



SAMSUNG

GSM TELEPHONE

GT-i9020T(i9020 Common)

SERVICE *Manual*

GSM TELEPHONE

CONTENTS



1. Safety Precautions
2. Specification
3. Product Function
4. Exploded View and Parts list
5. MAIN Electrical Parts List
6. Level 1 Repair
7. Level 2 Repair
8. Level 3 Repair
9. Reference data

Notice

All functionality, features, specifications and other product information provided in this document including, but not limited to, the benefits, design, pricing, components, performance, availability, and capabilities of the product are subject to change without notice or obligation. Samsung reserves the right to make changes to this document and the product described herein, at anytime, without obligation on Samsung to provide notification of such change.

1. Safety Precautions

1-1. Repair Precaution

- Repair in Shield Box, during detailed tuning.
Take specially care of tuning or test, because the specification 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

	GSM 850	EGSM 900	DCS 1800	PCS 1900	WCDMA 900	WCDMA 1700	WCDMA 2100
Freq. Band[MHz] Uplink/ Downlink	824~849 869~894	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990	882.4~912.6 927.4~975.6	1710-1755 2110-2155	1920~1980 2110~2170
ARFCN range	128~251	0~124 & 975~1023	512~885	512~810	UL:2712~2863 DL:2937~3088	UL:1312~1513 DL:1537~1738	UL:9612~9888 DL:10562~1083 8
Tx/Rx spacing	45 MHz	45MHz	90MHz	80MHz	45MH	400MHz	190MHz
Mod. Bit rate/ Bit Period	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	3.84Mcps (chip rate)	3.84Mcps (chip rate)	3.84Mcps (chip rate)
Time Slot Period/ Frame Period	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	Frame length : 10ms Slot length : 0.667ms	Frame length : 10ms Slot length : 0.667ms	Frame length : 10ms Slot length : 0.667ms
Modulation	0.3GMSK	0.3GMSK	0.3GMSK	0.3GMSK	QPSK HPSK	QPSK HPSK	QPSK HPSK
MS Power	33dBm~5dBm	33dBm~5dBm	30dBm~0dBm	30dBm~0dBm	24dBm~-50dBm	24dBm~-50dBm	24dBm~-50dBm
Power Class	4 (max +33dBm)	4 (max +33dBm)	1 (max +30dBm)	1 (max +30dBm)	3 (max +24dBm)	3 (max +24dBm)	3 (max +24dBm)
Sensitivity	-102dBm	-102dBm	-100dBm	-100dBm	-103.7dBm	-106.7dBm	-106.7dBm
TDMA Mux	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	GSM900	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±3 dBm	17	9±3 dBm	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

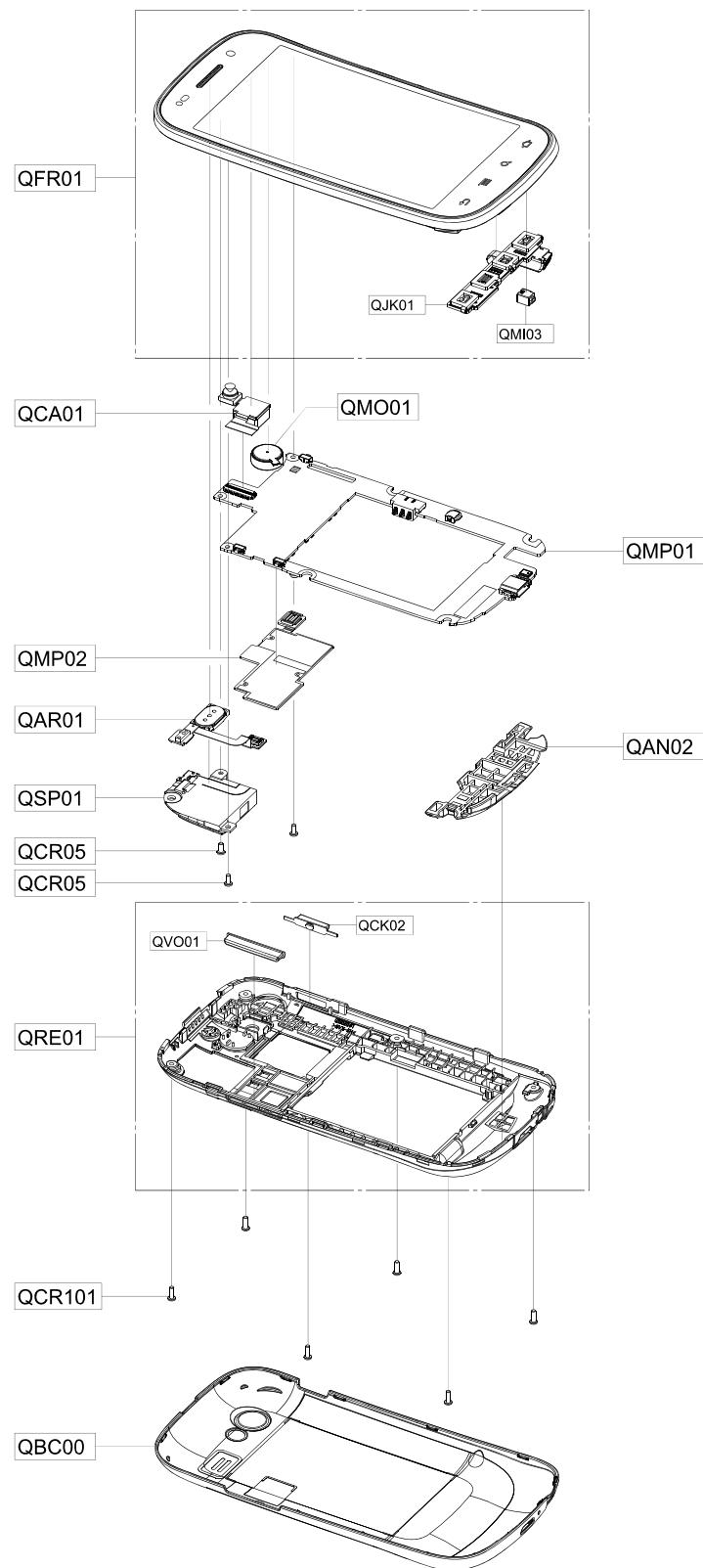
3. Operation Instruction and Installation

Main Function

- EDGE & GPRS Dual Standby
- MASTER : WCMA Triple + GSM Quad Band
(WCDMA FDD 1, 4, 8 & GSM850+EGSM900+DCS1800+PCS1900)
- Bluetooth v2.1 + EDR
- 3.97" WVGA
- 5MP AF with Power LED

4. Exploded View and Parts List

4-1. Cellular phone Exploded View



4-2. Cellular phone Parts list_i9020T

Design LOC	Description	SEC CODE
QCR05	SCREW-MACHINE	6001-001478
QCR05	SCREW-MACHINE	6001-001478
QCR101	SCREW-MACHINE	6001-002005
QMO01	MOTOR LINEAR VIBRATION-GT-I9020	GH31-00515A
QAN02	INTENNA-GT_I9020 MAIN_TMB	GH42-02789A
QSP01	MODULE-SPK(GT_I9020)	GH59-10341A
QAR01	MODULE-RCV+SENSOR(GT_I9020)	GH59-10342A
QCA01	CAMERA MODULE-GT_I9020 5M+VGA	GH59-10347A
QMP01	A/S ASSY-PBA MAIN(TMB) GT_I9020T	GH82-05341A
QMP02	A/S ASSY-PBA SUB(TMB) GT_I9020T	GH82-05342A
QBC00	ASSY COVER-BATT	GH98-18462A
QFR01	MEA FRONT-OCTA LCD(EU/BLK/I9020)	GH97-11714A
QJK01	KEY FPCB-EARJACK/TOUCH KEY ASSY(GT_I90	GH59-10333A
QMI03	ASSY RUBBER-MIC HOLDER	GH98-18759A
QRE01	ASSY CASE-REAR	GH98-18270A
QVO01	PMO KEY-VOLUME	GH72-61504A
QCK02	PMO KEY-POWER	GH72-61506A

4-3. Cellular phone Parts list_i9020

Design LOC	Description		SEC CODE
QCR05		SCREW-MACHINE	6001-001478
QCR05		SCREW-MACHINE	6001-001478
QCR101		SCREW-MACHINE	6001-002005
QMO01		MOTOR LINEAR VIBRATION-GT-I9020	GH31-00515A
QAN02		INTENNA-GT_I9020 MAIN	GH42-02752A
QSP01		MODULE-SPK(GT_I9020)	GH59-10341A
QAR01		MODULE-RCV+SENSOR(GT_I9020)	GH59-10342A
QCA01		CAMERA MODULE-GT_I9020 5M+VGA	GH59-10347A
QMP01		A/S ASSY-PBA MAIN(TMB) GT_I9020T	GH82-05341A
QMP02		A/S ASSY-PBA SUB(TMB) GT_I9020T	GH82-05342A
QBC00		ASSY COVER-BATT	GH98-18462A
QFR01		MEA FRONT-OCTA LCD(EU/BLK/I9020)	GH97-11714A
	QJK01	KEY FPCB-EARJACK/TOUCH KEY ASSY(GT-_I90	GH59-10333A
	QMI03	ASSY RUBBER-MIC HOLDER	GH98-18759A
QRE01		ASSY CASE-REAR	GH98-18270A
	QVO01	PMO KEY-VOLUME	GH72-61504A
	QCK02	PMO KEY-POWER	GH72-61506A

5. MAIN Electrical Parts List

Design LOG	SEC CODE	Description
D501	0403-001688	DIODE-ZENER
ZD703	0403-001688	DIODE-ZENER
U704	0406-001369	DIODE-TVS
ZD300	0406-001446	DIODE-TVS
ZD500	0406-001446	DIODE-TVS
ZD600	0406-001446	DIODE-TVS
ZD601	0406-001446	DIODE-TVS
ZD602	0406-001446	DIODE-TVS
ZD603	0406-001446	DIODE-TVS
ZD605	0406-001446	DIODE-TVS
ZD606	0406-001446	DIODE-TVS
ZD609	0406-001446	DIODE-TVS
ZD610	0406-001446	DIODE-TVS
ZD611	0406-001446	DIODE-TVS
ZD612	0406-001446	DIODE-TVS
ZD700	0406-001446	DIODE-TVS
ZD701	0406-001446	DIODE-TVS
ZD702	0406-001446	DIODE-TVS
ZD800	0406-001446	DIODE-TVS
ZD801	0406-001446	DIODE-TVS
ZD802	0406-001446	DIODE-TVS
D500	0407-001002	DIODE-ARRAY
Q700	0504-001138	TR-DIGITAL
LED700	0601-002779	LED
U300	0801-003139	IC-CMOS LOGIC
U304	0801-003227	IC-CMOS LOGIC
UCP400	0902-002582	IC-MICROPROCESSOR
U600	1001-001459	IC-ANALOG SWITCH
U703	1001-001580	IC-ANALOG MULTIPLEX
U804	1003-002047	IC-MOTOR DRIVER
U400	1003-002216	IC-LEVEL DRIVER
U302	1003-002352	IC-LEVEL DRIVER
U604	1003-002352	IC-LEVEL DRIVER
U303	1107-001937	IC-NAND FLASH

Design LOG	SEC CODE	Description
U202	1201-002971	IC-RF AMP
U107	1201-003091	IC-POWER AMP
U108	1201-003092	IC-POWER AMP
PAM100	1201-003144	IC-RF AMP
U100	1201-003177	IC-RF AMP
U103	1201-003180	IC-POWER AMP
U606	1202-001036	IC-VOLTAGE COMP.
U700	1203-004339	IC-MULTI REG.
U301	1203-004524	IC-MULTI REG.
U104	1203-004819	IC-POSI.FIXED REG.
U601	1203-004819	IC-POSI.FIXED REG.
U603	1203-004819	IC-POSI.FIXED REG.
U608	1203-004819	IC-POSI.FIXED REG.
U701	1203-004819	IC-POSI.FIXED REG.
U607	1203-004925	IC-POSI.FIXED REG.
U803	1203-004925	IC-POSI.FIXED REG.
U502	1203-005772	IC-VOL. DETECTOR
U702	1203-006025	IC-DC/DC CONVERTER
U105	1203-006159	IC-DC/DC CONVERTER
U501	1203-006367	IC-POWER SUPERVISOR
U802	1203-006372	IC-RESET
U602	1205-003943	IC-CODEC
U101	1205-003949	IC-TRANSCEIVER
U201	1205-003966	IC-RECEIVER
UCP300	1205-003993	IC-MODEM
U800	1209-001872	IC-SENSOR
U801	1209-001922	IC-SENSOR
U805	1209-001997	IC-SENSOR
U109	1209-001998	IC-DETECTOR
TH300	1404-001221	THERMISTOR-NTC
TH400	1404-001221	THERMISTOR-NTC
ZD604	1405-001296	VARISTOR
ZD607	1405-001296	VARISTOR
ZD608	1405-001296	VARISTOR
R800	2007-000162	R-CHIP

Design LOG	SEC CODE	Description
R325	2007-000167	R-CHIP
R604	2007-000172	R-CHIP
R613	2007-000172	R-CHIP
R701	2007-000172	R-CHIP
R618	2007-000242	R-CHIP
R601	2007-001298	R-CHIP
R612	2007-001298	R-CHIP
R320	2007-003018	R-CHIP
R110	2007-003029	R-CHIP
R506	2007-007307	R-CHIP
R507	2007-007307	R-CHIP
R628	2007-007585	R-CHIP
R806	2007-007592	R-CHIP
R705	2007-007875	R-CHIP
R713	2007-007943	R-CHIP
R321	2007-008045	R-CHIP
R322	2007-008045	R-CHIP
R422	2007-008045	R-CHIP
R469	2007-008045	R-CHIP
R470	2007-008045	R-CHIP
R619	2007-008045	R-CHIP
R620	2007-008045	R-CHIP
R625	2007-008045	R-CHIP
R703	2007-008045	R-CHIP
R708	2007-008045	R-CHIP
R400	2007-008052	R-CHIP
R437	2007-008052	R-CHIP
R208	2007-008055	R-CHIP
R323	2007-008055	R-CHIP
R441	2007-008055	R-CHIP
R444	2007-008055	R-CHIP
R445	2007-008055	R-CHIP
R447	2007-008055	R-CHIP
R448	2007-008055	R-CHIP
R457	2007-008055	R-CHIP

Design LOG	SEC CODE	Description
R501	2007-008055	R-CHIP
R502	2007-008055	R-CHIP
R503	2007-008055	R-CHIP
R704	2007-008055	R-CHIP
R706	2007-008055	R-CHIP
R707	2007-008055	R-CHIP
R602	2007-008211	R-CHIP
R603	2007-008211	R-CHIP
R714	2007-008211	R-CHIP
R715	2007-008211	R-CHIP
R312	2007-008312	R-CHIP
R100	2007-008419	R-CHIP
R401	2007-008419	R-CHIP
R402	2007-008419	R-CHIP
R414	2007-008419	R-CHIP
R415	2007-008419	R-CHIP
R416	2007-008419	R-CHIP
R417	2007-008419	R-CHIP
R418	2007-008419	R-CHIP
R419	2007-008419	R-CHIP
R449	2007-008419	R-CHIP
R450	2007-008419	R-CHIP
R453	2007-008419	R-CHIP
R454	2007-008419	R-CHIP
R459	2007-008419	R-CHIP
R460	2007-008419	R-CHIP
R461	2007-008419	R-CHIP
R462	2007-008419	R-CHIP
R111	2007-008486	R-CHIP
R508	2007-008502	R-CHIP
R202	2007-008516	R-CHIP
R203	2007-008516	R-CHIP
R204	2007-008516	R-CHIP
R205	2007-008516	R-CHIP
R206	2007-008516	R-CHIP

Design LOG	SEC CODE	Description
R311	2007-008516	R-CHIP
R328	2007-008516	R-CHIP
R423	2007-008516	R-CHIP
R424	2007-008516	R-CHIP
R427	2007-008516	R-CHIP
R429	2007-008516	R-CHIP
R432	2007-008516	R-CHIP
R433	2007-008516	R-CHIP
R435	2007-008516	R-CHIP
R438	2007-008516	R-CHIP
R458	2007-008516	R-CHIP
R464	2007-008516	R-CHIP
R465	2007-008516	R-CHIP
R466	2007-008516	R-CHIP
R504	2007-008516	R-CHIP
R505	2007-008516	R-CHIP
R615	2007-008516	R-CHIP
R616	2007-008516	R-CHIP
R623	2007-008516	R-CHIP
R702	2007-008516	R-CHIP
R709	2007-008516	R-CHIP
R808	2007-008516	R-CHIP
R463	2007-008531	R-CHIP
R606	2007-008531	R-CHIP
R607	2007-008531	R-CHIP
R617	2007-009408	R-CHIP
R314	2007-008588	R-CHIP
R315	2007-008588	R-CHIP
R316	2007-008588	R-CHIP
R711	2007-008774	R-CHIP
R712	2007-008774	R-CHIP
R803	2007-008774	R-CHIP
R108	2007-008806	R-CHIP
R207	2007-008806	R-CHIP
R500	2007-008809	R-CHIP

Design LOG	SEC CODE	Description
R624	2007-009084	R-CHIP
R627	2007-009084	R-CHIP
R313	2007-009157	R-CHIP
R317	2007-009157	R-CHIP
R408	2007-009157	R-CHIP
R409	2007-009157	R-CHIP
R302	2007-009171	R-CHIP
R303	2007-009171	R-CHIP
R304	2007-009171	R-CHIP
R305	2007-009171	R-CHIP
R306	2007-009171	R-CHIP
R307	2007-009171	R-CHIP
R308	2007-009171	R-CHIP
R309	2007-009171	R-CHIP
R102	2007-009212	R-CHIP
R327	2007-009323	R-CHIP
R103	2007-009801	R-CHIP
R104	2007-009801	R-CHIP
R201	2007-009801	R-CHIP
R455	2007-009964	R-CHIP
R456	2007-009964	R-CHIP
R404	2007-010029	R-CHIP
R614	2007-010202	R-CHIP
C206	2203-000278	C-CER,CHIP
C538	2203-000254	C-CER,CHIP
L201	2703-003470	INDUCTOR-SMD
C208	2203-005288	C-CER,CHIP
C329	2203-000425	C-CER,CHIP
C330	2203-000425	C-CER,CHIP
C515	2203-000425	C-CER,CHIP
C536	2203-000425	C-CER,CHIP
C633	2203-000425	C-CER,CHIP
C643	2203-000425	C-CER,CHIP
C644	2203-000425	C-CER,CHIP
C806	2203-000725	C-CER,CHIP

Design LOG	SEC CODE	Description
C632	2203-001153	C-CER,CHIP
C637	2203-001153	C-CER,CHIP
C134	2203-002709	C-CER,CHIP
C426	2203-005138	C-CER,CHIP
C117	2203-005234	C-CER,CHIP
C174	2203-005552	C-CER,CHIP
C102	2203-005682	C-CER,CHIP
C125	2203-005682	C-CER,CHIP
C127	2203-005682	C-CER,CHIP
C128	2203-005682	C-CER,CHIP
C129	2203-005682	C-CER,CHIP
C135	2203-005682	C-CER,CHIP
C137	2203-005682	C-CER,CHIP
C140	2203-005682	C-CER,CHIP
C141	2203-005682	C-CER,CHIP
C189	2203-005682	C-CER,CHIP
C190	2203-005682	C-CER,CHIP
C191	2203-005682	C-CER,CHIP
C339	2203-005682	C-CER,CHIP
C104	2203-005683	C-CER,CHIP
C710	2203-005719	C-CER,CHIP
C221	2203-005725	C-CER,CHIP
C123	2203-005727	C-CER,CHIP
C130	2203-005729	C-CER,CHIP
C101	2203-005731	C-CER,CHIP
C121	2203-005731	C-CER,CHIP
C126	2203-005732	C-CER,CHIP
C719	2203-005732	C-CER,CHIP
C159	2203-005736	C-CER,CHIP
C161	2203-005736	C-CER,CHIP
C162	2203-005736	C-CER,CHIP
C169	2203-005736	C-CER,CHIP
C172	2203-005736	C-CER,CHIP
C177	2203-005736	C-CER,CHIP
C178	2203-005736	C-CER,CHIP

Design LOG	SEC CODE	Description
C183	2203-005736	C-CER,CHIP
C184	2203-005736	C-CER,CHIP
C185	2203-005736	C-CER,CHIP
C186	2203-005736	C-CER,CHIP
C709	2203-005740	C-CER,CHIP
C103	2203-005777	C-CER,CHIP
C153	2203-005777	C-CER,CHIP
C157	2203-005777	C-CER,CHIP
C158	2203-005777	C-CER,CHIP
C176	2203-005777	C-CER,CHIP
C156	2203-005806	C-CER,CHIP
C171	2203-005806	C-CER,CHIP
C180	2203-005806	C-CER,CHIP
C202	2203-006048	C-CER,CHIP
C604	2203-006048	C-CER,CHIP
C222	2203-006120	C-CER,CHIP
C120	2203-006123	C-CER,CHIP
C421	2203-006133	C-CER,CHIP
C422	2203-006133	C-CER,CHIP
C107	2203-006194	C-CER,CHIP
C108	2203-006194	C-CER,CHIP
C109	2203-006194	C-CER,CHIP
C110	2203-006194	C-CER,CHIP
C111	2203-006194	C-CER,CHIP
C112	2203-006194	C-CER,CHIP
C114	2203-006194	C-CER,CHIP
C115	2203-006194	C-CER,CHIP
C116	2203-006194	C-CER,CHIP
C188	2203-006194	C-CER,CHIP
C223	2203-006194	C-CER,CHIP
C305	2203-006194	C-CER,CHIP
C166	2203-006208	C-CER,CHIP
C218	2203-006208	C-CER,CHIP
C219	2203-006208	C-CER,CHIP
C516	2203-006324	C-CER,CHIP

Design LOG	SEC CODE	Description
C517	2203-006208	C-CER,CHIP
C518	2203-006141	C-CER,CHIP
C519	2203-006208	C-CER,CHIP
C319	2203-006260	C-CER,CHIP
C327	2203-006260	C-CER,CHIP
C427	2203-006305	C-CER,CHIP
C175	2203-006318	C-CER,CHIP
C501	2203-006348	C-CER,CHIP
C119	2203-006399	C-CER,CHIP
C520	2203-006399	C-CER,CHIP
C521	2203-006399	C-CER,CHIP
C523	2203-006399	C-CER,CHIP
C524	2203-006399	C-CER,CHIP
C525	2203-006399	C-CER,CHIP
C527	2203-006399	C-CER,CHIP
C528	2203-006399	C-CER,CHIP
C529	2203-006399	C-CER,CHIP
C530	2203-006399	C-CER,CHIP
C531	2203-006399	C-CER,CHIP
C532	2203-006399	C-CER,CHIP
C533	2203-006399	C-CER,CHIP
C534	2203-006399	C-CER,CHIP
C535	2203-006399	C-CER,CHIP
C122	2203-006423	C-CER,CHIP
C138	2203-006423	C-CER,CHIP
C303	2203-006423	C-CER,CHIP
C309	2203-006423	C-CER,CHIP
C314	2203-006423	C-CER,CHIP
C316	2203-006423	C-CER,CHIP
C335	2203-006423	C-CER,CHIP
C336	2203-006423	C-CER,CHIP
C401	2203-006423	C-CER,CHIP
C408	2203-006423	C-CER,CHIP
C413	2203-006423	C-CER,CHIP
C415	2203-006423	C-CER,CHIP

Design LOG	SEC CODE	Description
C419	2203-006423	C-CER,CHIP
C600	2203-006423	C-CER,CHIP
C608	2203-006423	C-CER,CHIP
C609	2203-006423	C-CER,CHIP
C713	2203-006423	C-CER,CHIP
C720	2203-006423	C-CER,CHIP
C800	2203-006462	C-CER,CHIP
C320	2203-006474	C-CER,CHIP
C328	2203-006474	C-CER,CHIP
C131	2203-006562	C-CER,CHIP
C163	2203-006562	C-CER,CHIP
C216	2203-006562	C-CER,CHIP
C331	2203-006562	C-CER,CHIP
C404	2203-006562	C-CER,CHIP
C500	2203-006562	C-CER,CHIP
C502	2203-006562	C-CER,CHIP
C513	2203-006562	C-CER,CHIP
C514	2203-006562	C-CER,CHIP
C522	2203-006562	C-CER,CHIP
C526	2203-006562	C-CER,CHIP
C605	2203-006562	C-CER,CHIP
C606	2203-006562	C-CER,CHIP
C610	2203-006562	C-CER,CHIP
C611	2203-006562	C-CER,CHIP
C612	2203-006562	C-CER,CHIP
C613	2203-006562	C-CER,CHIP
C616	2203-006562	C-CER,CHIP
C617	2203-006562	C-CER,CHIP
C627	2203-006562	C-CER,CHIP
C634	2203-006562	C-CER,CHIP
C635	2203-006562	C-CER,CHIP
C641	2203-006562	C-CER,CHIP
C642	2203-006562	C-CER,CHIP
C645	2203-006562	C-CER,CHIP
C646	2203-006562	C-CER,CHIP

Design LOG	SEC CODE	Description
C805	2203-006562	C-CER,CHIP
C807	2203-006562	C-CER,CHIP
C143	2203-006611	C-CER,CHIP
C149	2203-006611	C-CER,CHIP
C150	2203-006611	C-CER,CHIP
C151	2203-006611	C-CER,CHIP
C201	2203-006642	C-CER,CHIP
C406	2203-006642	C-CER,CHIP
C416	2203-006642	C-CER,CHIP
C182	2203-006665	C-CER,CHIP
C420	2203-006668	C-CER,CHIP
C722	2203-006681	C-CER,CHIP
C723	2203-006681	C-CER,CHIP
C803	2203-006681	C-CER,CHIP
C100	2203-006707	C-CER,CHIP
C209	2203-006824	C-CER,CHIP
C217	2203-006824	C-CER,CHIP
C504	2203-006824	C-CER,CHIP
C164	2203-006839	C-CER,CHIP
C224	2203-006839	C-CER,CHIP
C225	2203-006839	C-CER,CHIP
C311	2203-006839	C-CER,CHIP
C313	2203-006839	C-CER,CHIP
C400	2203-006839	C-CER,CHIP
C425	2203-006839	C-CER,CHIP
C428	2203-006839	C-CER,CHIP
C429	2203-006839	C-CER,CHIP
C714	2203-006839	C-CER,CHIP
C808	2203-006839	C-CER,CHIP
C537	2203-006841	C-CER,CHIP
C539	2203-006841	C-CER,CHIP
C203	2203-006872	C-CER,CHIP
C204	2203-006872	C-CER,CHIP
C207	2203-006872	C-CER,CHIP
C215	2203-006872	C-CER,CHIP

Design LOG	SEC CODE	Description
C220	2203-006872	C-CER,CHIP
C624	2203-006872	C-CER,CHIP
C628	2203-006872	C-CER,CHIP
C629	2203-006872	C-CER,CHIP
C132	2203-006979	C-CER,CHIP
C133	2203-006979	C-CER,CHIP
C810	2203-006979	C-CER,CHIP
C136	2203-007133	C-CER,CHIP
C106	2203-007210	C-CER,CHIP
C301	2203-007210	C-CER,CHIP
C304	2203-007210	C-CER,CHIP
C308	2203-007210	C-CER,CHIP
C323	2203-007210	C-CER,CHIP
C334	2203-007210	C-CER,CHIP
C154	2203-007270	C-CER,CHIP
C165	2203-007270	C-CER,CHIP
C168	2203-007270	C-CER,CHIP
C179	2203-007270	C-CER,CHIP
C200	2203-007270	C-CER,CHIP
C310	2203-007270	C-CER,CHIP
C312	2203-007270	C-CER,CHIP
C325	2203-007270	C-CER,CHIP
C326	2203-007270	C-CER,CHIP
C503	2203-007270	C-CER,CHIP
C315	2203-007271	C-CER,CHIP
C317	2203-007271	C-CER,CHIP
C337	2203-007271	C-CER,CHIP
C403	2203-007271	C-CER,CHIP
C414	2203-007271	C-CER,CHIP
C418	2203-007271	C-CER,CHIP
C430	2203-007271	C-CER,CHIP
C540	2203-007271	C-CER,CHIP
C700	2203-007271	C-CER,CHIP
C701	2203-007271	C-CER,CHIP
C702	2203-007271	C-CER,CHIP

Design LOG	SEC CODE	Description
C711	2203-007271	C-CER,CHIP
C717	2203-007271	C-CER,CHIP
C721	2203-007271	C-CER,CHIP
C802	2203-007271	C-CER,CHIP
C804	2203-007271	C-CER,CHIP
C409	2203-007317	C-CER,CHIP
C410	2203-007317	C-CER,CHIP
C417	2203-007317	C-CER,CHIP
C601	2203-007317	C-CER,CHIP
C602	2203-006399	C-CER,CHIP
C607	2203-007317	C-CER,CHIP
C626	2203-007317	C-CER,CHIP
C638	2203-006048	C-CER,CHIP
C639	2203-007317	C-CER,CHIP
C715	2203-007317	C-CER,CHIP
C716	2203-007317	C-CER,CHIP
C811	2203-007391	C-CER,CHIP
C603	2203-007393	C-CER,CHIP
C703	2203-007393	C-CER,CHIP
C704	2203-007393	C-CER,CHIP
C705	2203-007393	C-CER,CHIP
C706	2203-007393	C-CER,CHIP
C707	2203-007393	C-CER,CHIP
C708	2203-007393	C-CER,CHIP
C712	2203-007393	C-CER,CHIP
C801	2203-007393	C-CER,CHIP
C809	2203-007393	C-CER,CHIP
C718	2203-007425	C-CER,CHIP
C300	2203-007449	C-CER,CHIP
C302	2203-007449	C-CER,CHIP
C306	2203-007449	C-CER,CHIP
C307	2203-007449	C-CER,CHIP
C318	2203-007449	C-CER,CHIP
C321	2203-007449	C-CER,CHIP
C322	2203-007449	C-CER,CHIP

Design LOG	SEC CODE	Description
C324	2203-007449	C-CER,CHIP
C332	2203-007449	C-CER,CHIP
C333	2203-007449	C-CER,CHIP
C338	2203-007449	C-CER,CHIP
C402	2203-007449	C-CER,CHIP
C405	2203-007449	C-CER,CHIP
C407	2203-007449	C-CER,CHIP
C411	2203-007449	C-CER,CHIP
C412	2203-007449	C-CER,CHIP
C512	2203-007449	C-CER,CHIP
C622	2203-007449	C-CER,CHIP
TA500	2404-001339	C-TA,CHIP
TA501	2404-001339	C-TA,CHIP
TA502	2404-001339	C-TA,CHIP
TA503	2404-001339	C-TA,CHIP
TA504	2404-001339	C-TA,CHIP
TA505	2404-001506	C-TA,CHIP
TA600	2404-001561	C-TA,CHIP
TA601	2404-001561	C-TA,CHIP
L610	2703-001206	INDUCTOR-SMD
L101	2703-002176	INDUCTOR-SMD
C205	2203-001383	C-CER,CHIP
L203	2703-001734	INDUCTOR-SMD
L802	2703-002309	INDUCTOR-SMD
L803	2703-002309	INDUCTOR-SMD
L109	2703-002793	INDUCTOR-SMD
L102	2703-002842	INDUCTOR-SMD
L112	2703-002842	INDUCTOR-SMD
L800	2703-002842	INDUCTOR-SMD
L801	2703-002842	INDUCTOR-SMD
L122	2703-002858	INDUCTOR-SMD
L123	2703-002858	INDUCTOR-SMD
L103	2703-002870	INDUCTOR-SMD
L115	2703-002901	INDUCTOR-SMD
L107	2703-002903	INDUCTOR-SMD

Design LOG	SEC CODE	Description
L110	2703-002903	INDUCTOR-SMD
L100	2703-002906	INDUCTOR-SMD
L117	2703-002906	INDUCTOR-SMD
L120	2703-002906	INDUCTOR-SMD
L118	2703-002907	INDUCTOR-SMD
L121	2703-002907	INDUCTOR-SMD
L116	2703-002910	INDUCTOR-SMD
L106	2703-002953	INDUCTOR-SMD
L105	2703-002999	INDUCTOR-SMD
L119	2703-002999	INDUCTOR-SMD
L124	2703-003009	INDUCTOR-SMD
L701	2703-003502	INDUCTOR-SMD
L500	2703-003686	INDUCTOR-SMD
L501	2703-003687	INDUCTOR-SMD
L502	2703-003685	INDUCTOR-SMD
L503	2703-003687	INDUCTOR-SMD
L111	2703-003802	INDUCTOR-SMD
L202	2703-003869	INDUCTOR-SMD
L302	2703-003869	INDUCTOR-SMD
L303	2703-003869	INDUCTOR-SMD
L113	2703-003914	INDUCTOR-SMD
L114	2703-003916	INDUCTOR-SMD
L108	2703-003970	INDUCTOR-SMD
OSC300	2801-004373	CRYSTAL-SMD
OSC500	2801-004373	CRYSTAL-SMD
OSC400	2801-004458	CRYSTAL-SMD
OSC201	2804-001884	OSCILLATOR-CLOCK
OSC200	2809-001348	OSCILLATOR-TCXO
OSC100	2809-001358	OSCILLATOR-TCXO
F700	2901-001413	FILTER-EMI SMD
F701	2901-001413	FILTER-EMI SMD
F702	2901-001413	FILTER-EMI SMD
F703	2901-001413	FILTER-EMI SMD
F704	2901-001413	FILTER-EMI SMD
F705	2901-001413	FILTER-EMI SMD

Design LOG	SEC CODE	Description
F706	2901-001604	FILTER-EMI SMD
F707	2901-001604	FILTER-EMI SMD
F104	2904-001778	FILTER-SAW
F105	2904-001847	FILTER-SAW
F108	2904-001850	FILTER-SAW
F102	2904-001953	FILTER-SAW
F100	2904-001966	FILTER-SAW
F101	2904-001973	FILTER-SAW
F106	2910-000081	DUPLEXER-SAW
F103	2910-000101	DUPLEXER-SAW
F107	2910-000107	DUPLEXER-SAW
MIC600	3003-001136	MIC MEMS
L300	3301-001120	BEAD-SMD
L301	3301-001120	BEAD-SMD
L702	3301-001438	BEAD-SMD
L200	3301-001659	BEAD-SMD
L700	3301-001729	BEAD-SMD
L600	3301-001789	BEAD-SMD
L601	3301-001789	BEAD-SMD
L204	3301-001885	BEAD-SMD
L602	3301-001885	BEAD-SMD
L603	3301-001885	BEAD-SMD
L604	3301-001885	BEAD-SMD
L605	3301-001885	BEAD-SMD
L606	3301-001885	BEAD-SMD
L607	3301-001885	BEAD-SMD
L608	3301-001885	BEAD-SMD
L609	3301-001885	BEAD-SMD
TAC800	3404-001303	SWITCH-TACT
TAC801	3404-001303	SWITCH-TACT
TAC802	3404-001303	SWITCH-TACT
RFS100	3705-001731	CONNECTOR-COAXIAL
HDC700	3708-002162	CONNECTOR-FPC/FFC/PIC
HDC300	3711-005962	HEADER-BOARD TO BOARD
BTC500	3711-006299	HEADER-BATTERY

Design LOG	SEC CODE	Description
HDC701	3711-006483	HEADER-BOARD TO BOARD
HDC600	3711-006615	HEADER-BOARD TO BOARD
HDC601	3711-006923	HEADER-BOARD TO BOARD
HDC400	3711-007173	HEADER-BOARD TO BOARD
ANT100	3712-001348	CONNECTOR-TERMINAL
ANT101	3712-001348	CONNECTOR-TERMINAL
ANT200	3712-001348	CONNECTOR-TERMINAL
ANT201	3712-001348	CONNECTOR-TERMINAL
IFC700	3722-002867	JACK-MINI USB
BAT500	4302-001180	BATTERY-LI(2ND)
U200	4709-001844	W-LAN MODULE
SC100	GH70-04443A	ICT SHIELD-CAN CLIP
SC101	GH70-04443A	ICT SHIELD-CAN CLIP
SC102	GH70-04443A	ICT SHIELD-CAN CLIP
SC103	GH70-04443A	ICT SHIELD-CAN CLIP
SC104	GH70-04443A	ICT SHIELD-CAN CLIP
SC105	GH70-04443A	ICT SHIELD-CAN CLIP
SC106	GH70-04443A	ICT SHIELD-CAN CLIP
SC107	GH70-04443A	ICT SHIELD-CAN CLIP
SC800	GH70-04443A	ICT SHIELD-CAN CLIP
SC801	GH70-04443A	ICT SHIELD-CAN CLIP
SC802	GH70-04443A	ICT SHIELD-CAN CLIP
SC803	GH70-04443A	ICT SHIELD-CAN CLIP

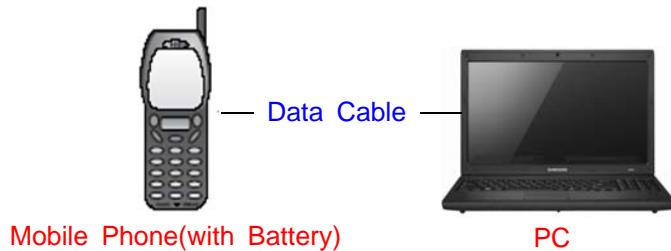
Please consult the GSPN website (Samsung Portal) for the most recent version of the product's part list.

6. Level 1 Repair

6-1. S/W Download

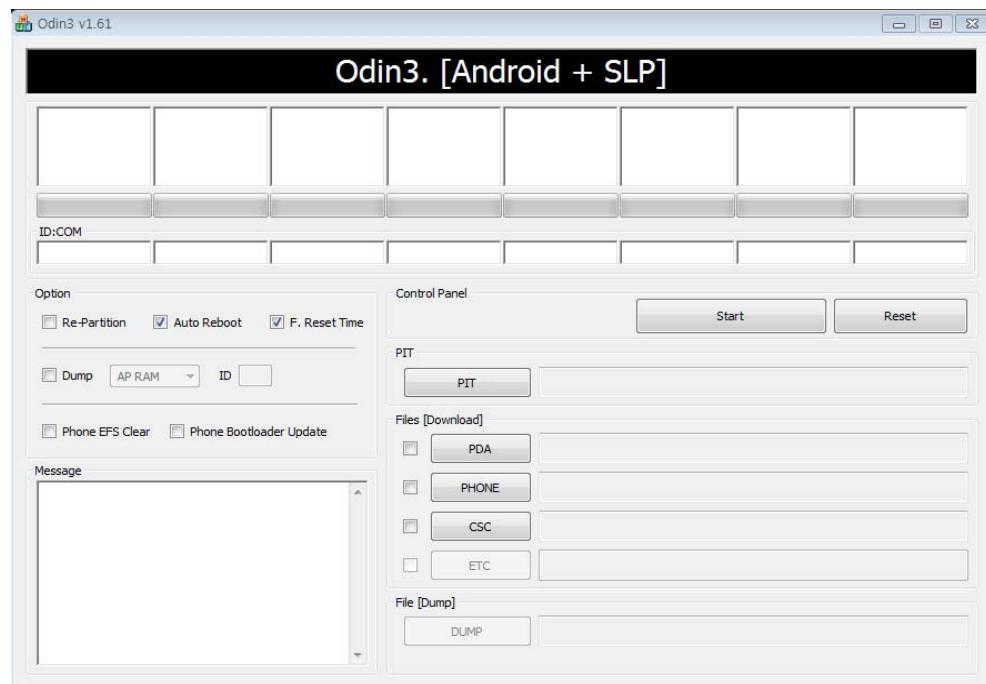
6-1-1. Pre-requisite for S/W Downloading

- Diagram of connection



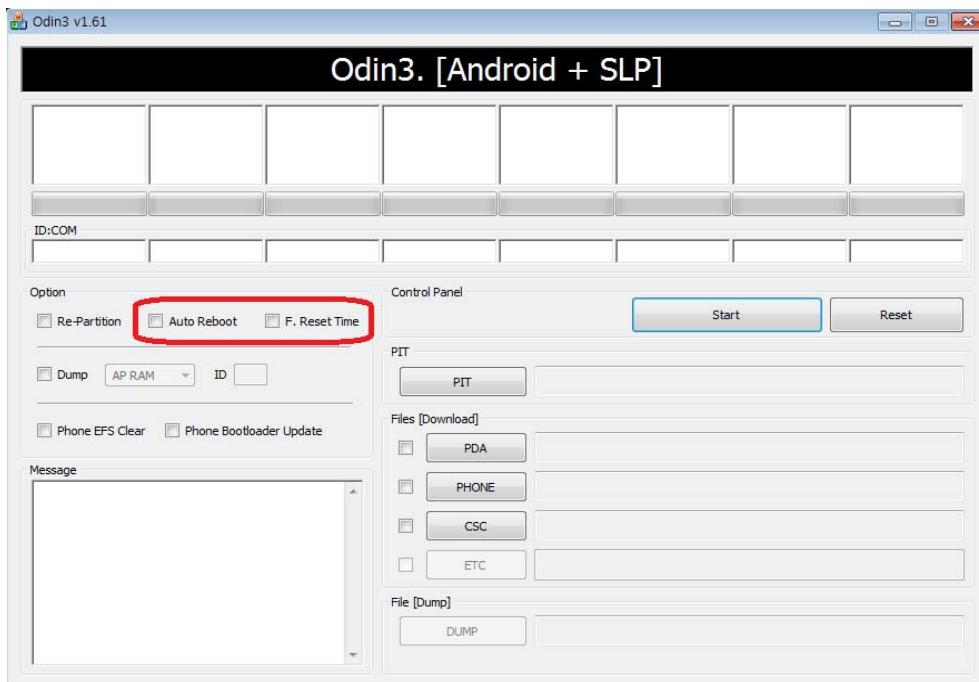
6-2-2. How to download S/W

1. Load the binary download program by executing the "[Odin3 v1.61.exe](#)" ← Run this file.



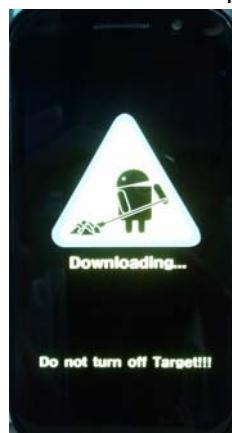
2. Option Selection

- Un-select all boxes in Option section.

