

SAMSUNG

GSM TELEPHONE

SGH-C260

***SERVICE* Manual**

GSM TELEPHONE



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10. Product Function

1. Specification

1-1. GSM General Specification

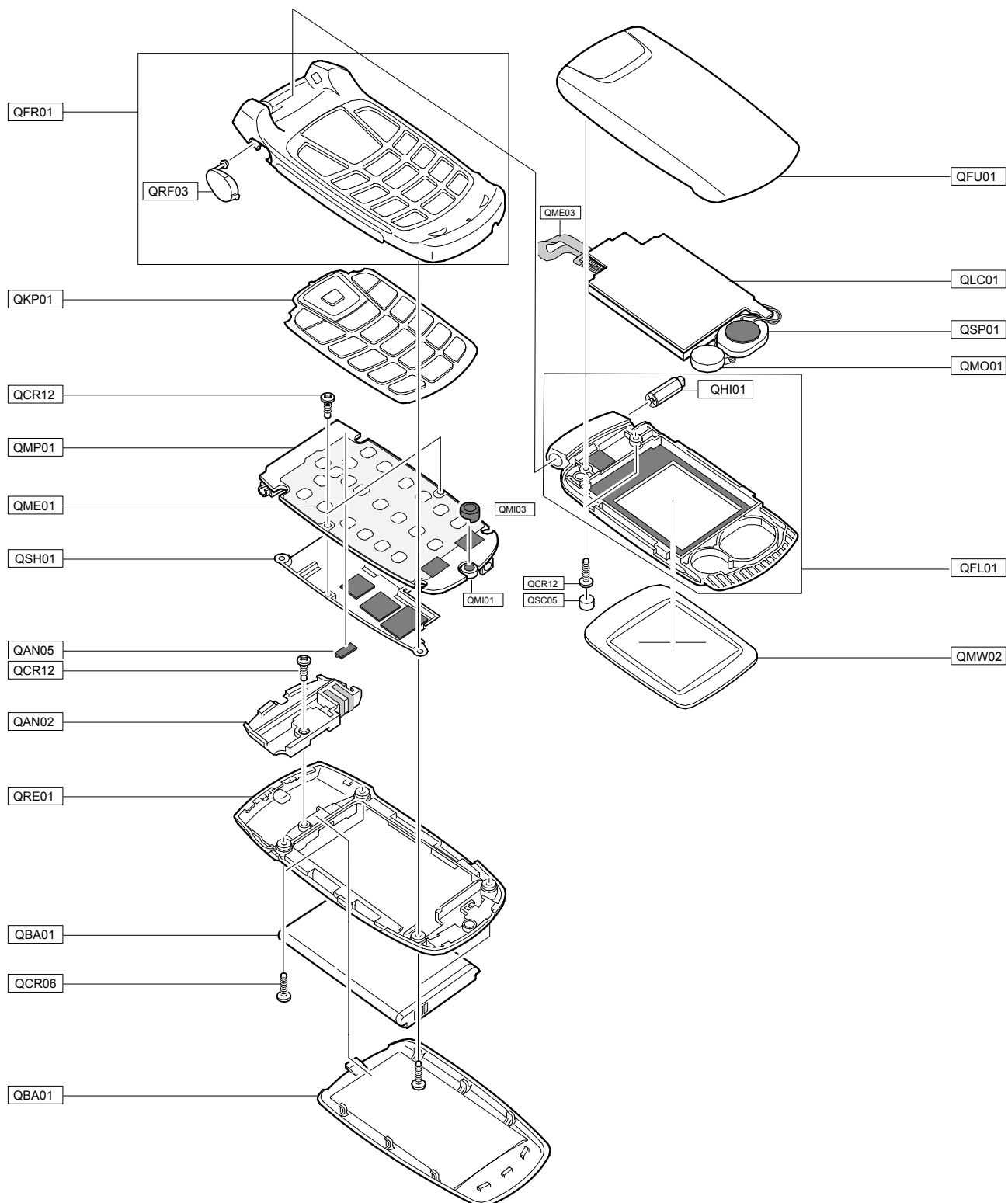
		GSM 900	DCS1800
Freq. Band[MHz] Uplink/Downlink		880~915 925~960	1710~1785 1805~1880
ARFCN range		0~124 & 975~1023	512~885
Tx/Rx spacing		45MHz	95MHz
Mod. Bit rate/ Bit Period	GPRS	270.833Kbps 3.692us	270.833Kbps 3.692us
	EDGE	812.5Kbps 3.692us	812.5Kbps 3.692us
Time Slot Period/Frame Period		576.9us 4.615ms	576.9us 4.615ms
Modulation	GPRS	0.3GMSK	0.3GMSK
	EDGE	8PSK	8PSK
MS Power	GPRS	33dBm~5dBm	30dBm~0dBm
	EDGE	27~5dBm	26~0dBm
Power Level	GPRS	5pcl~19pcl	0pcl~15pcl
	EDGE	8~19(class E2)	2~15(class E2)
Sensitivity		-102dBm	-100dBm
TDMA Mux		8	8
Cell Radius		35Km	2Km

1-2. GSM Tx Power Class

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

2. Exploded View and Parts List

2-1. Cellular phone Exploded View

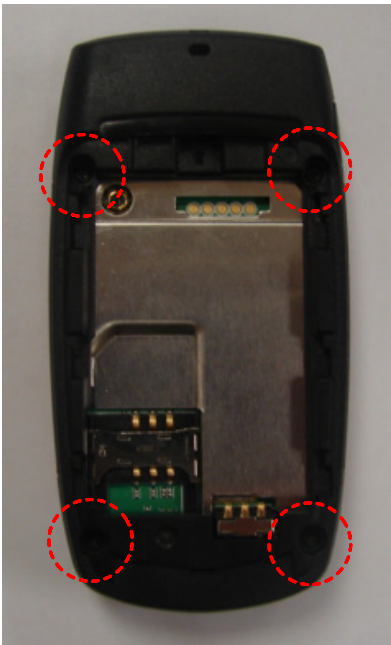


2-2. Cellular phone Parts list

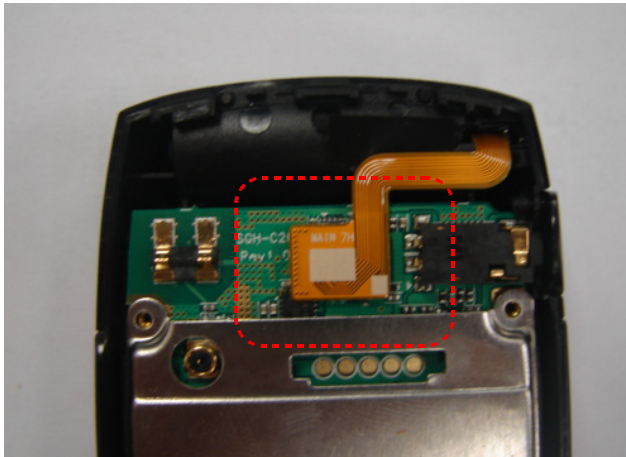
Design LOC		Discription	SEC CODE
QAN02		INTENNA-SGHC260	GH42-01102A
QAN05		ASSY MEC-INTENNA CONTACT	GH75-08168A
QBA00		PMO-CASE BATTERY	GH72-36766A
QBA01		INNER BATTERY PACK-750MAH,BLK,	GH43-02483A
QCR06		SCREW-MACHINE	6001-001155
QCR12		SCREW-MACHINE	6001-001530
QCR12		SCREW-MACHINE	6001-001530
QCR12		SCREW-MACHINE	6001-001530
QFU01		ASSY CASE-UPPER	GH98-03405A
QKP01		ASSY KEYPAD-(XEN/ZR)	GH98-03772A
QLC01		LCD-LCD MODULE	GH07-01056A
QME01		UNIT-SGHC260 METAL DOME(MAIN)	GH59-04084A
QME03		UNIT-SGHC260 CON TO CON	GH59-04070A
QMI01		MICROPHONE-ASSY-6.25MM	GH30-00177F
QMI03		RMO-MIC HOLDER	GH73-05342A
QMO01		MOTOR DC-SGHC260	GH31-00308A
QMP01		PBA MAIN-SGHC260	GH92-03328A
QMW02		PMO-COVER MAIN WINDOW	GH72-36767A
QRE01		ASSY CASE-REAR	GH98-03406A
QSC05		RMO-COVER FOLDER SCREW	GH73-09088A
QSH01		ASSY CASE-SHIELD CAN	GH98-03407A
QSP01		SPEAKER	3001-002094
QFR01		ASSY CASE-FRONT	GH98-03403A
	QRF03	PMO-CASE EAR	GH72-36761A
QFL01		ASSY CASE-LOWER	GH98-03404A
	QHI01	ASSY MEC-HINGE	GH75-08452A

Discription	SEC CODE
BAG PE	6902-000297
ADAPTOR-SGHC140 DC JACK(EU_B	GH44-01597A
LABEL(R)-WATER SOAK	GH68-09361A
LABEL(R)-WATER SOAK	GH68-09361A
MANUAL USERS-EU PORTUGUESE	GH68-13784A
MANUAL USERS-EU ENGLISH	GH68-13785A
LABEL(R)-MAIN(EU)	GH68-13956A
BOX(P)-UNIT MAIN (EU)	GH69-05051A
RMO-RUBBER CSP	GH73-08597A
RMO-COVER DUMMY HOLE	GH73-08828A
MPR-INSU TAPE	GH74-17540A
MPR-VINYL BOHO LCD WIN	GH74-20912A
MPR-TAPE MAIN WINDOW	GH74-29604A
MPR-TAPE DOPARO LED	GH74-30219A
MPR-VINYL BOHO WINDOW JIG	GH74-30221A
MPR-SPONGE	GH74-30223A
MPR-SPONGE	GH74-30638A
MPR-INSU TAPE	GH74-30658A

2-3. Disassembly

1 	2 
1) Unscrew the REAR.(4 points) * caution 1) Be careful not to make scratch and molding damage!	1) Lift up the lockers in the center of set. * caution 1) Be careful not to make scratch and molding damage! 2) Remove the lockers in the center by all means.
3 	4 
1) Lift up the lockers in the bottom of set. * caution 1) Be careful not to make scratch and molding damage!	1) Twist the REAR off the set carefully. * caution 1) Be careful not to make scratch and molding damage!

5



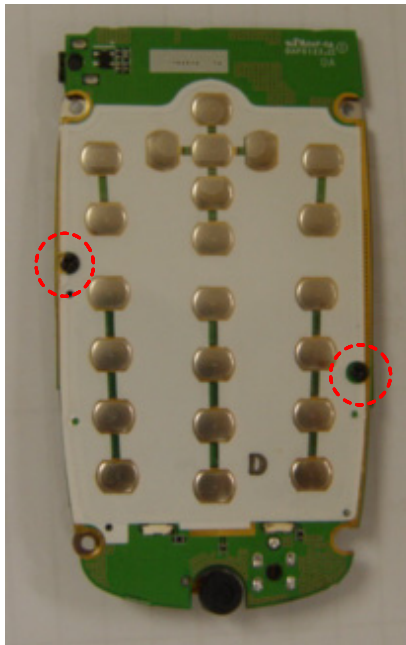
- 1) Remove the CON TO CON.
※ caution
 1) Be careful not to make scratch and molding damage!
 2) Be careful not to damage the CON TO CON .

6



- 1) Remove the PBA placed at the FRONT.
※ caution
 1) Be careful not to make scratch and molding damage!
 2) Be careful not to damage the CON TO CON .

7



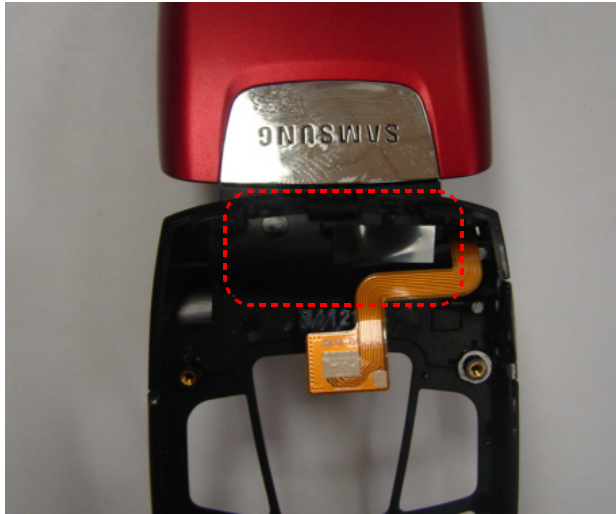
- 1) Unscrew the SHIELD-CAN.(2 points)
※ caution
 1) Be careful not to make scratch and molding damage!

8



- 1) Remove the KEY-PAD placed at the Front.
※ caution
 1) Be careful not to make scratch and molding damage!

9



- 1) Remove the tape.
- ※ **caution**
- 1) Be careful not to make scratch and molding damage!
- 2) Be careful not to damage the CON TO CON .

10



- 1) Separate the FRONT from the FOLDER assembled.
- ※ **caution**
- 1) Be careful not to make scratch and molding damage!
- 2) Be careful not to damage the CON TO CON .

11



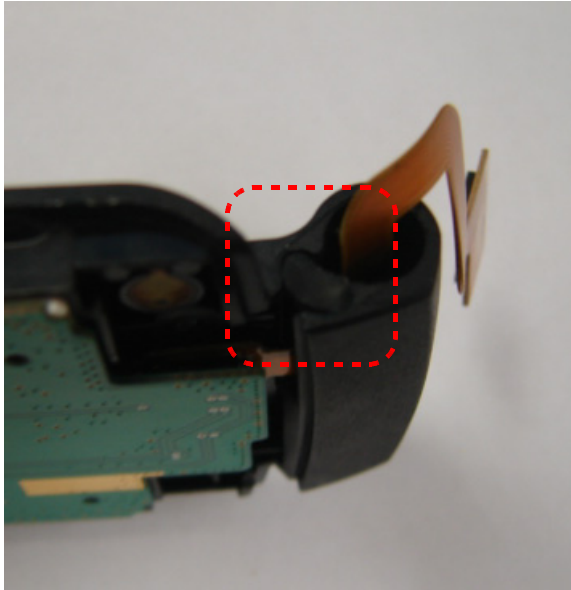
- 1) Remove the screw caps and unscrew the LOWER. (2points)
- ※ **caution**
- 1) Be careful not to make scratch and molding damage!

12



- 1) Lift up the bottom of LOWER removing the lockers with a tool.
- ※ **caution**
- 1) Be careful not to make scratch and molding damage!

13



- 1) Take the rubber out.
※ **caution**
- 1) Be careful not to make scratch and molding damage!

14



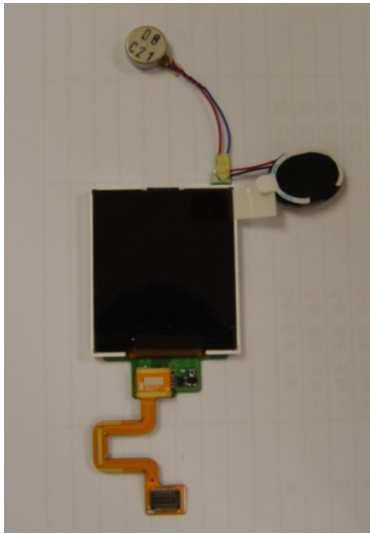
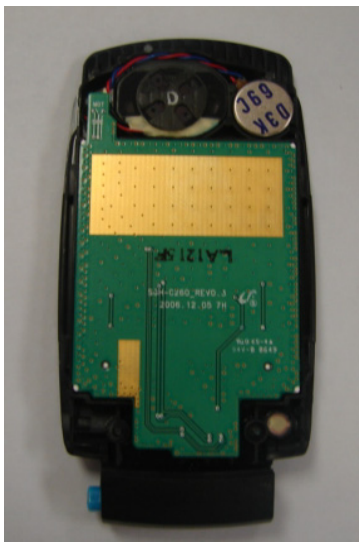
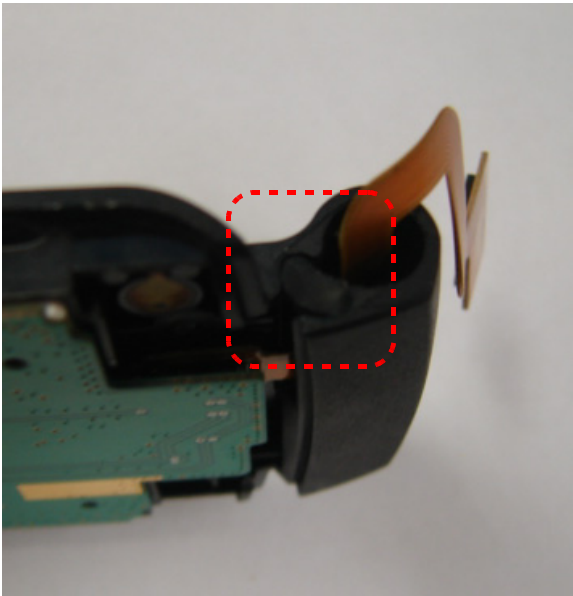
- 1) Remove the LCD F-PCB.
※ **caution**
- 1) Be careful not to make scratch and molding damage!

