SAMSUNG

GSM TELEPHONE
SGH-D840

SERVICE Manual

GSM TELEPHONE

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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 disassembing 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 easilly 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 General Specification

		GSM 900	DCS1800	PCS1900
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	GPRS	270.833 Kbps 3.692 us	270.833 Kbps 3.692 us	270.833 Kbps 3.692 us
	EDGE	812.5 Kbps 3.692 us	812.5 Kbps 3.692 us	812.5 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	GPRS	0.3 GMSK	0.3 GMSK	0.3 GMSK
	EDGE	8 PSK	8 PSK	8 PSK
MS Power	GPRS	33 dBm~5 dBm	30 dBm~0 dBm	30 dBm~0 dBm
	EDGE	27~5 dBm	26~0 dBm	26~0 dBm
Power Level	GPRS	5 pcl~19 pcl	0 pcl~15 pcl	0 pcl~15 pcl
	EDGE	8~19(class E2)	2~15(class E2)	2~15(class E2)
Sensitivity		-102 dBm	-100 dBm	-102 dBm
TDMA Mux		8	8	8
Cell Radius		35 Km	2 Km	2 Km
Operation Temperature		-20 ℃~45 ℃	-20 ℃~45 ℃	20 ℃~45 ℃
Supply Voltage		3.7 V	3.7 V	3.7 V
Size and Weight		Dimention : 11.95(H)x52(W)x99(D)mm Weight :98.6g(with standard battery)		

2-2. GMSK TX power Level

TX Power control level	GSM900
5	33±2 dBm
6	31±3 dBm
7	29±3 dBm
8	27±3 dBm
9	25±3 dBm
10	23±3 dBm
11	21±3 dBm
12	19±3 dBm
13	17±3 dBm
14	15±3 dBm
15	13±3 dBm
16	11±5 dBm
17	9±5 dBm
18	7±5 dBm
19	5±5 dBm

TX Power control level	DCS1800
0	30±2 dBm
1	28±3 dBm
2	26±3 dBm
3	24±3 dBm
4	22±3 dBm
5	20±3 dBm
6	18±3 dBm
7	16±3 dBm
8	14±3 dBm
9	12±4 dBm
10	10±4 dBm
11	8±4d Bm
12	6±4 dBm
13	4±4 dBm
14	2±5 dBm
15	0±5 dBm

TX Power control level	PCS1900
0	30±2 dBm
1	28±3 dBm
2	26±3 dBm
3	24±3 dBm
4	22±3 dBm
5	20±3 dBm
6	18±3 dBm
7	16±3 dBm
8	14±3 dBm
9	12±4 dBm
10	10±4 dBm
11	8±4 dBm
12	6±4 dBm
13	4±4 dBm
14	2±5 dBm
15	0±5 dBm

2-3. EDGE TX Power Level

TX Power control level	GSM850
8	27±3 dBm
9	25±3 dBm
10	23±3 dBm
11	21±3 dBm
12	19±3 dBm
13	17±3 dBm
14	15±3 dBm
15	13±3 dBm
16	11±5 dBm
17	9±5 dBm
18	7±5 dBm
19	5±5 dBm

TX Power control level	DCS1800
2	26±3 dBm
3	24±3 dBm
4	22±3 dBm
5	20±3 dBm
6	18±3 dBm
7	16±3 dBm
8	14±3 dBm
9	12±4 dBm
10	10±4 dBm
11	8±4 dBm
12	6±4 dBm
13	4±4 dBm
14	2±5 dBm
15	0±5 dBm

TX Power control level	PCS1900
2	26±3 dBm
3	24±3 dBm
4	22±3 dBm
5	20±3 dBm
6	18±3 dBm
7	16±3 dBm
8	14±3 dBm
9	12±4 dBm
10	10±4 dBm
11	8±4 dBm
12	6±4 dBm
13	4±4 dBm
14	2±5 dBm
15	0±5 dBm

3. Product Function

Main Function

-Camera and camcorder
-Music player
-File viewer
-Bluetooth
-Phone to TV
-Image editor
-Photo printing
-Multimedia Message Service (MMS)
-E-mail
-Offline mode
-Web browser

4. Array course control

Test Jig (GH80-03307A)

Test Cable (GH39-00501A)

RF Test Cable (GH39-00599A)

4-1. Downloading Binary Files (1)

•Swift Model firmware is composed of 2 files

–*.s3 : Main source code binary.

4-2. Prerequisite

•Downloader program(Optiflash.exe)

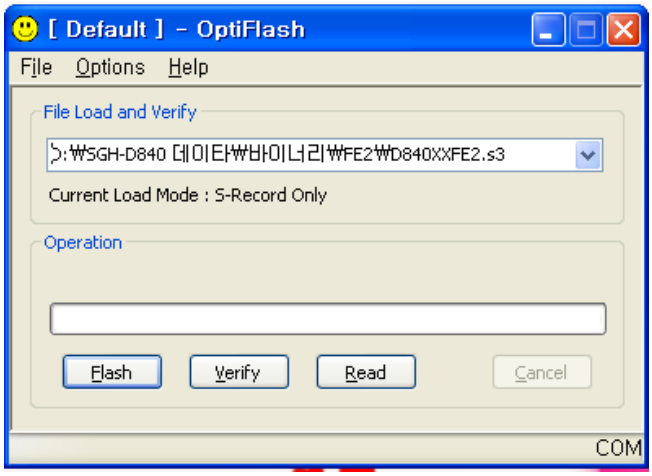
•D840 Moblie Phone

•Data Cable

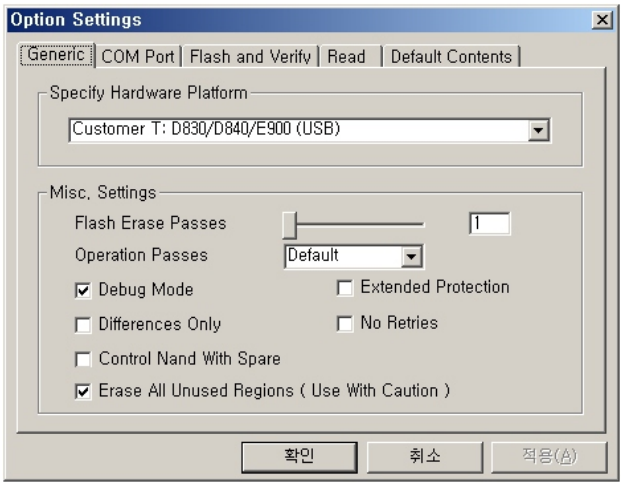
•Binary Files

4-3. S/W Downloader Program

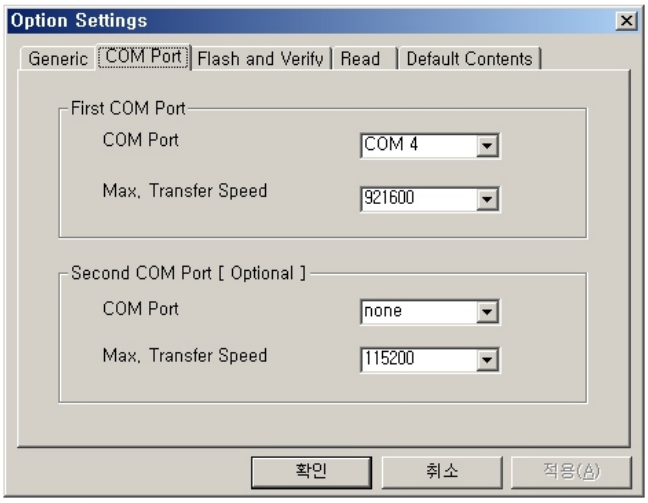
1. Load the binary download program by execution the "OptiFlash.exe"



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



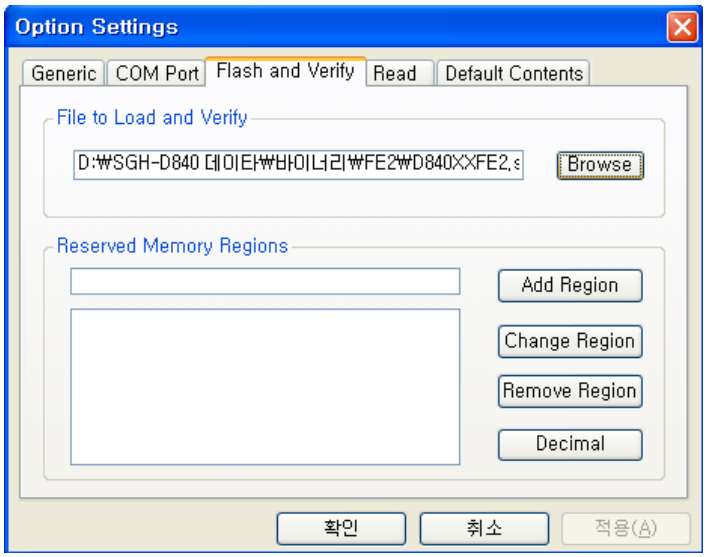
3. Select the COM port where the download cable is connected



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.

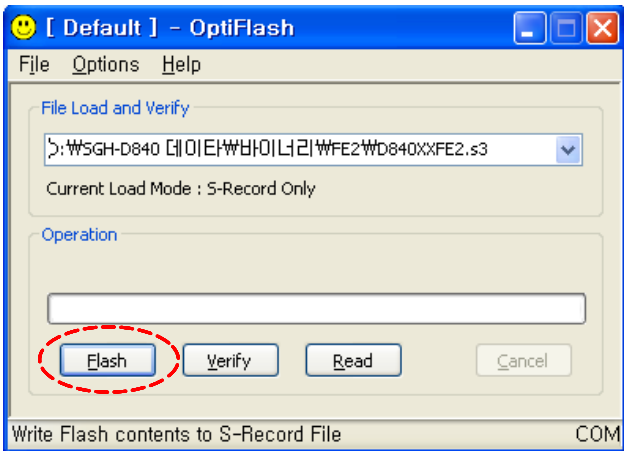
4. Select the "Flash&Verify" -> "Browse"

Set the directory path and choose the latest S/W binary, for example "D840XXYY.s3", for the downloader binary setting.



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.



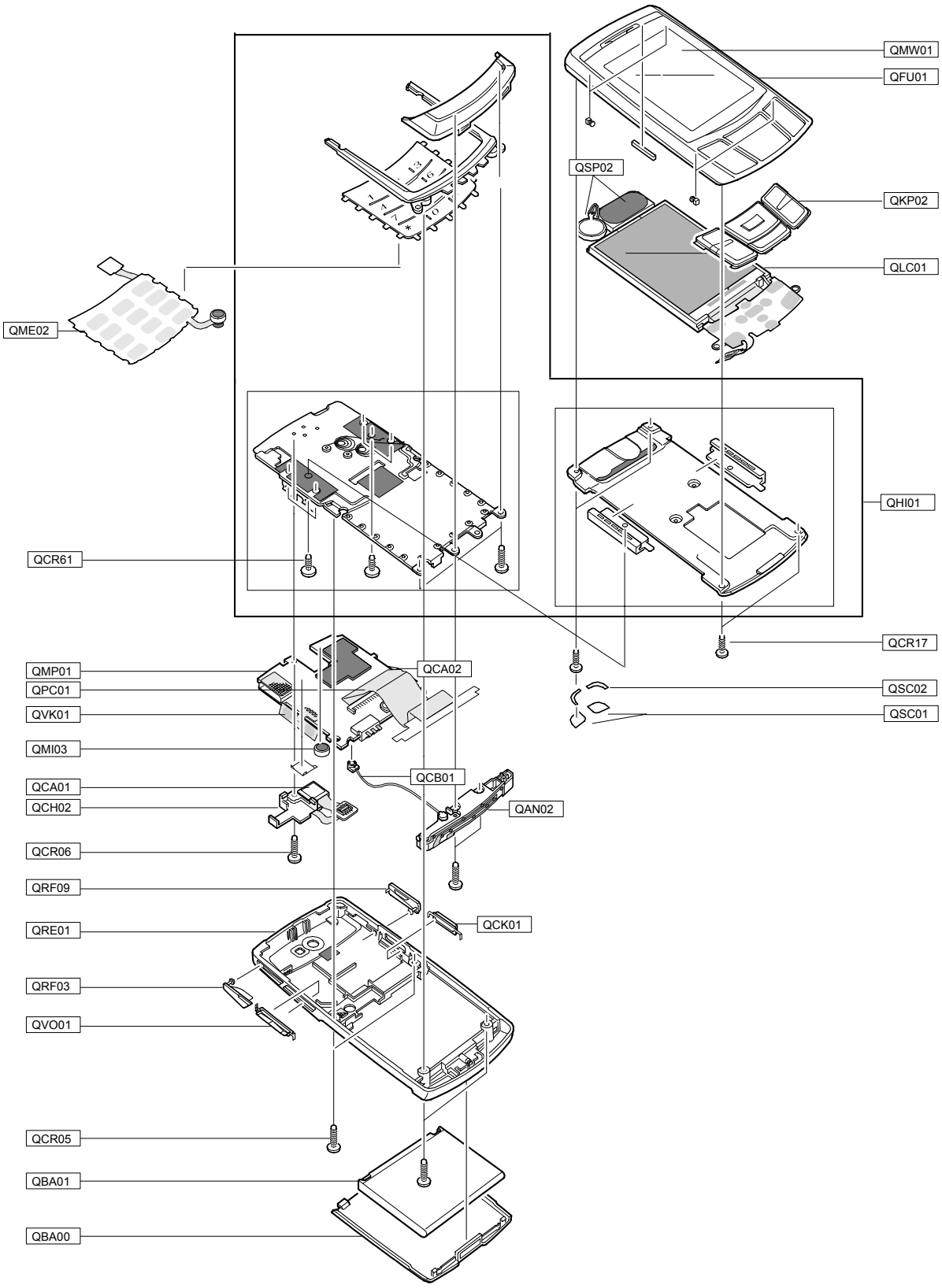
6. When downloading is finished successfully, there is a "All is well" message.

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

8. Confirm the downloaded version name by key-string(***#1234#**)
   Memory reset will be done by pressing the following key-strings.
   Full Reset : "***2767*3855#**" will reboot the phone automatically.

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	GH42-00789A
QBA00		PMO-COVER BATT	GH72-29396A
QBA01		INNER BATTERY PACK-700MAHBLKEN	GH43-02374A
QCA01		UNIT-CAMERA MODULE	GH59-02877A
QCA02		UNIT-CAMERA KEY	GH59-02882A
QCB01		CBF COAXIAL CABLE	GH39-00565A
QCH02		PMO-FLASH BRACKET	GH72-30832A
QCR05		SCREW-MACHINE	6001-001478
QCR06		SCREW-MACHINE	6001-001155
QFL01		ASSY MEC-SLIDE LOWER	GH75-09041A
QFU01		ASSY MEC-SLIDE UPPER	GH75-09040A
QHI01		ASSY HINGE-MAIN(SER/ZK)	GH98-01449A
QKP02		ASSY MEC-KEYPAD SUB(XET/ZK)	GH75-09053A
QLC01		LCD-MODULE,SGHD840	GH07-00884A
QME02		UNIT-EL KEY PBA(NAVI)	GH59-03014A
QMI01		MICROPHONE-ASSY-SGHE340	GH30-00199A
QMI03		RMO-MIC HOLDER	GH73-06561A
QMP01		PBA MAIN-SGHD840	GH92-02551A
QMW01		ASSY COVER-MAIN WINDOW	GH98-01505A
QPC01		MEA-SLIDE FPCB KIT	GH97-06223A
QSC01		ASSY COVER-SCREW CAP	GH98-01954A
QSC02		RMO-RUBBER SCREW CAP	GH73-07745A
QSP02		UNIT-SPK MOTOR FPCB	GH59-03012A
QVK01		UNIT-VOLUME KEY	GH59-02881A
QRE01		ASSY MEC-REAR COVER	GH75-09306A
	QCK01	ASSY MEC-CAMERA KEY	GH75-09051A
	QRF03	PMO-EAR JACK COVER V2	GH72-31064A
	QRF09	PMO-COVER MICRO SD	GH72-29400A
	QVO01	PMO-VOLUME KEY	GH72-28074A
QFR01		ASSY CASE-FRONT	GH98-01518A
	QCR12	SCREW-MACHINE	6001-001530
	QMI03	RMO-MIC HOLDER	GH73-06561A

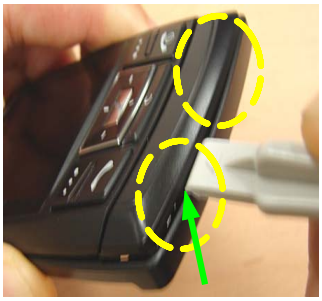
Discription	SEC CODE
BAG PE	6902-000297
CBF INTERFACE-DATA LINK CABLE	GH39-00444A
ADAPTOR-SGHD800 TA(EU)	GH44-01060A
S/W CD-SAMSUNG PC STUDIO 3.0	GH46-00241A
UNIT-EARPHONE(BLK)	GH59-02499A
LABEL(P)-WATER SOAK	GH68-02026A
LABEL(P)-WATER SOAK	GH68-02026A
MANUAL-WARRANTY CARD	GH68-02623A
MANUAL-SFC	GH68-04336A
LABEL(P)-BARCODE RUSSIA	GH68-08494A
LABEL(R)-MAIN(SER)	GH68-10760A
MANUAL USERS-EU RUSSIAN	GH68-10851A
BOX(P)-UNIT MAIN(SER)	GH69-03917A
CUSHION-CASE TA2 MA2(SLIM)	GH69-04177A
IPR-FUNCTION KEY SUPPORT V2	GH70-01330A
MPR-TAPE MAIN WINDOW	GH74-20511A
MPR-SPONGE FPCB	GH74-21333A
MPR-TAPE LCD CONN	GH74-21339A
MPR-TAPE DDK CONN	GH74-21340A
MPR-TAPE FPCB A	GH74-21341A
MPR-SPONGE FPCB B	GH74-21342A
MPR-TAPE EAR JACK	GH74-21343A
MPR-VINYL BOHO MAIN WIN	GH74-21347A
MPR-VINYL BOHO F/N KEY	GH74-22420A
MPR-TAPE FRONT	GH74-22425A
MPR-TAPE BATT CONN	GH74-22428A
MPR-TAPE LCD A	GH74-24670A
MPR-TAPE PBA	GH74-24672A
MPR-SPONGE BT	GH74-24673A
MPR-TAPE LCD FPCB	GH74-25807A
MPR-TAPE BT	GH74-25808A
MPR-SPONGE GUIDE	GH74-25977A
MPR-TAPE LCD B	GH74-25978A
MPR-VINYL BOHO MAIN WIN FINAL	GH74-26270A

5-3. Disassembly

1

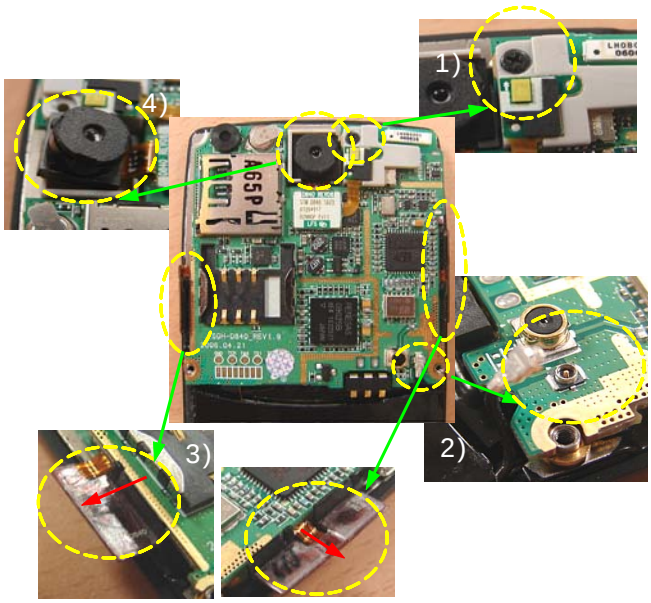
1) Loosen a screw this four point form Rear.

2



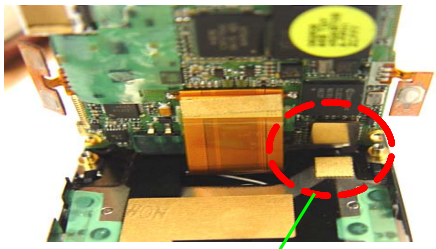
1) Make the space between rear cover and front cover using assembly stick.
2) And then widen space with hand pushing upside and separate 2 parts.

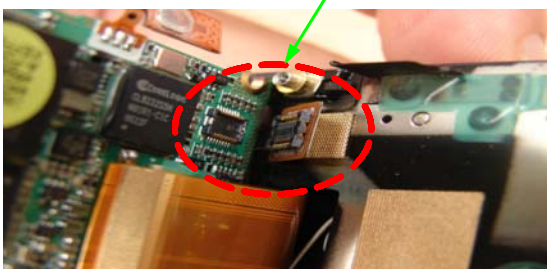
3



1) Loosen the screw of camera module.
2) Remove coaxial cable.
3) Remove side Key of both side.
4) Remove camera module from front cover.

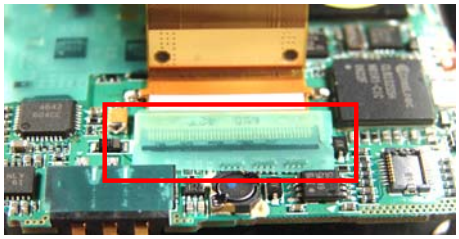
4

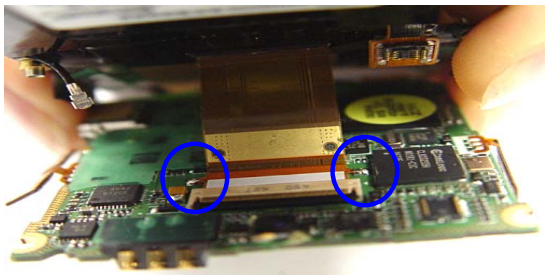




1) Upside down the main PBA with moving slide. Be careful the hook.
2) And remove the keypad connector from PBA

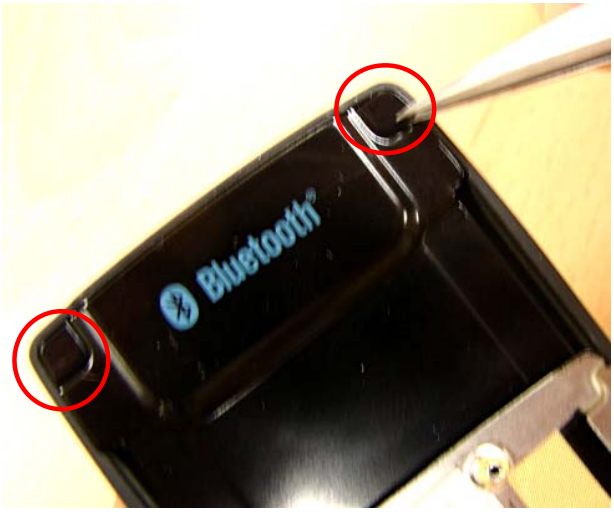
5





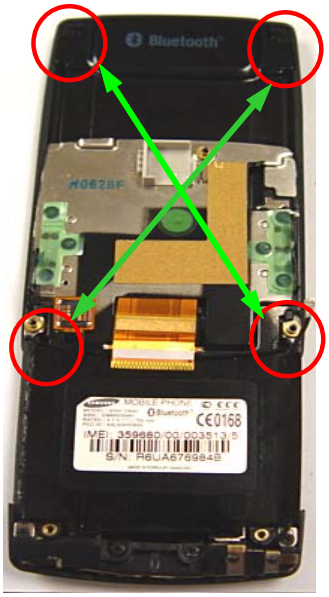
1) Remove the insulation tape.
2) And separate LCD connector from Main-PBA by removing soldering points.

6



1) Open the slide. (Slide up)
2) Remove the 2 screw caps with pinset.

