

SAMSUNG

GSM TELEPHONE

SGH-L310

SERVICE *Manual*

GSM TELEPHONE



CONTENTS

1. Safety Precautions
2. Specification
3. Product Function
4. Array course control
5. Exploded View and Parts 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
12. Schematic Diagrams

**SAMSUNG
ELECTRONICS**



GSPN (Global Service Partner Network)

Country	Web Site
North America	service.samsungportal.com
Latin America	latin.samsungportal.com
CIS	cis.samsungportal.com
Europe	europe.samsungportal.com
China	china.samsungportal.com
Asia	asia.samsungportal.com
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1. Safety Precautions

1-1. Repair Precaution

- Repair in Shield Box, during detailed tuning.
Take specially care of tuning or test,
because specipicty of cellular phone is sensitive for surrounding interference(RF noise).
- Be careful to use a kind of magnetic object or tool,
because performance of parts is damaged by the influence of 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

	GSM900 Phase 1	EGSM 900 Phase 2	DCS1800 Phase 1	PCS1900
Freq. Band[MHz] Uplink/Downlink	890~915 935~960	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990
ARFCN range	1~124	0~124 & 975~1023	512~885	512~810
Tx/Rx spacing	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
Time Slot Period / Frame Period	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
MS Power	33dBm~5dBm	33dBm~5dBm	30dBm~0dBm	30dBm~0dBm
Power Class	5pcl ~ 19pcl	5pcl ~ 19pcl	0pcl ~ 15pcl	0pcl ~ 15pcl
Sensitivity	-102dBm	-102dBm	-100dBm	-100dBm
TDMA Mux	8	8	8	8
Cell Radius	35Km	35Km	2Km	-

2-2. GSM TX power class

TX Power control level	GSM900	TX Power control level	DCS1800	TX Power control level	PCS1900
5	33±2 dBm	0	30±2 dBm	0	30±2 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

2-3. GSM EDGE TX power class

TX Power control level	GSM900	TX Power control level	DCS1800	TX Power control level	PCS1900
8	27±3 dBm	2	26 -4/+3 dBm	2	26 -4/+3 dBm
9	25±3 dBm	3	24±3 dBm	3	24±3 dBm
10	23±3 dBm	4	22±3 dBm	4	22±3 dBm
11	21±3 dBm	5	20±3 dBm	5	20±3 dBm
12	19±3 dBm	6	18±3 dBm	6	18±3 dBm
13	17±3 dBm	7	16±3 dBm	7	16±3 dBm
14	15±3 dBm	8	12±3 dBm	8	12±3 dBm
15	13±3 dBm	9	10±3 dBm	9	10±3 dBm
16	11±5 dBm	10	14±3 dBm	10	14±3 dBm
17	9±5 dBm	11	12±4 dBm	11	12±4 dBm
18	7±5 dBm	12	10±4 dBm	12	10±4 dBm
19	5±5 dBm	13	8±4dBm	13	8±4dBm
		14	6±4 dBm	14	6±4 dBm
		15	4±4 dBm	15	4±4 dBm

3. Product Function

Main Function

- GPRS / EDGE Class10
- 2 Megapixel Camera
- Main LCD : 1.8" QCIF TFT LCD
- Video Recording & Messaging
- Mp3, AAC, AAC+, WMA
- Bluetooth V2.0
- Multimedia Message Service (MMS)
- External Memory
- Java / WAP2.0
- Tri-band(900/1800/1900MHz)
- Stereo FM Radio
- Speaker Phone

4. Array course control

4-1. Software Adjustments

RF Cable (GH39-00599A)



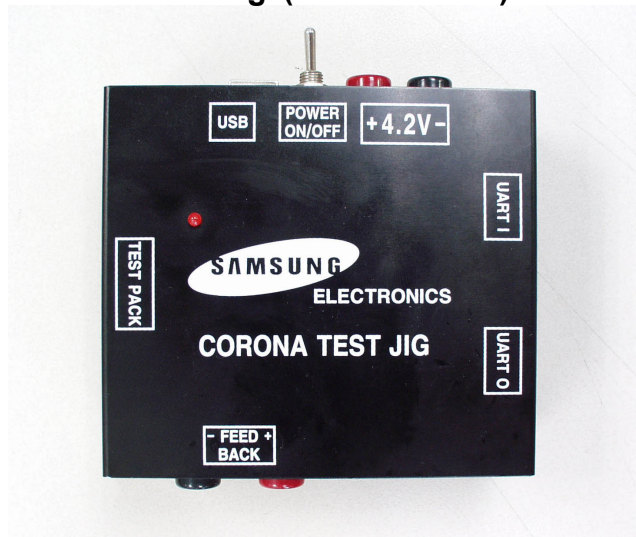
**Test Cable 0.4M
(GH39-00872A)**



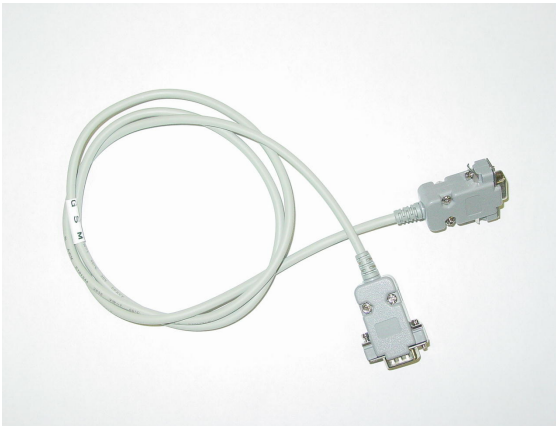
**Test Cable 1.5m
(GH39-00877A)**



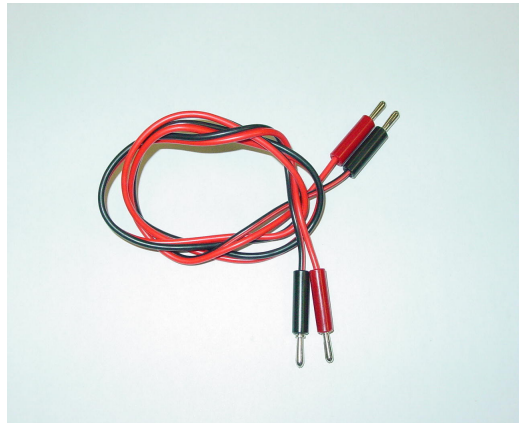
Test Jig (GH80-03306A)



Serial Cable



Power Supply Cable



4-2. Software Downloading

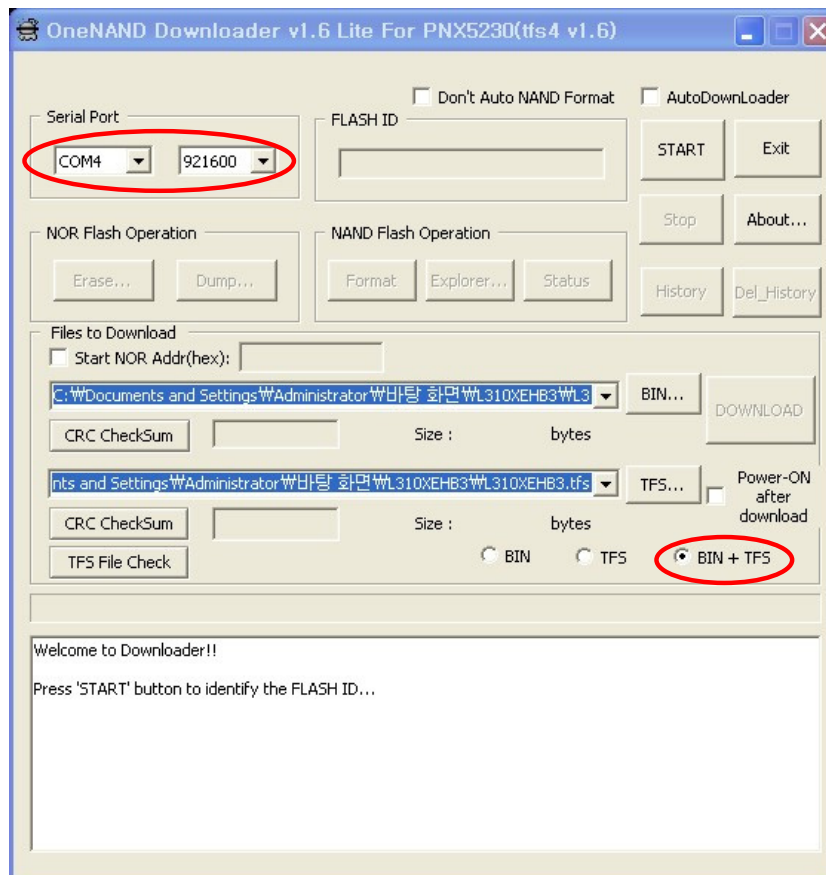
4-2-1. Pre-requisite for Downloading

- Downloader Program([OneNAND Downloader v1.6 Lite For PN5230\(tfs4 v1.6\).exe](#))
- L310 Mobile Phone
- Data Cable
- Binary file, TFS file

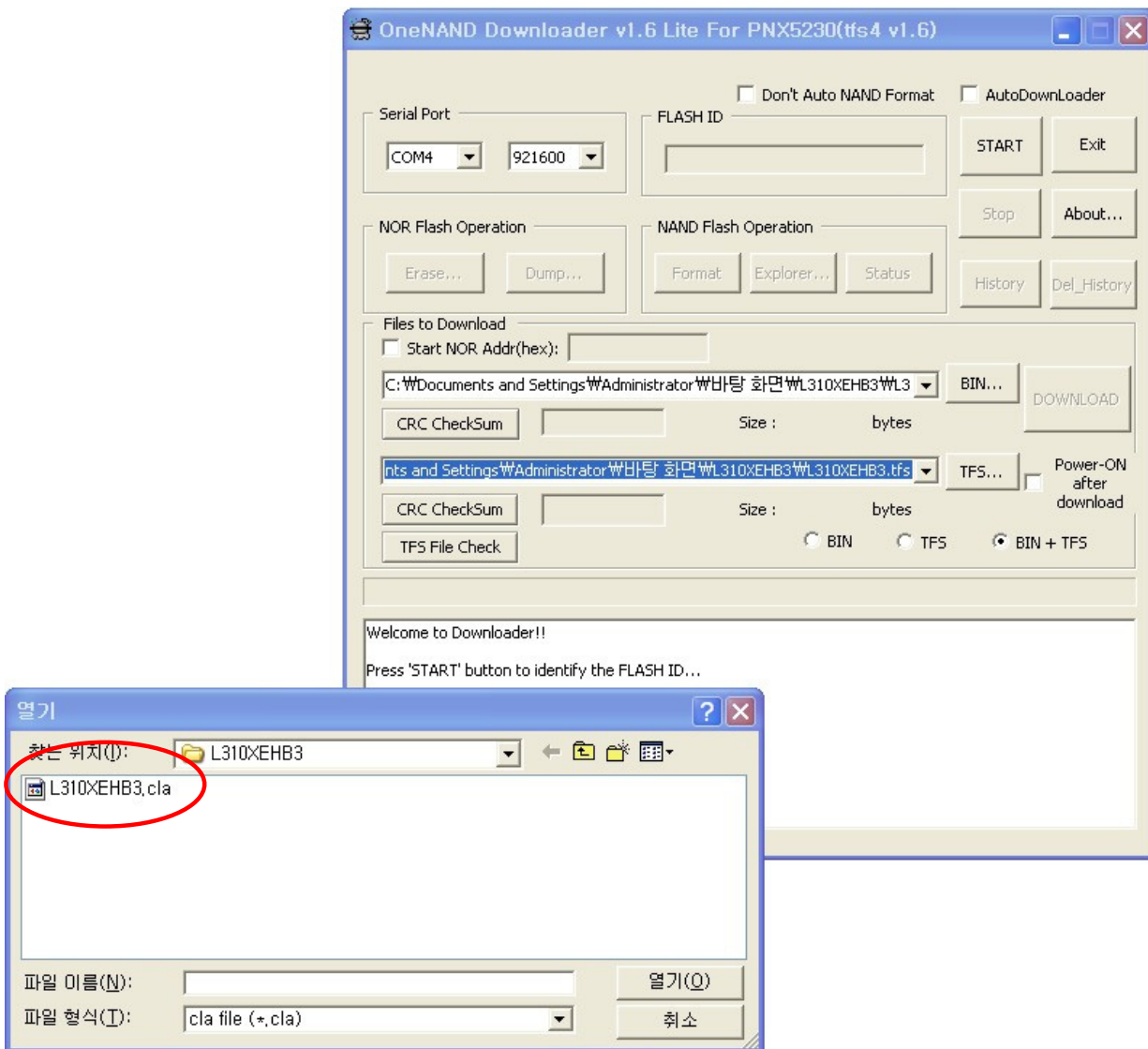
4-2-2. S/W Downloader Program

- Load the binary download program by executing the
[“OneNAND Downloader v1.6 Lite For PN5230”](#)

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'

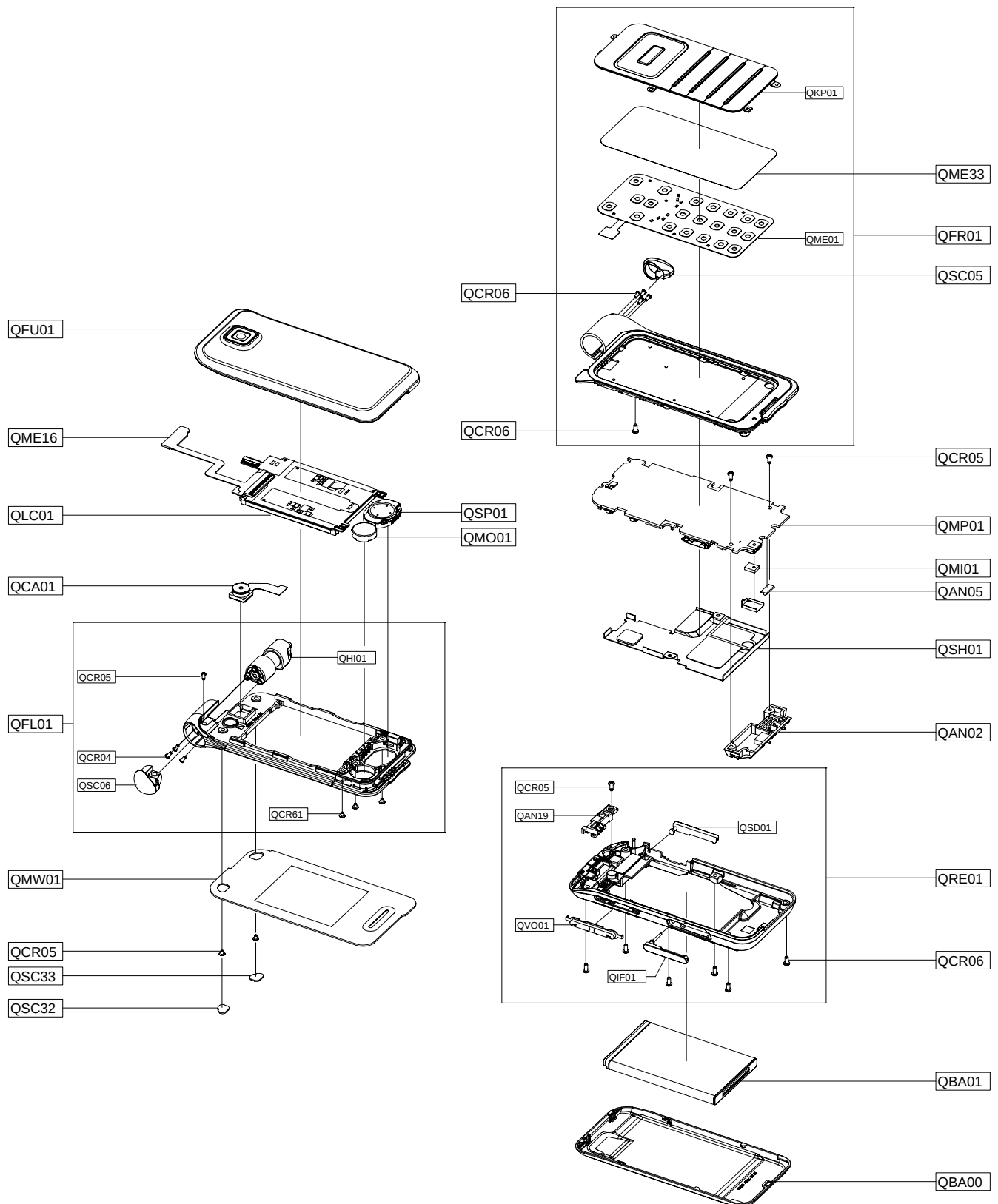


3. Select the file(s) what you want to download



5. Exploded View and Parts List

5-1. Cellular phone Exploded View



5-2. Cellular phone Parts List

Design LOC	Description	SEC CODE
QAN02	ANTENNA-SGHL310	GH42-01464A
QAN05	ASSY MEC-ANTENNA CONTACT	GH75-08168A
QAN19	ANTENNA-SGHL310BT	GH42-01507A
QBA00	ASSY COVER-BATT	GH98-07029D
QBA01	INNER BATTERY PACK-800MAH,BLK,	GH43-03039A
QCA01	CAMERA MODULE-2M 1/4"	GH59-05186A
QCR03	SCREW-MACHINE	6001-001811
QCR04	SCREW-MACHINE	6001-001479
QCR05	SCREW-MACHINE	6001-001478
QCR05	SCREW-MACHINE	6001-001478
QCR05	SCREW-MACHINE	6001-001478
QCR06	SCREW-MACHINE	6001-001155
QCR06	SCREW-MACHINE	6001-001155
QCR61	SCREW-MACHINE	6001-002008
QFL01	ASSY CASE-LOWER	GH98-06825A
QFR01	ASSY CASE-FRONT	GH98-06826A
QFU01	ASSY CASE-UPPER	GH98-06819D
QHI01	ASSY HINGE-LCD	GH98-06822A
QIF01	PMO COVER-IF	GH72-44707D
QKP01	ASSY KEYPAD-(EU/BLK)	GH98-06824A
QLC01	LCD-SGHL310 1.8"	GH07-01226A
QME01	KEY FPCB-SGH-L310 22KEY	GH59-05289A
QME16	UNIT-CON TO CON	GH59-05284A
QME33	KEY FPCB-DOPARO FPC ASS'Y	GH59-05502A
QMI01	MICROPHONE-ASSY-SGHL310 SMD TY	GH30-00457A
QMO01	MOTOR DC-SGH-L310	GH31-00403A
QMP01	PBA MAIN-SGHL310	GH92-04339A
QMW01	ASSY COVER-WINDOW MAIN	GH98-06823A
QRE01	ASSY CASE-REAR	GH98-06820D
QSC05	PMO COVER-RIGHT SCREW CAP V2	GH72-45164A
QSC06	PMO COVER-LEFT SCREW CAP V2	GH72-45163A
QSC32	ASSY COVER-WINDOW LEFT SCREW C	GH98-07991A
QSC33	ASSY COVER-WINDOW RIGHT SCREW	GH98-07992A
QSD01	PMO COVER-SD	GH72-44708D
QSH01	ASSY BRACKET-PBA SHIELD CAN	GH98-06828A
QSP01	MICRO SPEAKER	3001-002296
QVO01	PMO KEY-VOLUME	GH72-44709D

6. Main Electrical Parts List

SEC Code	Design LOC	Description	STATUS
0403-001339	ZD503	DIODE-ZENER	SA
0403-001547	ZD300	DIODE-ZENER	SA
0406-001150	ZD504	DIODE-TVS	SA
0406-001190	ZD604	DIODE-TVS	SA
0406-001200	ZD301	DIODE-TVS	SA
0406-001254	ZD502	DIODE-TVS	SA
0406-001254	ZD600	DIODE-TVS	SA
0406-001254	ZD601	DIODE-TVS	SA
0406-001286	ZD500	DIODE-TVS	SA
0505-002111	TR300	FET-SILICON	SA
0801-003022	U202	IC-CMOS LOGIC	SA
0801-003079	U401	IC-CMOS LOGIC	SA
1001-001447	U402	IC-ANALOG MULTIPLEX	SA
1009-001020	U600	IC-HALL EFFECT S/W	SA
1108-000102	UME200	IC-MCP	SA
1201-002423	PAM100	IC-POWER AMP	SA
1201-002609	U403	IC-AUDIO AMP	SA
1203-003737	U300	IC-POSIFIXED REG.	SA
1203-003737	U301	IC-POSIFIXED REG.	SA
1203-004382	PAM300	IC-POWER SUPERVISOR	SA
1203-004776	U500	IC-POSIFIXED REG.	SA
1204-002688	U101	IC-DEMODULATOR	SA
1205-003082	UCP200	IC-MODEM	SA
1205-003283	U100	IC-TRANSCEIVER	SA
1205-003419	U102	IC-TRANSCEIVER	SA
1404-001221	VR500	THERMISTOR-NTC	SA
1405-001082	VR600	VARISTOR	SA
2007-000137	R400	R-CHIP	SA
2007-000137	R402	R-CHIP	SA
2007-000138	R315	R-CHIP	SA
2007-000138	R403	R-CHIP	SA
2007-000138	R408	R-CHIP	SA
2007-000138	R410	R-CHIP	SA
2007-000140	R214	R-CHIP	SA
2007-000140	R318	R-CHIP	SA
2007-000148	R203	R-CHIP	SA
2007-000148	R215	R-CHIP	SA
2007-000148	R223	R-CHIP	SA
2007-000148	R317	R-CHIP	SA
2007-000148	R401	R-CHIP	SA
2007-000159	R319	R-CHIP	SA
2007-000162	R210	R-CHIP	SA

SEC Code	Design LOC	Description	STATUS
2007-000162	R212	R-CHIP	SA
2007-000162	R302	R-CHIP	SA
2007-000162	R320	R-CHIP	SA
2007-000162	R321	R-CHIP	SA
2007-000162	R322	R-CHIP	SA
2007-000162	R404	R-CHIP	SA
2007-000170	R207	R-CHIP	SA
2007-000170	R208	R-CHIP	SA
2007-000171	R100	R-CHIP	SA
2007-000171	R111	R-CHIP	SA
2007-000171	R200	R-CHIP	SA
2007-000171	R308	R-CHIP	SA
2007-000171	R501	R-CHIP	SA
2007-000758	R205	R-CHIP	SA
2007-000758	R213	R-CHIP	SA
2007-000758	R323	R-CHIP	SA
2007-001288	R405	R-CHIP	SA
2007-001288	R406	R-CHIP	SA
2007-001313	R103	R-CHIP	SA
2007-001333	R307	R-CHIP	SA
2007-001333	R324	R-CHIP	SA
2007-001333	R500	R-CHIP	SA
2007-001333	R502	R-CHIP	SA
2007-001333	R506	R-CHIP	SA
2007-003001	R106	R-CHIP	SA
2007-007014	R407	R-CHIP	SA
2007-007014	R409	R-CHIP	SA
2007-007107	R509	R-CHIP	SA
2007-007137	R217	R-CHIP	SA
2007-007137	R218	R-CHIP	SA
2007-007142	R508	R-CHIP	SA
2007-007308	R105	R-CHIP	SA
2007-007312	R510	R-CHIP	SA
2007-007316	R107	R-CHIP	SA
2007-007489	R110	R-CHIP	SA
2007-007573	R304	R-CHIP	SA
2007-008052	R104	R-CHIP	SA
2007-008055	R314	R-CHIP	SA
2007-008354	R305	R-CHIP	SA
2007-008419	R102	R-CHIP	SA
2007-008588	R313	R-CHIP	SA
2007-008648	R312	R-CHIP	SA

