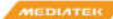


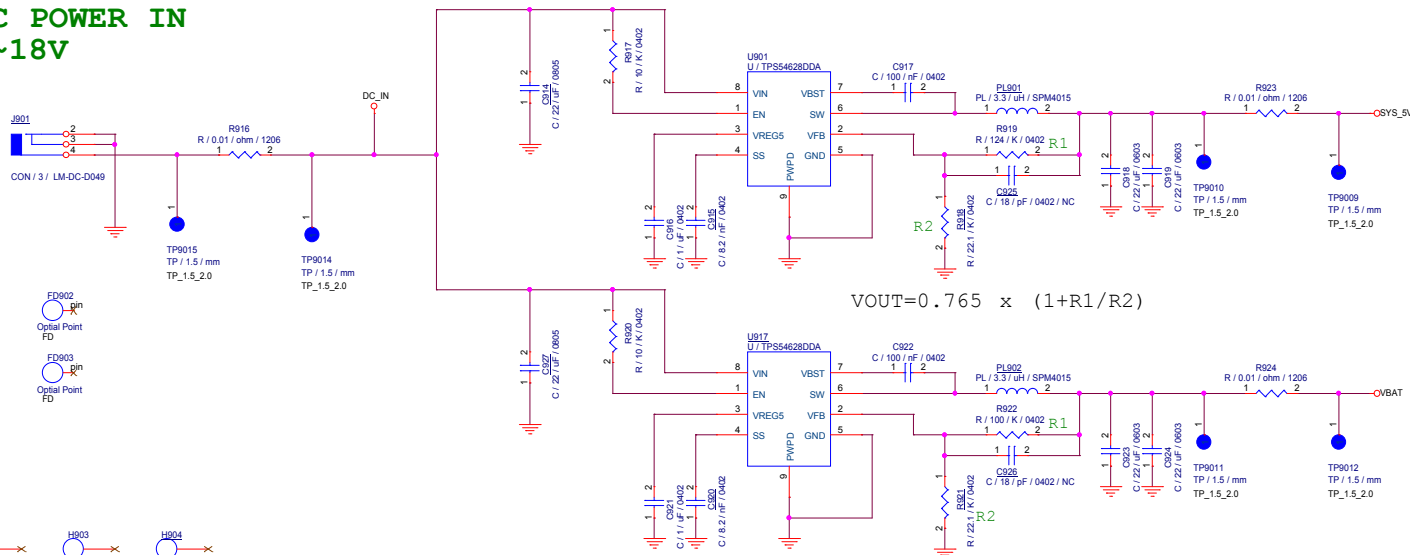
Date	Category	Item
2016.01.13	General	Preliminary release
2016.01.15	General	<ol style="list-style-type: none"> [Power] Change PL901 and PL902 to 3.3uH / SPM4015. [ME] Add FD900,FD901,FD902,FD903,H901,H902,H903,H904.
2016.01.29	General	<ol style="list-style-type: none"> [DSI] Change DSI-0 to HS IO expansion and remove DSI-1. [CSI] Change CSI-2 to CSI-1. [GPIO] Move GPIOs on DPI interface to BPI_BUS. [HDMI] Change ADV7533 to SiI9024A. Modify block diagram. [Power] Remove U1002~U1004, U916,U918,U919, U2302. [CLK] Remove U3202. [Audio] Remove U6101. [Memory] Change eMMC to 8GB, DDR to 16Gb. [Connector] Change CON70001 to 55510-140LF. [Charging] Remove pulse charger and battery connector. [RTC] Remove GB2001. [Debug] Change CON9001 to NC.
2016.02.18	General	<ol style="list-style-type: none"> [HDMI] Change HDMI to MT8193.
2016.02.26	General	<ol style="list-style-type: none"> [Passive] Remove CE901,D6402. [USB] Modify symbols of U6402, U6403. [Connector] Change J901 to LM-DC-D049;Remove J903,J904.
2016.03.01	General	<ol style="list-style-type: none"> [Connsys] Change U5002 from ACPF-7124 to DEA162450BT-1288B2.
2016.03.14	General	<ol style="list-style-type: none"> [HDMI] Update U6502 MT8193 PCB Footprint;Updata Q6501,Q6502 Symbol;ADD TP6505,TP6506. [Connsys] NC R5061,Add R5001, R5002, U5001.
2016.03.15	General	<ol style="list-style-type: none"> [Connsys] ADD CON5005,CON5006,R5071,R5072,R5073,R5074.
2016.03.23	General	<ol style="list-style-type: none"> [Connsys] Change ANT5001 To chip ANT ANT016008LCD2442MA1, Change CON5005,CON5006 to MM5829-2700RJ4.
2016.05.31	General	<ol style="list-style-type: none"> [KEY_LED_EXT26M] Add SW3204,SW3205,D3201,D3202,R3225,R3226. [Connsys] Update U5001 SCH symbol. [SD Card] Swap pin 1 and 2 of ESD4104,ESD4105,ESD4106,ESD4107,ESD4108,ESD4109.
2016.06.07	General	<ol style="list-style-type: none"> [USB] Add switch between USB device and USB hub [Camera] Change CSI-1 from 2*2-lane mode to 4-lane mode

<Variant Name>

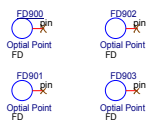
	
Title	
05_Change_Notice	
Size	MTK Confidential
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Date: Wednesday, June 08, 2016	
Sheet 05 of 89	

Common EVB features

DC POWER IN
8~18V



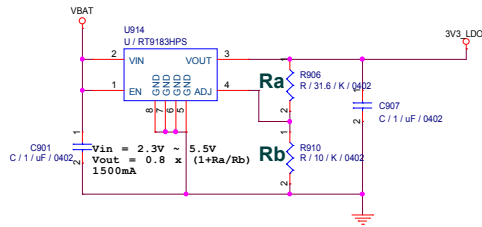
FD



HOLE

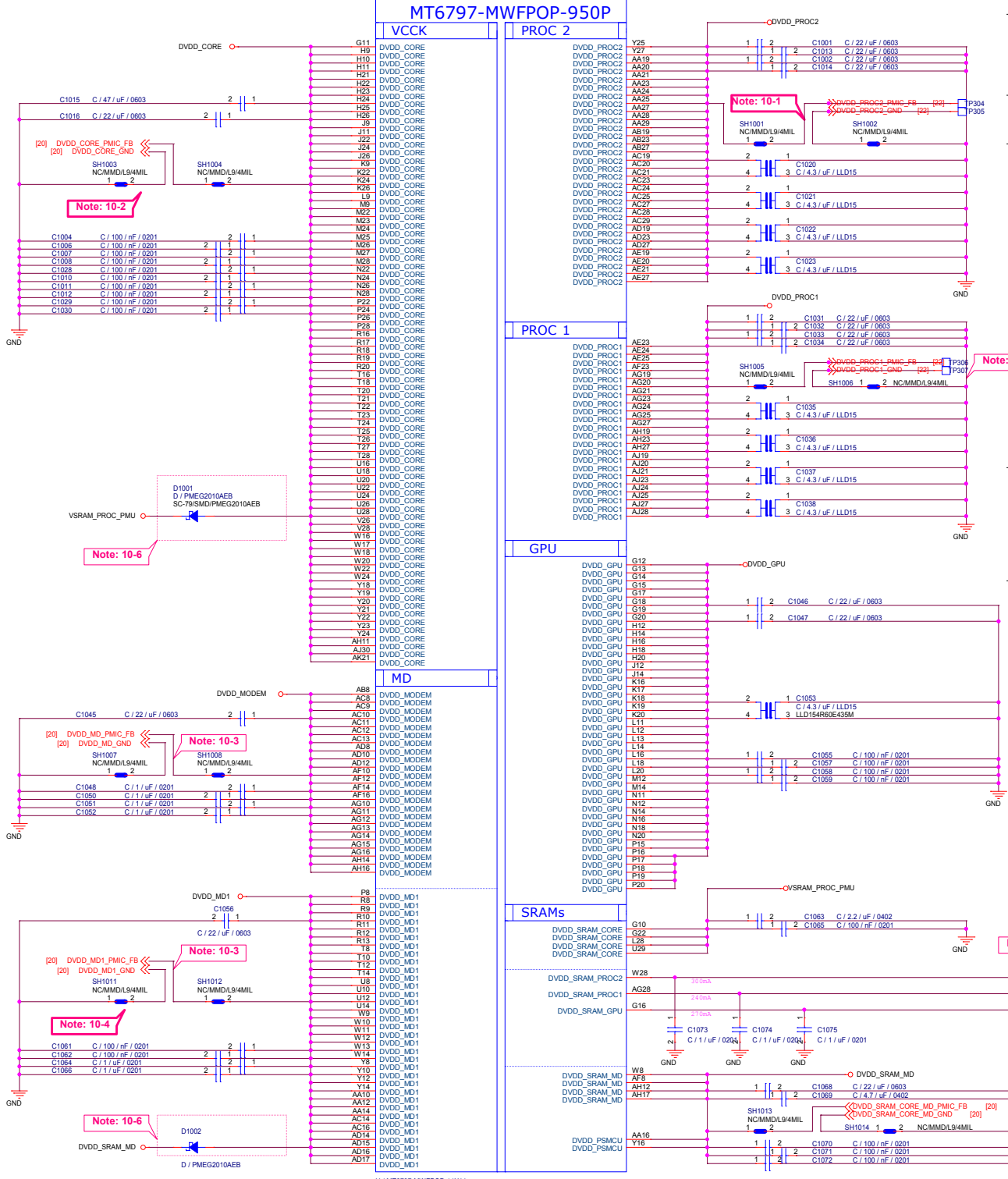


3V3



<Variant Name>

U1001E MT6797-MWFPPOP-950P



Schematic design notice of "10_BB_POWER_1" page.

- Note 10-1: [Diagram reference]
- Note 10-2: Differential pairs of buck's remote sense must be placed at PCB
- Note 10-3: back side right beneath MT6797 chip.
- Note 10-4: [Diagram reference]

Note 10-5: For PCB layout, the star connection should be implemented in the MT6351's VIO18 output.

