

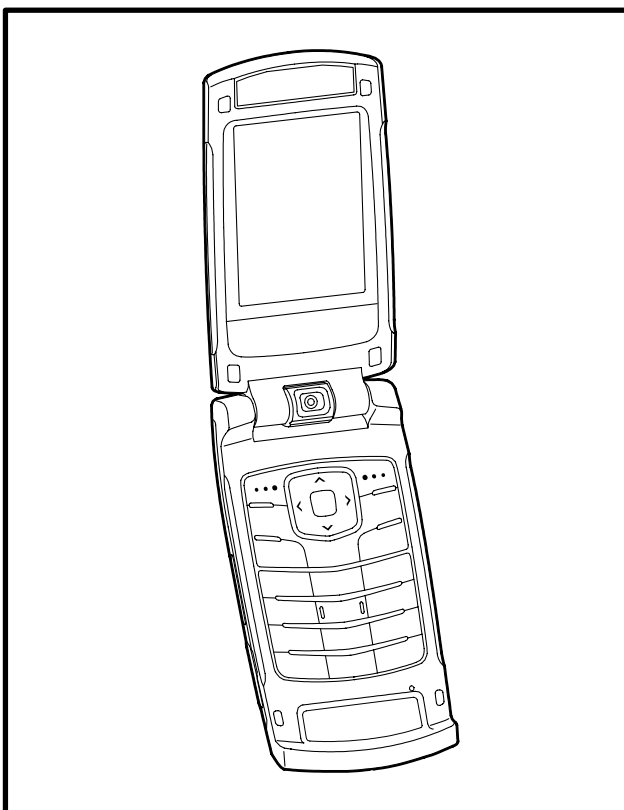
SAMSUNG

GSM TELEPHONE

SGH-Z620

SERVICE *Manual*

GSM TELEPHONE



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**SAMSUNG
ELECTRONICS**



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10. Reference data

1. Safety Precautions

1-1. Repair Precaution

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

1-2. ESD(Electrostatically Sensitive Devices) Precaution

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

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

2. Specification

2-1. GSM/WCDMA General Specification

	EGSM 900 Phase 2	DCS1800 Phase 1	PCS1900	WCDMA
Freq. Band[MHz] Uplink/Downlink	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990	1920~1980 2110~2170
ARFCN range	0~124 & 975~1023	512~885	512~810	10562~10838
Tx/Rx spacing	45 MHz	95 MHz	80 MHz	190 MHz
Mod. Bit rate/ Bit Period	270.833 kbps 3.692 us	270.833 kbps 3.692 us	270.833 kbps 3.692 us	3.84 Mcps/s
Time Slot Period/Frame Period	576.9 us 4.615 ms	576.9 us 4.615 ms	576.9 us 4.615 ms	10 ms
Modulation	0.3 GMSK	0.3 GMSK	0.3 GMSK	UL:2BPSK DL:QPSK
MS Power	33 dBm~5 dBm	30 dBm~0 dBm	30 dBm~0 dBm	MAX:24(+1,-3) dBm MIN:<-50 dBm
Power Class	5 pcl ~ 19 pcl	0 pcl ~ 15 pcl	0 pcl ~ 15 pcl	CLASS3
Sensitivity	-102 dBm	-100 dBm	-100 dBm	-106.7 dBm
TDMA Mux	8	8	8	-
Cell Radius	35 Km	2 Km	-	-

2-2. GSM TX power class

TX Power control level	EGSM900	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± 3dBm	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

3. Product Function

Main Function

- Camera and camcorder
- Music player
- Bluetooth
- Web browser
- File viewer
- Java
- Multimedia Message Service(MMS)
- E-mail

4. Array course control



Test Jig (GH80-03308A)



Test Cable (GH39-00478A)

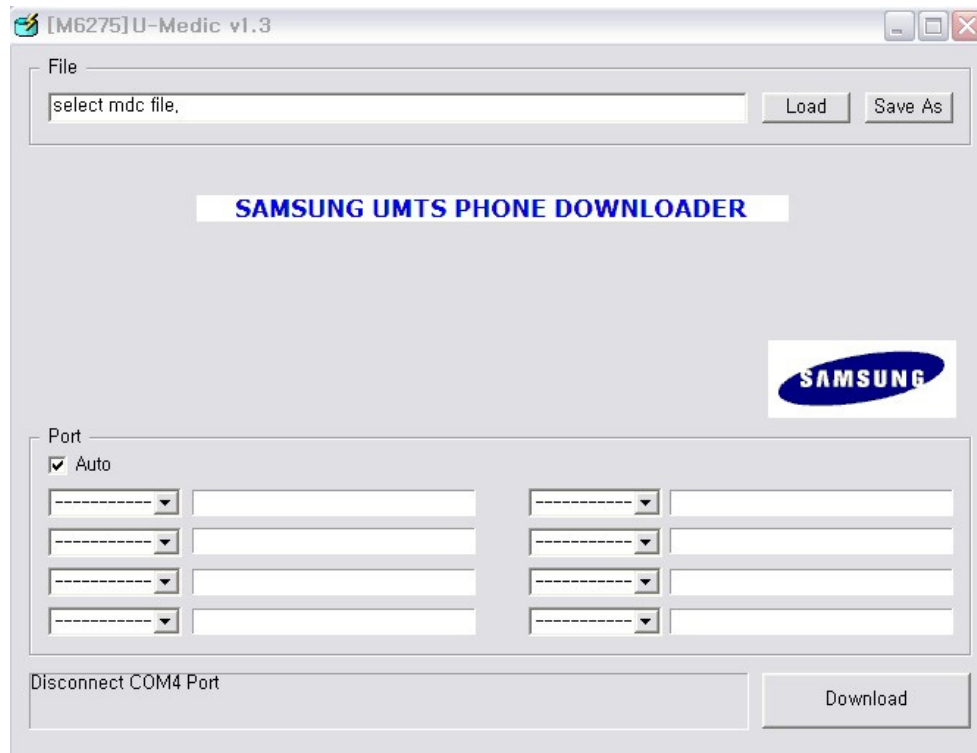


RF Test Cable (GH39-00397A)

4.1 Downloading Binaries.

Start the Downloader application.

You can get the downloader program from binary zip file. Unzip the file and move to the \tools\downloader directory. You will see below if run the [M6275]U-Medic v1.3_SVC.exe file.



Please follow the order. The detailed fact is explained below. (store the user data using PC-Studio3 if necessary)

1. Load the Z620.mdc file.
2. Connect the Mobile Handset to the PC via USB port.
3. Download.

First, click the 'Load' button to select "Z620.mdc" file. The mdc file is located in the \tools\downloader directory. And then Connect the Mobile Handset to the PC via USB port. Press power button with red color and button captioned 4 to put the mobile into download mode. To verify that the mobile is put into download mode, just check the front LCD screen of the mobile. (USB DOWNLOAD SAMSUNG UMTS)

Once the mobile is detected/sensed by the Downloader Application, the appropriate Mobile Entry will be enabled in the application screen. Optionally Port Search button could be pressed to detect/sense the mobile.

Port

☒ Auto

COM4 Ready...

Detect COM4 Port

Download

Press 'Download' Button to proceed. After successful completion of download, a message saying Download Completed will be flashed.

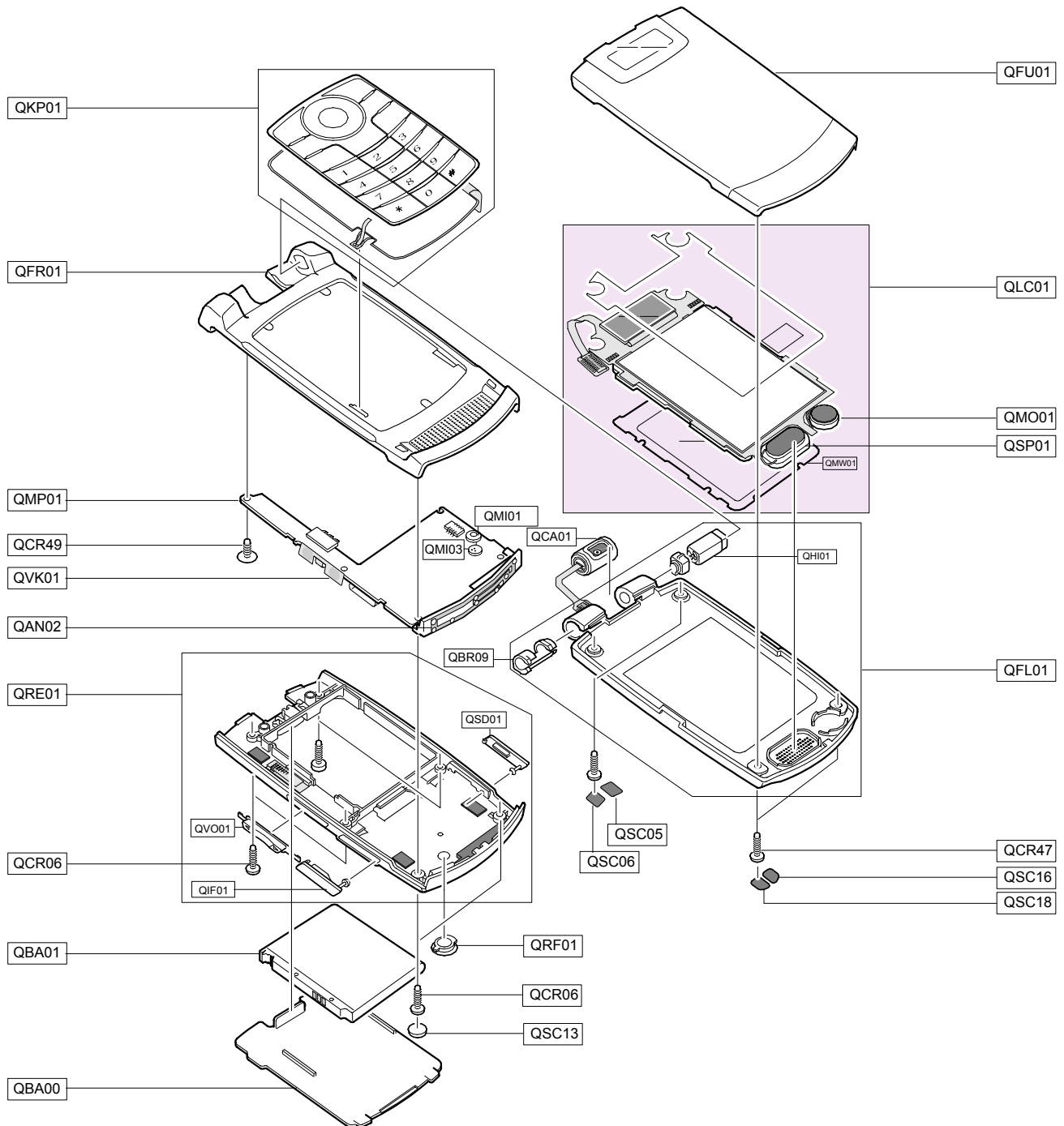
Please try to download again if you will see the "ERROR : Download Fail" popup. We need to download twice when the Boot and Resource code is changed. This is for preventing a wrong operation.

Warning:-

Incorrect download of binary file may lead to incorrect operation of the mobile, or the mobile may not operate at all.

5. Exploded View and Parts List

5-1. Cellular phone Exploded View

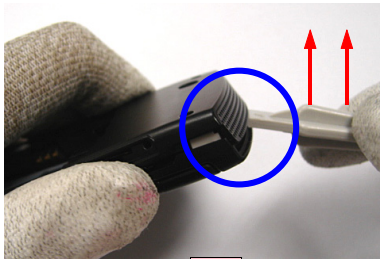
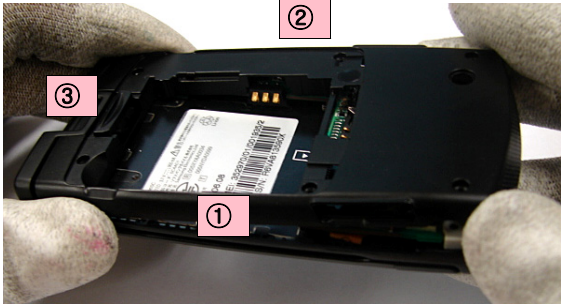
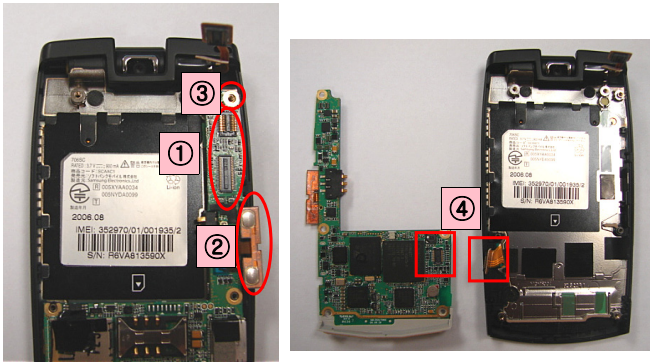
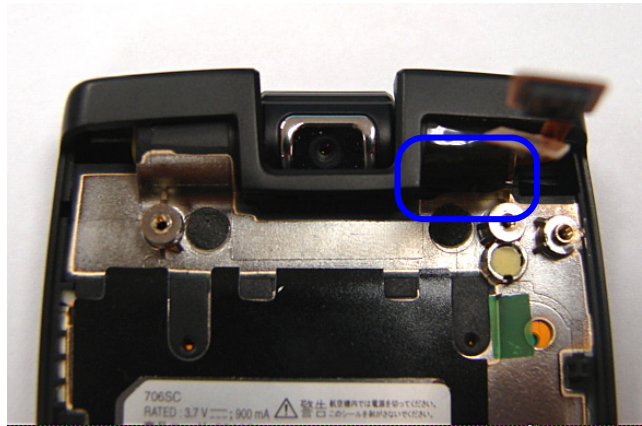


5-2. Cellular phone Parts list

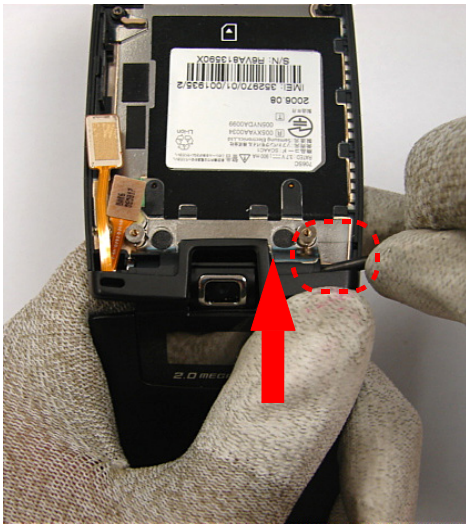
Design LOC		Discription	SEC CODE
QAN02		INTENNA-SGHZ620	GH42-00849A
QBA00		ASSY COVER-BATT	GH98-02985A
QBA01		INNER BATTERY PACK-900MAH	GH43-02398A
QBR09		NDC-HINGE BRACKET	GH71-06431A
QCA01		UNIT-CAMERA	GH59-03288A
QCR06		SCREW-MACHINE	6001-001155
QCR47		SCREW-MACHINE	6001-001695
QCR49		SCREW-MACHINE	6001-001823
QFR01		ASSY CASE-FRONT	GH98-02959A
QFU01		ASSY CASE-F/UPPER	GH98-02791A
QKP01		ASSY KEYPAD-(TIM/BLK)	GH98-02790A
QMI01		MICROPHONE-ASSY-SGHD830	GH30-00278A
QMI03		RMO-RUBBER MIC HOLDER	GH73-07110A
QMO01		MOTOR DC-SGHZ620	GH31-00265A
QMP01		PBA MAIN-SGHZ620	GH92-02732A
QRF01		PMO-RUBBER RF COVER	GH72-30630A
QSC05		MPR-FOLDER SCREW SHEET A	GH74-22971A
QSC06		MPR-FOLDER SCREW SHEET B	GH74-22972A
QSC13		RMO-RUBBER REAR SCREW COVER	GH73-07752A
QSC16		MPR-TAPE F/TOP SCREW A	GH74-27733A
QSC18		MPR-TAPE F/TOP SCREW B	GH74-27734A
QSP01		SPEAKER	3001-002015
QVK01		UNIT-VOLUME KEY	GH59-03219A
QRE01		ASSY-CASE-REAR	GH98-00901A
	QIF01	PMO-COVER IF	GH72-30626A
	QSD01	PMO-COVER MICRO SD	GH72-30628A
	QVO01	PMO-VOLUME KEY	GH72-30629A
QFL01		ASSY-CASE-F/LOWER	GH98-00898A
	QHI01	ASSY-HINGE	GH98-00899A
QLC01		MEA-LCD MODULE KIT	GH97-06596A
	QMW01	AS-LCD WINDOW	GH81-04515A

Discription	SEC CODE
BAG PE	6902-000297
CBF INTERFACE-DATA LINK CABLE	GH39-00444A
ADAPTOR-SGHD800 TA(EU)	GH44-01060A
S/W CD-SGHZ620 PC STUDIO 3.0	GH46-00328A
UNIT-EARPHONE(BLK)	GH59-02499A
LABEL(P)-WATER SOAK	GH68-02026A
LABEL(P)-WATER SOAK	GH68-02026A
LABEL(R)-MASTER TIM	GH68-11408B
MANUAL USERS-TIM TALIAN	GH68-11875A
LABEL(P)-BASE FRONT LABEL	GH68-12049A
LABEL(R)-MAIN(TIM)	GH68-12061A
BOX(P)-UNIT MAIN(TIM)	GH69-04317A
CUSHION-CASE TA2 MA2	GH69-04584A
RMO-RUBBER YAMAHA	GH73-07659A
MPR-BOHO VINYL LCD CONN	GH74-15350A
MPR-VINYL BOHO F/UPPER B	GH74-25093A
MPR-VINYL BOHO MAIN WIN A	GH74-25095A
MPR-TAPE DUST PREVENTION	GH74-25103A
MPR-TAPE KEY TAIL	GH74-25104A
MPR-GASK TAPE	GH74-25105A
MPR-TAPE GASKET IF	GH74-25107A
MPR-TAPE ESD LCD MODULE	GH74-25846A
MPR-INSU TAPE PBA VOLKEY	GH74-26674A
MPR-INSU TAPE PBA SD	GH74-27338A
MPR-INSU TAPE PBA IF	GH74-27375A
MPR-TAPE	GH74-27595A
MPR-TAPE	GH74-27596A
MPR-TAPE KEYPAD PREVENTION	GH74-27820A
MPR-VINYL BOHO STATIC	GH74-28052B
MPR-TAPE KEYPAD R	GH74-28054A
AS-LCD TAPE	GH81-05256A
AS-IC-MCP UMTS	GH81-05912A

5-3. Disassembly

1 	2  
1) Remove 6Screws on Rear Case. 2) Open the IF COVER. 3) Open the MICRO SD COVER. * caution 1) Be careful not to get a damage.	1) Lift the hook at the end of the lower case with an instrument and disassemble the Rear Cover like the sequence below. * caution 1) Be careful not to get a damage of Rear Case.
3 	4 
1) Detach the LCD,CAMERA conn. 2) Detach the Vol Key FPCB with tweezers 3) Remove the screw on PBA. 4) Remove the Keypad. * caution 1) Be careful not to get a damage of FPCB when Detaching LCD conn, CAM conn, and VOLUME KEY FPCB.	1) Remove the dust prevention tape. * caution 1) Pay attention to damage of the LCD,CAM conn.

5

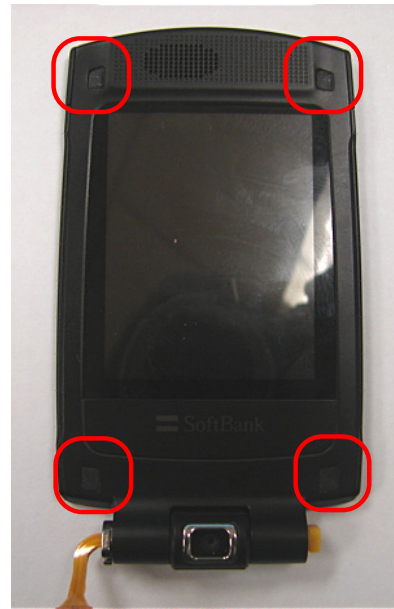


- 1) Disassemble the Front Cover from front case by Pushing out the hinge spring.
- 2) Please refer to the Picture below.

※ **caution**

- 1) Be careful not to get a damage.
- 2) Pay attention to the damage of the LCD,CAM conn.

6

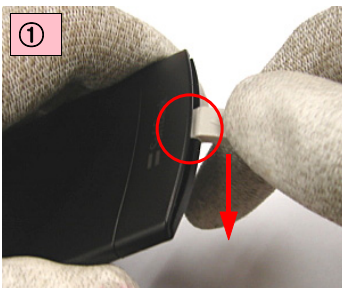


- 1) Remove the SCREW CAP.
- 2) UNSCREW 4 Points.

※ **caution**

- 1) When you use a screwdriver, Be careful of the damage of component.

7

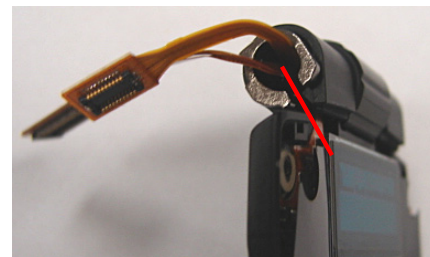


- 1) Disassemble the Upper Case of the folder with an instrument like below.

※ **caution**

- 1) Be careful not to get a damage.

8

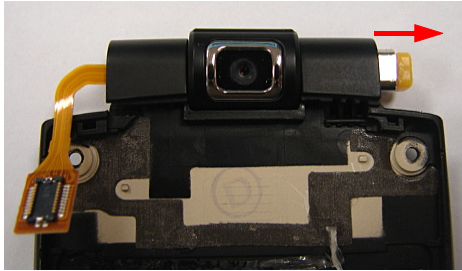
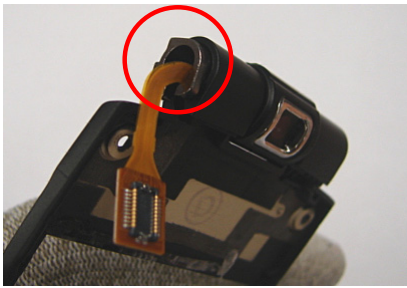


- 1) Separate the MOT & SPK with tweezers.
- 2) Remove the LCD from the LOWER case (Holding the direction of hinge bracket like below)

※ **caution**

- 1) When you remove the LCD. Be careful of the crack and damage of the LCD & LCD FPCB

9



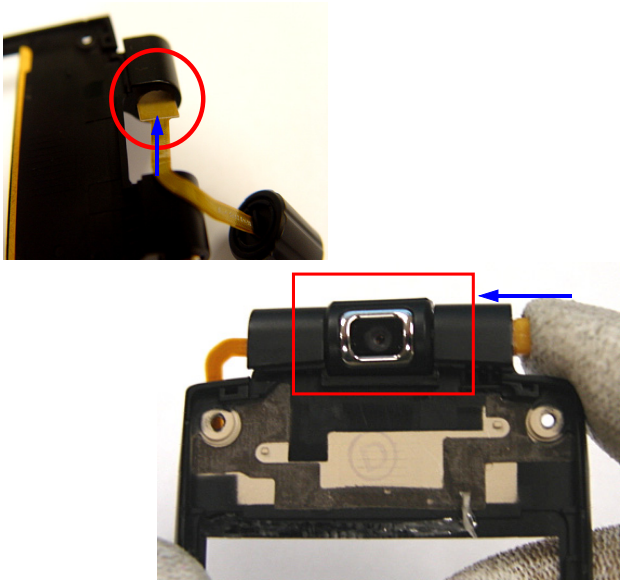
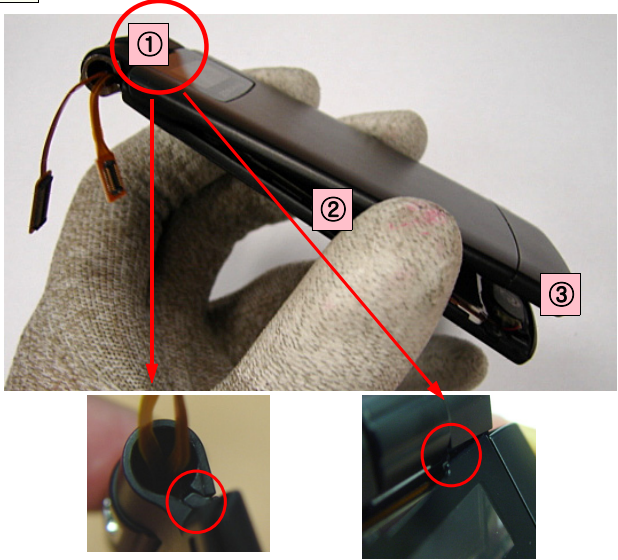
- 1) Remove the Hinge Bracket with tweezers.
 - 2) In order to detach the CAM, Remove the Hinge like below
- * caution**
- 1) Be careful of the crack and damage of the CAM FPCB

10

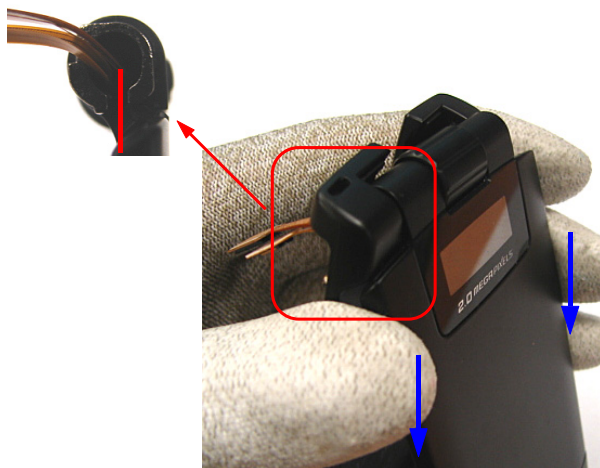


- 1) Please check the disassembled part.

5-4. Assembly

1  1) Insert CAM FPCB in the LOWER like below. 2) Insert Hinge like below Please refer to the Picture below. ※ caution 1) Be careful CAM FPCB Crack.	2  1) Insert LCD FPCB keeping up the lower direction of Hinge Bracket 2) Place the SPK & MOTOR. 3) Place the LCD. ※ caution 1) When you insert the LCD FPCB, Pay attention to damage of the FPCB 2) Be careful of SPK & MOTOR wire crack
3  1) Combine the UPPER & Lower Please refer to the sequence below. ※ caution 1) Be careful not to get a damage of outward	4  1) SCREW the 4 POINTs. ※ caution 1) When you use a screwdriver, Be careful of the damage of component.

