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Title		
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A

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BLOCK DIAGRAM		
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Title		
SYSTEM POWER DIGGRAM		
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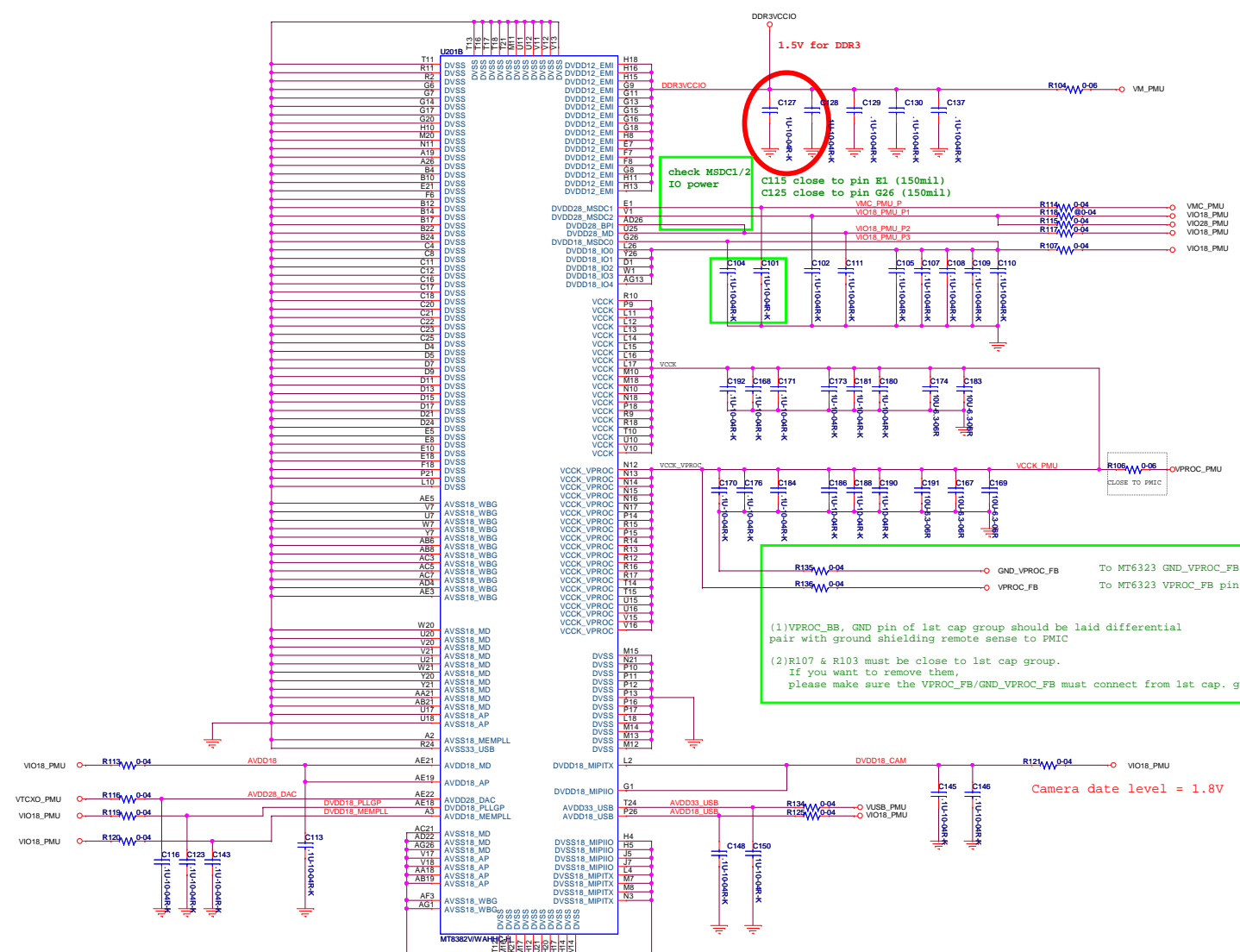
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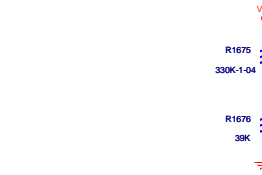
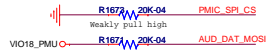
check MSDCL/2 IO power

(1) VPROC_BB, GND pin of 1st cap group should be laid differential pair with ground shielding remote sense to PMIC
 (2) R107 & R103 must be close to 1st cap group. If you want to remove them, please make sure the VPROC_FB/GND_VPROC_FB must connect from 1st cap. group of VPROC

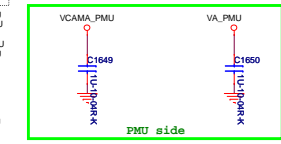
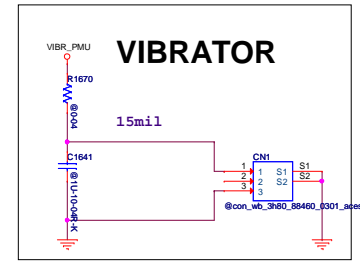
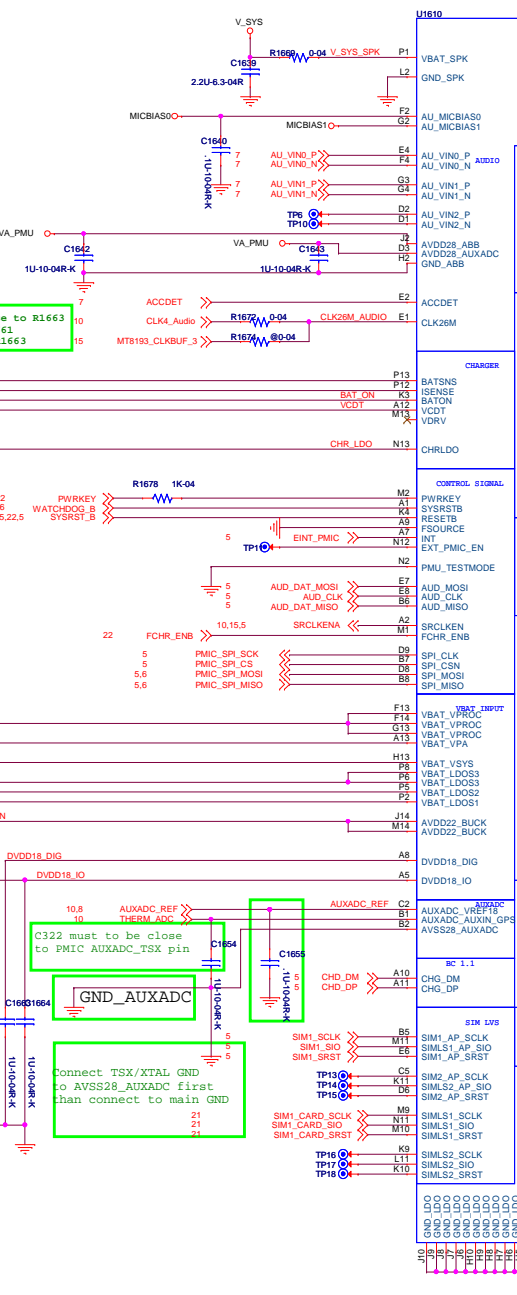
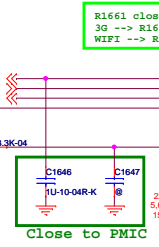
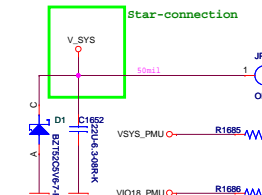
AVDD18_MEMPLL pin and AVSS18_MEMPLL pin should be connected with PCB CAP first, and then connected with PMU and PCB ground. CAP should be near MT6582 as possible as we can.

Title	MT8382_POWER		
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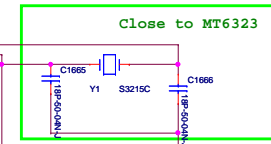
Symbol	LPDDR2/1.2V	PCDDR3L/1.35V	PCDDR3/1.5V	LPDDR1/1.8V	Default
SPI_CSN	H	L (20K)	H	L (20K)	FU
AUD_MOSI	L	H (20K)	H (20K)	L	PD



Vbat should connect to C341 first, then star-connection to MT6323



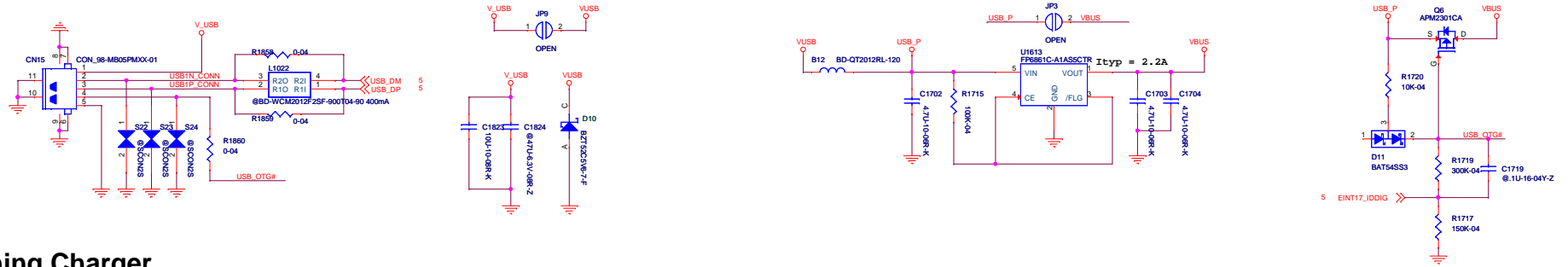
VGP1 3.3V LCM
 VGP2 2.8V CTP
 VGP3 1.2V MT8193