Note 10-6: Add D1001 and D1002 schottky diodes to avoid large current during power-on sequence. The VF of D1001 and D1002 should be less than 0.3V when IF is <100mA.

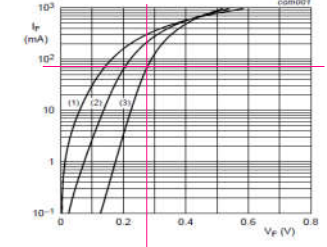
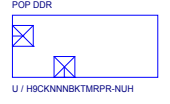


Fig.2 Forward current as a function of forward voltage; typical values.

The purpose of this symbol is used for including POP LPDDR3 in BOM.

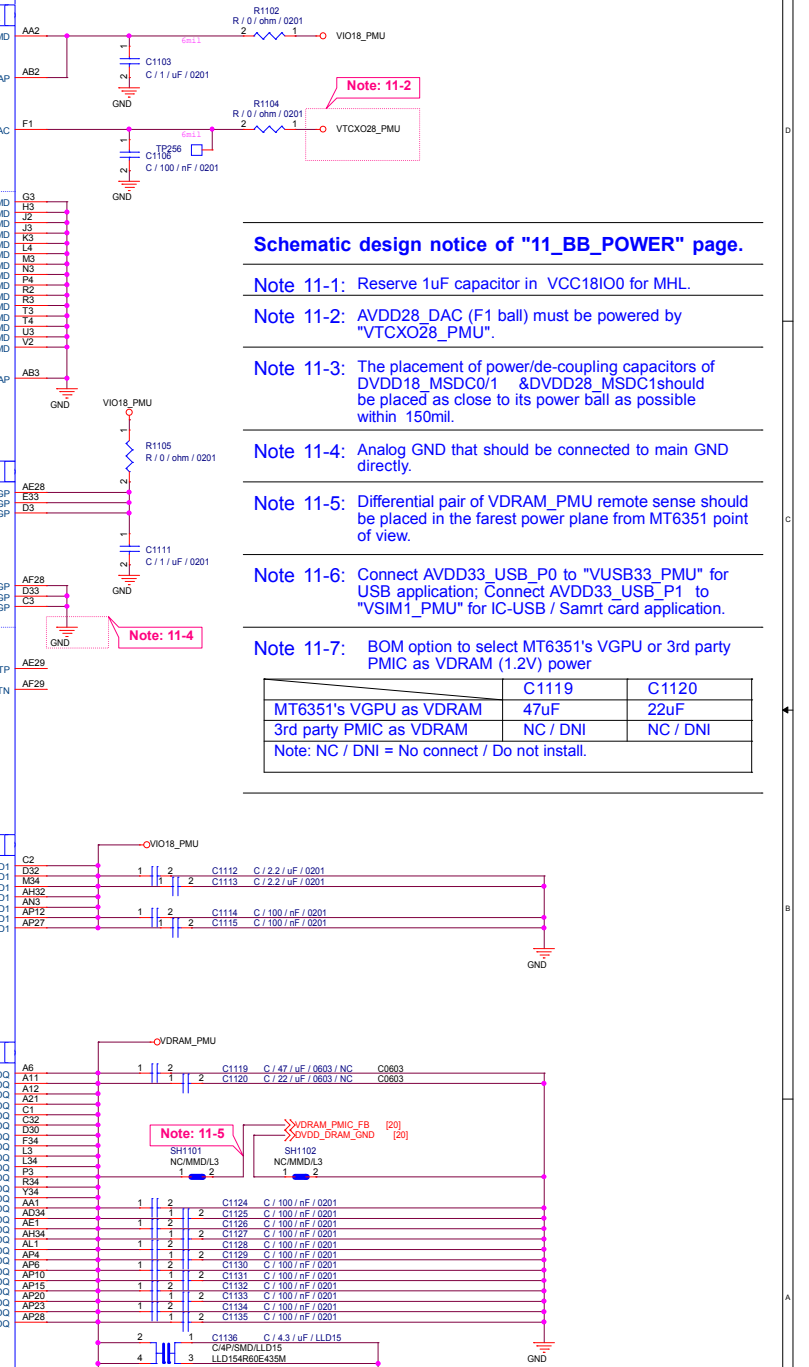
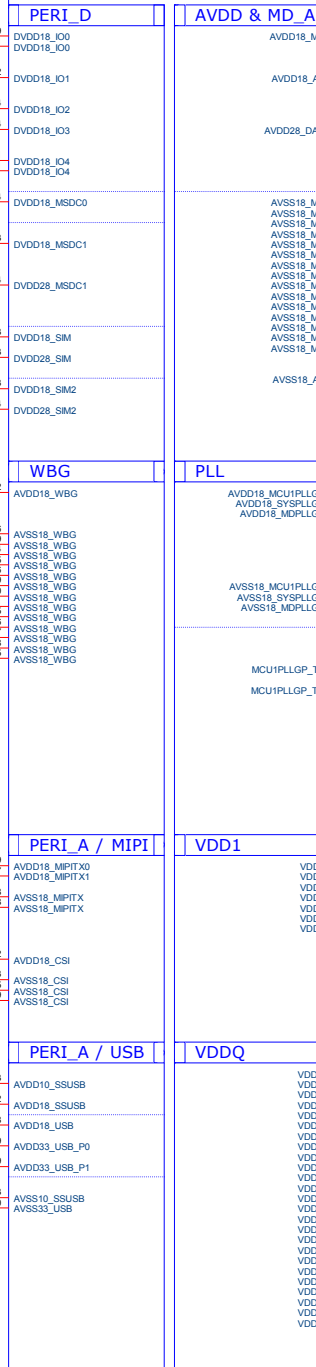
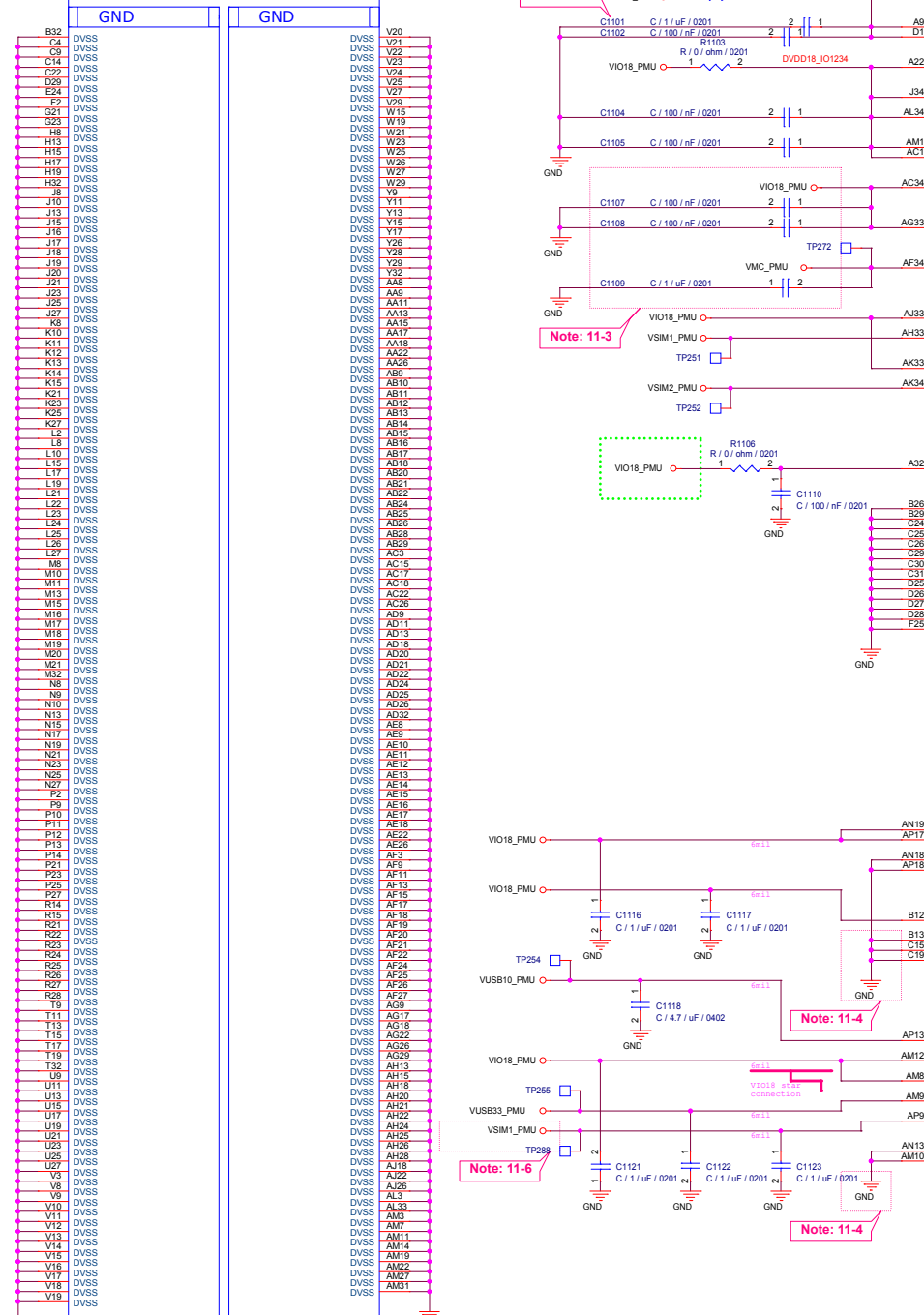


Note 10-5: [Diagram reference]

Note 10-4: [Diagram reference]

MT6797-MWFPPOP-950P

MT6797-MWFPPOP-950P



Schematic design notice of "11_BB_POWER" page.

