

**SAMSUNG**

# GSM TELEPHONE SGH-F250

# ***SERVICE*** *Manual*

## GSM TELEPHONE



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**SAMSUNG  
ELECTRONICS**



GSPN (Global Service Partner Network)

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

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

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

You can prevent from ESD damage by static electricity.

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

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## 2. Specification

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### 2-1. GSM General Specification

	<b>GSM900 Phase 1</b>	<b>DCS1800 Phase 1</b>	<b>PCS1900</b>
Freq. Band[MHz] Uplink/Downlink	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990
ARFCN range	0~124 & 975~1023	512~885	512~810
Tx/Rx spacing	45MHz	95MHz	80MHz
Mod. Bit rate/ Bit Period	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us
Time Slot Period/Frame Period	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms
Modulation	0.3GMSK	0.3GMSK	0.3GMSK
MS Power	33dBm~5dBm	30dBm~0dBm	30dBm~0dBm
Power Class	5pcl ~ 19pcl	0pcl ~ 15pcl	0pcl ~ 15pcl
Sensitivity	-102dBm	-100dBm	-100dBm
TDMA Mux	8	8	8
Cell Radius	35Km	2Km	-

## 2-2. GSM Tx Power Class

<b>TX Power control level</b>	<b>GSM850</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±3 dBm	1	28±3 dBm	1	28±3 dBm
7	29±3 dBm	2	26±3 dBm	2	26±3 dBm
8	27±3 dBm	3	24±3 dBm	3	24±3 dBm
9	25±3 dBm	4	22±3 dBm	4	22±3 dBm
10	23±3 dBm	5	20±3 dBm	5	20±3 dBm
11	21±3 dBm	6	18±3 dBm	6	18±3 dBm
12	19±3 dBm	7	16±3 dBm	7	16±3 dBm
13	17±3 dBm	8	14±3 dBm	8	14±3 dBm
14	15±3 dBm	9	12±4 dBm	9	12±4 dBm
15	13±3 dBm	10	10±4 dBm	10	10±4 dBm
16	11±5 dBm	11	8±4dBm	11	8±4dBm
17	9±5 dBm	12	6±4 dBm	12	6±4 dBm
18	7±5 dBm	13	4±4 dBm	13	4±4 dBm
19	5±5 dBm	14	2±5 dBm	14	2±5 dBm
		15	0±5 dBm	15	0±5 dBm

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## 3. Product Function

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### Main Function

- Enhanced Music Function supporting phone
- 1.3 Mega Pixel (CMOS) Camera
- Bluetooth V.2.0 EDR
- 65K 128x160 TFT 1.9"
- SMS/MMS/E-Mail/Video Messaging
- WMDRM/MTP
- J2ME JAVA (MIDP 2.0/CLDC 1.1)
- EMS (Enhanced Message Service)
- WAP 2.0
- MP3/AAC/AAC+/e-AAC+ Ringtone
- GPRS/EDGE Class 10
- Triple Band(EGSM900/DCS,PCS)
- 64 Poly Melody (MIDI)
- MicroSD Card Support
- External Memory
- USB v2.0 Full-speed, Bluetooth 2.0 EDR
- FM Radio Support





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## 4. Array course control

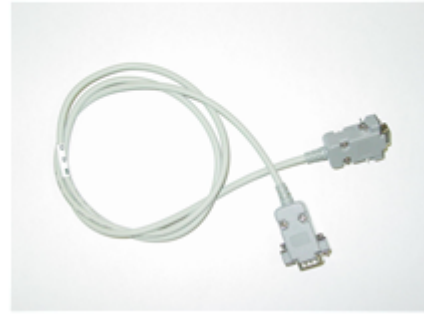
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### 4-1. Software Adjustments

Test Jig (GH80-03306A)



Serial Cable(CSA LL64151-A)



Power Supply Cable



RF CABLE(GH39-00599A)



TEST CABLE-0.4M(GH39-01020A)



TEST CABLE-1.5M(GH39-01022A)



## 4-2. Software Downloading

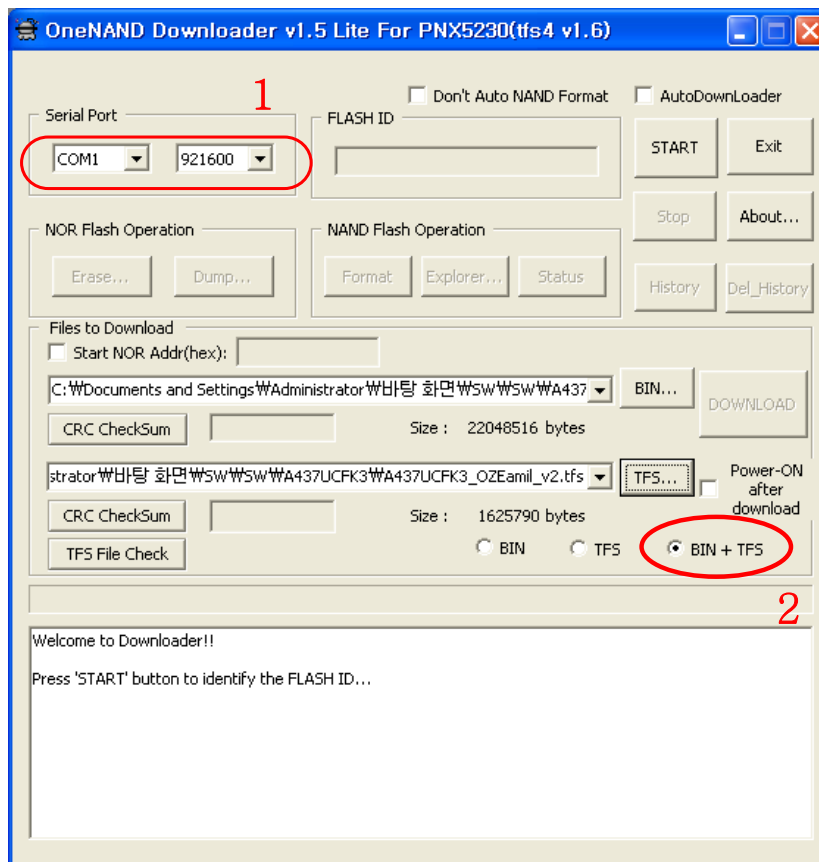
### 4-2-1. Pre-requisite for Downloading

- Downloader Program([OneNAND Downloder V1.5 Lite For PNX5230.exe](#))
- SGH-F250 Mobile Phone
- Data Cable
- Binary file, TFS file

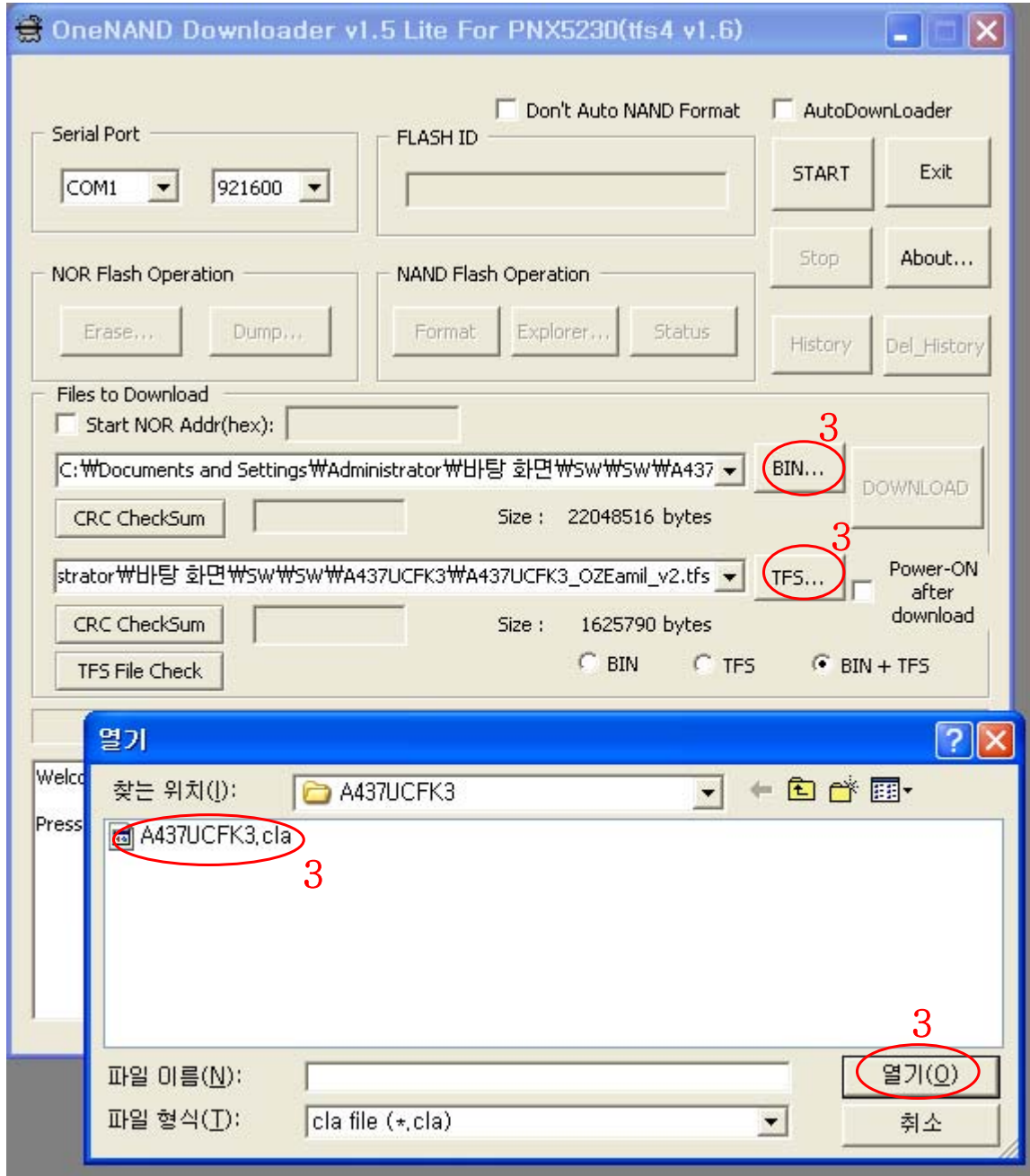
### 4-2-2. S/W Downloader Program

- Load the binary download program by executing the [“OneNAND Downloder V1.5 Lite For PNX5230.exe”](#)

1. Select the connected serial port and the rate of speed
2. Select the check box, the mode you want to download.
  - if the binary file wanted, check only 'BIN'
  - if the tfs file wanted, check only 'TFS'
  - if all the files wanted, check 'BIN+TFS'



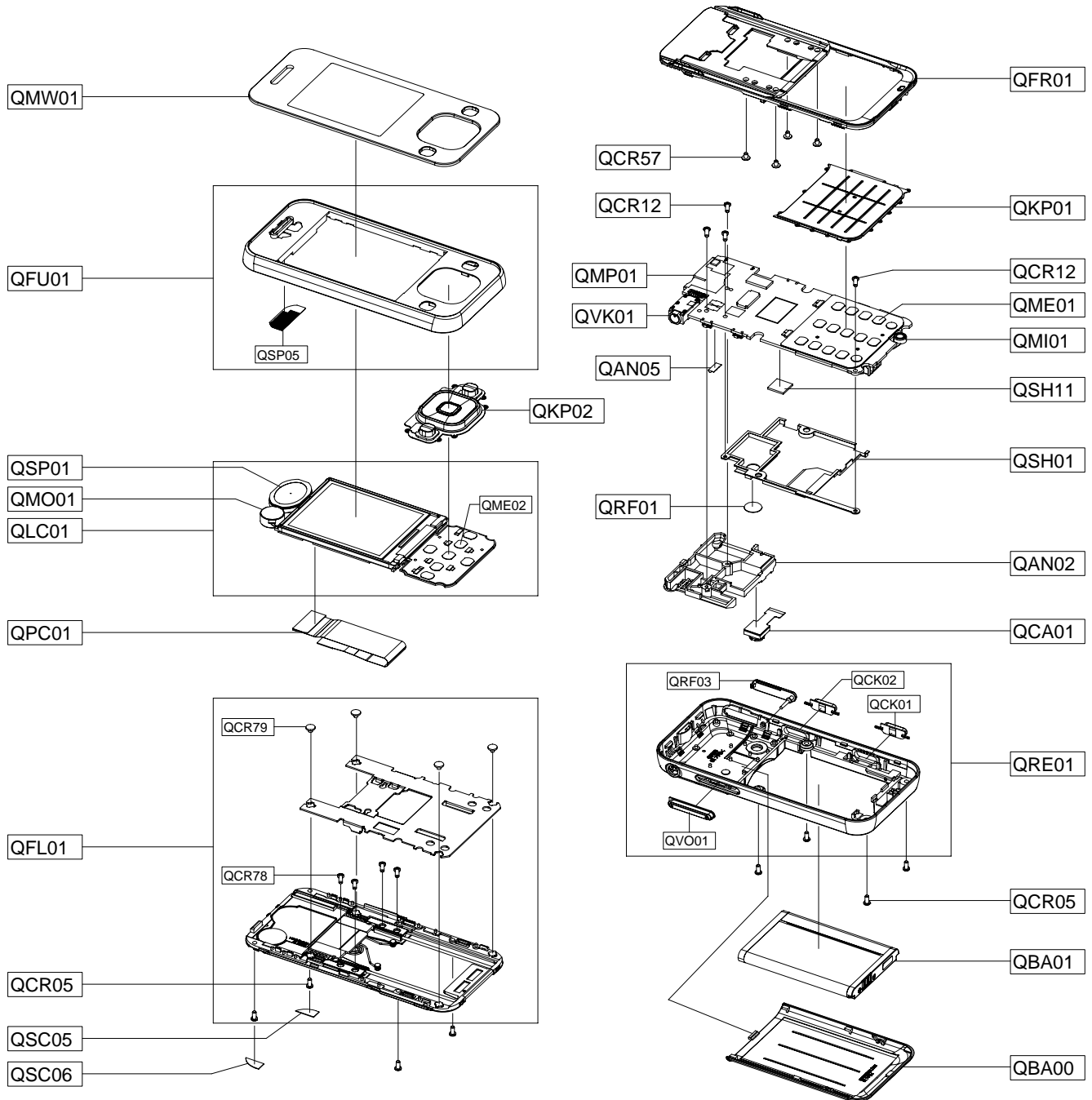
3. Select the file(s) what you want to download
  - click 'BIN...' to select a binary file.
  - click 'TFS...' to select a tfs file.



4. Click the 'DOWNLOAD' button to downloading

# 5. Exploded View and Parts List

## 5-1. Cellular phone Exploded View



## 5-2. Cellular phone Parts List

Design LOC		Description	SEC CODE
QAN02		INTENNA-SGHF250	GH42-01334A
QAN05		ASSY MEC-INTENNA CONN RUBBER	GH75-08200A
QBA00		PMO COVER-BATTERY	GH72-45426A
QBA01		INNER BATTERY PACK-750MAH,BLK,	GH43-02483A
QCA01		CAMERA MODULE-1/5" 1.3M	GH59-04999A
QCR05		SCREW-MACHINE	6001-001478
QCR05		SCREW-MACHINE	6001-001478
QCR12		SCREW-MACHINE	6001-001530
QCR57		SCREW-MACHINE	6001-002001
QFR01		ASSY CASE-FRONT	GH98-06181A
QKP01		ASSY KEYPAD-MAIN(SER/BLU)	GH98-07157A
QKP02		ASSY KEYPAD-SUB(EU/SIL)	GH98-06178A
QME01		DOME SHEET-MAIN 15KEY	GH59-04909A
QMI01		MICROPHONE-ASSY-SGHF250	GH30-00417A
QMO01		MOTOR DC-SGHF250	GH31-00373A
QMP01		PBA MAIN-SGHF250	GH92-04288A
QMW01		ASSY COVER-MAIN WINDOW	GH98-06184A
QPC01		MEA-SLIDE FPCBKIT	GH97-08490A
QRF01		TAPE-RF	GH74-35673A
QSC05		TAPE-SHEET LOWER SCREW R	GH74-34644A
QSC06		TAPE-SHEET LOWER SCREW L	GH74-34645A
QSH01		ASSY BRACKET-SHIELD CAN	GH98-06179A
QSH11		RMO RUBBER-PMU	GH73-11283A
QSP01		SPEAKER	3001-002242
QVK01		ASSY ETC-SGH-F250 EARJACK FPCB	GH59-05101A
QRE01		ASSY CASE-REAR	GH98-06182A
	QCK01	PMO KEY-CAMERA	GH72-44168A
	QCK02	PMO KEY-MUSIC	GH72-44170A
	QRF03	PMO COVER-EAR	GH72-44164A
	QVO01	PMO KEY-VOLUME	GH72-44169A

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<b>Design LOC</b>		<b>Description</b>	<b>SEC CODE</b>
QFU01		ASSY CASE-SLIDE UPPER	GH98-06180A
	QSP05	ASSY DECO-SPK	GH98-06298A
QFL01		ASSY CASE-SLIDE LOWER	GH98-06183A
	QCR78	SCREW-MACHINE	6001-002116
	QCR79	SCREW-SPECIAL	6009-001534
QLC01		ELA ETC-SGHF250 SUB LCD MODULE	GH96-02951A
	QME02	DOME SHEET-SUB 7KEY	GH59-04915A

<b>Description</b>	<b>SEC CODE</b>
BAG PE	6902-000634
CBF INTERFACE-DATA LINK CABLE(	GH39-00859B
CBF INTERFACE-MIC CABLE(S20P,B	GH39-01031A
ADAPTOR-ATADS10EBE,BLK,EU	GH44-01702A
S/W CD-SGH-F250 PC STUDIO 3.2.	GH46-00532A
EARPHONE-EARPHONE,3 PLUG,BLK,E	GH59-04418A
LABEL(P)-UNIT SEAL	GH68-00518B
LABEL(R)-WATER SOAK	GH68-09361A
MANUAL USERS-EU ENGLISH	GH68-16947A
MANUAL USERS-EU RUSSIAN	GH68-16950A
LABEL(R)-MAIN(EU)	GH68-16966B
BOX-UNIT(EU NEW)	GH69-06257E
CUSHION-CASE(EU)	GH69-06258A
TAPE INSU	GH74-30411A
TAPE INSU-LED	GH74-34647A
TAPE-REMOVE	GH74-35112A
SPONGE	GH74-36182A
TAPE INSU	GH74-36183A
SPONGE	GH74-36186A
TAPE GASK	GH74-36188A
TAPE ELEC	GH74-36189A
VINYL-BOHO UPPER	GH74-36405A
TAPE-LCD ESD MIDDLE R	GH74-36625A
TAPE-SUB CONN BOTTOM	GH74-36713A
TAPE INSU	GH74-36715A
SPONGE-FRONT BOTTOM	GH74-36910A
VINYL-BOHO UPPER BOTTOM	GH74-37142A
SPONGE	GH74-37143A
SPONGE-MIC	GH74-37207A



## 6. Main Electrical Parts List

SEC Code	Design LOC	Description	STATUS
0403-001547	D301	DIODE-ZENER	SA
0406-001267	ZD405	DIODE-TVS	SA
0406-001286	ZD501	DIODE-TVS	SA
0406-001286	ZD504	DIODE-TVS	SA
0406-001288	ZD400	DIODE-TVS	SA
0406-001288	ZD401	DIODE-TVS	SA
0406-001288	ZD403	DIODE-TVS	SA
0406-001288	ZD404	DIODE-TVS	SA
0406-001288	ZD500	DIODE-TVS	SA
0406-001288	ZD600	DIODE-TVS	SA
0406-001288	ZD601	DIODE-TVS	SA
0505-001325	Q100	FET-SILICON	SA
0601-002048	LED300	LED	SA
0601-002048	LED301	LED	SA
0801-003012	U306	IC-CMOS LOGIC	SA
0801-003022	TR500	IC-CMOS LOGIC	SA
0801-003022	U205	IC-CMOS LOGIC	SA
1001-001447	U400	IC-ANALOG MULTIPLEX	SA
1001-001447	U404	IC-ANALOG MULTIPLEX	SA
1009-001020	U308	IC-HALL EFFECT S/W	SA
1108-000102	UME200	IC-MCP	SA
1201-002576	PAM100	IC-POWER AMP	SA
1201-002609	U401	IC-AUDIO AMP	SA
1201-002610	U402	IC-AUDIO AMP	SA
1202-001068	U502	IC-VOLTAGE COMP.	SA
1203-004291	U307	IC-MULTI REG.	SA
1203-004382	U305	IC-POWER SUPERVISOR	SA
1203-004776	U301	IC-POSI.FIXED REG.	SA
1203-004776	U303	IC-POSI.FIXED REG.	SA
1203-004776	U304	IC-POSI.FIXED REG.	SA
1205-003335	U100	IC-TRANSCEIVER	SA
1205-003336	UCP200	IC-COMM. CONTROLLER	SA
1205-003346	U101	IC-DATA COMM./GEN.	SA
1404-001221	VR500	THERMISTOR-NTC	SA
1405-001121	ZD300	VARISTOR	SA
1405-001121	ZD502	VARISTOR	SA
1405-001121	ZD503	VARISTOR	SA
1405-001133	V608	VARISTOR	SA
2007-000138	R402	R-CHIP	SA
2007-000138	R419	R-CHIP	SA
2007-000138	R422	R-CHIP	SA
2007-000140	R104	R-CHIP	SA
2007-000140	R514	R-CHIP	SA
2007-000141	R600	R-CHIP	SA
2007-000141	R601	R-CHIP	SA
2007-000148	R200	R-CHIP	SA
2007-000148	R210	R-CHIP	SA
2007-000148	R215	R-CHIP	SA
2007-000148	R405	R-CHIP	SA
2007-000148	R505	R-CHIP	SA
2007-000149	R102	R-CHIP	SA
2007-000157	R111	R-CHIP	SA
2007-000159	R513	R-CHIP	SA
2007-000160	R109	R-CHIP	SA
2007-000162	R217	R-CHIP	SA

Main Electrical Parts List

<b>SEC Code</b>	<b>Design LOC</b>	<b>Description</b>	<b>STATUS</b>
2007-000162	R218	R-CHIP	SA
2007-000162	R512	R-CHIP	SA
2007-000162	R521	R-CHIP	SA
2007-000162	R605	R-CHIP	SA
2007-000164	R314	R-CHIP	SA
2007-000170	R207	R-CHIP	SA
2007-000170	R208	R-CHIP	SA
2007-000171	R101	R-CHIP	SA
2007-000171	R105	R-CHIP	SA
2007-000171	R107	R-CHIP	SA
2007-000171	R316	R-CHIP	SA
2007-000171	R417	R-CHIP	SA
2007-000171	R418	R-CHIP	SA
2007-000171	R509	R-CHIP	SA
2007-000171	R602	R-CHIP	SA
2007-000171	R603	R-CHIP	SA
2007-000171	R604	R-CHIP	SA
2007-000758	R201	R-CHIP	SA
2007-000758	R309	R-CHIP	SA
2007-000758	R517	R-CHIP	SA
2007-001284	R420	R-CHIP	SA
2007-001284	R421	R-CHIP	SA
2007-001288	R303	R-CHIP	SA
2007-001288	R304	R-CHIP	SA
2007-001319	R212	R-CHIP	SA
2007-001319	R213	R-CHIP	SA
2007-001333	R310	R-CHIP	SA
2007-001333	R317	R-CHIP	SA
2007-001333	R406	R-CHIP	SA
2007-002796	R206	R-CHIP	SA
2007-002796	R413	R-CHIP	SA
2007-007107	R308	R-CHIP	SA
2007-007107	R313	R-CHIP	SA
2007-007107	R506	R-CHIP	SA
2007-007142	R503	R-CHIP	SA
2007-007156	R106	R-CHIP	SA
2007-007156	R116	R-CHIP	SA
2007-007192	R100	R-CHIP	SA
2007-007309	R209	R-CHIP	SA
2007-007311	R306	R-CHIP	SA
2007-007317	R307	R-CHIP	SA
2007-007334	R504	R-CHIP	SA
2007-007528	R407	R-CHIP	SA
2007-007528	R408	R-CHIP	SA
2007-007573	R300	R-CHIP	SA
2007-007942	R520	R-CHIP	SA
2007-007942	R551	R-CHIP	SA
2007-007943	R516	R-CHIP	SA
2007-007981	R501	R-CHIP	SA
2007-008040	R401	R-CHIP	SA
2007-008040	R403	R-CHIP	SA
2007-008040	R411	R-CHIP	SA
2007-008040	R415	R-CHIP	SA
2007-008055	R118	R-CHIP	SA
2007-008055	R508	R-CHIP	SA