5



- 1) Combine the Folder and Front case like the picture below.(Keeping up the lower direction of hinge bracket and Folder position.)

※ **caution**

- 1) Be careful not to get a damage.
- 2) Be careful of the crack and damage of LCD, LCD Conn.
- 3) Absolutely Keep up the picture's direction of Folder

6

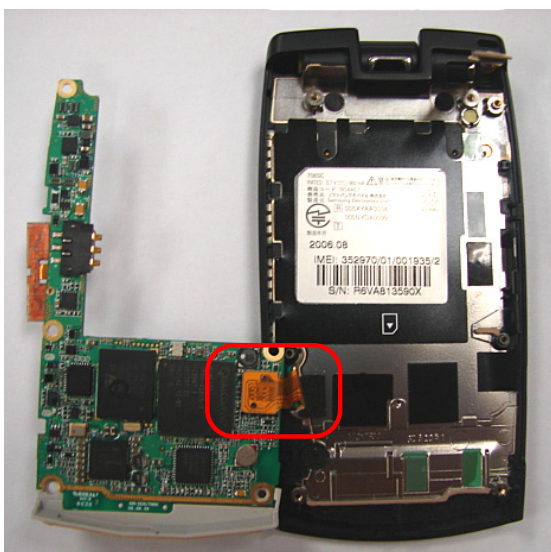


- 1) Keeping up the FOLDER's direction, Combine the Folder with a instrument.

※ **caution**

- 1) Be careful not to get a damage.
- 2) Absolutely Keep up the picture's direction of Folder

7



- 1) Combine the KEY FPCB Conn.

※ **caution**

- 1) Be careful not to get a damage of KEY FPCB

8

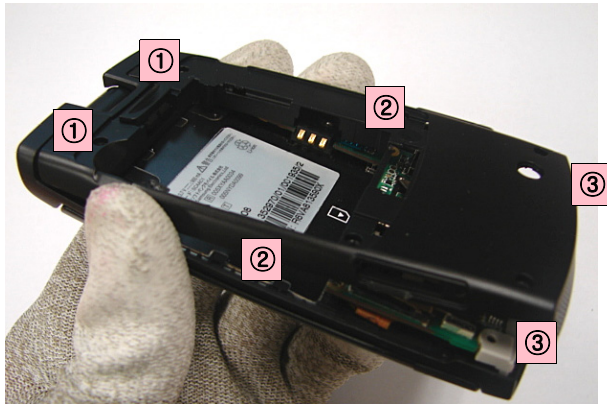


- 1) Screw down
- 2) Connect CAMERA,LCD Conn.and VOLUME KEY FPCB

※ **caution**

- 1) Be careful not to get a damage of CAMERA,LCD FPCB and VOLUME KEY FPCB.

9



1) Assemble the REAR with FRONT ASS'Y like below sequence.

※ **caution**

1) Be careful not to get a damage.

10



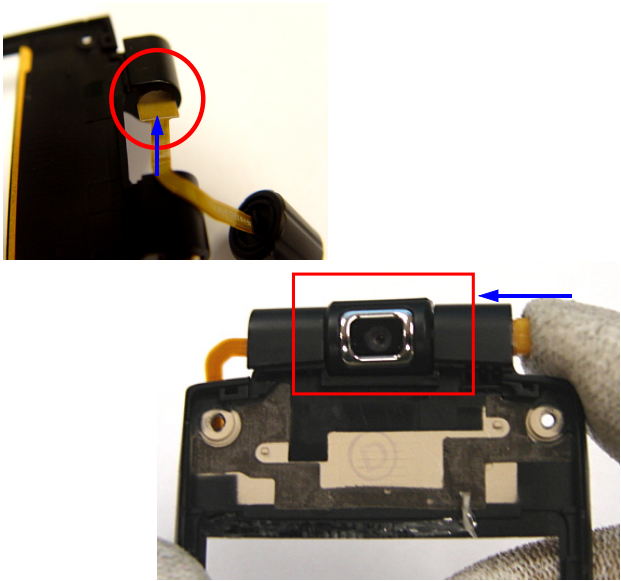
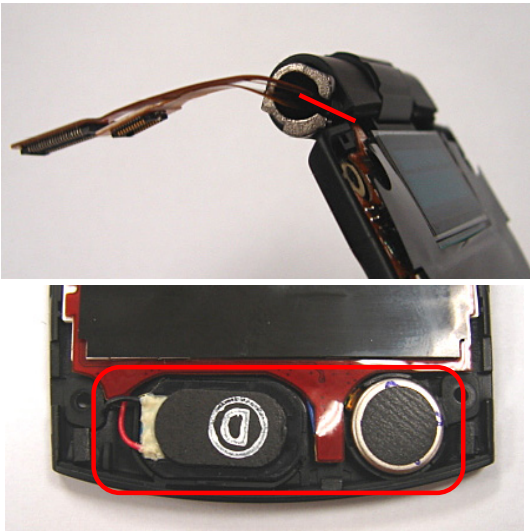
1) SCREW the 6 POINTs.

2) Insert SCREW Cap at two points

※ **caution**

2) Pay attention to damage of the LCD con FPCB.

5-5. LCD KIT

1 	2 
1) Attach the gasket on the LCD Conn. * caution 1) Attach the gasket according to red line like a picture.	1) Attach the black insulation tape on the LCD * caution 1) Be careful of the red lines.

6. MAIN Electrical Parts List

SEC CODE	Design LOC	Discription	STATUS
0403-001511	ZD400	DIODE-ZENER	SA
0403-001547	D504	DIODE-ZENER	SA
0404-001172	D100	DIODE-SCHOTTKY	SA
0404-001172	D101	DIODE-SCHOTTKY	SA
0404-001172	D102	DIODE-SCHOTTKY	SA
0404-001172	D502	DIODE-SCHOTTKY	SA
0406-001208	ZD202	DIODE-TVS	SA
0406-001223	ZD200	DIODE-TVS	SA
0406-001223	ZD201	DIODE-TVS	SA
0406-001254	ZD203	DIODE-TVS	SA
0406-001254	ZD204	DIODE-TVS	SA
0406-001254	ZD205	DIODE-TVS	SA
0406-001254	ZD206	DIODE-TVS	SA
0406-001254	ZD207	DIODE-TVS	SA
0406-001254	ZD208	DIODE-TVS	SA
0406-001254	ZD209	DIODE-TVS	SA
0406-001254	ZD210	DIODE-TVS	SA
0406-001254	ZD211	DIODE-TVS	SA
0406-001254	ZD212	DIODE-TVS	SA
0406-001254	ZD213	DIODE-TVS	SA
0406-001254	ZD214	DIODE-TVS	SA
0406-001254	ZD215	DIODE-TVS	SA
0406-001254	ZD216	DIODE-TVS	SA
0406-001254	ZD217	DIODE-TVS	SA
0406-001254	ZD218	DIODE-TVS	SA
0406-001254	ZD219	DIODE-TVS	SA
0501-002039	TR401	TR-SMALL SIGNAL	SA
0504-001113	TR100	TR-DIGITAL	SA
0504-001113	TR500	TR-DIGITAL	SA
0505-001518	TR200	FET-SILICON	SA
0505-001889	U506	FET-SILICON	SA
0801-002995	U402	IC-CMOS LOGIC	SA
1001-001354	U302	IC-ANALOG SWITCH	SA
1001-001410	U303	IC-ANALOG SWITCH	SA
1003-001395	U403	IC-EL DRIVER	SA
1006-001322	U102	IC-LINE TRANSCEIVER	SA
1108-000071	UME400	IC-MCP	SA

SEC CODE	Design LOC	Discription	STATUS
1201-002304	U304	IC-AUDIO AMP	SA
1201-002426	PAM700	IC-POWER AMP	SA
1203-003532	U201	IC-POSI.FIXED REG.	SA
1203-003532	U301	IC-POSI.FIXED REG.	SA
1203-003674	U404	IC-DC/DC CONVERTER	SA
1203-003728	U505	IC-VOL. DETECTOR	SA
1203-003737	U502	IC-POSI.FIXED REG.	SA
1203-003742	U401	IC-BATTERY	SA
1203-003768	U507	IC-POSI.FIXED REG.	SA
1203-003769	U504	IC-POSI.FIXED REG.	SNA
1203-004102	U501	IC-POWER SUPERVISOR	SA
1203-004362	U200	IC-MULTI REG.	SA
1204-002138	U300	IC-MELODY	SA
1205-002568	U503	IC-SWITCH	SA
1205-002645	U600	IC-TRANSCIEVER	SA
1205-002781	U700	IC-RECEIVER	SA
1205-002790	UCP100	IC-MODEM	SA
1404-001224	U101	THERMISTOR-NTC	SA
1405-001082	VR217	VARISTOR	SA
1405-001082	VR218	VARISTOR	SA
1405-001082	VR219	VARISTOR	SA
1405-001082	VR220	VARISTOR	SA
1405-001082	VR226	VARISTOR	SA
1405-001082	VR227	VARISTOR	SA
1405-001082	VR229	VARISTOR	SA
1405-001082	VR300	VARISTOR	SA
1405-001082	VR301	VARISTOR	SA
1405-001110	VR225	VARISTOR	SA
1405-001138	VR230	VARISTOR	SA
1405-001138	VR231	VARISTOR	SA
2007-000138	R610	R-CHIP	SA
2007-000141	R217	R-CHIP	SA
2007-000145	R615	R-CHIP	SA
2007-000148	R305	R-CHIP	SA
2007-000148	R306	R-CHIP	SA
2007-000148	R504	R-CHIP	SA
2007-000154	R403	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2007-000156	R402	R-CHIP	SA
2007-000161	R407	R-CHIP	SA
2007-000162	R242	R-CHIP	SA
2007-000162	R507	R-CHIP	SA
2007-000164	R410	R-CHIP	SA
2007-000169	R413	R-CHIP	SA
2007-000171	R243	R-CHIP	SA
2007-000171	R310	R-CHIP	SA
2007-000171	R607	R-CHIP	SA
2007-000171	R710	R-CHIP	SA
2007-000171	R805	R-CHIP	SA
2007-000172	R129	R-CHIP	SA
2007-000172	R132	R-CHIP	SA
2007-000242	R301	R-CHIP	SA
2007-000242	R304	R-CHIP	SA
2007-000690	R406	R-CHIP	SA
2007-000775	R412	R-CHIP	SA
2007-001119	R202	R-CHIP	SA
2007-001292	R611	R-CHIP	SA
2007-007136	R600	R-CHIP	SA
2007-007316	R612	R-CHIP	SA
2007-007318	R106	R-CHIP	SA
2007-007318	R604	R-CHIP	SA
2007-007468	R506	R-CHIP	SA
2007-007491	R603	R-CHIP	SA
2007-007491	R703	R-CHIP	SA
2007-007528	R213	R-CHIP	SA
2007-007528	R701	R-CHIP	SA
2007-007741	R502	R-CHIP	SA
2007-007766	R107	R-CHIP	SA
2007-008040	R203	R-CHIP	SA
2007-008040	R204	R-CHIP	SA
2007-008040	R205	R-CHIP	SA
2007-008040	R206	R-CHIP	SA
2007-008040	R207	R-CHIP	SA
2007-008040	R208	R-CHIP	SA
2007-008040	R209	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
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2007-008040	R211	R-CHIP	SA
2007-008040	R212	R-CHIP	SA
2007-008040	R214	R-CHIP	SA
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2007-008040	R218	R-CHIP	SA
2007-008040	R219	R-CHIP	SA
2007-008045	R235	R-CHIP	SA
2007-008045	R237	R-CHIP	SA
2007-008045	R508	R-CHIP	SA
2007-008045	R602	R-CHIP	SA
2007-008045	R616	R-CHIP	SA
2007-008045	R619	R-CHIP	SA
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2007-008052	R315	R-CHIP	SA
2007-008054	R130	R-CHIP	SA
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2007-008055	R221	R-CHIP	SA
2007-008055	R241	R-CHIP	SA
2007-008055	R512	R-CHIP	SA
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2007-008401	R409	R-CHIP	SA
2007-008419	R127	R-CHIP	SA
2007-008419	R223	R-CHIP	SA
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2007-008419	R226	R-CHIP	SA
2007-008419	R229	R-CHIP	SA
2007-008419	R240	R-CHIP	SA
2007-008420	R609	R-CHIP	SA
2007-008478	R120	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
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2007-008483	R101	R-CHIP	SA
2007-008483	R103	R-CHIP	SA
2007-008483	R123	R-CHIP	SA
2007-008483	R245	R-CHIP	SA
2007-008483	R309	R-CHIP	SA
2007-008483	R405	R-CHIP	SA
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2007-008483	R501	R-CHIP	SA
2007-008483	R511	R-CHIP	SA
2007-008483	R804	R-CHIP	SA
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2007-008516	R113	R-CHIP	SA
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2007-008516	R404	R-CHIP	SA
2007-008516	R500	R-CHIP	SA
2007-008531	R109	R-CHIP	SA
2007-008531	R110	R-CHIP	SA
2007-008531	R705	R-CHIP	SA
2007-008531	R706	R-CHIP	SA
2007-008542	R112	R-CHIP	SA
2007-008542	R124	R-CHIP	SA
2007-008542	R125	R-CHIP	SA
2007-008542	R230	R-CHIP	SA
2007-008542	R233	R-CHIP	SA
2007-008542	R236	R-CHIP	SA
2007-008542	R244	R-CHIP	SA
2007-008542	R307	R-CHIP	SA
2007-008542	R308	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
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2007-008542	R408	R-CHIP	SA
2007-008542	R618	R-CHIP	SA
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2007-008542	R621	R-CHIP	SA
2007-008542	R708	R-CHIP	SA
2007-008544	R300	R-CHIP	SA
2007-008579	R613	R-CHIP	SA
2007-008579	R614	R-CHIP	SA
2007-008581	R605	R-CHIP	SNA
2007-008581	R606	R-CHIP	SNA
2007-008588	R302	R-CHIP	SA
2007-008647	R239	R-CHIP	SA
2007-008785	R608	R-CHIP	SNA
2007-008798	R510	R-CHIP	SNA
2007-008806	R505	R-CHIP	SA
2007-008806	R617	R-CHIP	SA
2007-008964	R104	R-CHIP	SA
2007-008964	R105	R-CHIP	SA
2007-009111	R231	R-CHIP	SA
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2007-009166	R131	R-CHIP	SA
2007-009170	R108	R-CHIP	SA
2007-009170	R114	R-CHIP	SA
2007-009170	R222	R-CHIP	SA
2007-009170	R252	R-CHIP	SA
2007-009170	R253	R-CHIP	SA
2007-009171	R115	R-CHIP	SA
2007-009171	R116	R-CHIP	SA
2007-009171	R117	R-CHIP	SA
2007-009171	R118	R-CHIP	SA
2007-009171	R119	R-CHIP	SA
2007-009171	R509	R-CHIP	SA
2007-009194	R254	R-CHIP	SNA
2007-009223	R250	R-CHIP	SA
2007-009233	R400	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
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2203-000278	C706	C-CER,CHIP	SA
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2203-000359	C503	C-CER,CHIP	SA
2203-000386	C325	C-CER,CHIP	SA
2203-000386	C328	C-CER,CHIP	SA
2203-000438	C208	C-CER,CHIP	SA
2203-000438	C226	C-CER,CHIP	SA
2203-000438	C402	C-CER,CHIP	SA
2203-000489	C127	C-CER,CHIP	SA
2203-000627	C736	C-CER,CHIP	SNA
2203-000696	C633	C-CER,CHIP	SA
2203-000812	C204	C-CER,CHIP	SA
2203-000812	C207	C-CER,CHIP	SA
2203-000812	C209	C-CER,CHIP	SA
2203-000812	C225	C-CER,CHIP	SA
2203-000812	C318	C-CER,CHIP	SA
2203-000812	C731	C-CER,CHIP	SA
2203-000836	C624	C-CER,CHIP	SA
2203-000854	C314	C-CER,CHIP	SA
2203-000854	C315	C-CER,CHIP	SA
2203-000995	C221	C-CER,CHIP	SA
2203-001033	C412	C-CER,CHIP	SA
2203-001072	C732	C-CER,CHIP	SA
2203-001124	C724	C-CER,CHIP	DNA
2203-001405	C206	C-CER,CHIP	SA
2203-002443	C619	C-CER,CHIP	SA
2203-005053	C715	C-CER,CHIP	SA
2203-005053	C722	C-CER,CHIP	SA
2203-005056	C739	C-CER,CHIP	SA
2203-005234	C723	C-CER,CHIP	SA
2203-005234	C740	C-CER,CHIP	SA
2203-005288	C737	C-CER,CHIP	SA
2203-005288	C801	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2203-005288	C802	C-CER,CHIP	SA
2203-005344	C309	C-CER,CHIP	SA
2203-005344	C310	C-CER,CHIP	SA
2203-005393	C604	C-CER,CHIP	SA
2203-005682	C210	C-CER,CHIP	SA
2203-005682	C238	C-CER,CHIP	SA
2203-005682	C539	C-CER,CHIP	SA
2203-005682	C540	C-CER,CHIP	SA
2203-005682	C541	C-CER,CHIP	SA
2203-005682	C607	C-CER,CHIP	SA
2203-005682	C617	C-CER,CHIP	SA
2203-005682	C703	C-CER,CHIP	SA
2203-005682	C708	C-CER,CHIP	SA
2203-005682	C734	C-CER,CHIP	SA
2203-005682	C800	C-CER,CHIP	SA
2203-005682	C804	C-CER,CHIP	SA
2203-005682	C805	C-CER,CHIP	SA
2203-005682	C806	C-CER,CHIP	SA
2203-005682	C807	C-CER,CHIP	SA
2203-005729	C125	C-CER,CHIP	SA
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2203-005729	C605	C-CER,CHIP	SA
2203-005729	C630	C-CER,CHIP	SA
2203-005729	C632	C-CER,CHIP	SA
2203-005729	C738	C-CER,CHIP	SA
2203-005731	C517	C-CER,CHIP	SA
2203-005731	C518	C-CER,CHIP	SA
2203-005732	C538	C-CER,CHIP	SA
2203-005732	C700	C-CER,CHIP	SA
2203-005736	C507	C-CER,CHIP	SA
2203-005736	C629	C-CER,CHIP	SA
2203-005736	C711	C-CER,CHIP	SA
2203-005736	C713	C-CER,CHIP	SA
2203-005736	C716	C-CER,CHIP	SA
2203-005736	C718	C-CER,CHIP	SA
2203-005736	C726	C-CER,CHIP	SA
2203-005736	C728	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
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2203-005777	C626	C-CER,CHIP	SA
2203-005806	C100	C-CER,CHIP	SNA
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2203-005806	C119	C-CER,CHIP	SNA
2203-005806	C302	C-CER,CHIP	SNA
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2203-005806	C312	C-CER,CHIP	SNA
2203-005806	C320	C-CER,CHIP	SNA
2203-005806	C406	C-CER,CHIP	SNA
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2203-005806	C714	C-CER,CHIP	SNA
2203-005806	C741	C-CER,CHIP	SNA
2203-005808	C603	C-CER,CHIP	SA
2203-005808	C606	C-CER,CHIP	SA
2203-005808	C608	C-CER,CHIP	SA
2203-005808	C620	C-CER,CHIP	SA
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2203-006048	C201	C-CER,CHIP	SA
2203-006048	C229	C-CER,CHIP	SA
2203-006048	C230	C-CER,CHIP	SA
2203-006048	C305	C-CER,CHIP	SA
2203-006048	C306	C-CER,CHIP	SA
2203-006048	C308	C-CER,CHIP	SA
2203-006048	C321	C-CER,CHIP	SA
2203-006048	C324	C-CER,CHIP	SA
2203-006048	C411	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
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2203-006048	C504	C-CER,CHIP	SA
2203-006048	C522	C-CER,CHIP	SA
2203-006194	C122	C-CER,CHIP	SA
2203-006194	C145	C-CER,CHIP	SA
2203-006194	C218	C-CER,CHIP	SA
2203-006194	C223	C-CER,CHIP	SA
2203-006194	C409	C-CER,CHIP	SA
2203-006194	C520	C-CER,CHIP	SA
2203-006194	C704	C-CER,CHIP	SA
2203-006194	C705	C-CER,CHIP	SA
2203-006194	C729	C-CER,CHIP	SA
2203-006194	C814	C-CER,CHIP	SA
2203-006260	C205	C-CER,CHIP	SA
2203-006324	C110	C-CER,CHIP	SA
2203-006324	C222	C-CER,CHIP	SA
2203-006324	C237	C-CER,CHIP	SA
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2203-006324	C701	C-CER,CHIP	SA
2203-006324	C809	C-CER,CHIP	SA
2203-006324	C810	C-CER,CHIP	SA
2203-006324	C812	C-CER,CHIP	SA
2203-006348	C401	C-CER,CHIP	SA
2203-006348	C415	C-CER,CHIP	SA
2203-006348	C416	C-CER,CHIP	SA
2203-006348	C527	C-CER,CHIP	SA
2203-006379	C610	C-CER,CHIP	SA
2203-006423	C103	C-CER,CHIP	SA
2203-006423	C104	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
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2203-006423	C112	C-CER,CHIP	SA
2203-006423	C116	C-CER,CHIP	SA
2203-006423	C117	C-CER,CHIP	SA
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2203-006423	C717	C-CER,CHIP	SA
2203-006423	C719	C-CER,CHIP	SA
2203-006423	C720	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
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2203-006474	TA205	C-CER,CHIP	SA
2203-006556	C611	C-CER,CHIP	SA
2203-006556	C612	C-CER,CHIP	SA
2203-006562	C109	C-CER,CHIP	SA
2203-006562	C118	C-CER,CHIP	SA
2203-006562	C142	C-CER,CHIP	SA
2203-006562	C219	C-CER,CHIP	SA
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2203-006562	C417	C-CER,CHIP	SA
2203-006562	C418	C-CER,CHIP	SA
2203-006562	C505	C-CER,CHIP	SA
2203-006562	C506	C-CER,CHIP	SA
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2203-006562	C815	C-CER,CHIP	SA
2203-006617	C135	C-CER,CHIP	SA
2203-006617	C138	C-CER,CHIP	SA
2203-006648	C128	C-CER,CHIP	SA
2203-006648	C132	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
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2203-006648	C134	C-CER,CHIP	SA
2203-006648	C730	C-CER,CHIP	SA
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2203-006824	C510	C-CER,CHIP	SA
2203-006824	C511	C-CER,CHIP	SA
2203-006824	C514	C-CER,CHIP	SA
2203-006824	C516	C-CER,CHIP	SA
2203-006824	C521	C-CER,CHIP	SA
2203-006824	C526	C-CER,CHIP	SA
2203-006825	TA204	C-CER,CHIP	SA
2301-001200	C622	C-FILM,SMD-PPS	SA
2301-001213	C602	C-FILM,SMD-PPS	SA
2301-001735	C600	C-FILM,SMD	SA
2301-001807	C623	C-FILM,SMD	SA
2404-001348	TA201	C-TA,CHIP	SA
2404-001348	TA202	C-TA,CHIP	SA
2404-001352	TA300	C-TA,CHIP	SA
2404-001377	TA200	C-TA,CHIP	SA
2404-001381	TA301	C-TA,CHIP	SA
2404-001381	TA502	C-TA,CHIP	SA
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2404-001381	TA600	C-TA,CHIP	SA
2404-001396	TA206	C-TA,CHIP	SA
2404-001396	TA500	C-TA,CHIP	SA
2404-001406	TA203	C-TA,CHIP	SA
2404-001406	TA501	C-TA,CHIP	SA
2404-001474	TA700	C-TA,CHIP	SA
2703-001747	L804	INDUCTOR-SMD	SA
2703-001747	L806	INDUCTOR-SMD	SA
2703-001751	L807	INDUCTOR-SMD	SA
2703-001751	L809	INDUCTOR-SMD	SA
2703-001786	L801	INDUCTOR-SMD	SA
2703-001786	L803	INDUCTOR-SMD	SA
2703-001990	L805	INDUCTOR-SMD	SA
2703-002170	L810	INDUCTOR-SMD	SA
2703-002176	L703	INDUCTOR-SMD	SA

