

SAMSUNG

GSM TELEPHONE

GT-P5100

SERVICE *Manual*

GSM TELEPHONE

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2. Specification

2-1. GSM General Specification

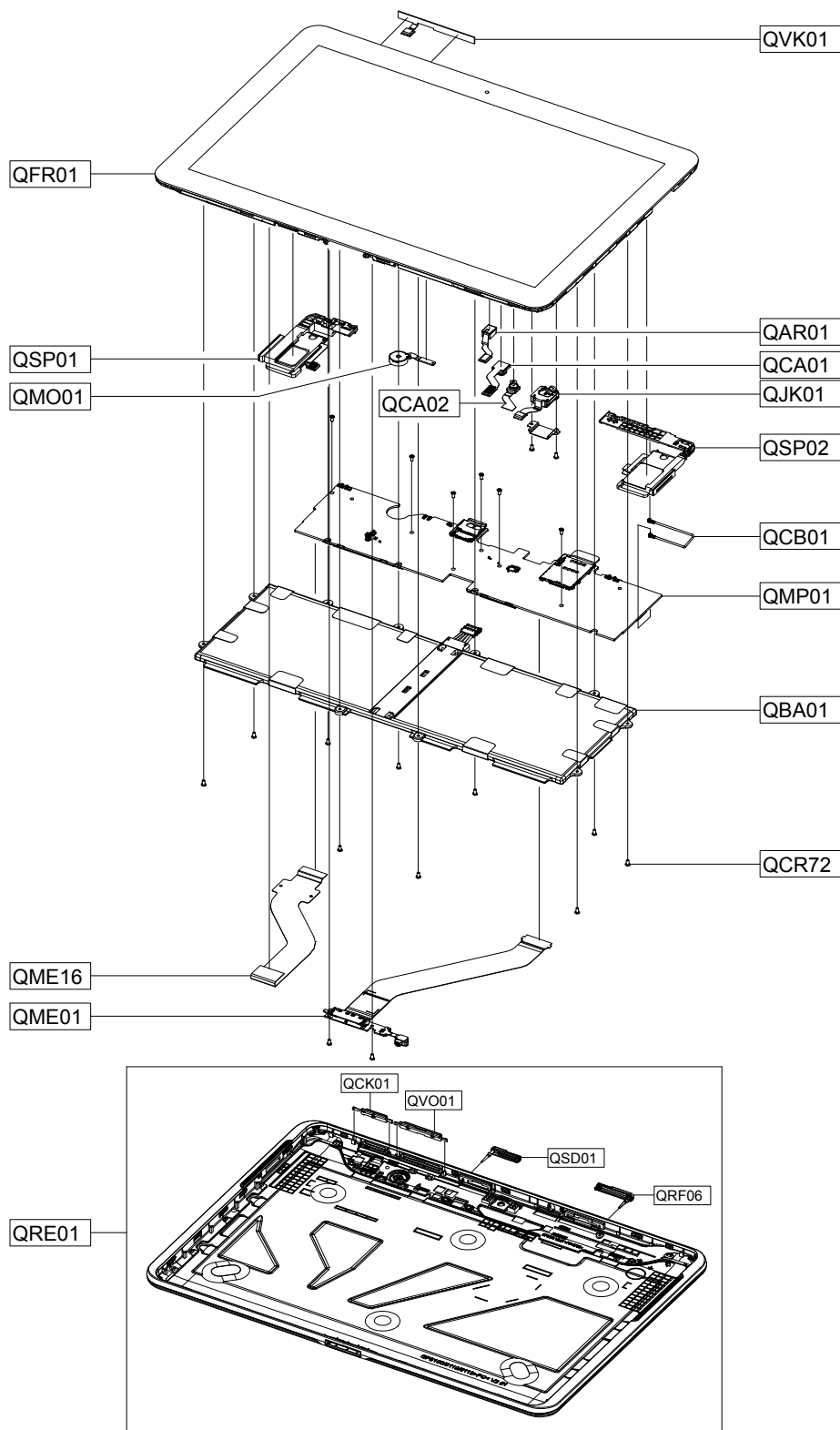
	GSM850	EGSM 900	DCS1800	PCS1900	WCDMA 2100	WCDMA 1900	WCDMA 900	WCDMA 850
Freq. Band[MHz] Uplink/ Downlink	824~849 869~894	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990	1922~1977 2112~2167	1852~1907 1932~1987	880~915 925~960	824~849 869~894
ARFCN range	128~251	0~124 & 975~1023	512~885	512~810	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	270.833kbp s 3.692us	270.833kbp s 3.692us	270.833kbp s 3.692us	270.833kbp s 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	QPSKHQPS K	QPSKHQPS K	QPSKHQPS K	QPSKHQPS K
MS Power	33dBm~5dB m	33dBm~5dB m	30dBm~0dB m	30dBm~0dB m	24dBm~ -50dBm	24dBm~ -50dBm	24dBm~ -50dBm	24dBm~ -50dBm
Power Class	5pcl ~ 19pcl	5pcl ~ 19pcl	0pcl ~ 15pcl	0pcl ~ 15pcl	3(max+24dB m)	3(max+24dB m)	3(max+24dB m)	3(max+24dB m)
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	TX Power control level	EGSM900	TX Power control level	DCS1800	TX Power control level	PCS1900
5	33±2 dBm	5	33±2 dBm	0	30±3 dBm	0	30±3 dBm
6	31±2 dBm	6	31±2 dBm	1	28±3 dBm	1	28±3 dBm
7	29±2 dBm	7	29±2 dBm	2	26±3 dBm	2	26±3 dBm
8	27±2 dBm	8	27±2 dBm	3	24±3 dBm	3	24±3 dBm
9	25±2 dBm	9	25±2 dBm	4	22±3 dBm	4	22±3 dBm
10	23±2 dBm	10	23±2 dBm	5	20±3 dBm	5	20±3 dBm
11	21±2 dBm	11	21±2 dBm	6	18±3 dBm	6	18±3 dBm
12	19±2 dBm	12	19±2 dBm	7	16±3 dBm	7	16±3 dBm
13	17±2 dBm	13	17±2 dBm	8	14±3 dBm	8	14±3 dBm
14	15±2 dBm	14	15±2 dBm	9	12±4 dBm	9	12±4 dBm
15	13±2 dBm	15	13±2 dBm	10	10±4 dBm	10	10±4 dBm
16	11±3 dBm	16	11±3 dBm	11	8±4 dBm	11	8±4 dBm
17	9±3dBm	17	9±3dBm	12	6±4 dBm	12	6±4 dBm
18	7±3 dBm	18	7±3 dBm	13	4±4 dBm	13	4±4 dBm
19	5±3 dBm	19	5±3 dBm	14	2±5 dBm	14	2±5 dBm
				15	0±5 dBm	15	0±5 dBm

4. Exploded View and Parts List

4-1. Cellular phone Exploded View



5. MAIN Electrical Parts List

Design LOC	SEC CODE	Description
D600	0401-001110	DIODE-SWITCHING
D702,ZD506	0403-001870	DIODE-ZENER
D703	0404-001172	DIODE-SCHOTTKY
D800	0404-001669	DIODE-SCHOTTKY
D300,D301,D500,D501	0406-001239	DIODE-TVS
D302,ZD100,ZD700	0406-001267	DIODE-TVS
ZD300,ZD302,ZD403	0406-001413	DIODE-TVS
ZD404,ZD405,ZD406	0406-001413	DIODE-TVS
ZD503,ZD504,ZD903	0406-001413	DIODE-TVS
ZD904,ZD905	0406-001413	DIODE-TVS
ZD301	0406-001459	DIODE-TVS
ZD500,ZD501,ZD502	0406-001505	DIODE-TVS
ZD505,ZD507,ZD701	0406-001505	DIODE-TVS
D502	0406-001526	DIODE-TVS
D700	0407-001002	DIODE-ARRAY
TR700,TR702	0504-001113	TR-DIGITAL
Q500	0504-001307	TR-DIGITAL
TR701,TR703	0505-002720	FET-SILICON
Q700	0505-002748	FET-SILICON
TR704	0505-003052	FET-SILICON
U608	0801-003079	IC-CMOS LOGIC
U304	0801-003437	IC-CMOS LOGIC
U108	0801-003444	IC-CMOS LOGIC
UCP600	0902-002849	IC-MICROPROCESSOR
U102	1001-001733	IC-ANALOG SWITCH
U501,U502	1001-001755	IC-ANALOG SWITCH
U503	1003-002132	IC-LEVEL DRIVER
U601,U602	1003-002216	IC-LEVEL DRIVER
UME300	1105-002212	IC-RDRAM
U610	1107-002134	IC-FLASH MEMORY
U206	1201-003378	IC-GPS AMP
U103	1201-003406	IC-POWER AMP
U403,U500	1202-001121	IC-VOLTAGE COMP.
U605,U908	1203-004818	IC-POSI.FIXED REG.
U305,U401,U402,U715	1203-004819	IC-POSI.FIXED REG.

Design LOC	SEC CODE	Description
U900	1203-004819	IC-POSI.FIXED REG.
U707	1203-005069	IC-POSI.FIXED REG.
U609	1203-005512	IC-POSI.FIXED REG.
U805	1203-005599	IC-DC/DC CONVERTER
U109	1203-005831	IC-MULTI REG.
U905	1203-006115	IC-POWER SUPERVISOR
U717	1203-006392	IC-POWER SUPERVISOR
U506	1203-006766	IC-VOL. DETECTOR
U803	1203-006768	IC-DC/DC CONVERTER
U504	1203-006794	IC-DC/DC CONVERTER
U104	1203-006801	IC-DC/DC CONVERTER
U804	1203-006920	IC-BACKLIGHT DRIVER
U106	1203-006985	IC-DC/DC CONVERTER
U603	1203-007142	IC-DC/DC CONVERTER
U716	1203-007169	IC-BATTERY
U701	1203-007210	IC-POWER SUPERVISOR
U400	1205-003692	IC-EXPANDER
U800	1205-004313	IC-INTERFACE
U207	1205-004396	IC-GPS RECEIVER
U213	1205-004402	IC-WIFI
U404	1205-004509	IC-CODEC
UCP300	1205-004511	IC-MODEM
U100	1205-004515	IC-TRANSCIVER
U902	1205-004521	IC-CONTROLLER
U105	1209-002006	IC-SENSOR
U904	1209-002106	IC-SENSOR
U906	1209-002151	IC-SENSOR
TH300,TH700	1404-001728	THERMISTOR-NTC
VAR400,VAR401	1405-001091	VARISTOR
R120,R404,R624,R625	2007-000138	R-CHIP
R902	2007-000138	R-CHIP
R519,R520,R529,R530	2007-000140	R-CHIP
R414,R634,R635,R668	2007-000141	R-CHIP
R669	2007-000141	R-CHIP
R756,R924	2007-000143	R-CHIP
R111,R420,R608,R611	2007-000148	R-CHIP

Design LOC	SEC CODE	Description
R613,R614,R681,R683	2007-000148	R-CHIP
R690,R718,R722,R760	2007-000148	R-CHIP
R210,R211,R212,R213	2007-000157	R-CHIP
R214,R302,R304,R305	2007-000157	R-CHIP
R306,R324,R325	2007-000157	R-CHIP
R402,R516,R522,R680	2007-000162	R-CHIP
R704,R707,R754,R757	2007-000162	R-CHIP
R513,R515,R806	2007-000163	R-CHIP
R517,R518	2007-000164	R-CHIP
R101	2007-000165	R-CHIP
R503	2007-000167	R-CHIP
R702	2007-000169	R-CHIP
R512,R535	2007-000170	R-CHIP
R100,R122,R753,R770	2007-000758	R-CHIP
R501	2007-001217	R-CHIP
R679	2007-001292	R-CHIP
R508,R509	2007-001298	R-CHIP
R114	2007-002796	R-CHIP
R674	2007-003015	R-CHIP
R532	2007-007092	R-CHIP
R538	2007-007099	R-CHIP
R303	2007-007107	R-CHIP
R209	2007-007132	R-CHIP
R413	2007-007137	R-CHIP
R416,R417	2007-007156	R-CHIP
R900,R901	2007-007193	R-CHIP
R412	2007-007318	R-CHIP
R677,R678	2007-007517	R-CHIP
R502	2007-007529	R-CHIP
R691	2007-007538	R-CHIP
R510	2007-007592	R-CHIP
R808	2007-007627	R-CHIP
R403,R405,R408,R410	2007-007942	R-CHIP
R411	2007-007942	R-CHIP
R406,R407	2007-007943	R-CHIP
R108	2007-008044	R-CHIP

Design LOC	SEC CODE	Description
R308,R622,R623	2007-008045	R-CHIP
R310,R685,R686	2007-008052	R-CHIP
R536,R6001,R619,R675	2007-008055	R-CHIP
R709,R730,R732,R746	2007-008055	R-CHIP
R807,R927,R928	2007-008055	R-CHIP
R504,R505	2007-008211	R-CHIP
R511	2007-008275	R-CHIP
R409	2007-008312	R-CHIP
R670	2007-008354	R-CHIP
R500	2007-008403	R-CHIP
R506,R507,R758	2007-008483	R-CHIP
R311	2007-008486	R-CHIP
R323,R526,R527,R528	2007-008516	R-CHIP
R642,R643,R654,R801	2007-008516	R-CHIP
R802,R905	2007-008516	R-CHIP
R208	2007-008579	R-CHIP
R318,R319,R320,R400	2007-008588	R-CHIP
R627,R636,R667,R676	2007-008588	R-CHIP
R692	2007-008588	R-CHIP
R109,R110	2007-008686	R-CHIP
R811	2007-008721	R-CHIP
R115,R533,R534	2007-008774	R-CHIP
R812	2007-008812	R-CHIP
R415	2007-009084	R-CHIP
R666	2007-009108	R-CHIP
R664	2007-009111	R-CHIP
R312,R665	2007-009155	R-CHIP
R809	2007-009168	R-CHIP
R655,R656,R657,R658	2007-009171	R-CHIP
R659,R660,R661,R662	2007-009171	R-CHIP
R663	2007-009171	R-CHIP
R300	2007-009315	R-CHIP
R600,R617	2007-009354	R-CHIP
R103,R104	2007-009801	R-CHIP
R309	2007-010233	R-CHIP
R116,R123	2007-010783	R-CHIP

Design LOC	SEC CODE	Description
R755	2007-010856	R-CHIP
C120,C213,C231,C248	2203-000233	C-CER,CHIP
C256,C439,C440,C441	2203-000233	C-CER,CHIP
C442,L105	2203-000233	C-CER,CHIP
C104,C205,C7002,C768	2203-000254	C-CER,CHIP
C769,C929	2203-000254	C-CER,CHIP
C228,C229,C235,C236	2203-000278	C-CER,CHIP
C238,C239,C240,C241	2203-000278	C-CER,CHIP
C250	2203-000278	C-CER,CHIP
C425,C428,C429	2203-000386	C-CER,CHIP
C233,C691	2203-000585	C-CER,CHIP
C208	2203-000627	C-CER,CHIP
C164,C341,C342,C343	2203-000812	C-CER,CHIP
C826	2203-000854	C-CER,CHIP
C765,C766,C789	2203-000995	C-CER,CHIP
C426,C430,C434,C435	2203-001153	C-CER,CHIP
C764,C784,C785,C788	2203-002687	C-CER,CHIP
C717	2203-005249	C-CER,CHIP
C178	2203-005393	C-CER,CHIP
C121,C144,C190,C206	2203-005682	C-CER,CHIP
C255	2203-005682	C-CER,CHIP
C125	2203-005683	C-CER,CHIP
C338,C349	2203-005725	C-CER,CHIP
C119	2203-005726	C-CER,CHIP
C718,C719	2203-005727	C-CER,CHIP
C227	2203-005729	C-CER,CHIP
C433,C436,C437	2203-005731	C-CER,CHIP
C427,C515,C516,C517	2203-005732	C-CER,CHIP
C518	2203-005732	C-CER,CHIP
C143	2203-005736	C-CER,CHIP
C186	2203-005740	C-CER,CHIP
C184	2203-005777	C-CER,CHIP
C129,C180	2203-005789	C-CER,CHIP
C244	2203-005792	C-CER,CHIP
C137	2203-005806	C-CER,CHIP
C761	2203-006047	C-CER,CHIP

Design LOC	SEC CODE	Description
C105,C222,C223,C237	2203-006048	C-CER,CHIP
C242,C340,C407,C504	2203-006048	C-CER,CHIP
C505,C607,C612,C649	2203-006048	C-CER,CHIP
C653,C667,C678,C679	2203-006048	C-CER,CHIP
C680,C694,C778,C920	2203-006048	C-CER,CHIP
C126	2203-006187	C-CER,CHIP
C654,C685	2203-006190	C-CER,CHIP
C133,C148,C246,C302	2203-006194	C-CER,CHIP
C303,C800	2203-006194	C-CER,CHIP
C902	2203-006257	C-CER,CHIP
C230,C243	2203-006305	C-CER,CHIP
C692,C693,C7001	2203-006324	C-CER,CHIP
C138	2203-006379	C-CER,CHIP
C162,C347,C348,C617	2203-006399	C-CER,CHIP
C618,C665,C674,C690	2203-006399	C-CER,CHIP
C696,C697,C756	2203-006399	C-CER,CHIP
C106,C107,C108,C109	2203-006423	C-CER,CHIP
C110,C115,C116,C117	2203-006423	C-CER,CHIP
C149,C151,C209,C210	2203-006423	C-CER,CHIP
C301,C304,C305,C310	2203-006423	C-CER,CHIP
C316,C318,C319,C320	2203-006423	C-CER,CHIP
C321,C324,C325,C327	2203-006423	C-CER,CHIP
C328,C329,C332,C333	2203-006423	C-CER,CHIP
C334,C344,C402,C601	2203-006423	C-CER,CHIP
C602,C603,C604,C606	2203-006423	C-CER,CHIP
C608,C609,C611,C613	2203-006423	C-CER,CHIP
C614,C619,C620,C623	2203-006423	C-CER,CHIP
C624,C625,C628,C629	2203-006423	C-CER,CHIP
C630,C634,C635,C636	2203-006423	C-CER,CHIP
C637,C639,C640,C641	2203-006423	C-CER,CHIP
C647,C650,C651,C660	2203-006423	C-CER,CHIP
C661,C662,C663,C666	2203-006423	C-CER,CHIP
C668,C669,C670,C677	2203-006423	C-CER,CHIP
C681,C684,C699,C922	2203-006423	C-CER,CHIP
C923,C941	2203-006423	C-CER,CHIP
C152,C159,C175,C176	2203-006562	C-CER,CHIP

Design LOC	SEC CODE	Description
C177,C187,C400,C401	2203-006562	C-CER,CHIP
C408,C409,C410,C411	2203-006562	C-CER,CHIP
C413,C414,C415,C416	2203-006562	C-CER,CHIP
C418,C419,C420,C421	2203-006562	C-CER,CHIP
C502,C503,C510,C600	2203-006562	C-CER,CHIP
C689,C779,C791,C799	2203-006562	C-CER,CHIP
C801,C802,C803,C805	2203-006562	C-CER,CHIP
C816,C819,C825,C905	2203-006562	C-CER,CHIP
C907,C937,C940	2203-006562	C-CER,CHIP
C111,C112,C113,C118	2203-006647	C-CER,CHIP
C140	2203-006648	C-CER,CHIP
C824	2203-006681	C-CER,CHIP
R106,R107	2203-006815	C-CER,CHIP
C170,C707,C708,C720	2203-006824	C-CER,CHIP
C721,C722,C723,C724	2203-006824	C-CER,CHIP
C900	2203-006824	C-CER,CHIP
C131,C135,C136,C150	2203-006839	C-CER,CHIP
C153,C218,C818	2203-006839	C-CER,CHIP
C777,C829	2203-006841	C-CER,CHIP
C621,C813,C815	2203-006844	C-CER,CHIP
C114,C166,C200,C201	2203-006872	C-CER,CHIP
C202,C203,C403,C422	2203-006872	C-CER,CHIP
C423,C424,C682,C683	2203-006872	C-CER,CHIP
C716	2203-006872	C-CER,CHIP
C100,C103,C903,C904	2203-006979	C-CER,CHIP
C514	2203-007133	C-CER,CHIP
C167,C306,C307,C311	2203-007210	C-CER,CHIP
C315,C317,C322,C326	2203-007210	C-CER,CHIP
C330,C331,C335,C345	2203-007210	C-CER,CHIP
C626,C627,C633,C655	2203-007210	C-CER,CHIP
C656,C657,C658,C659	2203-007210	C-CER,CHIP
C664,C672,C673	2203-007210	C-CER,CHIP
C336,C337,C687	2203-007240	C-CER,CHIP
C156,C160,C631,C632	2203-007270	C-CER,CHIP
C644,C652,C695,C755	2203-007270	C-CER,CHIP
C757,C758,C804,C822	2203-007270	C-CER,CHIP

Design LOC	SEC CODE	Description
C823	2203-007270	C-CER,CHIP
C132,C204,C207,C234	2203-007271	C-CER,CHIP
C701,C703,C704,C705	2203-007271	C-CER,CHIP
C706,C709,C710,C711	2203-007271	C-CER,CHIP
C712,C713,C714,C715	2203-007271	C-CER,CHIP
C906,C908,C909,C910	2203-007271	C-CER,CHIP
C911,C914,C915,C916	2203-007271	C-CER,CHIP
C921,C936,C938,C939	2203-007271	C-CER,CHIP
C698,C702,C732,C733	2203-007279	C-CER,CHIP
C734,C735,C760,C762	2203-007279	C-CER,CHIP
C161,C169,C220,C221	2203-007317	C-CER,CHIP
C257,C339	2203-007317	C-CER,CHIP
C790	2203-007342	C-CER,CHIP
C605,C610,C622,C648	2203-007391	C-CER,CHIP
C134,C145,C154,C219	2203-007393	C-CER,CHIP
C225,C226,C615,C616	2203-007393	C-CER,CHIP
C638,C645,C646,C688	2203-007393	C-CER,CHIP
C700,C786	2203-007393	C-CER,CHIP
C754,C783	2203-007425	C-CER,CHIP
C165,C312,C313,C314	2203-007449	C-CER,CHIP
C323,C642,C643,C671	2203-007449	C-CER,CHIP
C675,C739,C912,C917	2203-007449	C-CER,CHIP
C918,C919,C925,C926	2203-007449	C-CER,CHIP
C927,C935	2203-007449	C-CER,CHIP
C512	2203-007456	C-CER,CHIP
C245	2203-007474	C-CER,CHIP
C508,C513	2203-007634	C-CER,CHIP
C300,C308,C309	2203-007701	C-CER,CHIP
C189	2203-007754	C-CER,CHIP
C404,C405,C406,C412	2203-007775	C-CER,CHIP
C417,C770	2203-007775	C-CER,CHIP
C500,C501,C506,C507	2203-007781	C-CER,CHIP
C736,C759,C763	2203-007781	C-CER,CHIP
C814,C827,C828	2203-007790	C-CER,CHIP
C168,C171,C188	2203-007795	C-CER,CHIP
C817	2203-007796	C-CER,CHIP

Design LOC	SEC CODE	Description
C901	2203-008126	C-CER,CHIP
TA400	2404-001561	C-TA,CHIP
TA700	2409-001232	C-POLYMER ,CHIP
L125	2703-001747	INDUCTOR-SMD
L104	2703-002208	INDUCTOR-SMD
L215,L408,L409,L410	2703-002268	INDUCTOR-SMD
L411	2703-002268	INDUCTOR-SMD
L102,L124,L213	2703-002313	INDUCTOR-SMD
L119,L123	2703-002596	INDUCTOR-SMD
L126	2703-002901	INDUCTOR-SMD
L113	2703-002903	INDUCTOR-SMD
L109	2703-002953	INDUCTOR-SMD
L101,L112	2703-002999	INDUCTOR-SMD
L210	2703-003545	INDUCTOR-SMD
L600	2703-003546	INDUCTOR-SMD
L901	2703-003754	INDUCTOR-SMD
L118,L120,L122	2703-003755	INDUCTOR-SMD
L302,L303	2703-003869	INDUCTOR-SMD
L500,L700,L701,L702	2703-003911	INDUCTOR-SMD
L703,L704	2703-003911	INDUCTOR-SMD
L802	2703-003913	INDUCTOR-SMD
L211,L214	2703-003916	INDUCTOR-SMD
L801	2703-003939	INDUCTOR-SMD
L108	2703-004000	INDUCTOR-SMD
C101,L114,L115	2703-004013	INDUCTOR-SMD
L116	2703-004014	INDUCTOR-SMD
C102	2703-004034	INDUCTOR-SMD
L106	2703-004035	INDUCTOR-SMD
L111	2703-004037	INDUCTOR-SMD
L121	2703-004185	INDUCTOR-SMD
L707	2703-004244	INDUCTOR-SMD
OSC300,OSC700	2801-004551	CRYSTAL-SMD
OSC201	2801-005107	CRYSTAL-SMD
OSC600	2804-001884	OSCILLATOR-CLOCK
OSC400	2804-001935	OSCILLATOR-CLOCK
OSC100	2809-001369	OSCILLATOR-VCTCXO

Design LOC	SEC CODE	Description
OSC200	2809-001374	OSCILLATOR-VCTCXO
F800	2901-001625	FILTER-EMI/ESD
F801,F802	2901-001647	FILTER-EMI SMD
F900,F901	2901-001674	FILTER-EMI SMD
F200	2904-001988	FILTER-GPS SAW
F201	2909-001324	FILTER-LC
F100	2910-000126	DUPLEXER-SAW
U212	2911-000168	DUPLEXER-FEM
U101	2911-000191	DUPLEXER-FEM
L203,L204	3301-001534	BEAD-SMD
L201	3301-001659	BEAD-SMD
L804,L805,L806,L807	3301-001756	BEAD-SMD
L402,L403,L404,L405	3301-001885	BEAD-SMD
L406,L407	3301-001885	BEAD-SMD
L205,L208	3301-001895	BEAD-SMD
L900,L902	3301-001901	BEAD-SMD
L200,L400,L401	3301-001929	BEAD-SMD
L300,L301	3301-001956	BEAD-SMD
L501,L803	3301-002037	BEAD-SMD
L117	3301-002062	BEAD-SMD
RFS200	3705-001448	CONNECTOR-COAXIAL
RFS100	3705-001731	CONNECTOR-COAXIAL
SLC800	3708-002183	CONNECTOR-FPC/FFC/PIC
CN900	3708-002222	CONNECTOR-FPC/FFC/PIC
SLC500	3708-002278	CONNECTOR-FPC/FFC/PIC
SLC900	3708-002781	CONNECTOR-FPC/FFC/PIC
CD300	3709-001575	CONNECTOR-CARD EDGE
CN300	3709-001625	CONNECTOR-CARD EDGE
HDC400,HDC401,HDC402	3711-006615	HEADER-BOARD TO BOARD
HDC500	3711-006615	HEADER-BOARD TO BOARD
HDC501	3711-006923	HEADER-BOARD TO BOARD
HDC900	3711-006925	HEADER-BOARD TO BOARD
HDC300,HDC600	3711-007173	HEADER-BOARD TO BOARD
BTC700	3711-007494	CONNECTOR-HEADER
ANT100,ANT101,ANT200	3712-001373	CONNECTOR-TERMINAL
ANT201	3712-001373	CONNECTOR-TERMINAL

Design LOC	SEC CODE	Description
CON600,CON601	3712-001412	CONNECTOR-TERMINAL
SC101	GH70-07980A	ICT SHIELD-RF FRAME
R203,R431,R435	GH80-03320A	SOLDER-CREAM/SMT KOREA(FREE)
R906,R908,R922,R923	GH80-03321A	SOLDER-CREAM/DHDMR(FREE)
SC100	GH98-20254A	ASSY COVER-SHIELD GPS

7. Level 2 Repair

7-1. Disassembly and assembly Instructions

7-1-1. Disassembly

<p>1 Disassemble the rear cover with the front cover by using the hook</p>   	<p>2 (Caution) Be careful Earjack damage</p>  
<p>Be careful not to scratch cover. Follow the numbered sequence when you disjoint</p>	<p>Be careful not to damage to EARJACK.</p>
<p>3 Detach 3 insulation tapes. Carefully release the screws at 14 different locations from the Front. (L1.4*2.5, Torque 1.1 ± 0.1 kgf.cm)</p> 	<p>4 Separate LCD FPCB,IF FPCB, Battery from the PBA.</p> 
<p>Be careful not to scratch cover and damage to FPC.</p>	<p>Be careful not to damage the FPCBs Be careful not to damage the wires</p>

5

Separate Earjack SUS, Earjack, 3M camera, VGA camera, Light sensor from the PBA



6

Separate SPK L/R connectors, Key connector and GPS coaxial cable connector. Separate PBA from the Front.

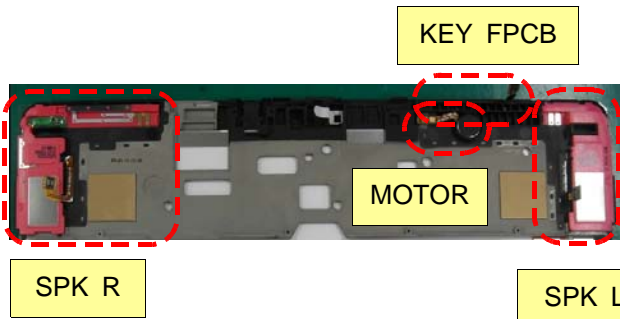


Be careful not to damage the FPCBs

Be careful not to scratch cover

7

Separate the SPK L/R, KEY FPCB, MOTOR from the Front.

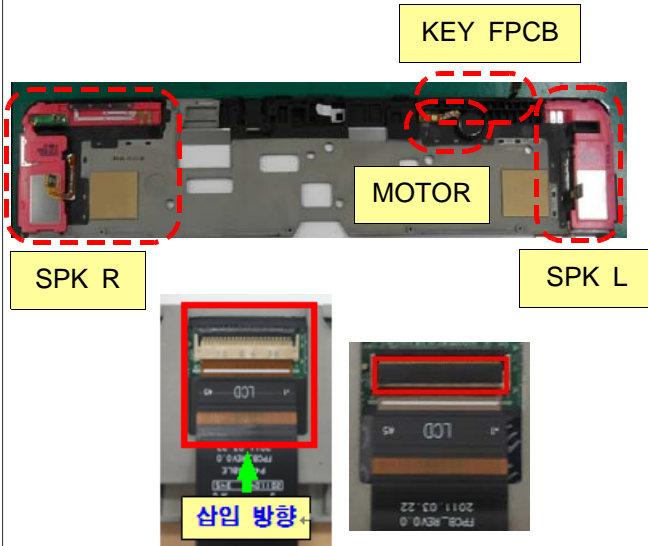


Be careful not to damage the FPCBs

7-1-2. assemble

1

Assemble KEY FPCB, MOTOR, SPK L/R and LCD FPCB&rubber



Be careful not to damage the FPCBs

2

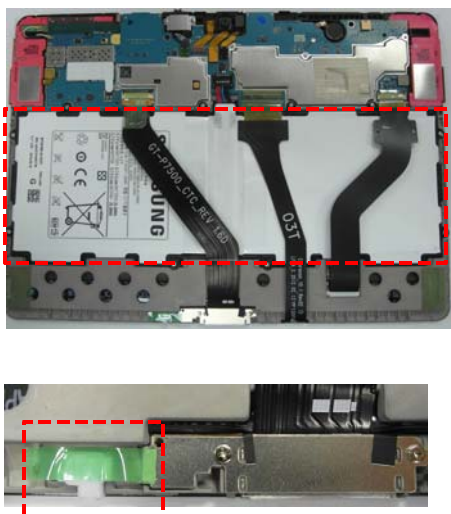
Put the PBA to Bracket ass'y then connect SPK L/R, KEY FPCB.
Assemble EAR JACK, EARJACK SUS, 3M/VGA CAM and LIGHT SENSOR. and GPS Coaxial cable



Be careful not to damage the FPCBs

3

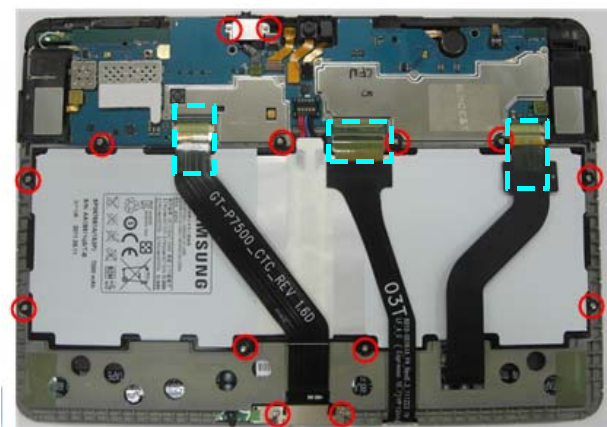
Assemble the Battery and IF FPCB. MIC RUBBER and attach INSU TAPE.



Be careful not to damage the FPCBs

4

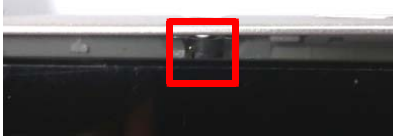
Attach 3 INSU TAPEs to connector.
Screw 14 points.



Be careful not to damage the FPCBs

5

Assemble the REAR CASE.



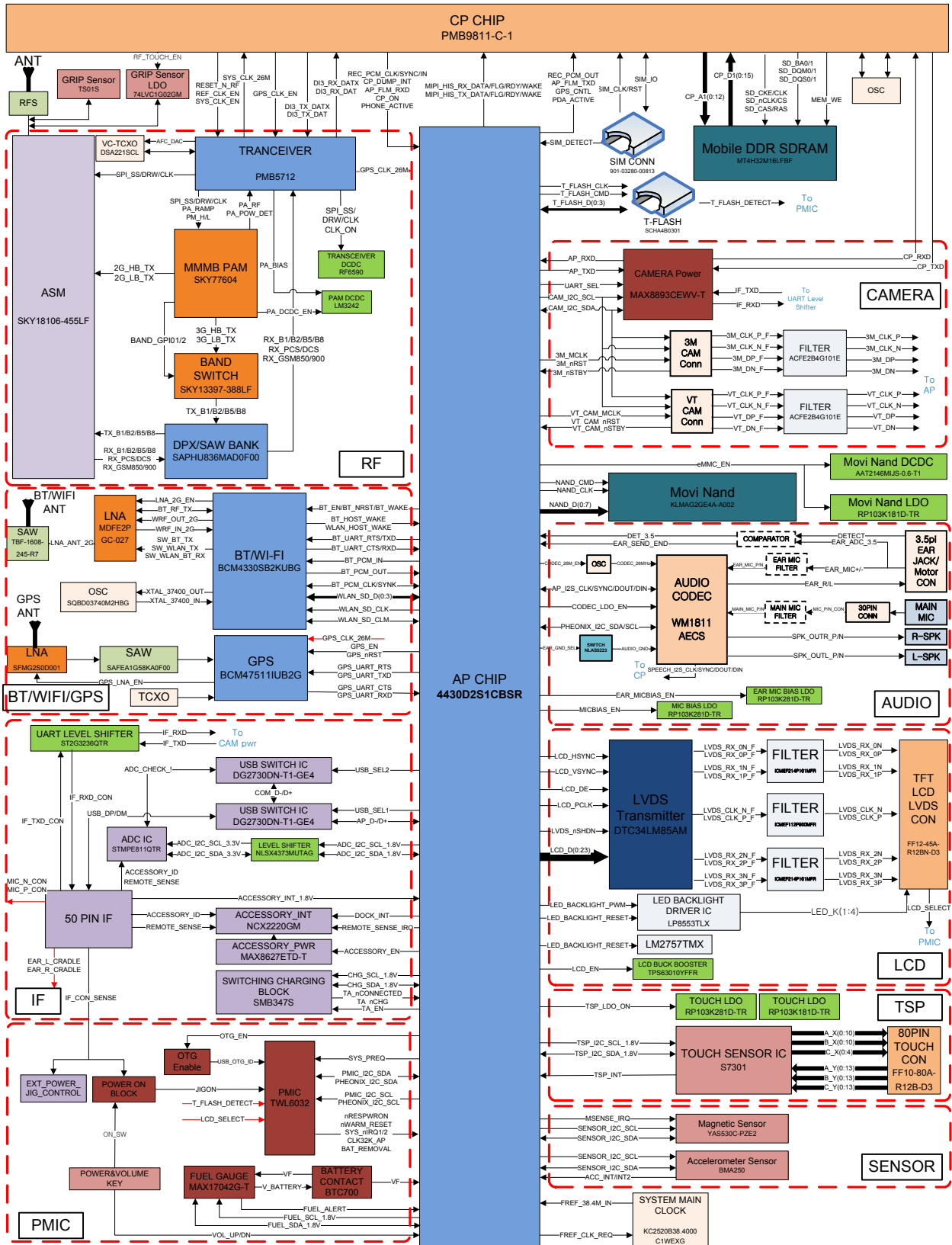
check the
EARJACK
position.



