GSM TELEPHONE

GT-P3100

SERVICE Manual

GSM TELEPHONE

CONTENTS

SAMSUNG
ELECTRONICS

2012. 03. Rev.1.0

2. Specification

2-1. GSM General Specification

	GSM850	EGSM 900	DCS1800	PCS1900	WCDMA 2100	WCDMA 1900	WCDMA 900	WCDMA 850
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	1852~1907 1932~1987	880~915 925~960	824~849 869~894
ARFCN range	128~251	0~124 & 975~1023	512~885	512~810	UL: 9612~9888 DL: 10562~10838	UL: 9262~9538 DL: 9662~9938	UL: 2712~2863 DL: 2937~3088	UL: 4132~4233 DL: 4357~4458
Tx/Rx spacing	45MHz	45MHz	95MHz	80MHz	190MHz	80MHz	45MHz	45MHz
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	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	FrameLength: 10ms Slotlength: 0.667ms
Modulation	0.3GMSK	0.3GMSK	0.3GMSK	0.3GMSK	QPSKHQPSK	QPSKHQPSK	QPSKHQPSK	QPSKHQPSK
MS Power	33dBm~5dBm	33dBm~5dBm	30dBm~0dBm	30dBm~0dBm	24dBm~ -50dBm	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)	3(max+24dBm)
Sensitivity	-102dBm	-102dBm	-100dBm	-100dBm	-106.7dBm	-106.7dBm	-106.7dBm	-106.7dBm
TDMA Mux	8	8	8	8	8	8	8	8
Cell Radius	35Km	35Km	2Km	2Km	2Km	2Km	2Km	2Km

2-2. GSM Tx Power Class

TX Power control level	GSM850
5	33±2 dBm
6	31±2 dBm
7	29±2 dBm
8	27±2 dBm
9	25±2 dBm
10	23±2 dBm
11	21±2 dBm
12	19±2 dBm
13	17±2 dBm
14	15±2 dBm
15	13±2 dBm
16	11±3 dBm
17	9±3dBm
18	7±3 dBm
19	5±3 dBm

TX Power control level	EGSM900
5	33±2 dBm
6	31±2 dBm
7	29±2 dBm
8	27±2 dBm
9	25±2 dBm
10	23±2 dBm
11	21±2 dBm
12	19±2 dBm
13	17±2 dBm
14	15±2 dBm
15	13±2 dBm
16	11±3 dBm
17	9±3dBm
18	7±3 dBm
19	5±3 dBm

TX Power control level	DCS1800
0	30±3 dBm
1	28±3 dBm
2	26±3 dBm
3	24±3 dBm
4	22±3 dBm
5	20±3 dBm
6	18±3 dBm
7	16±3 dBm
8	14±3 dBm
9	12±4 dBm
10	10±4 dBm
11	8±4 dBm
12	6±4 dBm
13	4±4 dBm
14	2±5 dBm
15	0±5 dBm

TX Power control level	PCS1900
0	30±3 dBm
1	28±3 dBm
2	26±3 dBm
3	24±3 dBm
4	22±3 dBm
5	20±3 dBm
6	18±3 dBm
7	16±3 dBm
8	14±3 dBm
9	12±4 dBm
10	10±4 dBm
11	8±4 dBm
12	6±4 dBm
13	4±4 dBm
14	2±5 dBm
15	0±5 dBm

3. Operation Instruction and Installation

Main Function

- Android OS: Ice Cream Sandwich(ICS)
- HSPA+ 21Mbps / HSUPA 5.7Mbps
- Main 3M FF, VGA
- 7.0" WSGA 16M TFT LCD (PLS_type)
- GPS / BT v3.0 USB v2.0 / WiFi (802.11 b/g/n) / OTG
- Recording definition: 720p / Playback at 1080p resolution
- Sensors: Accelerometer, Electromagnetic, Light
- Additional :
  - 1GHz Dual Core CPU
  - Application store / Precise Motion UI
  - Seamless Sharing Experience.

6. Level 1 Repair

6-1. S/W Download

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

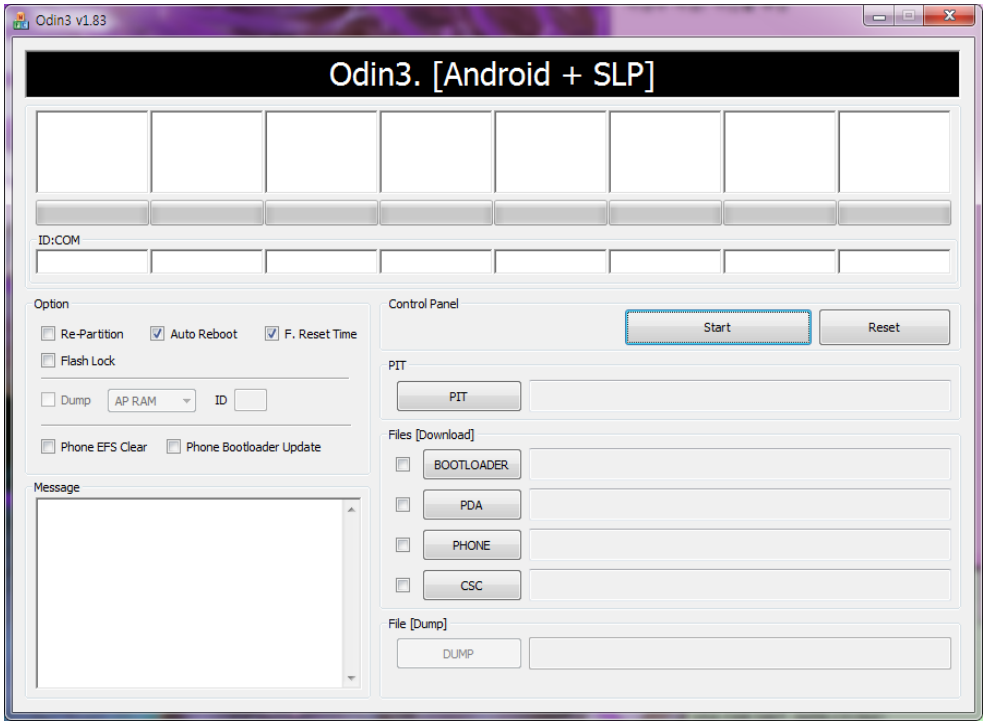
- Downloader Program (**Odin3 v1.83.exe**)
- GT-P3100 Mobile Phone
- Data Link Cable (GH39-01440H)
- Binary files

❖ **Settings**

Data Link Cable

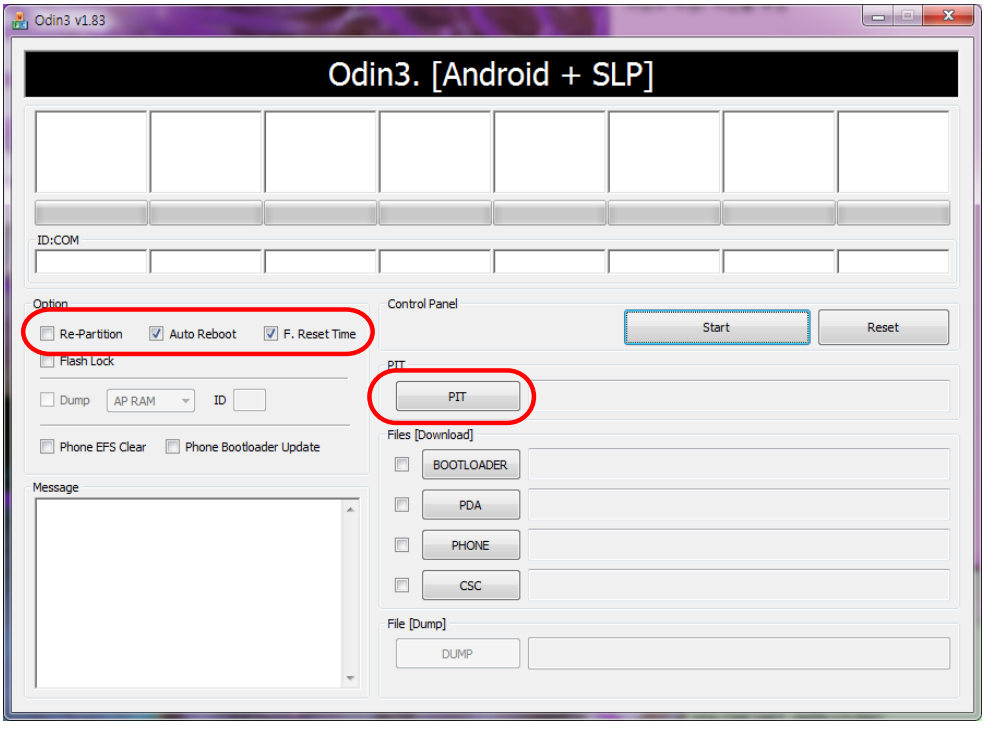
6-1-2. S/W Downloader Program

■ Load the binary download program by executing the **"Odin3 v1.83.exe" ← Run this file.**



1. Option Selection

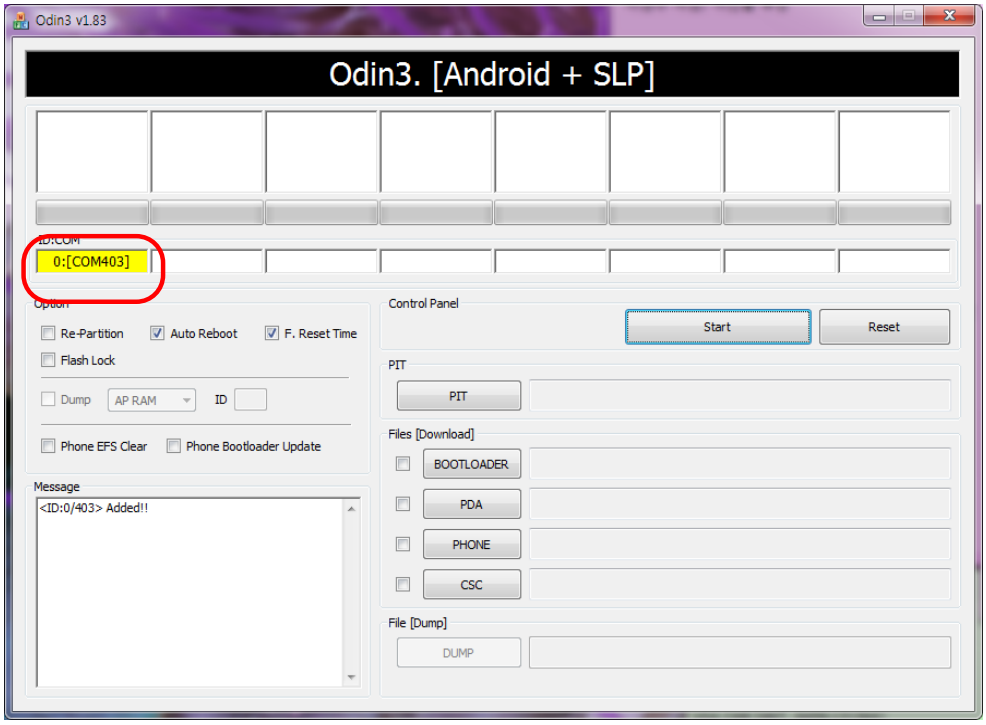
- Check Auto Reboot and F. Reset Time, then select PIT File



2. Enter Device into Download Mode

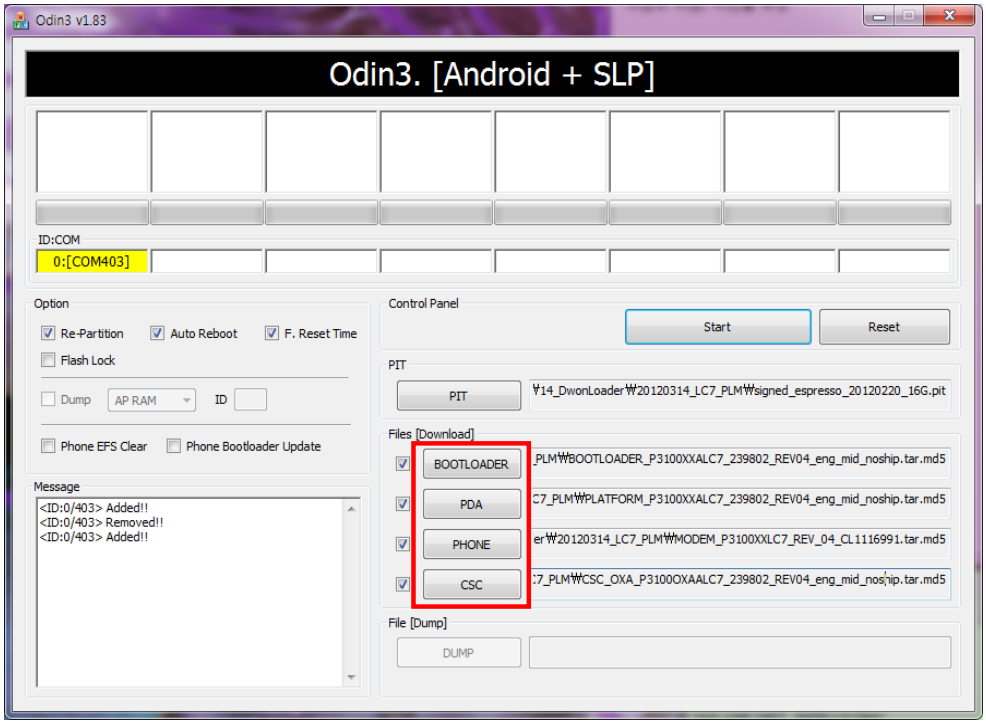
- Press down on Volume Down button and power key at same time for 10 seconds
- Press down on Volume Up button to enter device into download mode

3. Connect the Device to PC via Data Cable.
Make sure ID:COM box highlighted yellow that the device is connected to the PC.

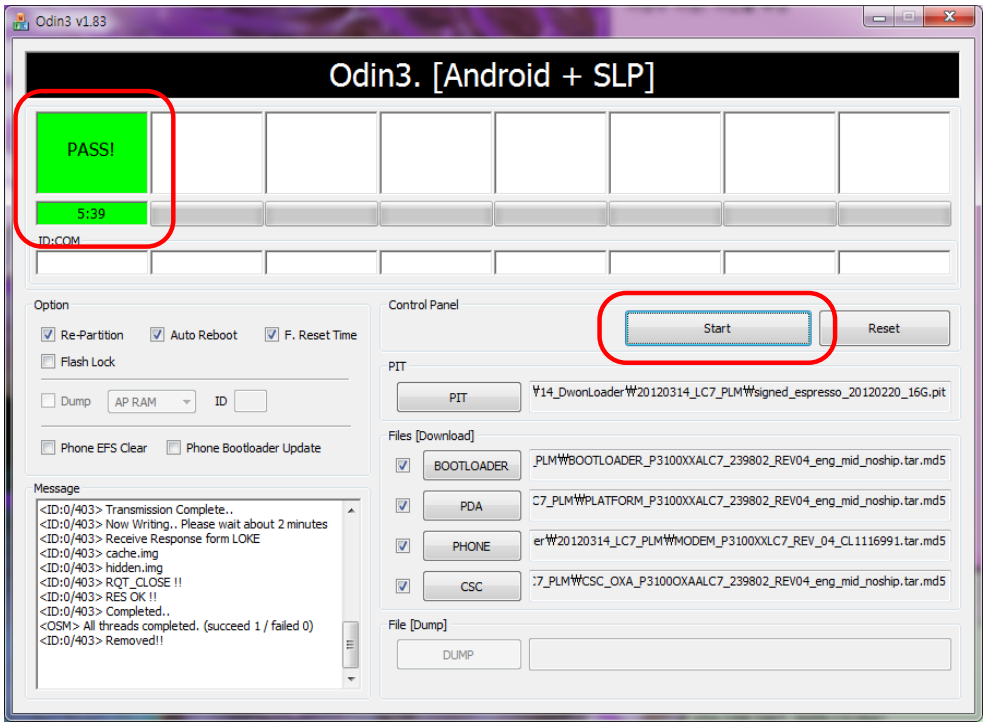


4. Enable the check mark by click on the following options,

- Check BOOTLOADER, PDA and CSC Files



5. Start downloading binary file into the device by clicking Start Button on the screen. the green colored "PASS!" sign will appear on the upper-left box if the binary file has been successfully downloaded into the device.



6. Disconnect the device from the Data cable.

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

Full Reset :
***2767*3855#**

9. Reference Abbreviate

Reference Abbreviate

—AAC: AdvancedAudioCoding.
—AVC: AdvancedVideoCoding.
—BER: BitErrorRate
—BPSK: BinaryPhaseShiftKeying
—CA: ConditionalAccess
—CDM: CodeDivisionMultiplexing
—C/I: CarriertoInterference
—DMB: DigitalMultimediaBroadcasting
—두: EuropeanStandard
—ES: ElementaryStream
—ETSI: EuropeanTelecommunicationsStandardsInstitute
—MPEG: MovingPictureExpertsGroup
—PN: Pseudo-randomNoise
—PS: PilotSymbol
—QPSK: QuadraturePhaseShiftKeying
—RS: Reed-Solomon
—SI: ServiceInformation
—TDM: TimeDivisionMultiplexing
—TS: TransportStream

1. Safety Precautions

1-1. Repair Precaution

Before attempting any repair or detailed tuning, shield the device from RF noise or static electricity discharges.

Use only demagnetized tools that are specifically designed for small electronic repairs, as most electronic parts are sensitive to electromagnetic forces.

Use only high quality screwdrivers when servicing products. Low quality screwdrivers can easily damage the heads of screws.

Use only conductor wire of the properly gauge and insulation for low resistance, because of the low margin of error of most testing equipment.
We recommend 22-gauge twisted copper wire.

Hand-soldering is not recommended, because printed circuit boards (PCBs) can be easily damaged, even with relatively low heat. Never use a soldering iron with a power rating of more than 100 watts and use only lead-free solder with a melting point below 250°C (482°F).

Prior to disassembling the battery charger for repair, ensure that the AC power is disconnected. Always use the replacement parts that are registered in the SEC system. Third-party replac ement parts may not function properly.

1-2. ESD(Electrostatically Sensitive Devices) Precaution

Many semiconductors and ESDs in electronic devices are particularly sensitive to static discha rge and can be easily damaged by it. We recommend protecting these components with cond uctive anti-static bags when you store or transport them.

Always use an anti-static strap or wristband and remove electrostatic buildup or dissipate static electricity from your body before repairing ESDs.

Ensure that soldering irons have AC adapter with ground wires and that the ground wires are properly connected.

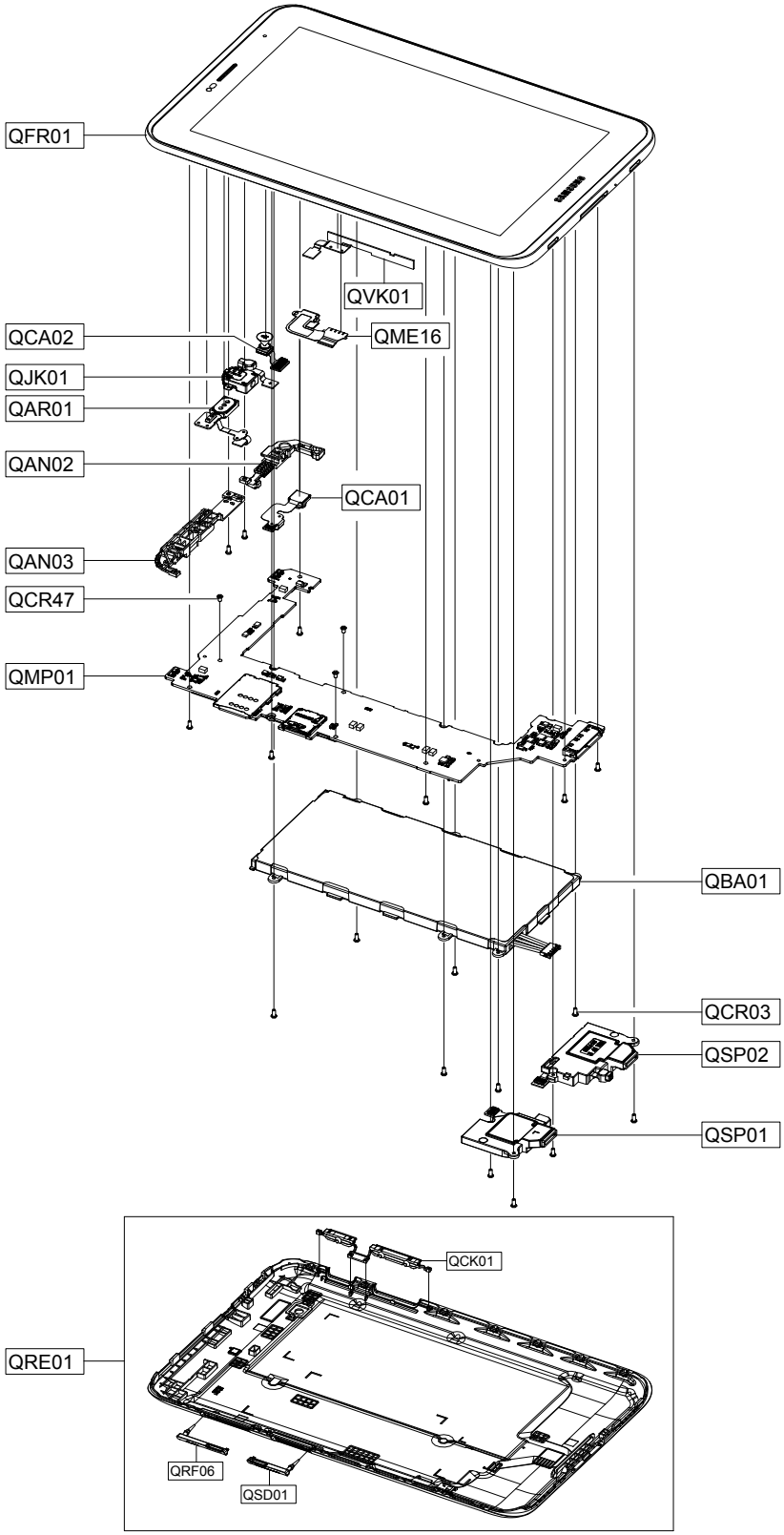
Use only desoldering tools with plastic tips to prevent static discharge.

Properly shield the work environment from accidental electrostatic discharge before opening packages containing ESDs.

The potential for static electricity discharge may be increased in low humidity environments, such as air-conditioned rooms. Increase the airflow to the working area to decrease the chance of accidental static electricity discharges.

4. Exploded View and Parts List

4-1. Cellular phone Exploded View



5. MAIN Electrical Parts List

SEC CODE	Design LOC	Description
0403-001688	D504,ZD501,ZD701	DIODE-ZENER
0406-001239	D300,D500,D501,D502	DIODE-TVS
0406-001239	D503	DIODE-TVS
0406-001267	ZD100,ZD500,ZD700	DIODE-TVS
0406-001375	ZD408,ZD502,ZD503,ZD504	DIODE-TVS
0406-001375	ZD505,ZD506,ZD800	DIODE-TVS
0406-001413	ZD900,ZD901	DIODE-TVS
0406-001494	ZD300,ZD301	DIODE-TVS
0406-001506	ZD402,ZD403,ZD404	DIODE-TVS
0406-001506	ZD405	DIODE-TVS
0407-001002	D700	DIODE-ARRAY
0504-001113	TR700,TR702,TR703	TR-DIGITAL
0504-001171	TR500	TR-DIGITAL
0505-001518	Q800	FET-SILICON
0505-002720	TR701	FET-SILICON
0505-002748	TR704,TR705	FET-SILICON
0505-003052	U703	FET-SILICON
0801-003031	U609	IC-ANALOG SWITCH
0801-003079	U606,U608	IC-ANALOG SWITCH
0801-003437	U300	IC-ANALOG SWITCH
0801-003444	U108	IC-ANALOG SWITCH
0902-002849	UCP600	IC-MICROPROCESSOR
0903-001762	U900	IC-TOUCH IC
1001-001410	U405	IC-ANALOG SWITCH
1001-001481	U504,U505	IC-USB SWITCH IC
1001-001733	U102	IC-BAND SWITCH
1003-002132	U503	IC-LEVEL DRIVER
1003-002216	U601,U602,U603	IC-LEVEL DRIVER
1105-002329	UME300	IC-DDR SDRAM
1107-002134	U607	IC-FLASH
1201-003378	U200	IC-GPS LNA
1201-003406	U103	IC-PAM
1202-001121	U500	IC-ANALOG SWITCH
1202-001123	U401	IC-COMPARATOR
1203-004776	U803	IC-DC/DC CONVERTER

SEC CODE	Design LOC	Description
1203-004818	U605	IC-DC/DC CONVERTER
1203-004819	U402,U403,U700,U705	IC-DC/DC CONVERTER
1203-004819	U901	IC-DC/DC CONVERTER
1203-004925	U408	IC-DC/DC CONVERTER
1203-005069	U707	IC-DC/DC CONVERTER
1203-005396	U404	IC-DC/DC CONVERTER
1203-005831	U109	IC-DC/DC CONVERTER
1203-006115	U913	IC-POWER SUPERVISOR
1203-006346	U704	IC-RESET IC
1203-006392	U702	IC-FUELGAUGE
1203-006493	U706	IC-POWER SUPERVISOR
1203-006766	U502	IC-SWITCH
1203-006794	U501	IC-POWER SUPERVISOR
1203-006801	U104	IC-DC/DC TRANSCIEVER
1203-006817	U904	IC-DC/DC CONVERTER
1203-006985	U106	IC-PAM
1203-006986	U800	IC-DC/DC CONVERTER
1203-007142	U604	IC-DC/DC CONVERTER
1203-007210	U701	IC-POWER SUPERVISOR
1205-003692	U400	IC-ADC IC
1205-004004	U805	IC-DC/DC CONVERTER
1205-004313	U801	IC-TRANSMITTER
1205-004396	U201	IC-GPS
1205-004402	U203	IC-Wifi
1205-004509	U406	IC-CODEC
1205-004511	UCP300	IC-MODEM
1205-004515	U100	IC-AMP
1209-002006	U105,U107	IC-SWITCH REGULATOR
1209-002106	U903	IC-SENSOR
1209-002151	U902	IC-SENSOR
1404-001728	TH300,TH700	THERMISTOR
1405-001091	VAR400,VAR401,VAR402	VARISTOR
1405-001091	VAR403	VARISTOR
1405-001346	VAR700	VARISTOR
2007-000138	R121,R421,R628,R629	R-CHIP
2007-000140	R532,R533	R-CHIP

SEC CODE	Design LOC	Description
2007-000141	R419,R635,R636,R670	R-CHIP
2007-000141	R671	R-CHIP
2007-000143	R310,R720,R729,R901	R-CHIP
2007-000143	R912 , R913	R-CHIP
2007-000147	R630	R-CHIP
2007-000148	R109,R118,R322,R608	R-CHIP
2007-000148	R610,R611,R613,R672	R-CHIP
2007-000148	R691,R693,R717,R726	R-CHIP
2007-000148	R728	R-CHIP
2007-000155	R721	R-CHIP
2007-000157	R209,R210,R211,R212	R-CHIP
2007-000157	R213,R308,R500,R503	R-CHIP
2007-000157	R504,R505,R506,R507	R-CHIP
2007-000162	R402,R524,R534,R657	R-CHIP
2007-000162	R658,R664,R690,R704	R-CHIP
2007-000162	R708,R711,R722,R727	R-CHIP
2007-000162	R810	R-CHIP
2007-000163	R512,R513	R-CHIP
2007-000164	R516,R517	R-CHIP
2007-000165	R102	R-CHIP
2007-000166	R510	R-CHIP
2007-000167	R508	R-CHIP
2007-000170	R420,R515	R-CHIP
2007-000172	R825	R-CHIP
2007-000173	R684,R900	R-CHIP
2007-000758	R101,R123	R-CHIP
2007-001217	R502	R-CHIP
2007-001284	R304	R-CHIP
2007-001292	R689,R694,R695	R-CHIP
2007-001295	R801,R802,R803,R804	R-CHIP
2007-001295	R805,R806,R807,R808	R-CHIP
2007-001295	R809	R-CHIP
2007-001298	R404,R520,R521	R-CHIP
2007-001306	R731	R-CHIP
2007-001308	R105	R-CHIP
2007-002796	R112,R119	R-CHIP

SEC CODE	Design LOC	Description
2007-003015	R529,R530	R-CHIP
2007-007014	R673,R674,R675,R676	R-CHIP
2007-007014	R677,R678,R679,R680	R-CHIP
2007-007014	R681	R-CHIP
2007-007092	R531	R-CHIP
2007-007099	R525	R-CHIP
2007-007107	R306,R307	R-CHIP
2007-007131	R824	R-CHIP
2007-007132	R208	R-CHIP
2007-007137	R410,R413,R414,R415	R-CHIP
2007-007137	R416	R-CHIP
2007-007142	R526,R527,R528	R-CHIP
2007-007156	R422,R423	R-CHIP
2007-007195	R909,R911	R-CHIP
2007-007312	R424,R823	R-CHIP
2007-007318	R409,R411,R412,R417	R-CHIP
2007-007318	R418	R-CHIP
2007-007517	R687,R688	R-CHIP
2007-007529	R509	R-CHIP
2007-007538	R661	R-CHIP
2007-007700	R407	R-CHIP
2007-007875	R405	R-CHIP
2007-007942	R403	R-CHIP
2007-008045	R309,R626,R627,R638	R-CHIP
2007-008045	R639,R735	R-CHIP
2007-008046	R106	R-CHIP
2007-008055	R430,R709,R902	R-CHIP
2007-008211	R518,R519,R903,R919	R-CHIP
2007-008275	R511	R-CHIP
2007-008354	R656	R-CHIP
2007-008403	R501	R-CHIP
2007-008483	R522,R523,R712	R-CHIP
2007-008502	R406	R-CHIP
2007-008516	R316,R643,R644,R813	R-CHIP
2007-008516	R817,R904	R-CHIP
2007-008579	R207	R-CHIP

SEC CODE	Design LOC	Description
2007-008588	R300,R301,R302,R400	R-CHIP
2007-008588	R625,R637,R669,R685	R-CHIP
2007-008588	R686	R-CHIP
2007-008774	R113,R634,R908	R-CHIP
2007-009108	R668	R-CHIP
2007-009155	R313,R667	R-CHIP
2007-009233	R701	R-CHIP
2007-009314	R733,R734	R-CHIP
2007-009354	R600,R617	R-CHIP
2007-009801	R103,R104	R-CHIP
2007-010509	R713	R-CHIP
2007-010856	R736	R-CHIP
2203-000233	C113,C206,C235,C236	C-CERAMIC,CHIP
2203-000254	C100,C747,C802	C-CERAMIC,CHIP
2203-000278	C231,C232,C234,C239	C-CERAMIC,CHIP
2203-000278	C240,C241,C242,C244	C-CERAMIC,CHIP
2203-000278	C247,C825	C-CERAMIC,CHIP
2203-000386	C433,C434,C436,C437	C-CERAMIC,CHIP
2203-000425	C439,C443,C444	C-CERAMIC,CHIP
2203-000438	C233	C-CERAMIC,CHIP
2203-000585	C228,C695	C-CERAMIC,CHIP
2203-000696	C210	C-CERAMIC,CHIP
2203-001101	C131,C134	C-CERAMIC,CHIP
2203-001153	C430,C431,C435,C438	C-CERAMIC,CHIP
2203-001239	C440,C441,C442,C924	C-CERAMIC,CHIP
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2203-001437	C238	C-CERAMIC,CHIP
2203-002677	C118	C-CERAMIC,CHIP
2203-002687	C746	C-CERAMIC,CHIP
2203-002709	C211	C-CERAMIC,CHIP
2203-005393	C118	C-CERAMIC,CHIP
2203-005395	C248	C-CERAMIC,CHIP
2203-005682	C114,C117,C144,C151	C-CERAMIC,CHIP
2203-005682	C154	C-CERAMIC,CHIP
2203-005725	C214,C337,C342	C-CERAMIC,CHIP
2203-005727	C715,C716,C912	C-CERAMIC,CHIP

SEC CODE	Design LOC	Description
2203-005729	C222,C429	C-CERAMIC,CHIP
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2203-005736	C146,C200,C250	C-CERAMIC,CHIP
2203-005779	C224	C-CERAMIC,CHIP
2203-005806	C133,C203	C-CERAMIC,CHIP
2203-006048	C101,C220,C221,C223	C-CERAMIC,CHIP
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2203-006048	C612,C651,C654,C668,	C-CERAMIC,CHIP
2203-006048	C684,C685,C748,C932	C-CERAMIC,CHIP
2203-006123	C140	C-CERAMIC,CHIP
2203-006190	C655,C691,C693,C694	C-CERAMIC,CHIP
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2203-006194	C135,C156,C216,C302	C-CERAMIC,CHIP
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2203-006348	C513	C-CERAMIC,CHIP
2203-006379	C129	C-CERAMIC,CHIP
2203-006399	C411,C412,C416,C619	C-CERAMIC,CHIP
2203-006399	C620,C666,C675,C689	C-CERAMIC,CHIP
2203-006399	C724	C-CERAMIC,CHIP
2203-006423	C104,C105,C106,C107	C-CERAMIC,CHIP
2203-006423	C108,C122,C123,C124	C-CERAMIC,CHIP
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2203-006423	C149,C157,C204,C301	C-CERAMIC,CHIP
2203-006423	C304,C305,C306,C307	C-CERAMIC,CHIP
2203-006423	C308,C309,C315,C316	C-CERAMIC,CHIP
2203-006423	C317,C319,C320,C322	C-CERAMIC,CHIP
2203-006423	C323,C325,C326,C327	C-CERAMIC,CHIP
2203-006423	C328,C329,C330,C331	C-CERAMIC,CHIP
2203-006423	C332,C343,C345,C402	C-CERAMIC,CHIP
2203-006423	C407,C601,C602,C603	C-CERAMIC,CHIP
2203-006423	C604,C606,C608,C609	C-CERAMIC,CHIP
2203-006423	C611,C613,C614,C621	C-CERAMIC,CHIP
2203-006423	C622,C625,C626,C627	C-CERAMIC,CHIP
2203-006423	C630,C631,C632,C634	C-CERAMIC,CHIP
2203-006423	C635,C636,C637,C638	C-CERAMIC,CHIP
2203-006423	C640,C641,C642,C649	C-CERAMIC,CHIP