15



- 1) Remove the LCD carefully so that the nonwoven on speaker and motor is not damaged.
※ **caution**
- 1) Be careful not to make scratch and molding damage!

2-4. Assembly

1 	2 
1) Put the CON TO CON on the LCD Module it clicks. ※ caution 1) Be careful not to make scratch and molding damage! 2) Be careful not to damage the LCD Module.	1) Put the LCD Module into place as shown . 2) Put the speaker and motor into place. ※ caution 1) Be careful not to make scratch and molding damage!
3 	4 
1) Place the MIC as the picture below ※ caution 1) Be careful not to make scratch and molding damage! TORQUE (1.0 ± 0.1 Kgf·Cm)	1) Put the MIC COVER and CREW 2) Attach KEYPAD 3) Press the KEYPAD not to be detached ※ caution 1) Be careful not to make scratch and molding damage!

5



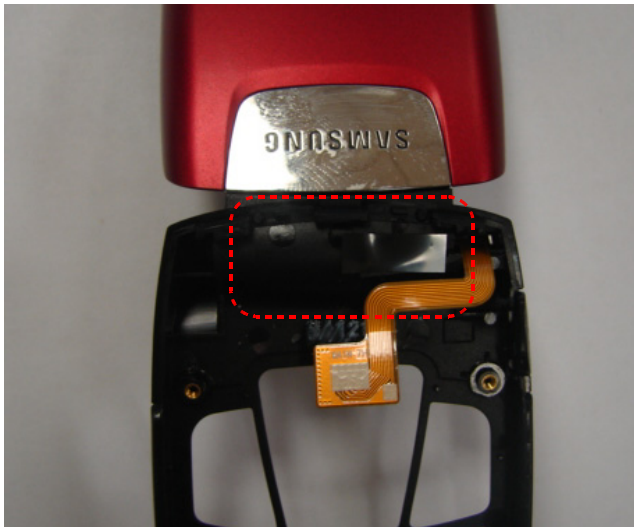
- 1) Fasten 2 screws.
 - 2) Put the screw caps on the FOLDER.
- ※ **caution**
- 1) Be careful not to make scratch and molding damage!
- TORQUE (1.0 ± 0.1 Kgf-Cm)

6



- 1) Put one side of the FOLDER into the FRONT firstly, do the other side pressing the hinge.
- ※ **caution**
- 1) Be careful not to damage the F-PCB.

7



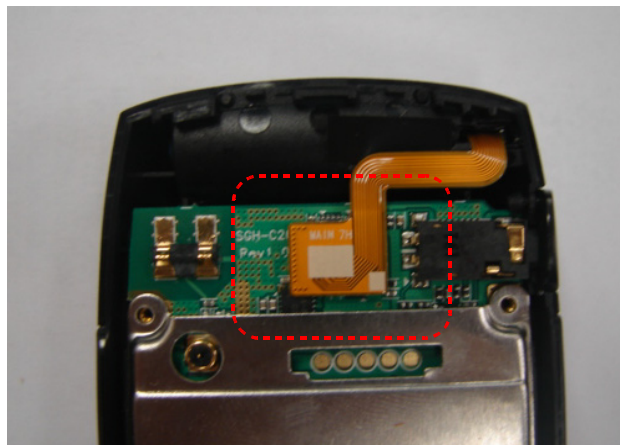
- 1) Put a tape on.
- ※ **caution**
- 1) Be careful not to damage the wire on the speaker due to PBA.

8



- 1) Place the KEY-PAD into the FRONT.
- ※ **caution**
- 1) Be careful not to make scratch and molding damage!

9



- 1) As shown, put the CON TO CON on PBA.
- ※ **caution**
- 1) Be careful not to make scratch and molding damage!
- 2) Press the CON TO CON down firmly.

10



- 1) Press the bottom of REAR down until it clicks.
- ※ **caution**
- 1) Be careful not to make scratch and molding damage!
- 2) Be careful not to damage the locker.

11



- 1) Press the both sides of the REAR using the lockers.
- ※ **caution**
- 1) Be careful not to make scratch and molding damage!
- 2) Be careful not to damage the locker.

12

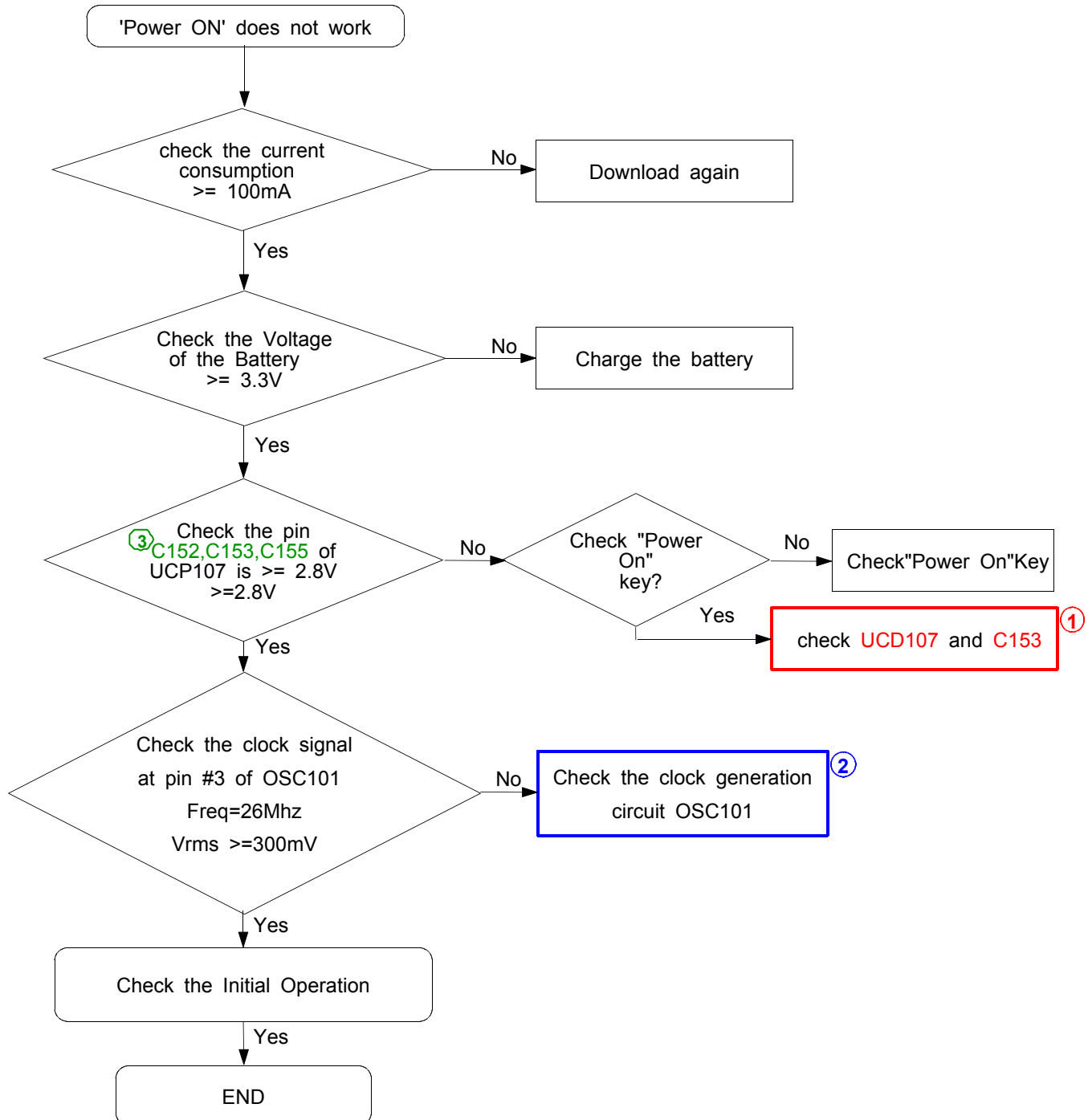


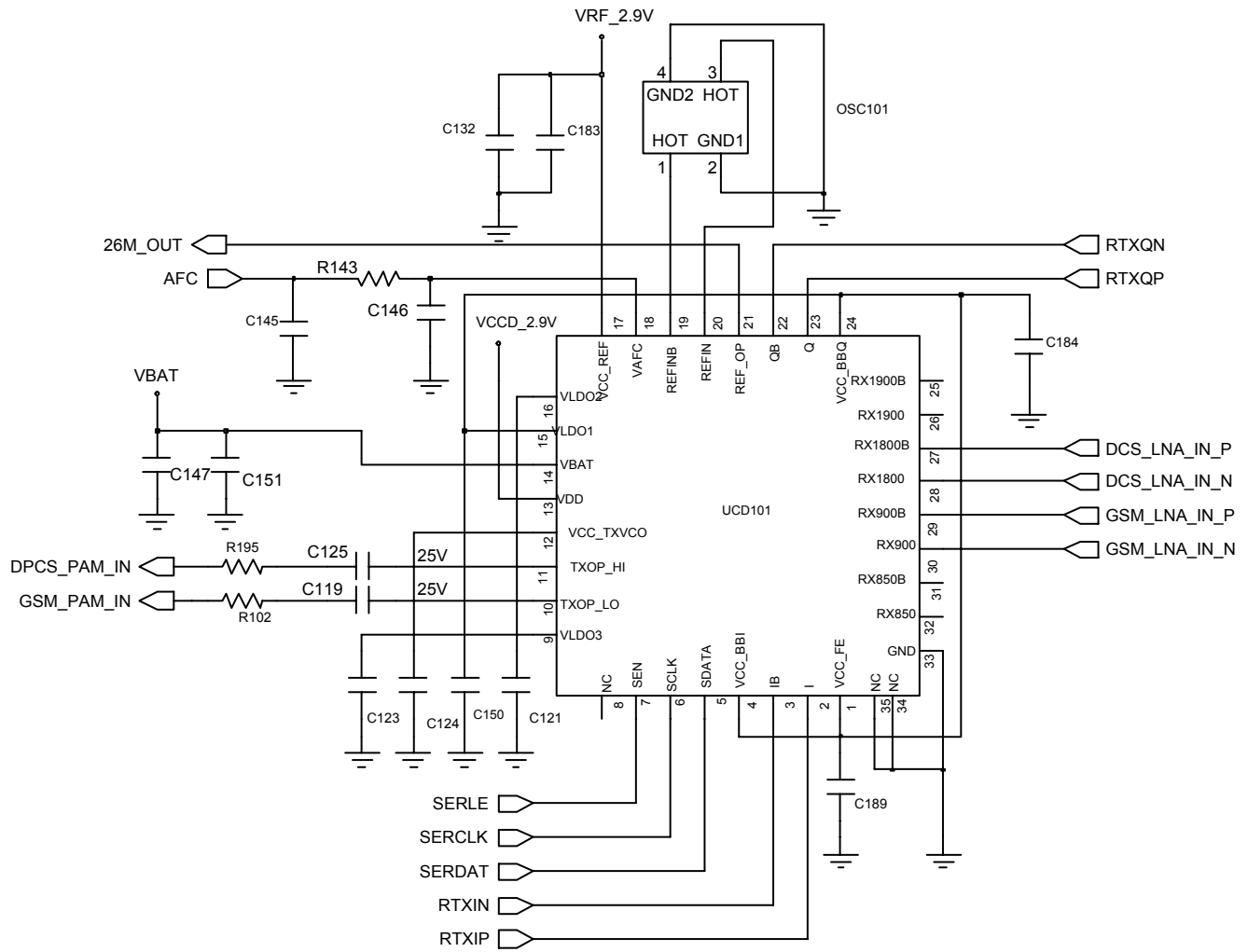
- 1) Press the top down until the lockers click grasping with your fingers carefully.
- ※ **caution**
- 1) Be careful not to make scratch and molding damage!
- 2) Be careful not to damage the locker.