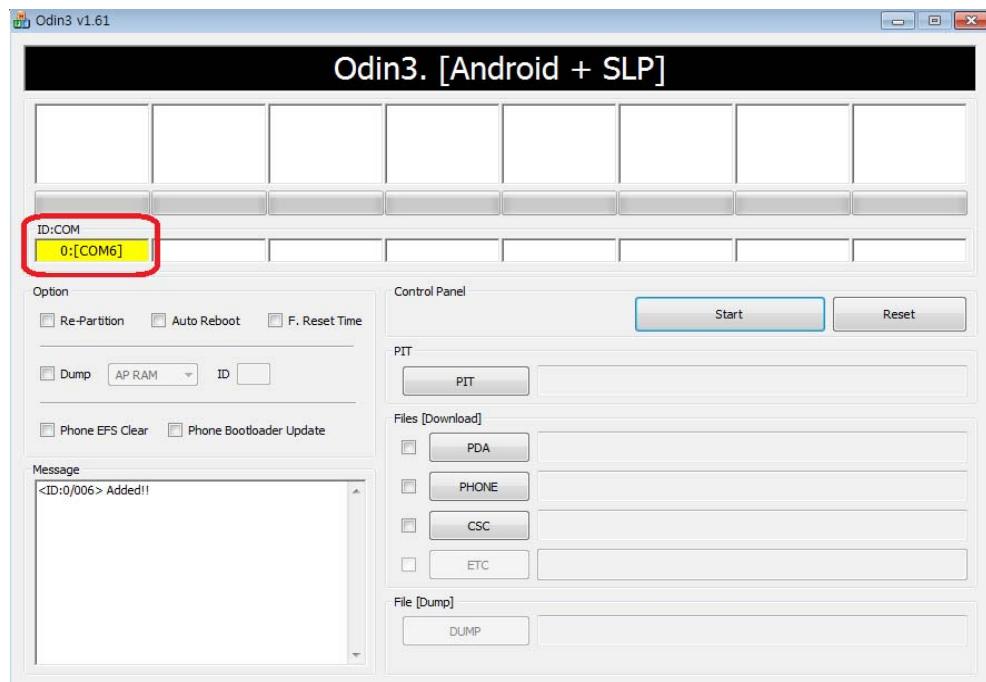


3. Enter Device into the download mode and connect the phone to PC.

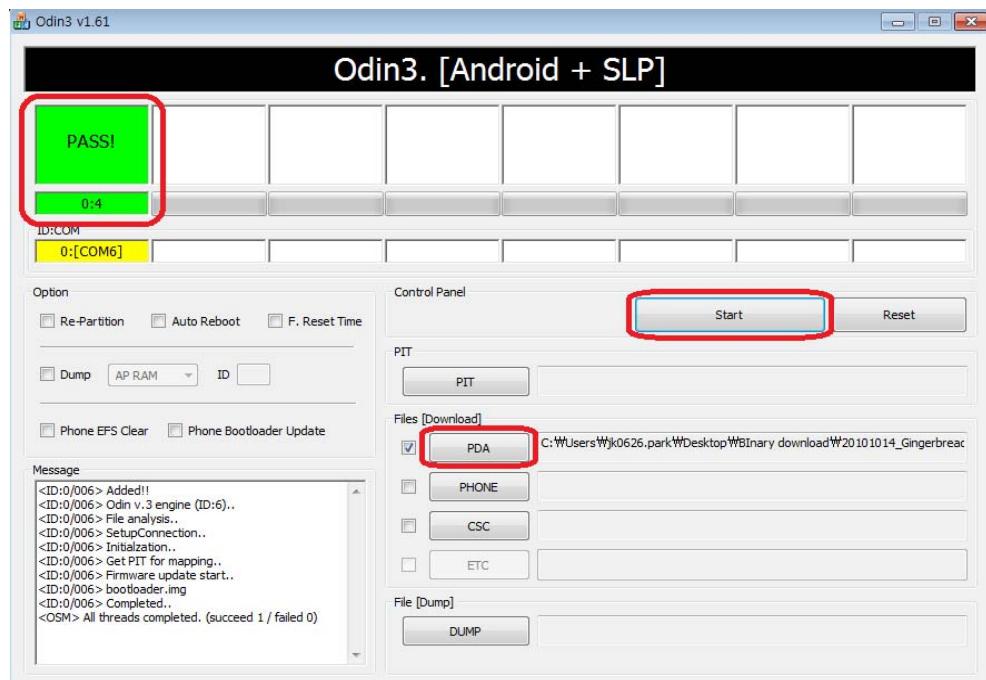
- ① Turn off the phone.
- ② Push the 'volume up' + 'volume down'.
- ③ Connect the phone(with battery) to PC via 'data cable' while pushing the 'volume up' + 'volume down'.
- ④ Phone will enter to 'download mode' like this shape.



- ⑤ Make sure ID:COM box highlighted yellow that the phone is connected to the PC.

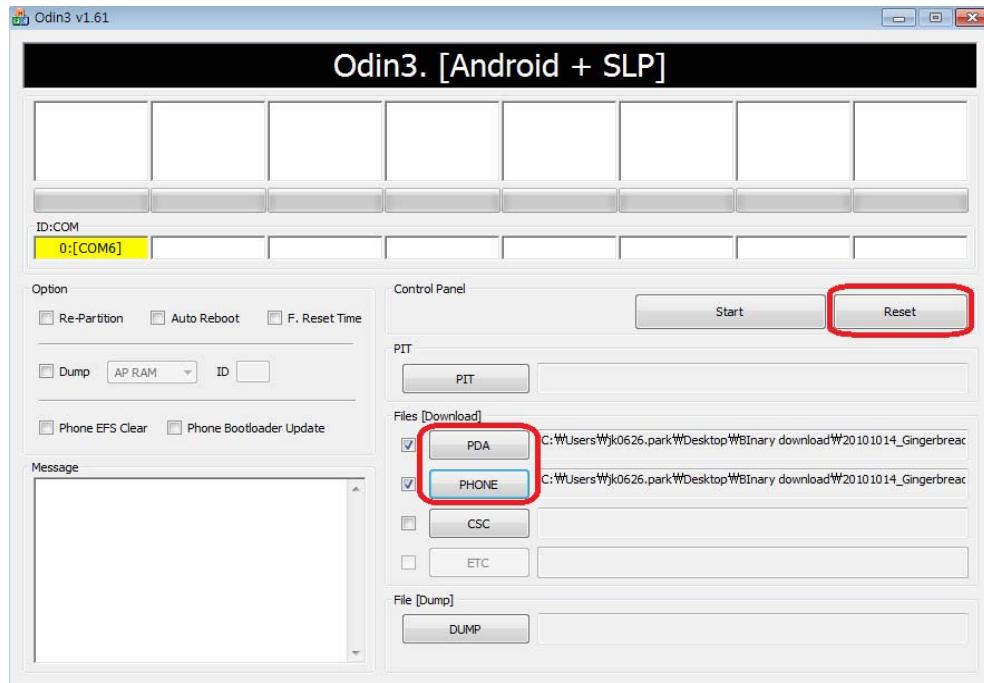


4. Select BOOTLOADER file in the section of PDA. Start downloading BOOTLOADER file by clicking Start button. Then wait for "Pass" to be appear on the screen.

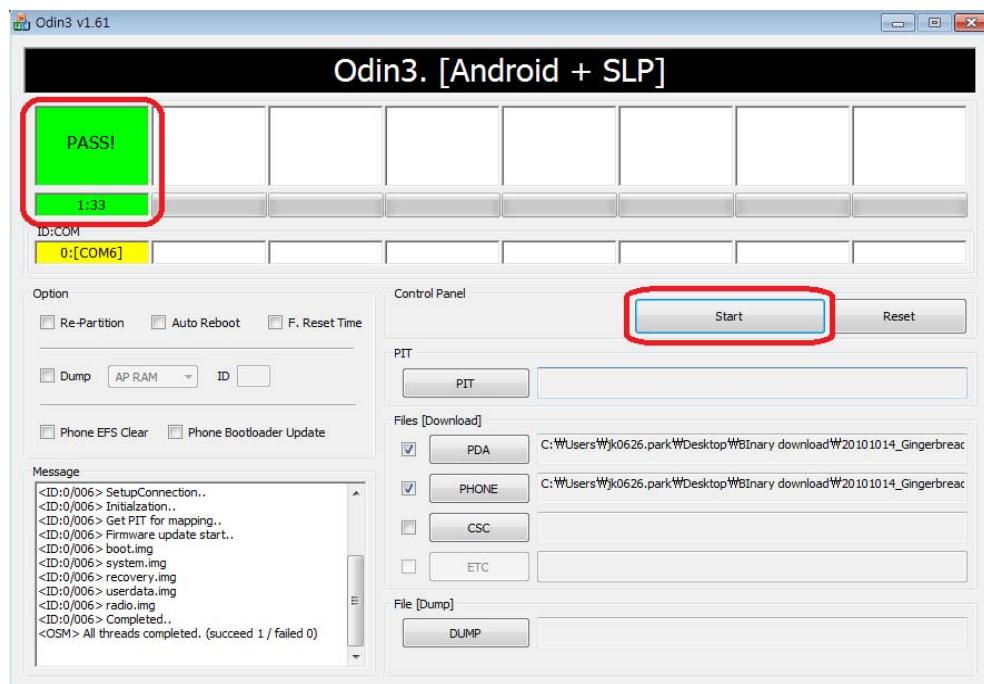


5. Remove the battery, then enter to the download mode and connect the phone to PC again as in step #3.

6. Click on Reset button, then select PDA, PHONE files.



7. Start downloading PDA and PHONE files by clicking Start button. Then wait for "Pass" to be appear on the screen.

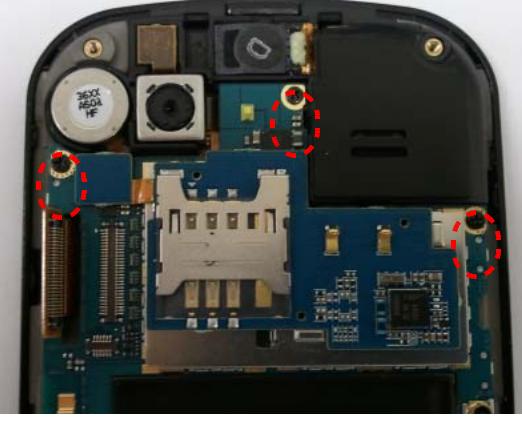


* Caution. Never disconnect during the S/W downloading.

7. Level 2 Repair

7-1. Disassembly and Assembly Instructions

7-1-1. Disassembly

<p>1 Loosen 6 rear screws</p> 	<p>2 Separates the Rear cover from the set using the jig.</p> 
<p>1) M1.4 X L4.0 SCREW Torque: 1.2 ~ 1.4kgf.cm</p>	<p>1) Be careful not to make a damage to the rear cover by jig.</p>
<p>3 Detach LCD connector and Touch key FPCB connector from PBA</p> 	<p>4 Loosen 2 screws on PBA</p> 
<p>1) Be careful with FPCB separation.</p>	<p>1) Be careful with PBA. ※ M1.4 X L3 SCREW Torque: 1.1 ~ 1.3kgf.cm</p>

5

Detach PBA from LCD bracket.



6

Detach connector and separate Sim socket FPCB and shield-cover from PBA.

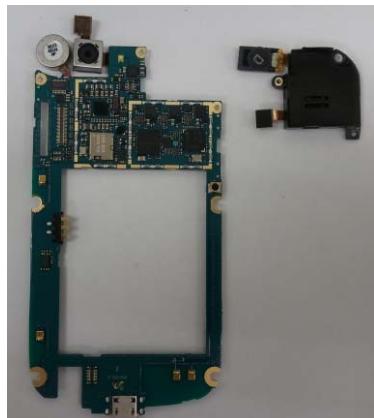


1) Be careful when Motor, Receiver and Camera separate.

1) Be careful not to make a damage when shield-cover separate from PBA.

7

Loosen a screw on speaker module and separate the speaker module from PBA.



8

Finished.



1) Be careful with connector and FPCB of speaker module.

※ M1.4 X L3

SCREW Torque: 1.1 ~ 1.3kgf.cm

1) Be careful of a damage on LCD connector.

7-1-2. Assembly

1

Soldering and bonding motor on PBA.



2

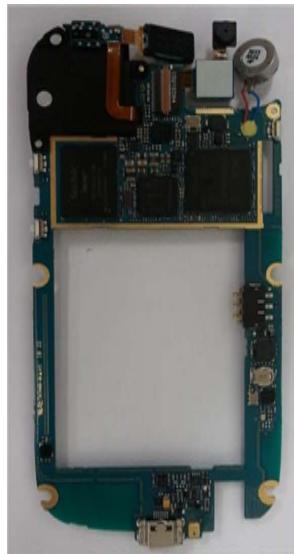
Attach speaker module on PBA and tighten a screw.



1) Be careful not to make a damage to components by soldering iron.

3

Attach camera module.



1) Be careful with PBA.

* M1.4 X L3

SCREW Torque: 1.1 ~ 1.3kgf.cm

4

Put on Sim socket FPCB and shield-cover on PBA and attach connector.



1) Be careful of components near soldering section.

1) Be careful with PBA.

5

Put PBA on Front Ass'y.



6

Connect LCD and Touch key FPCB on PBA and tighten screws.



1) Adjust the PBA to 2 POINT on Front Ass'y.

1) Push the connector with sound '??' to avoid incompleteness of insert.

SCREW Torque: 1.1 ~ 1.3kgf.cm

7

Attach Rear cover on set and tighten screws.



1) Be careful of appearance faulty

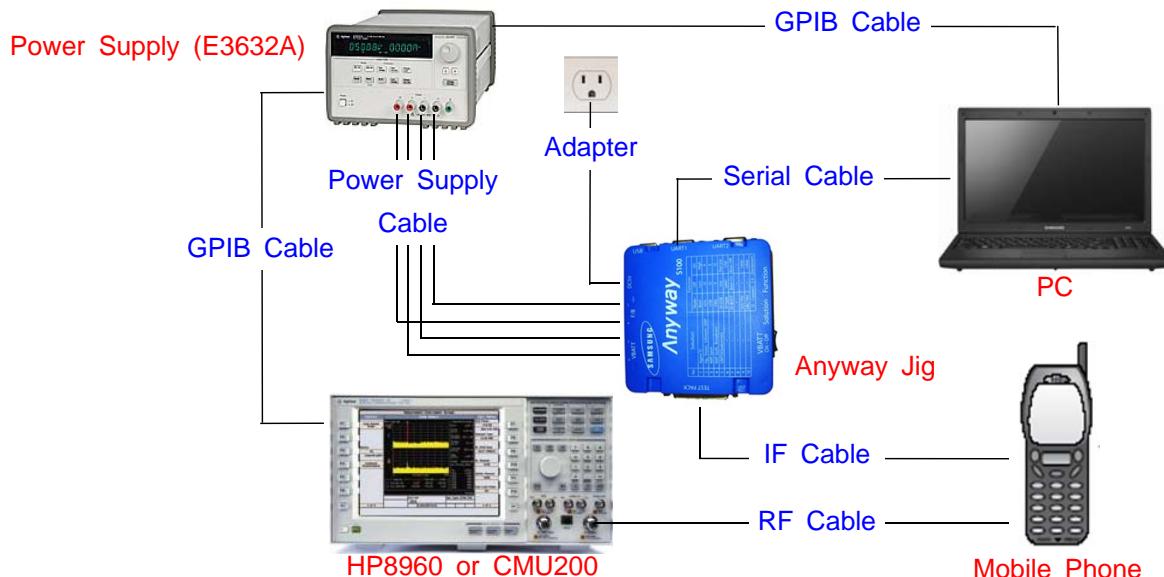
※ M1.4 X L4.0

SCREW Torque: 1.2 ~ 1.4kgf.cm

7-2. Calibration

7-2-1. Pre-requisite for calibration

- Diagram of connection



- Service Parts

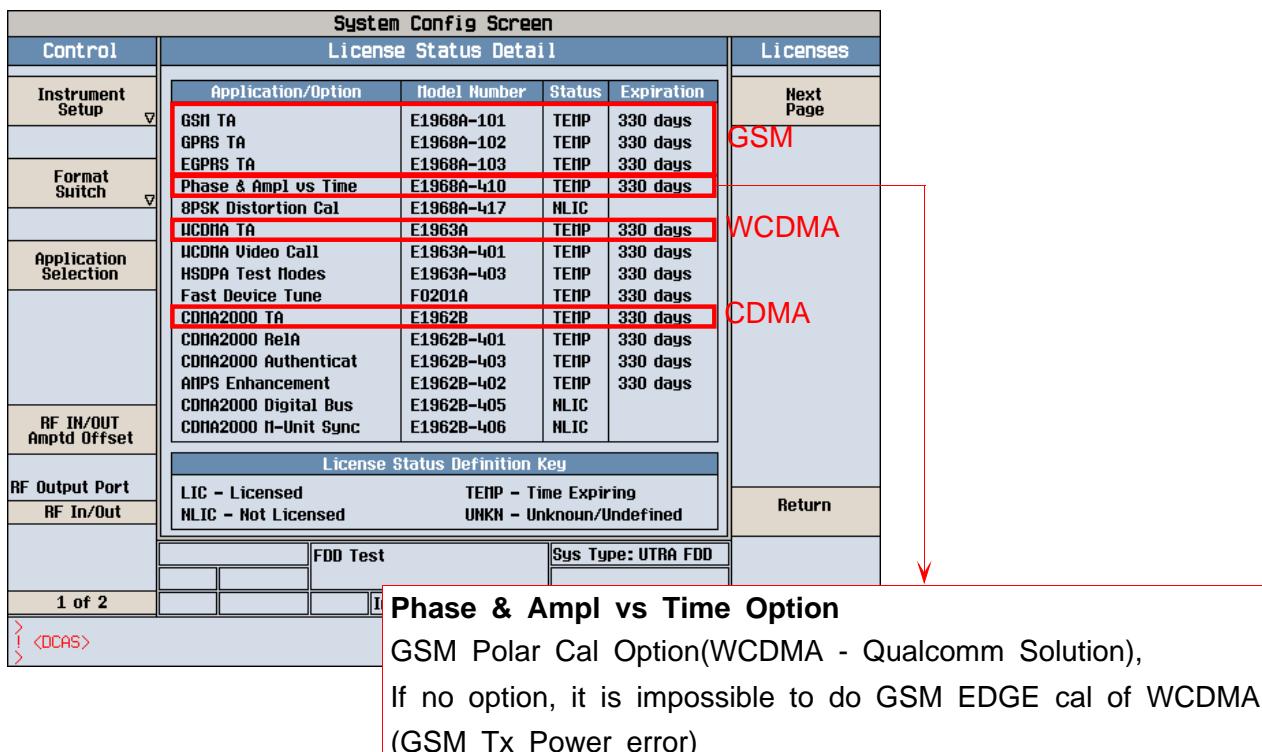
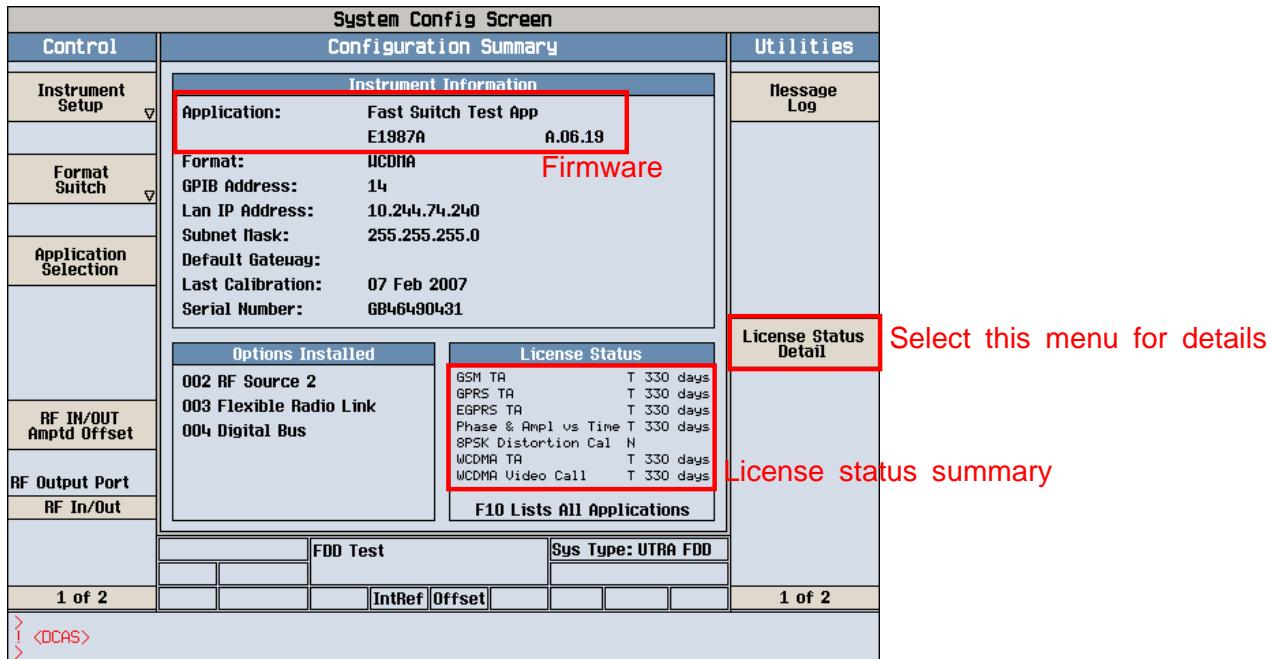
Anyway Jig	Adaptor	IF Cable	RF Cable
GH99-36900A	GH99-38251A	GH39-01339A	GH39-00985A

- Standard Parts

Power Supply Cable	Serial Cable	GPIB Cable

- HP8960 has to be satisfied the condition like below to do calibration.

Option list upgrade need	E1968A-202	GSM & EDGE mobile test application
	Phase & Ampl vs Time	GSM Polar cal option (WCDMA - Qualcomm solution)
	CDMA2000 TA	CDMA2000 mobile test
Firmware	E1968A A.06.56	GSM/GPRS/EDGE
	E1987A Fast switching A.06.19	GSM/GPRS/EDGE/WCDMA/HSDPA/CDMA2000
	E1962B B.10.11	IS-2000/IS-95/AMPS
Hardware	002	002 RF source 2
	003	003 Flexible radio



- CMU200 has to be satisfied the condition like below to do calibration.

H/W Option			
	Option No.	Option Name	Option Description
GSM/ EGPRS GPRS/	CMU200	Main Frame	
	CMU-B11/B12	OCXO	Need to have one of those.
	CMU-B21(v14)	Universal Signaling Unit	It may needed when the DUT based on AGERE chipset, because it need a live for GSM, it need CMU-B54(v14). BCH signal for Calibration. To working
	CMU-B54(v14)*		This is daughter board for GSM Signaling. It's attached on the B21(v14).
	CMU-U65(v04)	DSP for Wideband Measurement	Support DSP measurement, and also works as a buffer. It needed to support support up to 128 steps, CMU-U65(v04) support up to 500 steps. Dynamic Power" Calibration. In case of "Polar Modulation" CMU-U65(v02) only "Polar Modulation" test and "EDGE
WCDMA/ GSM/ EGPRS GPRS/	CMU200	Main Frame	
	CMU-B11/B12	OCXO	Need to have one of those.
	CMU-B21(v14)	Universal Signaling Unit	It may needed when the DUT based on AGERE chipset, because it need a live for GSM, it need CMU-B54(v14). BCH signal for Calibration. To working
	CMU-B66**	Versatile Baseband Unit (Tx)	Baseband board for UL, but it's now included in CMU-B68. So no longer exist.
	CMU-B68	Versatile Baseband Unit (Tx + Rx)	Baseband board for WCDMA UL/DL
	CMU-U65(v04)***	DSP for Wideband Measurement	Support DSP measurement, and also works as a buffer. It needed to support "Polar Modulation" test and "EDGE Dynamic Power" Calibration.

S/W Option			
	Option No.	Option Name	Option Description
GSM/ GPRS/ EGPRS	CMU-K21*	GSM900-MS	Signaling SW for GSM 900 Band
	CMU-K22*	GSM1800-MS	Signaling SW for GSM 1800 Band
	CMU-K23*	GSM1900-MS	Signaling SW for GSM 1900 Band
	CMU-K24*	GSM850-MS	Signaling SW for GSM 850 Band
WCDMA/ GSM/ GPRS/ EGPRS	CMU-K48	IQvsSlot	SW support "Polar Modulation Calibration"
	CMU-K65	WCDMA-UE : Tx-tests(3GPP/FDD)	SW support Tx Measurement of WCDMA
	CMU-K66	WCDMA-UE : DL-Generator(3GPP/FDD)	SW Support DL Generator for WCDMA.

*These options were needed because some old phones needed to have a live BCH to do a Rx Calibration(AFC and AGC).

**CMU-B66 may can be found at the HW option list. But this option is no longer exist, because it's now included in the option CMU-B68, only in case of very old CMU200 which supporting the WCDMA Testing.

***CMU-U65 has 2 kind of revision. The difference is the amount of buffer memory inside. This influence to the "Polar Modulation Calibration" test, in case of CMU-U65(v02) only supports up to 128 steps of test, CMU-U65(v04) supports up to 500 Steps. Currently Samsung UMTS calibration doing that with about 300 steps, so it requires CMU-U65(v0.4)

7-2-2. How to do calibration

- 1) Download the the latest calibration program from anysvc, and unpack the .zip file in the same folder.

- INFINEON_RFCAL_VXXX.exe
- INFINEON_RFCAL_VXXX.zip

- 2) Check solution and the relay control switch setting of anyway jig.

- Solution switch : 2

No	Solution
2	HP, Vision, Infineon

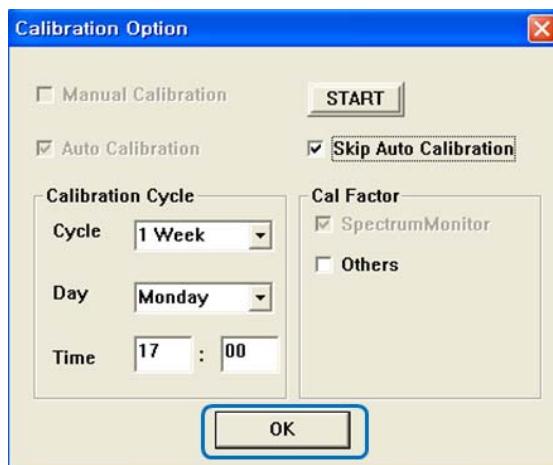
- Relay control switch : all switches must be turn off.



- 3) Run the execution file(.exe).

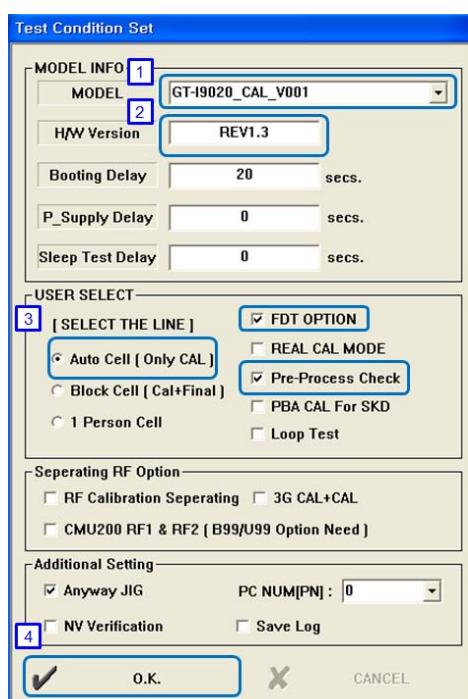
- INFINEON_RFCAL_VXXX.exe

4) Click the 'OK' button.



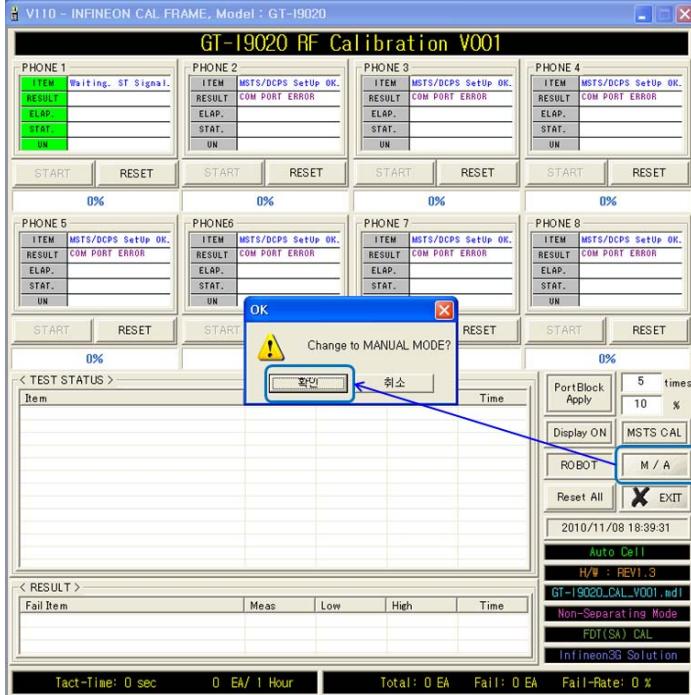
5) Setting the Config Test

- ① Select a final calibration program version.
- ② Write a H/W Version.
- ③ Select a Auto Cell, FDT OPTION, Pre-Process Check.
- ④ Click the 'OK' button.

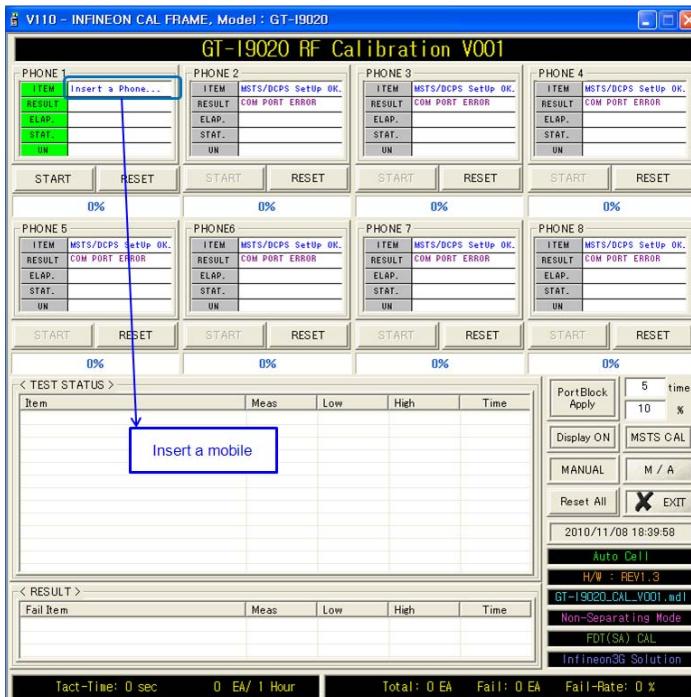


7. Level 2 Repair

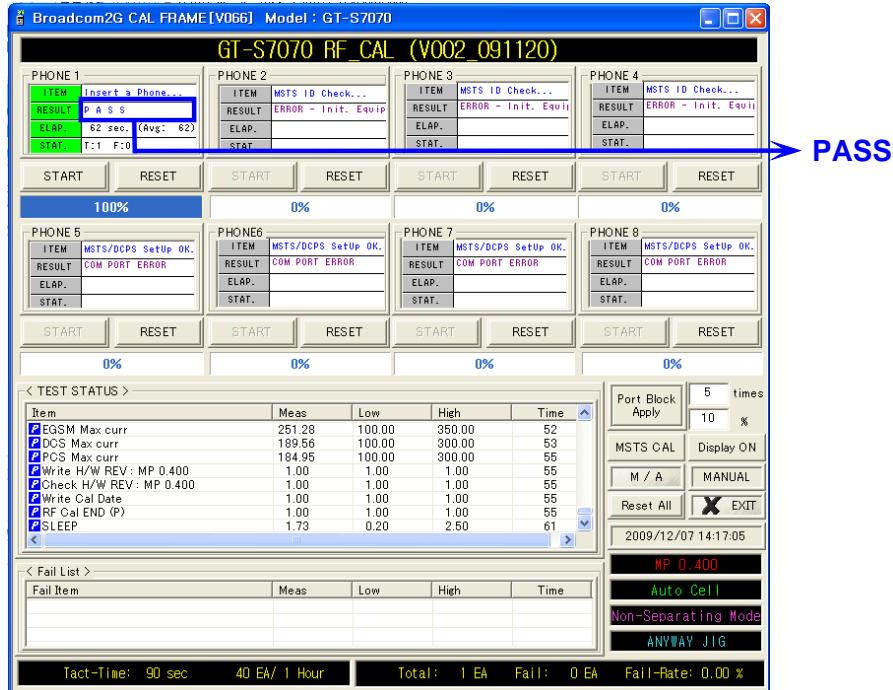
- 6) Click the 'M/A' button and 'OK' button to convert 'ROBOT' mode to 'MANUAL' mode.



- 7) Connect a IF cable to mobile phone when it shows the 'Insert a Phone...' message. Then the calibration is progressed automatically.



- 8) If the calibration is completed rightly, it shows the 'PASS' message as shown below.

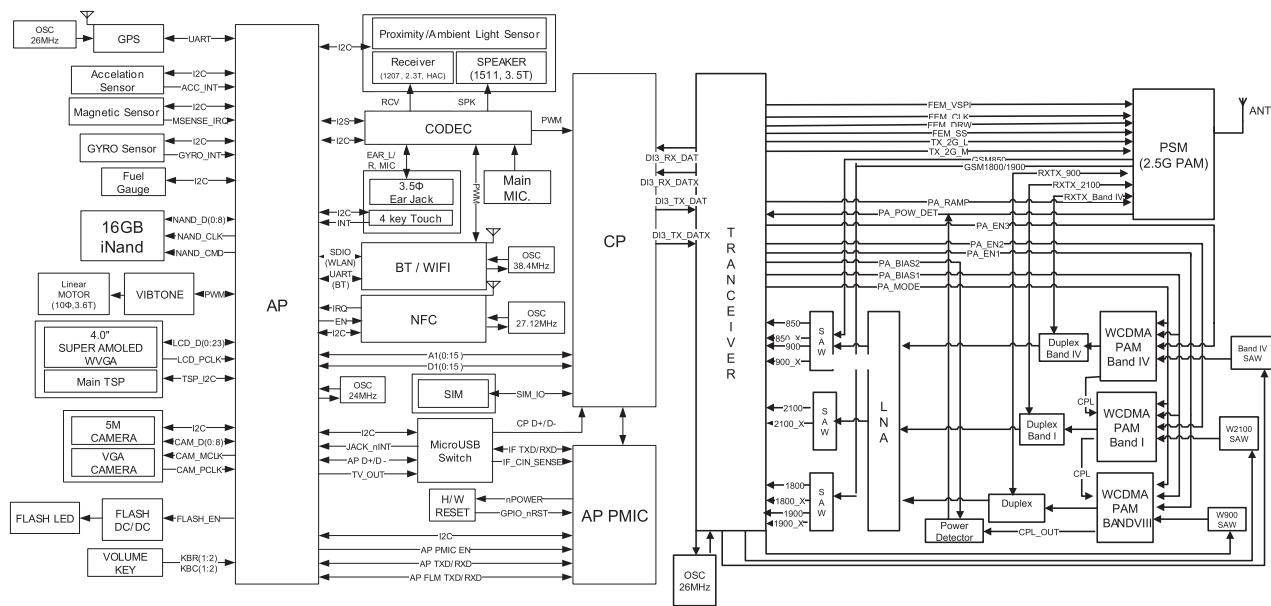


- 9) Refer to the result of calibration in the folder, 'C:\DGS\LOGS'.

