

**SAMSUNG**

# GSM TELEPHONE

## SGH-i400

# **SERVICE** *Manual*

## GSM TELEPHONE



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# 1. Safety Precautions

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## 1-1. 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.

## 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.

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## 2. Specification

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### 2-1. GSM/WCDMA General Specification

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

**2-2. GSM TX power class**

<b>TX Power control level</b>	<b>EGSM900</b>	<b>TX Power control level</b>	<b>DCS1800</b>	<b>TX Power control level</b>	<b>PCS1900</b>
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

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## 3. Product Function

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### Main Function

- Camera
- Music player
- RealPlayer
- Gallery
- Flash lite player
- Voice mail, Instant Messageing
- Bluetooth

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## 4. Array course control

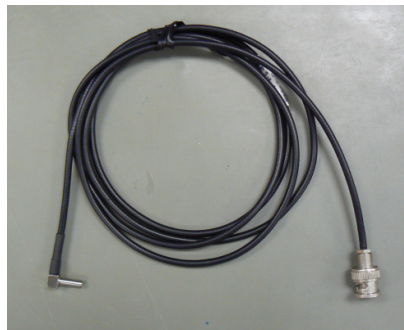
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GH39-03307A



GH39-00894A



GH39-00599A

## **Software Downloading**

### **4-1. Downloading Binary Files**

- binary file for downloading i400.
  - i400XEXXX.BIN : AP Image.
  - i400XEXXX.s3 : CP Image.

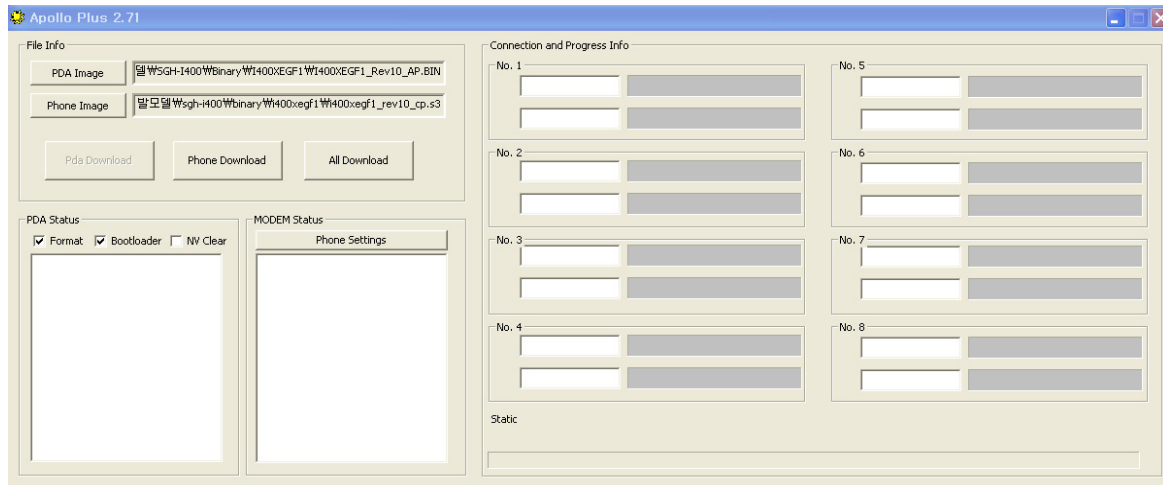
### **4-2. Pre-requisite for Downloading**

- Downloader Program([ApolloPlus](#))
- i400 Mobile Phone
- Data Cable
- Binary file

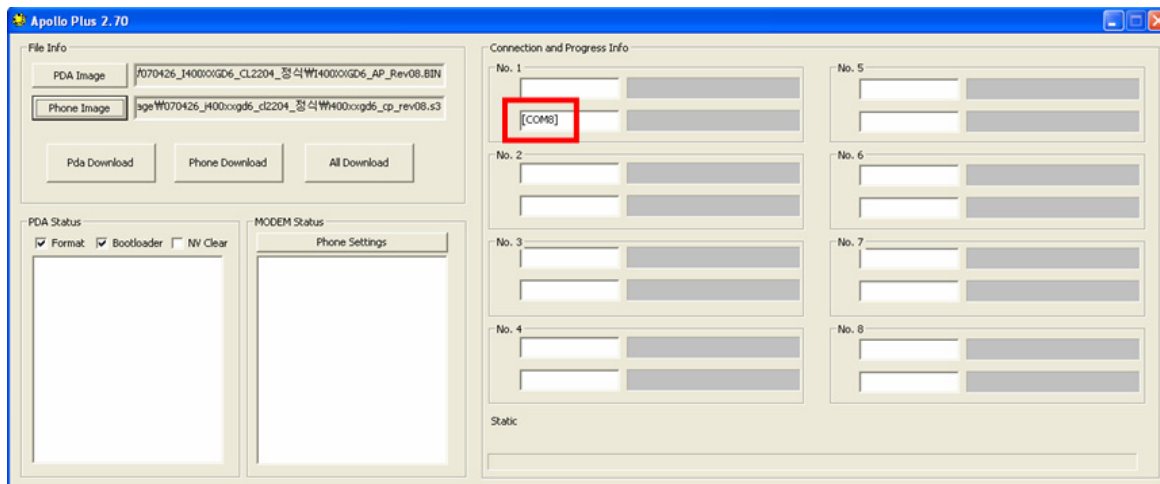


### 4-3. S/W Downloader Program

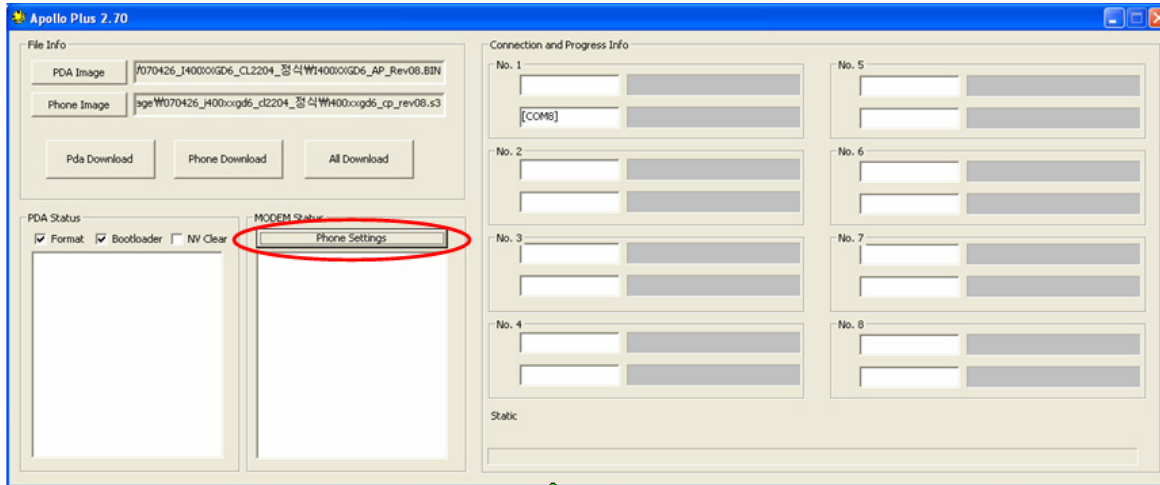
1. Load the binary download program by executing the "ApolloPlus"



2. Push the simultaneously "5" & "8" when Handset power on.  
Confirm the No."COM Port"

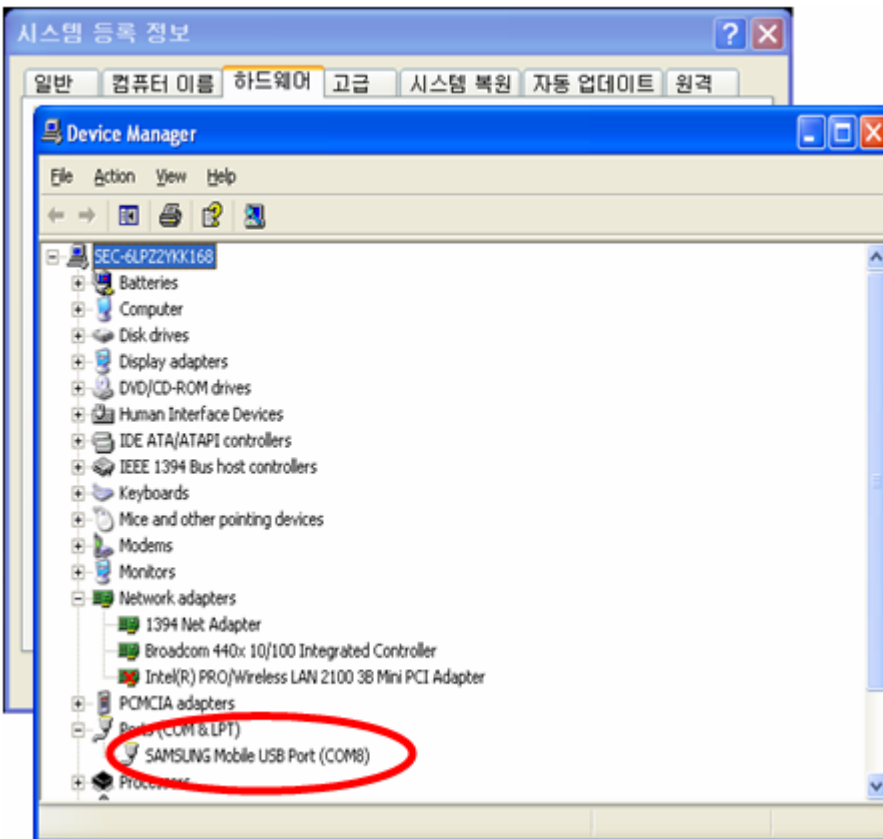


### 3. Select Phone Settings.



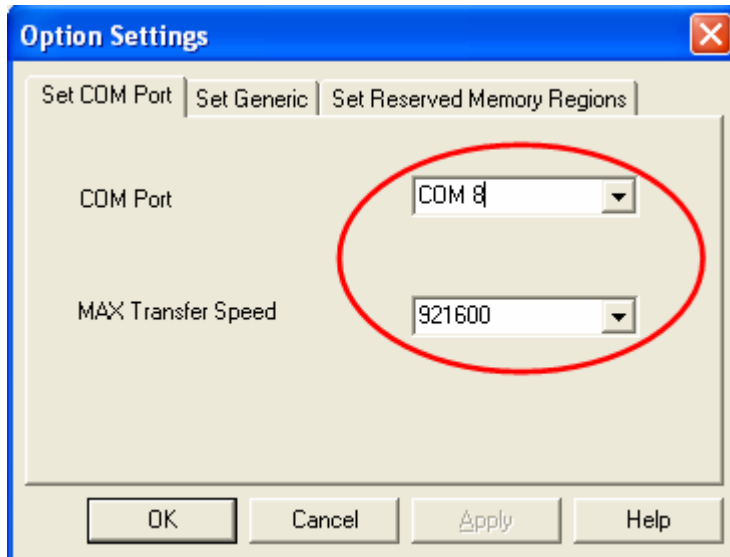
### 4. Confirm "COM Port"

Push the "Device Manager" and Confirm "Com Port No."



5. Push the "Set COM Port".

Select "COM Port No" as you confirm COM Port Number in Device Manager.



You can select the maximum transfer speed. ApolloPlus will use to communicate with the phone. However, ApolloPlus will use a slower speed if either the PC's or the phone's serial hardware is incapable of handling the selected speed

6. Push the "Set Generic" tab.

Select the "Customer T: Drummer(128/64,USB)



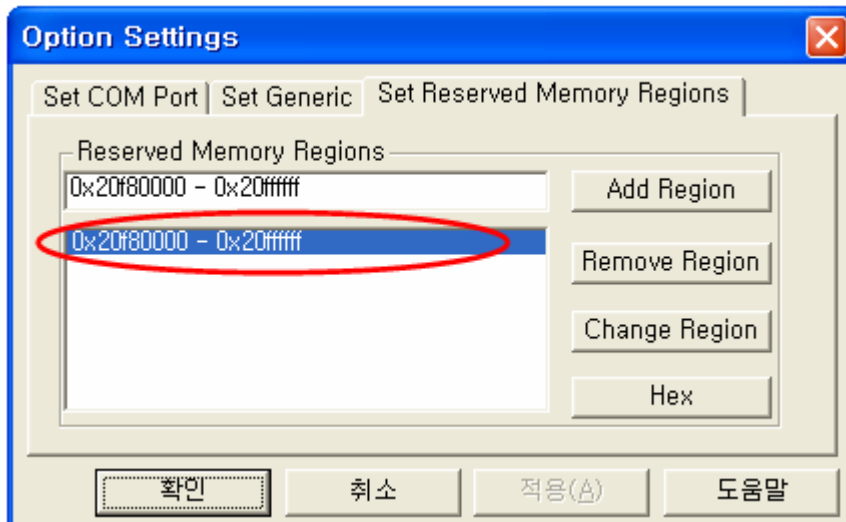
7. Comfirm "Option Settings"

Select "Differences Only" or "Erase All Unused Regions"



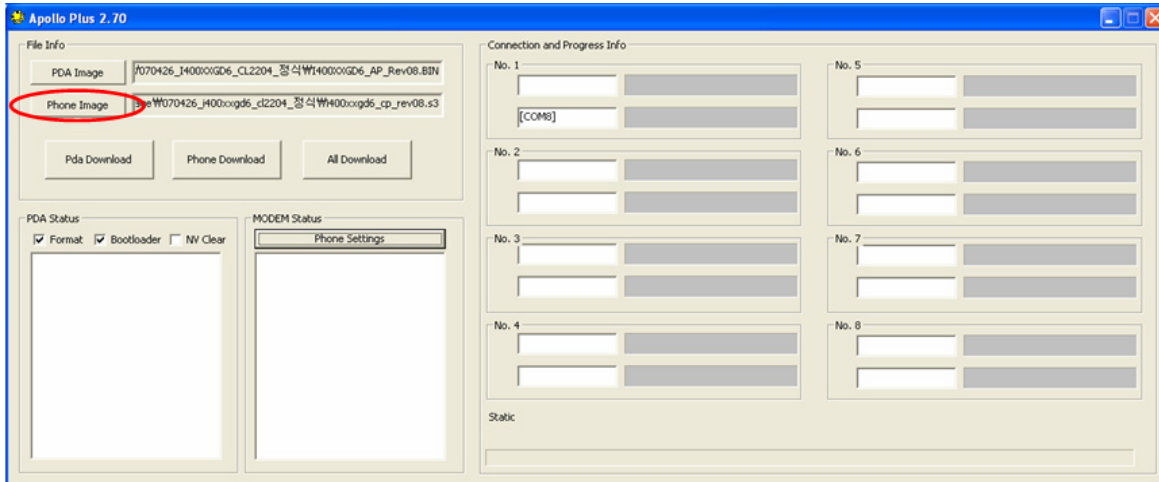
8. Make sure the reserved Memory Regions.

0x20f80000 – 0x20ffffff



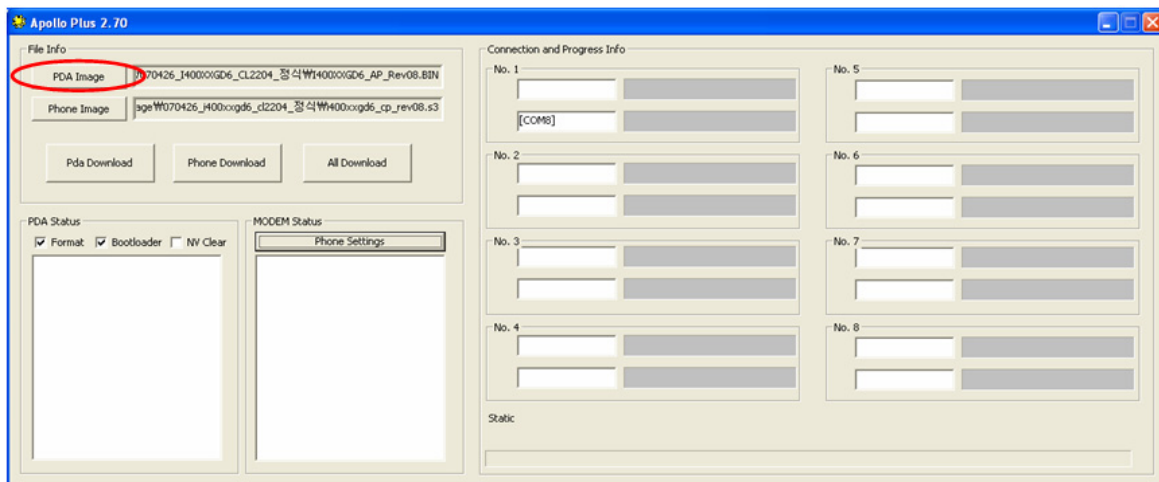
### 9. Select the "Phone Image"

Set the directory path and choose the latest s/w binary, for example "i400XXXX.s3", for the downloader binary setting.

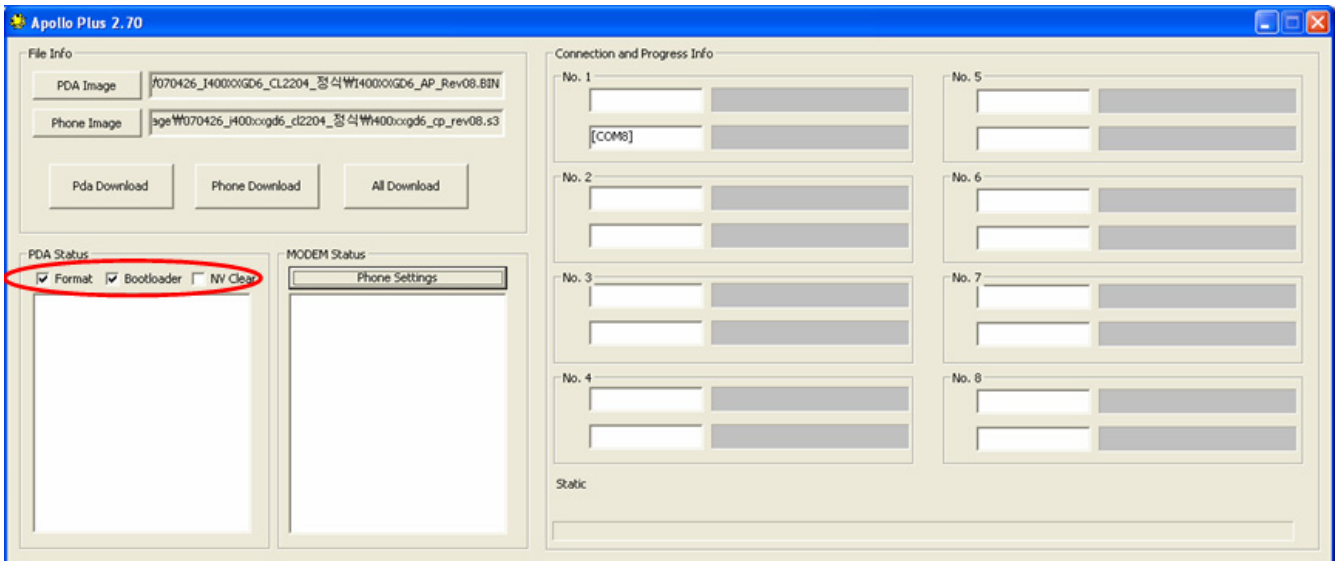


### 10. Select the "PDA Image"

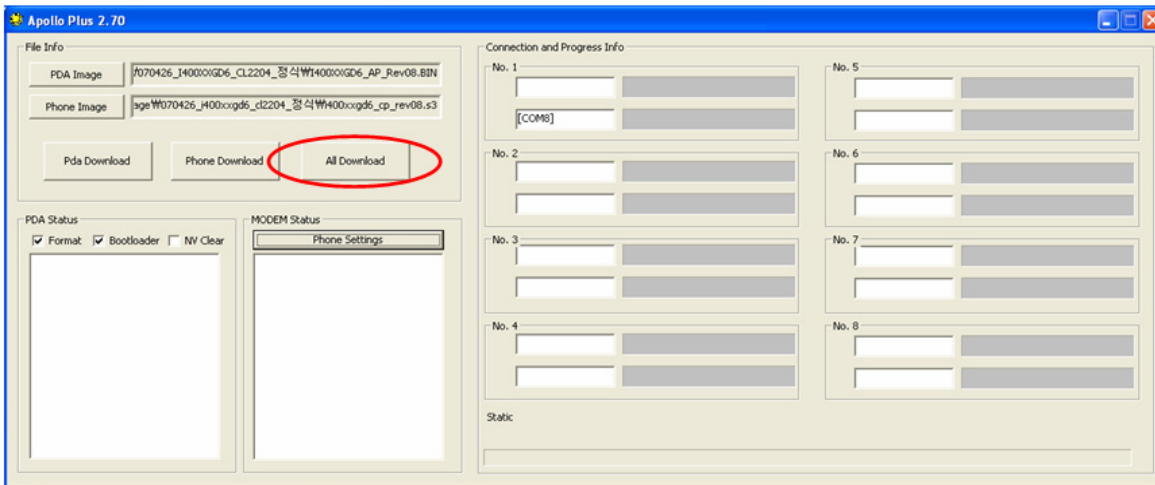
Set the directory path and choose the latest s/w binary, for example "i400XXXX.BIN", for the downloader binary setting.



### 11. Select the "Format" & "Bootloader"

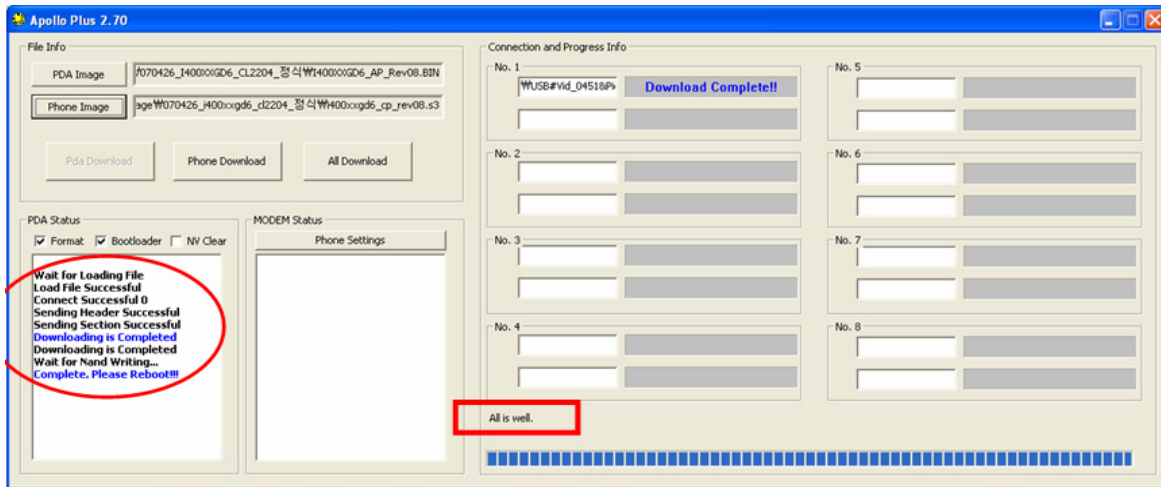


### 12. Select the "All Download"



### 13. The completion of S/W Download

When downloading is finished successfully, there is a "All is well" message.