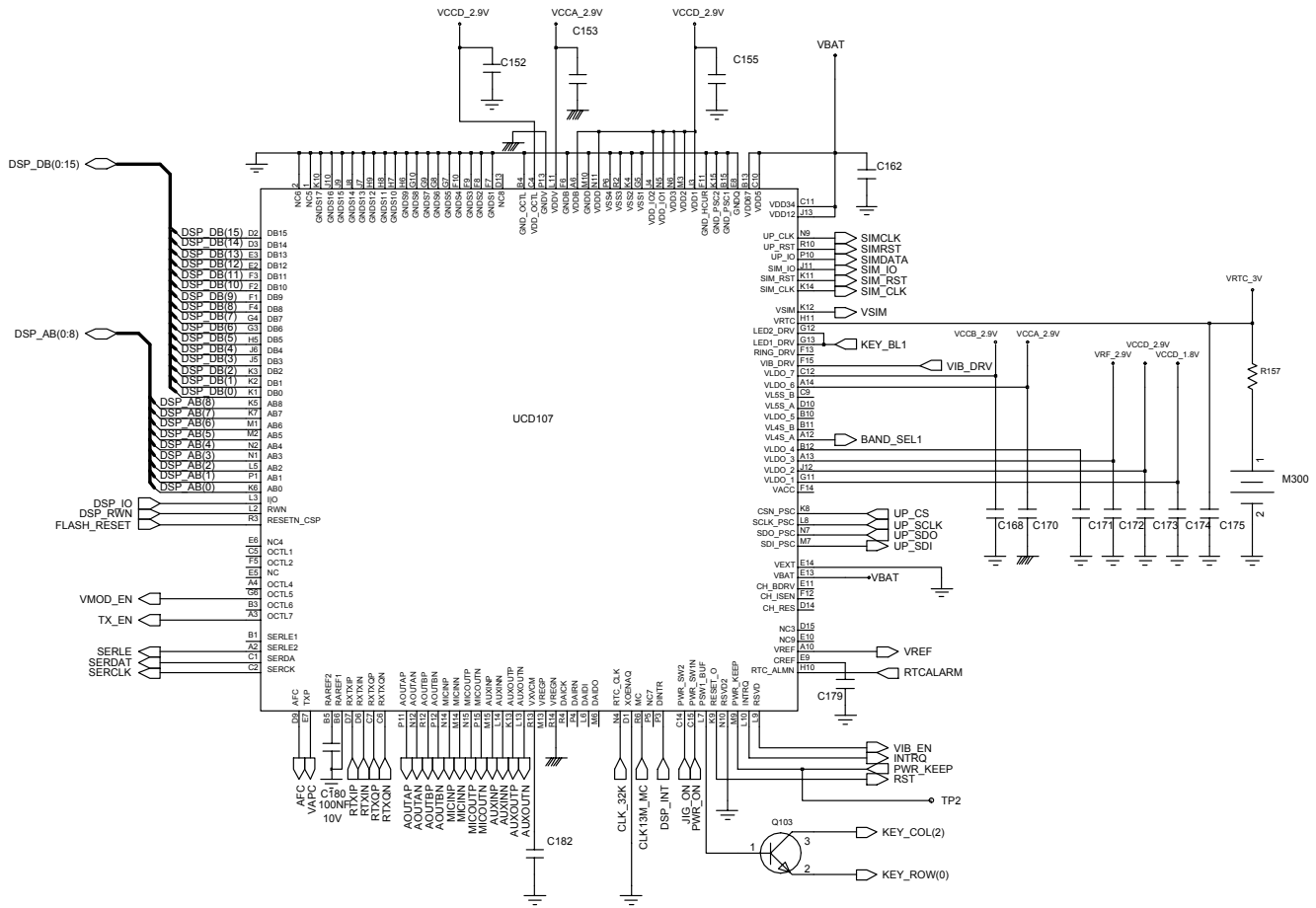
3. Flow Chart of Troubleshooting

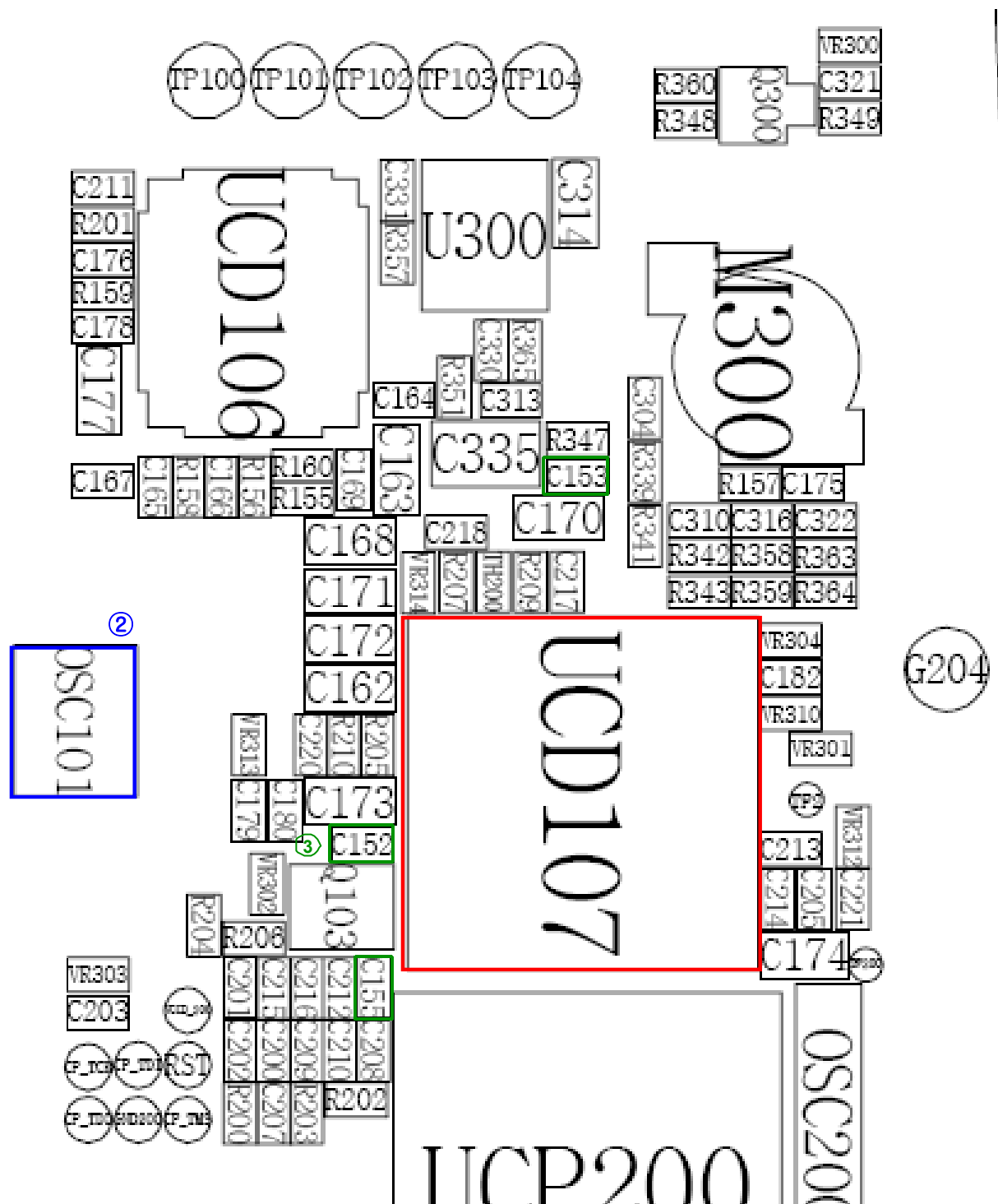
3-1. Baseband

3-1-1. Power ON

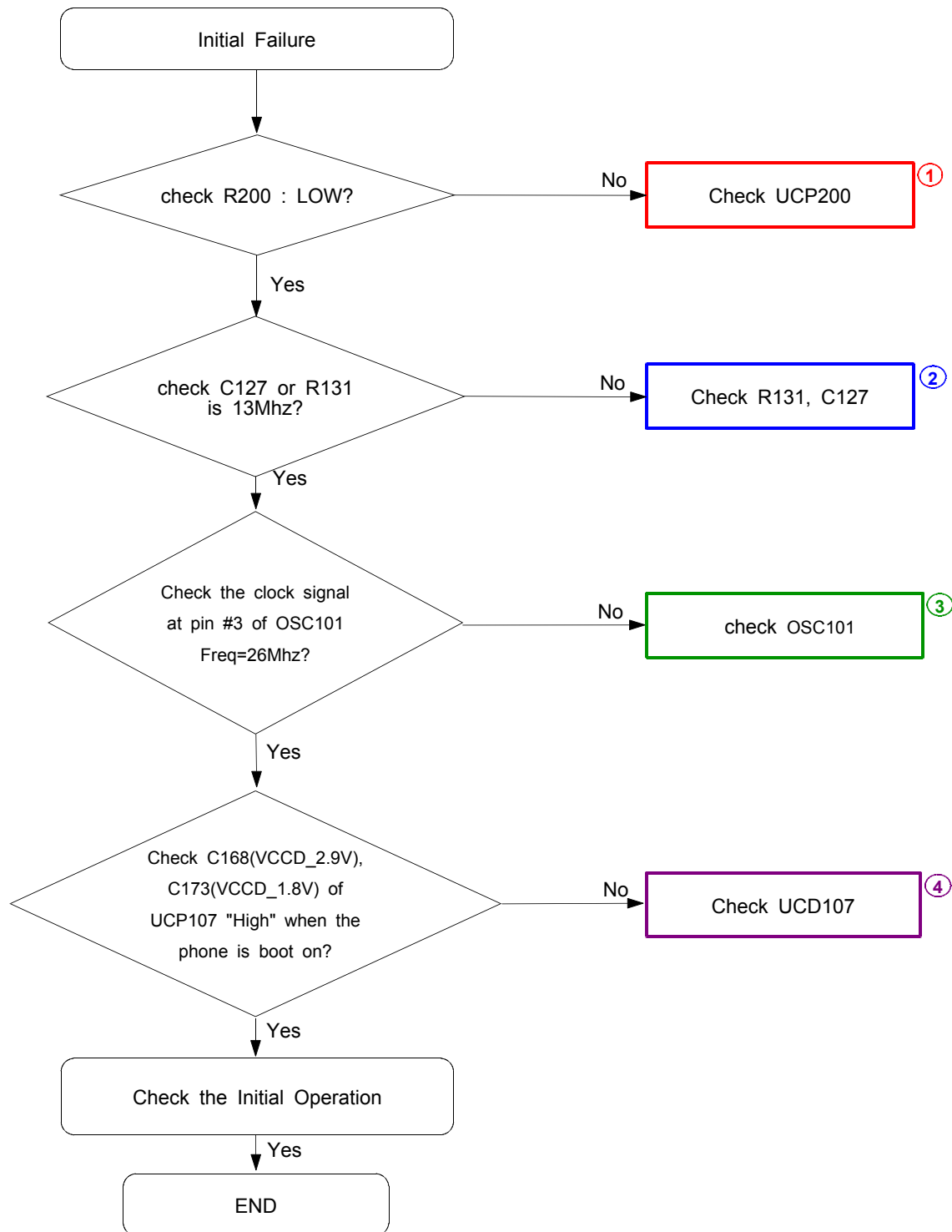


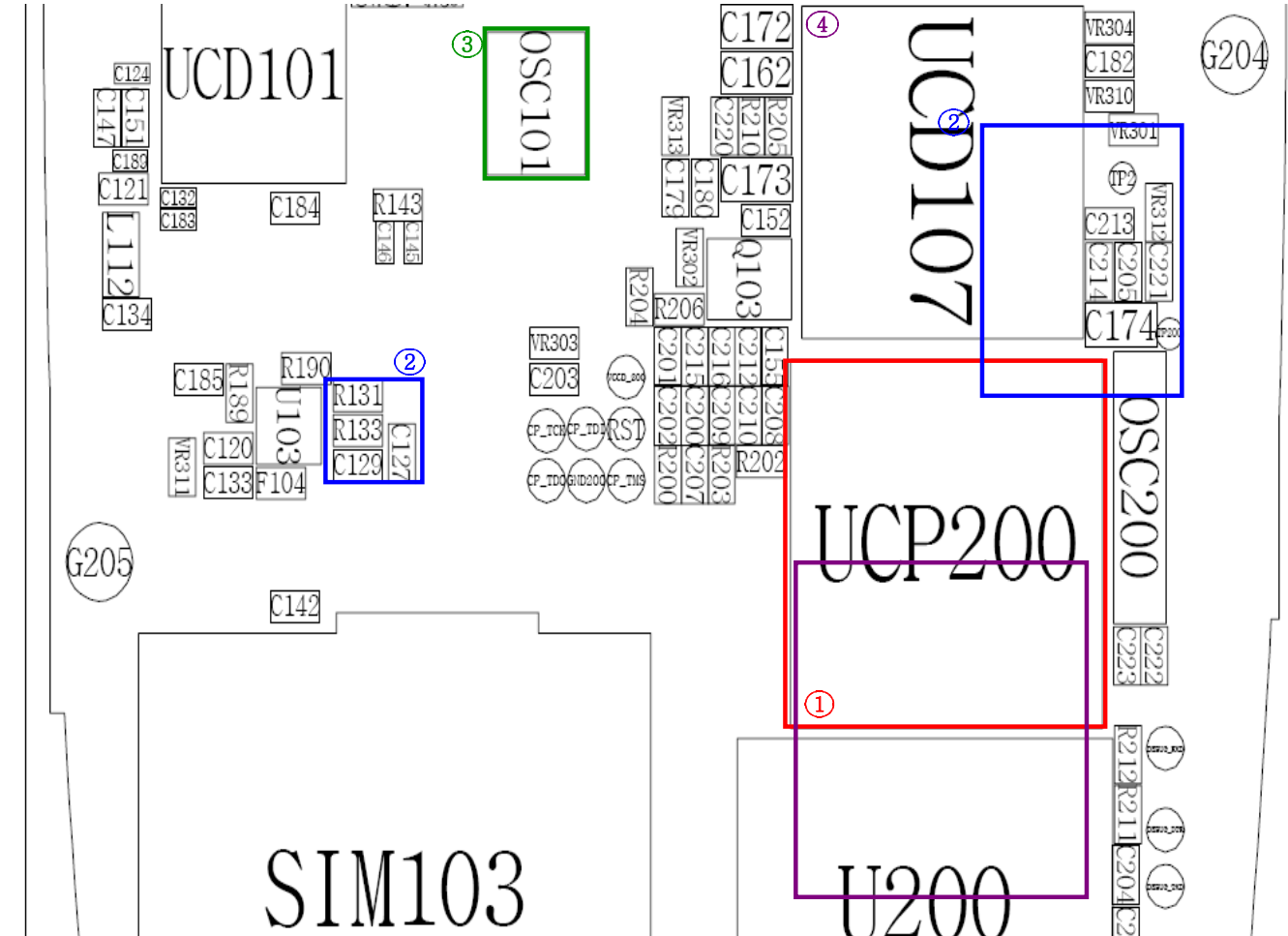




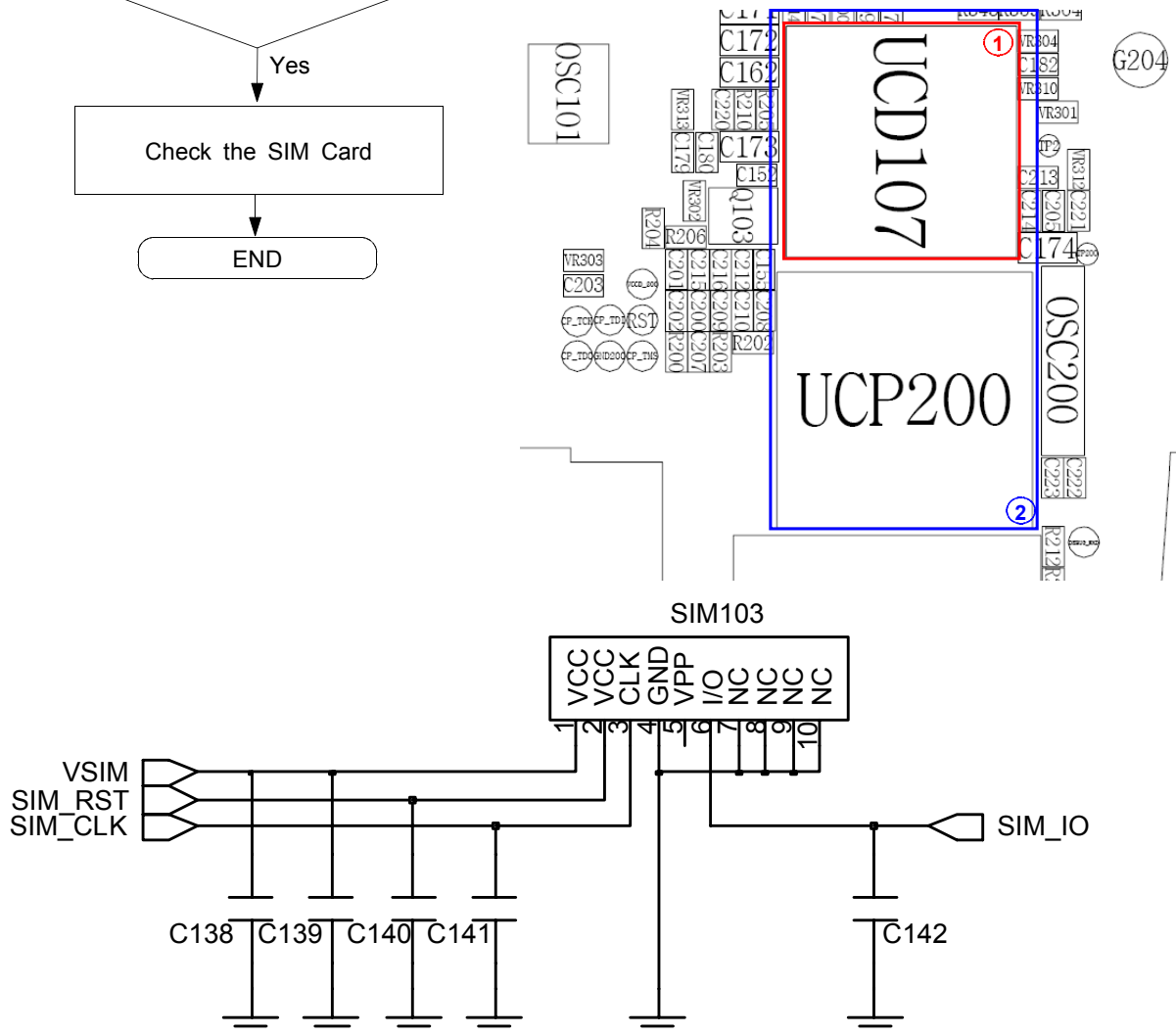
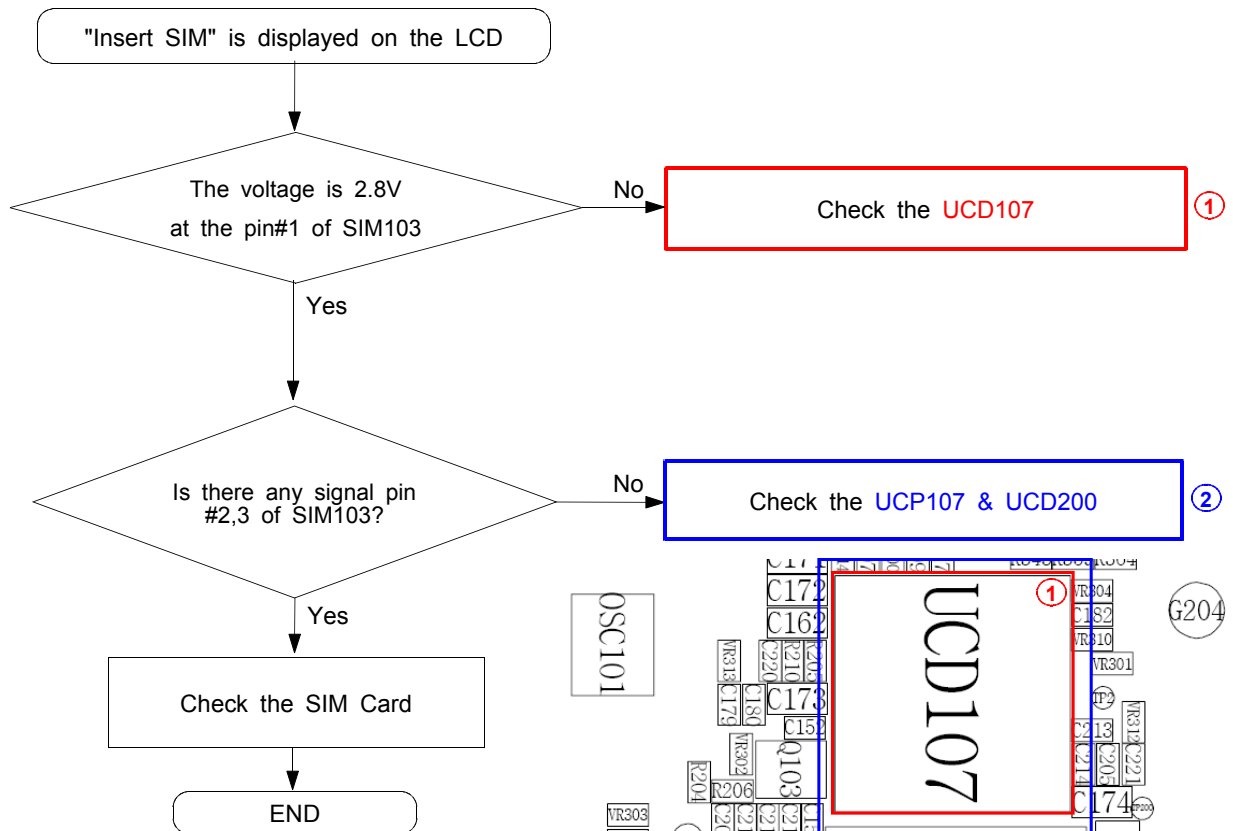


