

REMARKS :

1. The "NM" is for no mount. (Ex. NM_1K 0402 5%)
2. Document number: 60xxxx
It is first six characters of SMT P/N, and change second character to "0".
Ex. If SMT P/N is 6610090001W or 6310090001W, the document number is 601009.
3. Title : SCHEMATIC, x/B Gx-xxx (Function title)
It is the description & specification of SMT P/N, and function of each page.
Ex. 6310090001W is "SMT M/B T31I GA-010", and function is "Power Supply". The title is "SCHEMATIC, M/B GA-010 (Power Supply)".
4. Rev. :
The schematic revision from AA, after EN modify CML to control AB, AC..... by EDC
From DVT phase, the schematic revision change to BA, after ECO/EN modify CML to control BB, BC... by EDC.
From PVT phase, the schematic revision will change to CA,CB,CC....
5. Size : Units by Millimeters, Size by A3 for standard.
6. Copyright reserved : Each page must have CCI's copyright reserved.
7. One schematic file for one PCB number
8. Function "Mechanical Parts Template" must include shield-case, and each shield-case must write P/N in this symbol "Part Number" filed.

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Title		
SCHEMATIC, M/B GA-400 (REMARKS)		
Size	Document Number	Rev
A3	601B16	CA
Date:	Monday, January 06, 2014	Sheet 01 of 23

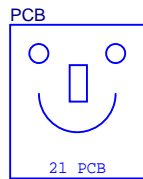
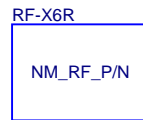
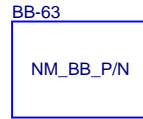
Project Name : LVP9/LVP0/LVPD

PCB Number : GA-400

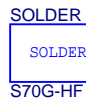
PCB Revision : 1.0

Page Description :

Item	Function Category	Function Description / Contents	Option	Page
1	Cover Page	EDC's cover page for EN/ECO revision control (EXCEL File)	Necessary	1
2	Page Summary	Project Name , PCB Number , PCB Revision , Pages Description	Necessary	2
3	Block Diagram	System Block Diagram	MB necessary	3
4	Power Tree	Power tree definition	MB necessary	4
5	DBB -1,-2,-3	Digital baseband or application processor	Yes	5,6,7
6	GPIO	GPIO		
7	PMIC -1,-2	PMIC Power	Yes	8,9
8	Power Supply	Discrete Power: LDO, Switching Regulator ...		
9	USB / Charger	USB, USB PHY, USB Charger, Gas Guage , OVP, EMU...etc.	Yes	10
10	Memory	MCP Memory, Embedded Memory	Yes	11
11	Audio -1,-2	Microphone(s), Receiver, Speaker(s), Headset, Audio Amplifier ...etc	Yes	12,13
12	Camera/Flash Light	Camera , Camera ISP , Camera Flash Light	Yes	14
13	LCM	LCM, LCM Bridge IC , LCM Backlight Driver , Touch Screen ...etc.	Yes	15
14	RF Transceiver	RF Transceiver	Yes	16
15	RF PA	RF PA	Yes	17
16	RF Front End	RF Front End	Yes	
17	BT / WiFi / FM	BT / WiFi / FM	Yes	18
18	GPS	GPS , Galileo		
19	Mobile TV	Mobile TV , DVB-H/T , MedioFLO , TV-Out , Analog TV, HDMI , ...etc.		
20	Sensors	G-Sensor, Ambient Light Sensor, Proximity Sensor, e-compass, Hall sensoretc.	Yes	19
21	Keypad / Backlight	Keypad and keypad backlight driver & LED or EL	Yes	20
22	SIM / uSD Card	SIM Connector, uSD Card	Yes	21
23	Connectors / Vibrator	Battery connector, Board to Board Connector, Keypad connector		
24	Debug Conn / TPs	Debug connecgtor, Test points (for factory test requirements)	Yes	22
25	Clock / Others	Clock , VCTCXO, Haptic Driver, others		
26	Mechanical Parts Template	Screw hole, PADs , Shielding Case , Antenna ...	Yes	23
27	Modem part DBB	Modem Part's DBB		
28	Modem Part ABB	Modem Part's ABB		
29	Modem Part Memory	Modem Part's Memory		
30	Modem Part Power	Modem Part's Power		



LVP9 GA-400 REV:1.0 MB

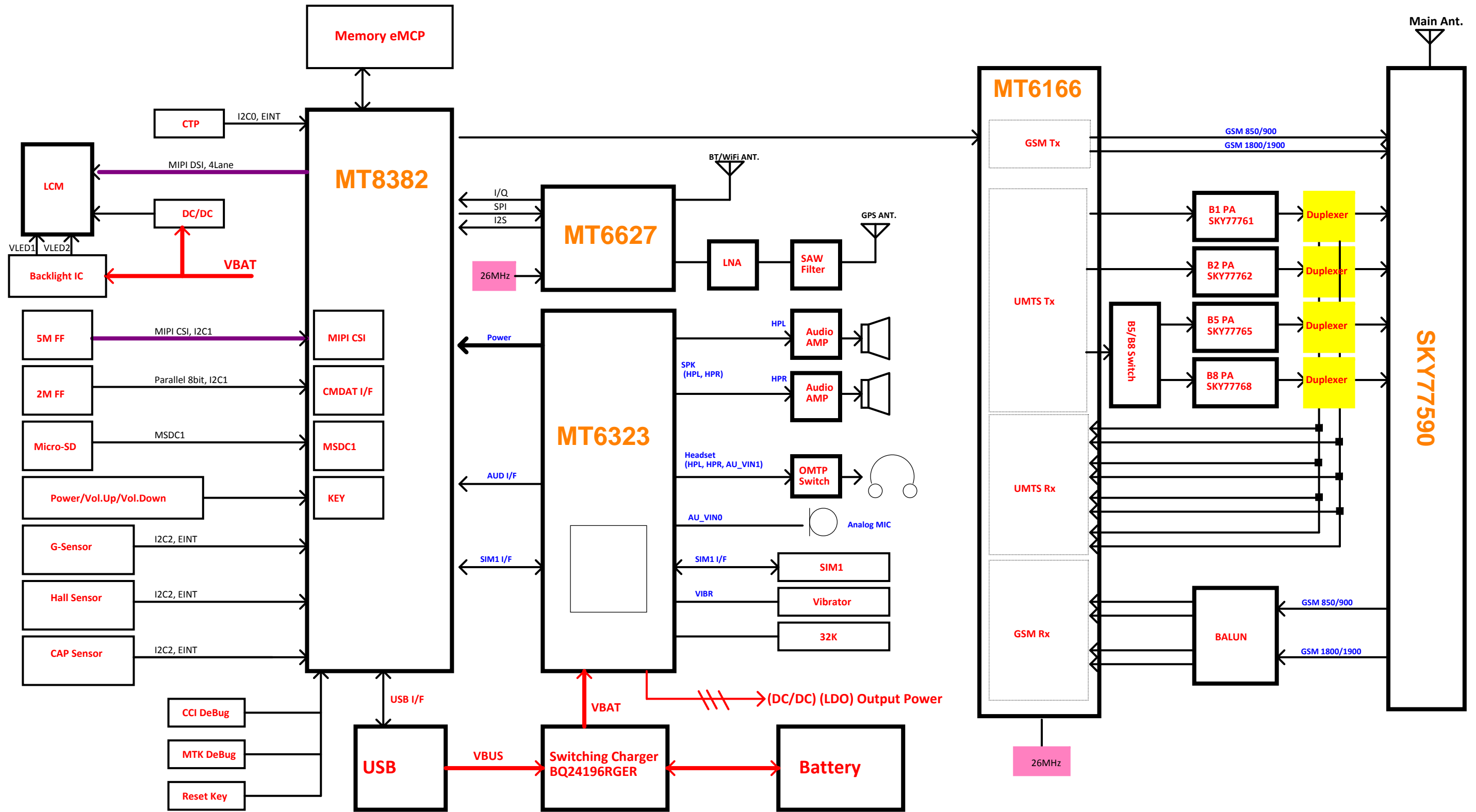


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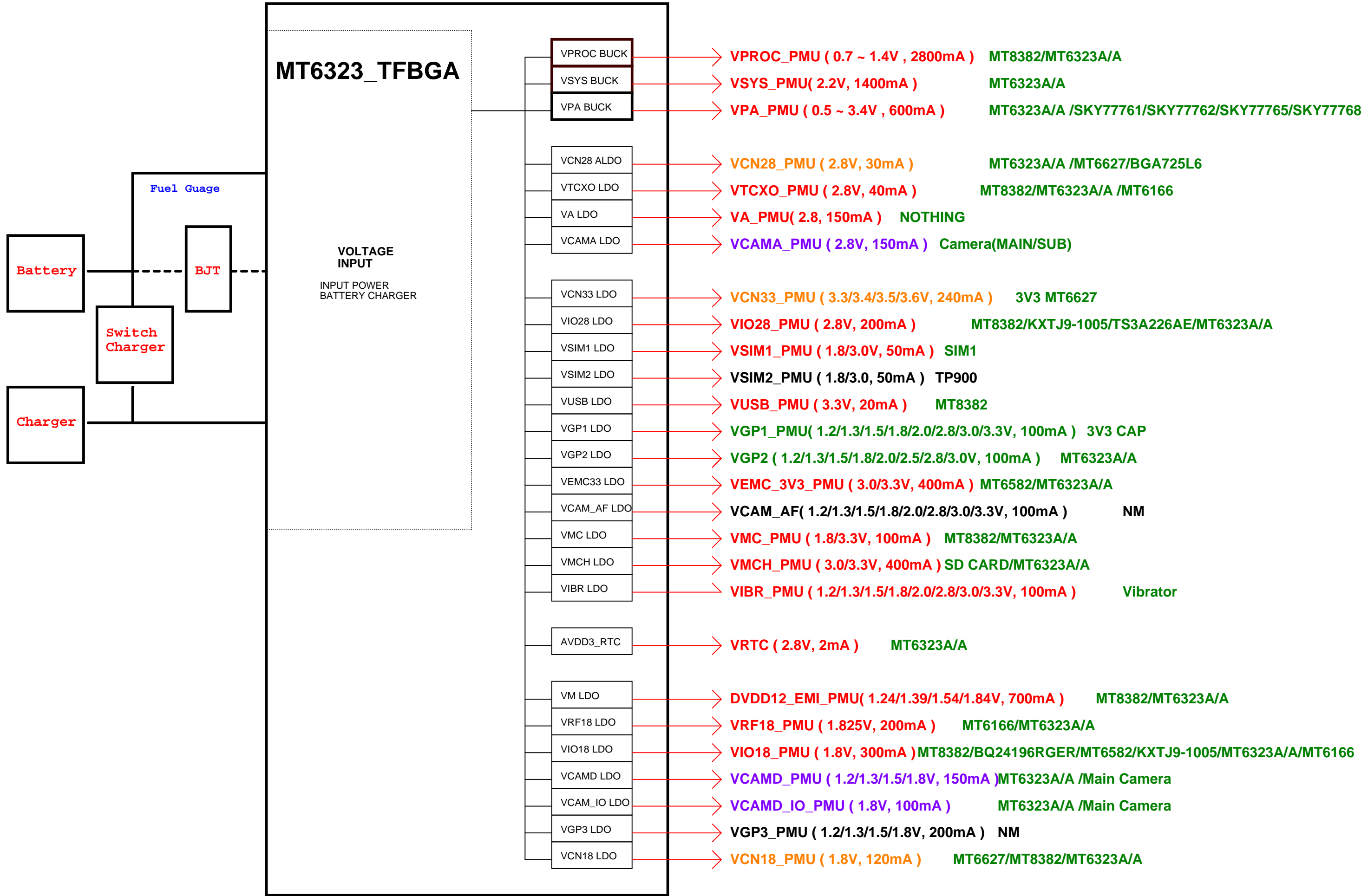
Title: SCHEMATIC, M/B GA-400 (Page Summary)

Size: A3	Document Number: 601B16	Rev: BC
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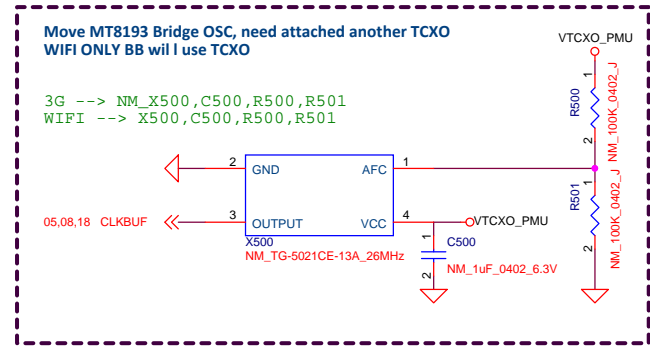
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Title	SCHEMATIC, M/B GA-400 (Block Diagram)		
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NOTE:
Page5/8/16/17 ,Need to change for Wifi / 3G

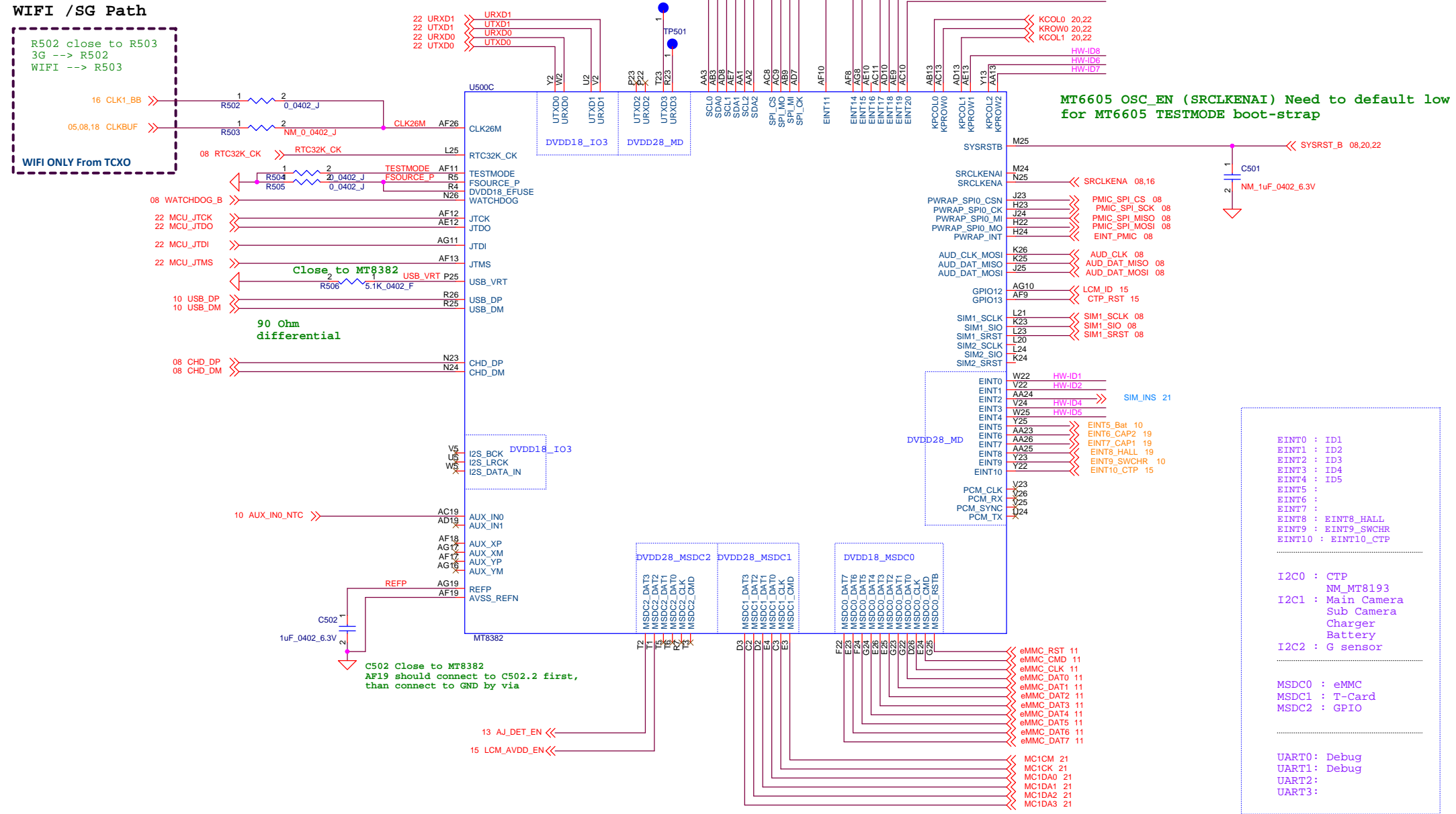
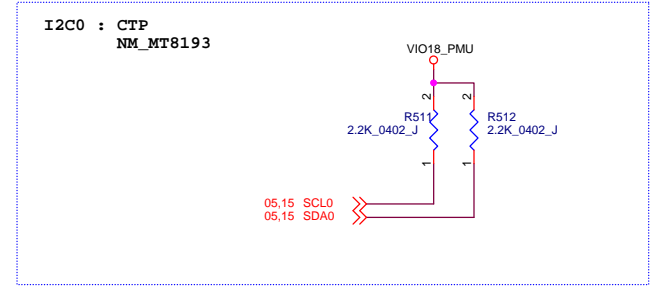
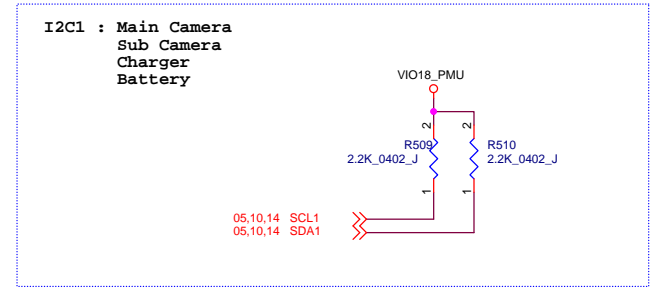
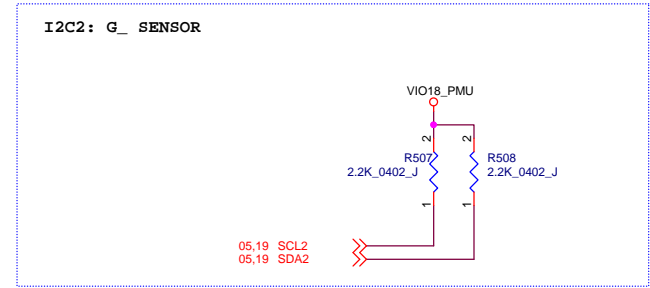
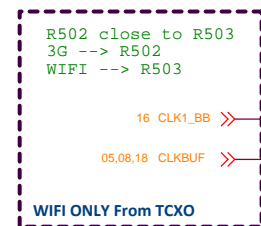
WIFI /SG Path



Main Chip

- LVP9 (ROW) MT8382 0298C
- LVP0 (WIFI) MT8121 0284C
- LVPD (PRC) MT8382 0298C
- LVP9 (ROW) NM_X500,R500,R501,R503
- LVP0 (WIFI) NM_R502 , Mount_X500,R500,R501,R503
- LVPD (PRC) NM_X500,R500,R501,R503