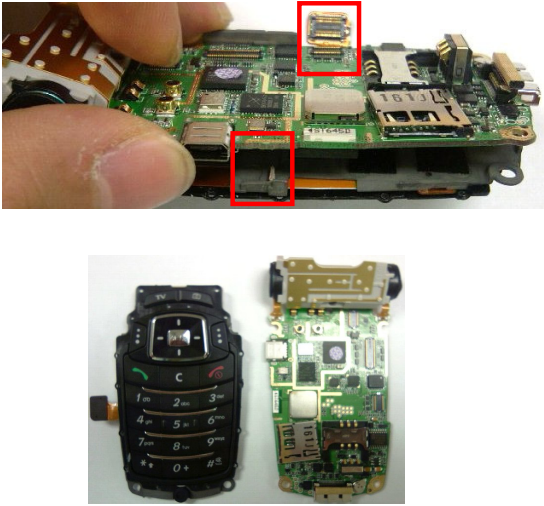
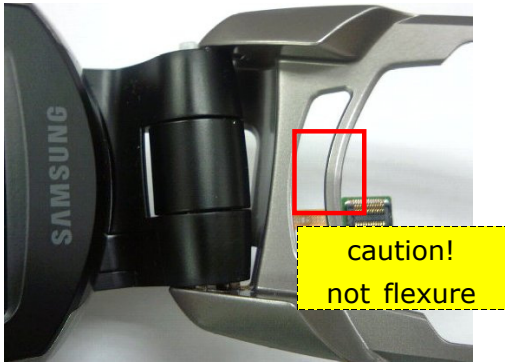
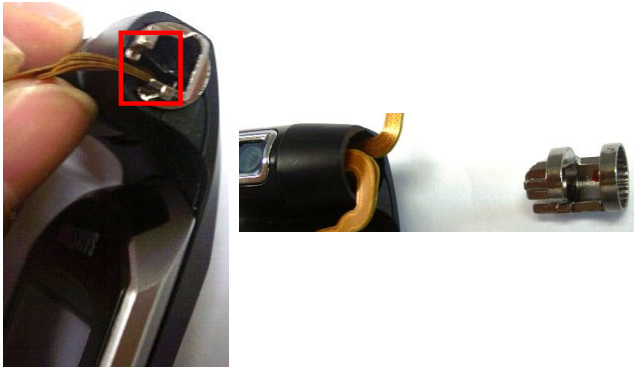
SEC CODE	Design LOC	Discription	STATUS
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2703-002204	L802	INDUCTOR-SMD	SA
2703-002205	L702	INDUCTOR-SMD	SA
2703-002205	L708	INDUCTOR-SMD	SA
2703-002208	L707	INDUCTOR-SMD	SA
2703-002313	L200	INDUCTOR-SMD	SA
2703-002313	L201	INDUCTOR-SMD	SA
2703-002313	L203	INDUCTOR-SMD	SA
2703-002313	L204	INDUCTOR-SMD	SA
2703-002313	L302	INDUCTOR-SMD	SA
2703-002313	L303	INDUCTOR-SMD	SA
2703-002313	L705	INDUCTOR-SMD	SA
2703-002649	L709	INDUCTOR-SMD	SNA
2703-002782	L500	INDUCTOR-SMD	SA
2703-002782	L501	INDUCTOR-SMD	SA
2703-002795	L701	INDUCTOR-SMD	SNA
2703-002795	L704	INDUCTOR-SMD	SNA
2703-002819	L604	INDUCTOR-SMD	SA
2703-002819	L605	INDUCTOR-SMD	SA
2703-002819	L606	INDUCTOR-SMD	SA
2703-002819	L607	INDUCTOR-SMD	SA
2703-002824	L400	INDUCTOR-SMD	SA
2703-002842	L608	INDUCTOR-SMD	SA
2703-002850	L401	INDUCTOR-SMD	SA
2703-002870	L600	INDUCTOR-SMD	SA
2703-002958	L800	INDUCTOR-SMD	SA
2703-003005	L700	INDUCTOR-SMD	SA
2801-004466	OSC500	CRYSTAL-SMD	SA
2802-001182	OSC100	RESONATOR-CERAMIC	SA
2806-001380	VCO600	OSCILLATOR-VCO	SA
2809-001312	TCX800	OSCILLATOR-VCTCXO	SA
2901-001326	F202	FILTER-EMI/ESD	SA
2901-001326	F203	FILTER-EMI/ESD	SA
2901-001326	F204	FILTER-EMI/ESD	SA
2901-001326	F205	FILTER-EMI/ESD	SA
2901-001326	F206	FILTER-EMI/ESD	SA

SEC CODE	Design LOC	Discription	STATUS
2901-001353	F200	FILTER-EMI/ESD	SA
2901-001353	F201	FILTER-EMI/ESD	SA
2904-001658	F600	FILTER-SAW	SA
2904-001702	F702	FILTER-SAW	SA
2910-000010	DUF700	DUPLEXER-SAW	SA
2911-000048	D800	DUPLEXER-FEM	SA
3301-001208	L300	BEAD-SMD	SA
3301-001208	L301	BEAD-SMD	SA
3301-001659	L202	BEAD-SMD	SA
3301-001809	L205	BEAD-SMD	SA
3301-001869	L206	BEAD-SMD	SA
3705-001358	CN800	CONNECTOR-COAXIAL	SA
3709-001344	T_CON	CONNECTOR-CARD EDGE	SA
3709-001456	SIM500	CONNECTOR-CARD EDGE	SA
3710-002104	HDC201	SOCKET-BOARD TO BOARD	SA
3710-002442	IFC200	SOCKET-INTERFACE	SA
3711-005659	HDC200	HEADER-BOARD TO BOARD	SA
3711-006028	HDC202	HEADER-BOARD TO BOARD	SA
3711-006108	BTC200	HEADER-BATTERY	SA
4202-001187	ANT801	ANTENNA-CHIP	SA
4302-001130	BAT500	BATTERY-LI(2ND)	SA
4709-001460	U800	BLUETOOTH MODULE	SA

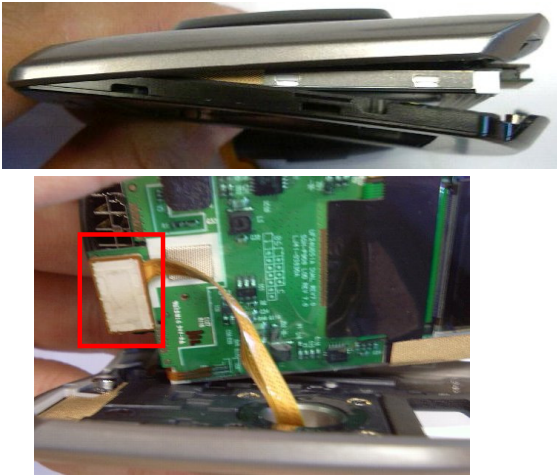
6. Disassembly and Assembly instructions

6-1. Disassembly

1	2
3	4

5  1) Unsnap KEY FPCB CONNECTOR. 2) Disassemble a PBA from shield-can. And do that from left side. ※ caution 1) Be careful not to crack the FPCB and damage the connector. 2) Be careful not to damage BGA parts	6  1) Separate FOLDER assembly from FRONT with pressing the FOLDER hinge. ※ caution 1) When separating, be careful not to bend the FRONT. 2) Be careful not to tear or crack the FPCB of LCD and CAMERA. 3) Be careful not to damage or scratch the molding.
7  1) Move FPCB to the open side of Hinge-dummy. 2) Pull out the Hinge-dummy. ※ caution 1) Be careful not to tear or crack the FPCB of LCD and CAMERA.	8  1) Rotate the LCD to anticlockwise and extract two screw covers. 2) Unscrew them. ※ caution 1) Be careful not to damage or scratch the molding.

9



1) Disassemble a LCD frame from below.
Do use a tool.

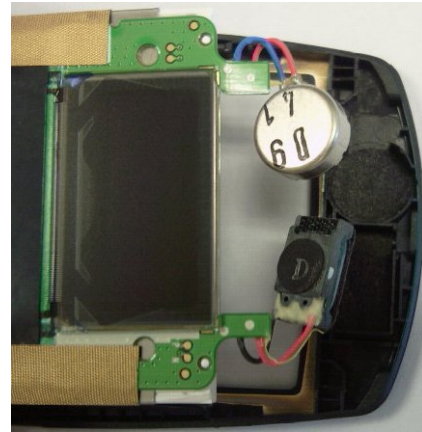
2) Unsnap a LCD connector.

*** caution**

1) Be careful not to damage or crack the FPCB and connector.

2) Be careful not to damage or scratch the molding.

10

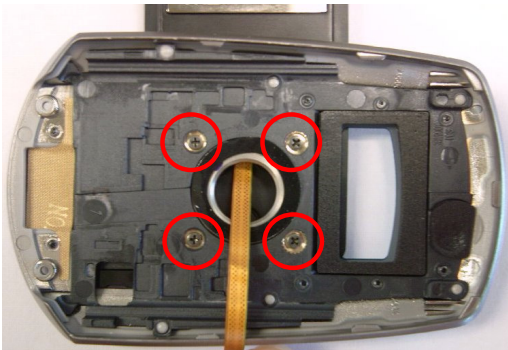


1) Take off the motor and receiver from FOLDER LOWER.

*** caution**

1) When separating, be careful not to cut the wires of motor and receiver.

11

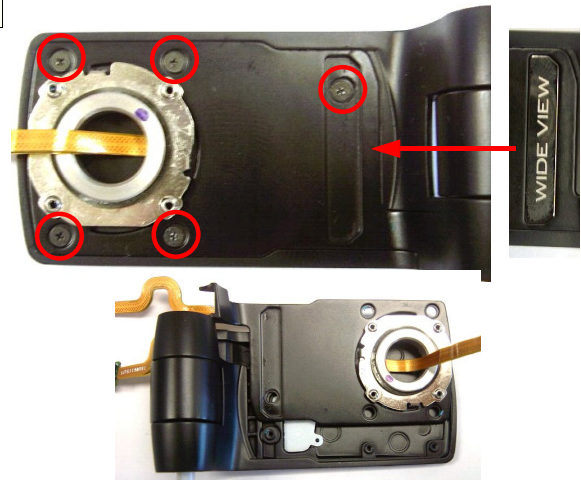


1) Unscrew 4 points like a picture below.

*** caution**

1) Be careful not to damage or scratch the molding.

12



1) Take off a WIDE VIEW sticker.

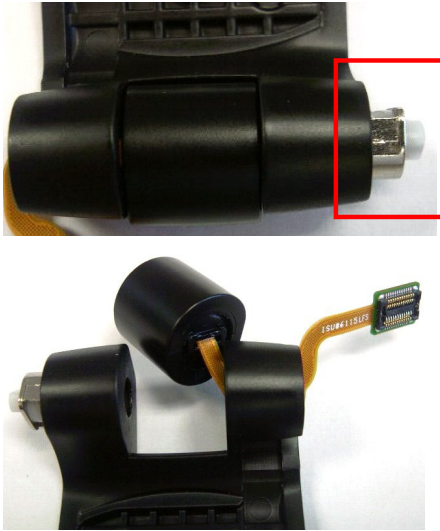
2) Unscrew 5 points like a picture below.

3) Disassemble ARM UPPER and ARM LOWER from each other.

*** caution**

1) Be careful not to damage or scratch the molding.

13



- 1) Pull out a hinge using a nipper.
 - 2) Separate a CAMERA from ARM UPPER.
- * caution**
- 1) Be careful not to damage the hinge.
 - 2) Be careful not to damage CAMERA FPCB.

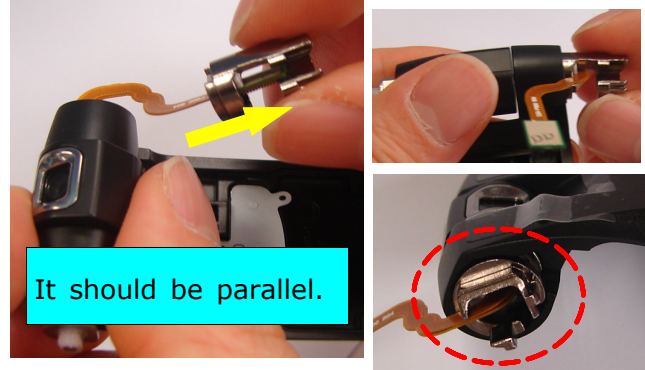
6-2. Assembly

1



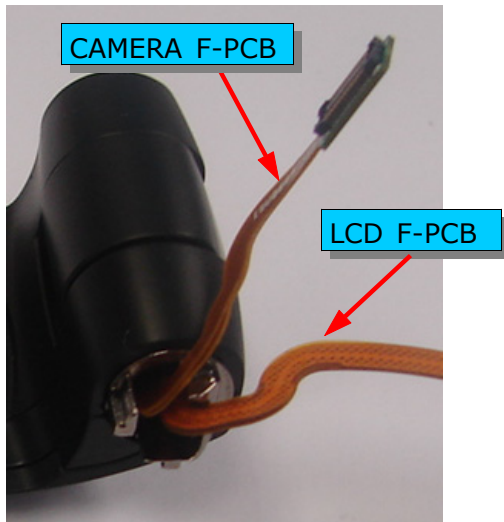
- 1) Insert a CAMERA to ARM UPPER.
 - 2) Inert a hinge.
- ※ **caution**
- 1) Be careful not to damage the hinge.
 - 2) Be careful not to damage CAMERA FPCB.

2



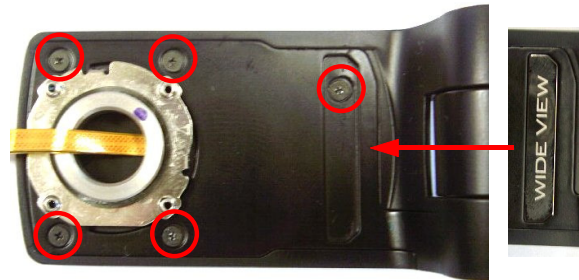
- 1) Insert a hinge-dummy to ARM UPPER .
LCD connector should be parallel with hole of hinge-dummy.
- ※ **caution**
- 1) Be careful not to damage CAMERA FPCB.
 - 2) Confirm the direction of hinge-dummy.

3



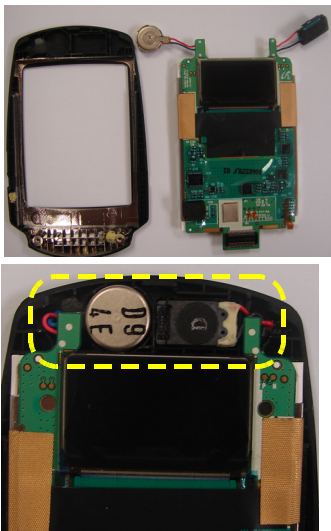
- 1) Assemble ARM UPPER and ARM LOWER.
- ※ **caution**
- 1) LCD FPCB should be located lower than CAMERA FPCB like a picture.

4



- 1) Screw 5 point like a picture below.
 - 2) Attach WIDE VIEW sticker.
- ※ **caution**
- 1) Be careful not to damage or scratch the molding.

5

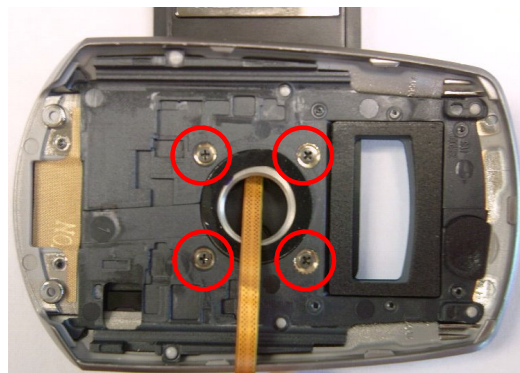


1) Put a motor and receiver in place.

※ **caution**

1) Arrange wires to be located under the LCD PBA branch.

6

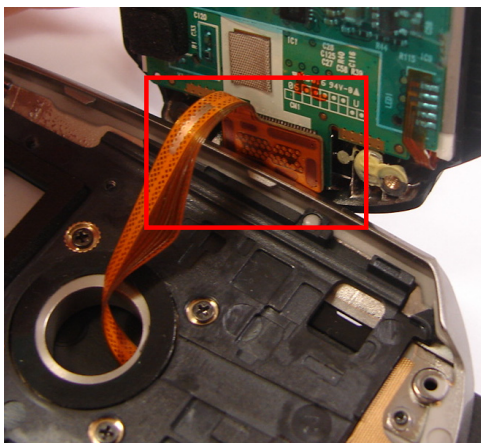


1) Assemble ARM and FOLDER UPPER and screw those 4 points. FOLDER UPPER should rotate to anticlockwise.

※ **caution**

1) Be careful not to damage or scratch the molding.

7



1) Snap a LCD CONNECTOR.

※ **caution**

1) Confirm the direction of LCD CONNECTOR.
2) When snapping, confirm the click sound.

8

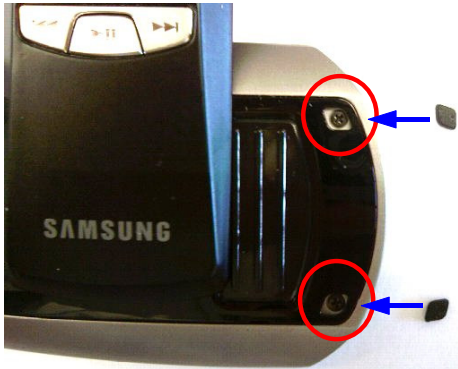


1) Assemble a LCD from upper side in order like below.

※ **caution**

1) Be careful not to damage or scratch the molding.

9

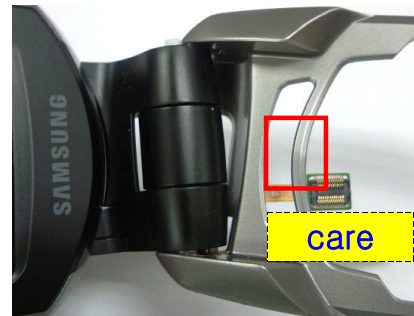


- 1) Screw 2 points like a picture below.
- 2) Insert the screw cover.

※ **caution**

- 1) Be careful not to damage or scratch the molding.

10



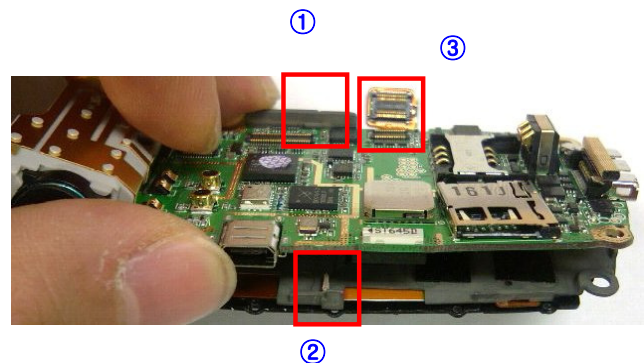
- 1) Insert CAMERA and LCD FPCB into the hole of FRONT.
 - 2) Assemble FRONT and FOLDER.
- ※ **caution**
- 1) Be careful not to damage or scratch the molding.
 - 2) Be careful not to damage or tear FPCB.

11

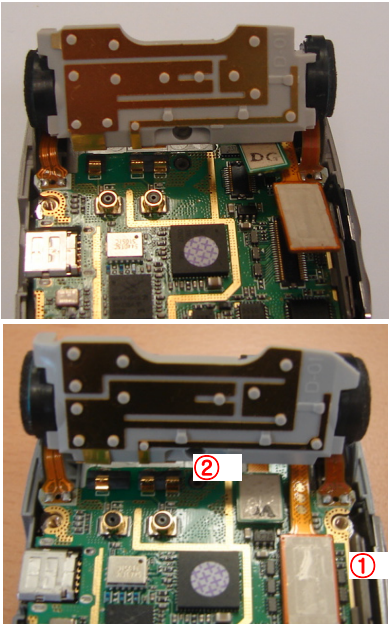
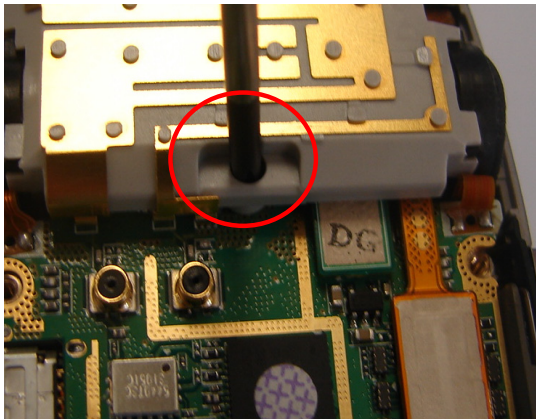


- 1) Put KEYPAD in place.

12

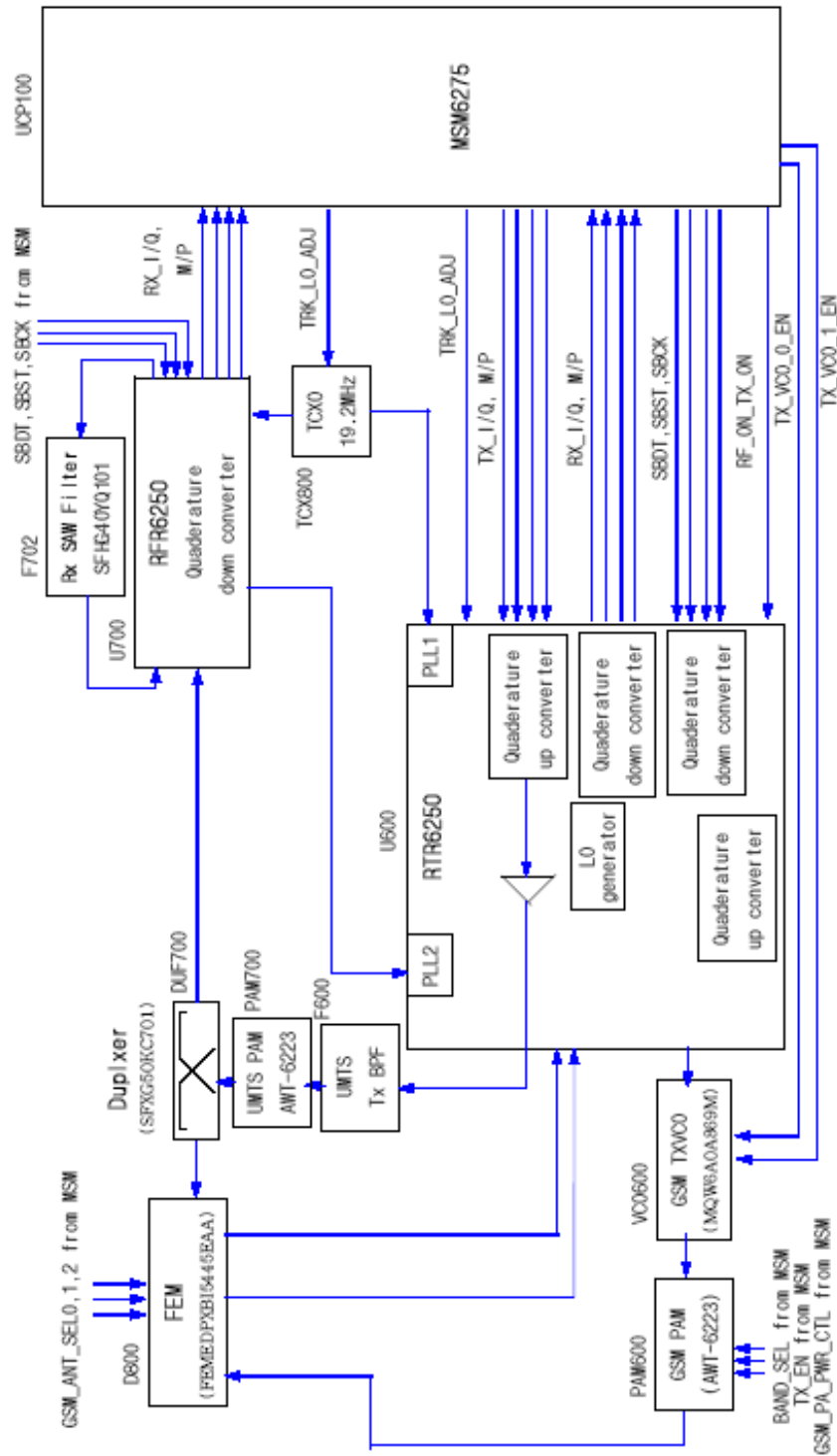


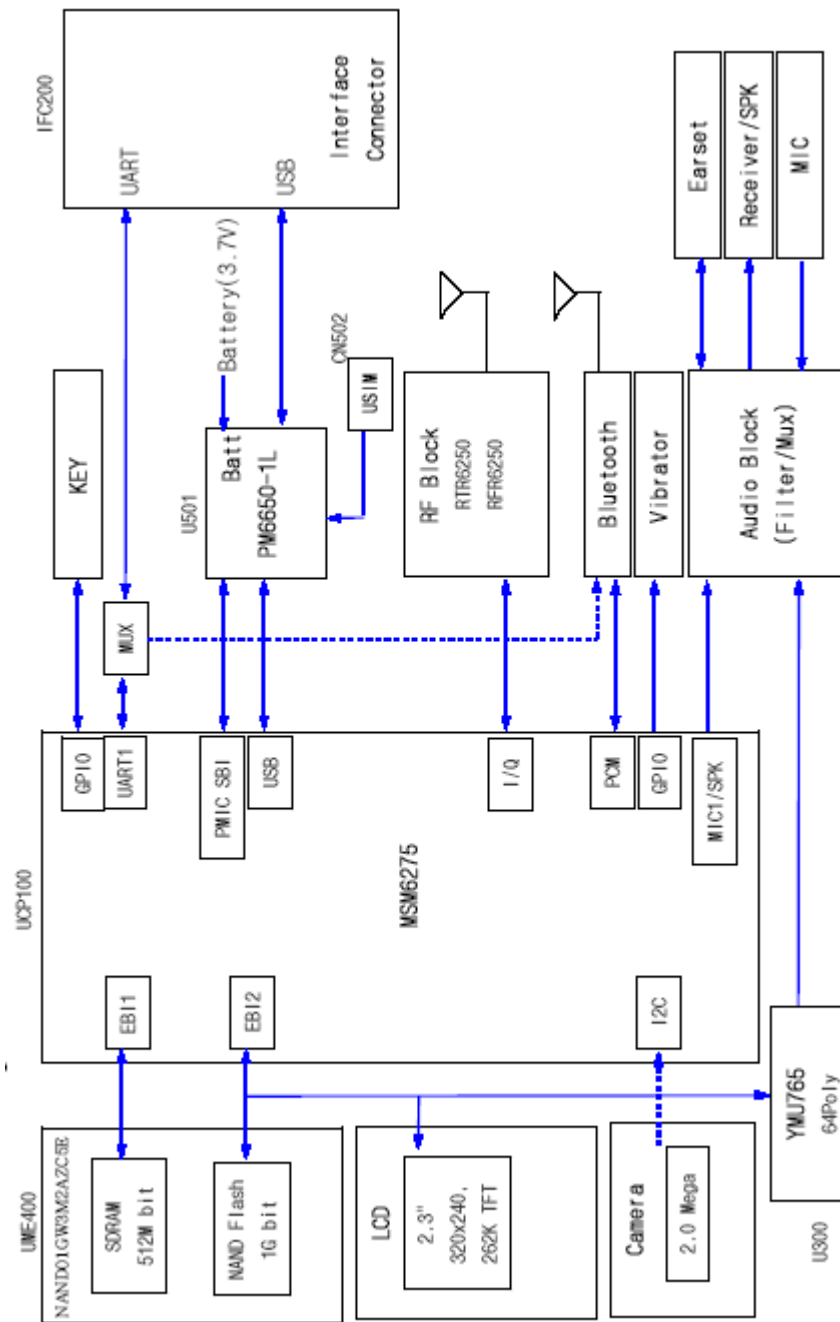
- 1) Assemble PBA with SHIELD-CAN and confirm the locking.
 - 2) Snap the connector.
- ※ **caution**
- 1) Be careful not to damage the connector.

13 	14 
1) Put the FPCB of LCD and CAMERA between INTEANNA and PBA. 2) Snap the connector of LCD and CAMERA. * caution 1) Be careful not to damage or tear FPCB. 2) When snapping, confirm the click sound.	1) Screw INTENNA. * caution 1) Be careful not to damage or scratch INTENNA.
15 	16 
1) Screw 6 points like a picture below. * caution 1) Be careful not to damage or scratch the molding.	1) Insert 2 screw covers in the top.

