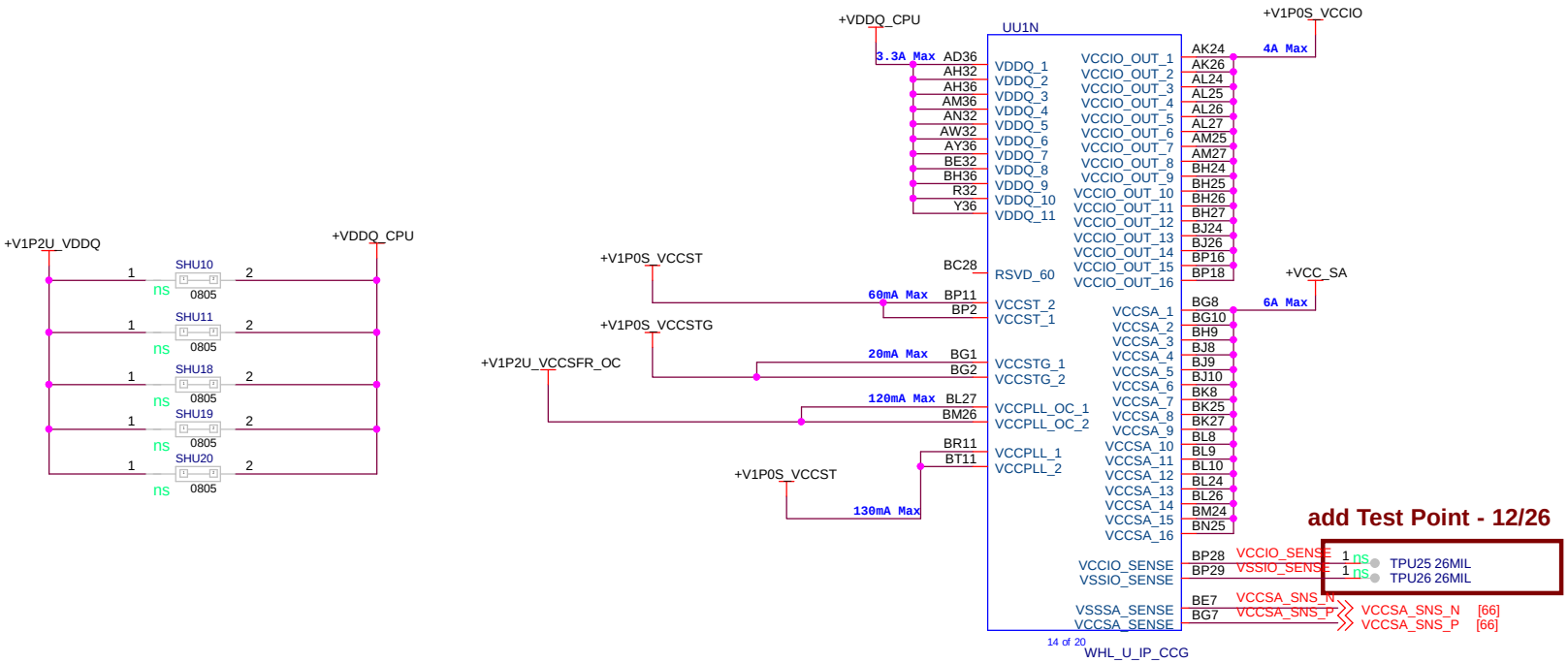
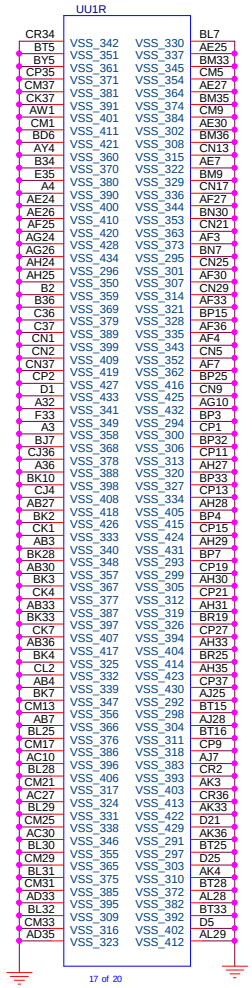
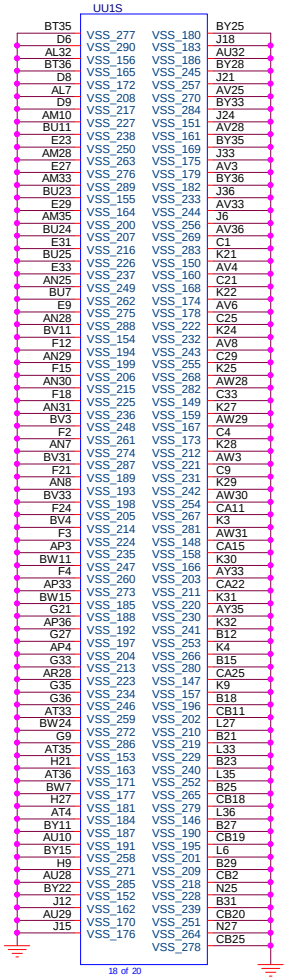
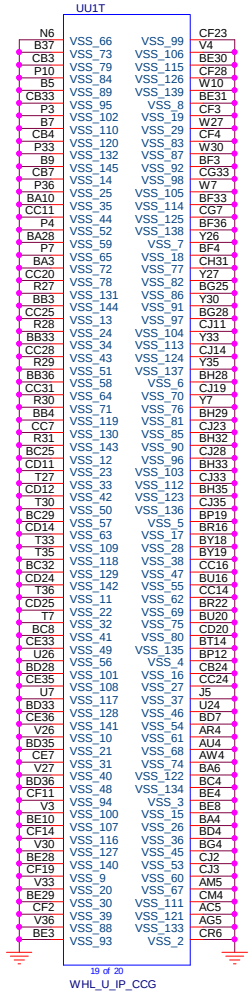


add Test Point - 12/26

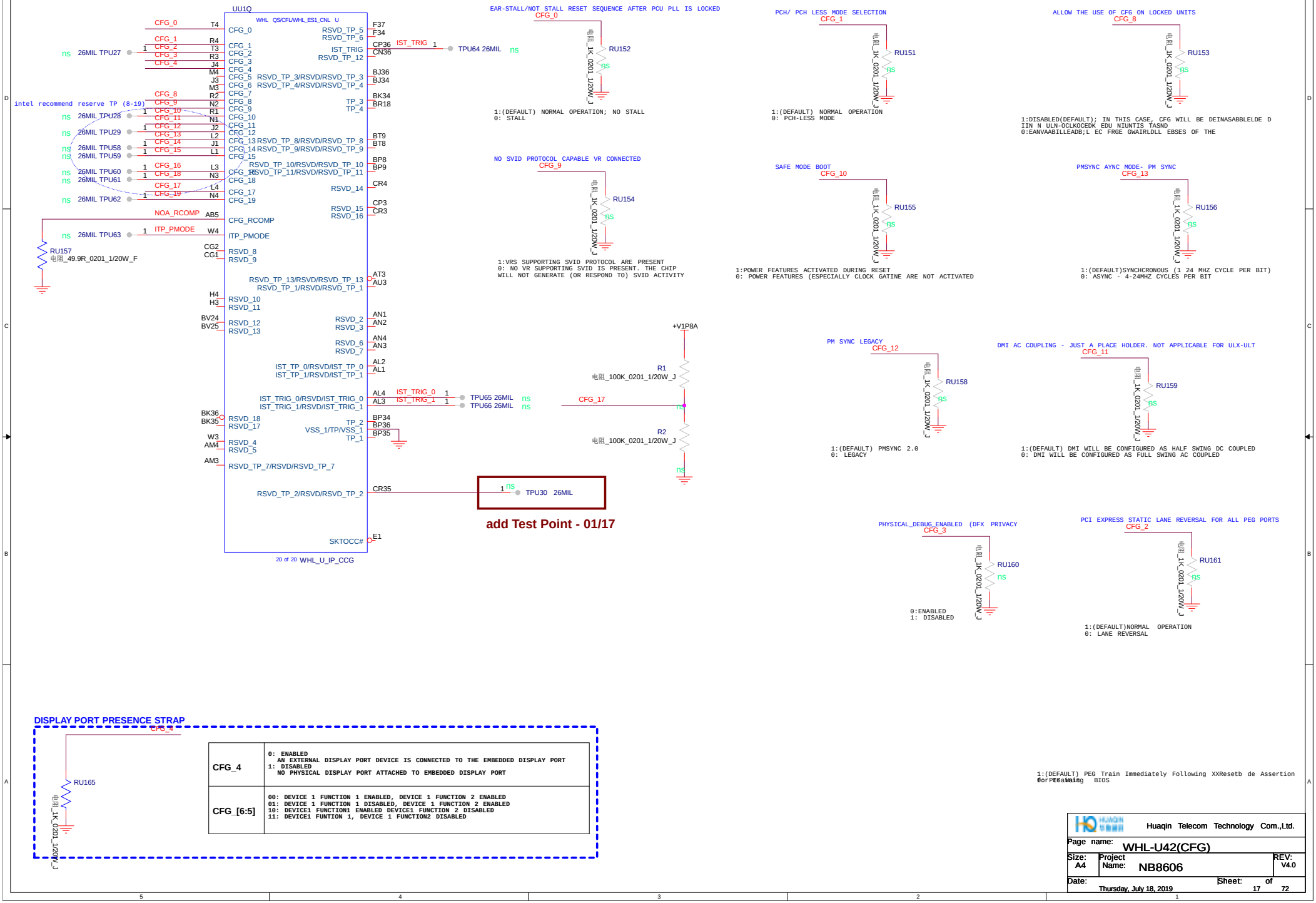
Huaqin Telecom Technology Com.,Ltd.		
Page name: WHL-U42(VCC/VDDQ)		
Size: A4	Project Name: NB8606	REV: V4.0
Date: Thursday, July 18, 2019	Sheet: 15 of 72	







Huaqin Telecom Technology Com.,Ltd.		
Page name: WHL-U42(VSS)		
Size: A4	Project Name: NB8606	REV: V4.0
Date: Thursday, July 18, 2019	Sheet: 16 of 72	


UU1Q
WHL QS/CFL/WHL_ES1_CNL U
CFG_0
CFG_1
CFG_2
CFG_3
CFG_4
CFG_5 RSVD_TP_3/RSVD/RSVD_TP_3
CFG_6 RSVD_TP_4/RSVD/RSVD_TP_4
CFG_7
CFG_8
CFG_9
CFG_10
CFG_11
CFG_12
CFG_13 RSVD_TP_8/RSVD/RSVD_TP_8
CFG_14 RSVD_TP_9/RSVD/RSVD_TP_9
CFG_15
RSVD_TP_10/RSVD/RSVD_TP_10
CFG_16 RSVD_TP_11/RSVD/RSVD_TP_11
CFG_17
CFG_18
CFG_19
CFG_RCOMP
ITP_PMODE
RSVD_8
RSVD_9
RSVD_TP_13/RSVD/RSVD_TP_13
RSVD_TP_1/RSVD/RSVD_TP_1
RSVD_10
RSVD_11
RSVD_12
RSVD_13
RSVD_14
RSVD_15
RSVD_16
RSVD_2
RSVD_3
RSVD_6
RSVD_7
IST_TP_0/RSVD/IST_TP_0
IST_TP_1/RSVD/IST_TP_1
IST_TRIG_0/RSVD/IST_TRIG_0
IST_TRIG_1/RSVD/IST_TRIG_1
RSVD_18
RSVD_17
RSVD_4
RSVD_5
RSVD_TP_7/RSVD/RSVD_TP_7
RSVD_TP_2/RSVD/RSVD_TP_2
IST_TRIG
RSVD_TP_12
RSVD_TP_5
RSVD_TP_6
RSVD_TP_3
RSVD_TP_4
TP_3
TP_4
TP_2
VSS_1/TP/VSS_1
TP_1
SKTOCC#
20 of 20 WHL_U_IP_CCG
intel recommend reserve TP (8-19)
26MIL TPU27
26MIL TPU28
26MIL TPU29
26MIL TPU58
26MIL TPU59
26MIL TPU60
26MIL TPU61
26MIL TPU62
26MIL TPU63
RU157
电阻_49.9R_0201_1/20W_F
IST_TRIG
TPU64 26MIL
IST_TRIG_0
IST_TRIG_1
TPU65 26MIL
TPU66 26MIL
TPU30 26MIL
add Test Point - 01/17
+V1P8A
R1
电阻_100K_0201_1/20W_J
R2
电阻_100K_0201_1/20W_J
CFG_17
EAR-STALL/NOT STALL RESET SEQUENCE AFTER PCU PLL IS LOCKED
CFG_0
RU152
1:(DEFAULT) NORMAL OPERATION; NO STALL
0: STALL
PCH/ PCH LESS MODE SELECTION
CFG_1
RU151
1:(DEFAULT) NORMAL OPERATION
0: PCH-LESS MODE
ALLOW THE USE OF CFG ON LOCKED UNITS
CFG_8
RU153
1:DISABLED(DEFAULT); IN THIS CASE, CFG WILL BE DEINASABBLELDE D
IIN N ULN-OCLKOCEDK EDU NIUNTIS TASND
0:EANVAABILLEADB;L EC FRGE GWAIRLDLL EBSES OF THE
NO SVID PROTOCOL CAPABLE VR CONNECTED
CFG_9
RU154
1:VRS SUPPORTING SVID PROTOCOL ARE PRESENT
0: NO VR SUPPORTING SVID IS PRESENT. THE CHIP
WILL NOT GENERATE (OR RESPOND TO) SVID ACTIVITY
SAFE MODE BOOT
CFG_10
RU155
1:POWER FEATURES ACTIVATED DURING RESET
0: POWER FEATURES (ESPECIALLY CLOCK GATINE ARE NOT ACTIVATED
PMSYNC AYNC MODE- PM SYNC
CFG_13
RU156
1:(DEFAULT)SYNCHCRONOUS (1 24 MHZ CYCLE PER BIT)
0: ASYNC - 4-24MHZ CYCLES PER BIT
PM SYNC LEGACY
CFG_12
RU158
1:(DEFAULT) PMSYNC 2.0
0: LEGACY
DMI AC COUPLING - JUST A PLACE HOLDER. NOT APPLICABLE FOR ULX-ULT
CFG_11
RU159
1:(DEFAULT) DMI WILL BE CONFIGURED AS HALF SWING DC COUPLED
0: DMI WILL BE CONFIGURED AS FULL SWING AC COUPLED
PHYSICAL_DEBUG_ENABLED (DFX PRIVACY
CFG_3
RU160
0:ENABLED
1: DISABLED
PCI EXPRESS STATIC LANE REVERSAL FOR ALL PEG PORTS
CFG_2
RU161
1:(DEFAULT)NORMAL OPERATION
0: LANE REVERSAL
1:(DEFAULT) PEG Train Immediately Following XXResetb de Assertion
0:Waiting BIOS
DISPLAY PORT PRESENCE STRAP
CFG_4
RU165
CFG_4
0: ENABLED
AN EXTERNAL DISPLAY PORT DEVICE IS CONNECTED TO THE EMBEDDED DISPLAY PORT
1: DISABLED
NO PHYSICAL DISPLAY PORT ATTACHED TO EMBEDDED DISPLAY PORT
CFG_[6:5]
00: DEVICE 1 FUNCTION 1 ENABLED, DEVICE 1 FUNCTION 2 ENABLED
01: DEVICE 1 FUNCTION 1 DISABLED, DEVICE 1 FUNCTION 2 ENABLED
10: DEVICE1 FUNCTION1 ENABLED DEVICE1 FUNCTION 2 DISABLED
11: DEVICE1 FUNTION 1, DEVICE 1 FUNCTION2 DISABLED
Huaqin Telecom Technology Com.,Ltd.
Page name: WHL-U42(CFG)
Size: A4
Project Name: NB8606
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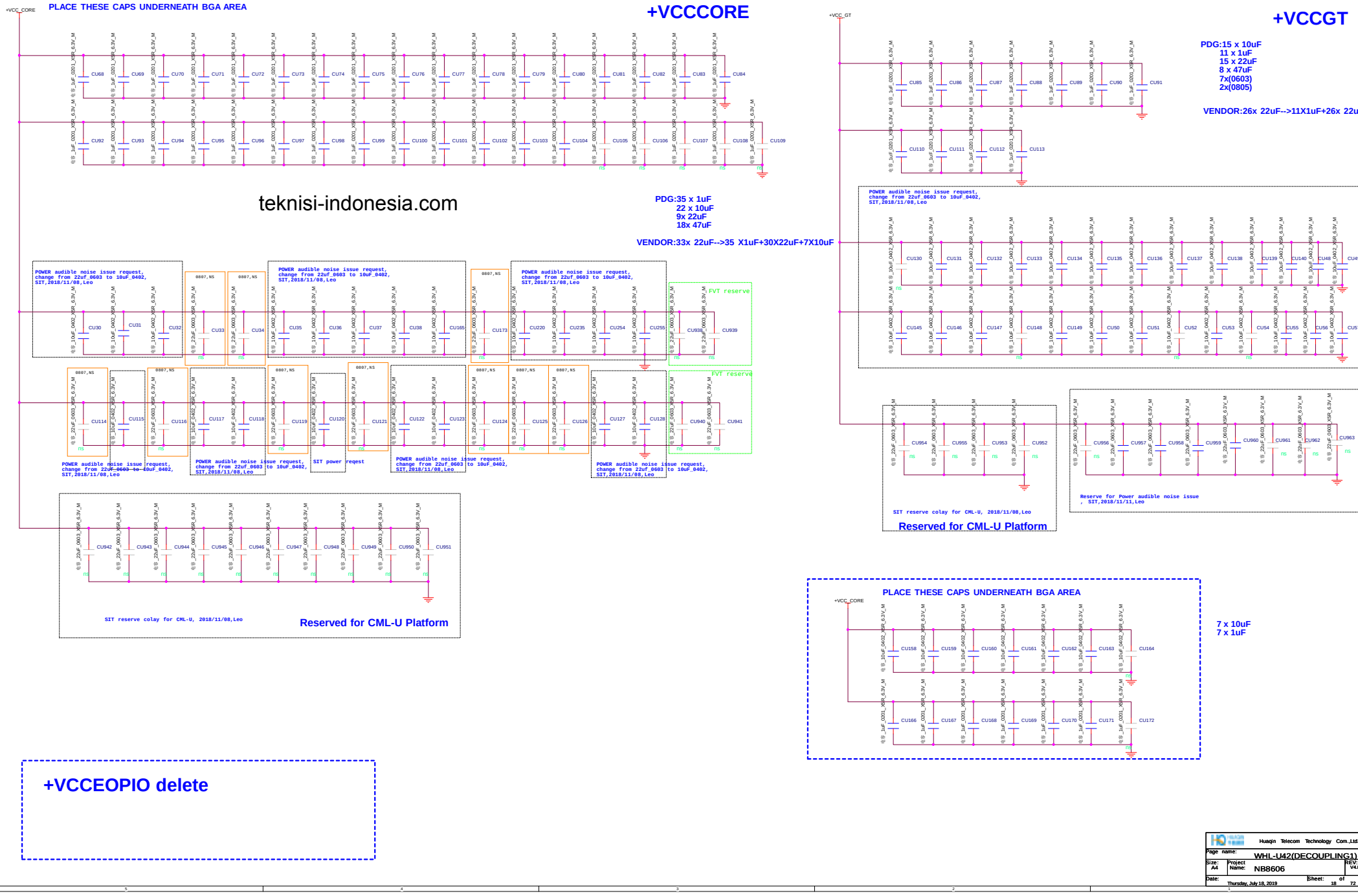
PLACE THESE CAPS UNDERNEATH BGA AREA
+VCCCORE
+VCC_CORE
PDG:35 x 1uF
22 x 10uF
9x 22uF
18x 47uF
VENDOR:33x 22uF-->35 X1uF+30X22uF+7X10uF
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+VCCGT
+VCC_GT
PDG:15 x 10uF
11 x 1uF
15 x 22uF
8 x 47uF
7x(0603)
2x(0805)
VENDOR:26x 22uF-->11X1uF+26x 22uF
POWER audible noise issue request, change from 22uf_0603 to 10uF_0402, SIT,2018/11/08,Leo
FVT reserve
SIT power reqest
SIT reserve colay for CML-U, 2018/11/08,Leo
Reserved for CML-U Platform
Reserve for Power audible noise issue , SIT,2018/11/11,Leo
PLACE THESE CAPS UNDERNEATH BGA AREA
7 x 10uF
7 x 1uF
+VCCEOPIO delete
Huaqin Telecom Technology Com.,Ltd.
Page name:
WHL-U42(DECOUPLING1)
Size: A4
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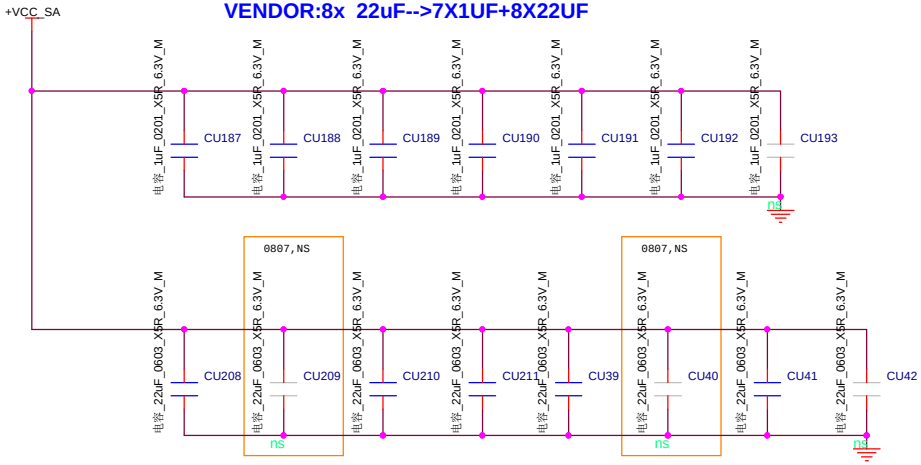
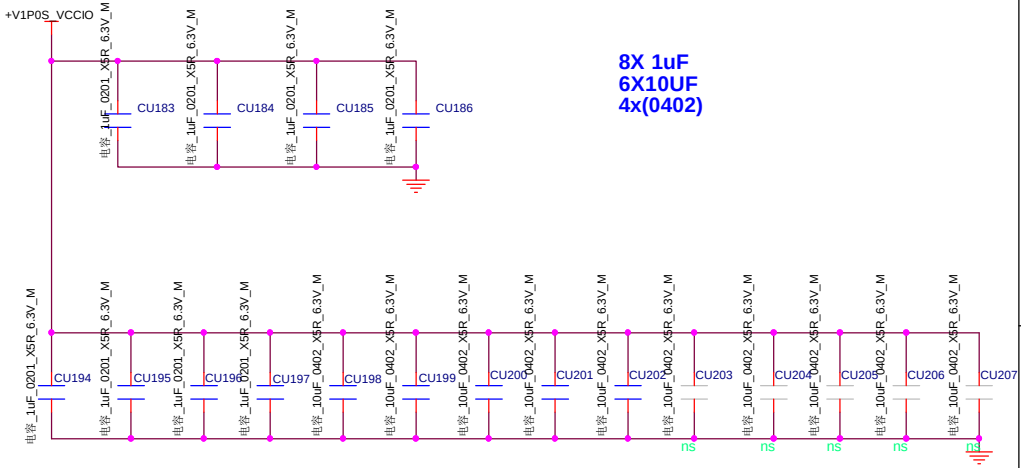
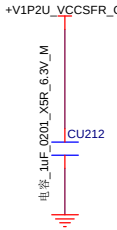
PDG:7x 1uF
15X 10uF
2 x 47 uF
2 x (0805)

VENDOR:8x 22uF-->7X1UF+8X22UF

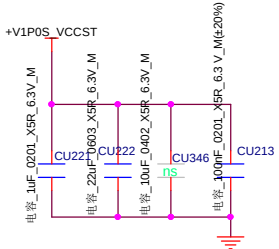


8X 1uF
6X10UF
4x(0402)

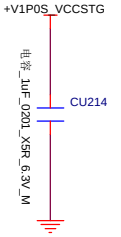




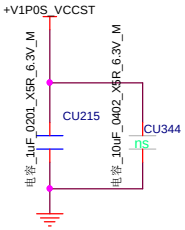
VCCPLL-OC 1x1uf



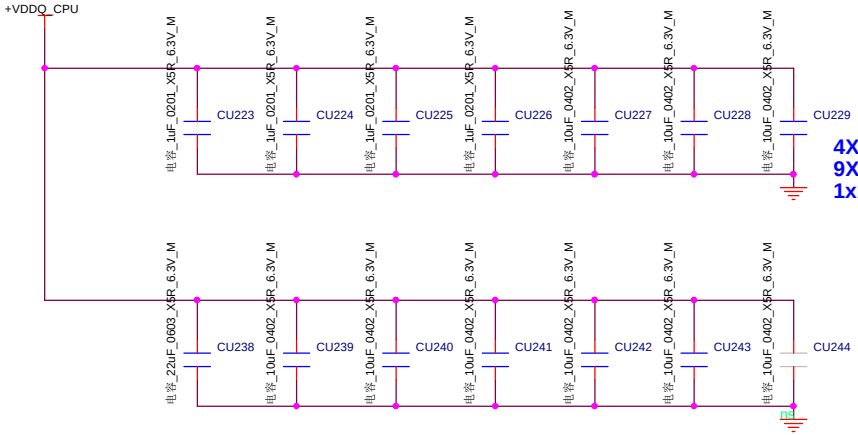
VCCPLL 1x1uf,1X0.1,2X(0402 10uF)



