

SAMSUNG

GSM TELEPHONE

SGH-X481

SERVICE *Manual*

GSM TELEPHONE

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1. SGH-X481 Specification

1-1. GSM General Specification

	GSM900 Phase 1	EGSM 900 Phase 2	DCS1800 Phase 1	PCS1900
Freq. Band[MHz] Uplink/Downlink	890~915 935~960	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990
ARFCN range	1~124	0~124 & 975~1023	512~885	512~810
Tx/Rx spacing	45MHz	45MHz	95MHz	80MHz
Mod. Bit rate/ Bit Period	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us
Time Slot Period/Frame Period	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms
Modulation	0.3GMSK	0.3GMSK	0.3GMSK	0.3GMSK
MS Power	33dBm~13dBm	33dBm~5dBm	30dBm~0dBm	30dBm~0dBm
Power Class	5pcl ~ 15pcl	5pcl ~ 19pcl	0pcl ~ 15pcl	0pcl ~ 15pcl
Sensitivity	-102dBm	-102dBm	-100dBm	-100dBm
TDMA Mux	8	8	8	8
Cell Radius	35Km	35Km	2Km	-

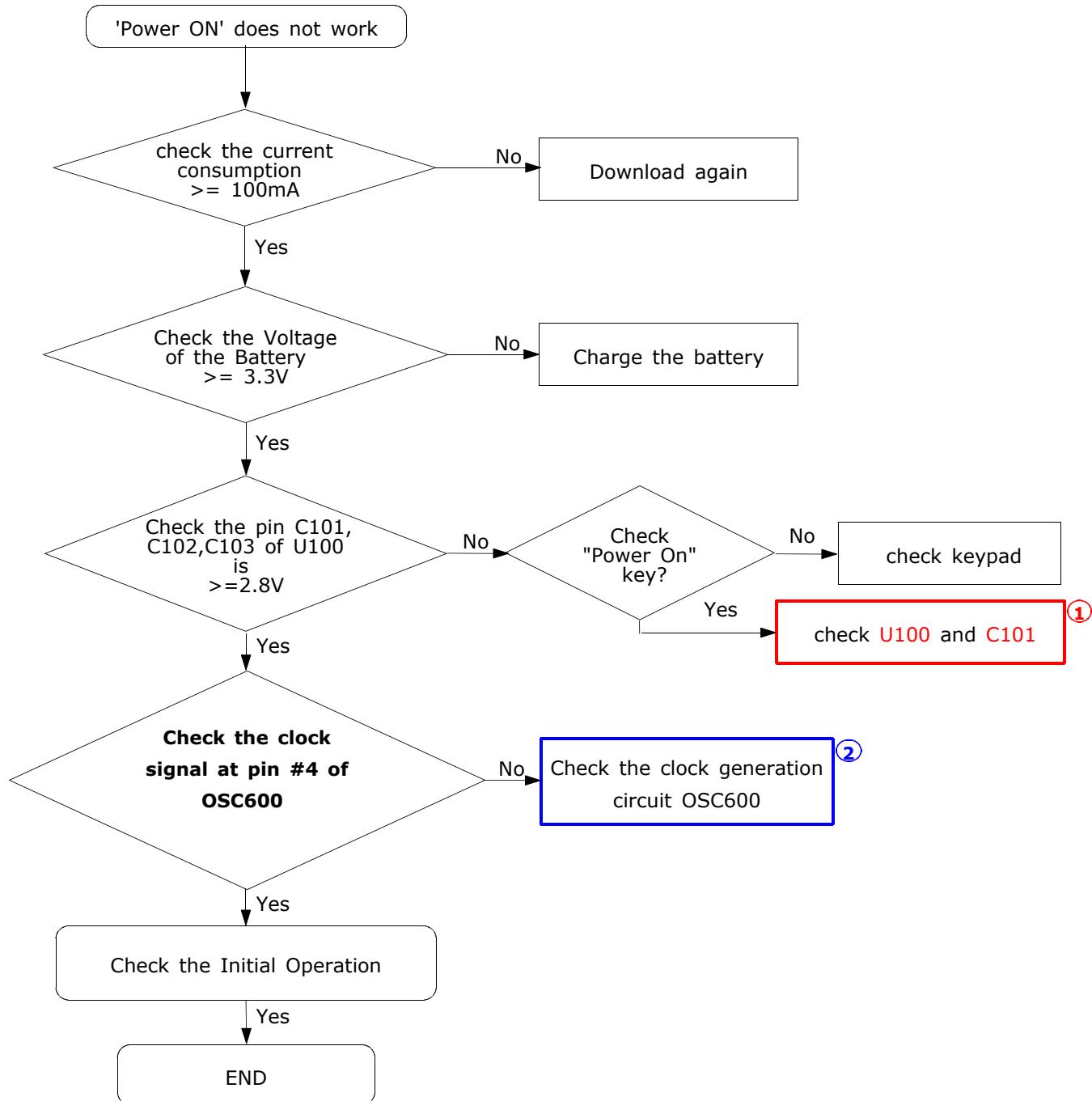
1-2. GSM Tx Power Class

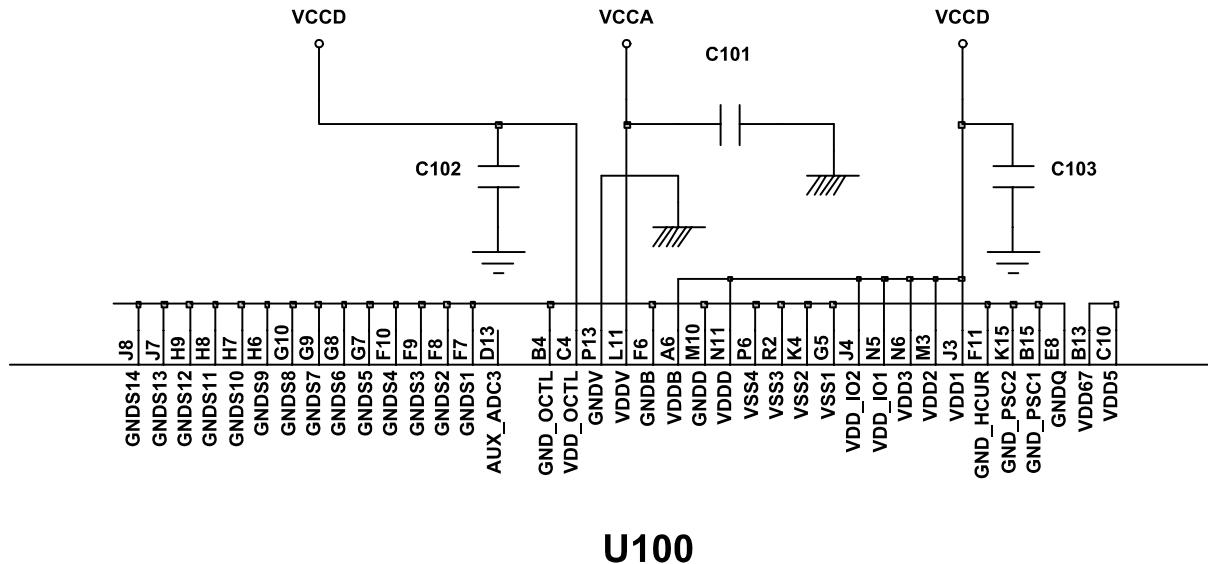
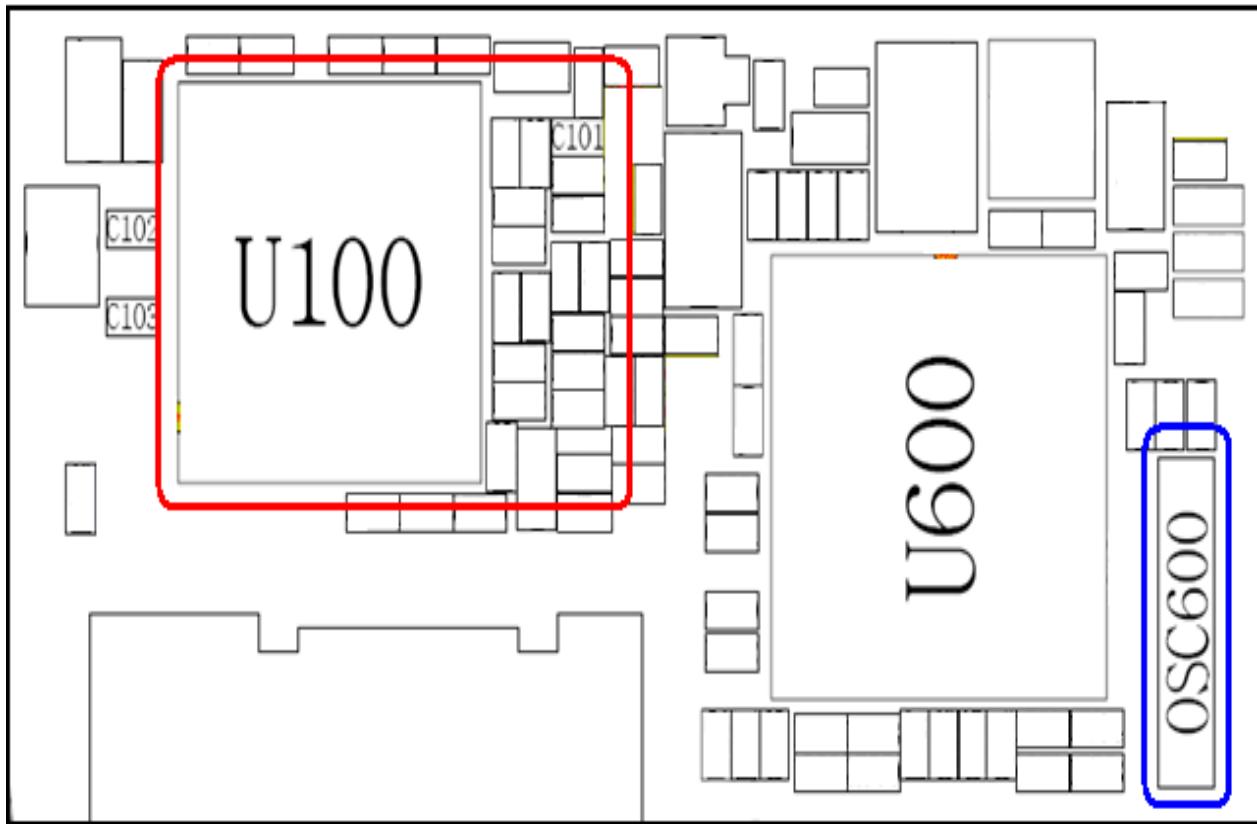
TX Power control level	GSM900	TX Power control level	DCS1800	TX Power control level	PCS1900
5	33±2 dBm	0	30±3 dBm	0	30±3 dBm
6	31±2 dBm	1	28±3 dBm	1	28±3 dBm
7	29±2 dBm	2	26±3 dBm	2	26±3 dBm
8	27±2 dBm	3	24±3 dBm	3	24±3 dBm
9	25±2 dBm	4	22±3 dBm	4	22±3 dBm
10	23±2 dBm	5	20±3 dBm	5	20±3 dBm
11	21±2 dBm	6	18±3 dBm	6	18±3 dBm
12	19±2 dBm	7	16±3 dBm	7	16±3 dBm
13	17±2 dBm	8	14±3 dBm	8	14±3 dBm
14	15±2 dBm	9	12±4 dBm	9	12±4 dBm
15	13±2 dBm	10	10±4 dBm	10	10±4 dBm
16	11±3 dBm	11	8±4 dBm	11	8±4 dBm
17	9±3 dBm	12	6±4 dBm	12	6±4 dBm
18	7±3 dBm	13	4±4 dBm	13	4±4 dBm
19	5±3 dBm	14	2±5 dBm	14	2±5 dBm
		15	0±5 dBm	15	0±5 dBm