3-1-2. Initial



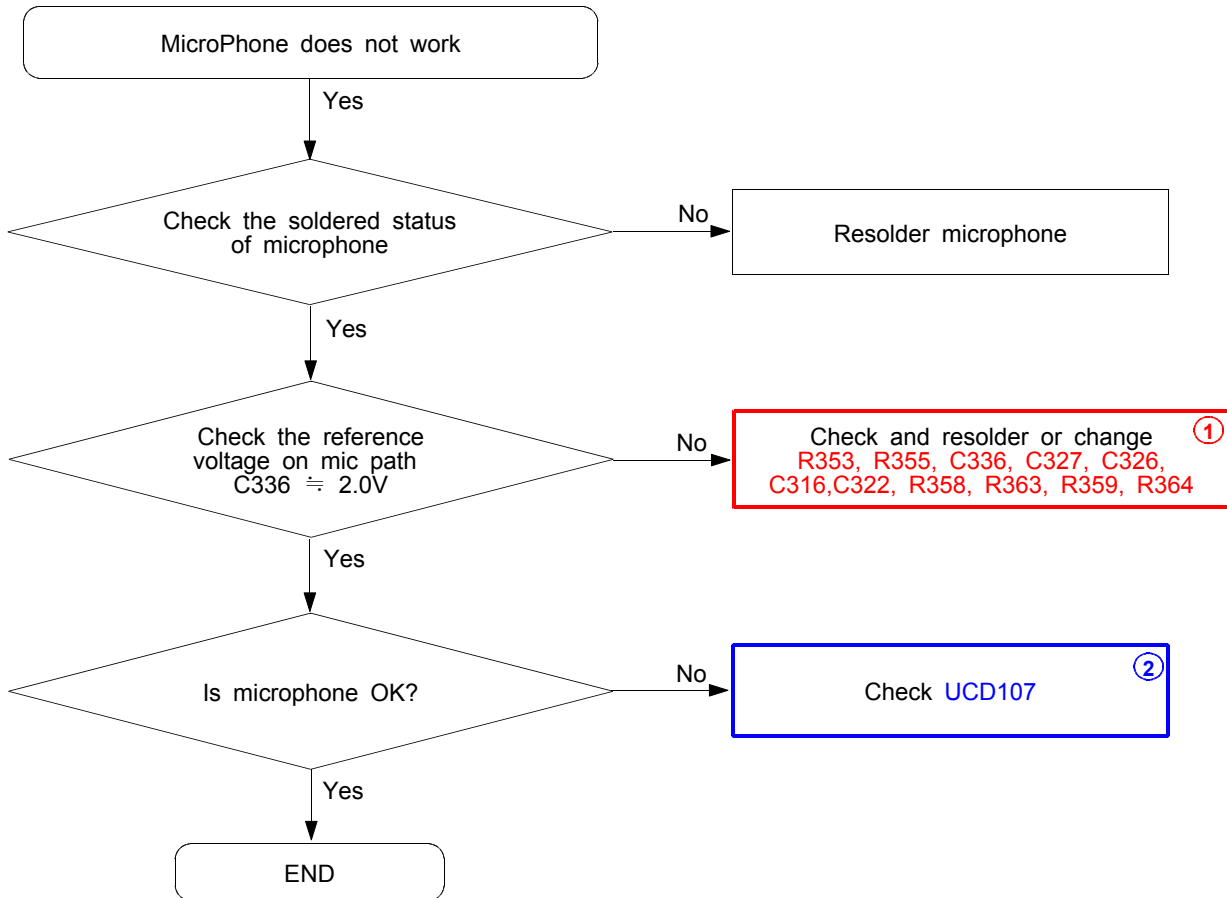


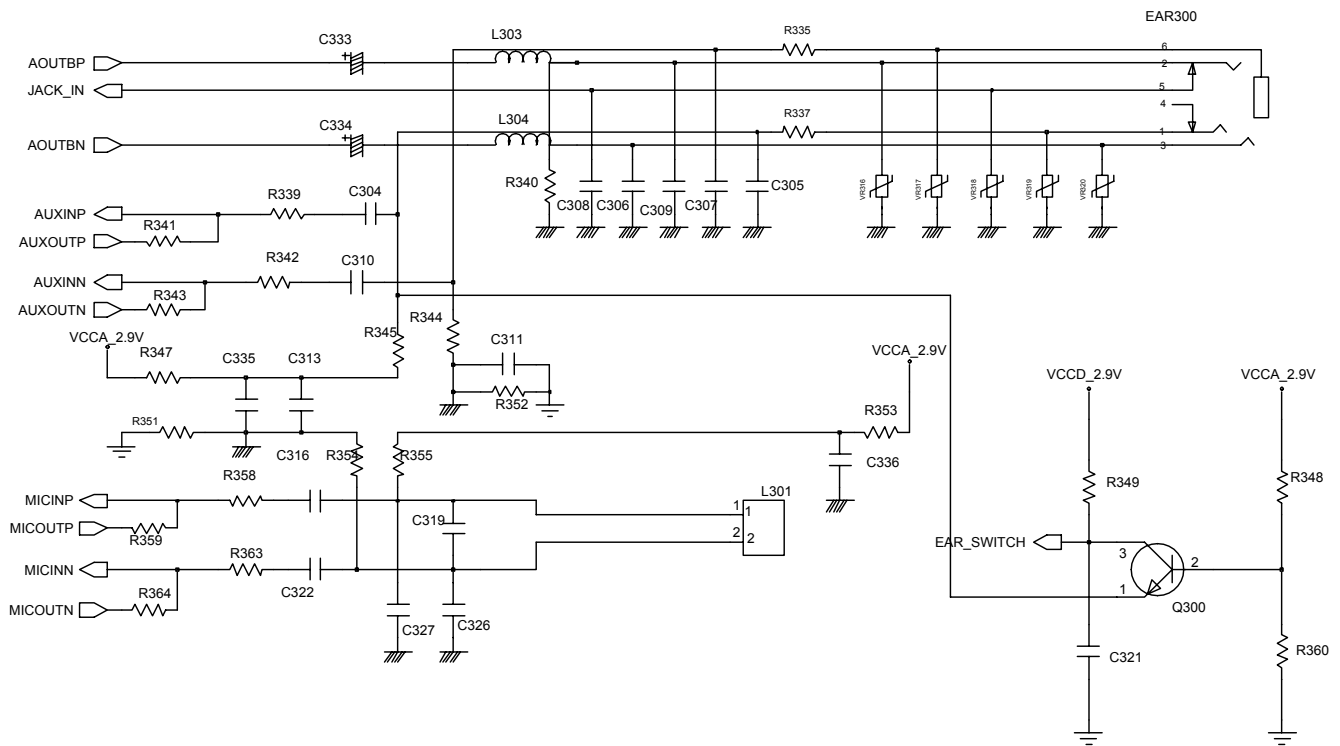
3-1-3. Sim Part



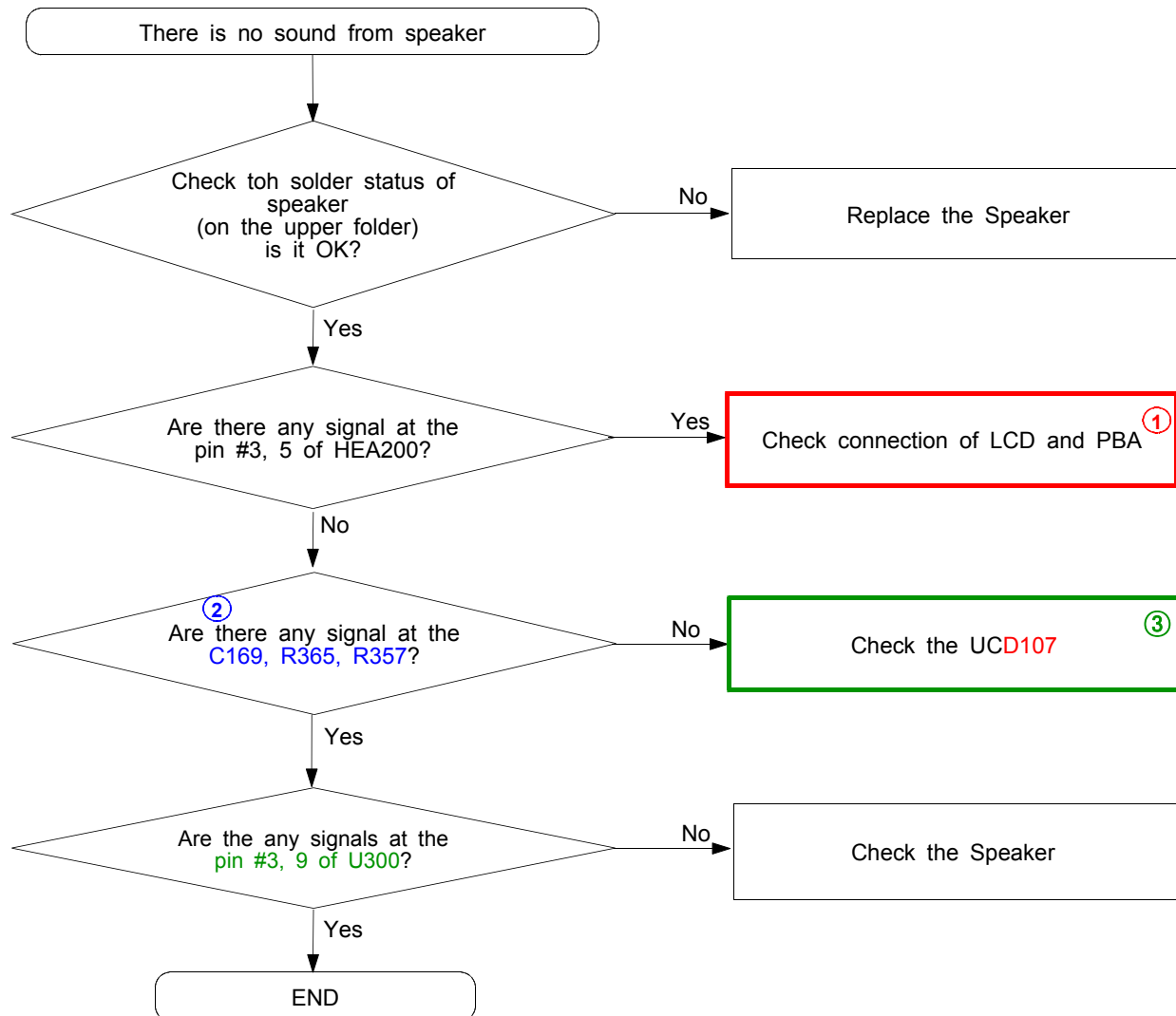
3-1-4. Microphone Part

* Call with Sim before testing.

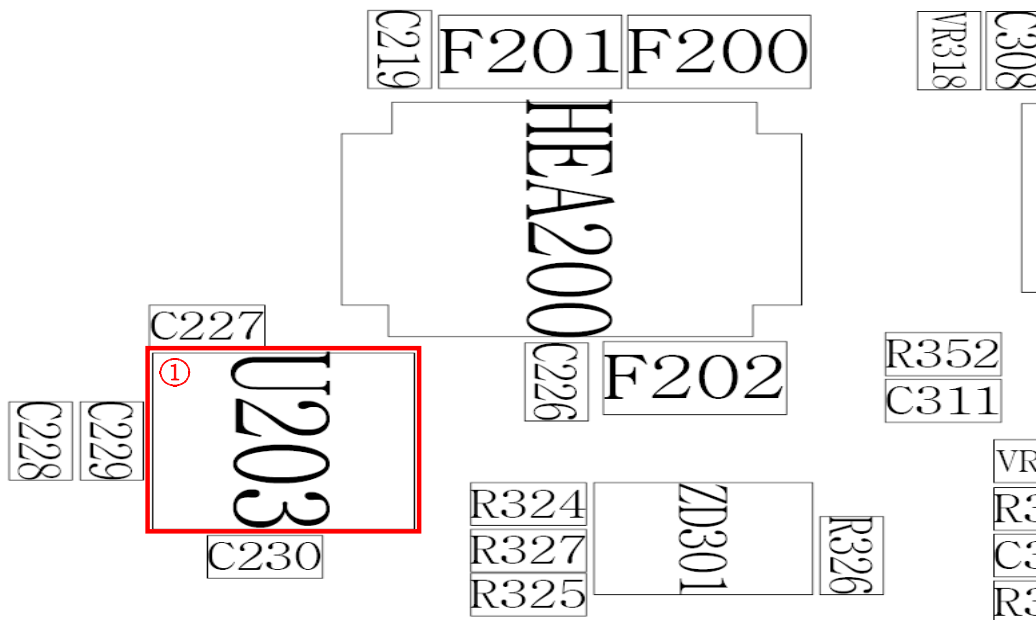
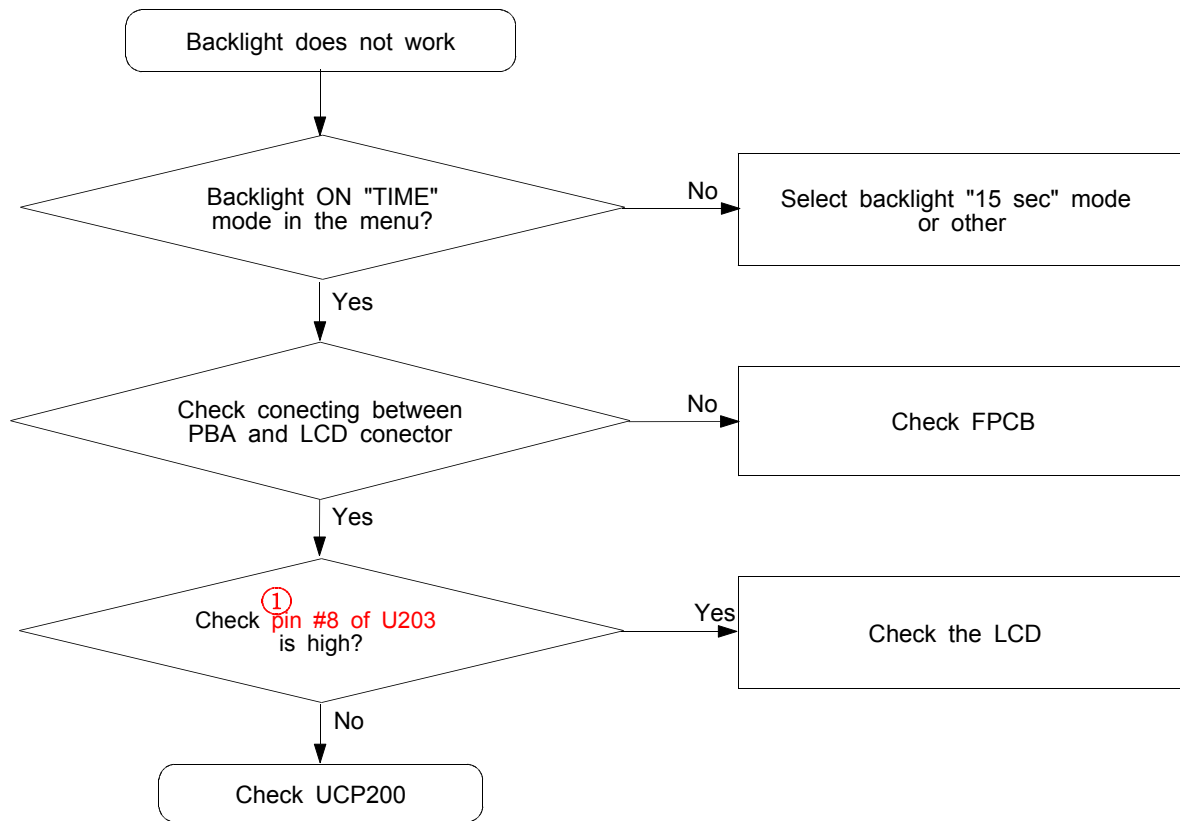