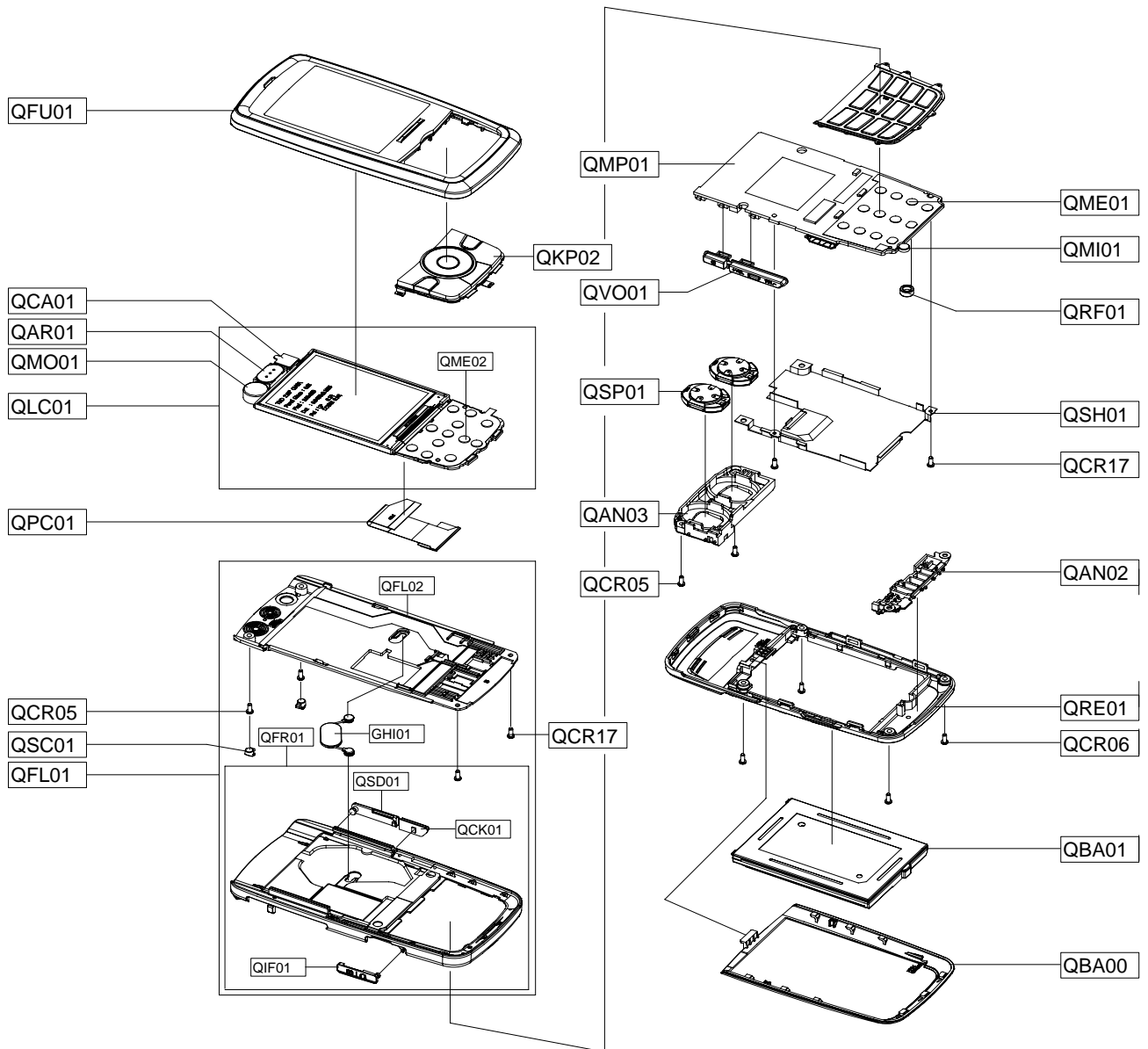


8. Confirm the downloaded version name and etc. :

**\*#1234#**

# 5. Exploded View and Parts List

## 5-1. Cellular phone Exploded View





## 5-2. Cellular phone Parts list

Design LOC	Description	SEC CODE
QAN02	INTENNA-SGHI400	GH42-01269A
QAN03	INTENNA-SGHI400,BT	GH42-01280A
QAR01	AUDIO-RECEIVER	3009-001273
QBA00	PMO-CASE BATTERY	GH72-39402C
QBA01	BATTERY-950MAH,BLK,ENG,M	GH43-02901A
QCA01	CAMERA MODULE	GH59-04541A
QCK01	PMO KEY-CAMERA V3	GH72-42382C
QCR05	SCREW-MACHINE	6001-001478
QCR05	SCREW-MACHINE	6001-001478
QCR06	SCREW-MACHINE	6001-001155
QCR17	SCREW-MACHINE	6001-001460
QCR17	SCREW-MACHINE	6001-001460
QFL01	ASSY CASE-HINGE S/L F/C(SER)	GH98-05512B
QFL02	ASSY CASE-SLIDE LOWER	GH98-04530C
QFR01	ASSY CASE-FRONT(SER)	GH98-05511B
QFU01	ASSY CASE-SLIDE UPPER	GH98-04528C
QHI01	ASSY HINGE-LINK HINGE	GH98-03994A
QIF01	PMO COVER-EAR IF V2	GH72-42376C
QKP02	ASSY KEYPAD-SUB(XEF/ZR)	GH98-04535A
QLC01	ELA UNIT-SGHI400 LCD MODULE	GH96-02535A
QME01	DOME SHEET-3X4 KEY DOME SHEET,	GH59-04530A
QME02	DOME SHEET-NAVI KEY DOME SHEET	GH59-04531A
QMI01	MICROPHONE-ASSY-SGHI400	GH30-00392A
QMO01	MOTOR DC-SGHI400	GH31-00349A
QMP01	PBA MAIN-SGHI400	GH92-03452A
QPC01	MEA-SLIDE FPCB KIT	GH97-08116A
QRE01	ASSY CASE-REAR	GH98-04532C
QRF01	RMO COVER-RF	GH73-11035A
QSC01	RMO COVER-SCREW CAP	GH73-11047C
QSD01	PMO COVER-MICRO SD	GH72-42380C
QSH01	ASSY COVER-SHIELD CAN	GH98-06206A
QSP01	SPEAKER	3001-002180
QVO01	ASSY KEY-VOLUME	GH98-06207C

Description	SEC CODE
ADAPTOR-ATADS10EBE,BLK,EU	GH44-01702A
LABEL(R)-WATER SOAK	GH68-09361A
IPR BRACKET-LID	GH70-02616A
TAPE GASK	GH74-29623A
TAPE INSU-MIC FPCB	GH74-34204A
TAPE INSU-PBA	GH74-34205A
TAPE	GH74-34206A
TAPE GASK	GH74-34207A
TAPE GASK-ESD FRONT	GH74-34569A
MPR-INSU TAPE	GH74-11961A
TAPE INSU-LCD	GH74-34197A
TAPE GASK-LCD	GH74-34570A
TAPE-LIGHT LCD	GH74-34571A
MPR-REMOVE TAPE LCD	GH74-13804A
MPR-TAPE LED	GH74-17926A
TAPE INSU	GH74-32729A
TAPE	GH74-35048A
TAPE-LCD BACK LIGHT	GH74-34772A
VINYL-BOHO MAIN KEY	GH74-35325A
VINYL-BOHO SUB KEY	GH74-35324A
TAPE INSU	GH74-32729A
TAPE	GH74-35048A
BAG PE	6902-000634
LABEL(P)-UNIT SEAL	GH68-00518B
LABEL(R)-MAIN EU	GH68-15593A
BOX(P)-UNIT MAIN EU	GH69-05733A
CUSHION-CASE TA2 MA2	GH69-05734A
S/W CD-MS COMPANION,I400	GH46-00457A
MANUAL USERS-QRG RUSSIAN	GH68-15110A
MANUAL USERS-QRG ENGLISH	GH68-15111A
CBF INTERFACE-DLC APCBS10BBE(S)	GH39-00922A
VINYL-BOHO WINODW	GH74-35903A
EARPHONE-B-TYPE	GH59-04557A

## 6. MAIN Electrical Parts List

SEC CODE	Design LOC	Discription	STATUS
0401-001141	D503	DIODE-SWITCHING	SA
0403-001547	D500	DIODE-ZENER	SA
0404-001172	D300	DIODE-SCHOTTKY	SA
0406-001190	D506	DIODE-TVS	SA
0406-001190	D507	DIODE-TVS	SA
0406-001197	D602	DIODE-TVS	SA
0406-001197	D603	DIODE-TVS	SA
0406-001197	ZD602	DIODE-TVS	SA
0406-001210	ZD603	DIODE-TVS	SA
0406-001210	ZD604	DIODE-TVS	SA
0407-000115	D509	DIODE-ARRAY	SA
0407-001002	D501	DIODE-ARRAY	SA
0407-001002	D502	DIODE-ARRAY	SA
0407-001002	D508	DIODE-ARRAY	SA
0407-001007	D400	DIODE-ARRAY	SA
0504-001113	TR300	TR-DIGITAL	SA
0504-001113	TR501	TR-DIGITAL	SA
0505-001165	TR500	FET-SILICON	SA
0601-002275	LED600	LED	SA
0601-002275	LED601	LED	SA
0801-003012	U403	IC-CMOS LOGIC	SA
0801-003016	U301	IC-CMOS LOGIC	SA
0801-003016	U400	IC-CMOS LOGIC	SA
0801-003058	U405	IC-CMOS LOGIC	SA
0904-002227	UCP700	IC-DSP	SA
1001-001221	U202	IC-ANALOG SWITCH	SA
1001-001336	U501	IC-ANALOG SWITCH	SA
1001-001408	U605	IC-ANALOG SWITCH	SA
1001-001408	U606	IC-ANALOG SWITCH	SA
1009-001027	U200	IC-HALL EFFECT S/W	SA
1108-000050	UCP700UP	IC-MCP	SA
1108-000122	UME200	IC-MCP	SA
1201-002241	U604	IC-AUDIO AMP	SA
1201-002457	PAM100	IC-POWER AMP	SA
1203-002716	U402	IC-VOL. DETECTOR	SA
1203-003432	U401	IC-POSI.FIXED REG.	SA
1203-003523	U410	IC-POSI.FIXED REG.	SA

Main Electrical Parts List

SEC CODE	Design LOC	Discription	STATUS
1203-003643	U409	IC-MULTI REG.	SA
1203-003737	U602	IC-POSI.FIXED REG.	SA
1203-003737	U603	IC-POSI.FIXED REG.	SA
1203-003748	U407	IC-MULTI REG.	SA
1203-004119	UCD300	IC-POWER SUPERVISOR	SA
1203-004164	U300	IC-DC/DC CONVERTER	SA
1203-004621	U406	IC-POWER SUPERVISOR	SA
1203-004838	U404	IC-BATTERY	SA
1205-002272	U201	IC-TRANSCIEVER	SA
1205-003093	RFT101	IC-TRANSCIEVER	SA
1205-003169	U101	IC-DATA COMM./GEN.	SA
1404-001165	TH300	THERMISTOR-NTC	SA
1405-001093	V500	VARISTOR	SA
1405-001093	V501	VARISTOR	SA
1405-001093	V502	VARISTOR	SA
1405-001093	V503	VARISTOR	SA
1405-001093	V504	VARISTOR	SA
1405-001093	V505	VARISTOR	SA
1405-001093	V506	VARISTOR	SA
1405-001093	V507	VARISTOR	SA
1405-001093	V508	VARISTOR	SA
1405-001093	V509	VARISTOR	SA
1405-001093	V510	VARISTOR	SA
1405-001093	V511	VARISTOR	SA
1405-001093	V512	VARISTOR	SA
1405-001093	V513	VARISTOR	SA
1405-001093	V514	VARISTOR	SA
1405-001093	V515	VARISTOR	SA
1405-001093	V516	VARISTOR	SA
1405-001093	V517	VARISTOR	SA
1405-001093	V518	VARISTOR	SA
1405-001093	V600	VARISTOR	SA
1405-001093	V601	VARISTOR	SA
1405-001093	V606	VARISTOR	SA
1405-001093	V607	VARISTOR	SA
2007-000070	R403	R-CHIP	SA
2007-000070	R404	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2007-000138	R311	R-CHIP	SA
2007-000138	R615	R-CHIP	SA
2007-000138	R616	R-CHIP	SA
2007-000140	R513	R-CHIP	SA
2007-000140	R514	R-CHIP	SA
2007-000140	R515	R-CHIP	SA
2007-000140	R516	R-CHIP	SA
2007-000140	R518	R-CHIP	SA
2007-000140	R520	R-CHIP	SA
2007-000141	R301	R-CHIP	SA
2007-000141	R524	R-CHIP	SA
2007-000141	R525	R-CHIP	SA
2007-000141	R642	R-CHIP	SA
2007-000141	R646	R-CHIP	SA
2007-000148	R417	R-CHIP	SA
2007-000148	R502	R-CHIP	SA
2007-000157	R206	R-CHIP	SA
2007-000157	R222	R-CHIP	SA
2007-000157	R300	R-CHIP	SA
2007-000157	R454	R-CHIP	SA
2007-000157	R461	R-CHIP	SA
2007-000157	R536	R-CHIP	SA
2007-000157	R608	R-CHIP	SA
2007-000157	R609	R-CHIP	SA
2007-000157	R610	R-CHIP	SA
2007-000157	R611	R-CHIP	SA
2007-000157	R612	R-CHIP	SA
2007-000157	R614	R-CHIP	SA
2007-000157	R636	R-CHIP	SA
2007-000157	R637	R-CHIP	SA
2007-000157	R638	R-CHIP	SA
2007-000157	R639	R-CHIP	SA
2007-000157	R640	R-CHIP	SA
2007-000157	R648	R-CHIP	SA
2007-000159	R507	R-CHIP	SA
2007-000159	R644	R-CHIP	SA
2007-000159	R647	R-CHIP	SA

Main Electrical Parts List

SEC CODE	Design LOC	Discription	STATUS
2007-000162	R204	R-CHIP	SA
2007-000162	R205	R-CHIP	SA
2007-000162	R212	R-CHIP	SA
2007-000162	R216	R-CHIP	SA
2007-000162	R419	R-CHIP	SA
2007-000162	R420	R-CHIP	SA
2007-000162	R421	R-CHIP	SA
2007-000162	R434	R-CHIP	SA
2007-000162	R435	R-CHIP	SA
2007-000162	R442	R-CHIP	SA
2007-000162	R504	R-CHIP	SA
2007-000162	R505	R-CHIP	SA
2007-000162	R506	R-CHIP	SA
2007-000162	R510	R-CHIP	SA
2007-000162	R534	R-CHIP	SA
2007-000162	R535	R-CHIP	SA
2007-000162	R599	R-CHIP	SA
2007-000165	R508	R-CHIP	SA
2007-000170	R500	R-CHIP	SA
2007-000170	R501	R-CHIP	SA
2007-000171	L111	R-CHIP	SA
2007-000171	L601	R-CHIP	SA
2007-000171	L602	R-CHIP	SA
2007-000171	L603	R-CHIP	SA
2007-000171	L604	R-CHIP	SA
2007-000171	R533	R-CHIP	SA
2007-000171	R703	R-CHIP	SA
2007-000171	R711	R-CHIP	SA
2007-000171	R718	R-CHIP	SA
2007-000171	R720	R-CHIP	SA
2007-000173	R224	R-CHIP	SA
2007-000173	R225	R-CHIP	SA
2007-001119	R632	R-CHIP	SA
2007-001119	R633	R-CHIP	SA
2007-001119	R634	R-CHIP	SA
2007-001119	R635	R-CHIP	SA
2007-001291	R521	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2007-001291	R522	R-CHIP	SA
2007-001298	R625	R-CHIP	SA
2007-001298	R626	R-CHIP	SA
2007-001298	R627	R-CHIP	SA
2007-001298	R628	R-CHIP	SA
2007-001298	R629	R-CHIP	SA
2007-001298	R630	R-CHIP	SA
2007-001298	R631	R-CHIP	SA
2007-001308	R103	R-CHIP	SA
2007-001308	R459	R-CHIP	SA
2007-001308	R526	R-CHIP	SA
2007-001319	R101	R-CHIP	SA
2007-001320	R431	R-CHIP	SA
2007-001325	R429	R-CHIP	SA
2007-001339	R509	R-CHIP	SA
2007-001339	R613	R-CHIP	SA
2007-007107	R411	R-CHIP	SA
2007-007107	R412	R-CHIP	SA
2007-007107	R457	R-CHIP	SA
2007-007136	R308	R-CHIP	SA
2007-007142	R643	R-CHIP	SA
2007-007142	R645	R-CHIP	SA
2007-007142	R714	R-CHIP	SA
2007-007306	R527	R-CHIP	SA
2007-007306	R528	R-CHIP	SA
2007-007308	R307	R-CHIP	SA
2007-007314	R306	R-CHIP	SA
2007-007317	R600	R-CHIP	SA
2007-007317	R603	R-CHIP	SA
2007-007317	R606	R-CHIP	SA
2007-007317	R607	R-CHIP	SA
2007-007318	R430	R-CHIP	SA
2007-007528	R223	R-CHIP	SA
2007-007528	R641	R-CHIP	SA
2007-007798	R702	R-CHIP	SA
2007-008056	R100	R-CHIP	SA
2007-008516	R102	R-CHIP	SA

Main Electrical Parts List

SEC CODE	Design LOC	Discription	STATUS
2007-008516	R106	R-CHIP	SA
2007-008542	R104	R-CHIP	SA
2007-008542	R105	R-CHIP	SA
2007-008672	R529	R-CHIP	SA
2203-000233	C112	C-CER,CHIP	SA
2203-000233	C134	C-CER,CHIP	SA
2203-000233	C323	C-CER,CHIP	SA
2203-000233	C461	C-CER,CHIP	SA
2203-000254	C203	C-CER,CHIP	SA
2203-000254	C204	C-CER,CHIP	SA
2203-000254	C207	C-CER,CHIP	SA
2203-000254	C208	C-CER,CHIP	SA
2203-000254	C210	C-CER,CHIP	SA
2203-000254	C217	C-CER,CHIP	SA
2203-000254	C222	C-CER,CHIP	SA
2203-000254	C306	C-CER,CHIP	SA
2203-000254	C307	C-CER,CHIP	SA
2203-000254	C324	C-CER,CHIP	SA
2203-000254	C637	C-CER,CHIP	SA
2203-000254	C638	C-CER,CHIP	SA
2203-000254	C639	C-CER,CHIP	SA
2203-000254	C640	C-CER,CHIP	SA
2203-000278	C601	C-CER,CHIP	SA
2203-000278	C604	C-CER,CHIP	SA
2203-000278	C611	C-CER,CHIP	SA
2203-000278	C623	C-CER,CHIP	SA
2203-000278	C626	C-CER,CHIP	SA
2203-000278	C631	C-CER,CHIP	SA
2203-000311	C602	C-CER,CHIP	SA
2203-000311	C624	C-CER,CHIP	SA
2203-000330	C136	C-CER,CHIP	SA
2203-000330	C137	C-CER,CHIP	SA
2203-000386	C223	C-CER,CHIP	SA
2203-000386	C224	C-CER,CHIP	SA
2203-000386	C300	C-CER,CHIP	SA
2203-000386	C425	C-CER,CHIP	SA
2203-000386	C426	C-CER,CHIP	SA



SEC CODE	Design LOC	Discription	STATUS
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2203-000386	C513	C-CER,CHIP	SA
2203-000386	C514	C-CER,CHIP	SA
2203-000386	C515	C-CER,CHIP	SA
2203-000438	C502	C-CER,CHIP	SA
2203-000438	C503	C-CER,CHIP	SA
2203-000438	C633	C-CER,CHIP	SA
2203-000438	C634	C-CER,CHIP	SA
2203-000438	C635	C-CER,CHIP	SA
2203-000438	C636	C-CER,CHIP	SA
2203-000812	C111	C-CER,CHIP	SA
2203-000812	C304	C-CER,CHIP	SA
2203-000812	C305	C-CER,CHIP	SA
2203-000812	C509	C-CER,CHIP	SA
2203-000812	C600	C-CER,CHIP	SA
2203-000812	C605	C-CER,CHIP	SA
2203-000812	C610	C-CER,CHIP	SA
2203-000812	C622	C-CER,CHIP	SA
2203-000812	C627	C-CER,CHIP	SA
2203-000812	C630	C-CER,CHIP	SA
2203-000940	C302	C-CER,CHIP	SA
2203-000995	C219	C-CER,CHIP	SA
2203-000995	C423	C-CER,CHIP	SA
2203-000995	C435	C-CER,CHIP	SA
2203-000995	C436	C-CER,CHIP	SA
2203-000995	C510	C-CER,CHIP	SA
2203-000995	C511	C-CER,CHIP	SA
2203-000995	C516	C-CER,CHIP	SA
2203-000995	C606	C-CER,CHIP	SA
2203-000995	C628	C-CER,CHIP	SA
2203-001405	C325	C-CER,CHIP	SA
2203-001405	C326	C-CER,CHIP	SA
2203-002709	C310	C-CER,CHIP	SA
2203-002709	C421	C-CER,CHIP	SA
2203-002709	C422	C-CER,CHIP	SA
2203-005055	C143	C-CER,CHIP	SA
2203-005234	C118	C-CER,CHIP	SA

Main Electrical Parts List

SEC CODE	Design LOC	Discription	STATUS
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2203-005234	C124	C-CER,CHIP	SA
2203-005234	C125	C-CER,CHIP	SA
2203-005234	C135	C-CER,CHIP	SA
2203-005288	C127	C-CER,CHIP	SA
2203-005481	C200	C-CER,CHIP	SA
2203-005482	C309	C-CER,CHIP	SA
2203-005482	C327	C-CER,CHIP	SA
2203-005482	C711	C-CER,CHIP	SA
2203-005682	C113	C-CER,CHIP	SA
2203-005682	C114	C-CER,CHIP	SA
2203-005682	C115	C-CER,CHIP	SA
2203-005682	C121	C-CER,CHIP	SA
2203-005682	C122	C-CER,CHIP	SA
2203-005682	C123	C-CER,CHIP	SA
2203-005682	C128	C-CER,CHIP	SA
2203-005717	C101	C-CER,CHIP	SA
2203-005731	C117	C-CER,CHIP	SA
2203-005731	C120	C-CER,CHIP	SA
2203-005731	C126	C-CER,CHIP	SA
2203-005777	C107	C-CER,CHIP	SA
2203-005806	C102	C-CER,CHIP	SNA
2203-005819	C410	C-CER,CHIP	SA
2203-005819	C411	C-CER,CHIP	SA
2203-005819	C416	C-CER,CHIP	SA
2203-006047	C603	C-CER,CHIP	SA
2203-006047	C609	C-CER,CHIP	SA
2203-006048	C132	C-CER,CHIP	SA
2203-006048	C201	C-CER,CHIP	SA
2203-006048	C202	C-CER,CHIP	SA
2203-006048	C205	C-CER,CHIP	SA
2203-006048	C206	C-CER,CHIP	SA
2203-006048	C209	C-CER,CHIP	SA
2203-006048	C218	C-CER,CHIP	SA
2203-006048	C220	C-CER,CHIP	SA
2203-006048	C221	C-CER,CHIP	SA
2203-006048	C226	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2203-006048	C227	C-CER,CHIP	SA
2203-006048	C228	C-CER,CHIP	SA
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2203-006048	C413	C-CER,CHIP	SA
2203-006048	C464	C-CER,CHIP	SA
2203-006048	C526	C-CER,CHIP	SA
2203-006048	C702	C-CER,CHIP	SA
2203-006048	C705	C-CER,CHIP	SA
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2203-006048	C710	C-CER,CHIP	SA
2203-006048	C712	C-CER,CHIP	SA
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2203-006048	C718	C-CER,CHIP	SA
2203-006048	C719	C-CER,CHIP	SA
2203-006048	C720	C-CER,CHIP	SA
2203-006048	C721	C-CER,CHIP	SA
2203-006048	C722	C-CER,CHIP	SA
2203-006048	C723	C-CER,CHIP	SA
2203-006048	C724	C-CER,CHIP	SA
2203-006048	C725	C-CER,CHIP	SA
2203-006048	C727	C-CER,CHIP	SA
2203-006048	C728	C-CER,CHIP	SA
2203-006048	C729	C-CER,CHIP	SA
2203-006048	C730	C-CER,CHIP	SA
2203-006048	C731	C-CER,CHIP	SA
2203-006048	C732	C-CER,CHIP	SA
2203-006048	C733	C-CER,CHIP	SA
2203-006048	C734	C-CER,CHIP	SA
2203-006048	C735	C-CER,CHIP	SA
2203-006048	C736	C-CER,CHIP	SA

