GSM TELEPHONE

SGH-G600

SERVICE Manual

GSM TELEPHONE

CONTENTS

1. Safety Precautions
2. Specification
3. Product Function
4. Array course control
5. Exploded View and Part List
6. MAIN Electrical Parts List
7. Block Diagrams
8. PCB Diagrams
9. Flow Chart of Troubleshooting
10. Reference data
11. Disassembly and Assembly Instructions

SAMSUNG ELECTRONICS

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1. Safety Precautions

1-1. Repair Precaution

- Repair in Shield Box, during detailed tuning. Take specially care of tuning or test, because the specification 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.

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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

2-1. GSM General Specification

	GSM850 Phase 1	GSM900 Phase 1	EGSM 900 Phase 2	DCS1800	PCS1900
Freq. Band[MHz] Uplink/Downlink	824~849 869~894	890~915 935~960	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990
ARFCN range	128~251	1~124	0~124 & 975~1023	512~885	512~810
Tx/Rx spacing	45MHz	45MHz	45MHz	95MHz	80MHz
Mod. Bit rate/ Bit Period	270.833kbps 3.692us	270.833kbps 3.692us	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	576.9us 4.615ms	576.9us 4.615ms
Modulation	0.3GMSK	0.3GMSK	0.3GMSK	0.3GMSK	0.3GMSK
MS Power	33dBm~5dBm	33dBm~5dBm	33dBm~5dBm	30dBm~0dBm	30dBm~0dBm
Power Class	5pcl ~ 19pcl	5pcl ~ 19pcl	5pcl ~ 19pcl	0pcl ~ 15pcl	0pcl ~ 15pcl
Sensitivity	-102dBm	-102dBm	-102dBm	-100dBm	-100dBm
TDMA Mux	8	8	8	8	8
Cell Radius	35Km	35Km	35Km	2Km	-

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2-2. GSM TX power class

TX Power control level	GSM850	GSM900
5	33±2 dBm	33±2 dBm
6	31±2 dBm	31±2 dBm
7	29±2 dBm	29±2 dBm
8	27±2 dBm	27±2 dBm
9	25±2 dBm	25±2 dBm
10	23±2 dBm	23±2 dBm
11	21±2 dBm	21±2 dBm
12	19±2 dBm	19±2 dBm
13	17±2 dBm	17±2 dBm
14	15±2 dBm	15±2 dBm
15	13±2 dBm	13±2 dBm
16	11±3 dBm	11±3 dBm
17	9±3dBm	9±3dBm
18	7±3 dBm	7±3 dBm
19	5±3 dBm	5±3 dBm

TX Power control level	DCS1800	PCS1900
0	30±3 dBm	30±3 dBm
1	28±3 dBm	28±3 dBm
2	26±3 dBm	26±3 dBm
3	24±3 dBm	24±3 dBm
4	22±3 dBm	22±3 dBm
5	20±3 dBm	20±3 dBm
6	18±3 dBm	18±3 dBm
7	16±3 dBm	16±3 dBm
8	14±3 dBm	14±3 dBm
9	12±4 dBm	12±4 dBm
10	10±4 dBm	10±4 dBm
11	8±4dBm	8±4dBm
12	6±4 dBm	6±4 dBm
13	4±4 dBm	4±4 dBm
14	2±5 dBm	2±5 dBm
15	0±5 dBm	0±5 dBm

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3. Product Function

Main Function

- DC-Jack TA (700mA)
- MMS (Multimedia Message Service)
- J2ME JAVA (MIDP 2.0/CLDC 1.1)
- EMS (Enhanced Message Service)
- 64 Poly S/W MIDI
- Bluetooth 2.0 EDR
- FM Radio Support
- USB v1.2 High Speed Support
- MicroSD Card Support
- Active backlight control
- Quad band(850/900/1800/1900MHz)
- GPRS Class 10

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4. Array course control

4-1. Software Adjustments

1. JIG Box(GH68-03306A): Download, Trace, Calibration, etc
2. RF test cable(GH39-00283A): RF test
3. Test cable(GH39-00838A): JIG to phone
4. Serial cable: PC to JIG

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4-2. Software Downloading

4-2-1. Downloading Binary Files

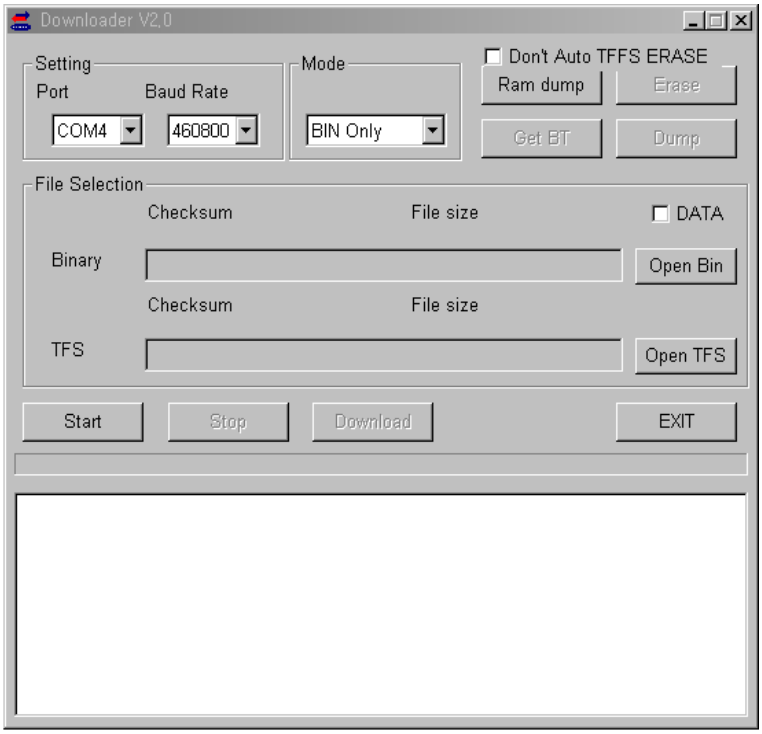
- 2 binary files for downloading G600
  - G600.cla
  - G600.tfs

4-2-2. Pre-requsite for Downloading

- Downloader Program
- SGH-G600 Mobile Phone
- JIG BOX
- Download JIG
- Test Cable
- Serial Cable
- Binary files

4-2-3. S/W Downloader Program

1. Load the binary download program by executing



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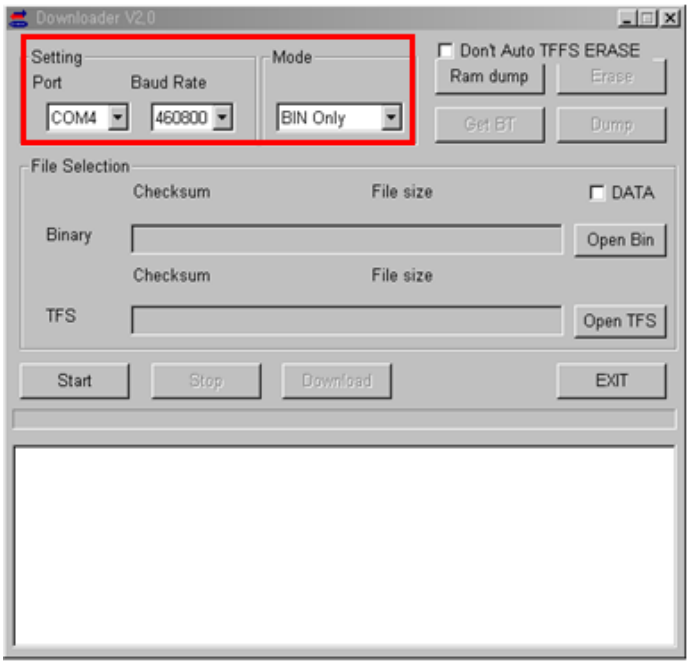
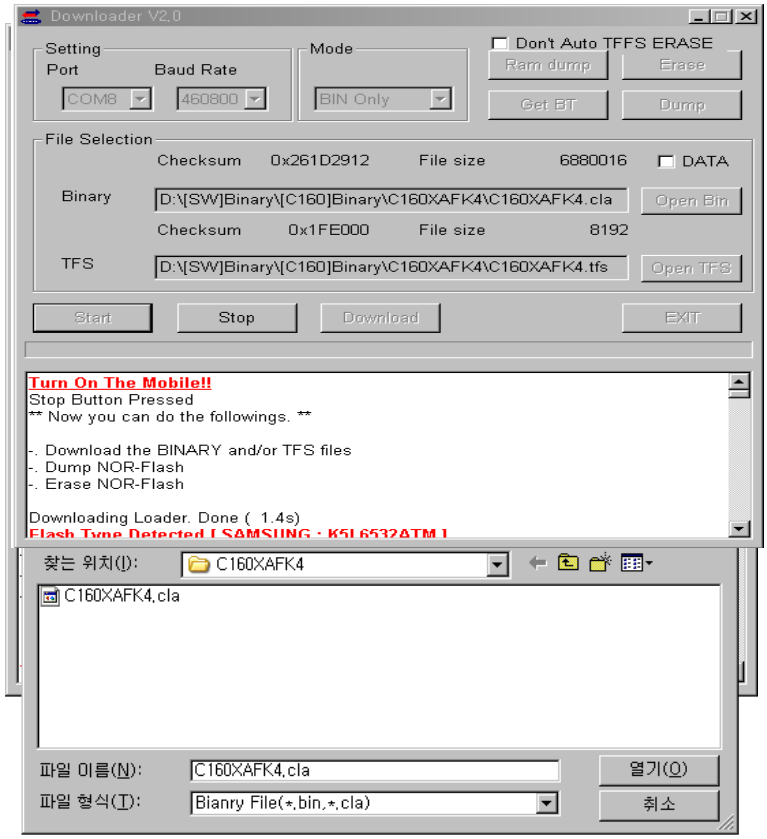
2. Select the Port, Baud Rate and Mode.



3. Select the binary files what you want to download



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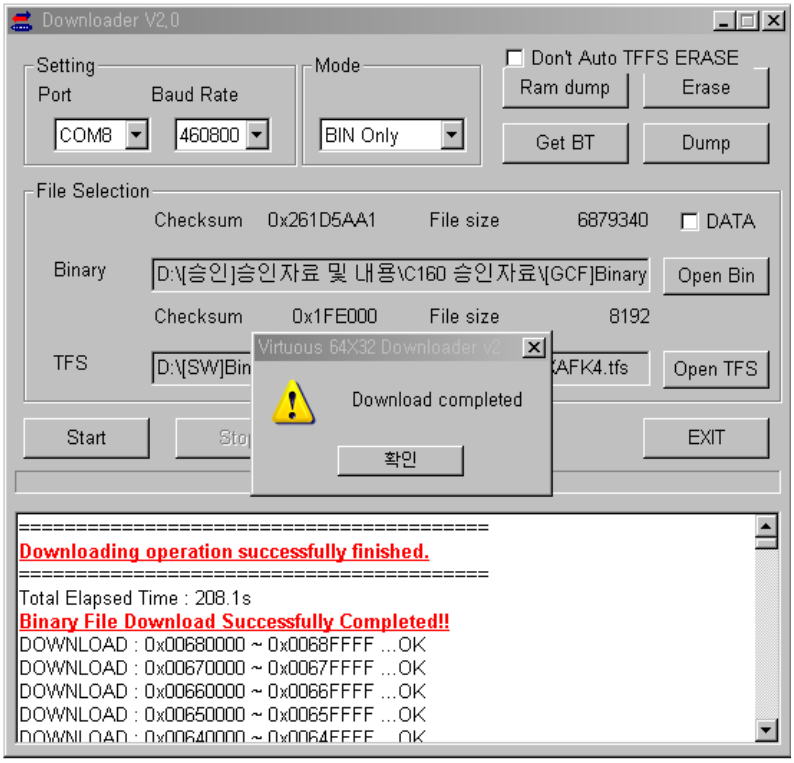
4. Press the "Start" button and connect the Handset

5. When downloading is complete, automatically the small window was showed up..



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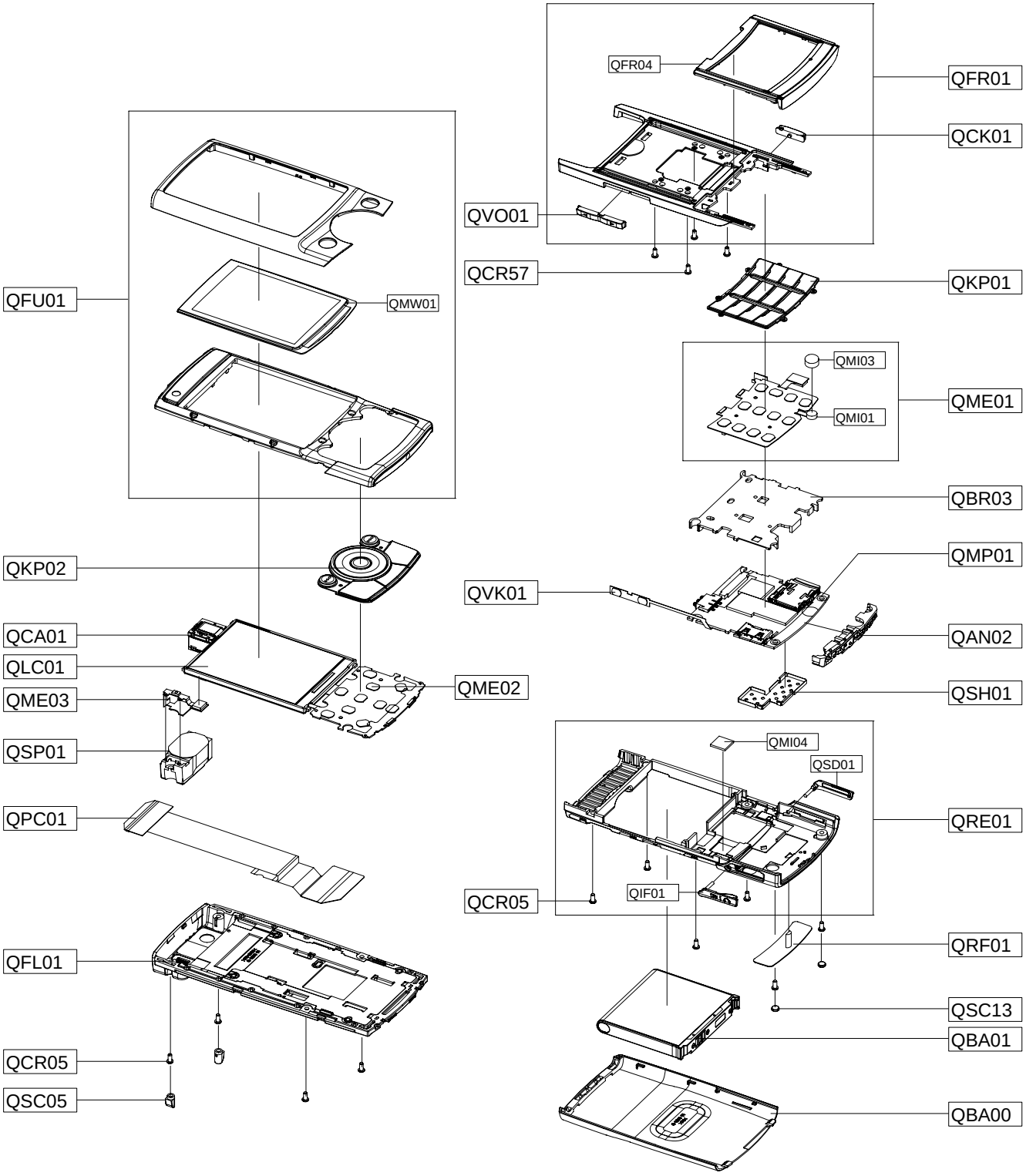
5. Exploded View and Parts List

5-1. Cellular phone Exploded View



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5-2. Cellular phone Parts list

Design LOC		Description	SEC CODE
QAN02		INTENNA-SGHG600	GH42-01290A
QBA00		PMO COVER-BATTERY	GH72-42760B
QBA01		INNER BATTERY PACK-880MAH , BL	GH43-02795A
QBR03		ASSY BRACKET-KEY	GH98-05613A
QCA01		CAMERA MODULE-5M	GH59-04643A
QCK01		PMO KEY-CAMERA	GH72-42790B
QCR05		SCREW-MACHINE	6001-001478
QCR05		SCREW-MACHINE	6001-001478
QCR57		SCREW-MACHINE	6001-002001
QFL01		ASSY CASE-SLIDE LOWER	GH98-05484B
QKP01		ASSY KEYPAD-MAIN(EU/E_BLK)	GH98-05489B
QKP02		ASSY KEYPAD-SUB(EU/E_BLK)	GH98-05488B
QLC01		MEA-LCD MODULE KIT	GH97-08026A
QME02		KEY FPCB-SUB KEY FPCB 10KEY	GH59-04700A
QME03		ASSY ETC-FLASH FPCB	GH59-04698A
QMP01		PBA MAIN-SGHG600	GH92-03873A
QPC01		MEA-FPCBKIT	GH97-08027A
QRF01		PMO COVER-RF	GH72-44462B
QSC05		RMO RUBBER-LOWER SCREW CAP	GH73-10563B
QSC13		RMO RUBBER-REAR SCREW CAP	GH73-10741B
QSH01		ICT COVER-SHIELD CAN	GH70-02732A
QSP01		UNIT-SGHG600,SPK MODULE	GH59-04704A
QVK01		KEY FPCB-VOLUME KEY	GH59-04706A
QVO01		PMO KEY-VOLUME	GH72-42793B
QME01		KEY FPCB-MAIN KEY FPCB 12 KEY	GH59-04699A
	QMI01	AS-MIC SVC	GH81-06075A
	QMI03	AS-SGHG600 MIC RUBBER	GH81-06836A
QFU01		ASSY CASE-SLIDE UPPER	GH98-05483B
	QMW01	ASSY COVER-MAIN WINDOW	GH98-05487B
QFR01		ASSY CASE-FRONT	GH98-05485B
	QFR04	ASSY DECO-FRONT	GH98-06134B
QRE01		ASSY CASE-REAR	GH98-05486B
	QIF01	PMO COVER-IF	GH72-42772B
	QMI04	RMO RUBBER-PMIC	GH73-10901A
	QSD01	PMO COVER-SD	GH72-42764B

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Description	SEC CODE
IC-MEMORY CARD	1109-001363
CONNECTOR-ADAPTOR	3719-001319
BAG PE	6902-000634
BAG ZIPPER	6902-000683
SCREW-MACHINE	6001-001478
MICROPHONE-ASSY-WEP210	GH30-00312A
CBF INTERFACE-MIC CABLE(S20P,B	GH39-00913A
CBF INTERFACE-DLC APCBS10BBE(S	GH39-00922A
BATTERY-70MAH CORE PACK	GH43-02683A
ADAPTOR-ATADS10UBE,BLK,UK	GH44-01756A
S/W CD-SGH-G600 SAMSUNG PC STU	GH46-00490A
KEY FPCB-SIDE KEY	GH59-03784A
EARPHONE-EARPHONE,3 PLUG,BLK,E	GH59-04418A
ASSY ETC-CONVERSION PLUG	GH59-04444A
LABEL(P)-UNIT SEAL	GH68-00518B
LABEL(P)-IMEI	GH68-01335D
MANUAL-SFC LEAFLET	GH68-04822A
LABEL(R)-WATER SOAK	GH68-09361A
MANUAL USERS-EU ENGLISH	GH68-15425A
LABEL(R)-MAIN(EU)	GH68-15559A
MANUAL USERS-EU ENGLISH	GH68-15785A
BOX-UNIT(UK)	GH69-05703G
CUSHION-CASE(UK)	GH69-05706A
PMO DECO-UPPER TOP	GH72-35348C
PMO COVER-DC JACK	GH72-35353C
PMO-VOL KEY V2	GH72-35354A
PMO CASE-EARPIECE	GH72-35513C
RMO-EAR RUBBER 1	GH73-08109A
RMO-EAR RUBBER 4	GH73-08112A
RMO-RUBBER MIC	GH73-08425A
RMO-RUBBER SCREW	GH73-08831A
RMO RUBBER-CHIP	GH73-10900A
MPR-CONN REMOVLA TAPE	GH74-04200A
MPR-TAPE MAIN KEY SOLDERING	GH74-22250A
MPR-INSU TAPE TOUCH CONN	GH74-27252A
MPR-SPONGE BATT	GH74-27787A
MPR-SPONGE MIC	GH74-27788A
TAPE-SPK CONN	GH74-33771A
TAPE-SLIDE CONN 2	GH74-33773A
TAPE ELEC	GH74-33928A
TAPE ELEC	GH74-33929A
TAPE INSU-SUB FPCB	GH74-34636A
TAPE INSU	GH74-34638A
TAPE-ABSORBER CHIP	GH74-34639A
VINYL-BOHO WINDOW MAIN END	GH74-34806A
SPONGE	GH74-34853A
TAPE ELEC	GH74-34894A
PBA MAIN-IN HOUSE	GH92-03339A
ELA UNIT-WEP210, EBONY GRAY(EU	GH96-02761A
ASSY CASE-UPPER	GH98-02765D
ASSY CASE-LOWER	GH98-02766C

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6. Electrical Parts List

Design LOC	Description	SEC CODE	STATUS
ANT101	ANTENNA-CHIP	4202-001254	SA
ANT102	ANTENNA-CHIP	4202-001255	SA
BAT400	BATTERY-LI(2ND)	4302-001181	SA
BTC600	HEADER-BATTERY	3711-006217	SA
C100	C-CER,CHIP	2203-000233	SA
C101	C-CER,CHIP	2203-005281	SA
C101	C-CER,CHIP	2203-006824	SA
C102	C-CER,CHIP	2203-001385	SA
C102	C-CER,CHIP	2203-006194	SA
C103	C-CER,CHIP	2203-002982	SA
C103	C-CER,CHIP	2203-005281	SA
C104	C-CER,CHIP	2203-002982	SA
C104	C-CER,CHIP	2203-005281	SA
C105	C-CER,CHIP	2203-005281	SA
C105	C-CER,CHIP	2203-005729	SA
C106	C-CER,CHIP	2203-005446	SA
C106	C-CER,CHIP	2203-006647	SA
C107	C-CER,CHIP	2203-000278	SA
C107	C-CER,CHIP	2203-006647	SA
C108	C-CER,CHIP	2203-000812	SA
C108	C-CER,CHIP	2203-006824	SA
C109	C-CER,CHIP	2203-005736	SA
C109	C-CER,CHIP	2203-006647	SA
C110	C-CER,CHIP	2203-005729	SA
C110	C-CER,CHIP	2203-005736	SA
C111	C-CER,CHIP	2203-005446	SA
C111	C-CER,CHIP	2203-006194	SA
C112	C-CER,CHIP	2203-000254	SA
C112	C-CER,CHIP	2203-005736	SA
C113	C-TA,CHIP	2404-001496	SA
C114	C-CER,CHIP	2203-000812	SA
C114	C-CER,CHIP	2203-006838	SA
C115	C-CER,CHIP	2203-001385	SA
C116	C-CER,CHIP	2203-000628	SA
C117	C-CER,CHIP	2203-005281	SA
C117	C-CER,CHIP	2203-005288	SA
C118	C-CER,CHIP	2203-002668	SA
C119	C-CER,CHIP	2203-005288	SA
C119	C-CER,CHIP	2203-006439	SNA
C120	C-CER,CHIP	2203-000330	SA
C120	C-CER,CHIP	2203-006305	SA
C121	C-CER,CHIP	2203-002709	SA
C122	C-CER,CHIP	2203-006305	SA
C123	C-CER,CHIP	2203-000233	SA
C123	C-CER,CHIP	2203-006260	SA
C124	C-CER,CHIP	2203-006562	SA
C125	C-CER,CHIP	2203-006562	SA
C126	C-CER,CHIP	2203-006048	SA
C127	C-CER,CHIP	2203-006994	SA
C128	C-CER,CHIP	2203-005482	SA
C129	C-CER,CHIP	2203-002709	SA
C130	C-CER,CHIP	2203-006838	SA
C131	C-CER,CHIP	2203-000438	SA
C132	C-CER,CHIP	2203-006423	SA
C133	C-CER,CHIP	2203-006423	SA
C134	C-CER,CHIP	2203-000438	SA