- GT-I9020_RFCAL_YYYYMMDD_01.csv

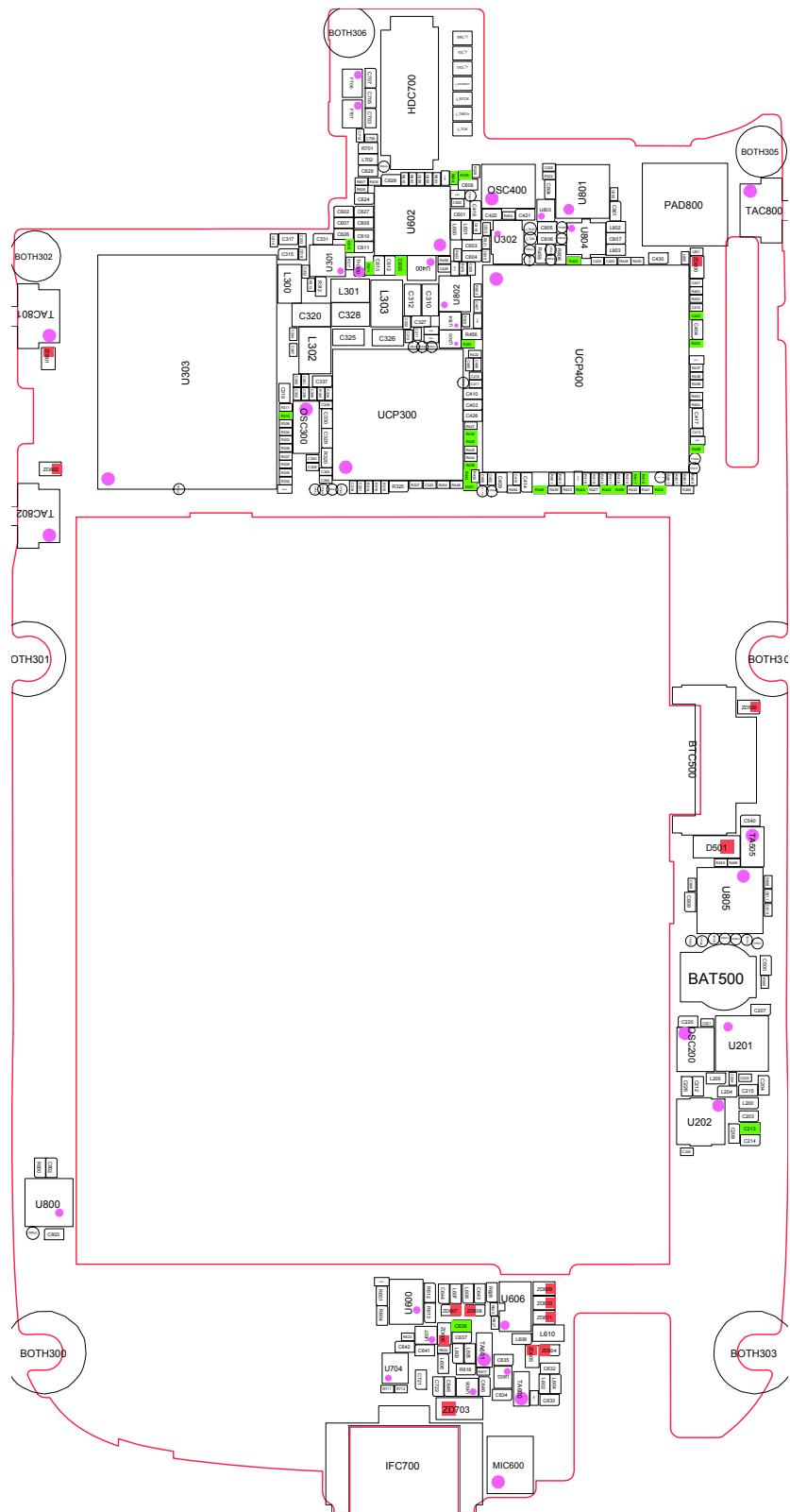
8. Level 3 Repair

8-1. Block Diagram

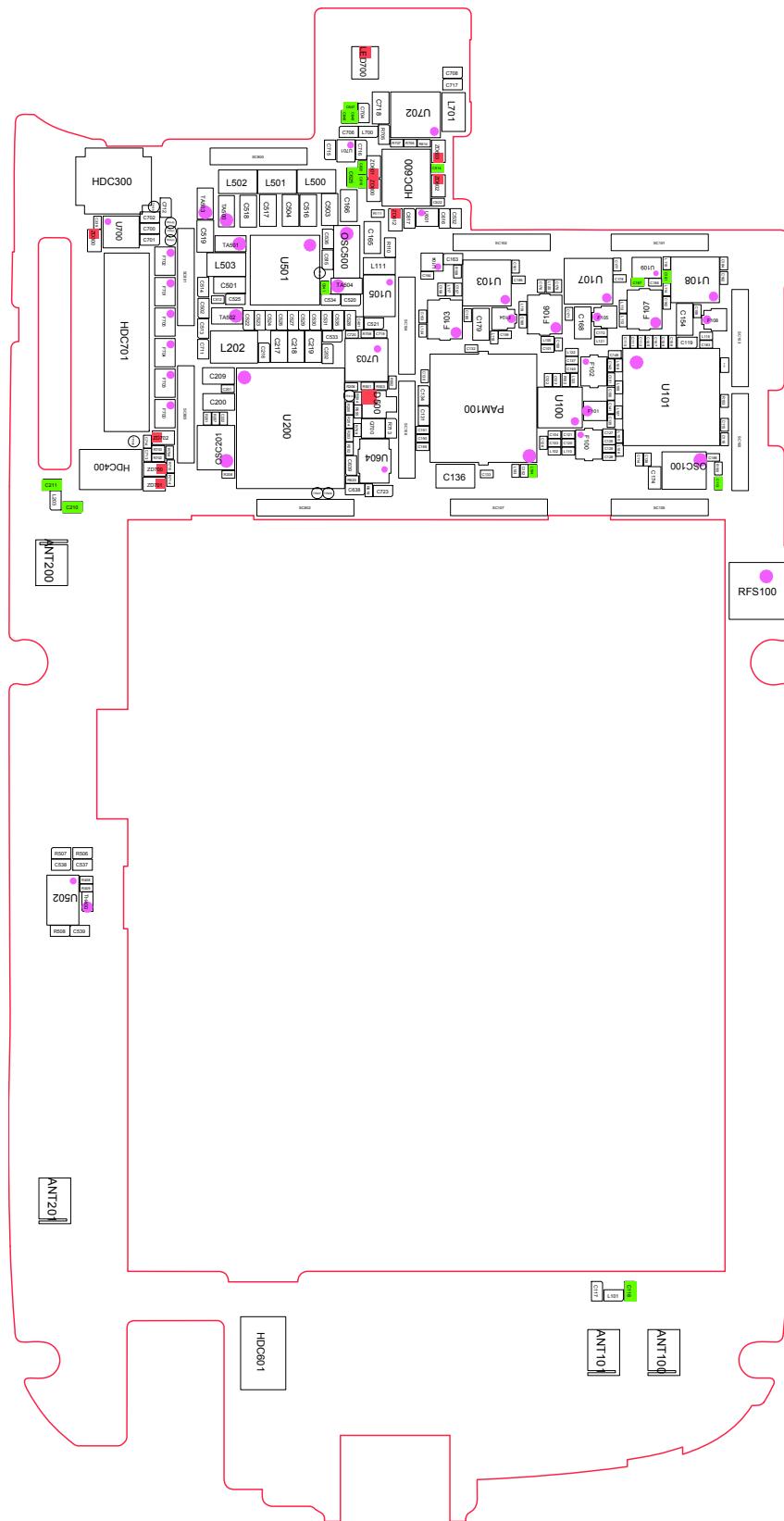


8a-2. PCB Diagrams

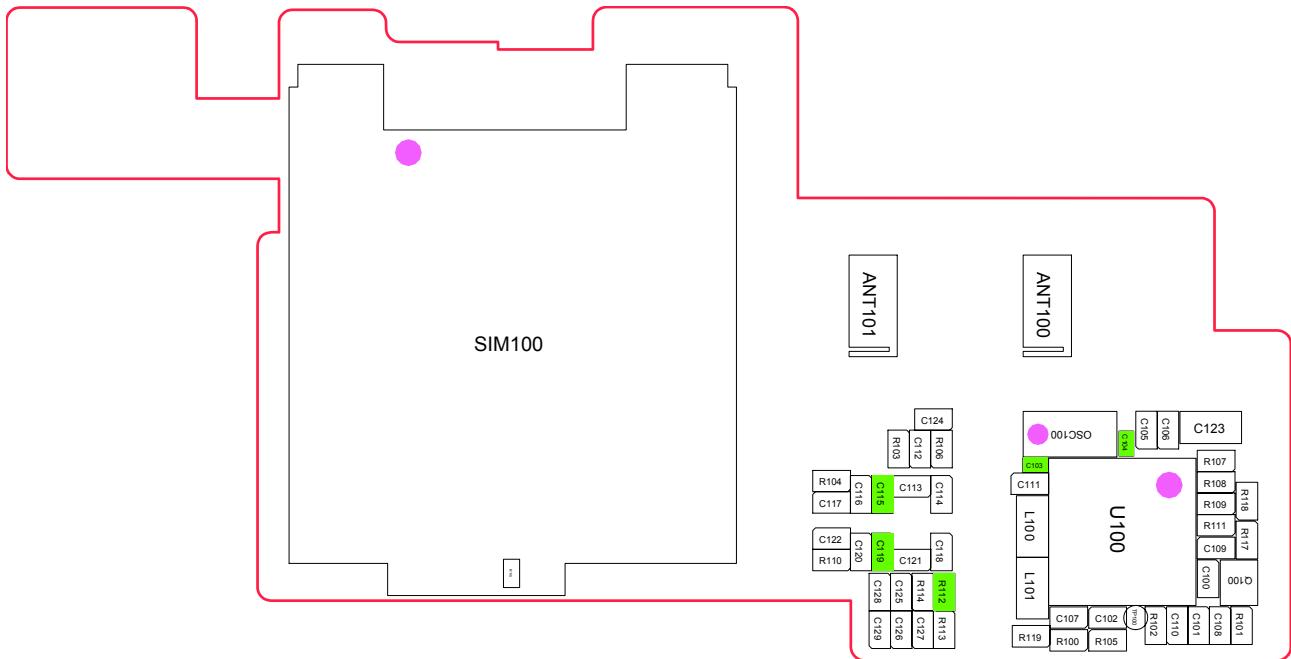
8a-2-1. Main Top



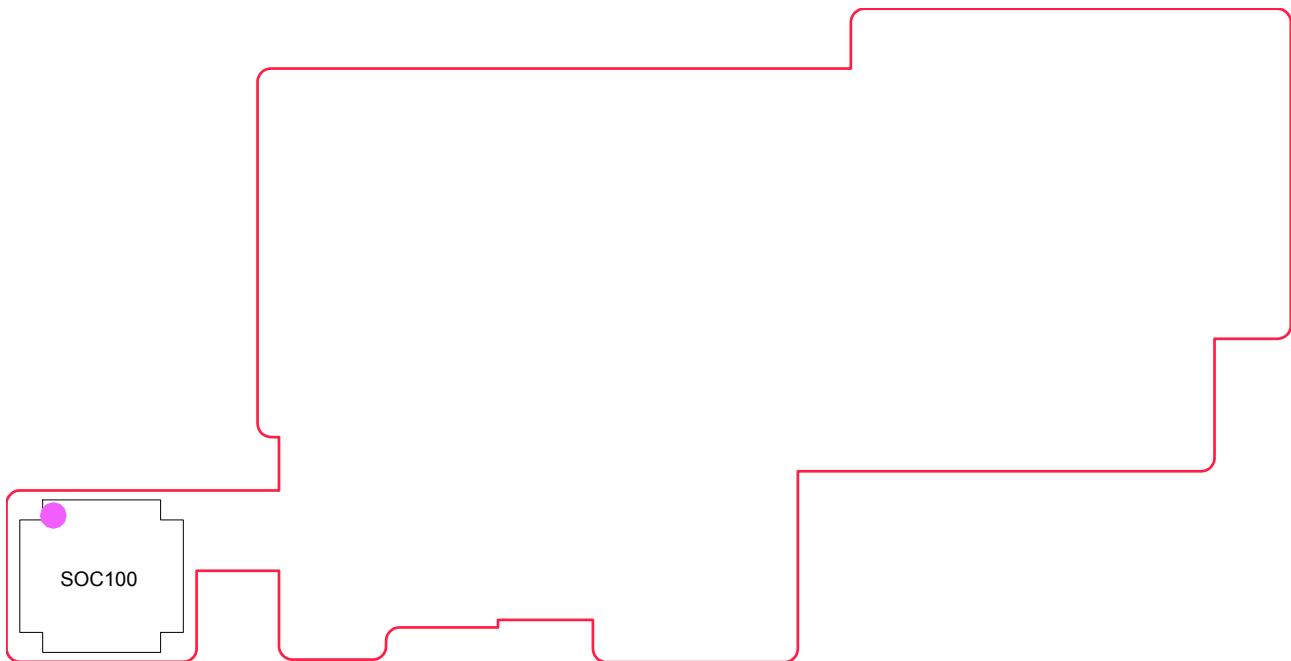
8a-2-1. Main Bottom



8a-2-1. Sub Top

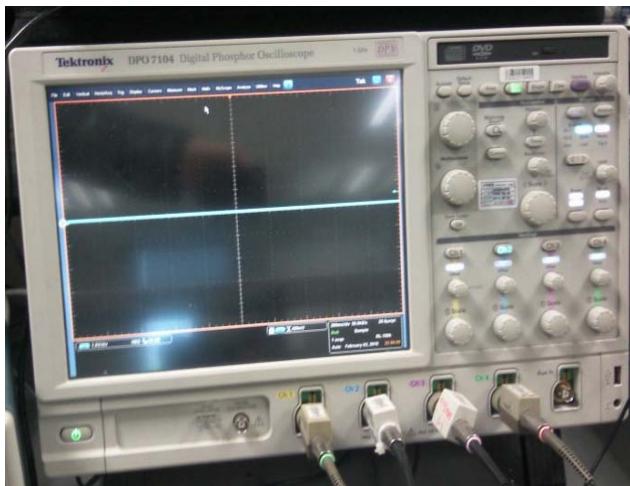


8a-2-1. Sub Bottom



8b-3. Flow Chart of Troubleshooting

Equipments



↑ Oscilloscope



↑ Digital Multimeter

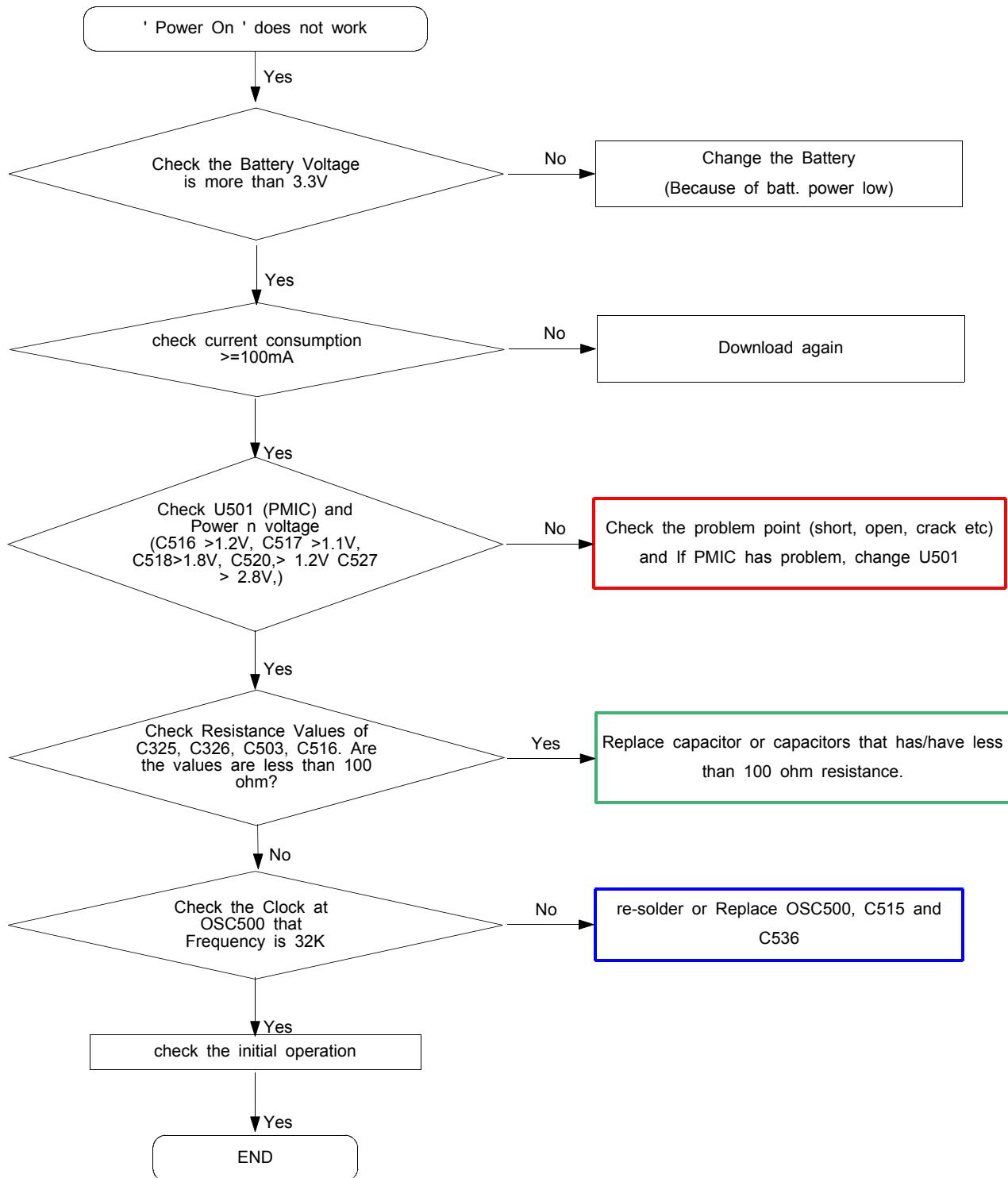


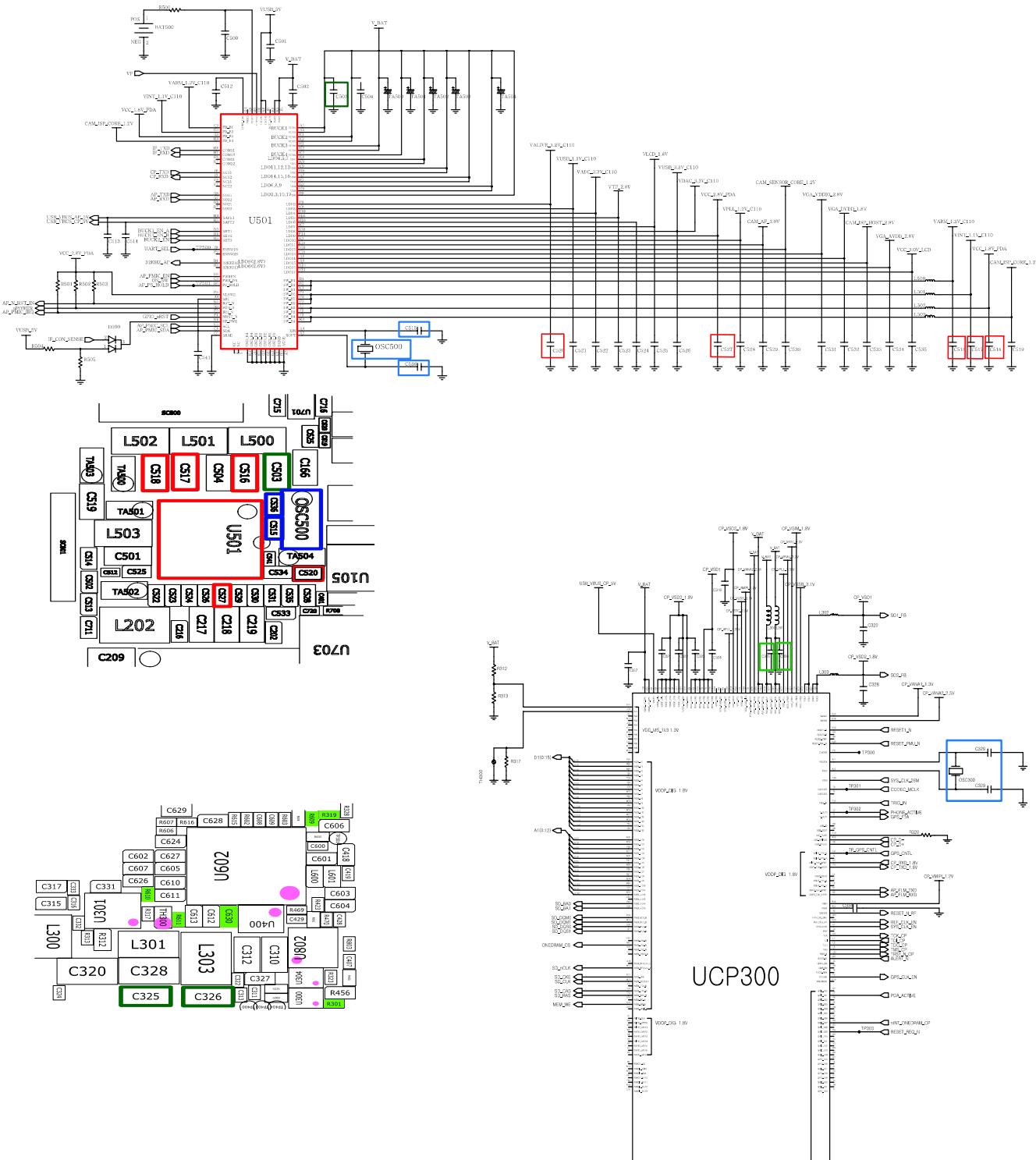
↑ Power Supply



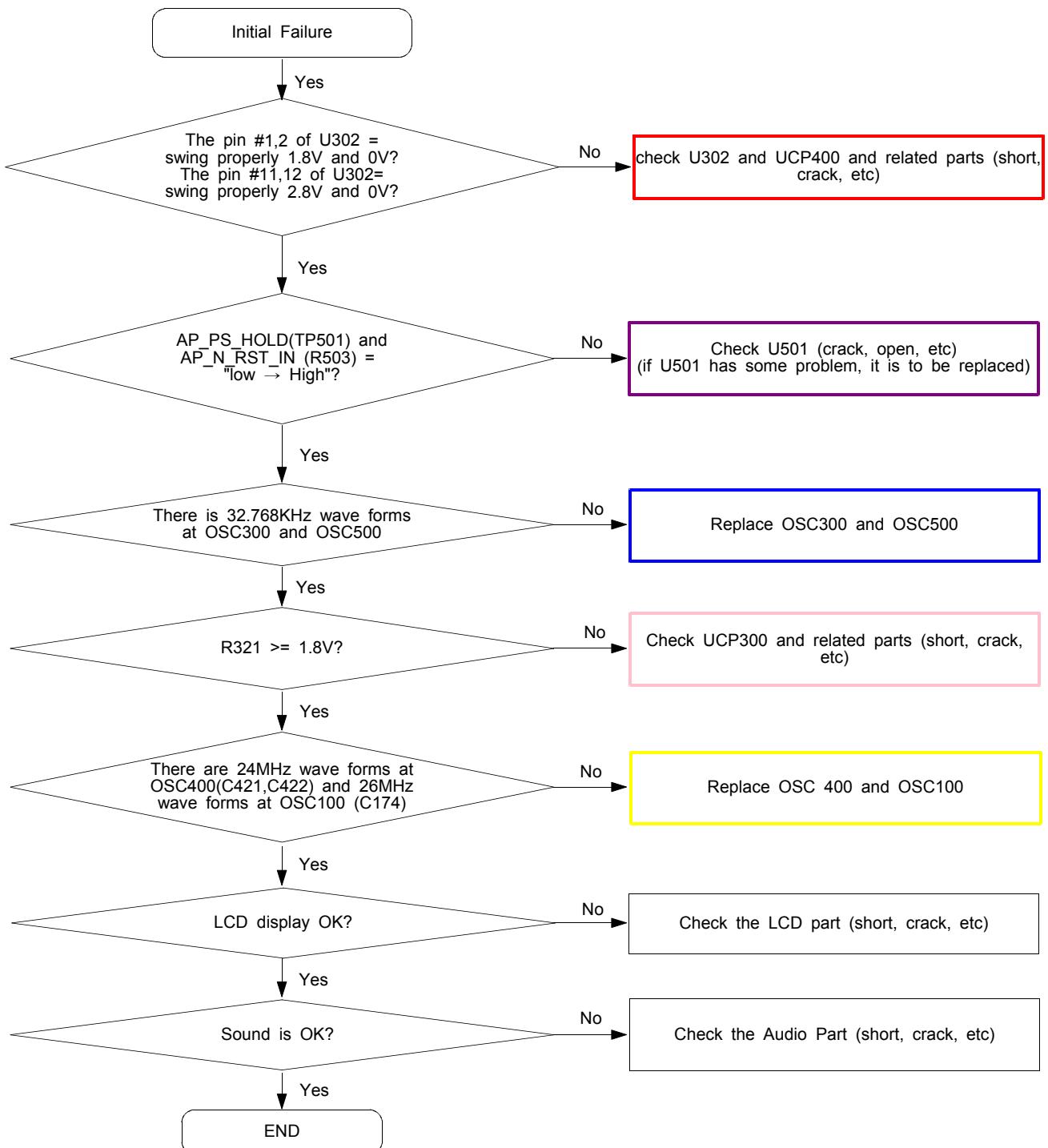
↑ + driver, Tweezer

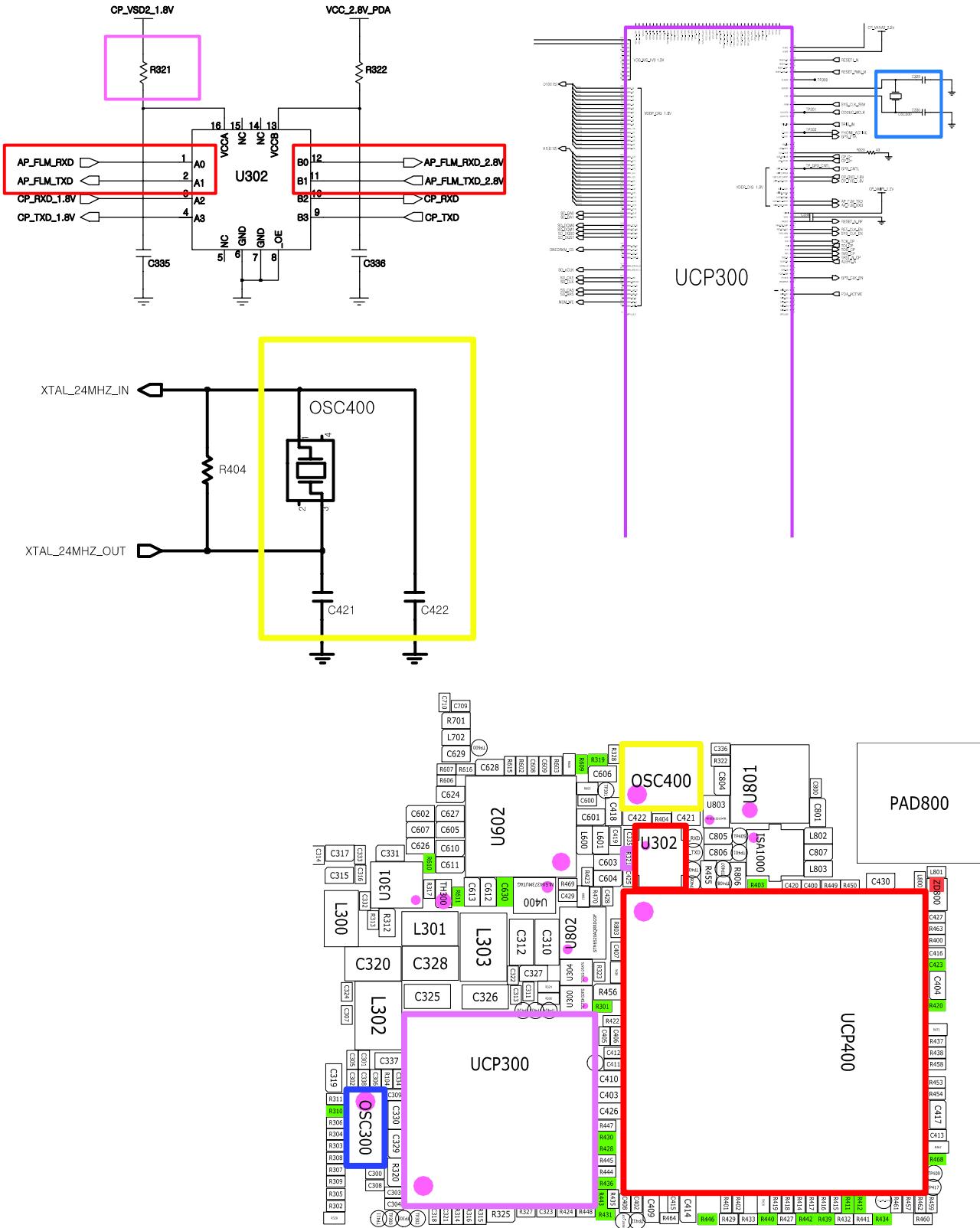
8b-3-1. Power On

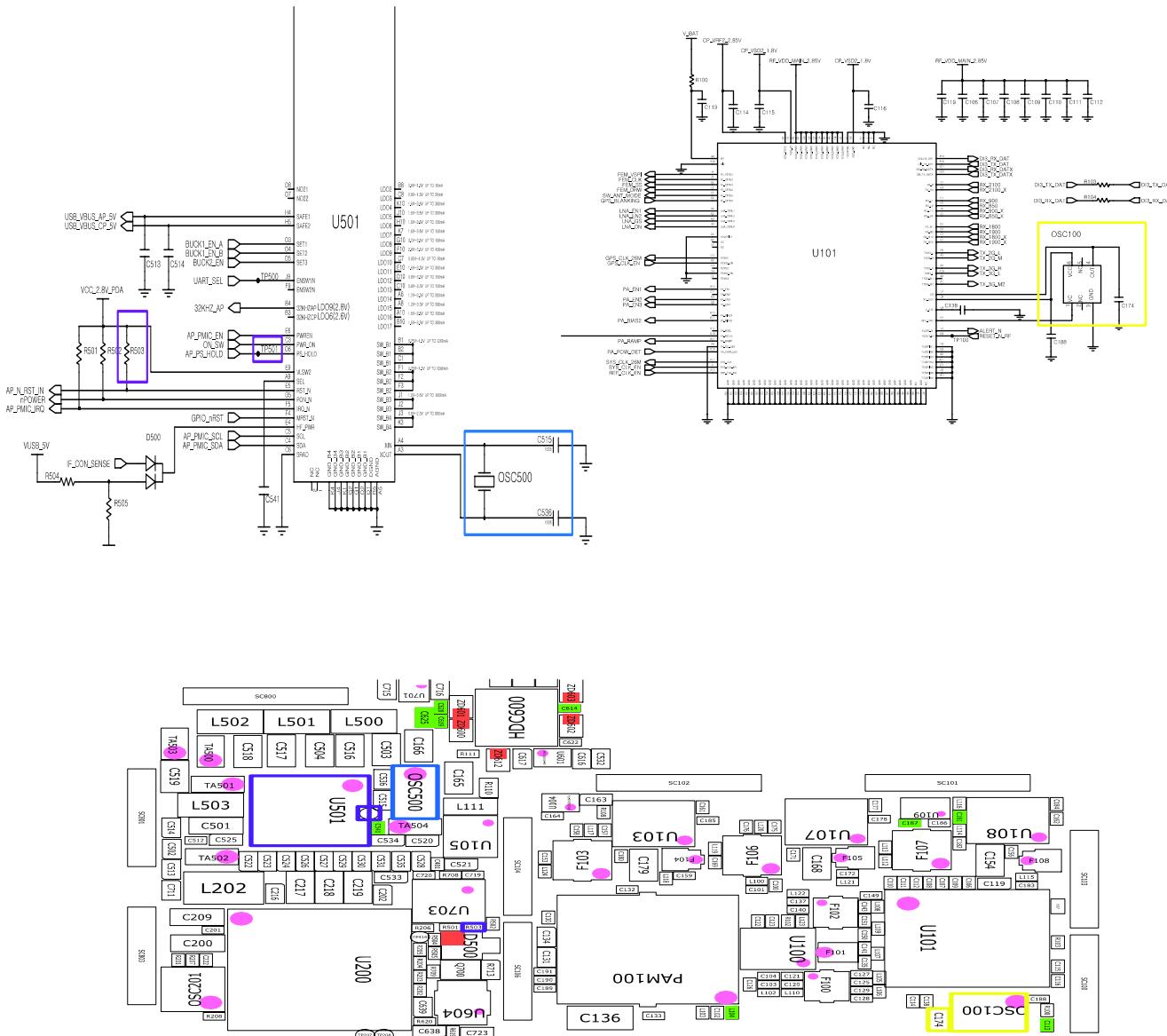




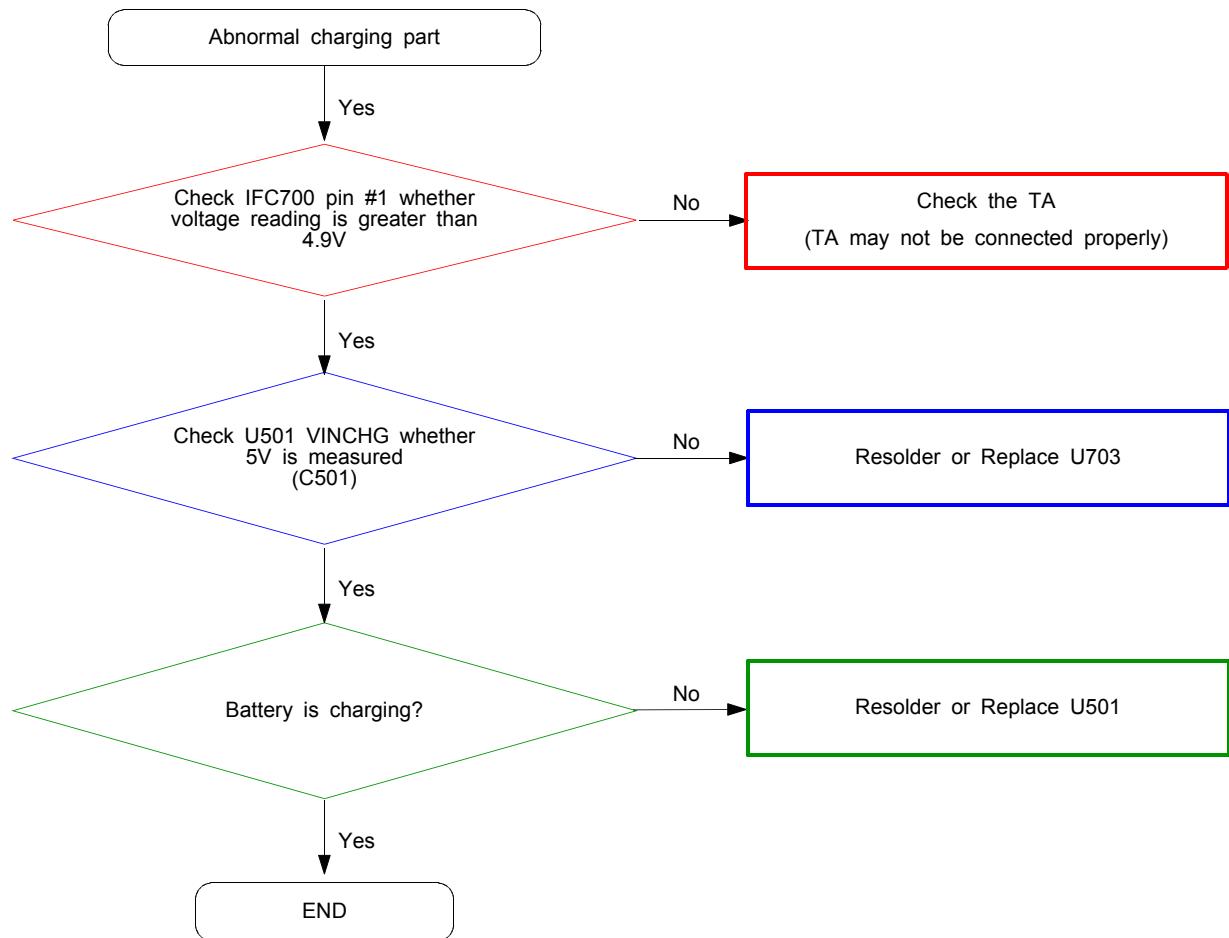
8b-3-2. Initial

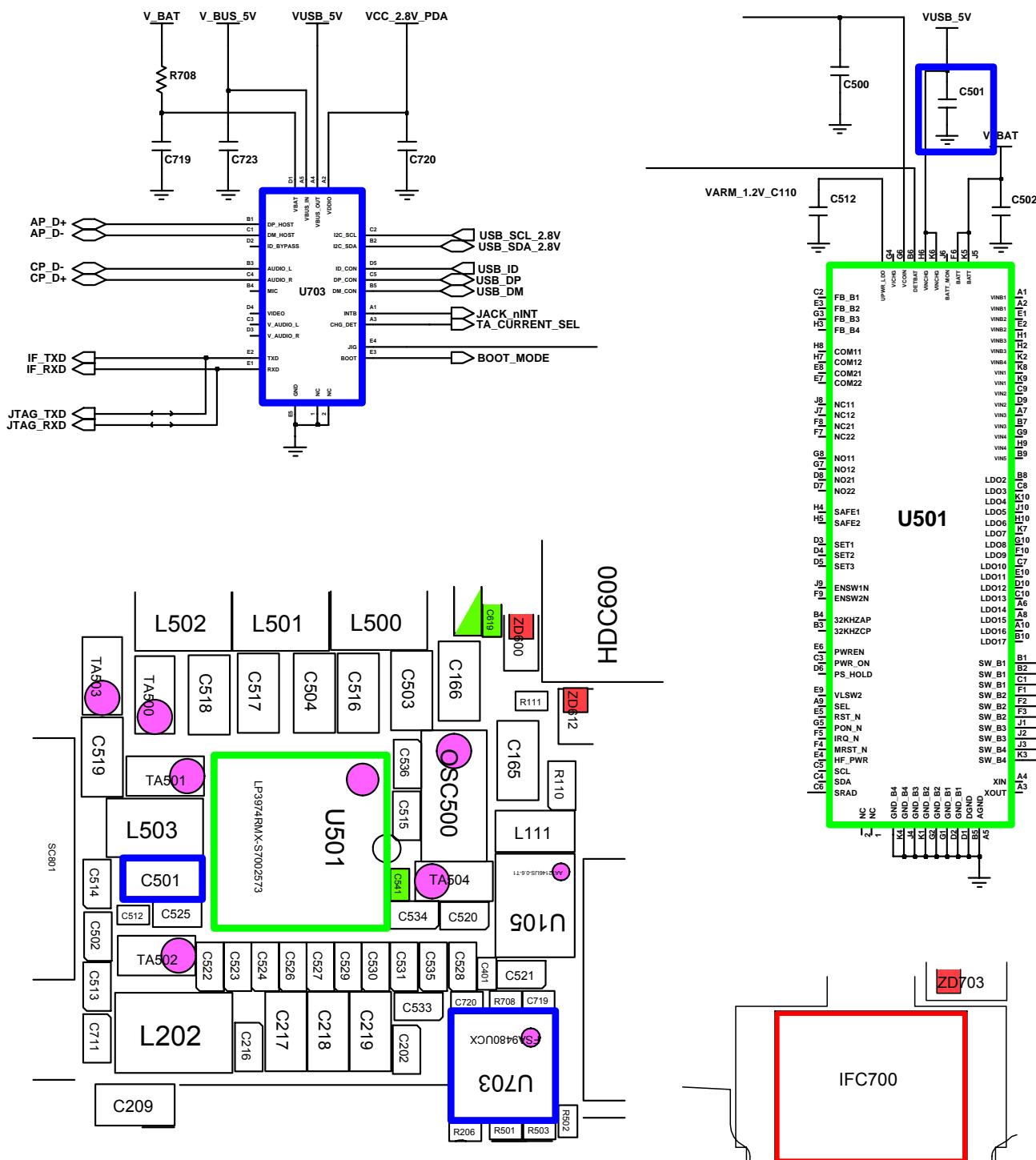




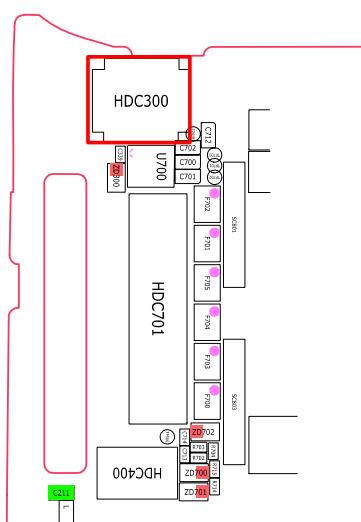
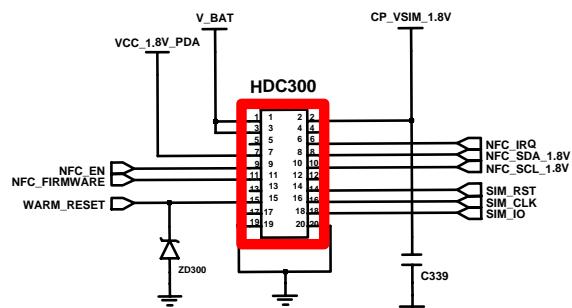
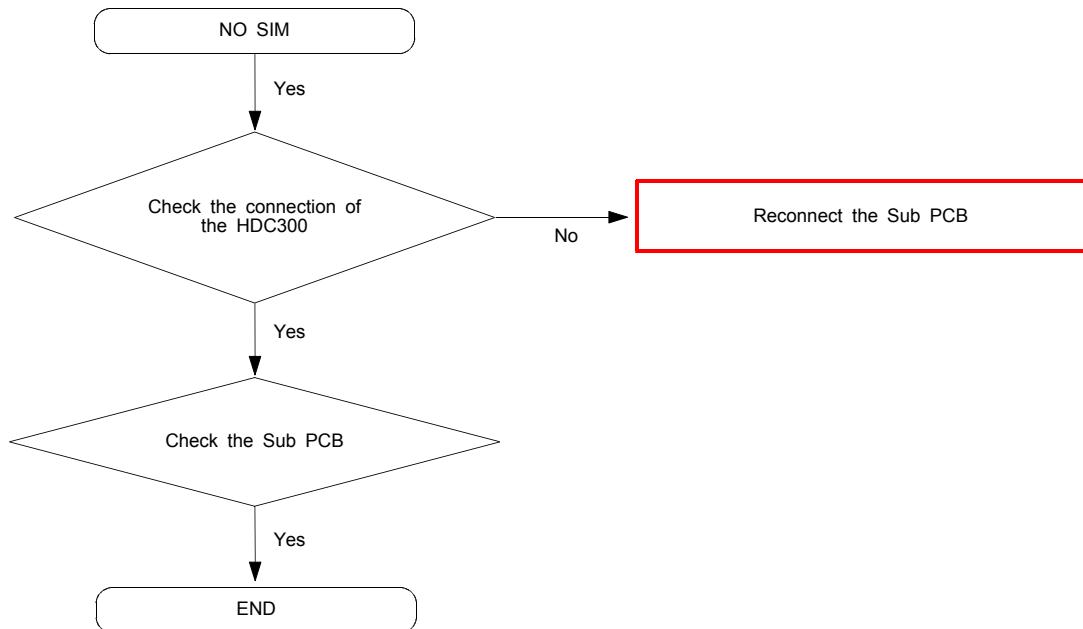