Main Electrical Parts List

SEC CODE	Design LOC	Discription	STATUS
2203-006048	C737	C-CER,CHIP	SA
2203-006048	C757	C-CER,CHIP	SA
2203-006048	C758	C-CER,CHIP	SA
2203-006048	C759	C-CER,CHIP	SA
2203-006048	C760	C-CER,CHIP	SA
2203-006048	C761	C-CER,CHIP	SA
2203-006048	C762	C-CER,CHIP	SA
2203-006048	C763	C-CER,CHIP	SA
2203-006048	C764	C-CER,CHIP	SA
2203-006091	C625	C-CER,CHIP	SA
2203-006091	C629	C-CER,CHIP	SA
2203-006194	C103	C-CER,CHIP	SA
2203-006194	C129	C-CER,CHIP	SA
2203-006257	C322	C-CER,CHIP	SA
2203-006260	C645	C-CER,CHIP	SA
2203-006260	C647	C-CER,CHIP	SA
2203-006305	C100	C-CER,CHIP	SA
2203-006324	C301	C-CER,CHIP	SA
2203-006324	C308	C-CER,CHIP	SA
2203-006324	C409	C-CER,CHIP	SA
2203-006324	C427	C-CER,CHIP	SA
2203-006324	C460	C-CER,CHIP	SA
2203-006361	C632	C-CER,CHIP	SA
2203-006377	C508	C-CER,CHIP	SA
2203-006423	C104	C-CER,CHIP	SA
2203-006423	C106	C-CER,CHIP	SA
2203-006423	C108	C-CER,CHIP	SA
2203-006423	C130	C-CER,CHIP	SA
2203-006423	C131	C-CER,CHIP	SA
2203-006556	C116	C-CER,CHIP	SA
2203-006562	C138	C-CER,CHIP	SA
2203-006562	C139	C-CER,CHIP	SA
2203-006562	C140	C-CER,CHIP	SA
2203-006562	C141	C-CER,CHIP	SA
2203-006562	C142	C-CER,CHIP	SA
2203-006562	C225	C-CER,CHIP	SA
2203-006562	C316	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
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2203-006562	C318	C-CER,CHIP	SA
2203-006562	C319	C-CER,CHIP	SA
2203-006562	C320	C-CER,CHIP	SA
2203-006562	C321	C-CER,CHIP	SA
2203-006562	C328	C-CER,CHIP	SA
2203-006562	C402	C-CER,CHIP	SA
2203-006562	C403	C-CER,CHIP	SA
2203-006562	C408	C-CER,CHIP	SA
2203-006562	C417	C-CER,CHIP	SA
2203-006562	C420	C-CER,CHIP	SA
2203-006562	C424	C-CER,CHIP	SA
2203-006562	C428	C-CER,CHIP	SA
2203-006562	C431	C-CER,CHIP	SA
2203-006562	C439	C-CER,CHIP	SA
2203-006562	C441	C-CER,CHIP	SA
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2203-006562	C451	C-CER,CHIP	SA
2203-006562	C452	C-CER,CHIP	SA
2203-006562	C453	C-CER,CHIP	SA
2203-006562	C459	C-CER,CHIP	SA
2203-006562	C462	C-CER,CHIP	SA
2203-006562	C463	C-CER,CHIP	SA
2203-006562	C641	C-CER,CHIP	SA
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2203-006562	C644	C-CER,CHIP	SA
2203-006562	C646	C-CER,CHIP	SA
2203-006642	C311	C-CER,CHIP	SA
2203-006642	C312	C-CER,CHIP	SA
2203-006648	C109	C-CER,CHIP	SA
2203-006648	C110	C-CER,CHIP	SA
2203-006681	C418	C-CER,CHIP	SA
2203-006681	C419	C-CER,CHIP	SA
2203-006681	C507	C-CER,CHIP	SA
2203-006824	C429	C-CER,CHIP	SA

Main Electrical Parts List



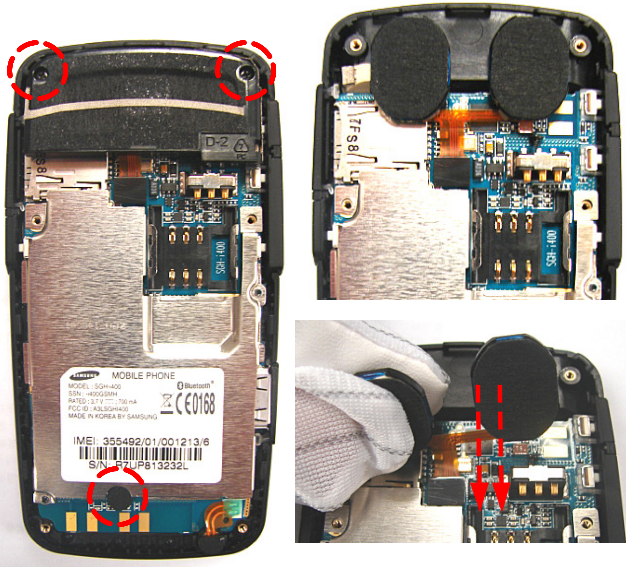
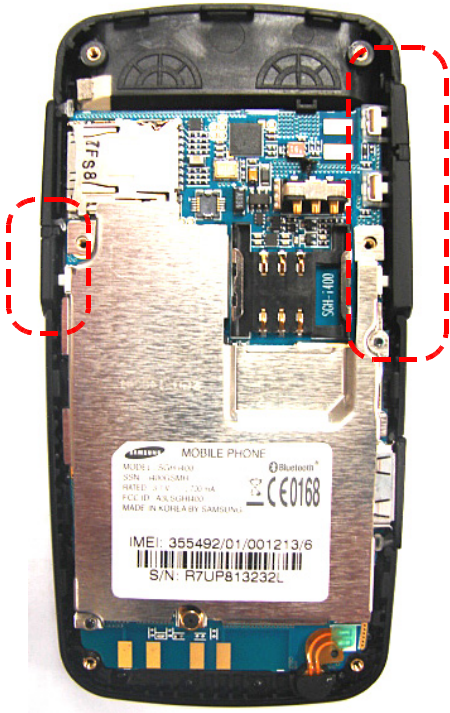
SEC CODE	Design LOC	Discription	STATUS
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2203-006824	C433	C-CER,CHIP	SA
2203-006825	C105	C-CER,CHIP	SA
2203-006825	C314	C-CER,CHIP	SA
2203-006825	C315	C-CER,CHIP	SA
2203-006825	C404	C-CER,CHIP	SA
2203-006825	C448	C-CER,CHIP	SA
2203-006825	C700	C-CER,CHIP	SA
2404-001339	C434	C-TA,CHIP	SA
2404-001352	TA602	C-TA,CHIP	SA
2404-001374	C133	C-TA,CHIP	SA
2404-001381	C313	C-TA,CHIP	SA
2404-001381	C400	C-TA,CHIP	SA
2404-001381	C440	C-TA,CHIP	SA
2404-001381	C454	C-TA,CHIP	SA
2404-001381	C455	C-TA,CHIP	SA
2404-001431	C500	C-TA,CHIP	SA
2404-001484	TA600	C-TA,CHIP	SA
2404-001484	TA601	C-TA,CHIP	SA
2703-001734	L112	INDUCTOR-SMD	SA
2703-001748	L106	INDUCTOR-SMD	SA
2703-001748	L107	INDUCTOR-SMD	SA
2703-002202	L104	INDUCTOR-SMD	SA
2703-002268	L105	INDUCTOR-SMD	SA
2703-002308	L605	INDUCTOR-SMD	SA
2703-002308	L606	INDUCTOR-SMD	SA
2703-002368	L108	INDUCTOR-SMD	SA
2703-002368	L109	INDUCTOR-SMD	SA
2703-002734	L300	INDUCTOR-SMD	SA
2703-002734	L301	INDUCTOR-SMD	SA
2703-002814	L400	INDUCTOR-SMD	SA
2703-002814	L405	INDUCTOR-SMD	SA
2703-002900	L102	INDUCTOR-SMD	SA
2703-002910	L103	INDUCTOR-SMD	SA
2703-002917	L100	INDUCTOR-SMD	SA
2703-002917	L101	INDUCTOR-SMD	SA

SEC CODE	Design LOC	Discription	STATUS
2801-004455	OSC100	CRYSTAL-SMD	SA
2801-004455	OSC101	CRYSTAL-SMD	SA
2801-004466	OSC200	CRYSTAL-SMD	SA
2801-004466	OSC400	CRYSTAL-SMD	SA
2804-001736	OSC401	OSCILLATOR-CLOCK	SA
2901-001353	F500	FILTER-EMI/ESD	SA
2901-001353	F501	FILTER-EMI/ESD	SA
2901-001353	F502	FILTER-EMI/ESD	SA
2901-001353	F503	FILTER-EMI/ESD	SA
2901-001353	F504	FILTER-EMI/ESD	SA
2901-001353	F505	FILTER-EMI/ESD	SA
2901-001353	F506	FILTER-EMI/ESD	SA
2904-001600	F102	FILTER-SAW	SA
2904-001604	F101	FILTER-SAW	SNA
2904-001628	F100	FILTER-SAW	SA
3301-001438	L201	BEAD-SMD	SA
3301-001534	L200	BEAD-SMD	SA
3301-001729	L607	BEAD-SMD	SA
3301-001851	L608	BEAD-SMD	SA
3404-001303	CAM_KEY	SWITCH-TACT	SA
3404-001303	PWR_KEY	SWITCH-TACT	SA
3404-001303	VOL_DOWN	SWITCH-TACT	SA
3404-001303	VOL_UP	SWITCH-TACT	SA
3705-001358	RFS100	CONNECTOR-COAXIAL	SA
3709-001229	SIM300	CONNECTOR-CARD EDGE	SA
3709-001464	CON600	CONNECTOR-CARD EDGE	SA
3710-002499	IFC500	SOCKET-INTERFACE	SA
3711-005550	HDC600	HEADER-BOARD TO BOARD	SA
3711-005933	HDC500	HEADER-BOARD TO BOARD	SA
3711-006228	BTC400	HEADER-BATTERY	SA
4302-001158	BAT100	BATTERY-LI(2ND)	SA
4709-001338	F103	BALUN	SA
GH09-00044A	UCP200	IC MICOM	SA
GH70-02617A	SC100	IPR BRACKET-FRAME	SA

Please consult the GSPN website (Samsung Portal) for the most recent version of the product's part list.

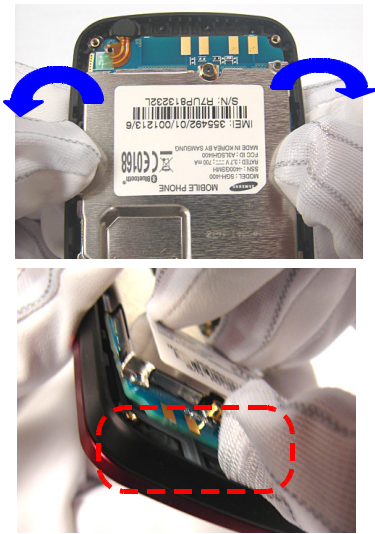
# 7. Disassembly and Assembly Instructions

## 7-1. Disassembly

<p><b>1</b></p> 	<p><b>2</b></p> 
<p>1) Unscrew blue-marked 4 bolts.</p>	<p>1) disassemble a rear cover case by using the tool from the bottom. (be cautious not to damage the hook)</p>
<p><b>3</b></p> 	<p><b>4</b></p> 
<p>1) Unscrew red-marked 2 bolts 2) take apart SPK bracket. 3) Remove stereo SPK (be careful not to damage FPCB connector.)</p>	<p>1) Remove Volume Key and CAM activation Key.</p>

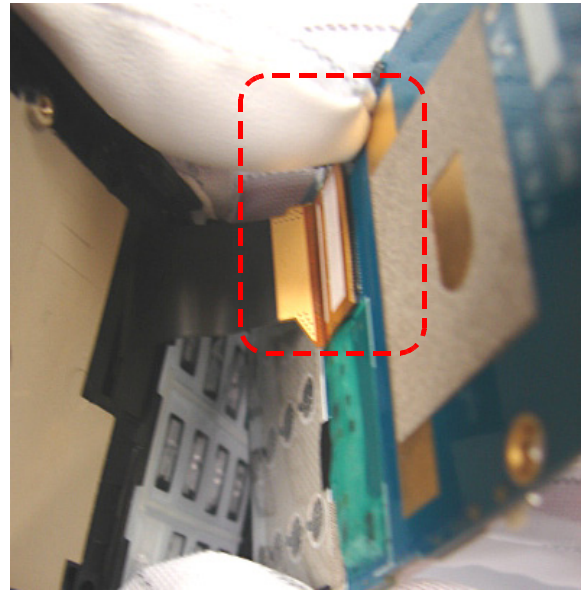


5



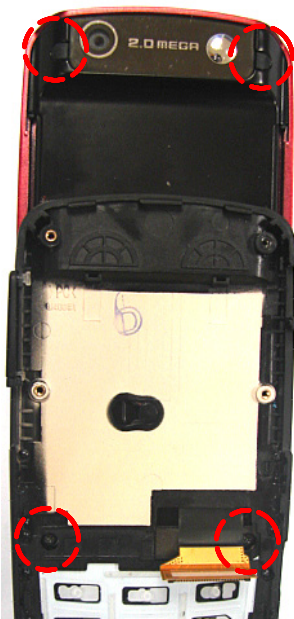
1. when it's in the state of "Slide-Up", take apart PBA from the mobile.
2. Put it back to "Slide-Down" and detach PBA from the sticky tape.

6



1. Disconnect "Sliding FPCB" from the PBA. by using the tip of the thumb.

7



1. Remove rubber caps in the upper and unscrew red-marked 4 bolts

8



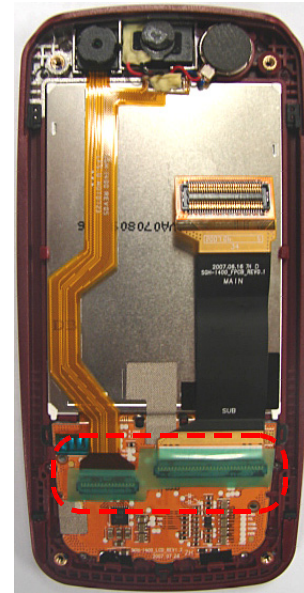
1. in the state of "Slide-up", using the tool, disassemble the upper and the lower along the dashed arrow

9



1. As shown above, in the state of "Slide-Down", pull out the FPCB from the lower. (be careful of the damage on the FPCB)

10



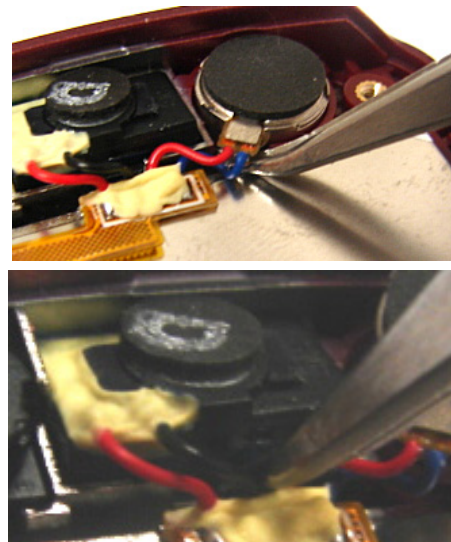
1. Remove green shielding tape shown above.

11



1. Open up the lid and remove the conduction tape on the main FPCB.
2. detach the main FPCB from the sub-PCB (be careful of the damage on the FPCB)

12



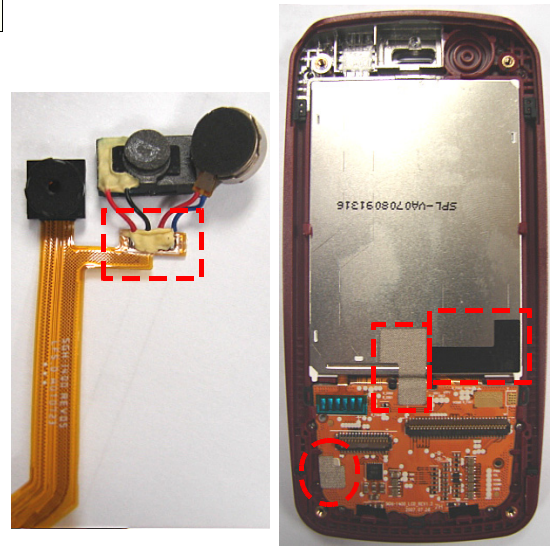
1. Using the pinch, detach the vibration motor..
2. Using the pinch, detach the RCV Speaker. (Be careful of the damage on the wire.)

**13**



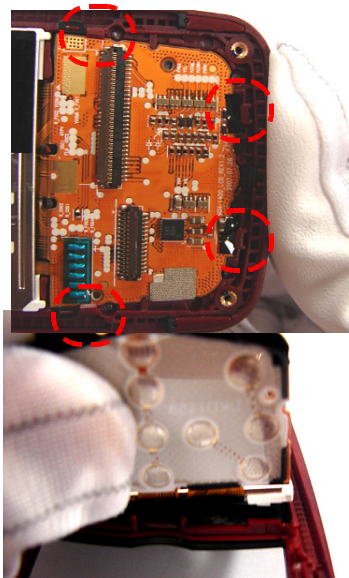
1. Using the pinch, detach the camera module
2. Using the pinch, tear off the tape shown above. (be careful of the damage on the FPCB.)

**14**



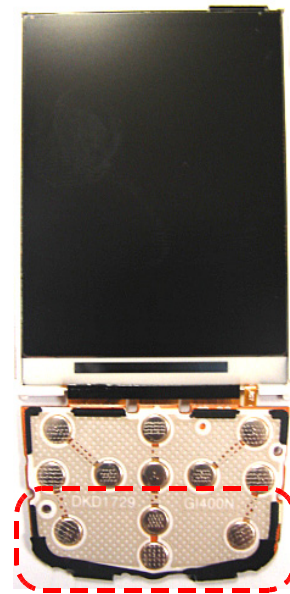
1. Tear off the glued part and unsolder the vibration motor and receiving speaker. (be careful of the damage on the FPCB)
2. As shown in the right picture above, tear off red-marked 3 taped parts..

**15**



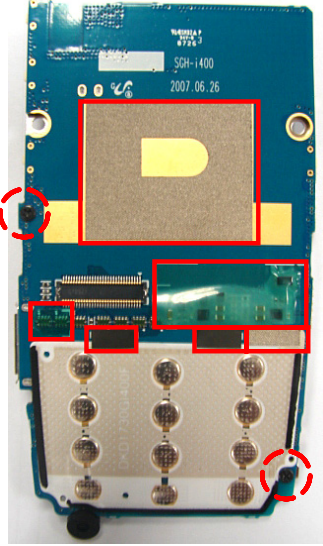
1. As shown above, take apart the PCB from the upper
2. take apart the LCD from the upper (be careful of the damage on the FPCB of LCD)

**16**



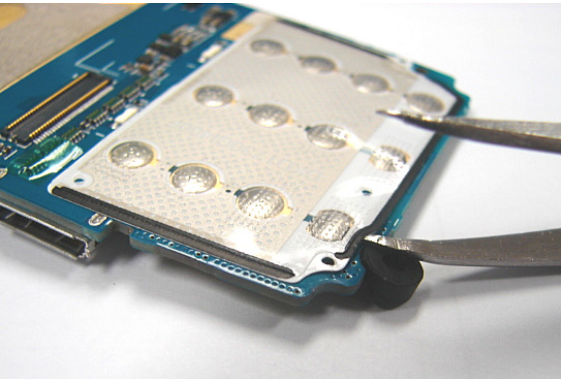
1. Tear off the black shielding tape shown above.
2. Tear off the Sub-Dome sheet.

13



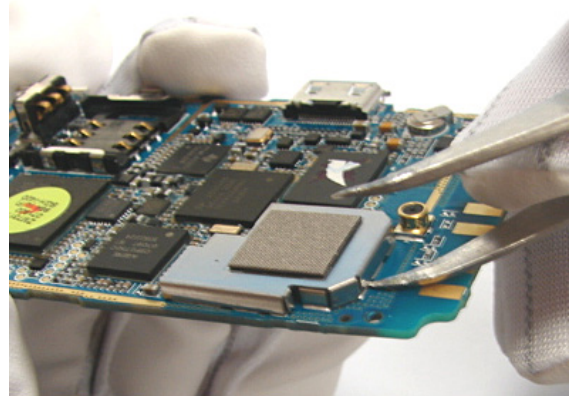
1. tear off all of the 6 taped parts shown above.
2. Unscrew 2 bolts in the red dashed circles above.

15



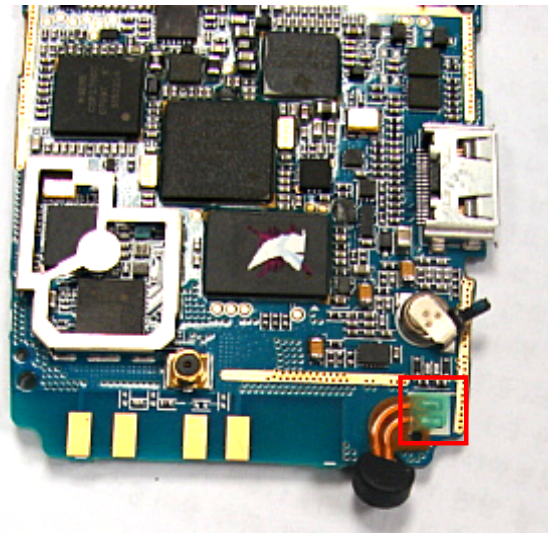
1. Remove the main dome sheet.

14



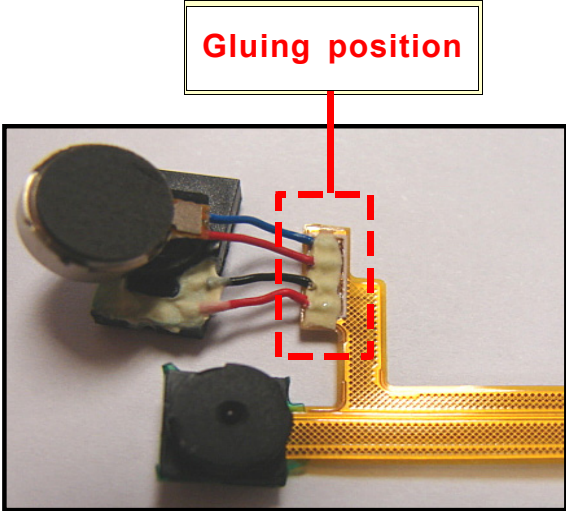
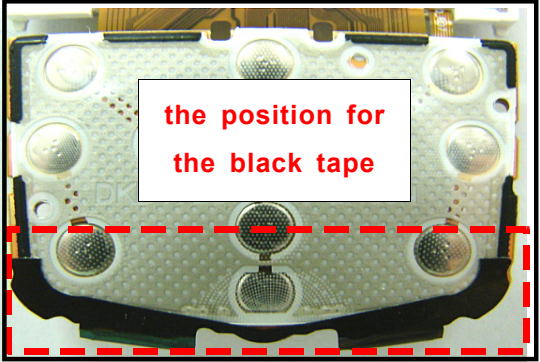
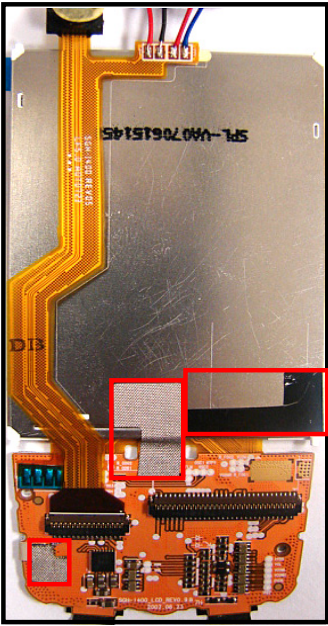
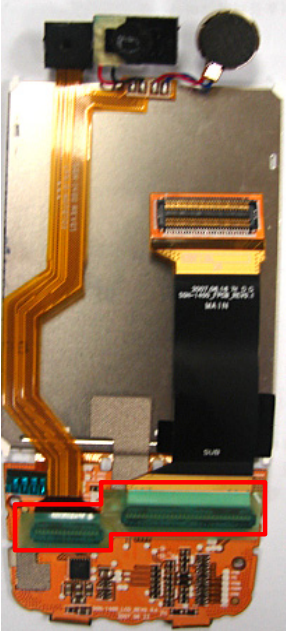
1. Detach RF lid, using the round pinch.

16

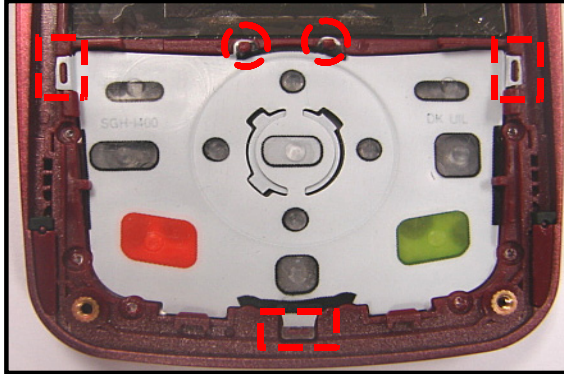


1. tear off the green tape shown above, and unsolder MIC.