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Design LOC	Description	SEC CODE	STATUS
C135	C-CER,CHIP	2203-000438	SA
C136	C-CER,CHIP	2203-002668	SA
C137	C-CER,CHIP	2203-006838	SA
C138	C-CER,CHIP	2203-006423	SA
C139	C-CER,CHIP	2203-000278	SA
C140	C-CER,CHIP	2203-006842	SA
C200	C-CER,CHIP	2203-005482	SA
C201	C-CER,CHIP	2203-000812	SA
C202	C-CER,CHIP	2203-005482	SA
C203	C-CER,CHIP	2203-005482	SA
C204	C-CER,CHIP	2203-005482	SA
C205	C-CER,CHIP	2203-005482	SA
C206	C-CER,CHIP	2203-005482	SA
C207	C-CER,CHIP	2203-006423	SA
C208	C-CER,CHIP	2203-005482	SA
C209	C-CER,CHIP	2203-000254	SA
C210	C-CER,CHIP	2203-005482	SA
C211	C-CER,CHIP	2203-005682	SA
C212	C-CER,CHIP	2203-006423	SA
C213	C-CER,CHIP	2203-006423	SA
C214	C-CER,CHIP	2203-006399	SA
C215	C-CER,CHIP	2203-006423	SA
C216	C-CER,CHIP	2203-006423	SA
C217	C-CER,CHIP	2203-006399	SA
C218	C-CER,CHIP	2203-006562	SA
C219	C-CER,CHIP	2203-000425	SA
C220	C-CER,CHIP	2203-000425	SA
C300	C-CER,CHIP	2203-006423	SA
C301	C-CER,CHIP	2203-006423	SA
C302	C-CER,CHIP	2203-006423	SA
C303	C-CER,CHIP	2203-006423	SA
C304	C-CER,CHIP	2203-006423	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	2203-006423	SA
C309	C-CER,CHIP	2203-006562	SA
C310	C-CER,CHIP	2203-006562	SA
C312	C-CER,CHIP	2203-006048	SA
C313	C-CER,CHIP	2203-006048	SA
C314	C-CER,CHIP	2203-006048	SA
C315	C-CER,CHIP	2203-006048	SA
C316	C-CER,CHIP	2203-006423	SA
C317	C-CER,CHIP	2203-006423	SA
C318	C-CER,CHIP	2203-006423	SA
C319	C-CER,CHIP	2203-006423	SA
C320	C-CER,CHIP	2203-006423	SA
C321	C-CER,CHIP	2203-006324	SA
C322	C-CER,CHIP	2203-006208	SA
C323	C-CER,CHIP	2203-006048	SA
C324	C-CER,CHIP	2203-006260	SA
C325	C-CER,CHIP	2203-006121	SA
C326	C-CER,CHIP	2203-000330	SA
C327	C-CER,CHIP	2203-000330	SA
C400	C-CER,CHIP	2203-006257	SA
C401	C-CER,CHIP	2203-006208	SA

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Design LOC	Description	SEC CODE	STATUS
C402	C-CER,CHIP	2203-006257	SA
C403	C-CER,CHIP	2203-006257	SA
C404	C-CER,CHIP	2203-006208	SA
C405	C-CER,CHIP	2203-006257	SA
C406	C-CER,CHIP	2203-006208	SA
C407	C-CER,CHIP	2203-006257	SA
C408	C-CER,CHIP	2203-006257	SA
C409	C-CER,CHIP	2203-000233	SA
C410	C-CER,CHIP	2203-000425	SA
C411	C-CER,CHIP	2203-006348	SA
C412	C-CER,CHIP	2203-006562	SA
C413	C-CER,CHIP	2203-000425	SA
C414	C-CER,CHIP	2203-005482	SA
C418	C-CER,CHIP	2203-006257	SA
C419	C-CER,CHIP	2203-006324	SA
C420	C-CER,CHIP	2203-005482	SA
C421	C-CER,CHIP	2203-006208	SA
C422	C-CER,CHIP	2203-006562	SA
C423	C-CER,CHIP	2203-006201	SA
C424	C-CER,CHIP	2203-006361	SA
C425	C-CER,CHIP	2203-006474	SA
C426	C-CER,CHIP	2203-006562	SA
C427	C-CER,CHIP	2203-006562	SA
C501	C-CER,CHIP	2203-005482	SA
C502	C-CER,CHIP	2203-005482	SA
C504	C-CER,CHIP	2203-006399	SA
C505	C-CER,CHIP	2203-006399	SA
C506	C-CER,CHIP	2203-005993	SA
C507	C-CER,CHIP	2203-006399	SA
C508	C-CER,CHIP	2203-005993	SA
C509	C-CER,CHIP	2203-006399	SA
C510	C-CER,CHIP	2203-006562	SA
C511	C-CER,CHIP	2203-006562	SA
C512	C-CER,CHIP	2203-005482	SA
C514	C-CER,CHIP	2203-005482	SA
C515	C-CER,CHIP	2203-005482	SA
C516	C-CER,CHIP	2203-000386	SA
C517	C-CER,CHIP	2203-000386	SA
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C521	C-CER,CHIP	2203-005482	SA
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C526	C-CER,CHIP	2203-006260	SA
C527	C-CER,CHIP	2203-006260	SA
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C601	C-CER,CHIP	2203-001437	SA
C602	C-CER,CHIP	2203-001259	SA
C603	C-CER,CHIP	2203-000995	SA
C604	C-CER,CHIP	2203-001437	SA
C605	C-CER,CHIP	2203-000425	SA
C609	C-CER,CHIP	2203-006423	SA
C610	C-CER,CHIP	2203-006896	SA
C612	C-CER,CHIP	2203-005061	SA
C614	C-CER,CHIP	2203-005482	SA

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Design LOC	Description	SEC CODE	STATUS
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C619	C-CER,CHIP	2203-000995	SA
C620	C-CER,CHIP	2203-000679	SA
C702	C-CER,CHIP	2203-000386	SA
C704	C-CER,CHIP	2203-006562	SA
C705	C-CER,CHIP	2203-006562	SA
C706	C-CER,CHIP	2203-006399	SA
C707	C-CER,CHIP	2203-000812	SA
C708	C-CER,CHIP	2203-005682	SA
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C711	C-CER,CHIP	2203-005682	SA
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C715	C-CER,CHIP	2203-006562	SA
C717	C-CER,CHIP	2203-005682	SA
C718	C-CER,CHIP	2203-005682	SA
C719	C-CER,CHIP	2203-005682	SA
C720	C-CER,CHIP	2203-005682	SA
C721	C-CER,CHIP	2203-005682	SA
C722	C-CER,CHIP	2203-005682	SA
C723	C-CER,CHIP	2203-005682	SA
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C725	C-CER,CHIP	2203-005682	SA
C726	C-CER,CHIP	2203-005682	SA
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C732	C-CER,CHIP	2203-005682	SA
CD700	CONNECTOR-CARD EDGE	3709-001464	SA
CN100	CONNECTOR-COAXIAL	3705-001358	SA
CON101	JACK-DC POWER	3722-002433	SA
D101	DIODE-ZENER	0403-001547	SA
D600	DIODE-TVS	0406-001208	SA
D601	DIODE-TVS	0406-001208	SA
D602	DIODE-TVS	0406-001231	SA
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D704	DIODE-TVS	0406-001223	SA
D705	DIODE-TVS	0406-001223	SA
F100	DUPLEXER-FEM	2911-000076	SA
F101	FILTER-LC	2909-001279	SA
F101	FILTER-LC	2909-001283	SA
F600	FILTER-EMI SMD	2901-001408	SA
HDC700	HEADER-BOARD TO BOARD	3711-006326	SA
HDC701	HEADER-BOARD TO BOARD	3711-006593	SA
IFC600	SOCKET-INTERFACE	3710-002523	SA

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L102	INDUCTOR-SMD	2703-003095	SA
L102	ICT-ON-BOARD CLIP	GH70-02367A	SA
L103	INDUCTOR-SMD	2703-002795	SNA
L103	ICT-ON-BOARD CLIP	GH70-02367A	SA
L104	INDUCTOR-SMD	2703-002649	SNA
L104	ICT-ON-BOARD CLIP	GH70-02367A	SA
L105	ICT-ON-BOARD CLIP	GH70-02367A	SA
L106	INDUCTOR-SMD	2703-002208	SA
L107	INDUCTOR-SMD	2703-002281	SA
L108	INDUCTOR-SMD	2703-002314	SA
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L112	INDUCTOR-SMD	2703-002608	SA
L113	INDUCTOR-SMD	2703-002608	SA
L115	BEAD-SMD	3301-001534	SA
L116	BEAD-SMD	3301-001659	SA
L117	INDUCTOR-SMD	2703-002198	SA
L300	INDUCTOR-SMD	2703-002866	SA
L301	INDUCTOR-SMD	2703-001231	SNA
L401	INDUCTOR-SMD	2703-002861	SA
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L605	INDUCTOR-SMD	2703-002910	SA
L606	INDUCTOR-SMD	2703-001673	SA
OSC100	CRYSTAL-SMD	2801-004426	SA
OSC101	CRYSTAL-SMD	2801-004568	SA
OSC300	CRYSTAL-SMD	2801-004285	SA
OSC400	CRYSTAL-SMD	2801-004339	SA
PAM500	IC-AUDIO AMP	1201-002492	SA
PM400	IC-POWER SUPERVISOR	1203-004382	SA
Q100	FET-SILICON	0505-002088	SA
QCR05	SCREW-MACHINE	6001-001478	SA
QCR05	SCREW-MACHINE	6001-001478	SA
QCR05	SCREW-MACHINE	6001-001478	SA
QCR57	SCREW-MACHINE	6001-002001	SA
R100	R-CHIP	2007-000140	SA
R101	R-CHIP	2007-000566	SA
R101	R-CHIP	2007-008056	SA
R102	R-CHIP	2007-000143	SA
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R103	R-CHIP	2007-008516	SA
R104	R-CHIP	2007-000162	SA
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R106	R-CHIP	2007-007489	SA
R106	R-CHIP	2007-008516	SA

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Design LOC	Description	SEC CODE	STATUS
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R108	R-CHIP	2007-008056	SA
R109	R-CHIP	2007-000141	SA
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R112	R-CHIP	2007-003015	SA
R113	R-CHIP	2007-008516	SA
R115	R-CHIP	2007-000148	SA
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R207	R-CHIP	2007-008055	SA
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R212	R-CHIP	2007-000148	SA
R305	R-CHIP	2007-008045	SA
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R324	R-CHIP	2007-000162	SA
R325	R-CHIP	2007-007009	SA
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R400	R-CHIP	2007-007573	SA
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R410	R-CHIP	2007-001333	SA
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R414	R-CHIP	2007-002796	SA
R415	R-CHIP	2007-000162	SA
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R509	R-CHIP	2007-007528	SA
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R515	R-CHIP	2007-002796	SA
R600	R-CHIP	2007-009170	SA
R601	R-CHIP	2007-007107	SA
R602	R-CHIP	2007-009112	SNA
R603	R-CHIP	2007-007741	SA
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R609	R-CHIP	2007-000162	SA
R610	R-CHIP	2007-000162	SA
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R612	R-CHIP	2007-000148	SA
R700	R-CHIP	2007-009112	SNA
R701	R-CHIP	2007-000159	SA
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TA400	C-TA,CHIP	2404-001381	SA
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TA500	C-TA,CHIP	2404-001396	SA
TA501	C-TA,CHIP	2404-001396	SA
TA502	C-TA,CHIP	2404-001430	SA
TA503	C-TA,CHIP	2404-001226	SA
TA504	C-TA,CHIP	2404-001414	SA
TA505	C-TA,CHIP	2404-001225	SA
TA506	C-TA,CHIP	2404-001414	SA
TA507	C-TA,CHIP	2404-001225	SA
TA600	C-TA,CHIP	2404-001381	SA
TA601	C-TA,CHIP	2404-001381	SA
U100	IC-POWER AMP	1201-002423	SA
U101	IC-POSI.FIXED REG.	1203-003688	SA
U101	IC-DATA COMM./GEN.	1205-002748	SA
U102	IC-TRANSCEIVER	1205-003093	SA
U103	IC-CMOS LOGIC	0801-003012	SA
U104	IC-TRANSCEIVER	1205-002942	SA
U300	IC-POSI.FIXED REG.	1203-003737	SA
U301	IC-DC/DC CONVERTER	1203-004548	SA
U302	IC-ANALOG MULTIPLEX	1001-001472	SA

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Design LOC	Description	SEC CODE	STATUS
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U402	IC-POSI.FIXED REG.	1203-003737	SA
U500	IC-POSI.FIXED REG.	1203-003737	SA
U501	IC-ANALOG MULTIPLEX	1001-001447	SA
U503	IC-ANALOG MULTIPLEX	1001-001349	SA
U504	IC-ANALOG MULTIPLEX	1001-001447	SA
U600	IC-ANALOG SWITCH	1001-001394	SA
U601	IC-DEMODULATOR	1204-002688	SA
U700	IC-POSI.FIXED REG.	1203-003815	SA
UCD300	IC ASIC-SGHG600	GH13-00059A	SA
UCD500	IC-CODEC	1205-003214	SA
UCP200	IC-COMM. CONTROLLER	1205-003082	SA
UME200	IC-MCP	1108-000112	SA
UPL200	IC-CMOS LOGIC	0801-003022	SA
UPL700	FET-SILICON	0505-002111	SA
V601	VARISTOR	1405-001183	SA
VR101	VARISTOR	1405-001082	SA
VR102	VARISTOR	1405-001082	SA
VR103	VARISTOR	1405-001093	SA
VR104	VARISTOR	1405-001082	SA
VR105	VARISTOR	1405-001082	SA
VR106	VARISTOR	1405-001082	SA
VR107	VARISTOR	1405-001093	SA
VR110	VARISTOR	1405-001167	SA
VR600	THERMISTOR-NTC	1404-001221	SA
ZD101	DIODE-SCHOTTKY	0404-001172	SA
ZD600	DIODE-ZENER	0403-001547	SA
ZD601	DIODE-TVS	0406-001254	SA
ZD602	DIODE-TVS	0406-001267	SA
ZD603	DIODE-TVS	0406-001267	SA
ZD604	DIODE-TVS	0406-001223	SA
ZD605	DIODE-TVS	0406-001223	SA

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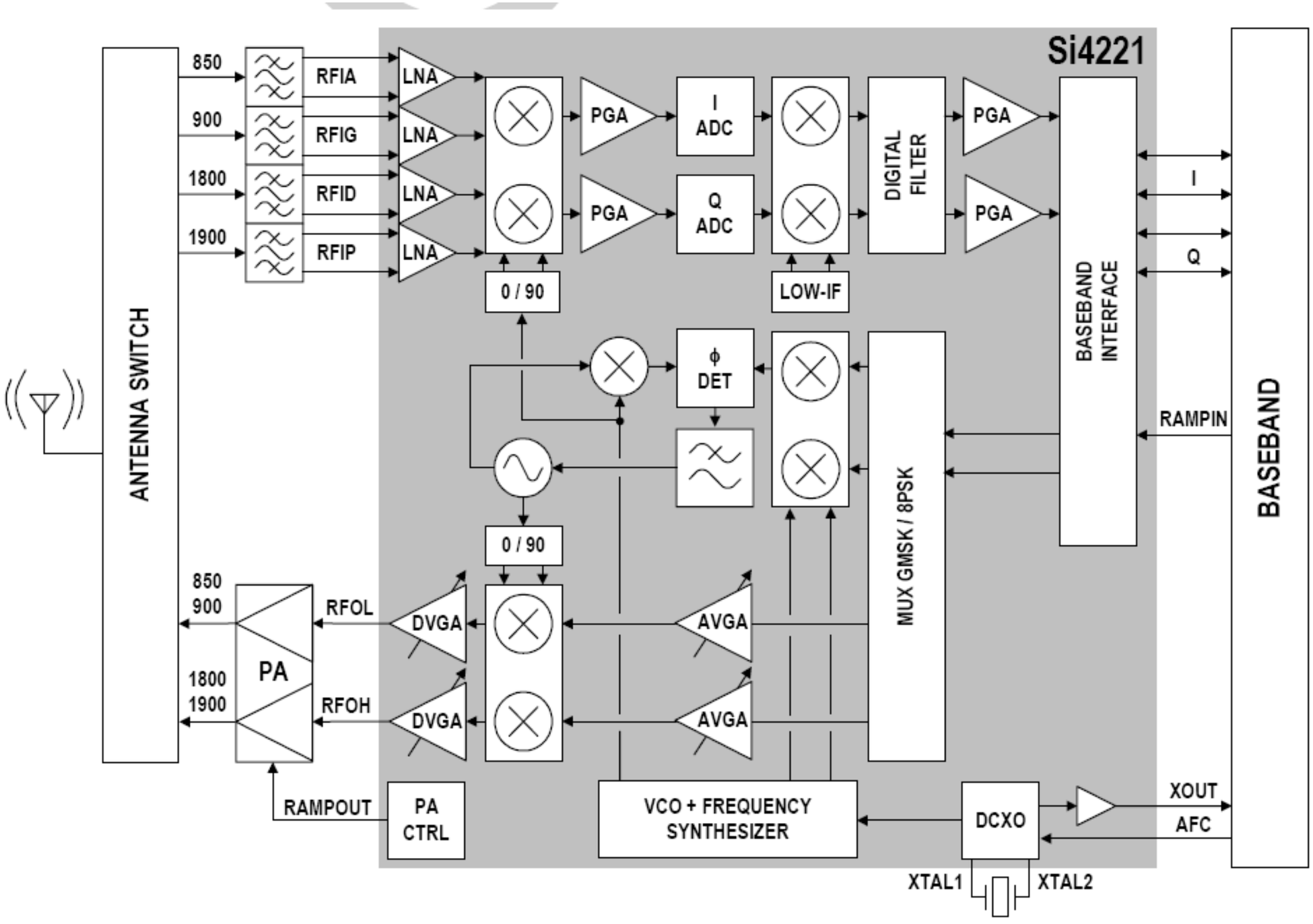
7. Block Diagrams

7-1. RF Solution Block Diagram



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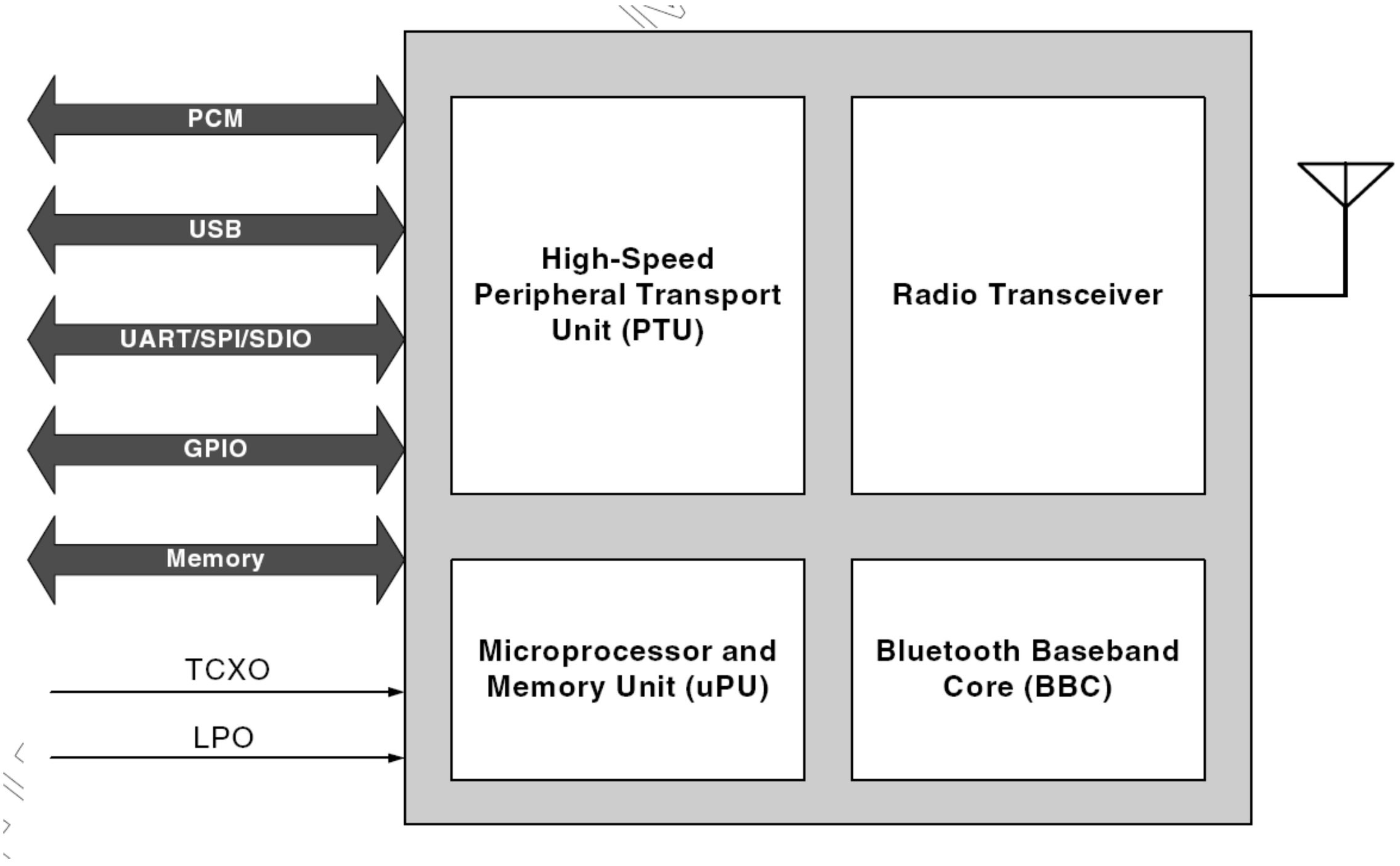
7-2. BT Solution Block Diagram