SEC Code	Design LOC	Description	STATUS
2007-009314	R316	R-CHIP	SA
2203-000233	C101	C-CER,CHIP	SA
2203-000233	C105	C-CER,CHIP	SA
2203-000233	C106	C-CER,CHIP	SA
2203-000233	C107	C-CER,CHIP	SA
2203-000233	C114	C-CER,CHIP	SA
2203-000233	C315	C-CER,CHIP	SA
2203-000233	C419	C-CER,CHIP	SA
2203-000278	C103	C-CER,CHIP	SA
2203-000278	C116	C-CER,CHIP	SA
2203-000278	C137	C-CER,CHIP	SA
2203-000278	C143	C-CER,CHIP	SA
2203-000278	C144	C-CER,CHIP	SA
2203-000278	C404	C-CER,CHIP	SA
2203-000425	C220	C-CER,CHIP	SA
2203-000425	C221	C-CER,CHIP	SA
2203-000425	C317	C-CER,CHIP	SA
2203-000425	C320	C-CER,CHIP	SA
2203-000425	C331	C-CER,CHIP	SA
2203-000438	C123	C-CER,CHIP	SA
2203-000438	C600	C-CER,CHIP	SA
2203-000627	C141	C-CER,CHIP	SNA
2203-000627	C401	C-CER,CHIP	SNA
2203-000627	C407	C-CER,CHIP	SNA
2203-000679	C139	C-CER,CHIP	SA
2203-000679	C206	C-CER,CHIP	SA
2203-000679	C209	C-CER,CHIP	SA
2203-000679	C214	C-CER,CHIP	SA
2203-000714	C120	C-CER,CHIP	SA
2203-000812	C110	C-CER,CHIP	SA
2203-000812	C118	C-CER,CHIP	SA
2203-000812	C604	C-CER,CHIP	SA
2203-000812	C613	C-CER,CHIP	SA
2203-000995	C140	C-CER,CHIP	SA
2203-001072	C403	C-CER,CHIP	SA
2203-001437	C400	C-CER,CHIP	SA
2203-001437	C406	C-CER,CHIP	SA
2203-002709	C601	C-CER,CHIP	SA
2203-005050	C104	C-CER,CHIP	SA
2203-005050	C108	C-CER,CHIP	SA
2203-005050	C111	C-CER,CHIP	SA
2203-005055	C203	C-CER,CHIP	SA

SEC Code	Design LOC	Description	STATUS
2203-005056	C307	C-CER,CHIP	SA
2203-005288	C100	C-CER,CHIP	SA
2203-005288	C102	C-CER,CHIP	SA
2203-005288	C112	C-CER,CHIP	SA
2203-005288	C115	C-CER,CHIP	SA
2203-005382	C113	C-CER,CHIP	SA
2203-005450	C208	C-CER,CHIP	SA
2203-005450	C213	C-CER,CHIP	SA
2203-005482	C122	C-CER,CHIP	SA
2203-005482	C201	C-CER,CHIP	SA
2203-005482	C202	C-CER,CHIP	SA
2203-005482	C204	C-CER,CHIP	SA
2203-005482	C205	C-CER,CHIP	SA
2203-005482	C207	C-CER,CHIP	SA
2203-005482	C210	C-CER,CHIP	SA
2203-005482	C211	C-CER,CHIP	SA
2203-005482	C212	C-CER,CHIP	SA
2203-005482	C215	C-CER,CHIP	SA
2203-005482	C216	C-CER,CHIP	SA
2203-005482	C402	C-CER,CHIP	SA
2203-005482	C405	C-CER,CHIP	SA
2203-005482	C408	C-CER,CHIP	SA
2203-005482	C409	C-CER,CHIP	SA
2203-005482	C411	C-CER,CHIP	SA
2203-005482	C412	C-CER,CHIP	SA
2203-005482	C414	C-CER,CHIP	SA
2203-005482	C415	C-CER,CHIP	SA
2203-005482	C416	C-CER,CHIP	SA
2203-005482	C503	C-CER,CHIP	SA
2203-005682	C606	C-CER,CHIP	SA
2203-005682	C607	C-CER,CHIP	SA
2203-005682	C608	C-CER,CHIP	SA
2203-005682	C609	C-CER,CHIP	SA
2203-005682	C615	C-CER,CHIP	SA
2203-005736	C117	C-CER,CHIP	SA
2203-005779	C500	C-CER,CHIP	SA
2203-005779	C501	C-CER,CHIP	SA
2203-005779	C502	C-CER,CHIP	SA
2203-006047	C417	C-CER,CHIP	SA
2203-006047	C418	C-CER,CHIP	SA
2203-006048	C125	C-CER,CHIP	SA
2203-006048	C127	C-CER,CHIP	SA

SEC Code	Design LOC	Description	STATUS
2203-006048	C129	C-CER,CHIP	SA
2203-006048	C134	C-CER,CHIP	SA
2203-006048	C138	C-CER,CHIP	SA
2203-006048	C302	C-CER,CHIP	SA
2203-006208	C305	C-CER,CHIP	SA
2203-006208	C310	C-CER,CHIP	SA
2203-006208	C314	C-CER,CHIP	SA
2203-006208	C325	C-CER,CHIP	SA
2203-006257	C303	C-CER,CHIP	SA
2203-006257	C304	C-CER,CHIP	SA
2203-006257	C309	C-CER,CHIP	SA
2203-006257	C313	C-CER,CHIP	SA
2203-006257	C316	C-CER,CHIP	SA
2203-006257	C323	C-CER,CHIP	SA
2203-006260	C135	C-CER,CHIP	SA
2203-006260	C136	C-CER,CHIP	SA
2203-006324	C322	C-CER,CHIP	SA
2203-006348	C319	C-CER,CHIP	SA
2203-006399	C126	C-CER,CHIP	SA
2203-006399	C200	C-CER,CHIP	SA
2203-006399	C217	C-CER,CHIP	SA
2203-006423	C119	C-CER,CHIP	SA
2203-006423	C121	C-CER,CHIP	SA
2203-006423	C324	C-CER,CHIP	SA
2203-006562	C109	C-CER,CHIP	SA
2203-006562	C130	C-CER,CHIP	SA
2203-006562	C219	C-CER,CHIP	SA
2203-006562	C300	C-CER,CHIP	SA
2203-006562	C301	C-CER,CHIP	SA
2203-006562	C308	C-CER,CHIP	SA
2203-006562	C311	C-CER,CHIP	SA
2203-006562	C312	C-CER,CHIP	SA
2203-006562	C318	C-CER,CHIP	SA
2203-006562	C330	C-CER,CHIP	SA
2203-006562	C410	C-CER,CHIP	SA
2203-006562	C413	C-CER,CHIP	SA
2203-006562	C504	C-CER,CHIP	SA
2203-006562	C505	C-CER,CHIP	SA
2203-006562	C605	C-CER,CHIP	SA
2203-006681	C329	C-CER,CHIP	SA
2203-006824	C328	C-CER,CHIP	SA
2203-006837	C326	C-CER,CHIP	SA

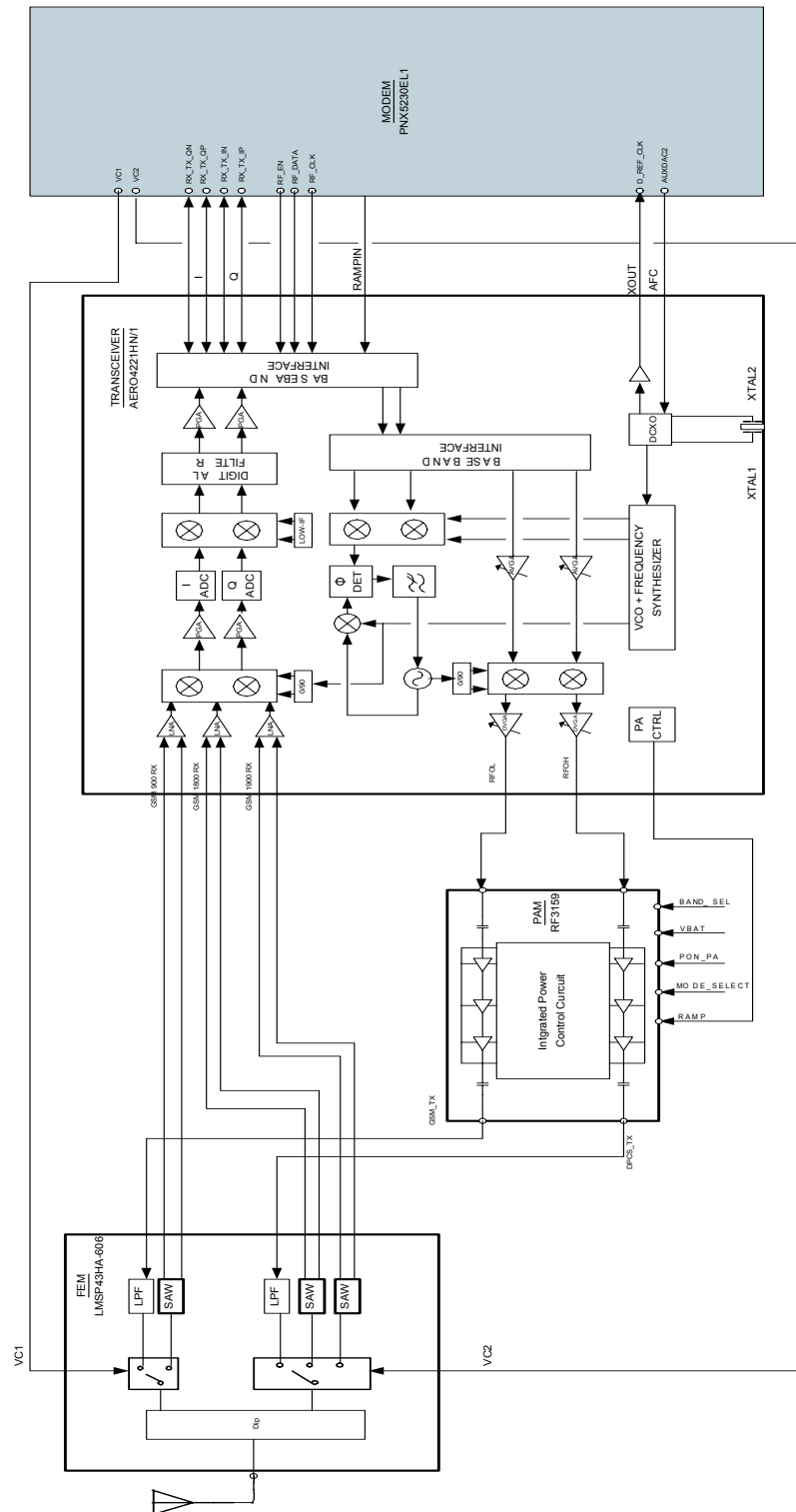
SEC Code	Design LOC	Description	STATUS
2203-006838	C128	C-CER,CHIP	SA
2203-006838	C133	C-CER,CHIP	SA
2203-006839	C602	C-CER,CHIP	SA
2203-006839	C614	C-CER,CHIP	SA
2203-006842	C142	C-CER,CHIP	SA
2203-006890	C306	C-CER,CHIP	SA
2203-007147	C327	C-CER,CHIP	SA
2404-001226	TA402	C-TA,CHIP	SA
2404-001377	TA400	C-TA,CHIP	SA
2404-001381	TA401	C-TA,CHIP	SA
2404-001381	TA500	C-TA,CHIP	SA
2404-001430	TA300	C-TA,CHIP	SA
2404-001430	TA501	C-TA,CHIP	SA
2404-001496	TA100	C-TA,CHIP	SA
2703-002076	L115	INDUCTOR-SMD	SA
2703-002206	L113	INDUCTOR-SMD	SA
2703-002314	L100	INDUCTOR-SMD	SA
2703-002367	L112	INDUCTOR-SMD	SA
2703-002558	L107	INDUCTOR-SMD	SA
2703-002597	L118	INDUCTOR-SMD	SA
2703-002608	L104	INDUCTOR-SMD	SA
2703-002608	L105	INDUCTOR-SMD	SA
2703-002612	L106	INDUCTOR-SMD	SA
2703-002612	L109	INDUCTOR-SMD	SA
2703-002989	L114	INDUCTOR-SMD	SA
2703-003331	L300	INDUCTOR-SMD	SA
2801-004426	OSC100	CRYSTAL-SMD	SA
2801-004466	OSC300	CRYSTAL-SMD	SA
2801-004560	OSC101	CRYSTAL-SMD	SA
2901-001316	U201	FILTER-EMI SMD	SA
2901-001408	F500	FILTER-EMI SMD	SA
2901-001450	F601	FILTER-EMI/ESD	SA
2901-001450	F602	FILTER-EMI/ESD	SA
2901-001450	F603	FILTER-EMI/ESD	SA
2901-001450	F604	FILTER-EMI/ESD	SA
2901-001450	F605	FILTER-EMI/ESD	SA
2901-001450	F606	FILTER-EMI/ESD	SA
2909-001279	F101	FILTER-LC	SA
2911-000087	F100	DUPLEXER-FEM	SA
3301-001534	L110	BEAD-SMD	SA
3301-001659	L111	BEAD-SMD	SA
3301-001885	L400	BEAD-SMD	SA

SEC Code	Design LOC	Description	STATUS
3301-001885	L401	BEAD-SMD	SA
3301-001885	L500	BEAD-SMD	SA
3301-001885	L502	BEAD-SMD	SA
3301-001885	L503	BEAD-SMD	SA
3301-001885	L504	BEAD-SMD	SA
3301-001885	L600	BEAD-SMD	SA
3404-001152	TAC600	SWITCH-TACT	SA
3404-001152	TAC601	SWITCH-TACT	SA
3705-001421	RFS100	CONNECTOR-COAXIAL	SA
3709-001453	T/SIM300	CONNECTOR-CARD EDGE	SA
3710-002499	IFC500	SOCKET-INTERFACE	SA
3711-005578	HEA601	HEADER-BOARD TO BOARD	SA
3711-005918	HEA600	HEADER-BOARD TO BOARD	SA
3711-006285	BTC500	HEADER-BATTERY	SA
4302-001181	BAT300	BATTERY-LI(2ND)	SA
GH13-00032A	U400	IC ASIC	SA
GH70-02640A	SC400	ICT SHIELD-CAN CLIP	SA
GH70-02640A	SC401	ICT SHIELD-CAN CLIP	SA
GH70-03143A	SC100	ICT SHIELD-ON BOARD CLIP	SA
GH70-03143A	SC101	ICT SHIELD-ON BOARD CLIP	SA
GH70-03143A	SC102	ICT SHIELD-ON BOARD CLIP	SA
GH70-03143A	SC103	ICT SHIELD-ON BOARD CLIP	SA
GH70-03143A	SC104	ICT SHIELD-ON BOARD CLIP	SA
GH70-03143A	SC105	ICT SHIELD-ON BOARD CLIP	SA
GH70-03143A	SC106	ICT SHIELD-ON BOARD CLIP	SA
GH70-03143A	SC107	ICT SHIELD-ON BOARD CLIP	SA
GH70-03143A	SC108	ICT SHIELD-ON BOARD CLIP	SA
GH70-03143A	SC109	ICT SHIELD-ON BOARD CLIP	SA
GH70-03143A	SC110	ICT SHIELD-ON BOARD CLIP	SA
GH71-06625A	ANT100	NPR-ANT CONTACT	SA
GH71-06625A	ANT101	NPR-ANT CONTACT	SA

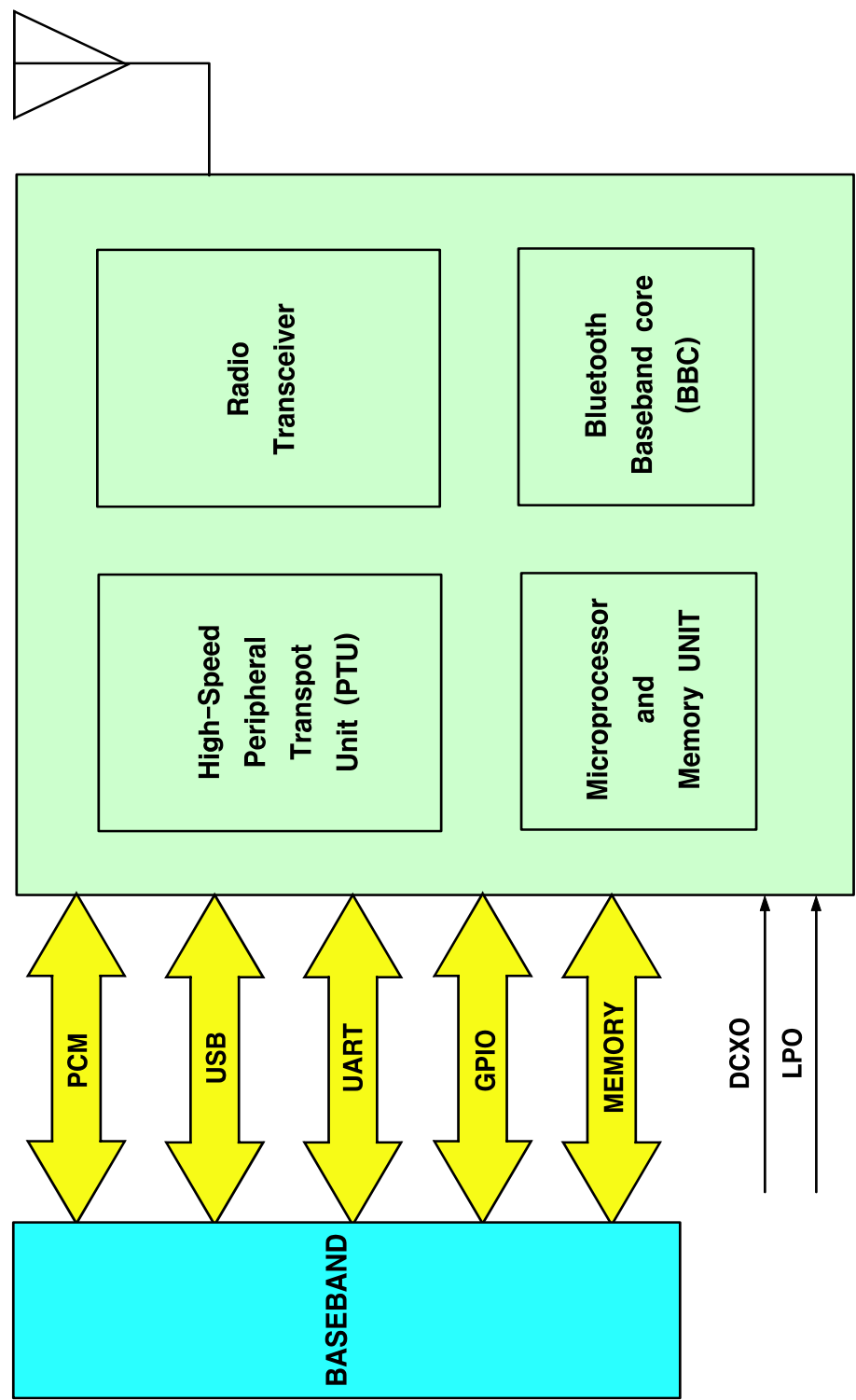
Please consult the GSPN website (Samsung Portal) for the most recent version of the product's part list.