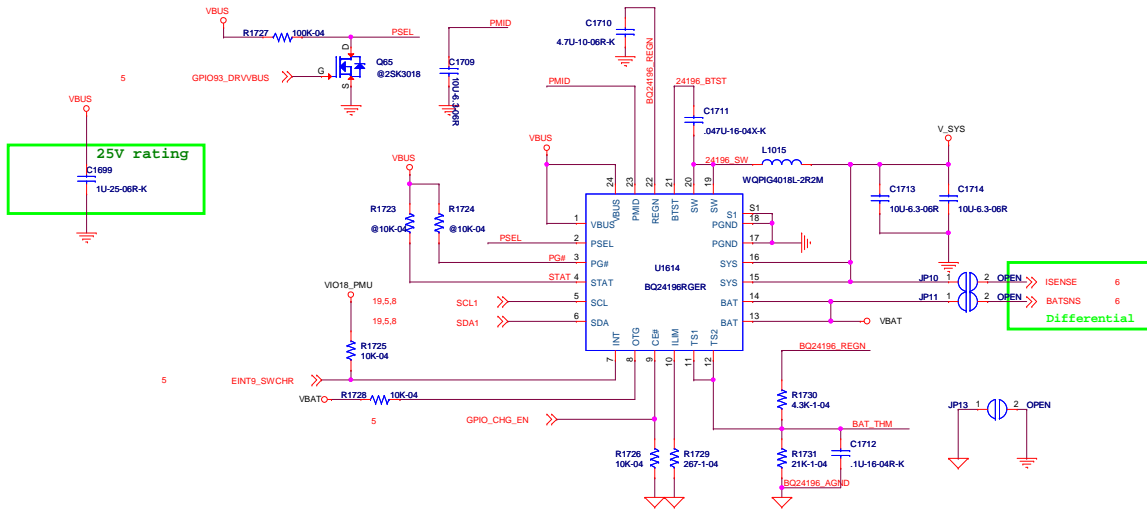
< 32K - Less >
 1. MT6323 XOUT connect to MT6166 32KHz output
 2. MT6323 XIN connect to GND



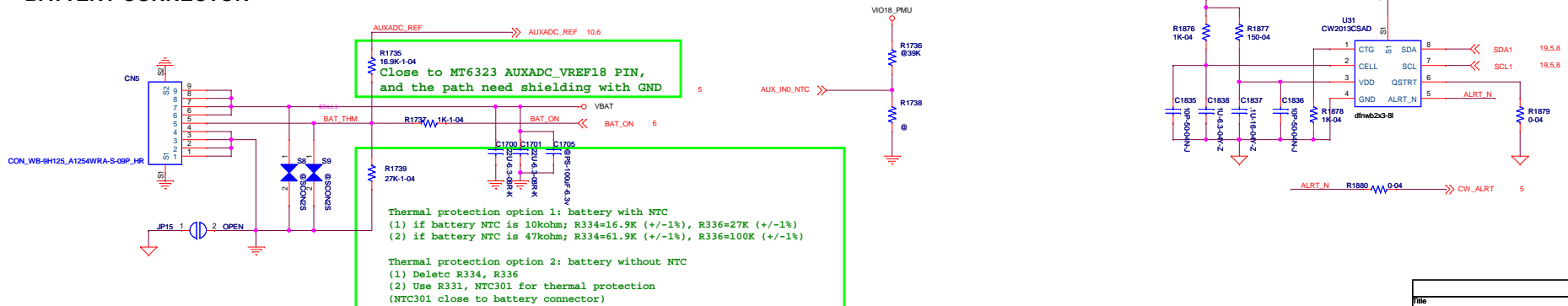
DC IN / Micro USB



Switching Charger

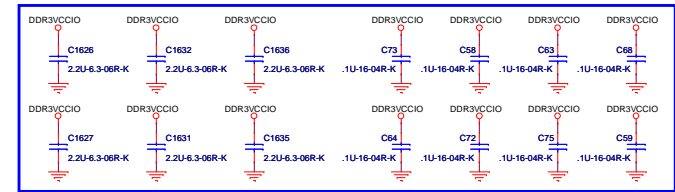
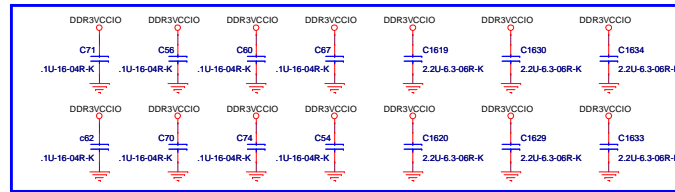
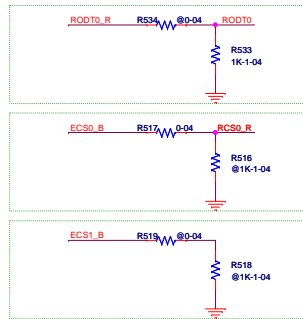
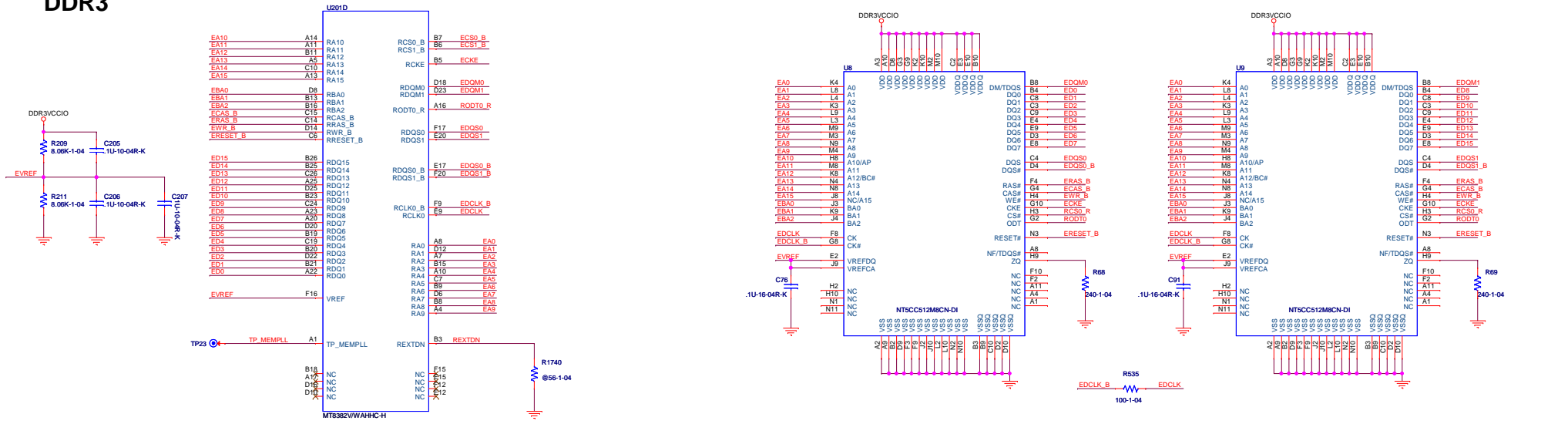


