

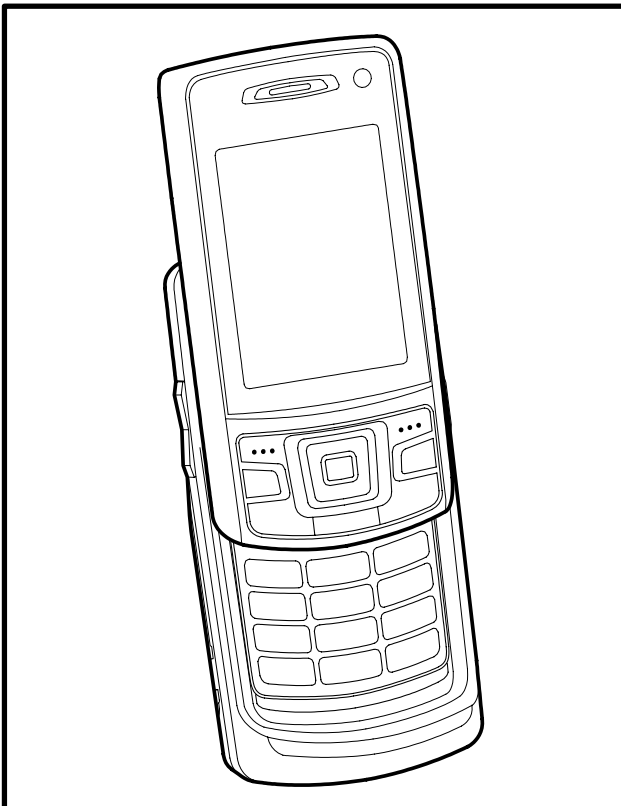
SAMSUNG

UMTS TELEPHONE

SGH-Z630

SERVICE *Manual*

UMTS TELEPHONE



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10. Reference data

1. Safety Precautions

1-1. Repair Precaution

- Repair in Shield Box, during detailed tuning.
Take specially care of tuning or test, because specificity 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 magnetic force.
- Surely use a standard screwdriver when you disassemble this product,
otherwise screw will be worn away.
- Use a thick twisted wire when you measure level.
A thick 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 please after change other material than replacement registered on SEC System.
Otherwise engineer in charge isn't charged with problem that you don't keep this rules.

1-2. ESD(Electrostatically Sensitive Devices) Precaution

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

You can prevent from ESD damage by static electricity.

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

2. Specification

2-1. GSM/WCDMA General Specification

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

2-2. GSM TX power class

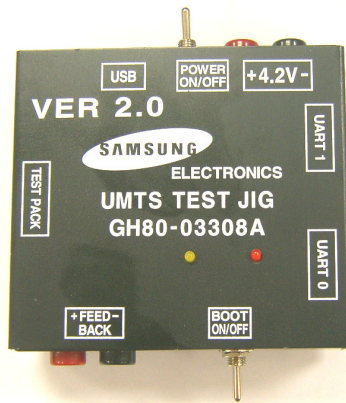
TX Power control level	EGSM900	TX Power control level	DCS1800	TX Power control level	PCS1900
5	33±2 dBm	0	30±3 dBm	0	30±3 dBm
6	31±2 dBm	1	28±3 dBm	1	28±3 dBm
7	29±2 dBm	2	26±3 dBm	2	26±3 dBm
8	27±2 dBm	3	24±3 dBm	3	24±3 dBm
9	25±2 dBm	4	22±3 dBm	4	22±3 dBm
10	23±2 dBm	5	20±3 dBm	5	20±3 dBm
11	21±2 dBm	6	18±3 dBm	6	18±3 dBm
12	19±2 dBm	7	16±3 dBm	7	16±3 dBm
13	17±2 dBm	8	14±3 dBm	8	14±3 dBm
14	15±2 dBm	9	12±4 dBm	9	12±4 dBm
15	13±2 dBm	10	10±4 dBm	10	10±4 dBm
16	11±3 dBm	11	8±4 dBm	11	8±4 dBm
17	9± 3dBm	12	6±4 dBm	12	6±4 dBm
18	7±3 dBm	13	4±4 dBm	13	4±4 dBm
19	5±3 dBm	14	2±5 dBm	14	2±5 dBm
		15	0±5 dBm	15	0±5 dBm

3. Product Function

3-1. Main Function

- Camera and camcorder
- Image editor
- Music player
- File viewer
- Bluetooth
- Photo printing
- i-mode browser
- Get personal with photo/VIDEO caller ID
- Name card
- Multimedia Message Service (i-MMS)
- Email (i-mail)
- Java
- Voice recorder

4. Array course control



Test JIG (GH80-03308A)



IF Test Cable (GH39-00478A)

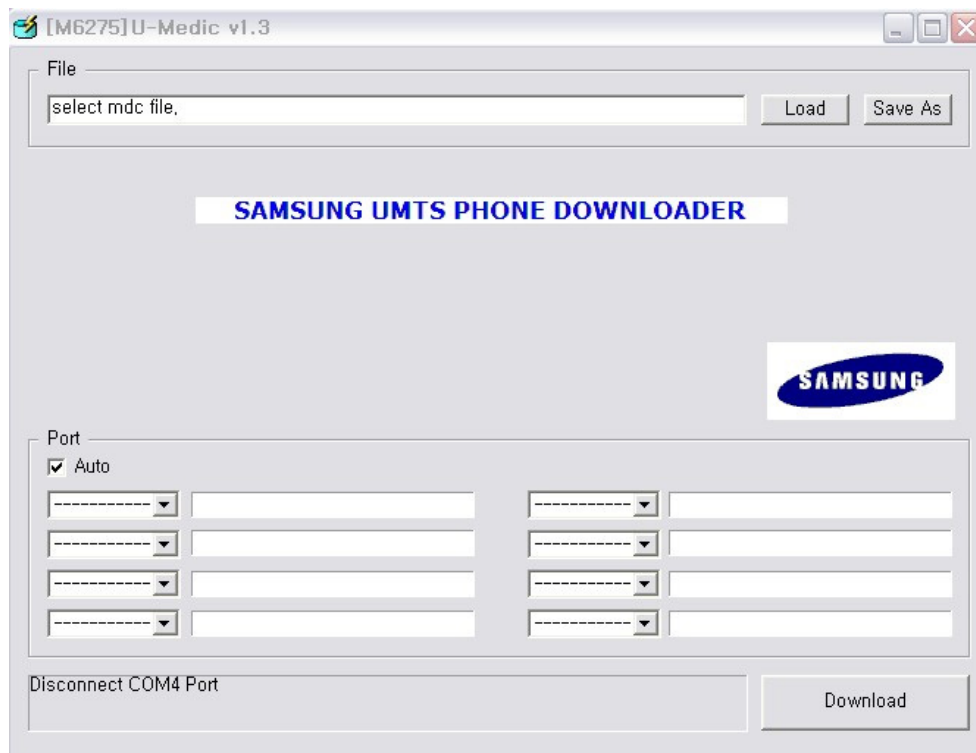


RF Test Cable (GH39-00397A)

4.1 Downloading Binaries.

Start the Downloader application.

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



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

1. Load the Z630.mdc file.
2. Connect the Mobile Handset to the PC via USB port.
3. Download.

First, click the 'Load' button to select "Z630.mdc" file. The mdc file is located in the \tools\downloader directory. And then Connect the Mobile Handset to the PC via USB port. Press power button with red color and button captioned 4 to put the mobile into download mode. To verify that the mobile is put into download mode, just check the front LCD screen of the mobile. (USB DOWNLOAD SAMSUNG UMTS)

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

The screenshot shows a software window titled 'Port'. At the top left, there is a checked checkbox labeled 'Auto'. Below it is a dropdown menu currently set to 'COM4', followed by a text field containing 'Ready...'. To the right of these are two empty dropdown menus and a text field. Below this row are three more rows, each consisting of a dropdown menu and a text field. At the bottom of the window, there is a button labeled 'Detect COM4 Port' on the left and a button labeled 'Download' on the right.

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

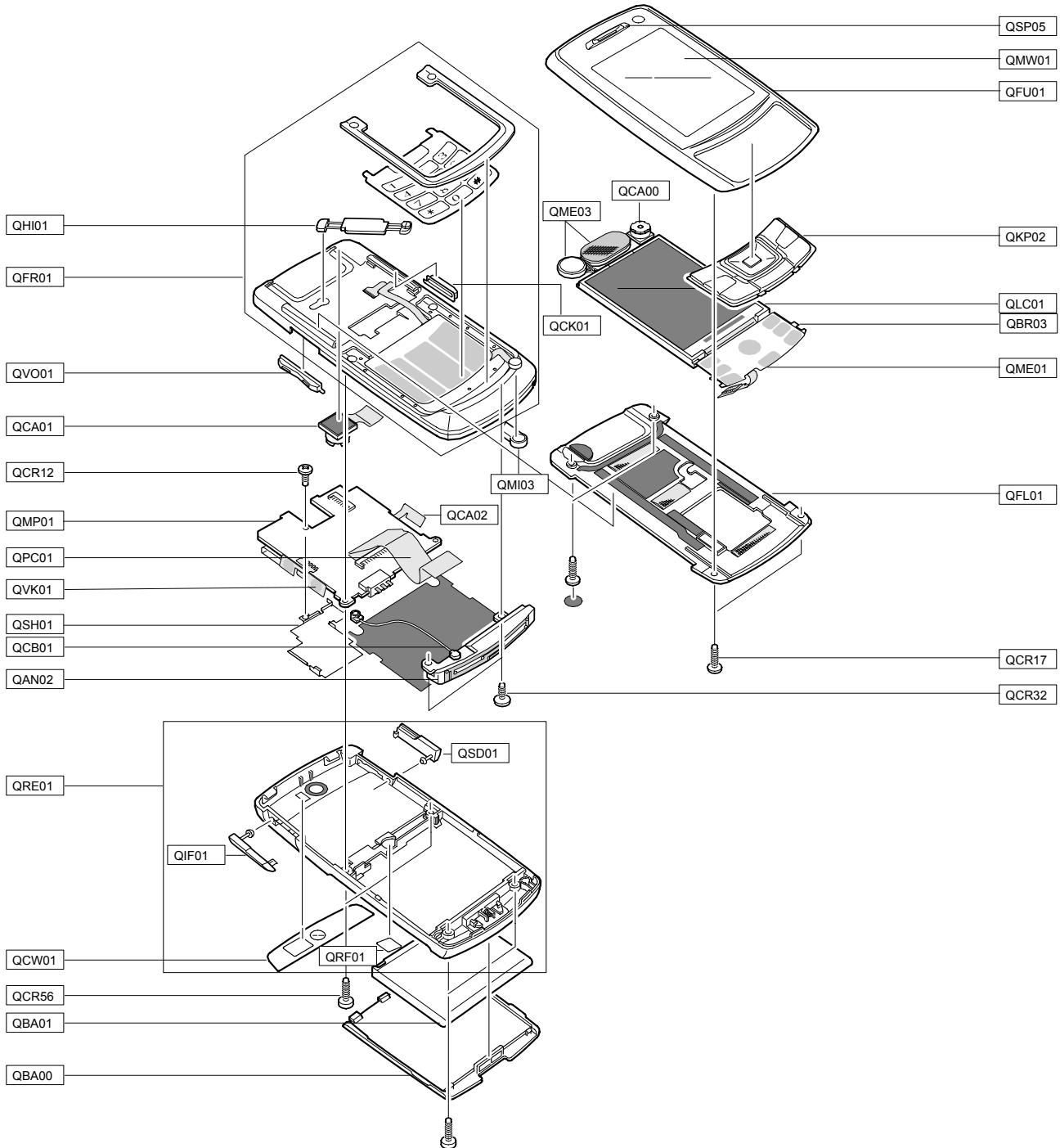
Please try to download again if you will see the "ERROR : Download Fail" popup. We need to download twice when the Boot and Resource code is changed. This is for preventing a wrong operation.

Warning:-

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

5. Exploded View and Parts List

5-1. Cellular phone Exploded View

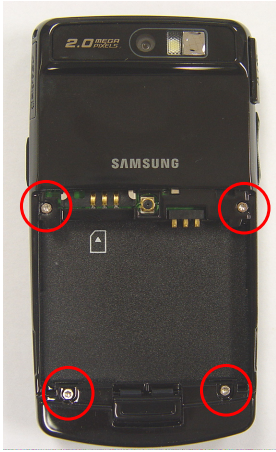
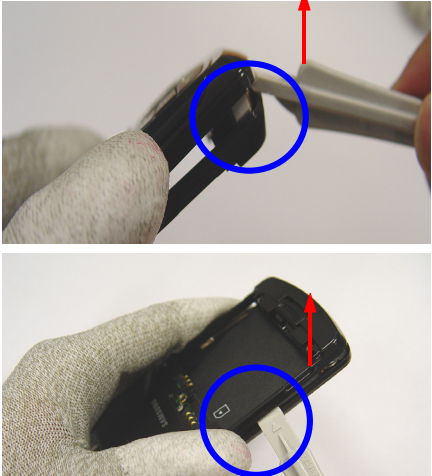
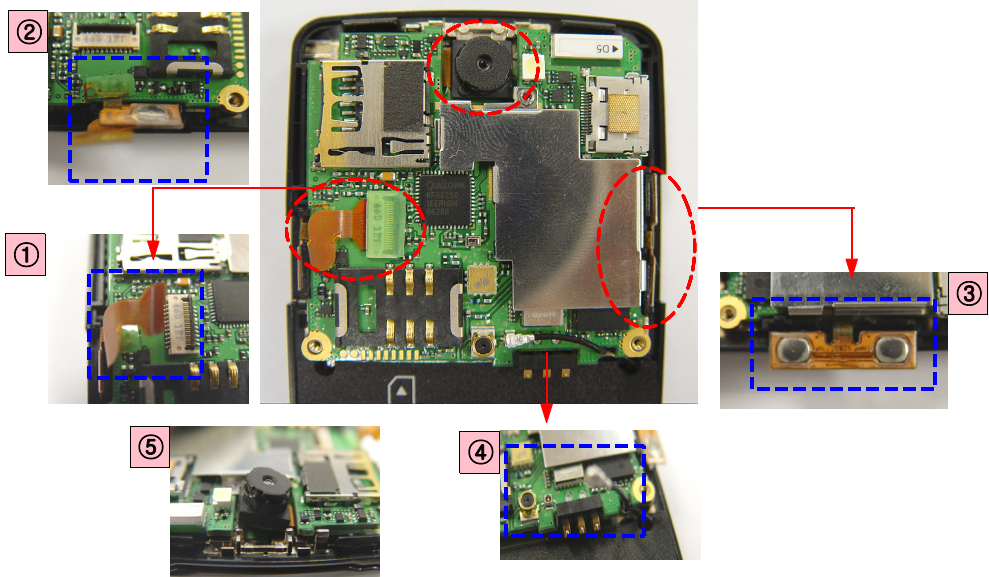


5-2. Cellular phone Parts list

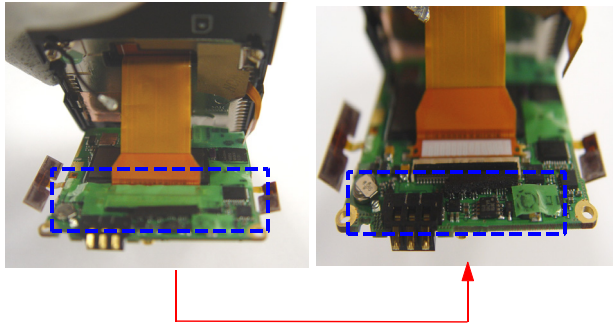
Design LOC		Discription	SEC CODE
QAN02		INTENNA-SGHZ630	GH42-00911A
QBA00		ASSY CASE-BATTERY	GH98-02392A
QBA01		BATTERY-880MAH,BLK,MAIN	GH43-02253A
QBR03		IPR-BRACKET SUB KEY V2	GH70-01675A
QCA00		UNIT-VGA CAMERA(SELF)	GH59-03204A
QCA01		UNIT-2M CAMERA(REC)	GH59-03190A
QCA02		UNIT-CAMERAKEY	GH59-03237A
QCB01		CBF COAXIAL CABLE-SGHZ630 ANTE	GH39-00598A
QCK01		ASSY KEY-CAMERA	GH98-02751A
QCR06		SCREW-MACHINE	6001-001155
QCR12		SCREW-MACHINE	6001-001530
QCR17		SCREW-MACHINE	6001-001460
QCR32		SCREW-MACHINE	6001-001700
QCW01		PMO-COVER WINDOW CAMERA	GH72-34702A
QFL01		ASSY MEC-HINGE S/L F/C	GH75-09403A
QFR01		MEA-FRONT KIT(CL/GRY)	GH97-06739A
QFU01		ASSY MEC-UPPER SLIDE	GH75-09381A
QHI01		ASSY ACCE-PUSH ROD	GH98-01237A
QKP02		ASSY KEYPAD-SUB(TIM/CA)	GH75-09400A
QLC01		MEA-LCD MODULE KIT	GH97-06604A
QME01		UNIT-EL KEY PBA(NAVI)	GH59-03233A
QME03		UNIT-SPK_MOT FPCB	GH59-03205A
QMI03		PMO-MIC HOLDER	GH72-34159A
QMP01		PBA MAIN-SGH-Z630	GH92-02568A
QMW01		ASSY MEC-COVER MAIN WINDOW	GH75-09396A
QPC01		MEA-SLIDE FPCB KIT	GH97-06605A
QRF01		MPR-TAPE RF SHEET	GH74-27744A
QSH01		ASSY COVER-SHIELD CAN	GH98-02614A
QSP05		ASSY DECO-SPK	GH98-01405A
QVK01		UNIT-VOLUME KEY	GH59-03239A
QVO01		PMO-KEY VOLUME	GH72-35859A
QRE01		ASSY MEC-COEVER REAR	GH75-09397A
	QIF01	PMO-COVER EAR IF	GH72-29654A
	QSD01	PMO-COVER MICRO SD	GH72-29655A

Discription	SEC CODE
BAG PE	6902-000297
CBF INTERFACE-DATA LINK CABLE	GH39-00444A
ADAPTOR-SGHE690,BLK,EU,A_TYPE	GH44-01361A
S/W CD-SAMSUNG PC STUDIO 3.0,Z	GH46-00327A
UNIT-EARPHONE(BLK)	GH59-02499A
LABEL(P)-WATER SOAK	GH68-02026A
LABEL(R)-MASTER TIM	GH68-11408D
MANUAL USERS-TIM ITALIAN	GH68-12568A
LABEL(R)-MAIN(TIM)	GH68-12832A
CUSHION-CASE TA2	GH69-04602A
BOX(P)-UNIT MAIN(TIM)	GH69-04636E
RMO-HINGE DAMPER A	GH73-08414A
MPR-TAPE LCD PCB GOLD	GH74-17771A
MPR-TAPE LCD CONN A	GH74-18637A
MPR-VINYL BOHO MAIN WINDOW	GH74-26869A
MPR-VINYL BOHO REAR UPPER	GH74-26872A
MPR-VINYL BOHO REAR CAMERA	GH74-26874A
MPR-INSU TAPE	GH74-26989A
MPR-INSU TAPE	GH74-26990A
MPR-SPONGE SLIDE FPCB NOISE	GH74-26997A
MPR-TAPE SLIDE CON SHIELD	GH74-27005A
MPR-TAPE BATT MASKING	GH74-27006A
MPR-TAPE	GH74-27010A
MPR-TAPE	GH74-27010A
MPR-GASKET TAPE	GH74-27014A
MPR-TAPE MAIN KEY FPCB SHIELD	GH74-27283A
MPR-TAPE LCD MASKING A	GH74-27284A
MPR-TAPE LCD MASKING B	GH74-27285A
MPR-TAPE LCD DONG	GH74-27287A
MPR-TAPE 2M CAMERA CON	GH74-27422A
MPR-INSU TAPE	GH74-27424A
MPR-TAPE MAIN CON	GH74-27435A
MPR-TAPE SHEET SLIDE SCREW	GH74-27743A
MPR-INSU TAPE	GH74-27774A
MPR-SPONGE REAR BGA ABS A	GH74-28042A
MPR-SPONGE REAR BGA ABS B	GH74-28043A
MPR-SPONGE T FLASH	GH74-28055A
MPR-INSU TAPE	GH74-28186A
MPR-VINYL BOHO MAIN WINDOW	GH74-28397A
MPR-TAPE MAIN WINDOW WATER	GH74-28420A
AS-IC-MCP UMTS	GH81-05913A

5-3. Disassembly

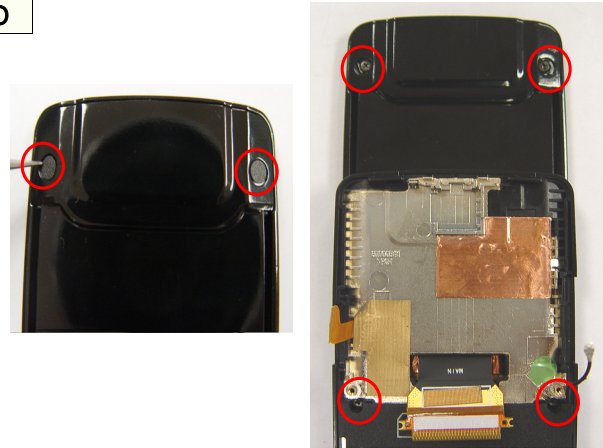
<p>1</p> 	<p>2</p> 
<p>Unscrew 4 places of the Rear. * caution 1) Attention, Avoid scratching 2) using the star driver</p>	<p>1) Open the lower part of Rear using stick for disassembly. And With the picture it disassemble in same order (And disassemble in order such as the picture) * caution 1) Attention, Avoid scratching</p>
<p>3</p> 	
<p>1) After remove the green tape, disassemble the 3*4 connector 2) After disassemble the CAM KEY FPCB using tweezers, 3*4 key FPCB is located in CAM KEY FPCB behind. 3) Disassemble VOL KEY FPCB using tweezers. 4) Disassemble INTENNA WIRE using tweezers. 5) Softly lift the CAMERA using tweezers. * caution 1) When moving the position of the 3*4 KEY CONNECTOR FPCB and CAM KEY FPCB, attention for the FPCB not to be damaged, 2) When disassembling INTENNA WIRE, attention for the end of the WIRE not to be bend.</p>	

4



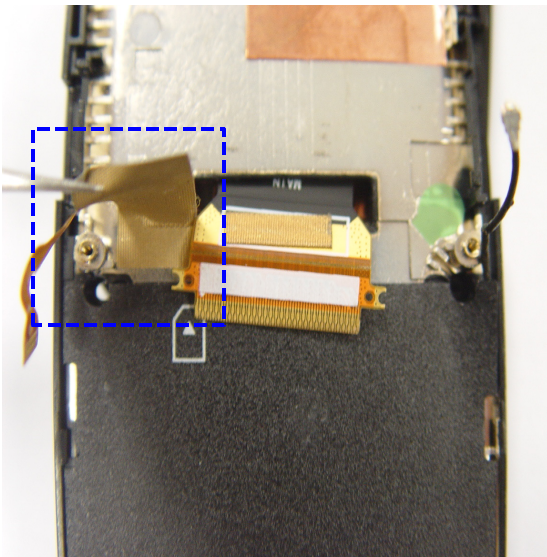
- 1) Remove a green insulation Tape on the FPCB Connector using tweezers.
 - 2) Open the cover of the Connector and pull out the Slide FPCB carefully in the PBA.
- * caution**
- 1) Attention not to be get the crack

5



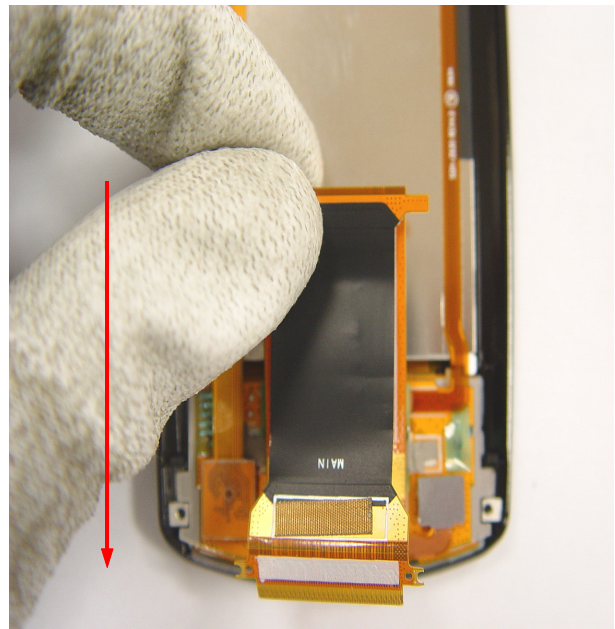
- 1) Remove the Screw Cap
 - 2) Unscrew 4 places of Front
- * caution**
- 1) Attention, SET does not occur scratch
 - 2) Using the a screwdriver

6

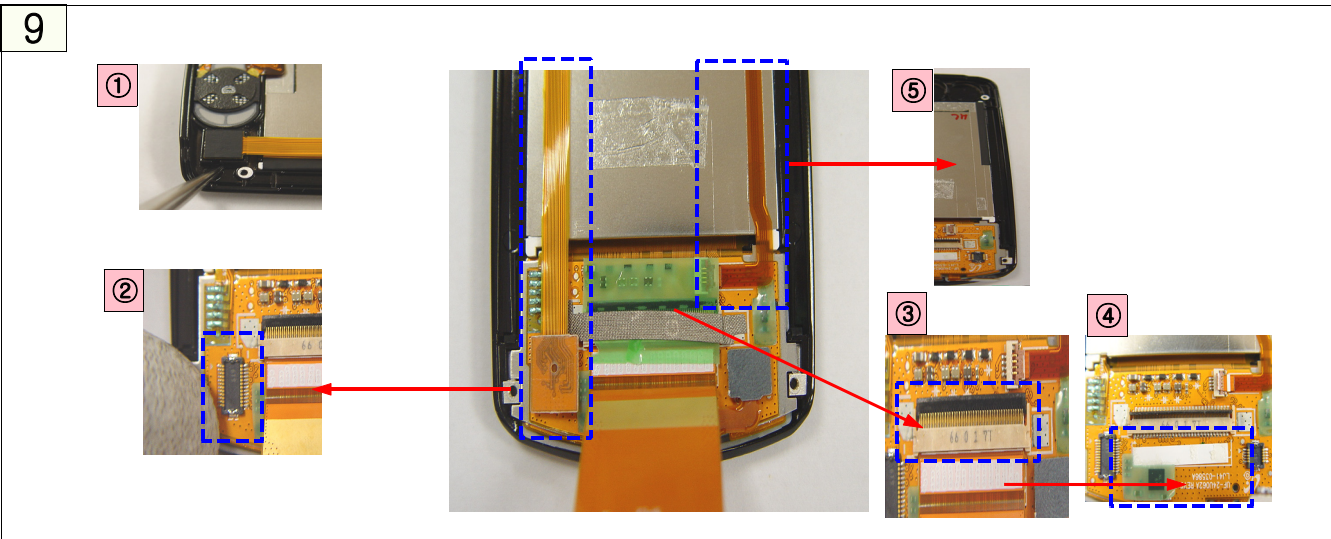


- 1) Softly remove tape using tweezers, FPCB and in tape internal it pulls out Extract FPCB to TAPE inside after lift TAPE using tweezers
- * caution**
- 1) When pulling out the FPCB on LCD, not to be bend.