8b-3-3. Charging Part

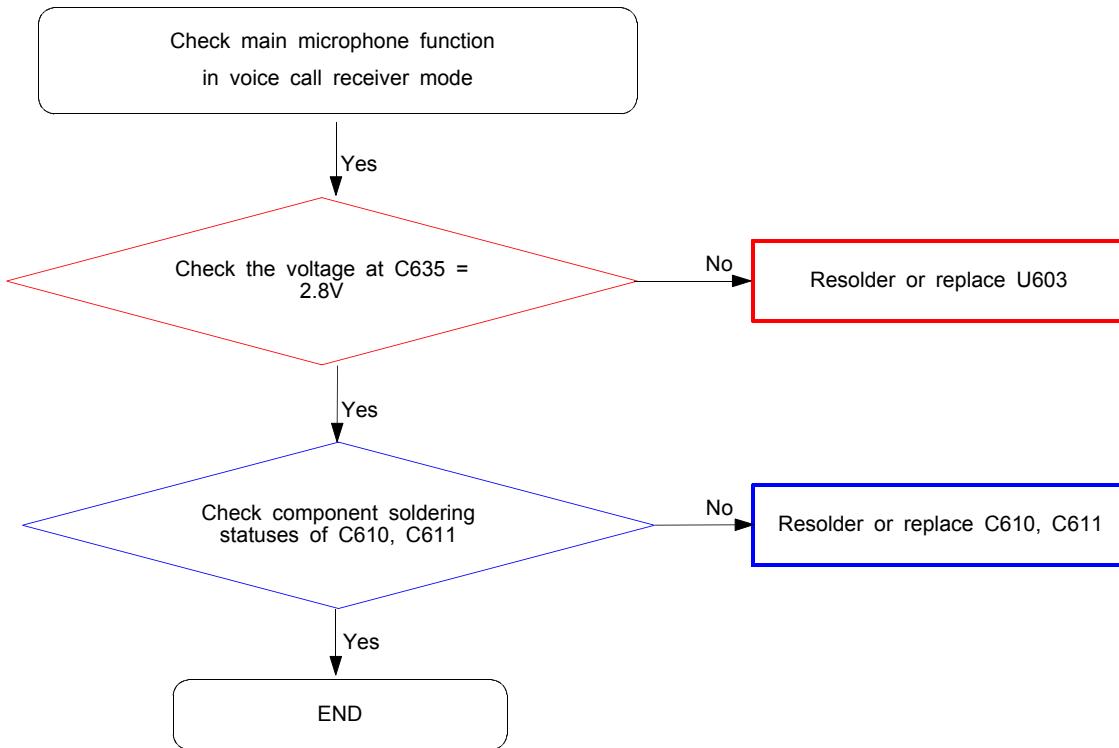


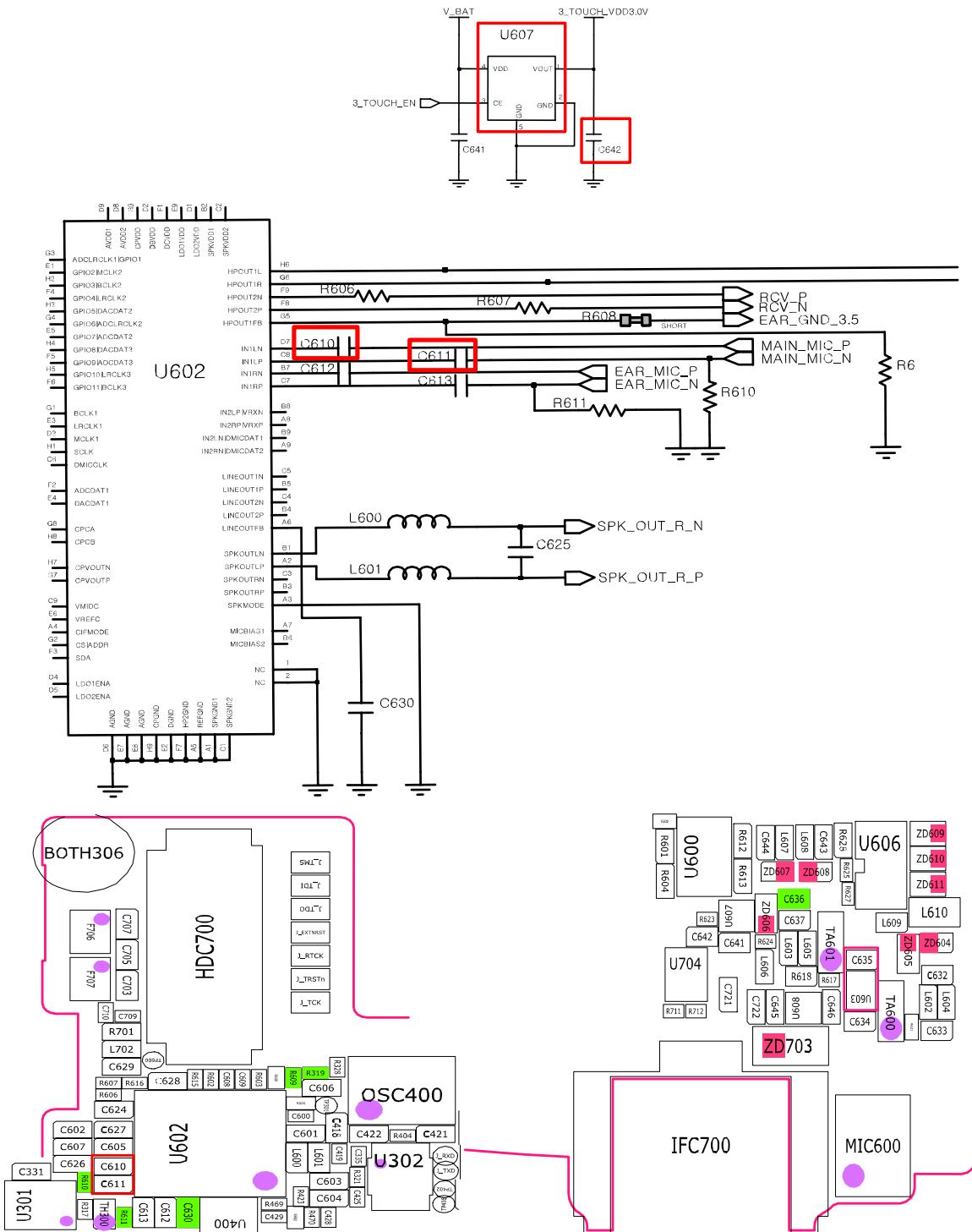


8b-3-4. Sim Part

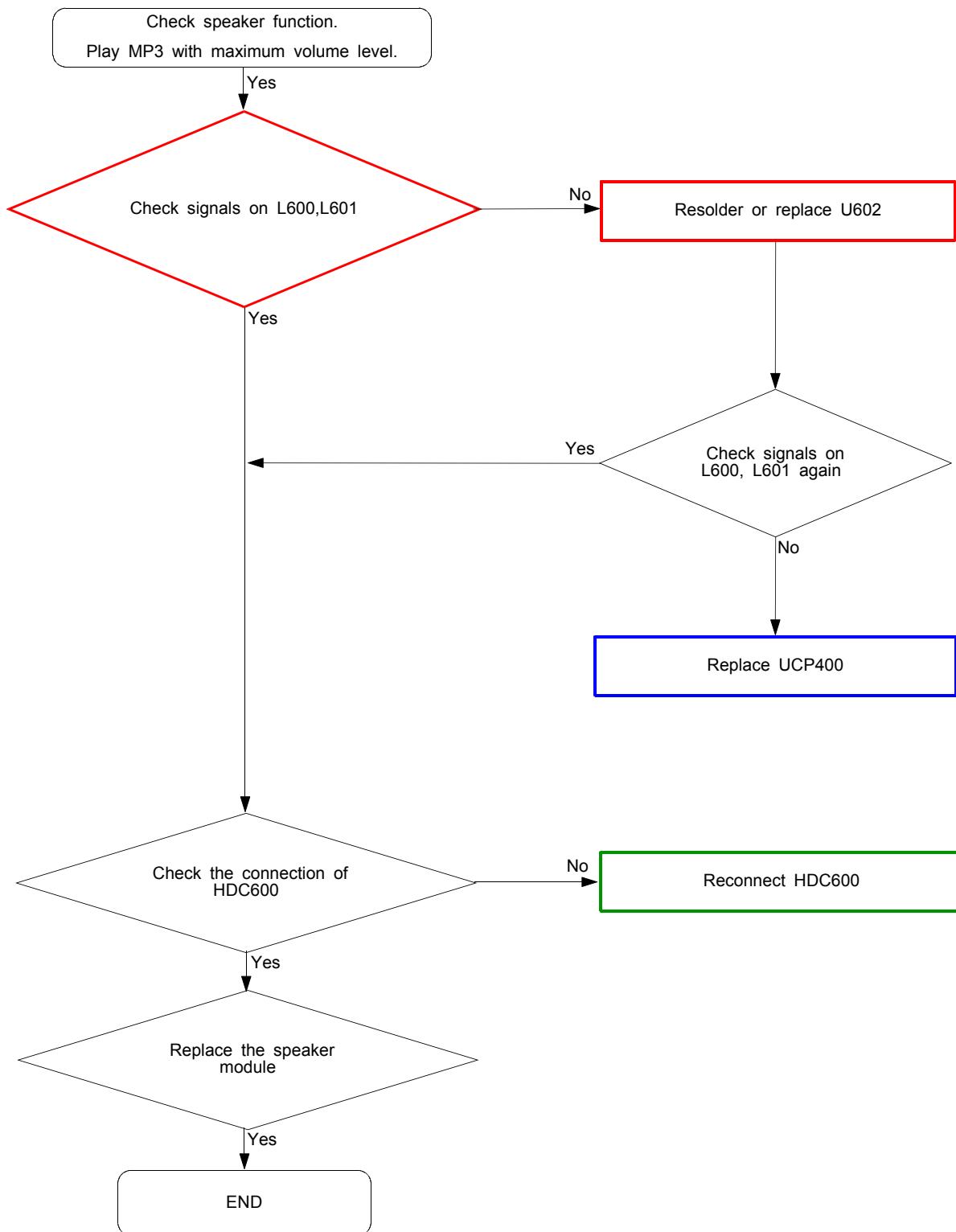


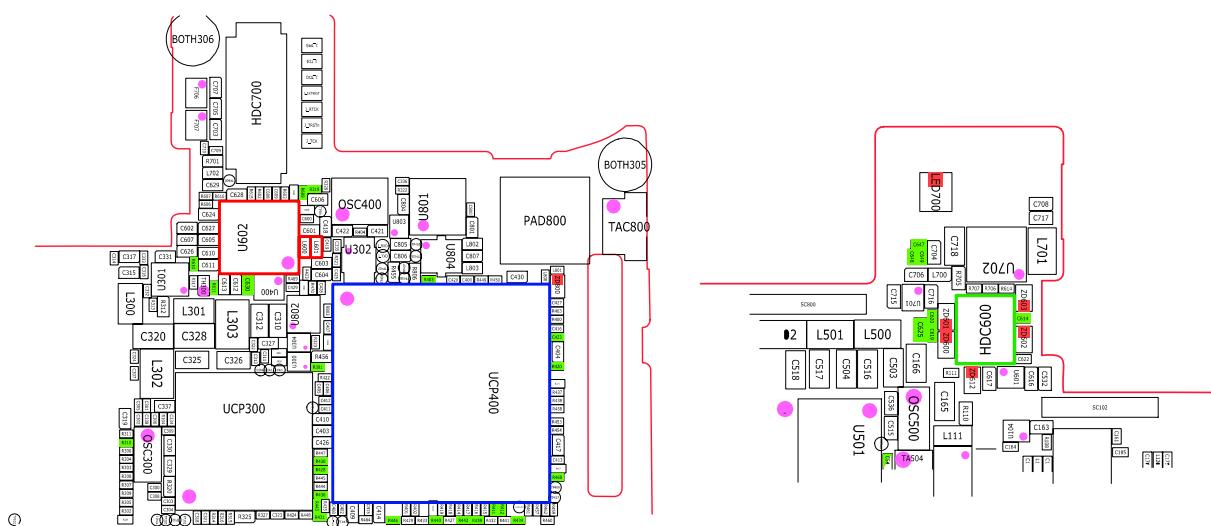
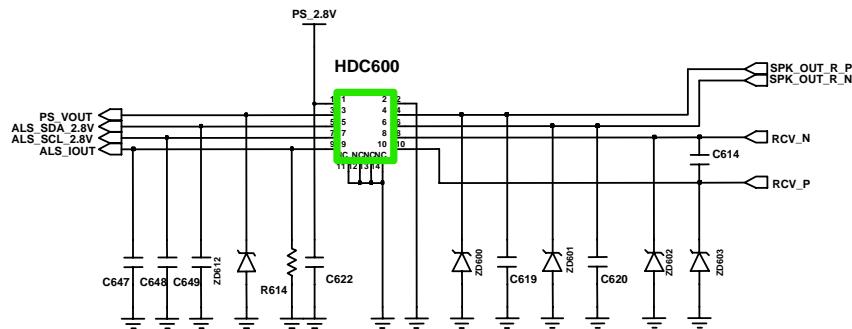
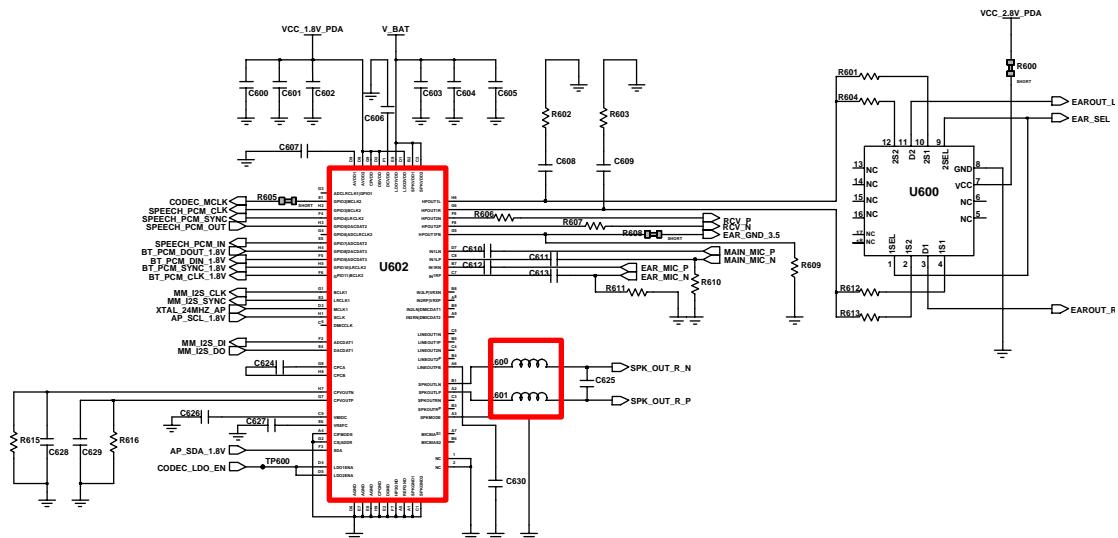
8b-3-5. Microphone Part



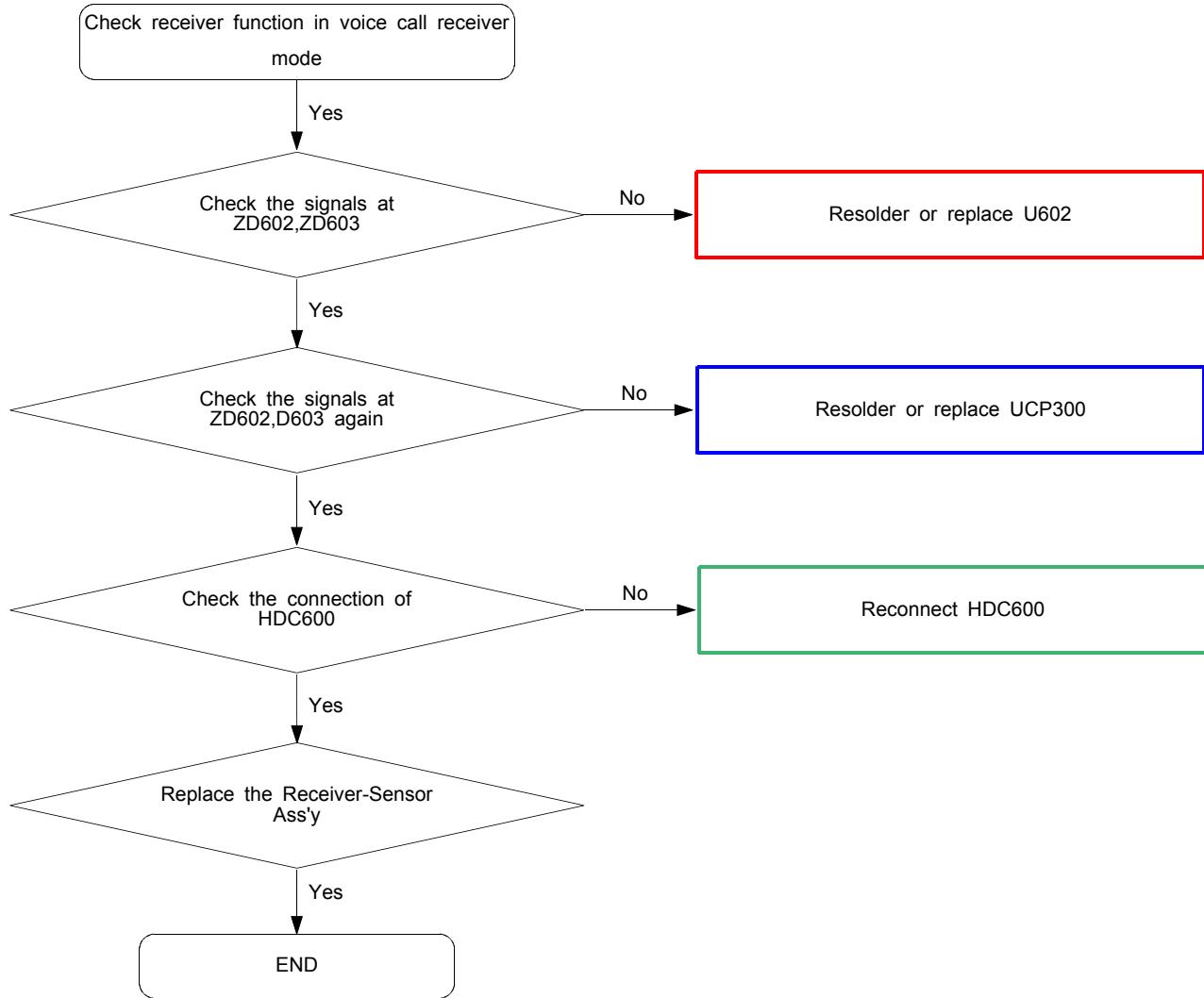


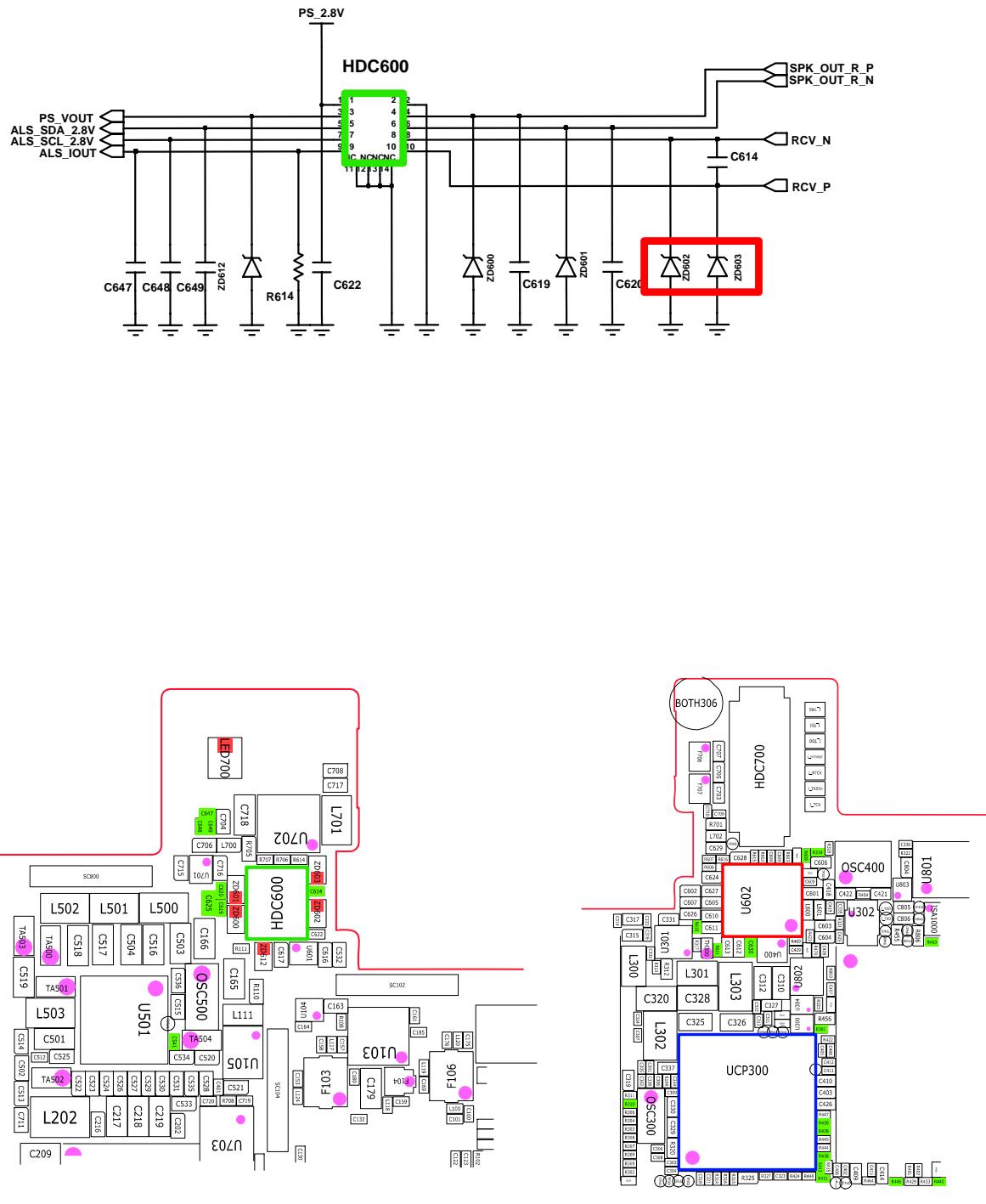
8b-3-6. Speaker Part



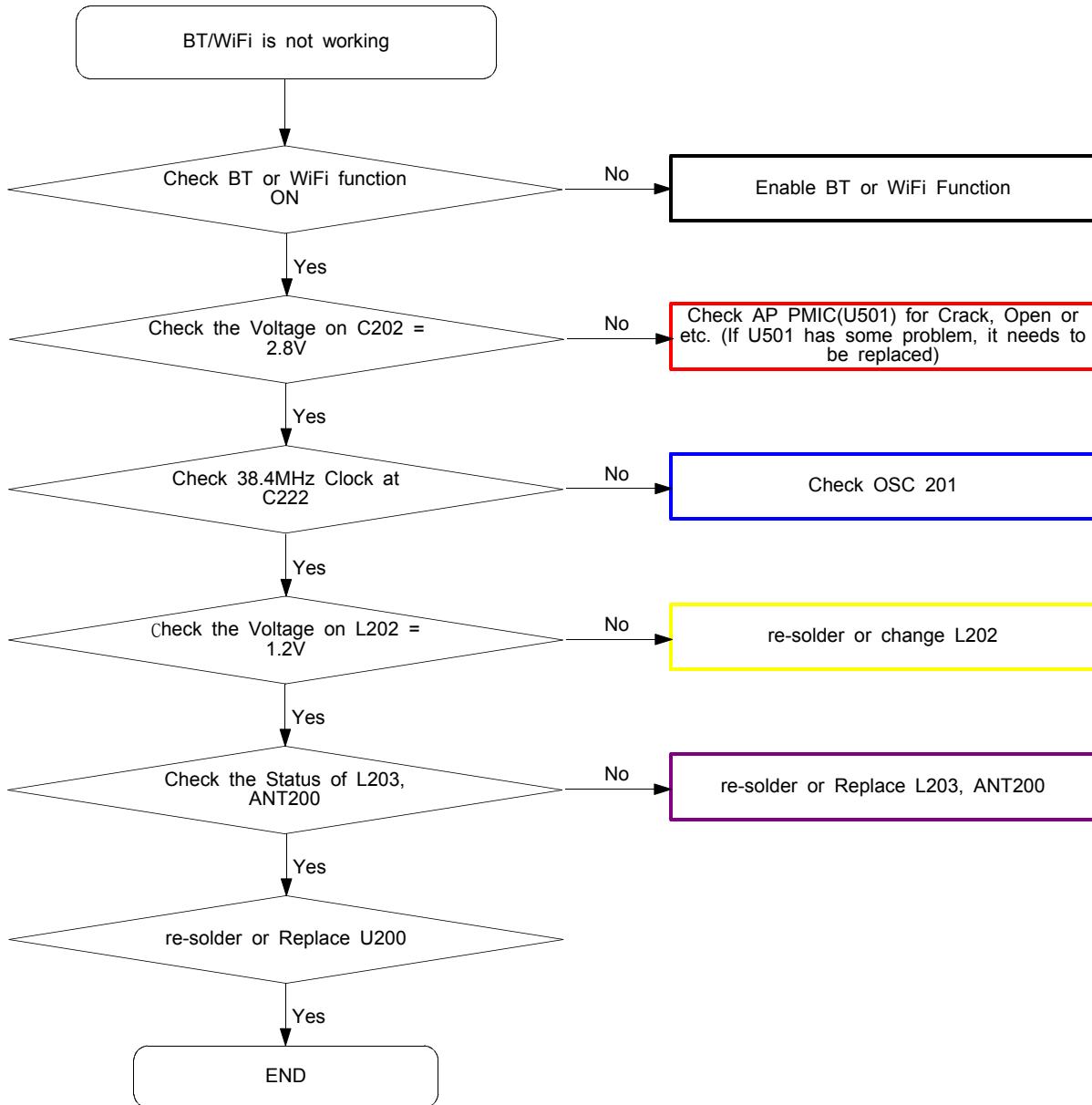


8b-3-7. Receiver Part

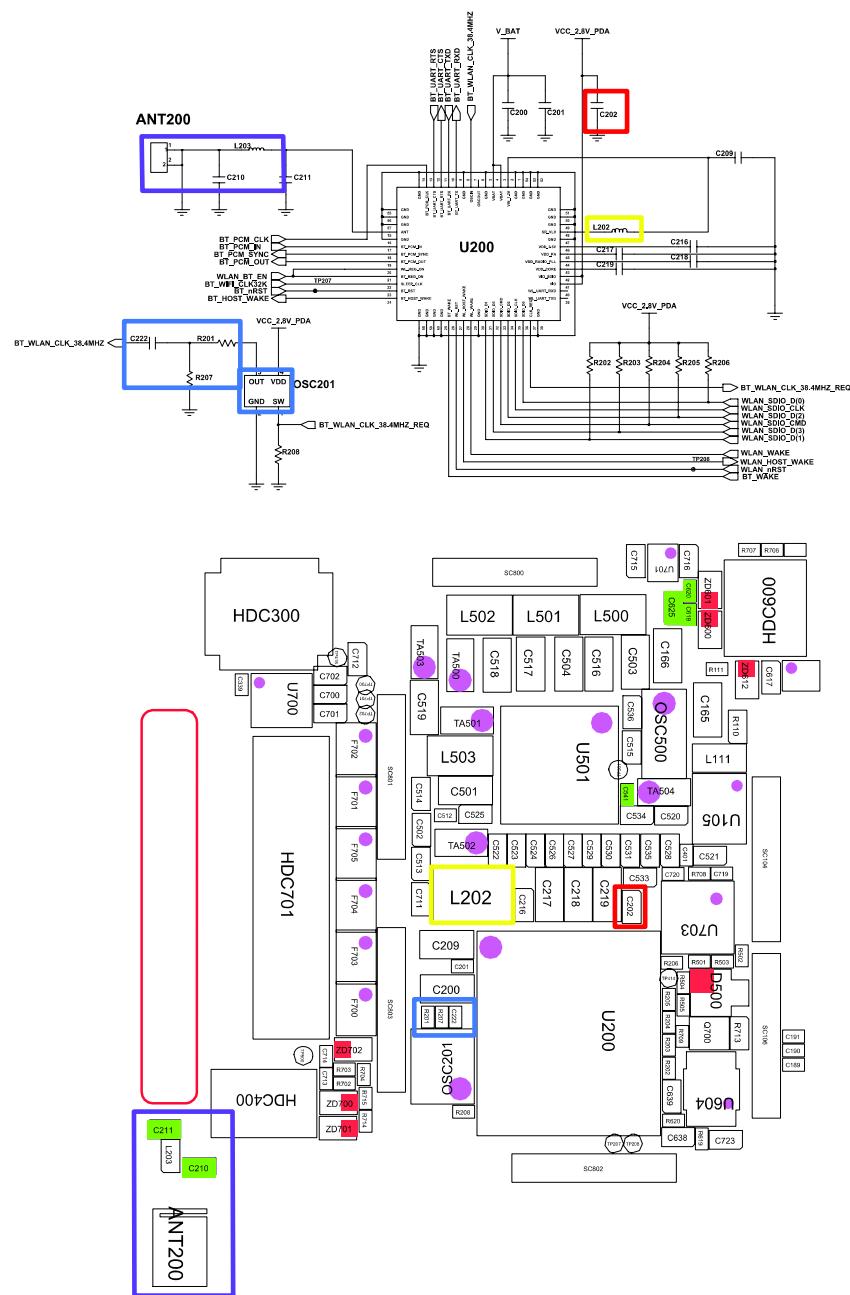




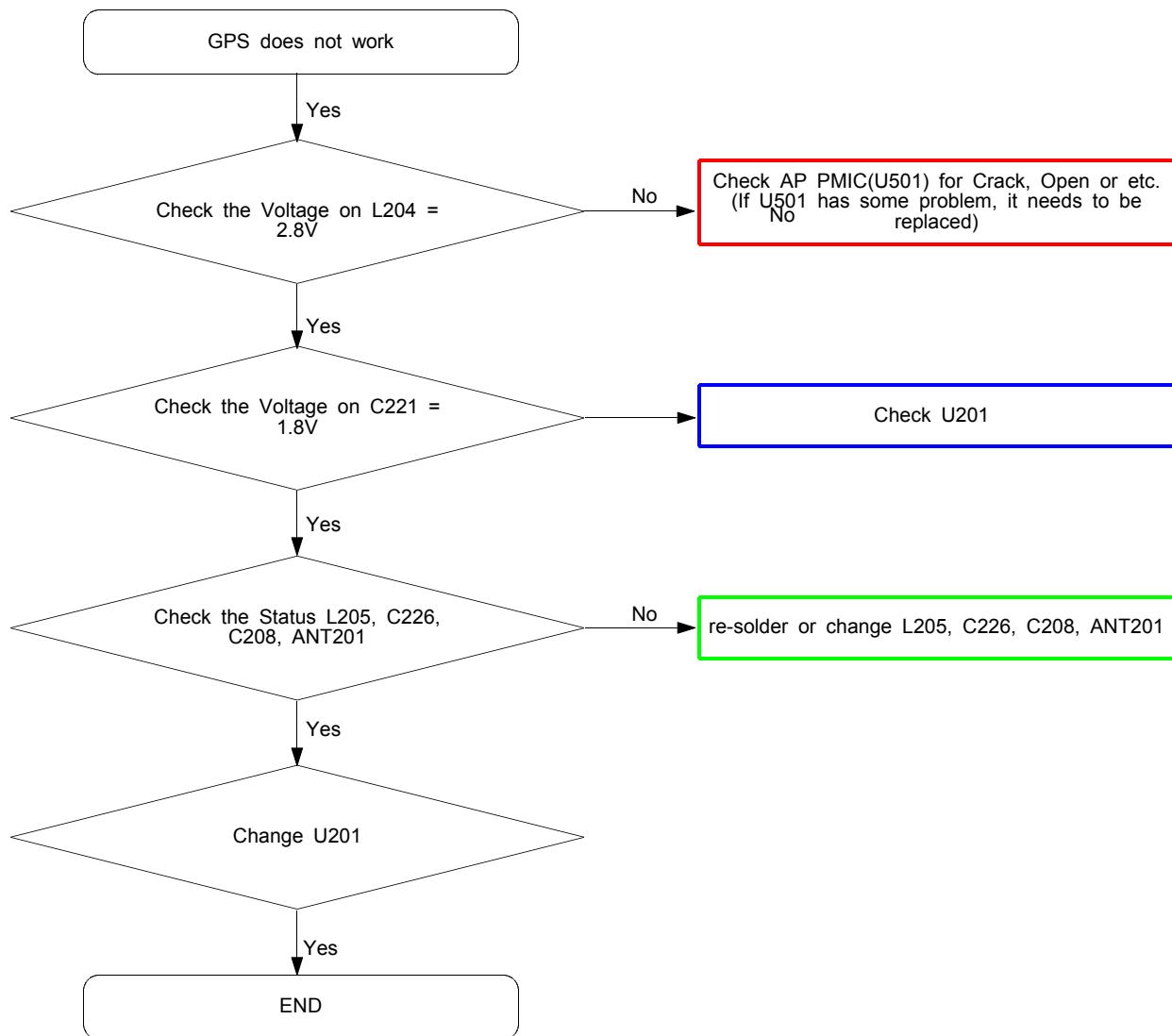
8b-3-8. BT/WIFI



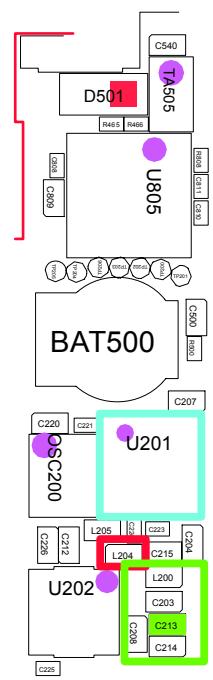
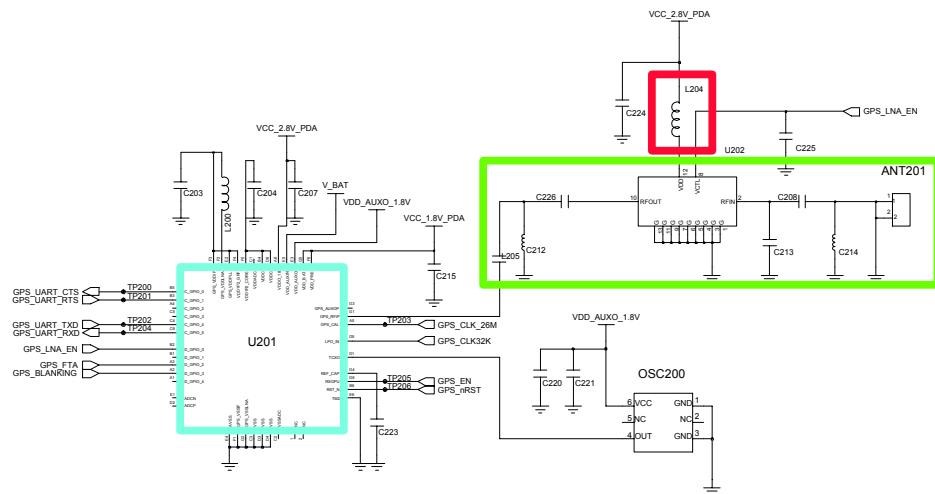
< WiFi / BT >