Be careful not to damage the CASE.

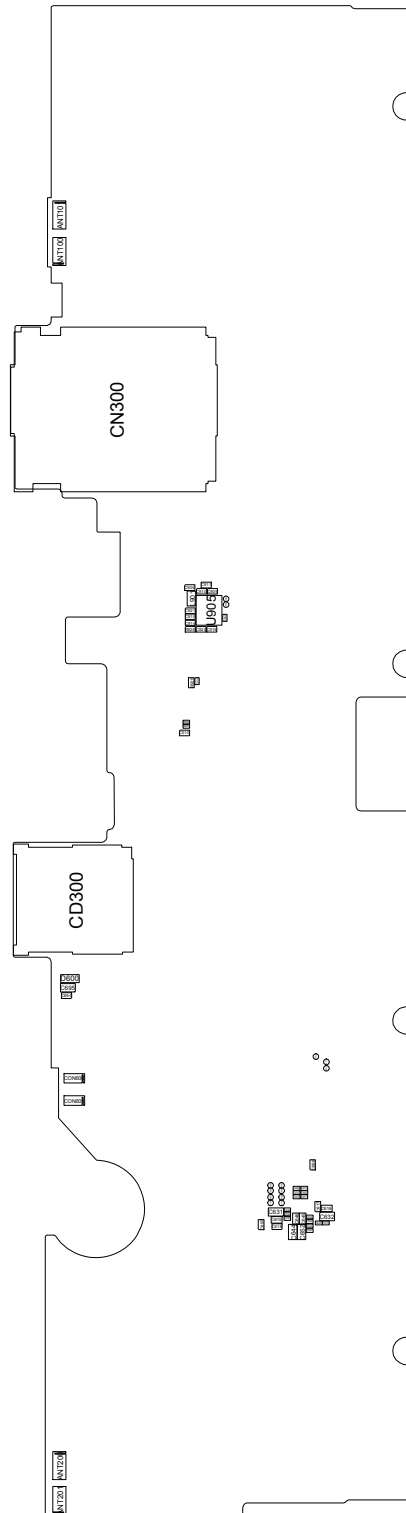
8. Level 3 Repair

8-1. Block Diagram

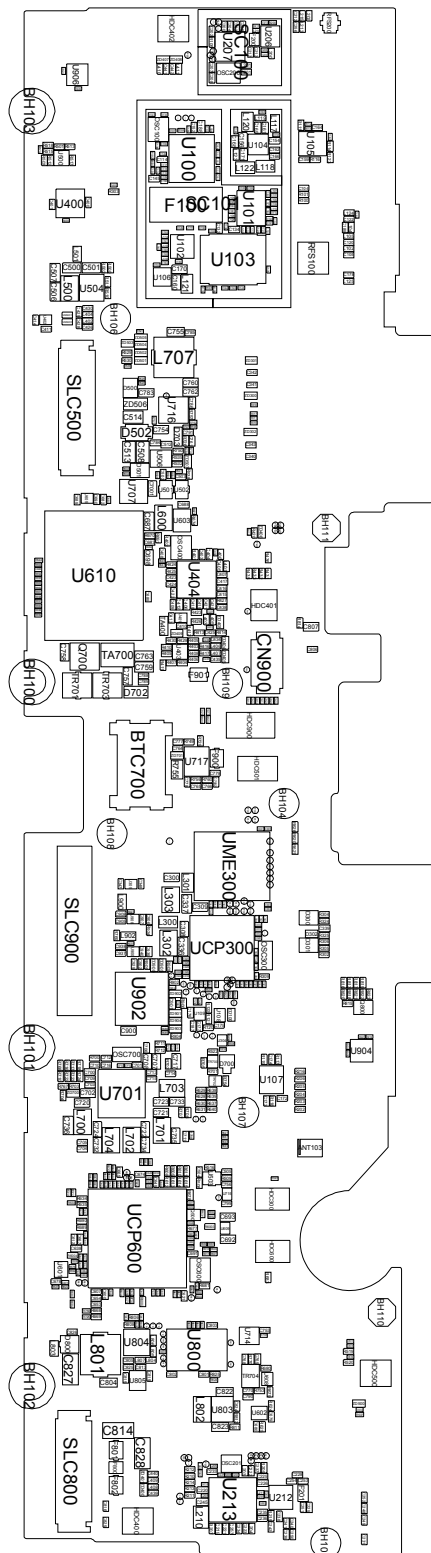


8-2. PCB Diagrams

8-2-1. Top

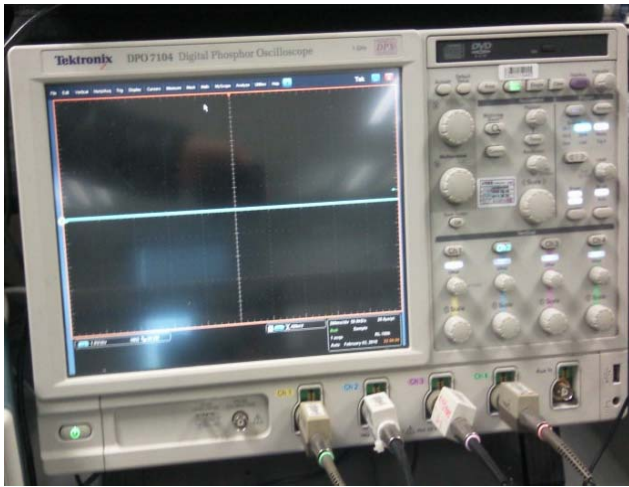


8-2-2. Bottom



8-3. Flow Chart of Troubleshooting

Equipments



↑ Oscilloscope



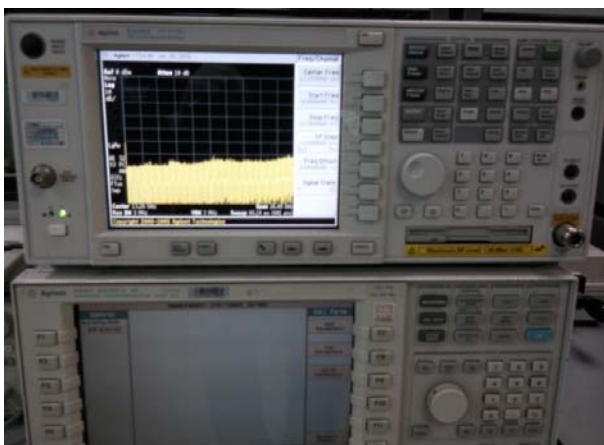
↑ Digital Multimeter



↑ Power Supply



↑ + driver, ESD Safe Tweezer

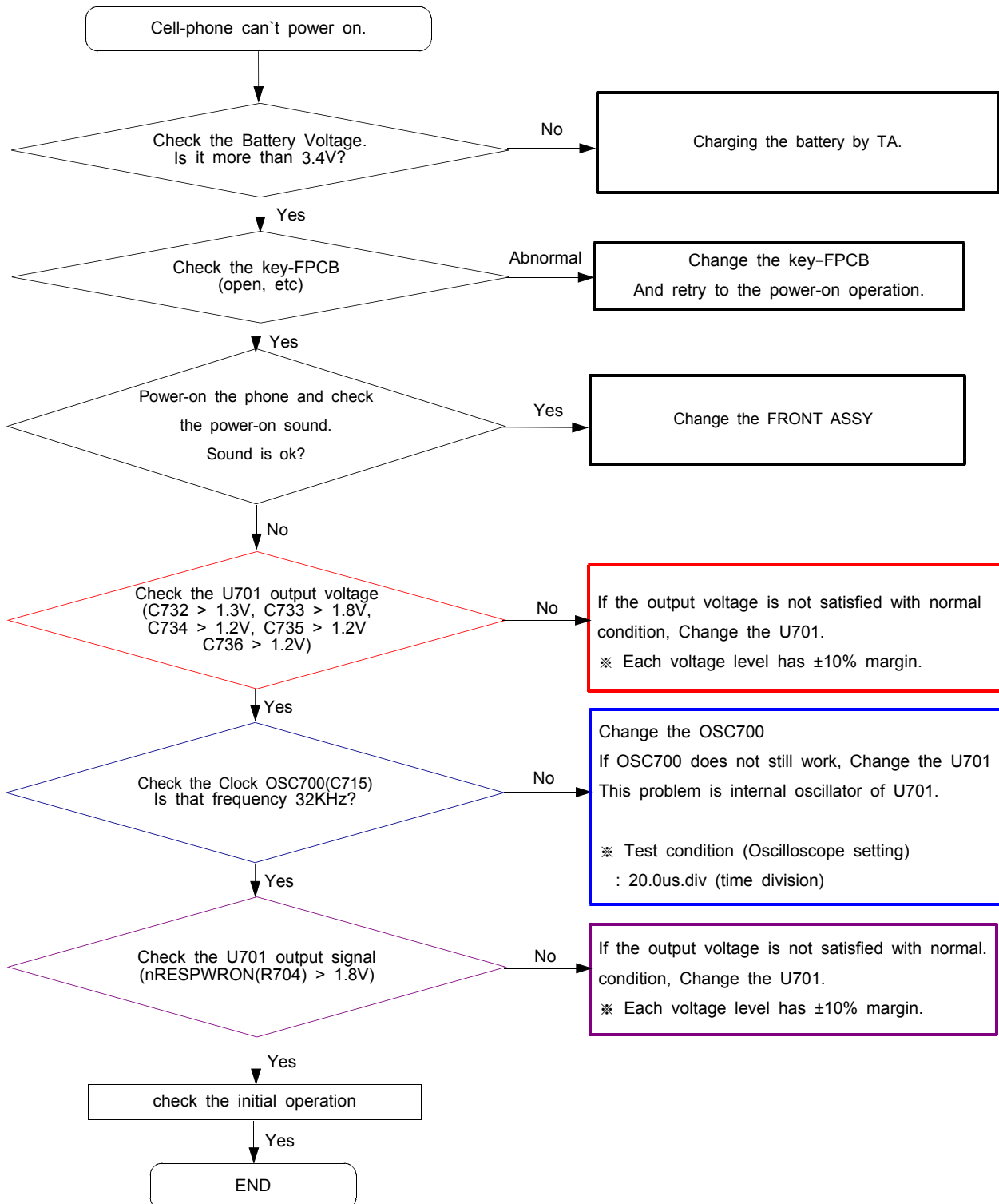


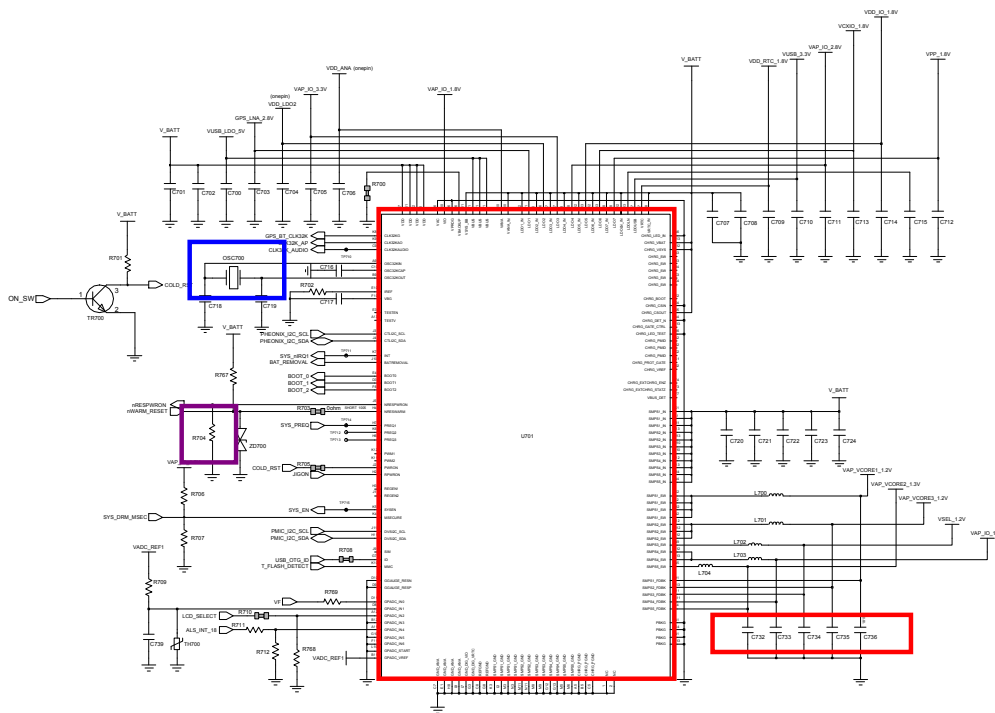
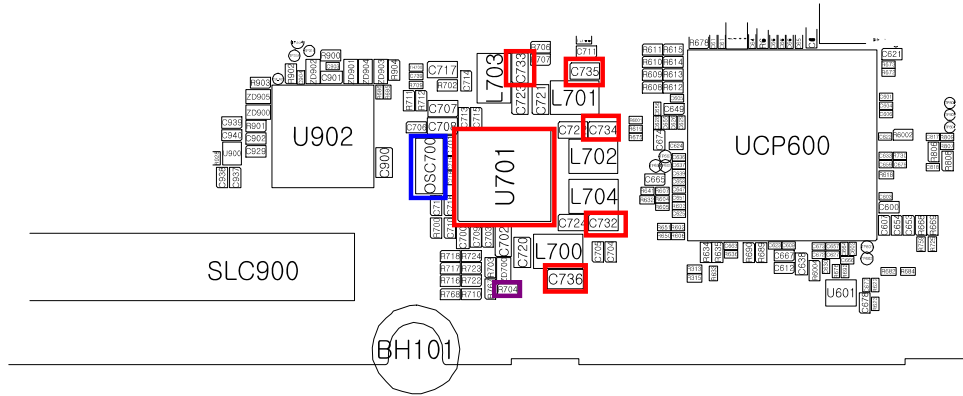
↑ 8960 & Spectrum Analyzer



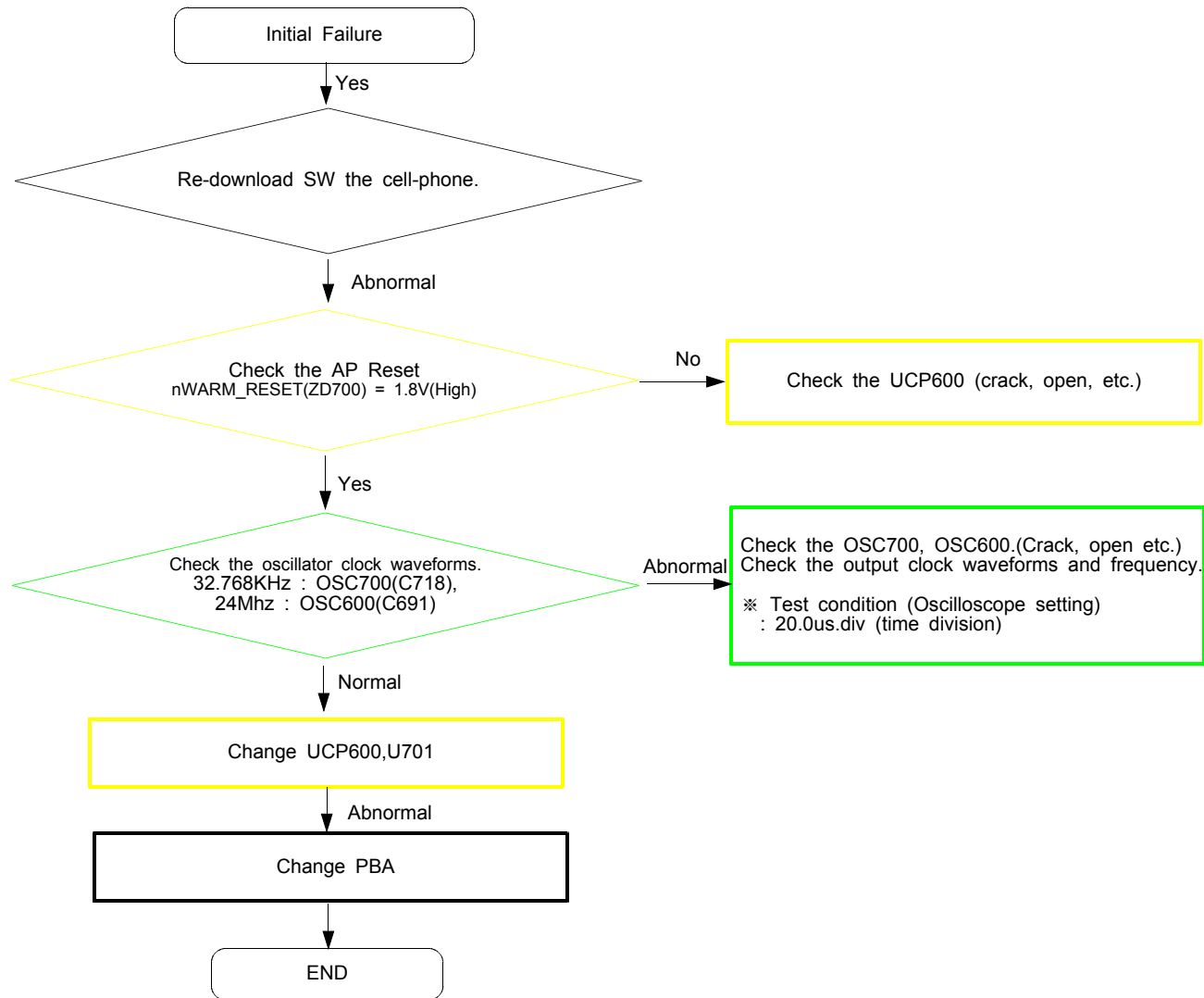
↑ Soldering iron

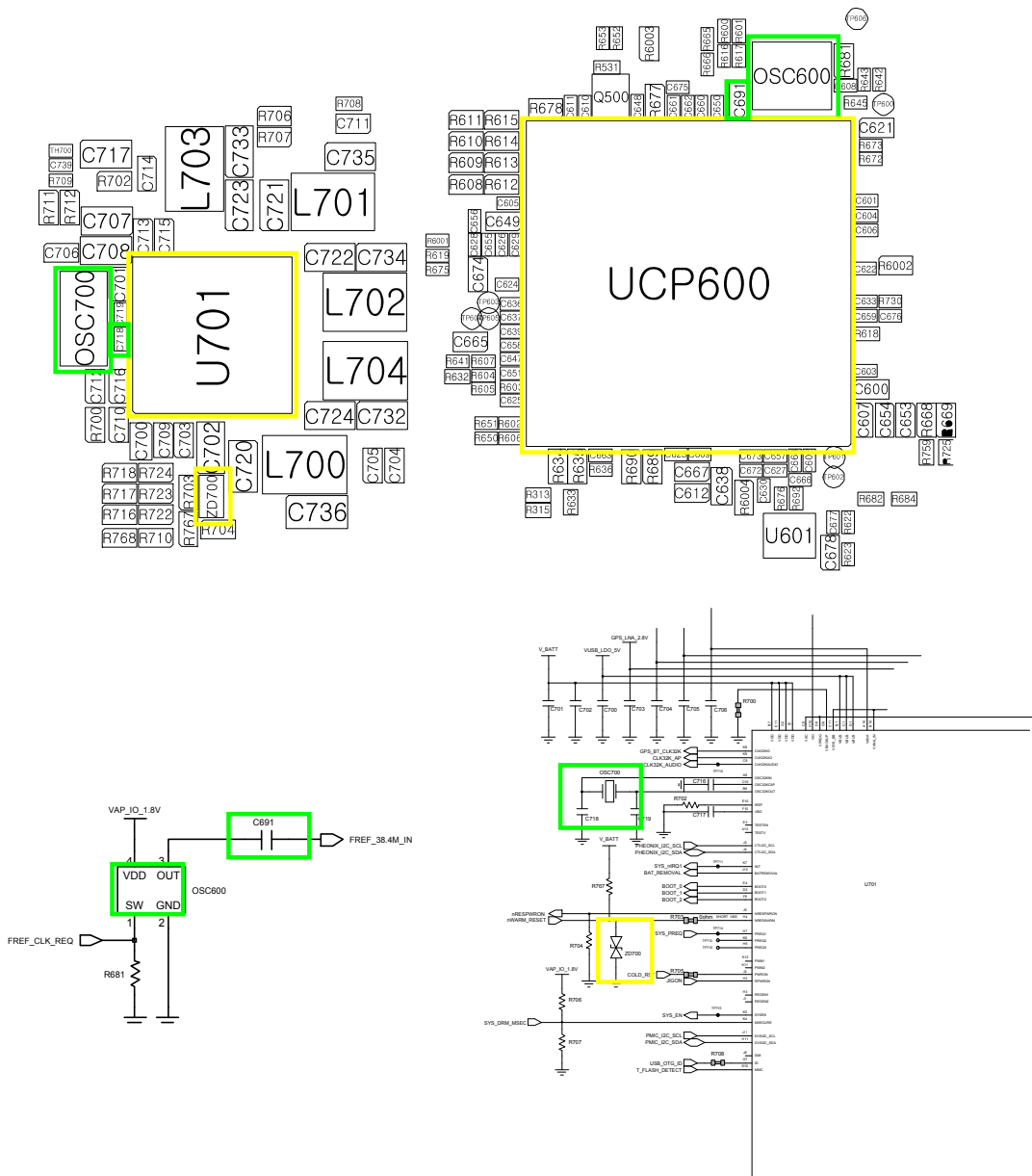
8-3-1. Power On



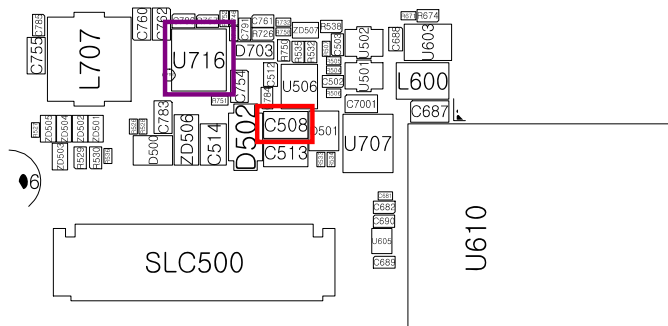
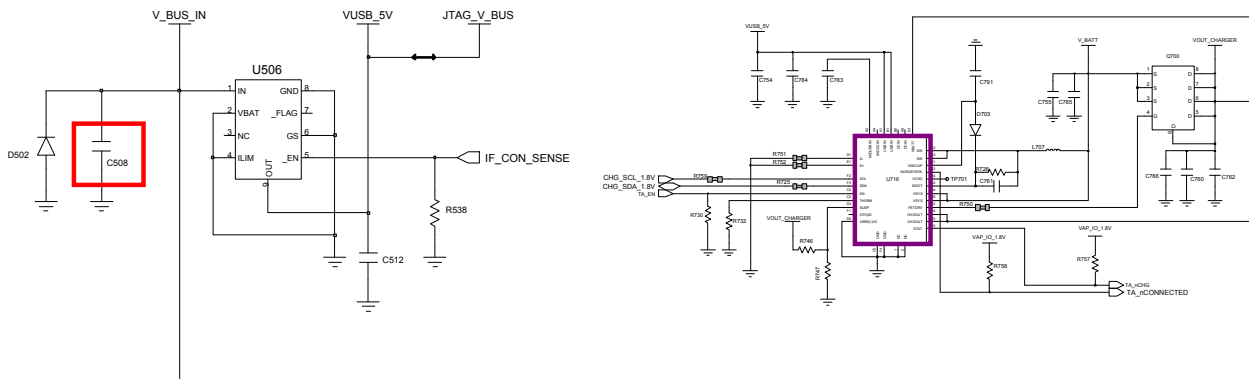
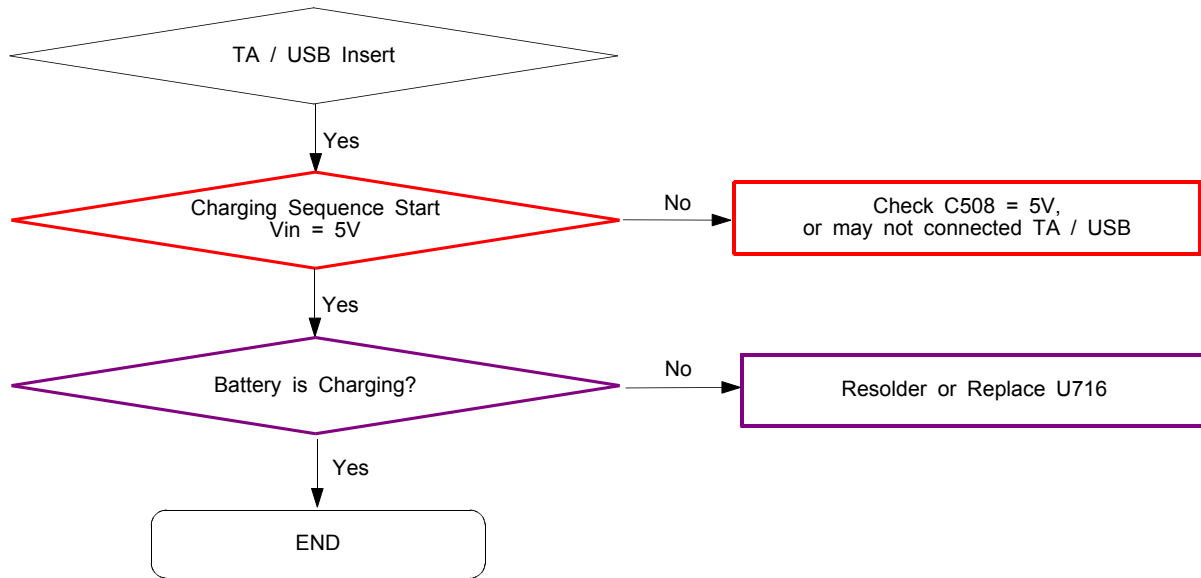


8-3-2. Initial

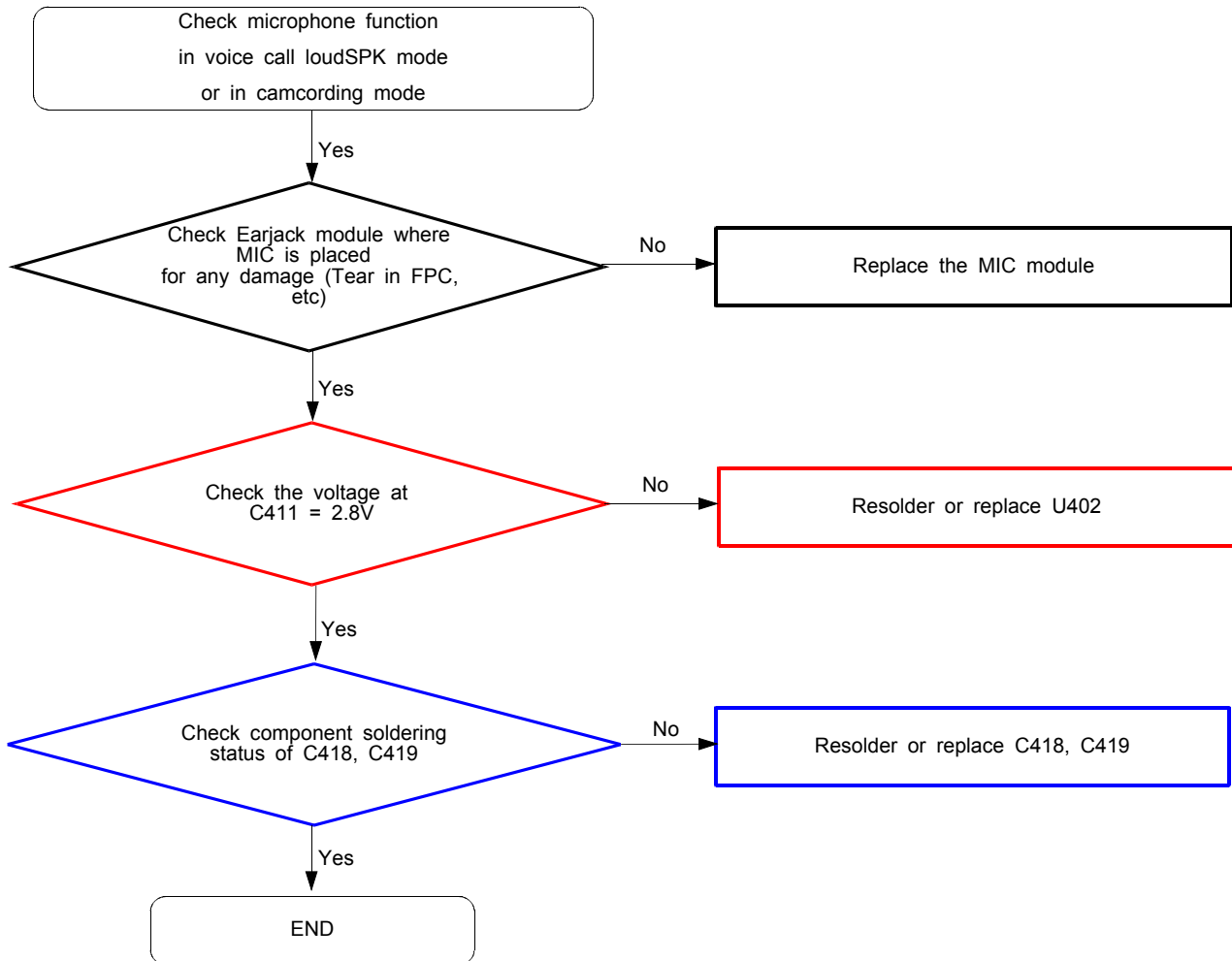


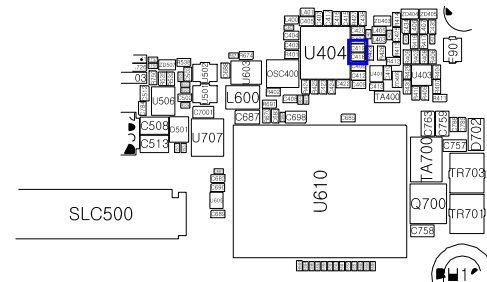
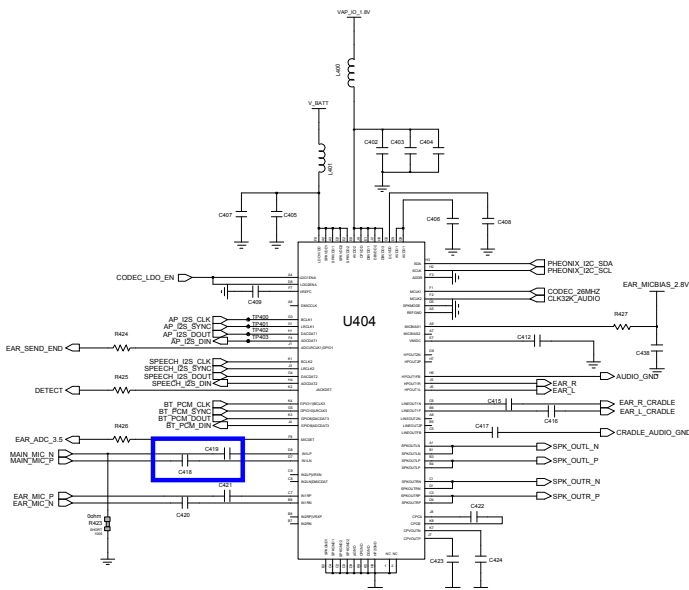
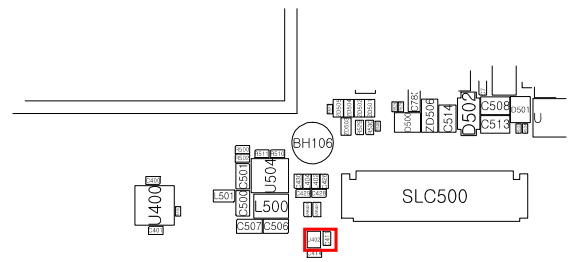
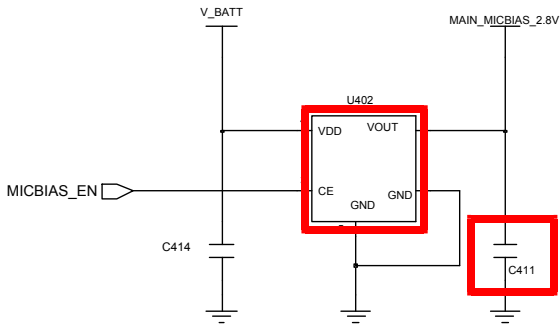