7



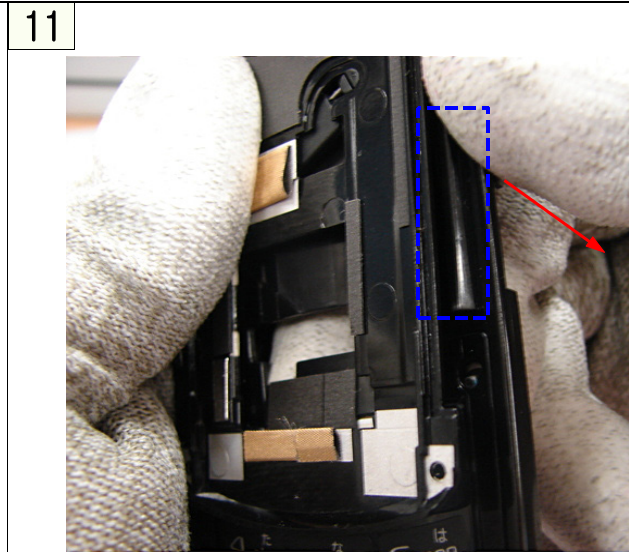
- 2) Remove bronze cover tape, FPCB take off in lower such as the picture
- * caution**
- 1) When pulling out the FPCB on LCD, not to be bend.



- 1),2) Remove VGA CAM such as pictures using tweezers, disassemble connector of the bottom
- 3) Remove tape in FPCB connector using tweezers
- 3),4) After lift connector pin, disassemble FPCB using tweezers
- 5) Remove SPK,MOT ASS'Y using tweezers
- * caution**
- 1) When disassemble VGA CAMERA using tweezers, attention not to be get the crack
- 2) Attention not to be get the damage
- 3) When disassemble LCD FPCB, using tweezers not to be get the crack

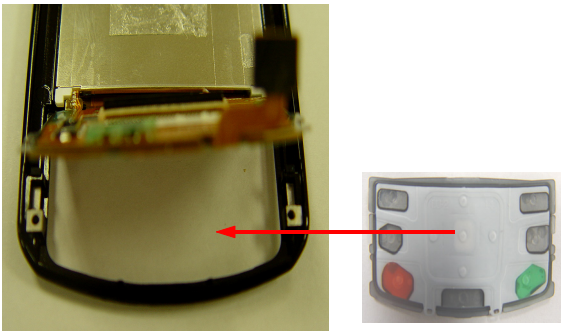
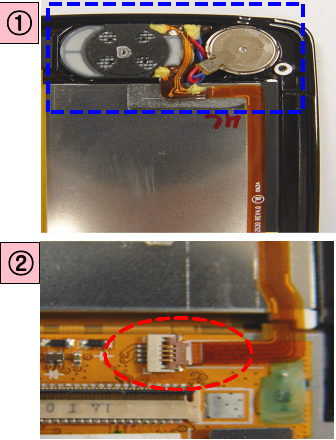
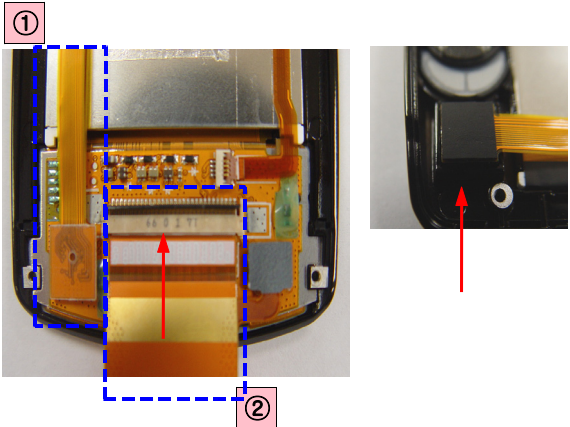
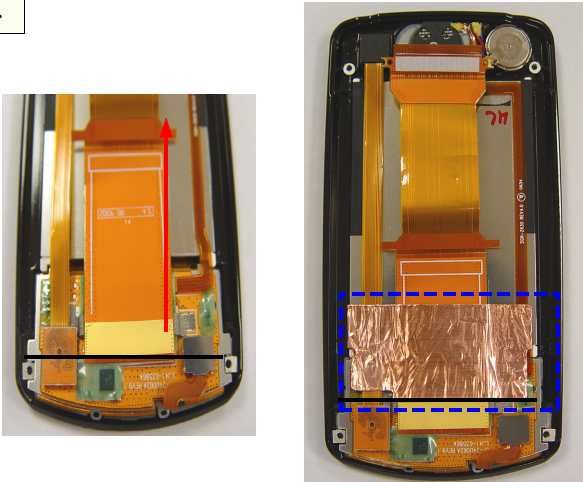






- 1) Downing lower such as picture
- * caution**
- 1) Attention, Avoid scratching.



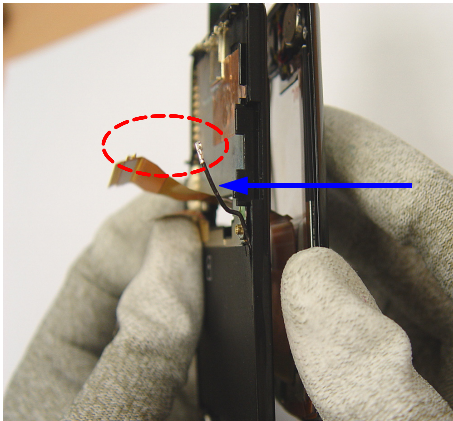
- 1) With right hand thumb it hands down the LOWER in the lower part and the FRONT and it disjoints.
- * caution**
- 1) With the picture together it catches the portion which is to the dotted line which is a blue
- 2) Attention, Avoid scratching.

5-4. Assembly

<p>1</p> 	<p>2</p> 
<p>1) With the picture 3*4 key arrives safely the UPPER</p> <p>* caution</p> <p>1) 3*4 KEY`s hole in lower to be in contact in the UPPER, arrives safely.</p>	<p>1) The SPK arriving safely first it arrives safely the MOT after. It follows the line which is coming to carve the FPCB in the LCD and it arrives safely.</p> <p>2) It inserts the FPCB in CONNECTOR portion</p> <p>* caution</p> <p>1) The MOT&SPK the ASS'Y should have arrived safely completely in shooting out, it is confirmed.</p> <p>2) In order for the FPCB not to be the crack the branch, it arrives safely.</p>
<p>3</p> 	<p>4</p> 
<p>1) VGA CAMERA arrives like picture</p> <p>2) LCD FPCB insult connector</p> <p>* caution</p> <p>1) Attention, SET does not occur scratch</p> <p>2) Attention LCD FPCB not to be get the crack</p>	<p>1) Line in the lower part in standard, it raises the FPCB</p> <p>2) With the picture Bronze cover TAPE attaches onthe black line that is standard</p> <p>* caution</p> <p>1) Attention LCD FPCB not to be get the crack</p>

<p>5</p> 	<p>6</p> 
<p>1) The PUSH LOADER with the picture it arrives safely to the FRONT. * caution 1) Attention, SET does not occur scratch</p>	<p>1) With the picture the LOWER inserts in PUSH LOADER. * caution 1) Attention, SET does not occur scratch</p>
<p>7</p> 	<p>8</p> 
<p>1) With the picture together right side insert in FRONT shooting out. * caution 1) Attention, SET does not occur scratch</p>	<p>1) With the picture it hands down the FRONT left side side together by the left hand and it inserts the LOWER. * caution 1) Attention, SET does not occur scratch</p>

9

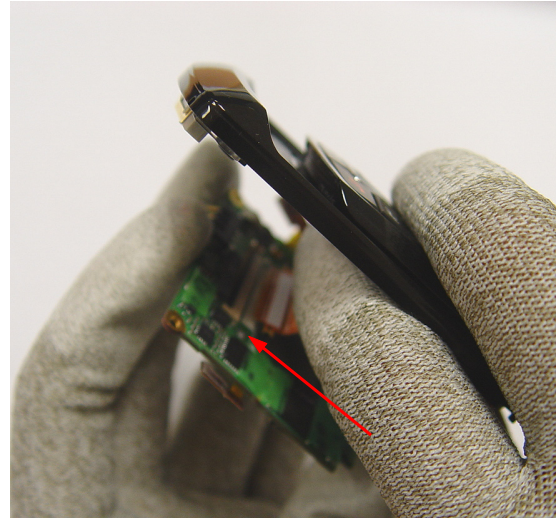


1) It combines the UPPER ASS'Y which in the LOWER it assembles rom before.
(Combination hour you must put out the TAPE which is sticking in 3*4KEY FPCB and it must combine and LCD FPCB enters well).

*** caution**

1) Attention FPCB not to be get the crack
It combines the UPPER ASS'Y which in the LOWER it assembles from before

10

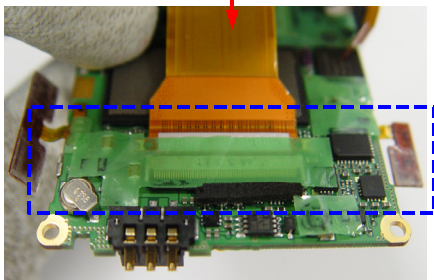
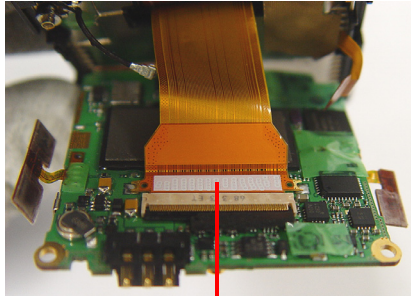


1) With the picture it catches the FPCB of the ASS'Y which it assembles in 5 procedure, it combines in the PBA CONNECTOR

*** caution**

1) Attention FPCB not to be get the crack

11

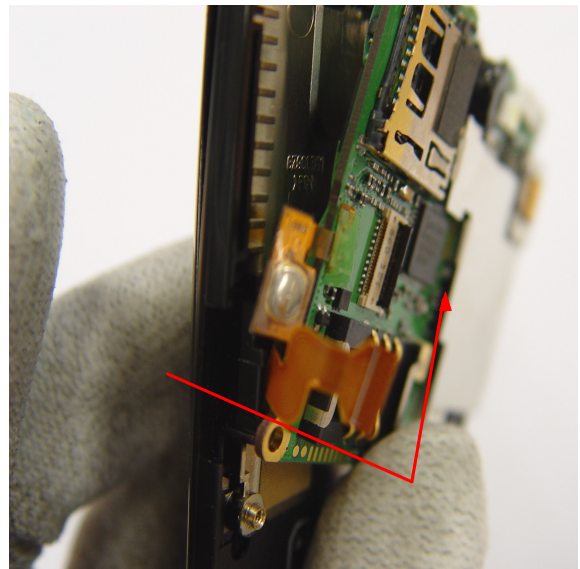


1) The FPCB CONNECTOR closes and green insulation TAPE with the picture it attaches in same location.

*** caution**

1) The green insulation TAPE attaches rightly in top part of the PORON.

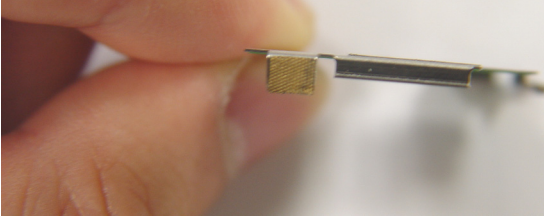
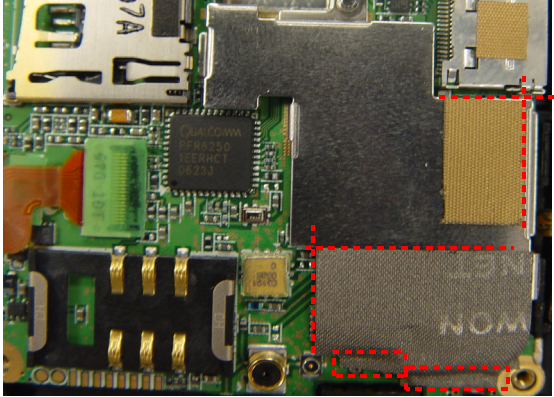
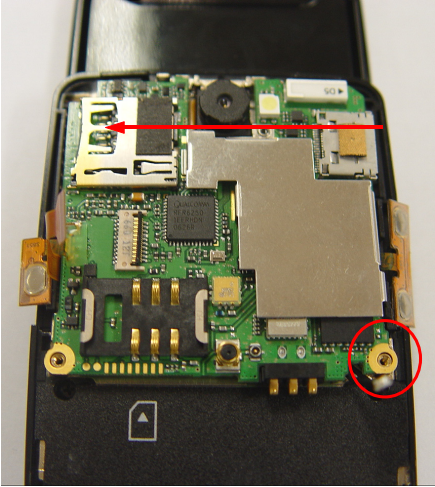
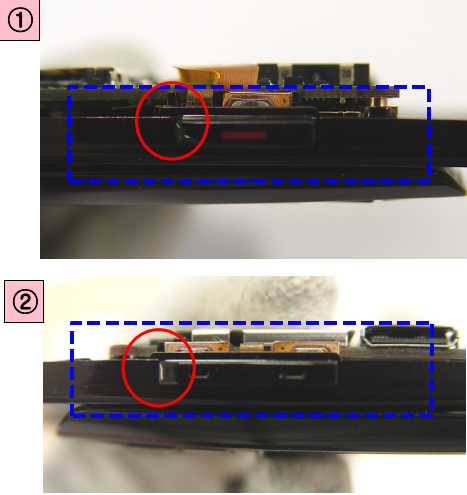
12

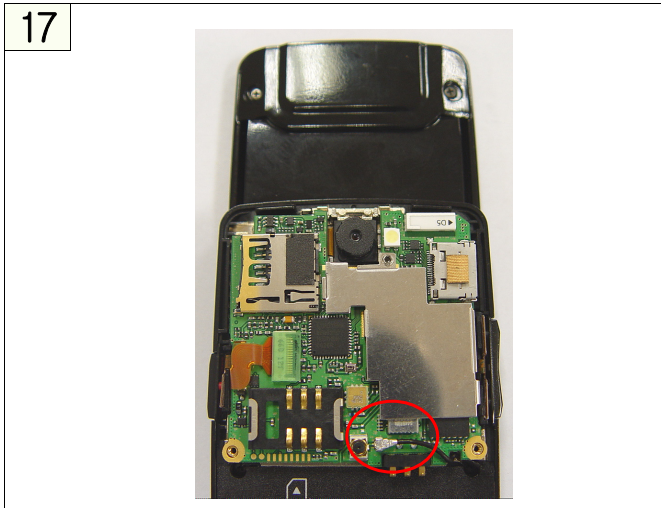


1) The CAM FPCB go to the 3*4 KEY FPCB lower part, it assembles.

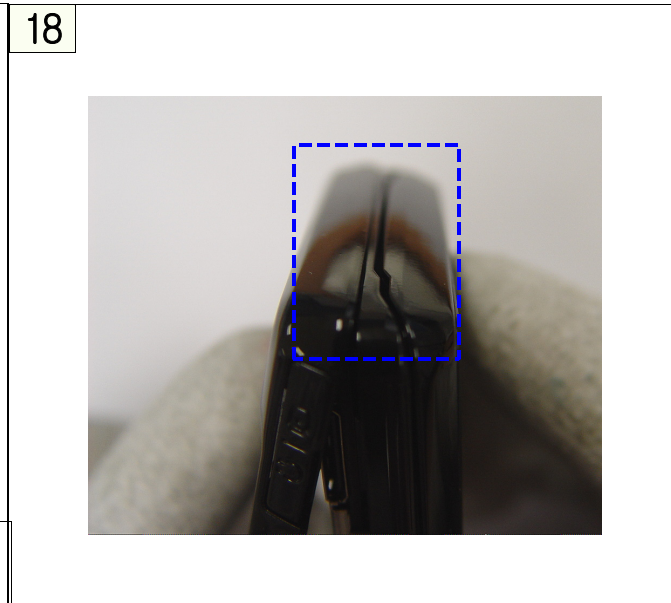
*** caution**

1) Attention FPCB of the CAMERA, LCD and VOLUME KEY not to be damage

<p>13</p> 	<p>14</p> 
<p>1) Confirm whether have attached GOLD GASKET TAPE with picture on SHIELD CAN HOOK wealth side. * caution 1)Confirmation work</p>	<p>1)Confirm SHIELD CAN whether GOLD GASKET TAPE, gray challenge TAPE with picture has attached over. * caution 1)Confirmation work</p>
<p>15</p> 	<p>16</p> 
<p>1) After arriving safely the right lower part first, board upper direction some it bends with the right and it arrives safely with the left side * caution 1) The PBA arrives safely from the condition which slide is ascending.</p>	<p>1) The CAM KEY arrives safely 2) The VOL KEY arrives safely * caution 1) The CAM, VOL KEY arrives safely. in order for the to be only caught the FRONT upper</p>



- 1) INTENNA arrives safely using tweezers
- * **caution**
- 1) When insert, INTENNA is located in the center so that INTENNA CABLE don't touch BAT CONNECTOR of bottom

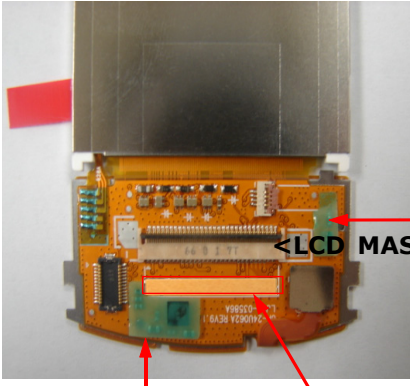
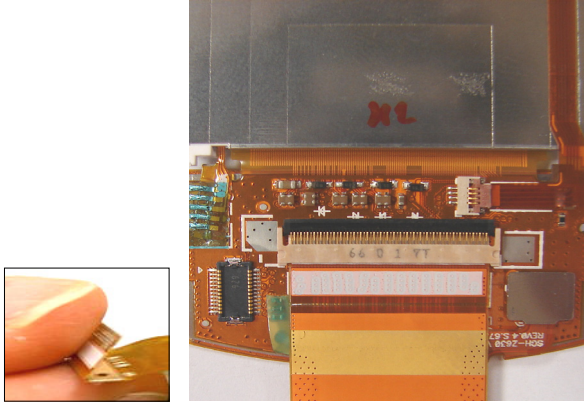
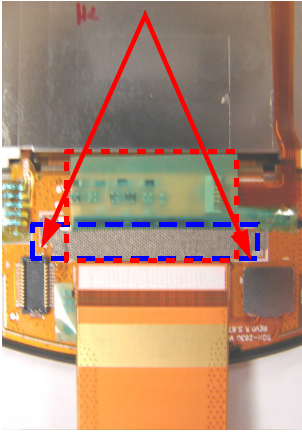
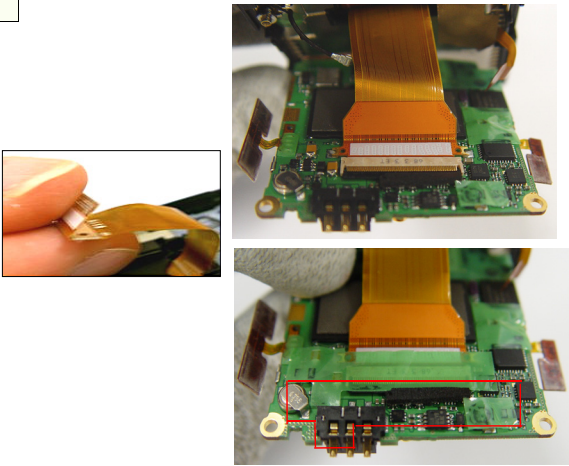


- 1) First, lock the top portion Hook.
- * **caution**
- 1) tention, SET does not occur scratch

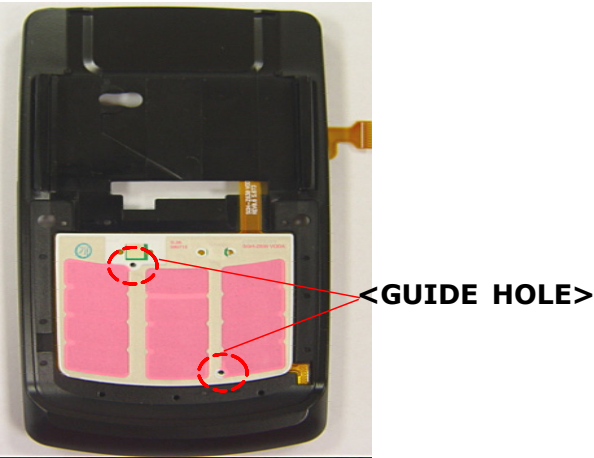


- 1) Screw the 4 star screws.
- * **caution**
- 1) Use the star-driver.

5-5. LCD KIT

<p>1</p>  <p><LCD MASKING TAPE B></p> <p><SLIDE FPCB MASKING TAPE></p> <p><LCD MASKING TAPE A></p>	<p>2</p> 
<p>1) Attach the MASKING TAPE A,B on LDI 2) Attach the SLIDE FPCB MASKING TAPE</p> <p>* caution</p> <p>1) The TAPE when attaching, it considers to the guide line of the picture and it attaches.</p>	<p>1) With the picture it inserts the FPCB * caution</p> <p>1) Attention. Don't crumple or crack the FPCB</p>
<p>3</p> <p>< Attach closely ></p> 	<p>4</p> 
<p>1) With the picture it attaches green insulation TAPE 2) With the picture it attaches silver electric conduction TAPE.</p> <p>* caution</p> <p>1) The TAPE when attaching, it considers to the guide line of the picture and it attaches. 2) Attach closely the silver electric conduction TAPE on the bottom.</p>	<p>1) With the picture it inserts FPCB in CONNECTOR after fold up edge of FPCB. 2) With the picture it attaches green insulation Tape.</p> <p>* caution</p> <p>1) Attention. Don't crumple or crack FPCB 2) The TAPE when attaching, it considers to the guide line of the picture and it attaches.</p>

5

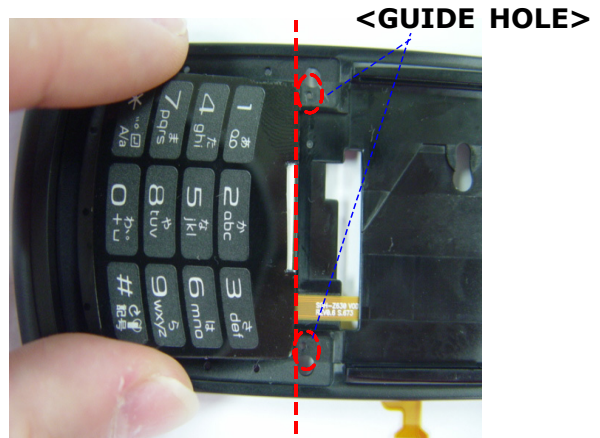


1) Insert the FPCB of MIC in front right side lower hole and Attach the 3*4 KEY PCB In 3*4 KEY safe arrival surface of FRONT

*** caution**

1) The TAPE when attaching, it considers to the guide line of the picture and it attaches.

6

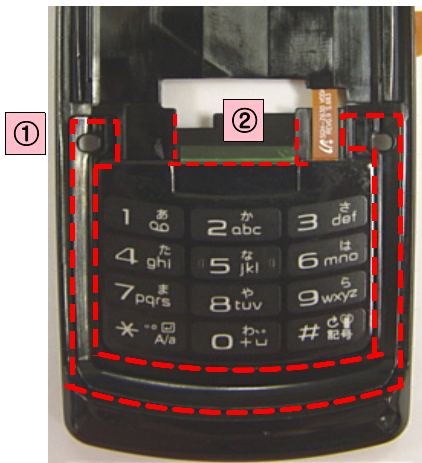


1) With the picture it attaches 3*4 KEY PAD

*** caution**

1) Attach the 3*4 KEY PAD according to GUIDE HOLE.

7



1) With the picture it assembles FRONT BRACKET .

2) With the picture which attach a green insulation 3*4 KEY NOISE Tape in same location.

*** caution**

1) The TAPE when attaching, it considers to the guide line of the picture and it attaches.

6. MAIN Electrical Parts List

SEC CODE	Design LOC	Description	STATUS
0403-001511	ZD540	DIODE-ZENER	SA
0403-001547	ZD204	DIODE-ZENER	SA
0404-001172	D100	DIODE-SCHOTTKY	SA
0404-001172	D101	DIODE-SCHOTTKY	SA
0404-001172	D102	DIODE-SCHOTTKY	SA
0406-001190	ZD201	DIODE-TVS	SA
0406-001190	ZD202	DIODE-TVS	SA
0406-001190	ZD203	DIODE-TVS	SA
0407-001002	D500	DIODE-ARRAY	SA
0504-001113	TR101	TR-DIGITAL	SA
0504-001113	TR502	TR-DIGITAL	SA
0504-001151	U701	TR-DIGITAL	SA
0505-001889	U502	FET-SILICON	SA
0601-001909	LED400	LED	SA
0801-002995	U406	IC-CMOS LOGIC	SA
1001-001414	U304	IC-ANALOG SWITCH	SA
1001-001414	U305	IC-ANALOG SWITCH	SA
1003-001716	U504	IC-EL DRIVER	SA
1006-001322	U102	IC-LINE TRANSCEIVER	SA
1108-000071	UME400	IC-MCP	SA
1201-002195	U303	IC-AUDIO AMP	SA
1201-002240	U302	IC-AUDIO AMP	SA
1201-002288	PAM600	IC-POWER AMP	SA
1201-002347	PAM700	IC-POWER AMP	SA
1203-003046	U403	IC-BATTERY	SA
1203-003523	U200	IC-POSI.FIXED REG.	SA
1203-003531	U505	IC-POSI.FIXED REG.	SA
1203-003728	U501	IC-VOL. DETECTOR	SA
1203-003742	U405	IC-BATTERY	SA
1203-003754	U508	IC-POSI.FIXED REG.	SA
1203-004102	U503	IC-POWER SUPERVISOR	SA
1203-004394	U404	IC-MULTI REG.	SA
1203-004473	U401	IC-POSI.FIXED REG.	SA
1204-002138	U301	IC-MELODY	SA
1205-002568	U507	IC-SWITCH	SA
1205-002645	U601	IC-TRANSCEIVER	SA
1205-002781	U700	IC-RECEIVER	SA

