

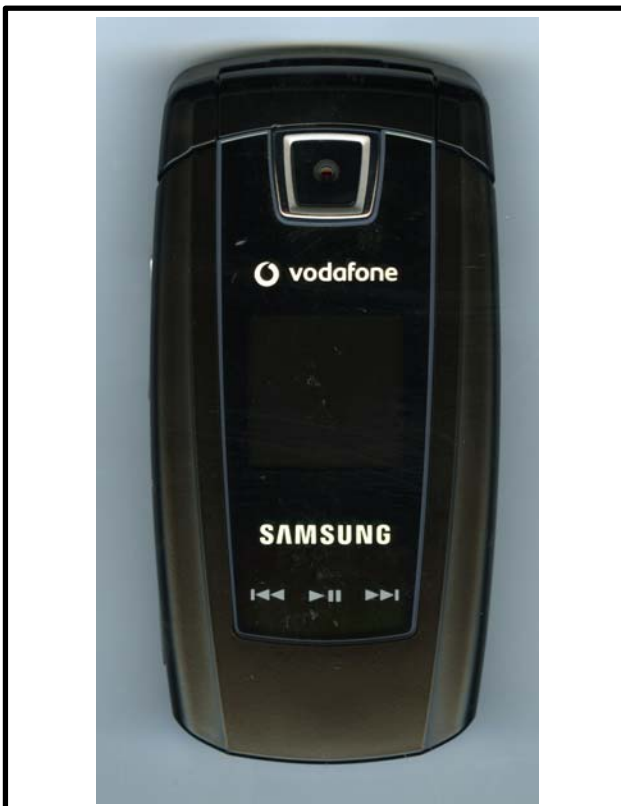
**SAMSUNG**

# UMTS TELEPHONE

## SGH-ZV60

# ***SERVICE*** *Manual*

### UMTS TELEPHONE



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**SAMSUNG  
ELECTRONICS**



GSPN (Global Service Partner Network)

<b>Country</b>	<b>Web Site</b>
North America	<a href="http://service.samsungportal.com">service.samsungportal.com</a>
Latin America	<a href="http://latin.samsungportal.com">latin.samsungportal.com</a>
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Europe	<a href="http://europe.samsungportal.com">europe.samsungportal.com</a>
China	<a href="http://china.samsungportal.com">china.samsungportal.com</a>
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# 1. Safety Precautions

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## 1-1. Repair Precaution

- Repair in Shield Box, during detailed tuning.  
Take specially care of tuning or test,  
because specipicity 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 thicken twisted wire when you measure level.  
A thicken twisted wire has low resistance, therefore error of measurement is few.
- Repair after separate Test Pack and Set because for short danger (for example an  
overcurrent and furious flames of parts etc) when you repair board in condition of  
connecting Test Pack and tuning on.
- Take specially care of soldering, because Land of PCB is small and weak in heat.
- Surely tune on/off while using AC power plug, because a repair of battery charger is  
dangerous when tuning ON/OFF PBA and Connector after disassembling charger.
- Don't use as you pleases after change other material than replacement registered on SEC System.  
Otherwise engineer in charge isn't charged with problem that you don't keep this rules.

## 1-2. ESD(Electrostatically Sensitive Devices) Precaution

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

You can prevent from ESD damage by static electricity.

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

## 2. Specification

### 2-1. GSM General Specification

	EGSM 900	DCS1800	PCS1900	W-CDMA
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	UL: 9612~9888 DL: 10562~10838
Tx/Rx spacing	45MHz	95MHz	80MHz	190MHz
Mod. Bit rate/ Bit Period	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	3.84Mcps
Time Slot Period/Frame Period	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	Frame length : 10ms
Modulation	0.3GMSK	0.3GMSK	0.3GMSK	QPSK HQPSK
MS Power	33dBm~5dBm	30dBm~0dBm	30dBm~0dBm	24dBm~-50dBm
Power Class	4 (max +33dBm)	1 (max +30dBm)	1 (max +30dBm)	3 (max +24dBm)
Sensitivity	-102dBm	-100dBm	-100dBm	-106.7dBm
TDMA Mux	8	8	8	
Cell Radius	35Km	2Km	2Km	2Km

## 2-2. GSM Tx Power Class

<b>TX Power control level</b>	<b>GSM900</b>	<b>TX Power control level</b>	<b>DCS1800</b>	<b>TX Power control level</b>	<b>PCS1800</b>
5	33±2 dBm	0	30±3 dBm	0	30±3 dBm
6	31±2 dBm	1	28±3 dBm	1	28±3 dBm
7	29±2 dBm	2	26±3 dBm	2	26±3 dBm
8	27±2 dBm	3	24±3 dBm	3	24±3 dBm
9	25±2 dBm	4	22±3 dBm	4	22±3 dBm
10	23±2 dBm	5	20±3 dBm	5	20±3 dBm
11	21±2 dBm	6	18±3 dBm	6	18±3 dBm
12	19±2 dBm	7	16±3 dBm	7	16±3 dBm
13	17±2 dBm	8	14±3 dBm	8	14±3 dBm
14	15±2 dBm	9	12±4 dBm	9	12±4 dBm
15	13±2 dBm	10	10±4 dBm	10	10±4 dBm
16	11±3 dBm	11	8±4dBm	11	8±4dBm
17	9±3dBm	12	6±4 dBm	12	6±4 dBm
18	7±3 dBm	13	4±4 dBm	13	4±4 dBm
19	5±3 dBm	14	2±5 dBm	14	2±5 dBm
		15	0±5 dBm	15	0±5 dBm

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## 3. Operation Instruction and Installation

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### Main Function

- Built-in Digital Cameras( CMOS 2 Mega , CMOS VGA )
- 1.9" Main LCD ( 260K TFT ), 1.07" Sub LCD (CSTN)
- Video Telephony / Streaming
- Bluetooth V2.0 Wireless Technology
- USB 2.0
- MP3 player
- Folder Upper Music Key(Touch key)
- Downloadable Game via JAVA
- Sending Photo & Video by MMS or E-Mail
- Supporting 72 Polyphonic Ring Tone
- WAP 2.0 Browser ( Including XHTML/WCSS MP, w/HTTP )
- External Memory Card Socket( T-flash )
- GSM 900MHz & DCS1800MHz & 1900MHz & WCDMA 2100MHz
- GPRS Class 12





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## 4. Array course control

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### 4-1. Software Adjustments



1. JIG: Download, Trace, Calibration, etc
2. RF test cable: RF test
3. Test cable: JIG to phone
4. TA (Travel Adaptor)
5. Data Link Cable : USB cable
6. Serial cable: PC to JIG

## 4-2. Software Downloading

### 4-2-1. Downloading Binary Files

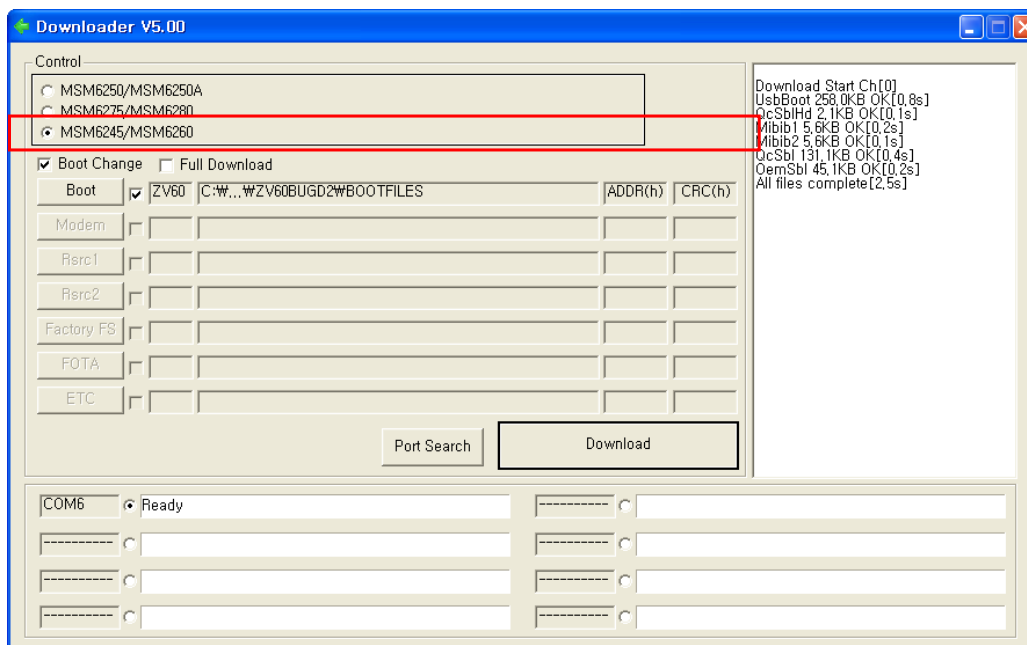
- Four binary files for downloading ZV60.
  - amss\_compressed.bin : Modem binary for communication function  
& Mocha binary for user interface and various application
  - Rsrc\_ZV60\_○○○.rc1: Files need for each application
  - Rsrc2\_ZV60(Low).rc2 : Power on/off animation
  - FactoryFS\_ZV60\_○○○.ffs : Default file system to be put into in initial production

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

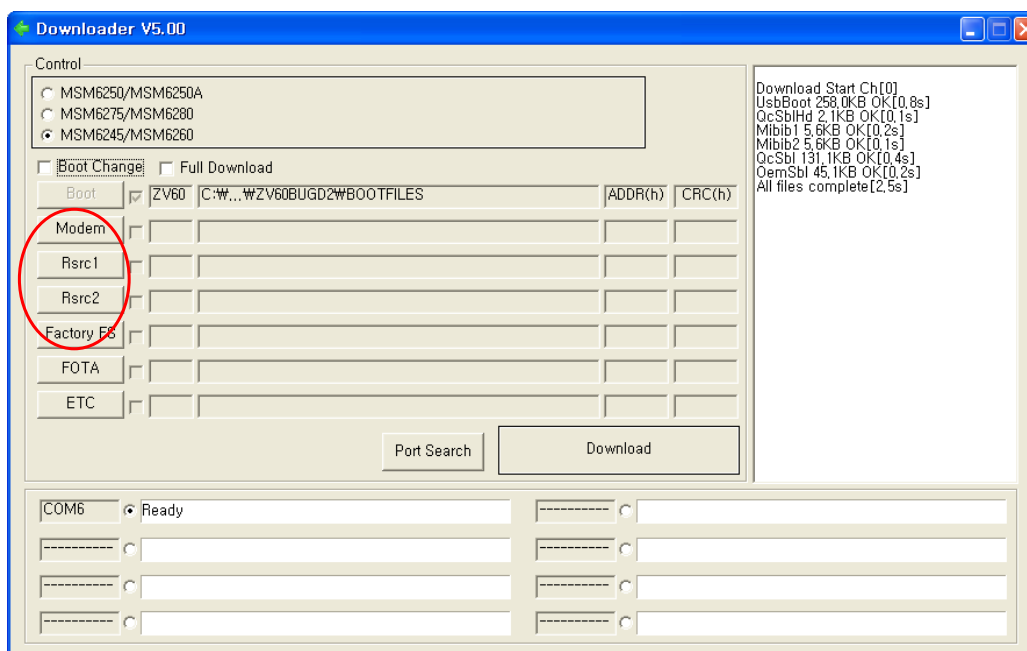
- Downloader Program( [FastMultiLoader V5.00.exe](#) )
- SGH-ZV60 Mobile Phone
- USB Data Link Cable
- Binary files

### 4-2-3. S/W Downloader Program

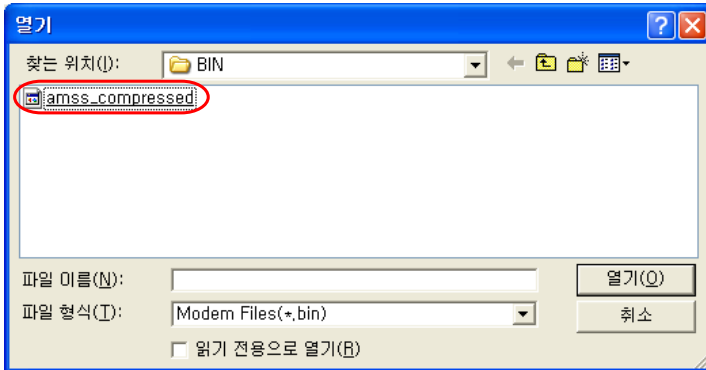
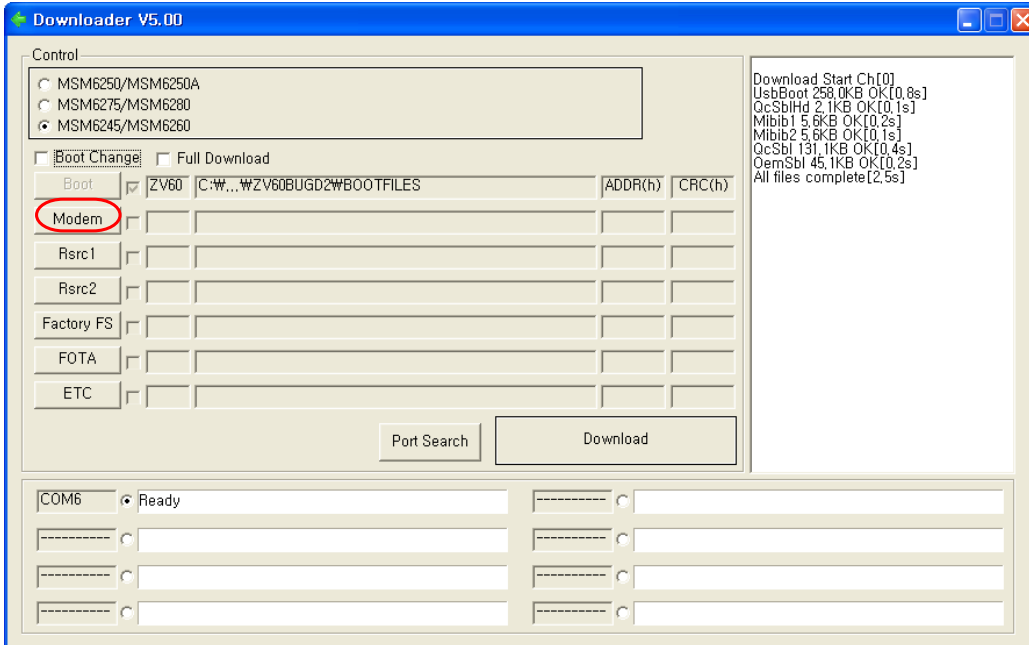
1. Boot the ZV60 by pressing 'Power ON key' + 'Number 9 key' at the same time-  
If you do properly, you can see the following message on LCD "DOWNLOAD" or RED SCREEN
2. Load the binary download program by executing the "FastMultiLoader V5.00.exe". And then Check the 6245.



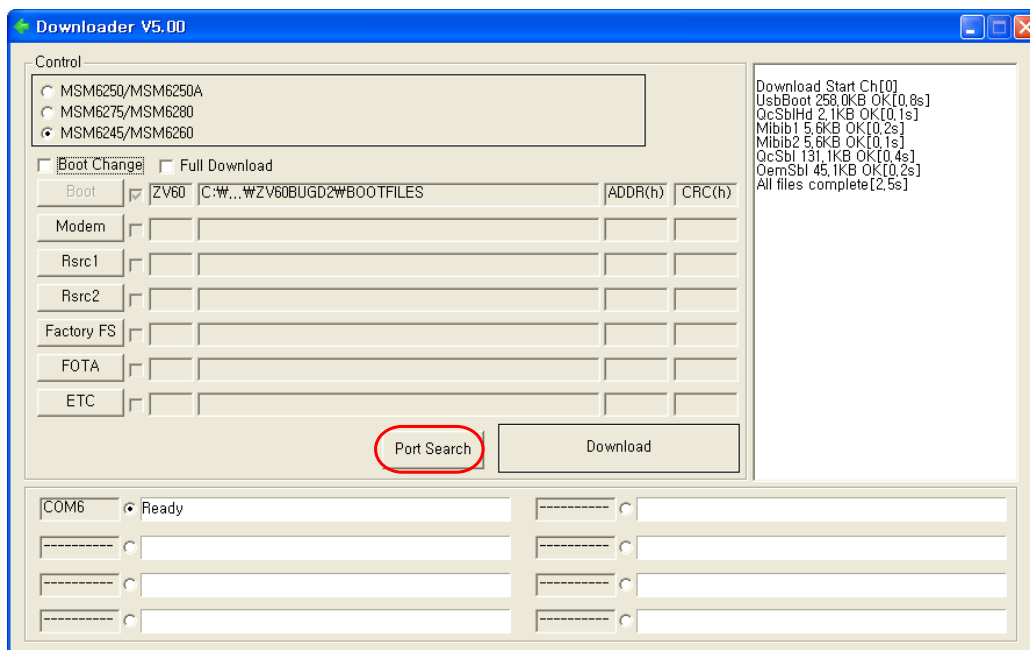
3. Select the check box what you want to download.



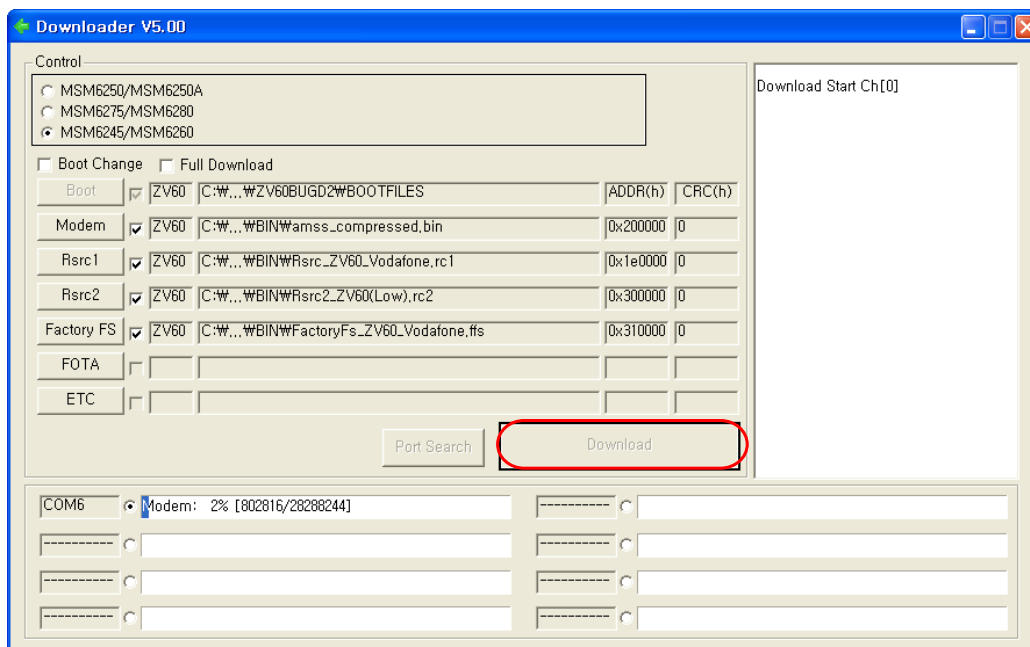
#### 4. Select the binary file what you want to download



## 5. Now press the button 'Port Search'



## 6. Now press the button 'Download'

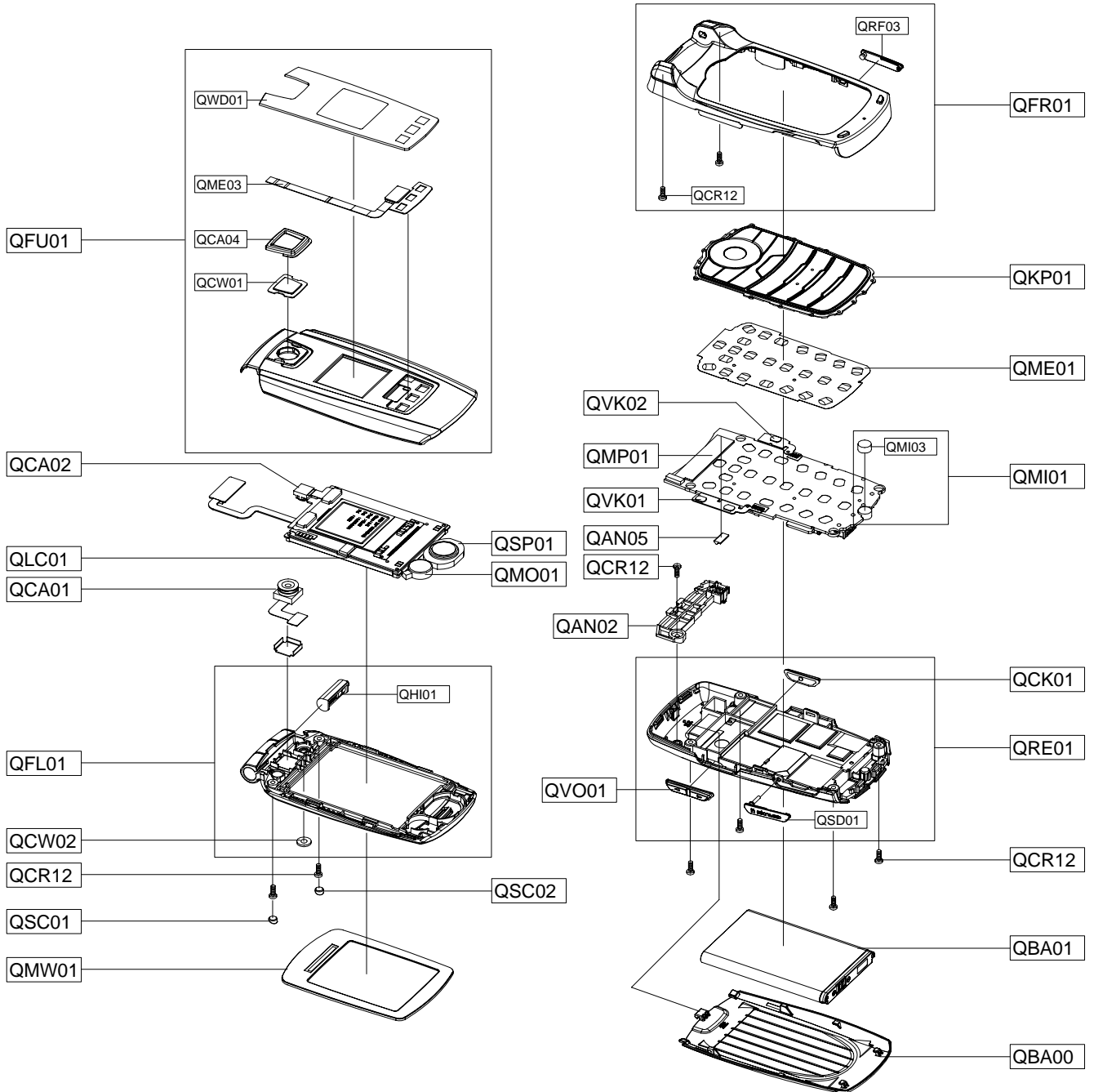


7. When downloading is complete, UE reboot automatically.  
 - If there is difference in FactoryFs.bin, UE will format file system automatically.



# 5. Exploded View/Disassembly&Assembly Instructions

## 5-1. Cellular Phone Exploded View



## 5-2. Cellular Phone Parts list

Design LOC	Description	SEC CODE
QAN02	ANTENNA-SGH ZV60	GH42-01187A
QAN05	ASSY MEC-ANTENNA CONTACT	GH75-08168A
QBA00	PMO-COVER BATTERY	GH72-37218A
QBA01	INNER BATTERY PACK-960MAH,BLK,	GH43-02720A
QCA01	UNIT-CAMERA MODULE	GH59-04089A
QCA02	UNIT-VGA CAMERA	GH59-04140A
QCA04	ICT-DECO MEGA CAMERA	GH70-01992A
QCK01	PMO-CAMERA KEY	GH72-37214A
QCR12	SCREW-MACHINE	6001-001530
QCR12	SCREW-MACHINE	6001-001530
QCR12	SCREW-MACHINE	6001-001530
QCR12	SCREW-MACHINE	6001-001530
QCW01	PCT-COVER WINDOW MEGA CAM	GH72-37221A
QCW02	PCT-COVER WINDOW VGA CAM	GH72-37222A
QFL01	ASSY CASE-LOWER FOLDER	GH98-03768A
QFR01	ASSY CASE-FRONT	GH98-03767A
QFU01	ASSY CASE-UPPER FOLDER	GH98-03769A
QHI01	ASSY MEC-HINGE	GH75-04948A
QKP01	ASSY KEYPAD-(VOD/BLK)	GH98-03771A
QLC01	ELA ETC-SGH ZV60 LCD MODULE	GH96-02453A
QME01	DOME SHEET-METAL DOME	GH59-04109A
QME03	KEY FPCB-SGHZV60 TOUCH KEY	GH59-04133A
QMI01	MICROPHONE-ASSY	GH30-00394A
QMI03	AS-SGHZV60 MIC RUBBER	GH81-06647A
QMO01	MOTOR DC-SGH ZV60	GH31-00313A
QMP01	PBA MAIN-SGH ZV60	GH92-03460A
QMW01	ASSY COVER-MAIN WINDOW	GH98-04609A
QRE01	ASSY CASE-REAR	GH98-03770A
QRF03	PMO-COVER EAR	GH72-37217A
QSC01	RMO-SCREW CAP L	GH73-09420A
QSC02	RMO-SCREW CAP R	GH73-09421A
QSD01	PMO-COVER SD	GH72-37216A
QSP01	SPEAKER	3001-002114
QVK01	KEY FPCB-VOLUME KEY ASSY	GH59-04204A
QVK02	KEY FPCB-CAM KEY FPCB	GH59-04203A
QVO01	PMO-VOLUME KEY	GH72-37213A
QWD01	PCT-COVER SUB WINDOW	GH72-37224A



Description	SEC CODE
CBF INTERFACE-DATA LINK CABLE	GH39-00444A
ADAPTOR-SGHE690,BLK,EU,A_TYPE	GH44-01361A
EARPHONE-EARPHONE,20P,B-TYPE	GH59-03883A
LABEL(R)-WATER SOAK	GH68-09361A
MPR-INSU TAPE LED	GH74-31775A
MPR-VINYL BOHO SUB WINDOW	GH74-31128A
MPR-REMOVE TAPE LCD	GH74-13804A
MPR-TAPE	GH74-27509A
MPR-INSU TAPE SUB LCD	GH74-27510A
MPR-INSU TAPE	GH74-27511A
MPR-INSU TAPE	GH74-27512A
MPR-TAPE DECO MEGA CAM	GH74-30162A
MPR-TAPE WINDOW MEGA CAM	GH74-30163A
MPR-VINYL BOHO SUB WINDOW	GH74-31128A
MPR-TAPE MAIN FPCB INSULATION	GH74-24736A
MPR-TAPE FPCB FRONT	GH74-31774A
ICT BRACKET-MEGA CAMERA	GH70-02533A
TAPE GASK	GH74-32594A
VINYL-BOHO REAR	GH74-33383A
S/W CD-PC STUDIO	GH46-00424A
MANUAL USERS-VODA SPANISH	GH68-14787A
MANUAL USERS-VODA QSG SPANISH	GH68-14916A
BAG PE	6902-000634
LABEL(R)-MAIN(VODA)	GH68-14768A
BOX-UNIT(VODA)	GH69-05393A
CUSHION-CASE(VODA)	GH69-05394A

## 5-3. Disassembly and Assembly Instructions

### 5-3-1. Disassembly

<p><b>1</b></p> 	<p><b>2</b></p> 
<p>1. Unscrew the 4 points. 2. Separate the REAR from the FRONT ass'y using assembly stick.</p>	<p>1. Disjoin the connectors from the PBA.</p>
<p><b>* Caution</b></p> <p>1) Be care of scratch and molding damage.</p>	<p><b>* Caution</b></p> <p>1) Be care of scratch and molding damage. 1) Be care of damage to the FPCBs.</p>
<p><b>3</b></p> 	<p><b>4</b></p> 
<p>1. Take out the PBA, KEYPAD. 2. Detach the DUST PROTECTION TAPE.</p>	<p>1. Push the hinge with a thin stick to separate the UPPER from the LOWER.</p>
<p><b>* Caution</b></p> <p>1) Be care of scratch and molding damage.</p>	<p><b>* Caution</b></p> <p>1) Be care of damage to the FPCBs. 2) Be care of scratch and molding damage.</p>

5



1. Detach the two SCREW CAPS.
2. Put the HINGE DUMMY out.
3. Unscrew 2 points.

**\* Caution**

- 1) Be care of scratch and molding damage.