2. SGH-X481 Flow Chart of Troubleshooting

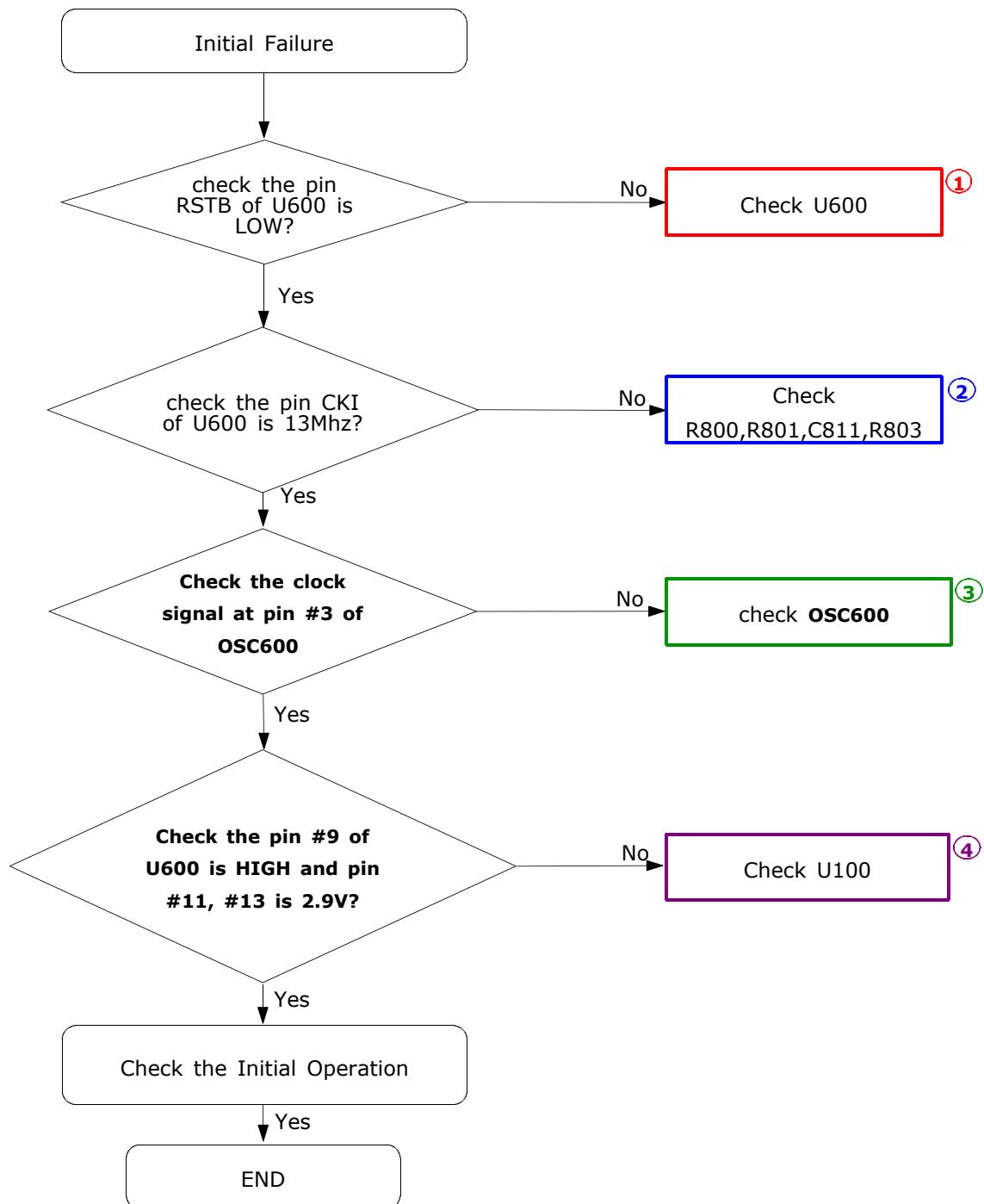
2-1. Baseband

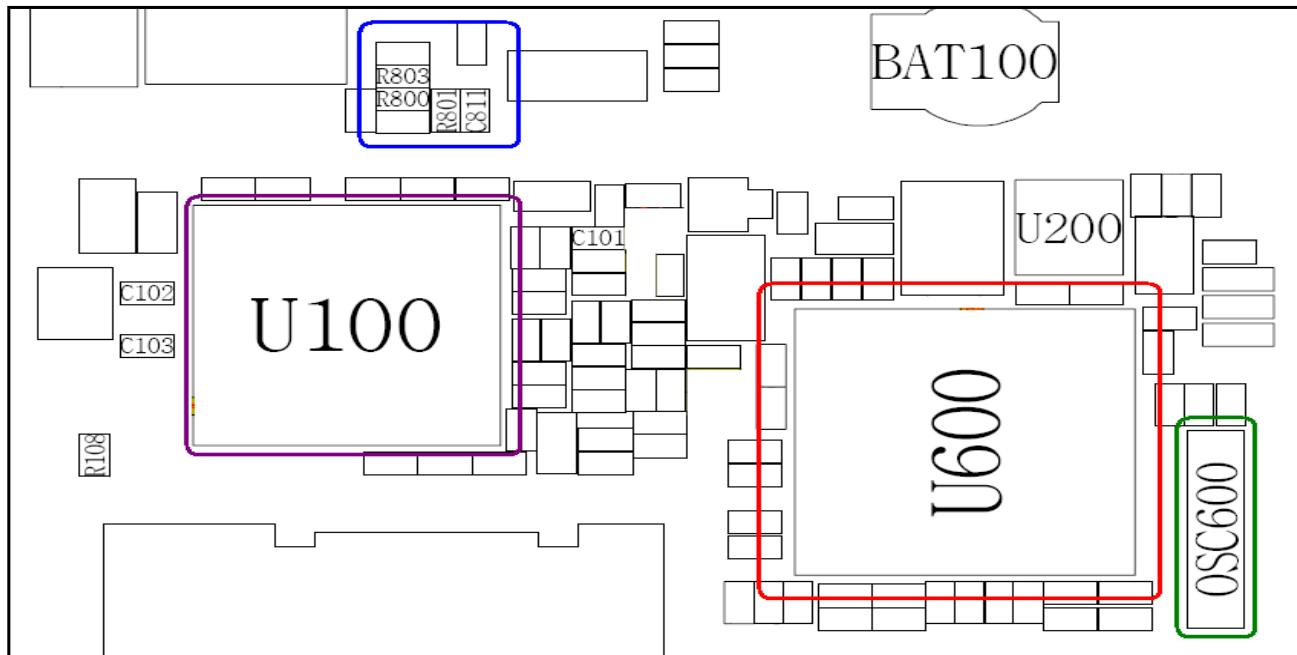
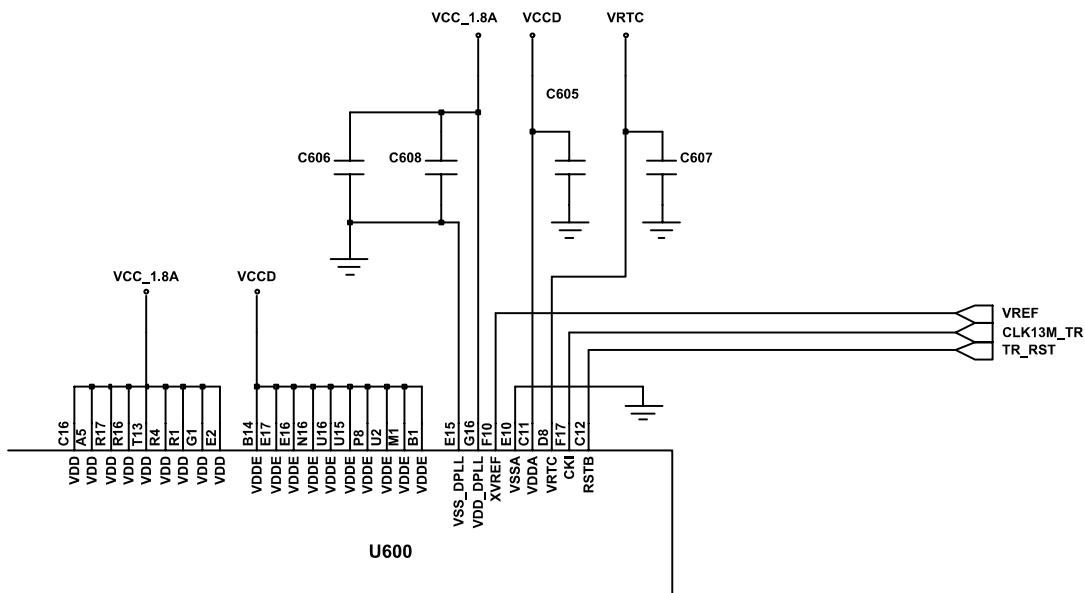
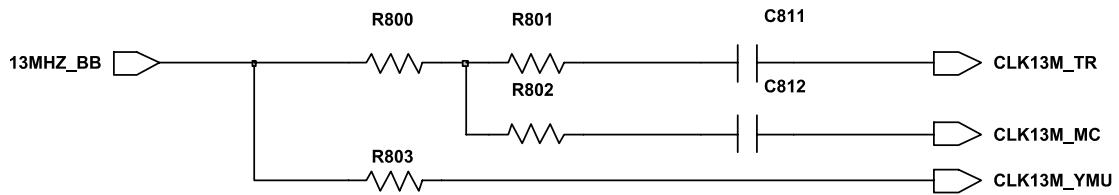
2-1-1. Power ON



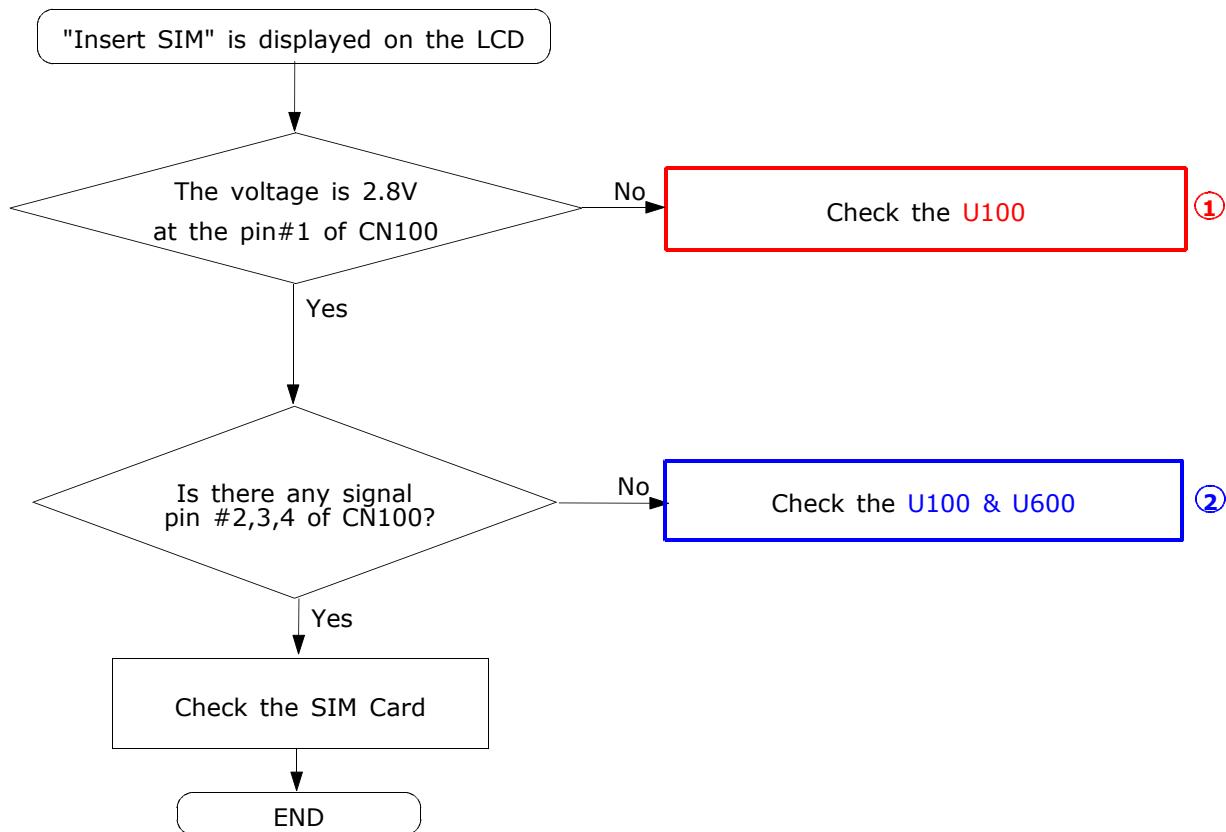
**U100**

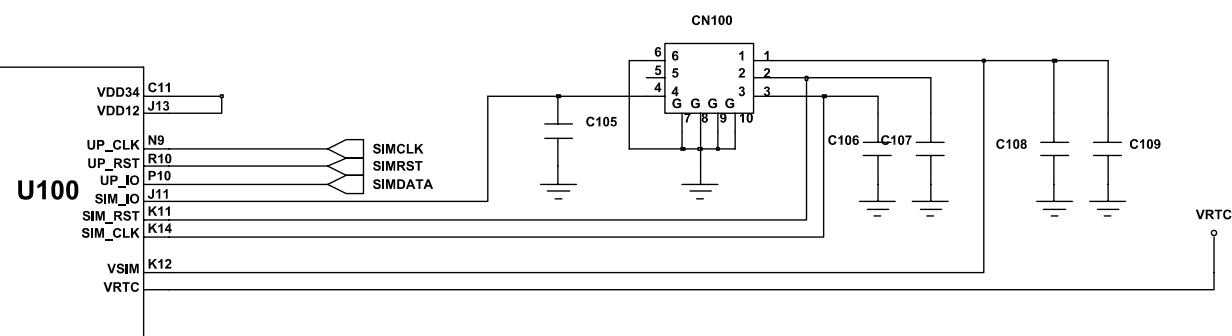
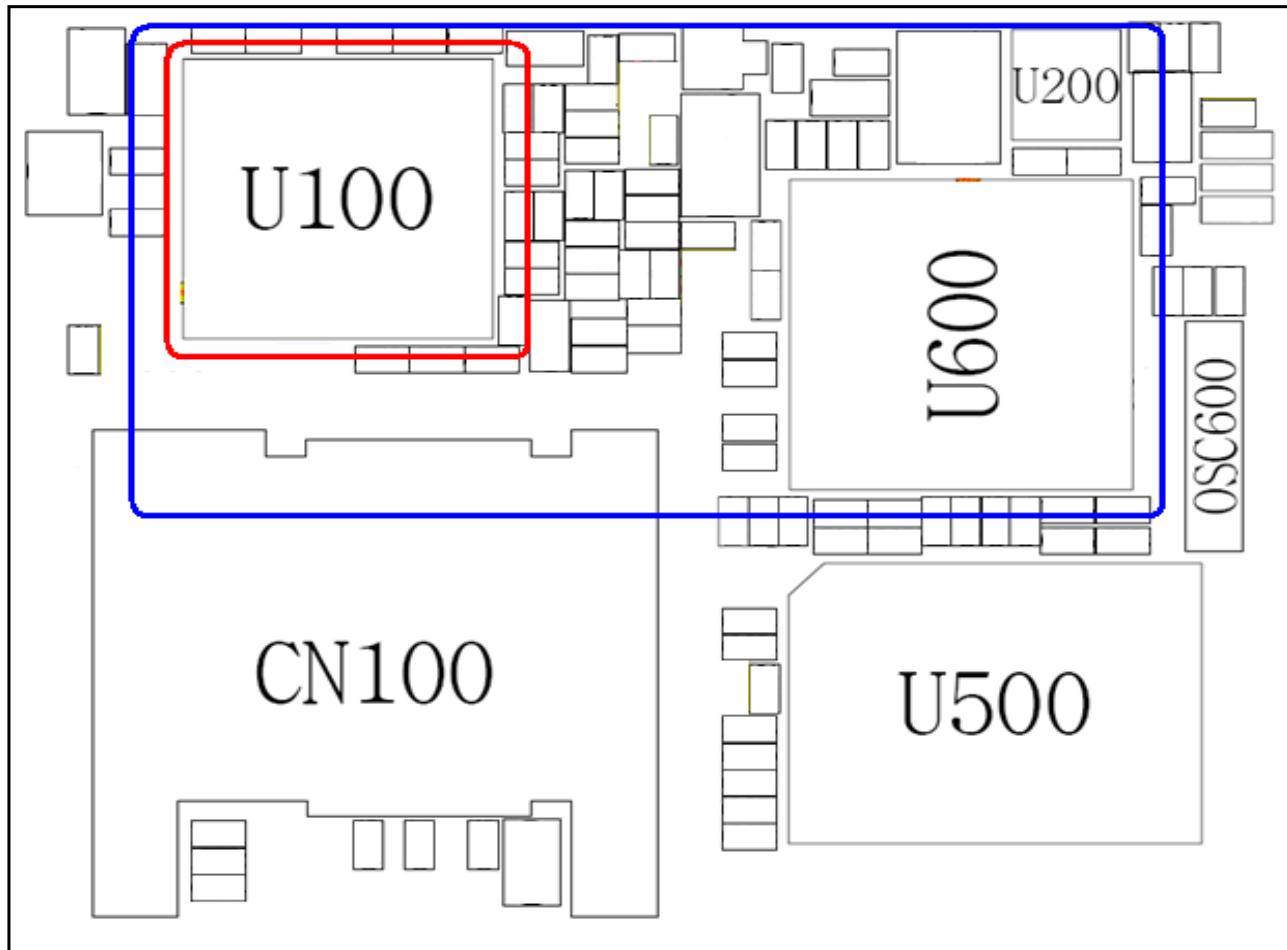
2-1-2. Initial