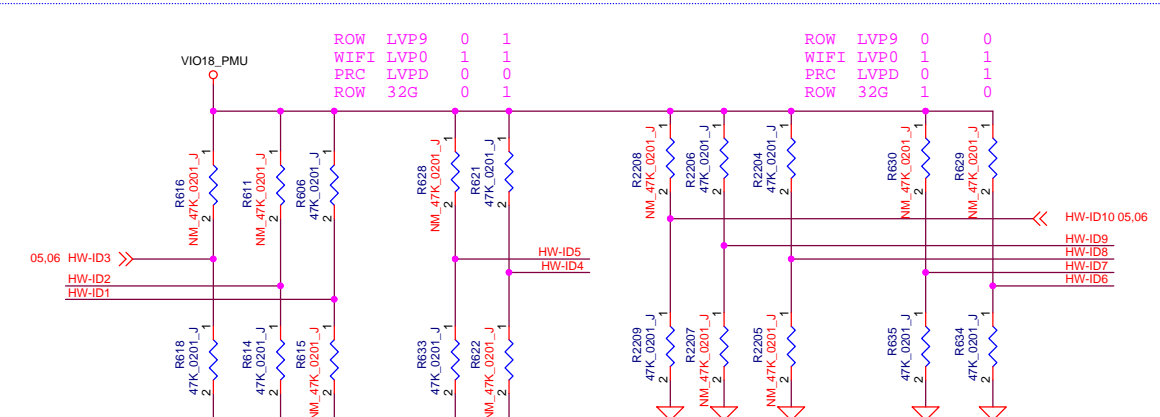
WIFI /SG Path

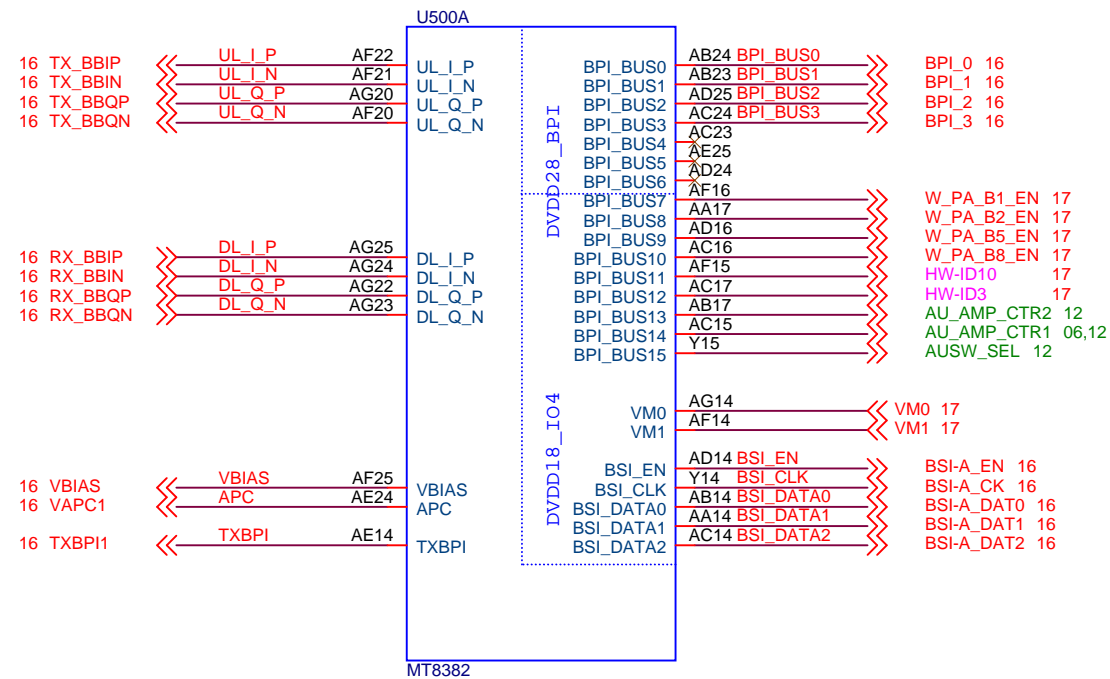
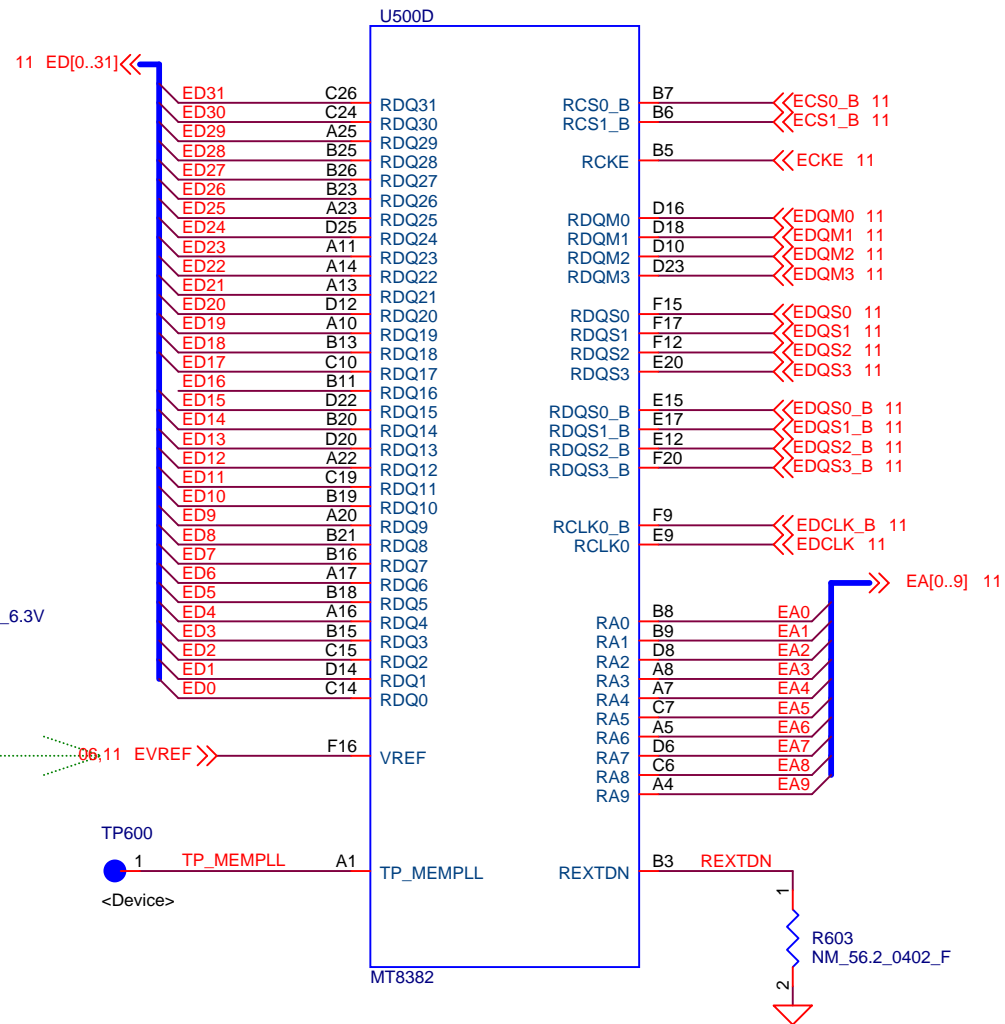
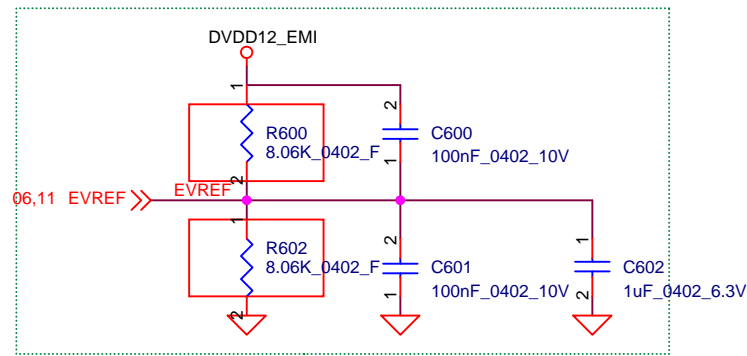


Project SKU	GPIO_63 HW_ID10	GPIO_20 HW_ID9	GPIO_92 HW_ID8	GPIO_93 HW_ID7	GPIO_168 HW_ID6
SKU_1	0	0	0	0	0
SKU_1.1	0	0	0	0	1
SKU_2	0	0	0	1	0
SKU_3	0	0	0	1	1
SKU_4	0	0	1	0	0
SKU_5	0	0	1	0	1
SKU_6	0	0	1	1	0
SKU_7	0	0	1	1	1
SKU_8	0	1	0	0	0
SKU_9	0	1	0	0	1
SKU_10	0	1	0	1	0
SKU_11	0	1	0	1	1
SKU_12	0	1	1	0	0
SKU_13	0	1	1	0	1
SKU_14	0	1	1	1	0
SKU_15	0	1	1	1	1
SKU_16	1	0	0	0	0

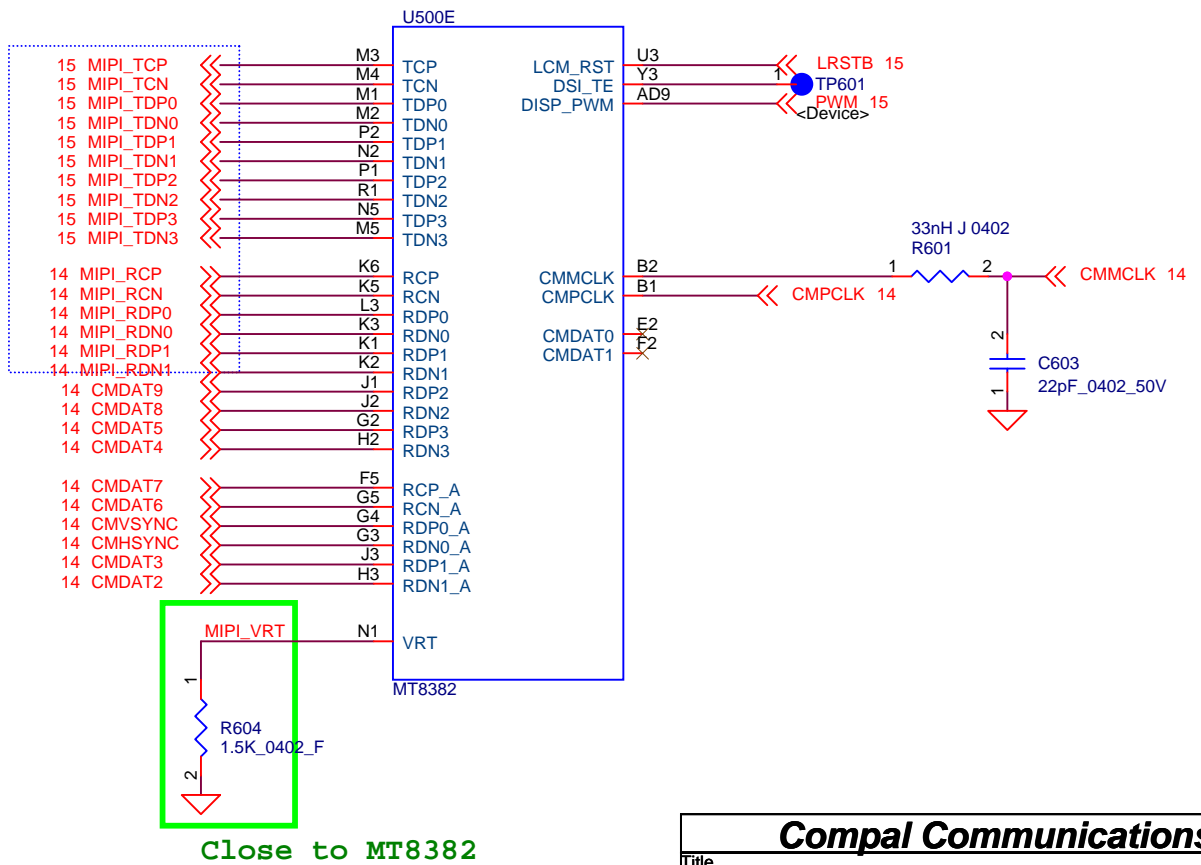
HW Phase ID	GPIO_64 HW_ID8	GPIO_101 HW_ID2	GPIO_100 HW_ID1
PVT	1	0	0
DVT1	0	1	1
DVT2	0	1	0
PVT	0	0	1
MP	0	0	0

RF ID	GPIO_104 HW_ID6	GPIO_100 HW_ID4
LVP9		
UMTS: 900/2100	0	0
GSM: 900/1800/1900		
LVP9		
UMTS: 850/900/1900/2100	0	1
GSM: 850/900/1800/1900		
LVP5		
UMTS: 900/2100	1	0
GSM: 900/1800/1900		
WiFi	1	1





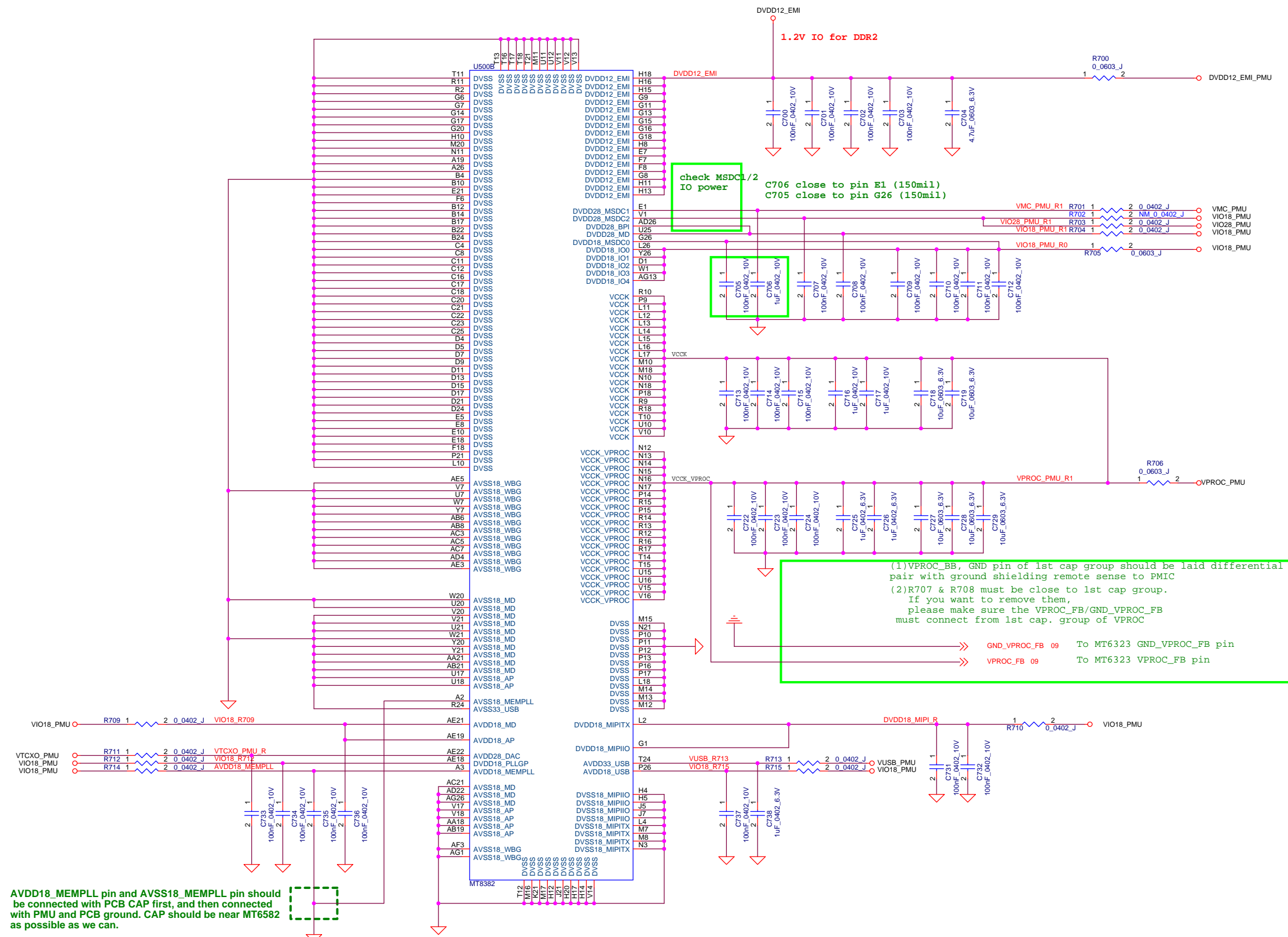
NEED MTK GPIO TAB



Close to MT8382

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Title SCHEMATIC, M/B GA-400 (DBB-2)		
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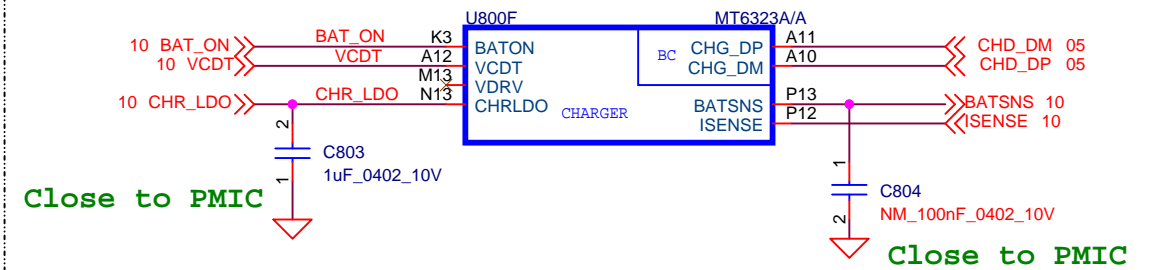
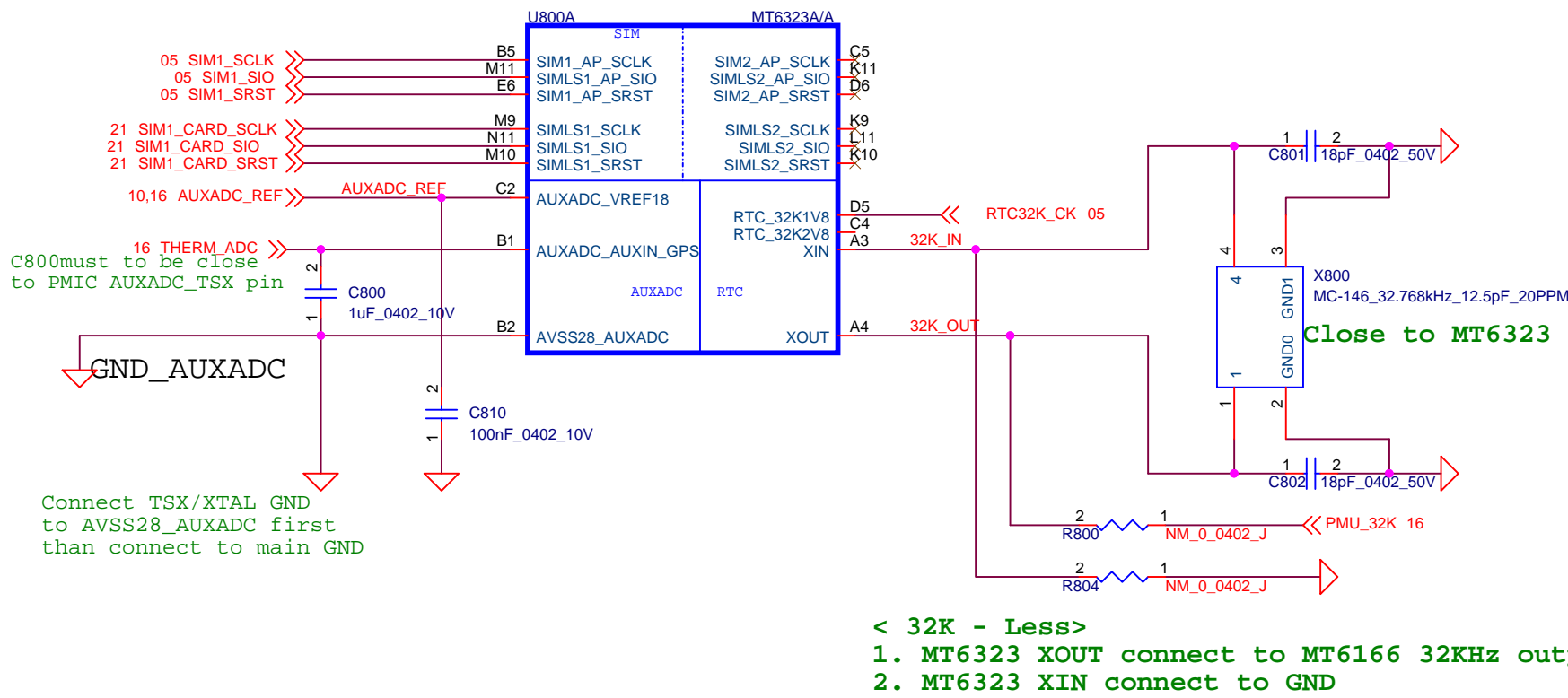


check MSDCL/2 IO power
 C706 close to pin E1 (150mil)
 C705 close to pin G26 (150mil)

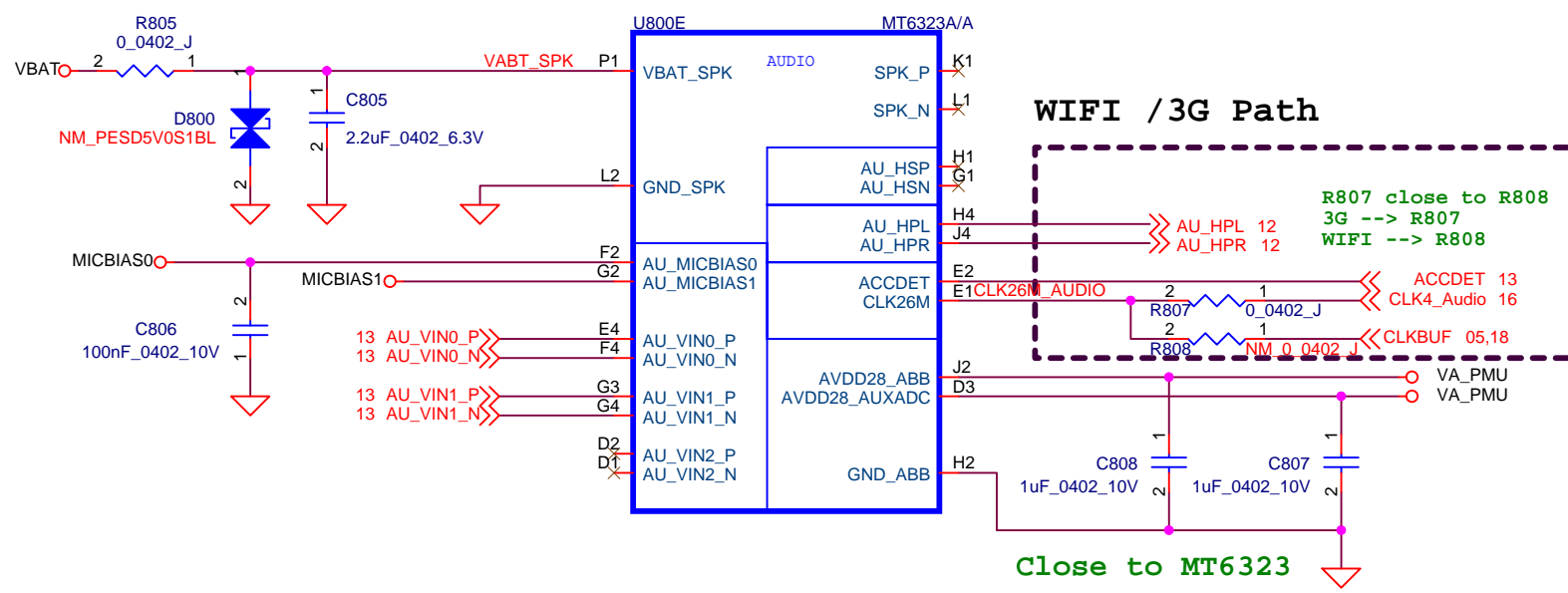
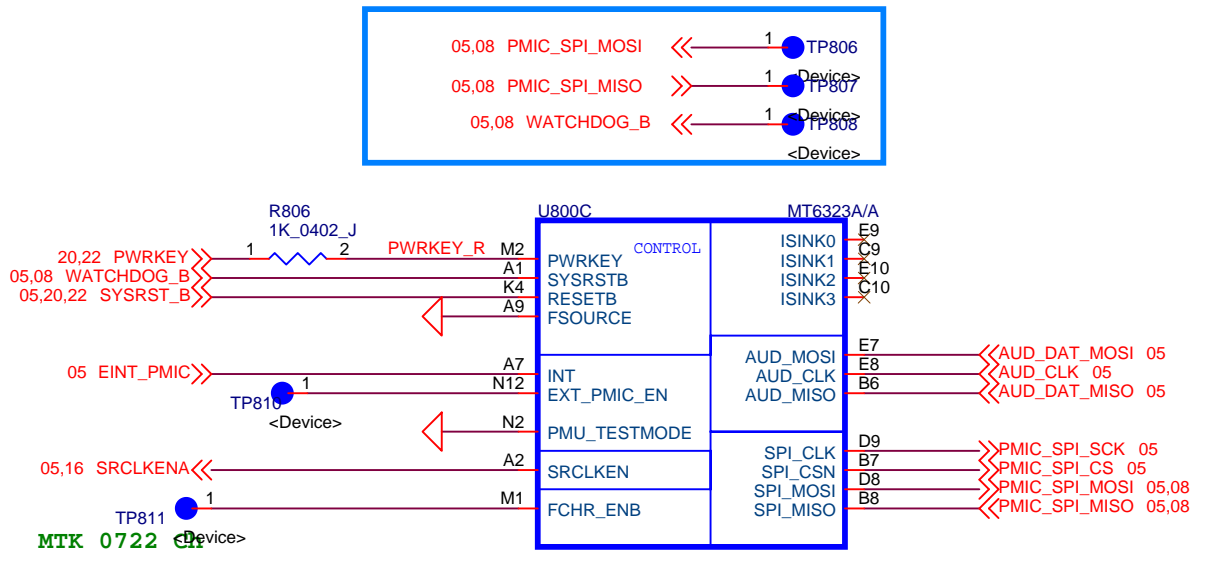
(1)VPROC_BB, GND pin of 1st cap group should be laid differential pair with ground shielding remote sense to PMIC
 (2)R707 & R708 must be close to 1st cap group.
 If you want to remove them, please make sure the VPROC_FB/GND_VPROC_FB must connect from 1st cap. group of VPROC

GND_VPROC_FB 09 To MT6323 GND_VPROC_FB pin
 VPROC_FB 09 To MT6323 VPROC_FB pin

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.