6

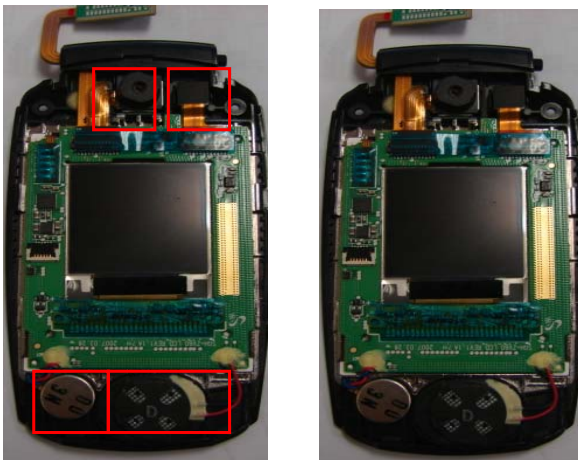


1. Disassemble the UPPER by using a assembly stick.

**\* Caution**

- 1) Be care of scratch and molding damage.

7

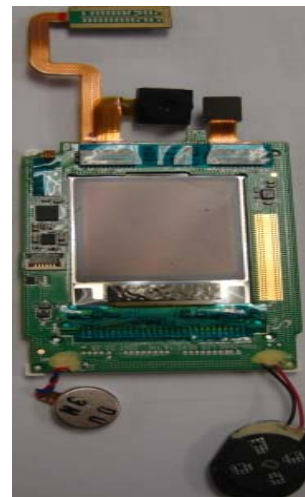


1. Separate a motor/speaker/Mega,Vga camera from the LOWER using a tweezer.
2. Separate the LCD module from the LOWER.

**\* Caution**

- 1) Be care of scratch and molding damage.
- 2) Be care of damage to motor/speaker wires.

8

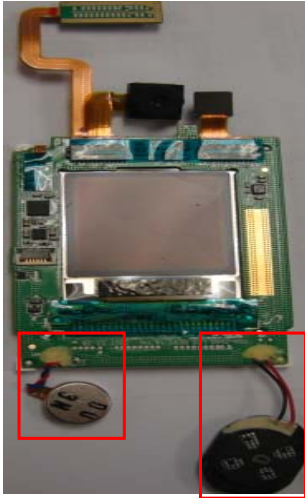
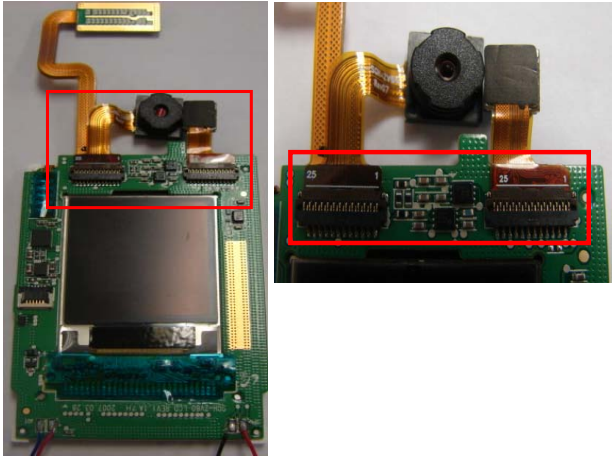
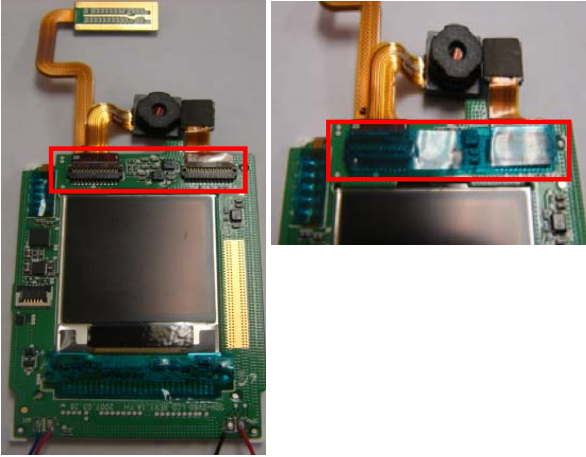


1. Take the LCD out.

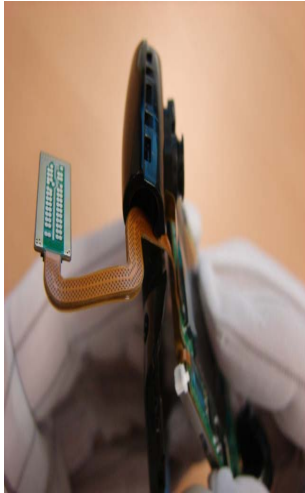
**\* Caution**

- 1) Be care of scratch and molding damage.
- 2) Be care of damage to LCD FPCB..

### 5-3-2. Assembly

<p>1</p> 	<p>2</p> 
<p>1.Solder motor/speaker to the pad of LCD module and Bonding.</p>	<p>1.Attach MEGA/VGA Camera module to the LCD.</p>
<p><b>* Caution</b> 1) Be care of damage to the LCD module</p>	<p><b>* Caution</b> 1) Be care of damage to the LCD module</p>
<p>3</p> 	
<p>1.Attach one insulation tape to Camera connector.</p>	
<p><b>* Caution</b> 1) Be care of scratch and molding damage.</p>	<p><b>* Caution</b> 1) Be care of scratch and molding damage.</p>

4

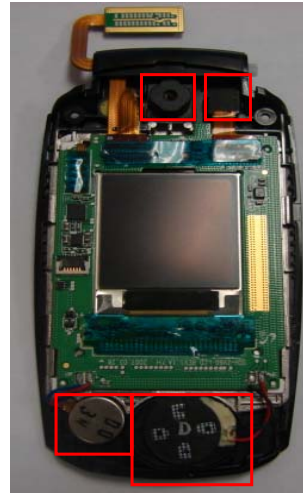


1.Assemble the LCD into the lower.

**\* Caution**

1) Be care of damage to F-PCB of LCD module.

5



1.Assemble the MOTOR/SPEAKER/MEGA,VGA CAMERA.

**\* Caution**

1) Be care of scratch.

6

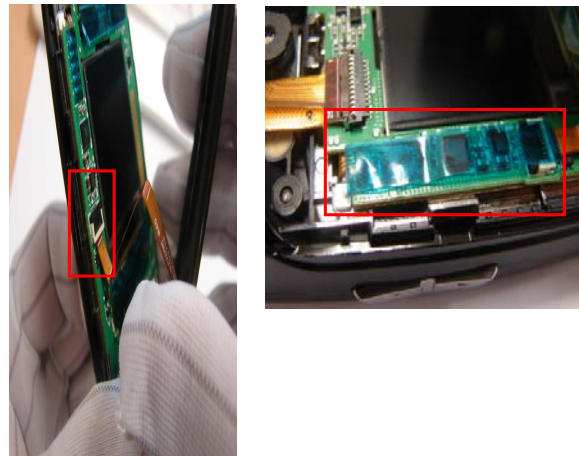


1.Attach the MAIN/VGA CAMERA WINDOW.

**\* Caution**

1) Be care of scratch and molding damage.

7



1.Assemble the MP3 KEY PCB CONNECTOR AND  
2.Attach one insulation tape to MP3 connector

**\* Caution**

1) Be care of damage to the camera F-PCB.



8



1.Assemble the UPPER Screw two points.

**\* Caution**

1) Be care of scratch and molding damage.

9

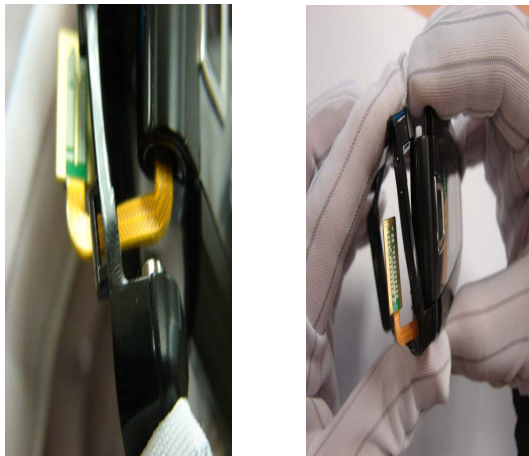


1.Attach two SCREW CAPs.

**\* Caution**

1) Be care of scratch and molding damage.

10

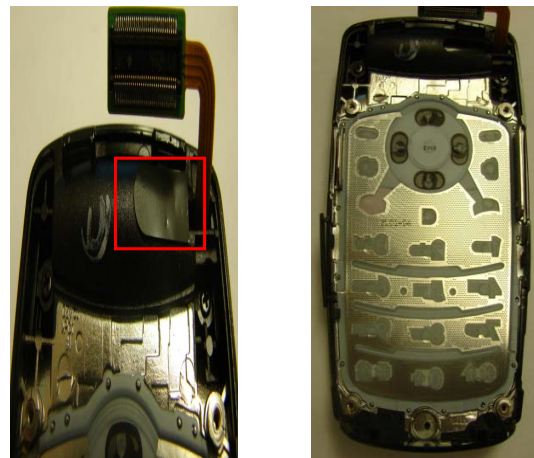


1.Assemble the folder and the front by fitting hinge dummy in the front.  
2.Push the hinge.

**\* Caution**

1) Be care of scratch.

11



1.Attach the DUST PROTECTION TAPE.  
2.Put the KEYPAD on the front ass'y.

**\* Caution**

1) Be care of scratch and molding damage.

12



- 1.Put the PBA on the front ass'y.
- 2.Join the LCD connector to the PBA.

**\* Caution**

- 1) Be care of damage to the SIDE KEY/CAMERA F-PCBs.

13

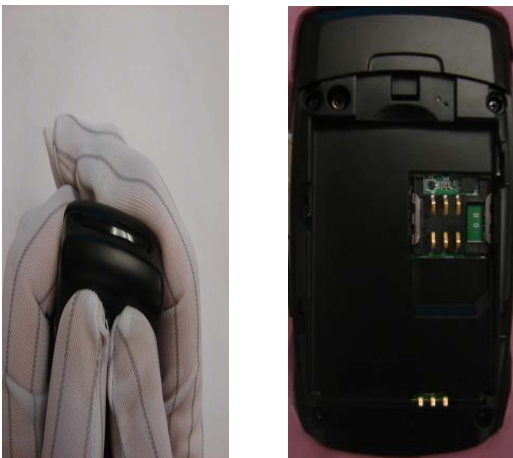


- 1.Place the VOLUME KEY/CAMERA KEY to both side of the assembly.

**\* Caution**

- 1) Be care of scratch and molding damage.

14



- 1.Assemble the rear case to the assembly.
- 2.Screw down 4 points in the red circle.

**\* Caution**

- 1) Be care of scratch and molding damage.





## 6. MAIN Electrical Parts List

Design LOC	Description	SEC Code	STATUS
ANT100	NPR-ANTENNA CONTACT	GH71-06379A	SA
ANT101	NPR-ANTENNA CONTACT	GH71-06379A	SA
ANT102	ANTENNA-CHIP	4202-001299	SA
BAT400	BATTERY-LI(2ND)	4302-001180	SA
BTC600	HEADER-BATTERY	3711-006137	SA
C100	C-CER,CHIP	2203-006556	SA
C103	C-CER,CHIP	2203-002668	SA
C104	C-CER,CHIP	2203-005659	SA
C105	C-CER,CHIP	2203-005659	SA
C106	C-CER,CHIP	2203-005659	SA
C107	C-CER,CHIP	2203-005659	SA
C108	C-CER,CHIP	2203-005727	SA
C109	C-CER,CHIP	2203-000696	SA
C110	C-CER,CHIP	2203-005382	SA
C111	C-CER,CHIP	2203-001437	SA
C113	C-CER,CHIP	2203-006423	SA
C115	C-CER,CHIP	2203-005725	SA
C118	C-CER,CHIP	2203-005725	SA
C119	C-CER,CHIP	2203-006423	SA
C120	C-CER,CHIP	2203-006423	SA
C121	C-CER,CHIP	2203-006379	SA
C122	C-CER,CHIP	2203-006423	SA
C123	C-CER,CHIP	2203-005682	SA
C124	C-CER,CHIP	2203-006423	SA
C126	C-CER,CHIP	2203-006423	SA
C127	C-CER,CHIP	2203-005725	SA
C129	C-CER,CHIP	2203-005444	SA
C130	C-CER,CHIP	2203-002677	SA
C131	C-CER,CHIP	2203-000438	SA
C132	C-CER,CHIP	2203-005682	SA
C133	C-CER,CHIP	2203-005682	SA
C134	C-CER,CHIP	2203-005682	SA
C135	C-CER,CHIP	2203-002968	SA
C137	C-CER,CHIP	2203-006556	SA
C138	C-CER,CHIP	2203-005393	SA
C140	C-CER,CHIP	2203-005444	SA
C141	C-CER,CHIP	2203-006423	SA
C142	C-CER,CHIP	2203-006423	SA
C143	C-CER,CHIP	2203-006423	SA
C144	C-CER,CHIP	2203-006423	SA
C145	C-CER,CHIP	2203-000812	SA
C146	C-CER,CHIP	2203-005056	SA
C148	C-CER,CHIP	2203-006194	SA
C149	C-CER,CHIP	2203-005725	SA
C151	C-CER,CHIP	2203-005725	SA
C152	C-CER,CHIP	2203-000233	SA
C156	C-CER,CHIP	2203-005736	SA
C157	C-CER,CHIP	2203-006305	SA
C162	C-CER,CHIP	2203-000854	SA
C163	C-CER,CHIP	2203-006648	SA
C164	C-CER,CHIP	2203-006423	SA
C165	C-CER,CHIP	2203-006562	SA
C166	C-CER,CHIP	2203-006872	SA

Main Electrical Parts List

<b>Design LOC</b>	<b>Description</b>	<b>SEC Code</b>	<b>STATUS</b>
C167	C-CER,CHIP	2203-006562	SA
C168	C-CER,CHIP	2203-006872	SA
C169	C-CER,CHIP	2203-005736	SA
C170	C-CER,CHIP	2203-000233	SA
C171	C-CER,CHIP	2203-000330	SA
C172	C-CER,CHIP	2203-000233	SA
C173	C-CER,CHIP	2203-000386	SA
C174	C-CER,CHIP	2203-006842	SA
C175	C-CER,CHIP	2203-006120	SA
C178	C-CER,CHIP	2203-006562	SA
C179	C-CER,CHIP	2203-006423	SA
C200	C-CER,CHIP	2203-006194	SA
C201	C-CER,CHIP	2203-006194	SA
C202	C-CER,CHIP	2203-005736	SA
C203	C-CER,CHIP	2203-000233	SA
C204	C-CER,CHIP	2203-000278	SA
C205	C-CER,CHIP	2203-005052	SA
C208	C-CER,CHIP	2203-005725	SA
C209	C-CER,CHIP	2203-006194	SA
C210	C-CER,CHIP	2203-005736	SA
C211	C-CER,CHIP	2203-006423	SA
C212	C-CER,CHIP	2203-000254	SA
C213	C-CER,CHIP	2203-005806	SNA
C214	C-CER,CHIP	2203-005482	SA
C215	C-CER,CHIP	2203-005806	SNA
C216	C-CER,CHIP	2203-005682	SA
C217	C-CER,CHIP	2203-006194	SA
C218	C-CER,CHIP	2203-006194	SA
C219	C-CER,CHIP	2203-000696	SA
C302	C-CER,CHIP	2203-000489	SA
C304	C-CER,CHIP	2203-005480	SA
C305	C-CER,CHIP	2203-006423	SA
C306	C-CER,CHIP	2203-006423	SA
C307	C-CER,CHIP	2203-006423	SA
C308	C-CER,CHIP	2203-006979	SA
C309	C-CER,CHIP	2203-006979	SA
C311	C-CER,CHIP	2203-006423	SA
C312	C-CER,CHIP	2203-006423	SA
C313	C-CER,CHIP	2203-006979	SA
C314	C-CER,CHIP	2203-006979	SA
C315	C-CER,CHIP	2203-006423	SA
C316	C-CER,CHIP	2203-000233	SA
C317	C-CER,CHIP	2203-006423	SA
C318	C-CER,CHIP	2203-000812	SA
C319	C-CER,CHIP	2203-000254	SA
C320	C-CER,CHIP	2203-006194	SA
C321	C-CER,CHIP	2203-006194	SA
C322	C-CER,CHIP	2203-006194	SA
C324	C-CER,CHIP	2203-006194	SA
C325	C-CER,CHIP	2203-006194	SA
C326	C-CER,CHIP	2203-000438	SA
C327	C-CER,CHIP	2203-000438	SA
C328	C-CER,CHIP	2203-006562	SA

<b>Design LOC</b>	<b>Description</b>	<b>SEC Code</b>	<b>STATUS</b>
C329	C-CER,CHIP	2203-000438	SA
C330	C-CER,CHIP	2203-000438	SA
C332	C-CER,CHIP	2203-006194	SA
C333	C-CER,CHIP	2203-006423	SA
C334	C-CER,CHIP	2203-000438	SA
C335	C-CER,CHIP	2203-006194	SA
C336	C-CER,CHIP	2203-006194	SA
C337	C-CER,CHIP	2203-006194	SA
C338	C-CER,CHIP	2203-006194	SA
C339	C-CER,CHIP	2203-006423	SA
C340	C-CER,CHIP	2203-006423	SA
C341	C-CER,CHIP	2203-006423	SA
C342	C-CER,CHIP	2203-006194	SA
C343	C-CER,CHIP	2203-006423	SA
C344	C-CER,CHIP	2203-006194	SA
C345	C-CER,CHIP	2203-006423	SA
C346	C-CER,CHIP	2203-006194	SA
C347	C-CER,CHIP	2203-006423	SA
C348	C-CER,CHIP	2203-006423	SA
C349	C-CER,CHIP	2203-006423	SA
C350	C-CER,CHIP	2203-006423	SA
C352	C-CER,CHIP	2203-006423	SA
C353	C-CER,CHIP	2203-005482	SA
C354	C-CER,CHIP	2203-000995	SA
C355	C-CER,CHIP	2203-005740	SA
C400	C-CER,CHIP	2203-006824	SA
C401	C-CER,CHIP	2203-006824	SA
C402	C-CER,CHIP	2203-006562	SA
C403	C-CER,CHIP	2203-006423	SA
C404	C-CER,CHIP	2203-005736	SA
C405	C-CER,CHIP	2203-005736	SA
C406	C-CER,CHIP	2203-000386	SA
C407	C-CER,CHIP	2203-000386	SA
C408	C-CER,CHIP	2203-006423	SA
C409	C-CER,CHIP	2203-006305	SA
C410	C-CER,CHIP	2203-006562	SA
C411	C-CER,CHIP	2203-006305	SA
C412	C-CER,CHIP	2203-006562	SA
C413	C-CER,CHIP	2203-006305	SA
C414	C-CER,CHIP	2203-006838	SA
C415	C-CER,CHIP	2203-006305	SA
C416	C-CER,CHIP	2203-006838	SA
C417	C-CER,CHIP	2203-006838	SA
C418	C-CER,CHIP	2203-006838	SA
C419	C-CER,CHIP	2203-006824	SA
C420	C-CER,CHIP	2203-006305	SA
C421	C-CER,CHIP	2203-006824	SA
C422	C-CER,CHIP	2203-005682	SA
C423	C-CER,CHIP	2203-006423	SA
C424	C-CER,CHIP	2203-006562	SA
C425	C-CER,CHIP	2203-006824	SA
C426	C-CER,CHIP	2203-006681	SA
C427	C-CER,CHIP	2203-006824	SA

Main Electrical Parts List

<b>Design LOC</b>	<b>Description</b>	<b>SEC Code</b>	<b>STATUS</b>
C428	C-CER,CHIP	2203-006681	SA
C429	C-CER,CHIP	2203-006562	SA
C430	C-CER,CHIP	2203-000812	SA
C431	C-CER,CHIP	2203-005682	SA
C434	C-CER,CHIP	2203-006824	SA
C435	C-CER,CHIP	2203-006824	SA
C438	C-CER,CHIP	2203-006048	SA
C439	C-CER,CHIP	2203-006048	SA
C441	C-CER,CHIP	2203-006048	SA
C442	C-CER,CHIP	2203-006562	SA
C443	C-CER,CHIP	2203-006562	SA
C444	C-CER,CHIP	2203-006562	SA
C445	C-CER,CHIP	2203-005682	SA
C446	C-CER,CHIP	2203-000812	SA
C447	C-CER,CHIP	2203-000812	SA
C448	C-CER,CHIP	2203-000812	SA
C449	C-CER,CHIP	2203-000812	SA
C450	C-CER,CHIP	2203-000812	SA
C451	C-CER,CHIP	2203-006824	SA
C452	C-CER,CHIP	2203-006824	SA
C500	C-CER,CHIP	2203-000278	SA
C501	C-CER,CHIP	2203-000812	SA
C504	C-CER,CHIP	2203-006562	SA
C506	C-CER,CHIP	2203-005482	SA
C507	C-CER,CHIP	2203-000278	SA
C508	C-CER,CHIP	2203-006305	SA
C509	C-CER,CHIP	2203-005482	SA
C511	C-CER,CHIP	2203-005482	SA
C512	C-CER,CHIP	2203-006048	SA
C513	C-CER,CHIP	2203-000254	SA
C514	C-CER,CHIP	2203-006260	SA
C515	C-CER,CHIP	2203-000254	SA
C516	C-CER,CHIP	2203-006260	SA
C517	C-CER,CHIP	2203-006562	SA
C519	C-CER,CHIP	2203-006648	SA
C520	C-CER,CHIP	2203-006257	SA
C521	C-CER,CHIP	2203-006305	SA
C522	C-CER,CHIP	2203-005682	SA
C523	C-CER,CHIP	2203-000278	SA
C524	C-CER,CHIP	2203-006648	SA
C528	C-CER,CHIP	2203-000812	SA
C530	C-CER,CHIP	2203-002709	SA
C600	C-CER,CHIP	2203-000425	SA
C601	C-CER,CHIP	2203-000425	SA
C603	C-CER,CHIP	2203-005682	SA
C607	C-CER,CHIP	2203-006562	SA
C608	C-CER,CHIP	2203-006562	SA
C700	C-CER,CHIP	2203-006562	SA
C704	C-CER,CHIP	2203-000386	SA
C705	C-CER,CHIP	2203-006562	SA
C706	C-CER,CHIP	2203-006562	SA
C800	C-CER,CHIP	2203-006423	SA
CD400	CONNECTOR-CARD EDGE	3709-001392	SA

Design LOC	Description	SEC Code	STATUS
CPL200	COUPLER-DIRECTION	4709-001399	SA
D400	DIODE-ARRAY	0407-001002	SA
D401	DIODE-TVS	0406-001215	SA
D402	DIODE-TVS	0406-001215	SA
D500	DIODE-TVS	0406-001254	SA
D501	DIODE-TVS	0406-001254	SA
D600	DIODE-TVS	0406-001208	SA
D601	DIODE-ZENER	0403-001547	SA
D602	DIODE-TVS	0406-001208	SA
D603	DIODE-ZENER	0403-001427	SA
DUF200	DUPLEXER-SAW	2910-000010	SA
F100	DUPLEXER-FEM	2911-000079	SA
F101	FILTER-SAW	2904-001623	SA
F102	FILTER-SAW	2904-001703	SA
F103	BEAD-SMD	3301-001534	SA
F104	FILTER-LC	2909-001285	SA
F200	FILTER-SAW	2904-001658	SA
F300	FILTER-EMI SMD	2901-001283	SA
F700	FILTER-EMI/ESD	2901-001418	SA
F701	FILTER-EMI/ESD	2901-001418	SA
F702	FILTER-EMI/ESD	2901-001418	SA
F703	FILTER-EMI/ESD	2901-001418	SA
HDC700	HEADER-BOARD TO BOARD	3711-005367	SA
IFC600	SOCKET-INTERFACE	3710-002442	SA
L100	INDUCTOR-SMD	2703-002170	SA
L103	INDUCTOR-SMD	2703-002955	SA
L104	INDUCTOR-SMD	2703-002793	SA
L105	INDUCTOR-SMD	2703-002793	SA
L106	INDUCTOR-SMD	2703-002793	SA
L107	INDUCTOR-SMD	2703-002858	SA
L108	INDUCTOR-SMD	2703-002798	SNA
L109	INDUCTOR-SMD	2703-002901	SNA
L110	INDUCTOR-SMD	2703-002858	SA
L111	INDUCTOR-SMD	2703-002798	SNA
L112	INDUCTOR-SMD	2703-002900	SA
L113	INDUCTOR-SMD	2703-002955	SA
L114	INDUCTOR-SMD	2703-002798	SNA
L116	INDUCTOR-SMD	2703-002900	SA
L118	INDUCTOR-SMD	2703-001726	SA
L126	INDUCTOR-SMD	2703-002596	SA
L200	INDUCTOR-SMD	2703-002170	SA
L201	INDUCTOR-SMD	2703-002842	SA
L205	INDUCTOR-SMD	2703-002281	SA
L206	INDUCTOR-SMD	2703-002798	SNA
L207	BEAD-SMD	3301-001756	SA
L300	INDUCTOR-SMD	2703-002858	SA
L400	INDUCTOR-SMD	2703-002840	SA
L401	INDUCTOR-SMD	2703-002840	SA
L602	BEAD-SMD	3301-001885	SA
L603	BEAD-SMD	3301-001885	SA
L604	BEAD-SMD	3301-001885	SA
L605	BEAD-SMD	3301-001756	SA
L606	BEAD-SMD	3301-001756	SA

Main Electrical Parts List

<b>Design LOC</b>	<b>Description</b>	<b>SEC Code</b>	<b>STATUS</b>
L800	BEAD-SMD	3301-001534	SA
LED800	LED	0601-002268	SA
LED801	LED	0601-002268	SA
MOD100	IC-TRANSCIEVER	1205-002942	SA
OSC100	CRYSTAL-SMD	2801-004515	SA
OSC400	CRYSTAL-SMD	2801-004339	SA
PAM100	IC-POWER AMP	1201-002534	SA
PAM200	IC-POWER AMP	1201-002305	SA
R100	R-CHIP	2007-008542	SA
R101	R-CHIP	2007-008542	SA
R102	R-CHIP	2007-008542	SA
R103	R-CHIP	2007-008542	SA
R104	R-CHIP	2007-008542	SA
R105	R-CHIP	2007-001285	SA
R107	R-CHIP	2007-007309	SA
R108	R-CHIP	2007-008419	SA
R109	R-CHIP	2007-008419	SA
R110	R-CHIP	2007-008419	SA
R112	R-CHIP	2007-001119	SA
R113	R-CHIP	2007-001285	SA
R114	R-CHIP	2007-008531	SA
R116	R-CHIP	2007-001298	SA
R118	R-CHIP	2007-001305	SA
R119	R-CHIP	2007-001305	SA
R120	R-CHIP	2007-000174	SA
R121	R-CHIP	2007-008588	SA
R122	R-CHIP	2007-001305	SA
R123	R-CHIP	2007-001305	SA
R130	R-CHIP	2007-008542	SA
R131	R-CHIP	2007-007489	SA
R132	R-CHIP	2007-009084	SA
R133	R-CHIP	2007-008542	SA
R200	R-CHIP	2007-001298	SA
R201	R-CHIP	2007-003022	SA
R202	R-CHIP	2007-001303	SA
R203	R-CHIP	2007-001303	SA
R204	R-CHIP	2007-000138	SA
R205	R-CHIP	2007-001298	SA
R206	R-CHIP	2007-000162	SA
R300	R-CHIP	2007-008516	SA
R301	R-CHIP	2007-000148	SA
R302	R-CHIP	2007-000148	SA
R303	R-CHIP	2007-008055	SA
R305	R-CHIP	2007-000171	SA
R307	R-CHIP	2007-000137	SA
R308	R-CHIP	2007-008542	SA
R310	R-CHIP	2007-007142	SA
R311	R-CHIP	2007-000171	SA
R312	R-CHIP	2007-007318	SA
R313	R-CHIP	2007-007314	SA
R314	R-CHIP	2007-007135	SA
R315	R-CHIP	2007-007741	SA
R316	R-CHIP	2007-007317	SA