## 7-2. Assembly

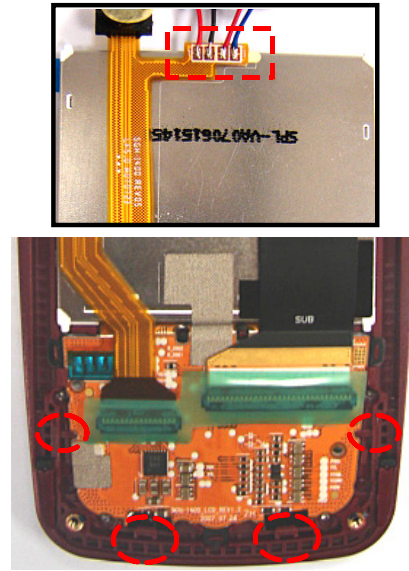
<p><b>1</b></p> 	<p><b>2</b></p> 
<p>1. solder RCX speaker and the vibration motor, and cover up those positions with chemical glue.</p>	<p>1. put the sub dome sheet on the PCB, and attach the black tape on it.</p>
<p><b>3</b></p> 	<p><b>4</b></p> 
<p>1. Attach 3 kinds of the tapes shown above. 2. Connect camera FPCB to the LCD</p>	<p>1. connect the main FPCB and close the lid 2. remove the white protection tape on the FPCB. 3. attach the green tape on the sub-FPCB.</p>

5



1. Put the sub-key pad on the upper shown above. (make sure 5 hooks are in the right places.)

6



1. Tear off the LCD protection film and put the LCD on the Upper.
2. Remove the protection tape and put the soldered parts on the LCD shown above.

7



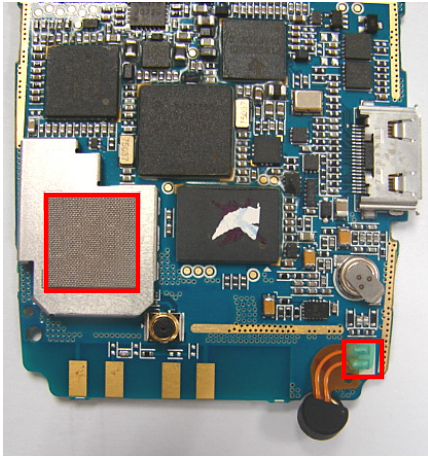
1. Remove dust-proof tape on the camera module and the lower.
2. put the lower and the upper together shown above along the arrow.

8



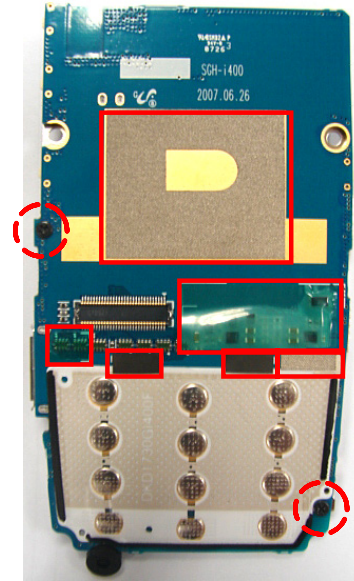
1. Screw 4 bolts shown in red-dashed circles above, and close up the hole with the rubber caps.

9



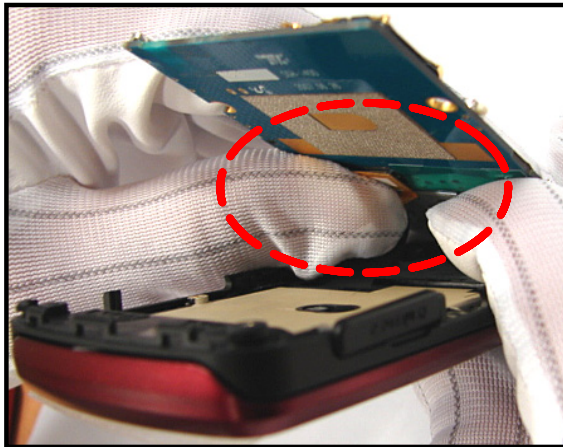
1. Solder Mic and attach the green tape on it.  
(be careful of the damage on the FPCB of Mic.)
2. Cover up the RF Shielding parts with the lid,  
and attach the conduction tape on it.

10



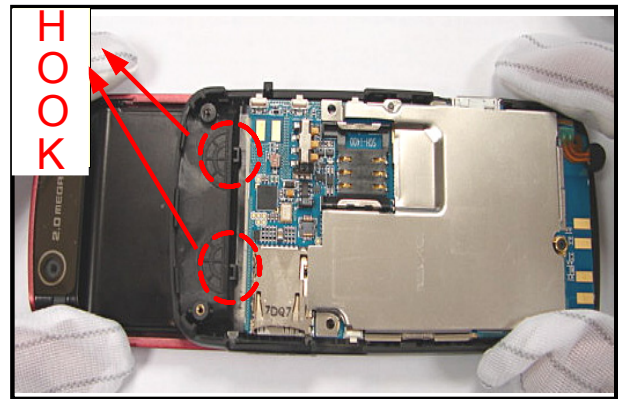
1. As shown above, put the main dome sheet on  
the PCB and attach 6 kinds of tapes on it.
2. By screwing 2 bolts shown above, put the main  
shielding can on the PCB.

11



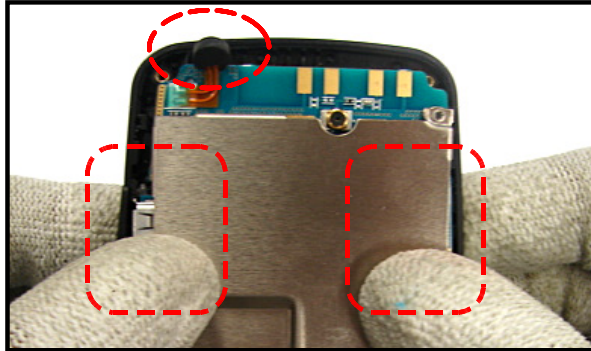
1. As shown above, in the state of "Slide - down",  
assemble PBA and the main FPCB.  
(be careful of the damage on the FPCB)

12



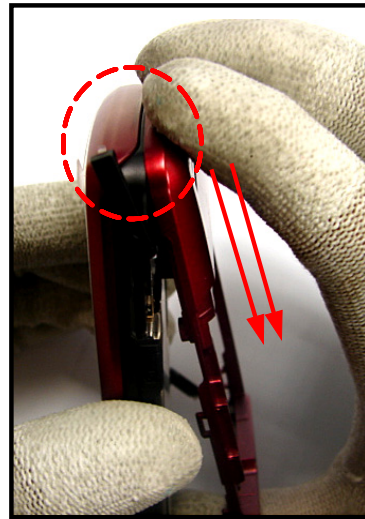
1. As shown above, in the state of "Slide-UP", push  
the PBA in to the lower until to hear the sound of  
"click".

**13**



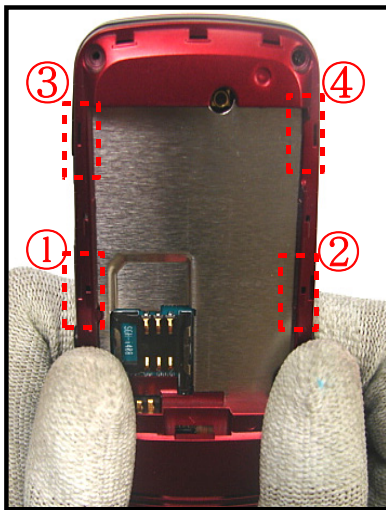
1. in the state of "Slide-Up", push each side of the PBA until hearing the sound of "click"
2. put the mic on the hole  
(be careful of the damage on the mic FPCB)

**14**



1. As shown above, put the rear cover case on the lower along the direction of the arrow.

**15**



1. Push each side of the case until hearing the sound of "click".

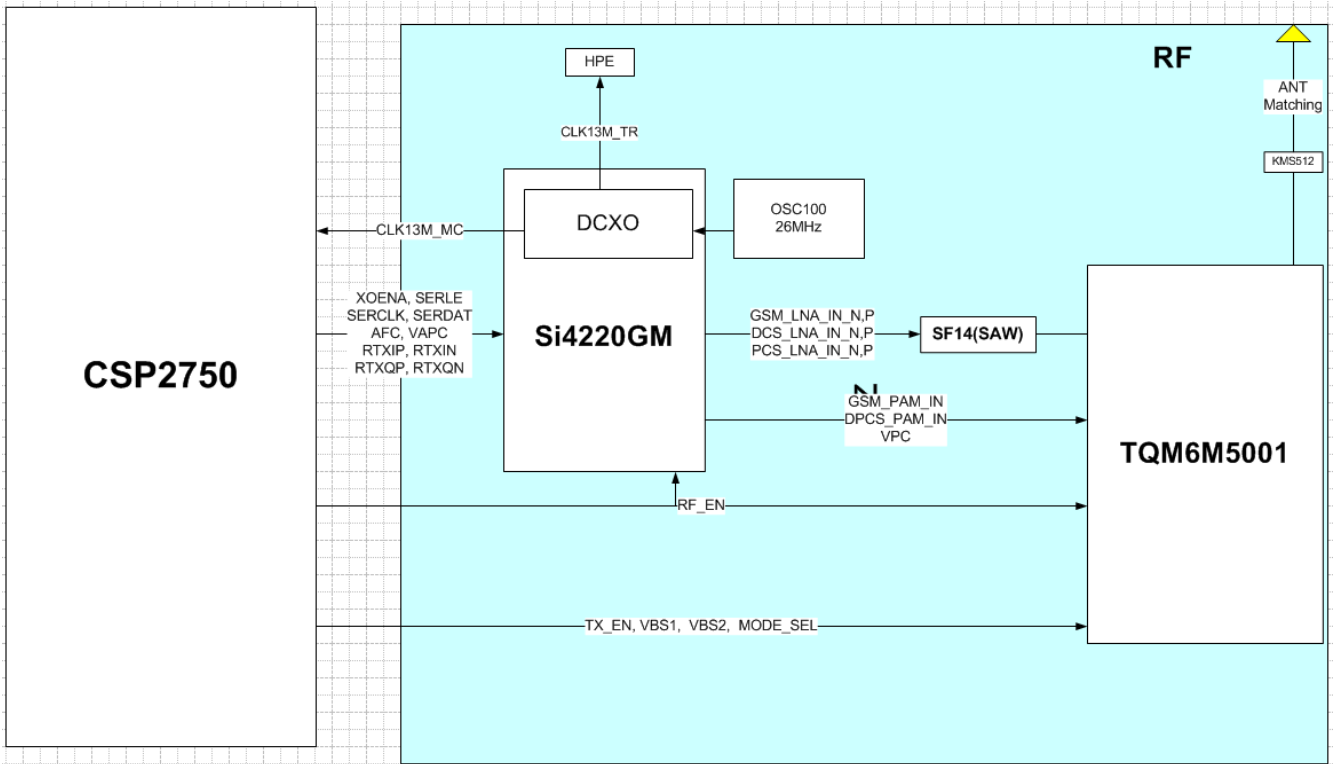
**16**



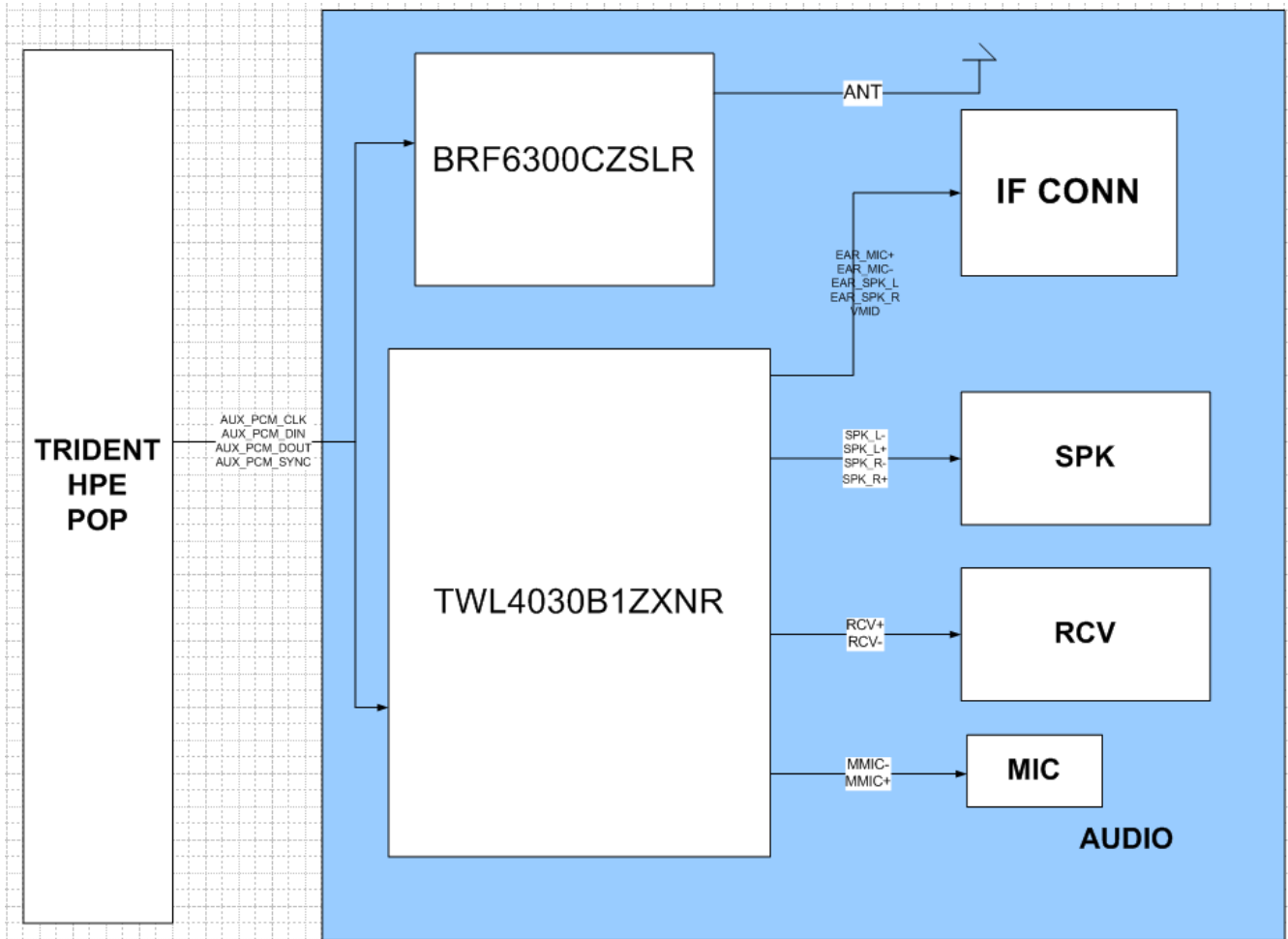
1. screw 4 bolts in the blue-dashed circles.