<b>SEC Code</b>	<b>Design LOC</b>	<b>Description</b>	<b>STATUS</b>
2007-008275	R550	R-CHIP	SA
2007-008275	R552	R-CHIP	SA
2007-008354	R301	R-CHIP	SA
2007-008419	R214	R-CHIP	SA
2007-008516	R202	R-CHIP	SA
2007-008542	R110	R-CHIP	SA
2007-008542	R115	R-CHIP	SA
2007-008542	R120	R-CHIP	SA
2007-008542	R203	R-CHIP	SA
2007-008542	R204	R-CHIP	SA
2007-008542	R318	R-CHIP	SA
2007-008542	R400	R-CHIP	SA
2007-008542	R510	R-CHIP	SA
2007-008587	R117	R-CHIP	SA
2007-009108	R302	R-CHIP	SA
2007-009108	R305	R-CHIP	SA
2007-009112	R312	R-CHIP	SNA
2007-009112	R500	R-CHIP	SNA
2007-009112	R502	R-CHIP	SNA
2007-009155	R518	R-CHIP	SNA
2203-000233	C100	C-CER,CHIP	SA
2203-000233	C102	C-CER,CHIP	SA
2203-000233	C111	C-CER,CHIP	SA
2203-000233	C118	C-CER,CHIP	SA
2203-000233	C120	C-CER,CHIP	SA
2203-000254	C128	C-CER,CHIP	SA
2203-000254	C208	C-CER,CHIP	SA
2203-000278	C158	C-CER,CHIP	SA
2203-000278	C400	C-CER,CHIP	SA
2203-000278	C407	C-CER,CHIP	SA
2203-000359	C104	C-CER,CHIP	SA
2203-000386	C108	C-CER,CHIP	SA
2203-000386	C124	C-CER,CHIP	SA
2203-000425	C107	C-CER,CHIP	SA
2203-000425	C216	C-CER,CHIP	SA
2203-000425	C218	C-CER,CHIP	SA
2203-000425	C314	C-CER,CHIP	SA
2203-000425	C317	C-CER,CHIP	SA
2203-000425	C505	C-CER,CHIP	SA
2203-000438	C137	C-CER,CHIP	SA
2203-000628	C160	C-CER,CHIP	SA
2203-000812	C113	C-CER,CHIP	SA
2203-000812	C202	C-CER,CHIP	SA
2203-000812	C203	C-CER,CHIP	SA
2203-000812	C217	C-CER,CHIP	SA
2203-000812	C220	C-CER,CHIP	SA
2203-001221	C136	C-CER,CHIP	SA
2203-001221	C138	C-CER,CHIP	SA
2203-001259	C424	C-CER,CHIP	SA
2203-002443	C332	C-CER,CHIP	SA
2203-002709	C115	C-CER,CHIP	SA
2203-002709	C123	C-CER,CHIP	SA
2203-002709	C126	C-CER,CHIP	SA
2203-002709	C142	C-CER,CHIP	SA
2203-002709	C151	C-CER,CHIP	SA

<b>SEC Code</b>	<b>Design LOC</b>	<b>Description</b>	<b>STATUS</b>
2203-005050	C403	C-CER,CHIP	SA
2203-005052	C103	C-CER,CHIP	SA
2203-005055	C159	C-CER,CHIP	SA
2203-005056	C411	C-CER,CHIP	SA
2203-005061	C116	C-CER,CHIP	SA
2203-005061	C119	C-CER,CHIP	SA
2203-005061	C150	C-CER,CHIP	SA
2203-005281	C139	C-CER,CHIP	SA
2203-005393	C423	C-CER,CHIP	SA
2203-005393	C425	C-CER,CHIP	SA
2203-005481	C127	C-CER,CHIP	SA
2203-005481	C140	C-CER,CHIP	SA
2203-005482	C112	C-CER,CHIP	SA
2203-005482	C327	C-CER,CHIP	SA
2203-005482	C401	C-CER,CHIP	SA
2203-005482	C409	C-CER,CHIP	SA
2203-005482	C410	C-CER,CHIP	SA
2203-005482	C500	C-CER,CHIP	SA
2203-005482	C504	C-CER,CHIP	SA
2203-005496	C214	C-CER,CHIP	SA
2203-005496	C215	C-CER,CHIP	SA
2203-005552	C109	C-CER,CHIP	SA
2203-005736	C310	C-CER,CHIP	SA
2203-006048	C417	C-CER,CHIP	SA
2203-006208	C301	C-CER,CHIP	SA
2203-006208	C308	C-CER,CHIP	SA
2203-006257	C300	C-CER,CHIP	SA
2203-006257	C305	C-CER,CHIP	SA
2203-006257	C306	C-CER,CHIP	SA
2203-006257	C307	C-CER,CHIP	SA
2203-006257	C311	C-CER,CHIP	SA
2203-006257	C319	C-CER,CHIP	SA
2203-006257	C333	C-CER,CHIP	SA
2203-006257	C414	C-CER,CHIP	SA
2203-006257	C416	C-CER,CHIP	SA
2203-006260	C153	C-CER,CHIP	SA
2203-006260	C402	C-CER,CHIP	SA
2203-006260	C404	C-CER,CHIP	SA
2203-006305	C114	C-CER,CHIP	SA
2203-006324	C318	C-CER,CHIP	SA
2203-006348	C316	C-CER,CHIP	SA
2203-006348	C508	C-CER,CHIP	SA
2203-006361	C323	C-CER,CHIP	SA
2203-006399	C117	C-CER,CHIP	SA
2203-006399	C213	C-CER,CHIP	SA
2203-006399	C325	C-CER,CHIP	SA
2203-006399	C330	C-CER,CHIP	SA
2203-006399	C331	C-CER,CHIP	SA
2203-006399	C604	C-CER,CHIP	SA
2203-006423	C200	C-CER,CHIP	SA
2203-006423	C201	C-CER,CHIP	SA
2203-006423	C204	C-CER,CHIP	SA
2203-006423	C205	C-CER,CHIP	SA
2203-006423	C206	C-CER,CHIP	SA
2203-006423	C207	C-CER,CHIP	SA

<b>SEC Code</b>	<b>Design LOC</b>	<b>Description</b>	<b>STATUS</b>
2203-006423	C209	C-CER,CHIP	SA
2203-006423	C210	C-CER,CHIP	SA
2203-006423	C211	C-CER,CHIP	SA
2203-006423	C212	C-CER,CHIP	SA
2203-006423	C221	C-CER,CHIP	SA
2203-006423	C222	C-CER,CHIP	SA
2203-006423	C223	C-CER,CHIP	SA
2203-006423	C224	C-CER,CHIP	SA
2203-006423	C320	C-CER,CHIP	SA
2203-006423	C334	C-CER,CHIP	SA
2203-006562	C219	C-CER,CHIP	SA
2203-006562	C302	C-CER,CHIP	SA
2203-006562	C303	C-CER,CHIP	SA
2203-006562	C309	C-CER,CHIP	SA
2203-006562	C313	C-CER,CHIP	SA
2203-006562	C315	C-CER,CHIP	SA
2203-006562	C321	C-CER,CHIP	SA
2203-006562	C322	C-CER,CHIP	SA
2203-006562	C328	C-CER,CHIP	SA
2203-006562	C405	C-CER,CHIP	SA
2203-006562	C406	C-CER,CHIP	SA
2203-006562	C413	C-CER,CHIP	SA
2203-006562	C426	C-CER,CHIP	SA
2203-006562	C427	C-CER,CHIP	SA
2203-006562	C428	C-CER,CHIP	SA
2203-006562	C506	C-CER,CHIP	SA
2203-006562	C603	C-CER,CHIP	SA
2203-006562	C605	C-CER,CHIP	SA
2203-006562	C606	C-CER,CHIP	SA
2203-006825	C304	C-CER,CHIP	SA
2203-006872	C130	C-CER,CHIP	SA
2203-006872	C133	C-CER,CHIP	SA
2203-006896	C121	C-CER,CHIP	SA
2203-007147	C324	C-CER,CHIP	SA
2404-001226	TA401	C-TA,CHIP	SA
2404-001377	TA402	C-TA,CHIP	SA
2404-001381	TA400	C-TA,CHIP	SA
2404-001430	TA300	C-TA,CHIP	SA
2404-001496	TA100	C-TA,CHIP	SA
2404-001496	TA500	C-TA,CHIP	SA
2703-000213	L114	INDUCTOR-SMD	SA
2703-001231	L503	INDUCTOR-SMD	SNA
2703-001733	L113	INDUCTOR-SMD	SA
2703-001733	L122	INDUCTOR-SMD	SA
2703-001990	L115	INDUCTOR-SMD	SA
2703-002170	L121	INDUCTOR-SMD	SA
2703-002205	L101	INDUCTOR-SMD	SA
2703-002308	L505	INDUCTOR-SMD	SA
2703-002308	L507	INDUCTOR-SMD	SA
2703-002308	L509	INDUCTOR-SMD	SA
2703-002308	L510	INDUCTOR-SMD	SA
2703-002308	L512	INDUCTOR-SMD	SA
2703-002308	L514	INDUCTOR-SMD	SA
2703-002308	L515	INDUCTOR-SMD	SA
2703-002308	L516	INDUCTOR-SMD	SA

SEC Code	Design LOC	Description	STATUS
2703-002308	L517	INDUCTOR-SMD	SA
2703-002308	L518	INDUCTOR-SMD	SA
2703-002314	L118	INDUCTOR-SMD	SA
2703-002367	L100	INDUCTOR-SMD	SA
2703-002367	L103	INDUCTOR-SMD	SA
2703-002367	L105	INDUCTOR-SMD	SA
2703-002367	L108	INDUCTOR-SMD	SA
2703-002368	L120	INDUCTOR-SMD	SA
2703-002596	L111	INDUCTOR-SMD	SA
2703-002597	L110	INDUCTOR-SMD	SA
2703-002597	L112	INDUCTOR-SMD	SA
2703-002700	L106	INDUCTOR-SMD	SA
2703-002870	L102	INDUCTOR-SMD	SA
2703-002870	L117	INDUCTOR-SMD	SA
2703-003064	L402	INDUCTOR-SMD	SA
2703-003331	L300	INDUCTOR-SMD	SA
2801-004339	OSC300	CRYSTAL-SMD	SA
2801-004683	OSC100	CRYSTAL-SMD	SA
2901-001283	U210	FILTER-EMI SMD	SA
2901-001320	F500	FILTER-EMI/ESD	SA
2901-001409	F600	FILTER-EMI SMD	SA
2901-001409	F601	FILTER-EMI SMD	SA
2901-001409	F602	FILTER-EMI SMD	SA
2901-001436	F603	FILTER-EMI SMD	SA
2901-001436	F604	FILTER-EMI SMD	SA
2901-001436	F605	FILTER-EMI SMD	SA
2901-001436	F606	FILTER-EMI SMD	SA
2901-001436	F607	FILTER-EMI SMD	SA
2909-001283	F100	FILTER-LC	SA
2911-000072	MODULE100	DUPLEXER-FEM	SA
3301-001729	L302	BEAD-SMD	SA
3301-001729	L400	BEAD-SMD	SA
3301-001729	L401	BEAD-SMD	SA
3301-001729	L403	BEAD-SMD	SA
3301-001729	L404	BEAD-SMD	SA
3301-001729	L405	BEAD-SMD	SA
3301-001729	L406	BEAD-SMD	SA
3301-001729	L407	BEAD-SMD	SA
3301-001729	L600	BEAD-SMD	SA
3301-001812	L301	BEAD-SMD	SA
3301-001812	L500	BEAD-SMD	SA
3301-001812	L501	BEAD-SMD	SA
3301-001812	L502	BEAD-SMD	SA
3301-001912	L504	BEAD-SMD	SA
3301-001912	L506	BEAD-SMD	SA
3301-001912	L508	BEAD-SMD	SA
3301-001912	L511	BEAD-SMD	SA
3404-001303	TAC_CAM600	SWITCH-TACT	SA
3404-001303	TAC_DOWN60	SWITCH-TACT	SA
3404-001303	TAC_MU600	SWITCH-TACT	SA
3404-001303	TAC_UP600	SWITCH-TACT	SA
3705-001421	CN100	CONNECTOR-COAXIAL	SA
3708-002211	CN600	CONNECTOR-FPC/FFC/PIC	SA
3709-001394	CD500	CONNECTOR-CARD EDGE	SA
3709-001400	SIM300	CONNECTOR-CARD EDGE	SA

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<b>SEC Code</b>	<b>Design LOC</b>	<b>Description</b>	<b>STATUS</b>
3710-002499	IFC500	SOCKET-INTERFACE	SA
3711-006137	BTC500	HEADER-BATTERY	SA
3711-006141	HDC600	HEADER-BOARD TO BOARD	SA
4202-001255	ANT102	ANTENNA-CHIP	SA
4302-001181	BAT300	BATTERY-LI(2ND)	SA
GH71-06379A	ANT100	NPR-ANTENNA CONTACT	SA
GH71-06379A	ANT101	NPR-ANTENNA CONTACT	SA

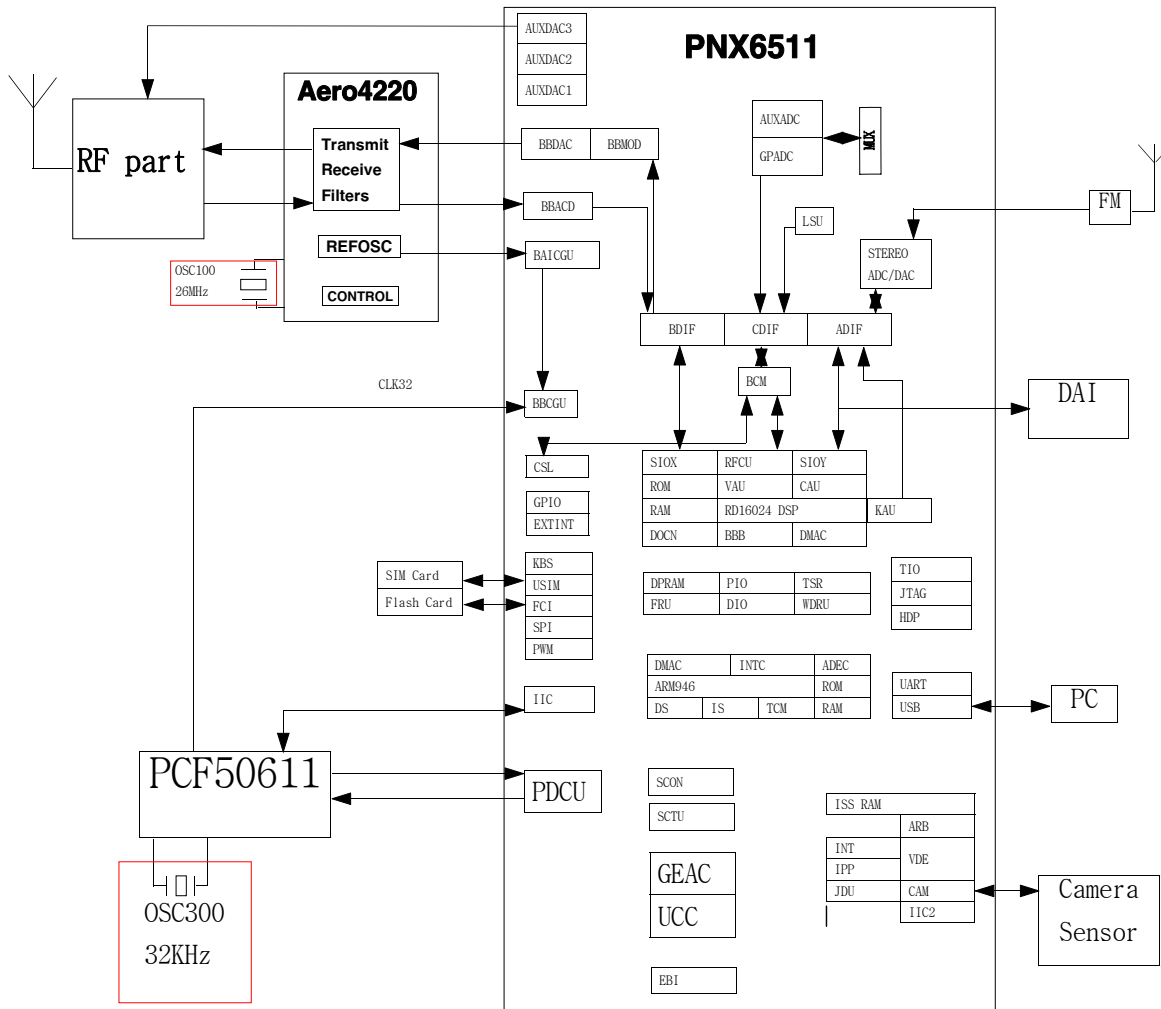
Please consult the GSPN website (Samsung Portal) for the most recent version of the product's part list.