VCCSTG 1x1uf



VCCST 1x1uf



4X1UF
9X10UF
1x22UF

Huaqin Telecom Technology Com.,Ltd.		
Page name:	WHL-U42(DECOUPLING2)	
Size: A4	Project Name: NB8606	REV: V4.0
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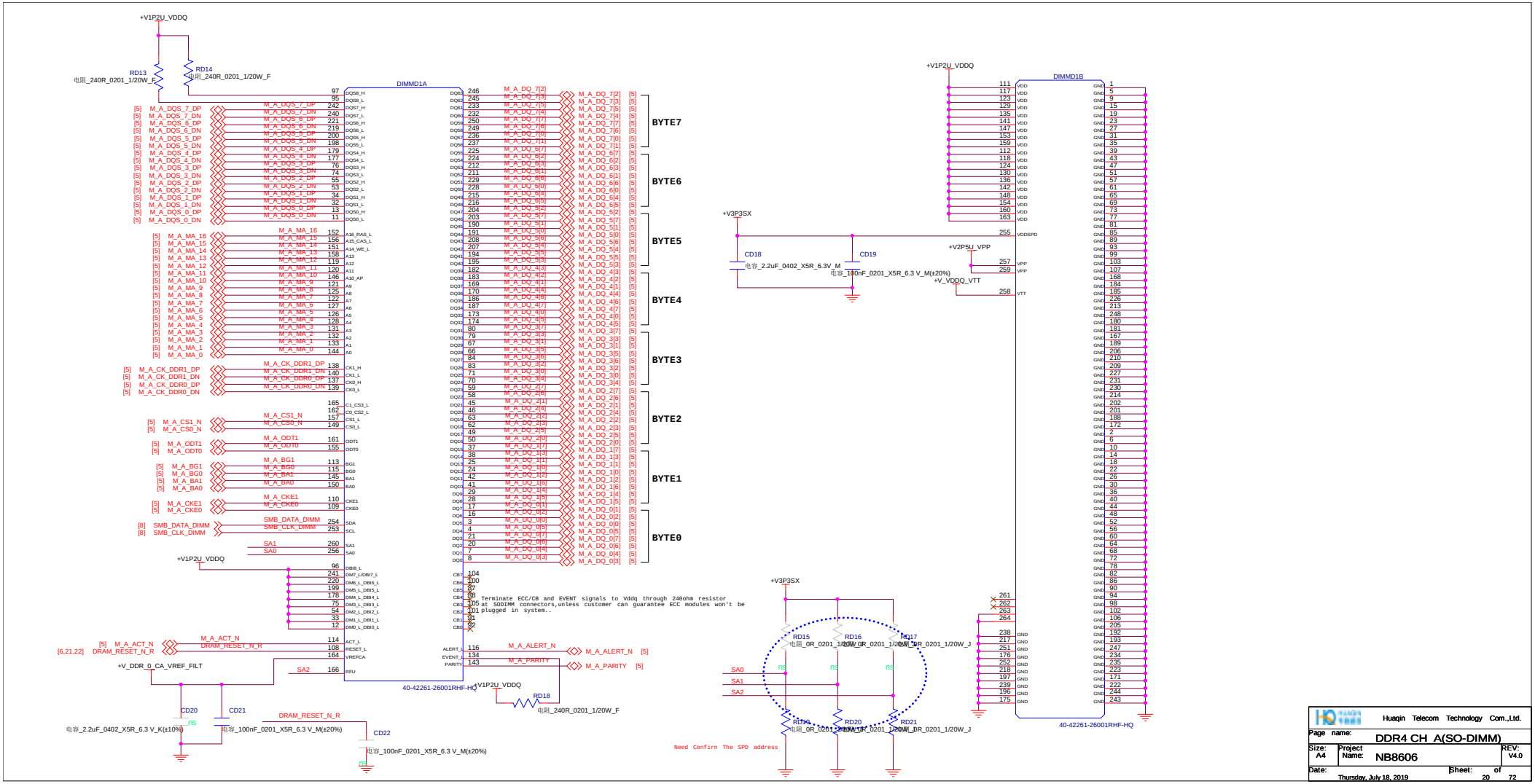
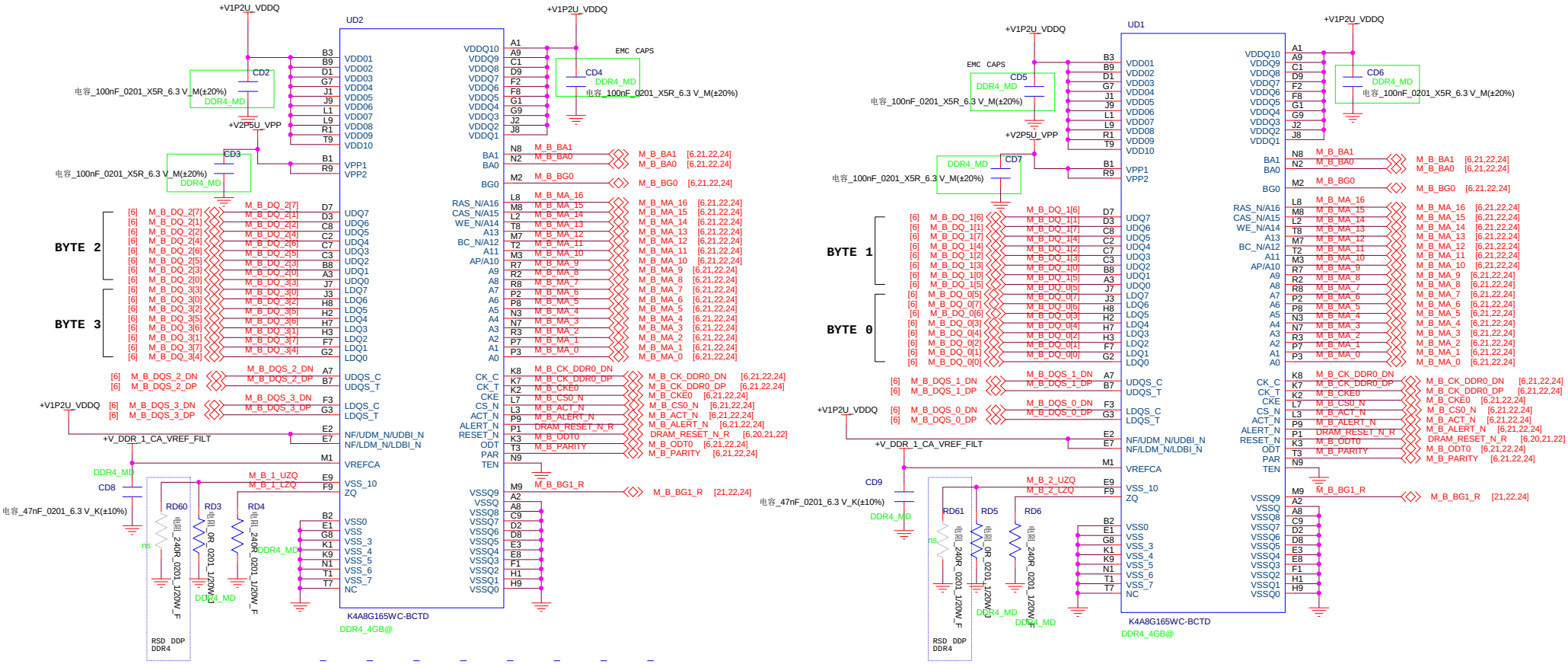


Huaqin Telecom Technology Com.,Ltd.		
Page name:	DDR4 CH A(SO-DIMM)	
Size: A4	Project Name: NB8606	REV: V4.0
Date: Thursday, July 18, 2019	Sheet: 20 of 72	



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BOM NOTE

DDR PINS		SDP	DDP
E9	UZQ	GND	240E PD
M9	BG1	GND	BG1 SIG FROM CONTROLLER

Huaqin Telecom Technology Com.,Ltd.		
Page name: DDR4 CH-B(DEVICE0)		
Size: A4	Project Name: NB8606	REV: V4.0
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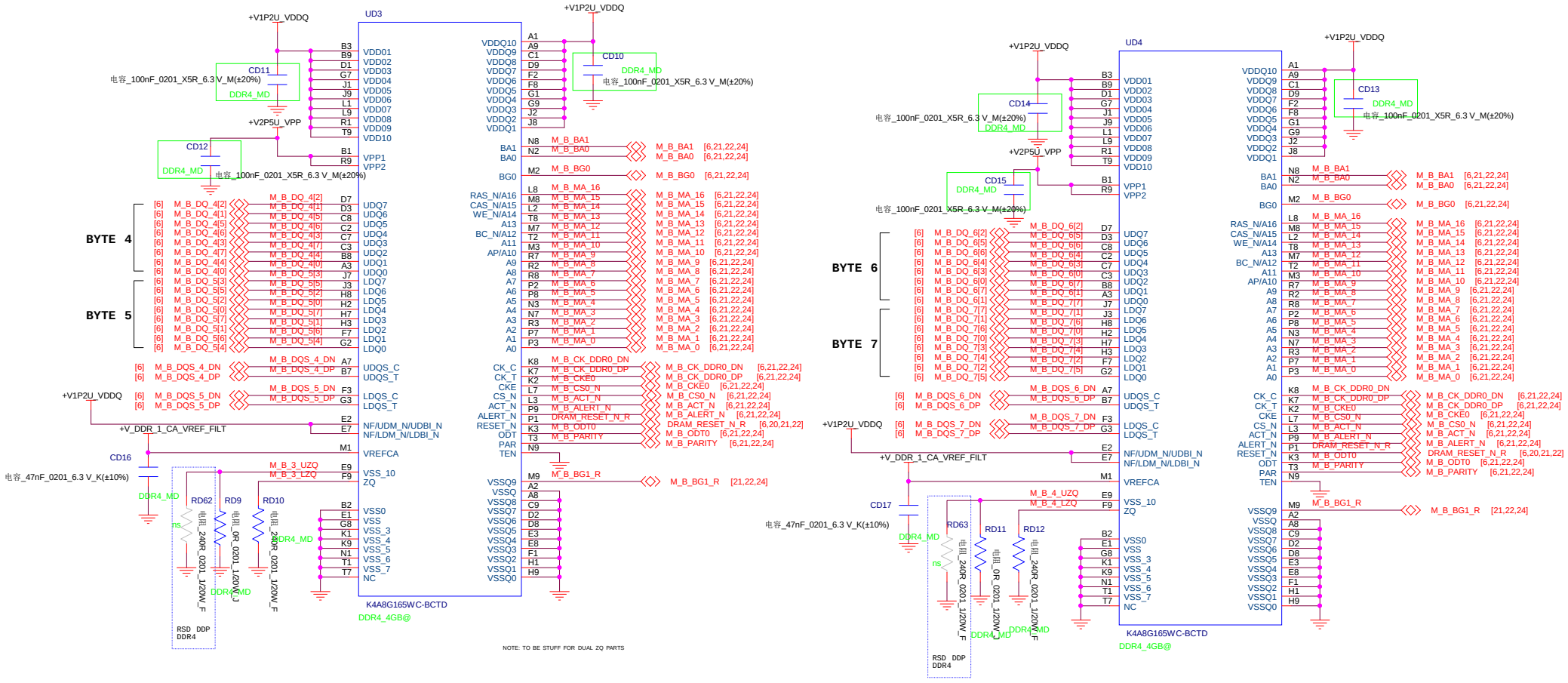
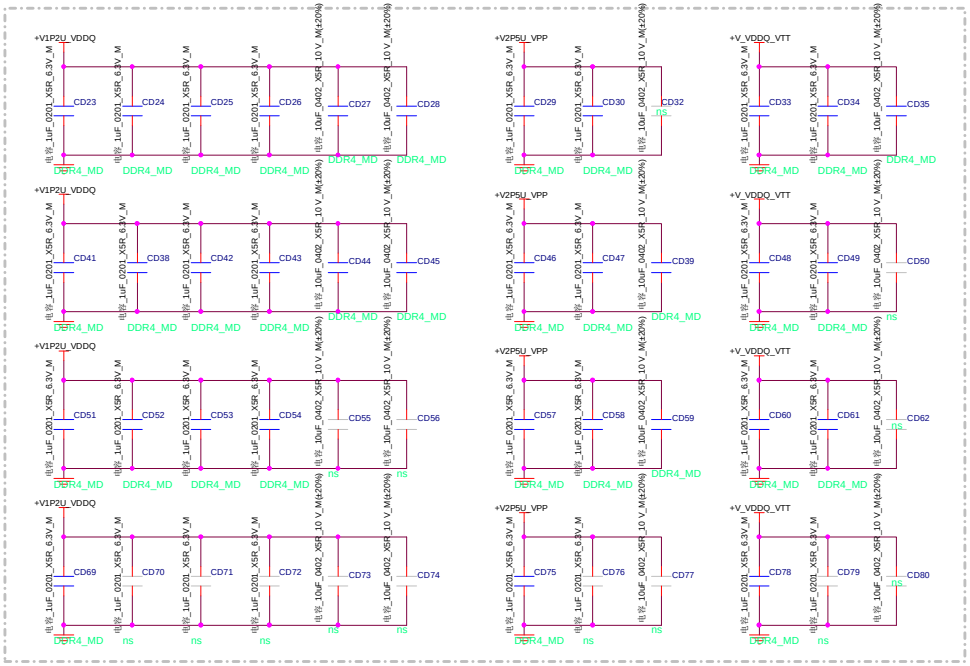
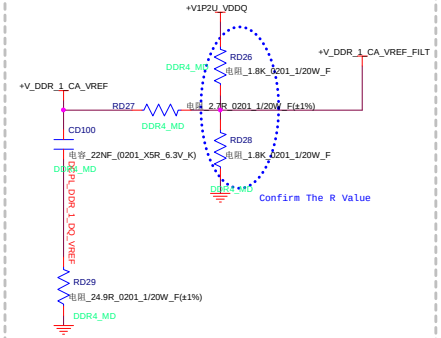


Huaqin Telecom Technology Com.,Ltd.		
Page name: DDR4 CH_B(DEVICE1)		
Size: A4	Project Name: NB8606	REV: V4.0
Date: Thursday, July 18, 2019	Sheet: 22 of 72	

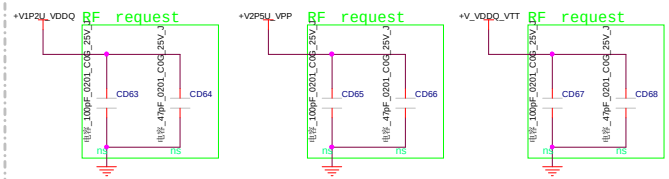
DECOUPLING CAPACITORS FOR DDR CHANNEL B MD



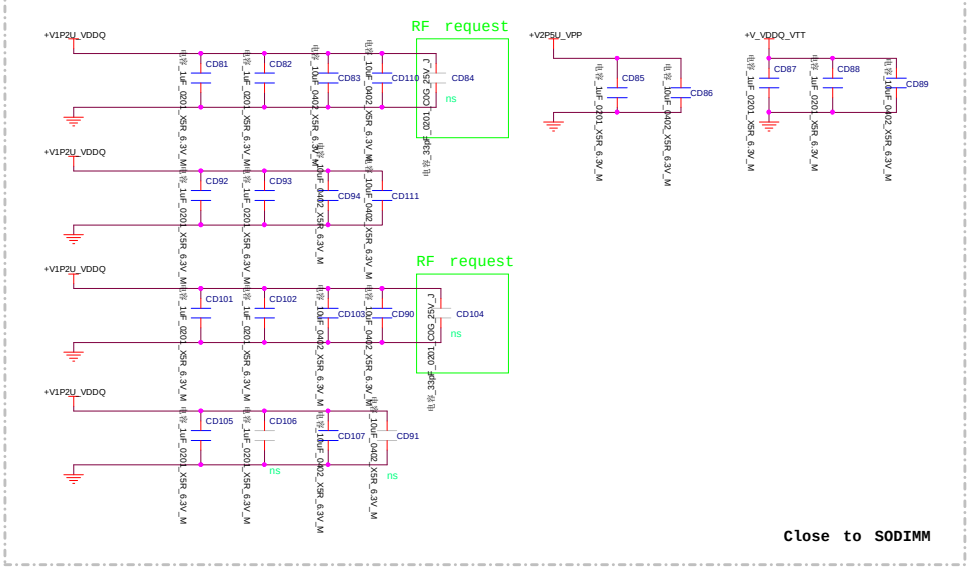
DDR4 CH B MD REF GENERATION



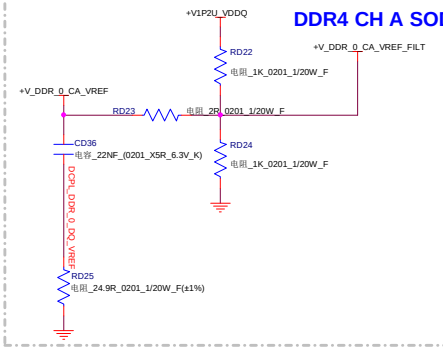
CHB MD



DECOUPLING CAPACITORS FOR DDR CHANNEL A SODIMM



DDR4 CH A SODIMM REF GENERATION



Huaqin Telecom Technology Com.,Ltd.		
Page name:	DDR4(DECAPS)	
Size: A4	Project Name: NB8606	REV: V4.0
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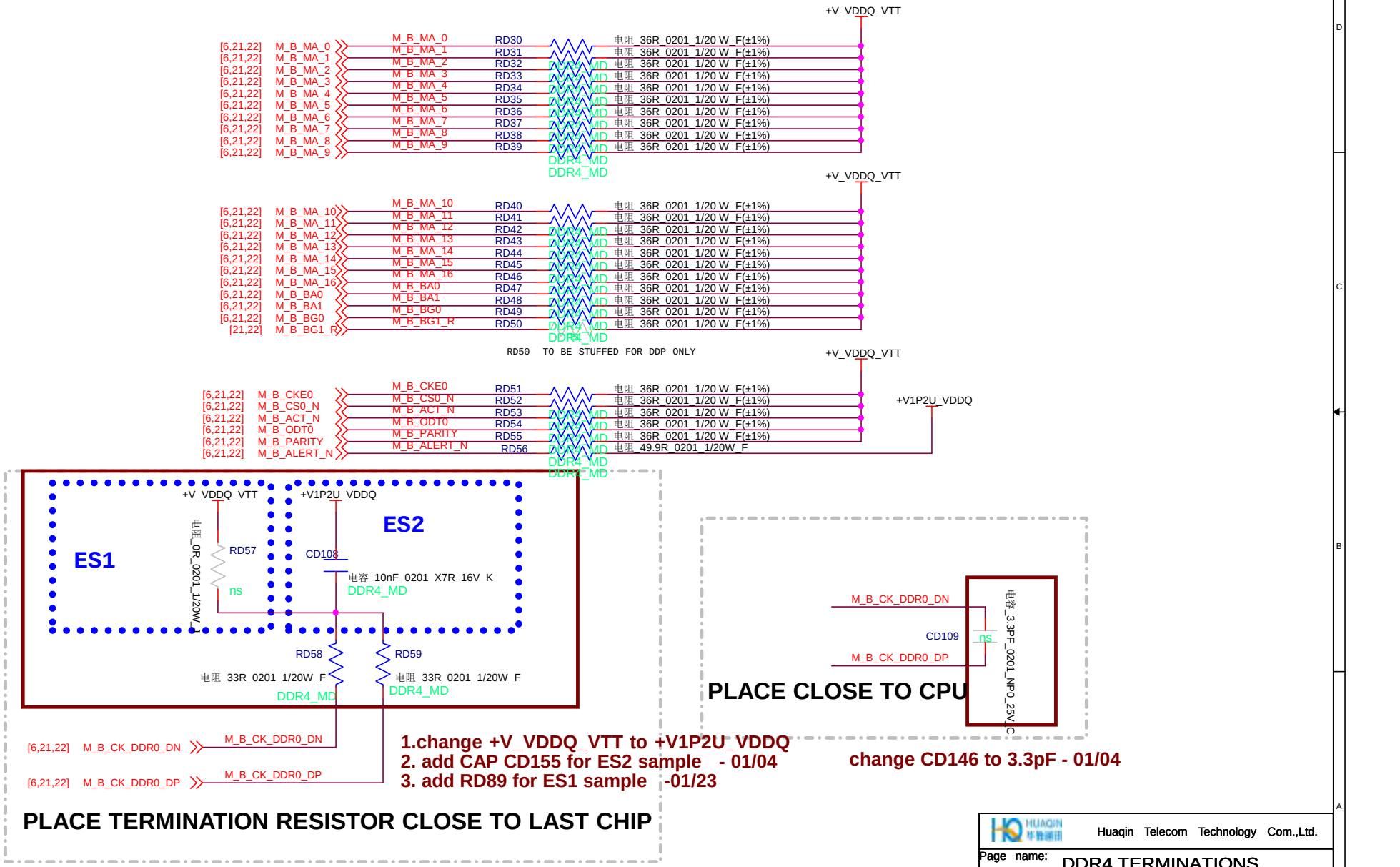
MEMORY TERMINATIONS CHANNEL B MD



1.change +V_VDDQ_VTT to +V1P2U_VDDQ
2. add CAP CD155 for ES2 sample - 01/04
3. add RD89 for ES1 sample -01/23

change CD146 to 3.3pF - 01/04

Huaqin Telecom Technology Com.,Ltd.		
Page name: DDR4 TERMINATIONS		
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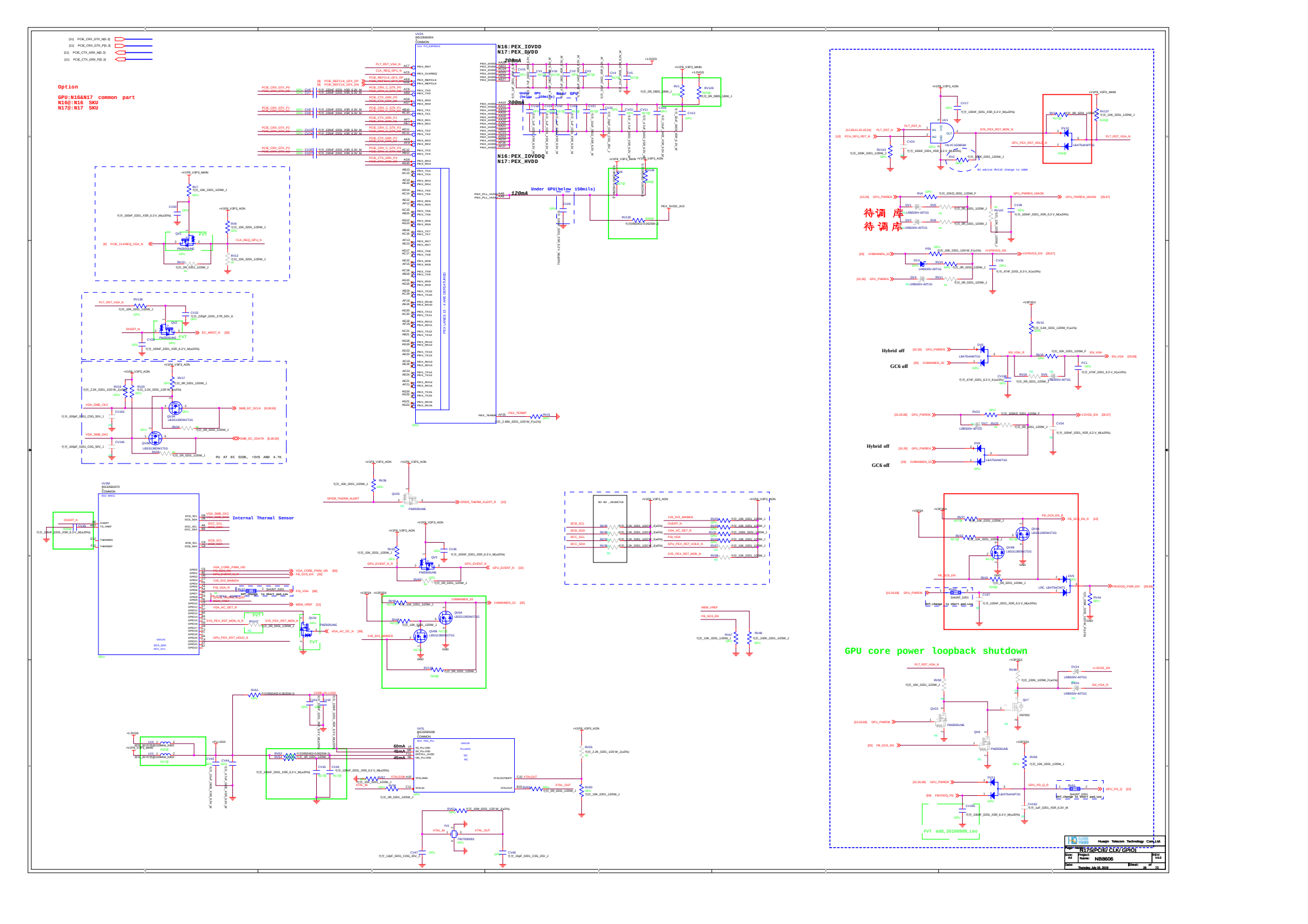
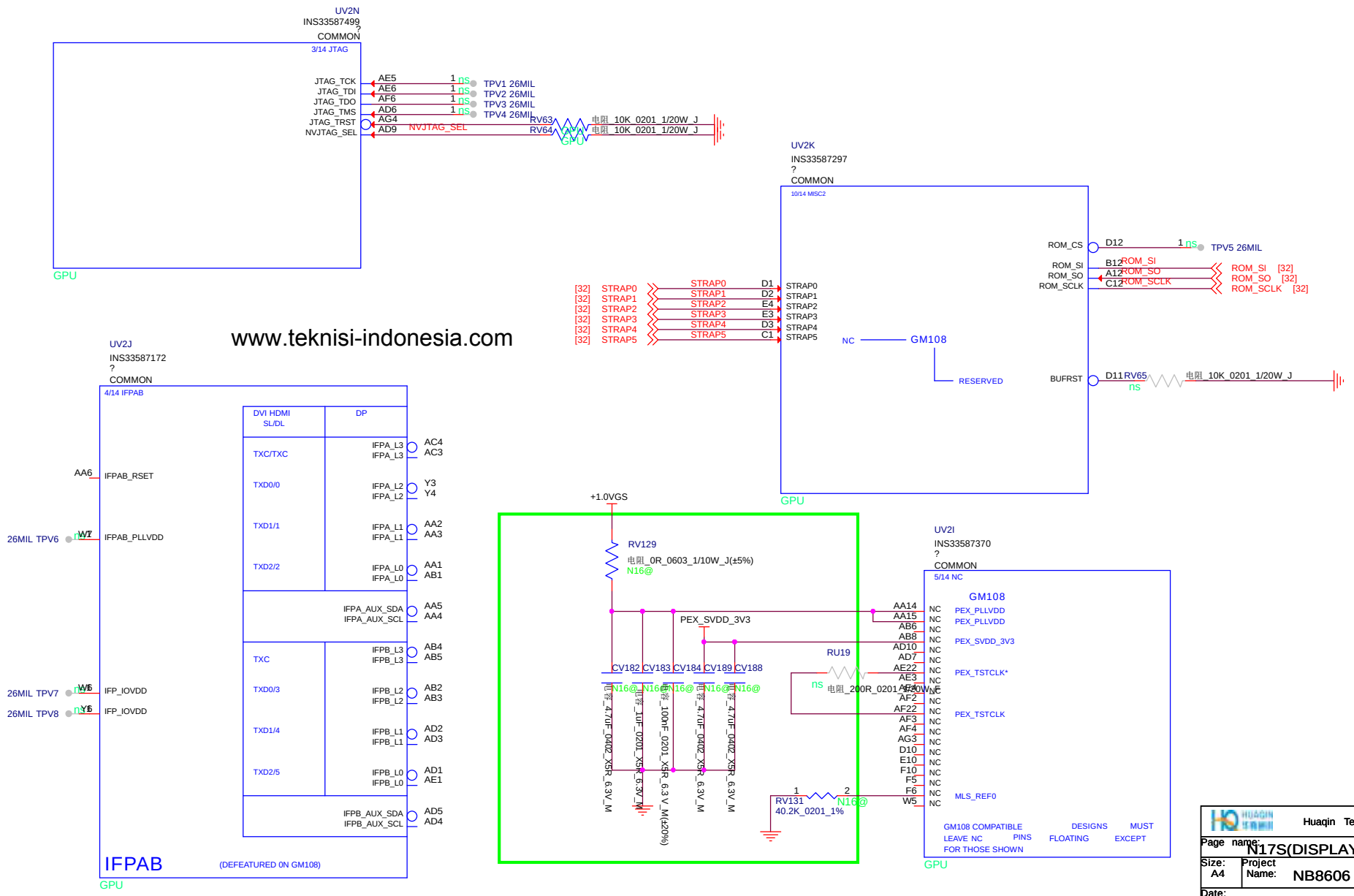
Huaqin Telecom Technology Com.,Ltd.		
Page name: BLANK		
Size: A4	Project Name: NB8606	REV: V4.0
Date: Thursday, July 18, 2019	Sheet: 25 of 72	