7. Block Diagrams

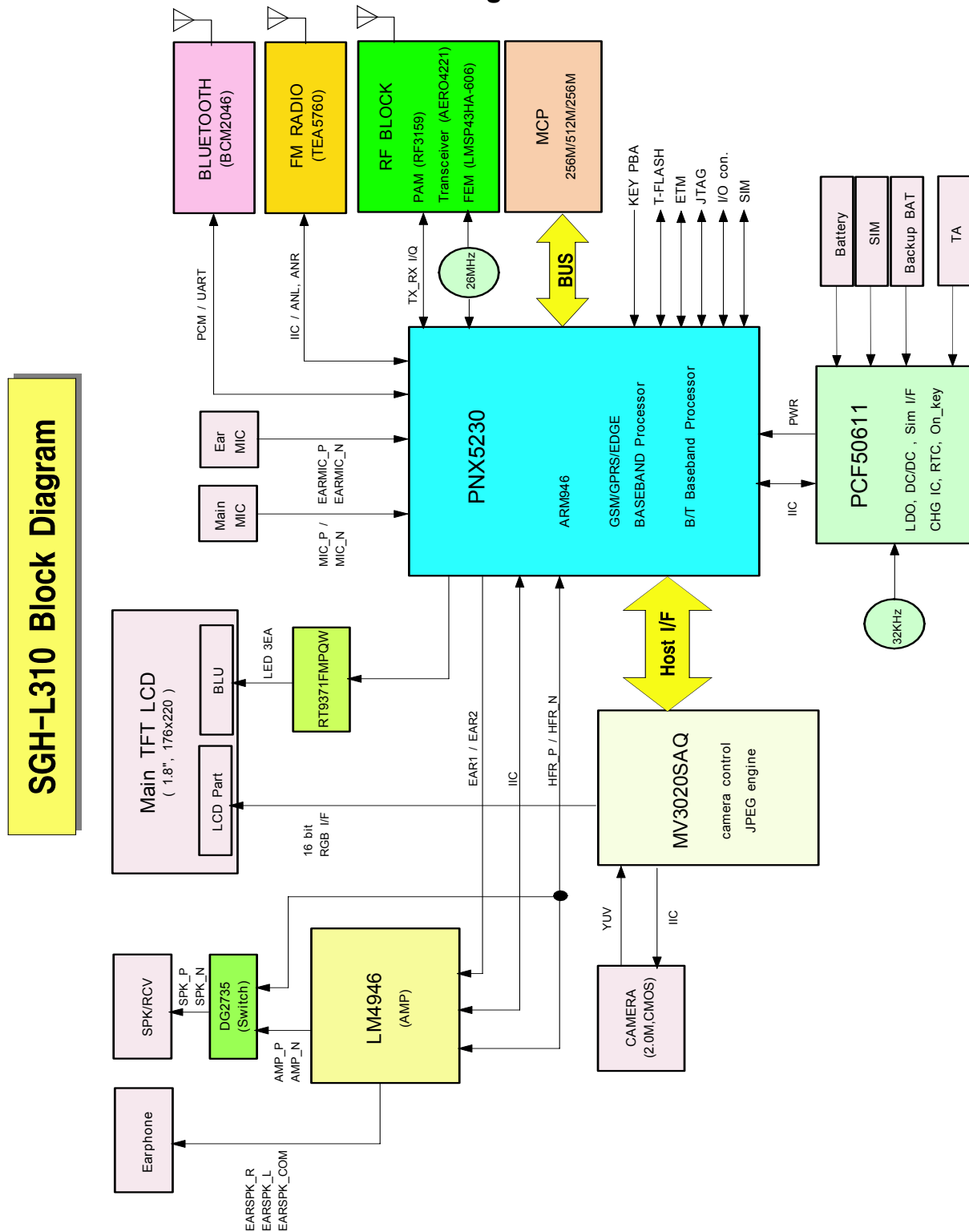
7-1. RF Solution Block Diagram



7-2. BT Solution Block Diagram



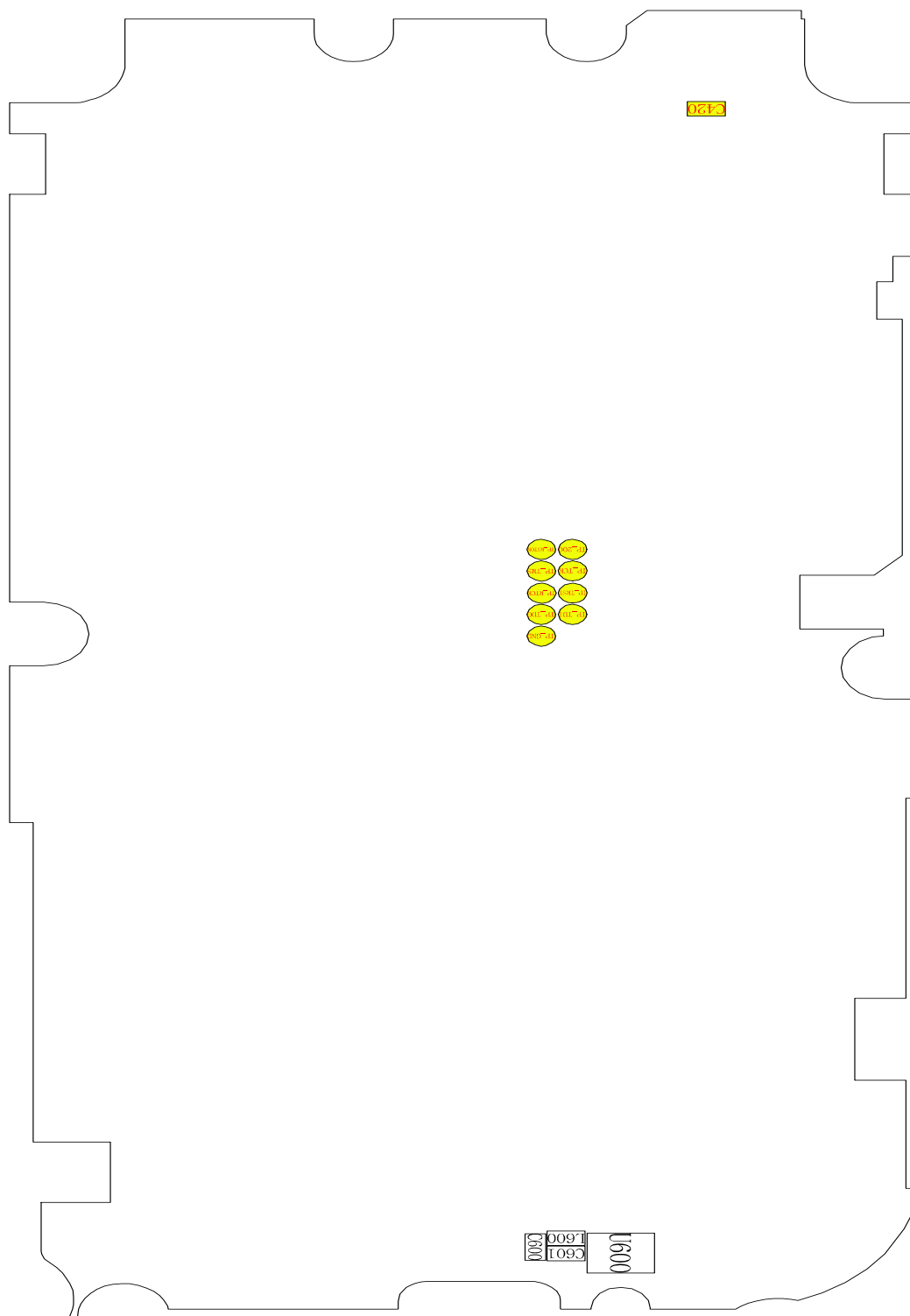
7-3. Base Band Solution Block Diagram



- Main top view

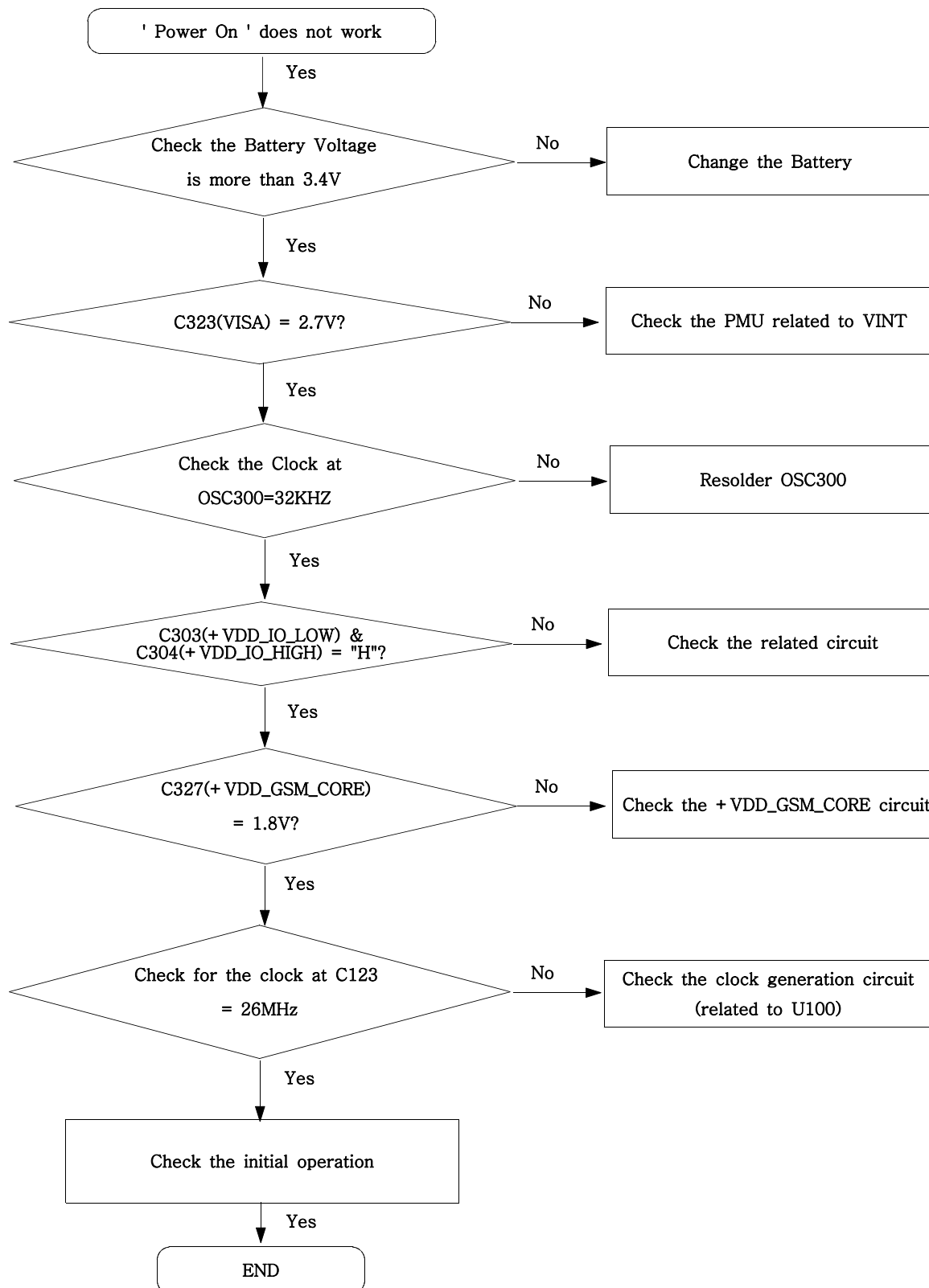


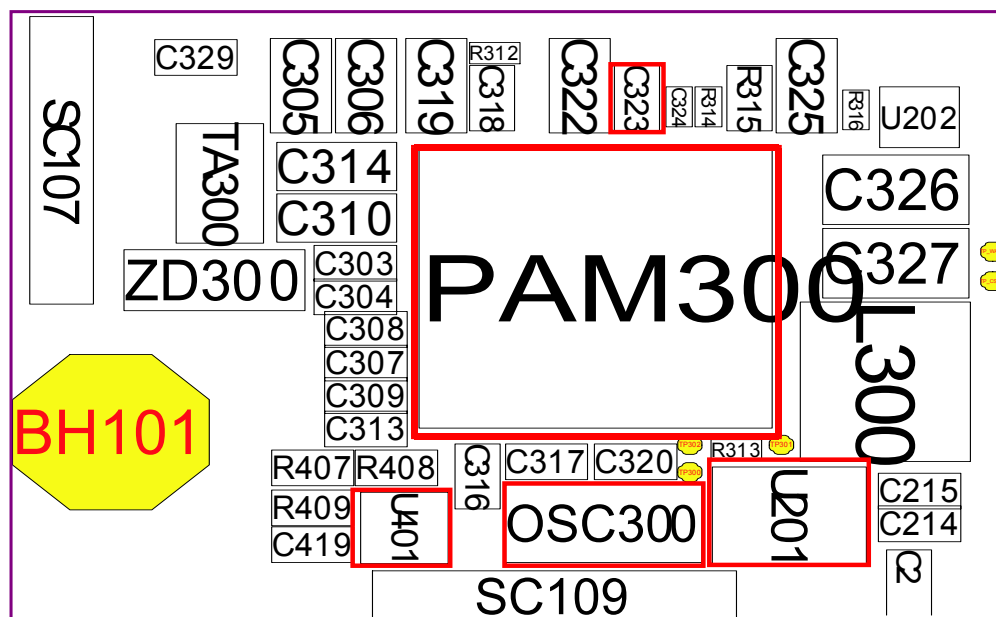
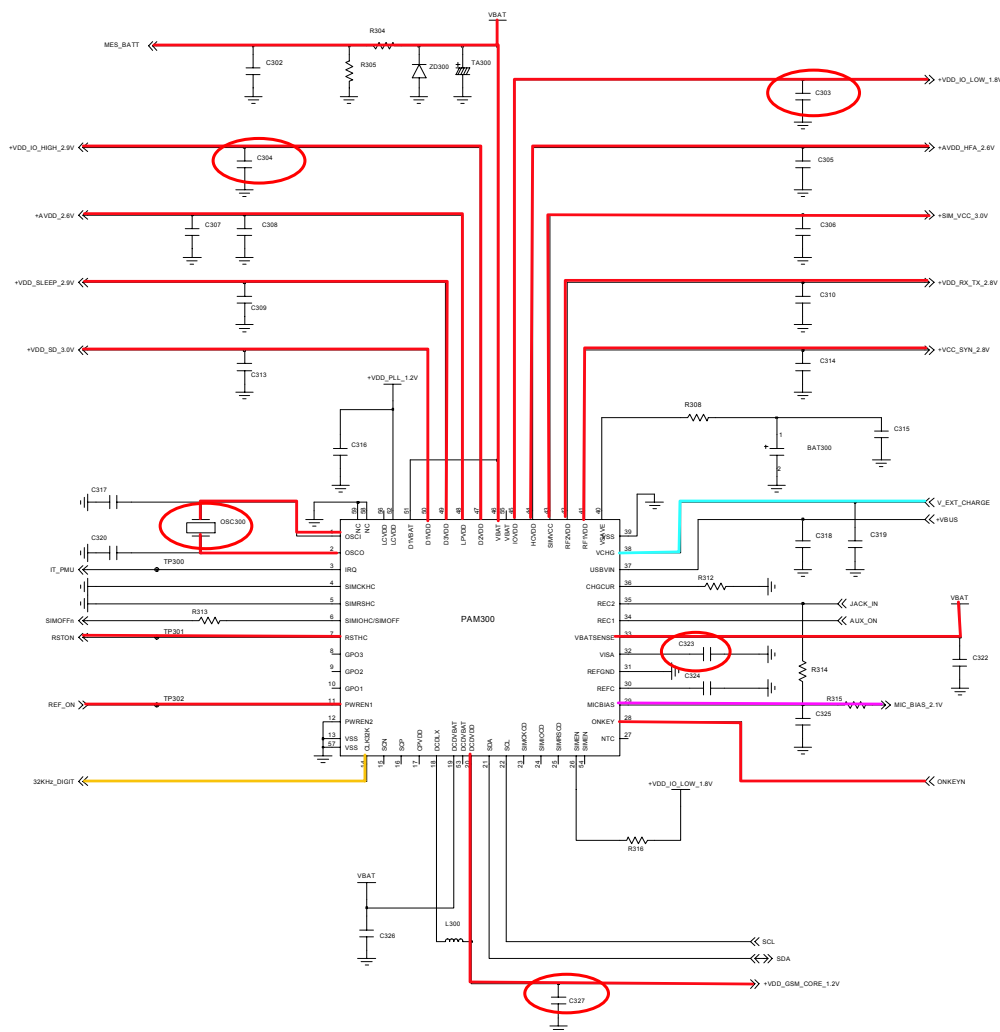
- Main bottom view



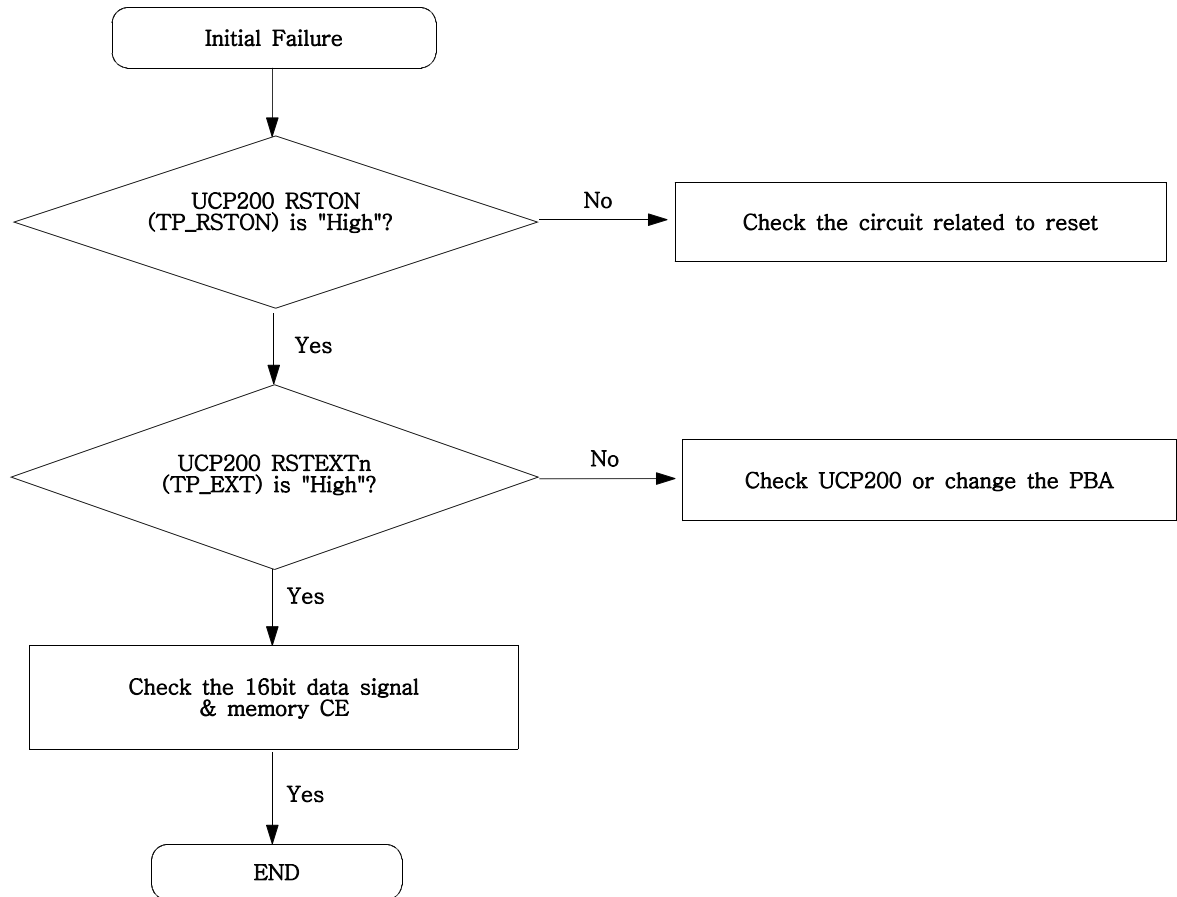
9. Flow Chart of Troubleshooting

9-1. Power On

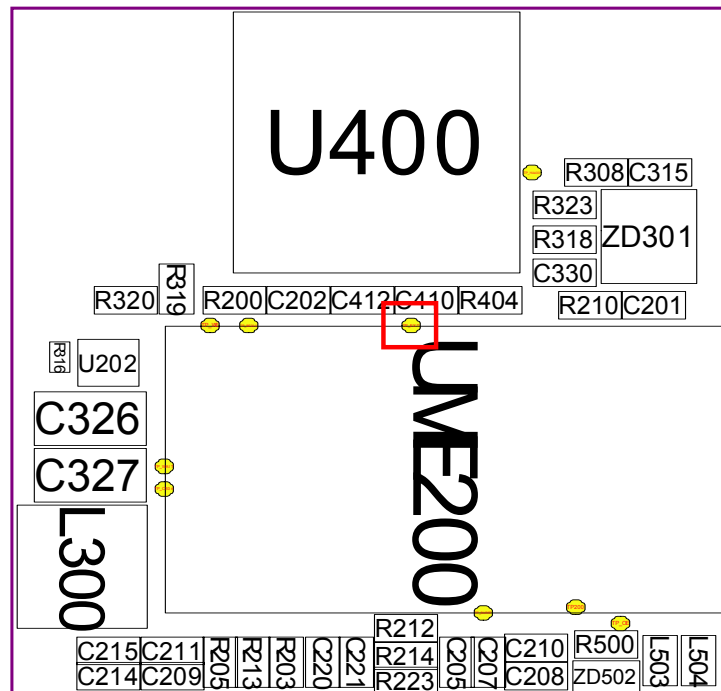
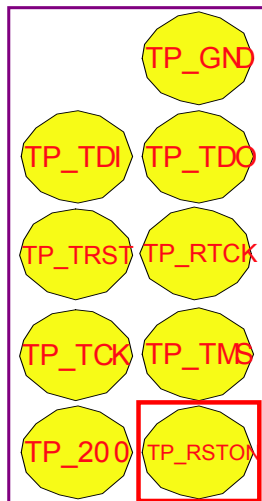
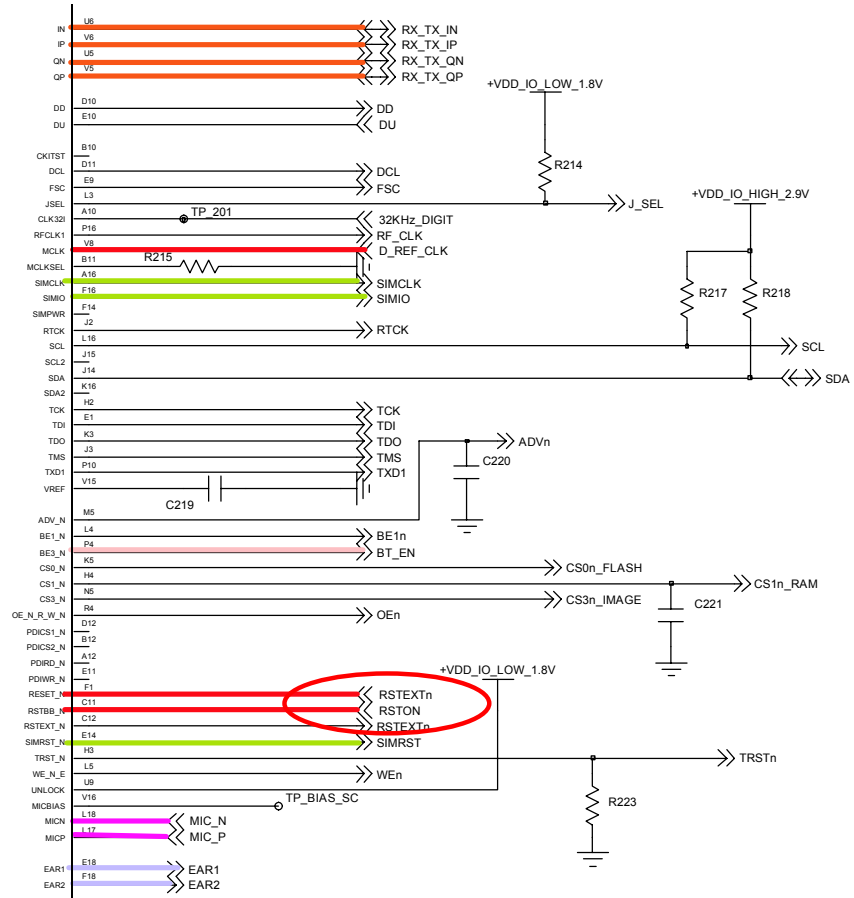