BATTERY CONNECTOR

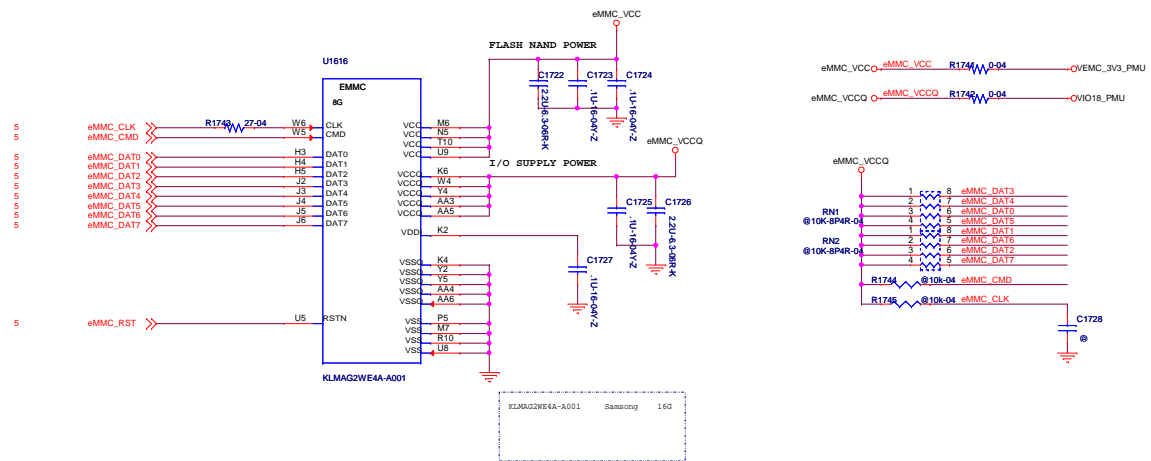


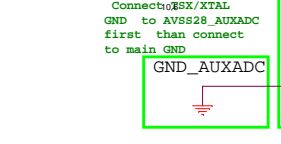
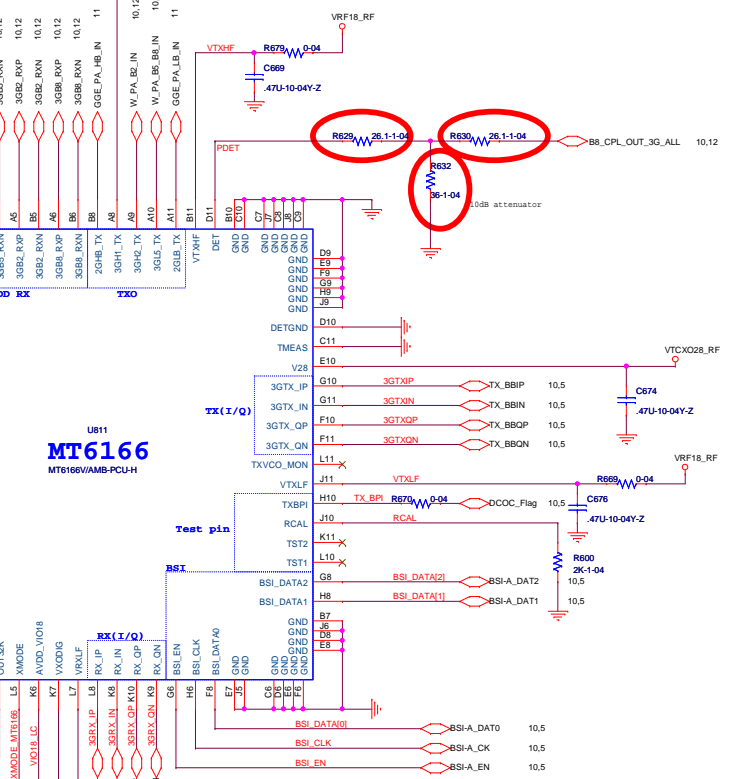
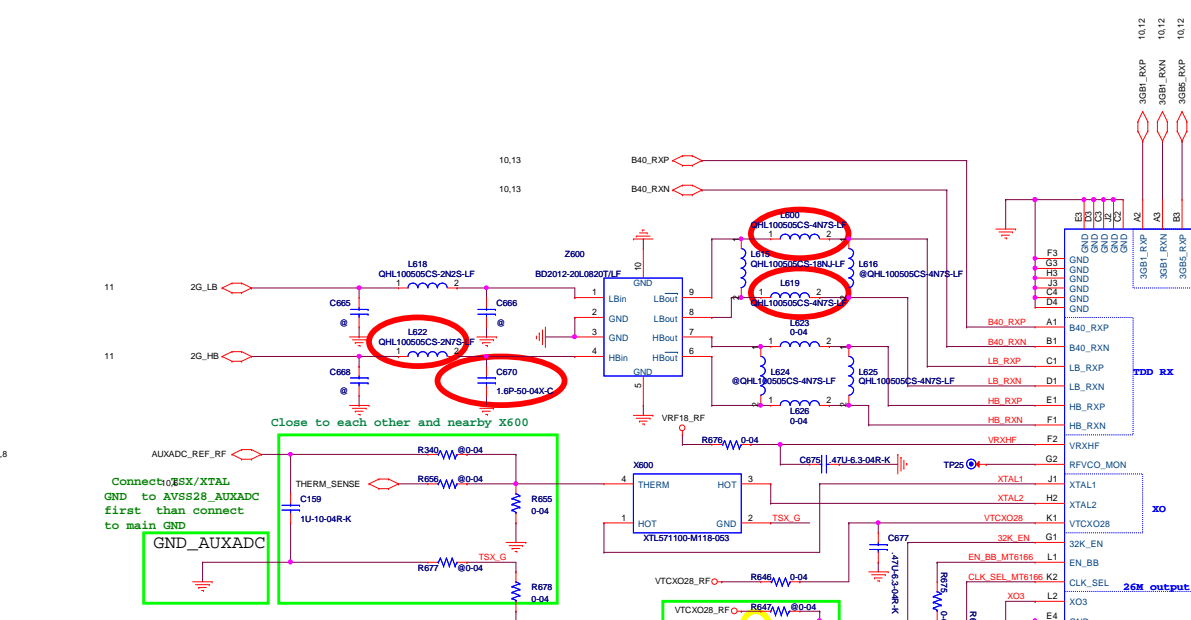
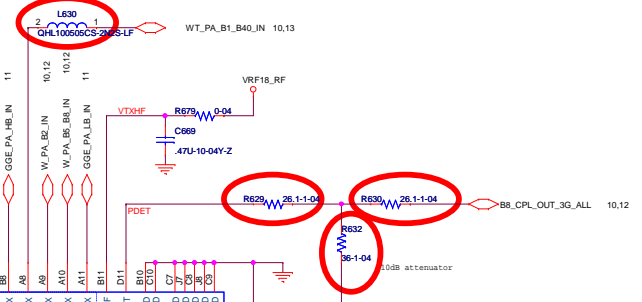
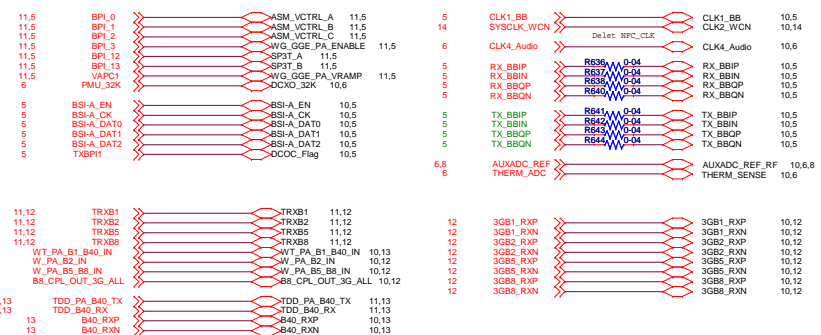
Title	DC_INCHARGER/BOOST		
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DDR3



eMMC





- 1.Route AUXADC_REF_RF/THERM_SENSE with 4mil trace width
- 2.Route AUXADC_REF_RF/THERM_SENSE as differential trace with well GND shielding
- 3.Route AUXADC_GND with 24mil trace width under THERM_SENSE/AUXADC_REF trace to provide return current path.

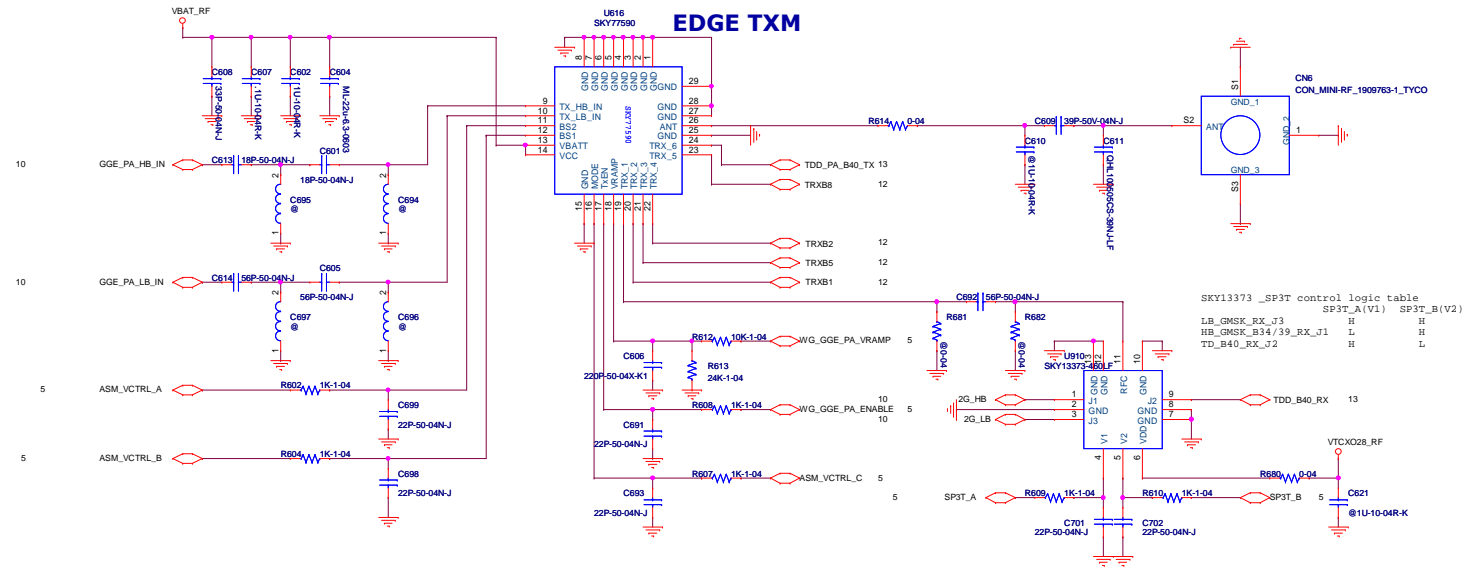
Component	X600	R655	R634	R656	C159
Xtal Mode	Xtal	0ohm	0.6 NC	NC	1uF
GPS co-clock	Xtal	Thermistor	NC	1.00K +/- 1%	0ohm