Option
GPU:N16&N17 common part
N16@:N16 SKU
N17@:N17 SKU
N16:PEX_IOVDD
N17:PEX_DVDD
200mA
300mA
Under GPU (below 150mils)
Near GPU
N16:PEX_IOVDDQ
N17:PEX_HVDD
120mA
Under GPU(below 150mils)
PCIE LANES 15 ~4 ARE DEFEATURED
Internal Thermal Sensor
PU AT EC SIDE, +3VS AND 4.7K
待调库
待调库
Hybrid off
GC6 off
Hybrid off
GC6 off
GPU core power loopback shutdown
FVT add,20180909,Leo
Huaqin Telecom Technology Corp.Ltd.
N17S(PCIE/ CLK/ GPIO)
NB8606
Thursday, July 19, 2018


UV2N
INS33587499
?
COMMON
3/14 JTAG
GPU
JTAG_TCK
JTAG_TDI
JTAG_TDO
JTAG_TMS
JTAG_TRST
NVJTAG_SEL
AE5
AE6
AF6
AD6
AG4
AD9
NVJTAG_SEL
TPV1 26MIL
TPV2 26MIL
TPV3 26MIL
TPV4 26MIL
RV63
RV64
电阻_10K_0201_1/20W_J
电阻_10K_0201_1/20W_J
GND
www.teknisi-indonesia.com
UV2K
INS33587297
?
COMMON
10/14 MISC2
GPU
[32] STRAP0
[32] STRAP1
[32] STRAP2
[32] STRAP3
[32] STRAP4
[32] STRAP5
STRAP0 D1
STRAP1 D2
STRAP2 E4
STRAP3 E3
STRAP4 D3
STRAP5 C1
STRAP0
STRAP1
STRAP2
STRAP3
STRAP4
STRAP5
NC
GM108
RESERVED
ROM_CS
ROM_SI
ROM_SO
ROM_SCLK
D12
B12
A12
C12
TPV5 26MIL
ROM_SI [32]
ROM_SO [32]
ROM_SCLK [32]
BUFRST
D11
RV65
电阻_10K_0201_1/20W_J
UV2J
INS33587172
?
COMMON
4/14 IFPAB
GPU
DVI HDMI SL/DL
DP
TXC/TXC
TXD0/0
TXD1/1
TXD2/2
TXC
TXD0/3
TXD1/4
TXD2/5
IFPA_L3 AC4
IFPA_L3 AC3
IFPA_L2 Y3
IFPA_L2 Y4
IFPA_L1 AA2
IFPA_L1 AA3
IFPA_L0 AA1
IFPA_L0 AB1
IFPA_AUX_SDA AA5
IFPA_AUX_SCL AA4
IFPB_L3 AB4
IFPB_L3 AB5
IFPB_L2 AB2
IFPB_L2 AB3
IFPB_L1 AD2
IFPB_L1 AD3
IFPB_L0 AD1
IFPB_L0 AE1
IFPB_AUX_SDA AD5
IFPB_AUX_SCL AD4
AA6 IFPAB_RSET
26MIL TPV6 W7 IFPAB_PLLVDD
26MIL TPV7 W6 IFP_IOVDD
26MIL TPV8 Y6 IFP_IOVDD
IFPAB
(DEFEATURED 0N GM108)
+1.0VGS
RV129
电阻_0R_0603_1/10W_J(±5%)
N16@
PEX_SVDD_3V3
CV182 CV183 CV184 CV189 CV188
电容_4.7uF_0402_X5R_6.3V_M
电容_1uF_0201_X5R_6.3V_M
电容_100nF_0201_X5R_6.3V_M(±20%)
RU19
电阻_200R_0201_1/20W_F
RV131
40.2K_0201_1%
UV2I
INS33587370
?
COMMON
5/14 NC
GPU
GM108
AA14 NC PEX_PLLVDD
AA15 NC PEX_PLLVDD
AB6 NC
AB8 NC PEX_SVDD_3V3
AD10 NC
AD7 NC
AE22 NC PEX_TSTCLK*
AE3 NC
AF2 NC
AF22 NC PEX_TSTCLK
AF3 NC
AF4 NC
AG3 NC
D10 NC
E10 NC
F10 NC
F5 NC
F6 NC MLS_REF0
W5 NC
GM108 COMPATIBLE LEAVE NC FOR THOSE SHOWN
PINS FLOATING
DESIGNS MUST EXCEPT
Huaqin Telecom Technology Com.,Ltd.
Page name: N17S(DISPLAY/ STRAP/ JTAG)
Size: A4
Project Name: NB8606
REV: V4.0
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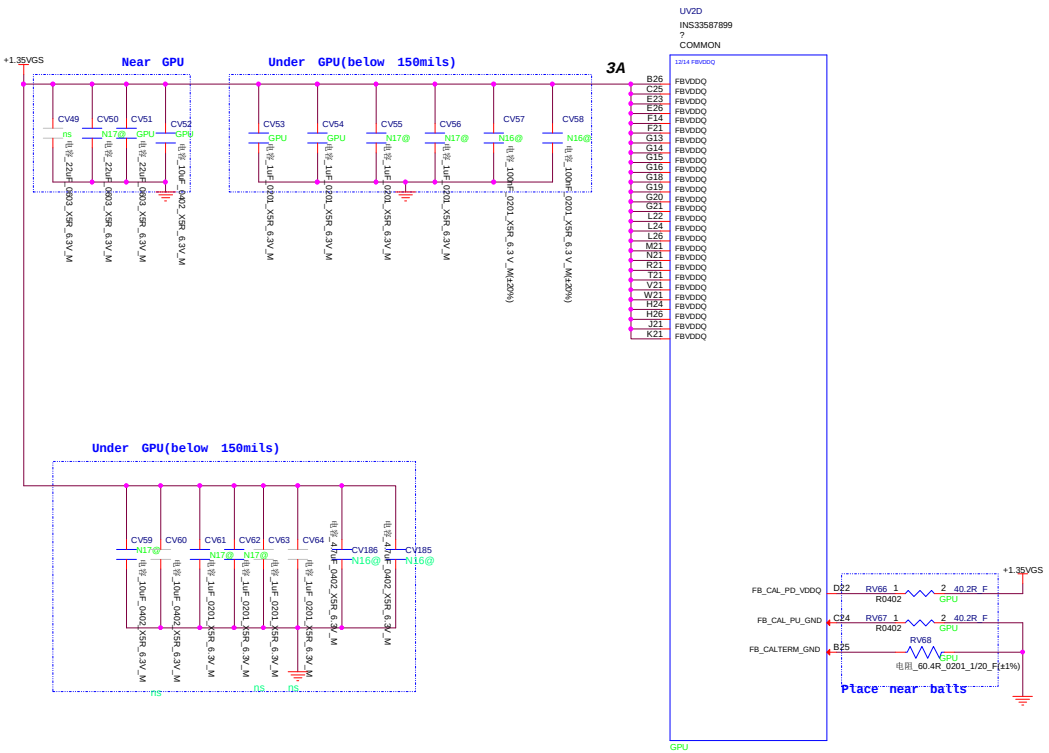
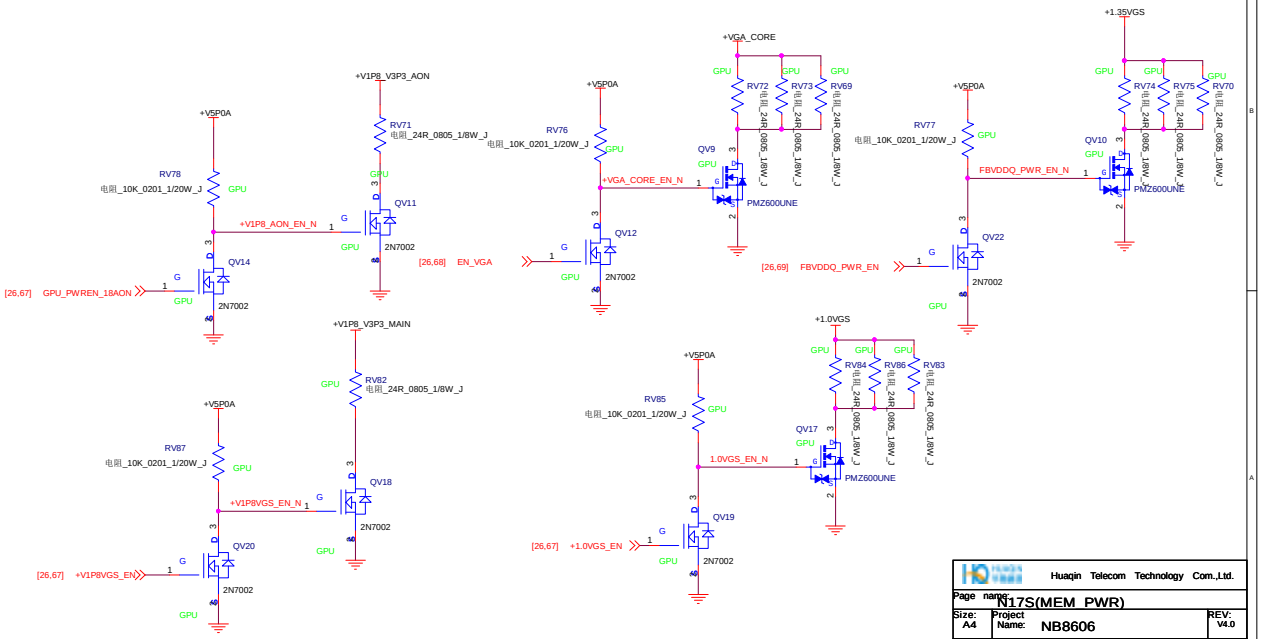


Table 9.18 GPU-Side FBVDDQ Decoupling Requirements

Decoupling Capacitor		Recommended Quantity and Placement (for all supported partitions combined)	
Capacitance	Type Size	Quantity	Placement
For N17x GPU Package: GB2C-64 (preliminary)			
1.0 uF	X6S [0402]	8	Under GPU FBVDDQ ball (evenly distributed throughout partition)
10 uF	X6S [0603]	2	
10 uF	X6S [0603]	1	Near GPU device
22 uF	X6S [0603]	3	
For N17x GPU Package: GB4C-128 (preliminary)			
1.0 uF	X6S [0402]	12	Under GPU FBVDDQ ball (equally distributed across partitions)
10 uF	X6S [0603]	4	
10 uF	X6S [0603]	2	Near GPU device
22 uF	X6S [0603]	5	
For N17x GPU Package: GB4-256			
1.0 uF	X6S [0402]	24	Under GPU FBVDDQ ball (equally distributed across partitions)
10 uF	X6S [0603]	5	
10 uF	X6S [0603]	7	Near GPU device
22 uF	X6S [0603]	9	

+V1P8A TO +V1P8_AON

Move to Power Page 2018/06/07



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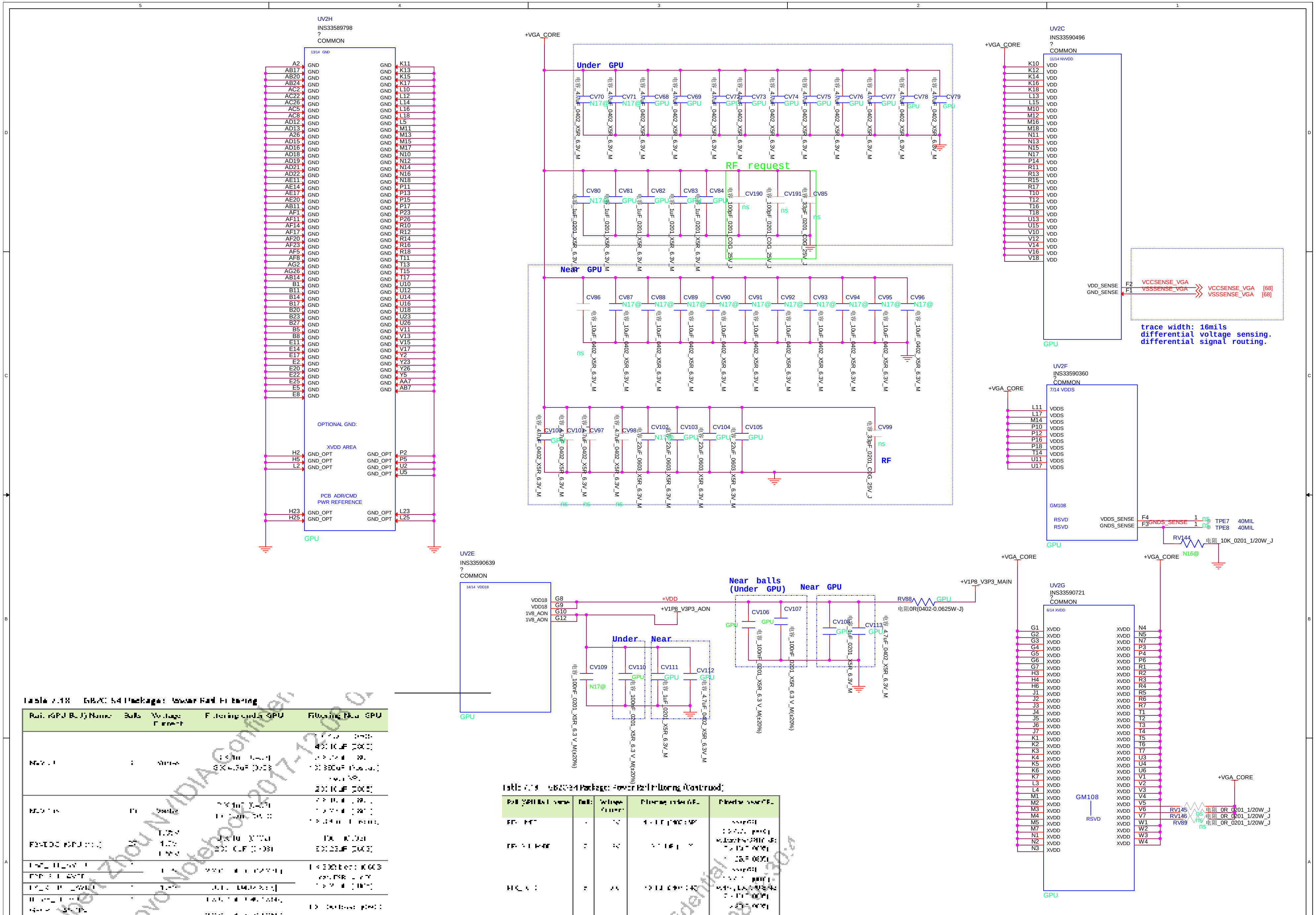

Huaqin Telecom Technology Com.,Ltd.	
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Size: A4	Project Name: NB8606 — REV: V4.0
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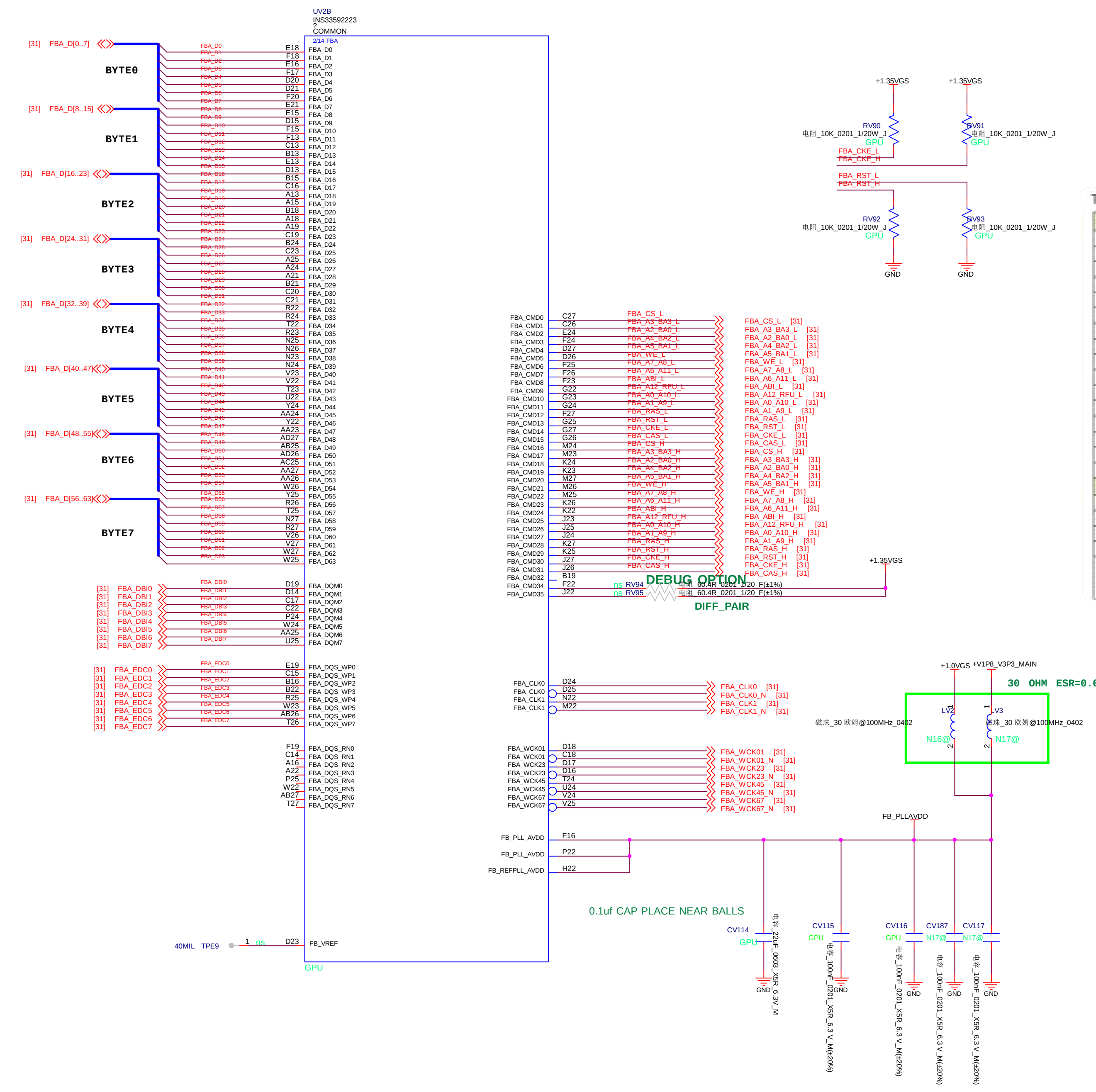

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Table 7-4. GDDR5 Mode H Mapping

GB2-64, GB2B-64, GB4B-128	Channel 0 0..31	GB2-64, GB2B-64, GB4B-128	Channel 1 32..63
CMD0	CS*	CMD16	CS*
CMD1	A3_BA3	CMD17	A3_BA3
CMD2	A2_BA0	CMD18	A2_BA0
CMD3	A4_BA2	CMD19	A4_BA2
CMD4	A5_BA1	CMD20	A5_BA1
CMD5	WE*	CMD21	WE*
CMD6	A7_A8	CMD22	A7_A8
CMD7	A6_A11	CMD23	A6_A11
CMD8	ABI*	CMD24	ABI*
CMD9	A12_RFU	CMD25	A12_RFU
CMD10	A0_A10	CMD26	A0_A10
CMD11	A1_A9	CMD27	A1_A9
CMD12	RAS*	CMD28	RAS*
CMD13	RST*	CMD29	RST*
CMD14	CKE*	CMD30	CKE*
CMD15	CAS*	CMD31	CAS*
GB2-64, GB2B-64, GB4B-128	Channel 0 & 1		
CMD32	Not used		
CMD33[1]	Not used		
CMD34	DEBUG0[2]		
CMD35	DEBUG1[2]		

Notes:
1. Not available in GB2-64 and GB2B-64 packages.
2. GPU debug pins not connected to DRAM. See section 7.1.13.

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Page name: N17S(MEM INTERFACE)

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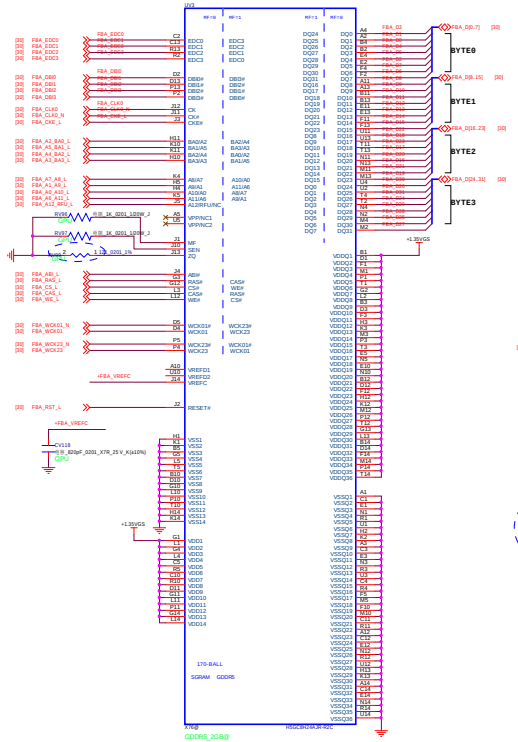
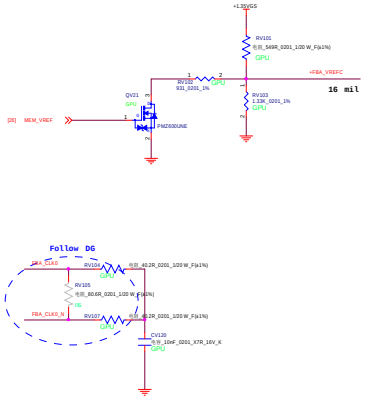
Memory - Lower 32 bits





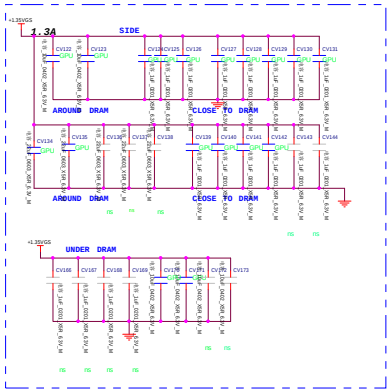
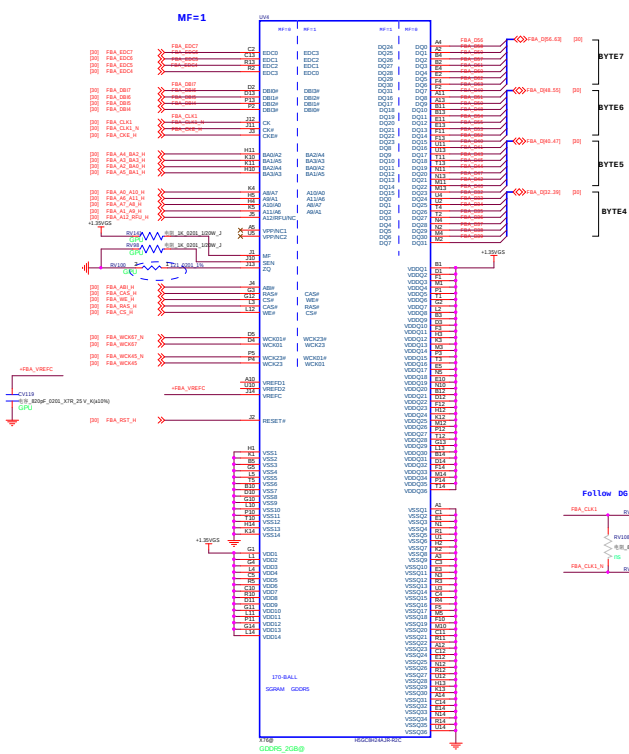
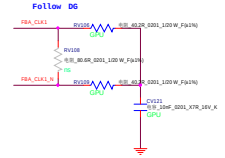


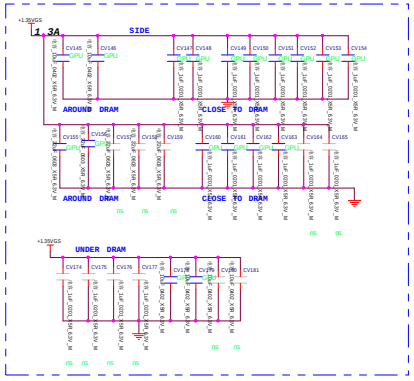
Table 9.19 DRAM-Side FBVDDQ/FBVDDQ Decoupling (Combined Rail)

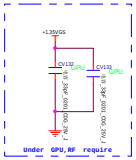
Decoupling Capacitors		Recommended Quantity and Placement (per DRAM device)	
Capacitance	Type [Size]	Quantity	Placement (by DRAM Interface Mode)
Combined FBVDD/FBVDDQ Rail			
1.0 µF	MLC [0402]	10	For x32 DRAM: Under the DRAM FBVDD or FBVDDQ ball.
10 µF	MLC [0603]	4	For x16 DRAM in a "clamshell" PCB configuration: As close to DRAM periphery as possible. Ensure at least 2 GND vias and 2 power vias for each decoupling capacitor.
1.0 µF	MLC [0402]	6 additional	For x32 DRAM: Choose x32 interface to achieve max PCB DRAM speed. Add these additional decoupling caps under the DRAM FBVDD/Q ball; should share existing FBVDD/Q ball via if possible. See Figure 9.23 for an example.
10 µF	MLC [0603]	2	Near DRAM device. Ensure at least 2 GND vias and 2 power vias for each capacitor.
22 µF	MLC [0603]	1	For 4 Gb/s WCK (8 Gb/s data rates): Near DRAM device. Ensure at least 2 GND vias and 2 power vias for each capacitor.