Main Electrical Parts List

SEC CODE	Design LOC	Discription	STATUS
1205-002790	UCP101	IC-MODEM	SA
1209-001577	U702	IC-DETECTOR	SA
1209-001615	U103	IC-SENSOR	SA
1404-001224	VR100	THERMISTOR-NTC	SA
1405-001108	VR101	VARISTOR	SA
1405-001108	VR201	VARISTOR	SA
1405-001108	VR202	VARISTOR	SA
1405-001108	VR203	VARISTOR	SA
1405-001108	VR204	VARISTOR	SA
1405-001108	VR205	VARISTOR	SA
1405-001108	VR206	VARISTOR	SA
1405-001108	VR207	VARISTOR	SA
1405-001108	VR215	VARISTOR	SA
1405-001108	VR217	VARISTOR	SA
1405-001108	VR400	VARISTOR	SA
1405-001108	VR401	VARISTOR	SA
2007-000140	R203	R-CHIP	SA
2007-000145	R616	R-CHIP	SA
2007-000148	R511	R-CHIP	SA
2007-000151	R578	R-CHIP	SA
2007-000156	R413	R-CHIP	SA
2007-000157	R538	R-CHIP	SA
2007-000162	R412	R-CHIP	SA
2007-000171	R200	R-CHIP	SA
2007-000171	R232	R-CHIP	SA
2007-000171	R442	R-CHIP	SA
2007-000171	R702	R-CHIP	SA
2007-000242	R371	R-CHIP	SA
2007-000242	R372	R-CHIP	SA
2007-000690	R569	R-CHIP	SA
2007-000758	R501	R-CHIP	SA
2007-001119	R376	R-CHIP	SA
2007-001292	R612	R-CHIP	SA
2007-001313	R607	R-CHIP	SA
2007-001329	R201	R-CHIP	SA
2007-003022	R436	R-CHIP	SA
2007-003022	R437	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2007-003030	R374	R-CHIP	SA
2007-007014	R872	R-CHIP	SA
2007-007142	R510	R-CHIP	SA
2007-007306	R701	R-CHIP	SA
2007-007306	R870	R-CHIP	SA
2007-007313	R119	R-CHIP	SA
2007-007318	R104	R-CHIP	SA
2007-007318	R606	R-CHIP	SA
2007-007318	R700	R-CHIP	SA
2007-007468	R513	R-CHIP	SA
2007-007491	R603	R-CHIP	SA
2007-007491	R704	R-CHIP	SA
2007-007798	R610	R-CHIP	SA
2007-008045	R233	R-CHIP	SA
2007-008045	R604	R-CHIP	SA
2007-008045	R611	R-CHIP	SA
2007-008045	R617	R-CHIP	SA
2007-008045	R619	R-CHIP	SA
2007-008045	R703	R-CHIP	SA
2007-008049	R105	R-CHIP	SA
2007-008051	R308	R-CHIP	SA
2007-008051	R613	R-CHIP	SA
2007-008052	R215	R-CHIP	SA
2007-008052	R602	R-CHIP	SA
2007-008053	R326	R-CHIP	SA
2007-008053	R327	R-CHIP	SA
2007-008053	R332	R-CHIP	SA
2007-008053	R333	R-CHIP	SA
2007-008054	R213	R-CHIP	SA
2007-008054	R214	R-CHIP	SA
2007-008055	R212	R-CHIP	SA
2007-008055	R217	R-CHIP	SA
2007-008055	R223	R-CHIP	SA
2007-008055	R873	R-CHIP	SA
2007-008161	R609	R-CHIP	SA
2007-008213	R605	R-CHIP	SA
2007-008297	R120	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2007-008419	R202	R-CHIP	SA
2007-008419	R227	R-CHIP	SA
2007-008419	R228	R-CHIP	SA
2007-008483	R130	R-CHIP	SA
2007-008483	R136	R-CHIP	SA
2007-008483	R805	R-CHIP	SA
2007-008516	R107	R-CHIP	SA
2007-008516	R108	R-CHIP	SA
2007-008516	R113	R-CHIP	SA
2007-008516	R204	R-CHIP	SA
2007-008516	R205	R-CHIP	SA
2007-008516	R206	R-CHIP	SA
2007-008516	R207	R-CHIP	SA
2007-008516	R210	R-CHIP	SA
2007-008516	R231	R-CHIP	SA
2007-008516	R378	R-CHIP	SA
2007-008516	R379	R-CHIP	SA
2007-008516	R404	R-CHIP	SA
2007-008531	R346	R-CHIP	SA
2007-008531	R347	R-CHIP	SA
2007-008531	R620	R-CHIP	SA
2007-008531	R706	R-CHIP	SA
2007-008531	R707	R-CHIP	SA
2007-008542	R101	R-CHIP	SA
2007-008542	R302	R-CHIP	SA
2007-008542	R303	R-CHIP	SA
2007-008542	R309	R-CHIP	SA
2007-008542	R579	R-CHIP	SA
2007-008542	R601	R-CHIP	SA
2007-008542	R621	R-CHIP	SA
2007-008579	R614	R-CHIP	SA
2007-008579	R615	R-CHIP	SA
2007-008581	R608	R-CHIP	SNA
2007-008587	R307	R-CHIP	SA
2007-008587	R339	R-CHIP	SA
2007-008588	R125	R-CHIP	SA
2007-008588	R126	R-CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2007-008588	R600	R-CHIP	SA
2007-008648	R411	R-CHIP	SA
2007-008648	R439	R-CHIP	SA
2007-008648	R443	R-CHIP	SA
2007-008648	R871	R-CHIP	SA
2007-008806	R512	R-CHIP	SA
2007-008806	R618	R-CHIP	SA
2007-008808	R580	R-CHIP	SA
2007-009157	R109	R-CHIP	SA
2007-009157	R133	R-CHIP	SA
2007-009170	R106	R-CHIP	SA
2007-009170	R111	R-CHIP	SA
2007-009170	R211	R-CHIP	SA
2007-009223	R208	R-CHIP	SA
2007-009233	R401	R-CHIP	SA
2007-009233	R410	R-CHIP	SA
2007-009233	R438	R-CHIP	SA
2007-009314	R400	R-CHIP	SA
2007-009314	R440	R-CHIP	SA
2007-009314	R441	R-CHIP	SA
2203-000233	C507	C-CER,CHIP	SA
2203-000233	C734	C-CER,CHIP	SA
2203-000254	C702	C-CER,CHIP	SA
2203-000254	C870	C-CER,CHIP	SA
2203-000438	C201	C-CER,CHIP	SA
2203-000489	C125	C-CER,CHIP	SA
2203-000627	C525	C-CER,CHIP	SNA
2203-000627	C526	C-CER,CHIP	SNA
2203-000812	C200	C-CER,CHIP	SA
2203-000812	C373	C-CER,CHIP	SA
2203-000812	C573	C-CER,CHIP	SA
2203-000812	C646	C-CER,CHIP	SA
2203-000812	C703	C-CER,CHIP	SA
2203-000812	C708	C-CER,CHIP	SA
2203-000812	C800	C-CER,CHIP	SA
2203-000995	C139	C-CER,CHIP	SA
2203-000995	C377	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2203-000995	C378	C-CER,CHIP	SA
2203-000995	C705	C-CER,CHIP	SA
2203-001072	C598	C-CER,CHIP	SA
2203-001153	C544	C-CER,CHIP	SA
2203-001259	C721	C-CER,CHIP	SA
2203-001383	C877	C-CER,CHIP	SA
2203-001405	C207	C-CER,CHIP	SA
2203-001405	C233	C-CER,CHIP	SA
2203-001405	C234	C-CER,CHIP	SA
2203-001405	C375	C-CER,CHIP	SA
2203-001405	C376	C-CER,CHIP	SA
2203-002443	C635	C-CER,CHIP	SA
2203-002668	C647	C-CER,CHIP	SA
2203-002709	C358	C-CER,CHIP	SA
2203-002709	C359	C-CER,CHIP	SA
2203-002709	C388	C-CER,CHIP	SA
2203-002709	C542	C-CER,CHIP	SA
2203-002709	C556	C-CER,CHIP	SA
2203-002709	C717	C-CER,CHIP	SA
2203-003019	C597	C-CER,CHIP	SA
2203-005053	C609	C-CER,CHIP	SA
2203-005053	C715	C-CER,CHIP	SA
2203-005053	C722	C-CER,CHIP	SA
2203-005390	C706	C-CER,CHIP	SA
2203-005395	C704	C-CER,CHIP	SA
2203-005450	C602	C-CER,CHIP	SA
2203-005682	C235	C-CER,CHIP	SA
2203-005682	C552	C-CER,CHIP	SA
2203-005682	C571	C-CER,CHIP	SA
2203-005682	C600	C-CER,CHIP	SA
2203-005682	C605	C-CER,CHIP	SA
2203-005682	C615	C-CER,CHIP	SA
2203-005682	C631	C-CER,CHIP	SA
2203-005682	C729	C-CER,CHIP	SA
2203-005682	C730	C-CER,CHIP	SA
2203-005682	C731	C-CER,CHIP	SA
2203-005682	C804	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2203-005682	C806	C-CER,CHIP	SA
2203-005682	C808	C-CER,CHIP	SA
2203-005682	C809	C-CER,CHIP	SA
2203-005717	C381	C-CER,CHIP	SA
2203-005717	C382	C-CER,CHIP	SA
2203-005729	C122	C-CER,CHIP	SA
2203-005729	C123	C-CER,CHIP	SA
2203-005729	C642	C-CER,CHIP	SA
2203-005729	C643	C-CER,CHIP	SA
2203-005732	C610	C-CER,CHIP	SA
2203-005736	C629	C-CER,CHIP	SA
2203-005736	C640	C-CER,CHIP	SA
2203-005736	C711	C-CER,CHIP	SA
2203-005736	C716	C-CER,CHIP	SA
2203-005736	C718	C-CER,CHIP	SA
2203-005736	C726	C-CER,CHIP	SA
2203-005736	C728	C-CER,CHIP	SA
2203-005777	C818	C-CER,CHIP	SA
2203-005789	C819	C-CER,CHIP	SA
2203-005806	C102	C-CER,CHIP	SNA
2203-005806	C103	C-CER,CHIP	SNA
2203-005806	C105	C-CER,CHIP	SNA
2203-005806	C106	C-CER,CHIP	SNA
2203-005806	C107	C-CER,CHIP	SNA
2203-005806	C108	C-CER,CHIP	SNA
2203-005806	C113	C-CER,CHIP	SNA
2203-005806	C114	C-CER,CHIP	SNA
2203-005806	C118	C-CER,CHIP	SNA
2203-005806	C119	C-CER,CHIP	SNA
2203-005806	C144	C-CER,CHIP	SNA
2203-005806	C192	C-CER,CHIP	SNA
2203-005806	C193	C-CER,CHIP	SNA
2203-005806	C311	C-CER,CHIP	SNA
2203-005806	C402	C-CER,CHIP	SNA
2203-005806	C403	C-CER,CHIP	SNA
2203-005806	C511	C-CER,CHIP	SNA
2203-005806	C512	C-CER,CHIP	SNA

Main Electrical Parts List

SEC CODE	Design LOC	Discription	STATUS
2203-005806	C523	C-CER,CHIP	SNA
2203-005806	C626	C-CER,CHIP	SNA
2203-005806	C630	C-CER,CHIP	SNA
2203-005806	C641	C-CER,CHIP	SNA
2203-005806	C714	C-CER,CHIP	SNA
2203-005806	C872	C-CER,CHIP	SNA
2203-005808	C400	C-CER,CHIP	SA
2203-005808	C401	C-CER,CHIP	SA
2203-005808	C407	C-CER,CHIP	SA
2203-005808	C608	C-CER,CHIP	SA
2203-005808	C614	C-CER,CHIP	SA
2203-005808	C710	C-CER,CHIP	SA
2203-006048	C211	C-CER,CHIP	SA
2203-006048	C500	C-CER,CHIP	SA
2203-006048	C509	C-CER,CHIP	SA
2203-006048	C510	C-CER,CHIP	SA
2203-006048	C524	C-CER,CHIP	SA
2203-006048	C527	C-CER,CHIP	SA
2203-006048	C536	C-CER,CHIP	SA
2203-006048	C538	C-CER,CHIP	SA
2203-006048	C555	C-CER,CHIP	SA
2203-006194	C130	C-CER,CHIP	SA
2203-006194	C148	C-CER,CHIP	SA
2203-006194	C205	C-CER,CHIP	SA
2203-006194	C611	C-CER,CHIP	SA
2203-006194	C613	C-CER,CHIP	SA
2203-006194	C616	C-CER,CHIP	SA
2203-006194	C633	C-CER,CHIP	SA
2203-006194	C733	C-CER,CHIP	SA
2203-006260	C449	C-CER,CHIP	SA
2203-006305	C617	C-CER,CHIP	SA
2203-006305	C619	C-CER,CHIP	SA
2203-006324	C648	C-CER,CHIP	SA
2203-006324	C701	C-CER,CHIP	SA
2203-006361	C540	C-CER,CHIP	SA
2203-006379	C621	C-CER,CHIP	SA
2203-006423	C100	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2203-006423	C101	C-CER,CHIP	SA
2203-006423	C109	C-CER,CHIP	SA
2203-006423	C110	C-CER,CHIP	SA
2203-006423	C111	C-CER,CHIP	SA
2203-006423	C115	C-CER,CHIP	SA
2203-006423	C117	C-CER,CHIP	SA
2203-006423	C120	C-CER,CHIP	SA
2203-006423	C133	C-CER,CHIP	SA
2203-006423	C138	C-CER,CHIP	SA
2203-006423	C141	C-CER,CHIP	SA
2203-006423	C142	C-CER,CHIP	SA
2203-006423	C147	C-CER,CHIP	SA
2203-006423	C158	C-CER,CHIP	SA
2203-006423	C177	C-CER,CHIP	SA
2203-006423	C190	C-CER,CHIP	SA
2203-006423	C194	C-CER,CHIP	SA
2203-006423	C197	C-CER,CHIP	SA
2203-006423	C198	C-CER,CHIP	SA
2203-006423	C303	C-CER,CHIP	SA
2203-006423	C306	C-CER,CHIP	SA
2203-006423	C310	C-CER,CHIP	SA
2203-006423	C312	C-CER,CHIP	SA
2203-006423	C332	C-CER,CHIP	SA
2203-006423	C389	C-CER,CHIP	SA
2203-006423	C448	C-CER,CHIP	SA
2203-006423	C469	C-CER,CHIP	SA
2203-006423	C541	C-CER,CHIP	SA
2203-006423	C620	C-CER,CHIP	SA
2203-006423	C625	C-CER,CHIP	SA
2203-006423	C628	C-CER,CHIP	SA
2203-006423	C712	C-CER,CHIP	SA
2203-006423	C713	C-CER,CHIP	SA
2203-006423	C719	C-CER,CHIP	SA
2203-006423	C720	C-CER,CHIP	SA
2203-006423	C803	C-CER,CHIP	SA
2203-006426	C724	C-CER,CHIP	SNA
2203-006462	C129	C-CER,CHIP	SA

SEC CODE	Design LOC	Discription	STATUS
2203-006556	C208	C-CER,CHIP	SA
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2203-006556	C624	C-CER,CHIP	SA
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2203-006562	C116	C-CER,CHIP	SA
2203-006562	C159	C-CER,CHIP	SA
2203-006562	C196	C-CER,CHIP	SA
2203-006562	C323	C-CER,CHIP	SA
2203-006562	C324	C-CER,CHIP	SA
2203-006562	C333	C-CER,CHIP	SA
2203-006562	C346	C-CER,CHIP	SA
2203-006562	C348	C-CER,CHIP	SA
2203-006562	C349	C-CER,CHIP	SA
2203-006562	C350	C-CER,CHIP	SA
2203-006562	C356	C-CER,CHIP	SA
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2203-006562	C521	C-CER,CHIP	SA
2203-006562	C522	C-CER,CHIP	SA
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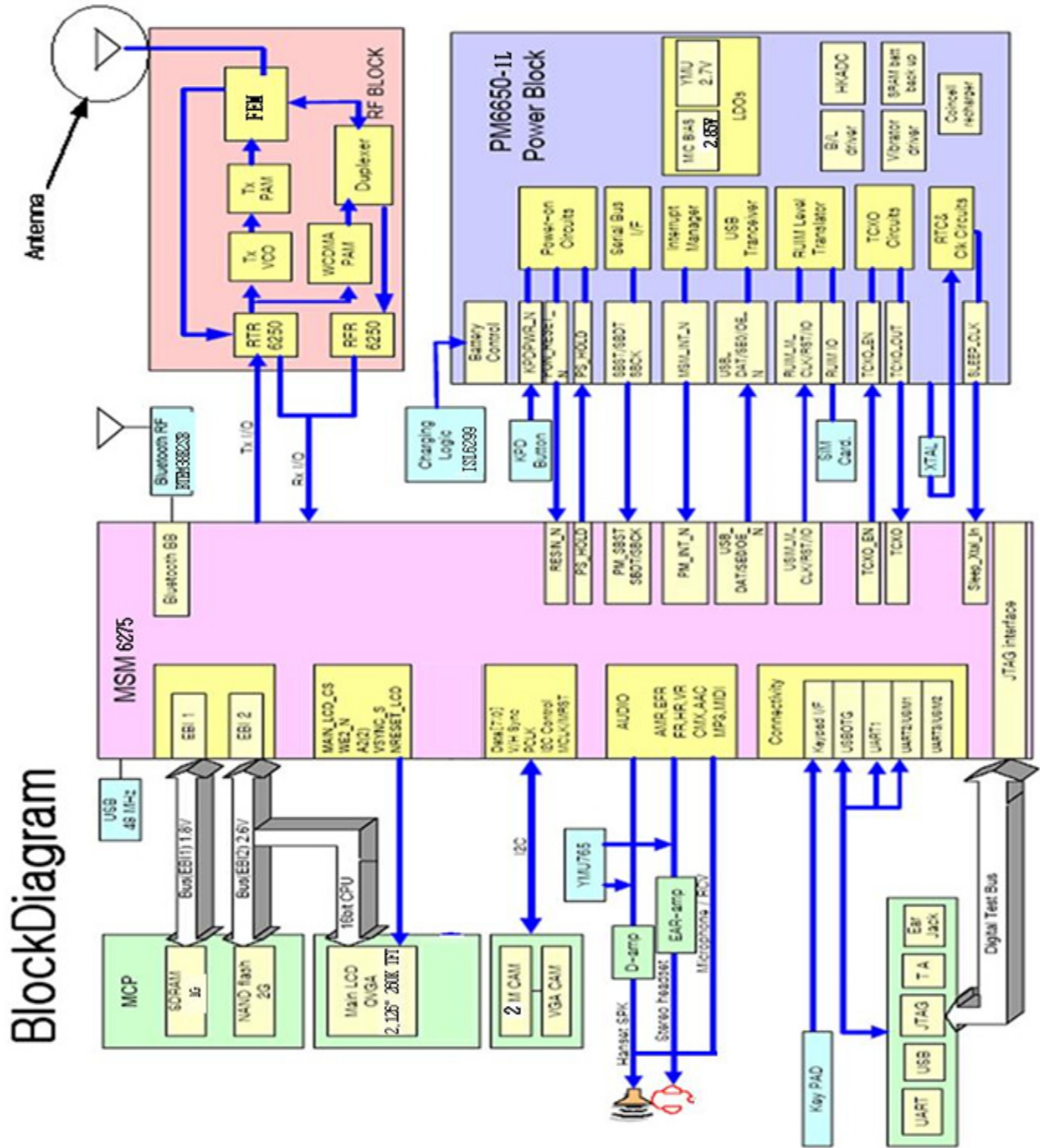
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2203-006838	C390	C-CER,CHIP	SA
2203-006838	C404	C-CER,CHIP	SA
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2203-006838	C446	C-CER,CHIP	SA
2203-006838	C447	C-CER,CHIP	SA
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2404-001352	TA372	C-TA,CHIP	SA
2404-001377	TA202	C-TA,CHIP	SA
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2703-001750	L703	INDUCTOR-SMD	SA
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2703-002795	L708	INDUCTOR-SMD	SNA
2703-002798	L807	INDUCTOR-SMD	SNA
2703-002798	L811	INDUCTOR-SMD	SNA
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2703-002798	L816	INDUCTOR-SMD	SNA
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2703-002870	L603	INDUCTOR-SMD	SA
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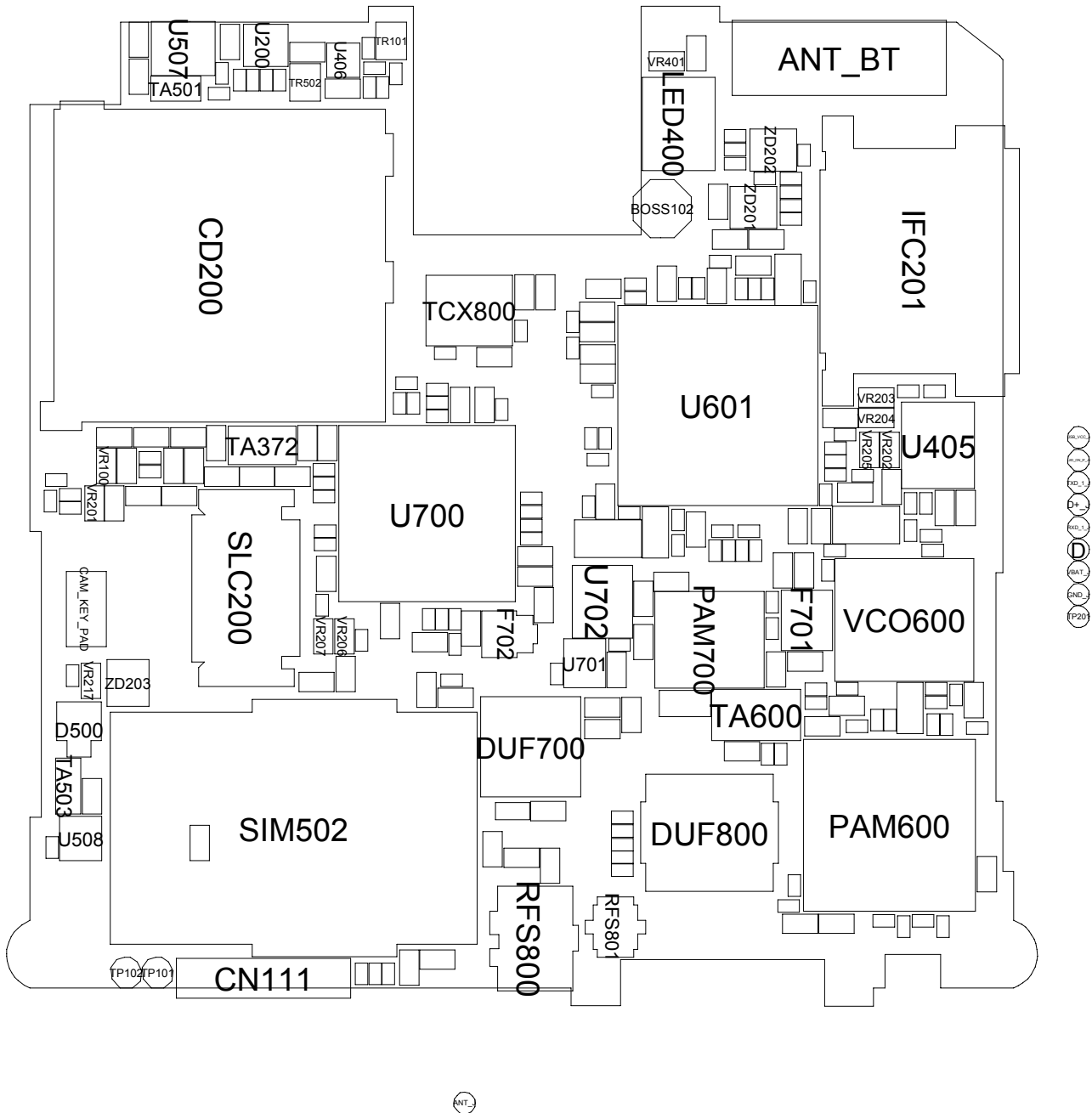
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2703-002907	L805	INDUCTOR-SMD	SNA
2703-002958	L201	INDUCTOR-SMD	SA
2703-002958	L202	INDUCTOR-SMD	SA
2801-004373	OSC501	CRYSTAL-SMD	SA
2802-001182	OSC101	RESONATOR-CERAMIC	SA
2806-001377	VCO600	OSCILLATOR-VCO	SA
2809-001312	TCX800	OSCILLATOR-VCTCXO	SA
2901-001308	F201	FILTER-EMI SMD	SA
2901-001308	F202	FILTER-EMI SMD	SA
2901-001308	F203	FILTER-EMI SMD	SA
2901-001308	F204	FILTER-EMI SMD	SA
2901-001308	F205	FILTER-EMI SMD	SA
2901-001348	F301	FILTER-EMI/ESD	SA
2904-001622	F702	FILTER-SAW	SA
2904-001704	F701	FILTER-SAW	SA
2910-000010	DUF700	DUPLEXER-SAW	SA
2911-000048	DUF800	DUPLEXER-FEM	SA
3301-001342	L103	BEAD-SMD	SA
3705-001339	RFS801	CONNECTOR-COAXIAL	SNA
3705-001358	RFS800	CONNECTOR-COAXIAL	SA
3708-002170	SLC202	CONNECTOR-FPC/FFC/PIC	SA
3708-002211	SLC200	CONNECTOR-FPC/FFC/PIC	SA
3708-002211	SLC301	CONNECTOR-FPC/FFC/PIC	SA
3709-001344	CD200	CONNECTOR-CARD EDGE	SA
3709-001391	SIM502	CONNECTOR-CARD EDGE	SA
3710-002442	IFC201	SOCKET-INTERFACE	SA
3711-006003	BTC220	CONNECTOR-BATTERY	SA
4202-001173	ANT_BT	ANTENNA-CHIP	SA
4302-001130	BAT501	BATTERY-LI(2ND)	SA
4709-001398	MOD800	BLUETOOTH MODULE	SA