8-3-3. Charging Part

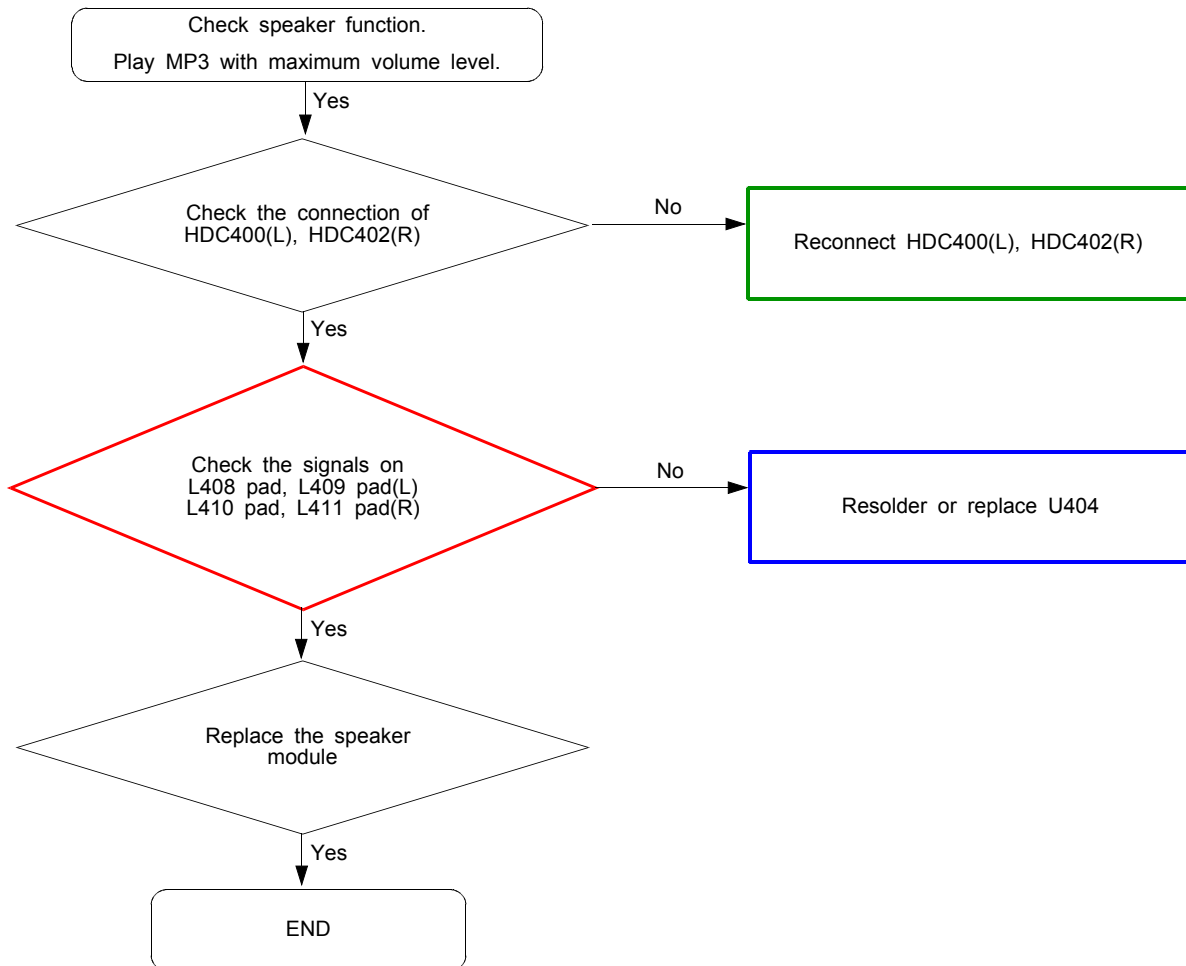


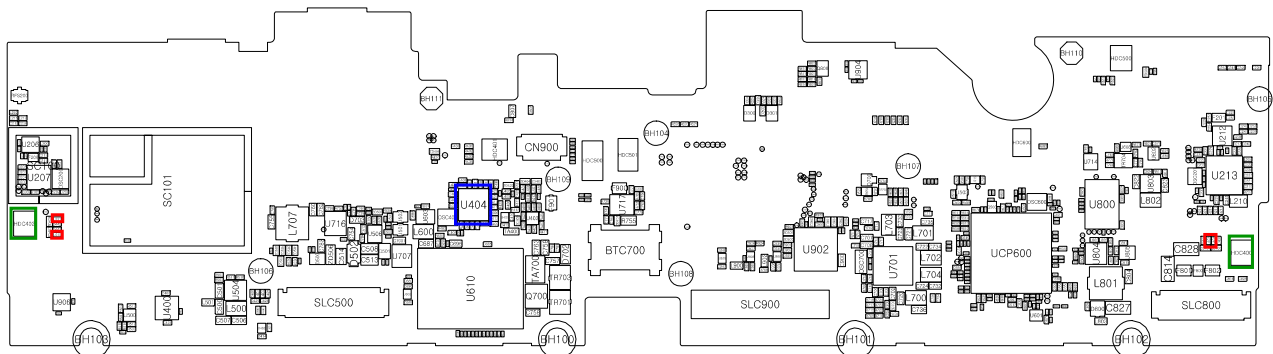
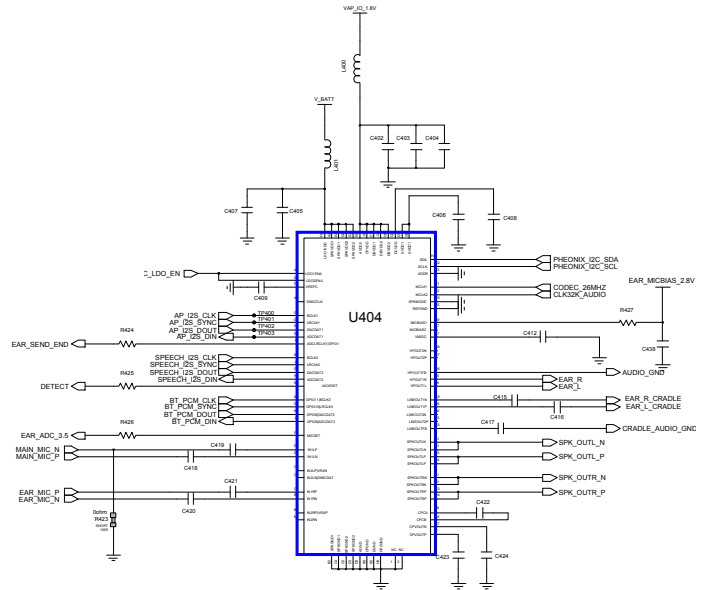
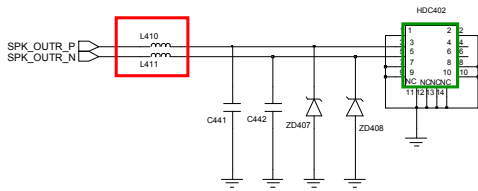
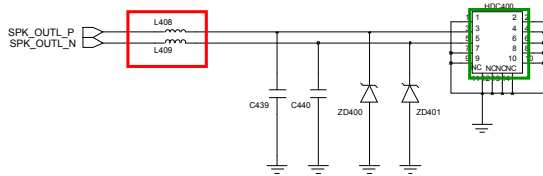
8-3-4. Microphone Part



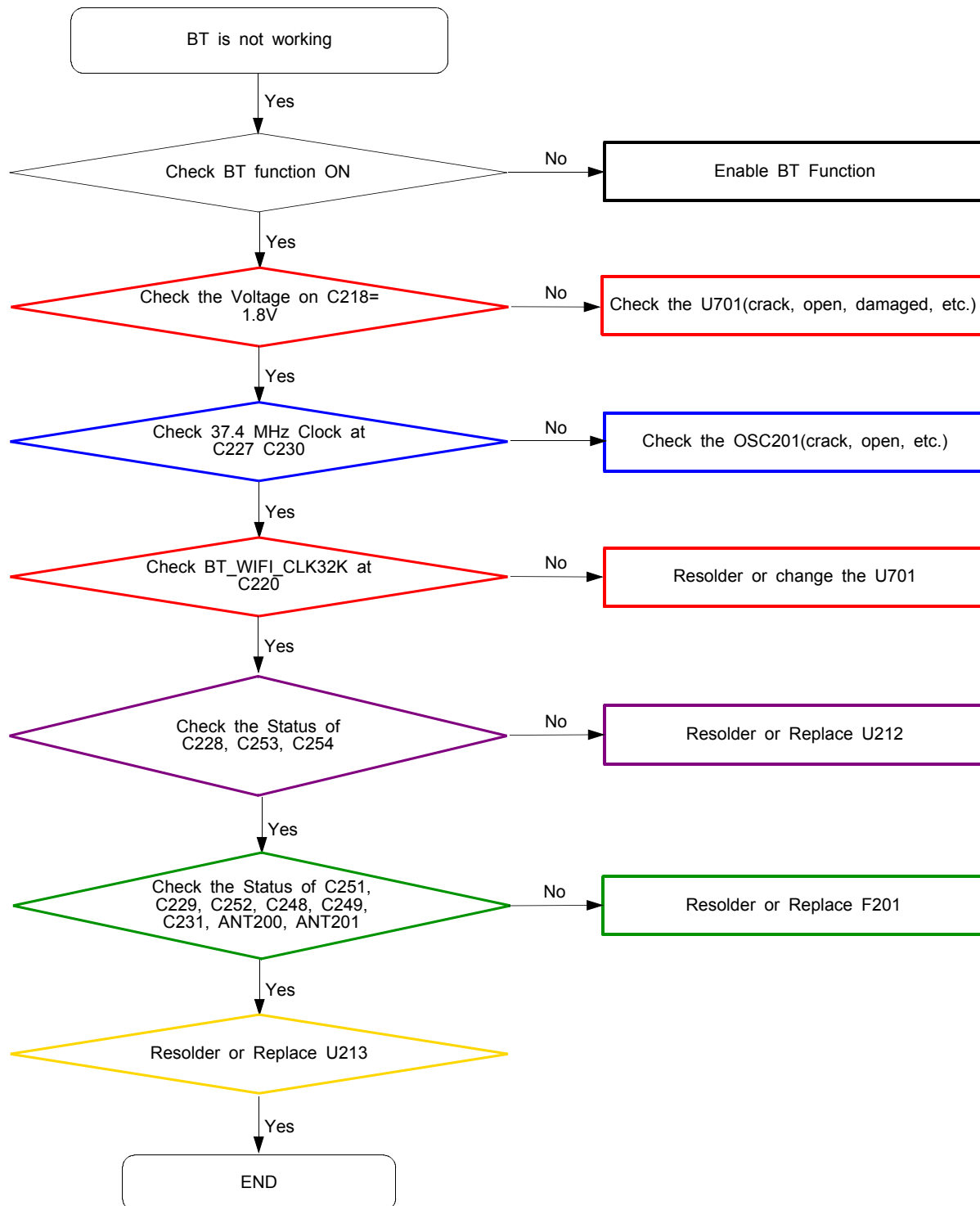


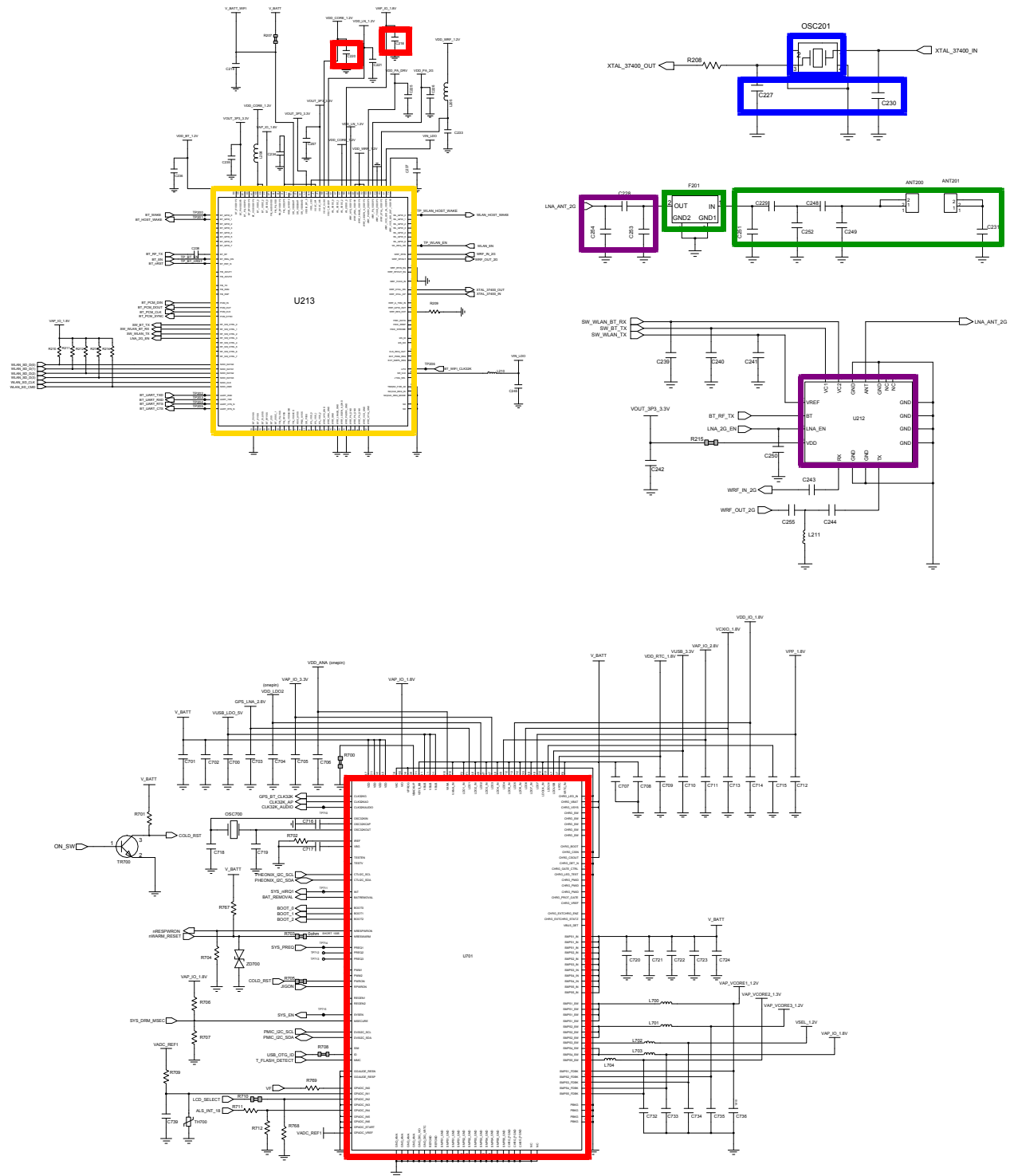
8-3-5. Speaker Part

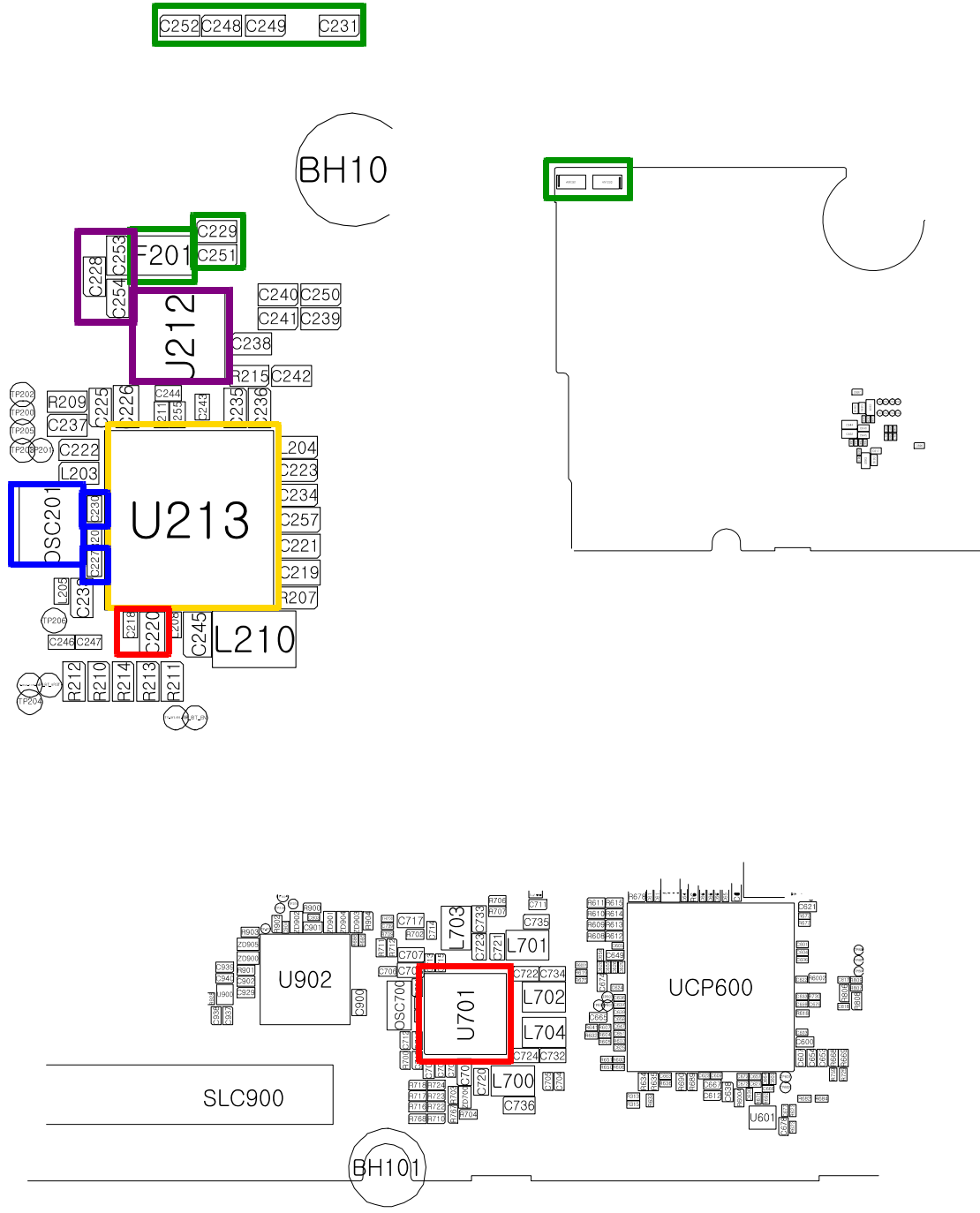




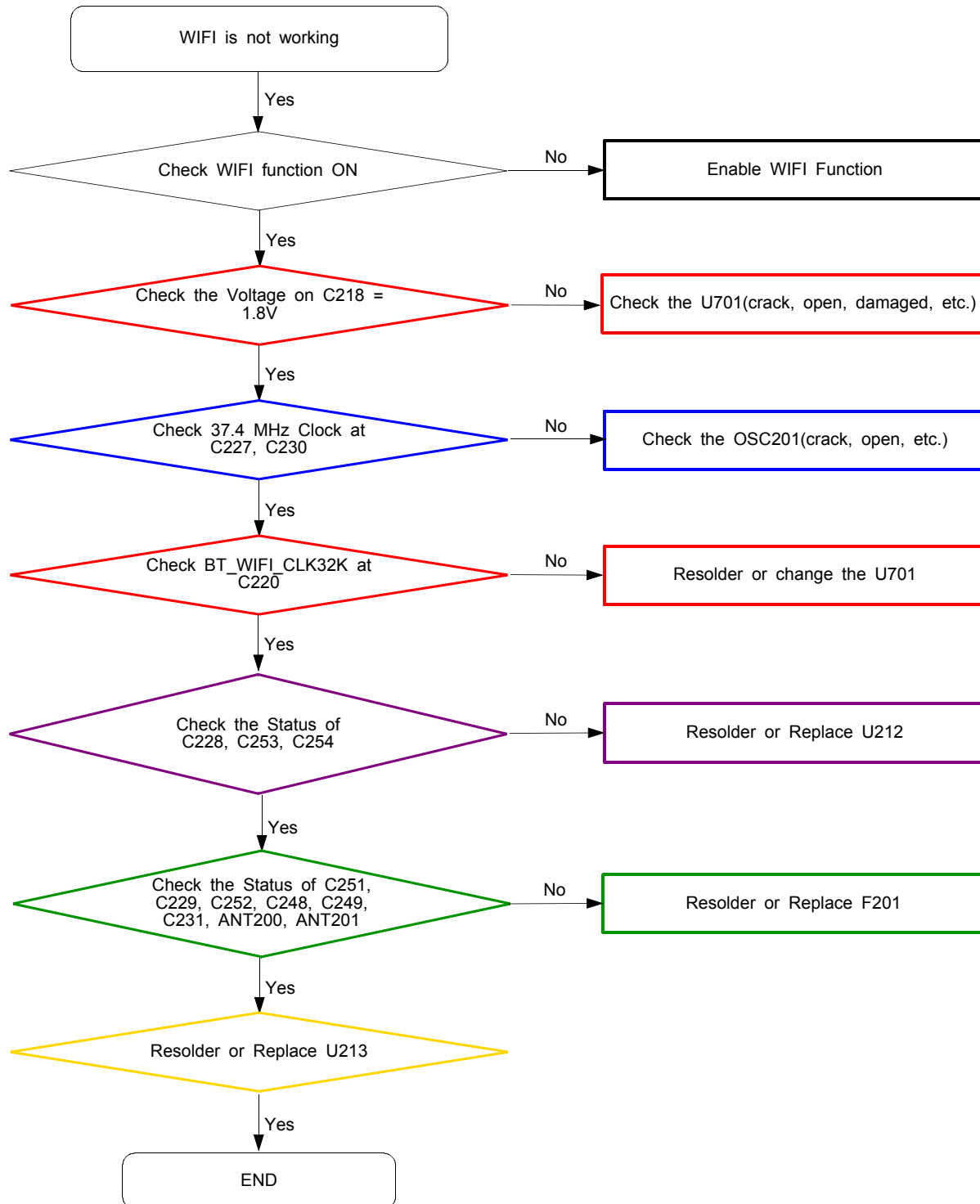
8-3-6. BT Part

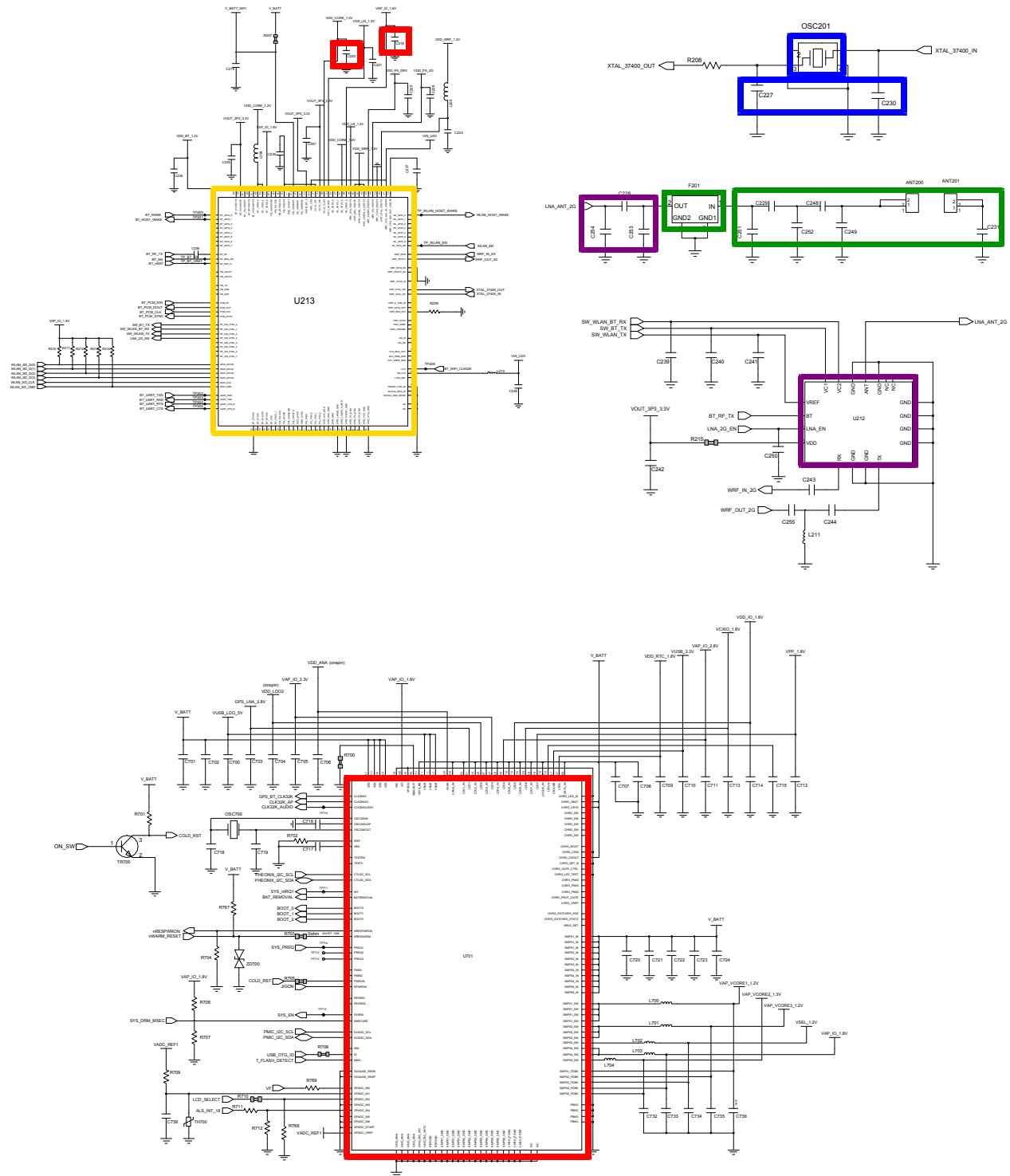


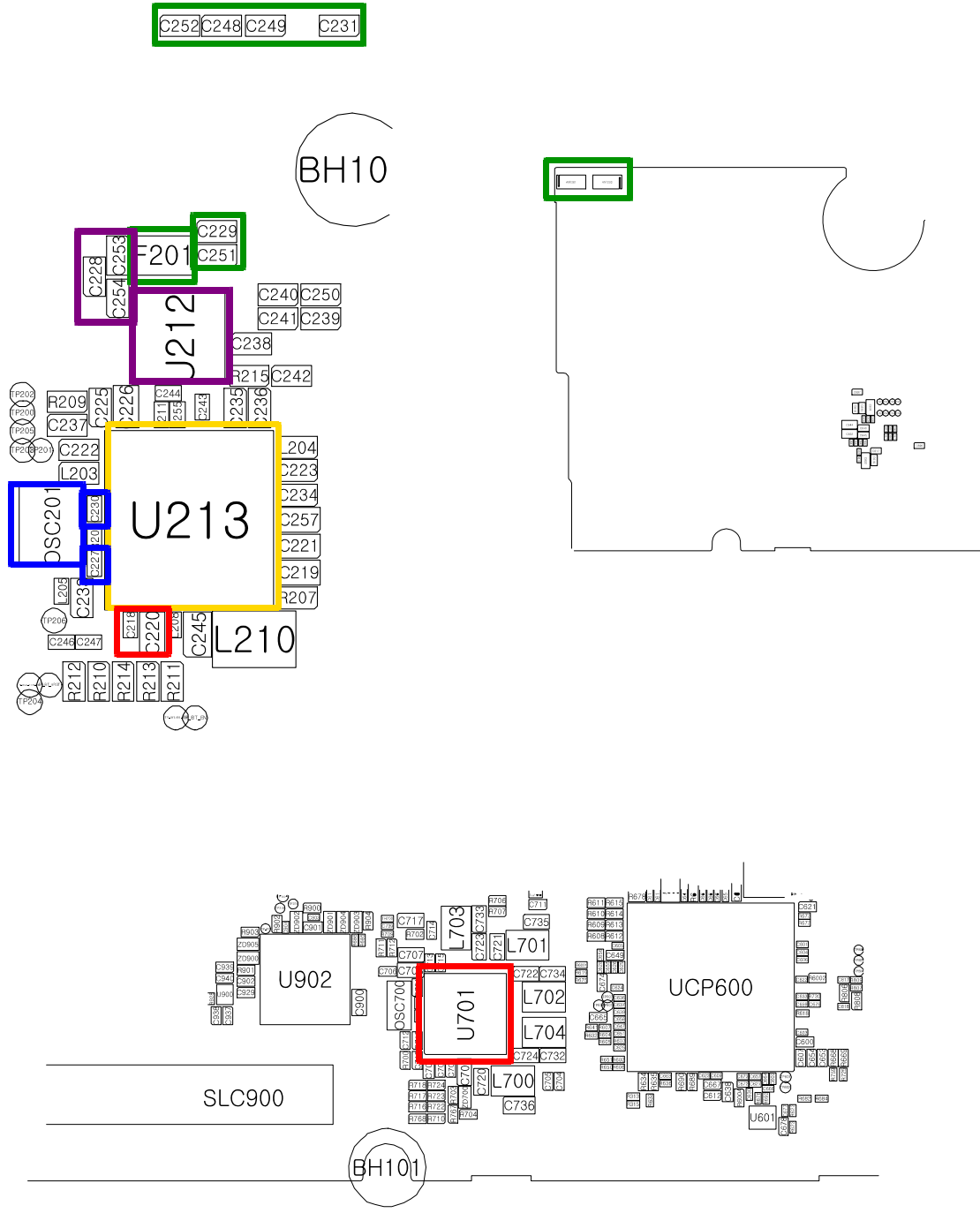




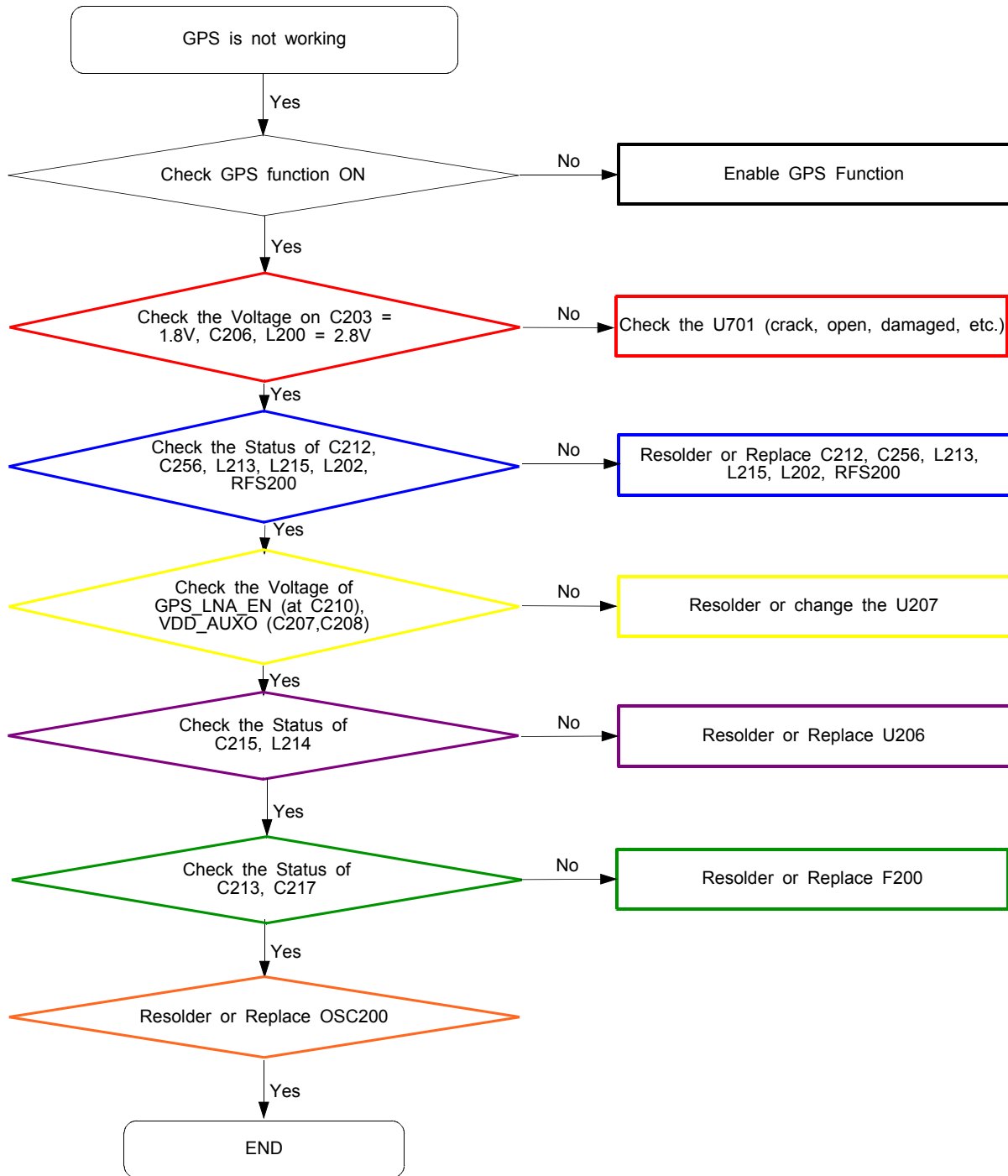
8-3-7. WIFI

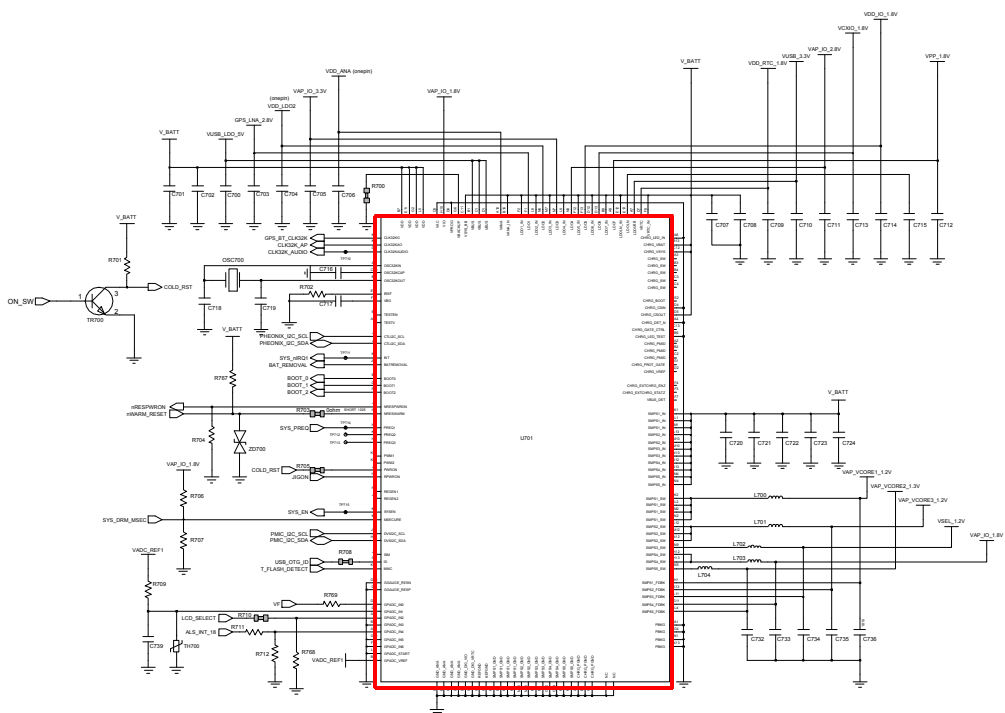
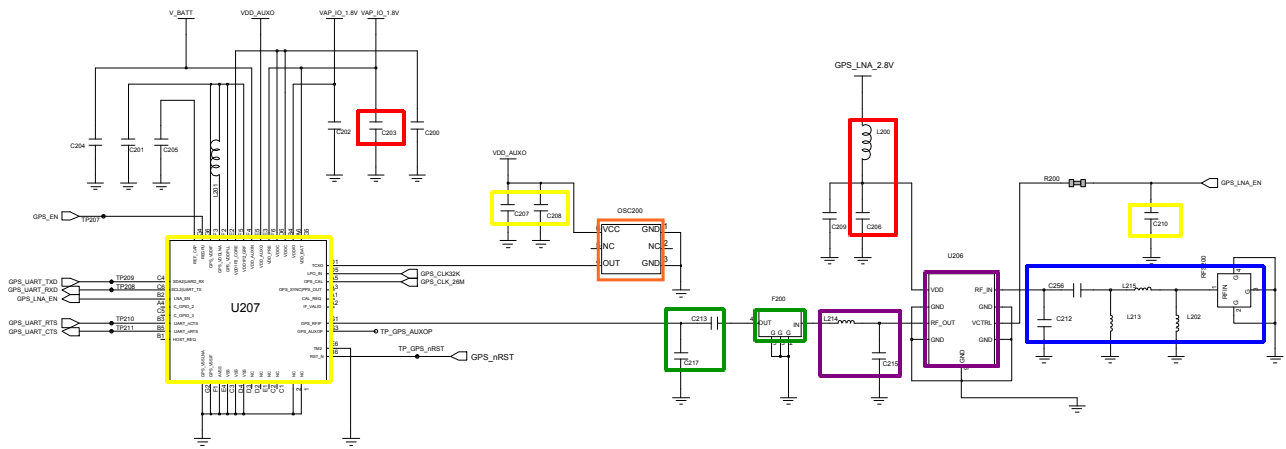