Memory - Upper 32 bits









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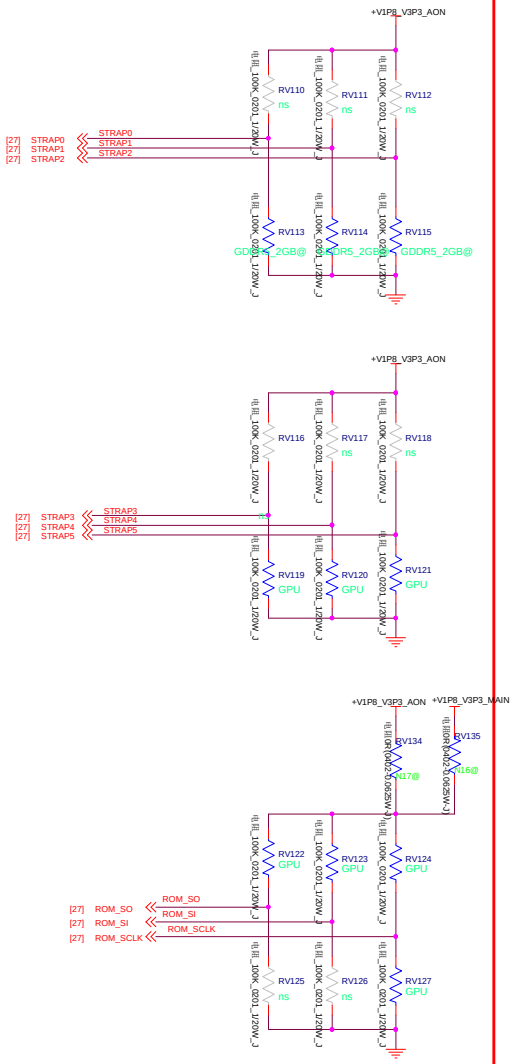

N17

GPU	Vendor	Manufacturer	Strap	Strap2	Strap1	Strap0
N17S-G1	Samsung	K4G80325FB-HC28	0x0	L	L	L
	Micron	MT51J256M32HF-70:A	0x1	L	L	H
	Hynix	H5GC8H24MJR-ROC	0x2	L	H	L
	Micron	MT51J256M32HF-70:B	0x4	H	L	L
	Hynix	H5GC8H24AJR-ROC	0x5	H	L	H
N17S_G0/G2	Micron	MT51J256M32HF-80:B	0x9	L	M	L
	Hynix	H5GC8H24AJR-R2C	0xA	L	M	H

PN	MPN	STRAP	Vendor
HQ11121499000	K4G80325FB-HC28	0x00	Samsung
HQ11121497000	H5GQ8H24MJR-R4C	0x02	Hynix

Physical Strapping pin	Power Rail	RAM_CFG[3]	RAM_CFG[0x02]	RAM_CFG[1]	RAM_CFG[0x00]
STRAP0			L		L
STRAP1			H		L
STRAP2			L		L

SMBUS_ALT_ADDR	
0	0x9E (Default)
1	0x9C (Multi-GPU usage)

DEVID_SEL	
0	(Default)
1	

PCIE_CFG	
0	(Default)
1	

VGA_DEVICE	
0	3D Device (Class Code 302h)
1	VGA Device (Default)

Physical Strapping pin	Power Rail	SOR3_EXPOSED	SOR2_EXPOSED	SOR1_EXPOSED	SOR0_EXPOSED
ROM_SCLK	M	Disable	Disable	Disable	Disable
ROM_SI	H				
ROM_SO	H				

N16

Resistor Values	Pull-up to +3VGS	Pull-down to Gnd
4.99K	1000	0000
10K	1001	0001
15K	1010	0010
20K	1011	0011
24.9K	1100	0100
30.1K	1101	0101
34.8K	1110	0110
45.3K	1111	0111

Physical Strapping pin	Power Rail	Logical Strapping Bit3	Logical Strapping Bit2	Logical Strapping Bit1	Logical Strapping Bit0
ROM_SCLK	+3VGS	SOR3_EXPOSED	SOR2_EXPOSED	SOR1_EXPOSED	SOR0_EXPOSED
ROM_SI	+3VGS	RAM_CFG[3]	RAM_CFG[2]	RAM_CFG[1]	RAM_CFG[0]
ROM_SO	+3VGS	DEVID_SEL	PCIE_CFG	SMB_ALT_ADDR	VGA_DEVICE
STRAP0	+3VGS	Reserved(keep pull-up and pull-down footprint and stuff 50Kohm pull-up)			
STRAP1	+3VGS	Reserved(keep pull-up and pull-down footprint and not stuff by default)			
STRAP2	+3VGS				
STRAP3	+3VGS				
STRAP4	+3VGS				

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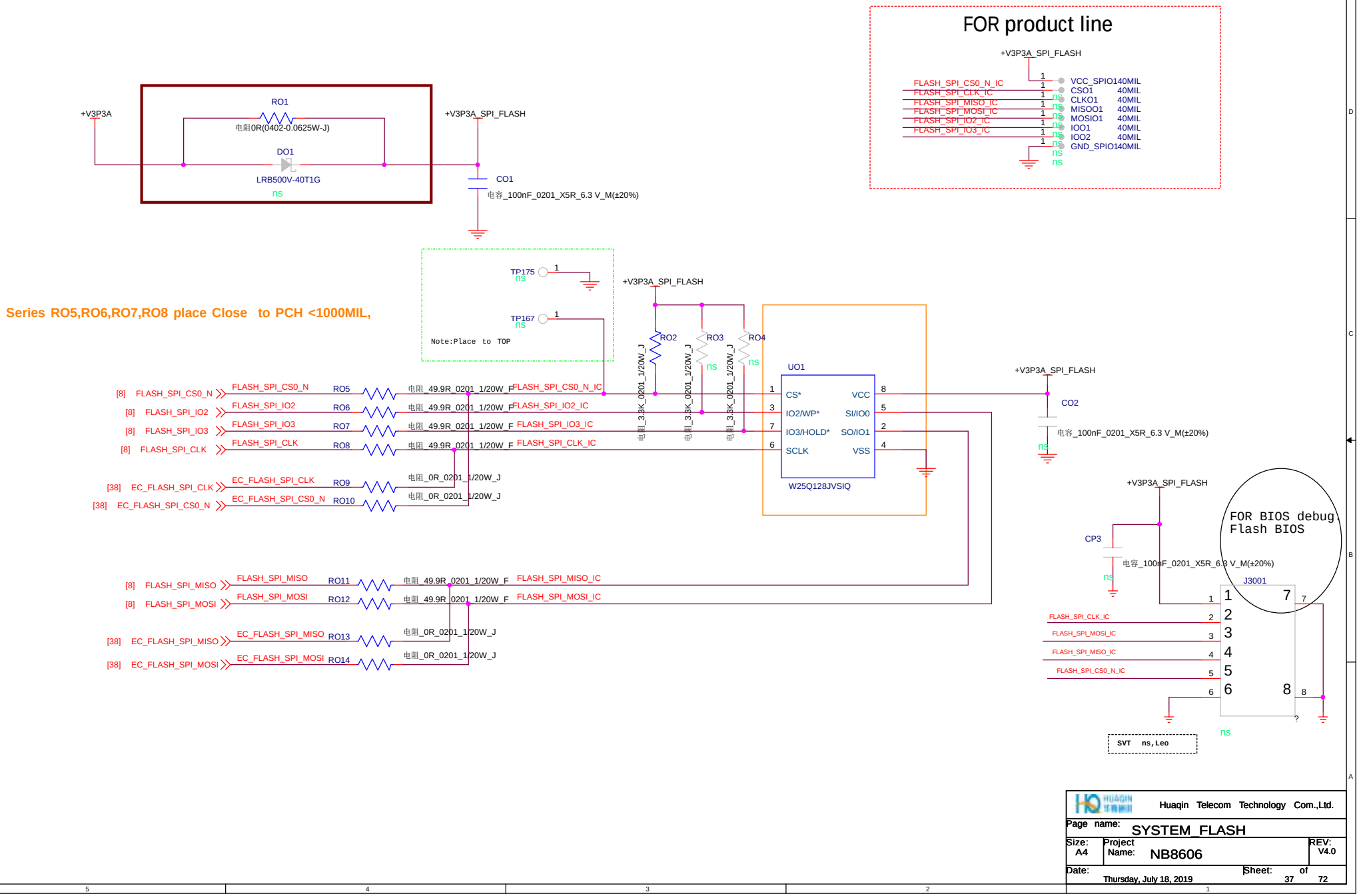

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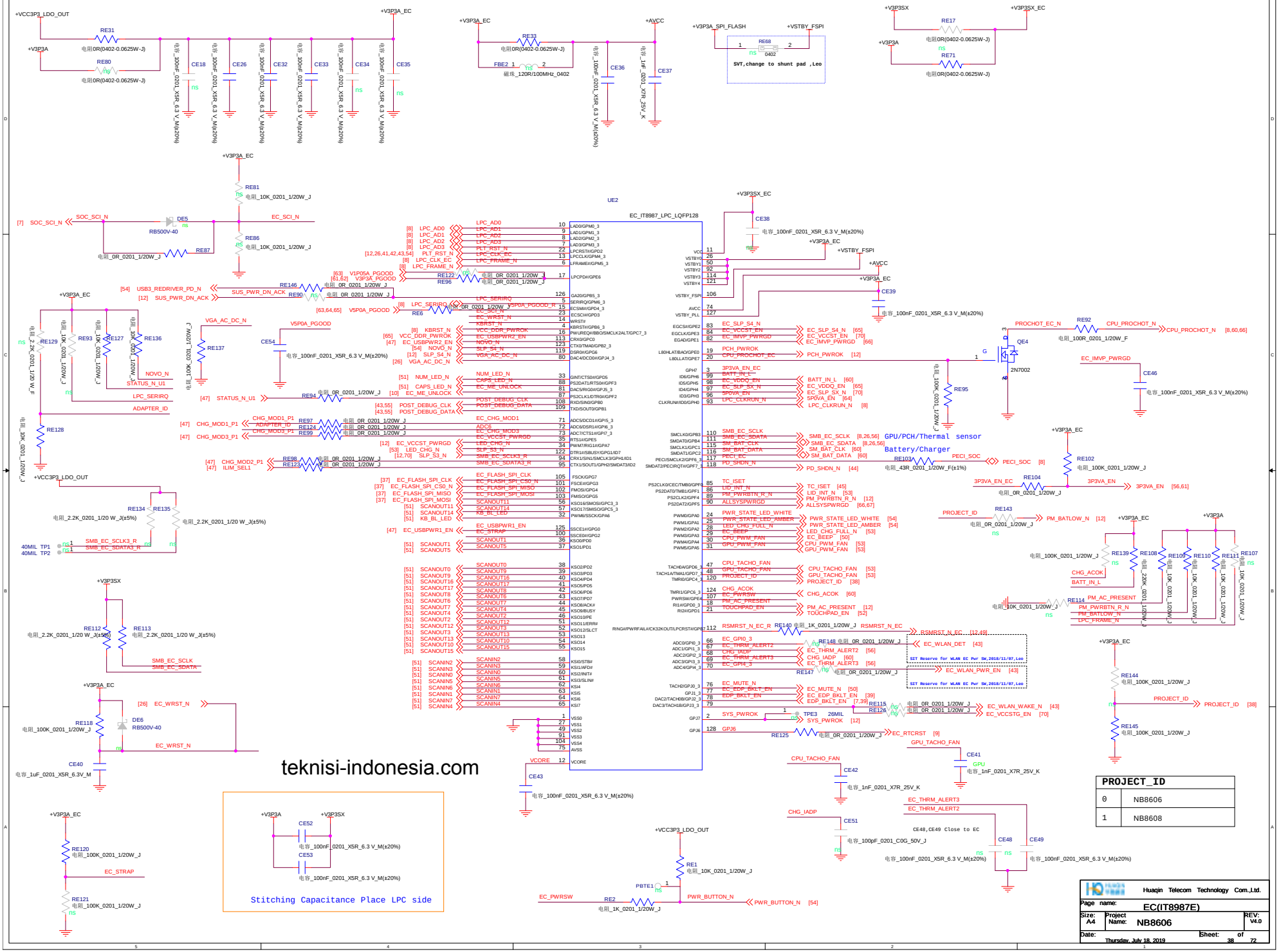
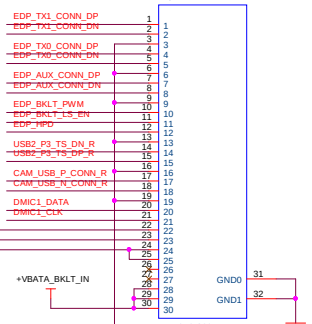


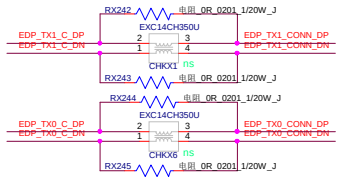
PROJECT_ID	
0	NB8606
1	NB8608

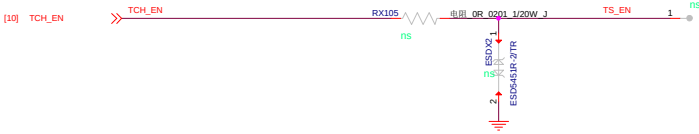
eDP Signal

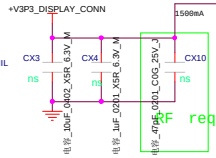
eDP & CAM & MIC CONN

PCB foot print should not be changed,for pin1 nb_con30_192x5d2x1d95_0d5

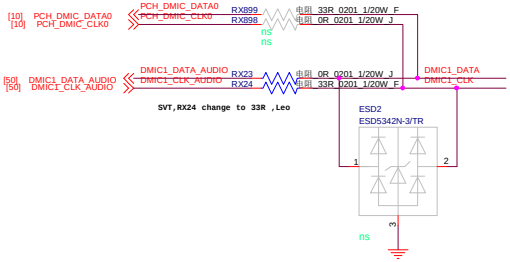


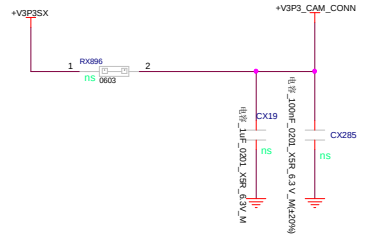




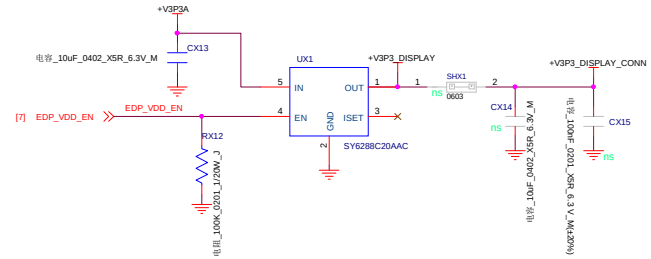


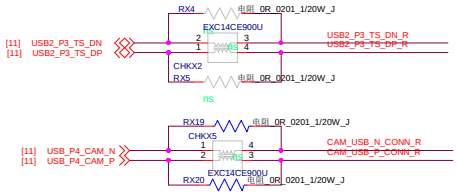
RF request



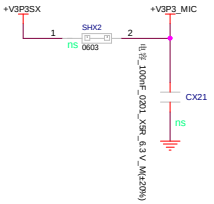


eDP VCC Power

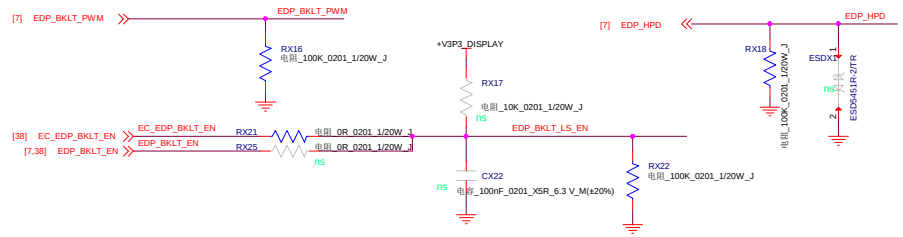


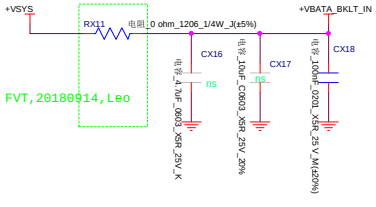


SVT,DEL +V3P3_TS 2019/01/02 ,Leo



eDP Control





FVT,20180914,Leo

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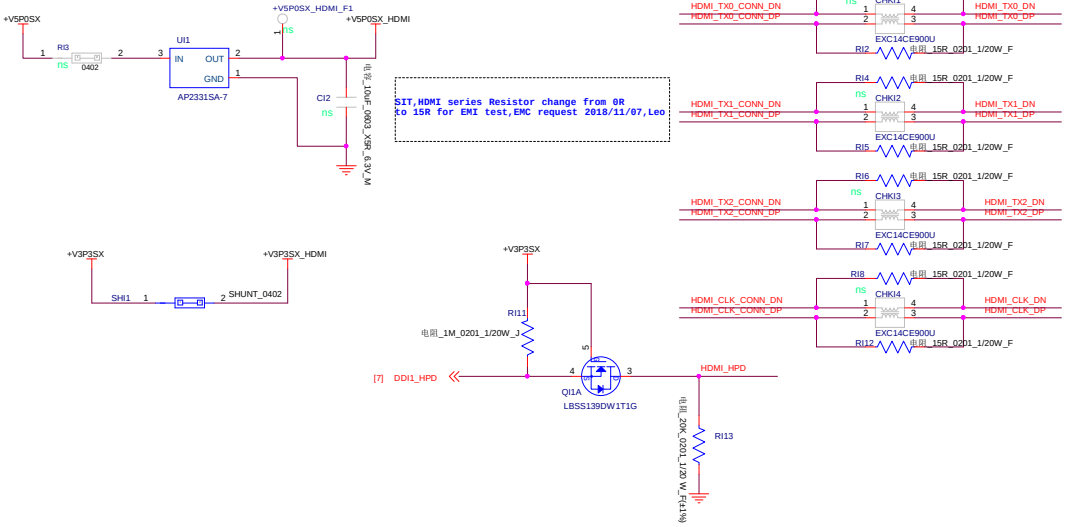
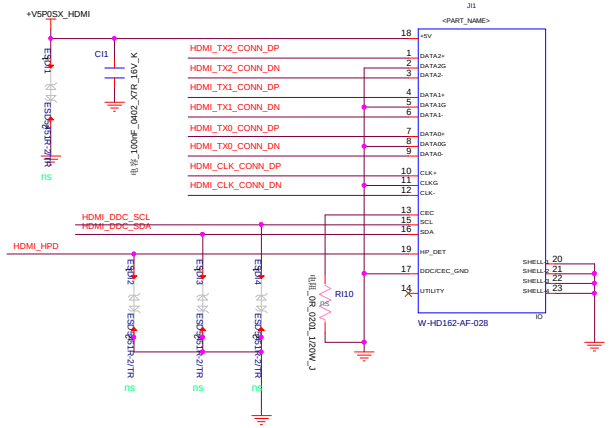
Power 1



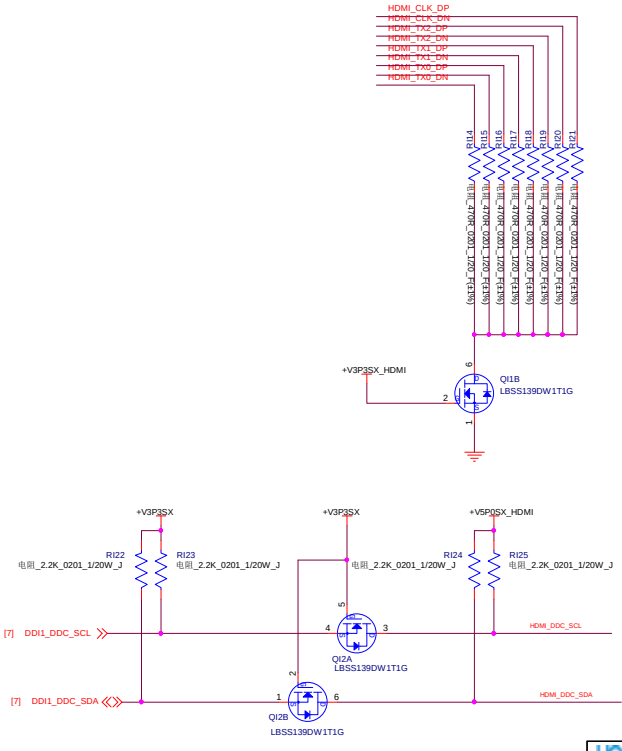
HDMI CONN



Signal

ESD

WHL----HDMI 1.4b level shift



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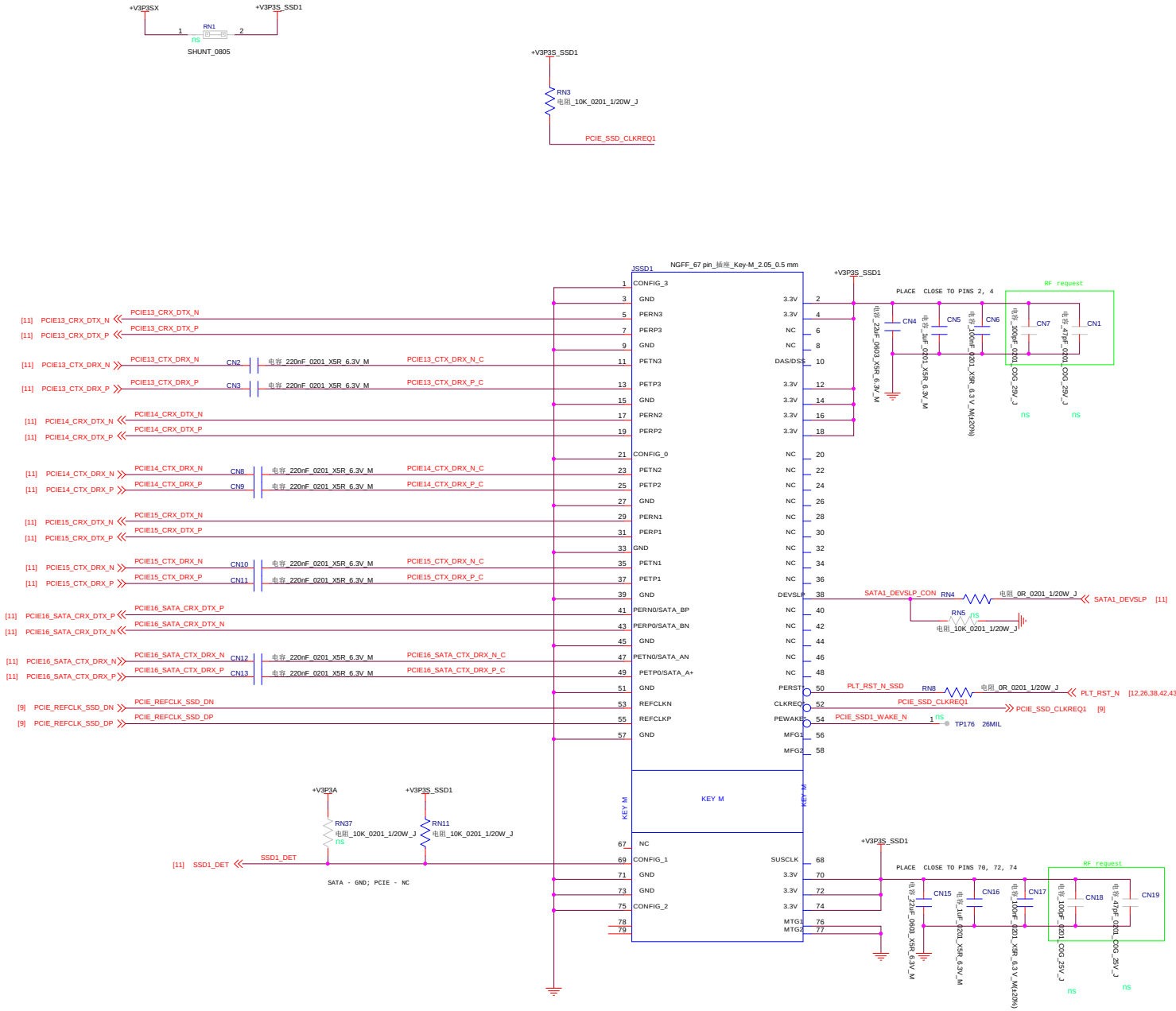
SSD