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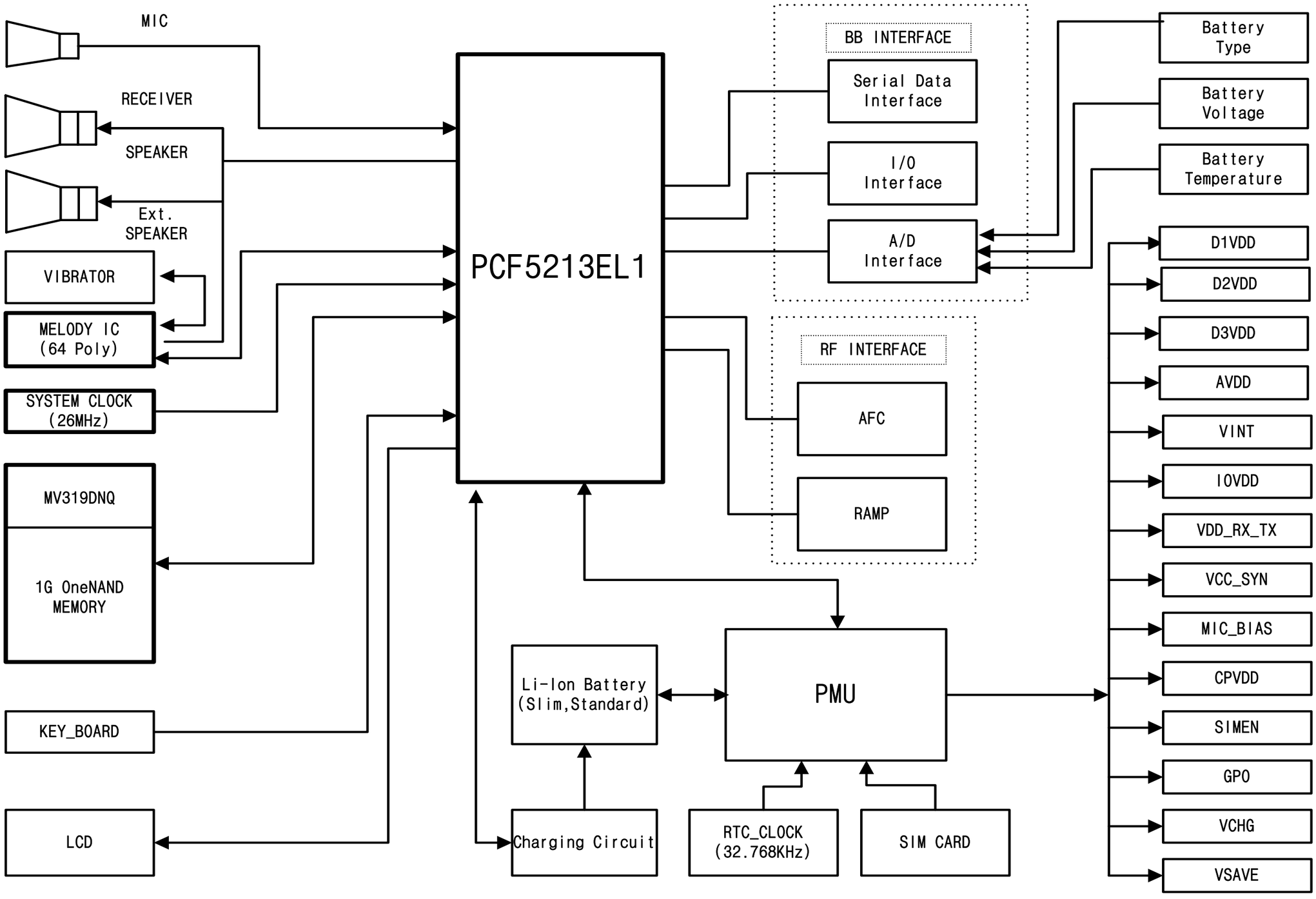
7-3. Base Band Solution Block Diagram



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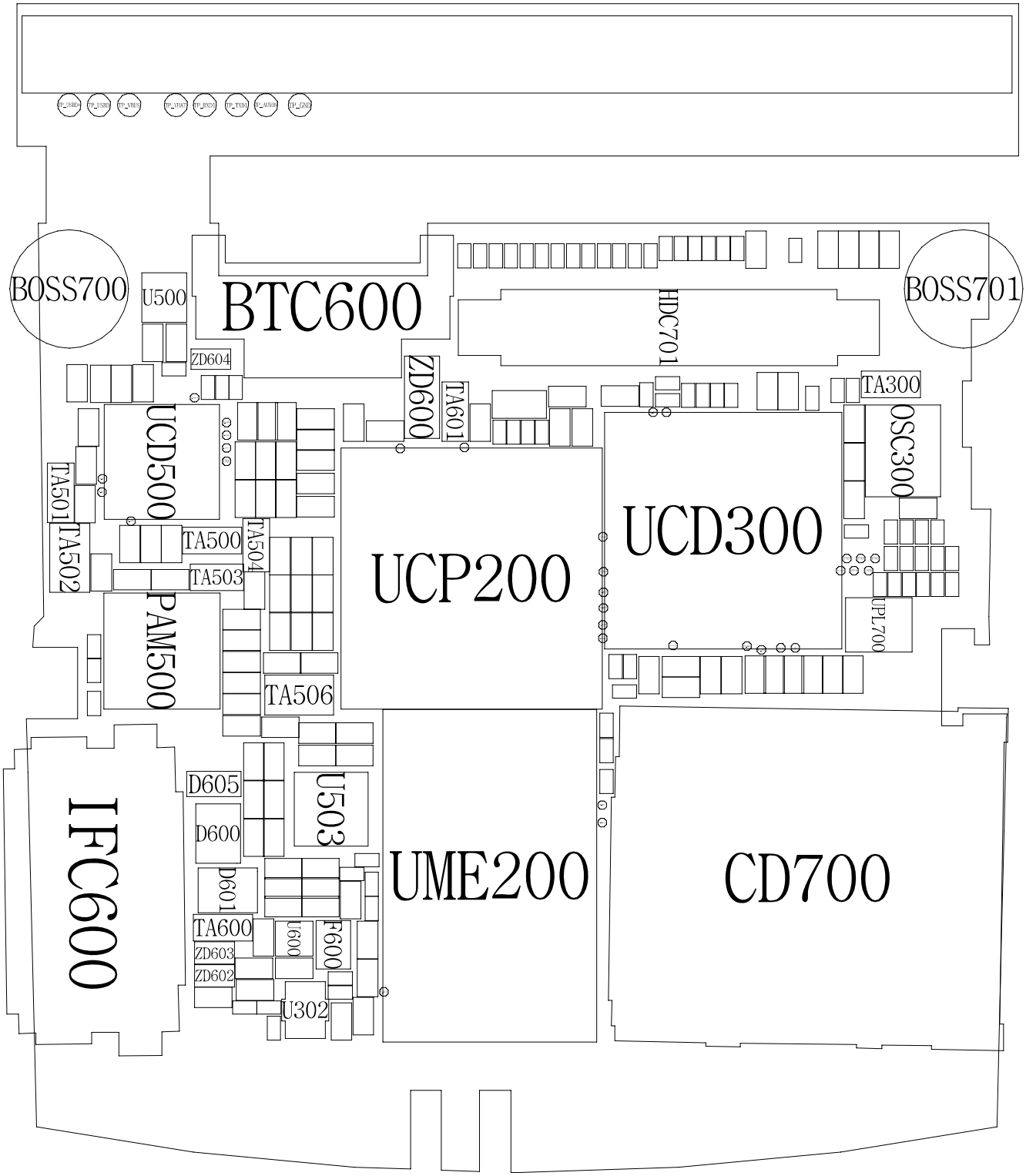
8. PCB Diagrams

Top



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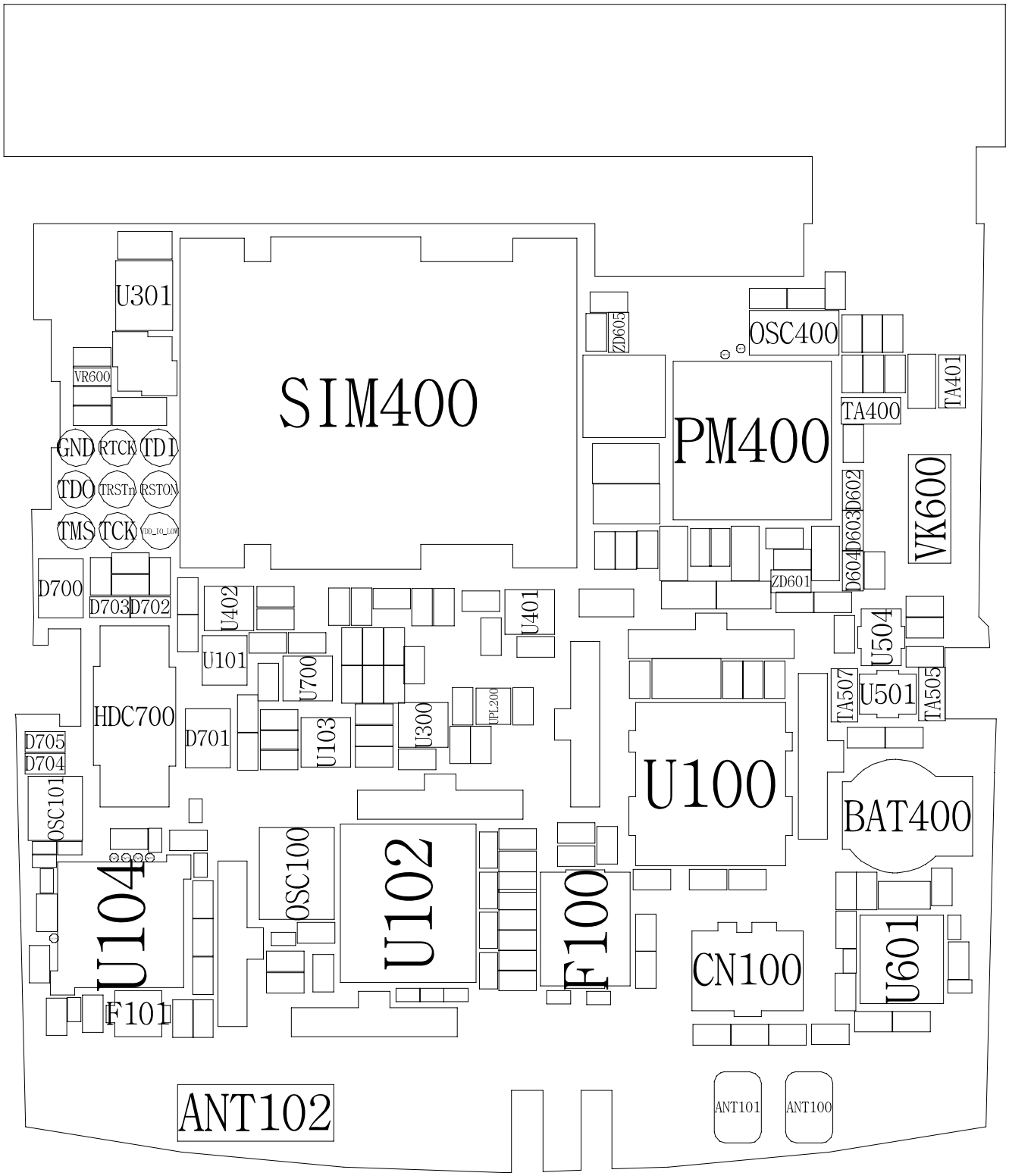

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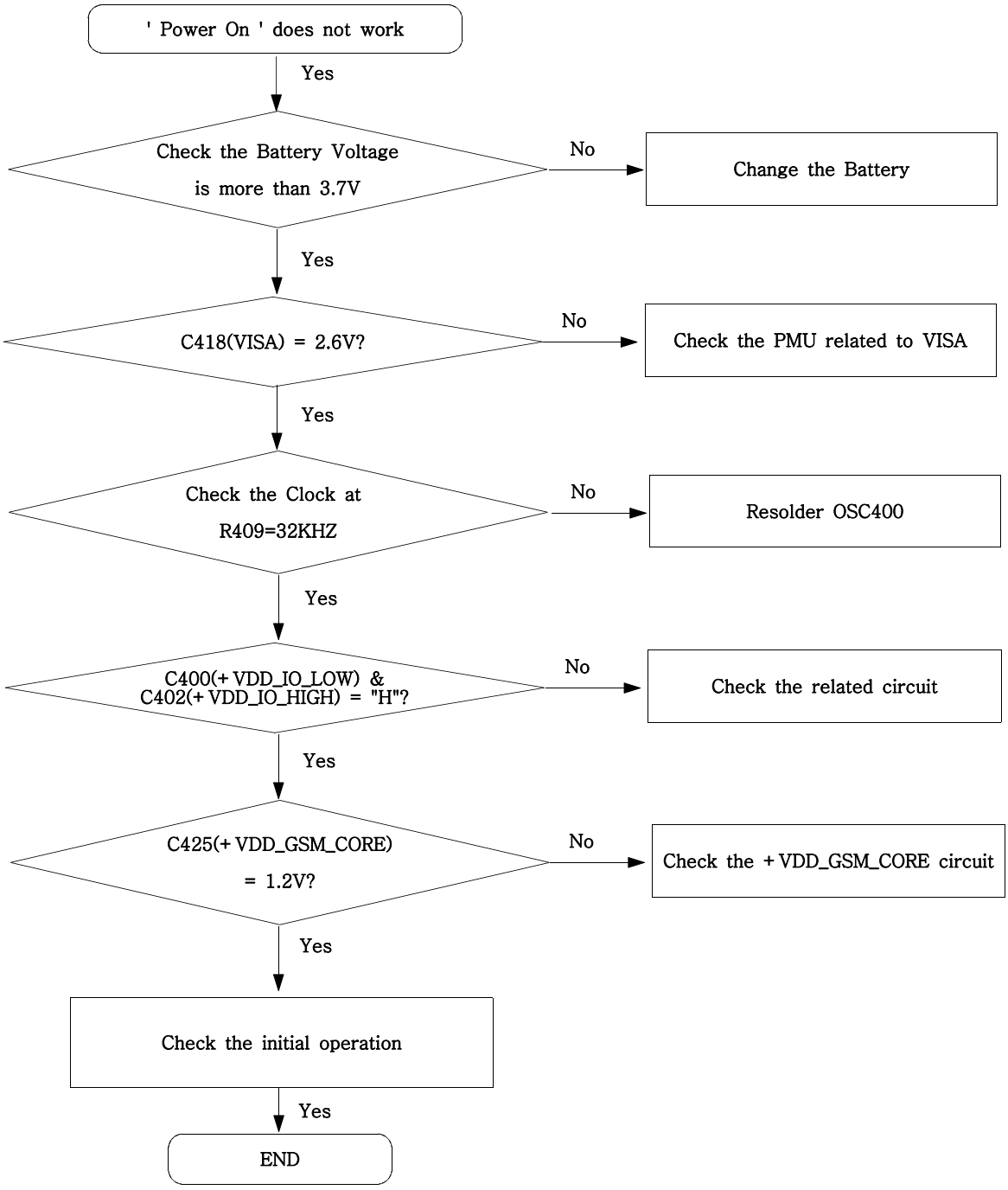
9. Flow Chart of Troubleshooting

9-1. Power On



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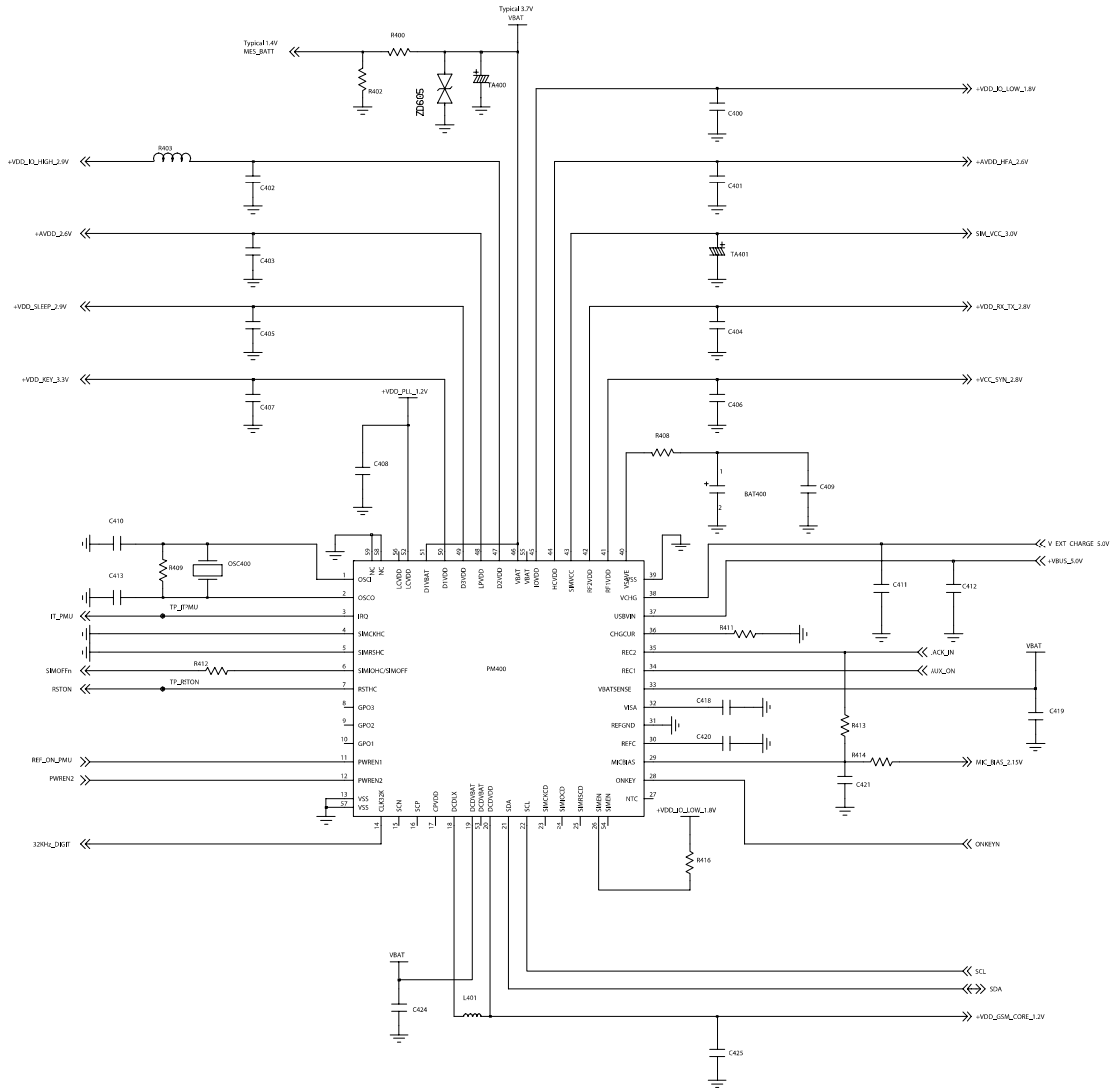

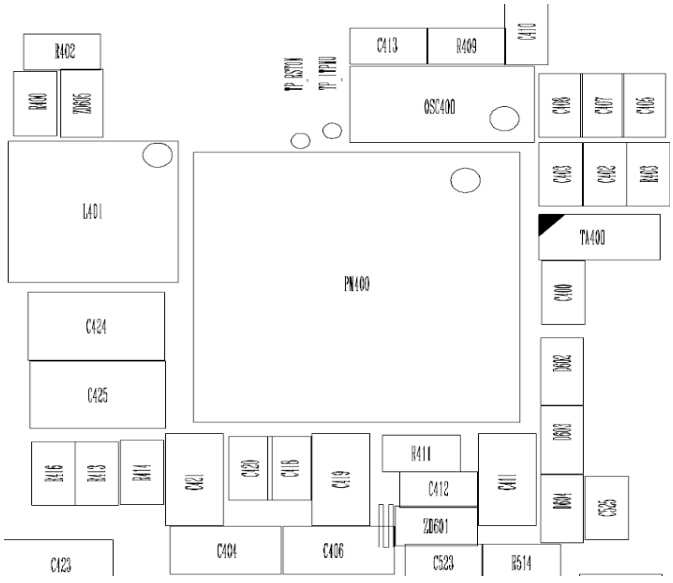

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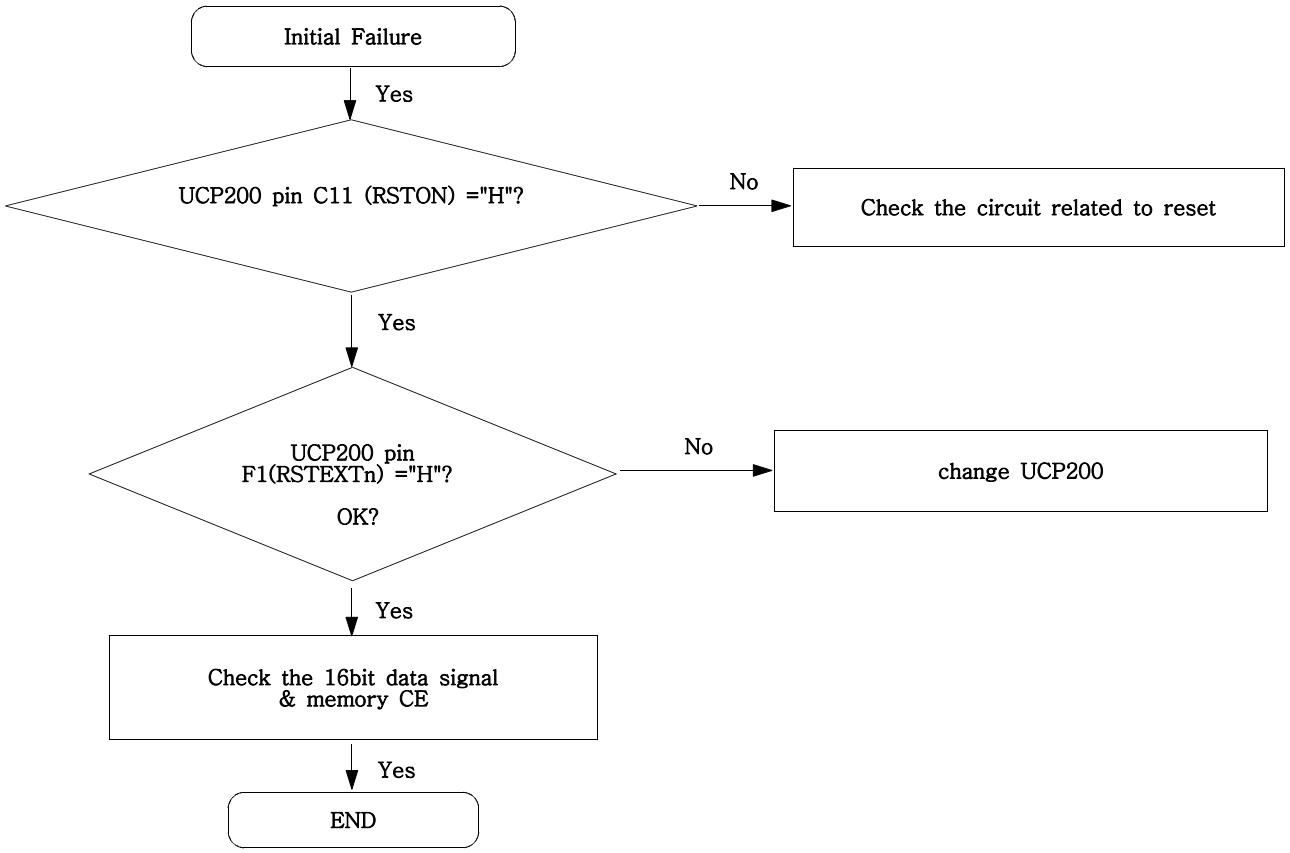
9-2. Initial