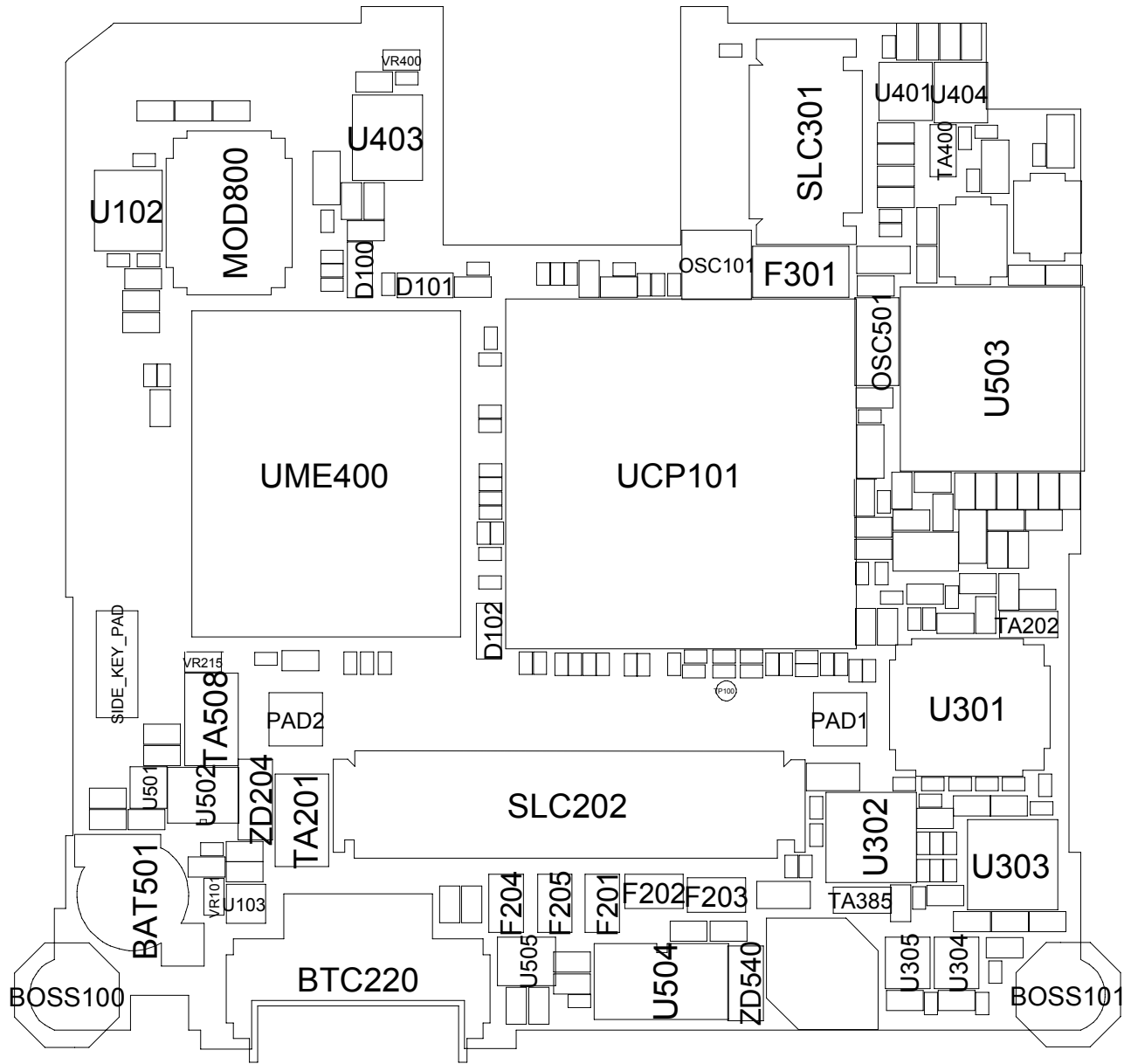
7. Block Diagrams

- RF Block Diagram



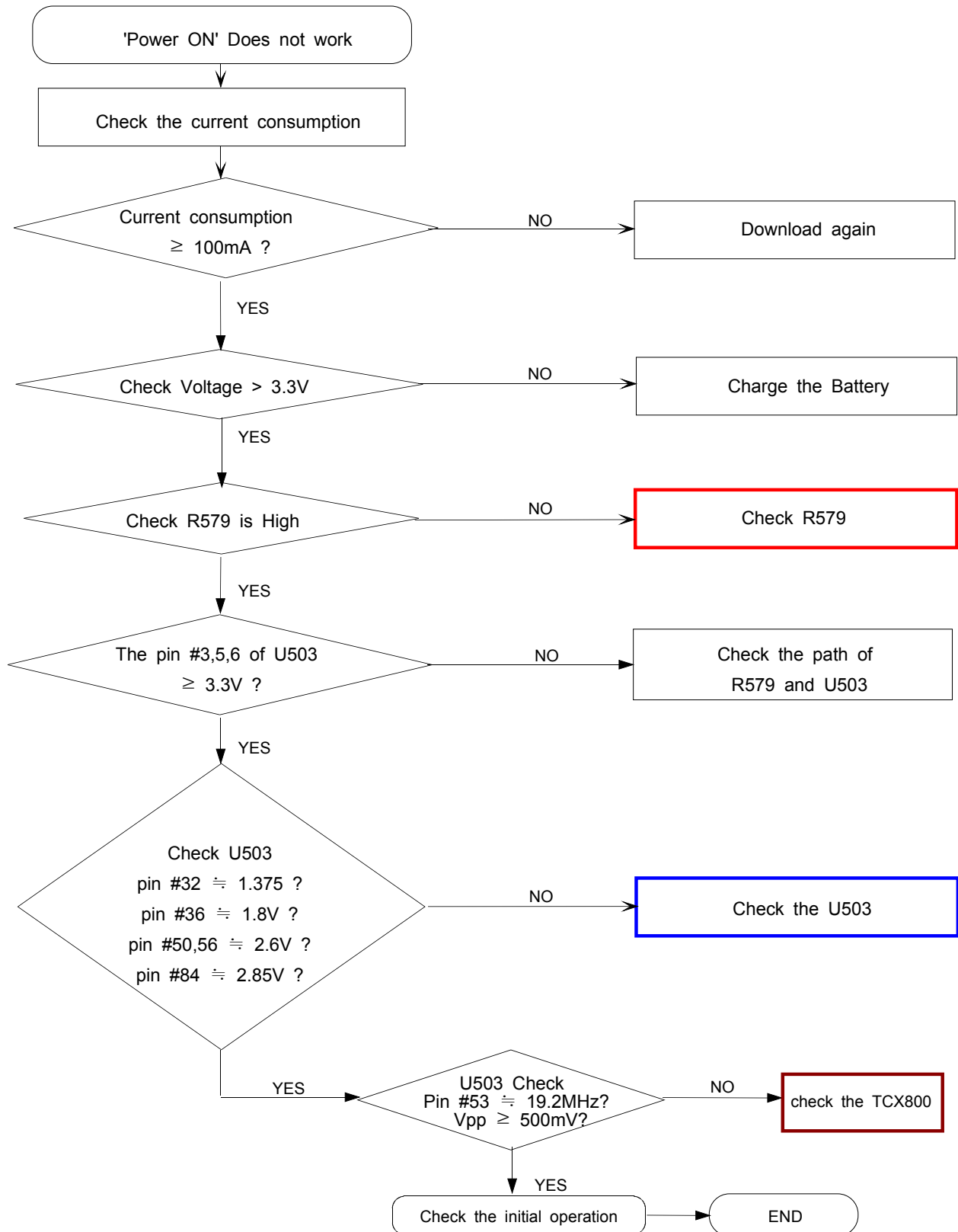
8. PCB Diagrams



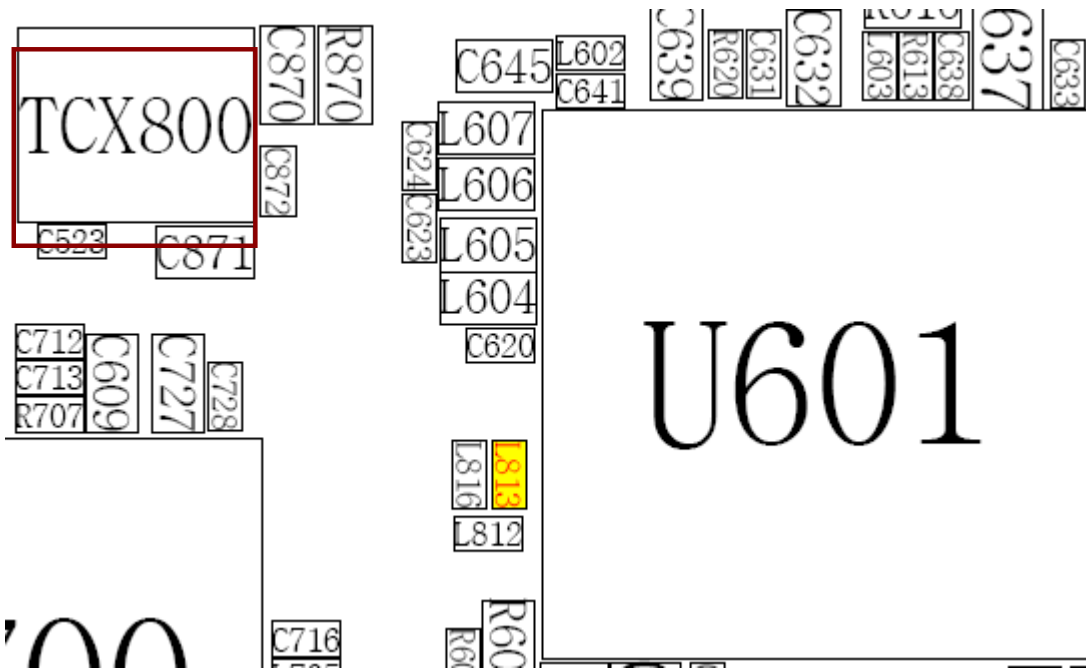
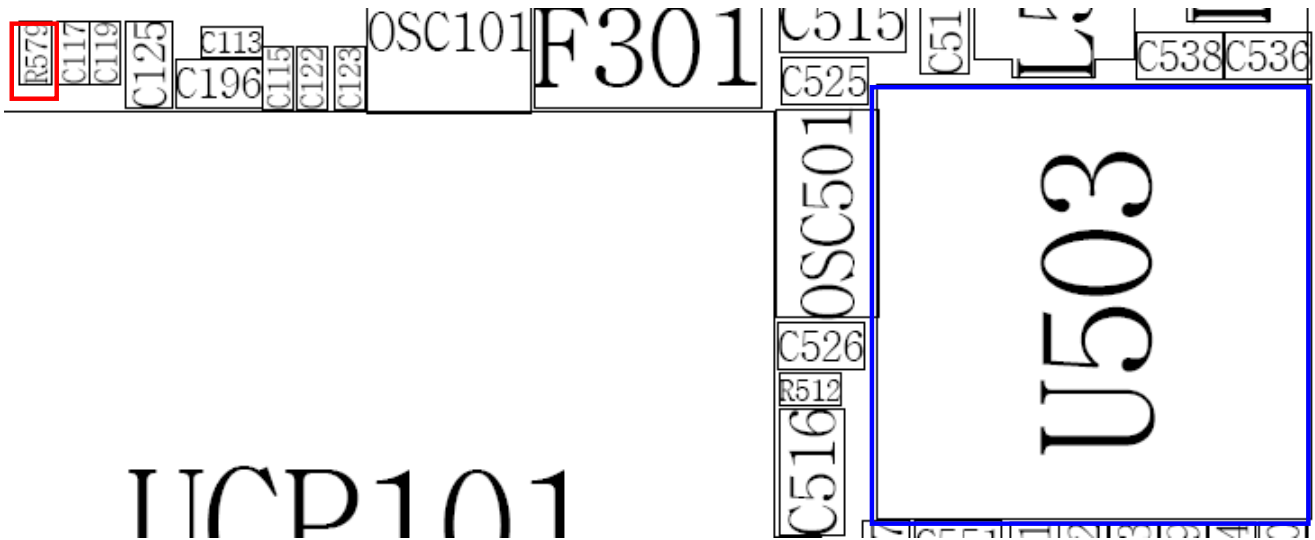


9. Flow Chart of Troubleshooting and Circuit Diagrams

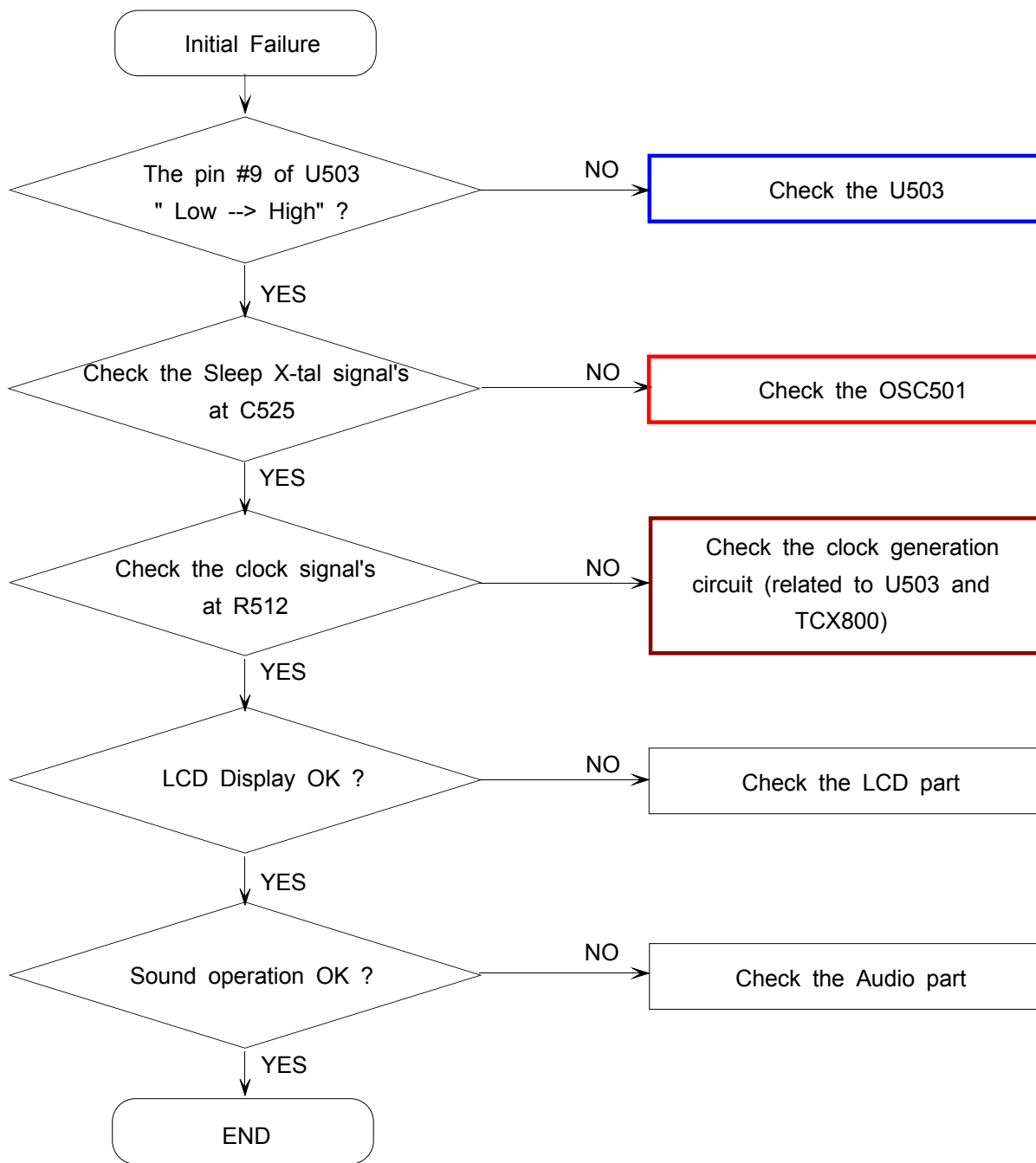
9-1. Baseband 9-1-1. Power ON

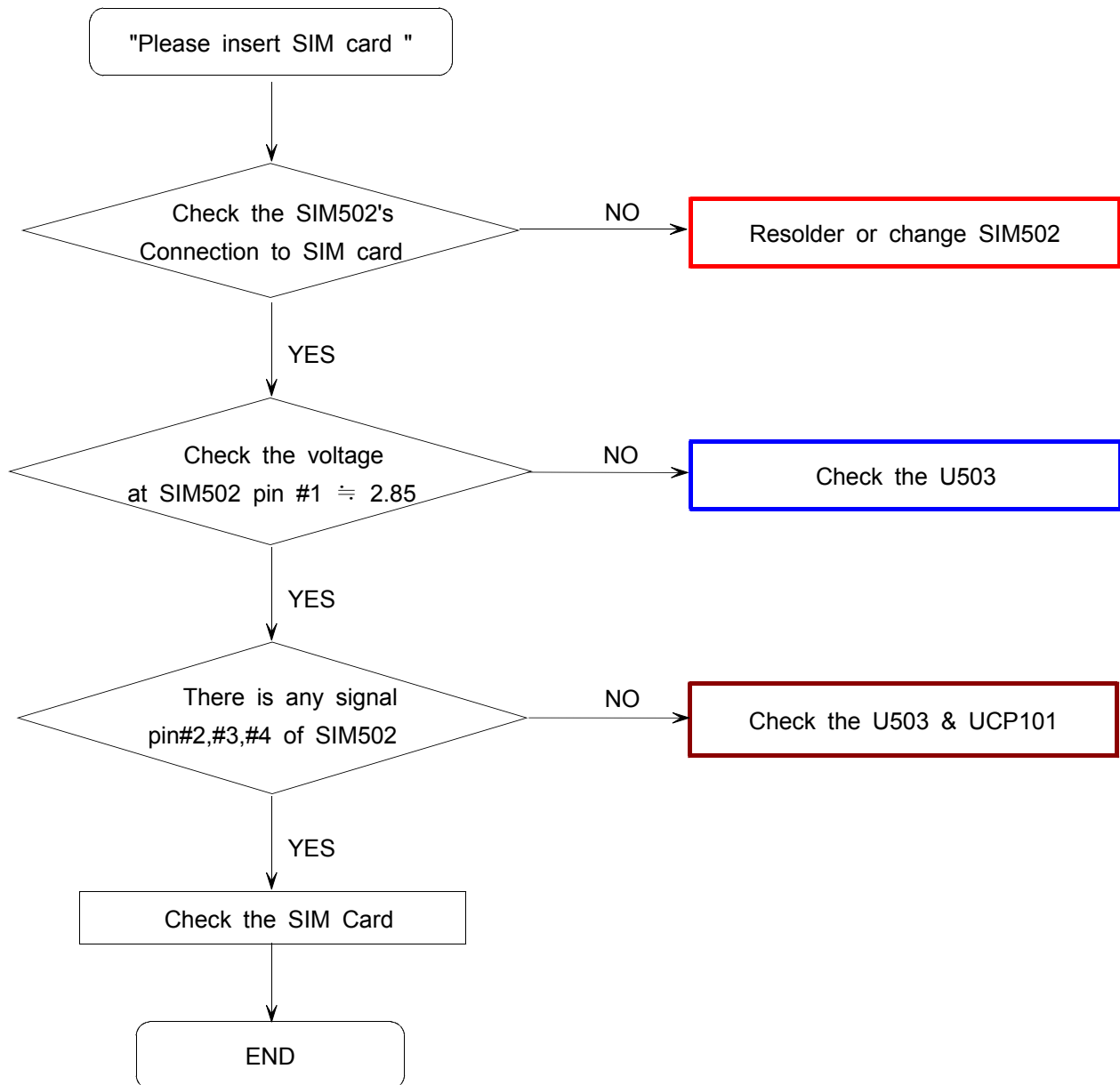


- Layout for Power on

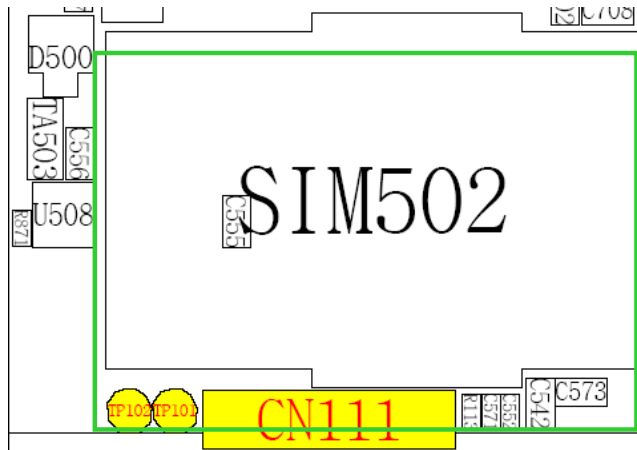
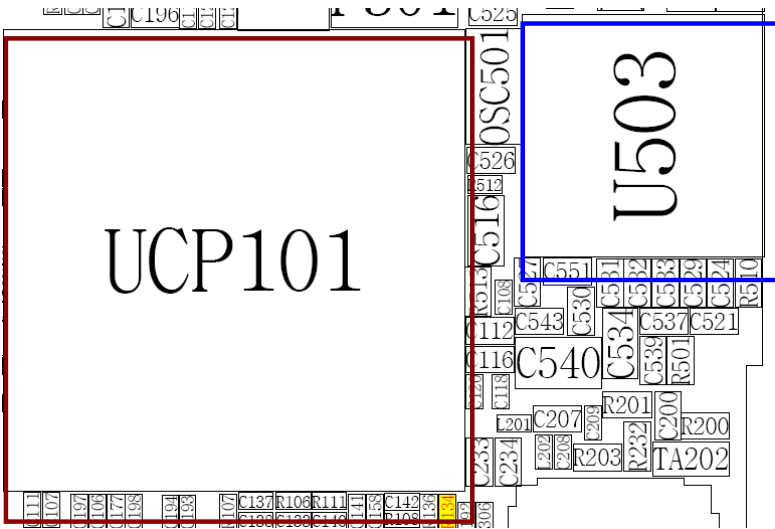
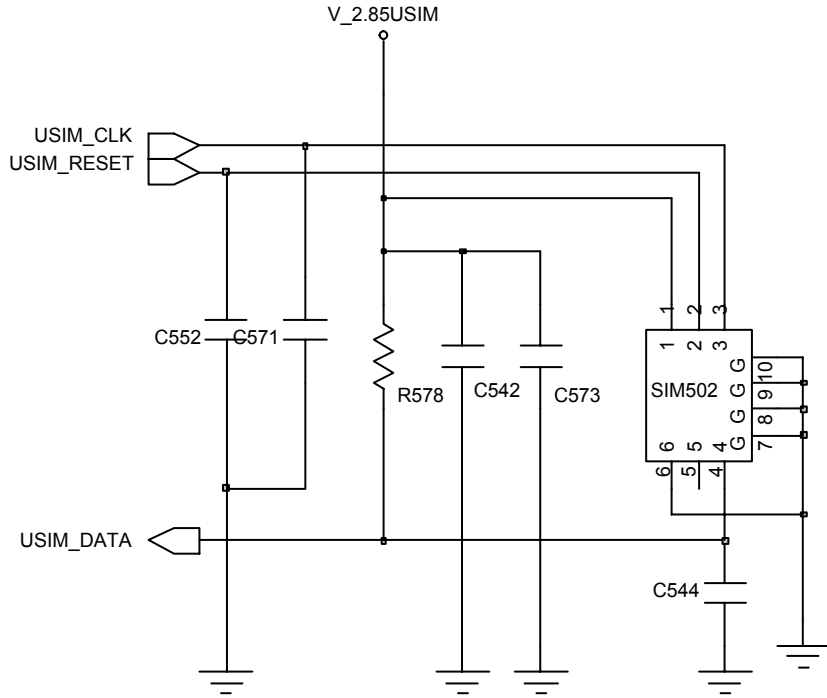


9-1-2. System Initial

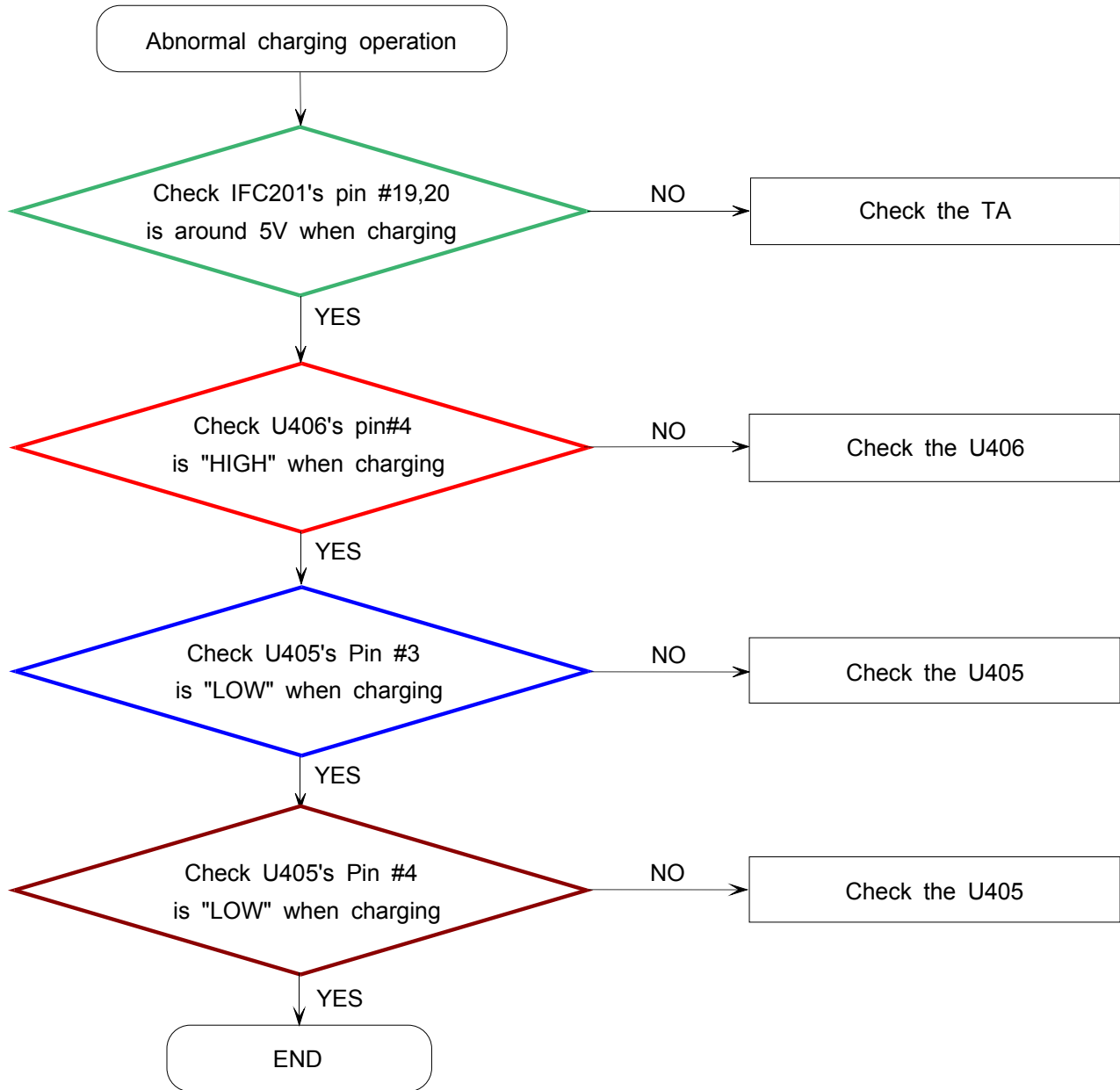


9-1-3. SIM Part

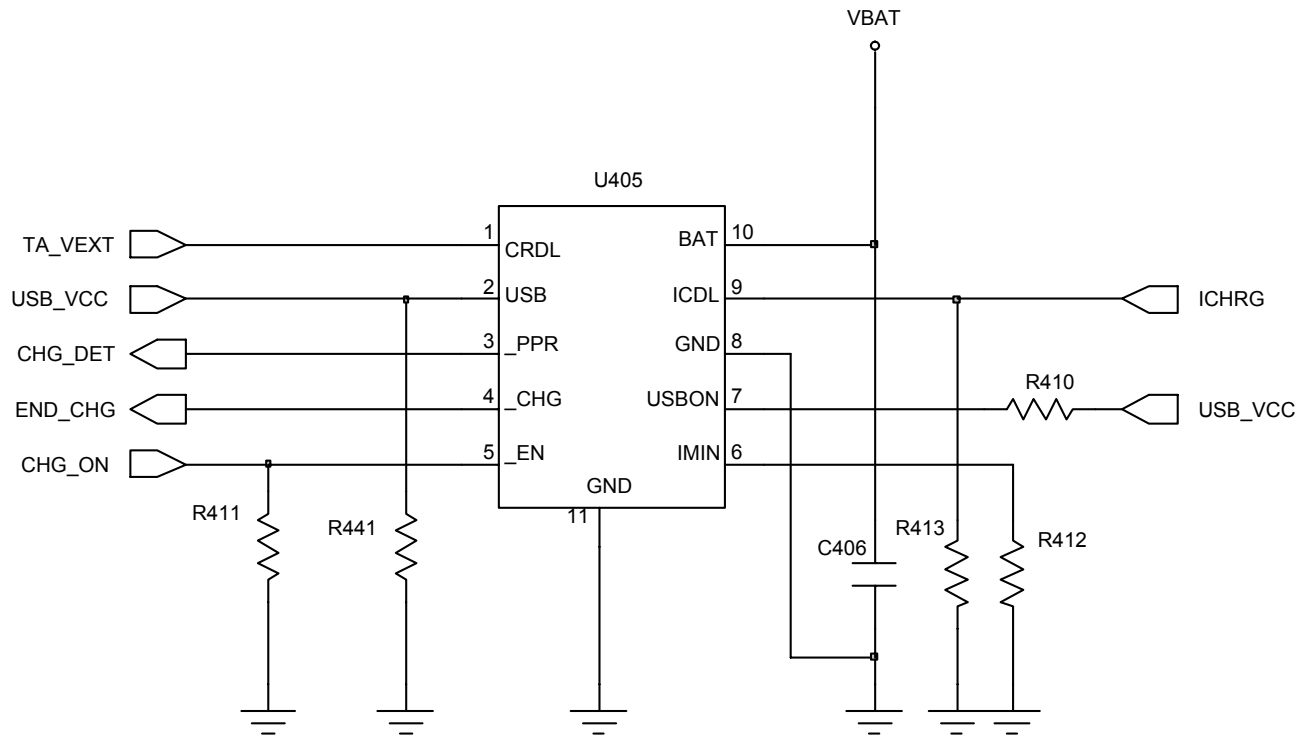
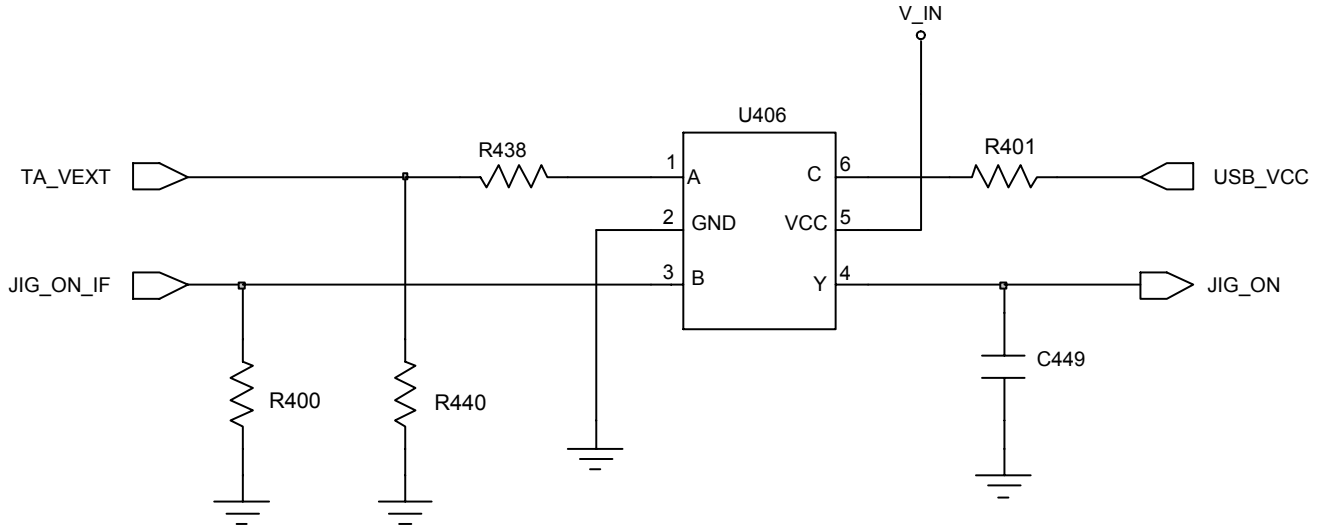
** Check SIM's signal
when you see SIM checking display