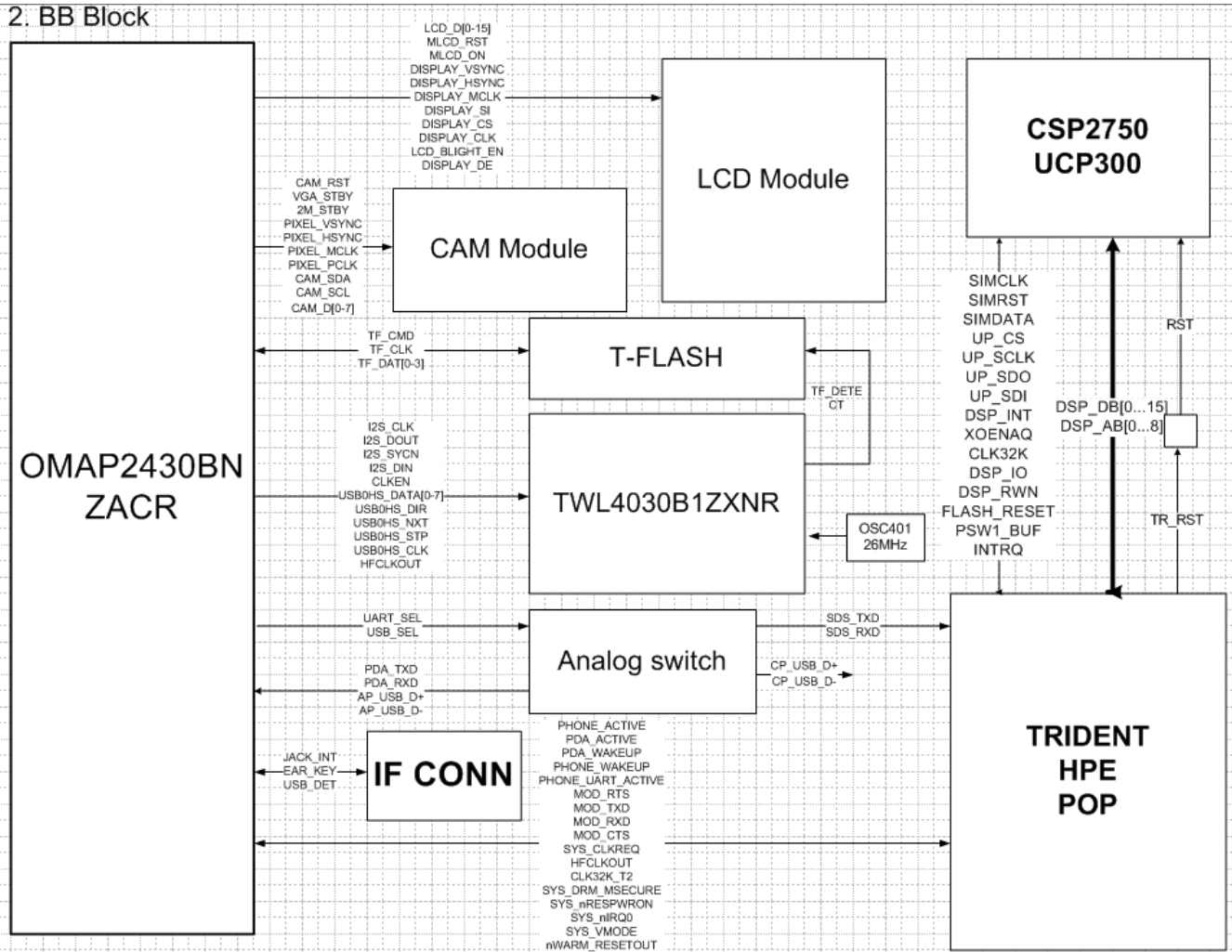
# 8. Block Diagrams



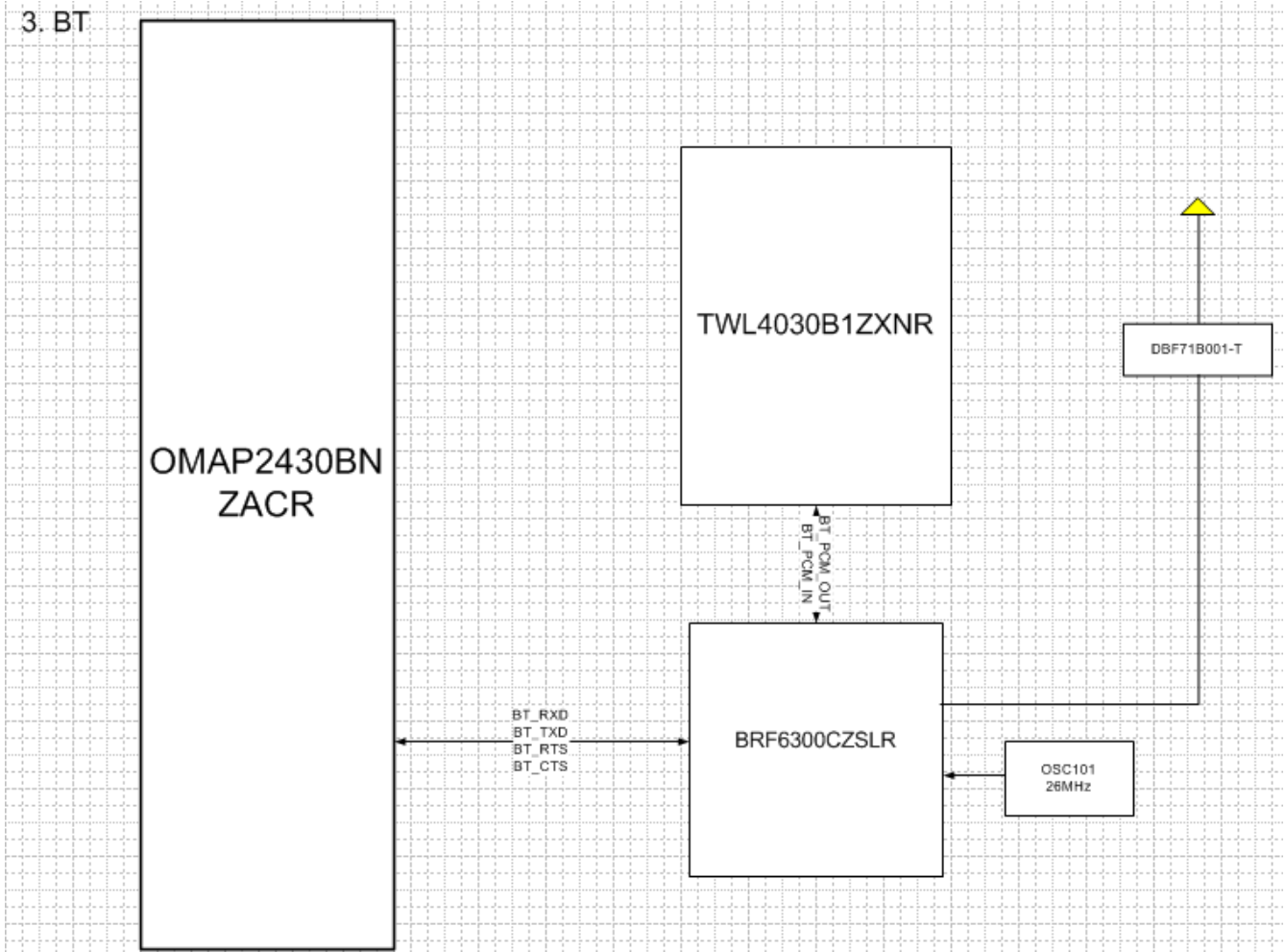
## 2. Audio Block



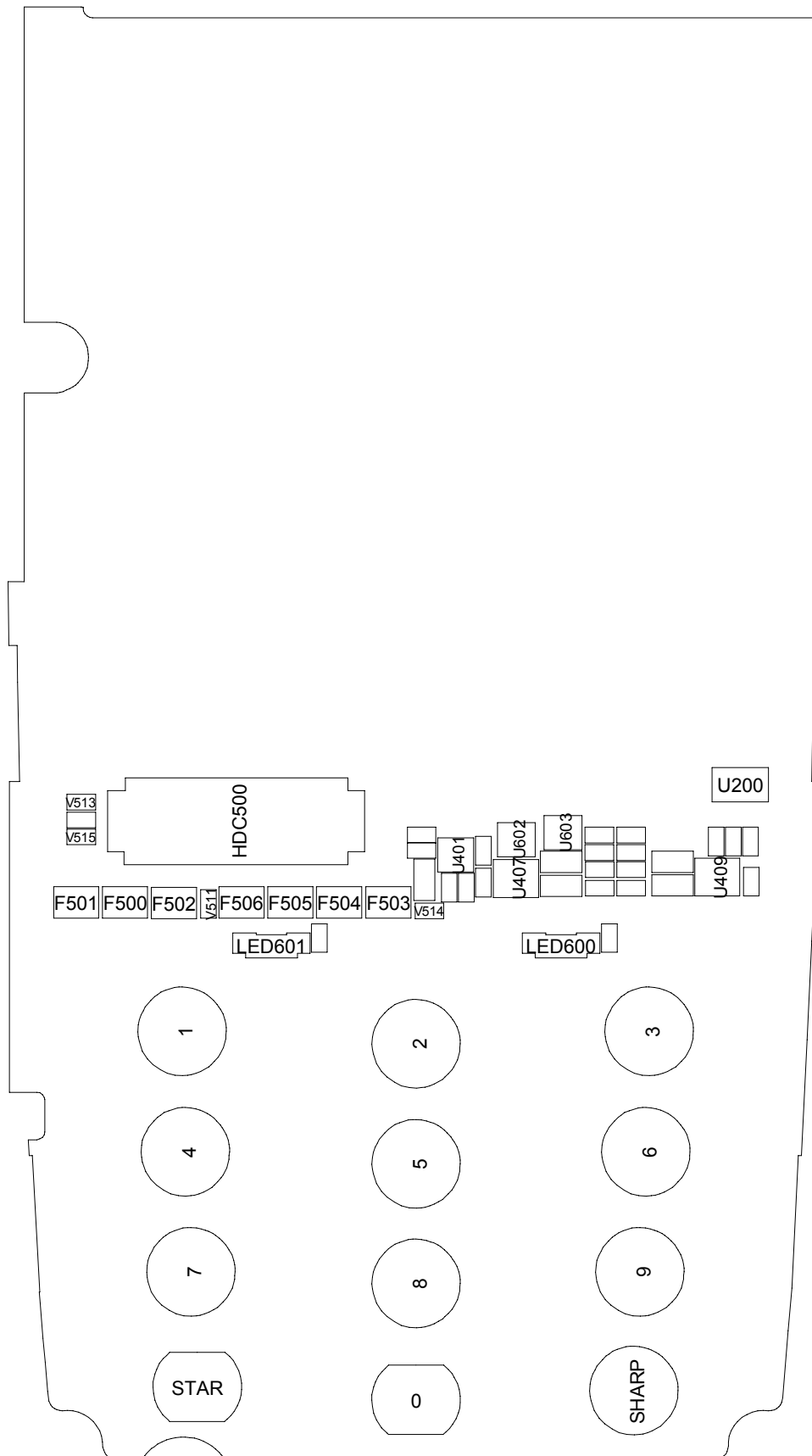
2. BB Block



4. BT Block



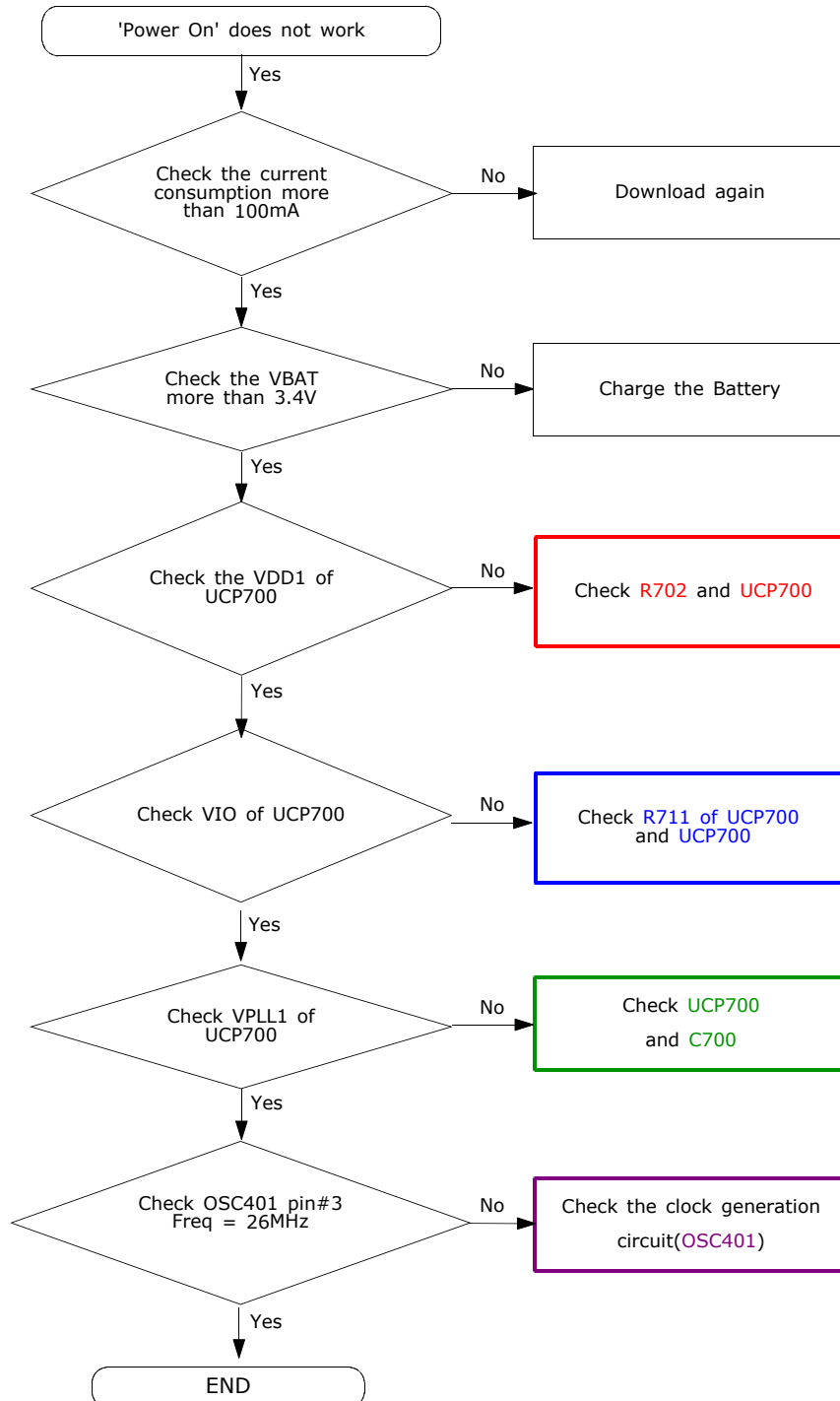


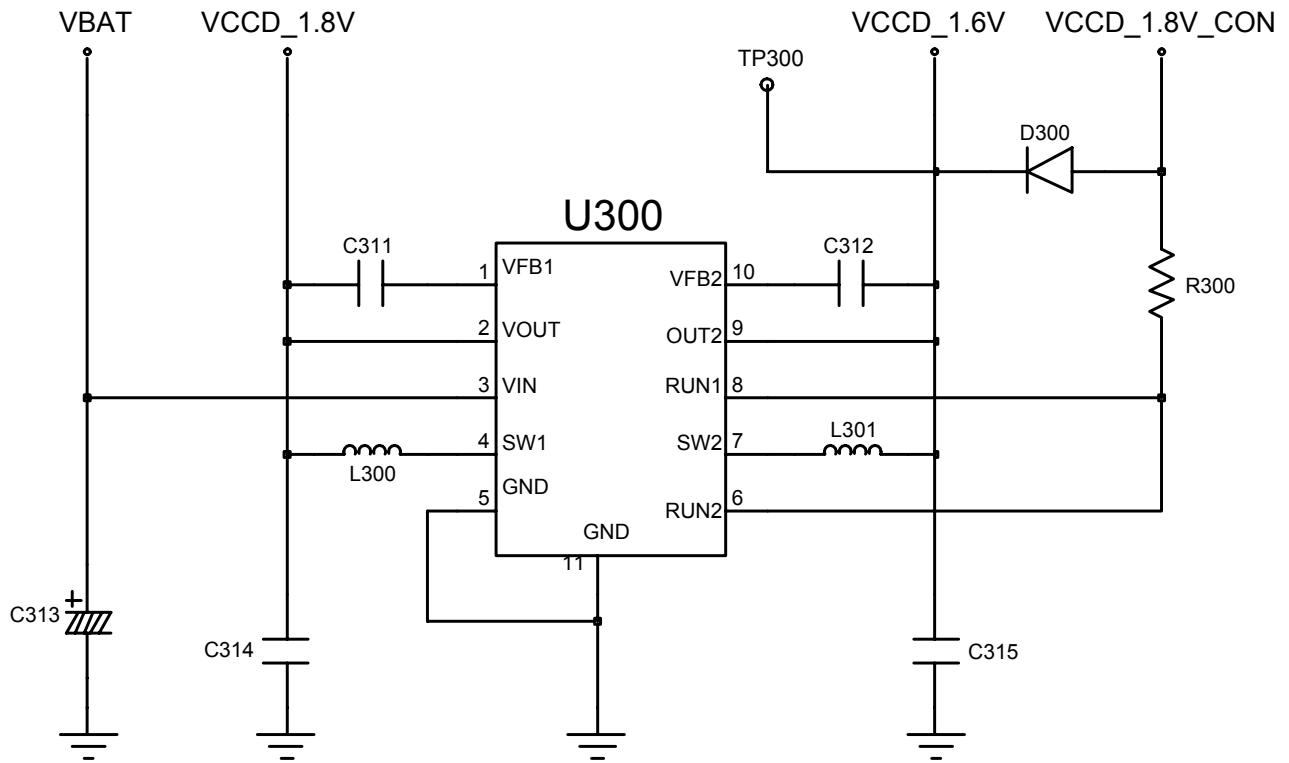


# 10. Flow Chart of Troubleshooting and Circuit Diagrams

## 10-1.Baseband

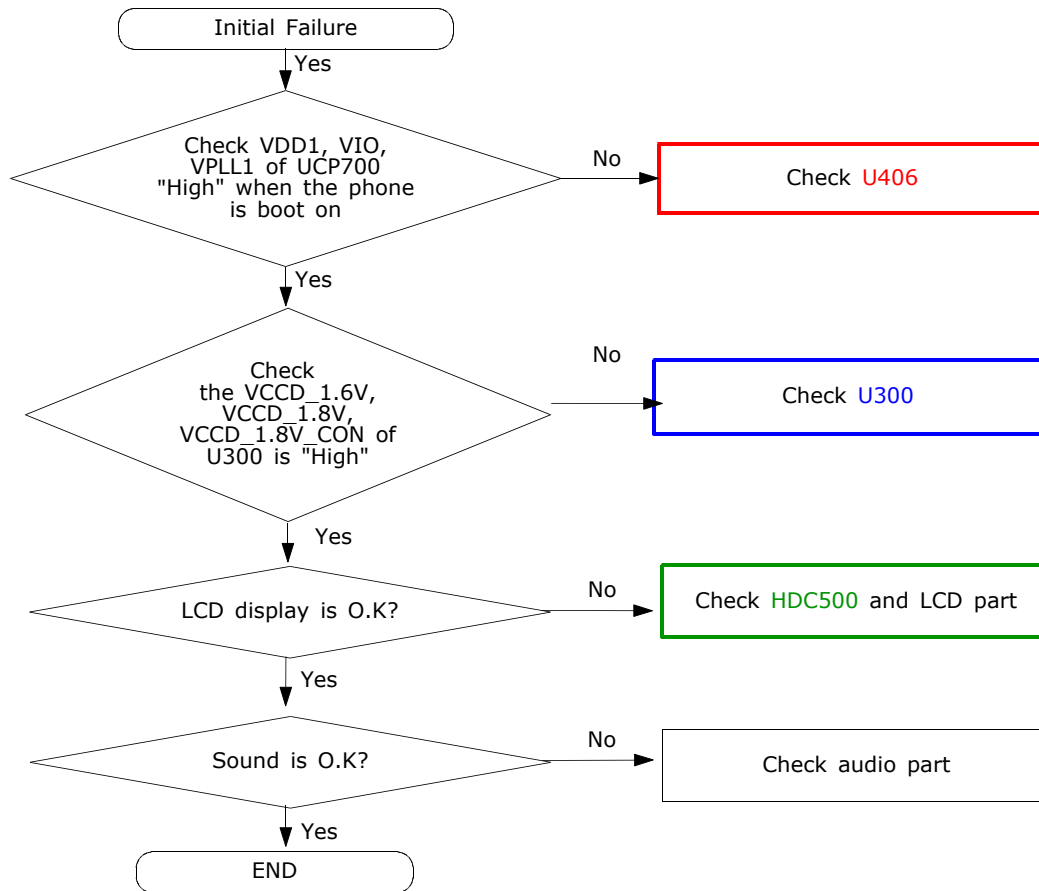
### 10-1-1. Power ON



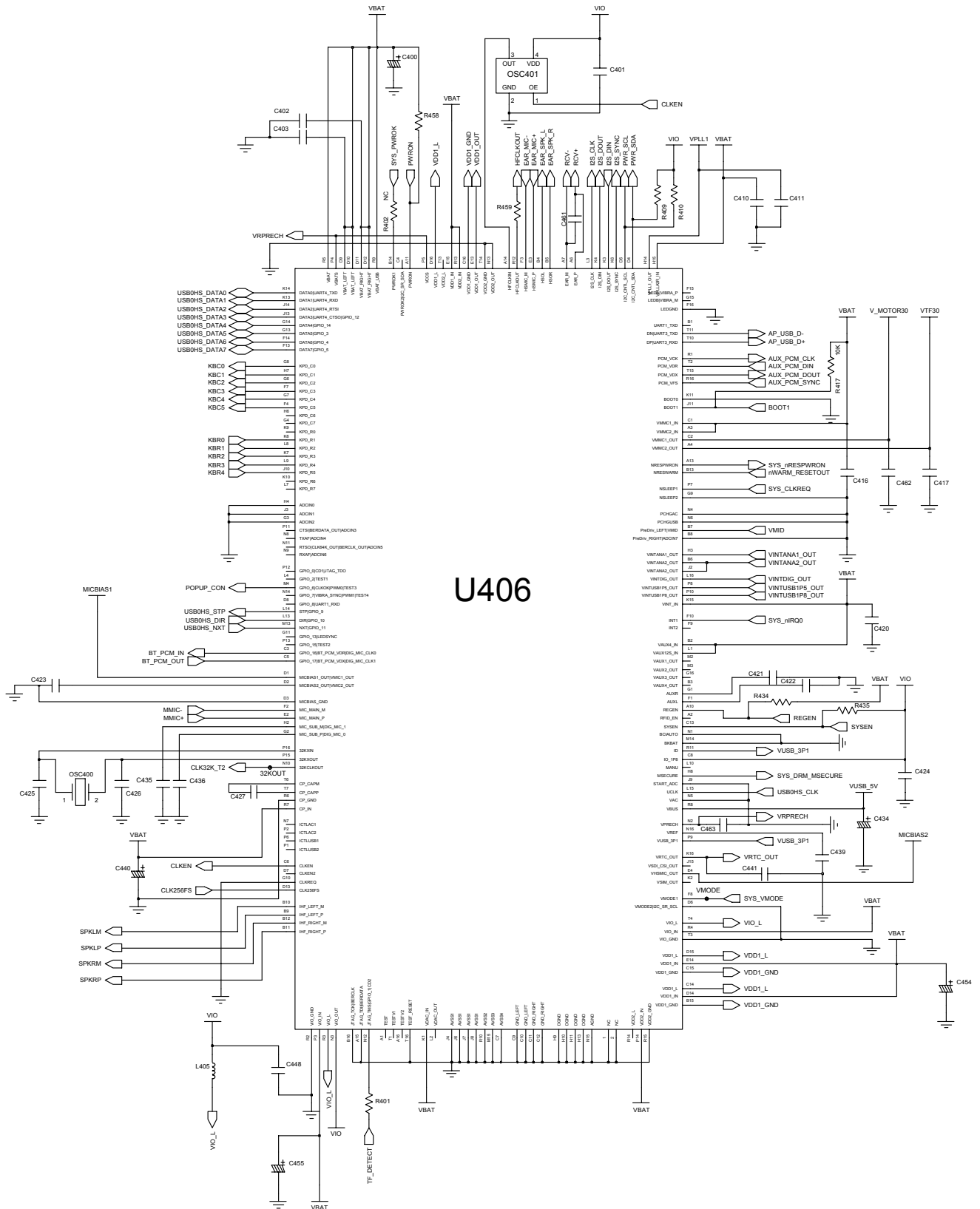




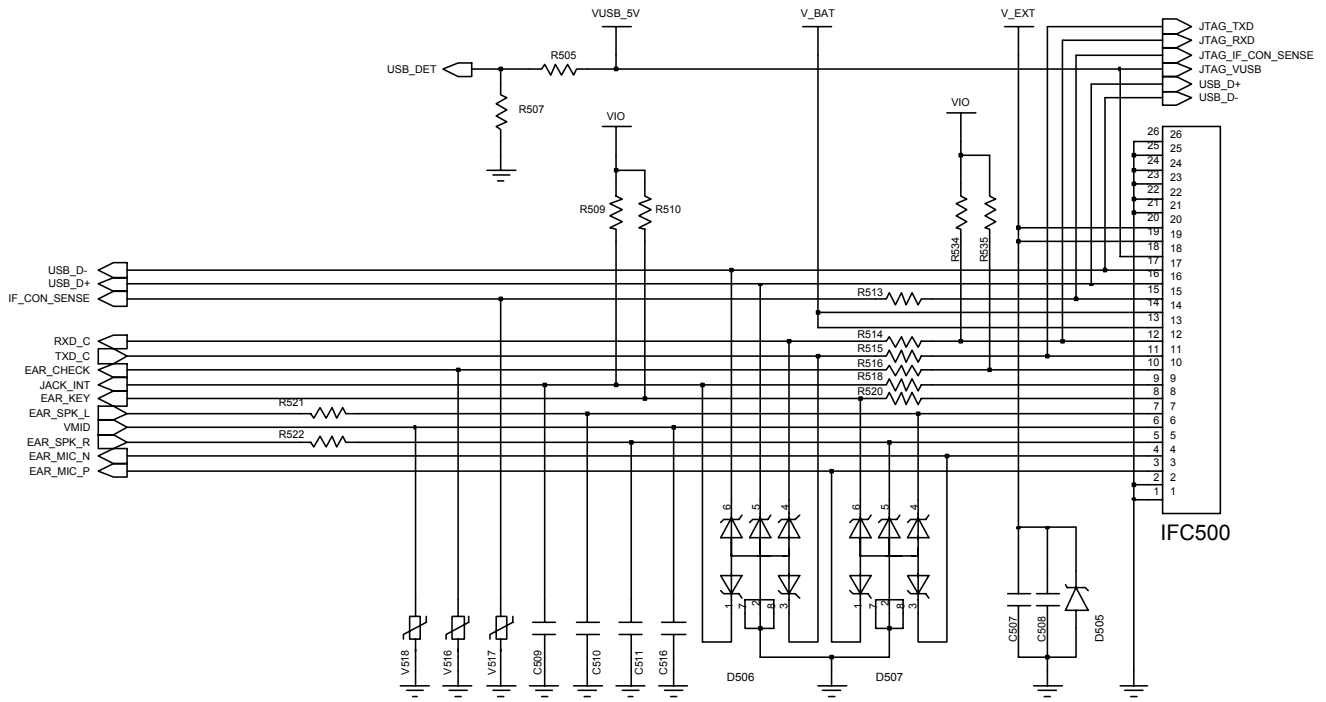
### 10-1-2. Initial



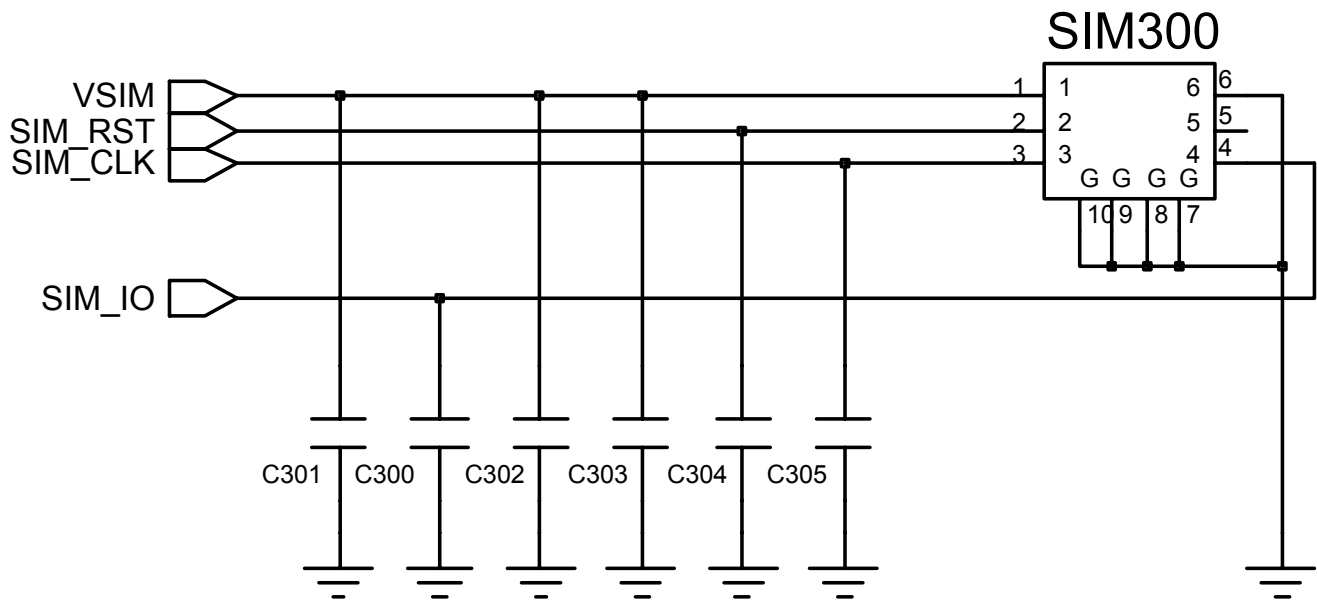
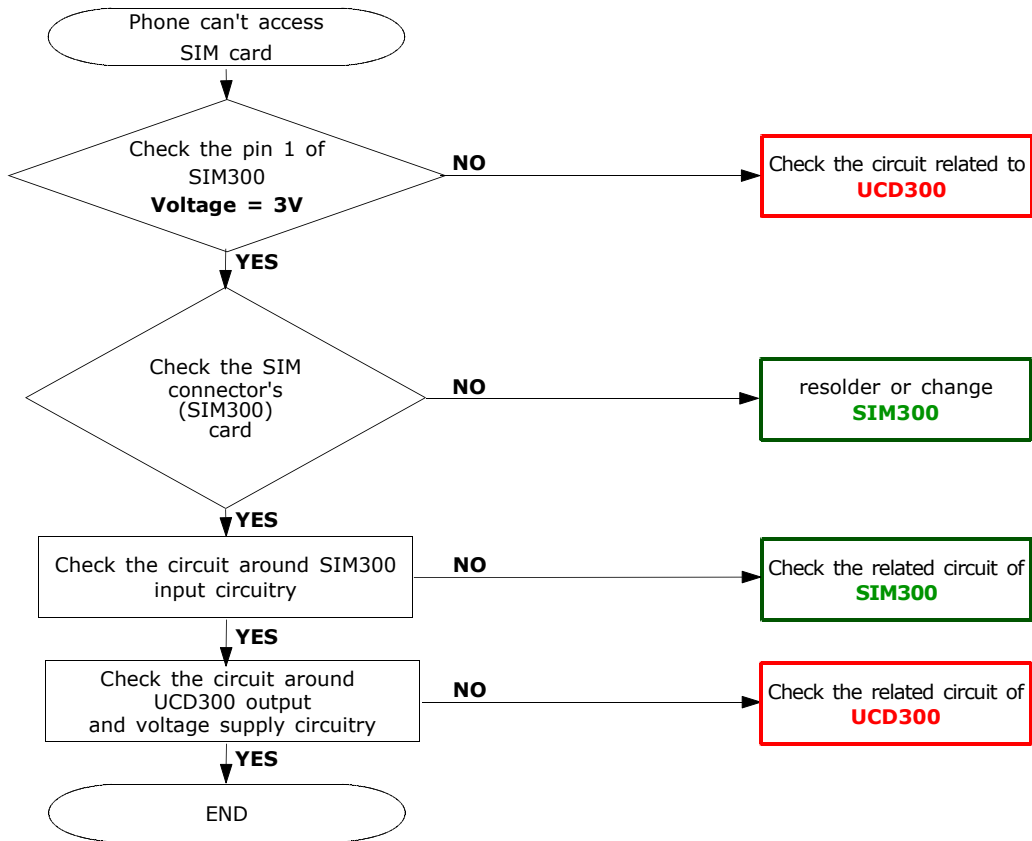
# Flow Chart of Troubleshooting and Circuit Diagrams