<b>Design LOC</b>	<b>Description</b>	<b>SEC Code</b>	<b>STATUS</b>
R317	R-CHIP	2007-007317	SA
R318	R-CHIP	2007-008542	SA
R320	R-CHIP	2007-007014	SA
R321	R-CHIP	2007-007014	SA
R322	R-CHIP	2007-007014	SA
R323	R-CHIP	2007-007014	SA
R324	R-CHIP	2007-007014	SA
R325	R-CHIP	2007-008055	SA
R326	R-CHIP	2007-009170	SA
R327	R-CHIP	2007-008806	SA
R400	R-CHIP	2007-008483	SA
R401	R-CHIP	2007-007586	SA
R402	R-CHIP	2007-008055	SA
R403	R-CHIP	2007-008516	SA
R404	R-CHIP	2007-007698	SA
R405	R-CHIP	2007-008806	SA
R406	R-CHIP	2007-007468	SA
R408	R-CHIP	2007-000151	SA
R409	R-CHIP	2007-007014	SA
R410	R-CHIP	2007-000165	SA
R411	R-CHIP	2007-009171	SA
R412	R-CHIP	2007-008486	SA
R413	R-CHIP	2007-008051	SA
R414	R-CHIP	2007-009212	SA
R415	R-CHIP	2007-007588	SA
R418	R-CHIP	2007-000148	SA
R419	R-CHIP	2007-000148	SA
R420	R-CHIP	2007-008516	SA
R421	R-CHIP	2007-008739	SA
R422	R-CHIP	2007-000148	SA
R424	R-CHIP	2007-000148	SA
R501	R-CHIP	2007-003001	SA
R502	R-CHIP	2007-003001	SA
R503	R-CHIP	2007-008588	SA
R504	R-CHIP	2007-007317	SA
R506	R-CHIP	2007-001292	SA
R507	R-CHIP	2007-001292	SA
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R600	R-CHIP	2007-008548	SA
R601	R-CHIP	2007-008419	SA
R602	R-CHIP	2007-008419	SA
R603	R-CHIP	2007-008516	SA
R604	R-CHIP	2007-008648	SA
R605	R-CHIP	2007-000171	SA
R703	R-CHIP	2007-009108	SA
R704	R-CHIP	2007-009108	SA
R705	R-CHIP	2007-000159	SA
R706	R-CHIP	2007-009108	SA
R707	R-CHIP	2007-000165	SA
R708	R-CHIP	2007-008542	SA
R709	R-CHIP	2007-008542	SA
R710	R-CHIP	2007-009108	SA

Main Electrical Parts List

Design LOC	Description	SEC Code	STATUS
R800	R-CHIP	2007-008055	SA
R801	R-CHIP	2007-001288	SA
R802	R-CHIP	2007-001288	SA
R803	R-CHIP	2007-008055	SA
RFS100	CONNECTOR-COAXIAL	3705-001358	SA
SIM400	CONNECTOR-CARD EDGE	3709-001365	SA
TA100	C-TA,CHIP	2404-001474	SA
TA200	C-TA,CHIP	2404-001381	SA
TA300	C-TA,CHIP	2404-001377	SA
TA401	C-TA,CHIP	2404-001381	SA
TA402	C-TA,CHIP	2404-001381	SA
TA500	C-TA,CHIP	2404-001240	SA
TA600	C-TA,CHIP	2404-001406	SA
TA601	C-TA,CHIP	2404-001406	SA
TA602	C-TA,CHIP	2404-001474	SA
TCX200	OSCILLATOR-VCTCXO	2809-001280	SA
TR200	TR-DIGITAL	0504-001151	SA
TR400	TR-DIGITAL	0504-000168	SA
U100	IC-TRANSCIVER	1205-003198	SA
U200	IC-CMOS LOGIC	0801-002896	SA
U300	IC-ANALOG SWITCH	1001-001336	SA
U400	IC-VOL. DETECTOR	1203-004045	SA
U401	IC-POWER SUPERVISOR	1203-004101	SA
U402	IC-BATTERY	1203-003823	SA
U500	IC-ANALOG SWITCH	1001-001336	SA
U501	IC-AUDIO AMP	1201-002492	SA
U502	IC-ANALOG SWITCH	1001-001336	SA
U700	IC-MULTI REG.	1203-004330	SA
U701	FET-SILICON	0505-001423	SA
U800	IC-HALL EFFECT S/W	1009-001020	SA
U801	IC-ANALOG SWITCH	1001-001336	SA
UCP300	IC-MODEM	1205-003206	SA
UME300	IC-MCP	1108-000105	SA
VR300	THERMISTOR-NTC	1404-001224	SA
VR600	VARISTOR	1405-001177	SA
VR700	VARISTOR	1405-001177	SA
VR701	VARISTOR	1405-001177	SA
VR702	VARISTOR	1405-001177	SA
VR703	VARISTOR	1405-001177	SA
VR704	VARISTOR	1405-001177	SA
VR705	VARISTOR	1405-001177	SA
VR706	VARISTOR	1405-001177	SA
VR707	VARISTOR	1405-001177	SA
VR708	VARISTOR	1405-001177	SA
VR709	VARISTOR	1405-001177	SA
VR710	VARISTOR	1405-001177	SA
VR711	VARISTOR	1405-001177	SA
VR712	VARISTOR	1405-001177	SA
VR713	VARISTOR	1405-001177	SA
VR714	VARISTOR	1405-001177	SA
VR715	VARISTOR	1405-001177	SA
VR716	VARISTOR	1405-001177	SA
VR800	VARISTOR	1405-001108	SA



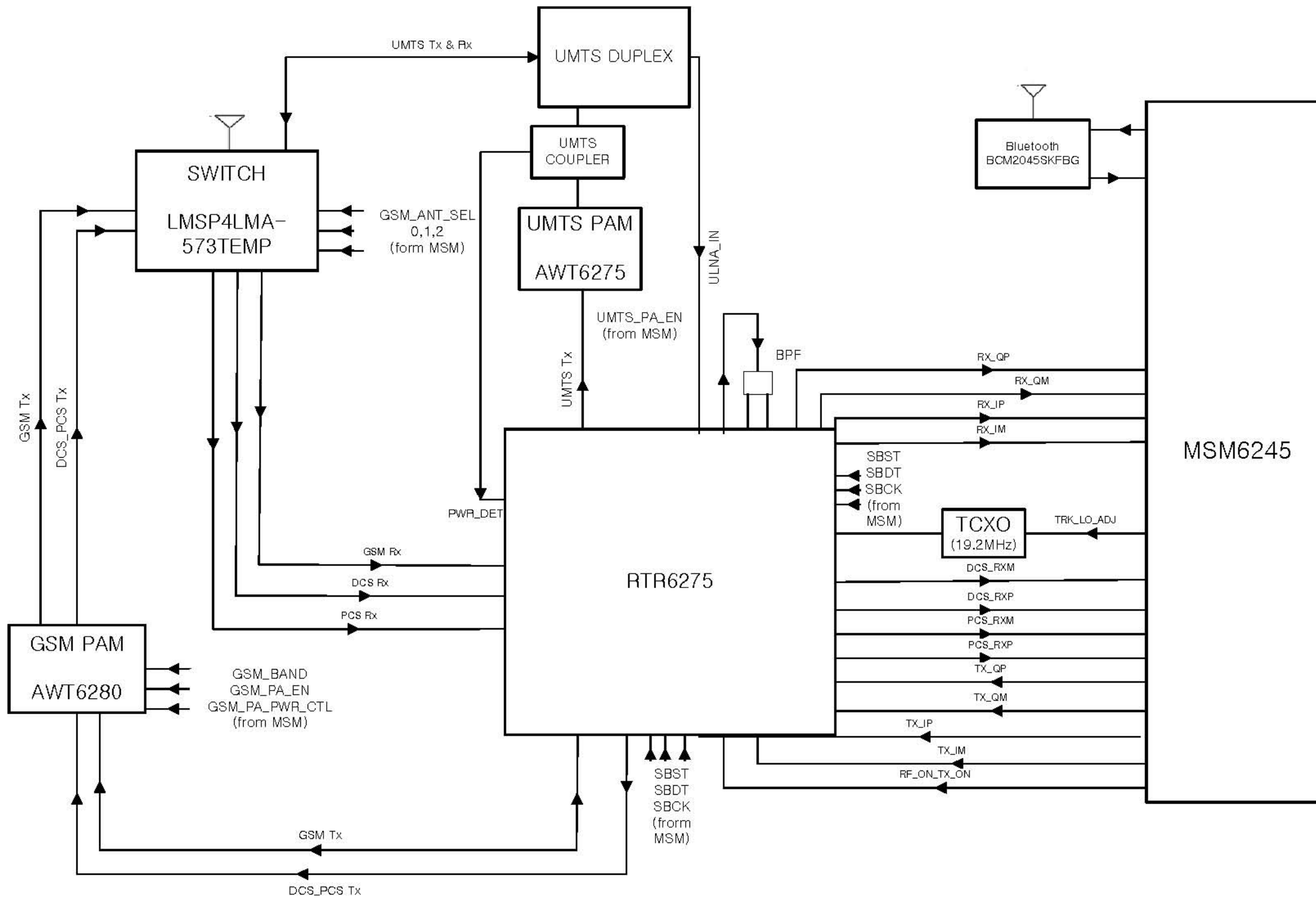
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VR801	VARISTOR	1405-001108	SA
VR802	VARISTOR	1405-001108	SA
VR803	VARISTOR	1405-001108	SA
VR804	VARISTOR	1405-001108	SA
VR805	VARISTOR	1405-001108	SA
VR806	VARISTOR	1405-001108	SA
VR807	VARISTOR	1405-001108	SA
VR808	VARISTOR	1405-001108	SA
VR809	VARISTOR	1405-001108	SA
VR810	VARISTOR	1405-001108	SA
VR811	VARISTOR	1405-001108	SA
VR812	VARISTOR	1405-001108	SA
VR813	VARISTOR	1405-001108	SA
VR814	VARISTOR	1405-001108	SA

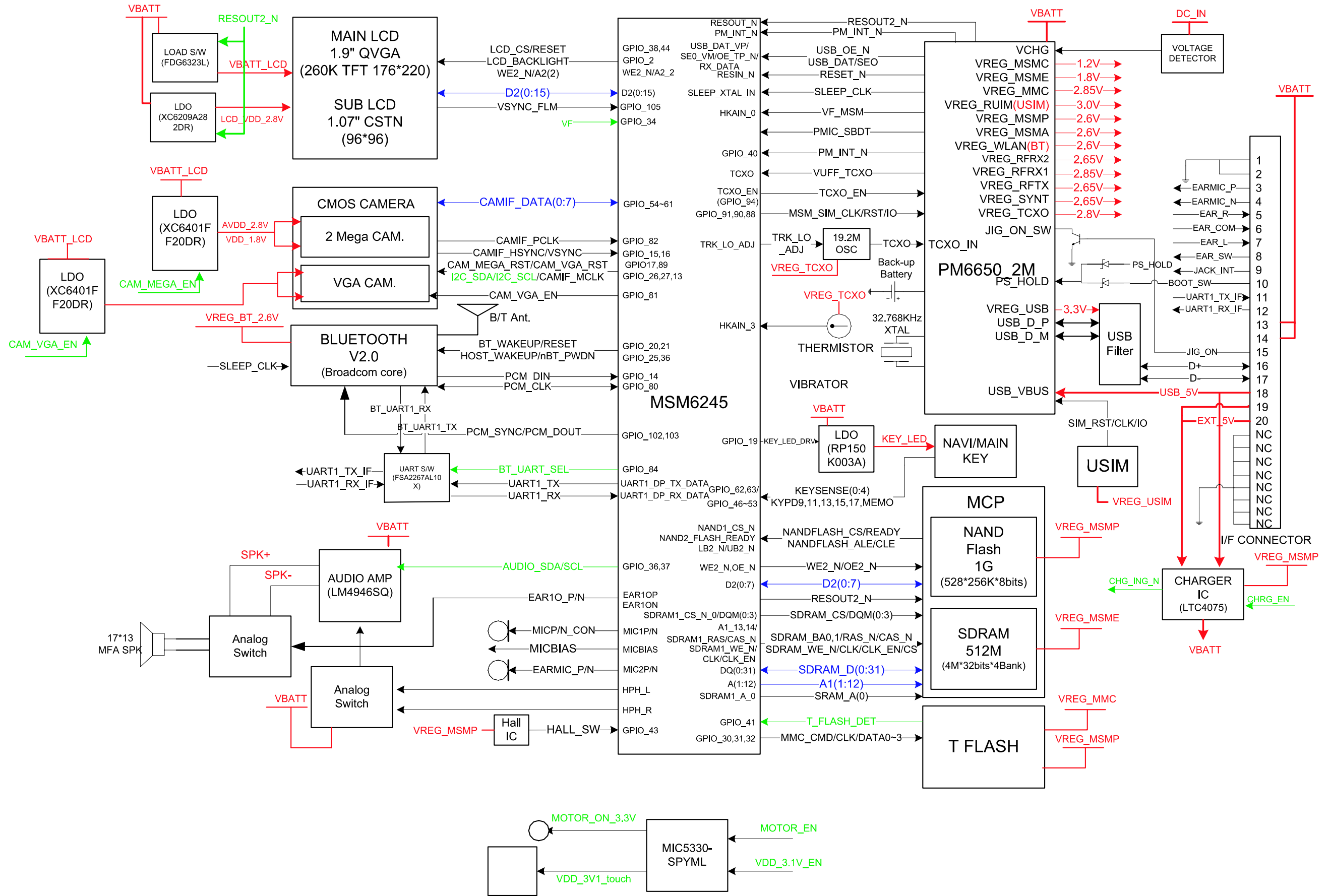


## 7. Block Diagrams

7-1. RF Solution Block Diagram

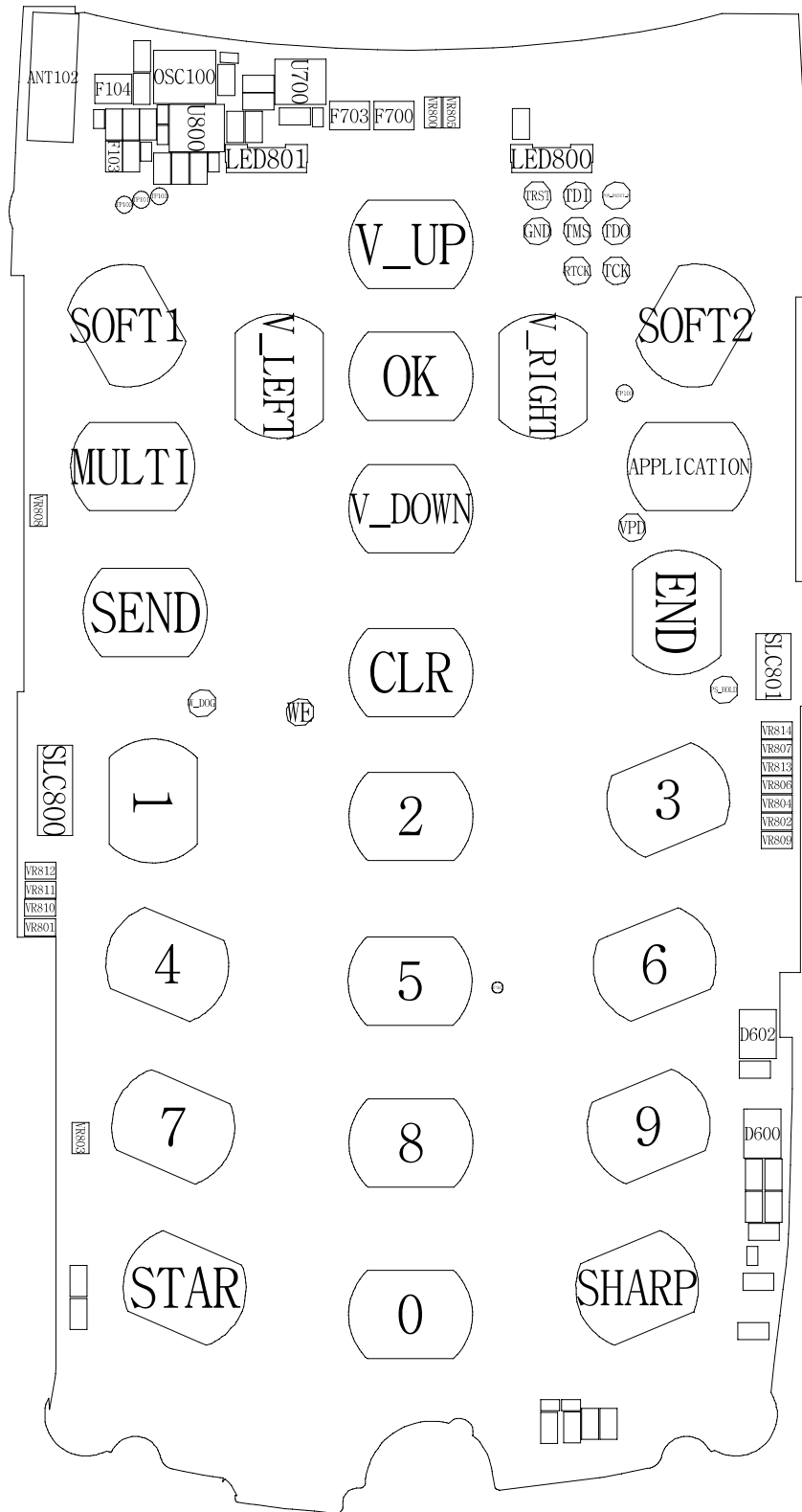


7-2. Logic Block Diagram

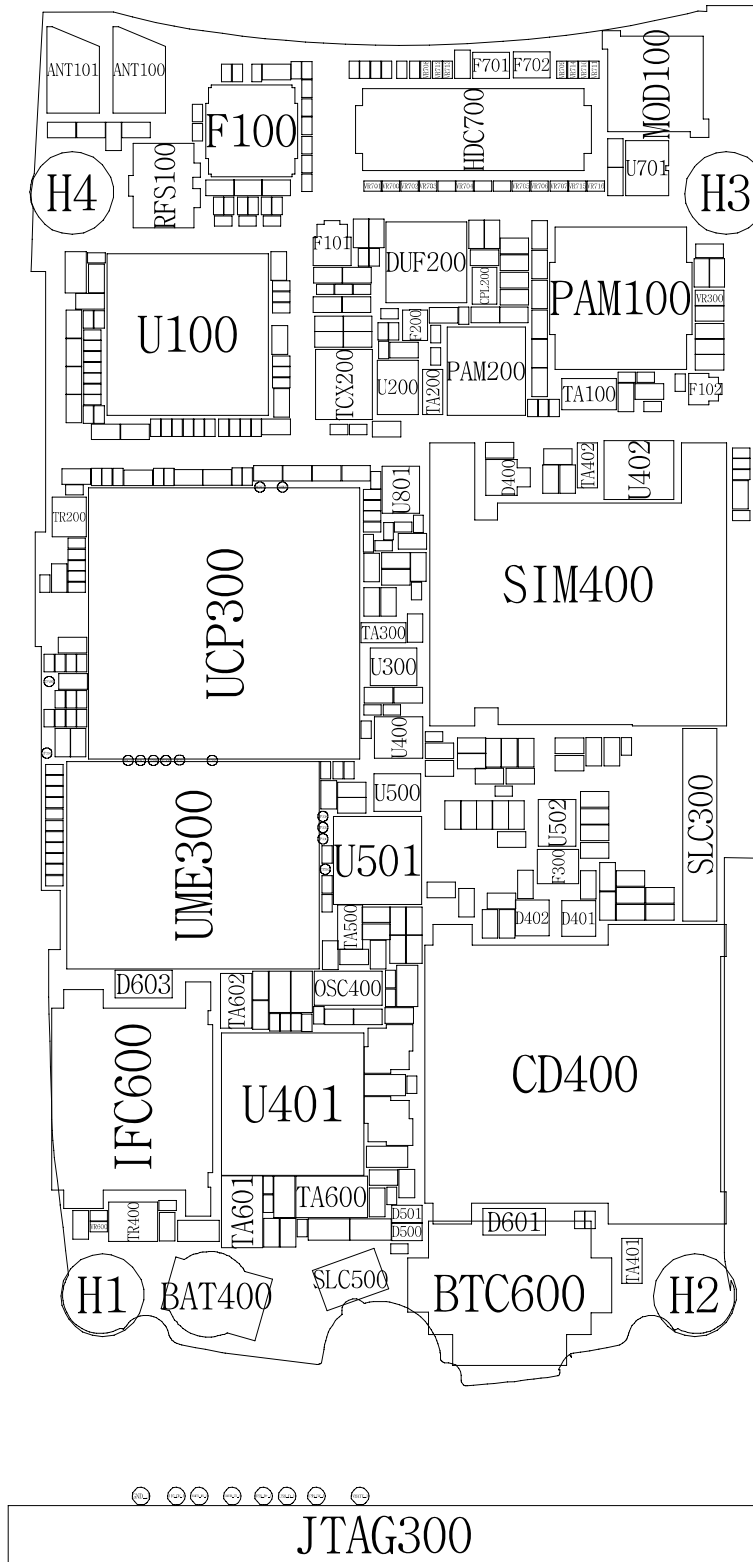


# 8. PCB Diagrams

Top

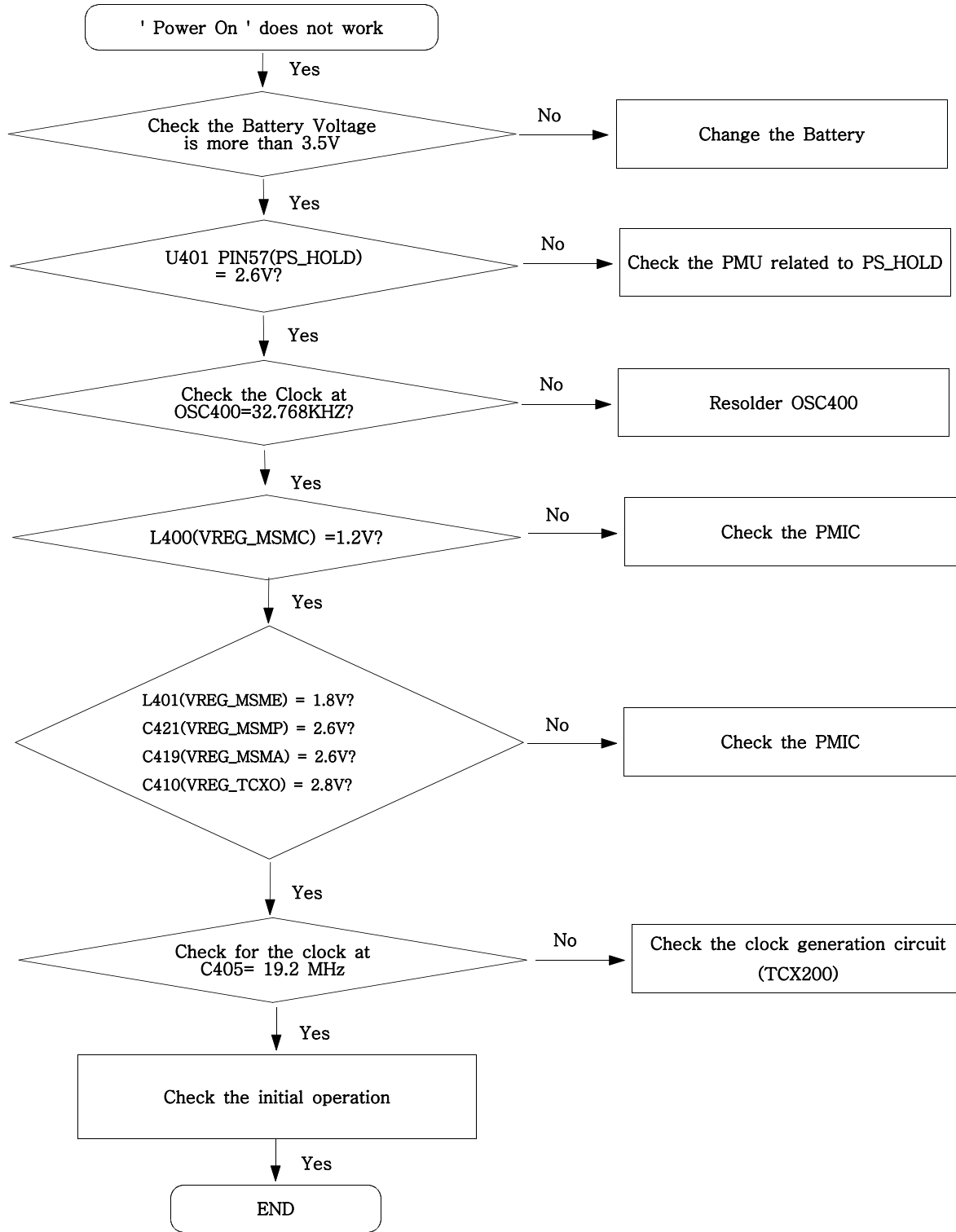


Bottom

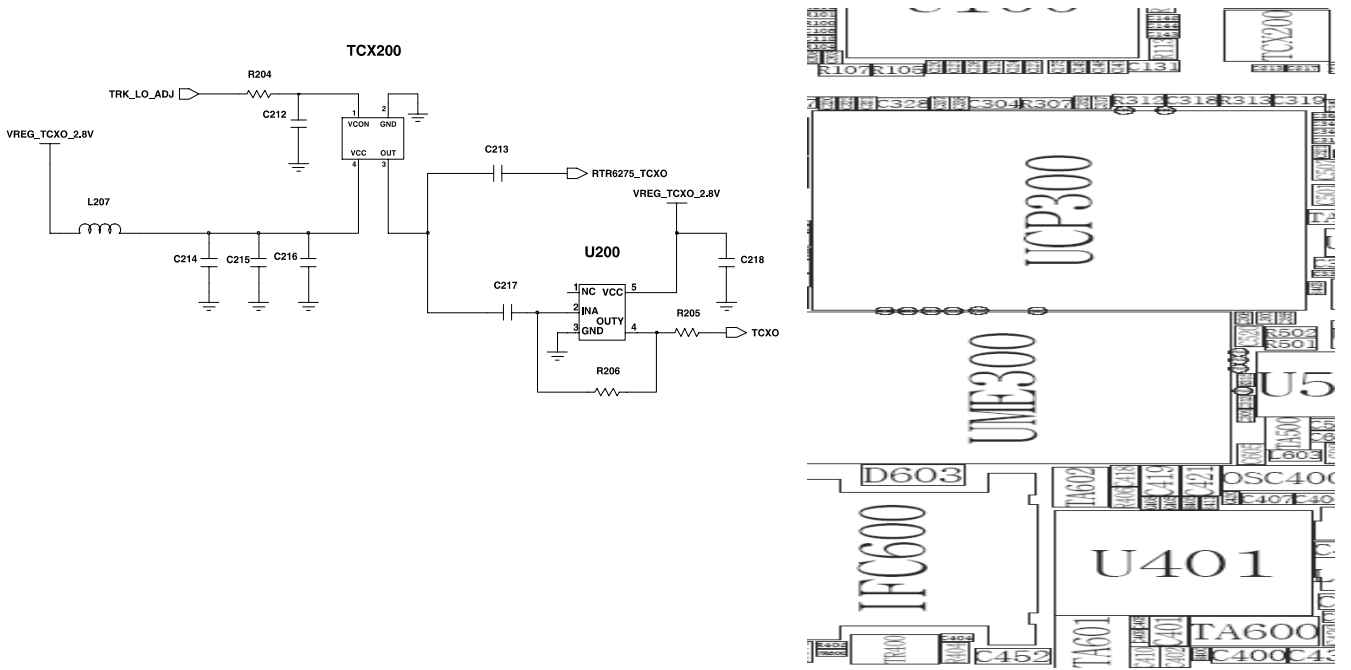
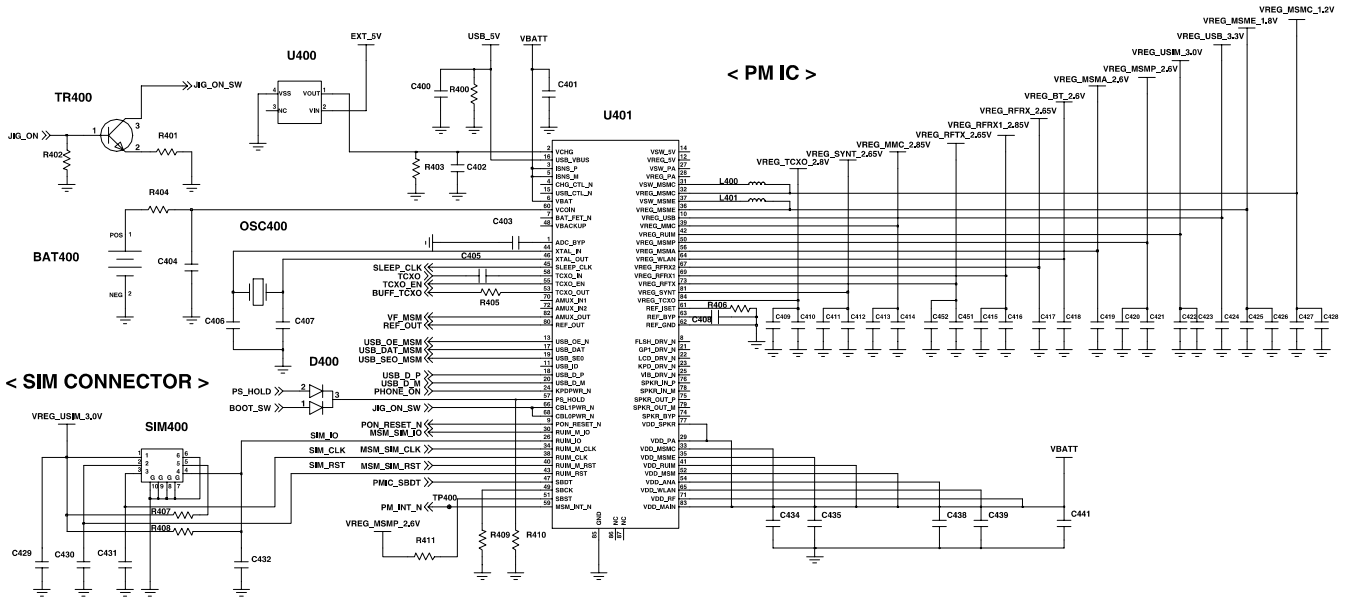


