



GSM TELEPHONE

GT-i9003

SERVICE *Manual*

GSM TELEPHONE

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Notice :

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1. Safety Precautions

1-1. Repair Precaution

- Repair in Shield Box, during detailed tuning. Take specially care of tuning or test, because specificity of cellular phone is sensitive for surrounding interference(RF noise).
- Be careful to use a kind of magnetic object or tool, because performance of parts is damaged by the influence of magnetic force.
- Surely use a standard screwdriver when you disassemble this product, otherwise screw will be worn away.
- Use a thicken twisted wire when you measure level.
A thicken twisted wire has low resistance, therefore error of measurement is few.
- Repair after separate Test Pack and Set because for short danger (for example an overcurrent and furious flames of parts etc) when you repair board in condition of connecting Test Pack and tuning on.
- Take specially care of soldering, because Land of PCB is small and weak in heat.
- Surely tune on/off while using AC power plug, because a repair of battery charger is dangerous when tuning ON/OFF PBA and Connector after disassembling charger.
- Don't use as you pleases after change other material than replacement registered on SEC System. Otherwise engineer in charge isn't charged with problem that you don't keep this rules.

1-2. ESD(Electrostatically Sensitive Devices) Precaution

Several semiconductor may be damaged easily by static electricity. Such parts are called by ESD (Electrostatically Sensitive Devices), for example IC,BGA chip etc. Read Precaution below.

You can prevent from ESD damage by static electricity.

- Remove static electricity remained your body before you touch semiconductor or parts with semiconductor. There are ways that you touch an earthed place or wear static electricity prevention string on wrist.
- Use earthed soldering steel when you connect or disconnect ESD.
- Use soldering removing tool to break static electricity. , otherwise ESD will be damaged by static electricity.
- Don't unpack until you set up ESD on product. Because most of ESD are packed by box and aluminum plate to have conductive power,they are prevented from static electricity.
- You must maintain electric contact between ESD and place due to be set up until ESD is connected completely to the proper place or a circuit board.

2. Specification

2-1. GSM General Specification

	GSM850	EGSM 900	DCS1800	PCS1900	WCDMA2100	WCDMA900	WCDMA1900
Freq. Band[MHz] Uplink/ Downlink	824~849 869~894	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990	1922~1977 2112~2167	880~915 925~960	1852~1907 1932~1987
ARFCN range	128~251	0~124 & 975~1023	512~885	512~810	UL:9612~9888 DL:10562~10838	UL:2712~2863,DL:2937 ~ 3088	UL:9262~9538,DL:9662~9938
Tx/Rx spacing	45MHz	45MHz	95MHz	80MHz	190MHz	45MHz	80MHz
Mod. Bit rate/ Bit Period	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	3.84Mcps	3.84Mcps	3.84Mcps
Time Slot Period/ Frame Period	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	FrameLength: 10ms Slotlength: 0.667ms	FrameLength: 10ms Slotlength: 0.667ms	FrameLength: 10ms Slotlength: 0.667ms
Modulation	0.3GMSK	0.3GMSK	0.3GMSK	0.3GMSK	QPSKHQP SK	QPSKHQP SK	QPSKHQP SK
MS Power	33dBm~5dBm	33dBm~5dBm	30dBm~0dBm	30dBm~0dBm	24dBm~-50dBm	24dBm~-50dBm	24dBm~-50dBm
Power Class	5pcl ~ 19pcl	5pcl ~ 19pcl	0pcl ~ 15pcl	0pcl ~ 15pcl	3(max+24dBm)	3(max+24dBm)	3(max+24dBm)
Sensitivity	-102dBm	-102dBm	-100dBm	-100dBm	-106.7dBm	-106.7dBm	-106.7dBm
TDMA Mux	8	8	8	8	8	8	8
Cell Radius	35Km	35Km	2Km	2Km	2Km	2Km	2Km

2-2. GSM Tx Power Class

TX Power control level	GSM850	TX Power control level	EGSM900	TX Power control level	DCS1800	TX Power control level	PCS1900
5	33±2 dBm	5	33±2 dBm	0	30±3 dBm	0	30±3 dBm
6	31±2 dBm	6	31±2 dBm	1	28±3 dBm	1	28±3 dBm
7	29±2 dBm	7	29±2 dBm	2	26±3 dBm	2	26±3 dBm
8	27±2 dBm	8	27±2 dBm	3	24±3 dBm	3	24±3 dBm
9	25±2 dBm	9	25±2 dBm	4	22±3 dBm	4	22±3 dBm
10	23±2 dBm	10	23±2 dBm	5	20±3 dBm	5	20±3 dBm
11	21±2 dBm	11	21±2 dBm	6	18±3 dBm	6	18±3 dBm
12	19±2 dBm	12	19±2 dBm	7	16±3 dBm	7	16±3 dBm
13	17±2 dBm	13	17±2 dBm	8	14±3 dBm	8	14±3 dBm
14	15±2 dBm	14	15±2 dBm	9	12±4 dBm	9	12±4 dBm
15	13±2 dBm	15	13±2 dBm	10	10±4 dBm	10	10±4 dBm
16	11±3 dBm	16	11±3 dBm	11	8±4 dBm	11	8±4 dBm
17	9±3dBm	17	9±3dBm	12	6±4 dBm	12	6±4 dBm
18	7±3 dBm	18	7±3 dBm	13	4±4 dBm	13	4±4 dBm
19	5±3 dBm	19	5±3 dBm	14	2±5 dBm	14	2±5 dBm
				15	0±5 dBm	15	0±5 dBm

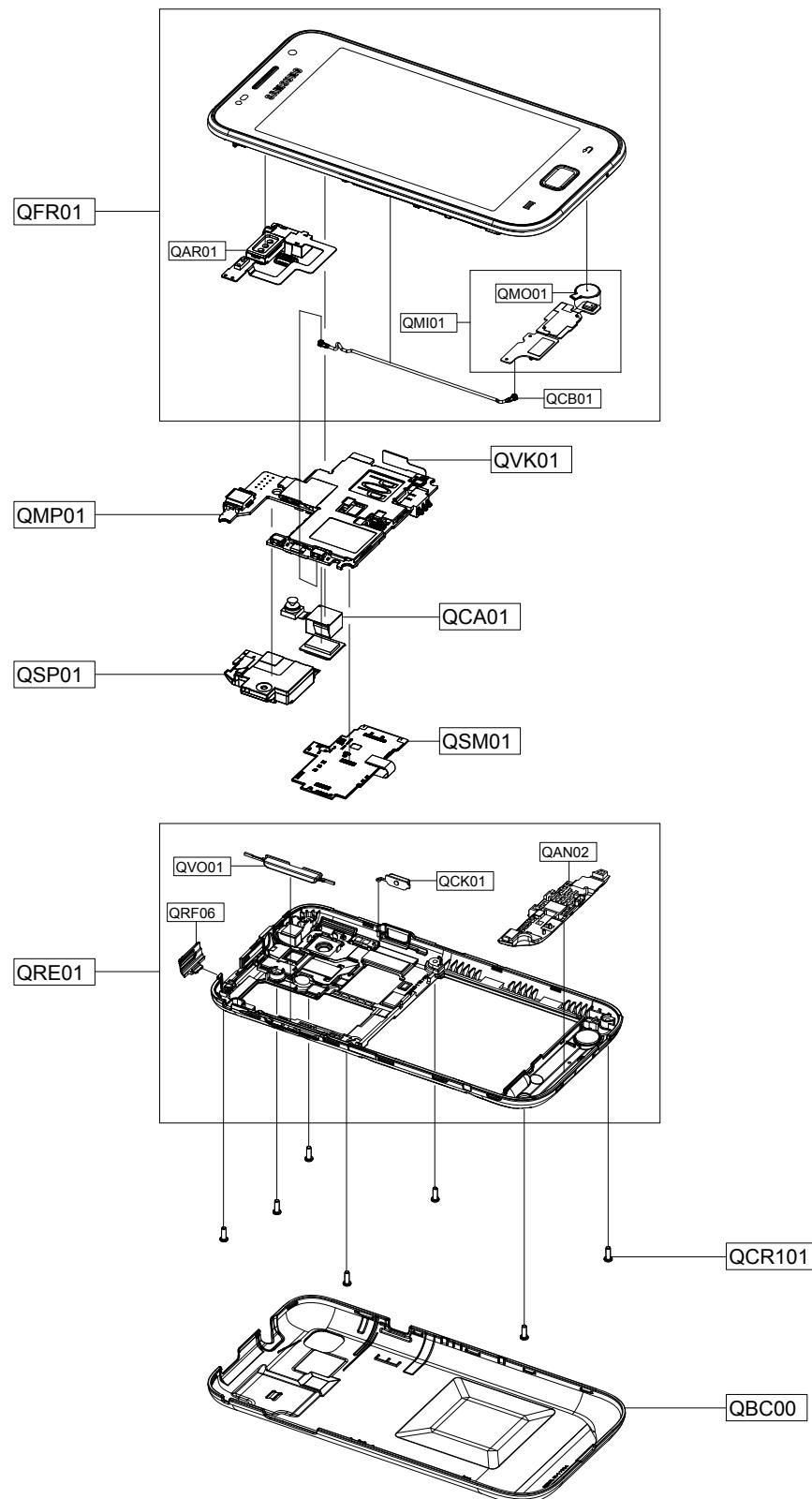
3. Operation Instruction and Installation

Main Function

- Android OS: Froyo
- HSDPA 7.2Mbps / HSUPA 5.76Mbps
- 5MP AF
- 4.0" TFT LCD, Full Touch (C-Type)
- A-GPS / BT v2.1 + EDR / USB v2.0 / WiFi (802.11 b/g/n)
- HD Recording (720p) / Full HD Playback (1080p)
- Sensors: Accelerometer, Compass, Proximity, Light
- TouchWiz 3.0 for Android, Multistage, Augmented Reality, Integrated phonebook with SNS, IM, E-mail, Face Recognition, etc.

4. Exploded View and Parts List

4-1. Cellular phone Exploded View



4-2. Cellular phone Parts list

Design LOC		Description	SEC CODE
QCR101		SCREW-MACHINE	6001-002005
QSP01		MODULE-SPEAKER	GH59-09408A
QCA01		CAMERA MODULE-5M A/F CMOS (GT-I9008)	GH59-09947A
QVK01		KEY FPCB-SIDE KEY(GT-I9003)	GH59-10424A
QSM01		ASSY ETC-SIM/T-FLASH ASSY(GT_I9003)	GH59-10518A
QMP01		A/S ASSY-PBA MAIN(COMM)GT-I9003	GH82-05486A
QBC00		ASSY COVER-BATT	GH98-18749A
QRE01		ASSY CASE-REAR	GH98-18750A
	QAN02	INTENNA-MAIN_GT-I9003	GH42-02787A
	QRF06	PMO COVER-USB	GH72-62156A
	QCK01	PMO COVER-POWER KEY	GH72-62157A
	QVO01	PMO COVER-VOL KEY V3	GH72-62808A
QFR01		MEA FRONT-SUPER LCD ASSY	GH97-11829A
	QCB01	CBF COAXIAL CABLE-SGH-T959 INT CABLE_(76	GH39-01438A
	QAR01	MODULE-RCV+SENSOR FPCB(I9003)	GH59-10401A
	QMI01	ASSY ETC-MIC/MOTOR FPCB(GT-I9003)	GH59-10425A
	QMO01	MOTOR LINEAR VIBRATION-GTS8000	GH31-00475A

5.a MAIN Electrical Parts List (HW REV1.0) 1010

Design LOC	SEC CODE	Description
D600, ZD601	0403-001688	DIODE-ZENER
D900	0404-001646	DIODE-SCHOTTKY
ZD600	0406-001369	DIODE-TVS
ZD400, ZD401, ZD402, ZD403, ZD404	0406-001413	DIODE-TVS
ZD405	0406-001375	DIODE-TVS
D800	0407-001007	DIODE-ARRAY
TR800	0504-001113	TR-DIGITAL
Q600	0504-001138	TR-DIGITAL
U301	0505-002207	FET-SILICON
U801	0801-003016	IC-CMOS LOGIC
U501, U901	0801-003031	IC-CMOS LOGIC
U802	0801-003079	IC-CMOS LOGIC
U300	0801-003139	IC-CMOS LOGIC
U604, U805	0801-003346	IC-CMOS LOGIC
UCP700	0902-002708	IC-MICROPROCESSOR
U405	1001-001394	IC-ANALOG SWITCH
U600	1001-001580	IC-ANALOG MULTIPLEX
U304	1001-001581	IC-ANALOG SWITCH
U800	1001-001664	IC-ANALOG SWITCH
U906	1003-002047	IC-MOTOR DRIVER
U404, U903	1003-002358	IC-LEVEL DRIVER
UME300	1105-002068	IC-MOBILE SDRAM
UME500	1107-001937	IC-NAND FLASH
UCP700UP	1108-000409	IC-MCP
U100	1201-002999	IC-RF AMP
U403	1201-003081	IC-AUDIO AMP
U104	1201-003091	IC-POWER AMP
U106	1201-003092	IC-POWER AMP
U103	1201-003107	IC-POWER AMP
U102	1201-003144	IC-RF AMP

Design LOC	SEC CODE	Description
U200	1201-003168	IC-RF AMP
U400	1202-001036	IC-VOLTAGE COMP.
U902	1203-004339	IC-MULTI REG.
U907	1203-004793	IC-POSI.FIXED REG.
U500	1203-004818	IC-POSI.FIXED REG.
U108, U502	1203-004819	IC-POSI.FIXED REG.
U908	1203-004845	IC-DC/DC CONVERTER
U507	1203-005250	IC-MULTI REG.
U401	1203-005396	IC-POSI.FIXED REG.
U809	1203-005485	IC-POSI.FIXED REG.
U504	1203-005690	IC-DC/DC CONVERTER
U806	1203-005783	IC-BATTERY
U808	1203-006054	IC-MULTI REG.
U101	1203-006159	IC-DC/DC CONVERTER
U603	1203-006178	IC-MULTI REG.
U803	1203-006304	IC-POWER SUPERVISOR
U804	1203-006346	IC-RESET
U807	1203-006464	IC-POWER SUPERVISOR
U204	1204-003176	IC-TUNER
U105	1205-003949	IC-TRANSCEIVER
U201	1205-003966	IC-RECEIVER
UCP300	1205-003993	IC-MODEM
U905	1209-001877	IC-SENSOR
R114	1209-001998	IC-DETECTOR
U904	1209-002023	IC-SENSOR
TH300, TH800	1404-001221	THERMISTOR-NTC
V300, V301, V302, V303, V304, V305, V306, V900, V901, V902, V903, V904, ZD612, ZD613	1405-001177	VARISTOR
V307, V600, V601, ZD610	1405-001200	VARISTOR

Design LOC	SEC CODE	Description
V400	1405-001294	VARISTOR
V800	1405-001298	VARISTOR
R800, R802, R808, R813	2007-000138	R-CHIP
R807	2007-000140	R-CHIP
R740	2007-000142	R-CHIP
R601	2007-000148	R-CHIP
R100	2007-000155	R-CHIP
R803, R805, R905	2007-000162	R-CHIP
R809	2007-000166	R-CHIP
R328	2007-000167	R-CHIP
R410, R412, R900	2007-000172	R-CHIP
R909	2007-000636	R-CHIP
R815	2007-008015	R-CHIP
R827	2007-007092	R-CHIP
R317	2007-003018	R-CHIP
R103	2007-003029	R-CHIP
R312, R819, R821	2007-007107	R-CHIP
R806	2007-007307	R-CHIP
R826	2007-007316	R-CHIP
R104	2007-007334	R-CHIP
R823	2007-007491	R-CHIP
R730	2007-007741	R-CHIP
R917	2007-007798	R-CHIP
R402, R606	2007-007943	R-CHIP
R315, R406, R600, R611, R801	2007-008045	R-CHIP
R404, R405, R906, R907	2007-008049	R-CHIP
R408, R708, R709, R715 R716, R743, R746, R747, R748, R810	2007-008052	R-CHIP

Design LOC	SEC CODE	Description
R500, R722, R724, R742, R816, R822, R824, R908	2007-008055	R-CHIP
R106, R205, R731, R732, R811, R812	2007-008419	R-CHIP
R415	2007-008478	R-CHIP
R330	2007-008483	R-CHIP
R327, R725, R726, R738, R739, R902, R915, R916	2007-008516	R-CHIP
R109, R608, R609	2007-008531	R-CHIP
R817, R818	2007-008548	R-CHIP
R413	2007-008587	R-CHIP
R515	2007-008774	R-CHIP
R614	2007-008774	R-CHIP
R616	2007-008774	R-CHIP
R617	2007-008774	R-CHIP
R829	2007-008774	R-CHIP
R208	2007-008800	R-CHIP
R105, R614, R616, R617, R829	2007-008806	R-CHIP
R401, R407	2007-009084	R-CHIP
R305, R502, R503, R504, R505, R506, R511, R512, R513, R514, R613	2007-009171	R-CHIP
R409, R411	2007-009201	R-CHIP
R329	2007-009323	R-CHIP
R318, R320, R321	2007-009354	R-CHIP
R700, R701, R702, R703, R717, R718, R719, R720	2007-009408	R-CHIP
R107, R108, R302, R400, R904	2007-009801	R-CHIP
R414	2007-010202	R-CHIP
C183, C213, C233, C258, C807	2203-000233	C-CER,CHIP
C821	2203-000254	C-CER,CHIP

Design LOC	SEC CODE	Description
C801,C902	2203-000278	C-CER,CHIP
C405, C414	2203-000386	C-CER,CHIP
C911	2203-000725	C-CER,CHIP
C422	2203-000995	C-CER,CHIP
C401, C413	2203-001153	C-CER,CHIP
C259	2203-001385	C-CER,CHIP
C131, C403	2203-002709	C-CER,CHIP
C218	2203-005050	C-CER,CHIP
C214	2203-005281	C-CER,CHIP
C215	2203-005446	C-CER,CHIP
C185, C256	2203-005552	C-CER,CHIP
C104, C120, C121, C135, C144, C163, C165	2203-005682	C-CER,CHIP
C102, C231	2203-005725	C-CER,CHIP
C118, C179, C824	2203-005727	C-CER,CHIP
C127, C326, C423	2203-005729	C-CER,CHIP
C110, C328, C419, C420	2203-005731	C-CER,CHIP
C111, C122, C600, U107	2203-005732	C-CER,CHIP
C149, C150, C170, C171, C180, C181, C182	2203-005736	C-CER,CHIP
C137, C139	2203-005740	C-CER,CHIP
C187	2203-005777	C-CER,CHIP
C168	2203-005789	C-CER,CHIP
C148	2203-005792	C-CER,CHIP
C142, C164, C176	2203-005806	C-CER,CHIP
C310, C313, C502, C505, C702, C704, C705, C706, C707, C710, C711, C712, C713, C717, C718, C719, C720, C722, C753, C754, C756, C757, C758, C759, C829, C913	2203-006048	C-CER,CHIP
C124	2203-006090	C-CER,CHIP
C234	2203-006120	C-CER,CHIP

Design LOC	SEC CODE	Description
C106	2203-006123	C-CER,CHIP
C407, C408	2203-006137	C-CER,CHIP
C112, C114, C140	2203-006187	C-CER,CHIP
C701, C708	2203-006190	C-CER,CHIP
C129, C130, C152, C153, C154, C155, C156, C157, C158, C159, C160, C173, C229, C751	2203-006194	C-CER,CHIP
C125, C402	2203-006208	C-CER,CHIP
C331, C334	2203-006260	C-CER,CHIP
C100, C825	2203-006305	C-CER,CHIP
C147	2203-006318	C-CER,CHIP
C835	2203-006324	C-CER,CHIP
C161, C235, C261, C700, C703, C709, C716, C723, C724, C726, C760, C761, C802, C804, C805, C808, C819, C820, C832,C833, C834, C845, C846,C848, C849, C850, C910	2203-006399	C-CER,CHIP
C117, C172, C200, C201, C301, C303, C308, C336, C721, C809, C810, C814, C815, C817, C818, C903, C904, C909	2203-006423	C-CER,CHIP
C320, C325	2203-006474	C-CER,CHIP
C128, C335, C404, C406, C411, C412, C507, C508, C806, C847, C888, C914	2203-006562	C-CER,CHIP
C178	2203-006604	C-CER,CHIP
C108	2203-006611	C-CER,CHIP
C409, C410	2203-006626	C-CER,CHIP
C752	2203-006647	C-CER,CHIP
C237, C238, C262, C762, C800, C908	2203-006648	C-CER,CHIP
C103, C107, C166, C232	2203-006674	C-CER,CHIP
C133, C136	2203-006707	C-CER,CHIP
C510, C839, C840	2203-006824	C-CER,CHIP

Design LOC	SEC CODE	Description
C503, C504, C506, C906, C907	2203-006838	C-CER,CHIP
C601	2203-006839	C-CER,CHIP
C822, C823, C837, C915	2203-006841	C-CER,CHIP
C210, C221, C222, C224, C230, C257, C330, C803, C811, C836, C838, C841, C842, C843, C844	2203-006872	C-CER,CHIP
C828, C830	2203-006890	C-CER,CHIP
C151	2203-007210	C-CER,CHIP
C302	2203-007210	C-CER,CHIP
C304	2203-007210	C-CER,CHIP
C305	2203-007210	C-CER,CHIP
C318	2203-007210	C-CER,CHIP
C324	2203-007210	C-CER,CHIP
C329	2203-007210	C-CER,CHIP
C916	2203-007210	C-CER,CHIP
C516, C826	2203-007240	C-CER,CHIP
C175, C311, C312, C322, C323	2203-007270	C-CER,CHIP
C255, C332, C511, C512, C513, C514, C515, C905	2203-007271	C-CER,CHIP
C333	2203-007317	C-CER,CHIP
C141, C501, C714, C715, C831	2203-007393	C-CER,CHIP
C186, C188, C300, C306, C307, C309, C314, C317, C319, C321, C337, C416, C608, C609, C610, C611, C851, C852, C853, C854, C891, C892, C912, U305	2203-007449	C-CER,CHIP
C917	2203-007687	C-CER,CHIP
C604	2203-007693	C-CER,CHIP
C134, C162, TA500, TA800	2404-001381	C-TA,CHIP
TA401, TA600	2404-001496	C-TA,CHIP

Design LOC	SEC CODE	Description
TA402, TA602	2404-001506	C-TA,CHIP
TA400, TA801, TA802	2404-001572	C-TA,CHIP
L411	2703-001259	INDUCTOR-SMD
L900, L901	2703-002309	INDUCTOR-SMD
C132, C138, L103	2703-002793	INDUCTOR-SMD
C174	2703-002794	INDUCTOR-SMD
L205	2703-002815	INDUCTOR-SMD
L600, L601	2703-002842	INDUCTOR-SMD
C143, L108	2703-002858	INDUCTOR-SMD
L902	2703-002862	INDUCTOR-SMD
L101, U703	2703-002901	INDUCTOR-SMD
L104, L105, L109	2703-002903	INDUCTOR-SMD
C109, C145	2703-002906	INDUCTOR-SMD
L111, L112, L113	2703-002918	INDUCTOR-SMD
L100, L107	2703-002953	INDUCTOR-SMD
L406	2703-002961	INDUCTOR-SMD
L110	2703-003125	INDUCTOR-SMD
L801	2703-003347	INDUCTOR-SMD
L106	2703-003685	INDUCTOR-SMD
L502	2703-003770	INDUCTOR-SMD
L302, L303	2703-003869	INDUCTOR-SMD
L800, L802	2703-003911	INDUCTOR-SMD
C115	2703-004000	INDUCTOR-SMD
R113	2703-004001	INDUCTOR-SMD
OSC300, OSC801	2801-004339	CRYSTAL-SMD
OSC800	2804-001762	OSCILLATOR-CLOCK
OSC201	2804-001772	OSCILLATOR-CLOCK
OSC200	2809-001348	OSCILLATOR-TCXO
OSC100	2809-001358	OSCILLATOR-VCTCXO

Design LOC	SEC CODE	Description
F900, F901, F902, F903, F904, F905	2901-001413	FILTER-EMI SMD
F500, F501, F502	2901-001604	FILTER-EMI SMD
F105	2904-001847	FILTER-SAW
F108	2904-001850	FILTER-SAW
F103	2904-001952	FILTER-SAW
F102	2904-001953	FILTER-SAW
F100	2904-001966	FILTER-SAW
F101	2904-001973	FILTER-SAW
F104	2910-000073	DUPLEXER-SAW
F106	2910-000081	DUPLEXER-SAW
F107	2910-000107	DUPLEXER-SAW
L201	3301-001534	BEAD-SMD
L204	3301-001659	BEAD-SMD
L206, L501	3301-001729	BEAD-SMD
L200	3301-001789	BEAD-SMD
L203, L400, L401, L404, L407, L408, L409, L410	3301-001885	BEAD-SMD
L500, L603	3301-001912	BEAD-SMD
L300, L301	3301-001956	BEAD-SMD
L402, L403	3301-002058	BEAD-SMD
L405	3301-002065	BEAD-SMD
TAC600, TAC601	3404-001152	SWITCH-TACT
ANT102	3705-001448	CONNECTOR-COAXIAL
RFS100	3705-001731	CONNECTOR-COAXIAL
HDC700	3711-005550	HEADER-BOARD TO BOARD
BTC600	3711-006299	HEADER-BATTERY
HDC900	3711-006483	HEADER-BOARD TO BOARD
HDC500	3711-006865	HEADER-BOARD TO BOARD
HDC300	3711-006923	HEADER-BOARD TO BOARD
HDC400, HDC600	3711-007592	HEADER-BOARD TO BOARD

Design LOC	SEC CODE	Description
IFC601	3722-002867	JACK-MINI USB
BAT800	4302-001246	BATTERY-LI(2ND)
U210	4709-001899	BLUETOOTH MODULE
SC613, SC615, SC616, SC617, SC620, SC621, SC622, SC623, SC624	GH70-03951A	ICT SHIELD-SHIELD CAN CLIP
SC601, SC603, SC604, SC605, SC607, SC608, SC610, SC611	GH70-04443A	ICT SHIELD-CAN CLIP
SC614, SC618, SC619, SC625	GH70-04828A	IPR SHIELD-CAN CLIP
ANT200, ANT201, ANT202, ANT203	GH71-08731A	NPR CONTACT-CAM
C827	2203-000627	C-CER,CHIP
C816	2203-006257	C-CER,CHIP

Please consult the GSPN website (Samsung Portal) for the most recent version of the product's part list.

6. Level 1 Repair

6-1. S/W Download

6-1-1. Pre-requisite for S/W Downloading

- Downloader Program([Odin3 v1.0.exe](#))
- GT-I9003 Mobile Phone
- Data Cable
- JIG BOX (GH99-36900A)
- RF Test Cable (GH39-00985A)
- JIG Cable (GH39-01290A)
- Adapter (GH99-38251A)
- Binary files

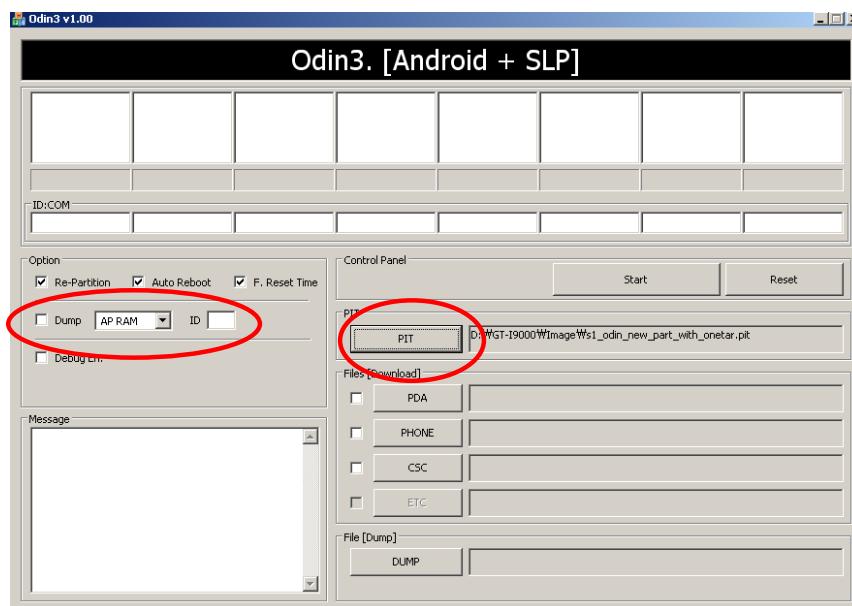
6-1-2. S/W Downloader Program

- Load the binary download program by executing the
" **Odin3 v1.0.exe** " ← Run this file.



1. Option Selection

- Check Re-Partition, Auto Reboot and F. Reset Time, then select PIT File

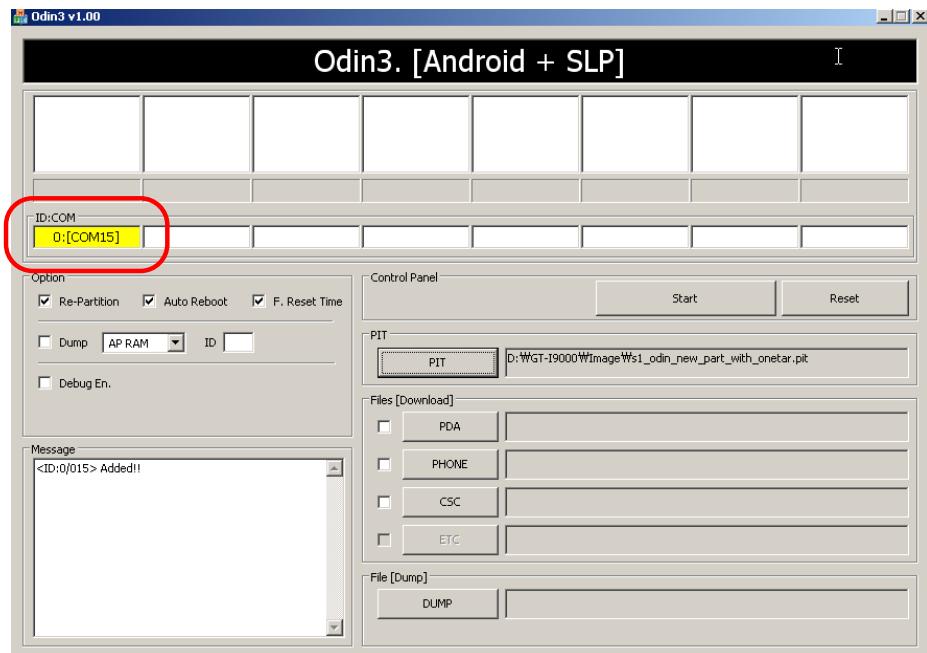


3. Enter Device into Download Mode

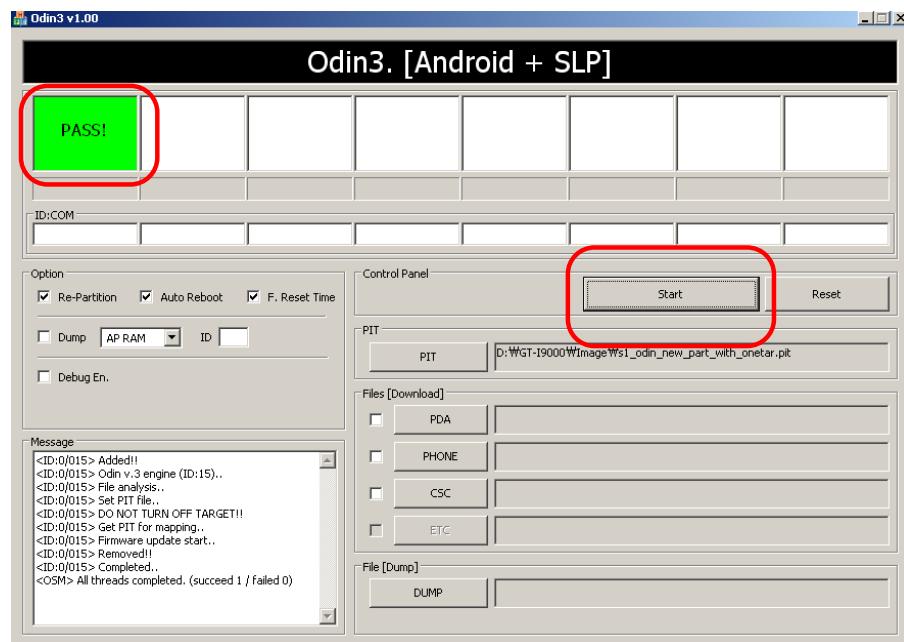
- Enter the device into Download Mode by pressing down on Volume Down button and OK button and Power On button at the same time.



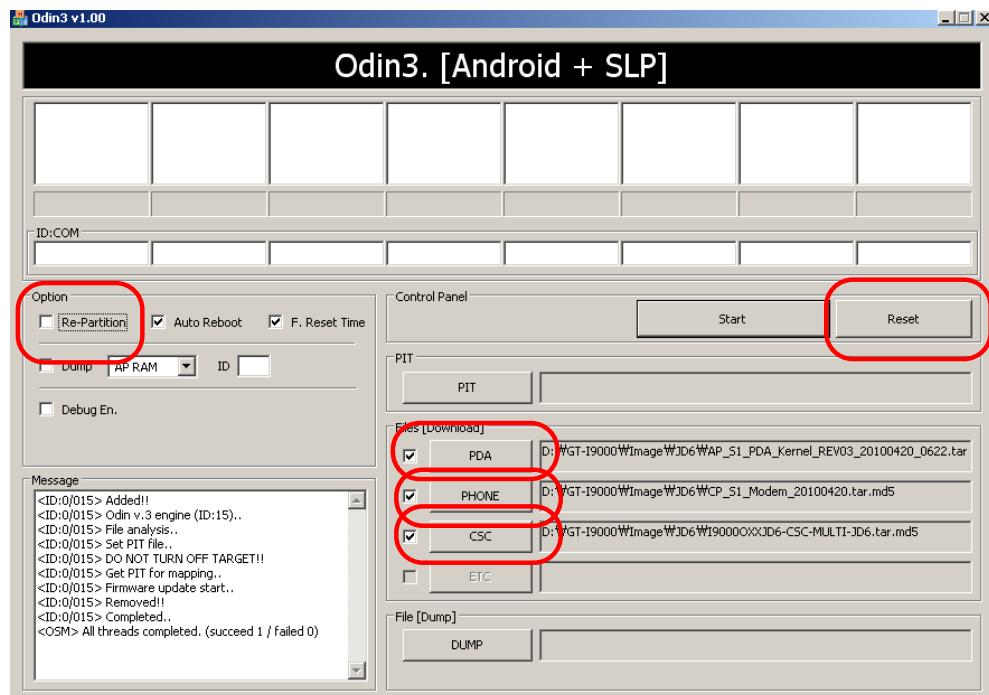
4. Connect the Handset to PC via Data Cable. Make sure ID:COM box highlighted yellow that the handset is connected to the PC.



