SAMSUNG

GSM TELEPHONE

GT-B2100

SERVICE Manual

GSM TELEPHONE

CONTENTS

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
Mideast & Africa	mea.samsungportal.com

2009. 03. Rev.1.0

2. Specification

2-1. GSM General Specification

	EGSM 900	DCS1800
Freq. Band[MHz] Uplink/Downlink	880~915 925~960	1710~1785 1805~1880
ARFCN range	0~124 & 975~1023	512~885
Tx/Rx spacing	45MHz	95MHz
Mod. Bit rate/ Bit Period	270.833kbps 3.692us	270.833kbps 3.692us
Time Slot Period/Frame Period	576.9us 4.615ms	576.9us 4.615ms
Modulation	0.3GMSK	0.3GMSK
MS Power	33dBm~5dBm	30dBm~0dBm
Power Class	4 (max +33dBm)	1 (max +30dBm)
Sensitivity	-102dBm	-100dBm
TDMA Mux	8	8
Cell Radius	35Km	2Km

	GSM850	PCS1900
Freq. Band[MHz] Uplink/Downlink	824~849 869~894	1850~1910 1930~1990
ARFCN range	128~251	512~810
Tx/Rx spacing	45MHz	80MHz
Mod. Bit rate/ Bit Period	270.833kbps 3.692us	270.833kbps 3.692us
Time Slot Period/Frame Period	576.9us 4.615ms	576.9us 4.615ms
Modulation	0.3GMSK	0.3GMSK
MS Power	33dBm~5dBm	30dBm~0dBm
Power Class	4 (max +33dBm)	1 (max +30dBm)
Sensitivity	-102dBm	-100dBm
TDMA Mux	8	8
Cell Radius	35Km	2Km

2-2. GSM TX power class

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

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

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

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

3. Operation Instruction and Installation

Main Function

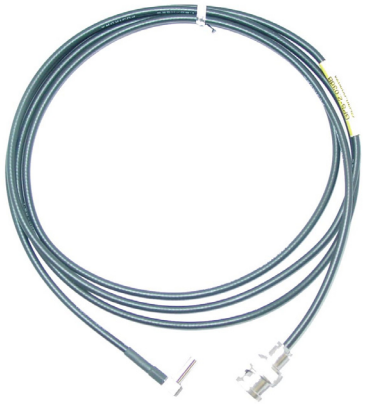
- **EDGE/GPRS 850/900/1800/1900**
- **1.77"TFT,QQVGA**
- **MPEG4 Video Recording**
- **FM Radio Recording(WAMR)**
- **SMS, MMS**
- **49.5 x 113.0 x 17.1 mm**
- **72 Poly Sound,SP-Midi,SMAF,MP#,AAc,AAC+**
- **6 MB(User Memory)+microSD**
- **BT 2.0, USB 2.0**
- **Dust & Water Proof (IP57)**
- **Noise Cancellation**
- **Torch Light**

4. Array course control

4-1. Software Adjustments

Test Jig (GH99-36900A)

Test Cable (GH39-01160A)



RF Test Cable (GH39-00985A)

Adapter (GH99-38251A)

4-2. Software Downloading

4-2-1. Downloading Binary Files

• 2 binary files for downloading B2100.