# 9. Flow Chart of Troubleshooting

## 9-1. Power On

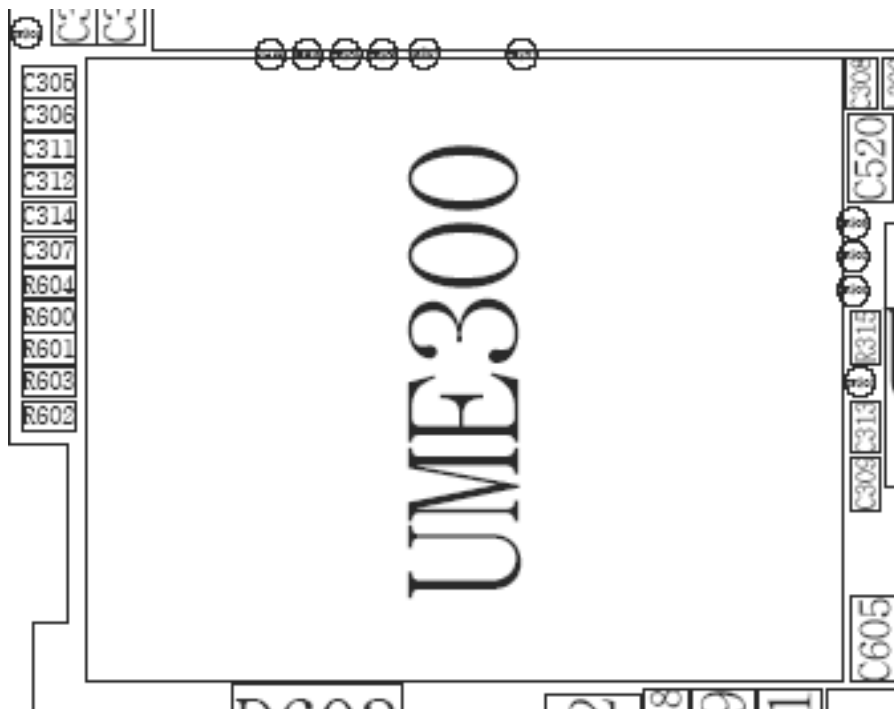
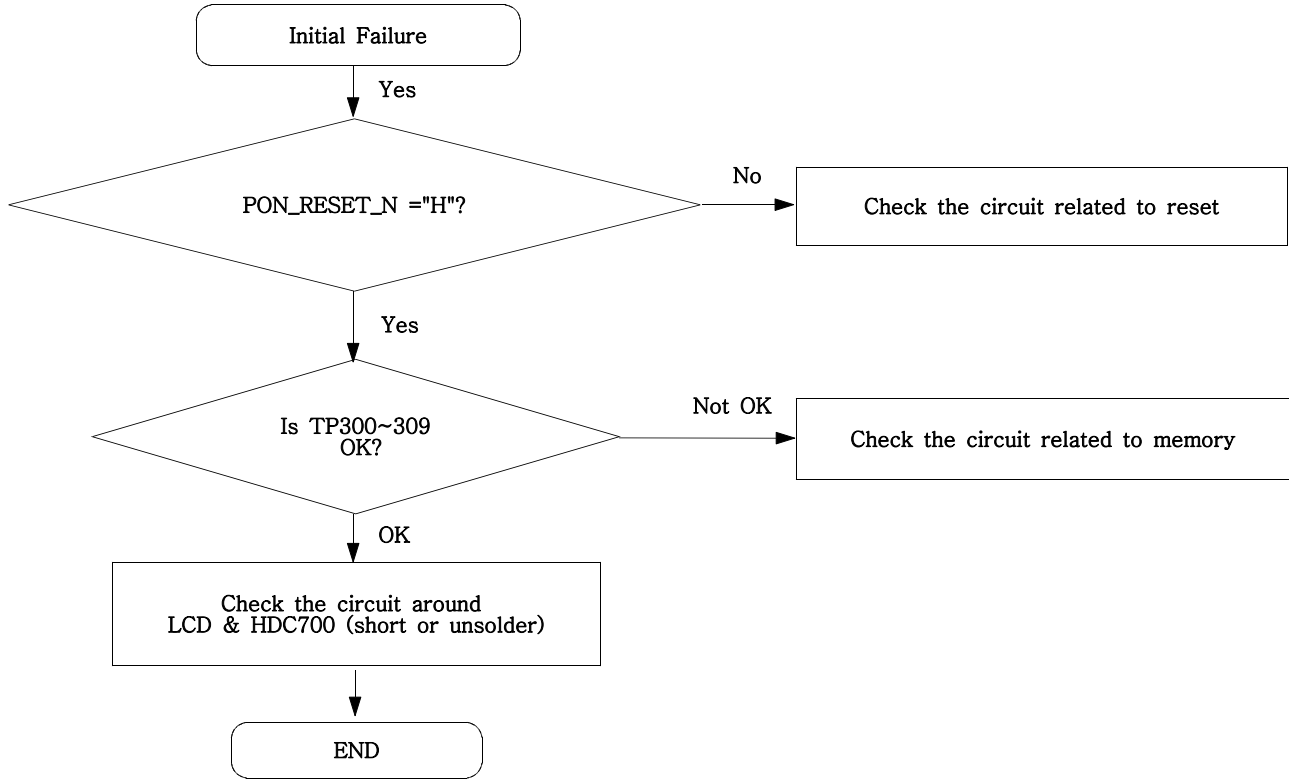


Power On

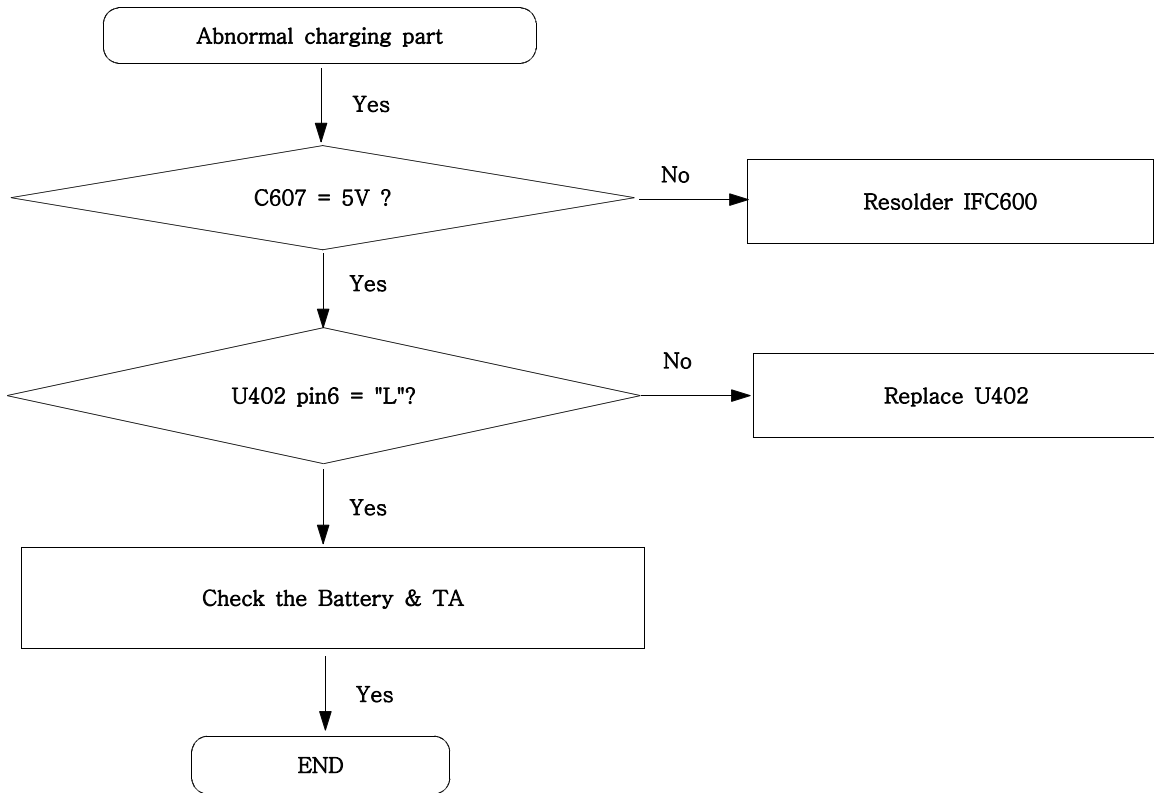


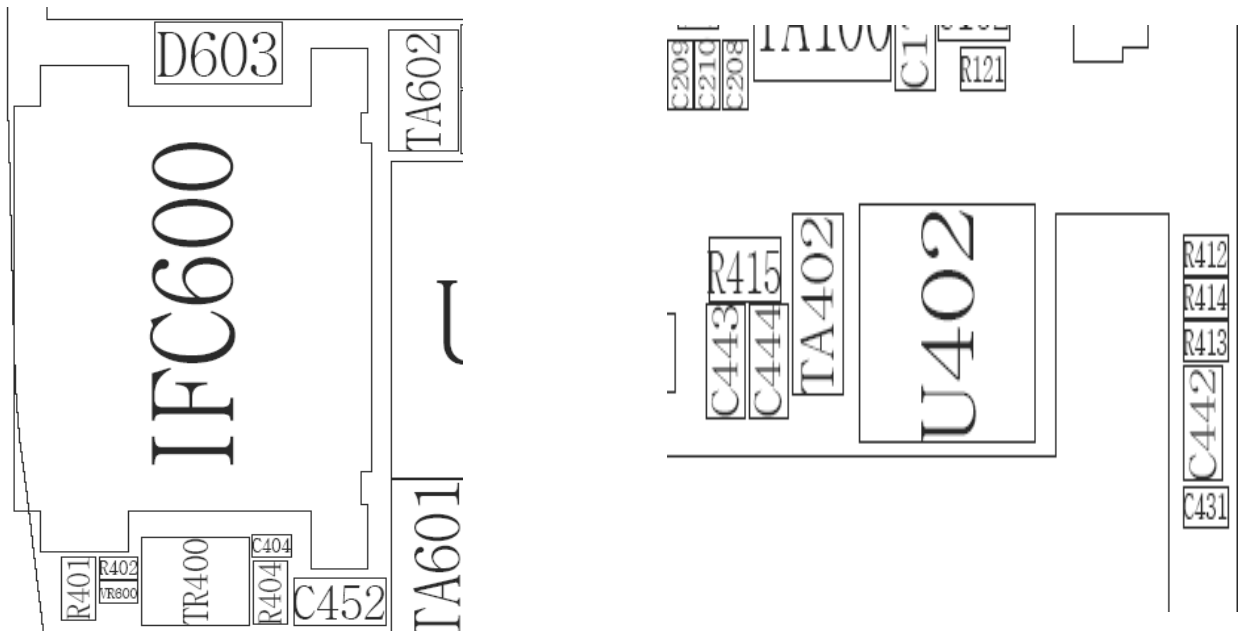
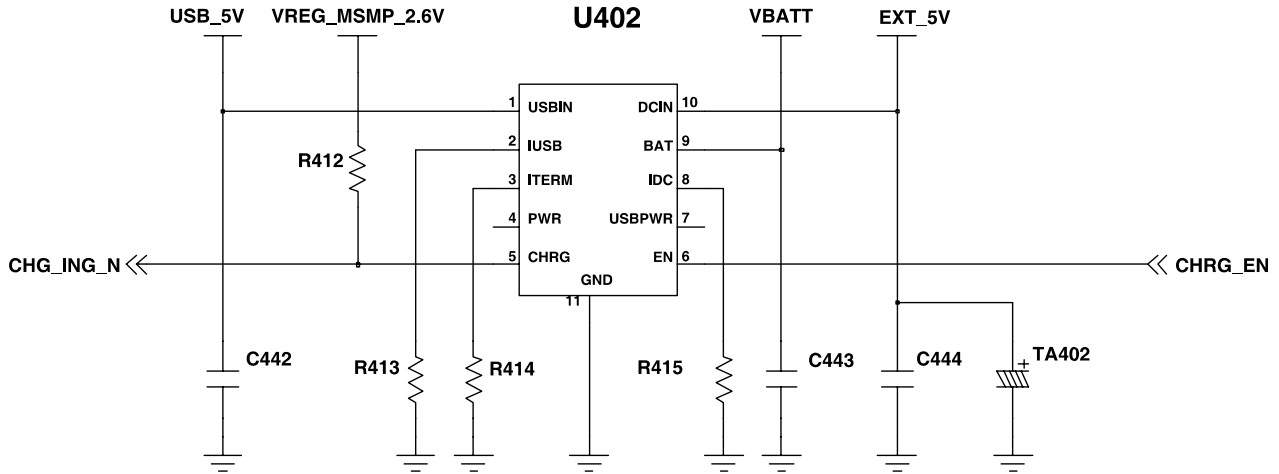
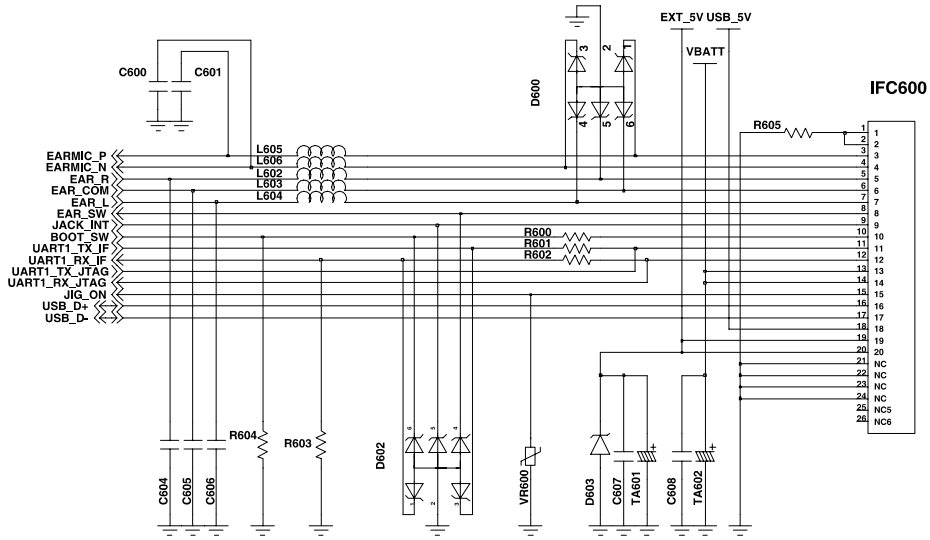


## 9-2. Initial

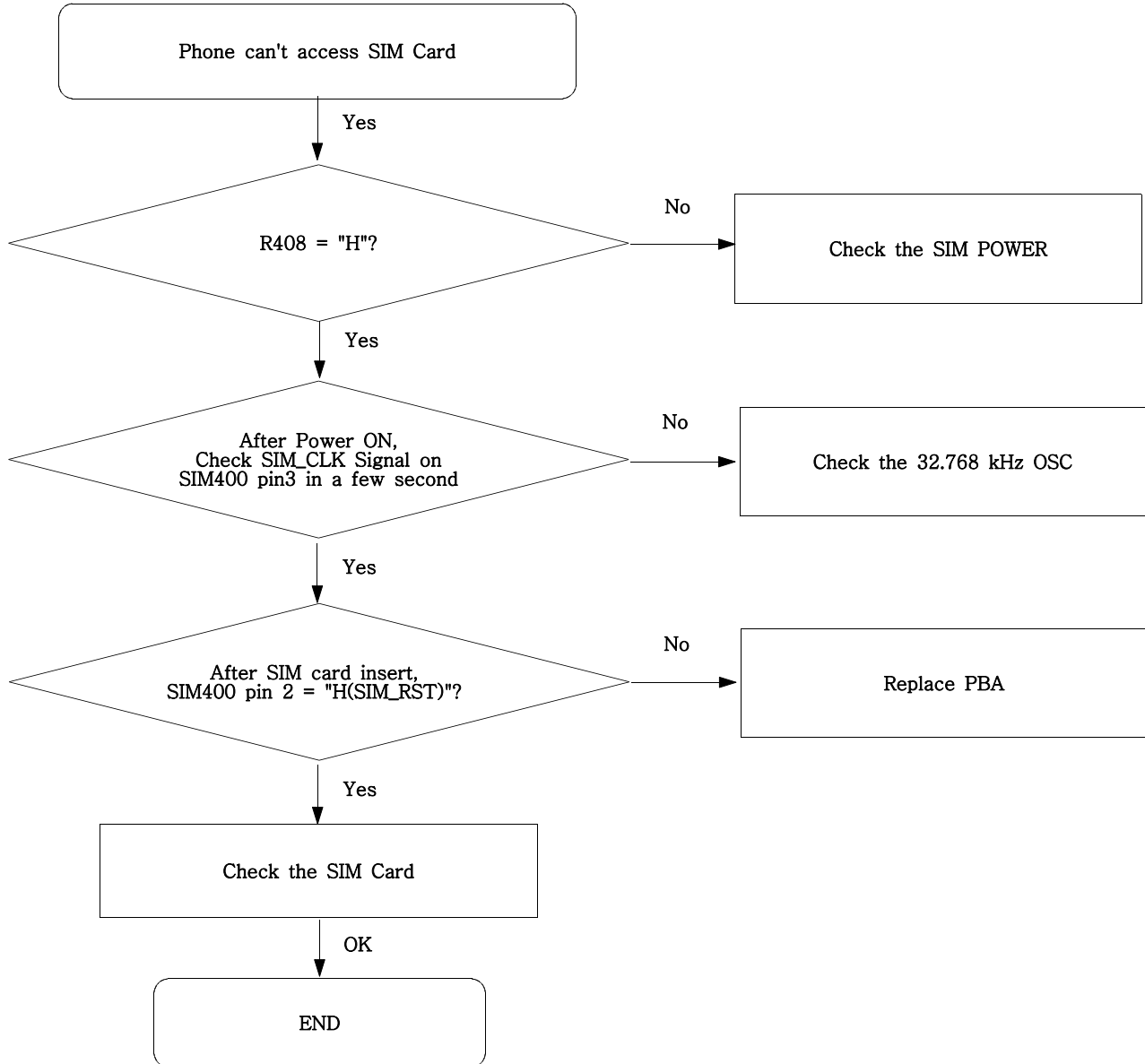


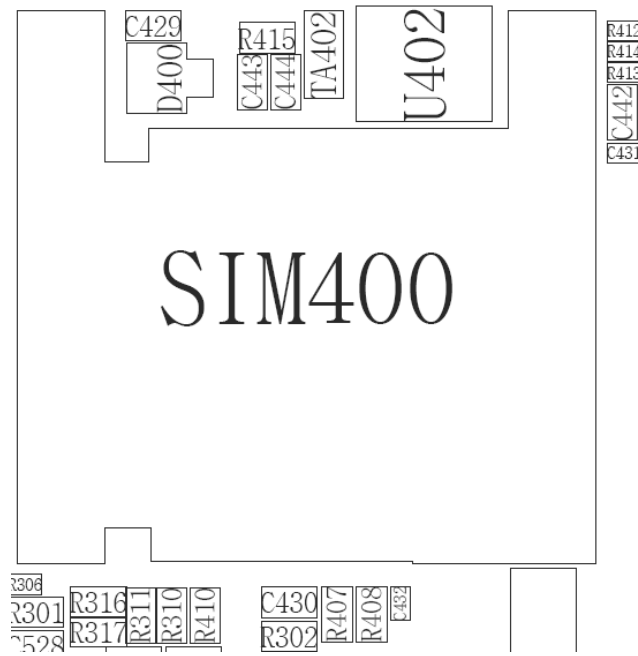
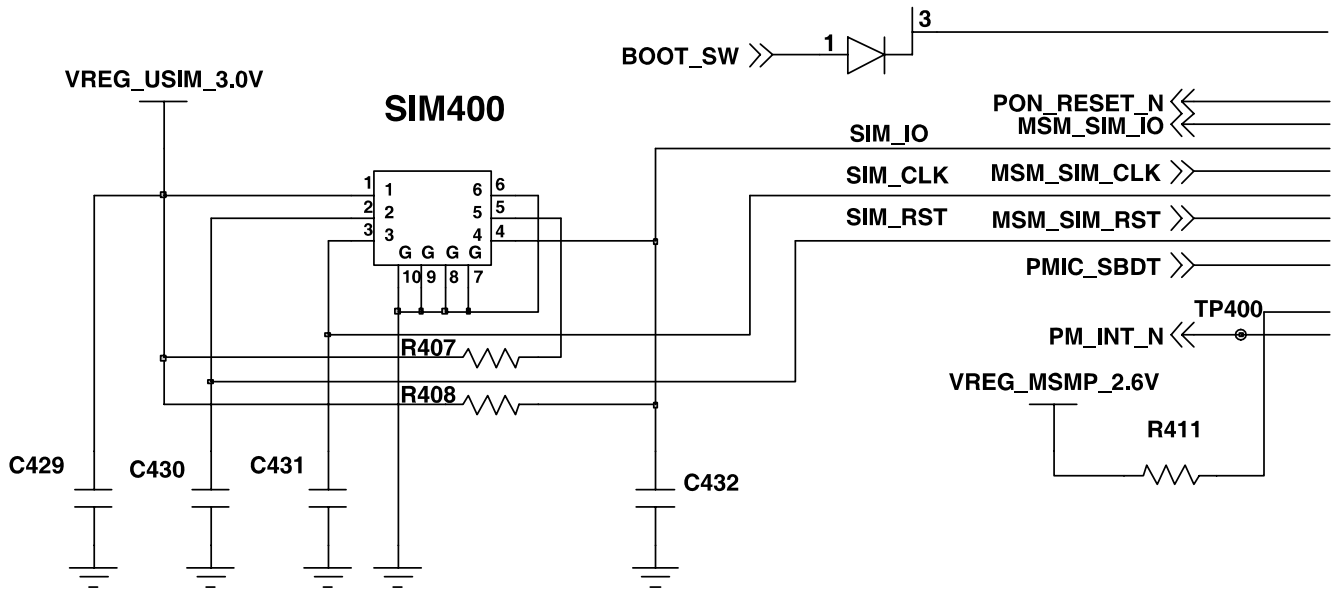
### 9-3. Charging Part