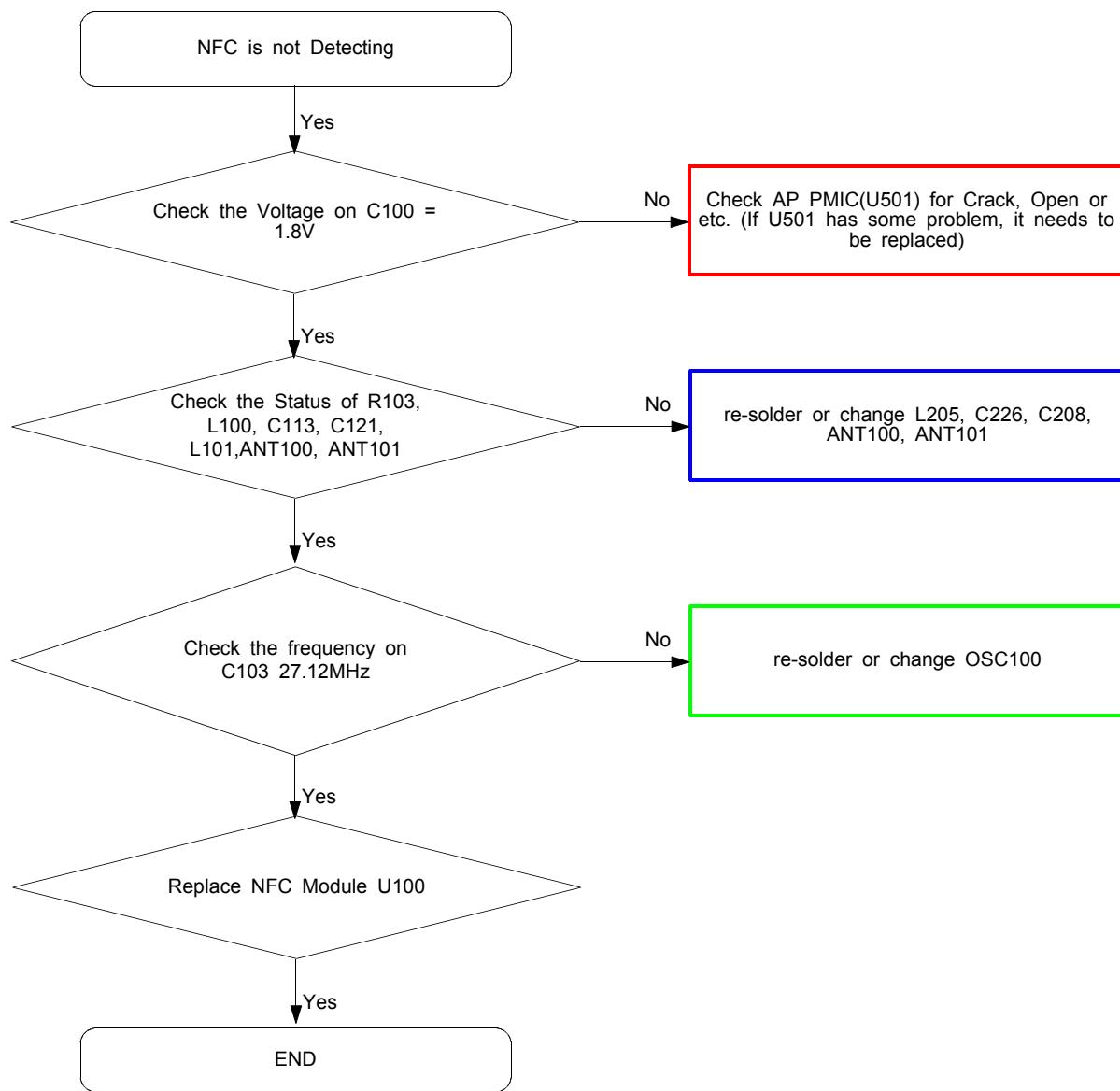
8b-3-9. GPS

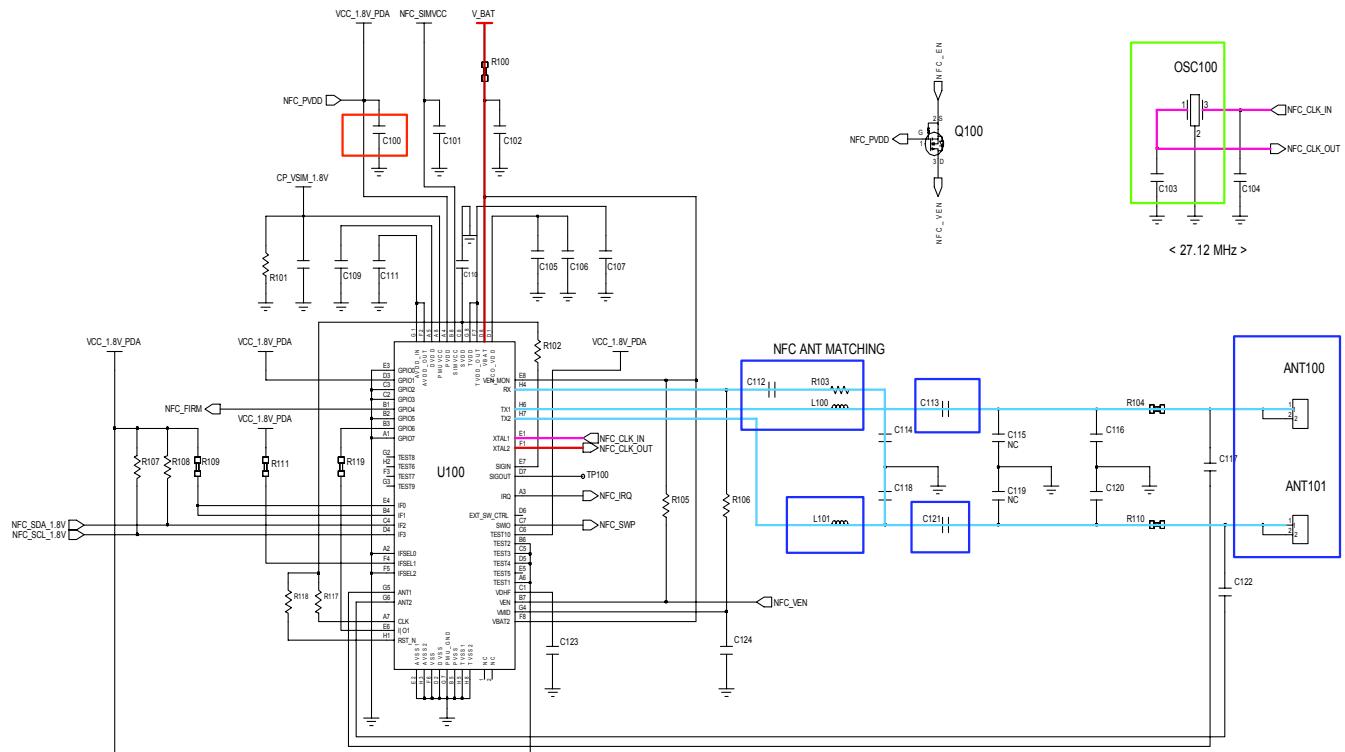


< GPS >

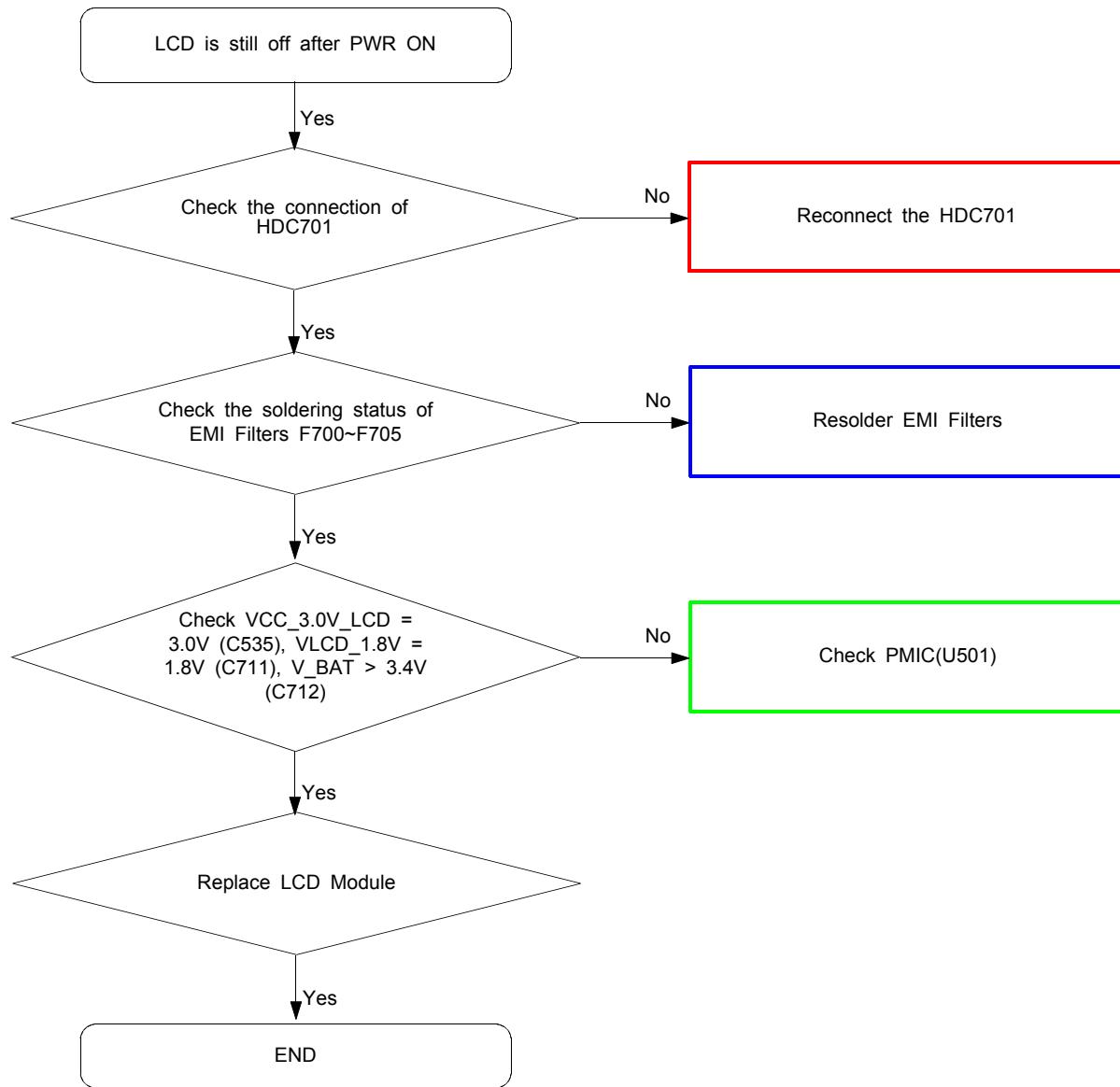


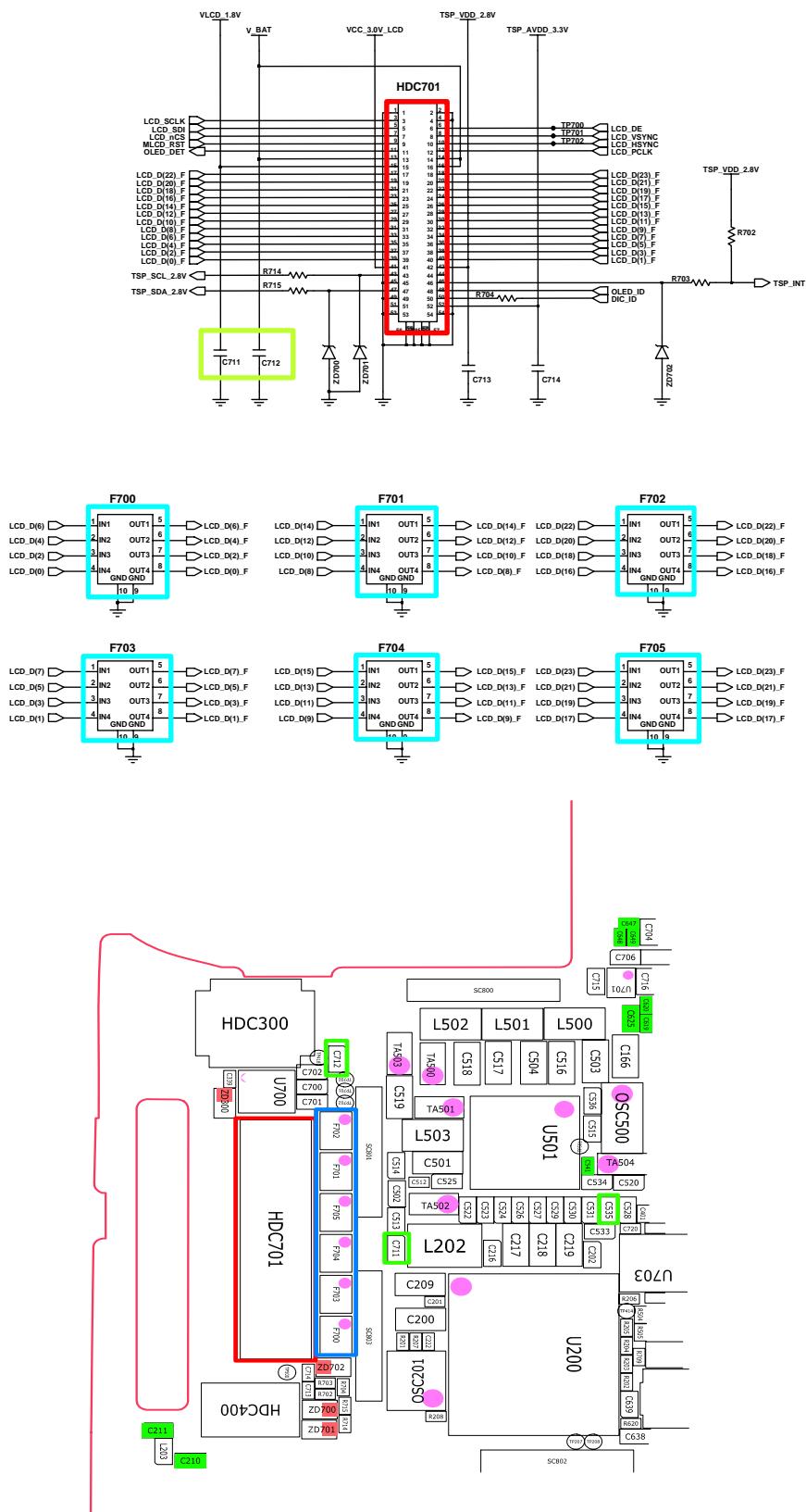
8b-3-10. NFC



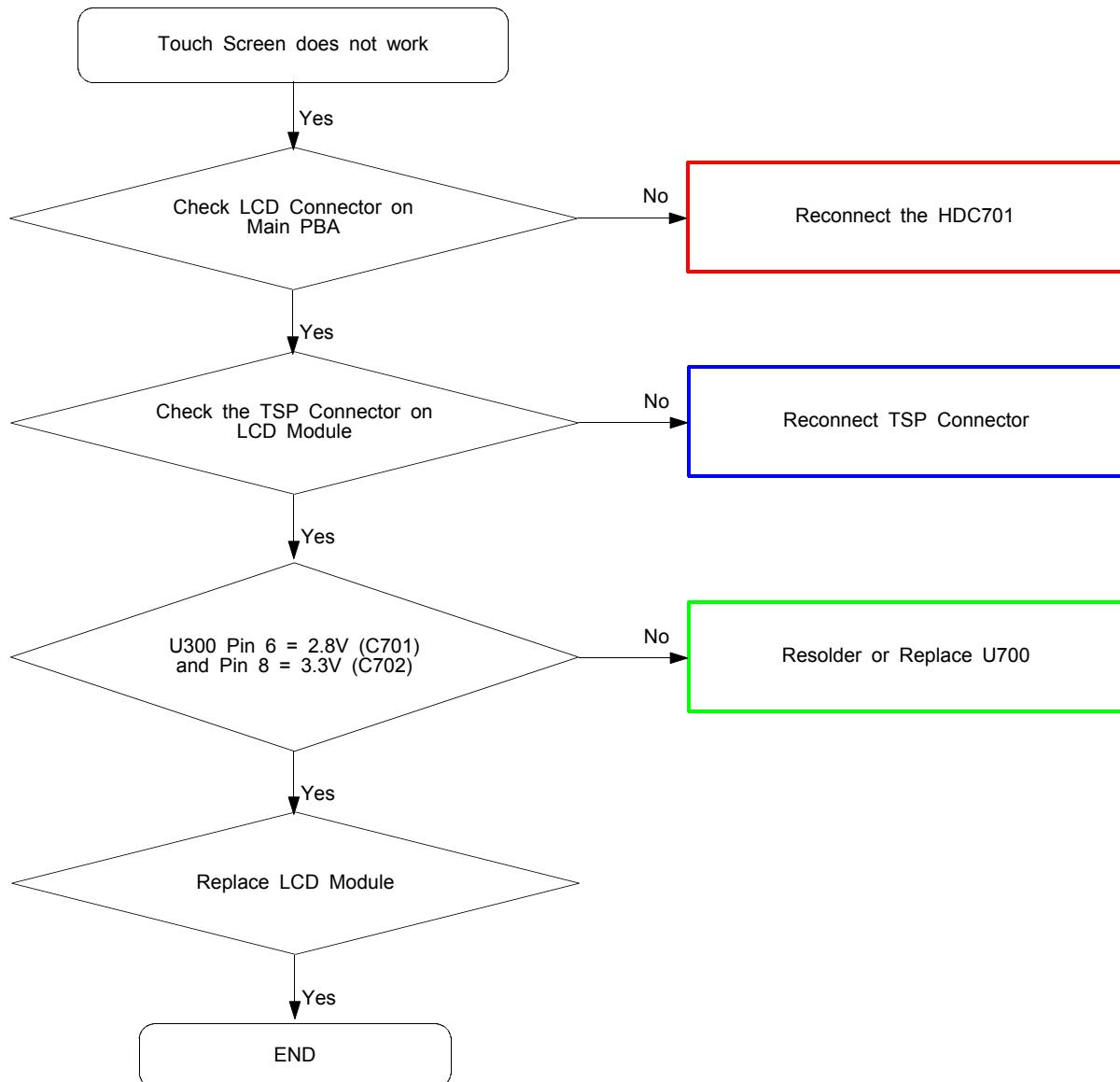


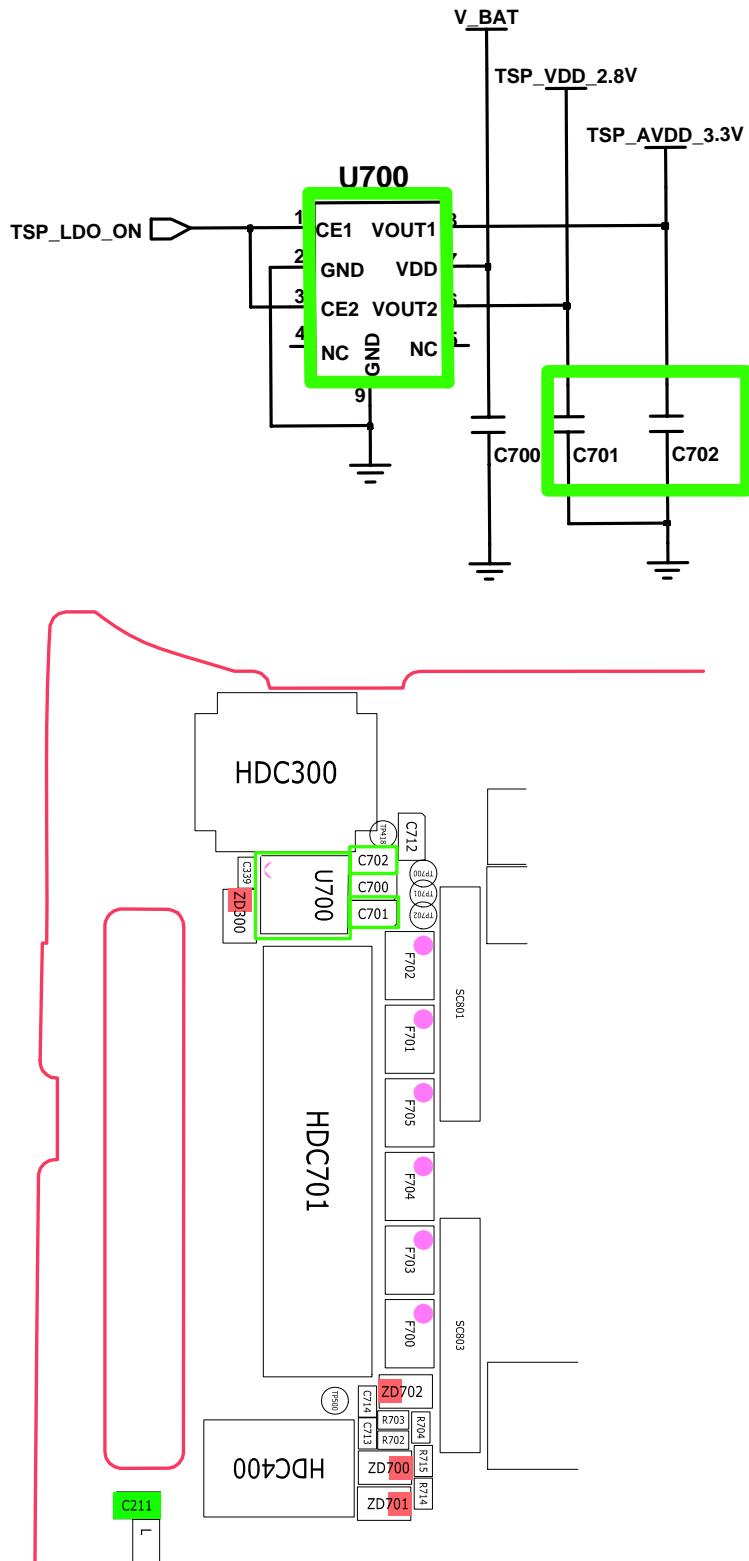
8b-3-10. LCD



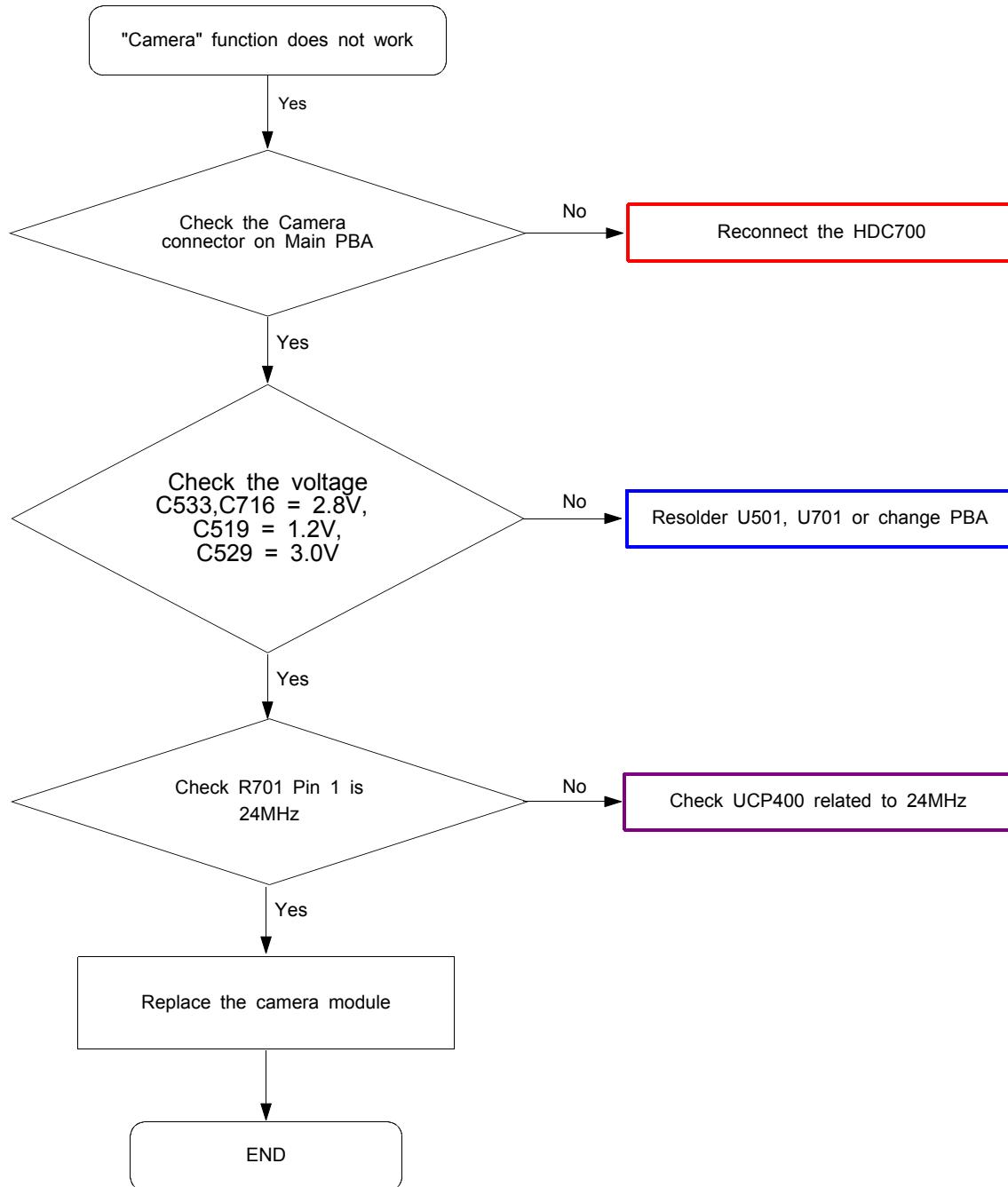


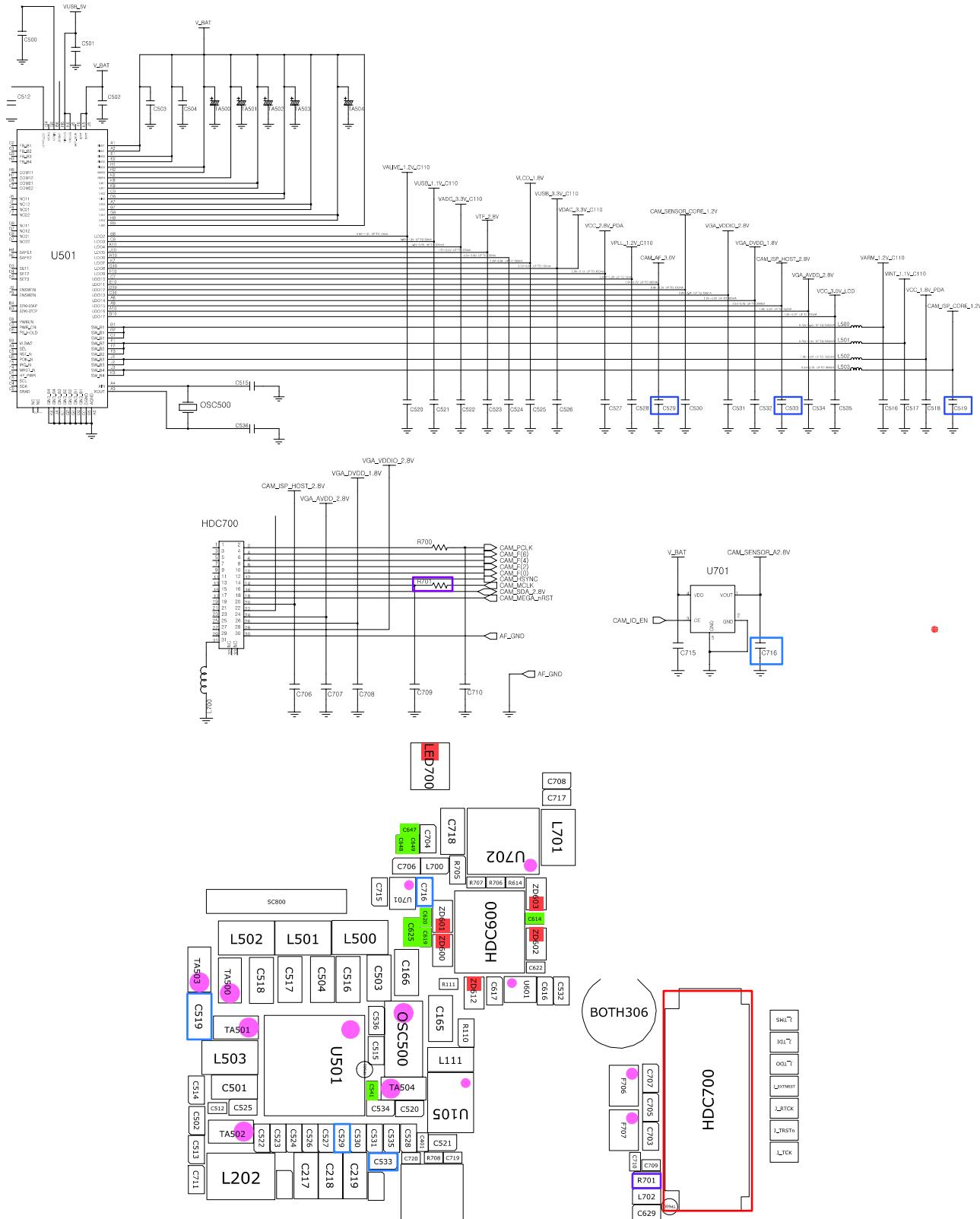
8b-3-11. TSP



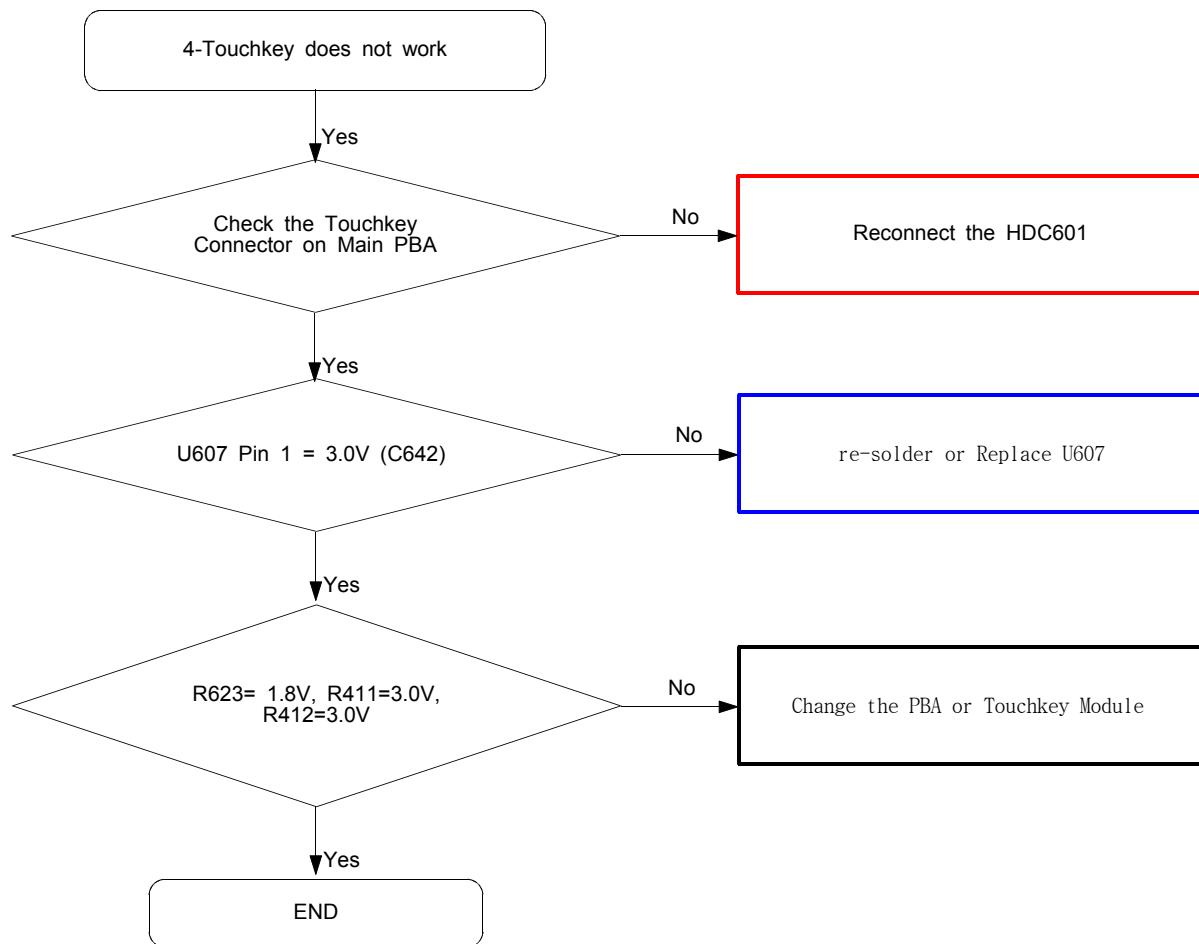


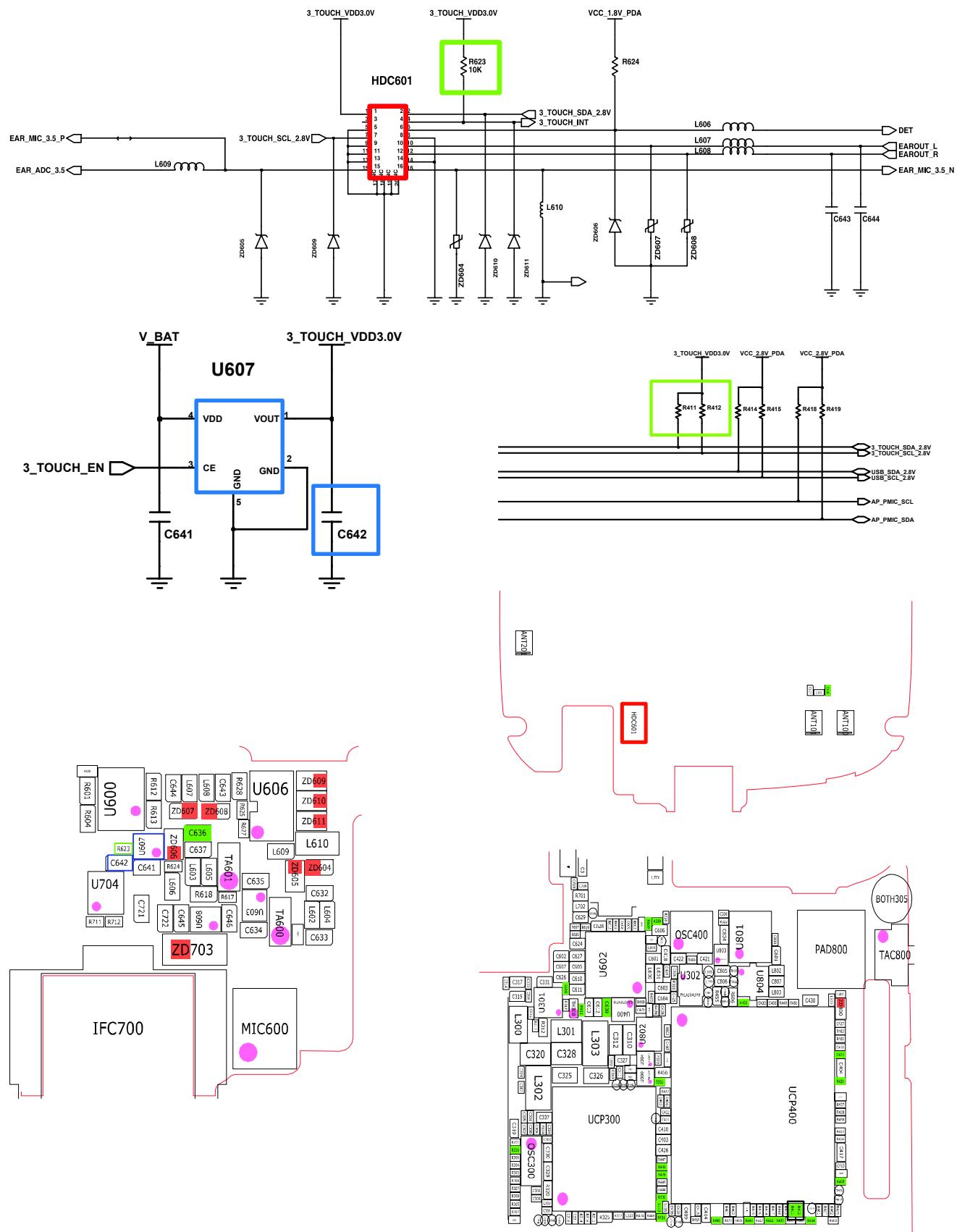
8b-3-12. 5M CAM & VGA



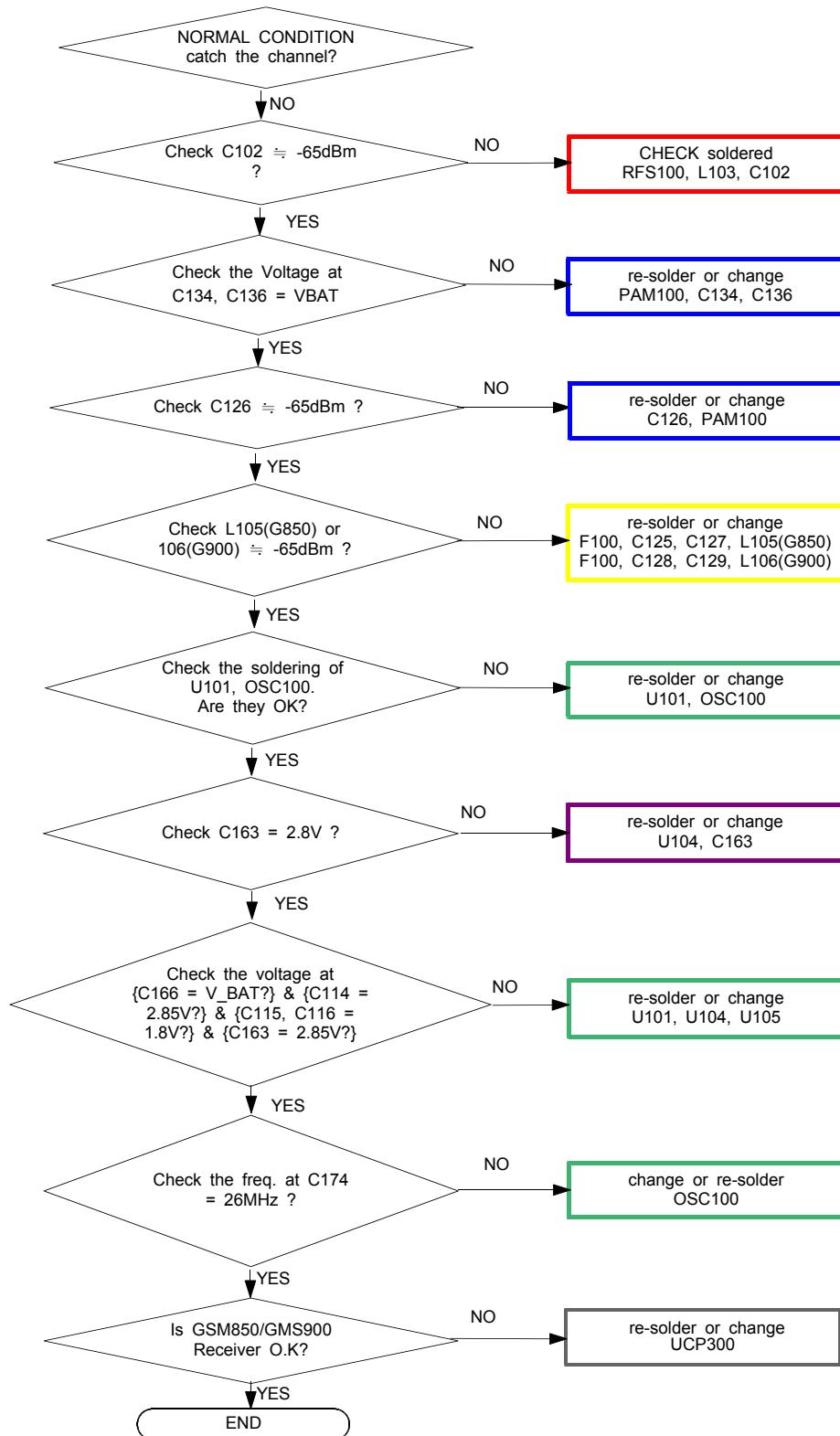


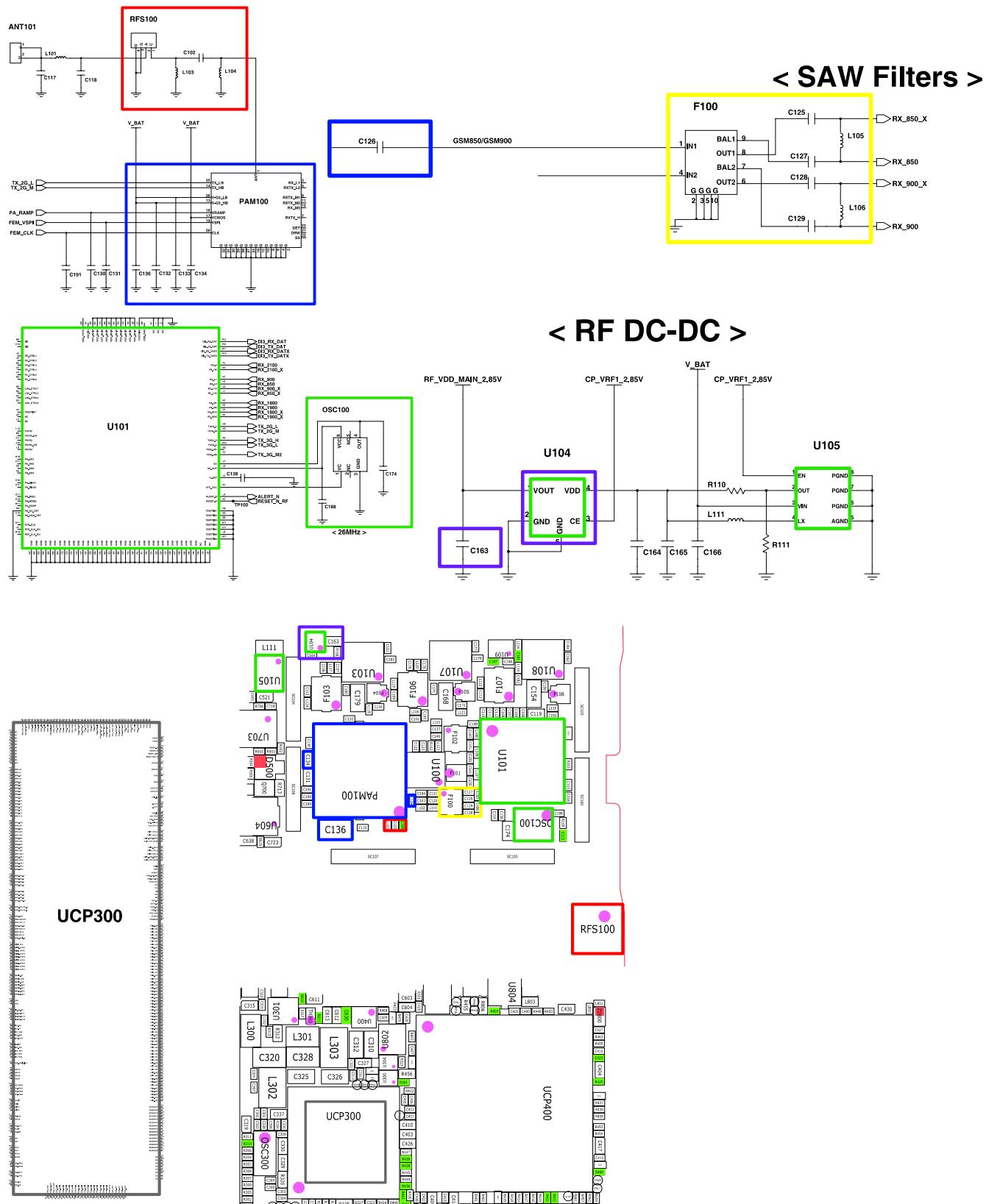
8b-3-13. 4 Touchkey



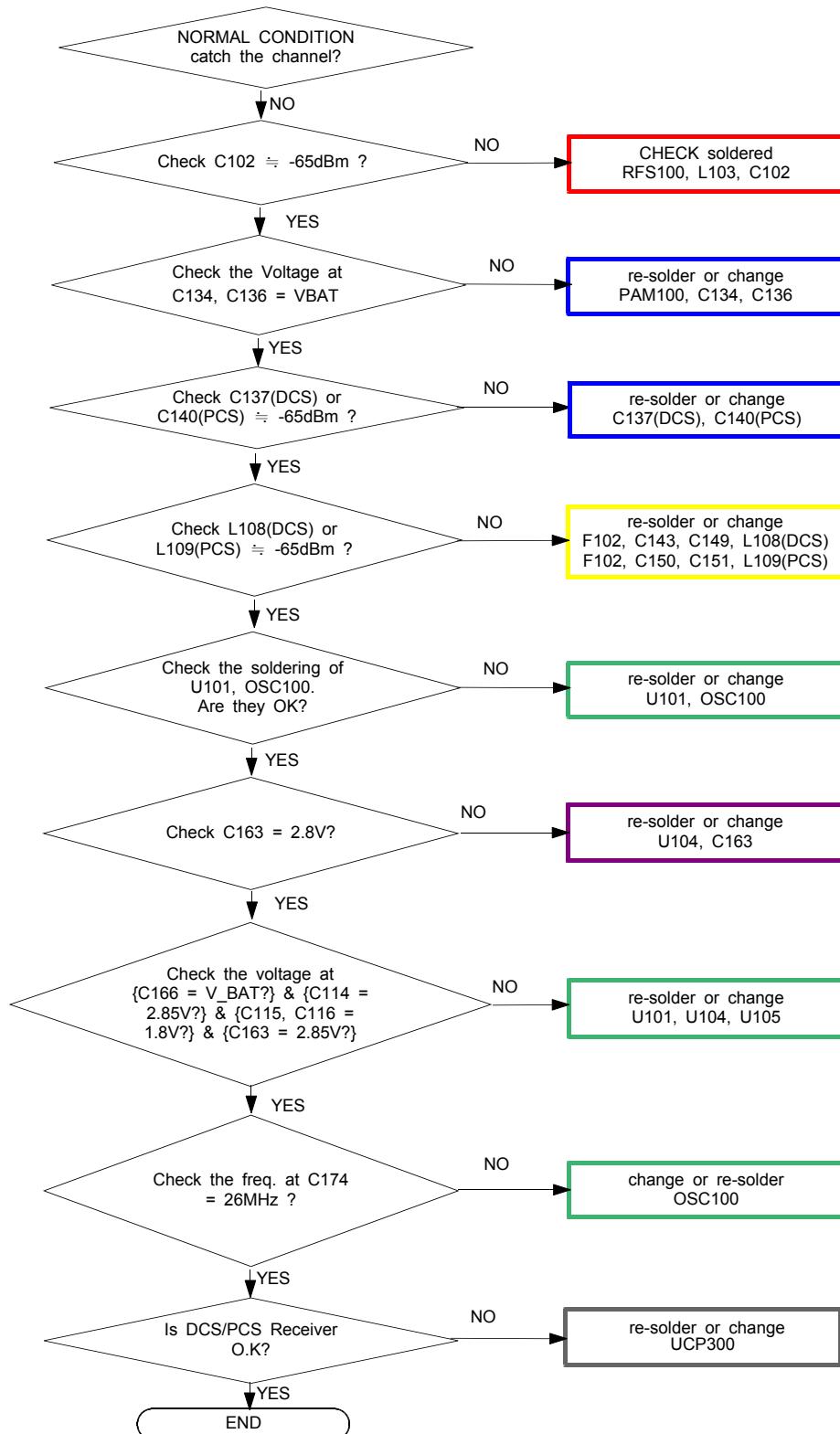


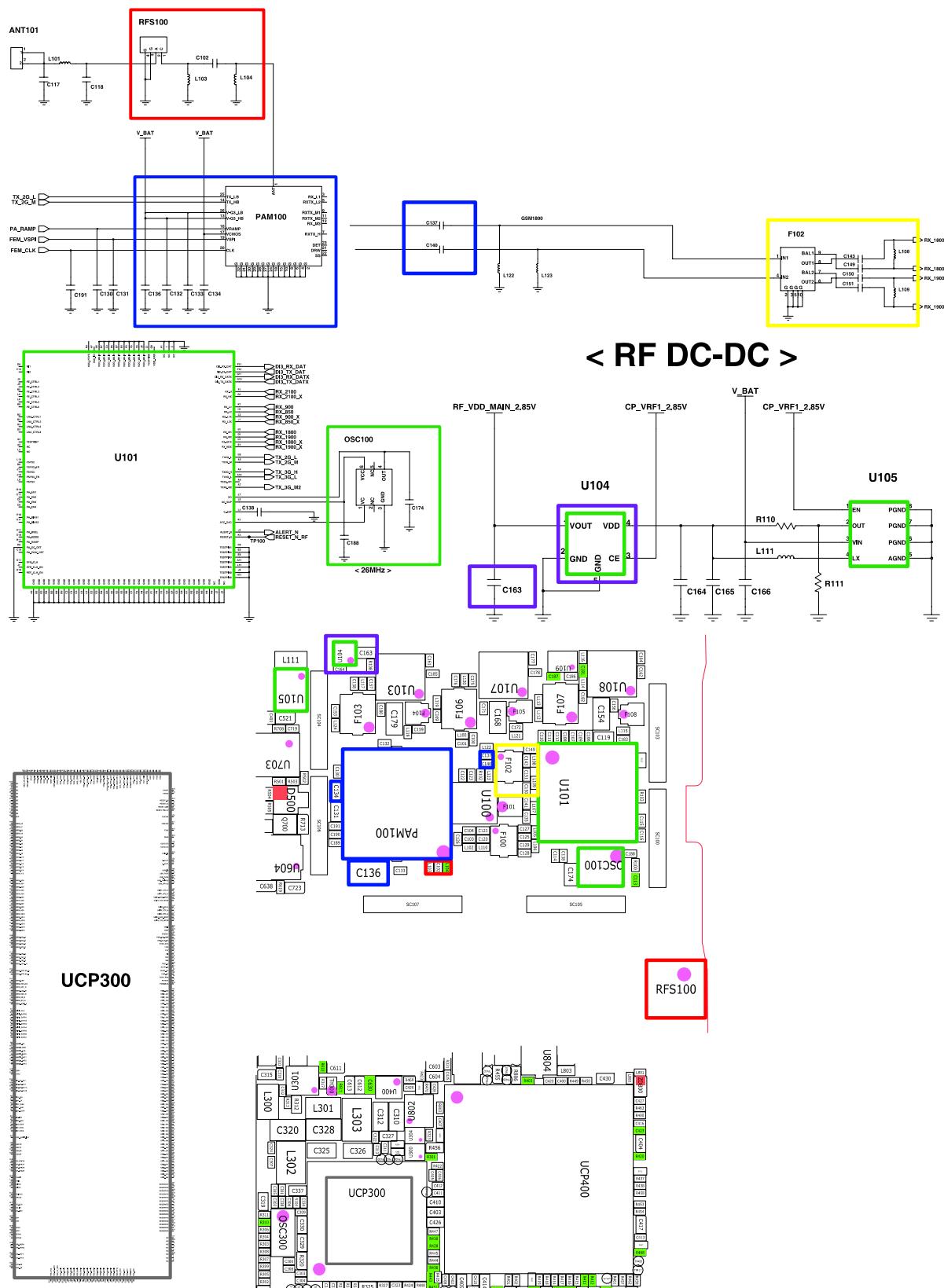
8b-3-13. GSM850/GSM900 RX



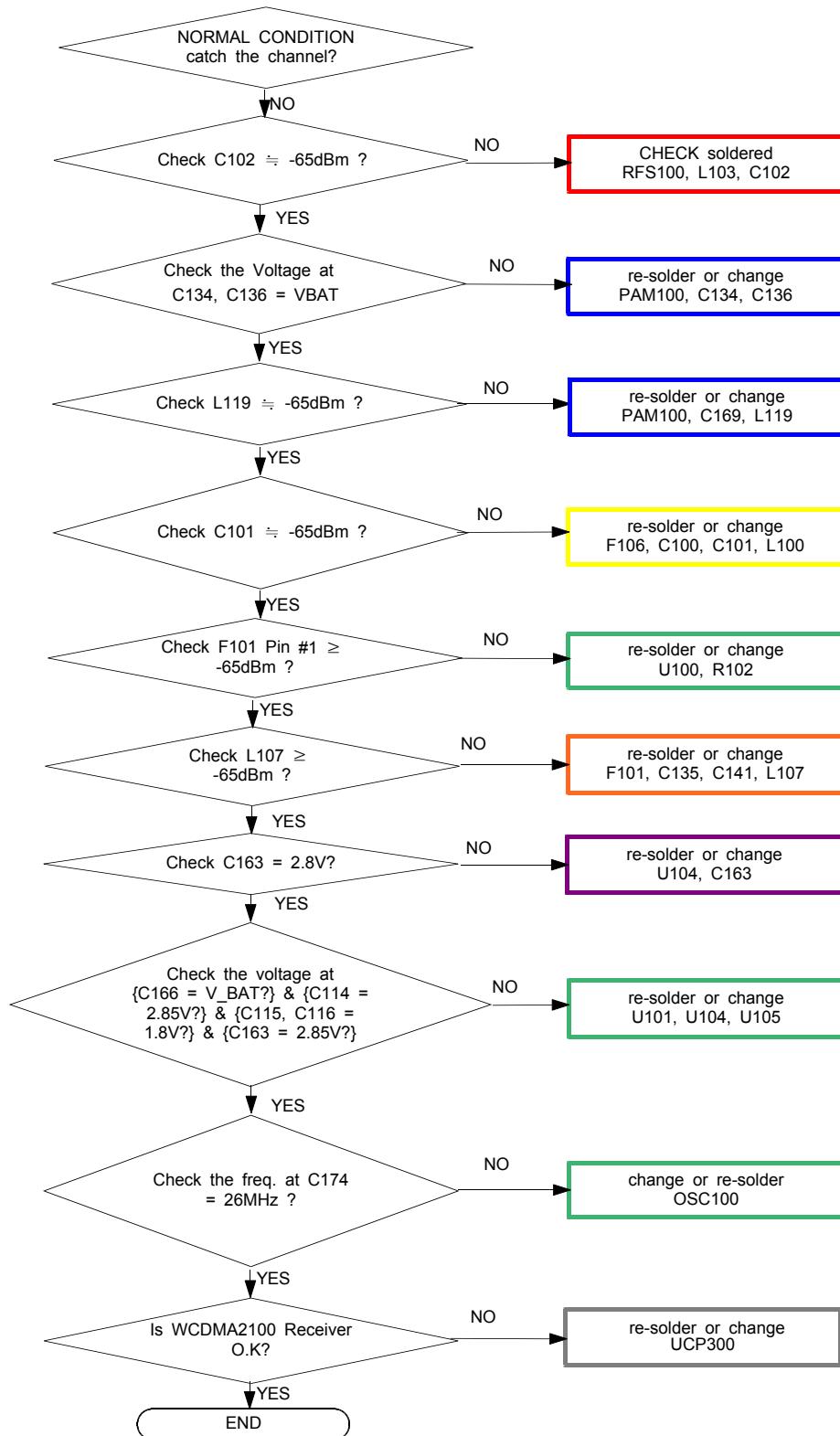


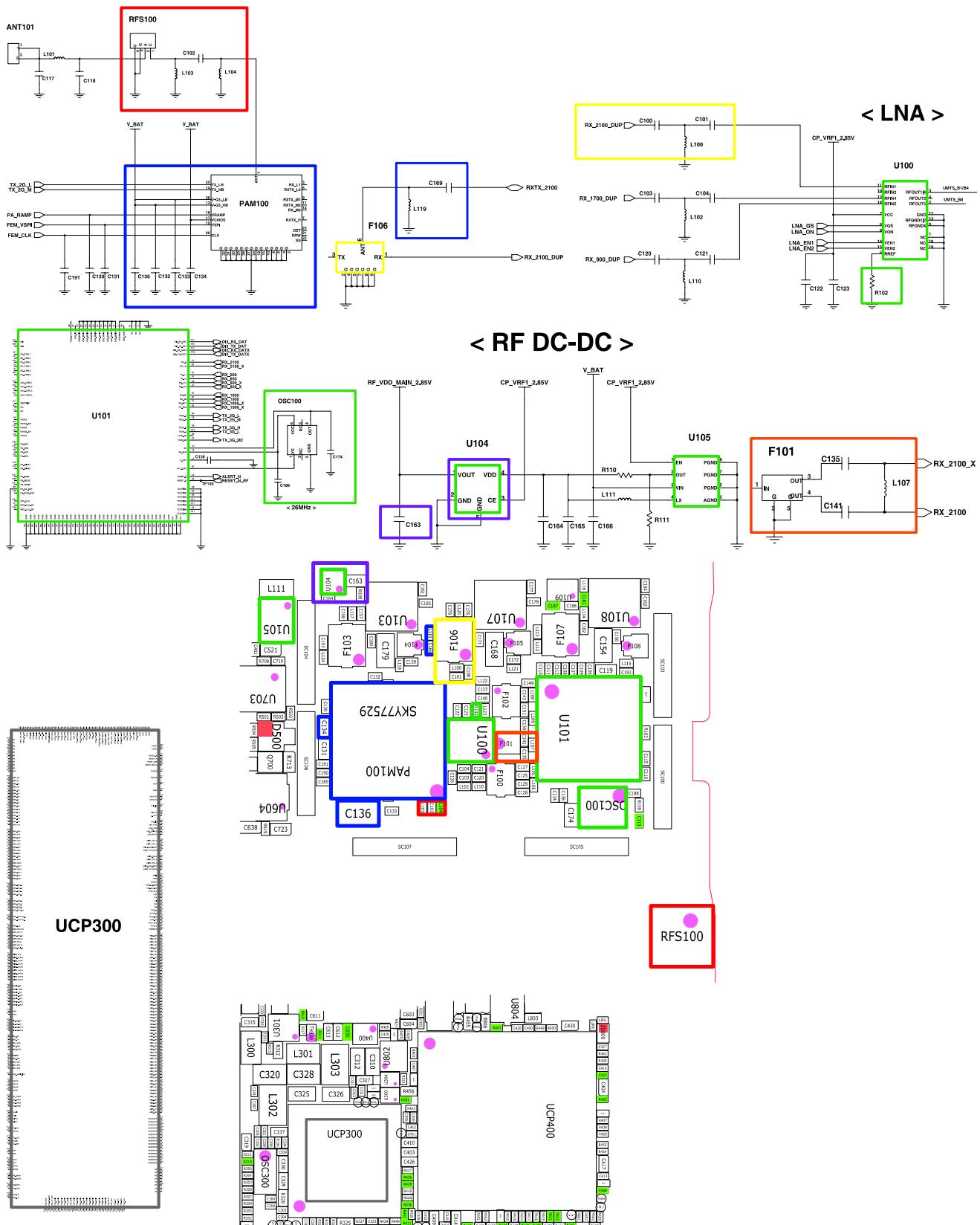
8b-3-14. DCS(GSM1800)/PCS(GSM1900) RX



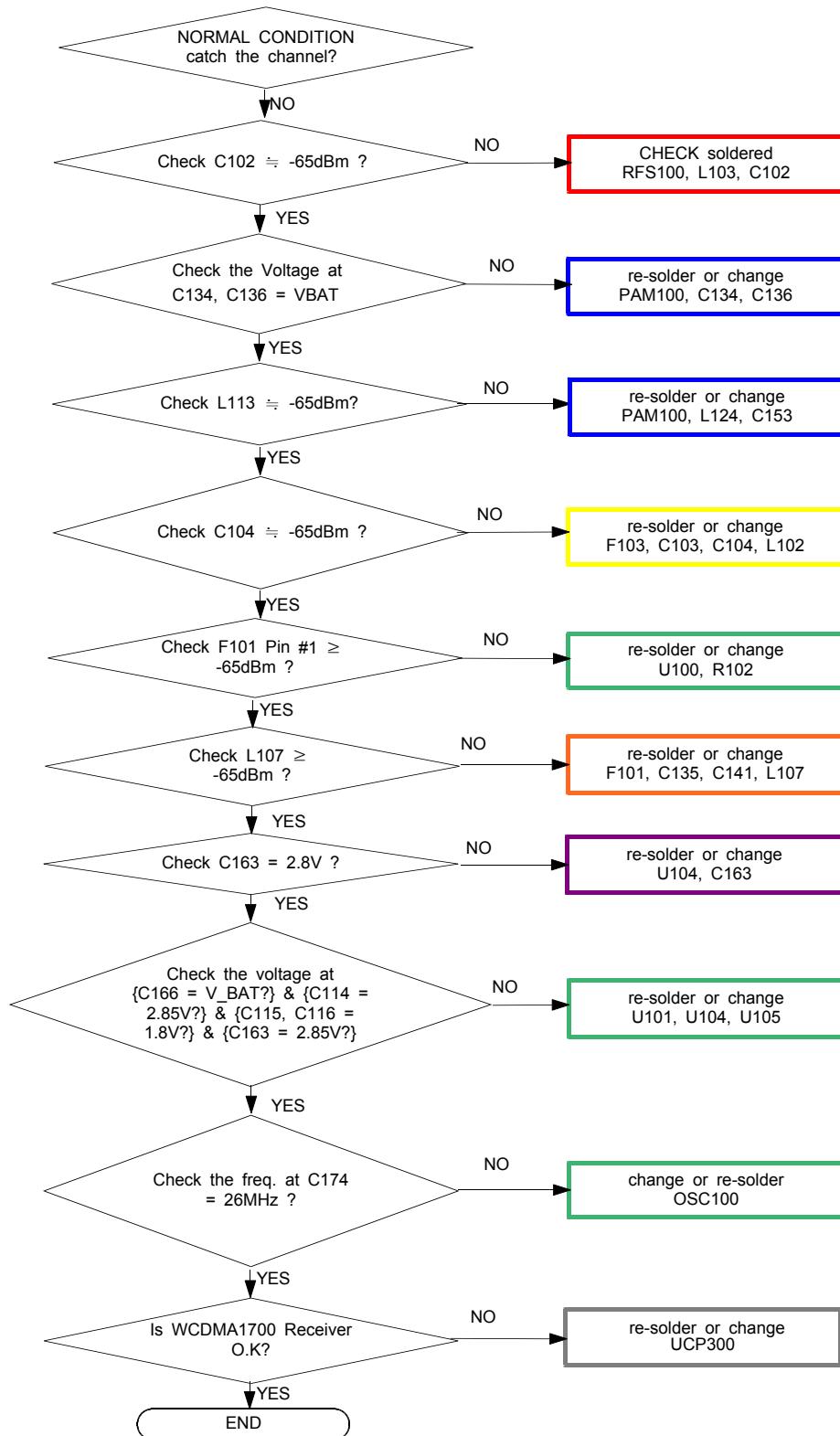