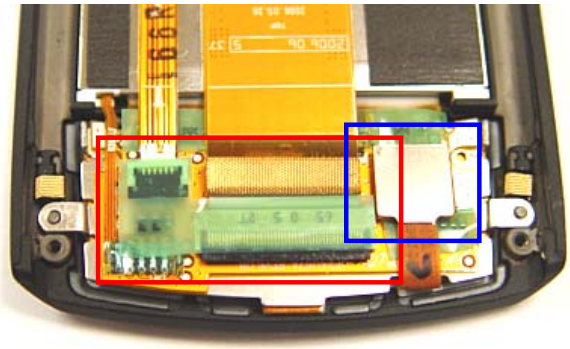
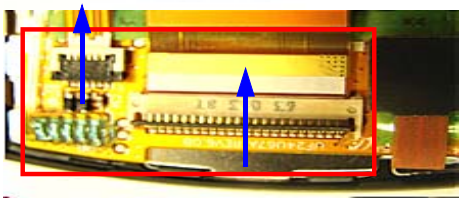
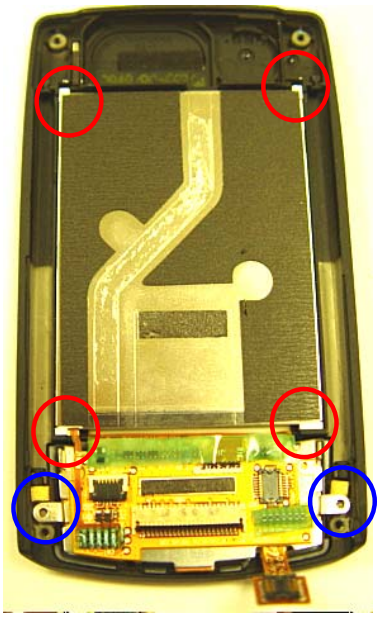
7



1) Loosen a screw 4 point form Lower.
2) Make the space between slide upper and slide lower using assembly stick.
3) And separate slide upper and lower.

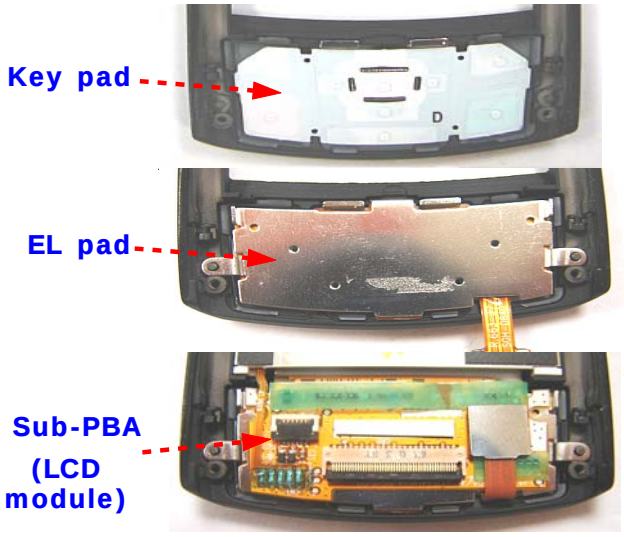
8

1) At first remove the EMI tape from sub-PBA.

9  	10 
1) Remove the insulation tape. 2) And separate LCD connector and Camera module connector from sub-PBA. 3) Separate sub-keypad connector from sub-PBA.	1) Separate sub-PBA from slide upper. And then caution the hook. 2) Separate LCD module from slide upper using 4 white points.

5-4. Assembly

1



1) At first put the keypad on the slide upper.
2) And put the EL pad on the keypad.
3) And put the LCD module on EL pad.

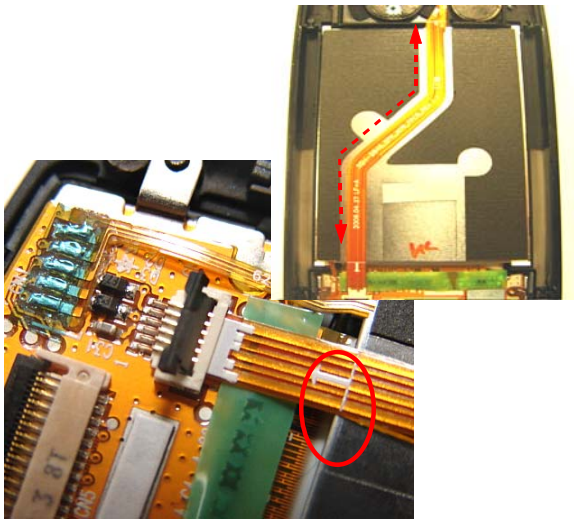
2

1) At first put motor and speaker on slide upper.

※ caution

1) Verify silk line and wire arrangement.

3

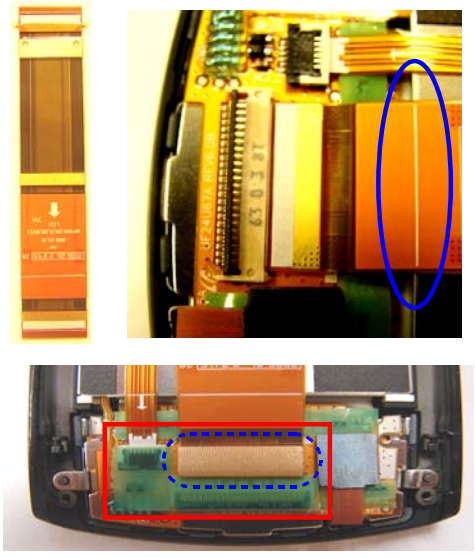


1) At first combined camera connector to sub-PBA.
2) And attach FPCB to LCD module.

※ caution

1) Verify the silk line.

4

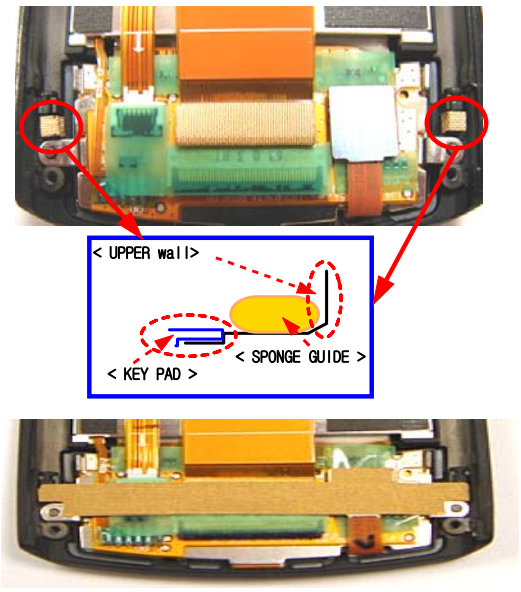


1) At first combined LCD connector to sub-PBA
2) And put gold gasket on FPCB and insulation tape on connector.

※ caution

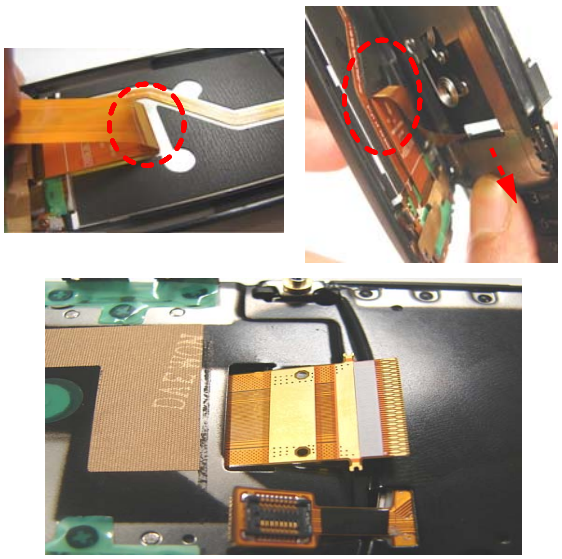
1) Verify the silk line.

5



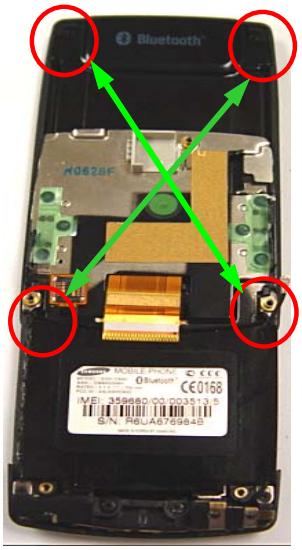
1) Put the sponge guide on slide upper.
2) And put the Tape LCD FPCB on sponge guide to guide.

6



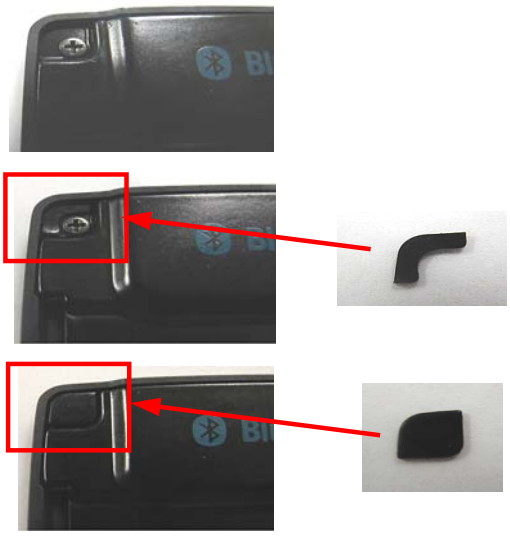
1) Fold LCD FPCB like a picture
2) And insert other side to front-rear hole.
3) Verify the FPCB size.

7



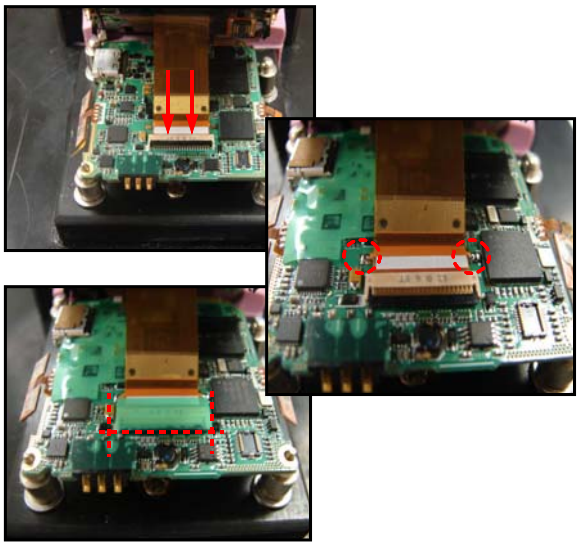
1) Fasten a screw at 4 points with driver after slide up.

8



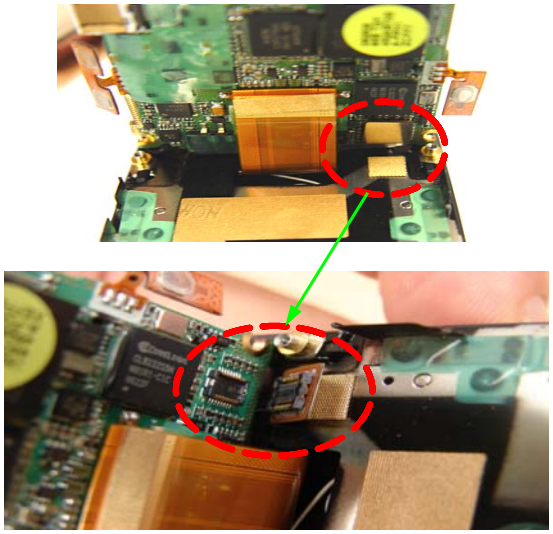
1) Put the 2 kind of screw caps on screw hole.

9



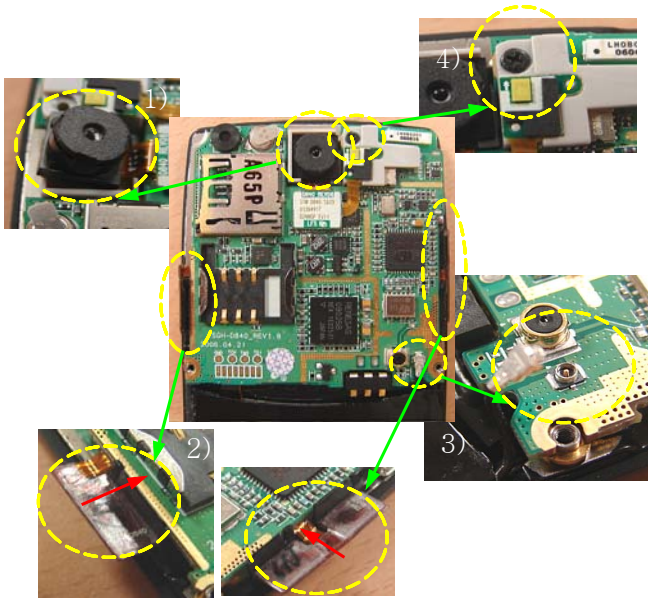
1) Combined LCD connector to main-PBA.
2) Soldering 2 points of FPCB
3) And put the insulation Tape on connector.

10



1) Combined Key connector to main-PBA.
2) Put the main-PBA on front cover and 4 screw hole

11



1) Insert camera module to front cover.
2) Insert side key FPCB of both side.
3) Combined coaxial cable on main-PBA.
4) Fasten the screw of camera module.

12

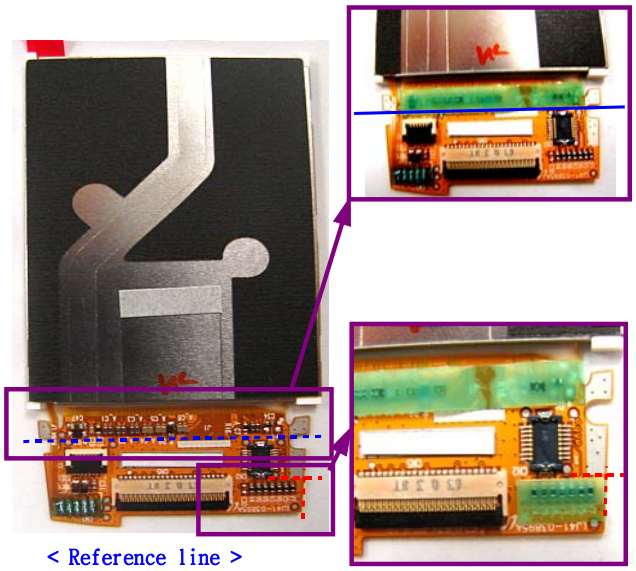
1) Put rear cover on Assay and lock like a picture.

13

1) Fasten a screw at 4 points with driver.

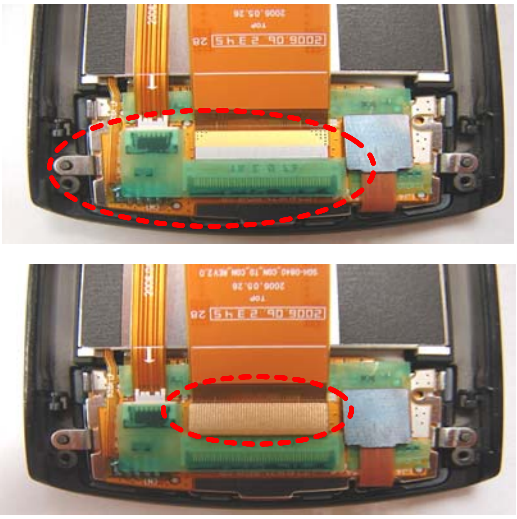
5-5. LCD Kit Assembly

1



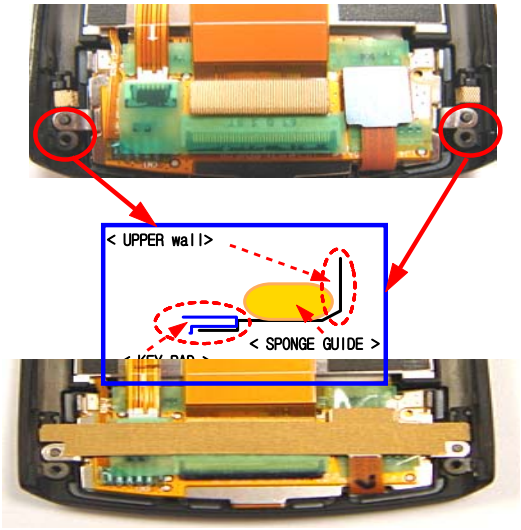
1) Put two insulation tapes according to refence line like a picture.

2



1) Put the insulation tape on connectors of LCD and camera module after combined connectors.
2) Put gold gasket tape on LCD FPCB.

3



1) Put the sponge guide on slide upper.
2) And put the Tape LCD FPCB on sponge guide to guide.

6. MAIN Electrical Parts List

SEC CODE	Design LOC	Discription	STATUS
4202-001142	AN1	ANTENNA-CHIP	SA
4302-001158	BAT301	BATTERY-LI(2ND)	SA
3711-006296	BTC504	HEADER-BATTERY	SA
2203-002443	C100	C-CER,CHIP	SA
2203-006638	C101	C-CER,CHIP	SA
2203-006562	C102	C-CER,CHIP	SA
2203-006562	C104	C-CER,CHIP	SA
2203-005138	C105	C-CER,CHIP	SA
2203-005138	C106	C-CER,CHIP	SA
2203-005682	C107	C-CER,CHIP	SA
2203-002677	C108	C-CER,CHIP	SA
2203-006562	C109	C-CER,CHIP	SA
2203-002677	C110	C-CER,CHIP	SA
2203-005682	C111	C-CER,CHIP	SA
2203-006305	C112	C-CER,CHIP	SA
2203-005054	C113	C-CER,CHIP	SA
2203-005054	C114	C-CER,CHIP	SA
2203-006562	C115	C-CER,CHIP	SA
2203-006562	C116	C-CER,CHIP	SA
2203-000654	C117	C-CER,CHIP	SA
2203-000489	C118	C-CER,CHIP	SA
2203-000627	C120	C-CER,CHIP	SNA
2203-000940	C121	C-CER,CHIP	SA
2203-001201	C122	C-CER,CHIP	SA
2203-000812	C123	C-CER,CHIP	SA
2203-000438	C124	C-CER,CHIP	SA
2203-000654	C125	C-CER,CHIP	SA
2203-006585	C126	C-CER,CHIP	SA
2203-000995	C127	C-CER,CHIP	SA
2203-000254	C128	C-CER,CHIP	SA
2203-000254	C132	C-CER,CHIP	SA
2203-006562	C133	C-CER,CHIP	SA
2203-000138	C134	C-CER,CHIP	SA
2203-006562	C135	C-CER,CHIP	SA
2203-000812	C136	C-CER,CHIP	SA
2203-000627	C137	C-CER,CHIP	SNA
2203-000233	C138	C-CER,CHIP	SA
2203-000812	C139	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2203-000812	C140	C-CER,CHIP	SA
2203-006562	C141	C-CER,CHIP	SA
2203-006838	C142	C-CER,CHIP	SA
2203-006423	C143	C-CER,CHIP	SA
2203-006562	C144	C-CER,CHIP	SA
2203-005482	C145	C-CER,CHIP	SA
2203-006423	C146	C-CER,CHIP	SA
2203-000438	C147	C-CER,CHIP	SA
2203-000254	C148	C-CER,CHIP	SA
2203-000254	C149	C-CER,CHIP	SA
2203-000254	C150	C-CER,CHIP	SA
2203-005482	C151	C-CER,CHIP	SA
2203-000278	C152	C-CER,CHIP	SA
2203-001412	C153	C-CER,CHIP	SA
2203-006562	C154	C-CER,CHIP	SA
2203-000438	C155	C-CER,CHIP	SA
2203-006562	C156	C-CER,CHIP	SA
2203-006194	C200	C-CER,CHIP	SA
2203-006423	C201	C-CER,CHIP	SA
2203-006423	C202	C-CER,CHIP	SA
2203-006194	C203	C-CER,CHIP	SA
2203-006423	C204	C-CER,CHIP	SA
2203-006194	C205	C-CER,CHIP	SA
2203-006194	C206	C-CER,CHIP	SA
2203-006194	C207	C-CER,CHIP	SA
2203-006194	C208	C-CER,CHIP	SA
2203-006423	C209	C-CER,CHIP	SA
2203-005482	C210	C-CER,CHIP	SA
2203-006423	C211	C-CER,CHIP	SA
2203-000254	C212	C-CER,CHIP	SA
2203-000254	C213	C-CER,CHIP	SA
2203-000254	C215	C-CER,CHIP	SA
2203-006423	C216	C-CER,CHIP	SA
2203-000425	C217	C-CER,CHIP	SA
2203-000425	C218	C-CER,CHIP	SA
2203-005482	C225	C-CER,CHIP	SA
2203-006562	C228	C-CER,CHIP	SA
2203-005482	C229	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2203-005482	C230	C-CER,CHIP	SA
2203-005682	C300	C-CER,CHIP	SA
2203-006194	C301	C-CER,CHIP	SA
2203-006423	C302	C-CER,CHIP	SA
2203-000254	C303	C-CER,CHIP	SA
2203-006423	C304	C-CER,CHIP	SA
2203-006324	C305	C-CER,CHIP	SA
2203-006562	C306	C-CER,CHIP	SA
2203-006562	C307	C-CER,CHIP	SA
2203-006257	C308	C-CER,CHIP	SA
2203-006562	C309	C-CER,CHIP	SA
2203-001153	C310	C-CER,CHIP	SA
2203-005482	C311	C-CER,CHIP	SA
2203-006562	C312	C-CER,CHIP	SA
2203-006562	C313	C-CER,CHIP	SA
2203-006562	C314	C-CER,CHIP	SA
2203-006562	C315	C-CER,CHIP	SA
2203-006562	C316	C-CER,CHIP	SA
2203-006562	C317	C-CER,CHIP	SA
2203-000233	C318	C-CER,CHIP	SA
2203-006562	C319	C-CER,CHIP	SA
2203-001405	C320	C-CER,CHIP	SA
2203-006348	C321	C-CER,CHIP	SA
2203-005482	C324	C-CER,CHIP	SA
2203-005482	C325	C-CER,CHIP	SA
2203-006423	C326	C-CER,CHIP	SA
2203-006562	C327	C-CER,CHIP	SA
2203-006423	C329	C-CER,CHIP	SA
2203-006562	C330	C-CER,CHIP	SA
2203-006562	C331	C-CER,CHIP	SA
2203-006208	C332	C-CER,CHIP	SA
2203-006562	C333	C-CER,CHIP	SA
2203-006562	C334	C-CER,CHIP	SA
2203-006825	C339	C-CER,CHIP	SA
2203-006562	C341	C-CER,CHIP	SA
2203-006324	C342	C-CER,CHIP	SA
2203-006562	C344	C-CER,CHIP	SA
2203-006562	C345	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2203-006825	C346	C-CER,CHIP	SA
2203-006838	C347	C-CER,CHIP	SA
2203-006838	C348	C-CER,CHIP	SA
2203-006838	C349	C-CER,CHIP	SA
2203-006838	C350	C-CER,CHIP	SA
2203-006257	C351	C-CER,CHIP	SA
2203-000254	C352	C-CER,CHIP	SA
2203-001405	C353	C-CER,CHIP	SA
2203-003019	C354	C-CER,CHIP	SNA
2203-005482	C400	C-CER,CHIP	SA
2203-006562	C402	C-CER,CHIP	SA
2203-006190	C403	C-CER,CHIP	SA
2203-006190	C404	C-CER,CHIP	SA
2203-006838	C405	C-CER,CHIP	SA
2203-006423	C406	C-CER,CHIP	SA
2203-006562	C407	C-CER,CHIP	SA
2203-006423	C408	C-CER,CHIP	SA
2203-006562	C410	C-CER,CHIP	SA
2203-006562	C411	C-CER,CHIP	SA
2203-006647	C412	C-CER,CHIP	SA
2203-006562	C413	C-CER,CHIP	SA
2203-006562	C414	C-CER,CHIP	SA
2203-005482	C415	C-CER,CHIP	SA
2203-000854	C416	C-CER,CHIP	SA
2203-006257	C417	C-CER,CHIP	SA
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2203-006562	C419	C-CER,CHIP	SA
2203-006324	C420	C-CER,CHIP	SA
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2203-000278	C424	C-CER,CHIP	SA
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2203-006379	C427	C-CER,CHIP	SA
2203-006562	C428	C-CER,CHIP	SA
2203-006257	C432	C-CER,CHIP	SA
2203-006626	C433	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2203-000812	C434	C-CER,CHIP	SA
2203-006626	C435	C-CER,CHIP	SA
2203-000812	C436	C-CER,CHIP	SA
2203-006562	C437	C-CER,CHIP	SA
2203-006837	C438	C-CER,CHIP	SA
2203-005061	C439	C-CER,CHIP	SA
2203-000812	C440	C-CER,CHIP	SA
2203-001259	C441	C-CER,CHIP	SA
2203-000654	C442	C-CER,CHIP	SA
2203-001405	C443	C-CER,CHIP	SA
2203-006423	C445	C-CER,CHIP	SA
2203-000812	C446	C-CER,CHIP	SA
2203-001033	C447	C-CER,CHIP	SA
2203-001033	C448	C-CER,CHIP	SA
2203-006423	C449	C-CER,CHIP	SA
2203-006562	C450	C-CER,CHIP	SA
2203-000438	C451	C-CER,CHIP	SA
2203-000438	C452	C-CER,CHIP	SA
2203-006423	C453	C-CER,CHIP	SA
2203-000438	C455	C-CER,CHIP	SA
2203-006048	C456	C-CER,CHIP	SA
2203-006647	C458	C-CER,CHIP	SA
2203-001033	C459	C-CER,CHIP	SA
2203-001033	C460	C-CER,CHIP	SA
2203-006562	C517	C-CER,CHIP	SA
2203-005682	C522	C-CER,CHIP	SA
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2203-005682	C527	C-CER,CHIP	SA
2203-006423	C529	C-CER,CHIP	SA
2203-006423	C530	C-CER,CHIP	SA
2203-005682	C531	C-CER,CHIP	SA
2203-005682	C532	C-CER,CHIP	SA
2203-005682	C533	C-CER,CHIP	SA
2203-005682	C534	C-CER,CHIP	SA
2203-005682	C535	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2203-005682	C536	C-CER,CHIP	SA
2203-005682	C537	C-CER,CHIP	SA
2203-005682	C538	C-CER,CHIP	SA
2203-005682	C539	C-CER,CHIP	SA
2203-000254	C540	C-CER,CHIP	SA
2203-006562	C545	C-CER,CHIP	SA
2203-000812	C546	C-CER,CHIP	SA
2203-000812	C548	C-CER,CHIP	SA
2203-000812	C549	C-CER,CHIP	SA
2203-000812	C550	C-CER,CHIP	SA
2203-006423	C553	C-CER,CHIP	SA
2203-006048	C554	C-CER,CHIP	SA
2203-000812	C555	C-CER,CHIP	SA
2203-000812	C556	C-CER,CHIP	SA
2203-000812	C557	C-CER,CHIP	SA
2203-000812	C558	C-CER,CHIP	SA
2203-006626	C559	C-CER,CHIP	SA
2203-006562	C560	C-CER,CHIP	SA
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2203-006423	C562	C-CER,CHIP	SA
2203-006648	C565	C-CER,CHIP	SA
2203-006562	C566	C-CER,CHIP	SA
2203-006562	C567	C-CER,CHIP	SA
2203-005682	C568	C-CER,CHIP	SA
2203-005682	C569	C-CER,CHIP	SA
2203-005682	C570	C-CER,CHIP	SA
2203-005682	C571	C-CER,CHIP	SA
2203-005682	C572	C-CER,CHIP	SA
2203-006562	C573	C-CER,CHIP	SA
2203-006562	C574	C-CER,CHIP	SA
2203-006562	C575	C-CER,CHIP	SA
2203-006562	C576	C-CER,CHIP	SA
2203-000812	C577	C-CER,CHIP	SA
2203-006423	C578	C-CER,CHIP	SA
2203-006562	C579	C-CER,CHIP	SA
3709-001344	CD200	CONNECTOR-CARD EDGE	SA
0407-000115	D301	DIODE-ARRAY	SA
2911-000010	DUF100	DUPLEXER-FEM	SA