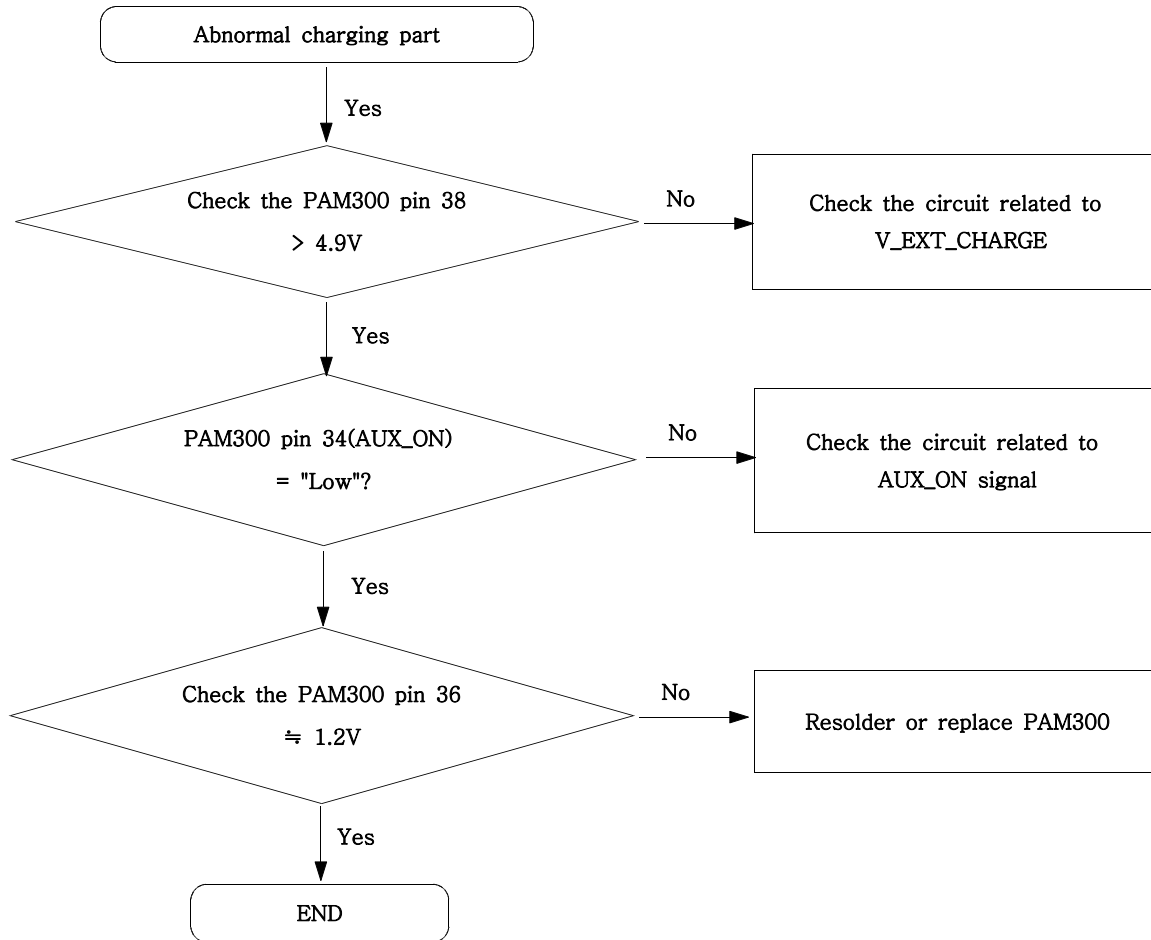
9-2. Initial

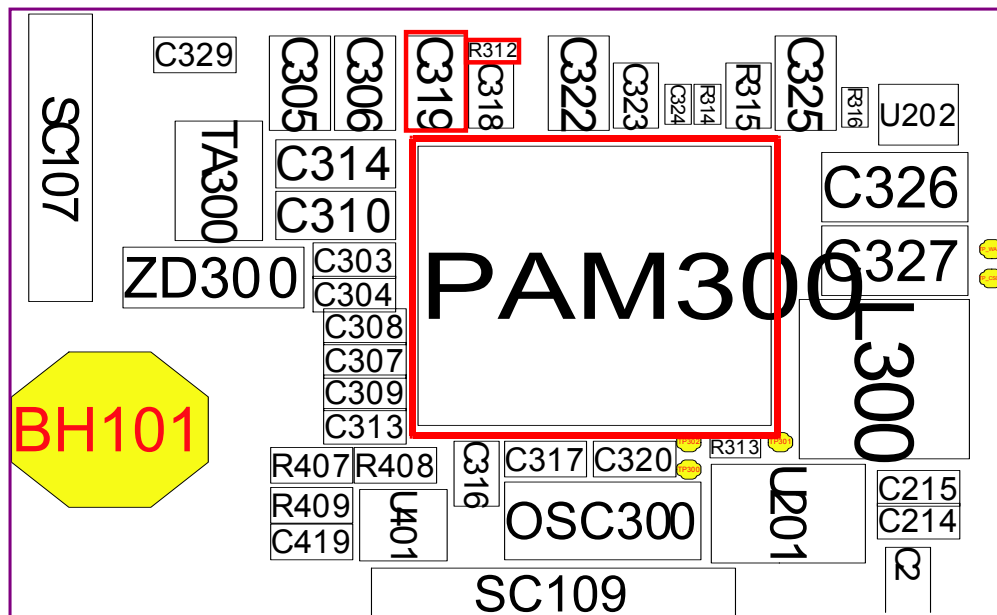
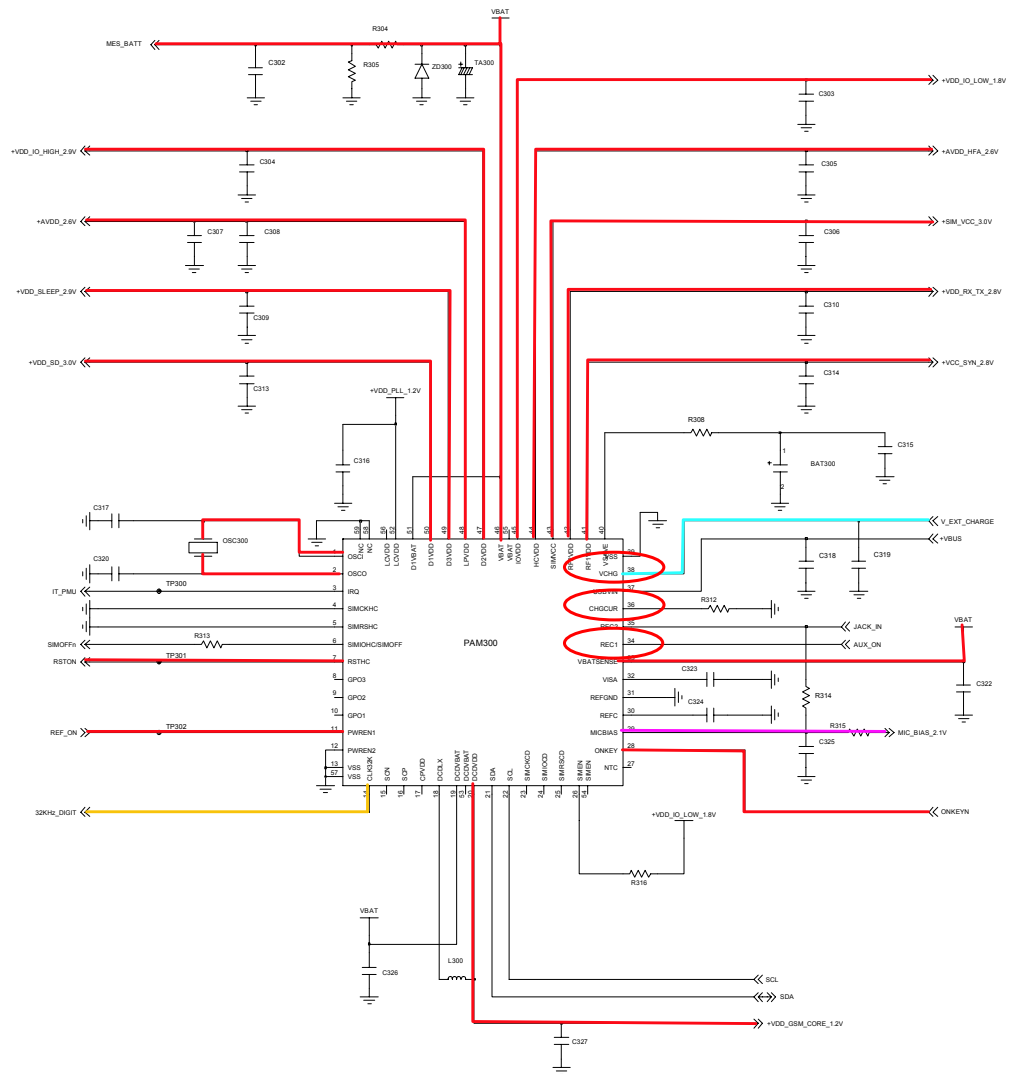


UCP200

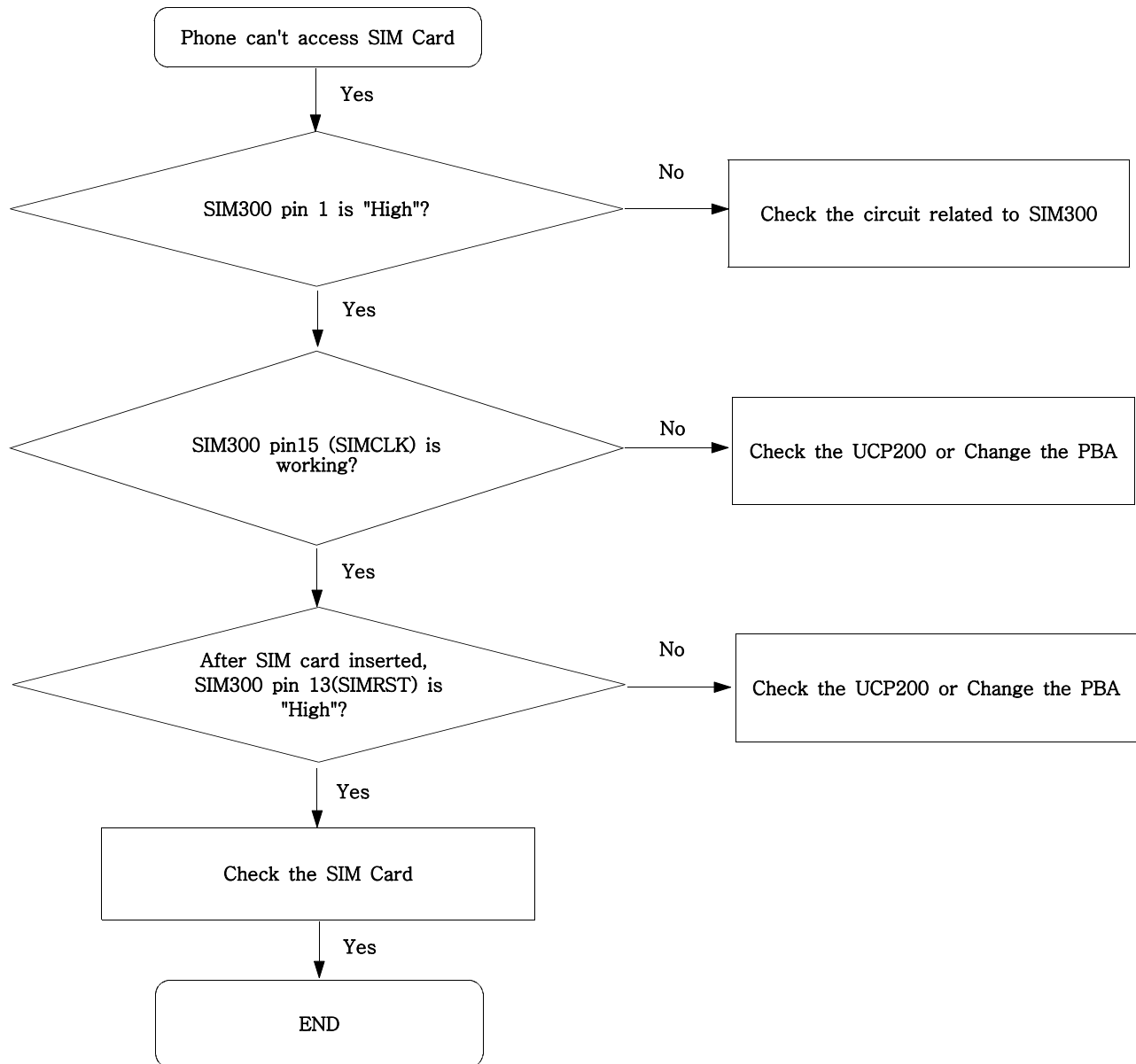


9-3. Charging Part

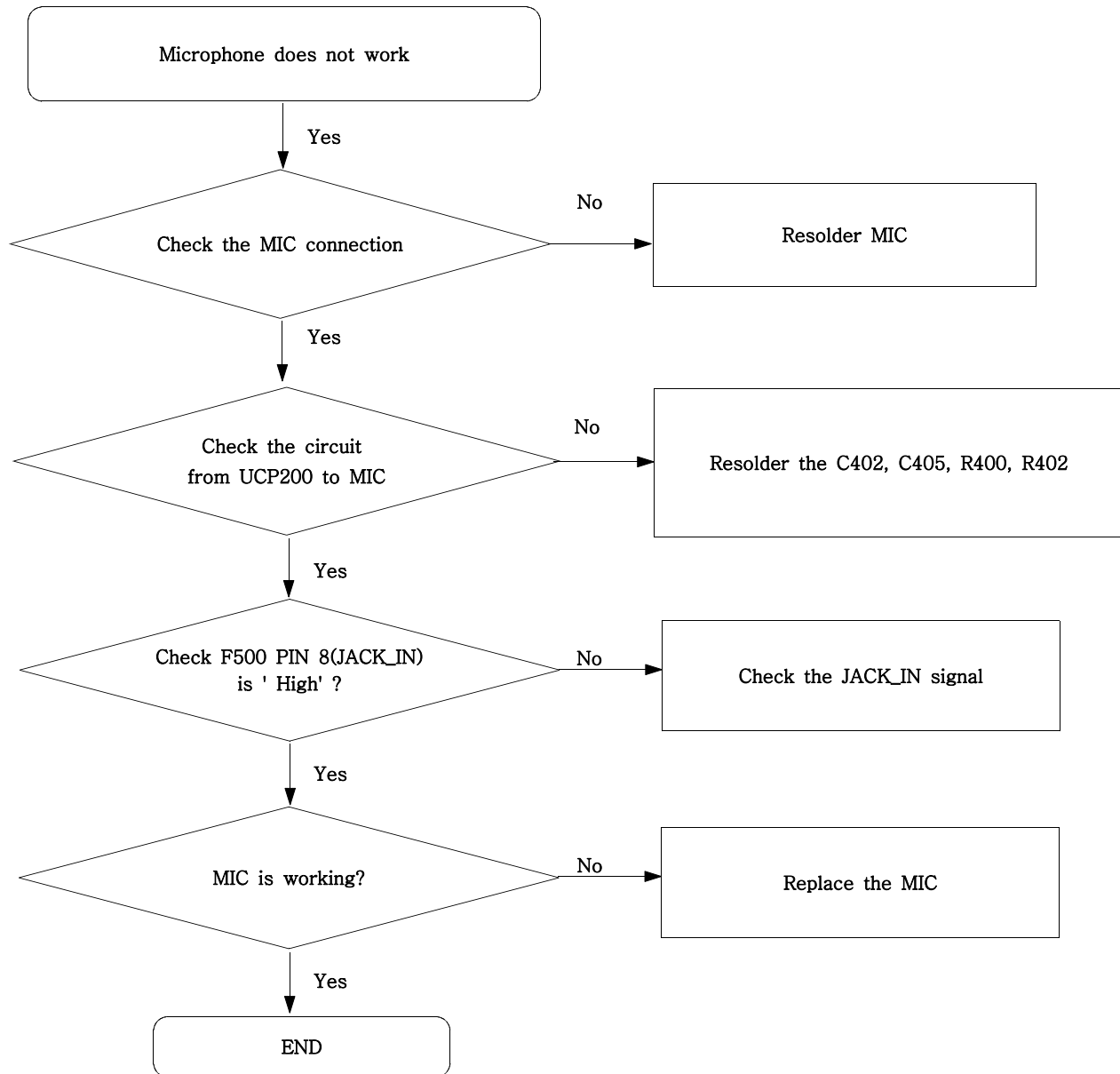


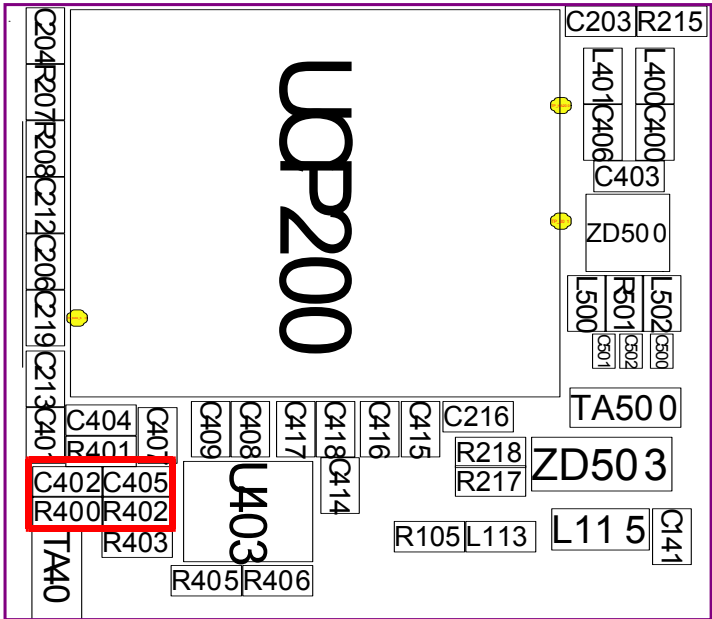


9-4. Sim Part

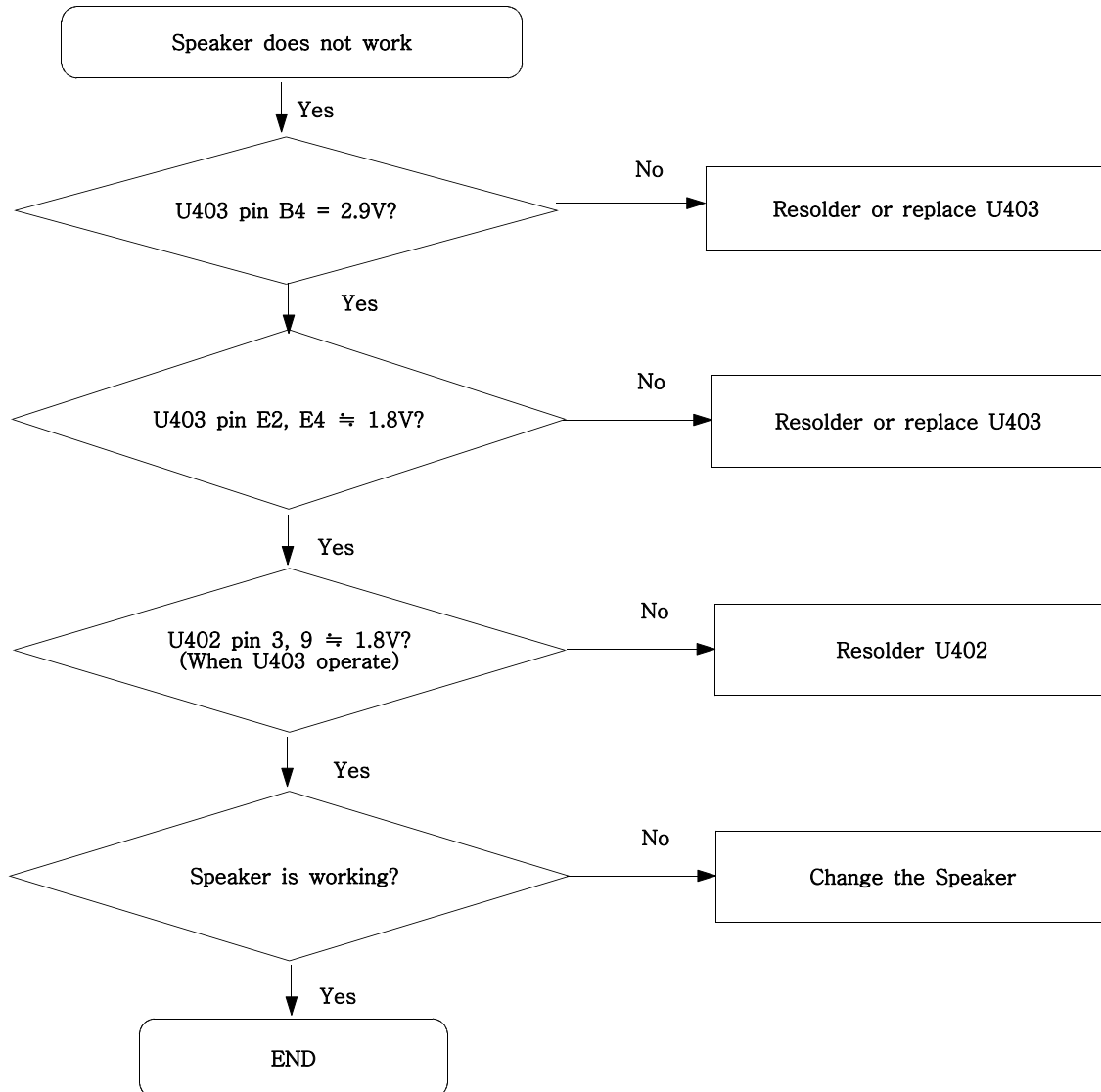


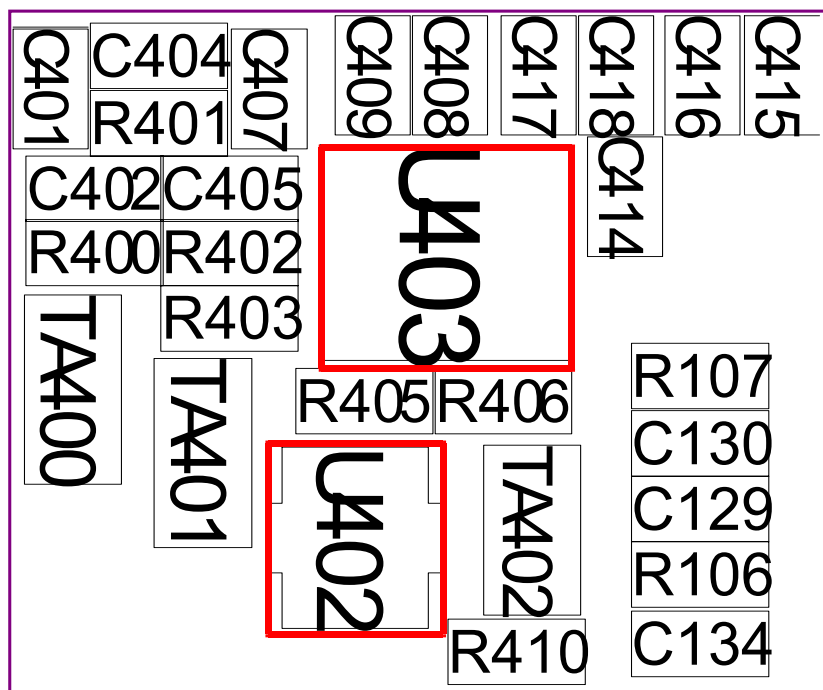
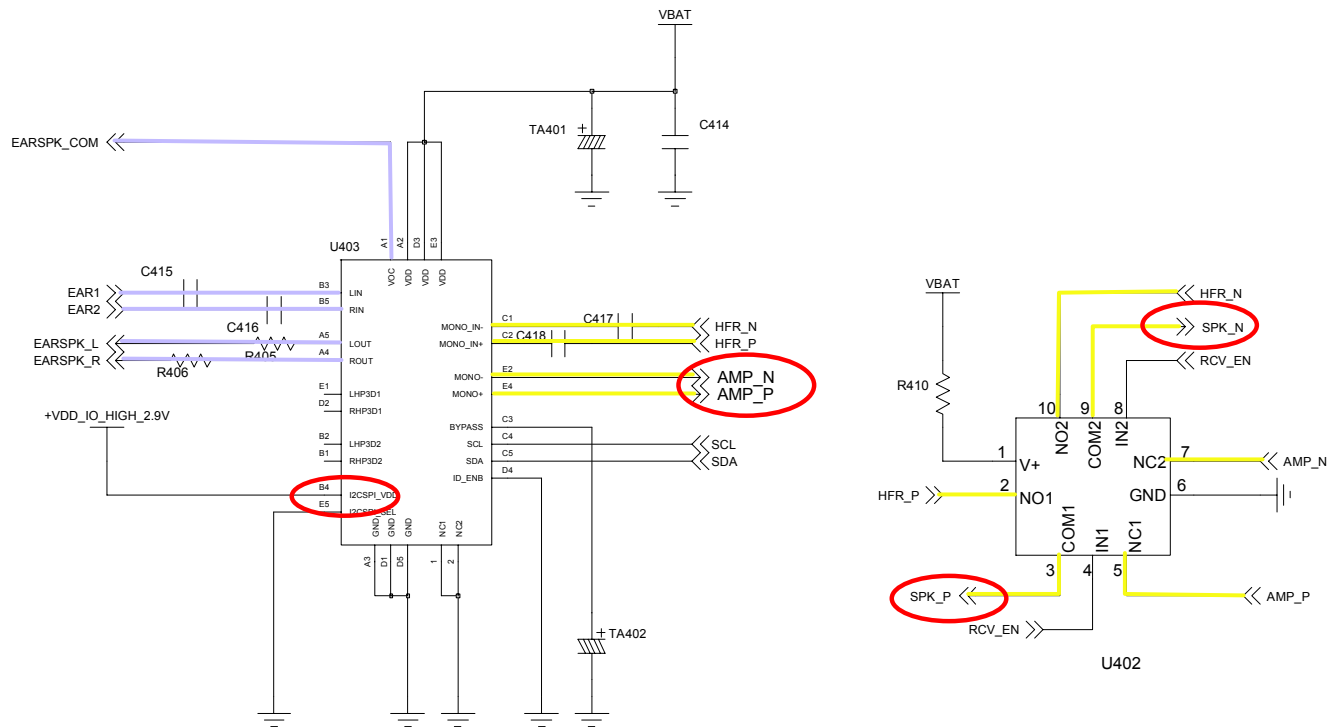
9-5. Microphone Part