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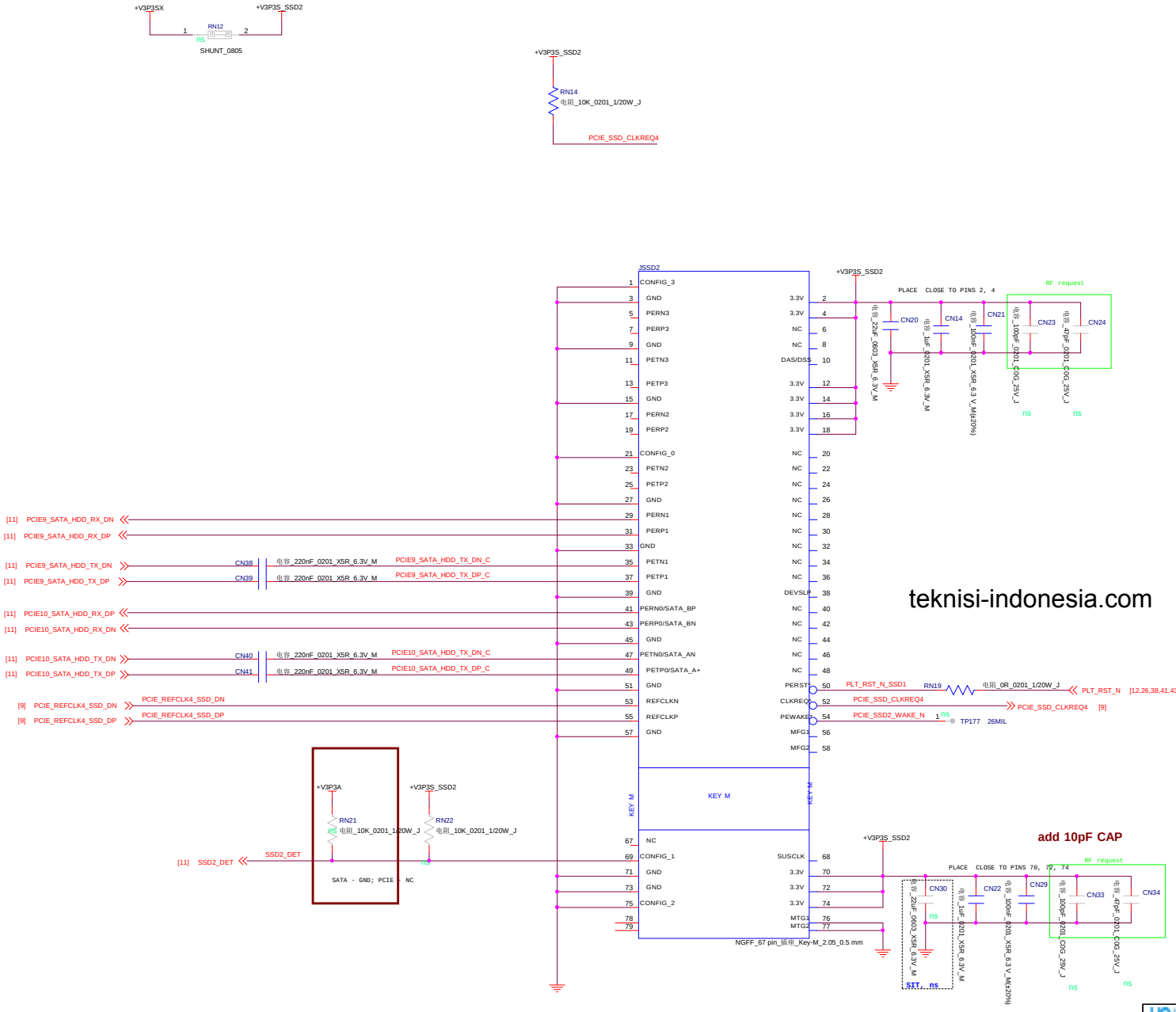
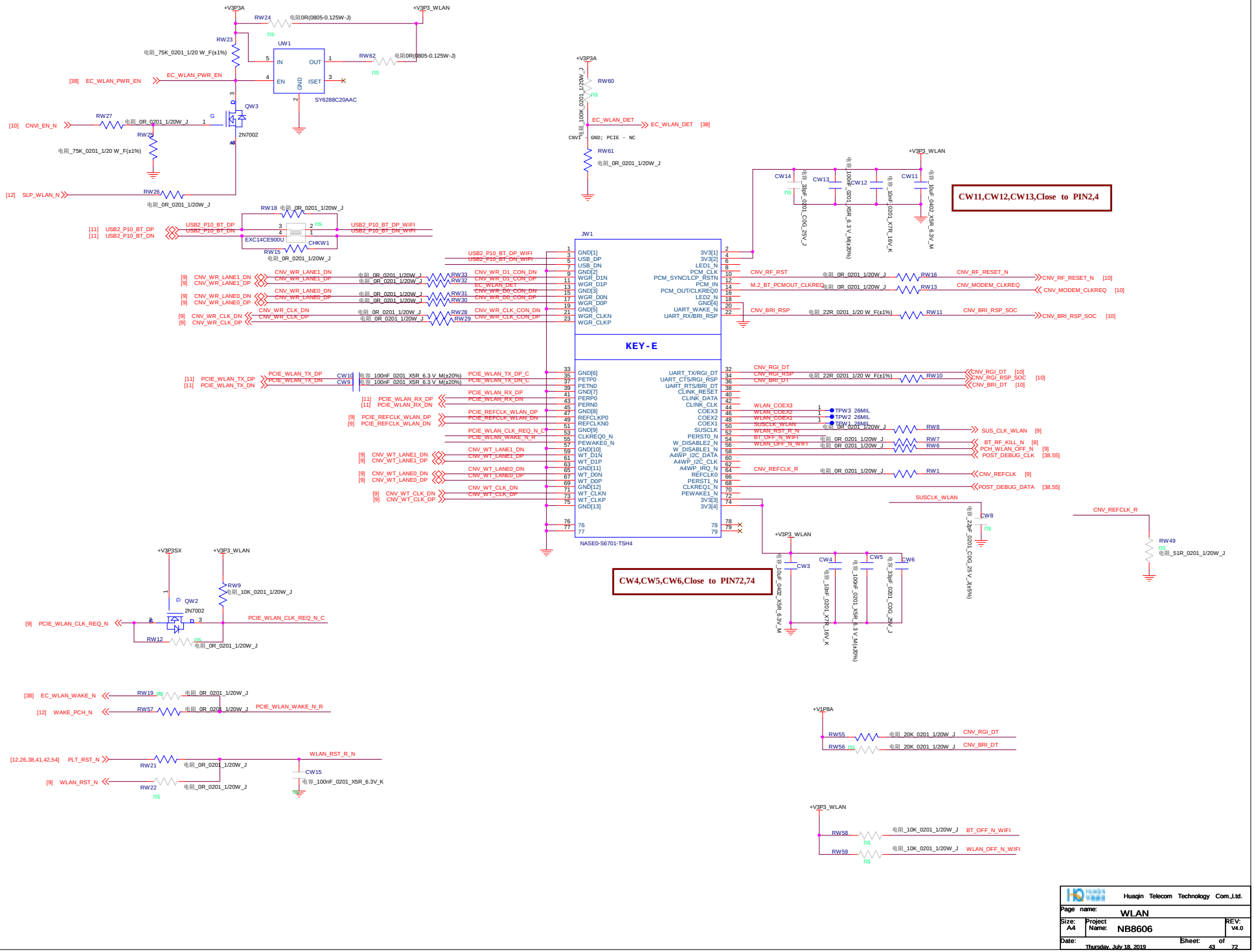
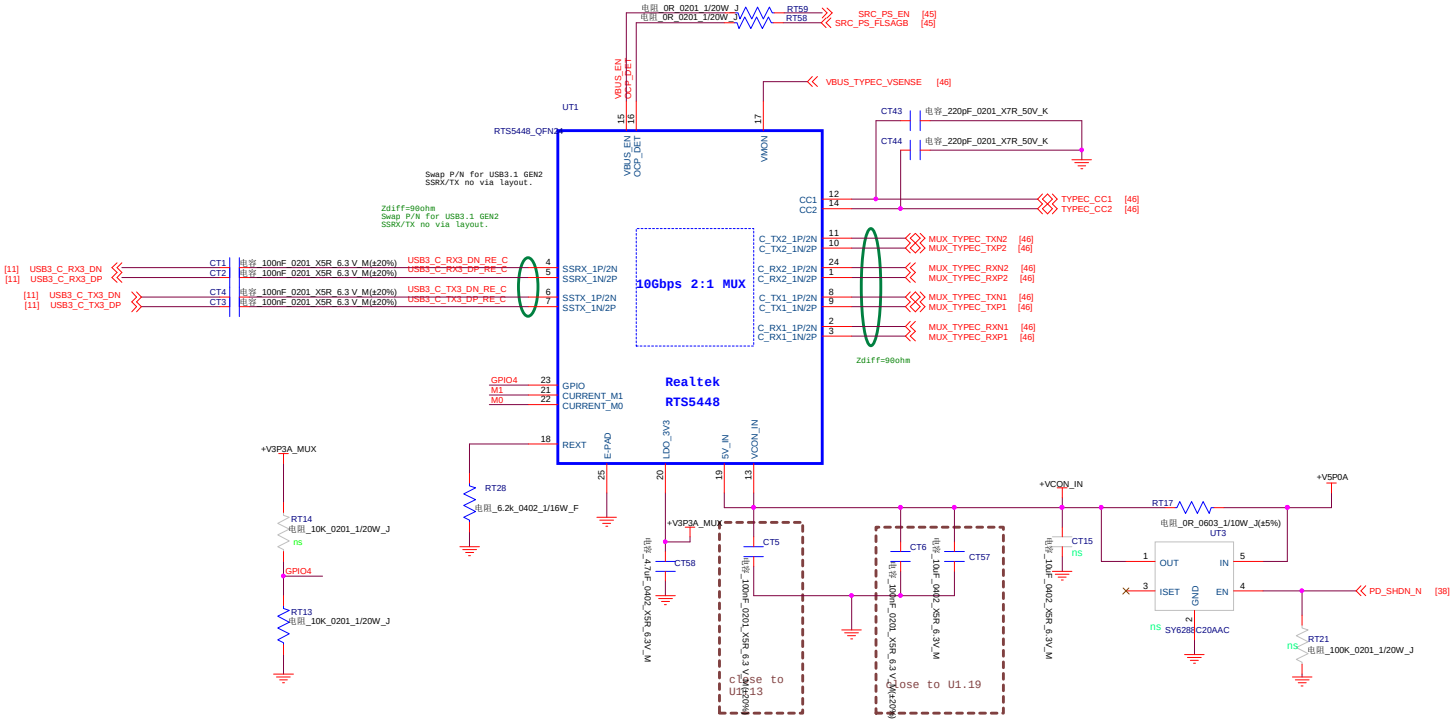
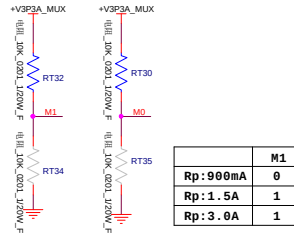
SSD 2




+V3P3A
RW24 电阻0R(0805-0.125W-J)
+V3P3_WLAN
RW23
电阻_75K_0201_1/20 W_F(±1%)
UW1
IN
OUT
EN
GND
ISET
SY6288C20AAC
RW62 电阻0R(0805-0.125W-J)
[38] EC_WLAN_PWR_EN
EC_WLAN_PWR_EN
QW3
2N7002
[10] CNVI_EN_N
RW27 电阻_0R_0201_1/20W_J
RW25
电阻_75K_0201_1/20 W_F(±1%)
[12] SLP_WLAN_N
RW26 电阻_0R_0201_1/20W_J
RW18 电阻_0R_0201_1/20W_J
[11] USB2_P10_BT_DP
[11] USB2_P10_BT_DN
EXC14CE900U
CHKW1
RW15 电阻_0R_0201_1/20W_J
USB2_P10_BT_DP_WIFI
USB2_P10_BT_DN_WIFI
+V3P3A
RW60
电阻_100K_0201_1/20W_J
EC_WLAN_DET
EC_WLAN_DET [38]
CNV1
GND; PCIE - NC
RW61 电阻_0R_0201_1/20W_J
+V3P3_WLAN
CW14 电容_33pF_0201_C0G_25V_J
CW13 电容_100nF_0201_X5R_6.3 V_M(±20%)
CW12 电容_10nF_0201_X7R_16V_K
CW11 电容_10uF_0402_X5R_6.3V_M
CW14,CW13,CW12,CW11,Close to PIN2,4
JW1
GND[1]
USB_DP
USB_DN
GND[2]
WGR_D1N
WGR_D1P
GND[3]
WGR_D0N
WGR_D0P
GND[5]
WGR_CLKN
WGR_CLKP
3V3[1]
3V3[2]
LED1_N
PCM_CLK
PCM_SYNC/LCP_RSTN
PCM_IN
PCM_OUT/CLKREQ0
LED2_N
GND[4]
UART_WAKE_N
UART_RX/BRI_RSP
CNV_RF_RST
M.2_BT_PCMOUT_CLKREQ
CNV_BRI_RSP
电阻_0R_0201_1/20W_J RW16 CNV_RF_RESET_N
CNV_RF_RESET_N [10]
电阻_0R_0201_1/20W_J RW13 CNV_MODEM_CLKREQ
CNV_MODEM_CLKREQ [10]
电阻_22R_0201_1/20 W_F(±1%) RW11 CNV_BRI_RSP_SOC
CNV_BRI_RSP_SOC [10]
KEY-E
NASE0-S6701-TSH4
[9] CNV_WR_LANE1_DN
[9] CNV_WR_LANE1_DP
[9] CNV_WR_LANE0_DN
[9] CNV_WR_LANE0_DP
[9] CNV_WR_CLK_DN
[9] CNV_WR_CLK_DP
RW33 CNV_WR_D1_CON_DN
RW32 CNV_WR_D1_CON_DP
RW31 CNV_WR_D0_CON_DN
RW30 CNV_WR_D0_CON_DP
RW28 CNV_WR_CLK_CON_DN
RW29 CNV_WR_CLK_CON_DP
[11] PCIE_WLAN_TX_DP
[11] PCIE_WLAN_TX_DN
CW10 电容_100nF_0201_X5R_6.3 V_M(±20%)
CW9 电容_100nF_0201_X5R_6.3 V_M(±20%)
PCIE_WLAN_TX_DP_C
PCIE_WLAN_TX_DN_C
PCIE_WLAN_RX_DP
PCIE_WLAN_RX_DN
[11] PCIE_WLAN_RX_DP
[11] PCIE_WLAN_RX_DN
[9] PCIE_REFCLK_WLAN_DP
[9] PCIE_REFCLK_WLAN_DN
PCIE_WLAN_CLK_REQ_N_C
PCIE_WLAN_WAKE_N_R
[9] CNV_WT_LANE1_DN
[9] CNV_WT_LANE1_DP
[9] CNV_WT_LANE0_DN
[9] CNV_WT_LANE0_DP
[9] CNV_WT_CLK_DN
[9] CNV_WT_CLK_DP
CNV_WT_LANE1_DN
CNV_WT_LANE1_DP
CNV_WT_LANE0_DN
CNV_WT_LANE0_DP
CNV_WT_CLK_DN
CNV_WT_CLK_DP
UART_TX/RGI_DT
UART_CTS/RGI_RSP
UART_RTS/BRI_DT
CLINK_RESET
CLINK_DATA
CLINK_CLK
COEX3
COEX2
COEX1
SUSCLK
PERST0_N
W_DISABLE2_N
W_DISABLE1_N
A4WP_I2C_DATA
A4WP_I2C_CLK
A4WP_IRQ_N
REFCLK0
PERST1_N
CLKREQ1_N
PEWAKE1_N
3V3[3]
3V3[4]
CNV_RGI_DT
CNV_RGI_RSP
CNV_BRI_DT
电阻_22R_0201_1/20 W_F(±1%) RW10
CNV_RGI_DT [10]
CNV_RGI_RSP_SOC [10]
CNV_BRI_DT [10]
WLAN_COEX3
WLAN_COEX2
WLAN_COEX1
SUSCLK_WLAN
WLAN_RST_R_N
BT_OFF_N_WIFI
WLAN_OFF_N_WIFI
CNV_REFCLK_R
TPW3 26MIL
TPW2 26MIL
TPW1 26MIL
电阻_0R_0201_1/20W_J RW8 SUS_CLK_WLAN [9]
电阻_0R_0201_1/20W_J RW7 BT_RF_KILL_N [8]
电阻_0R_0201_1/20W_J RW6 PCH_WLAN_OFF_N [9]
POST_DEBUG_CLK [38,55]
电阻_0R_0201_1/20W_J RW1 CNV_REFCLK [9]
POST_DEBUG_DATA [38,55]
CW4,CW5,CW6,Close to PIN72,74
+V3P3_WLAN
CW3 电容_10uF_0402_X5R_6.3V_M
CW4 电容_10nF_0201_X7R_16V_K
CW5 电容_100nF_0201_X5R_6.3 V_M(±20%)
CW6 电容_33pF_0201_C0G_25V_J
SUSCLK_WLAN
CW8 电容_22pF_0201_C0G_25 V_J(±5%)
CNV_REFCLK_R
RW49 电阻_51R_0201_1/20W_J
+V3P3SX
+V3P3_WLAN
RW9 电阻_10K_0201_1/20W_J
QW2
2N7002
[9] PCIE_WLAN_CLK_REQ_N
PCIE_WLAN_CLK_REQ_N_C
RW12 电阻_0R_0201_1/20W_J
[38] EC_WLAN_WAKE_N
[12] WAKE_PCH_N
RW19 电阻_0R_0201_1/20W_J
RW57 电阻_0R_0201_1/20W_J
PCIE_WLAN_WAKE_N_R
[12,26,38,41,42,54] PLT_RST_N
[9] WLAN_RST_N
RW21 电阻_0R_0201_1/20W_J
RW22 电阻_0R_0201_1/20W_J
WLAN_RST_R_N
CW15 电容_100nF_0201_X5R_6.3V_K
+V1P8A
RW55 电阻_20K_0201_1/20W_J CNV_RGI_DT
RW56 电阻_20K_0201_1/20W_J CNV_BRI_DT
+V3P3_WLAN
RW58 电阻_10K_0201_1/20W_J BT_OFF_N_WIFI
RW59 电阻_10K_0201_1/20W_J WLAN_OFF_N_WIFI
Huaqin Telecom Technology Com.,Ltd.
Page name: WLAN
Size: A4
Project Name: NB8606
REV: V4.0
Date: Thursday, July 18, 2019
Sheet: 43 of 72





Rp configuration

Rp:3.0A (now)

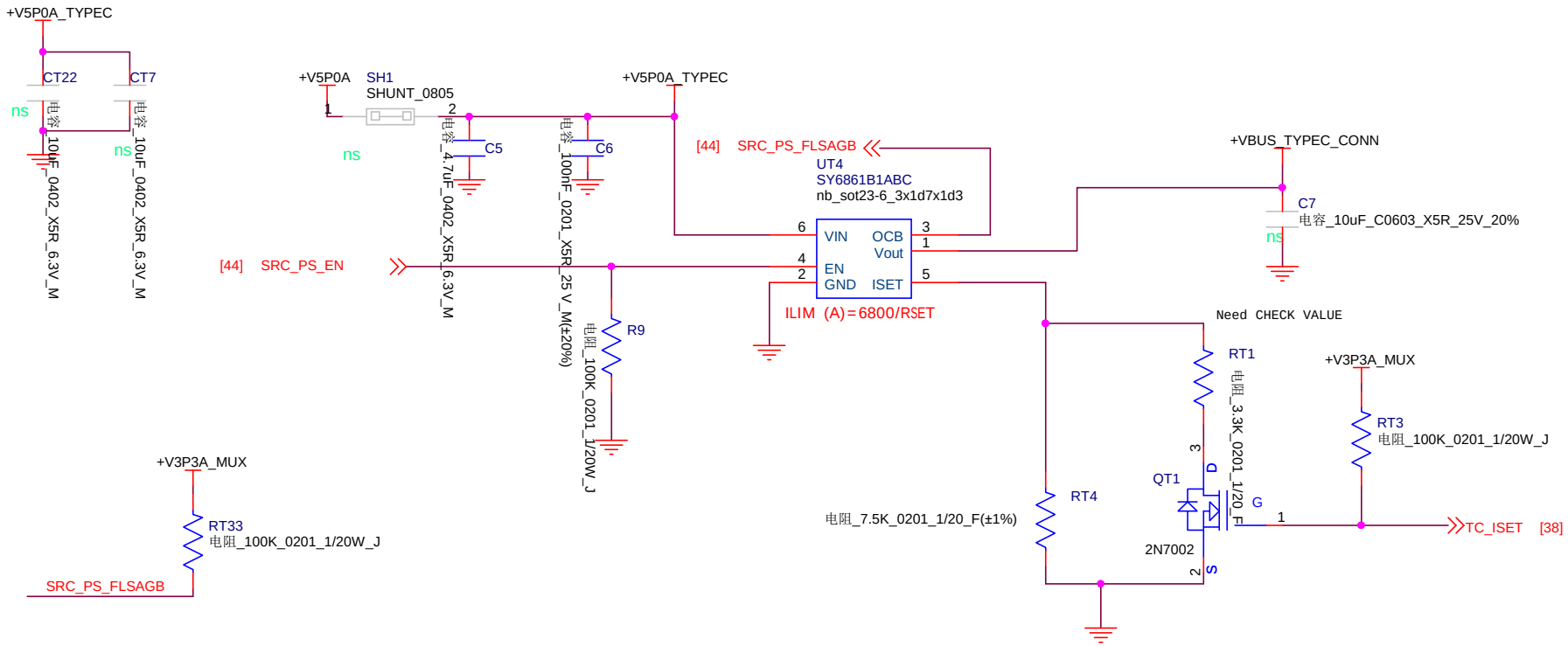
	M1	M0	Note
Rp:900mA	0	1	RT34/RT30 mount,RT32/RT35 don't mount
Rp:1.5A	1	0	RT32/RT35 mount,RT34/RT30 don't mount
Rp:3.0A	1	1	RT32/RT30 mount,RT34/RT35 don't mount

Huaqin Telecom Technology Com.,Ltd.

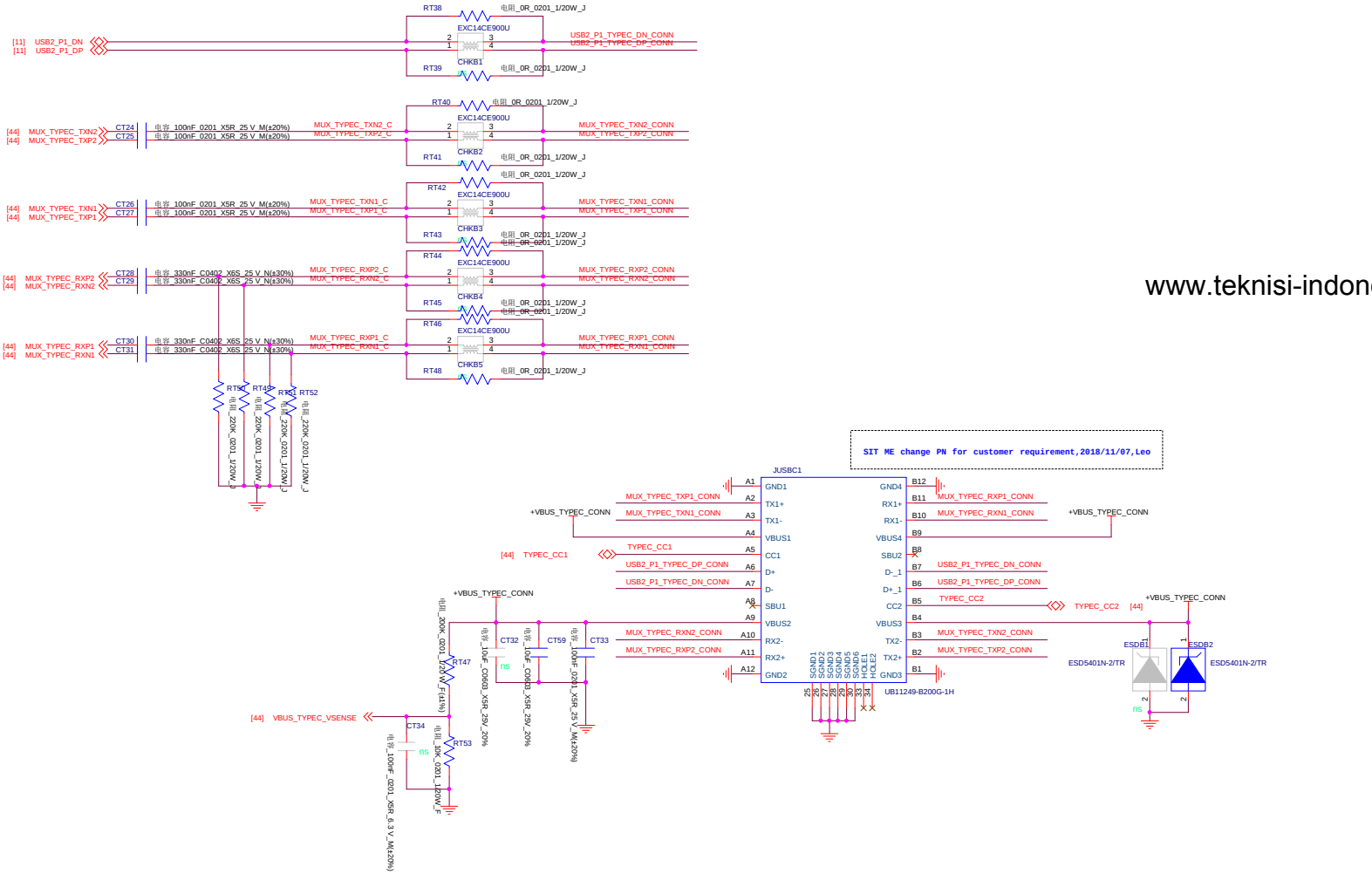
Page name: Type C Controller

Size: A4 | Project Name: NB8606 | REV: V4.0

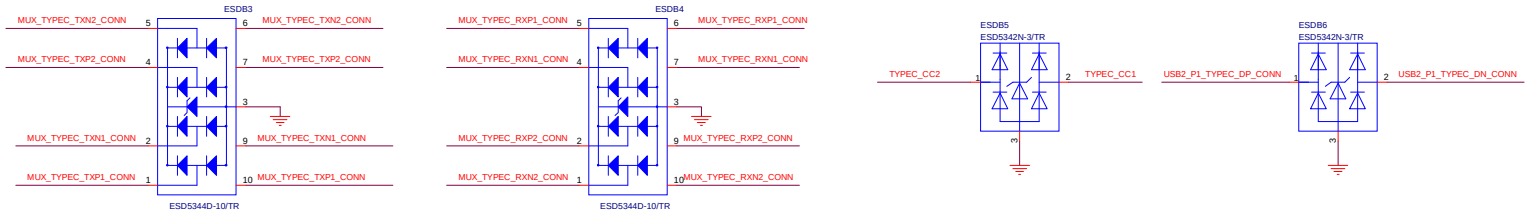
Date: Thursday, July 18, 2019 | Sheet: 44 of 72



Huaqin Telecom Technology Com.,Ltd.		
Page name: TYPE C Power		
Size: A4	Project Name: NB8606	REV: V4.0
Date: Thursday, July 18, 2019	Sheet: 45 of 72	