- Note 11-1:** Reserve 1uF capacitor in VCC18I00 for MHL.
- Note 11-2:** AVDD28_DAC (F1 ball) must be powered by "VTCXO28_PMU".
- Note 11-3:** The placement of power/de-coupling capacitors of DVDD18_MSDC0/1 & DVDD28_MSDC0/1 should be placed as close to its power ball as possible within 150mil.
- Note 11-4:** Analog GND that should be connected to main GND directly.
- Note 11-5:** Differential pair of VDRAM_PMU remote sense should be placed in the farrest power plane from MT6351 point of view.
- Note 11-6:** Connect AVDD33_USB_P0 to "VUSB33_PMU" for USB application; Connect AVDD33_USB_P1 to "VSIM18_PMU" for IC-USB / Samrt card application.
- Note 11-7:** BOM option to select MT6351's VGPU or 3rd party PMIC as VDRAM (1.2V) power

MT6351's VGPU as VDRAM	C1119 47uF	C1120 22uF
3rd party PMIC as VDRAM	NC / DNI	NC / DNI

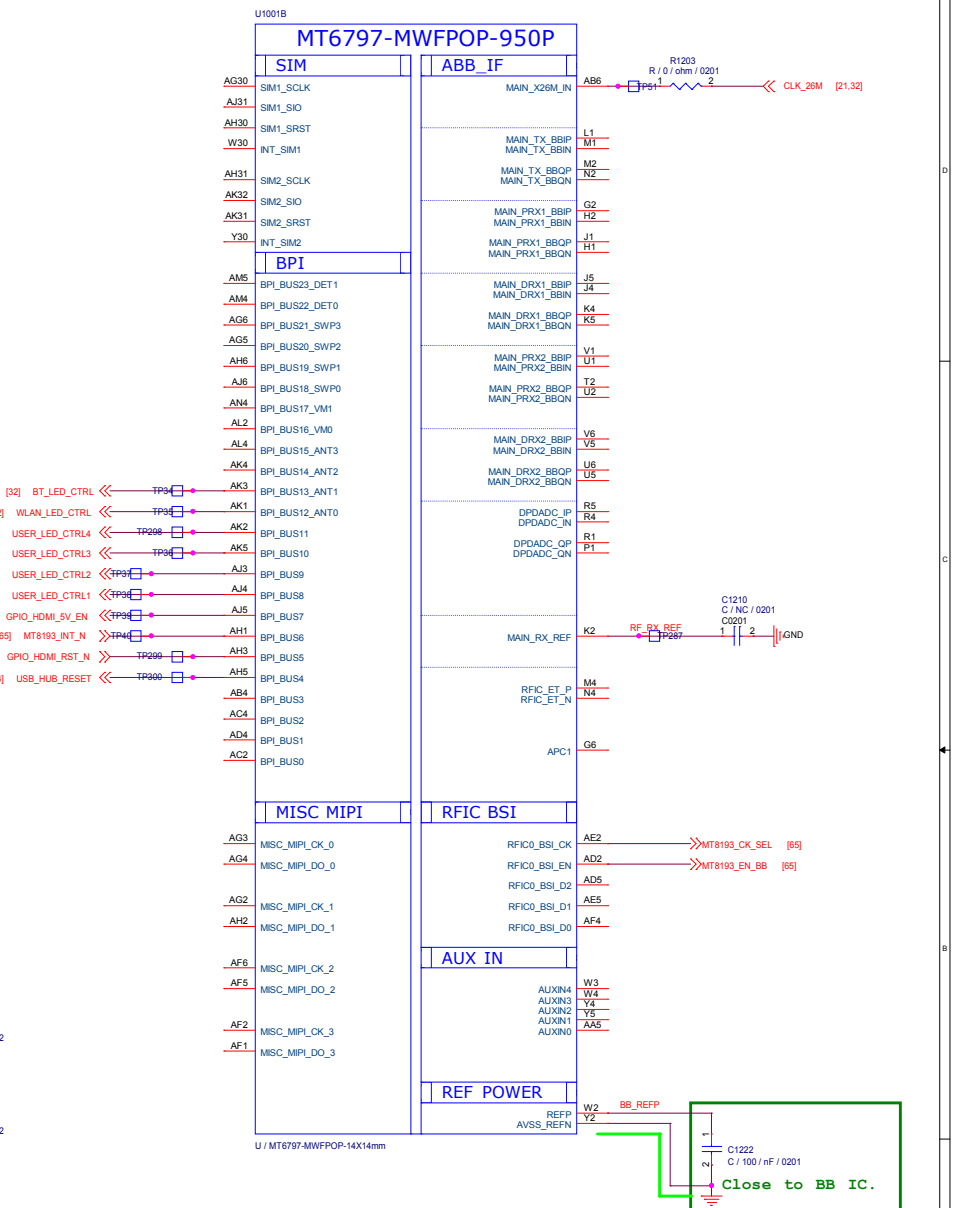
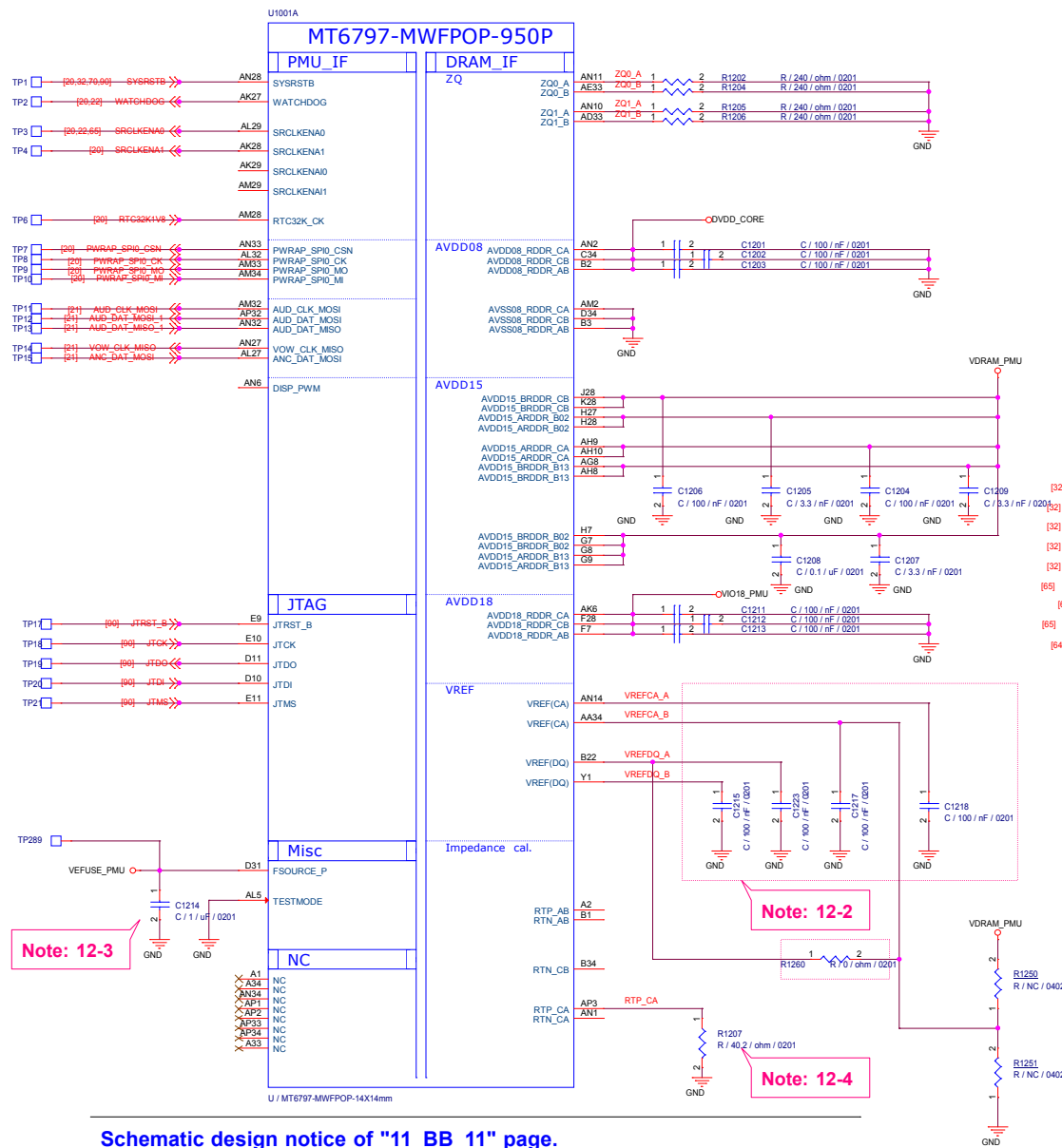
Note: NC / DNI = No connect / Do not install.