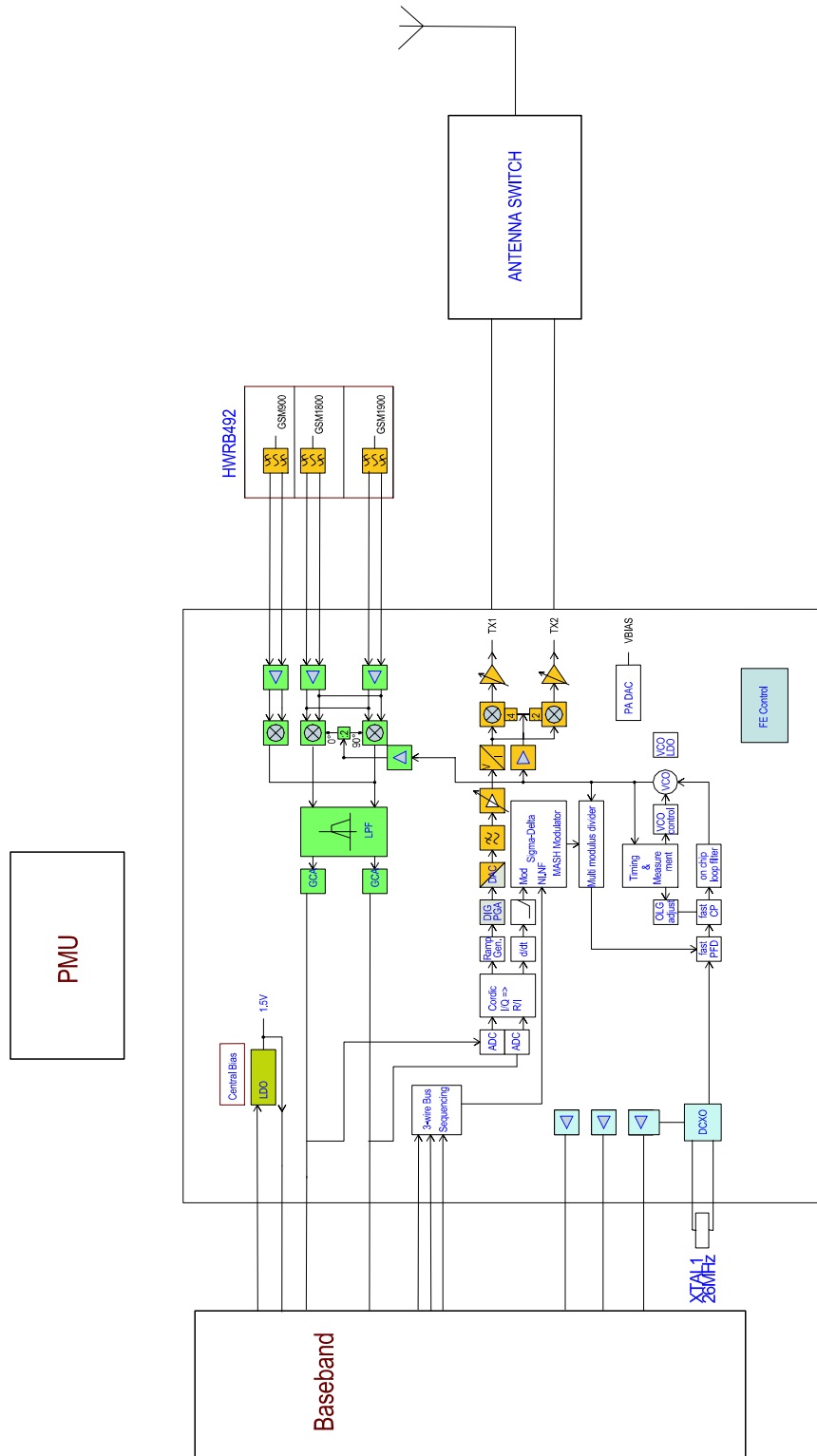


# 7. Block Diagrams

## 7-1. BaseBand Solution Block Diagram

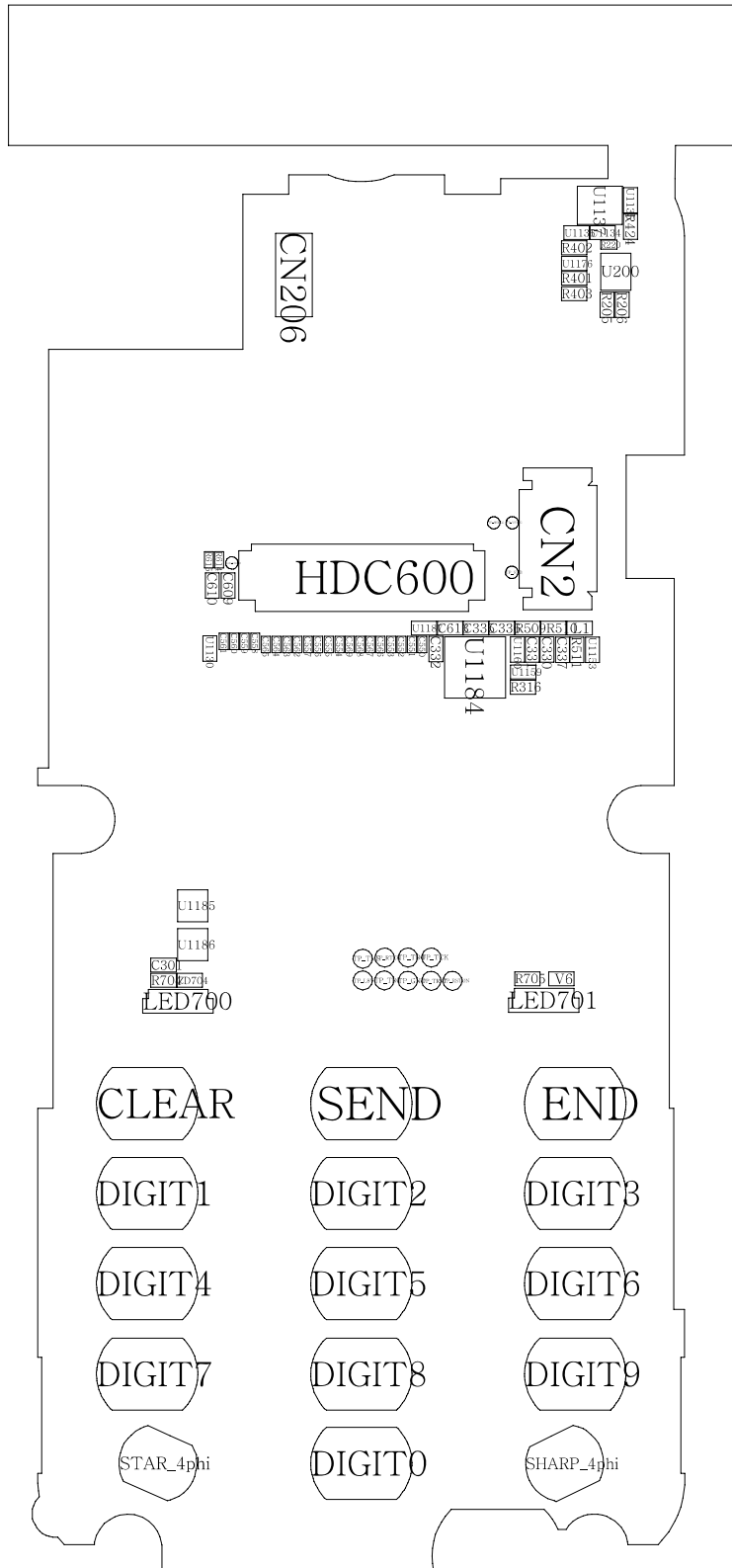


## 7-2. RF Solution Block Diagram

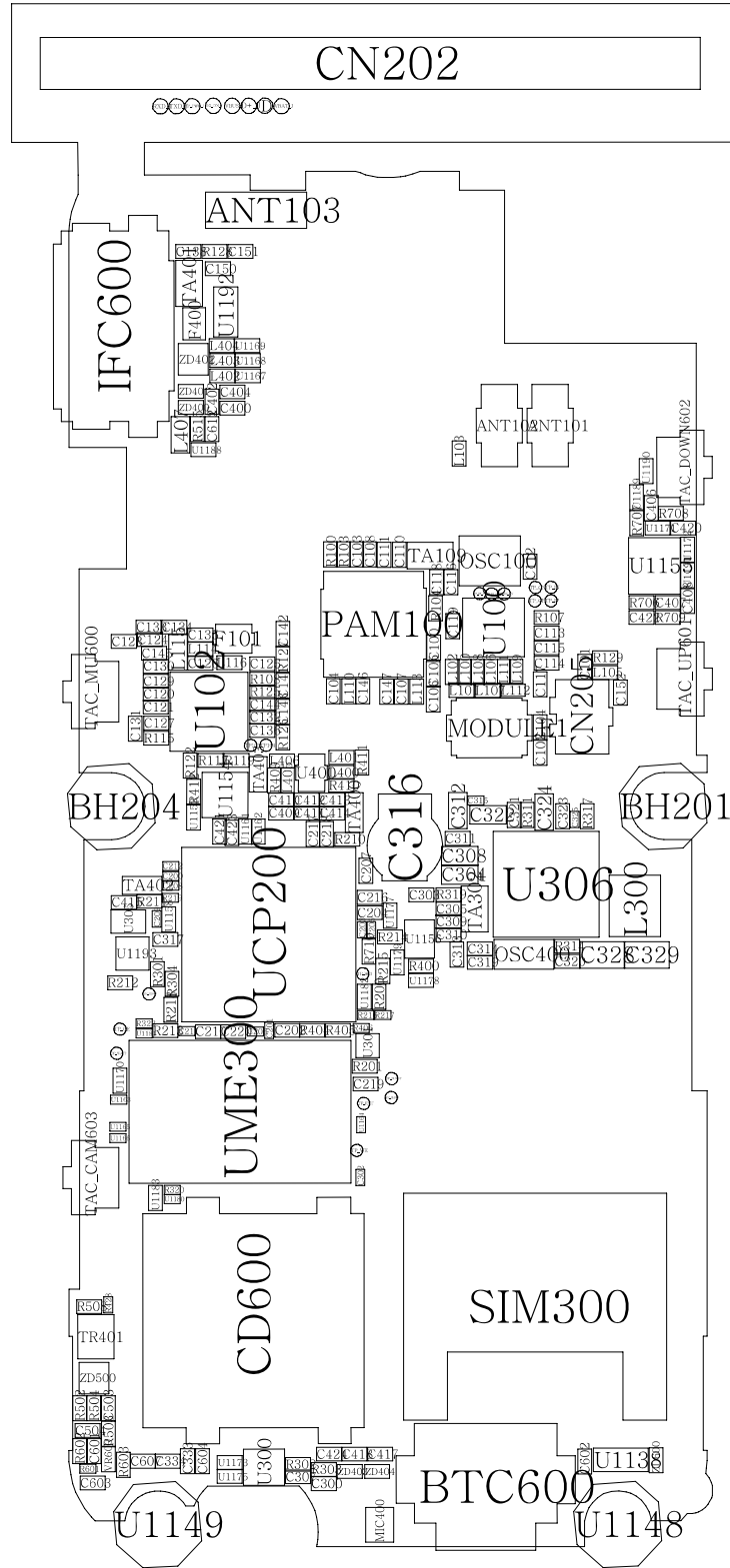


# 8. PCB Diagrams

## – Main top view

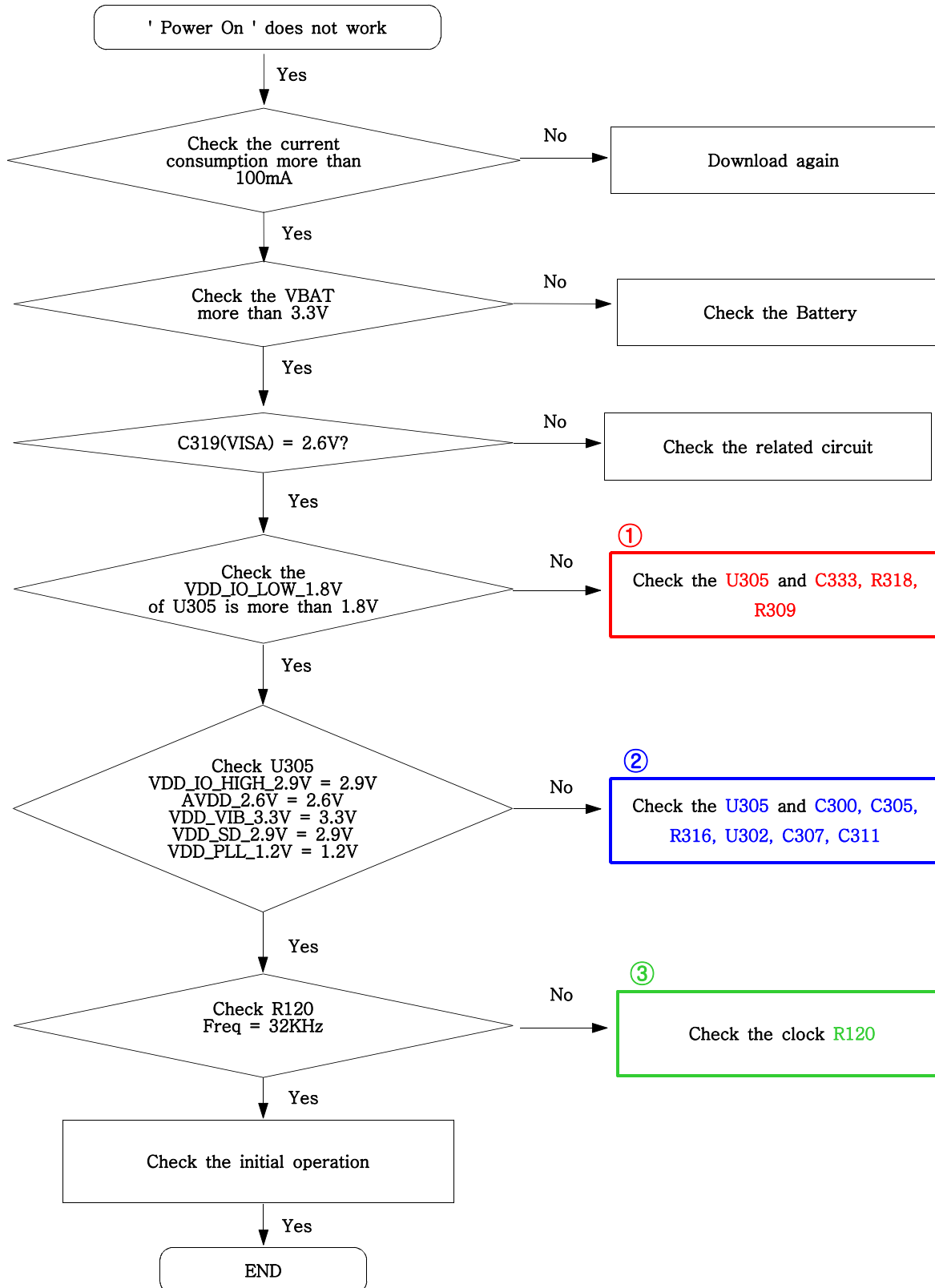


– Main bottom view

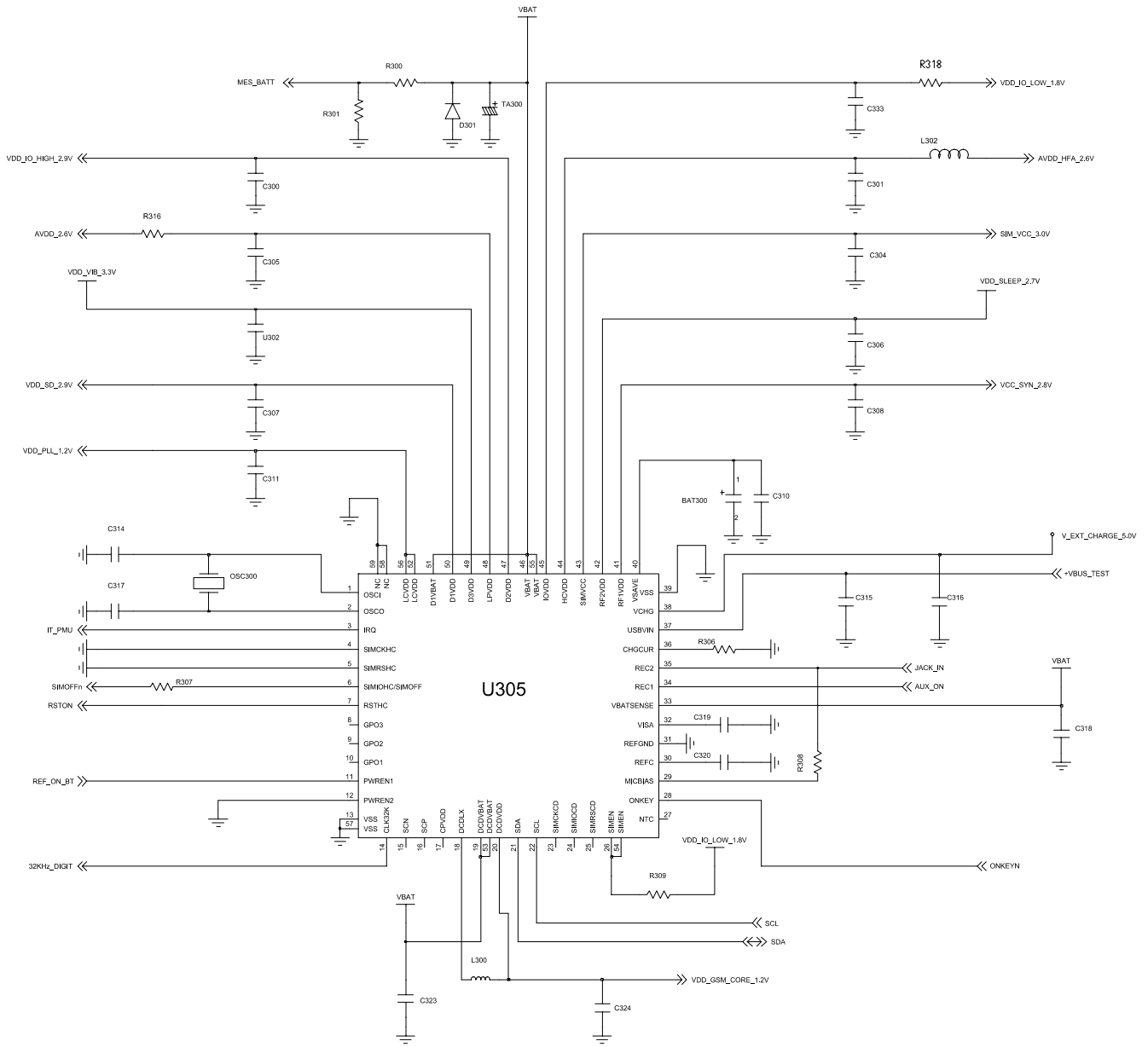


# 9. Flow Chart of Troubleshooting

## 9-1. Power On

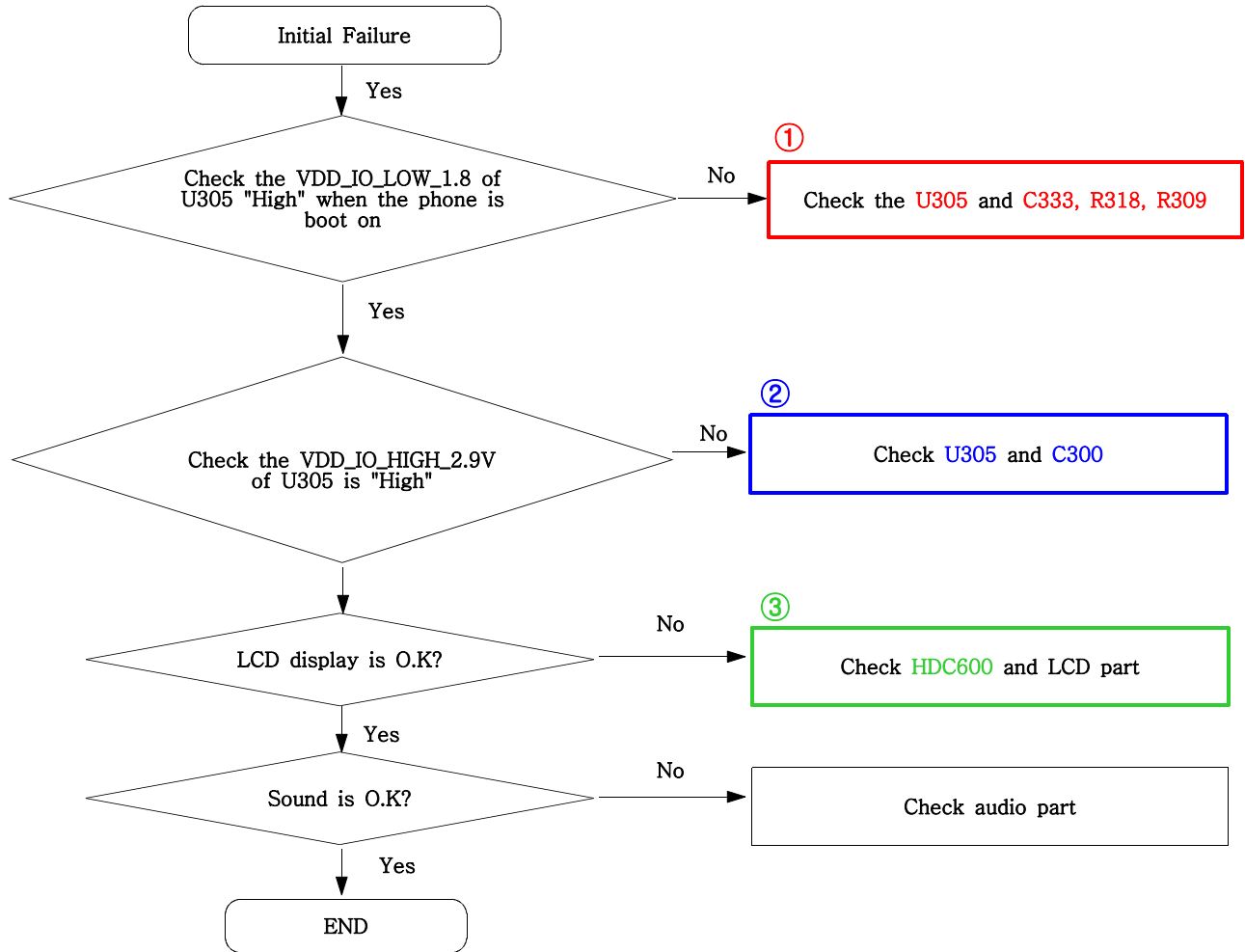