SEC CODE	Design LOC	Discription	STATUS
2901-001256	F301	FILTER-EMI SMD	SA
2901-001320	F501	FILTER-EMI/ESD	SA
2901-001320	F502	FILTER-EMI/ESD	SA
2901-001320	F503	FILTER-EMI/ESD	SA
2901-001320	F504	FILTER-EMI/ESD	SA
2901-001320	F505	FILTER-EMI/ESD	SA
3711-005643	HCD512	HEADER-BOARD TO BOARD	SA
3711-005976	HDC1	HEADER-BOARD TO BOARD	SA
3710-002306	IFC506	SOCKET-INTERFACE	SA
2703-002308	L101	INDUCTOR-SMD	SA
2703-002367	L102	INDUCTOR-SMD	SA
2703-002367	L103	INDUCTOR-SMD	SA
2703-001749	L104	INDUCTOR-SMD	SA
2703-001749	L105	INDUCTOR-SMD	SA
2703-001180	L106	INDUCTOR-SMD	SA
2703-001786	L107	INDUCTOR-SMD	SA
2703-001180	L109	INDUCTOR-SMD	SA
2703-001750	L110	INDUCTOR-SMD	SA
2703-001750	L111	INDUCTOR-SMD	SA
3301-001729	L114	BEAD-SMD	SA
2703-002369	L115	INDUCTOR-SMD	SA
3301-001342	L200	BEAD-SMD	SA
2703-002739	L300	INDUCTOR-SMD	SA
2703-002619	L301	INDUCTOR-SMD	SA
2703-002653	L302	INDUCTOR-SMD	SA
3301-001342	L400	BEAD-SMD	SA
3301-001729	L401	BEAD-SMD	SA
3301-001729	L402	BEAD-SMD	SA
3301-001729	L501	BEAD-SMD	SA
4709-001374	MOD104	BLUETOOTH MODULE	SA
1201-002147	OPA403	IC-VIDEO AMP	SA
2801-004551	OSC200	CRYSTAL-SMD	SA
2801-004340	OSC401	CRYSTAL-SMD	SA
1201-002267	PAM102	IC-POWER AMP	SA
2007-007310	R100	R-CHIP	SA
2007-000171	R101	R-CHIP	SA
2007-007310	R102	R-CHIP	SA
2007-000141	R103	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2007-001298	R104	R-CHIP	SA
2007-001298	R105	R-CHIP	SA
2007-000143	R106	R-CHIP	SA
2007-001217	R107	R-CHIP	SA
2007-007586	R109	R-CHIP	SA
2007-001292	R110	R-CHIP	SA
2007-001290	R111	R-CHIP	SA
2007-003006	R112	R-CHIP	SA
2007-000139	R113	R-CHIP	SA
2007-000139	R114	R-CHIP	SA
2007-007318	R115	R-CHIP	SA
2007-003006	R116	R-CHIP	SA
2007-007307	R117	R-CHIP	SA
2007-003006	R118	R-CHIP	SA
2007-007189	R119	R-CHIP	SA
2007-001288	R120	R-CHIP	SA
2007-007405	R121	R-CHIP	SA
2007-007405	R122	R-CHIP	SA
2007-007008	R123	R-CHIP	SA
2007-007008	R124	R-CHIP	SA
2007-001288	R125	R-CHIP	SA
2007-007008	R126	R-CHIP	SA
2007-007008	R127	R-CHIP	SA
2007-008483	R128	R-CHIP	SA
2007-000172	R130	R-CHIP	SA
2007-000138	R131	R-CHIP	SA
2007-000758	R132	R-CHIP	SA
2007-002797	R133	R-CHIP	SA
2007-000138	R134	R-CHIP	SA
2007-000157	R135	R-CHIP	SA
2007-000138	R136	R-CHIP	SA
2007-000162	R200	R-CHIP	SA
2007-000172	R201	R-CHIP	SA
2007-000148	R202	R-CHIP	SA
2007-008483	R204	R-CHIP	SA
2007-008055	R205	R-CHIP	SA
2007-000172	R207	R-CHIP	SA
2007-008542	R208	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2007-008055	R209	R-CHIP	SA
2007-008483	R213	R-CHIP	SA
2007-008483	R214	R-CHIP	SA
2007-008483	R215	R-CHIP	SA
2007-008486	R216	R-CHIP	SA
2007-000171	R218	R-CHIP	SA
2007-008055	R220	R-CHIP	SA
2007-008542	R221	R-CHIP	SA
2007-000690	R301	R-CHIP	SA
2007-000148	R303	R-CHIP	SA
2007-000170	R305	R-CHIP	SA
2007-000143	R306	R-CHIP	SA
2007-007489	R307	R-CHIP	SA
2007-008275	R308	R-CHIP	SA
2007-000148	R309	R-CHIP	SA
2007-000138	R310	R-CHIP	SA
2007-008483	R312	R-CHIP	SA
2007-008055	R313	R-CHIP	SA
2007-008055	R314	R-CHIP	SA
2007-008478	R316	R-CHIP	SA
2007-008420	R317	R-CHIP	SA
2007-008420	R318	R-CHIP	SA
2007-000157	R319	R-CHIP	SA
2007-000162	R320	R-CHIP	SA
2007-000157	R323	R-CHIP	SA
2007-008055	R324	R-CHIP	SA
2007-008483	R325	R-CHIP	SA
2007-008419	R326	R-CHIP	SA
2007-000148	R329	R-CHIP	SA
2007-000159	R330	R-CHIP	SA
2007-001288	R400	R-CHIP	SA
2007-001288	R401	R-CHIP	SA
2007-000172	R402	R-CHIP	SA
2007-001290	R403	R-CHIP	SA
2007-007798	R404	R-CHIP	SA
2007-007798	R405	R-CHIP	SA
2007-000140	R408	R-CHIP	SA
2007-000140	R409	R-CHIP	SA

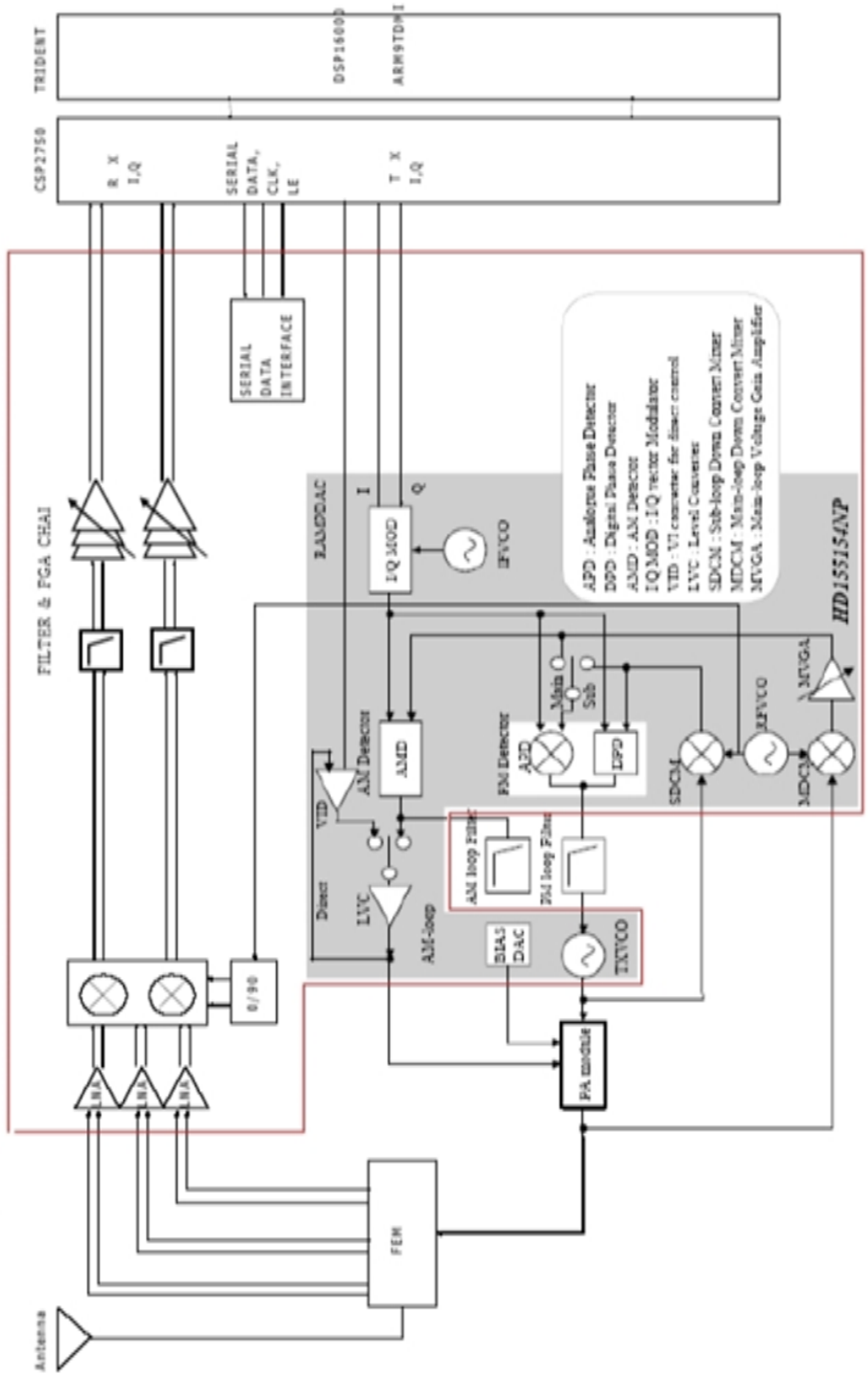
SEC CODE	Design LOC	Discription	STATUS
2007-008483	R410	R-CHIP	SA
2007-008483	R411	R-CHIP	SA
2007-000170	R413	R-CHIP	SA
2007-008516	R414	R-CHIP	SA
2007-008483	R415	R-CHIP	SA
2007-008483	R417	R-CHIP	SA
2007-008588	R418	R-CHIP	SA
2007-008588	R419	R-CHIP	SA
2007-007136	R420	R-CHIP	SA
2007-001306	R422	R-CHIP	SA
2007-007009	R423	R-CHIP	SA
2007-001119	R424	R-CHIP	SA
2007-007528	R425	R-CHIP	SA
2007-007528	R426	R-CHIP	SA
2007-000157	R427	R-CHIP	SA
2007-000157	R428	R-CHIP	SA
2007-000157	R429	R-CHIP	SA
2007-007142	R431	R-CHIP	SA
2007-000162	R432	R-CHIP	SA
2007-007142	R433	R-CHIP	SA
2007-000162	R434	R-CHIP	SA
2007-007334	R436	R-CHIP	SA
2007-000775	R438	R-CHIP	SA
2007-000775	R439	R-CHIP	SA
2007-000174	R440	R-CHIP	SA
2007-000154	R441	R-CHIP	SA
2007-000171	R442	R-CHIP	SA
2007-000171	R443	R-CHIP	SA
2007-000174	R444	R-CHIP	SA
2007-000154	R445	R-CHIP	SA
2007-000157	R446	R-CHIP	SA
2007-001325	R447	R-CHIP	SA
2007-008052	R450	R-CHIP	SA
2007-008052	R451	R-CHIP	SA
2007-000154	R452	R-CHIP	SA
2007-000154	R453	R-CHIP	SA
2007-000141	R513	R-CHIP	SA
2007-008055	R514	R-CHIP	SA

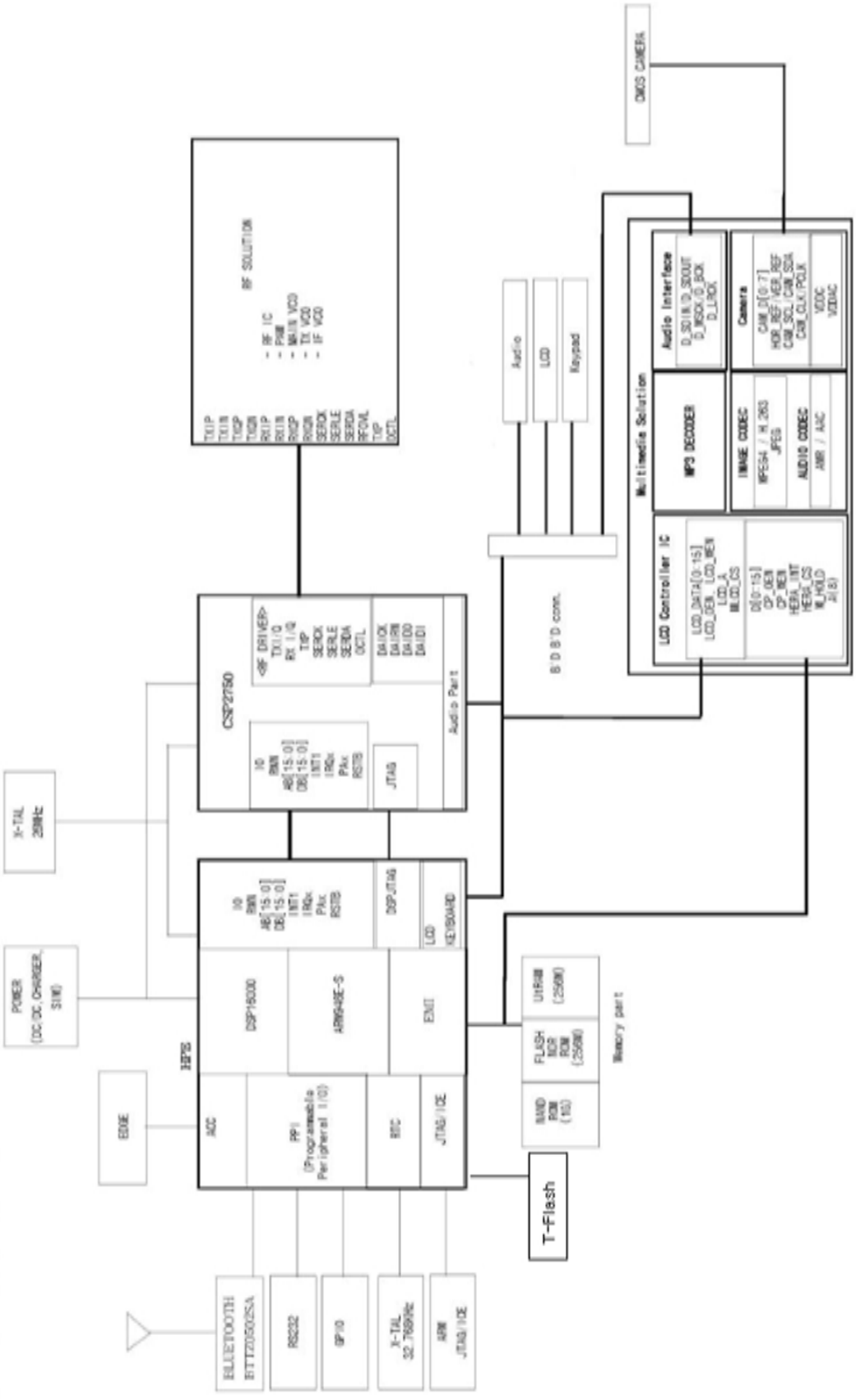
SEC CODE	Design LOC	Discription	STATUS
2007-008542	R515	R-CHIP	SA
2007-007528	R516	R-CHIP	SA
2007-000161	R517	R-CHIP	SA
2007-008542	R518	R-CHIP	SA
2007-007142	R519	R-CHIP	SA
2007-008419	R521	R-CHIP	SA
2007-008419	R522	R-CHIP	SA
2007-007142	R523	R-CHIP	SA
2007-000161	R524	R-CHIP	SA
2007-007528	R525	R-CHIP	SA
2007-007588	R526	R-CHIP	SA
2007-008055	R529	R-CHIP	SA
2007-008483	R530	R-CHIP	SA
2007-008419	R531	R-CHIP	SA
2007-008419	R532	R-CHIP	SA
2007-000138	R533	R-CHIP	SA
3705-001339	RFS100	CONNECTOR-COAXIAL	SNA
3705-001421	RFS101	CONNECTOR-COAXIAL	SA
3709-001400	SIM507	CONNECTOR-CARD EDGE	SA
3708-002183	SLC510	CONNECTOR-FPC/FFC/PIC	SA
2404-001352	TA119	C-TA,CHIP	SA
2404-001411	TA130	C-TA,CHIP	SA
2404-001411	TA131	C-TA,CHIP	SA
2404-001381	TA323	C-TA,CHIP	SA
2404-001339	TA328	C-TA,CHIP	SA
2404-001381	TA337	C-TA,CHIP	SA
2404-001381	TA340	C-TA,CHIP	SA
2404-001339	TA343	C-TA,CHIP	SA
2404-001381	TA401	C-TA,CHIP	SA
2404-001381	TA409	C-TA,CHIP	SA
2404-001352	TA431	C-TA,CHIP	SA
2404-001339	TA444	C-TA,CHIP	SA
2404-001339	TA454	C-TA,CHIP	SA
2404-001380	TA459	C-TA,CHIP	SA
2404-001380	TA460	C-TA,CHIP	SA
2404-001381	TA461	C-TA,CHIP	SA
2404-001406	TA500	C-TA,CHIP	SA
2404-001352	TA501	C-TA,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2404-001381	TA502	C-TA,CHIP	SA
2809-001302	TCX100	OSCILLATOR-VCTCXO	SA
0504-000168	TR301	TR-DIGITAL	SA
1203-003787	U103	IC-POSI.FIXED REG.	SA
1203-003688	U106	IC-POSI.FIXED REG.	SA
1009-001018	U203	IC-HALL EFFECT S/W	SA
1203-003789	U204	IC-POWER SUPERVISOR	SA
1003-001716	U300	IC-EL DRIVER	SA
1203-004119	U301	IC-POWER SUPERVISOR	SA
1203-003737	U302	IC-POSI.FIXED REG.	SA
1205-002272	U304	IC-TRANSCEIVER	SA
1203-003612	U306	IC-DC/DC CONVERTER	SA
1203-003737	U307	IC-POSI.FIXED REG.	SA
1203-003428	U309	IC-DC/DC CONVERTER	SA
1203-003787	U311	IC-POSI.FIXED REG.	SA
1209-001219	U312	IC-SENSOR	SA
1203-003742	U313	IC-BATTERY	SA
1203-004089	U315	IC-DC/DC CONVERTER	SA
1203-003517	U316	IC-MULTI REG.	SA
1205-002681	U400	IC-CODEC	SA
1203-003787	U401	IC-POSI.FIXED REG.	SA
1001-001336	U405	IC-ANALOG SWITCH	SA
1204-002138	U406	IC-MELODY	SA
1201-002240	U408	IC-AUDIO AMP	SA
1001-001349	U409	IC-ANALOG MULTIPLEX	SA
1001-001231	U503	IC-ANALOG SWITCH	SA
1203-003708	U505	IC-DC/DC CONVERTER	SNA
1405-001082	U506	VARISTOR	SA
1405-001082	U507	VARISTOR	SA
0801-002958	UCD206	IC-CMOS LOGIC	SA
0801-002995	UCD314	IC-CMOS LOGIC	SA
0801-002975	UCD508	IC-CMOS LOGIC	SA
0801-002958	UCP105	IC-CMOS LOGIC	SA
0801-003013	UCP107	IC-CMOS LOGIC	SA
1108-000063	UCP200	IC-MCP	SA
GH09-00045A	UCP200	IC MICOM	SA
1205-002943	UCP402	IC-CODEC	SA
1205-002652	UPL101	IC-TRANSCEIVER	SA