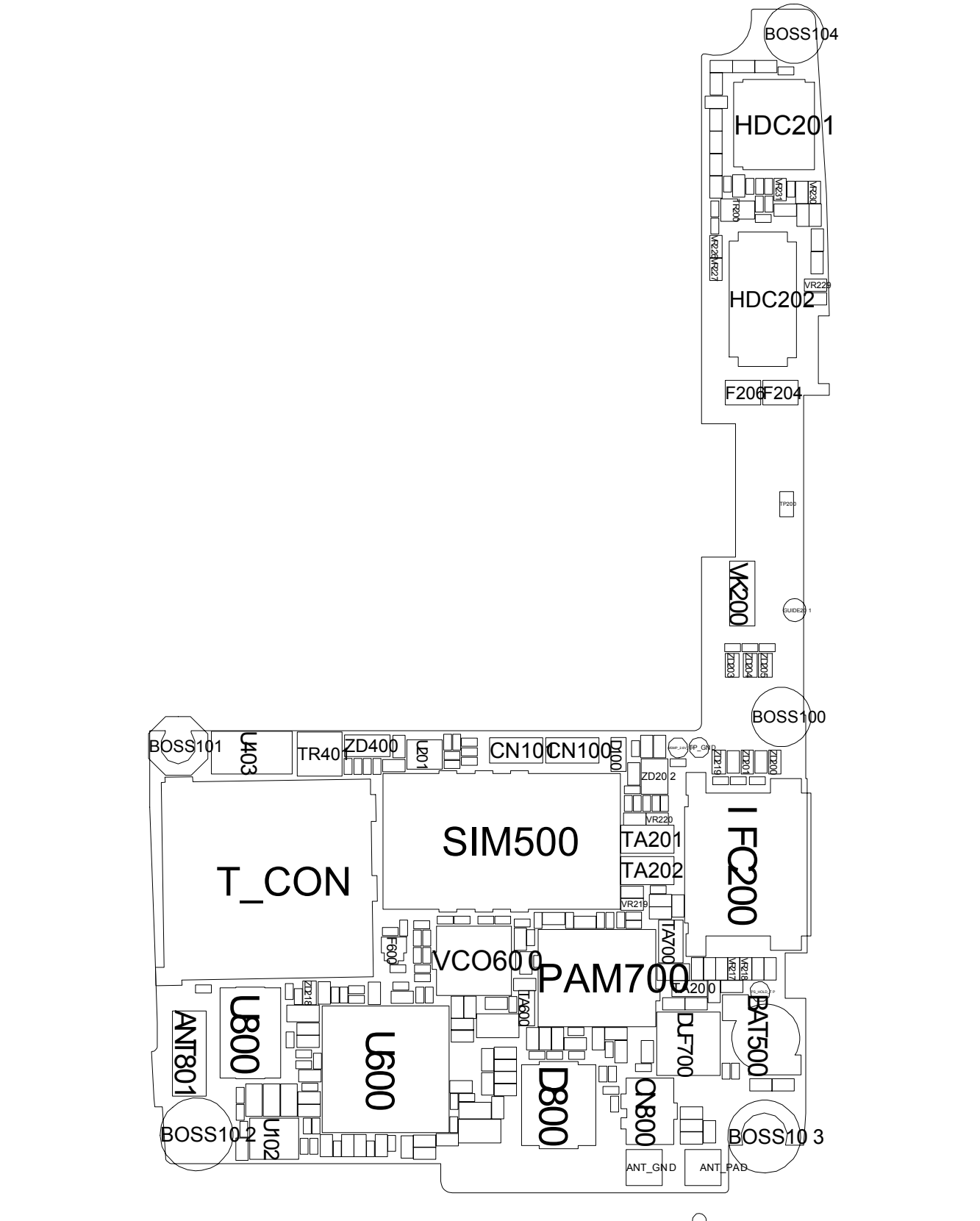
7. Block Diagrams

- RF Block Diagram





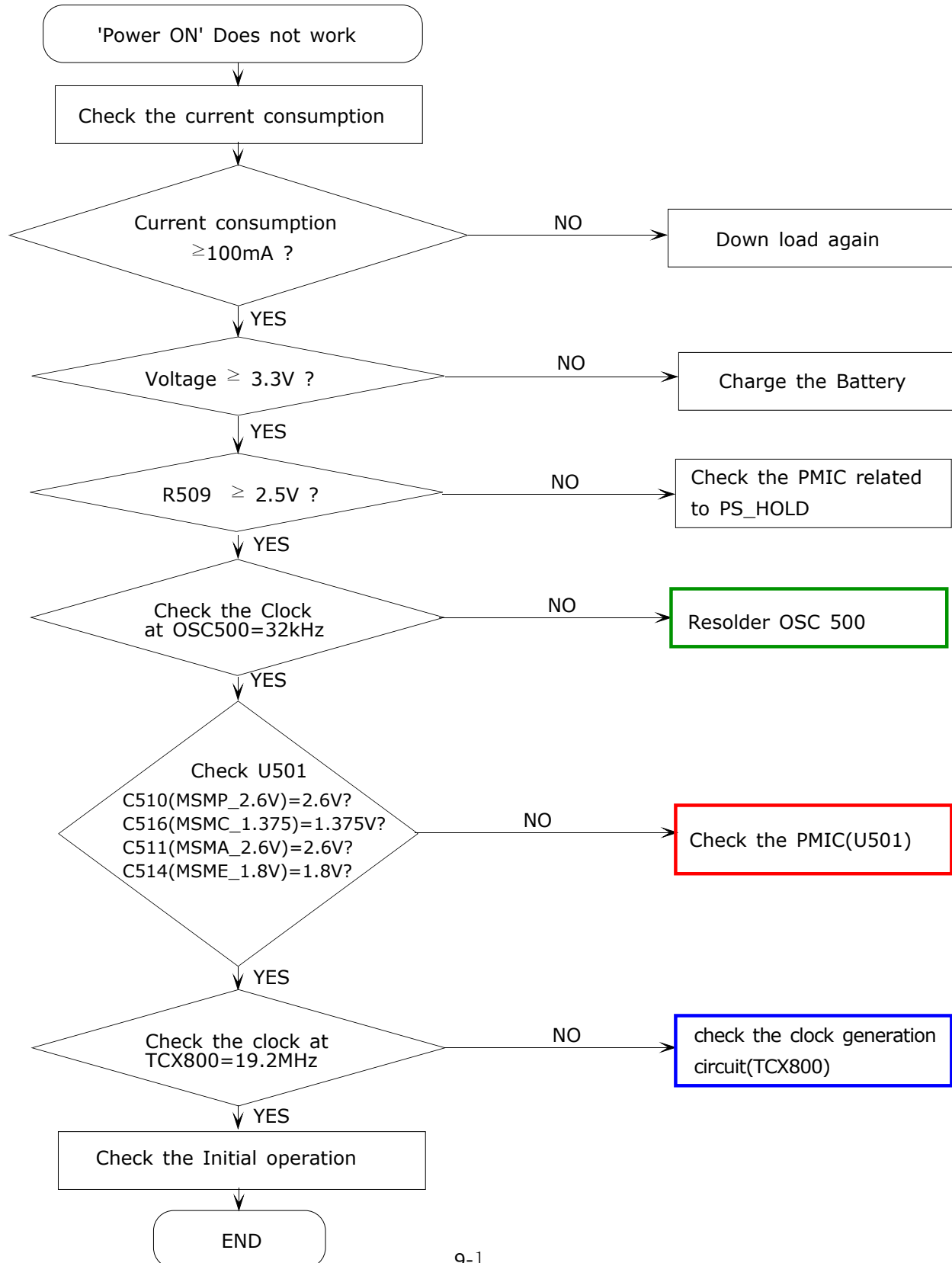
8. PCB Diagrams



9. Chart of Troubleshooting

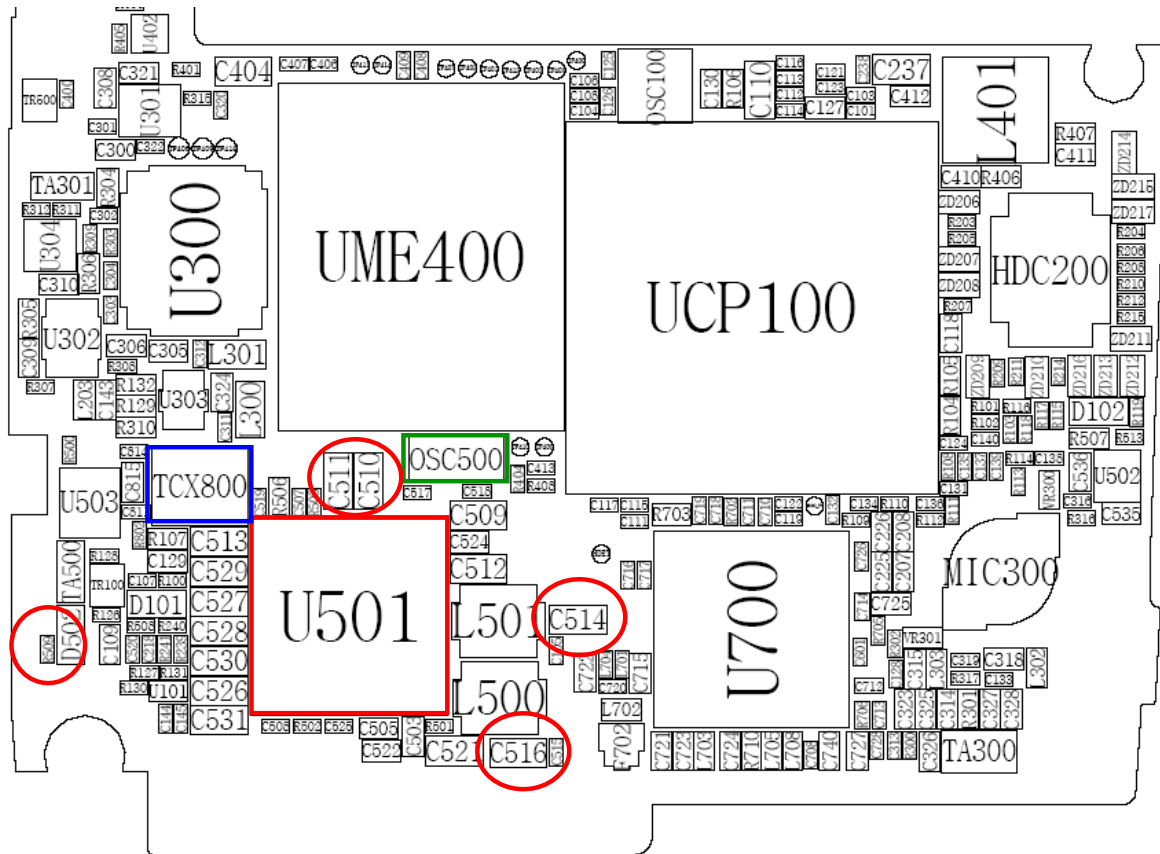
9-1. Baseband

9-1-1. Power ON

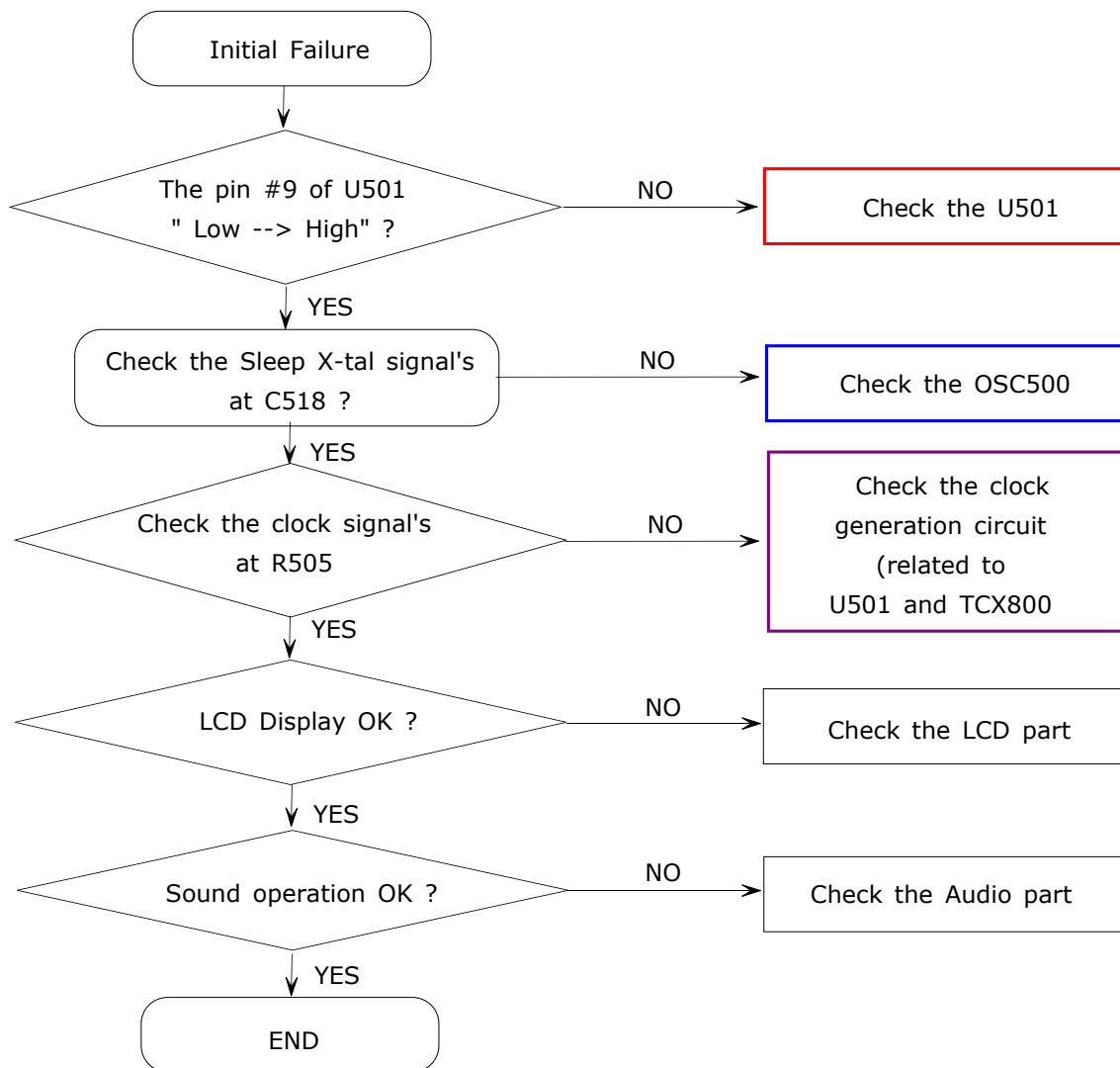


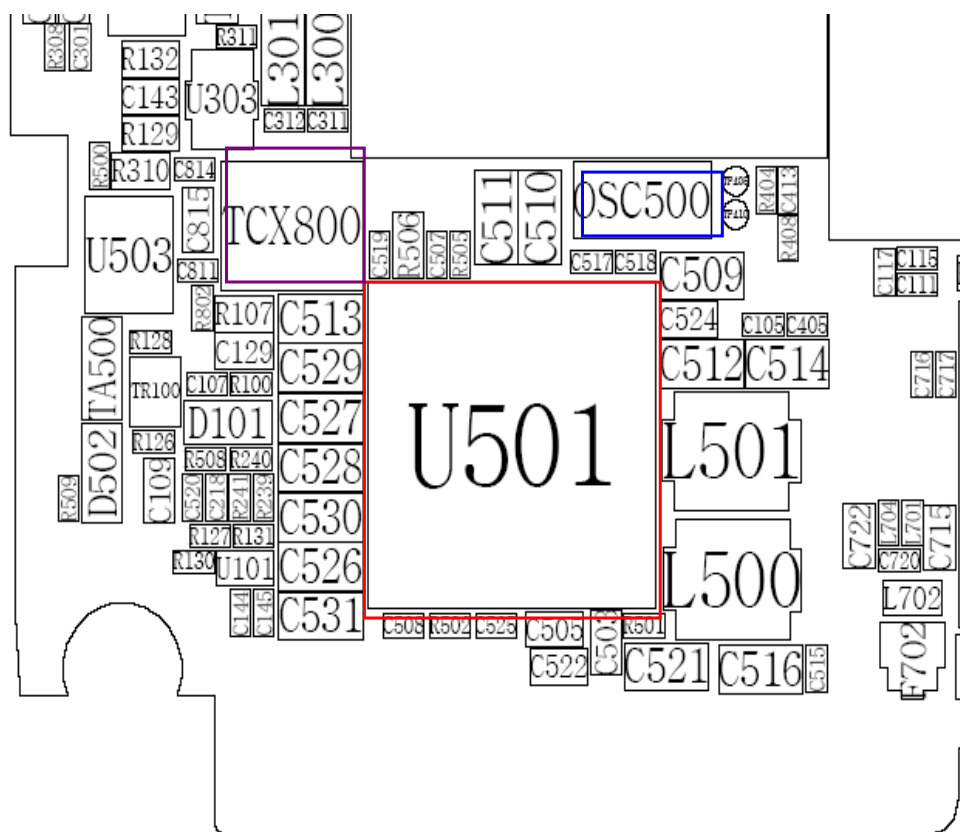
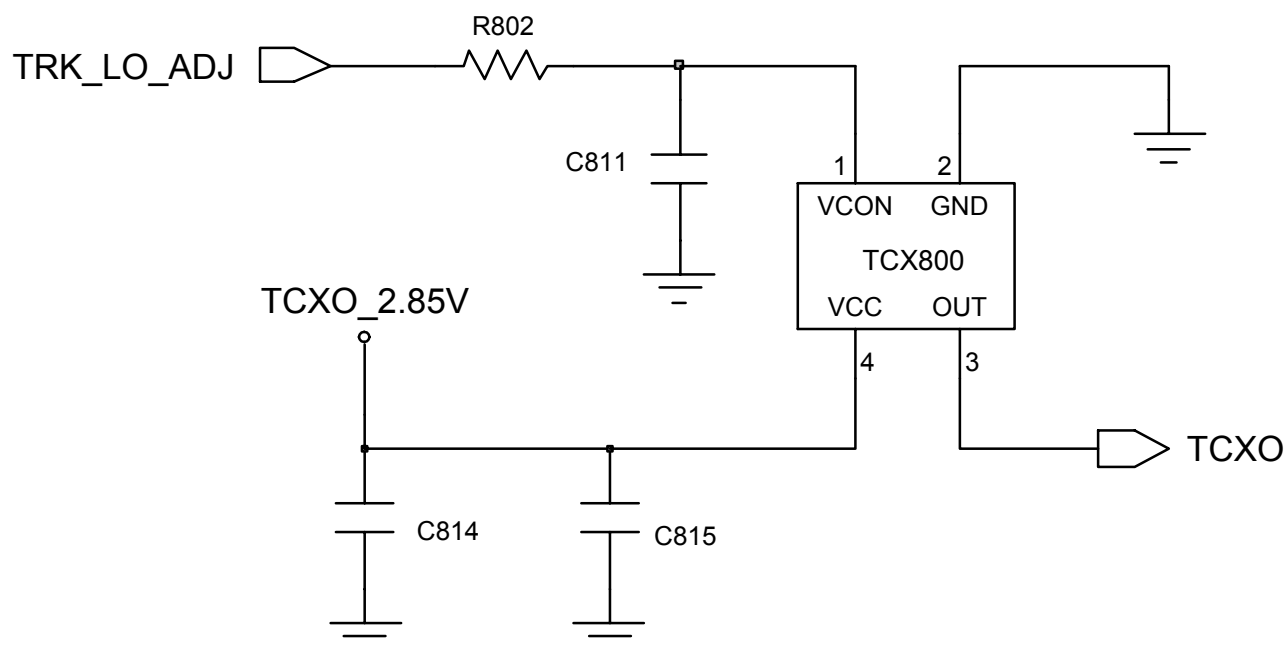


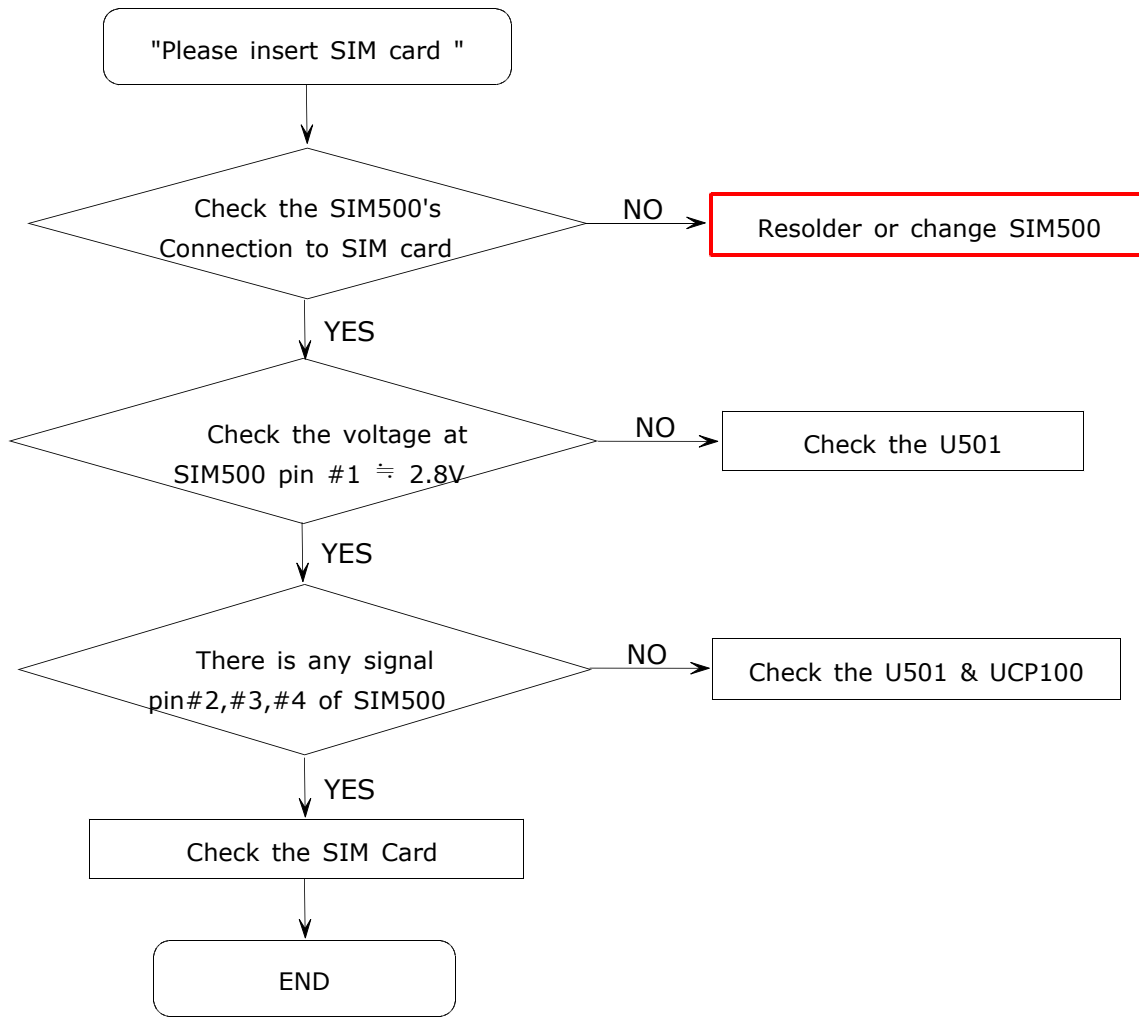
9. Chart of Troubleshooting

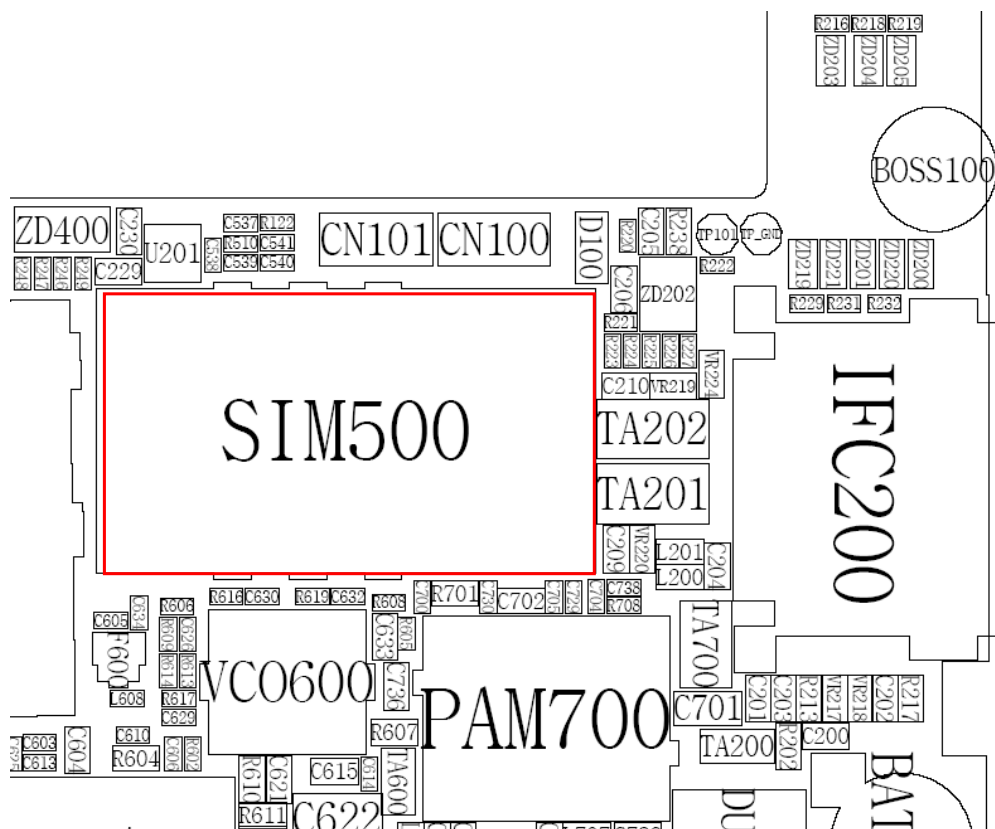
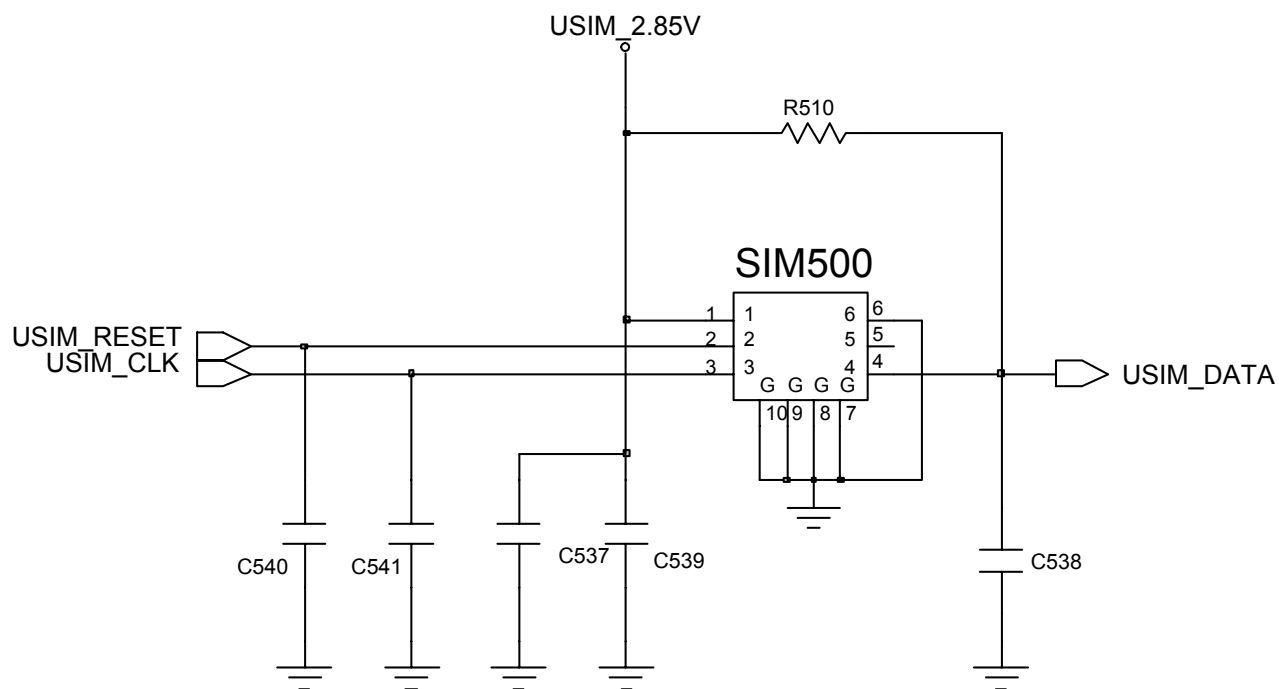