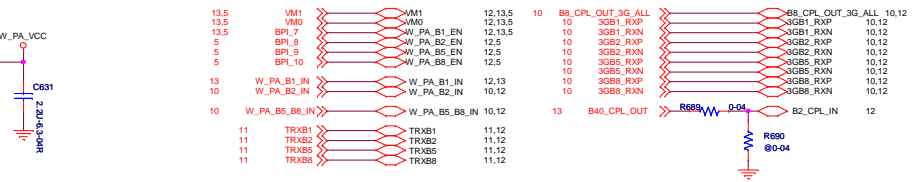
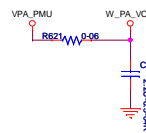
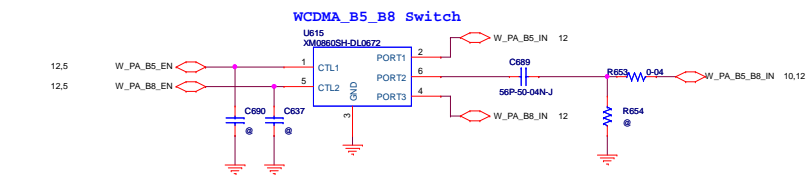
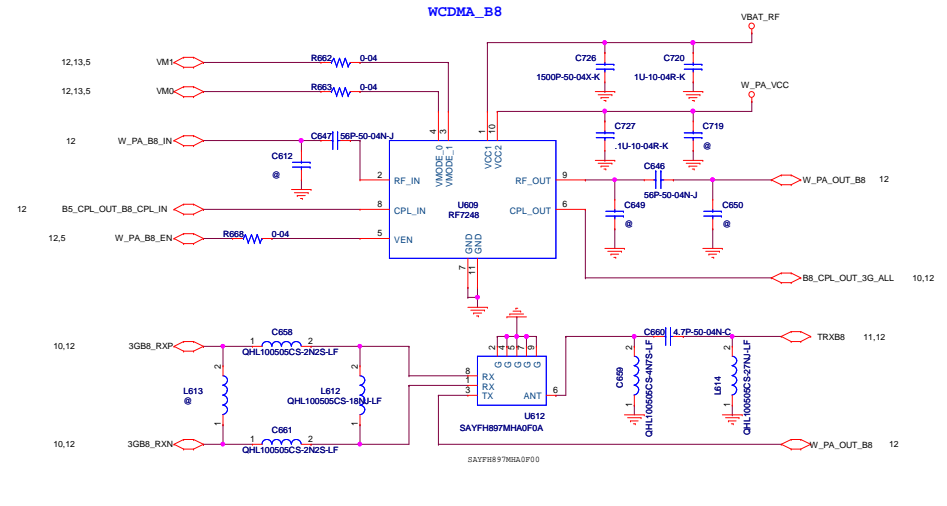
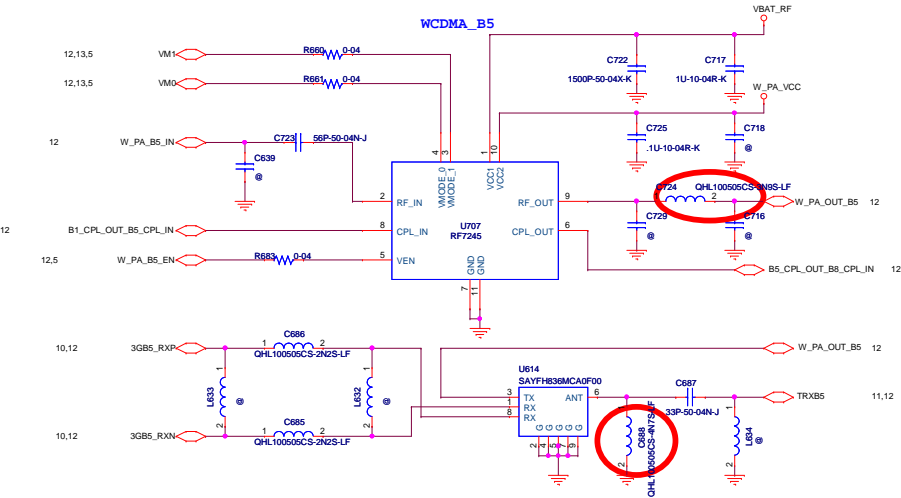
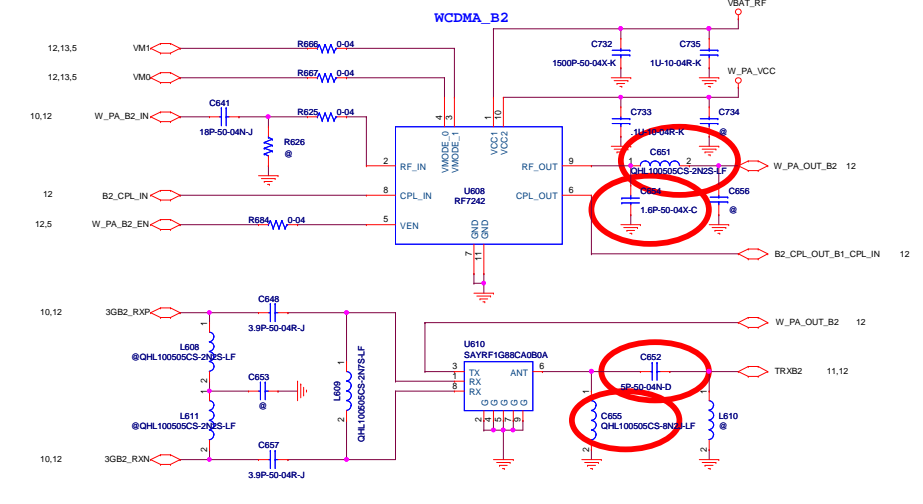
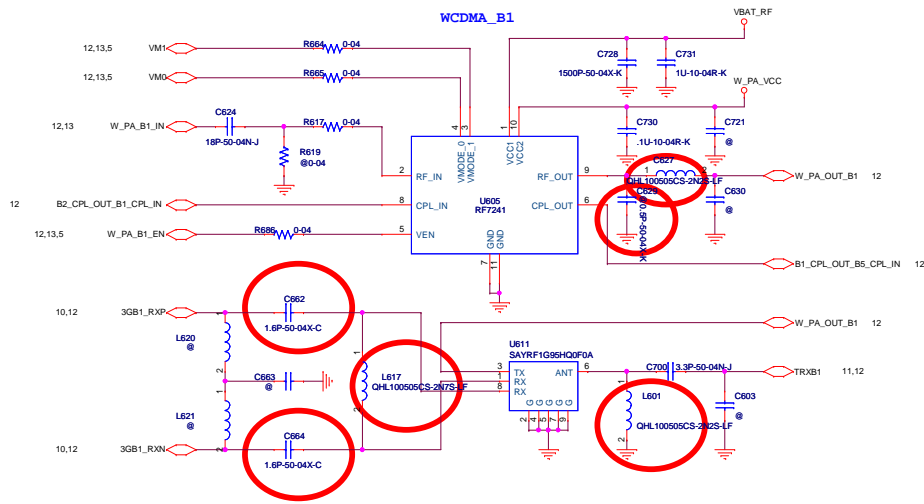
MODE	Logic	DCXO	32K_EN	XMODE	VXODIG
VTCXO		0 (GND)	0 (GND)	1 (VIO18)	
DCXO + 32K XO		0 (GND)	1 (VIO18)	1 (VIO18)	
DCXO + 32K-Less		1 (VTCXO28)	1 (VTCXO28)	1 (VTCXO28)	