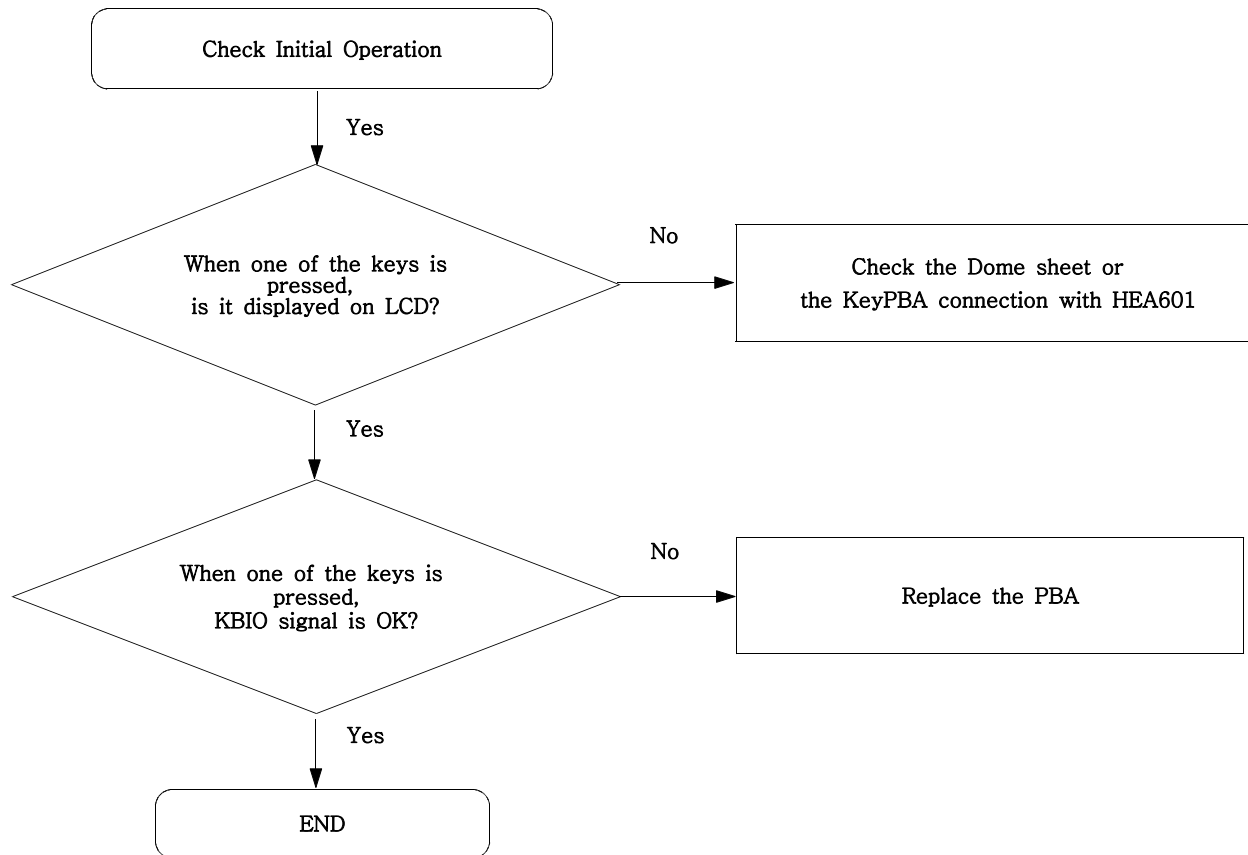


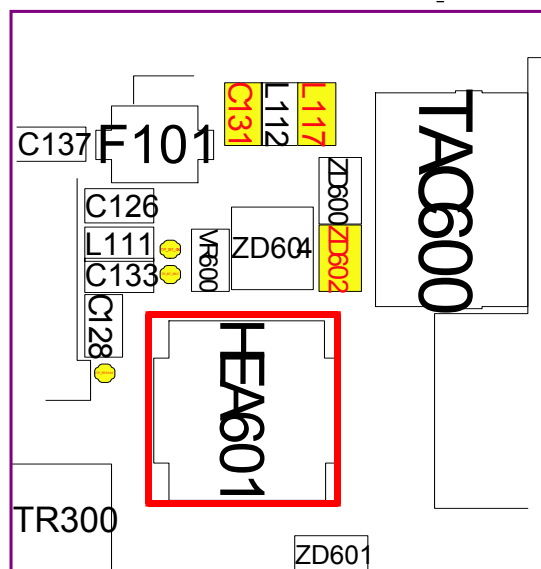
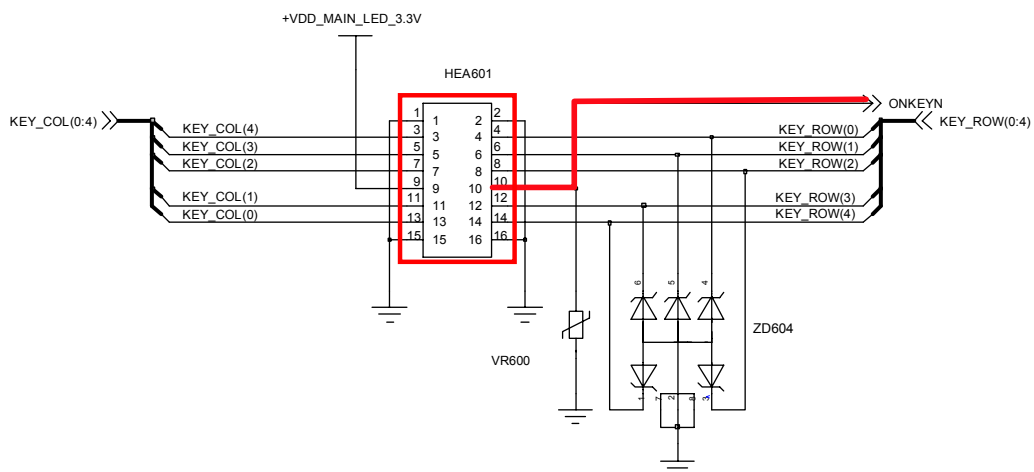
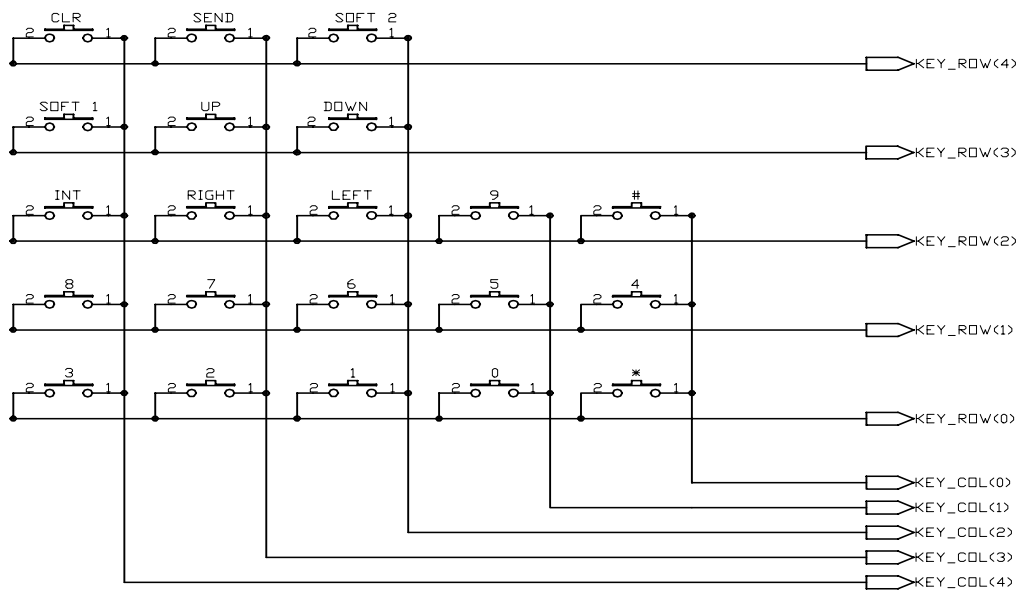
9-6. Speaker Part(Melody)



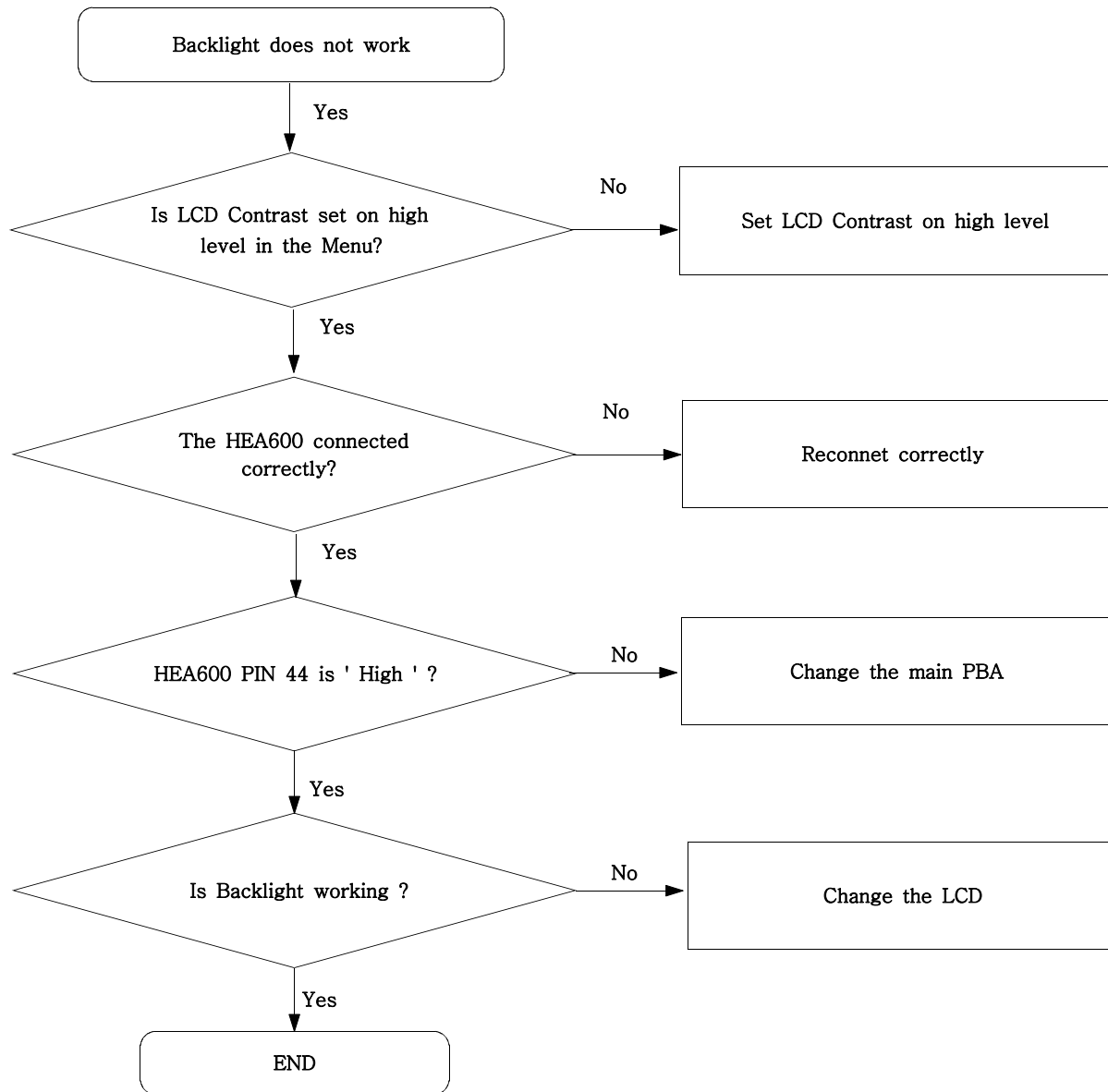


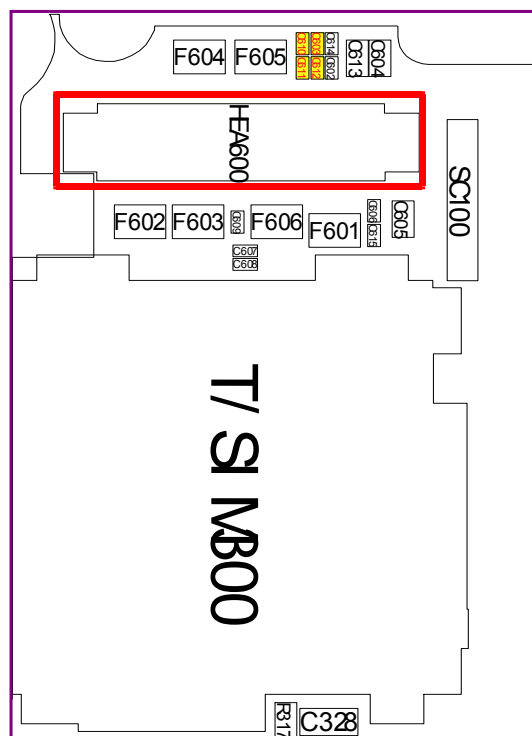
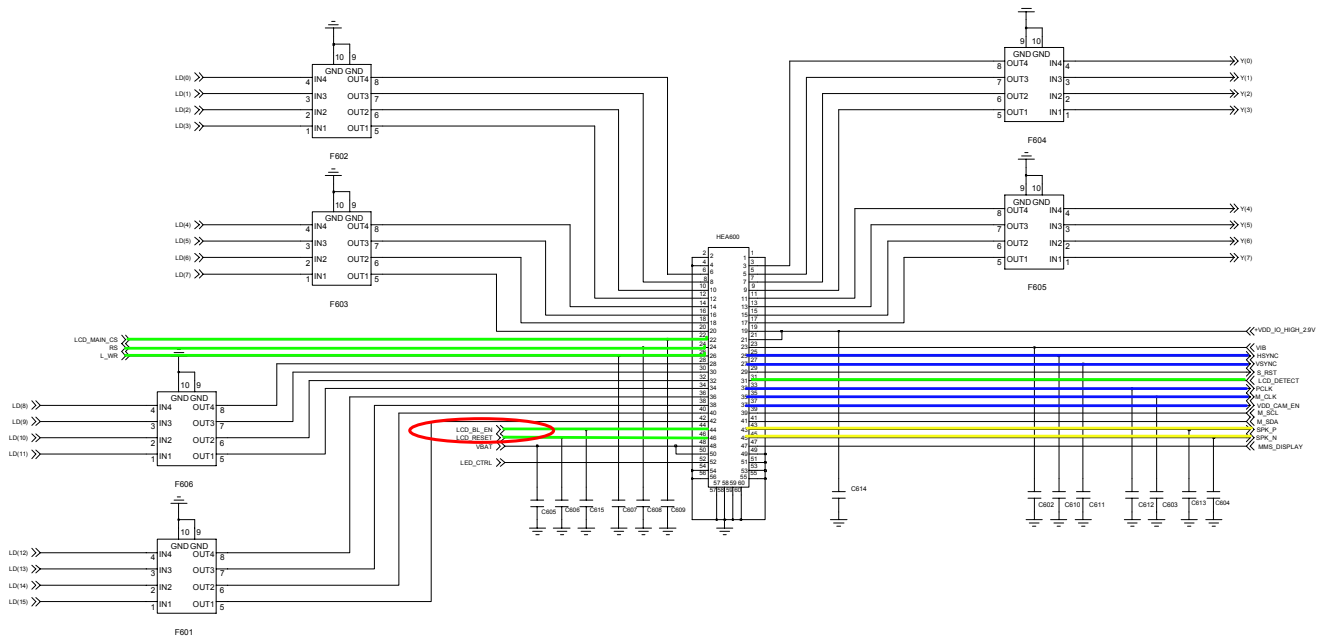
9-7. Key Data Input



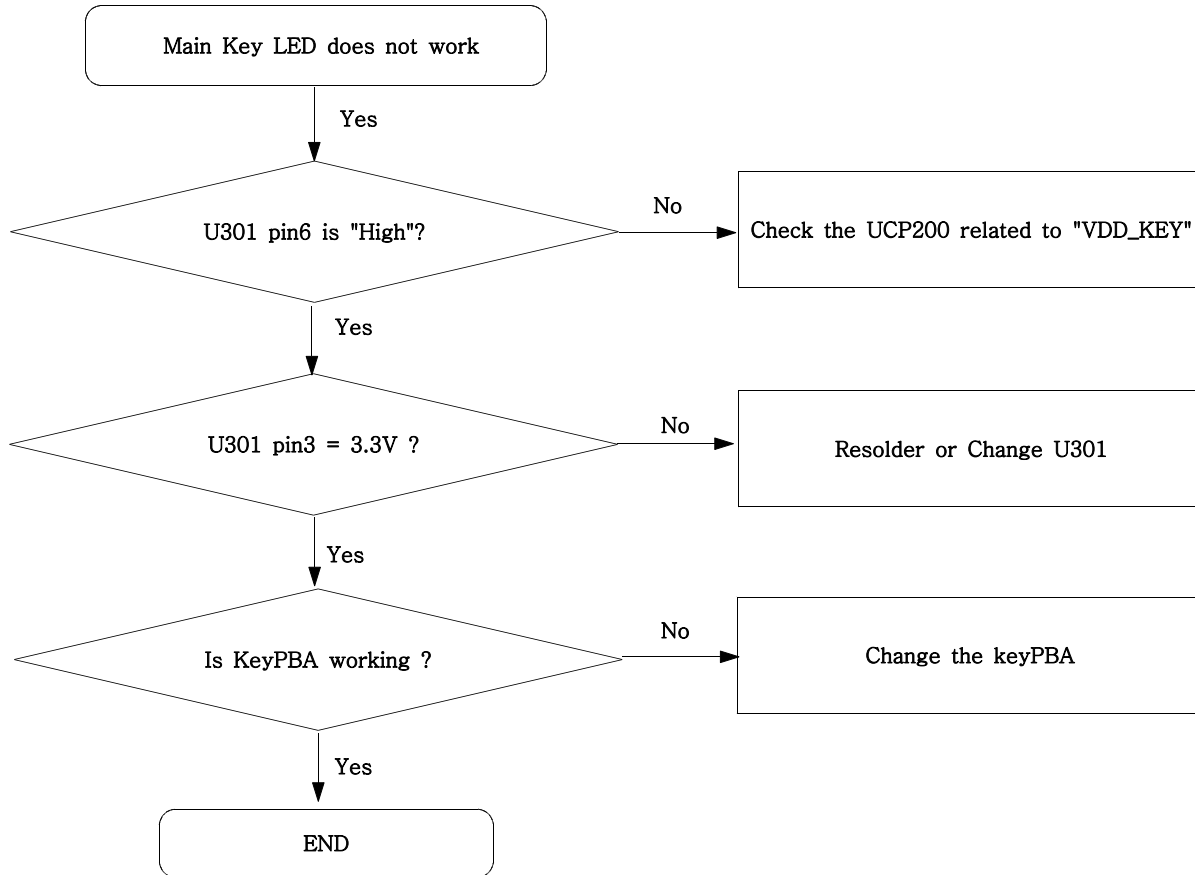


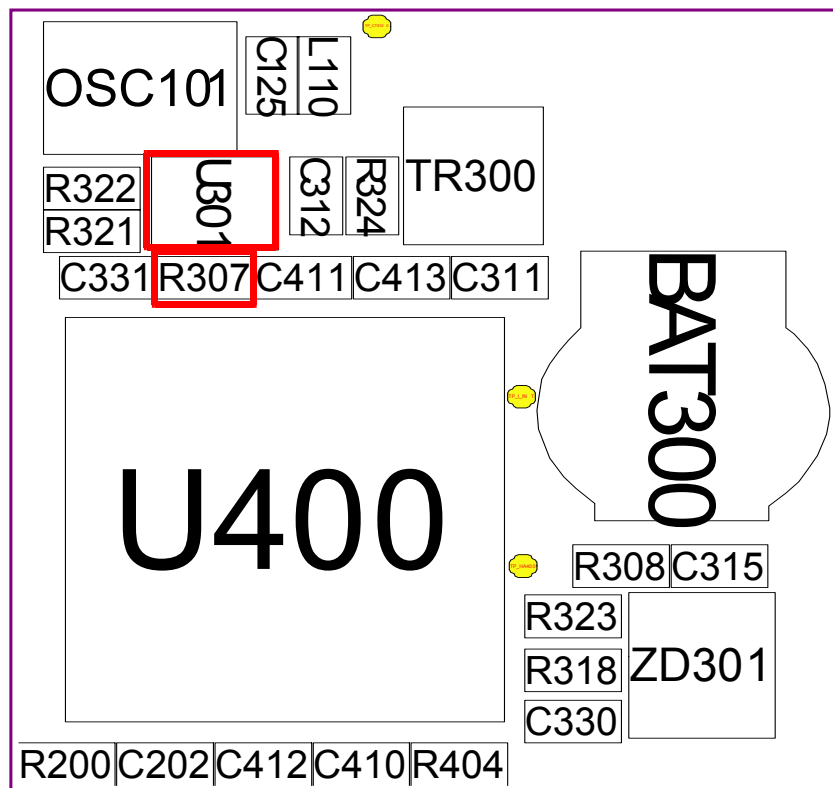
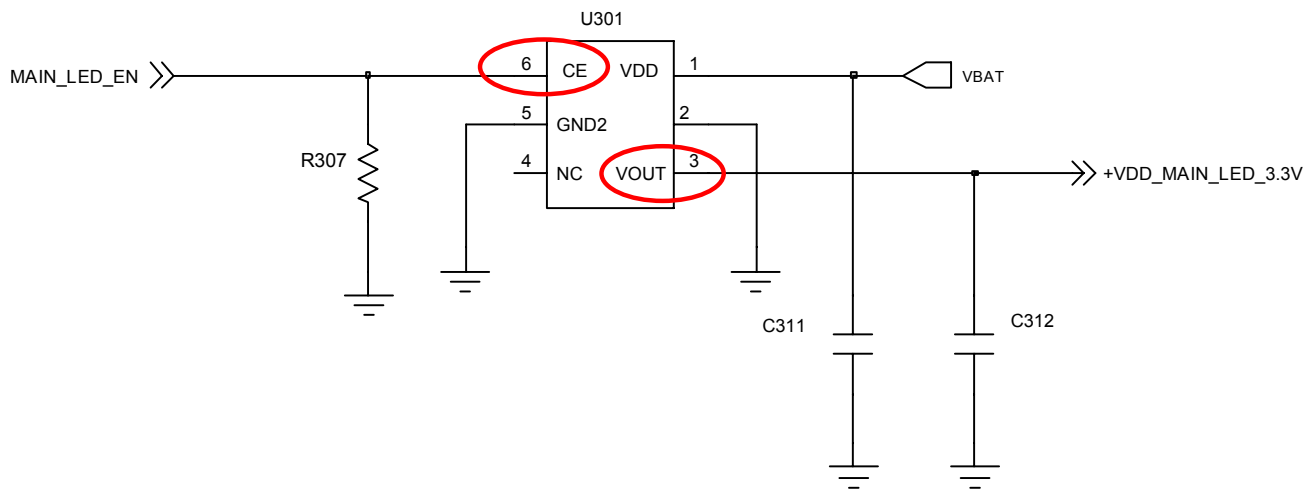
9-8. Back Light (for Color Main LCD)