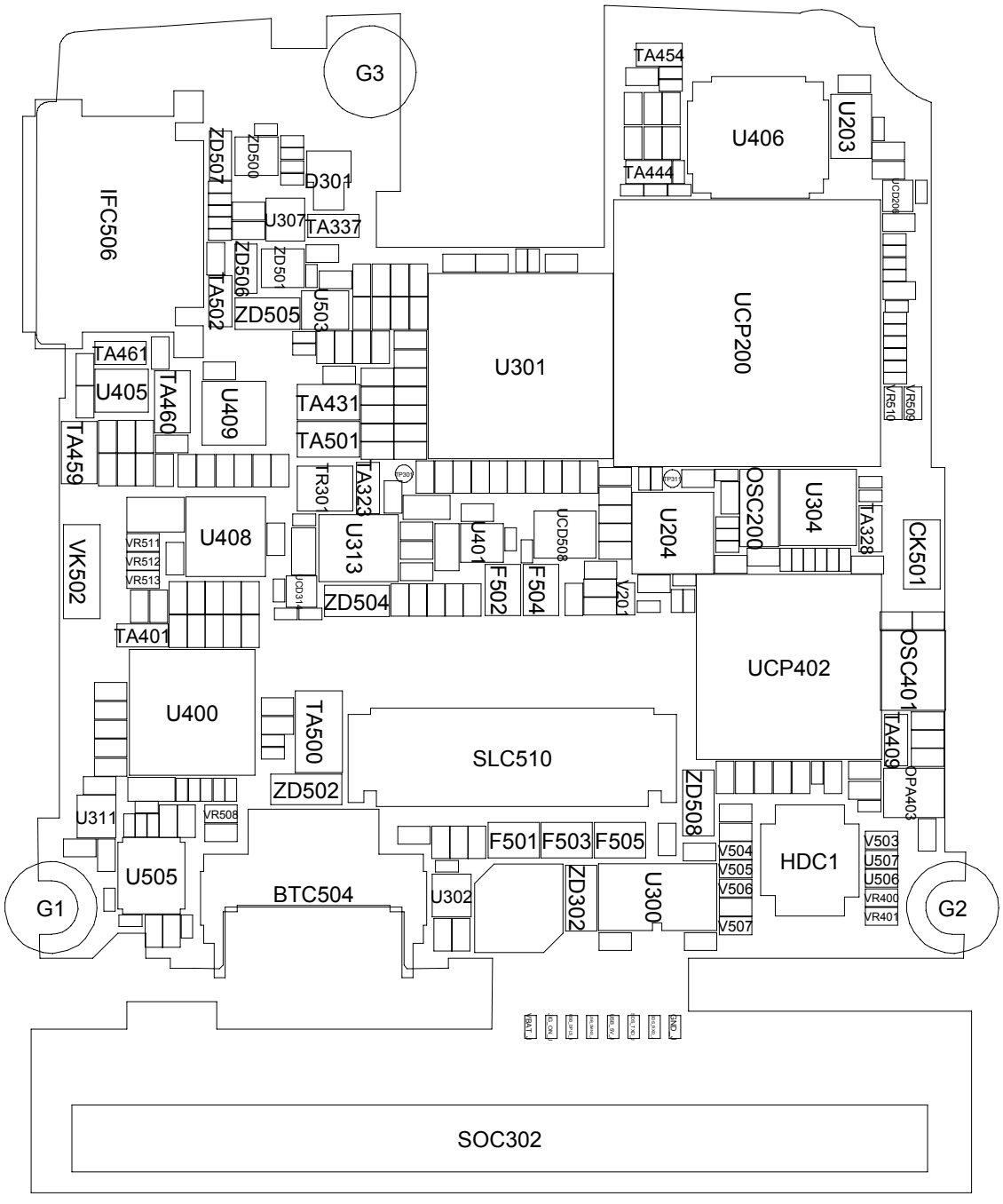
SEC CODE	Design LOC	Discription	STATUS
1405-001082	V201	VARISTOR	SA
1405-001082	V503	VARISTOR	SA
1405-001082	V504	VARISTOR	SA
1405-001082	V505	VARISTOR	SA
1405-001082	V506	VARISTOR	SA
1405-001082	V507	VARISTOR	SA
1405-001082	VR300	VARISTOR	SA
1405-001082	VR301	VARISTOR	SA
1405-001082	VR400	VARISTOR	SA
1405-001082	VR401	VARISTOR	SA
1405-001082	VR508	VARISTOR	SA
1405-001082	VR509	VARISTOR	SA
1405-001082	VR510	VARISTOR	SA
1405-001082	VR511	VARISTOR	SA
1405-001082	VR512	VARISTOR	SA
1405-001082	VR513	VARISTOR	SA
0406-001210	ZD201	DIODE-TVS	SA
0406-001210	ZD202	DIODE-TVS	SA
0406-001210	ZD203	DIODE-TVS	SA
0406-001210	ZD204	DIODE-TVS	SA
0403-001511	ZD302	DIODE-ZENER	SA
0406-001190	ZD500	DIODE-TVS	SA
0406-001190	ZD501	DIODE-TVS	SA
0403-001547	ZD502	DIODE-ZENER	SA
0403-001427	ZD504	DIODE-ZENER	SA
0403-001339	ZD505	DIODE-ZENER	SA
0406-001150	ZD506	DIODE-TVS	SA
0406-001150	ZD507	DIODE-TVS	SA
0403-001511	ZD508	DIODE-ZENER	SA