SEC CODE	Design LOC	Description
2203-006423	C652,C653,C661,C662	C-CERAMIC,CHIP
2203-006423	C663,C664,C667,C669	C-CERAMIC,CHIP
2203-006423	C670,C671,C678,C682	C-CERAMIC,CHIP
2203-006423	C909,C910,C915	C-CERAMIC,CHIP
2203-006562	C147,C164,C166,C178	C-CERAMIC,CHIP
2203-006562	C179,C180,C181,C182	C-CERAMIC,CHIP
2203-006562	C226,C340,C400,C401	C-CERAMIC,CHIP
2203-006562	C413,C414,C415,C463	C-CERAMIC,CHIP
2203-006562	C464,C505,C506,C510	C-CERAMIC,CHIP
2203-006562	C600,C688,C723,C743	C-CERAMIC,CHIP
2203-006562	C749,C803,C804,C805	C-CERAMIC,CHIP
2203-006562	C900,C901,C902,C903	C-CERAMIC,CHIP
2203-006562	C905,C907,C919,C920	C-CERAMIC,CHIP
2203-006647	C109,C110,C111,C125	C-CERAMIC,CHIP
2203-006648	C136	C-CERAMIC,CHIP
2203-006681	C753,C823	C-CERAMIC,CHIP
2203-006824	C167,C174,C175,C729	C-CERAMIC,CHIP
2203-006824	C732	C-CERAMIC,CHIP
2203-006839	C150,C215,C679,C683	C-CERAMIC,CHIP
2203-006839	C714,C921	C-CERAMIC,CHIP
2203-006841	C701	C-CERAMIC,CHIP
2203-006844	C623	C-CERAMIC,CHIP
2203-006872	C121,C171,C201,C202	C-CERAMIC,CHIP
2203-006872	C212,C213,C403,C425	C-CERAMIC,CHIP
2203-006872	C427,C428,C690,C703	C-CERAMIC,CHIP
2203-006872	C704,C708,C709,C713	C-CERAMIC,CHIP
2203-006872	C754	C-CERAMIC,CHIP
2203-006979	C102,C103,C207,C751	C-CERAMIC,CHIP
2203-007133	C511,C733	C-CERAMIC,CHIP
2203-007194	C128	C-CERAMIC,CHIP
2203-007210	C172,C300,C311,C314	C-CERAMIC,CHIP
2203-007210	C318,C324,C333,C334	C-CERAMIC,CHIP
2203-007210	C344,C628,C629,C633	C-CERAMIC,CHIP
2203-007210	C656,C657,C658,C659	C-CERAMIC,CHIP
2203-007210	C660,C665,C673,C674	C-CERAMIC,CHIP
2203-007240	C686,C734	C-CERAMIC,CHIP

SEC CODE	Design LOC	Description
2203-007269	C744	C-CERAMIC,CHIP
2203-007270	C160,C163,C741,C742	C-CERAMIC,CHIP
2203-007270	C817	C-CERAMIC,CHIP
2203-007271	C139,C205,C230,C702	C-CERAMIC,CHIP
2203-007271	C705,C707,C710,C756	C-CERAMIC,CHIP
2203-007271	C800,C815,C816,C906	C-CERAMIC,CHIP
2203-007271	C908,C911,C913,C929	C-CERAMIC,CHIP
2203-007271	C930,C931,C933,C934	C-CERAMIC,CHIP
2203-007271	C936	C-CERAMIC,CHIP
2203-007279	C310,C312,C313,C725	C-CERAMIC,CHIP
2203-007279	C726,C735,C736,C737	C-CERAMIC,CHIP
2203-007279	C738,C739,C740	C-CERAMIC,CHIP
2203-007317	C165,C173,C218,C219	C-CERAMIC,CHIP
2203-007317	C229,C504	C-CERAMIC,CHIP
2203-007342	C706,C824	C-CERAMIC,CHIP
2203-007391	C605,C610,C624,C650	C-CERAMIC,CHIP
2203-007392	C717	C-CERAMIC,CHIP
2203-007393	C141,C145,C158,C217	C-CERAMIC,CHIP
2203-007393	C227,C617,C618,C639	C-CERAMIC,CHIP
2203-007393	C647,C648,C687,C700	C-CERAMIC,CHIP
2203-007393	C718,C719,C720,C721	C-CERAMIC,CHIP
2203-007393	C722,C752	C-CERAMIC,CHIP
2203-007449	C170,C321,C643,C644	C-CERAMIC,CHIP
2203-007449	C672,C676,C696,C697	C-CERAMIC,CHIP
2203-007449	C730,C914,C916,C917	C-CERAMIC,CHIP
2203-007449	C918,C926,C927,C928	C-CERAMIC,CHIP
2203-007449	C935	C-CERAMIC,CHIP
2203-007474	C246,C512	C-CERAMIC,CHIP
2203-007634	C509	C-CERAMIC,CHIP
2203-007693	C727,C728	C-CERAMIC,CHIP
2203-007755	C245	C-CERAMIC,CHIP
2203-007775	C404,C405,C406,C410	C-CERAMIC,CHIP
2203-007775	C419,C692,C711,C712	C-CERAMIC,CHIP
2203-007775	C755	C-CERAMIC,CHIP
2203-007781	C335,C336,C500,C501	C-CERAMIC,CHIP
2203-007781	C502,C503	C-CERAMIC,CHIP

SEC CODE	Design LOC	Description
2203-007795	C615,C616,C645,C646	C-CERAMIC,CHIP
2203-007796	C408,C409,C417,C418	C-CERAMIC,CHIP
2203-007796	C420,C421,C422,C423	C-CERAMIC,CHIP
2203-007796	C424,C426	C-CERAMIC,CHIP
2203-007840	C801	C-CERAMIC,CHIP
2404-001561	TA400,TA401,TA402	C-TA,CHIP
2703-001737	L211	INDUCTOR-SMD
2703-002267	L131	INDUCTOR-SMD
2703-002281	L106	INDUCTOR-SMD
2703-002313	L100,L111	INDUCTOR-SMD
2703-002596	L127,L130	INDUCTOR-SMD
2703-002649	L214	INDUCTOR-SMD
2703-002900	L123	INDUCTOR-SMD
2703-002901	L112,L116	INDUCTOR-SMD
2703-002999	L104	INDUCTOR-SMD
2703-003533	L600	INDUCTOR-SMD
2703-003545	L212	INDUCTOR-SMD
2703-003687	L500	INDUCTOR-SMD
2703-003754	L901	INDUCTOR-SMD
2703-003755	L126,L128,L129	INDUCTOR-SMD
2703-003869	L302,L303	INDUCTOR-SMD
2703-003911	L700,L701,L702,L703	INDUCTOR-SMD
2703-003911	L704	INDUCTOR-SMD
2703-003914	L115,L119	INDUCTOR-SMD
2703-003921	L101	INDUCTOR-SMD
2703-004000	L108	INDUCTOR-SMD
2703-004012	L107	INDUCTOR-SMD
2703-004013	L102,L110,L118	INDUCTOR-SMD
2703-004018	L121	INDUCTOR-SMD
2703-004088	L207	INDUCTOR-SMD
2703-004185	L125	INDUCTOR-SMD
2703-004225	L705	INDUCTOR-SMD
2801-004551	OSC300,OSC700	CRYSTAL-UNIT
2801-005107	OSC201	CRYSTAL-UNIT
2804-001884	OSC600	OSCILLATOR-CLOCK
2804-001935	OSC400	OSCILLATOR-CLOCK

SEC CODE	Design LOC	Description
2809-001369	OSC100	OSCILLATOR-CLOCK
2809-001374	OSC200	OSCILLATOR-VCTCXO
2901-001674	F800,F801,F802,F900	FILTER-EMI
2901-001674	F901	FILTER-EMI
2904-001988	F200	FILTER-SAW
2909-001307	F201	FILTER-DUPLEXER
2910-000125	F100	FILTER
2911-000168	U202	FILTER
2911-000191	U101	FILTER
3301-001659	L201	CORE-FERRITE
3301-001885	L402,L403,L404,L405	CORE-FERRITE
3301-001885	L406,L407,L408,L409	CORE-FERRITE
3301-001885	L410	CORE-FERRITE
3301-001895	L200,L205,L206	CORE-FERRITE
3301-001901	L900	CORE-FERRITE
3301-001929	L400,L401	CORE-FERRITE
3301-001956	L300,L301,L804	CORE-FERRITE
3301-002066	L902	CORE-FERRITE
3301-002085	L203,L204	CORE-FERRITE
3705-001731	CN100	RF SWITCH
3709-001575	CD500	CONNECTOR-CARD
3709-001631	SIM300	CONNECTOR-CARD
3710-003319	IFC500	CONNECTOR-SOCKET
3711-005618	HDC902	CONNECTOR-HEADER
3711-006615	HDC400,HDC401,HDC800	CONNECTOR-HEADER
3711-006615	HDC901,HEA400	CONNECTOR-HEADER
3711-006852	HDC900,HDC903	CONNECTOR-HEADER
3711-006882	HDC801	CONNECTOR-HEADER
3711-007173	HDC600	CONNECTOR-HEADER
3711-007494	CON700	CONNECTOR-HEADER
3712-001348	ANT100,ANT101,ANT202	CONNECTOR
3712-001373	ANT103	CONNECTOR
3712-001375	ANT200,ANT201	CONNECTOR
GH62-00019A	CON100,CON101,CON102	SMR-TS-3-1.5-2
GH62-00019A	CON103,CON104,CON105	SMR-TS-3-1.5-2
GH62-00019A	CON106	SMR-TS-3-1.5-2

SEC CODE	Design LOC	Description
GH70-07744A	SC200	SHIELDCAN-P2-GPS-1
GH80-03320A	R201,R619	SHIELDCAN-P2-GPS-1
GH80-03321A	R922,R923	SHIELDCAN-P2-GPS-1
GH98-21816A	SC201	SHIELDCAN-P2-WIFI

7. Level 2 Repair

7-1. Disassembly and assembly Instructions

7-1-1. Disassembly

1 Disassemble the rear cover with the front cover by using the hook

: Hook (24 Point)

Be careful not to scratch cover.
Follow the numbered sequence when you disjoint

2 Put the disassemble jig as shown in the picture below. And disassemble hooks in regular sequence.

Be careful not to scratch cover.
Follow the numbered sequence when you disjoint

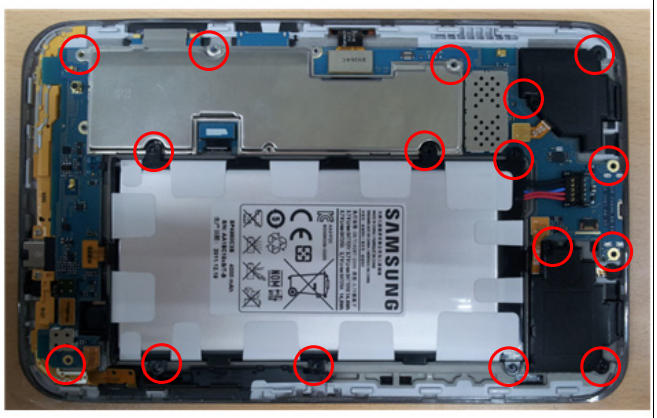
3 Disassemble the rest of the hooks.

Be careful not to scratch cover.
Follow the numbered sequence when you disjoint

4 Put your hand has opened between the front assy and the rear cover. First, disassemble the hooks in the direction of IF connector. And then disassemble all the remain hooks.

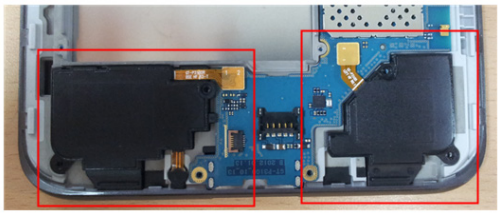
Be careful not to scratch cover.
Follow the numbered sequence when you disjoint

5 Carefully release the screws at 16 different locations from the Front.
(L1.4*3.0, Torque 0.9 ~ 1.0 kgf.cm)



Be careful not to scratch cover

6 Separate the Speaker, Battery from the PBA.



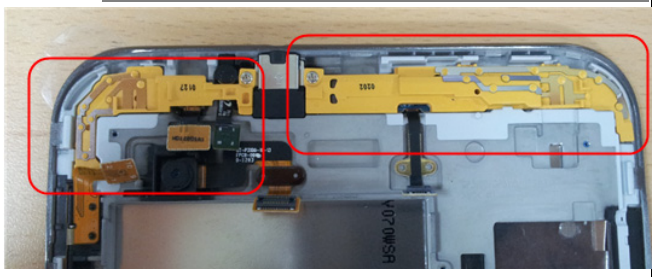
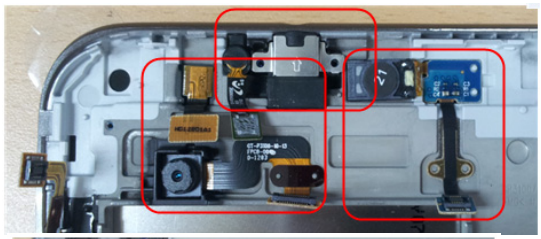
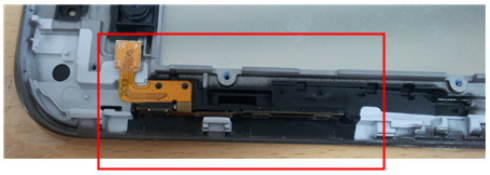
Be careful not to damage the FPCBs
Be careful not to damage the wires

7 Separate IF Connector, TSP, LCD, 3M Camera, VGA Camera, Volume Key, Earjack FPCBs from the PBA

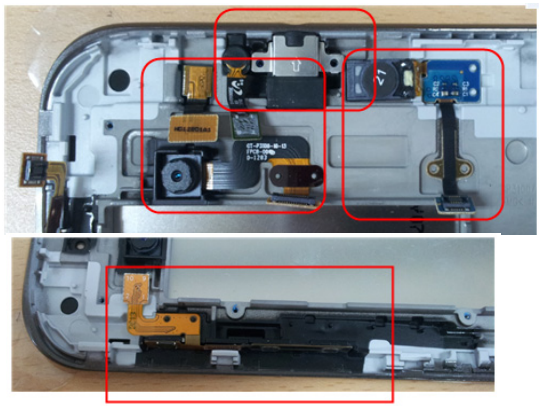
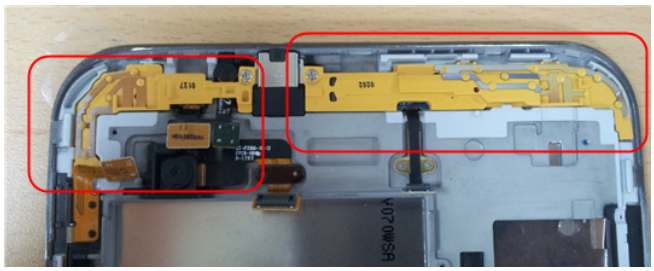
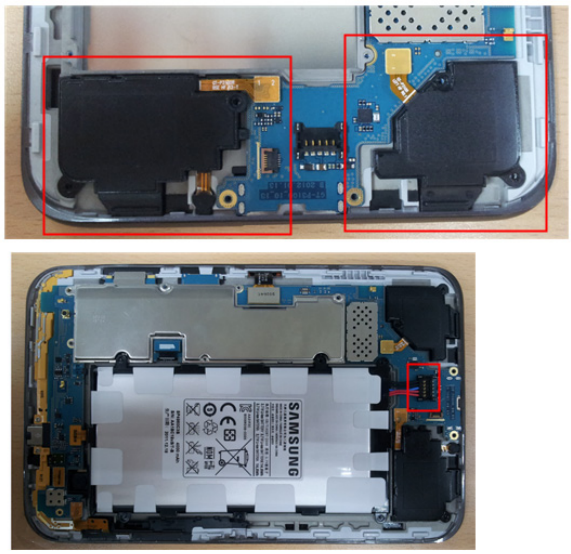
Be careful not to damage the FPCBs

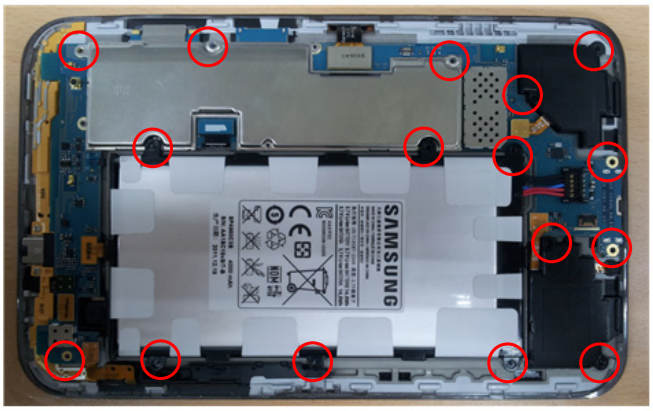
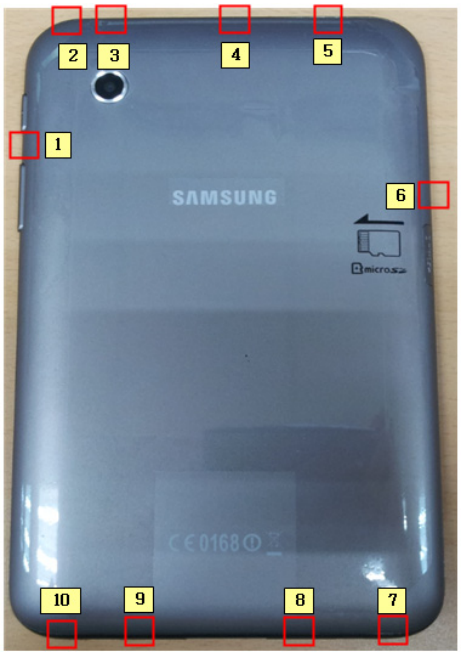
8 Separate PBA from the Front.

Be careful not to scratch cover

9 Separate the Intenna, 3M Camera, Earjack, Volume FPCB, VGA Camera, Sensor FPCB from the Front.   	
Be careful not to damage the FPCBs	

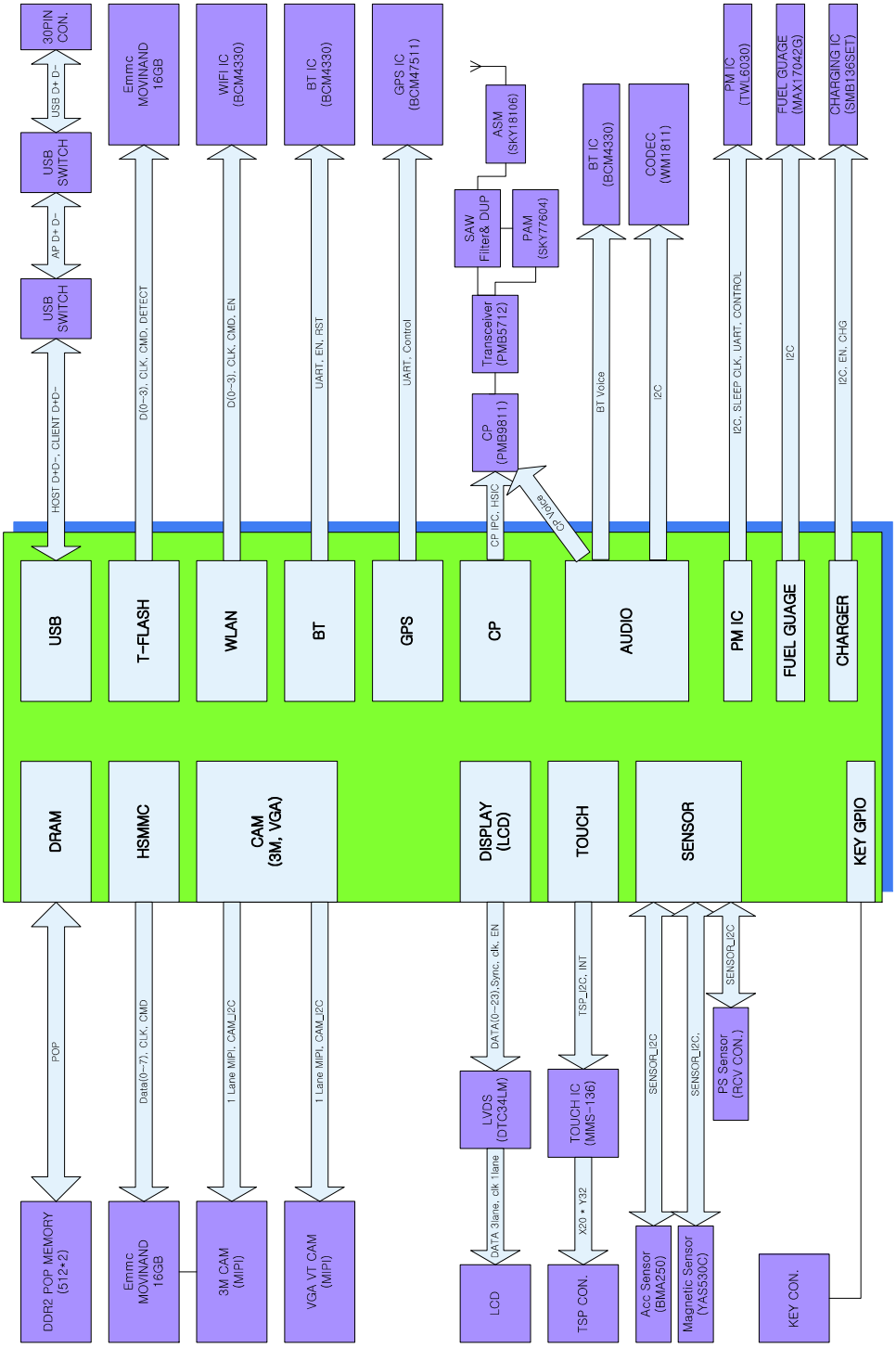
7-1-2. assemble

1 Assemble the 3M Camera, Earjack, Volume FPCB, VGA Camera, Sensor FPCB 	2 Assemble the Intenna 
Be careful not to damage the FPCBs	Be careful not to damage the FPCBs
3 Assemble PBA and all Connectors 	4 Assemble the Speakers Battery 
Be careful not to damage the FPCBs	Be careful not to damage the FPCBs

5 Screw at 16 point (L1.4*3.0, Torque 0.9 ~ 1.0 kgf.cm) 	**6** Assemble the Rear.  
Be careful not to damage the FPCBs	Be careful not to damage the FPCBs, not to scratch cover.