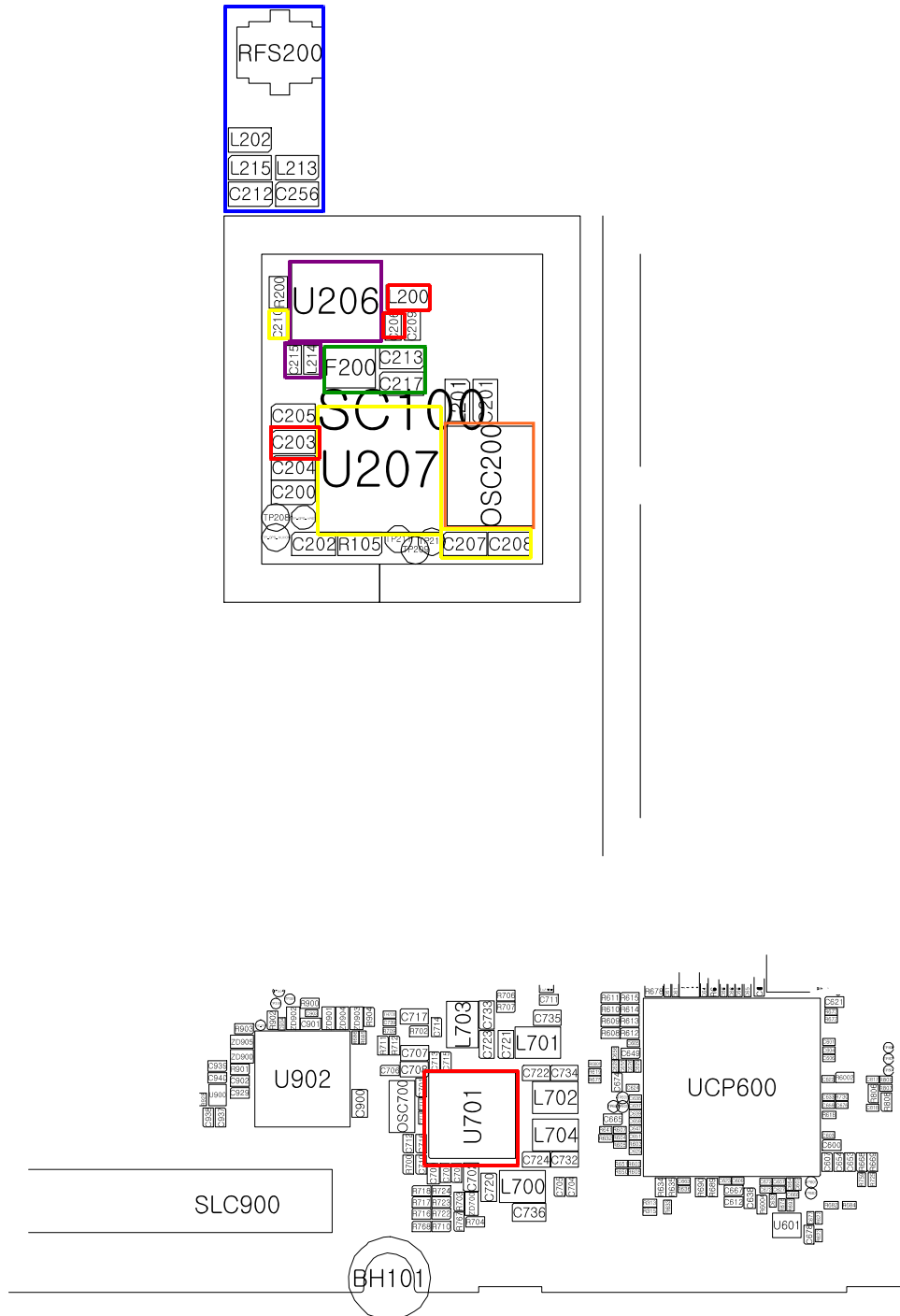




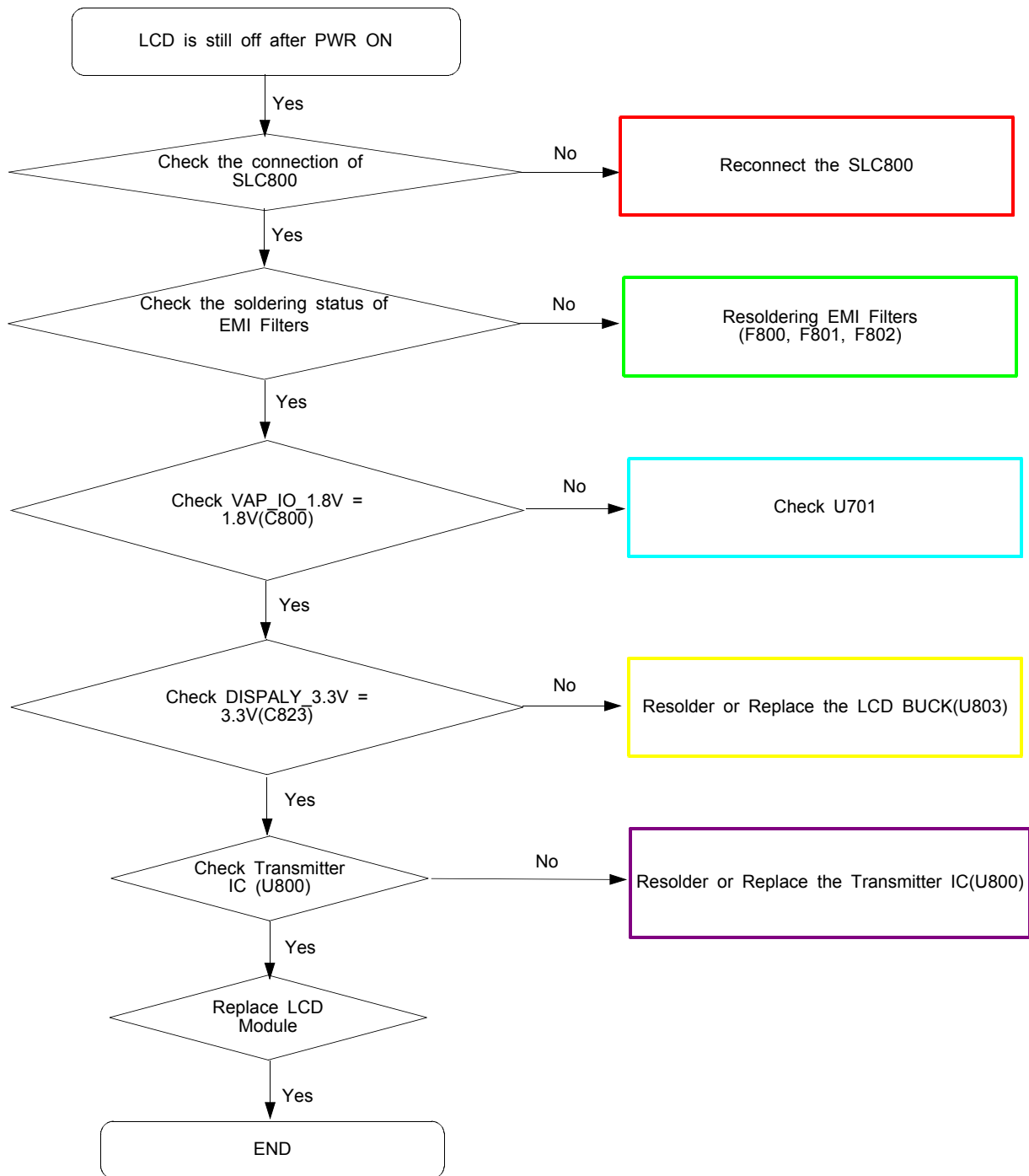
8-3-8. GPS

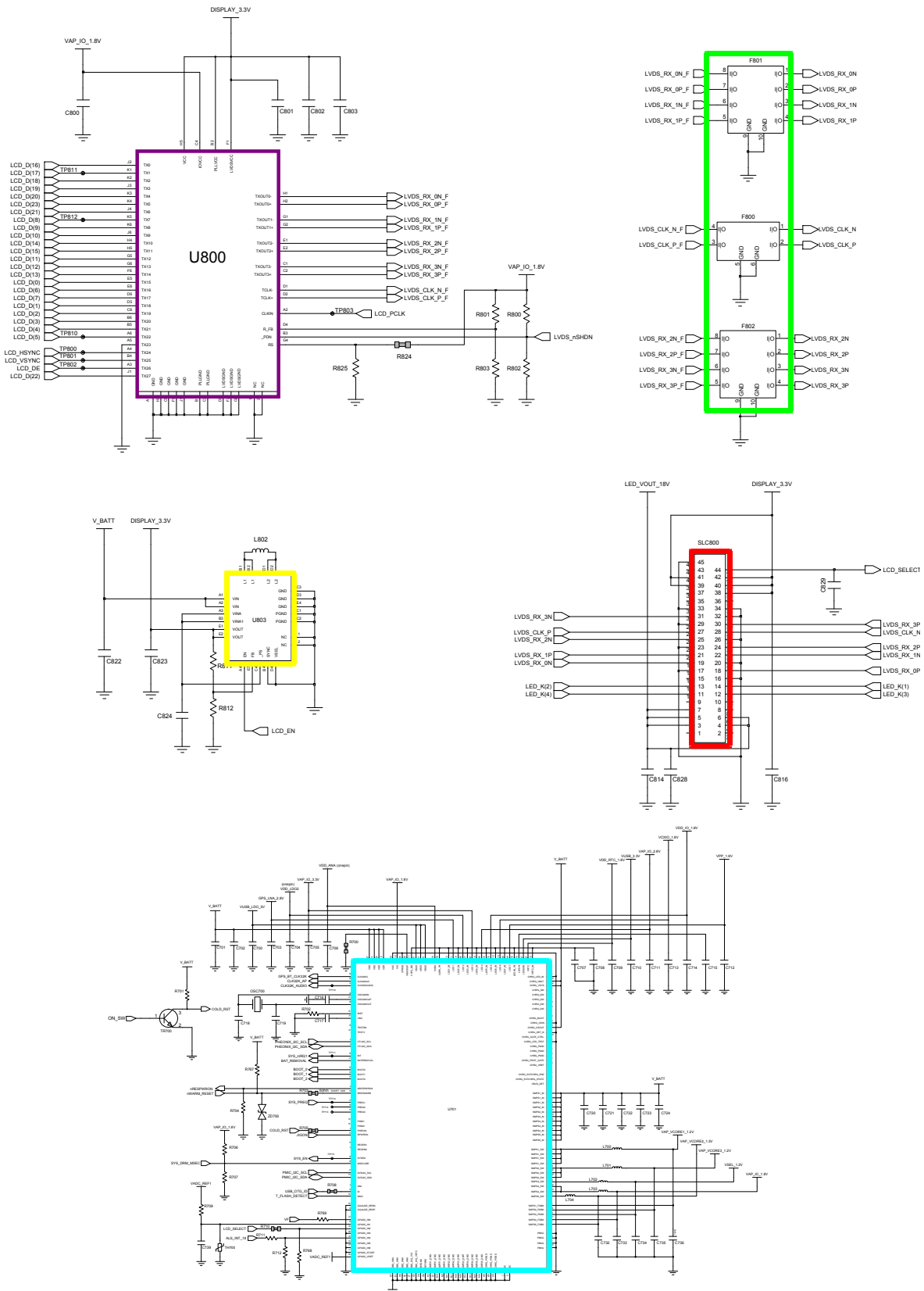


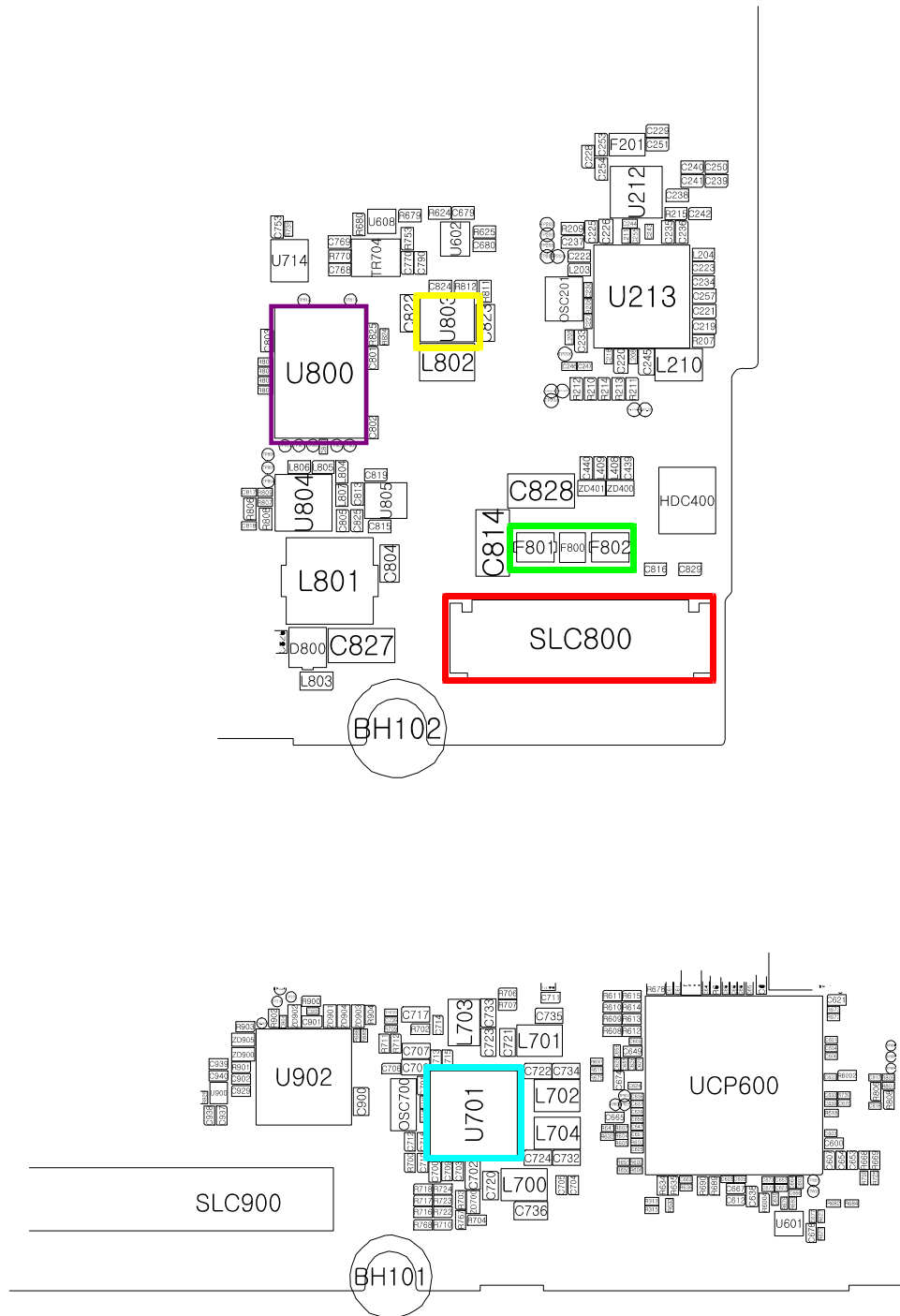




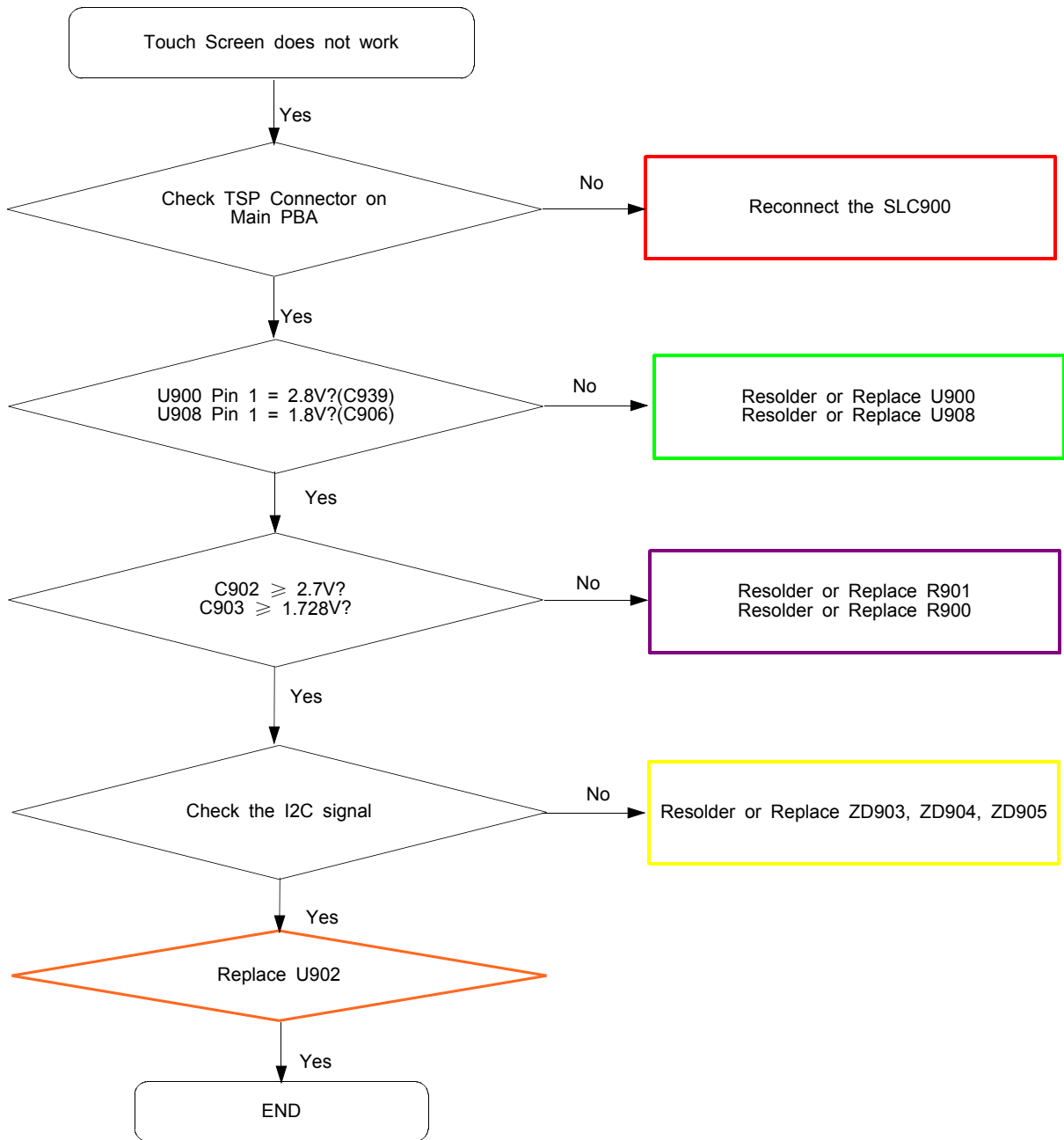
8-3-9. LCD

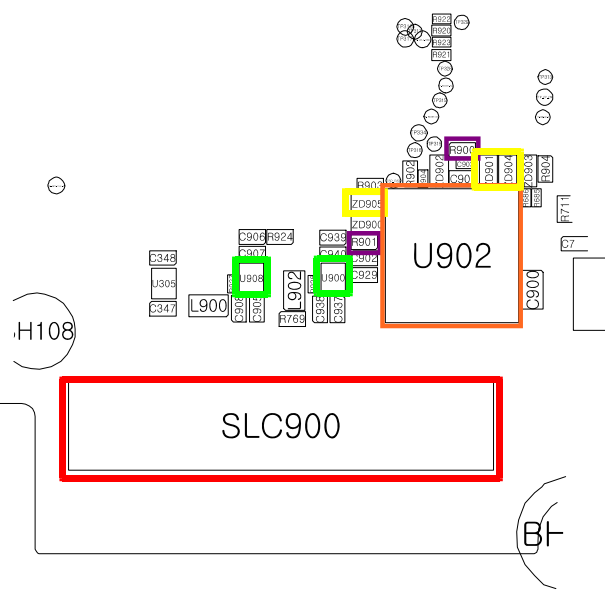
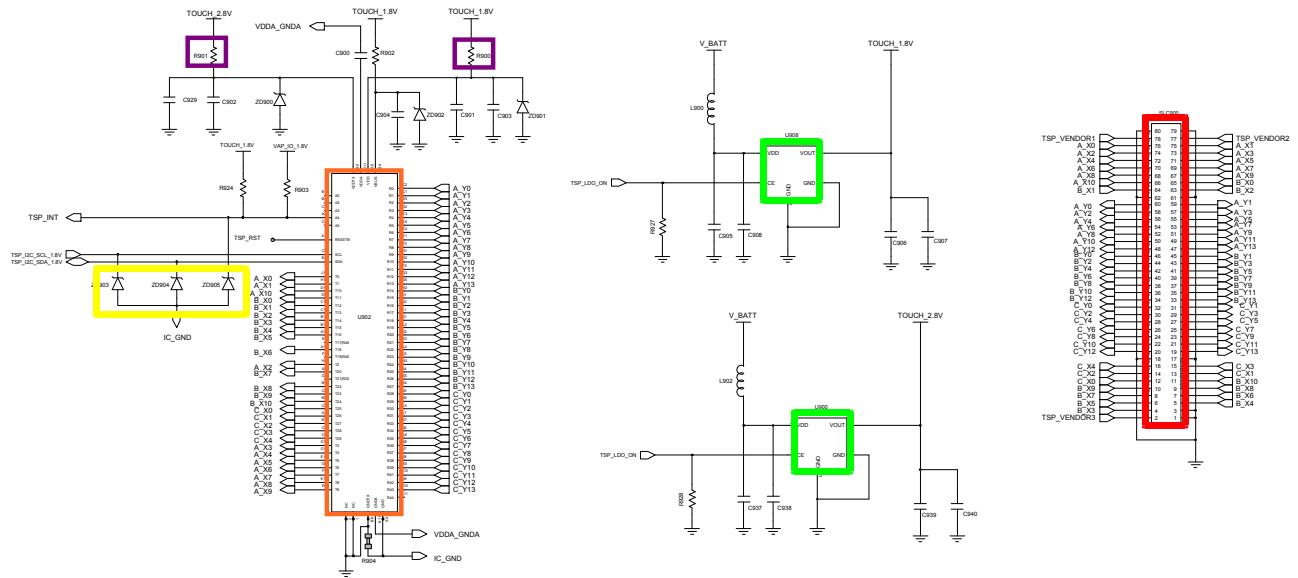




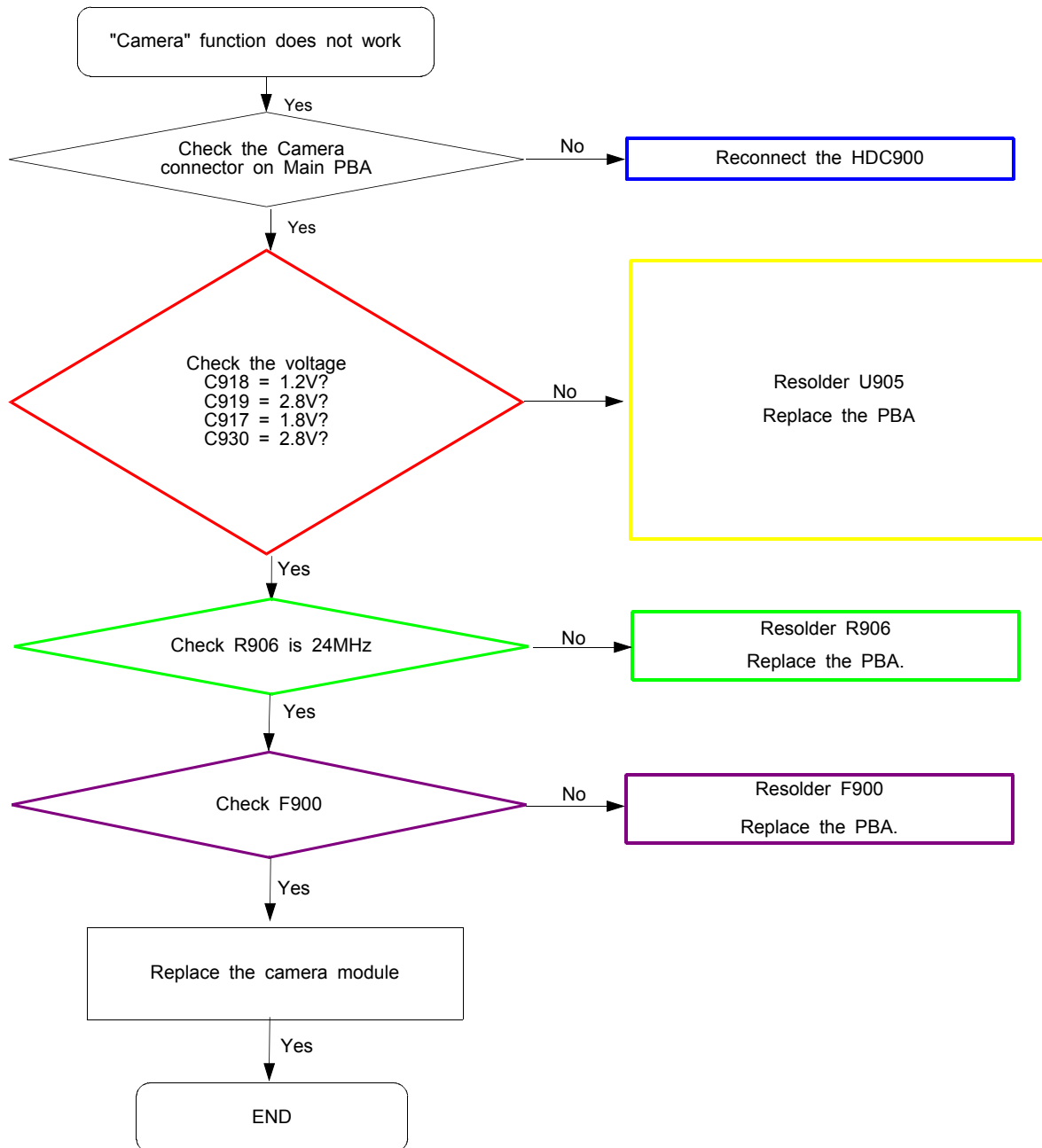


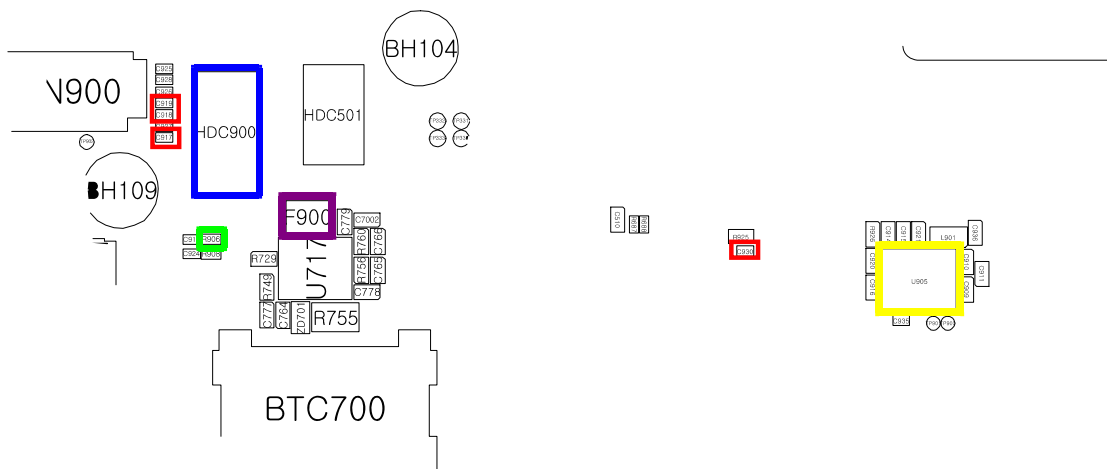
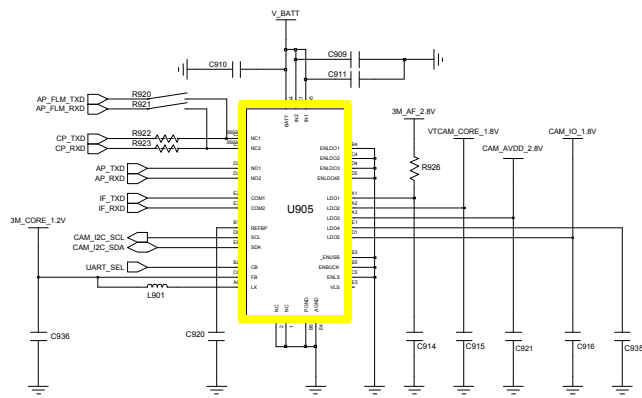
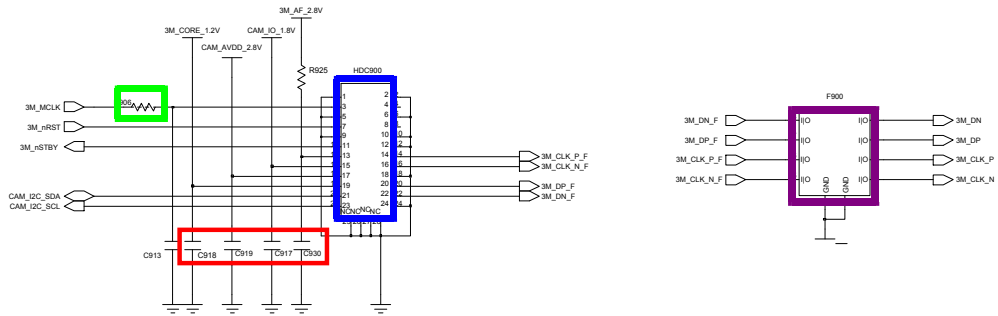
8-3-10. TSP



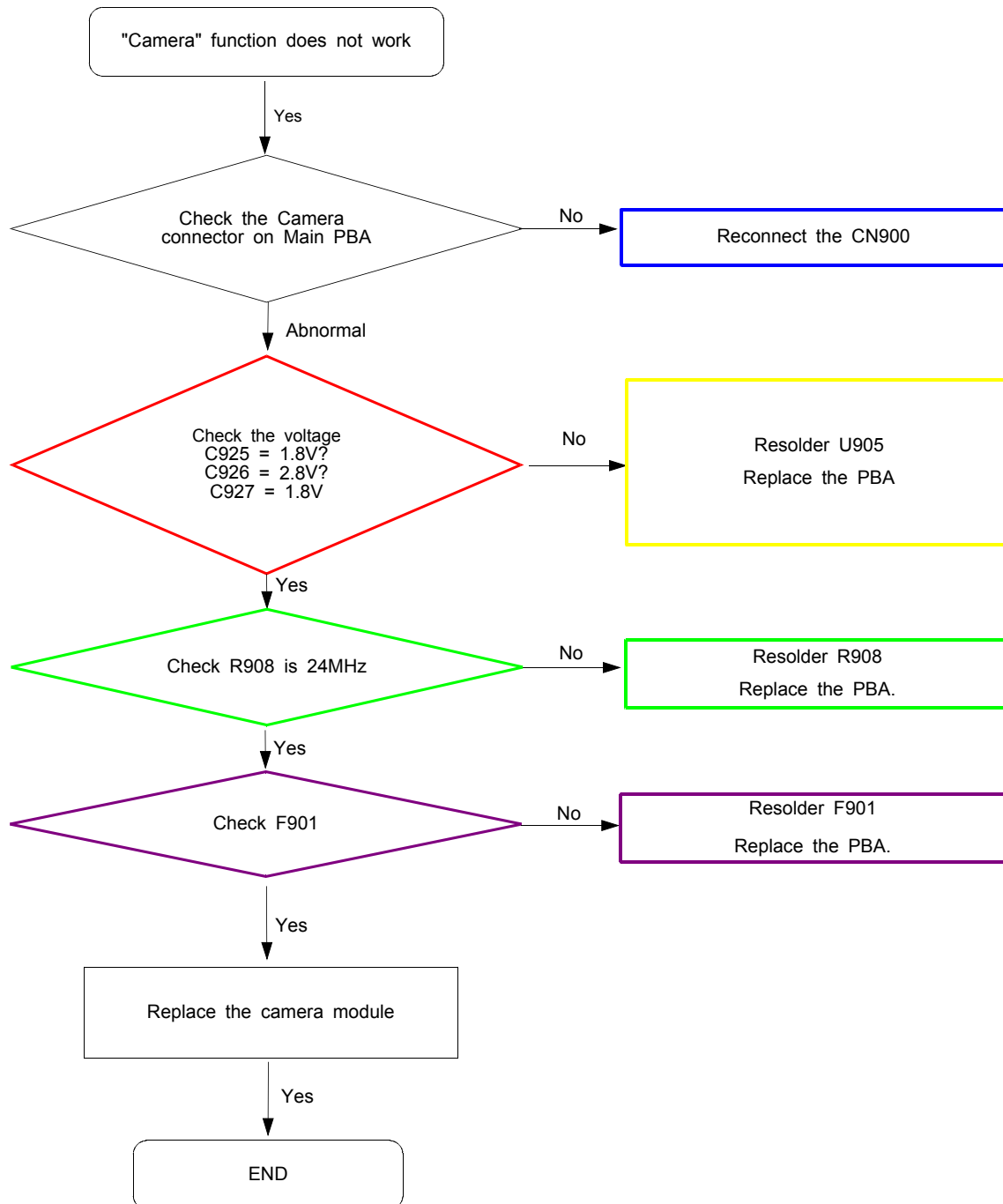


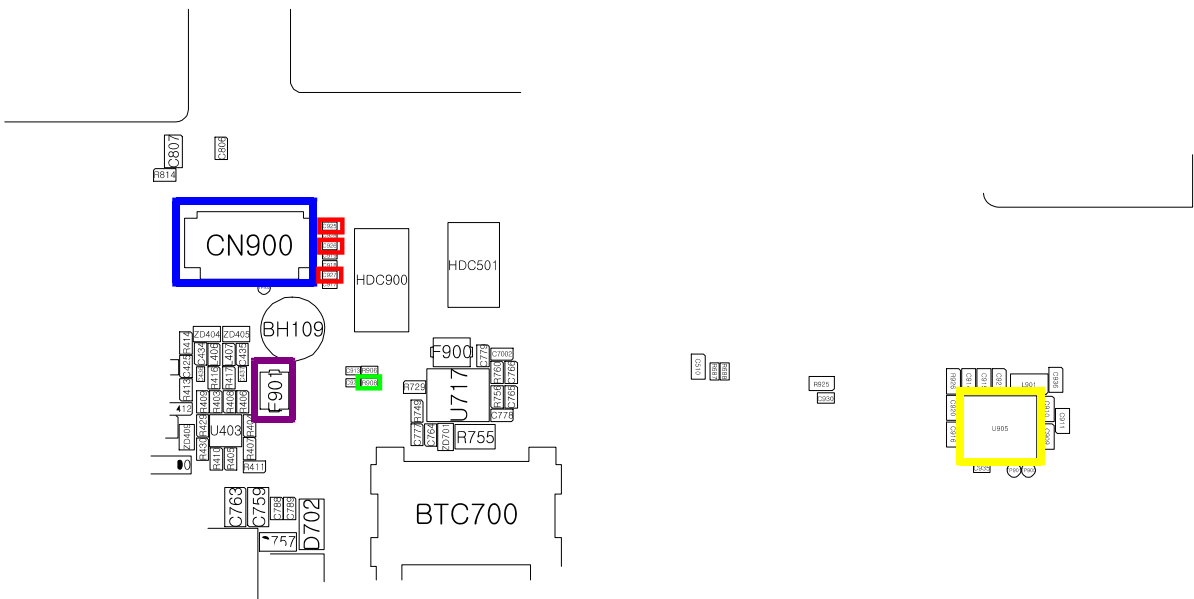
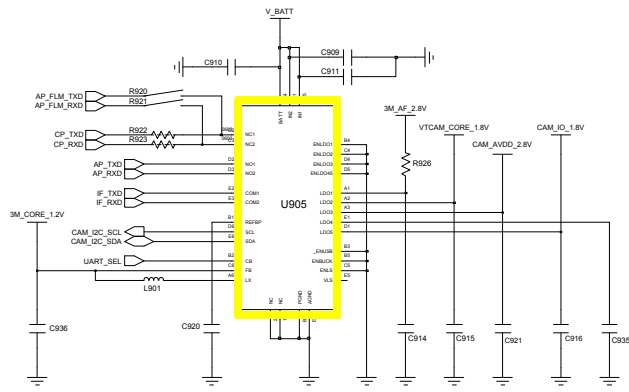
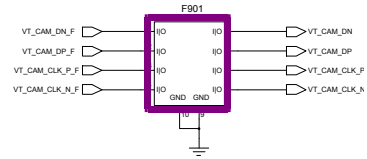
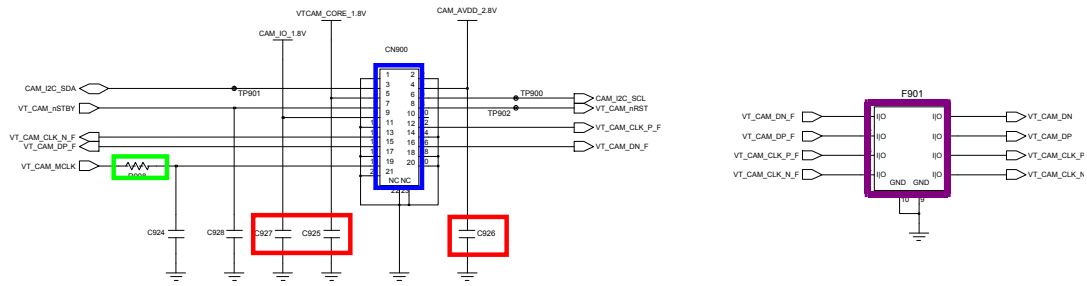
8-3-11. 3M CAM