5. Start Downloading PIT file by clicking Start Button. Then wait for "Pass" to be appear on the screen.

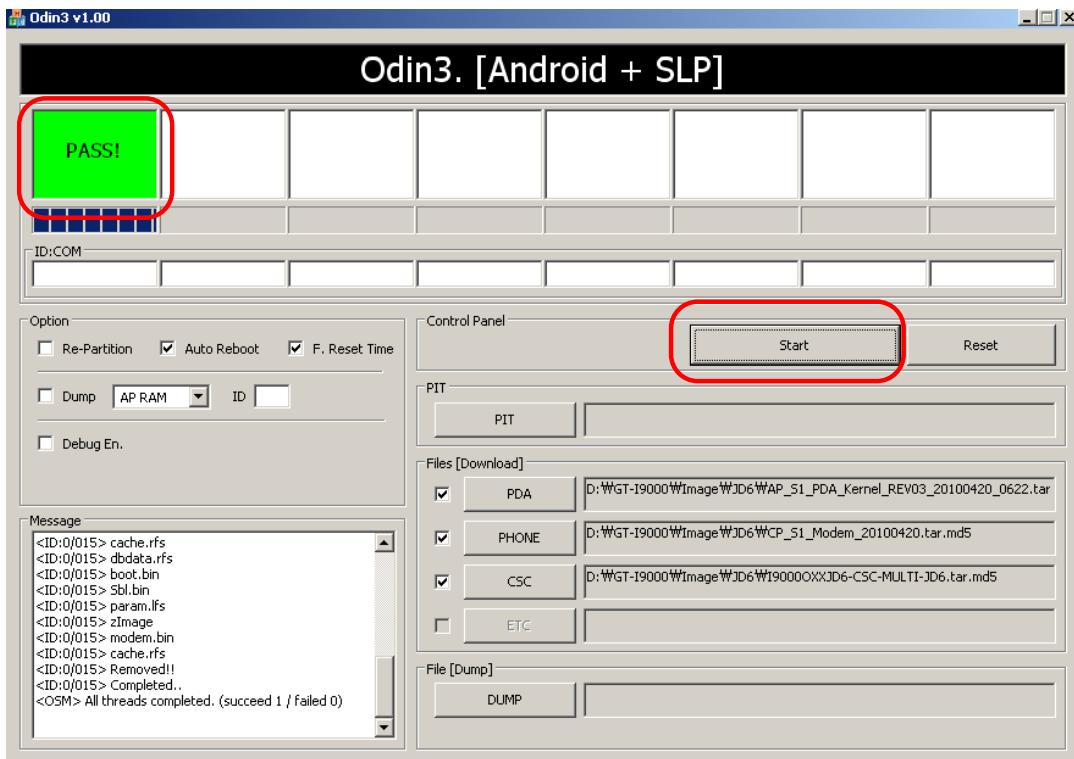


6. Click on Reset button, then unselect Re-Partition box. Then select PDA, PHONE and CSC Files.



7. Remove the battery, then enter Device into Download Mode again as in step #3. then connect to the PC.

8. Start Downloading PDA, PHONE and CSC files by clicking Start Button. Then wait for "Pass" to be appear on the screen.



9. Once the device boots up, confirm the downloaded version name and etc. :
***#1234#**

Full Reset :

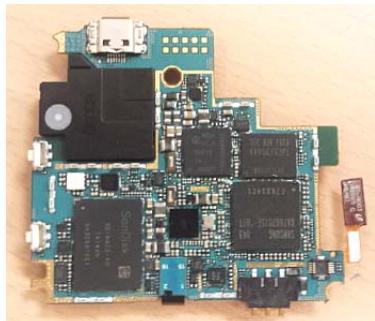
***2767*3855#**

7. Level 2 Repair

7-1. Assembly

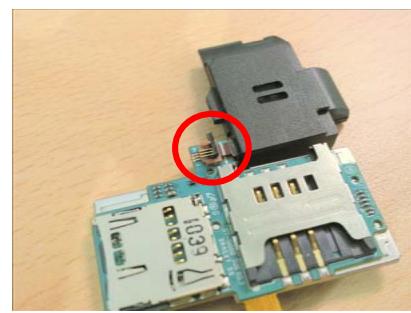
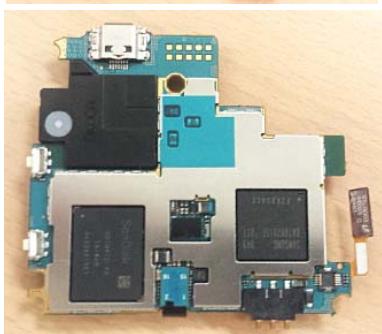
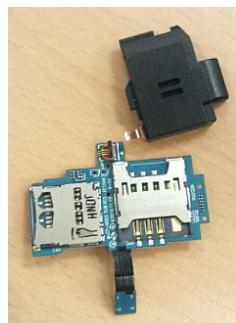
1

Place the top shield can.



2

Connect the speaker to the Sim Card PBA



Place the top shield can on the Main PBA

Connect the speaker to the Sim Card PBA by sliding FPC into the connector.

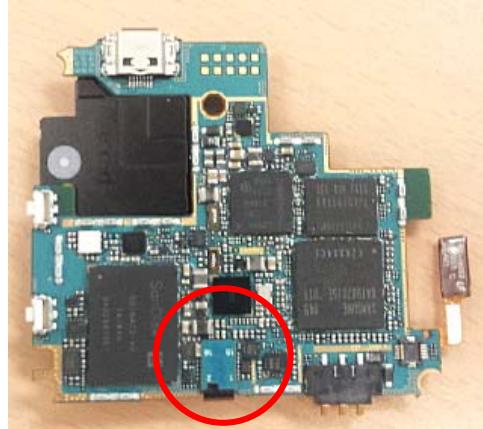
3

Place the Sim Card PBA + shield can



4

Connect the Sim Card PBA Connector



Place the bottom shield can + Sim Card PBA onto the bottom of the Main PBA. Make sure that the speaker locks into position and the shield can to be place correctly into the clips.

Connect the sim card PBA connector to the top of the main PBA.

5 Place the top shield can



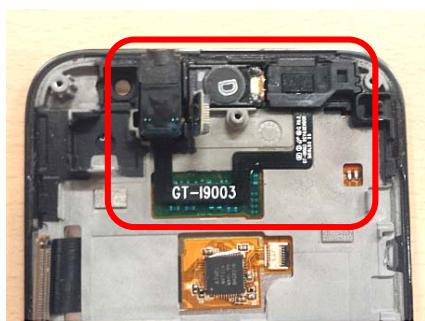
6 Place the camera module



Place the top shield can on the top of the main PBA

Connect the camera module to the Main PBA

7 Place the Receiver Module



8 Connect the Antenna Cable



Place the receiver module onto the bracket.

Connect the antenna cable to the Main Antenna PCB

9

Place the Main PBA

**10**

Connect LCD, Sub-touch key, Antenna and Receiver connectors and place the Power key



Place the main PBA onto the bracket. Make sure to place the camera module into the socket correctly.

Connect LCD, Sub-touch key, Antenna and Receiver connectors, and place the Power key to the side of the bracket

11

Place the rear cover

**12**

Screw the rear cover



Make sure all the hooks are placed correctly, and press the volume keys and the power key for tensions.

Screw 7 points on the rear cover
screw torque : 1.2 ~ 1.4 kgf.cm

7-2. Disassembly

1 Unscrew screws on the rear



2 Unhook the rear using a disassembly knife to remove the rear cover



Unscrew 7 screws on the rear using a screw driver.
screw torque : 1.2 ~ 1.4 kgf.cm

Be careful not to damage the rear cover when unhooking it.

3 Detach the Power Key FPCB



4 Disconnect connectors from the Main PBA



Detach the power key FPCB, that is stick to the bracket by a double-sided tape, using tweezers. Make sure to remove all remaining tape on the bracket.

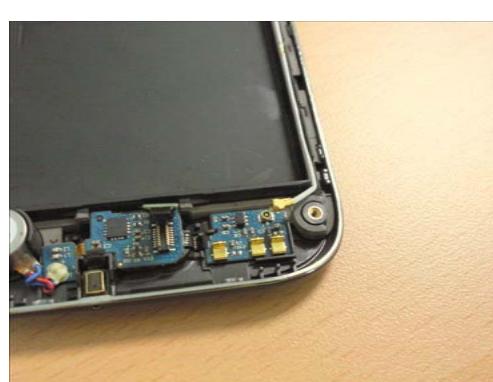
Disconnect LCD Connector, Receiver Connector, Sub-touch Key Connector and Antenna cable from the Main PBA

5

Pull out the Main PBA

**6**

Remove the Antenna Cable

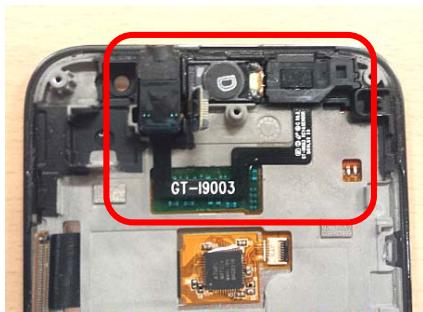


After disconnecting the connectors carefully pull the Main PBA out of the bracket.

Remove the antenna cable from the main Antenna PCB on the sub-touch key module.

7

Remove the top shield can

**8**

Remove the Camera Module

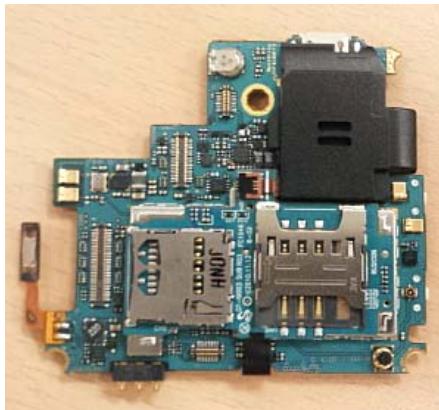


Pull out the Receiver module from the bracket. Be careful not to damage the FPC.

Remove the camera module from the Main PBA by pulling it out.

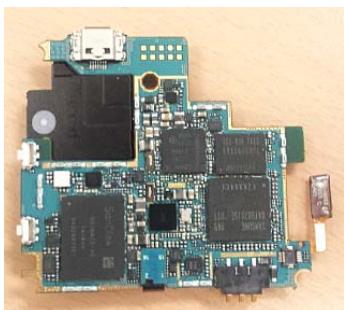
9

Pull out the Main PBA



10

Remove the top shield can

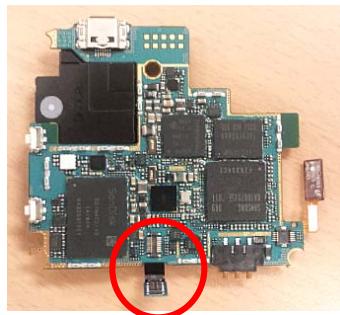


After disconnecting the connectors carefully pull the Main PBA out of the bracket.

Be careful not to damage the shield can and the components when removing it.

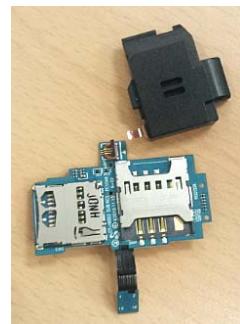
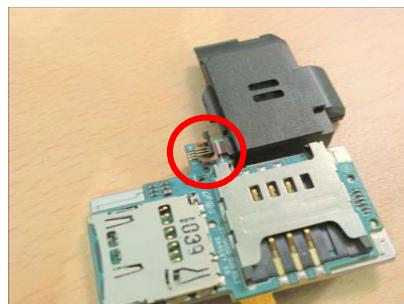
11

Remove the rear shield can + Sim Card PBA



12

Remove the speaker

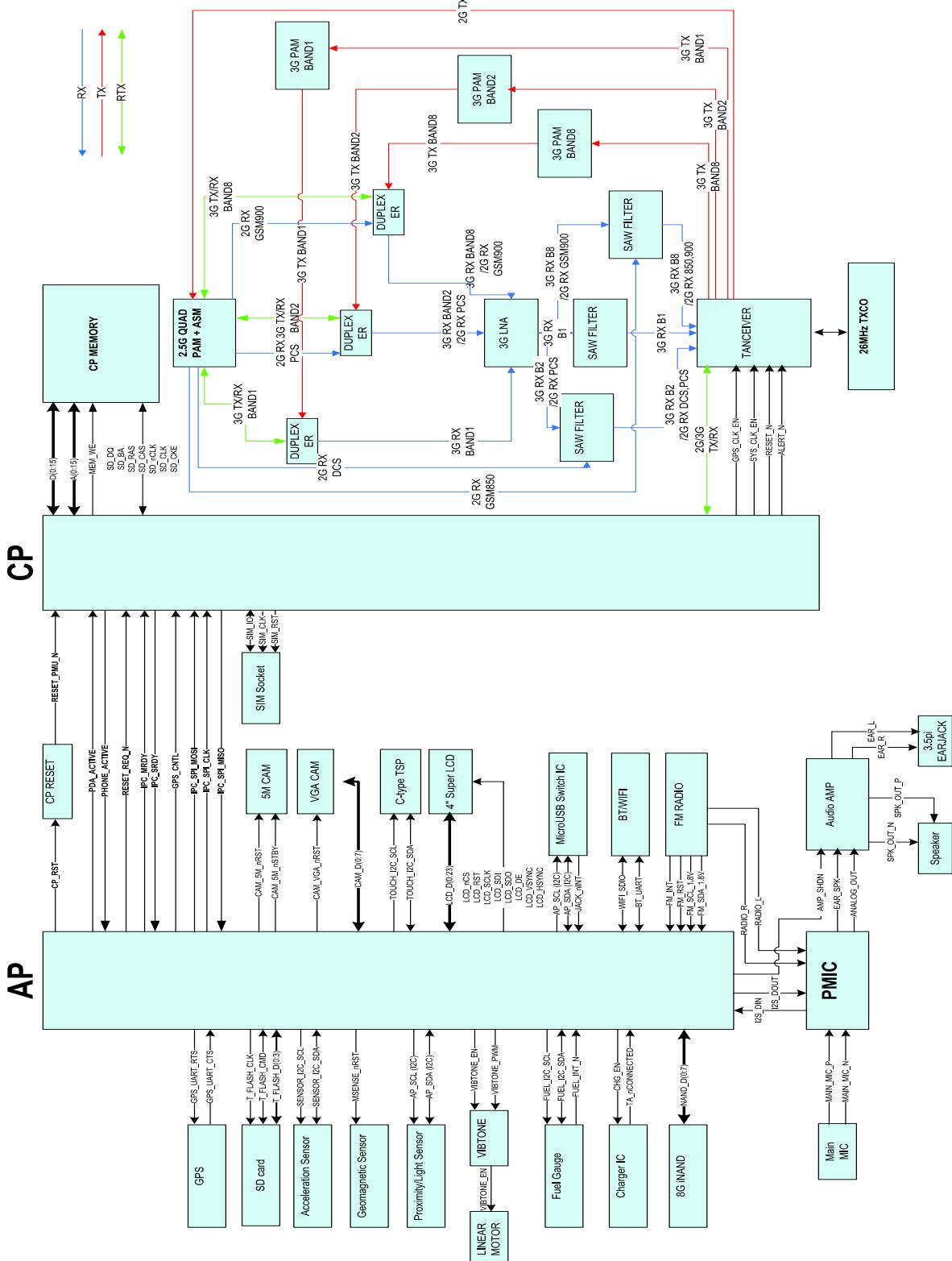


Disconnect the Sim Card PBA connector from the Main PBA then remove the rear shield can + Sim Card PBA

Remove the speaker by opening the connector.