MEDIATEK

File: **11_BB_POWER_2**

Size C: **MTK Confidential**

Date: **Wednesday, June 08, 2016** Sheet **11** of **89**



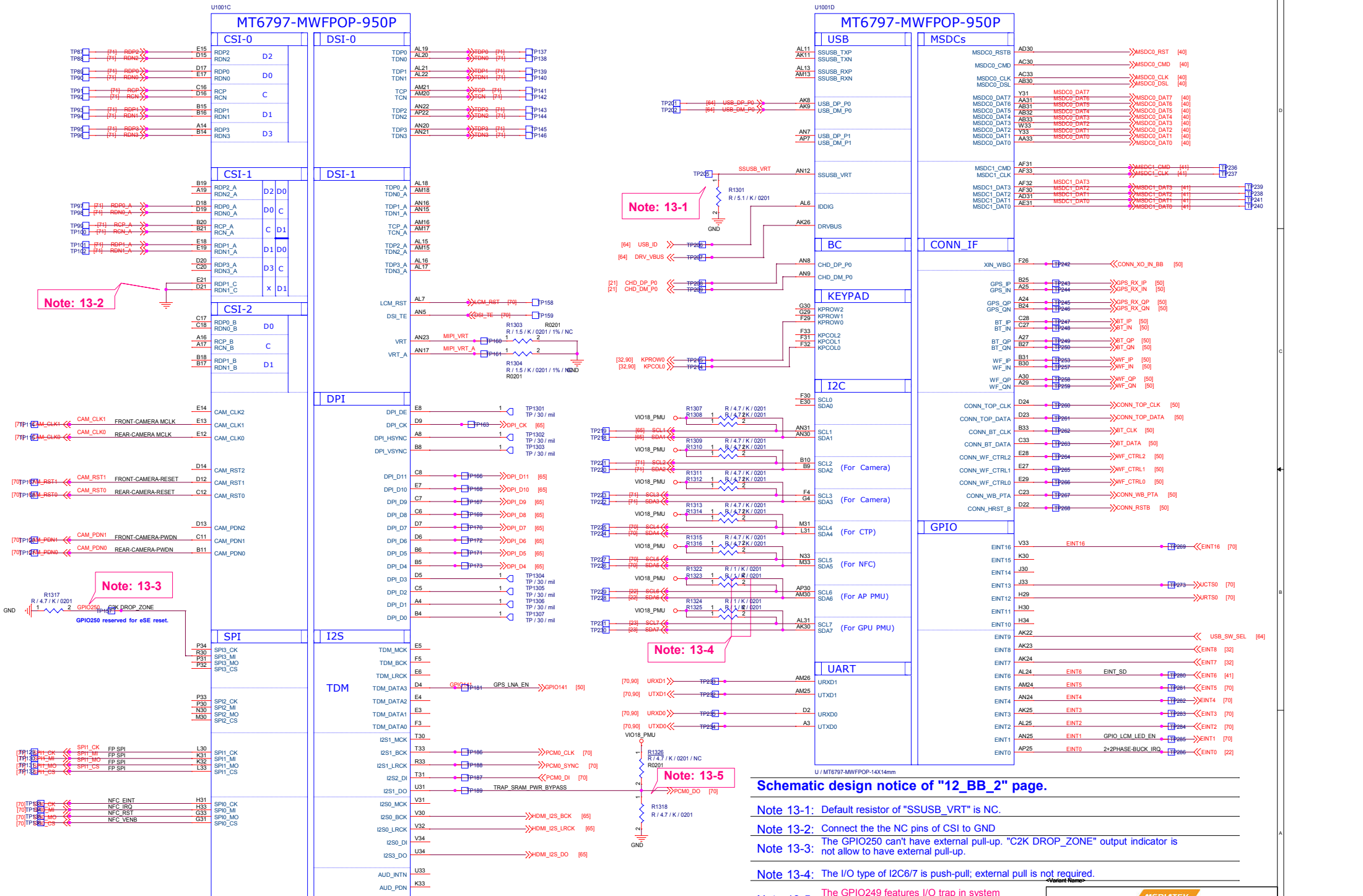
Schematic design notice of "11_BB_11" page.

Note 12-1: Apply 1.8V to FSOURCE_P (D31) for eFuse programming.

Note 12-2: The de-coupling cap. of DRAM VREF have to be placed as close to BB as possible.

Note 12-3: The 1uF capacitors of AUXIN0-4 have to be placed as close to BB as possible.

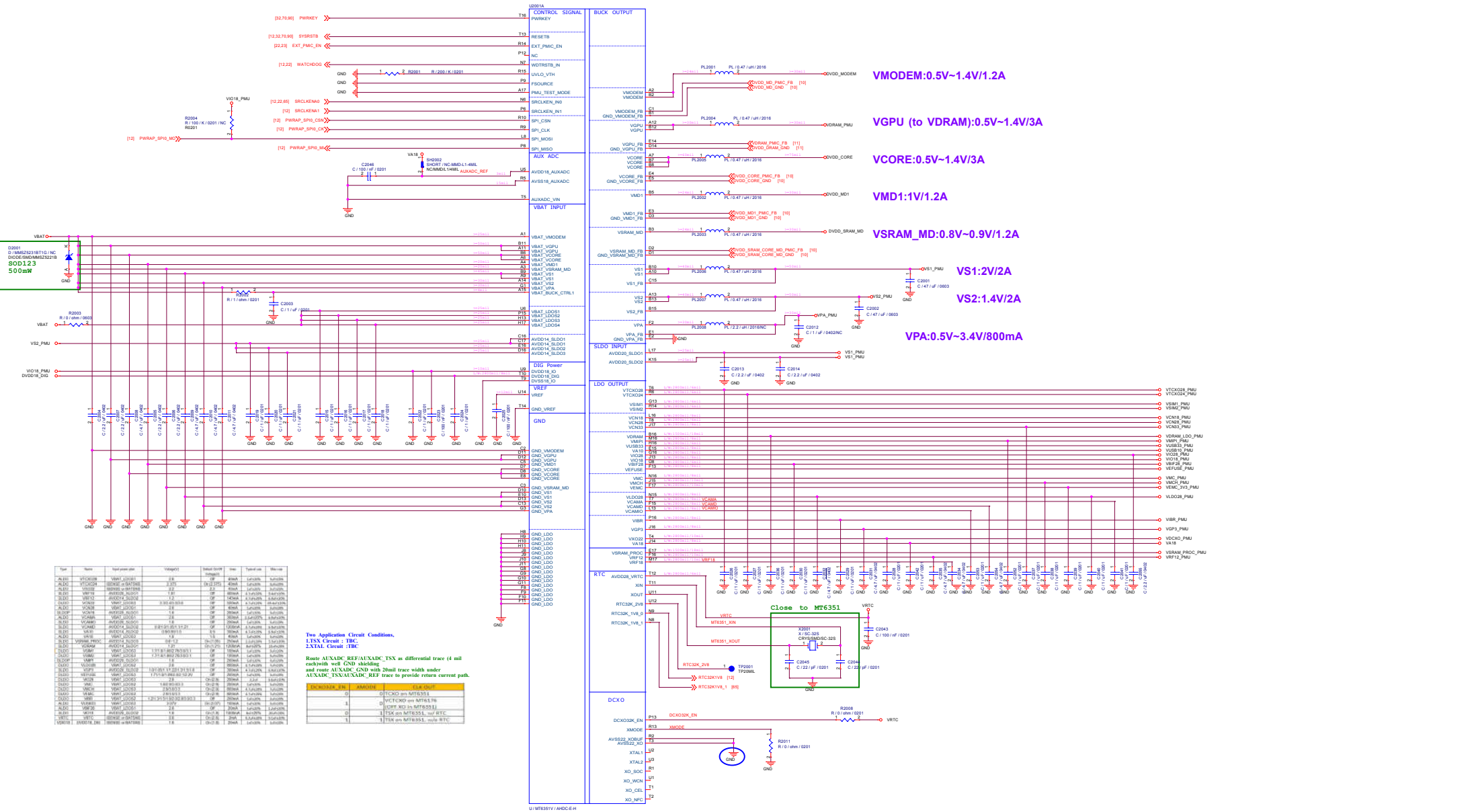
Note 12-4: For impedance calibration of DDRPHY



Schematic design notice of "I2_BB_2" page.

- Note 13-1:** Default resistor of "SSUSB_VRT" is NC.
- Note 13-2:** Connect the NC pins of CSI to GND. The GPIO250 can't have external pull-up. "C2K DROP_ZONE" output indicator is not allow to have external pull-up.
- Note 13-3:** The GPIO250 reserved for eSE reset.
- Note 13-4:** The I/O type of I2C6/7 is push-pull; external pull is not required.
- Note 13-5:** The GPIO249 features I/O trap in system bootup that must be pulled down.

MEDIATEK	
Title 13_BB_2	
Size C	MTK Confidential
Date: Wednesday, June 08, 2016 Sheet 13 of 89	



Two Application Circuit Conditions,
1.5SS Circuit + THC,
2.5TMA Circuit + THC

Route AUXADC_REF/AUXADC_TSN as differential trace (4 mil each) with well GND shielding and route AUXADC_GND with 20mil trace width under AUXADC_TSN/AUXADC_REF trace to provide return current path.

ENC0303X_EN	AMODE	TALK_OUT
0	0	GPIO pin MT6351
1	0	GPIO pin MT6351
0	1	GPIO pin MT6351, only RTC
1	1	GPIO pin MT6351, only RTC

VMODEM:0.5V~1.4V/1.2A

VGPU (to VDRAM):0.5V~1.4V/3A

VCORE:0.5V~1.4V/3A

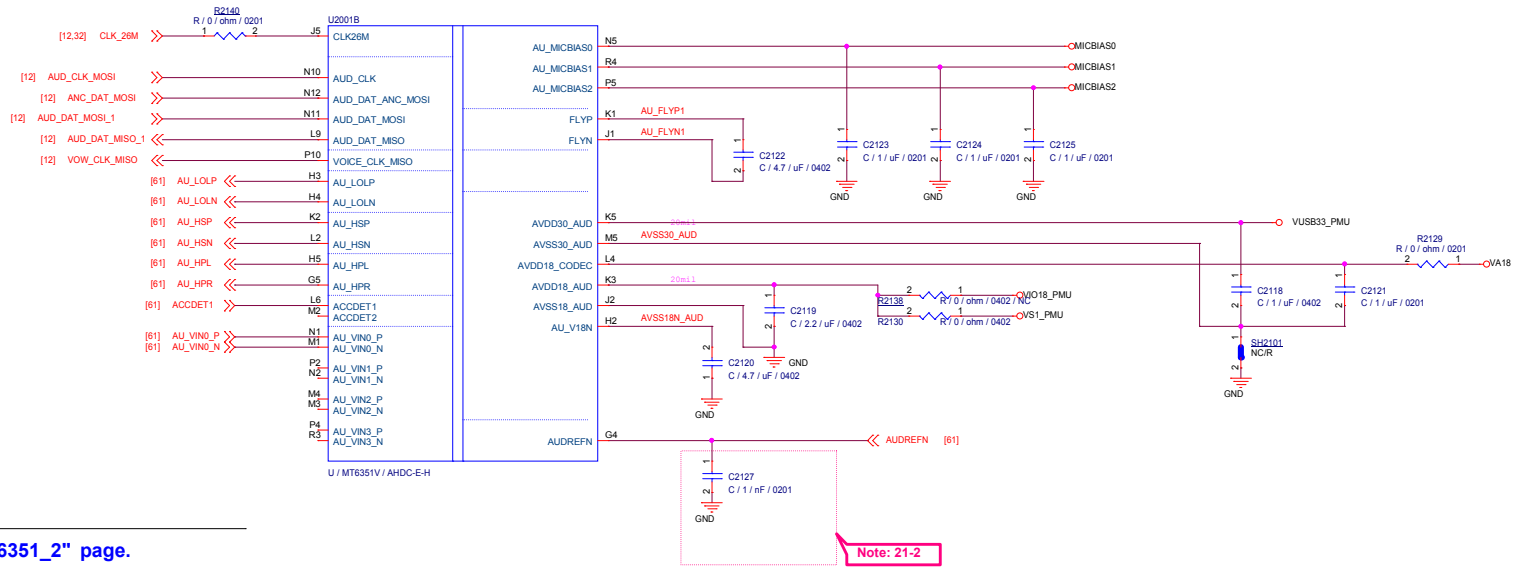
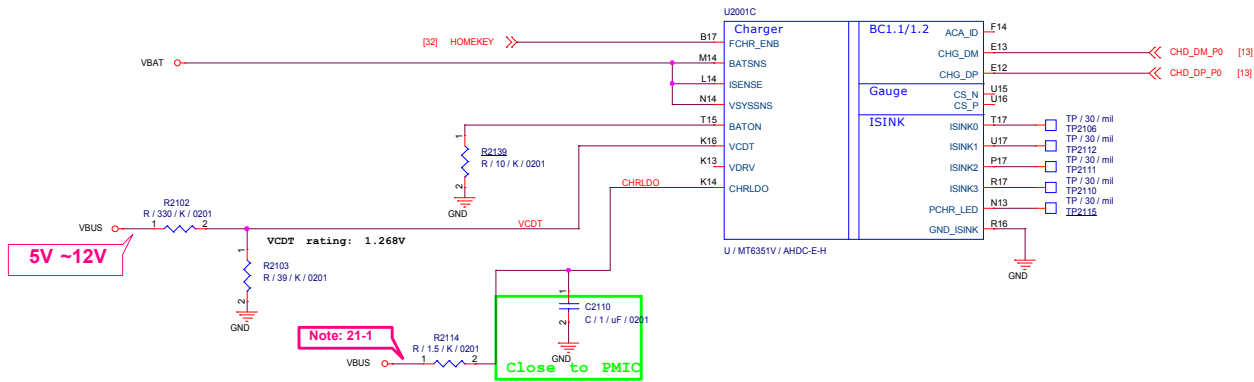
VMD1:1V/1.2A