3-1-5. Speaker Part

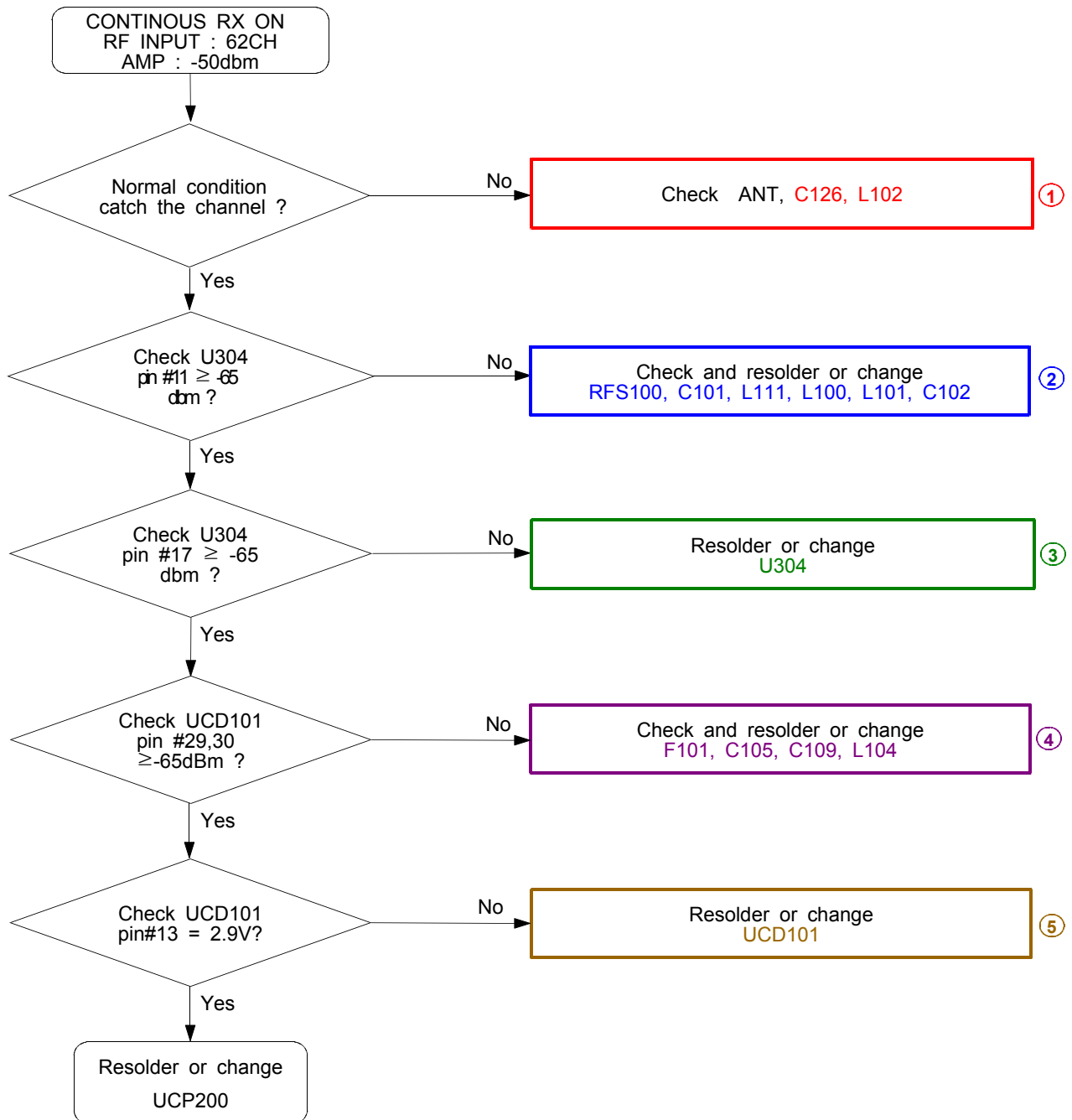


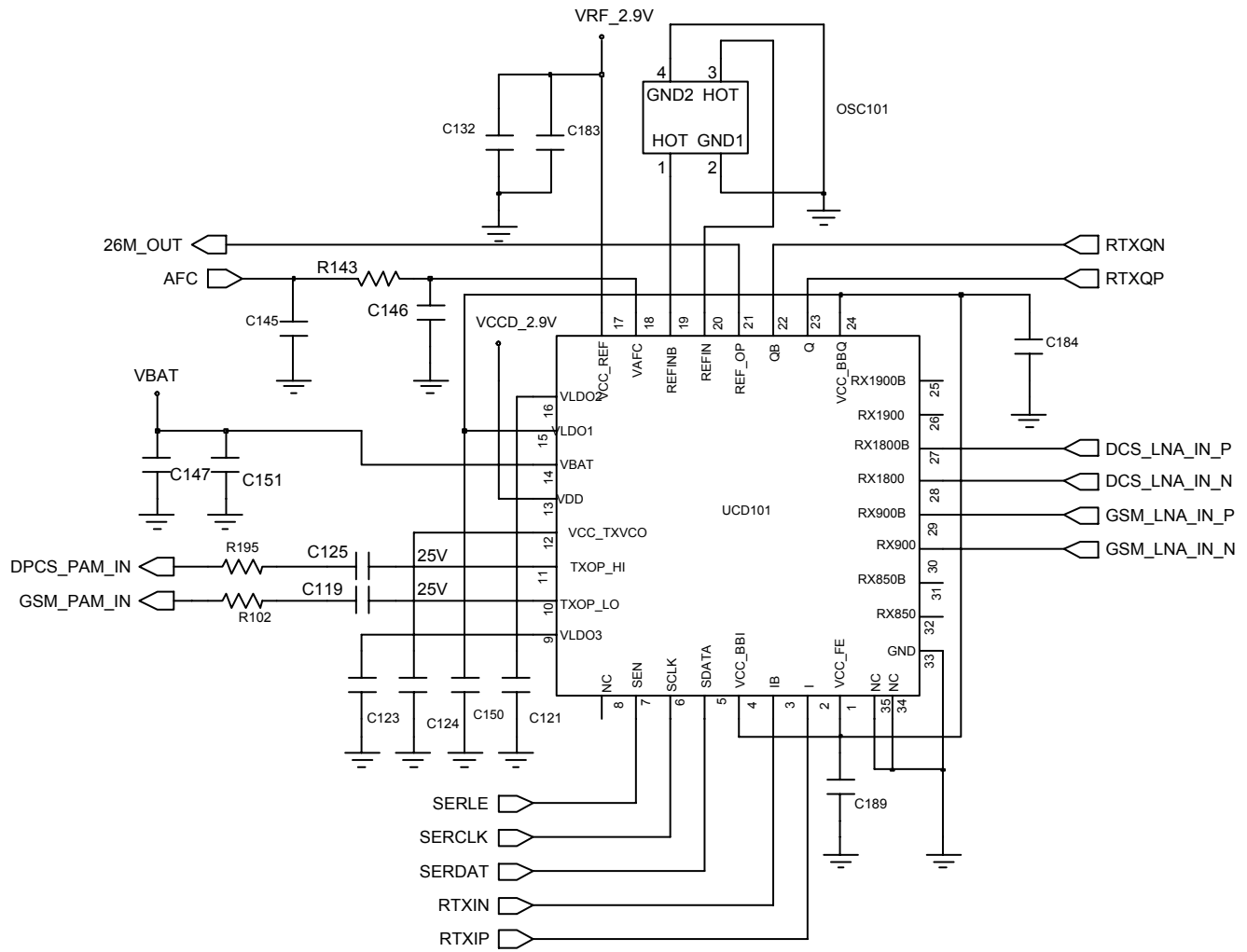
3-1-6. LCD backlight

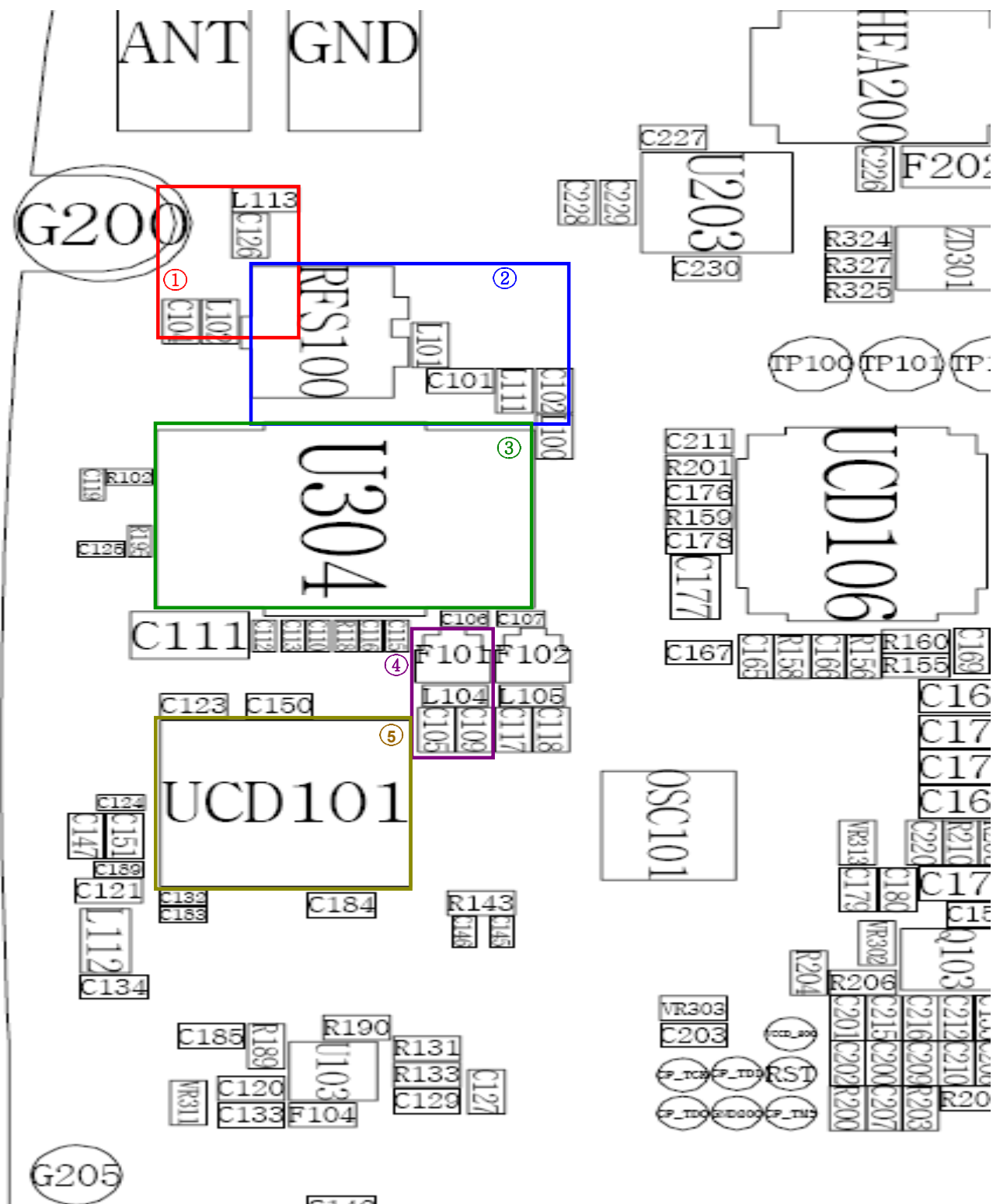


3-2. RF

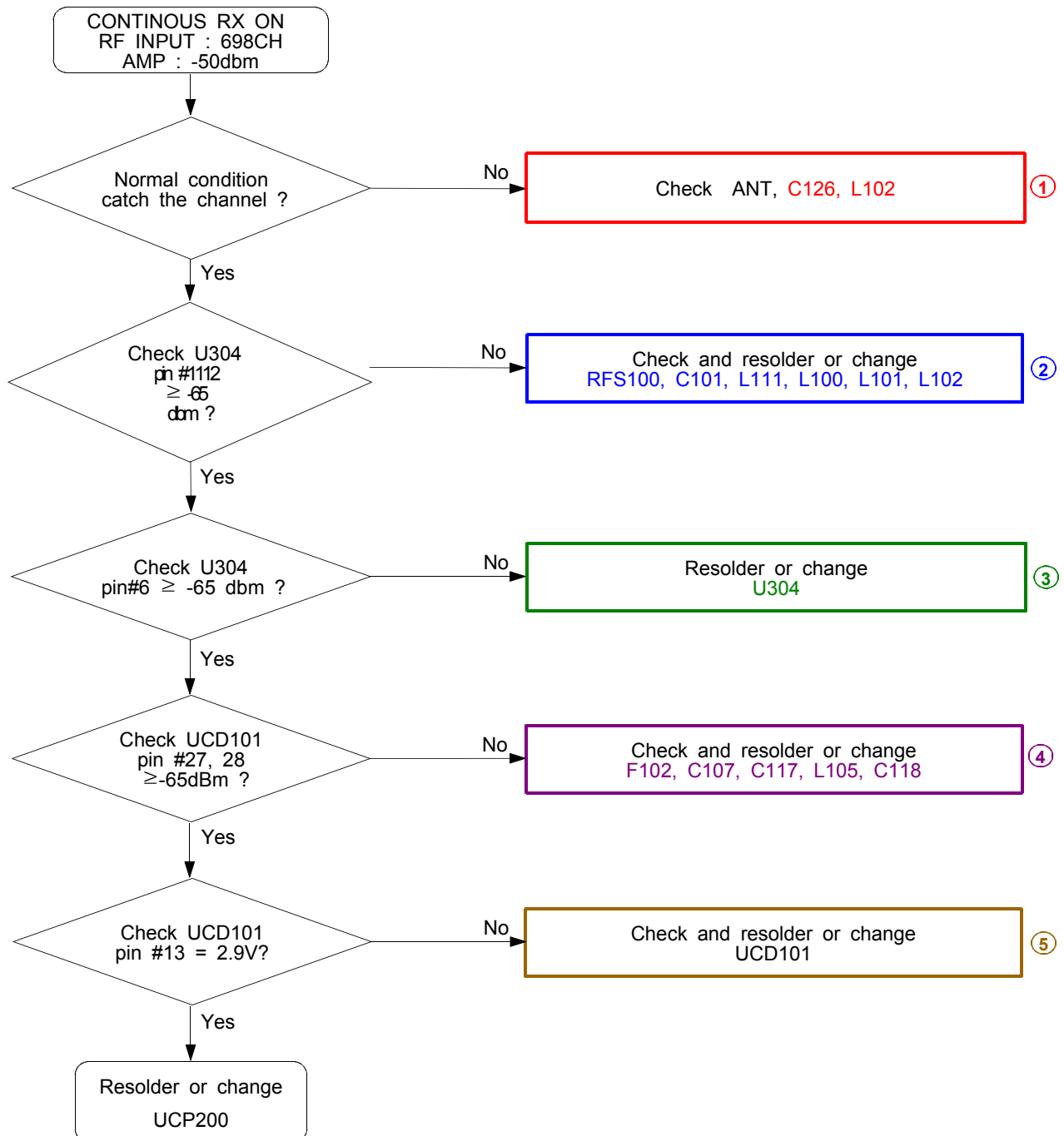
3-2-1. GSM Rx



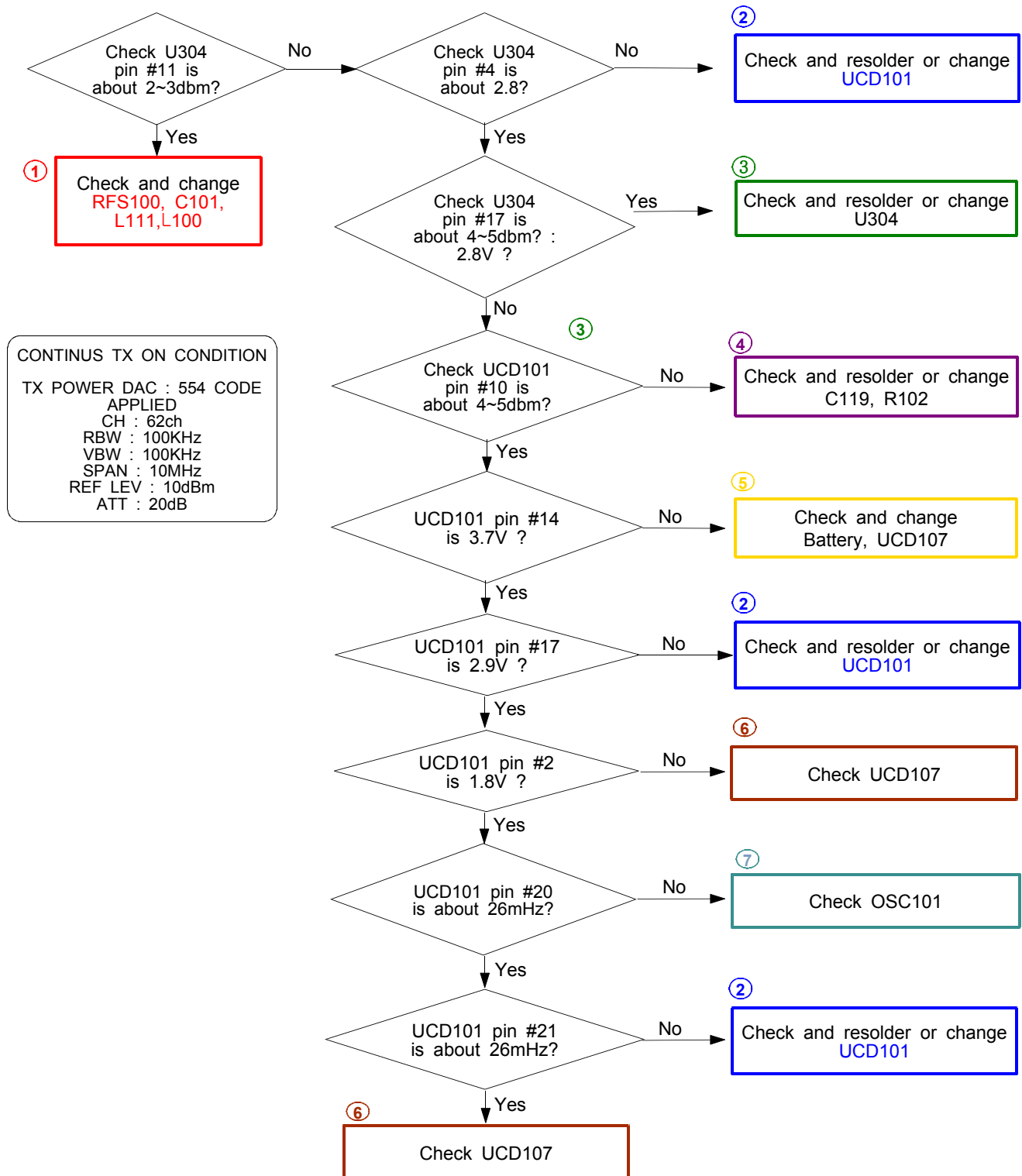


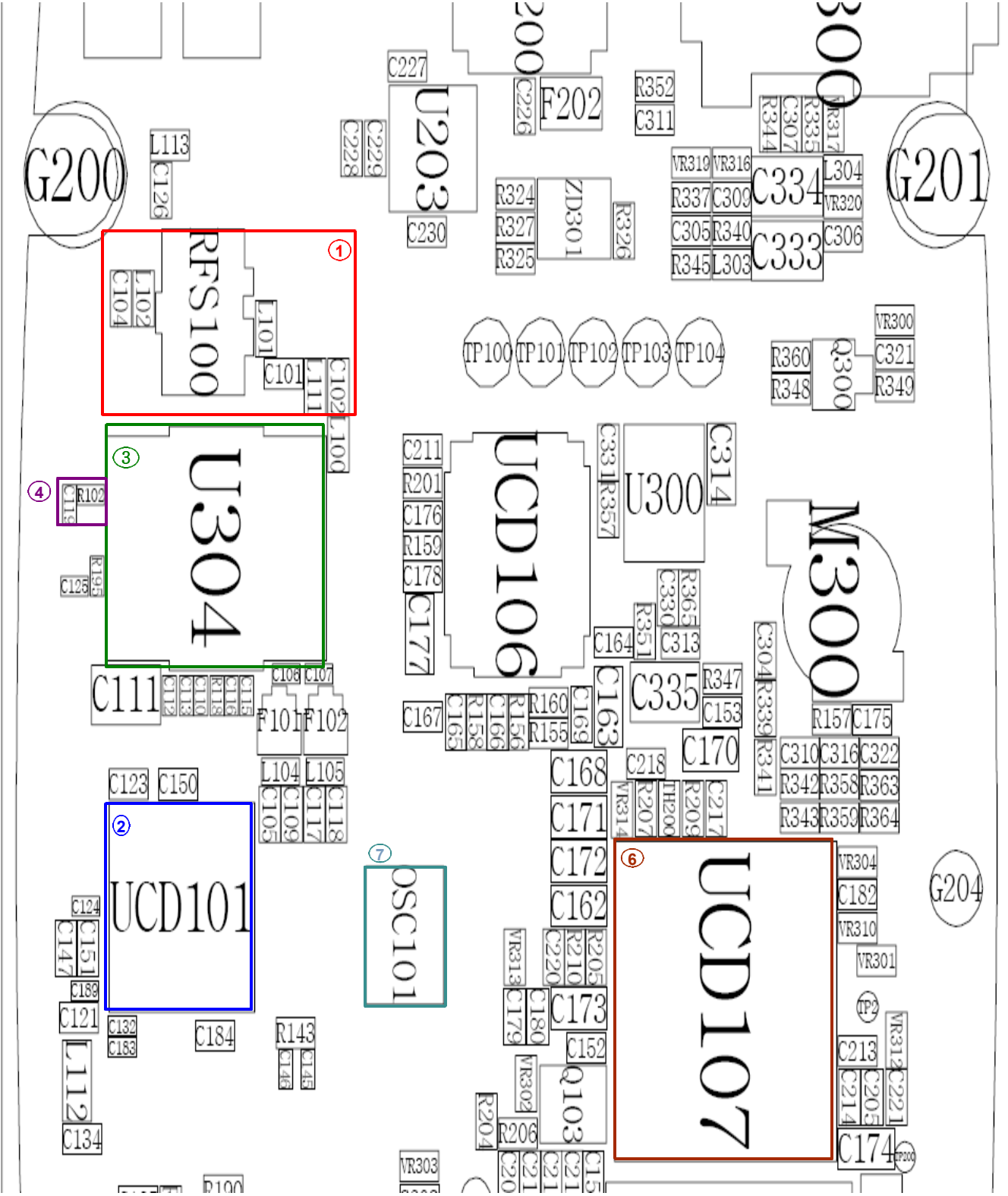


3-2-2. DCS Rx

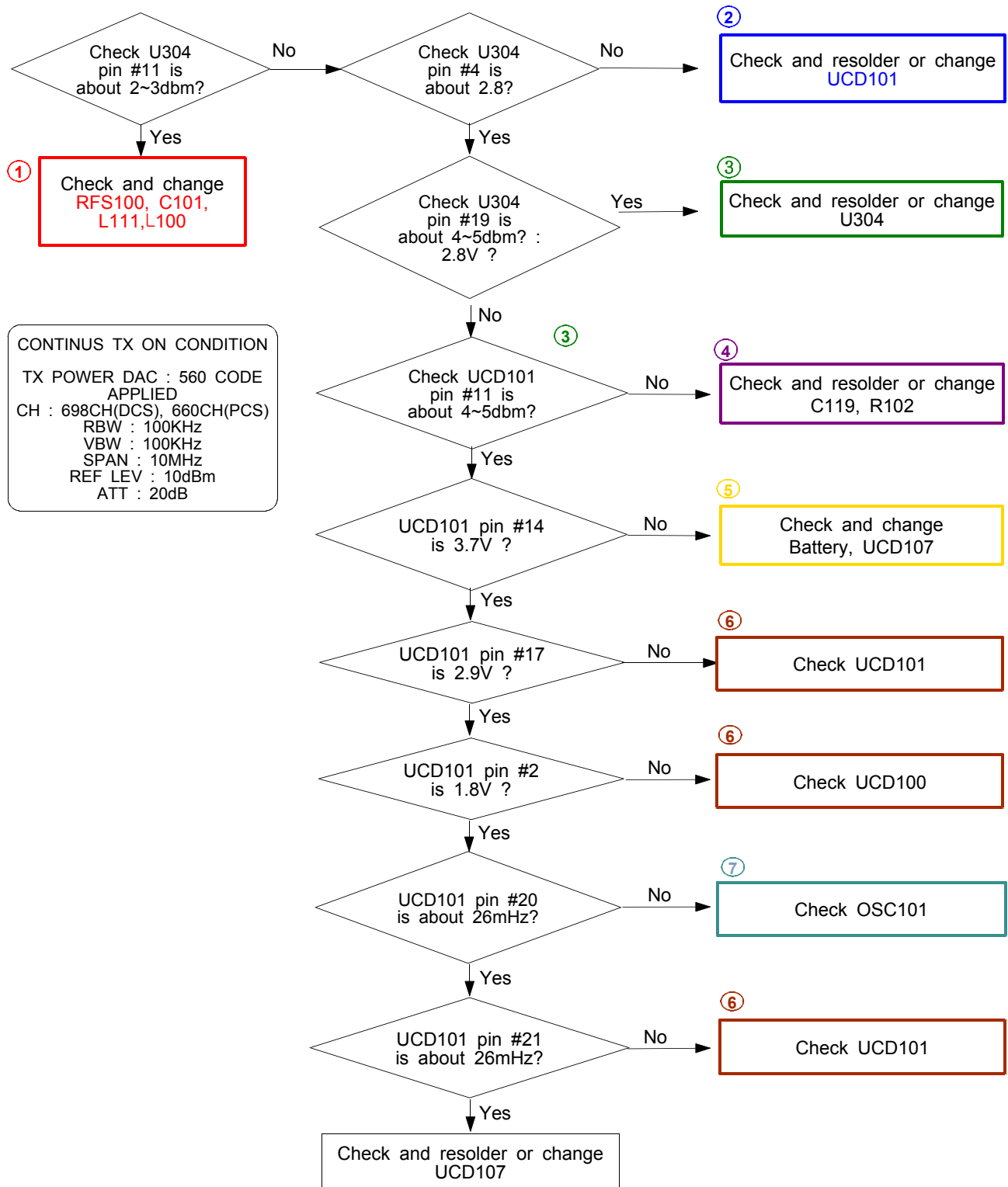