8. Level 3 Repair

8-1. Block Diagram



8-2. PCB Diagrams

8-2-1. Top

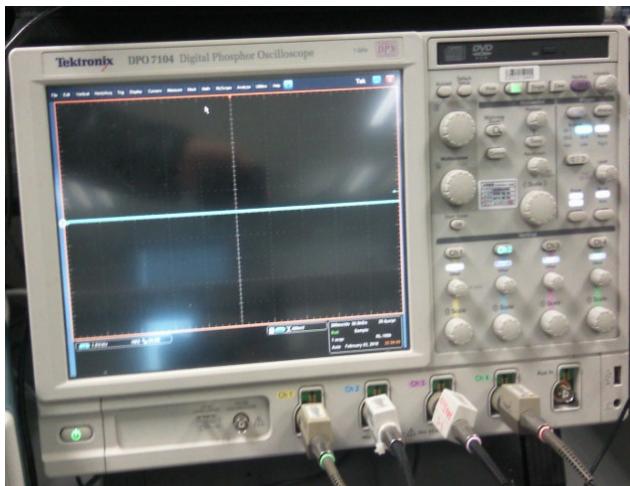


8-2-1. Bottom



8-3. Flow Chart of Troubleshooting

Equipments



↑ Oscilloscope



↑ Digital Multimeter

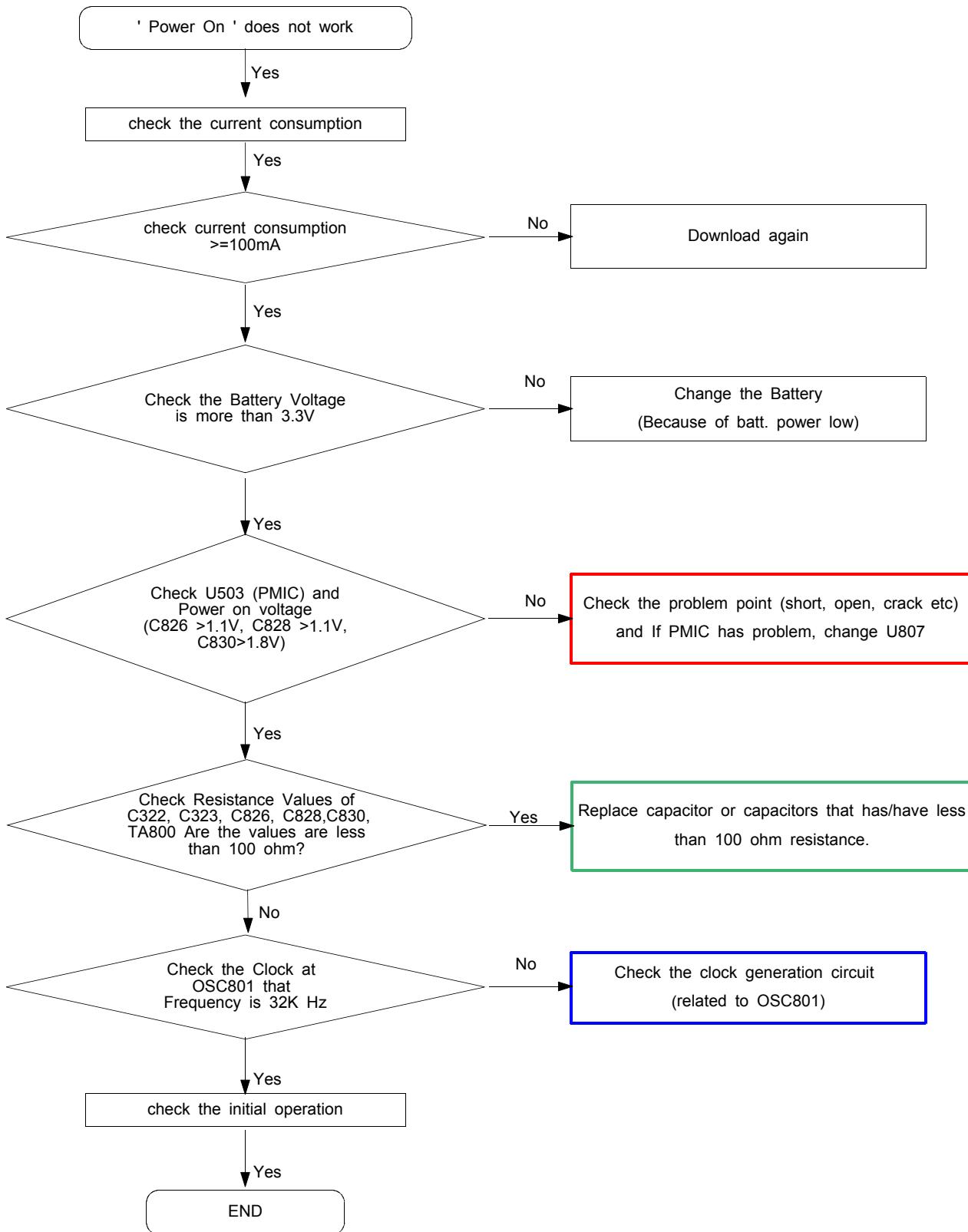


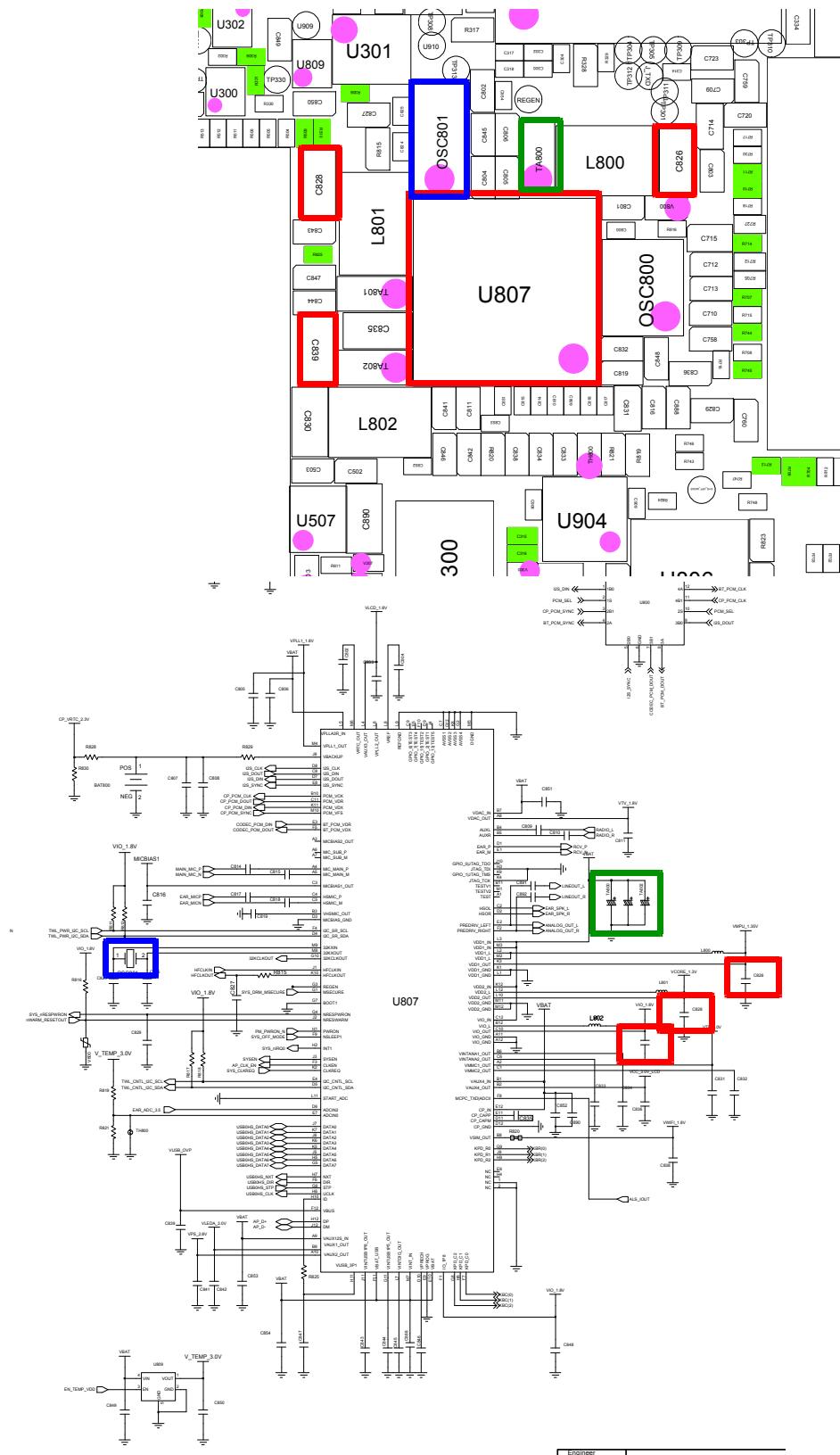
↑ Power Supply

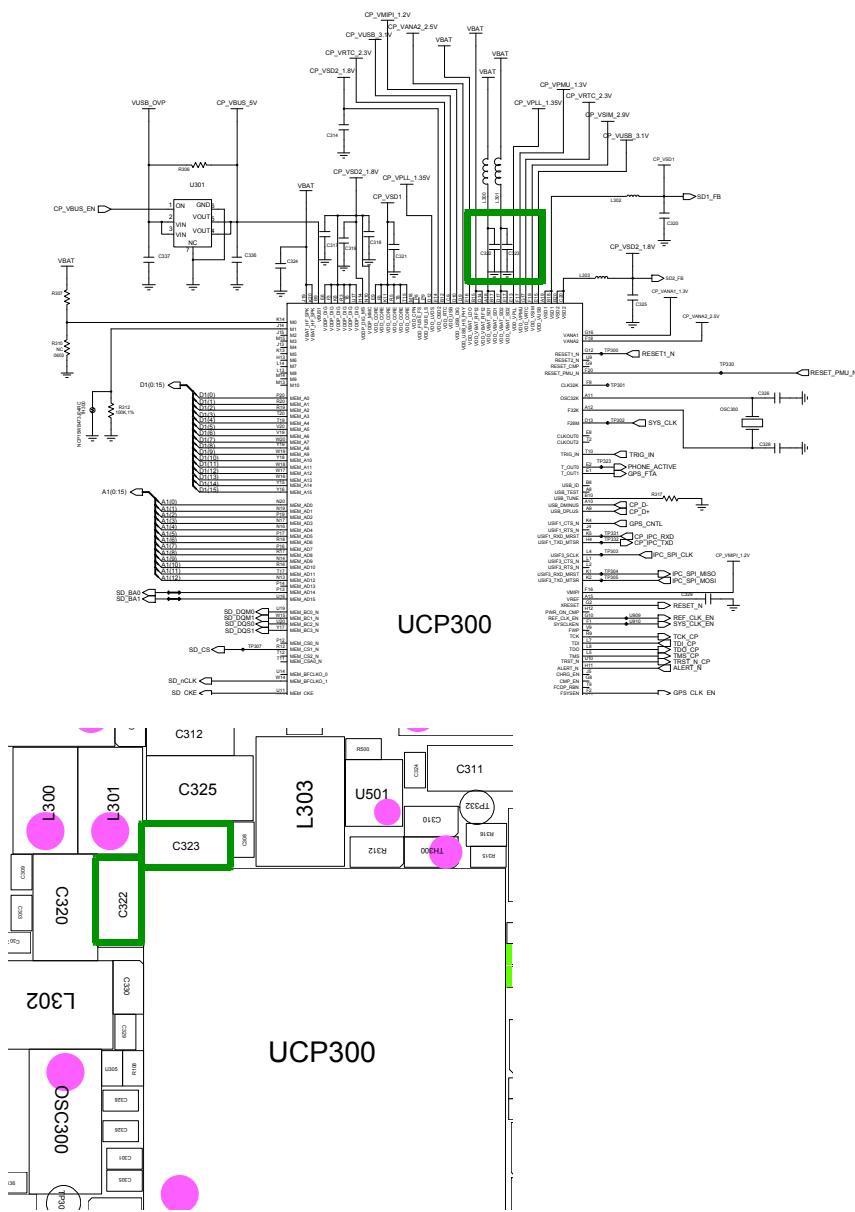


↑ + driver, Tweezer

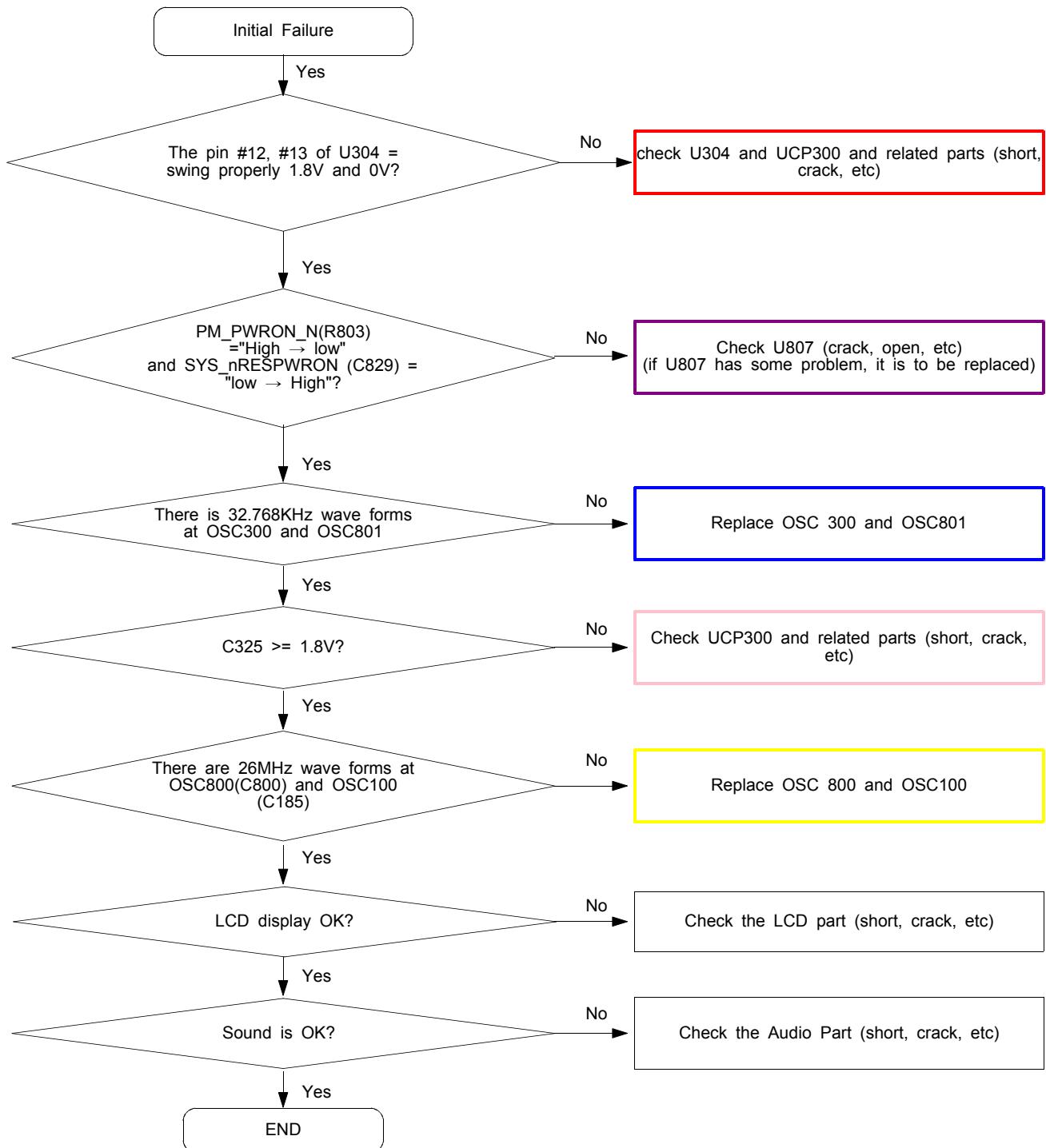
8-3-1. Power On

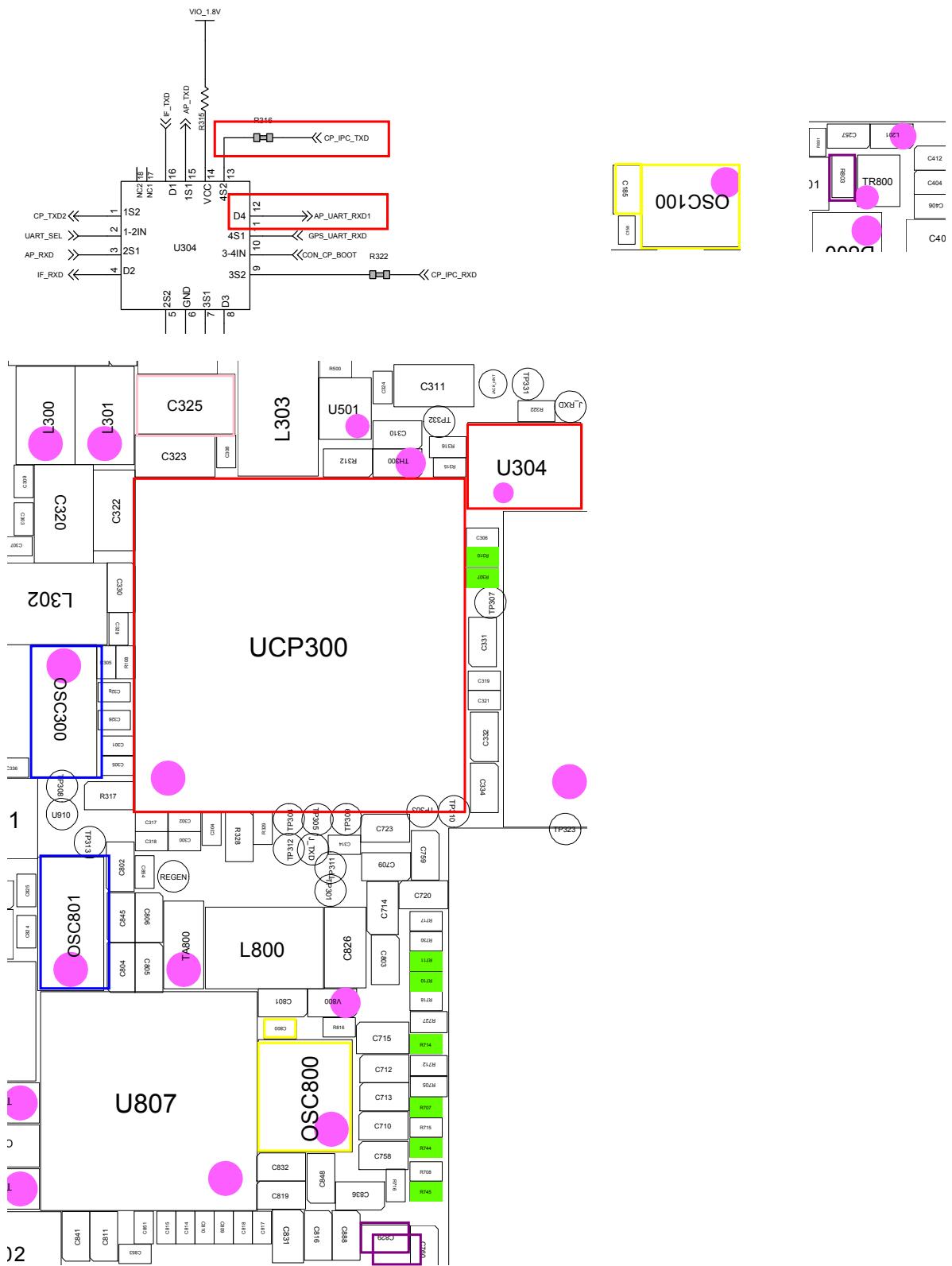




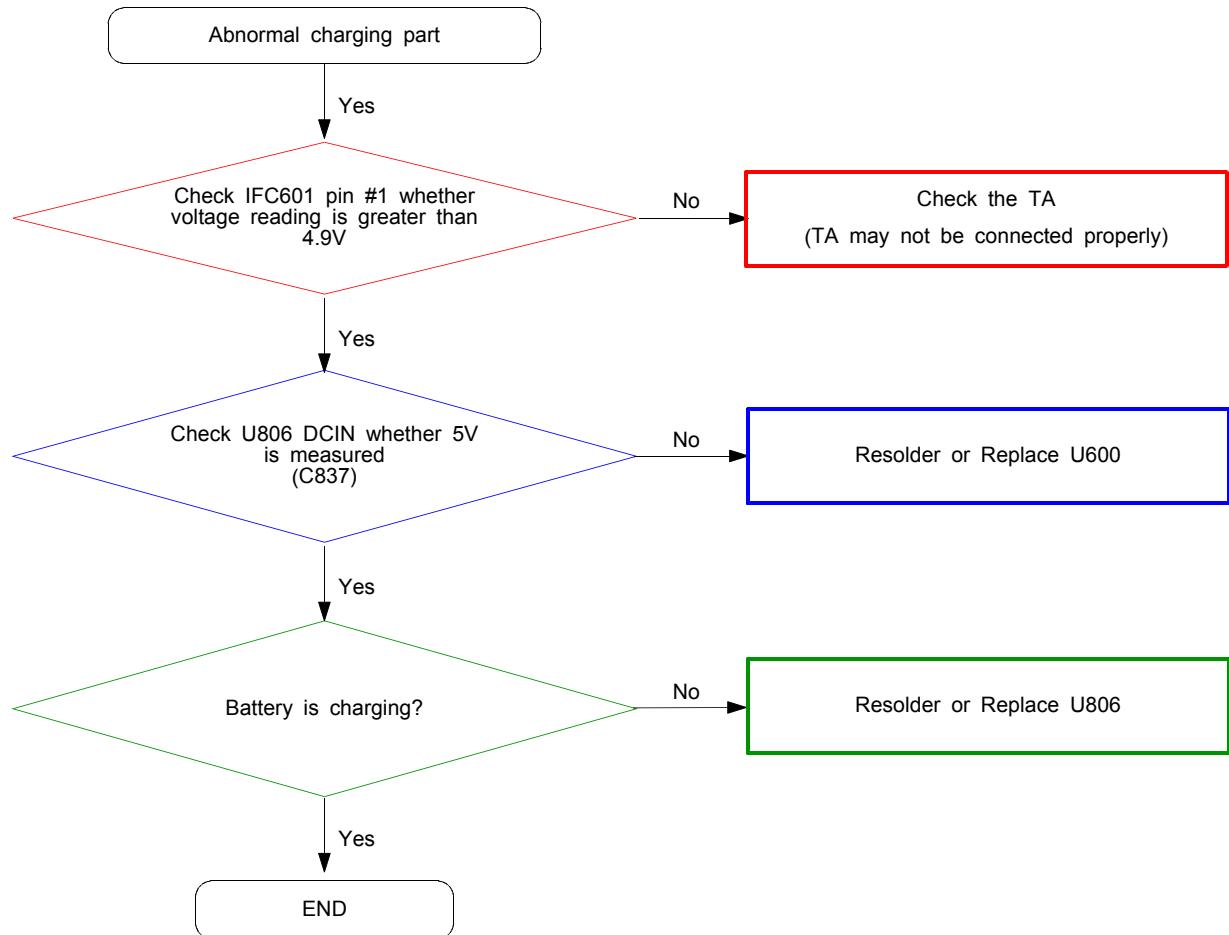


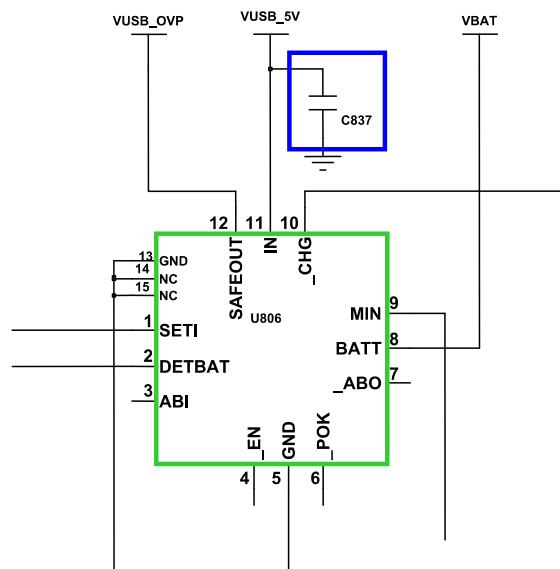
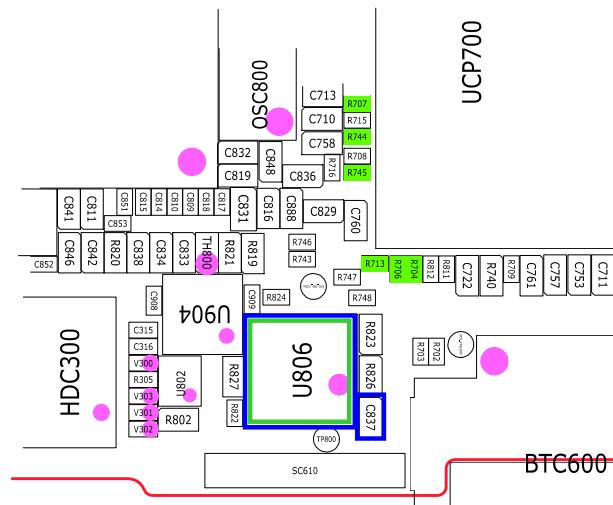
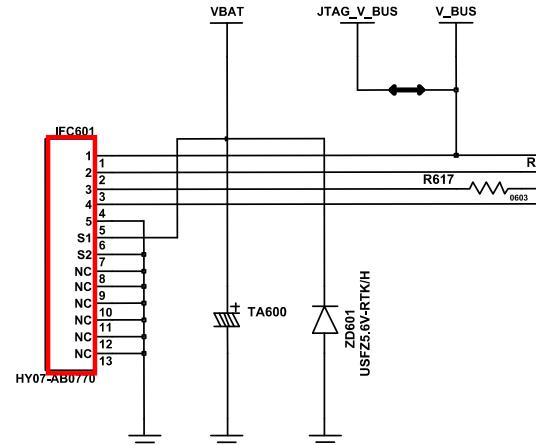
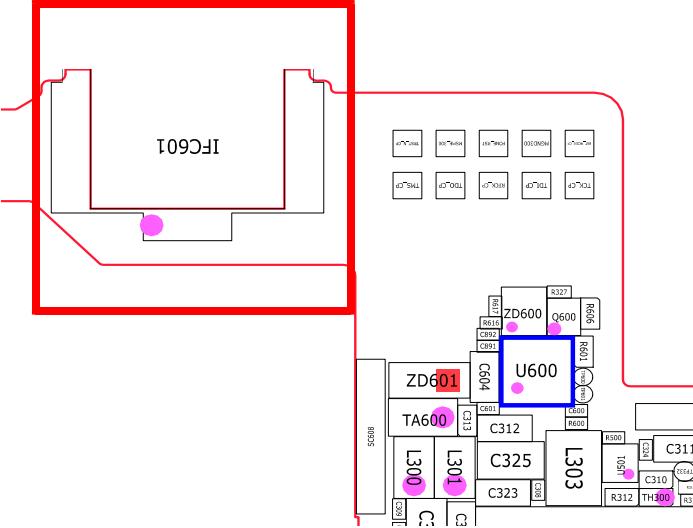
8-3-2. Initial



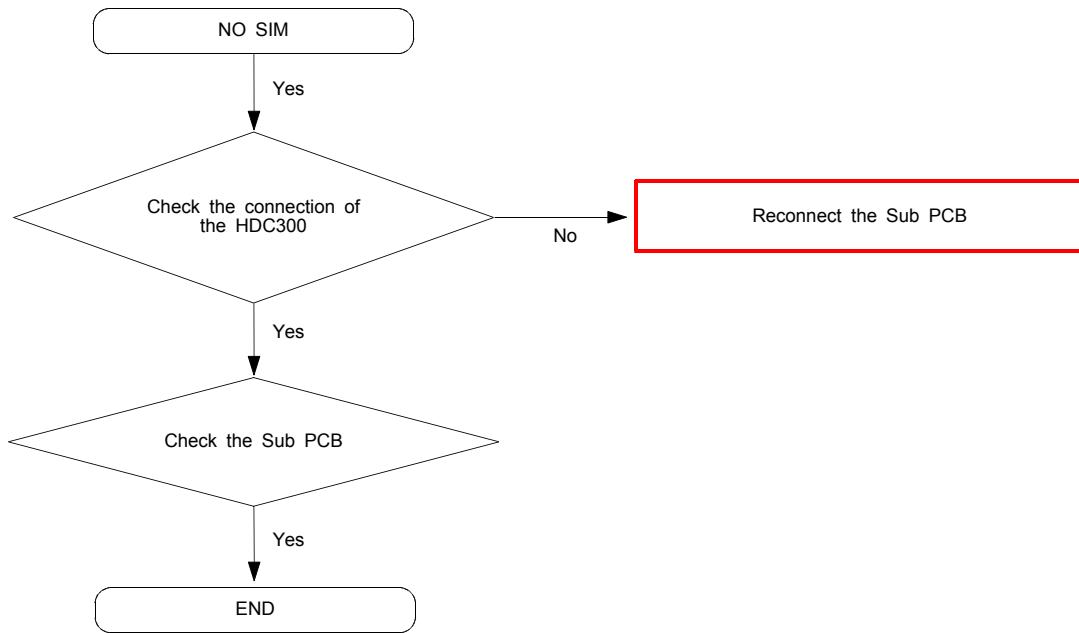


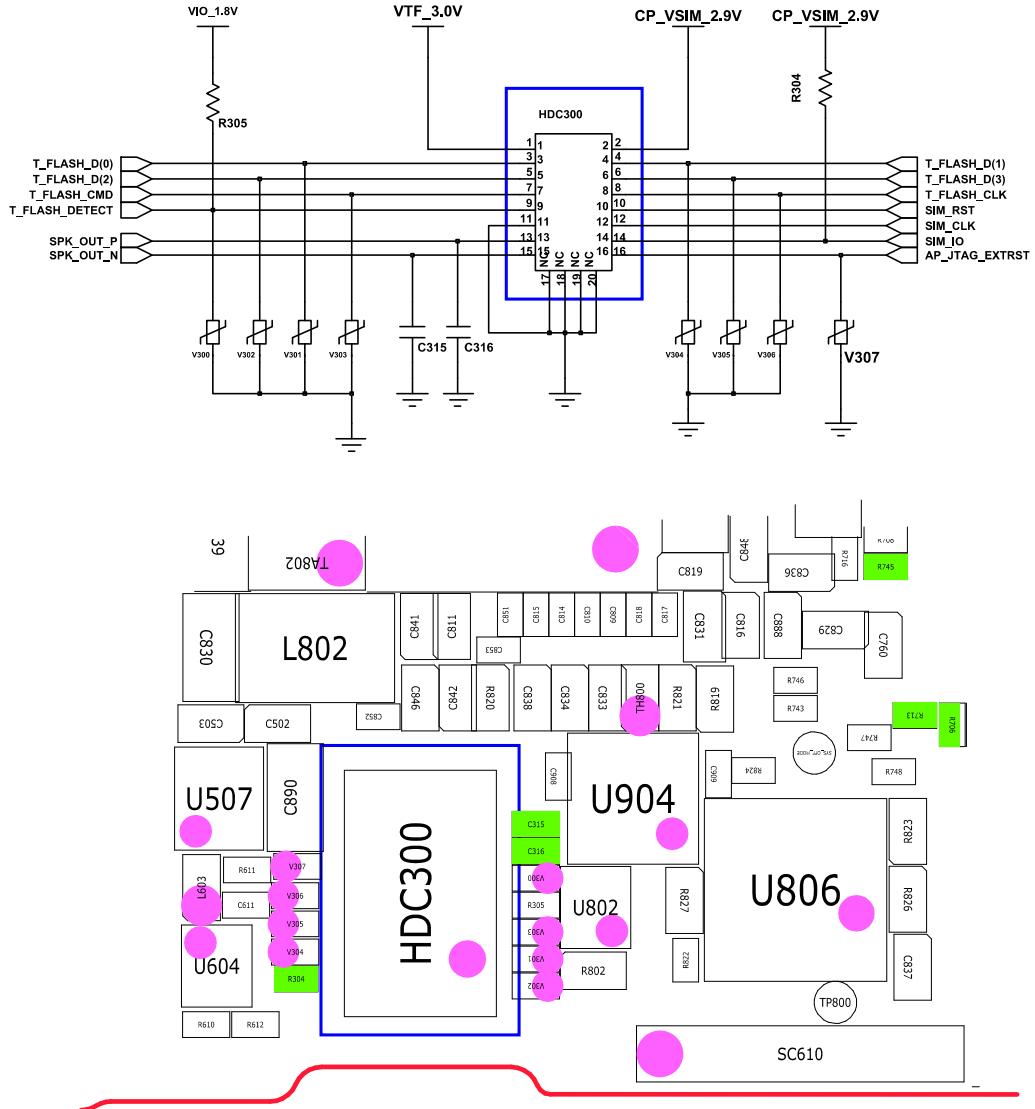
8-3-3. Charging Part



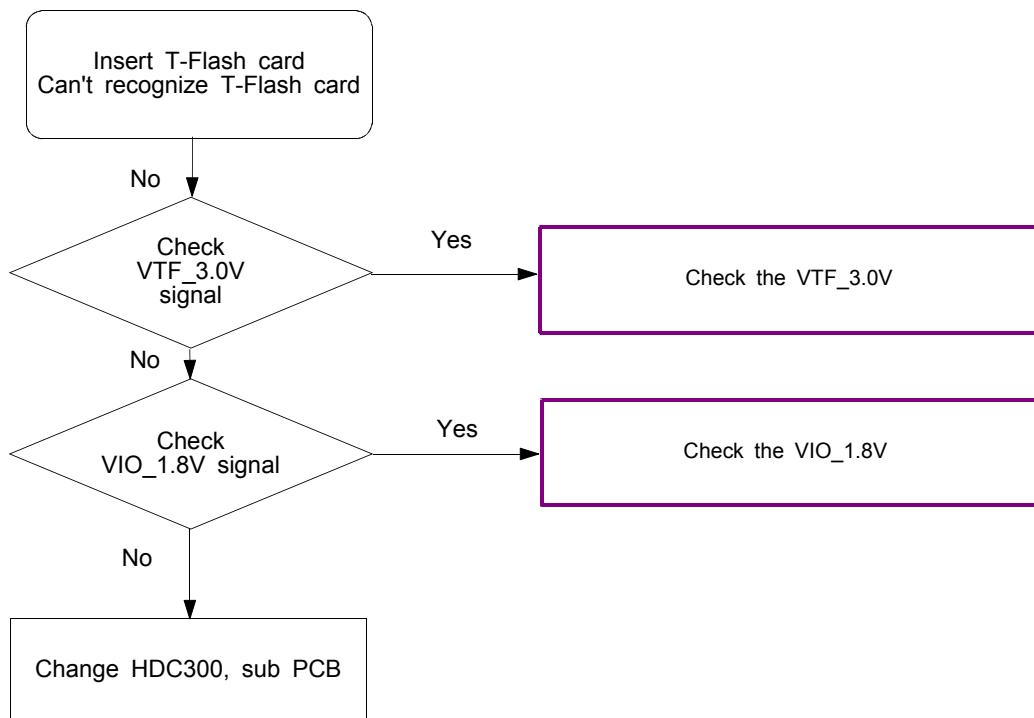


8-3-4. Sim Part

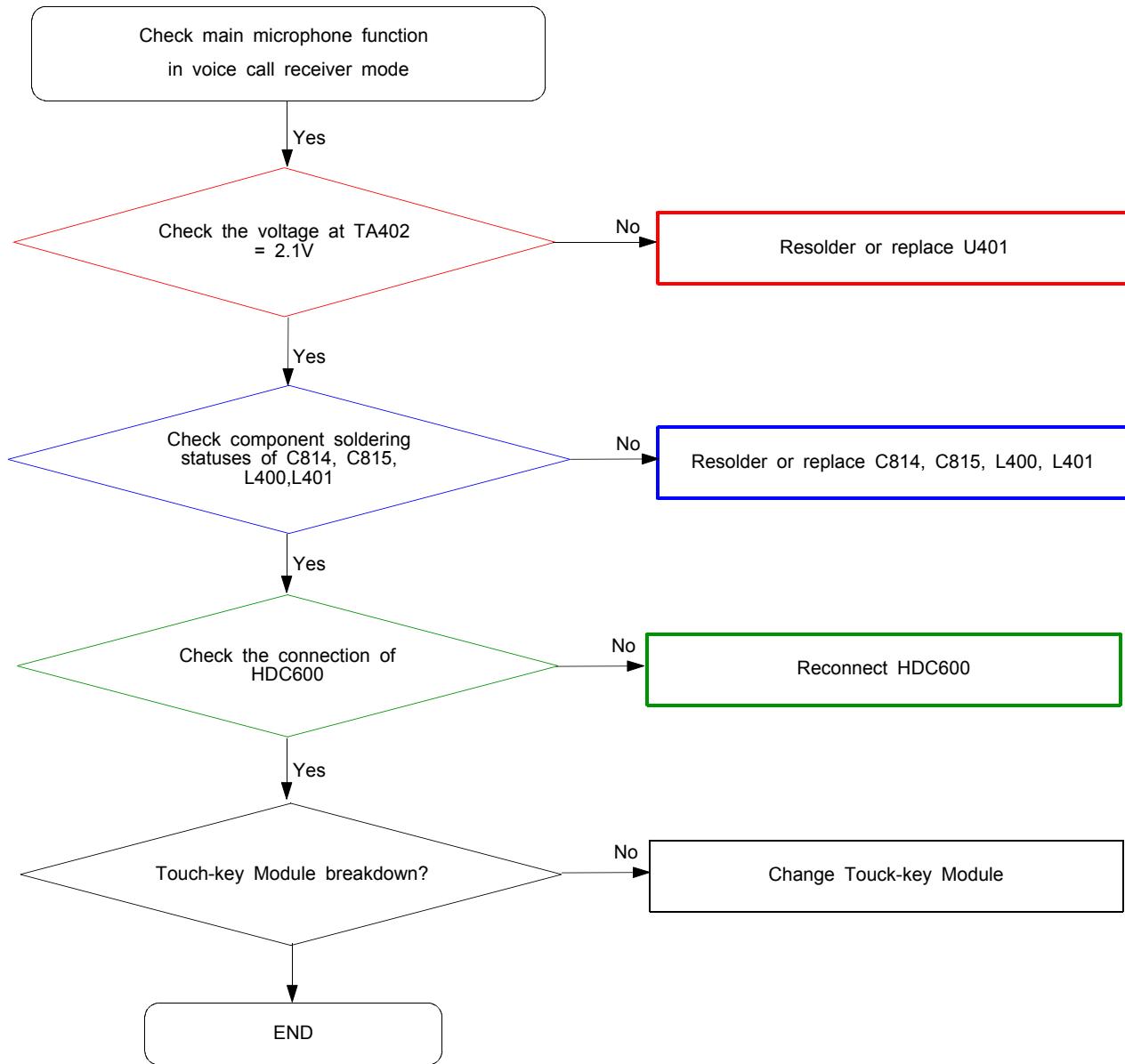


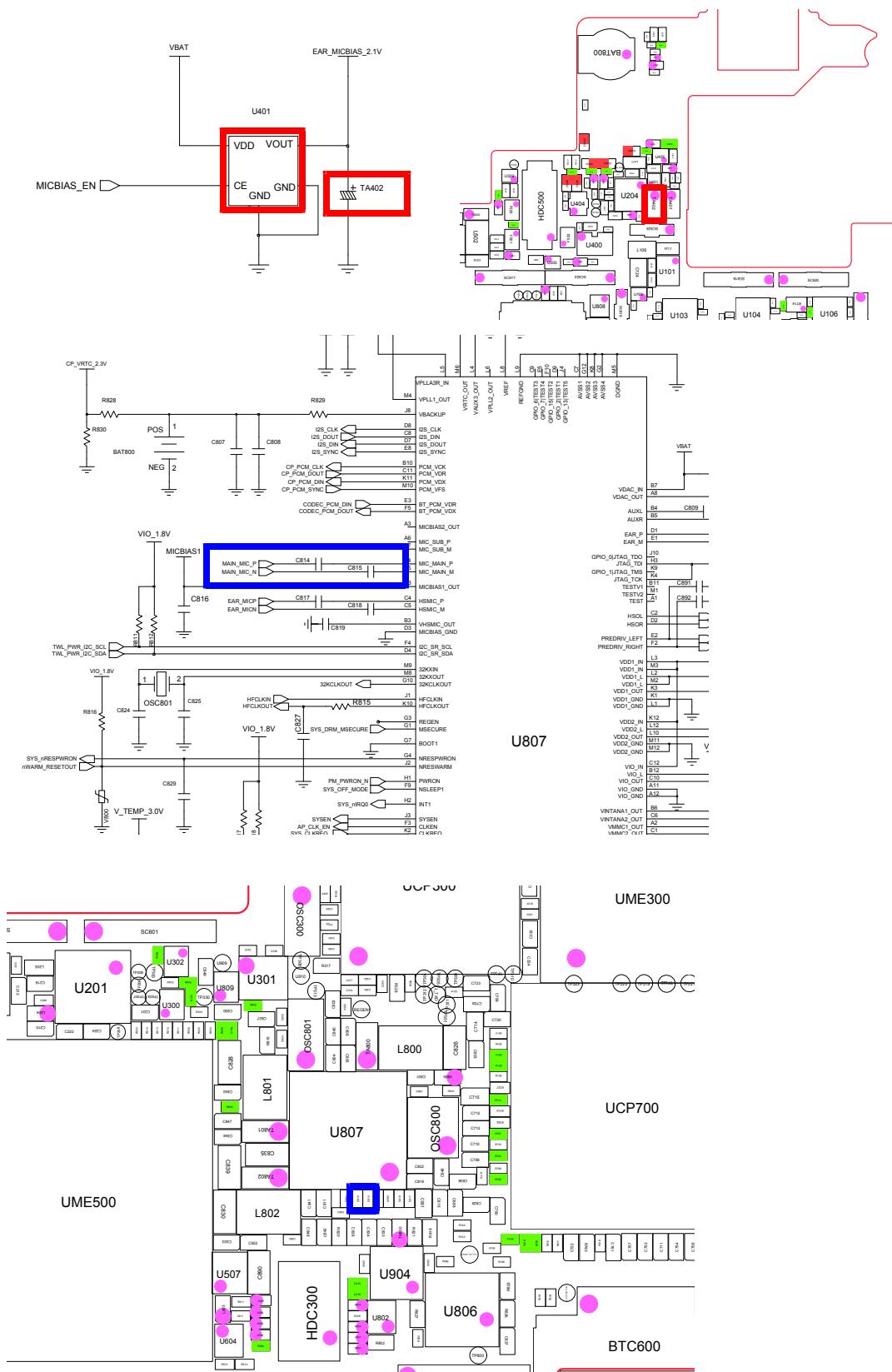


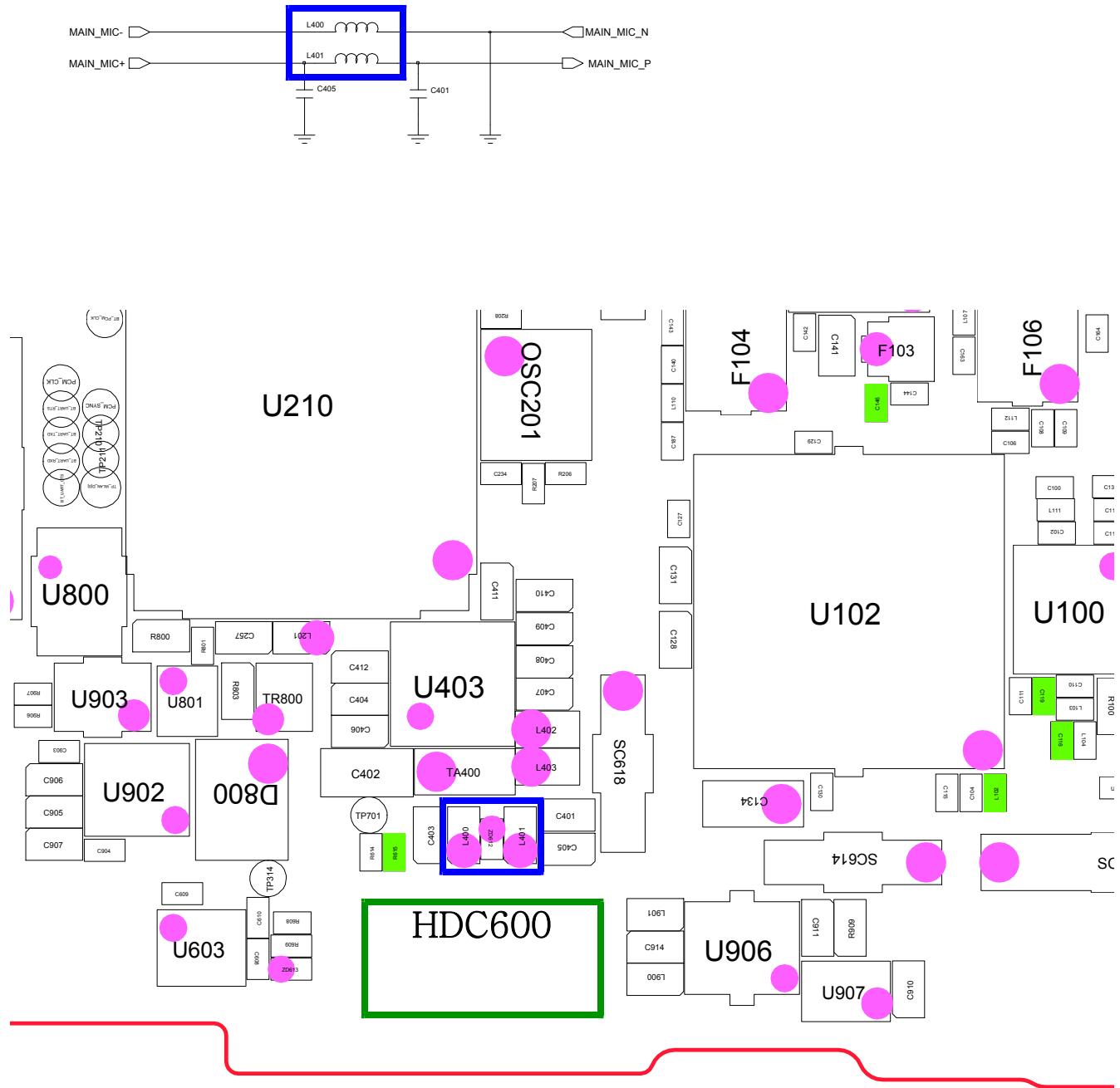
8-3-4 T-Flash



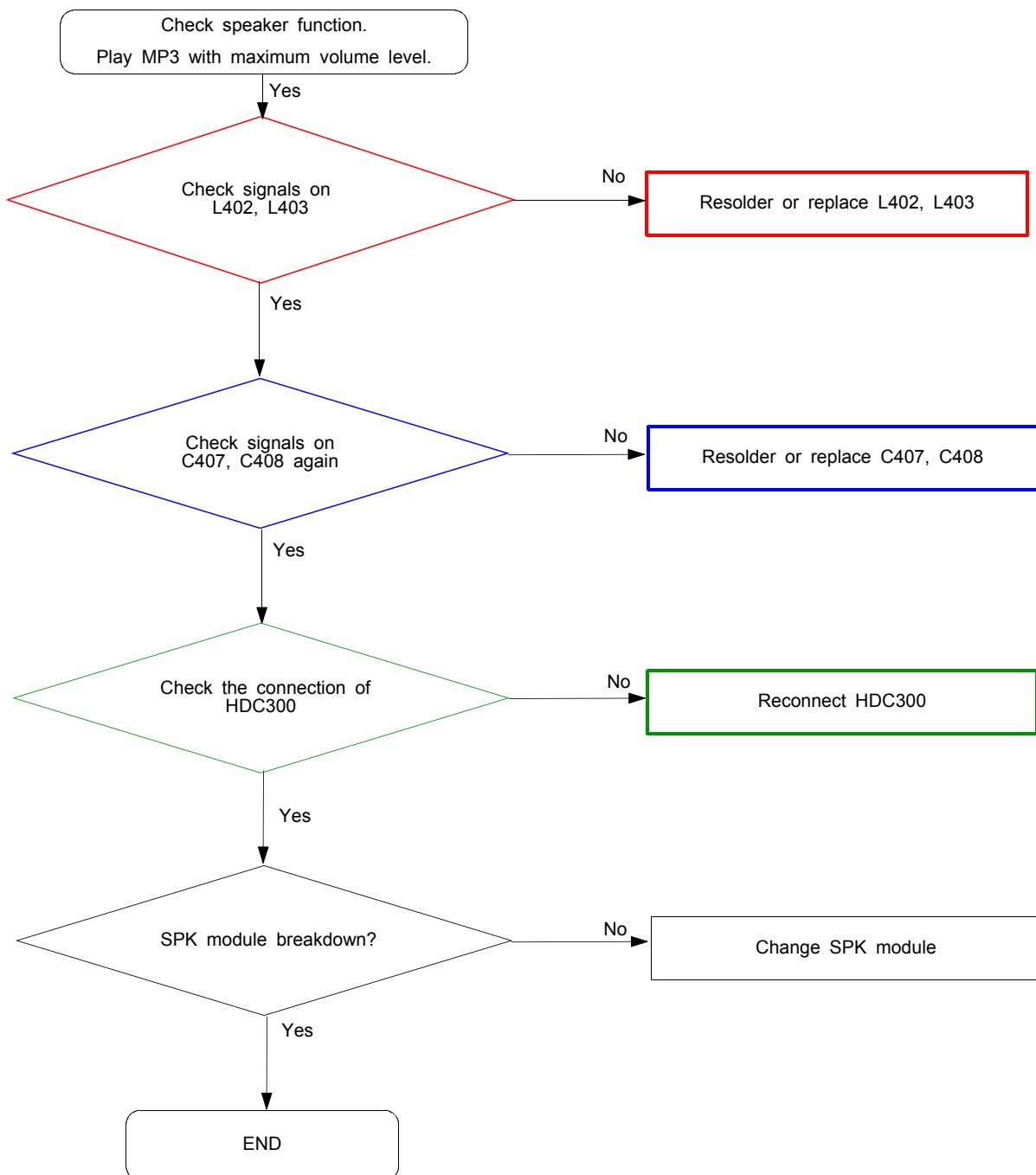
8-3-5. Microphone Part

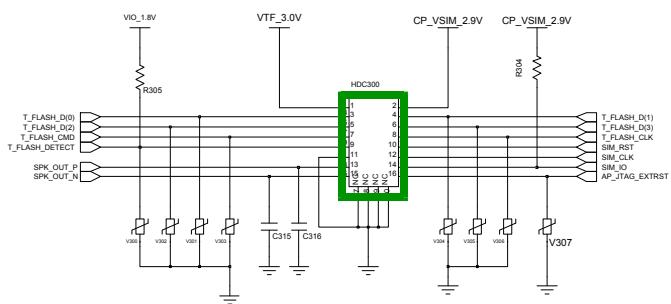
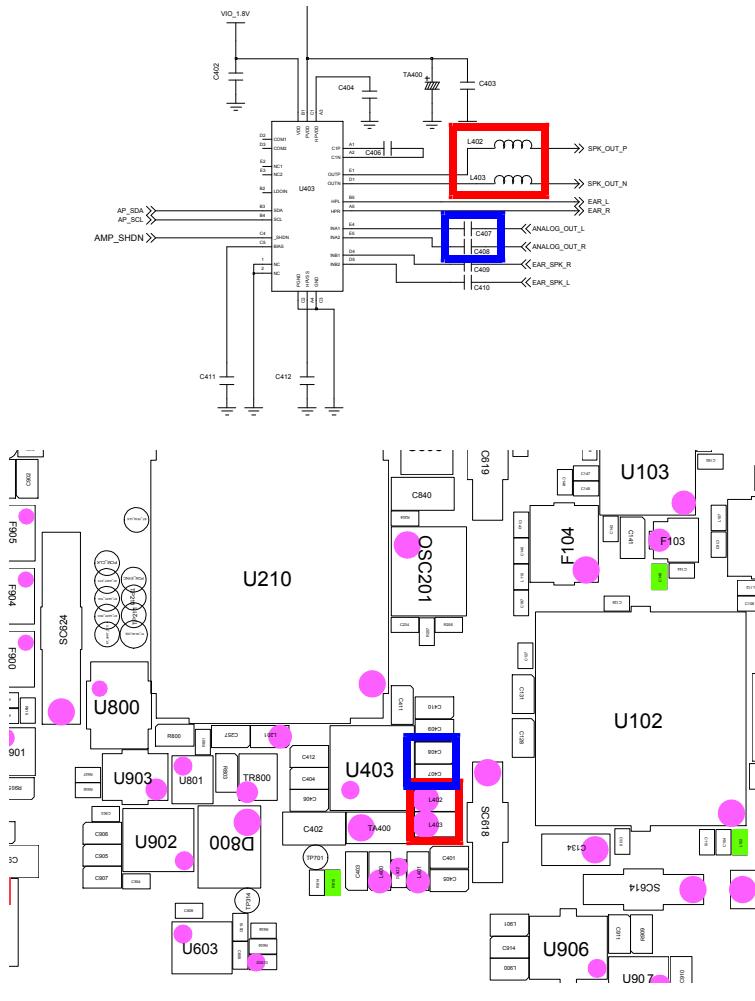