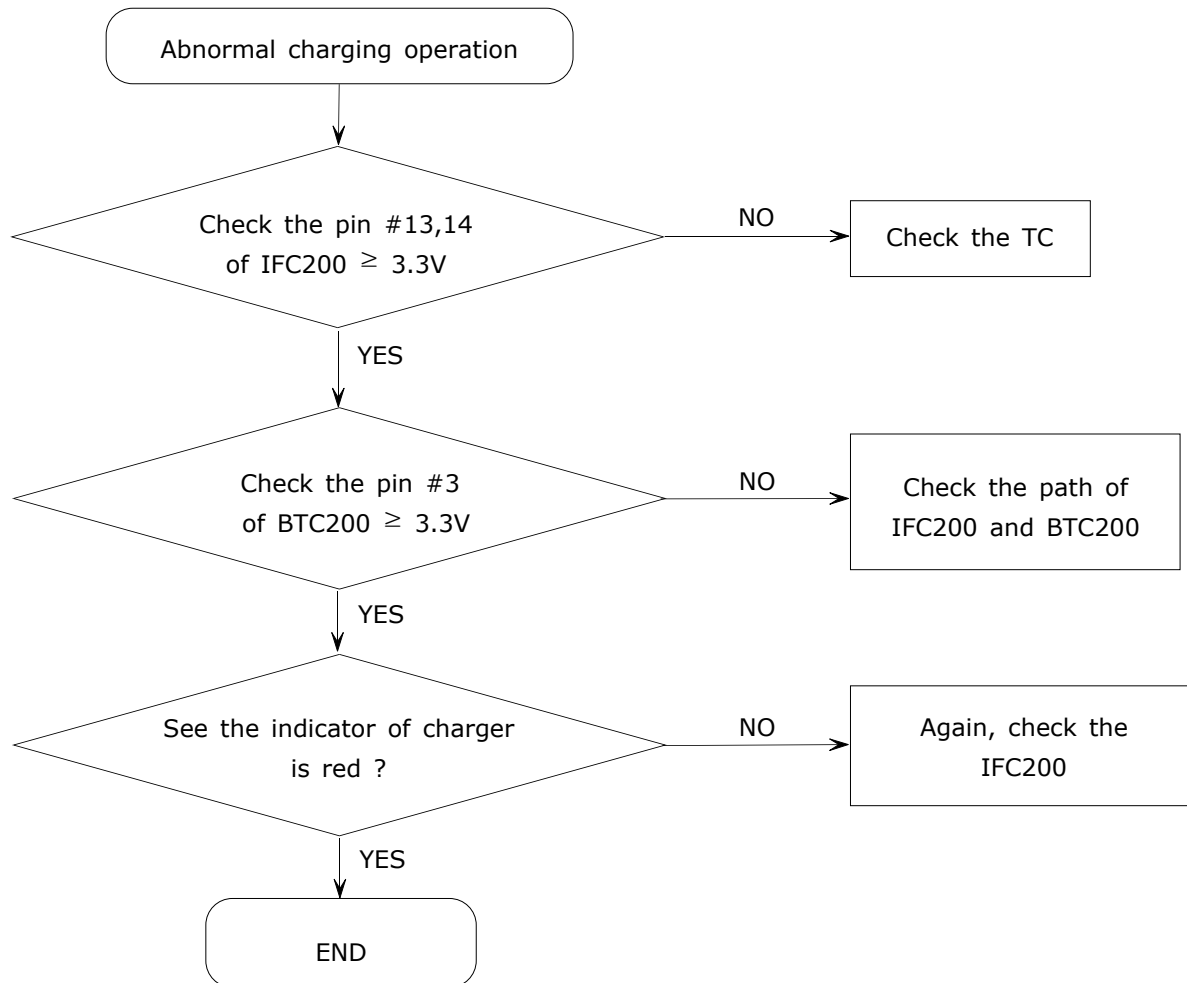
9-1-2. System Initial

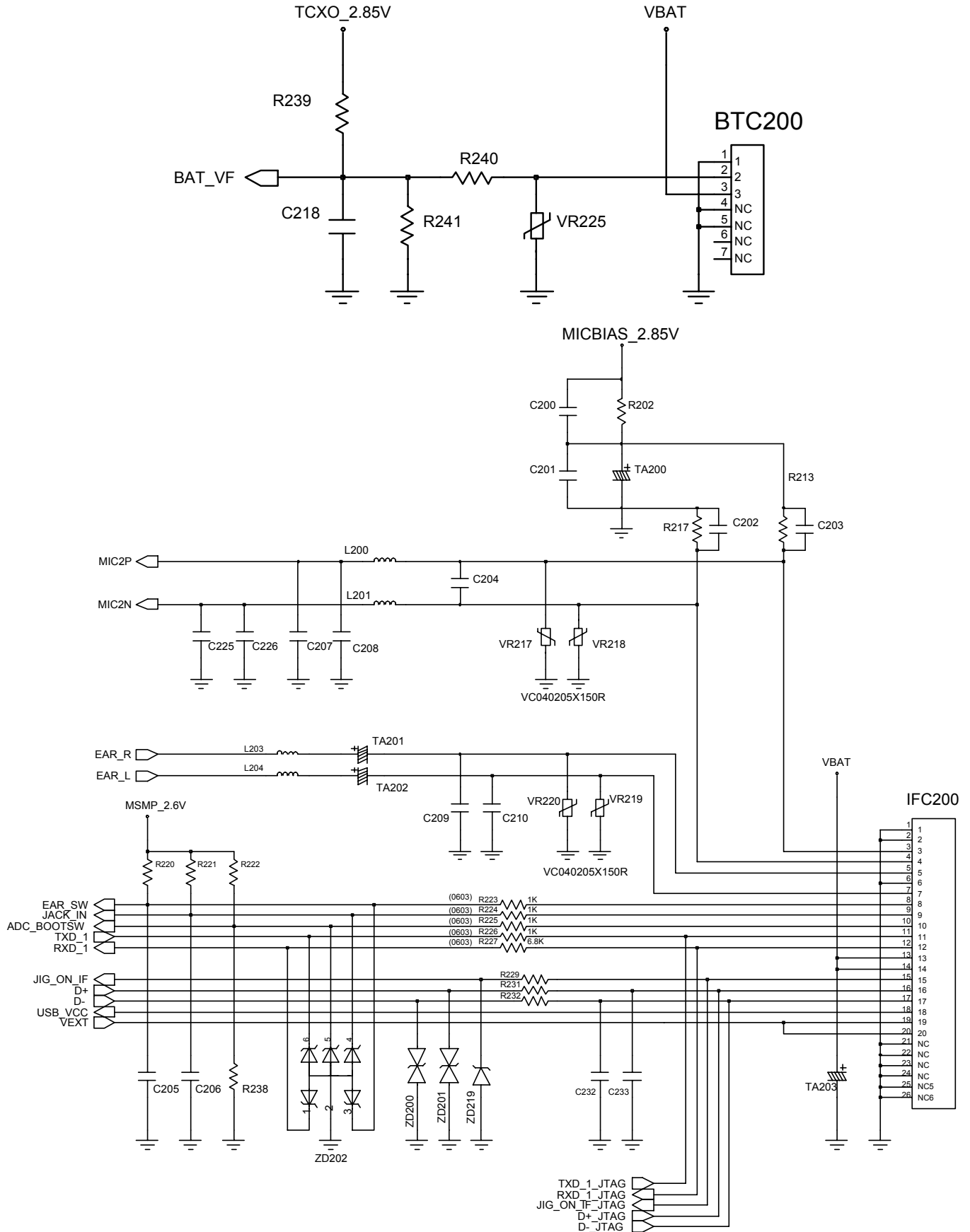


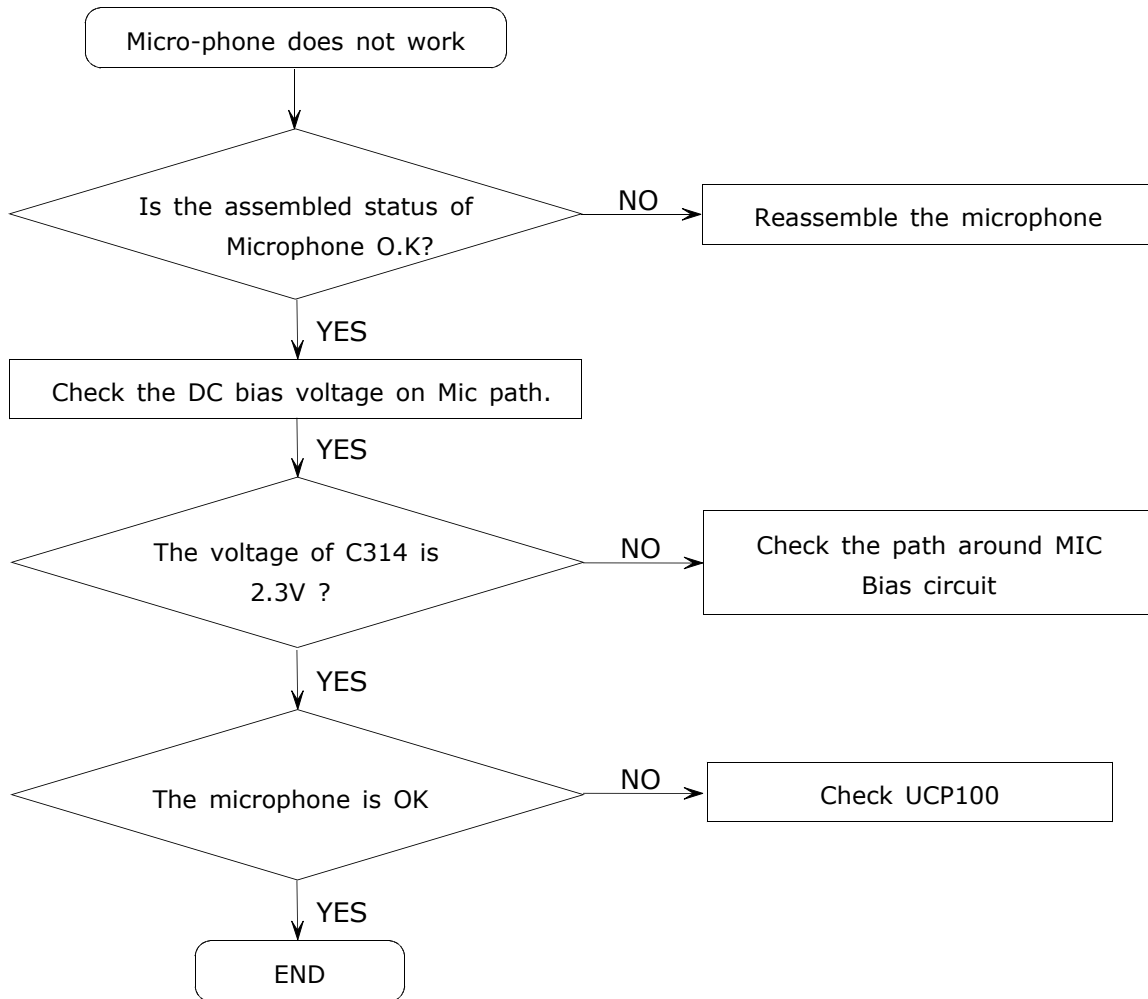


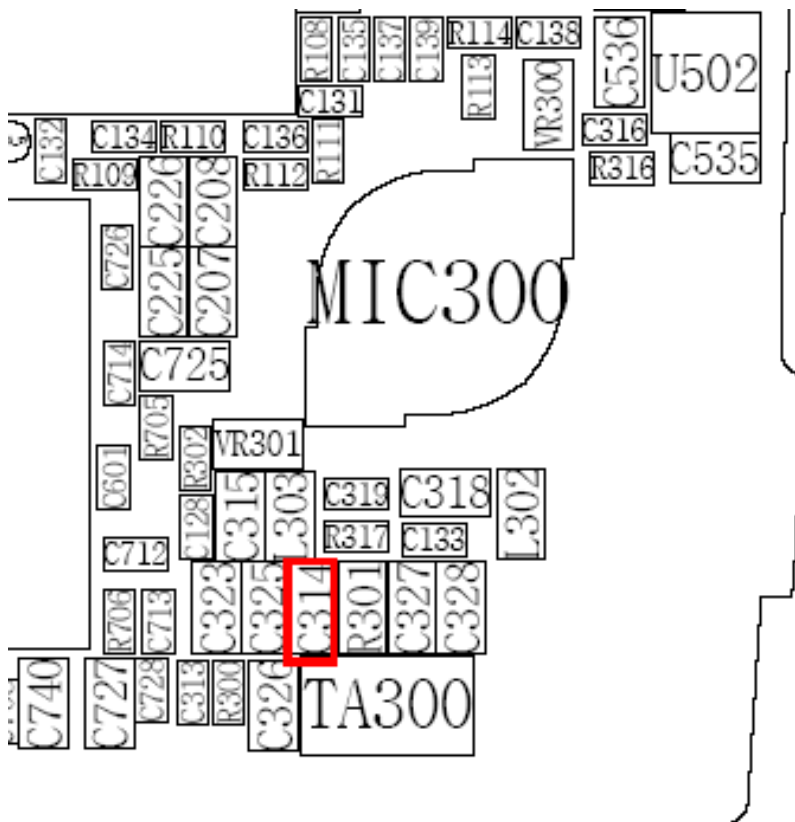
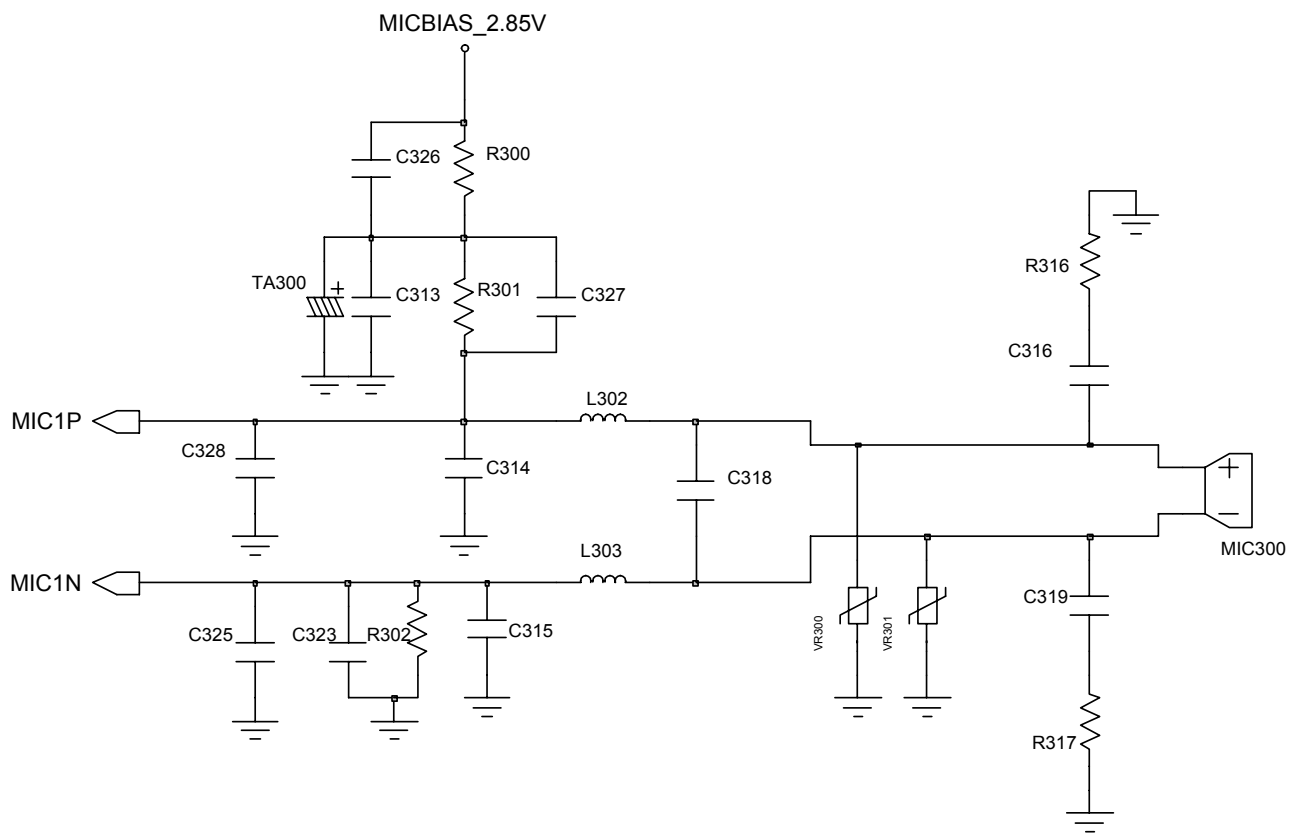
9-1-3. SIM Part

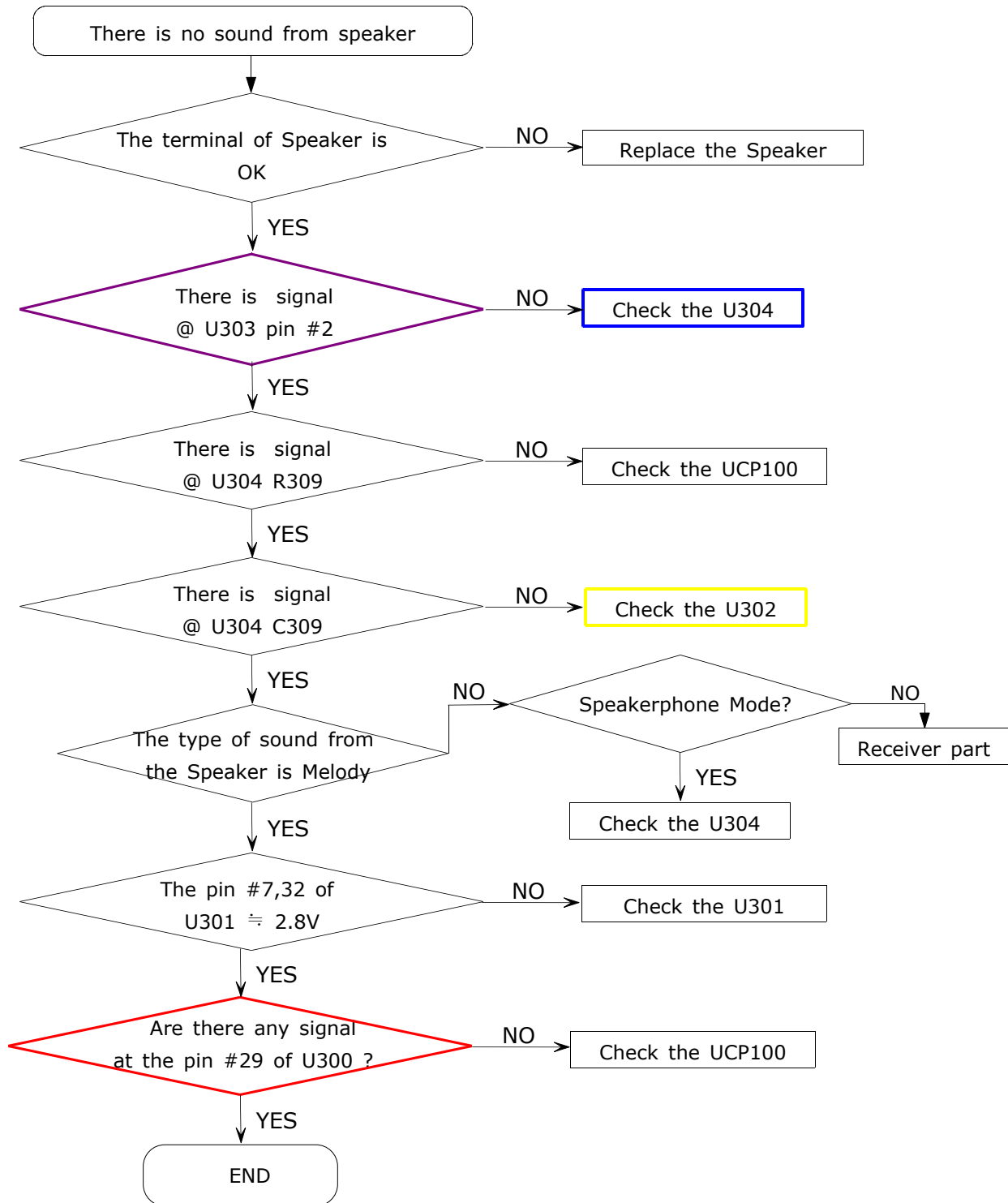


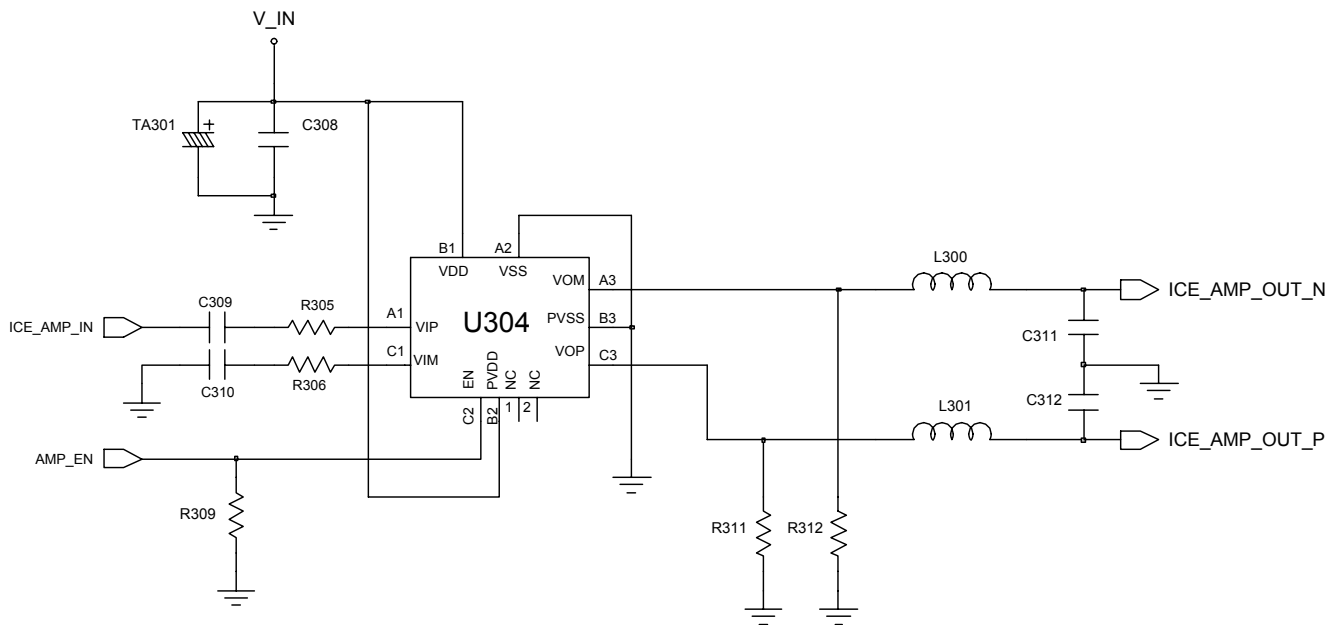
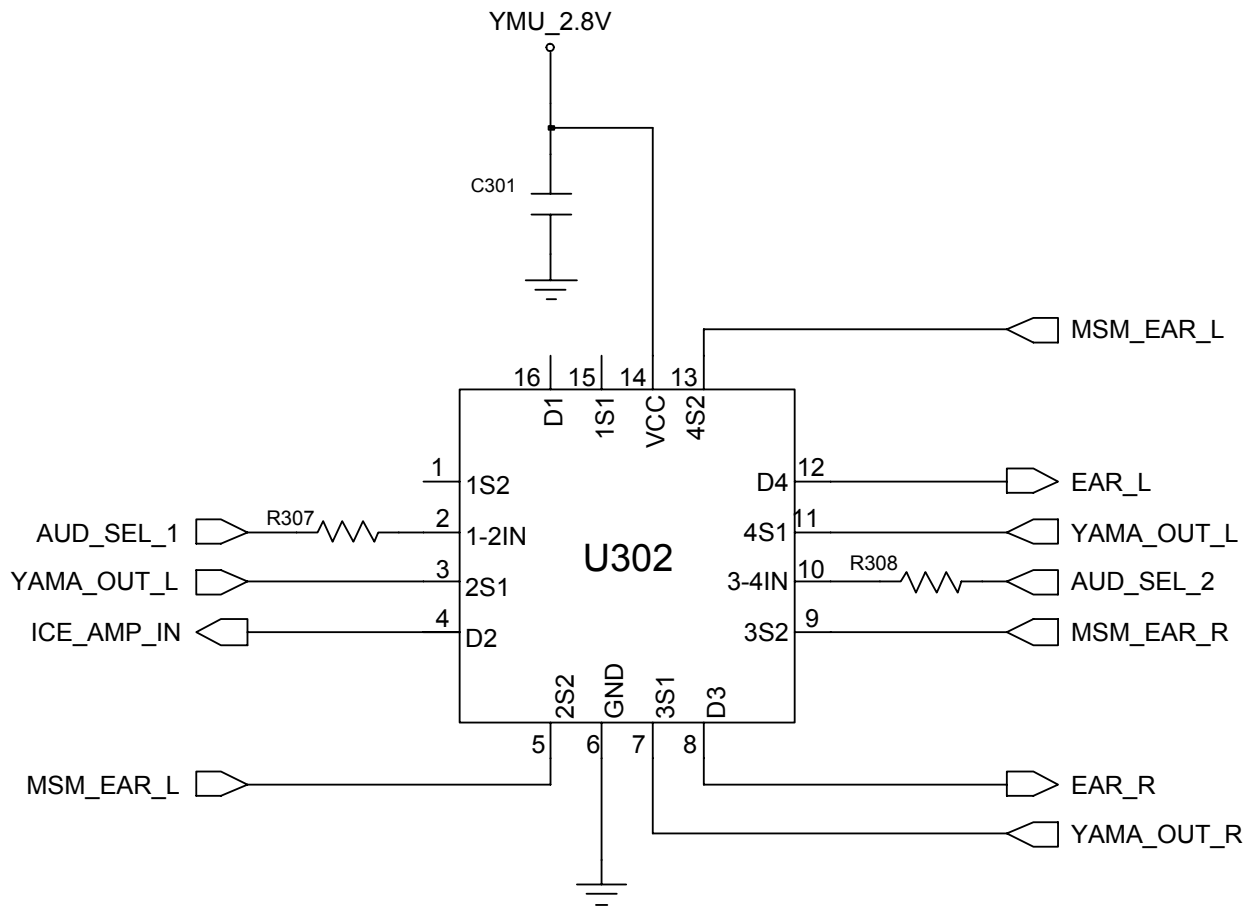
9-1-4. Charging Part