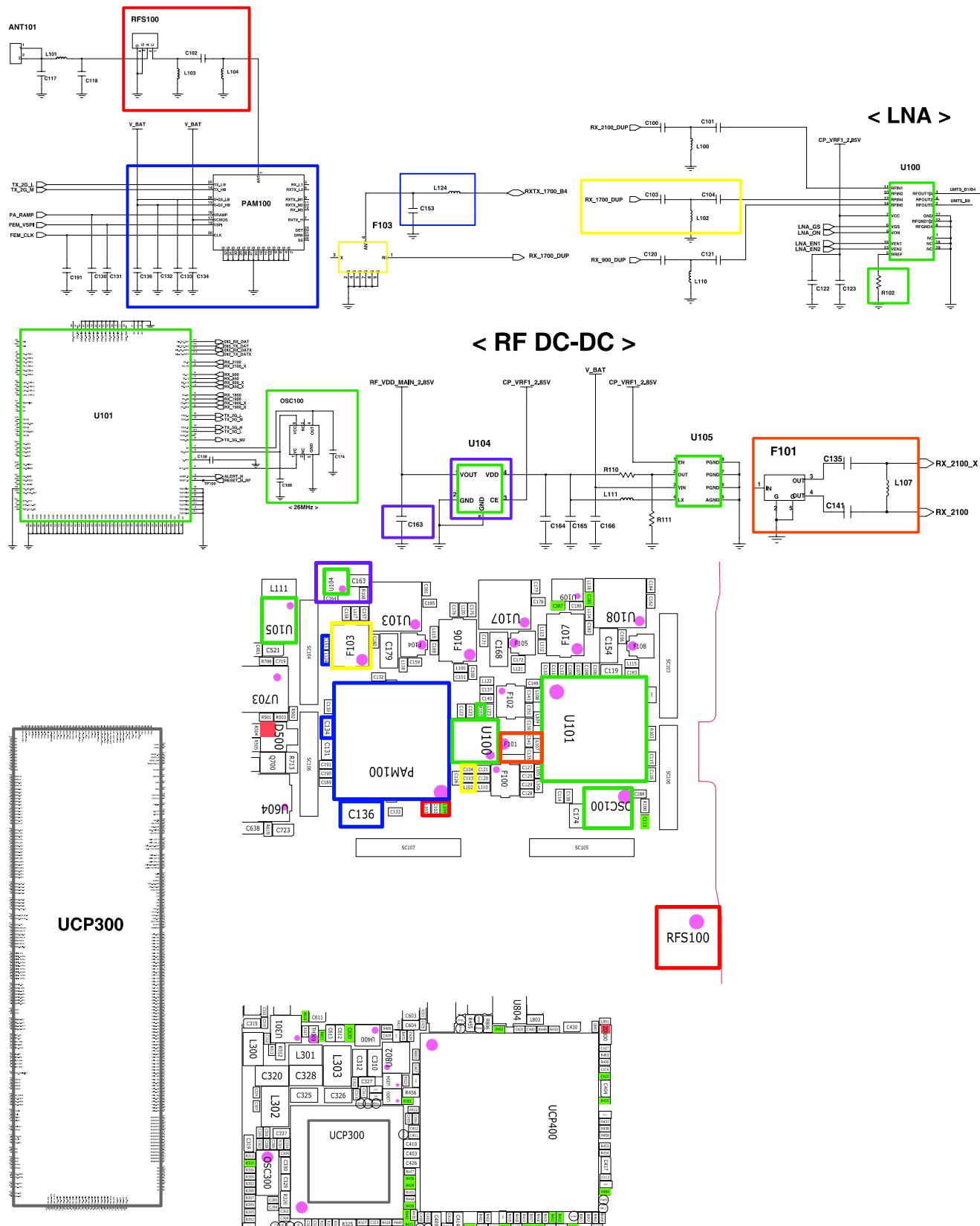
8b-3-15. WCDMA2100 RX



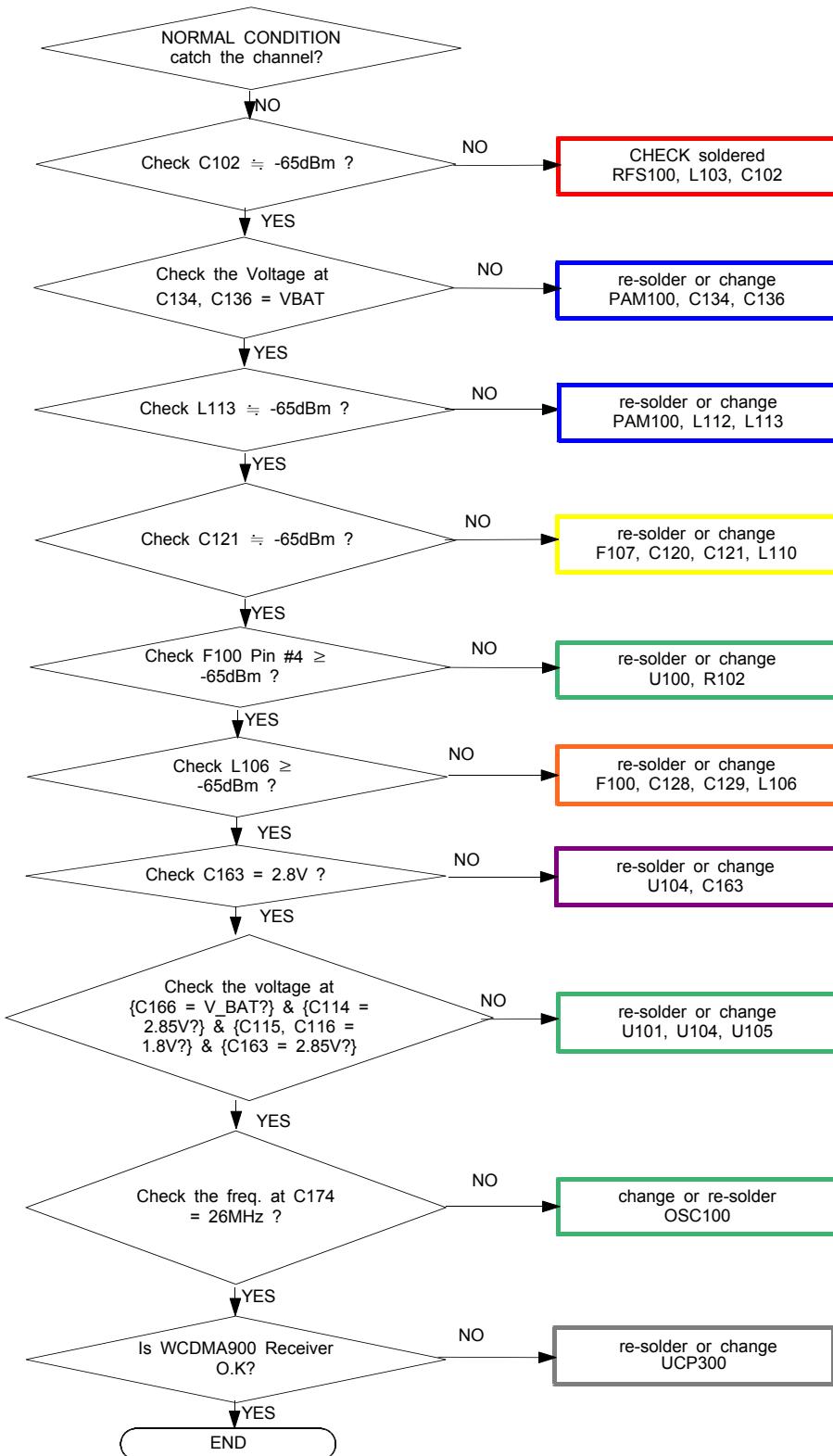


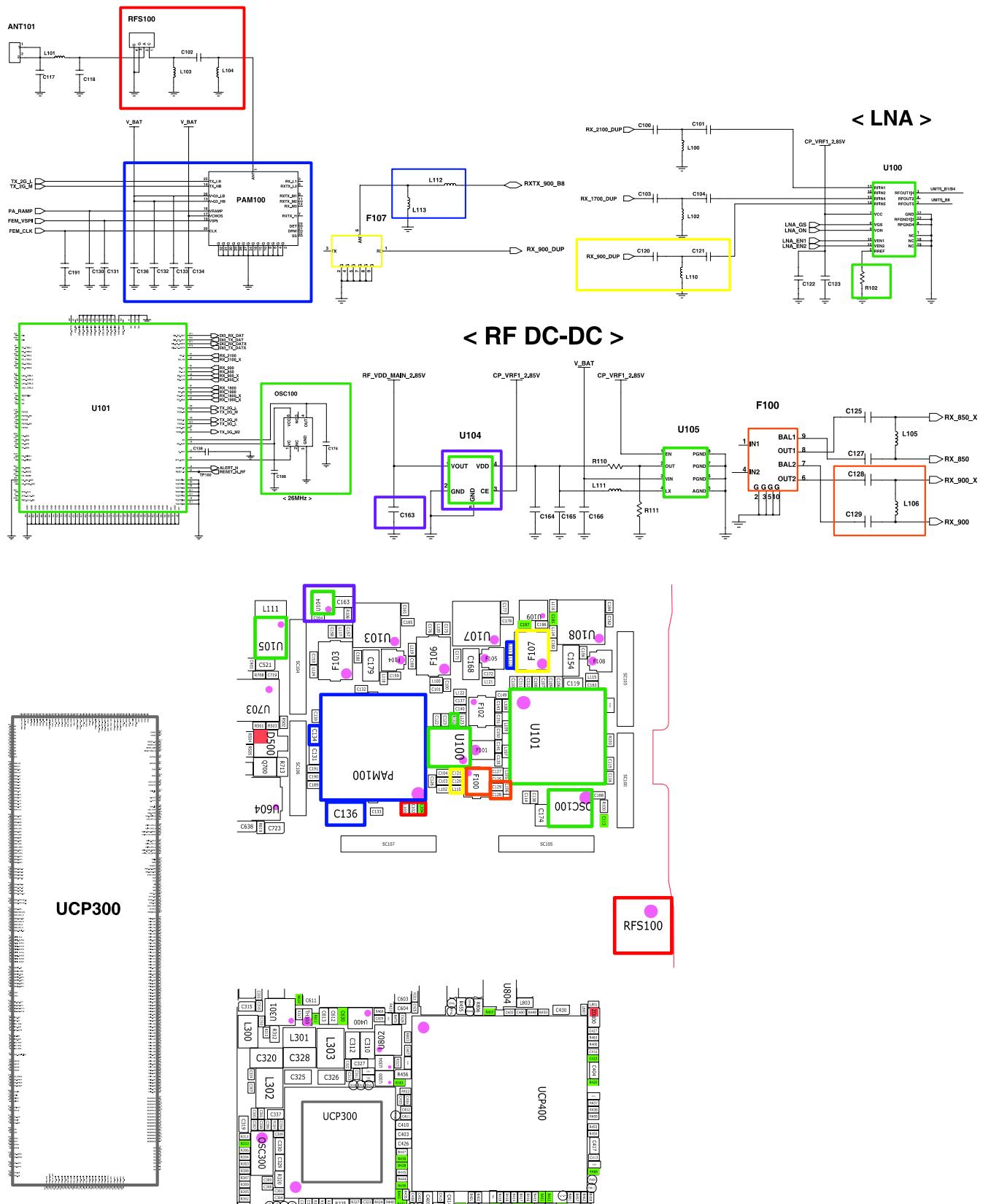
8b-3-16. WCDMA1700 RX



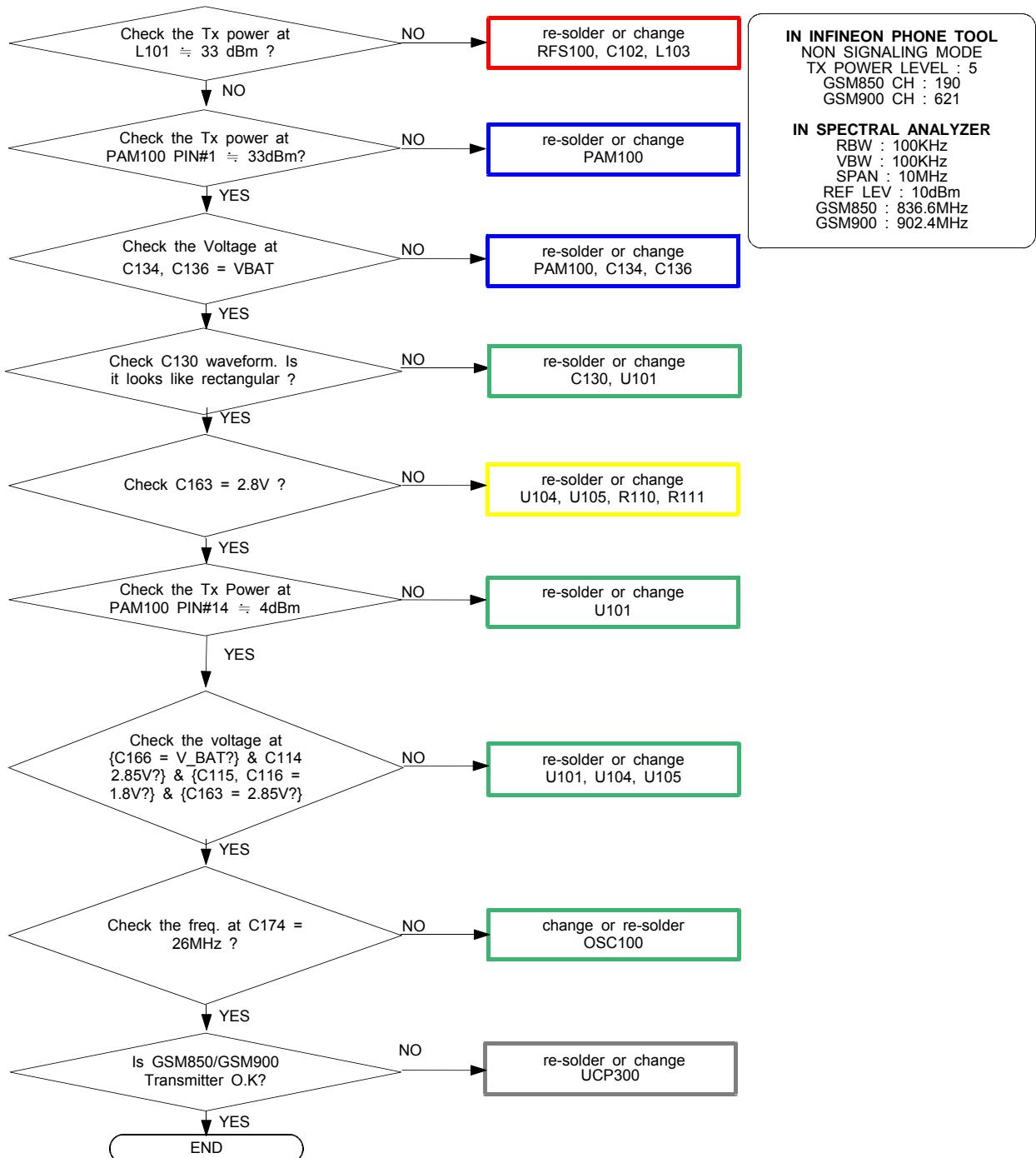


8b-3-17. WCDMA900 RX

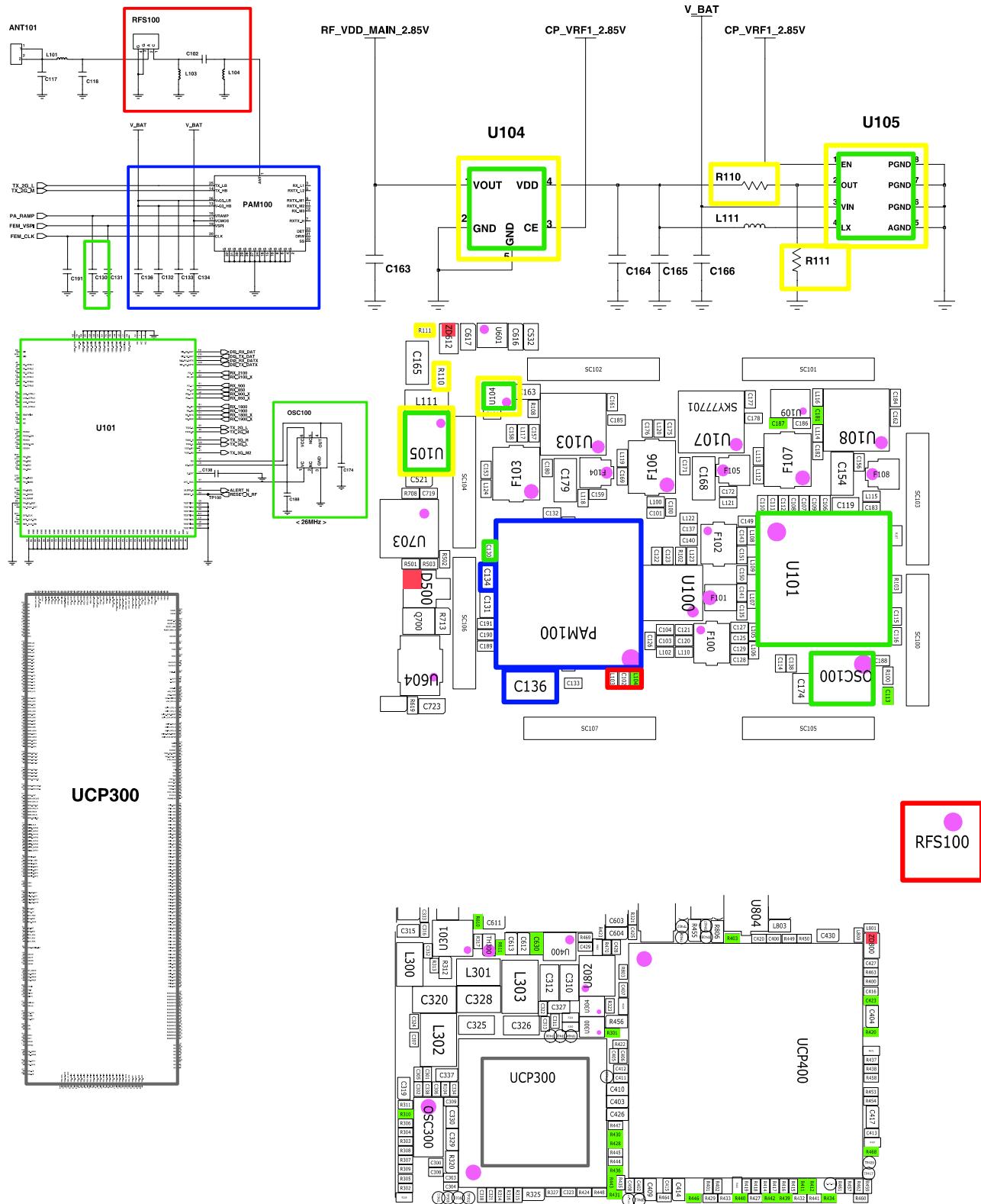




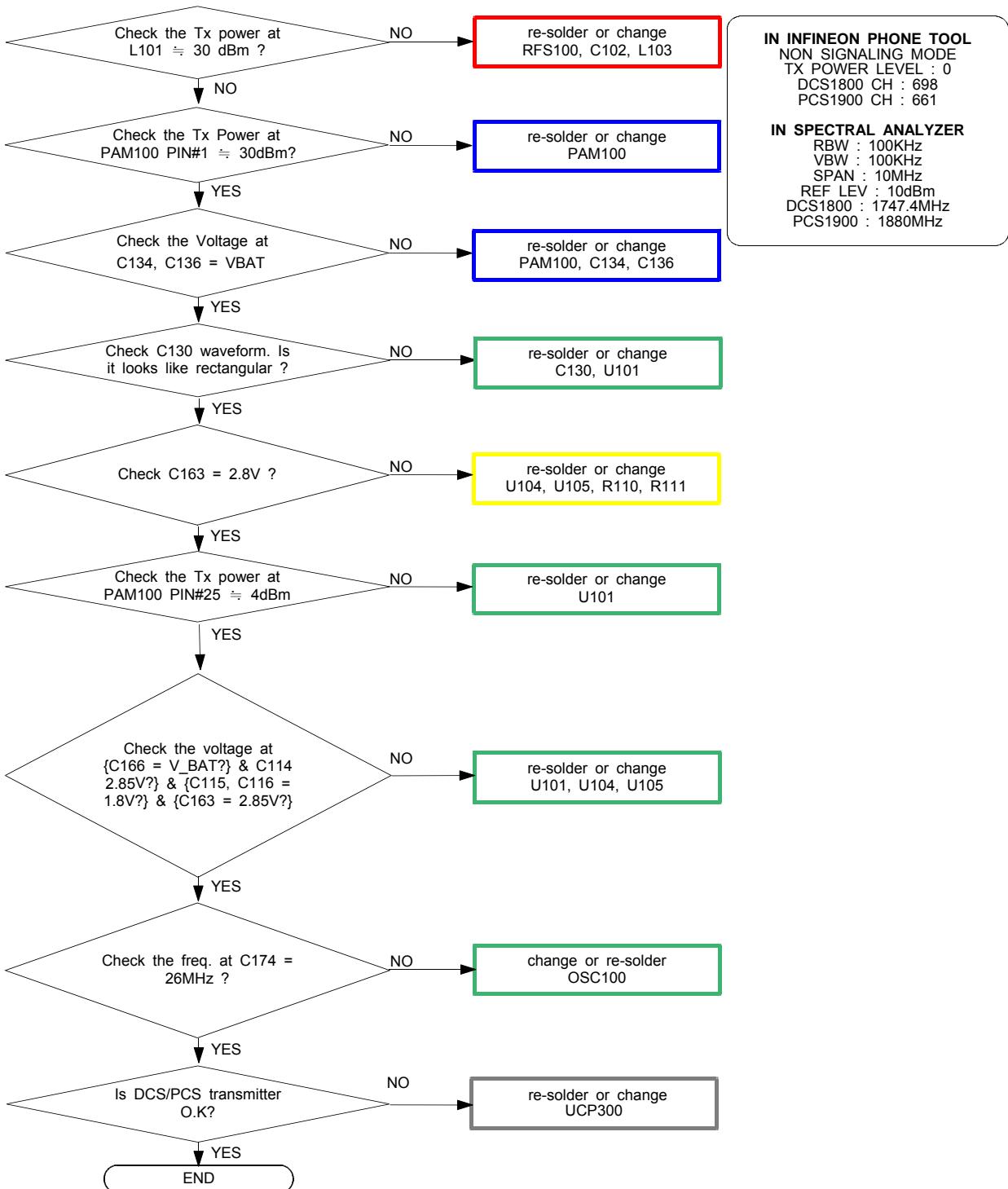
8b-3-18. GSM850/GSM900 TX



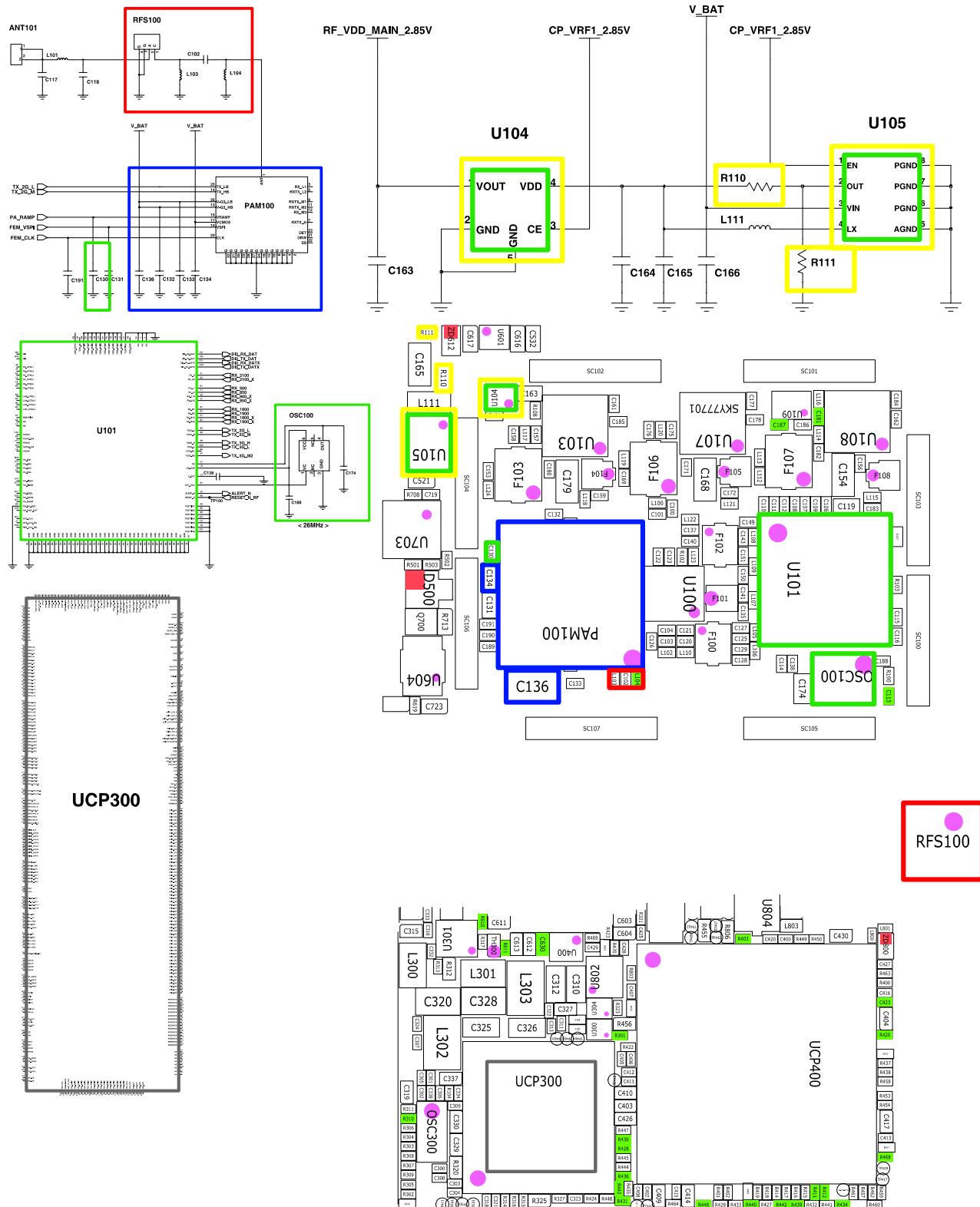
< RF DC-DC >



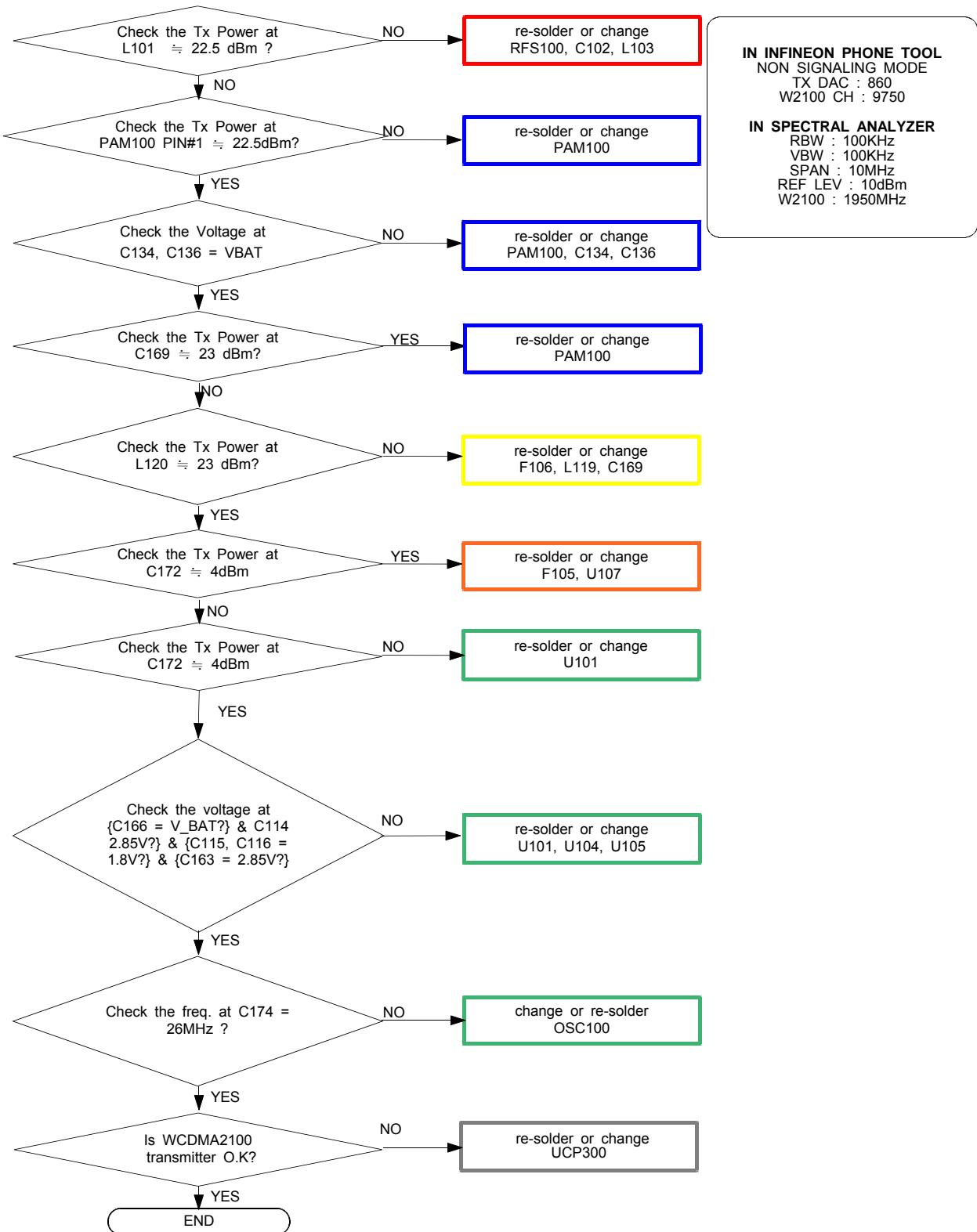
8b-3-19. DCS(GSM1800)/PCS(GSM1900) TX

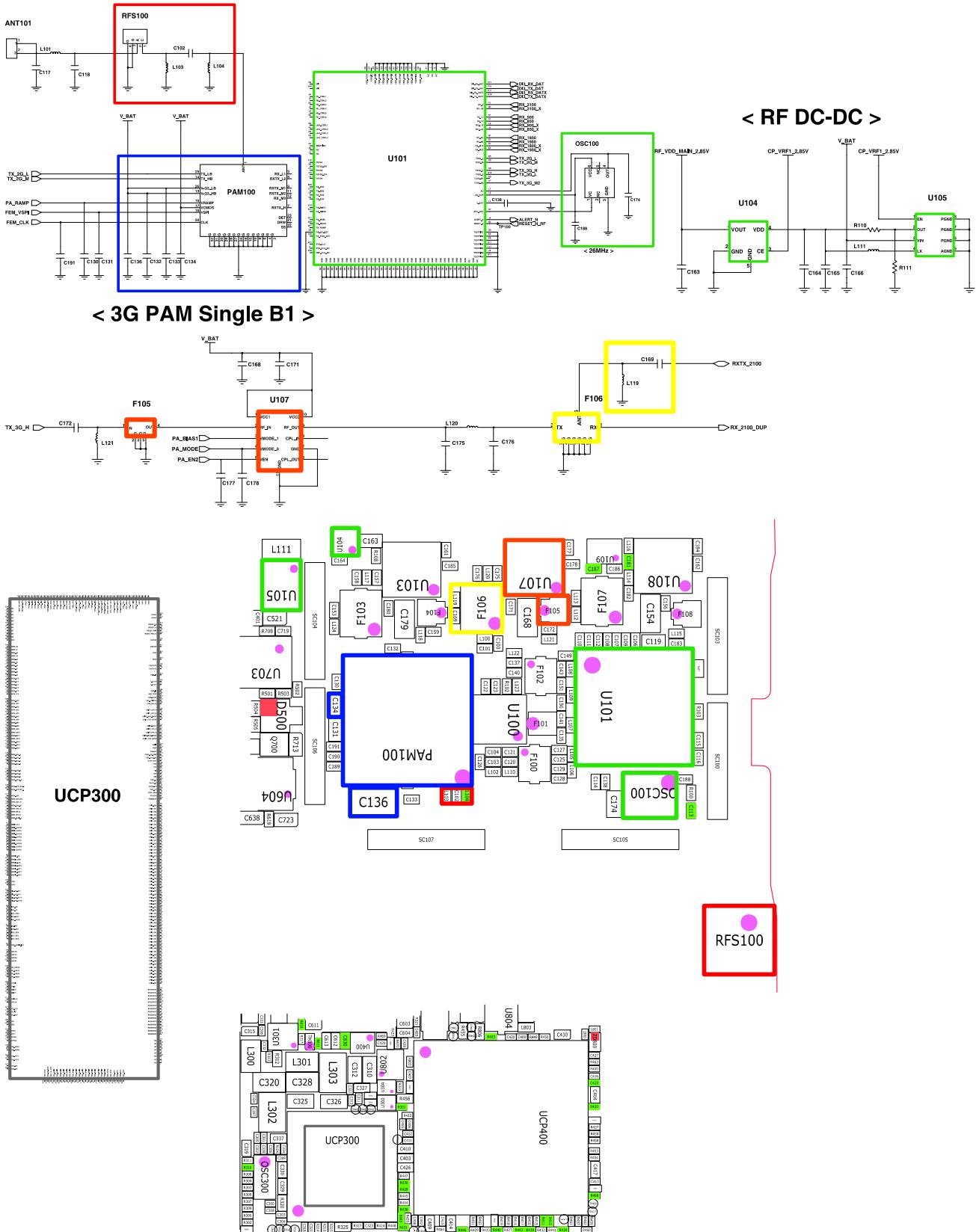


< RF DC-DC >

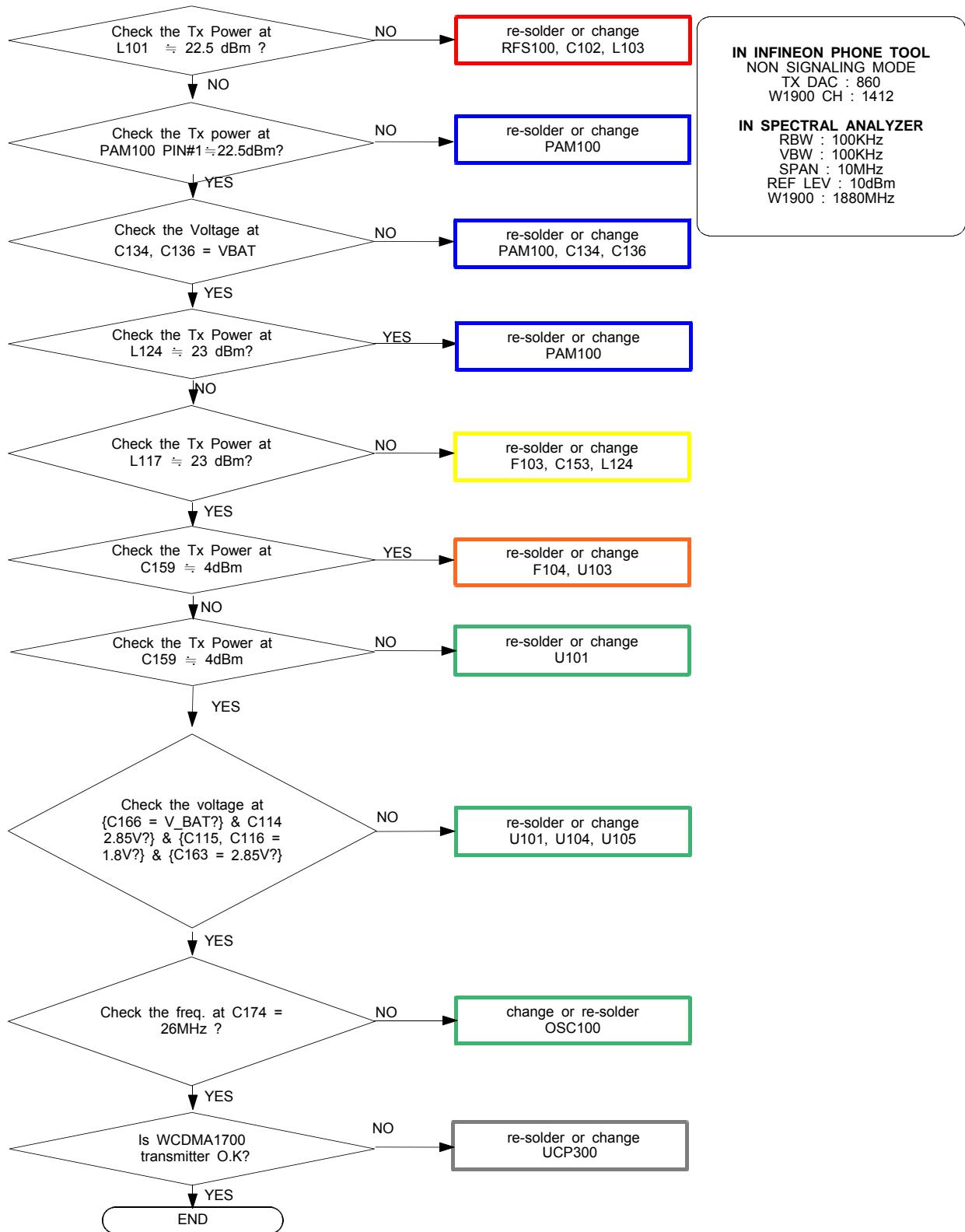


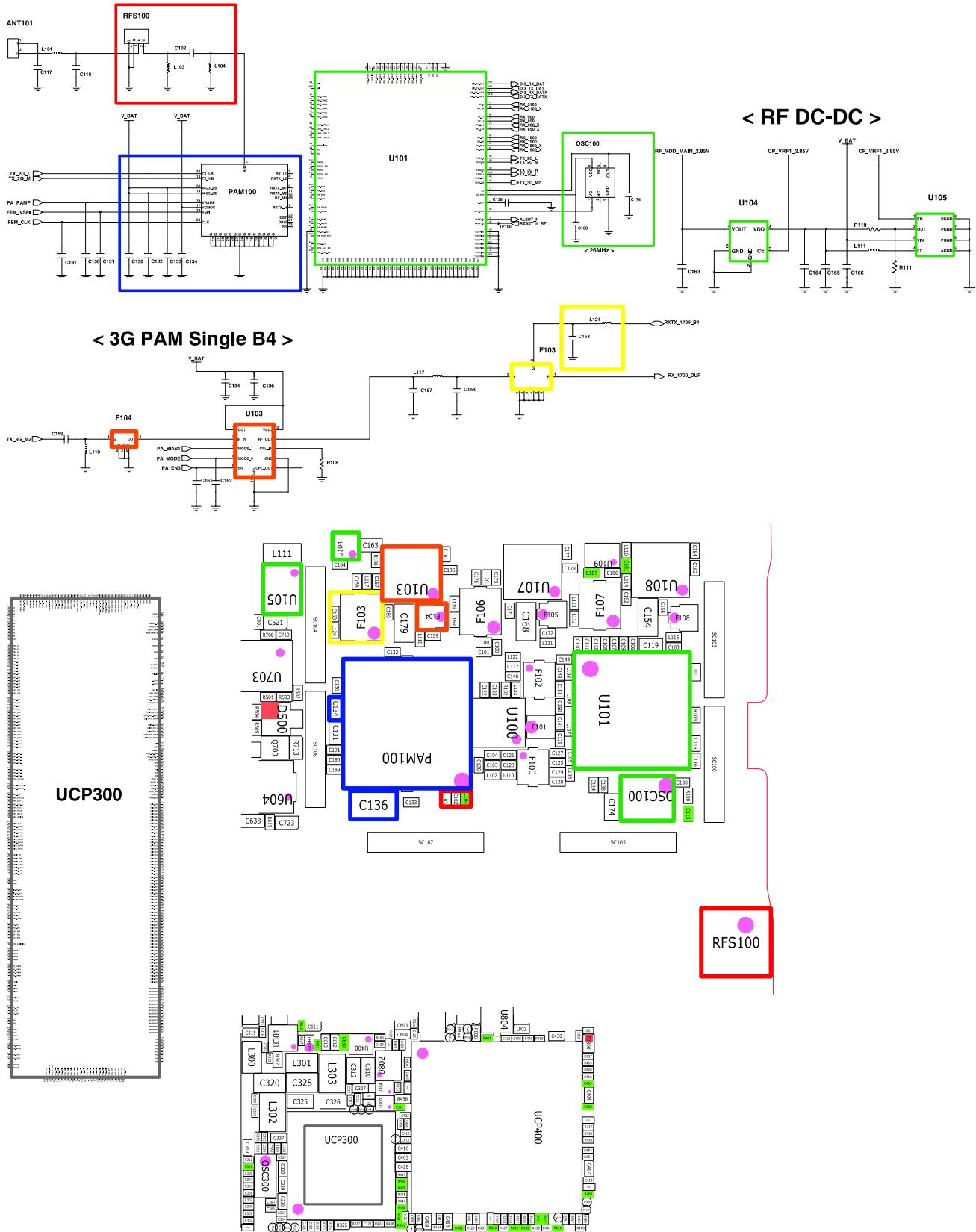
8b-3-20. WCDMA2100 TX



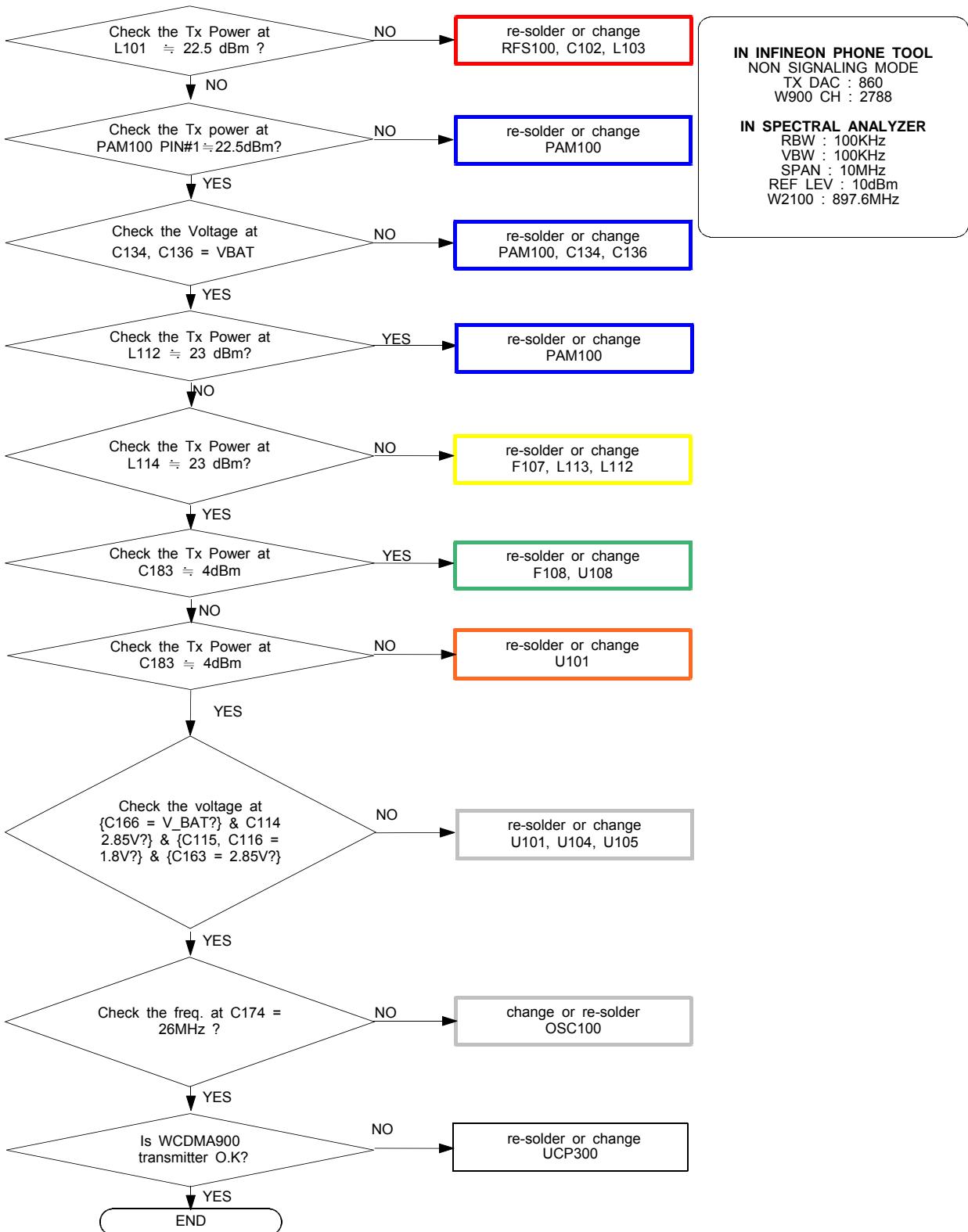


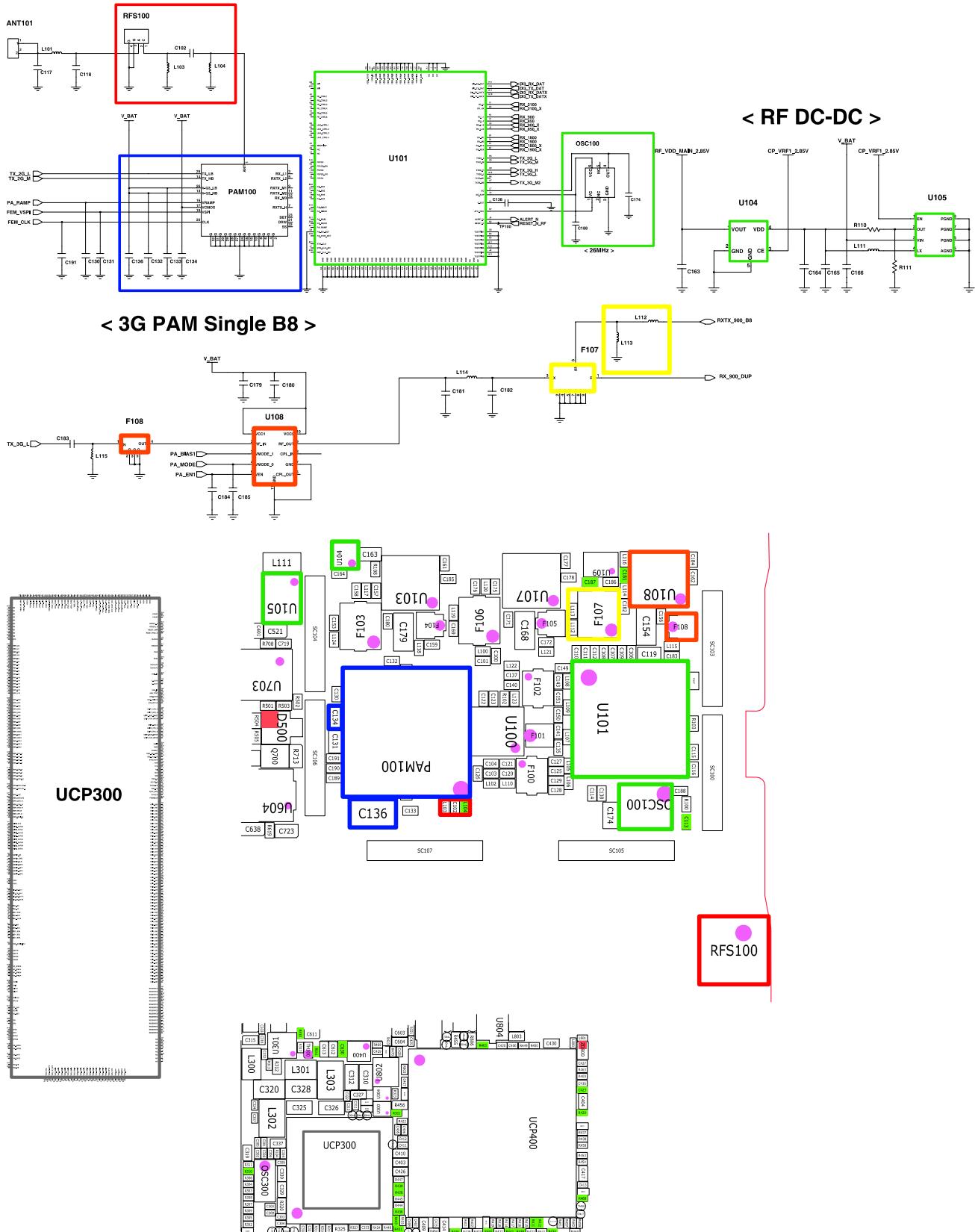
8b-3-21. WCDMA1700 TX



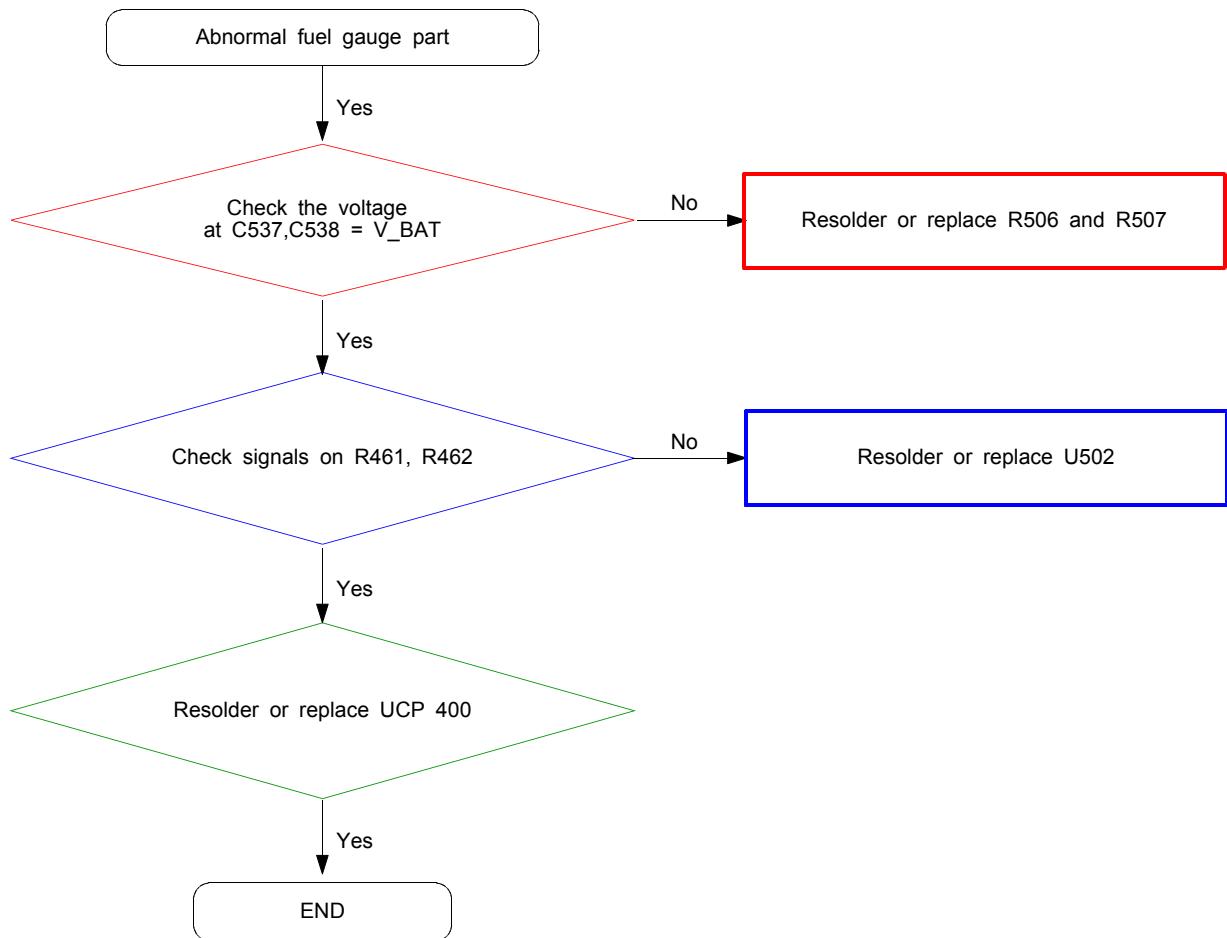


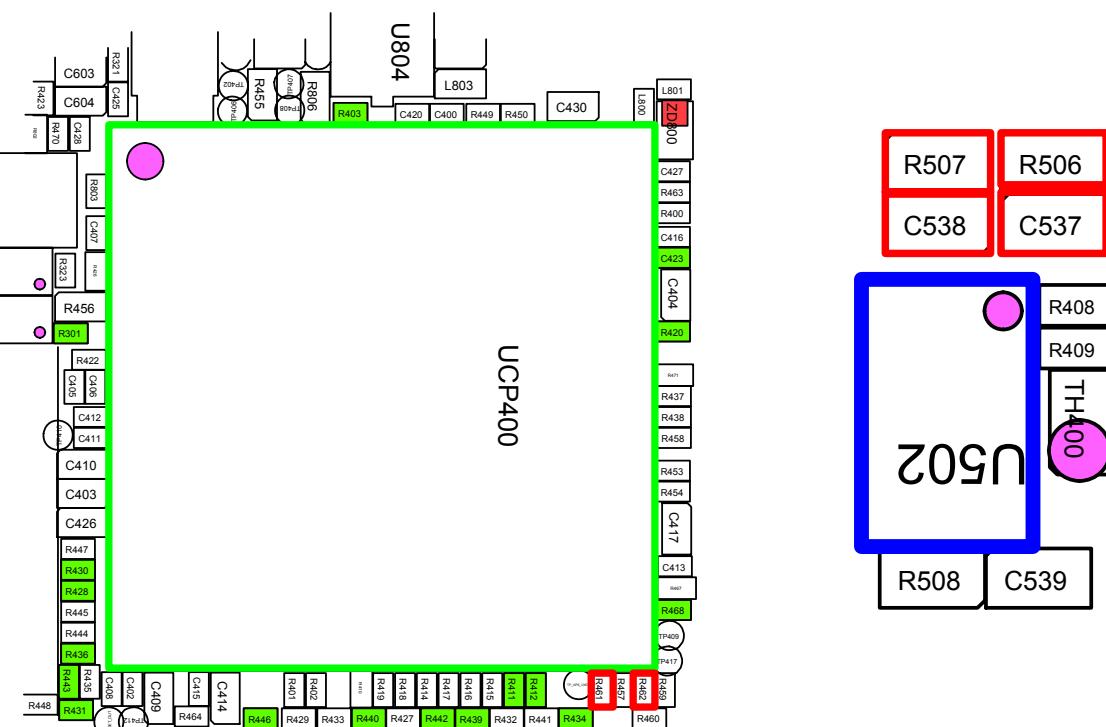
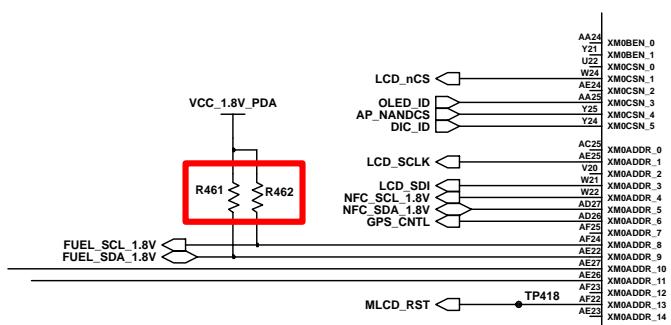