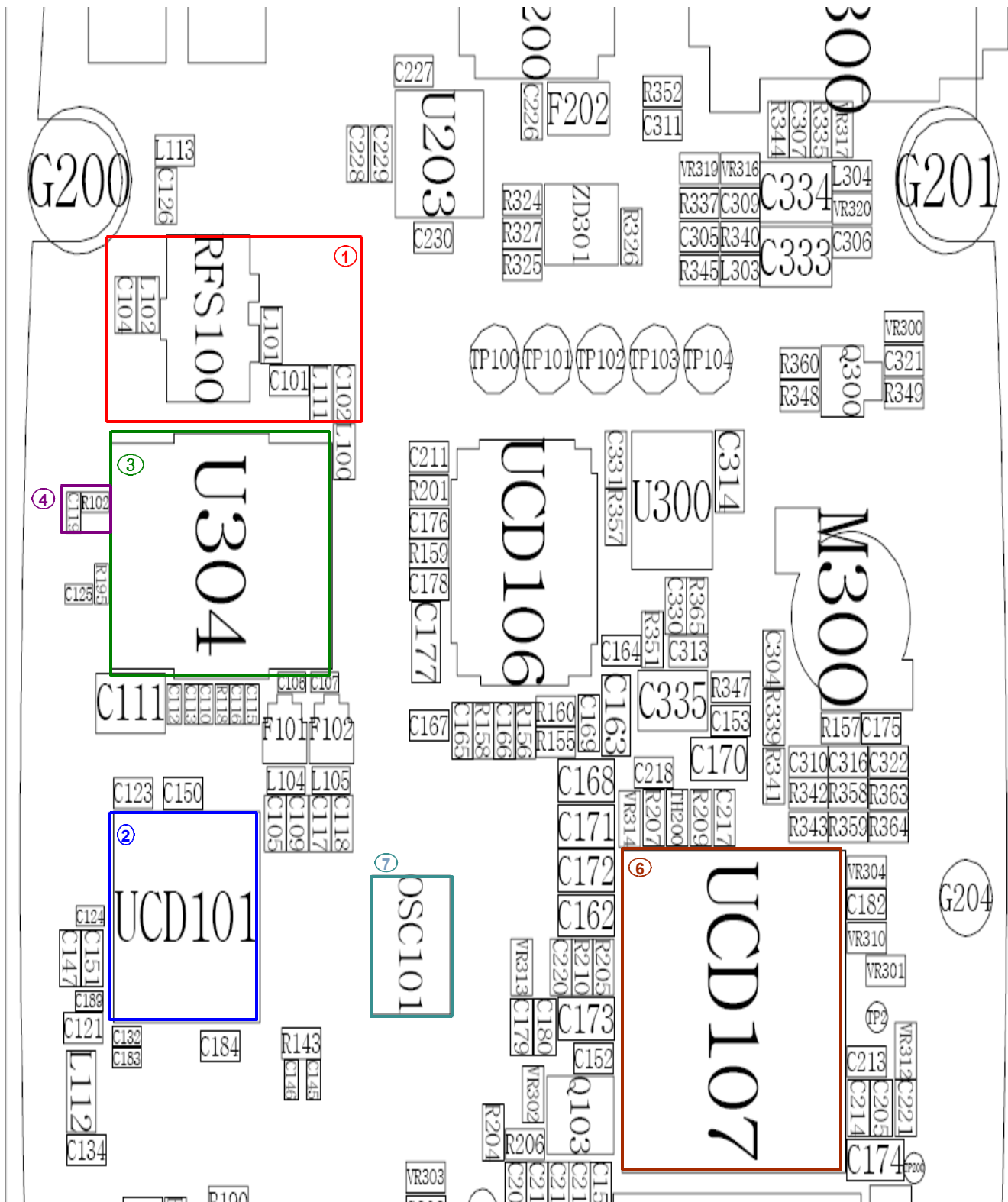
3-2-3. GSM Tx





3-2-4. DCS Tx





4. Array course control



Test Jig (GH80-00865A)



Test Cable (GH39-00127A)



RF Test Cable (GH39-00397A)

Software Downloading

4-1. Downloading Binary Files

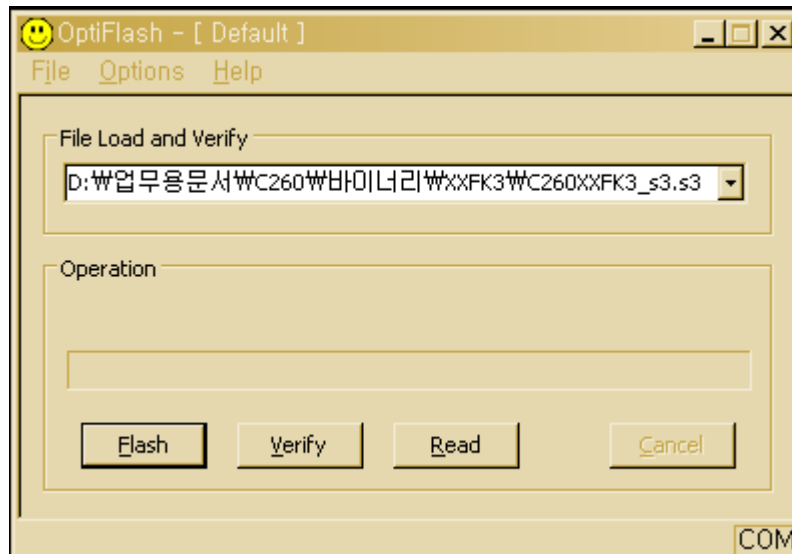
- Three binary files for downloading C260.
 - C260XXYY.s3 : Main source code binary.