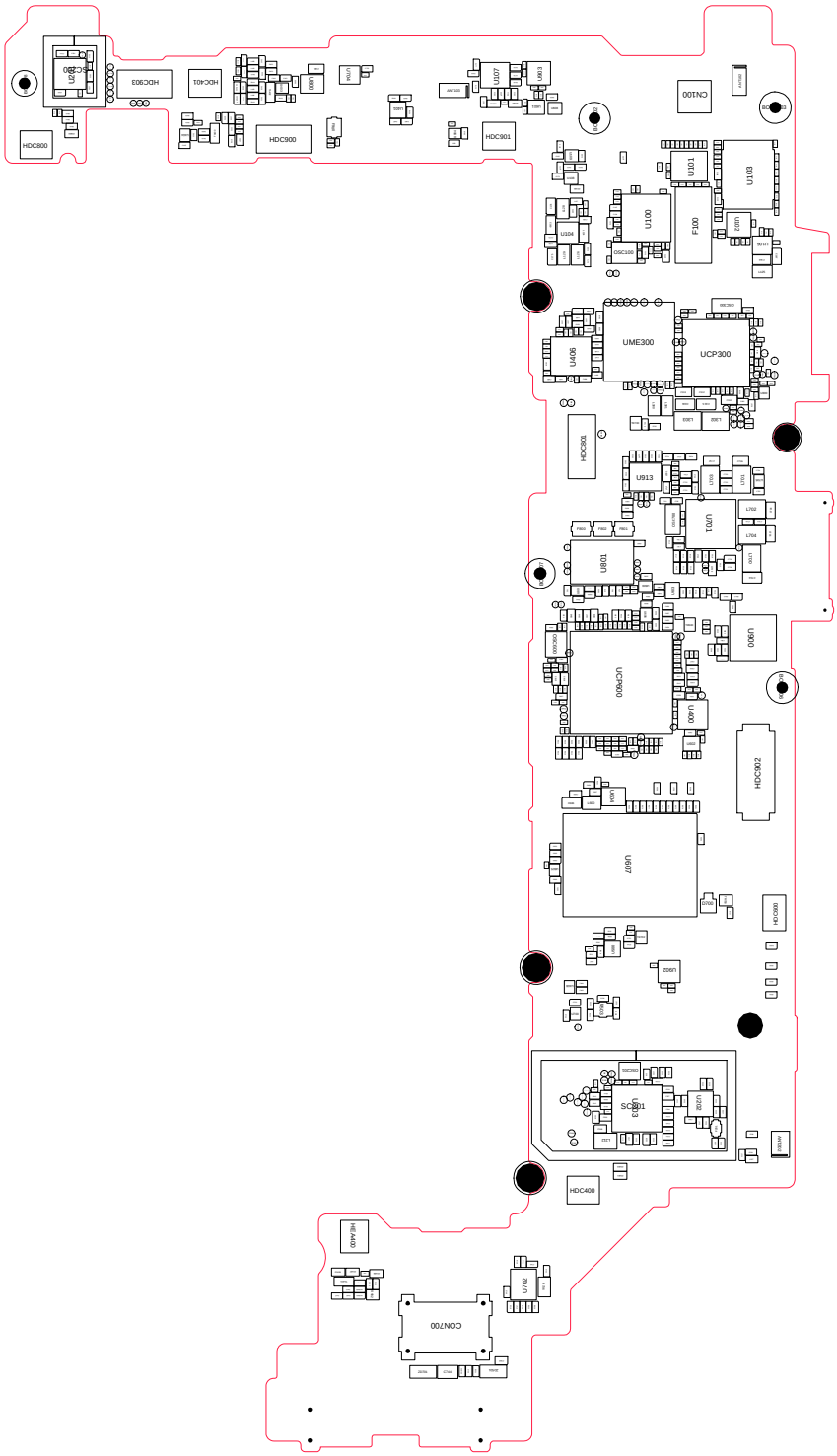
8. Level 3 Repair

8-1. Block Diagram

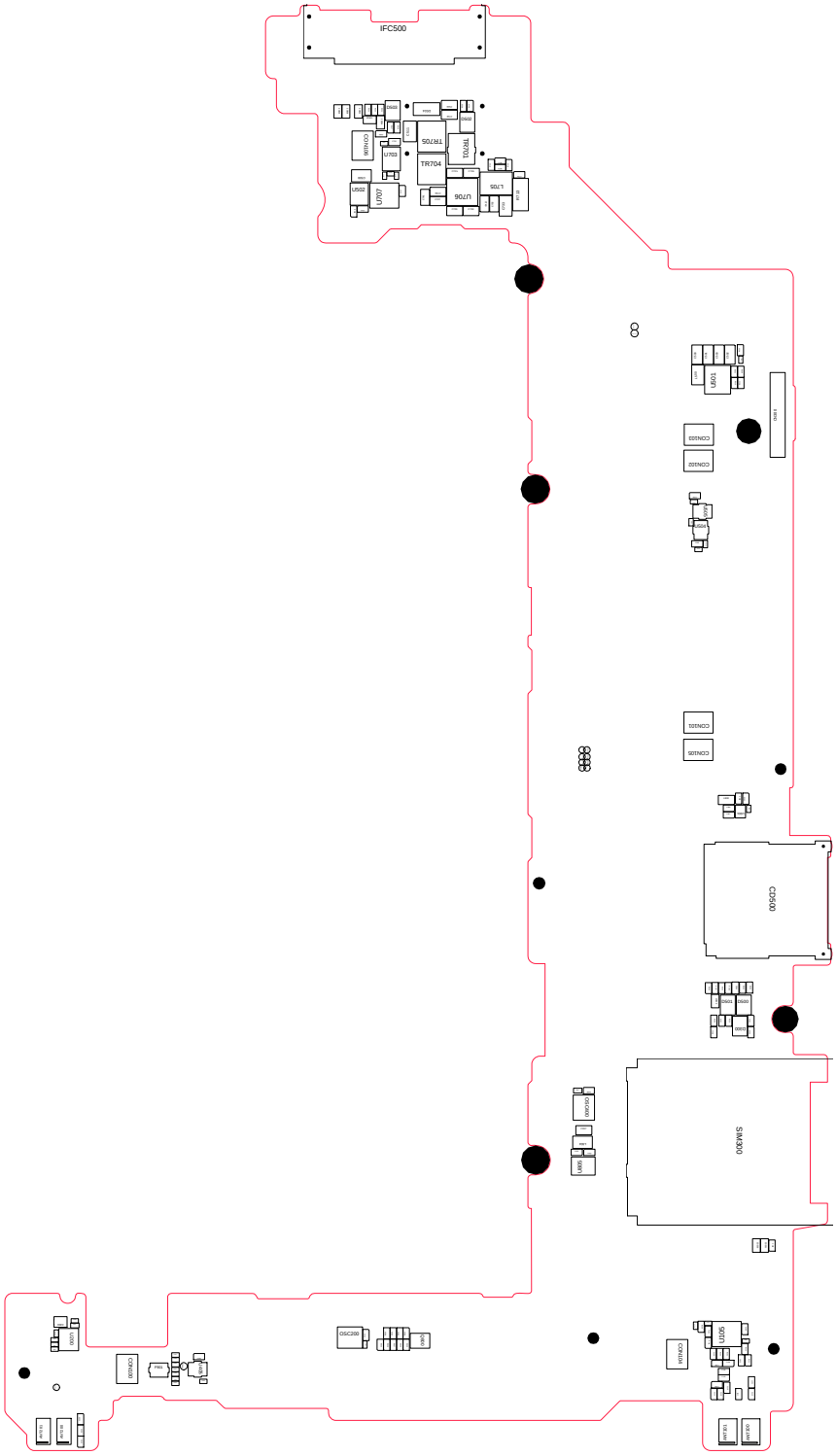


8-2. PCB Diagrams

8-2-1. Top

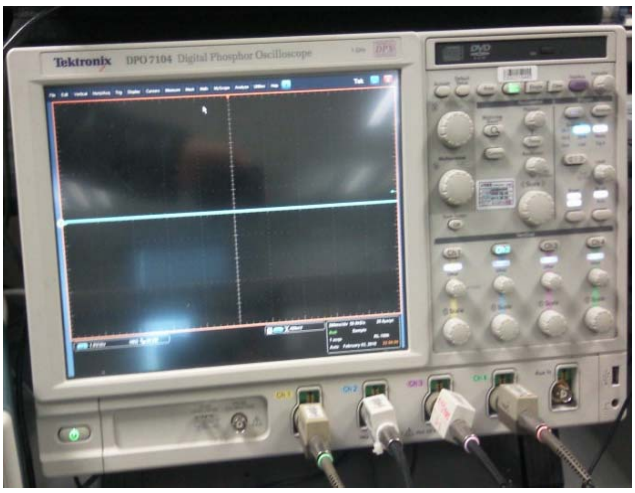


8-2-2. Bottom



8-3. Flow Chart of Troubleshooting

Equipments

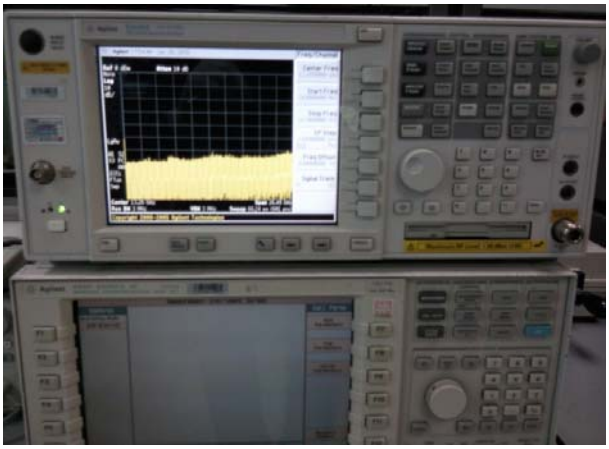


↑ Oscilloscope

↑ Digital Multimeter

↑ Power Supply

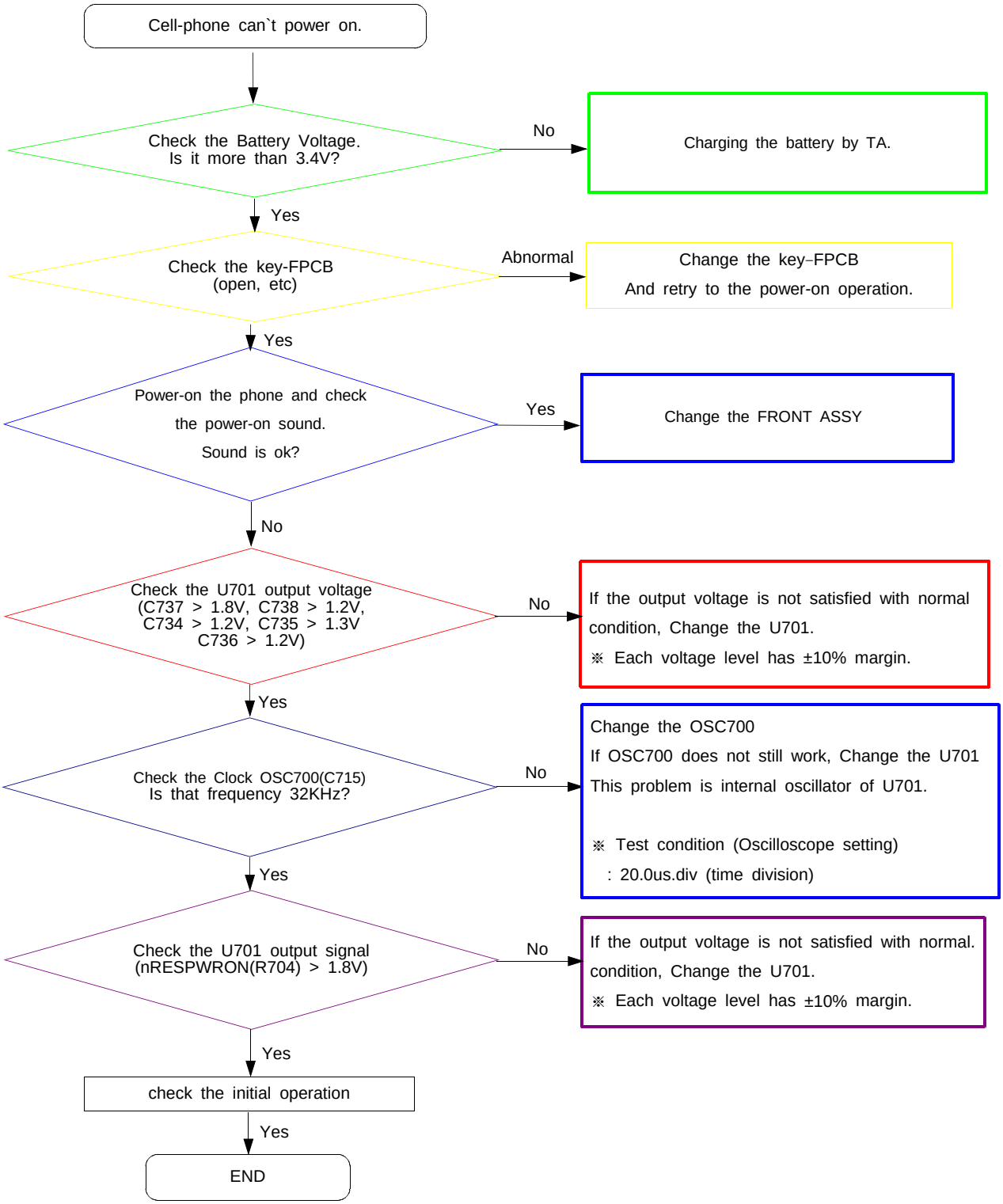
↑ + driver, ESD Safe Tweezer

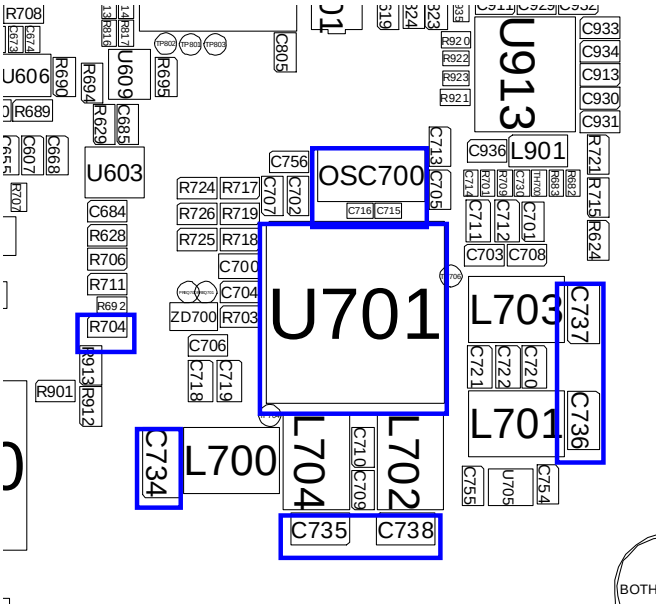


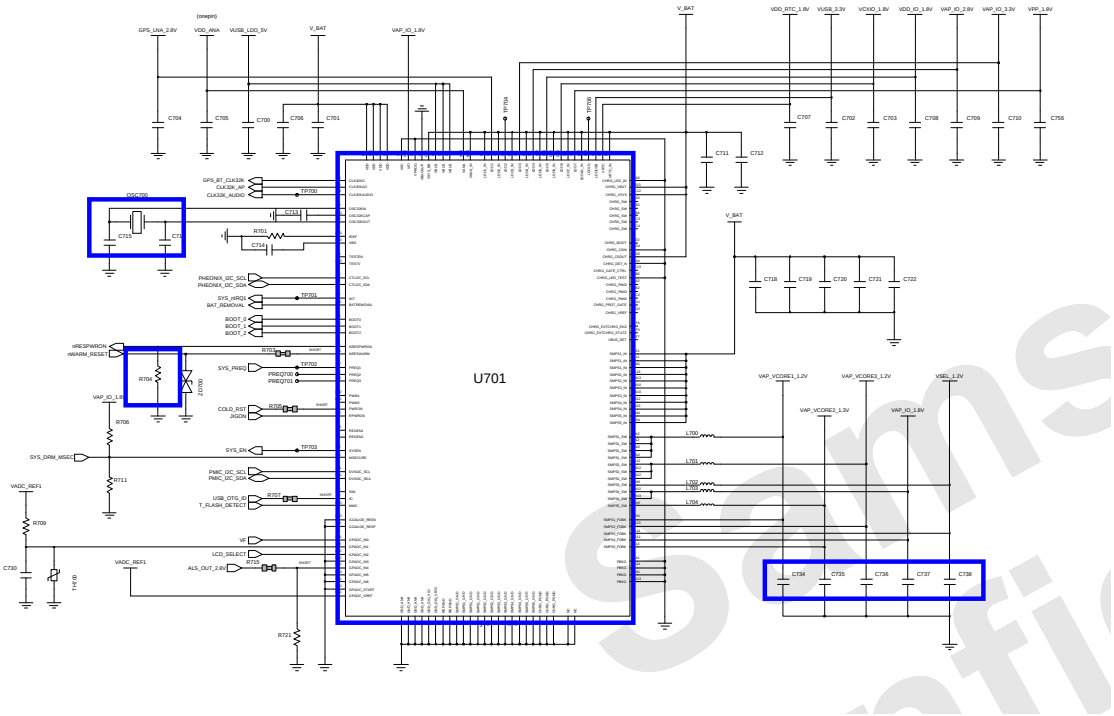
↑ 8960 & Spectrum Analyzer

↑ Soldering iron

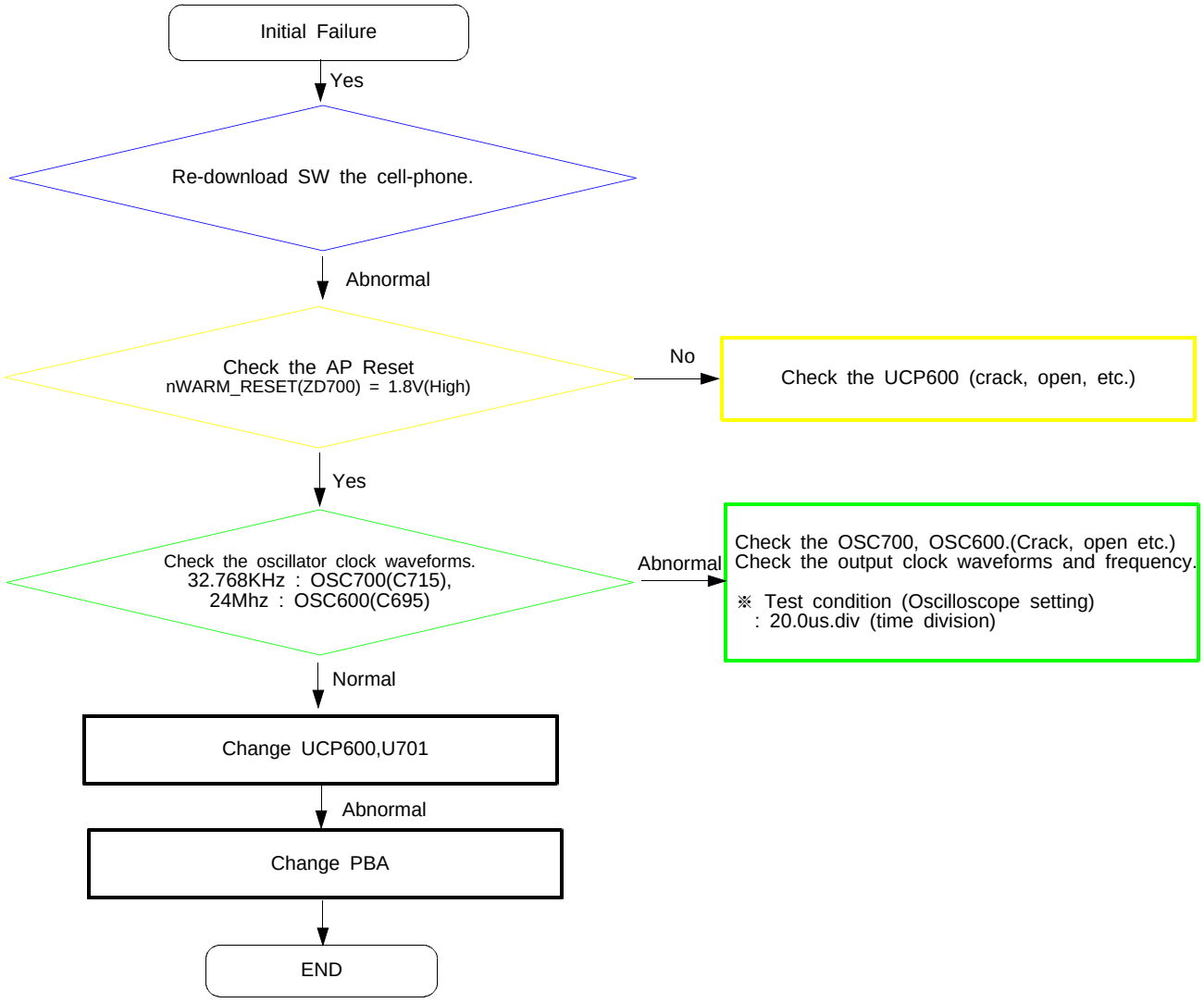
8-3-1. Power On

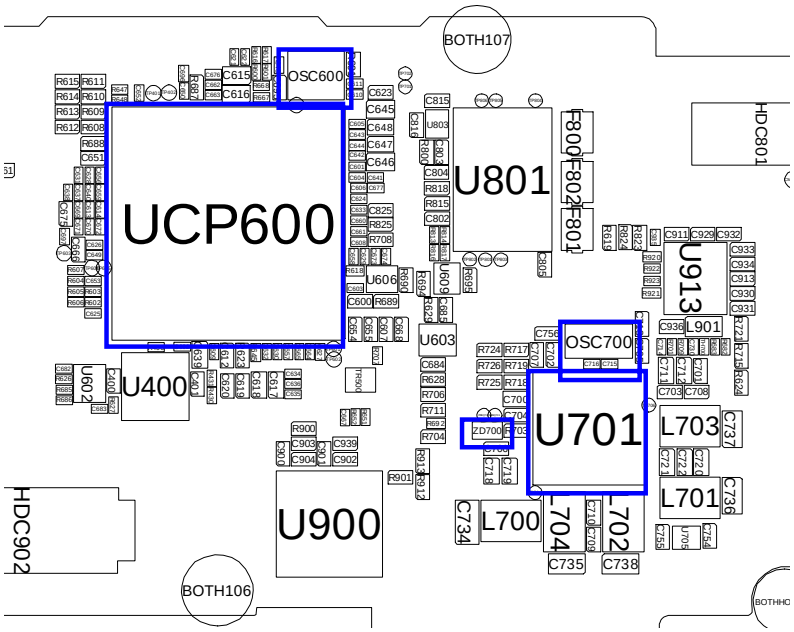


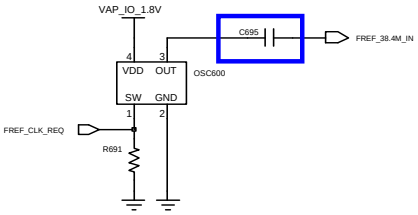


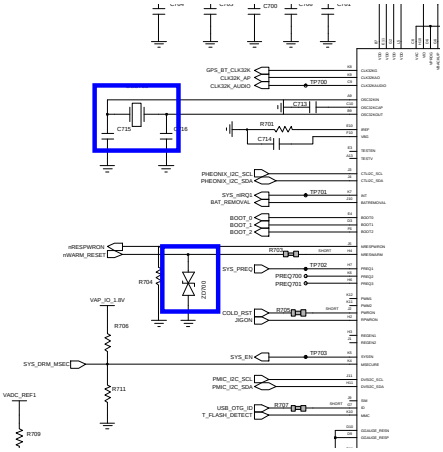


8-3-2. Initial

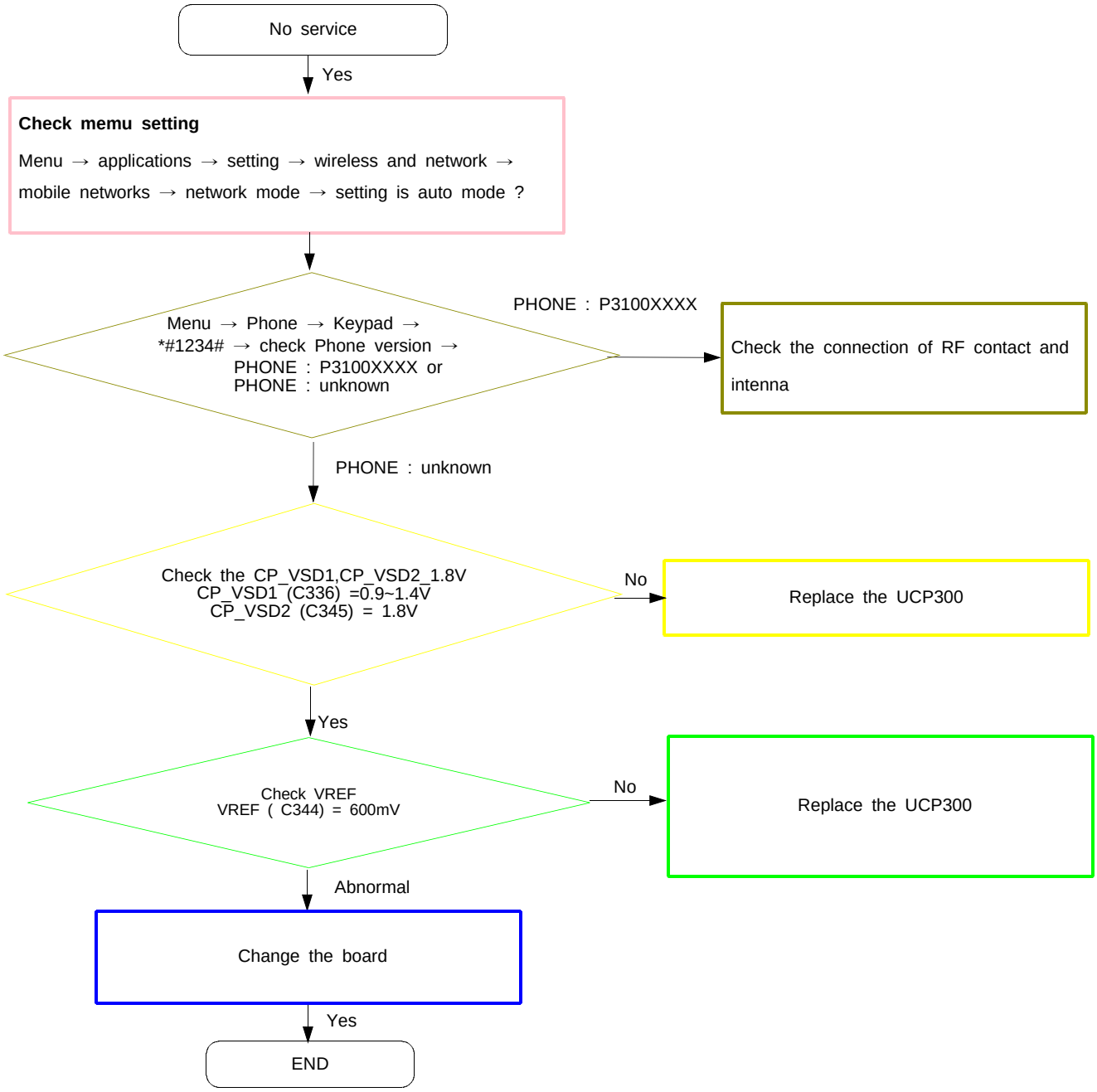


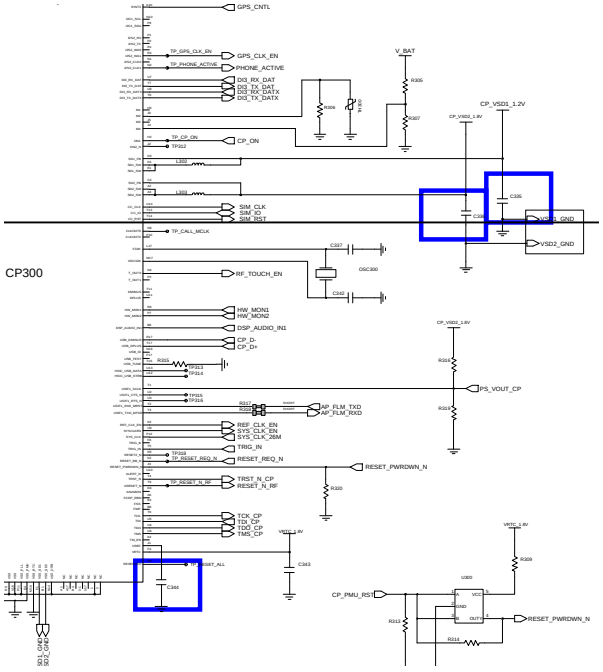


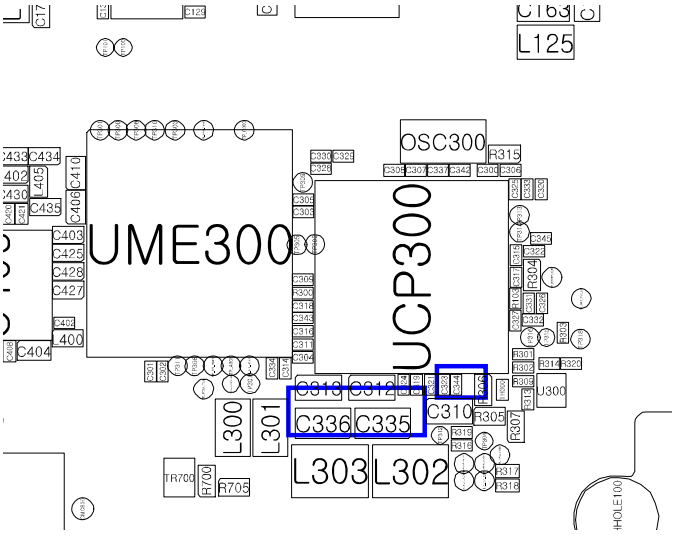




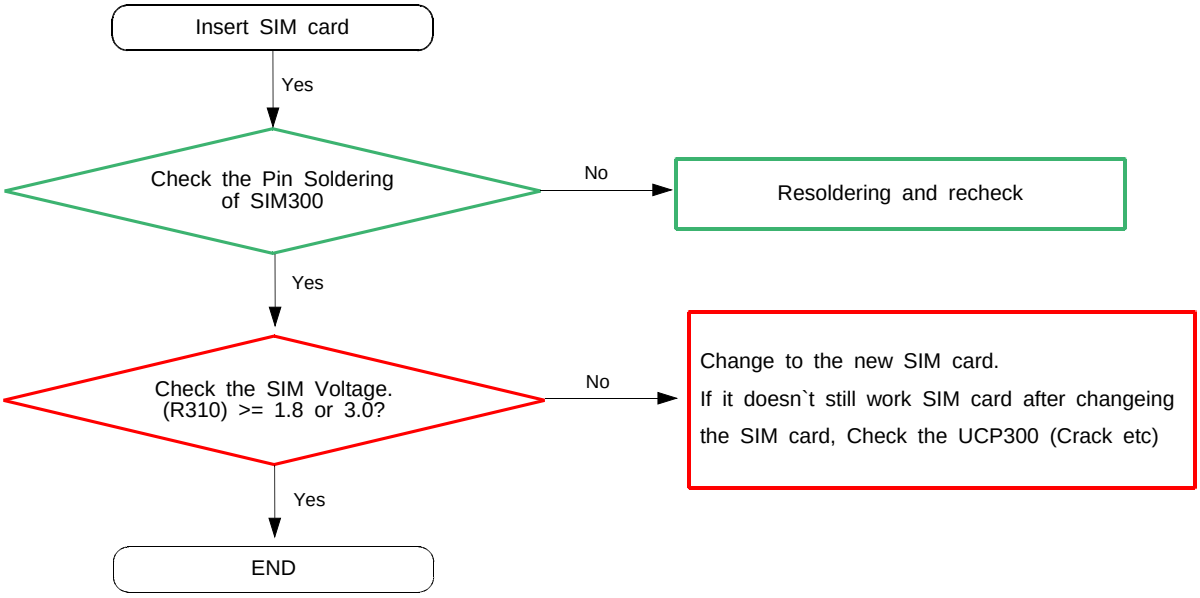
8-3-3. No Service

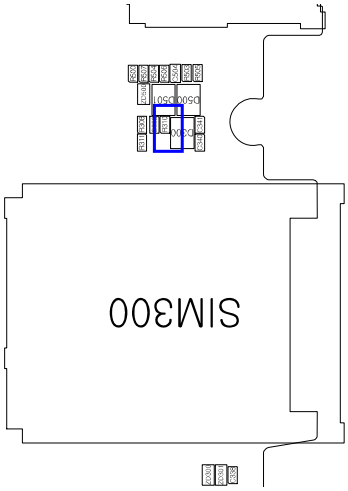


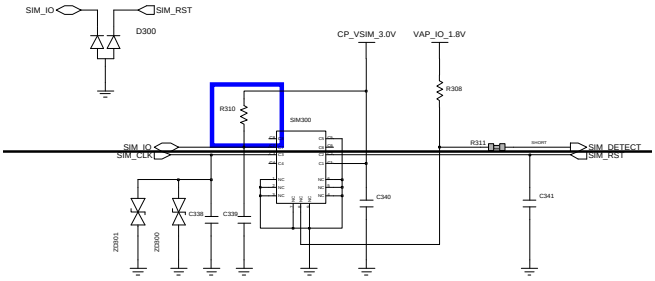




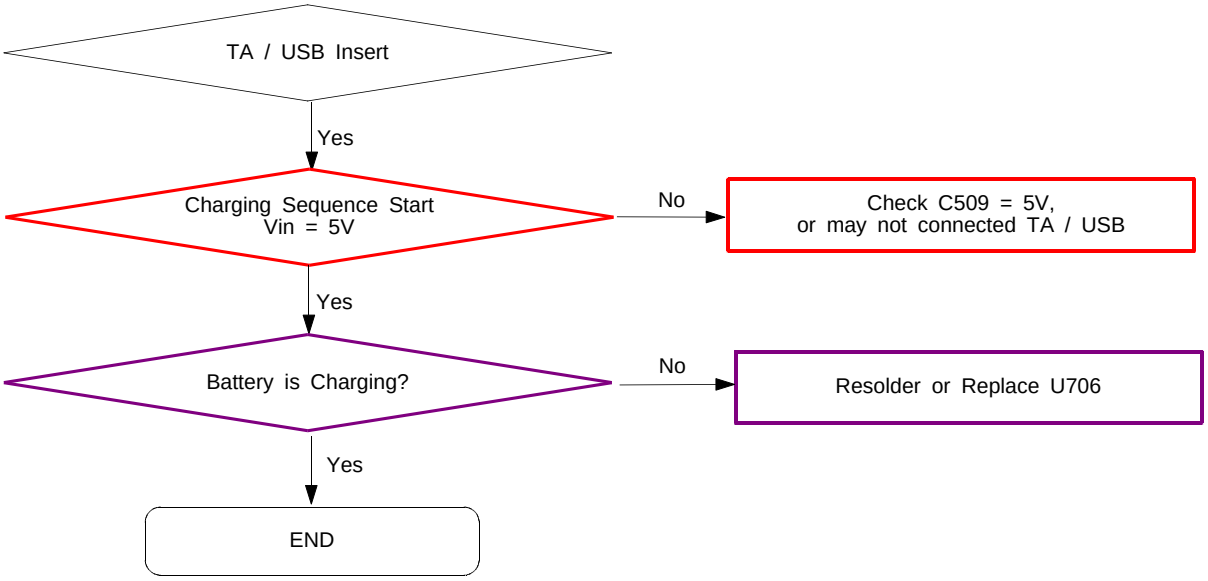
8-3-4. Sim Part

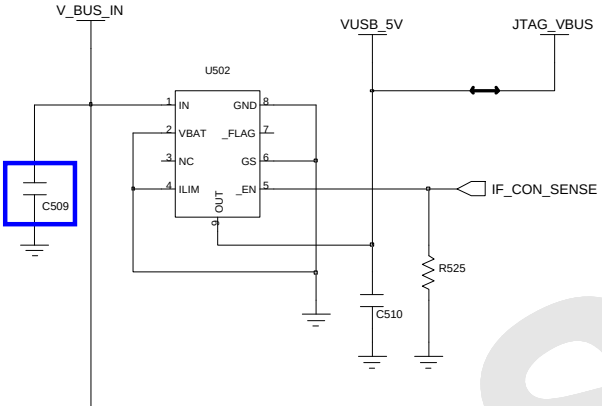


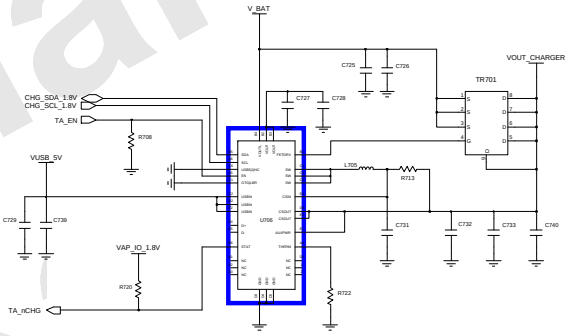


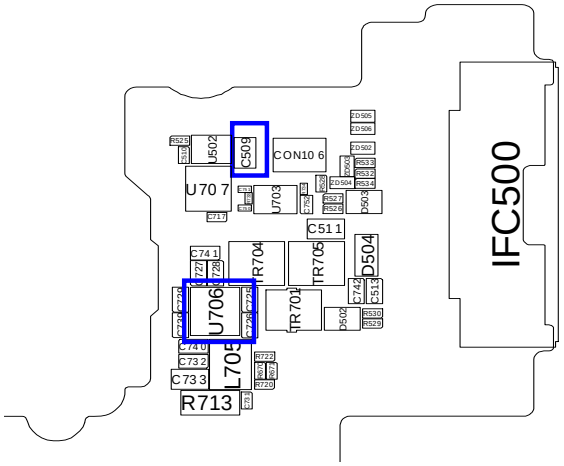


8-3-5. Charging Part

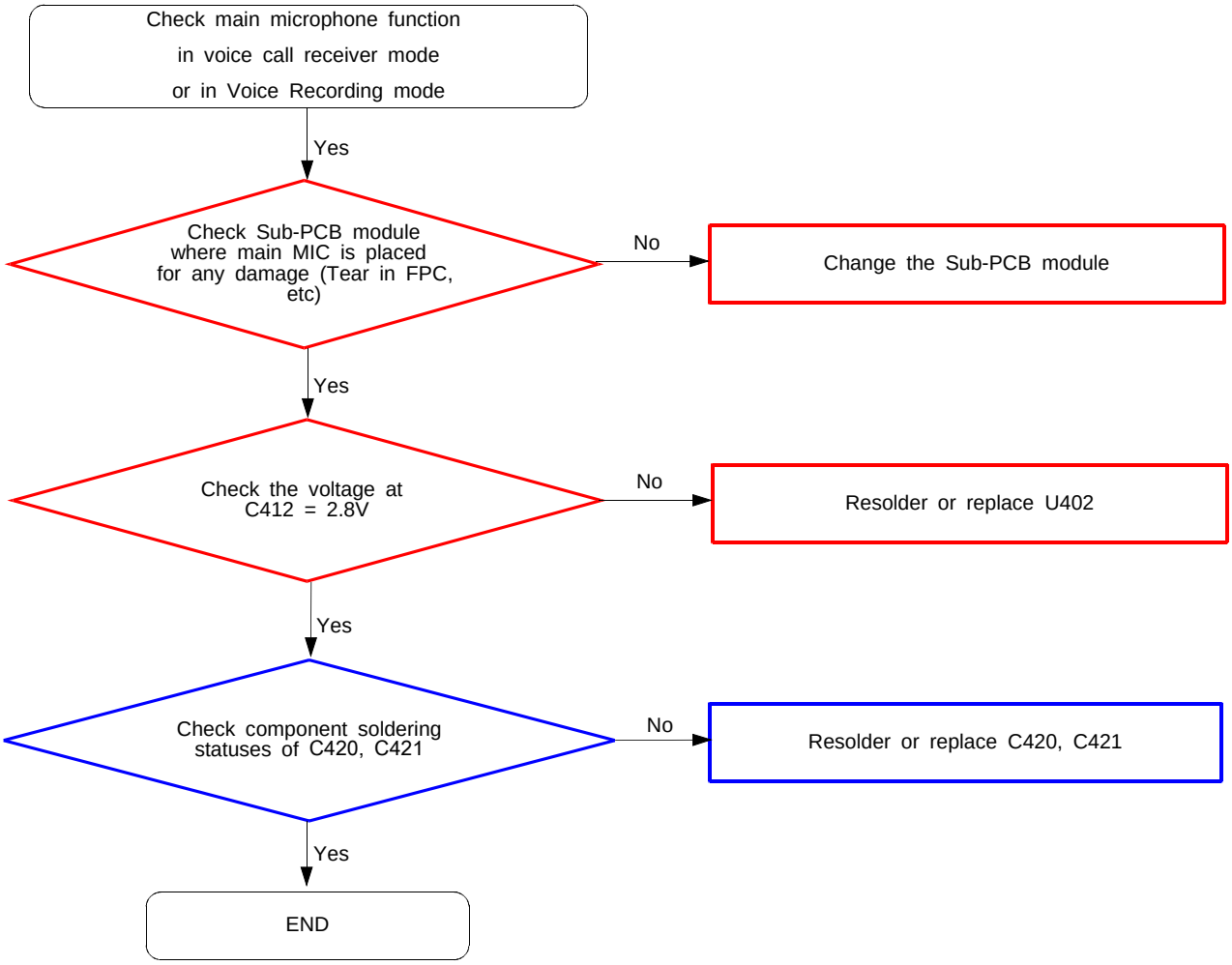


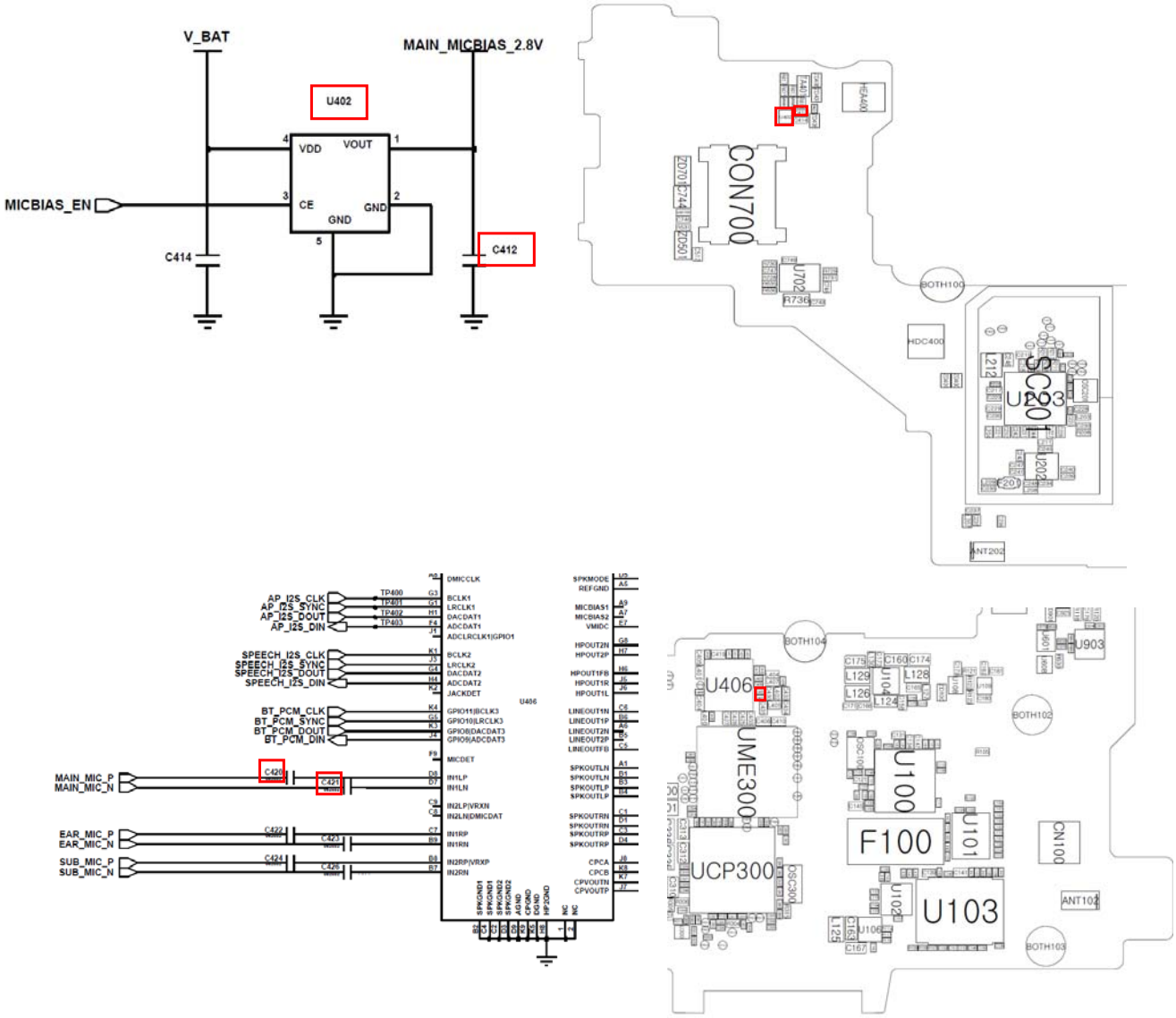




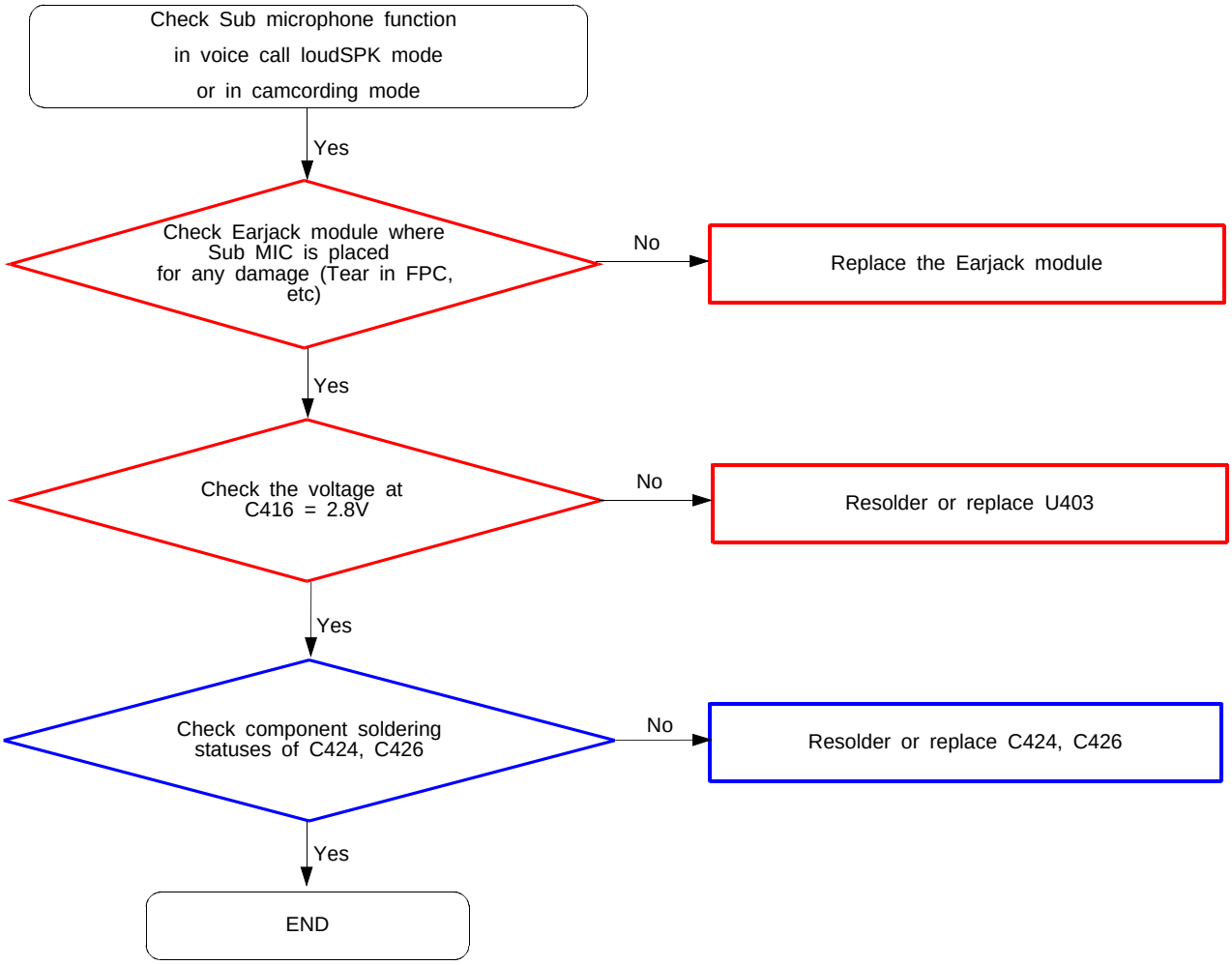


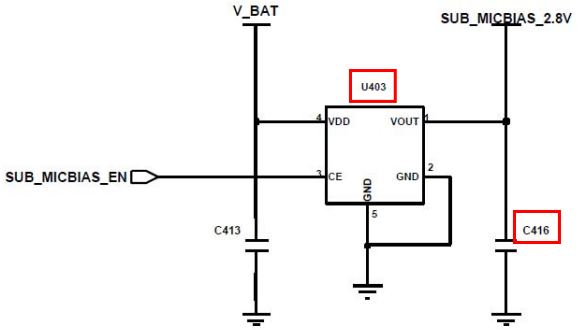
8-3-6. Microphone Part (Main MIC)