LVP9 (ROW) NM_R808
 LVP0 (WIFI) NM_R807
 LVPD (PRC) NM_R808



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

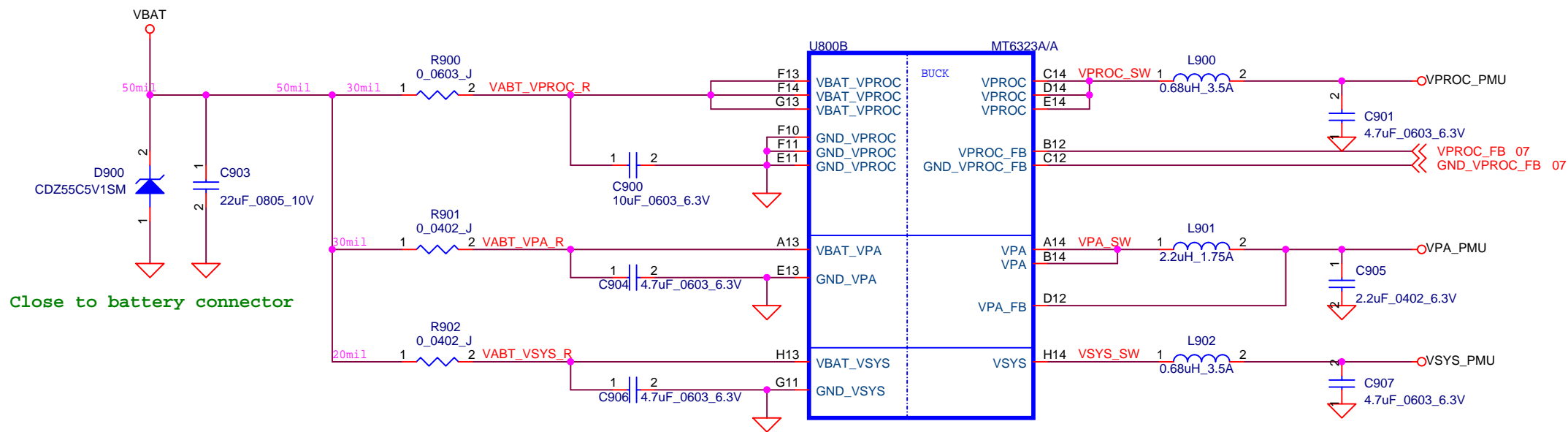
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Title: SCHEMATIC, M/B GA-400 (PMIC-1)

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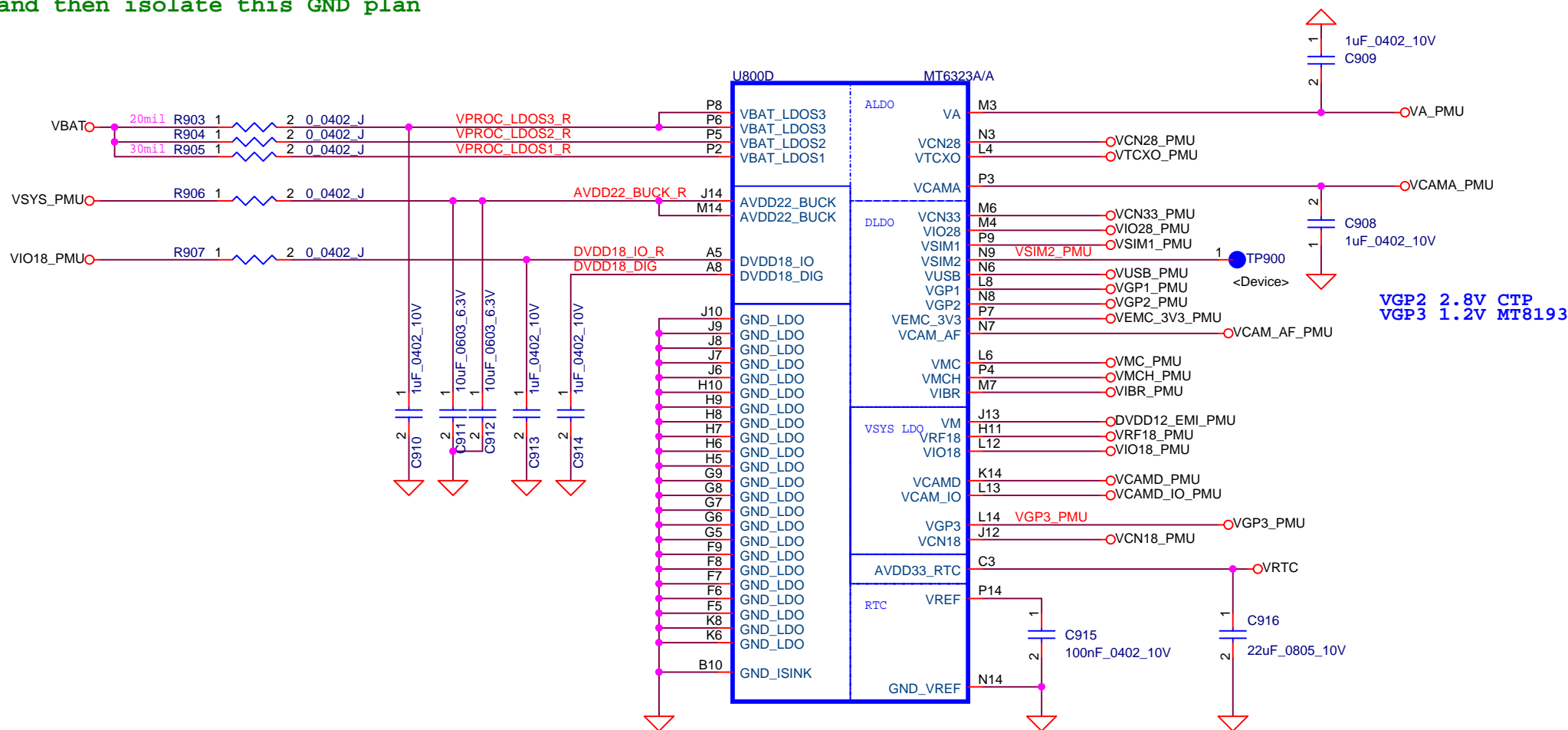


Please refer to MT6323 design notice for Buck GND layout rule

(1) MT6323 Buck GND (GND_VPROC/GND_VPA/GND_VSYS) is connected together first, and then single trace connect to GND layer

(2) Use single trace >40mil or GND plan to connect buck input bypass cap and MT6323 GND pins of buck in the same layer, and then isolate this GND plan

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



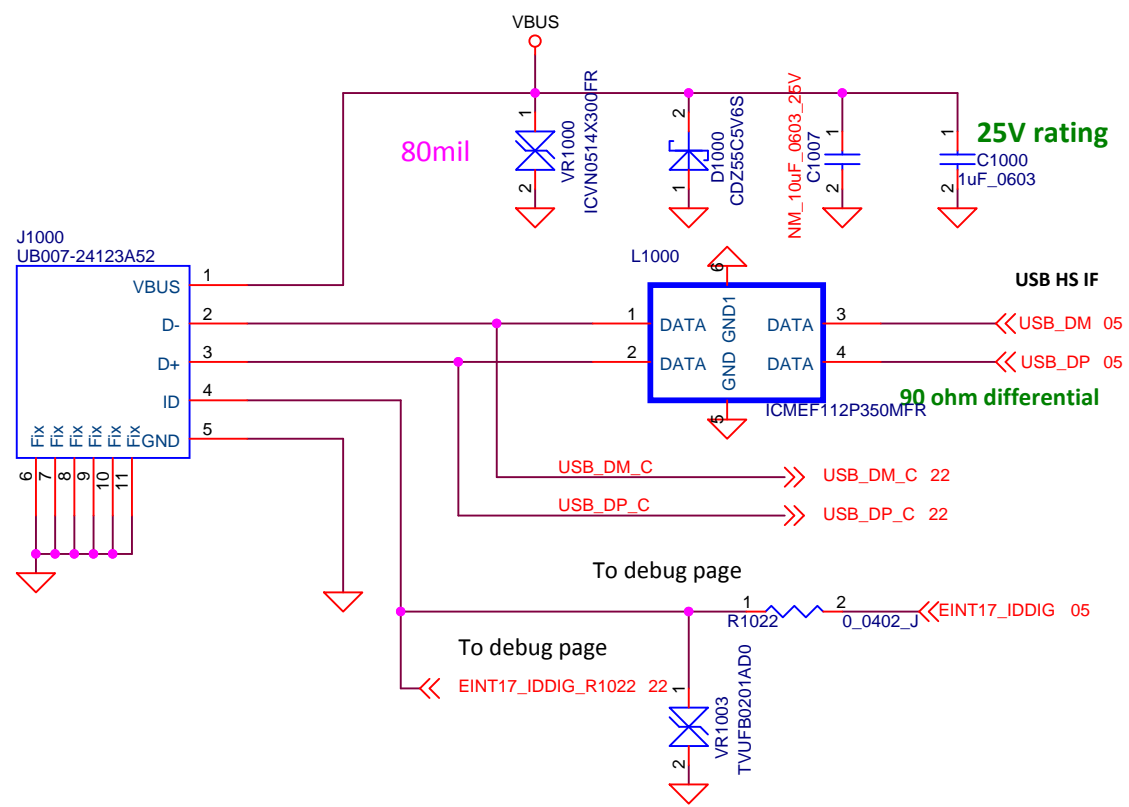
LDO	Output Voltage(V)	Output Current(mA)	Bypass cap	cap range	Notes
VA	2.8	150	1uF	-20%~+20%	Far-end bypass cap
VCN28	2.8	30	1uF	-20%~+20%	Far-end bypass cap
VTCXO	2.8	40	1uF	-20%~+20%	Far-end bypass cap
VCAMA	2.8	150	3.2uF	-20%~+20%	1uF near-end 2.2uF Far-end bypass cap
VCN33	3.3/3.4/3.5/3.6	240	4.7uF	-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%~+20%	Far-end bypass cap
VIO18	1.8	300	4.7uF	-20%~+20%	Far-end bypass cap
VIO28	2.8	200	2.2uF	-20%~+20%	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

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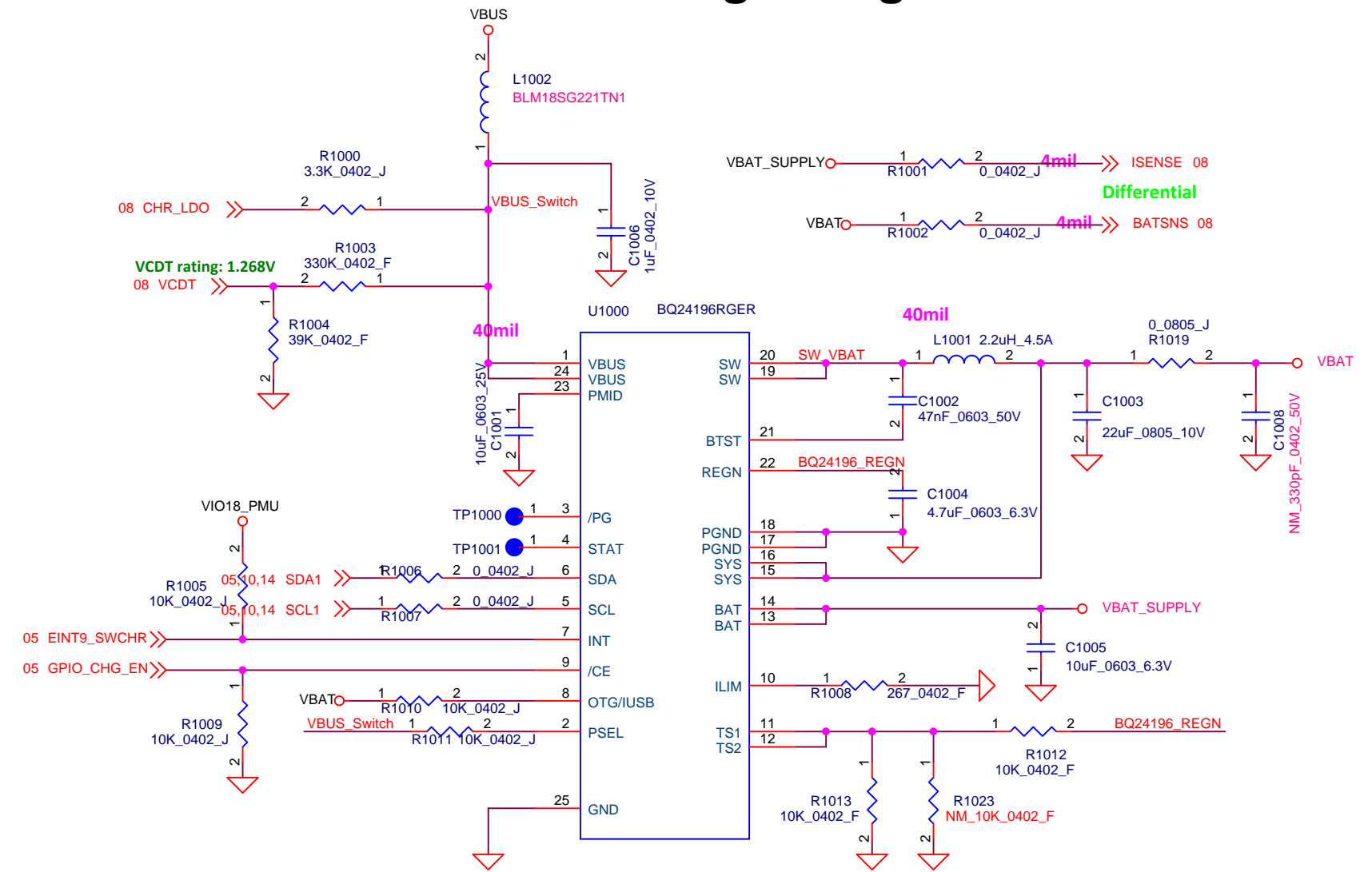
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USB Conn.

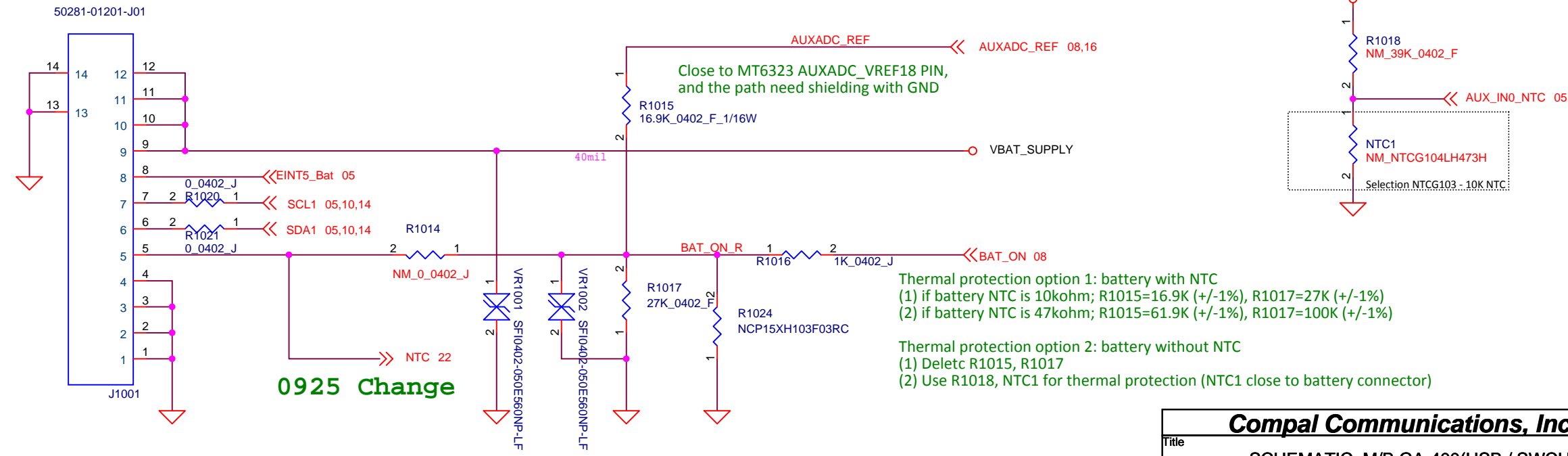


Switching Charger



BATTERY CONNECTOR

Pin No.	Symbol
1	GND -
2	GND -
3	GND -
4	GND -
5	T
6	Data
7	Clock
8	Interrupt
9	BATT+
10	BATT+
11	BATT+
12	BATT+



Thermal protection option 1: battery with NTC
 (1) if battery NTC is 10kohm; R1015=16.9K (+/-1%), R1017=27K (+/-1%)
 (2) if battery NTC is 47kohm; R1015=61.9K (+/-1%), R1017=100K (+/-1%)

Thermal protection option 2: battery without NTC
 (1) Deletc R1015, R1017
 (2) Use R1018, NTC1 for thermal protection (NTC1 close to battery connector)

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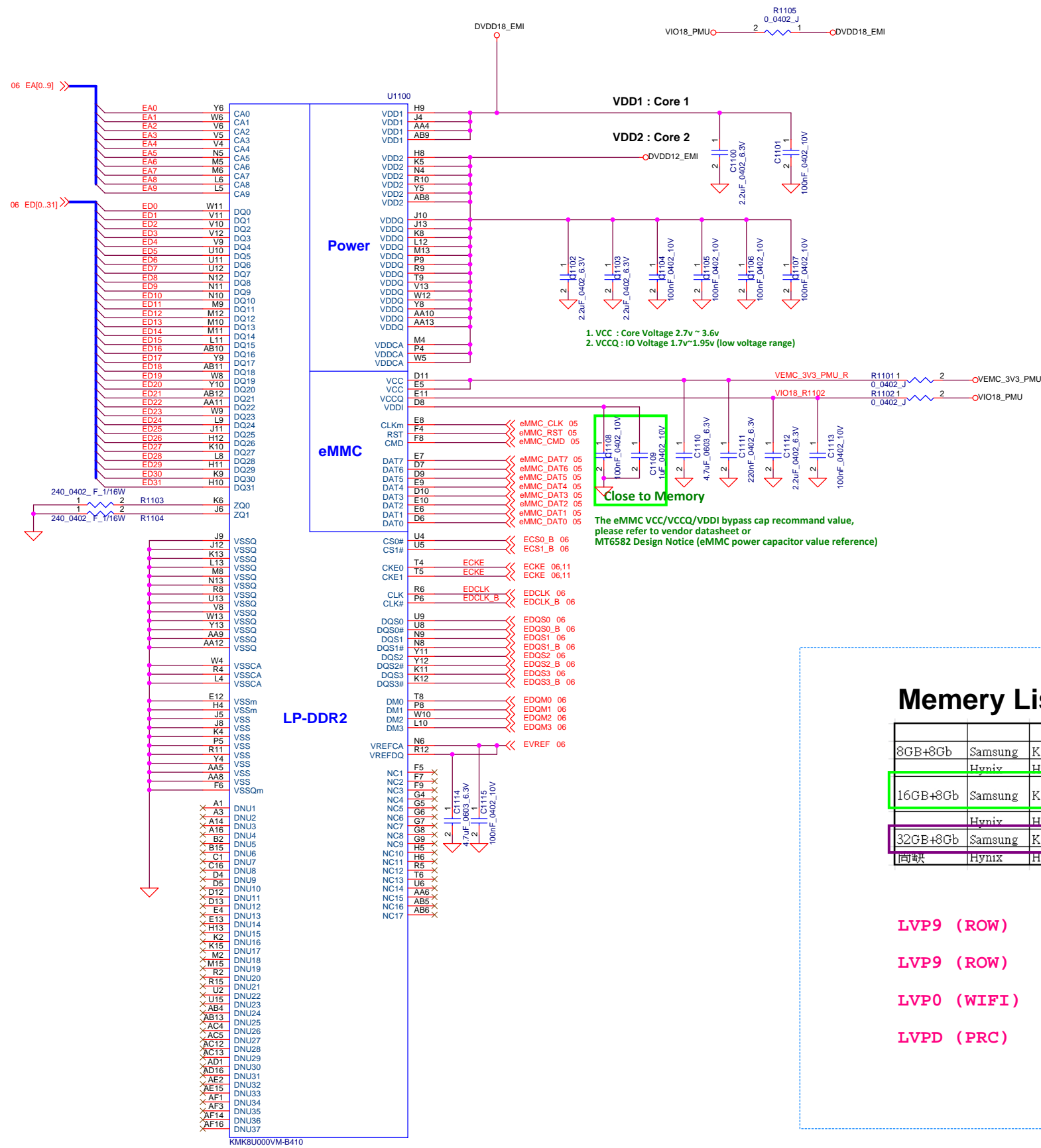
Title: SCHEMATIC, M/B GA-400(USB / SWCHR)

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eMMC+LPDDR2

162/186 Ball, 0.5mm pitch

VDD1=1.8V
VDD2=1.20V
VDDCA=1.2V
VDDQ=1.20V



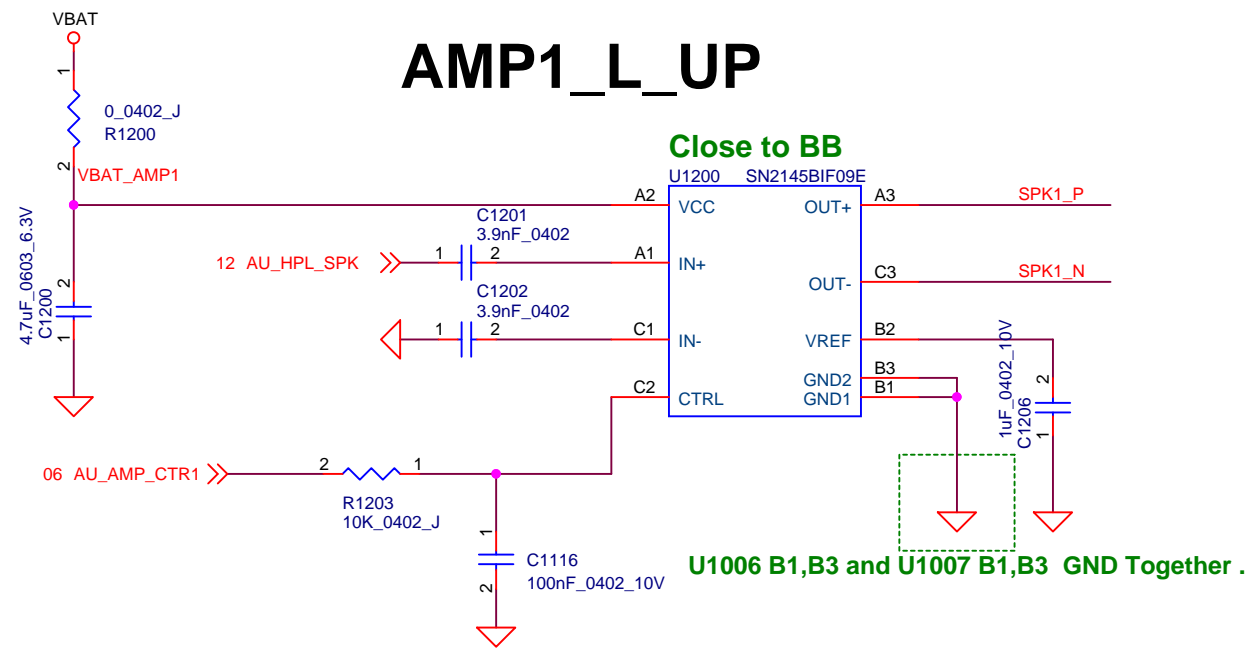
Memory List

Capacity	Manufacturer	Part Number	p/n	Notes
8GB+8Gb	Samsung	KMK7U000VM-B309	0200000353W	0828 change
	Hynix	H9TP65A81DACP-R-KGM	0200000343C	
16GB+8Gb	Samsung	KMK8U000VM-B410	0200000350C	0200000376C
	Hynix	H9TP18A81DACP-R-KGM	0200000363W	0200000376W
32GB+8Gb	Samsung	KMK2U000VM-B604	0200000352W	
尚缺	Hynix	H9TP26A81DACP-R-KGM	X	