VSRAM_MD:0.8V~0.9V/1.2A

VS1:2V/2A

VS2:1.4V/2A

VPA:0.5V~3.4V/800mA



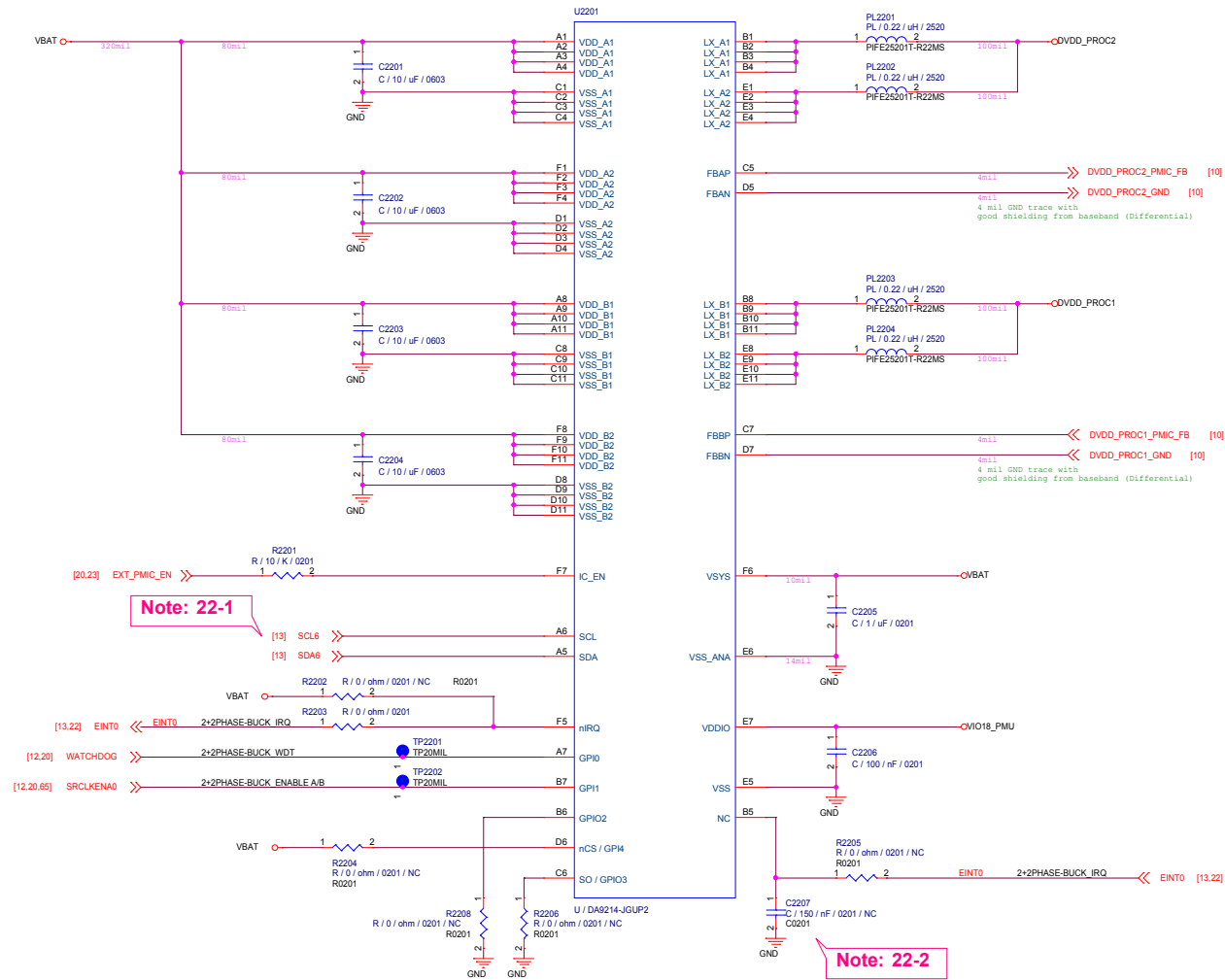
Schematic design notice of "21_POWER_MT6351_2" page.

Note 21-1: Reserve 1.5K in order to give additional power to turn on charger LED driver while low battery.

VPROC Buck

MT6313 / 2+2Phase Buck I2C address: 0X6B (Write:0xD6, Read:0xD7)

DA9214 / 2+2Phase Buck I2C address: 0X68 (Write:0xD0, Read:0xD1)



Schematic design notice of "22_POWER_VPROCS" page.

Note 22-1: Buck EN is controlled by SRCLKEN0 or I2C

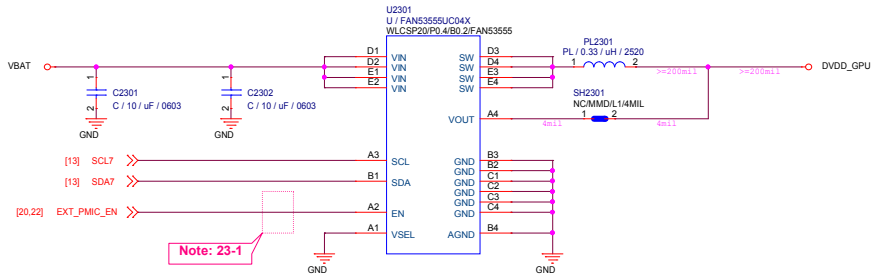
Note 22-2: BOM option of 2+2 phase buck

	R2202	R2203	R2204	R2205	R2206	R2208	C2207
DA9214	NC / DNI	0-ohm	NC / DNI	NC / DNI	NC / DNI	NC / DNI	150nF / NC
2nd source	0-ohm	NC / DNI	0-ohm	0-ohm	0-ohm	0-ohm	NC / DNI
NC / DNI = No connect / Do not install.							

<Variant Name>

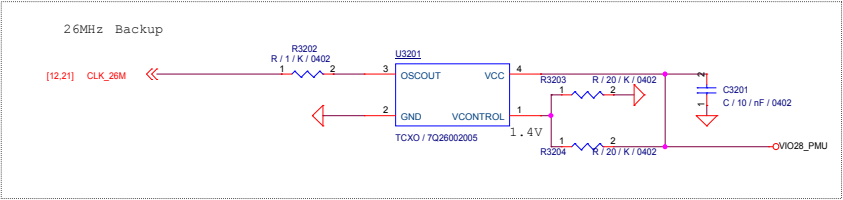
Buck for VGPU

FAN53200 / Buck I2C address: 0X60 (Write:0xC0, Read:0xC1)



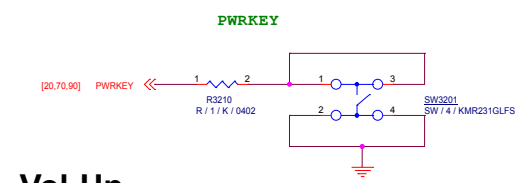
Schematic design notice of "23_POWER_VGPU_VM" page.

Note 23-1: FAN53200's EN pin is driven by MT6351.