# Flow Chart of Troubleshooting





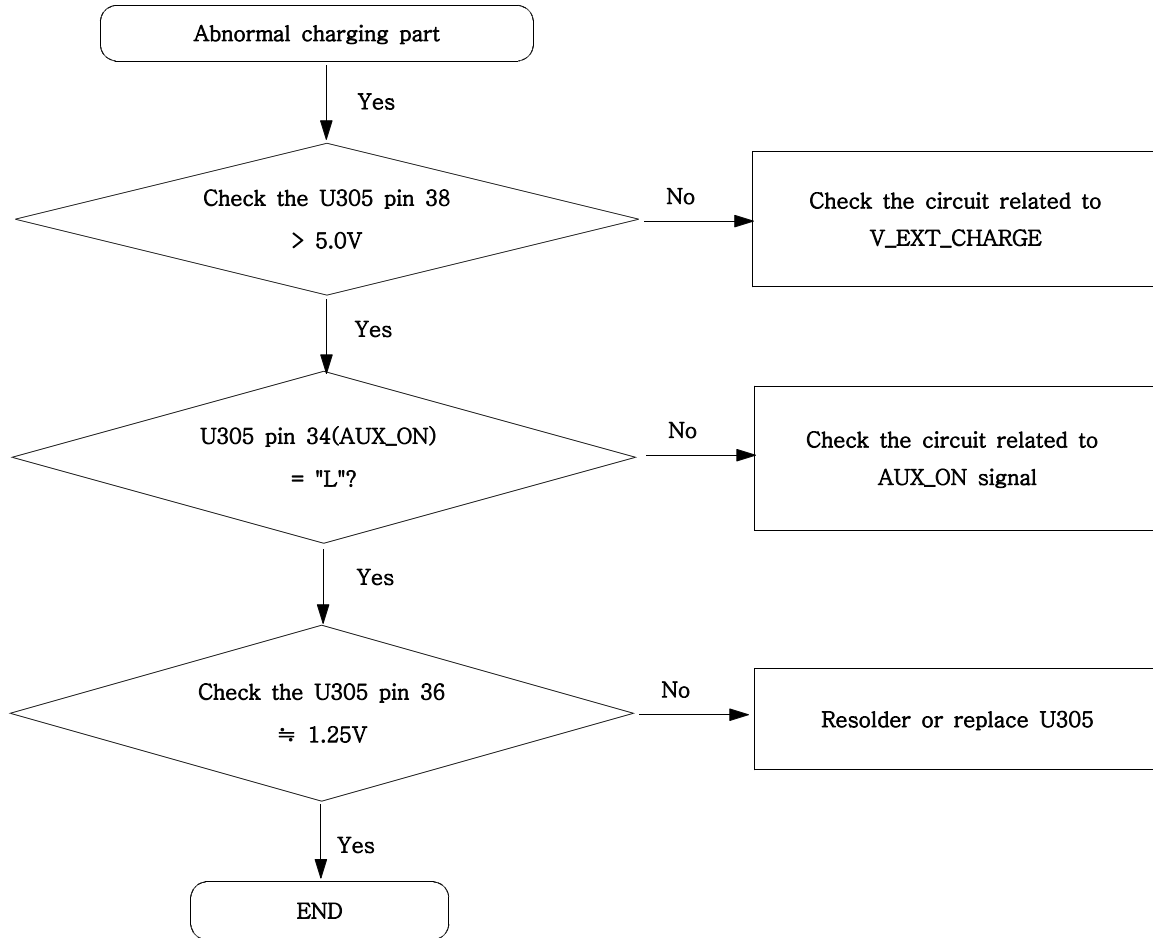
### 9-2. Initial

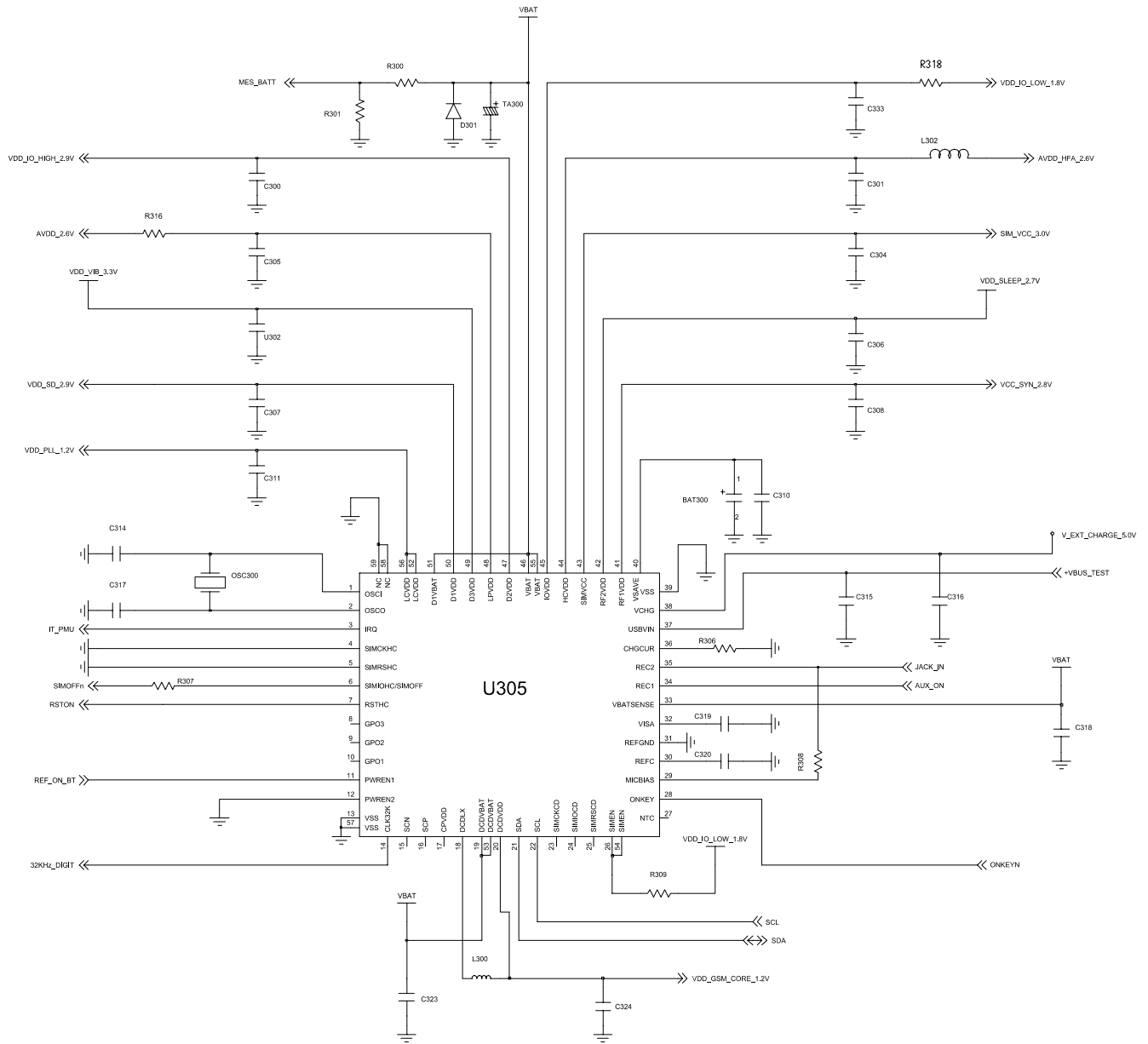




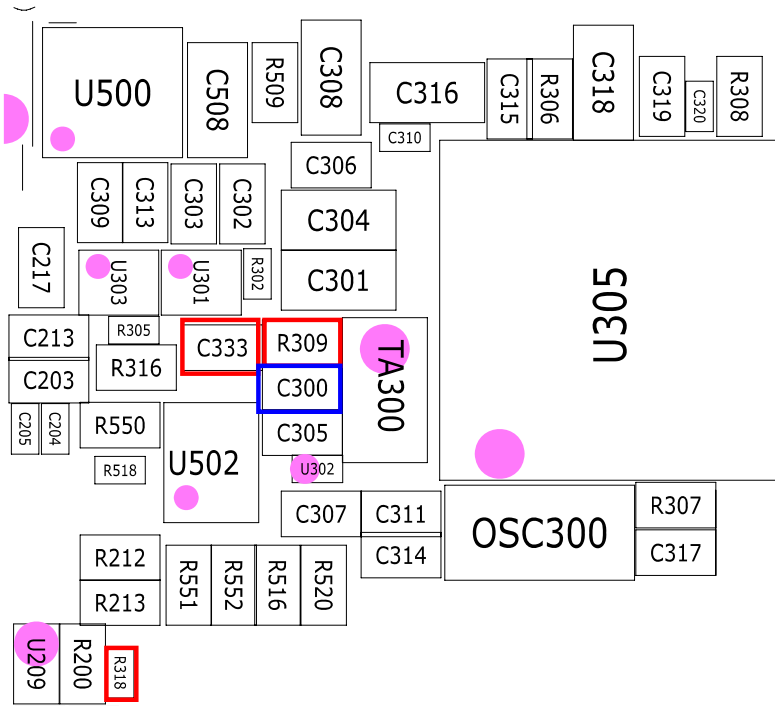


### 9-3. Charging Part

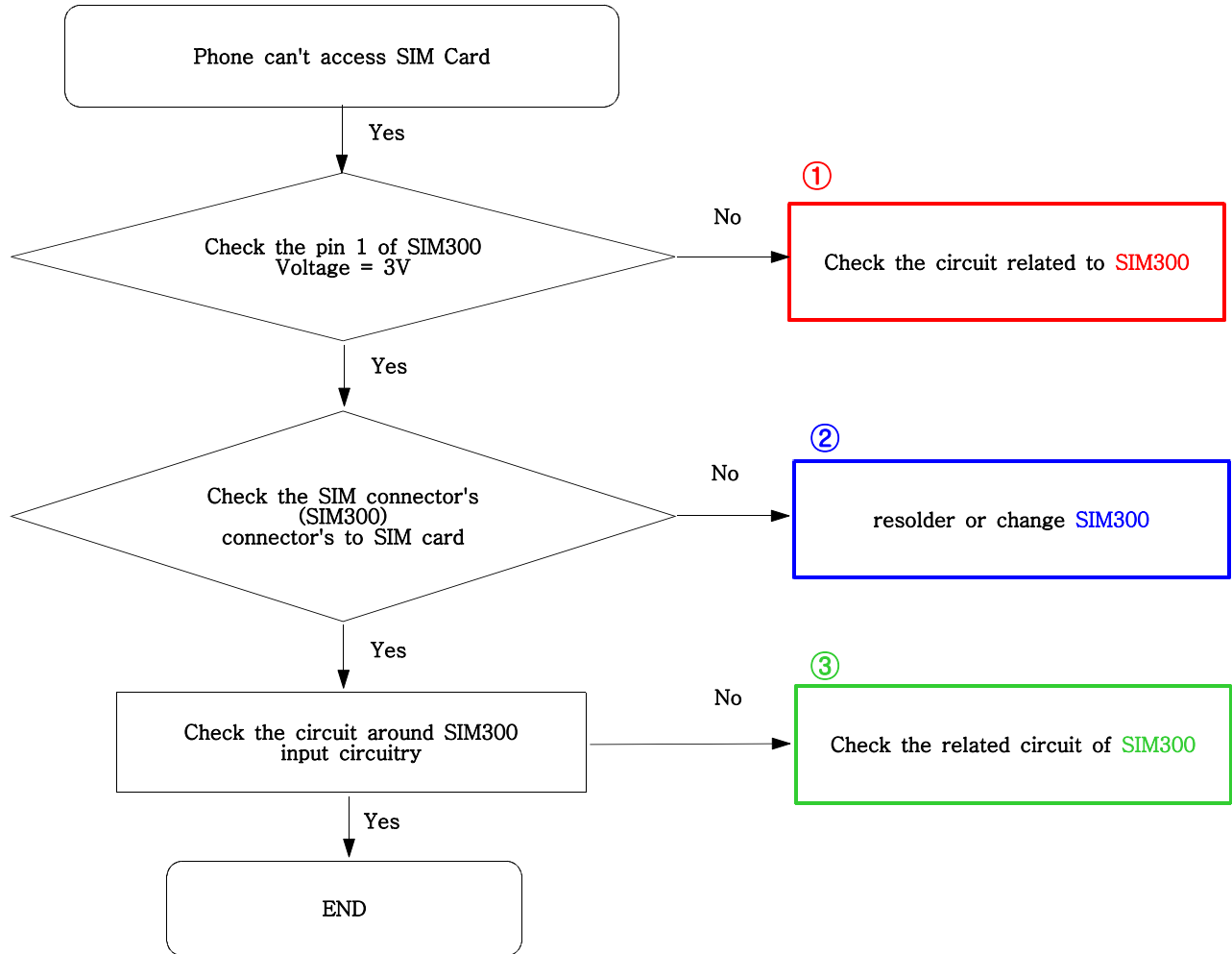


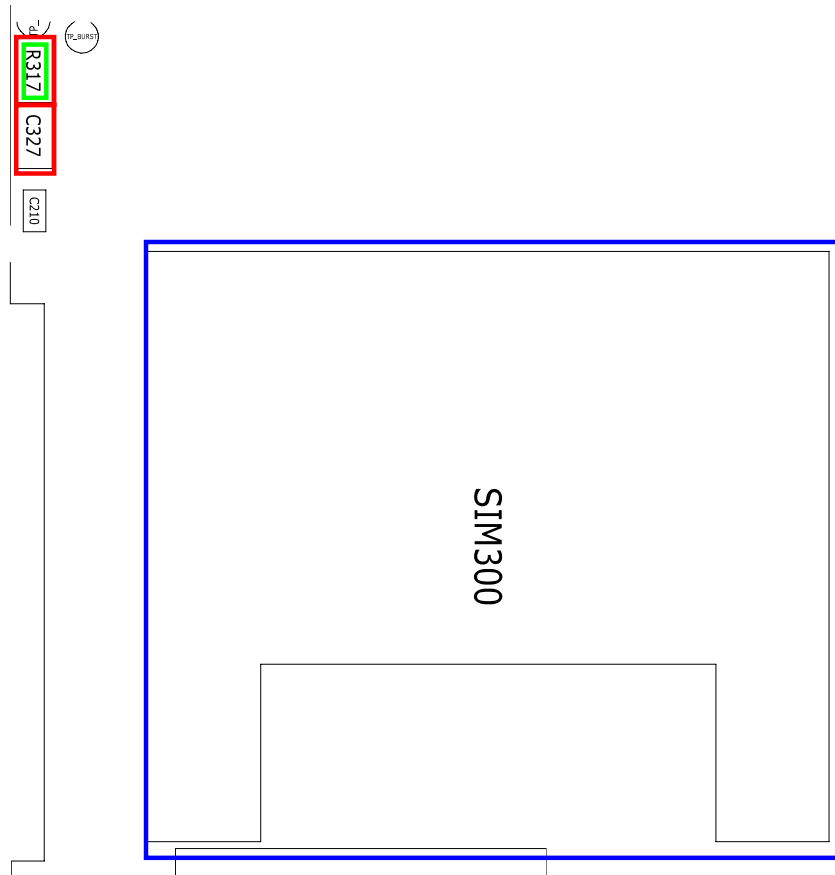
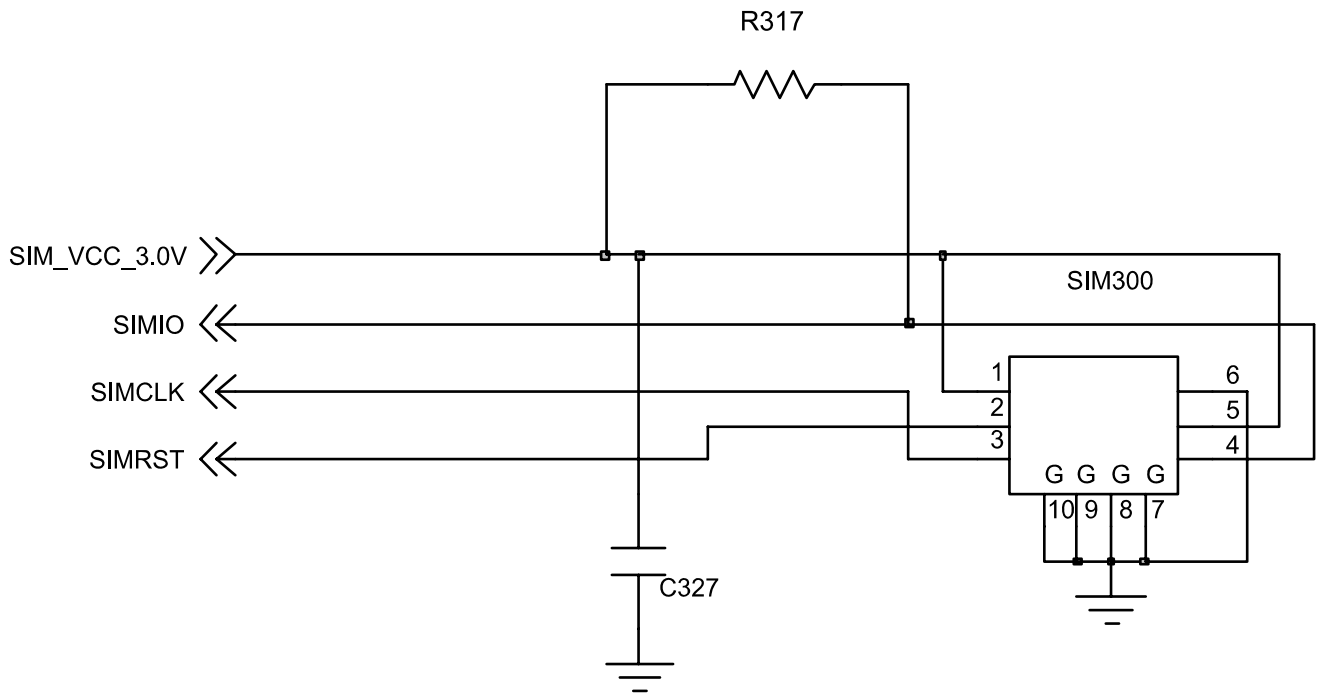


# Flow Chart of Troubleshooting

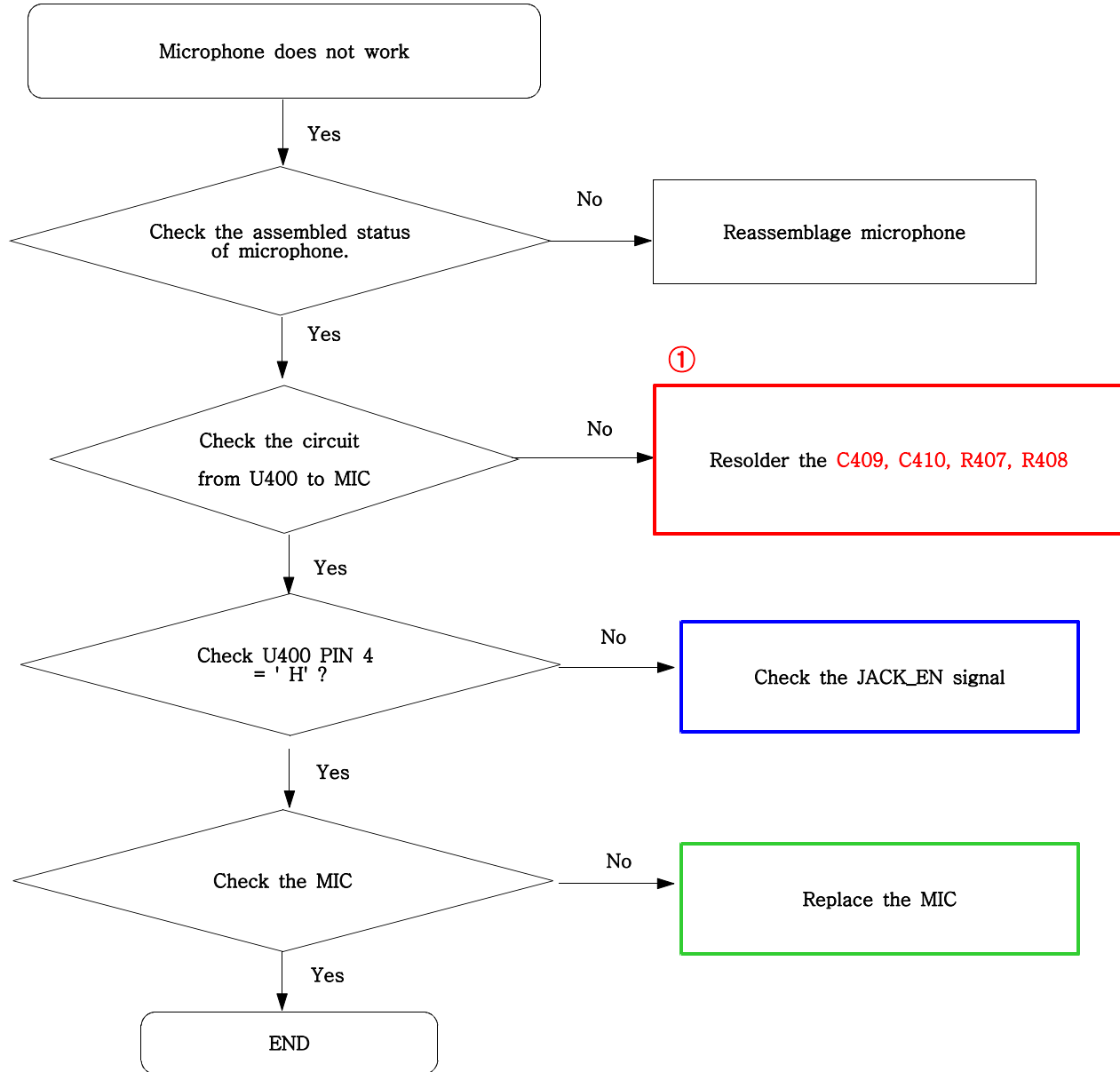


9-4. Sim Part

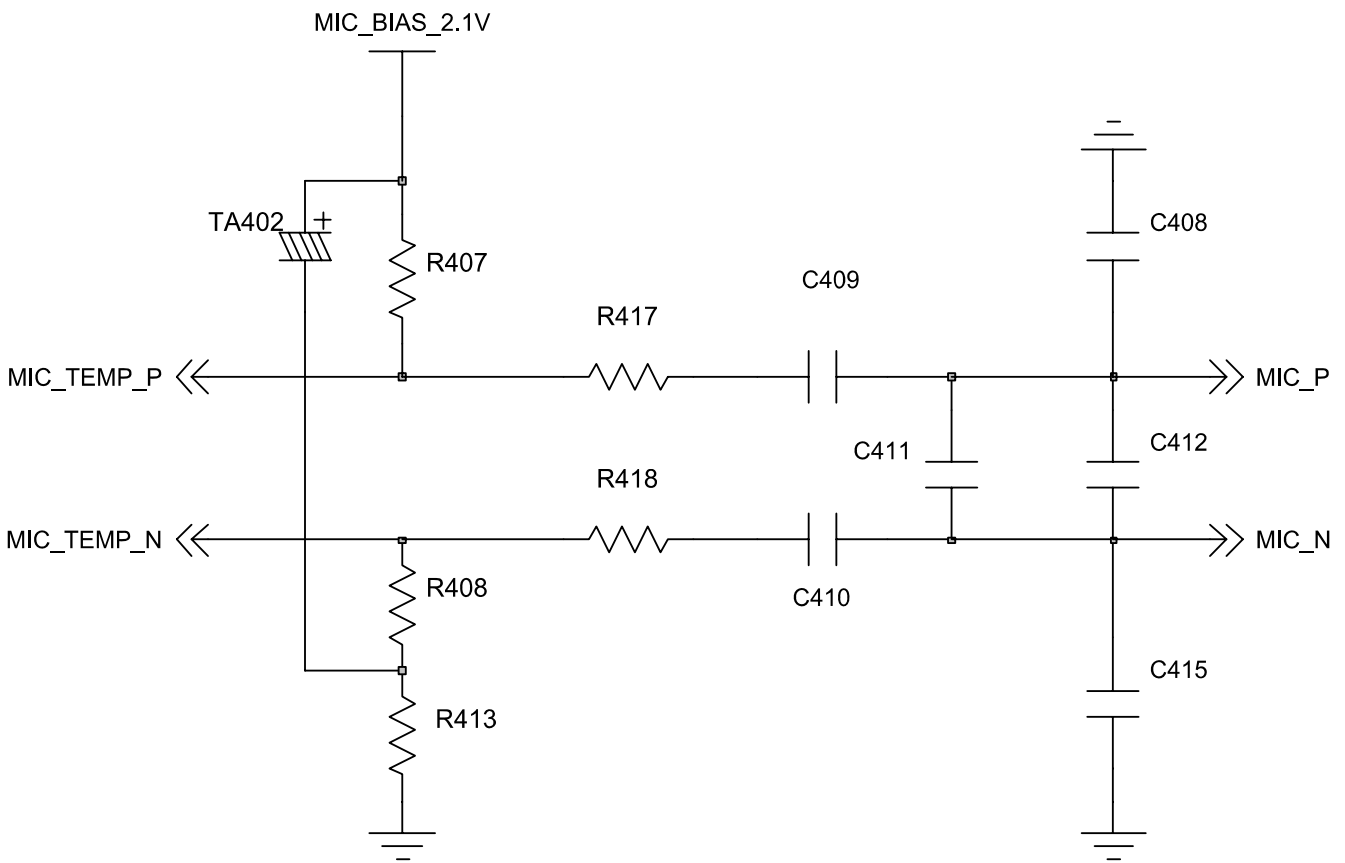
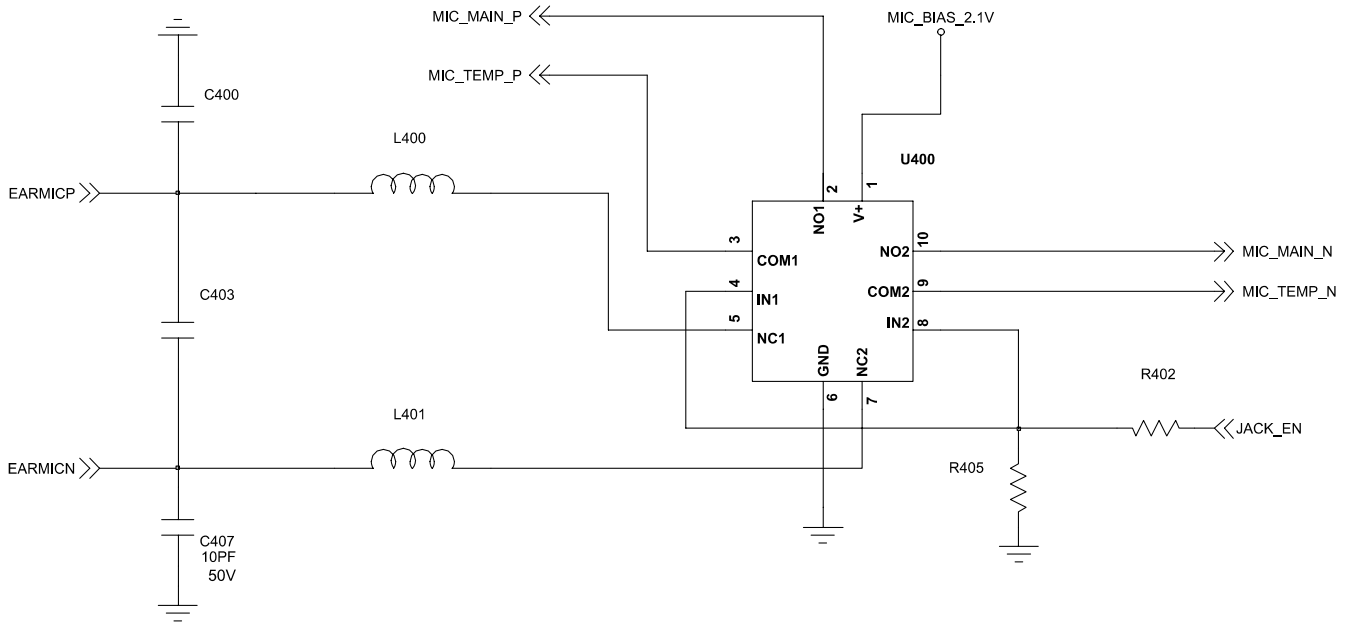