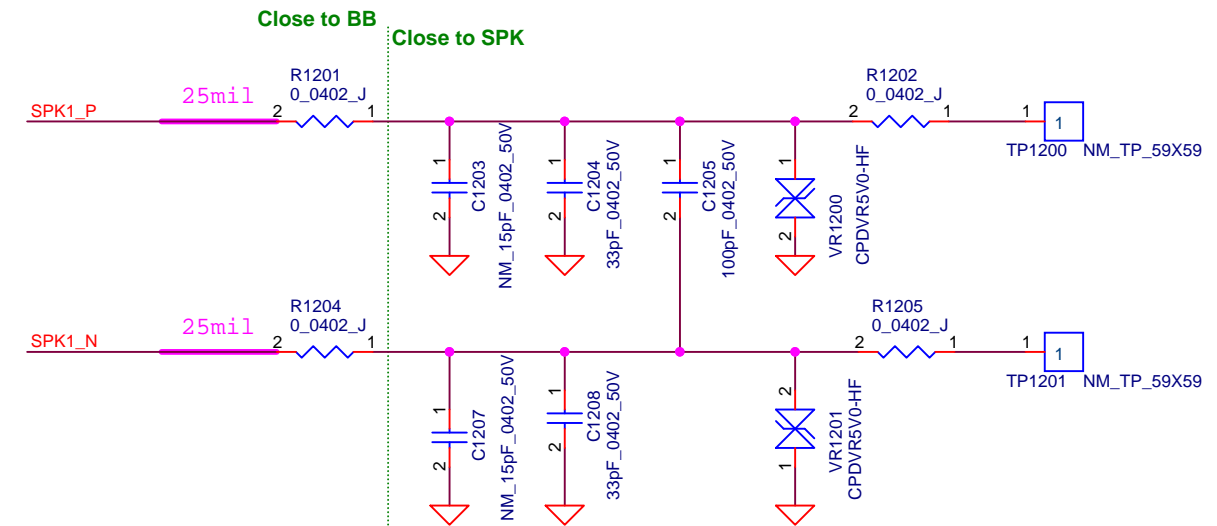
LVP9/LVP0/LVPD
LVP9

- LVP9 (ROW) 16GB+8Gb / 631B160001N
- LVP9 (ROW) 32GB+8Gb / 631B160002N
- LVP0 (WIFI) 16GB+8Gb / 631B160011N
- LVPD (PRC) 16GB+8Gb / 631B160021N

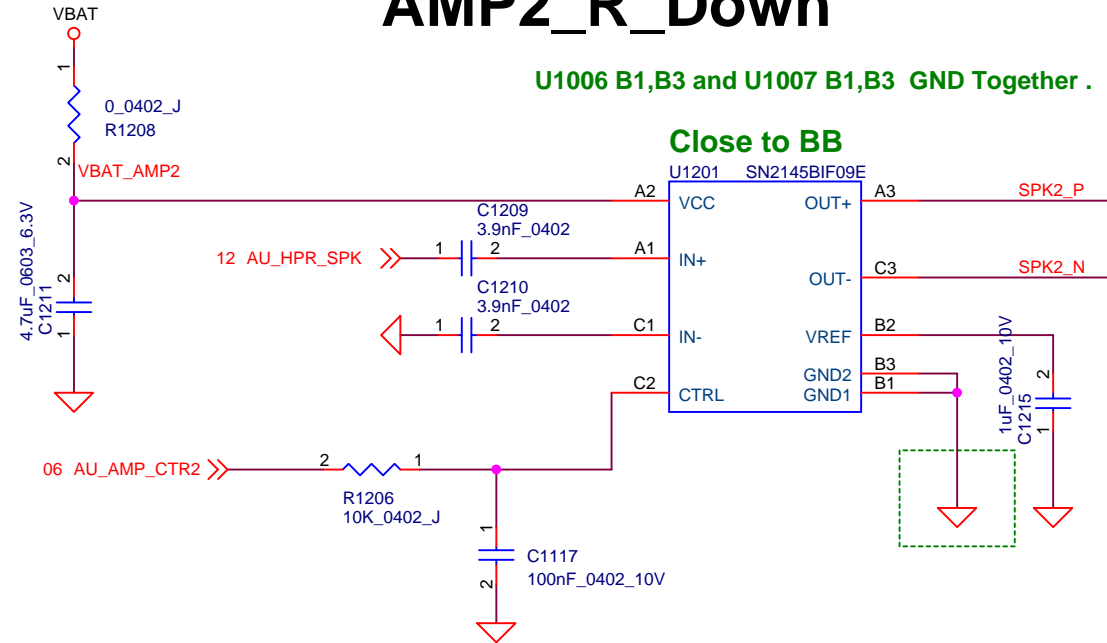
AMP1_L_UP



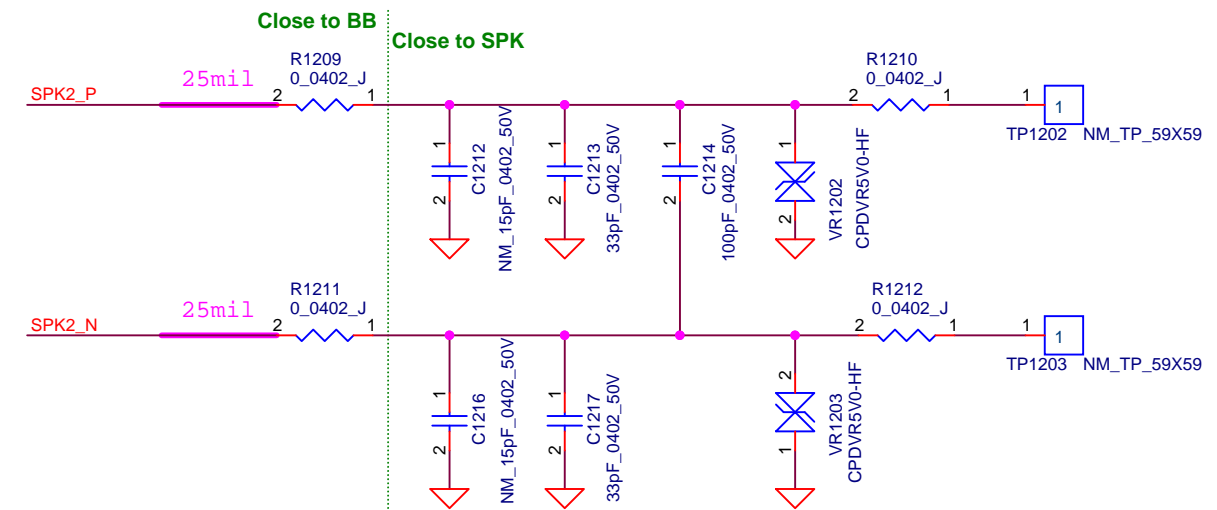
Speaker1_L



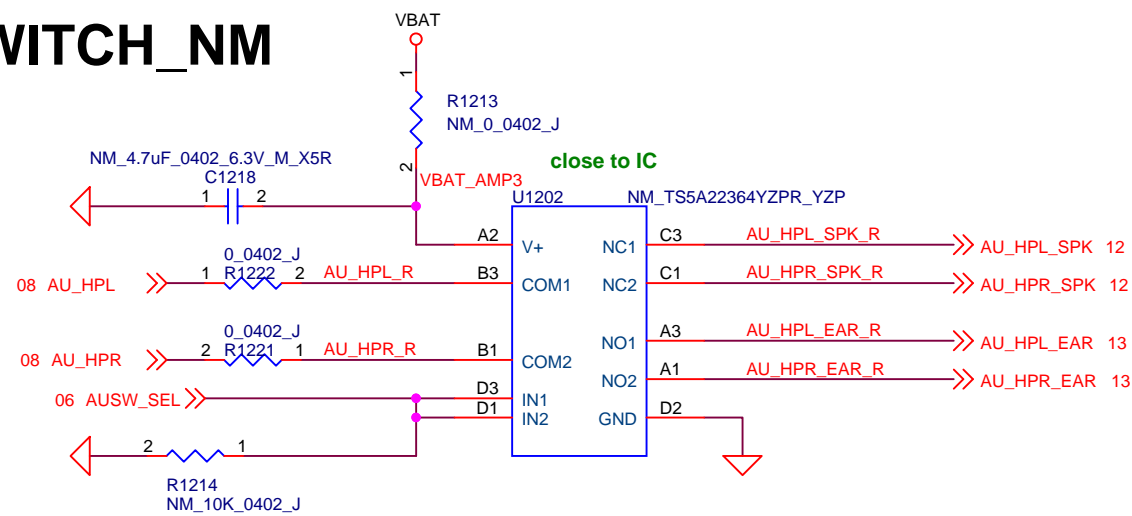
AMP2_R_Down



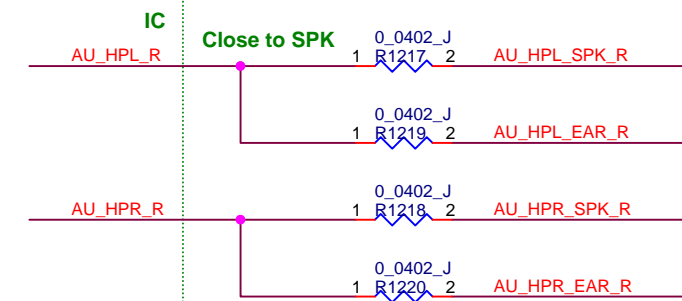
Speaker2_R



SWITCH_NM



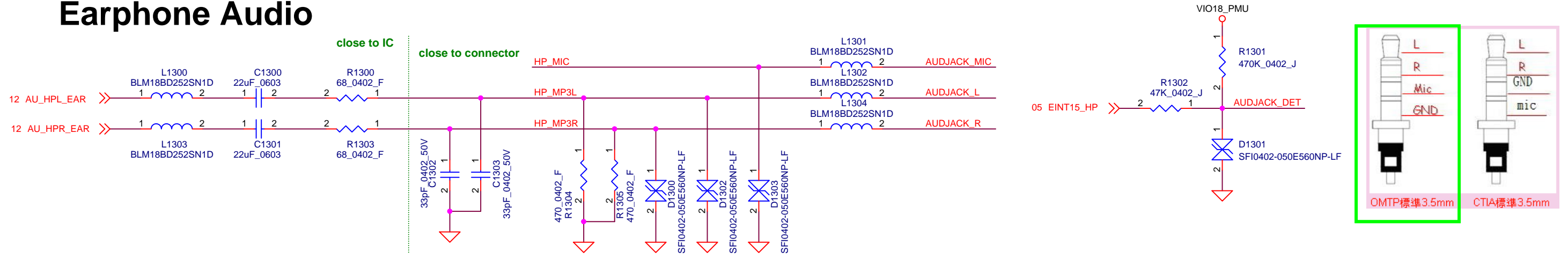
EAR 2 EAR & SPK



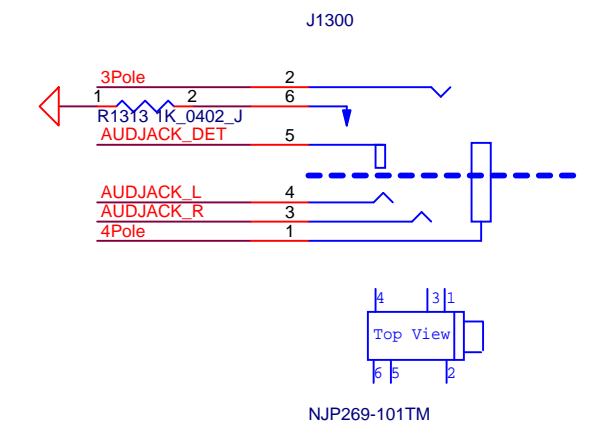
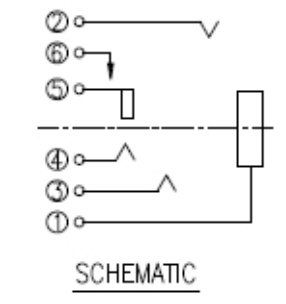
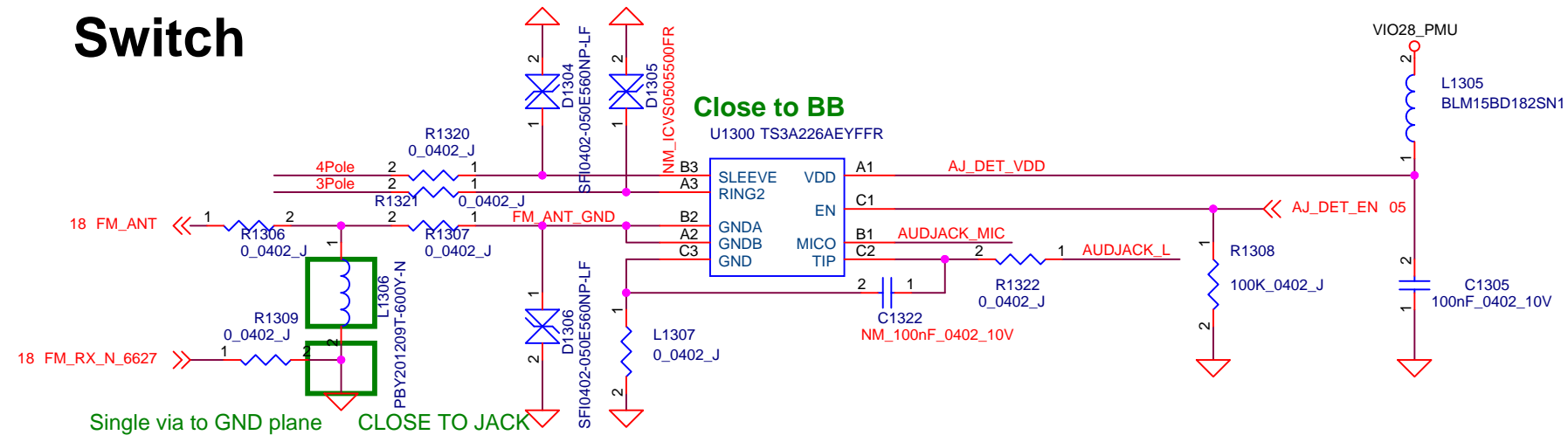
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Title SCHEMATIC, M/B GA-400 (Audio-1)		
Size A3	Document Number 601B16	Rev CA
Date: Monday, January 06, 2014	Sheet 12	of 23

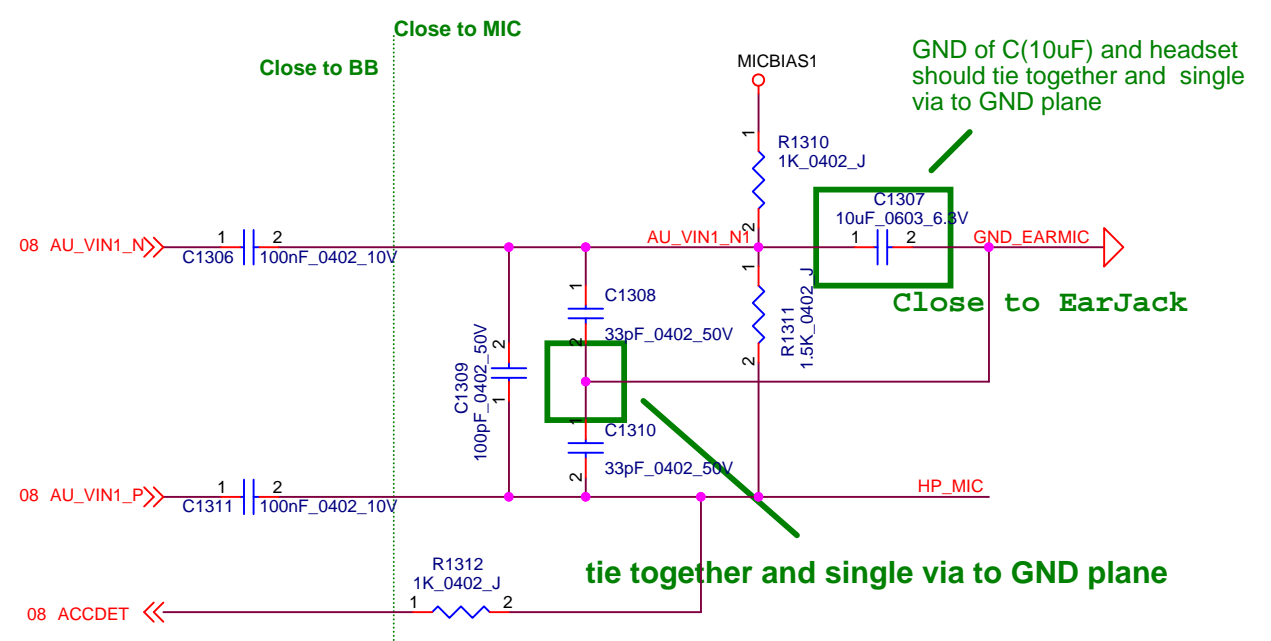
Earphone Audio



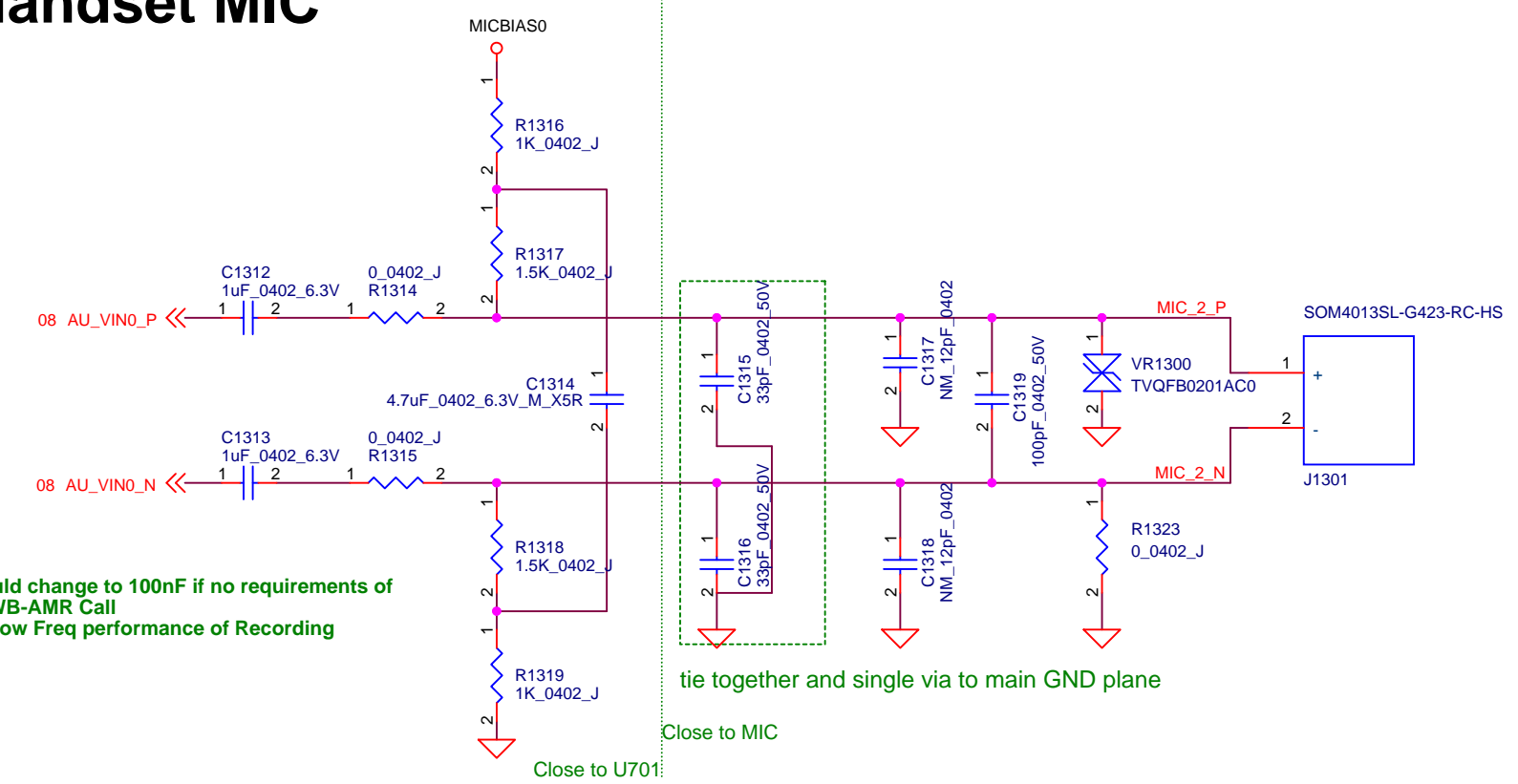
Switch



Earphone MIC



Handset MIC

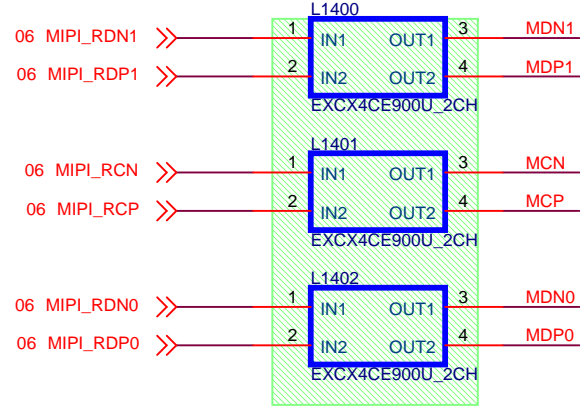


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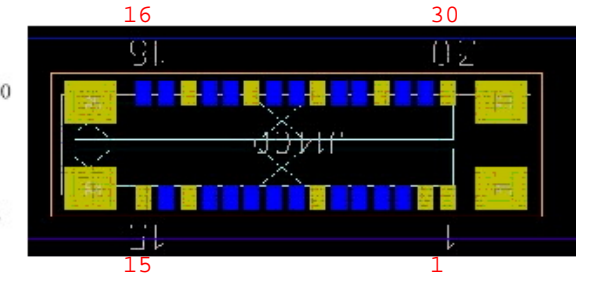
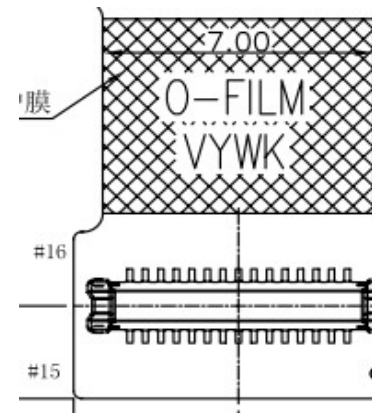
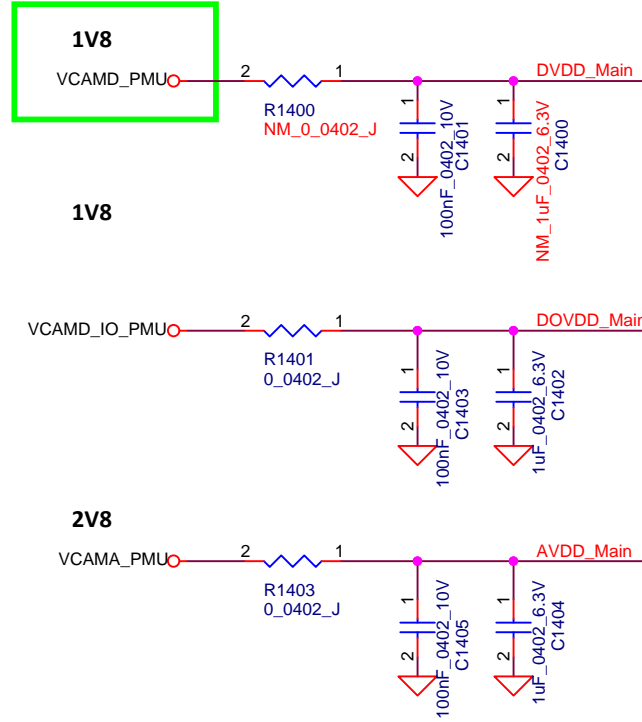
Compal Communications, Inc.			
Title SCHEMATIC, M/B GA-400 (Audio-2)			
Size A3	Document Number 601B16	Rev CA	
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Main Camera