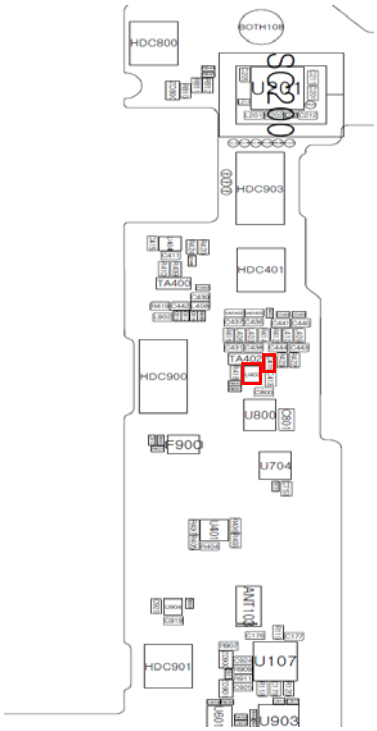


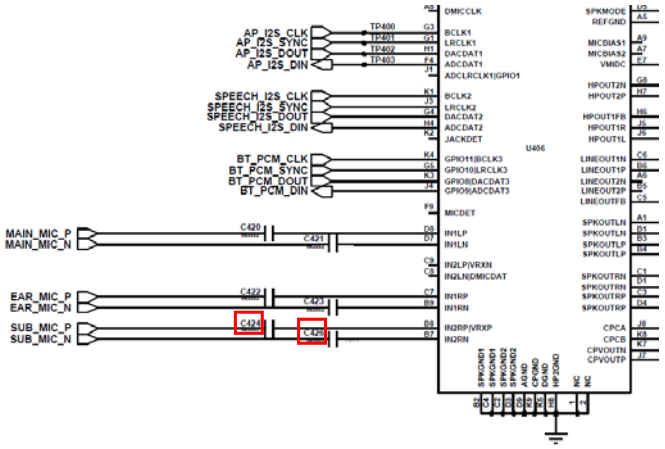


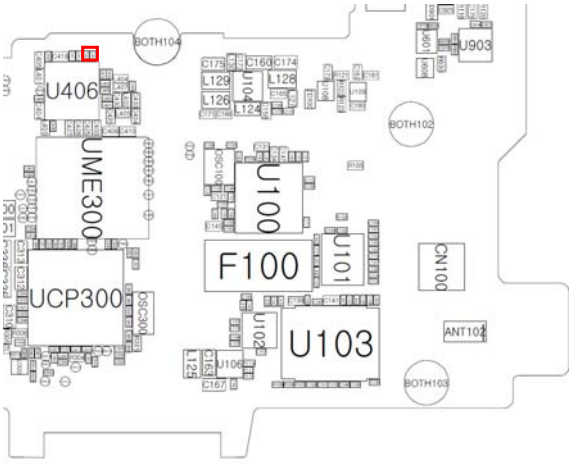
8-3-6-1. Microphone Part (Sub MIC)



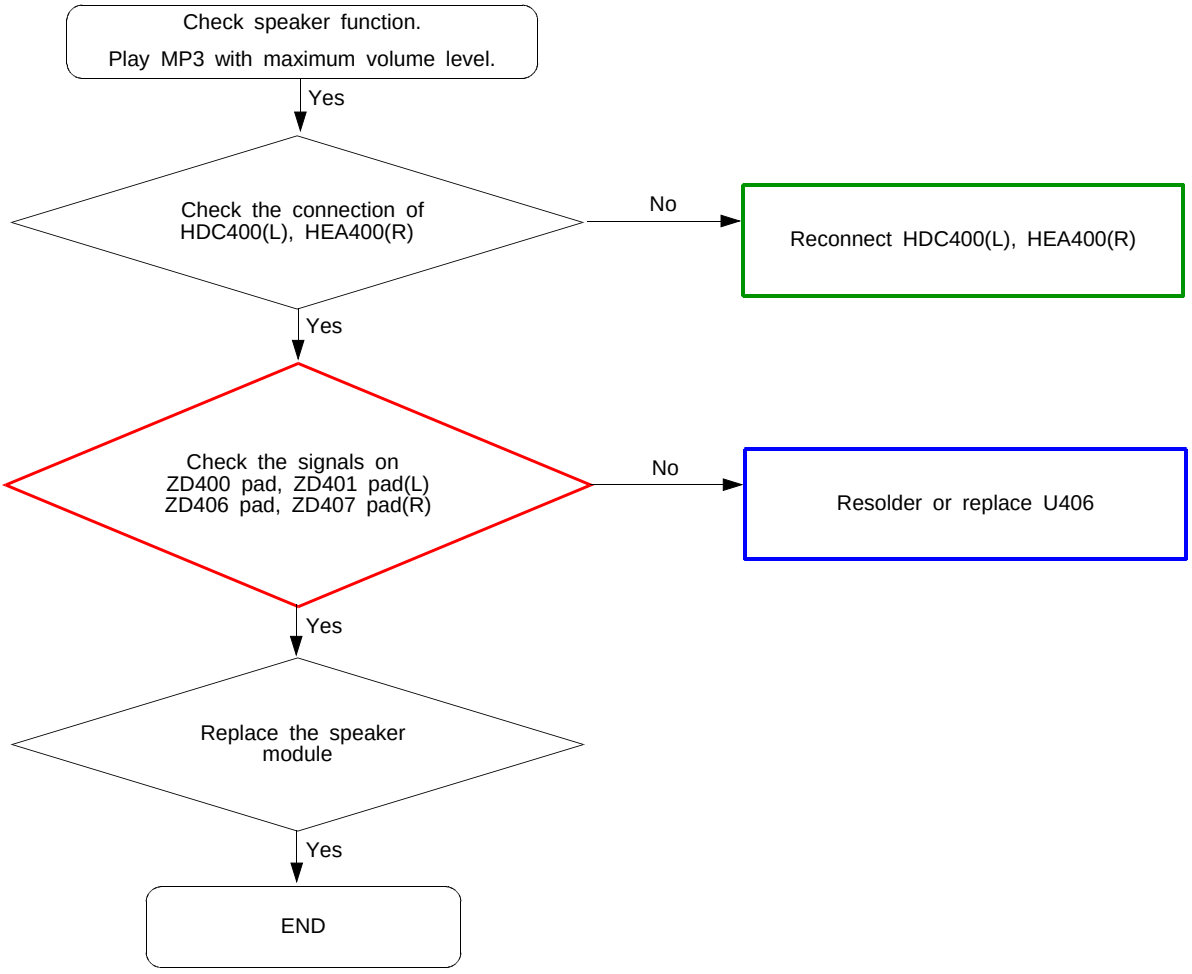


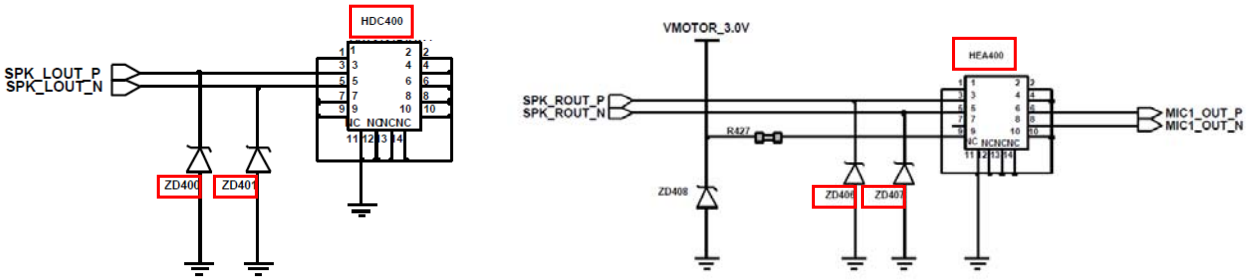


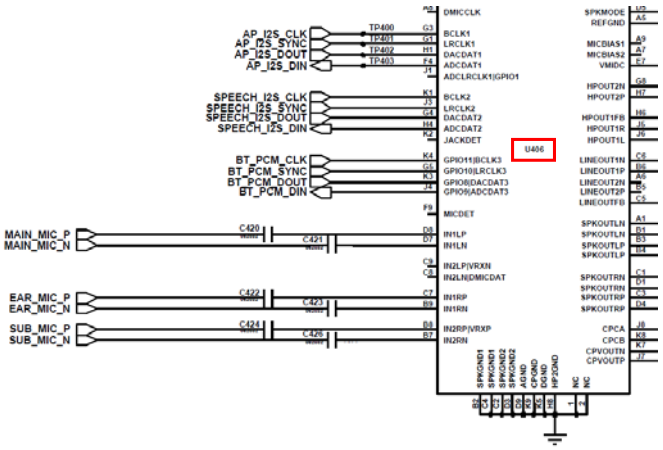


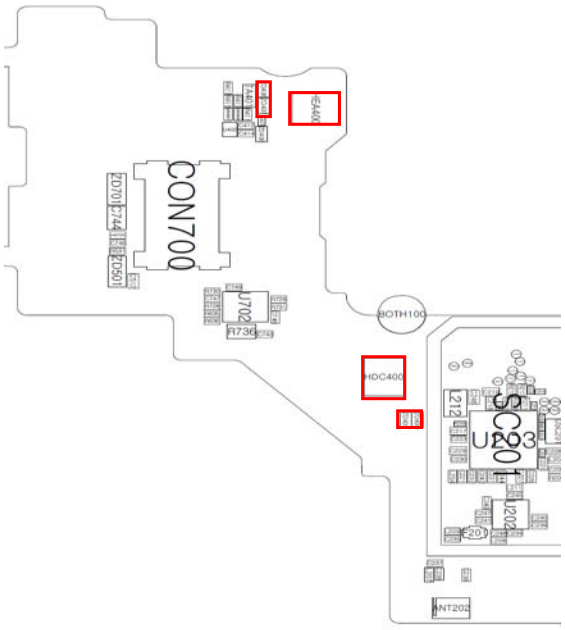


8-3-7. Speaker Part

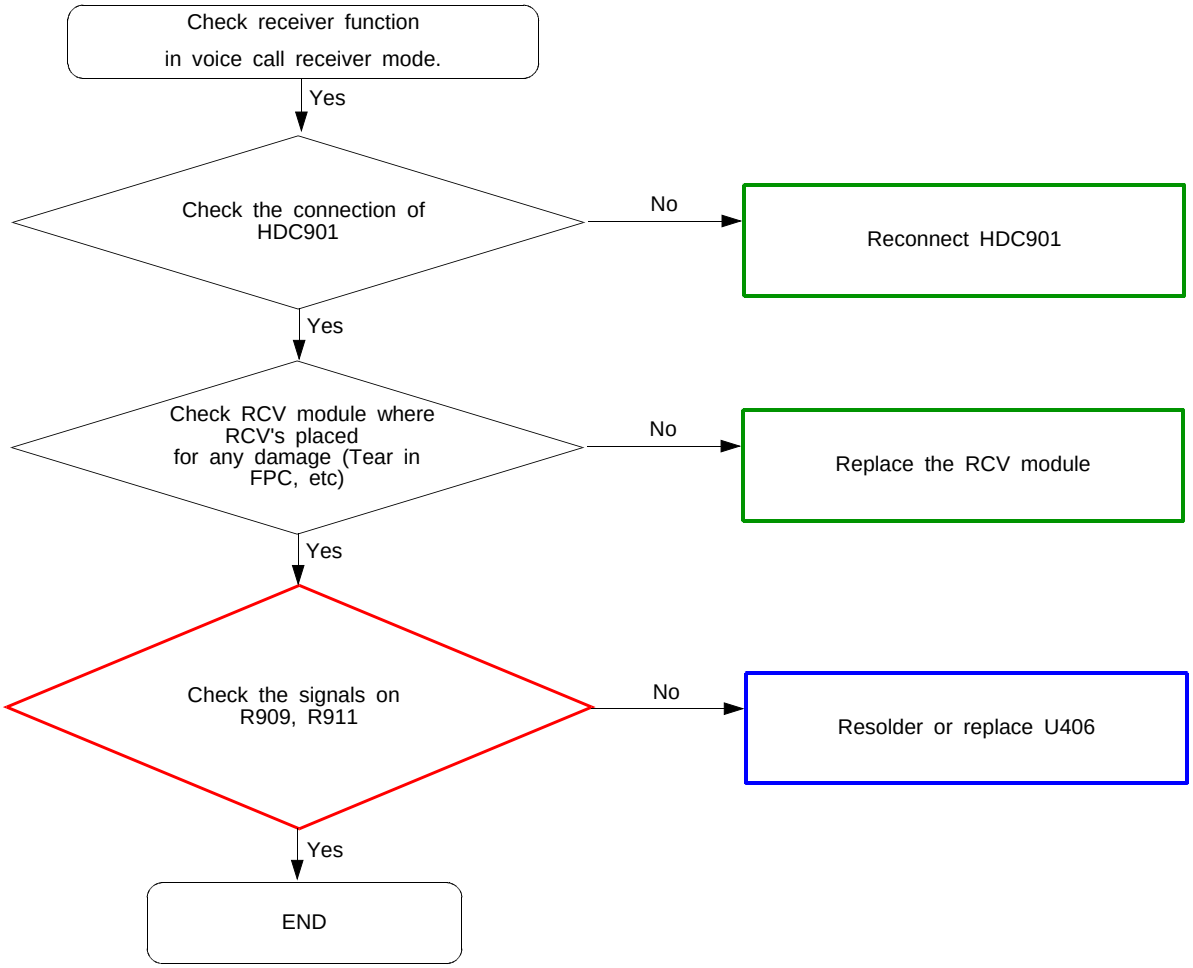


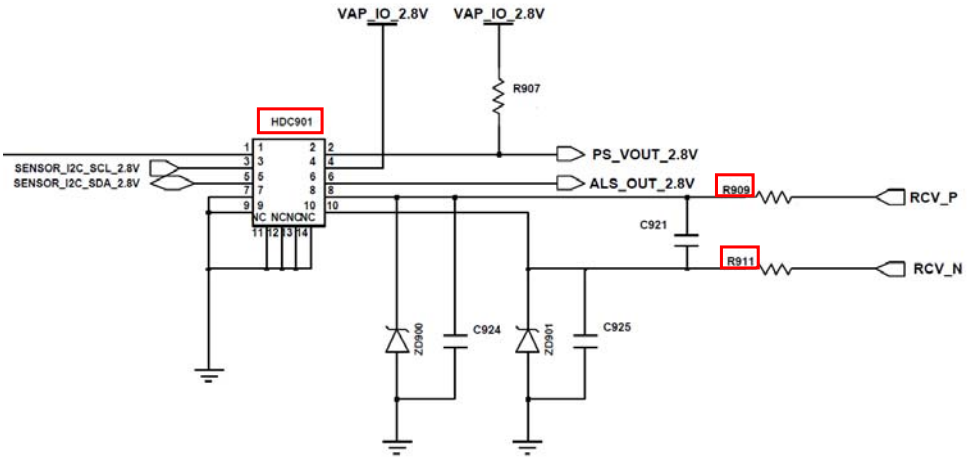


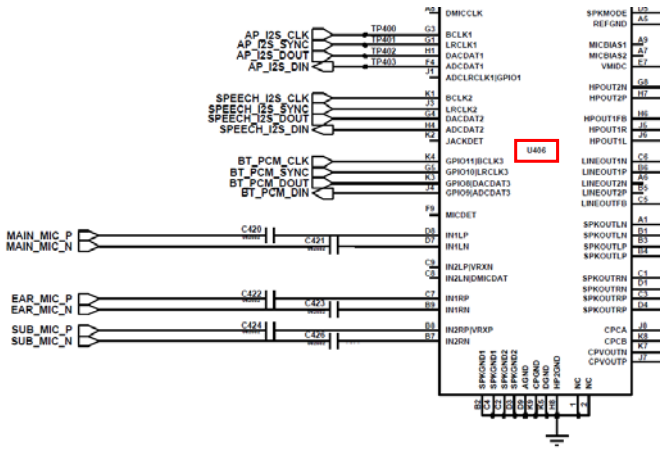


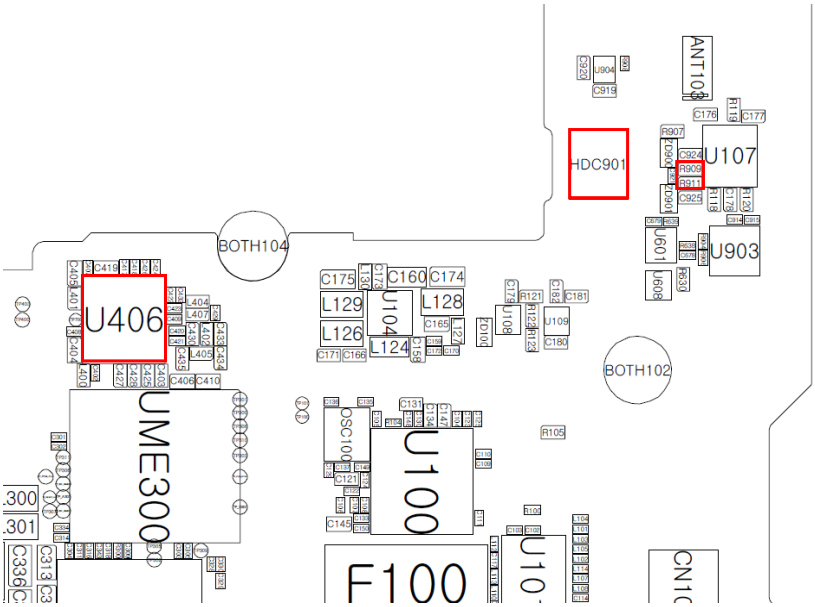


8-3-8. Receiver Part

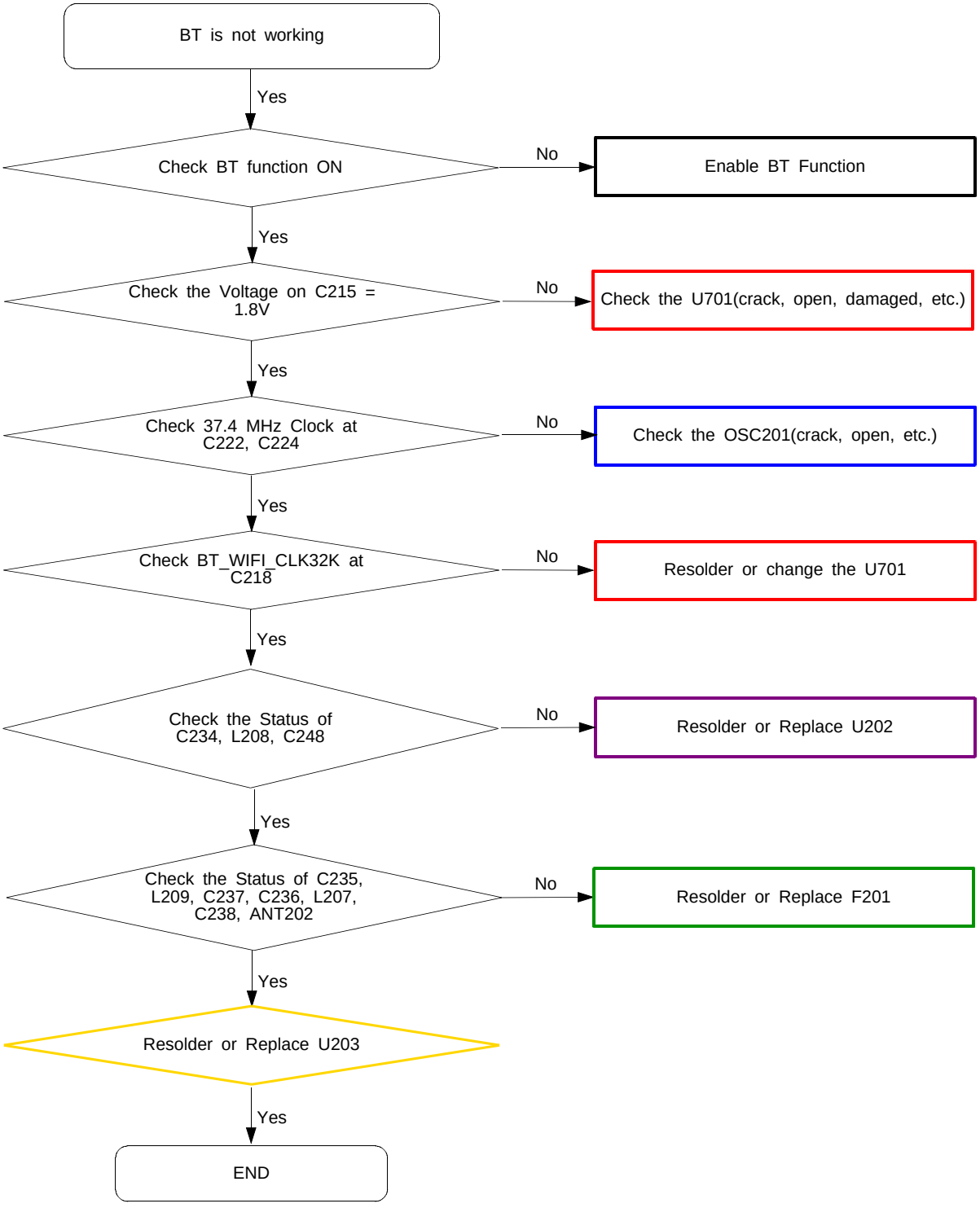


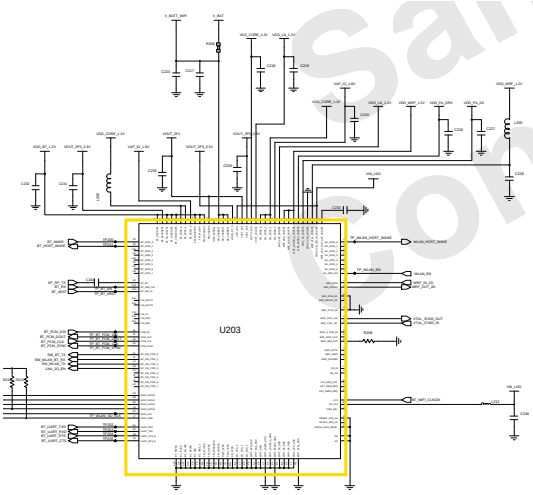


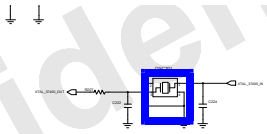




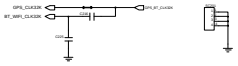
8-3-9. BT

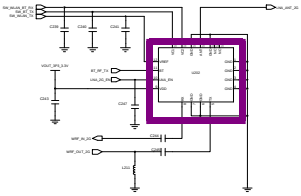




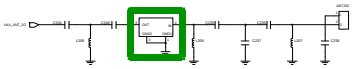


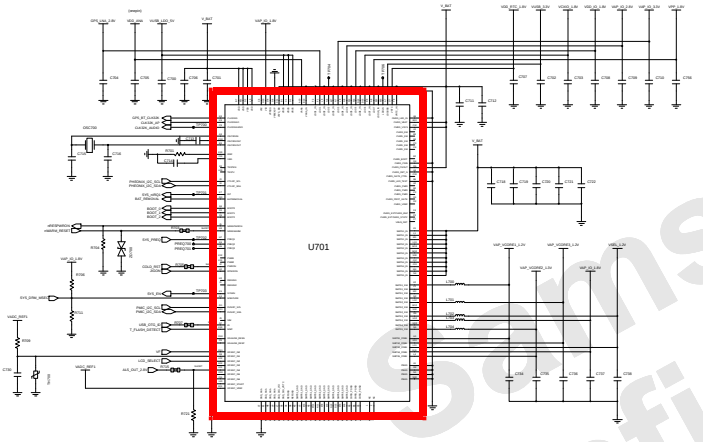
BT/WIFI OSC

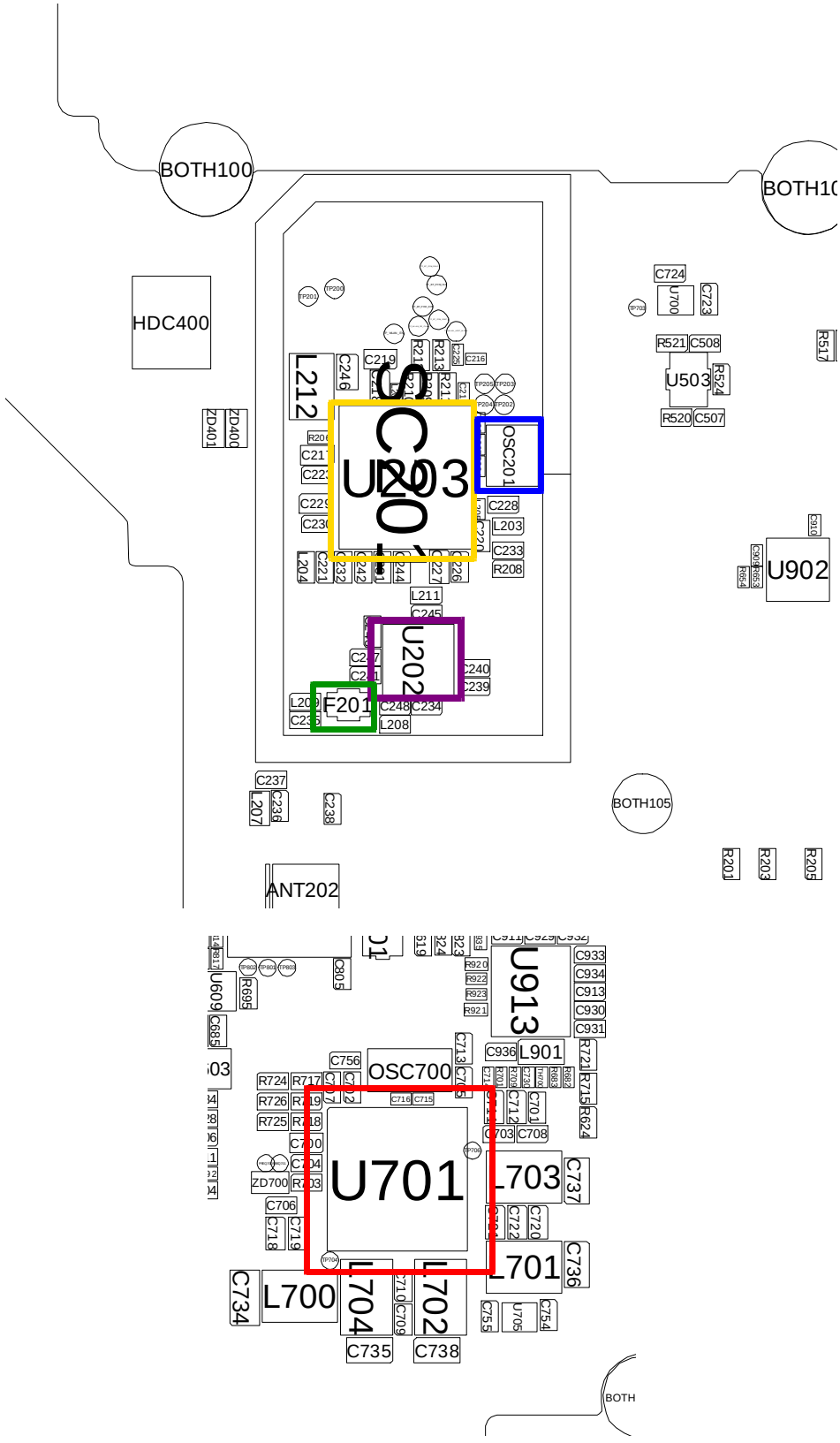




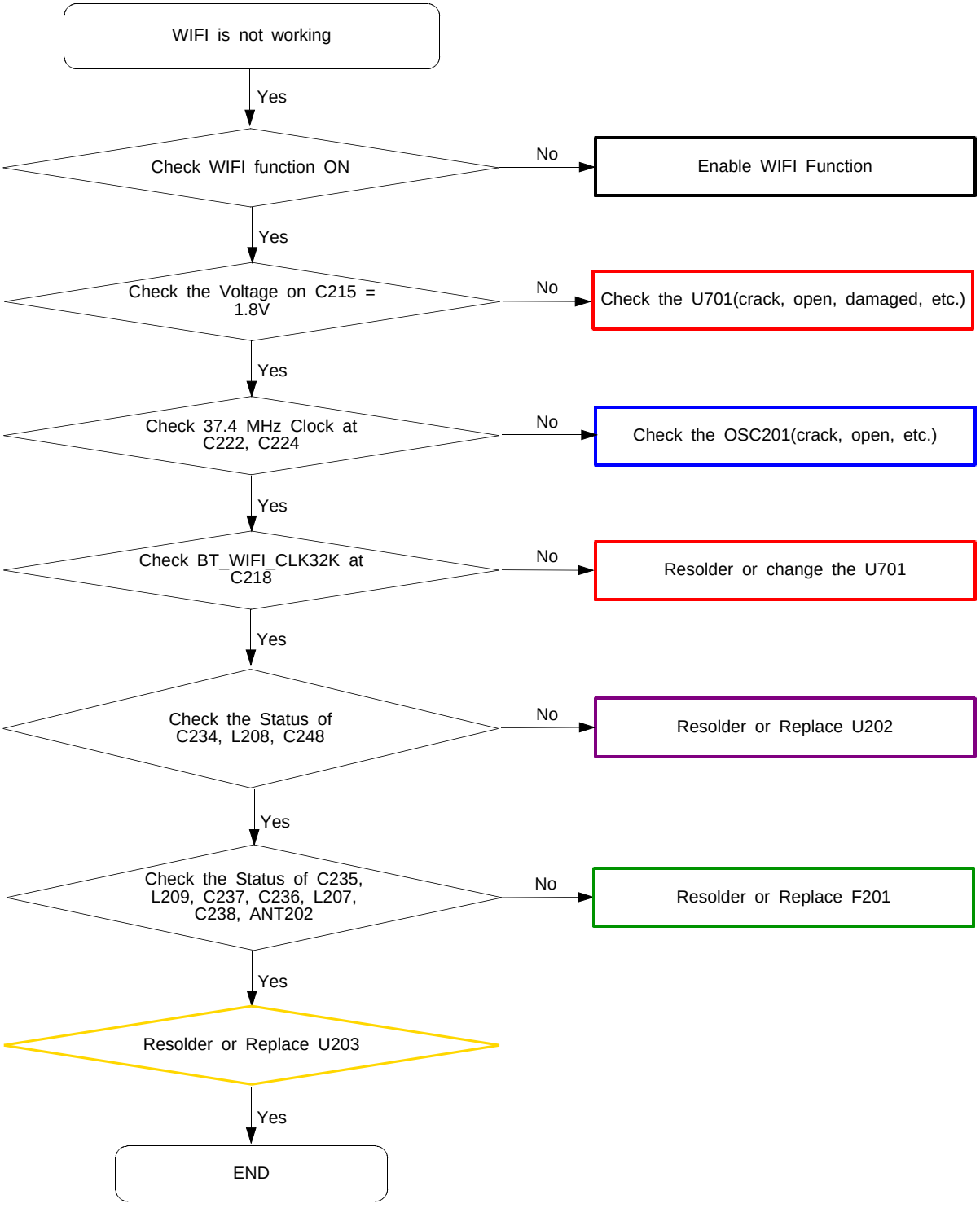
WIFI LNA(2G)