4-2. Pre-requisite for Downloading

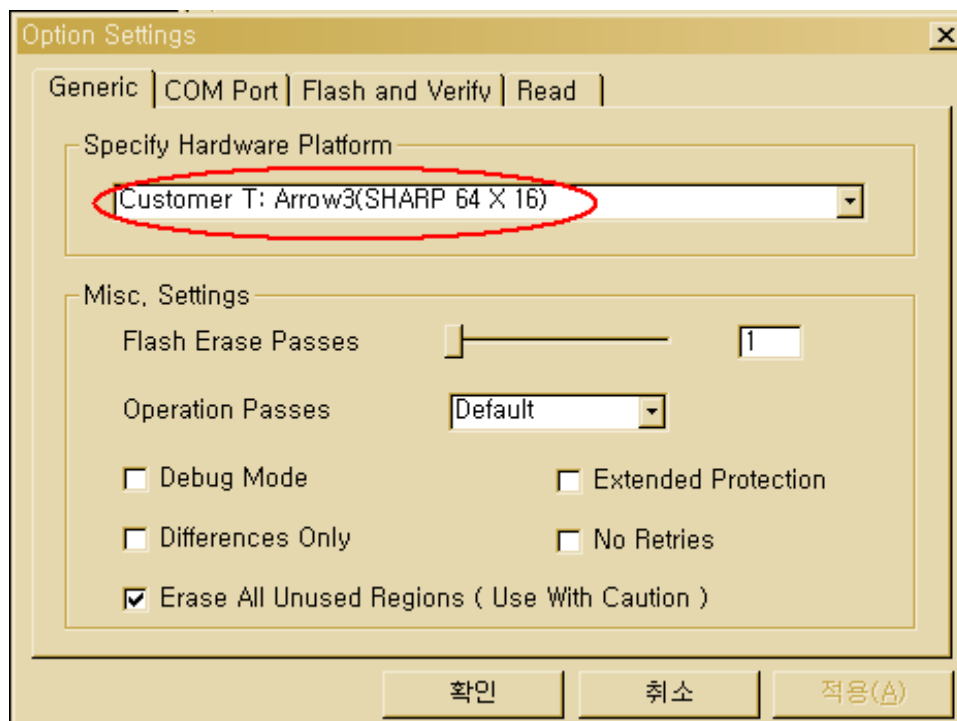
- Downloader Program([OptiFlash.exe](#))
- C260 Mobile Phone
- Data Cable
- Binary files

4-3. S/W Downloader Program

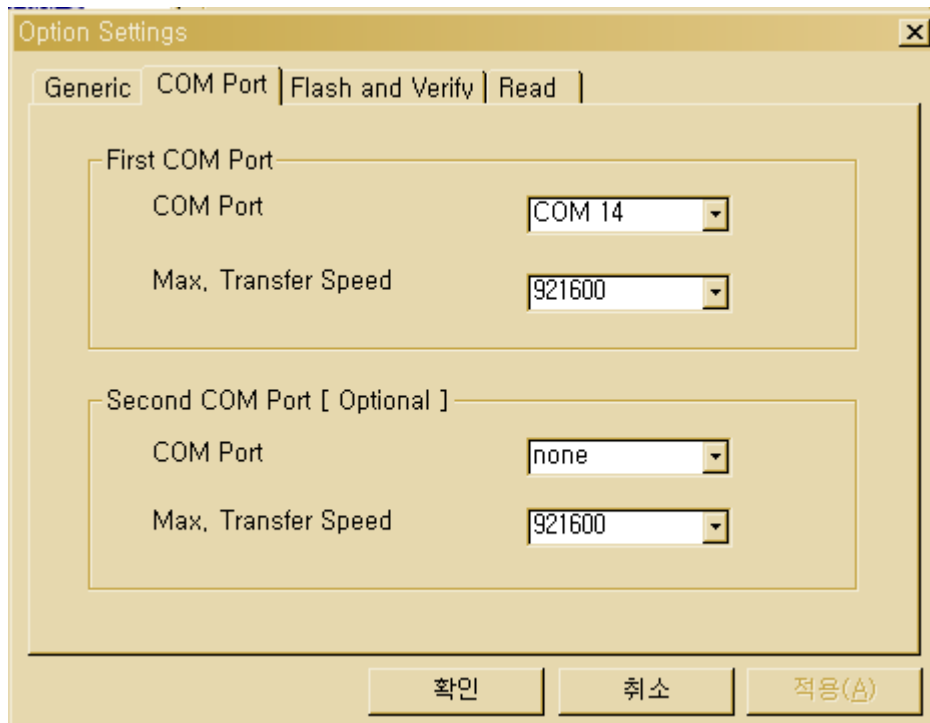
1. Load the binary download program by executing the “**OptiFlash.exe**”



2. Select the “**Options**” -> “**Settings**” -> “**Generic**” -> “**Specify hardware platform**”.
Choose hardware platform for the downloader file setting.
Set the everything else as the default values which are shown below



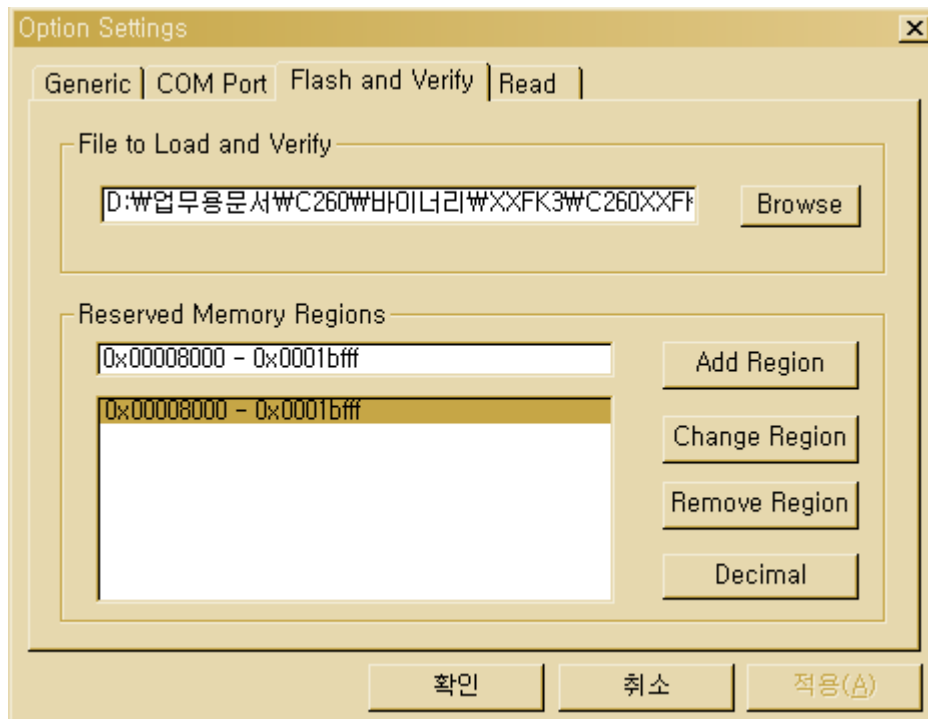
3. Select the **COM port** when the download cable is connected



Up to twelve ports are supported. Additionally you can select the maximum transfer speed OptiFlash will use to communicate with the phone. However, OptiFlash will use a slower speed if either the PC's or the phone's serial hardware is incapable of handling the selected speed

4. Select the “Flash&Verify” -> “Browse”

Set the directory path and choose the latest s/w binary, for example “C260XXYY.s3”, for the downloader binary setting.



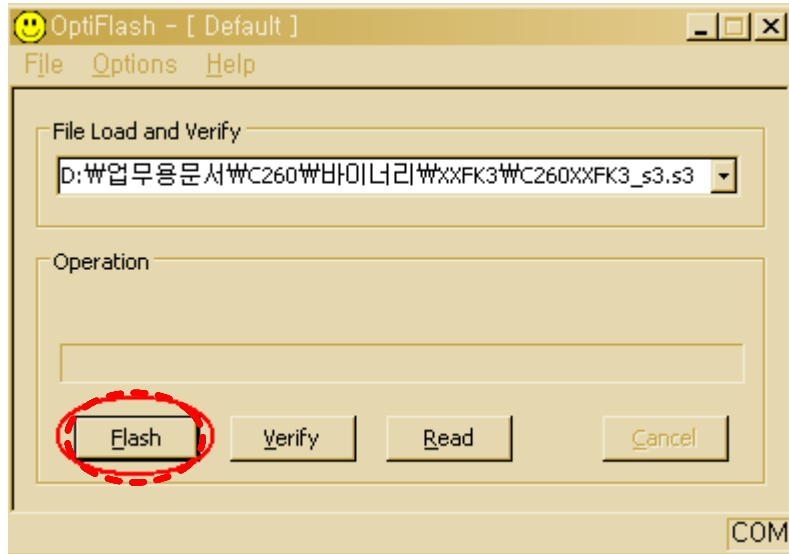
Make sure that not to change the reserved memory regions.

**In case of C140 the reserved memory regions are :
-0x00008000 – 0x0001bfff**

5. Click “**OK**” button then press “**Flash**”.

(Before pressing ‘Flash’ button, push the button “**” and ‘END’ at the same time. Then press ‘Flash’.)

Downloader will upload the binary file as below for the downloading.



6. When downloading is finished successfully, there is a “All is well” message.

7. After finishing downloading, Certain memory resets should be done to guarantee the normal performance.

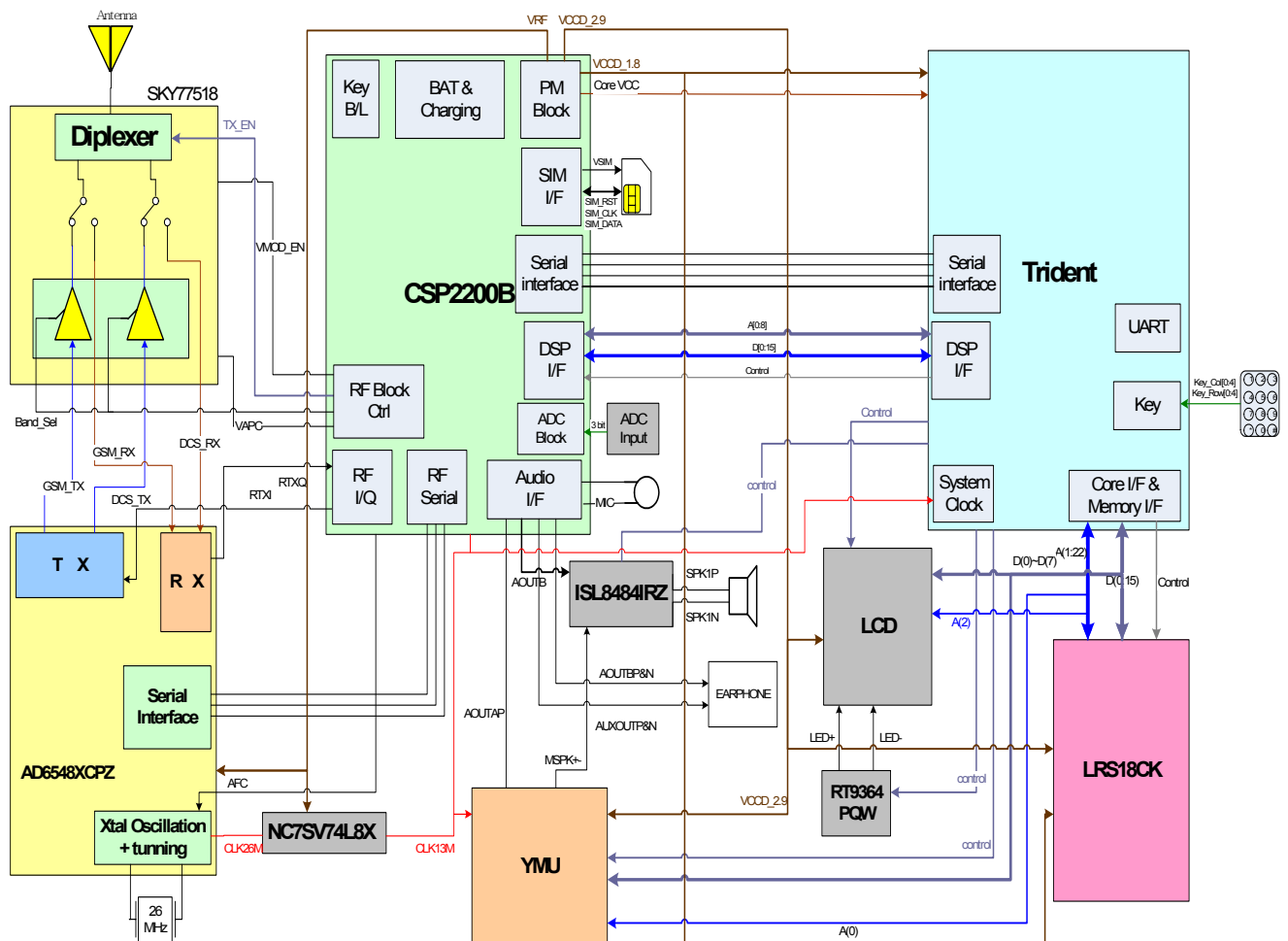
8. Confirm the downloaded version name and etc. :