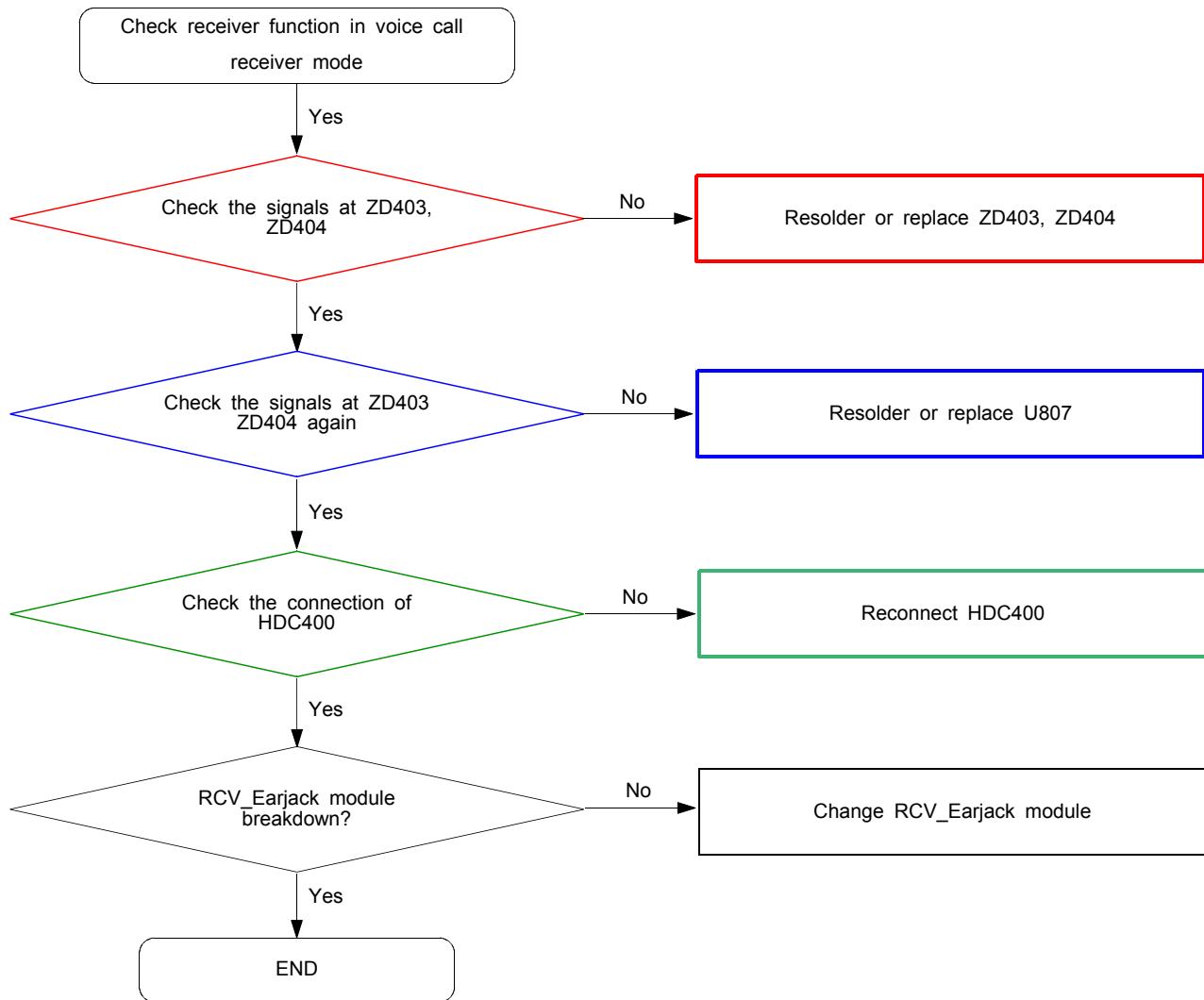


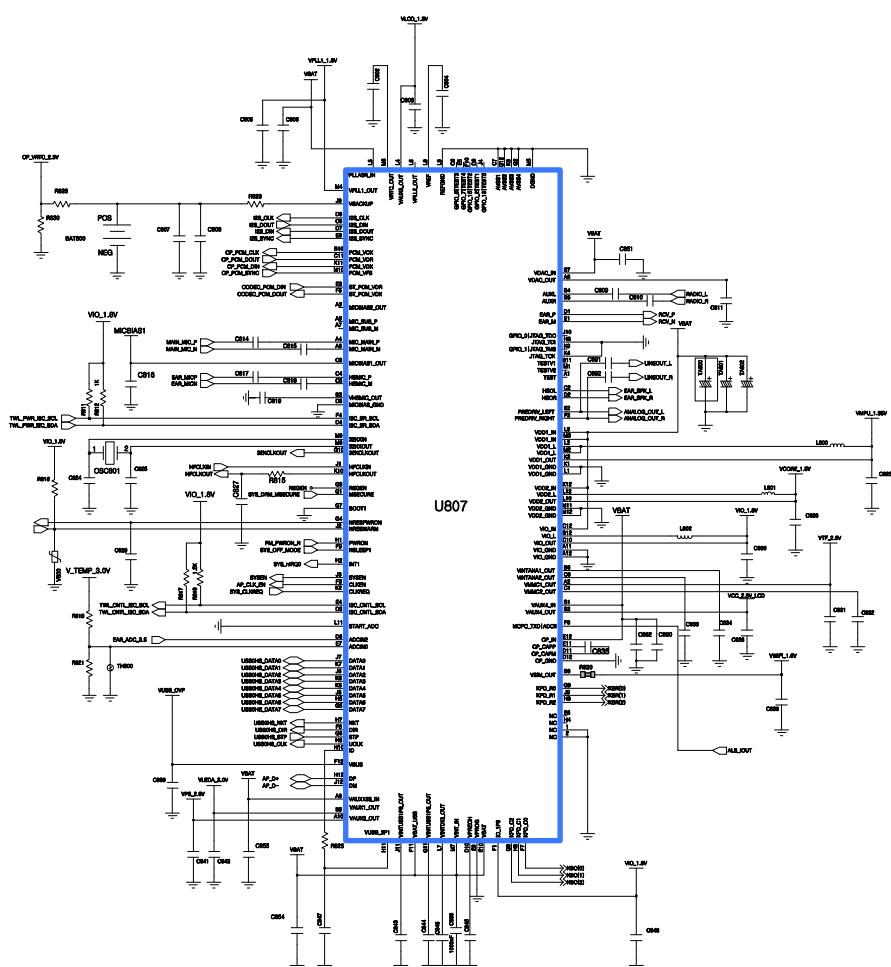
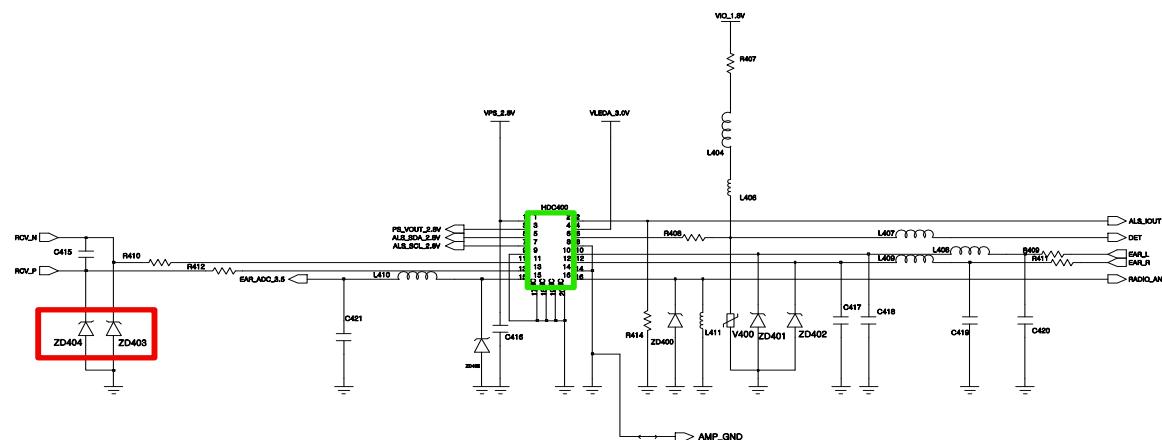
8-3-6. Speaker Part

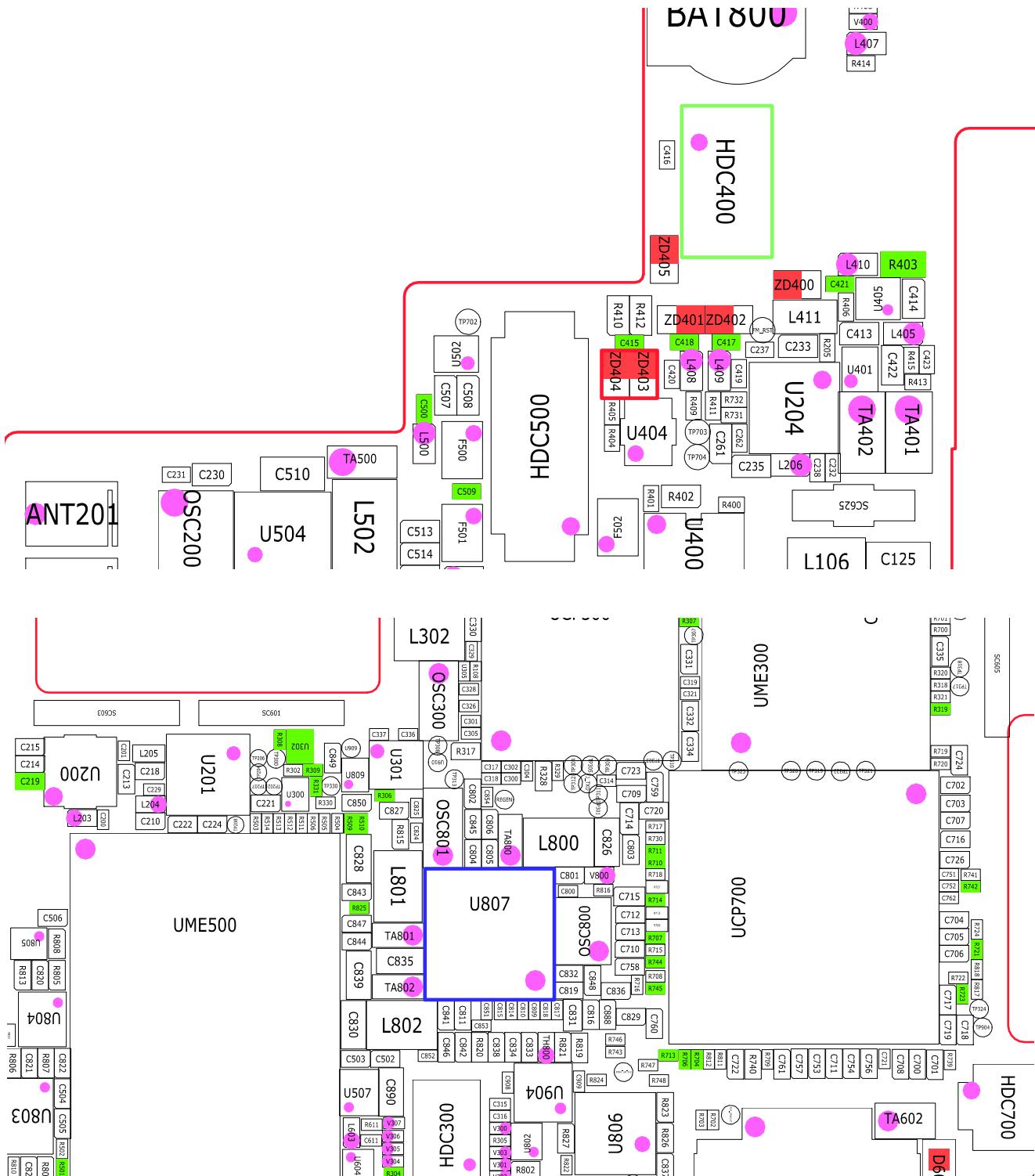




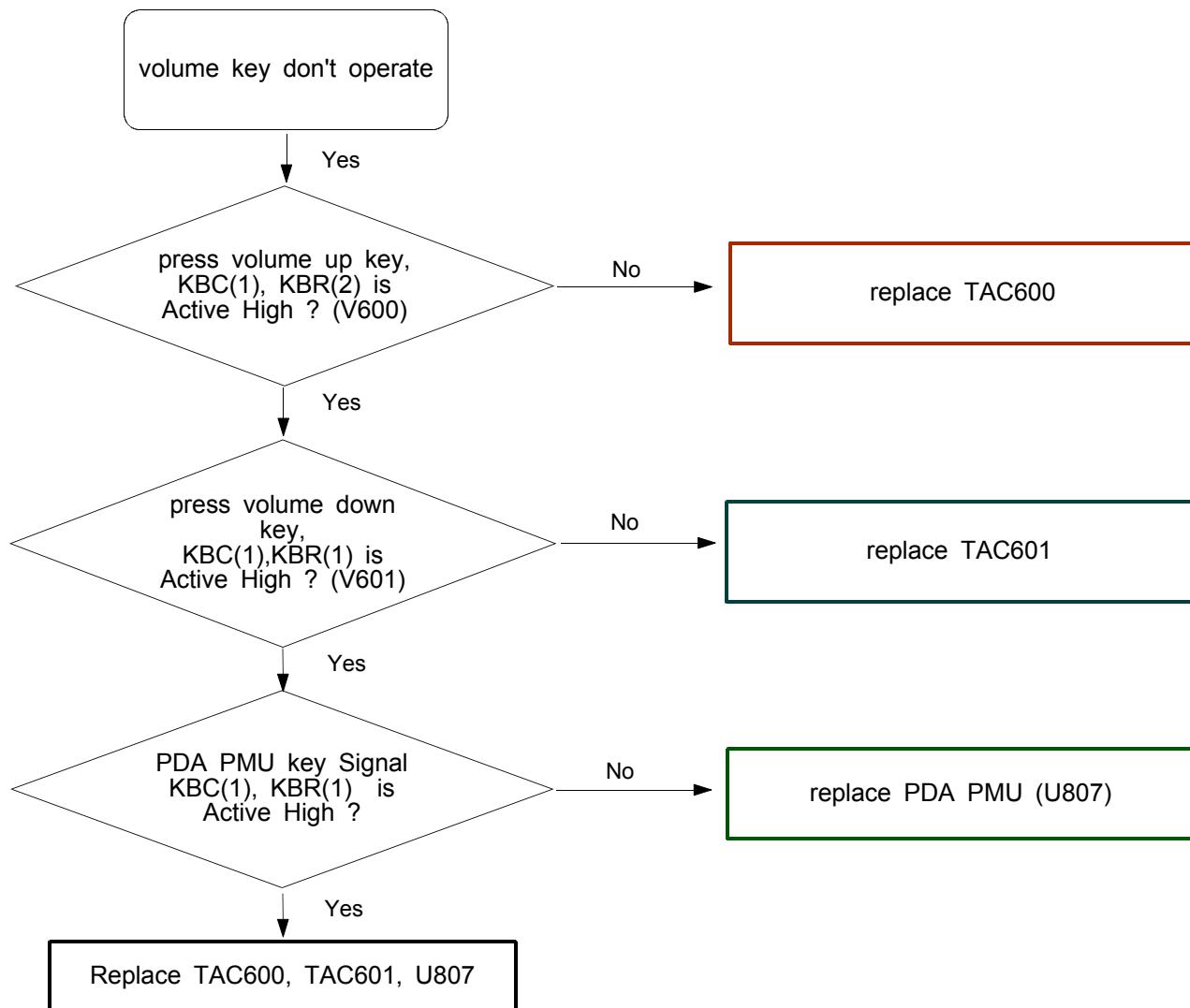
8-3-7. Receiver Part

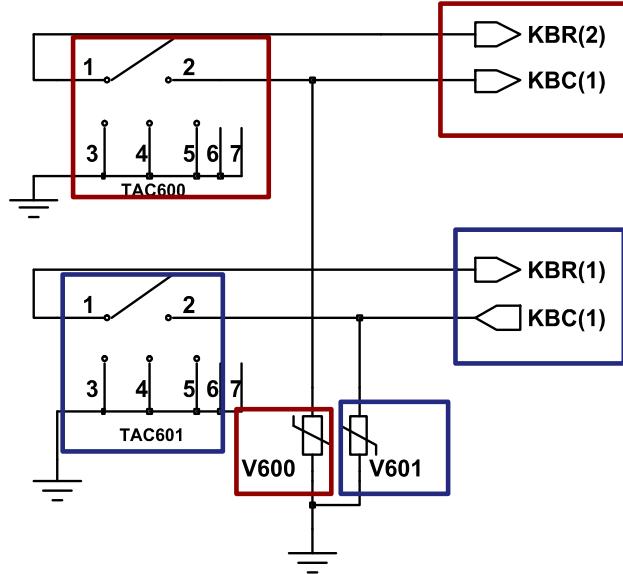




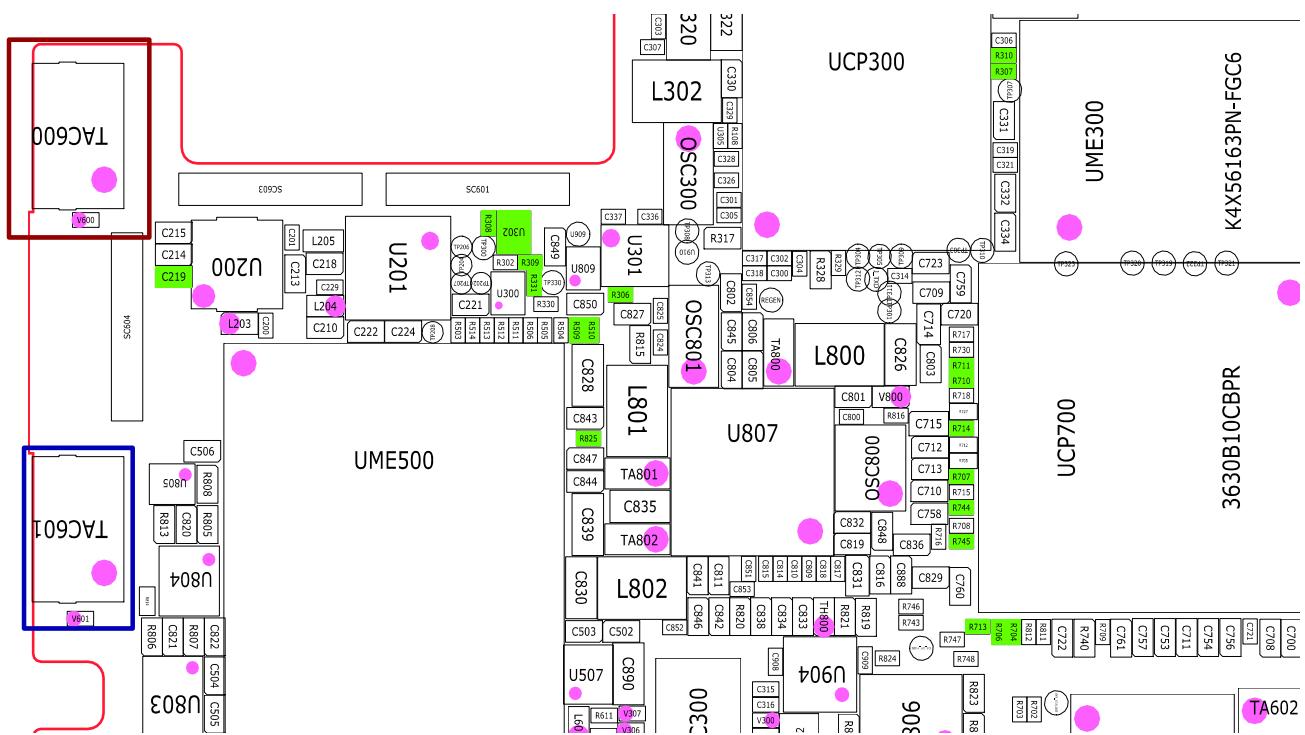


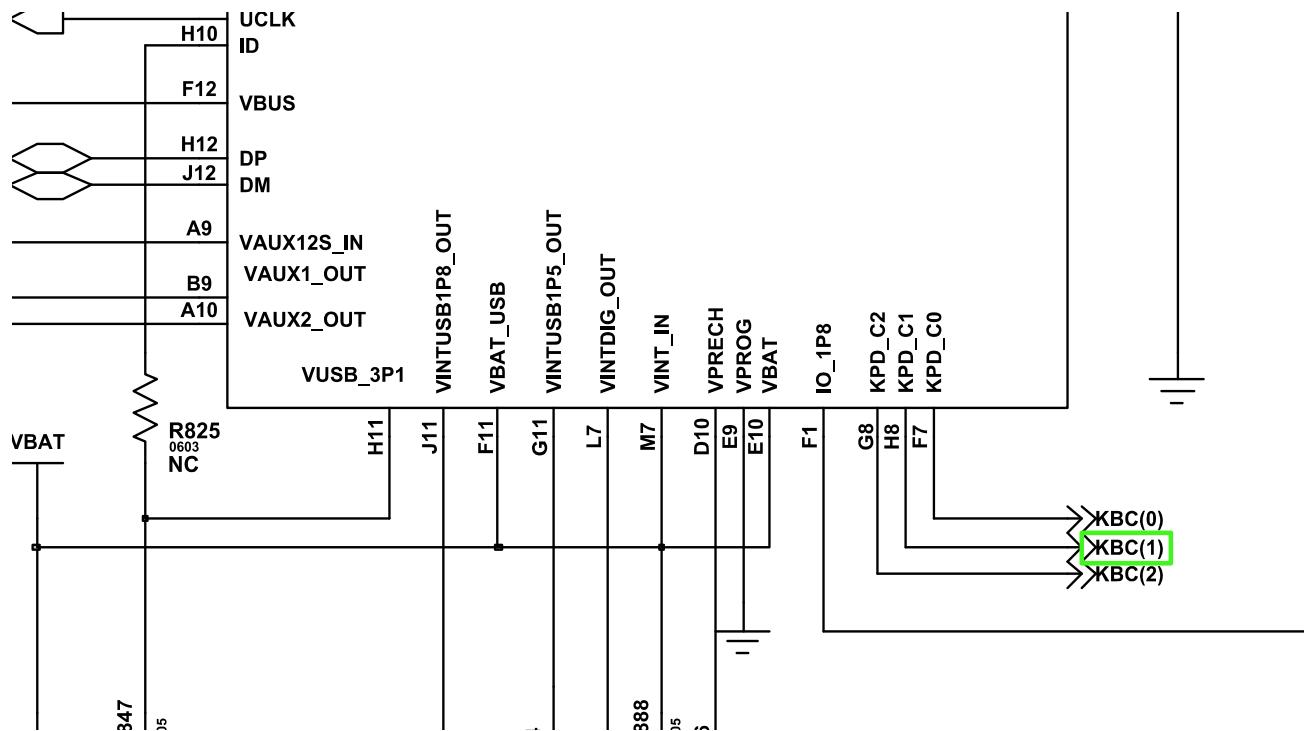
8-3-8. KEY Function (volume key/ power key / touch key)