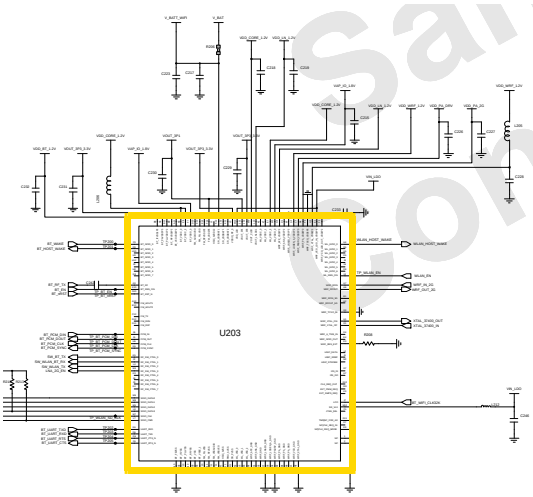


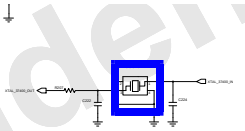




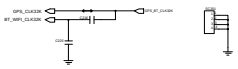
8-3-10. WIFI

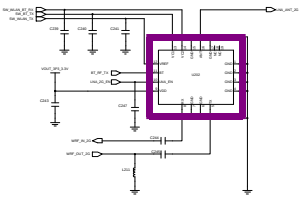




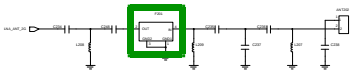


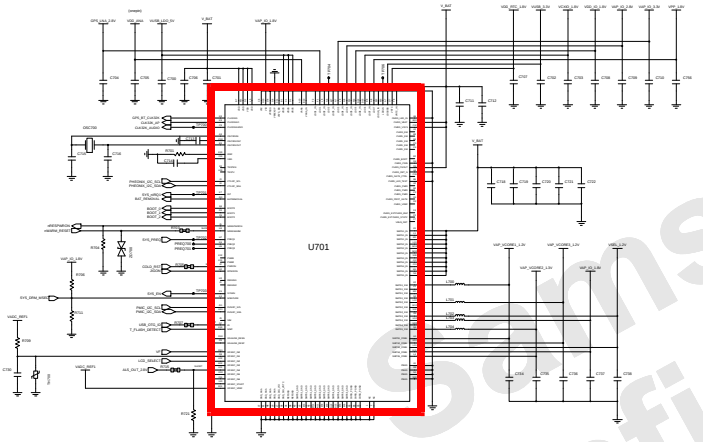
BT/WIFI OSC

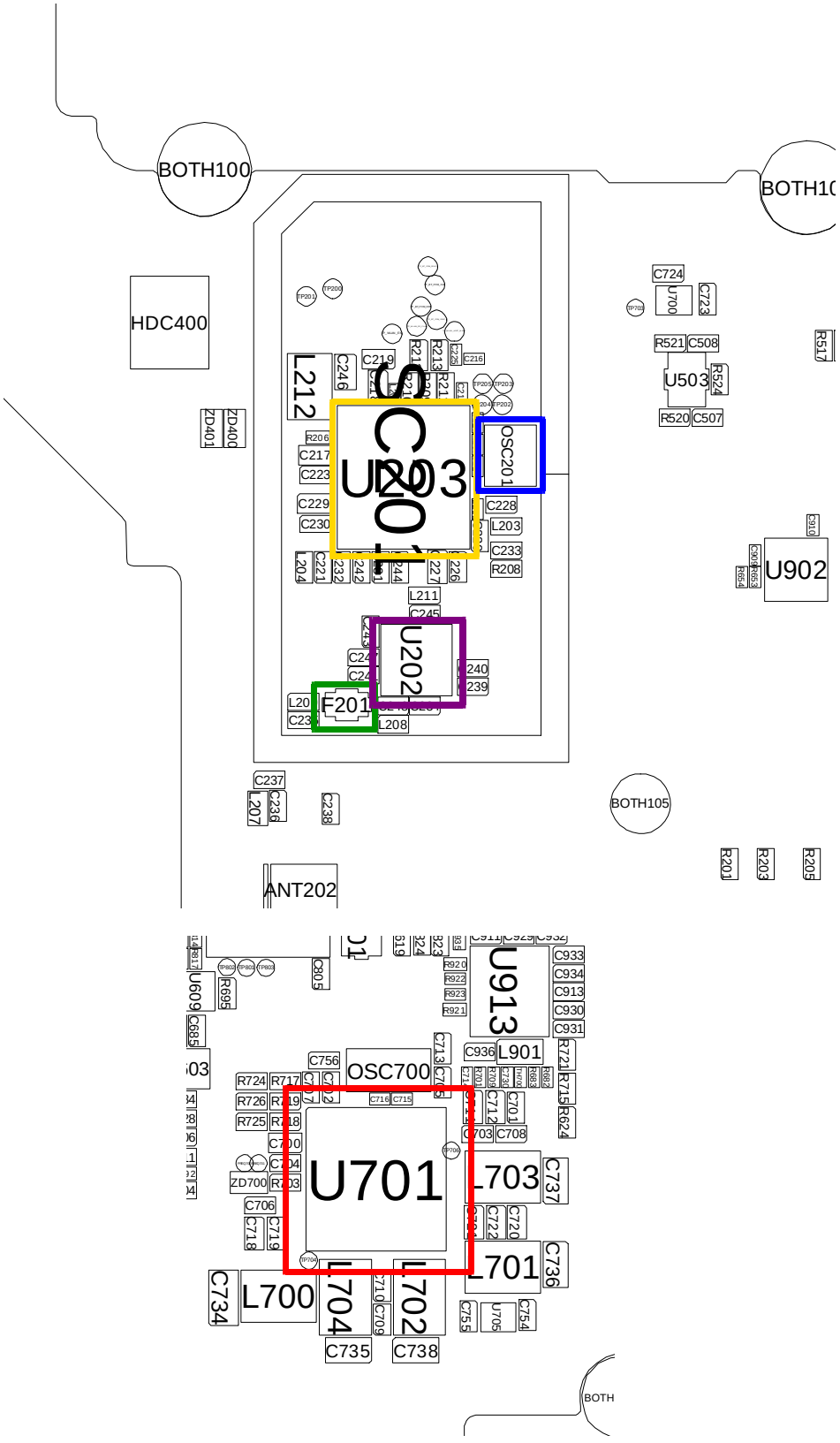




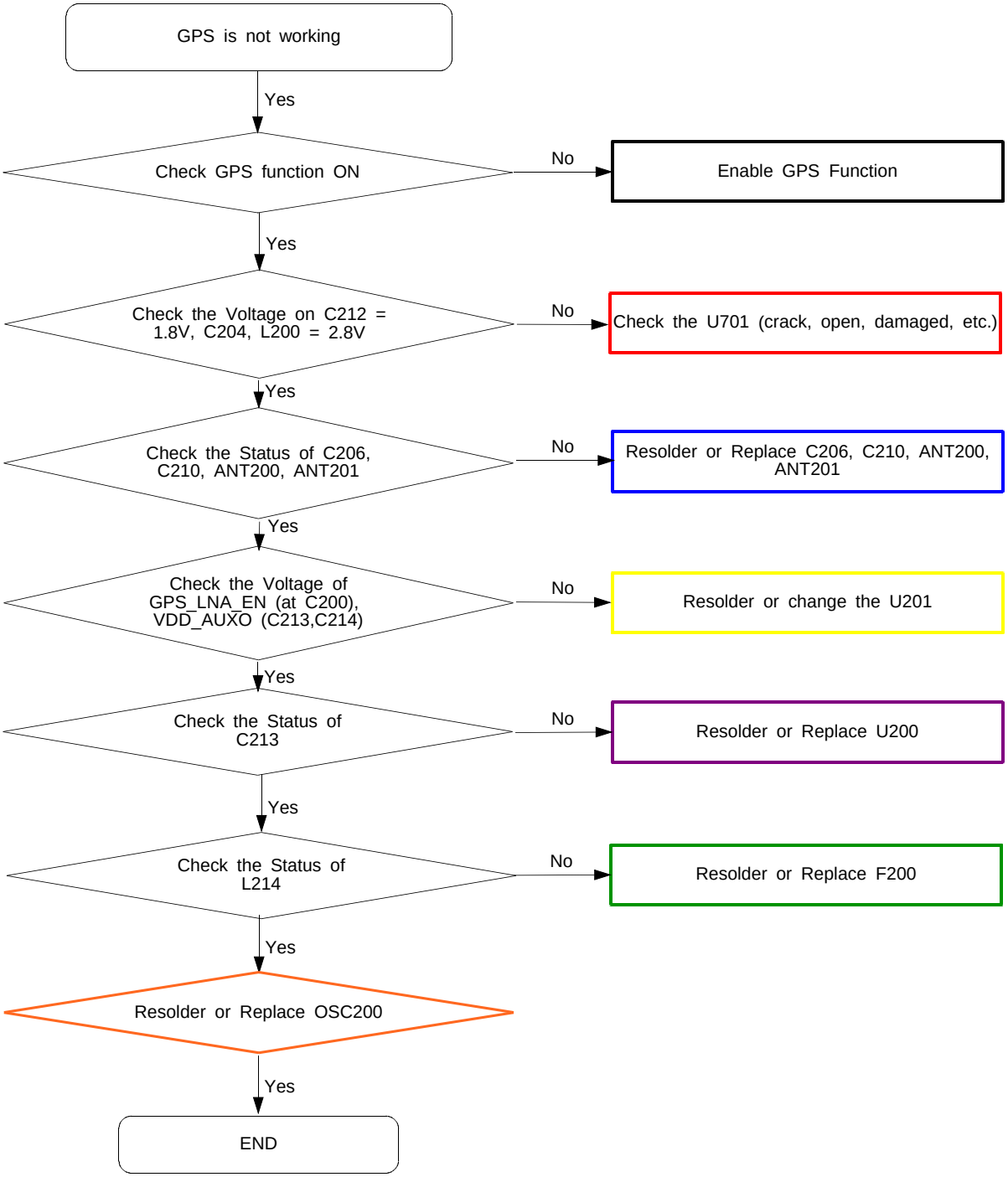
WIFI LNA(2G)

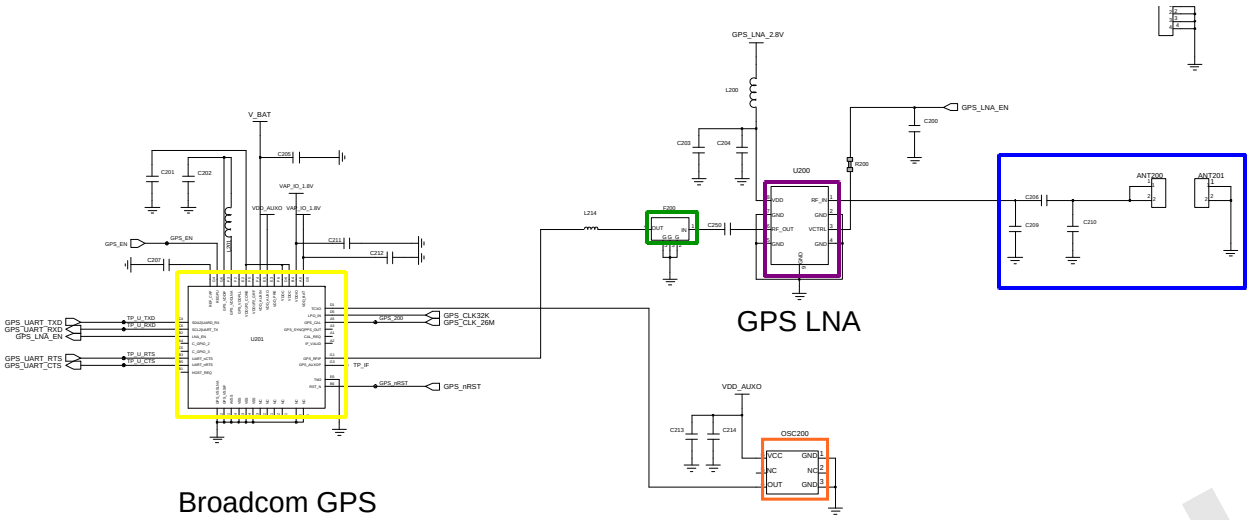


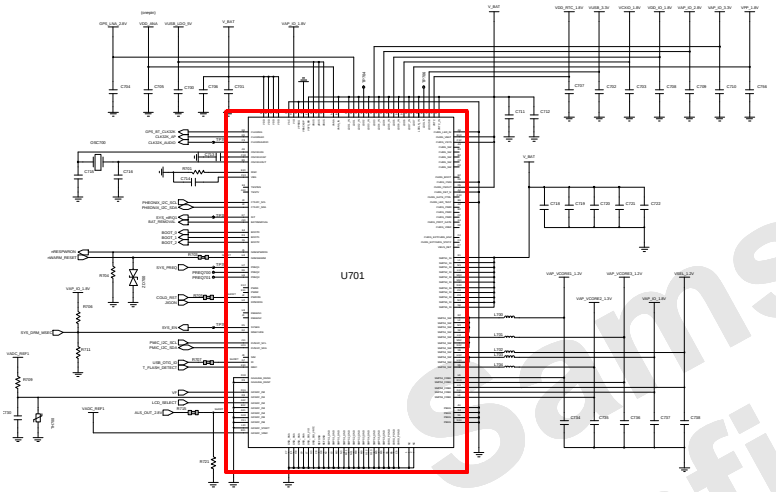


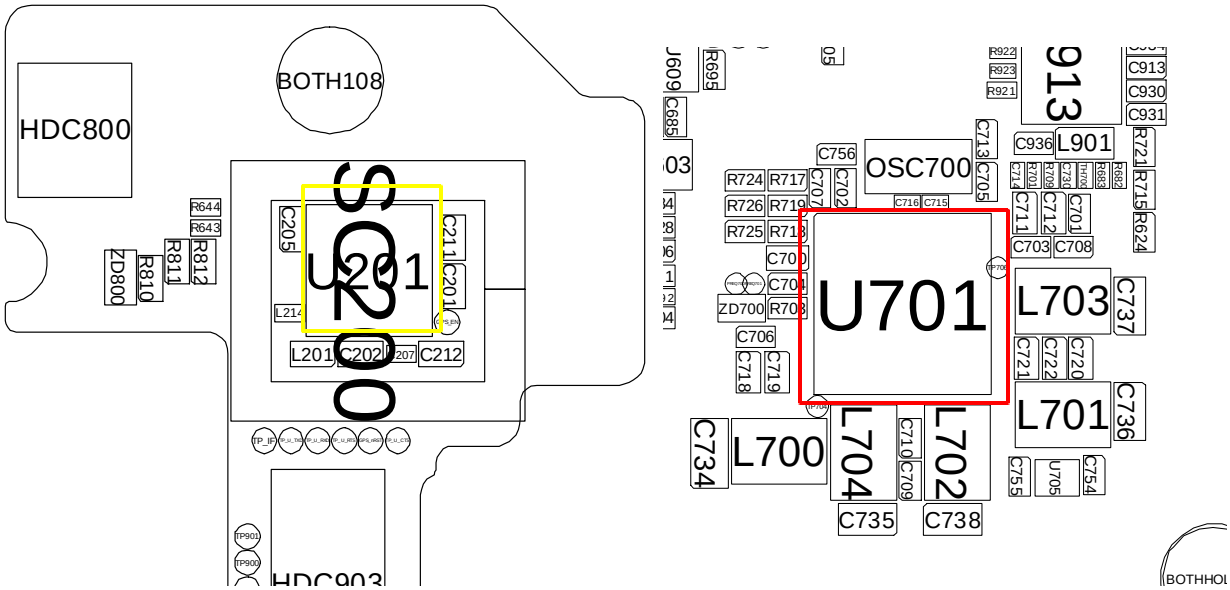


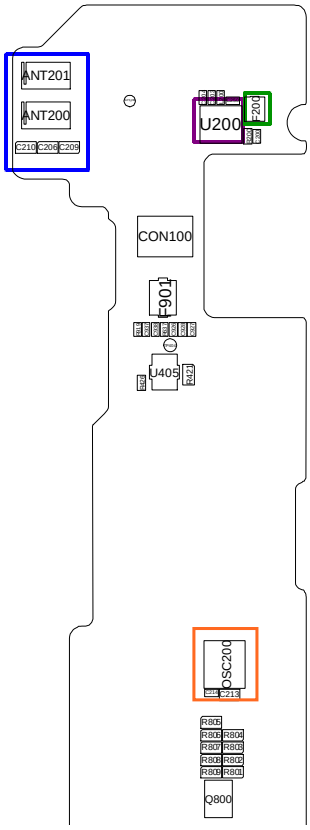
8-3-11. GPS



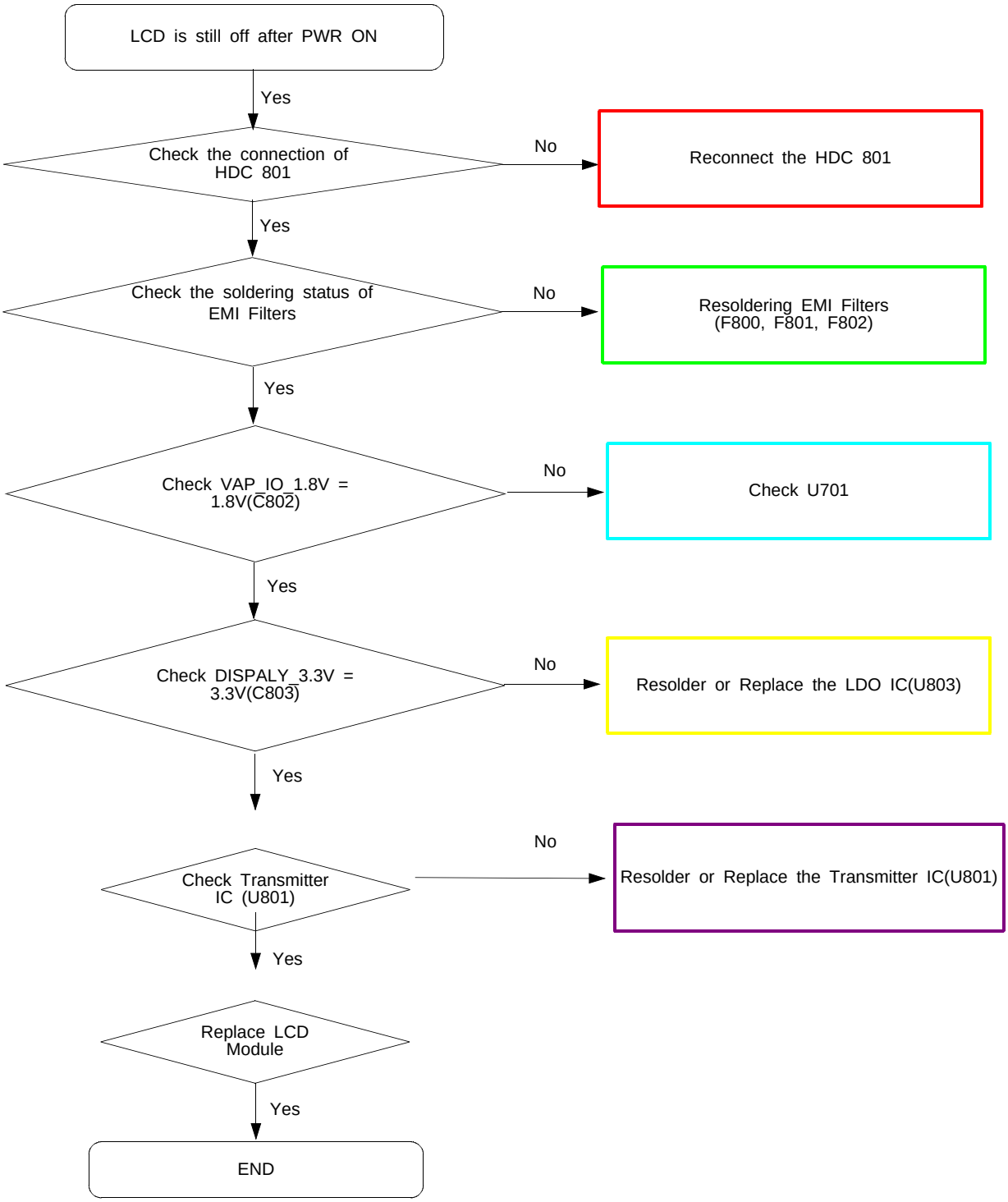


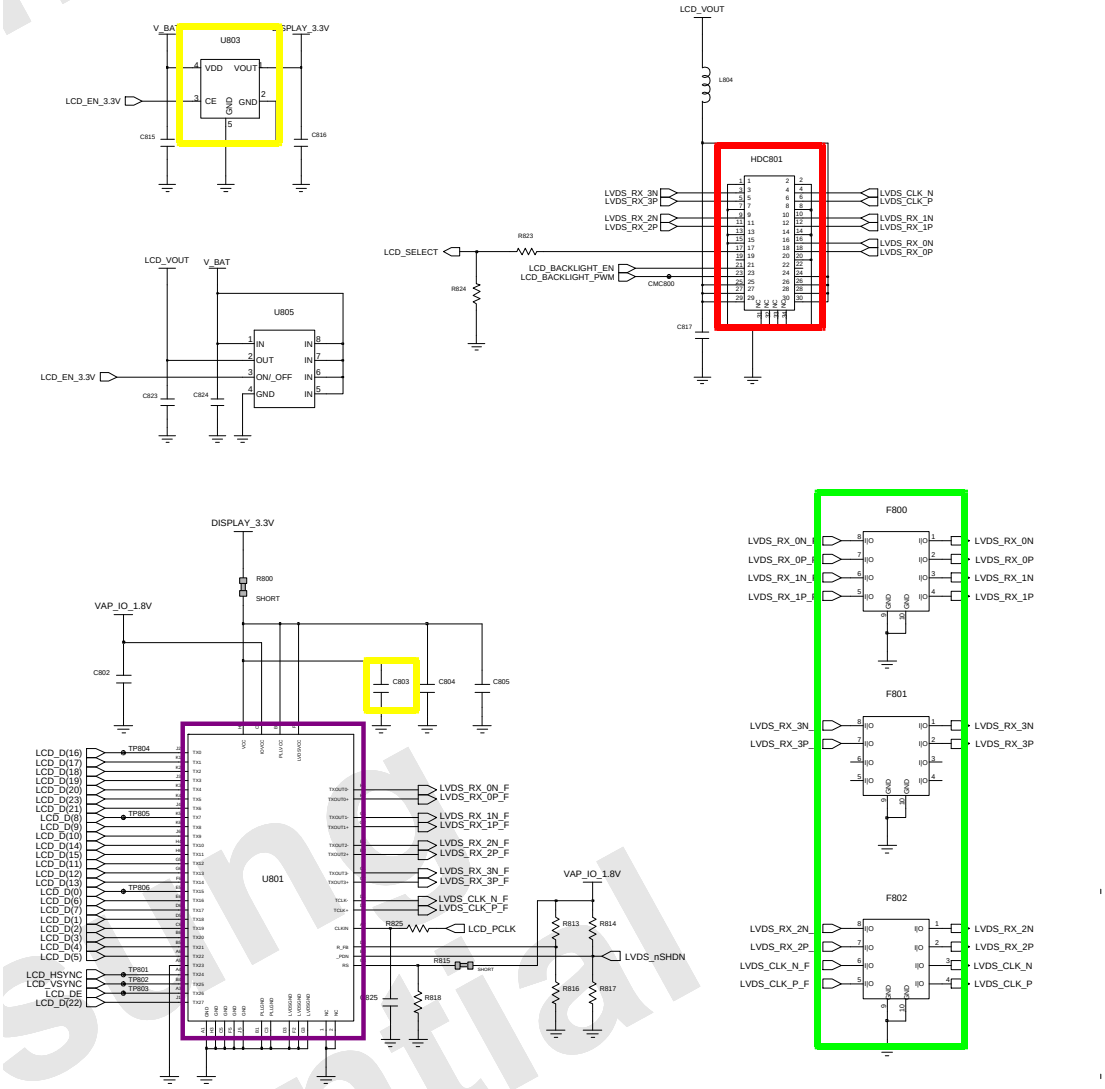




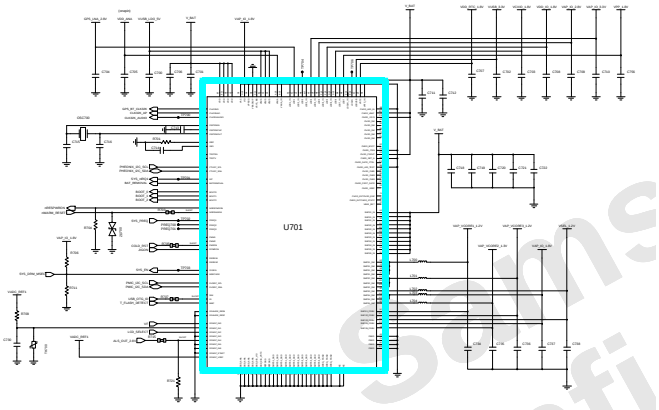


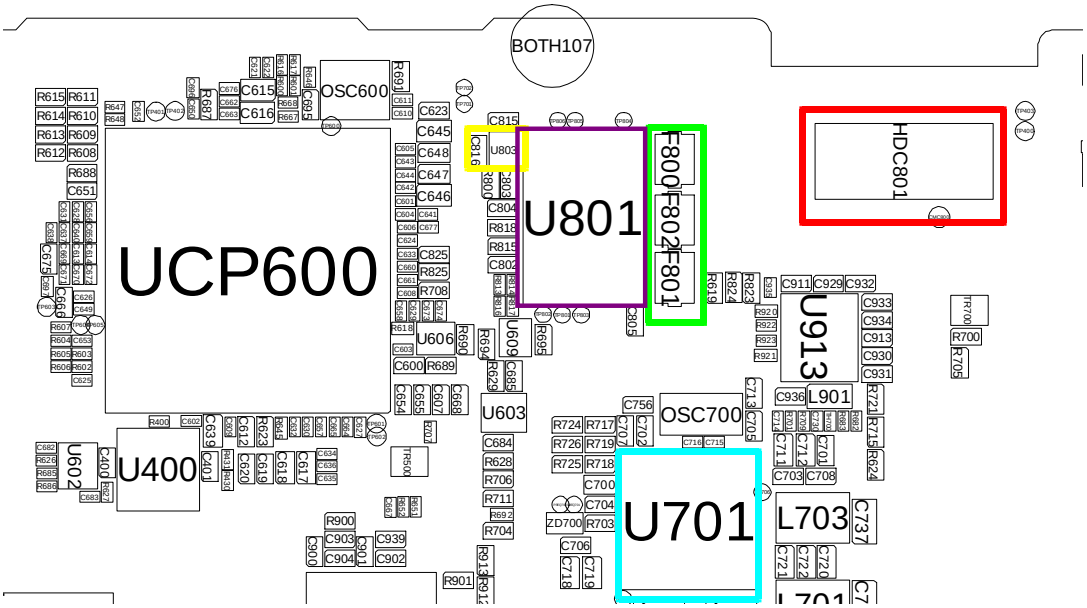
8-3-12. LCD



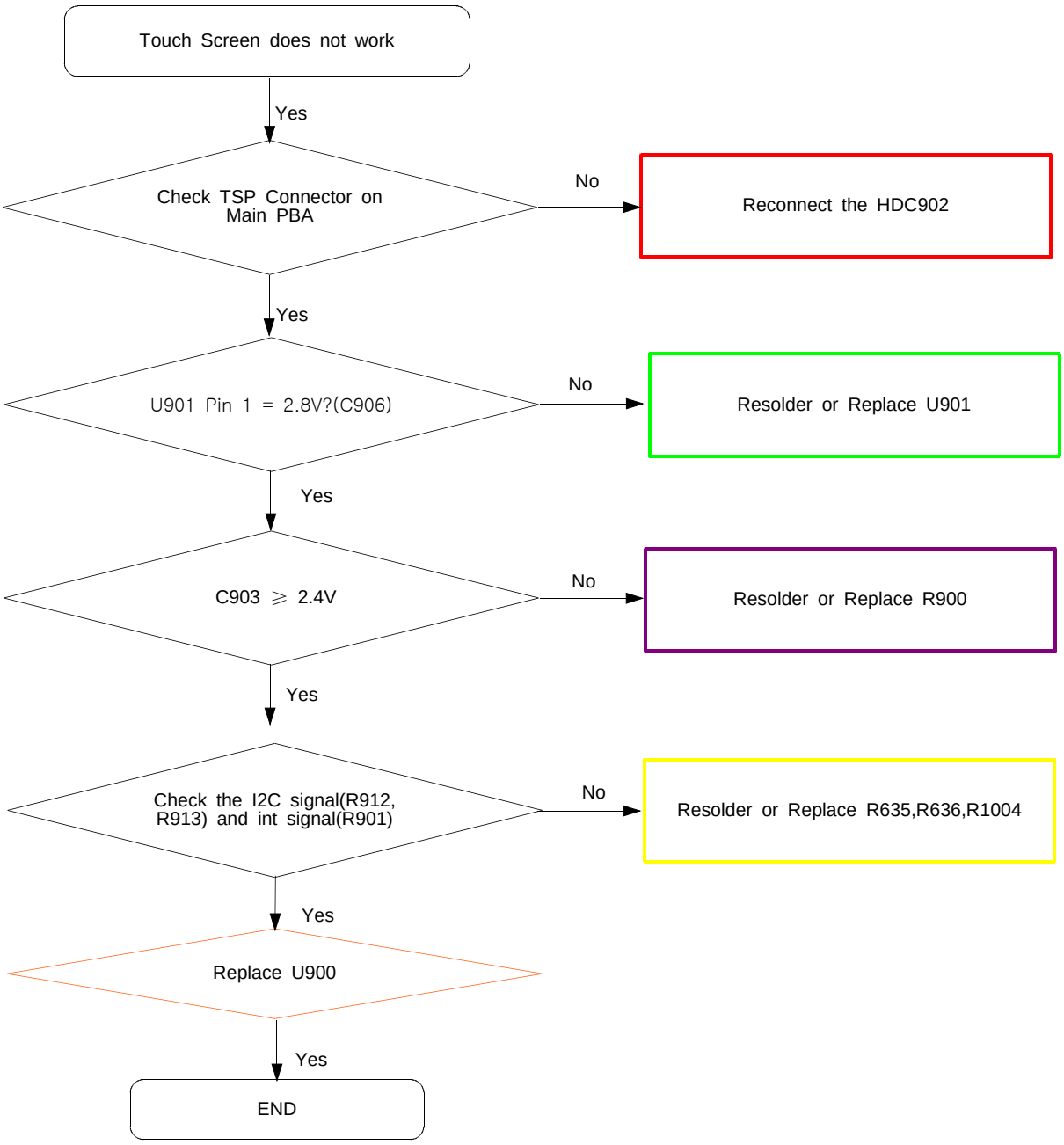


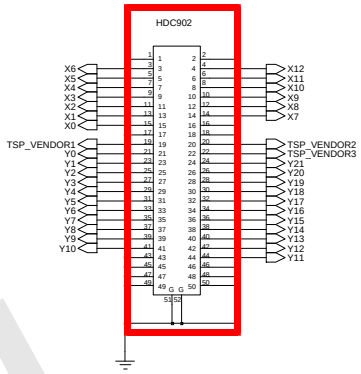
LVDS Transmitter



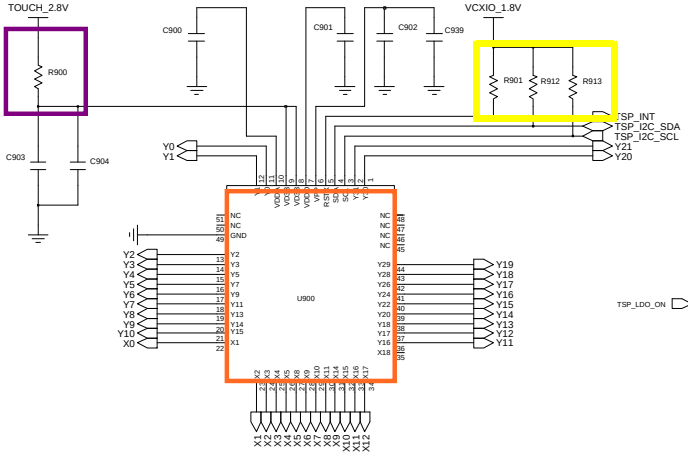


8-3-13. TSP

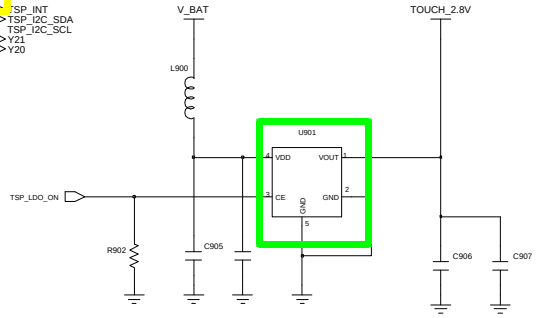




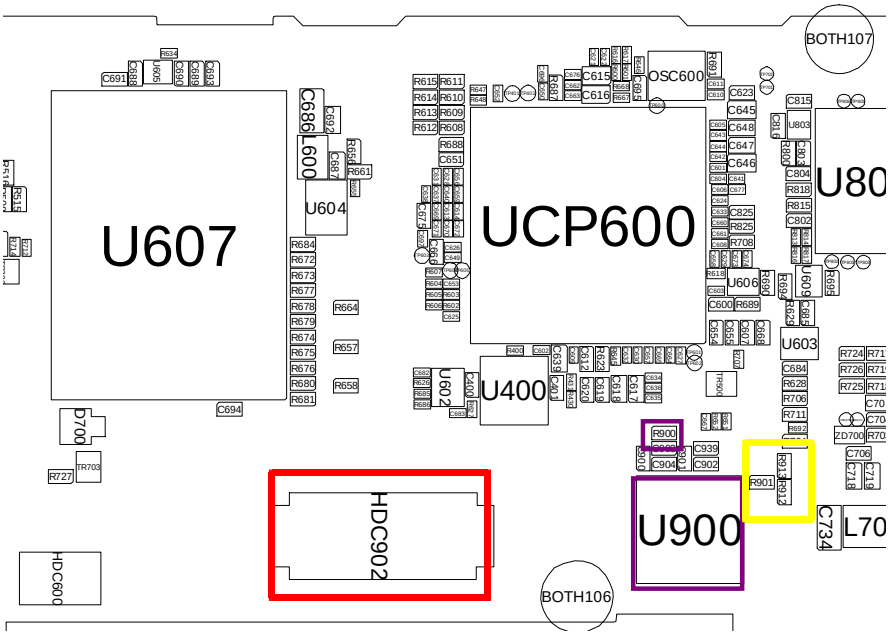
50Pin TOUCH Con.