***#1111#**

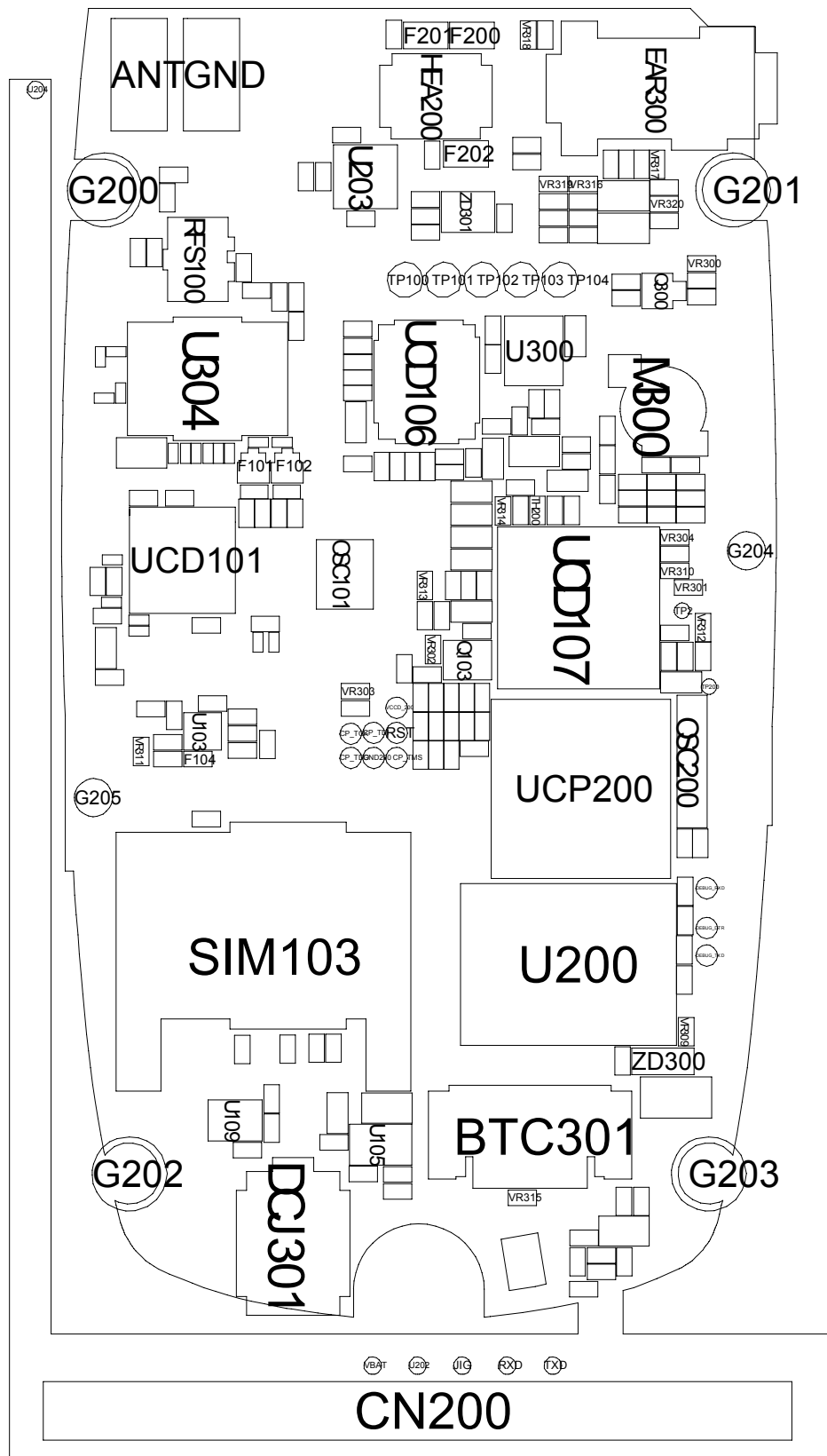
Full Reset :

***2767*3855#**

5. Block Diagrams



6. PCB Diagrams





7. MAIN Electrical Parts List

SEC CODE	Design LOC	Discription	STATUS
0403-001547	ZD300	DIODE-ZENER	SA
0406-001083	ZD301	DIODE-TVS	SA
0406-001267	ZD100	DIODE-TVS	SA
0501-000225	TR300	TR-SMALL SIGNAL	SA
0504-000168	TR100	TR-DIGITAL	SA
0601-002160	LED301	LED	SA
0601-002160	LED302	LED	SA
0801-002529	U109	IC-CMOS LOGIC	SA
0801-003013	U103	IC-CMOS LOGIC	SA
1001-001371	U300	IC-ANALOG SWITCH	SA
1009-001020	U201	IC-HALL EFFECT S/W	SA
1108-000095	UME200	IC-MCP	SA
1201-002490	PAM100	IC-POWER AMP	SA
1203-003663	U105	IC-BATTERY	SA
1203-003897	UCD107	IC-POWER SUPERVISOR	SA
1203-004051	U203	IC-DC/DC CONVERTER	SA
1204-001811	UCD106	IC-MELODY	SA
1205-003098	UCD101	IC-TRANSCEIVER	SA
1404-001165	TH200	THERMISTOR-NTC	SA
1405-001082	VR300	VARISTOR	SA
1405-001082	VR301	VARISTOR	SA
1405-001082	VR302	VARISTOR	SA
1405-001082	VR303	VARISTOR	SA
1405-001082	VR304	VARISTOR	SA
1405-001082	VR309	VARISTOR	SA
1405-001082	VR310	VARISTOR	SA
1405-001082	VR311	VARISTOR	SA
1405-001082	VR312	VARISTOR	SA
1405-001082	VR313	VARISTOR	SA
1405-001082	VR314	VARISTOR	SA
1405-001082	VR315	VARISTOR	SA
1405-001082	VR316	VARISTOR	SA
1405-001082	VR317	VARISTOR	SA
1405-001082	VR318	VARISTOR	SA
1405-001082	VR319	VARISTOR	SA
1405-001082	VR320	VARISTOR	SA
1405-001108	VR307	VARISTOR	SA

SEC CODE	Design LOC	Discription	STATUS
2007-000140	R324	R-CHIP	SA
2007-000140	R325	R-CHIP	SA
2007-000140	R326	R-CHIP	SA
2007-000140	R344	R-CHIP	SA
2007-000148	R118	R-CHIP	SA
2007-000148	R143	R-CHIP	SA
2007-000148	R339	R-CHIP	SA
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2007-000148	R363	R-CHIP	SA
2007-000157	R188	R-CHIP	SA
2007-000157	R202	R-CHIP	SA
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2007-000161	R341	R-CHIP	SA
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2007-000162	R203	R-CHIP	SA
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2007-000164	R155	R-CHIP	SA
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2007-000170	R190	R-CHIP	SA
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2007-000171	R337	R-CHIP	SA
2007-000171	R351	R-CHIP	SA
2007-000171	R366	R-CHIP	SA
2007-000172	R200	R-CHIP	SA
2007-000172	R201	R-CHIP	SA
2007-000173	R357	R-CHIP	SA
2007-000173	R365	R-CHIP	SA
2007-000242	R340	R-CHIP	SA
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2007-000242	R355	R-CHIP	SA

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2007-000566	R211	R-CHIP	SA
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2007-000775	R156	R-CHIP	SA
2007-000775	R158	R-CHIP	SA
2007-000831	R348	R-CHIP	SA
2007-001119	R347	R-CHIP	SA
2007-001119	R353	R-CHIP	SA
2007-001288	R367	R-CHIP	SA
2007-001288	R368	R-CHIP	SA
2007-001308	R133	R-CHIP	SA
2007-001323	R345	R-CHIP	SA
2007-001325	R159	R-CHIP	SA
2007-001335	R360	R-CHIP	SA
2007-001339	R183	R-CHIP	SA
2007-002797	R131	R-CHIP	SA
2007-003112	R301	R-CHIP	SA
2007-003112	R302	R-CHIP	SA
2007-007107	R207	R-CHIP	SA
2007-007314	R209	R-CHIP	SA
2007-007573	R205	R-CHIP	SA
2007-007573	R210	R-CHIP	SA
2007-007861	R160	R-CHIP	SA
2007-008043	R102	R-CHIP	SA
2007-008137	R170	R-CHIP	SA
2007-008806	R195	R-CHIP	SA
2007-009160	R171	R-CHIP	SA
2203-000233	C106	C-CER,CHIP	SA
2203-000233	C107	C-CER,CHIP	SA
2203-000233	C110	C-CER,CHIP	SA
2203-000233	C175	C-CER,CHIP	SA
2203-000233	C190	C-CER,CHIP	SA
2203-000233	C221	C-CER,CHIP	SA
2203-000233	C306	C-CER,CHIP	SA
2203-000233	C309	C-CER,CHIP	SA
2203-000254	C146	C-CER,CHIP	SA
2203-000254	C147	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2203-000254	C152	C-CER,CHIP	SA
2203-000254	C153	C-CER,CHIP	SA
2203-000254	C165	C-CER,CHIP	SA
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2203-000254	C207	C-CER,CHIP	SA
2203-000254	C208	C-CER,CHIP	SA
2203-000254	C209	C-CER,CHIP	SA
2203-000254	C211	C-CER,CHIP	SA
2203-000254	C213	C-CER,CHIP	SA
2203-000254	C215	C-CER,CHIP	SA
2203-000254	C217	C-CER,CHIP	SA
2203-000278	C319	C-CER,CHIP	SA
2203-000330	C222	C-CER,CHIP	SA
2203-000330	C223	C-CER,CHIP	SA
2203-000386	C127	C-CER,CHIP	SA
2203-000386	C326	C-CER,CHIP	SA
2203-000386	C327	C-CER,CHIP	SA
2203-000386	C338	C-CER,CHIP	SA
2203-000425	C101	C-CER,CHIP	SA
2203-000438	C176	C-CER,CHIP	SA
2203-000438	C185	C-CER,CHIP	SA
2203-000627	C134	C-CER,CHIP	SNA
2203-000654	C166	C-CER,CHIP	SA
2203-000679	C202	C-CER,CHIP	SA
2203-000714	C169	C-CER,CHIP	SA
2203-000812	C113	C-CER,CHIP	SA
2203-000812	C115	C-CER,CHIP	SA
2203-000812	C116	C-CER,CHIP	SA
2203-000812	C120	C-CER,CHIP	SA
2203-000812	C311	C-CER,CHIP	SA
2203-000854	C105	C-CER,CHIP	SA
2203-000854	C109	C-CER,CHIP	SA
2203-000854	C132	C-CER,CHIP	SA
2203-000854	C145	C-CER,CHIP	SA
2203-000854	C184	C-CER,CHIP	SA
2203-000854	C330	C-CER,CHIP	SA
2203-000854	C331	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2203-000940	C138	C-CER,CHIP	SA
2203-000995	C140	C-CER,CHIP	SA
2203-000995	C141	C-CER,CHIP	SA
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2203-000995	C225	C-CER,CHIP	SA
2203-000995	C305	C-CER,CHIP	SA
2203-000995	C307	C-CER,CHIP	SA
2203-001072	C321	C-CER,CHIP	SA
2203-001383	C108	C-CER,CHIP	SA
2203-001405	C218	C-CER,CHIP	SA
2203-001412	C129	C-CER,CHIP	SA
2203-005057	C117	C-CER,CHIP	SA
2203-005057	C118	C-CER,CHIP	SA
2203-005065	C168	C-CER,CHIP	SA
2203-005065	C170	C-CER,CHIP	SA
2203-005065	C171	C-CER,CHIP	SA
2203-005065	C173	C-CER,CHIP	SA
2203-005234	C102	C-CER,CHIP	SA
2203-005249	C188	C-CER,CHIP	SA
2203-005482	C112	C-CER,CHIP	SA
2203-005482	C124	C-CER,CHIP	SA
2203-005482	C139	C-CER,CHIP	SA
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2203-005482	C155	C-CER,CHIP	SA
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2203-005482	C178	C-CER,CHIP	SA
2203-005482	C180	C-CER,CHIP	SA
2203-005482	C183	C-CER,CHIP	SA
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2203-005482	C204	C-CER,CHIP	SA
2203-005482	C205	C-CER,CHIP	SA
2203-005482	C206	C-CER,CHIP	SA
2203-005482	C212	C-CER,CHIP	SA
2203-005482	C214	C-CER,CHIP	SA
2203-005482	C219	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2203-005482	C220	C-CER,CHIP	SA
2203-005482	C224	C-CER,CHIP	SA
2203-005482	C301	C-CER,CHIP	SA
2203-005482	C316	C-CER,CHIP	SA
2203-005482	C322	C-CER,CHIP	SA
2203-005682	C125	C-CER,CHIP	SA
2203-006047	C123	C-CER,CHIP	SA
2203-006048	C133	C-CER,CHIP	SA
2203-006137	C179	C-CER,CHIP	SA
2203-006137	C203	C-CER,CHIP	SA
2203-006137	C308	C-CER,CHIP	SA
2203-006257	C313	C-CER,CHIP	SA
2203-006260	C121	C-CER,CHIP	SA
2203-006260	C210	C-CER,CHIP	SA
2203-006260	C216	C-CER,CHIP	SA
2203-006324	C162	C-CER,CHIP	SA
2203-006361	C111	C-CER,CHIP	SA
2203-006361	C186	C-CER,CHIP	SA
2203-006361	C335	C-CER,CHIP	SA
2203-006556	C119	C-CER,CHIP	SA
2203-006562	C182	C-CER,CHIP	SA
2203-006562	C227	C-CER,CHIP	SA
2203-006562	C228	C-CER,CHIP	SA
2203-006562	C229	C-CER,CHIP	SA
2203-006626	C151	C-CER,CHIP	SA
2203-006626	C226	C-CER,CHIP	SA
2203-006626	C230	C-CER,CHIP	SA
2203-006626	C304	C-CER,CHIP	SA
2203-006626	C310	C-CER,CHIP	SA
2203-006708	C163	C-CER,CHIP	SA
2203-006708	C172	C-CER,CHIP	SA
2203-006708	C174	C-CER,CHIP	SA
2203-006708	C177	C-CER,CHIP	SA
2203-006824	C314	C-CER,CHIP	SA
2203-006978	C339	C-CER,CHIP	SA
2404-001352	TA303	C-TA,CHIP	SA
2404-001393	TA301	C-TA,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2404-001393	TA302	C-TA,CHIP	SA
2404-001406	TA300	C-TA,CHIP	SA
2703-001236	L112	INDUCTOR-SMD	SA
2703-001737	L100	INDUCTOR-SMD	SA
2703-001737	L111	INDUCTOR-SMD	SA
2703-001752	L101	INDUCTOR-SMD	SA
2703-002205	L103	INDUCTOR-SMD	SA
2703-002484	L105	INDUCTOR-SMD	SA
2703-002593	L104	INDUCTOR-SMD	SA
2801-003856	OSC200	CRYSTAL-SMD	SA
2801-004587	OSC101	CRYSTAL-SMD	SA
2901-001296	F200	FILTER-EMI SMD	SA
2901-001296	F201	FILTER-EMI SMD	SA
2901-001296	F202	FILTER-EMI SMD	SA
2904-001592	F101	FILTER-SAW	SA
2904-001599	F102	FILTER-SAW	SA
3301-001342	L110	BEAD-SMD	SA
3301-001342	L200	BEAD-SMD	SA
3705-001358	RFS100	CONNECTOR-COAXIAL	SA
3709-001384	SIM103	CONNECTOR-CARD EDGE	SA
3711-005954	HDC200	HEADER-BOARD TO BOARD	SA
3711-006228	BTC301	HEADER-BATTERY	SA
3722-002067	EAR300	JACK-EAR PHONE	SA
3722-002433	DCJ301	JACK-DC POWER	SA
GH09-00039A	UCP200	IC MICOM	SA
GH71-04813A	ANT	NPR-ANTENNA CONTACT	SA
GH71-04813A	GND	NPR-ANTENNA CONTACT	SA

8. Reference data

8-1. Reference Abbreviate

AAC: Advanced Audio Coding.

AVC : Advanced Video Coding.

BER : Bit Error Rate

BPSK: Binary Phase Shift Keying

CA : Conditional Access

CDM : Code Division Multiplexing

C/I : Carrier to Interference

DMB : Digital Multimedia Broadcasting

EN : European Standard

ES : Elementary Stream

ETSI: European Telecommunications Standards Institute

MPEG: Moving Picture Experts Group

PN : Pseudo-random Noise

PS : Pilot Symbol

QPSK: Quadrature Phase Shift Keying

RS : Reed-Solomon

SI : Service Information

TDM : Time Division Multiplexing

TS : Transport Stream

9. Safety Precautions

9-1. Repair Precaution

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

9-2. ESD(Electrostatically Sensitive Devices) Precaution

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

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

10. Product Function

Main Function

- Network services
- Read SMS messages
- Voicemail
- Broadcast message
- Web browser
- Access media files
- Funbox memory status
- Calendar, Calculator, Task list, Voice memo, etc...
- Speed dial
- SDN (Service Dialling Numbers)

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