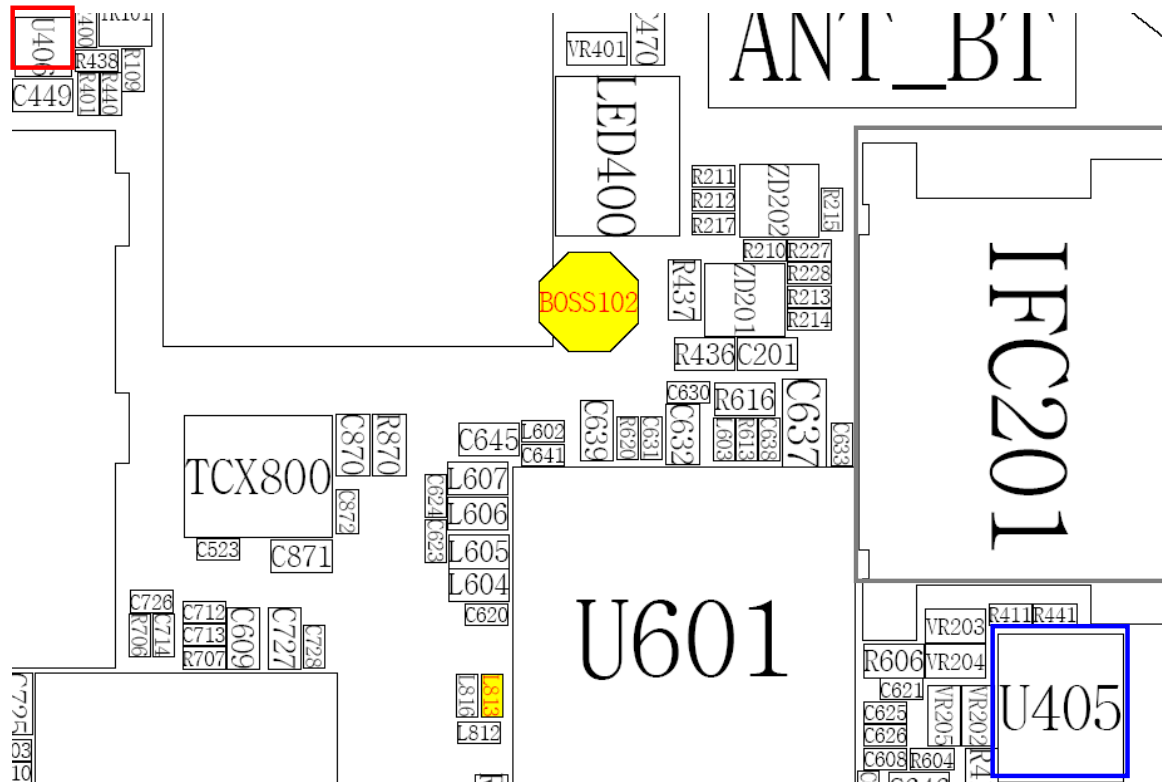


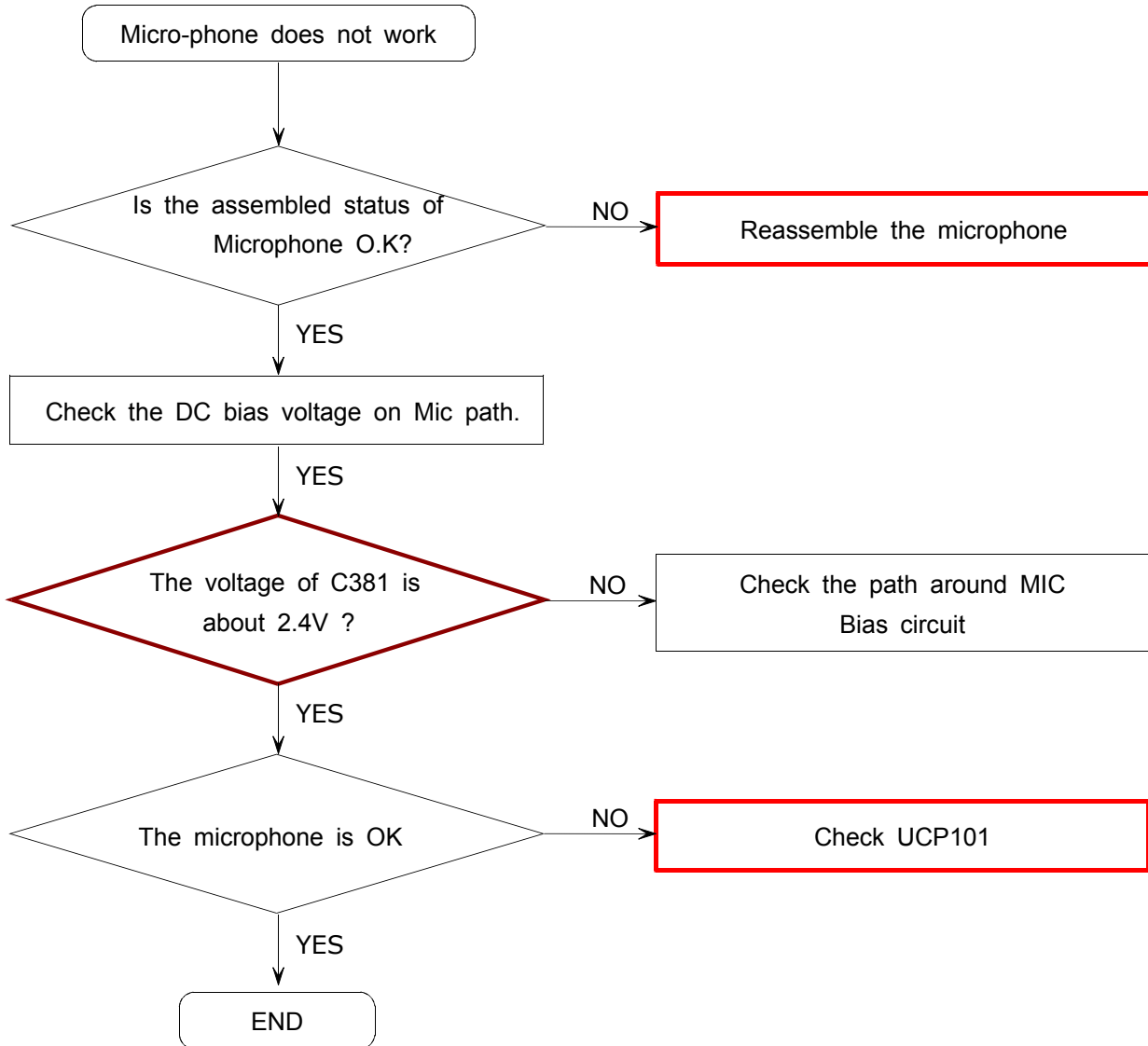
9-1-4. Charging Part



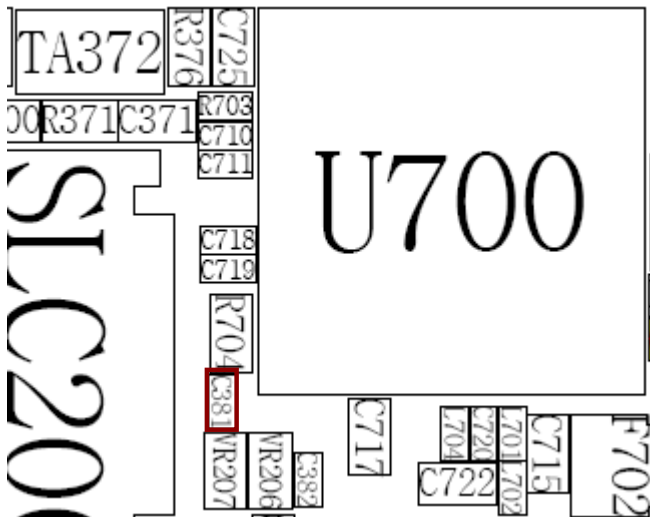
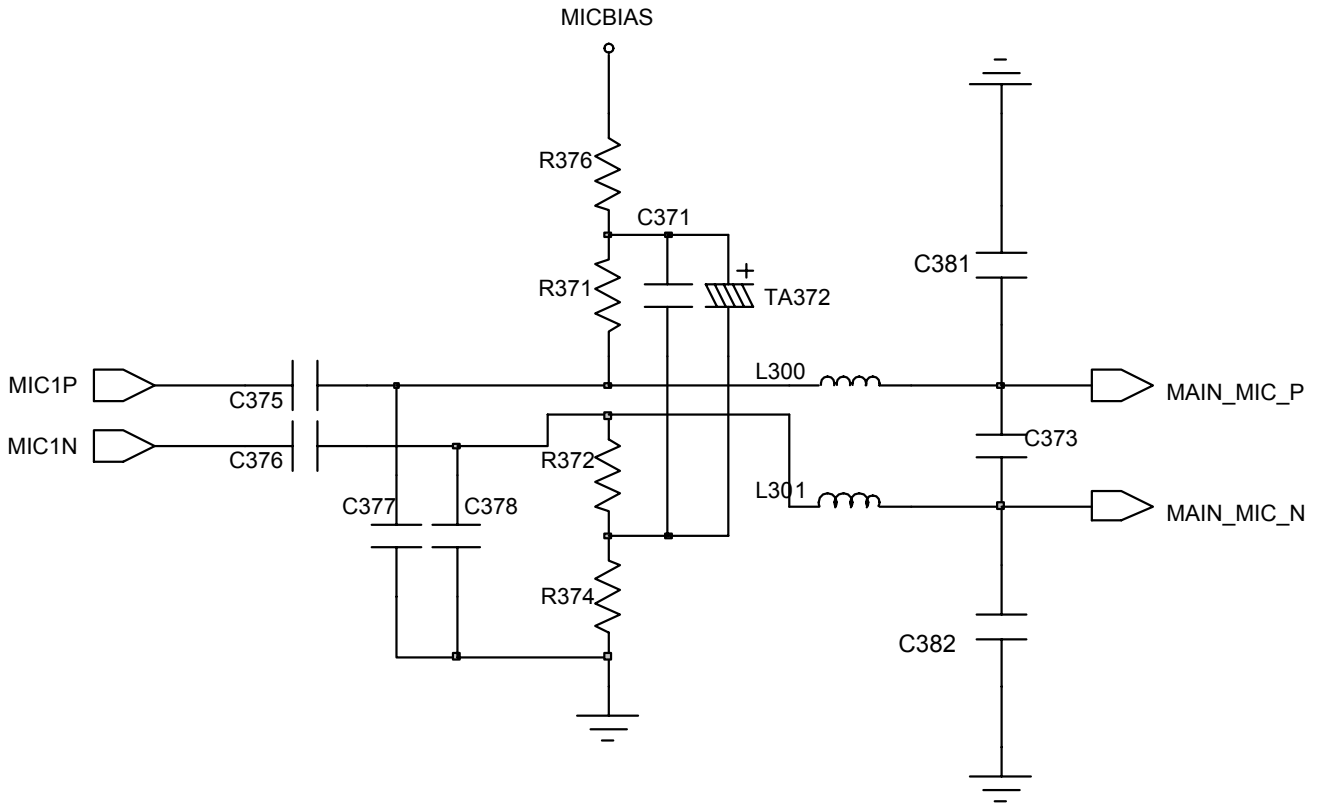
- Schematic for Charging

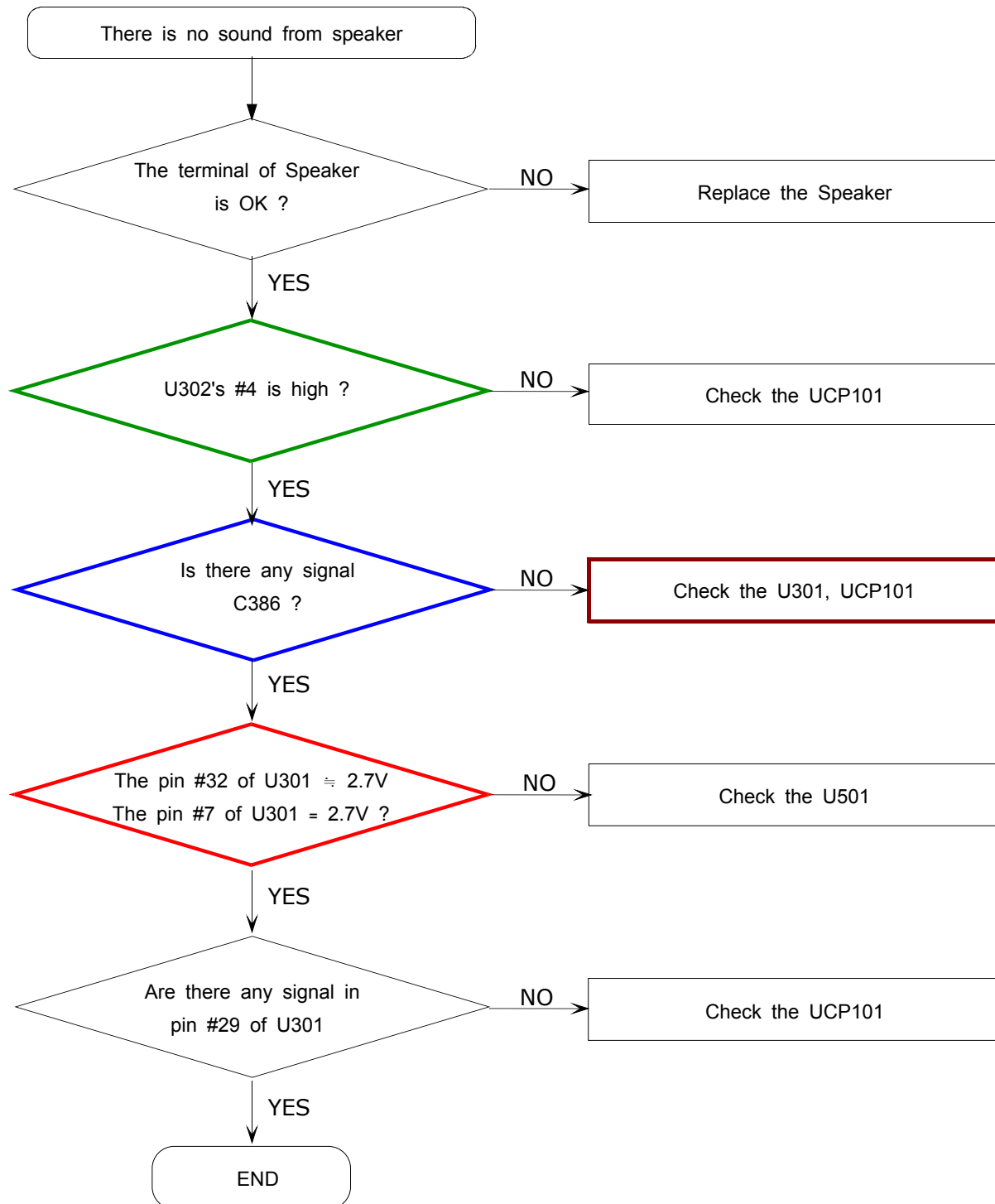




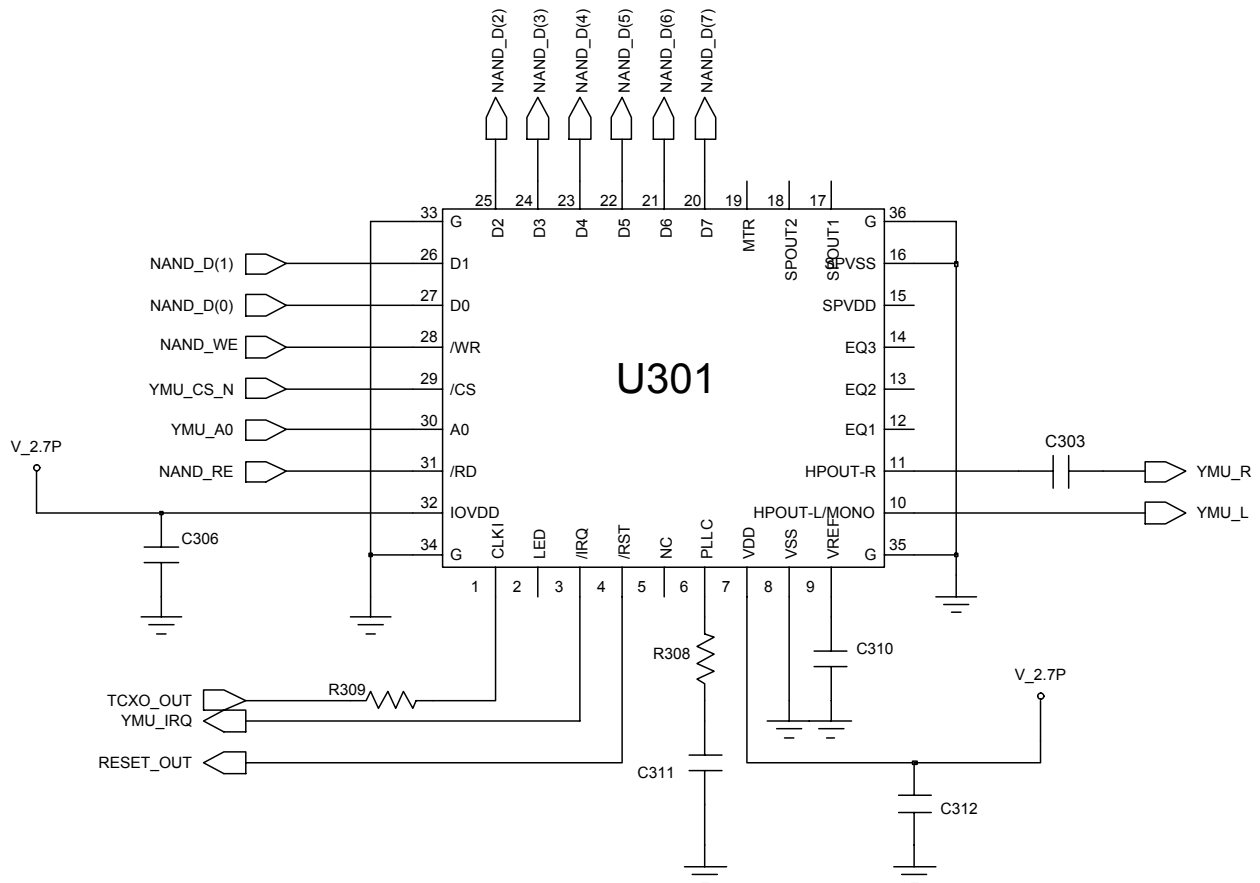
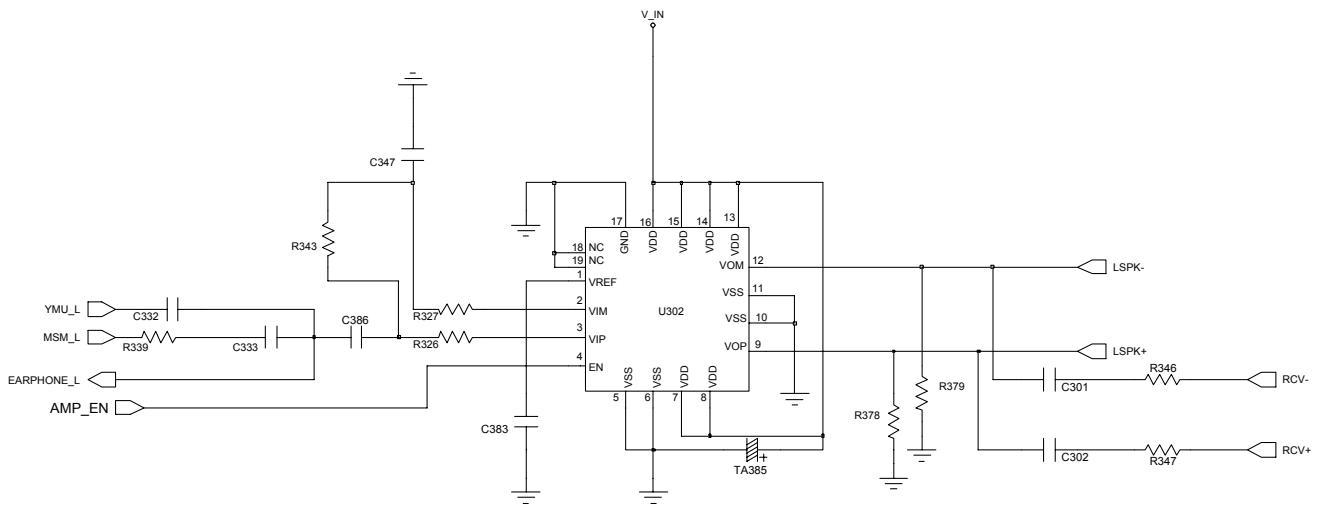
9-1-5. Microphone Part