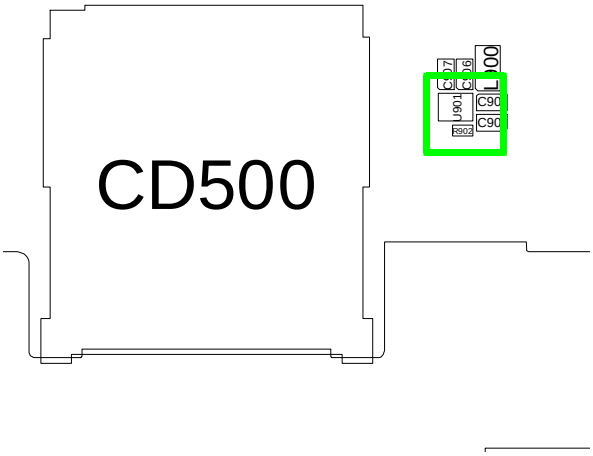


TOUCH SENSOR IC

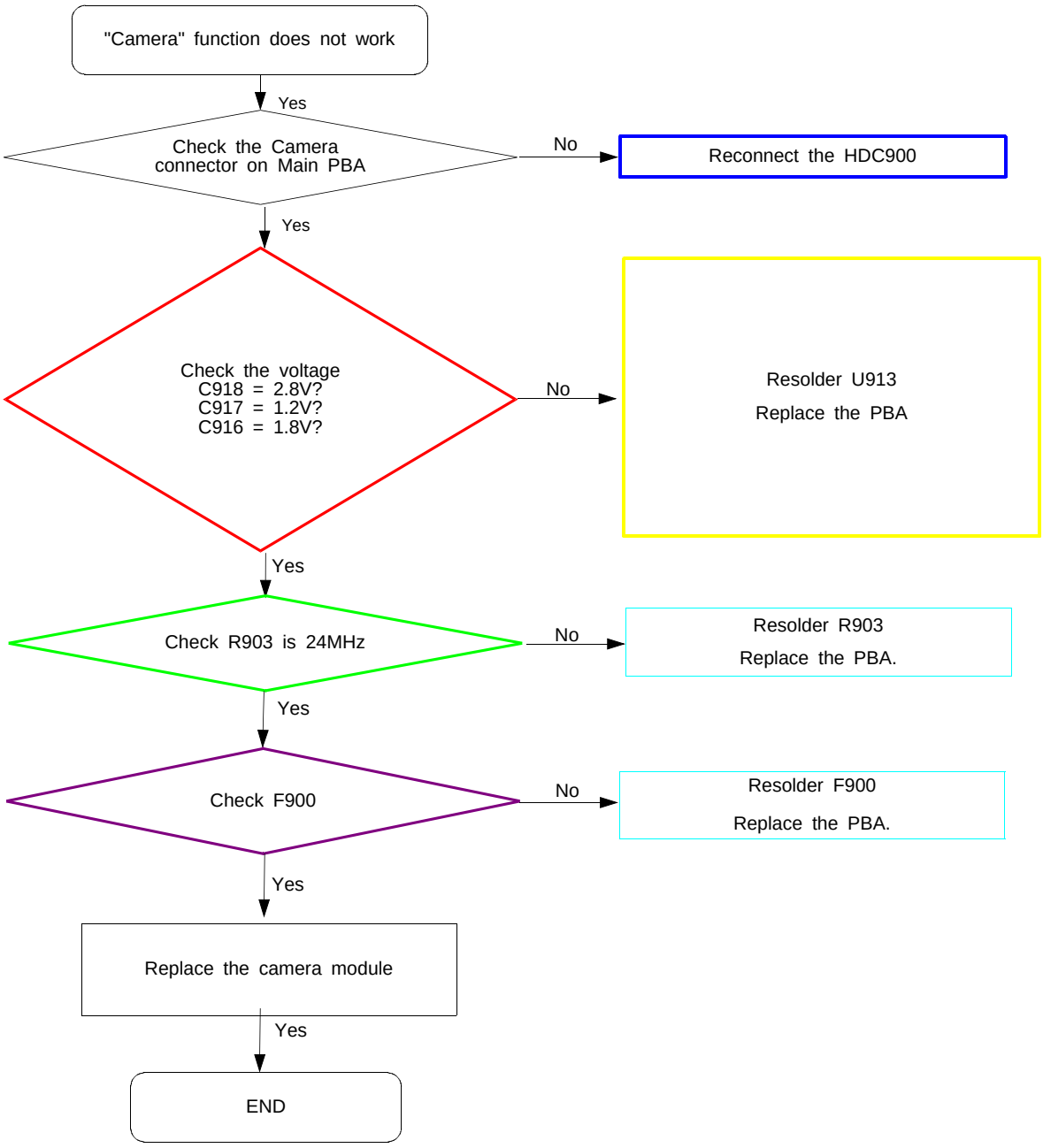


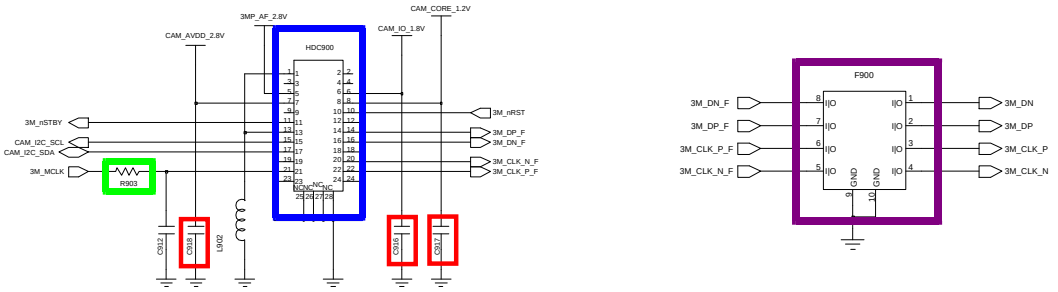
TOUCH LDO



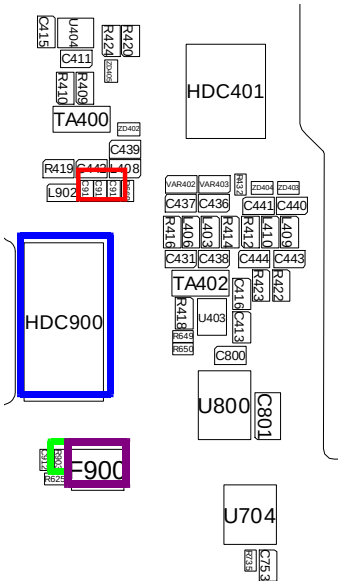


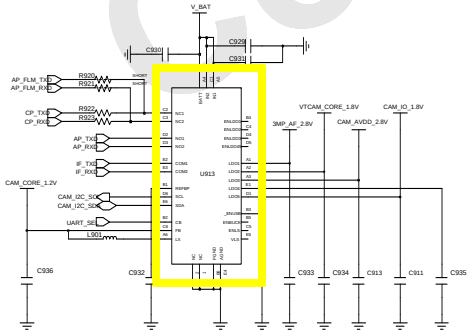
8-3-14. 3M CAM

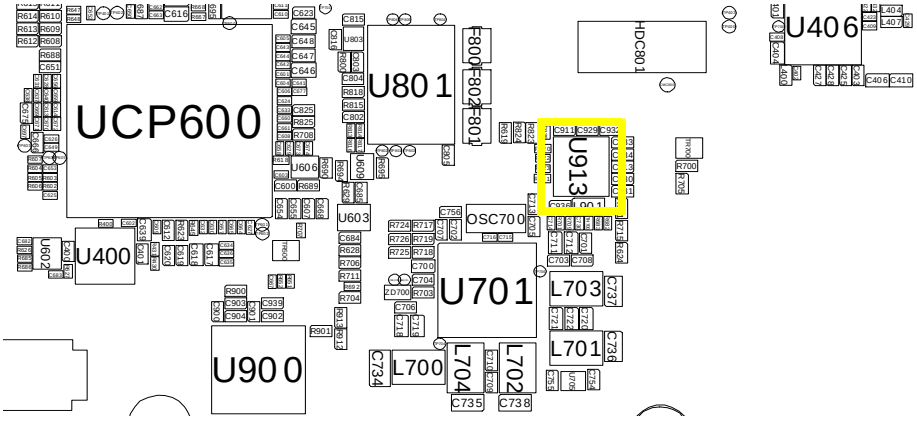




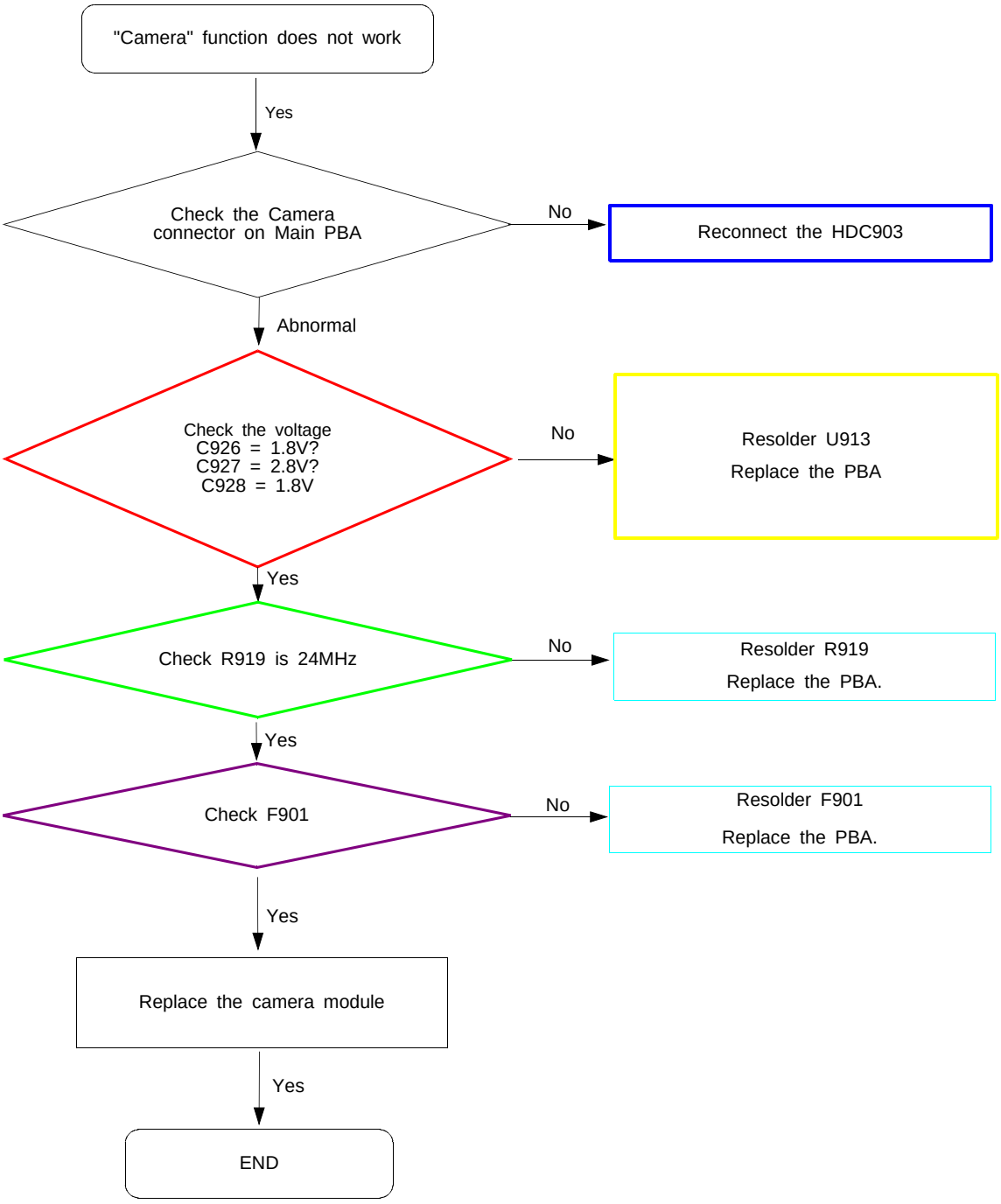
3M CAM

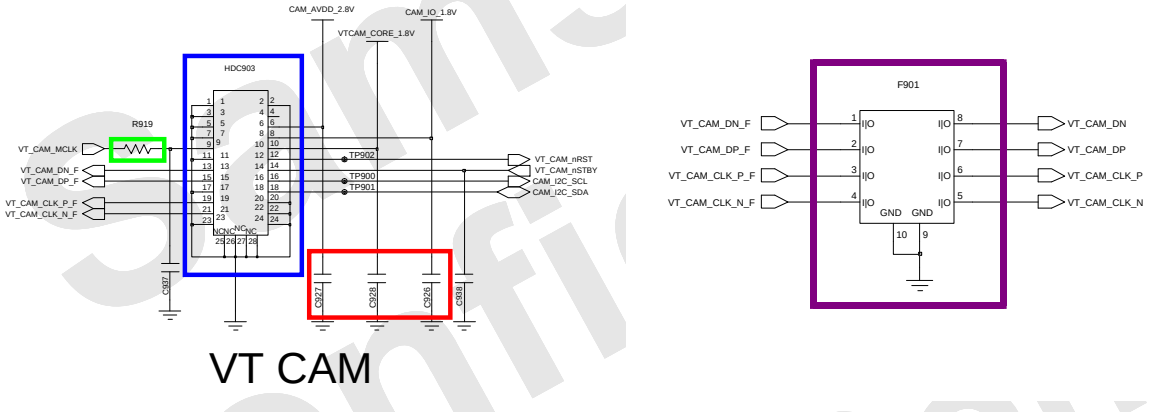




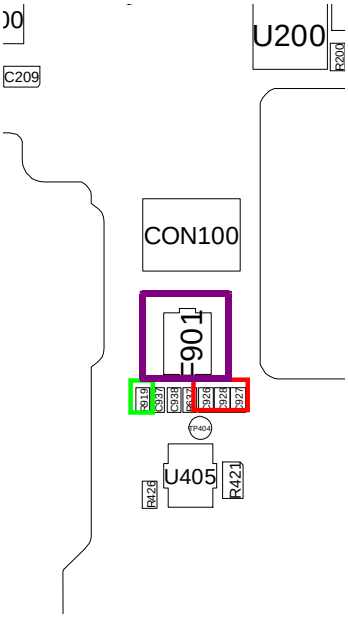


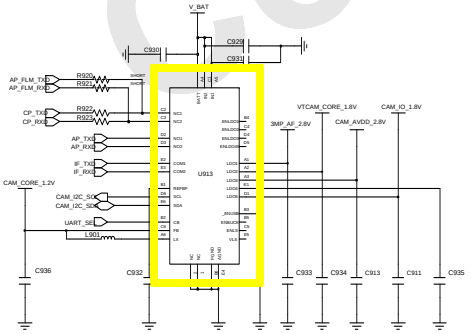
8-3-15. VGA CAM

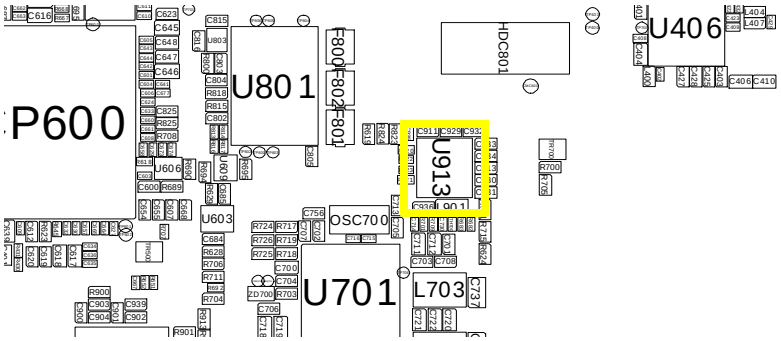


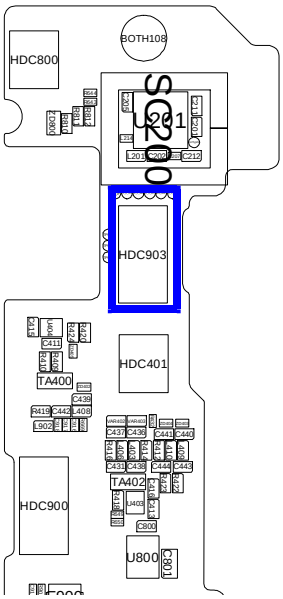


VT CAM

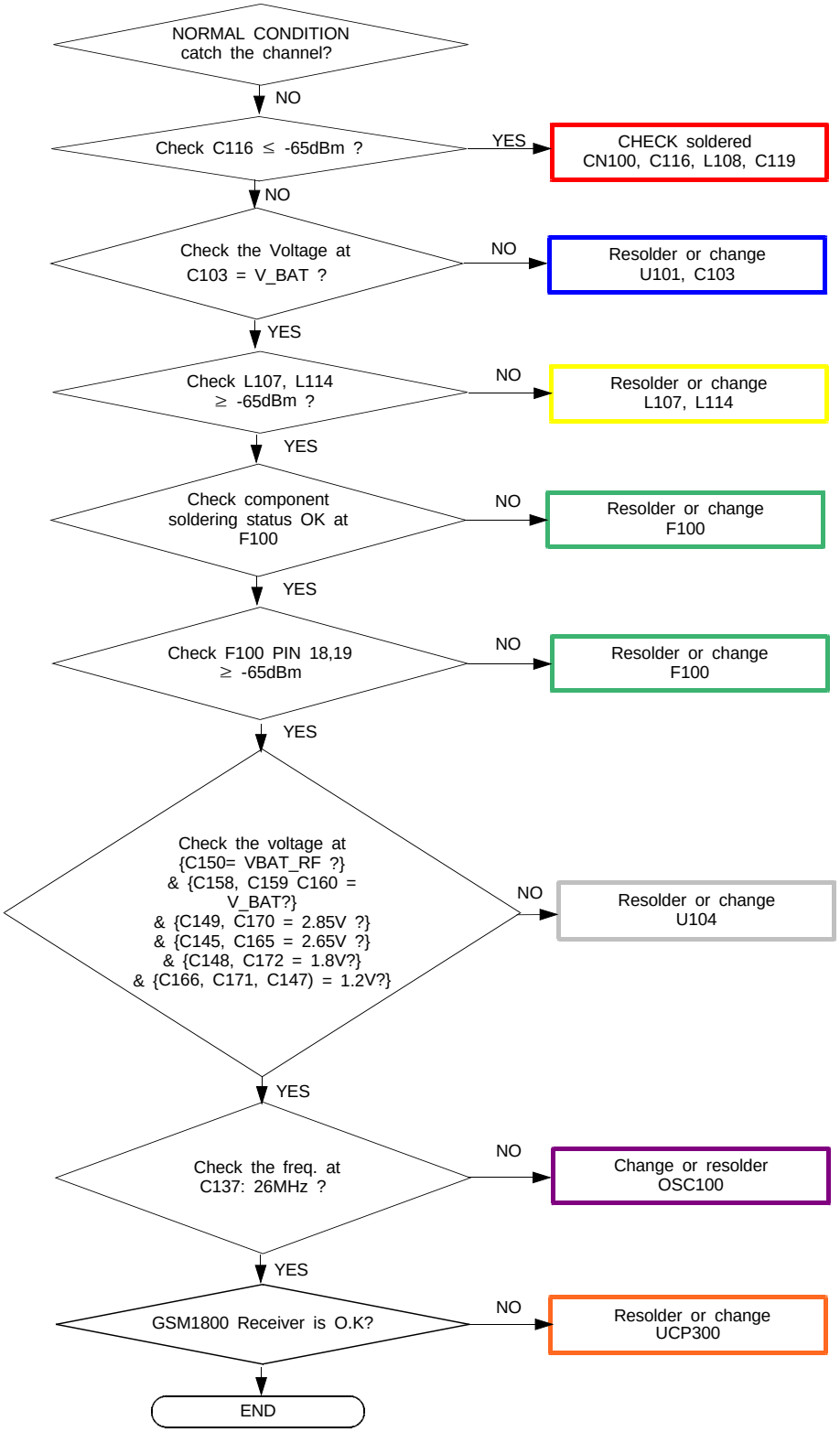


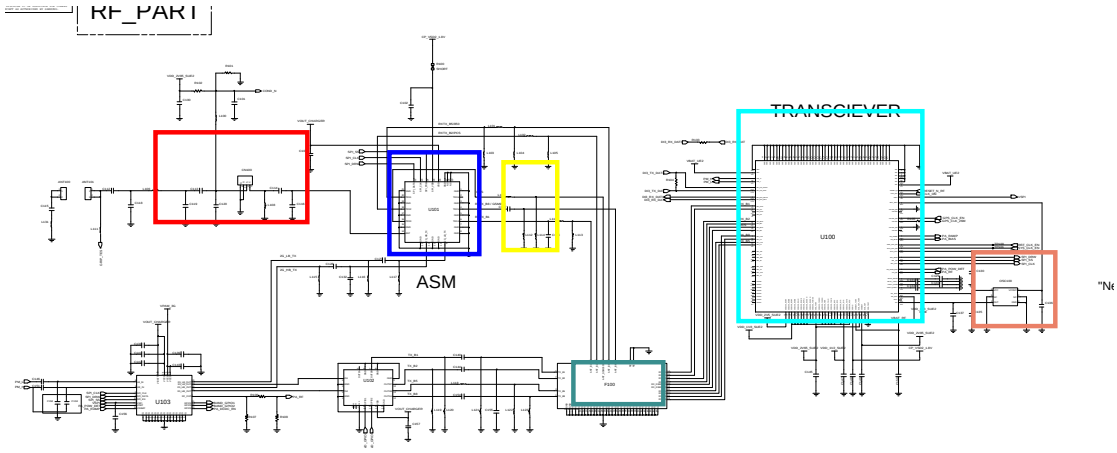


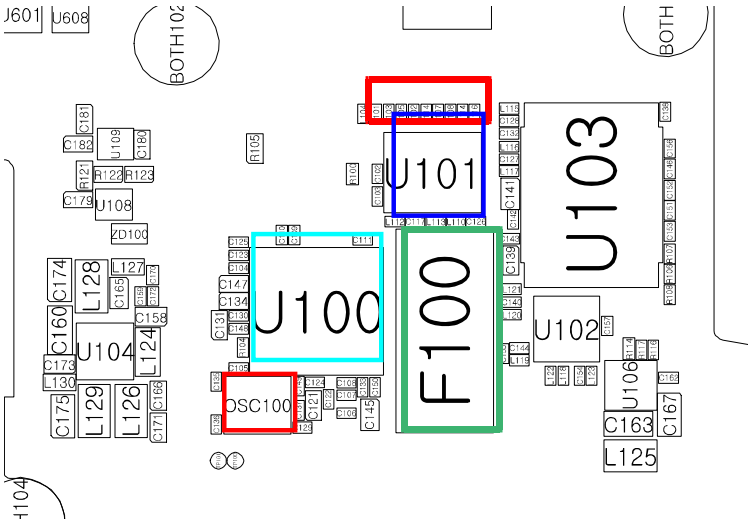




8-3-16. GSM1800 RX

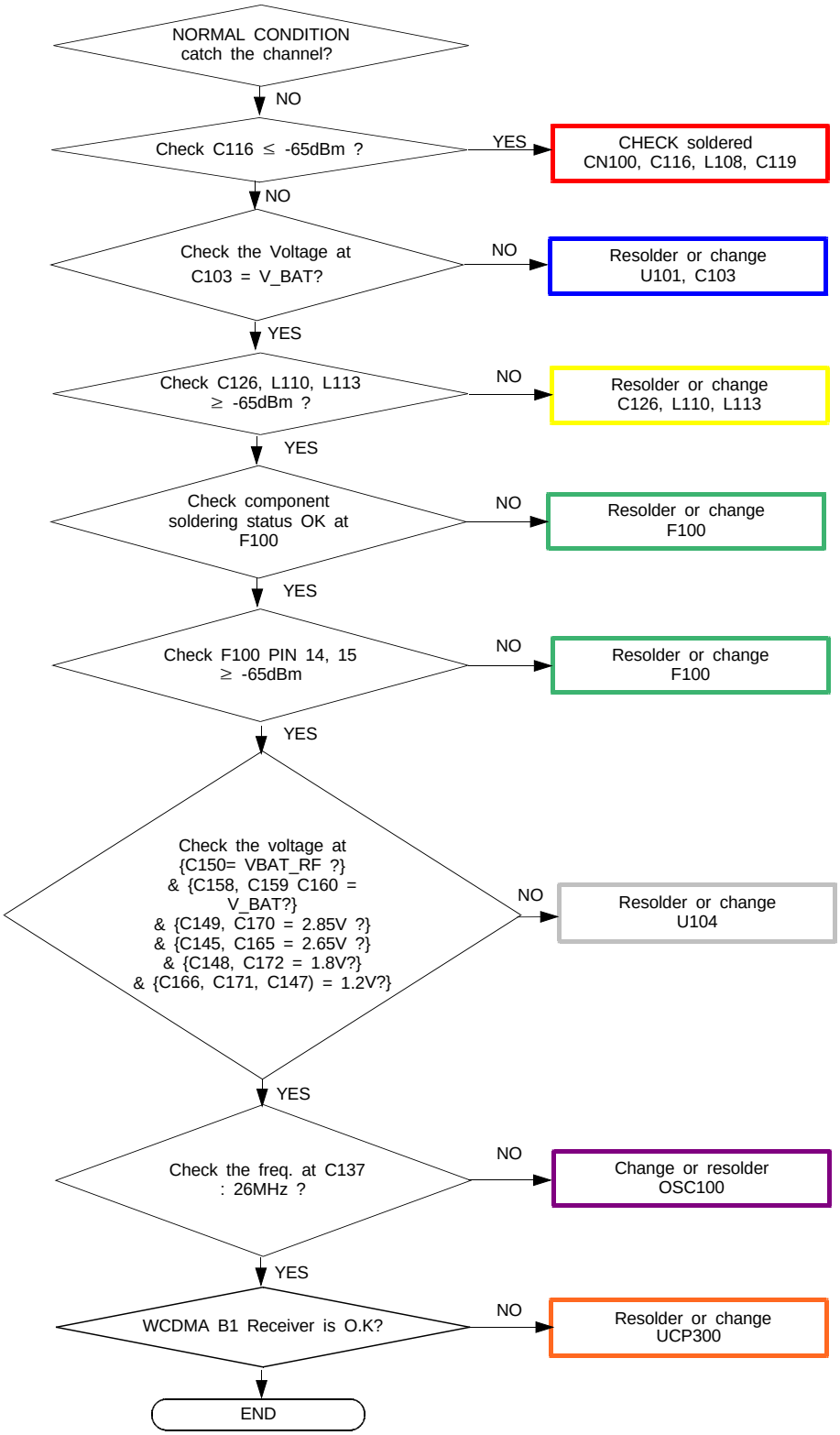


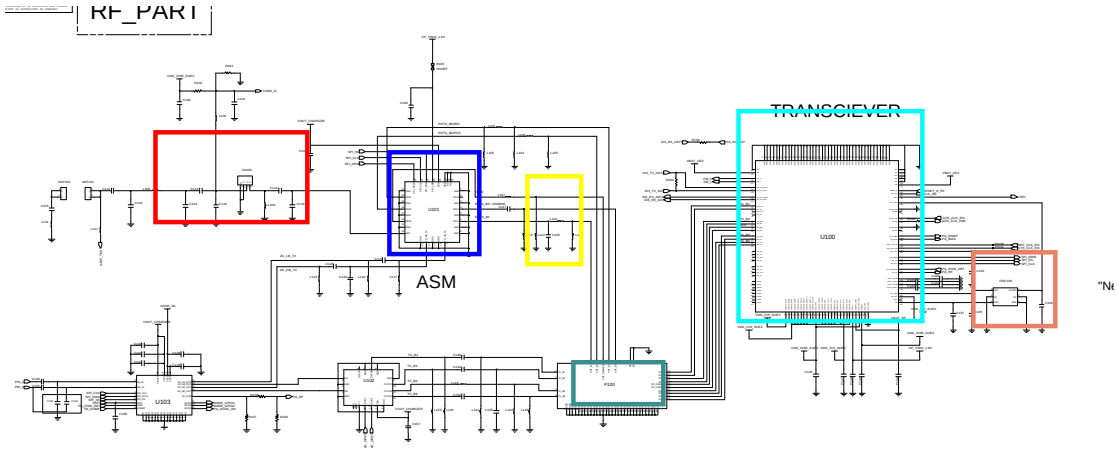


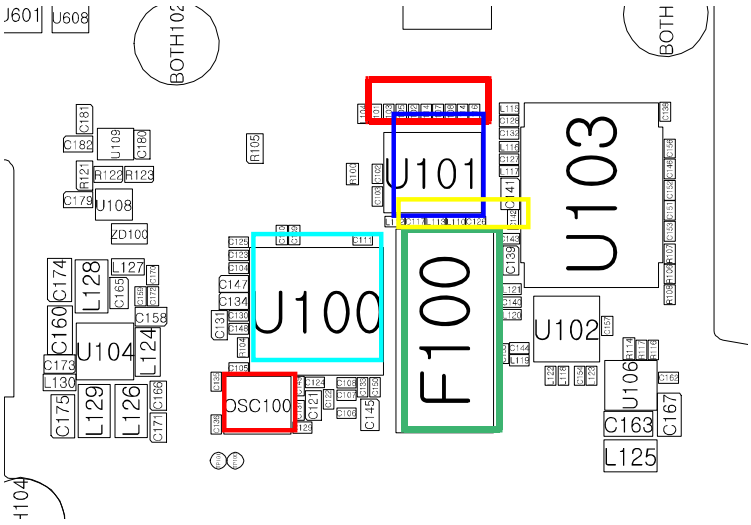


8-3-17. WCDMA Band1 RX

CONTINUOUS RX ON
RF INPUT : 10700CH
AMP : -50dBm

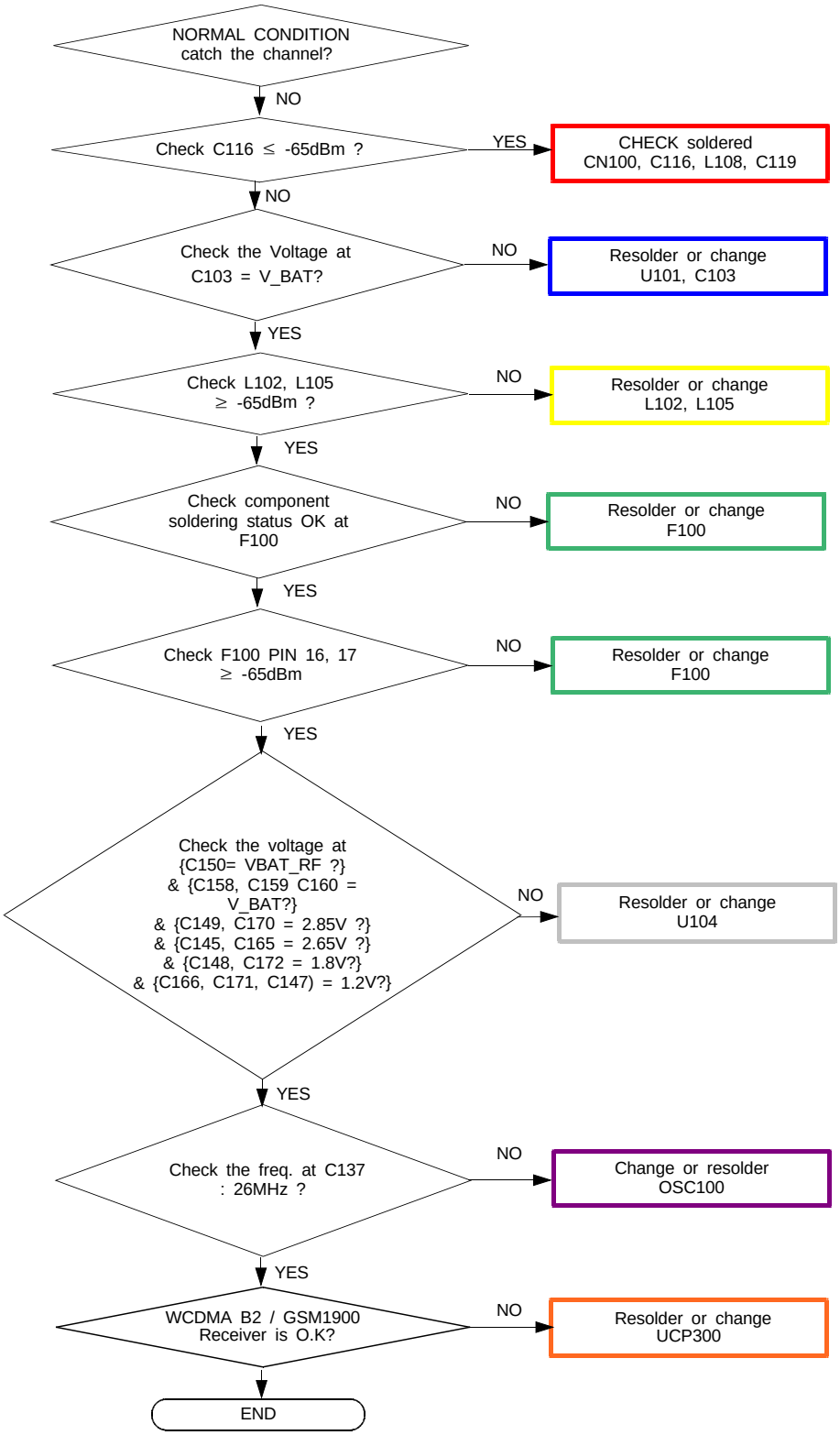


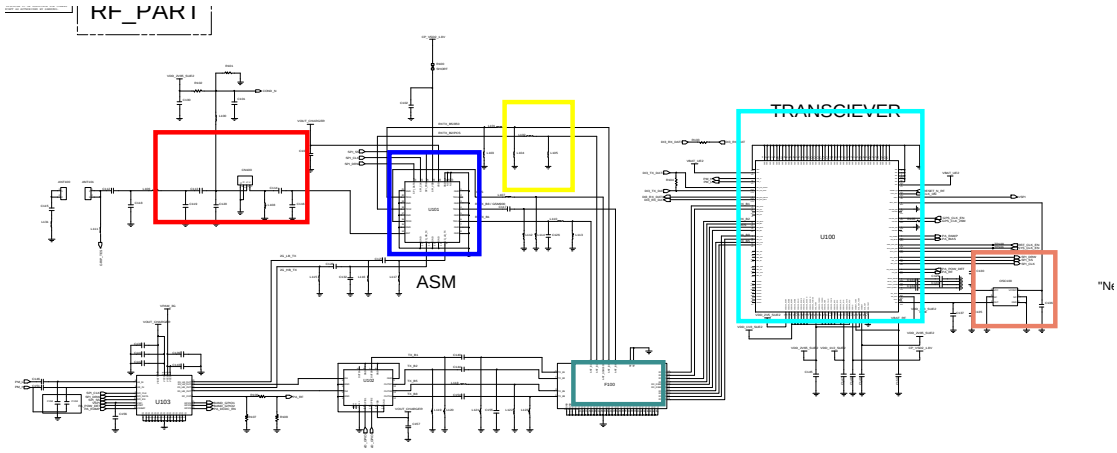


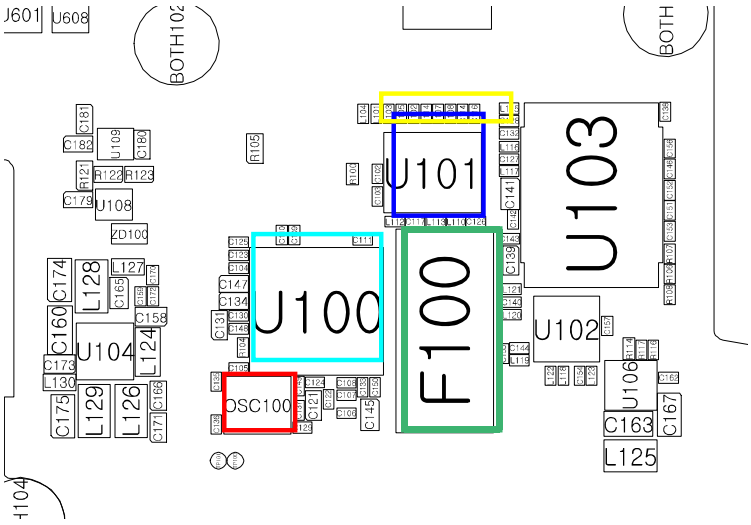


8-3-18. WCDMA Band2 / GSM1900 RX

CONTINUOUS RX ON
RF INPUT : 9880CH
AMP : -50dBm