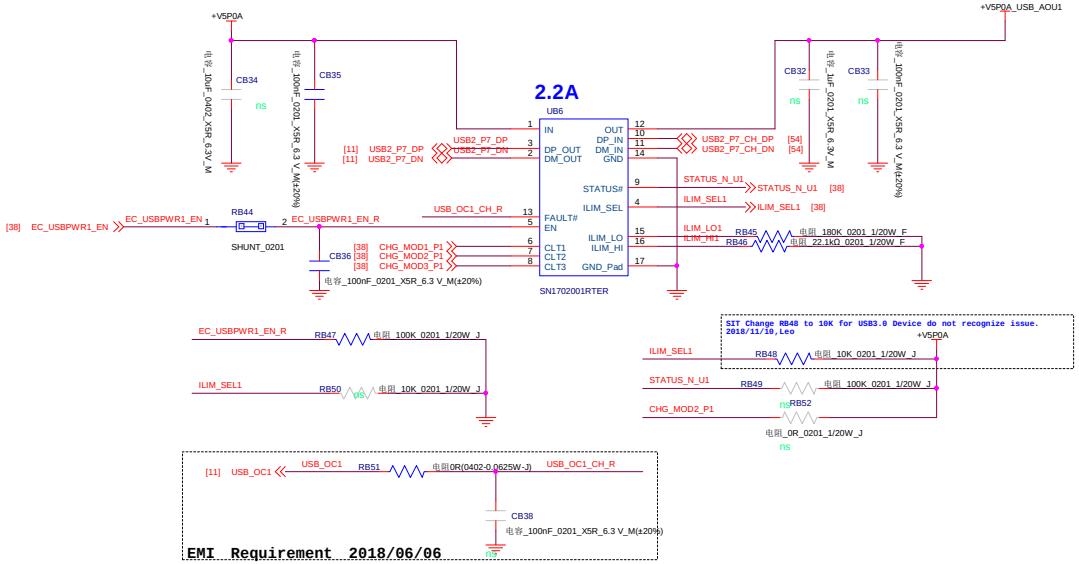


TYPE-C_ESD

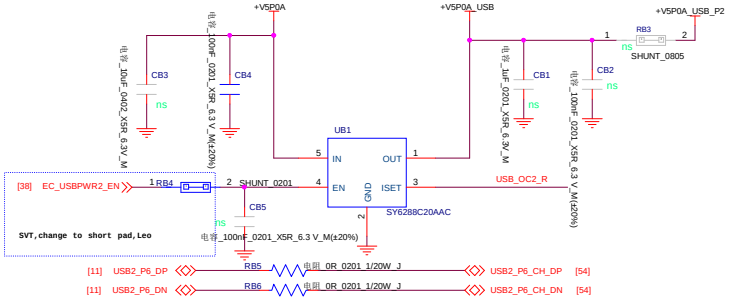


Huaqin Telecom Technology Com.,Ltd.		
Page name:	Type C CONN	
Size: A4	Project Name: NB8606	REV: V4.0
Date: Thursday, July 18, 2019	Sheet: 46 of 72	

USB3.1 POWER Port1

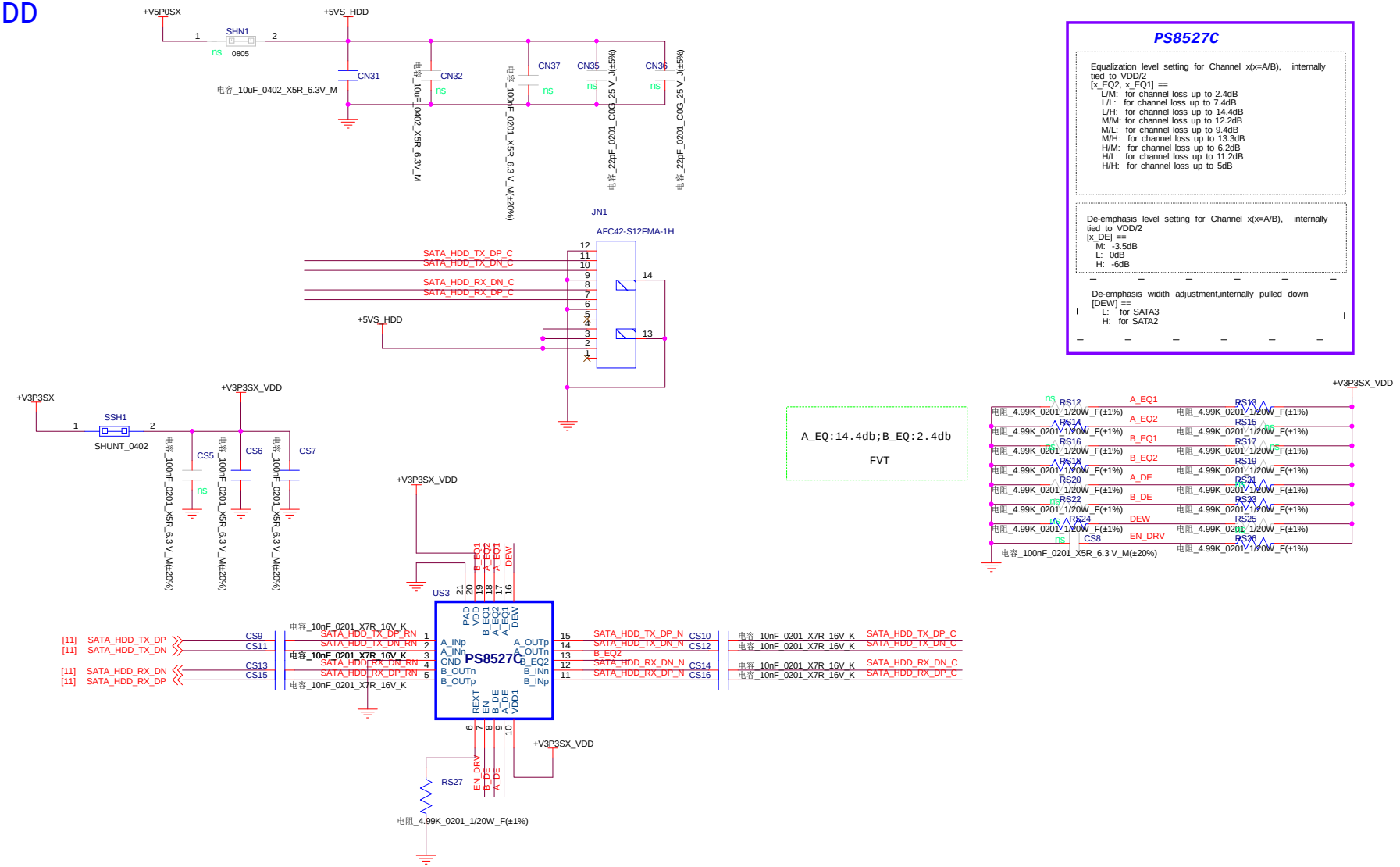


USB3.1 POWER Port2



Huaqin Telecom Technology Com.,Ltd.		
Page name:	TYPE-C PD & MUX	
Size: A4	Project Name: NB8606	REV: V4.0
Date: Thursday, July 18, 2019	Sheet: 47 of 72	

HDD



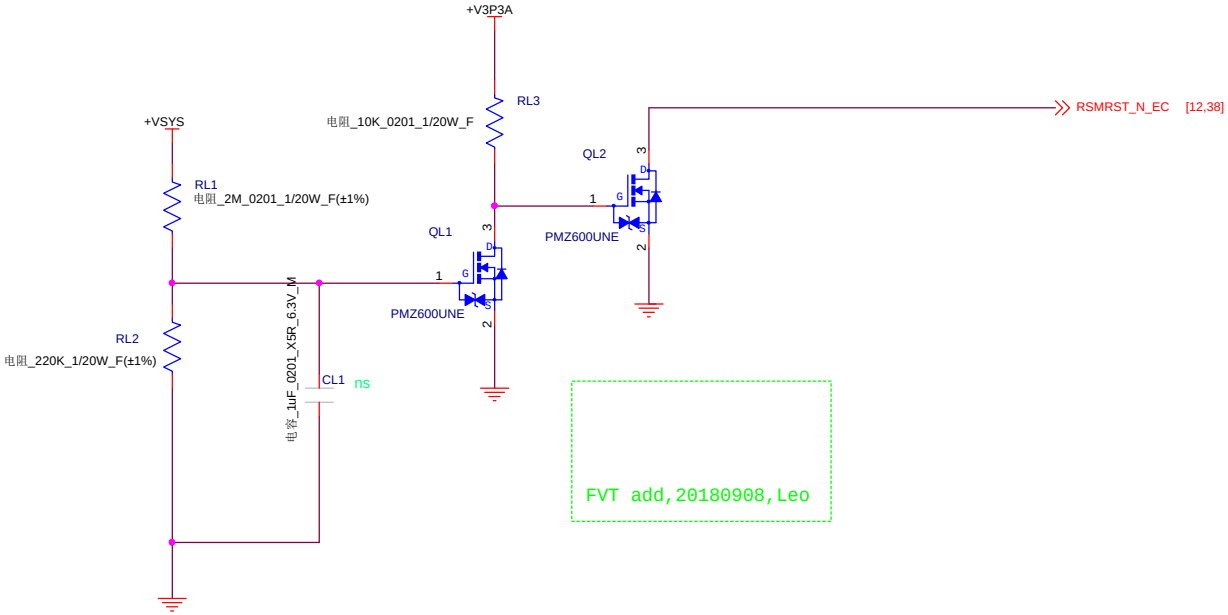
PS8527C

Equalization level setting for Channel x(x=A/B), internally tied to VDD/2
[x_EQ2, x_EQ1] ==
L/M: for channel loss up to 2.4dB
L/L: for channel loss up to 7.4dB
L/H: for channel loss up to 14.4dB
M/M: for channel loss up to 12.2dB
M/L: for channel loss up to 9.4dB
M/H: for channel loss up to 13.3dB
H/M: for channel loss up to 6.2dB
H/L: for channel loss up to 11.2dB
H/H: for channel loss up to 5dB

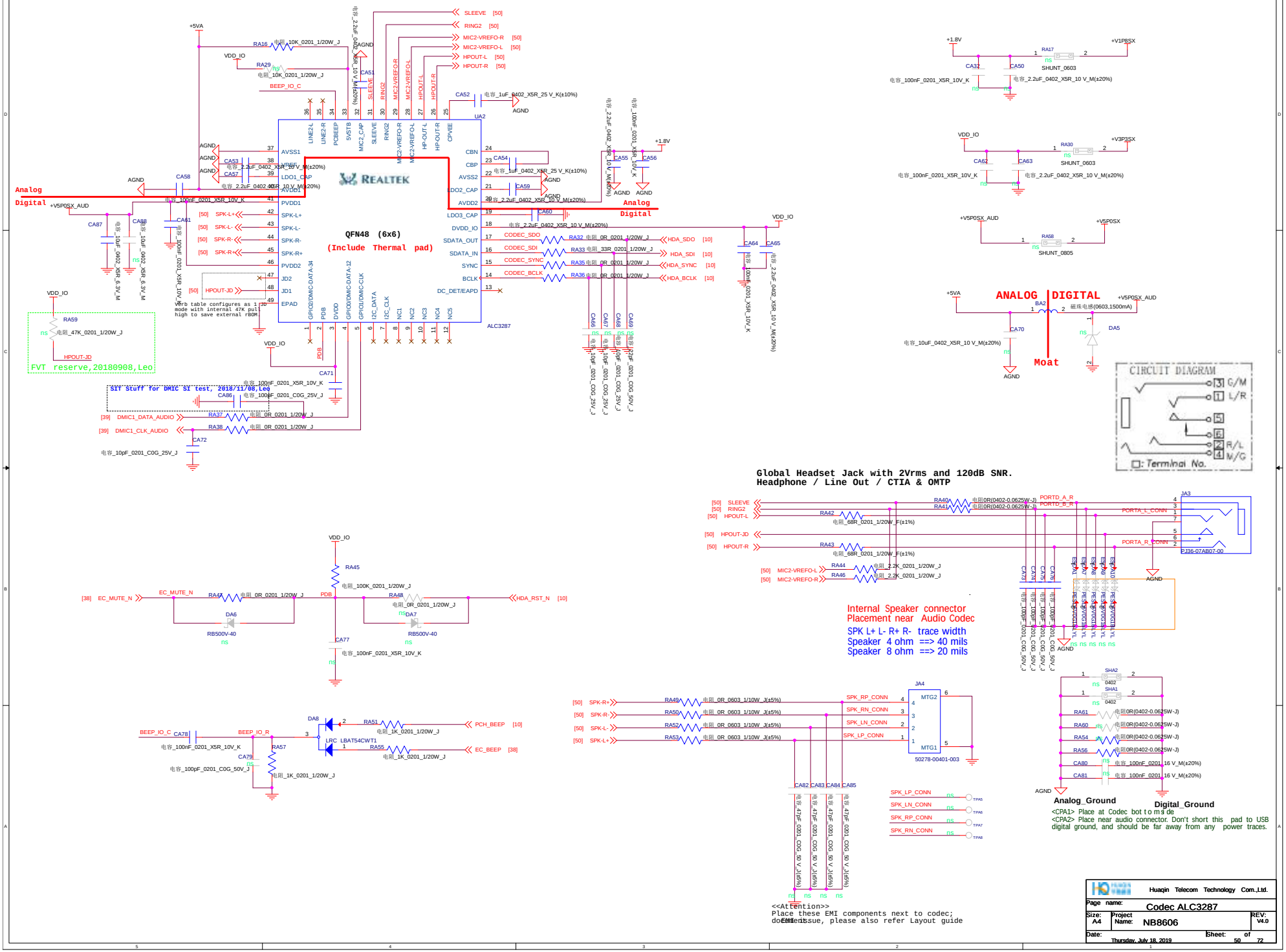
De-emphasis level setting for Channel x(x=A/B), internally tied to VDD/2
[x_DE] ==
M: -3.5dB
L: 0dB
H: -6dB

De-emphasis width adjustment,internally pulled down
[DEW] ==
L: for SATA3
H: for SATA2

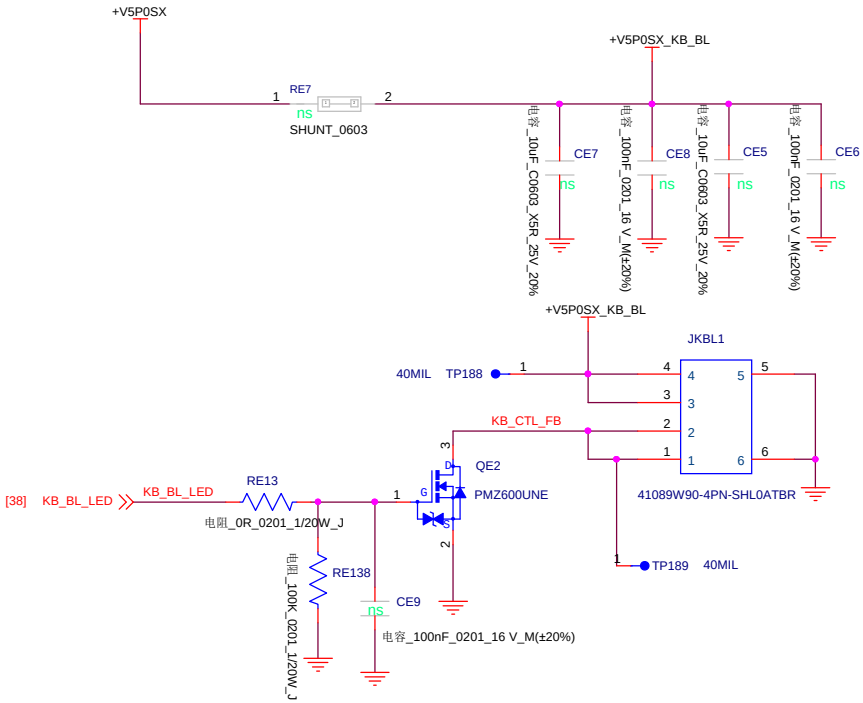
Huaqin Telecom Technology Com.,Ltd.	
Page name:	HDD
Size: A4	Project Name: NB8606
REV: V4.0	
Date: Thursday, July 18, 2019	Sheet: 48 of 72



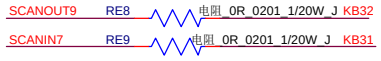
Huaqin Telecom Technology Com.,Ltd.		
Page name: BLANK		
Size: A4	Project Name: NB8606	REV: V4.0
Date: Thursday, July 18, 2019	Sheet: 49 of 72	

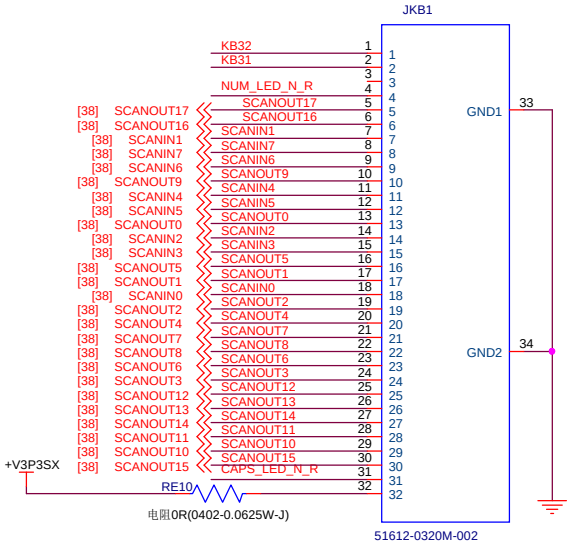

QFN48 (6x6)
(Include Thermal pad)
ALC3287
Analog
Digital
FVT reserve,20180908,Leo
Global Headset Jack with 2Vrms and 120dB SNR.
Headphone / Line Out / CTIA & OMTP
Internal Speaker connector
Placement near Audio Codec
SPK L+ L- R+ R- trace width
Speaker 4 ohm ==> 40 mils
Speaker 8 ohm ==> 20 mils
ANALOG
DIGITAL
Moat
CIRCUIT DIAGRAM
Analog_Ground
Digital_Ground
<Attention>>
Place these EMI components next to codec;
Huaqin Telecom Technology Com.,Ltd.
Codec ALC3287
NB8606
Thursday, July 18, 2019

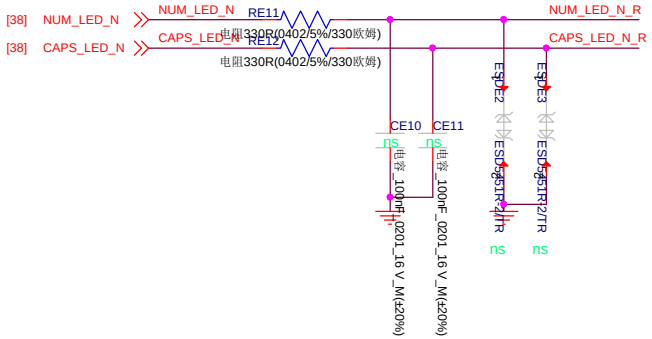
KB Backlight



KB CONN

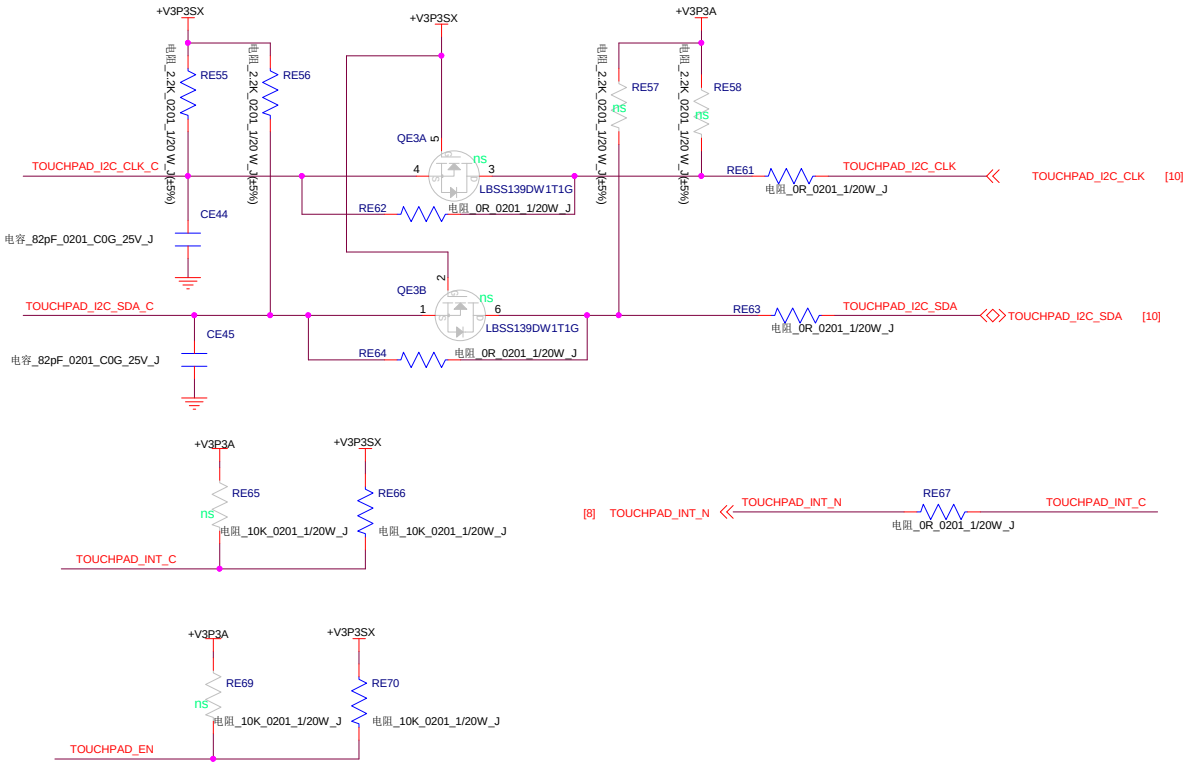




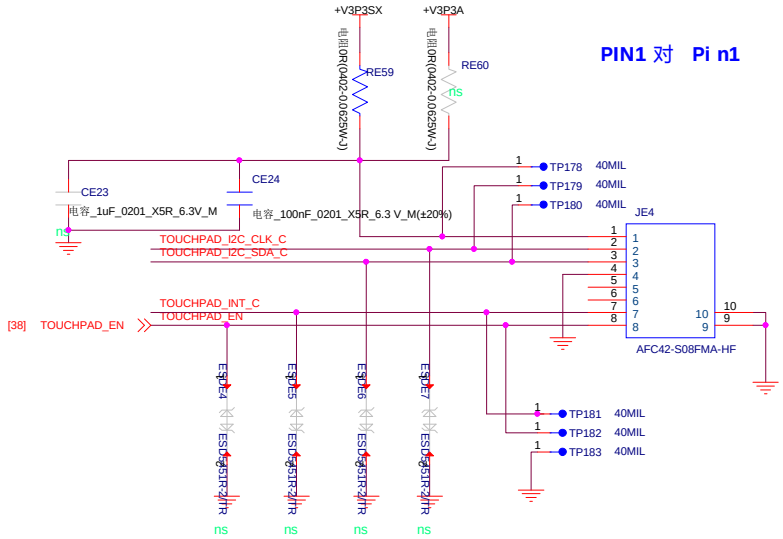


Huaqin Telecom Technology Com.,Ltd.		
Page name: KB CON & Backlight		
Size: A4	Project Name: NB8606	REV: V4.0
Date: Thursday, July 18, 2019	Sheet: 51 of 72	

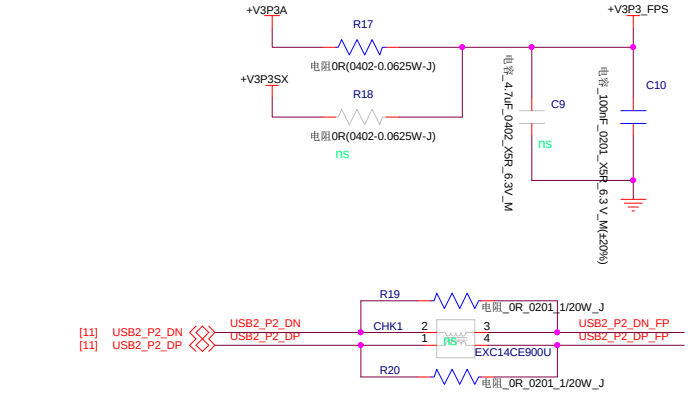
Touch Pad



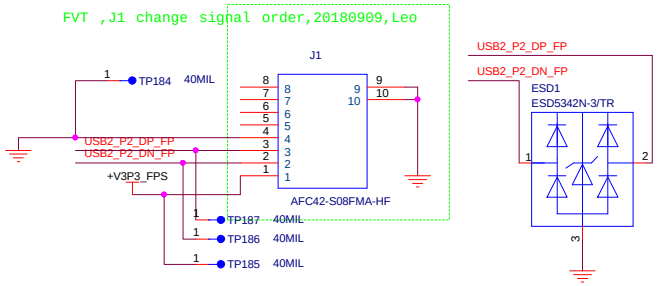
Touch Pad CONN



Finger Print



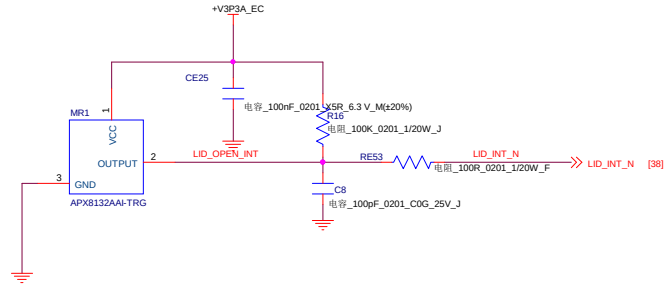
Finger Print CONN



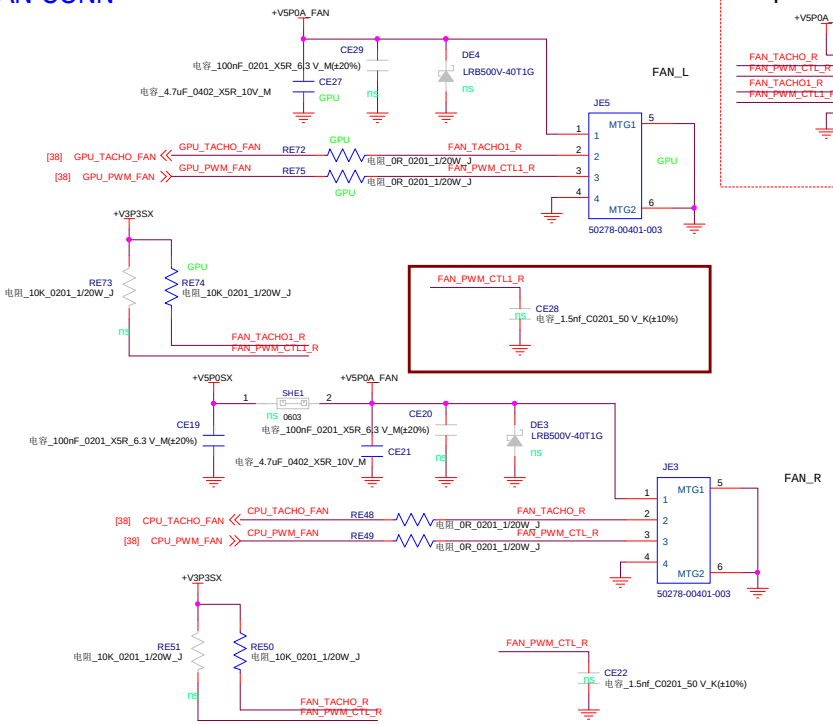
Huaqin Telecom Technology Com.,Ltd.		
Page name:	TouchPad/ Finger Print	
Size: A4	Project Name: NB8606	REV: V4.0
Date: Thursday, July 18, 2019	Sheet: 52 of 72	