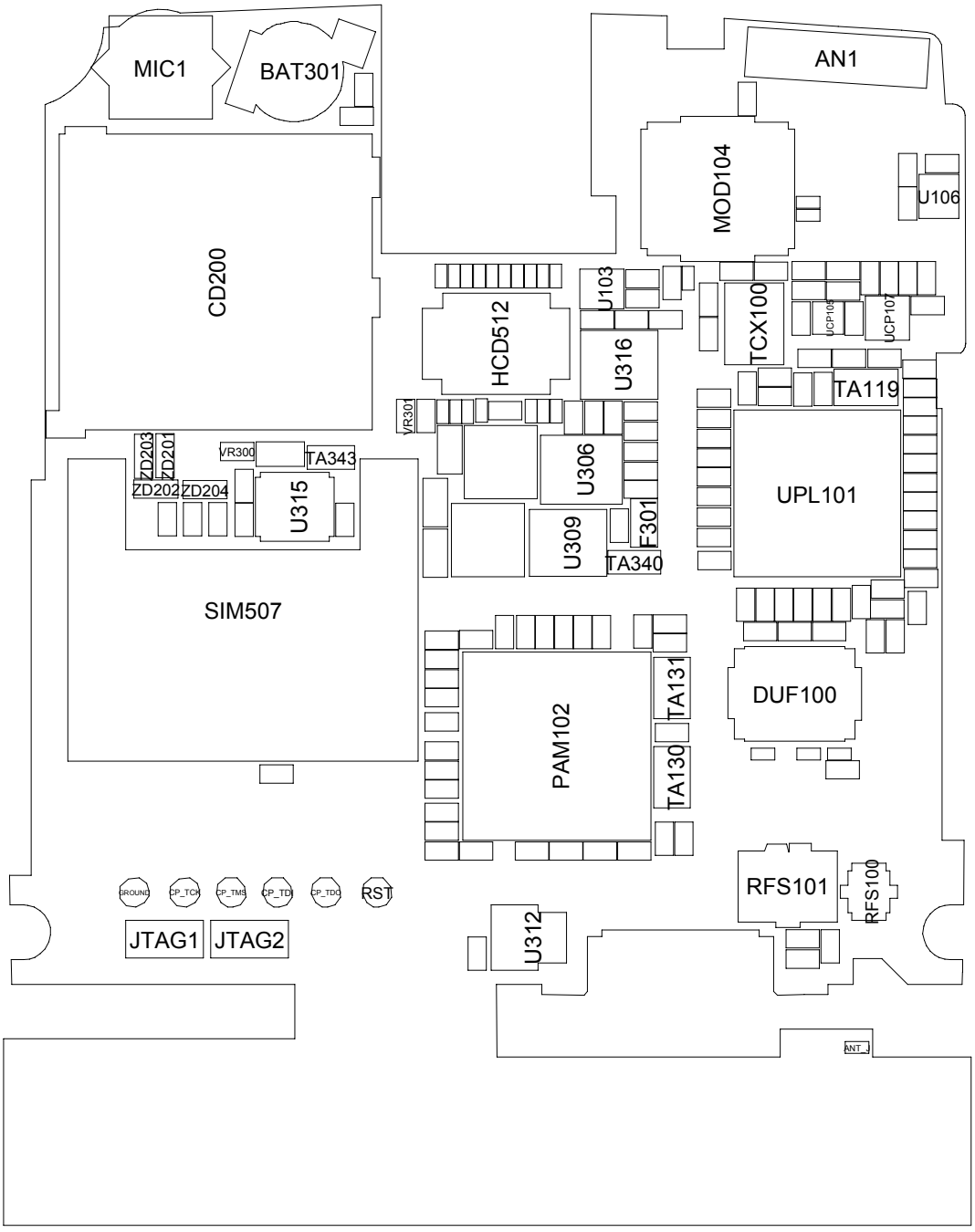
7. Block Diagrams





8. PCB Diagrams

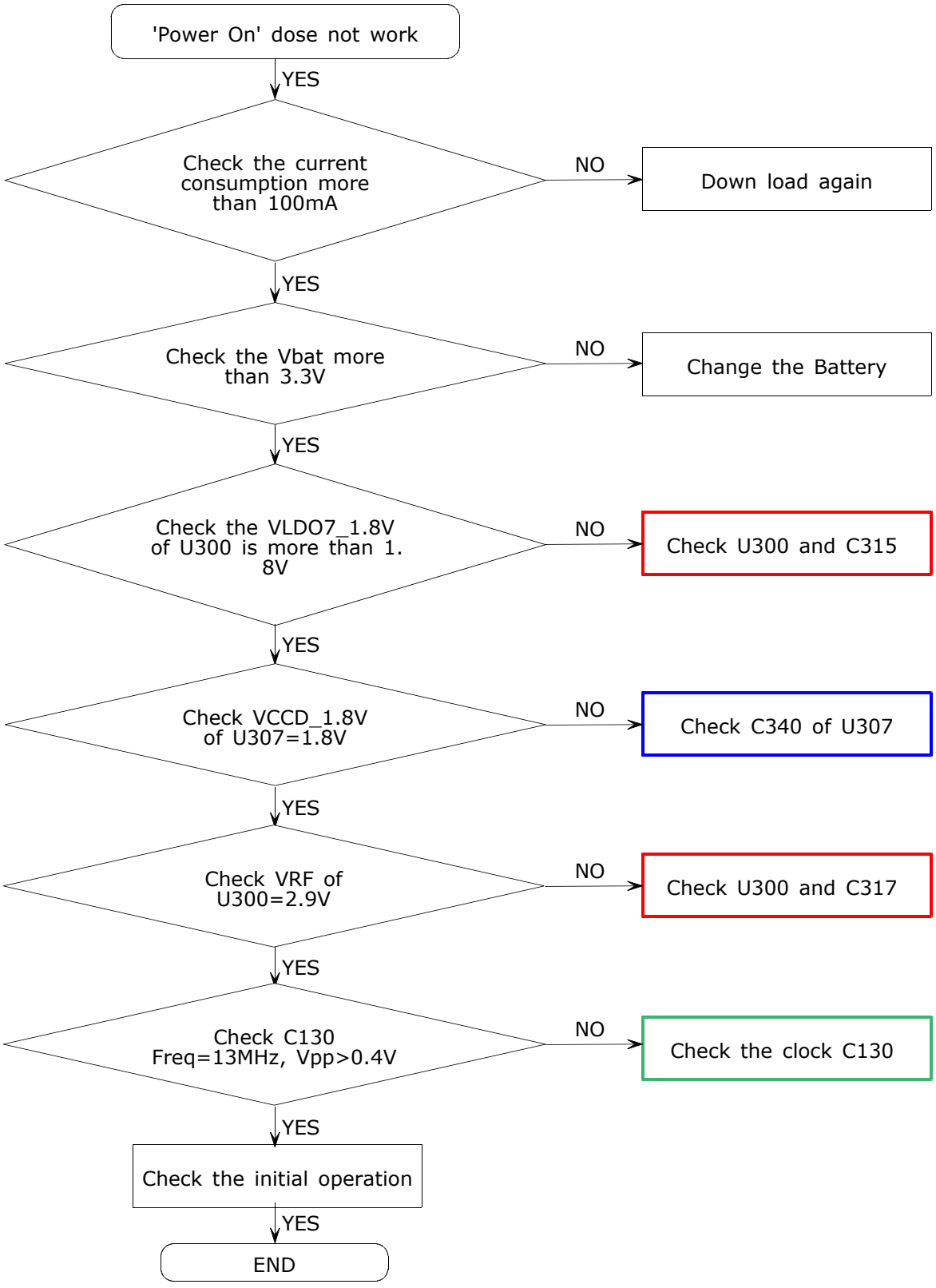


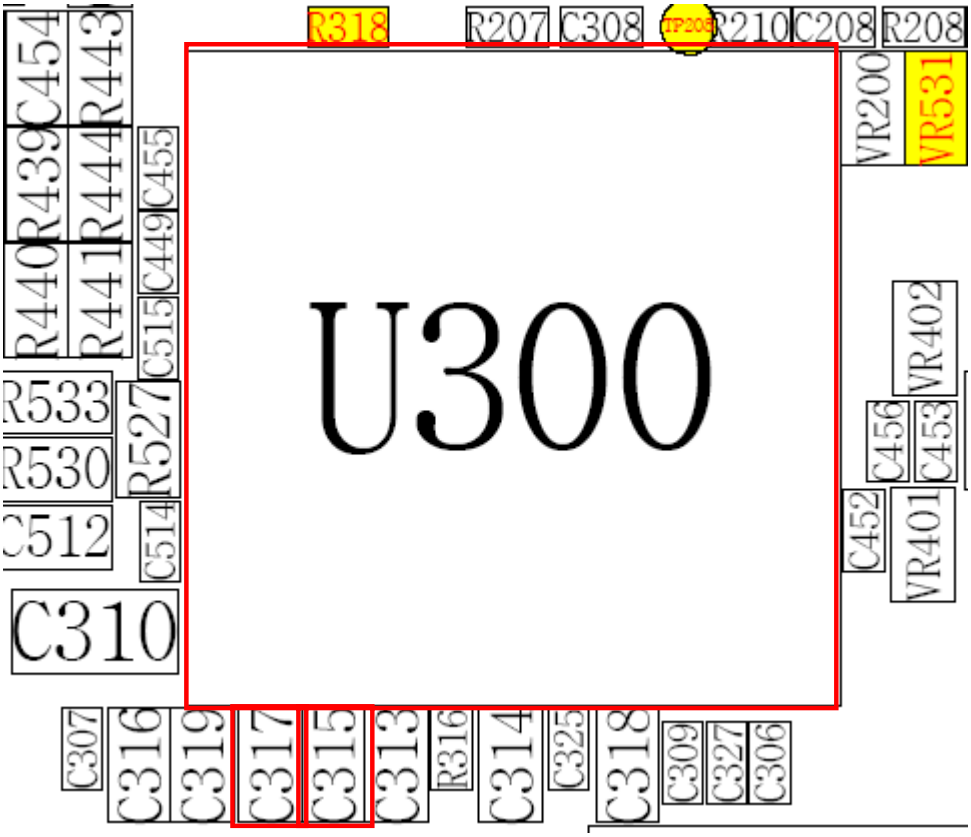


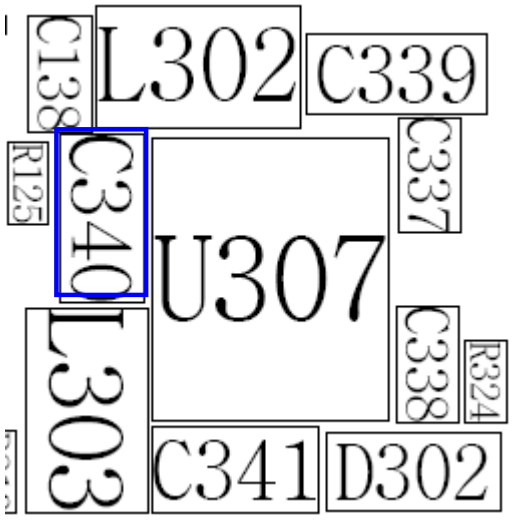
9. Flow Chart of Troubleshooting

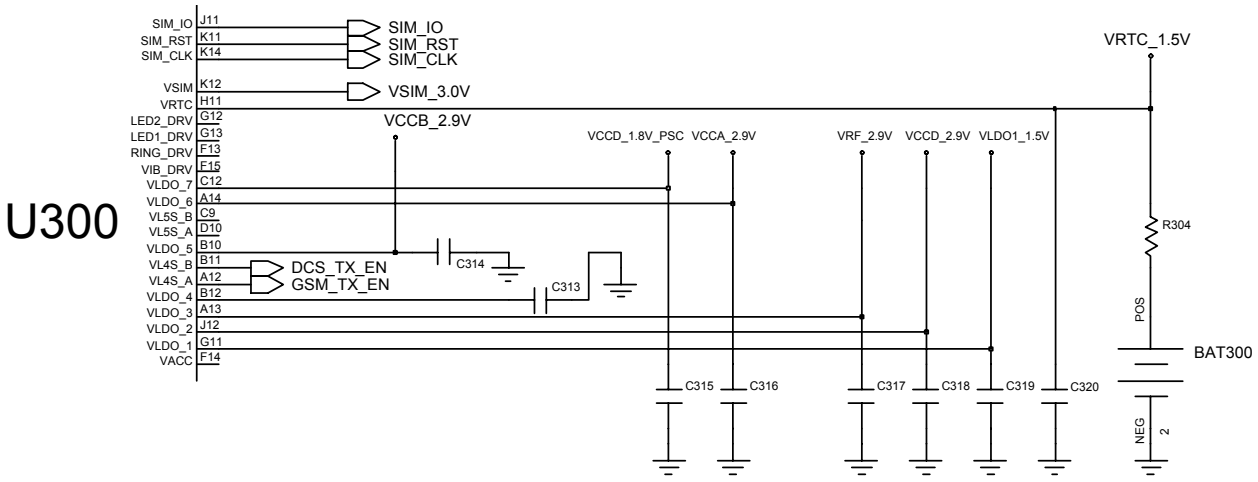
9-1.Baseband

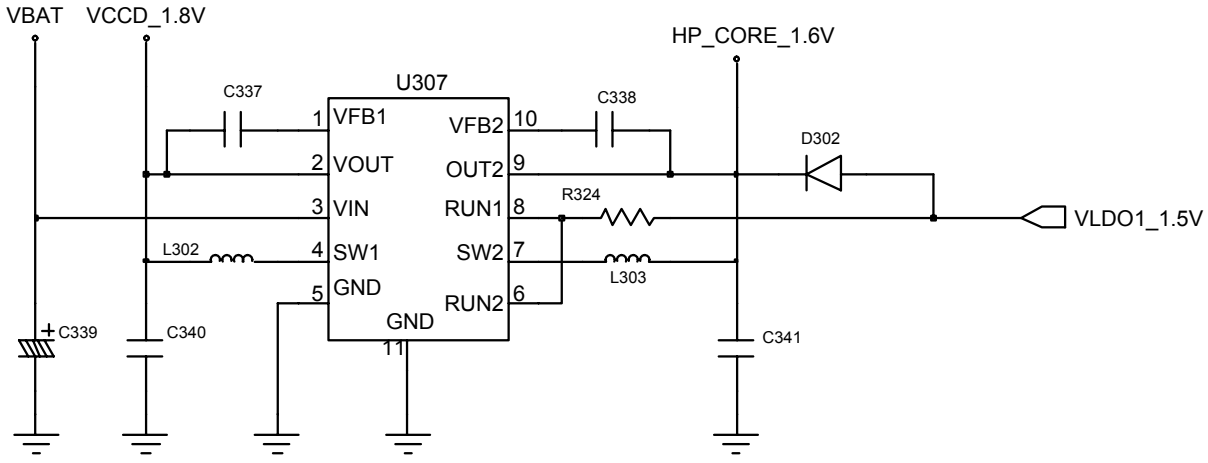
9-1-1. Power ON



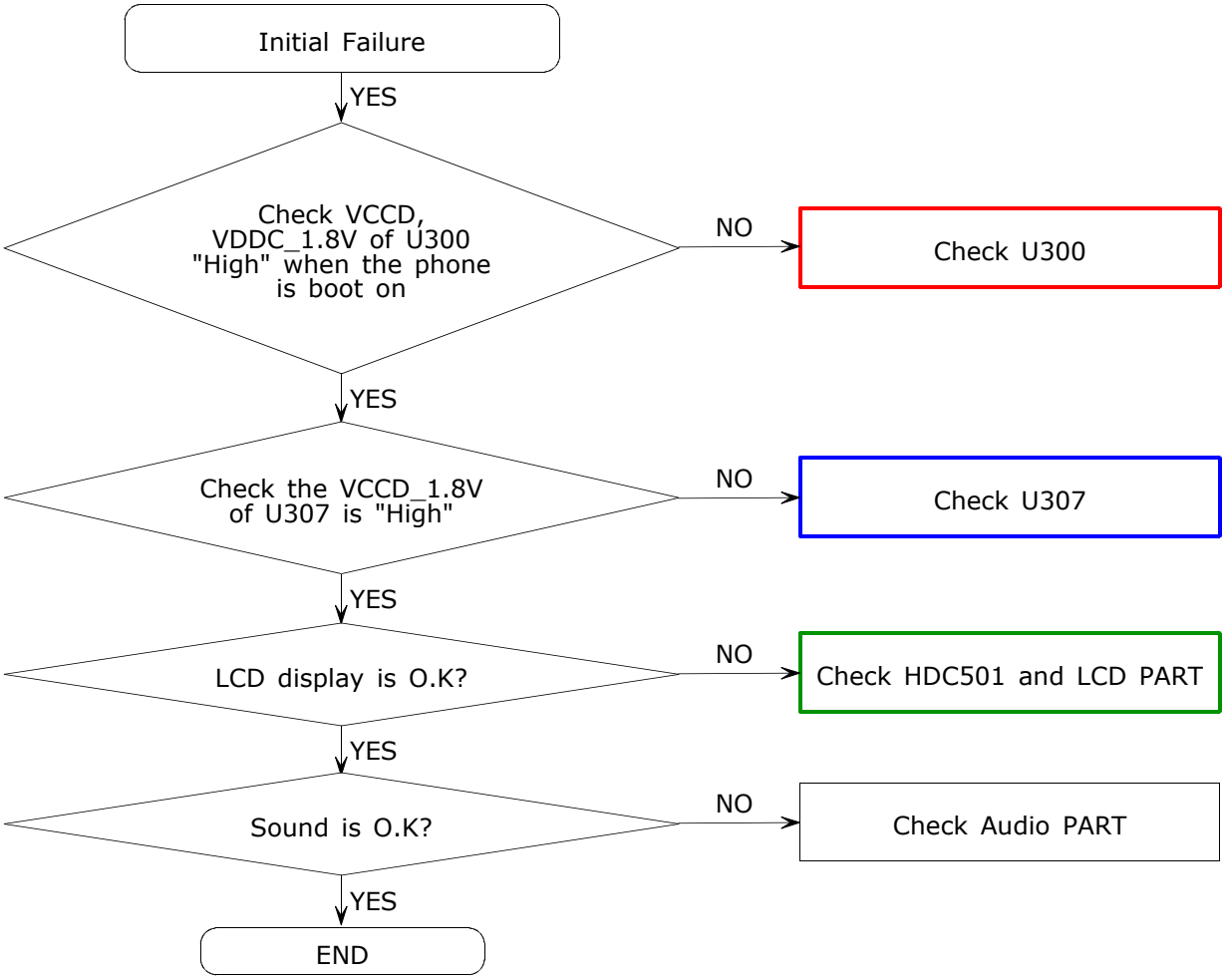


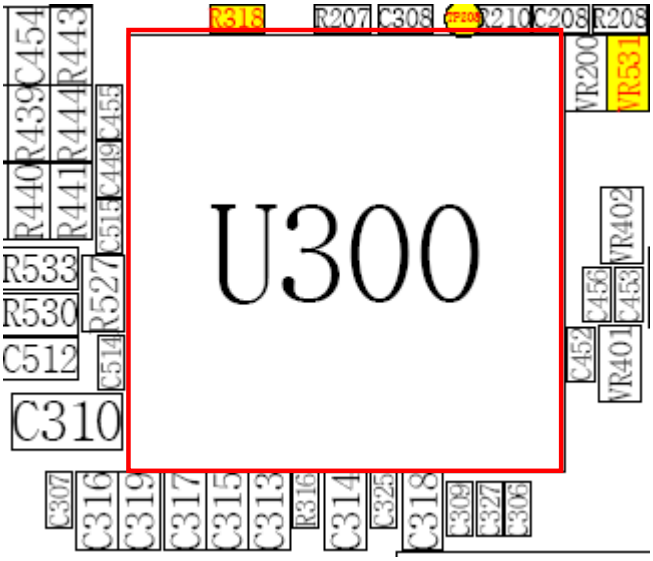


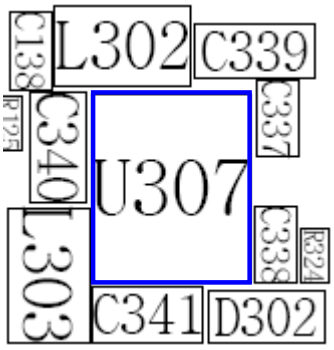


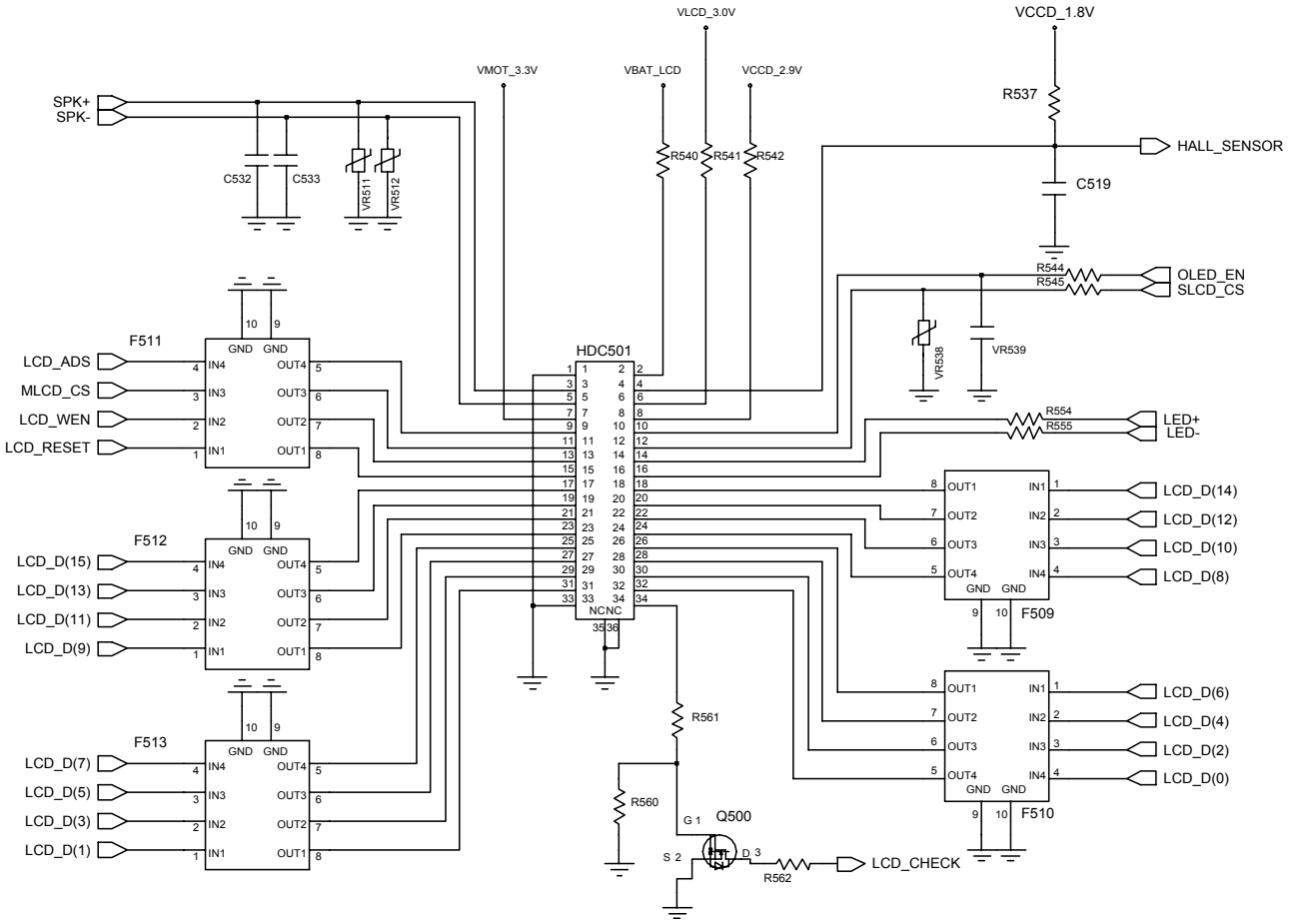


9-1-2. Initial

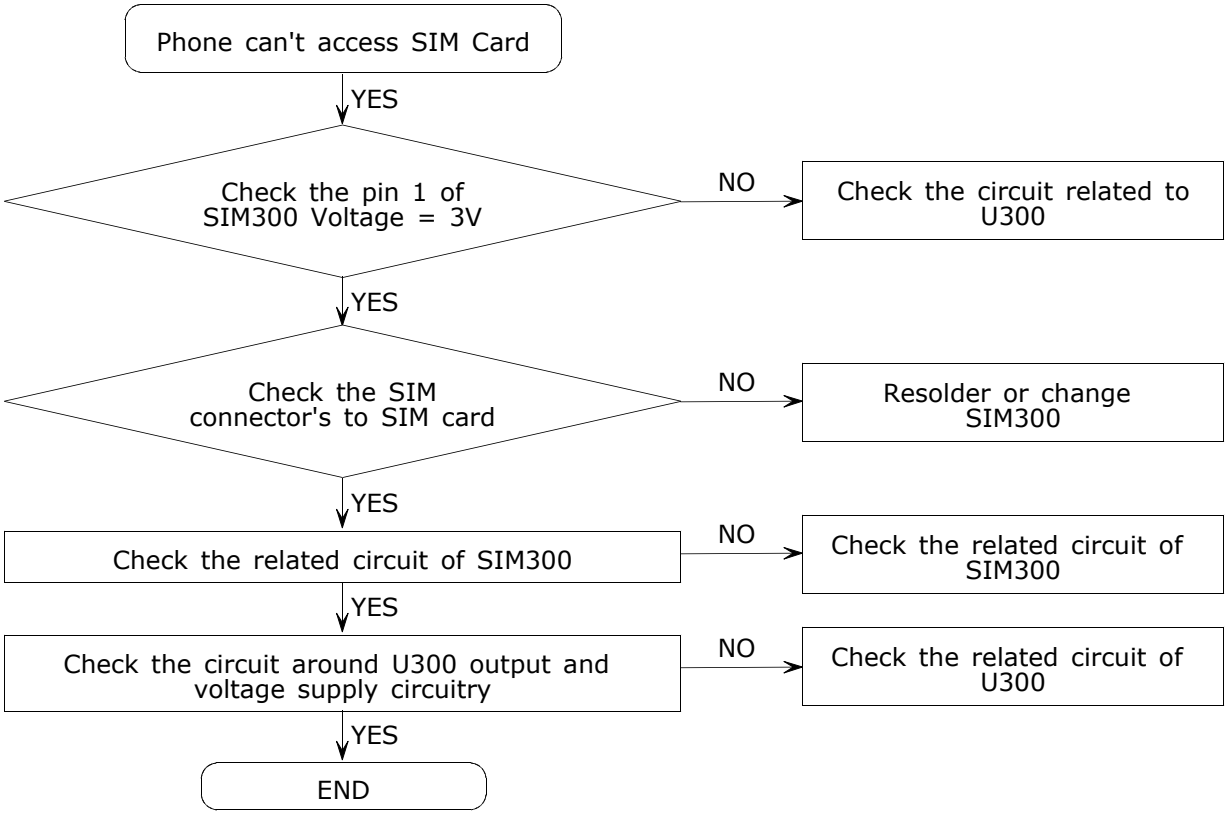


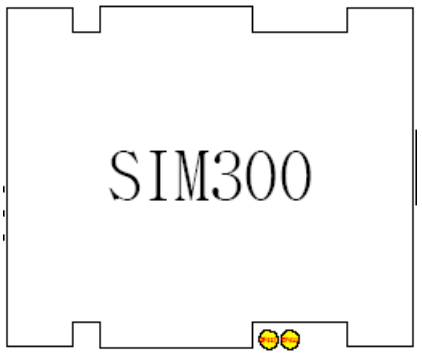