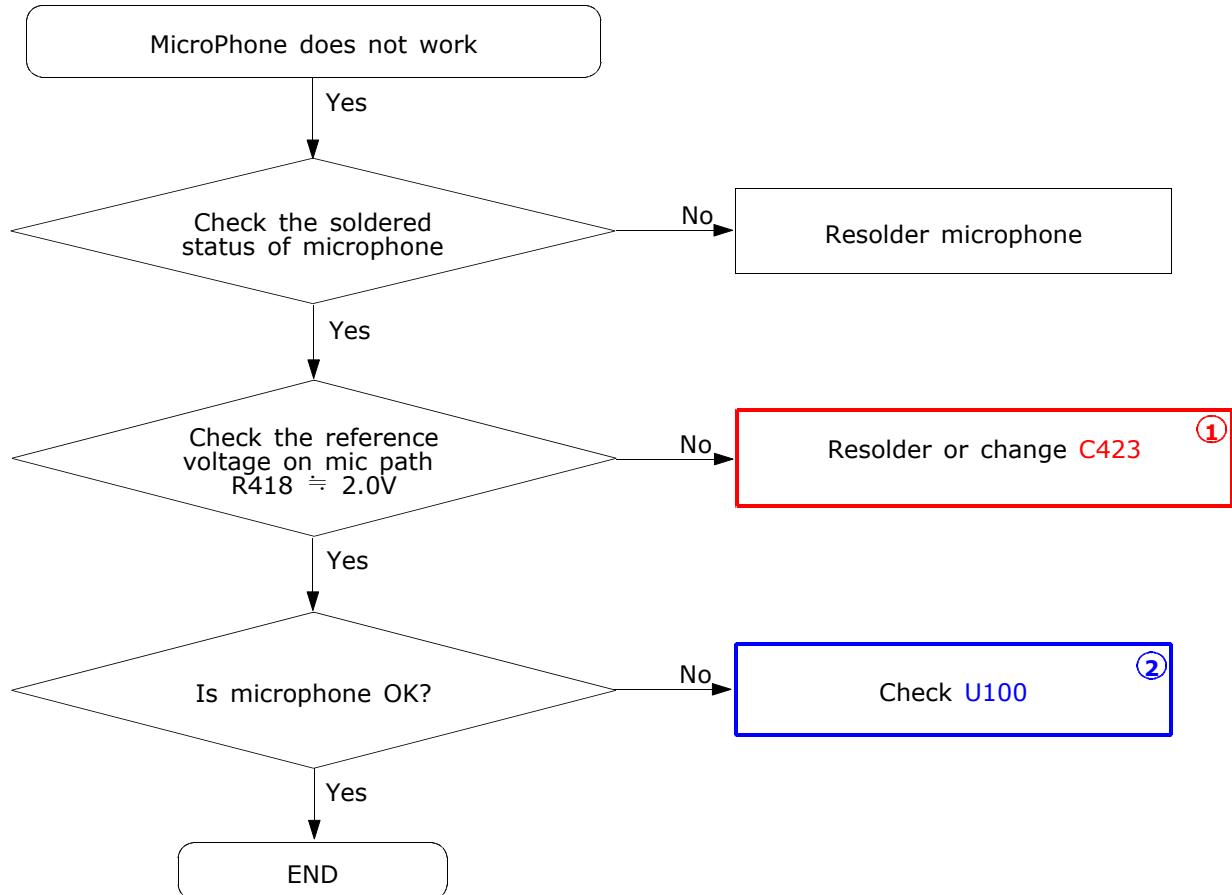
2-1-3. Sim Part

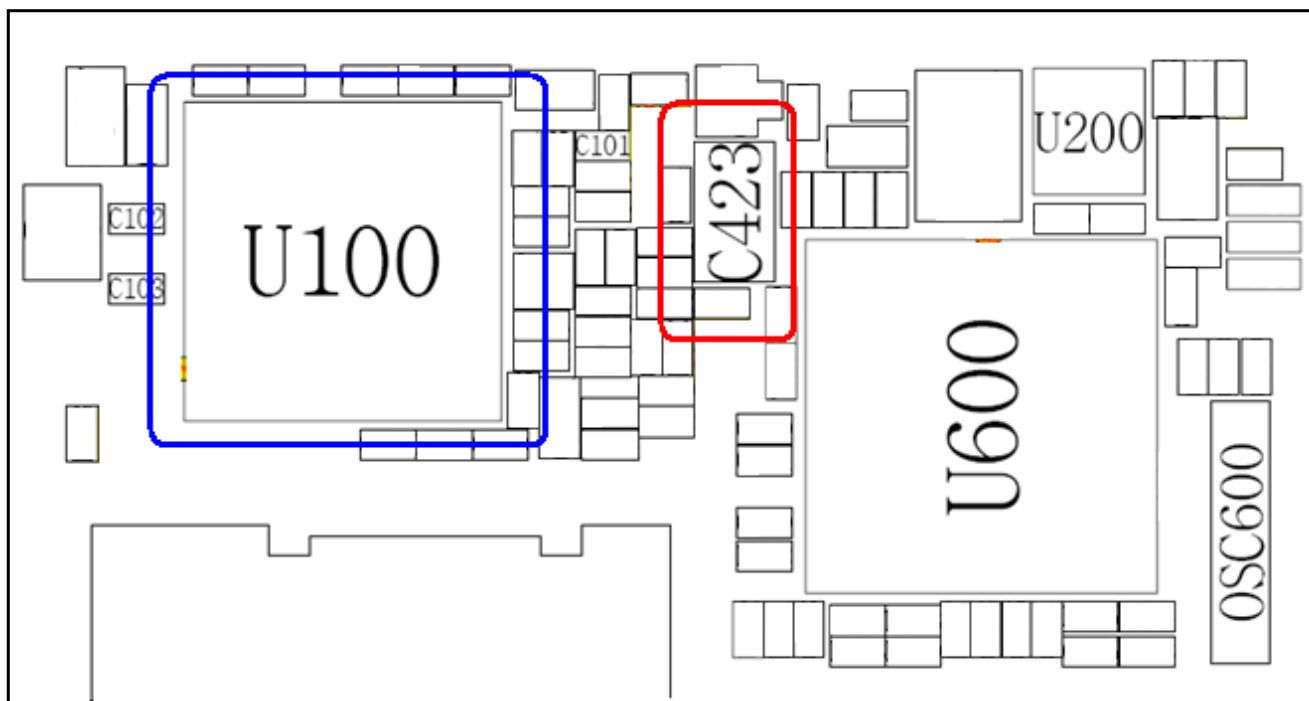
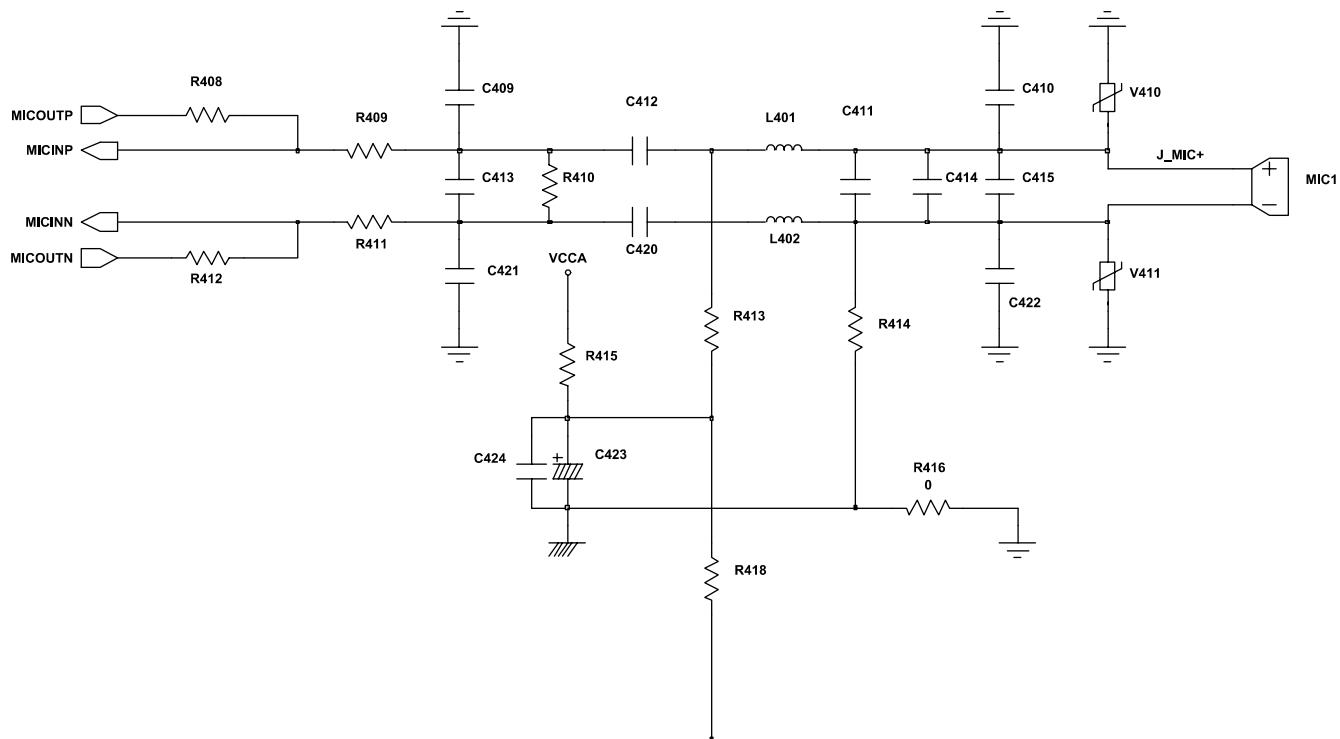




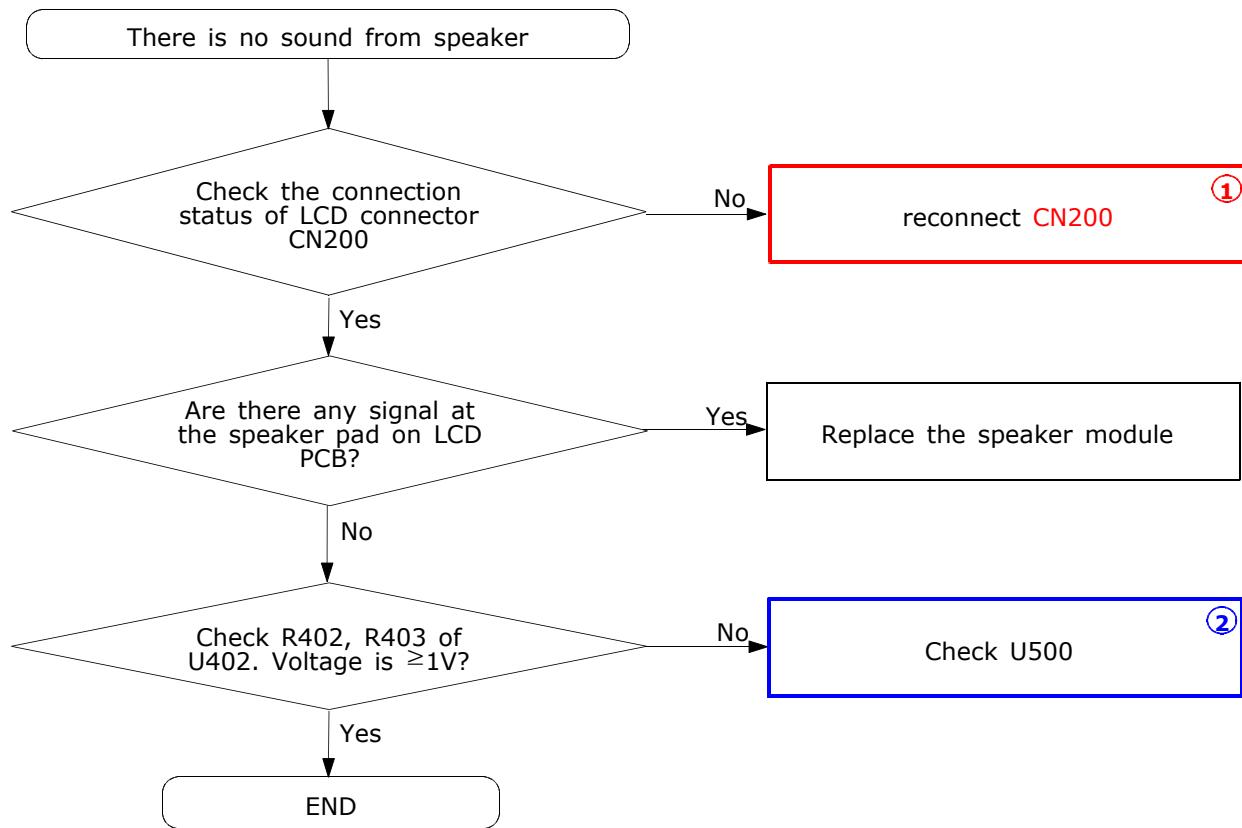
2-1-4.Microphone Part

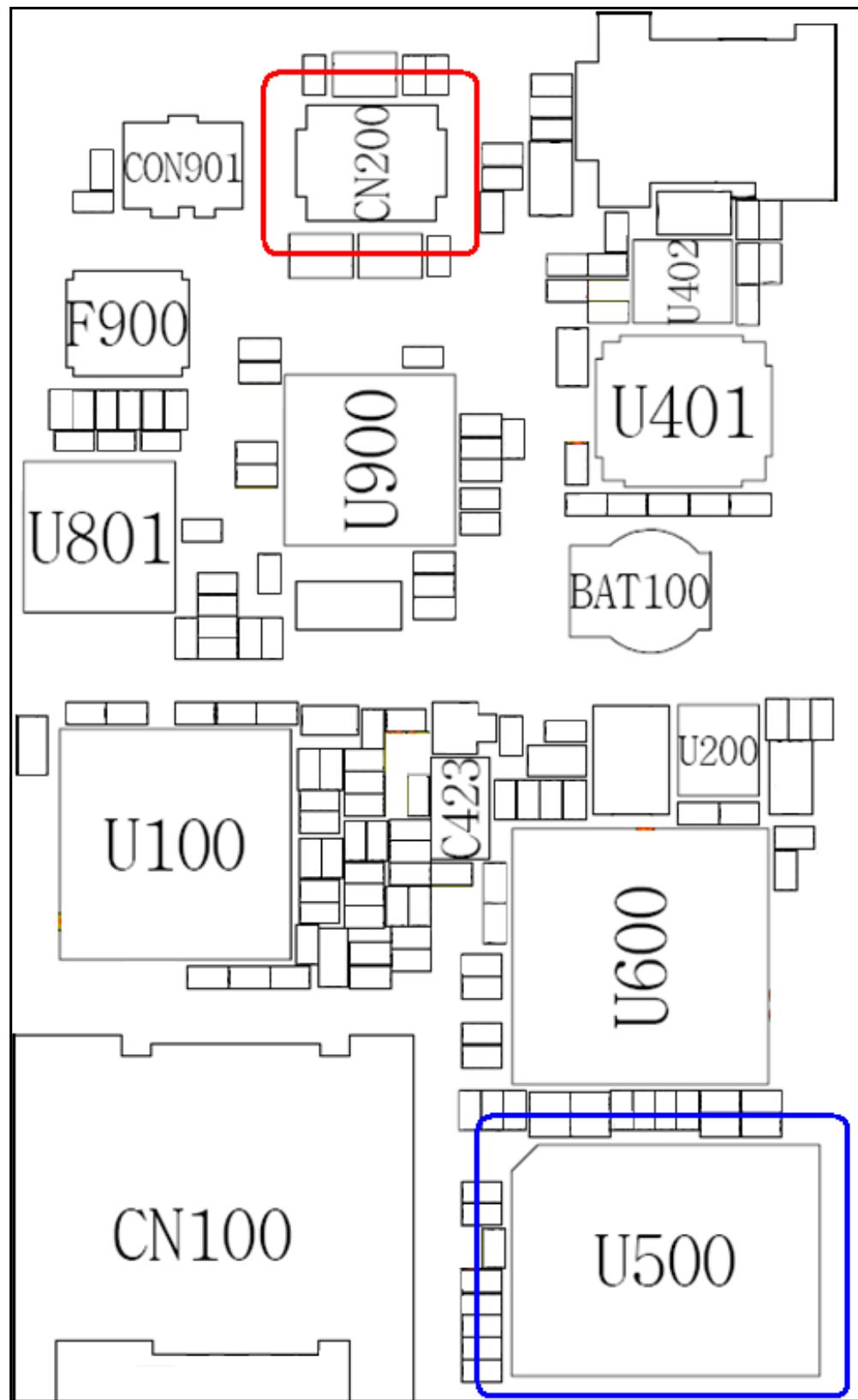
* Call with Sim before testing.



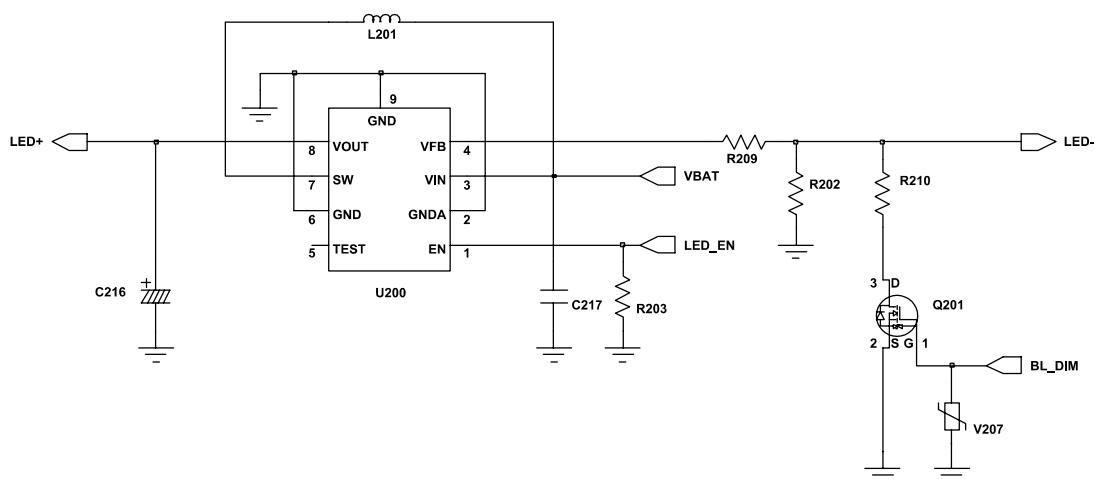
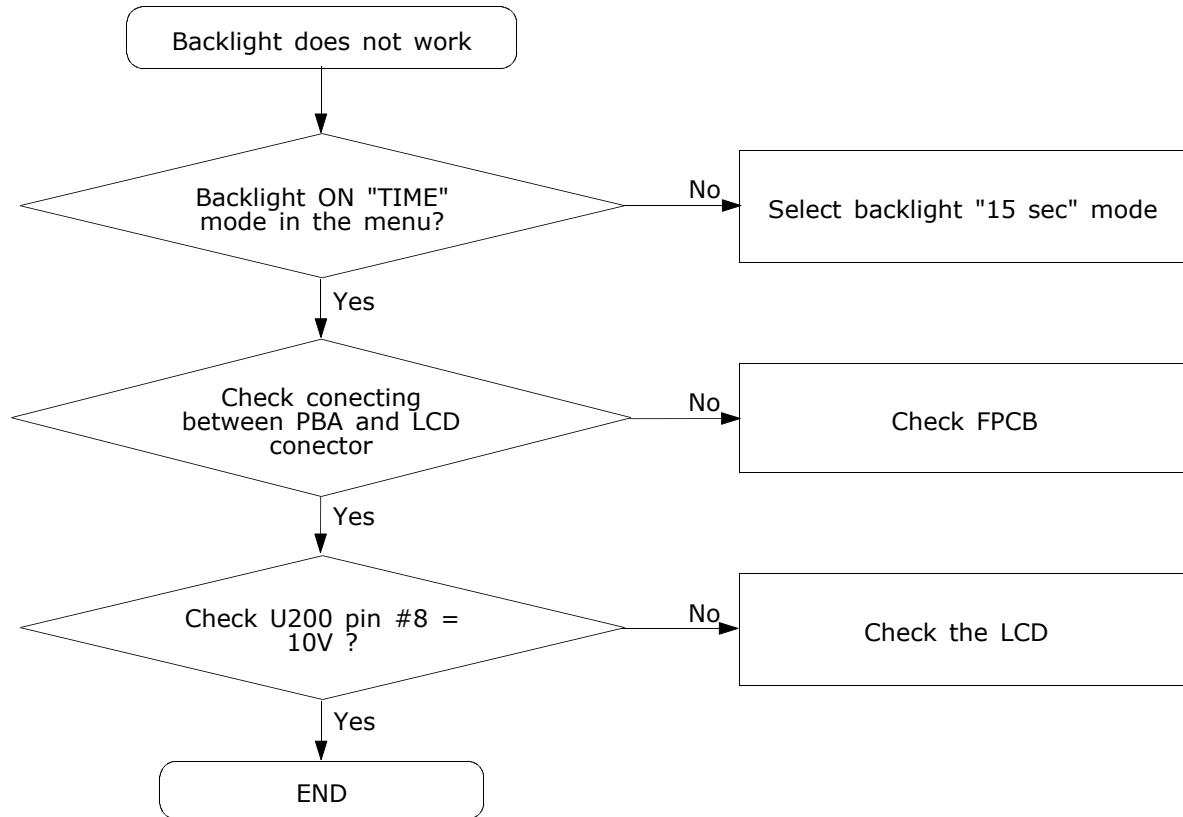