PWR BUTTON LOGIC

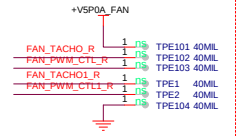
HALL



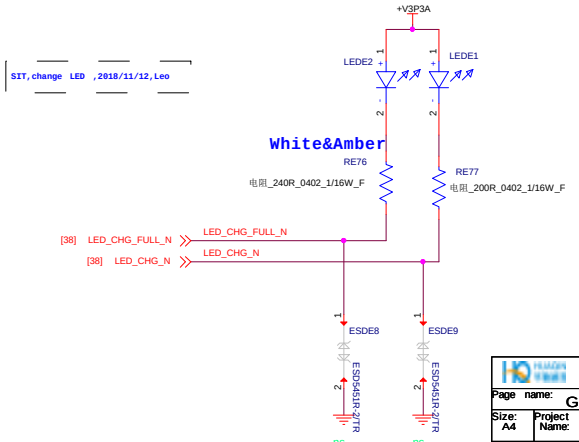
FAN CONN



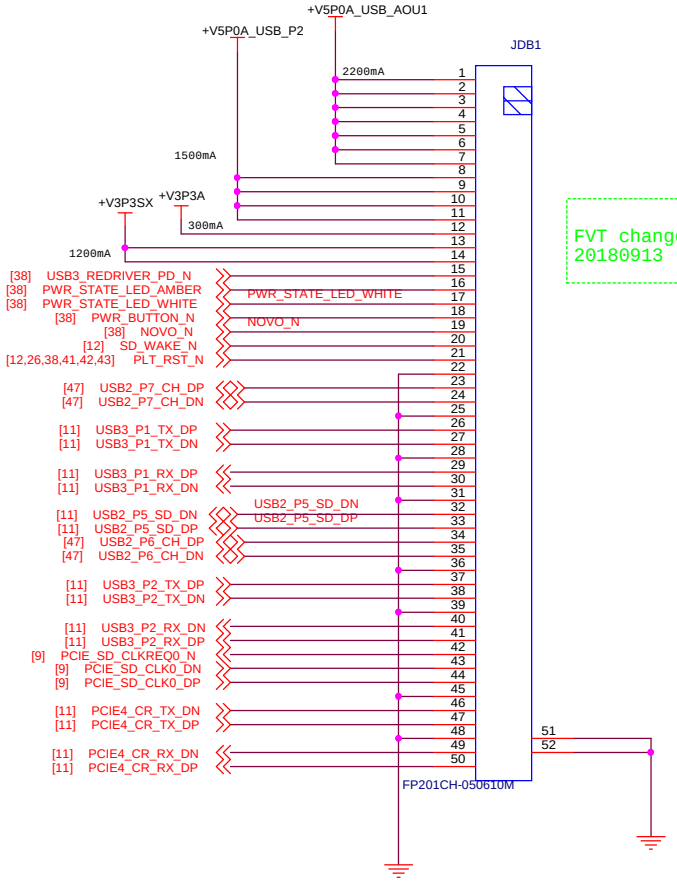
FOR product line



LED

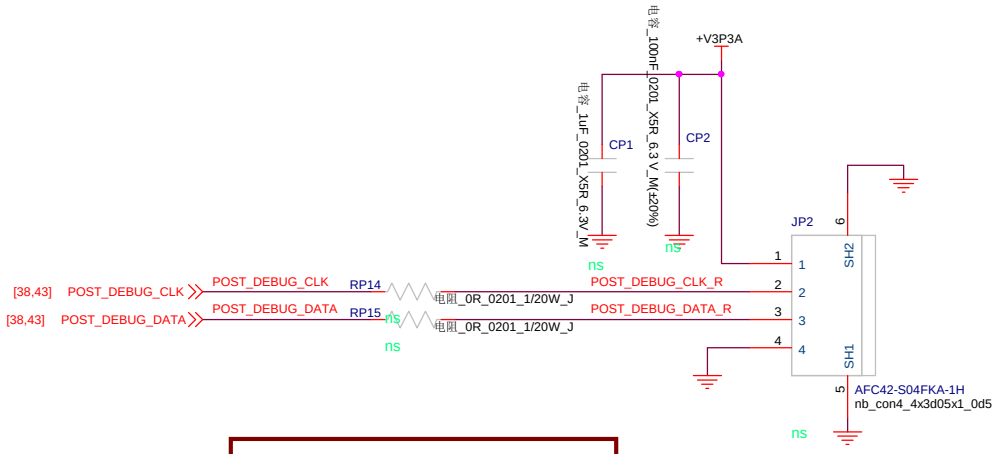


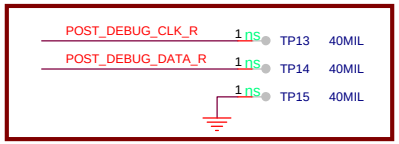
Huaqin Telecom Technology Com.,Ltd.		
Page name: G-SENSOR/FAN/LED/Hall		
Size: A4	Project Name: NB8606	REV: V4.0
Date: Thursday, July 18, 2019	Sheet: 53 of 72	



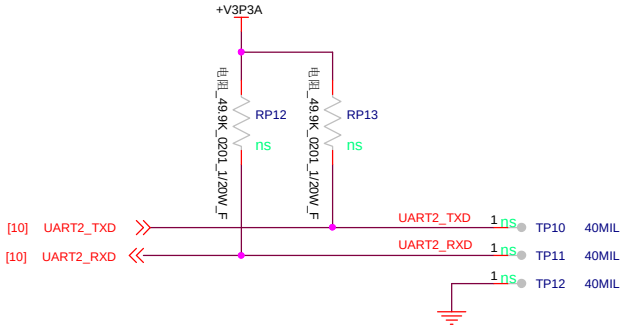
FVT change to 50pin for USB Drop test, 20180913

Huaqin Telecom Technology Com.,Ltd.		
Page name: DB CONNECTOR		
Size: A4	Project Name: NB8606	REV: V4.0
Date: Thursday, July 18, 2019	Sheet: 54 of 72	





add test point - 01/18



Huaqin Telecom Technology Com.,Ltd.		
Page name: Debug Conn		
Size: A4	Project Name: NB8606	REV: V4.0
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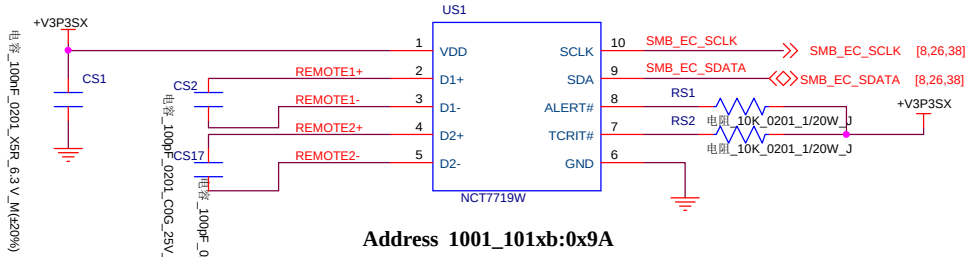
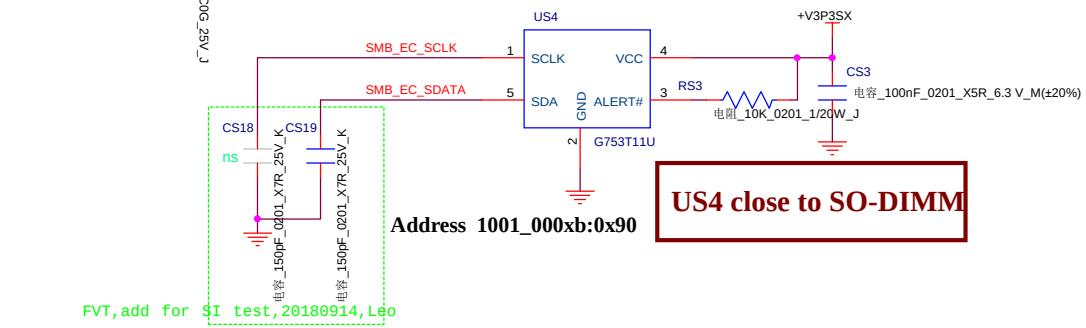
REMOTE1+/-, Trace width/space:10/10 mil,Trace length:<8"
Connect guard traces to GND on either side of the
DXP-DXN traces

Close to charger



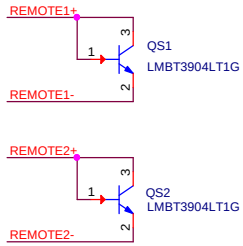
Address 1001_101xb:0x9A



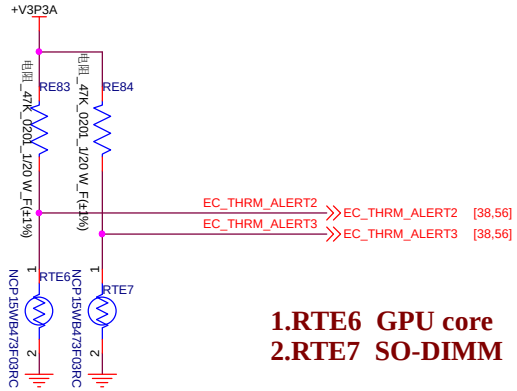
Address 1001_000xb:0x90

US4 close to SO-DIMM

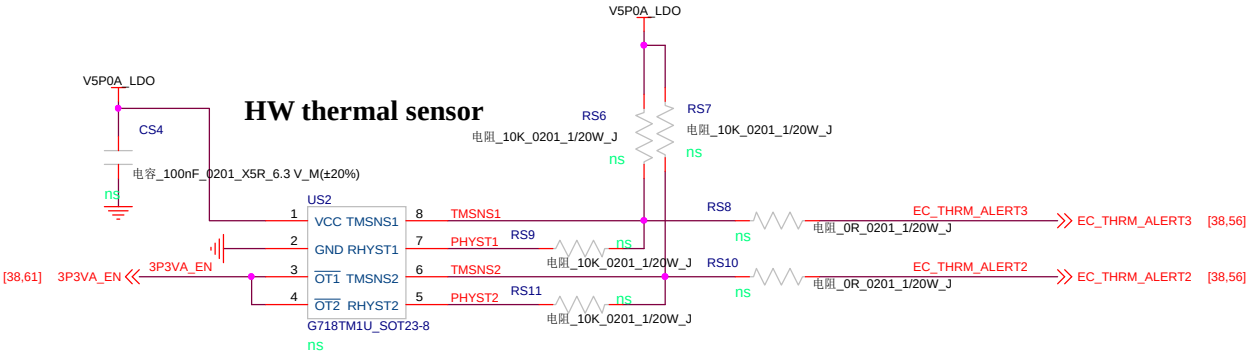
FVT,add for SI test,20180914,Leo



Between CPU and GPU



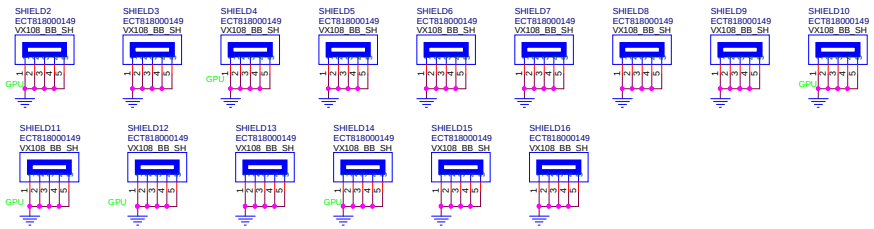
1.RTE6 GPU core
2.RTE7 SO-DIMM



NOTE:
HW thermal sensor ....??

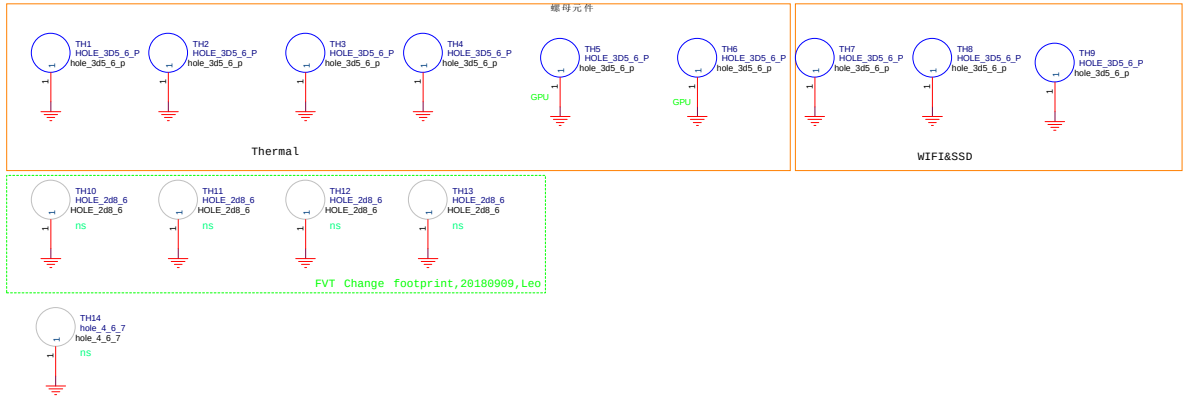
over temperature threshold:
RSET=3*RTMH
92+/-30C
Hysteresis temperature threshold.
RHYST=(RSET*RTML)/(3*RTML-RSET)
56+/-30C

Huaqin Telecom Technology Com.,Ltd.		
Page name: Thermal sensor		
Size: A4	Project Name: NB8606	REV: V4.0
Date: Thursday, July 18, 2019	Sheet: 56 of 72	



屏蔽　罩夹　子*15

Need add HQ CODE and Stuff

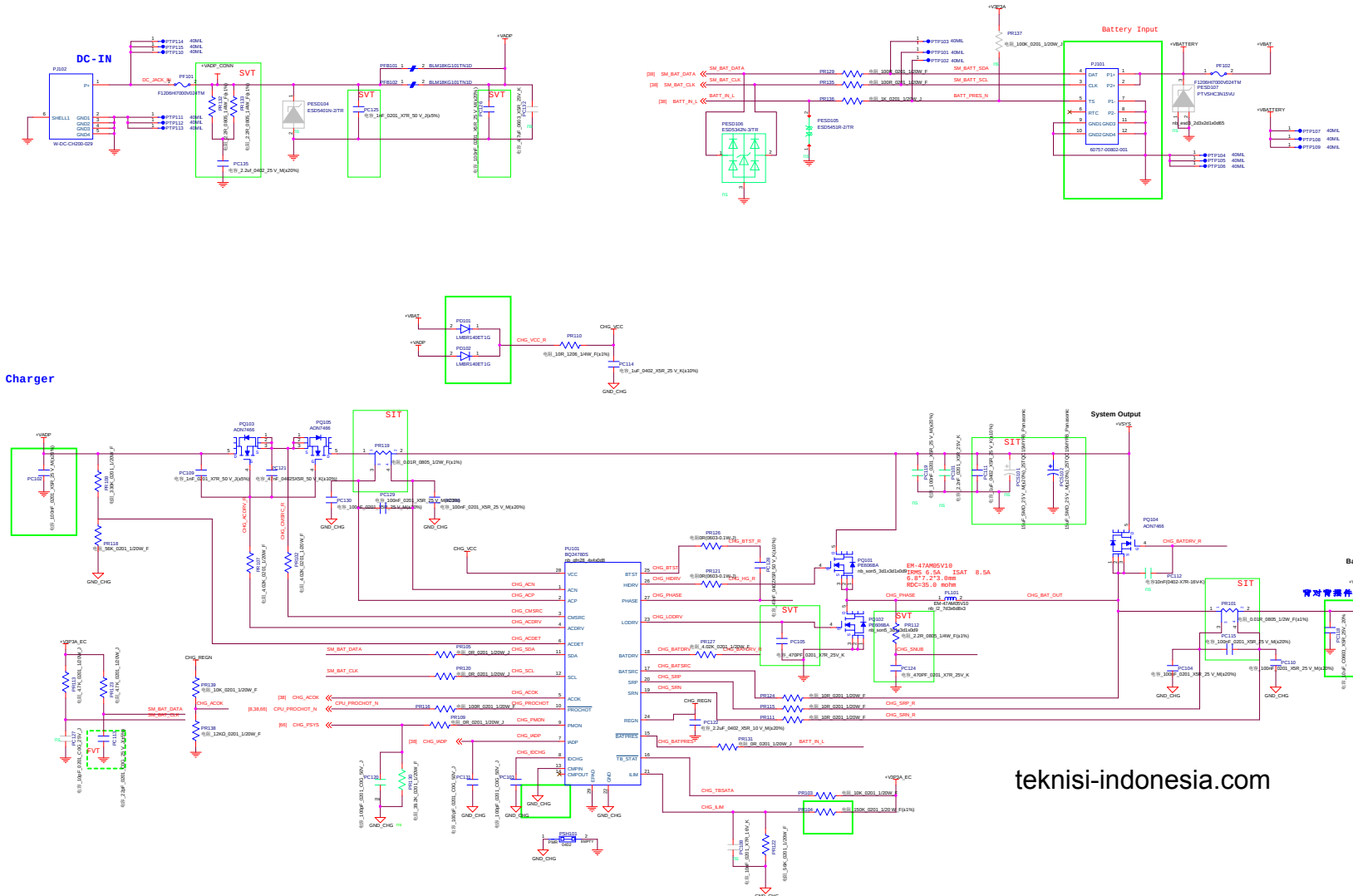


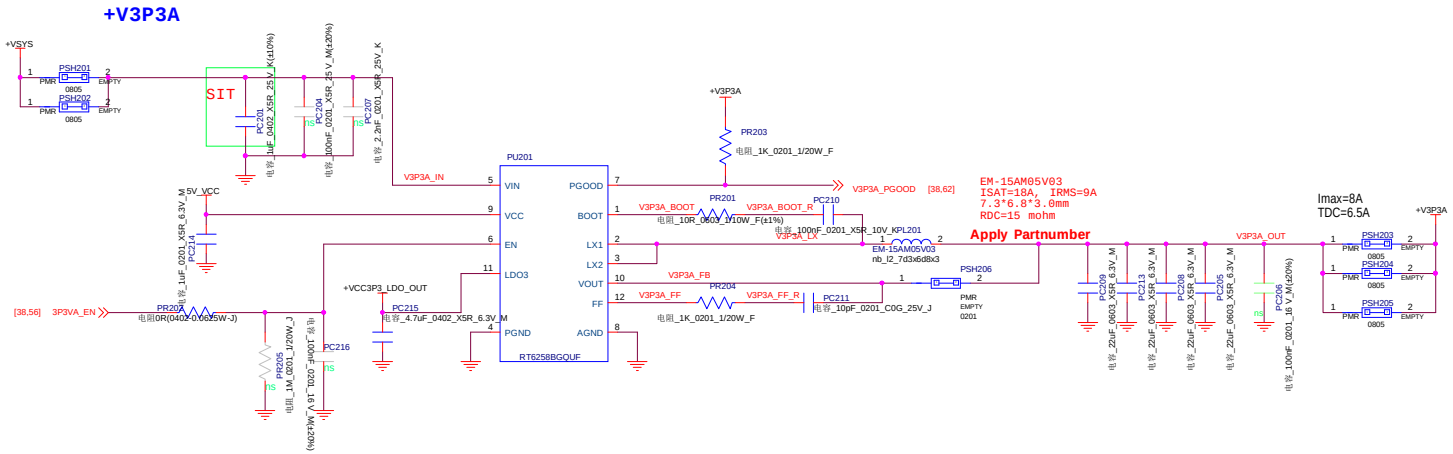
HOLE *14

Huaqin Telecom Technology Com.,Ltd.		
Page name:	Hole/ Mark	
Size: A4	Project Name: NB8606	REV: V4.0
Date: Thursday, July 18, 2019	Sheet: 57 of 72	

Huaqin Telecom Technology Com.,Ltd.			
Page name:	BLANK		
Size: A4	Project Name:	NB8606	REV: V4.0
Date: Thursday, July 18, 2019		Sheet: 58 of 72	

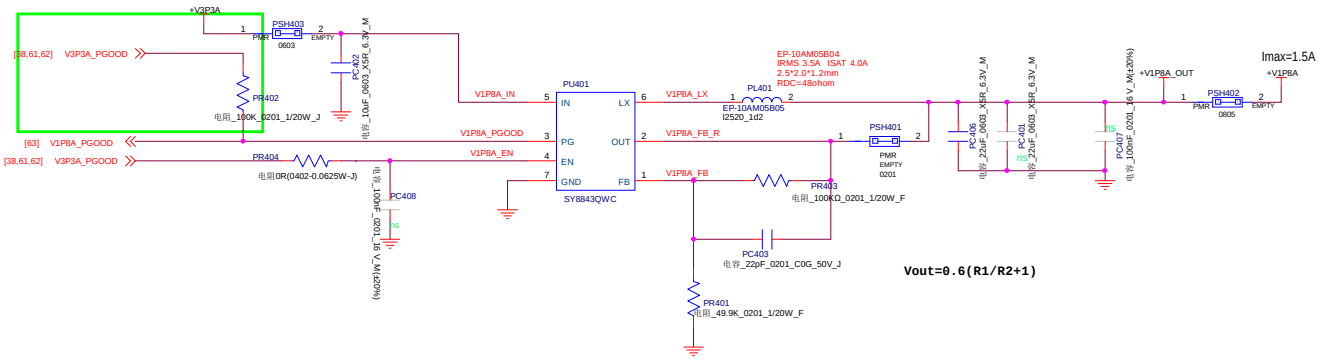
Huaqin Telecom Technology Com.,Ltd.		
Page name:	Power Map	
Size: A4	Project Name: NB8606	REV: V4.0
Date: Thursday, July 18, 2019	Sheet: 59	of 72


DC-IN
Battery Input
Charger
System Output
Battery Pack
SVT
SIT
teknisi-indonesia.com
Huaqin Telecom Technology Com.,Ltd.
Page name: BATTERY CHARGER
Size: A4
Project Name: NB8606
REV: V4.0
Date: Thursday, July 18, 2019
Sheet: 65 of 72



Huaqin Telecom Technology Com.,Ltd.		
Page name:	POWER DELIVERY 3.3V	
Size: A4	Project Name: NB8606	REV: V4.0
Date: Thursday, July 18, 2019	Sheet: 61 of 72	

+V1P8A



Huaqin Telecom Technology Com.,Ltd.		
Page name:	POWER DELIVERY 1.8V	
Size: A4	Project Name: NB8606	REV: V4.0
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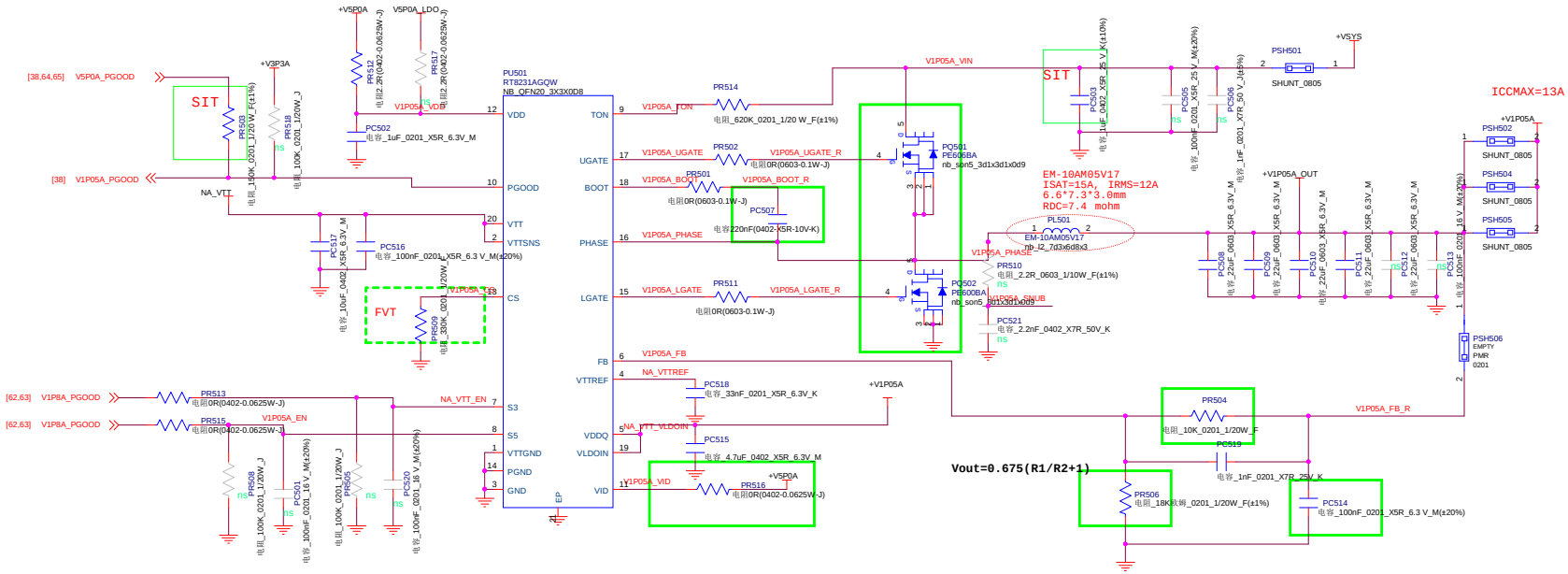