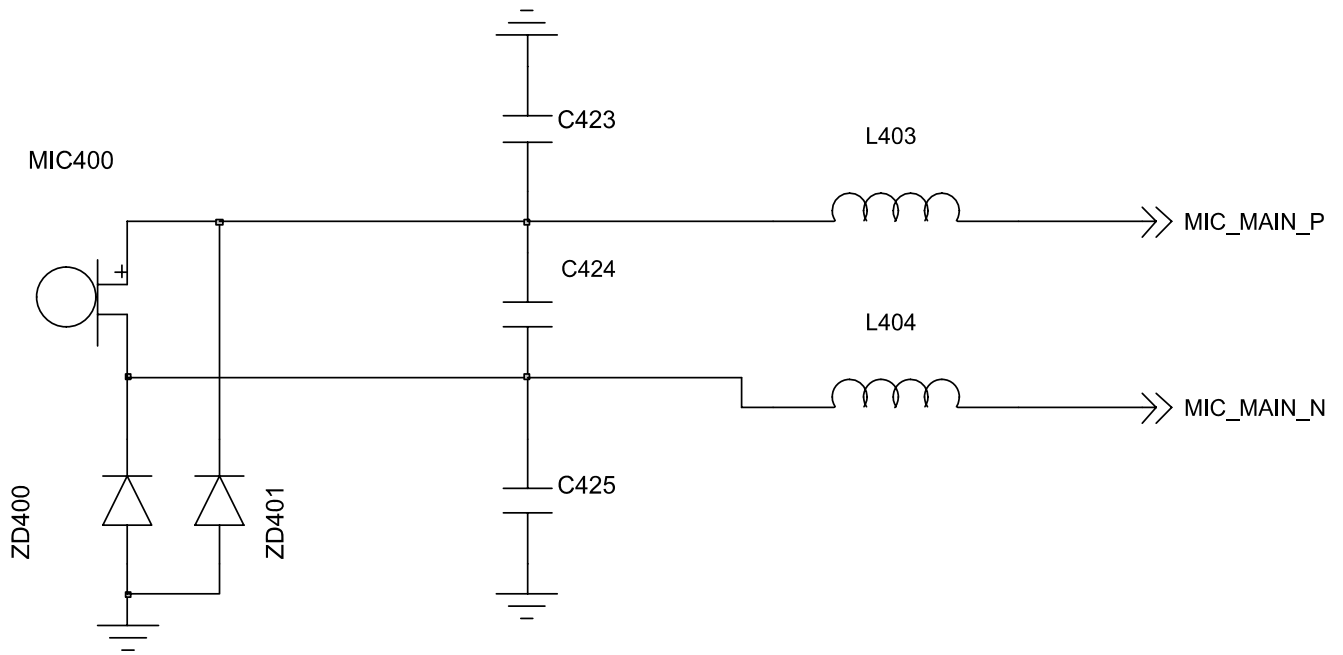
9-5. Microphone Part

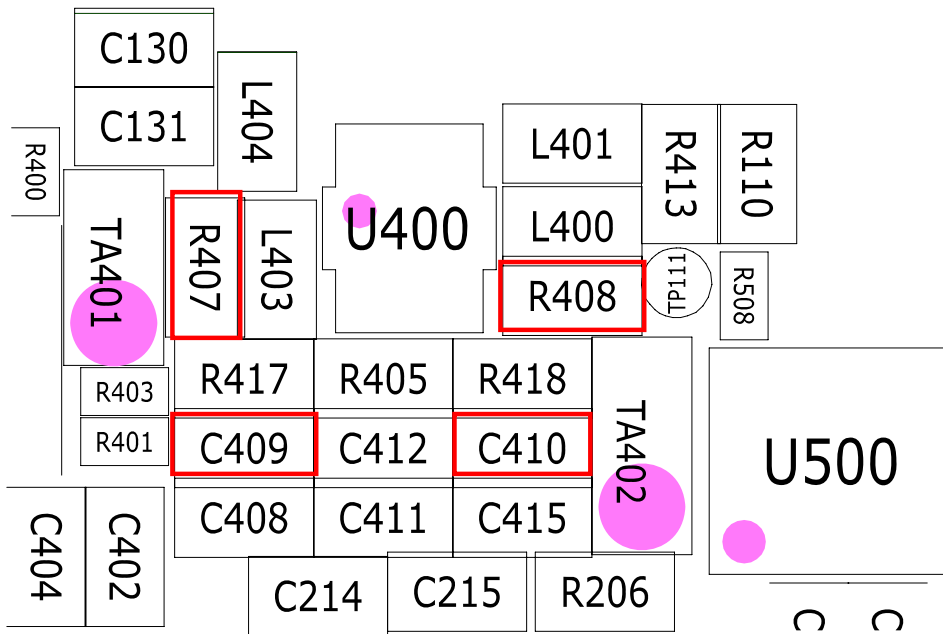


# Flow Chart of Troubleshooting

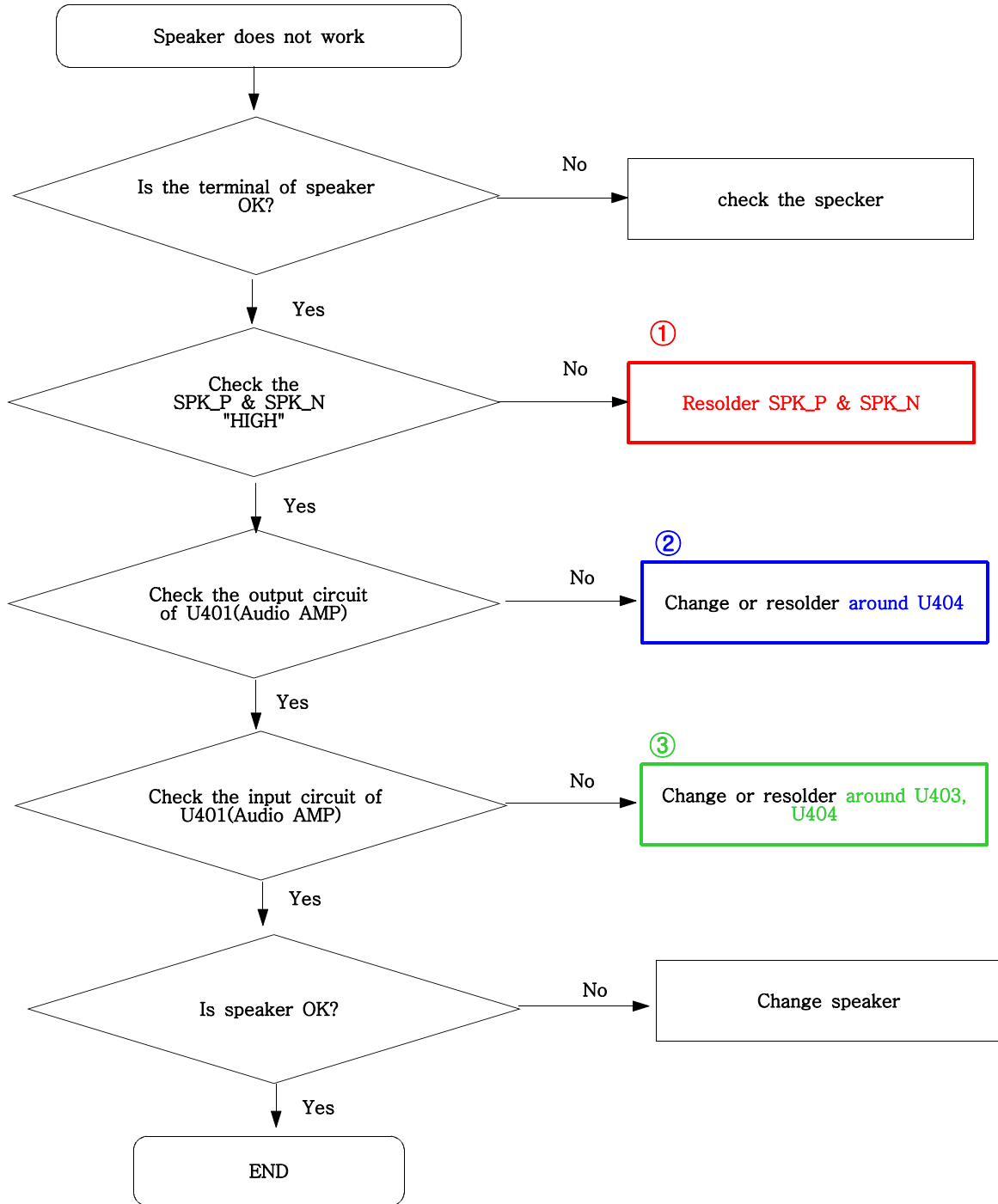


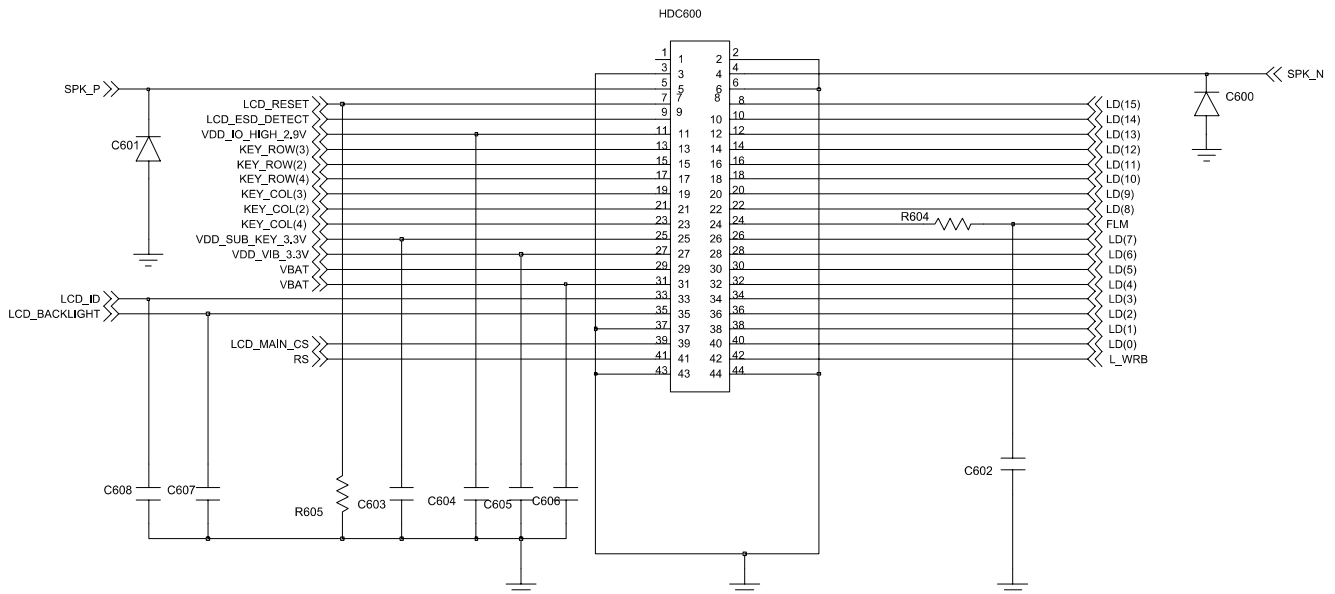
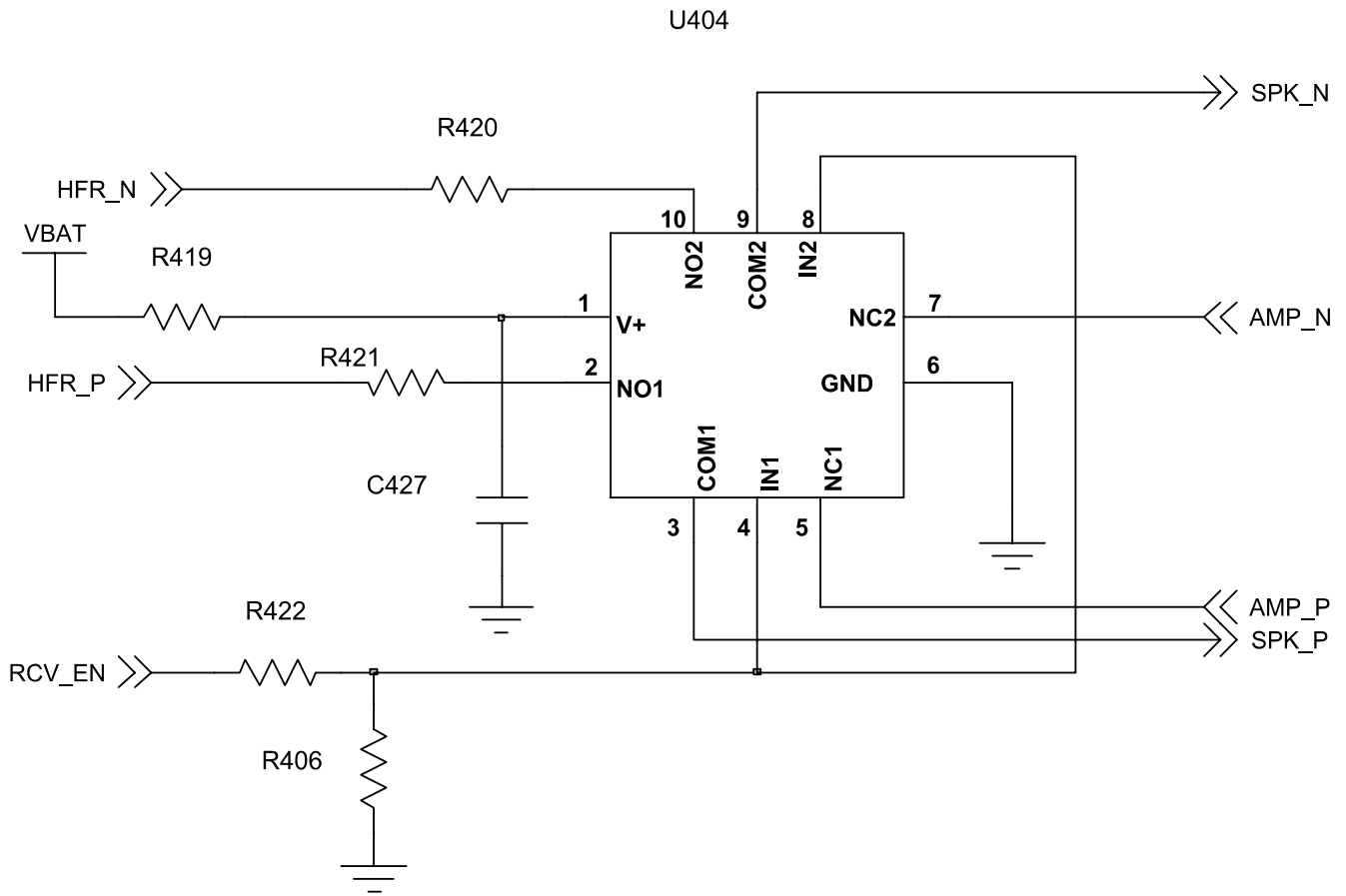




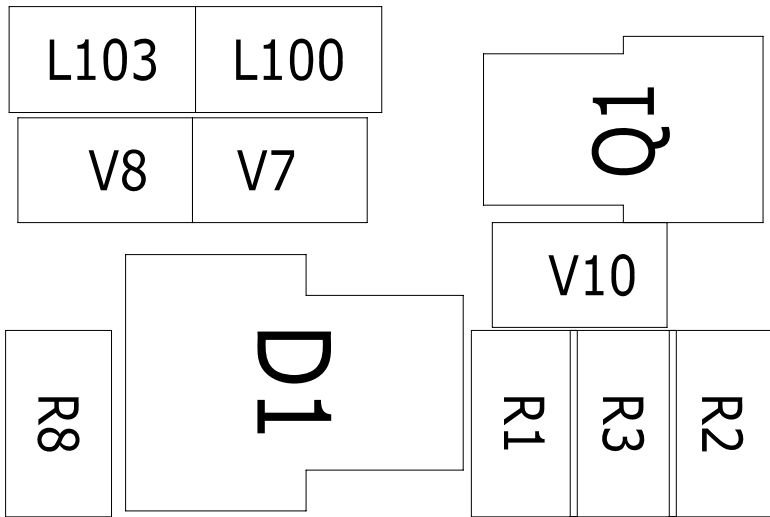


9-6. Speaker Part(Melody)

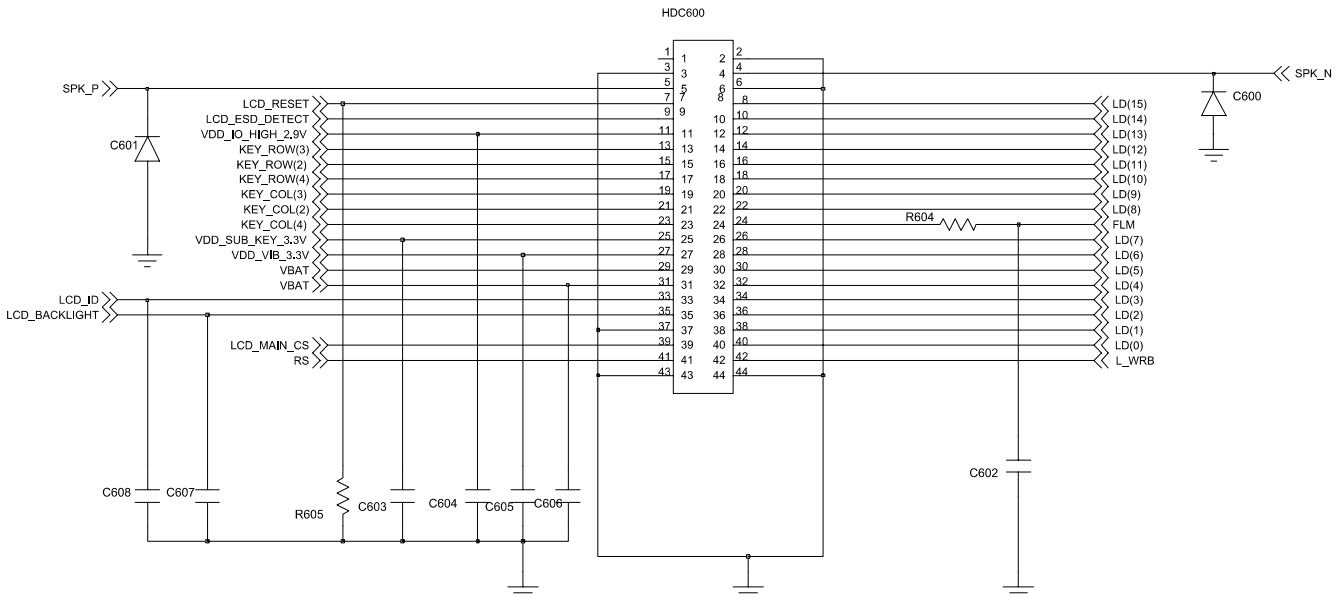
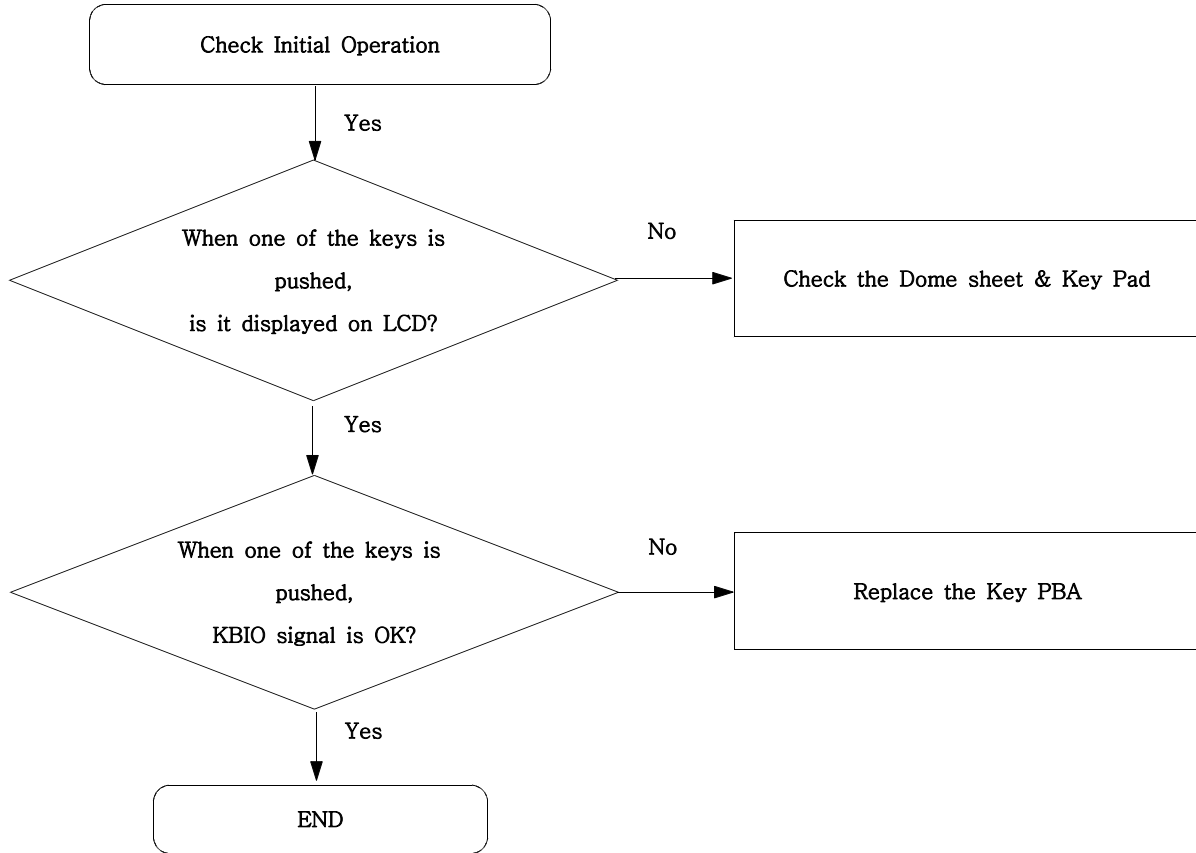