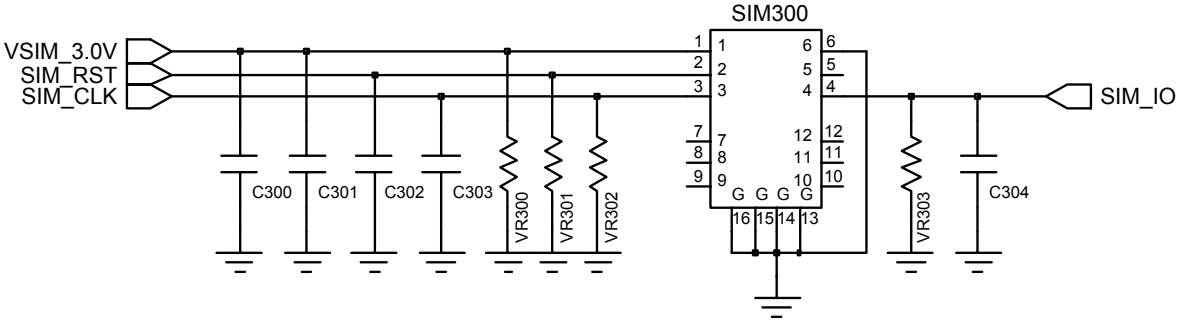




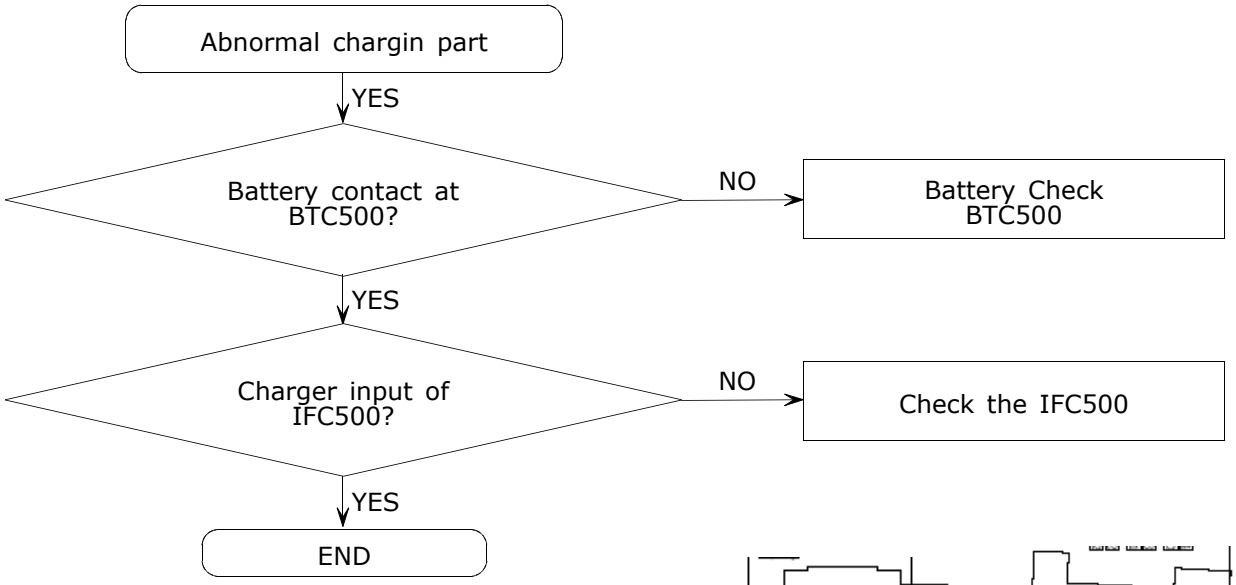
9-1-3. Sim Part

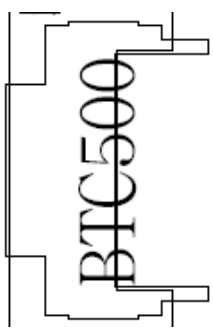


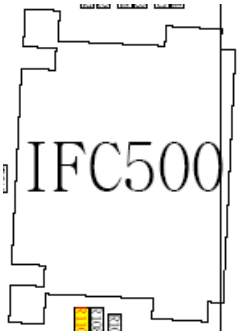


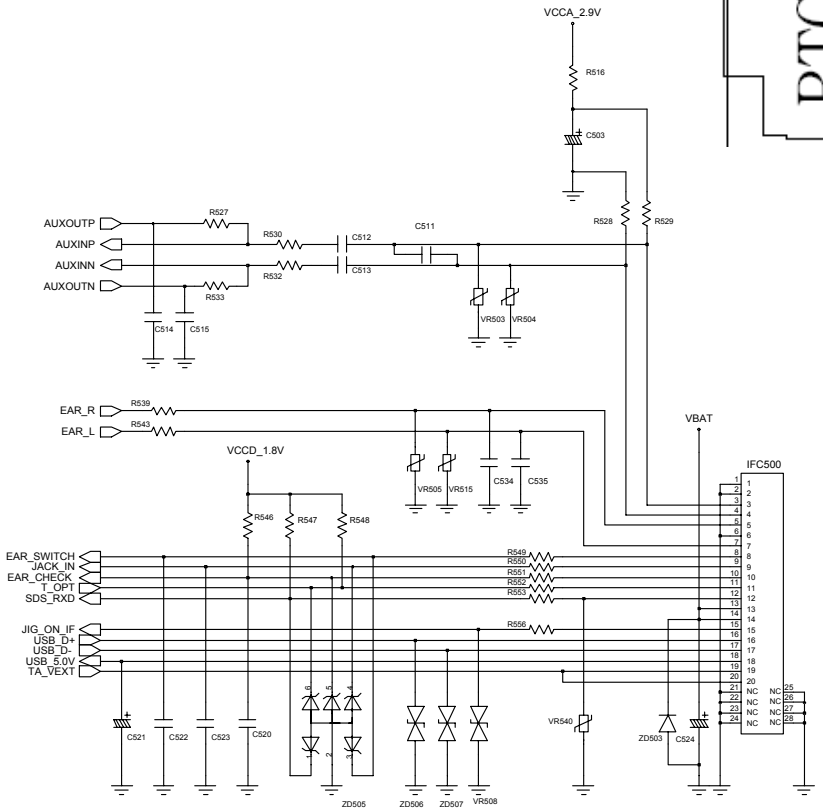


9-1-4. Charging Part

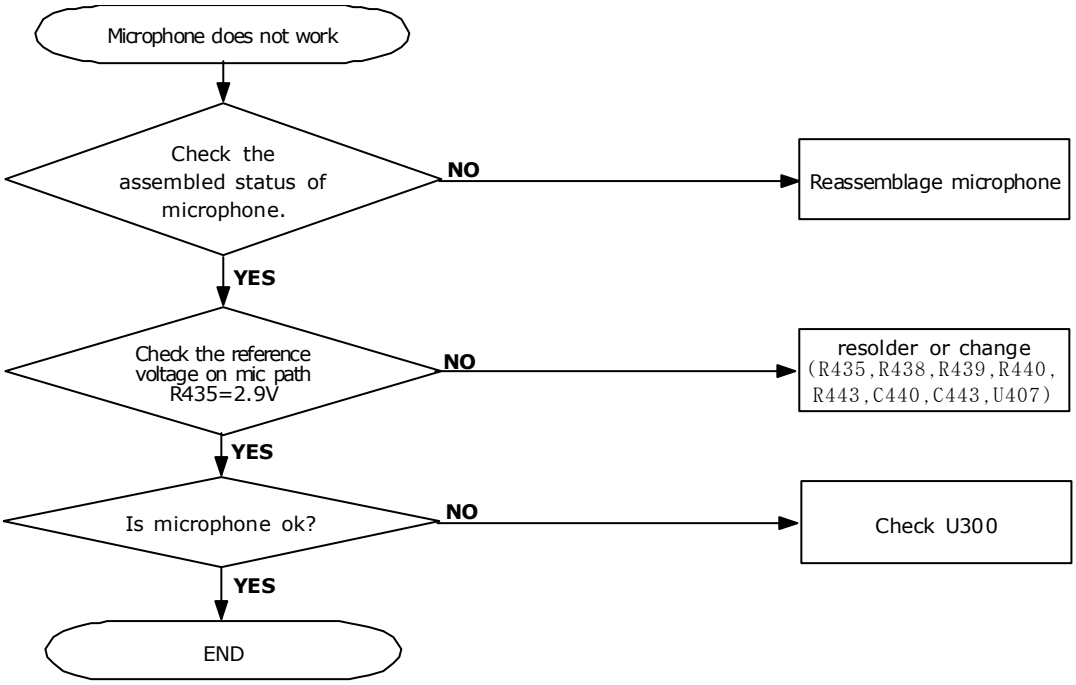


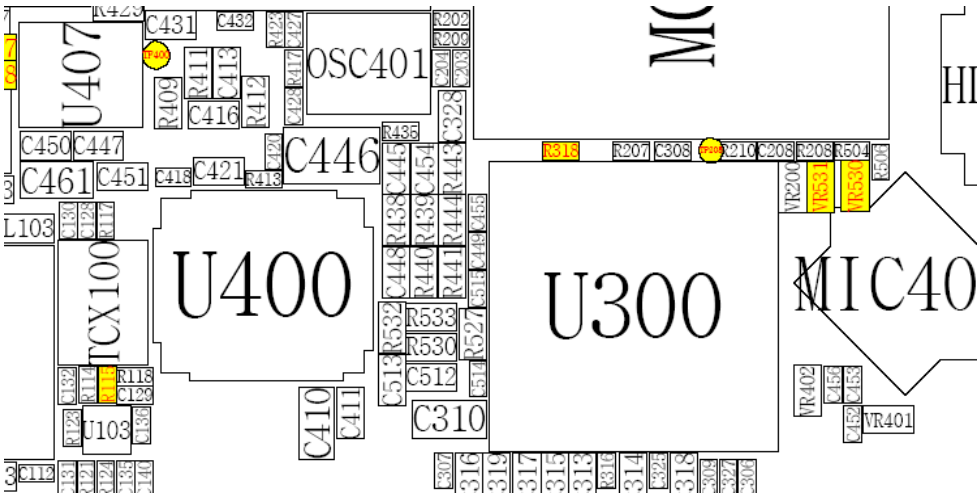


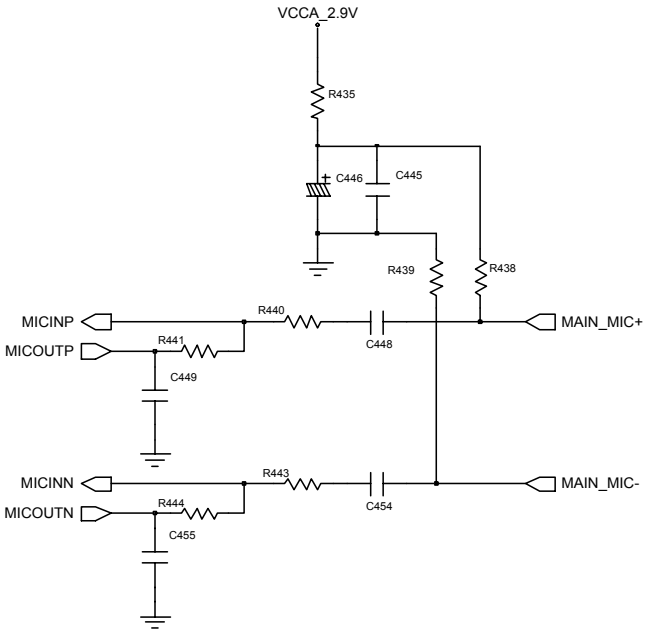


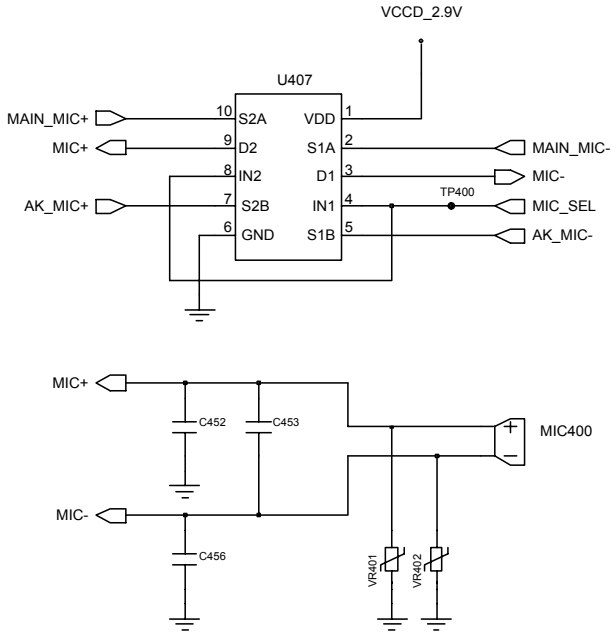


9-1-5. Microphone Part

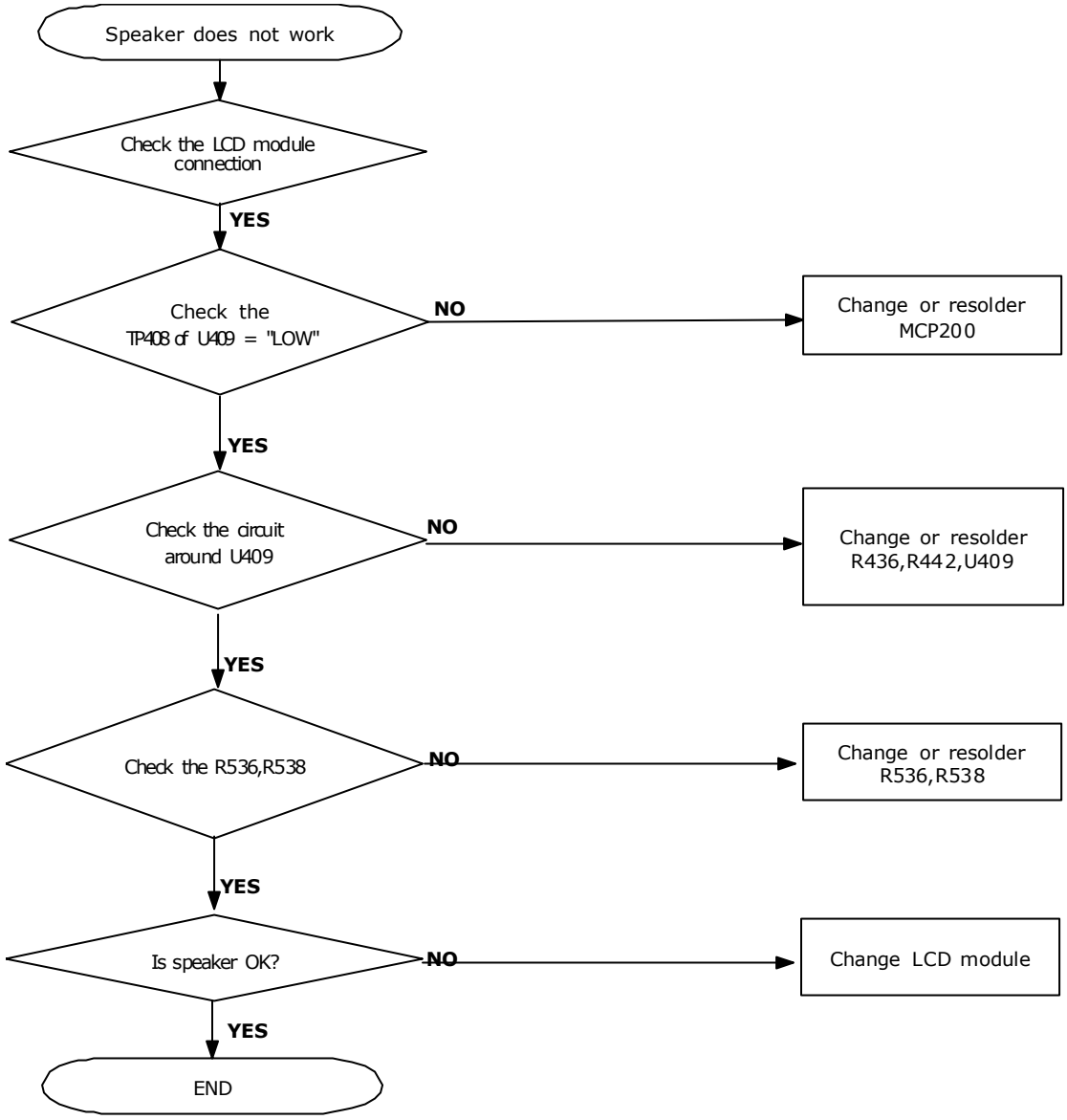


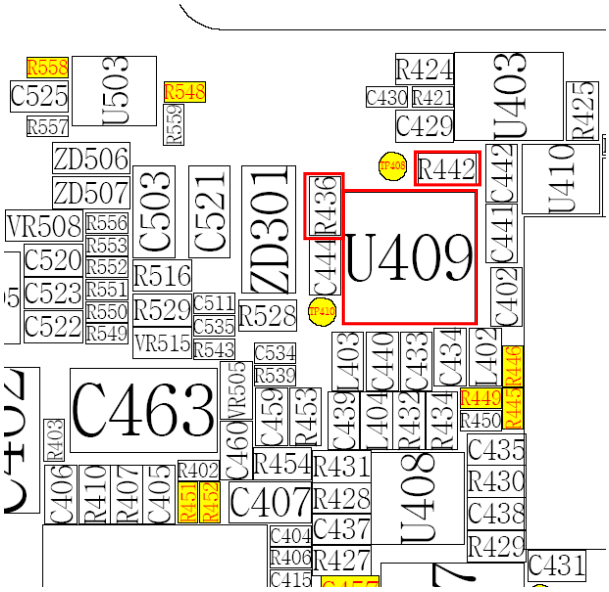


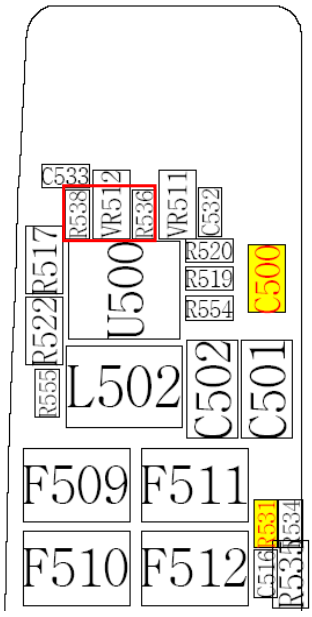


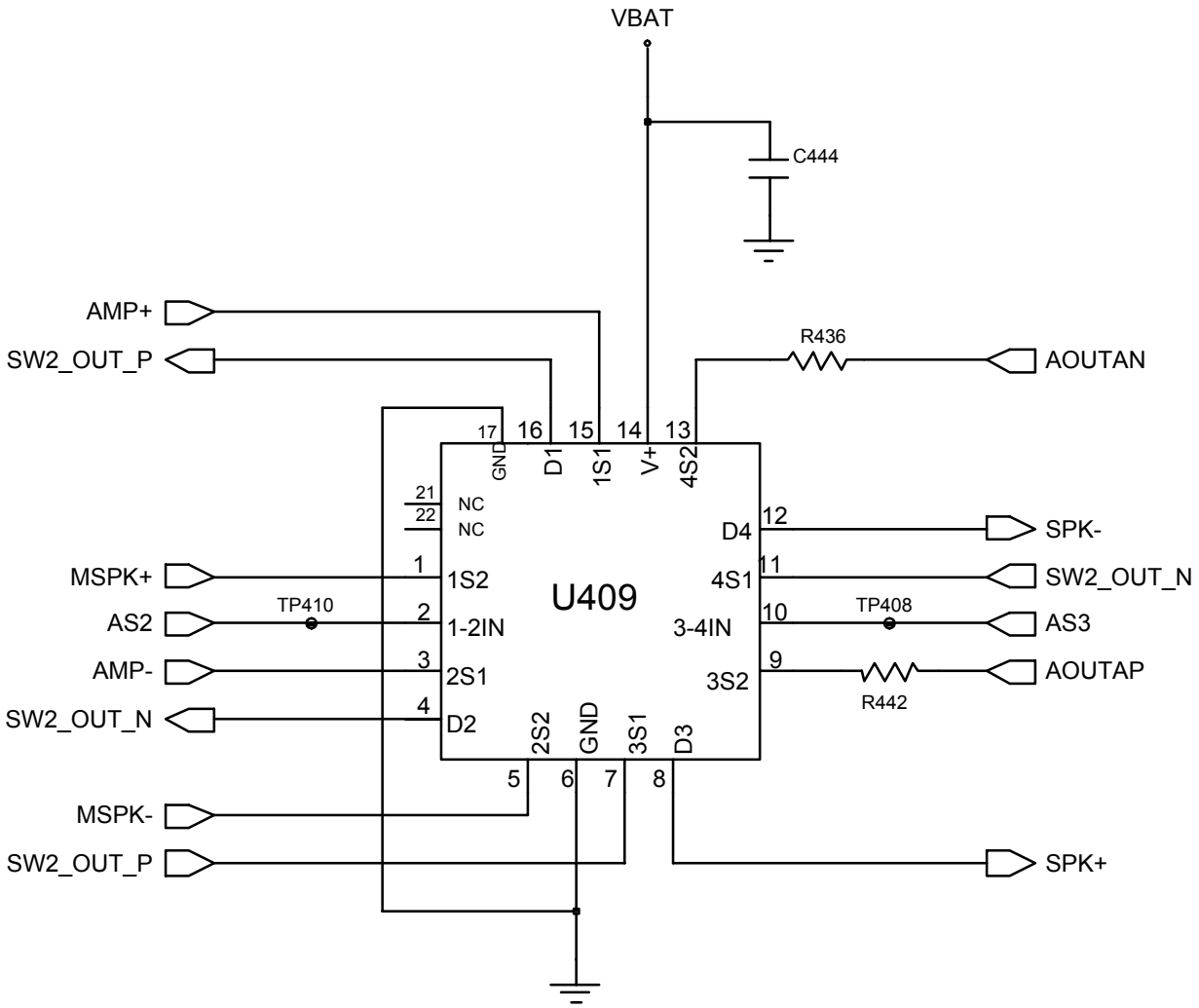


9-1-6. Speaker Part

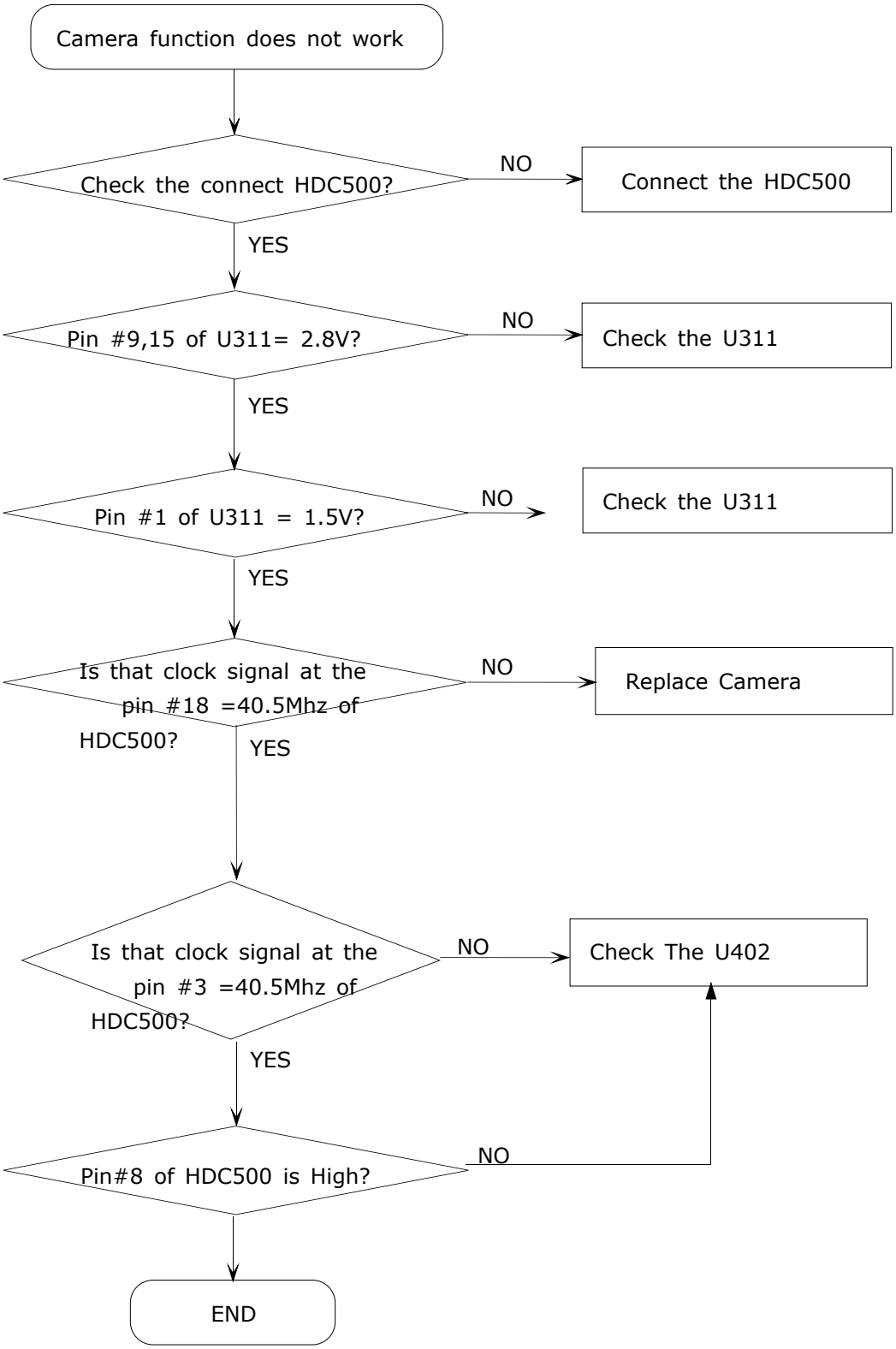