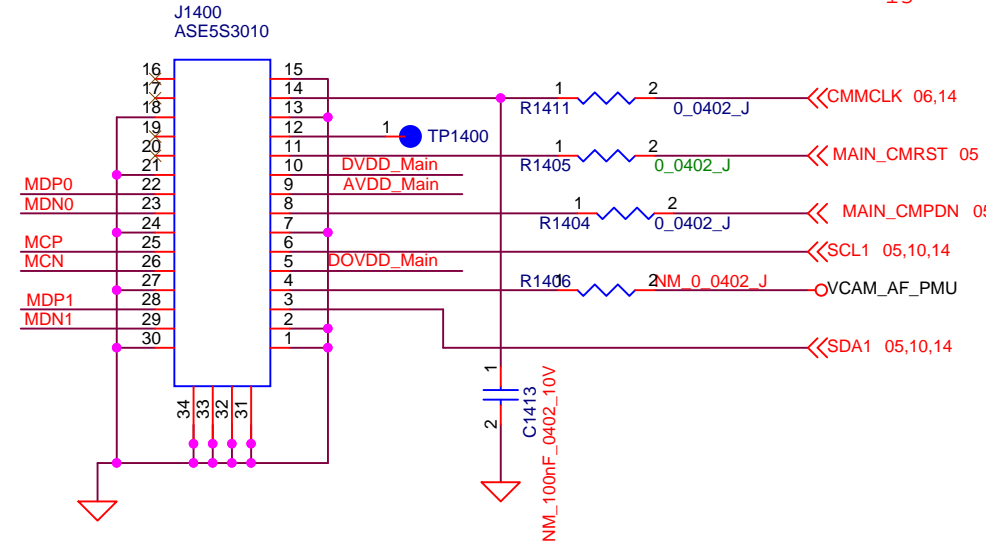
OV5648



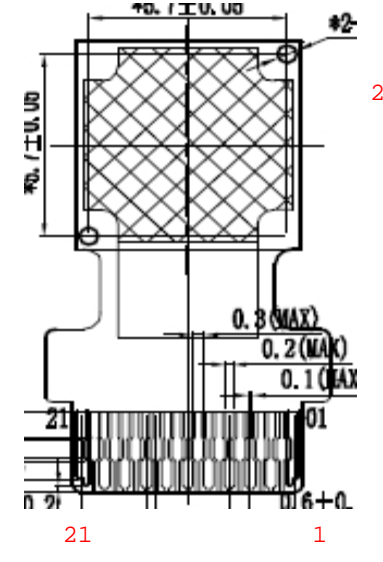
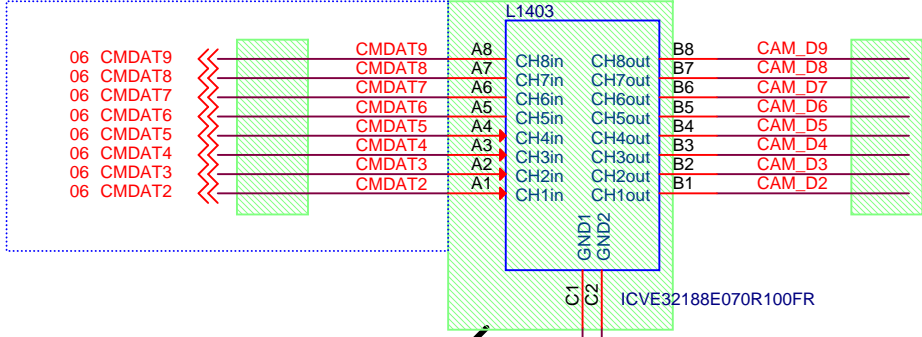
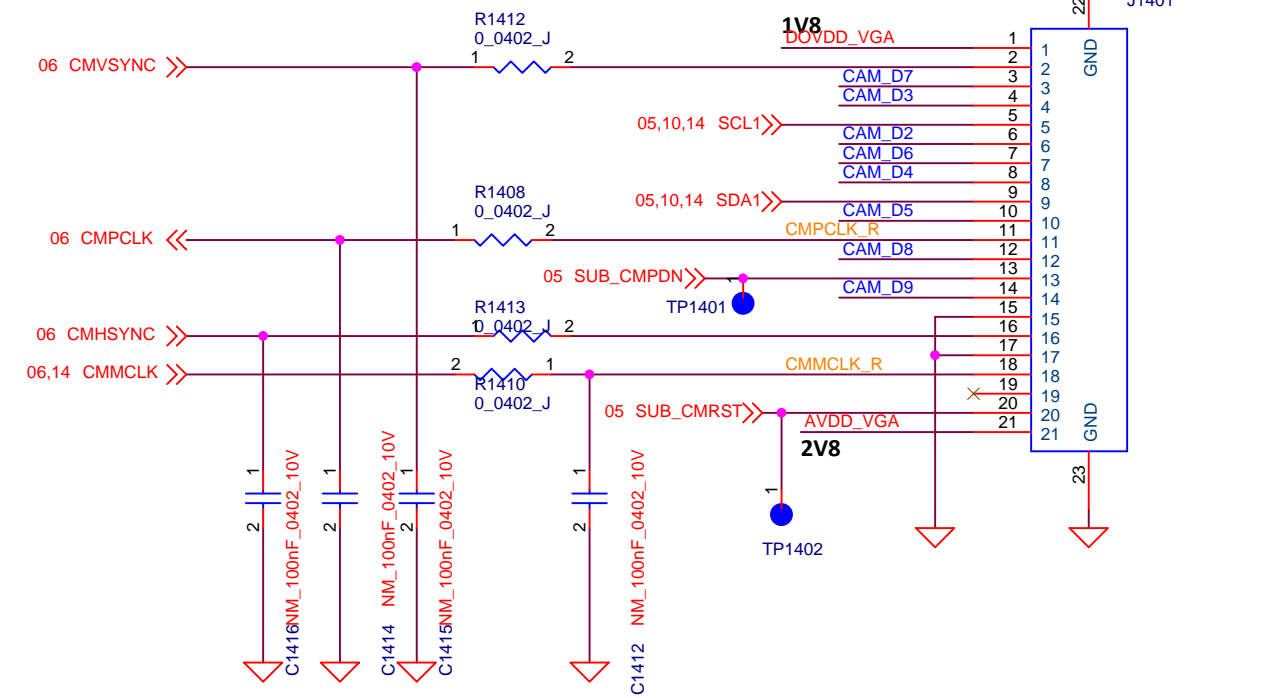
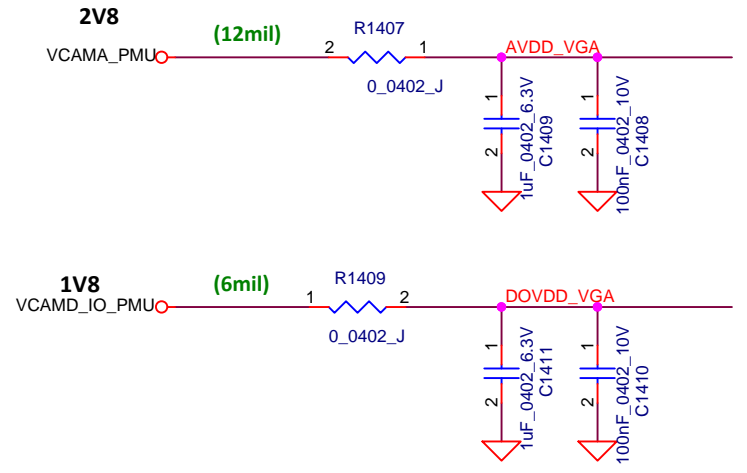
only 150mA from VCAMD
please check your CAM module DVDD current.
external LDO is required for DVDD current > 150mA



PIN	Symbol
1	DGND
2	DGND
3	SDA
4	NC
5	DOVDD
6	SCL
7	AGND
8	PWDN
9	AVDD
10	DVDD
11	VPP
12	FLASH
13	DGND
14	XCLK
15	DGND
16	MDP3(NC)
17	MDN3(NC)
18	DGND
19	MDP2(NC)
20	MDN2(NC)
21	DGND
22	MDP0
23	MDN0
24	DGND
25	MCP
26	MCN
27	DGND
28	MDP1
29	MDN1
30	DGND



Sub Camera 7651LV7301W DC-OVHB420A DARING



NO.	SYMBOL
1	DOVDD 1.8V
2	VSYNC
3	D5
4	D1
5	SIO C
6	D0
7	D4
8	D2
9	SIO D
10	D3
11	PCLK
12	D6
13	PWDN
14	D7
15	DGND
16	HSYNC
17	AGND
18	MCLK
19	NC
20	RESET
21	AVDD 2.8V

L1101 under layer must be keep GND plane

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Compal Communications, Inc.

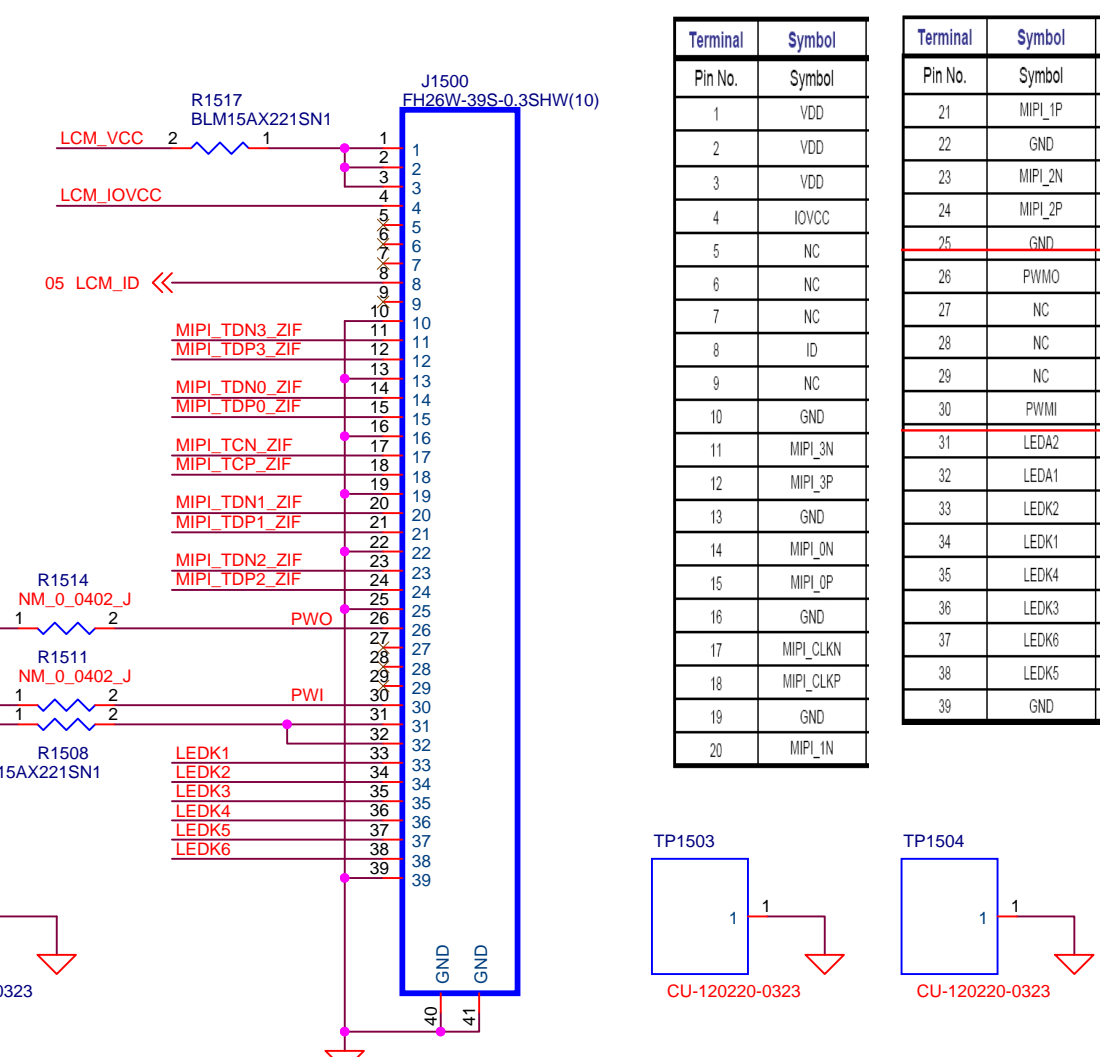
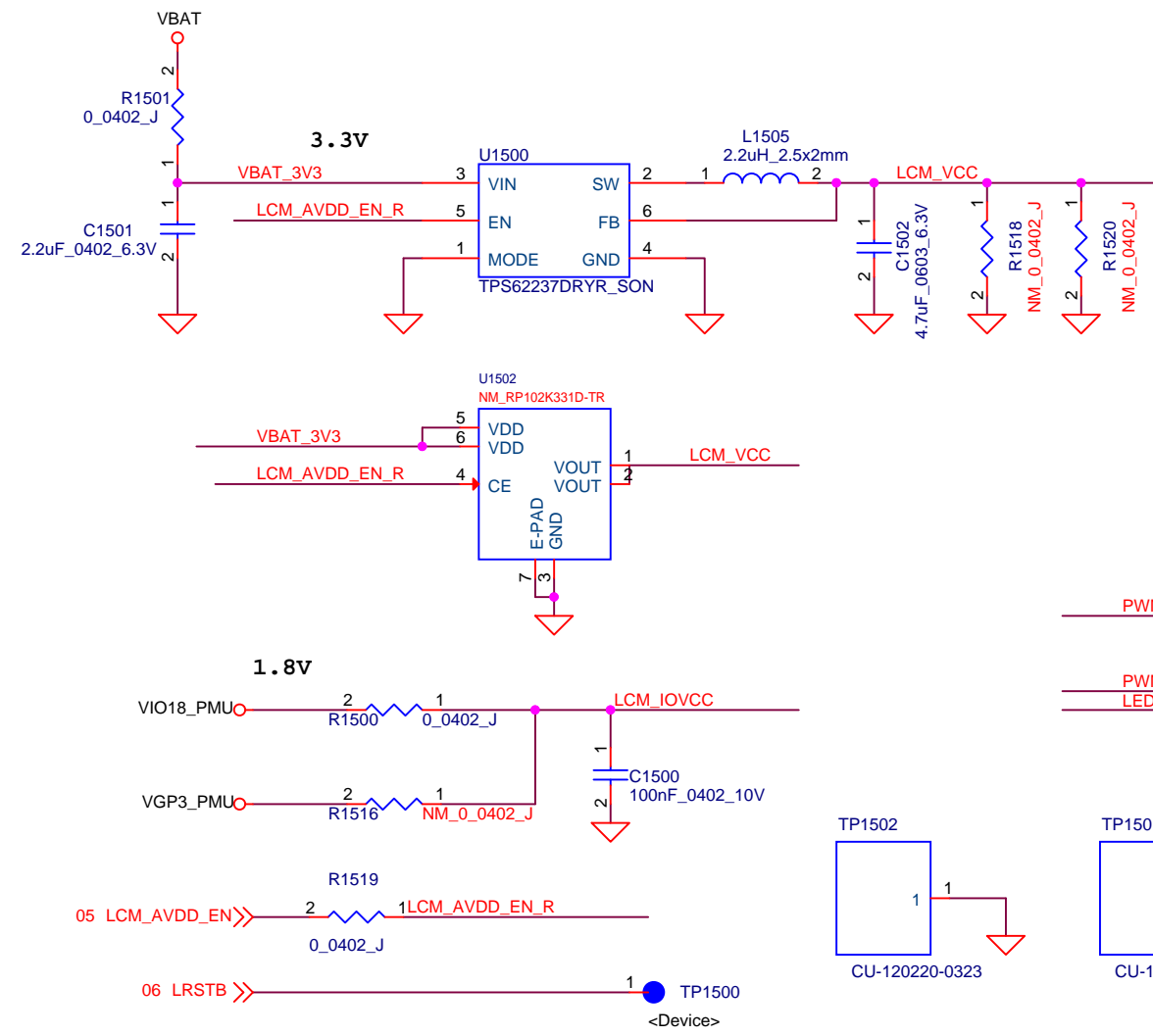
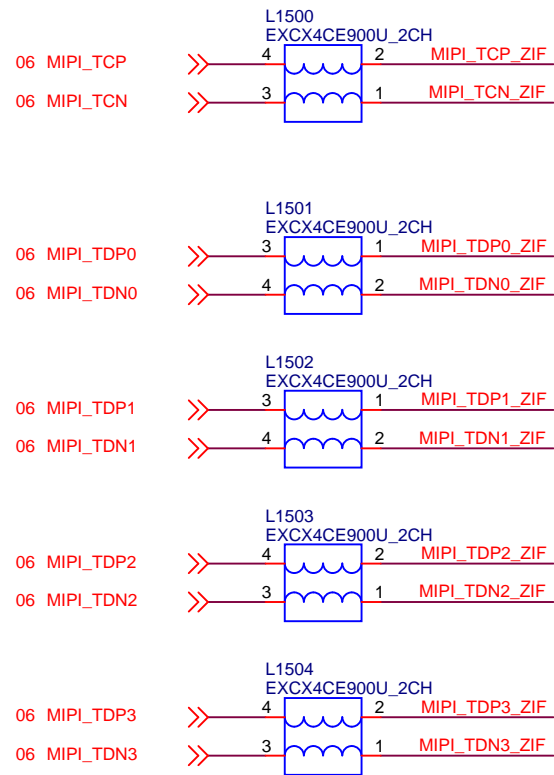
Title: SCHEMATIC, M/B GA-400(Camera/Flash LED)

Size: A3 Document Number: 601B16 Rev: CA

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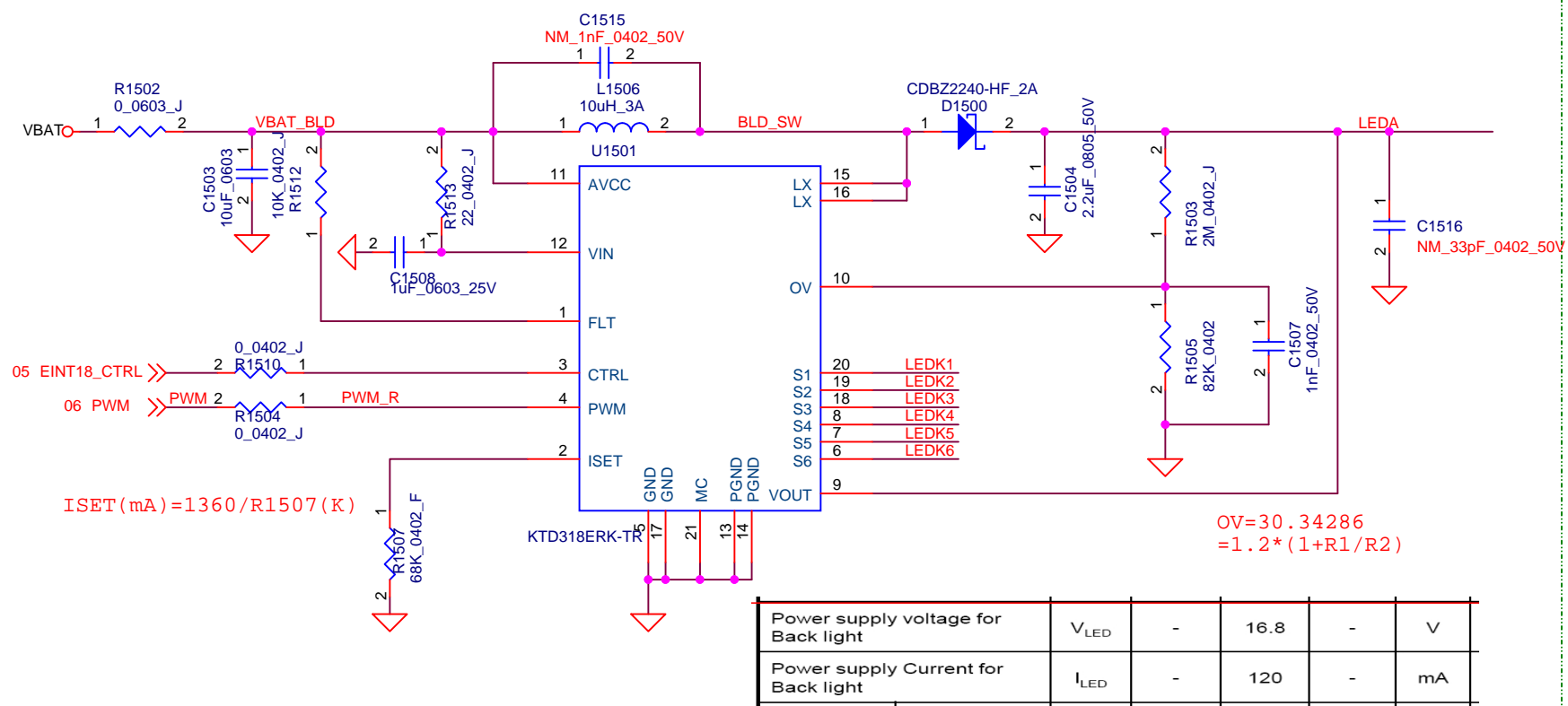
Main LCM

BP101WX1-207 BOE



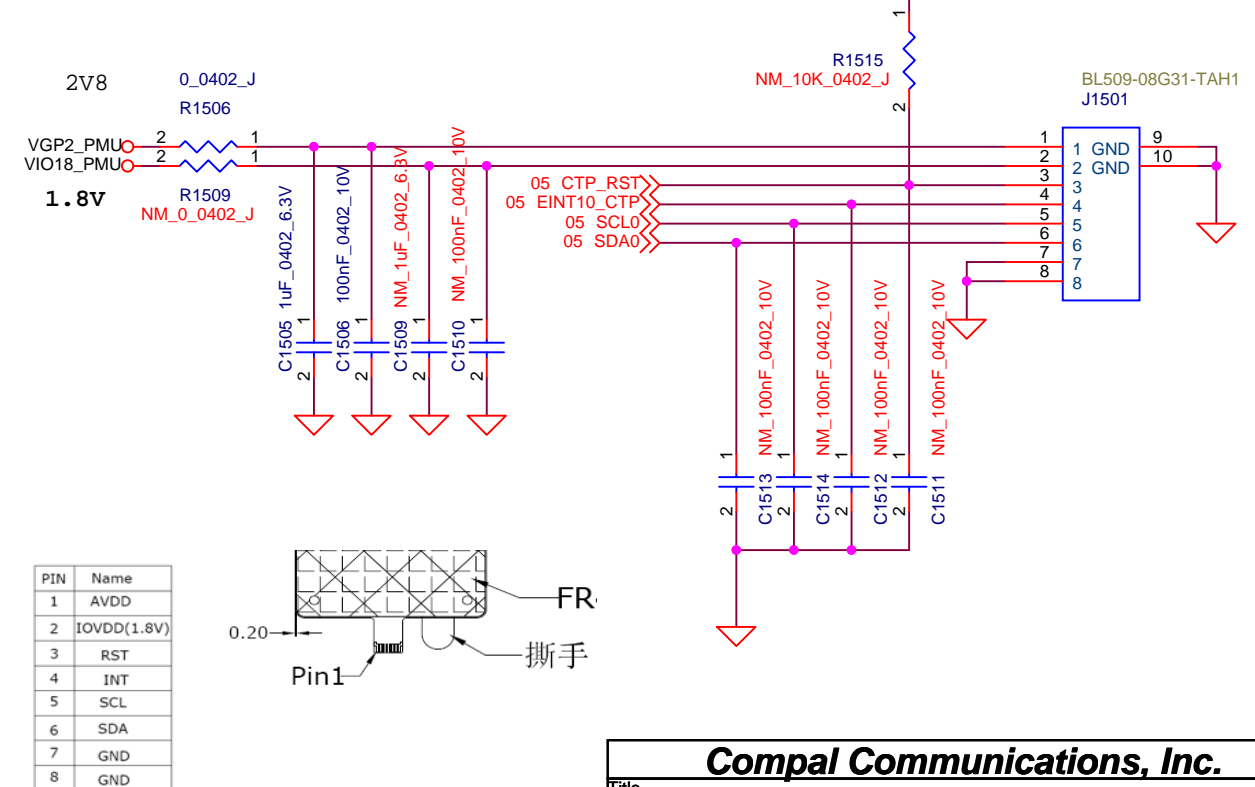
Terminal	Symbol	Terminal	Symbol
1	VDD	21	MIPI_1P
2	VDD	22	GND
3	VDD	23	MIPI_2N
4	IOVCC	24	MIPI_2P
5	NC	25	GND
6	NC	26	PWMO
7	NC	27	NC
8	NC	28	NC
9	NC	29	NC
10	GND	30	PWMI
11	MIPI_3N	31	LEDA2
12	MIPI_3P	32	LEDA1
13	GND	33	LEDK2
14	MIPI_ON	34	LEDK1
15	MIPI_OP	35	LEDK4
16	GND	36	LEDK3
17	MIPI_CLKN	37	LEDK6
18	MIPI_CLKP	38	LEDK5
19	GND	39	GND
20	MIPI_1N		

Backlight LED Driver



Power supply voltage for Back light	V_{LED}	-	16.8	-	V
Power supply Current for Back light	I_{LED}	-	120	-	mA

CTP MCF-101-1233 O-FILM



PIN	Name
1	AVDD
2	IOVDD(1.8V)
3	RST
4	INT
5	SCL
6	SDA
7	GND
8	GND

Compal Communications, Inc.