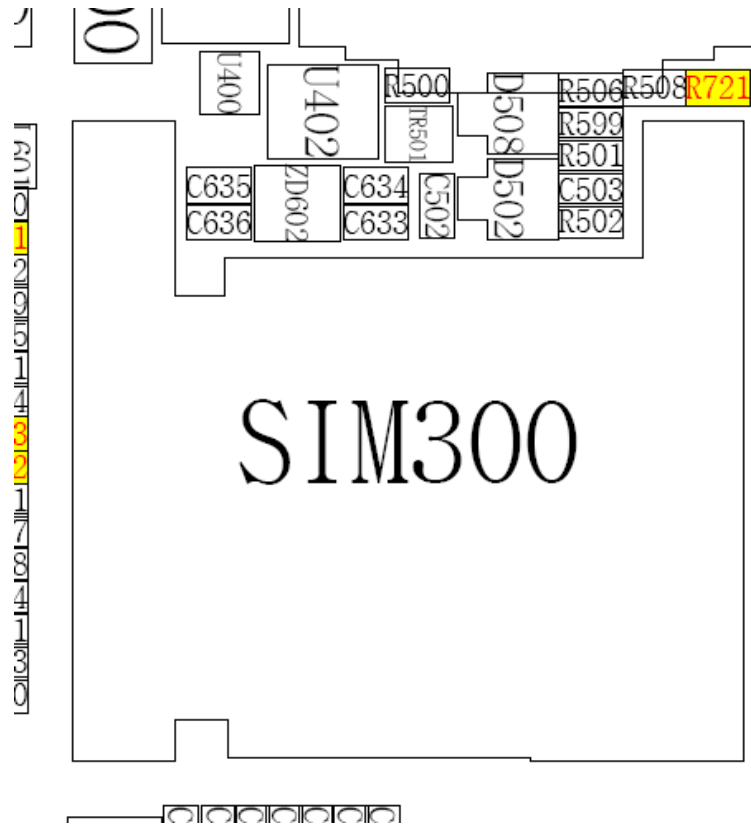
U406

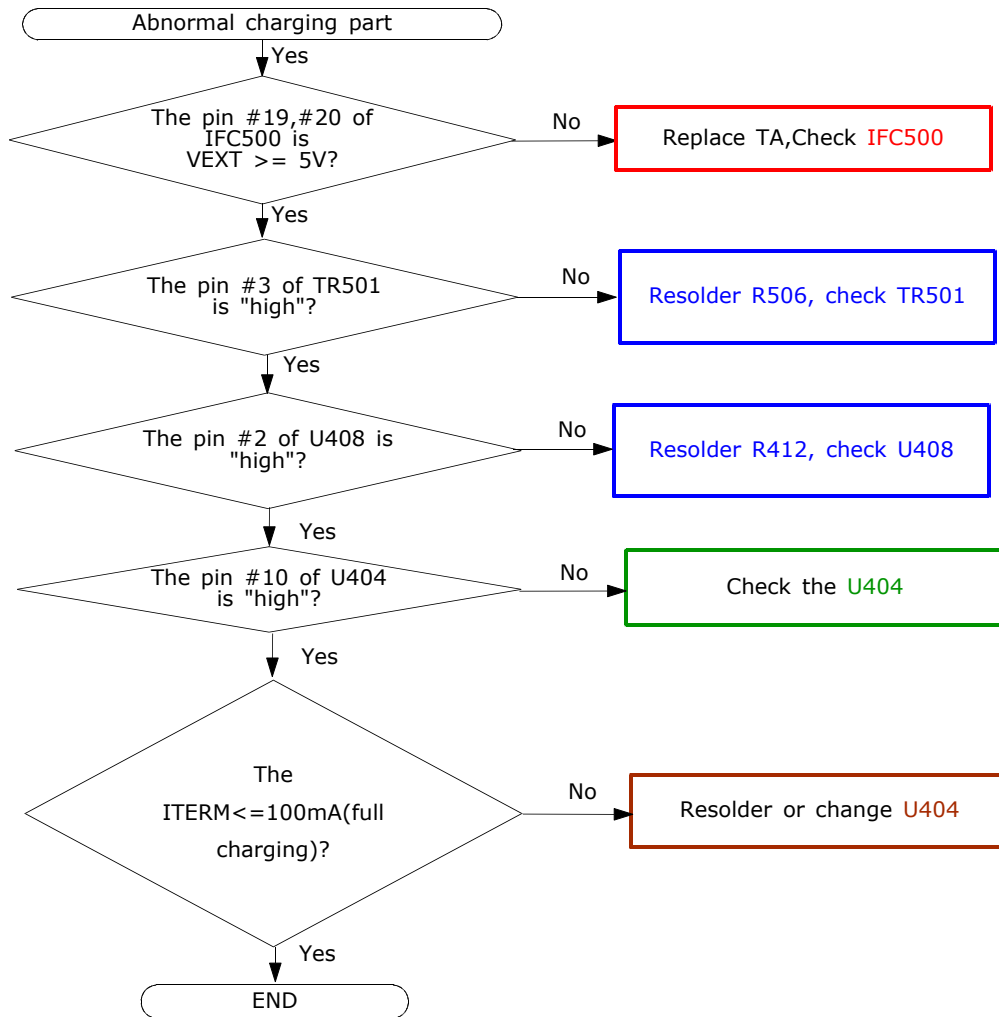


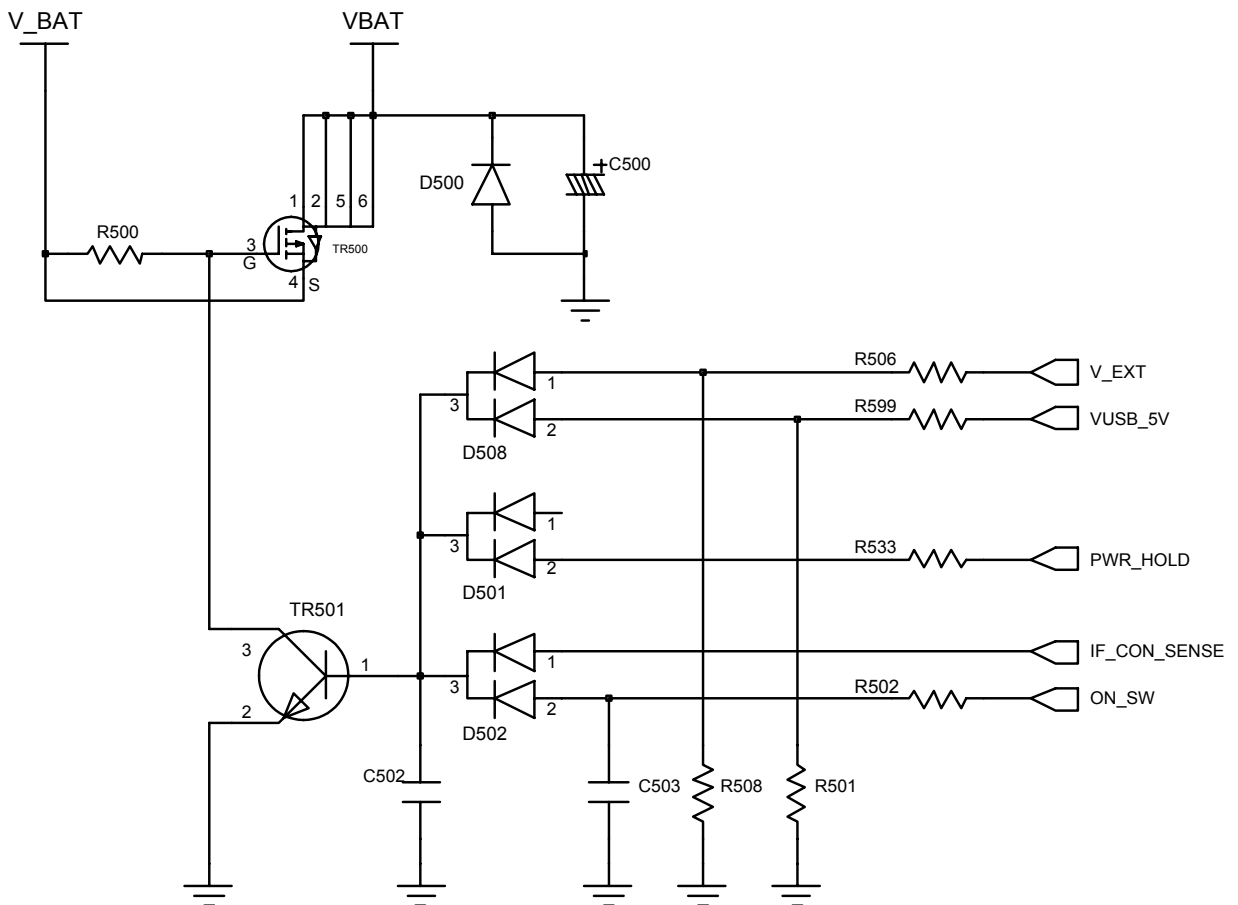
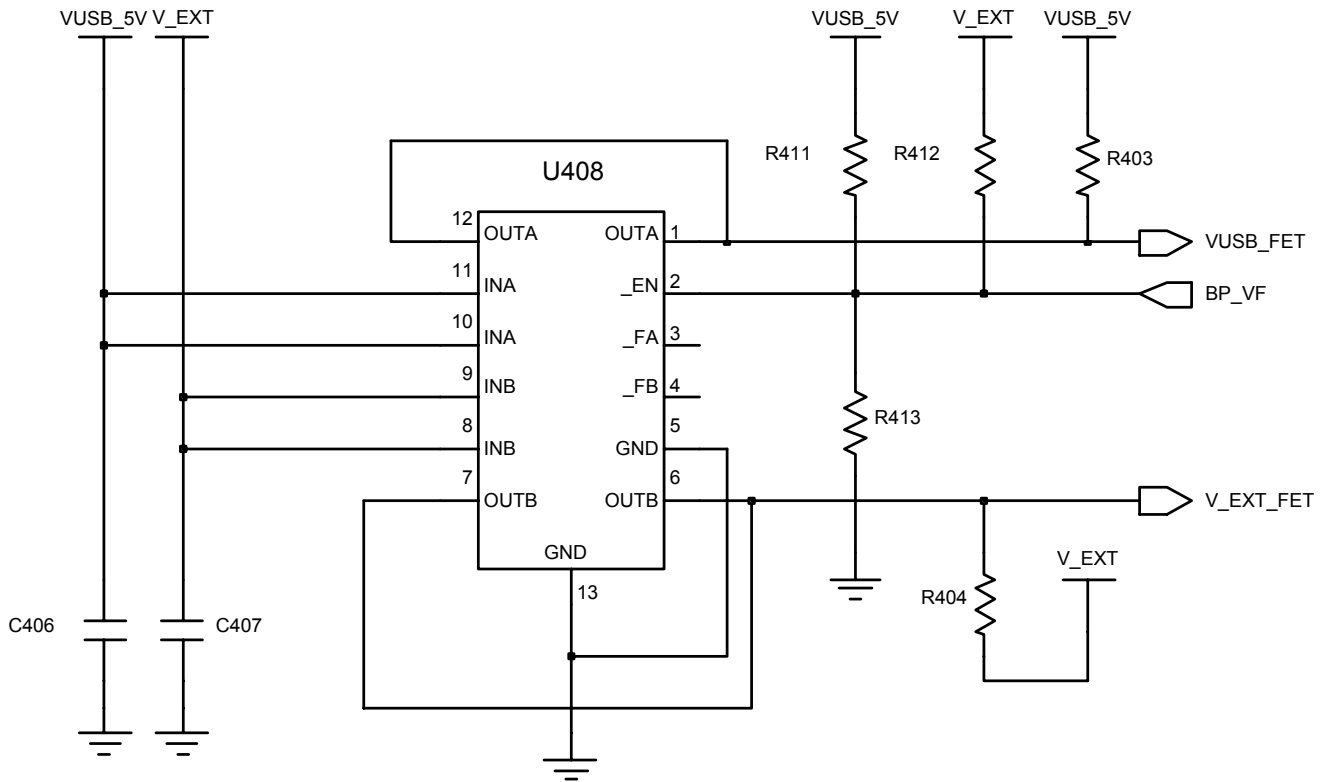
### 10-1-3. Sim Part