- Schematic for Microphone

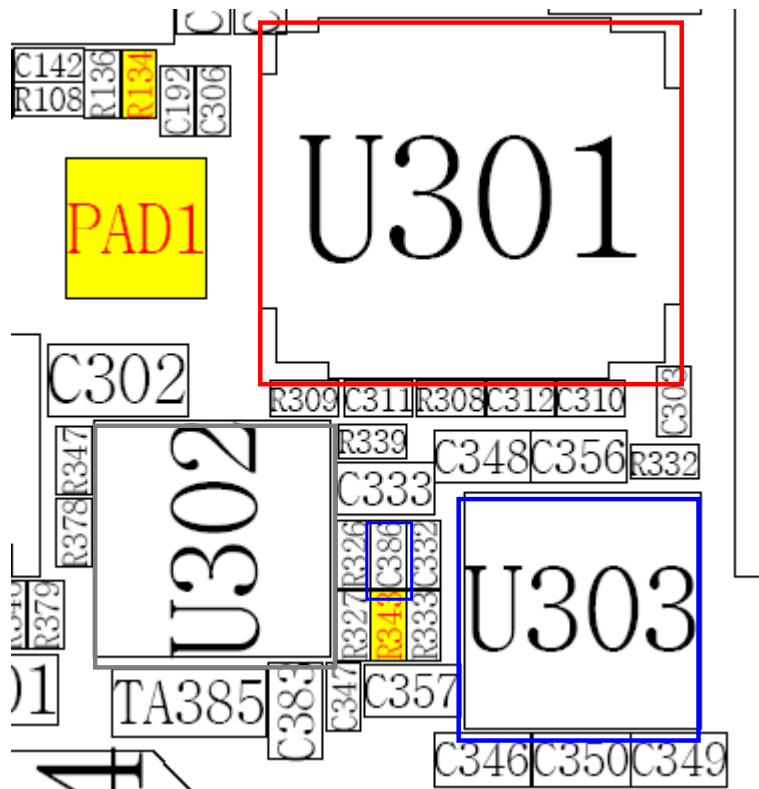


9-1-6. Speaker Part

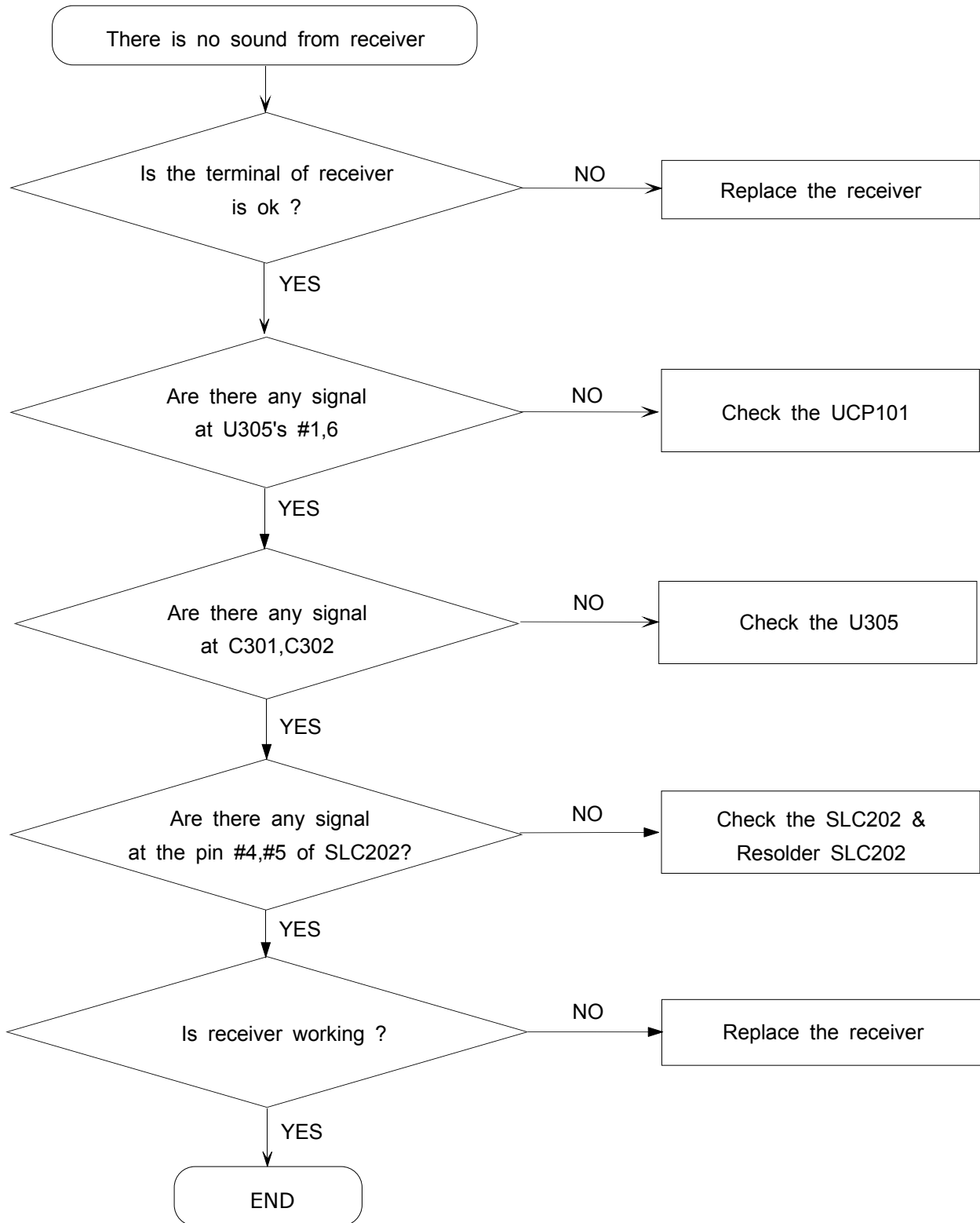
- Schematic for Speak part



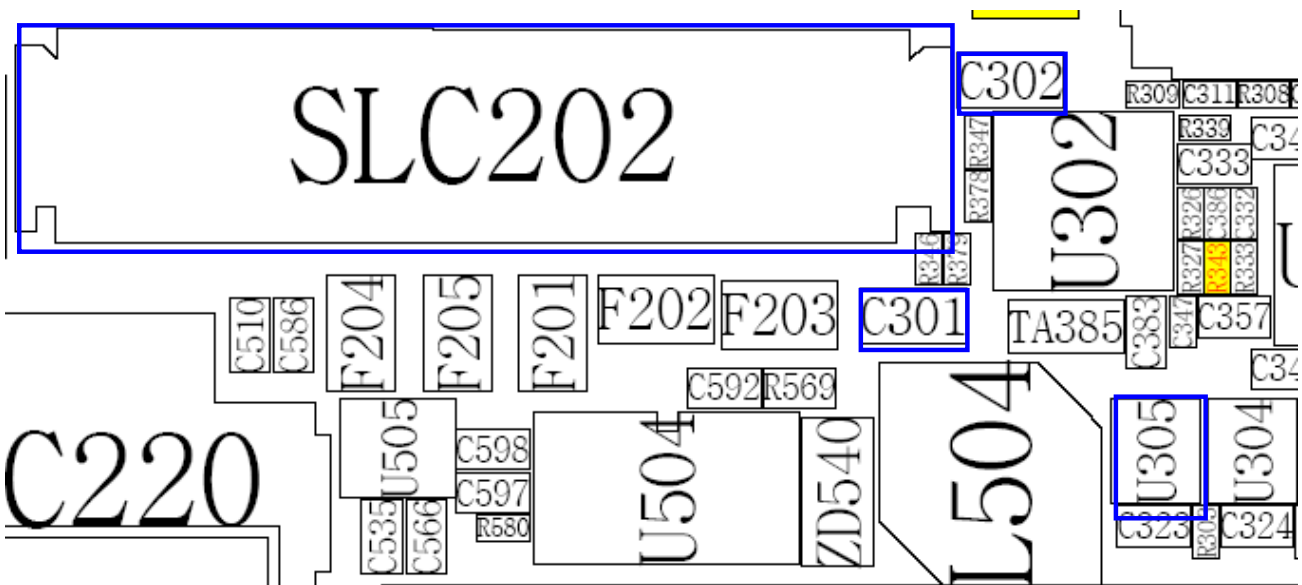
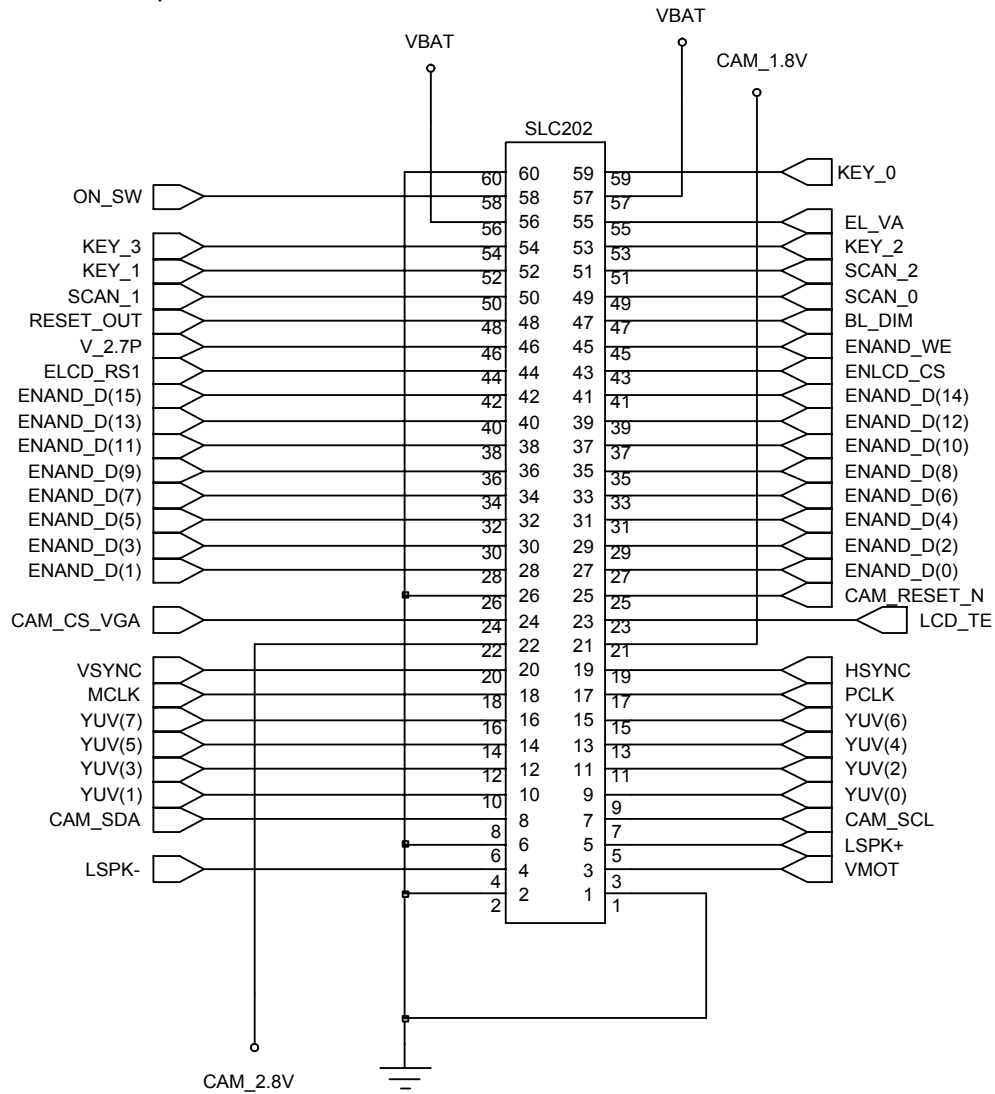
- Layout for Speaker Part



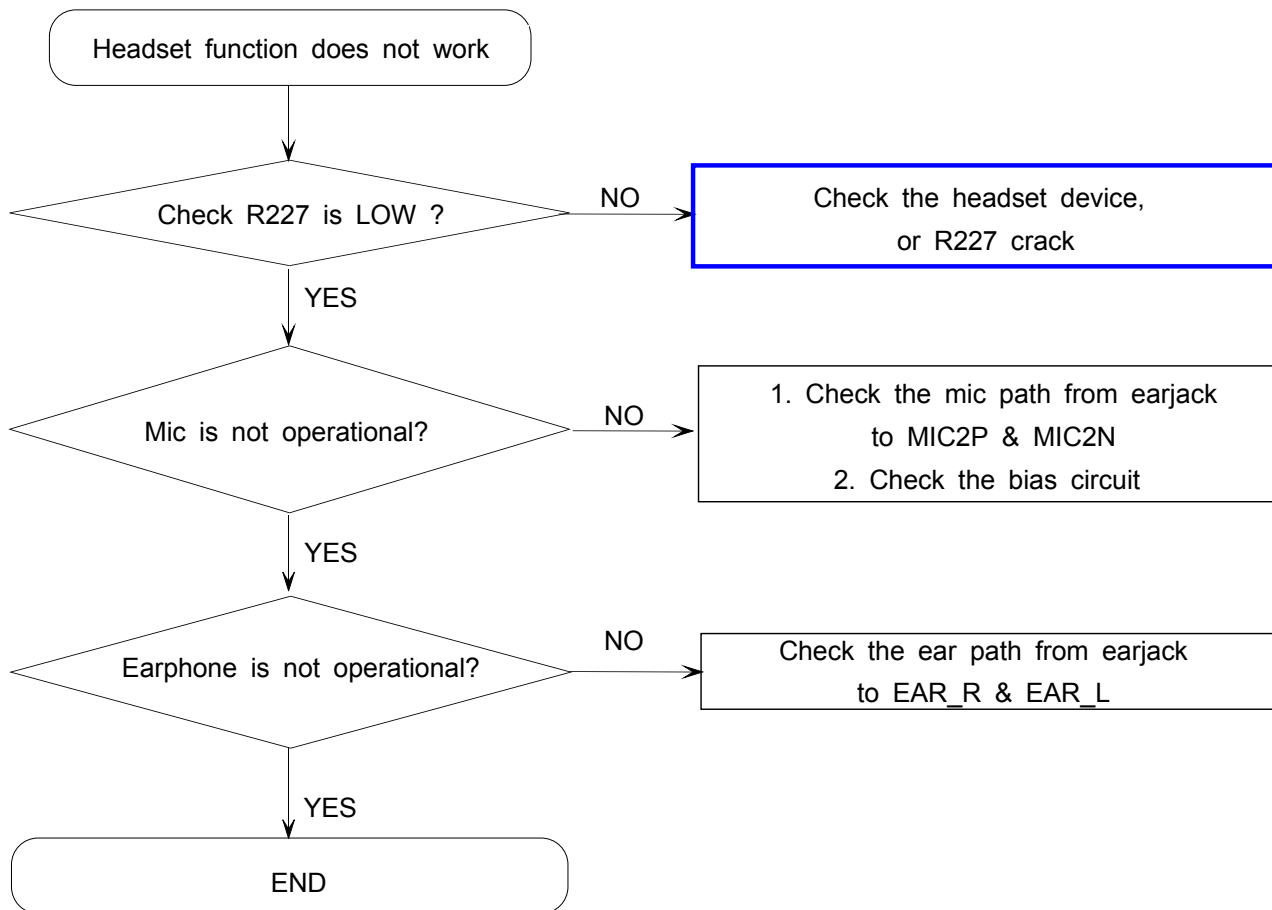
9-1-7. Receiver Part



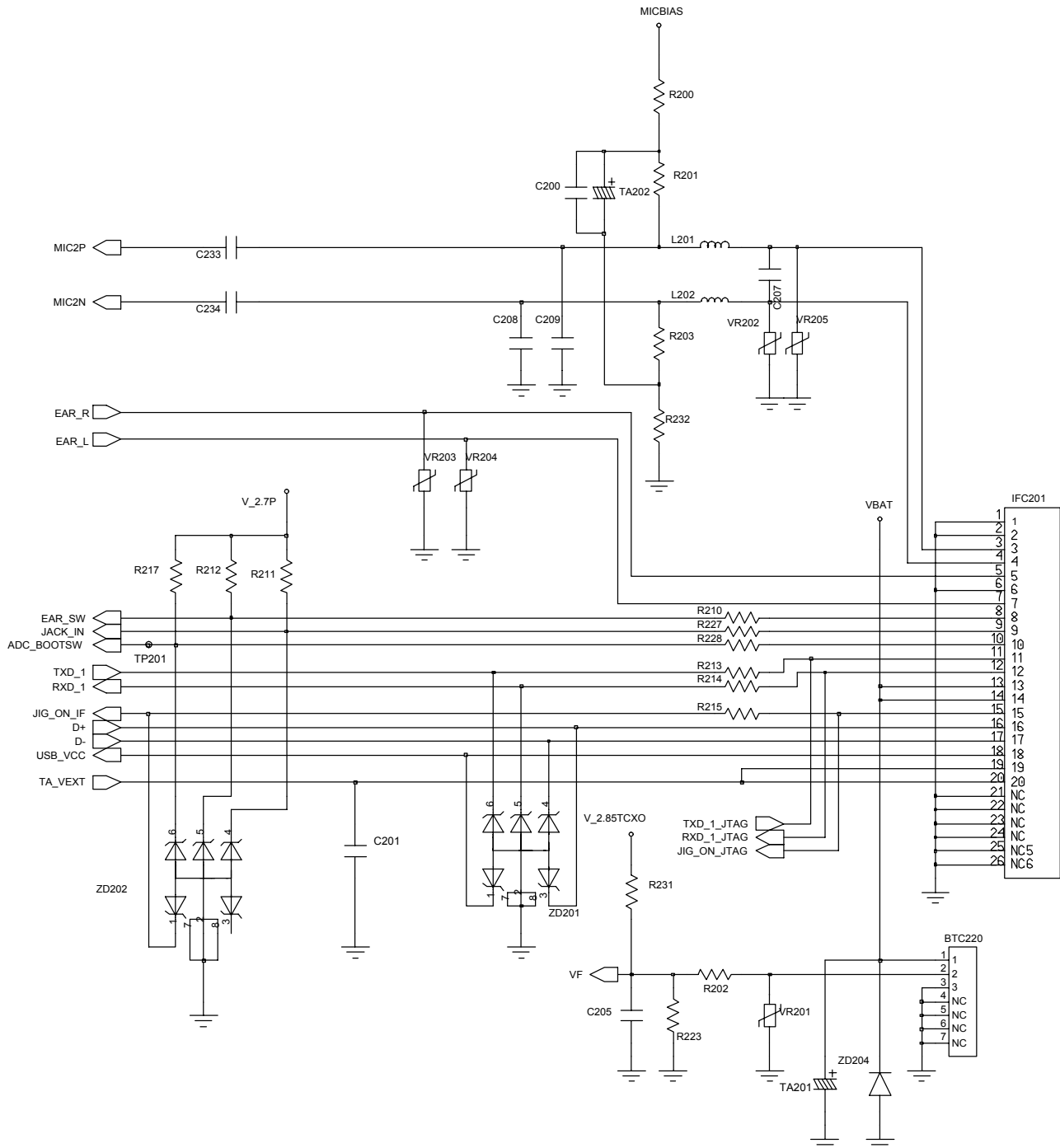
- Schematic for Receiver part

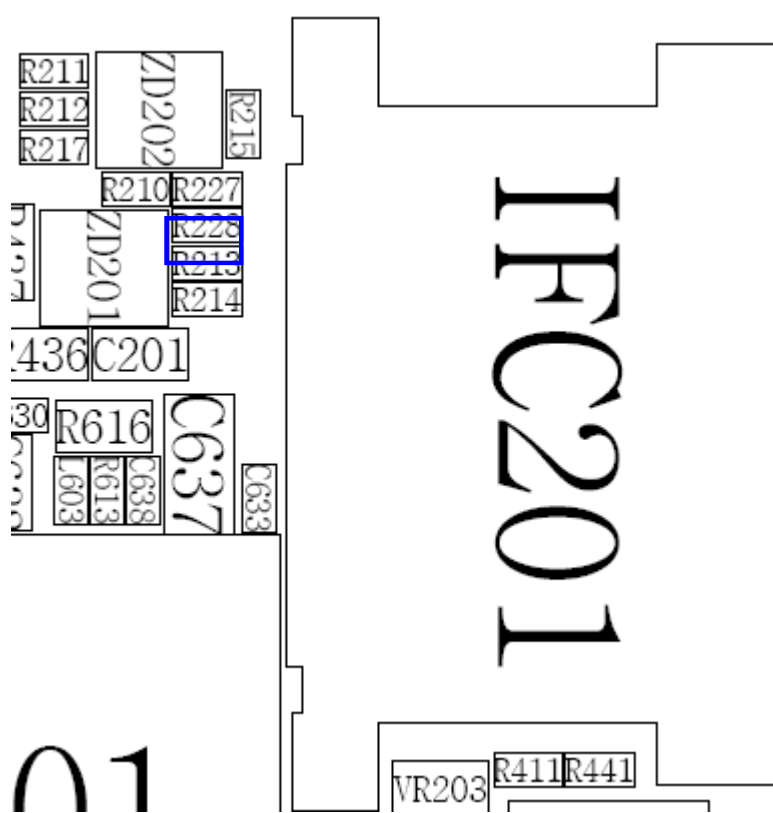


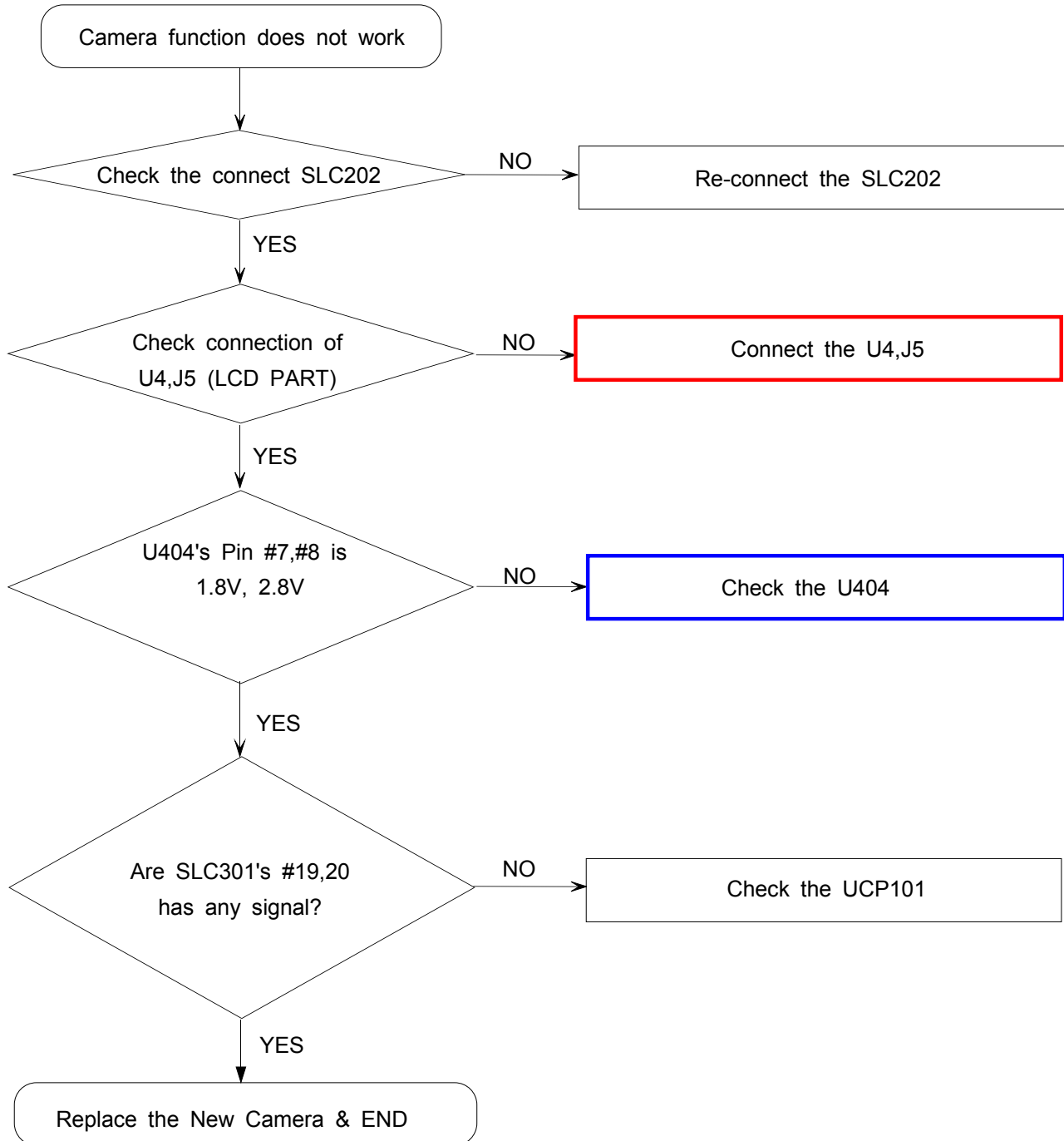
9-1-8. Headset Part



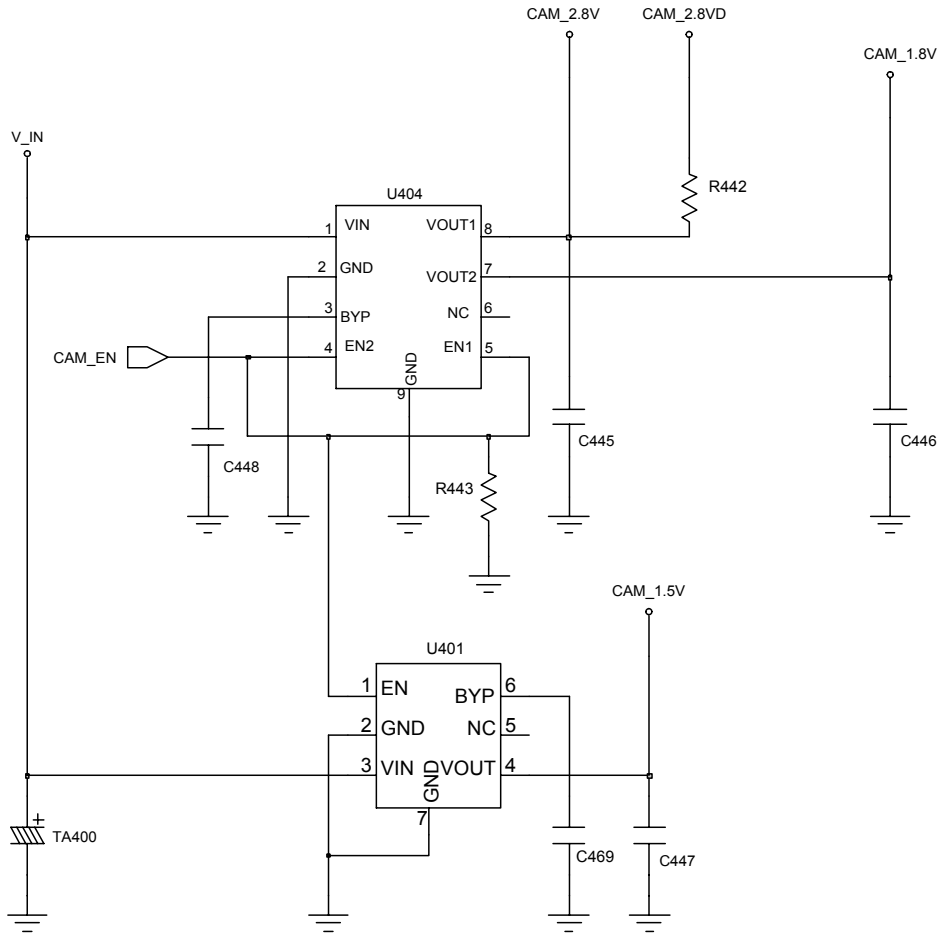
- Schematic for Headset



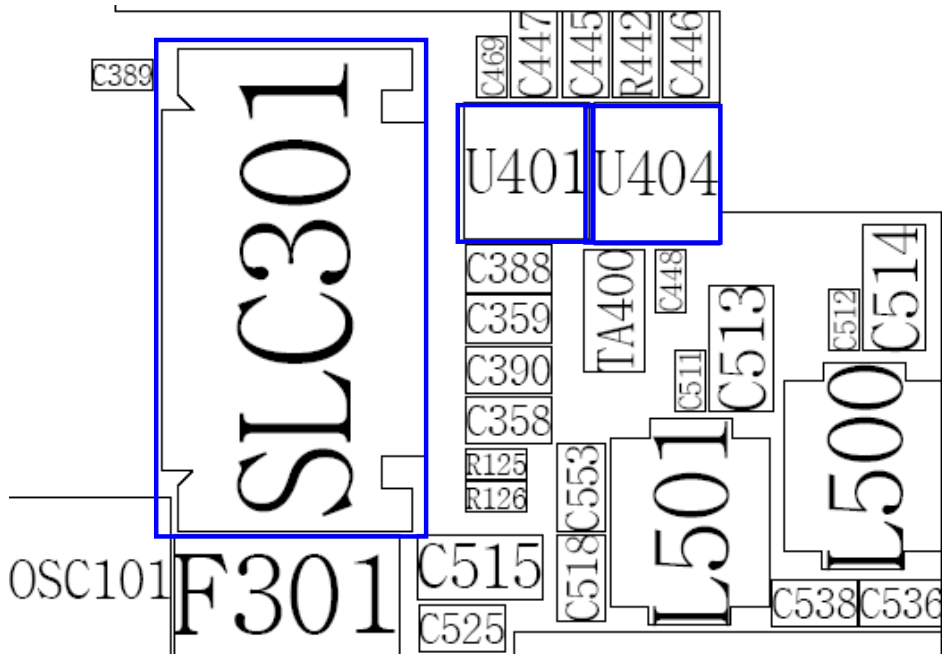


9-1-9. Camera Part (Mega and VGA)