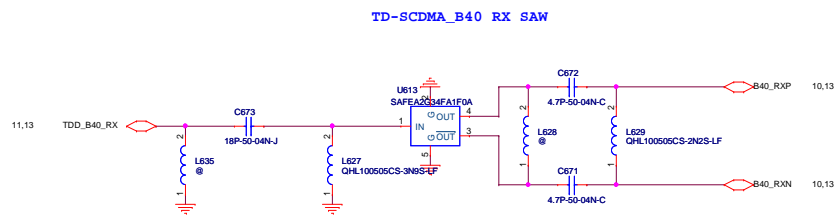
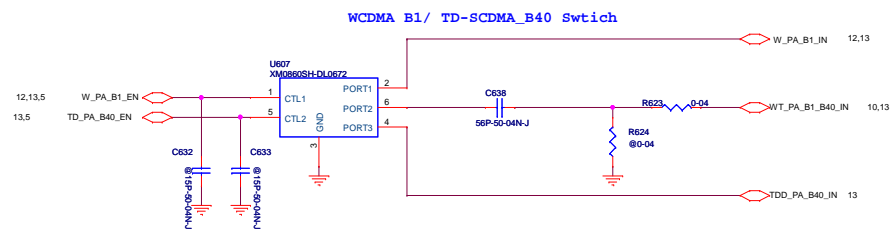
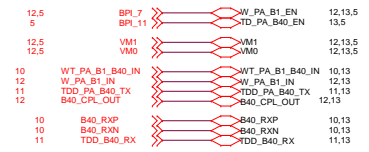
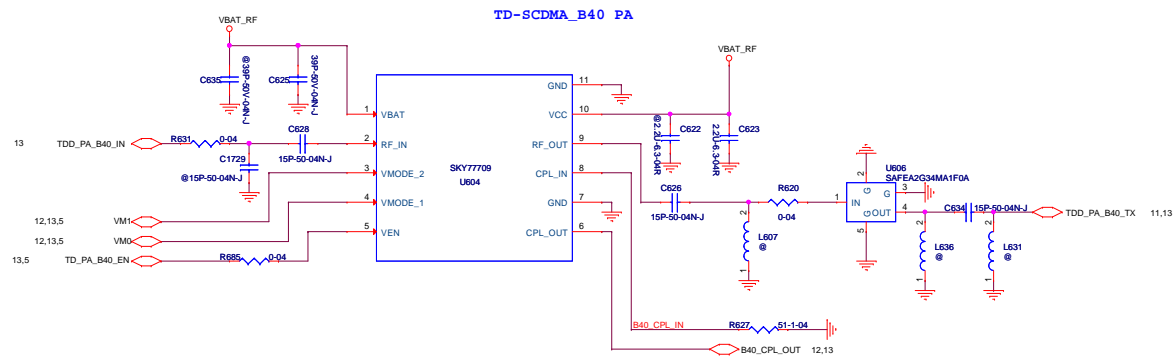
Net name	Pin name	Power domain	Max Current consumption (mA)
RXHF	F2	VRF18	100
VTCXO28	K1	VTCXO	6
VRXLF	L7	VRF18	35
VTXLF	J11	VRF18	35
V28	E10	VTCXO	1
VTXHF	B11	VRF18	125
VIO18	K6	VIO18	1

SKY77590 control logic table

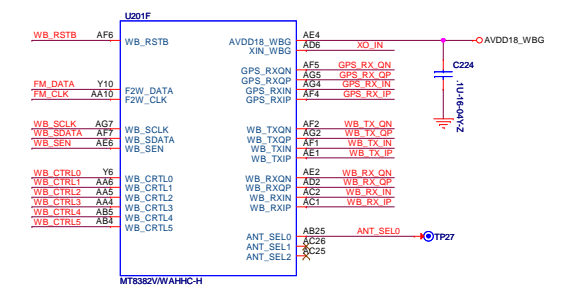
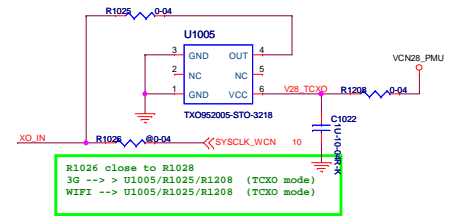
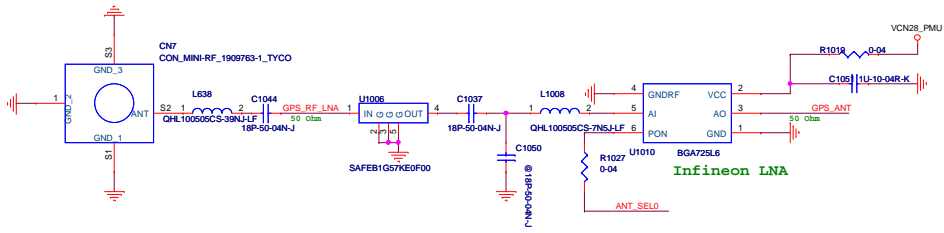
	Enable	VctC	VctB	VctA
LB_GMSK_TX	H	L	L	H
HB_GMSK_TX	H	L	H	H
LB_EDGE_TX	H	H	L	H
HB_EDGE_TX	H	H	H	H
TRX1	L	H	L	L
TRX2	L	H	H	L
TRX3	L	H	L	H
TRX4	L	H	H	H
TRX5	L	L	H	L
TRX6	L	L	L	H
TDSCDMA	H	H	H	H



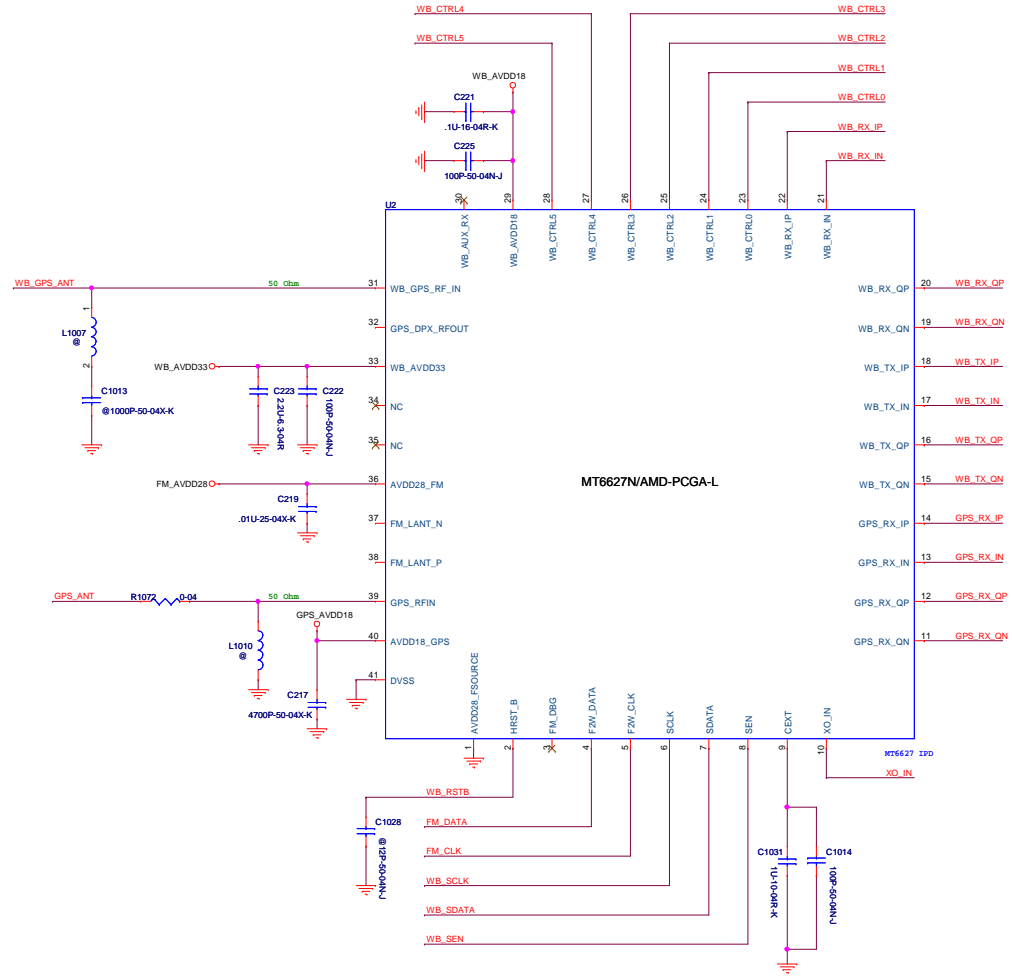
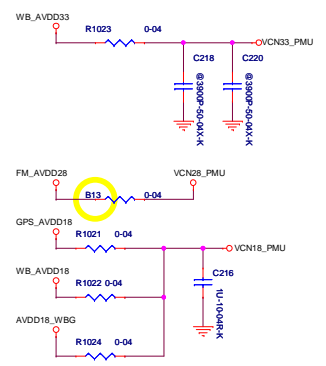
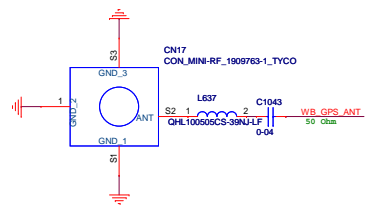