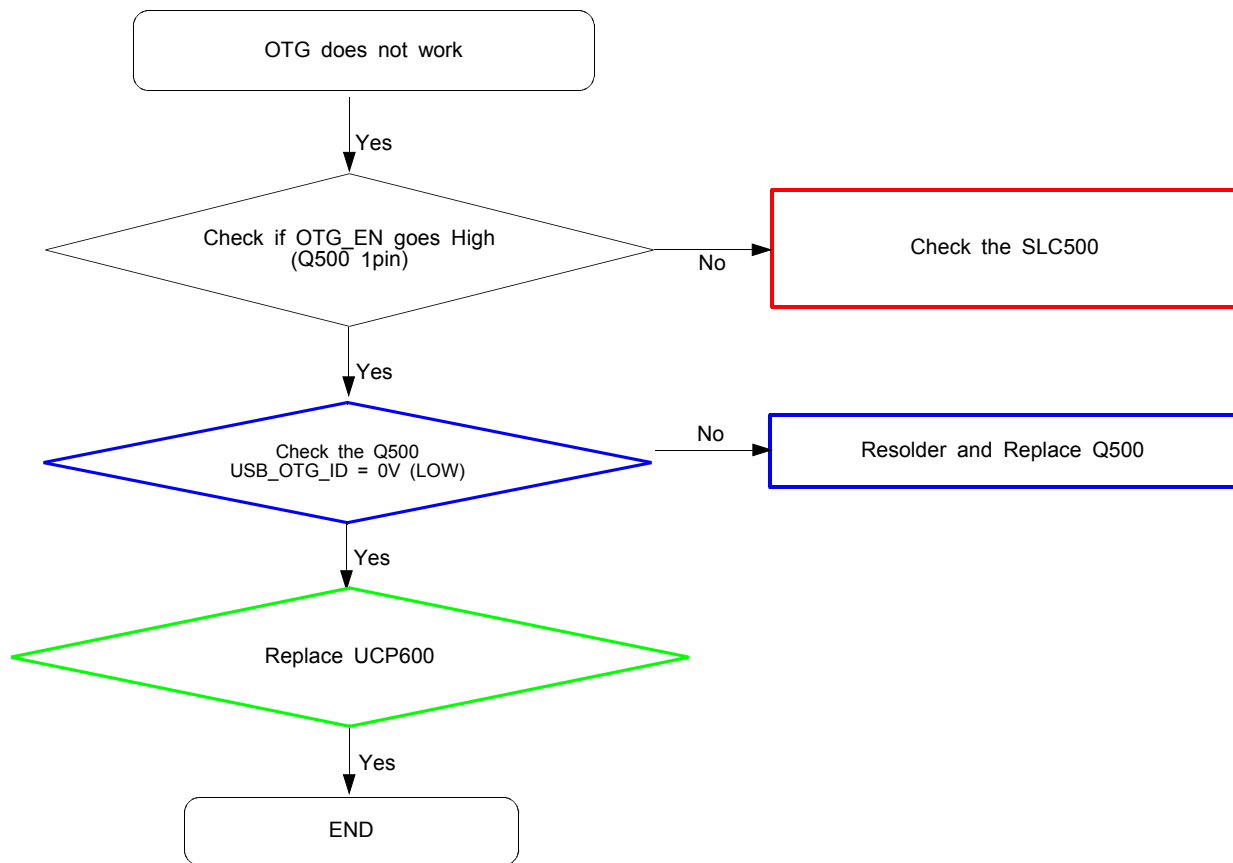


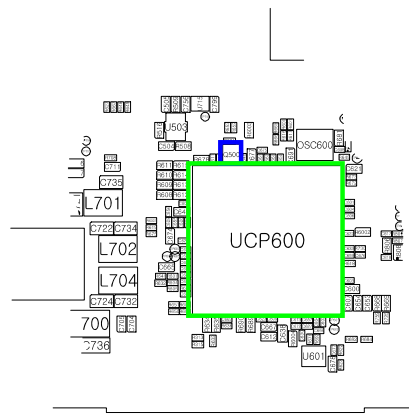
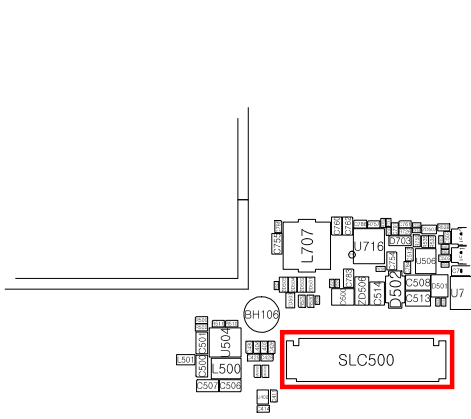
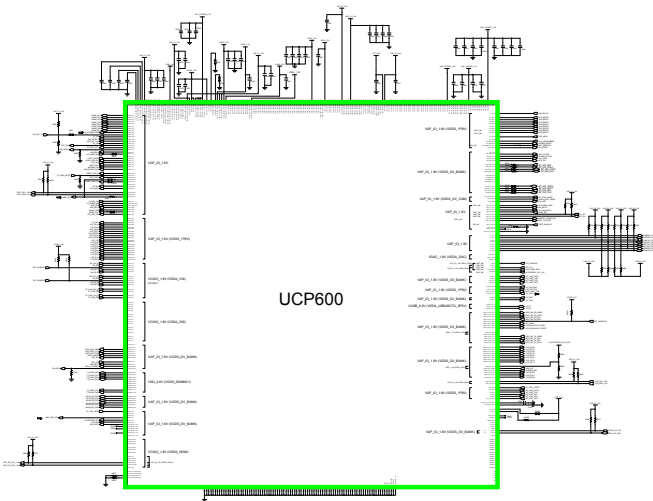
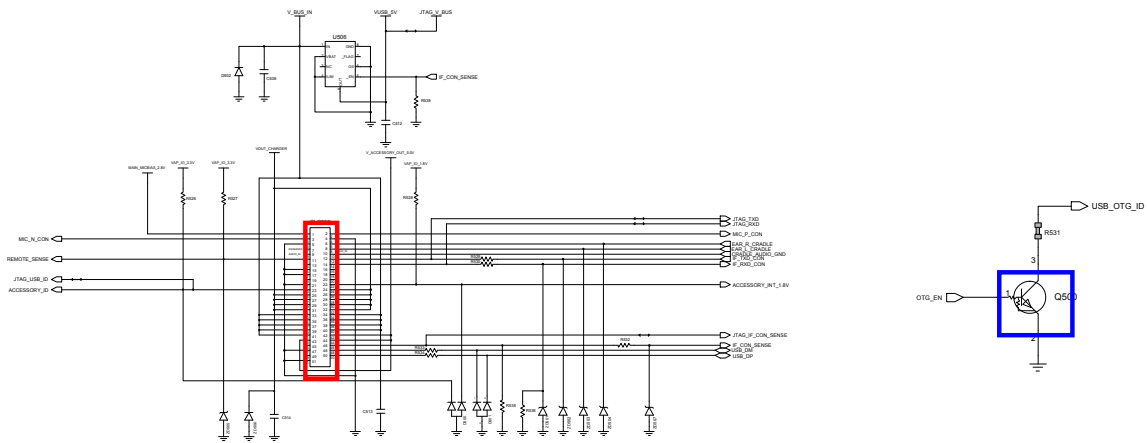
8-3-12. VGA CAM





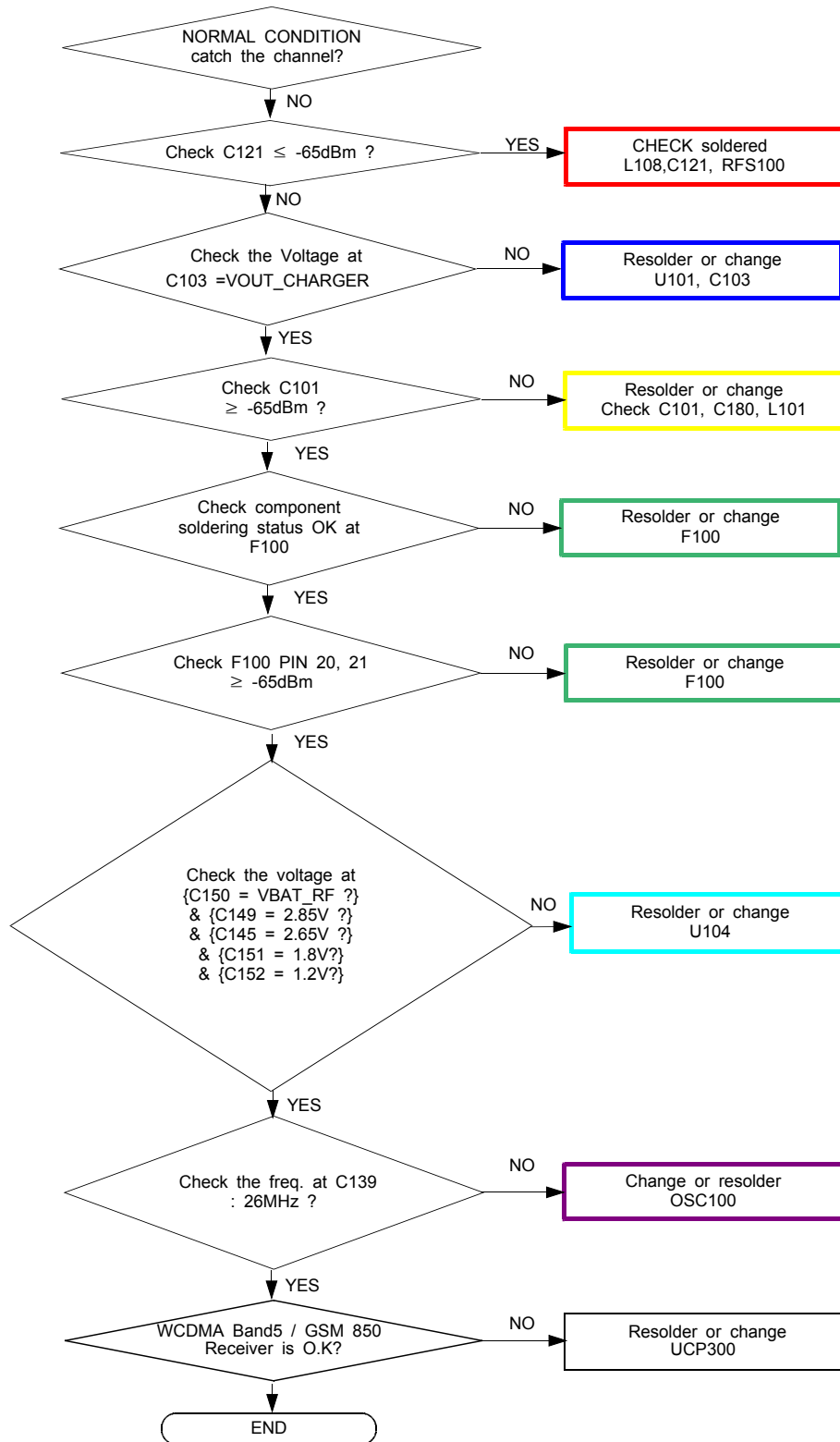
8-3-13. OTG

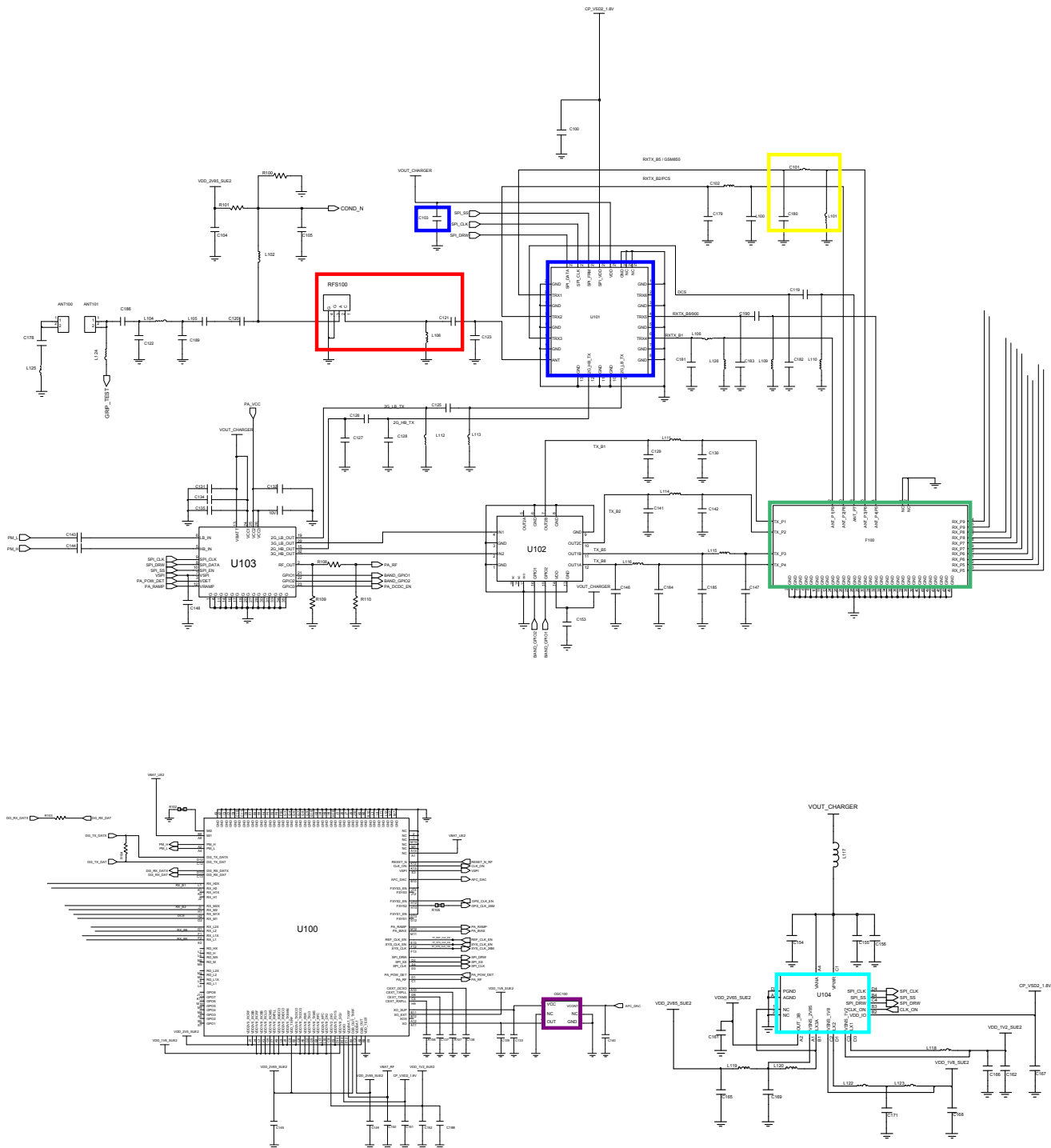


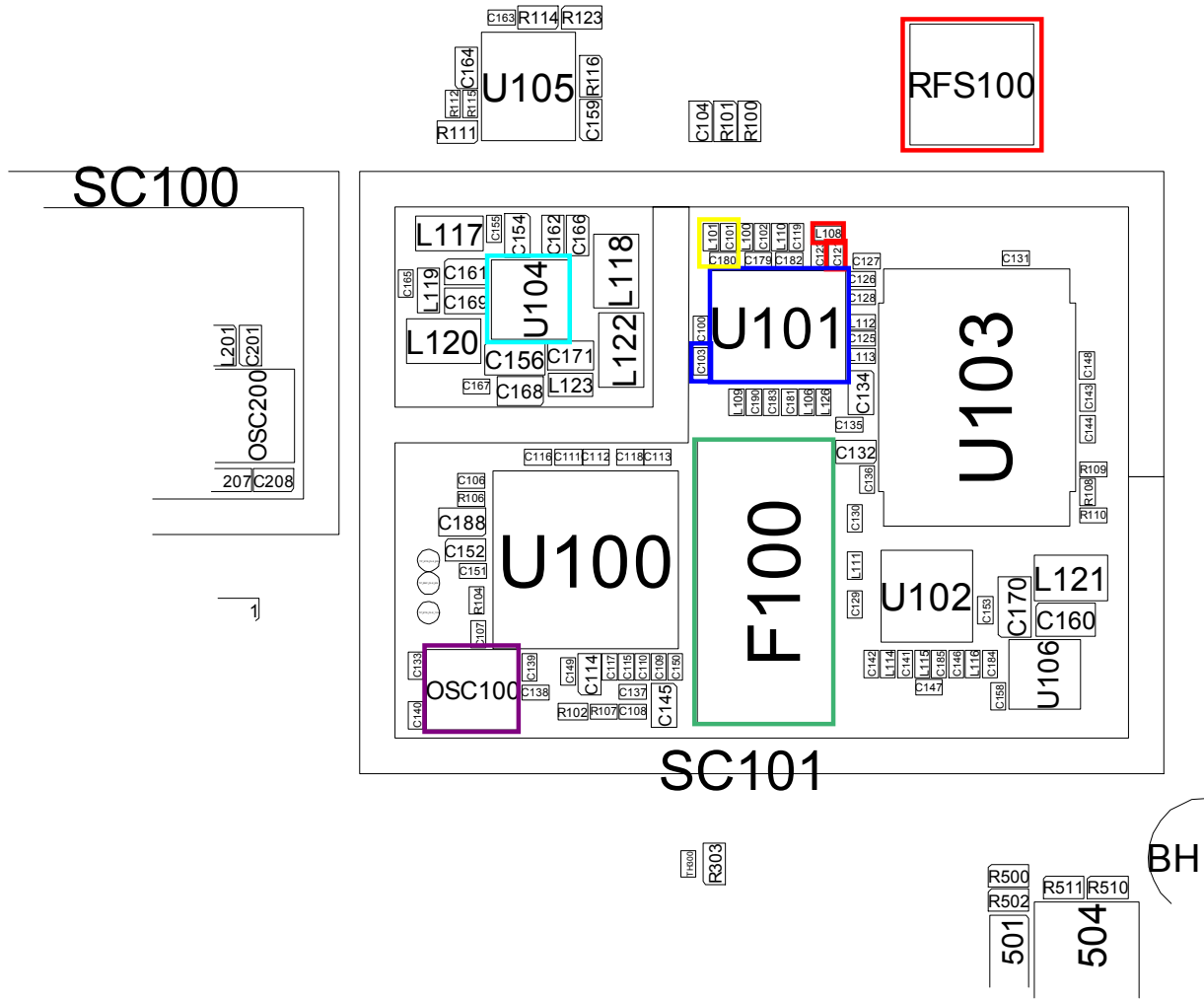


8-3-14. GSM850/ WCDMA Band5 RX

CONTINUO
 US RX ON
 RF INPUT : 4408CH
 AMP : -50dBm

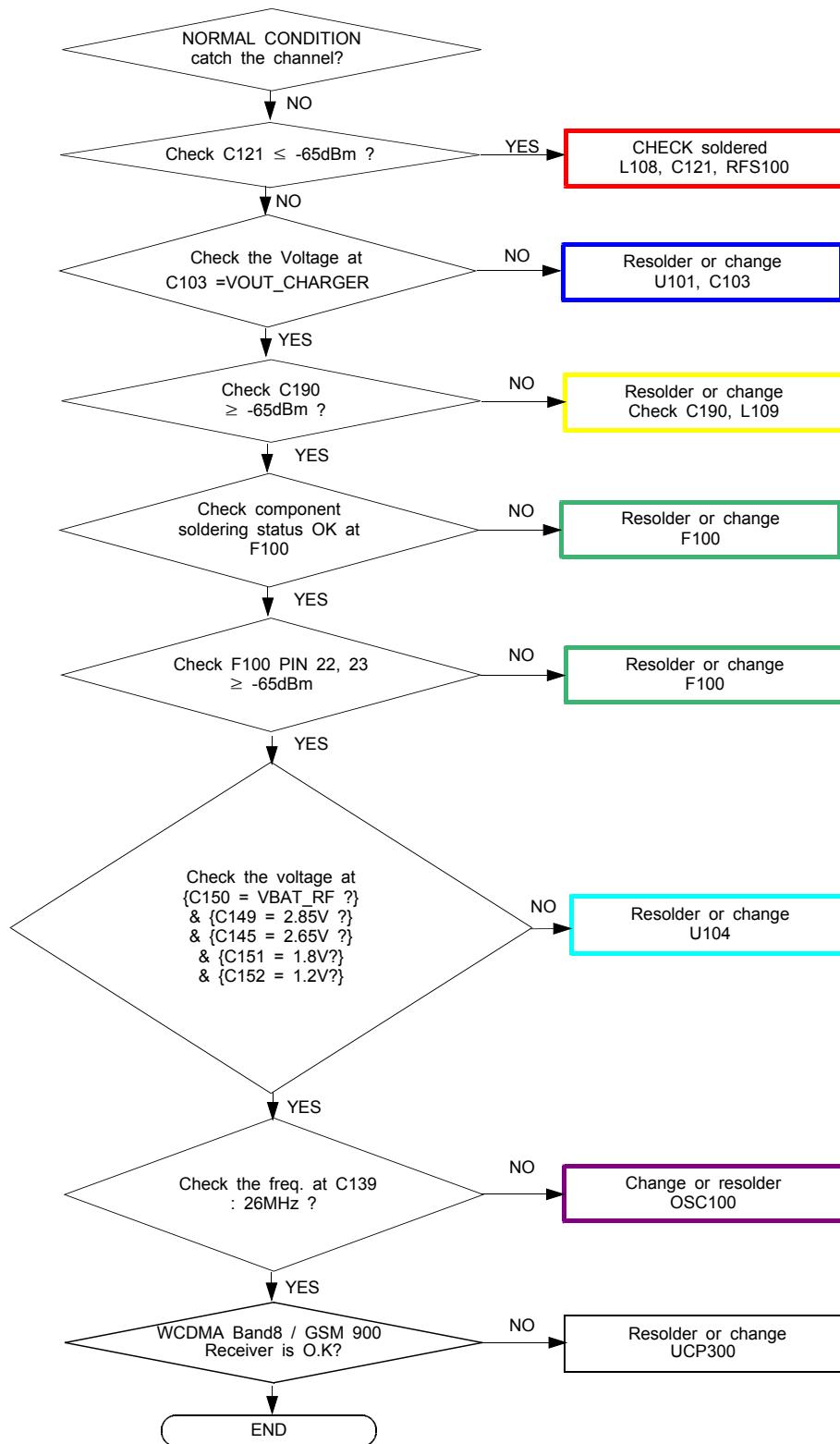


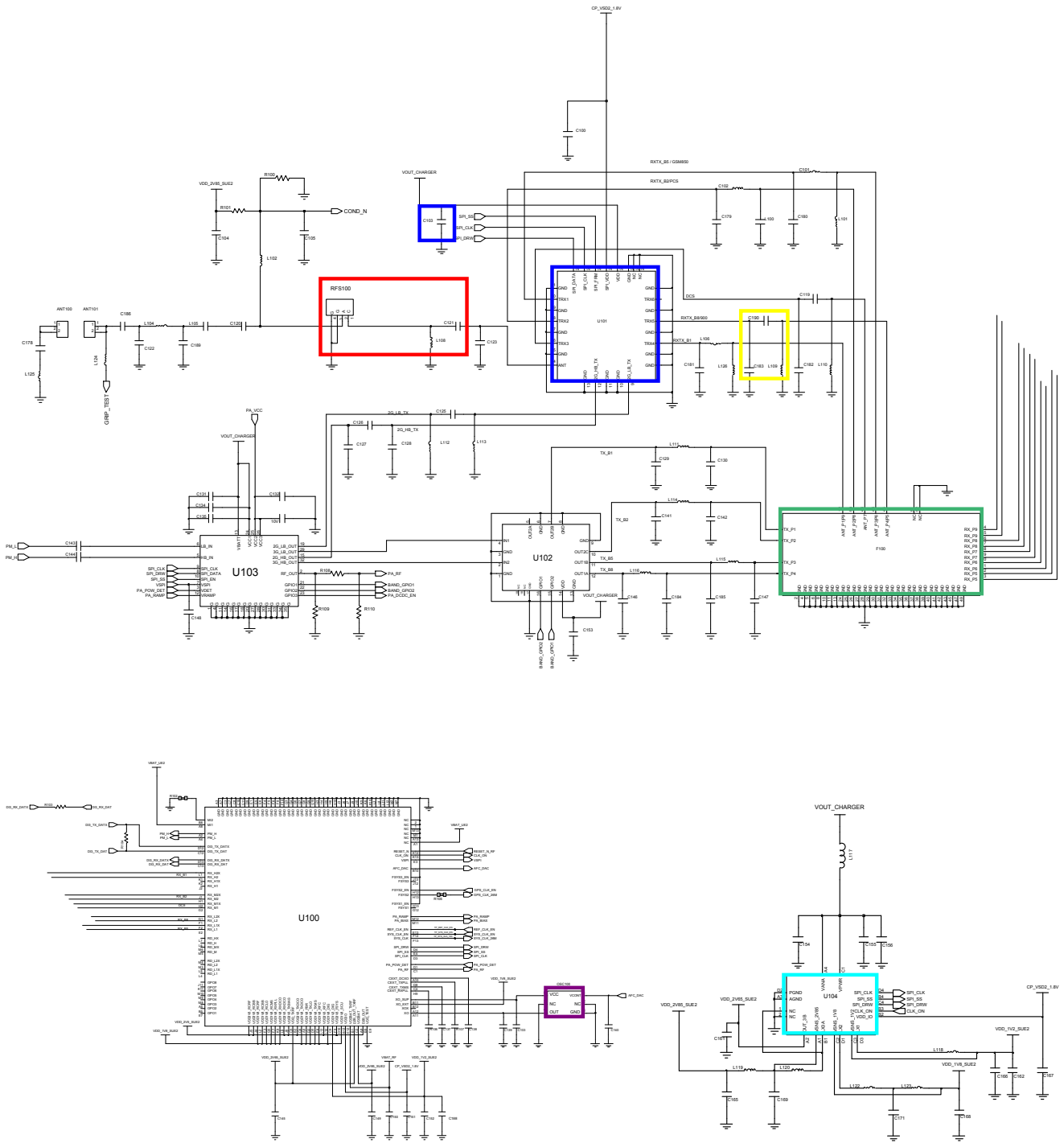


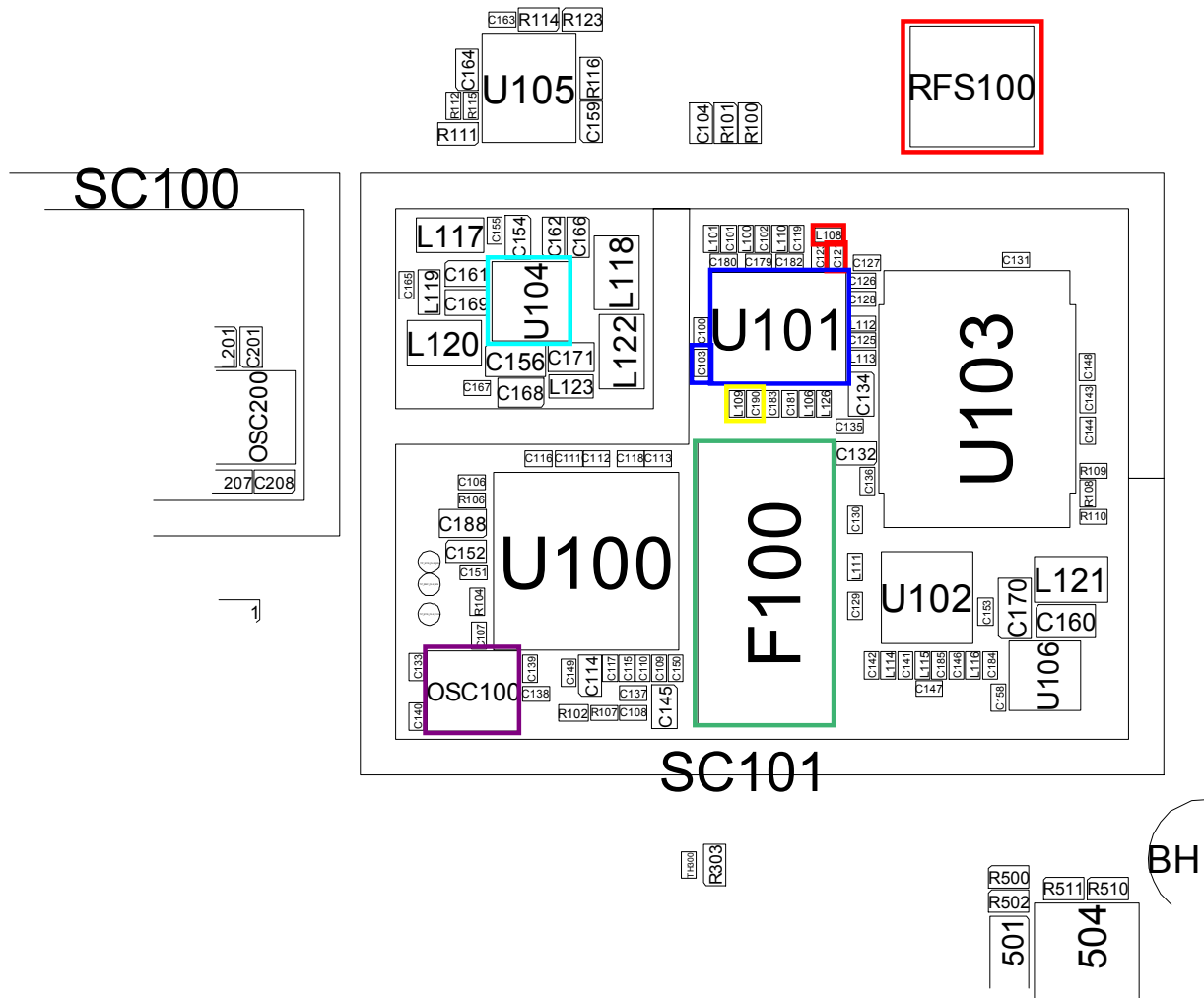


8-3-15. GSM900/ WCDMA Band8 RX

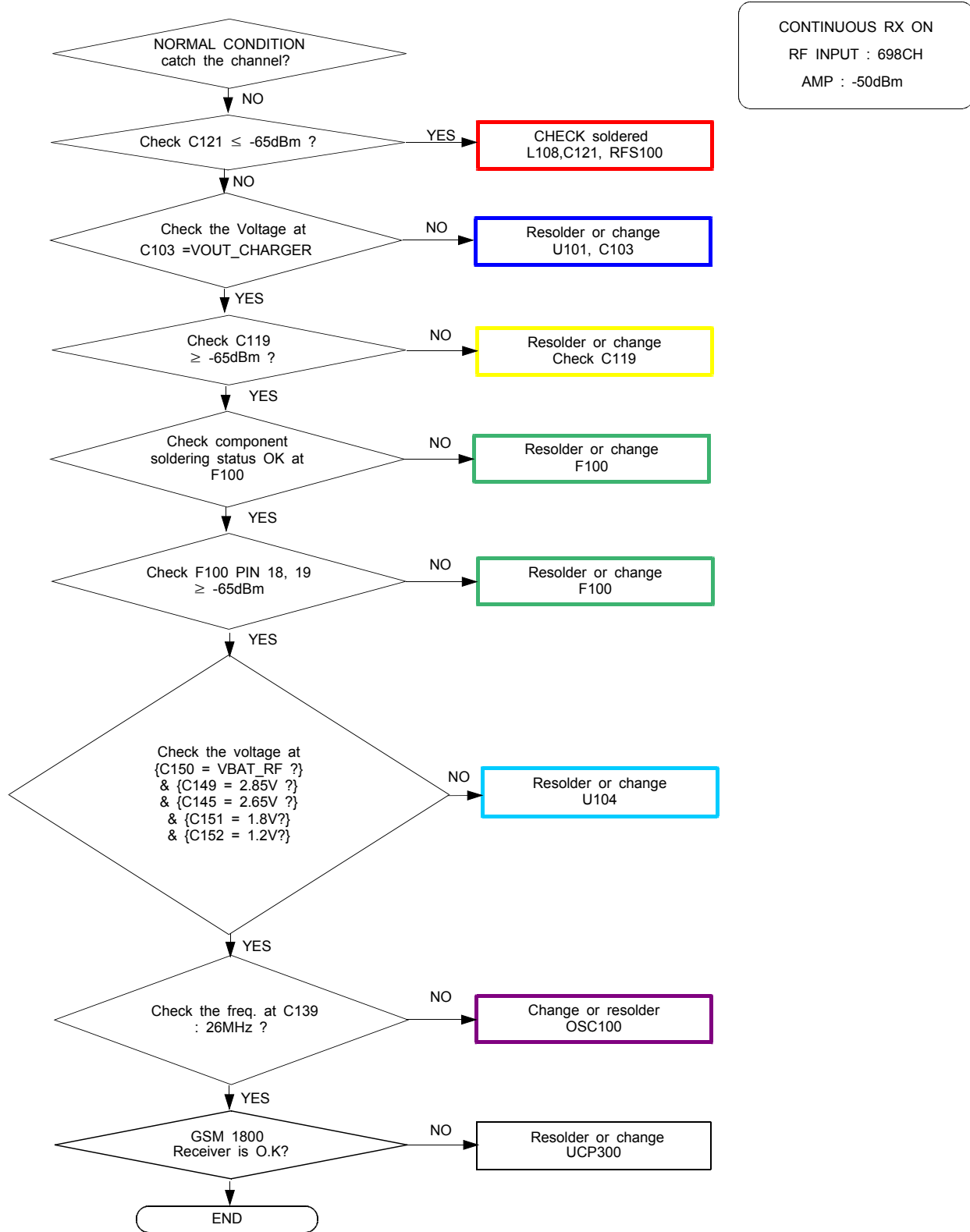
CONTINUOUS RX ON
RF INPUT : 3013CH
AMP : -50dBm