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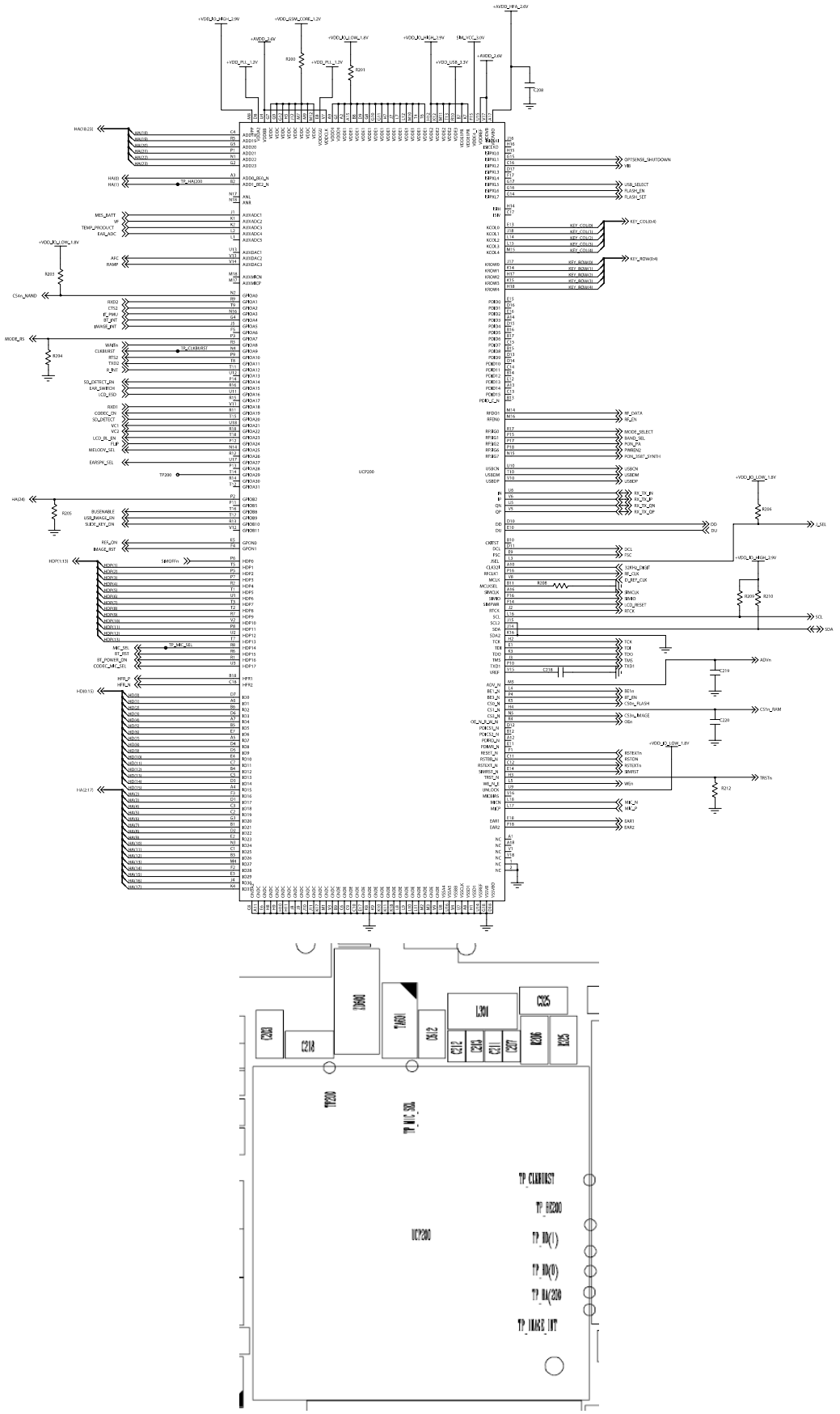

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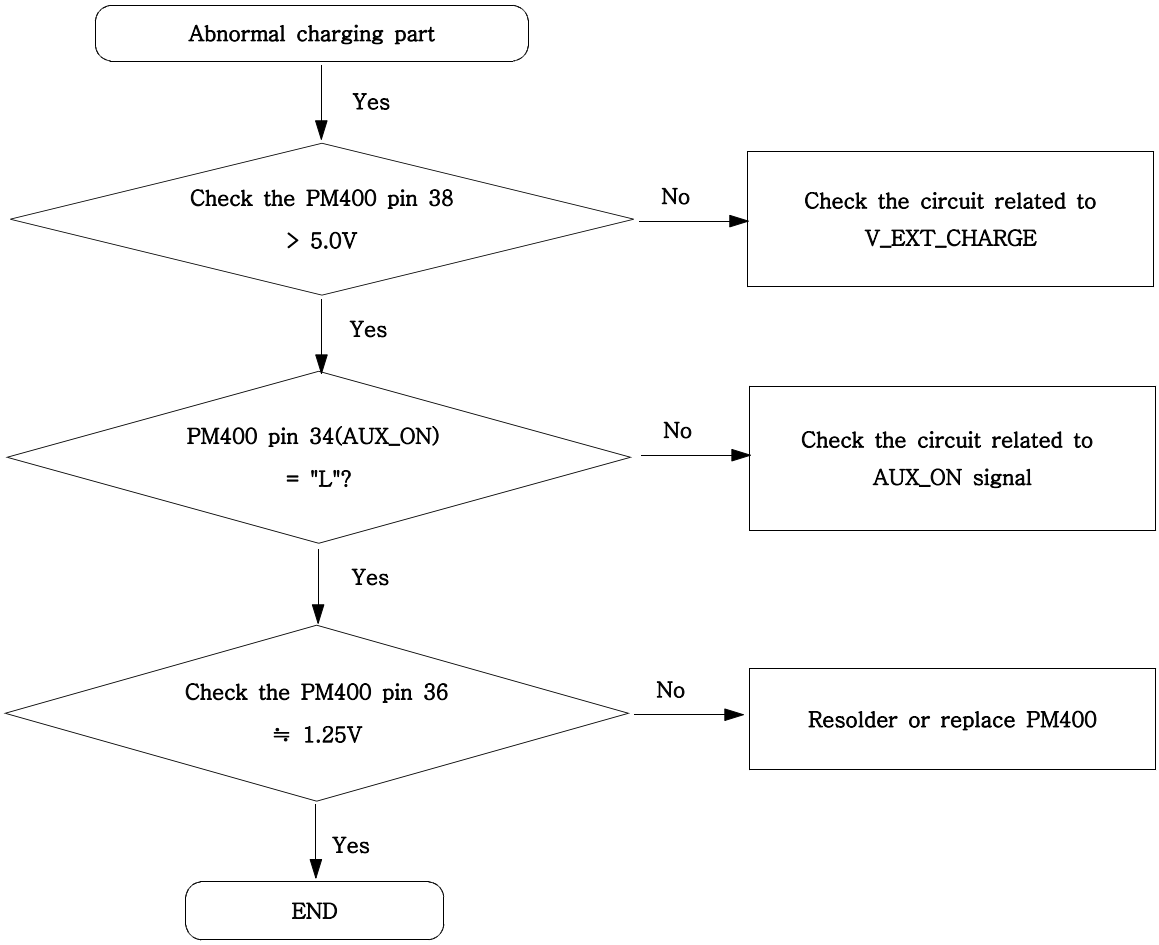
9-3. Charging Part



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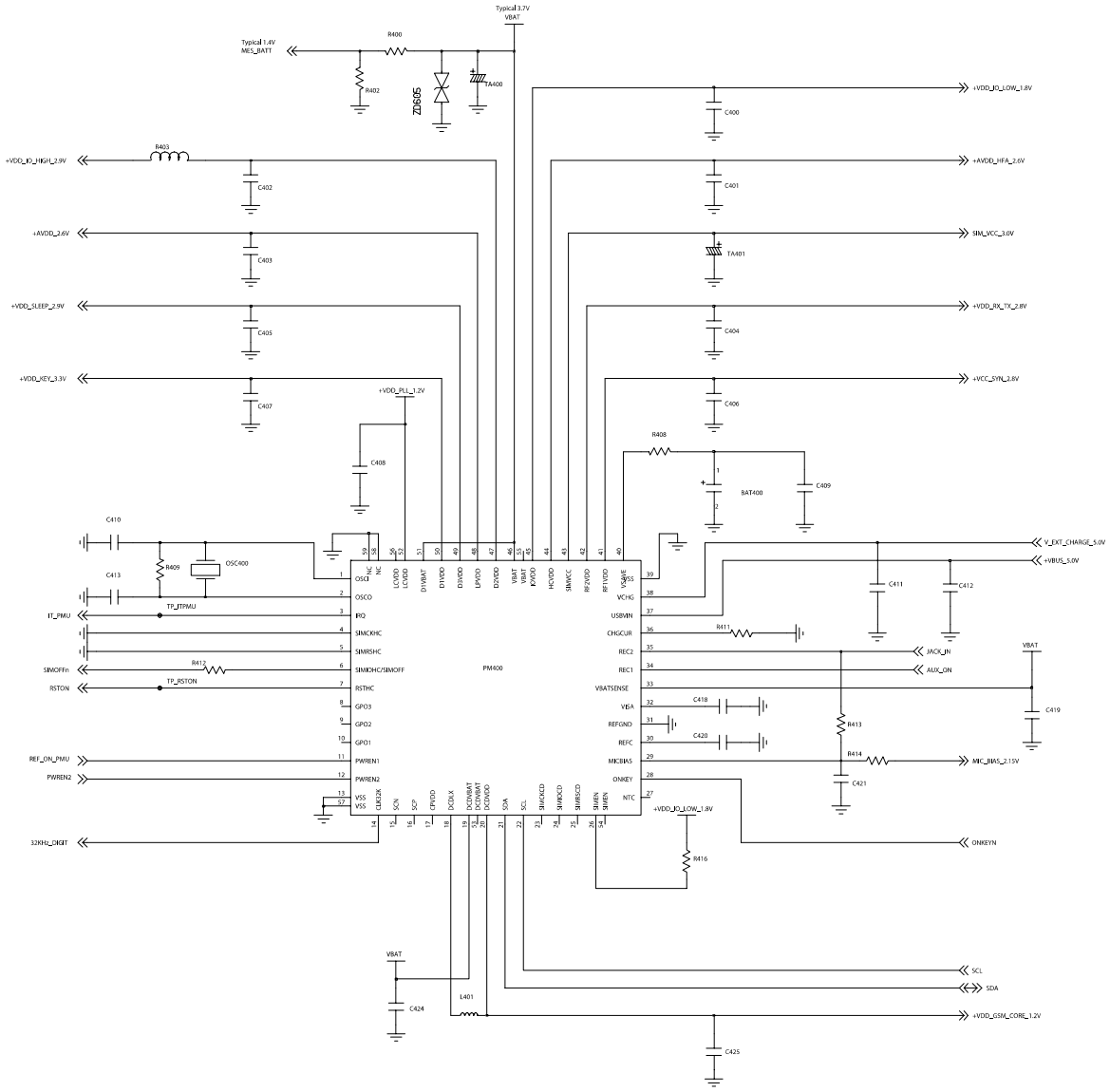

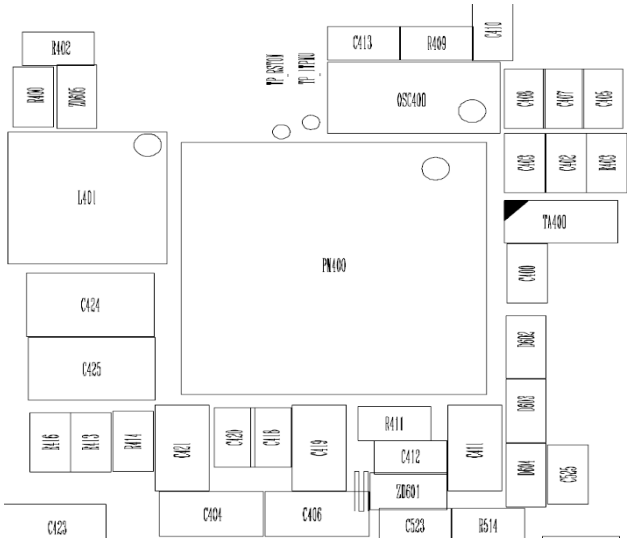

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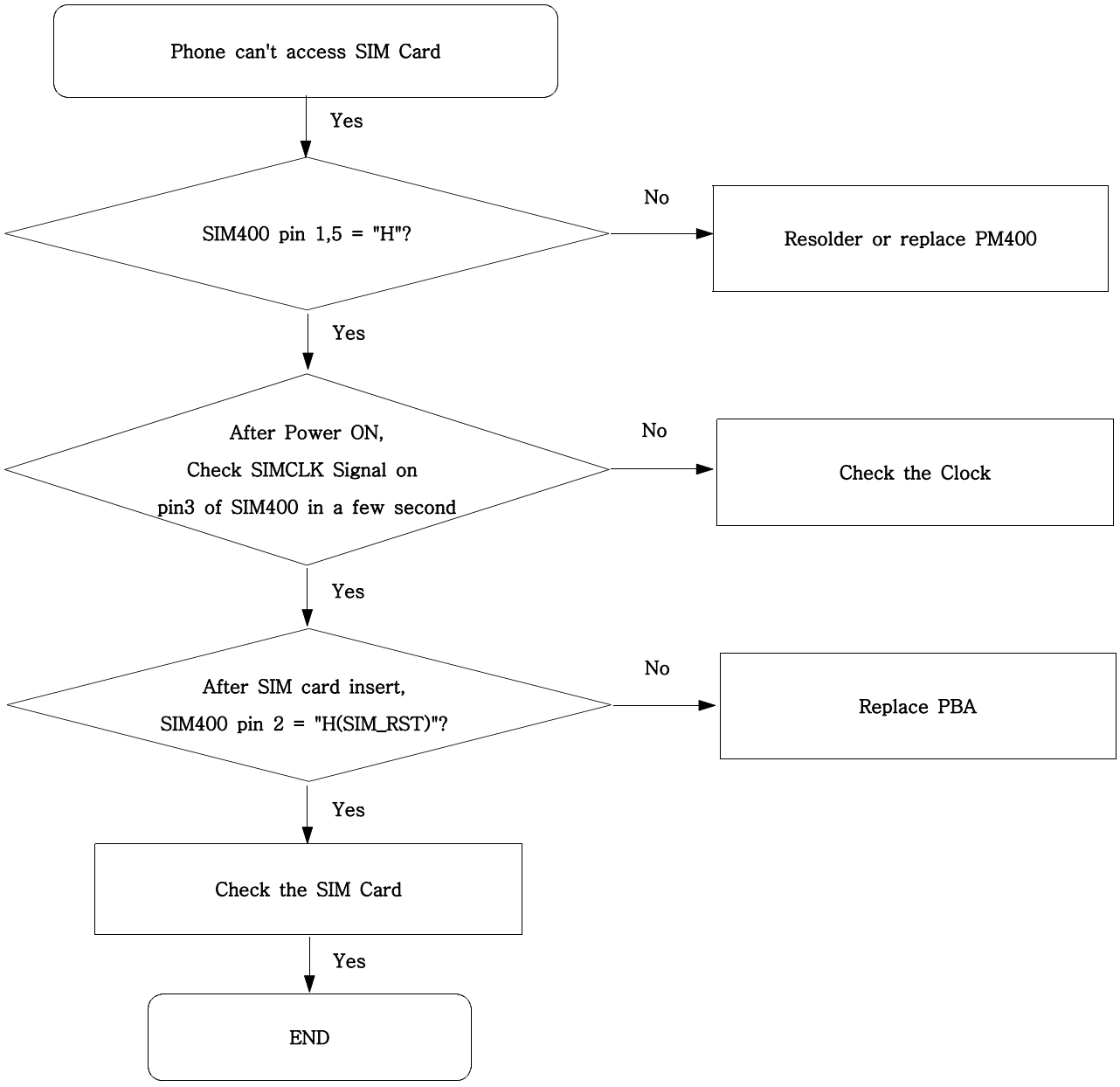
9-4. Sim Part



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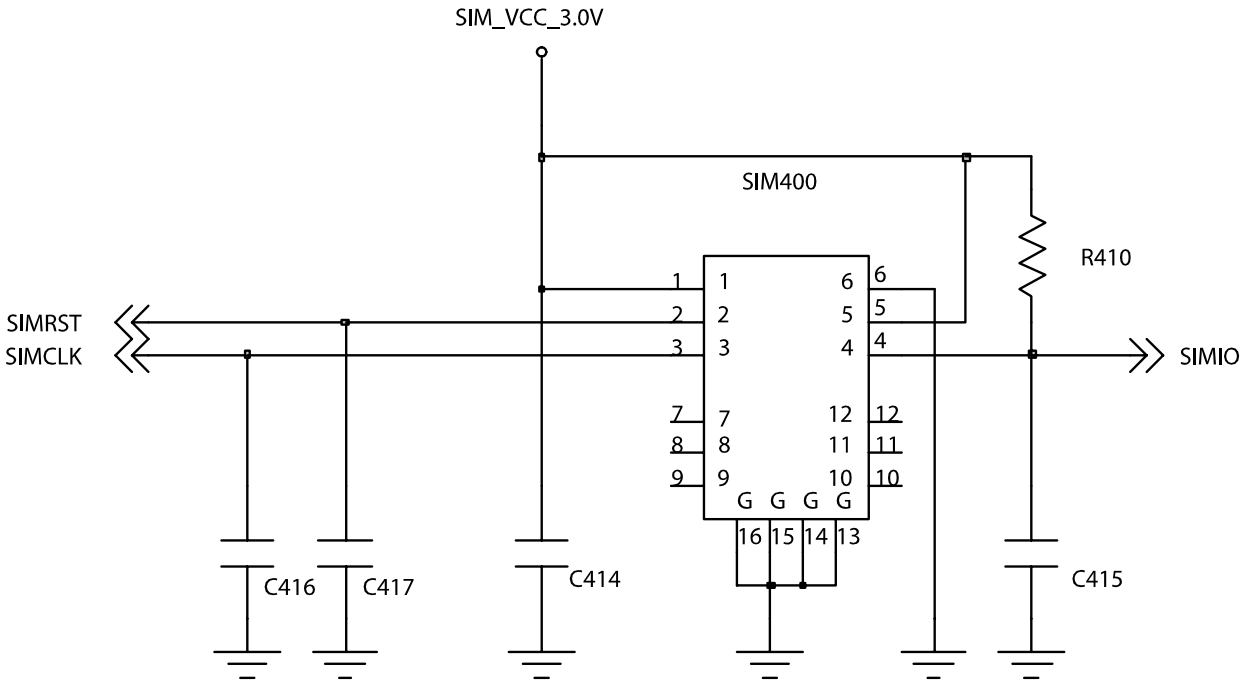

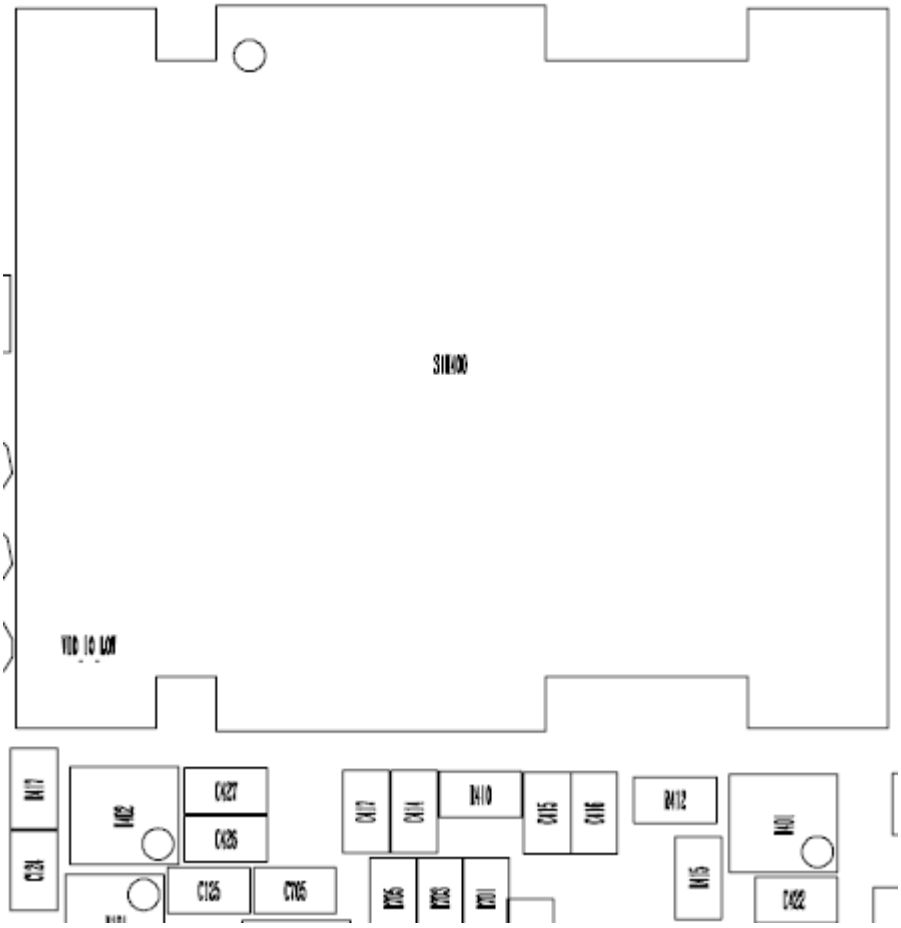

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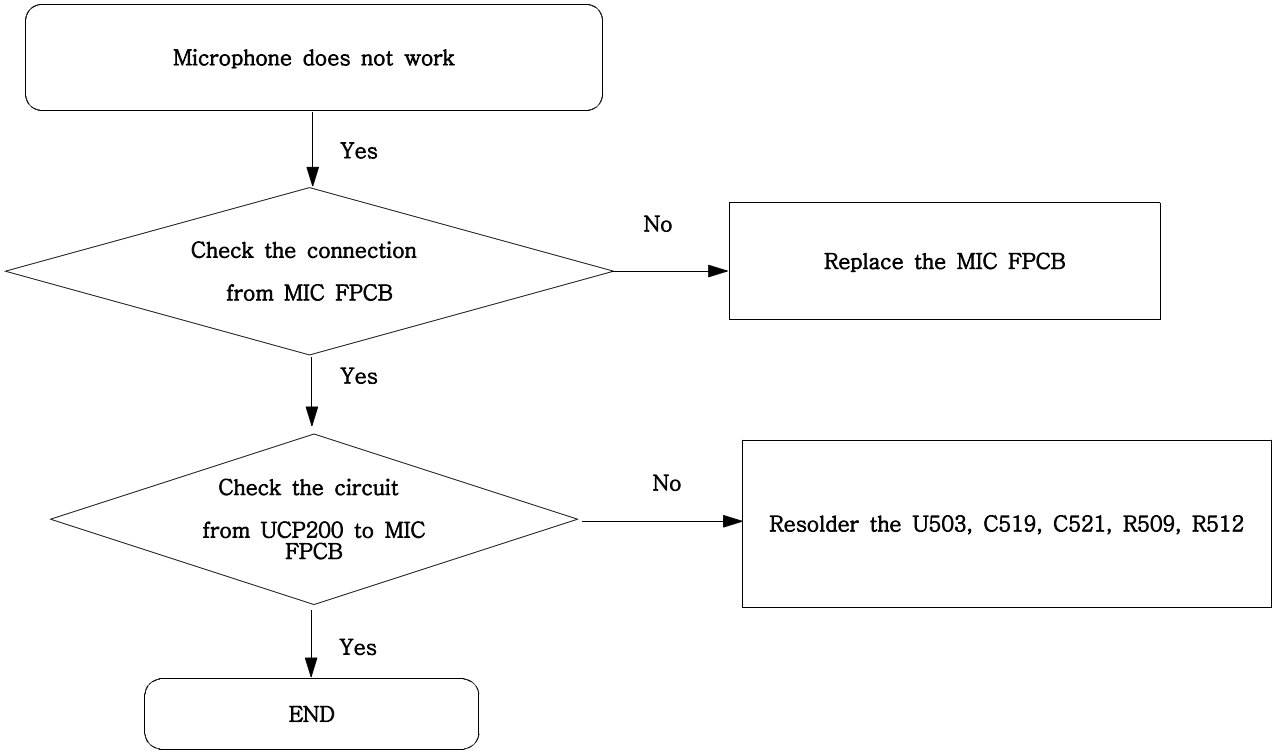
9-5. Microphone Part