Title: SCHEMATIC, M/B GA-400 (LCM)

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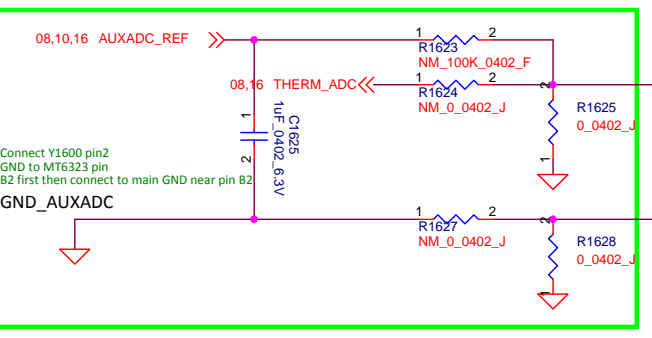
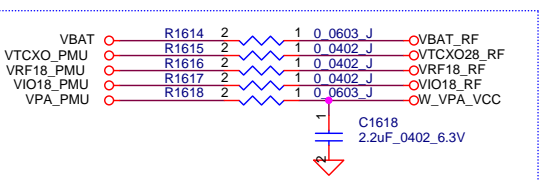
- 06 BPL_0 >> 5SM_VCTRL_A
- 06 BPL_1 >> ASM_VCTRL_B
- 06 BPL_2 >> ASM_VCTRL_C
- 06 BPL_3 >> WG_GGE_PA_ENABLE
- 06 VAPC1 >> WG_GGE_PA_VRAMP
- 08 PMU_32K >> DCXO_32K
- 06 BSI-A_EN >> BSI-A_EN
- 06 BSI-A_CK >> BSI-A_CK
- 06 BSI-A_DAT0 >> BSI-A_DAT0
- 06 BSI-A_DAT1 >> BSI-A_DAT1
- 06 BSI-A_DAT2 >> BSI-A_DAT2
- 06 TXBPI1 >> DCOC_Flag
- 05 CLK1_BB >> CLK1_BB
- 18 SYSCLK_WCN >> CLK2_WCN
- 08 CLK4_Audio >> CLK4_Audio
- 06 RX_BBIP >> RX_BBIP
- 06 RX_BBIN >> RX_BBIN
- 06 RX_BBQP >> RX_BBQP
- 06 RX_BBQN >> RX_BBQN
- 06 TX_BBIP >> TX_BBIP
- 06 TX_BBIN >> TX_BBIN
- 06 TX_BBQP >> TX_BBQP
- 06 TX_BBQN >> TX_BBQN
- 08,16 AUXADC_REF >> AUXADC_REF_RF
- 08,16 THERM_ADC >> THERM_SENSE
- 16,17 TRXB1 >> TRXB1
- 16,17 TRXB2 >> TRXB2
- 16,17 TRXB5 >> TRXB5
- 16,17 TRXB8 >> TRXB8
- 17 W_PA_B1_IN >> W_PA_B1_IN
- 17 W_PA_B2_IN >> W_PA_B2_IN
- 17 W_PA_B5_B8_IN >> W_PA_B5_B8_IN
- 16,17 B5_CPL_OUT_3G_ALL >> B5_CPL_OUT_3G_ALL
- 17 3GB1_RXP >> 3GB1_RXP
- 17 3GB1_RXN >> 3GB1_RXN
- 17 3GB2_RXP >> 3GB2_RXP
- 17 3GB2_RXN >> 3GB2_RXN
- 17 3GB5_RXP >> 3GB5_RXP
- 17 3GB5_RXN >> 3GB5_RXN
- 17 3GB8_RXP >> 3GB8_RXP
- 17 3GB8_RXN >> 3GB8_RXN
- 06 VBIAS >> TP1600

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 (2G HB)	L	H	L	L
TRX2 (2G LB)	L	H	H	L
TRX3 (W_B1)	L	H	L	H
TRX4 (W_B5)	L	H	H	H
TRX5 (W_B2)	L	L	H	L
TRX6 (W_B8)	L	L	L	H
TDSCDMA	H	H	H	H

SKY13373 SP3T control logic table

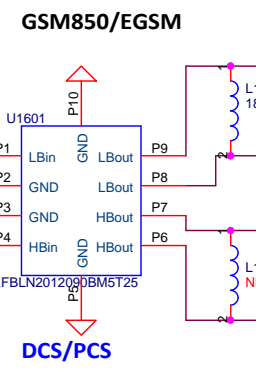
	SP3T_A(V1)	SP3T_B(V2)
LB_GMSK_RX_J3	H	H
HB_GMSK_B34/B39_RX_J1	L	H
TD_B40_RX_J2	H	L



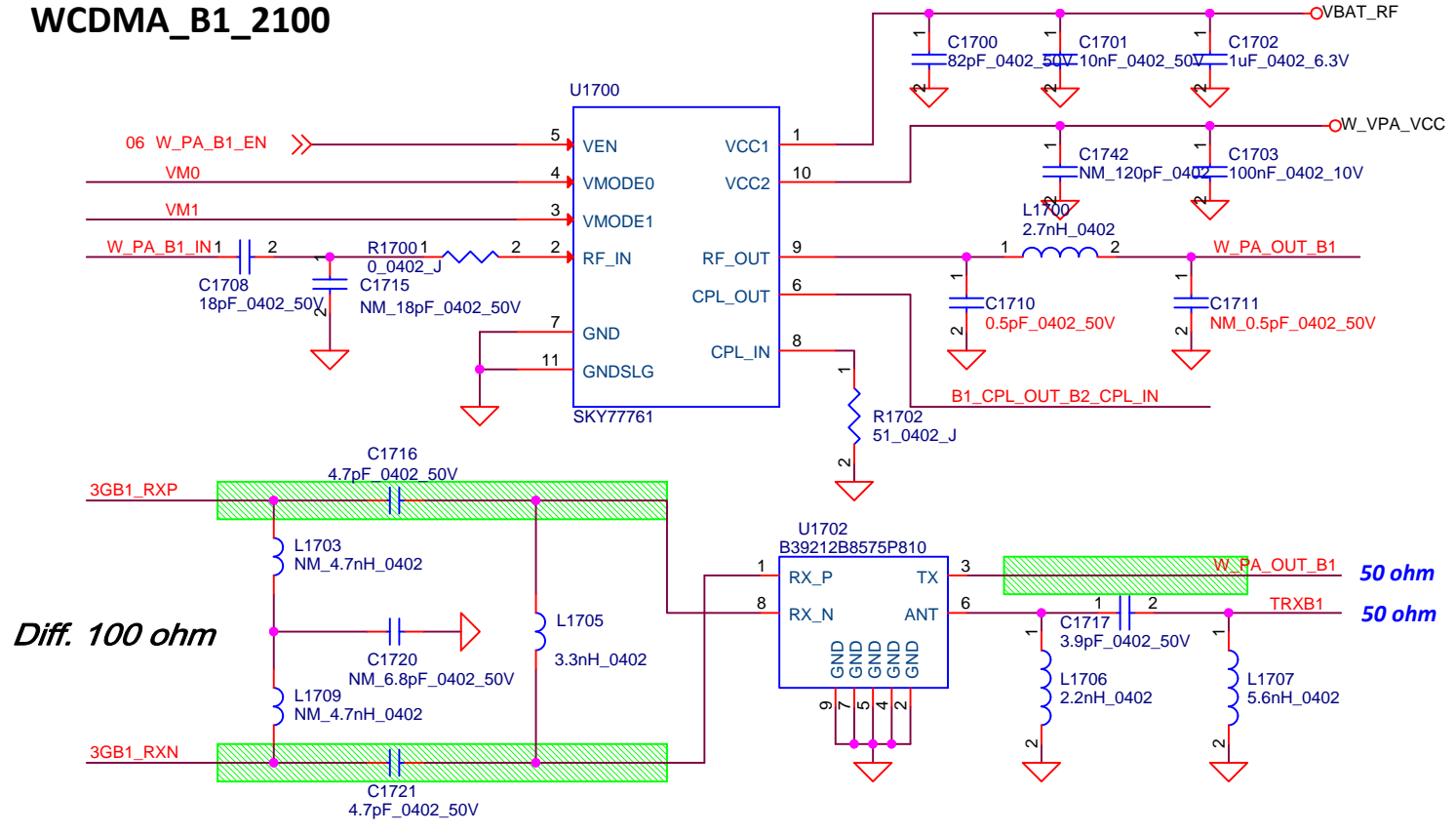
MTK 0722 Ch

Component	Y1600	R1625	R1628	R1623	R1627	C1625
Xtal Mode	Xtal	0ohm	NC	NC	NC	1uF
GPS co-clock	Xtal + Thermistor	NC	100K+/-1%	0ohm	0ohm	1uF

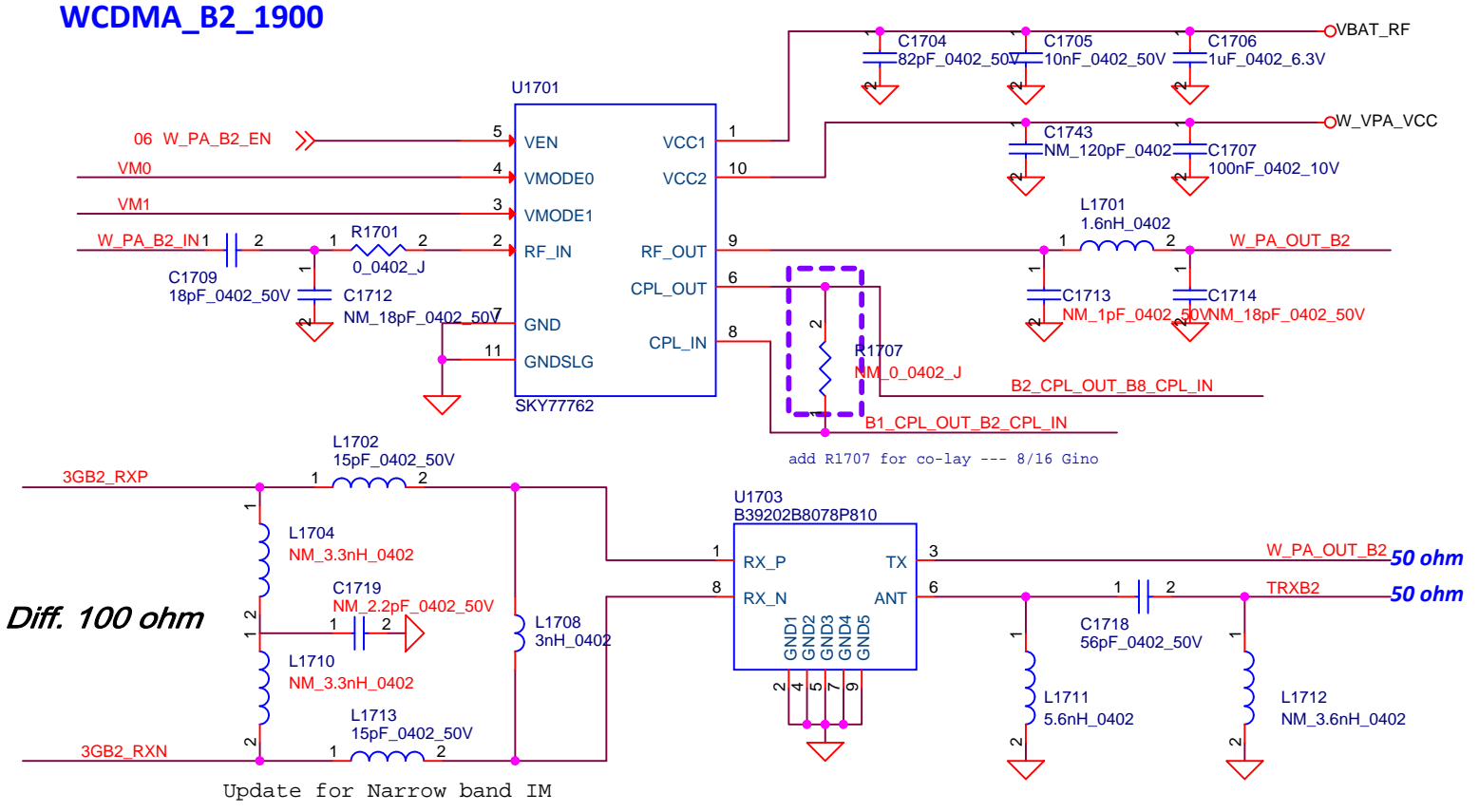
MODE	Logic	DCXO_32K_EN	XMODE	VXODIG
VTCXO		0(GND)	0(GND)	1(VIO18)
DCXO + 32K XO		0(GND)	1(VIO18)	1(VIO18)
DCXO + 32K-Less		1(VTCXO28)	1(VTCXO28)	1(VTCXO28)