- volume key

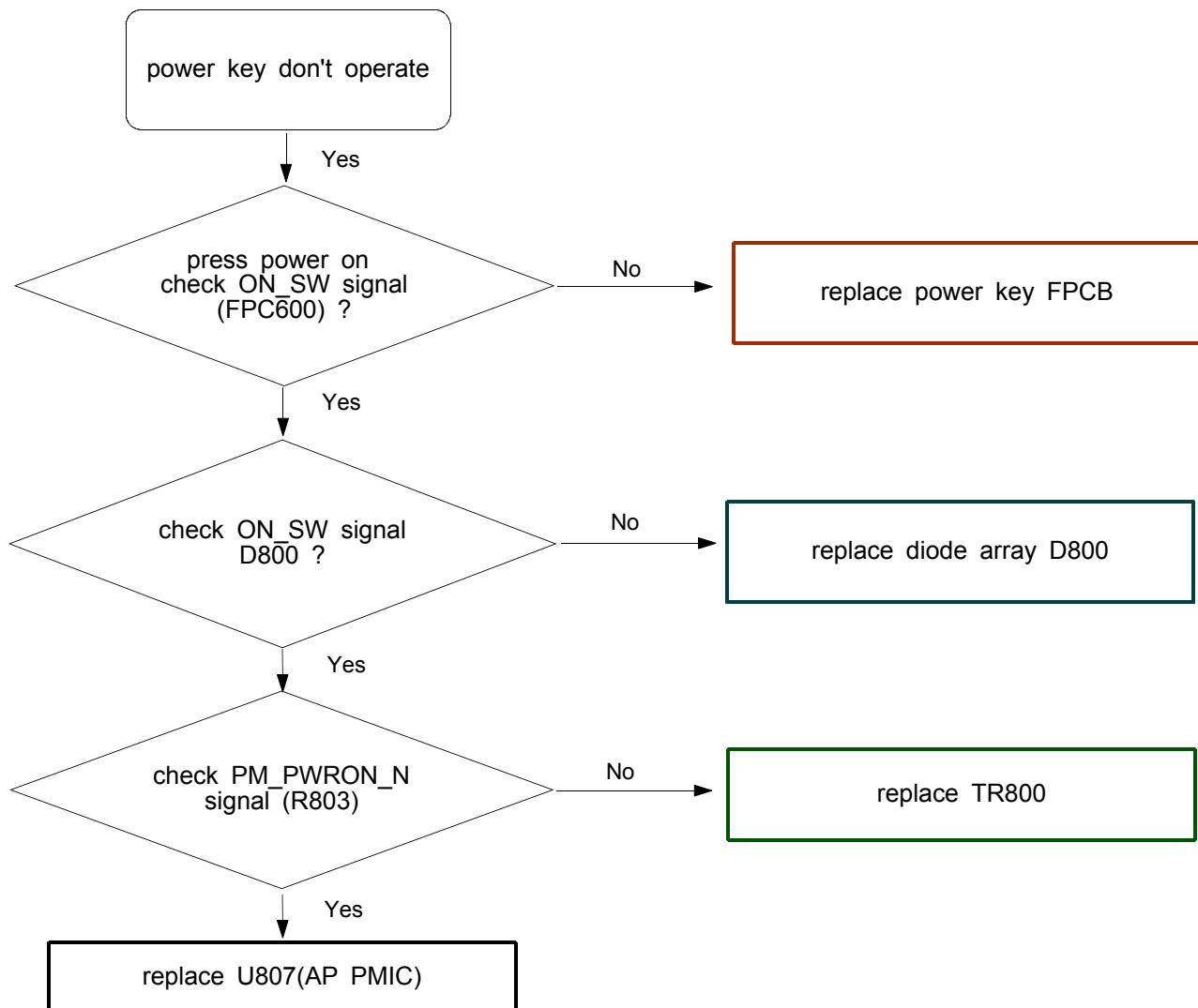


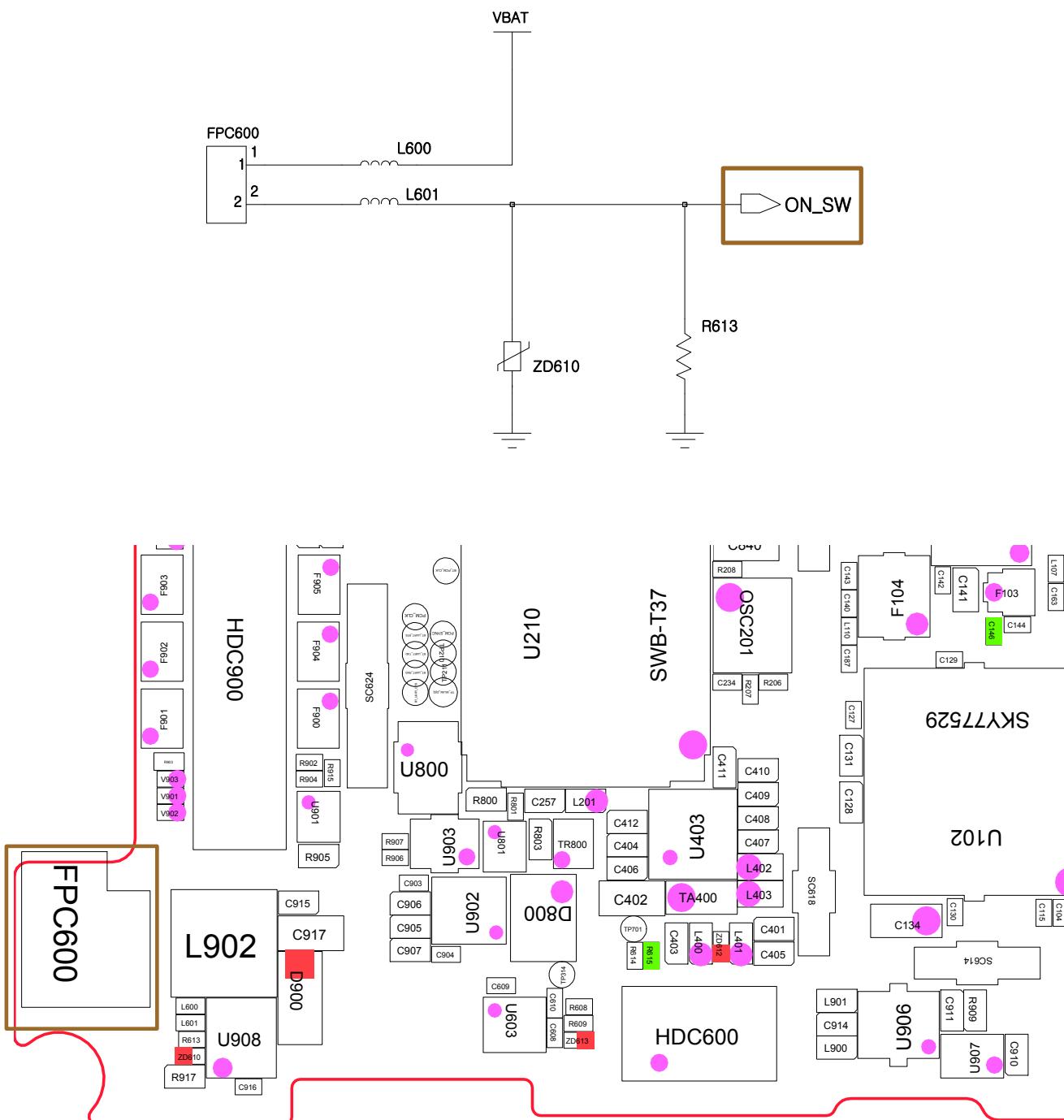
VOLUME KEY

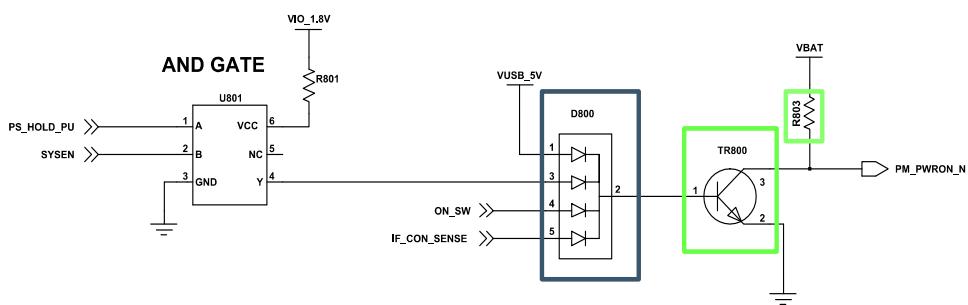




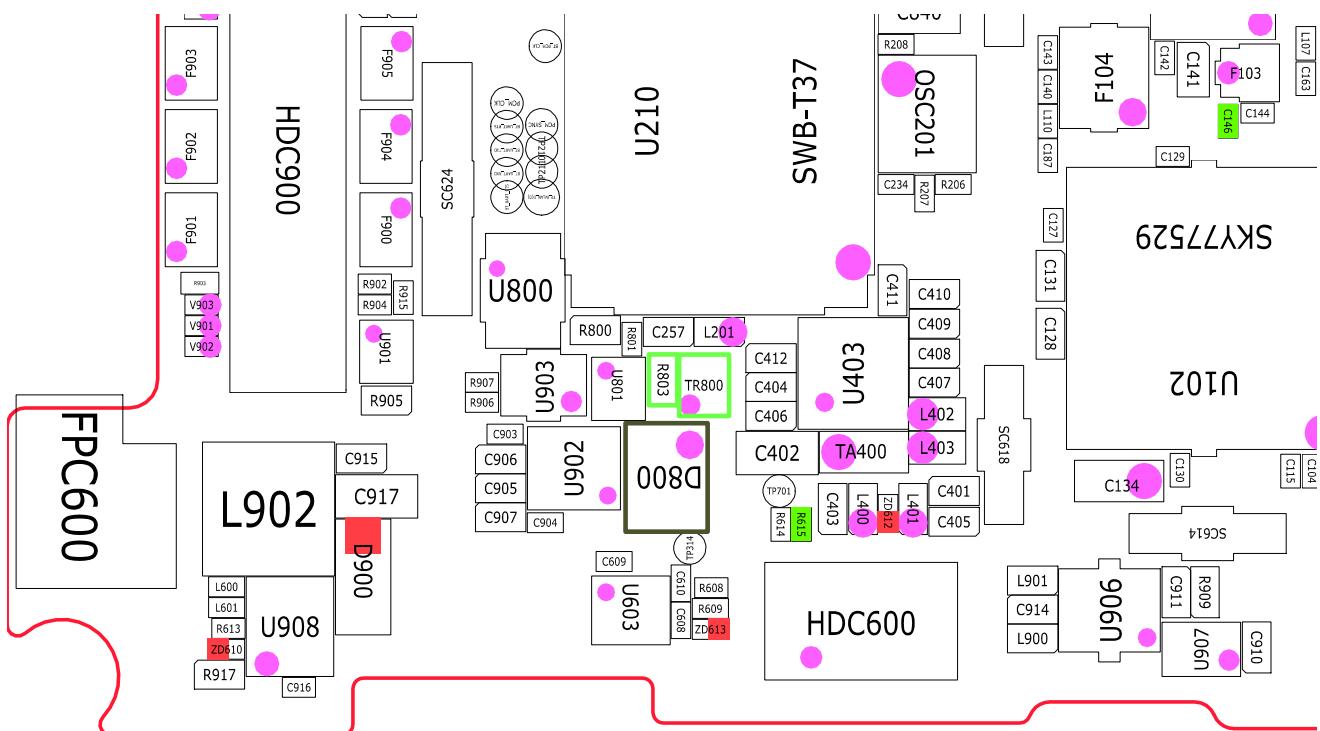
- power key



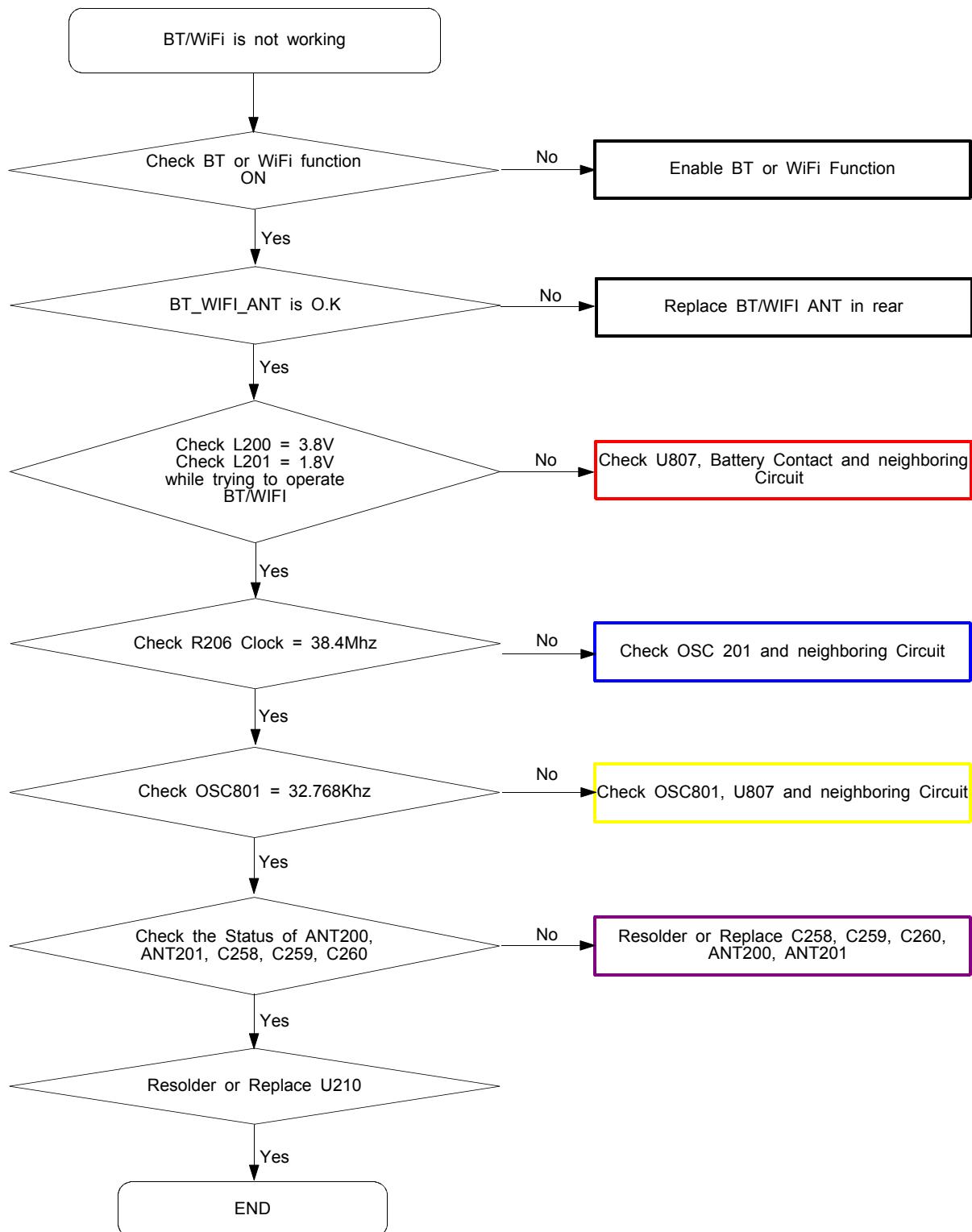


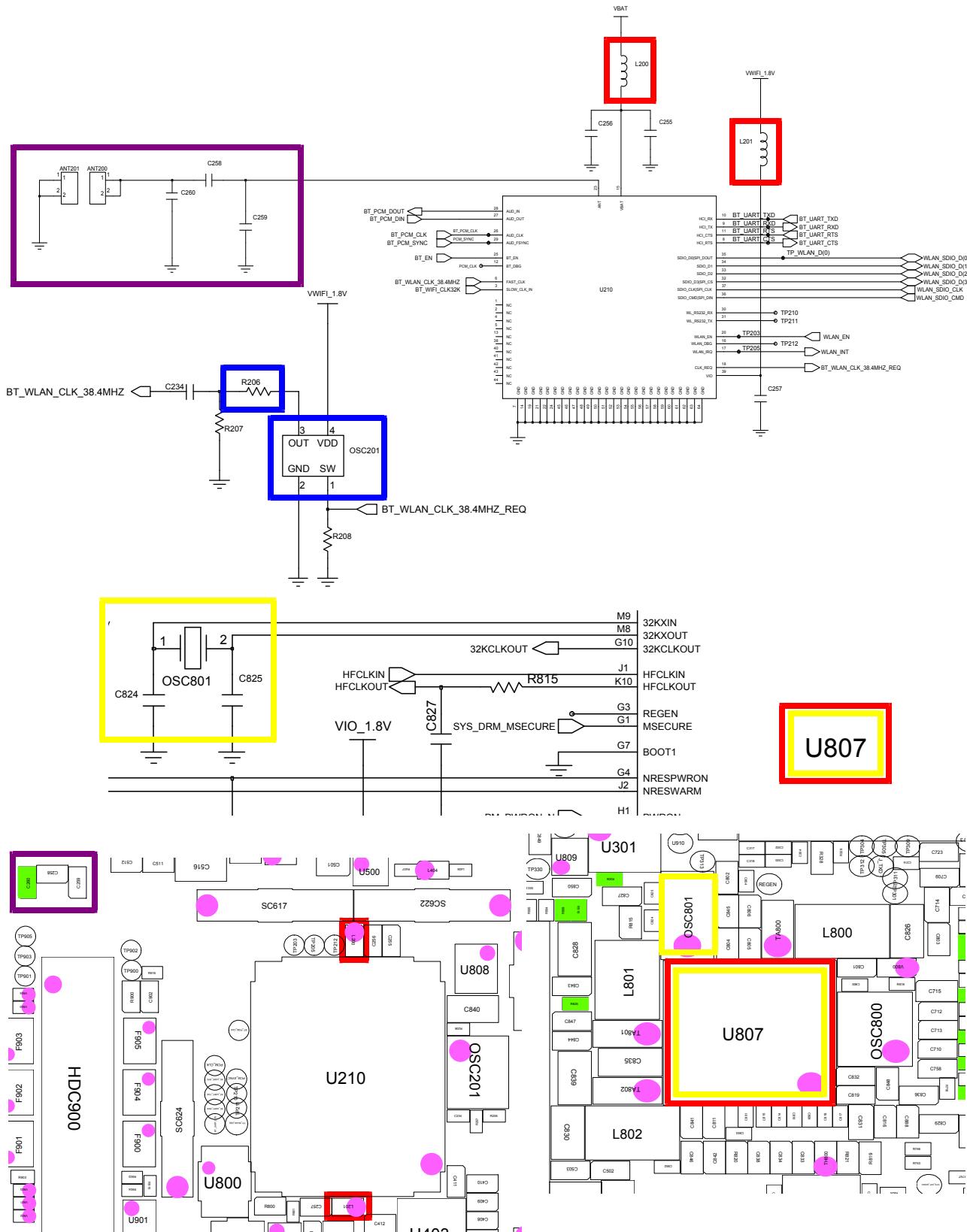


<Power On Block>

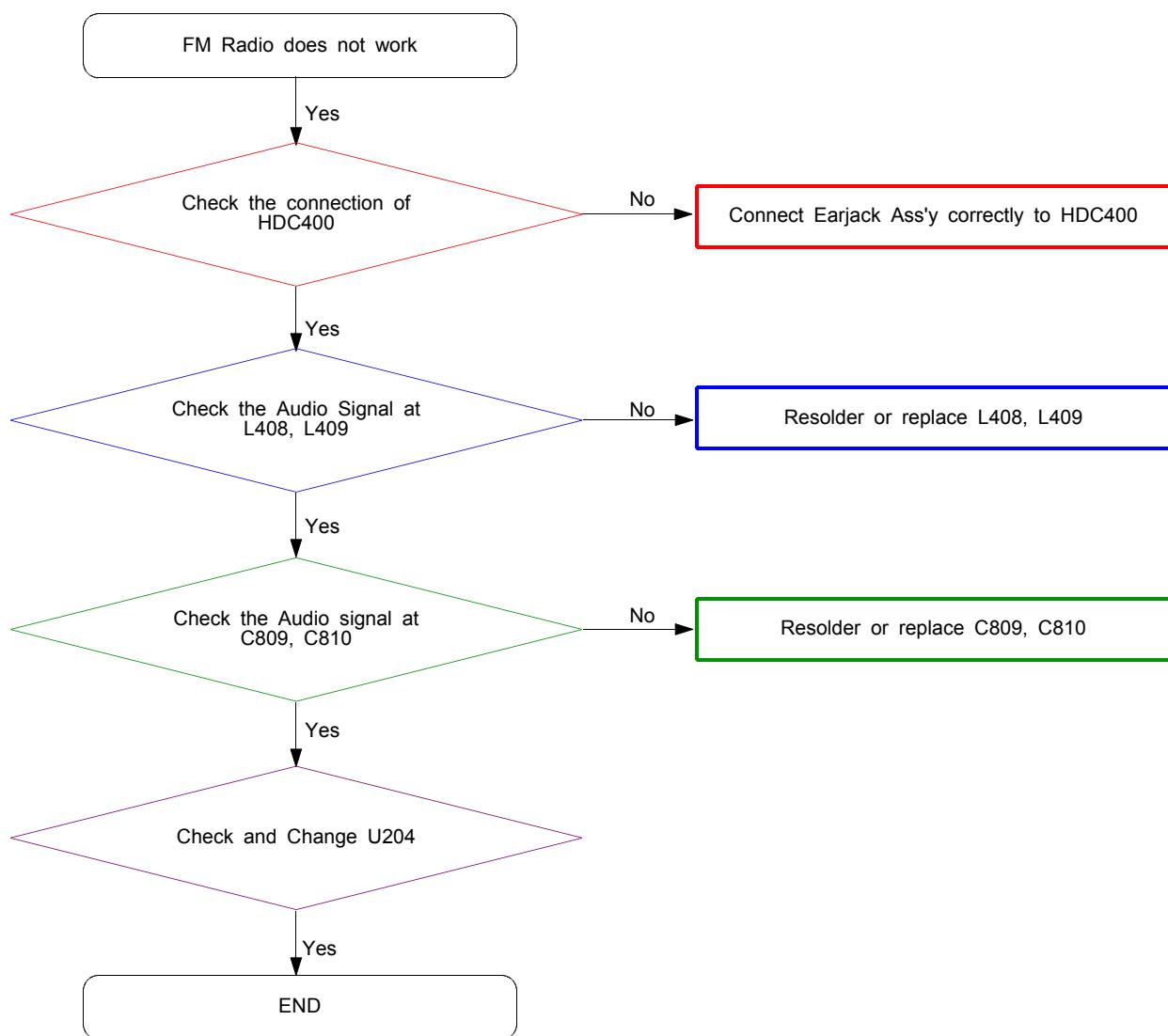


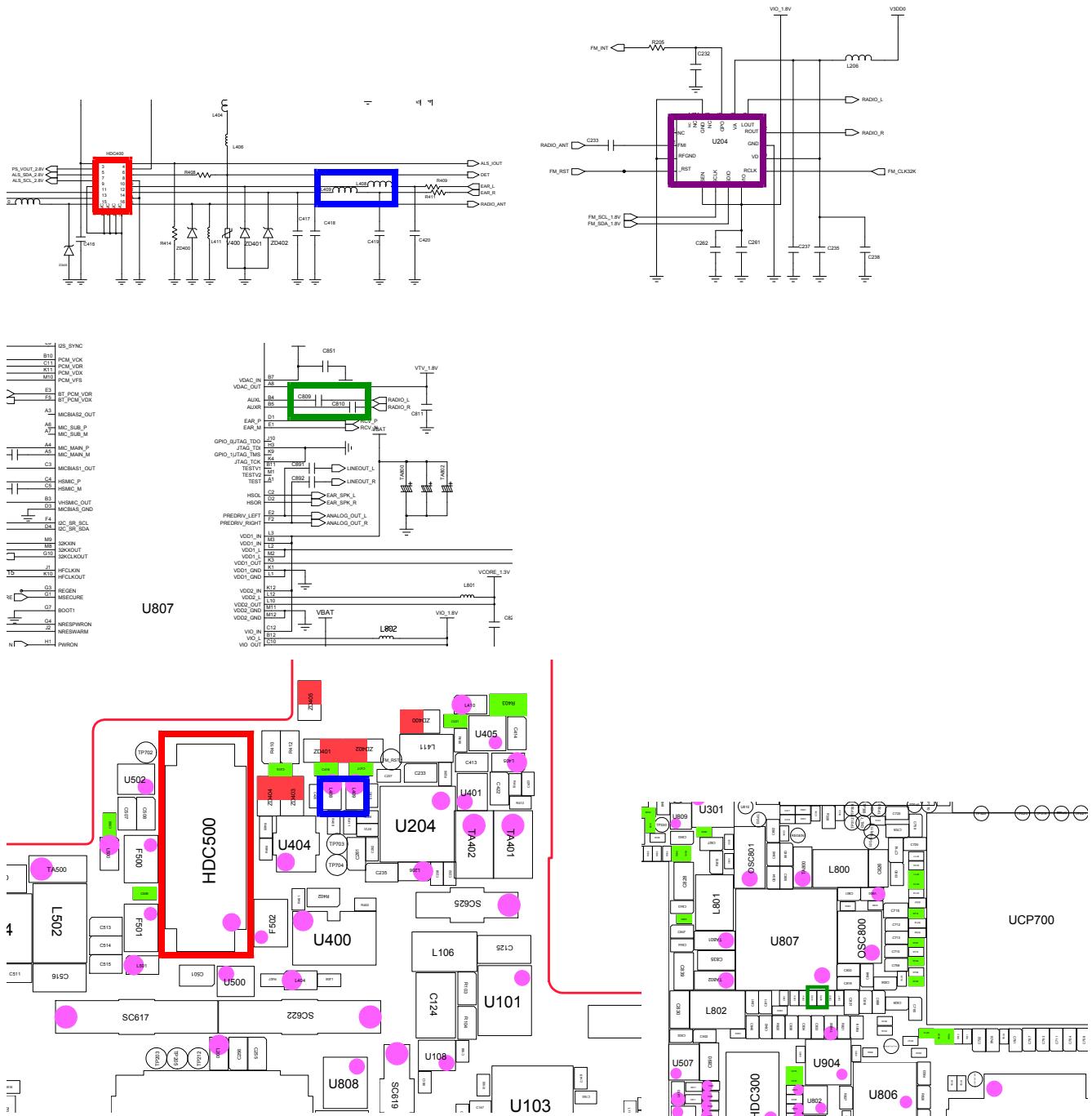
8-3-9. BT/WIFI



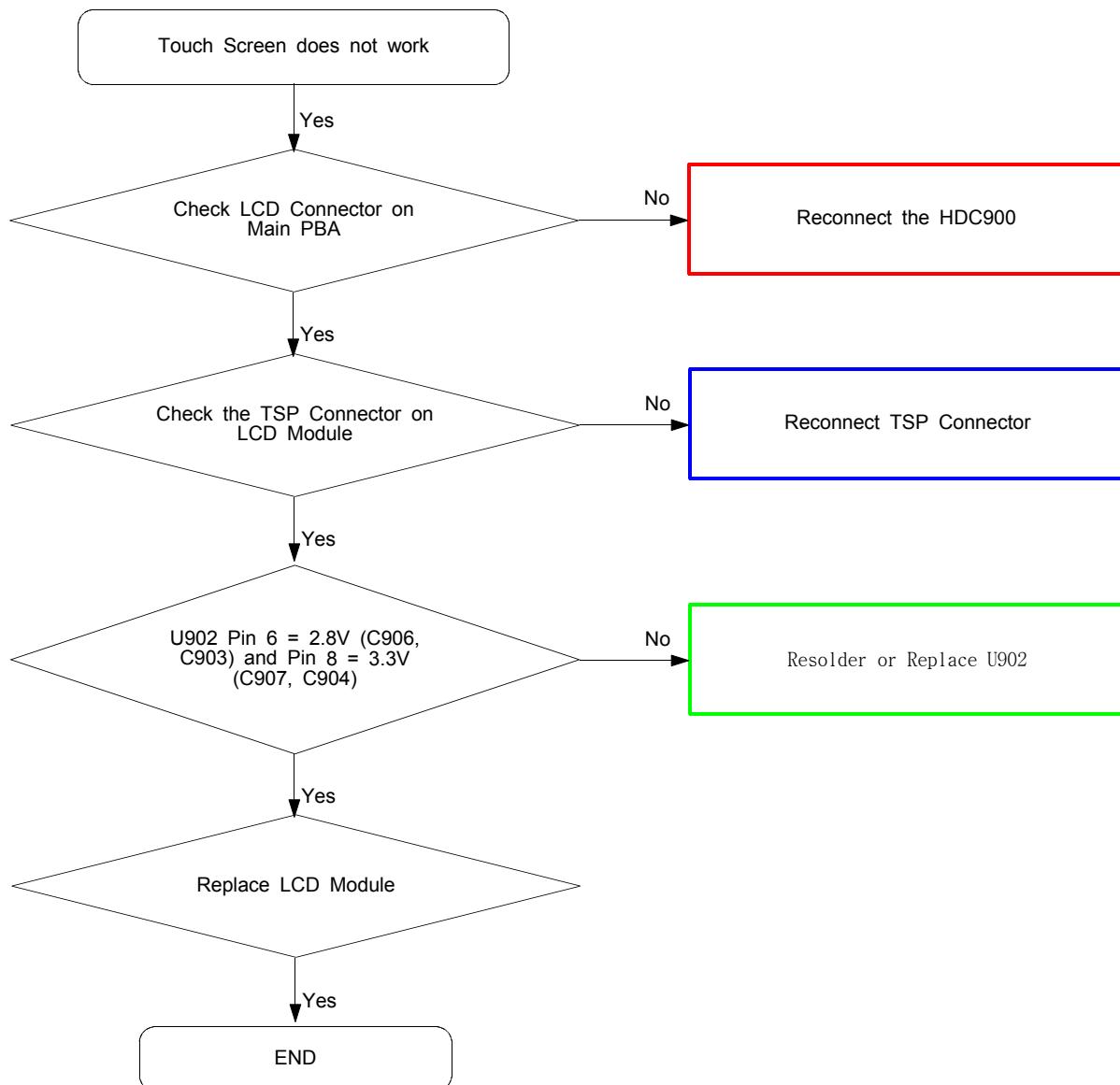


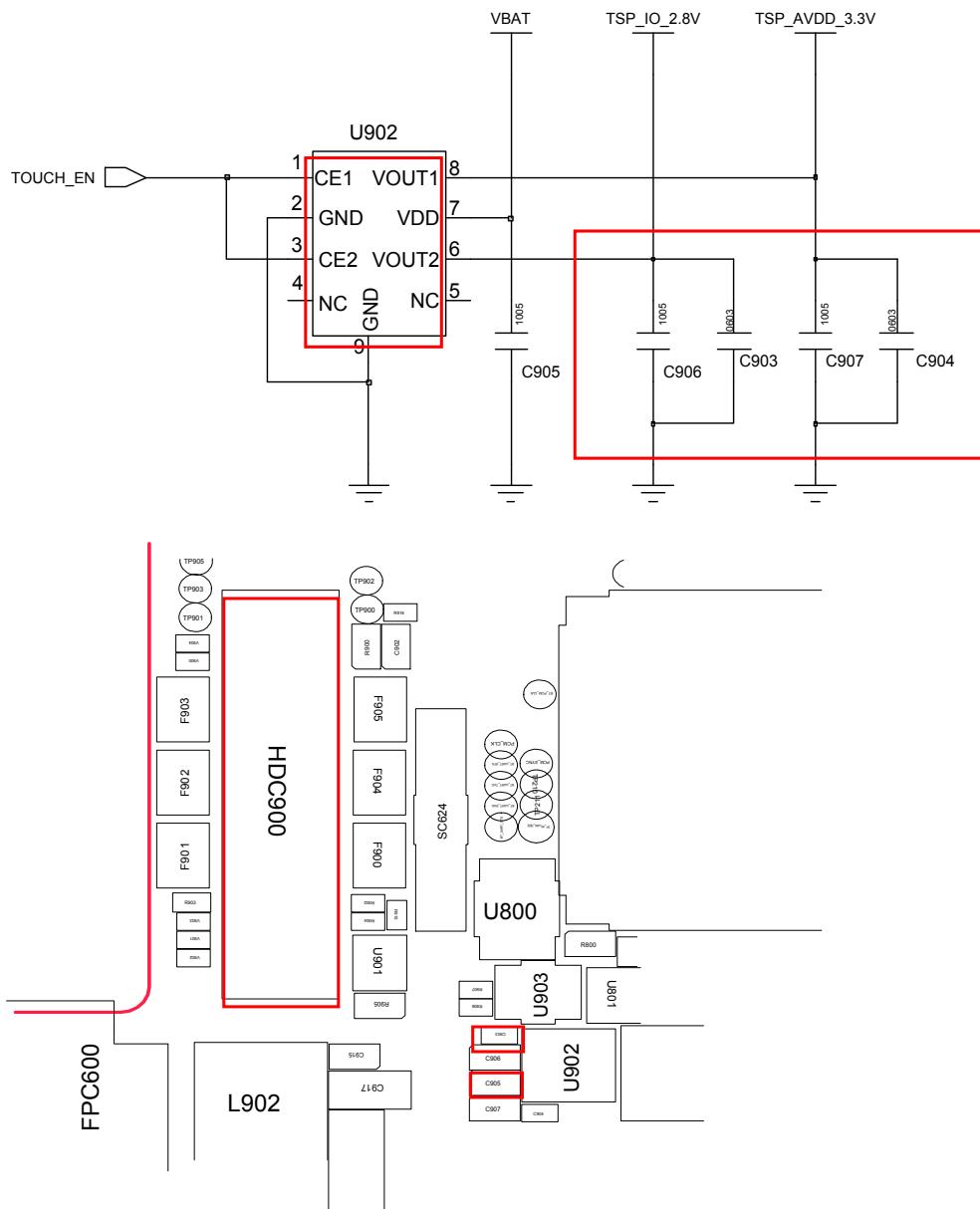
8-3-10. FM RADIO





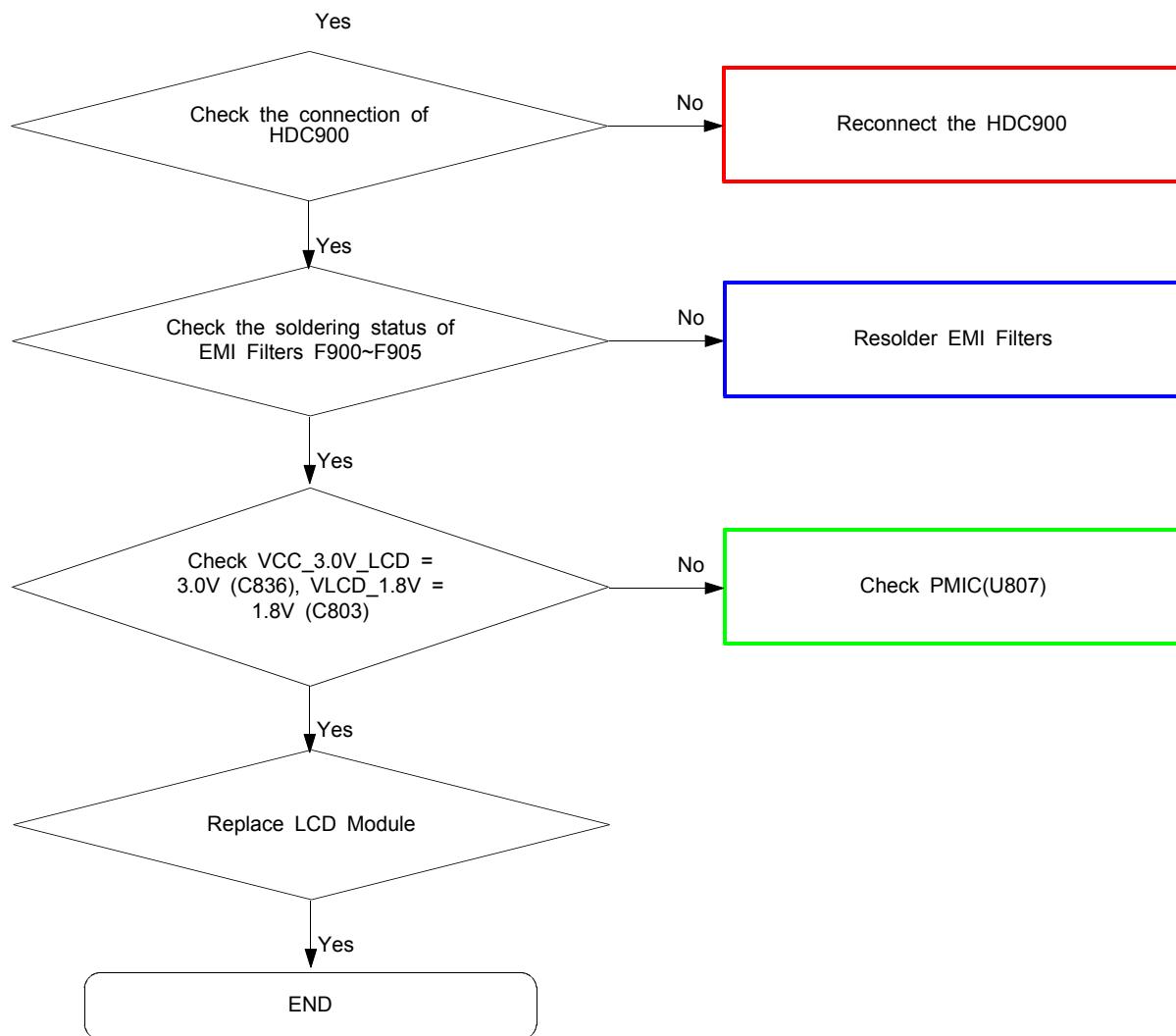
8-3-11. TSP

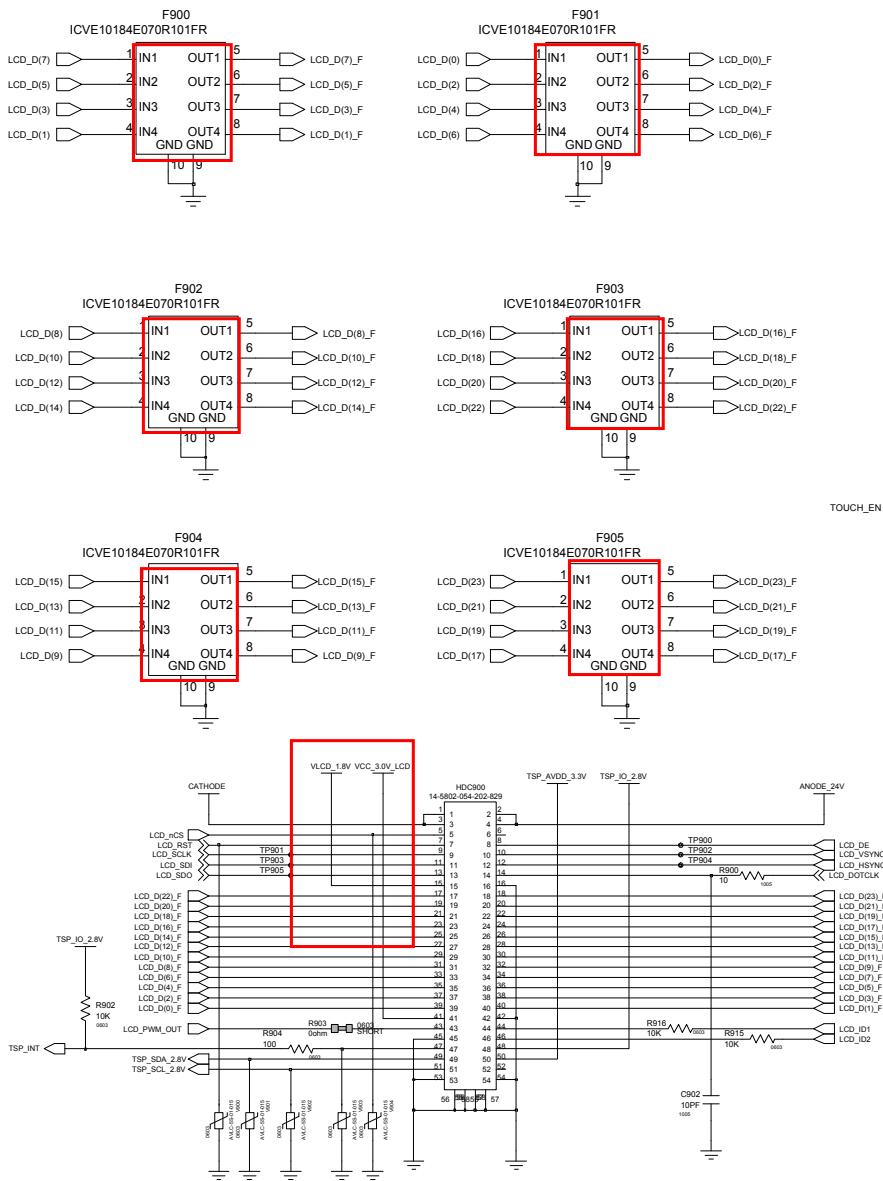


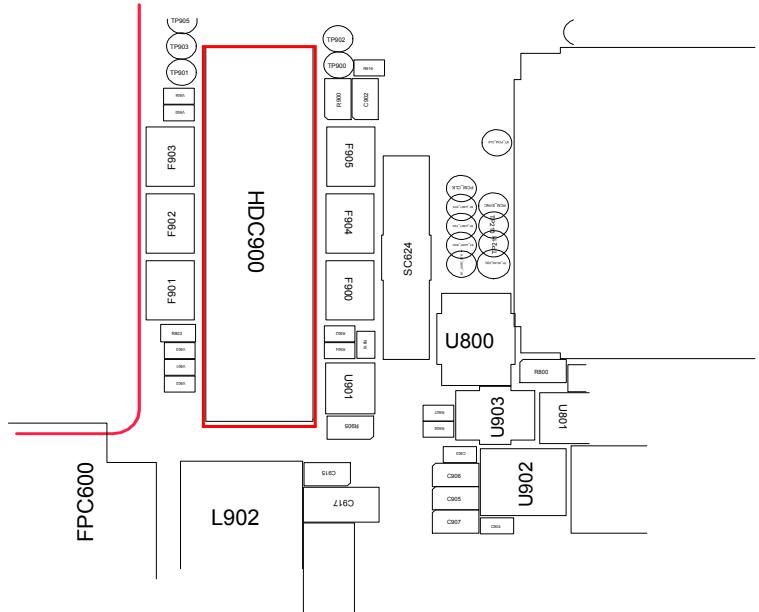


8-3-12. LCD

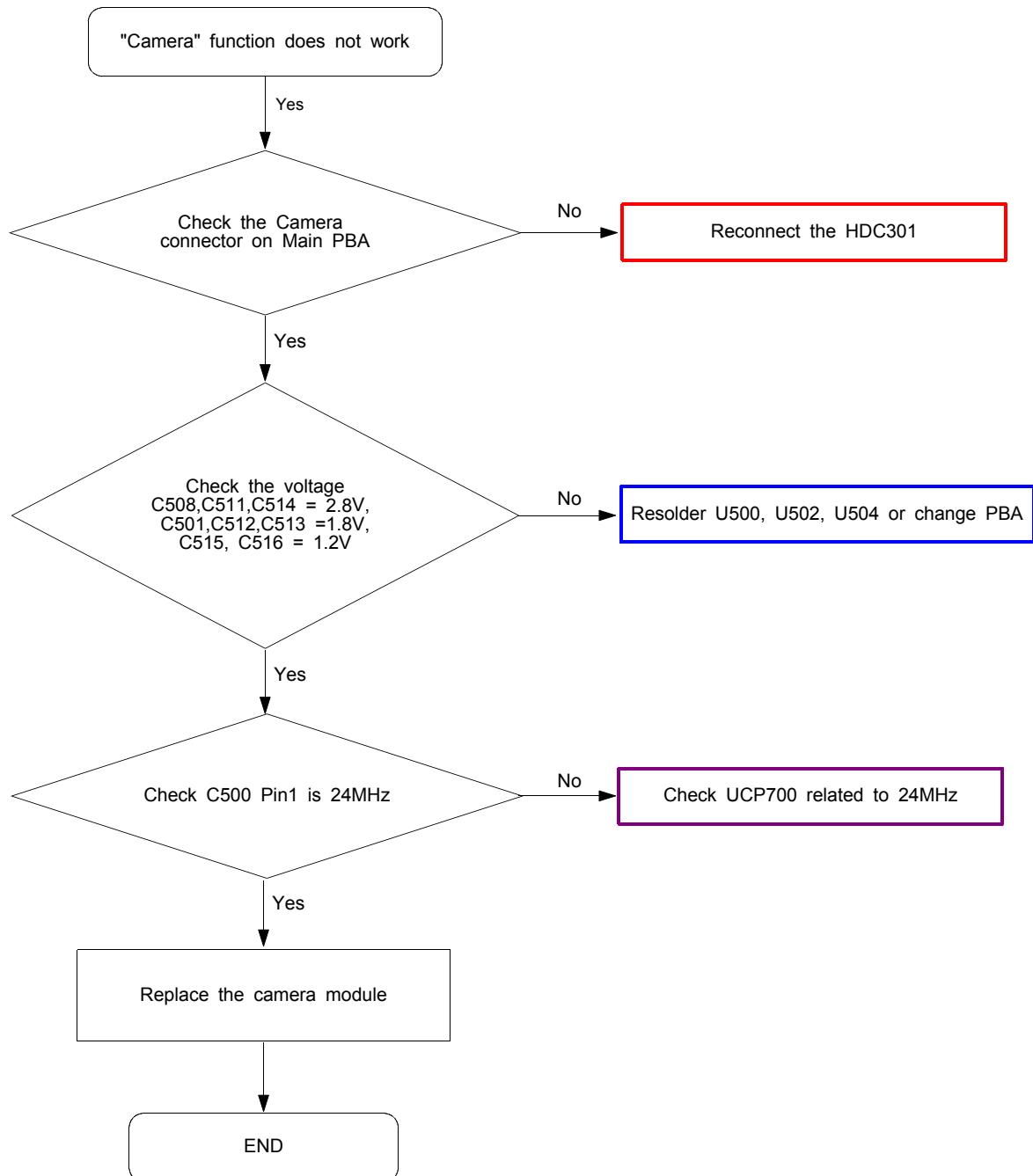
LCD is still off after PWR ON

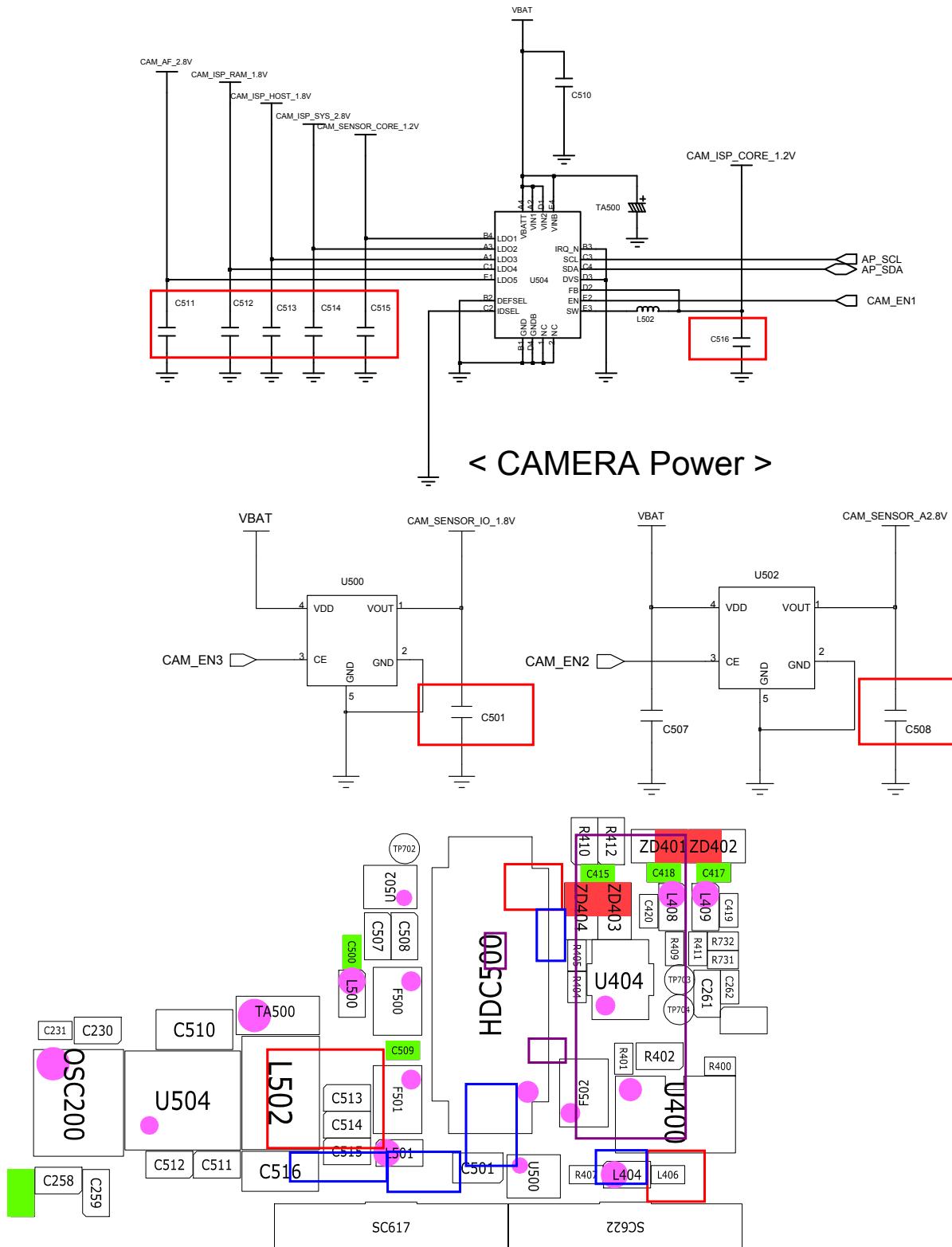




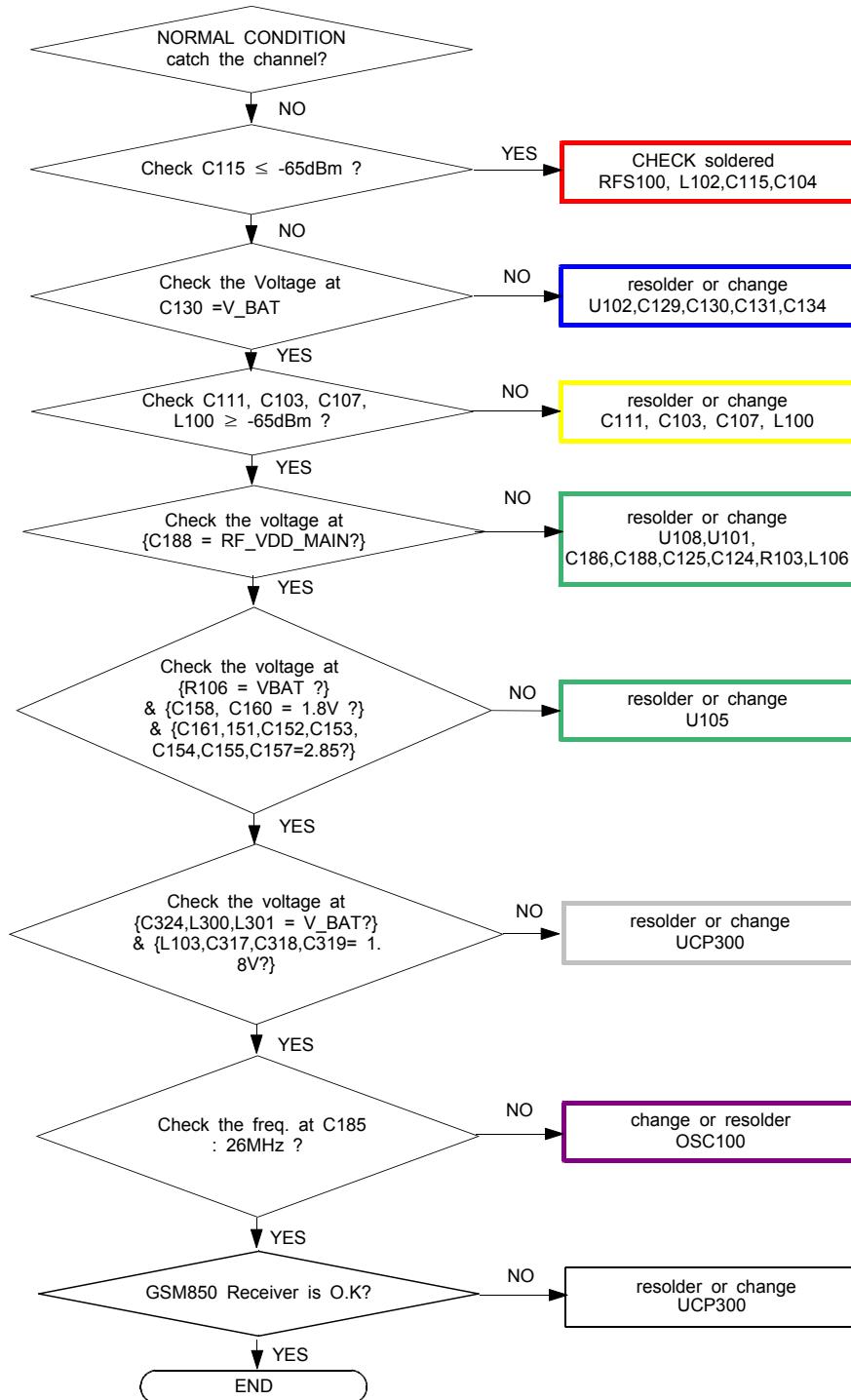


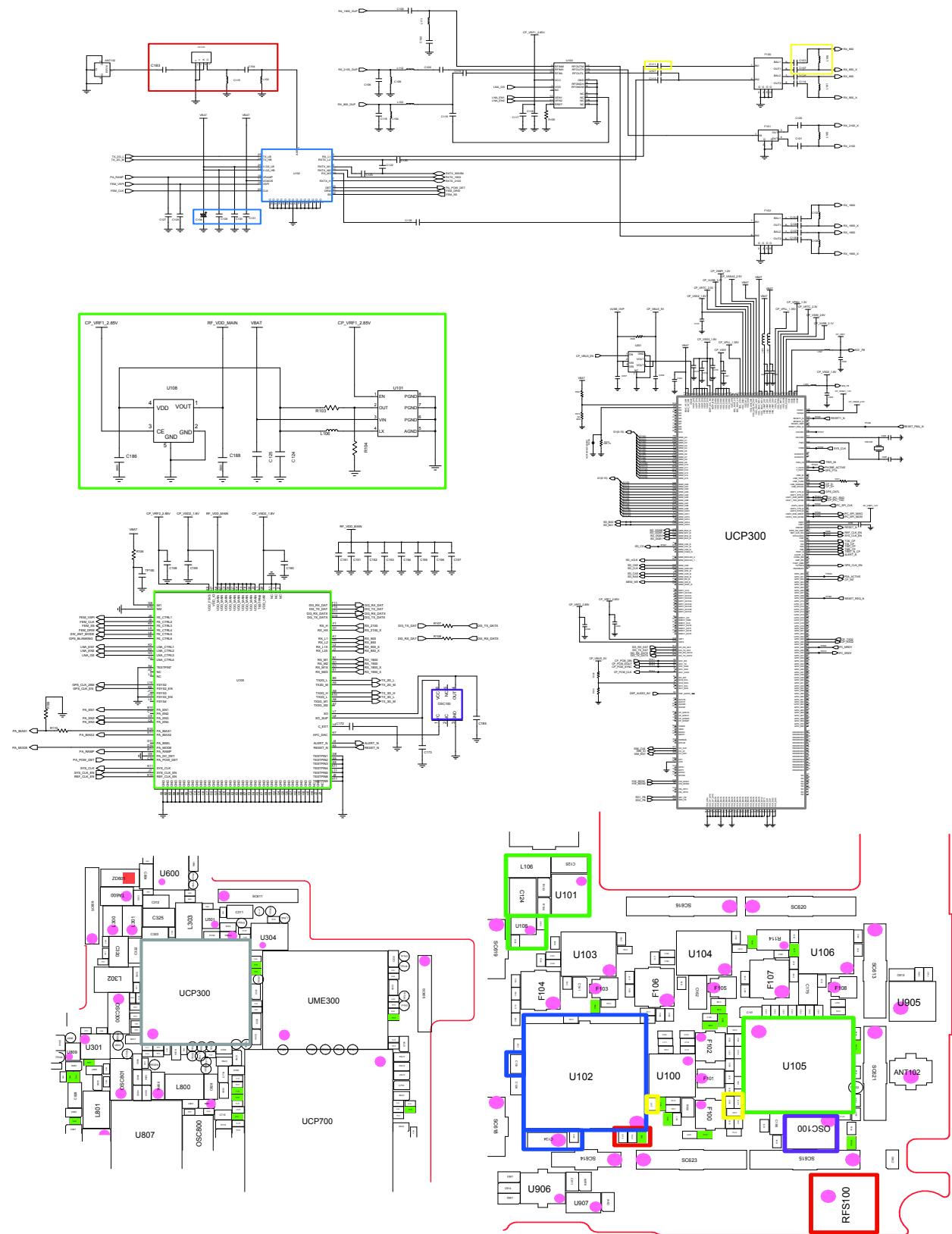
8-3-13. 5M CAM



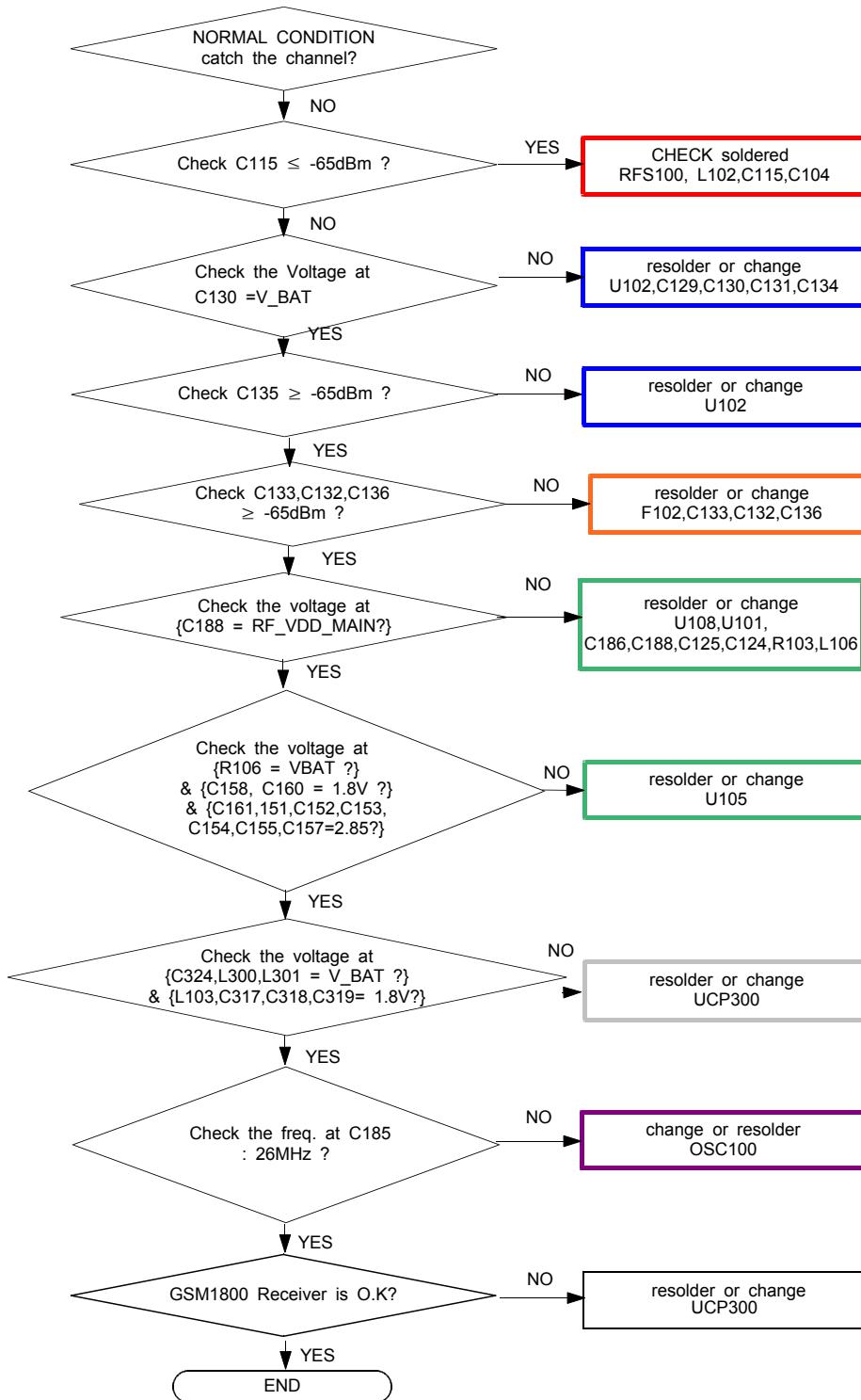


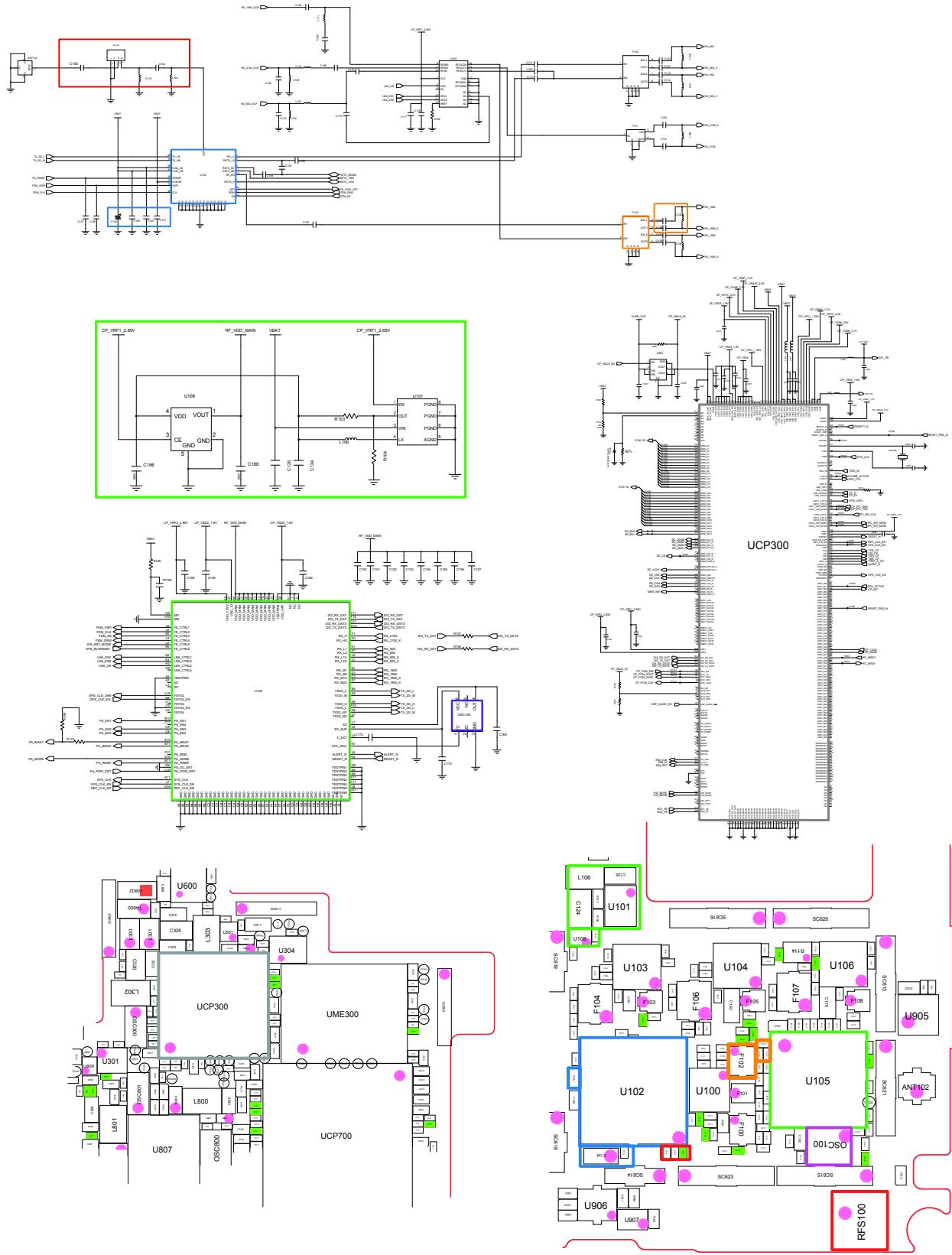
8-3-14. GSM850 RX



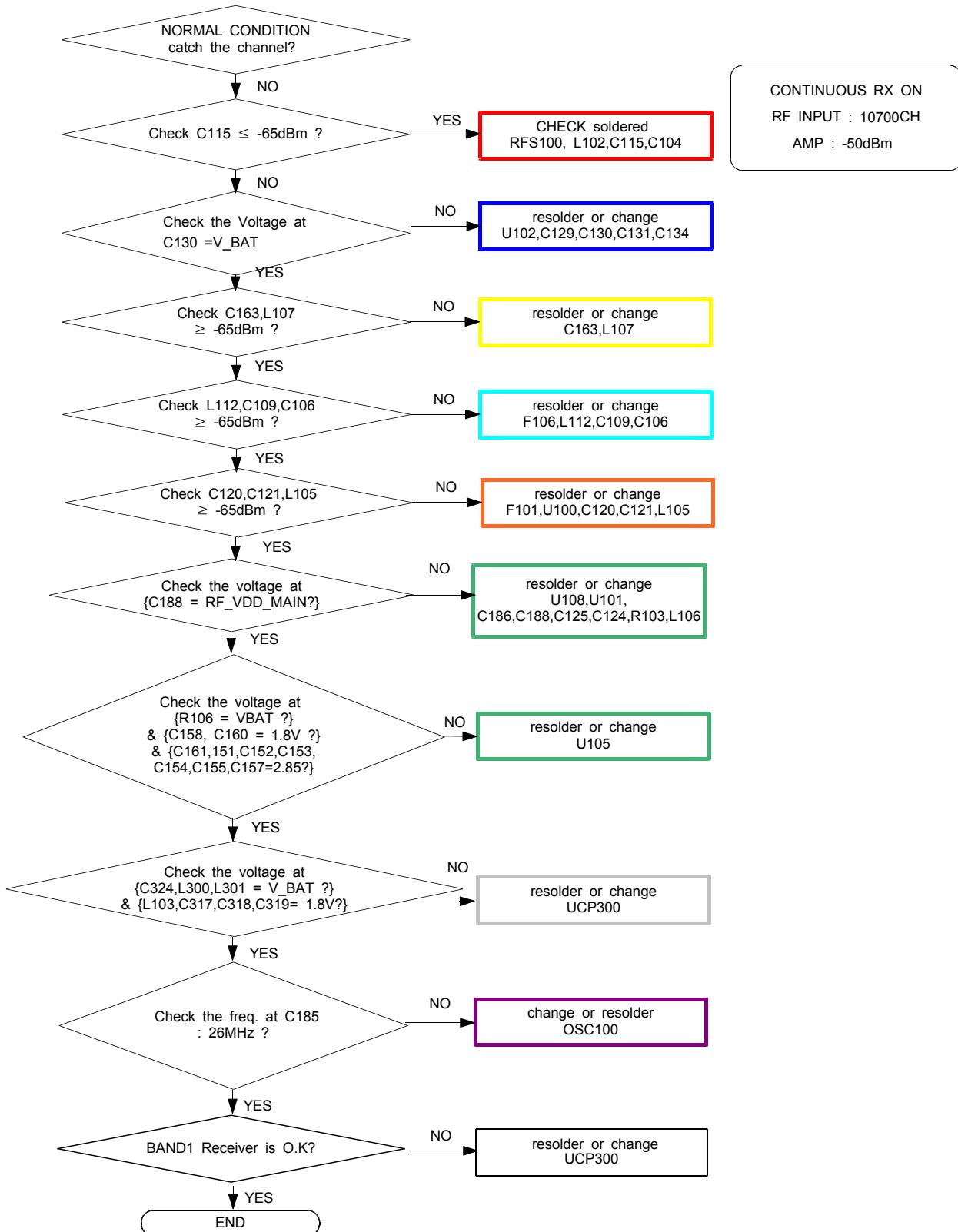


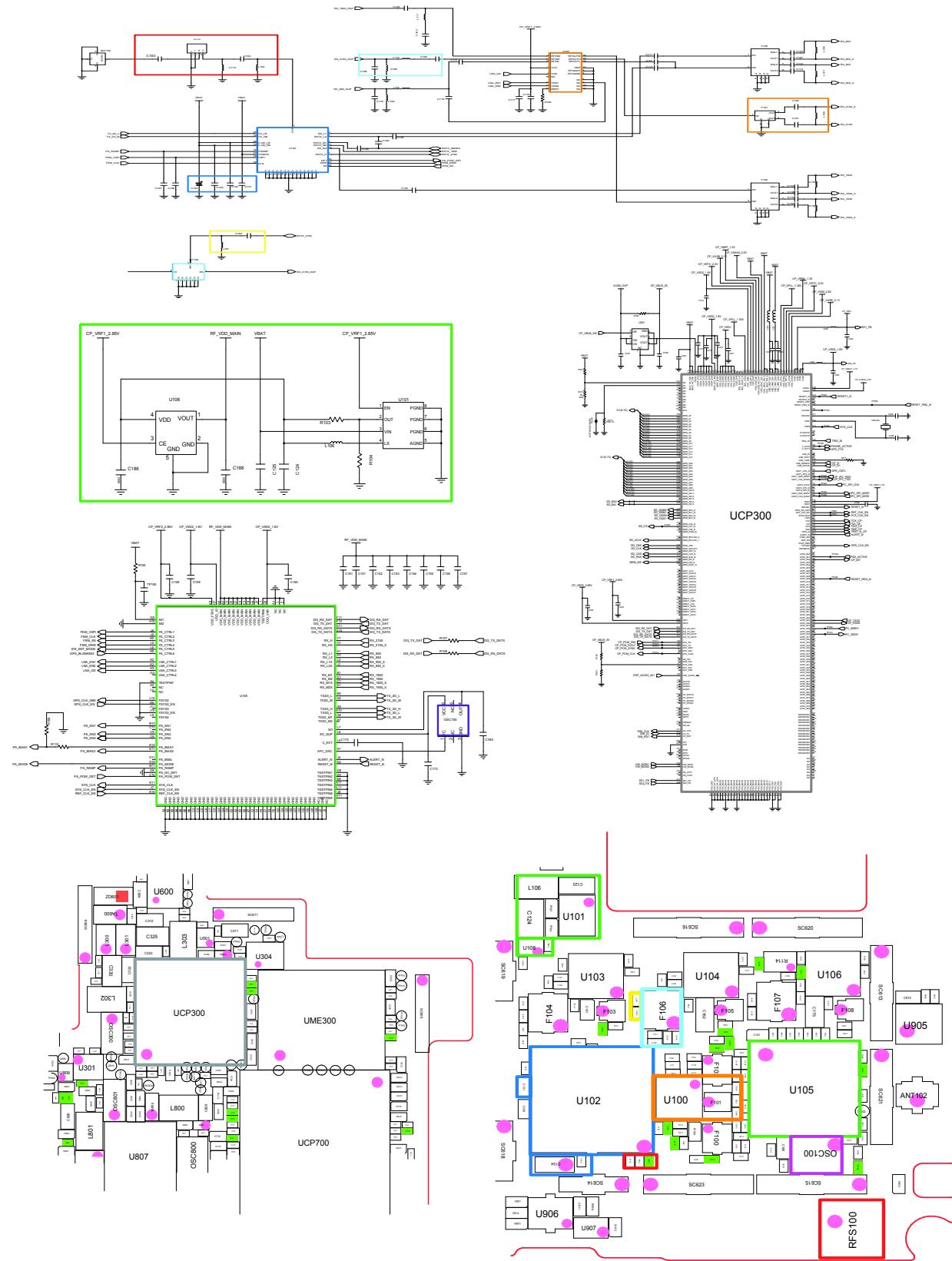
8-3-15. GSM1800 RX