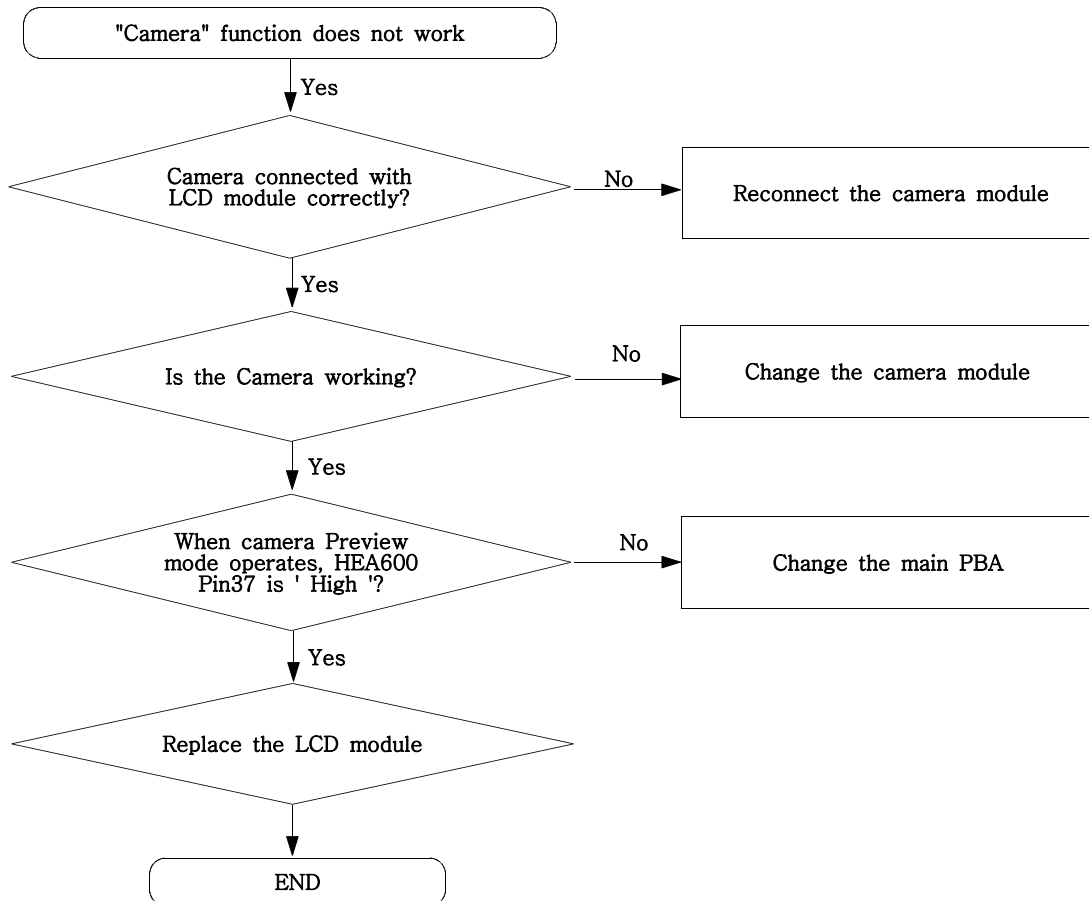


9-9. Key Back Light

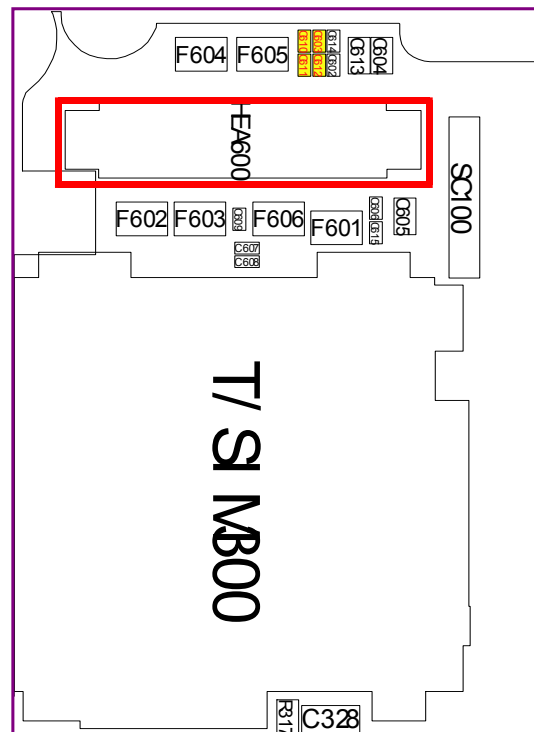
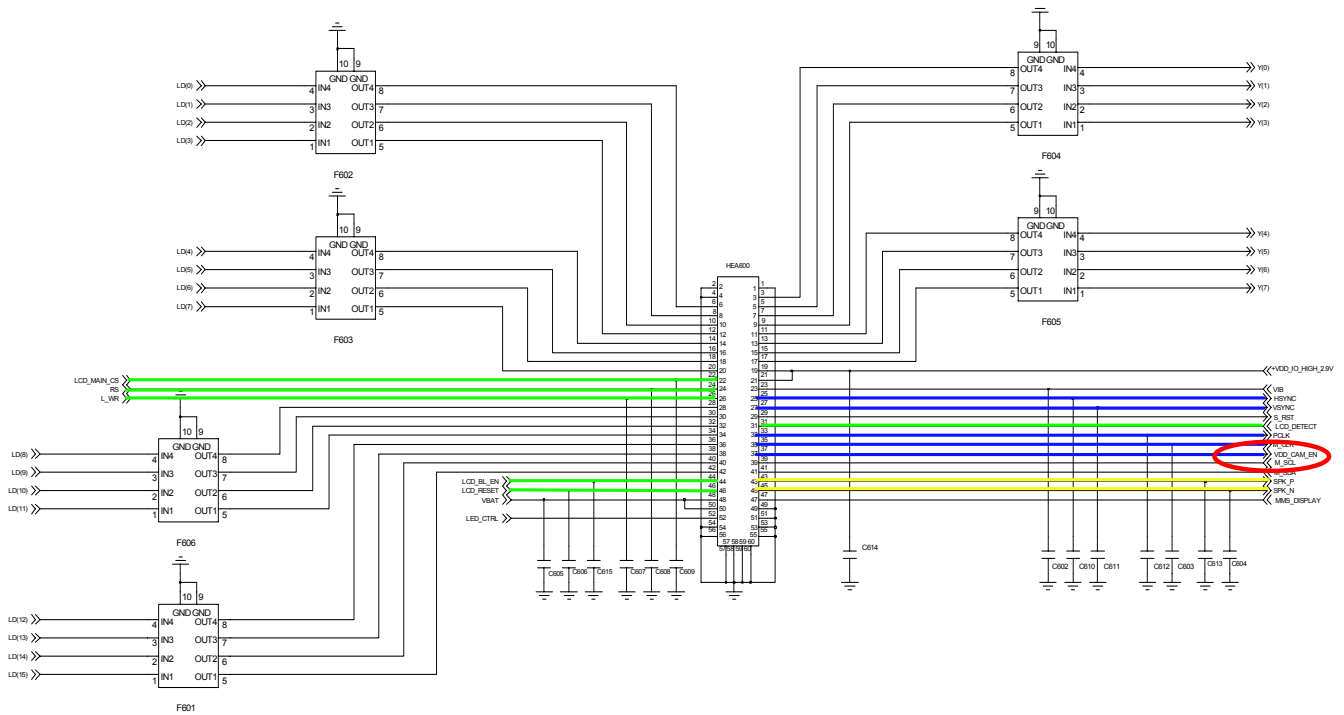