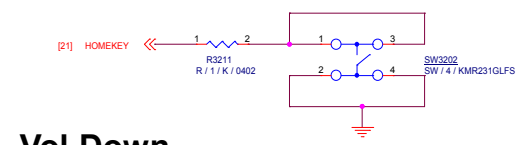


Power Key

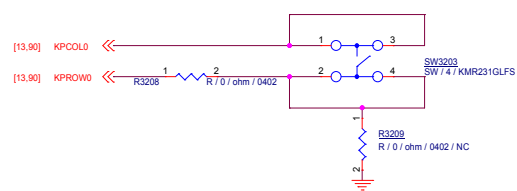
DO NOT put pull-up resistor on PWRKEY



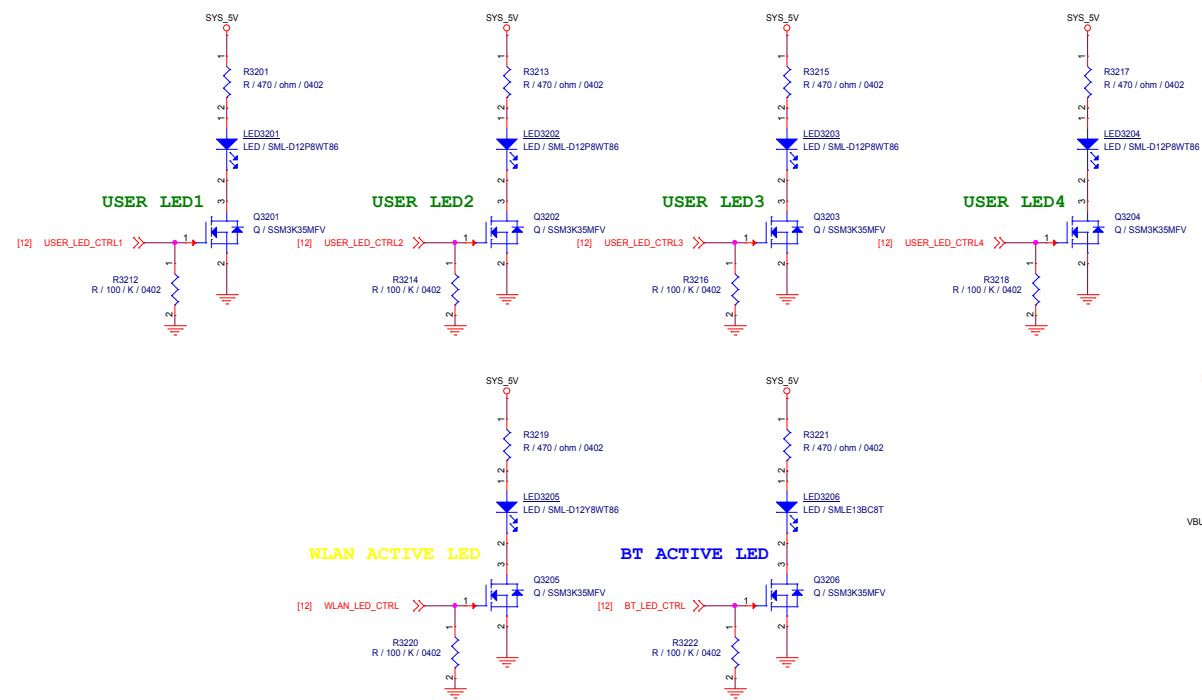
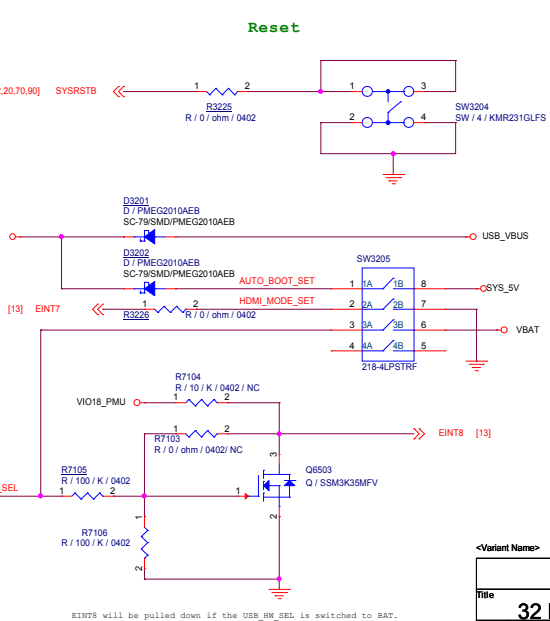
Vol Up



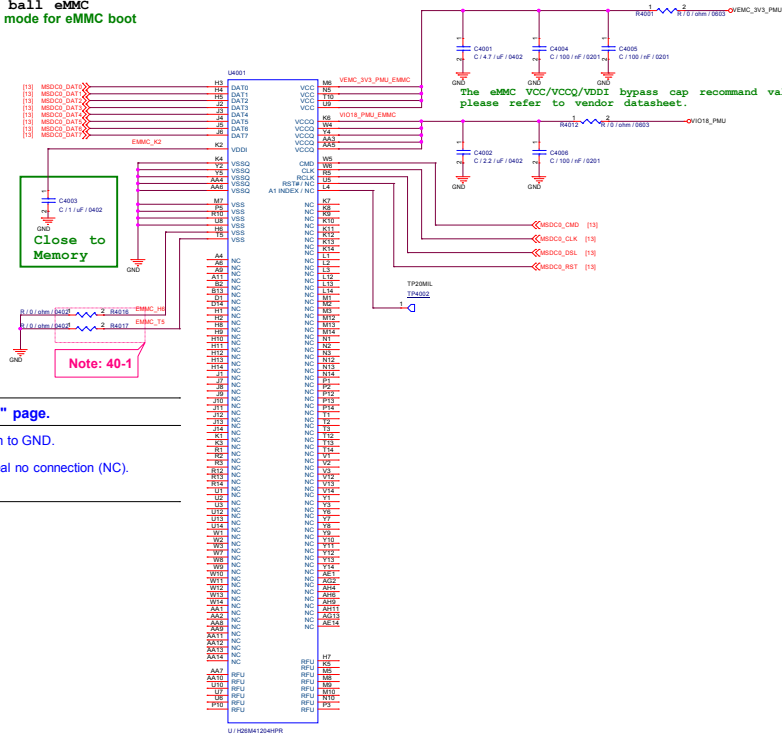
Vol Down



Reset Key



153 ball eMMC
1 bit mode for eMMC boot



C4003
C: 1.0 uF / 0402
Close to Memory

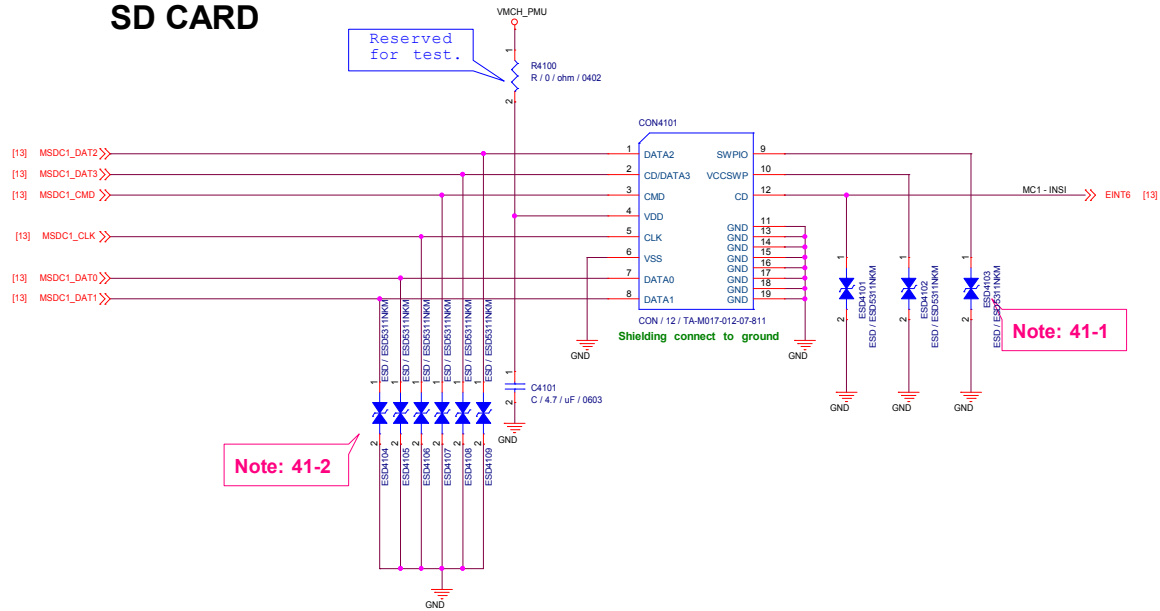
Note: 40-1

Schematic design notice of "40_MEMORY_eMMC" page.

Note 40-1: For eMMC 5.0, connect eMMC's H6 & T5 pin to GND.

For eMMC 4.5, check eMMC's H6 & T5 is real no connection (NC).

SD CARD

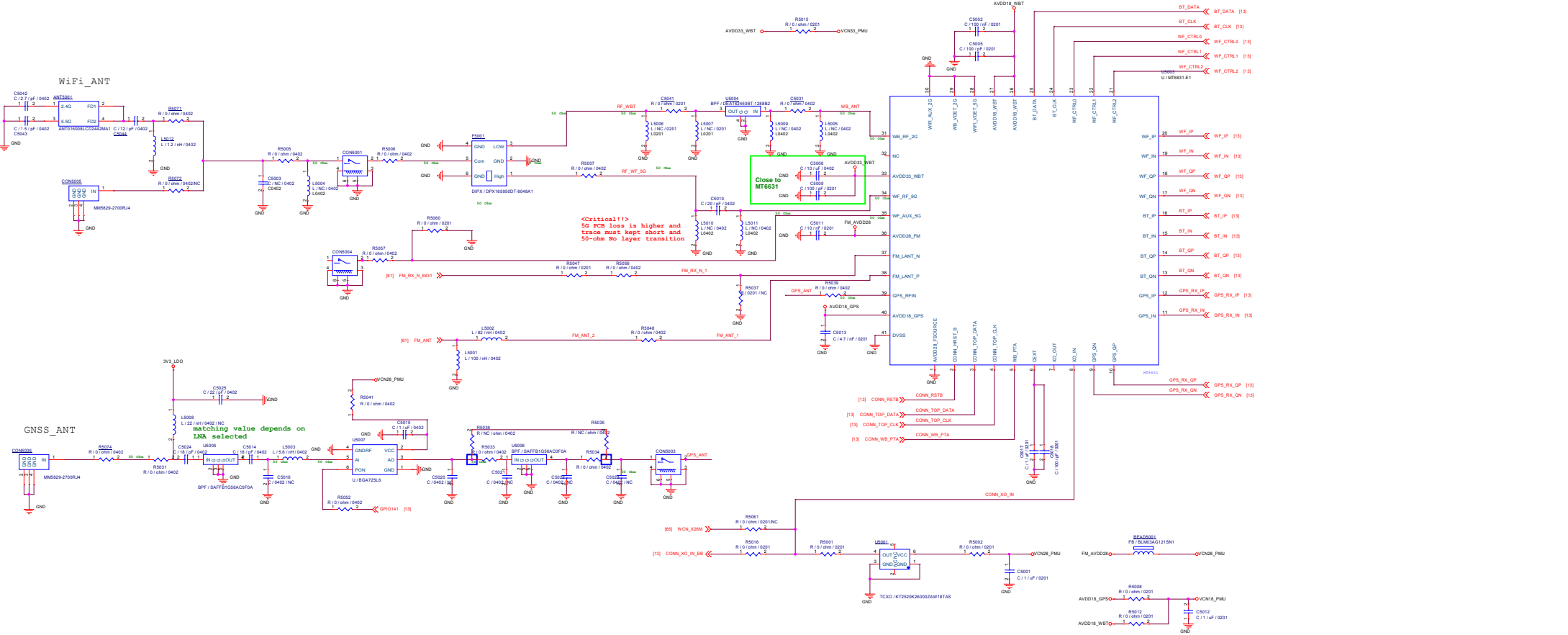


Schematic design notice of "41_MEMORY_SD Card" page.