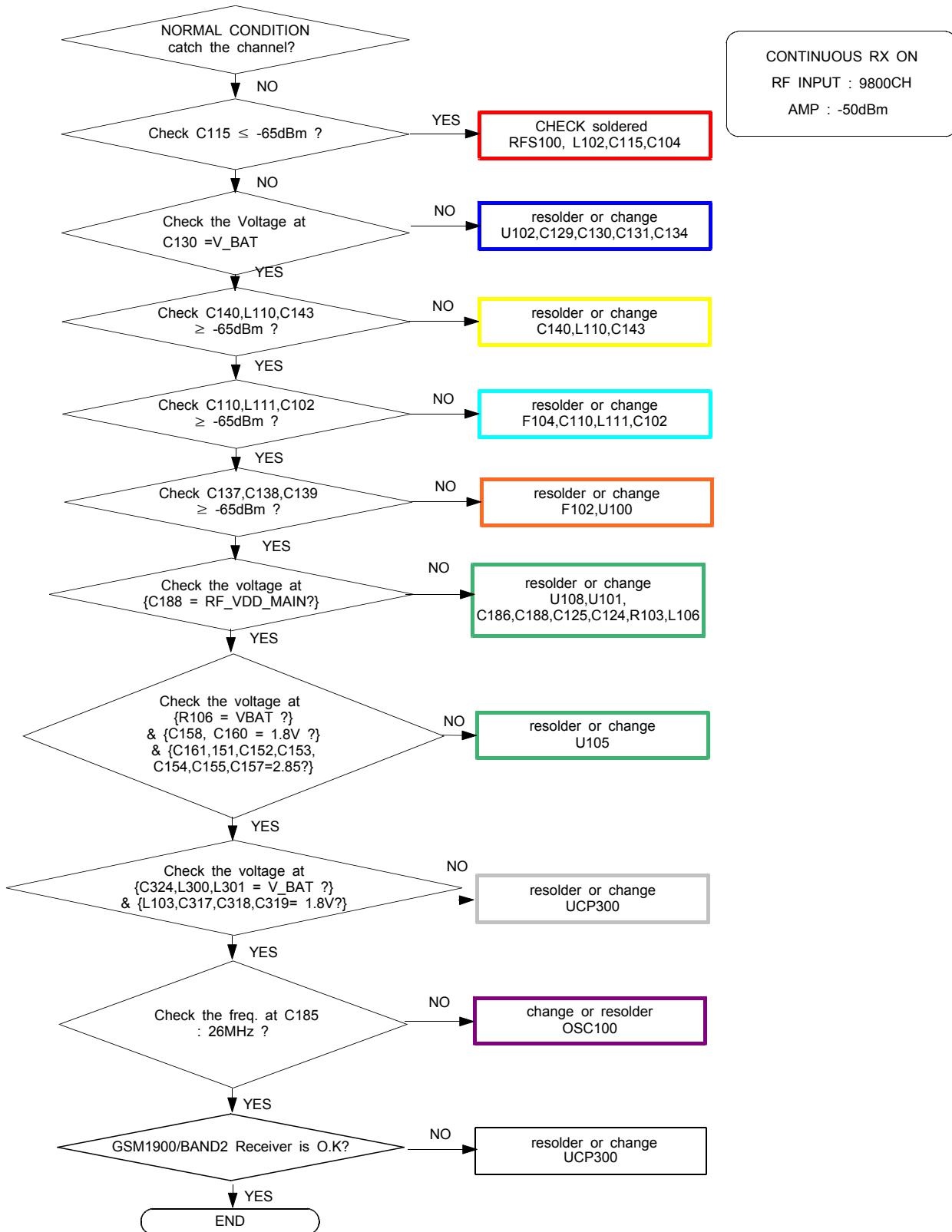


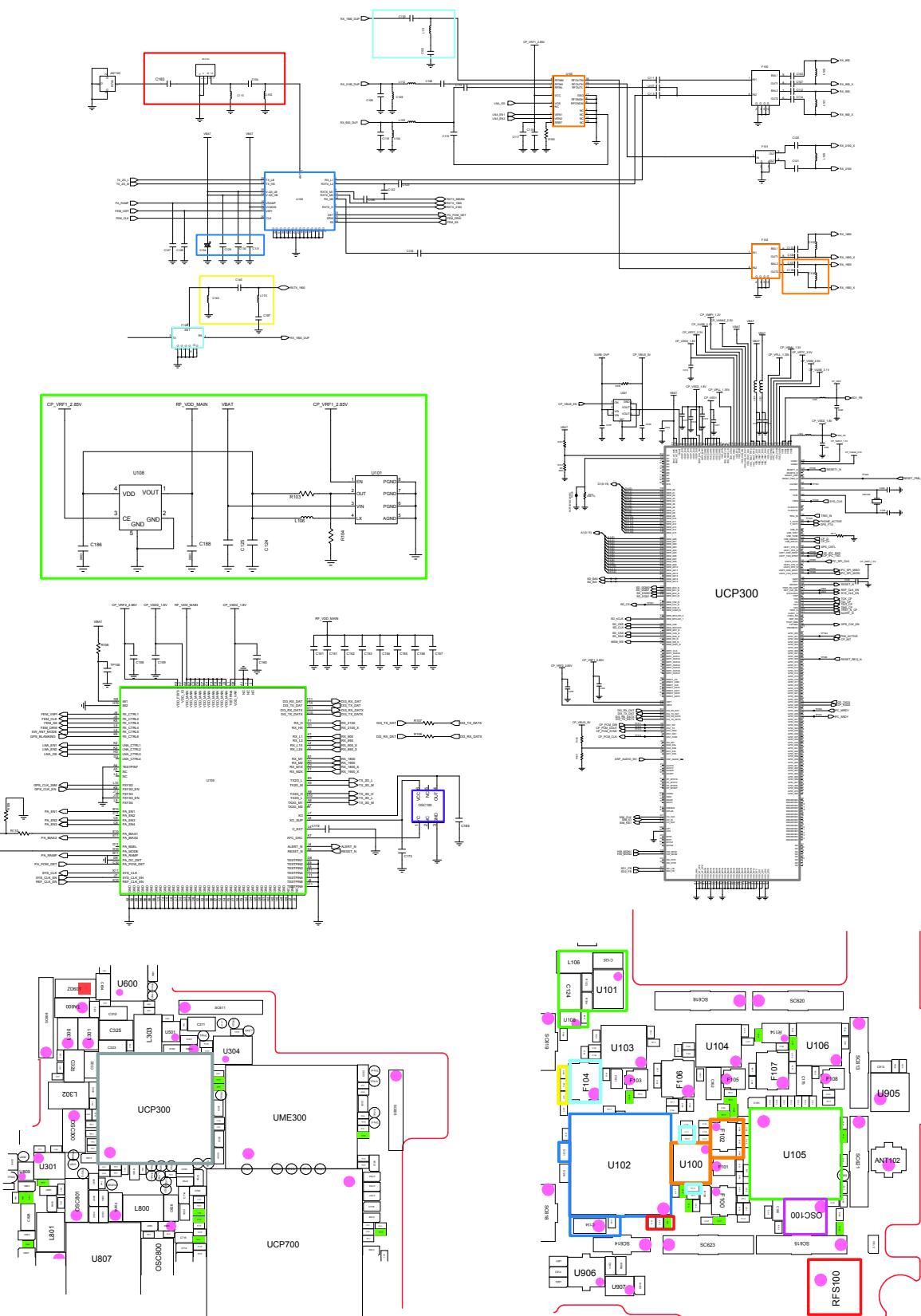
8-3-16. WCDMA Band1 RX



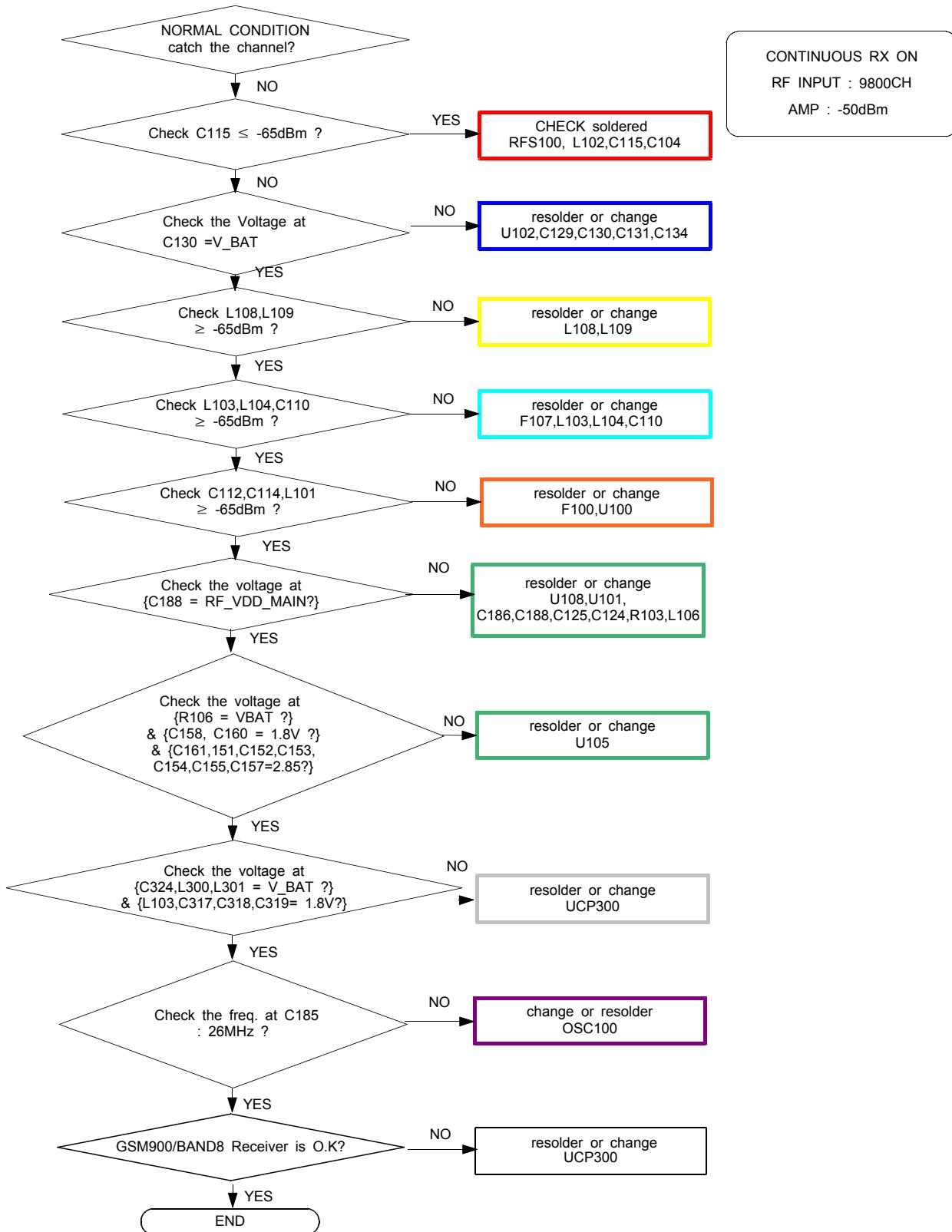


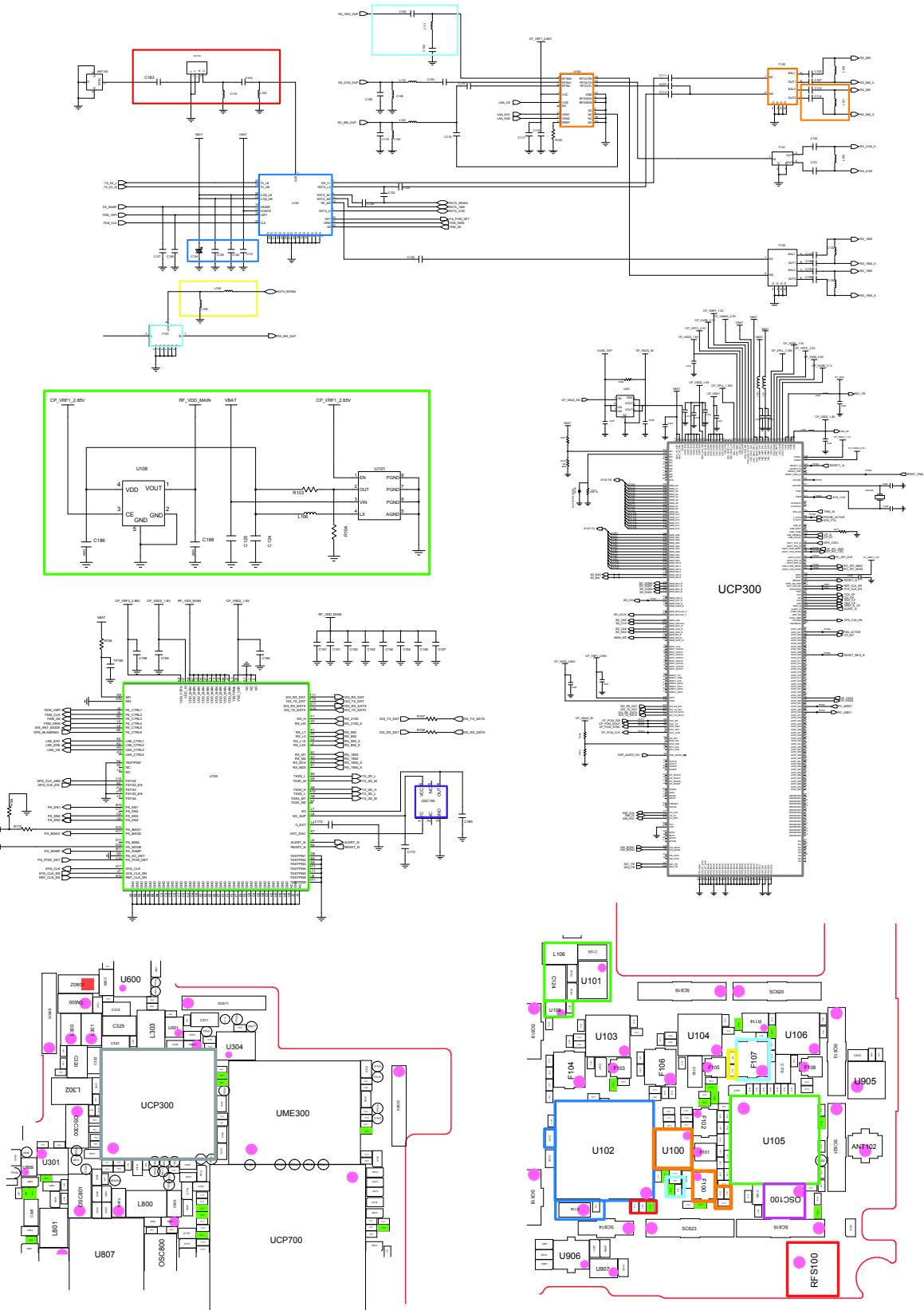
8-3-17. WCDMA Band2 / GSM1900 RX



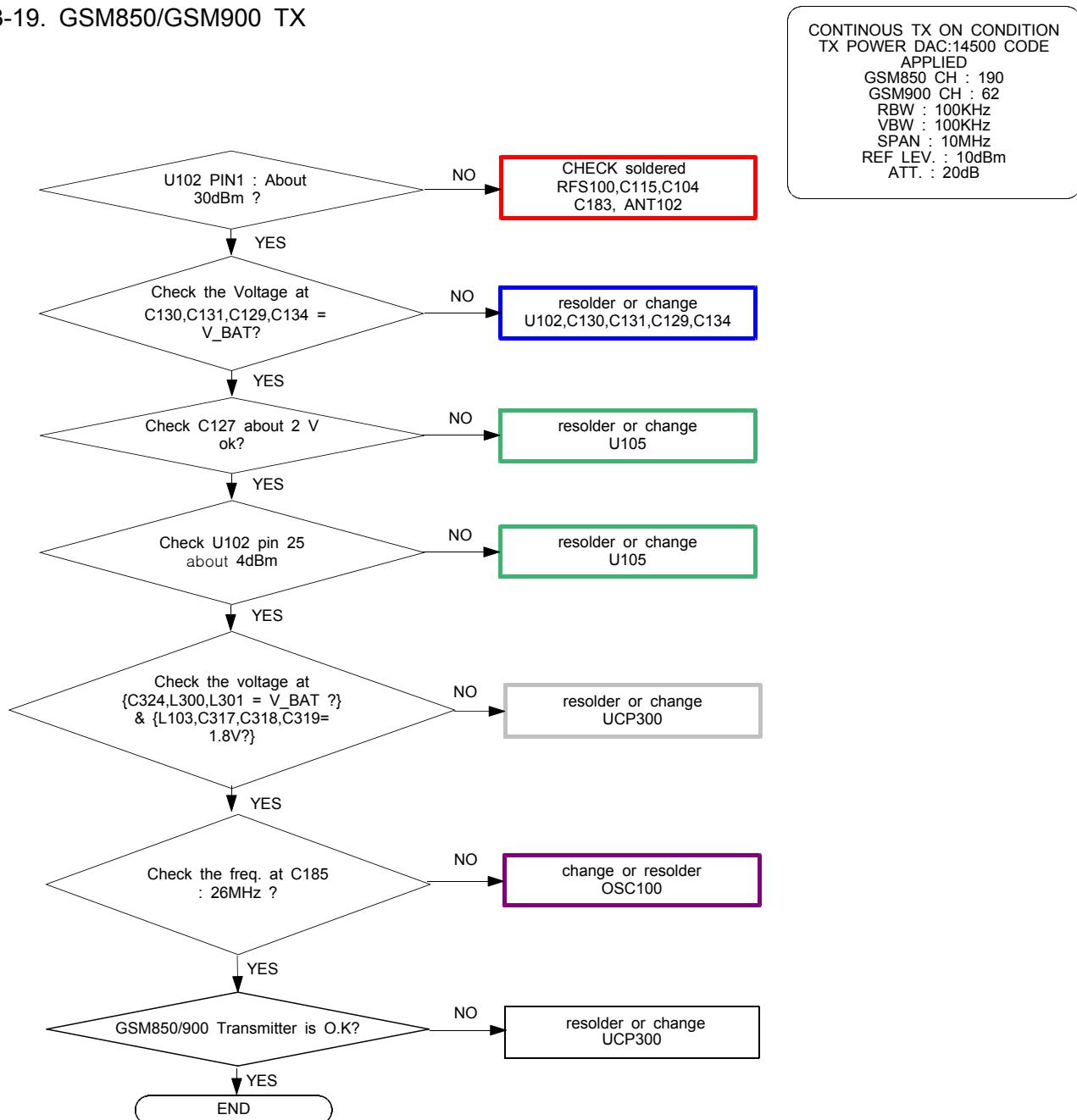


8-3-18. WCDMA Band8 / GSM900 RX

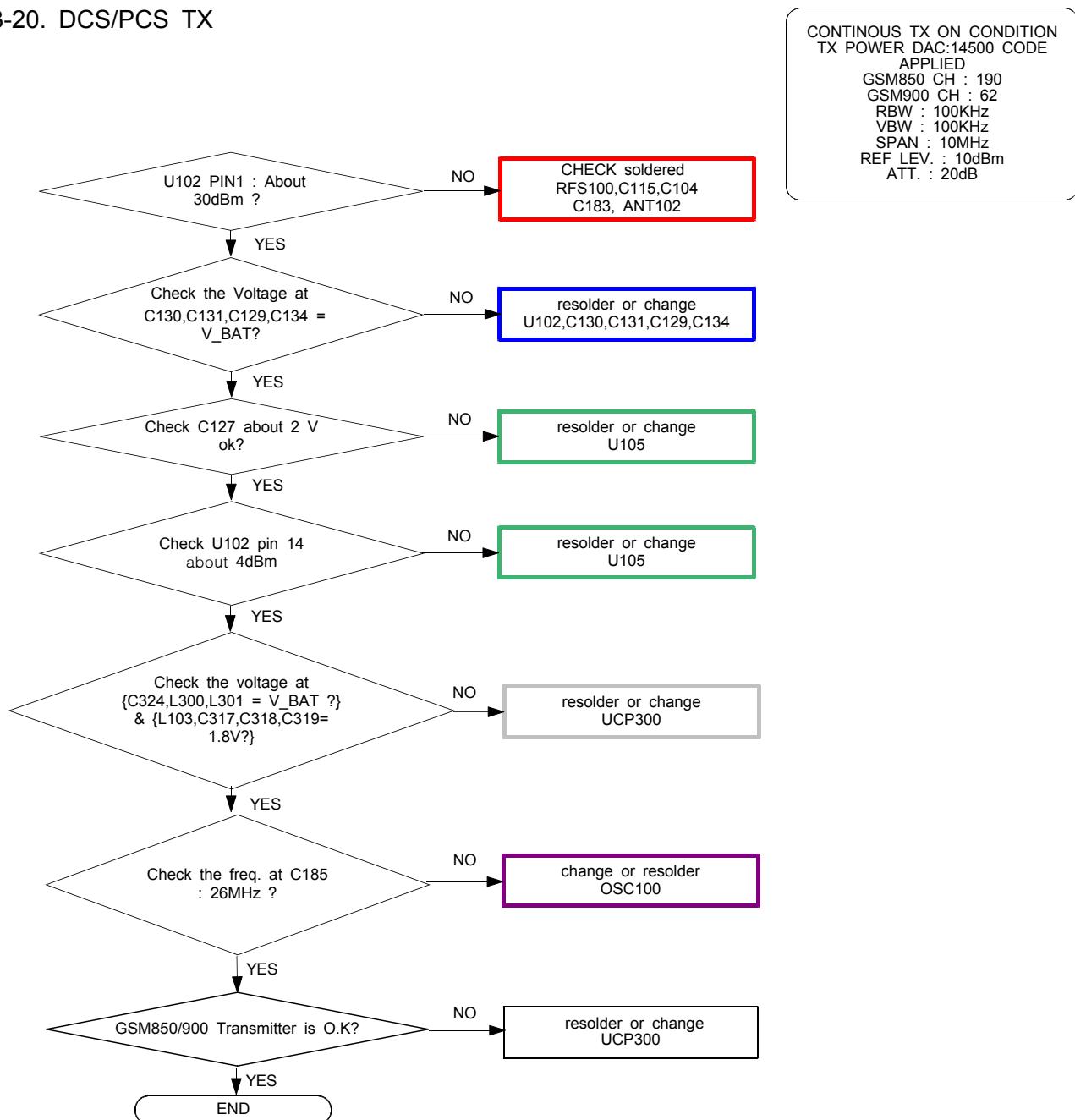


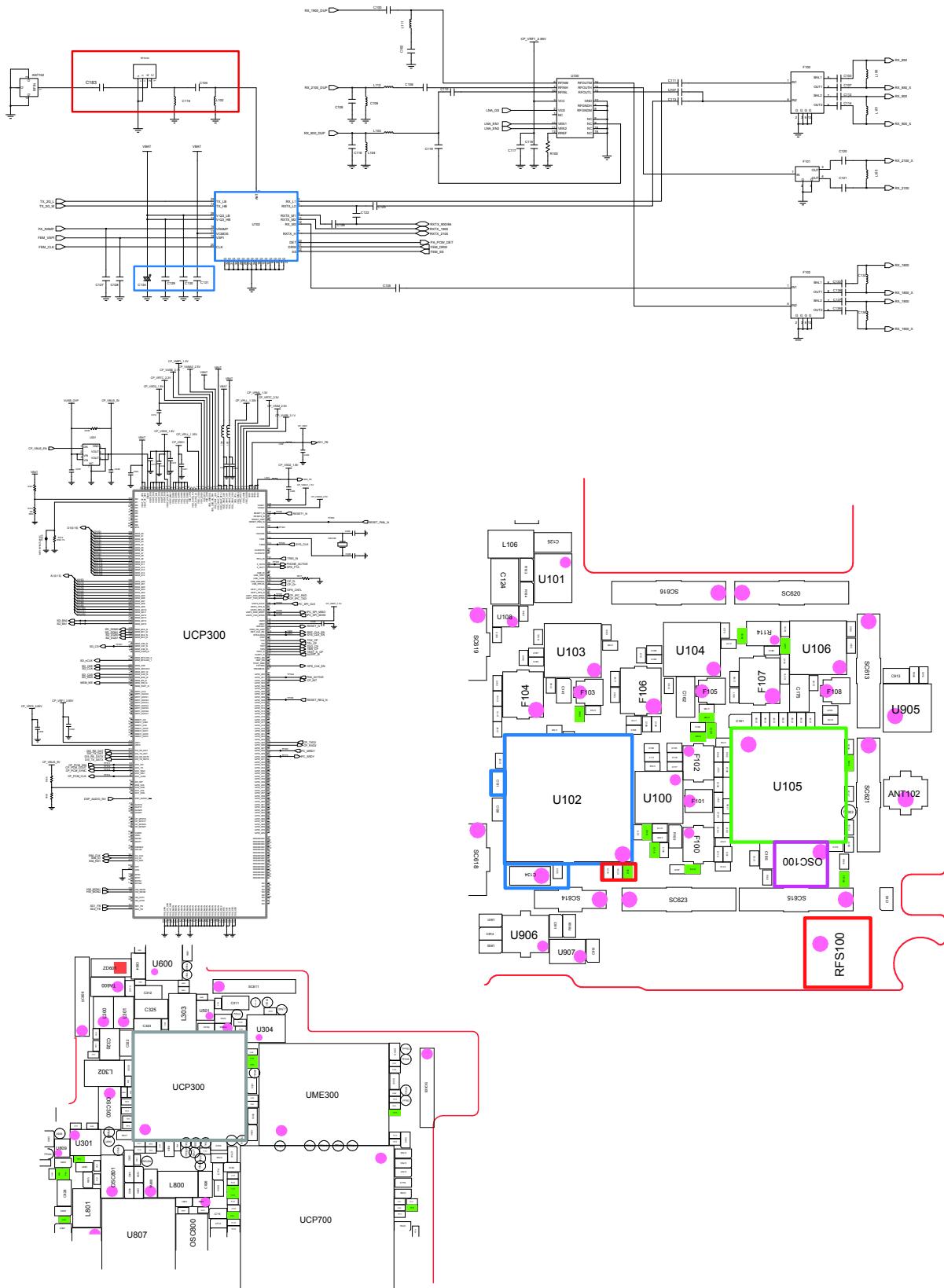


8-3-19. GSM850/GSM900 TX

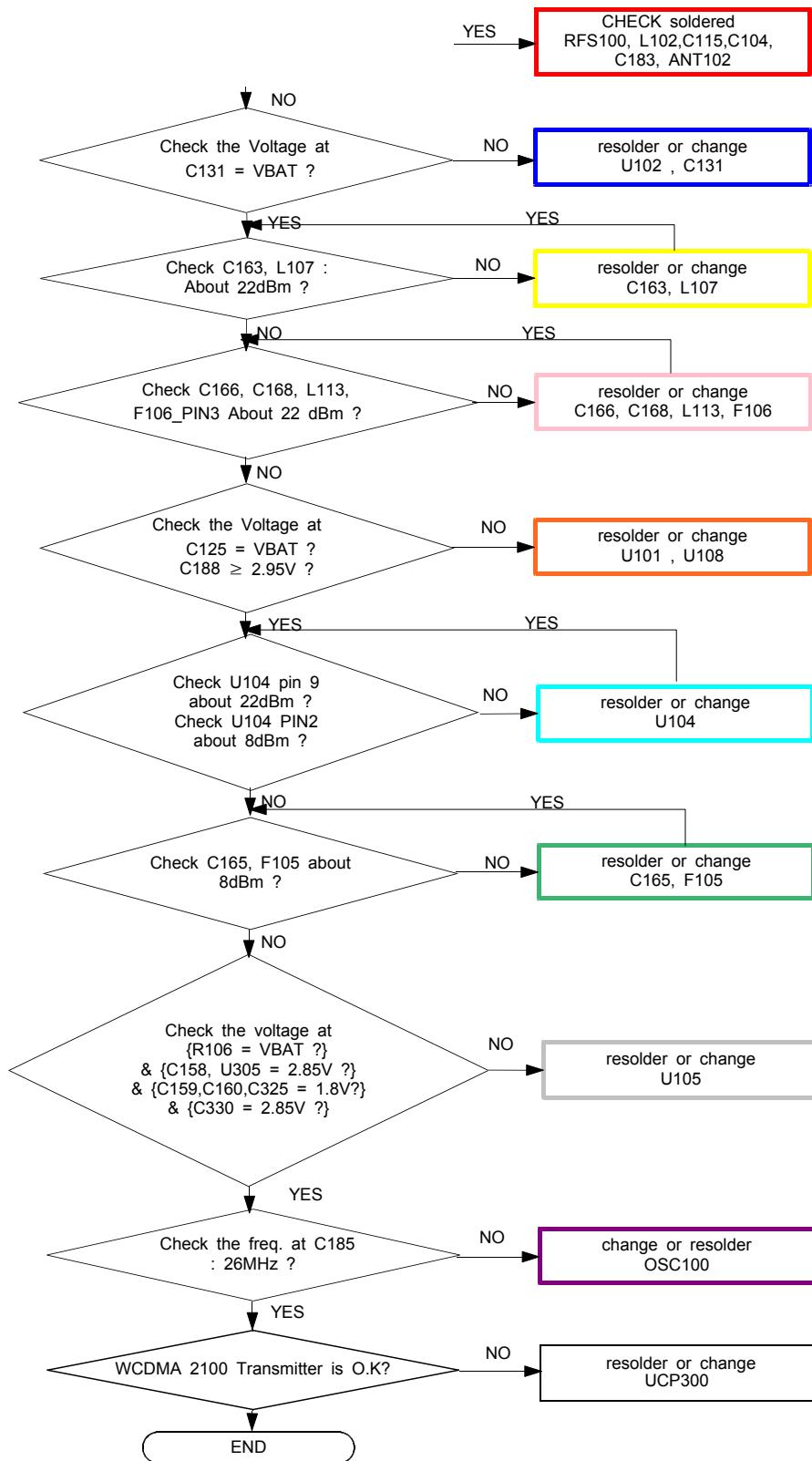


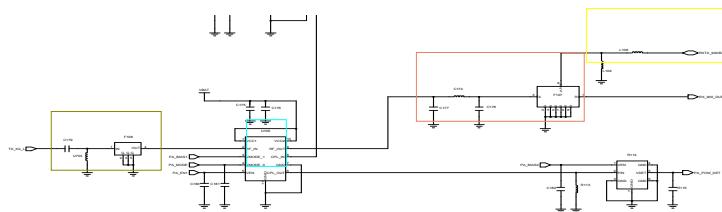
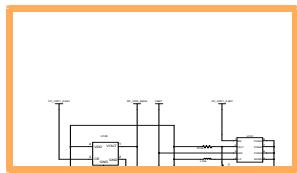
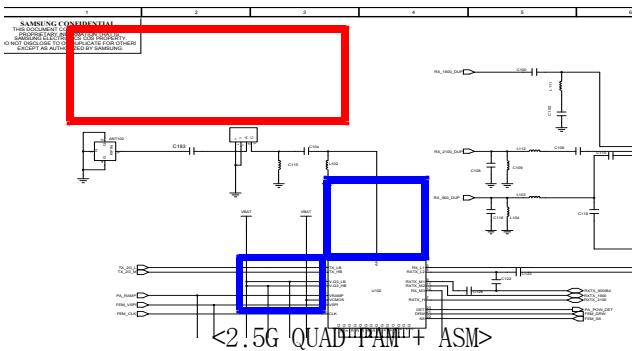
8-3-20. DCS/PCS TX



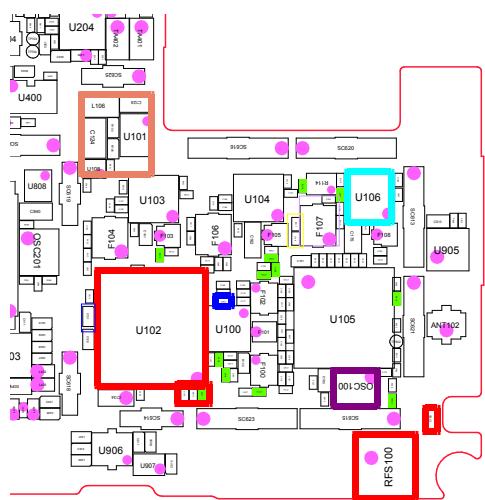
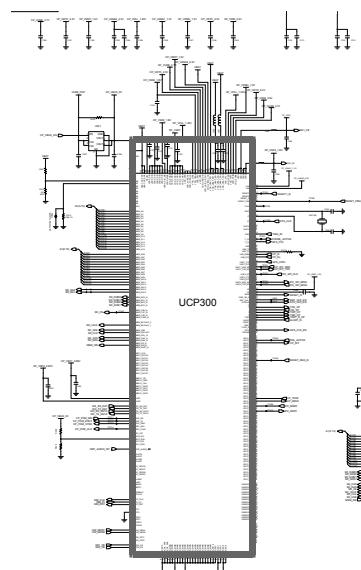
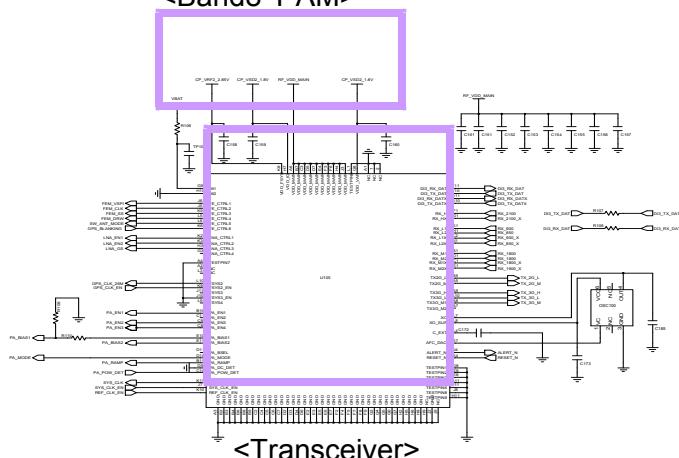


8-3-21. WCDMA BAND1 TX

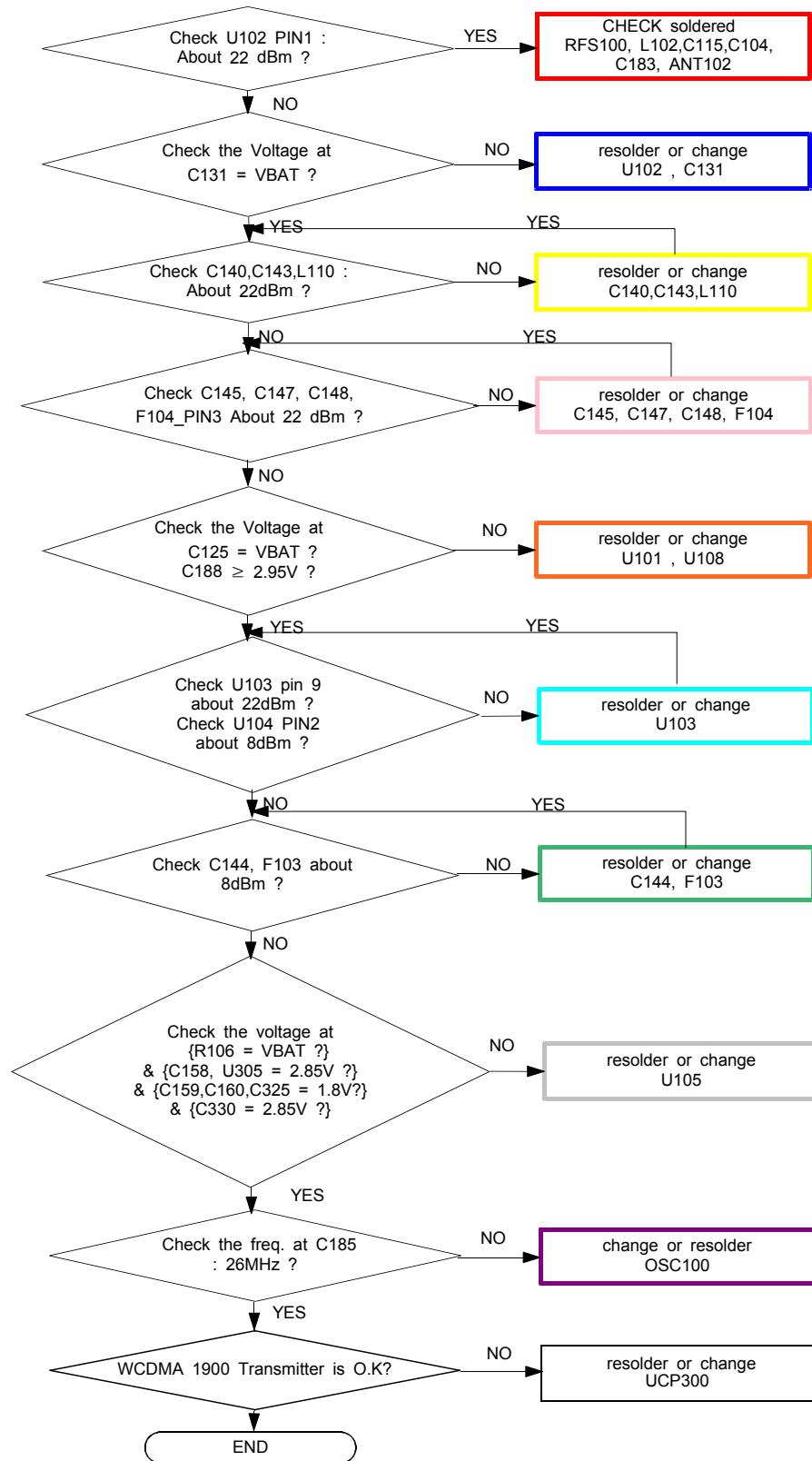




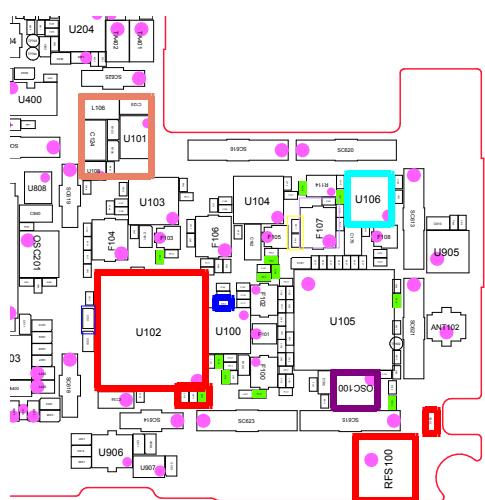
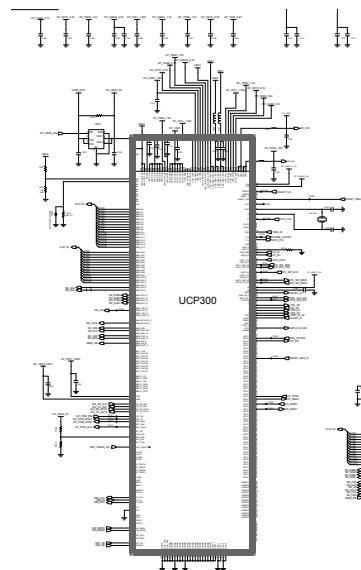
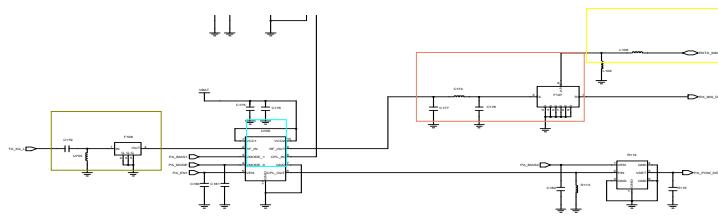
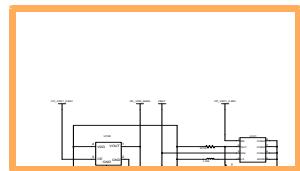
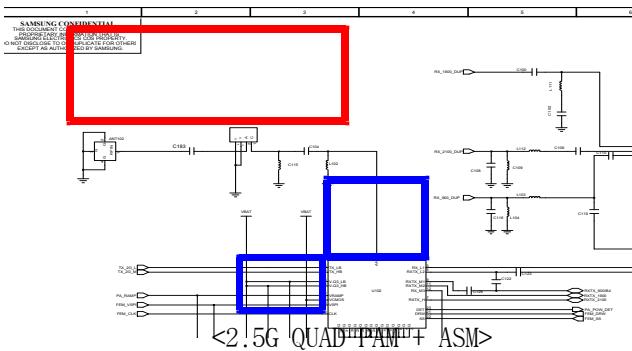
<Band8 PAM>



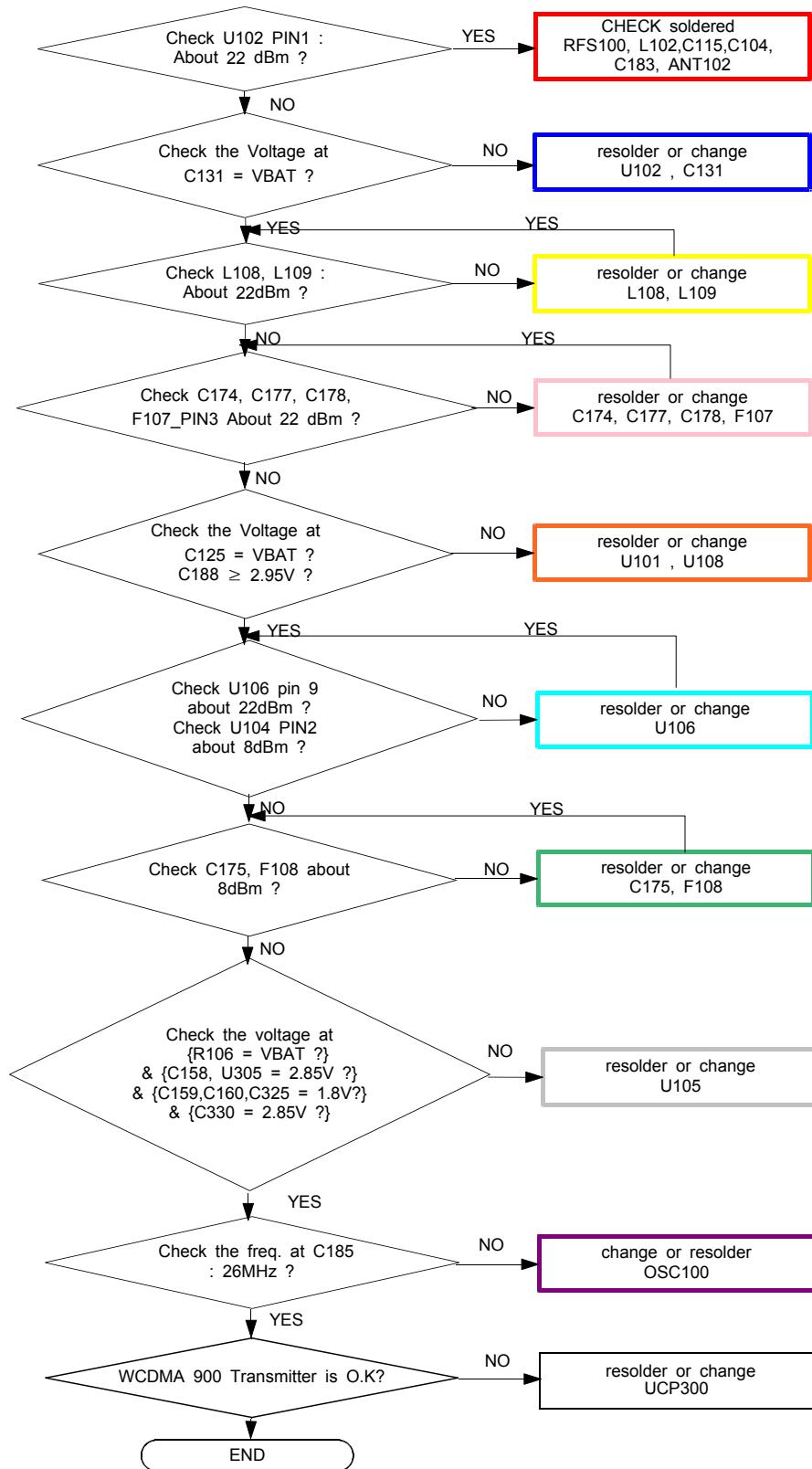
8-3-22. WCDMA BAND2 TX