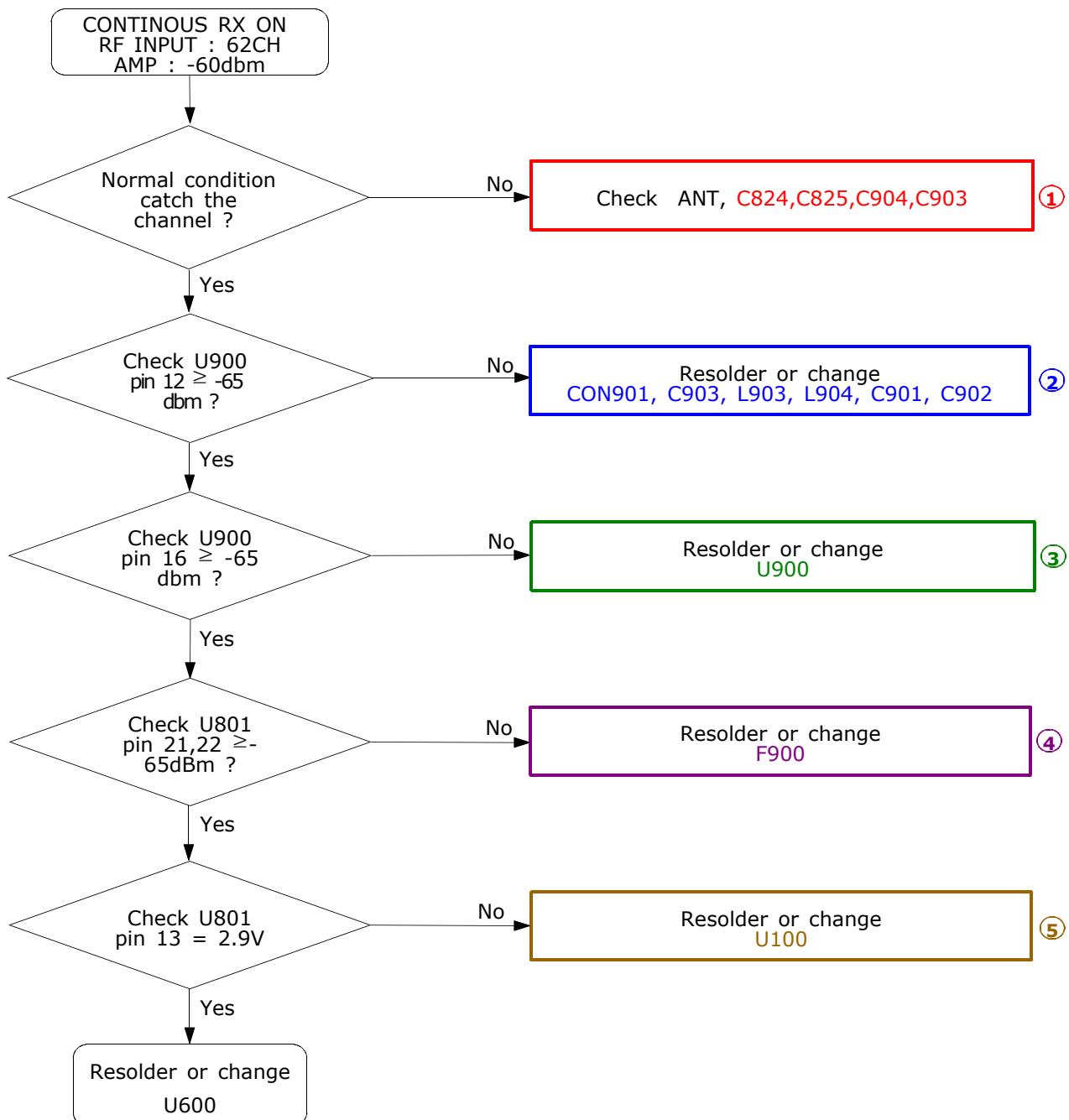
2-1-5. Speaker Part

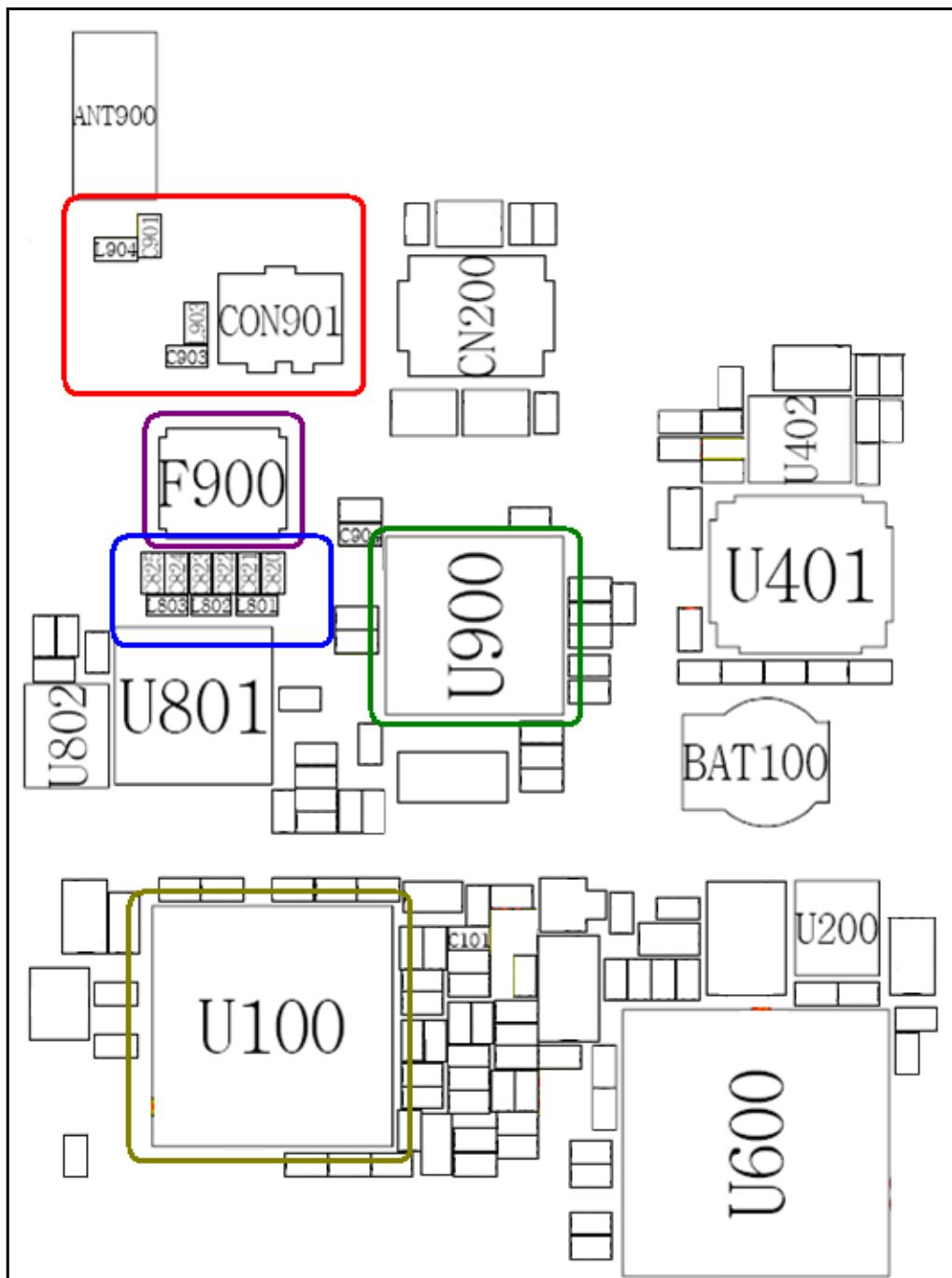




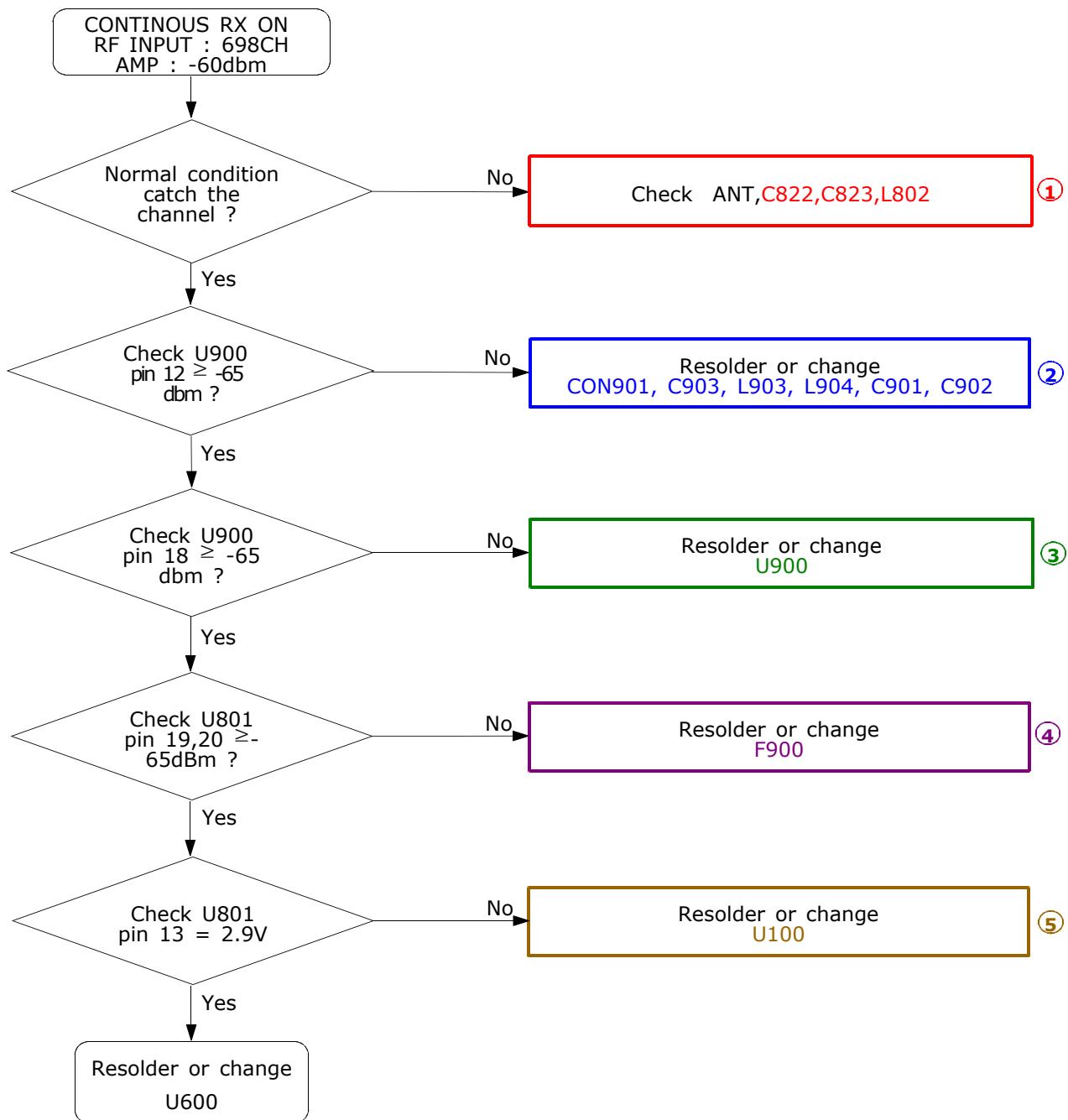
2-1-6. LCD backlight

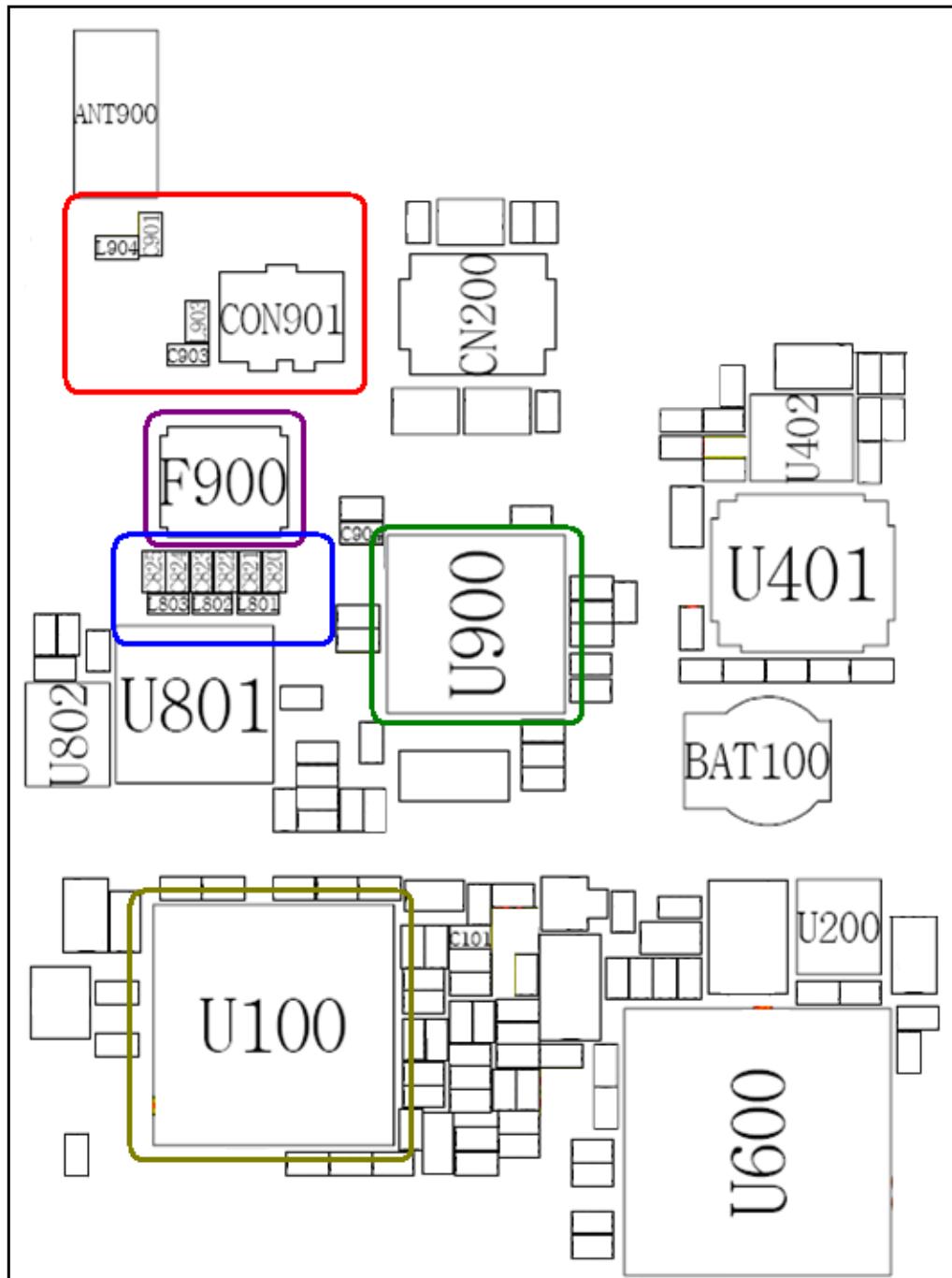


2-2. RF**2-2-1. GSM Rx**

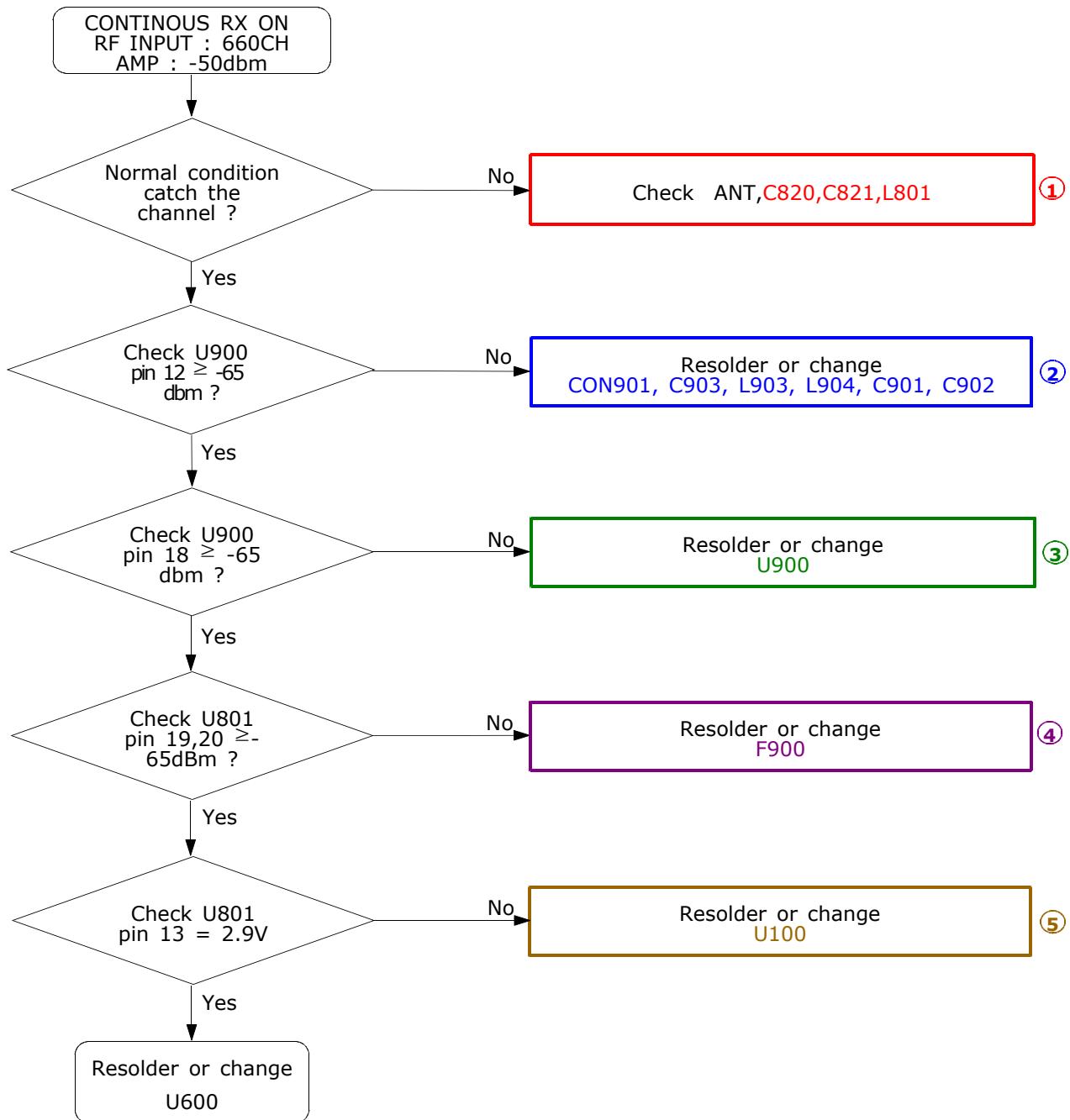


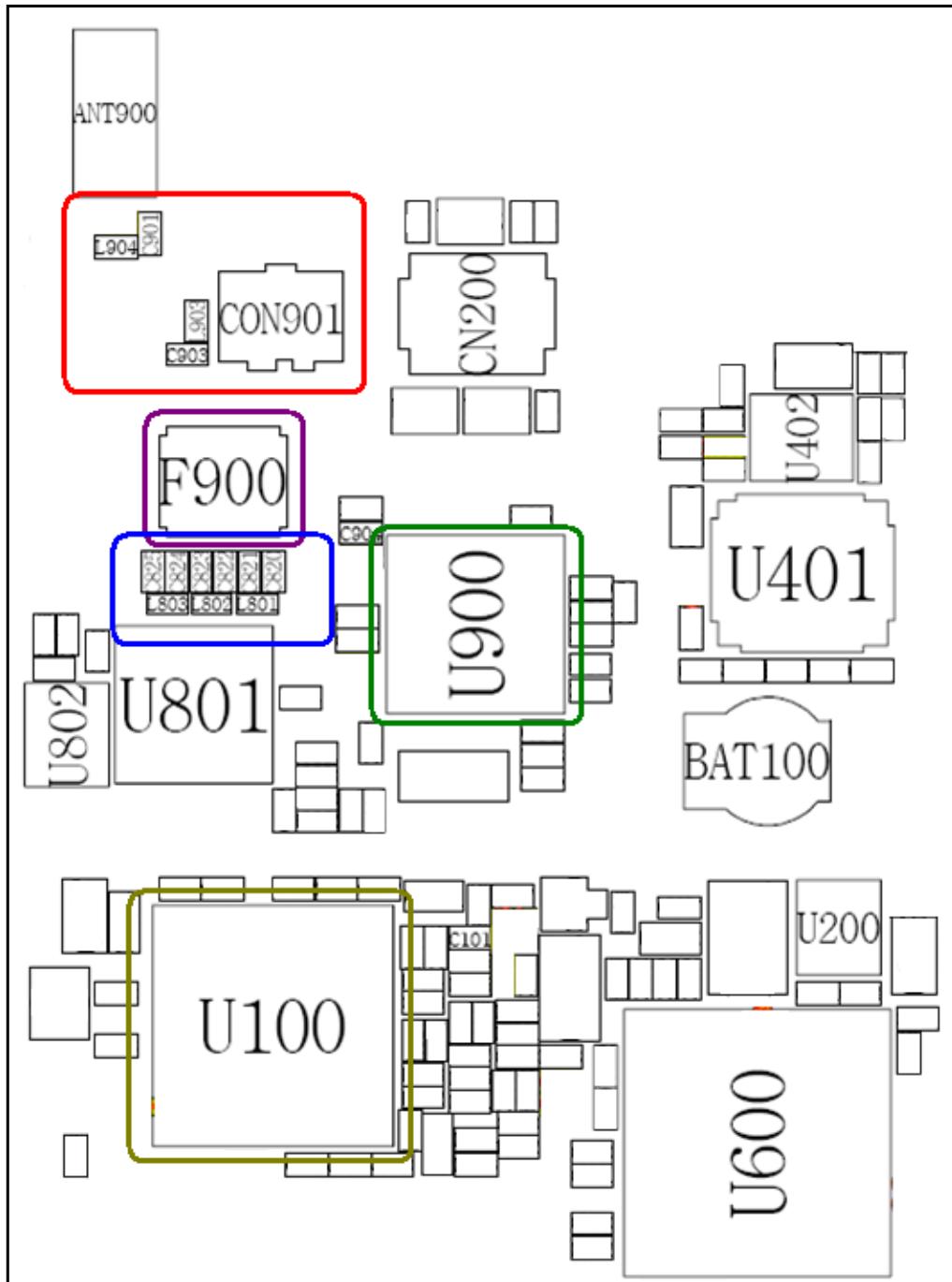
2-2-2. DCS Rx

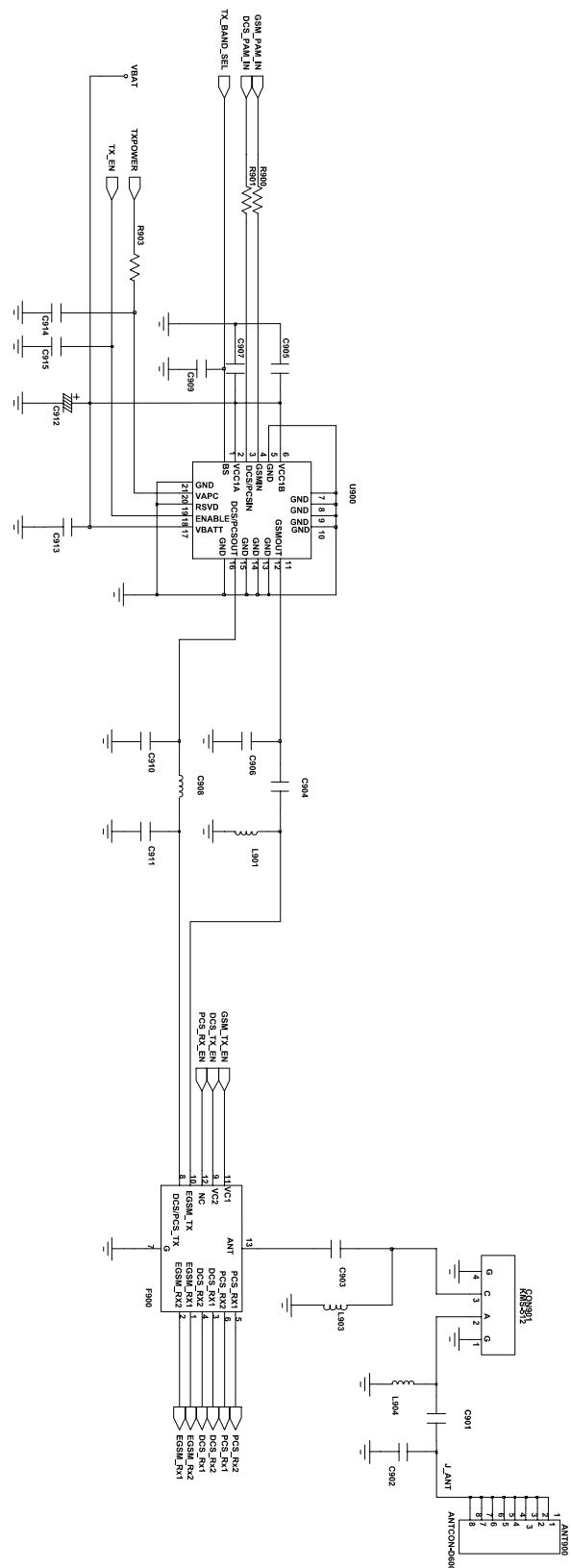




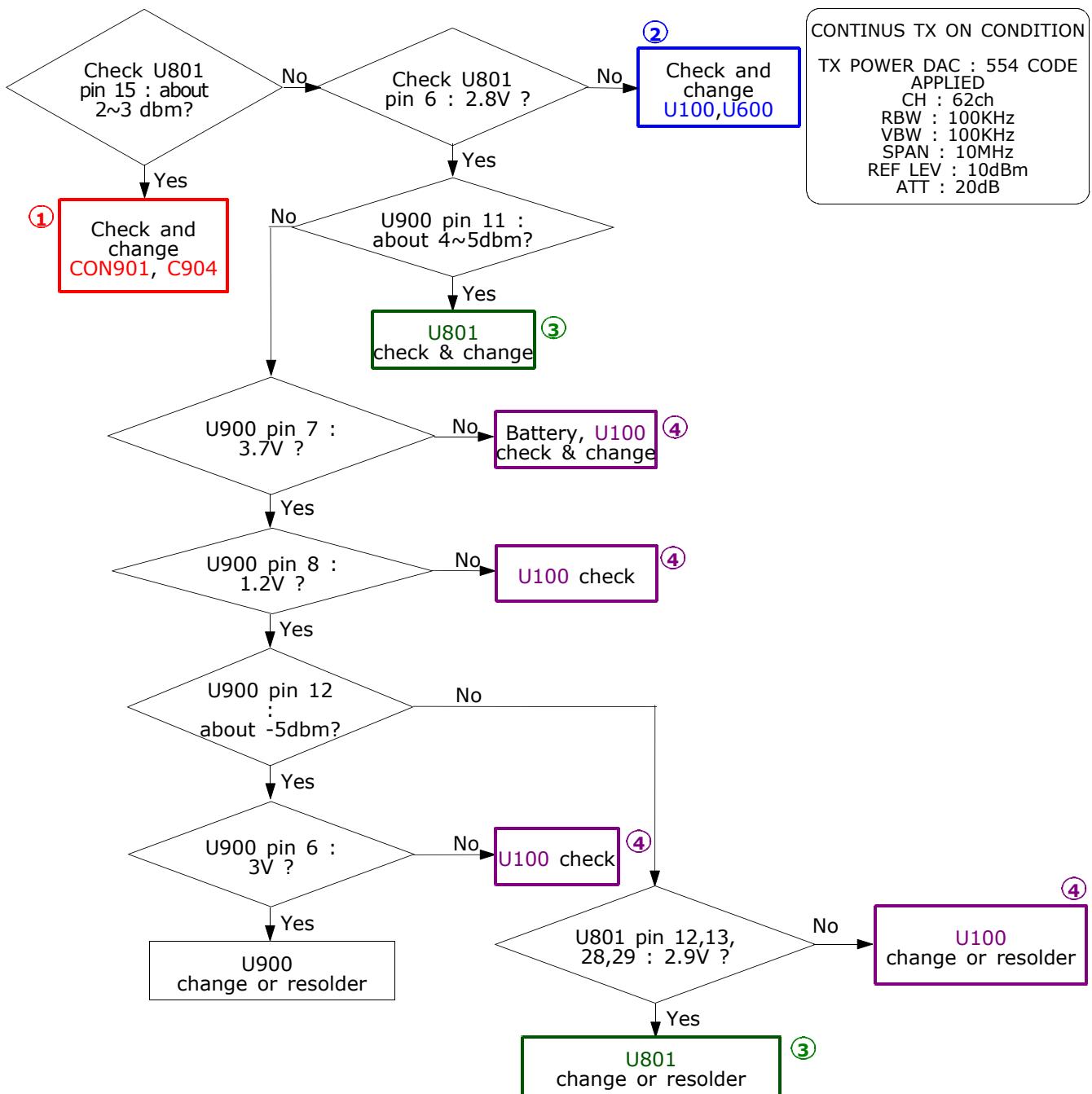
2-2-3. PCS Rx

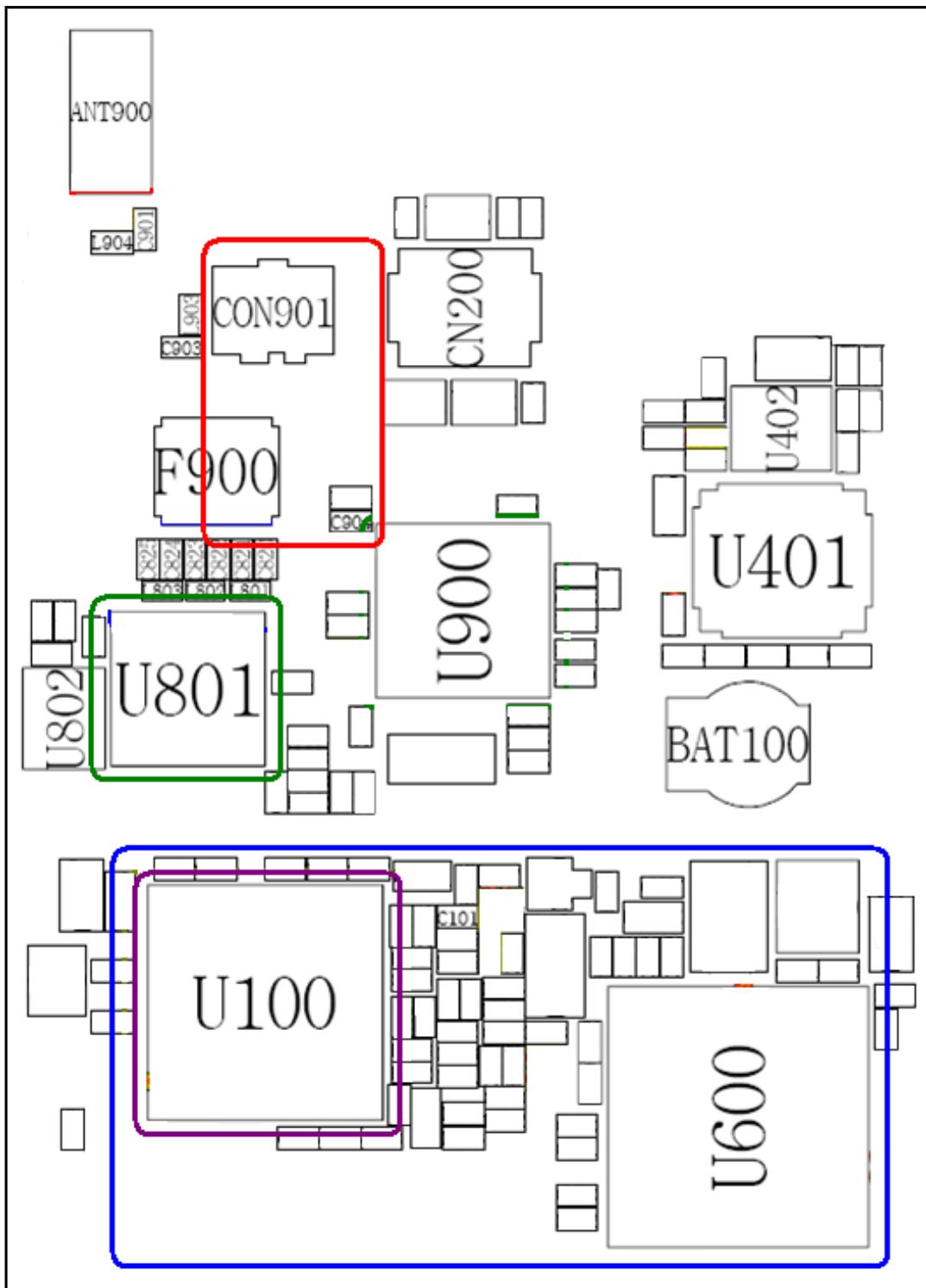




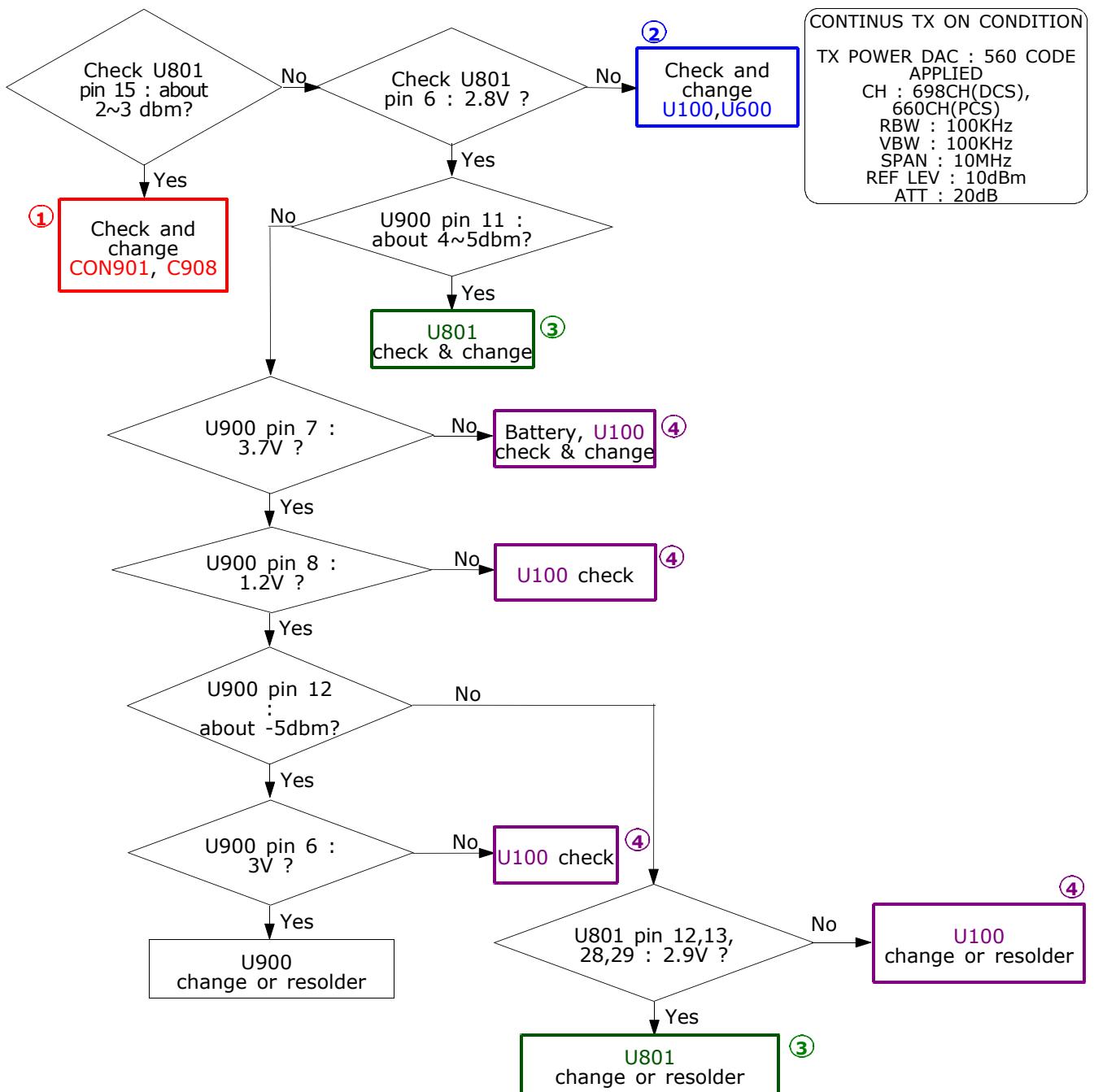


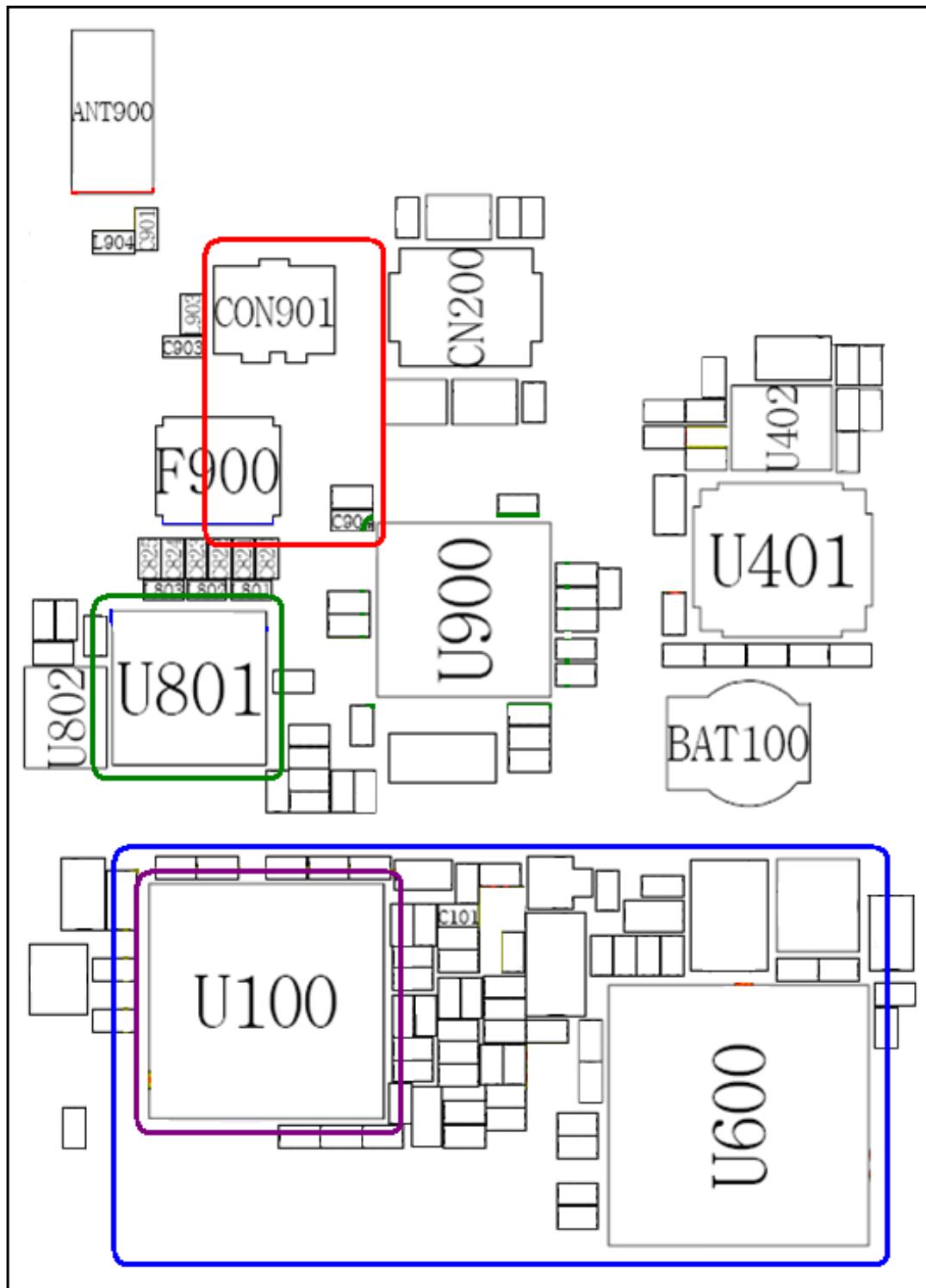
2-2-4. GSM Tx





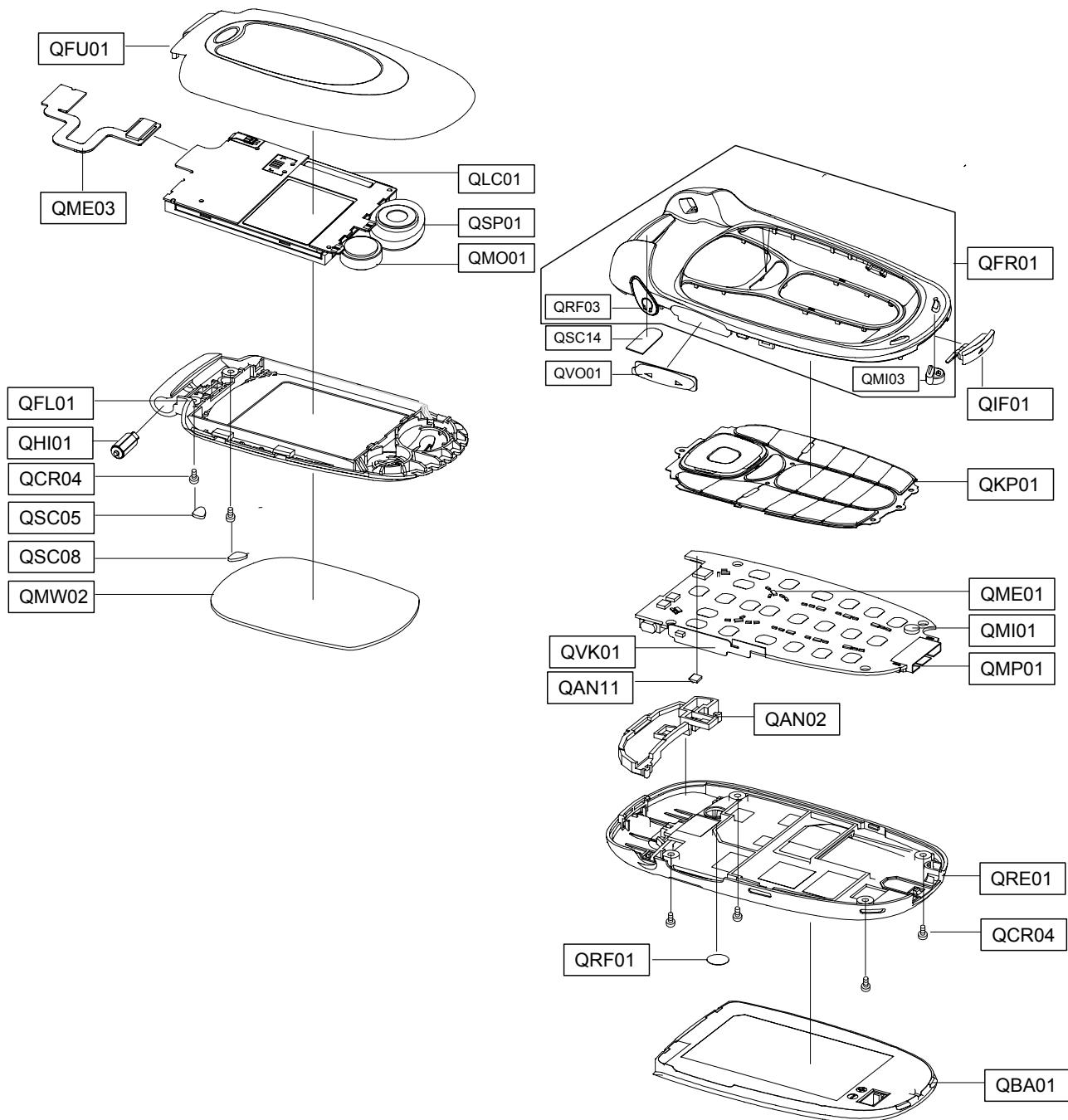
2-2-5. DCS/PCS Tx





3. SGH-X481 Exploded View and its Parts list

3-1. Cellular phone Exploded View



3-2. Cellular phone Parts list

Location No.	Description	SEC CODE
QAN02	INTENNA-SGHX481	GH42-00790A
QAN11	ASSY-CUSHION-RUBBER INTENNA CO	GH98-01051A
QBA01	BATTERY-800MAH,SIL,ENG,M	GH43-01661A
QCR04	SCREW-MACHINE	6001-001479
QFU01	MEC-CASE FOLDER UPPER	GH75-09357A
QIF01	PMO-IF COVER	GH72-19085A
QKP01	ASSY-KEY-KEYPAD(SER/SIL)	GH98-00843A
QLC01	MEA-LCD MODULE KIT(X481)	GH97-05658A
QME01	UNIT-METAL DOME	GH59-03023A
QME03	PCB-CON TO CON	GH41-01181A
QMI01	MICROPHONE-ASSY-SGHX460	GH30-00119A
QMO01	MOTOR DC	GH31-00148A
QMP01	PBA MAIN-SGHX481	GH92-02649A
QMW02	PCT-COVER MAIN WINDOW	GH72-29249A
QRE01	ASSY-CASE-REAR	GH98-00742A
QRF01	MPR-TAPE RF SWITCH	GH74-12570A
QSC05	MPR-SCREW CAP R	GH74-12568A
OSC08	MPR-SCREW CAP L	GH74-12569A
QSC14	MPR-FRONT SHEET	GH74-13673A
QSP01	SPEAKER	3001-001737
QVK01	UNIT-VOLUME KEY	GH59-01927A
QVO01	PMO-SIDE KEY	GH72-19086A
QFL01	MEC-FOLDER LOWER	GH75-06164A
QHI01	MEC-HINGE(CAN TYPE)	GH75-04662A
QFR01	ASSY-CASE-FRONT	GH98-00746A
QMI03	RMO-MIC HOLDER	GH73-04031A
QRF03	PMO-EAR COVER	GH72-19072A

Description	SEC CODE
BAG PE	6902-000634
ADAPTOR-TAD	GH44-00482A
LABEL(P)-WATER SOAK	GH68-02026A
LABEL(P)-WATER SOAK	GH68-02026A
MANUAL-WARRANTY CARD	GH68-02623A
MANUAL-SFC	GH68-04336A
LABEL(P)-BARCODE RUSSIA	GH68-08494A
LABEL(R)-MAIN(SER)	GH68-09191B
MANUAL USERS-EU RUSSIAN	GH68-09659A
CUSHION-CASE(1-2)	GH69-02722A
BOX(P)-UNIT(SER)	GH69-03612B
IPR-LOCKER SPRING	GH70-00228A
PMO-BATT LOCKER	GH72-19087A
MPR-MAIN WIN BOHO VINYL	GH74-09036A
MPR-BOHO VINYL W/SUB OUT	GH74-09046A
MPR-BOHO VINYL W/SUB OUT	GH74-09046A
MPR-LOWER BOHO VINYL	GH74-09047A
MPR-TAPE WINDOW	GH74-12567A
MPR-TAPE EAR COVER	GH74-12571A
MPR-TAPE CONTOCON	GH74-13626A
MPR-TAPE PBA EMI	GH74-13732A
MPR-TAPE J TAG	GH74-13733A