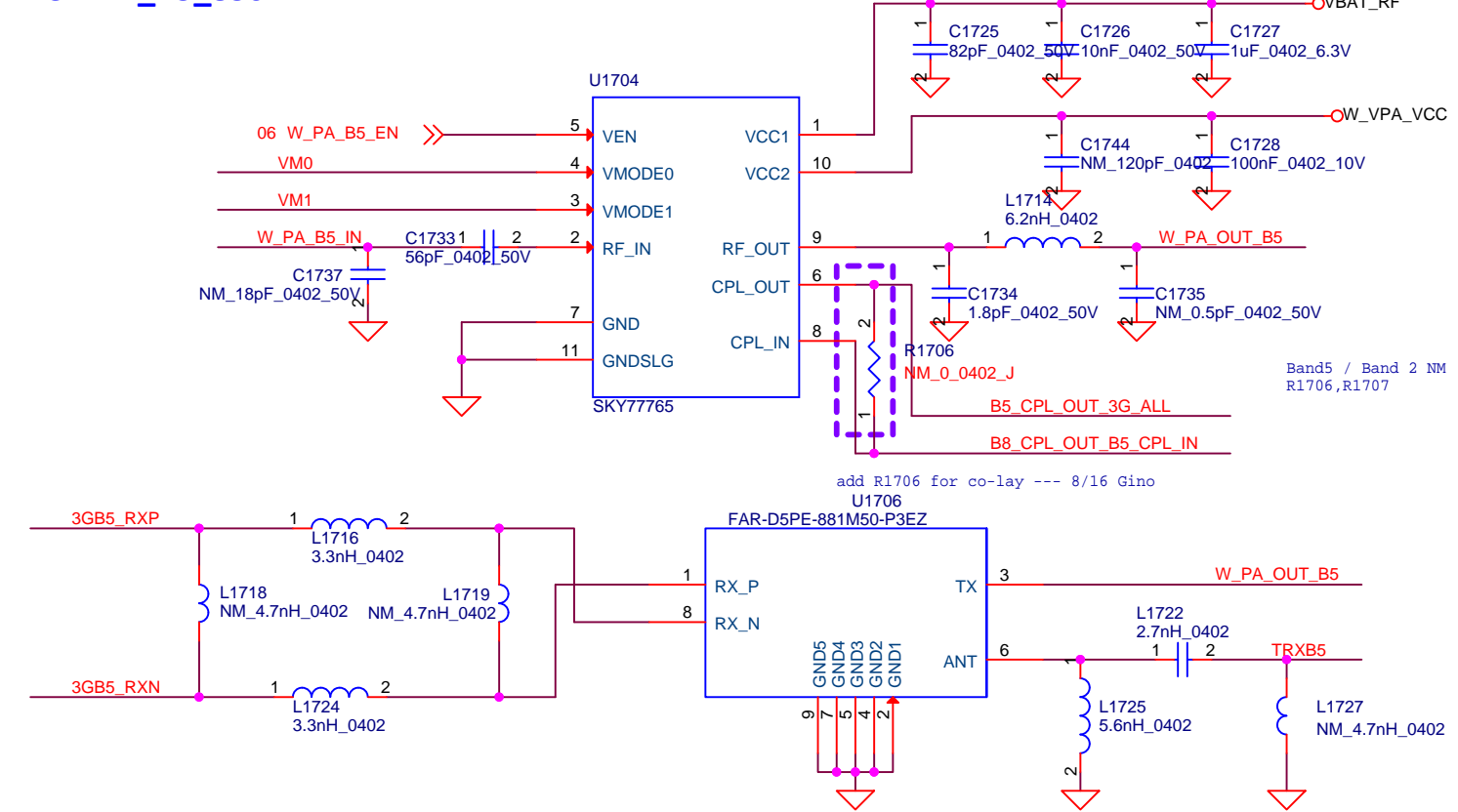
WCDMA_B1_2100



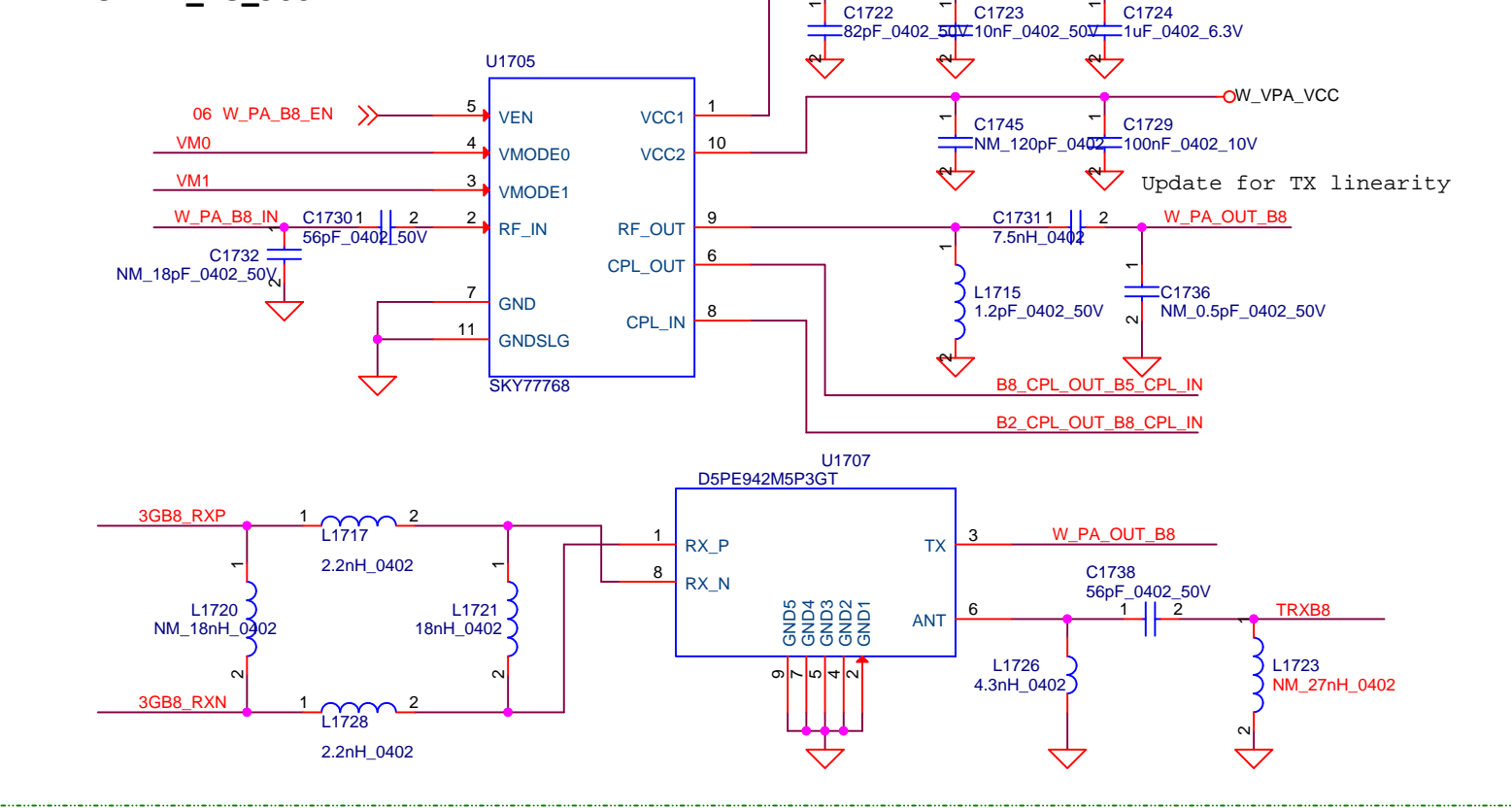
WCDMA_B2_1900



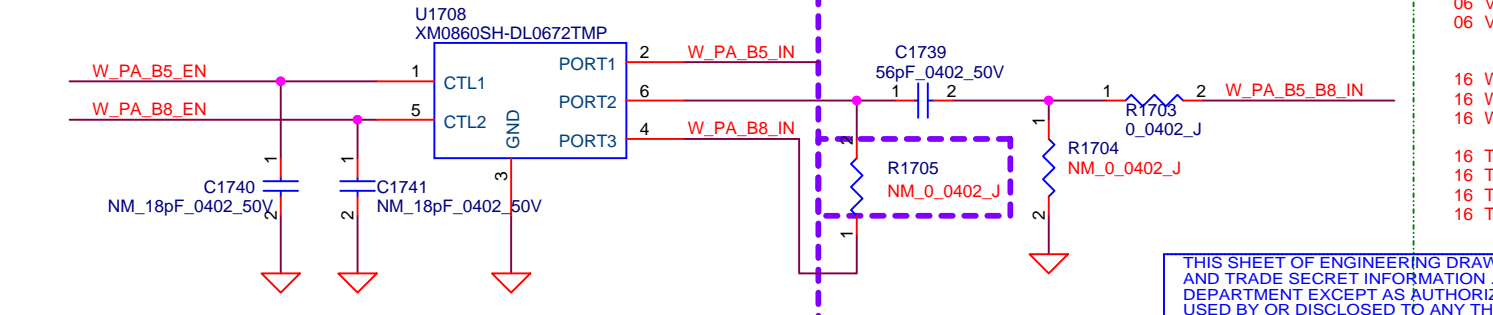
WCDMA_B5_850



WCDMA_B8_900



WCDMA_B5_B8 Switch

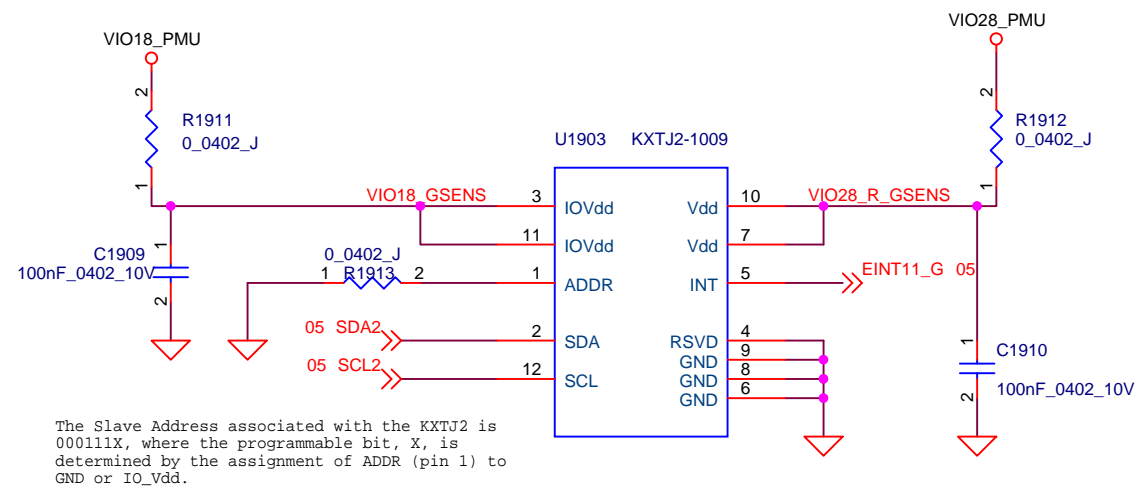


- 16 3GB1_RXP >>> 3GB1_RXP
 - 16 3GB1_RXN >>> 3GB1_RXN
 - 16 3GB2_RXP >>> 3GB2_RXP
 - 16 3GB2_RXN >>> 3GB2_RXN
 - 16 3GB5_RXP >>> 3GB5_RXP
 - 16 3GB5_RXN >>> 3GB5_RXN
 - 16 3GB8_RXP >>> 3GB8_RXP
 - 16 3GB8_RXN >>> 3GB8_RXN
 - 06 VM1 >>> VM1
 - 06 VM0 >>> VM0
 - 16 W_PA_B1_IN >>> W_PA_B1_IN
 - 16 W_PA_B2_IN >>> W_PA_B2_IN
 - 16 W_PA_B5_B8_IN >>> W_PA_B5_B8_IN
 - 16 TRXB1 >>> TRXB1
 - 16 TRXB2 >>> TRXB2
 - 16 TRXB5 >>> TRXB5
 - 16 TRXB8 >>> TRXB8
 - 16 B5_CPL_OUT_3G_ALL >>> B5_CPL_OUT_3G_ALL
- LVP9 (ROW)**
LVP0 (WIFI) NM_ALL COMPONENT
LVPD (PRC) NM_ALL in B2 /B5, and NM_U1708, Mount R1705, R1706, R1707

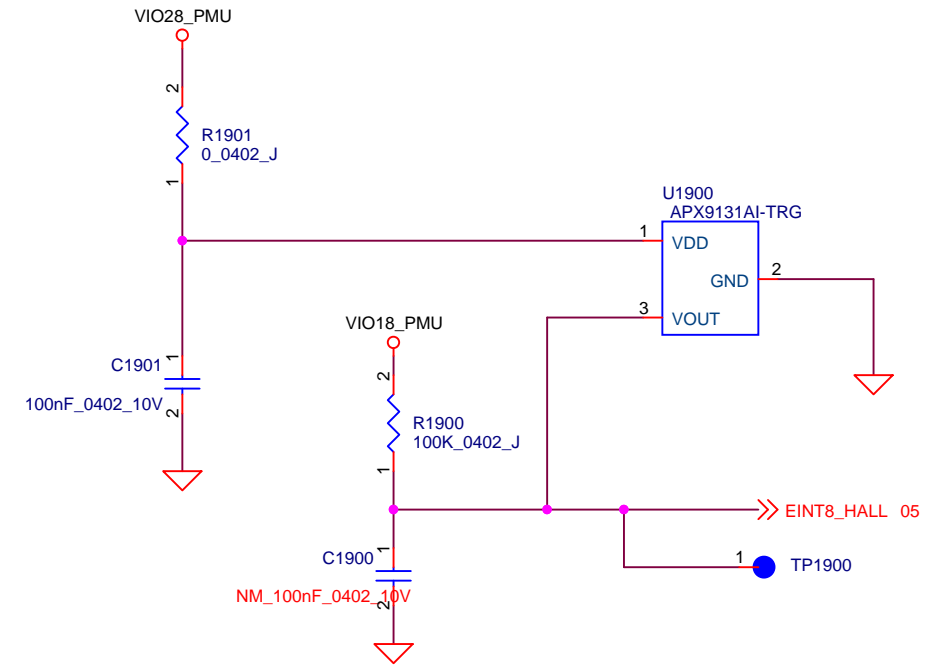
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G Sensor

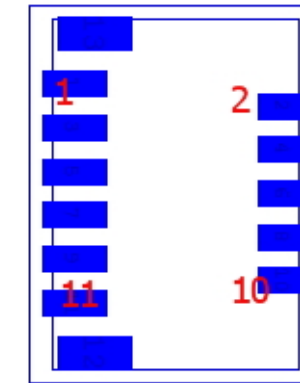
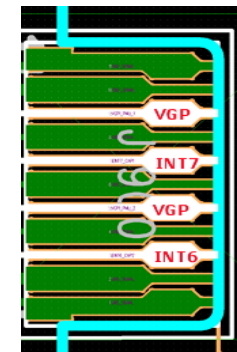
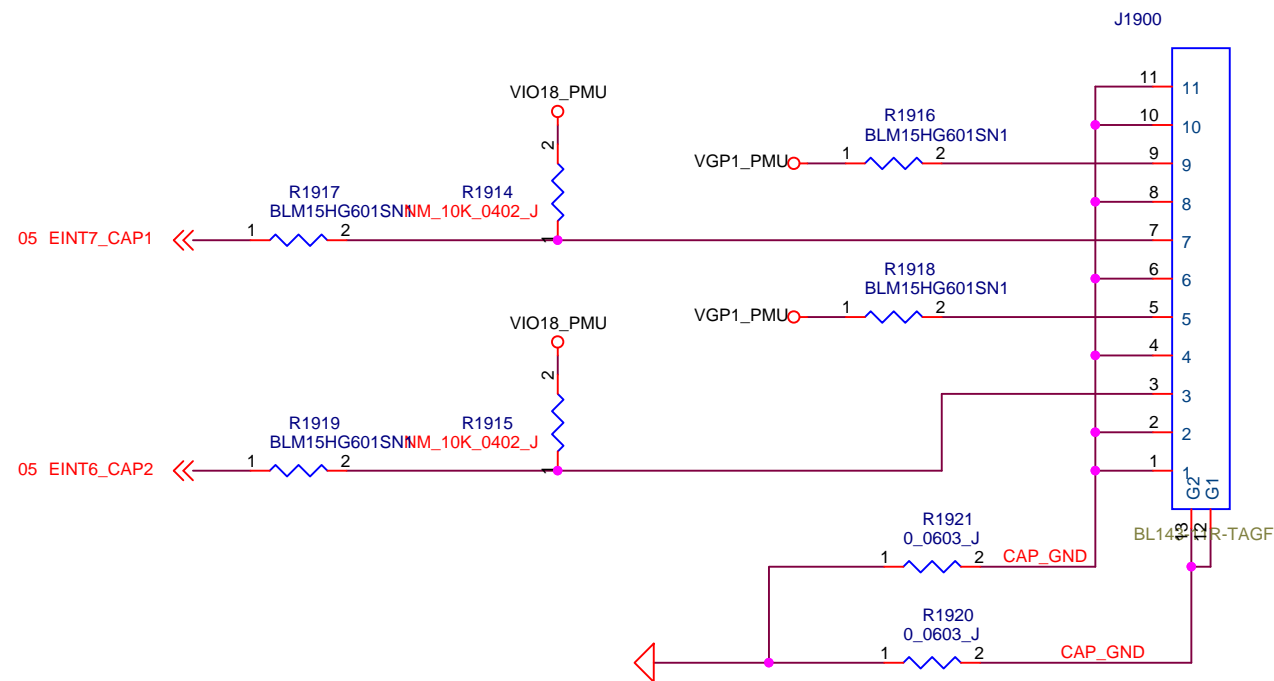


Hall-Sensor



CAP Sensor

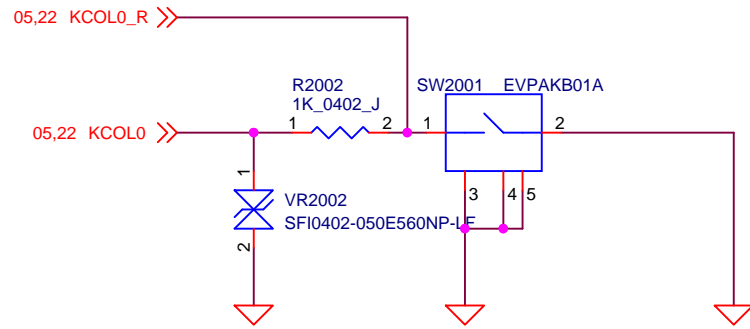
LVP0 (WIFI) NM_ALL CAP CON
631B160011N



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Title SCHEMATIC, M/B GA-400 (Sensors)		
Size A3	Document Number 601B16	Rev CA
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Volume Up

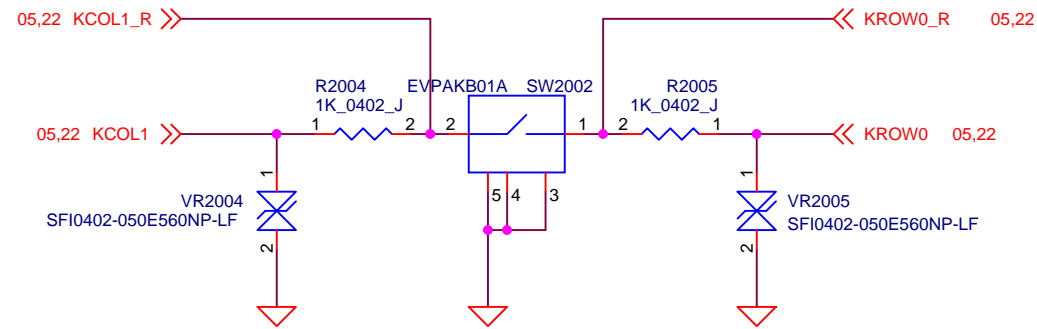


Notice :

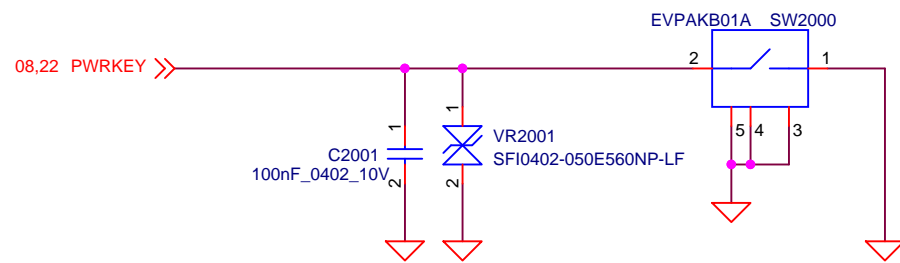
1. Due to KCOL0 & KROW0 reset mode = GPIO input mode, "Force USB download mode" will be fail in KCOL0+KROW0. So we change VolumeUp key=KCOL0+GND
2. Keypad matrix will become as (KEY1=KCOL0+GND)

	KCOL0
KROW0	
KROW1	KEY 1
KROW2	

Volume Down

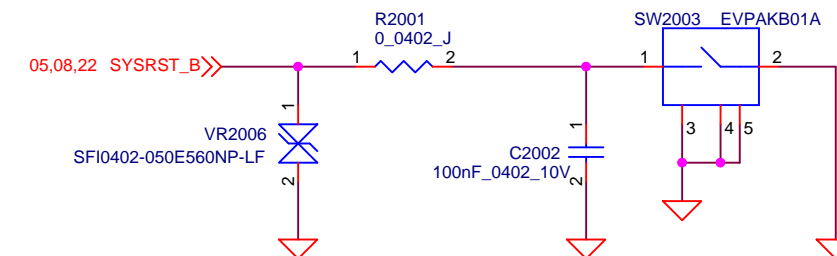


Power Key



DO NOT put pull-up resistor on PWRKEY

Reset Key

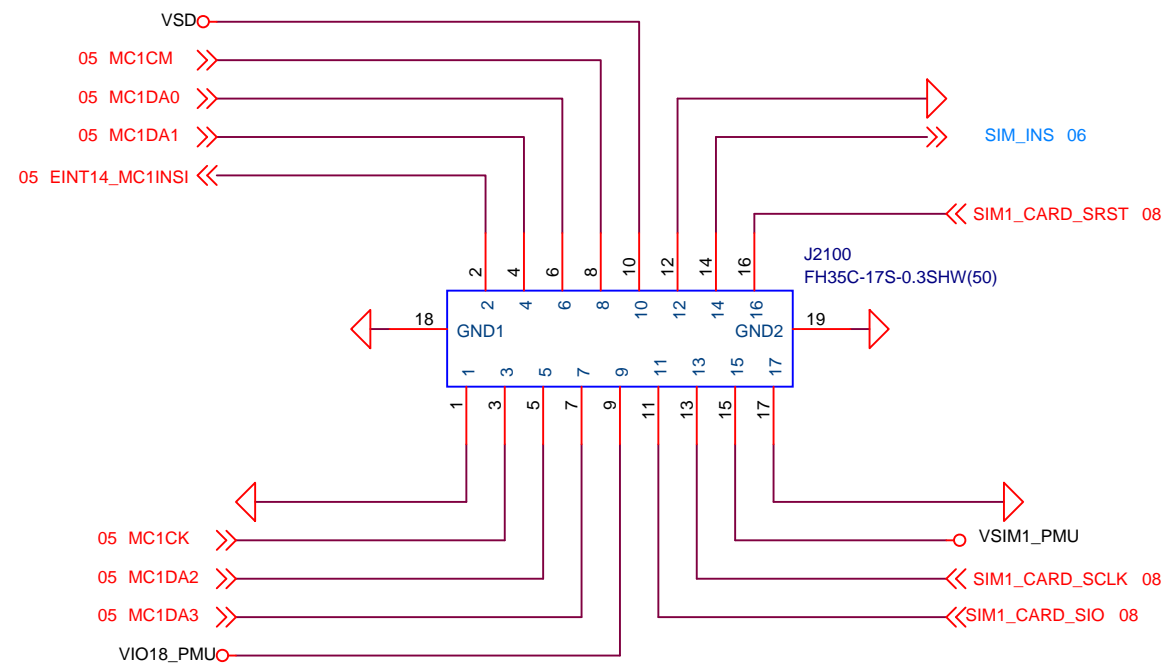


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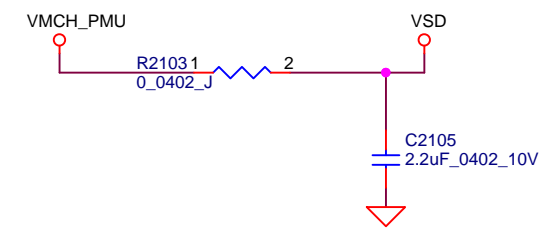
Compal Communications, Inc.		
Title SCHEMATIC, M/B GA-400 (Keypad/Backlight)		
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SD SIM CONN

Follow SB desing



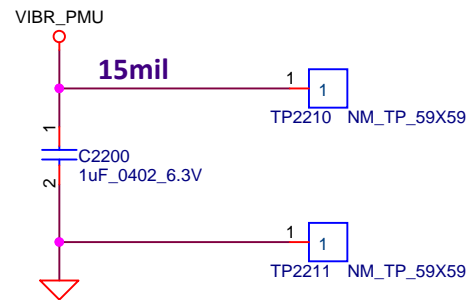
SD CARD



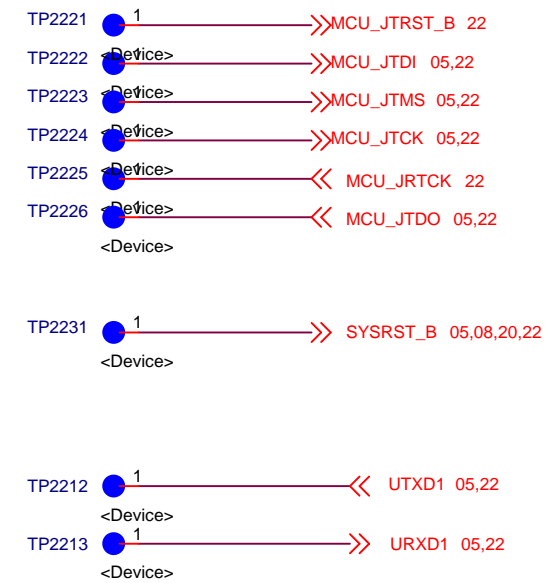
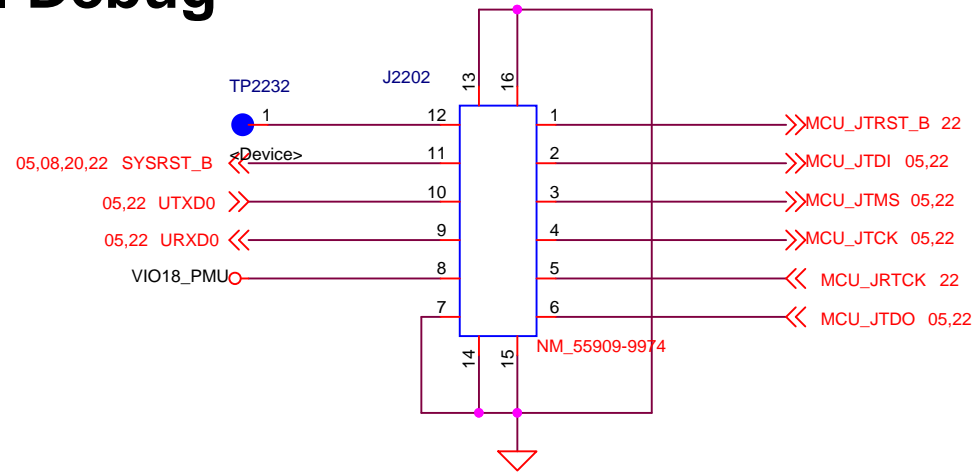
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Title SCHEMATIC, M/B GA-400 (SIM/uSD CARD)		
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Vibrator

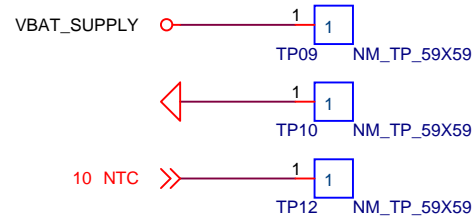


CCI Debug

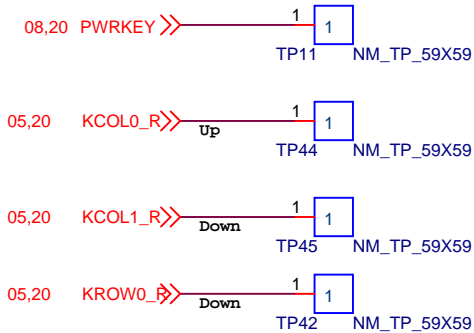


Factory TP

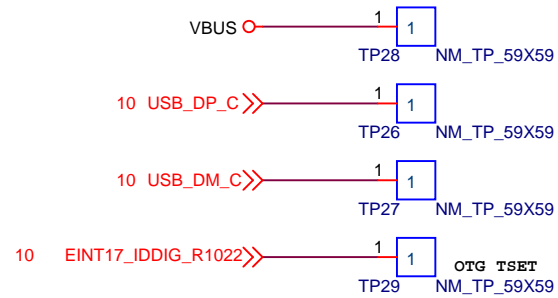
TP Group:VBat



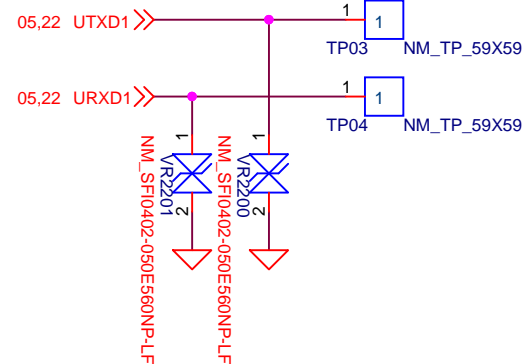
TP Group:Keypads



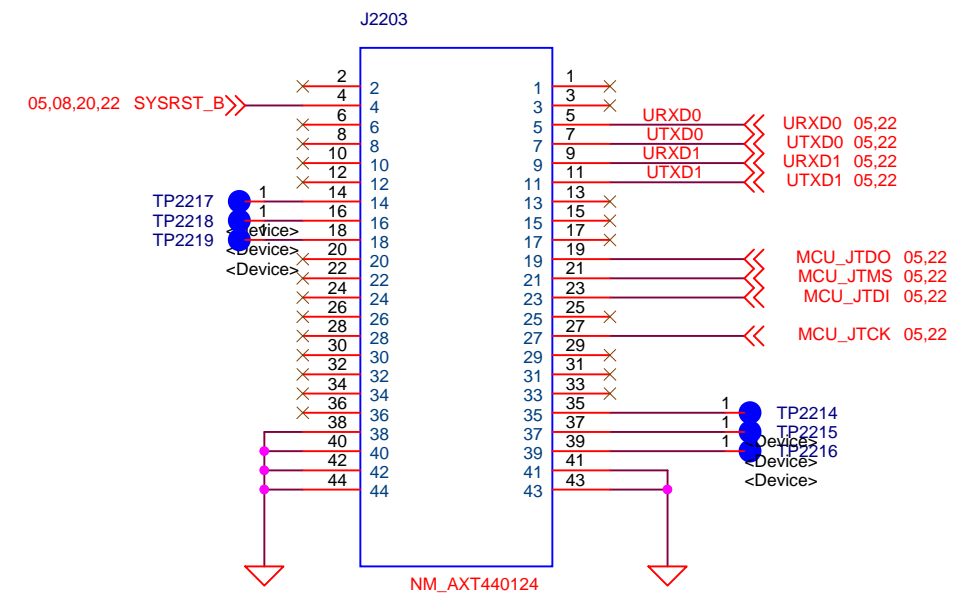
TP Group:USB



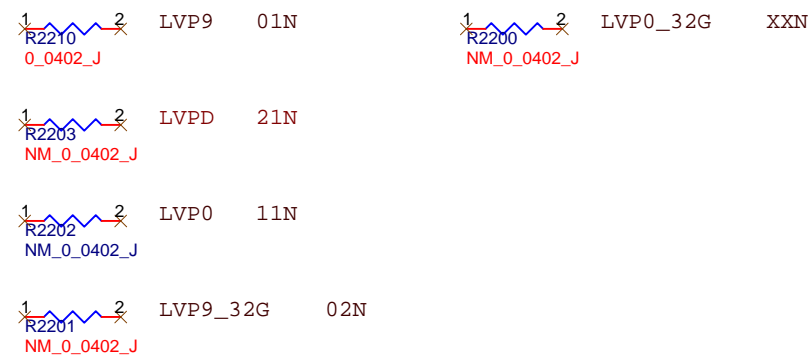
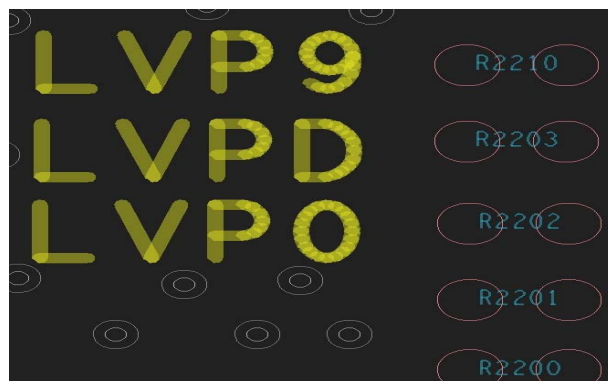
TP Group:UTXD1