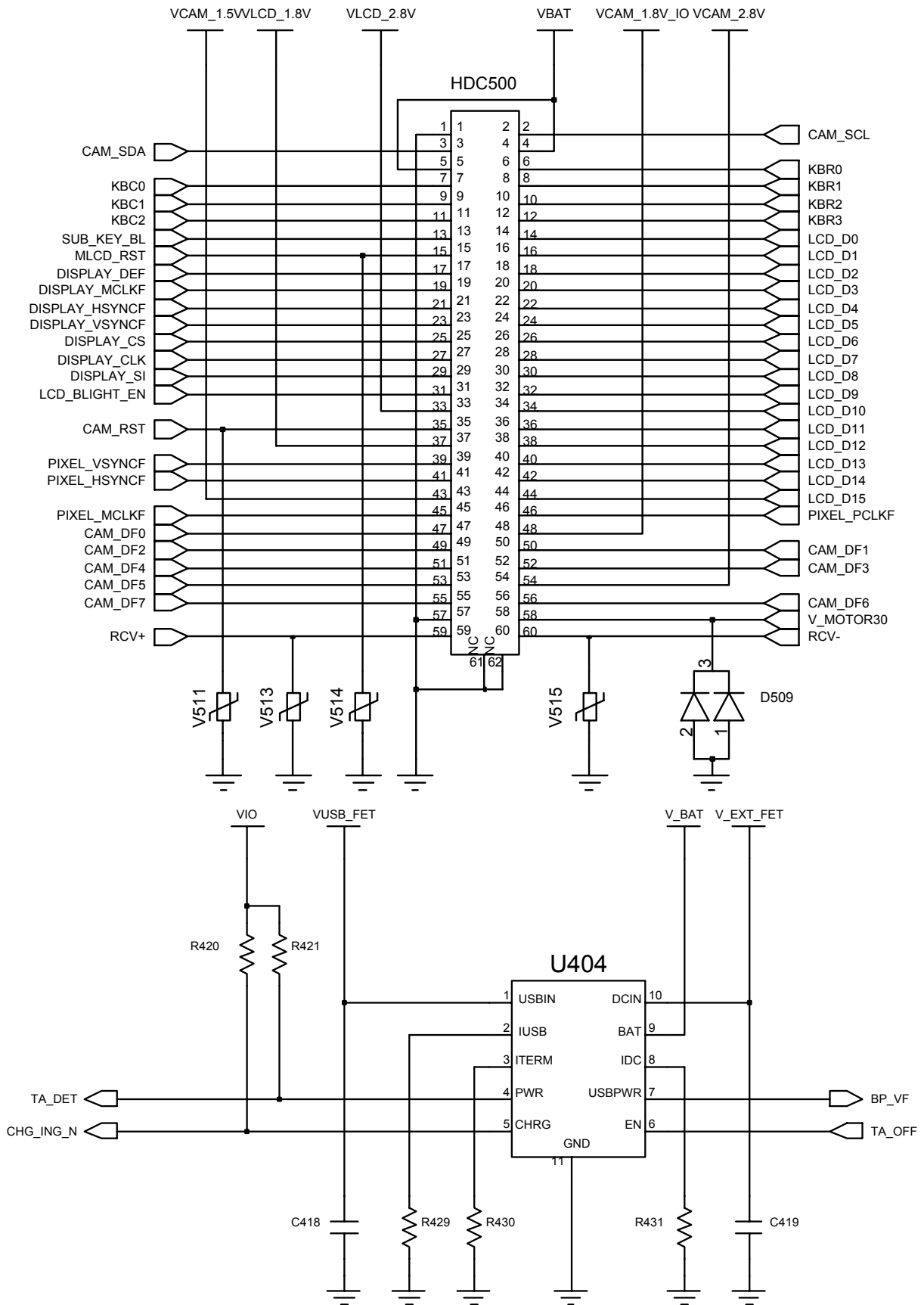




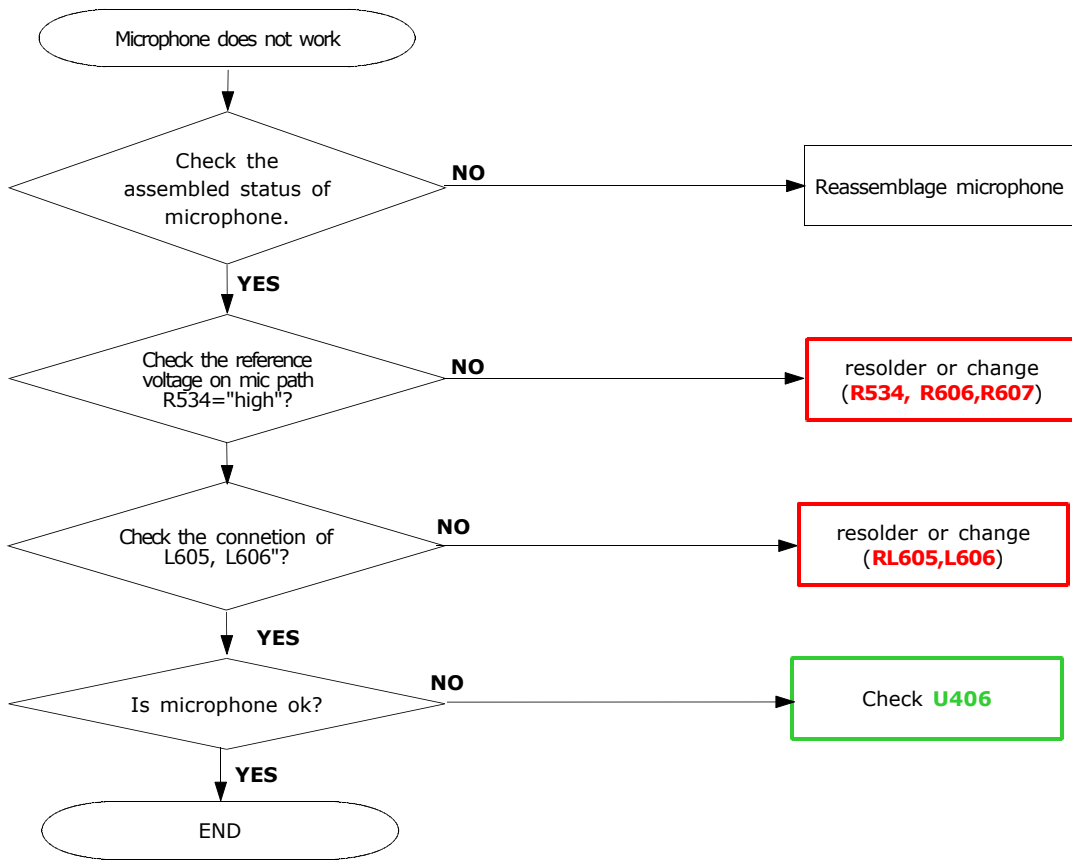
**10-1-4. Charging Part**

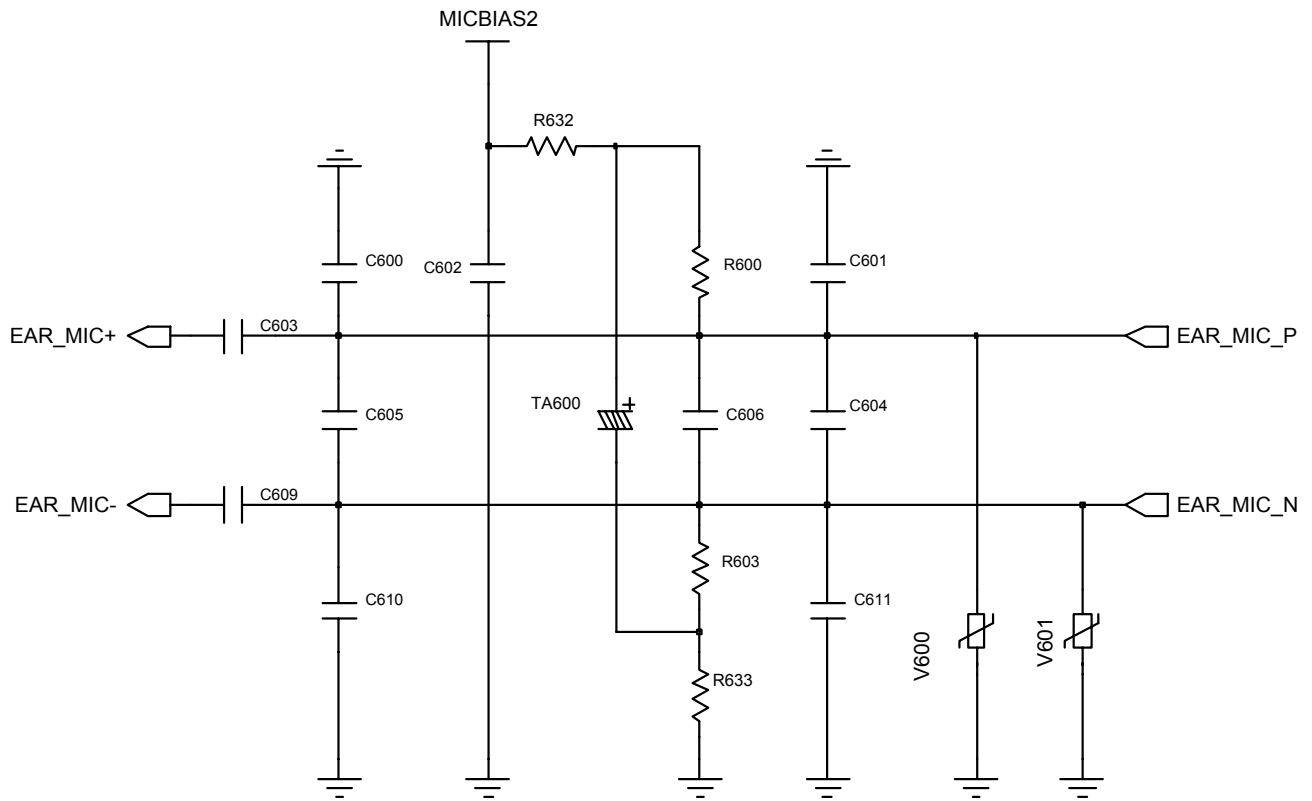




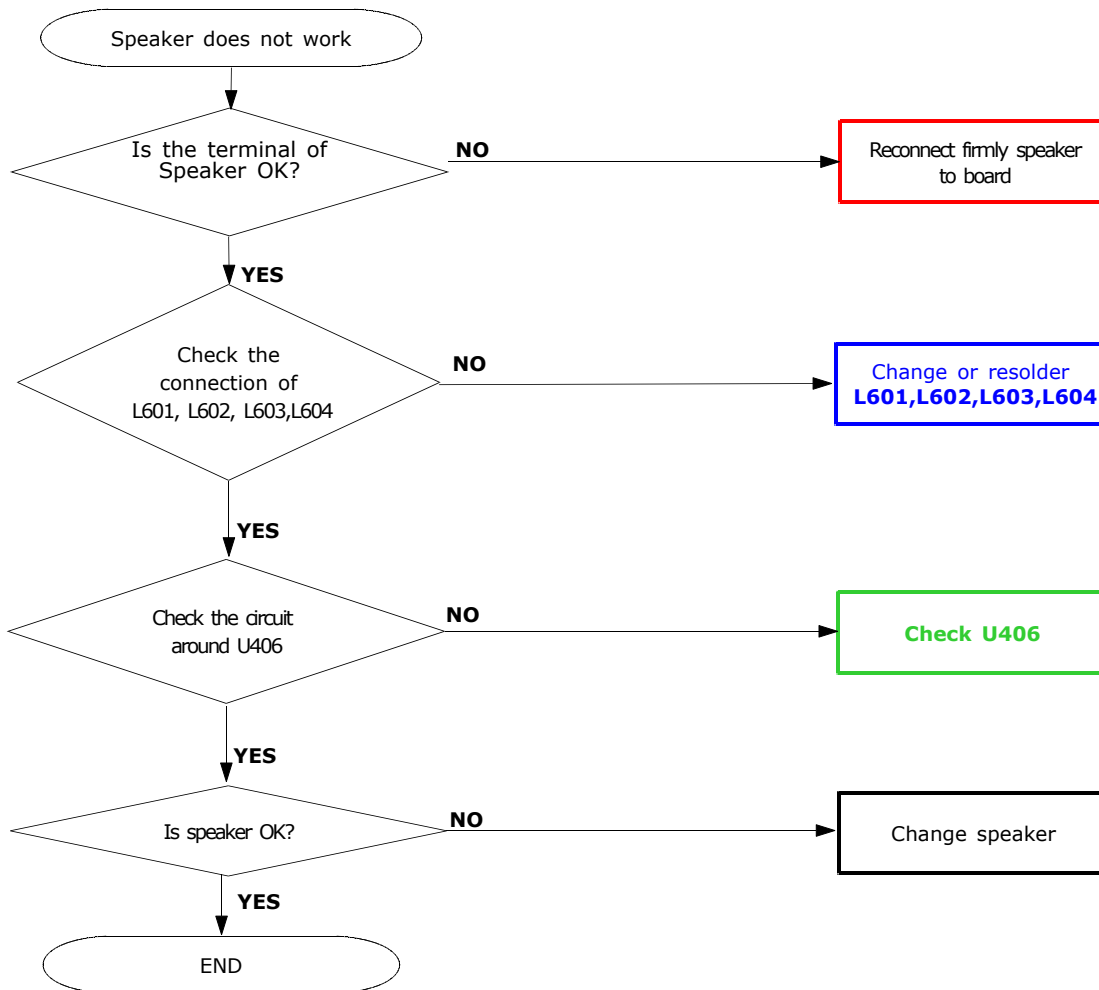


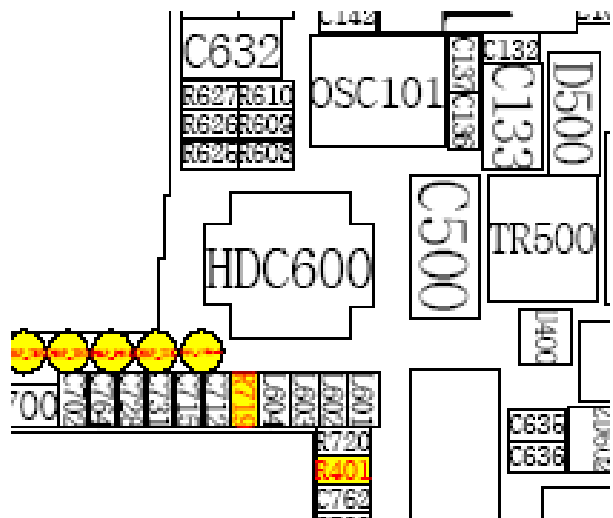
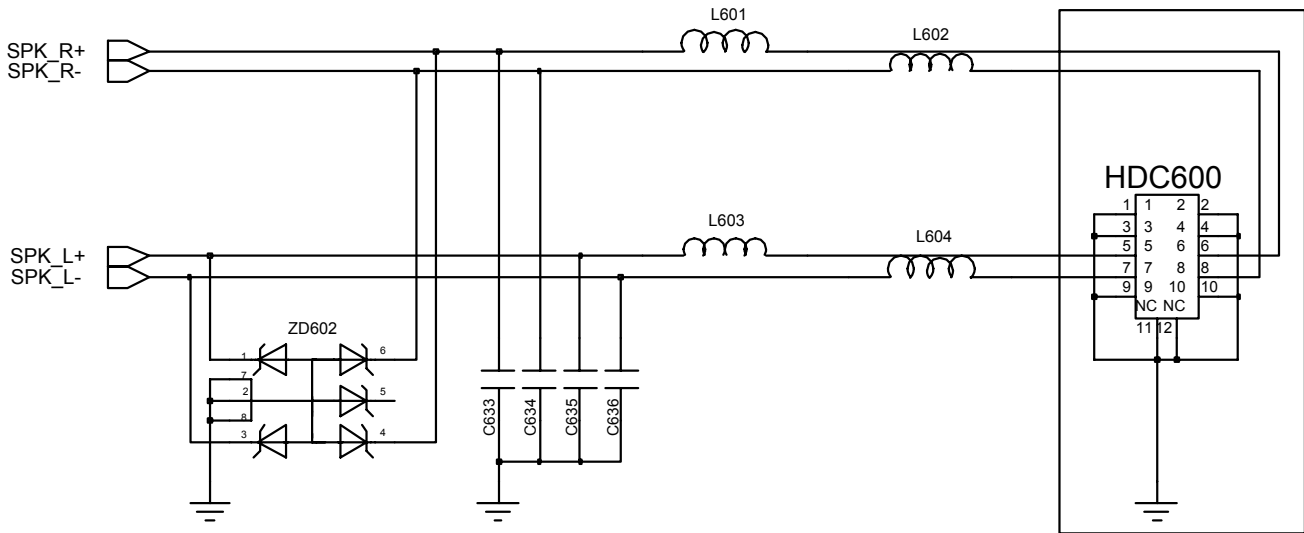
### 10-1-5. Microphone Part



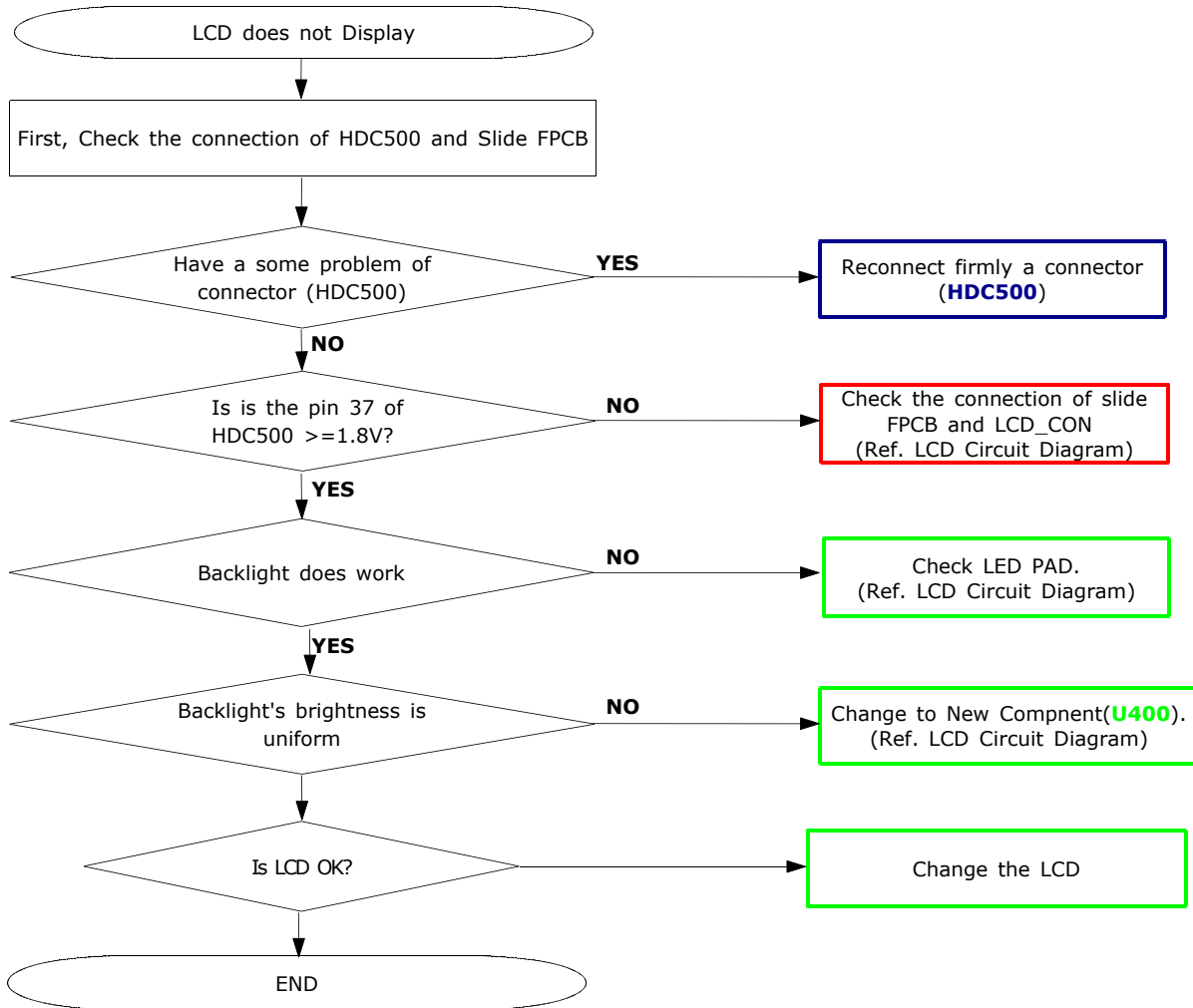


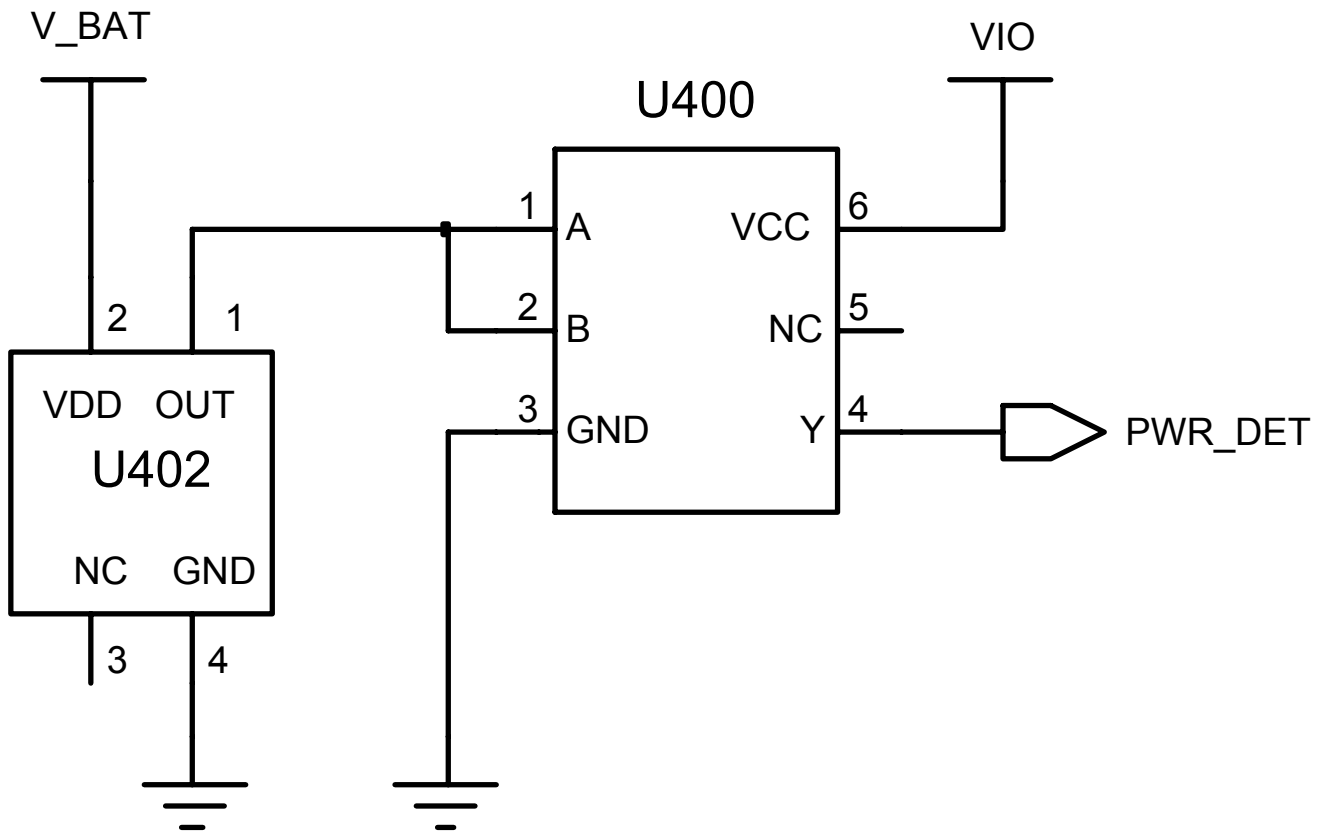
### 10-1-6. Speaker Part



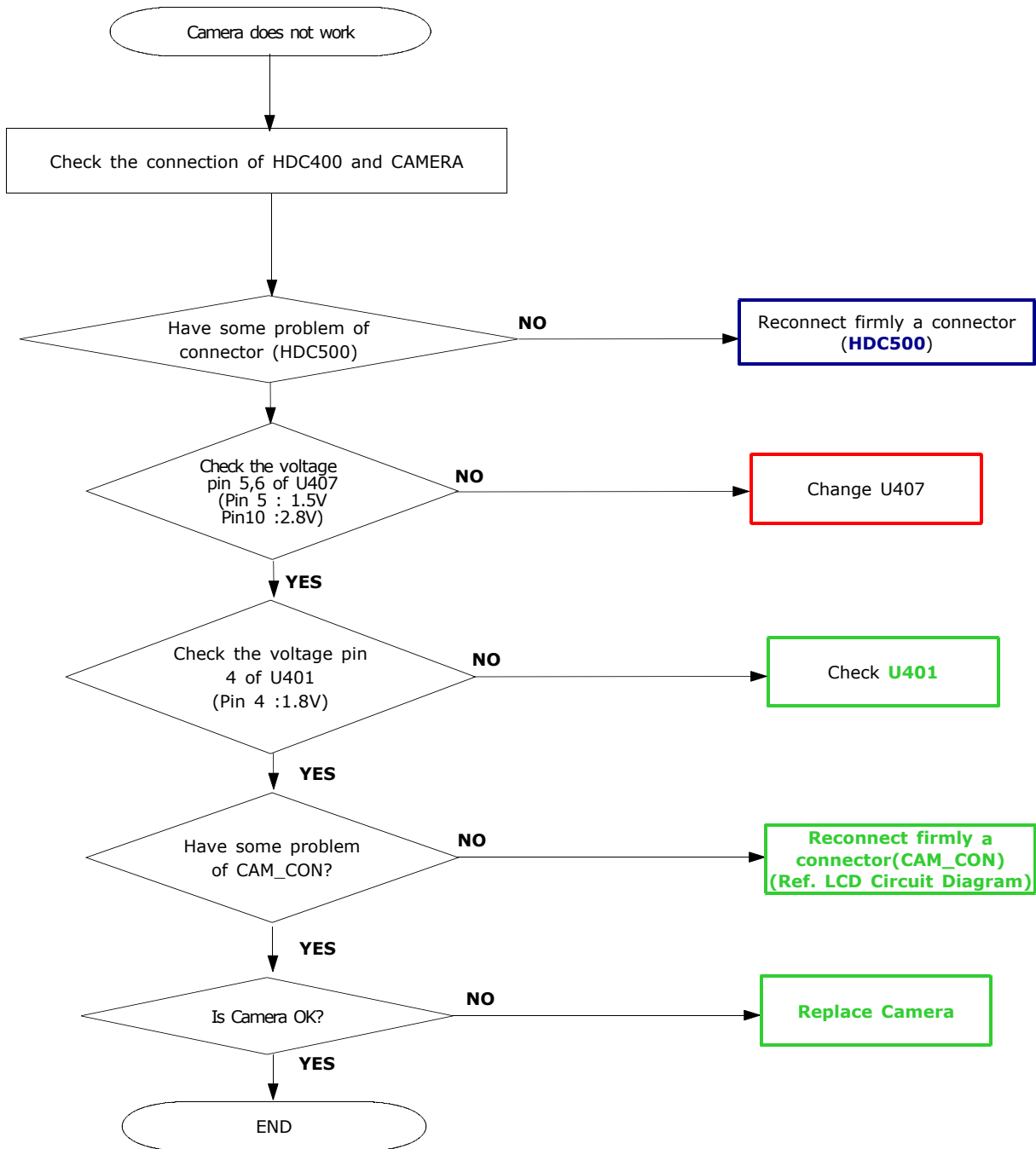


### 10-1-7. LCD

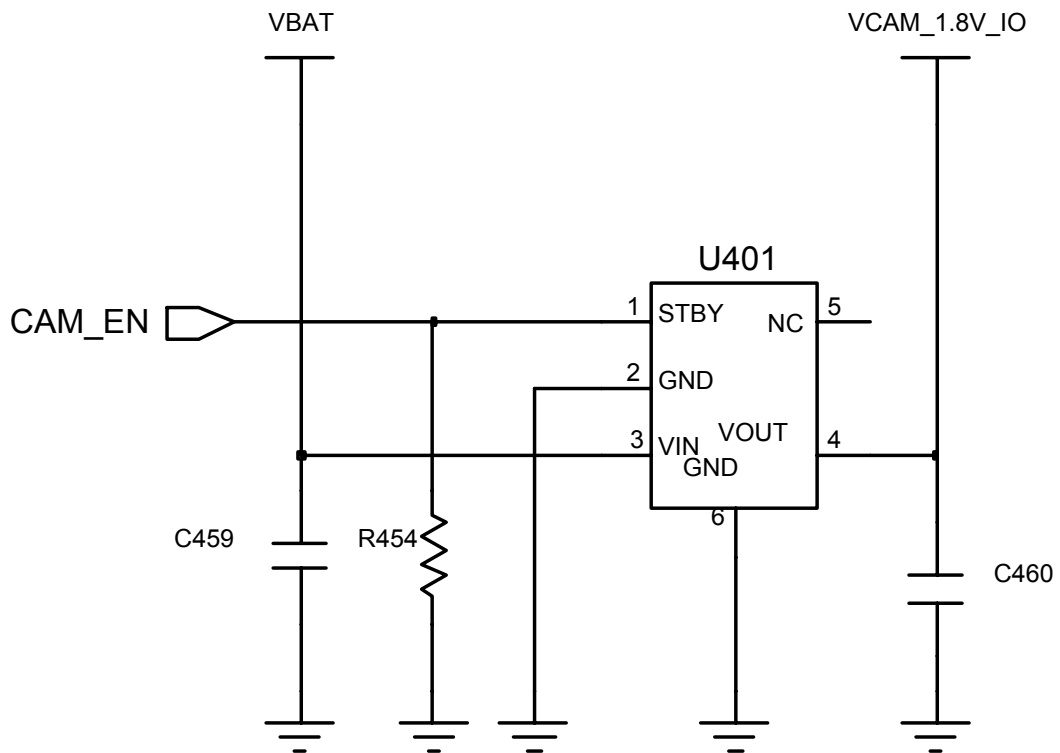
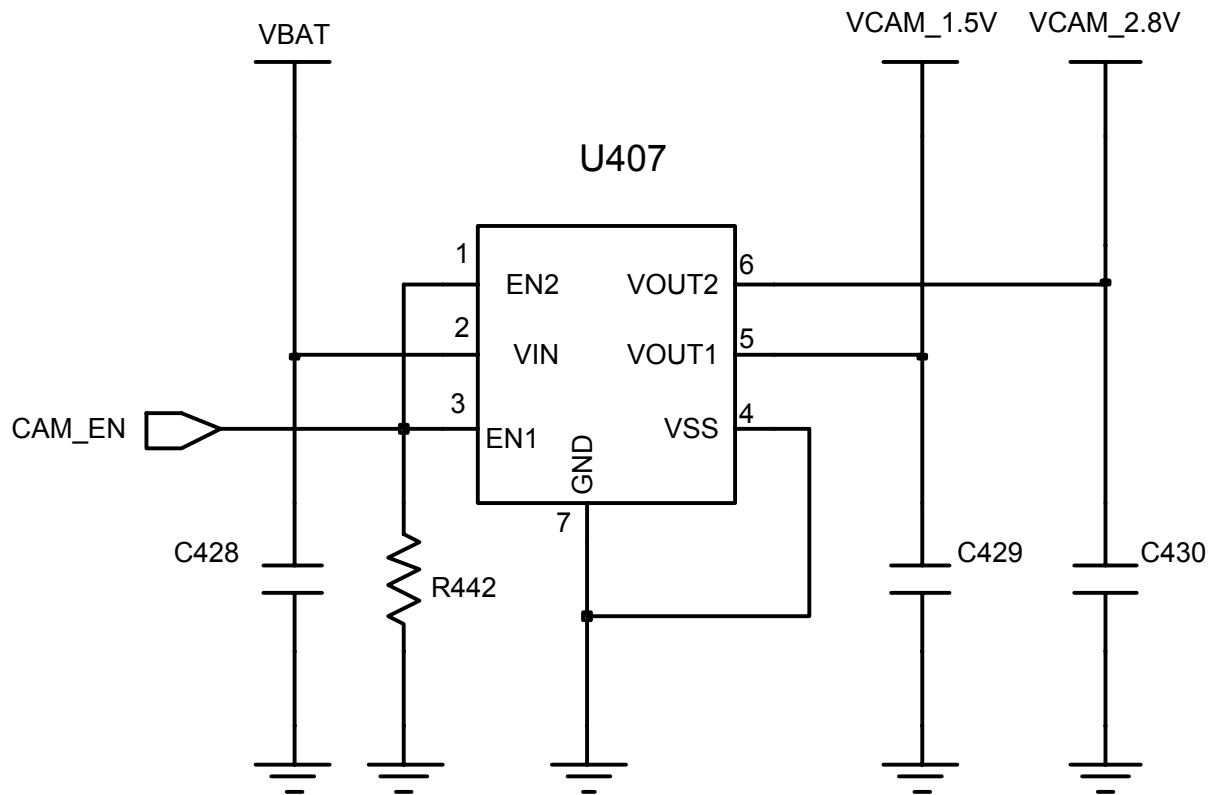