MPR-TAPE PBA GLD SHEET A	GH74-13963A
MPR-TAPE CAM CON LCD	GH74-20645A
MPR-TAPE EMI PBA 3	GH74-21767A

3-3. Test Jig (GH80-03304A)



3-3-1. RF Test Cable
(GH39-00283A)



3-3-2. DATA CABLE
(GH39-00127A)



3-3-3. Serial Cable



3-3-4. Power Supply Cable



3-3-5. Test Cable
(GH39-00304A)



3-3-6. TA
(GH44-00954A)



4. SGH-X481 MAIN Electrical Parts List

Design LOC	Description	SEC Code	STATUS
ANT900	NPR-ANTENNA CONTACT	GH71-06578A	SA
ANT901	NPR-ANTENNA CONTACT	GH71-06578A	SA
BAT100	BATTERY-LI(2ND)	4302-001184	SA
C101	C-CER,CHIP	2203-000254	SA
C102	C-CER,CHIP	2203-001072	SA
C103	C-CER,CHIP	2203-006048	SA
C104	C-CER,CHIP	2203-006324	SA
C105	C-CER,CHIP	2203-000812	SA
C106	C-CER,CHIP	2203-000812	SA
C107	C-CER,CHIP	2203-000812	SA
C108	C-CER,CHIP	2203-002709	SNA
C109	C-CER,CHIP	2203-006183	SA
C110	C-CER,CHIP	2203-000233	SA
C111	C-TA,CHIP	2404-001240	SA
C112	C-CER,CHIP	2203-006562	SA
C113	C-CER,CHIP	2203-006562	SA
C114	C-CER,CHIP	2203-006562	SA
C115	C-CER,CHIP	2203-006562	SA
C116	C-CER,CHIP	2203-006562	SA
C117	C-CER,CHIP	2203-006183	SA
C118	C-CER,CHIP	2203-000254	SA
C119	C-CER,CHIP	2203-002709	SNA
C120	C-CER,CHIP	2203-000254	SA
C121	C-CER,CHIP	2203-005819	SA
C123	C-CER,CHIP	2203-005617	SNA
C125	C-TA,CHIP	2404-001415	SA
C201	C-CER,CHIP	2203-006048	SA
C202	C-CER,CHIP	2203-006048	SA
C205	C-CER,CHIP	2203-000254	SA
C206	C-CER,CHIP	2203-000359	SA
C207	C-CER,CHIP	2203-000359	SA
C208	C-CER,CHIP	2203-006257	SA
C209	C-CER,CHIP	2203-006257	SA
C210	C-CER,CHIP	2203-000438	SA
C211	C-CER,CHIP	2203-000233	SA
C216	C-TA,CHIP	2404-001450	SA
C217	C-CER,CHIP	2203-006562	SA
C220	C-NETWORK	2503-001041	SA
C221	C-NETWORK	2503-001041	SA
C302	C-CER,CHIP	2203-000854	SA
C303	C-TA,CHIP	2404-001415	SA
C401	C-CER,CHIP	2203-000940	SA
C402	C-TA,CHIP	2404-001415	SA
C403	C-CER,CHIP	2203-002709	SNA
C404	C-CER,CHIP	2203-002709	SNA
C405	C-CER,CHIP	2203-006091	SA
C407	C-CER,CHIP	2203-002709	SNA

Design LOC	Description	SEC Code	STATUS
C408	C-CER,CHIP	2203-000585	SA
C410	C-CER,CHIP	2203-000812	SA
C411	C-CER,CHIP	2203-000812	SA
C412	C-CER,CHIP	2203-006260	SA
C413	C-CER,CHIP	2203-000995	SA
C414	C-CER,CHIP	2203-000628	SA
C415	C-CER,CHIP	2203-000425	SA
C416	C-CER,CHIP	2203-006824	SA
C417	C-CER,CHIP	2203-006260	SA
C418	C-CER,CHIP	2203-000438	SA
C419	C-CER,CHIP	2203-002709	SNA
C420	C-CER,CHIP	2203-006260	SA
C422	C-CER,CHIP	2203-000812	SA
C423	C-TA,CHIP	2404-001414	SA
C424	C-CER,CHIP	2203-000233	SA
C425	C-TA,CHIP	2404-001105	SA
C429	C-CER,CHIP	2203-006048	SA
C430	C-TA,CHIP	2404-001105	SA