GPS Ant



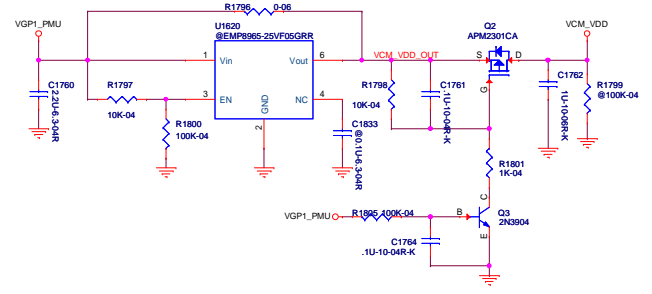
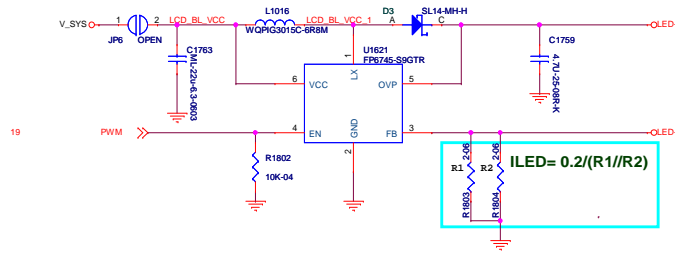
WiFi / BT Ant



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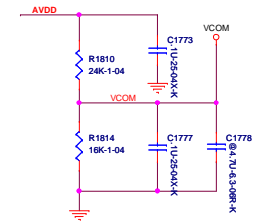
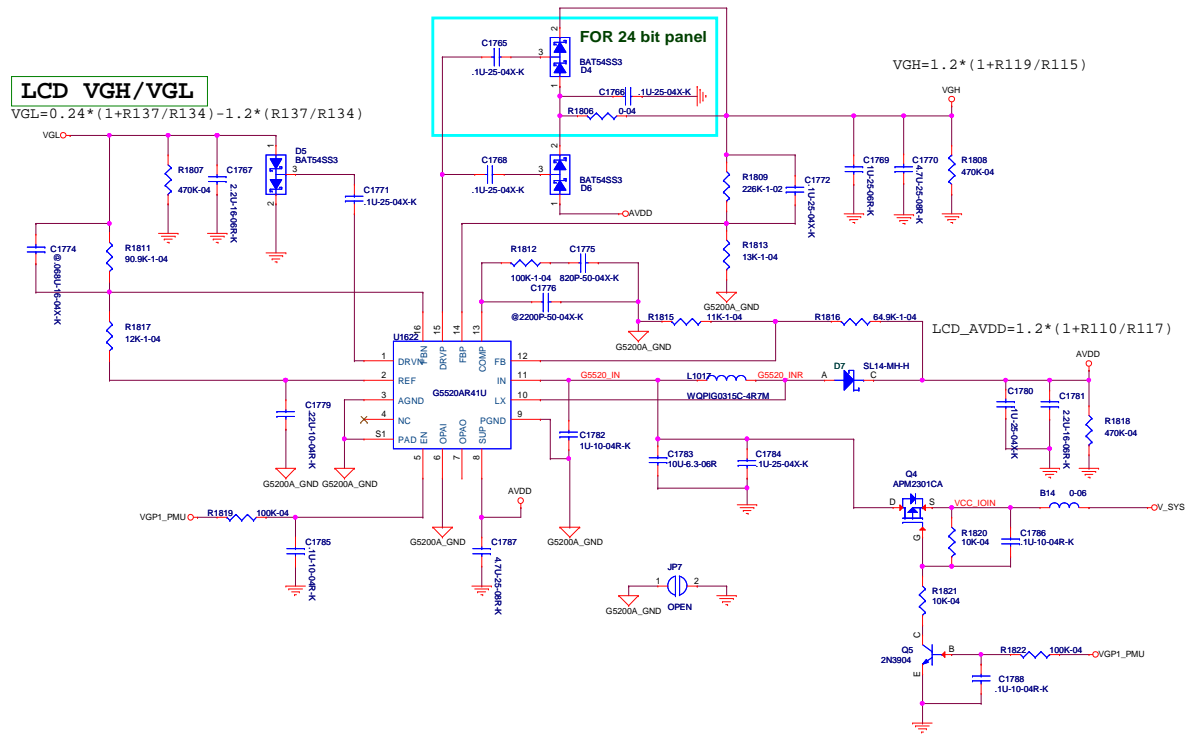
LCD INVERTER

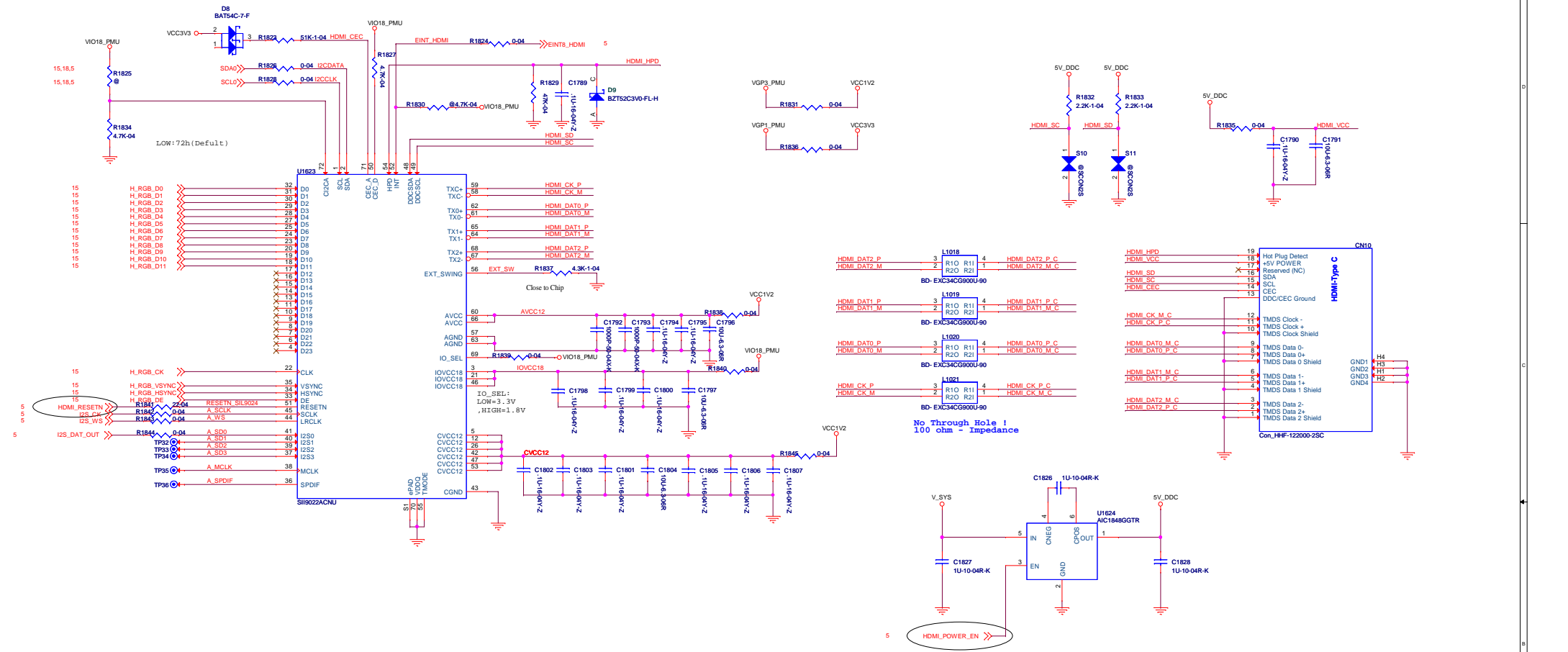
7"	R108	1.3-06	153mA
8"	R108	1.1-06	181mA
9"	R108	1.5-06	R109 2-06 235mA
10"	R108	2-06	R109 2-06 200mA



LCD VGH/VGL

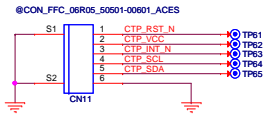
$$VGL = 0.24 * (1 + R137/R134) - 1.2 * (R137/R134)$$