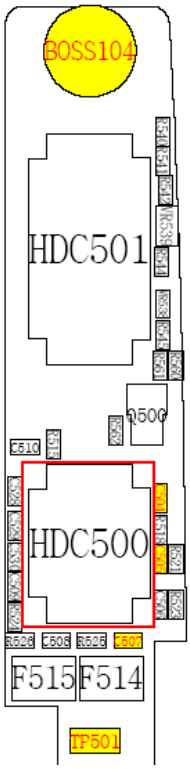


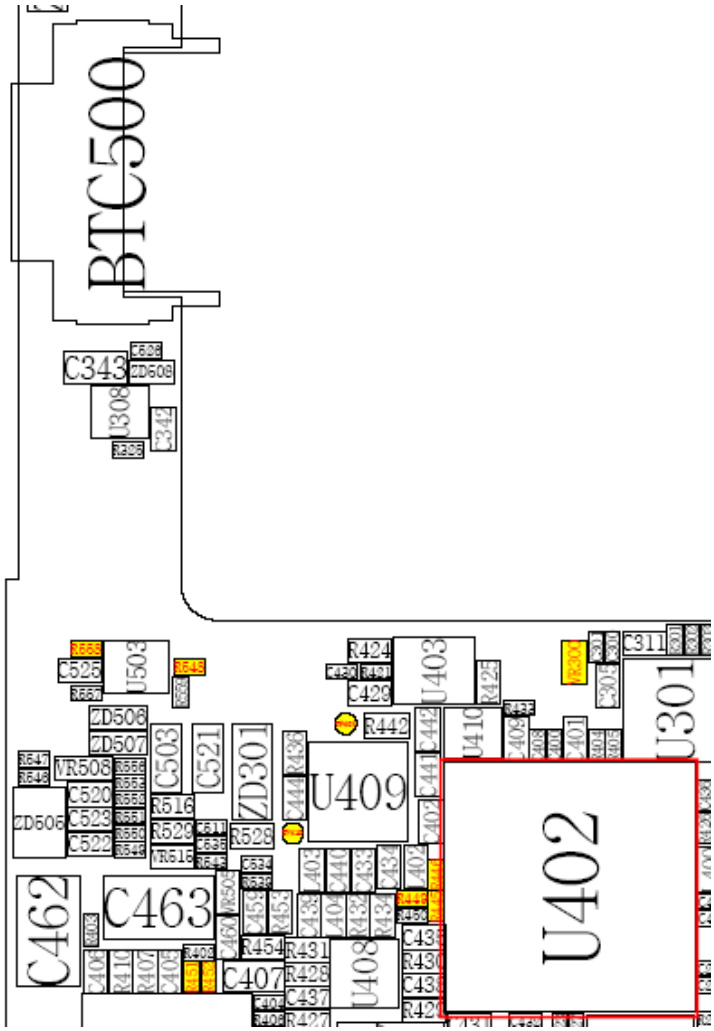


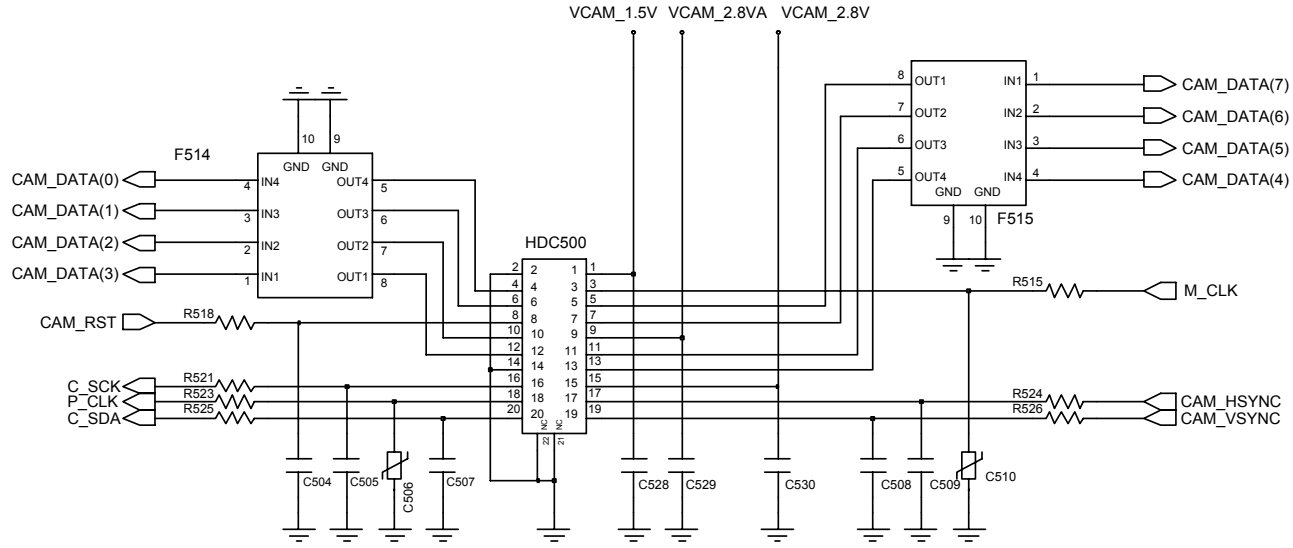


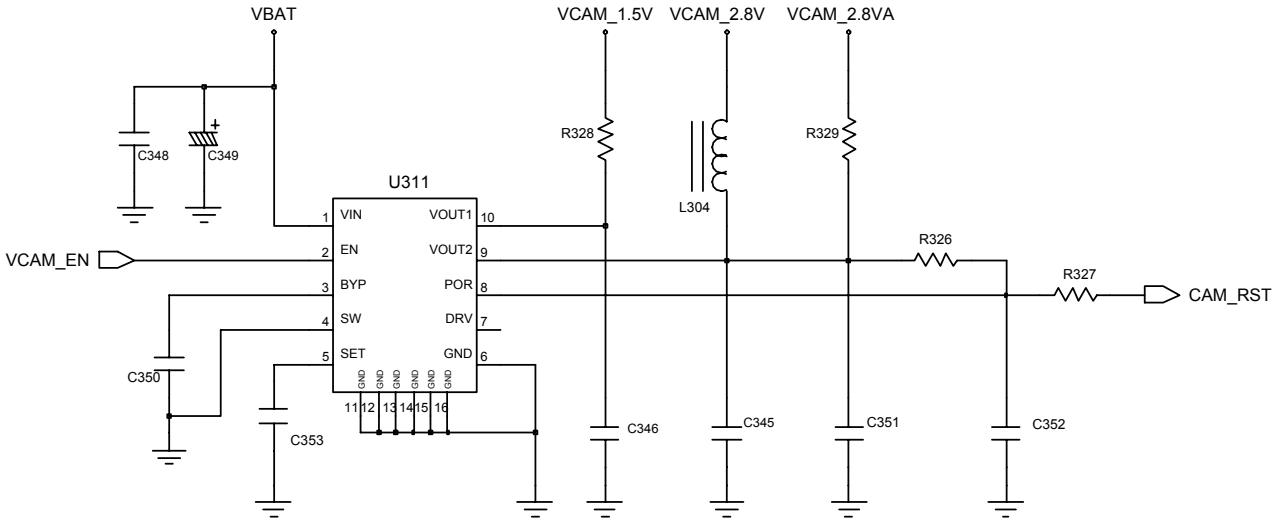
9-1-7. Camera Part



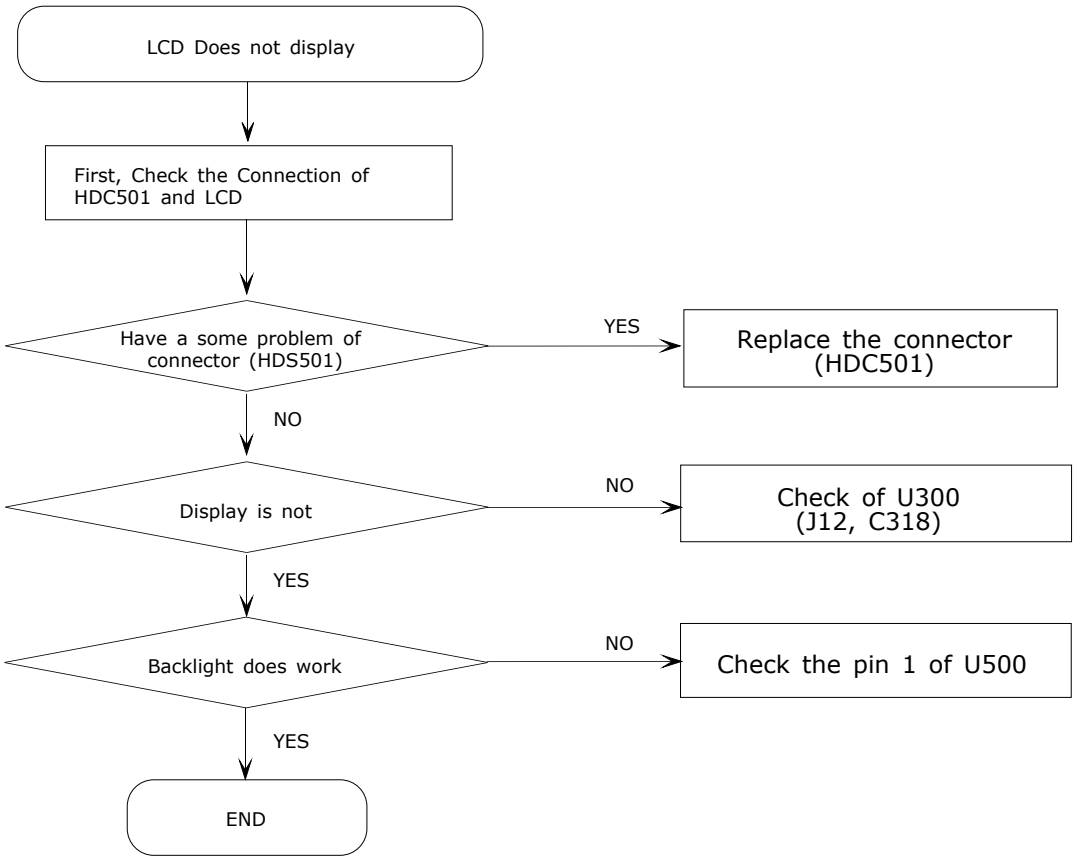


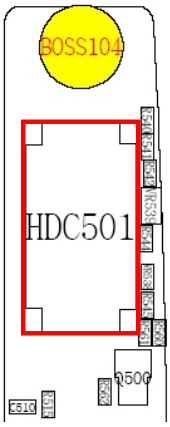


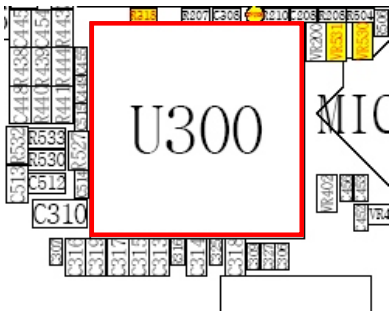


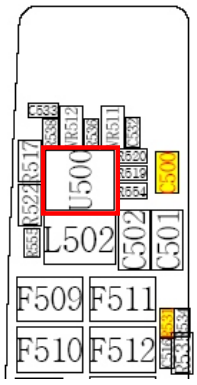


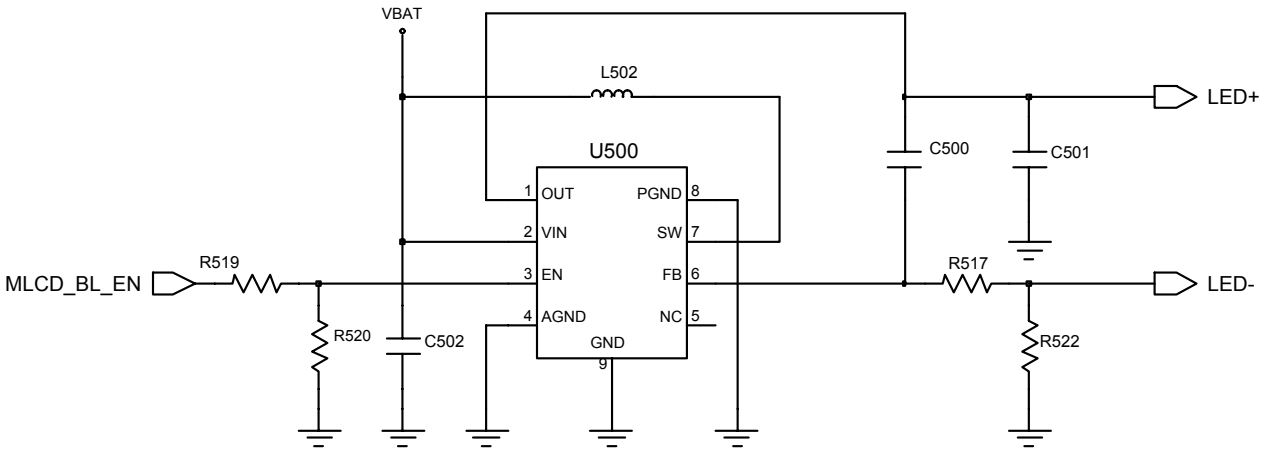
9-1-8. LCD





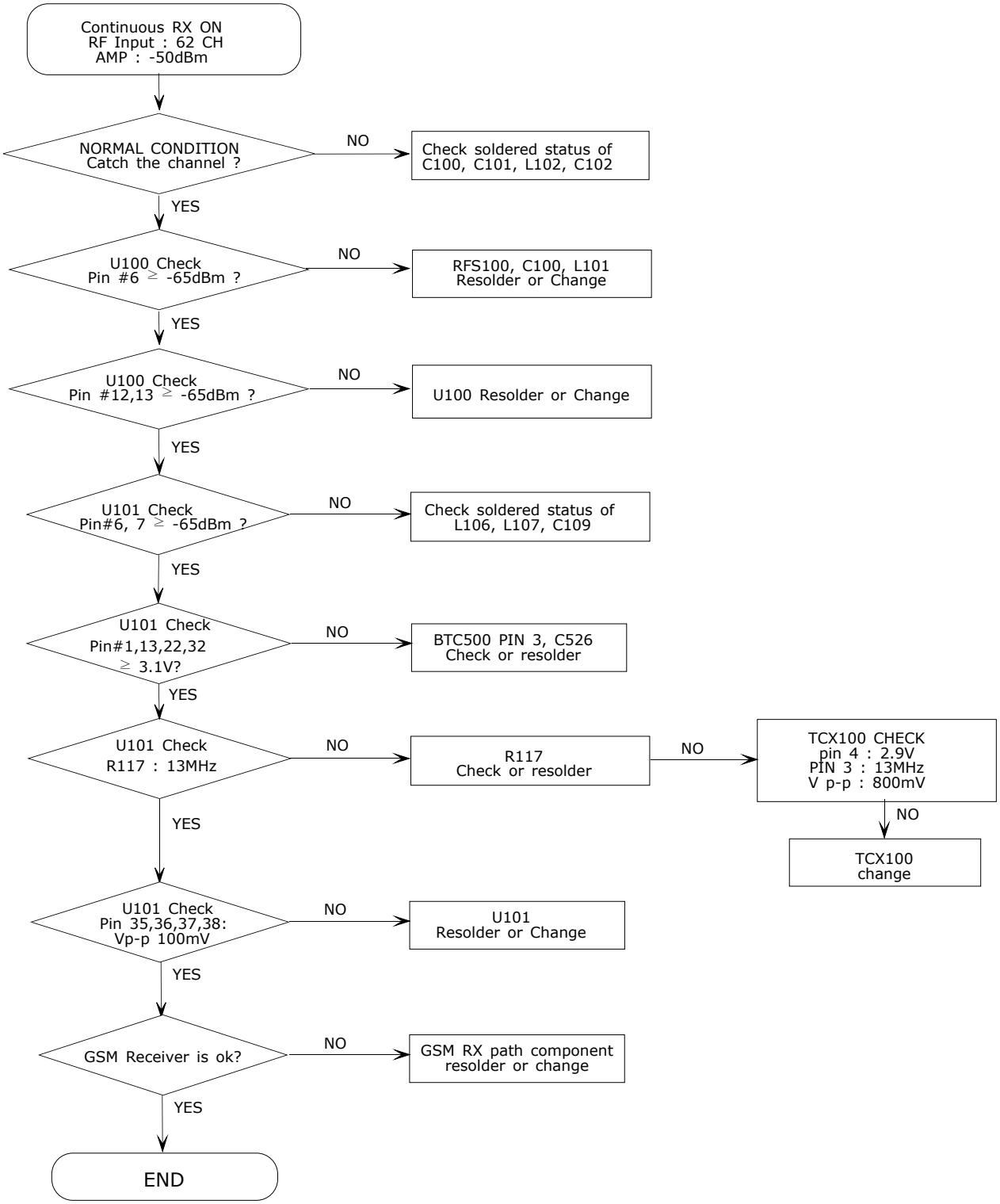




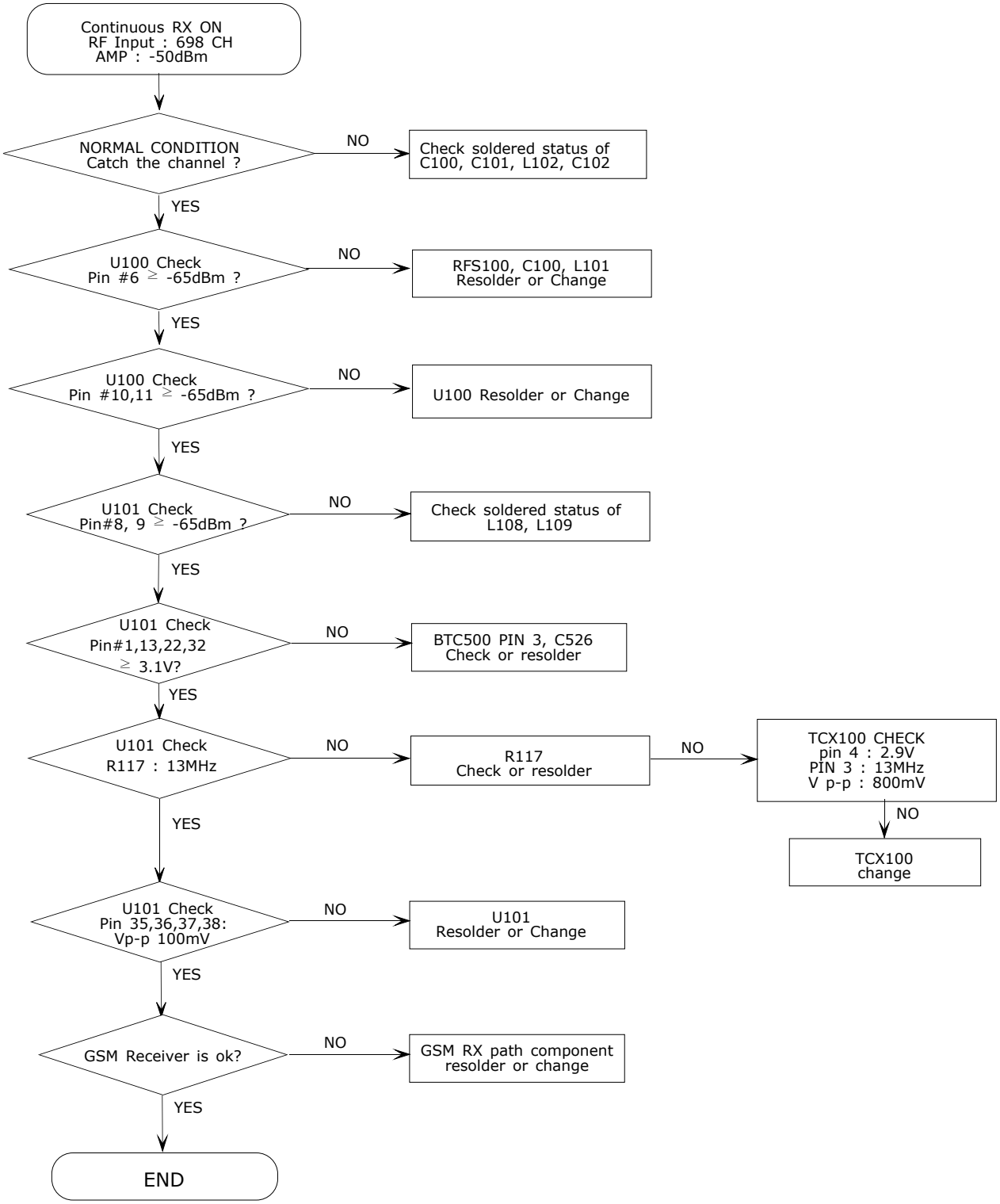


9-2.RF

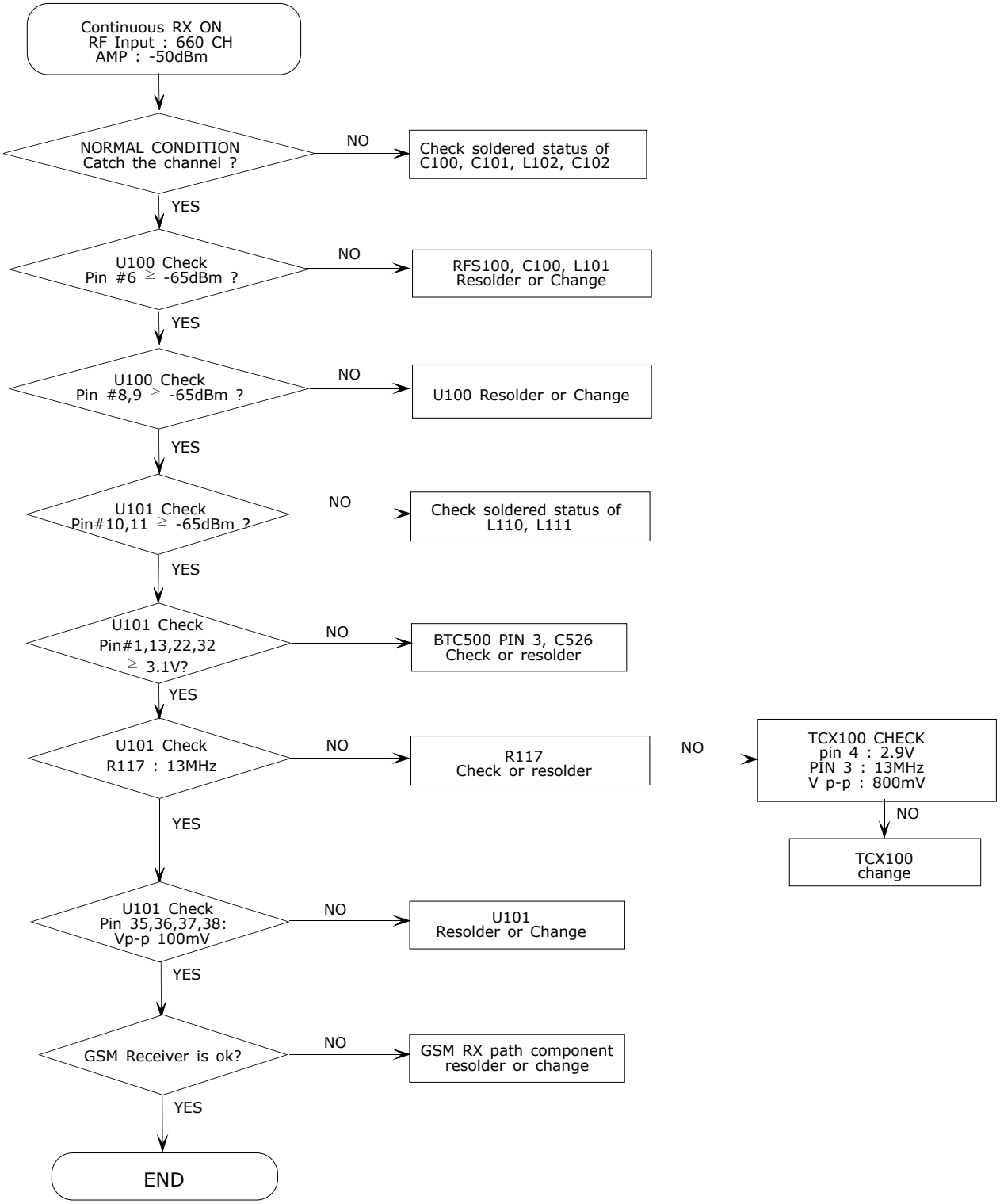
9-2-1. EGSM RX

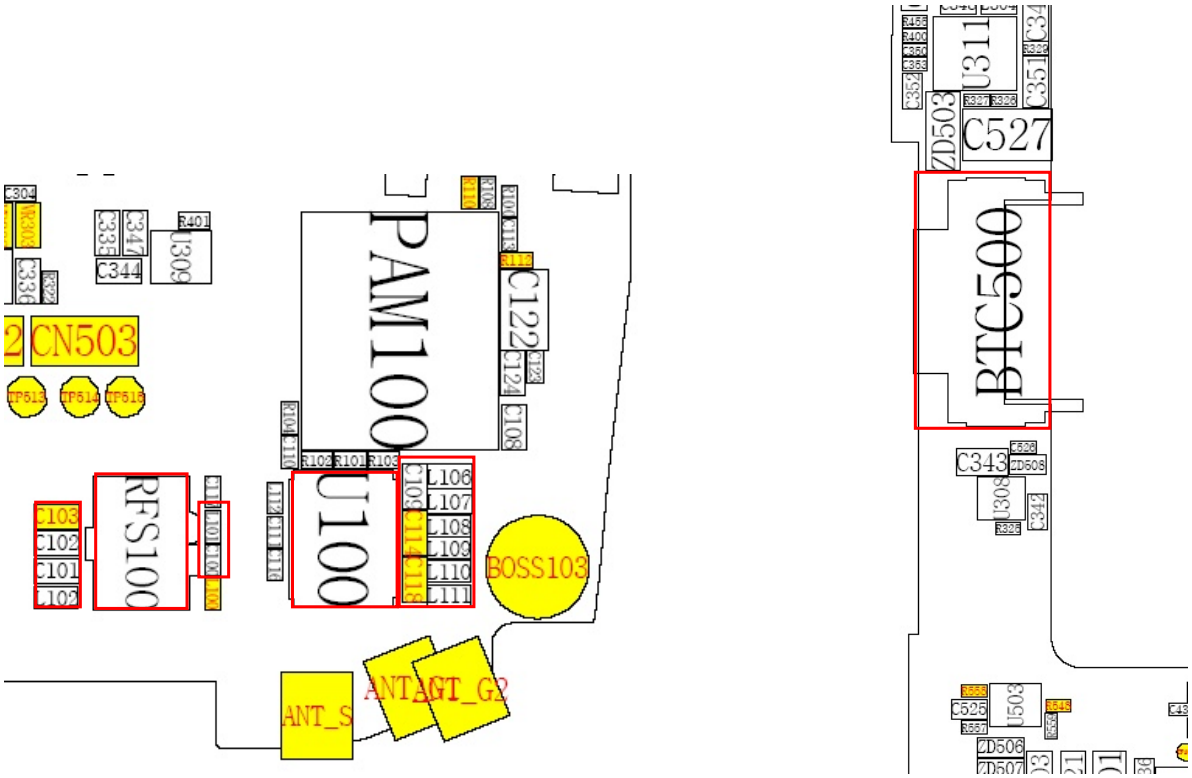