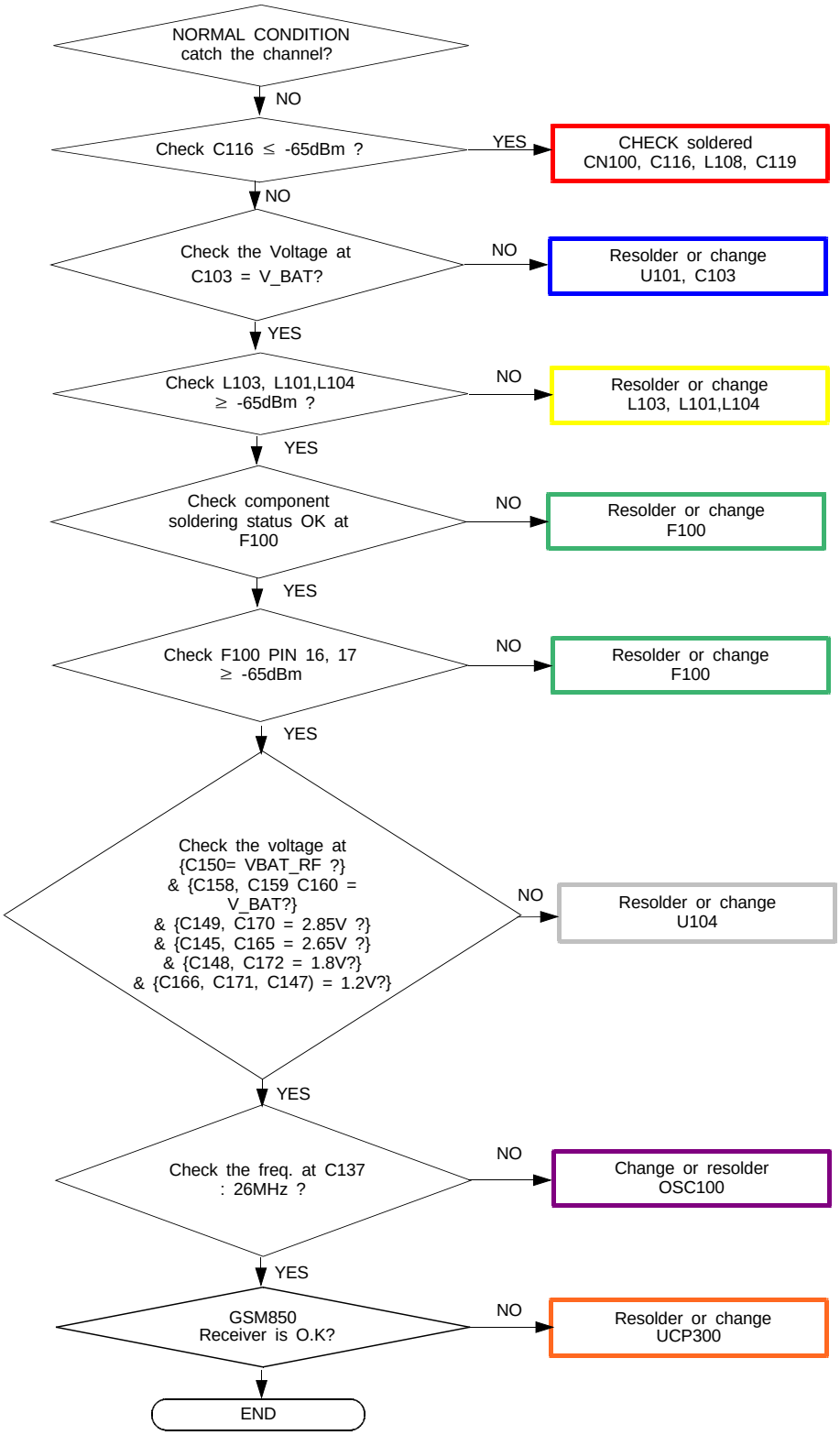


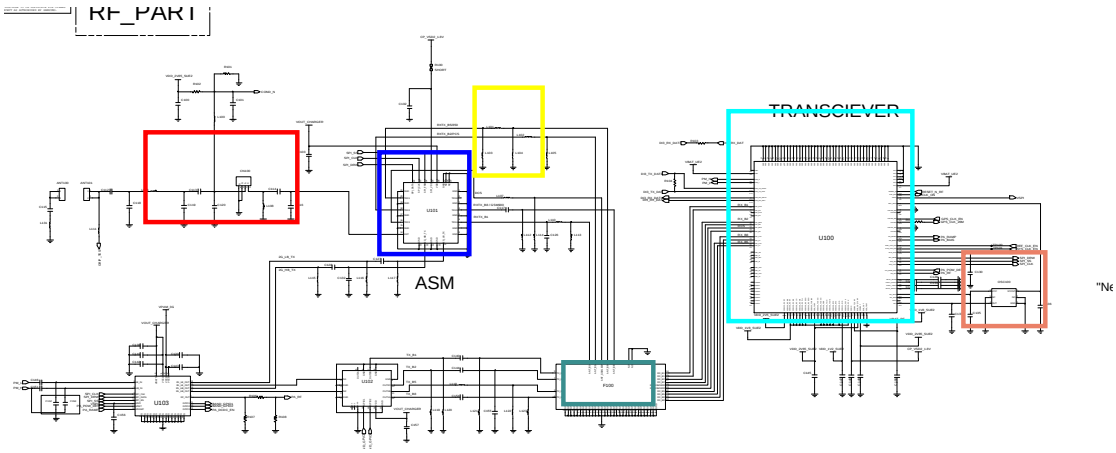


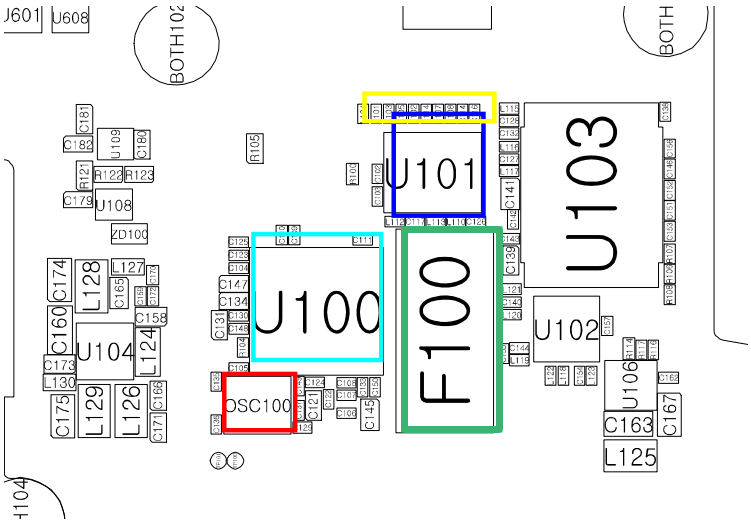


8-3-19. GSM 850 RX/WCDMA850

CONTINUOUS RX ON
RF INPUT : 4408CH
AMP : -50dBm

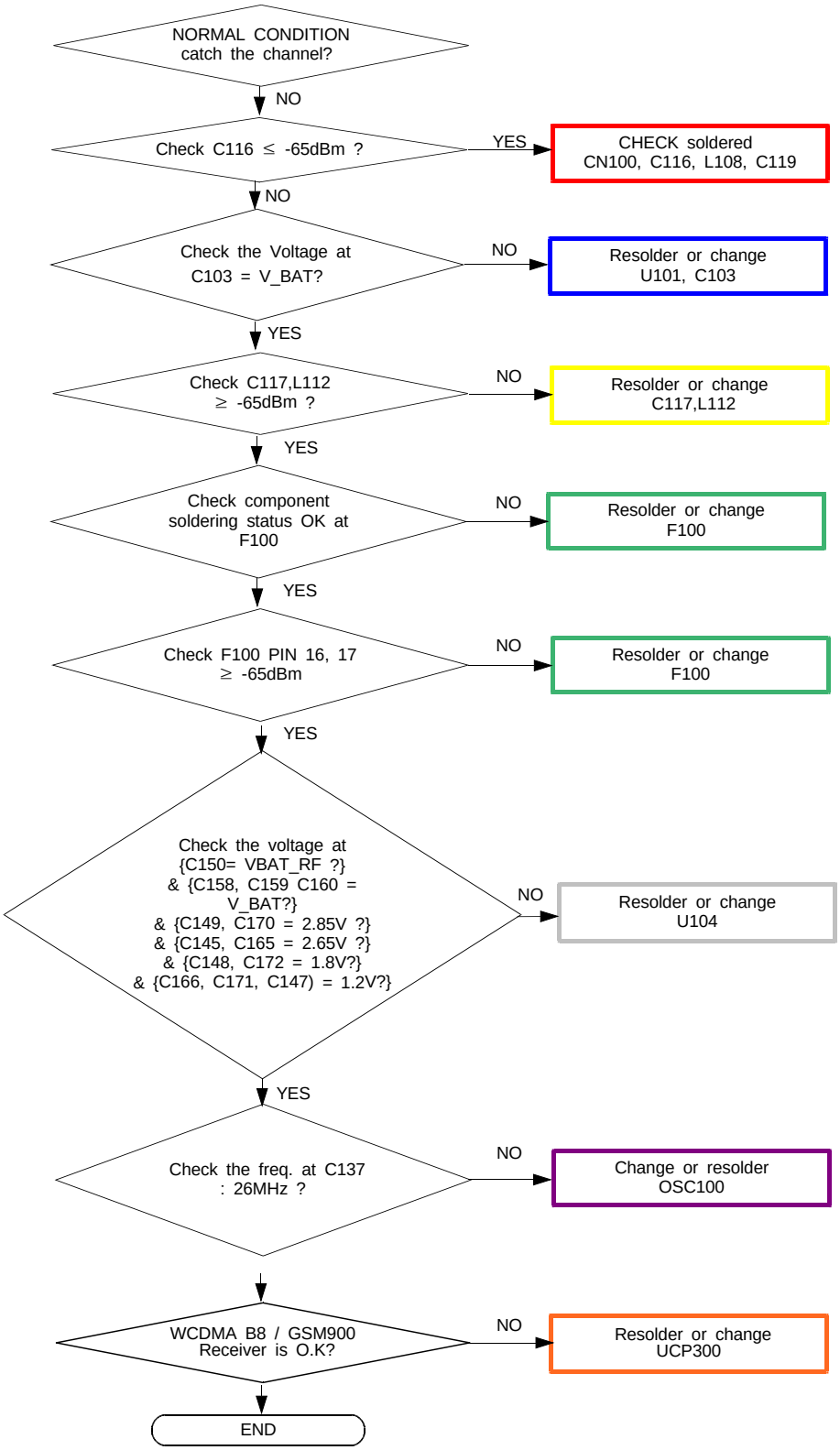


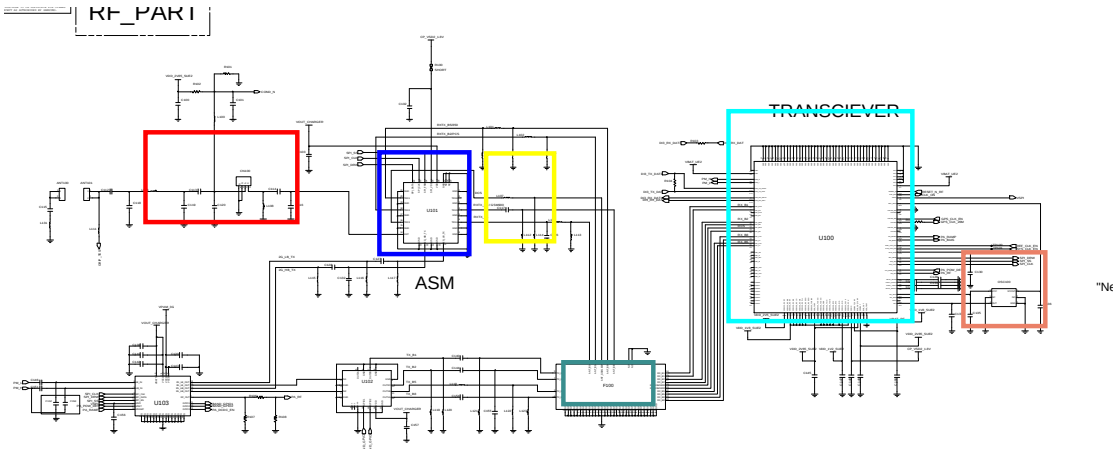


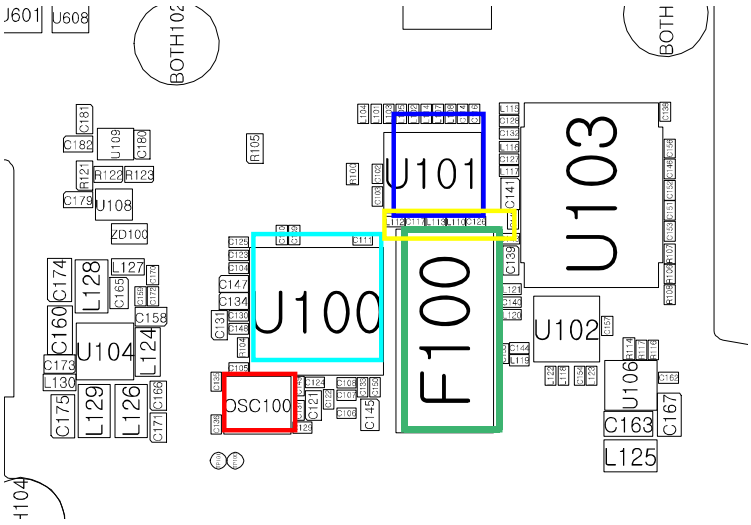


8-3-20. WCDMA Band8 / GSM900 RX

CONTINUOUS RX ON
RF INPUT : 3013CH
AMP : -50dBm

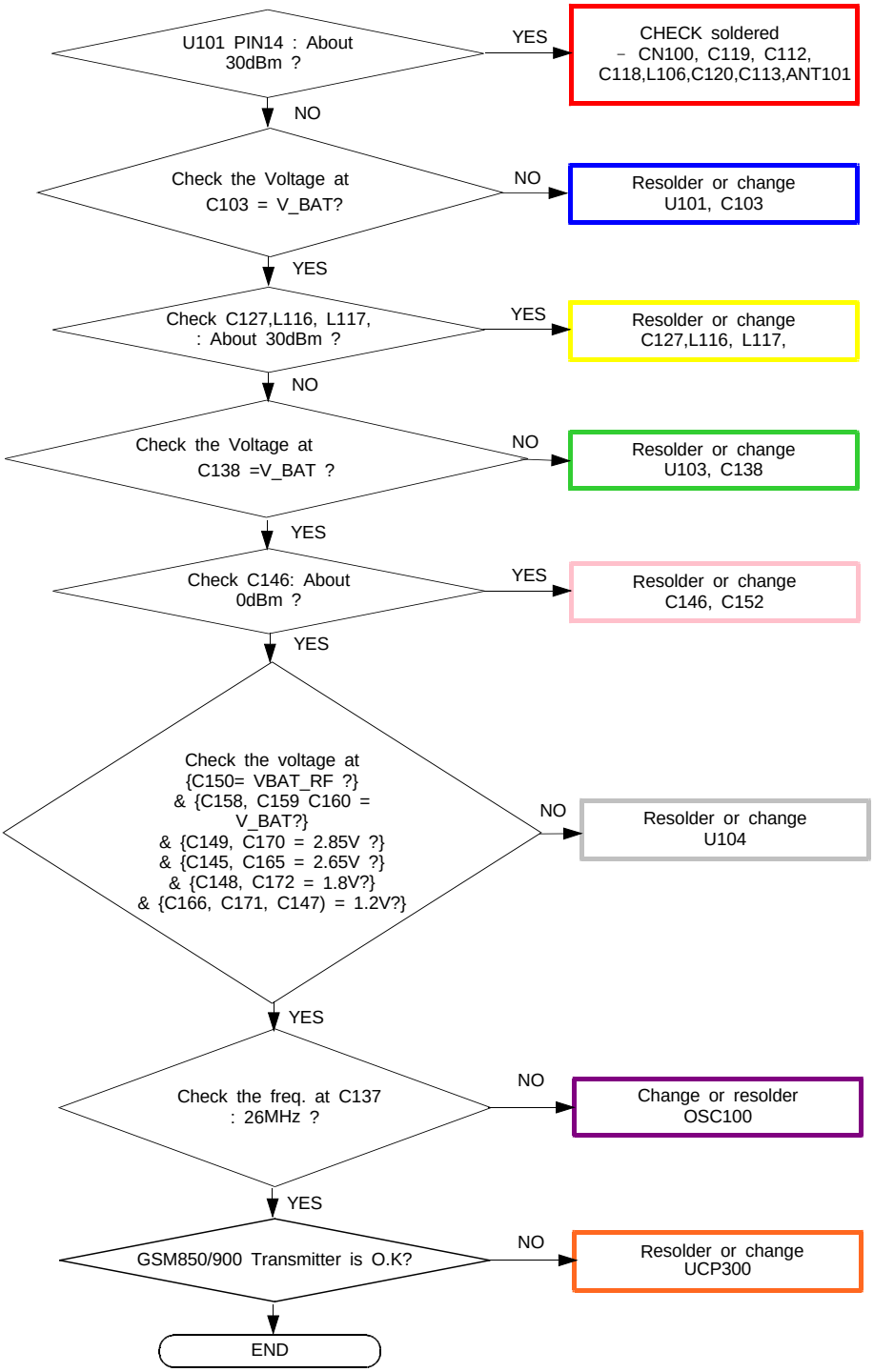


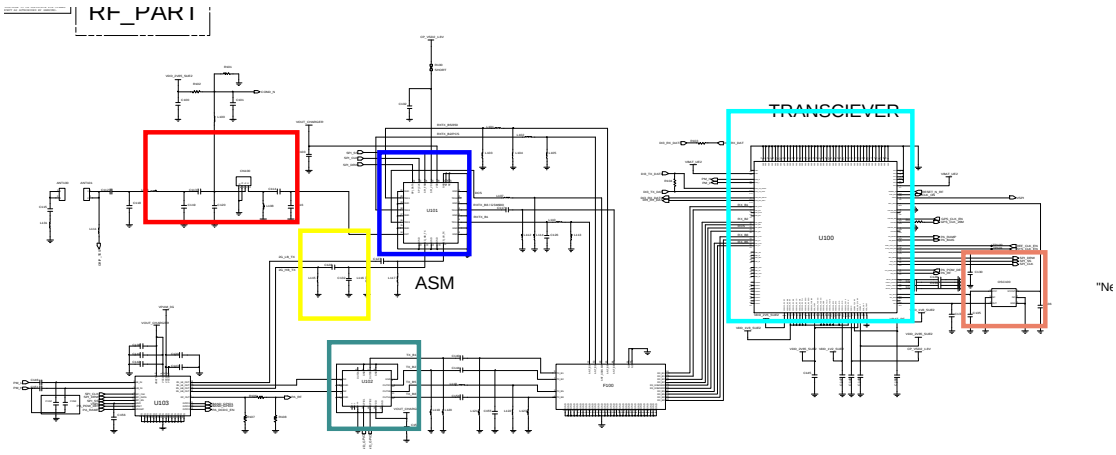


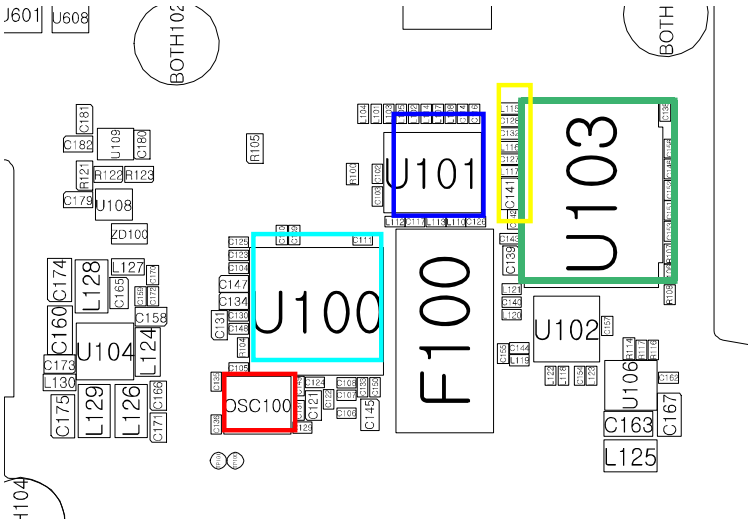


8-3-21. GSM850/GSM900 TX

CONTINOUS 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

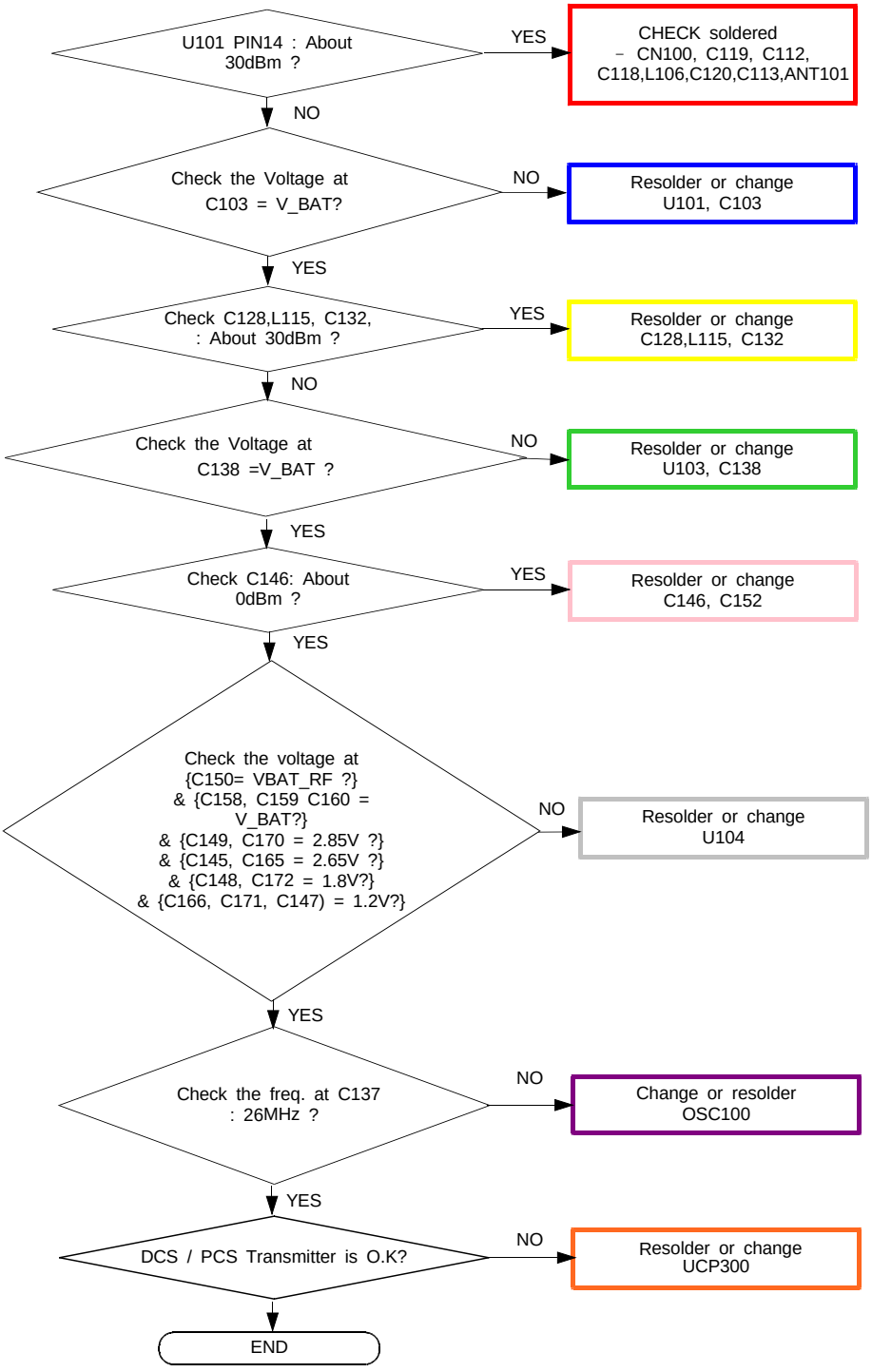


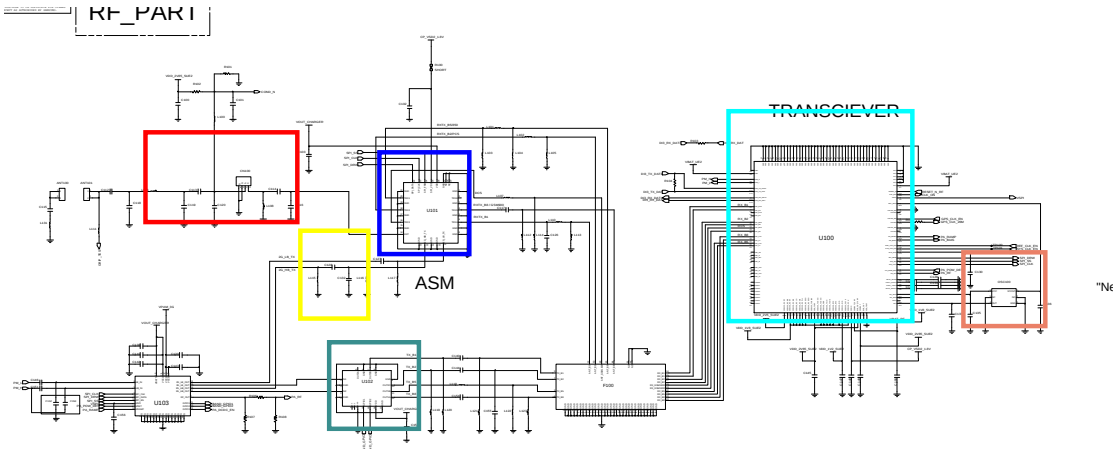


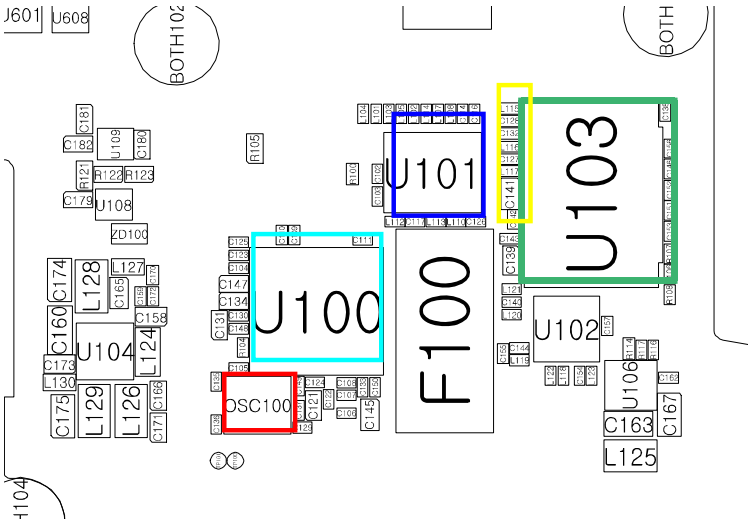


8-3-22. DCS/PCS TX

CONTINOUS 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

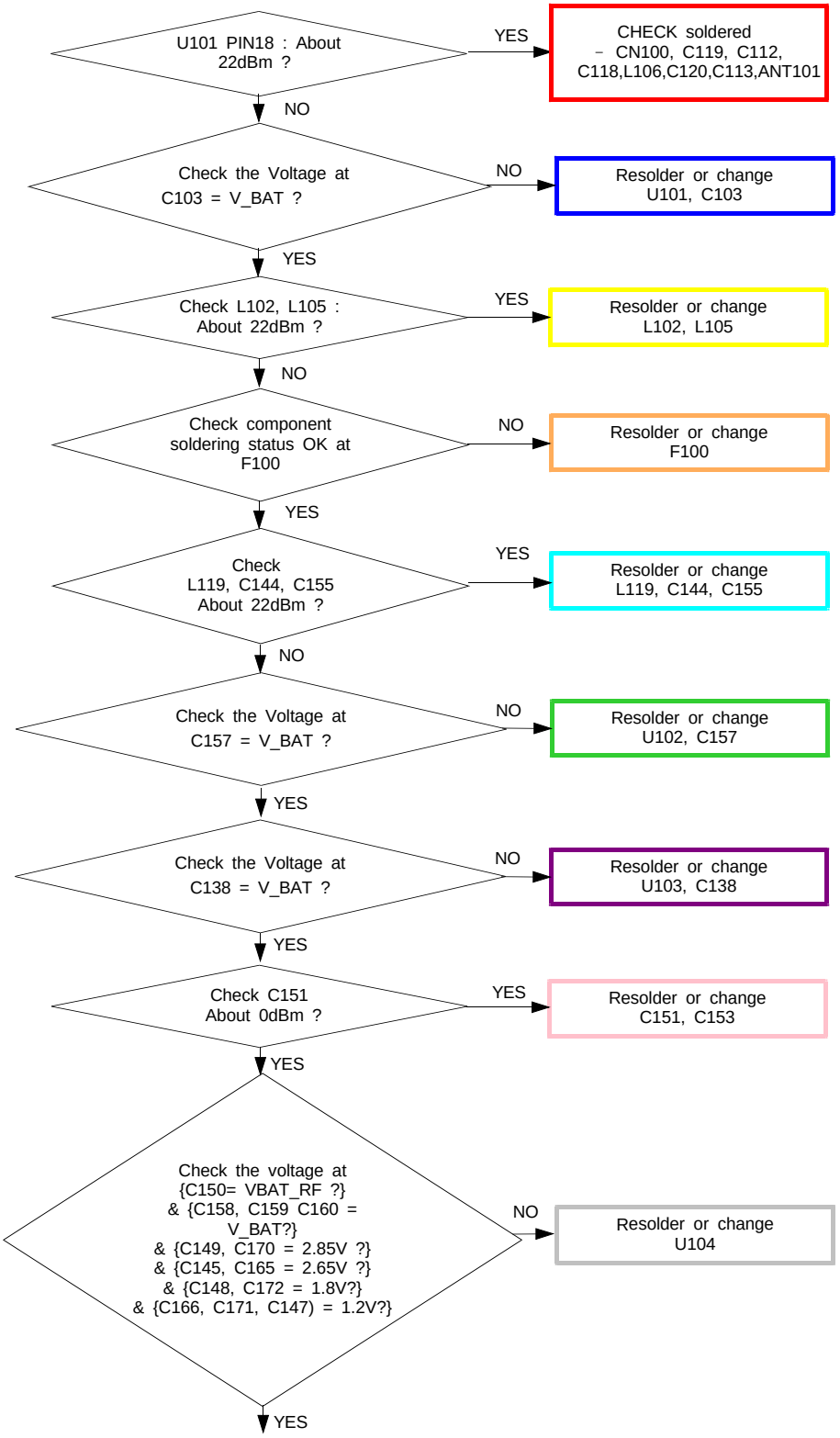


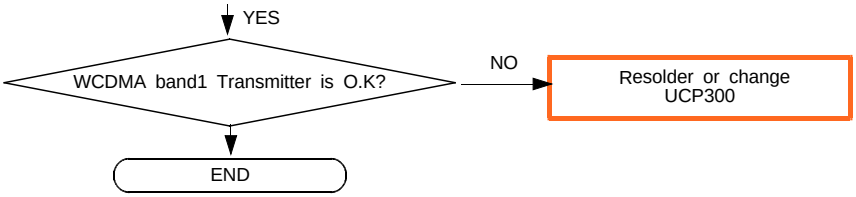


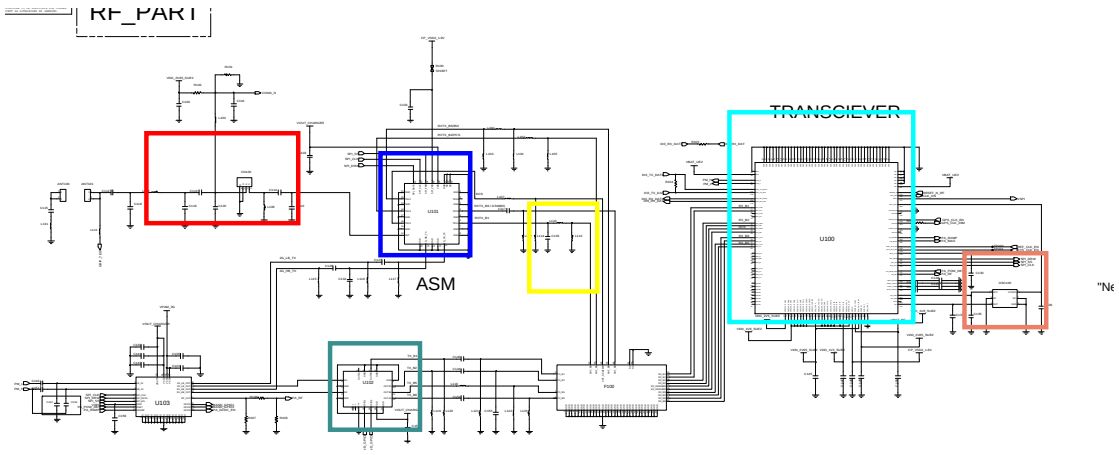


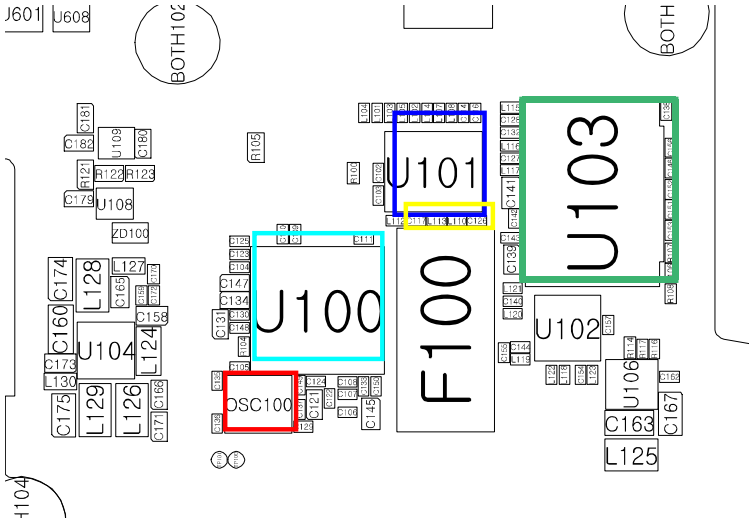
8-3-23. WCDMA BAND1 TX

CONTINOUS TX ON CONDITION
TX POWER DAC:14500 CODE APPLIED
WCDMA Band1 CH : 10700
RBW : 100KHz
VBW : 100KHz
SPAN : 10MHz
REF LEV. : 10dBm
ATT. : 20dB