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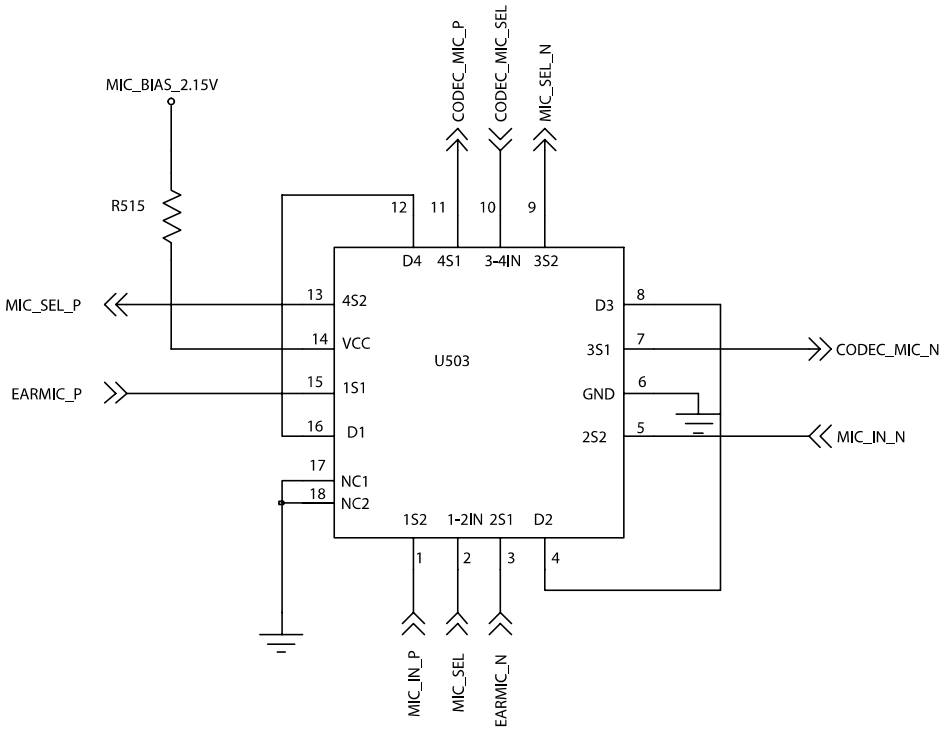

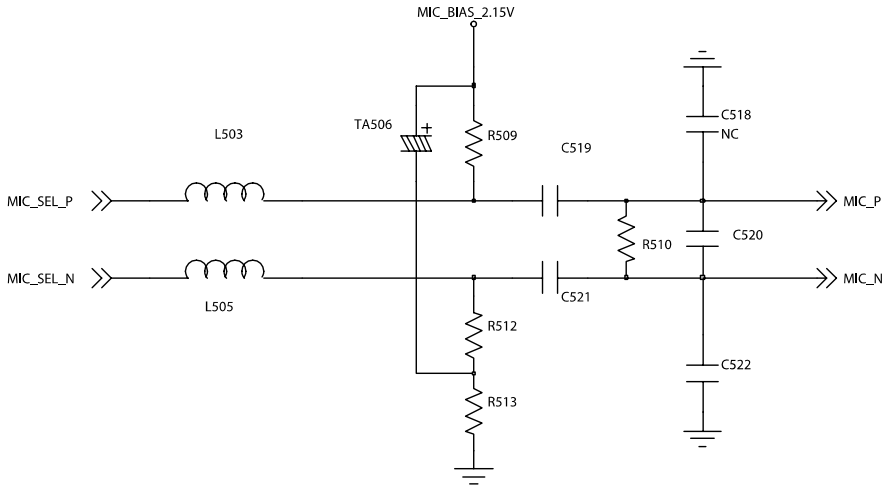

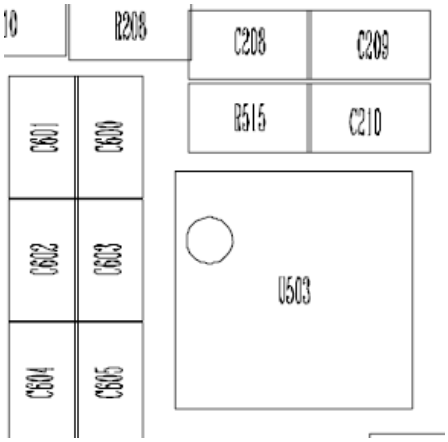

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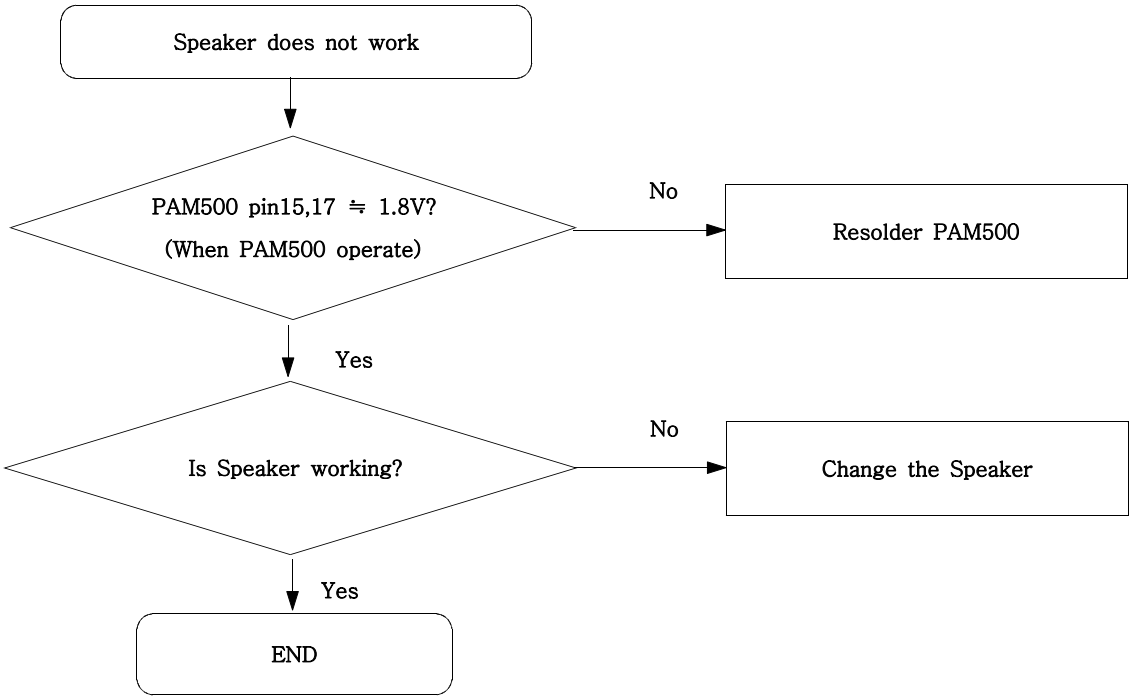
9-6. Speaker Part(Melody)



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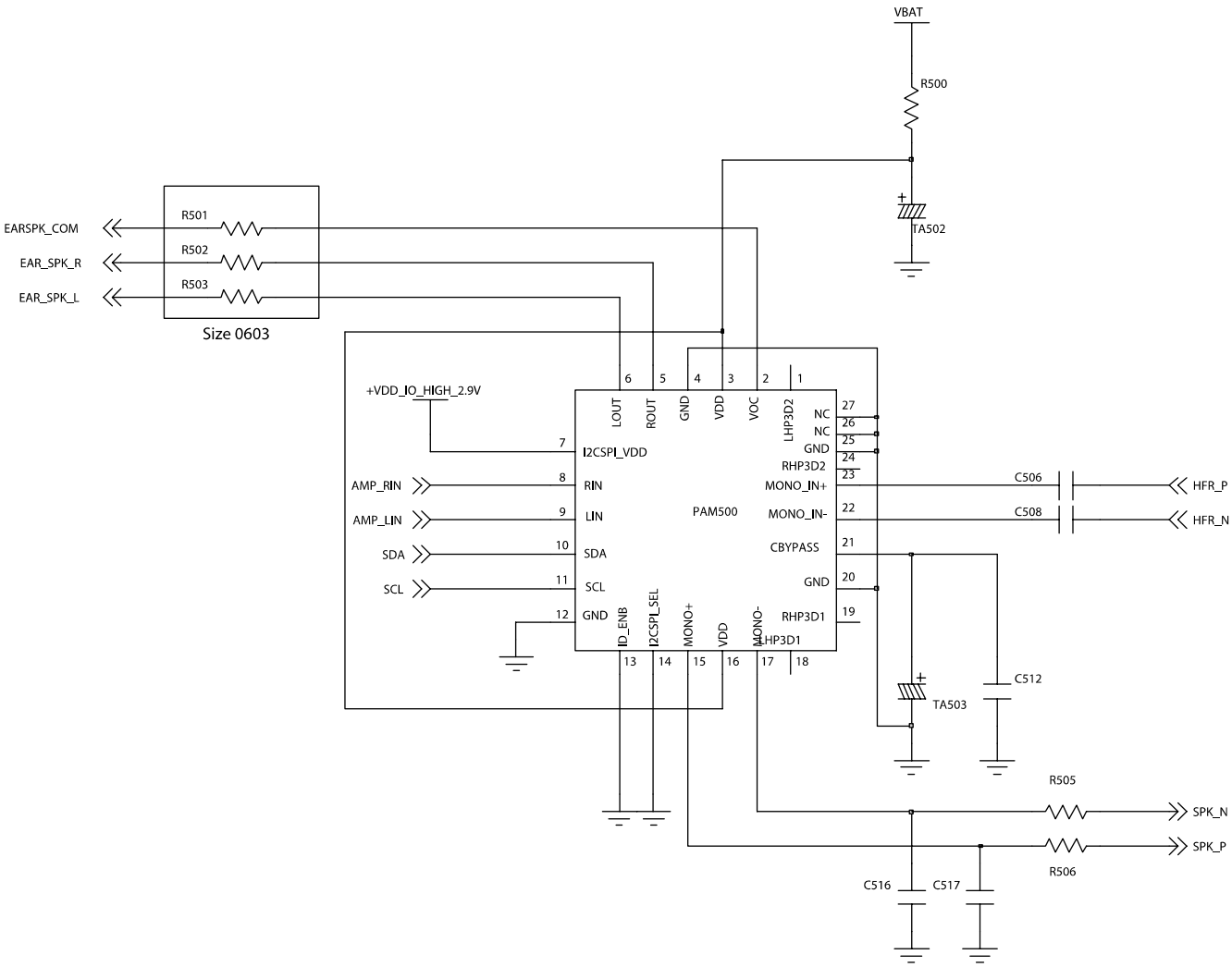

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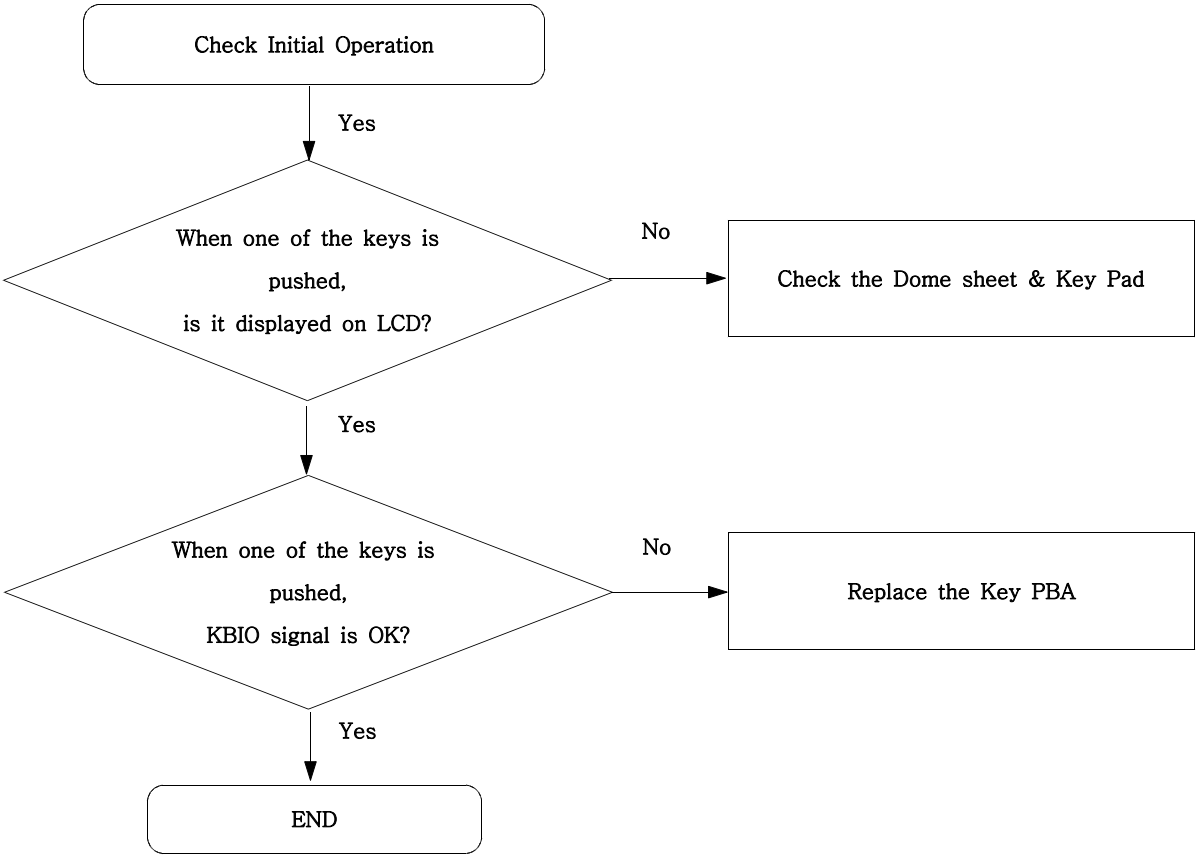
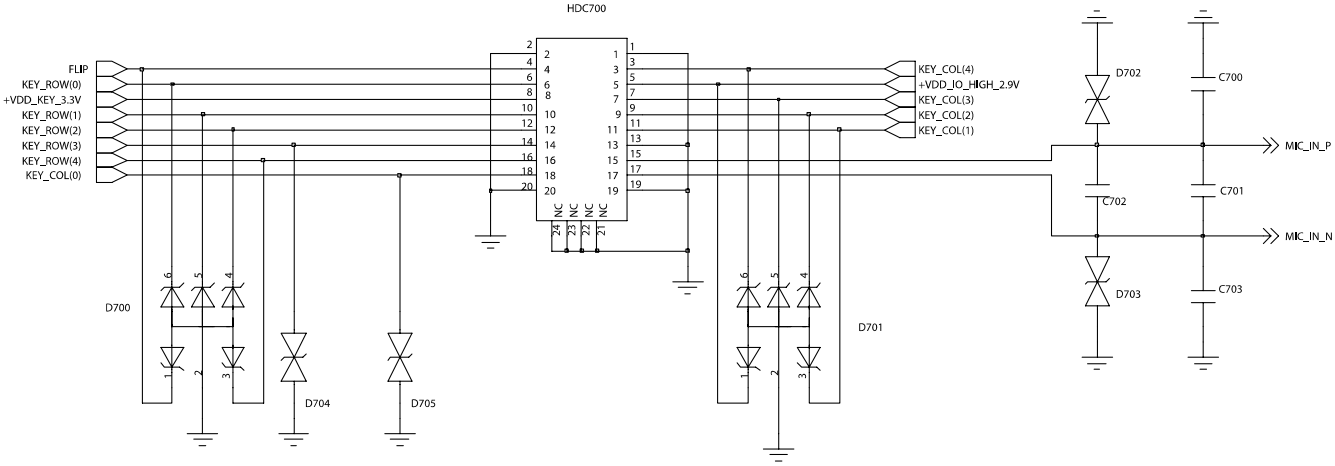
9-7. Key Data Input





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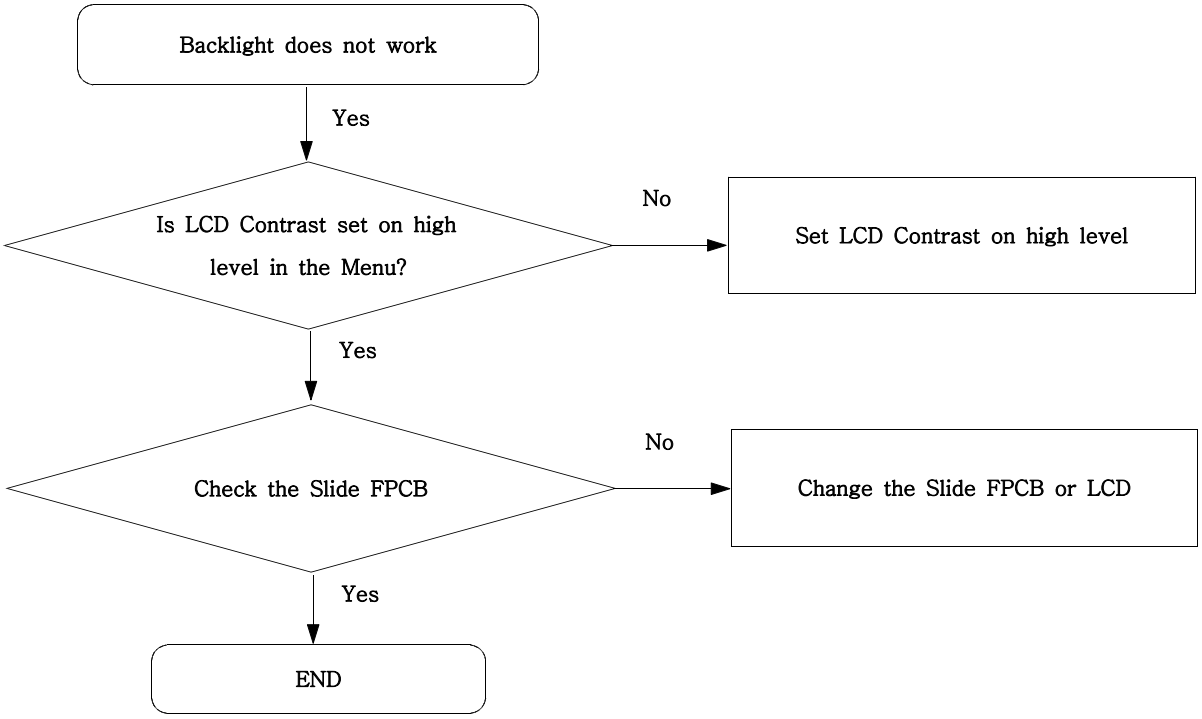
9-8. Back Light (for Color Main LCD)



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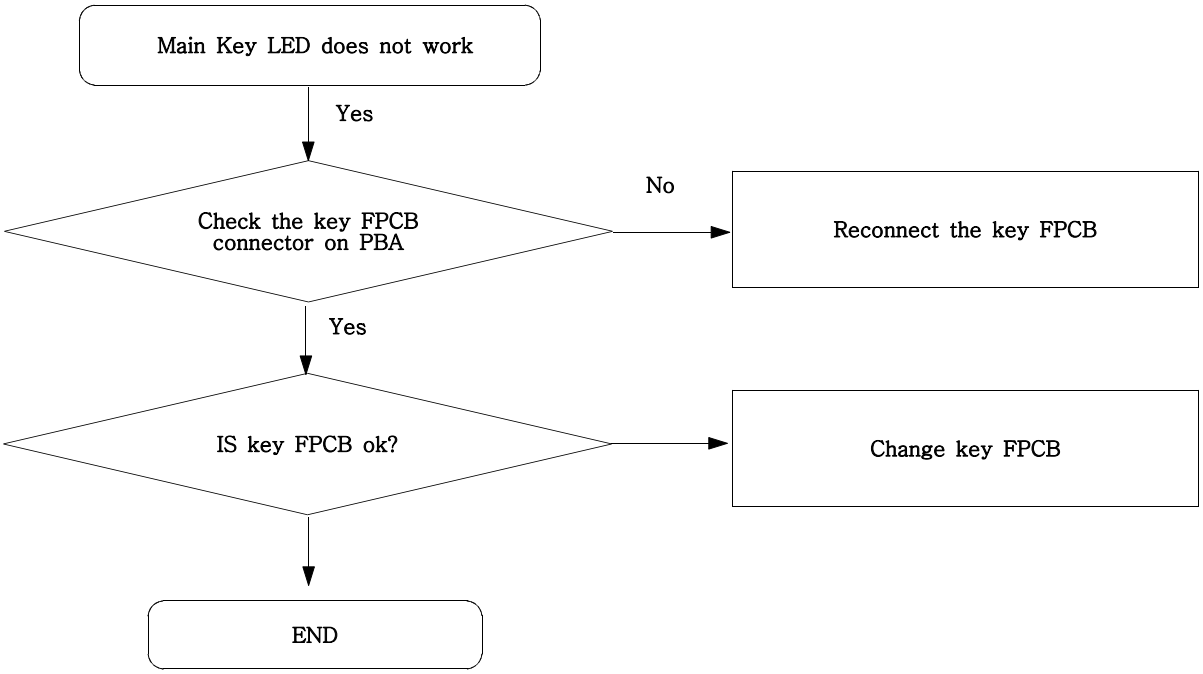
9-9. Key Back Light



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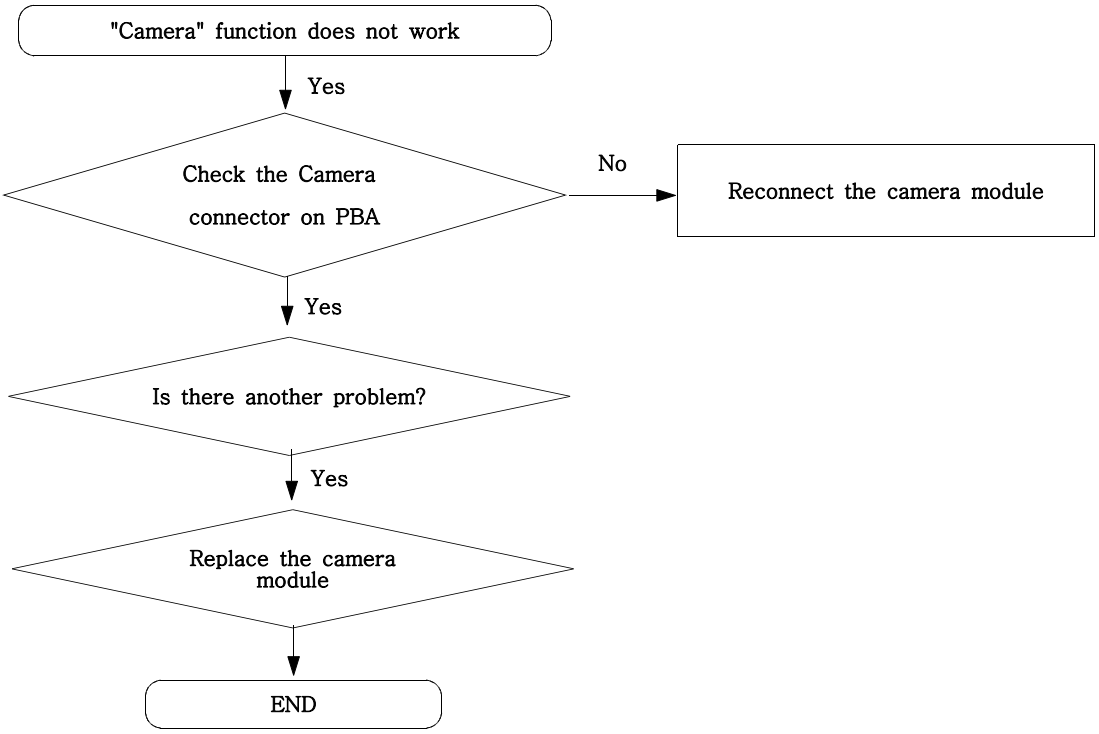
9-10. Camera part