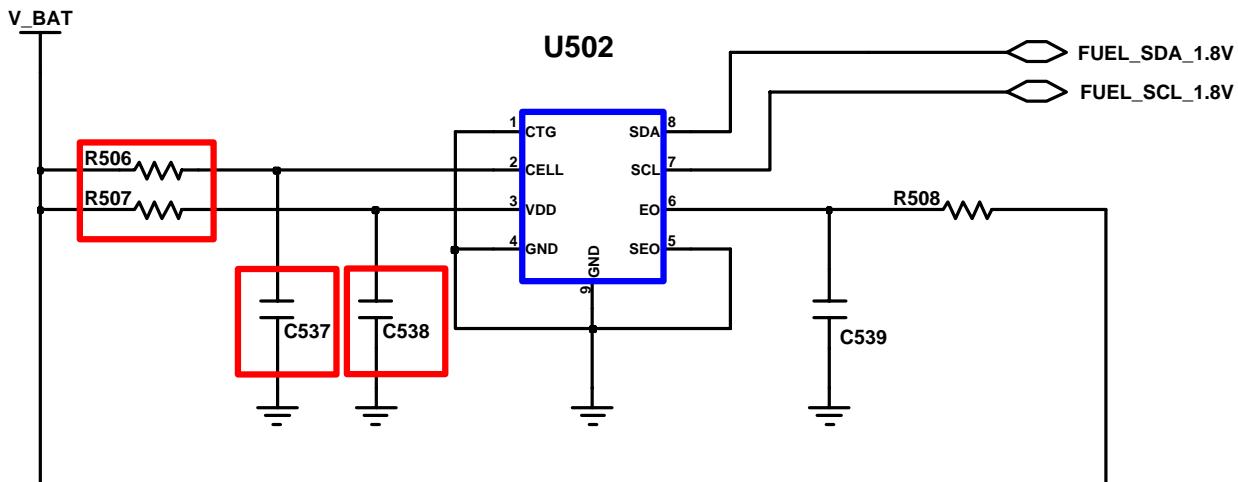
8b-3-22. WCDMA900 TX





8b-3-23. Fuel Gauge Part



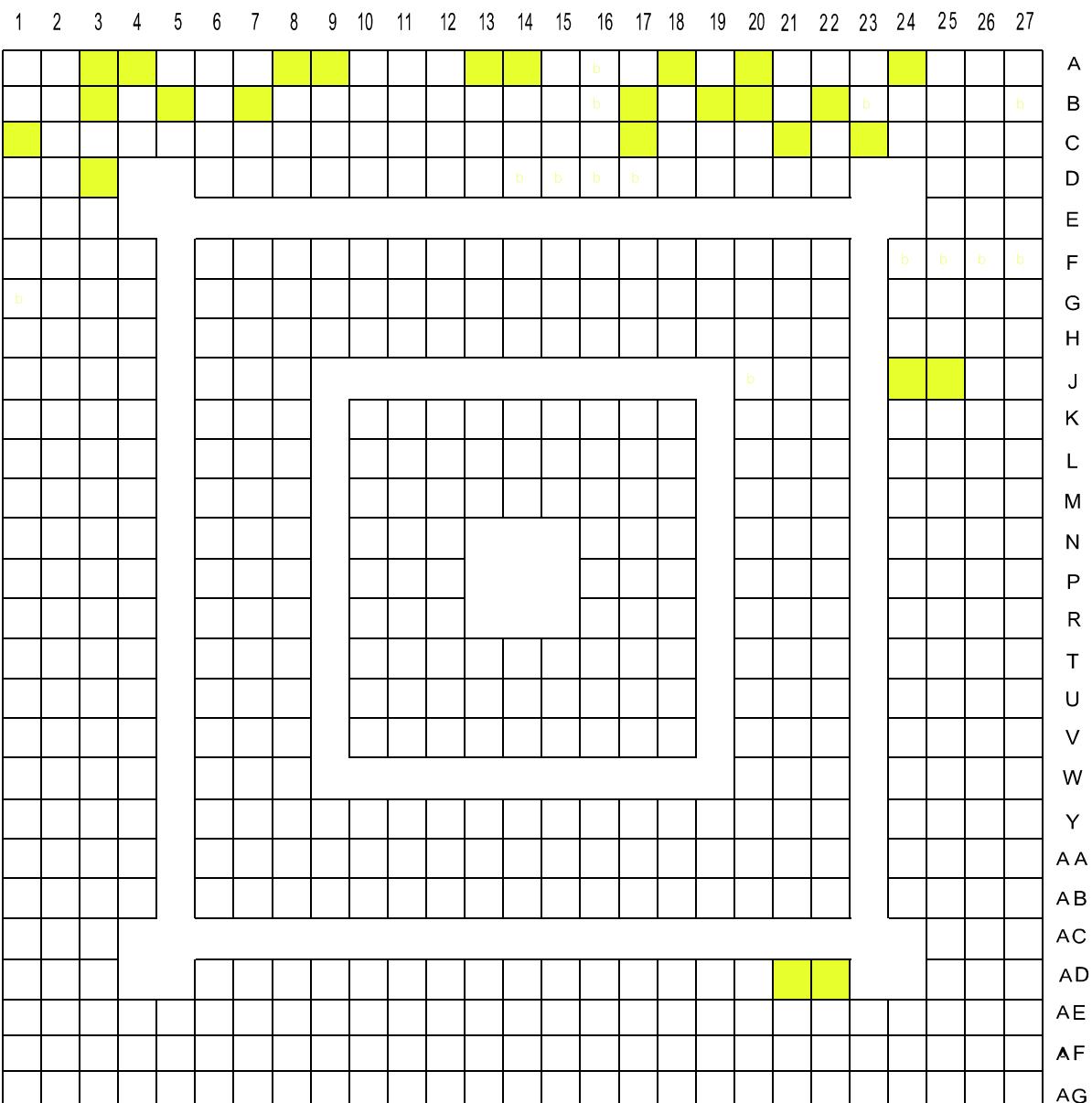


8b-4. Service Schematics

-NC Point(Top View)-

 : NC

UCP400



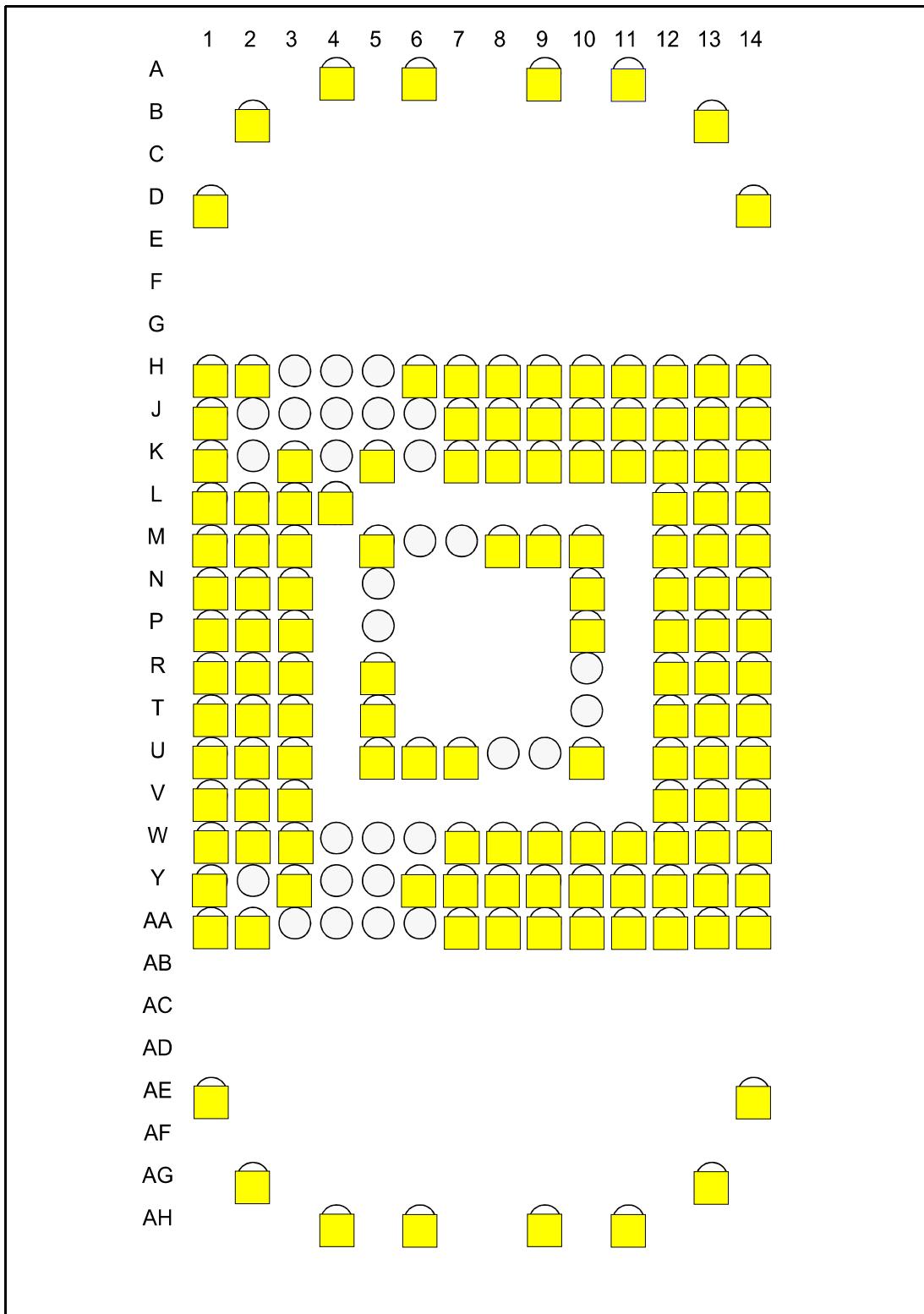
 : NC

UCP300

A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	T	U	V	W	Y	
																			 NC	
																				20
																				19
																				18
																				17
																				16
																				15
																				14
																				13
																				12
																				11
																				10
																				9
																				8
																				7
																				6
																				5
																				4
																				3
																				2
																				1
A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	T	U	V	W	Y	