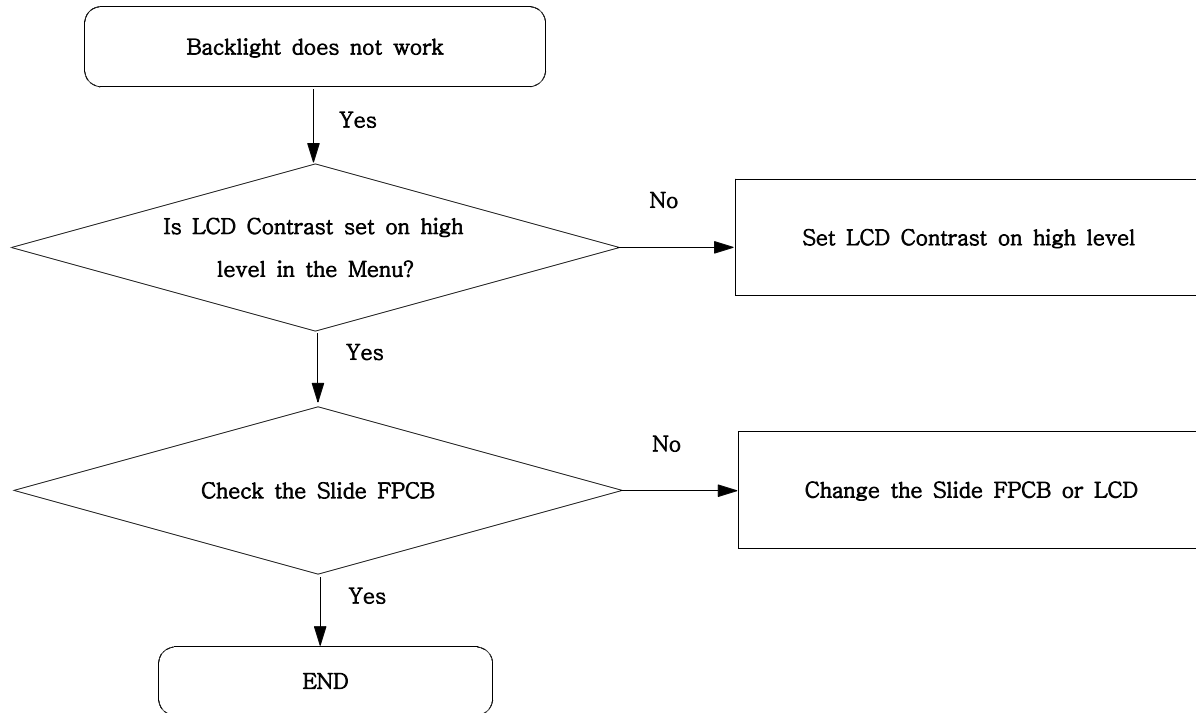
**SPK1**



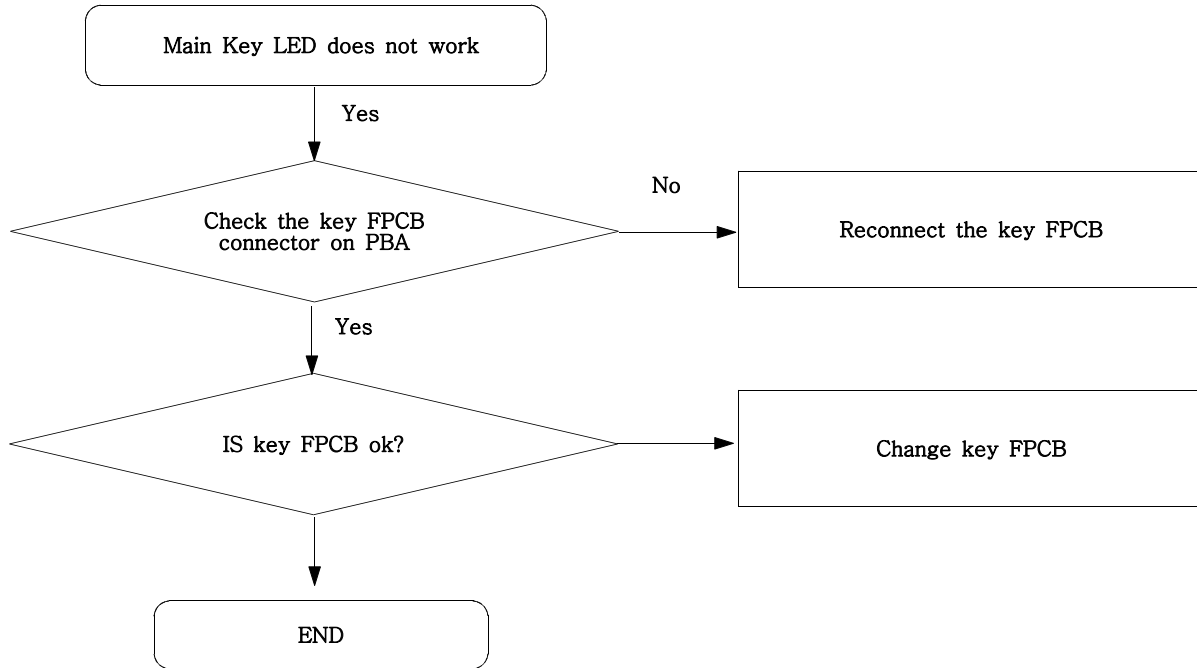
9-7. Key Data Input



## 9-8. Back Light (for Color Main LCD)

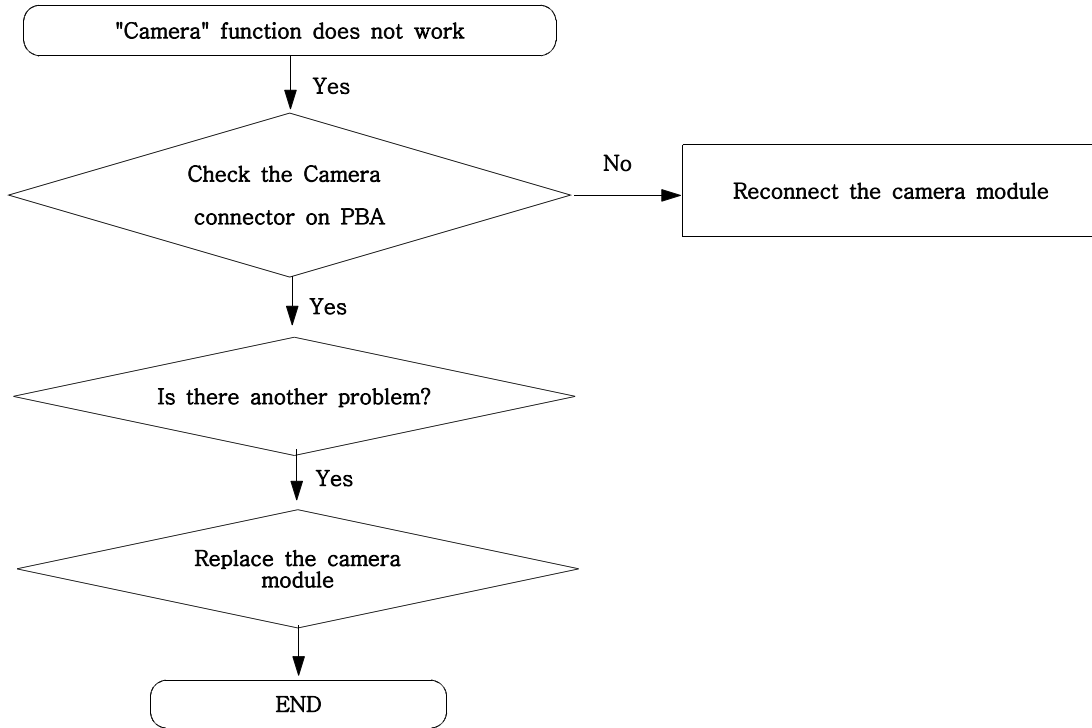


### 9-9. Key Back Light

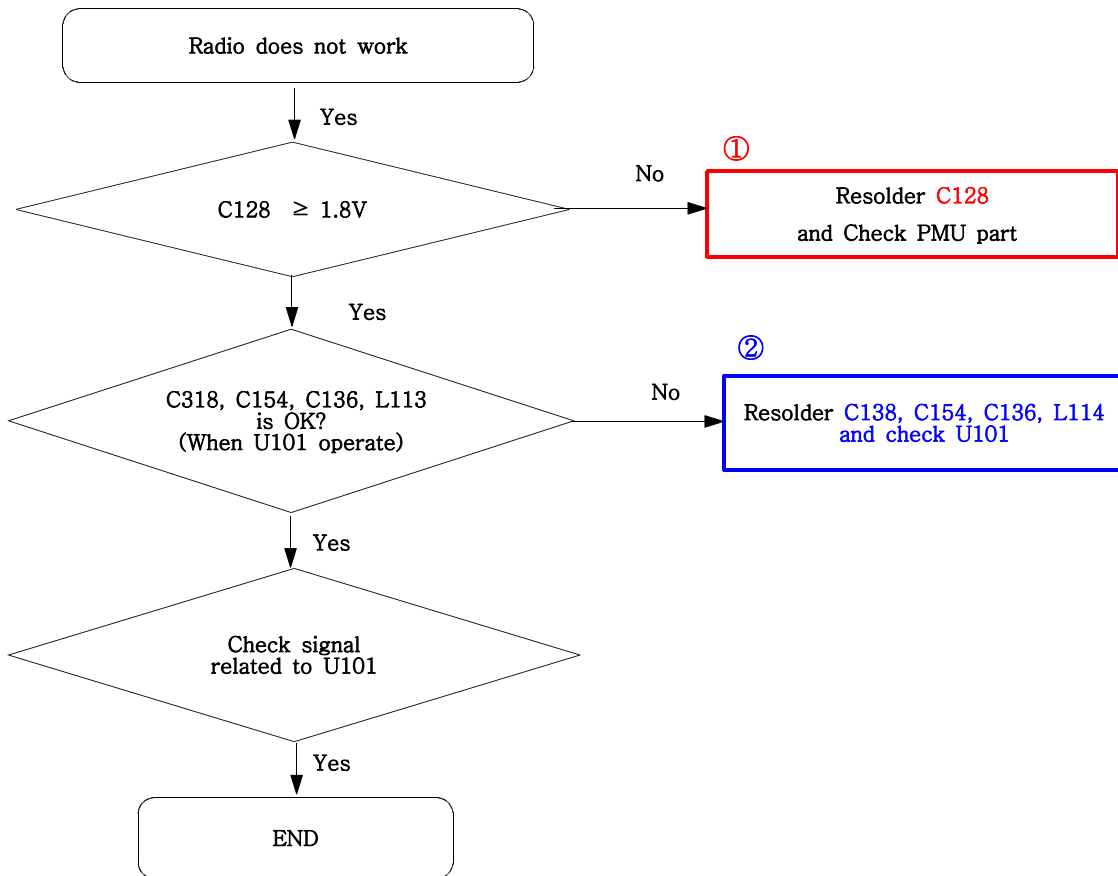


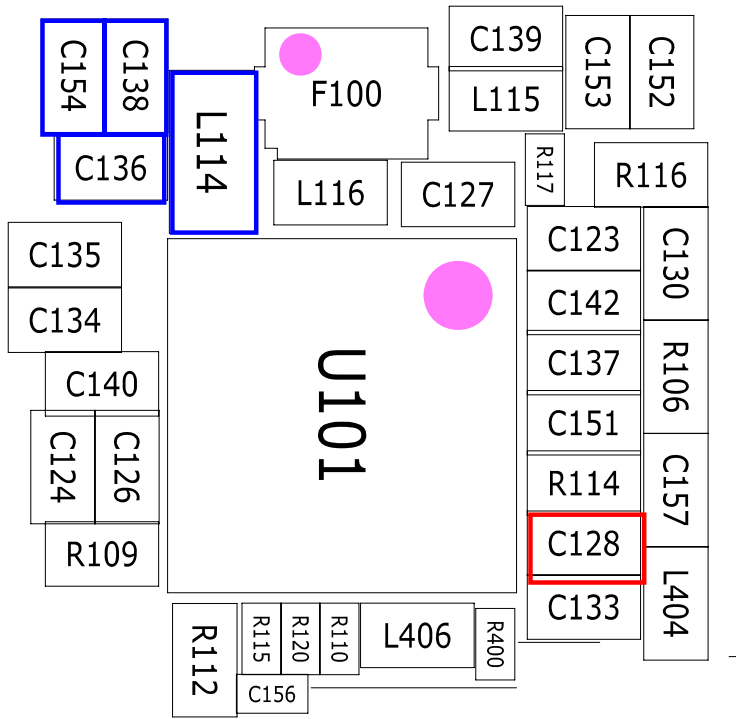
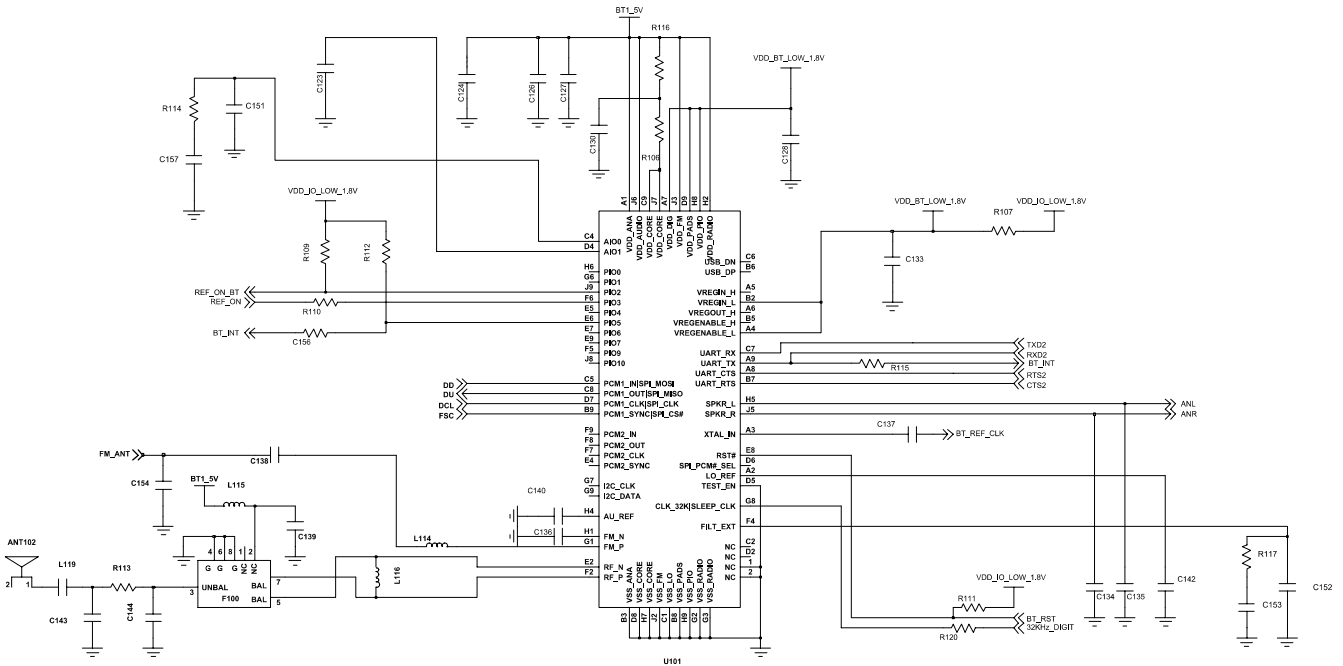