- Schematic for CAMERA

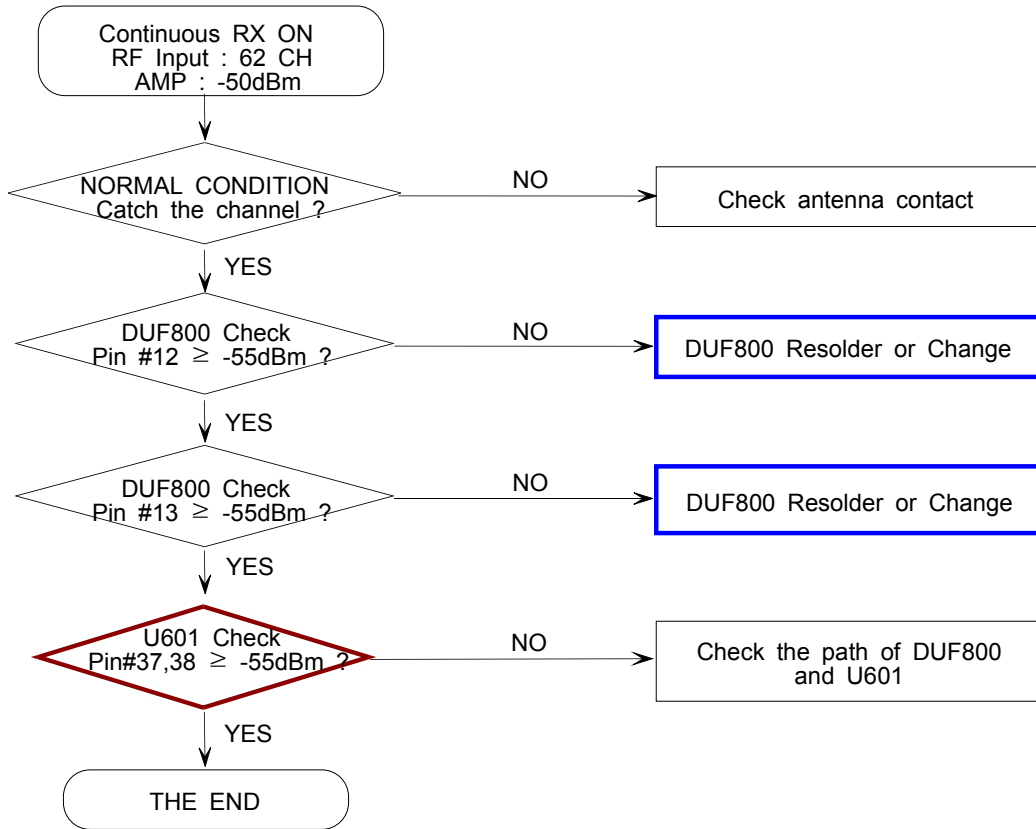


- Layout for CAMERA

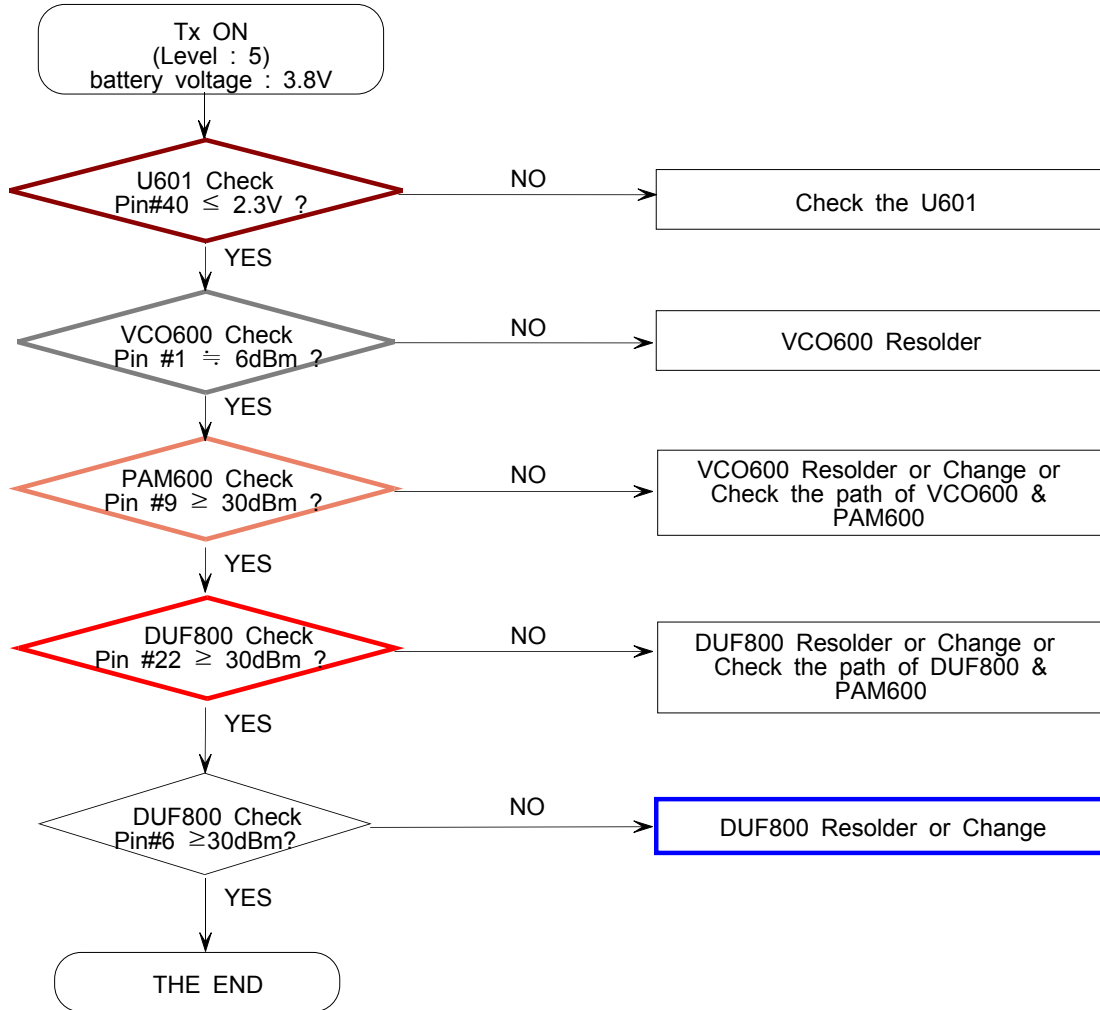


9-2.RF

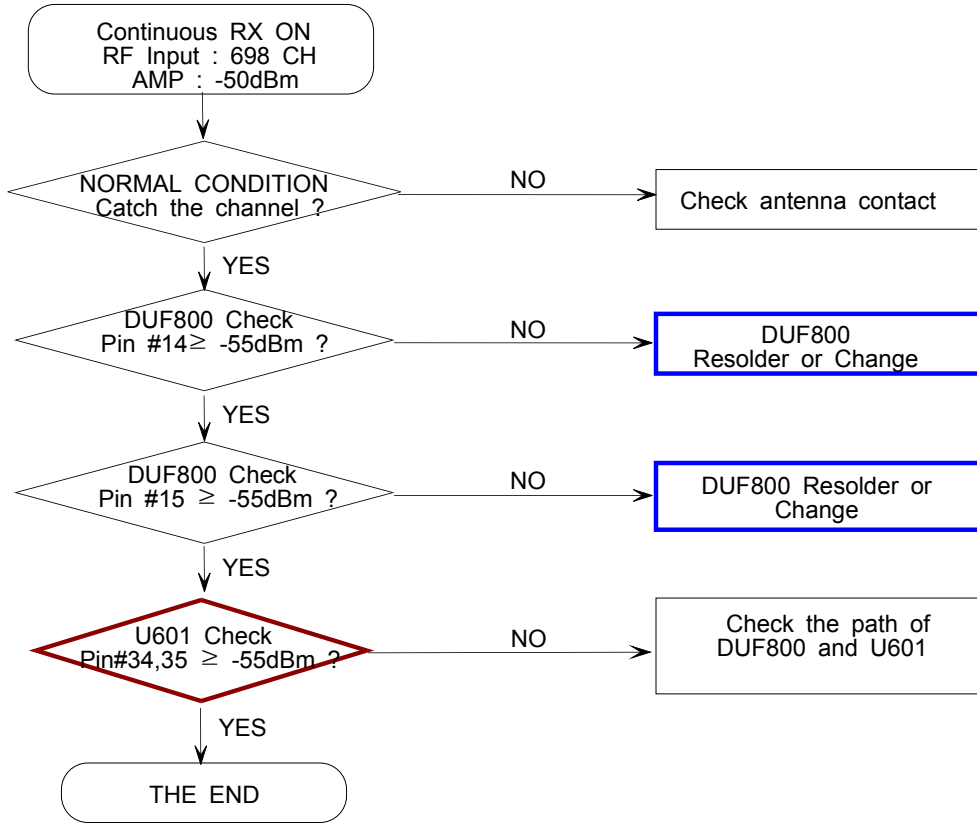
9-2-1. EGSM Receiver



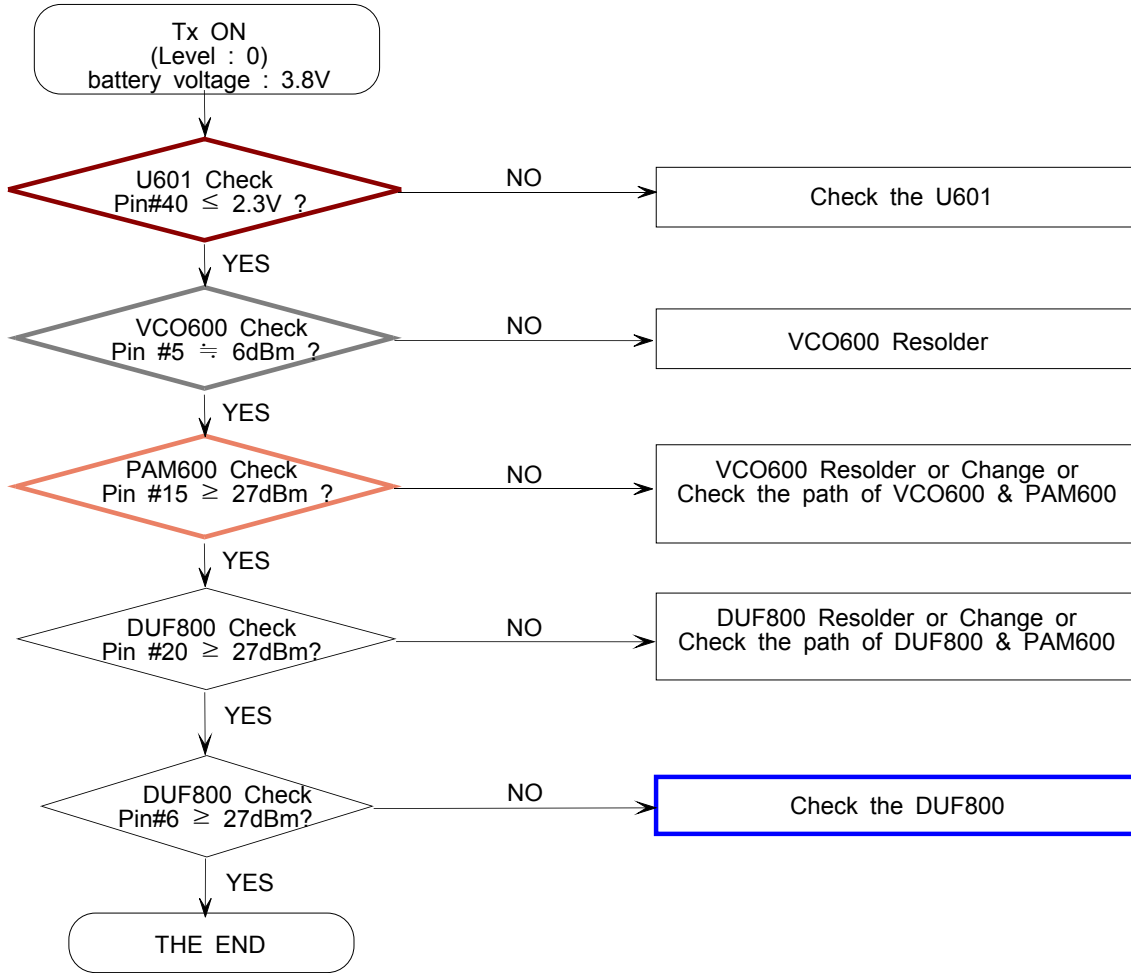
9-2-2. EGSM Transmitter



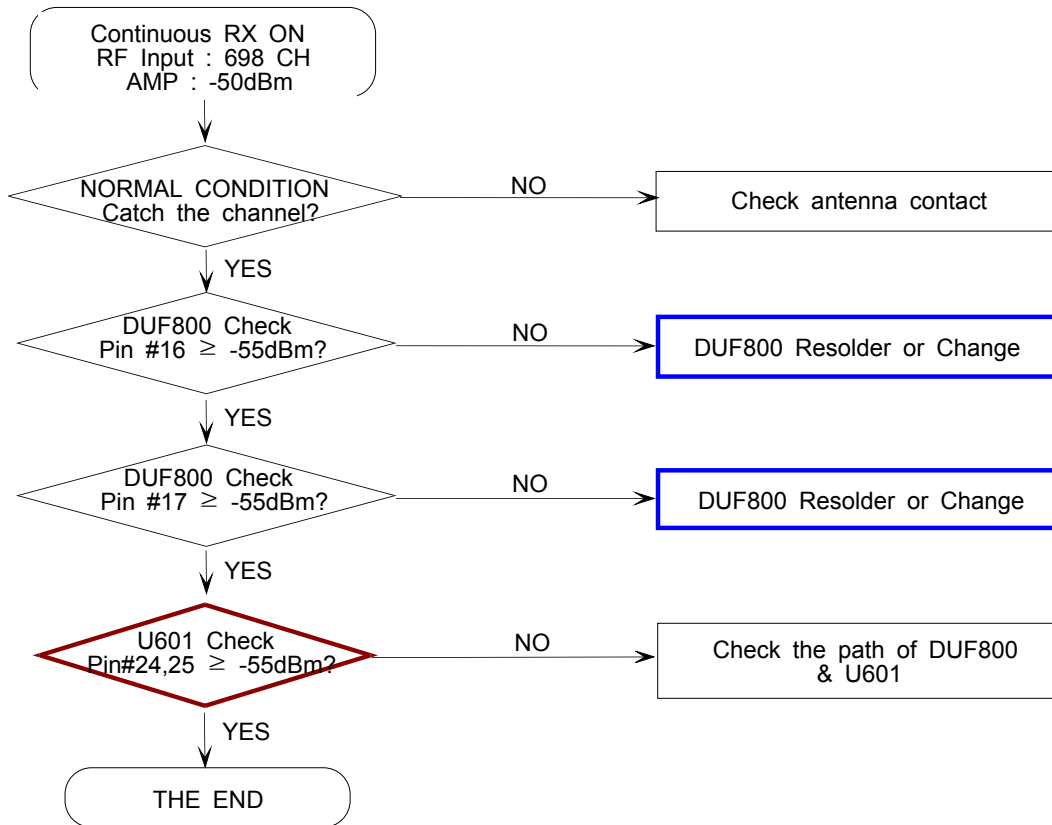
9-2-3. DCS Receiver



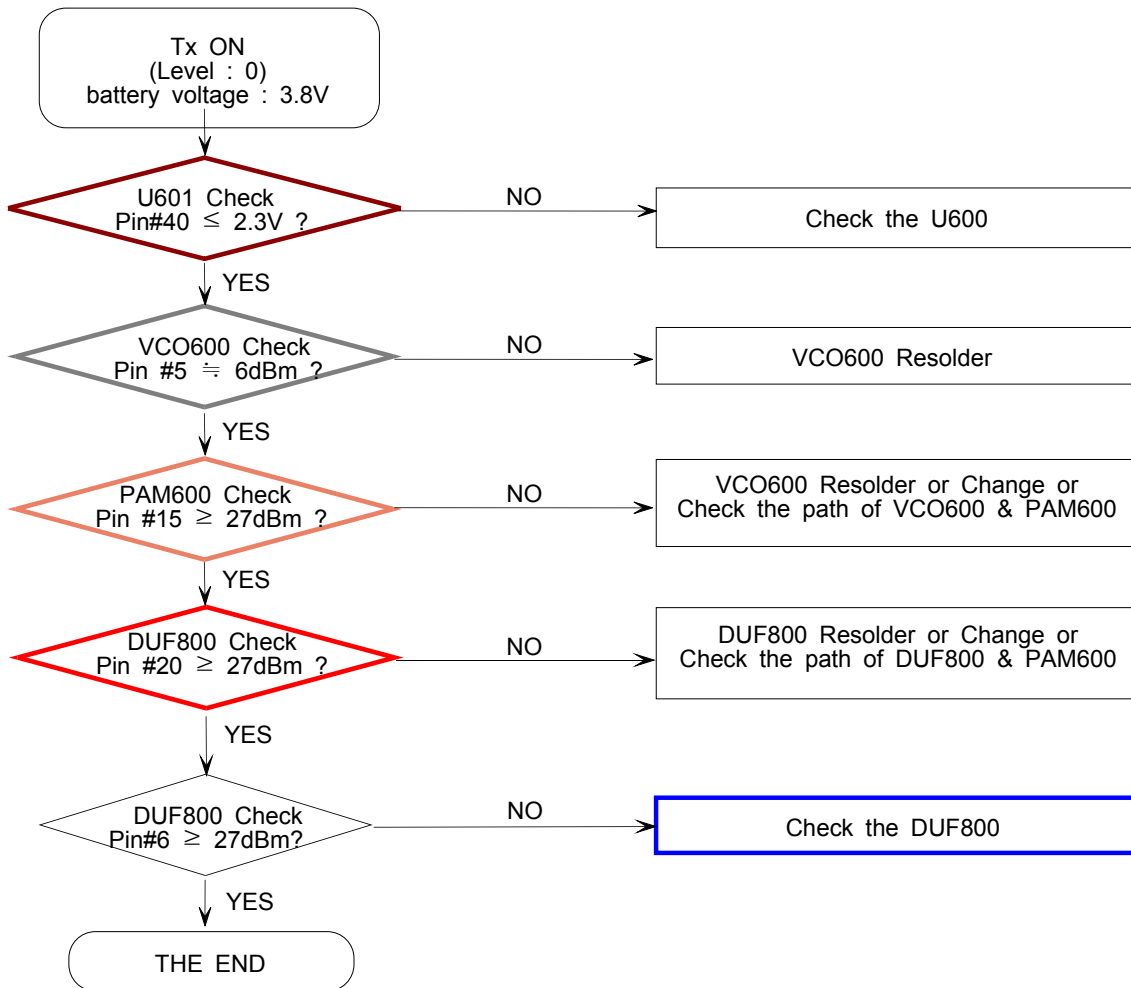
9-2-4. DCS Transmitter

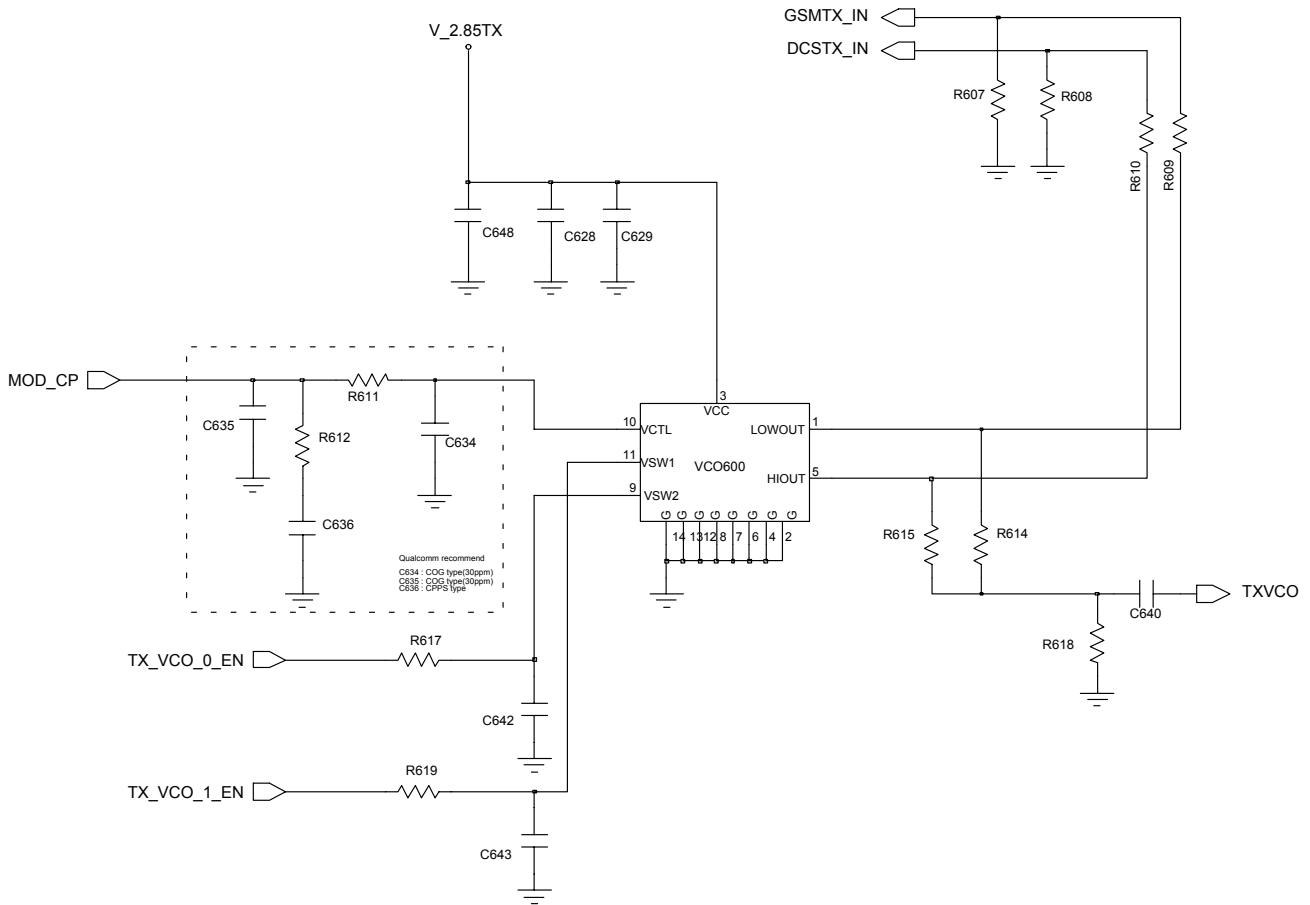
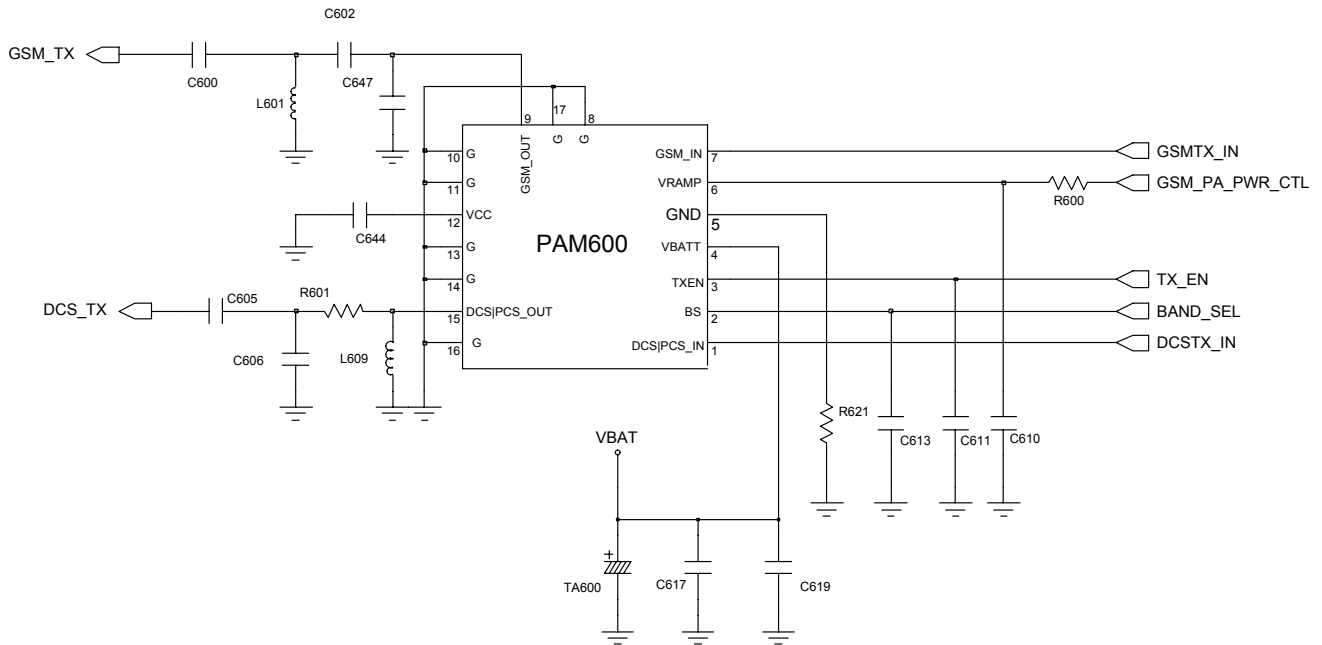


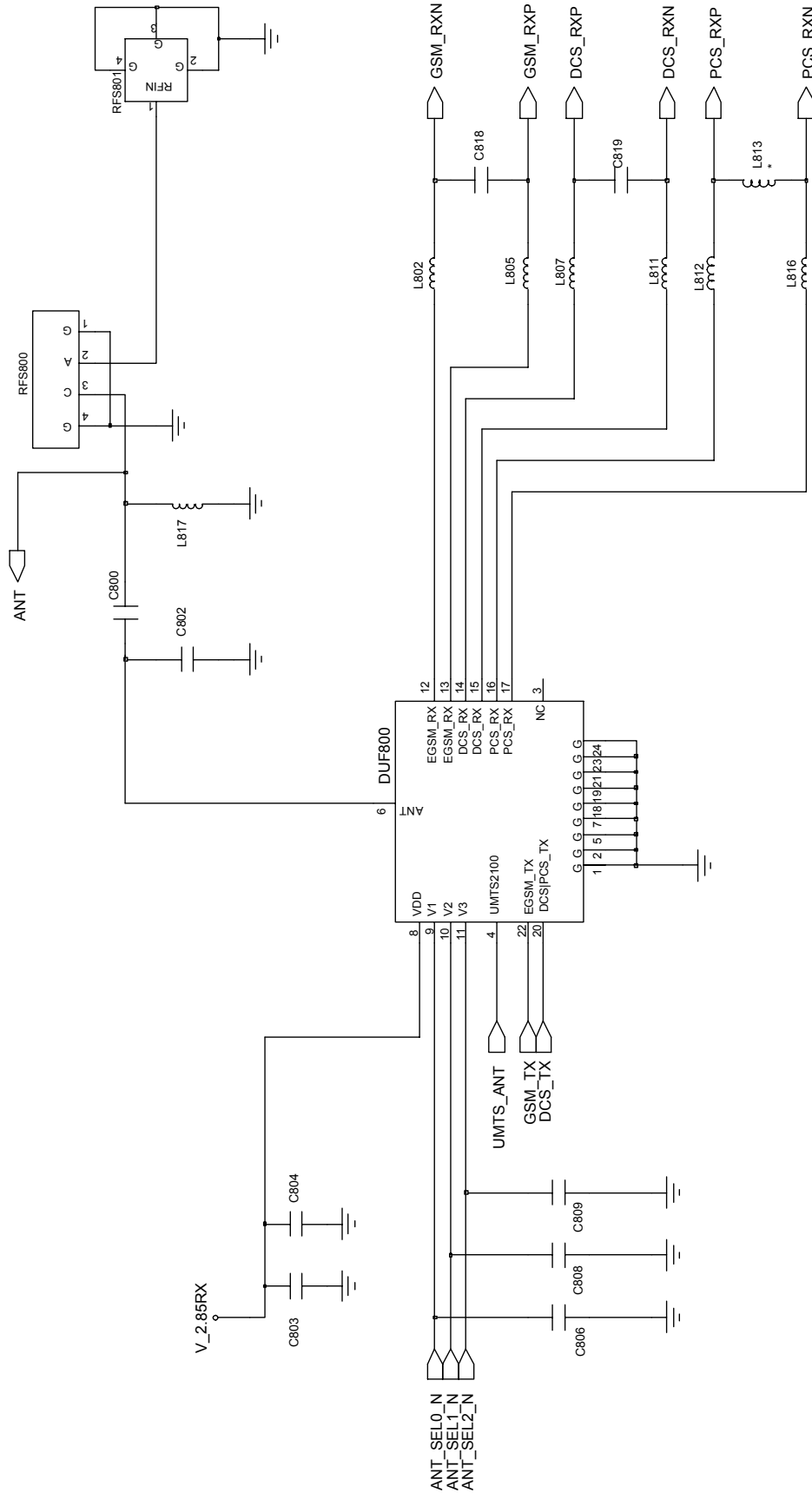
9-2-5. PCS Receiver

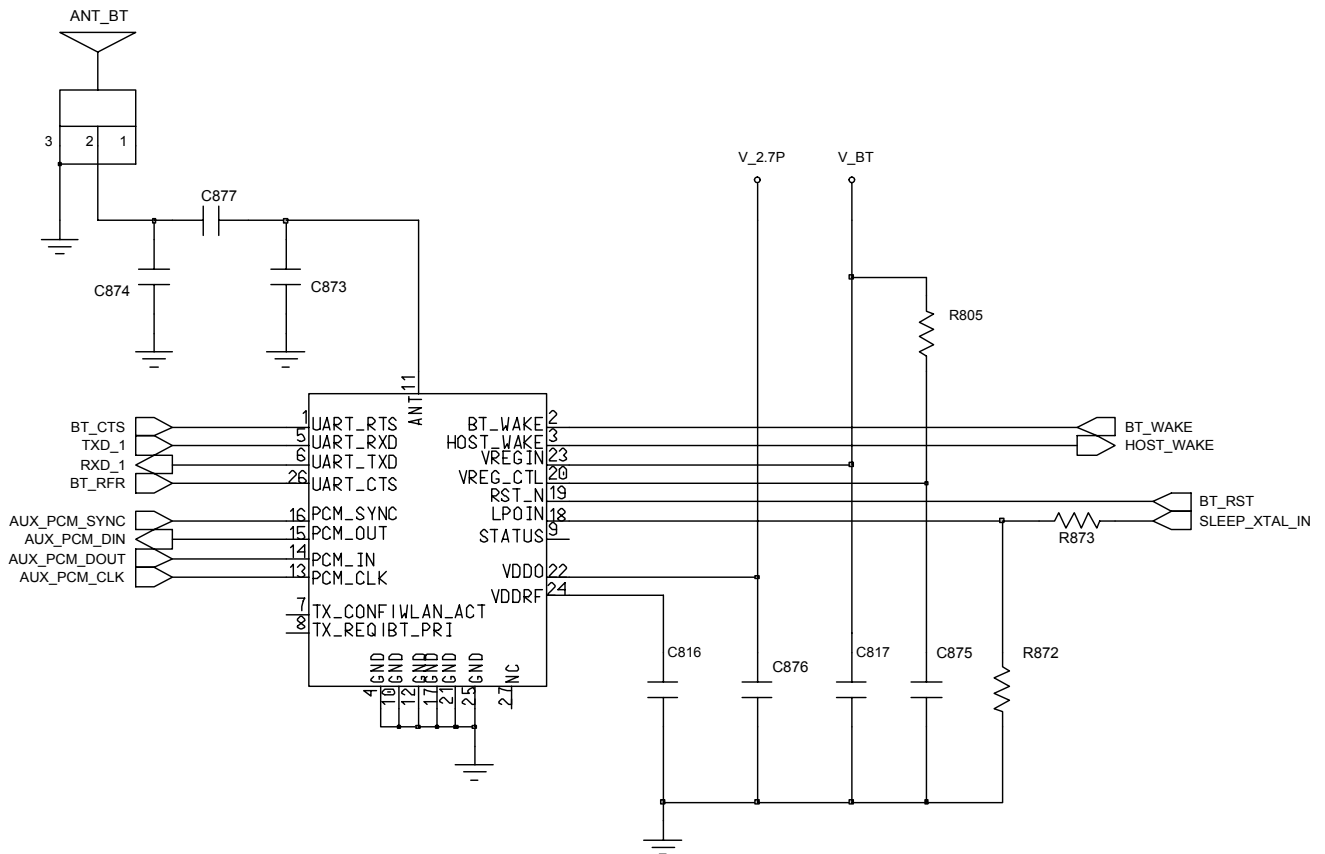
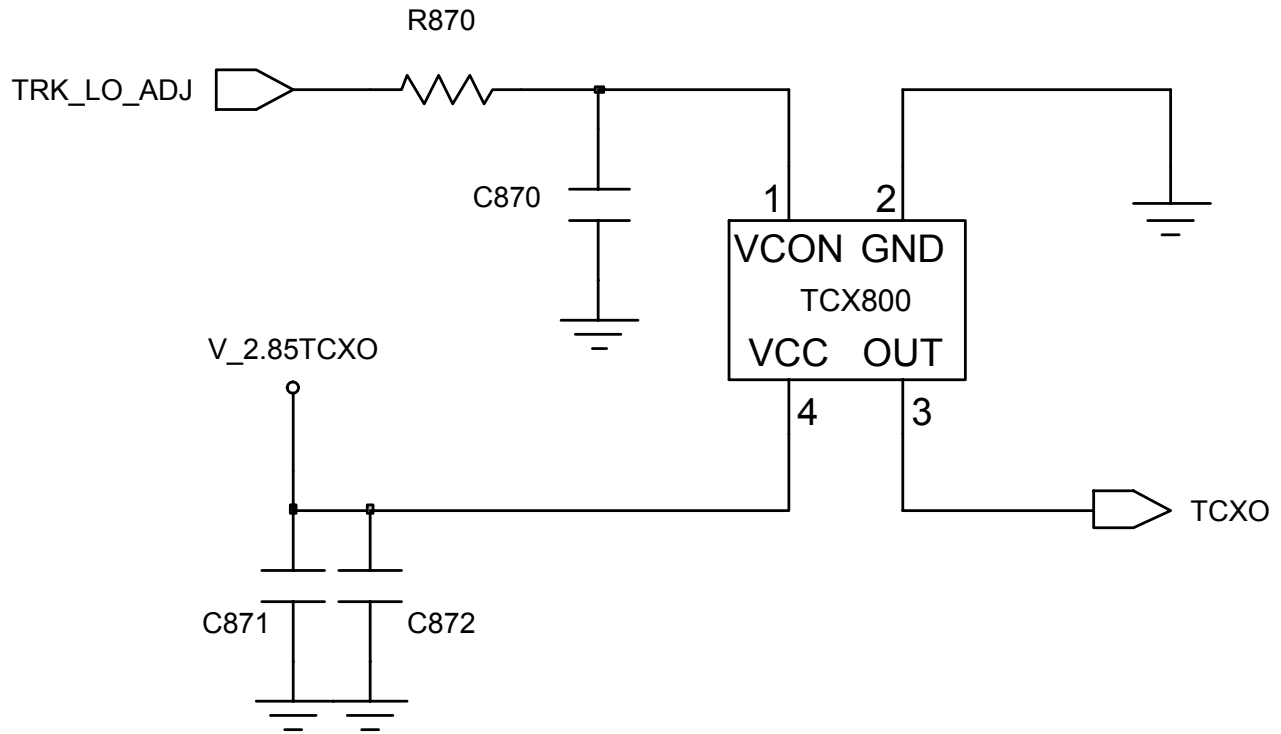