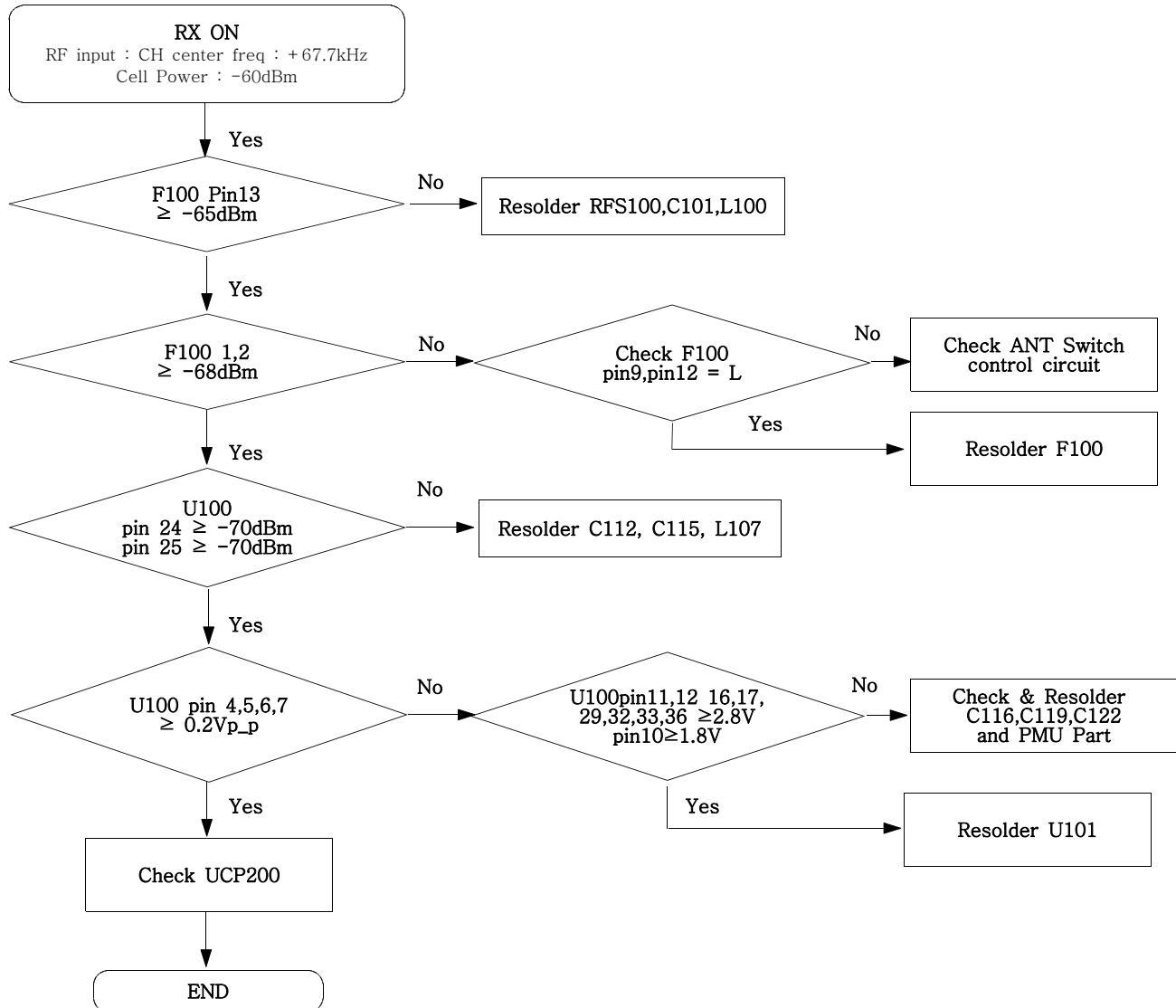
9-10. Camera part



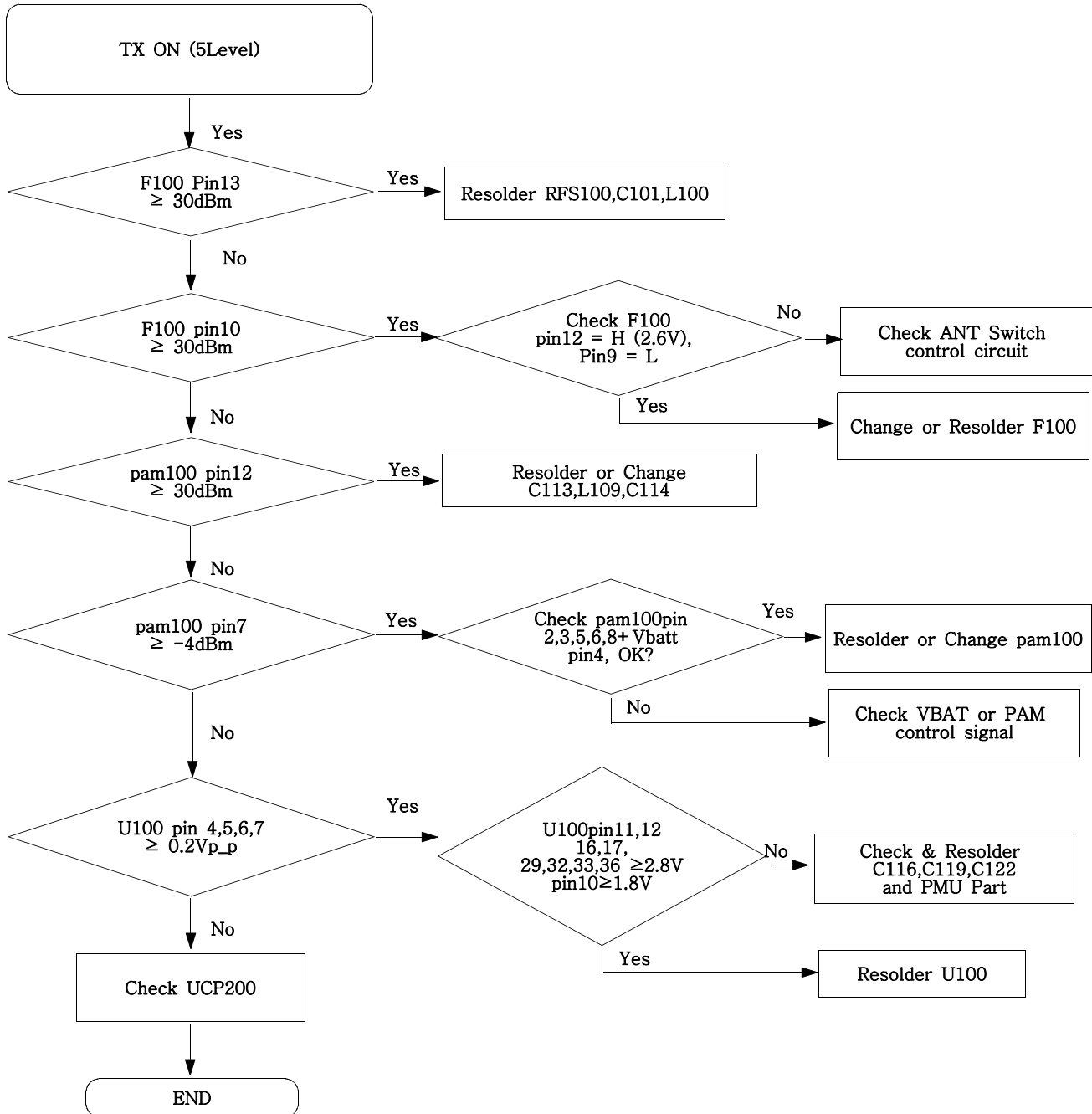
Flow Chart of Troubleshooting



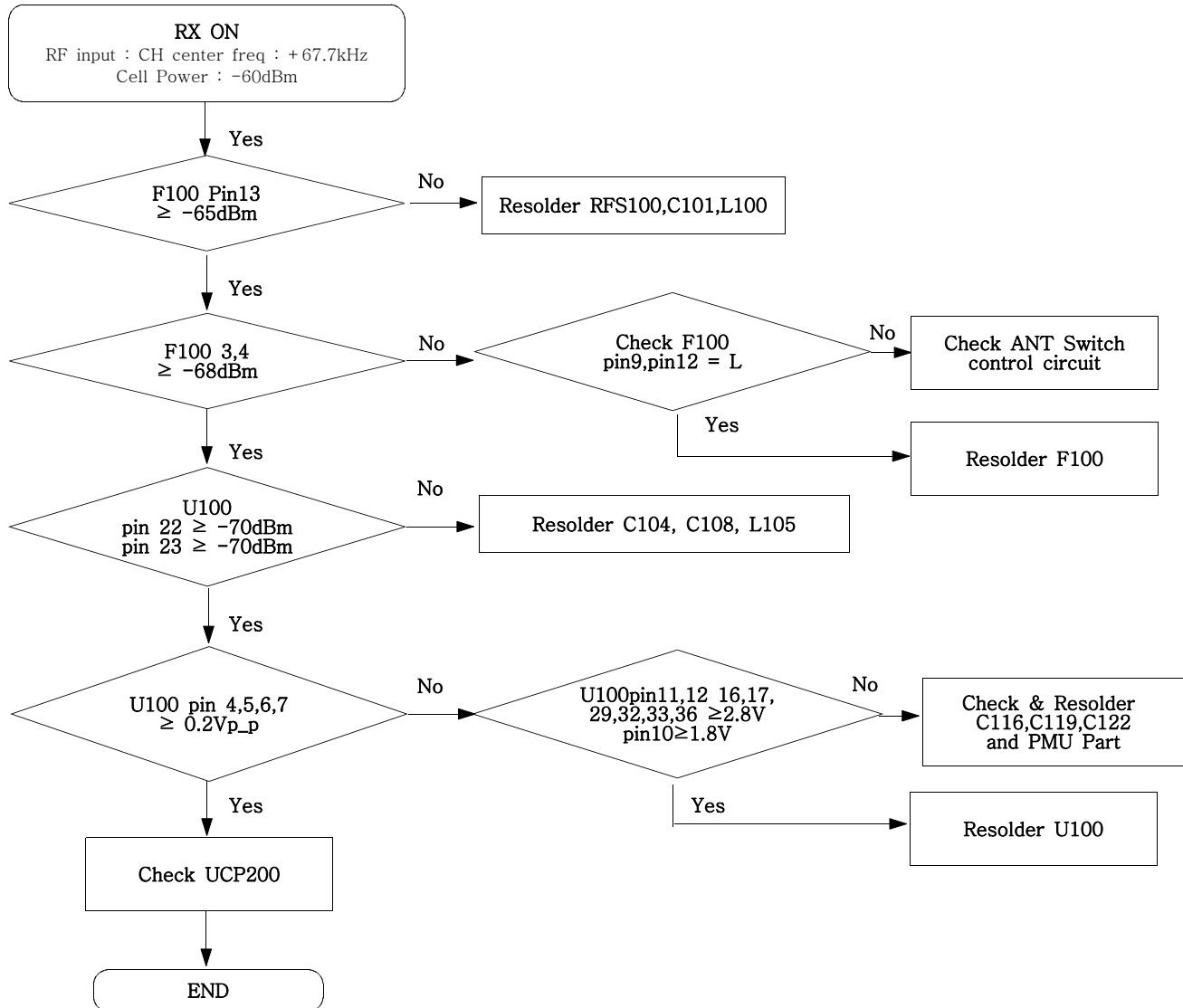
9-11. GSM Receiver



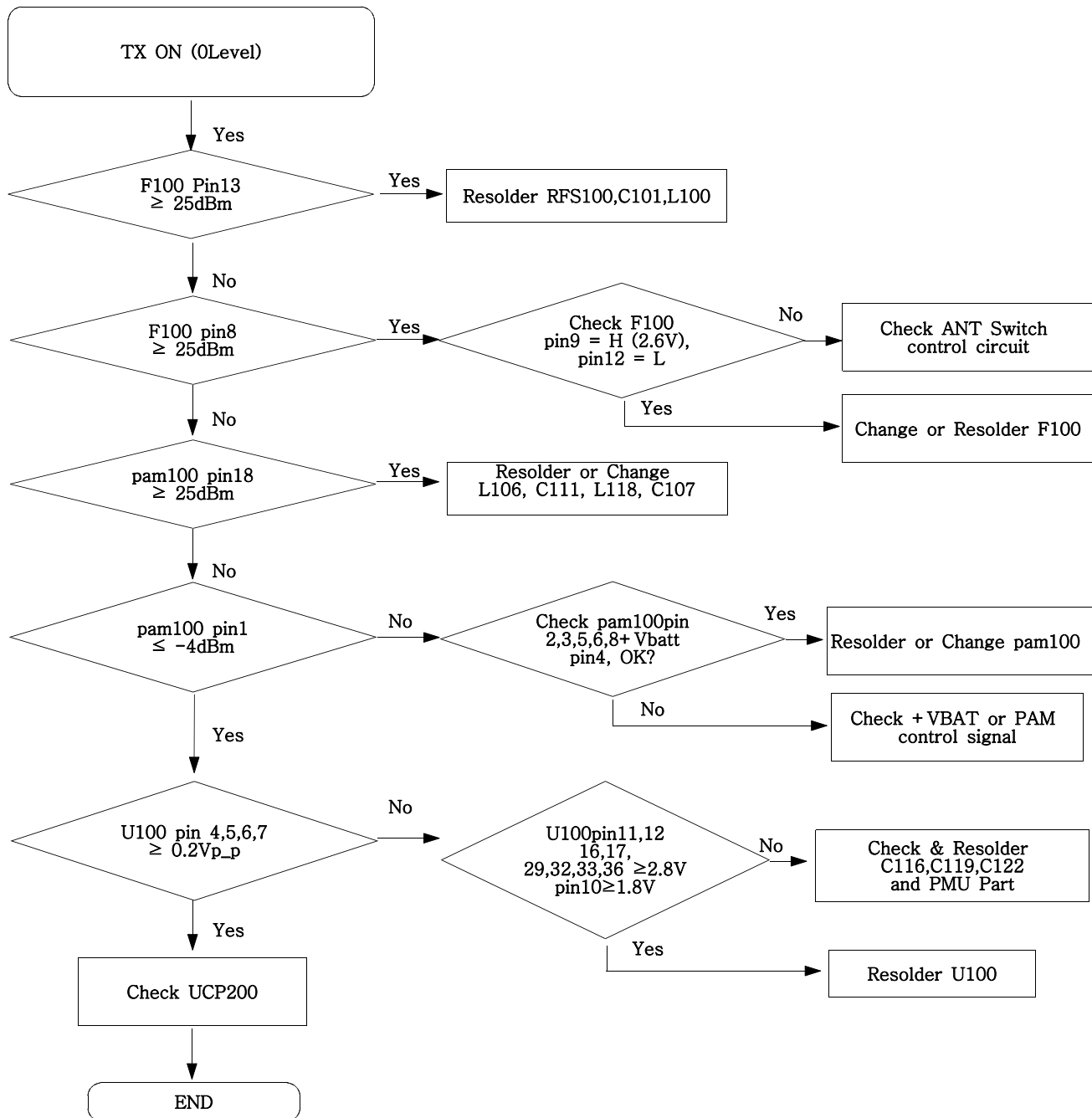
9-12. GSM Transmitter



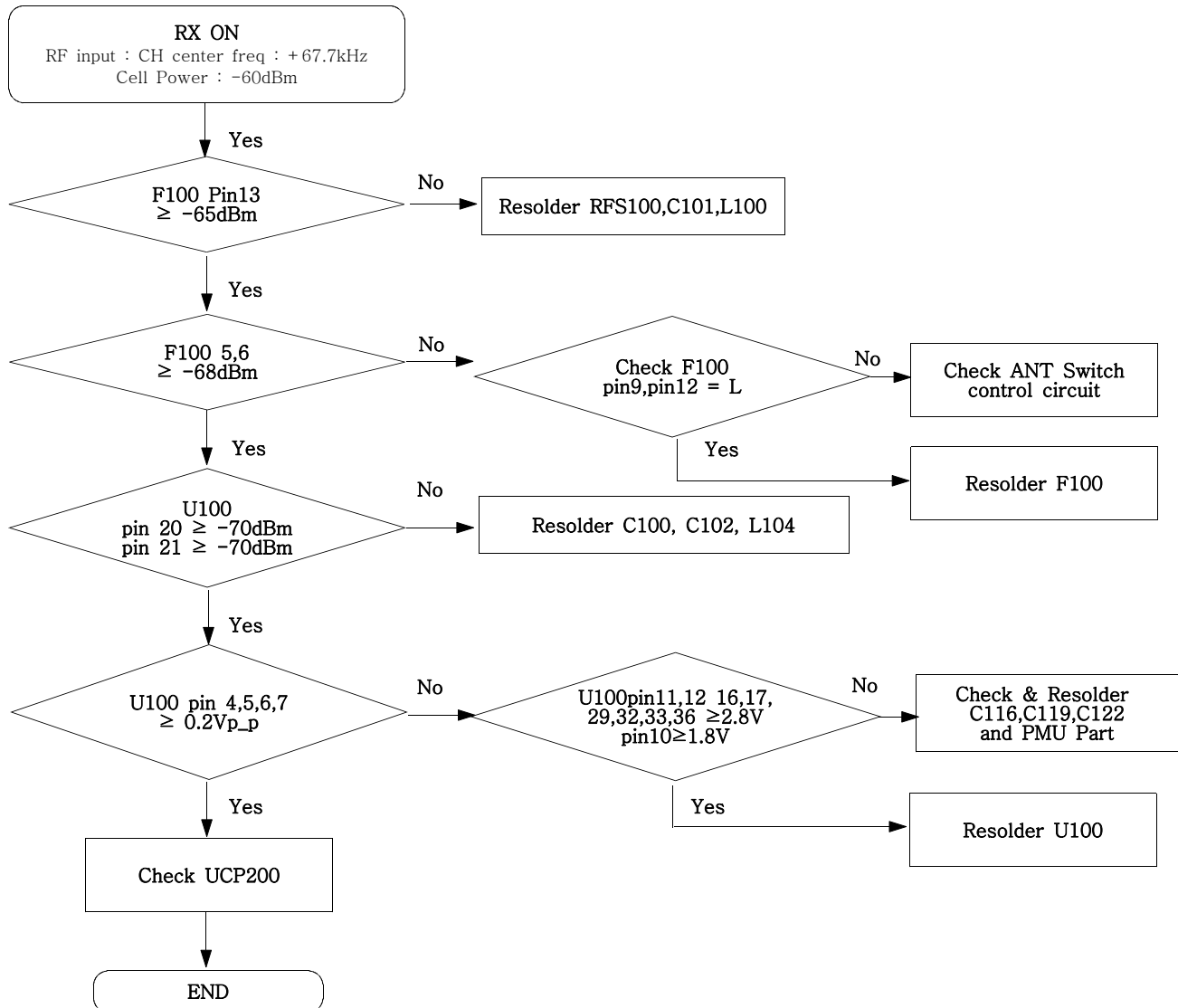
9-13. DCS Receiver



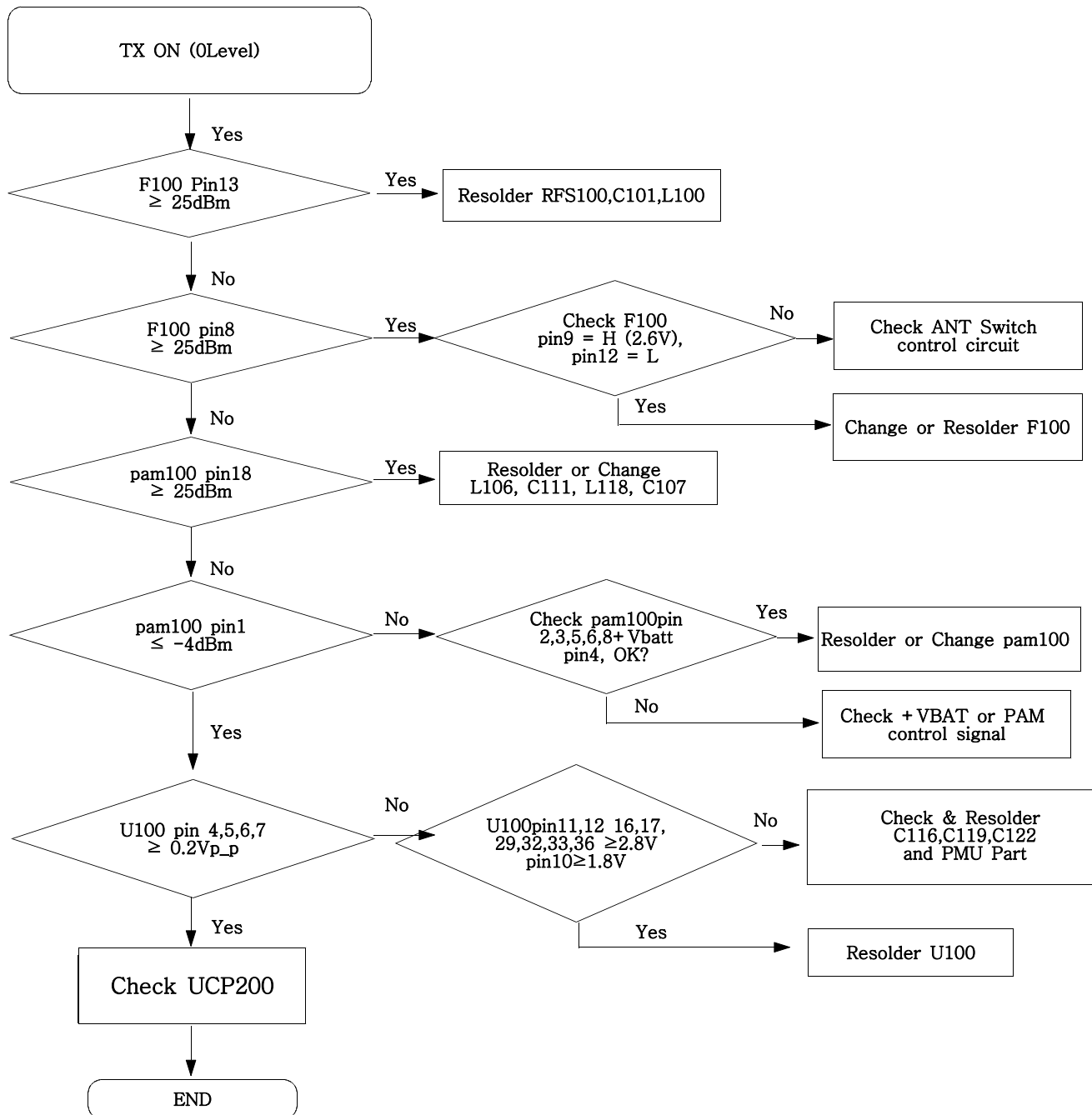
9-14. DCS Transmitter

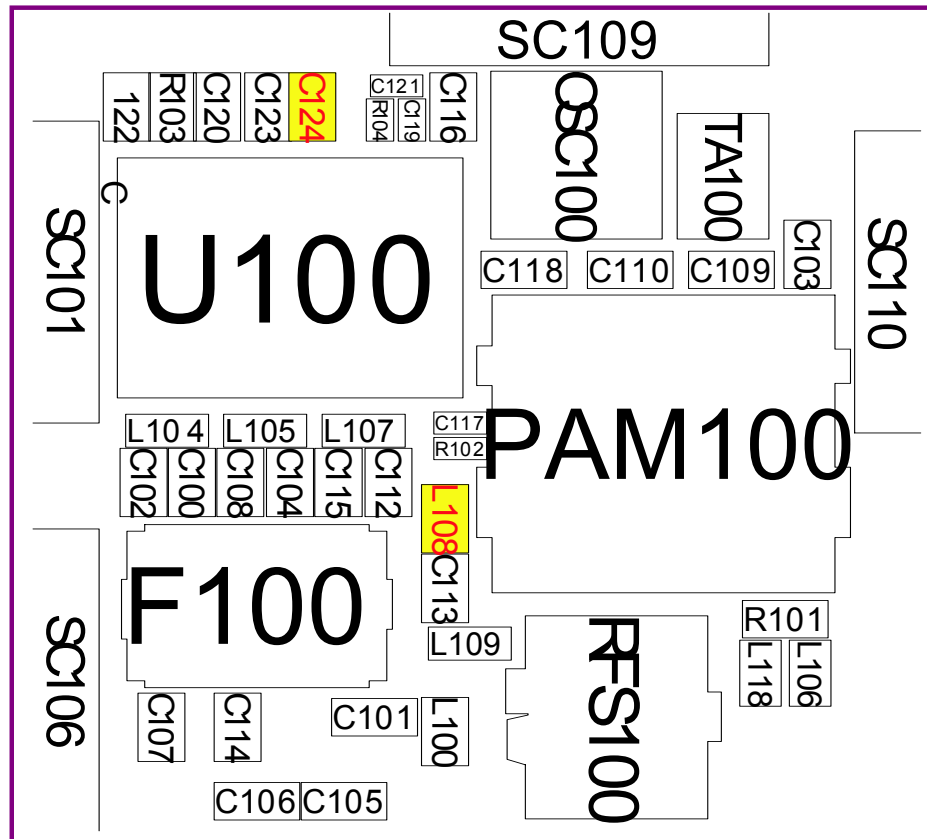
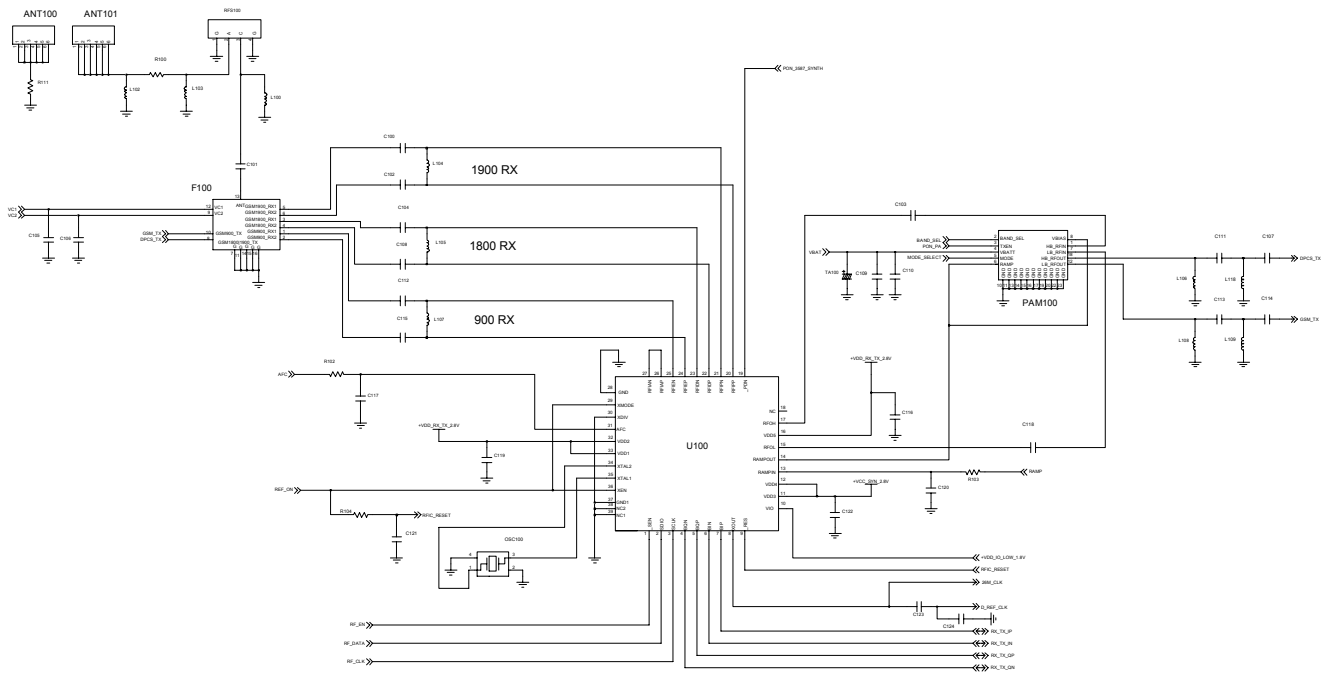


9-15. PCS Receiver

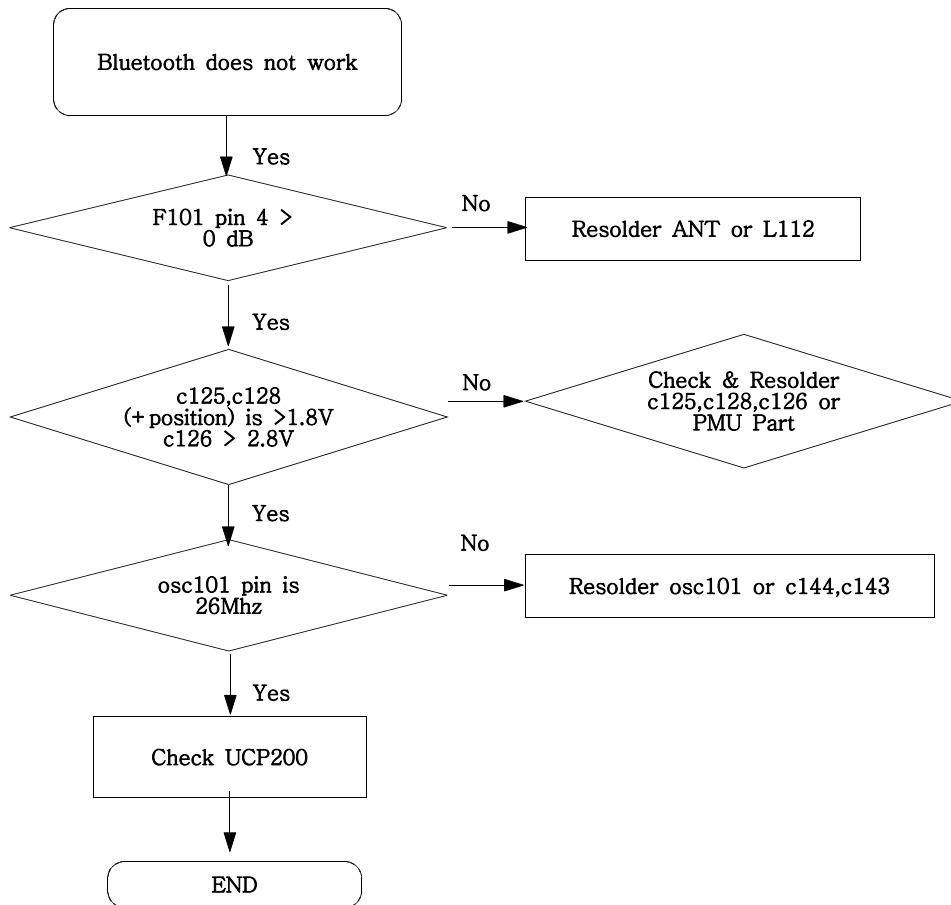


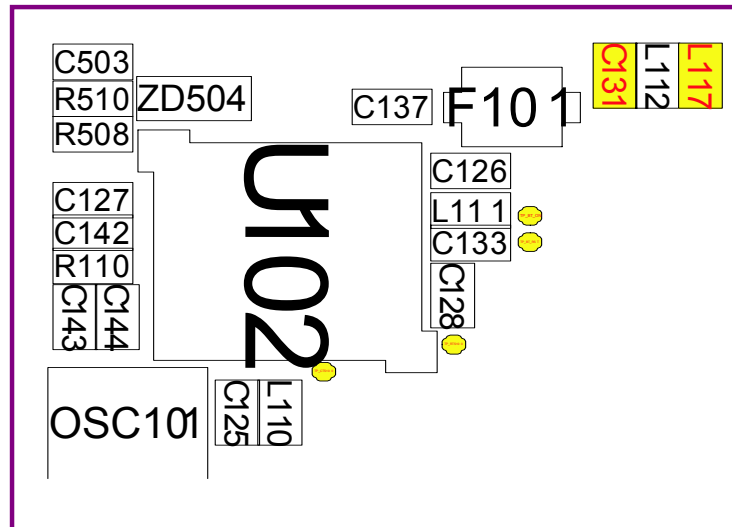
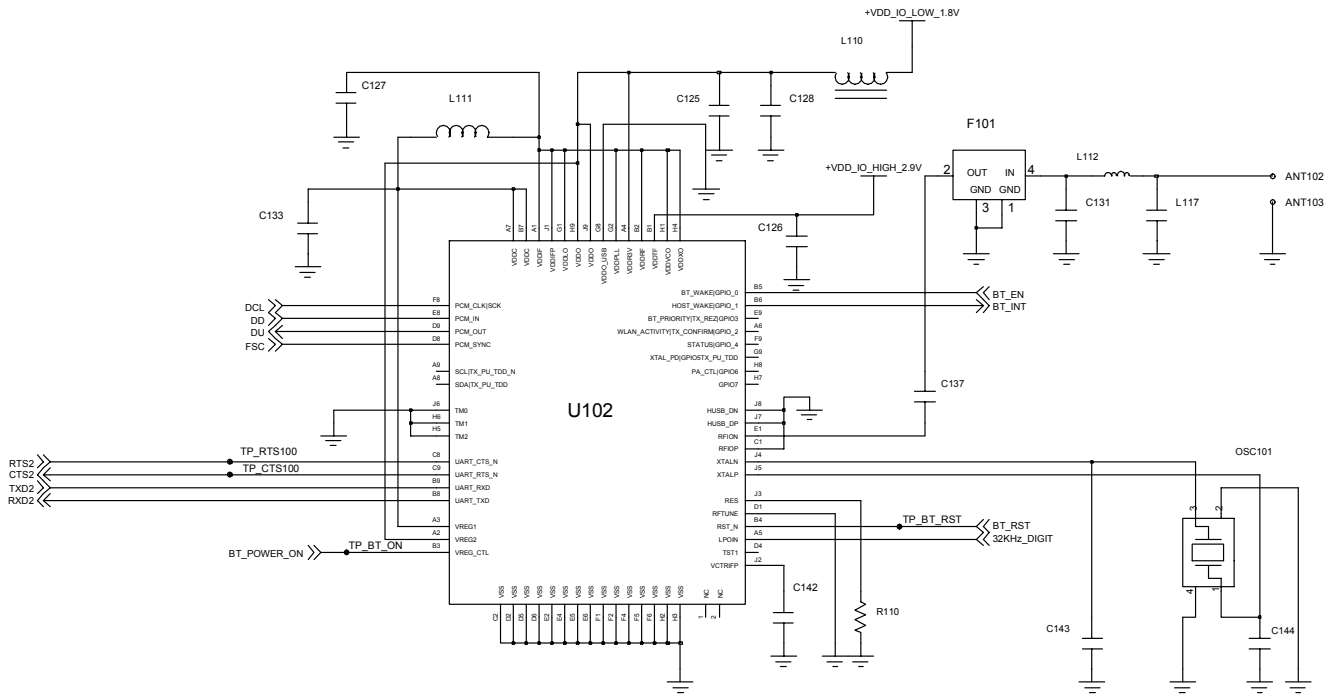
9-16. PCS Transmitter



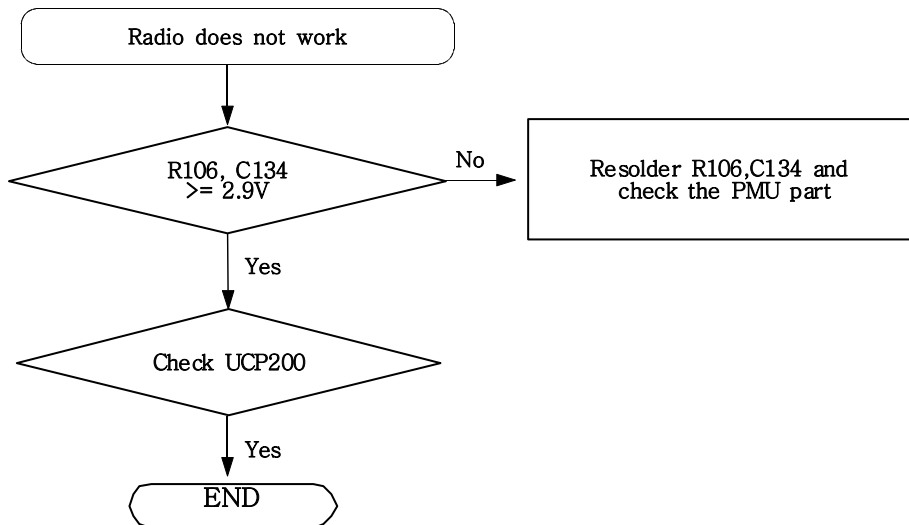


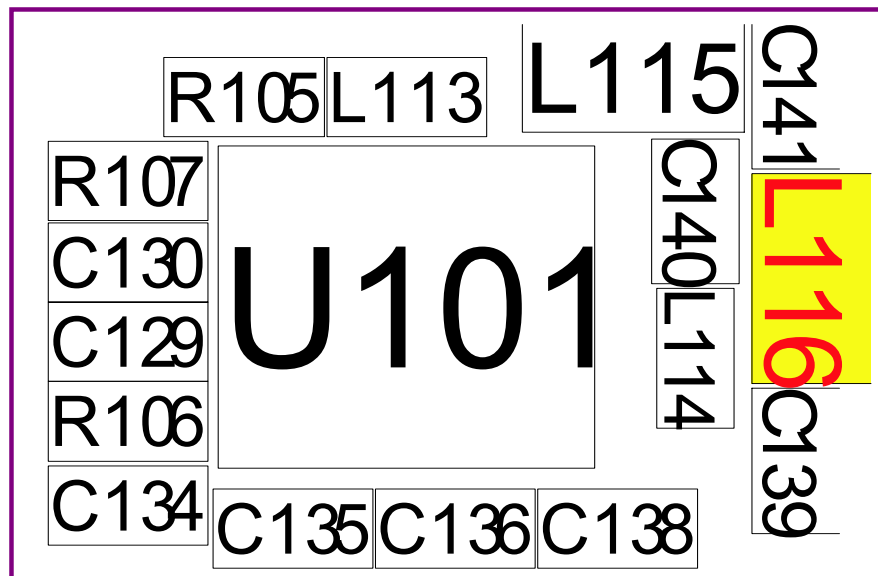
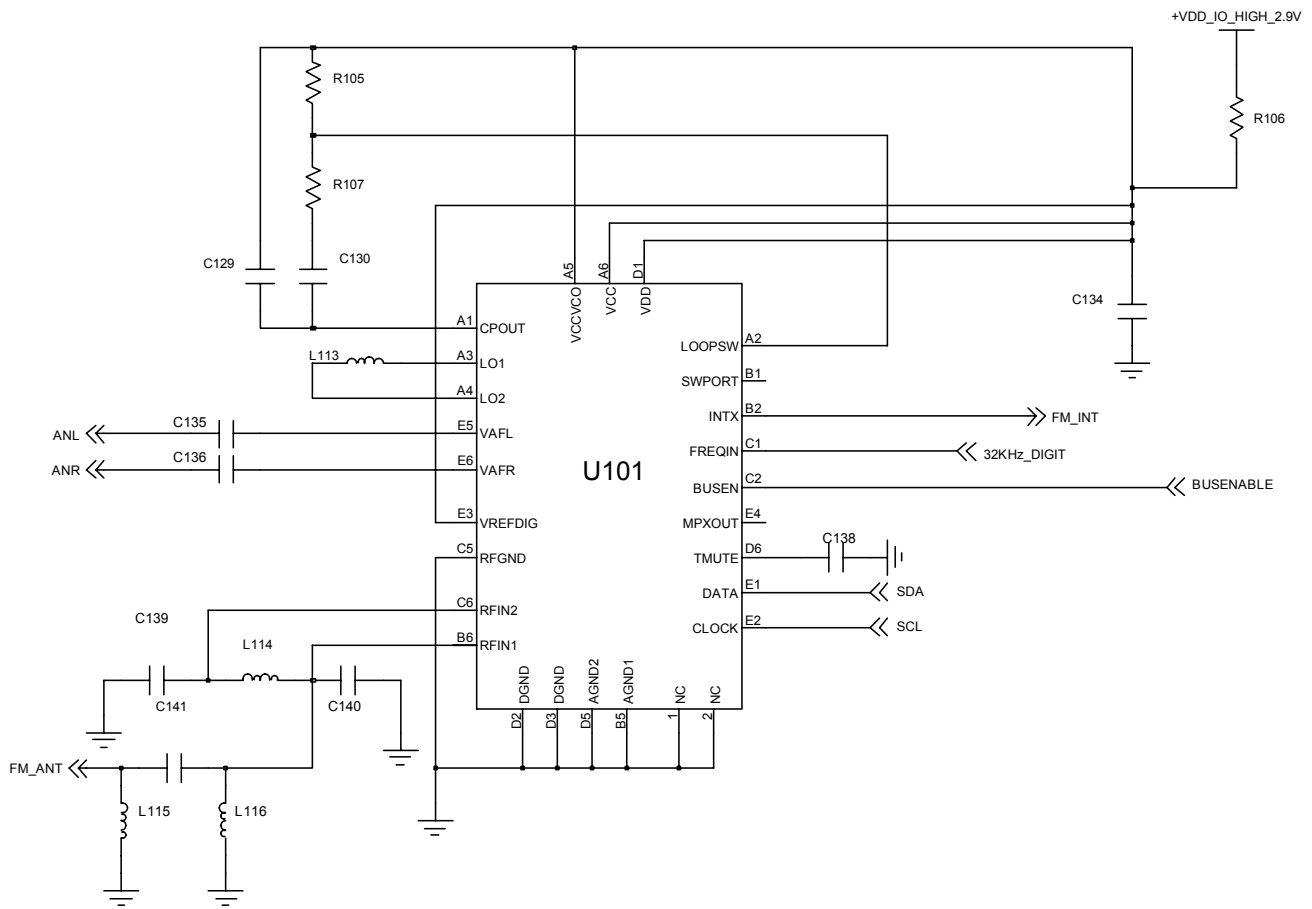
9-17. Bluetooth part





9-18. Radio part





10. Reference data

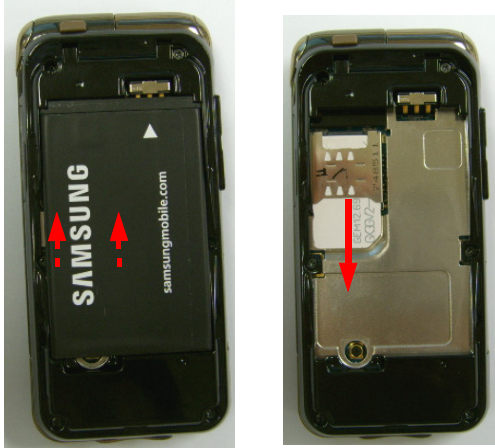
Reference Abbreviate

- **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

11. Disassembly and Assembly Instructions

11-1. Disassembly Instructions

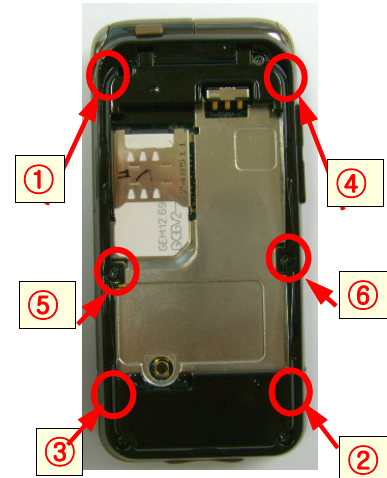
1



1) Remove a battery and remove SI CARD and SD CARD.