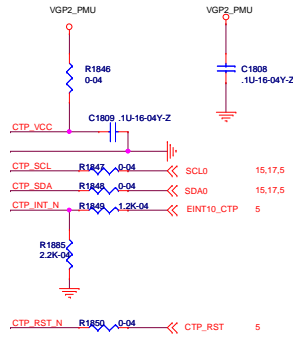


Chip on FPC

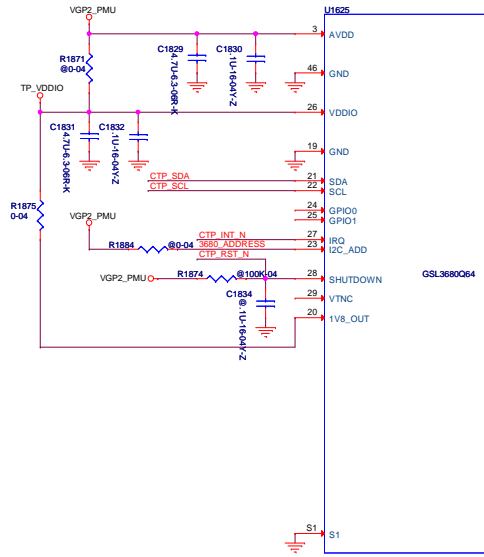
VGP2_PMU for CTP 2.8V



Touch Panel Connector

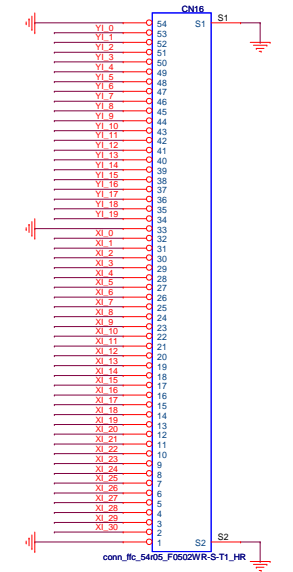


Chip on Board

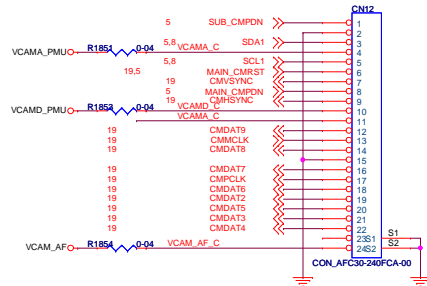
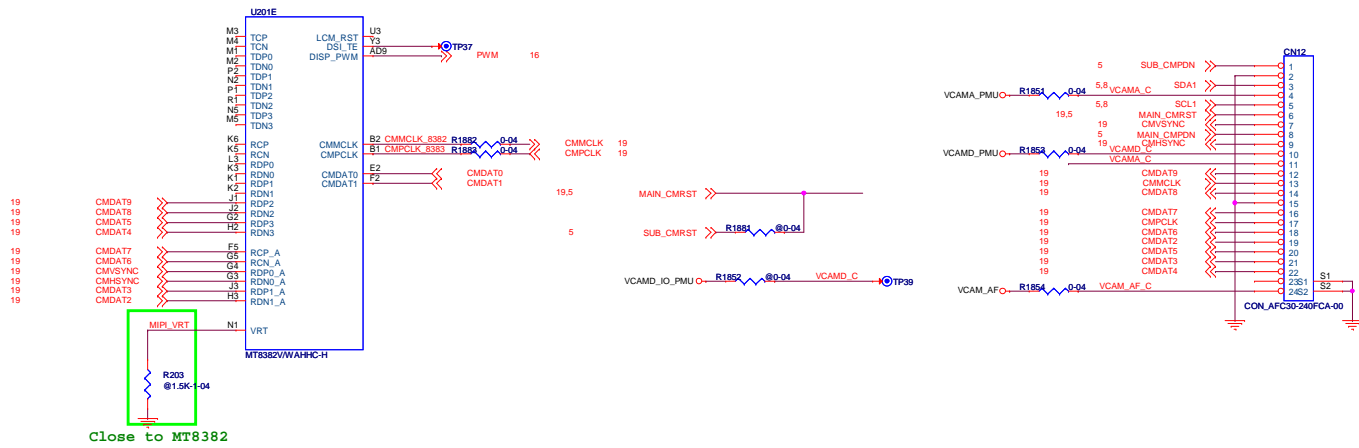


GSL3680C64

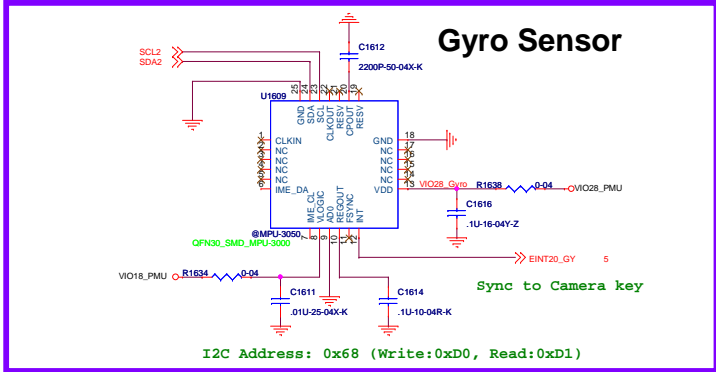
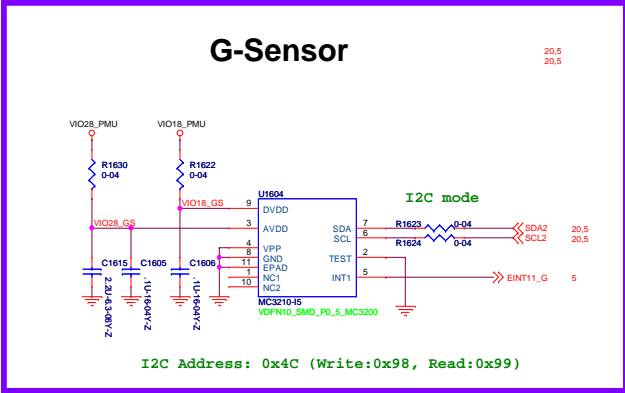
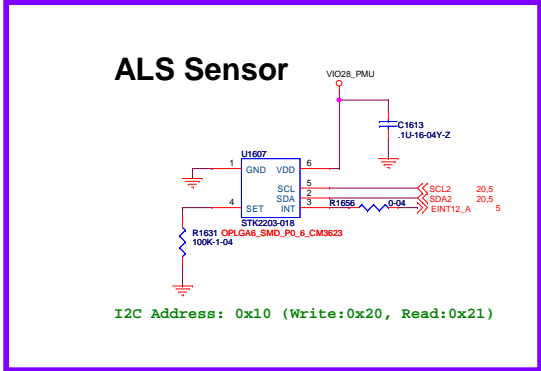
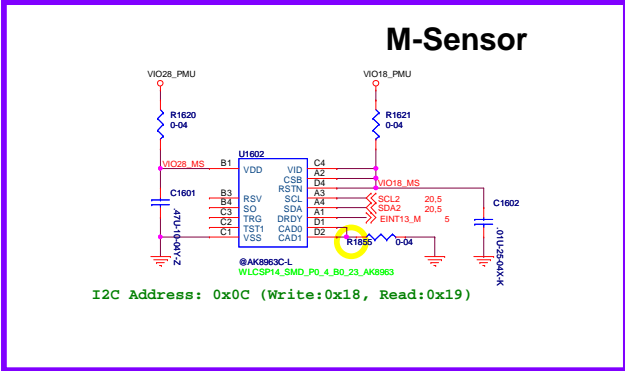
XL_0	30	XL_0
XL_1	31	XL_1
XL_2	32	XL_2
XL_3	33	XL_3
XL_4	34	XL_4
XL_5	35	XL_5
XL_6	36	XL_6
XL_7	37	XL_7
XL_8	38	XL_8
XL_9	39	XL_9
XL_10	40	XL_10
XL_11	41	XL_11
XL_12	42	XL_12
XL_13	43	XL_13
XL_14	44	XL_14
XL_15	45	XL_15
XL_16	46	XL_16
XL_17	47	XL_17
XL_18	48	XL_18
XL_19	49	XL_19
XL_20	50	XL_20
XL_21	51	XL_21
XL_22	52	XL_22
XL_23	53	XL_23
XL_24	54	XL_24
XL_25	55	XL_25
XL_26	56	XL_26
XL_27	57	XL_27
XL_28	58	XL_28
XL_29	59	XL_29
XL_30	60	XL_30
YL_0	47	YL_0
YL_1	48	YL_1
YL_2	49	YL_2
YL_3	50	YL_3
YL_4	51	YL_4
YL_5	52	YL_5
YL_6	53	YL_6
YL_7	54	YL_7
YL_8	55	YL_8
YL_9	56	YL_9
YL_10	57	YL_10
YL_11	58	YL_11
YL_12	59	YL_12
YL_13	60	YL_13
YL_14	61	YL_14
YL_15	62	YL_15
YL_16	63	YL_16
YL_17	64	YL_17
YL_18	1	YL_18
YL_19	2	YL_19



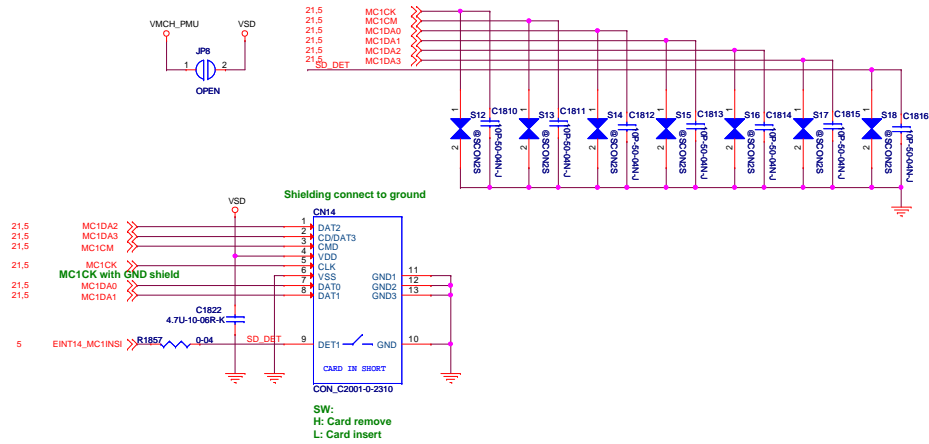
conn_1fc_5405_F0502WR-S-T1_HR



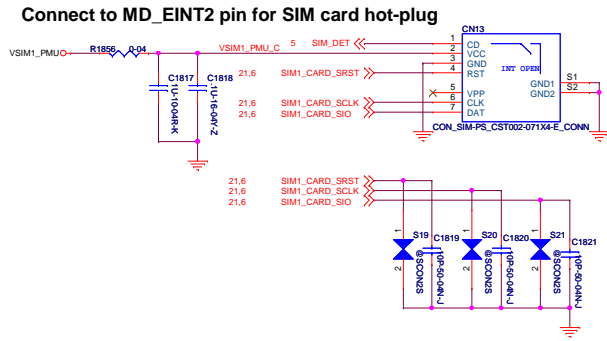
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SD CARD