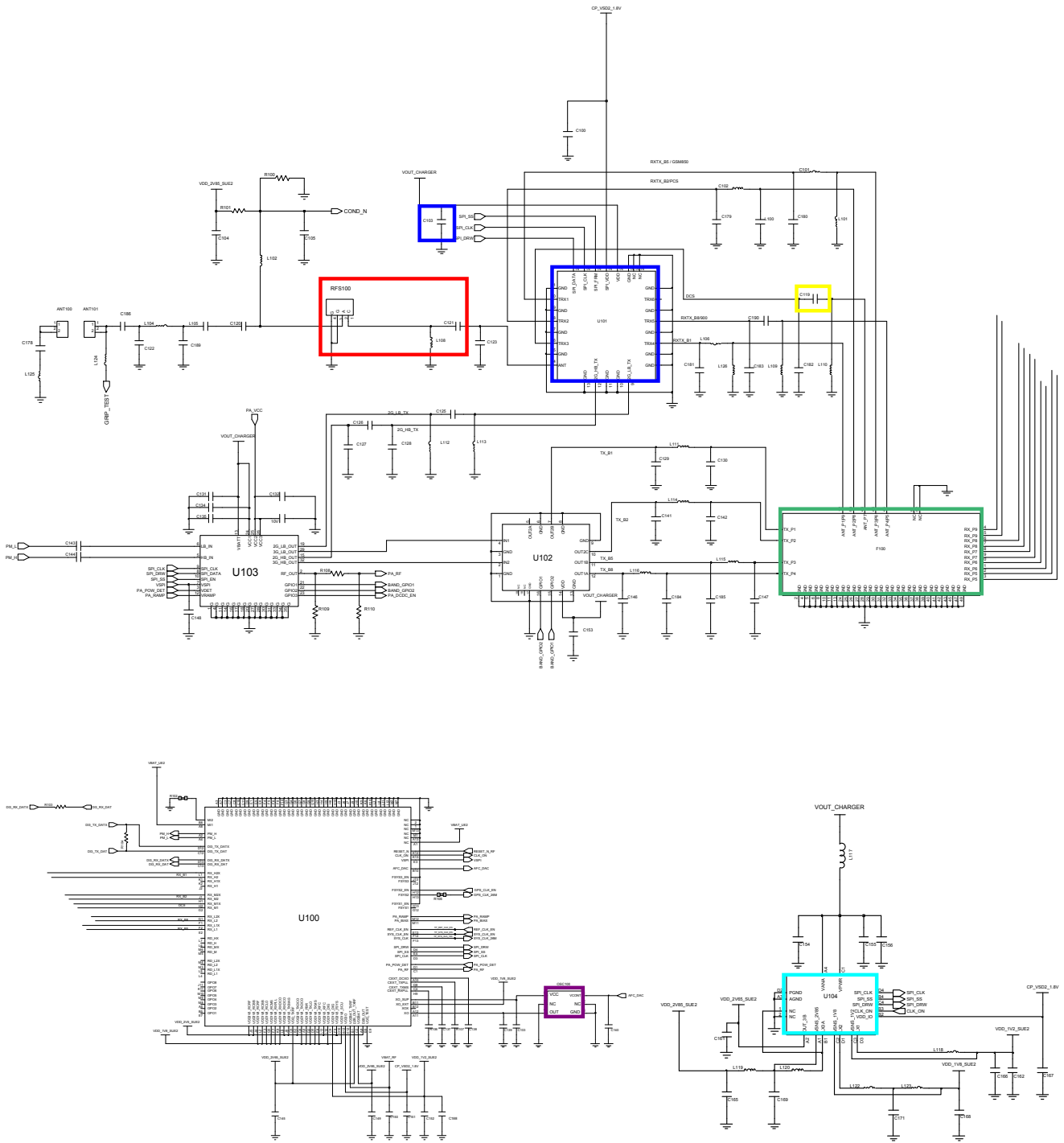




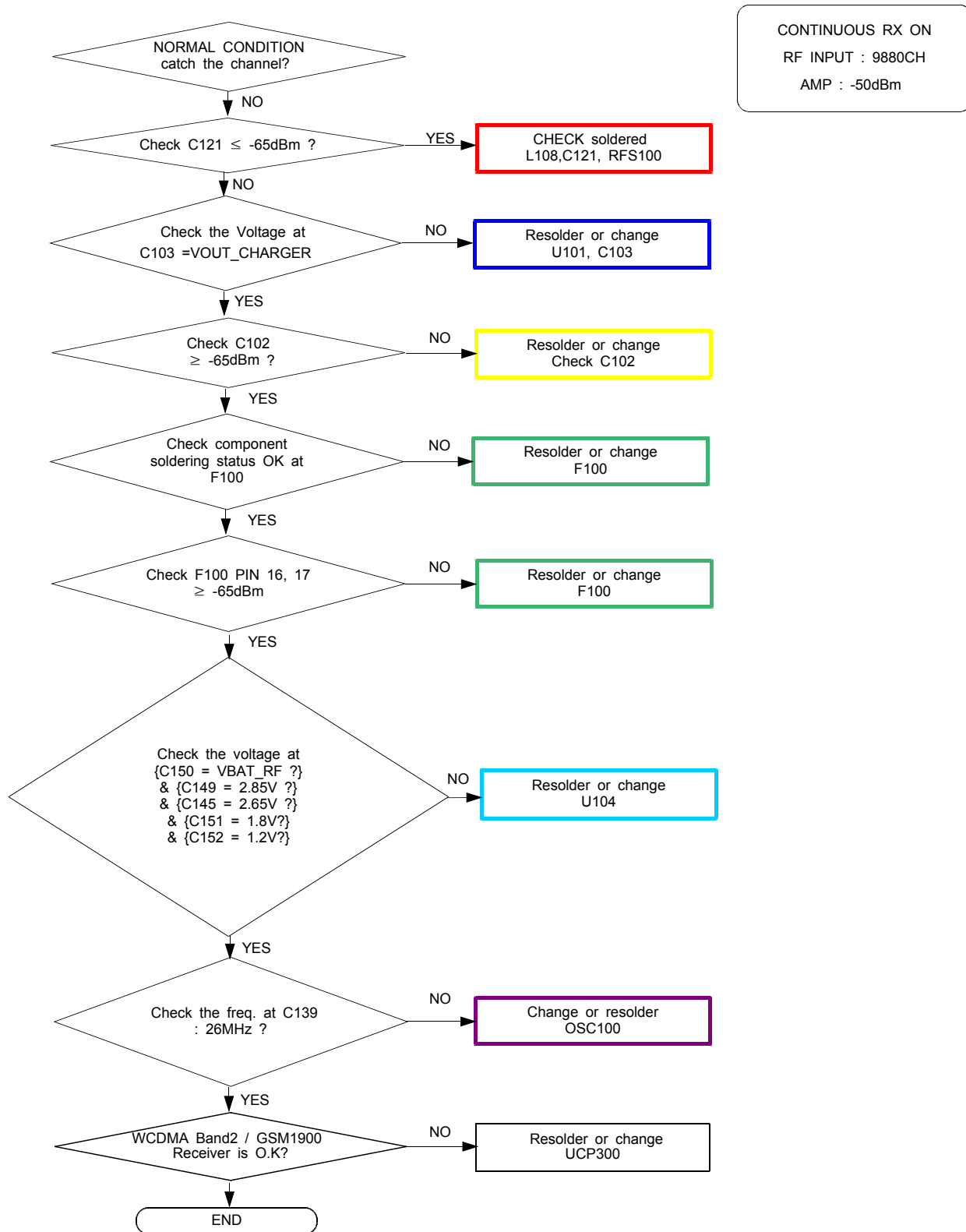


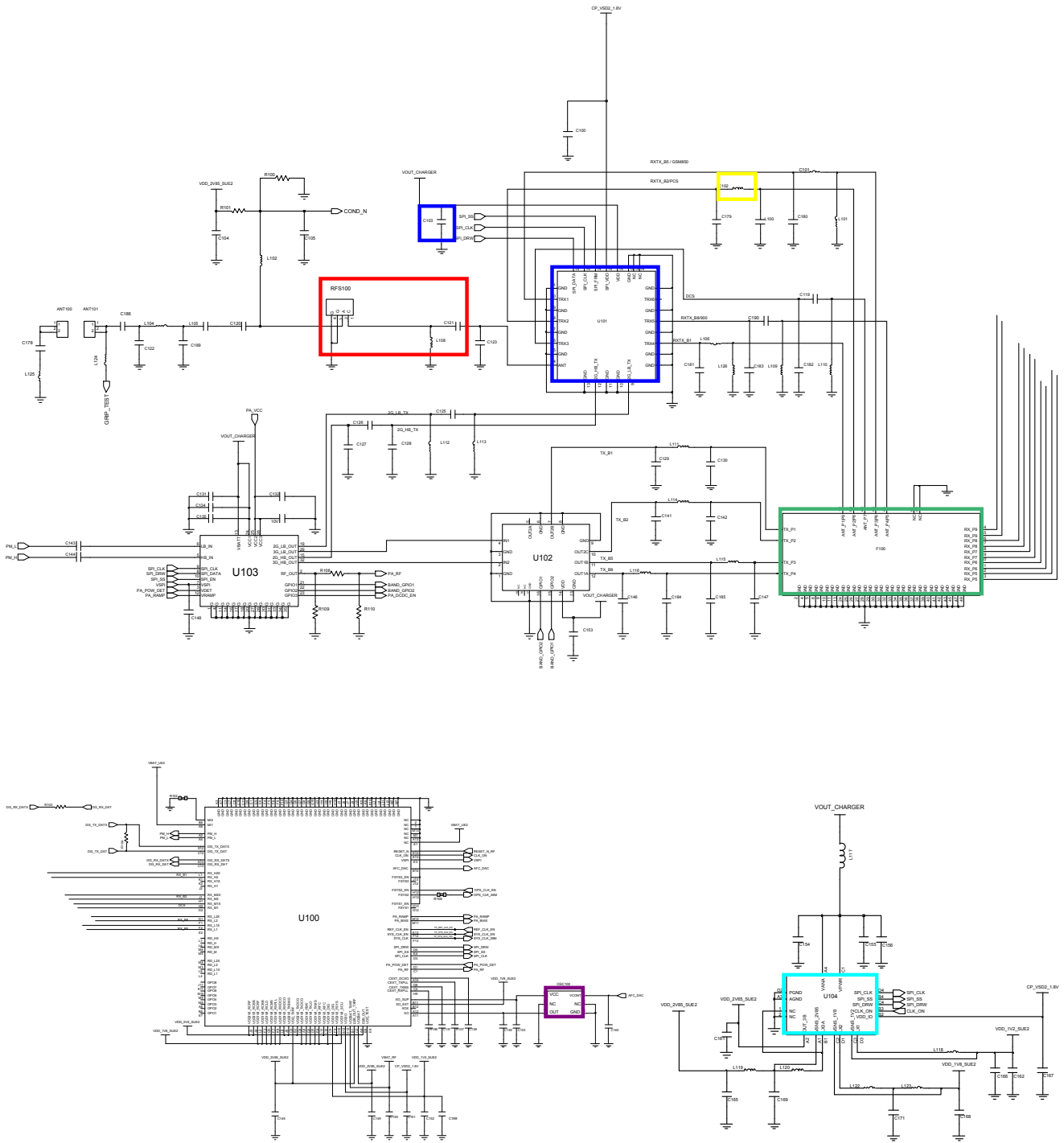
8-3-16. GSM1800 RX

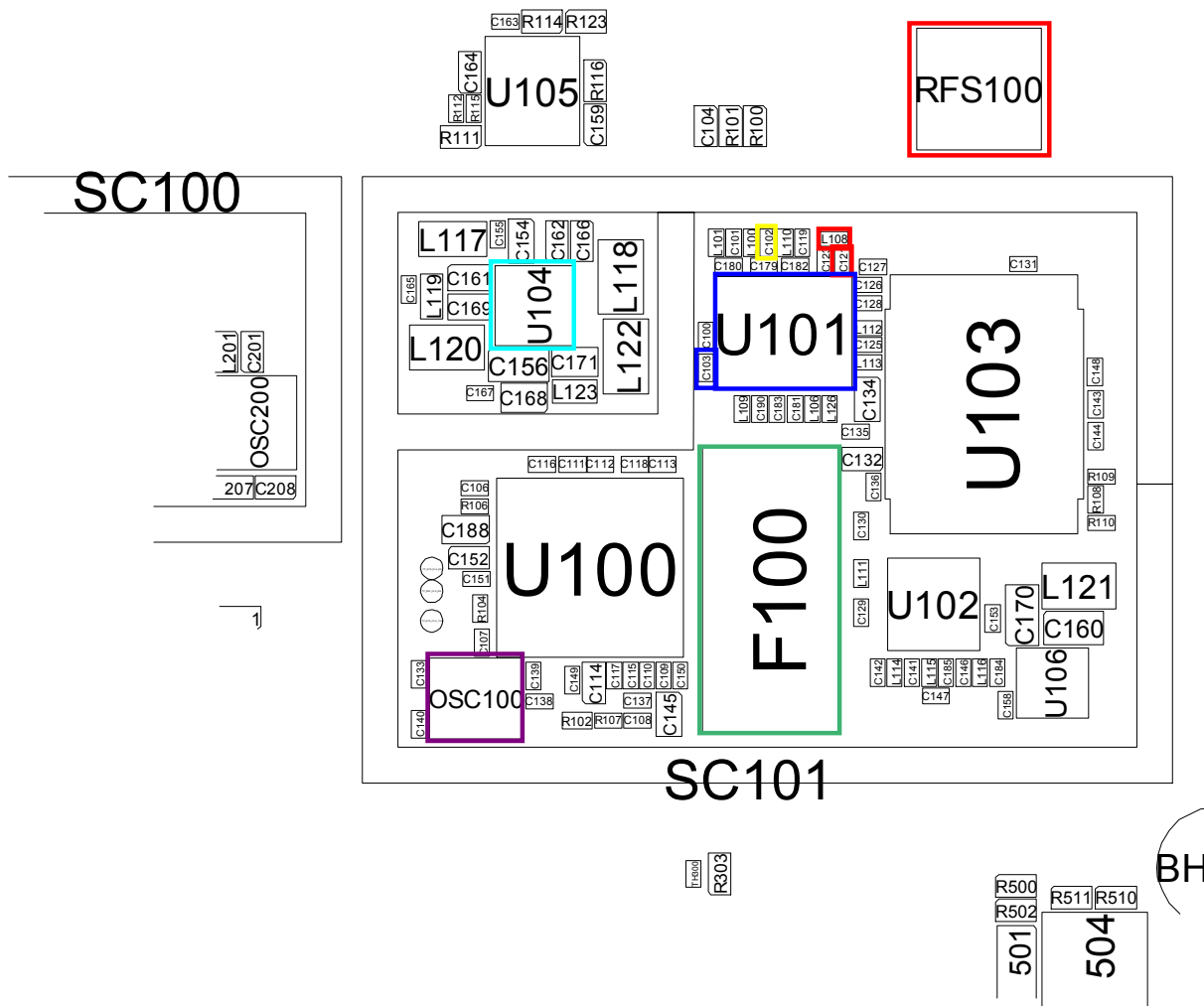




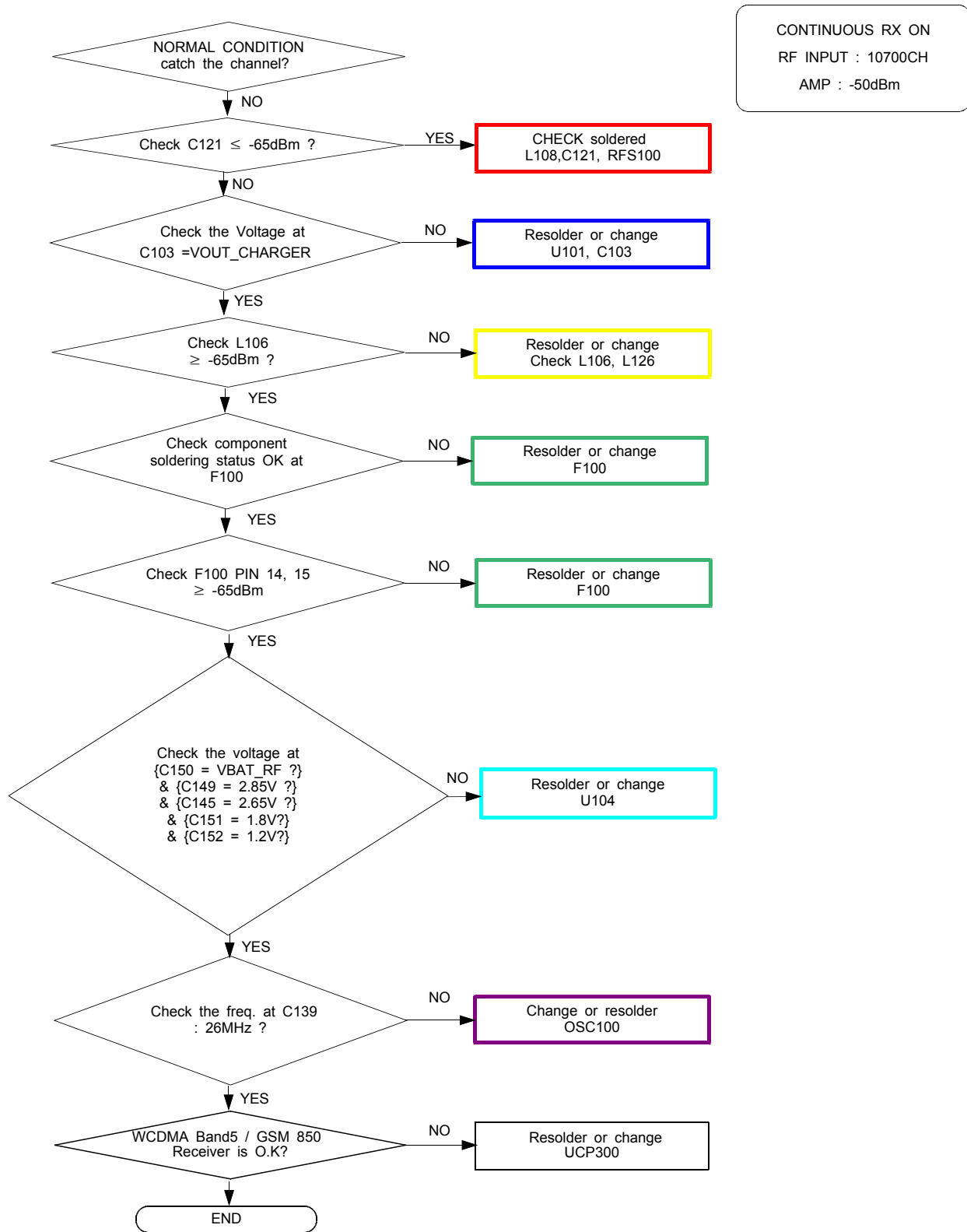
8-3-17. GSM1900/ WCDMA Band2 RX

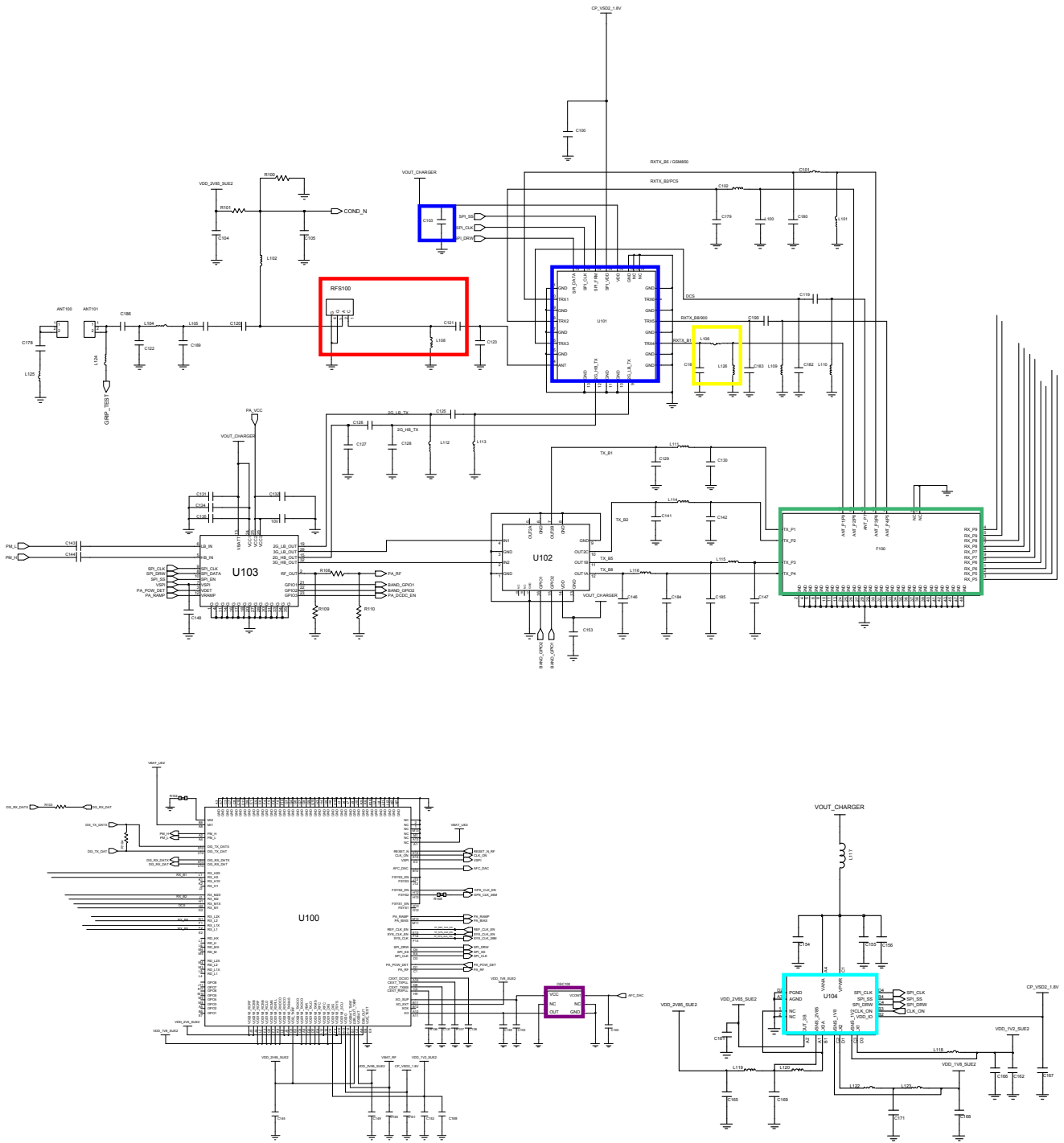


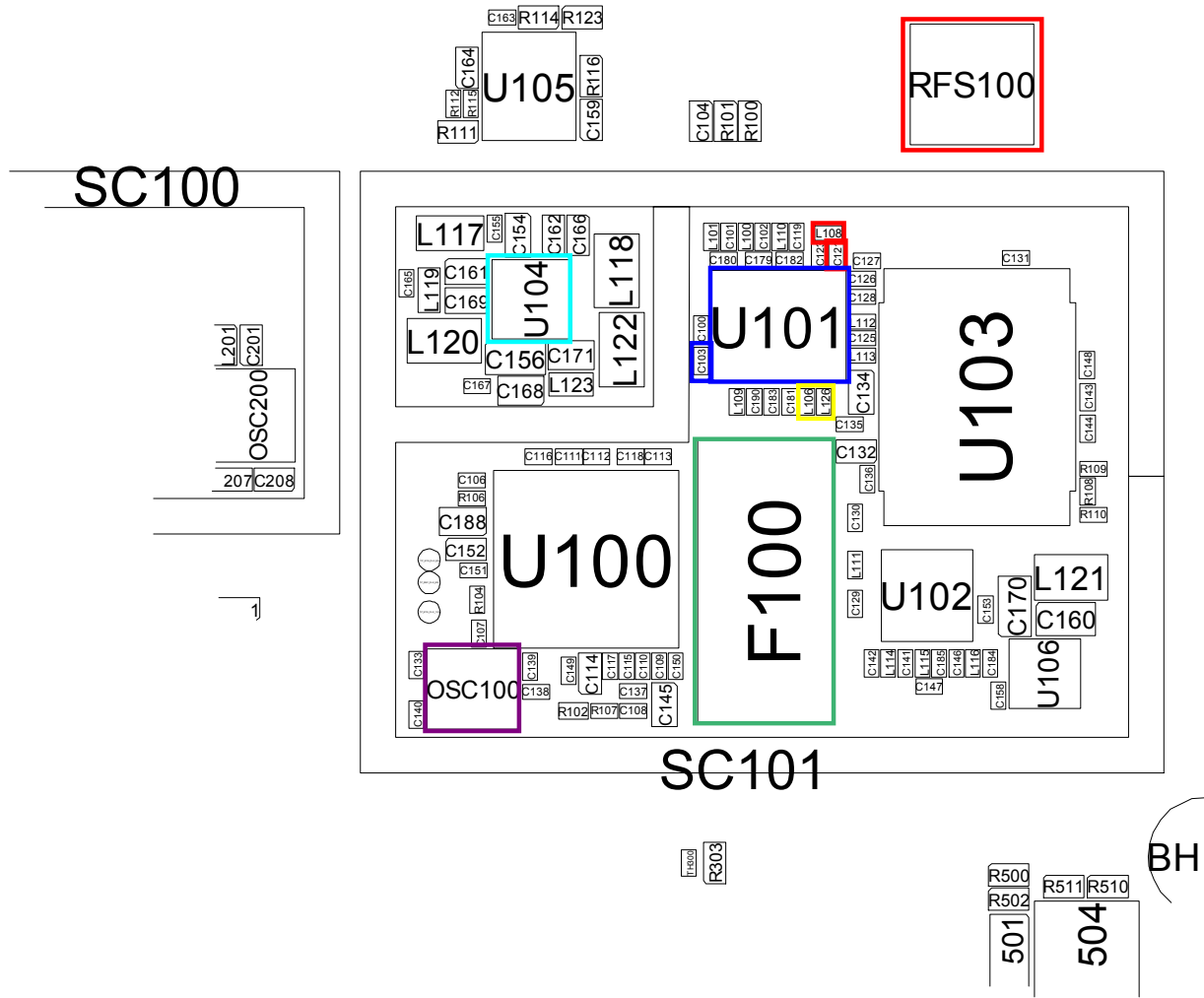




8-3-18. WCDMA Band1 RX

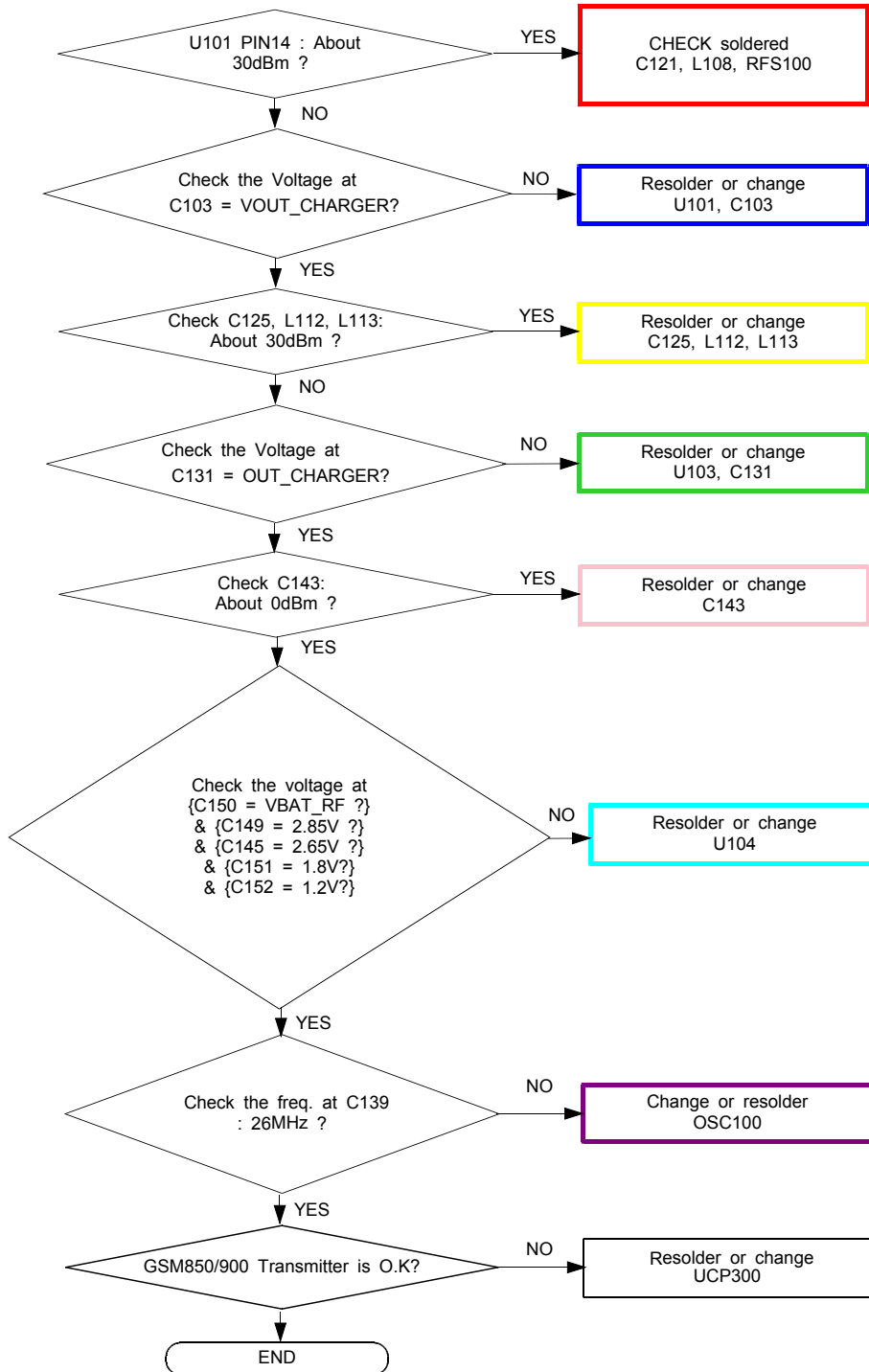


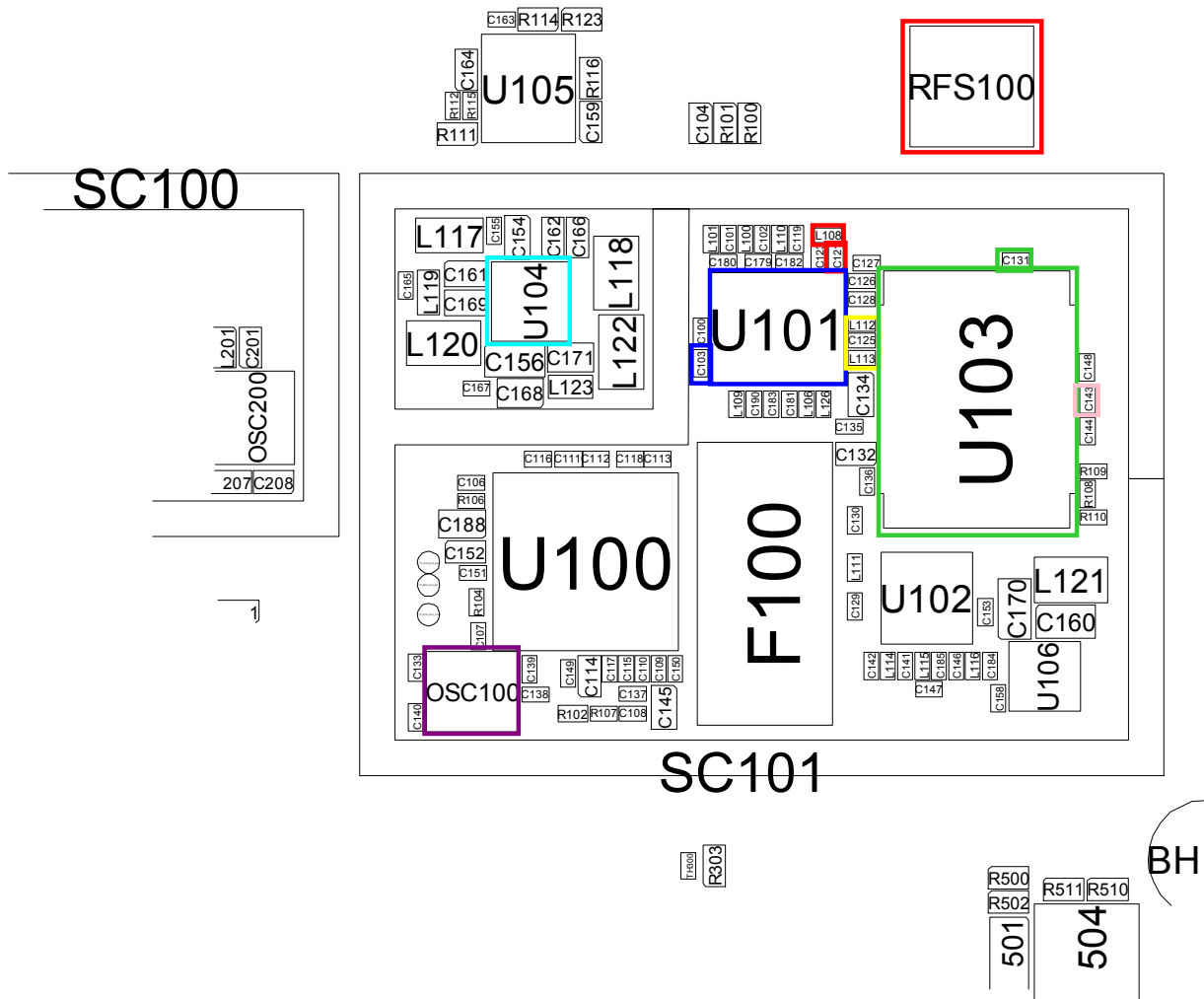




8-3-19. GSM850/ GSM900 TX

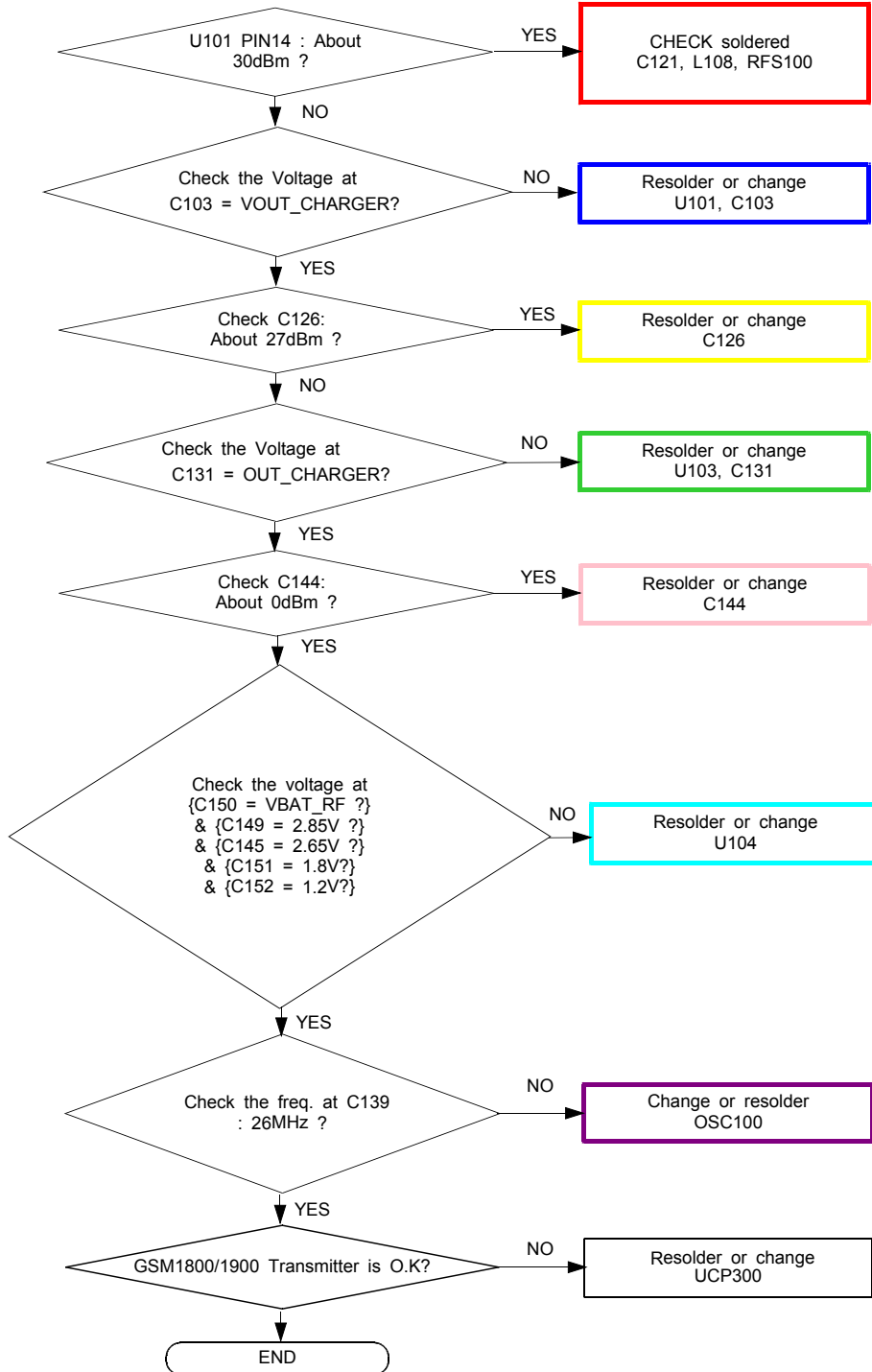
CONTINUOUS TX ON CONDITION
 TX POWER DAC:14500 CODE
 APPLIED
 GSM850 CH : 190
 GSM900 CH : 62
 RBW : 100KHz
 VBW : 100KHz
 SPAN : 10MHz
 REF LEV. : 10dBm
 ATT. : 20dB