9-2-6. PCS Transmitter

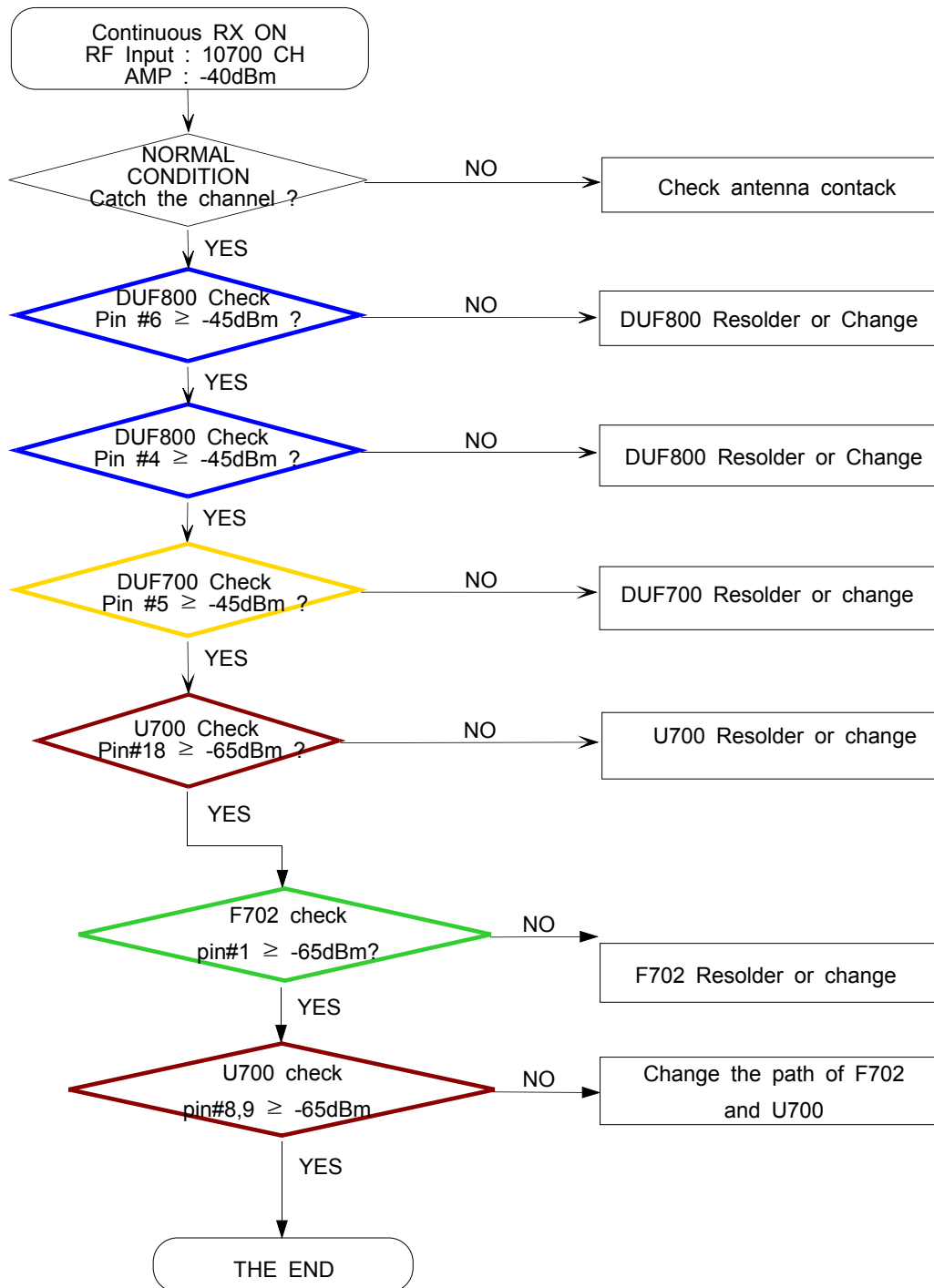


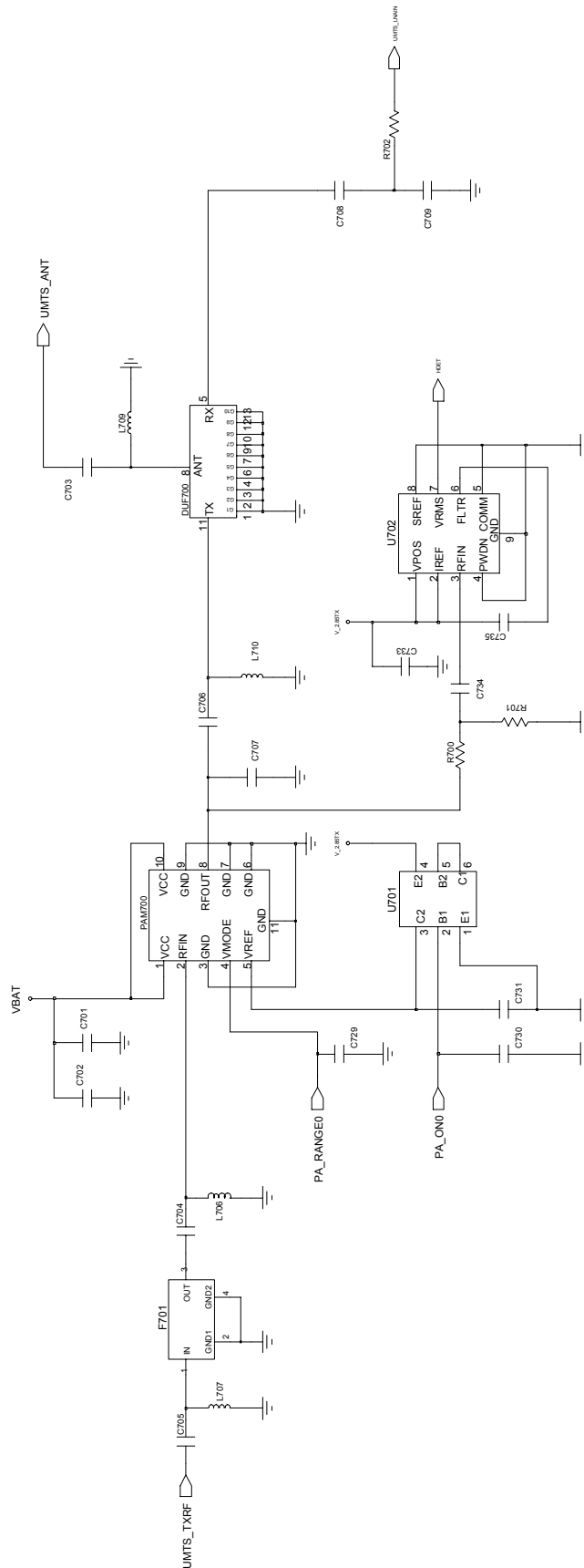


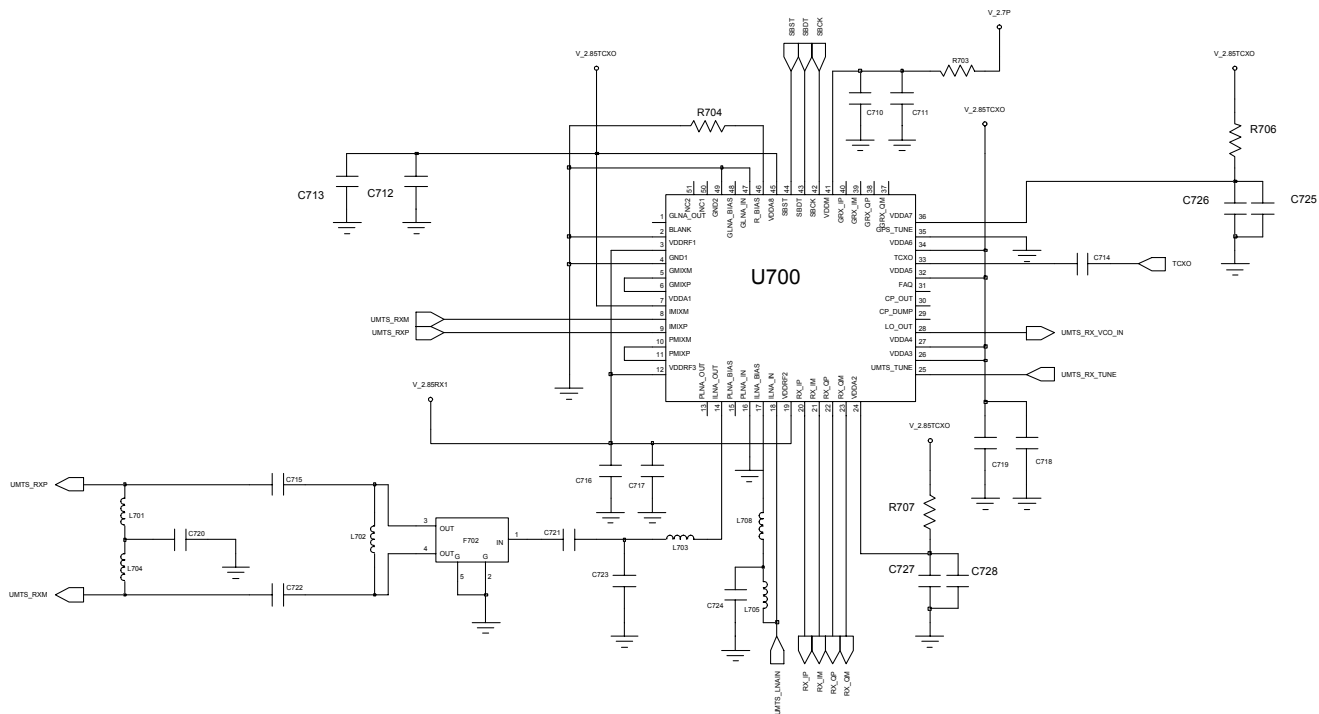




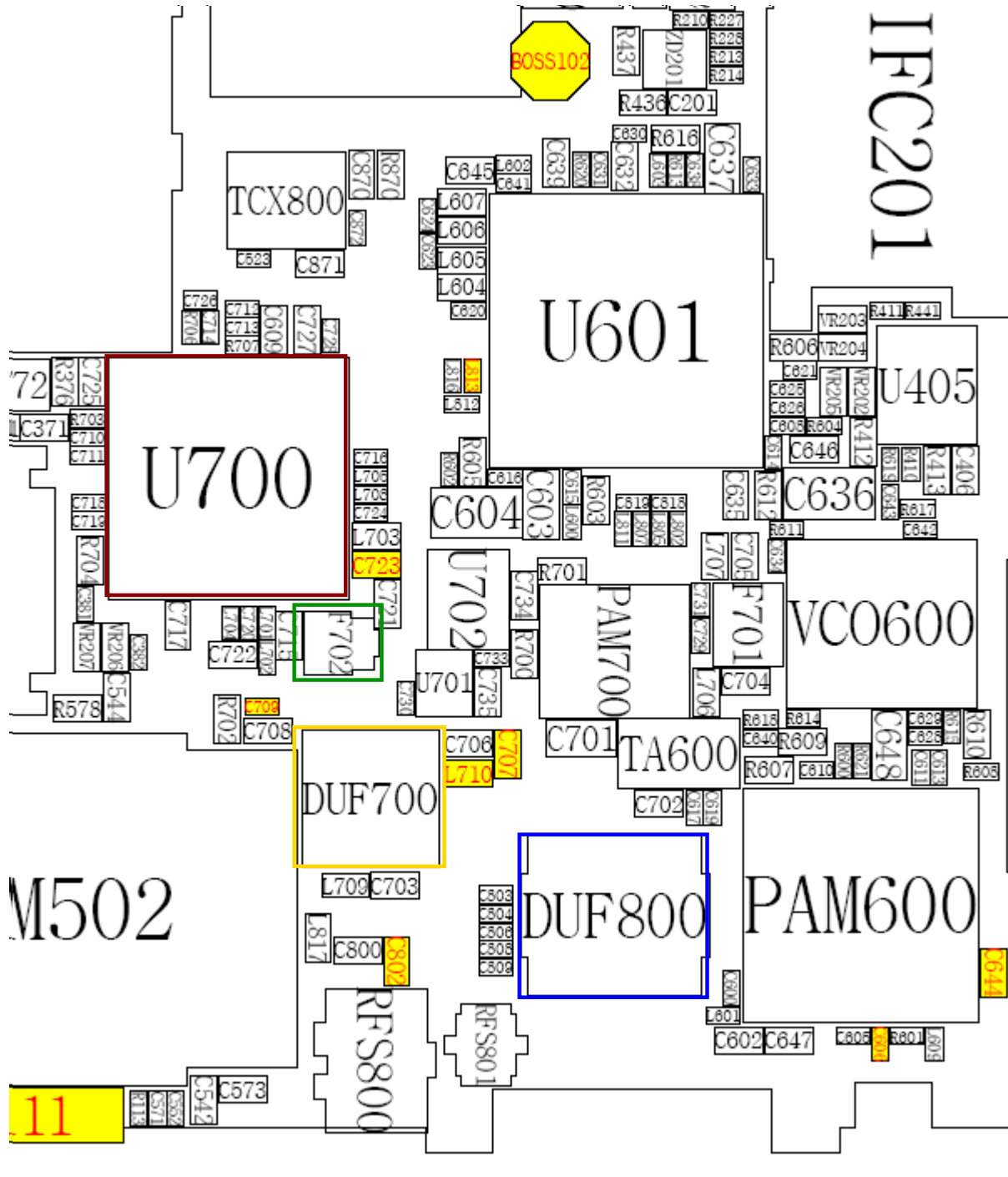
9-2-7. UMTS Receiver



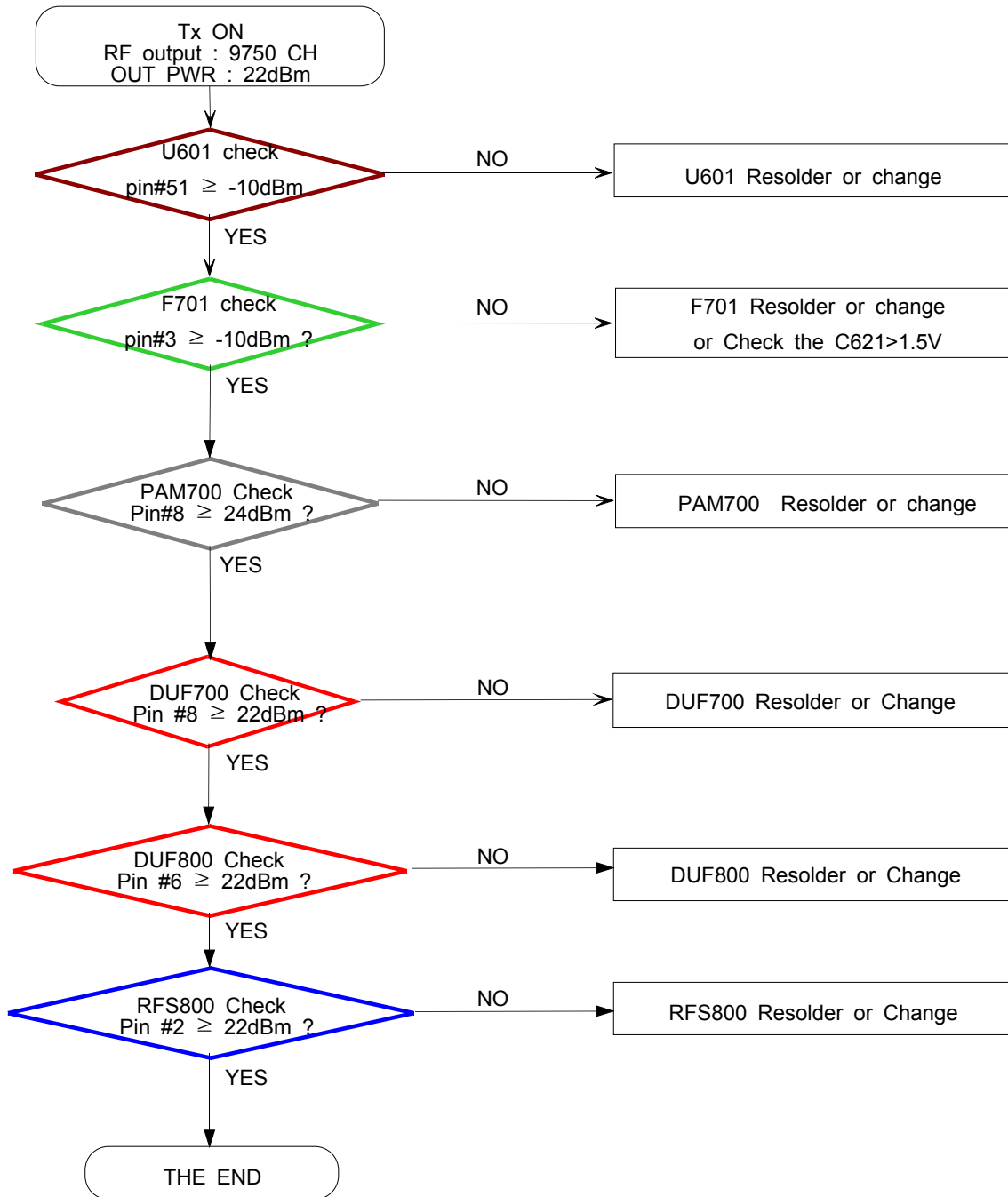


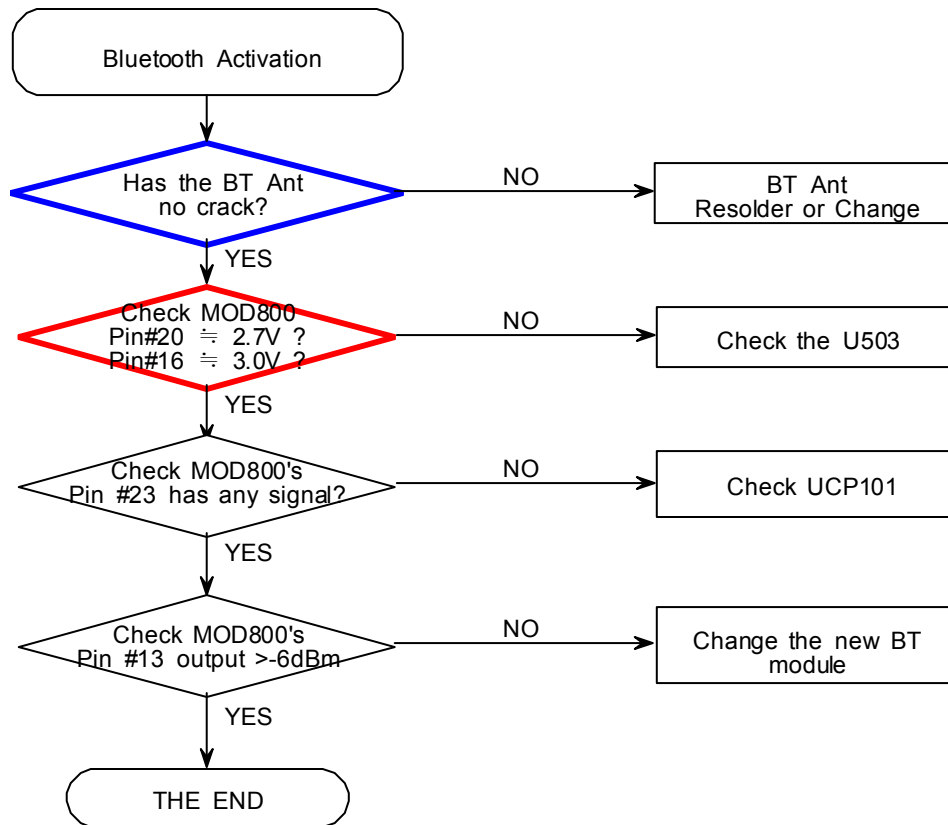


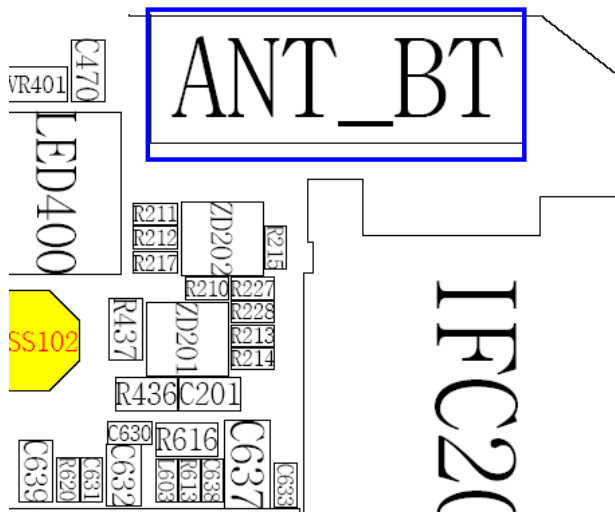
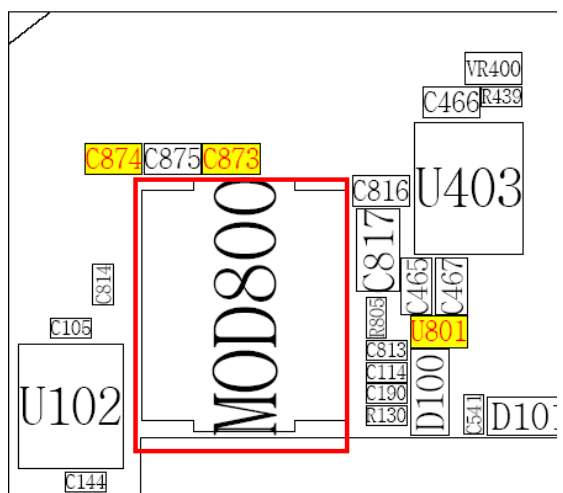
**If you check the RF chain,
Check the not only RF Device but also resistor, inductor and capacitor.



9-2-8. UMTS Transmitter



9-2-9. BLUETOOTH



10. Reference data

10-1. Reference Abbreviate

AAC: Advanced Audio Coding.

AVC : Advanced Video Coding.

BER : Bit Error Rate

BPSK: Binary Phase Shift Keying

CA : Conditional Access

CDM : Code Division Multiplexing

C/I : Carrier to Interference

DMB : Digital Multimedia Broadcasting

EN : European Standard

ES : Elementary Stream

ETSI: European Telecommunications Standards Institute

MPEG: Moving Picture Experts Group

PN : Pseudo-random Noise

PS : Pilot Symbol

QPSK: Quadrature Phase Shift Keying

RS : Reed-Solomon

SI : Service Information

TDM : Time Division Multiplexing

TS : Transport Stream

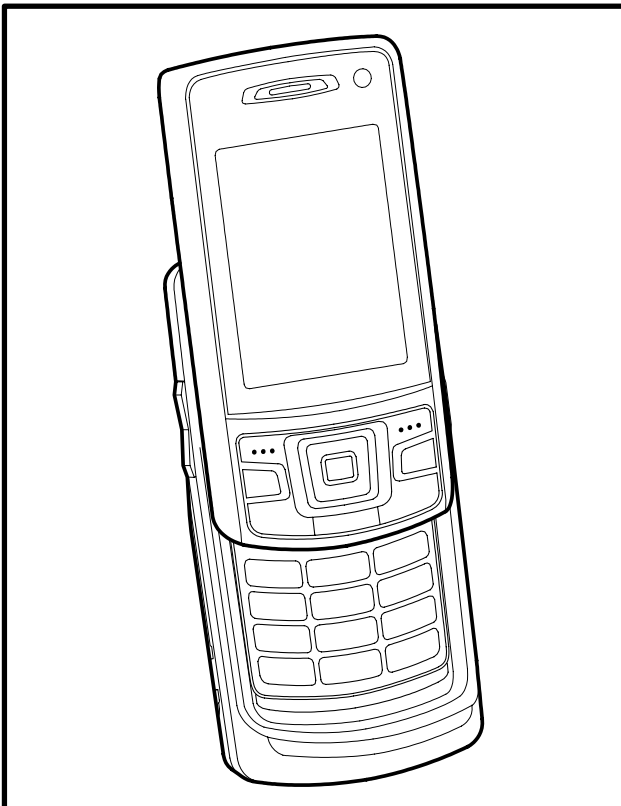
SAMSUNG

UMTS TELEPHONE

SGH-Z630

SERVICE *Manual*

UMTS TELEPHONE



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