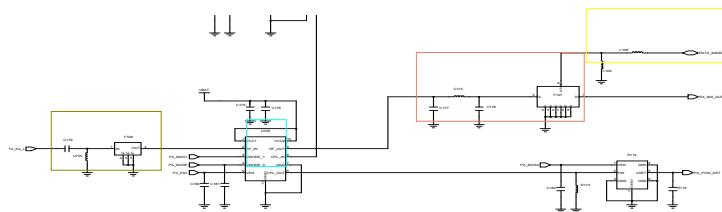
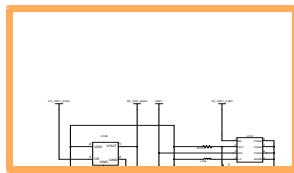
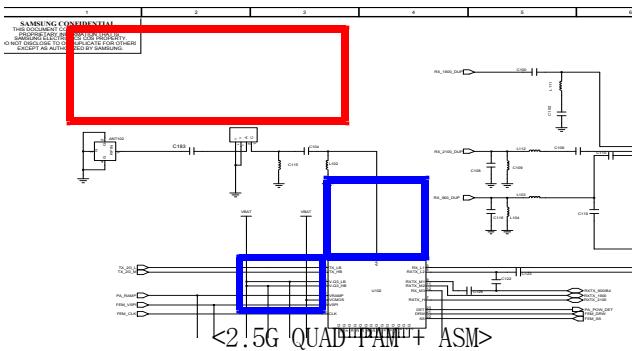
CONTINUOUS TX ON CONDITION
TX POWER DAC:14500 CODE
APPLIED
GSM850 CH : 190
GSM900 CH : 62
RBW : 100KHz
VBW : 100KHz
SPAN : 10MHz
REF LEV. : 10dBm
ATT. : 20dB



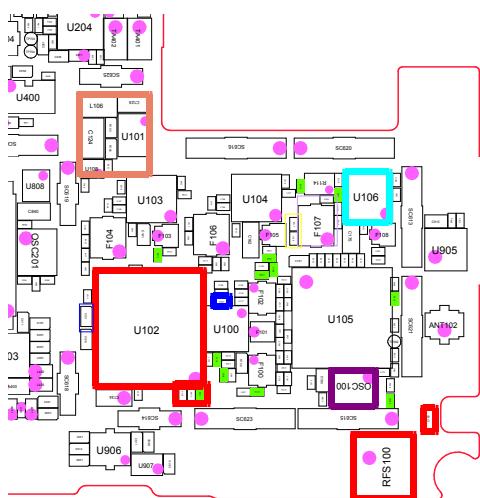
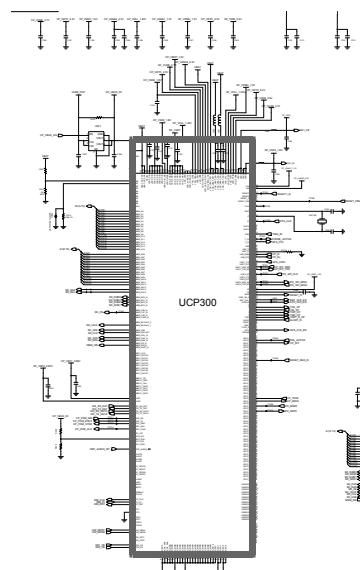
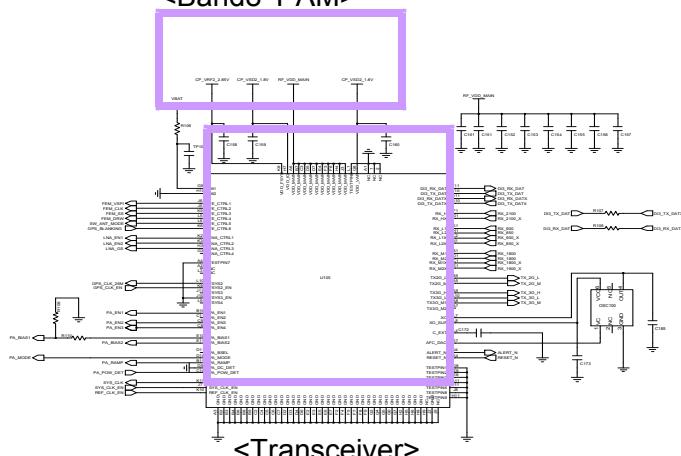
8-3-23. WCDMA BAND8 TX



CONTINUOUS TX ON CONDITION
TX POWER DAC:14500 CODE
APPLIED
GSM850 CH : 190
GSM900 CH : 62
RBW : 100KHz
VBW : 100KHz
SPAN : 10MHz
REF LEV. : 10dBm
ATT. : 20dB



<Band8 PAM>



8-4. Service Schematics

- NC Point : NC

UCP700

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
A																													A
B																													B
C																													C
D																													D
E																													E
F																													F
G																													G
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AF																													AF
AG																													AG
AH																													AH