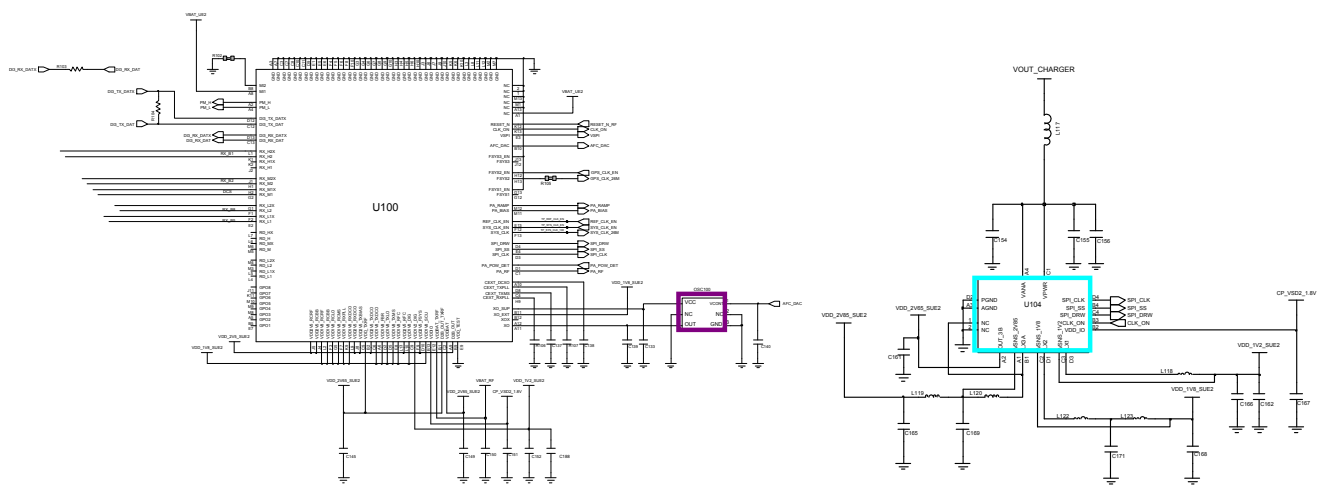
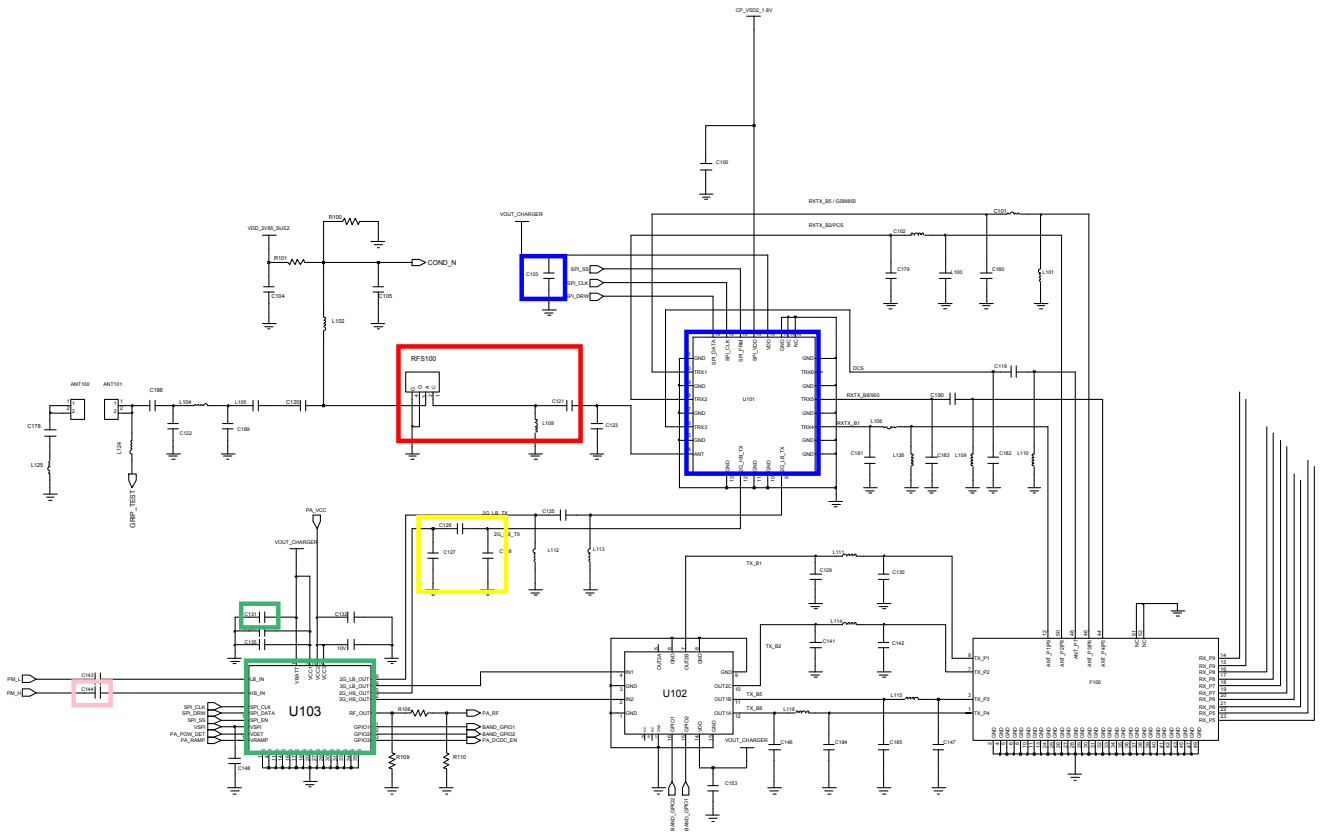




8-3-20. GSM1800/ GSM1900 TX

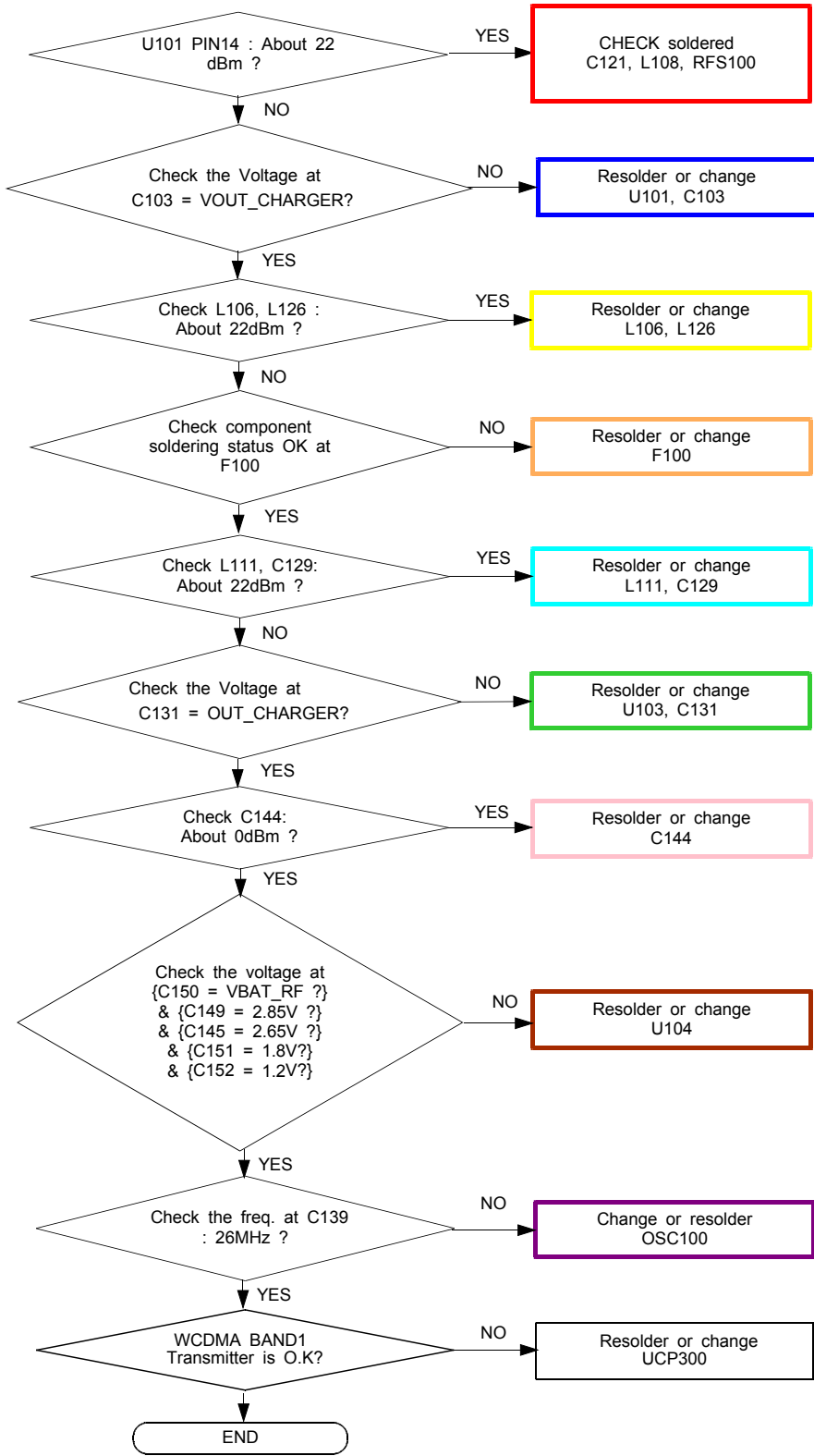
CONTINUOUS TX ON CONDITION
 TX POWER DAC:14500 CODE
 APPLIED
 DCS CH : 685
 PCS CH : 661
 RBW : 100KHz
 VBW : 100KHz
 SPAN : 10MHz
 REF LEV. : 10dBm
 ATT. : 20dB

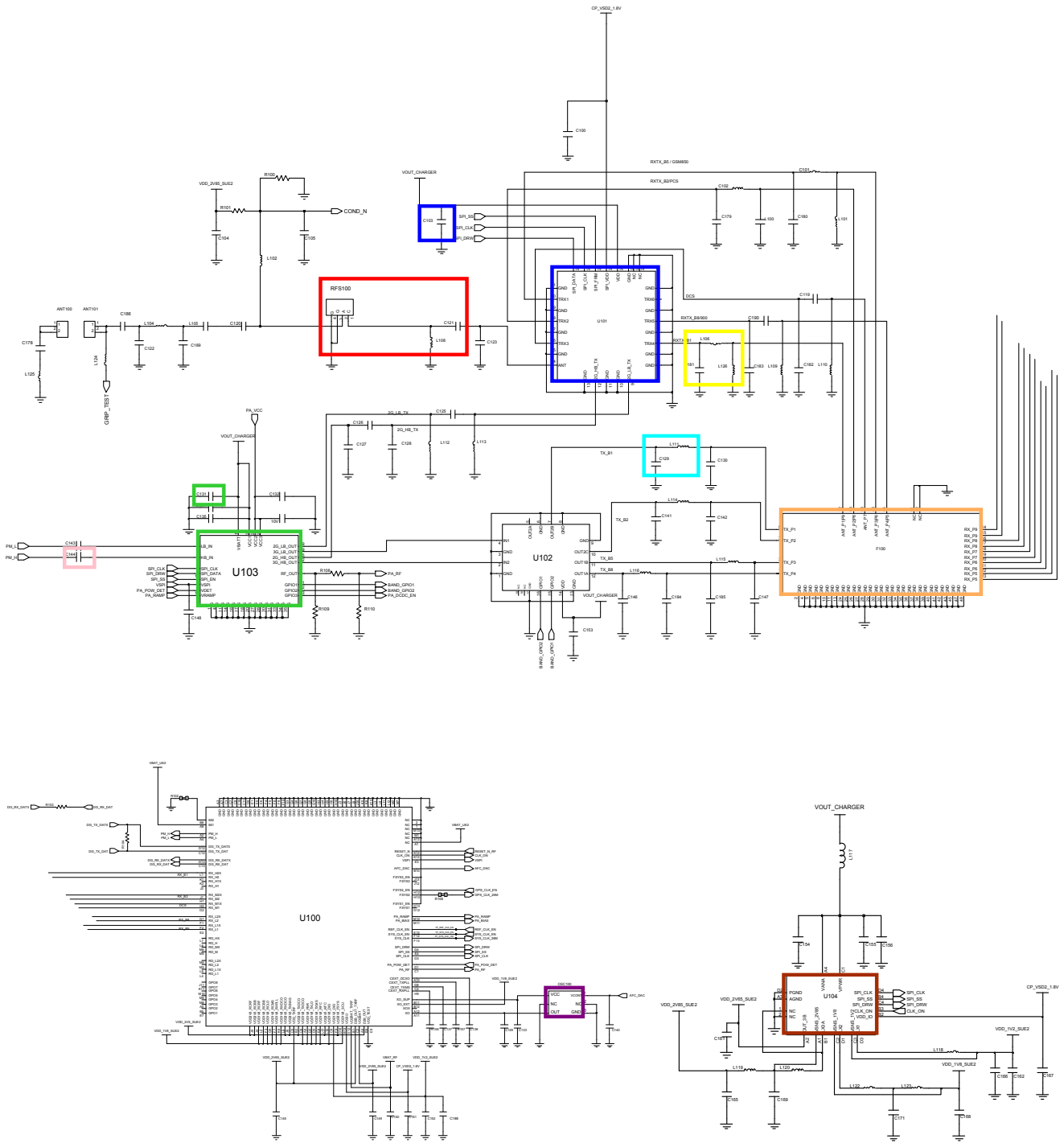


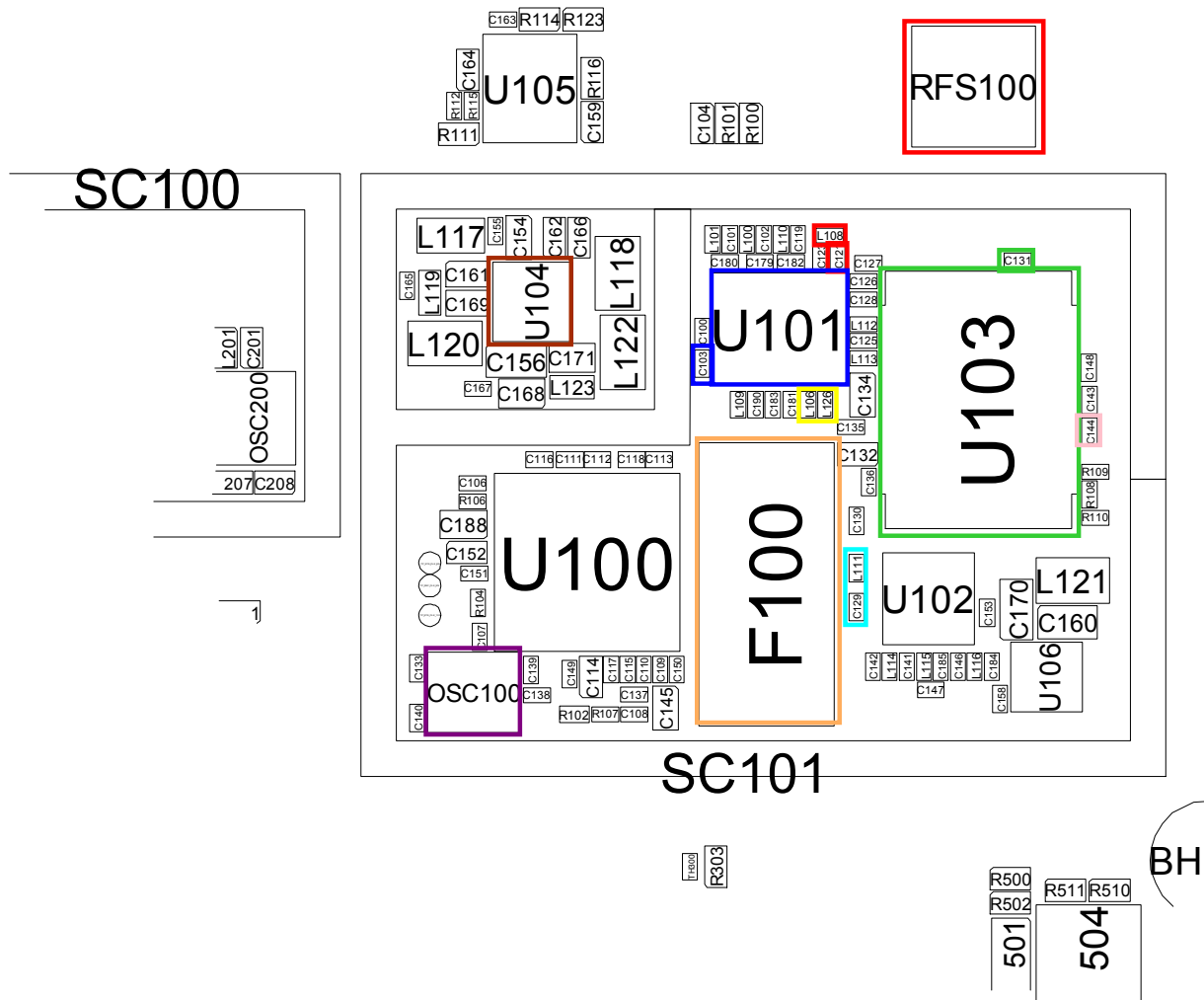


8-3-21. WCDMA BAND1 TX

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

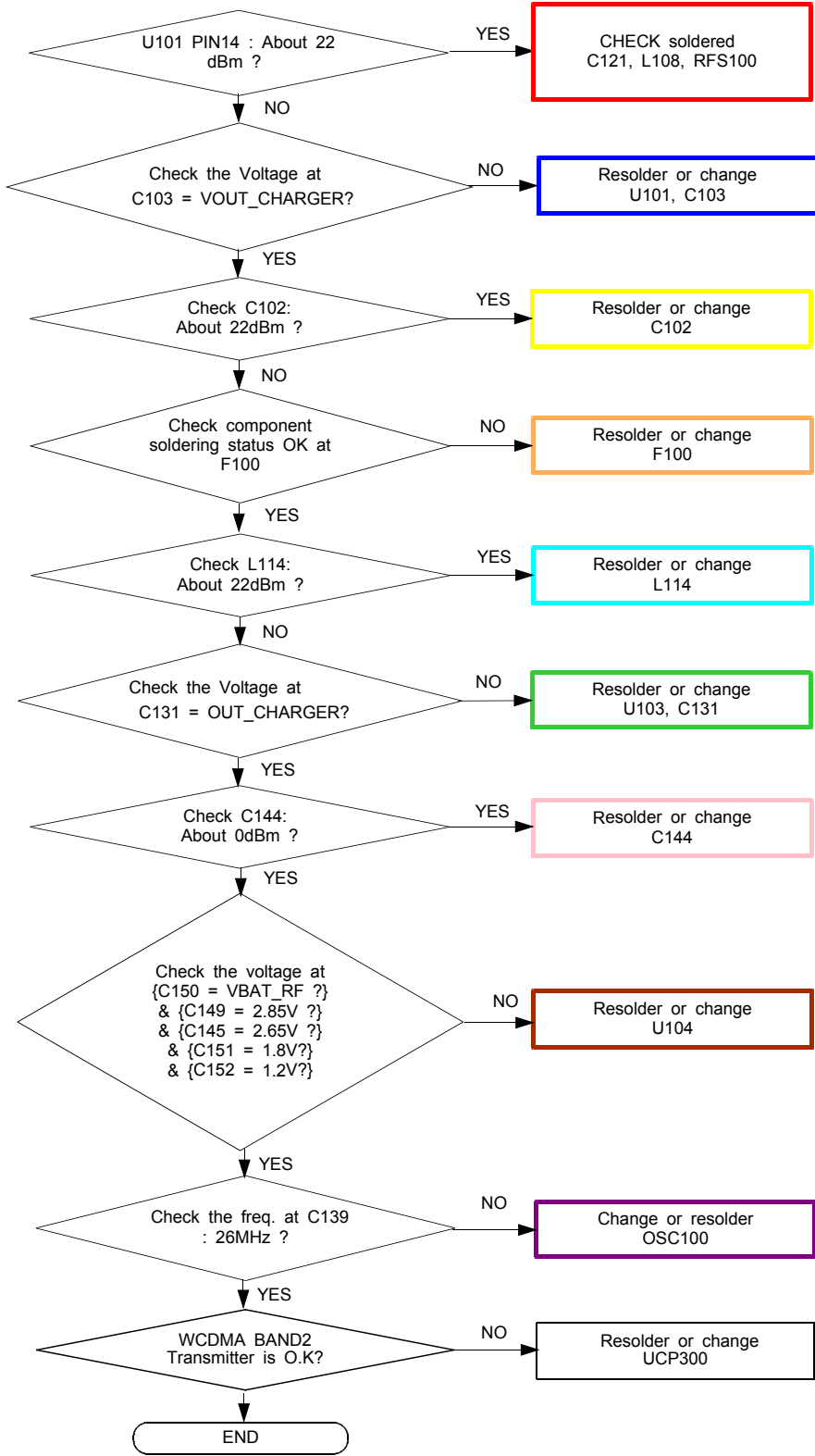


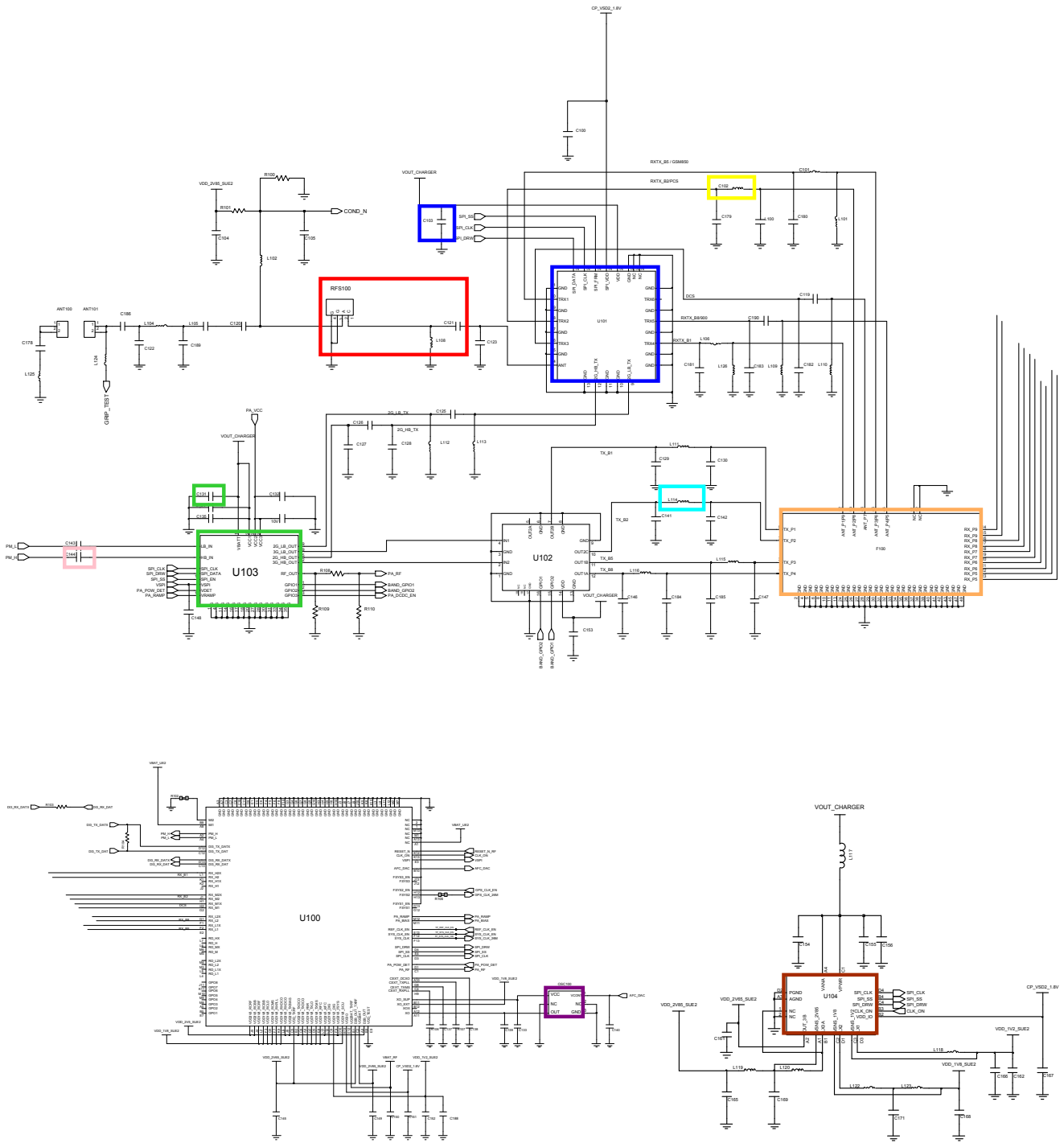


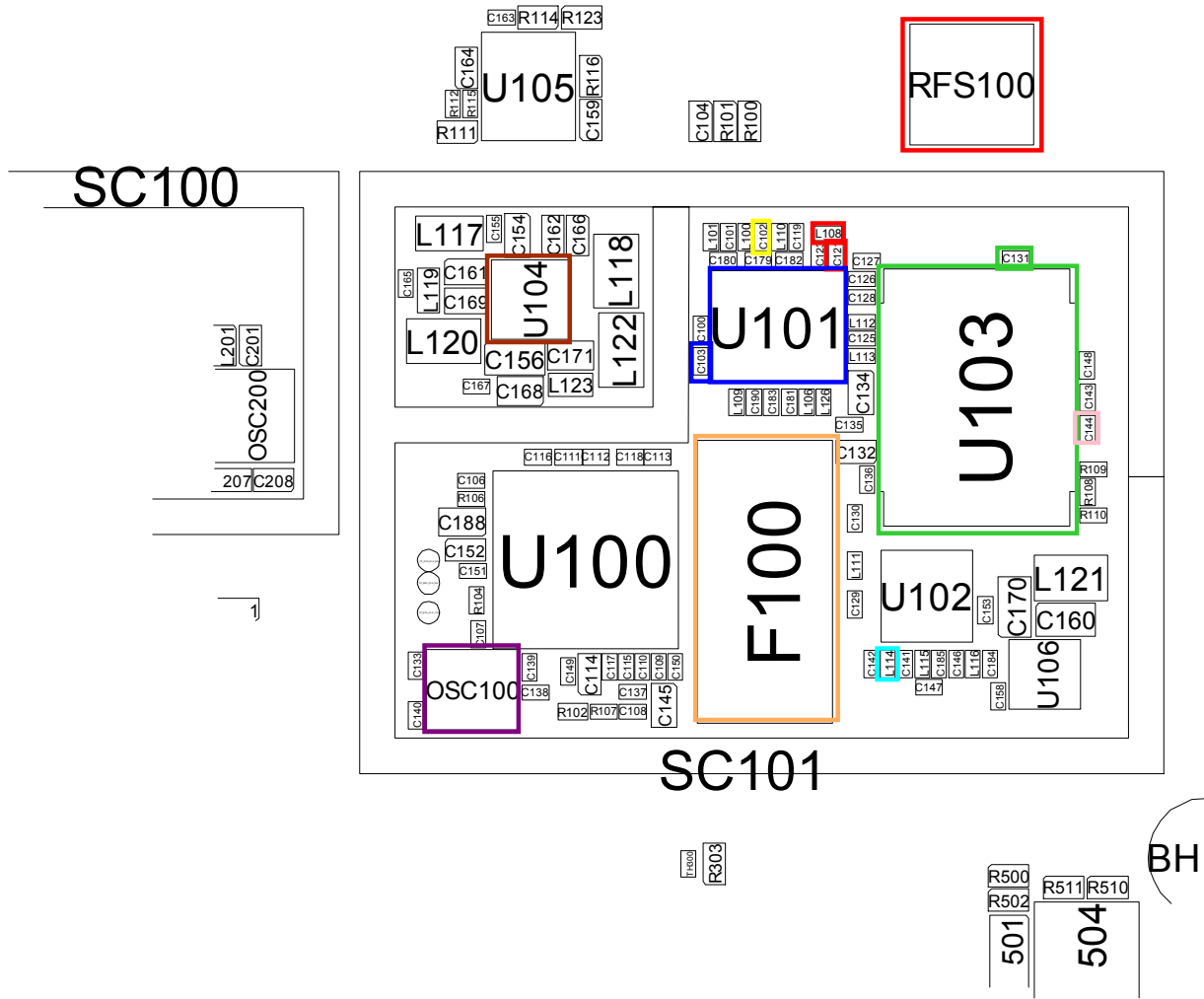


8-3-22. WCDMA BAND2 TX

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

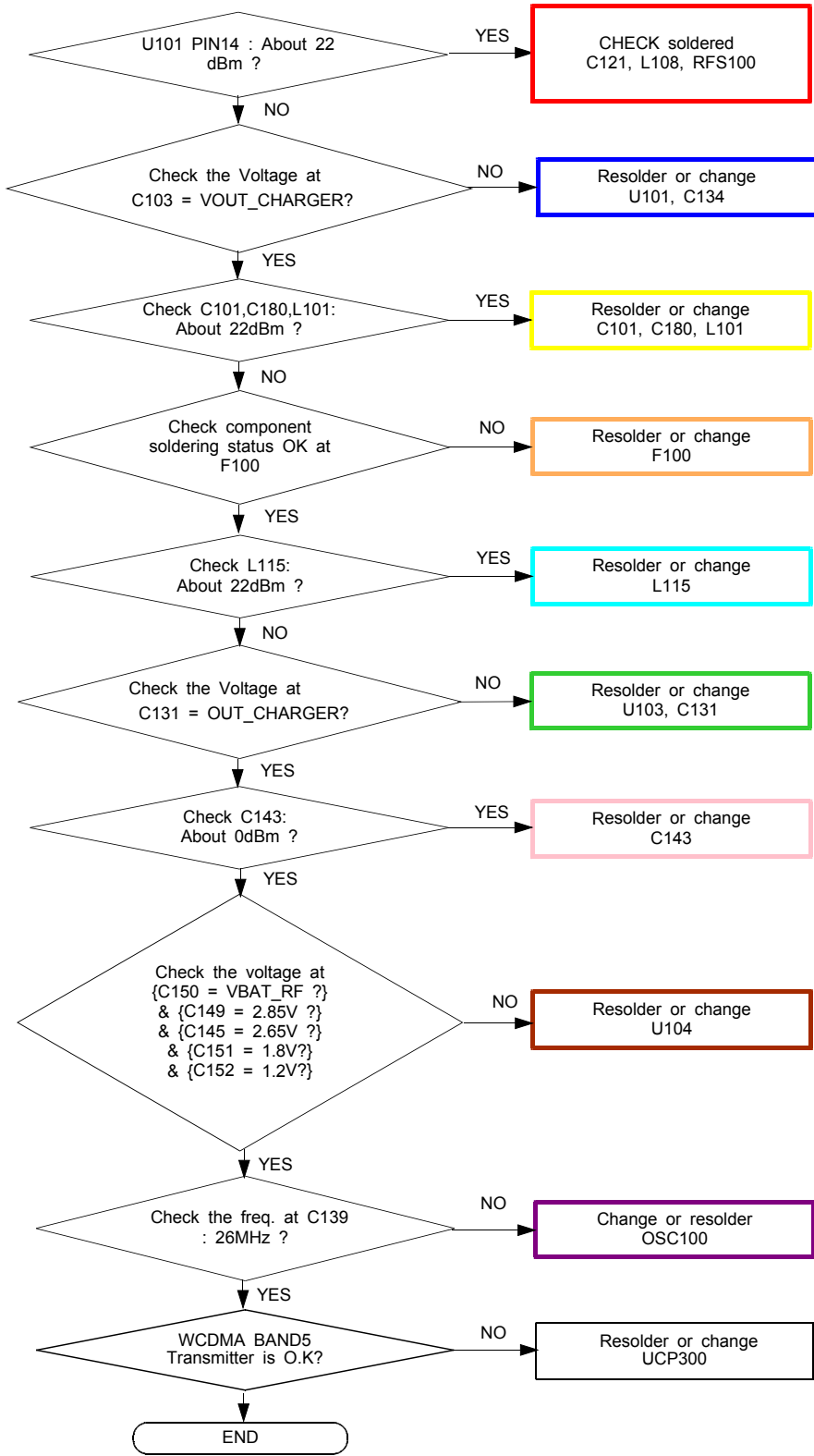


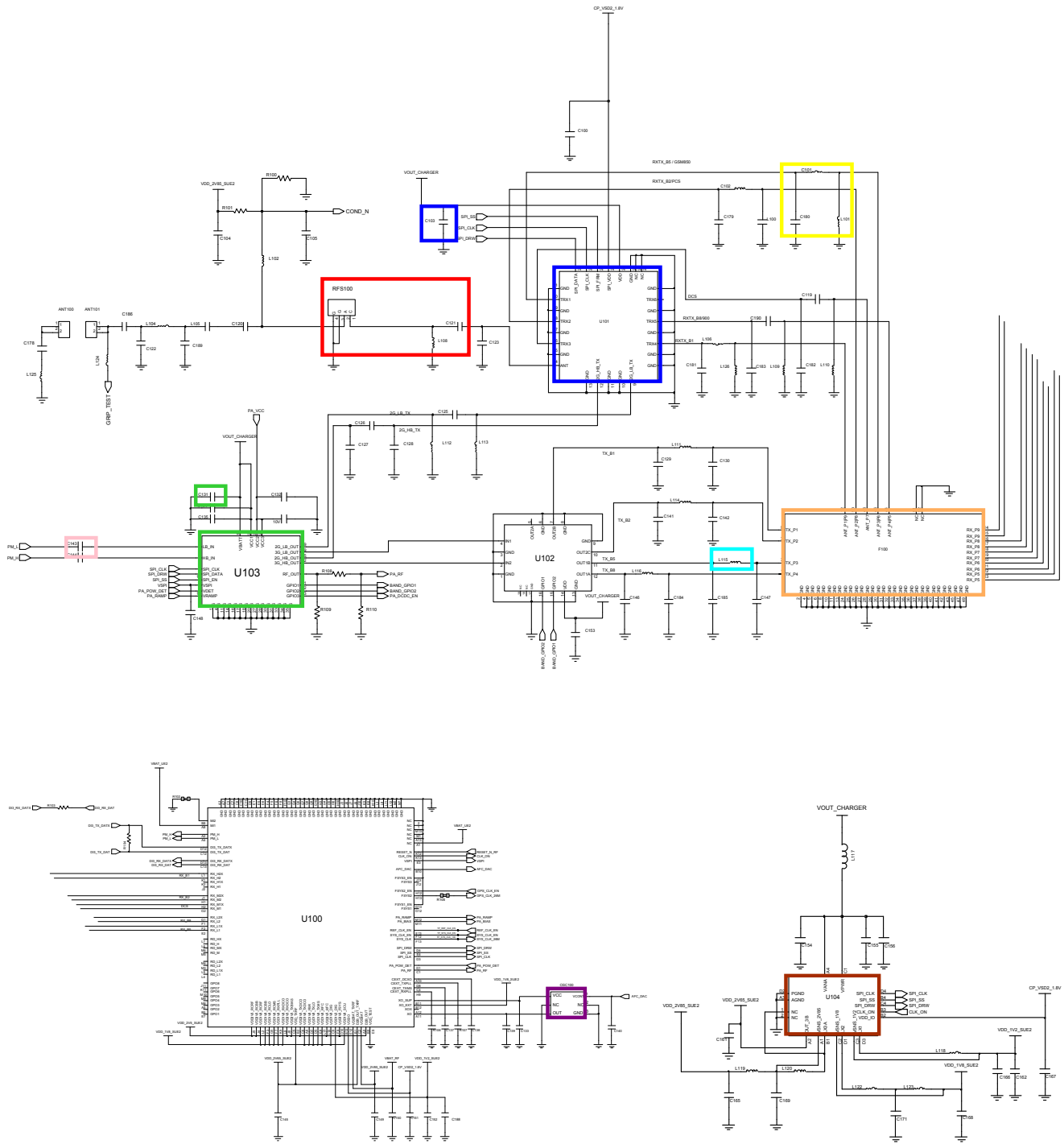


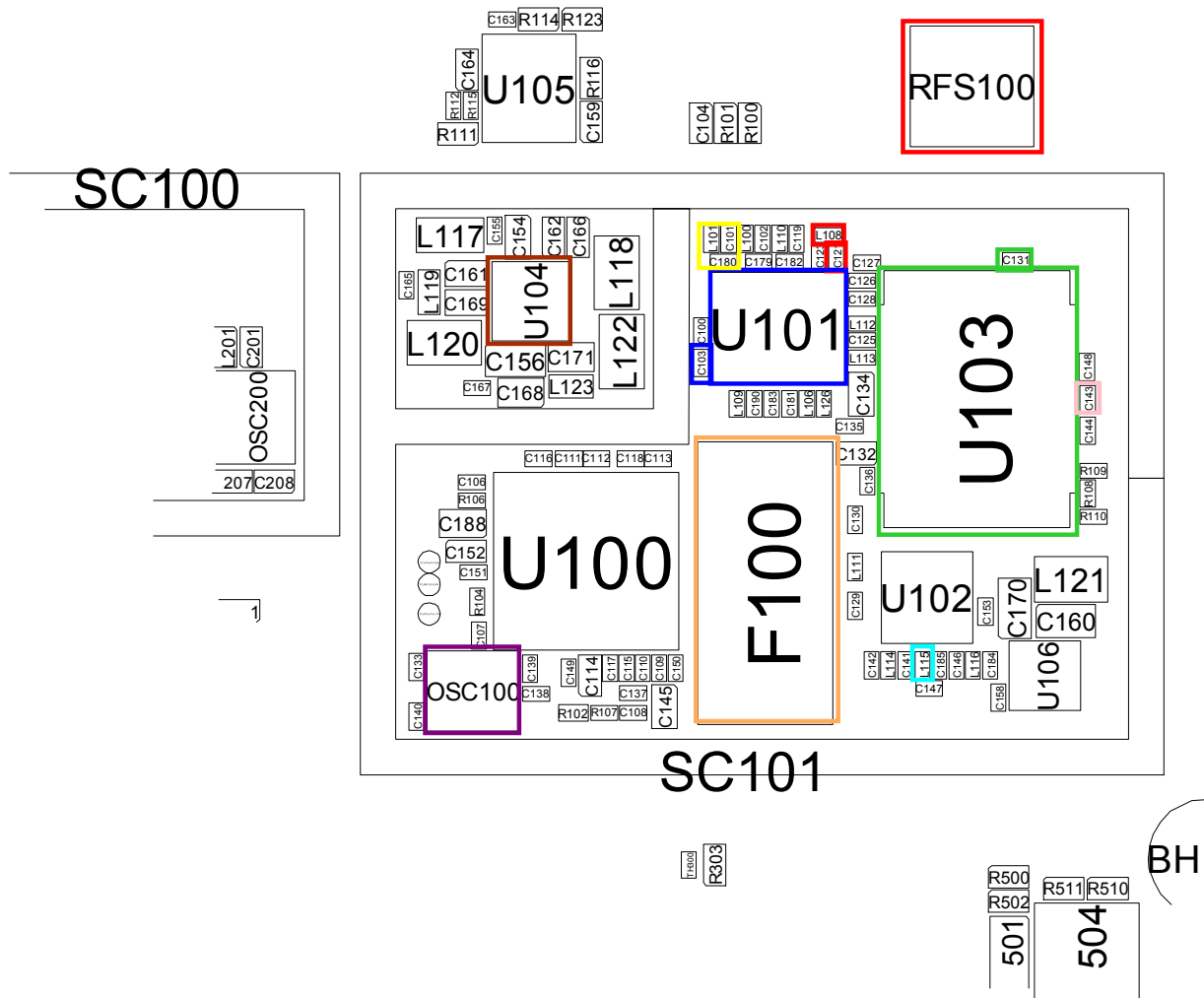


8-3-23. WCDMA BAND5 TX

CONTINUOUS TX ON CONDITION
 TX POWER DAC:14500 CODE
 APPLIED
 WCDMA Band5 CH : 4408
 RBW : 100KHz
 VBW : 100KHz
 SPAN : 10MHz
 REF LEV. : 10dBm
 ATT. : 20dB