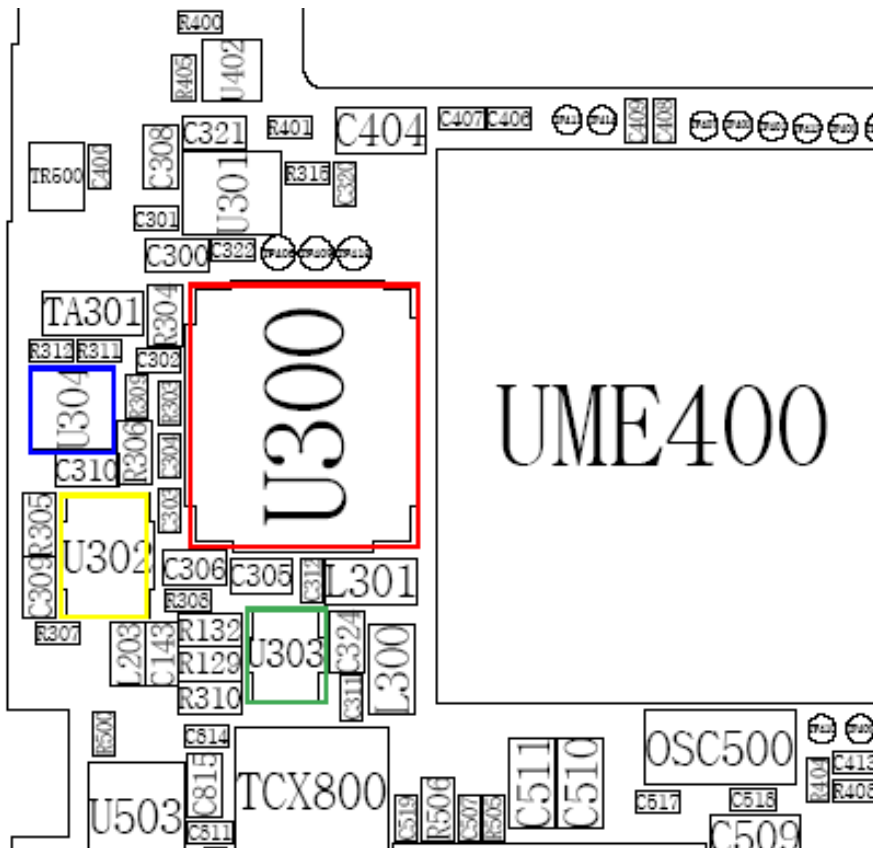


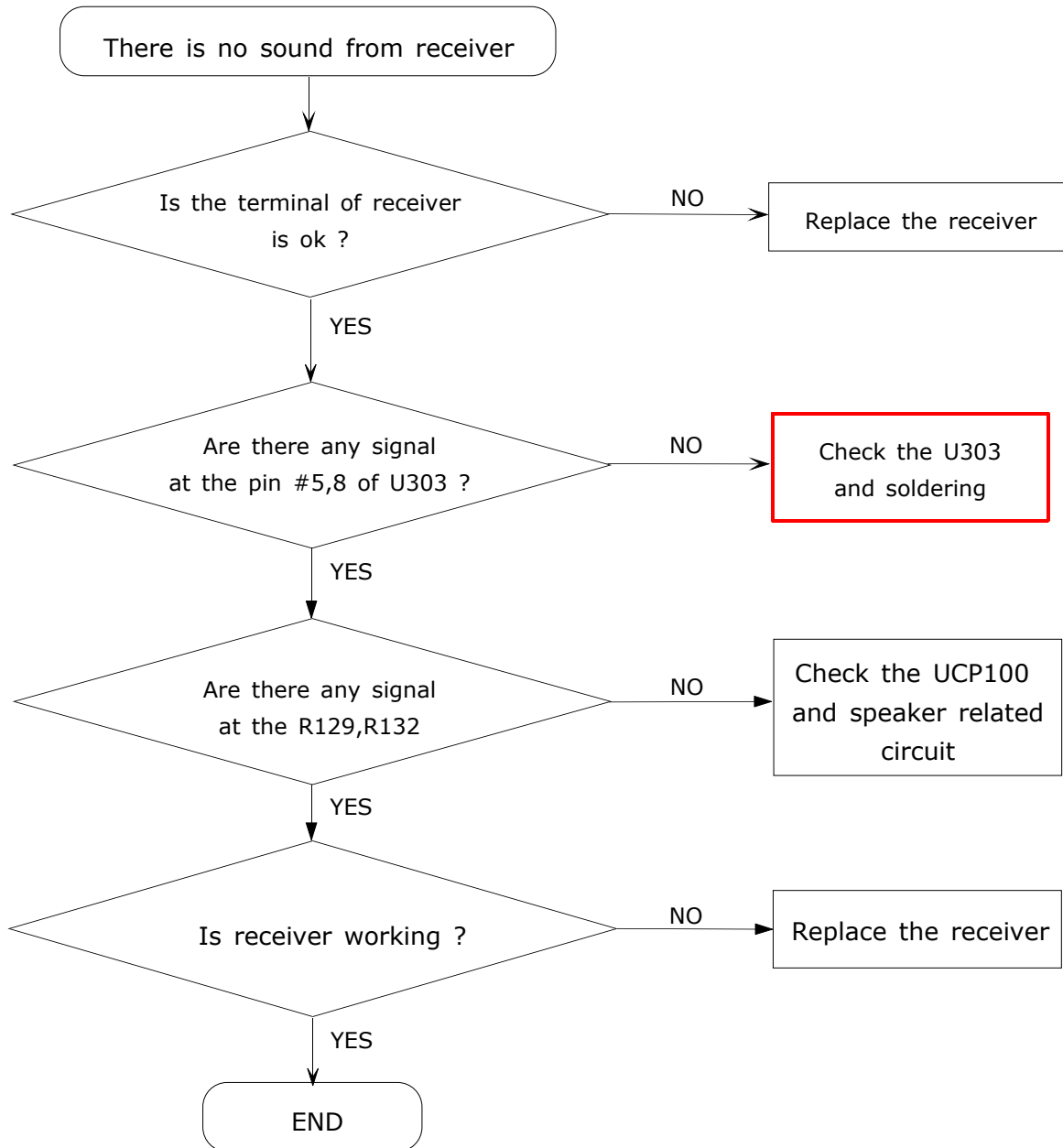
9-1-5. Microphone Part

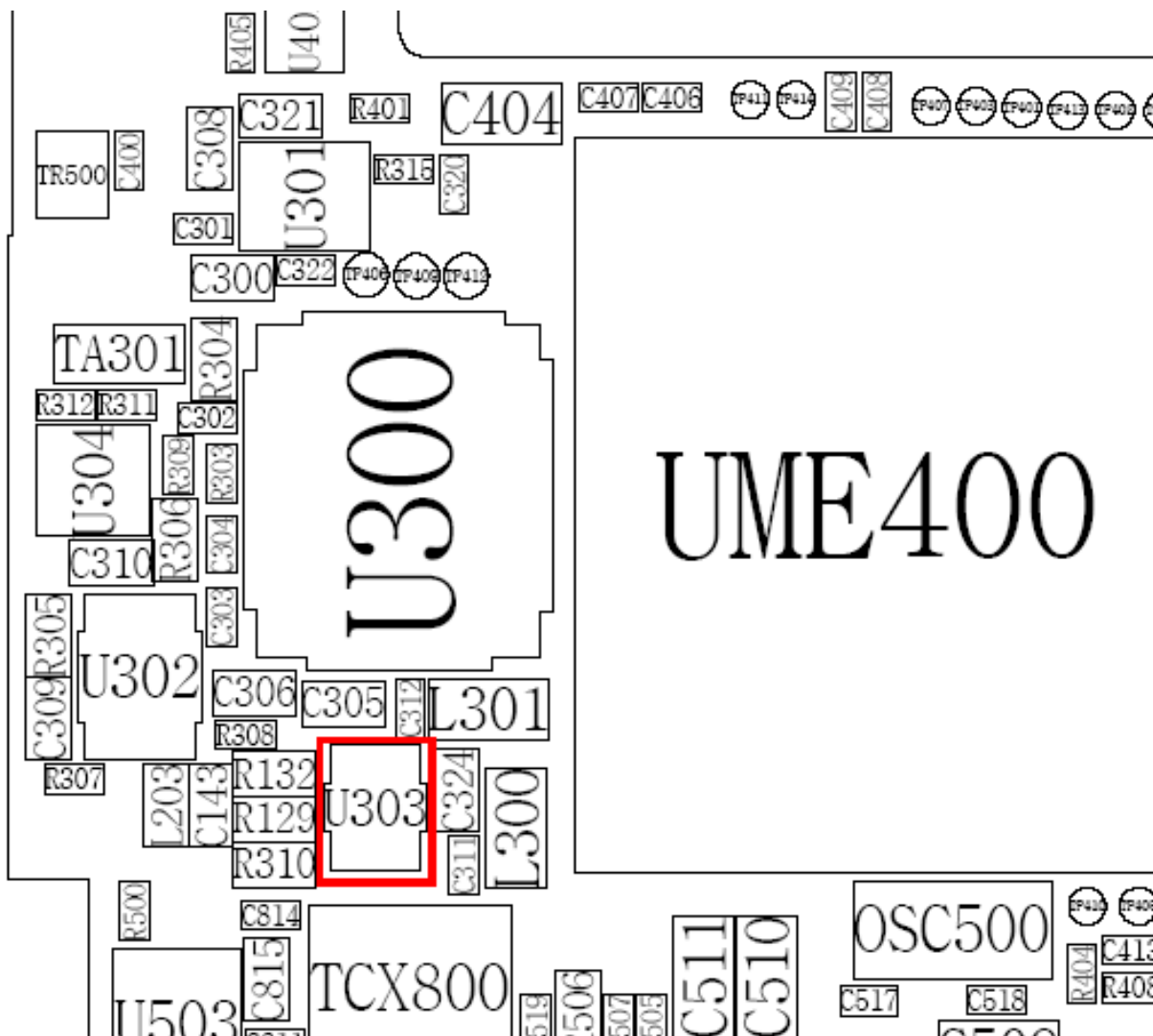
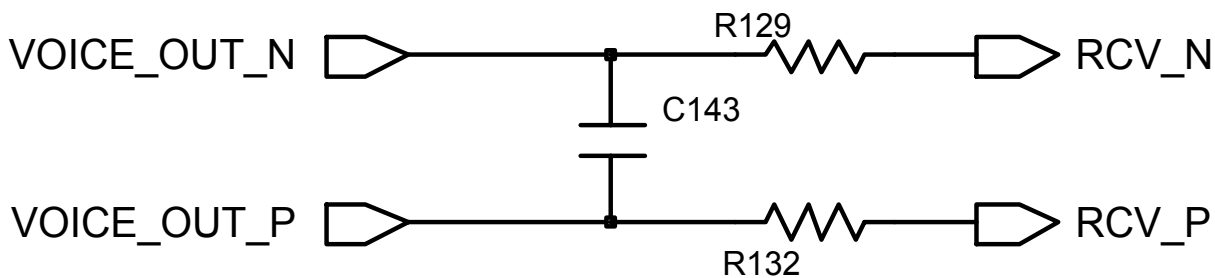


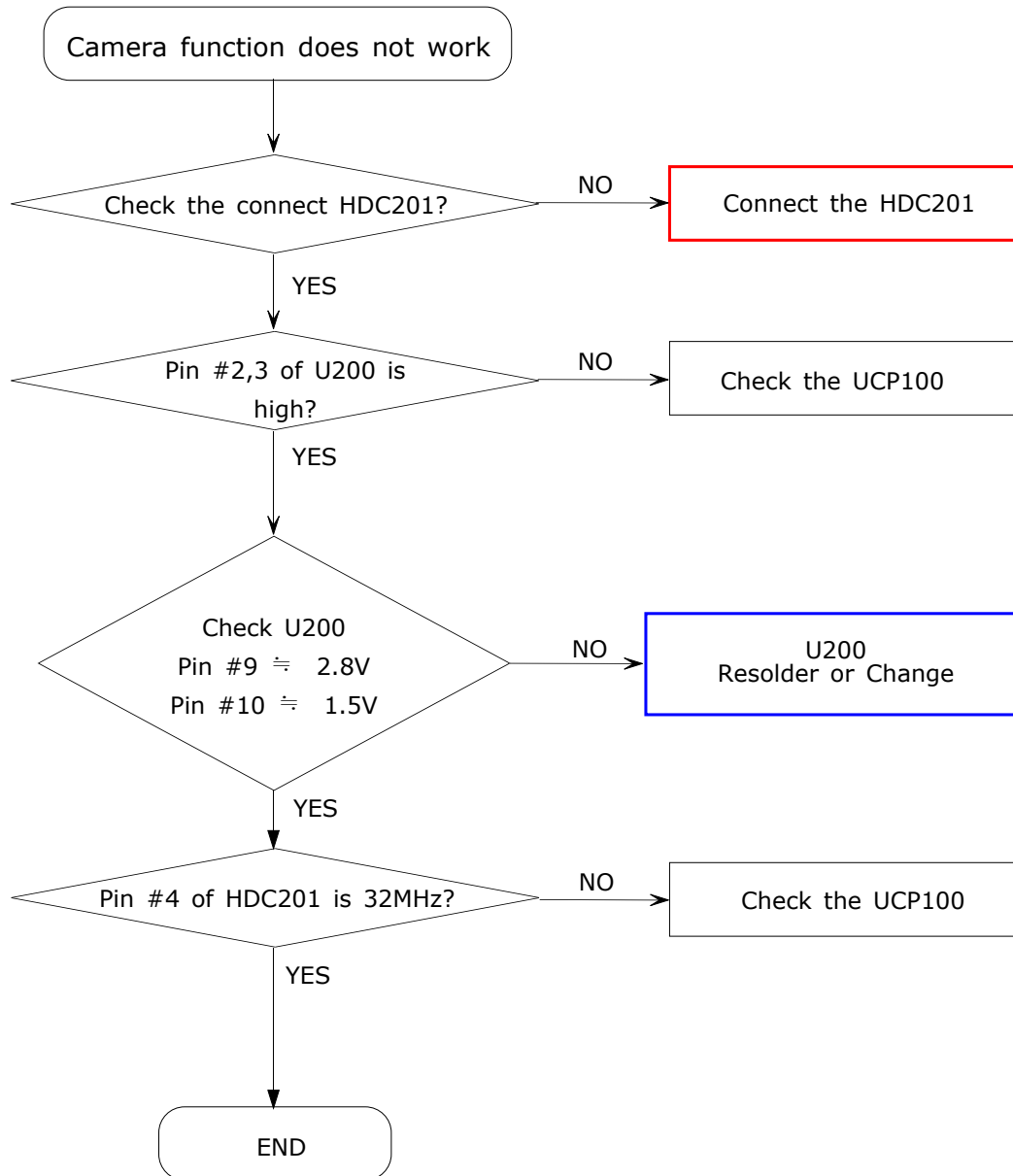
9-1-6. Speaker Part

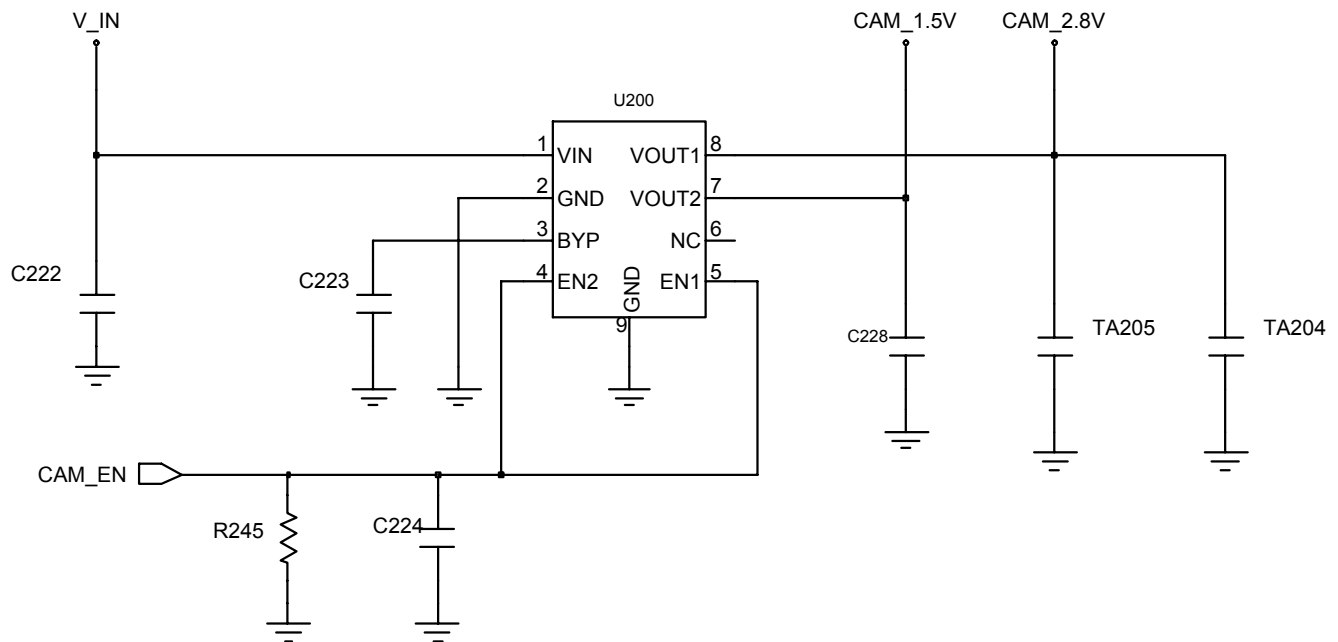
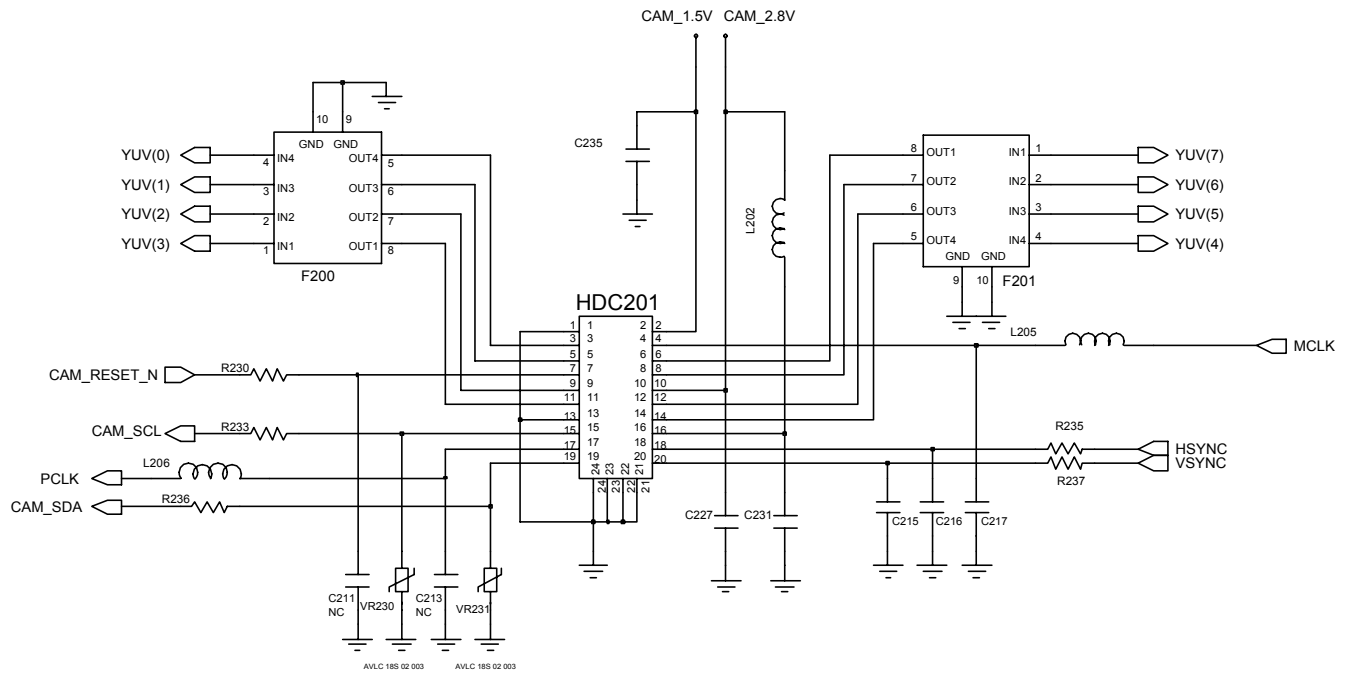