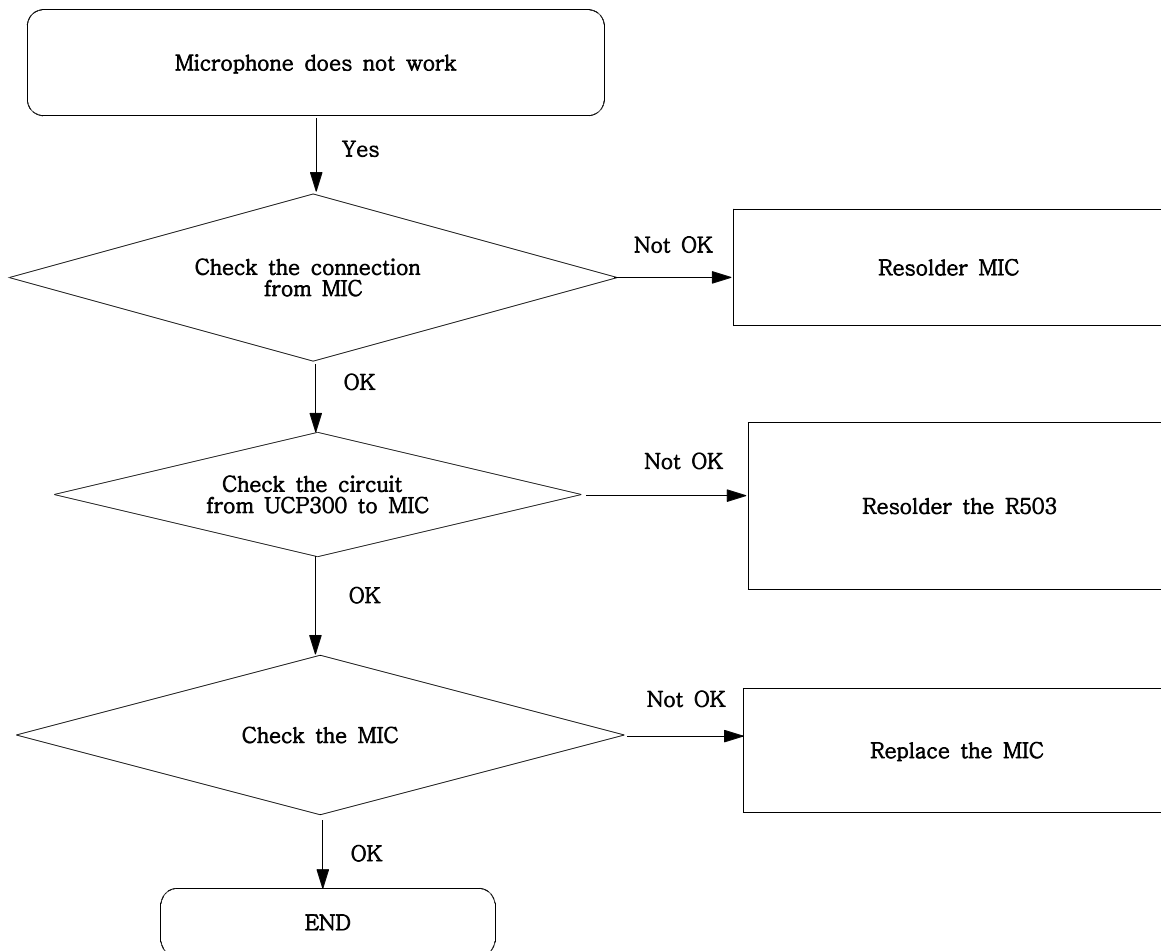


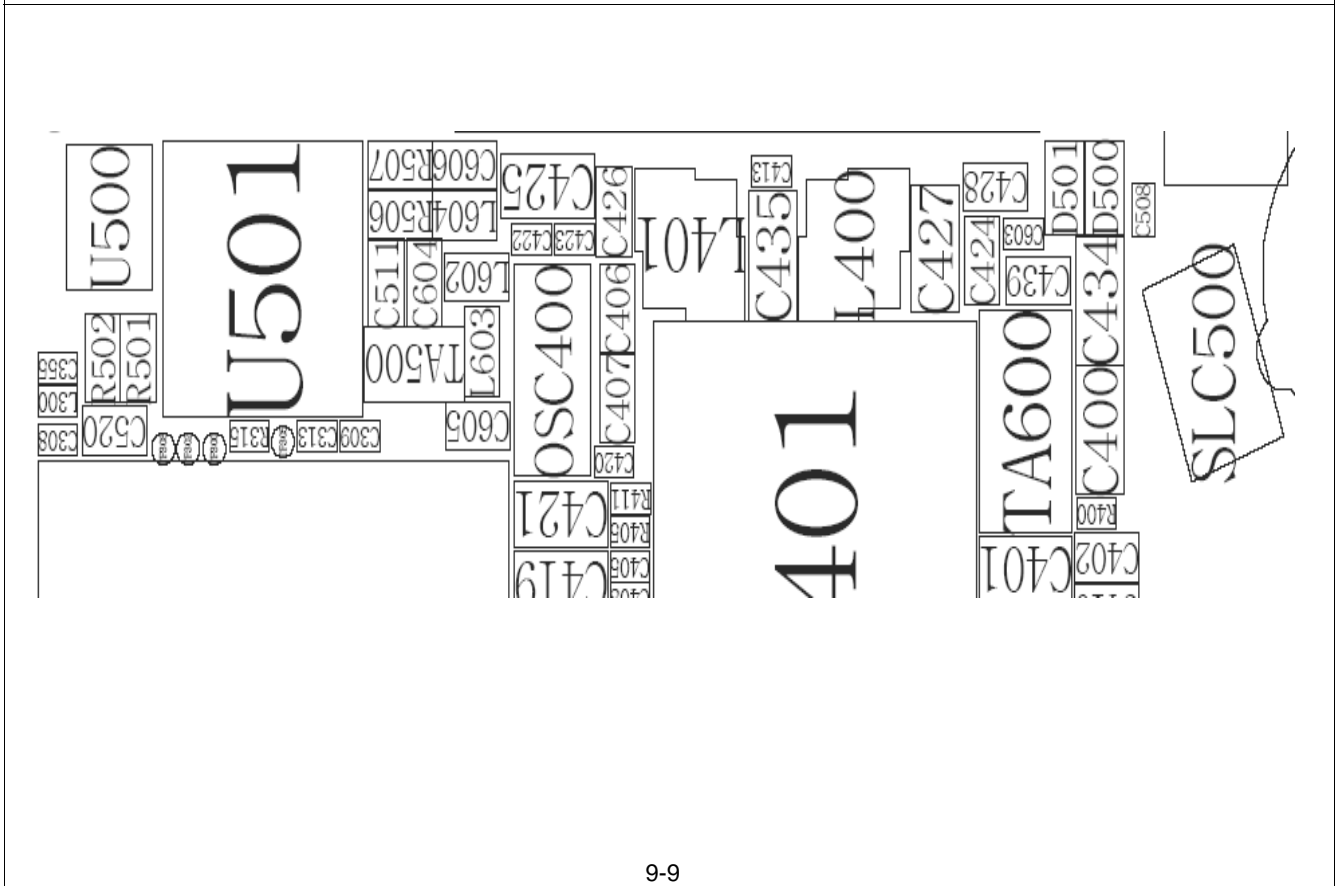
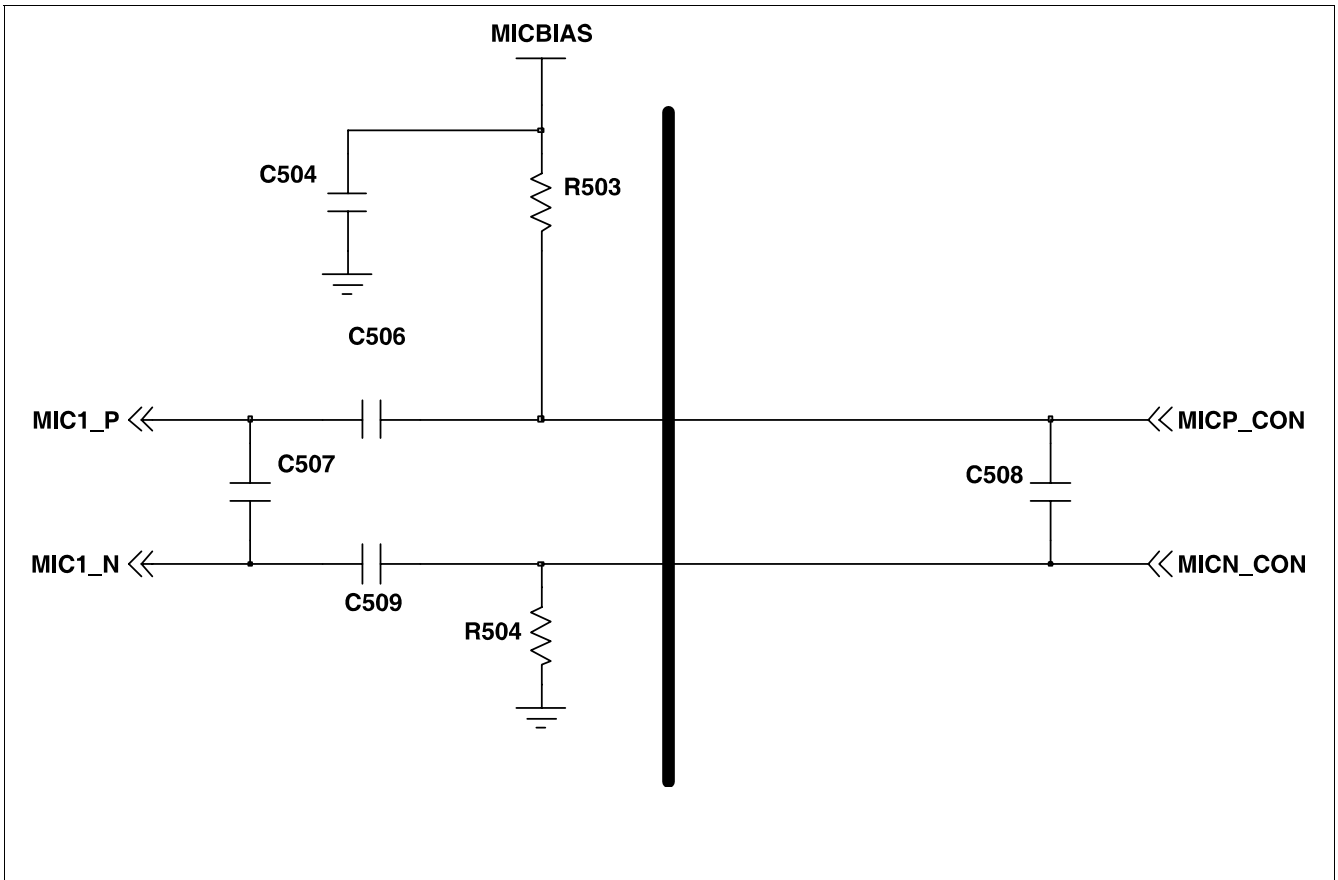
### 9-4. SIM Part



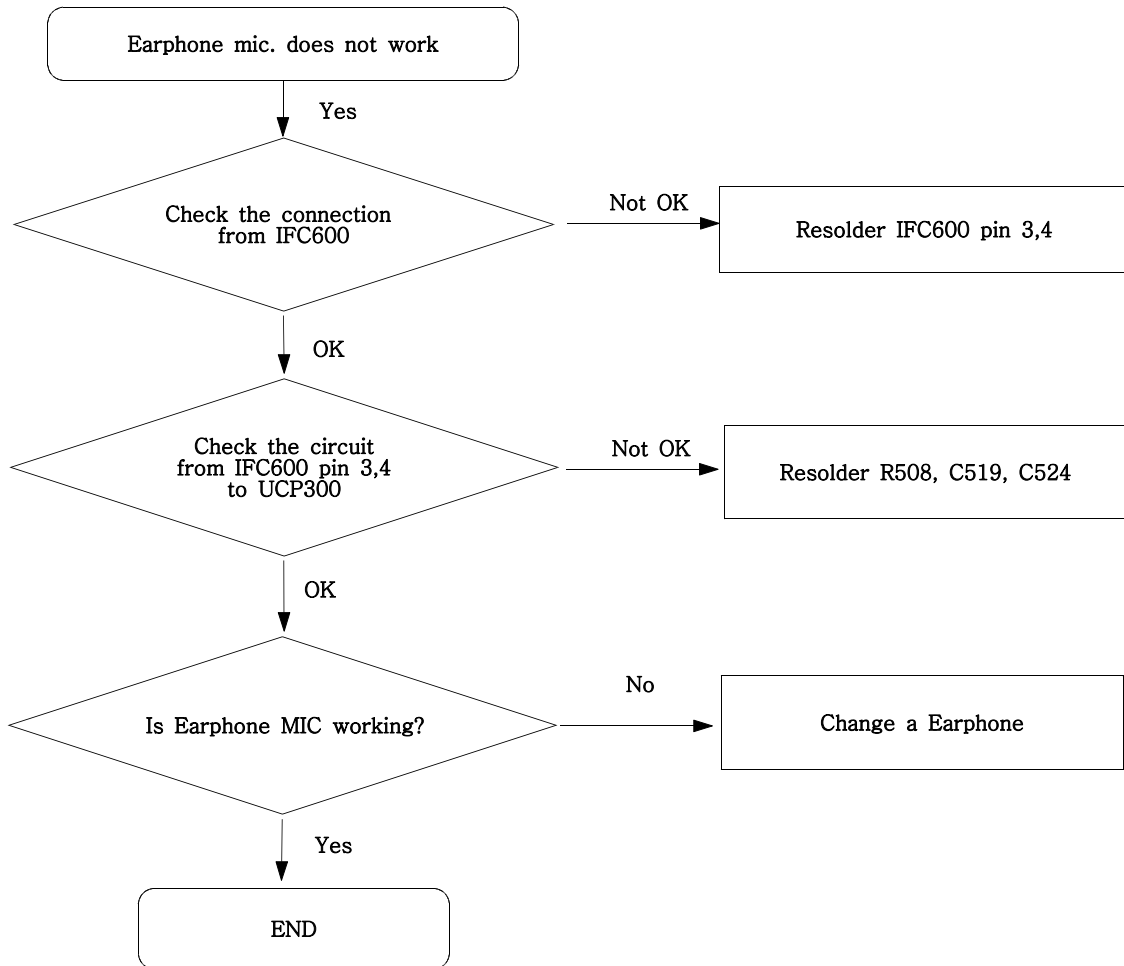


### 9-5. Microphone Part – Phone MIC

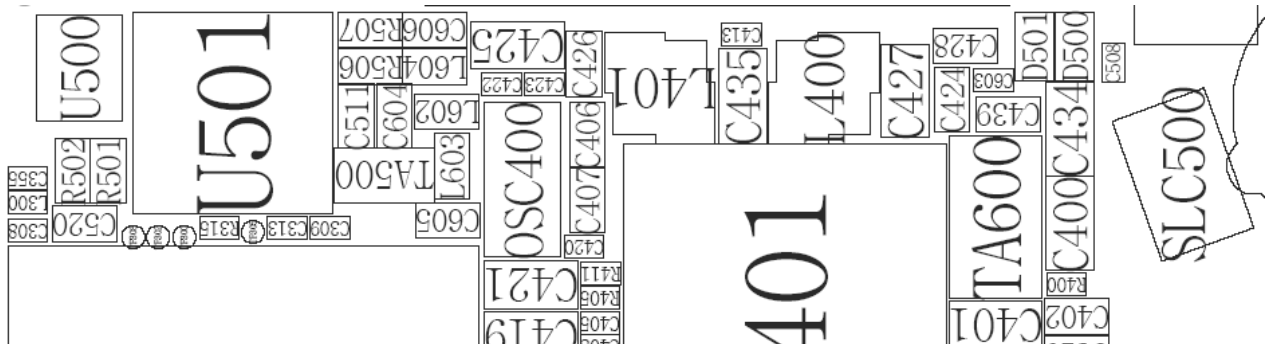
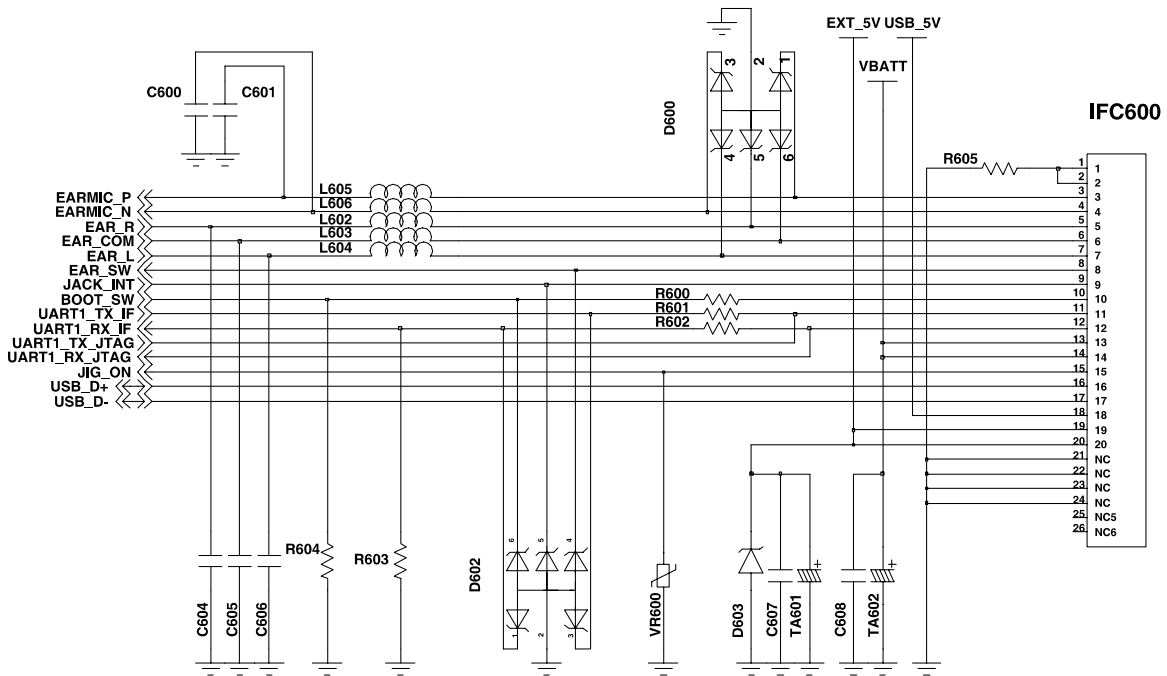
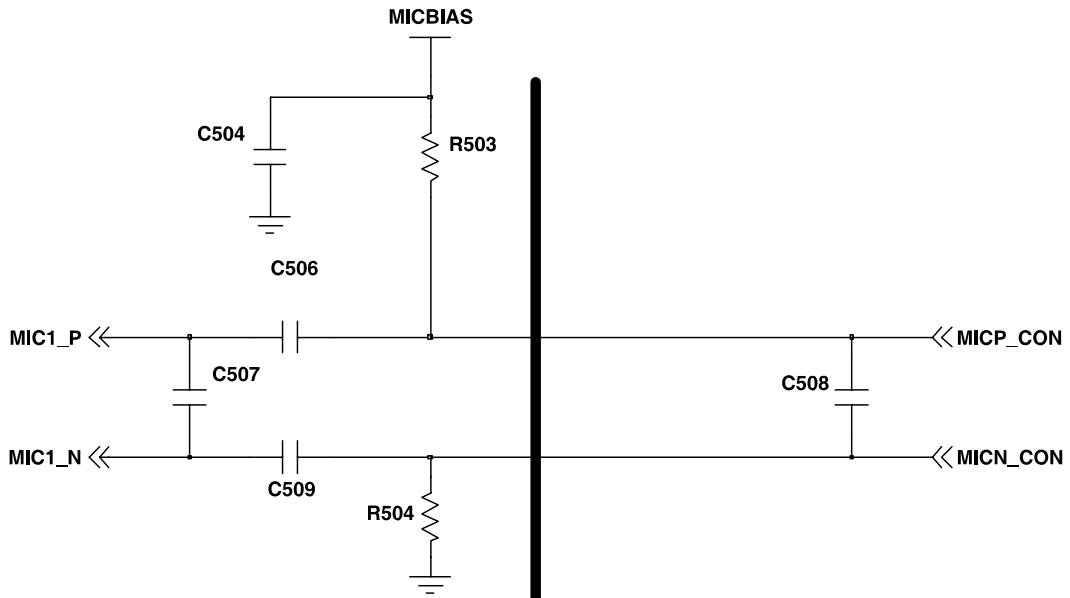




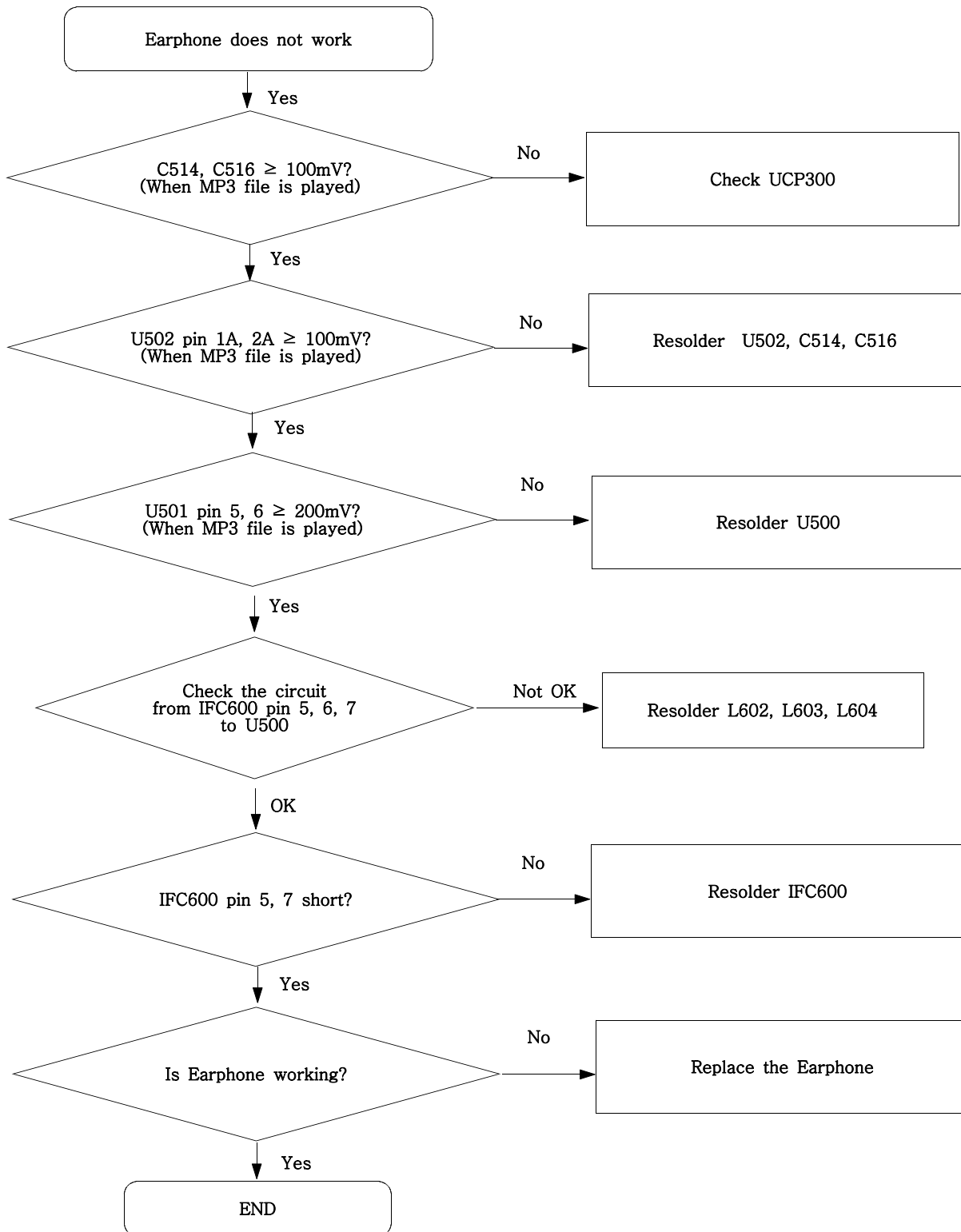
## 9-6 Microphone Part – Earphone MIC

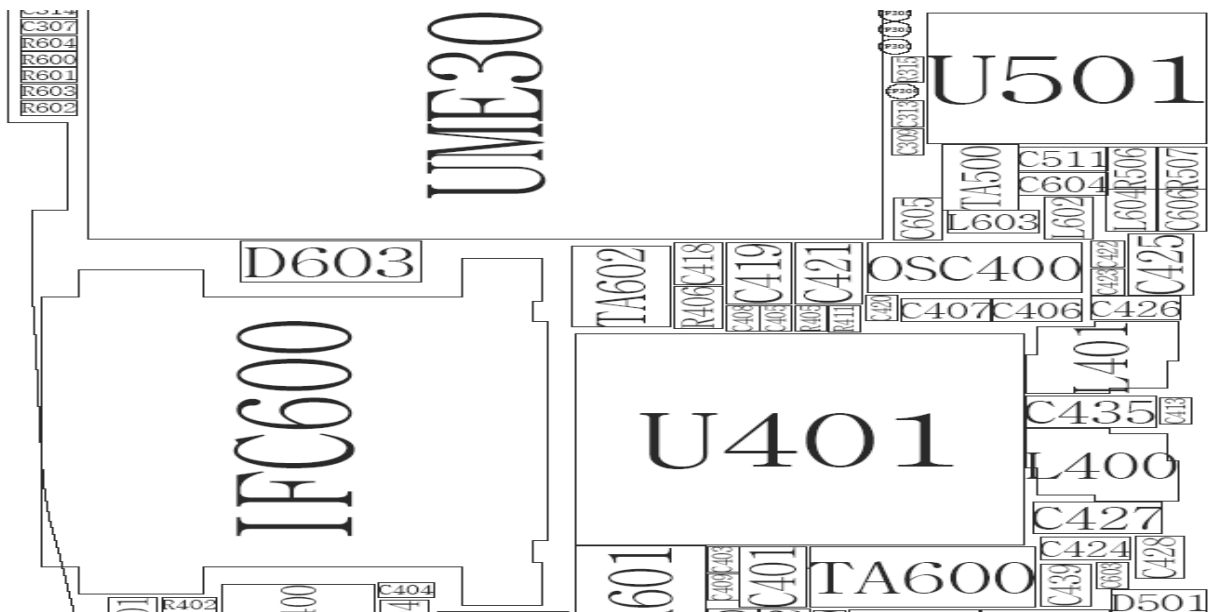
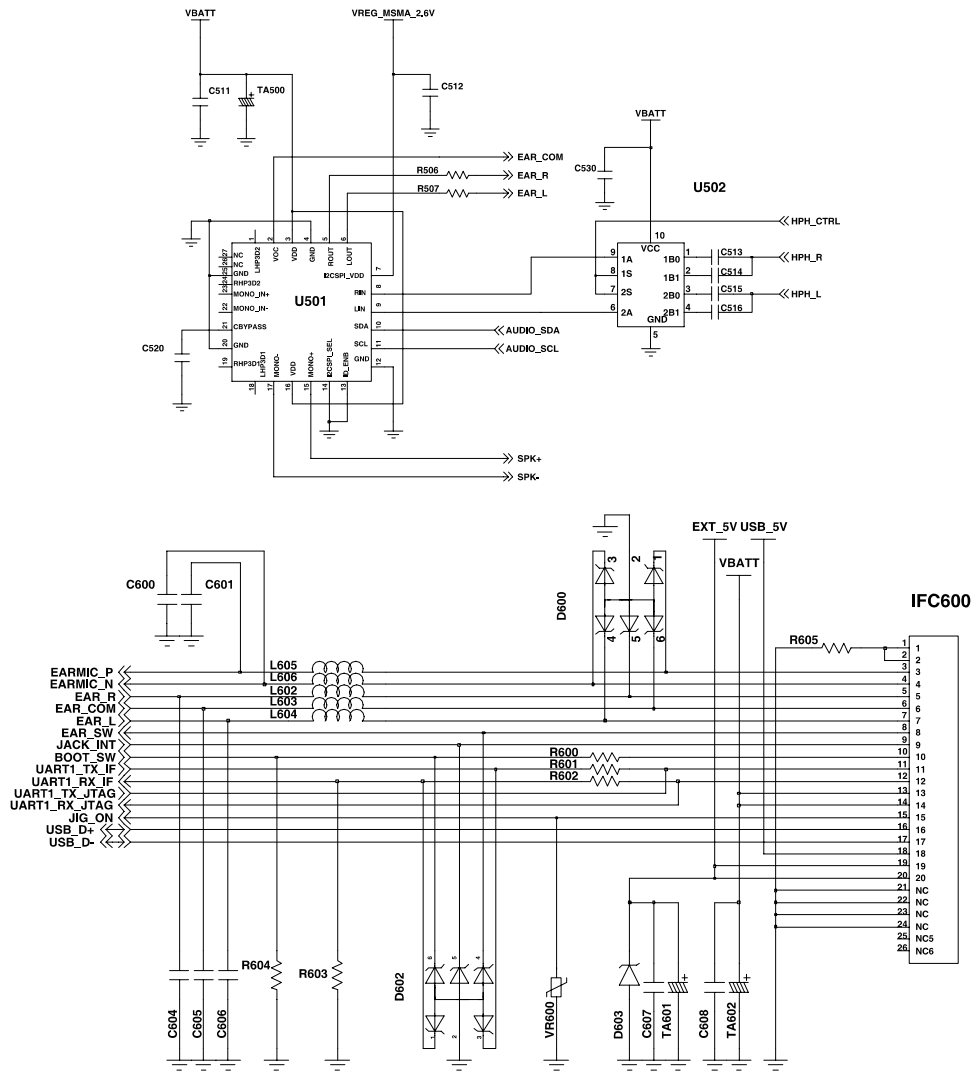




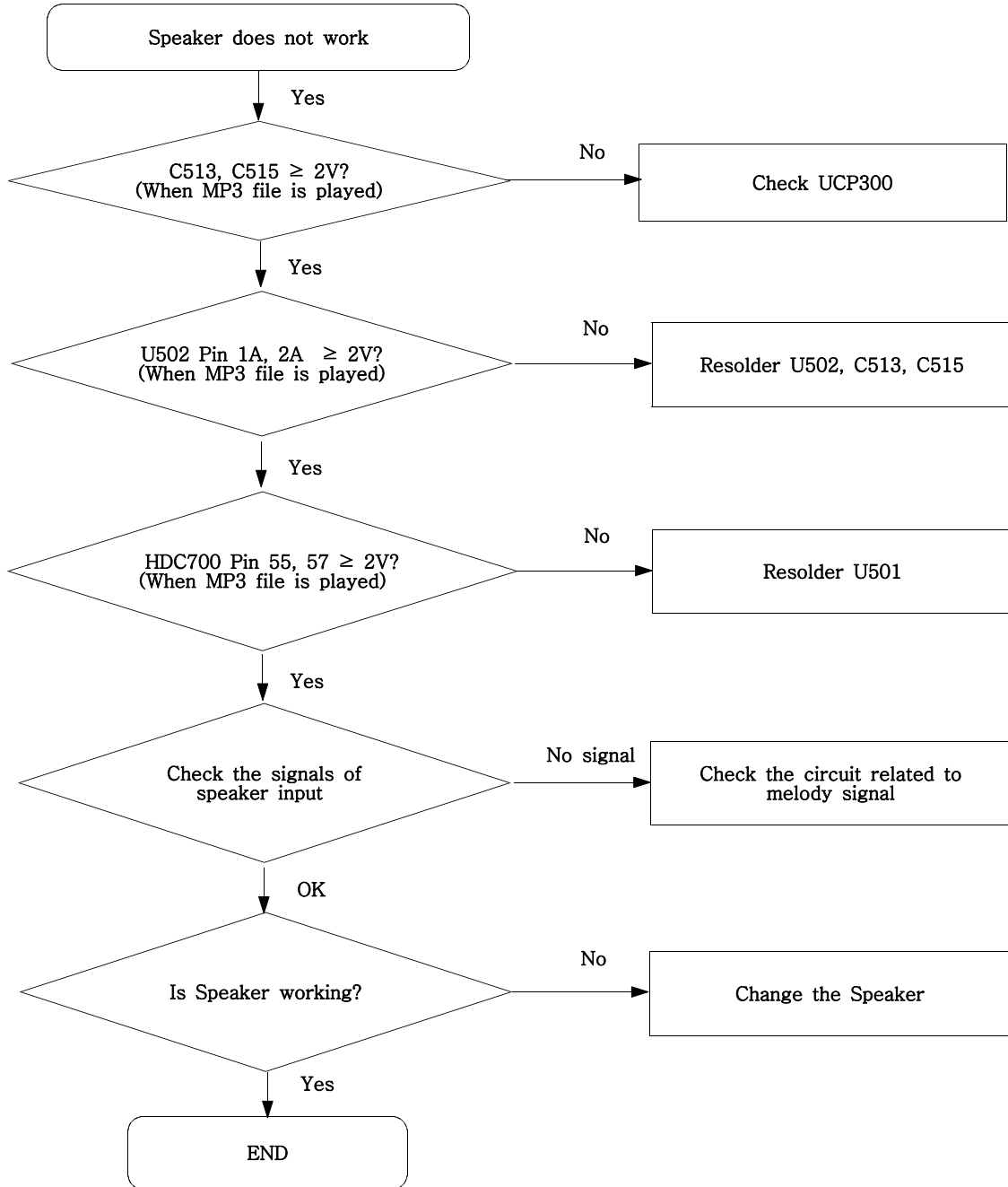


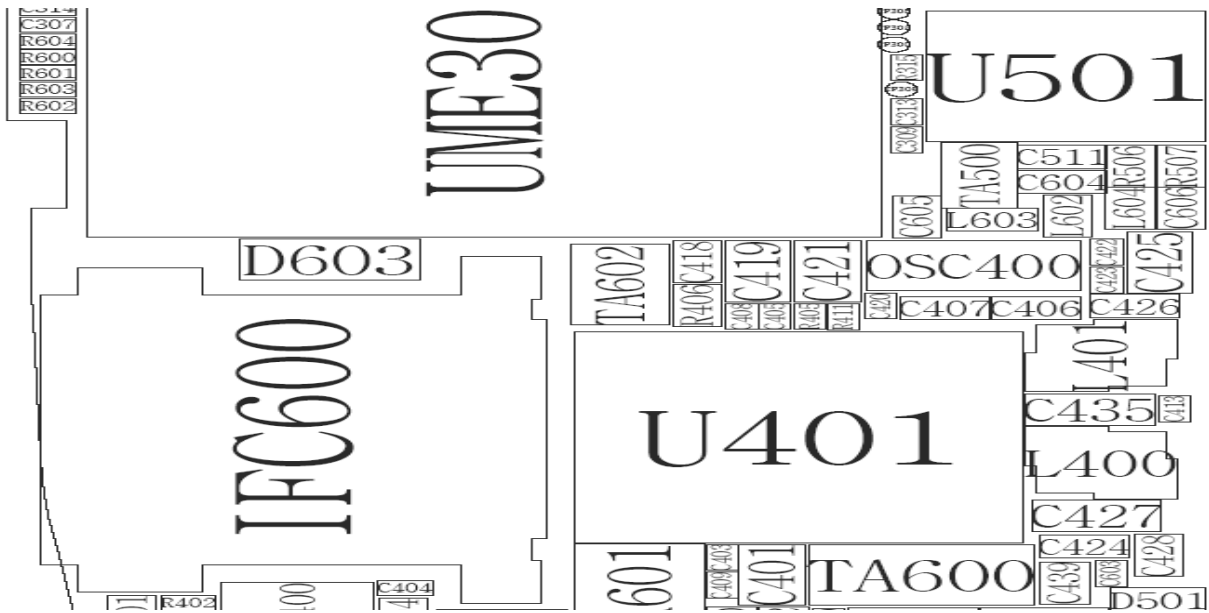
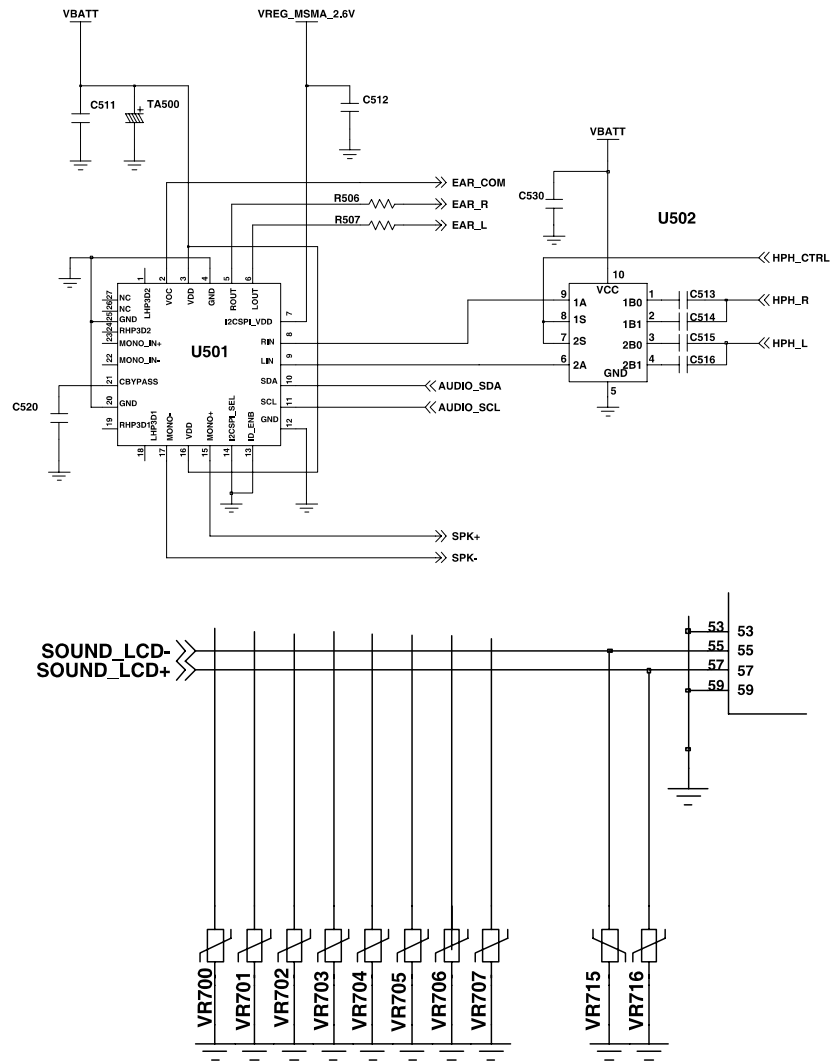
## 9-7. Earphone Part