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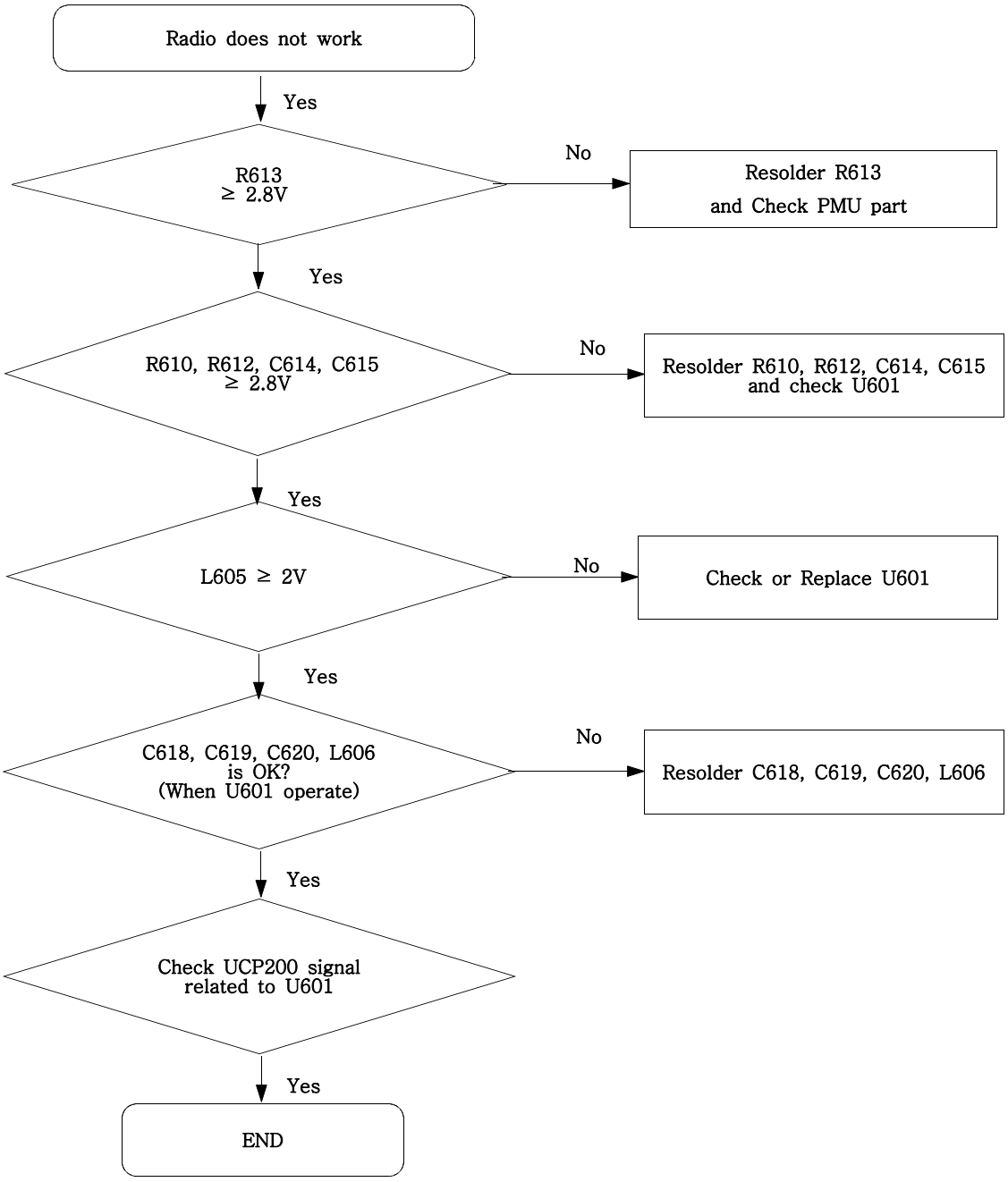
9-11. Radio part



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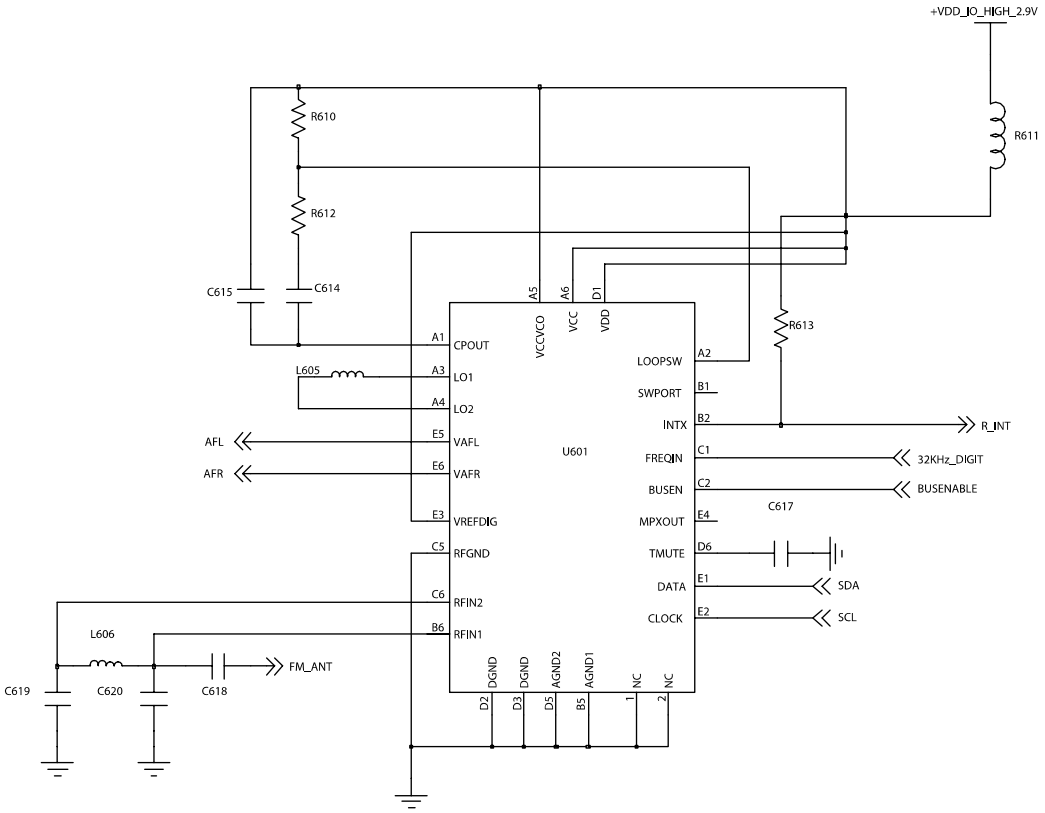

FM RADIO

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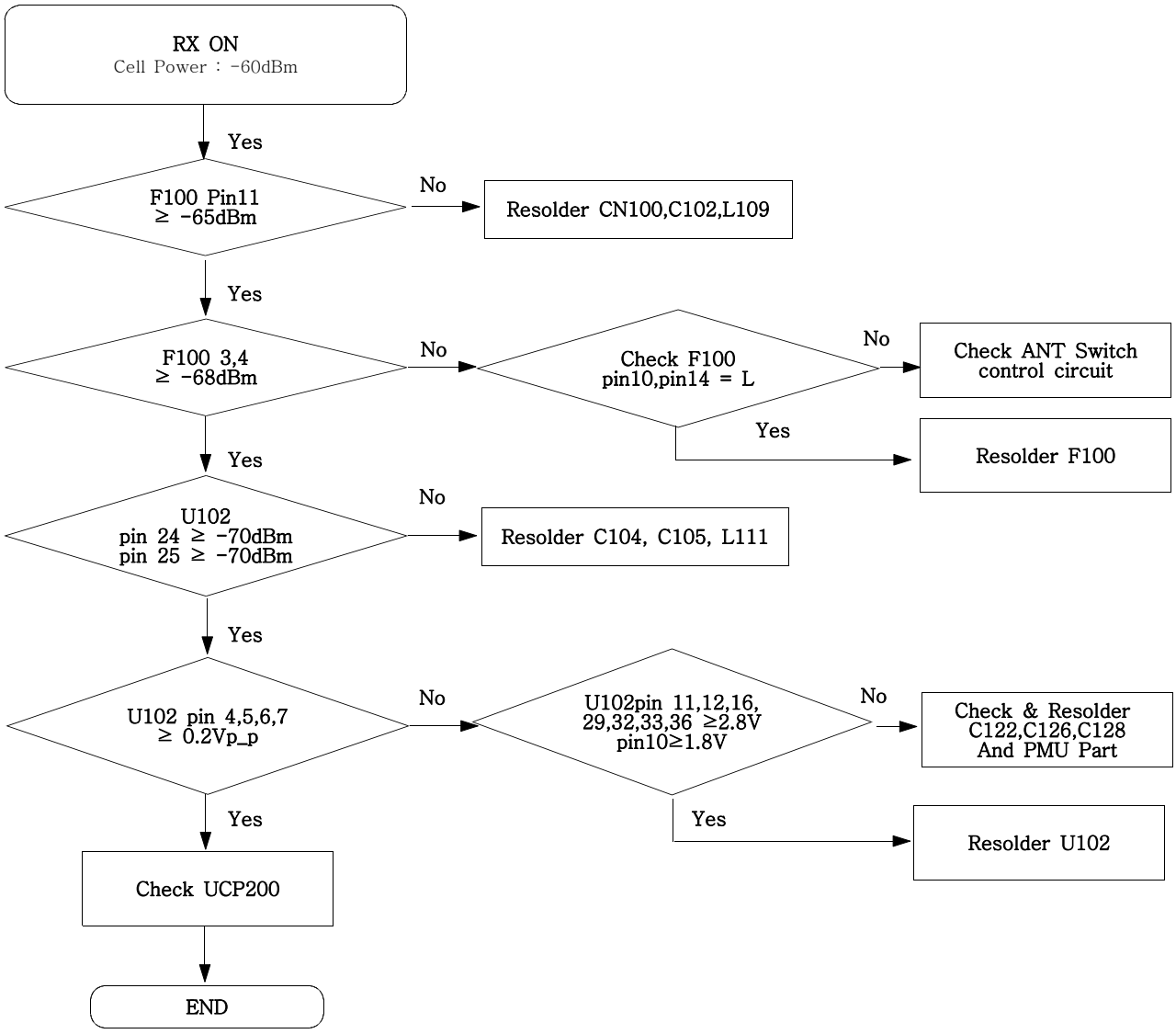
9-12. GSM Receiver



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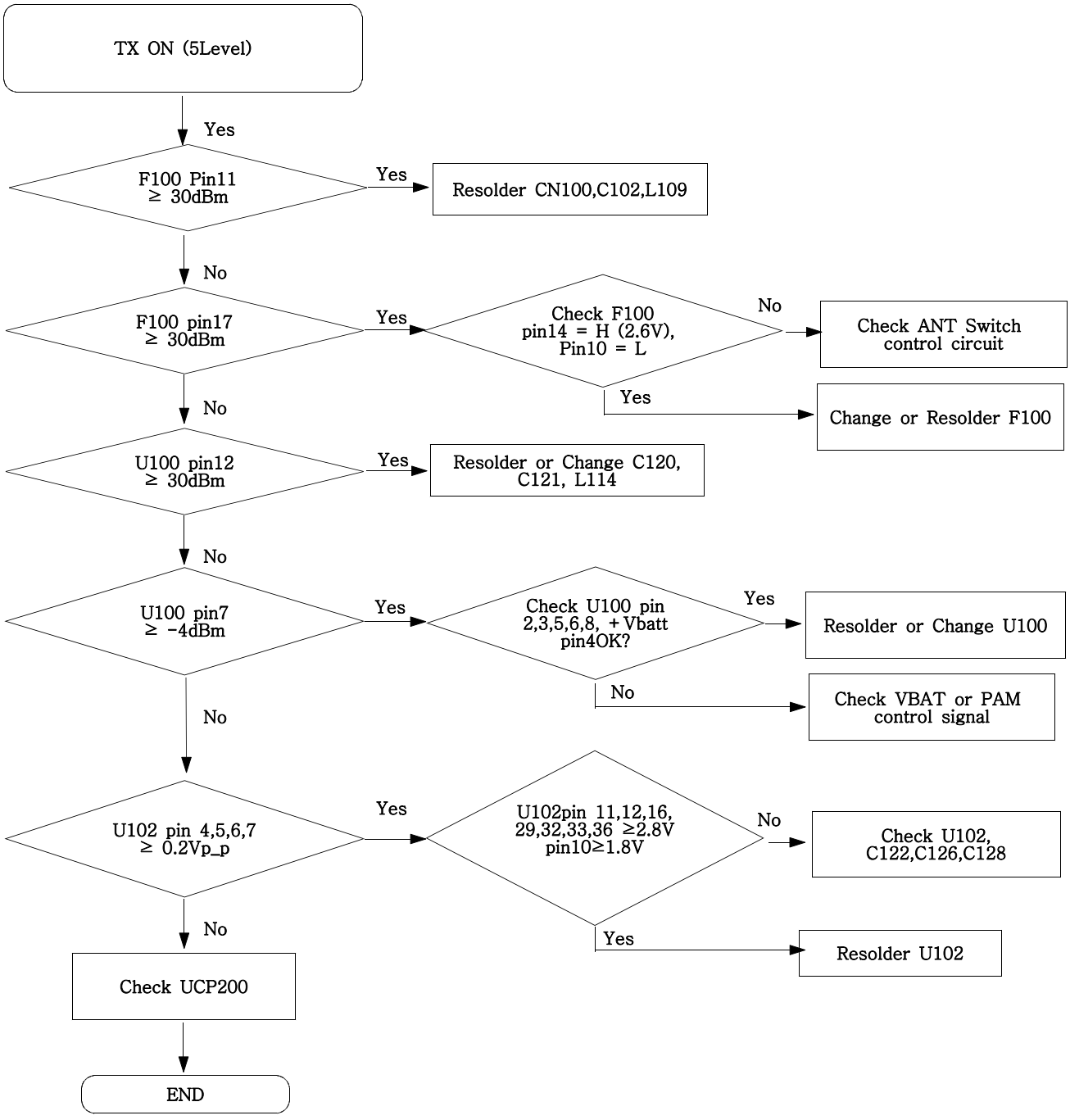
9-13. GSM Transmitter



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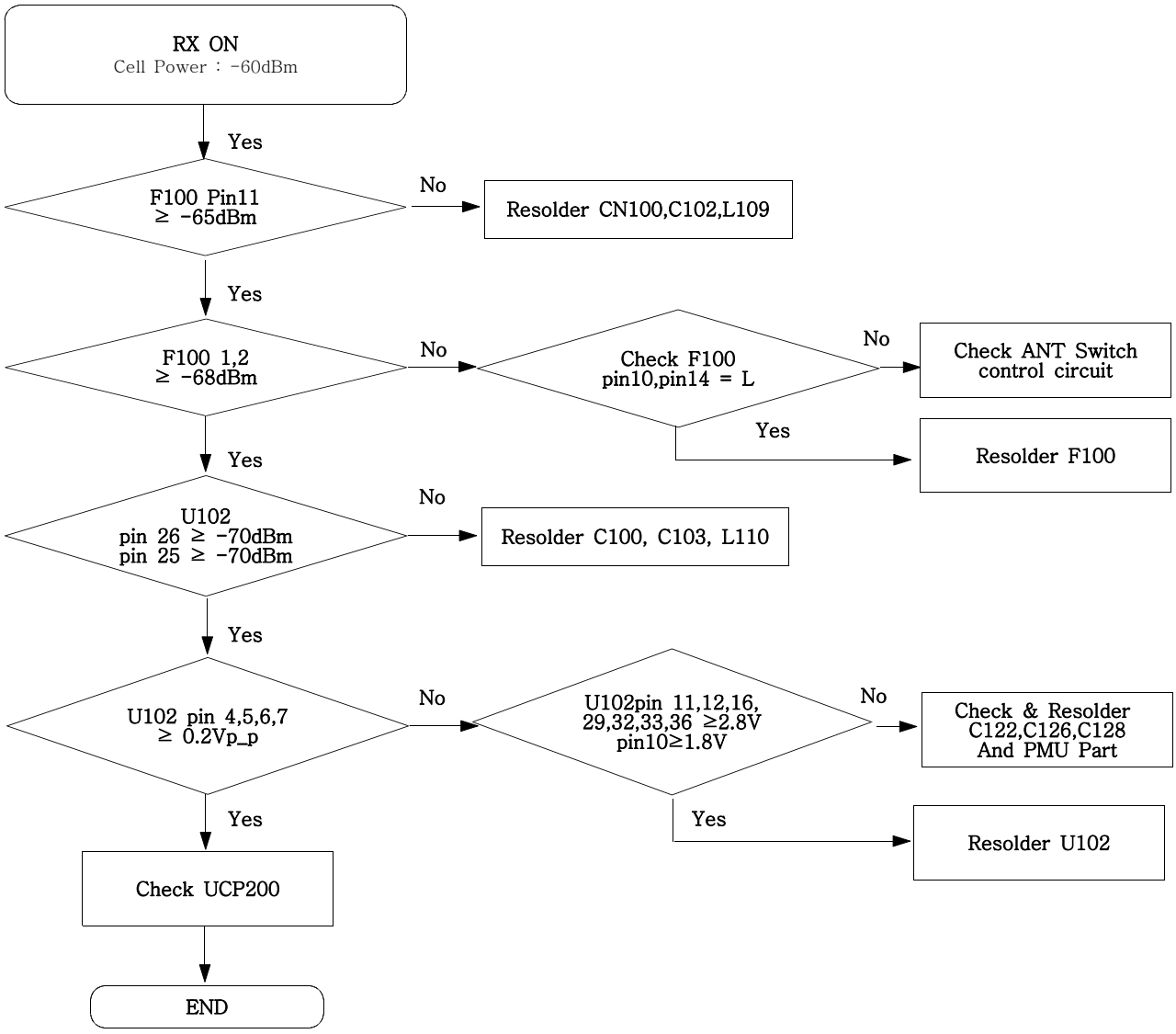
9-14. GSM850 Receiver



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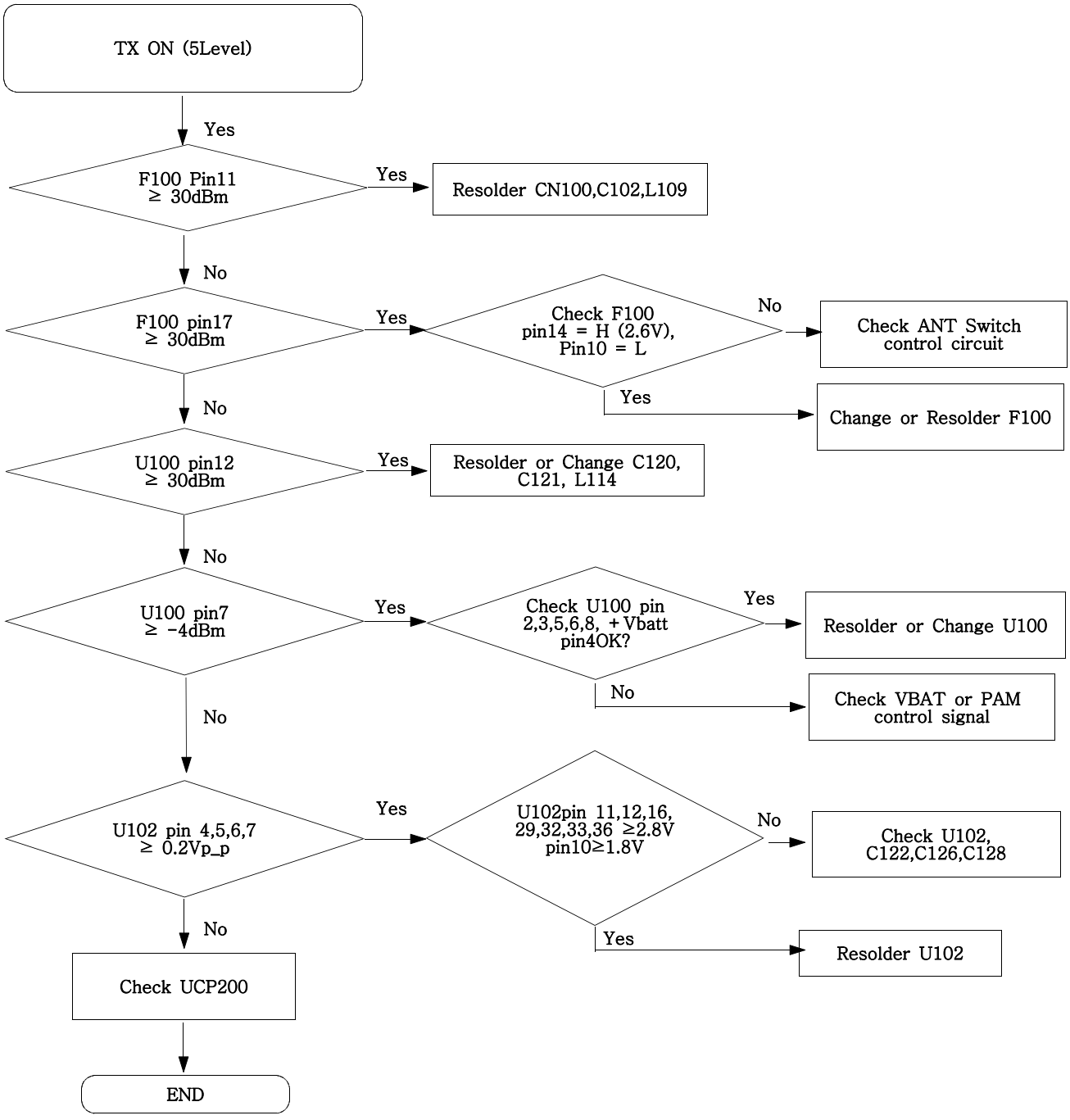
9-15. GSM850 Transmitter