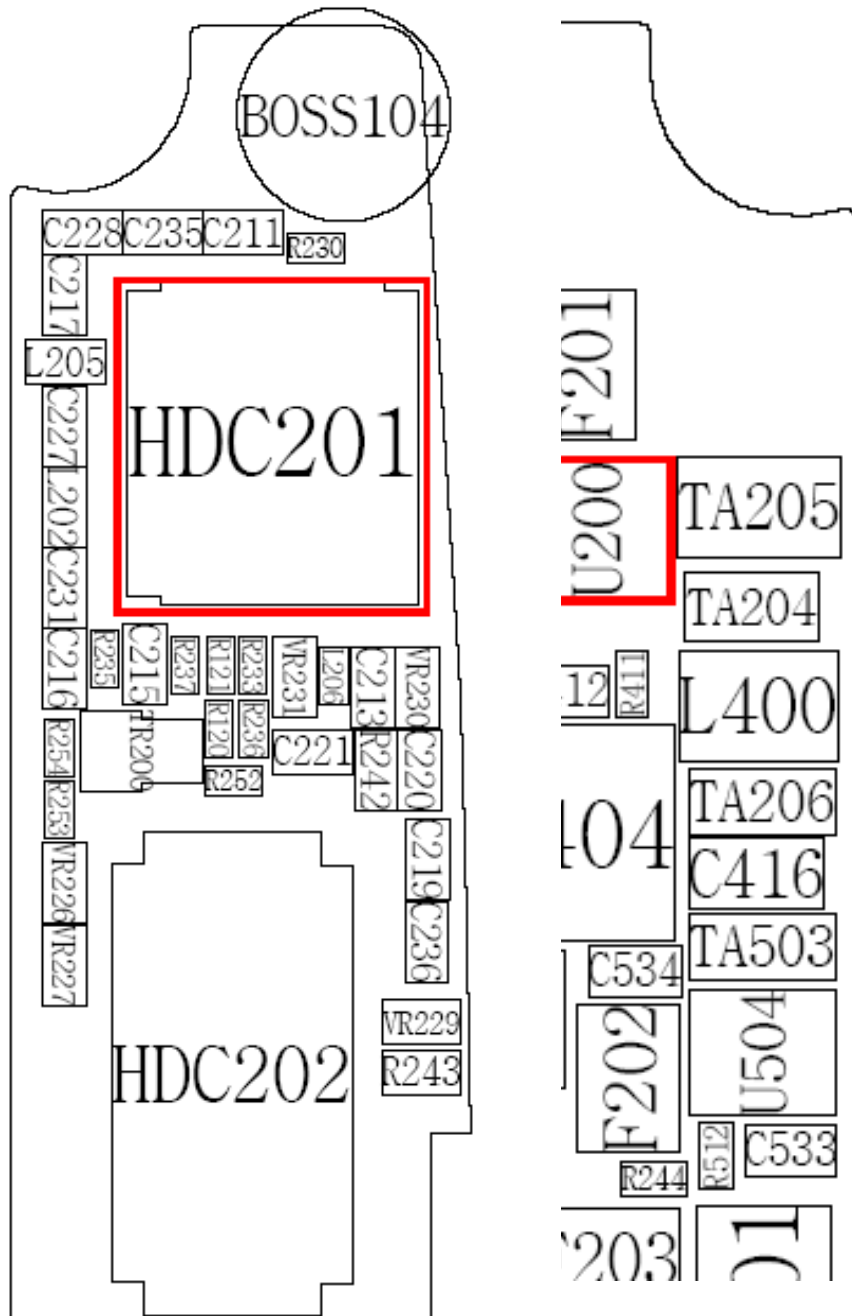


9-1-7. Receiver Part



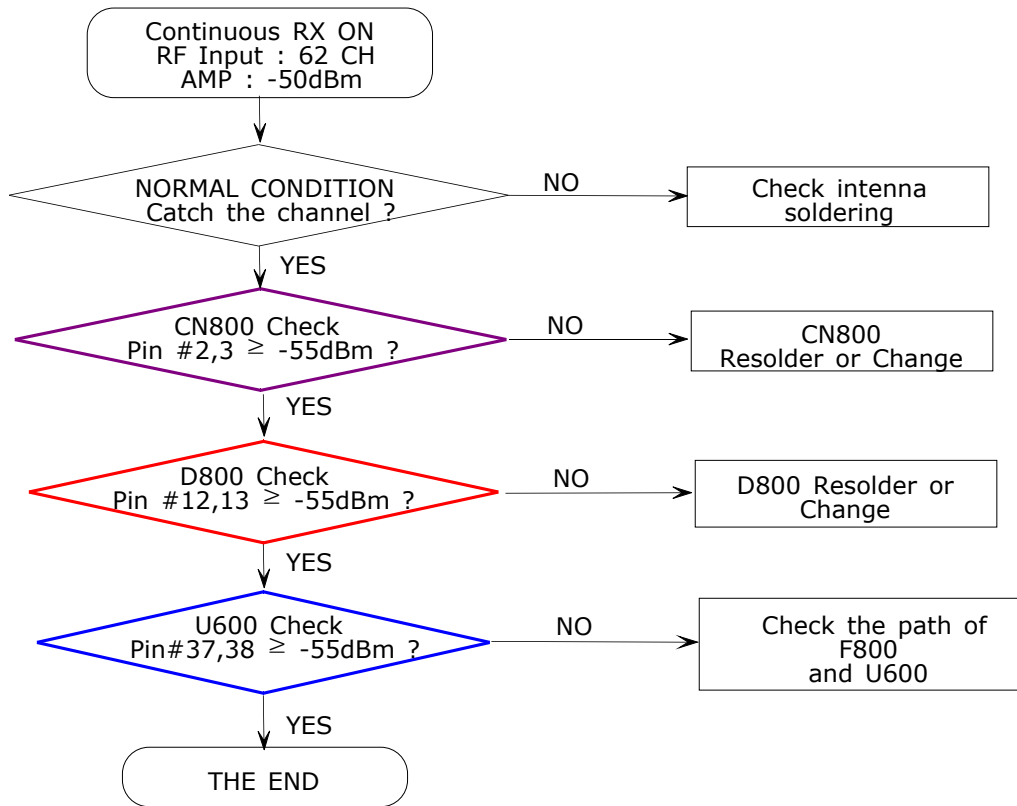
9-1-8. Camera Part



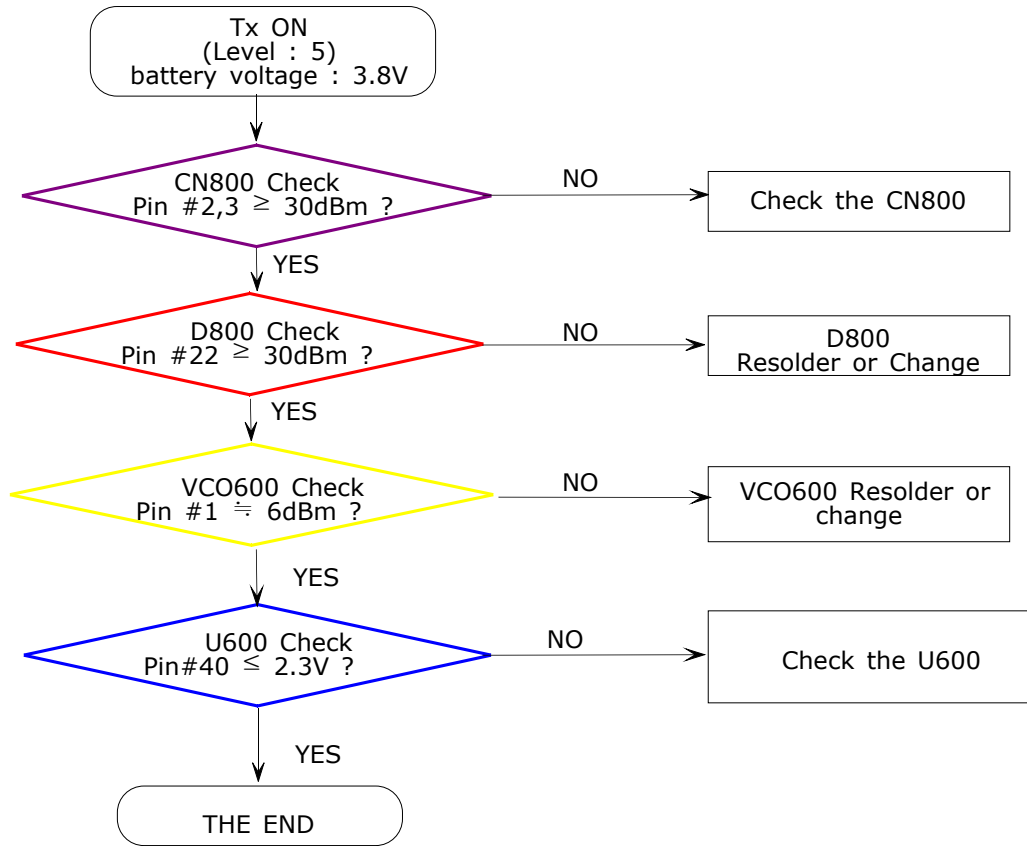


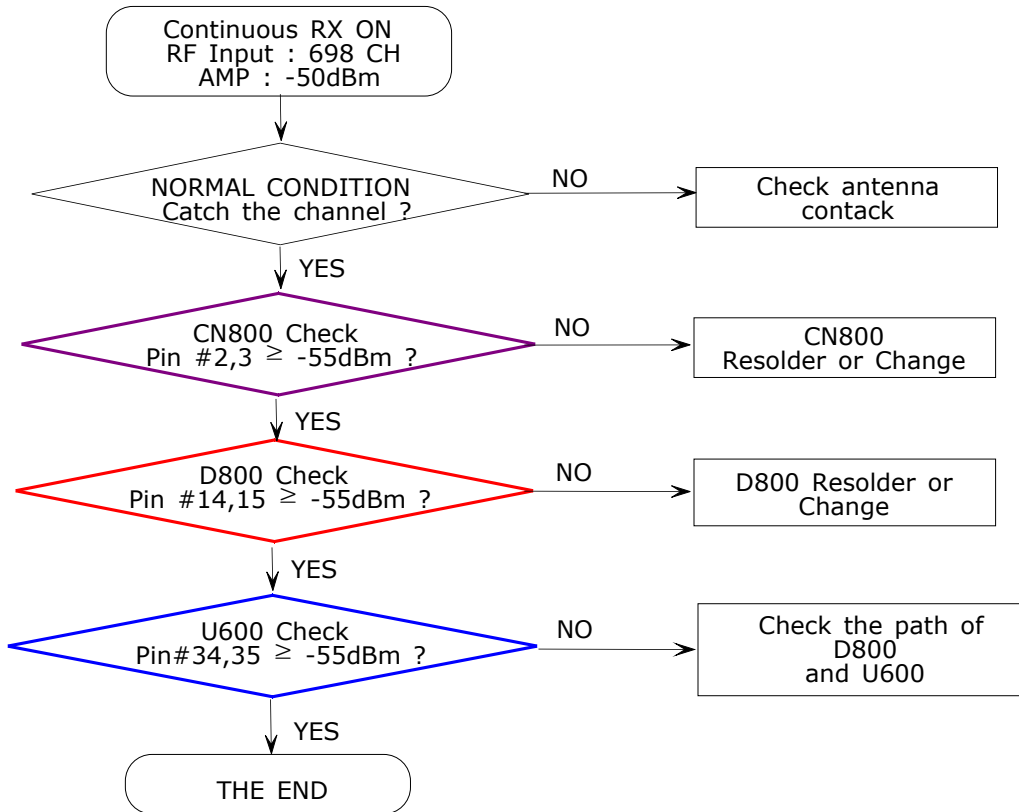
9-2.RF

9-2-1. EGSM Receiver

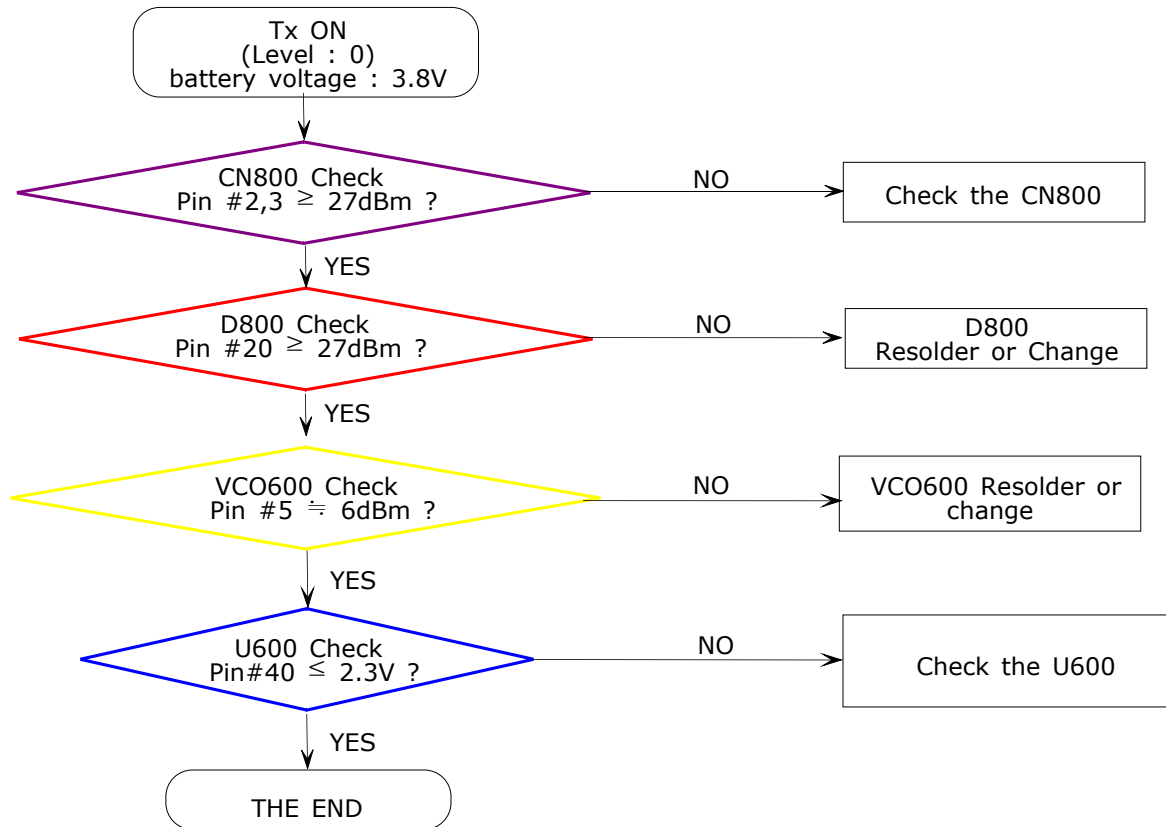


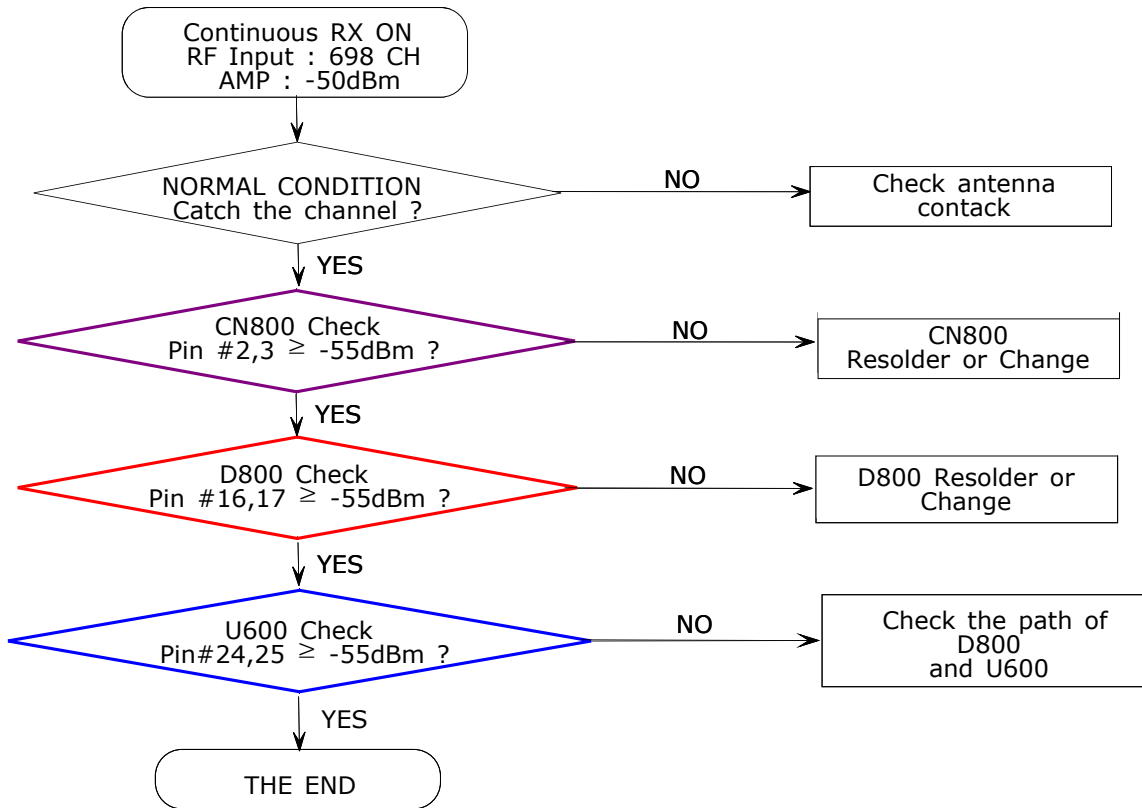
9-2-2. EGSM Transmitter



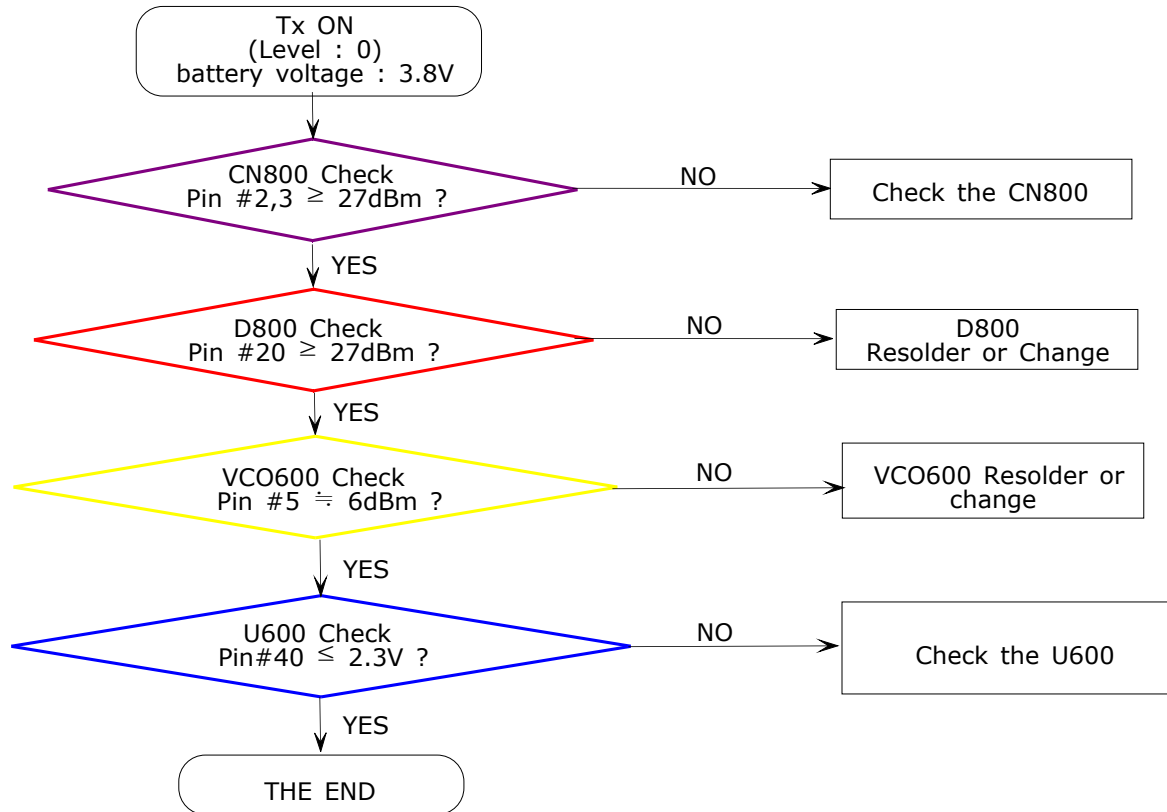
9-2-3. DCS Receiver

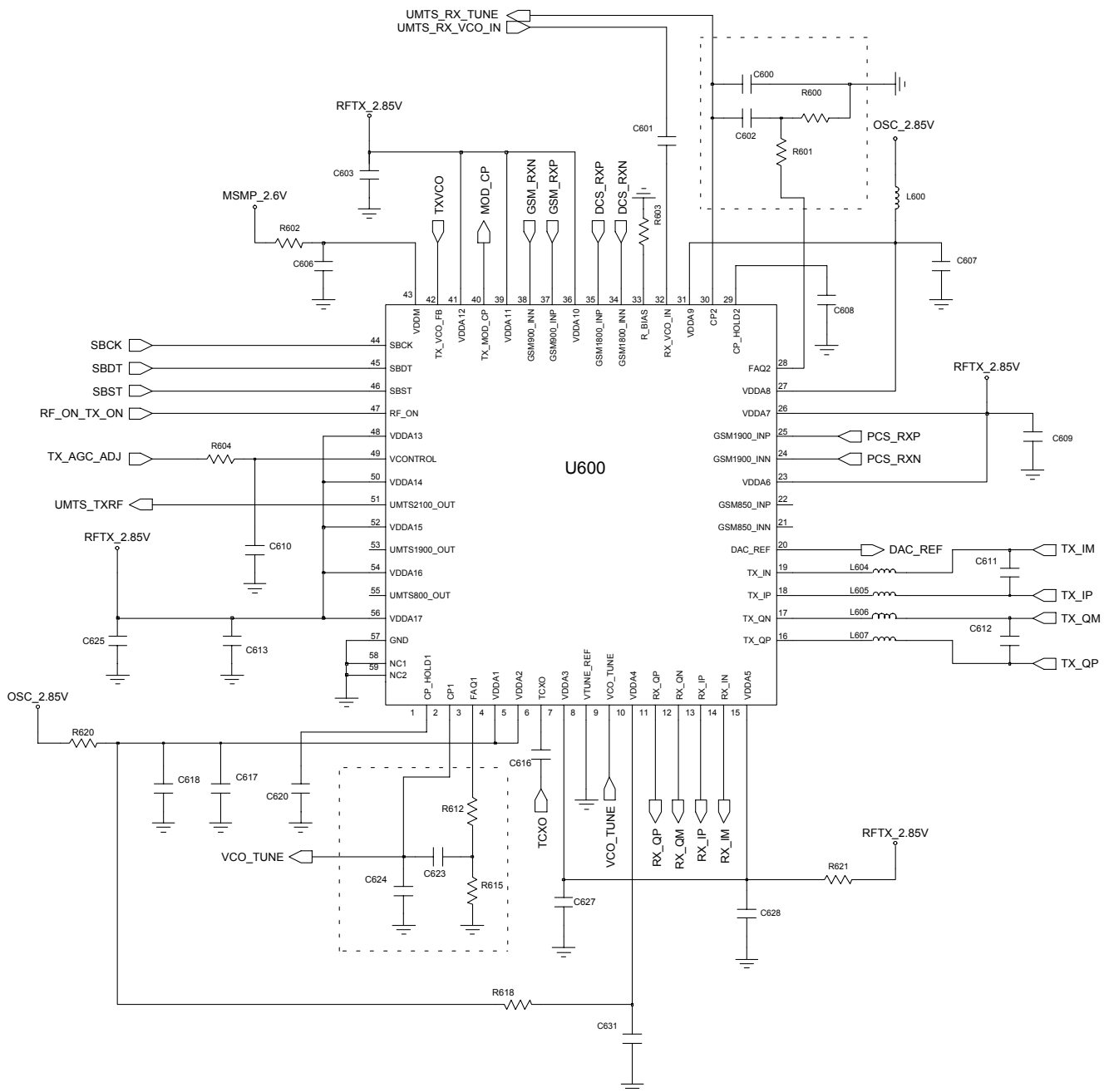
9-2-4. DCS Transmitter

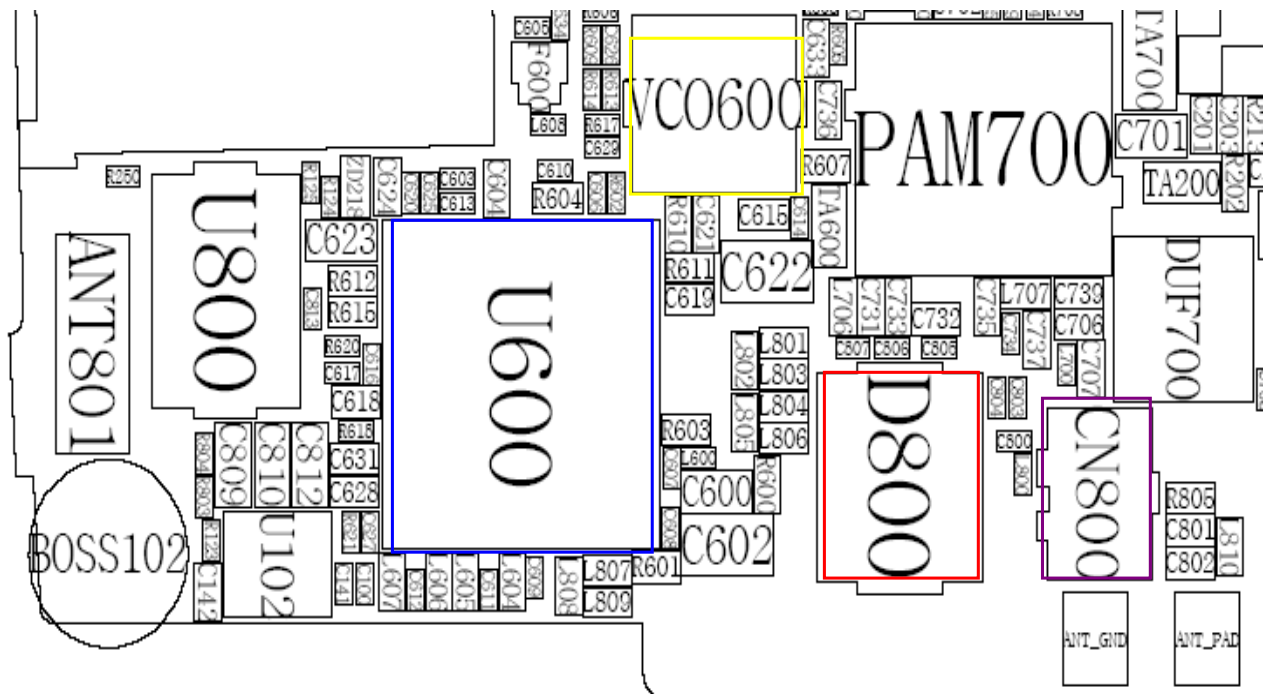
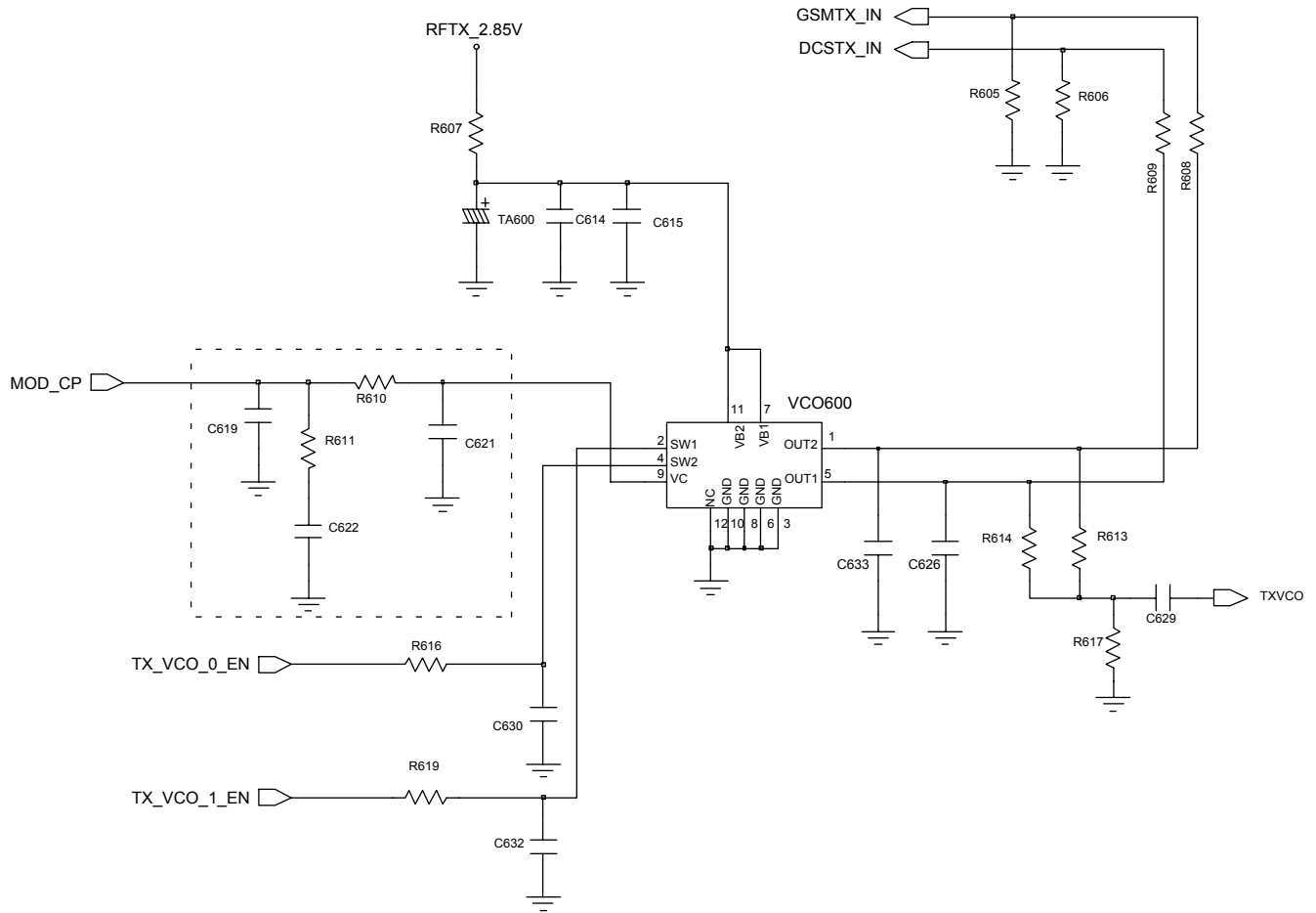