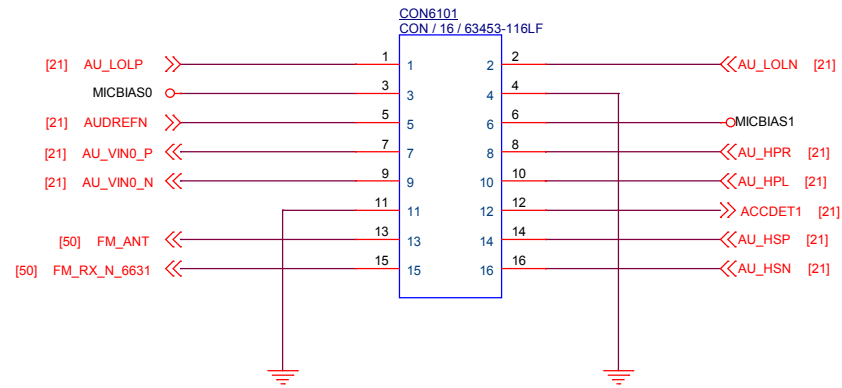
Note 41-1: The equivalent capacitance of ESD protection device must be $\leq 1\text{pF}$
 -- otherwise it will result in NFC card mode function fail.

Note 41-2: Depends on system design to add ESD protection component or not.

<Variant Name>



Audio Expansion



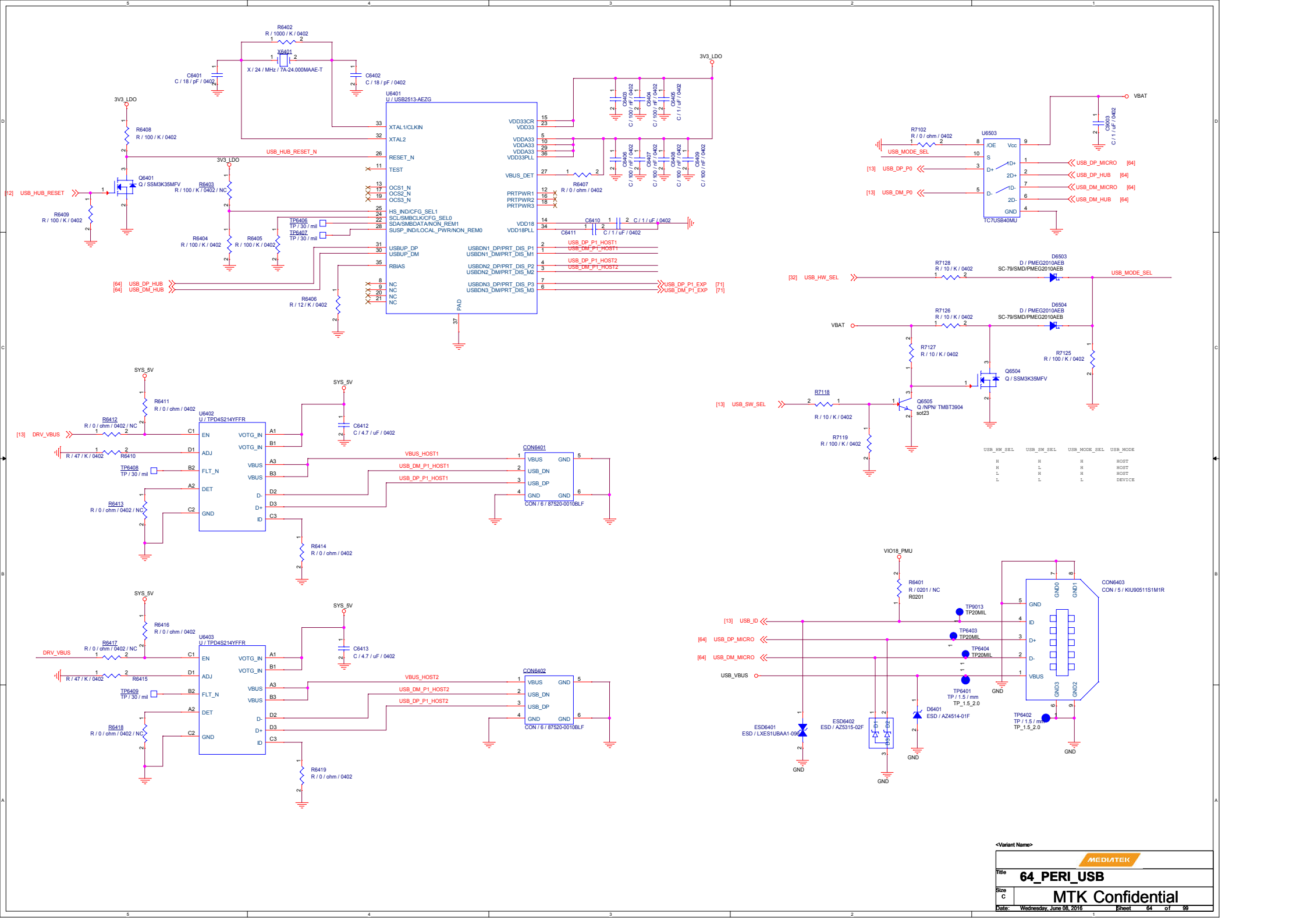
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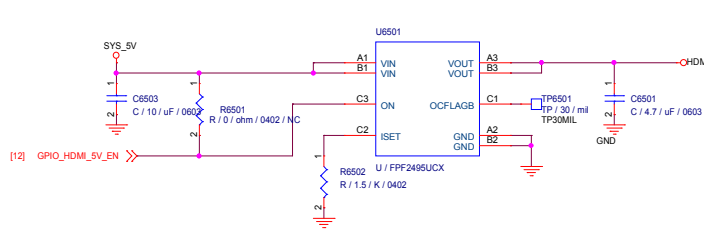


Title **61_AUDIO**

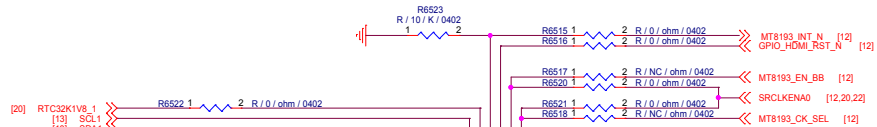
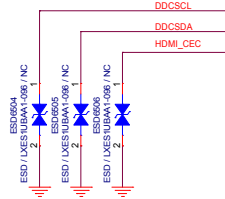
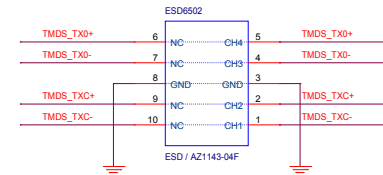
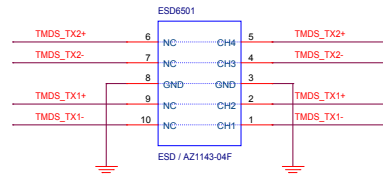
Size B **MTK Confidential**