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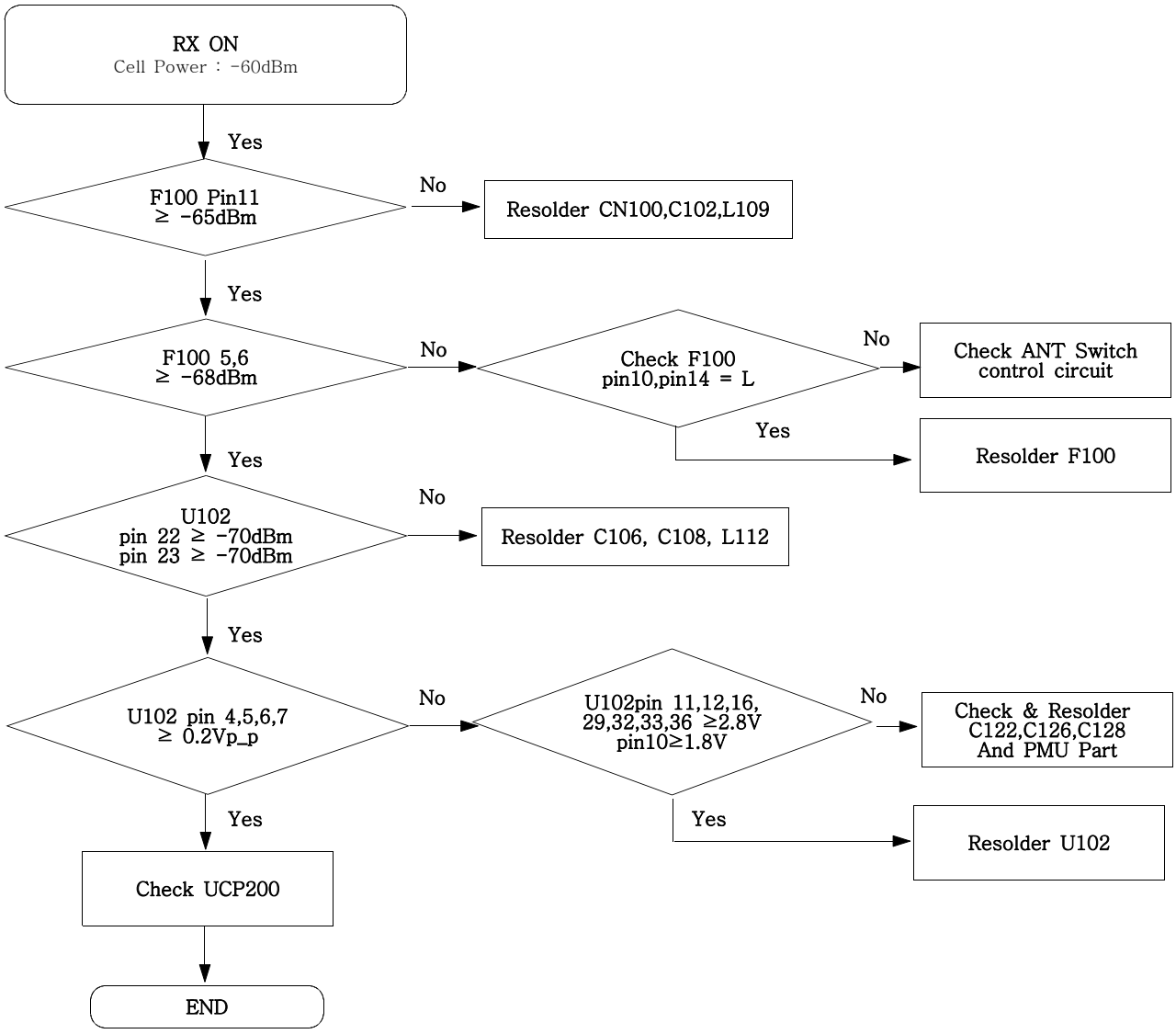
9-16. DCS Receiver



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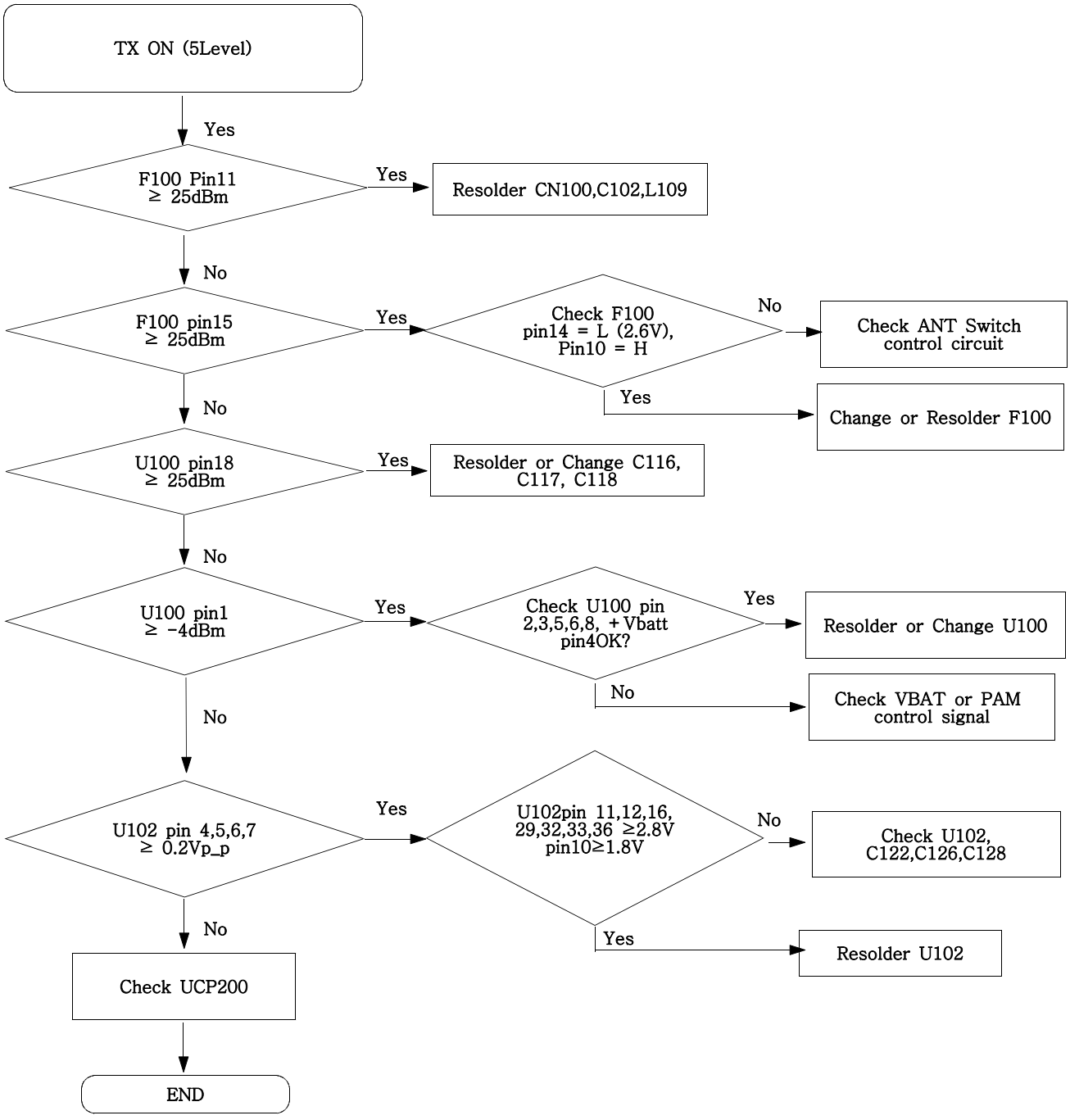
9-17. DCS Transmitter



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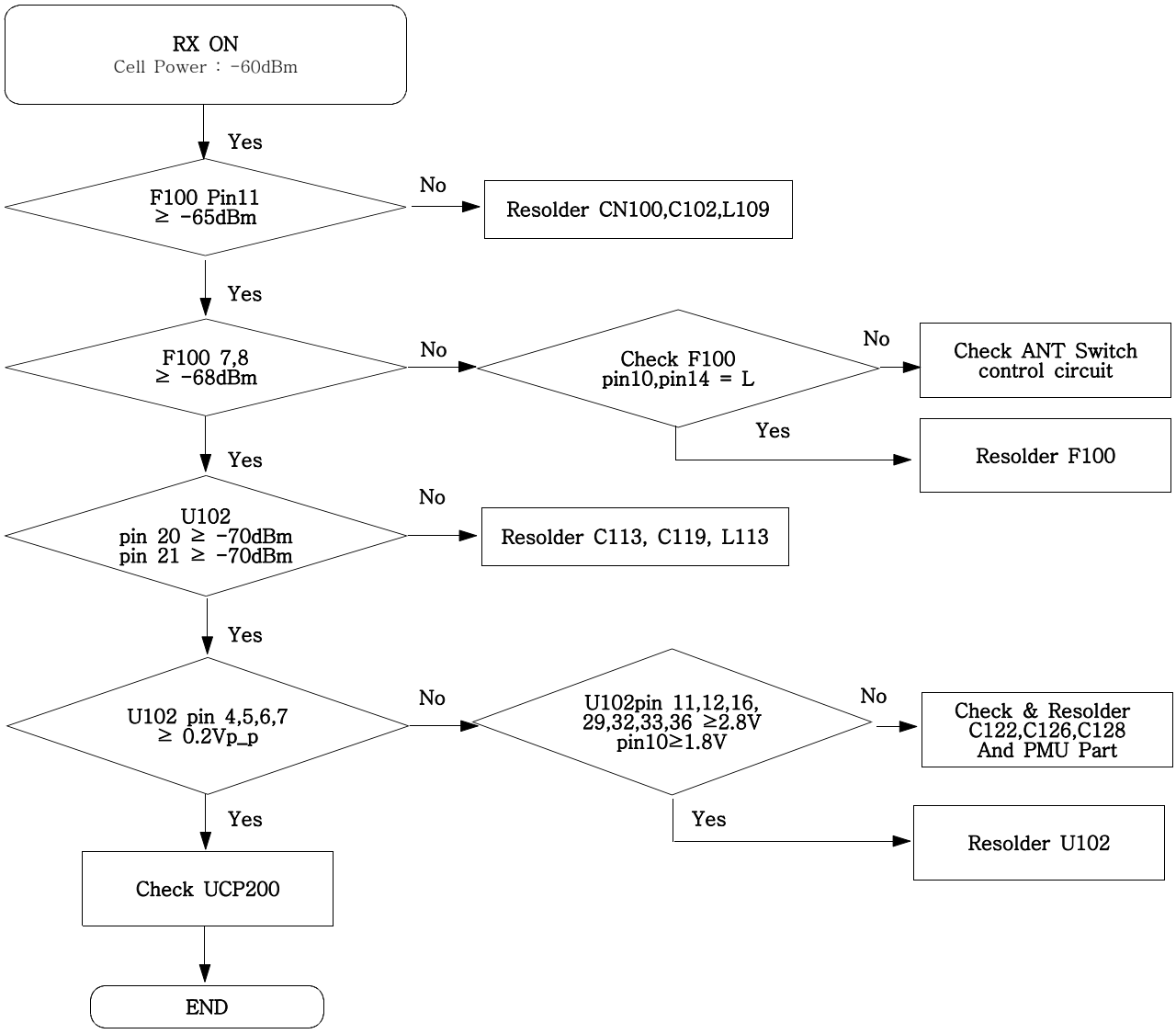
9-18. PCS Receiver



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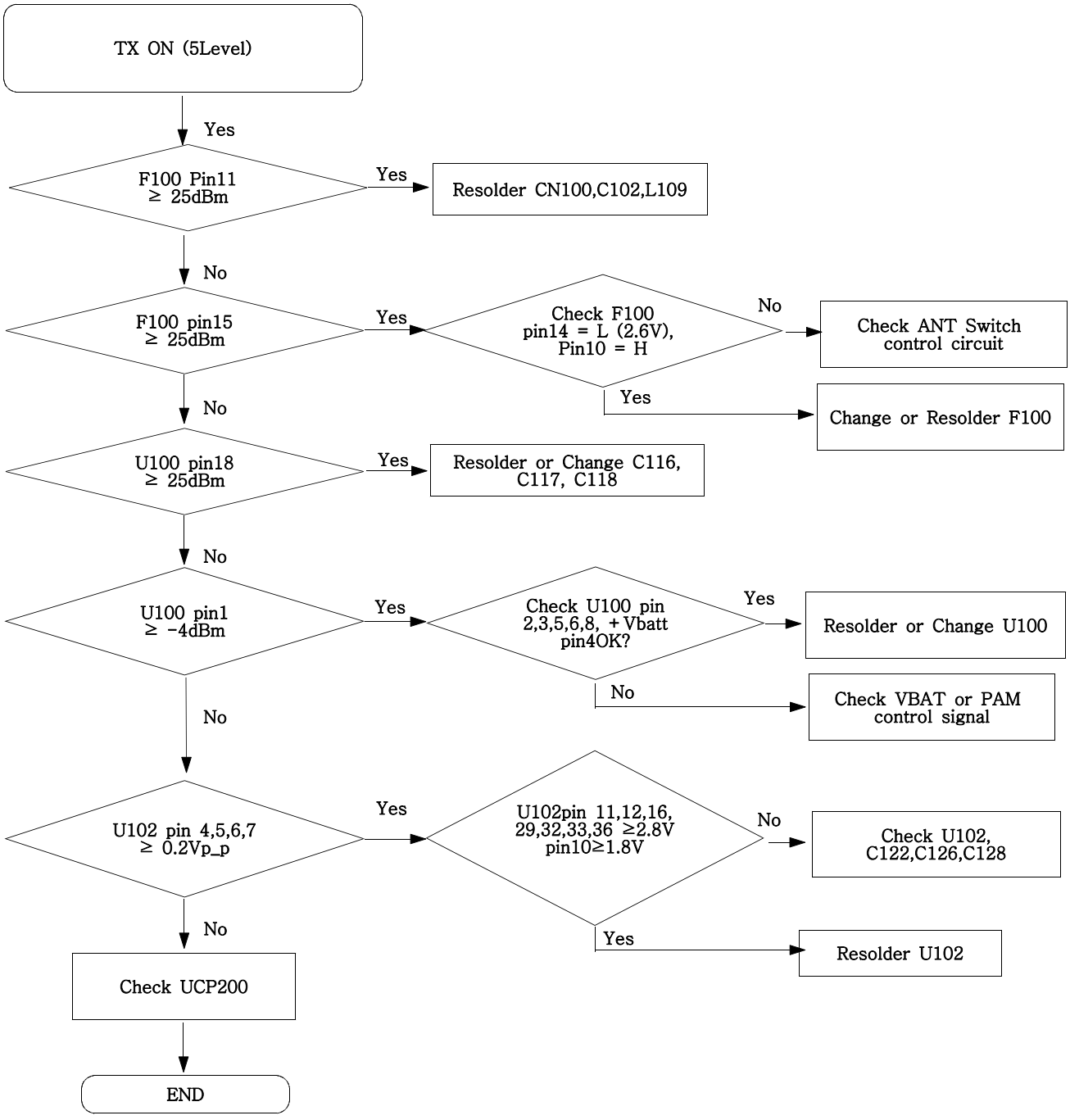
9-19. PCS Transmitter



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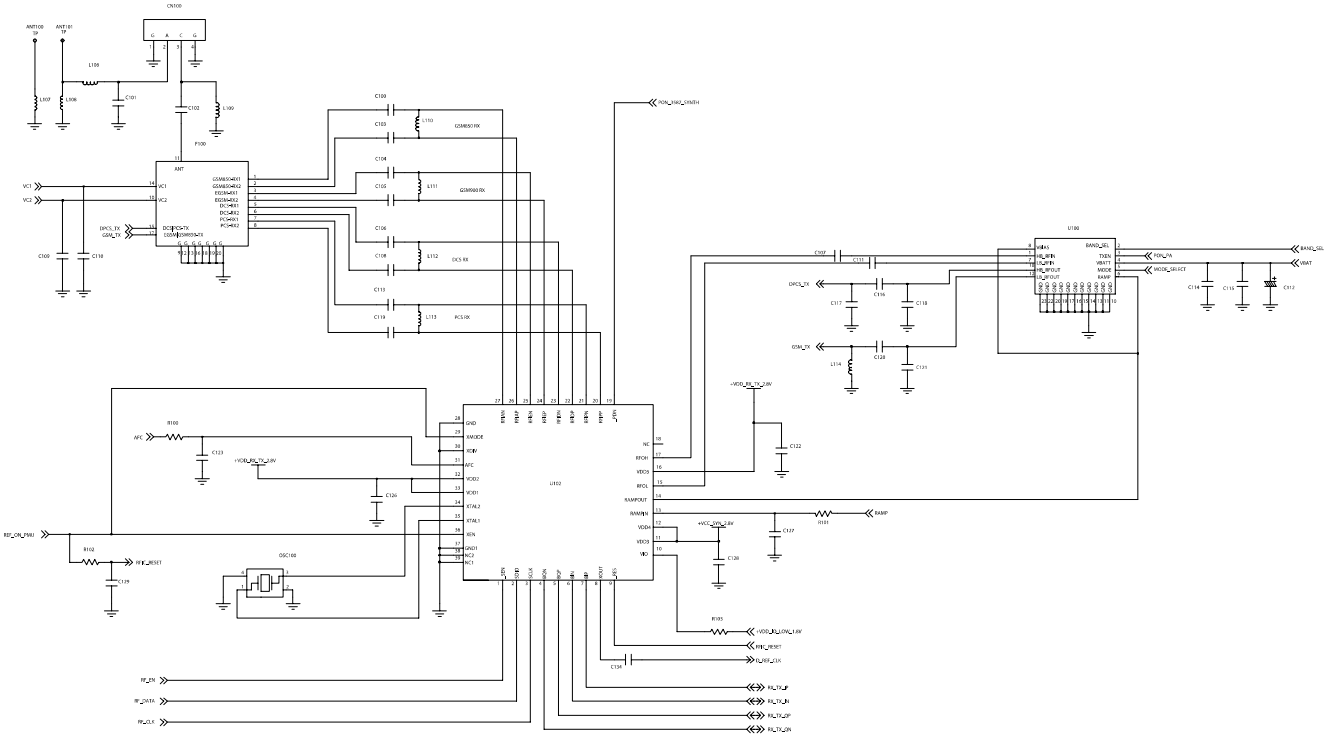

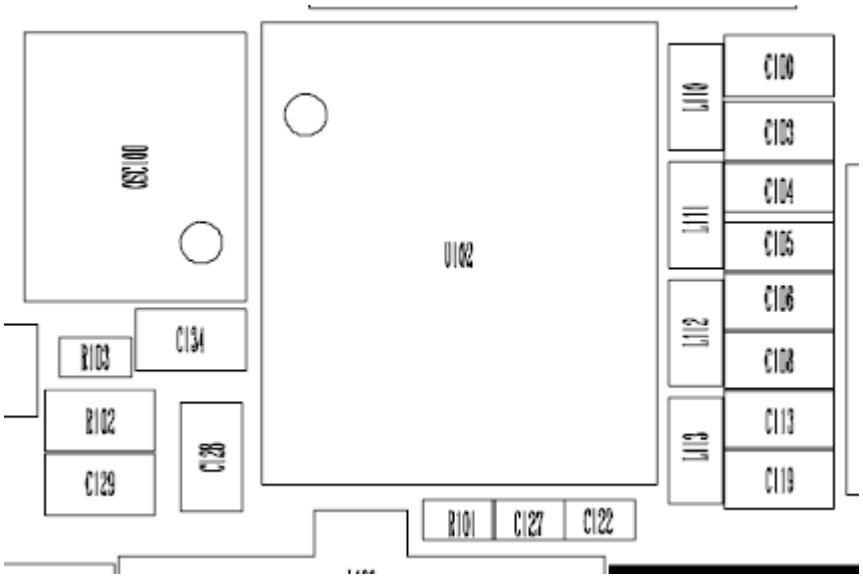

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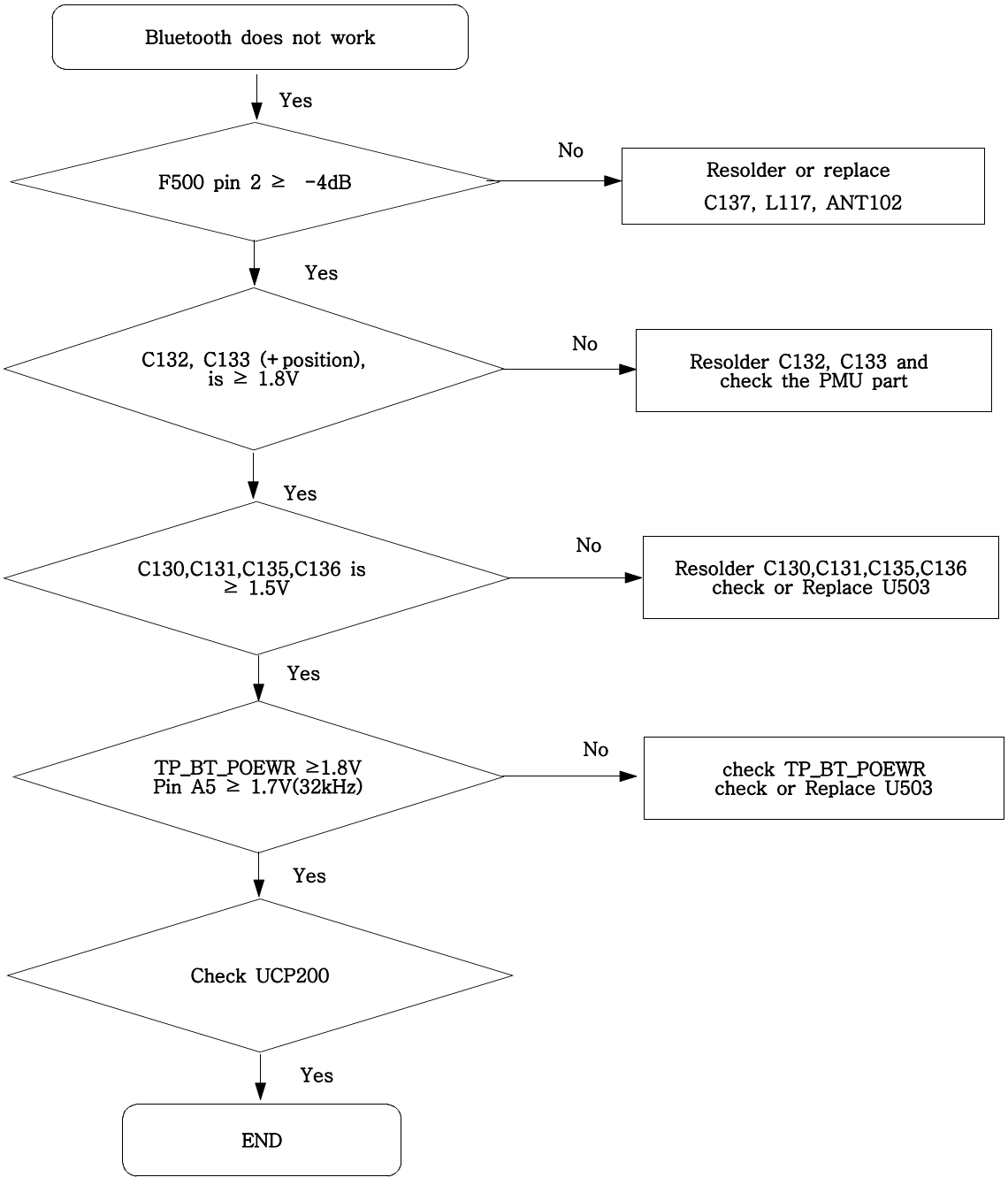
9-20. Bluetooth part