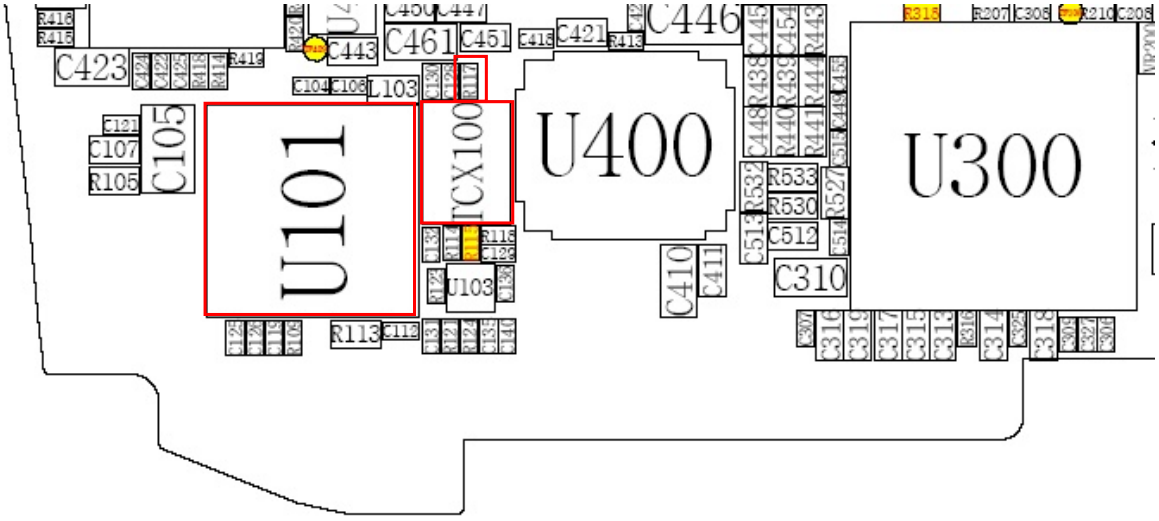
9-2-2. DCS RX



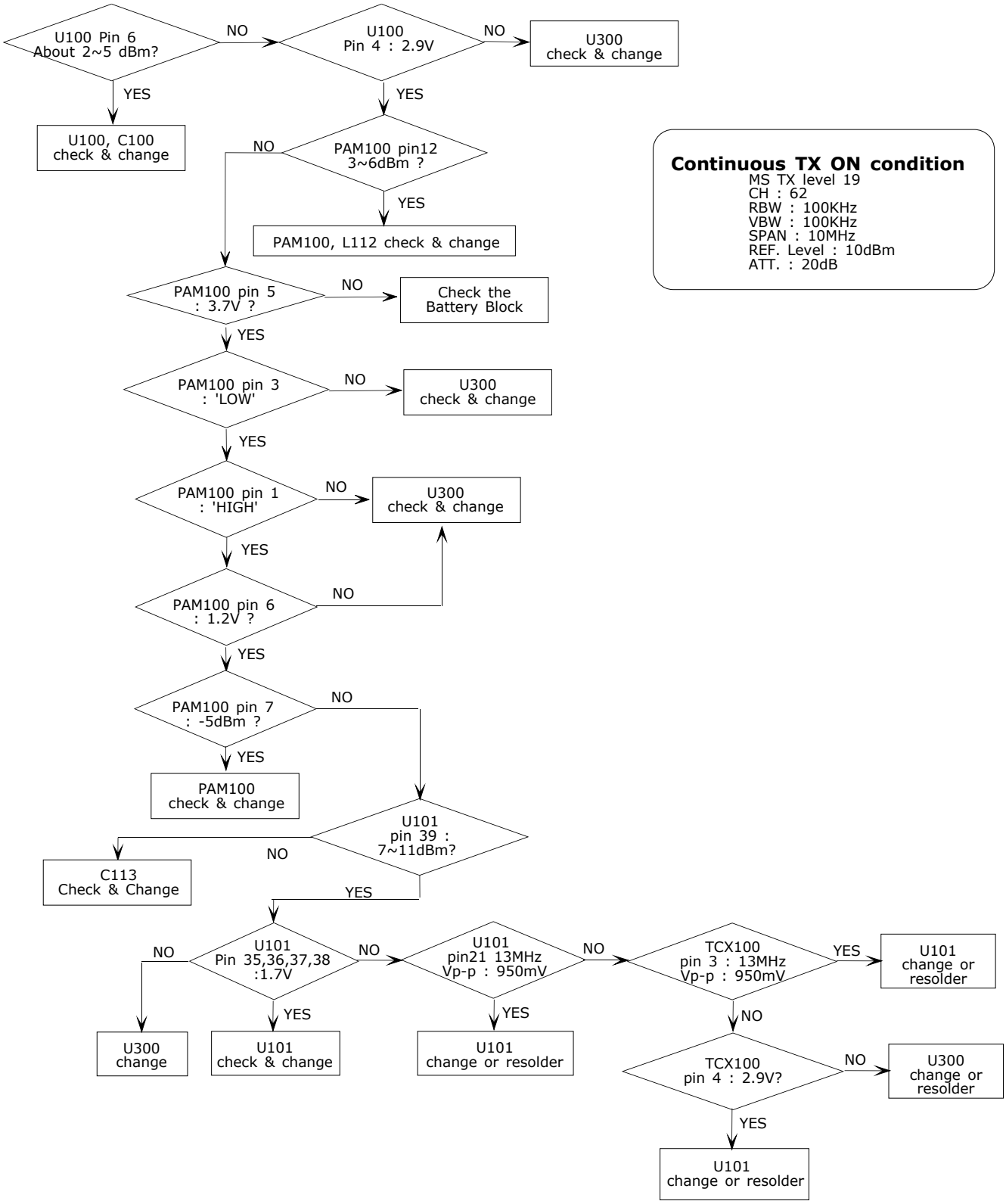
9-2-3. PCS RX



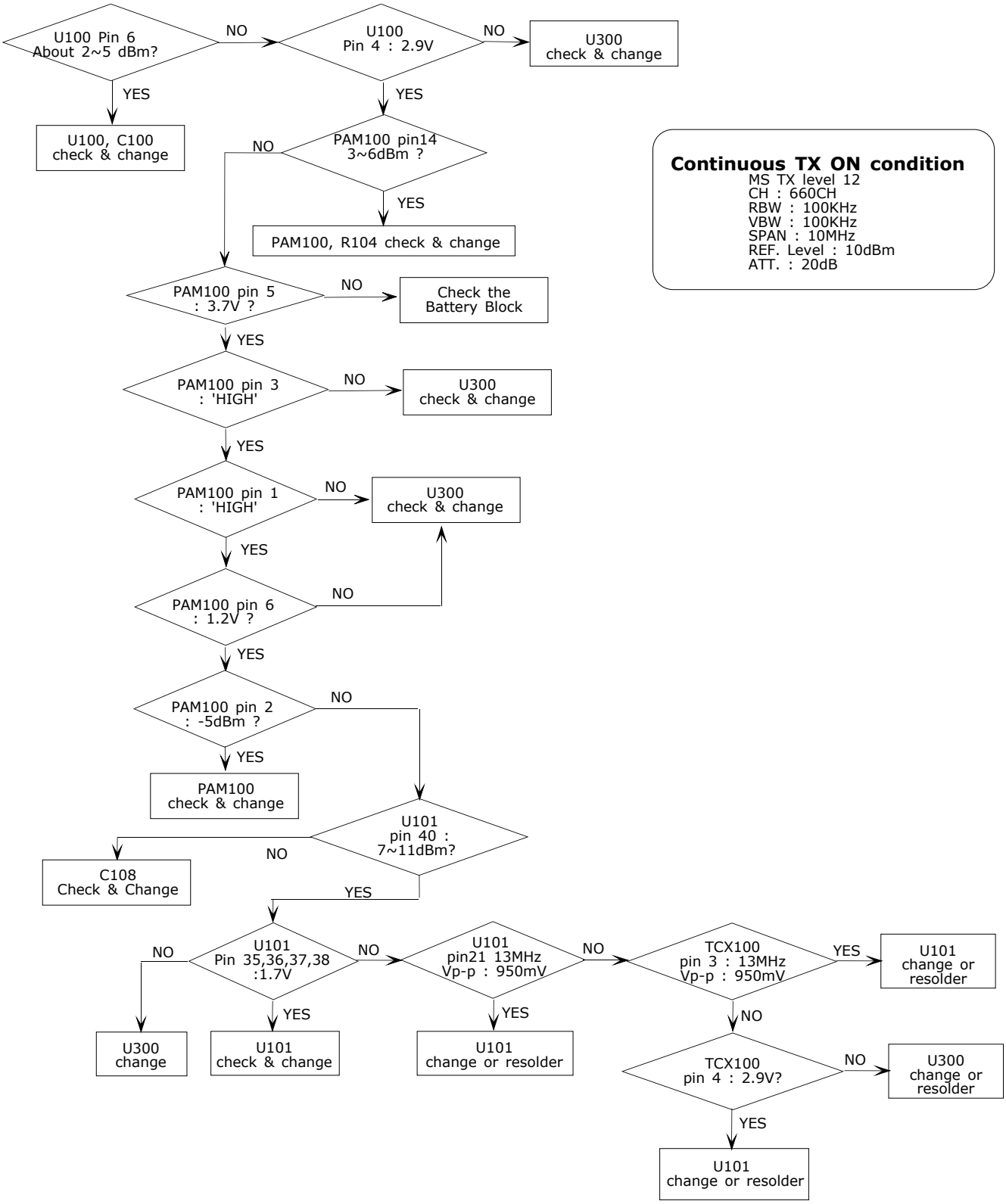


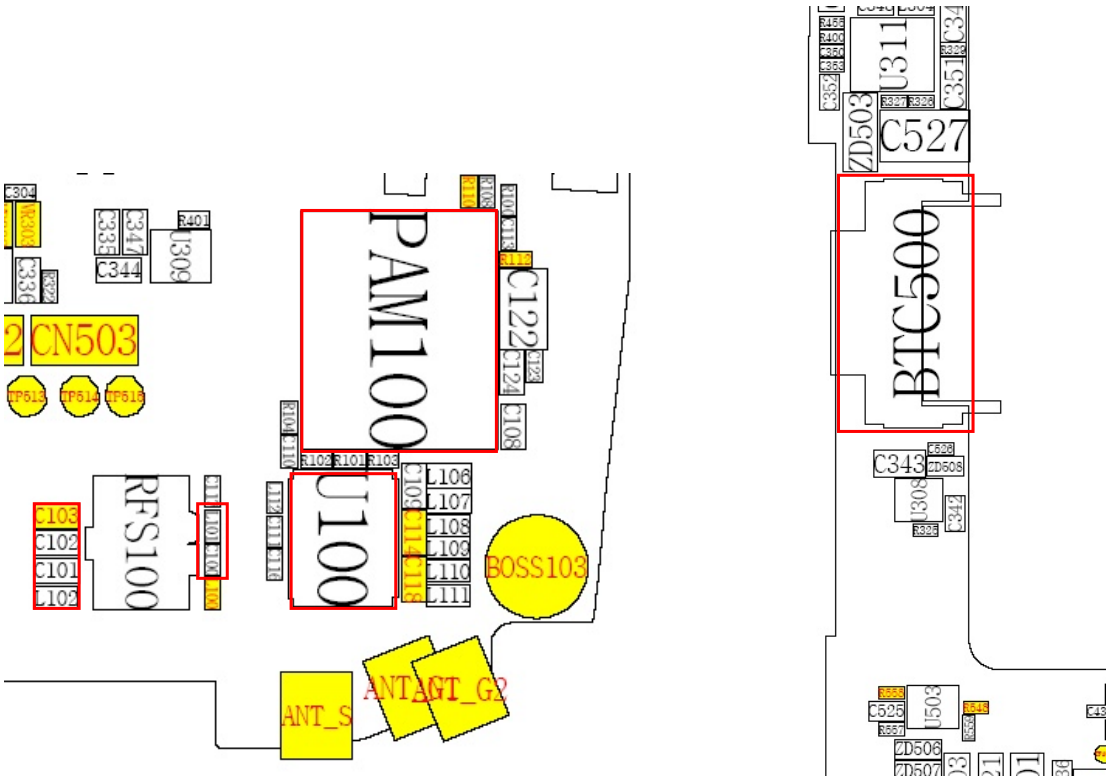


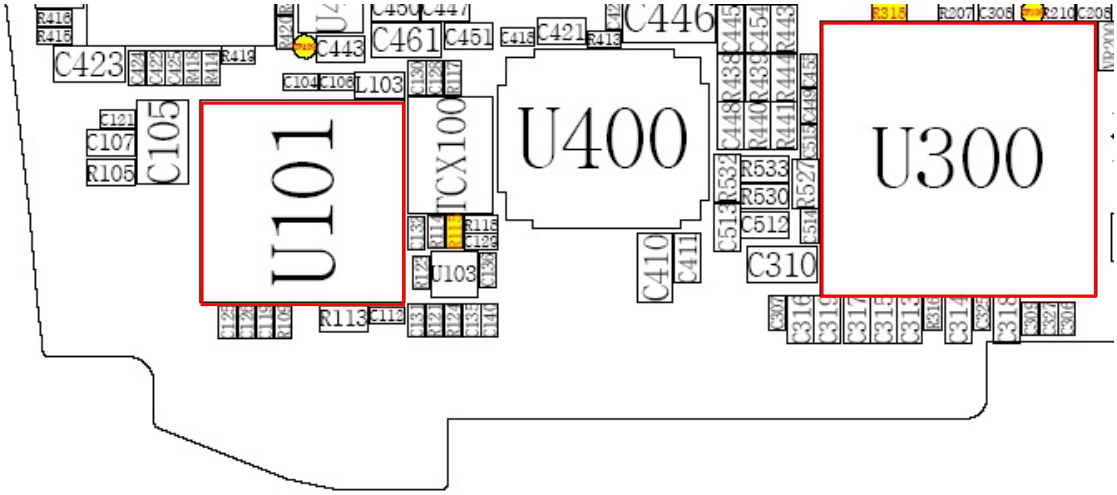
9-2-4. EGSM TX

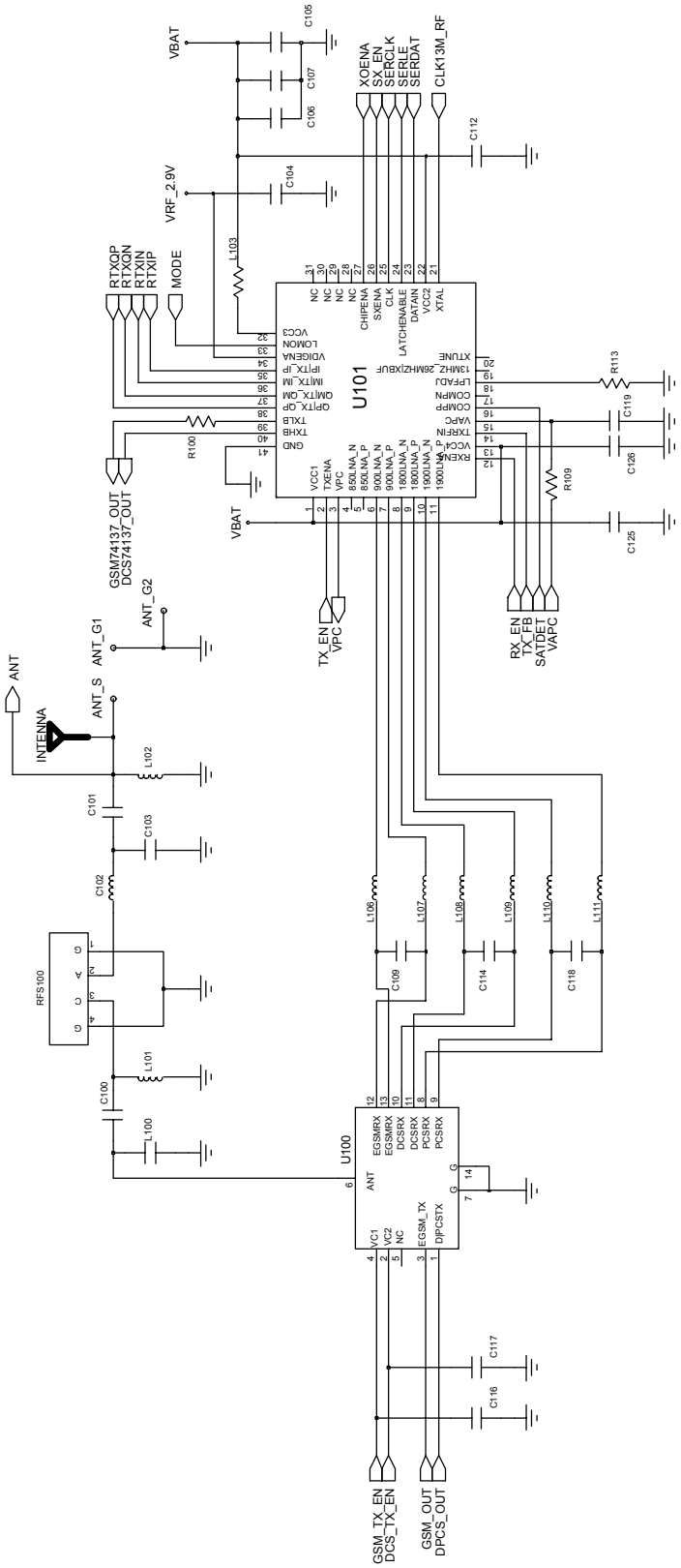


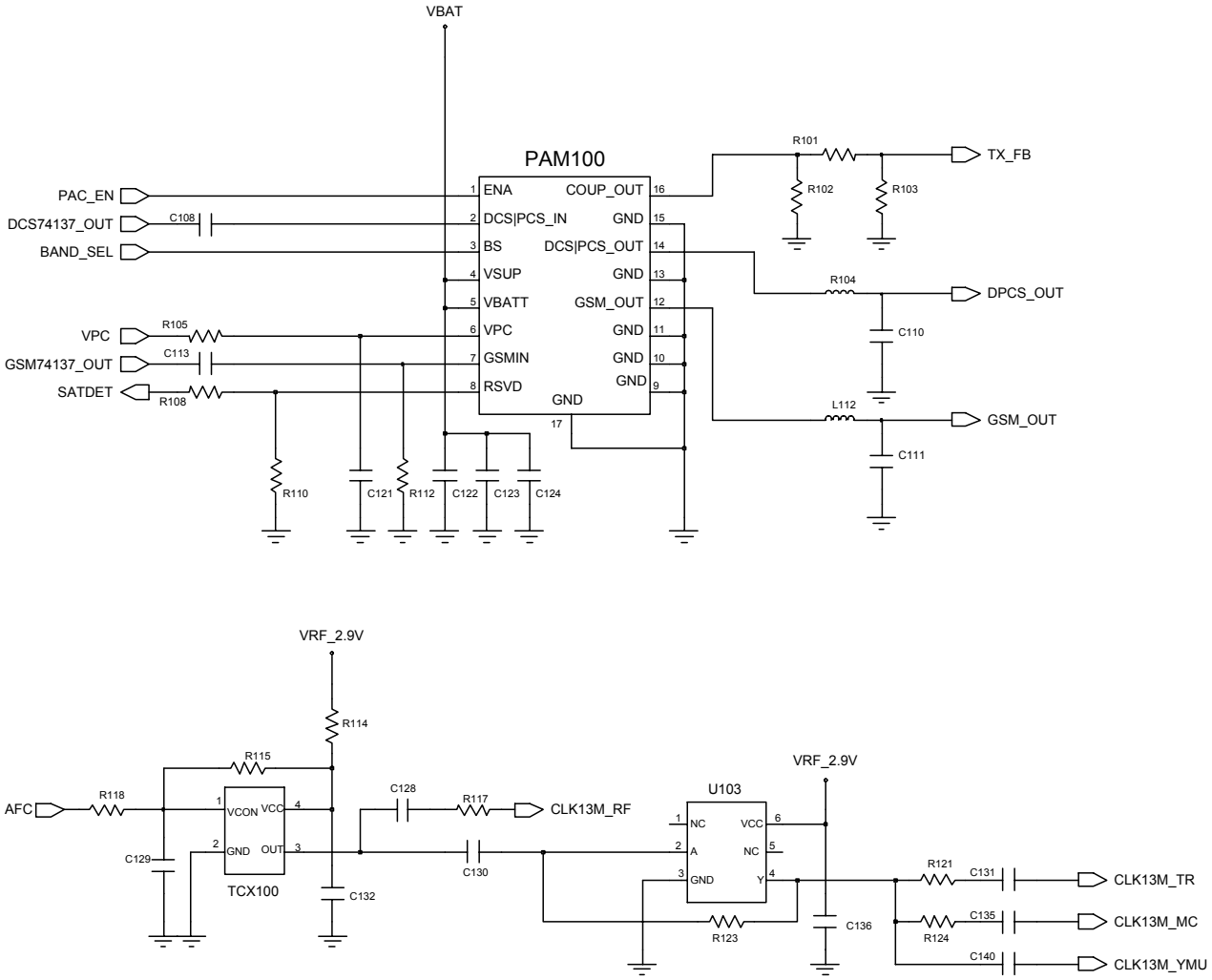
9-2-5. DCS & PCS TX



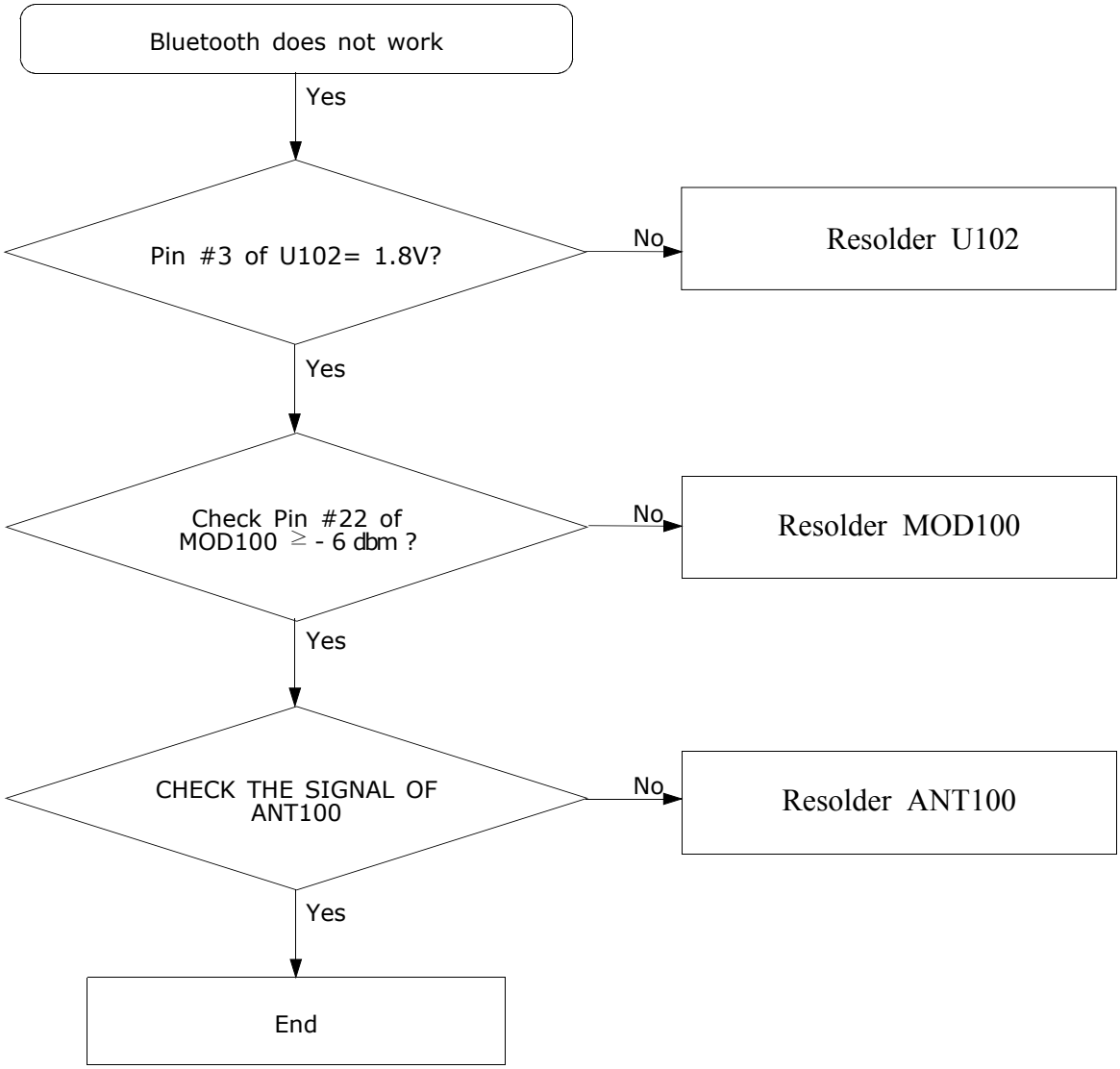


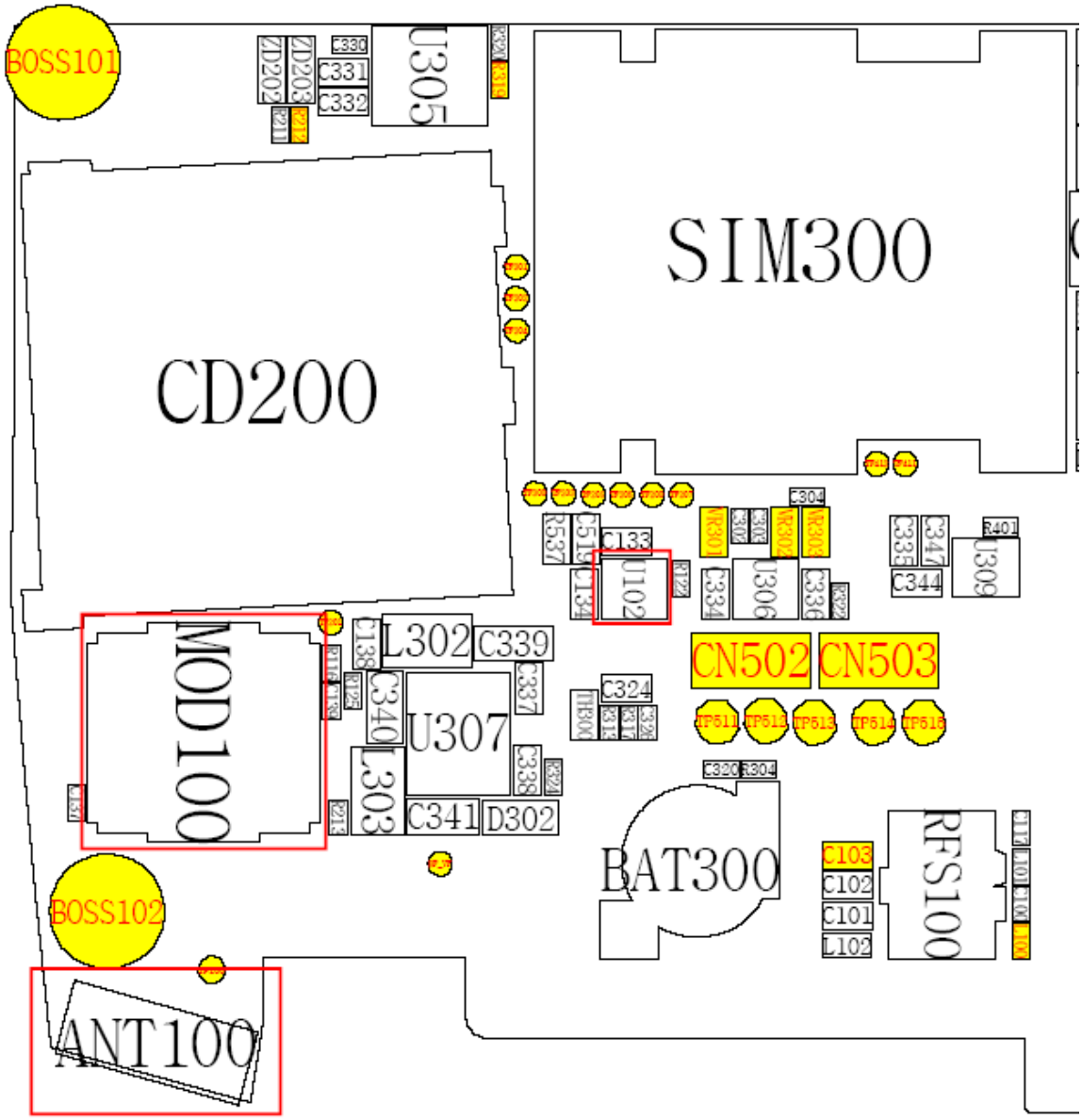


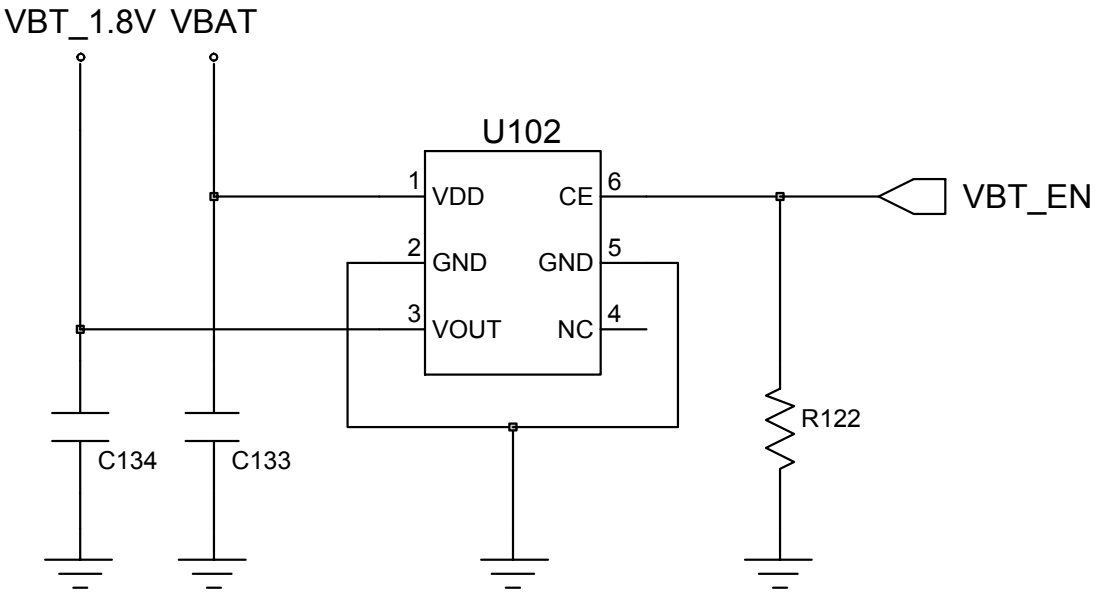


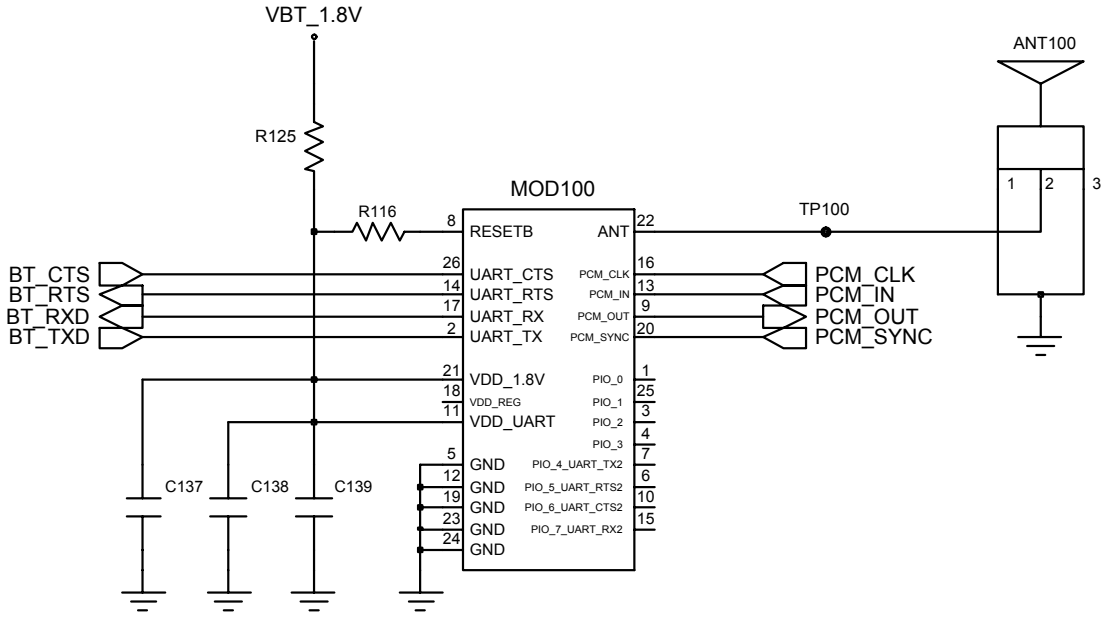


9-2-6. BLUETOOTH









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

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