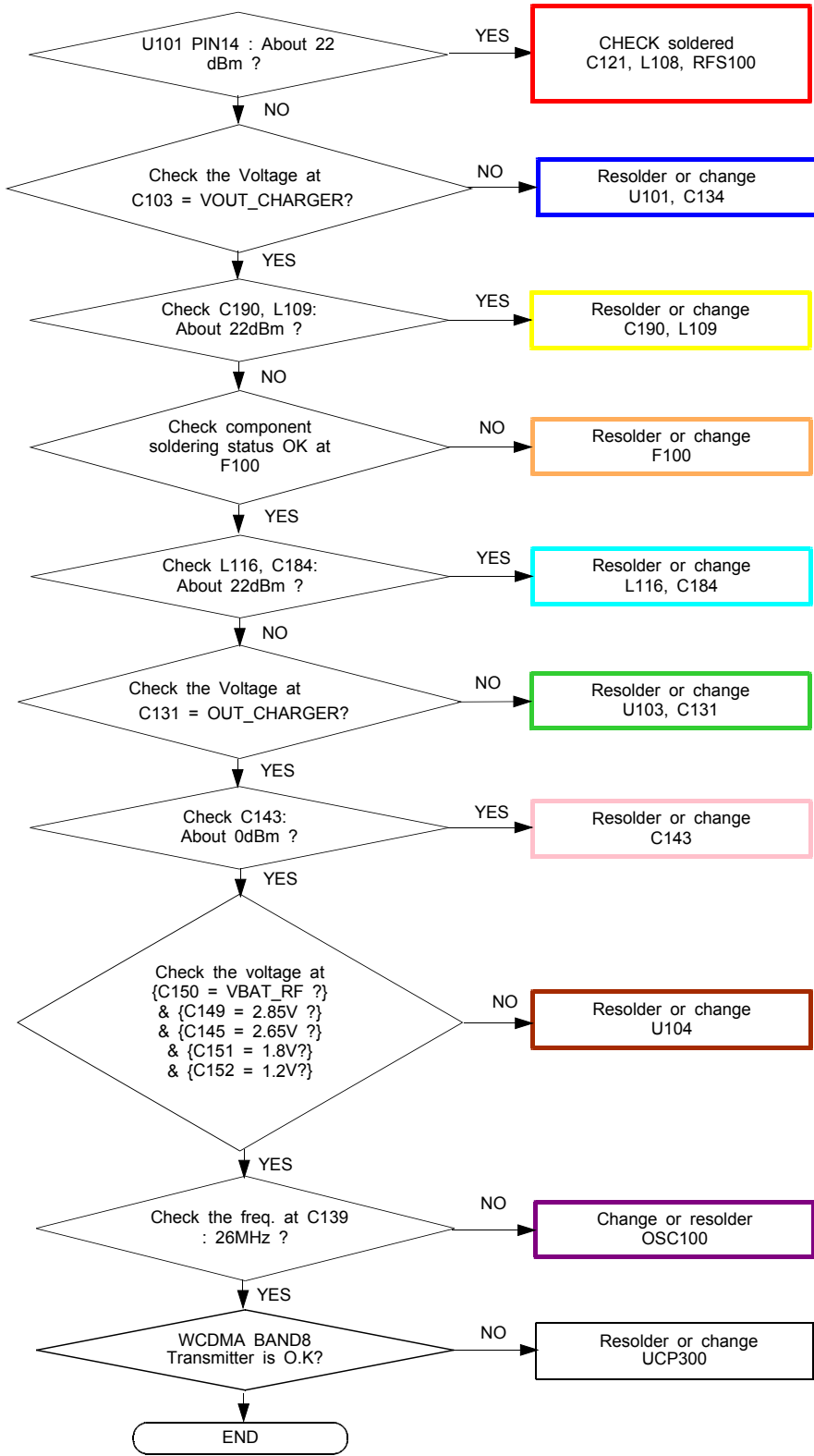


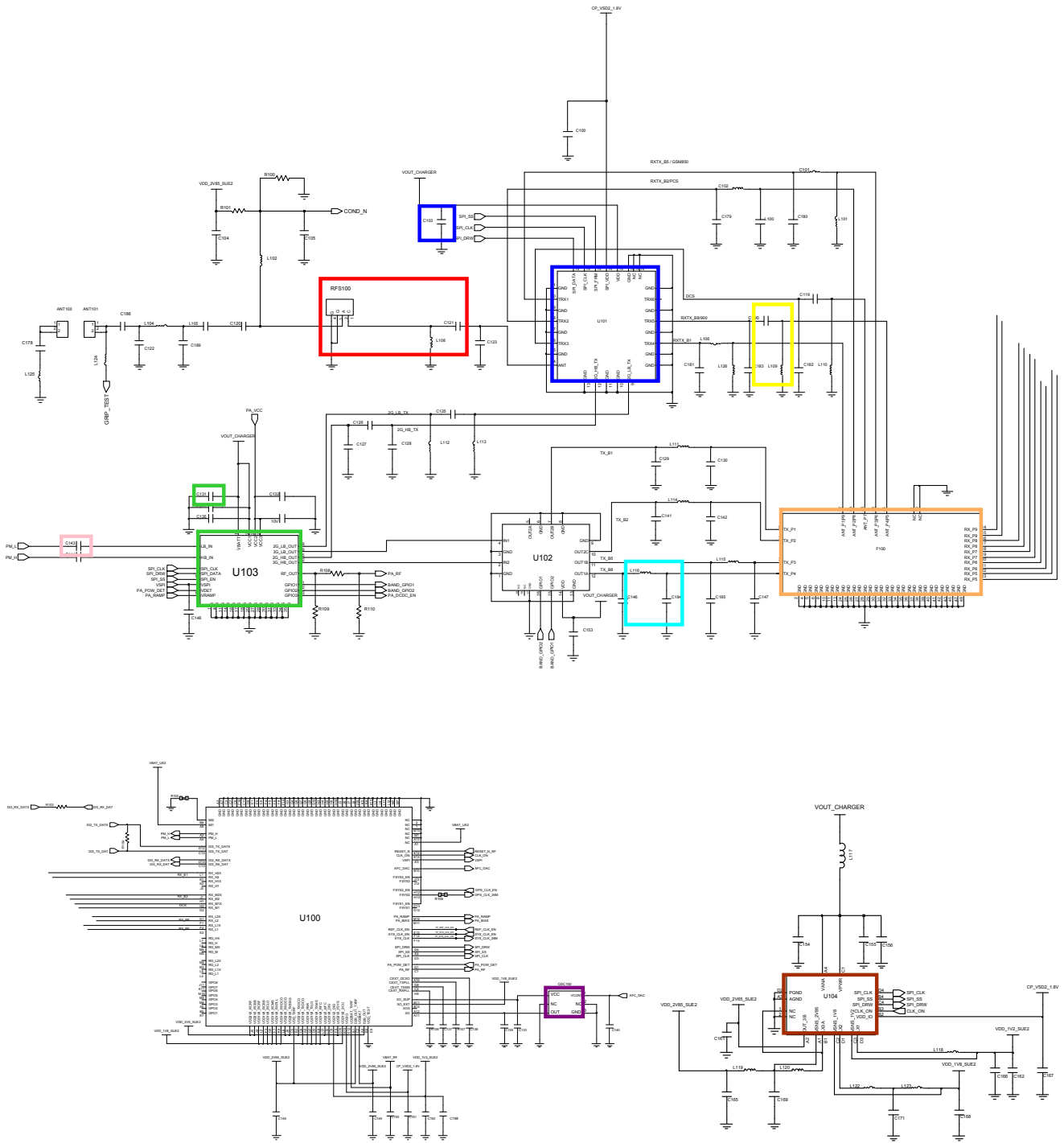


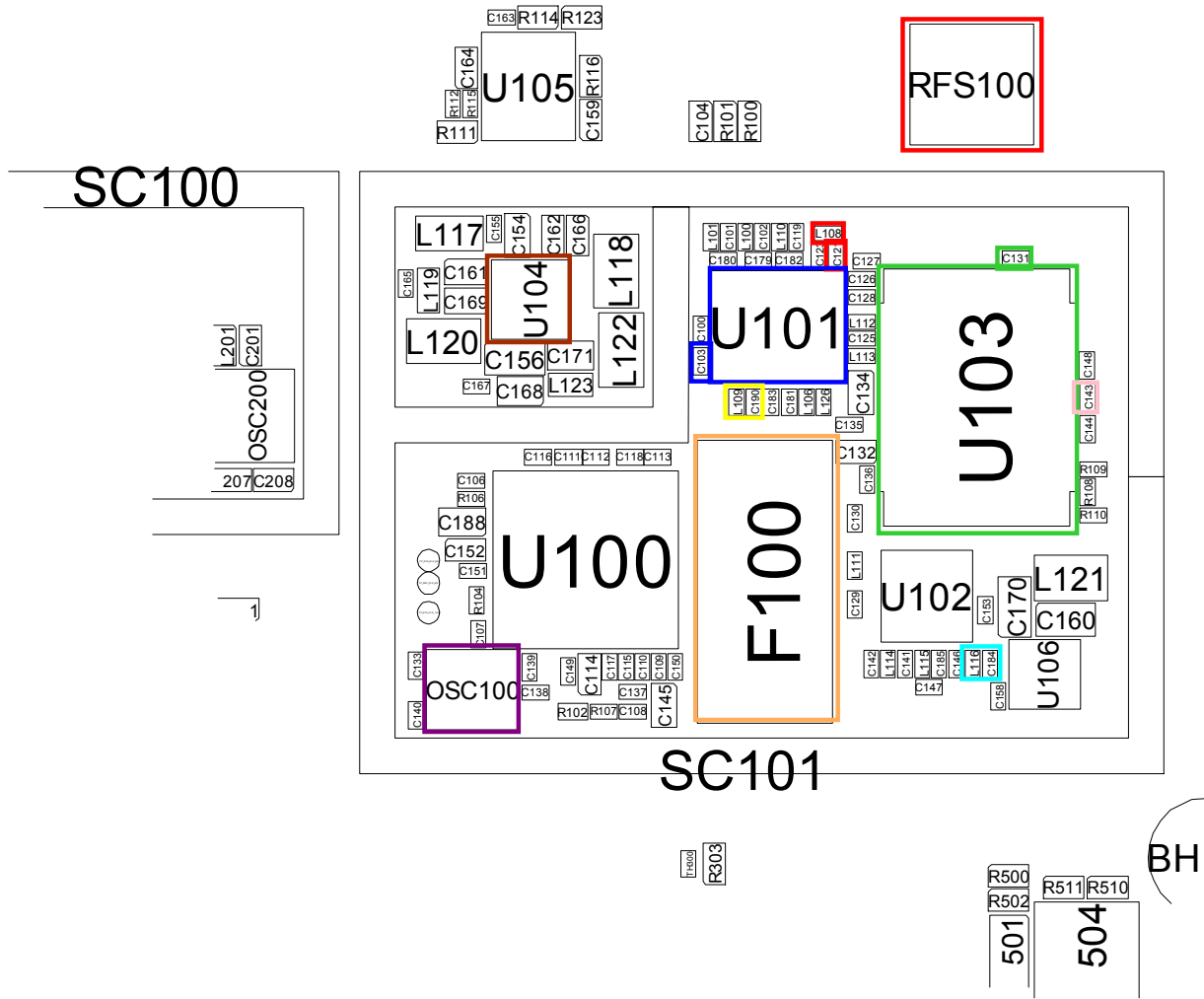


8-3-24. WCDMA BAND8 TX

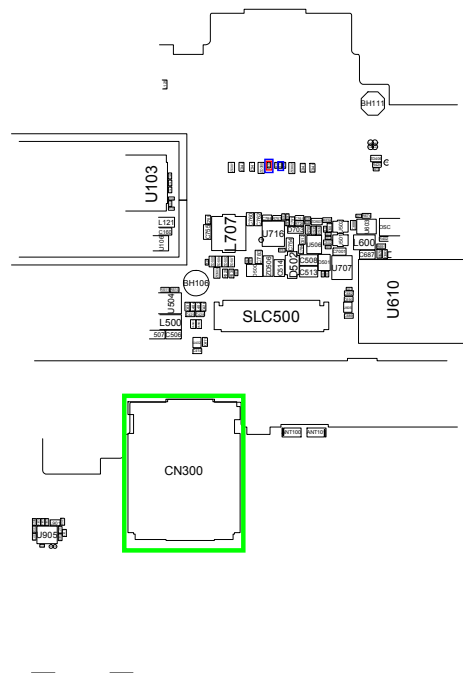
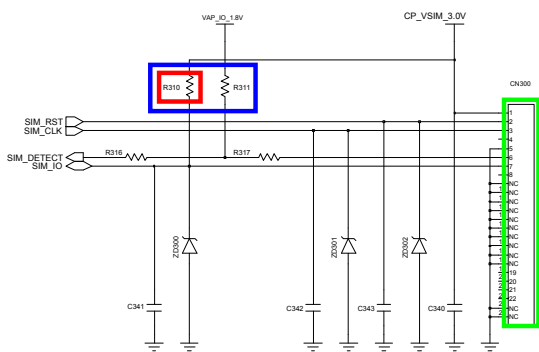
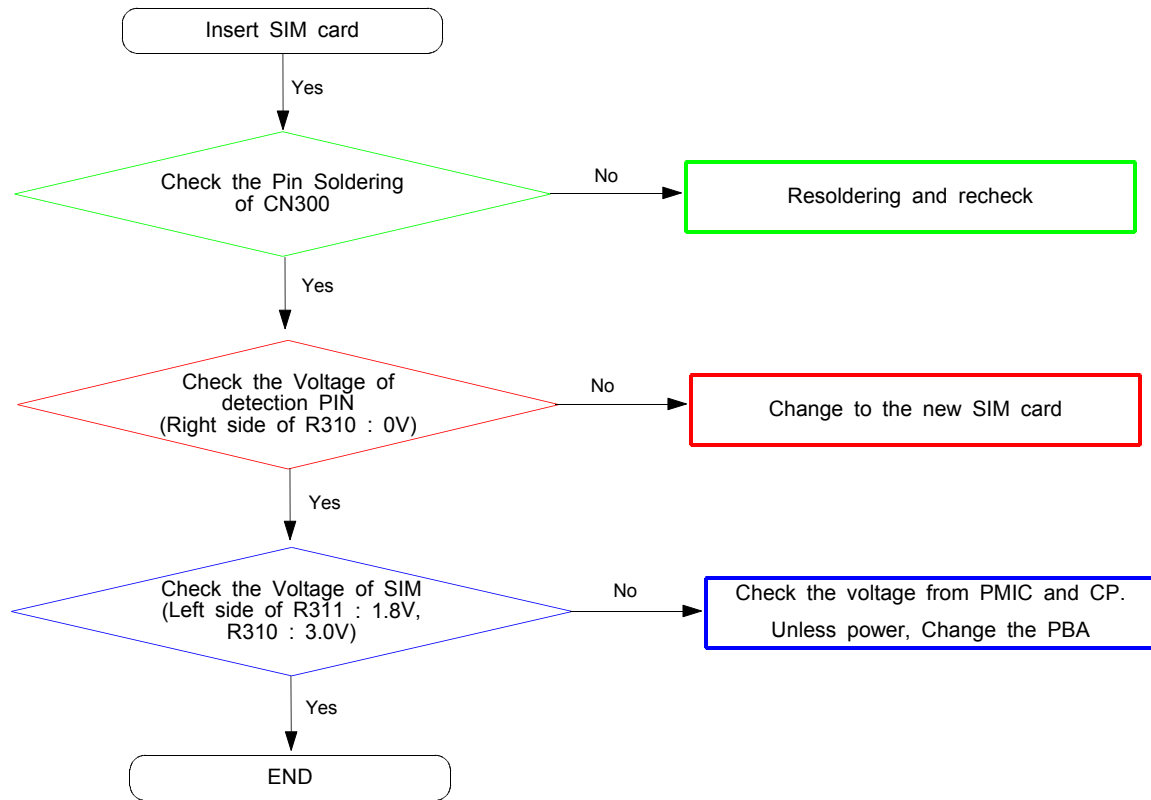
CONTINUOUS TX ON CONDITION
 TX POWER DAC:14500 CODE
 APPLIED
 WCDMA Band8 CH : 3013
 RBW : 100KHz
 VBW : 100KHz
 SPAN : 10MHz
 REF LEV. : 10dBm
 ATT. : 20dB







8-3-25. Sim Part



8-4. NC Point

- U213

 : NC

	12	11	10	9	8	7	6	5	4	3	2	1	
A	FM_AOU1	BT_VCOVDD1P2	BT_FEVSS	BT_RF	BT_PAVDD3P3	WRF_RFIN_2G	WRF_RFOUT_2G		WRF_VDDPA		WRF_RFOUT_5G		A
B	FM_AOU2	BT_PLLVDD1P2	BT_RFVSS	BT_RRVDD1P2	BT_IFVDD1P2	WRF_VDDINA_1P2_2G	WRF_PA_GND		WRF_PA_GND		WRF_PA_GND	WRF_RFIN_5G	B
C	FM_TX	FM_VSSAUDIO	BT_PLLVSS	BT_VSS	BT_IFVSS	WRF_GNDLNA_2G		WRF_GND	WRF_PADRV_GND	WRF_PADRV_VDD		WRF_ANA_GND	C
D	FM_RXN	FM_RXP	FM_VDDAUDIO	BT_GPIO_1	WL_GPIO_6	BT_CLK_REQ_IN	BT_UART_TXD	WL_GPIO_3	WRF_A_TSS_IN	WRF_LOGEN_A_GND	WRF_LOGEN_A_VDD1P2	WRF_VDDANA_1P2	D
E	FM_RFVDD1P2	FM_RXSS	FM_VDDPLL1P2	BT_CLK_REQ_MODE	BT_VDDC	WL_VDDC	BT_UART_RXD	WL_VSS_2	WRF_GPIO_OUT	WRF_RES_EXT		WRF_VDD_VCOOLD0_IN_1P8	E
F	FM_VDD2P5	FM_VSSVCO	FM_PLLVSS	BT_GPIO_0	BT_VSSC	BT_VDDO	BT_UART_RTS_N	JTAG_SEL	WRF_AFE_GND	WRF_TOXO_VDD	WRF_VCOOLD0_OUT_1P2	WRF_VCO_GND	F
G	BT_CLK_REQ_OUT	BT_TM0	BT_RST_N		BT_GPIO_7	BT_I2S_DI	BT_UART_CTS_N	WL_GPIO_1	WRF_VDDAFE_1P2	WRF_TOXO_IN		WRF_XTAL_OP	G
H	BT_GPIO_4		BT_GPIO_2	BT_GPIO_3	BT_GPIO_6	BT_I2S_DO	BT_PCM_CLK	WL_GPIO_2	WL_GPIO_0	WRF_XTAL_VDD_1P2	WRF_XTAL_GND	WRF_XTAL_ON	H
J	VOUT_3P3	VOUT_3P1	EXT_PWM_REQ	BT_GPIO_5	WL_GPIO_4	LPO	BT_PCM_IN	BT_PCM_OUT	RF_SW_CTRL_5	RF_SW_CTRL_6	RF_SW_CTRL_1	HSC_RREF	J
K	SR_VDDBAT1	SR_VDDBAT2	BT_REG_ON	EXT_SMPS_REQ	BT_VDDC	WL_VDDC	BT_PCM_SYNC	RF_SW_CTRL_0	RF_SW_CTRL_7	RF_SW_CTRL_4	WL_VSS_0	WL_VDDC	K
L	SR_VDDBAT1	PMU_AVSS	VOUT_LNLD01	WL_REG_ON	SDIO_DATA_3	SDIO_CMD	WL_GPIO_5	WL_VSS_1	RF_SW_CTRL_2	VDDIO_RF	HSC_DATA	HSC_AVDD12	L
M	SR_VLX	SR_PVSS	VIN_LDO	VOUT_CLDO	SDIO_DATA_1	SDIO_CLK	SDIO_DATA_0	SDIO_DATA_2	RF_SW_CTRL_3	WL_VDDO	HSC_STROBE	HSC_AVSS	M

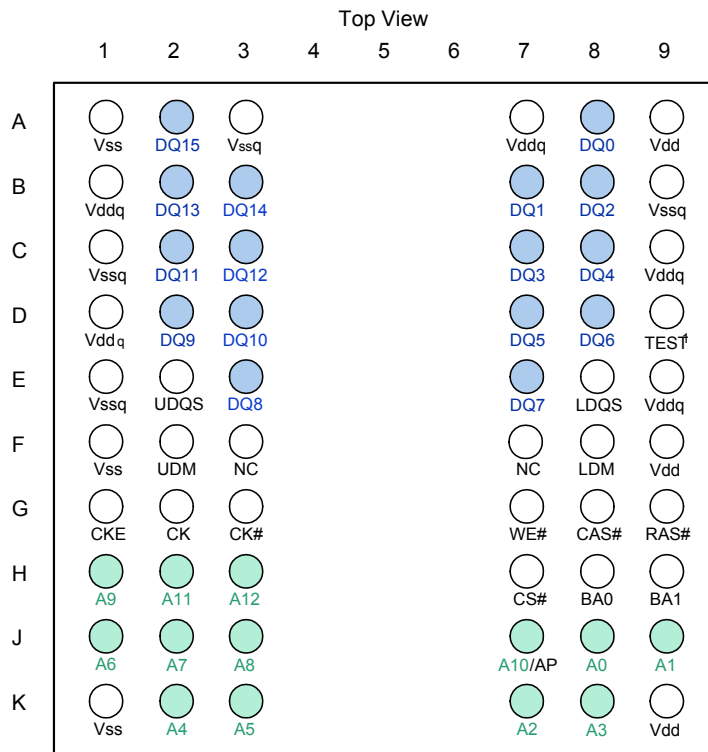
- UCP300

NC

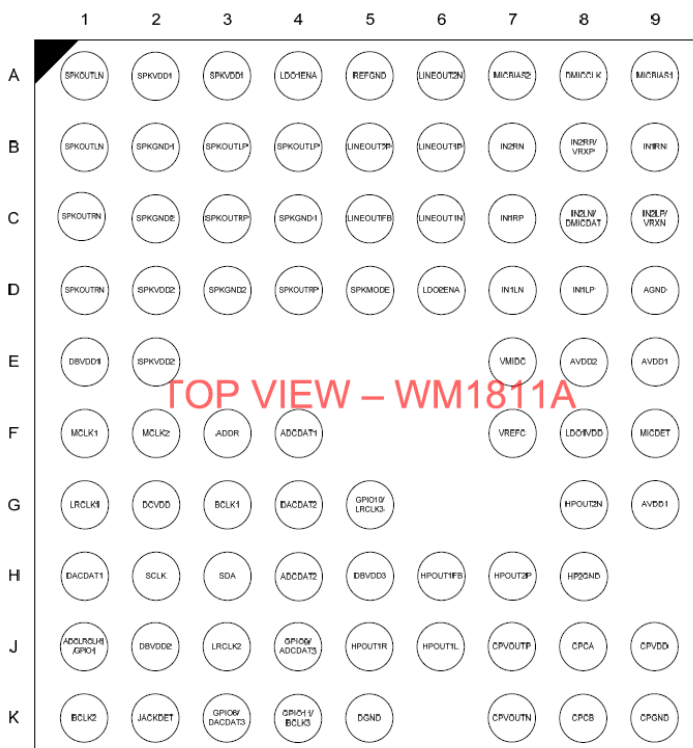
Bottom View

	17	16	15	14	13	12	11	10	9	8	765432						1	
A	NC	MEM_A_8	MEM_BFC_LKO_1	MEM_SDC_LKO	MEM_A_0	MEM_BC0_n	MEM_A_1	MEM_A_2	MEM_A_3	MEM_A_4	MEM_AD_9	FCDP_FB_n	VPLL	VDD_VBA_T_SD2	SD2_SW	SD2_SW	NC	A
B	MEM_A_9	MEM_A_2_3	MEM_BFC_LKO_0	MEM_CK_E	MEM_RD_n	MEM_WR_n	VDD_IO18	MEM_BC2_n	MEM_A_6	FWP	MEM_CAS_n	DSP_AUDI_O_IN1	x	VIO_12	x	x	VSS_SD2	B
C	MEM_A_1_0	MEM_A_2_2	xx		x	MEM_A_5	x	x	MEM_A_7	x	x	x	x	VUSB_PD	VDD_VSD_2	SD2_FB	VDD_VBA_T_SD1	C
D	MEM_A_1_1	MEM_A_2_1	x	VSS	MEM_AD_13	MEM_AD_12	MEM_AD_11	MEM_AD_7	VSS	MEM_AD_3	x	x	x	ANAMON	SD1_FB	x	SD1_SW	D
E	MEM_A_1_2	MEM_A_2_0	x	MEM_RAS_n	VDDCORE	VDDCORE_EBU	MEM_AD_8	VDDCORE	MEM_AD_6	MEM_AD_5	x	x	x	VSS	FSS	x	SD1_SW	E
F	MEM_A_1_3	MEM_BC1_n	VDD_IO18	VSS	MEM_AD_15	xx		x	MEM_AD_4	x	x	TRIG_B	x	VRTC	VDD_VBA_T_PMU	VUSB_AN_A	VSS_SD1	F
G	MEM_A_1_4	MEM_BC3_n	MEM_A_1_9	MEM_BE0	MEM_BE1	x	MEM_AD_1	MEM_AD_V_n	MEM_AD_2	VSS	x	xxx		x	VPMU	VSIM	G	
H	MEM_A_1_5	MEM_A_1_7	x	MEM_CS2_n	MEM_CS3_n	x	MEM_AD_0	MEM_AD_10	VDDCORE	RESERVE_D	x	M1	x	x	AGND	ON1	VUSB_IO	H
J	VDD_IO18	MEM_A_1_6	MEM_A_1_8	MEM_CS0_n	MEM_CS1_n	MEM_AD_14	VSS	x	x	VSS	x	M2	M3	M4	RESET_P_WRDWN_N	ON2_N	VREF	J
K	MEM_WA_IT_n	VDD_MPI	x	VDDCORE	VSS	x	VDD_IO18	EINT3	VDDCORE	VDD_IO18	ETM11_T_RACECLK	x	ETM11_T_RACEPKT_4	TM_EN	REF_CLK_EN	RESET_B_B_N	ETM11_T_RACEPKT_7	K
L	F32K	VSS	x	VSS	MIPL_HSI_RX_RDY	x	MIPL_HSI_TX_FLG	VSS	ETM11_T_RACEPKT_5	VDD_MM_C	MMCI1_C_MD	x	ETM11_T_RACEPKT_6	ETM11_T_RACEPKT_2	x	ETM11_T_RACEPKT_3	ETM11_T_RACEPKT_1	L
M	OSC32K	VSS	MIPL_HSI_TX_RDY	MIPL_HSI_RX_FLG	MIPL_HSI_TX_WAKE	xx		x	EINT1	EINT2	x	MMCI1_D_AT_3	MMCI1_D_AT_0	MMCI1_D_AT_2	MMCI1_C_LK	MMCI1_D_AT_1	ETM11_T_RACEPKT_0	M
N	VDD_RTC	USB_ID	x	VSS_USB	MIPL_HSI_RX_DATA	MIPL_HSI_TX_DATA	VDD_IO18	I2C1_SCL	VPP	CLKOUT0	x	x	MMCI1_C_D	T_OUT0	x	I2S2_CLK_1	I2S2_CLK_0	N
P	USB_TEST	VBUS	x	VDD_USB_ANA	MIPL_HSI_RX_WAKE	SYS_CLK	VSS_PLL	CLKOUT2	I2C1_SDA	VSS	HW_MON_2	xx		x	T_OUT1	I2S2_TX	I2S2_RX	P
R	USB_DMIPUS	VDD_USBIO	xx		x	VDD_PLL	x	x	VSS	VDDCORE	x	HW_MON_1	RESET2_N	NC	x	I2S2_WA1	I2S2_WA0	R
T	USB_DPLUS	USB_TUNE	VDD_USB_PD	CC_RST	CC_IO	VDD_SIM	DMINUS	VDD_DIG_RF	XRESET_N	DI3_TX_D_ATX	DI3_TX_D_AT	TCK	TRIG_IN	TRST_n	USIF1_TXD_MTSR	USIF1_RXD_MRST	USIF1_SCLK	T
U	NC	VSS	VDD_IO12	CC_CLK	HSIC_USB_DATA	HSIC_USB_STRB	DPLUS	ALERT_N	SYSCLK_N	DI3_RX_D_ATX	DI3_RX_D_AT	TMS	TDI	TDO	USIF1_RT_S_N	USIF1_CT_S_N	NC	U

- UME300



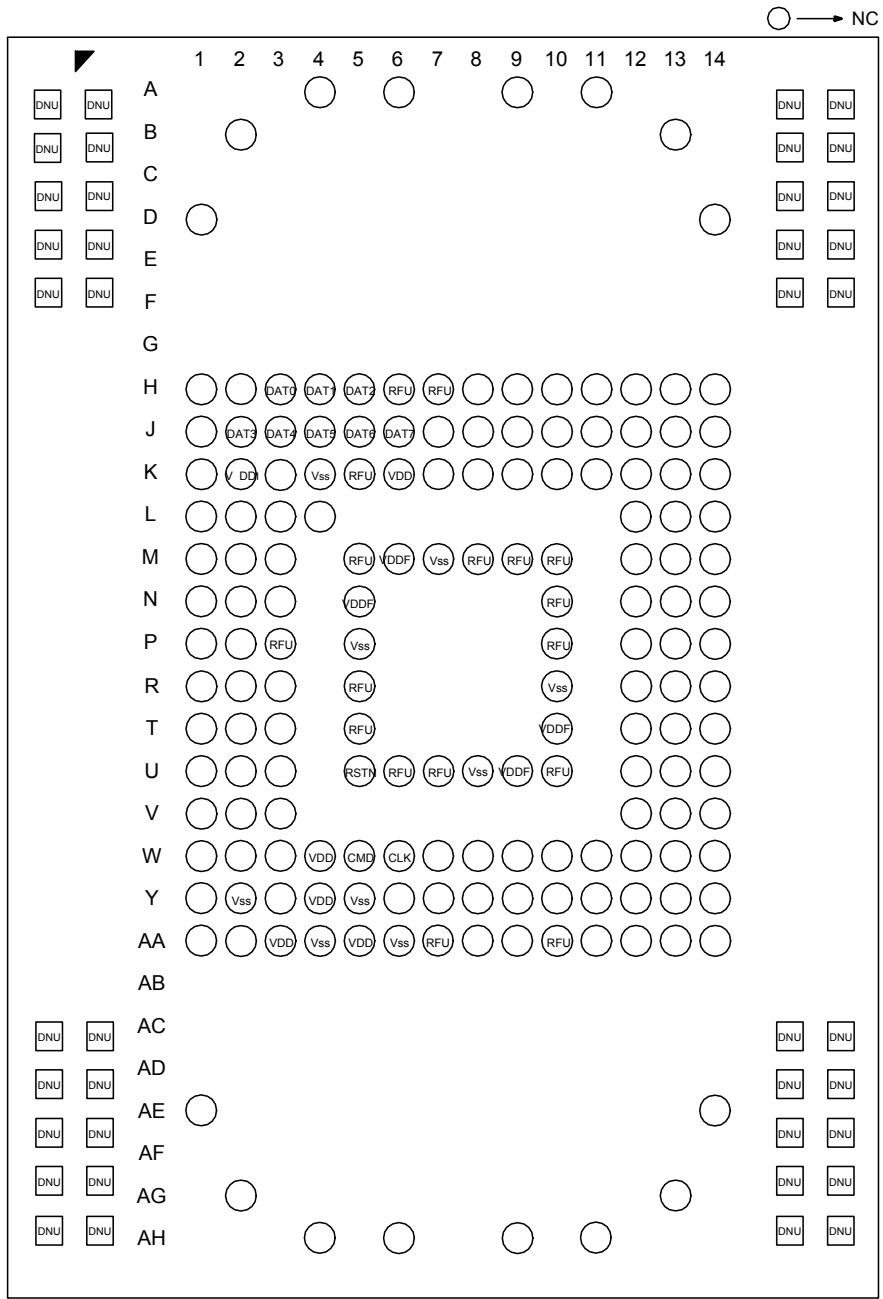
- U404



- UCP600

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	A
B	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	B	
C	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	C		
D	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	D			
E	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	E				
F	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	F					
G	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	G						
H	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	H							
I	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	I								
J	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	J									
K	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	K										
L	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	L											
M	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	M												
N	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	N													
P	15	16	17	18	19	20	21	22	23	24	25	26	27	28	P														
R	16	17	18	19	20	21	22	23	24	25	26	27	28	R															
T	17	18	19	20	21	22	23	24	25	26	27	28	T																
U	18	19	20	21	22	23	24	25	26	27	28	U																	
V	19	20	21	22	23	24	25	26	27	28	V																		
W	20	21	22	23	24	25	26	27	28	W																			
Y	21	22	23	24	25	26	27	28	Y																				
AA	22	23	24	25	26	27	28	AA																					
AB	23	24	25	26	27	28	AB																						
AC	24	25	26	27	28	AC																							
AD	25	26	27	28	AD																								
AE	26	27	28	AE																									
AF	27	28	AF																										
AG	28	AG																											
AH																													

- U610



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