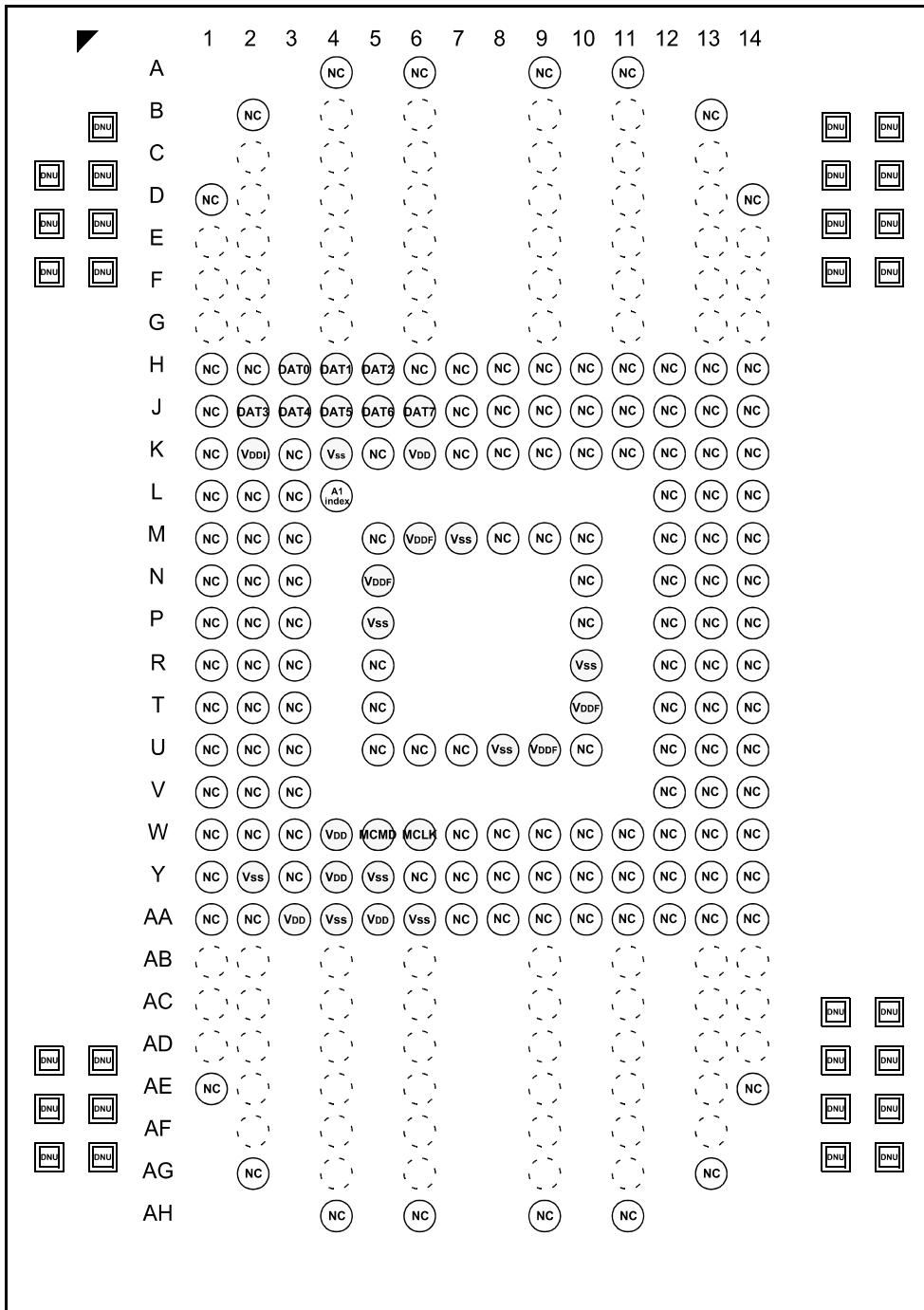
● : NC

UCP300

A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	T	U	V	W	Y	
NC																			NC	20
																				19
																				18
																				17
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																				7
																				6
																				5
																				4
																				3
																				2
NC																			NC	1
A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	T	U	V	W	Y	

● : NC

UME500

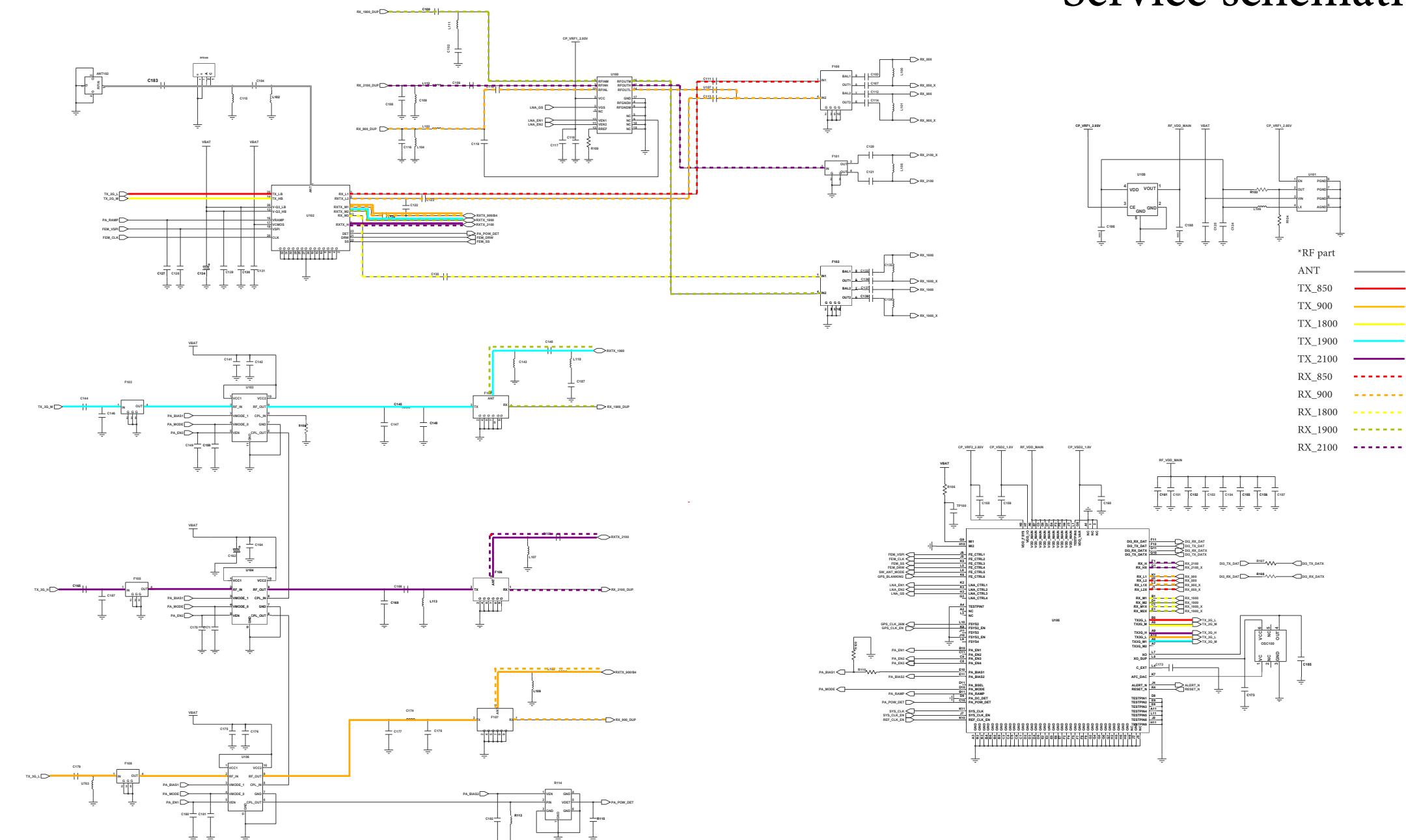


9. Reference Abbreviate

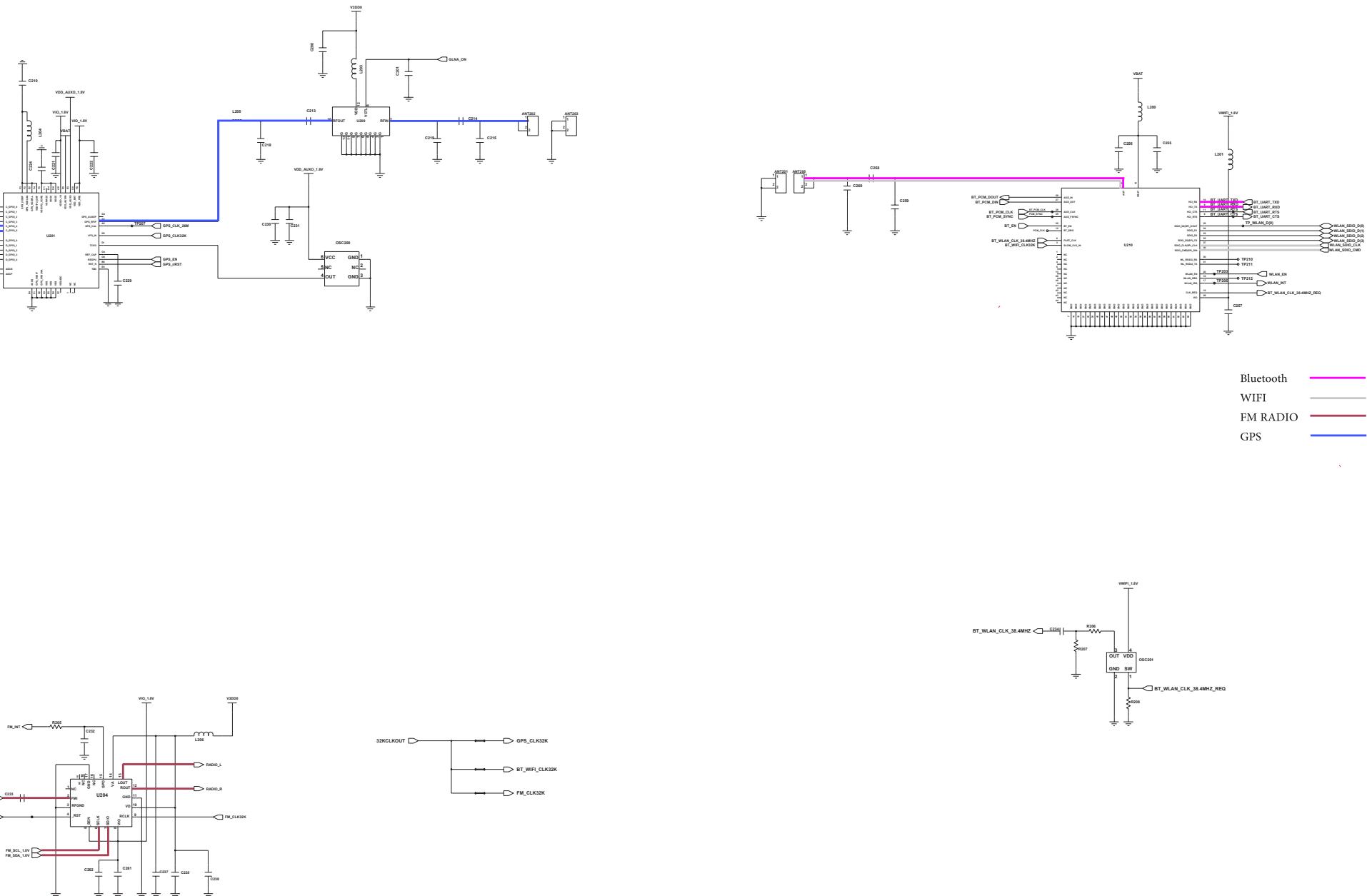
Reference Abbreviate

- **AAC**: Advanced Audio Coding.
- **AVC** : Advanced Video Coding.
- **BER** : Bit Error Rate
- **BPSK**: Binary Phase Shift Keying
- **CA** : Conditional Access
- **CDM** : Code Division Multiplexing
- **C/I** : Carrier to Interference
- **DMB** : Digital Multimedia Broadcasting
- **EN** : European Standard
- **ES** : Elementary Stream
- **ETSI**: European Telecommunications Standards Institute
- **MPEG**: Moving Picture Experts Group
- **PN** : Pseudo-random Noise
- **PS** : Pilot Symbol
- **QPSK**: Quadrature Phase Shift Keying
- **RS** : Reed-Solomon
- **SI** : Service Information
- **TDM** : Time Division Multiplexing
- **TS** : Transport Stream

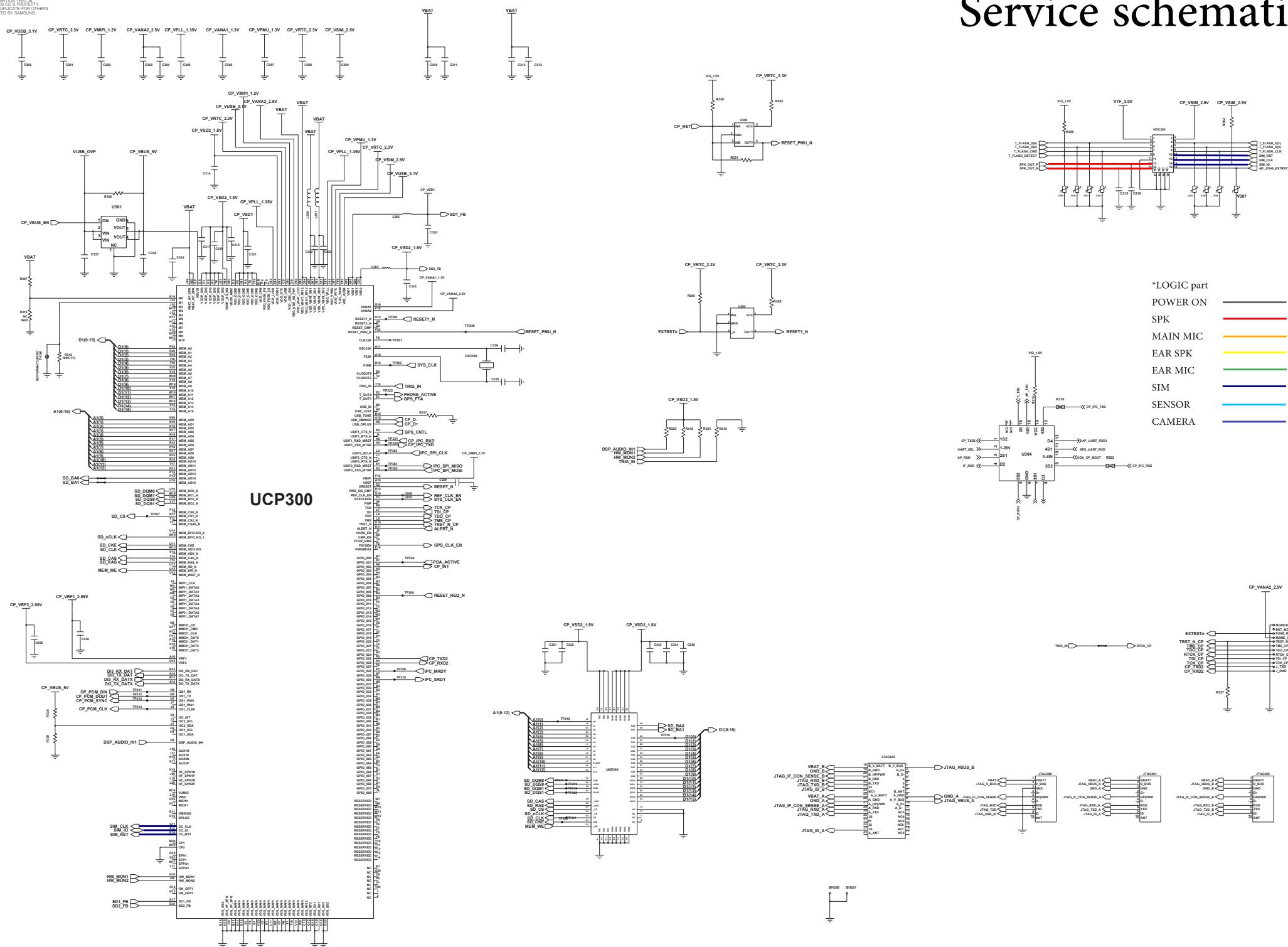
Service schematics



Service schematics

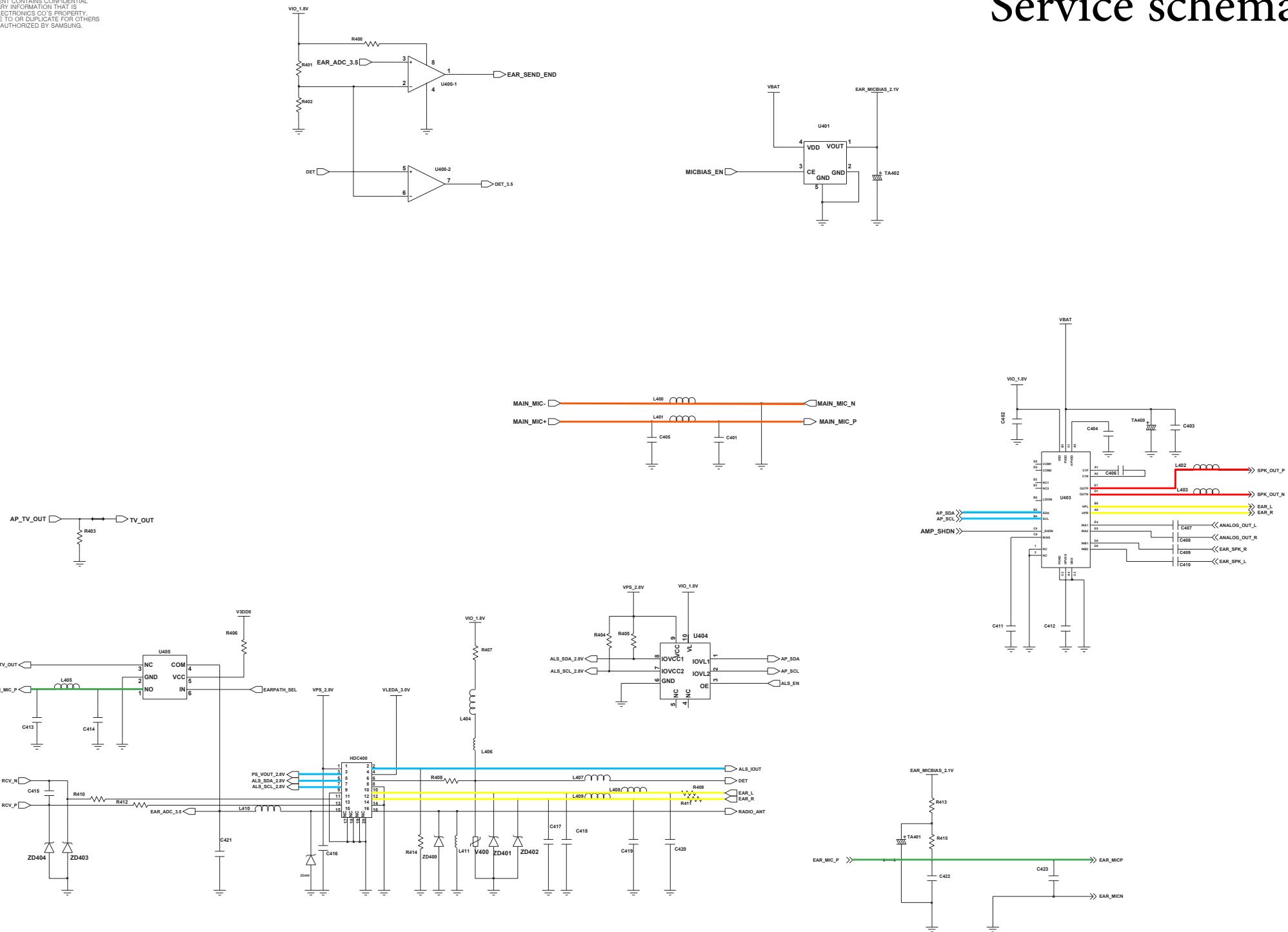


Service schematics



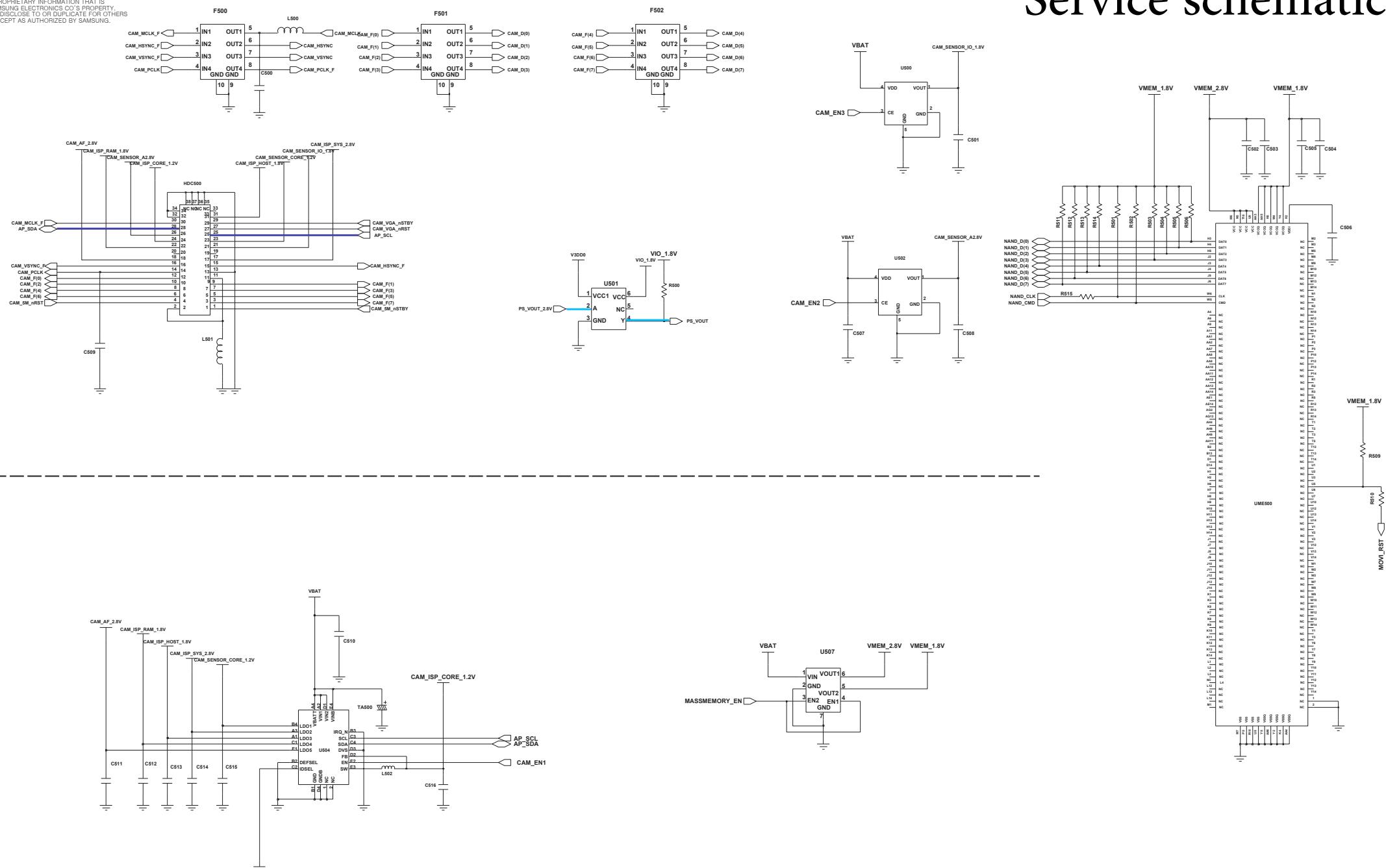
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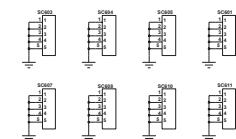
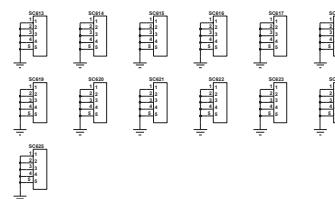
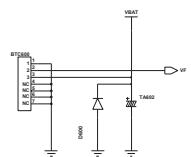
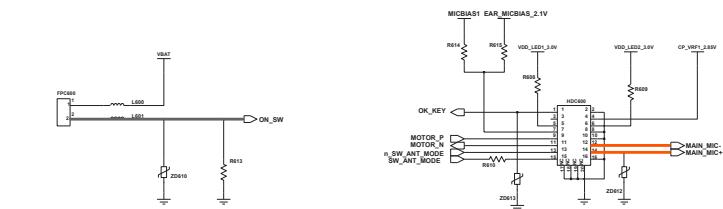
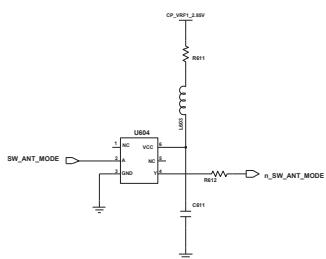
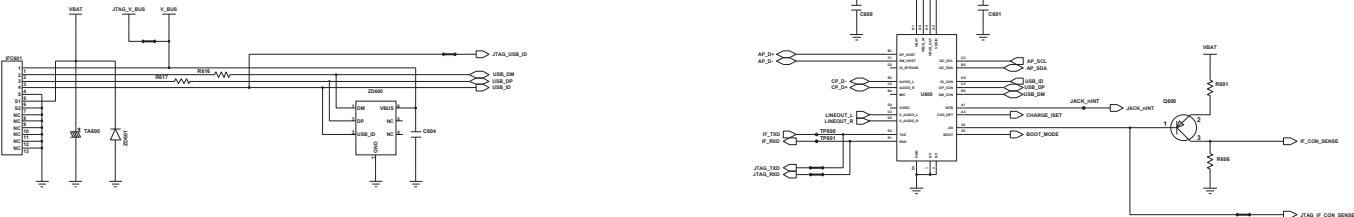


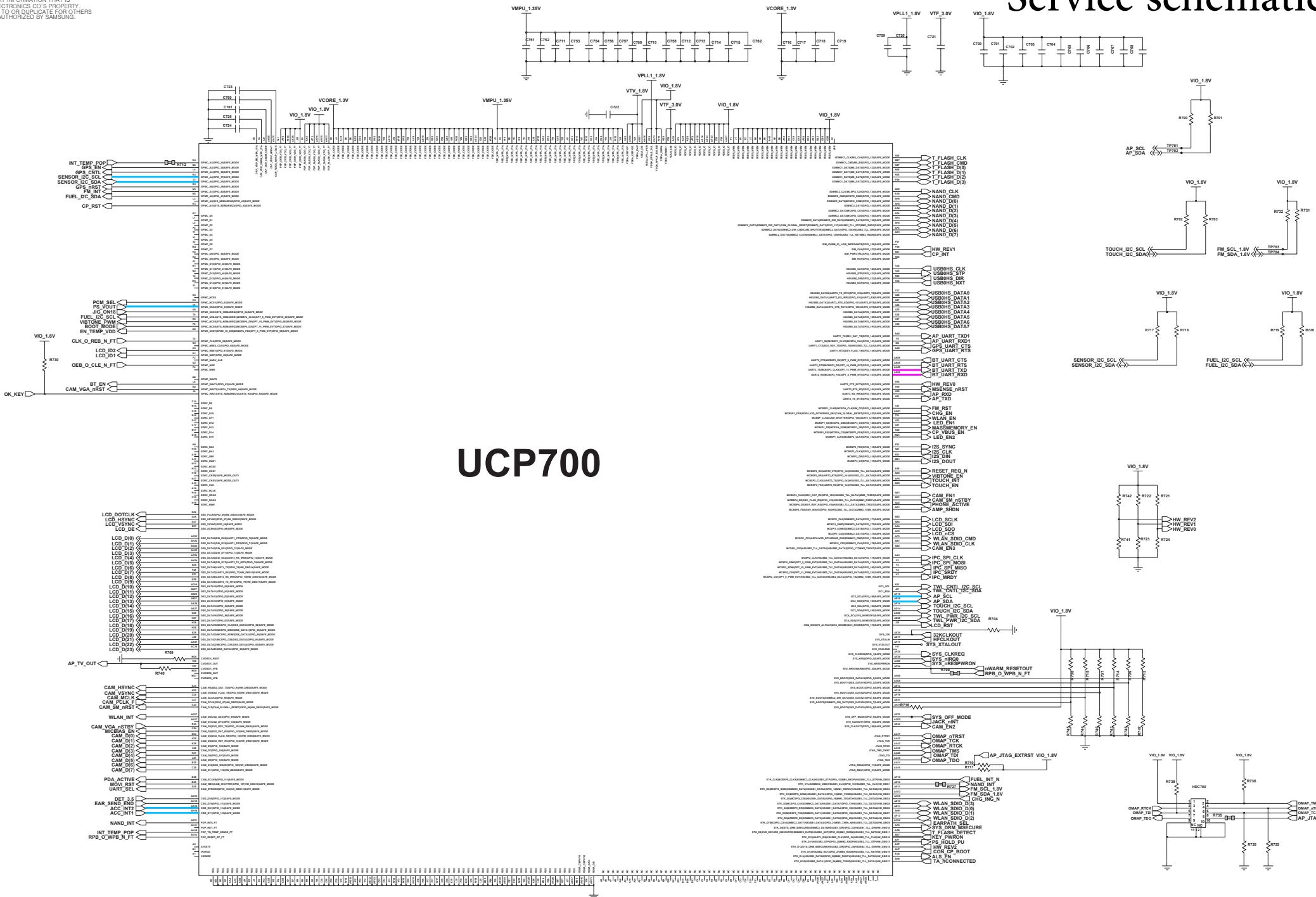
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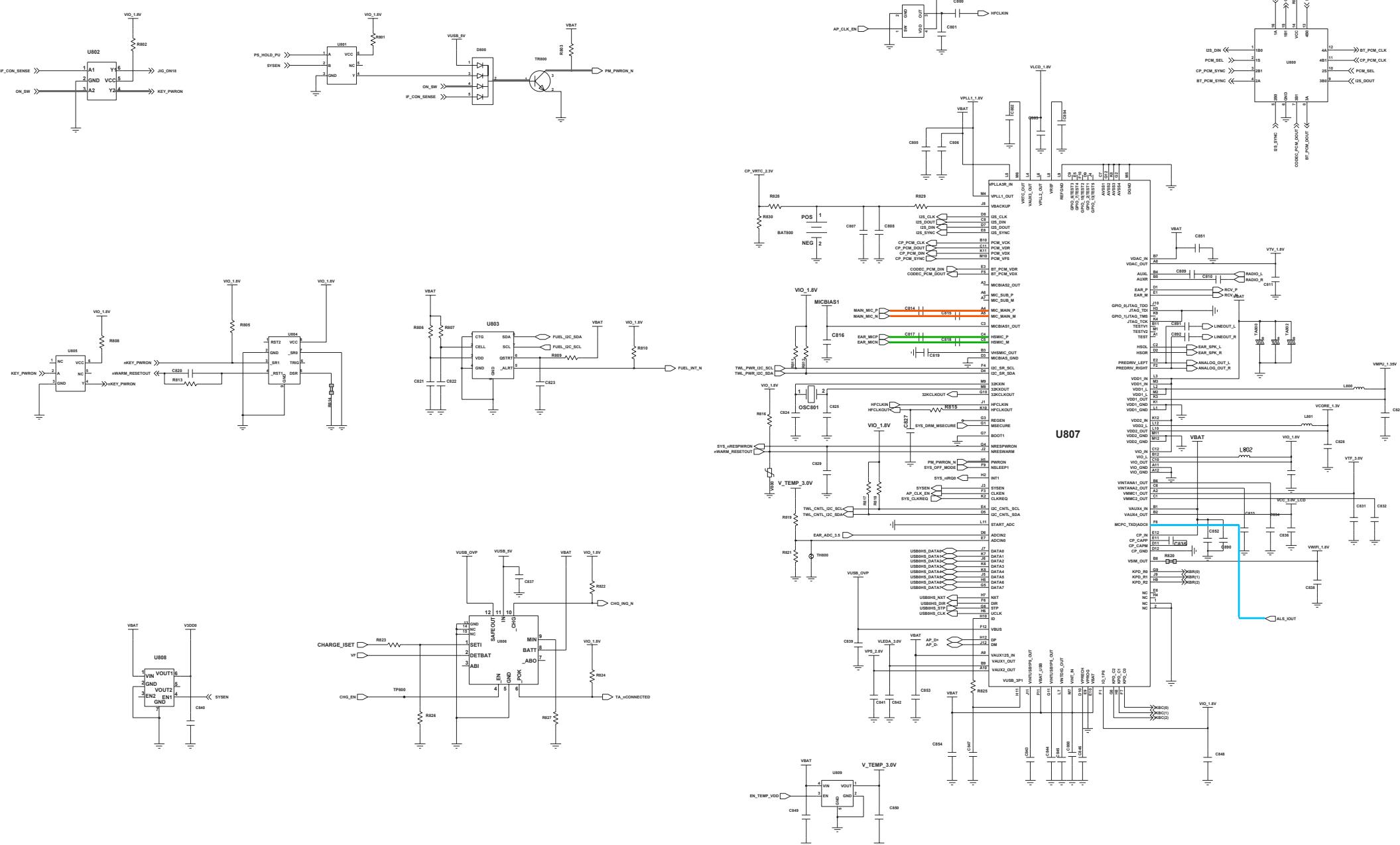


Service schematics



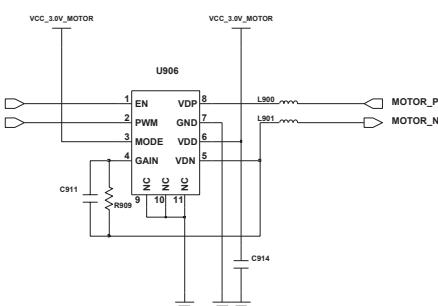
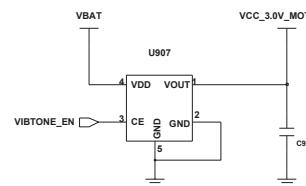
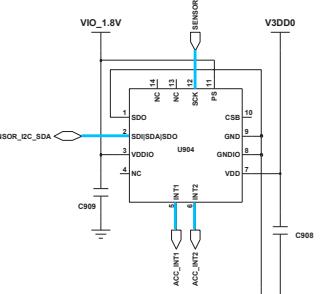
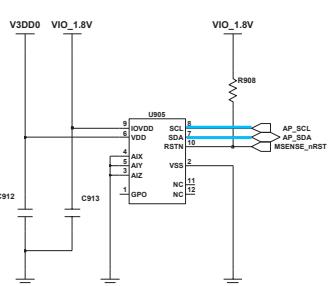
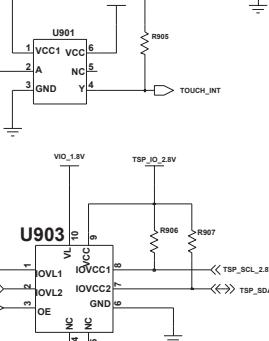
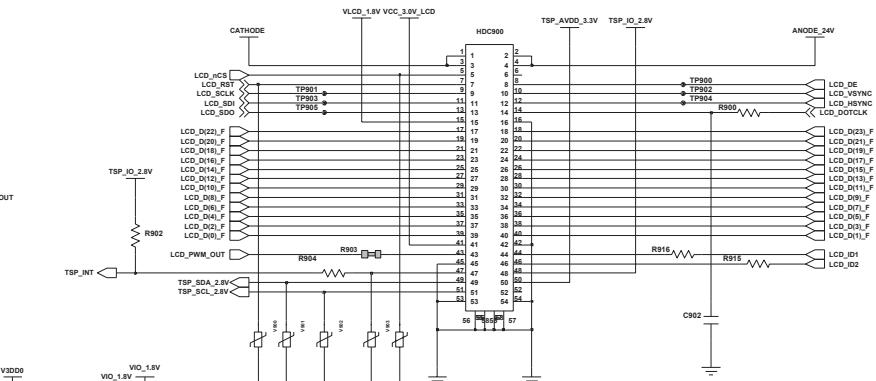
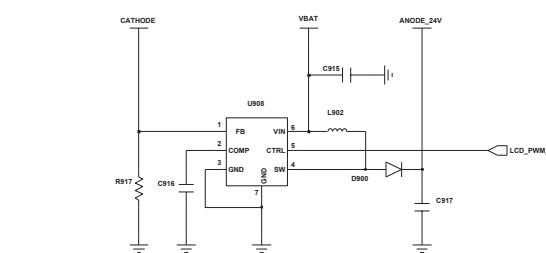
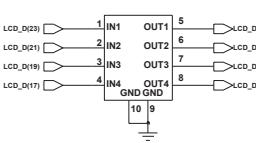
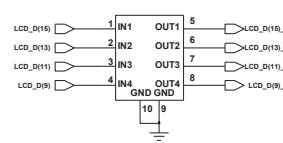
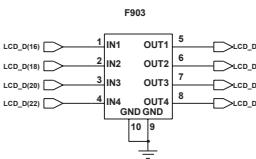
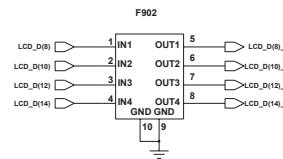
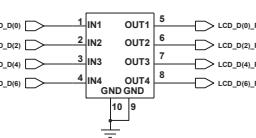
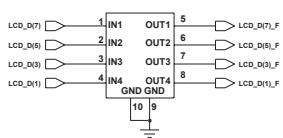


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