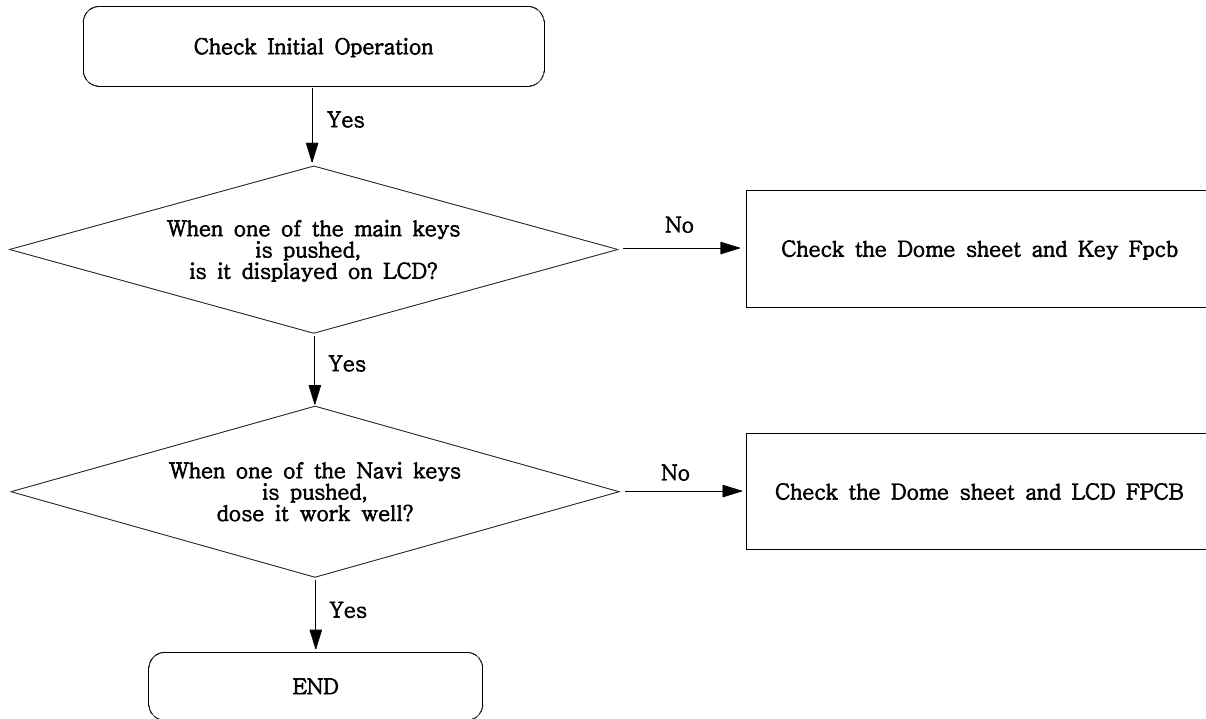


### 9-8. Speaker Part

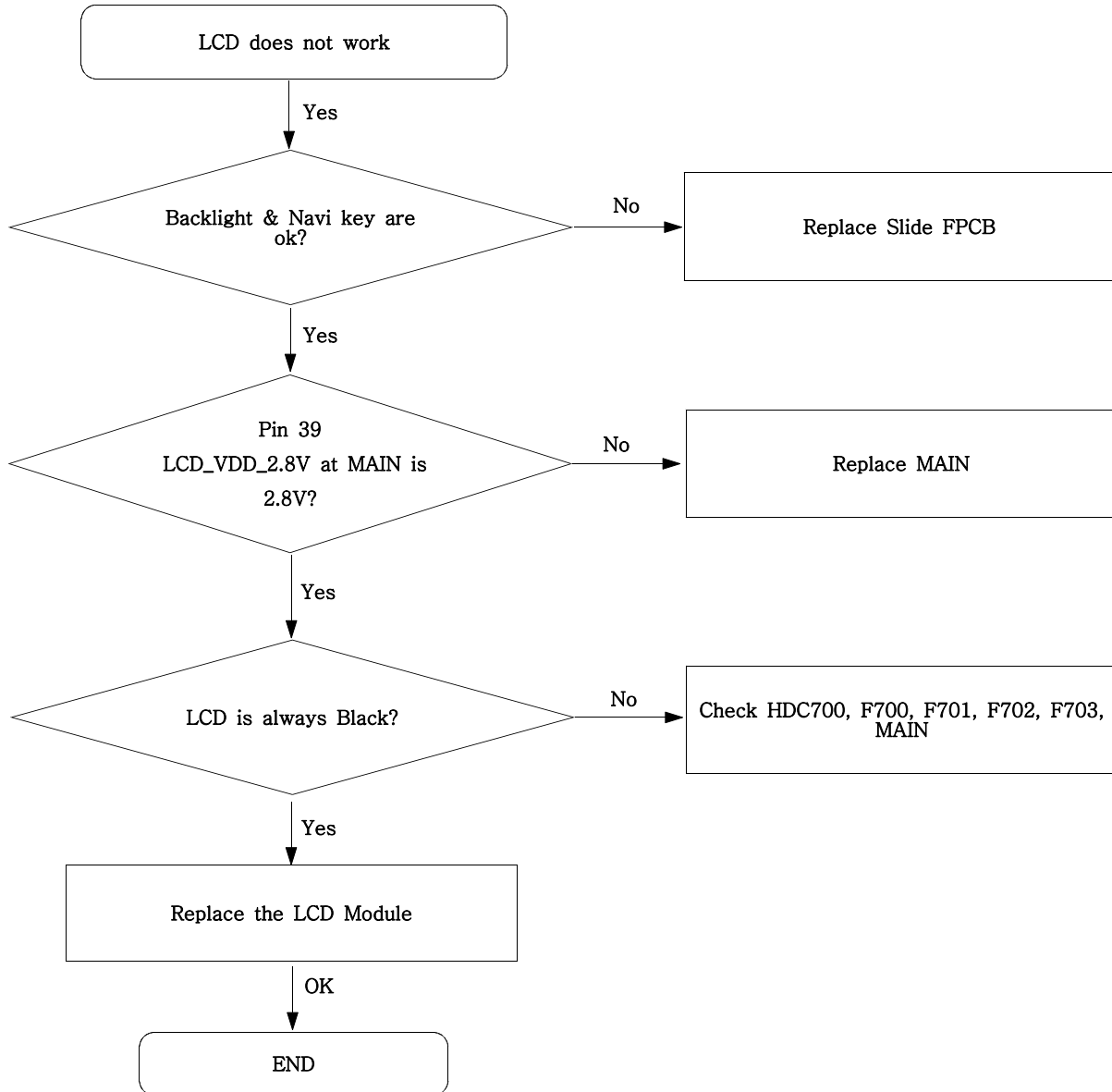


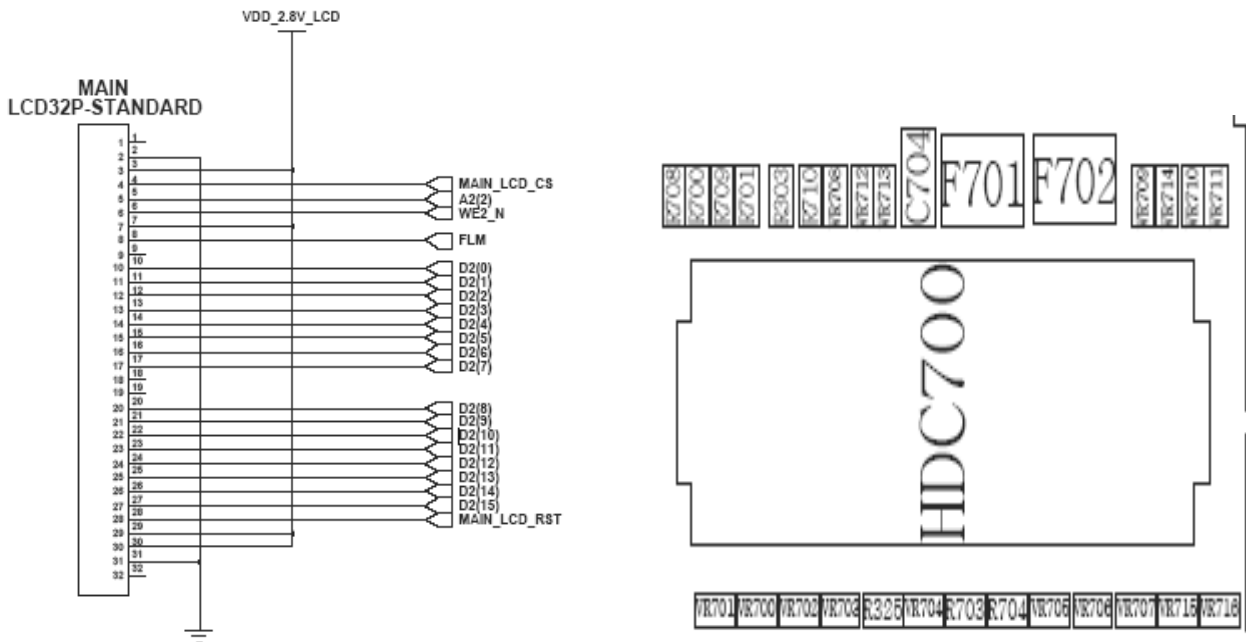
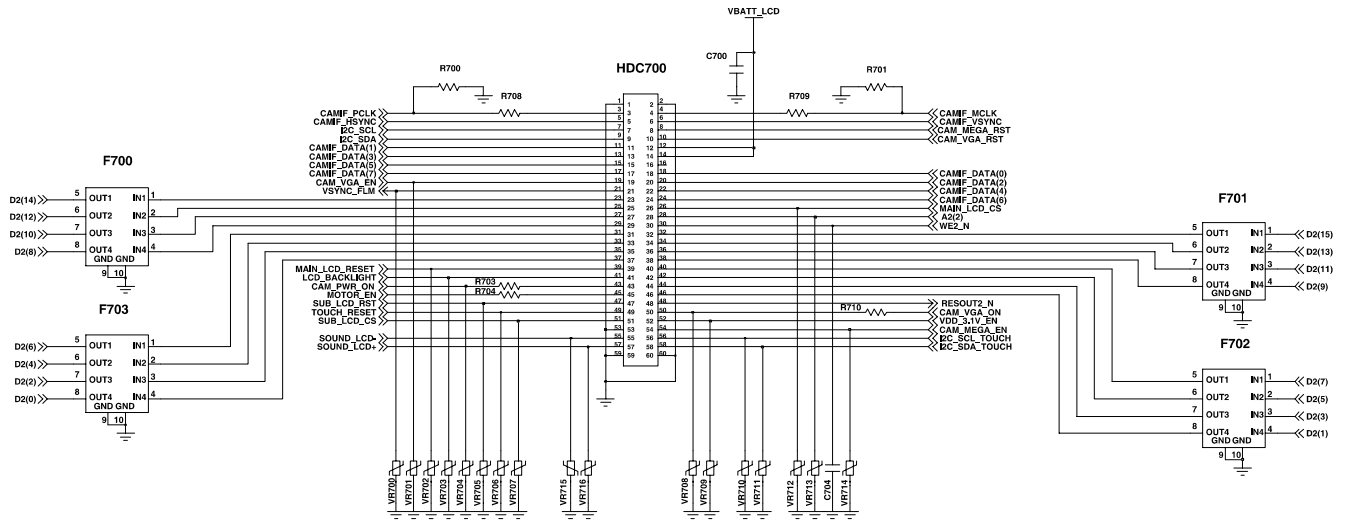


### 9-9. Key Data Input



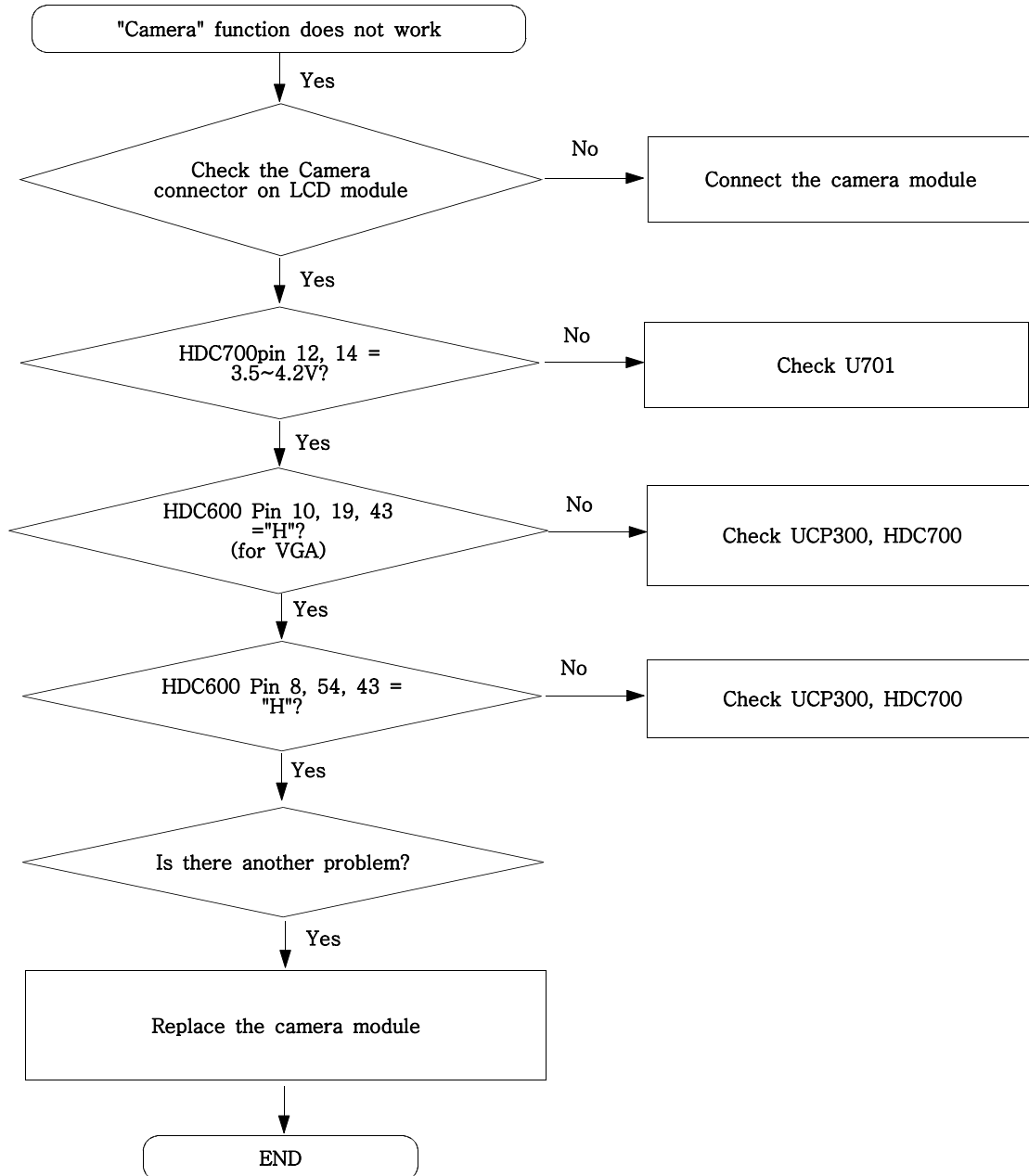
## 9-10. LCD part

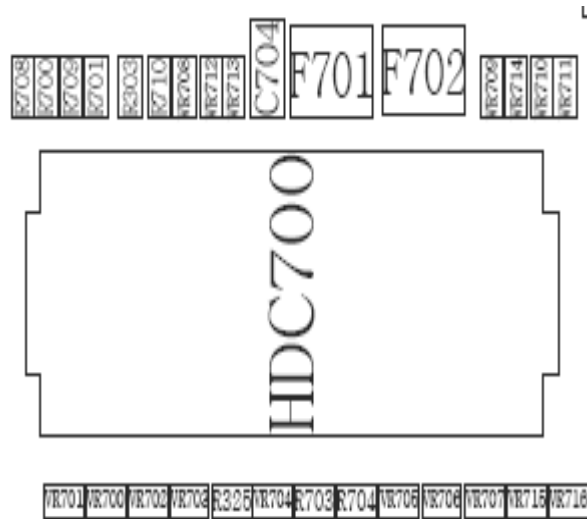
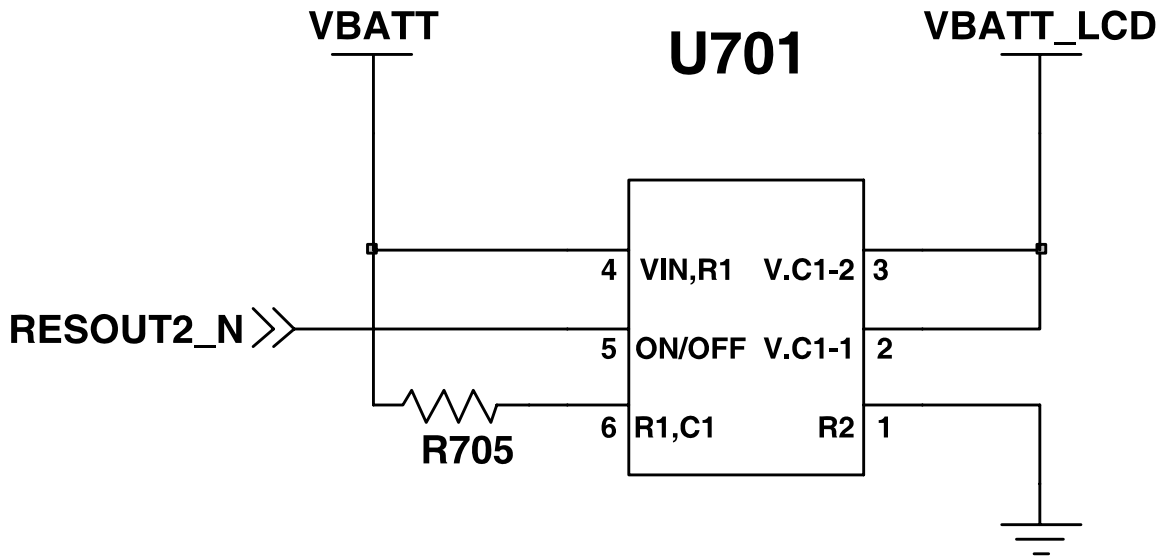
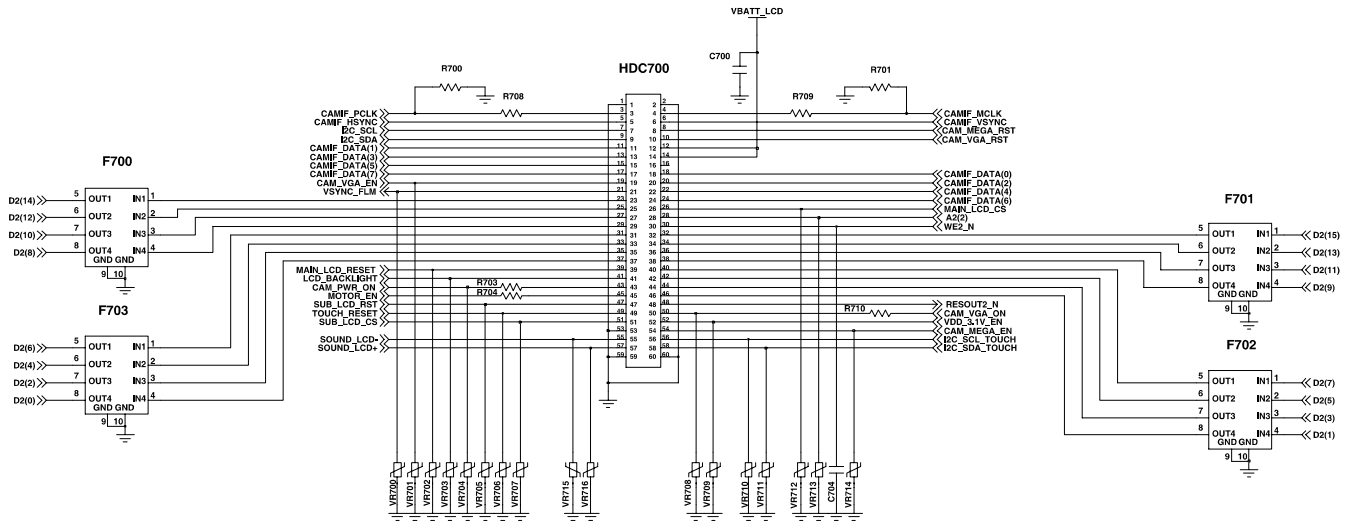