### 10-1-8. Camera

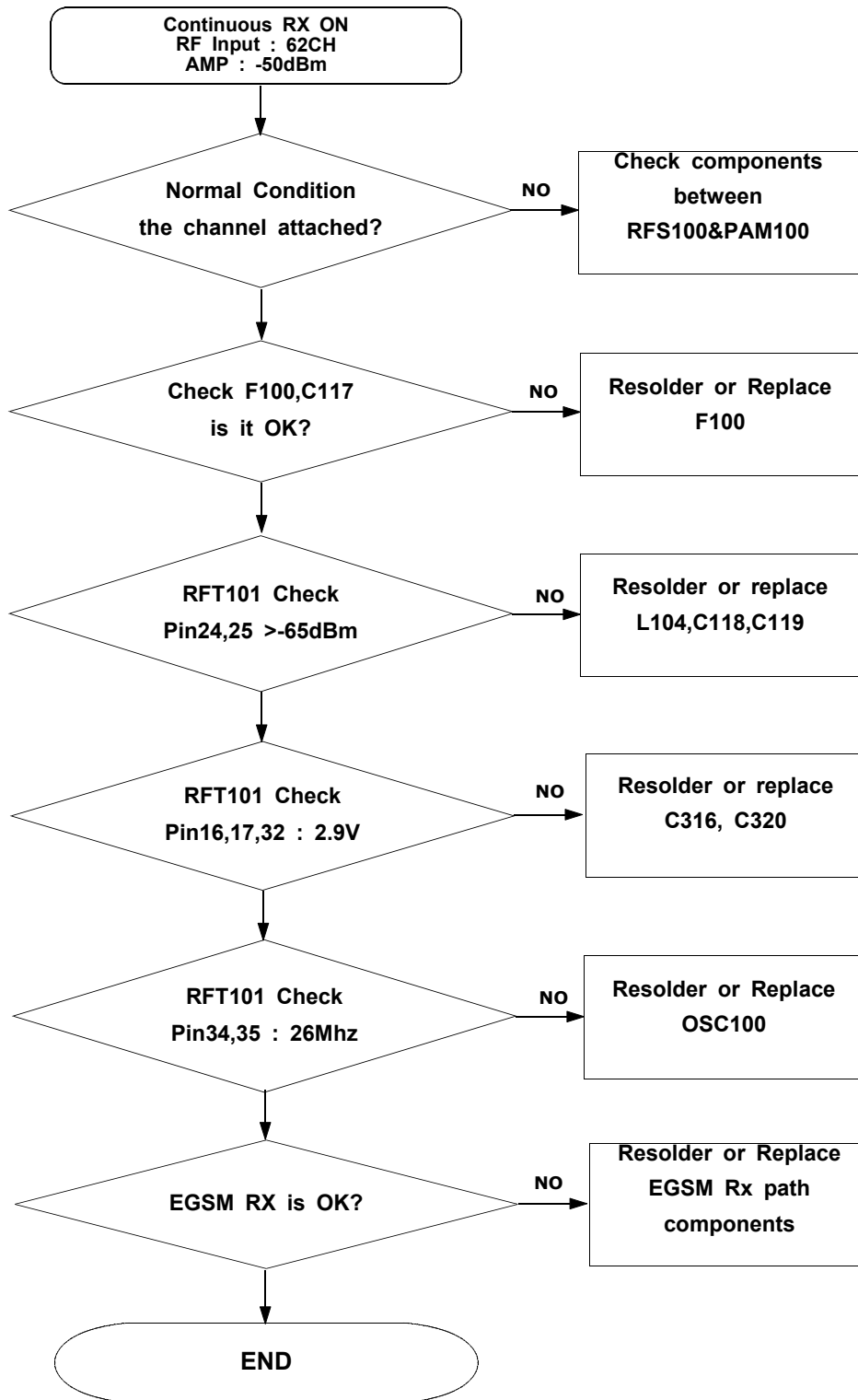


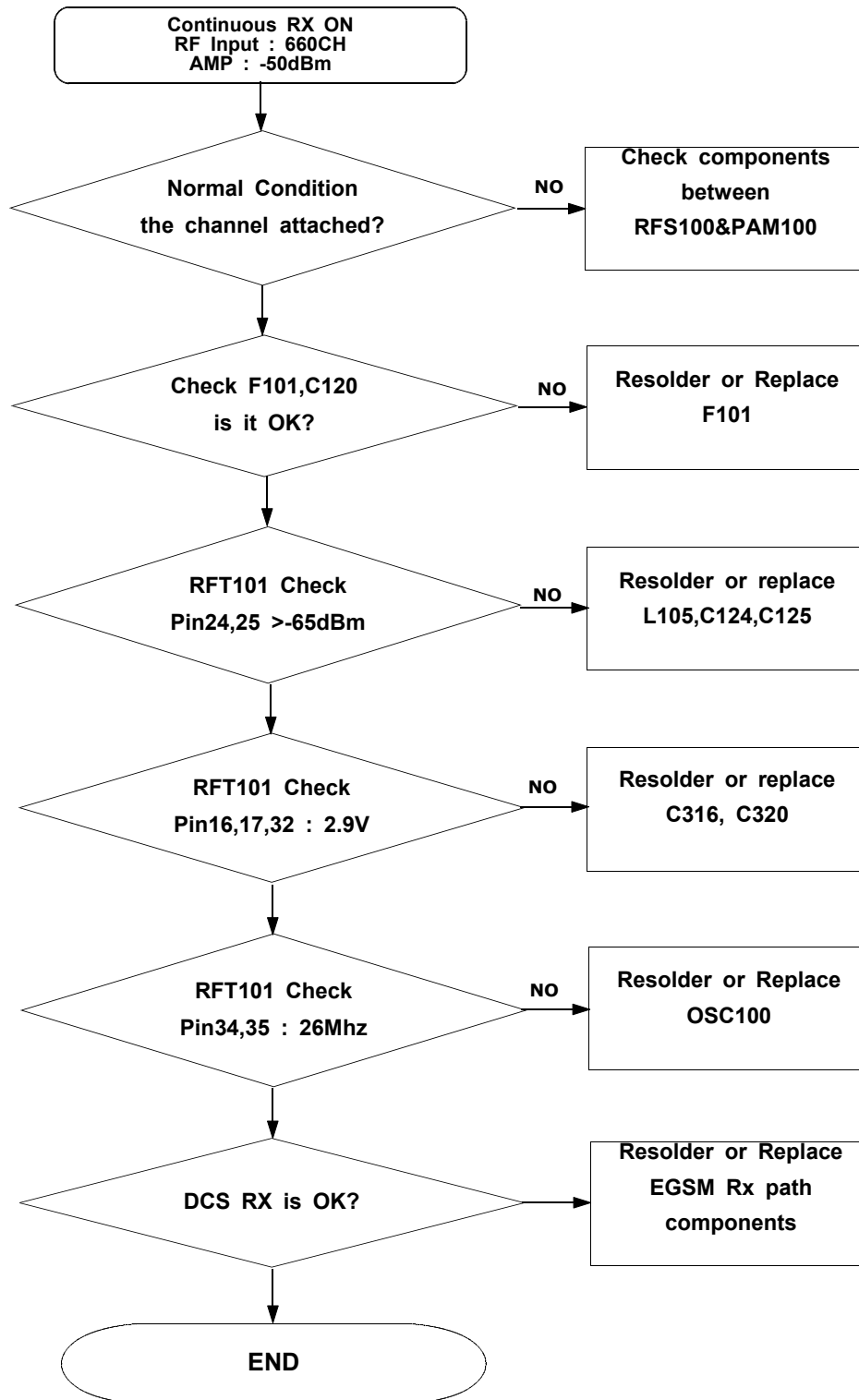




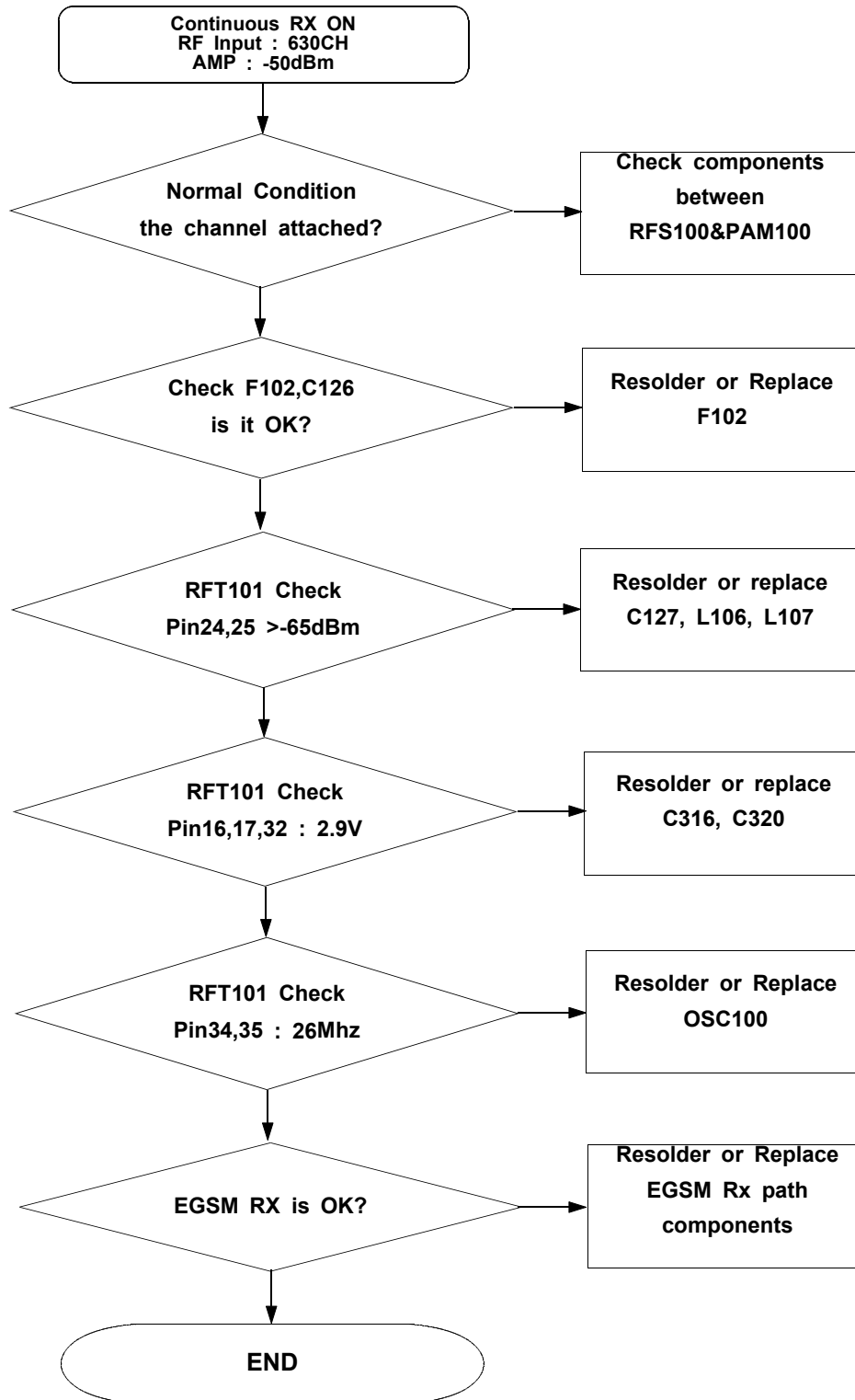
## 10-2.RF

### 10-2-1. EGSM Receiver

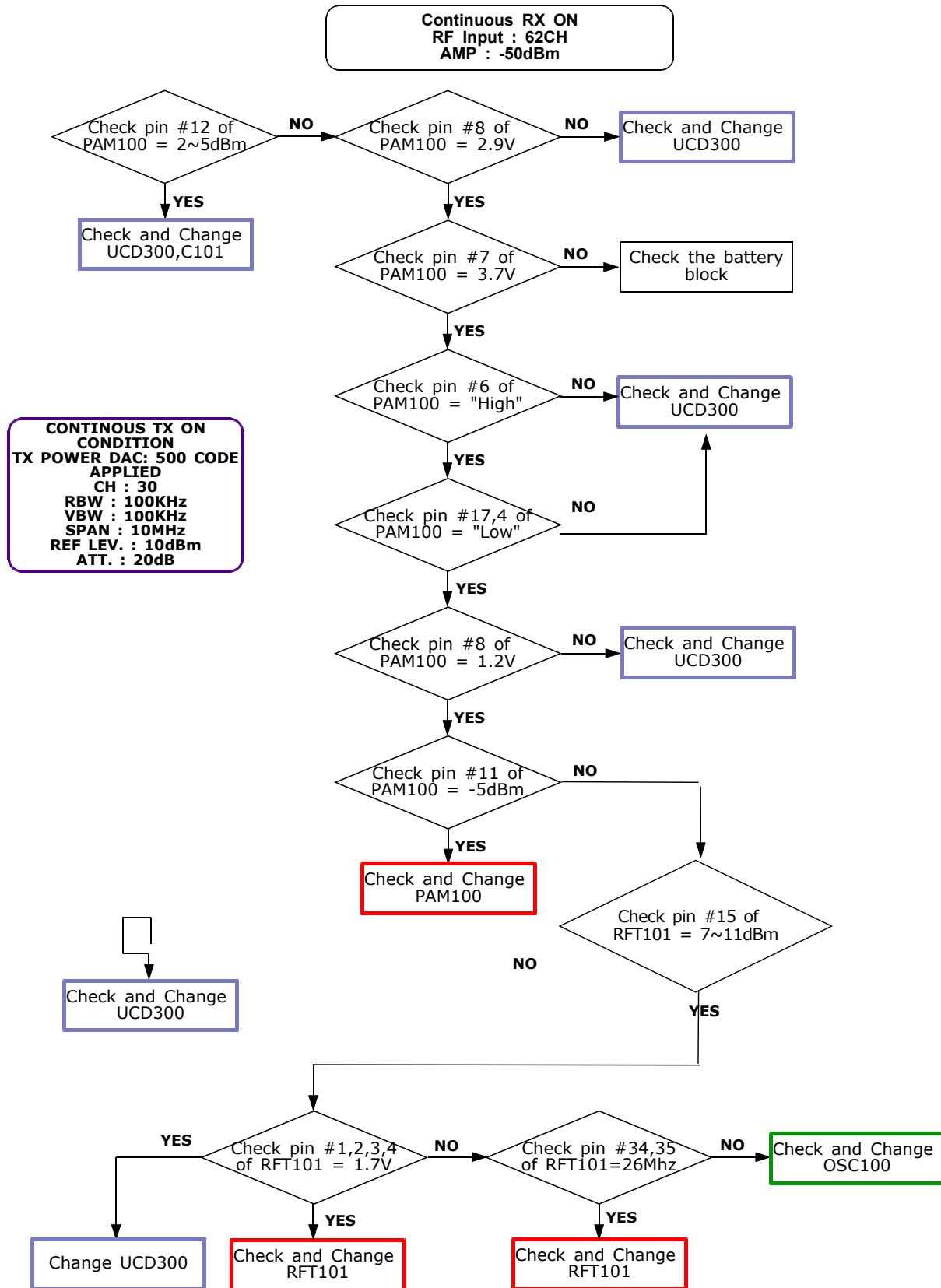


**10-2-2. DCS Receiver**

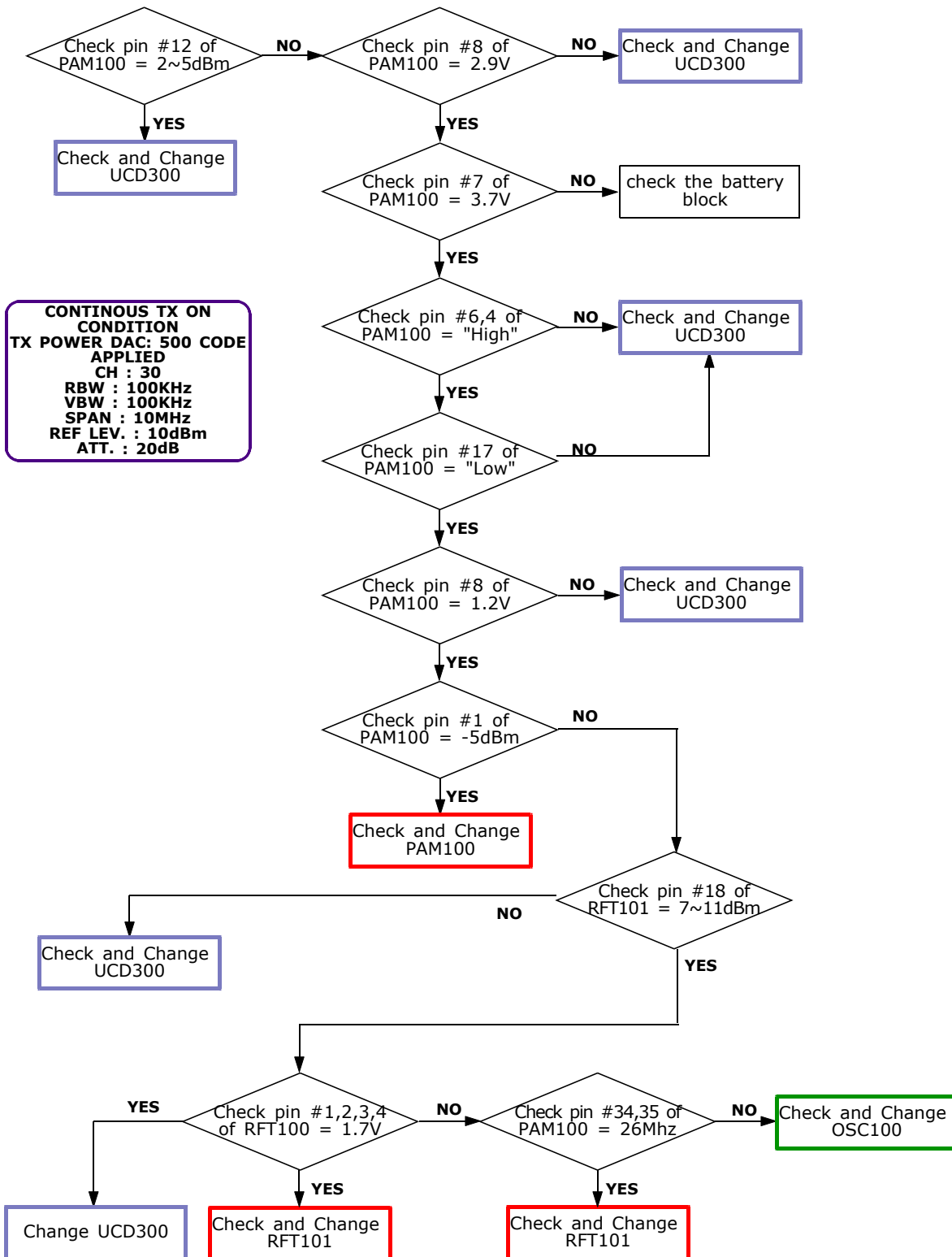
### 10-2-3. PCS Receiver

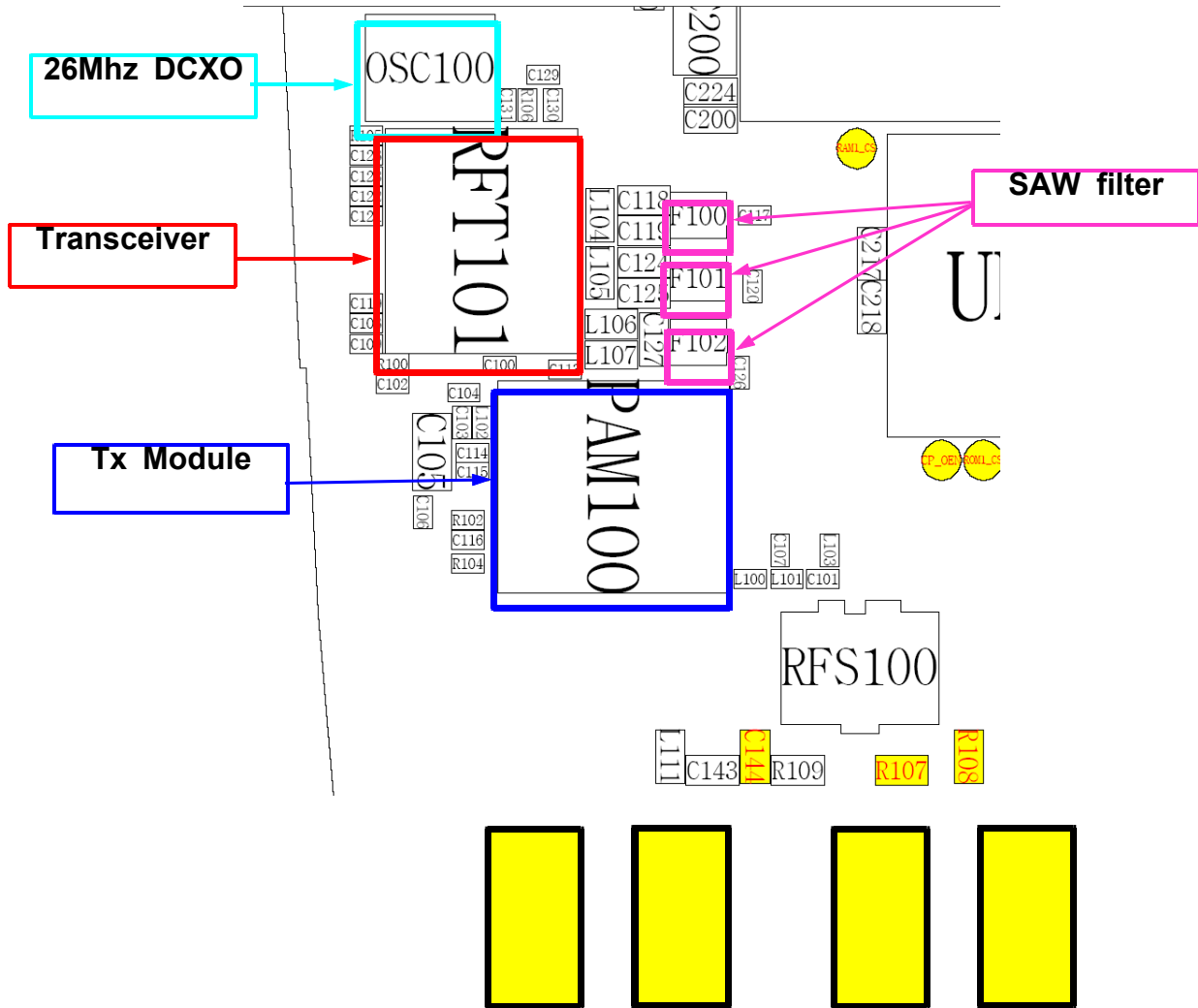


### 10-2-3. EGSM Transmitter

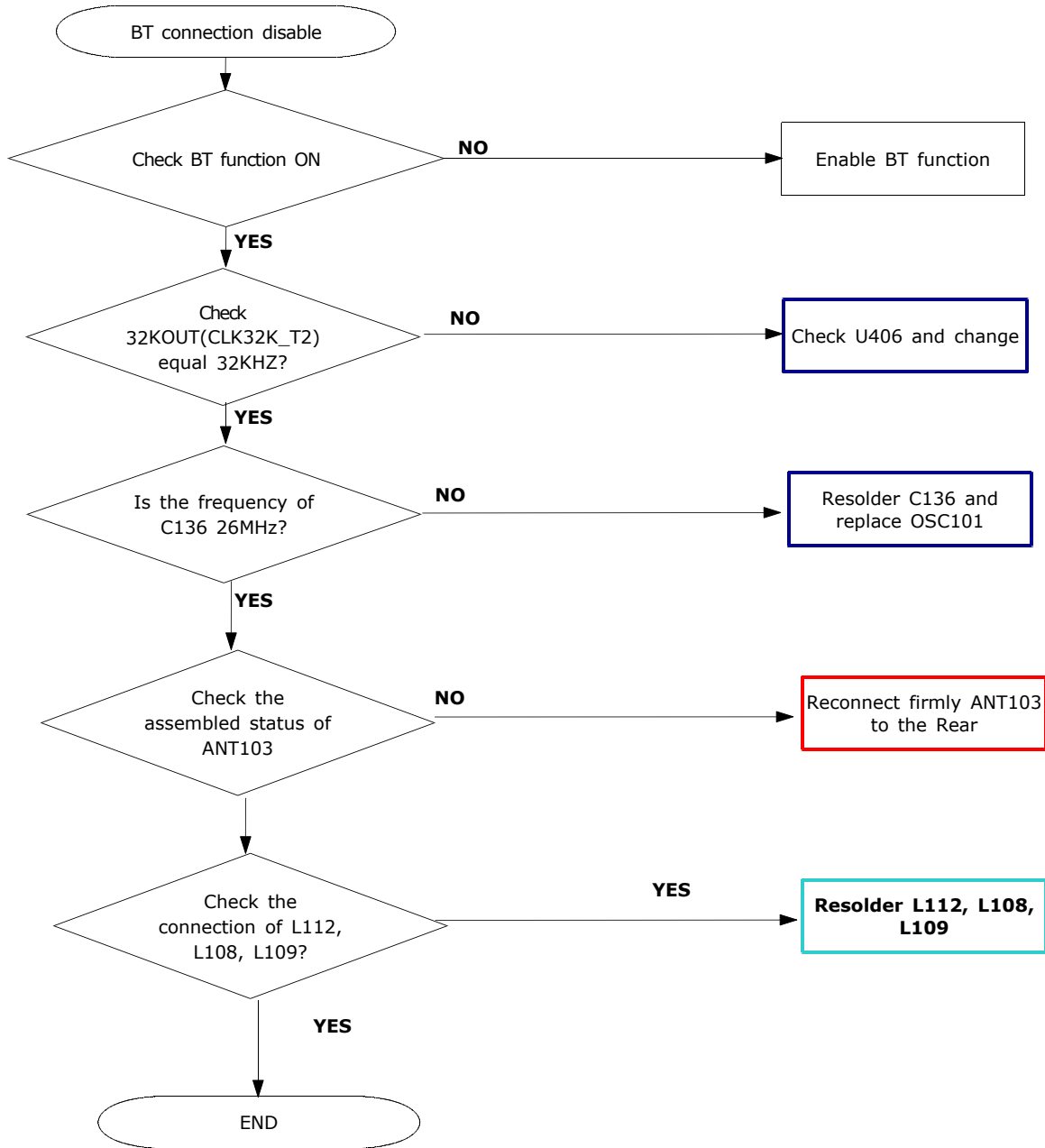


### 10-2-4. DCD & PCS Receiver





### 10-2-5. Bluetooth Part







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## 11. Reference data

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### 11-1. 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

**SAMSUNG  
ELECTRONICS**



GSPN (Global Service Partner Network)

<b>Country</b>	<b>Web Site</b>
North America	<a href="http://service.samsungportal.com">service.samsungportal.com</a>
Latin America	<a href="http://latin.samsungportal.com">latin.samsungportal.com</a>
CIS	<a href="http://cis.samsungportal.com">cis.samsungportal.com</a>
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Asia	<a href="http://asia.samsungportal.com">asia.samsungportal.com</a>
Mideast & Africa	<a href="http://mea.samsungportal.com">mea.samsungportal.com</a>