(NC) : NC

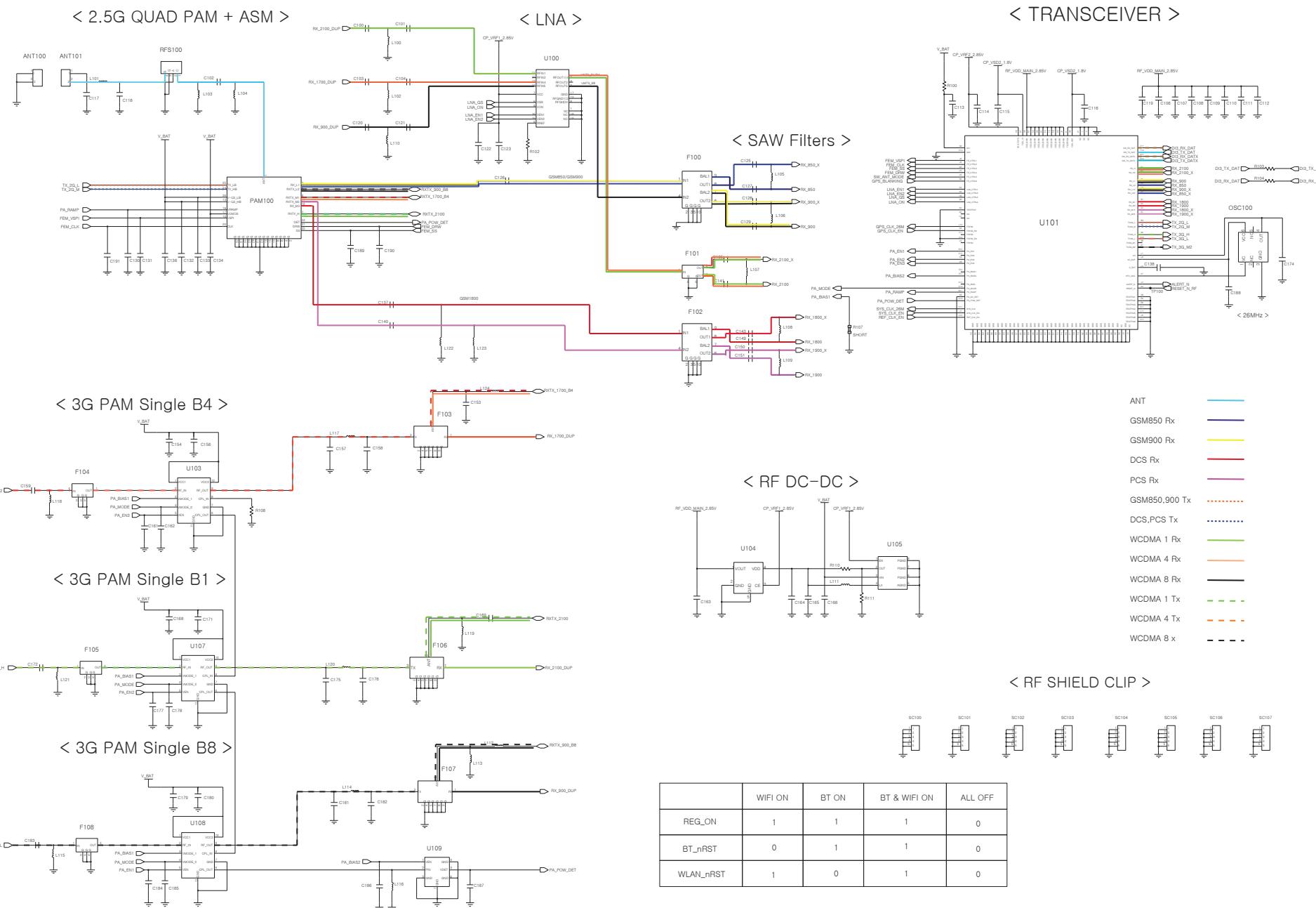
U303



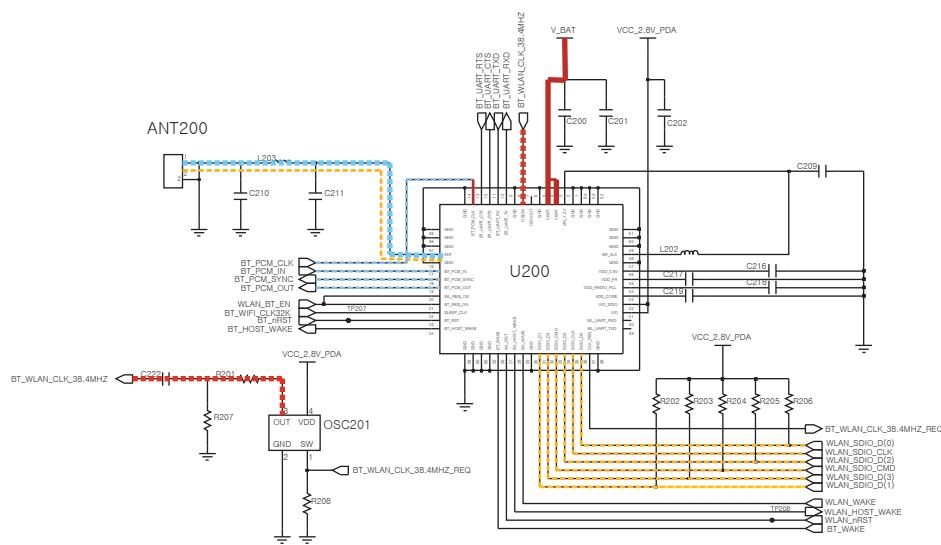
9. Reference Abbreviate

Reference Abbreviate

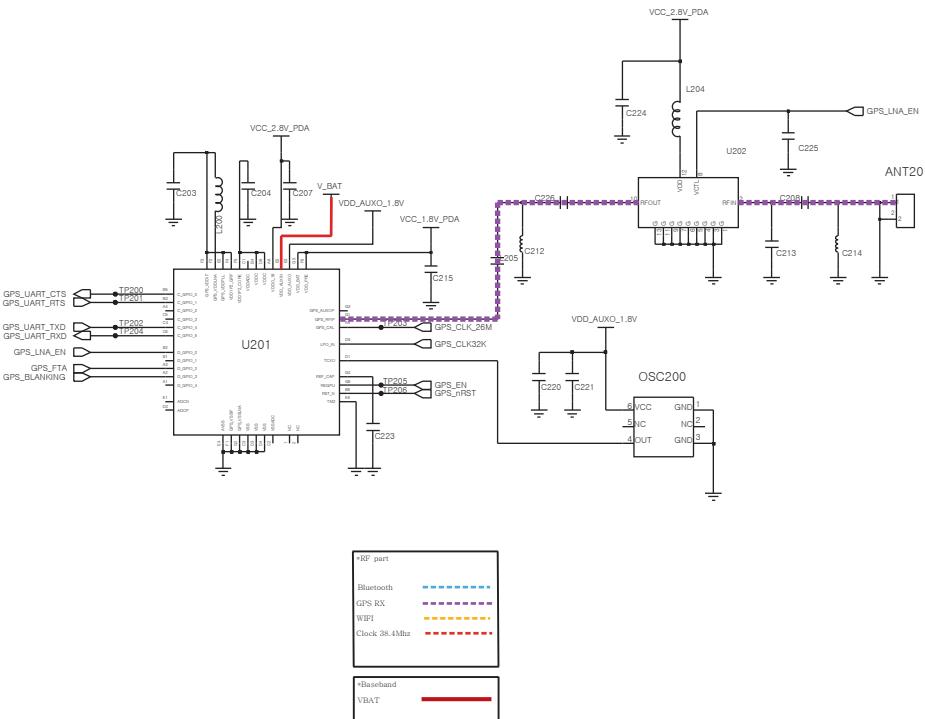
- **AAC**: Advanced Audio Coding.
- **AVC** : Advanced Video Coding.
- **BER** : Bit Error Rate
- **BPSK**: Binary Phase Shift Keying
- **CA** : Conditional Access
- **CDM** : Code Division Multiplexing
- **C/I** : Carrier to Interference
- **DMB** : Digital Multimedia Broadcasting
- **EN** : European 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



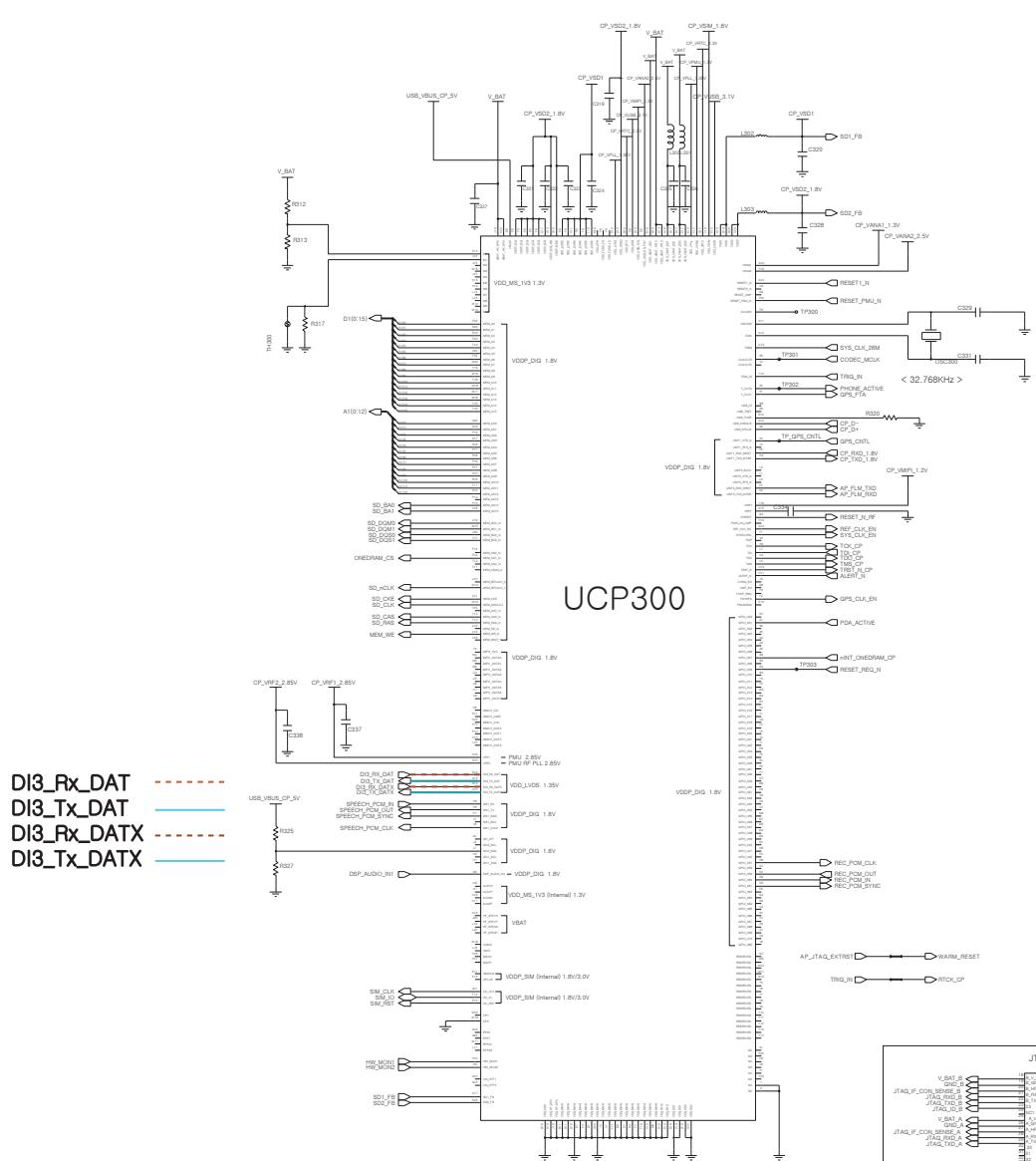
< WiFi / BT >



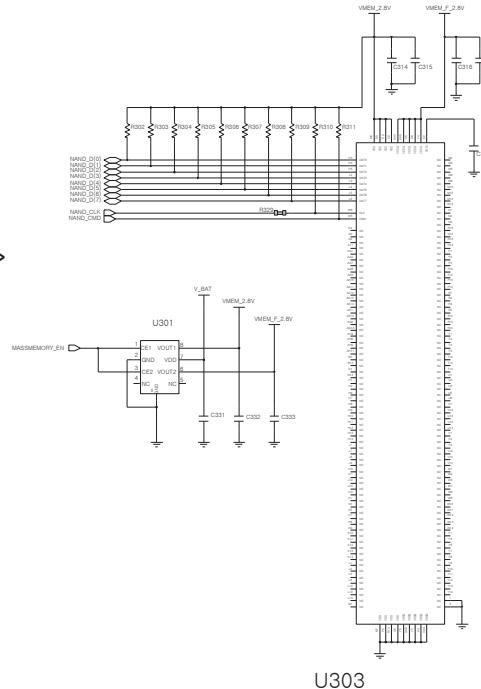
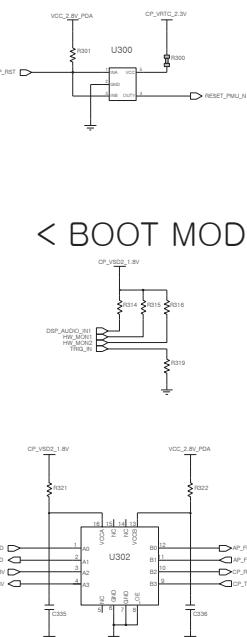
< GPS >



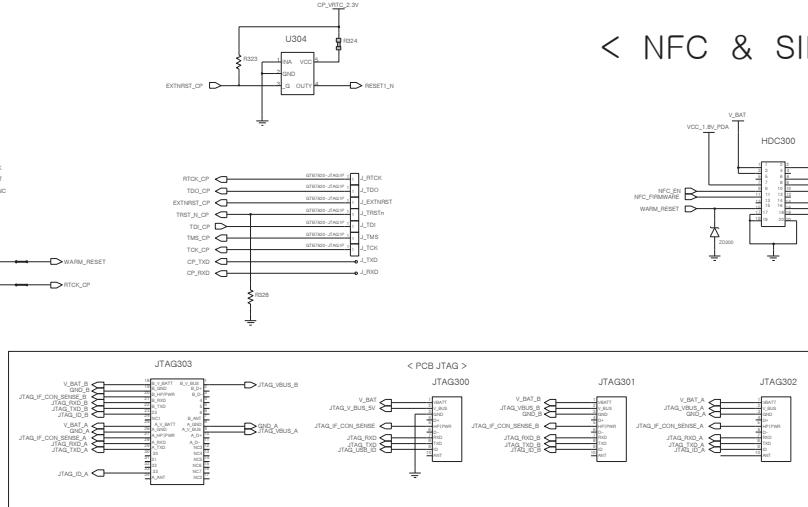
< 16GB iNAND >



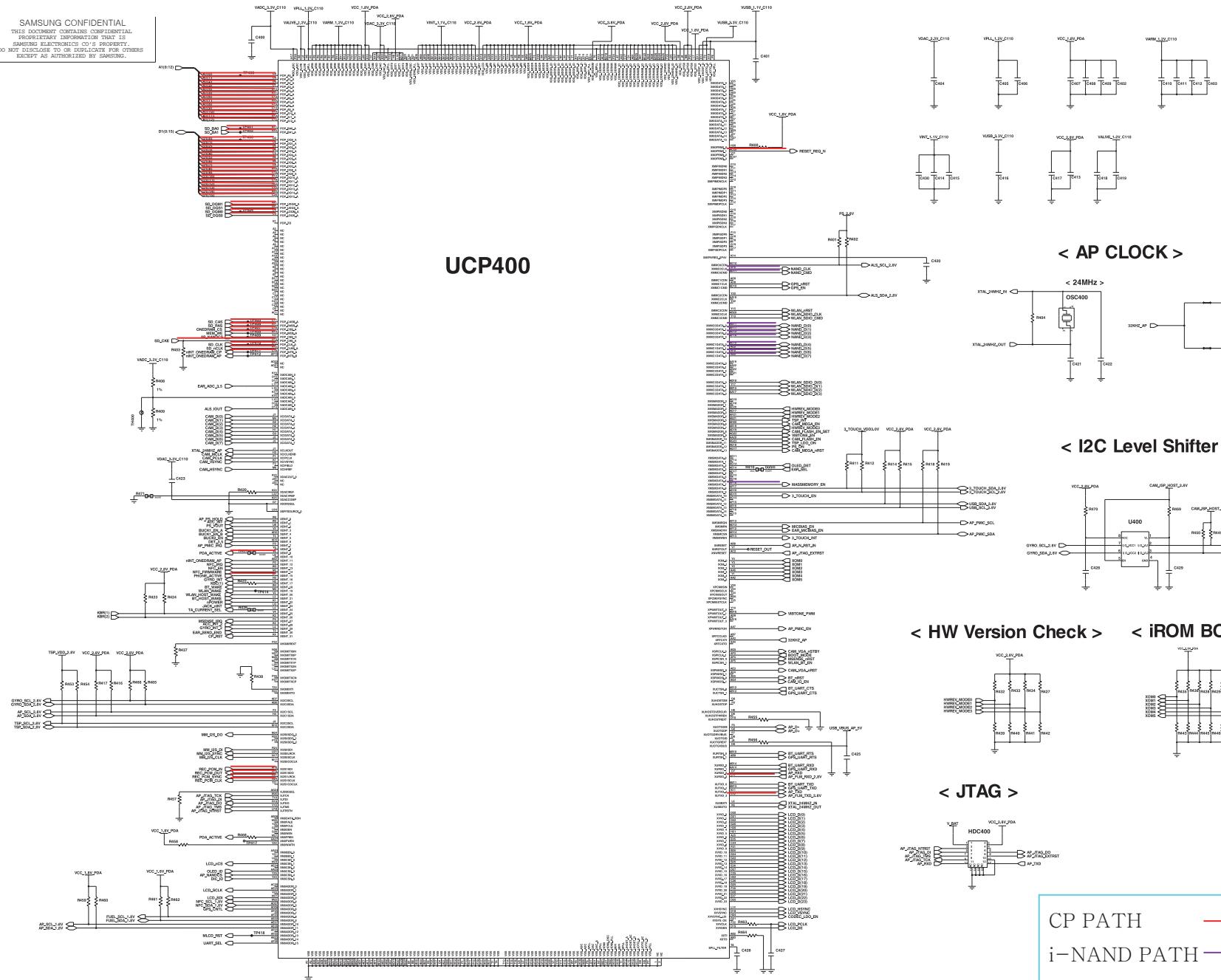
< BOOT MODE >



< NFC & SIM CON. >



SAMSUNG CONFIDENTIAL
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.

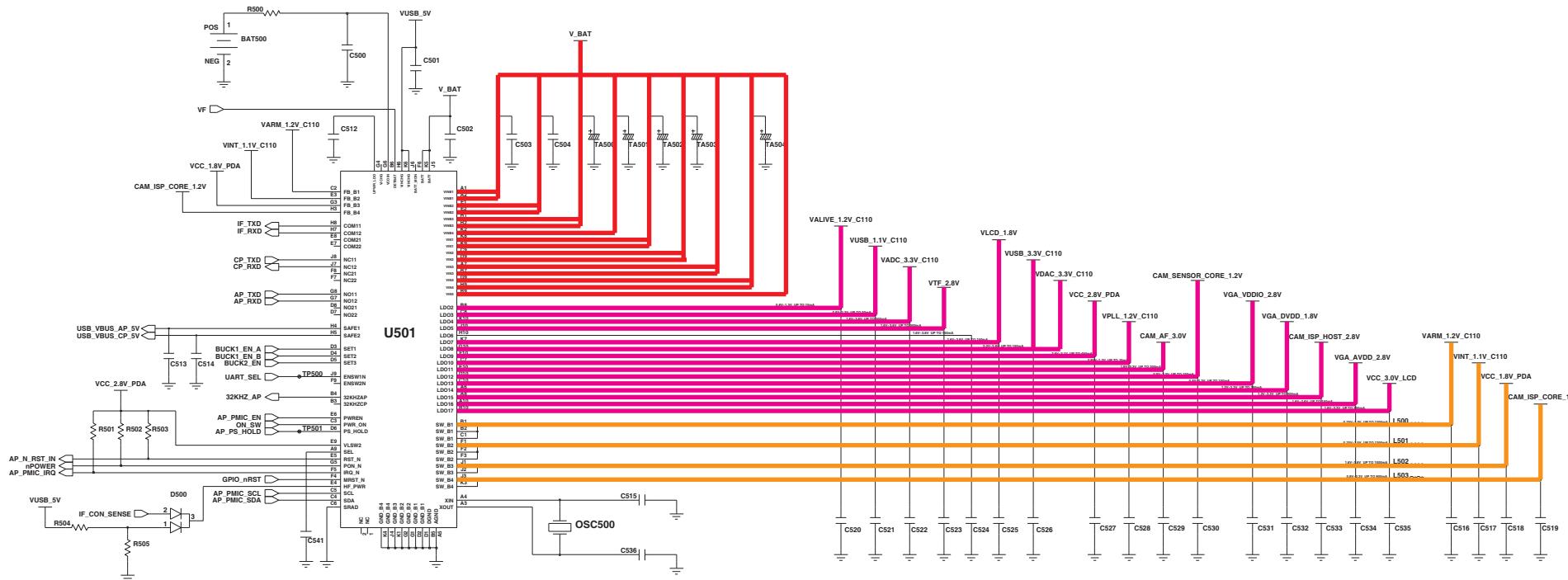


CP PATH

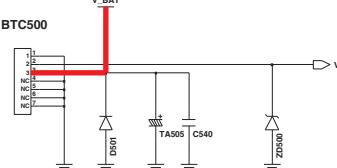
i-NAND PATH

< AP PMIC >

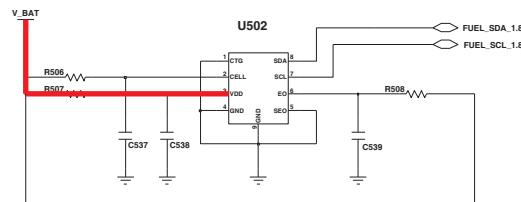
— VBAT
— LDO
— BUCK



< BATTERY CON. >

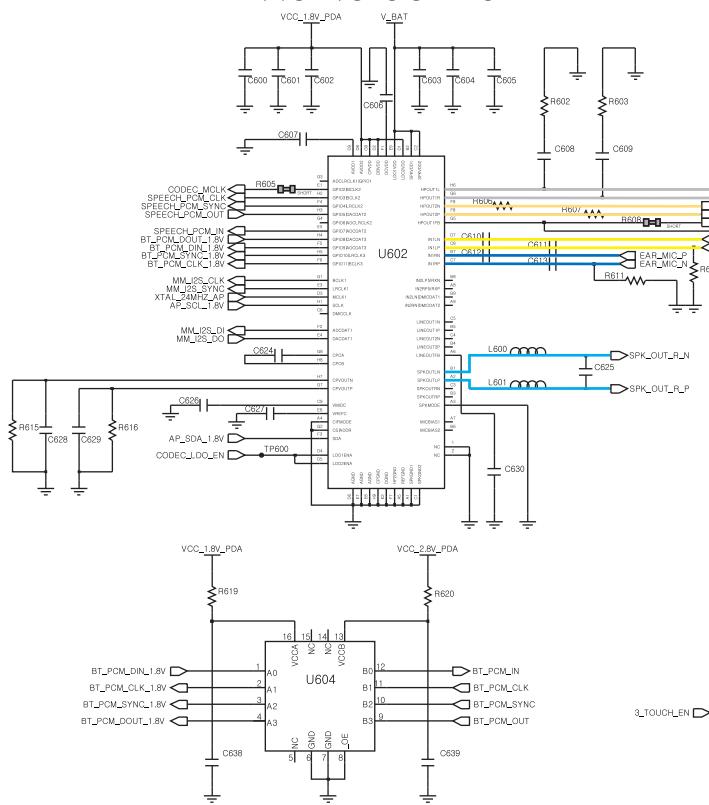


< FUEL GAUGE >

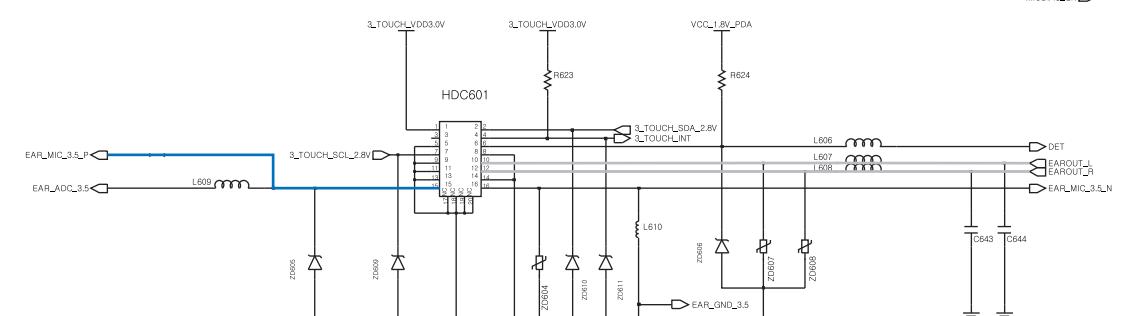


*AUDIO Part
Speaker
Reveiver
EAR Speaker
EAR MIC
Main MIC

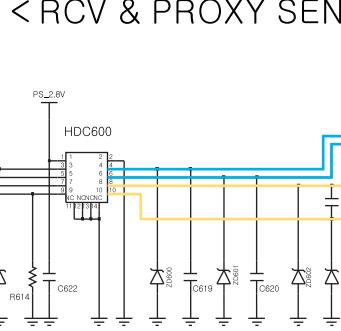
<AUDIO CODEC>



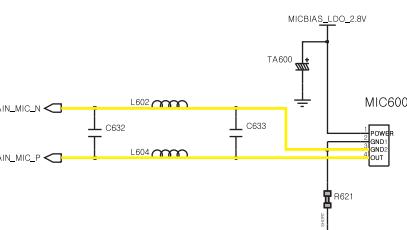
<EAR_JACK CON & 3_TOUCH KEY >



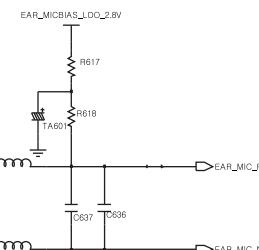
< RCV & PROXY SENSOR >



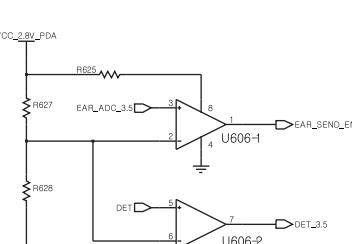
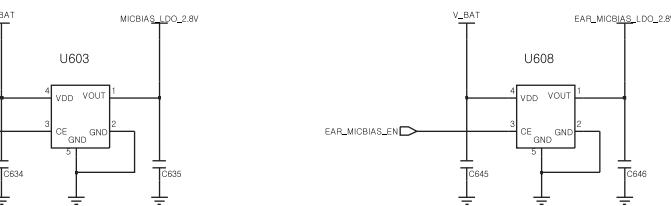
< MAIN MIC >



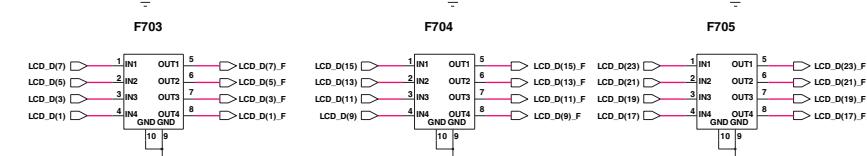
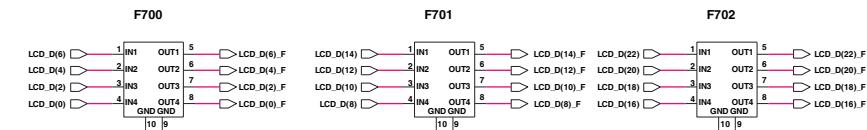
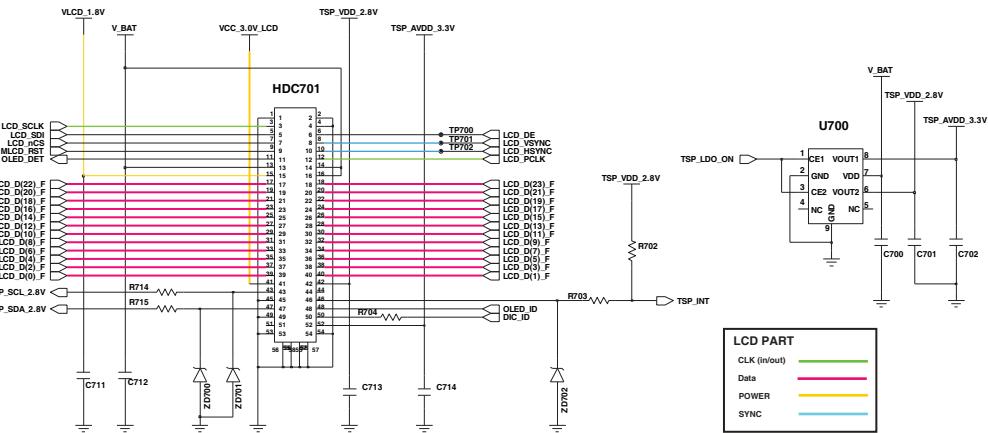
<EAR MIC>



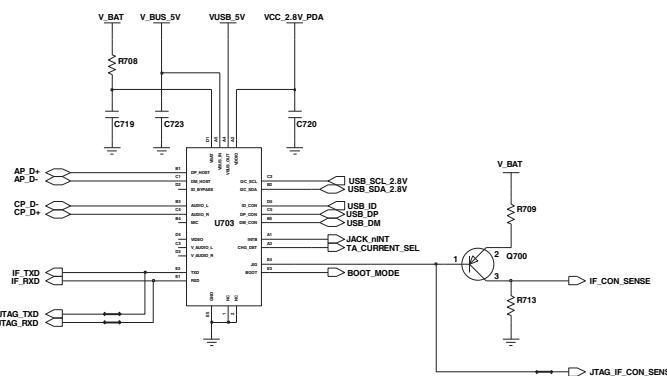
< MIC BIAS CIRCUIT >



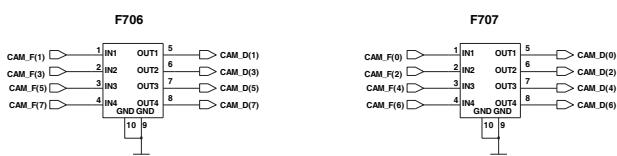
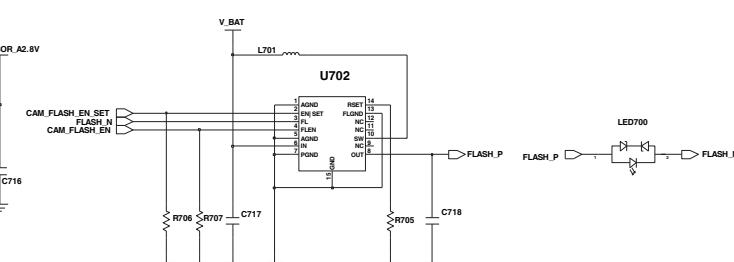
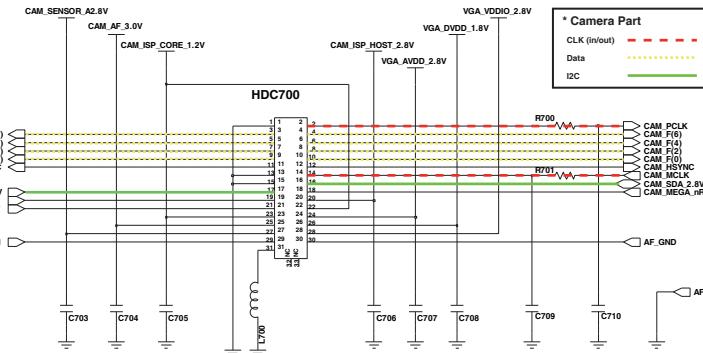
< OCTA 4.0° LCD >



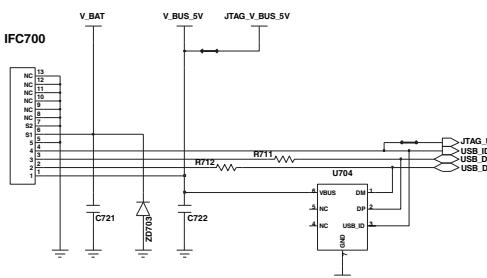
< micro USB SWITCH IC >



< 5 MEGA & VGA CAM CON. >

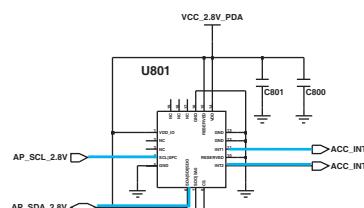


< micro USB CON. >

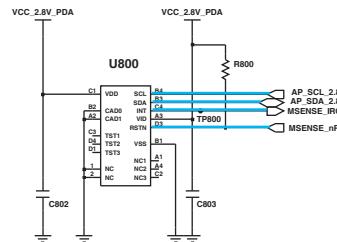


Sensor —

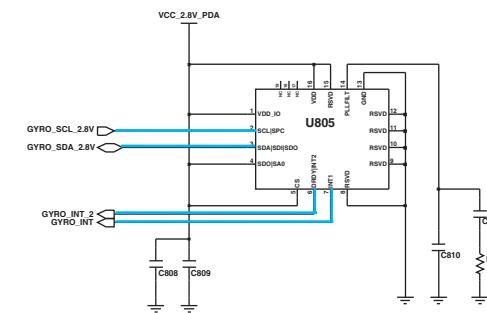
< ACCELERATION SENSOR >



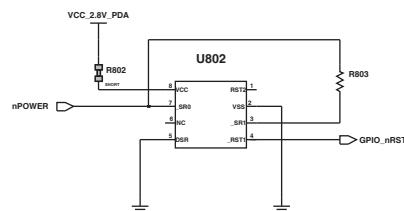
< COMPASS SENSOR >



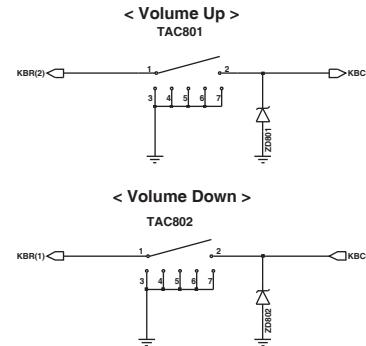
< GYRO SENSOR >



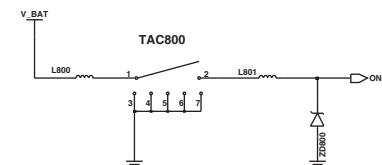
< RESET KEY >



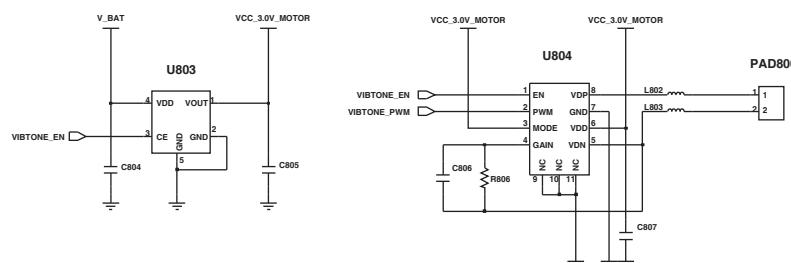
< VOLUME KEY >



< POWER / HOLD KEY >

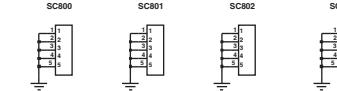


< VIBTONE >

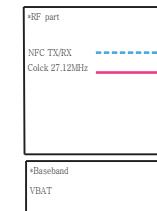
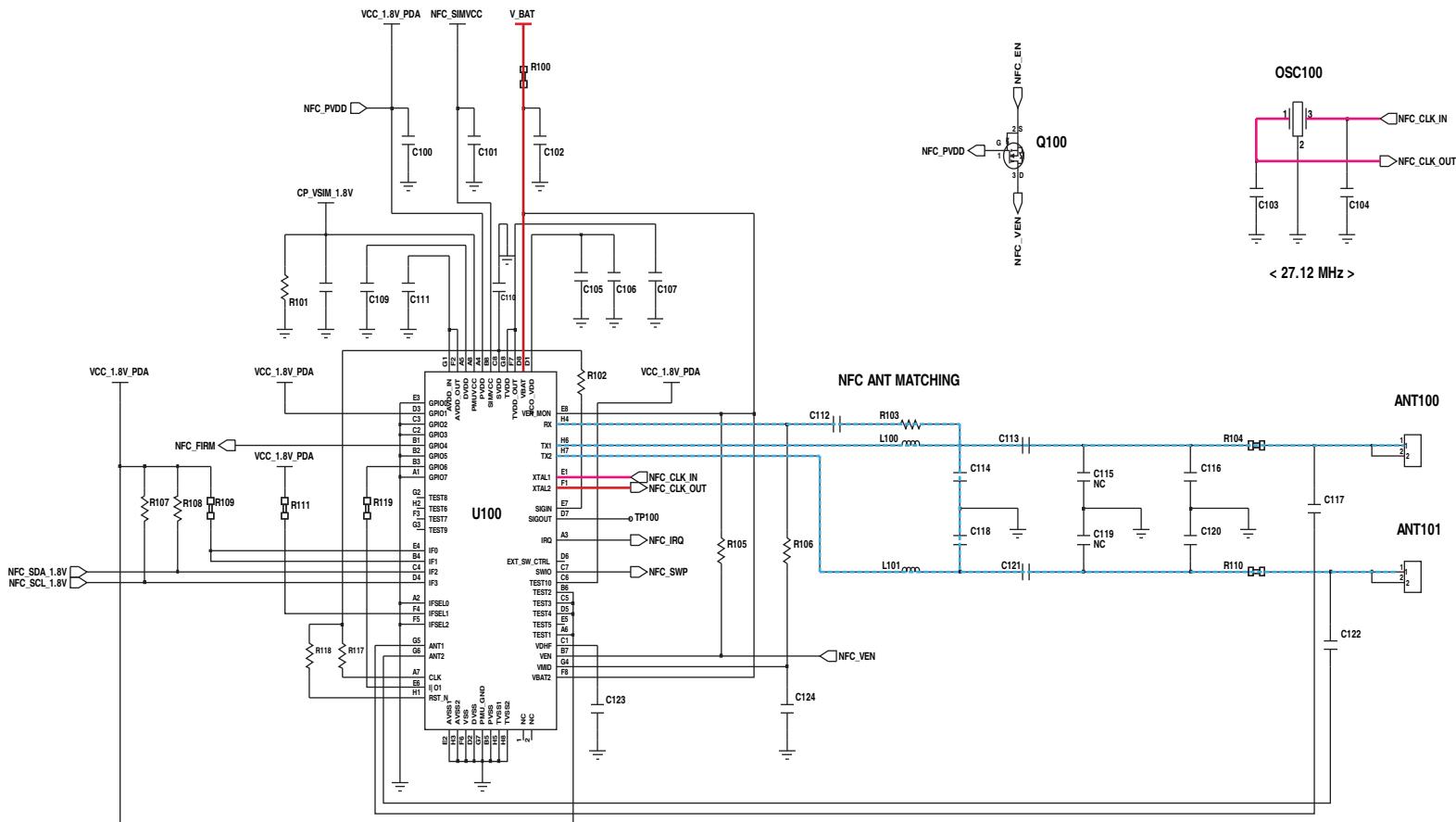


< KEY MAP >

	KBR(1)	KBR(2)
KBC(1)	VOLUME DOWN (SLIDE R)	VOLUME UP (SLIDE L)



< NFC >



**SAMSUNG
ELECTRONICS**



GSPN (Global Service Partner Network)

Country	Web Site
North America	service.samsungportal.com
Latin America	latin.samsungportal.com
CIS	cis.samsungportal.com
Europe	europe.samsungportal.com
China	china.samsungportal.com
Asia	asia.samsungportal.com
Mideast & Africa	mea.samsungportal.com