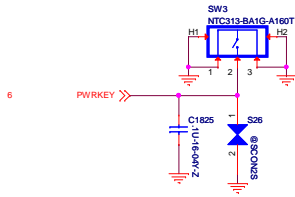
SIM



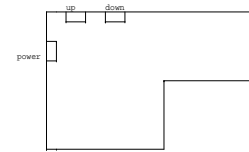
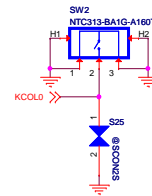
Title		SD CARD/SIM CARD	
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Power Key

DO NOT put pull-up resistor on PWRKEY



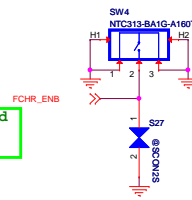
Volume Up



Notice :
 1. Due to KCOL0 & KROW0 reset mode = GPIO input mode, "Force USB download mode" will be fail in KCOL0+KROW0.
 So we change VolumeUp key=KCOL0+GND
 2. Keypad matrix will become as (KEY1=KCOL0+GND)

	KCOL0	KCOL1	KCOL2
KROW0		KEY 2	KEY 5
KROW1	KEY 1	KEY 3	KEY 6
KROW2		KEY 4	KEY 7

Volume Down

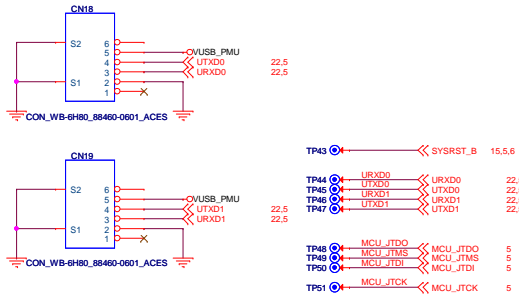
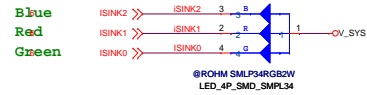


FCHR_ENB can be configured as a normal key function

Notice :
 There are 3 options for "Long press to shutdown" function
 1.PWRKEY + FCHR_ENB
 2.PWERKEY only
 3.FCHR_ENB only

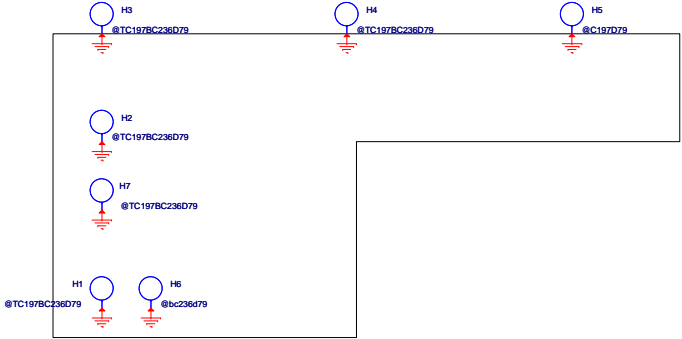
During download mode, default = PWRKEY + FCHR_ENB
 For other case (exclude download mode), default = PWERKEY only

Indicator LED



Net	Aux Func.0	Aux Func.1	Aux Func.2	Aux Func.3	Aux Func.4	Aux Func.5
JTMS	GPIO76	B1:JTMS	I1:CONN_MCU_TMS			
JTCK	GPIO77	I0:JTCK	I0:CONN_MCU_TCK1			
JTDI	GPIO78	I1:JTDI	I0:CONN_MCU_TDI			
JTDO	GPIO79	O:JTDO	O:CONN_MCU_TDO			
EINT1	GPIO1	O:PWM2	O:DPL_D5	I0:MD_EINT1	O: TDD_TDO	O:CONN_MCU_TDO
EINT2	GPIO2	O:CLKM0	O:DPL_D6	I0:MD_EINT2		O:CONN_MCU_DBGACK_N
EINT3	GPIO3	O:CLKM1	O:DPL_D7	I0:SPL_MI	I0:MD_EINT3	I1:CONN_MCU_DBGI_N
EINT4	GPIO4	O:CLKM2	O:DPL_D8	O:SPL_MO	I1:TDD_TCK	I0:CONN_MCU_TCK0
EINT5	GPIO5	I1:UCTS2	O:DPL_D9	O:SPL_CS	I1: TDD_TDI	I0:CONN_MCU_TDI
EINT6	GPIO6	O:URTS2	O:DPL_D10	O:SPL_CK	I0:TDD_TRSTN	I0:CONN_MCU_TRST_B
EINT7	GPIO7	I1:UCTS3	O:DPL_D11	B1:SDA1	I1: TDD_TMS	I1:CONN_MCU_TMS
ANT_SEL0	GPIO47	O:ANT_SEL0	O:PWM0		O:CONN_MCU_DBGACK_N	
ANT_SEL1	GPIO48	O:ANT_SEL1	O:PWM1		I1:CONN_MCU_DBGI_N	
ANT_SEL2	GPIO49	O:ANT_SEL2	O:PWM2		I0:CONN_MCU_TRST_B	

SCREW



Title		
SCREW / EPAD		
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Buck	Output Voltage(V)	Output Current(mA)	Input Decoupling	Output Decoupling	Notes
VPROC	0.7~1.4	2800	>10uF	L=0.68uH,C=10uF*4	Total output cap >40uF
VPA	0.5~3.4	600	>4.7uF	L=2.2uH, C=2.2uF+2.2uF	Output cap range 4.4uF +/-20%
VSYS	2.2	1200	>10uF	L=0.68uH, C=10uF*2	Total output cap >20uF

LDO	Output Voltage(V)	Output Current(mA)	Bypass cap	cap range	Notes
VA	2.8	150	1uF	-20%~+20%	Far-end bypass cap
VCN28	2.8	30	1uF	-20%~+20%	Far-end bypass cap
VTCXO	2.8	40	1uF	-20%~+20%	Far-end bypass cap
VCAMA	2.8	150	3.2uF	-20%~+20%	1uF near-end 2.2uF Far-end bypass cap
VCN33	3.3/3.4/3.5/3.6	240	4.7uF	-20%~+20%	Far-end bypass cap
VRTC	2.8	2	0.1uF to 1000uF	-20%~+20%	Far-end bypass cap
VM	1.24/1.39/1.54/1.84	700	10uF	-20%~+20%	Far-end bypass cap
VRF18	1.825	200	1uF	-20%~+200%	Far-end bypass cap
VIO18	1.8	300	4.7uF	-20%~+200%	Far-end bypass cap
VIO28	2.8	200	2.2uF	-20%~+200%	Far-end bypass cap
VCN18	1.8	120	1uF	-20%~+20%	Far-end bypass cap
VCAMD	1.2/1.3/1.5/1.8	150	1uF	-20%~+20%	Far-end bypass cap
VCAM_IO	1.8	100	1uF	-20%~+20%	Far-end bypass cap
VEMC_3V3	3.0/3.3	400	4.7uF	-20%~+20%	Far-end bypass cap
VMC	1.8/3.3	100	1uF	-20%~+20%	Far-end bypass cap
VMCH	3.0/3.3	400	2.2uF	-20%~+20%	Far-end bypass cap
VUSB	3.3	20	1uF	-20%~+20%	Far-end bypass cap
VSIM1	1.8/3.0	50	1uF	-20%~+20%	Far-end bypass cap
VSIM2	1.8/3.0	50	1uF	-20%~+20%	Far-end bypass cap
VGP1	1.2/1.3/1.5/1.8/2.0/2.8/3.0/3.3	100	1uF	-20%~+20%	Far-end bypass cap
VIBR	1.2/1.3/1.5/1.8/2.0/2.8/3.0/3.3	100	1uF	-20%~+20%	Far-end bypass cap
VGP2	1.2/1.3/1.5/1.8/2.0/2.5/2.8/3.0	100	1uF	-20%~+20%	Far-end bypass cap
VGP3	1.2/1.3/1.5/1.8	200	1uF	-20%~+20%	Far-end bypass cap
VCAM_AF	1.2/1.3/1.5/1.8/2.0/2.8/3.0/3.3	100	1uF	-20%~+20%	Far-end bypass cap
VDIG18	1.8	20	1uF	-20%~+20%	Far-end bypass cap