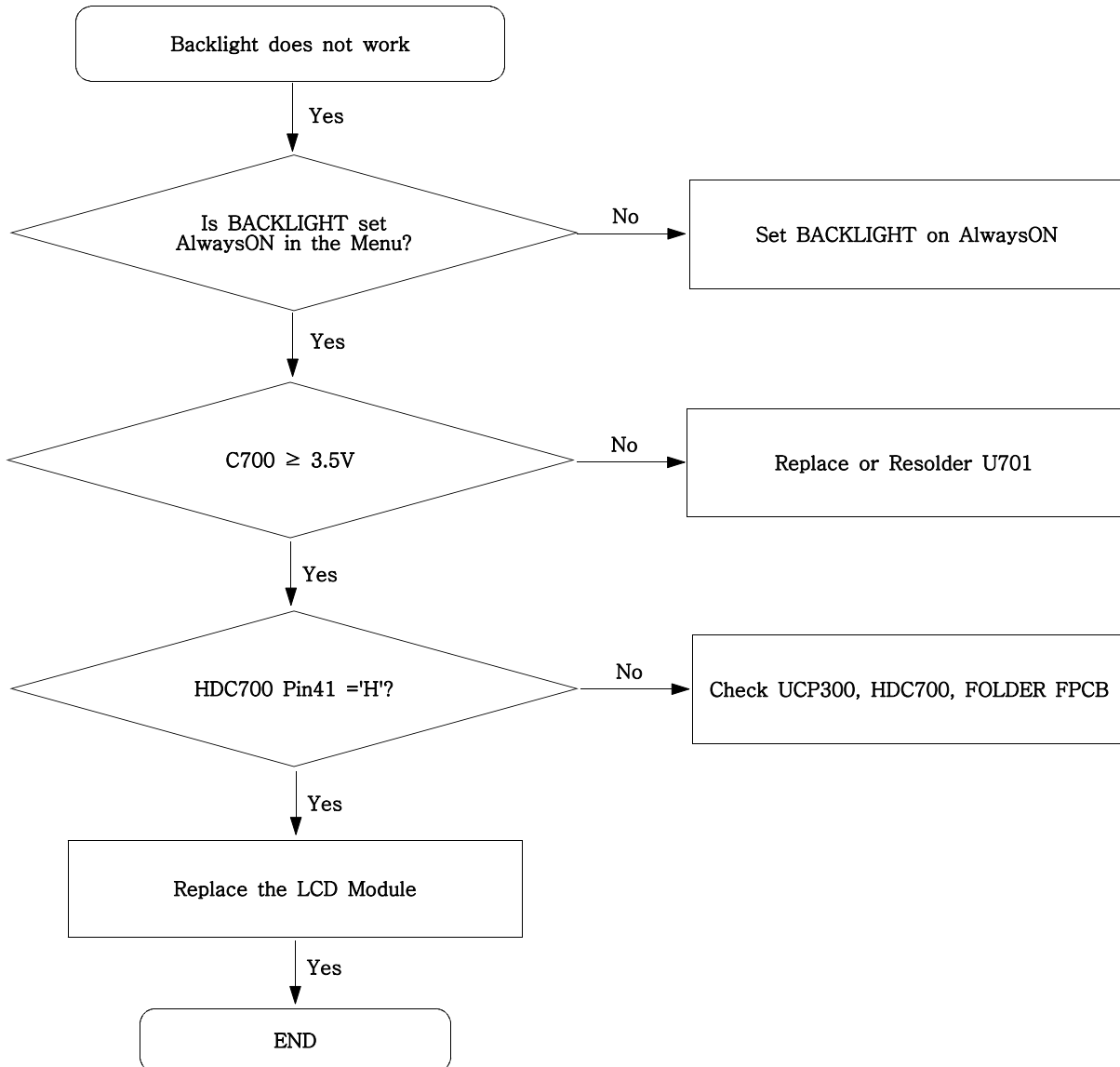


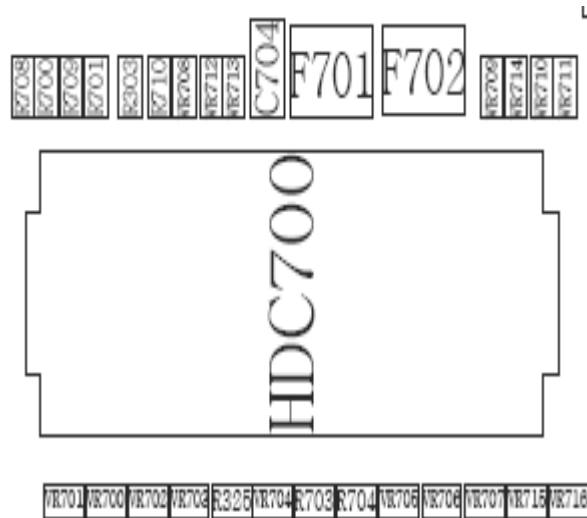
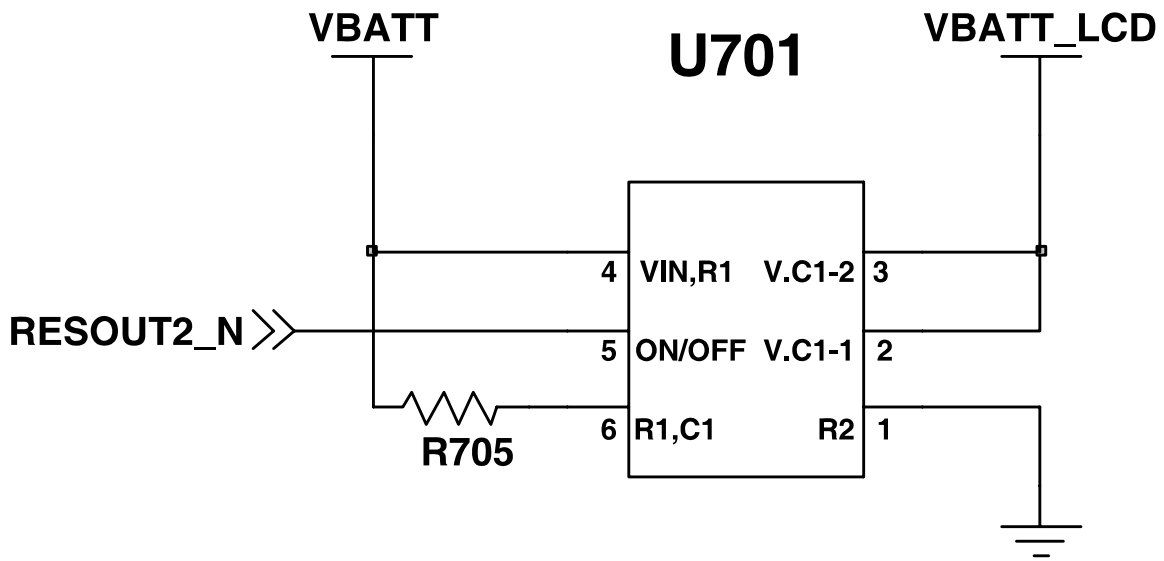
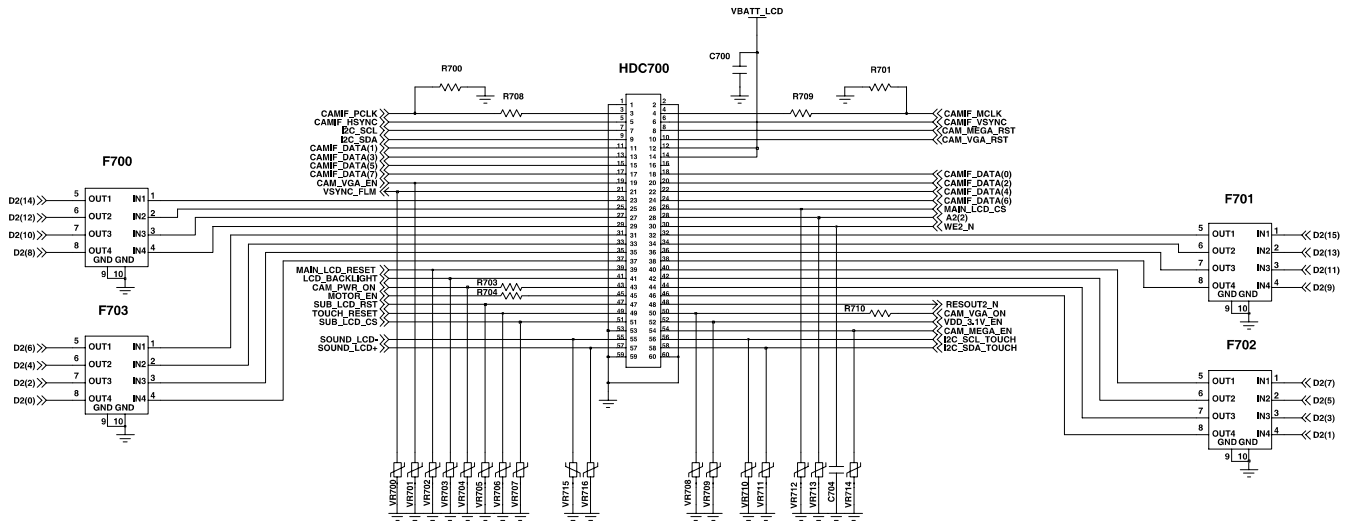
## 9-11. Camera part



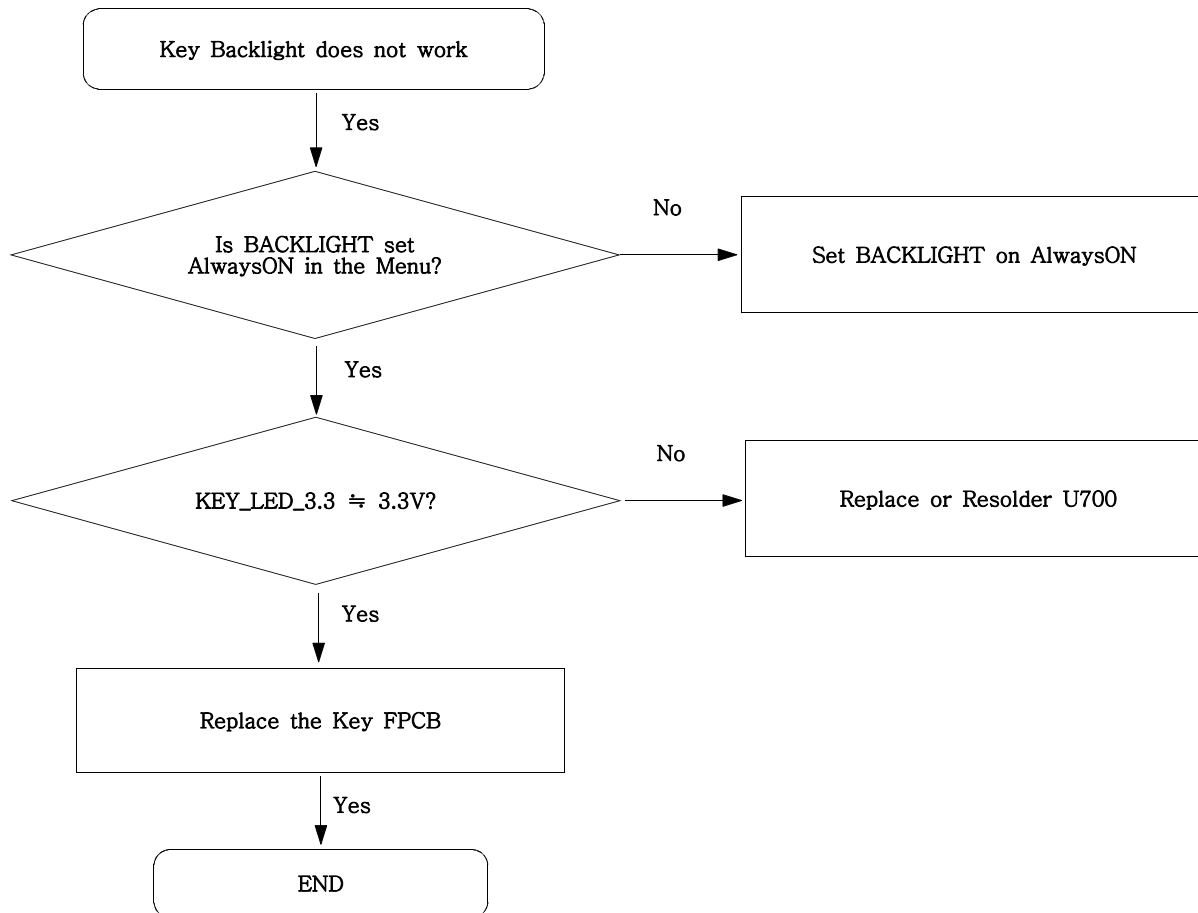


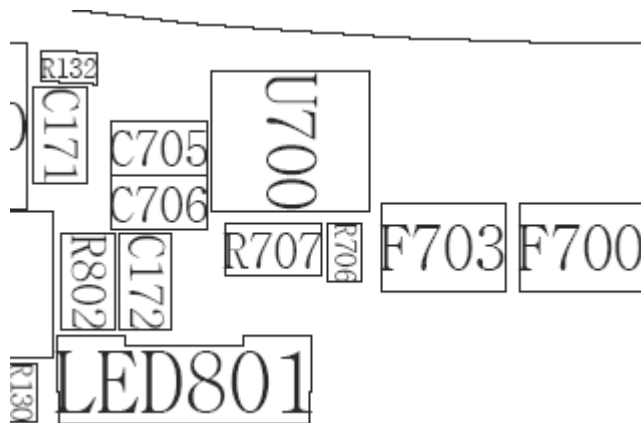
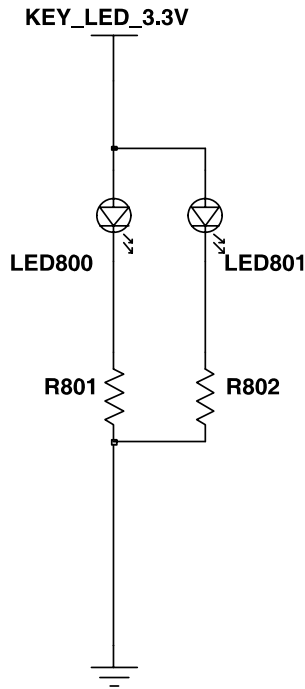
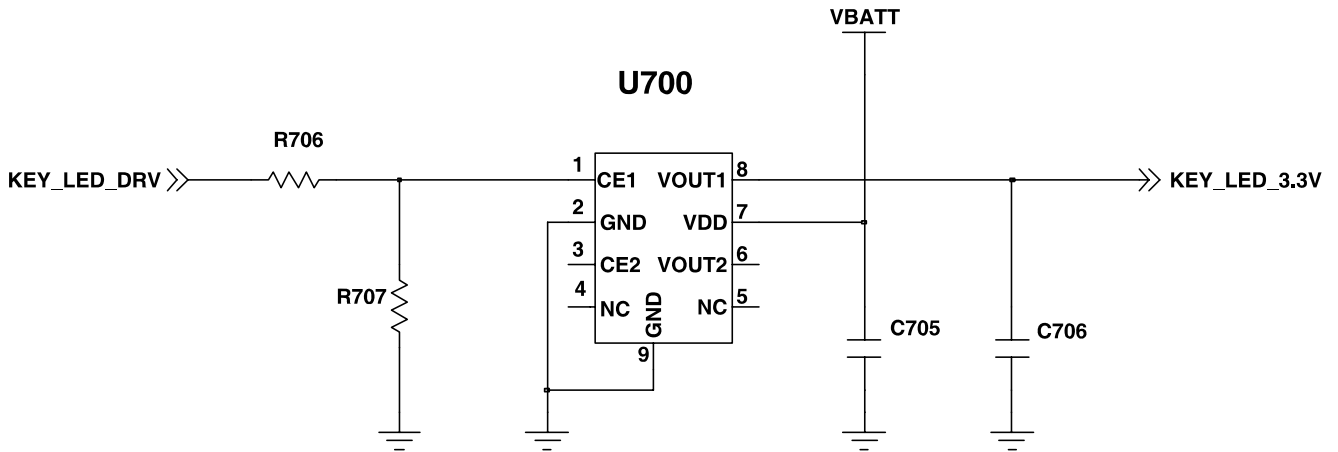
## 9-12. LCD Back Light



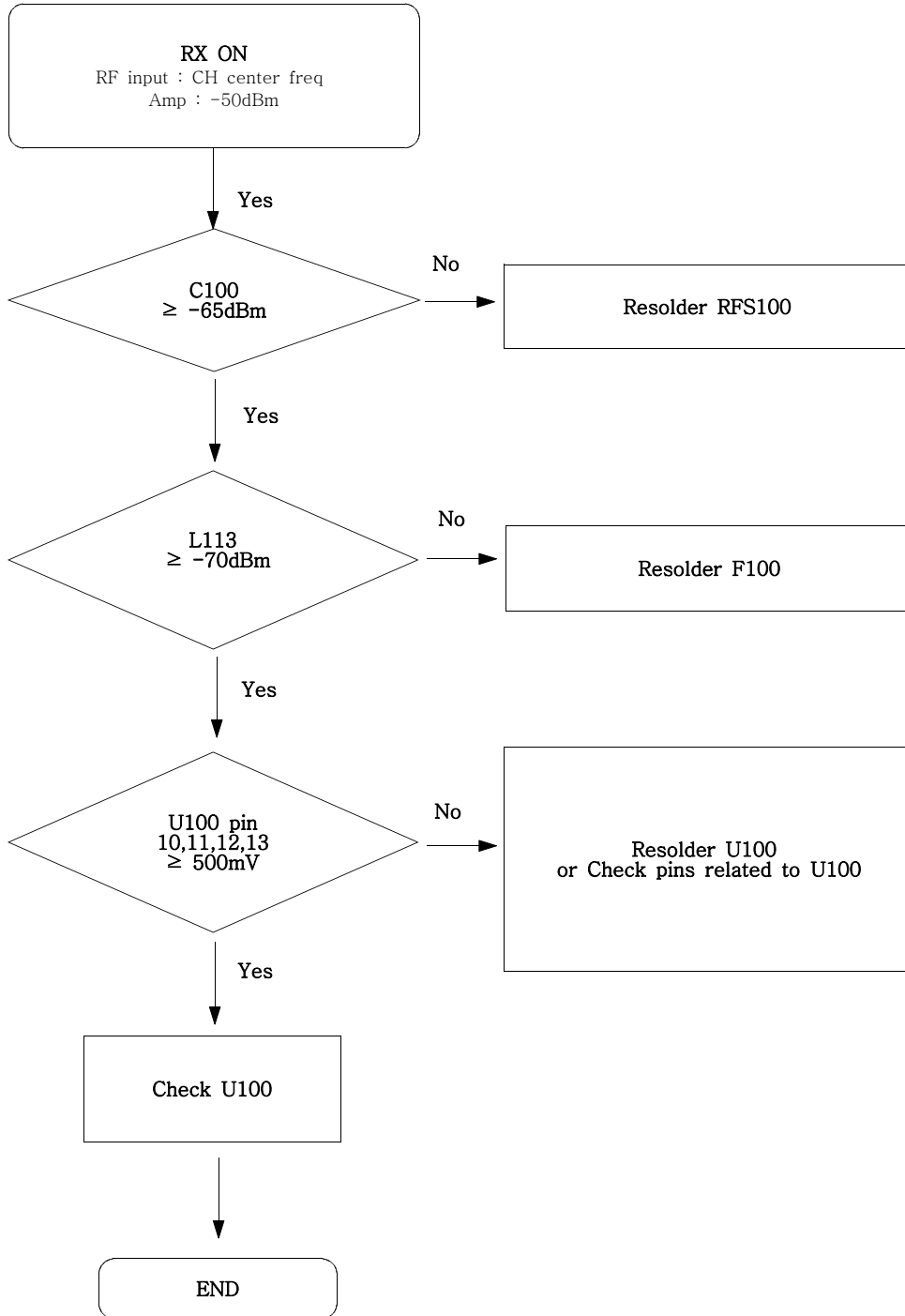


## 9-13. Key Back Light





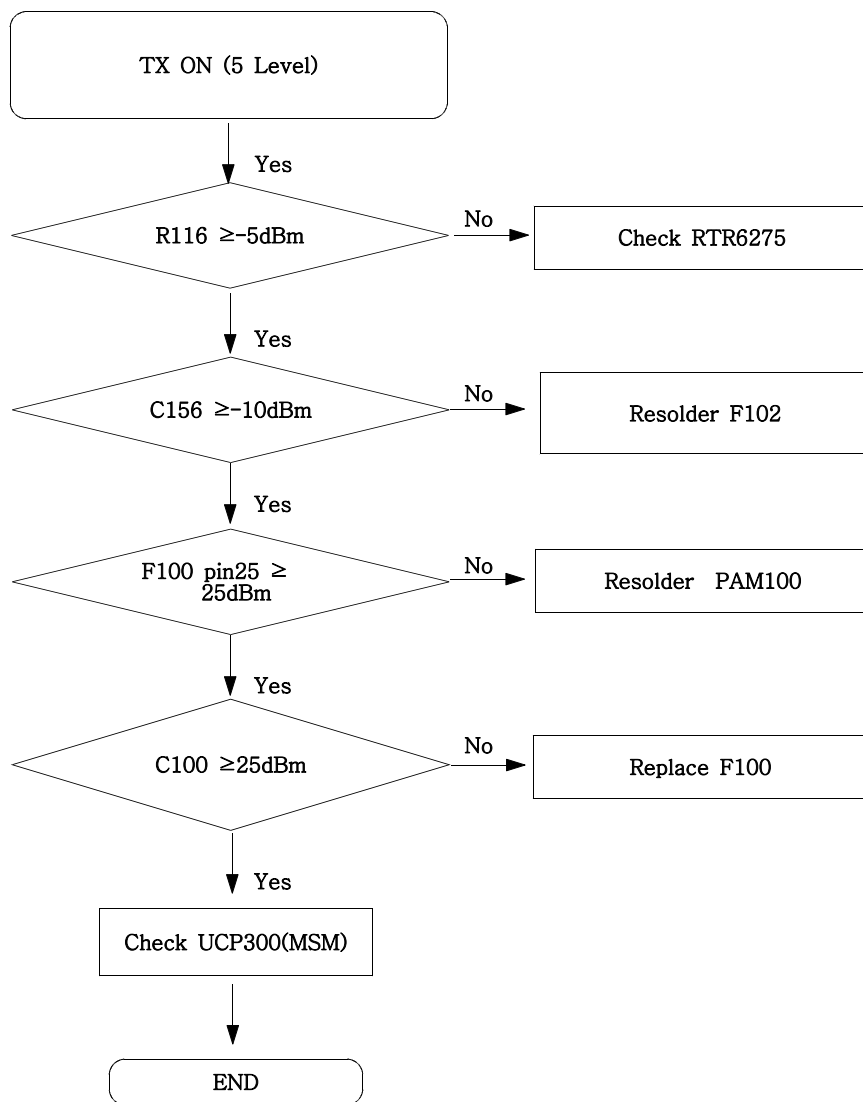
9-14. GSM Receiver

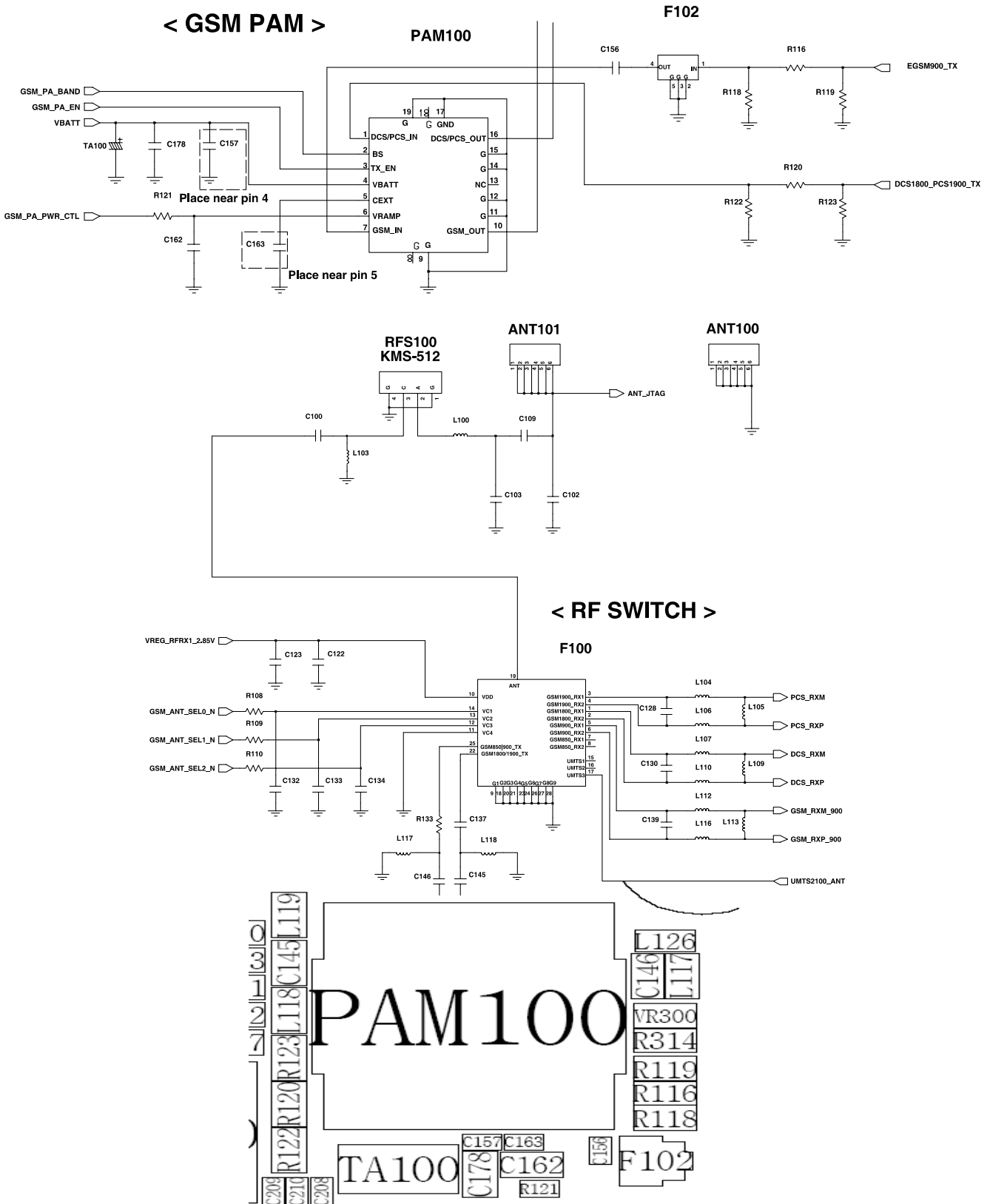




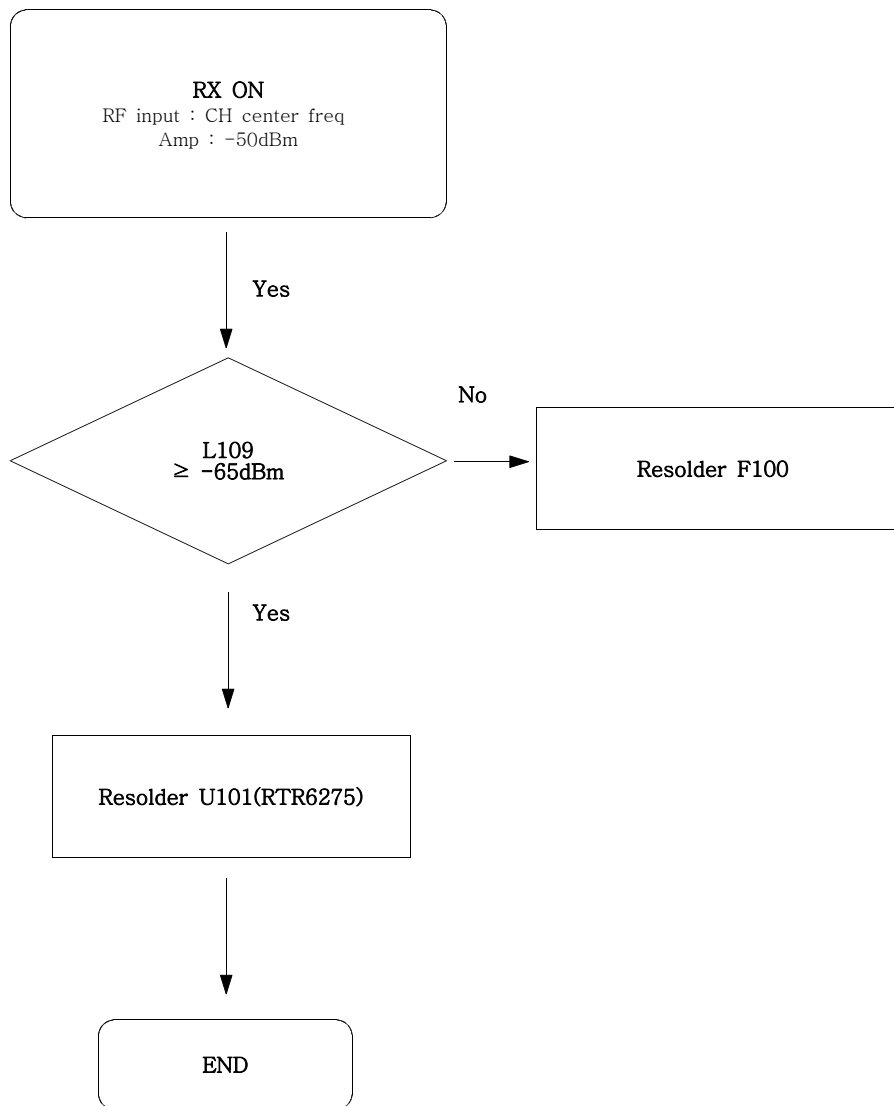


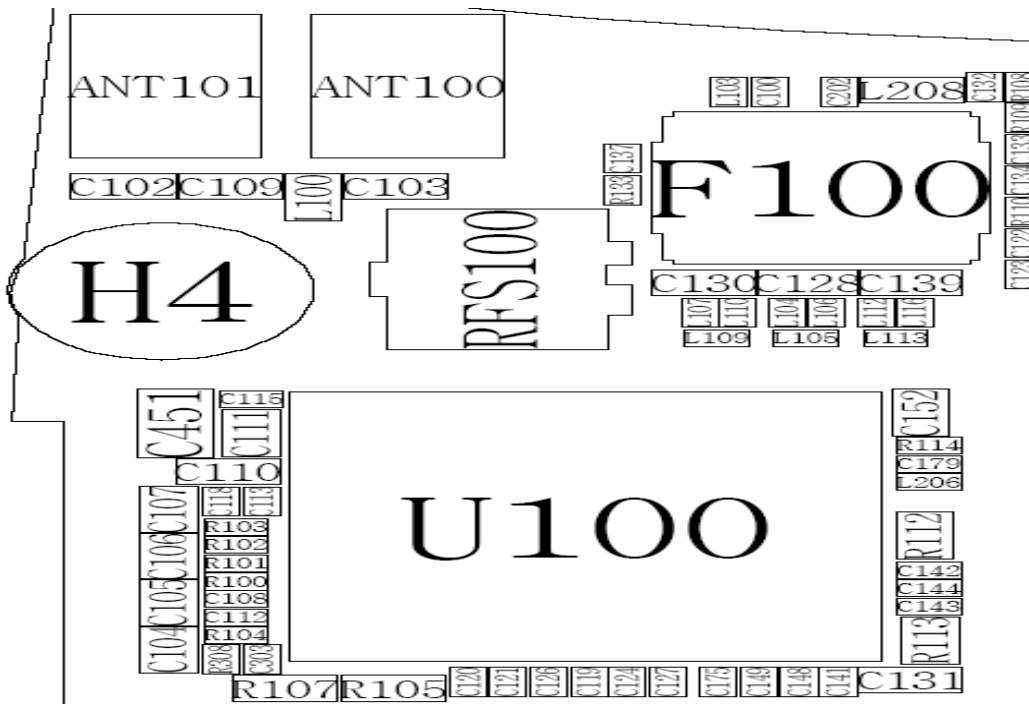
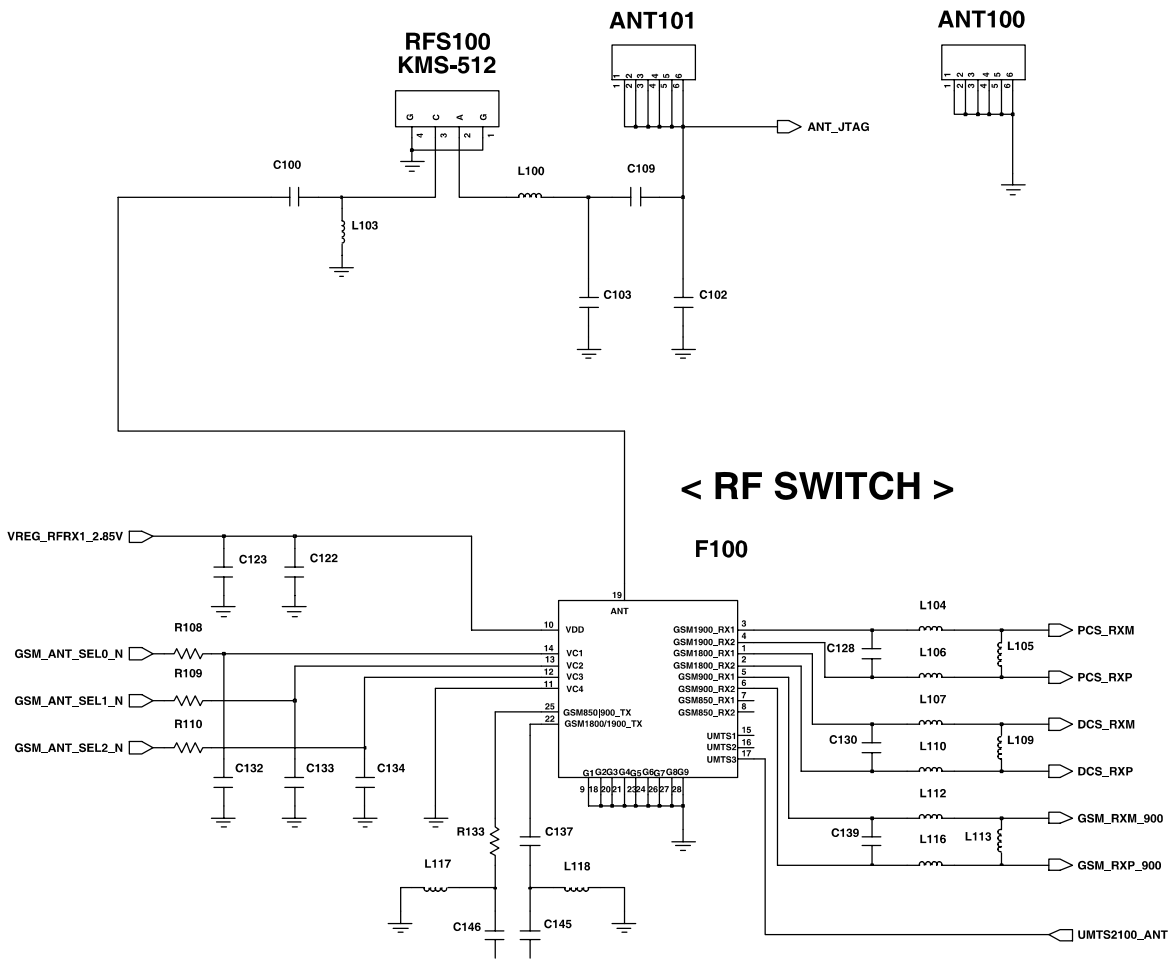
## 9-15. GSM Transmitter