C431	C-CER,CHIP	2203-000628	SA
C432	C-CER,CHIP	2203-000812	SA
C433	C-CER,CHIP	2203-001072	SA
C434	C-CER,CHIP	2203-001072	SA
C435	C-CER,CHIP	2203-006260	SA
C436	C-CER,CHIP	2203-005344	SA
C501	C-CER,CHIP	2203-000233	SA
C502	C-CER,CHIP	2203-002709	SNA
C503	C-CER,CHIP	2203-000233	SA
C504	C-CER,CHIP	2203-002709	SNA
C600	C-CER,CHIP	2203-006260	SA
C601	C-CER,CHIP	2203-000254	SA
C602	C-CER,CHIP	2203-000254	SA
C603	C-CER,CHIP	2203-000254	SA
C604	C-CER,CHIP	2203-000254	SA
C605	C-CER,CHIP	2203-002709	SNA
C606	C-CER,CHIP	2203-000679	SA
C607	C-CER,CHIP	2203-001405	SA
C608	C-CER,CHIP	2203-000254	SA
C610	C-CER,CHIP	2203-000254	SA
C611	C-CER,CHIP	2203-000254	SA
C612	C-CER,CHIP	2203-000254	SA
C613	C-CER,CHIP	2203-000254	SA
C615	C-CER,CHIP	2203-006626	SA
C618	C-CER,CHIP	2203-006260	SA
C619	C-CER,CHIP	2203-000330	SA
C620	C-CER,CHIP	2203-000330	SA
C702	C-CER,CHIP	2203-006324	SA
C703	C-CER,CHIP	2203-006048	SA

Design LOC	Description	SEC Code	STATUS
C704	C-CER,CHIP	2203-006048	SA
C706	C-CER,CHIP	2203-000812	SA
C801	C-CER,CHIP	2203-000233	SA
C802	C-CER,CHIP	2203-000854	SA
C803	C-CER,CHIP	2203-000278	SA
C810	C-CER,CHIP	2203-006048	SA
C811	C-CER,CHIP	2203-000386	SA
C812	C-CER,CHIP	2203-001412	SA
C814	C-CER,CHIP	2203-006048	SA
C815	C-CER,CHIP	2203-006048	SA
C819	C-CER,CHIP	2203-000278	SA
C820	C-CER,CHIP	2203-002677	SA
C821	C-CER,CHIP	2203-002677	SA
C822	C-CER,CHIP	2203-005234	SA
C823	C-CER,CHIP	2203-005234	SA
C824	C-CER,CHIP	2203-005281	SA
C825	C-CER,CHIP	2203-005281	SA
C901	C-CER,CHIP	2203-000330	SA
C902	C-CER,CHIP	2203-002668	SA
C903	C-CER,CHIP	2203-000812	SA
C904	C-CER,CHIP	2203-000854	SA
C905	C-CER,CHIP	2203-000254	SA
C907	C-CER,CHIP	2203-000254	SA
C908	INDUCTOR-SMD	2703-002205	SA
C909	C-CER,CHIP	2203-000438	SA
C911	C-CER,CHIP	2203-001383	SA
C912	C-TA,CHIP	2404-001449	SA
C913	C-CER,CHIP	2203-000254	SA
C914	C-CER,CHIP	2203-000530	SA
C915	C-CER,CHIP	2203-000438	SA
CN200	HEADER-BOARD TO BOARD	3711-005296	SA
CN300	CONNECTOR-INTERFACE	3710-001994	SA
CN301	CONNECTOR-BATTERY	3711-005829	SA
CN401	JACK-EAR PHONE	3722-002067	SA
CON901	CONNECTOR-COAXIAL	3705-001358	SA
D700	DIODE-TVS	0406-001210	SA
D701	DIODE-TVS	0406-001210	SA
D702	DIODE-TVS	0406-001210	SA
F900	DUPLEXER-FEM	2911-000030	SNA
L201	INDUCTOR-SMD	2703-002339	SA
L301	BEAD-SMD	3301-001659	SA
L401	INDUCTOR-SMD	2703-002202	SA
L402	INDUCTOR-SMD	2703-002202	SA
L701	BEAD-SMD	3301-001729	SA
L801	INDUCTOR-SMD	2703-002544	SA
L802	INDUCTOR-SMD	2703-002544	SA
L803	INDUCTOR-SMD	2703-002558	SA