1) Remove the Battery and SIM card.

2



1) Remove all screws and remove a REAR.

1) Be careful not to scratch the surface of the handset.

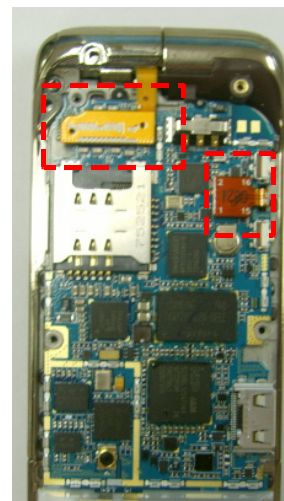
3



1) Remove the shieldcan.

1) Be careful not to break the PBA.

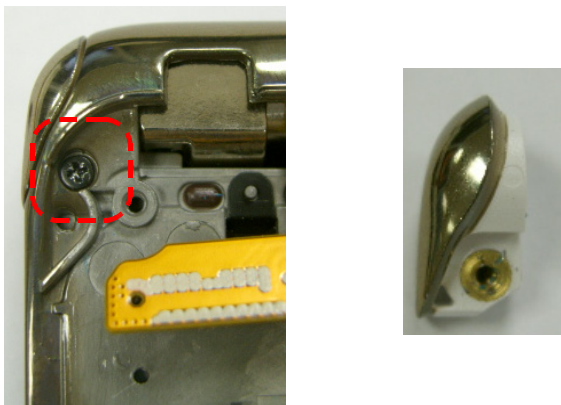
4



1) Disconnet two connectors.
2) Seperate the PBA.

1) Be careful not to harm to the PBA and FPCB.

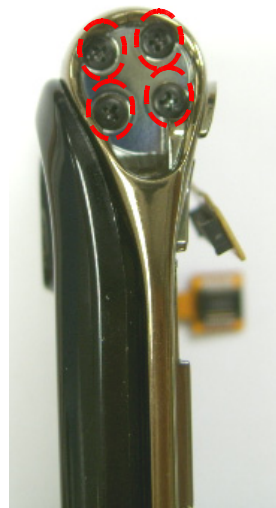
5



- 1) Remove SCREW.
- 2) Take the hinge dummy out .

1) When using the screwdriver, don't break the frame.

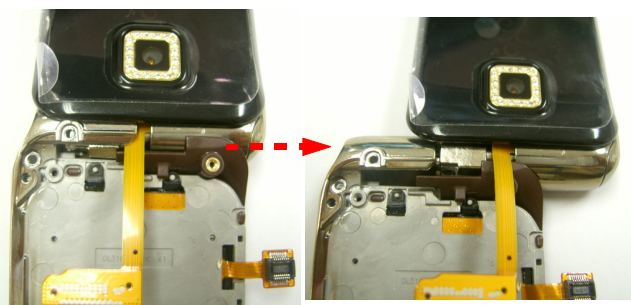
6



- 1) Remove 4 Screws.

1) When using the screwdriver, don't break the frame.

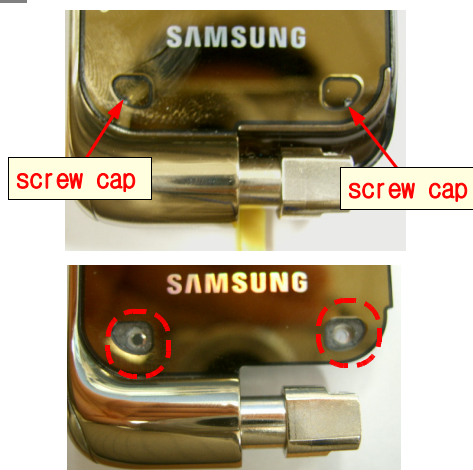
7



- 1) Open the folder.
- 2) Open the folder and push to the right side and pull out the hinge.

1) Be careful not to change the shape of hinge

8



- 1) Remove 2 screw caps.
- 2) Remove 2 screws.

1) When remove SCREW CAP, be careful not to scratch the surface.

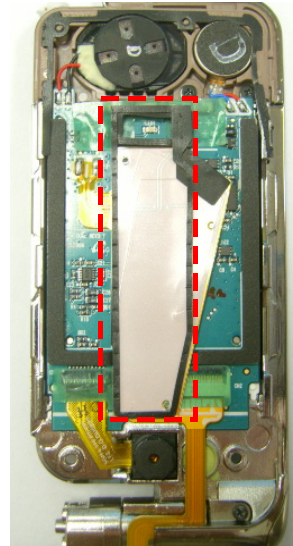
9



1) Separate the folder from right side to left side.

1) When using the separation jig, be careful not to damage the HOOK and structure.

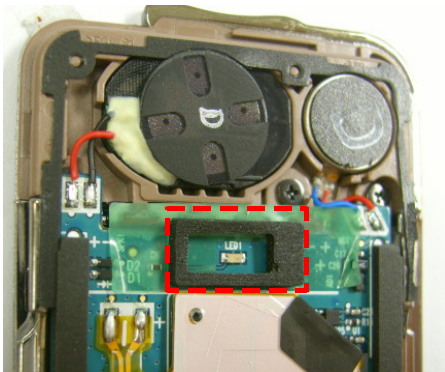
10



1) Remove the sponge on the lighting sheet.

1) When removing the sponge, be careful not to break the sponge.

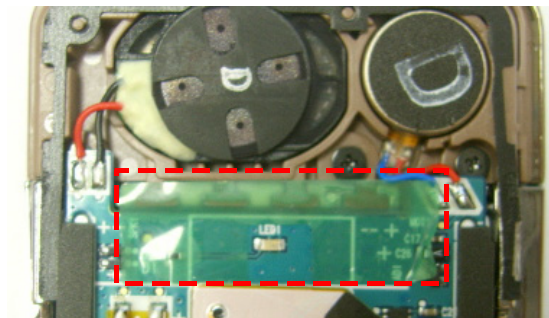
11



1) Remove LED sponge.

1) When removing the sponge, be careful not to break the sponge.

12

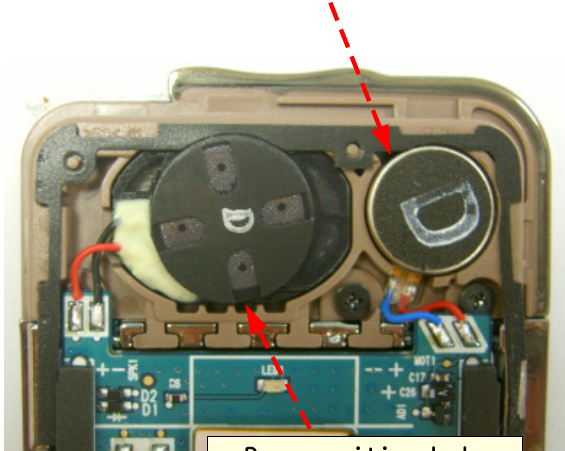


1) Remove insulating tape.

1) When removing the tape, be careful not to tear the tape.

13

Decomposition hole

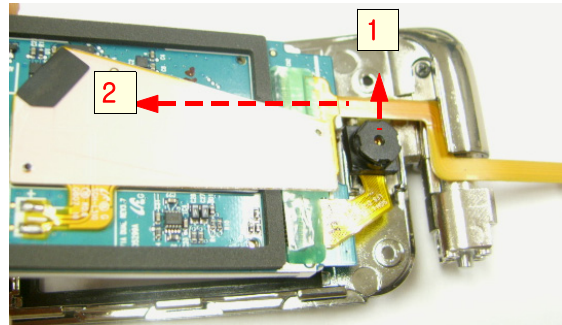


Decomposition hole

1) Separate the SPK and Motor

1) When removing the SPK and Motor, be careful not to break the solder pad.

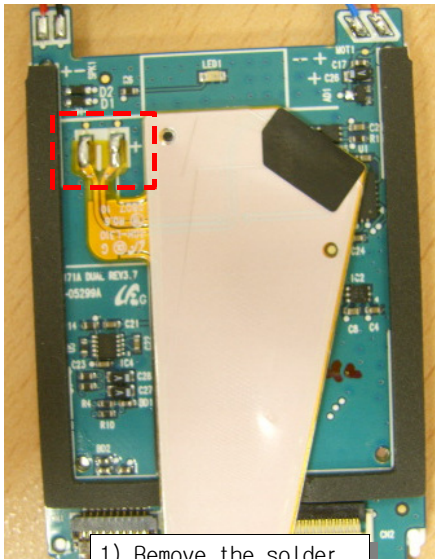
14



1) Lift up the camera.
2) Separate the LCD to No.2 direction.

1) Be careful not to tear the Camera FPCB.
2) When lifting up the CAMERA, be careful not to break the camera sensor.
3) Be careful not to tear the MAIN FPCB.

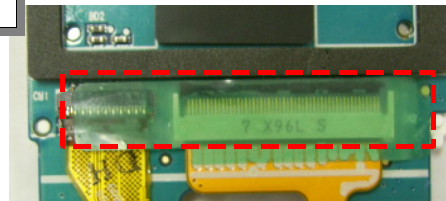
15



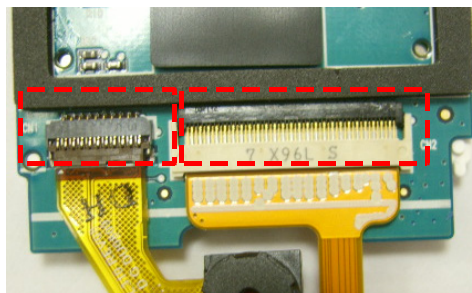
1) Remove the solder.

1) Be careful not to break the solder pad.

16



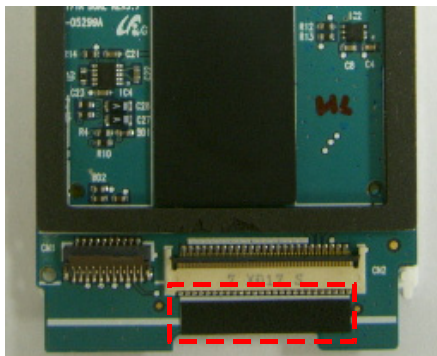
1) Remove the insulating tape.



2) Lift up the actuator and remove the camera, Main FPCB.

1) When removing the tape, be careful not to tear the tape.
2) Be careful not to tear the FPCB.

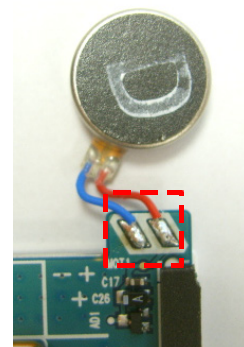
17



1) Remove double-faced TAPE of MAIN FPCB

1) Be careful not to tear the TAPE.

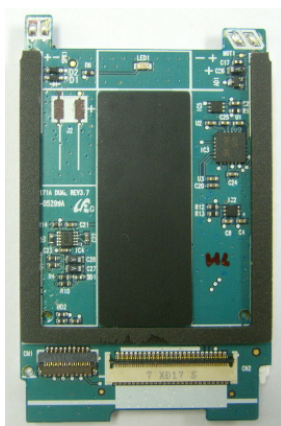
18



1) First, remove the glue, and remove MOT and SPK with soldering iron

1) Be careful not to break the solder pad.

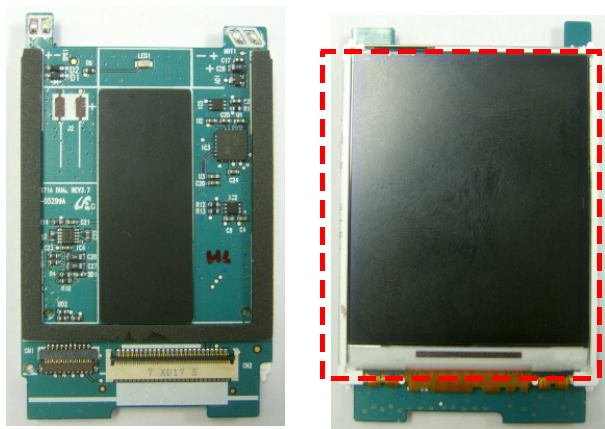
19



1) Be careful not to soil the LCD surface with dust or fingerprint.

11-2. Assembly Instructions

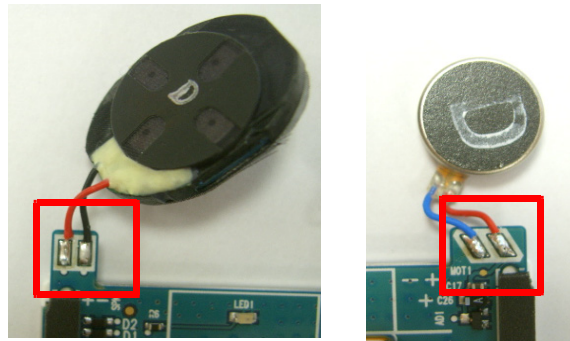
1



1) Check the LCD unit.
(dust or fingerprint)

1) Be careful not to break the LCD.

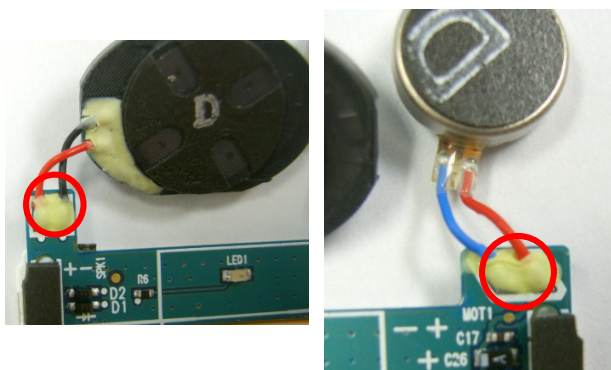
2



1) Solder SPK and MOT.

1) When soldering, pay attention to the polarity.

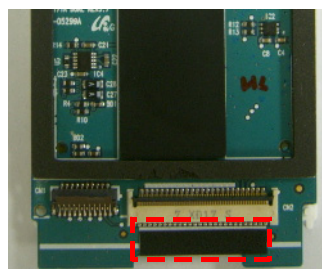
3



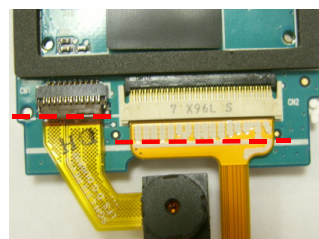
1) Glue after soldering

1) Take care so that the glue may not fall outside PCB.

4



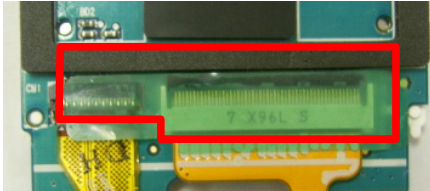
1) Attach the double-faced tape



2) Camera, MAIN FPCB connection.

1) Insert the FPCB according to the guideline.

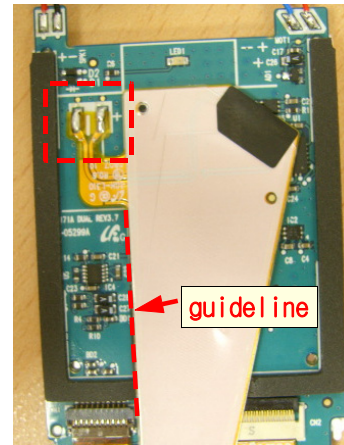
5



1) Attach the insulating tape

1) Attach the tape to cover all connector.

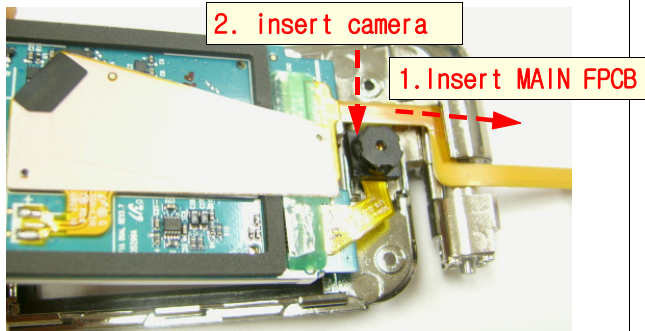
6



1) Attach the lighting sheet.
2) Solder on the pad.

1) Attach the lighting sheet according to guideline.

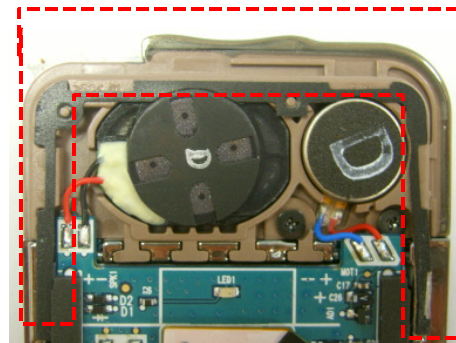
7



1) Insert MAIN FPCB into UPPER slot.
2) Insert the camera.

1) Be careful not to tear the FPCB.
2) Be careful not to soil the Camera Lens with dust or fingerprint.

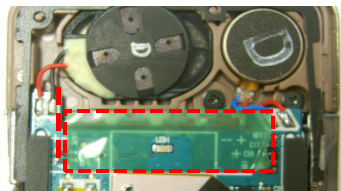
8



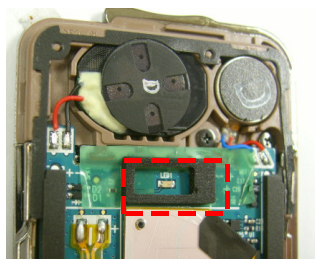
1) Insert the SPK/MOT.
2) Attach the sponge.

1) When arranging the SPK/MOT WIRE, be careful not to break the solder.
2) Be careful not to spill the sponge out of the upper case.

9



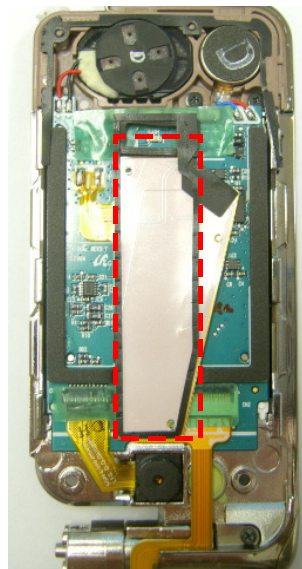
1) Attach the insulating tape.



2) Attach the sponge.

1) Be careful not to break the HOOK.

10



1) Attach the sponge

1) Fit the sponge on to the lighting sheet.

11

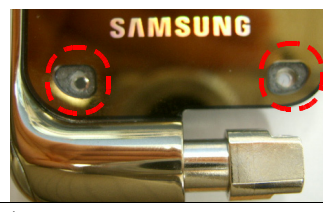


assembling direction

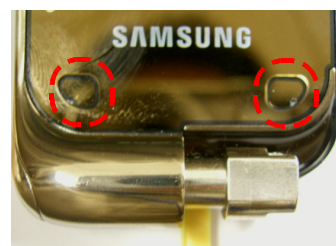
1) Assemble to arrow direction.

1) Assemble from the lower part to upper like arrow direction.

12



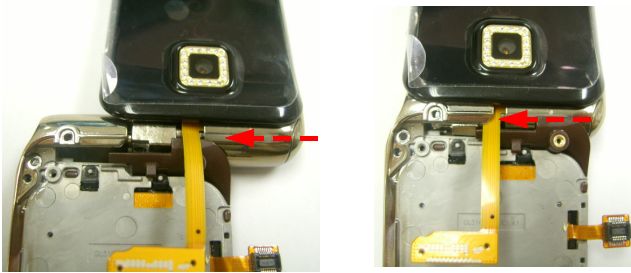
1) Tighten 2 SCREWS.



2) Attach the 2 SCREW CAPS.

1) Use the pressing jig to prevent the screw from loosening.

13

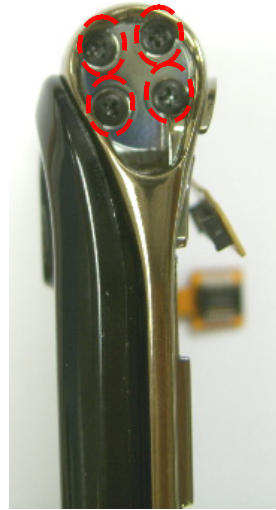


Insert the FPCB and FRONT into the hinge part.

1. Combine FOLDER for FRONT hinge.

1) Be careful not to tear the FPCB.

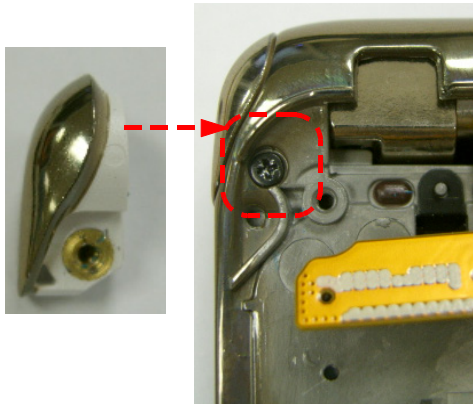
14



1) Tighten 4 SCREWS.

1) When using screwdriver, be careful not to break the screw hole.

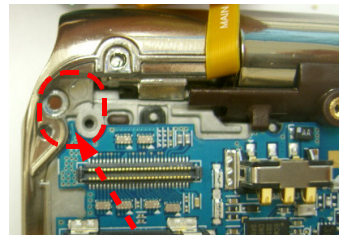
15



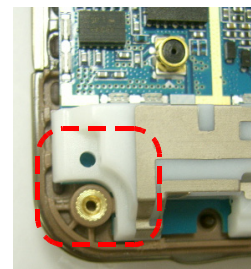
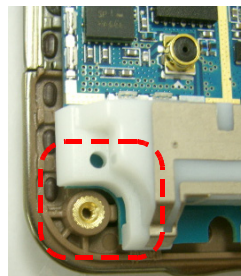
1) Insert the dummy.
2) Tighten the screw.

1) Assemble from the lower position.

16



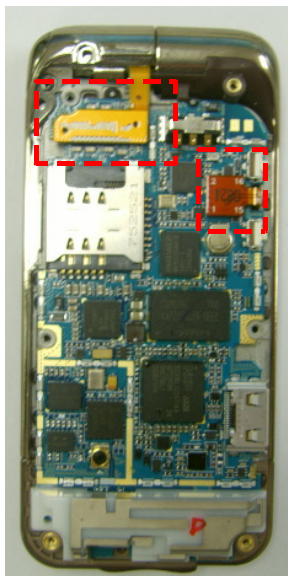
1) Insert MAIN B'D into FRONT's groove.



2) Push and insert MAIN B'D to left side HOOK .

1) When assembling the Main B'D, Be careful not to break the parts.

17



1) Assemble the 2 connectors.

1) Be careful not to tear the FPCB.

18



1) Assemble the shield can.

1) When assembling shield can, be careful not to break the MAIN B'D.

19



1) Assemble REAR from the top portion.

1) When assembling the REAR, be careful not to get damaged.

20



1) Tighten 6 SCREWS.

1) When using the screwdriver, be careful not to get damaged.