MTK Debug



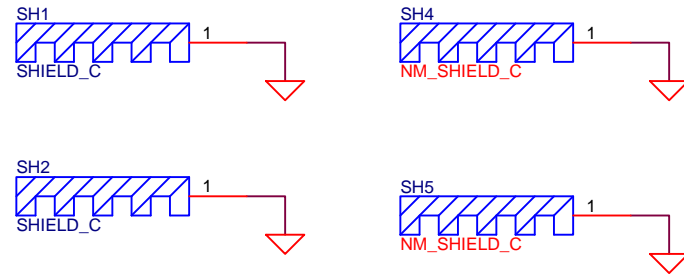
SMT ID



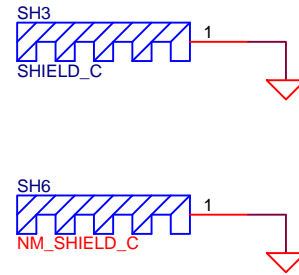
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Title SCHEMATIC, M/B GA-400 (Debug/TP)		
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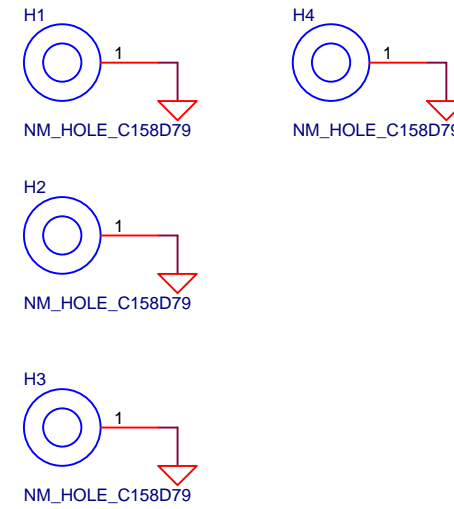
Shielding Frame Position Holes



One Case



Mechanical Screw



PCB Optical Position Holes



Change Note

EVT List

0819
 1. Change Backlight schement ,R1512,R1513,R1503,R1505 From FAE.
 2. Add R1708,R1709,R1710,R1711 for colay 2 gain PA.
 3. Change PAD1801 .
 4. Update Footprint U1300,U1500,U1501,J1000,J1300,J1501,SW2000,SW2001,SW2002,SW2003.

0820
 1. Add C1614,l1614,l1602 for matching
 2. Add R1014, for Battery
 3. Chang L1400,L1401,L1402,L1605,L1608,C1708,C1709,C1712,C1715,C1732,C1737,C1740,C1741,C1815,C1600,C1602,C1607,C1608,C1720,U1707,U1706,U1702,U1703,U1801,X800 for 2'nd
 4. Change J1401 Direction
 5. Upate Allego footprint
 6. Add D1306 for ESD.
 7. R1019 to 0805 for wat

0821
 1. Add R1638
 2. Change HWID and SIM_INS GPIO from MTK

0822
 1. Follow TI' suggestion ,change C1003 to 22uF,C1005 to 10uF,C1006 to 1uF
 2. Change SPK AMP. gain control circuit

0826
 1. Add R1515 for TP RST pull-up Resistor
 2. Add R1813,R1621,del R1708~1711.

0827
 1. Change HWID up to 10
 2. Add HWID R R2204,R2205,R2206,R2207R2208,R2209
 3. TP Pull up R1515 NM.
 4. Change value at R1619,R1620,R1622

0826
 1. Change C1007,R1018 NM,C1006 NM
 2. Change C1201,C1202,C1209,C1210 Value /Change R1322 Loction. / Add C1322 for Audio.
 3. Change J1000 TP1501,TP1502 for ME
 4. Add SH1~SH11,FI1~FI4,H1~H7
 5. Change Memery to 0200000376C
 6. Change HWID value.
 7. Change SIM/SD Conn Net .Follow SB Desing

0829
 1. Change J1601 for ME.

0902
 1. R1705 NM 2. Change ID PIN

0902
 1. Change J1401,J1900 to 5151-0XX0M-J01 for ME.

0903
 1. Change L1506 Vender.
 2. Change X500 VTCXO to 028W BB
 Y1800 TCXO to 051W WIFI.
 3. Change C1201,C1202,C1209,C1210 for Audio.
 4. Add R1621 for RF Temp.

0904
 1. Change U1703 for Sales.
 2. Add LVP9 / LVP0 / LVPD different part list .

0905
 1. Change X500 VTCXO to 021W BB

0910
 1. Change Y1800 for Sales. 051 to 030W
 2. Change C1809,C1807 to 18p,R1807 to 0ohm,C1802,11800 to NM,D1304 mount.

Control Note

DVT1 List

Reference Exl 0927

Reference Exl 1004

DVT2 List

Reference Exl 1114

DVT2-1 List

Will use BC for DVT2-1

12/20 EN
 N13C2740_0

LVP9 (ROW) 16GB+8Gb / 631B160001N
 LVP9 (ROW) 32GB+8Gb / 631B160002N
 LVP0 (WIFI) 16GB+8Gb / 631B160011N
 LVPD (PRC) 16GB+8Gb / 631B160021N

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Title SCHEMATIC, M/B GA-400 (Mechanical Parts Template)

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REMARKS :

1. The "NM" is for no mount. (Ex. NM_1K 0402 5%)
2. Document number: 60xxxx
It is first six characters of SMT P/N, and change second character to "0".
Ex. If SMT P/N is 6610090001W or 6310090001W, the document number is 601009.
3. Title : SCHEMATIC, x/B Gx-xxx (Function title)
It is the description & specification of SMT P/N, and function of each page.
Ex. 6310090001W is "SMT M/B T31I GA-010", and function is "Power Supply". The title is "SCHEMATIC, M/B GA-010 (Power Supply)".
4. Rev. :
The schematic revision from AA, after EN modify CML to control AB, AC..... by EDC
From DVT phase, the schematic revision change to BA, after ECO/EN modify CML to control BB, BC... by EDC.
From PVT phase, the schematic revision will change to CA,CB,CC....
5. Size : Units by Millimeters, Size by A3 for standard.
6. Copyright reserved : Each page must have CCI's copyright reserved.
7. One schematic file for one PCB number
8. Function "Mechanical Parts Template" must include shield-case, and each shield-case must write P/N in this symbol "Part Number" filed.

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Title		
SCHEMATIC, S/B GS-227 (REMARKS)		
Size	Document Number	Rev
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Project Name : LVP9/LVPD/LVPO

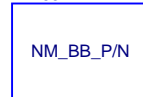
PCB Number : GS-227

PCB Revision : 1.0

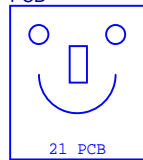
Page Description :

Item	Function Category	Function Description / Contents	Option	Page
1	Cover Page	EDC's cover page for EN/ECO revision control (EXCEL File)	Necessary	1
2	Page Summary	Project Name , PCB Number , PCB Revision , Pages Description	Necessary	2
3	Block Diagram	System Block Diagram	MB necessary	
4	Power Tree	Power tree definition	MB necessary	
5	DBB	Digital baseband or application processor		
6	GPIO	GPIO		
7	PMIC	PMIC Power		
8	Power Supply	Discrete Power: LDO, Switching Regulator ...		
9	USB / Charger	USB, USB PHY, USB Charger, Gas Guage , OVP, EMU...etc.		
10	Memory	MCP Memory, Embedded Memory		
11	Audio	Microphone(s), Receiver, Speaker(s), Headset, Audio Amplifier ...etc		
12	Camera/Flash Light	Camera , Camera ISP , Camera Flash Light		
13	LCM	LCM, LCM Bridge IC , LCM Backlight Driver , Touch Screen ...etc.		
14	RF Transceiver	RF Transceiver		
15	RF PA	RF PA		
16	RF Front End	RF Front End		
17	BT / WiFi / FM	BT / WiFi / FM		
18	GPS	GPS , Galileo		
19	Mobile TV	Mobile TV , DVB-H/T , MedioFLO , TV-Out , Analog TV, HDMI , ...etc.		
20	Sensors	G-Sensor, Ambient Light Sensor, Proximity Sensor, e-compass, Hall sensoretc.		
21	Keypad / Backlight	Keypad and keypad backlight driver & LED or EL		
22	SIM / uSD Card	SIM Connector, uSD Card	Yes	3
23	Connectors / Vibrator	Battery connector, Board to Board Connector, Keypad connector		
24	Debug Conn / TPs	Debug connecgtor, Test points (for factory test requirements)	Yes	4
25	Clock / Others	Clock , VCTCXO, Haptic Driver, others		
26	Mechanical Parts Template	Screw hole, PADs , Shielding Case , Antenna ...		
27	Modem part DBB	Modem Part's DBB		
28	Modem Part ABB	Modem Part's ABB		
29	Modem Part Memory	Modem Part's Memory		
30	Modem Part Power	Modem Part's Power		

BB-63

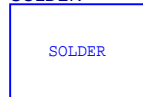


PCB



21 PCB
LVP9 GS-227 REV:1.0 SB

SOLDER



S70G-HF

UNDERFILL

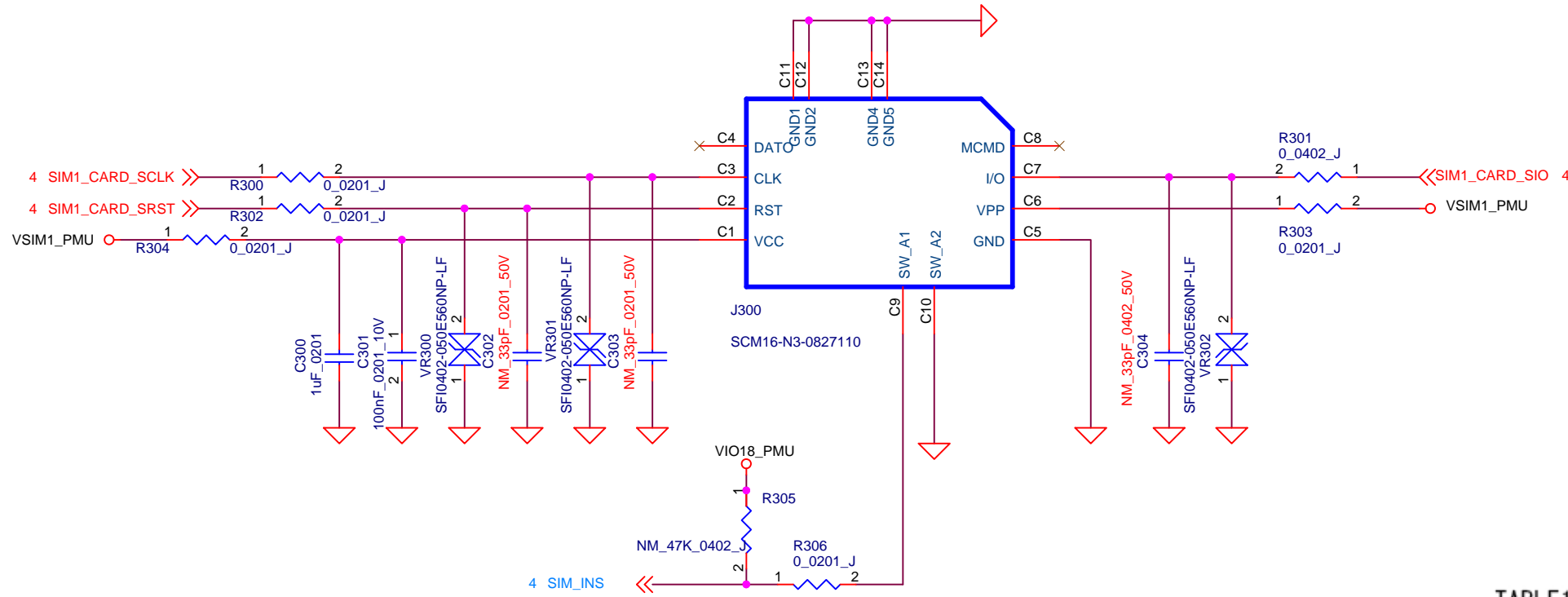


NON UNDERFILL

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SIM1

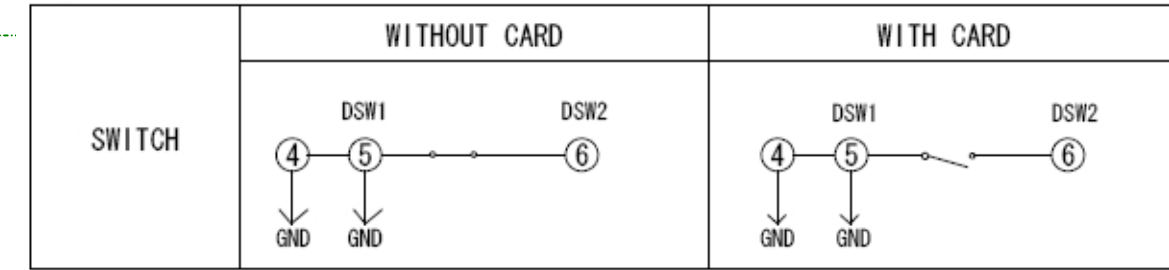


CONNECTOR TERMINAL NO.	PIN NO.
C1	VCC
C2	RST
C3	CLK
C4	DATO
C5	GND
C6	VPP
C7	I/O
C8	MCMD
C9	CARD Detect Switch
C10	CARD Detect Switch
C11-C14	GND

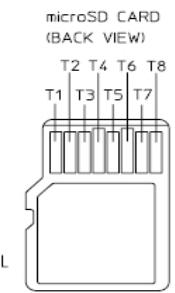
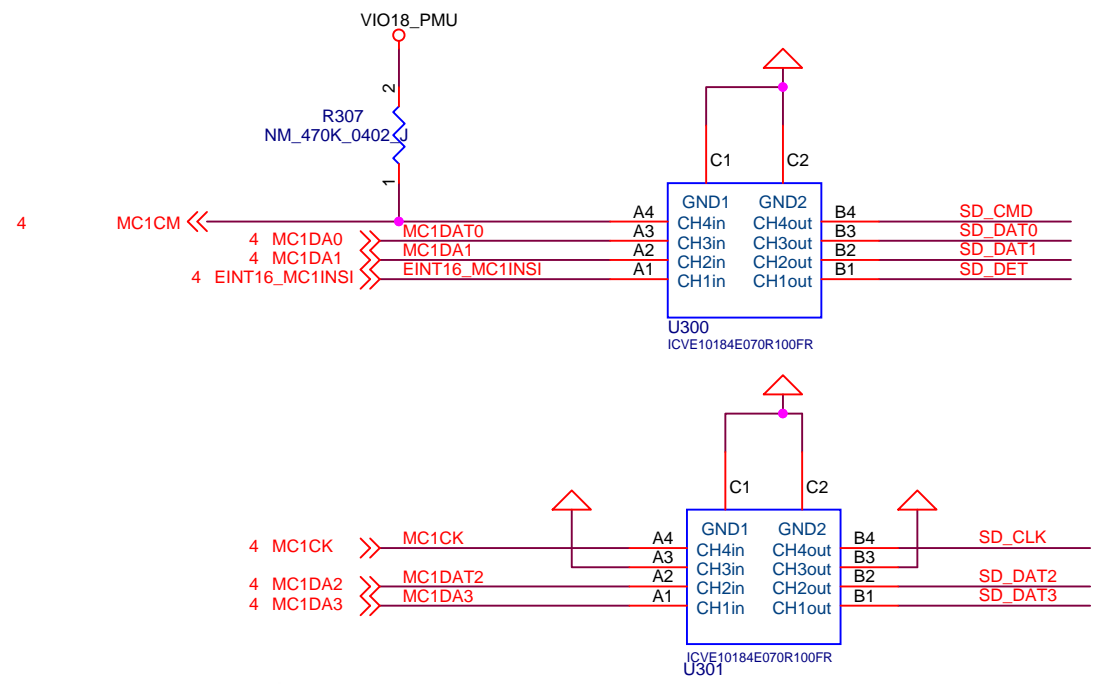
Deference List

	LVP9	LVPD	LVPO
R300	0	0	X
R302	0	0	X
R304	0	0	X
C300	0	0	X
C301	0	0	X
VR300	0	0	X
VR301	0	0	X
R306	0	0	X
VR302	0	0	X
R303	0	0	X
R301	0	0	X
J300	0	0	X

TABLE1. CIRCUIT



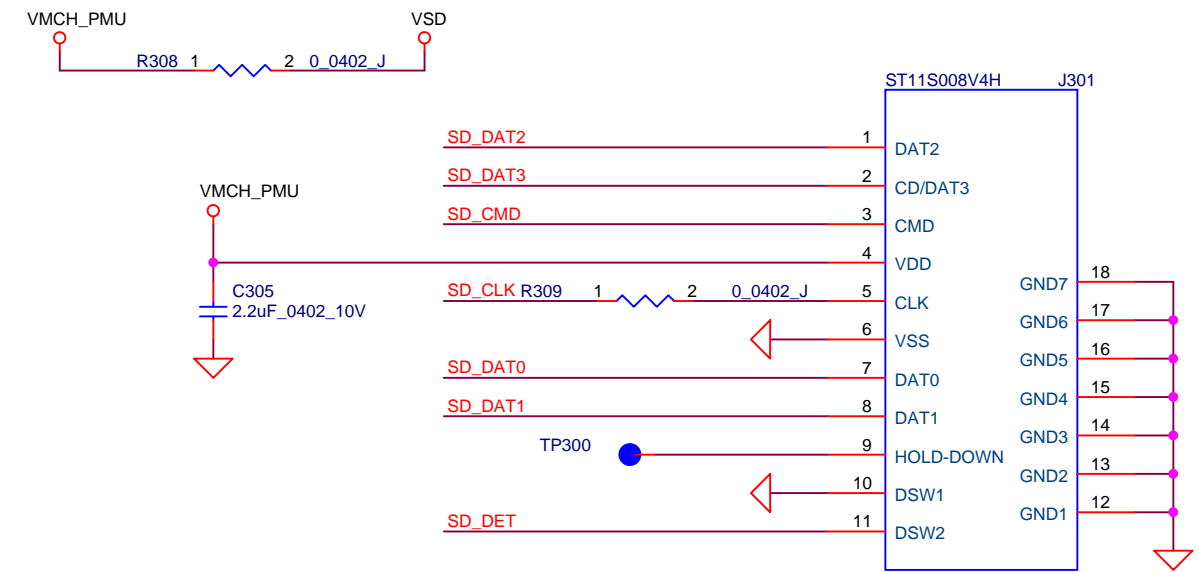
SD CARD



(microSD CARD PIN-MAP)

PIN NO.	DESCRIPTION
T1	DAT2
T2	CD/DAT3 ²
T3	CMD
T4	VDD
T5	CLK
T6	VSS
T7	DAT0
T8	DAT1

MC1CK with GND shield



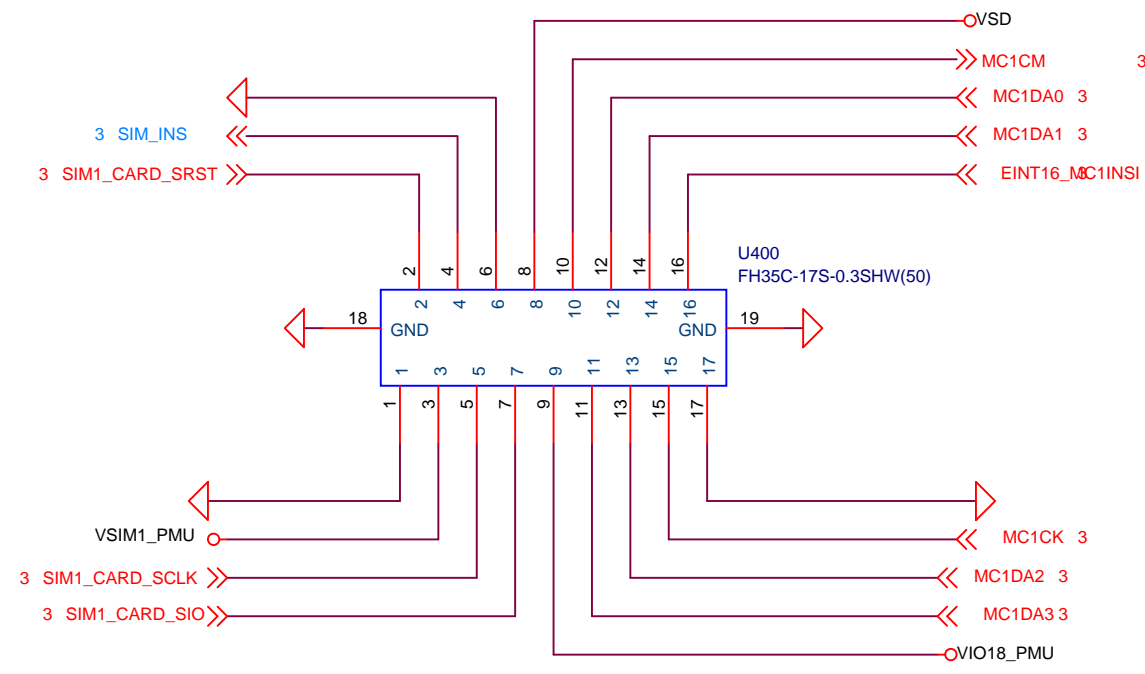
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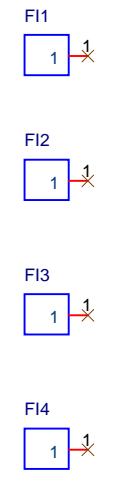
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Title: SCHEMATIC, S/B GS-227 (SIM/uSD CARD)

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**PCB
Optical Position Holes**



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