Date: Wednesday, June 08, 2016 Sheet 61 of 99

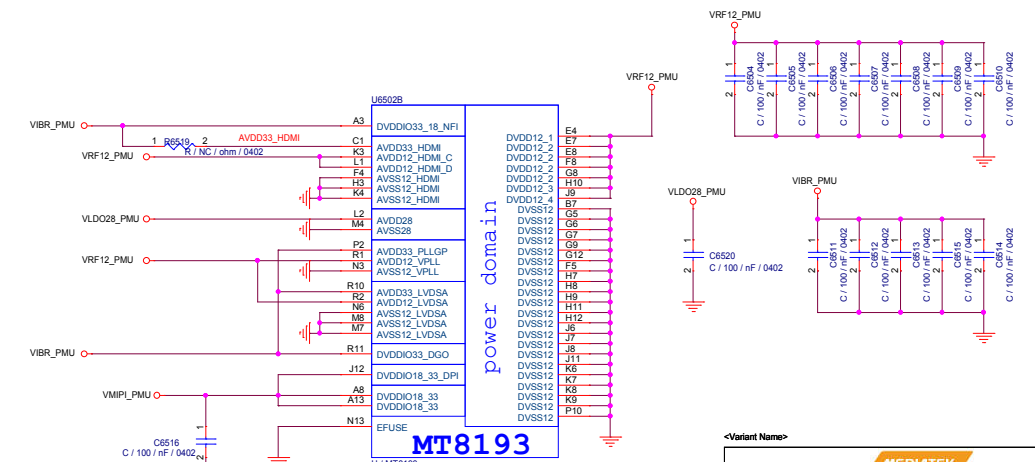
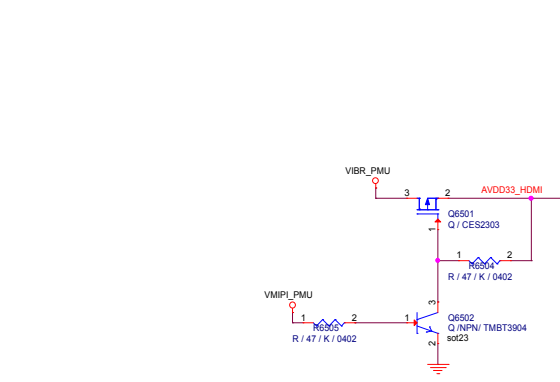
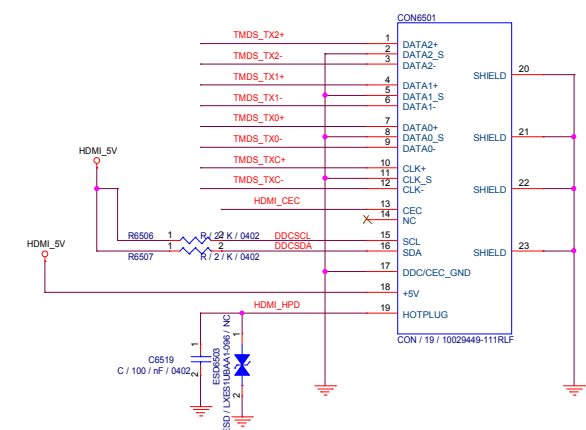
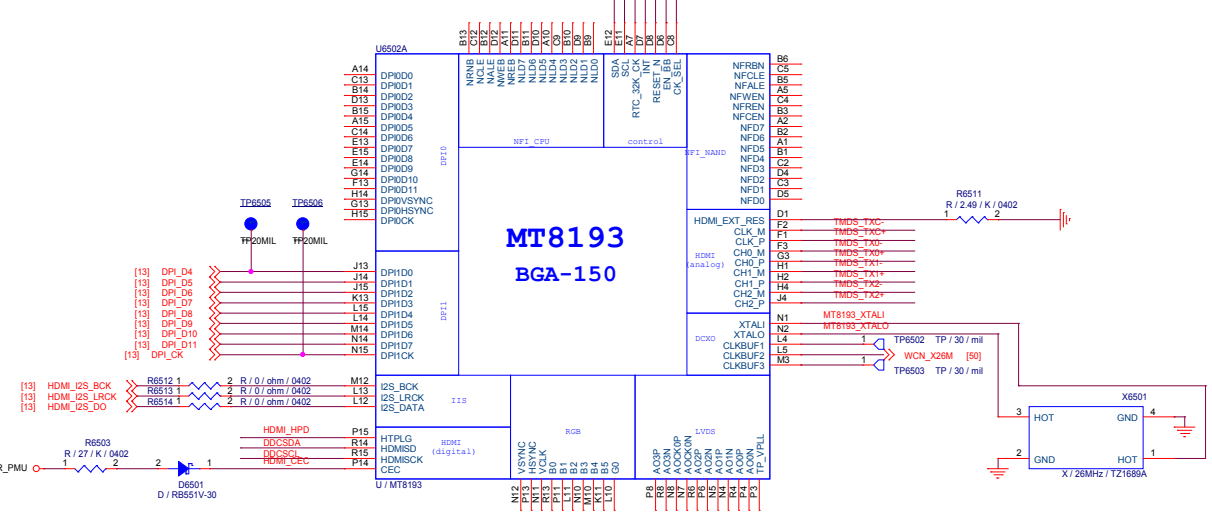




[12] GPIO_HDM_EN



**MT8193
BGA-150**



<Variant Name>

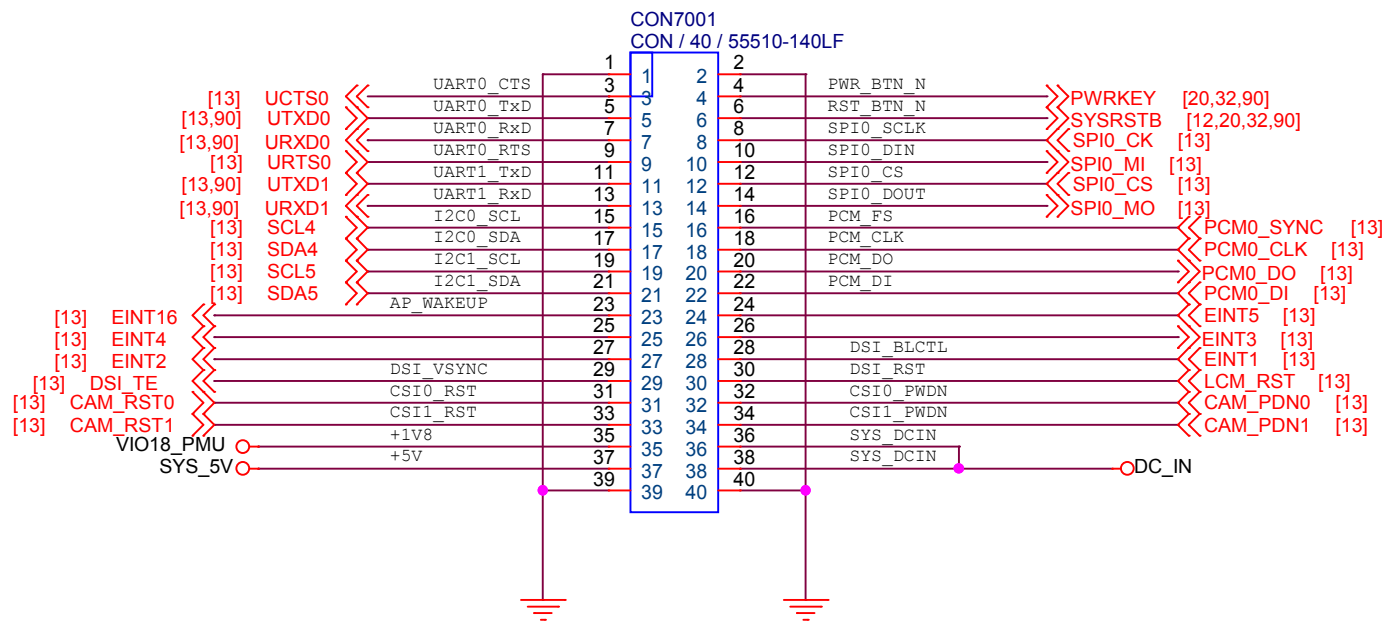
MEDIATEK

Title: **65_PERI_HDMI**

Size: C

MTK Confidential

Date: Wednesday, June 08, 2016 Sheet 65 of 89



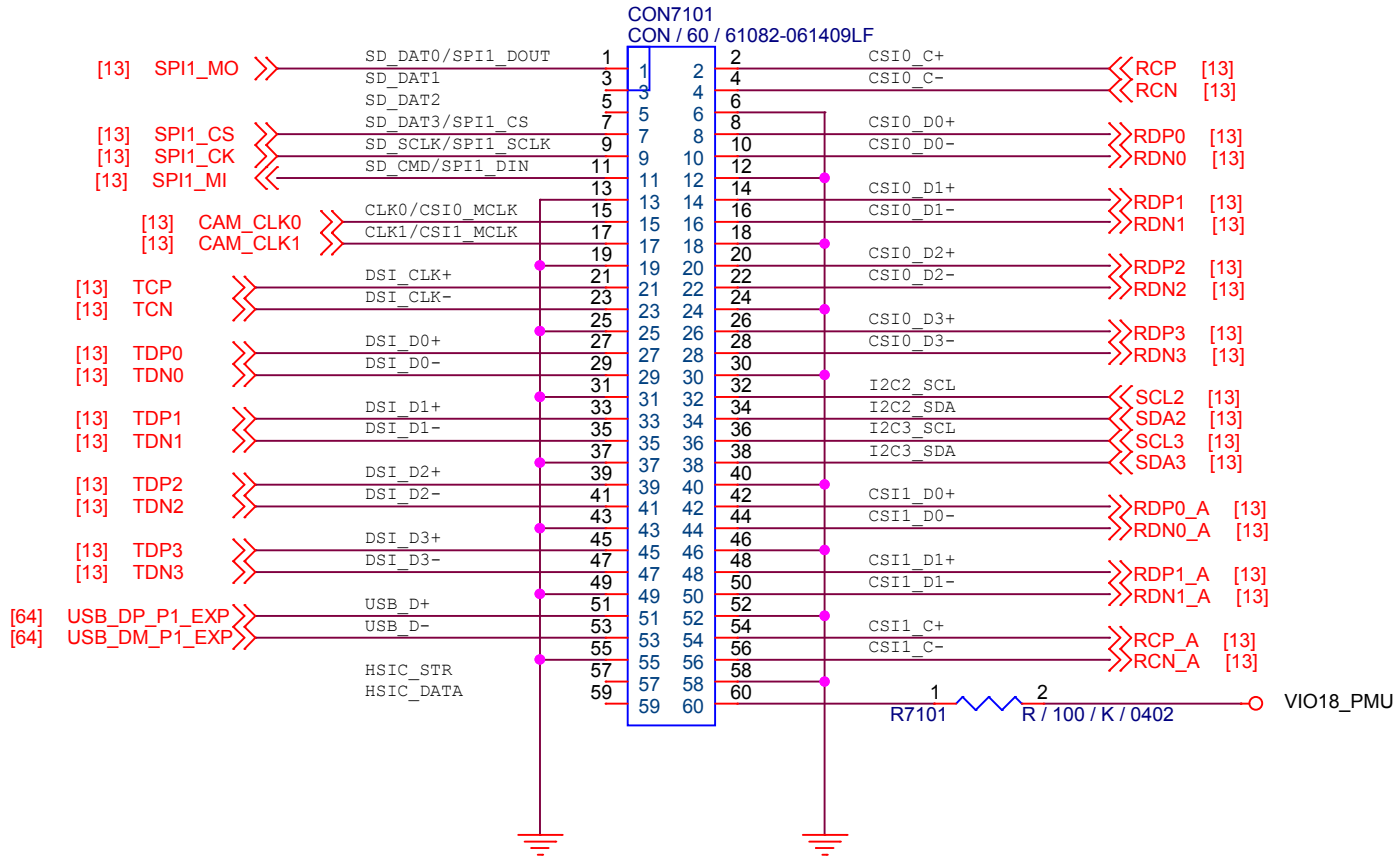
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Title **70_LS_IO_EXP**

Size A **MTK Confidential**

Date: Wednesday, June 08, 2016 Sheet 70 of 99



<Variant Name>



Title **71_HS_IO_EXP**

Size A **MTK Confidential**

Date: Wednesday, June 08, 2016 Sheet 71 of 99

MTK Debug I/O