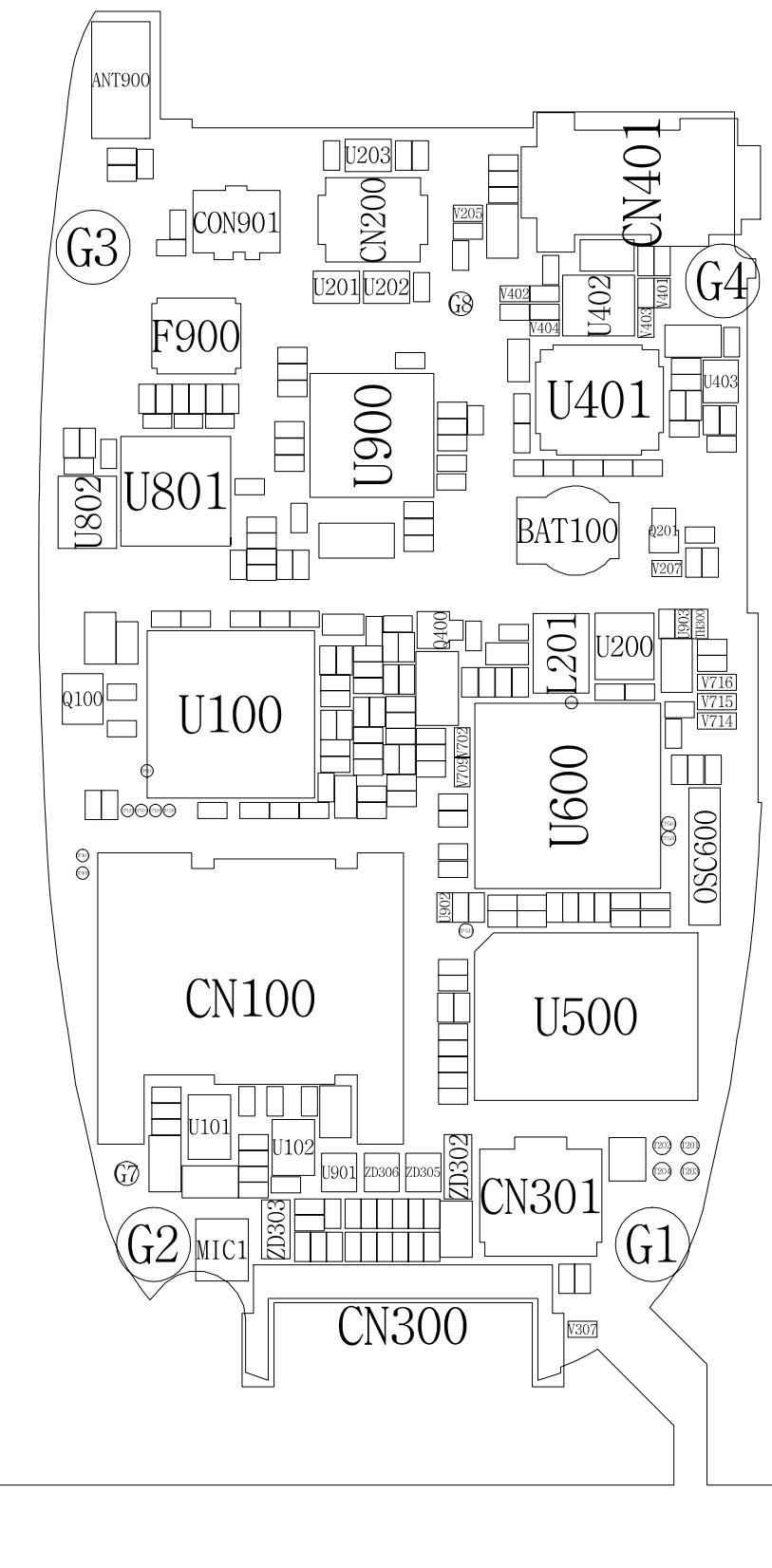
Design LOC	Description	SEC Code	STATUS
L901	INDUCTOR-SMD	2703-002202	SA
L903	INDUCTOR-SMD	2703-002201	SA
L904	INDUCTOR-SMD	2703-002203	SA
LED700	LED	0601-001790	SA
LED701	LED	0601-001790	SA
LED702	LED	0601-001790	SA
LED703	LED	0601-001790	SA
LED704	LED	0601-001790	SA
LED705	LED	0601-001790	SA
LED706	LED	0601-001790	SA
LED707	LED	0601-001790	SA
LED708	LED	0601-001790	SA
LED709	LED	0601-001790	SA
OSC600	CRYSTAL-SMD	2801-003856	SA
Q201	FET-SILICON	0505-001518	SA
Q400	TR-SMALL SIGNAL	0501-000225	SA
R101	R-CHIP	2007-000162	SA
R103	R-CHIP	2007-007142	SA
R104	R-CHIP	2007-000171	SA
R105	R-CHIP	2007-000167	SA
R106	R-CHIP	2007-000172	SA
R108	R-CHIP	2007-000172	SA
R109	R-CHIP	2007-000162	SA
R111	R-CHIP	2007-007142	SA
R112	R-CHIP	2007-000154	SA
R113	R-CHIP	2007-000153	SA
R114	R-CHIP	2007-000162	SA
R115	R-CHIP	2007-000140	SA
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R202	R-CHIP	2007-003030	SA
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R209	R-CHIP	2007-000140	SA
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R300	R-CHIP	2007-000566	SA
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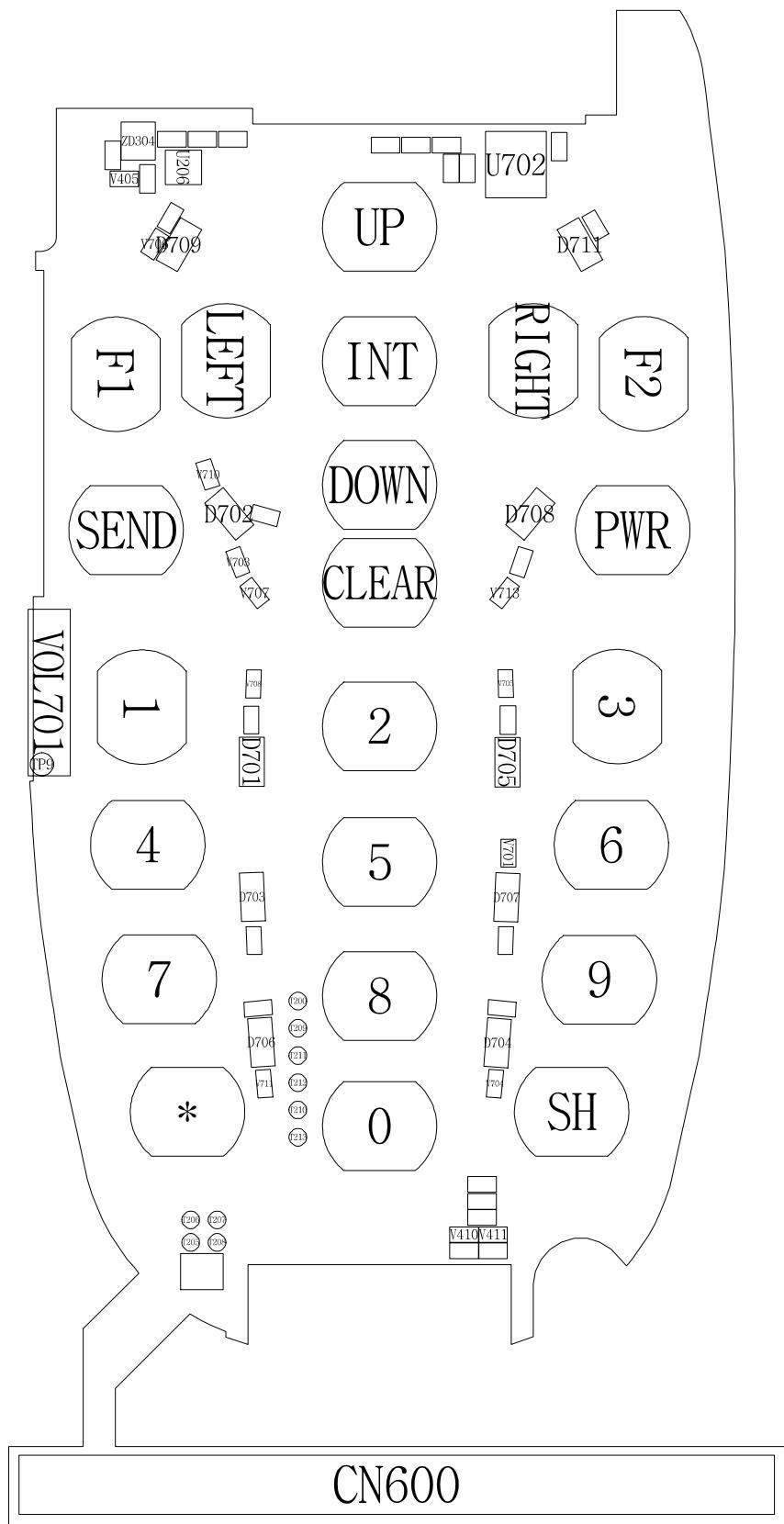
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R406	R-CHIP	2007-001329	SA
R407	R-CHIP	2007-001325	SA
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R410	R-CHIP	2007-000148	SA
R411	R-CHIP	2007-007142	SA
R412	R-CHIP	2007-007107	SA
R413	R-CHIP	2007-001320	SA
R414	R-CHIP	2007-000142	SNA
R415	R-CHIP	2007-001317	SA
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R501	R-CHIP	2007-000172	SA
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R600	R-CHIP	2007-000157	SA
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R705	R-CHIP	2007-000139	SA
R706	R-CHIP	2007-000932	SA
R707	R-CHIP	2007-007095	SA
R708	R-CHIP	2007-000139	SA
R709	R-CHIP	2007-001119	SA
R710	R-CHIP	2007-000139	SA
R711	R-CHIP	2007-000139	SA
R715	R-CHIP	2007-000162	SA
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R801	R-CHIP	2007-002797	SA
R802	R-CHIP	2007-001308	SA
R803	R-CHIP	2007-000171	SA
R809	R-CHIP	2007-000148	SA
R900	R-CHIP	2007-001298	SA
R901	R-CHIP	2007-002970	SA
R903	R-CHIP	2007-007306	SA
SIM100	CONNECTOR-CARD EDGE	3709-001336	SA
TH300	THERMISTOR-NTC	1404-001221	SA
TR100	TR-DIGITAL	0504-000168	SA
U100	IC-POWER SUPERVISOR	1203-003304	SA
U101	IC-BATTERY	1203-003663	SA
U102	IC-CMOS LOGIC	0801-000796	SA
U200	IC-DC/DC CONVERTER	1203-004004	SA
U201	FILTER-EMI SMD	2901-001286	SA
U202	FILTER-EMI SMD	2901-001286	SA
U203	FILTER-EMI SMD	2901-001286	SA
U206	IC-POSI.FIXED REG.	1203-003754	SA
U401	IC-MELODY	1204-002161	SA
U402	IC-ANALOG SWITCH	1001-001371	SA
U403	IC-ANALOG SWITCH	1001-001231	SA
U500	IC-MCP	1108-000010	SA
U600	IC MICO-SGHX480	GH09-00036A	SA
U702	IC-HALL EFFECT S/W	1009-001010	SA
U801	IC-TRANSCEIVER	1205-002683	SA
U802	CRYSTAL-SMD	2801-004426	SA
U900	IC-POWER AMP	1201-002218	SA
U901	DIODE-TVS	0406-001190	SA
U902	C-CER,CHIP	2203-000254	SA
U903	R-CHIP	2007-007480	SA
V205	VARISTOR	1405-001082	SA
V207	VARISTOR	1405-001110	SA
V307	VARISTOR	1405-001093	SA
V401	VARISTOR	1405-001108	SA

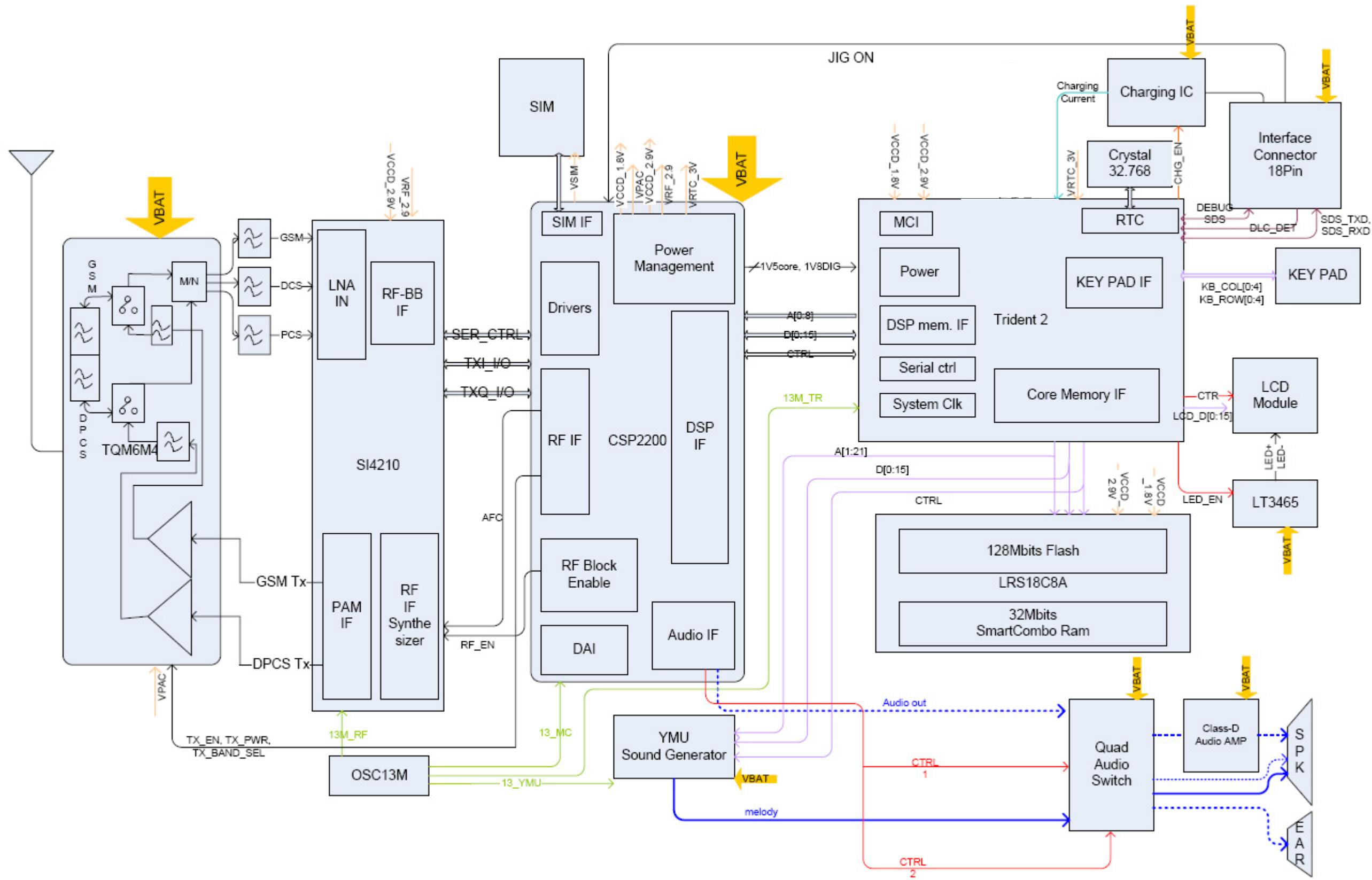
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V410	VARISTOR	1405-001082	SA
V411	VARISTOR	1405-001082	SA
VR700	VARISTOR	1405-001082	SA
VR701	VARISTOR	1405-001082	SA
VR702	VARISTOR	1405-001082	SA
VR703	VARISTOR	1405-001082	SA
VR704	VARISTOR	1405-001082	SA
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VR708	VARISTOR	1405-001082	SA
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VR711	VARISTOR	1405-001082	SA
ZD302	DIODE-ZENER	0403-001547	SA
ZD304	DIODE-TVS	0406-001190	SA
ZD305	DIODE-TVS	0406-001190	SA
ZD306	DIODE-TVS	0406-001190	SA

5. SGH-X481 PCB Diagrams





6. SGH-X481 Block Diagrams

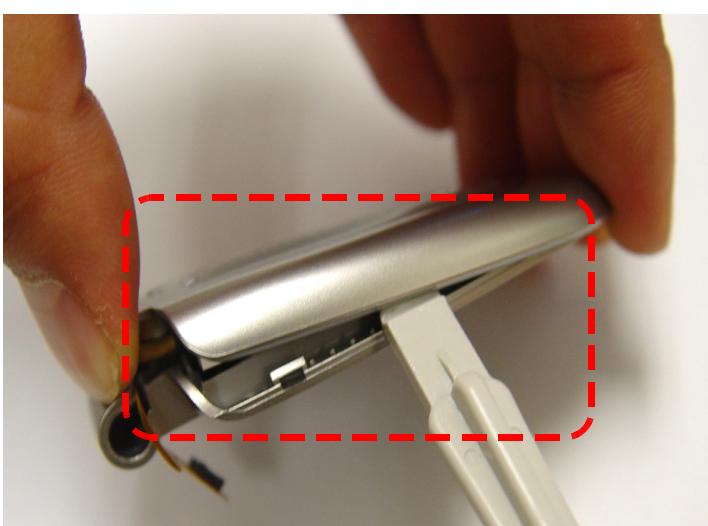


7. SGH-X481 Disassembly and Assembly instructions

7-1. Disassembly

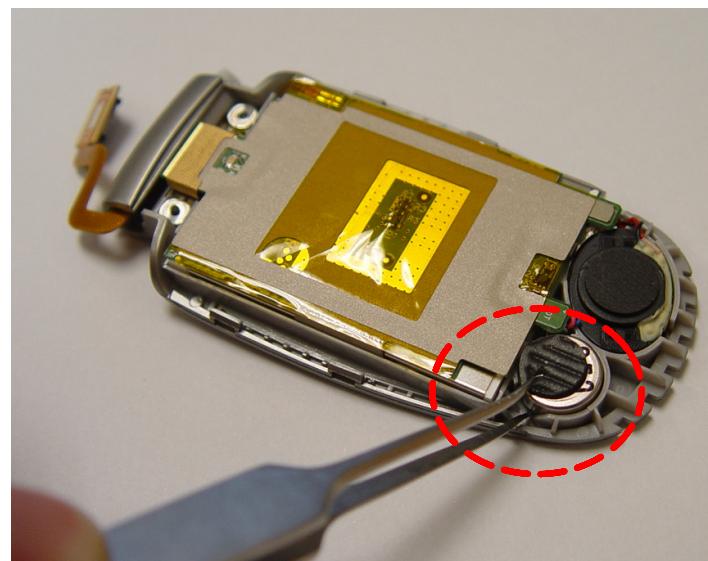
<p>1</p> <p>1) Loosen a screw this four point form Rear.</p>	<p>2</p> <p>1) Make the space between rear cover and front cover using assembly stick.</p> <p>2</p> <p>2) And then widen space with hand and separate 2 parts.</p>	<p>3</p> <p>1) At first remove the connector from PBA. 2) And disjoint PBA from front ass'y. 3) Remove the front sheet tape at front ass'y.</p>
<p>1) Be care of scratch and molding damage.</p>	<p>1) When we disjoint Rear, be care of scratch and molding damage.</p>	<p>1) When we disjointing a connector and PBA, be care of damage.</p>
<p>4</p> <p>1) Remove the keypad from front ass'y. 2) And separate the folder ass'y from front by pushing the hinge.</p>	<p>5</p> <p>1) Remove a screw cap with a pinset. 2) Loosen a screw with driver.</p>	<p>6</p> <p>1) Insert a assembly stick to folder space after pushing top side with a thumb like a picture.</p>
<p>1) When we disjoint the Front, be care of body transformation.</p>	<p>1) Be care of scratch.</p>	<p>1) Be care of scratch and molding damage.</p>