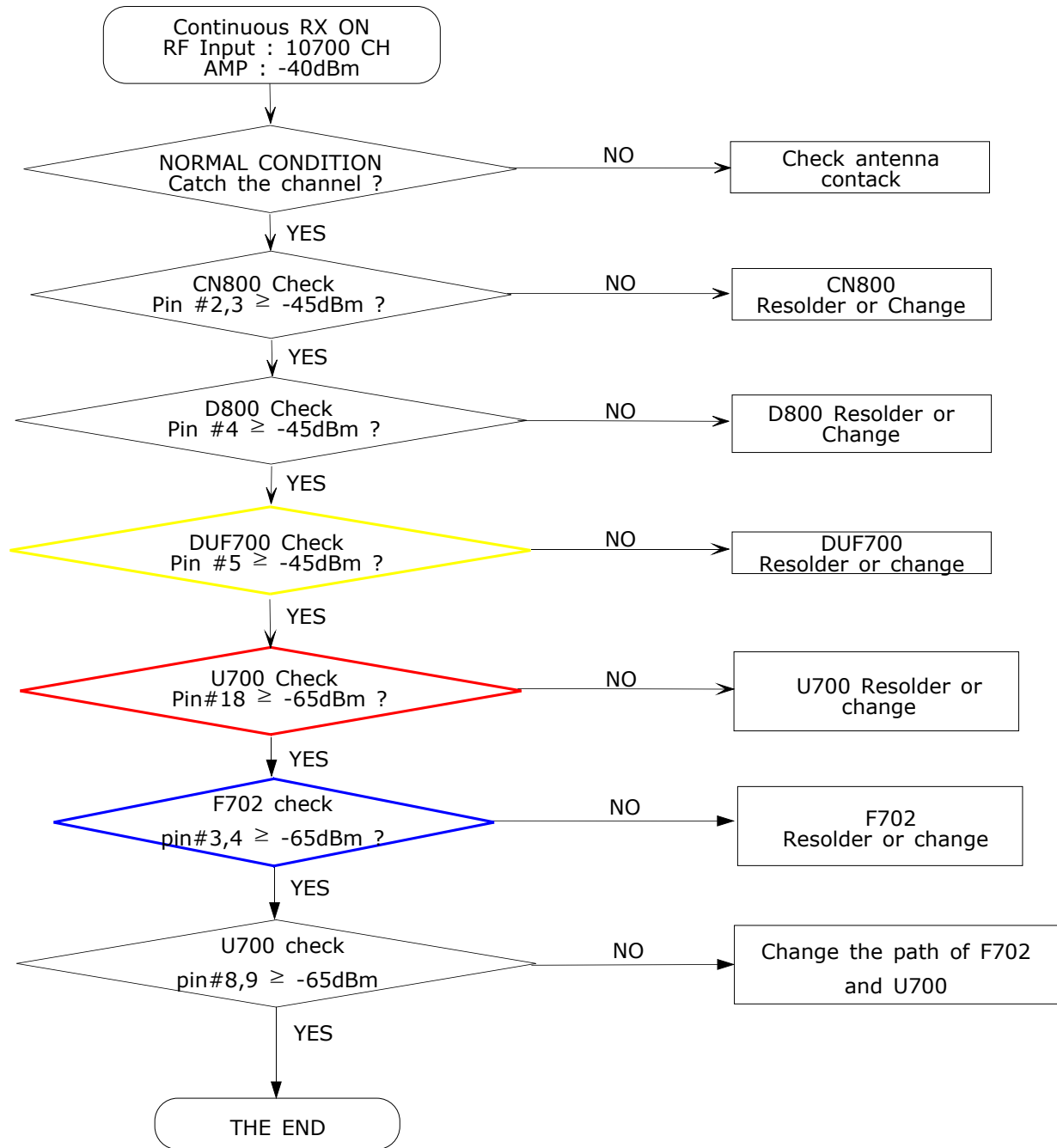
9-2-5. PCS Receiver

9-2-6. PCS Transmitter

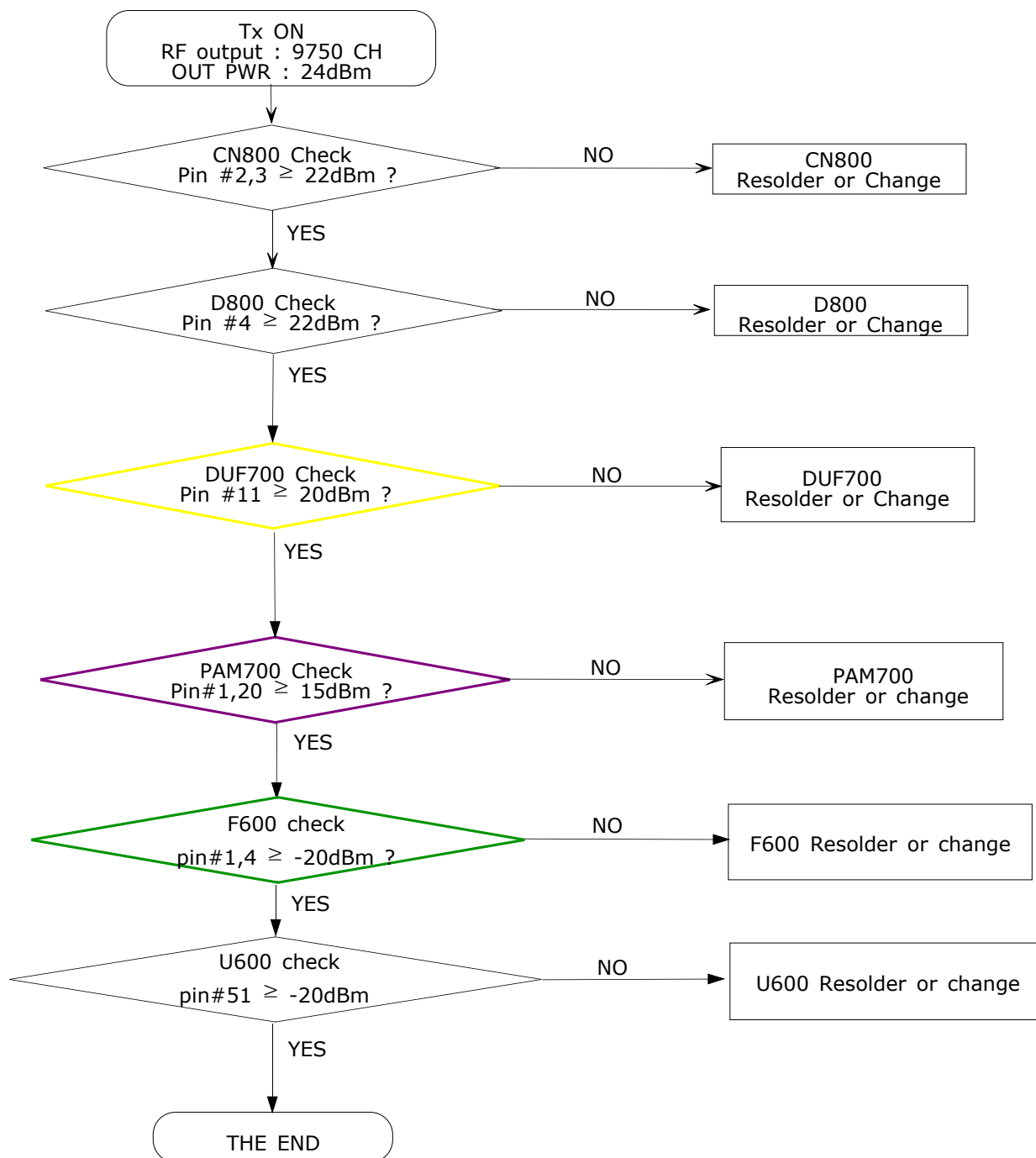


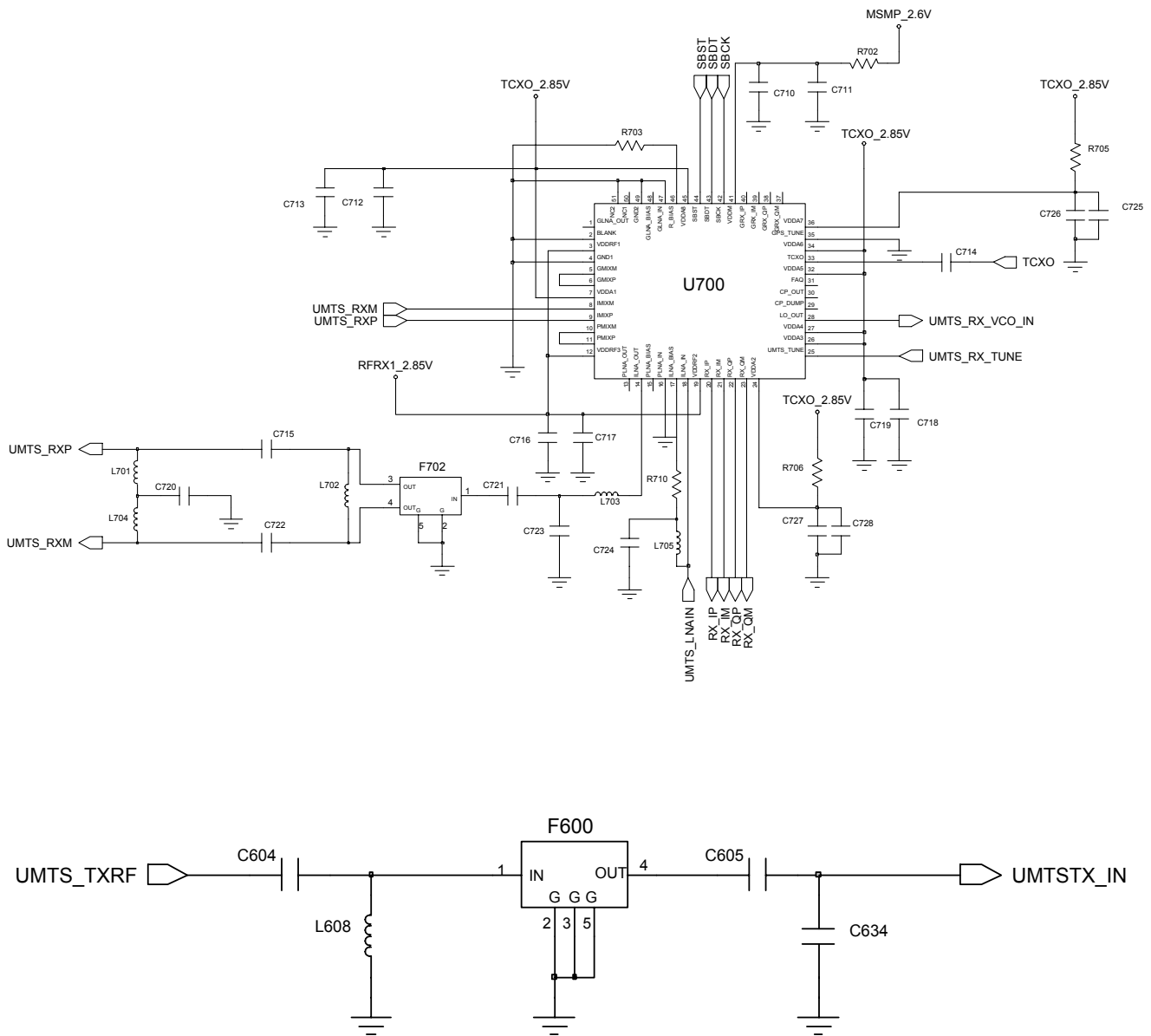


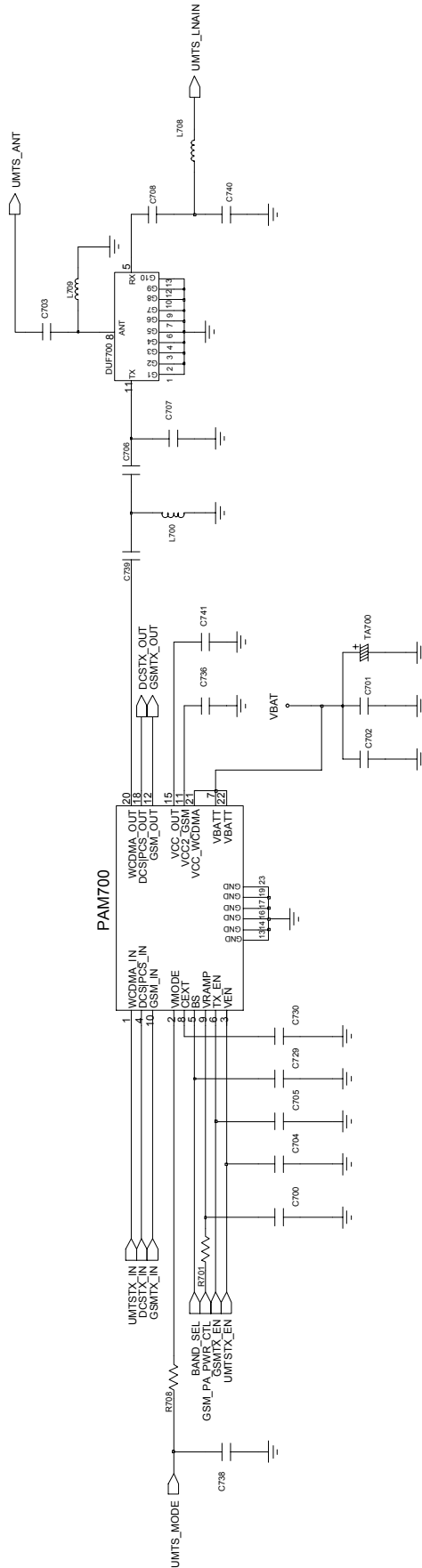


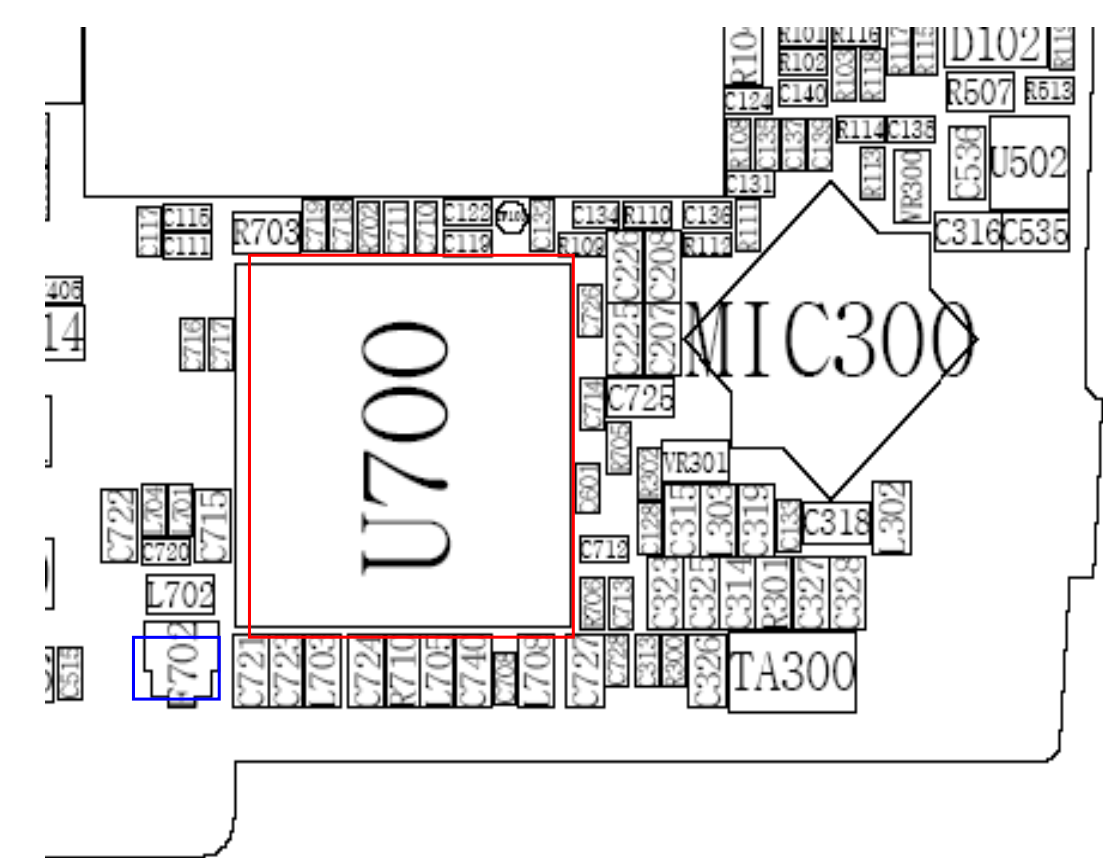
9-2-7. UMTS Receiver

9-2-8. UMTS Transmitter

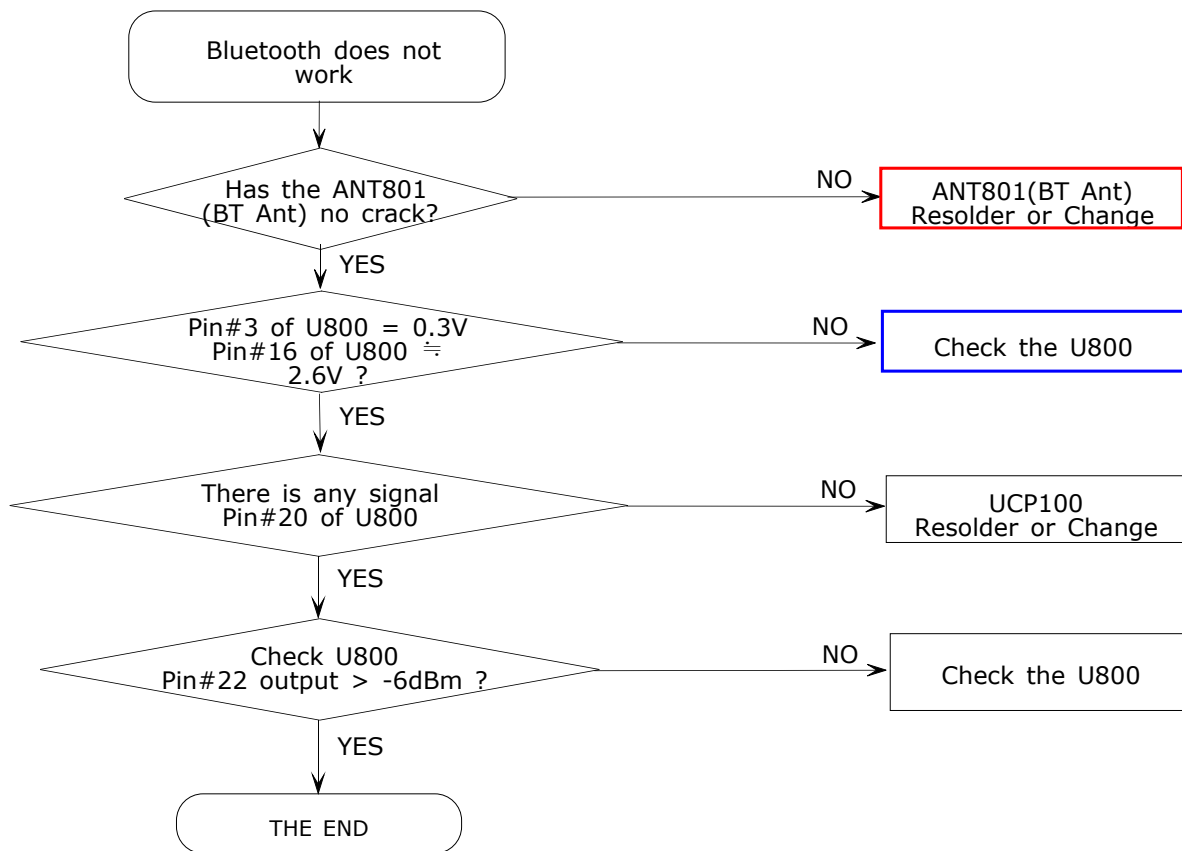


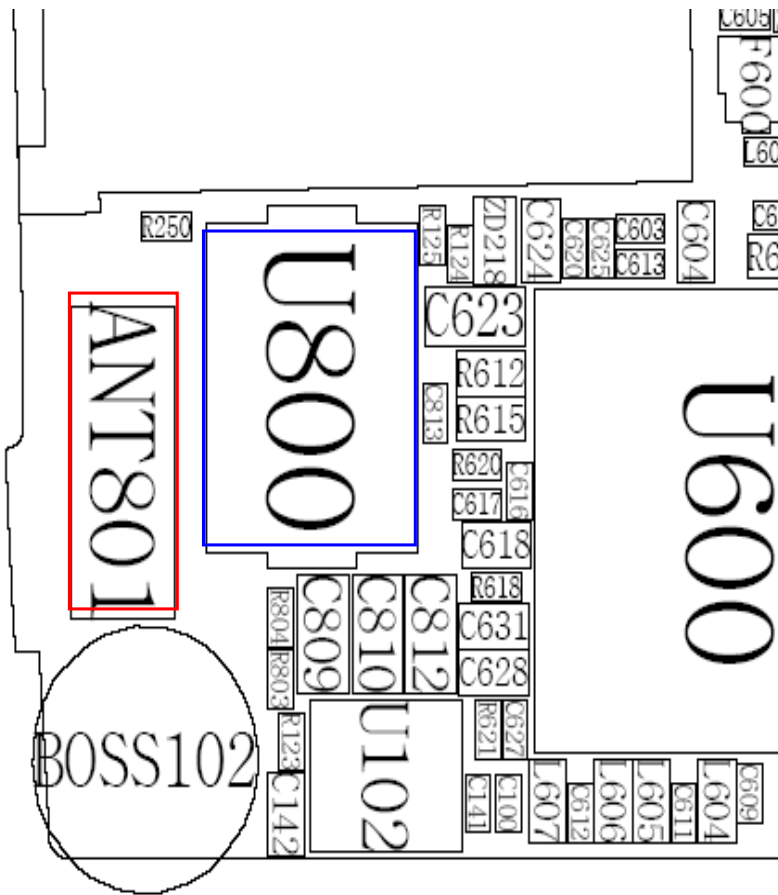
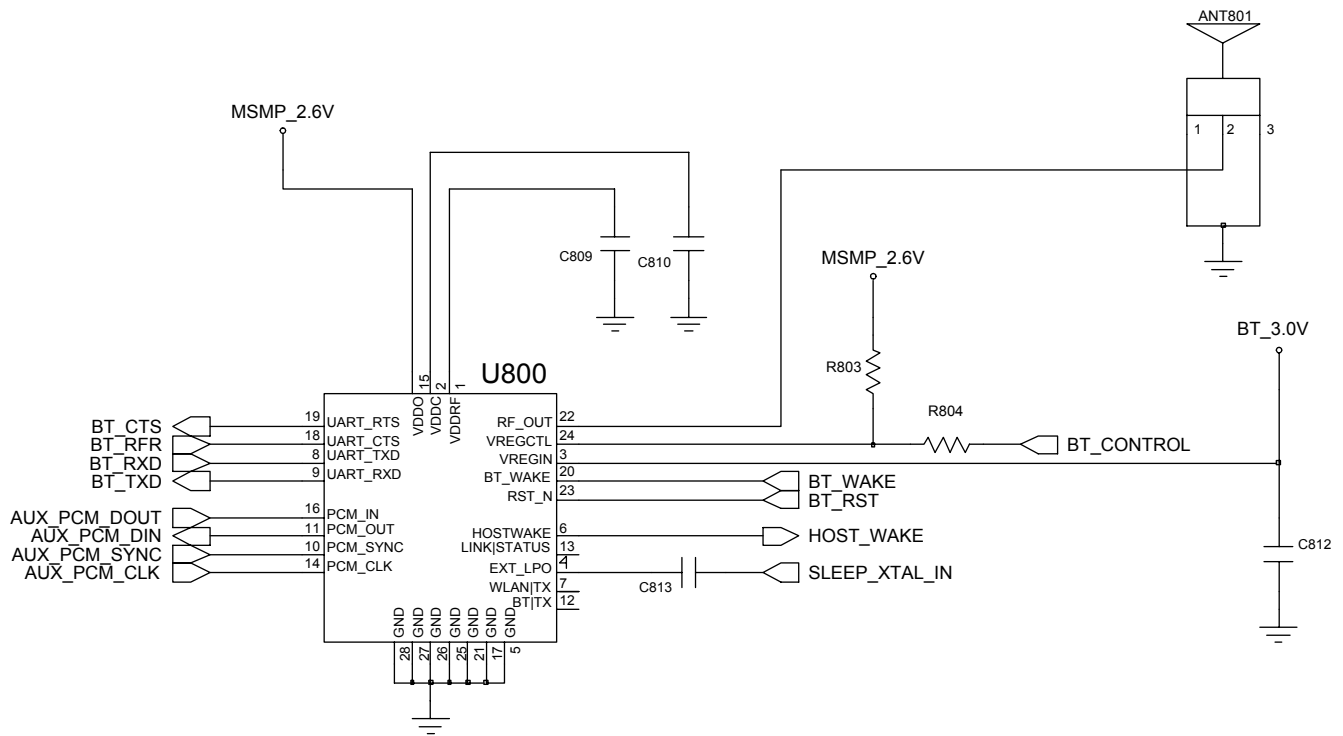






9-2-9. BLUETOOTH





10. Reference data

10-1. 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