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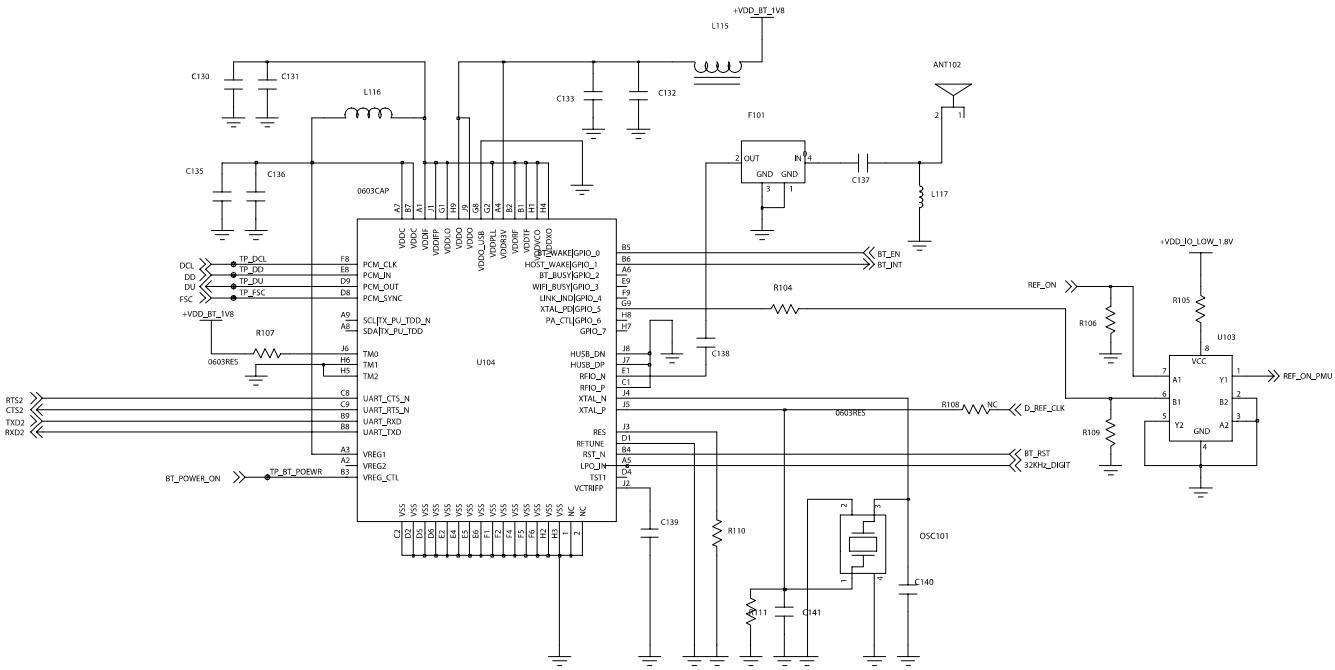

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10. Reference data

Reference Abbreviate

- **AAC**: Advanced Audio Coding.
- **AVC** : Advanced Video Coding.
- **BER** : Bit Error Rate
- **BPSK**: Binary Phase Shift Keying
- **CA** : Conditional Access
- **CDM** : Code Division Multiplexing
- **C/I** : Carrier to Interference
- **DMB** : Digital Multimedia Broadcasting
- **EN** : European Standard
- **ES** : Elementary Stream
- **ETSI**: European Telecommunications Standards Institute
- **MPEG**: Moving Picture Experts Group
- **PN** : Pseudo-random Noise
- **PS** : Pilot Symbol
- **QPSK**: Quadrature Phase Shift Keying
- **RS** : Reed-Solomon
- **SI** : Service Information
- **TDM** : Time Division Multiplexing
- **TS** : Transport Stream

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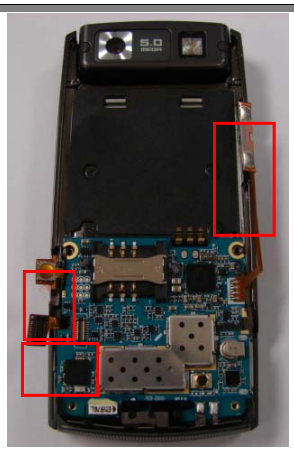
11. Disassembly and Assembly Instructions

11-1. Disassembly Instructions

1 1) Unscrew 6points from the rear case 2) Open the IF COVER 	2 1) Disjoint from low side to up side of rear case.
1) Be careful not to make scratch and molding damage!	1) Be careful not to make scratch and molding damage!
3 1) Remove the volume key and camera key. 2) Disconnect the 3X4 key connecter. 	
1) Be careful not to make scratch and molding damage!	

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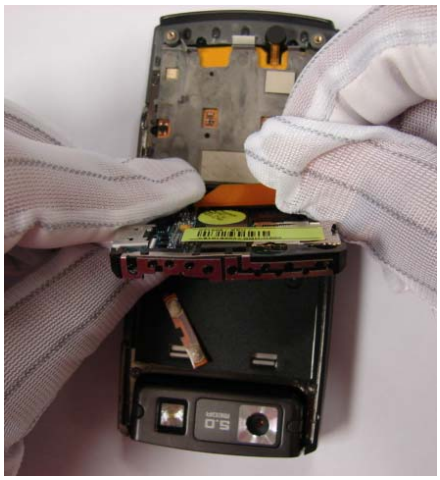
4

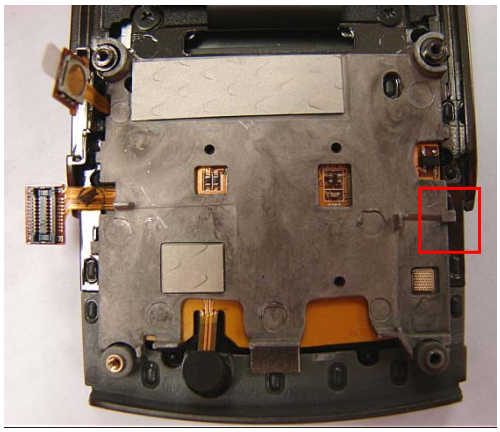
1) Lift B'd up and Disconnect the slide FPCB connecter.



1) Be careful not to make scratch and molding damage!
2) Be careful not to make the FPCB damage!

5

1) Disjoint the key bracket from front case.



1) Be careful not to make scratch and molding damage!

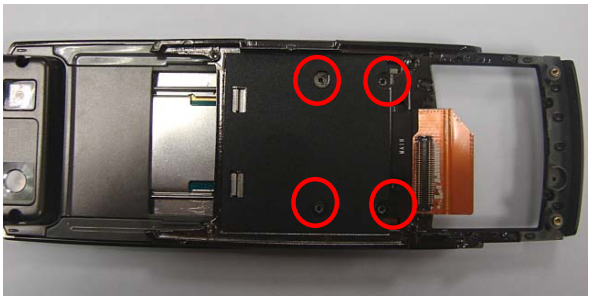
6

1) Slide up and Remove the keypad .

1) Be careful not to make scratch and molding damage!

7

1) Unscrew 6 points from the front case.



1) Be careful not to make scratch and molding damage!

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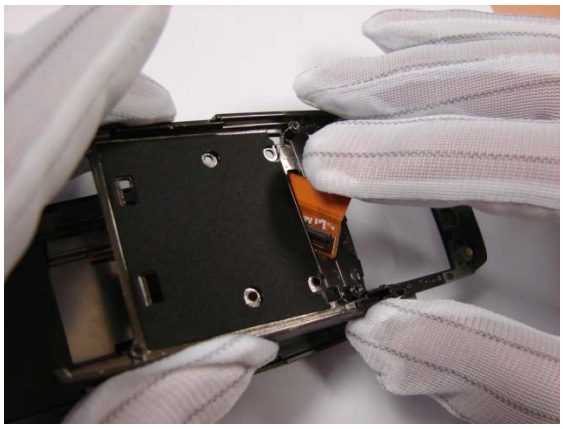
8

1) Disjoint the front case as below picture.



1) Be careful not to make scratch and molding damage!
2) Be careful not to make the FPCB damage!

9

1) Remove the screw rubbers.

1) Be careful not to make scratch and molding damage!

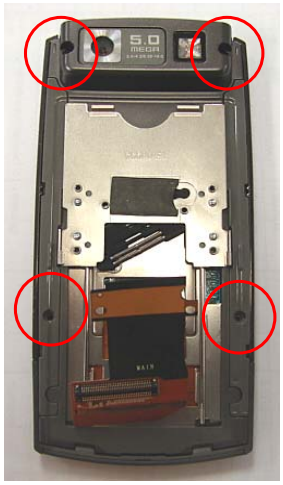
10

1) Remove the tape between FPCB and lower.

1) Be careful not to make scratch and molding damage!
2) Be careful not to make the FPCB damage!

11

1) Unscrew 4 points from the lower case.



1) Be careful not to make scratch and molding damage!

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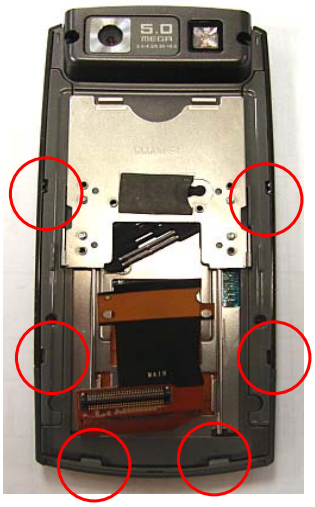
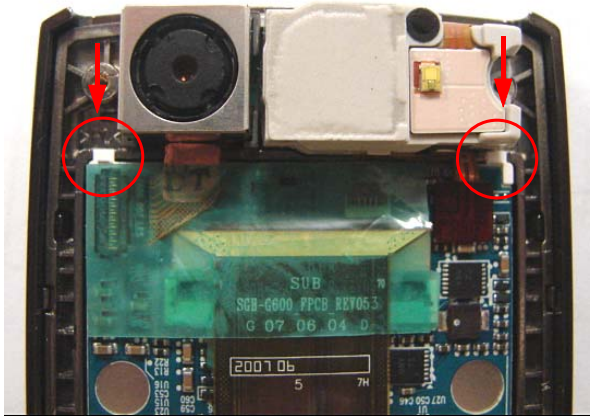
12 1) After disjoint the hooker of the lower side, disassemble the LOWER case as below the picture. 	13 1) Disjoint the hooker of the LCD as below the picture. 
1) Be careful not to make scratch and molding damage! 2) Be careful not to make the FPCB damage!	1) Be careful not to make scratch and molding damage! 2) Be careful not to make the camera FPCB damage!
14 1) Disassemble the upper case as below the picture. 	
1) Be careful not to make scratch and molding damage!	

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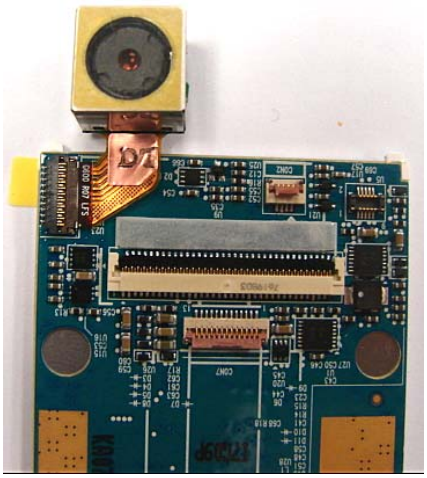
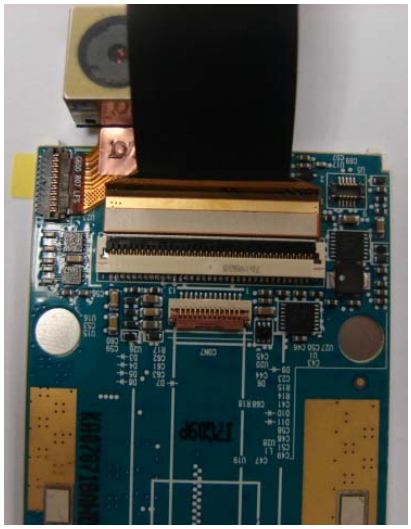
11-2. Assembly Instructions

<table>
<tr>
<td>1 1) Insert the camera FPCB into connector.
  </td>
<td>2 1) Insert the slide FPCB into connector.
  </td>
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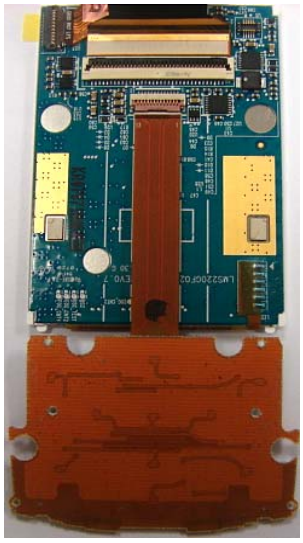
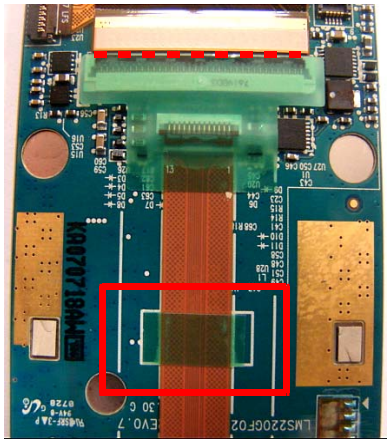
<tr>
<td>1) Be careful not to make scratch and molding damage!
2) Be careful not to make the camera FPCB damage!</td>
<td>1) Be careful not to make scratch and molding damage!
2) Be careful not to make the FPCB damage!
3) Be careful make right side of FPCB.</td>
</tr>
<tr>
<td>3 1) Insert sub key FPCB into connector.
  </td>
<td>4 1) Attach tape to the slide connector.
2) Attach tape to FPCB. (Guide line)
  </td>
</tr>
<tr>
<td>1) Be careful not to make scratch and molding damage!</td>
<td>1) Be careful not to make scratch and molding damage!</td>
</tr>
</table>

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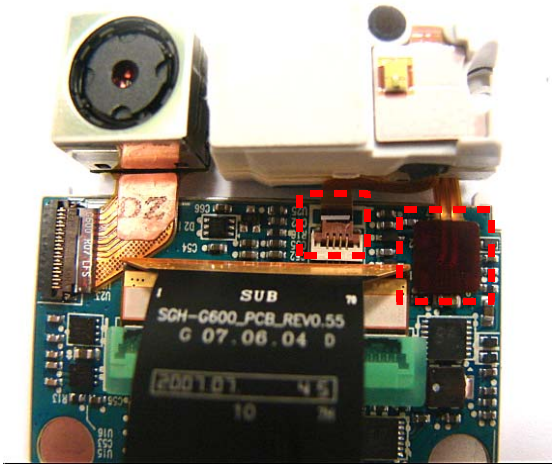
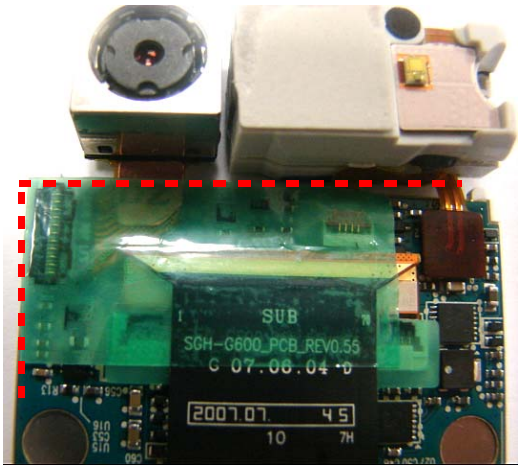
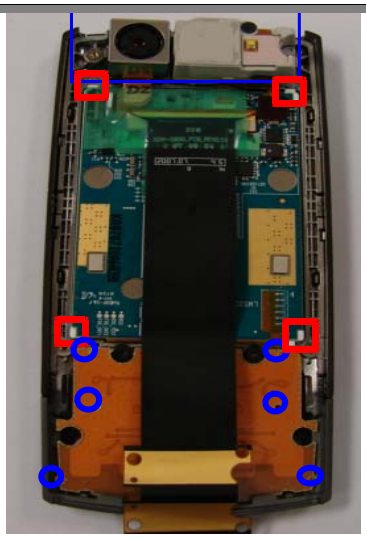
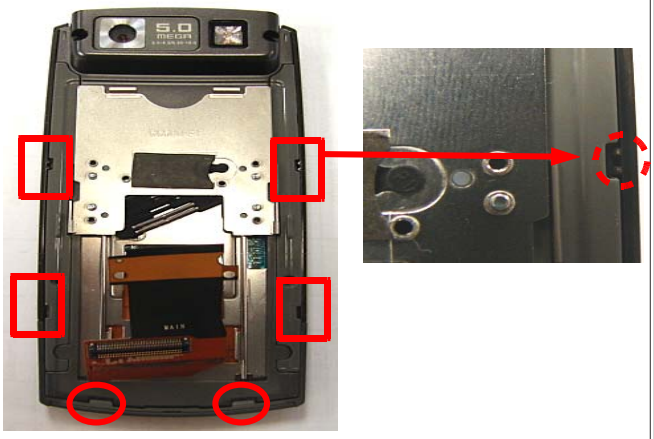
5 1) Insert the speaker module and flash kit. 	6 1) Attach tape to the connector. 
1) Be careful not to make scratch and molding damage!	1) Be careful not to make the FPCB damage!
7 1) Put the Speaker and Camera to the Upper case 2) Joint the LCD hooks 3) Insert the sub key into guide holes. 	8 1) Joint the lower hooks. 
1) Be careful not to make scratch and molding damage! 2) Be careful not to disconnect the speaker	1) Be careful not to make scratch and molding damage!

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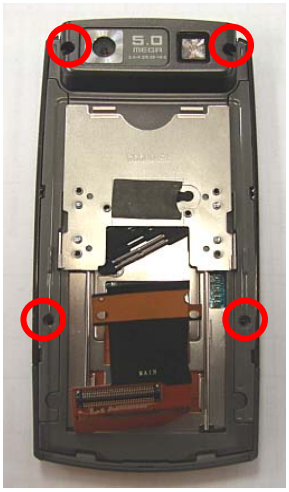
9

1) Screw 4 points on Lower assy'.



1) Be careful not to make scratch and molding damage!
2) TORQE (1.1 ± 0.1 Kgf · Cm)

10

1) Fold slide FPCB together
2) Attach slide to the lower guide holes.

1) Be careful not to make scratch and molding damage!
2) Be careful not to make the FPCB damage!

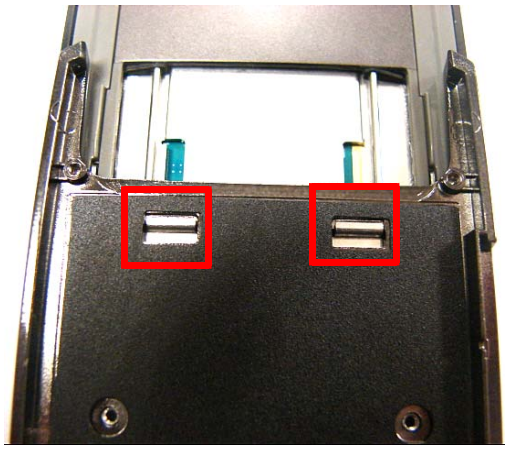
11

1) Insert the 2 points screw rubbers into the lower case

1) Be careful not to make scratch and molding damage!

12

1) Insert the FPCB into front FPCB hole.
2) Inset front holes into lower hooks.



1) Be careful not to make scratch and molding damage!
2) Be careful not to make the FPCB damage!

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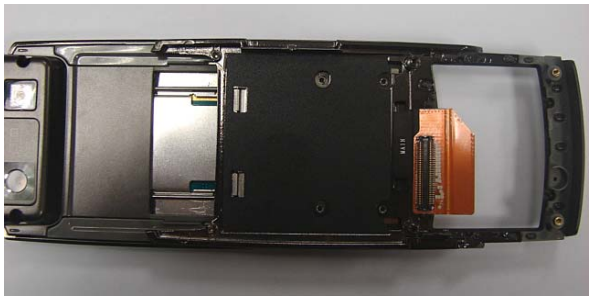
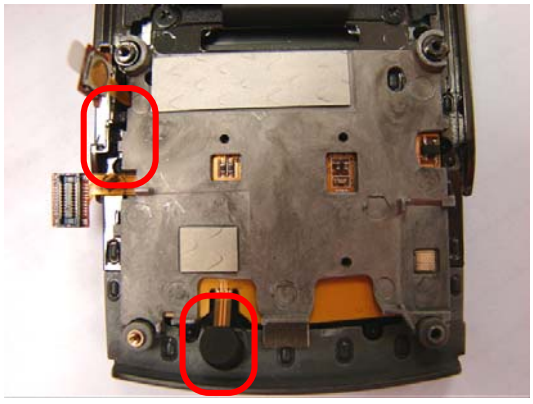
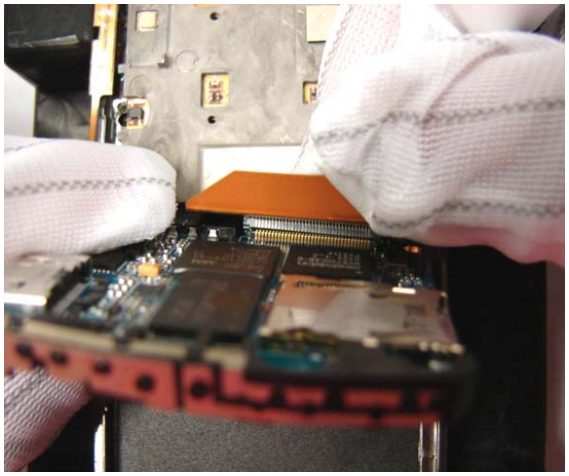
13 1) Screw 4 points on front ass'y. 	14 1) Let a key pad on front ass'y.
1) Be careful not to make scratch and molding damage!. 2) TORQE (1.1 ± 0.1 Kgf · Cm)	1) Be careful not to make scratch and molding damage!
15 1) Lock 3X4 bracket to front ass'y. 2) Let a mic rubber on mic. 	16 1) Insert the slide connect to slide FPCB horizontally. 
1) Be careful not to make scratch and molding damage!	1) Be careful not to make scratch and molding damage! 2) Be careful not to make the FPCB damage!

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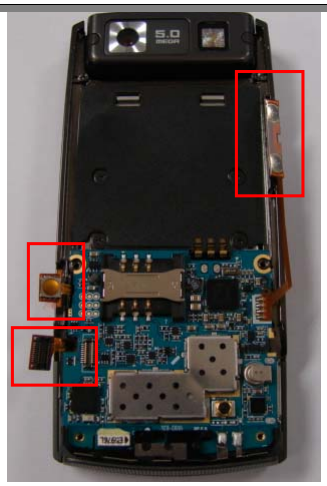
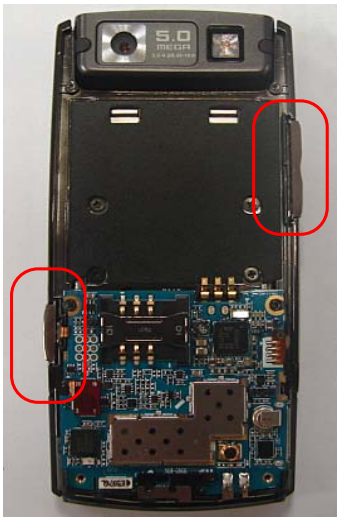
17 1) Attach the volume key FPCB and camera key FPCB to the front ass'y, right side slightly. 2) Insert 3X4 key FPCB into B'd connector 	18 1) Put the volume key and camera key to the front ass'y, right side slightly. 
1) Be careful not to make scratch and molding damage!.	1) Be careful not to make scratch and molding damage!
19 1) Assemble the rear case. 	20 1) Screw 6 points.
1) Be careful not to make scratch and molding damage!	1) Be careful not to make scratch and molding damage! 2) TORQE (1.1 ± 0.1 Kgf · Cm).

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