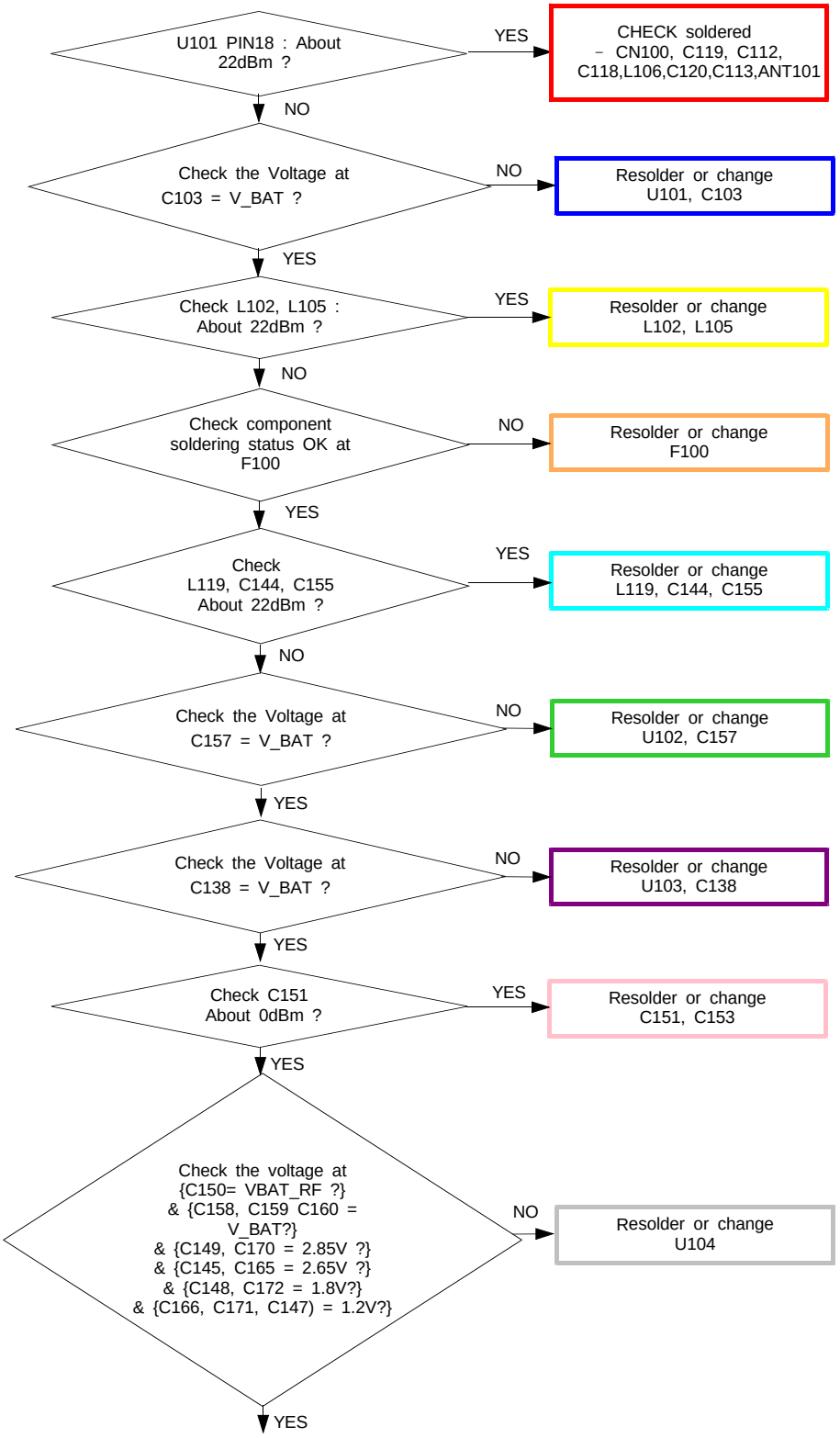


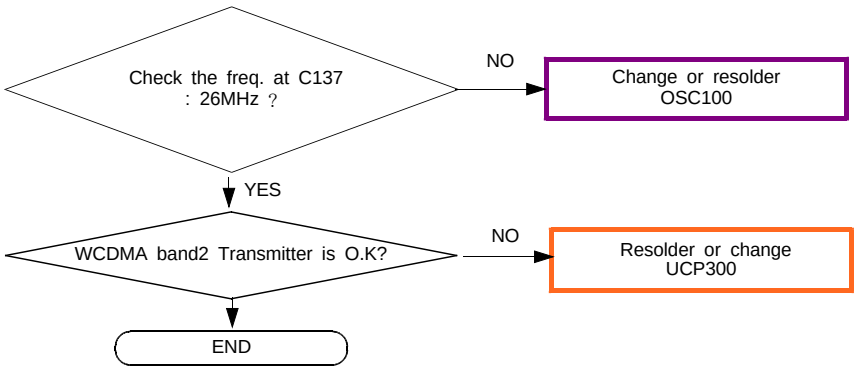


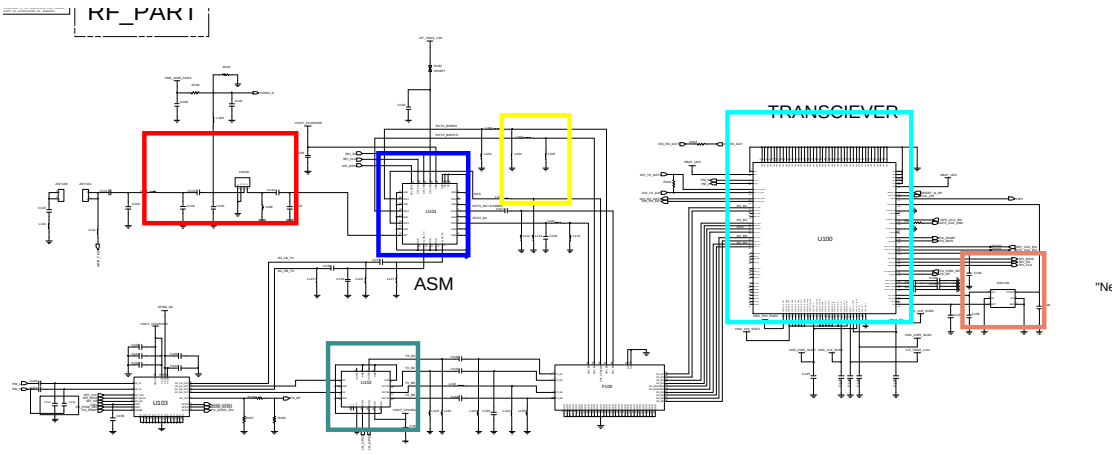


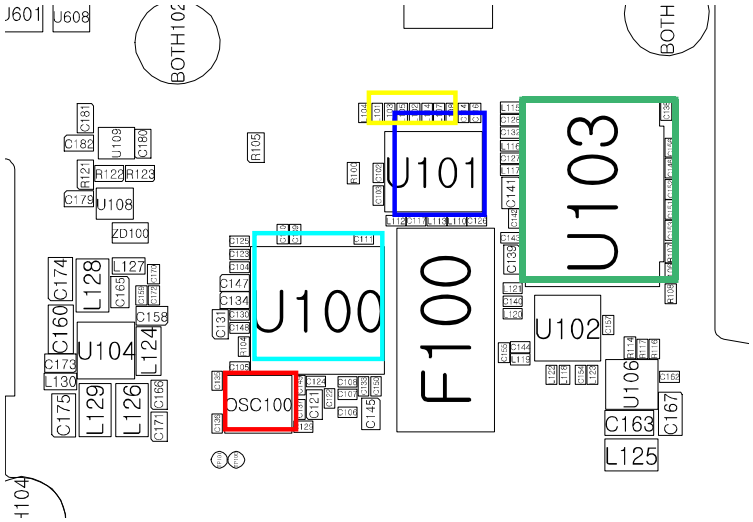
8-3-24. WCDMA BAND2 TX

CONTINOUS TX ON CONDITION
TX POWER DAC:14500 CODE APPLIED
WCDMA Band2 CH : 9880
RBW : 100KHz
VBW : 100KHz
SPAN : 10MHz
REF LEV. : 10dBm
ATT. : 20dB



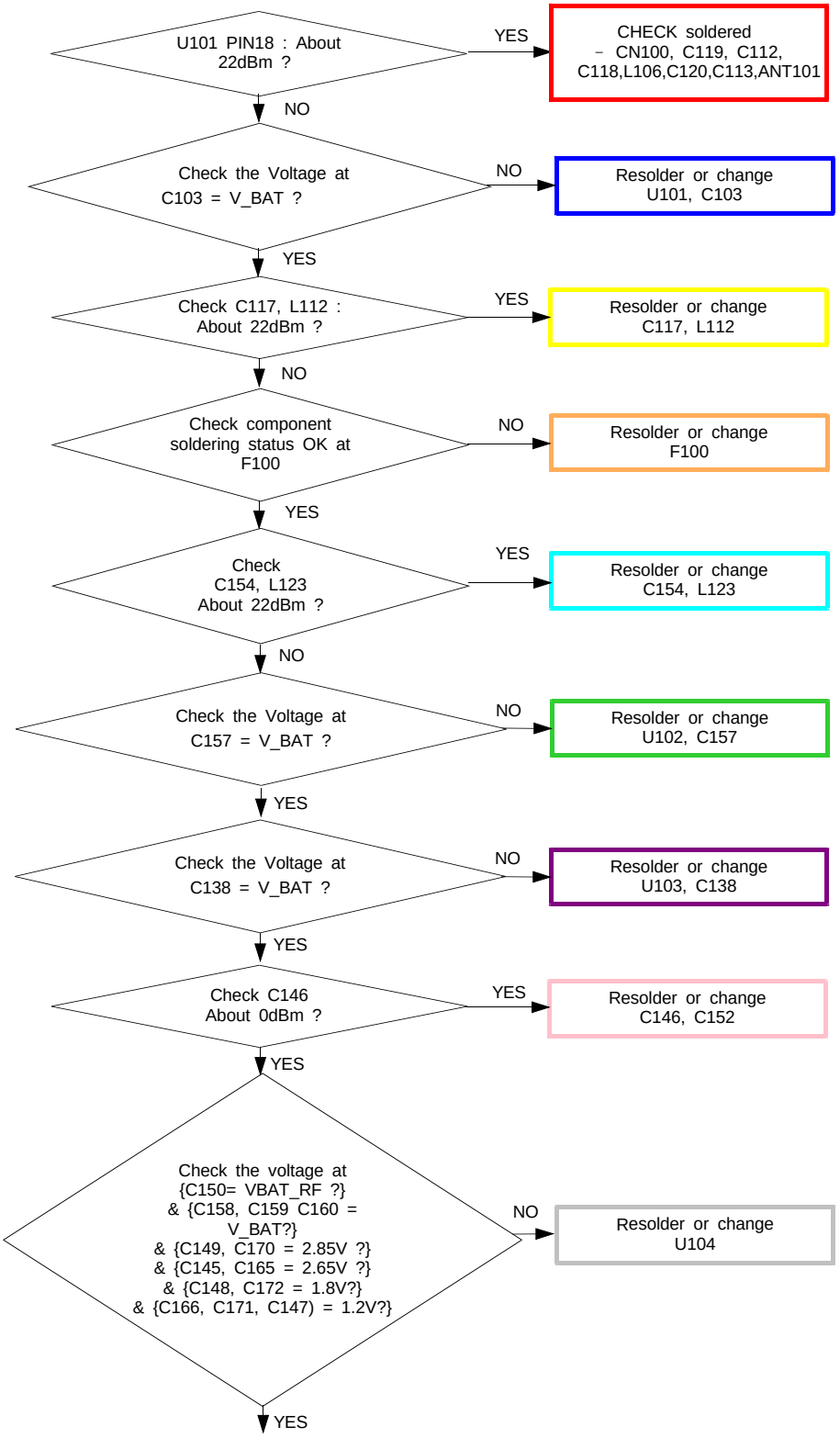


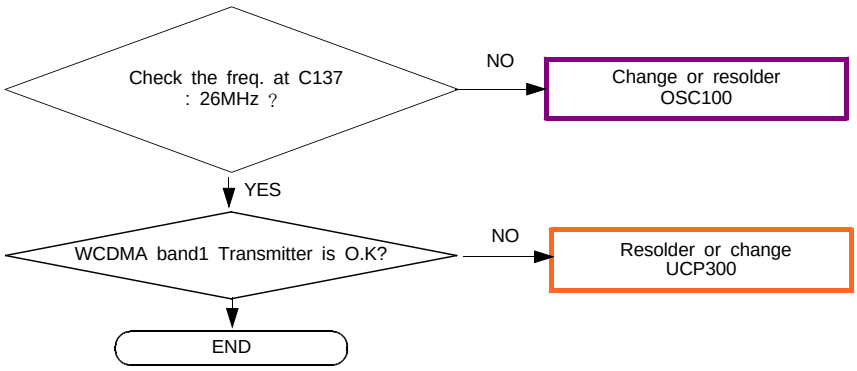


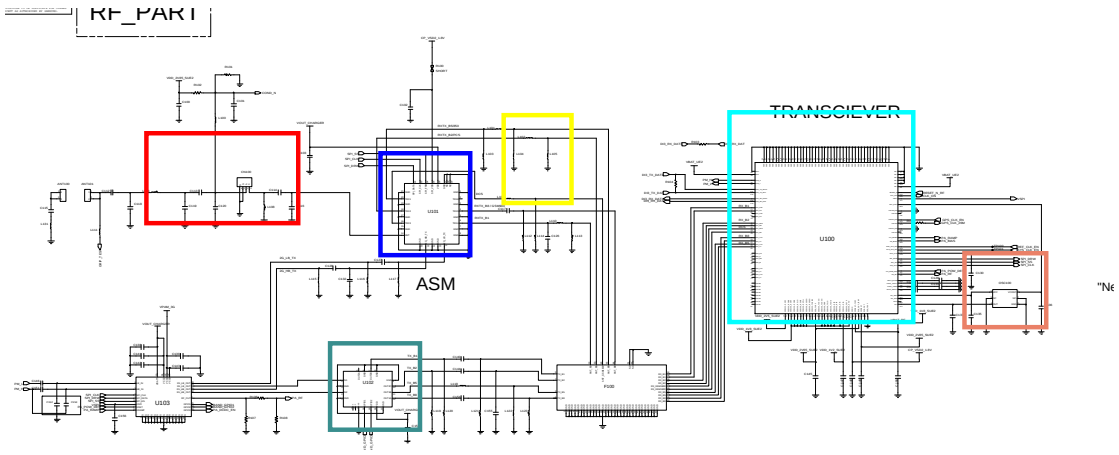


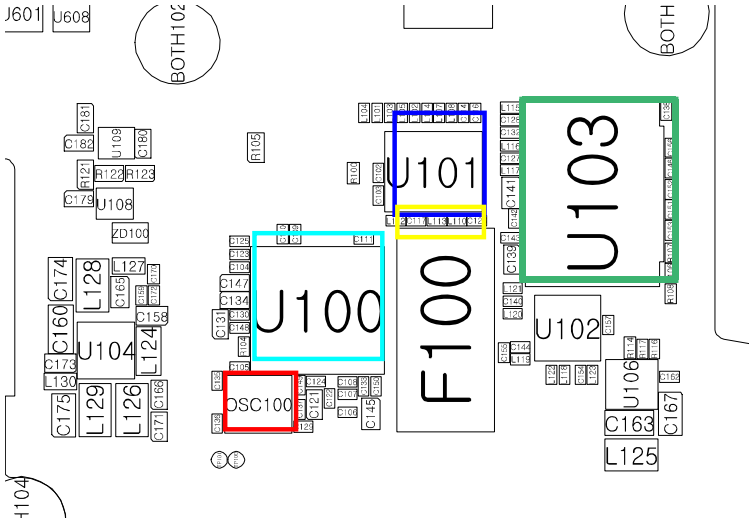
8-3-25. WCDMA BAND8 TX

CONTINOUS TX ON CONDITION
TX POWER DAC:14500 CODE APPLIED
WCDMA Band2 CH : 3013
RBW : 100KHz
VBW : 100KHz
SPAN : 10MHz
REF LEV. : 10dBm
ATT. : 20dB

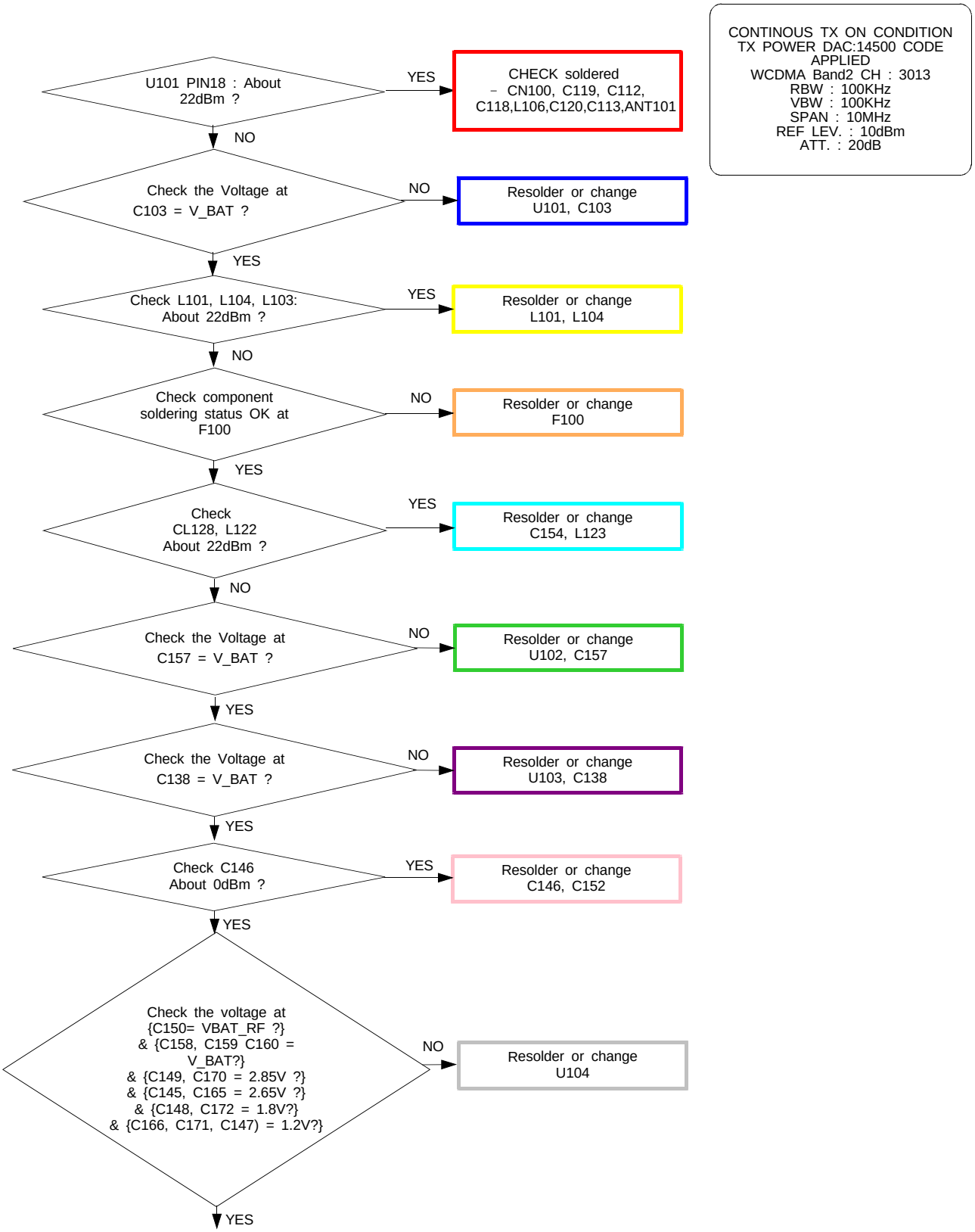


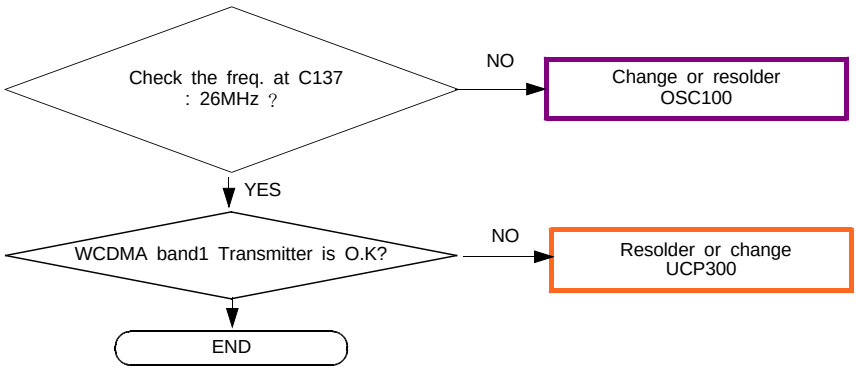


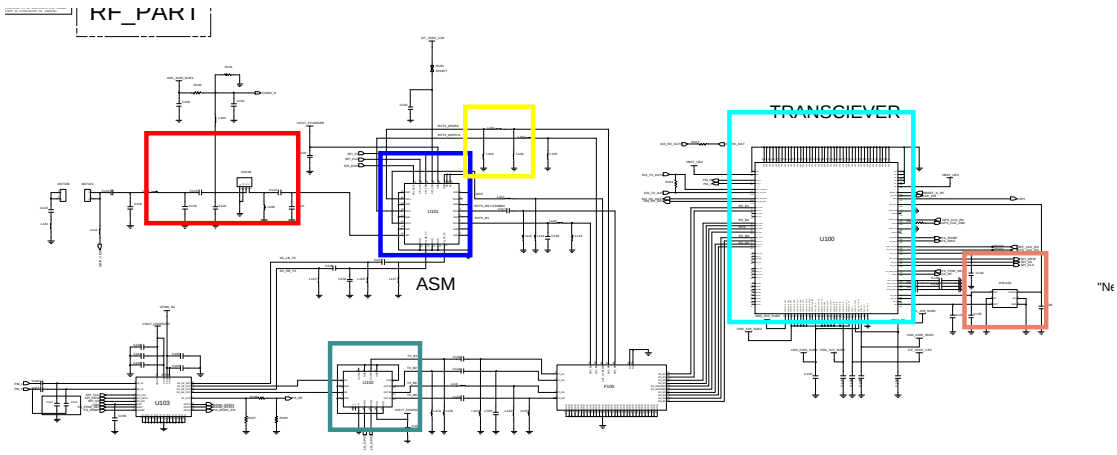


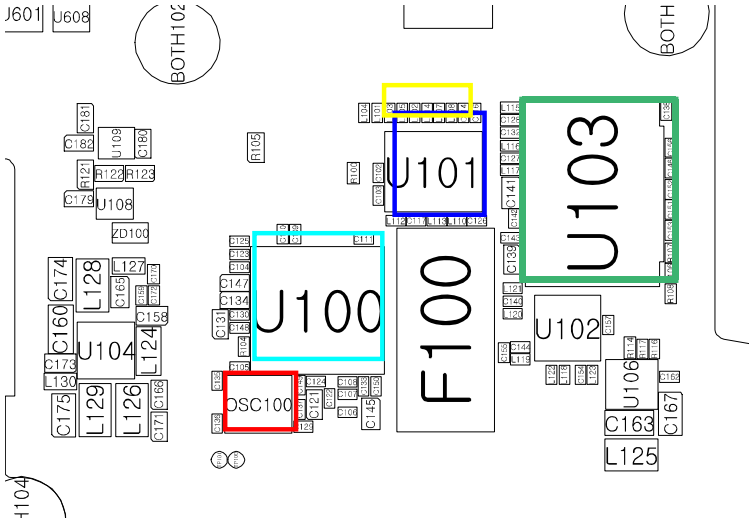


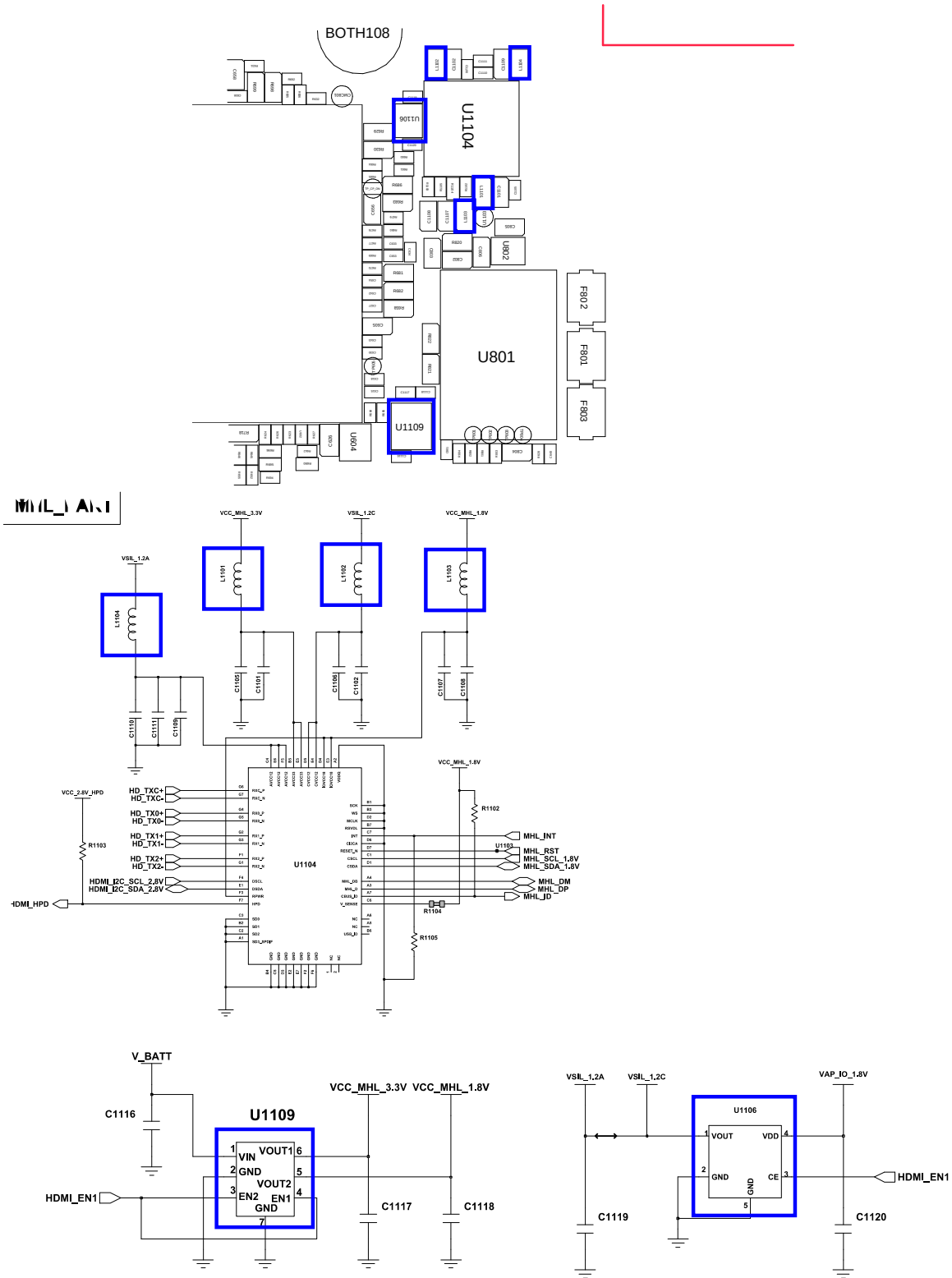
8-3-26. WCDMA BAND5 TX



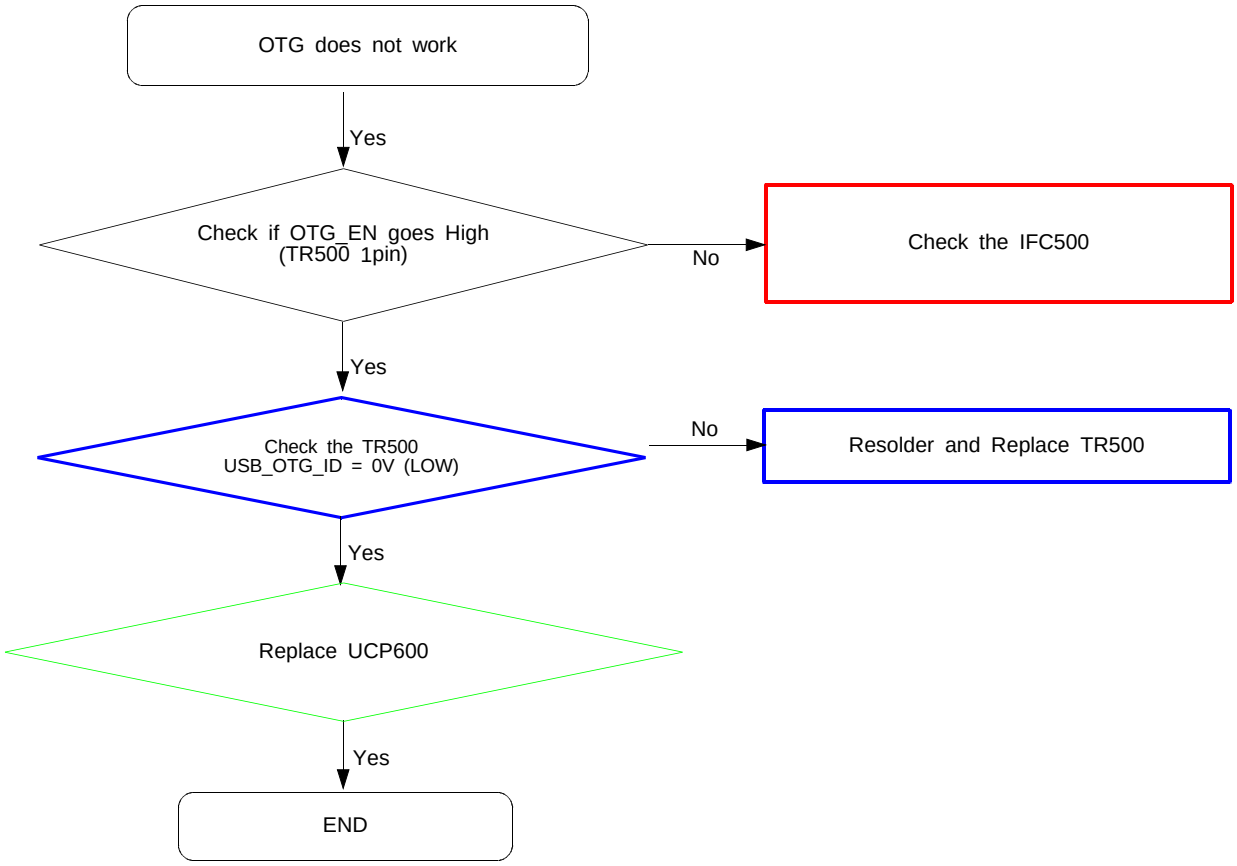


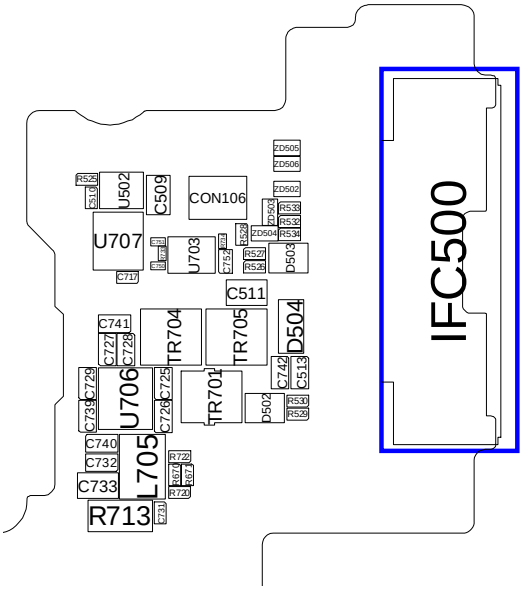


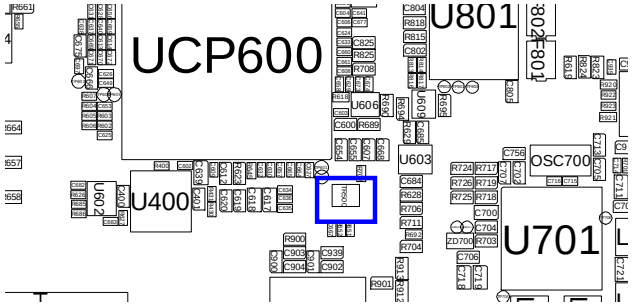


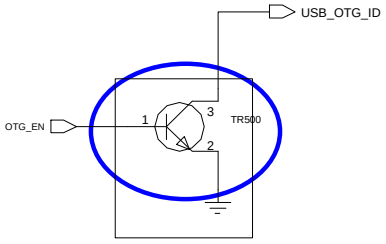


8-3-27. OTG



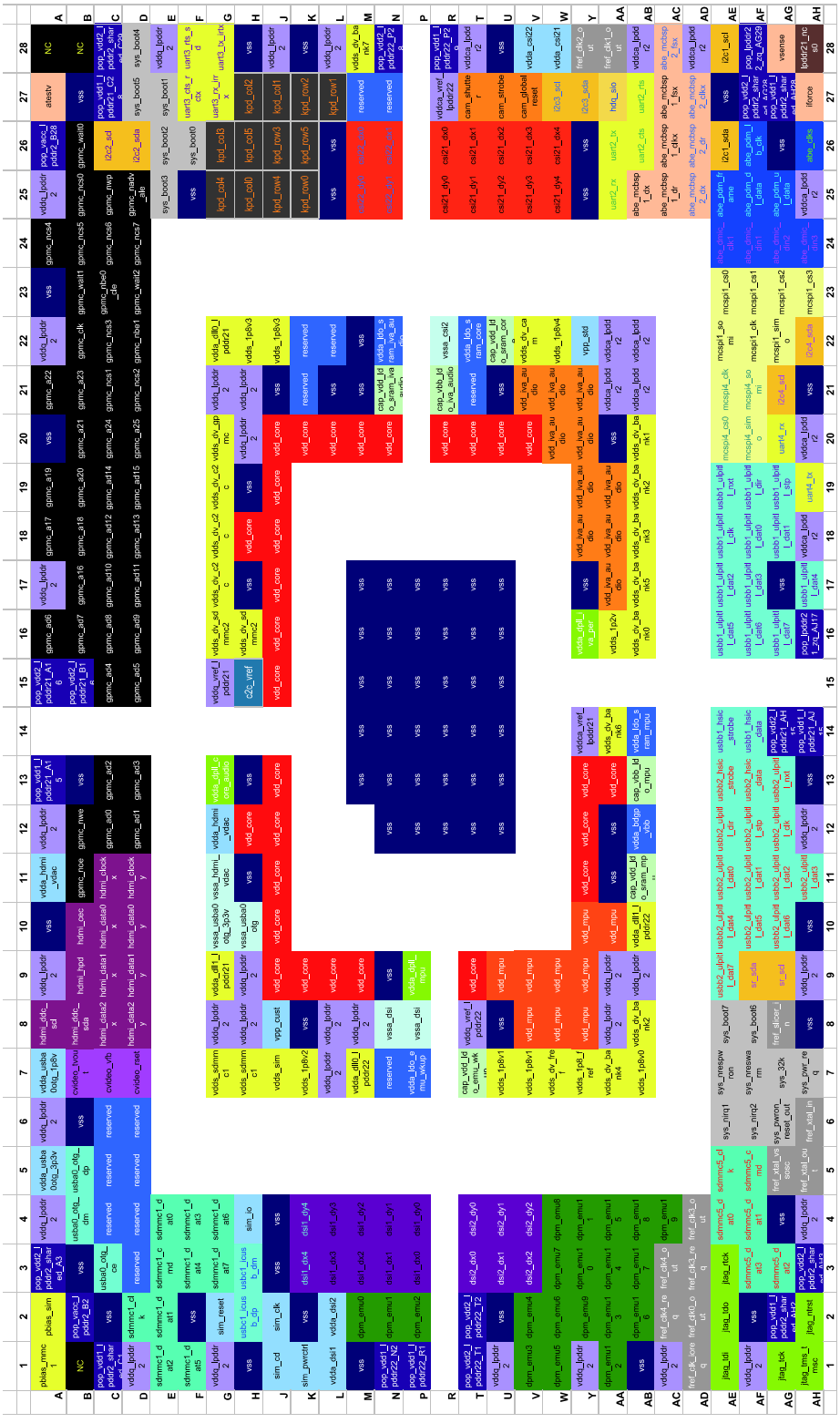






8-4. NC Point

-UCP600



-U607