9-10. Camera part

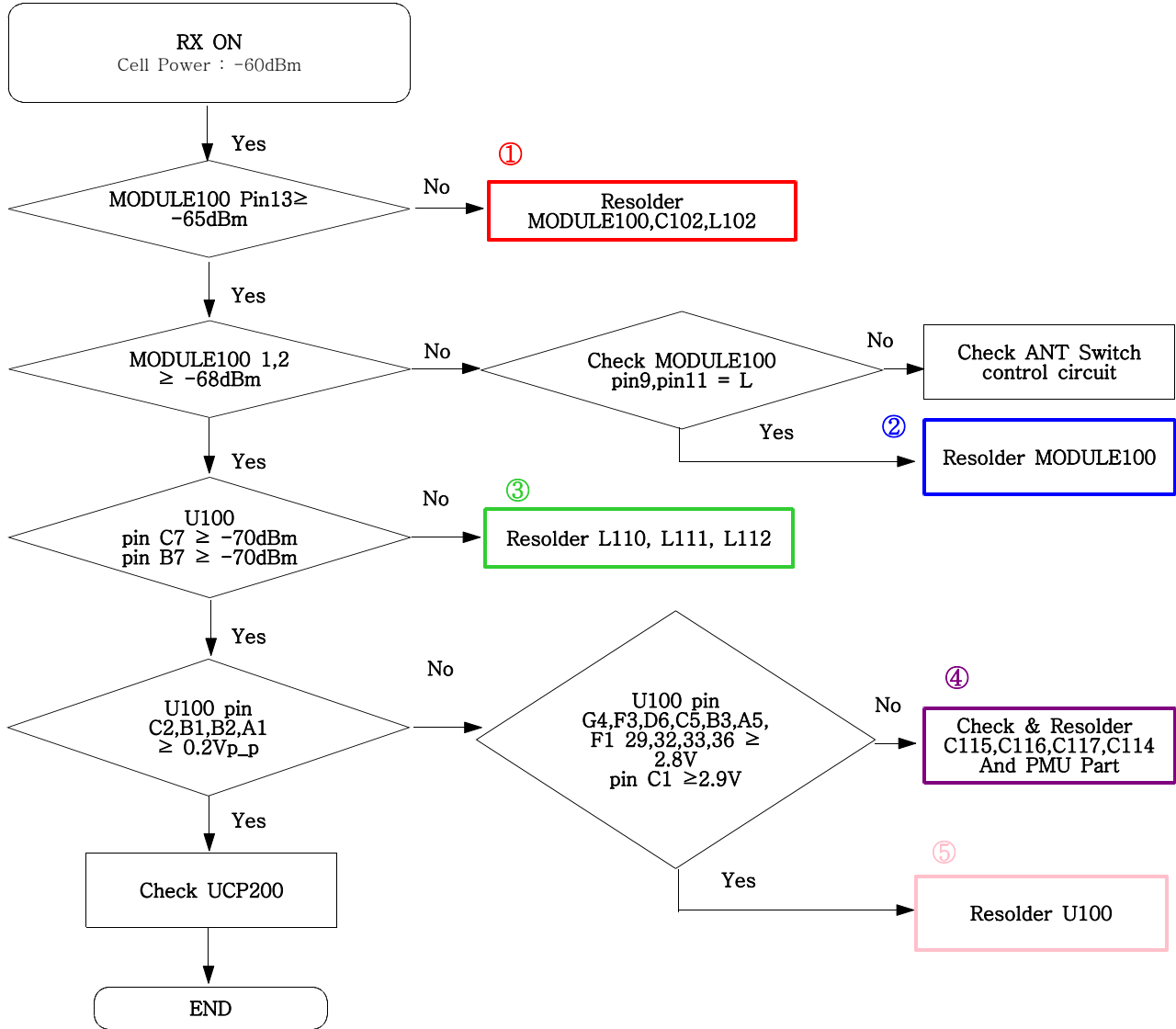


9-11. Radio part

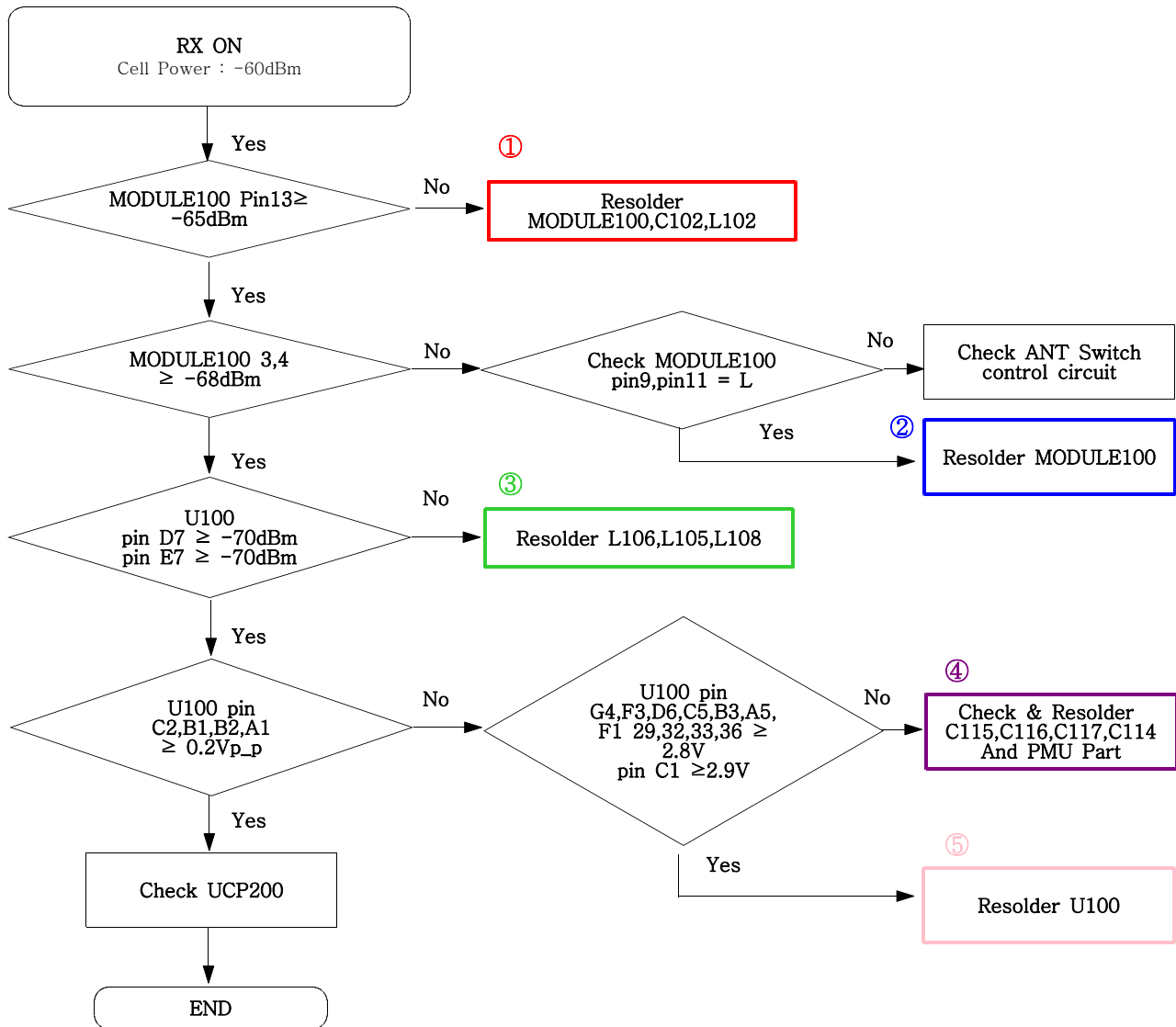




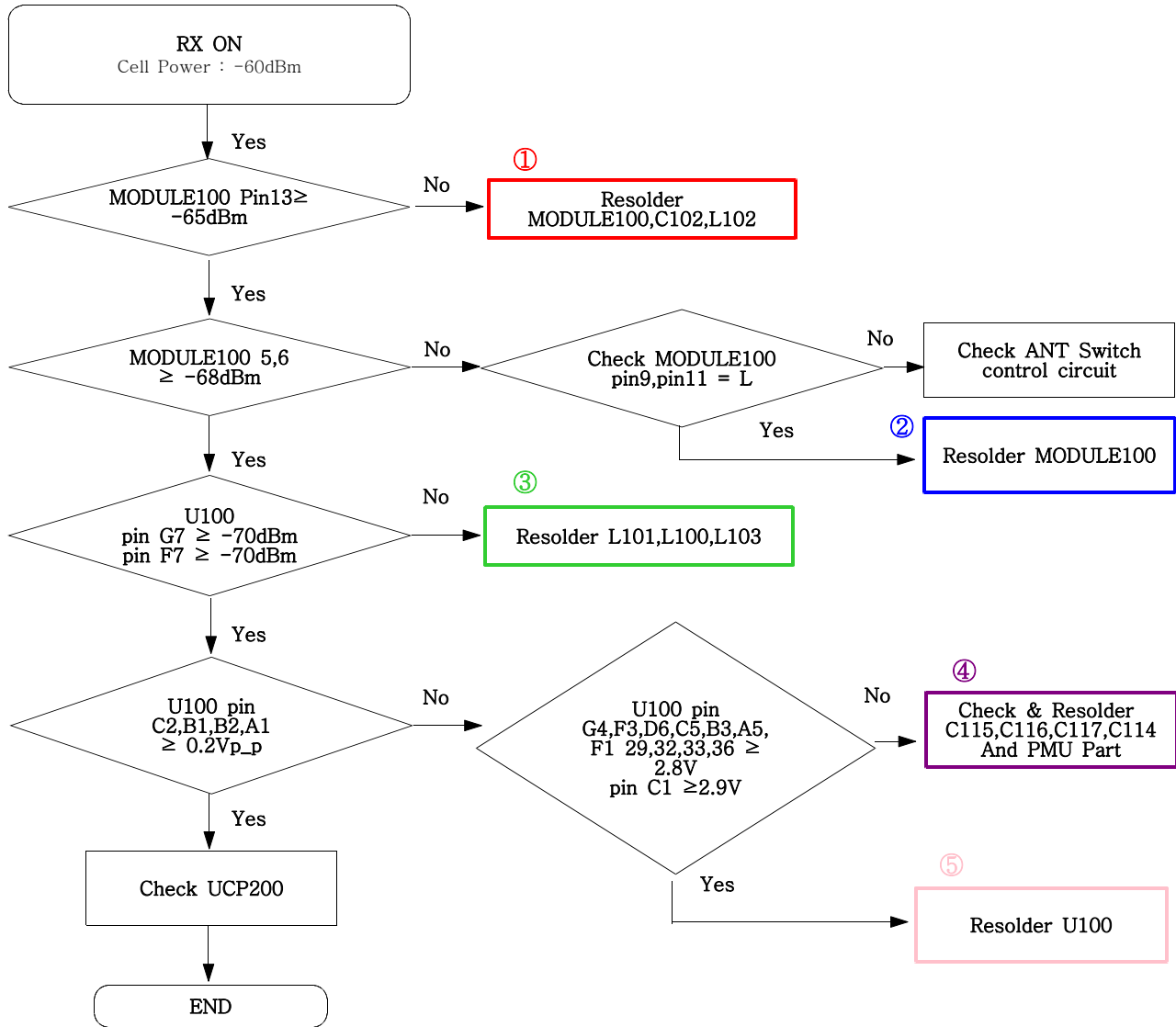
9-12. GSM Receiver



9-13. DCS Receiver



9-14. PCS Receiver

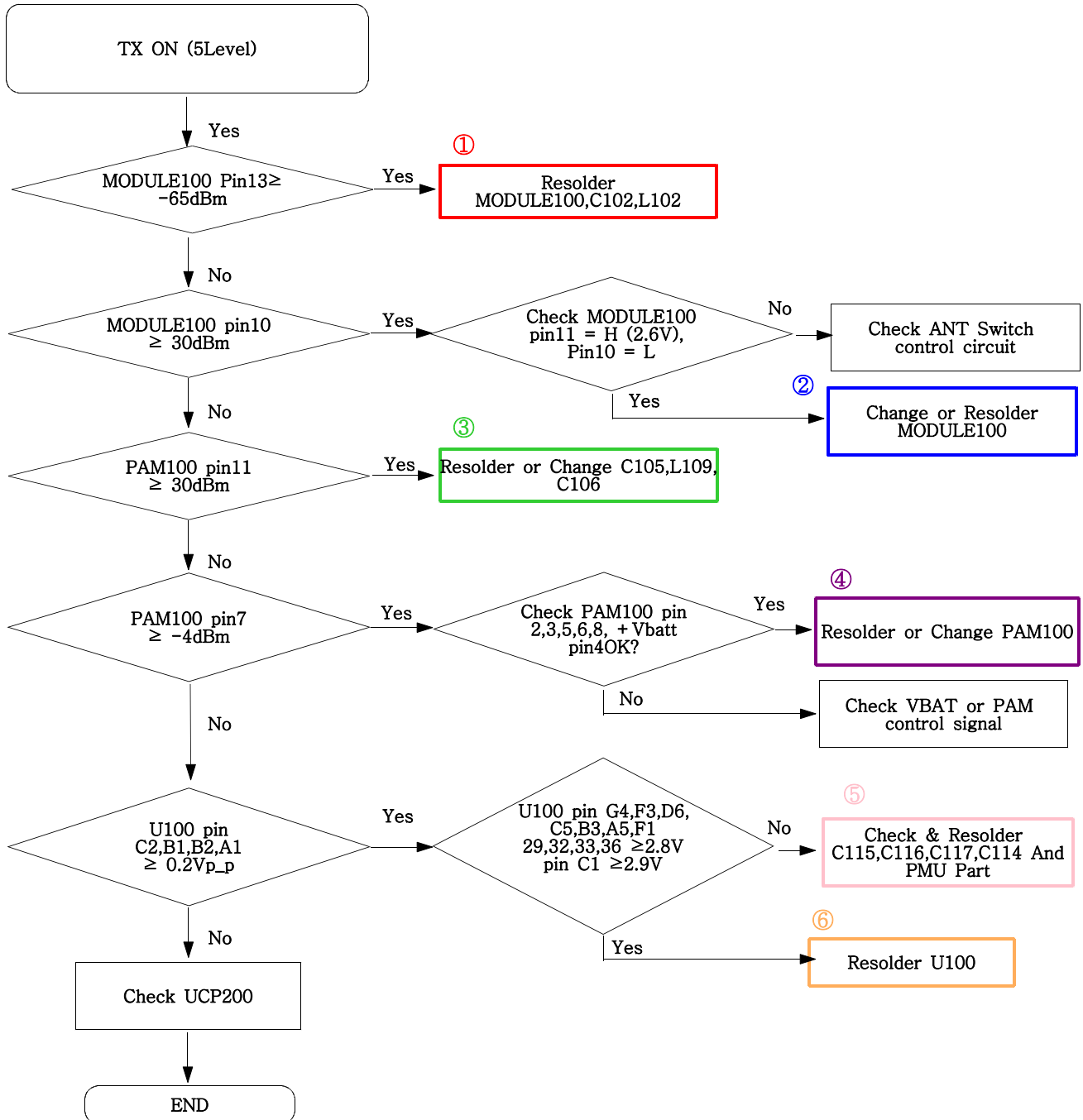




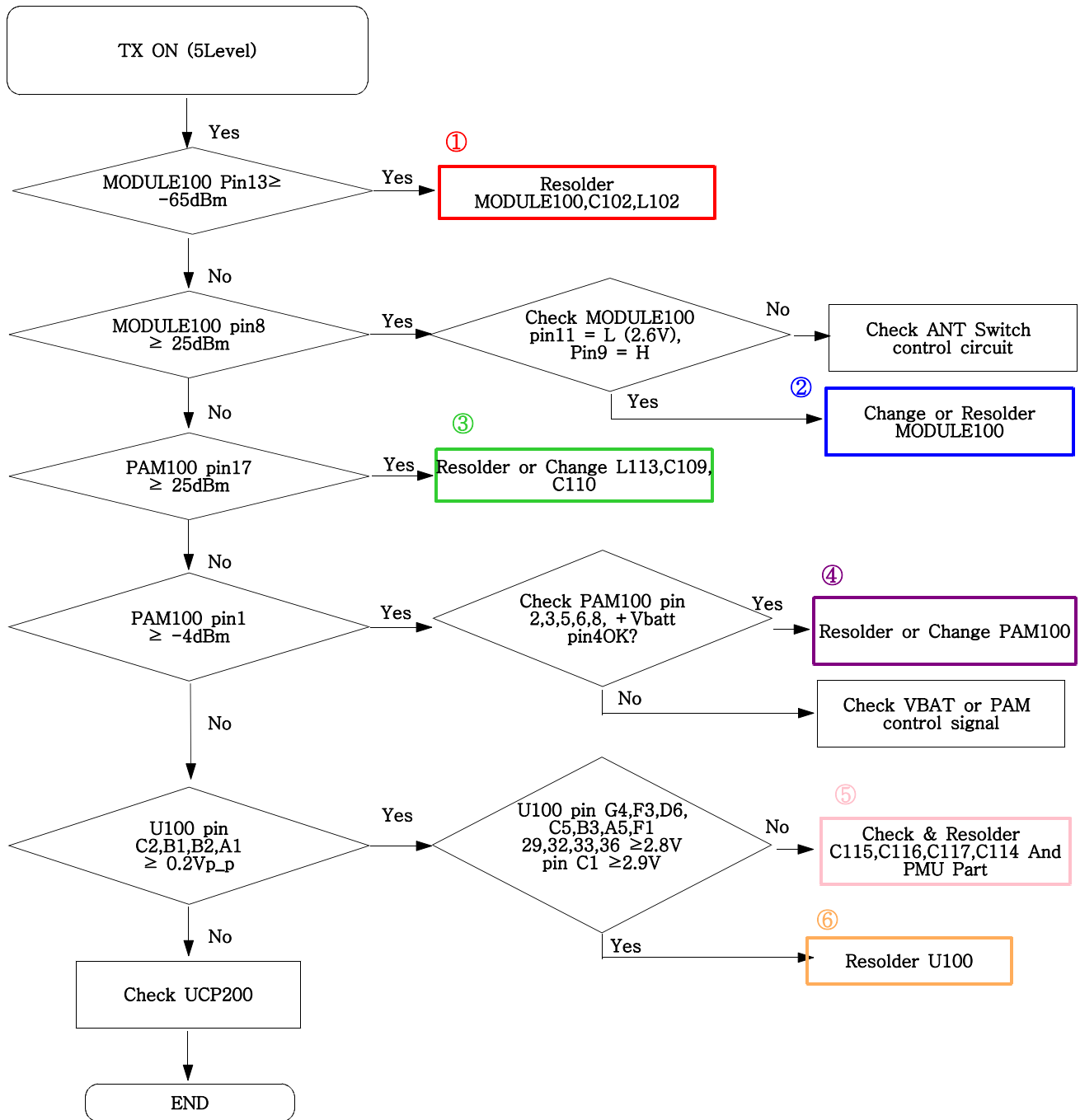




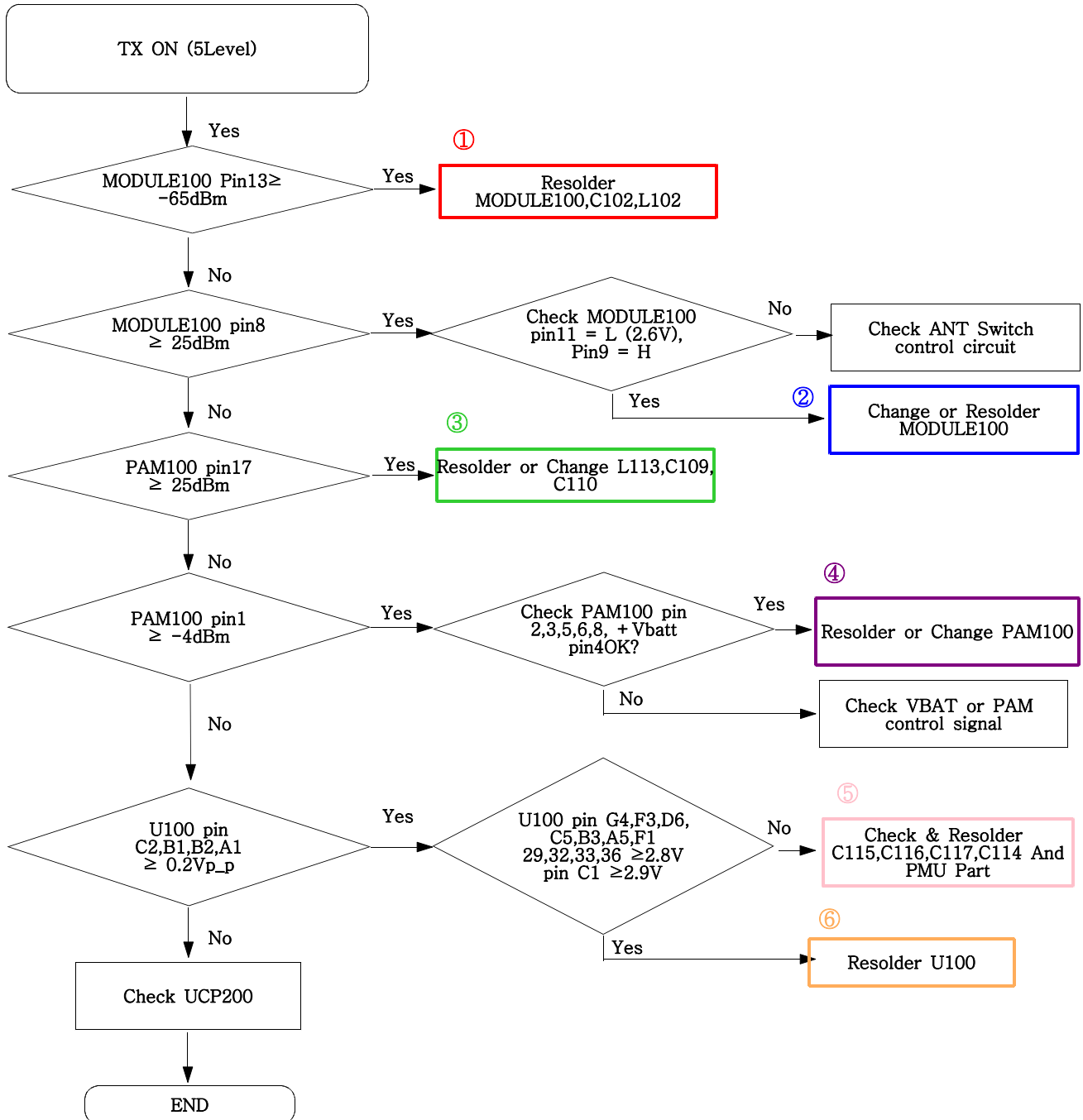
9-15. GSM Transmitter

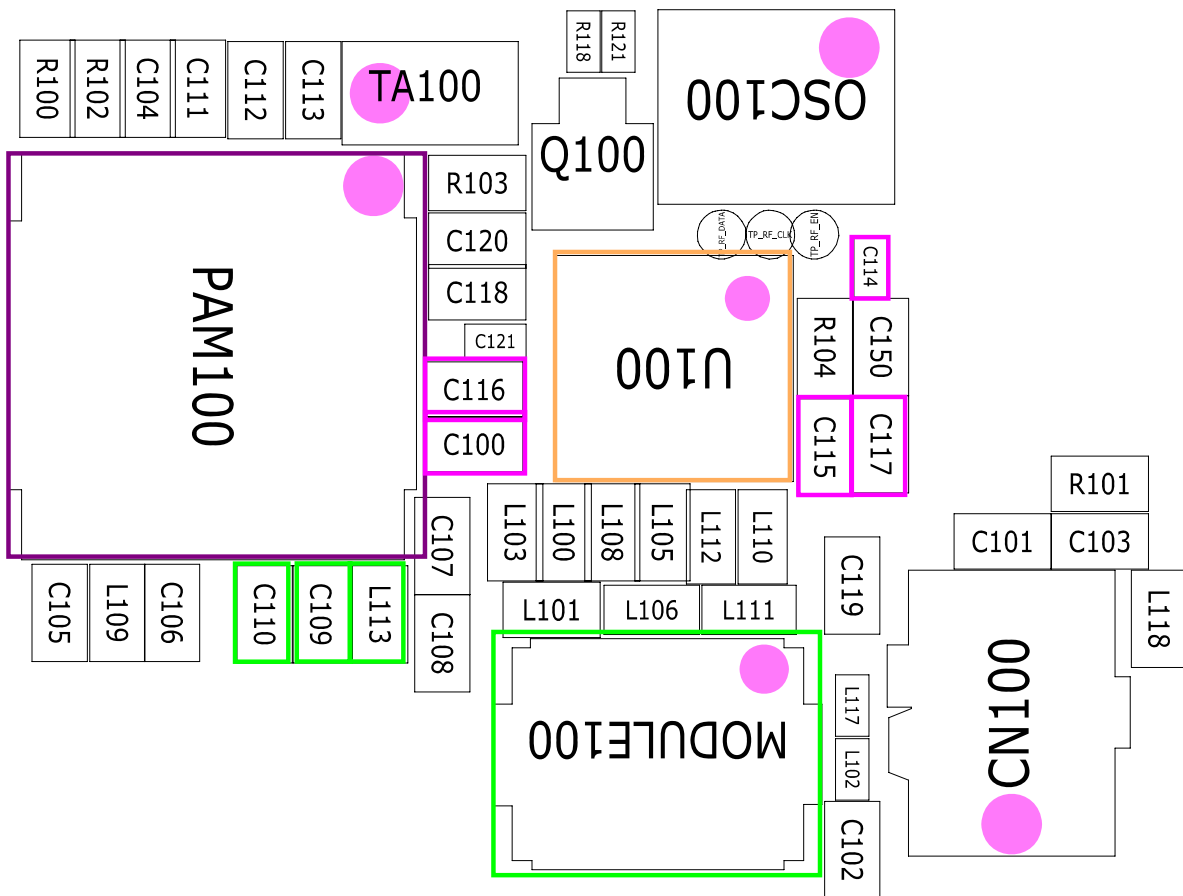
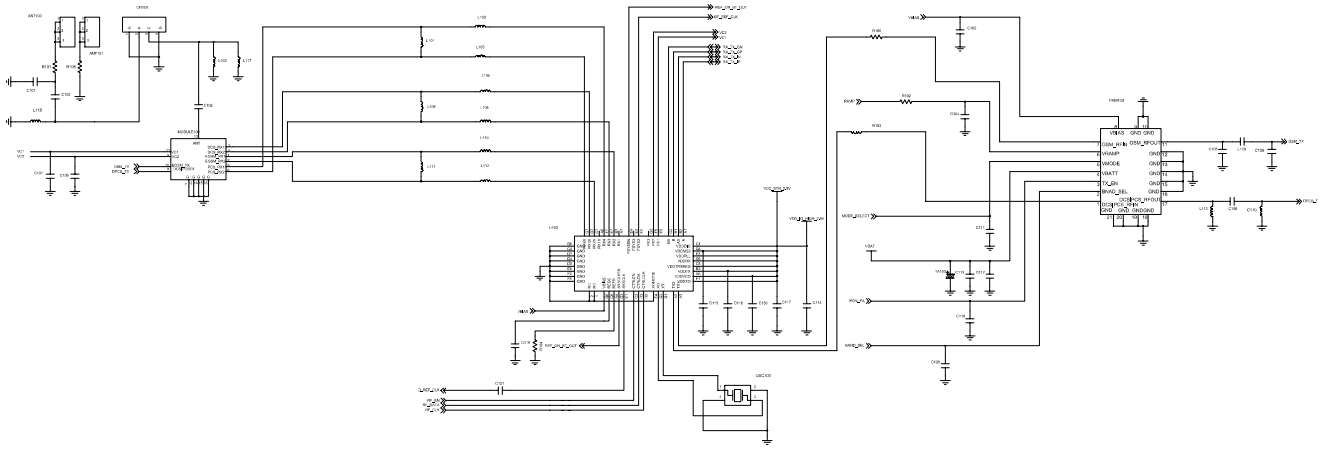


9-16. DCS Transmitter

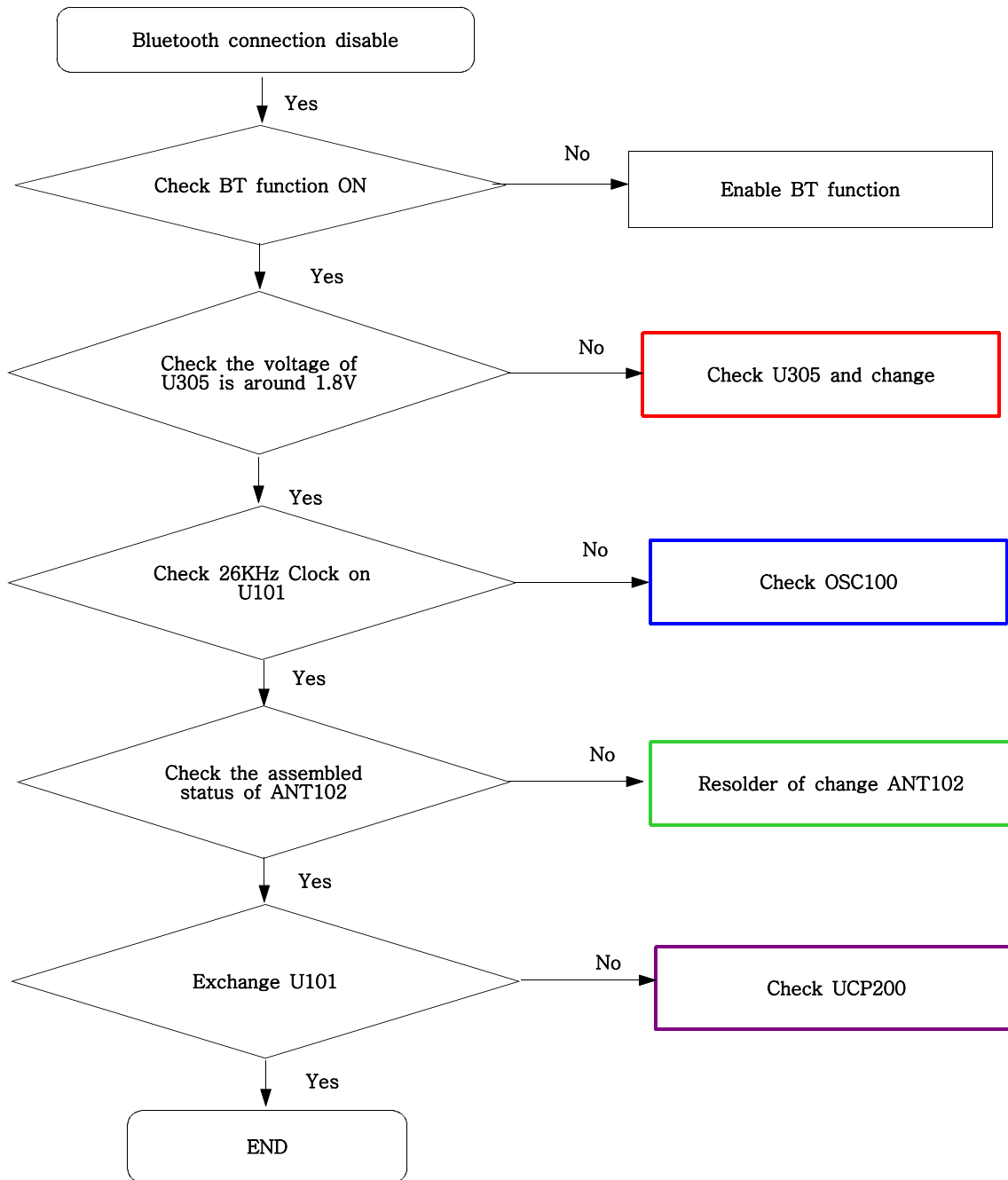


9-17. PCS Transmitter

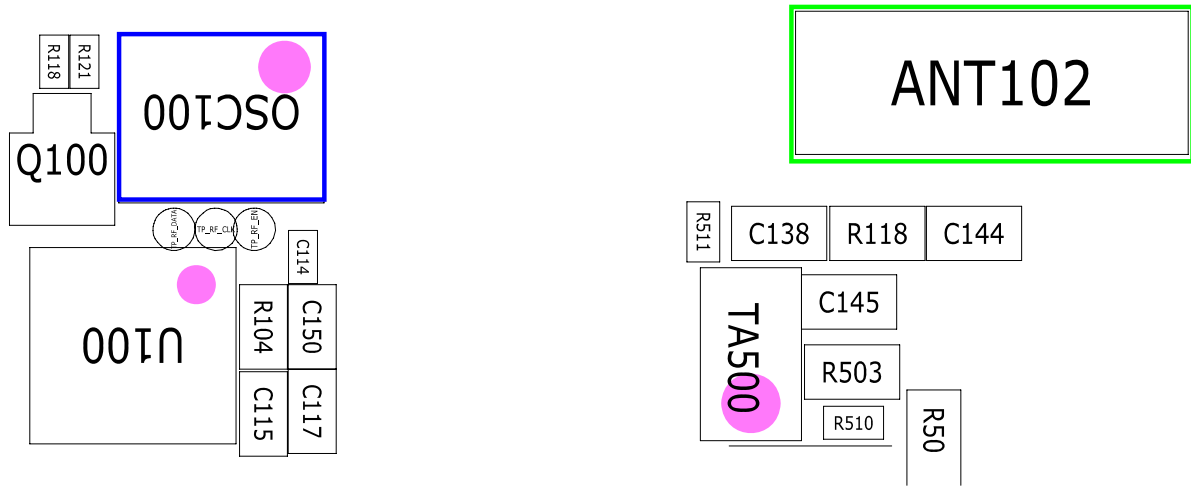
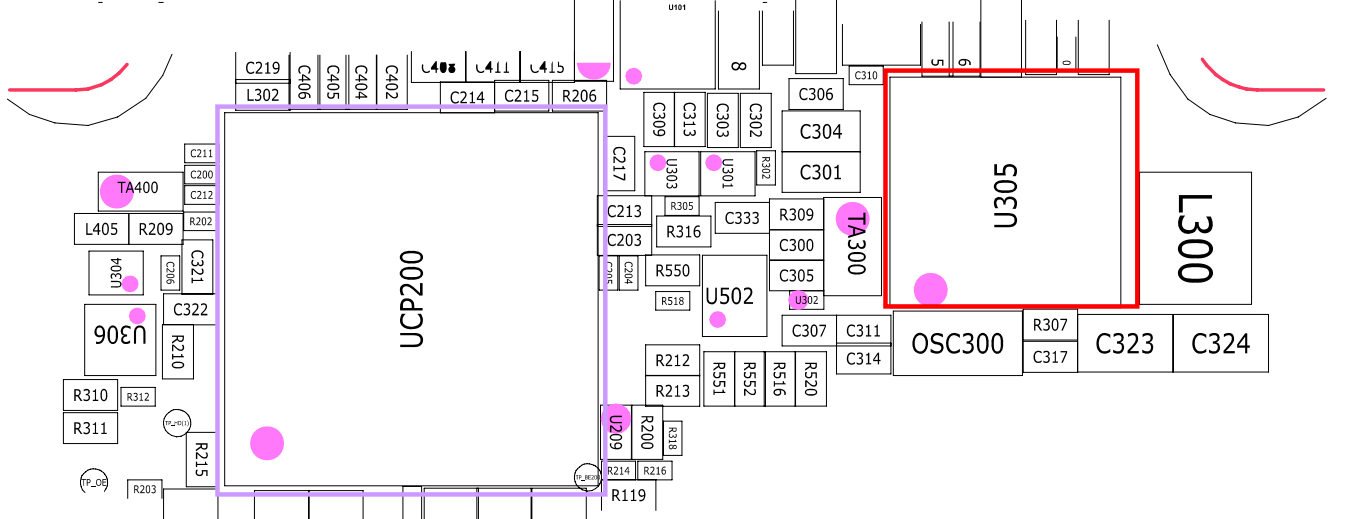
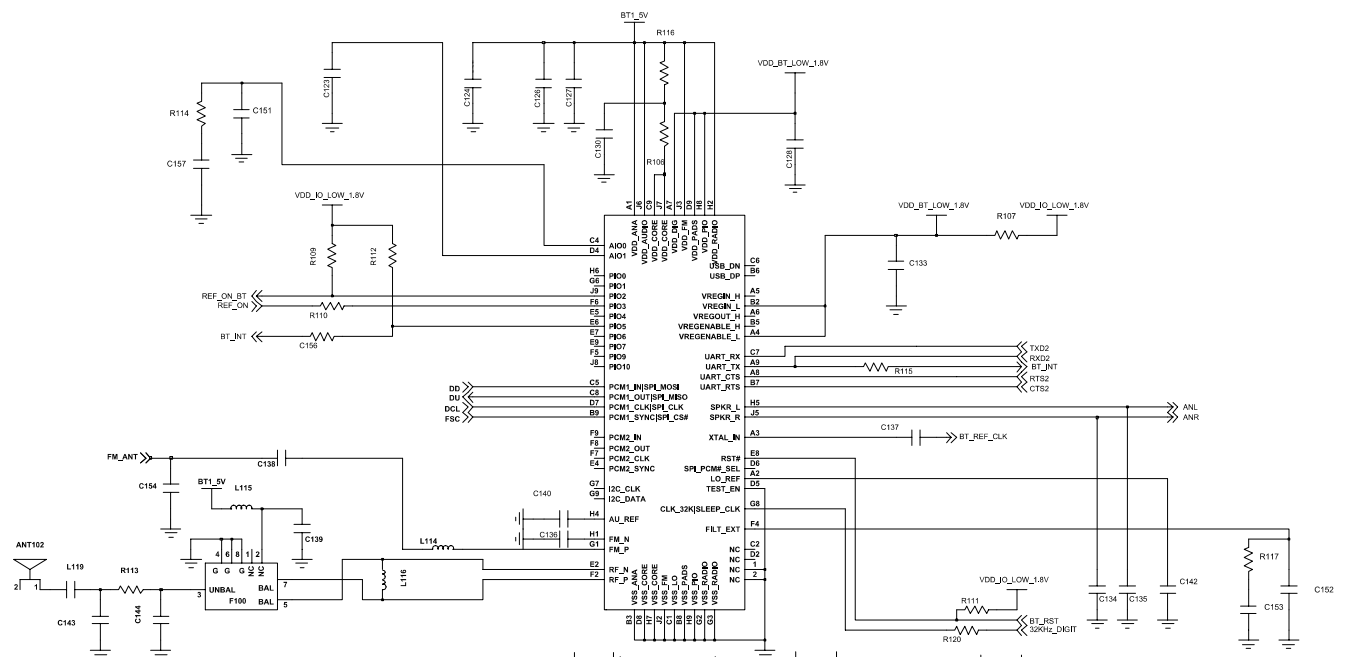




9-18. Bluetooth part



# Flow Chart of Troubleshooting



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## 10. Reference data

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### Reference Abbreviate

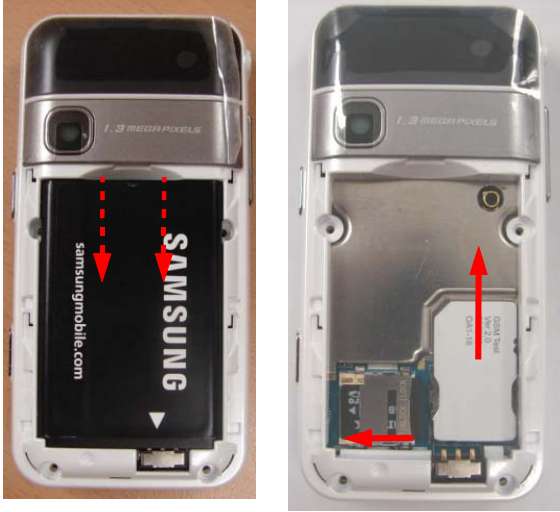
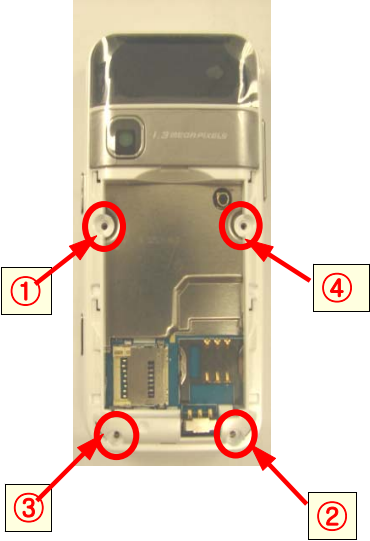
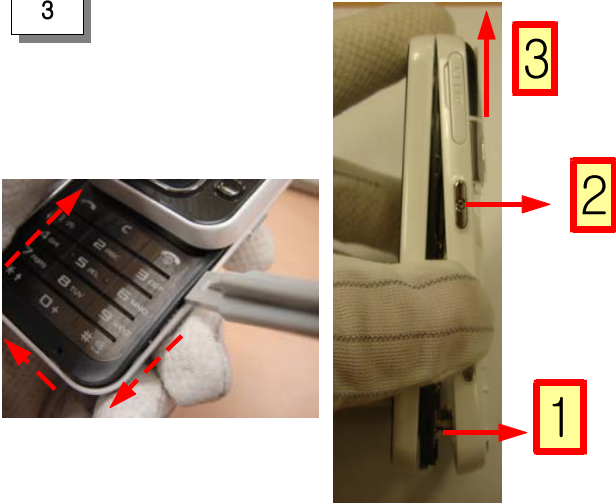
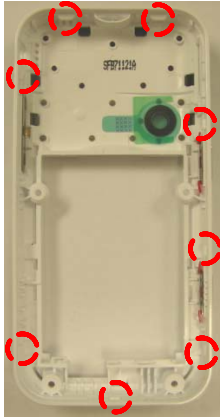
- **AAC**: Advanced Audio Coding.
- **AVC** : Advanced Video Coding.
- **BER** : Bit Error Rate
- **BPSK**: Binary Phase Shift Keying
- **CA** : Conditional Access
- **CDM** : Code Division Multiplexing
- **C/I** : Carrier to Interference
- **DMB** : Digital Multimedia Broadcasting
- **EN** : European 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