7



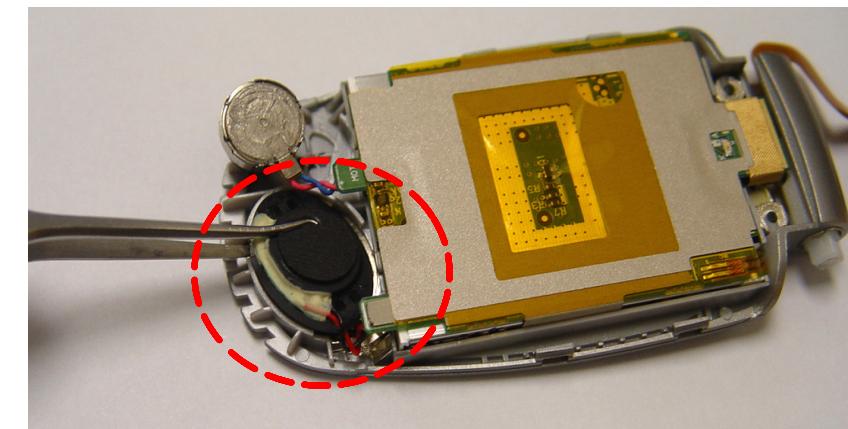
- 1) Separate the folder upper and lower by assembly stick.
- 2) Repeat that procedure both side of folder ass'y.

8



- 1) Separate a motor from folder lower using a pinset.

9



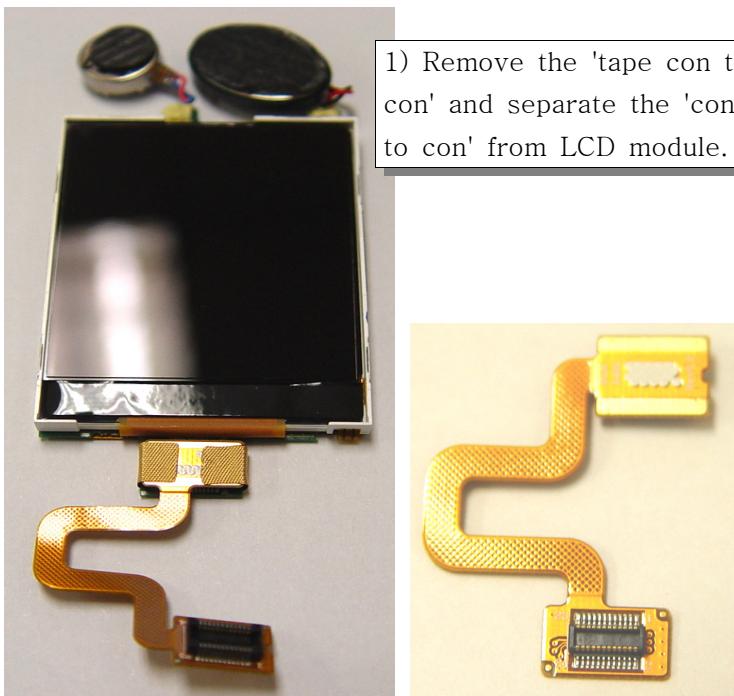
- 1) Separate a speaker from folder lower using a pinset.

1) Be care of scratch and molding damage.

1) Be care of scratch and molding damage.

1) Be care of scratch and molding damage.

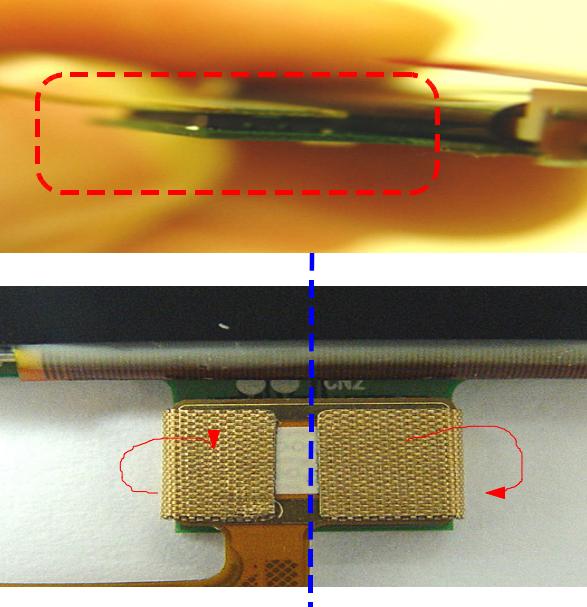
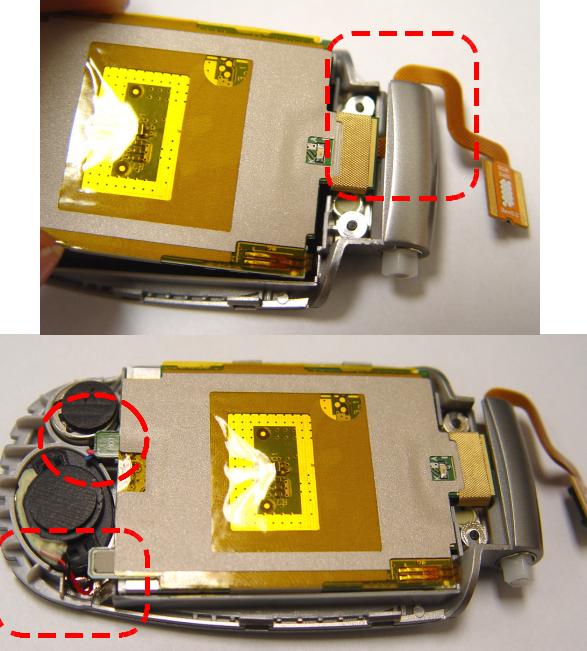
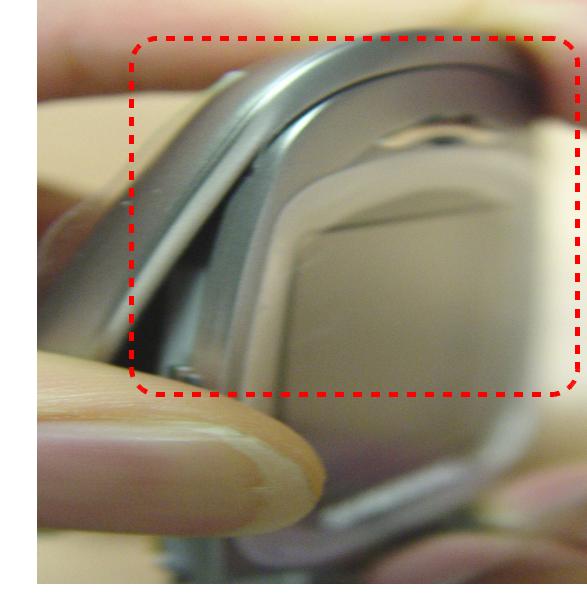
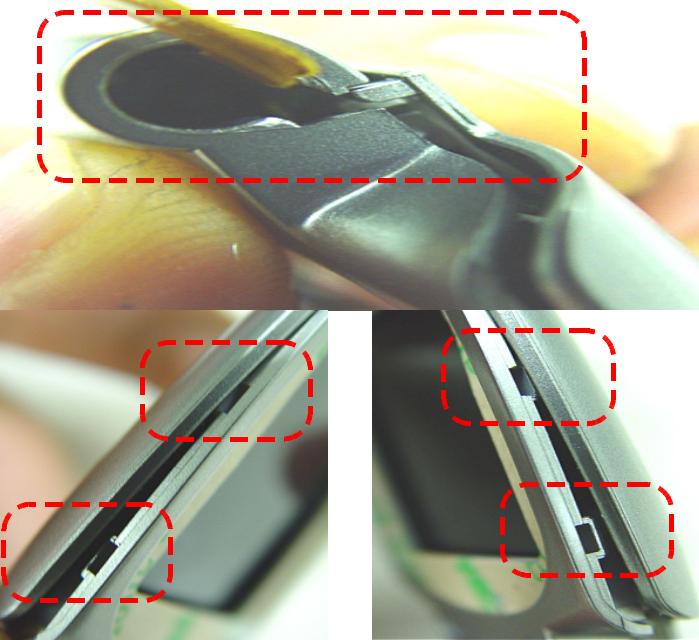
10



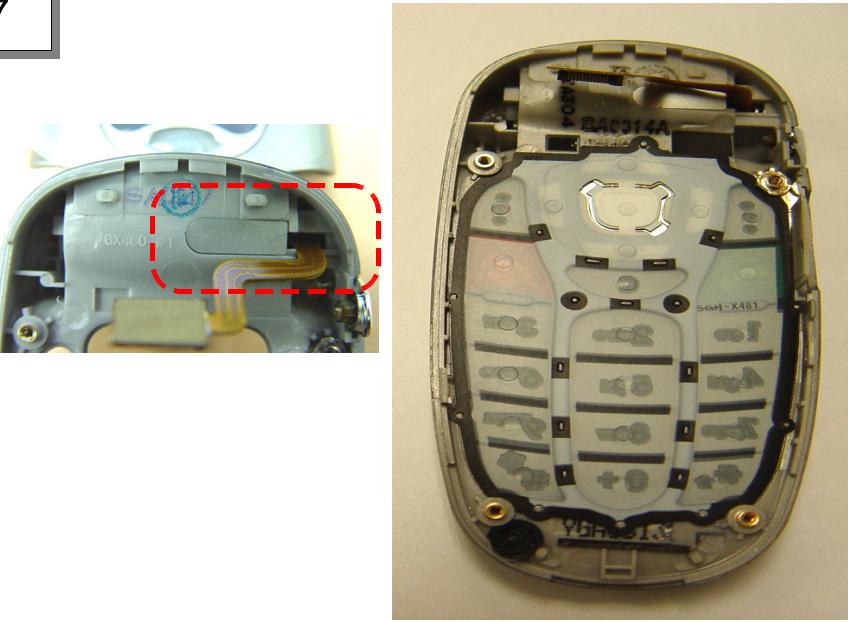
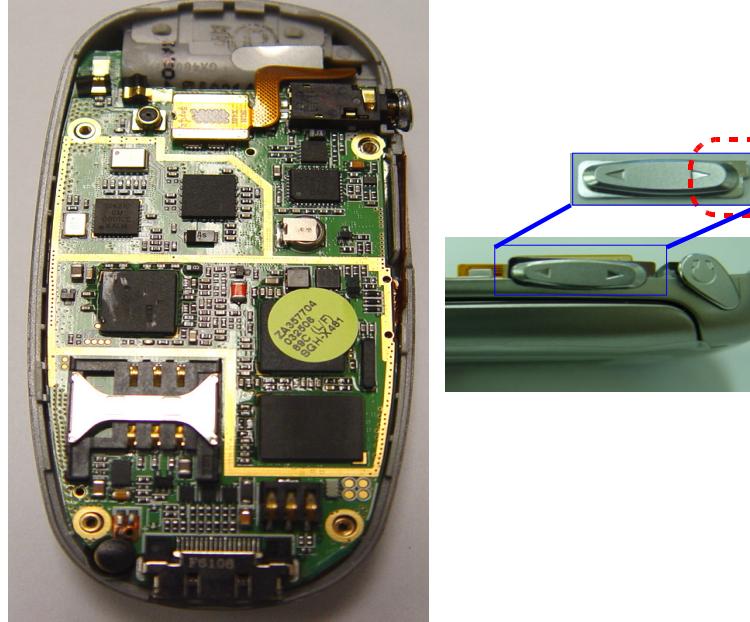
- 1) Remove the 'tape con to con' and separate the 'con to con' from LCD module.

1) Be care of scratch and molding damage.

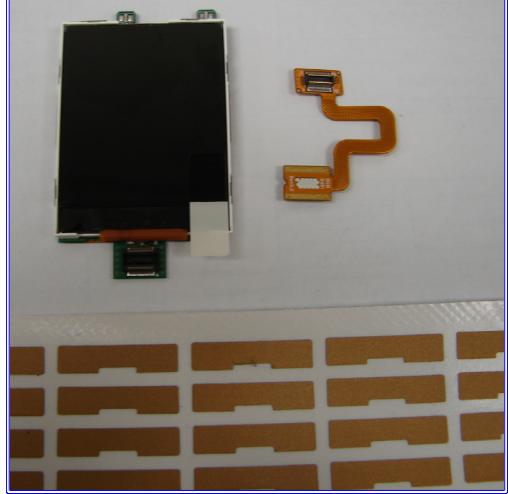
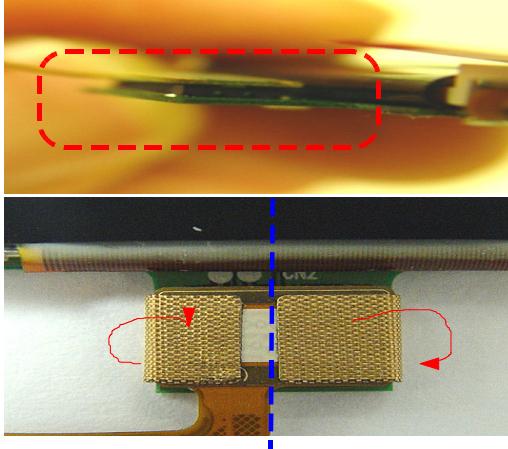
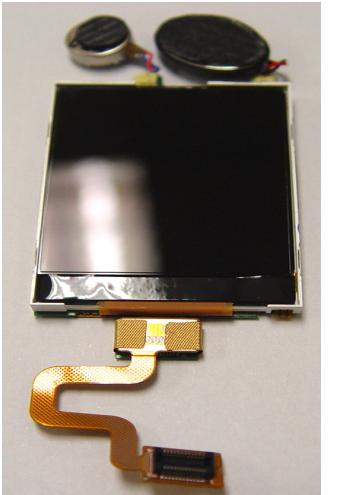
7-2. Assembling

 <p>1) At first combine the 'con to con' with LCD connector. 2) Rap the 'tape con to con' to jointing point with clockwise.</p>	 <p>1) Insert the 'con to con' to folder lower. 2) Assemble speaker and motor wire arrangement.</p>	 <p>1) Insert the folder upper to folder lower top side.</p>
<p>1) Be care of damage of LCD module.</p>	<p>1) Be care of wire arrangement and damage. - Speak: twist twice with counterclockwise - Motor: twist once with counterclockwise</p>	<p>1) Be care of scratch and molding damage.</p>
 <p>1) Push the bottom side with thumb. 2) Joint 4 hooks of all sides.</p>	 <p>1) Fasten a screw with driver. 2) Attach a 'screw cap' with a pinset and hit with a Q-tip.</p>	 <p>1) Insert the 'con to con' to front cover hole. 2) Insert the folder ass'y to front cover using folder hinge.</p>
<p>1) When we disjoint the Front, be care of body transformation.</p>	<p>1) Be care of scratch and molding damage.</p>	<p>1) Be care of scratch and molding damage. Especially FPCB of 'con to con'</p>

SGH-X481 Disassembly and Assembly instructions

		
<p>1) Attach the 'front sheet'. 2) Put the keypad on front ass'y.</p>	<p>1) Put the PBA on front ass'y and hook the 'con to con' connector. 2) Insert Side Key on side dome.</p>	<p>1) Hook the rear cover to top side of front ass'y. 2) Grab bottom side of ass'y and push all hooks.</p>
<p>1) Be care of scratch and molding damage.</p>	<p>1) Be care of scratch and molding damage. 2) Verify the direction of side key</p>	<p>1) Be care of scratch and molding damage.</p>
		
<p>1) Fasten screws this four point of rear cover.</p>		
<p>1) Be care of scratch and molding damage.</p>		

7-3. LCD KIT Assembly

 <p>1</p> <p>1. Verify this parts such as LCD Module, con to con and tape con to con. And inspect standard and nap of outside.</p>	 <p>2</p> <p>1) At first combine the 'con to con' with LCD connector. 2) Rap the 'tape con to con' to jointing point with clockwise.</p>
<p>* Caution</p> <p>1. Verify the model name, SGH-X481 in 'con to con'</p>	<p>* Caution</p> <p>1. Be careful of LCD damage while using pinset.</p>
 <p>3</p> <p>1. inspect the outside of LCD Module.</p>	<p>* Caution</p> <p>1. If the position of 'Tape con to con' is wrong, reattach the tape with new one.</p>

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