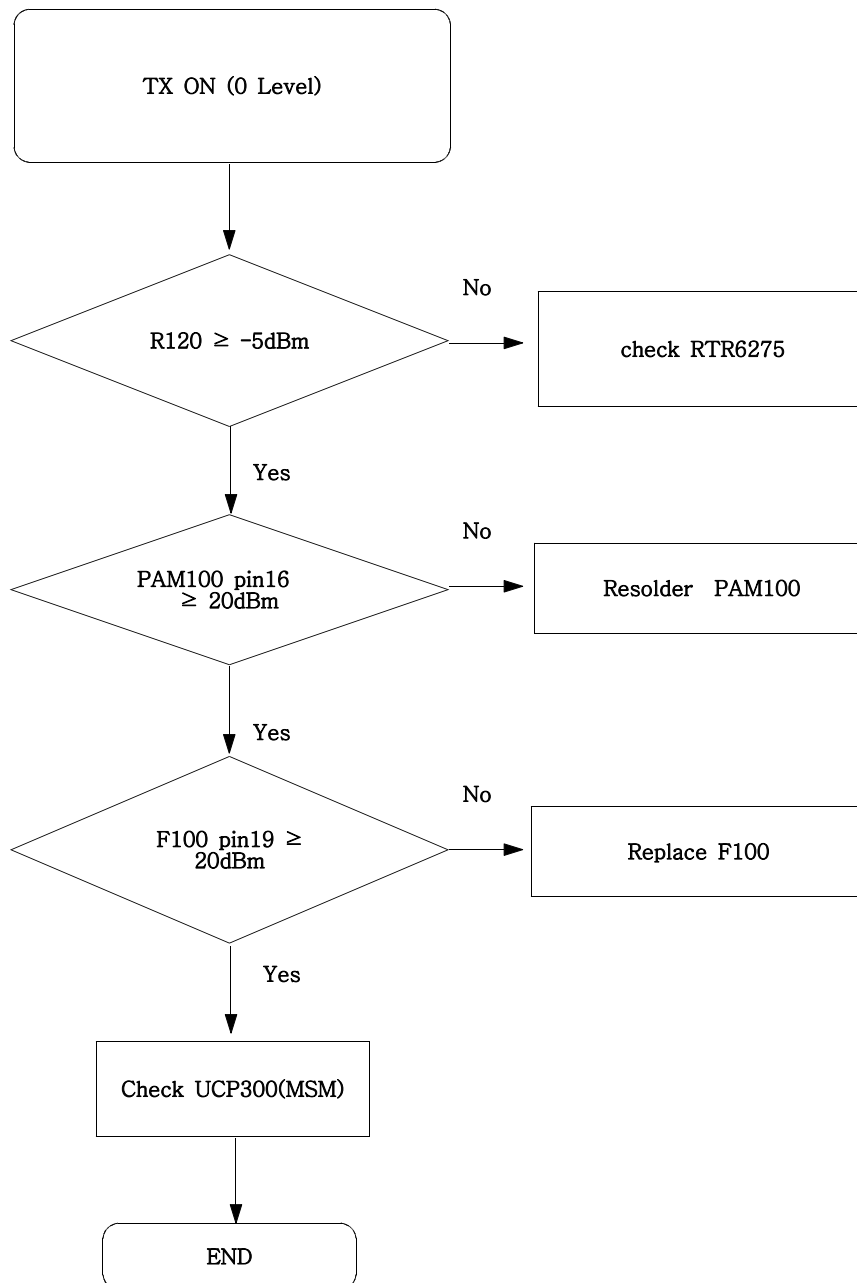


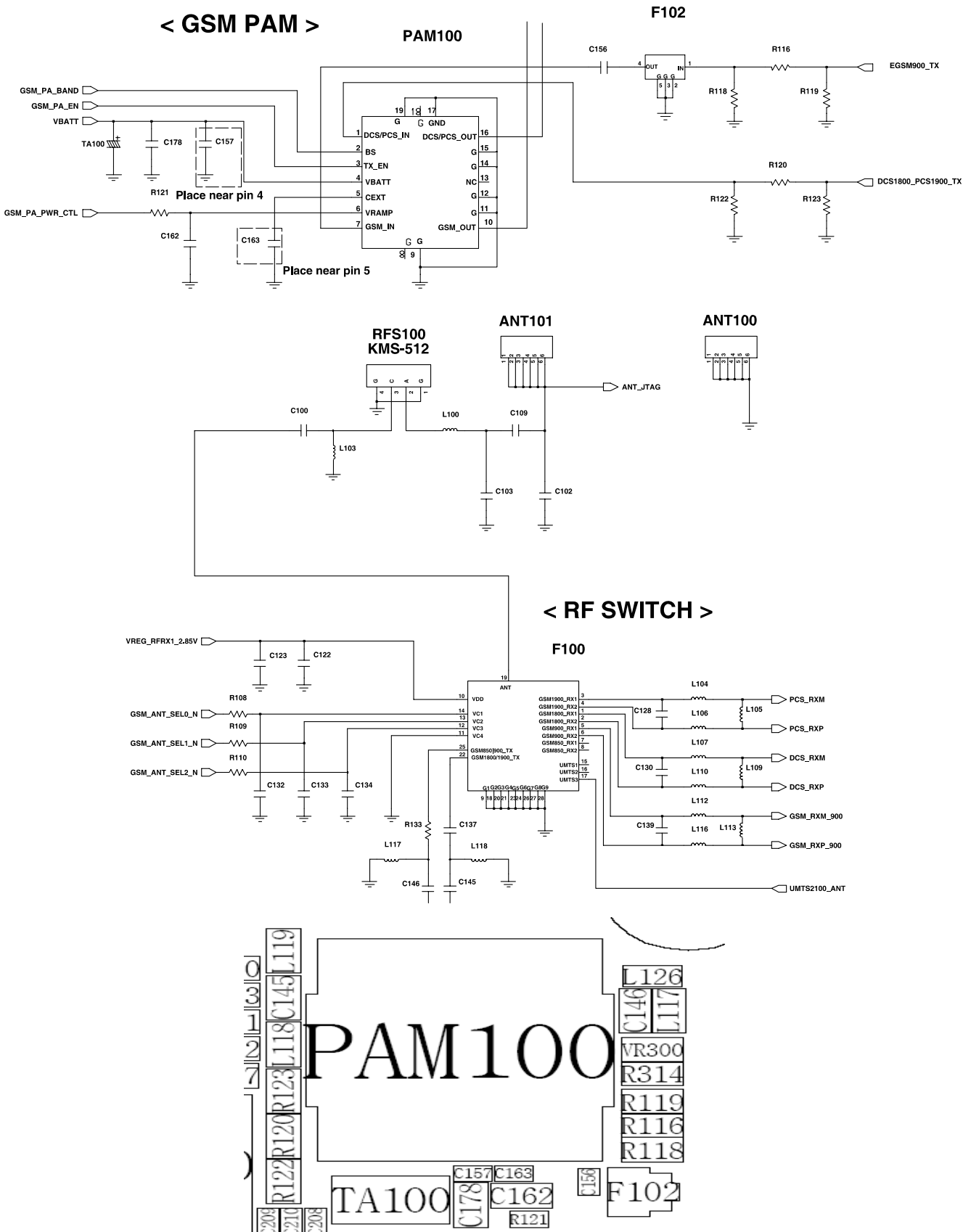
## 9-16. DCS Receiver



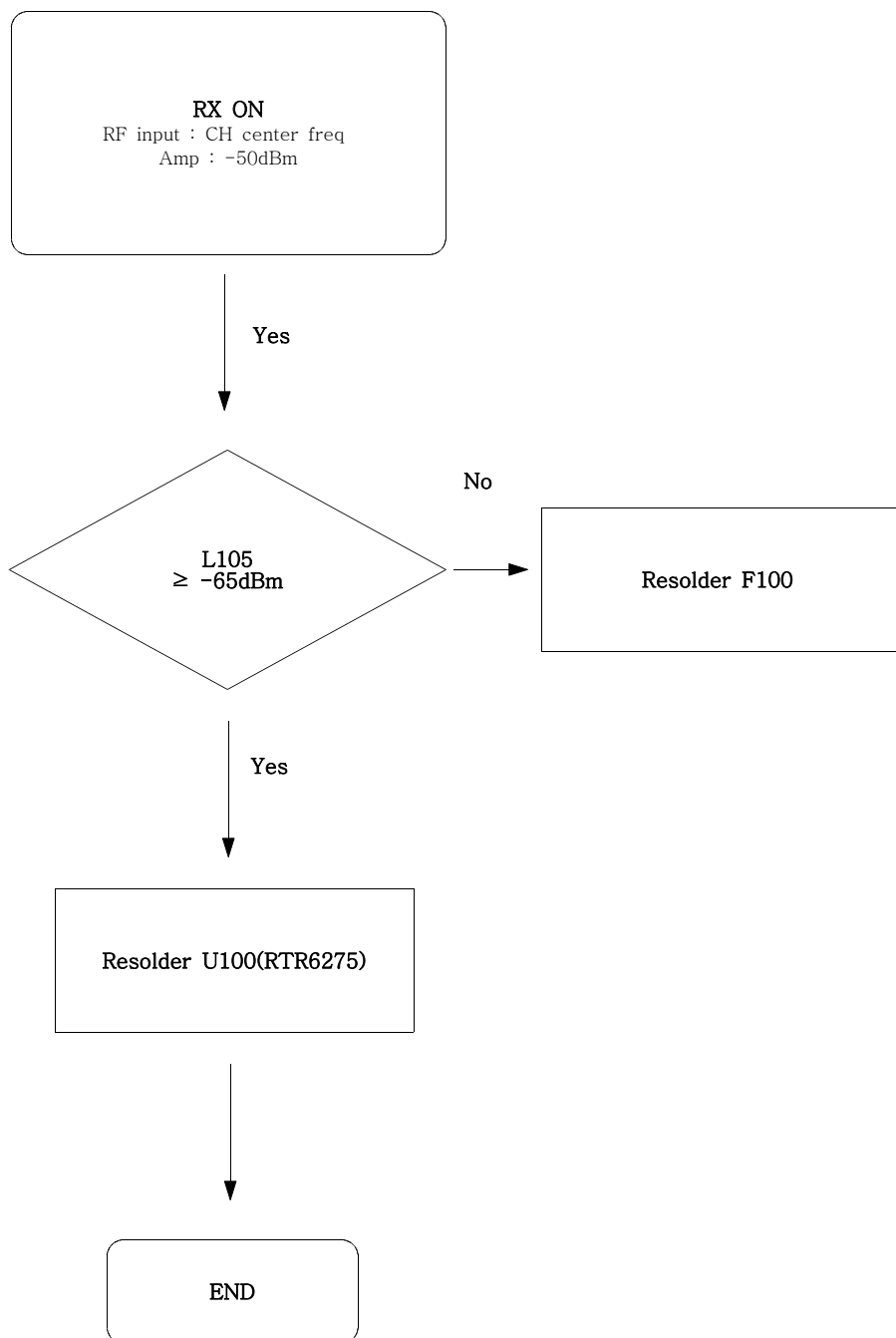


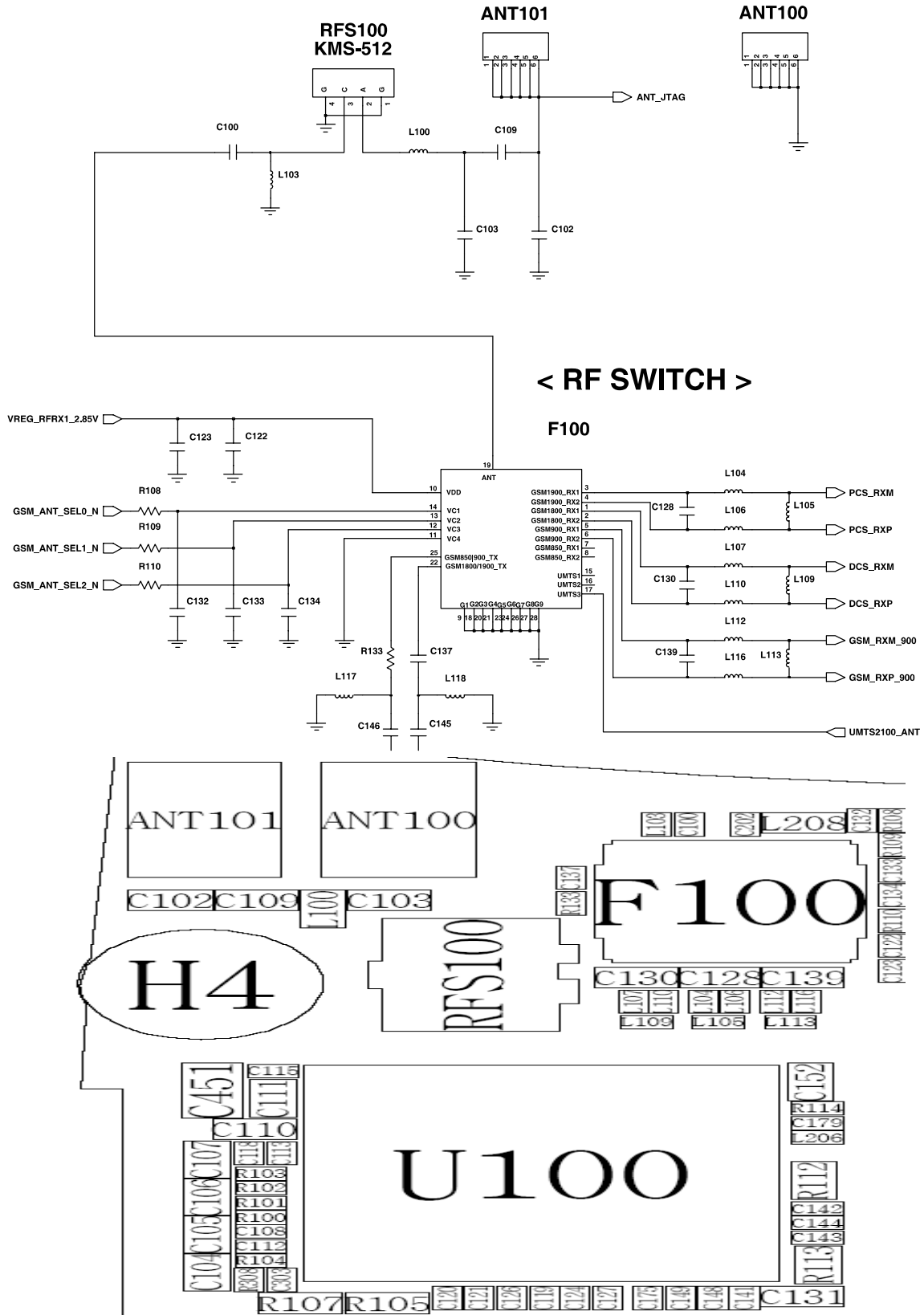
## 9-17. DCS Transmitter





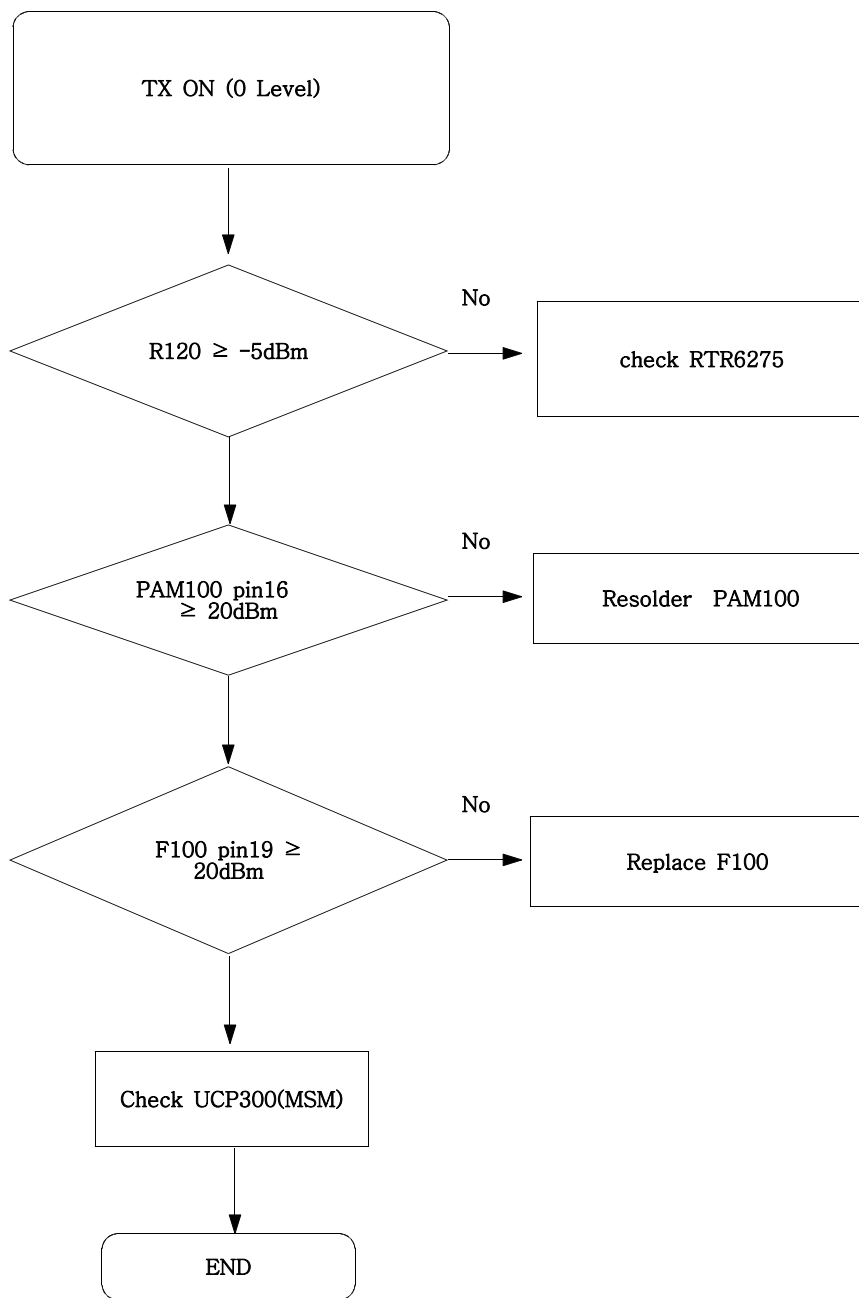
## 9-18. PCS Receiver

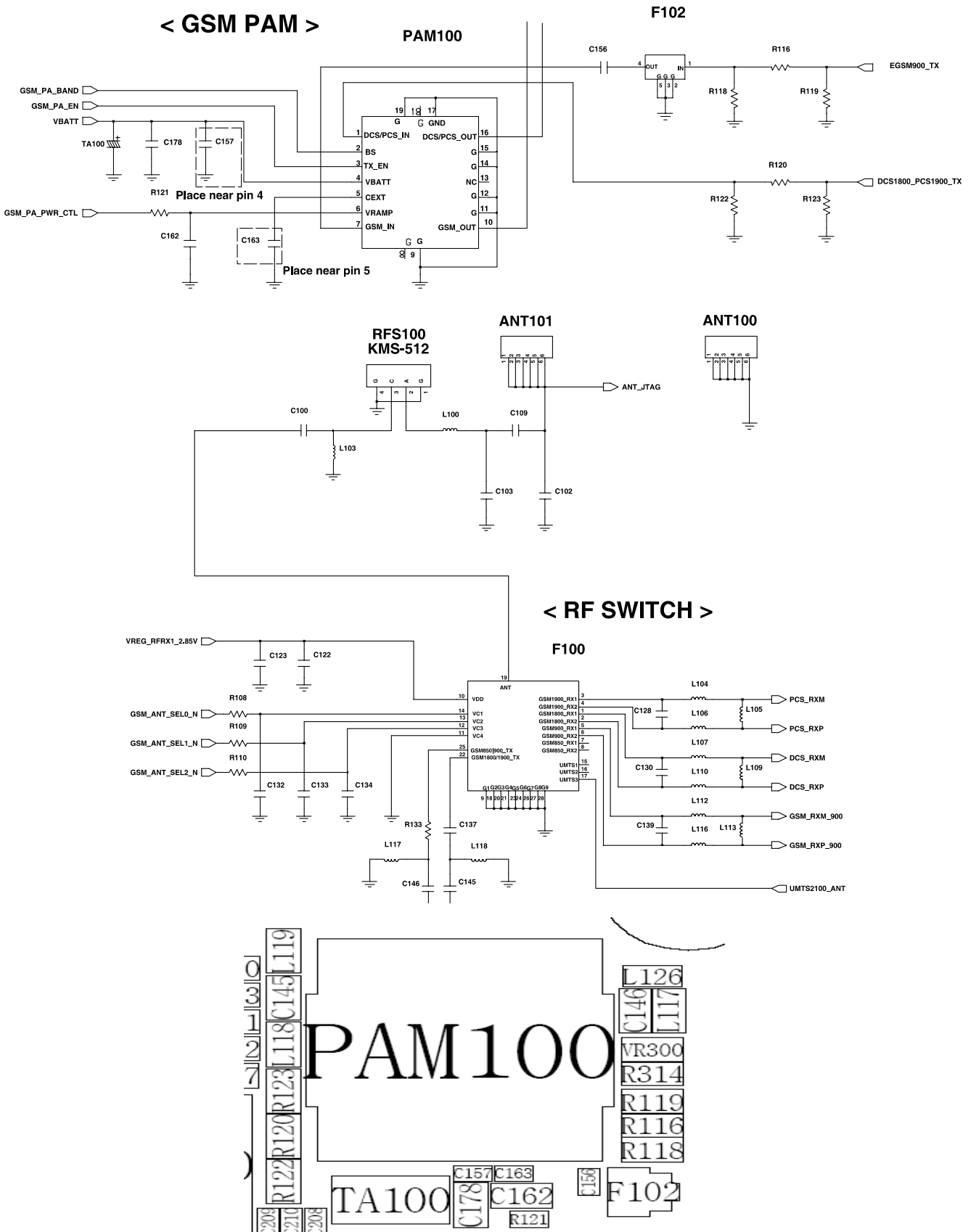




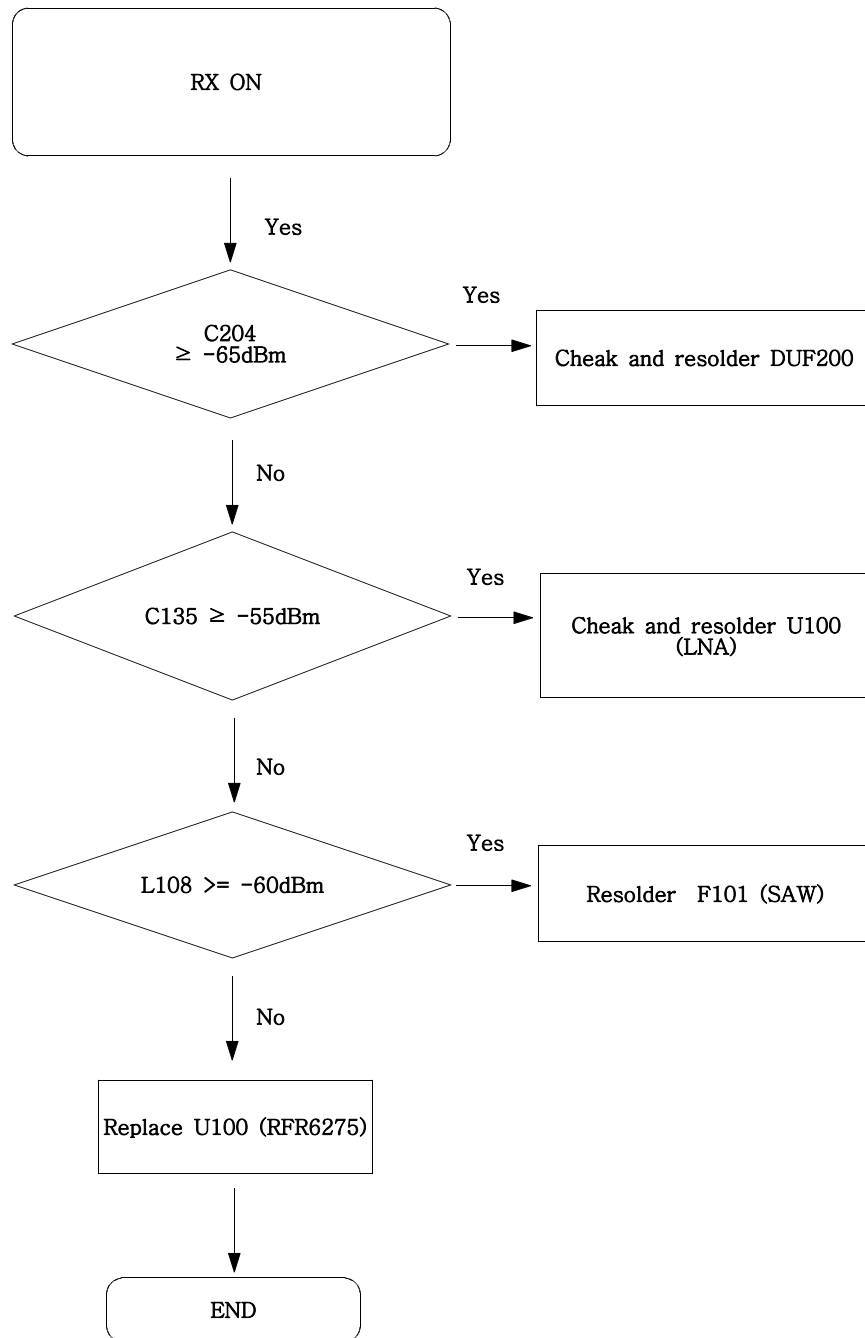


## 9-19. PCS Transmitter





## 9-20. WCDMA Receiver





## 9-21. WCDMA Transmitter