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Page name:	POWER DELIVERY 1.0V		
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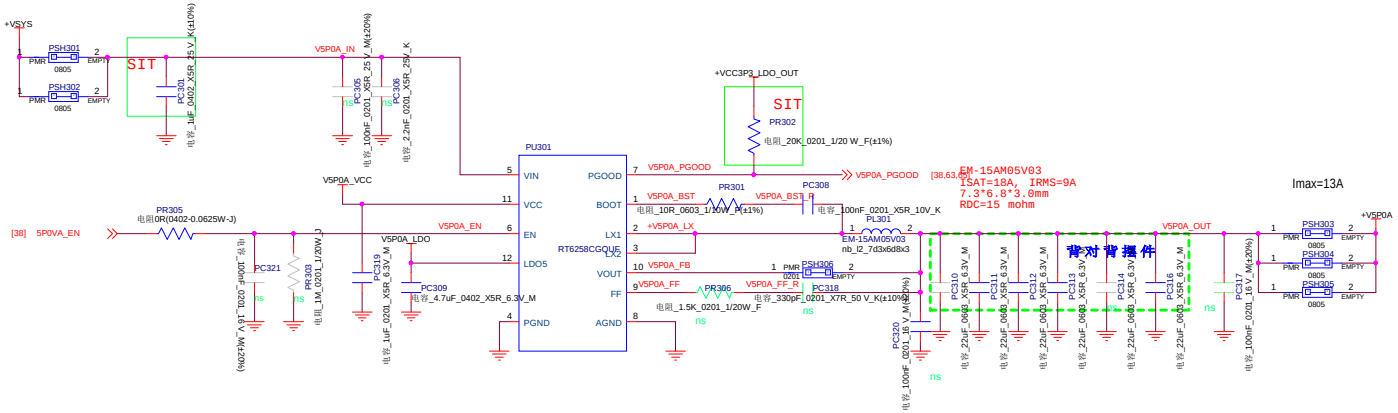

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Page name:	POWER DELIVERY 5V		
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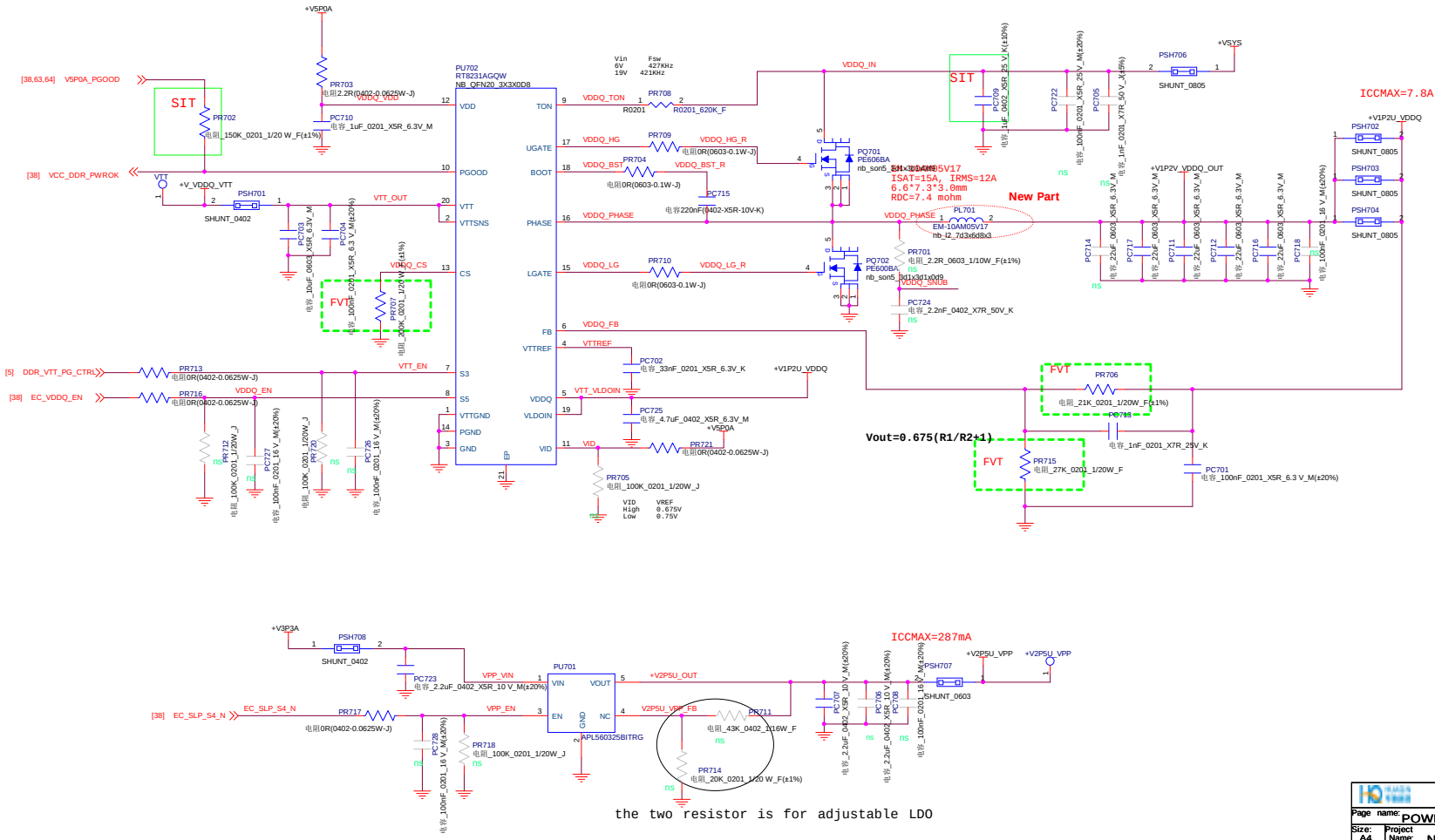

the two resistor is for adjustable LDO

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Page name:	POWER DELIVERY 1.2V & 2.5V	
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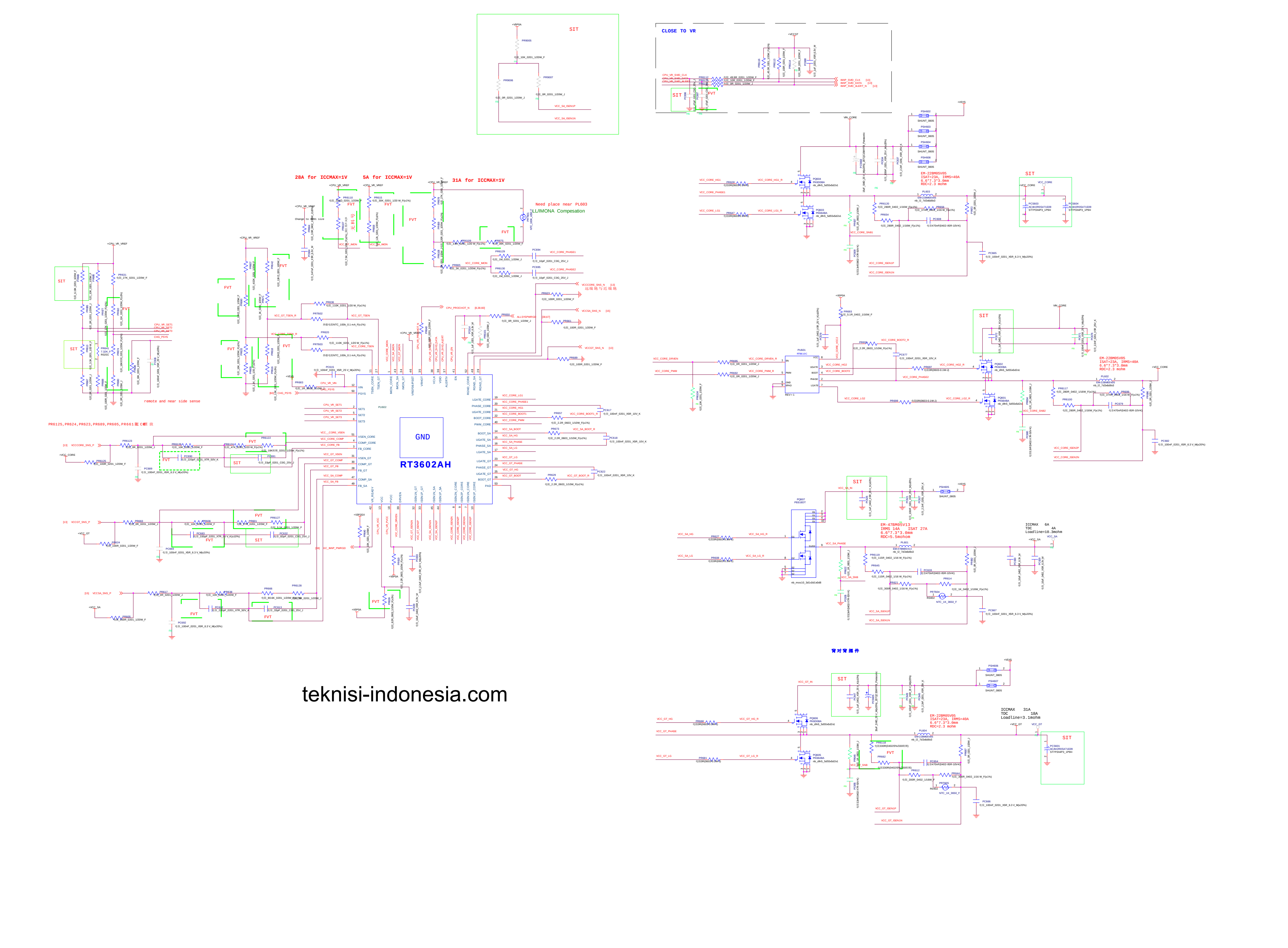

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Page name:	POWER DELIVERY-IMVP8		
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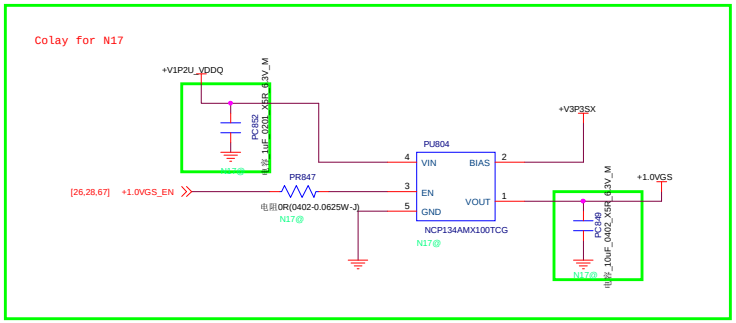
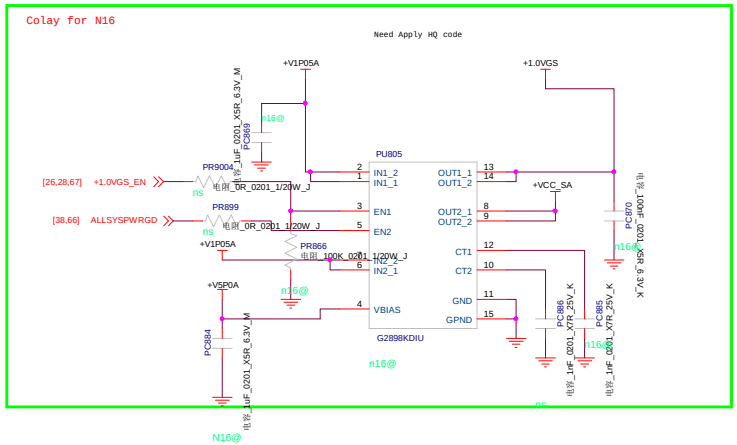
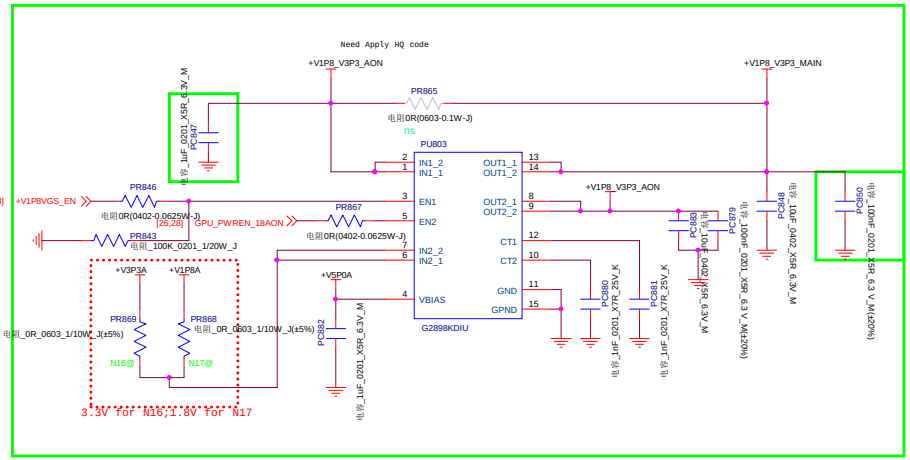
Colay for N17



Colay for N16





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Page name:	POWER DELIVERY 1.0VGS&1.8VGS		
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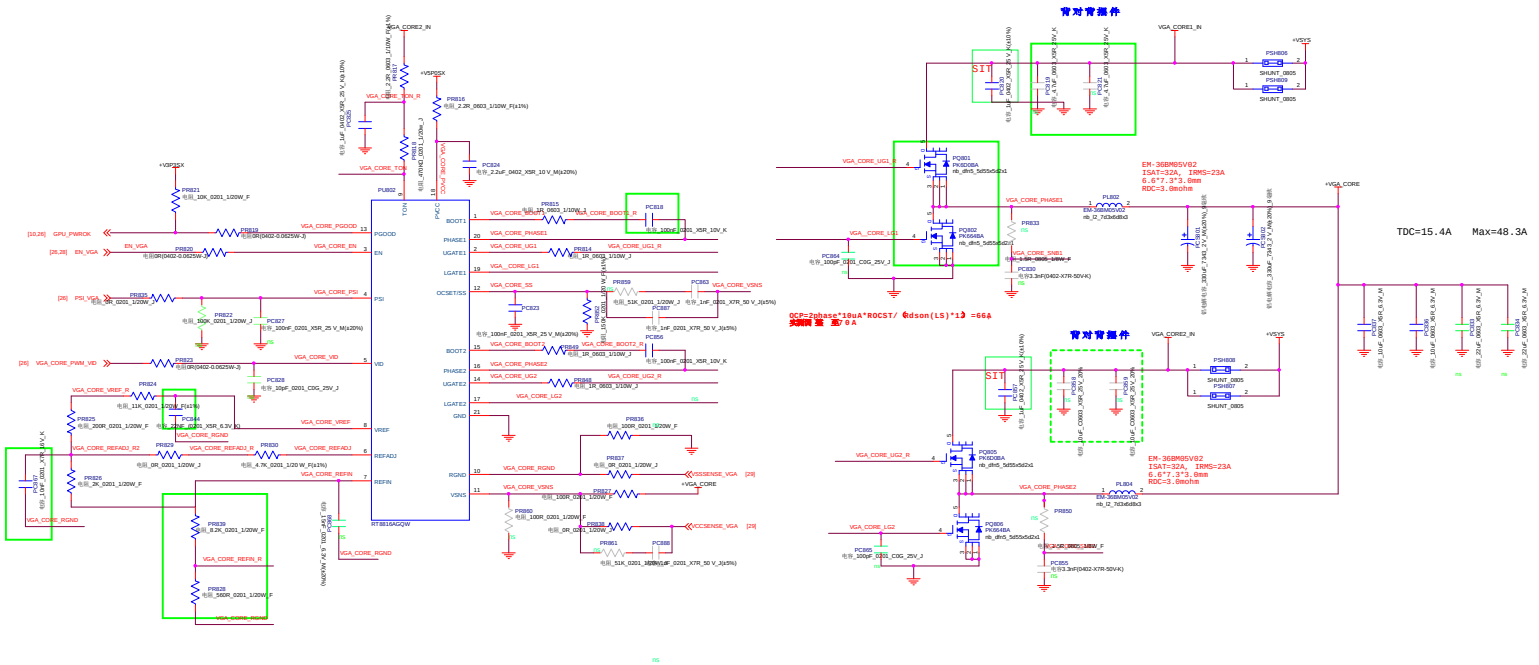

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Page name:	POWER DELIVERY-GPU Core	
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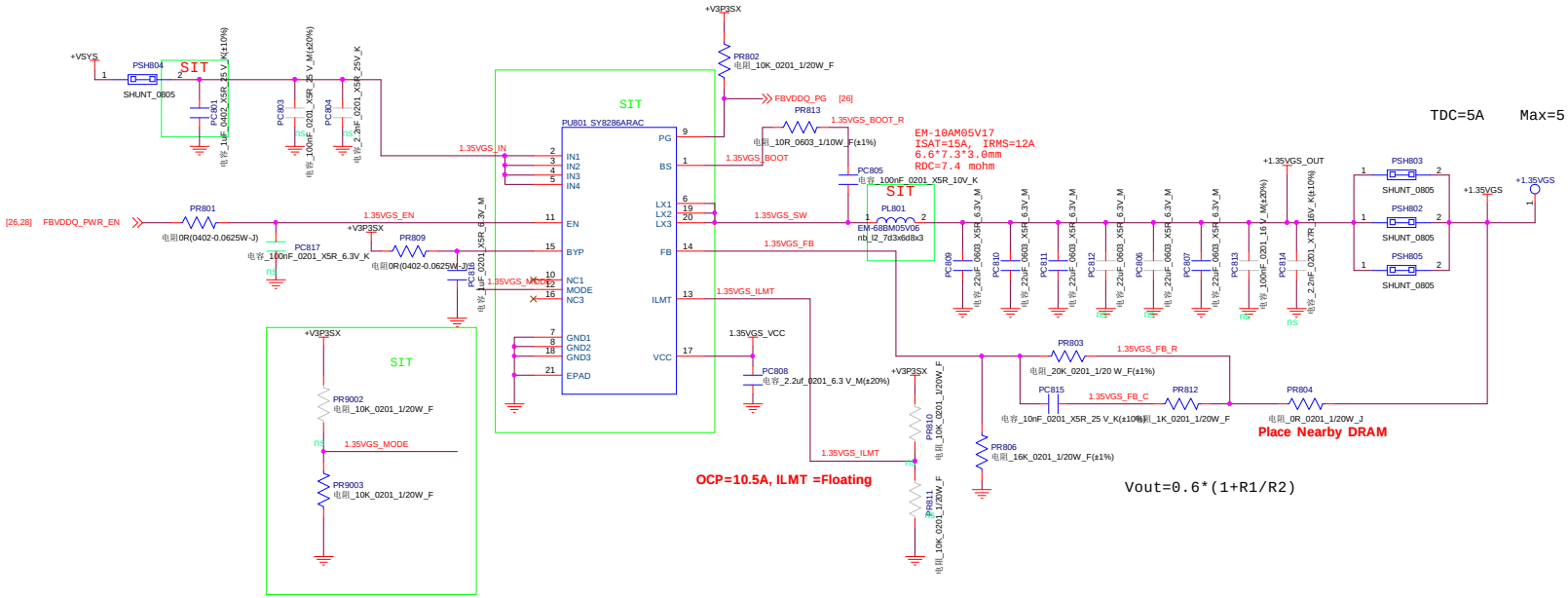

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Page name:	POWER DELIVERY 1.35VGS		
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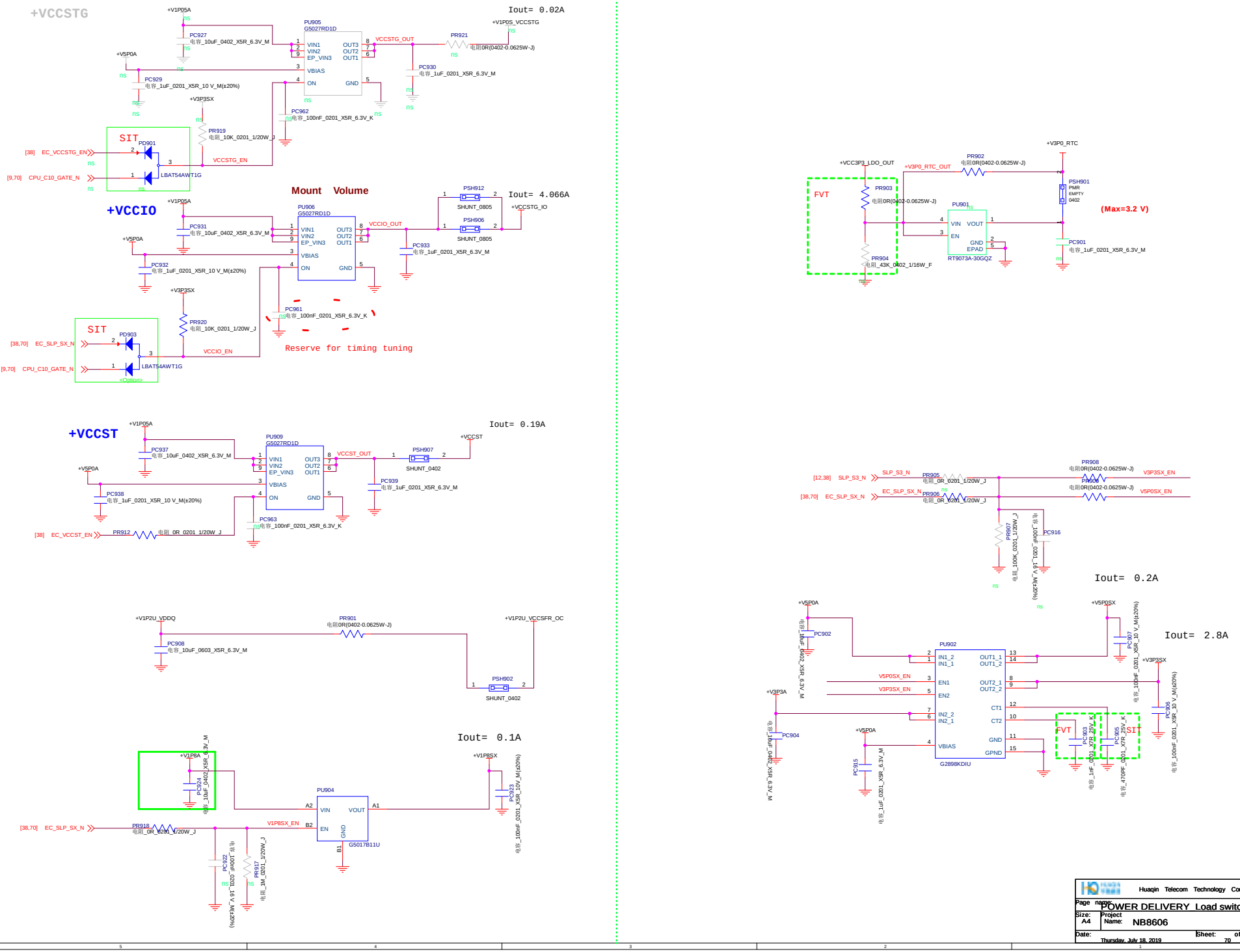
+VCCSTG
Iout= 0.02A
+V1P05A
PC927 电容_10uF_0402_X5R_6.3V_M
PU905 G5027RD1D
VIN1 VIN2 EP_VIN3 VBIAS ON OUT3 OUT2 OUT1 GND
VCCSTG_OUT
PR921 电阻0R(0402-0.0625W-J)
+V1P05_VCCSTG
+V5P0A
PC929 电容_1uF_0201_X5R_10 V_M(±20%)
PC930 电容_1uF_0201_X5R_6.3V_M
+V3P3SX
PR919 电阻_10K_0201_1/20W_J
PC962 电容_100nF_0201_X5R_6.3V_K
SIT
PD901
LBAT54AWT1G
[38] EC_VCCSTG_EN
[9,70] CPU_C10_GATE_N
VCCSTG_EN
Mount Volume
+VCCIO
Iout= 4.066A
PSH912 SHUNT_0805
PSH906 SHUNT_0805
+VCCSTG_IO
PC931 电容_10uF_0402_X5R_6.3V_M
PU906 G5027RD1D
VCCIO_OUT
PC933 电容_1uF_0201_X5R_6.3V_M
PC932 电容_1uF_0201_X5R_10 V_M(±20%)
PR920 电阻_10K_0201_1/20W_J
PC961 电容_100nF_0201_X5R_6.3V_K
Reserve for timing tuning
SIT
PD903
LBAT54AWT1G
<Option>
[38,70] EC_SLP_SX_N
[9,70] CPU_C10_GATE_N
VCCIO_EN
+VCCST
Iout= 0.19A
PC937 电容_10uF_0402_X5R_6.3V_M
PU909 G5027RD1D
VCCST_OUT
PSH907 SHUNT_0402
PC939 电容_1uF_0201_X5R_6.3V_M
PC938 电容_1uF_0201_X5R_10 V_M(±20%)
PC963 电容_100nF_0201_X5R_6.3V_K
[38] EC_VCCST_EN
PR912 电阻_0R_0201_1/20W_J
+V1P2U_VDDQ
PR901 电阻0R(0402-0.0625W-J)
+V1P2U_VCCSFR_OC
PC908 电容_10uF_0603_X5R_6.3V_M
PSH902 SHUNT_0402
Iout= 0.1A
+V1P8A
PC924 电容_10uF_0402_X5R_6.3V_M
PU904
VIN VOUT EN GND G5017B11U
A2 A1 B2 B1
+V1P8SX
PC923 电容_100nF_0201_X5R_6.3V_M(±20%)
[38,70] EC_SLP_SX_N
PR918 电阻_0R_0201_1/20W_J
V1P8SX_EN
PC922 电容_470PF_0201_X7R_16V_K(±10%)
PR917 电阻_1M_0201_1/20W_J
+V3P0_RTC
+VCC3P3_LDO_OUT
+V3P0_RTC_OUT
PR902 电阻0R(0402-0.0625W-J)
FVT
PR903 电阻0R(0402-0.0625W-J)
PR904 电阻_43K_0402_1/16W_F
PU901
VIN VOUT EN GND EPAD RT9073A-30GQZ
PSH901 PMR EMPTY 0402
(Max=3.2 V)
PC901 电容_1uF_0201_X5R_6.3V_M
[12,38] SLP_S3_N
EC_SLP_SX_N
PR905 电阻_0R_0201_1/20W_J
PR906 电阻_0R_0201_1/20W_J
PR908 电阻0R(0402-0.0625W-J)
PR909 电阻0R(0402-0.0625W-J)
V3P3SX_EN
V5P0SX_EN
PR907 电阻_100K_0201_1/20W_J
PC916 电容_100nF_0201_16V_K(±10%)
Iout= 0.2A
Iout= 2.8A
+V5P0A
PC902 电容_10uF_0603_X5R_6.3V_M
PU902
IN1_2 IN1_1 EN1 EN2 IN2_2 IN2_1 VBIAS GND GPND CT1 CT2 OUT1_1 OUT1_2 OUT2_1 OUT2_2
G2898KDIU
+V5P0SX
PC907 电容_100nF_0201_X5R_10 V_M(±20%)
+V3P3A
PC904 电容_10uF_0603_X5R_6.3V_M
PC915 电容_1uF_0201_X5R_6.3V_M
+V3P3SX
PC905 电容_100nF_0201_X5R_10 V_M(±20%)
FVT
PC903 电容_1nF_0201_X7R_25V_K
PC925 电容_470PF_0201_X7R_25V_K
SIT
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