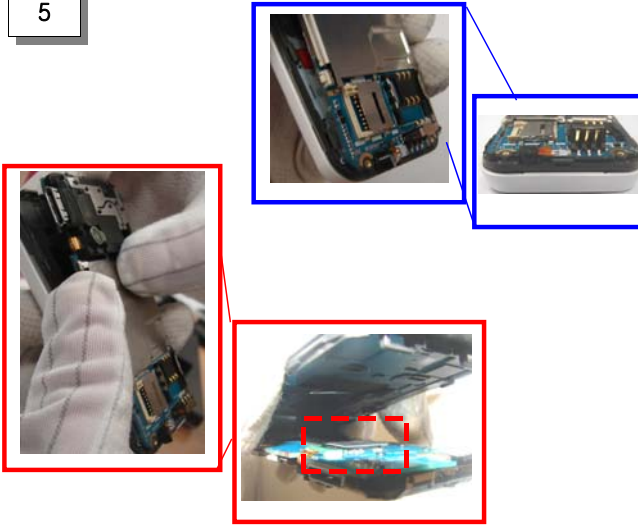
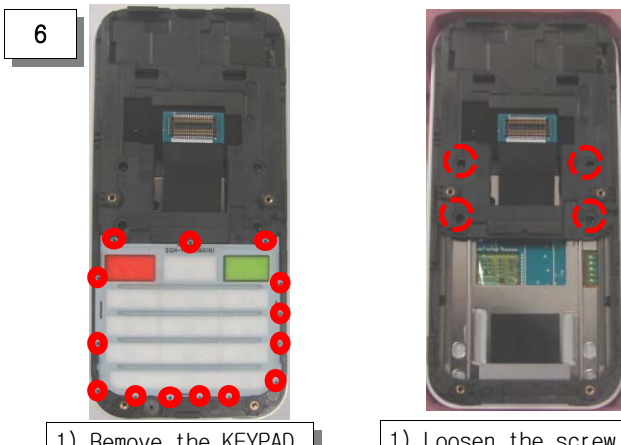
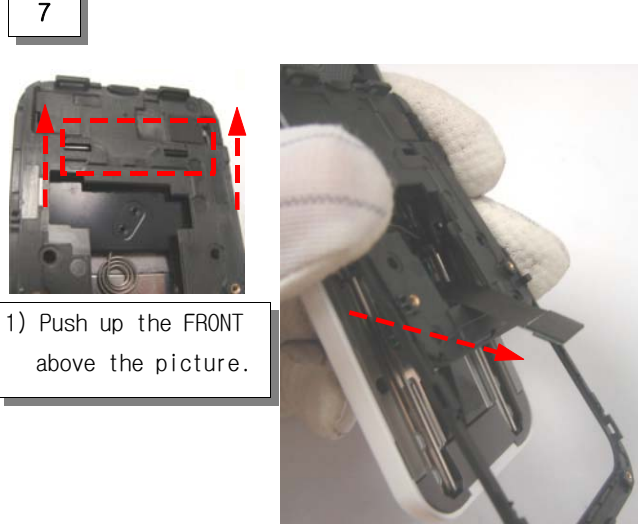
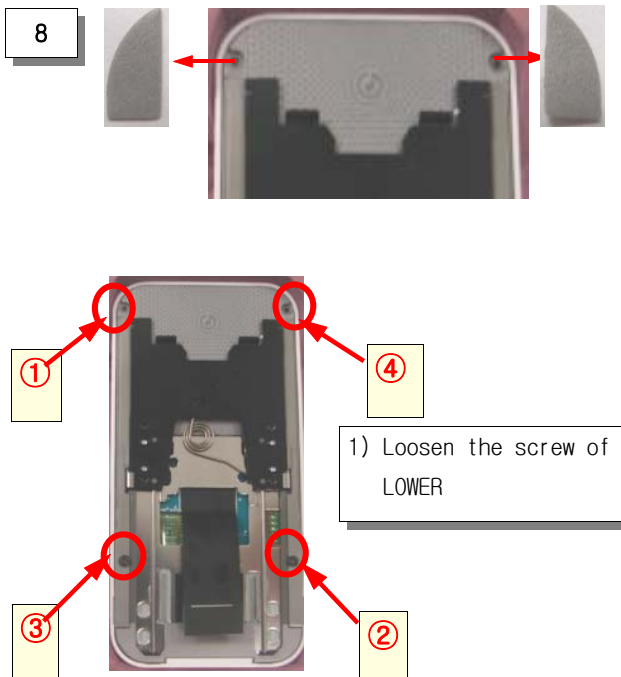




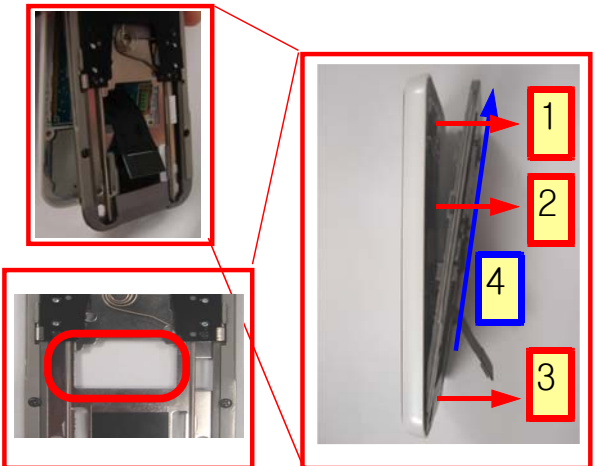
# 11. Disassembly and Assembly Instructions

## 11-1. Disassembly Instructions

<p><b>1</b></p>  <p>1) Unlock the SD CARD moving to left side.</p>	<p><b>2</b></p>  <p>1) Remove 4 screws of the Rear</p>
<p>1) Remove the Battery and SIM CARD/SD CARD from handset.</p>	<p>1) Be careful of scratching the surface of handset.</p>
<p><b>3</b></p>  <p>1) Separate the Rear and the Front with holding top of the Rear.</p>	<p><b>4</b></p>  <p>1) Separate the Rear Cover from Front Ass'y after verifying the position of 7 hooks in Rear Cover.</p>
<p>1) Don't devote heavily the bottom of the Rear.</p>	<p>1) Be careful of breaking the Hooks.</p>

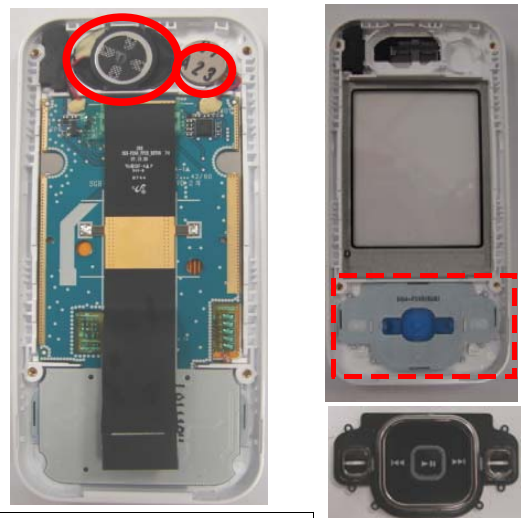
<p>5</p>  <p>1) Lift the PBA top position and separate the FPCB CONNECTOR.</p>	<p>6</p>  <p>1) Remove the KEYPAD</p> <p>1) Loosen the screw of FRONT</p>
<p>1) Be careful of damaging the FPCB and CONNECTOR.</p>	<p>1) Don't devote heavily the screw of FRONT.</p>
<p>7</p>  <p>1) Push up the FRONT above the picture.</p> <p>2) Separate the FRONT from the LCD part.</p>	<p>8</p>  <p>1) Loosen the screw of LOWER</p>
<p>1) Be careful of damaging the FPCB.</p>	<p>1) Be careful of damaging the FPCB.</p>

9



1) Separate the LOWER from 1 ~ 4.

10

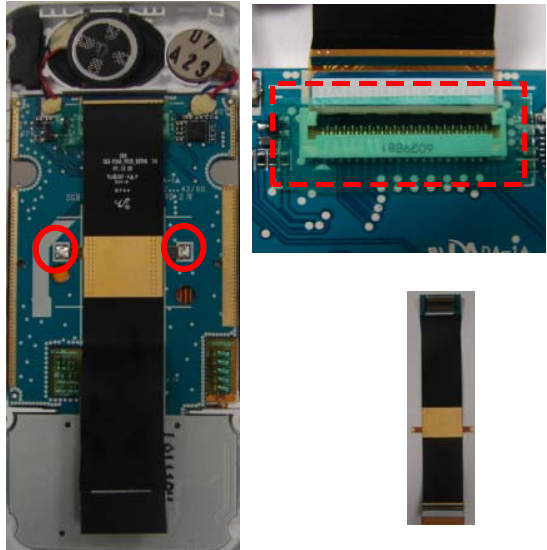


1) Remove the SPK and MOTOR  
 2) Separate the KEYPAD from UPPER

1) Be careful of damaging FPCB.  
 2) Lift up the SLIDE HINGE before you separate LOWER.

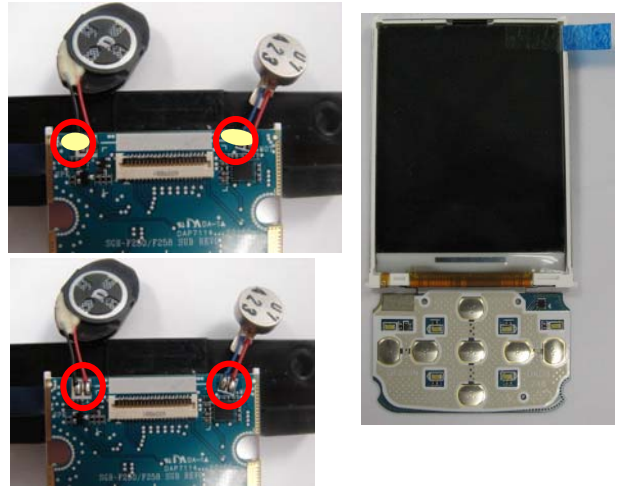
1) Be careful of damaging the SPK and MOTOR.

11



1) Solder and separate the FPCB from the PBA.  
 2) Remove the TAPE.  
 2) Remove the FPCB.

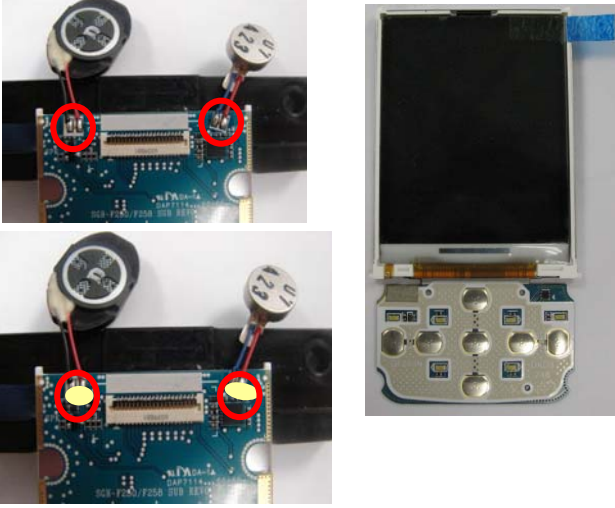
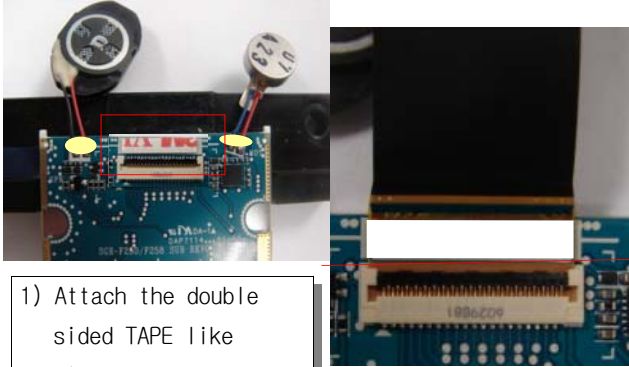
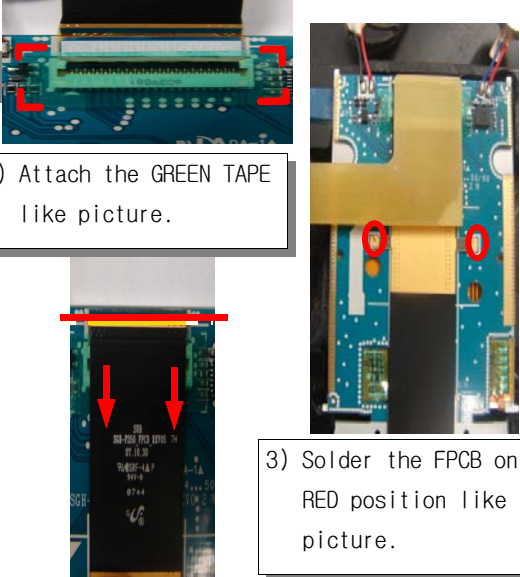
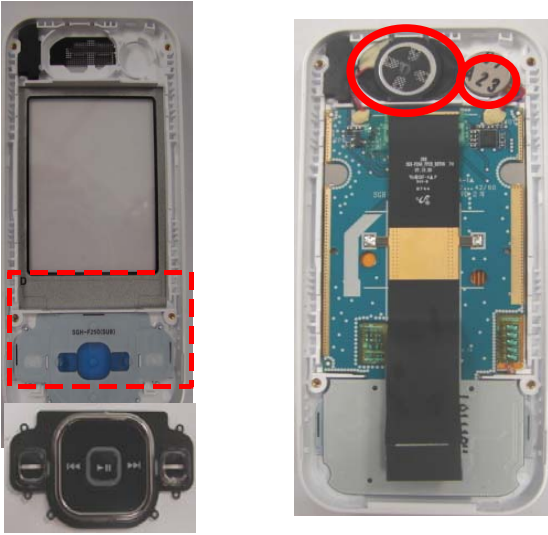
12

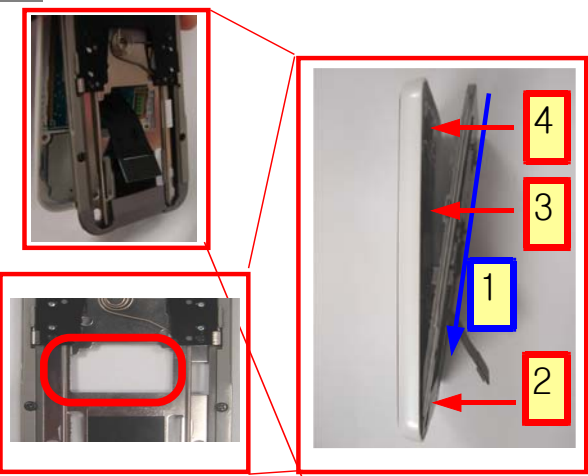
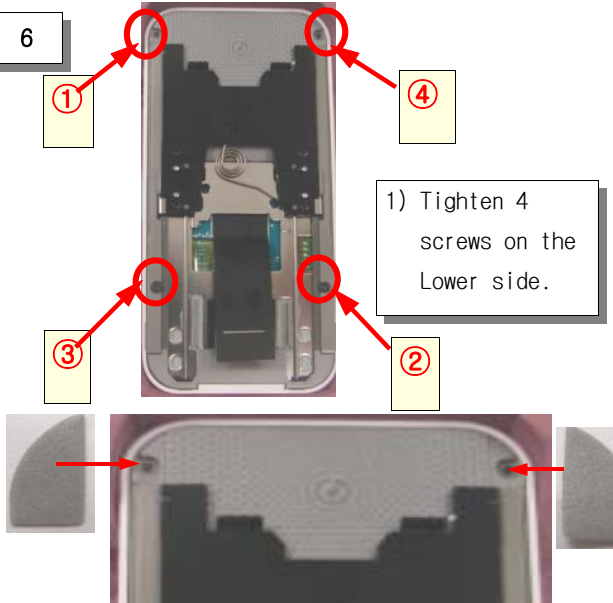
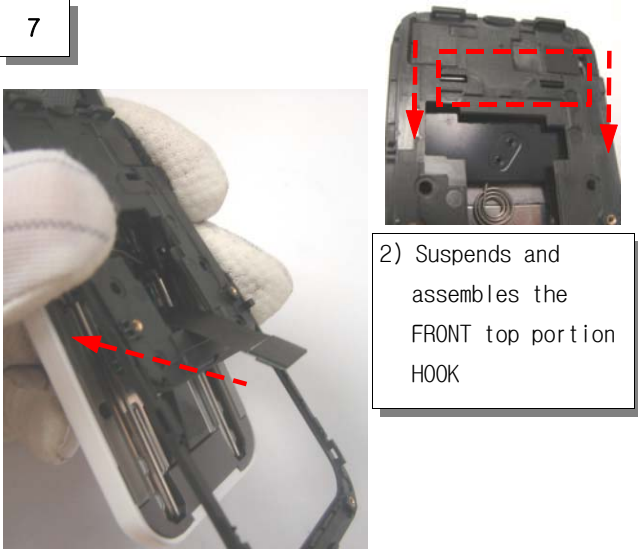
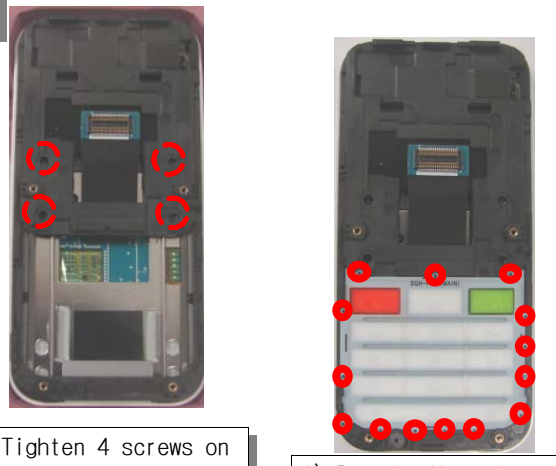


1) After remove the bonding, separate the SPK and MOTOR.

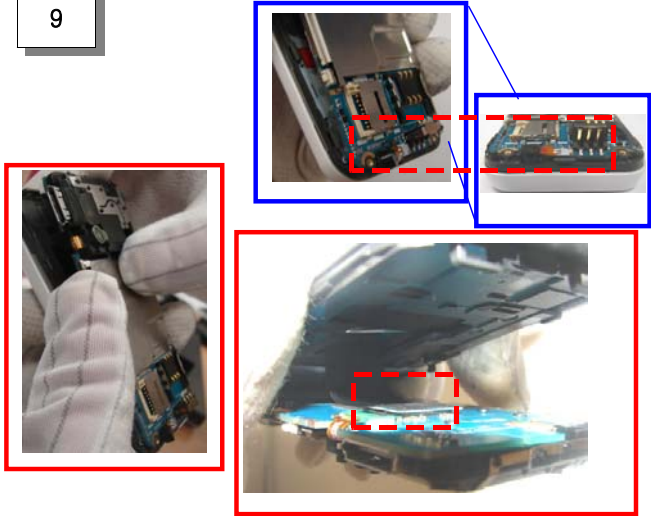
1) Be careful of damaging the LCD GLASS.

## 11-2. Assembly Instructions

<p>1</p>  <p>1) Solder the SPK ,MOTOR and paste the bond.</p>	<p>2</p>  <p>1) Attach the double sided TAPE like picture.</p> <p>2) Insert the FPCB in RED line.</p>
<p>1) Be careful of damaging LCD.</p>	
<p>3</p>  <p>1) Attach the GREEN TAPE like picture.</p> <p>2) Verify the SILK line.</p> <p>3) Solder the FPCB on RED position like picture.</p>	<p>4</p>  <p>1) Put in the SUB KEYPAD.</p> <p>2) Be careful of damaging the SPK and MOTOR.</p>
<p>1) Be careful of damaging FPCB and Sub PCB Connector.</p>	
<p>1) Be careful of damaging FPCB.</p>	

<p><b>5</b></p>  <p>1) Insert the FPCB into lower hole. 2) Combine Slide lower and upper from 1 ~ 4</p>	<p><b>6</b></p>  <p>1) Tighten 4 screws on the Lower side.</p> <p>2) Attach the LOWER SHEET on the top side LOWER.</p>
<p>1) Be careful of damaging FPCB. 2) Be careful of scratching the surface of handset.</p>	<p>1) Be careful of scratching the surface of handset.</p>
<p><b>7</b></p>  <p>2) Suspends and assembles the FRONT top portion HOOK</p> <p>1) Assembling the FRONT and LCD ASS'Y, be careful of damaging FPCB.</p>	<p><b>8</b></p>  <p>1) Tighten 4 screws on the FRONT side.</p> <p>1) Put the Keypad on front cover's right position.</p>
<p>1) Be careful of damaging FPCB..</p>	<p>1) Be careful of damaging FPCB/CONNENTOR.</p>

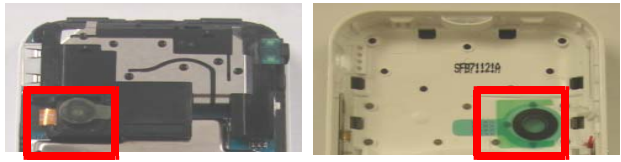
9



- 1) Attach the PBA on bottom side, and then combine the FPCB and CONNECTOR.
- 2) Verify Mic on front cover's mic guide.

1) Be careful of damaging FPCB.

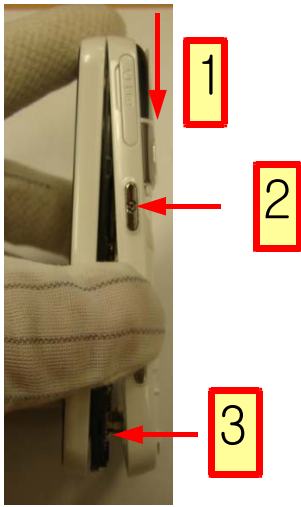
10



- 1) Remove the GREEN TAPE of the CAMERA and REAR.

1) Remove certainly the GREEN TAPE because it is responsible for picture quality badness.

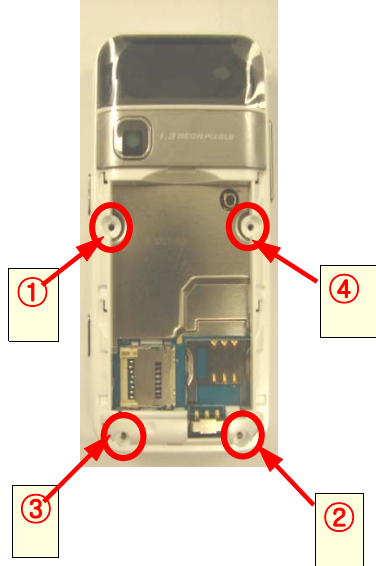
11



- 1) Hook the top side of rear to front ass'y.

1) Be careful of damaging FPCB and Mic.

12



- 1) Tighten 4 screws on rear red position.

1) Be careful of damaging FPCB.

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