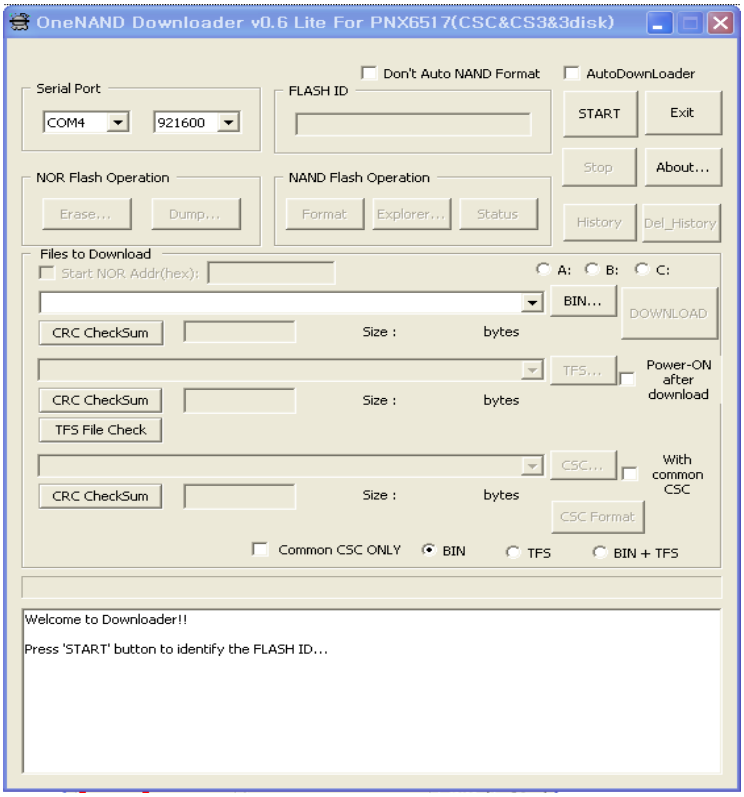
– B2100XA.cla
– B2100XA.tfs

4-2-2. Pre-requsite for Downloading

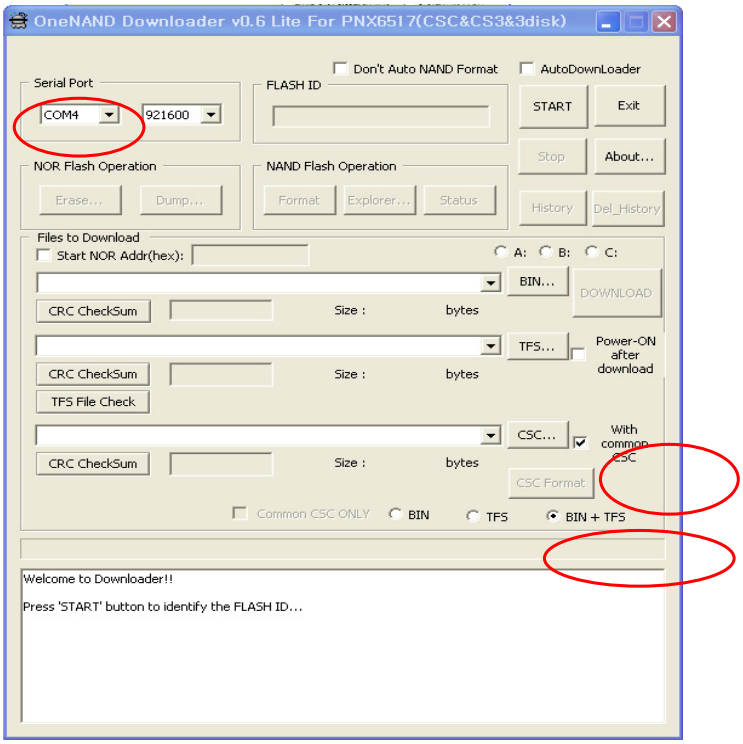
• Downloader Program(B2100_DL_V1.1)
• GT-B2100 Mobile Phone
• JIG BOX
• Test Cable
• Serial Cable
• Binary files

4-2-3. S/W Downloader Program

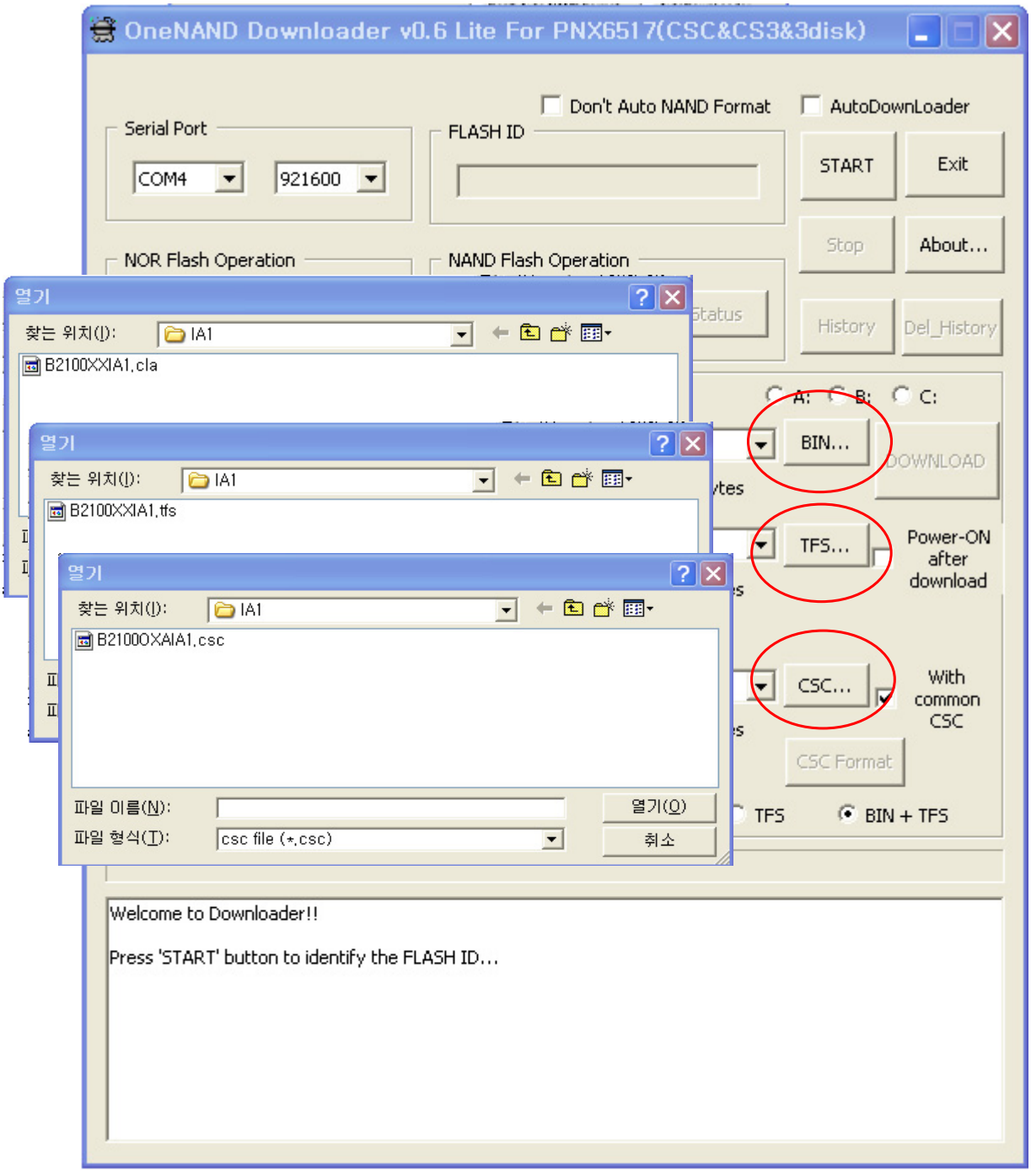
1. Load the binary download program by executing the "B2100_DL_V0.6_Lite".



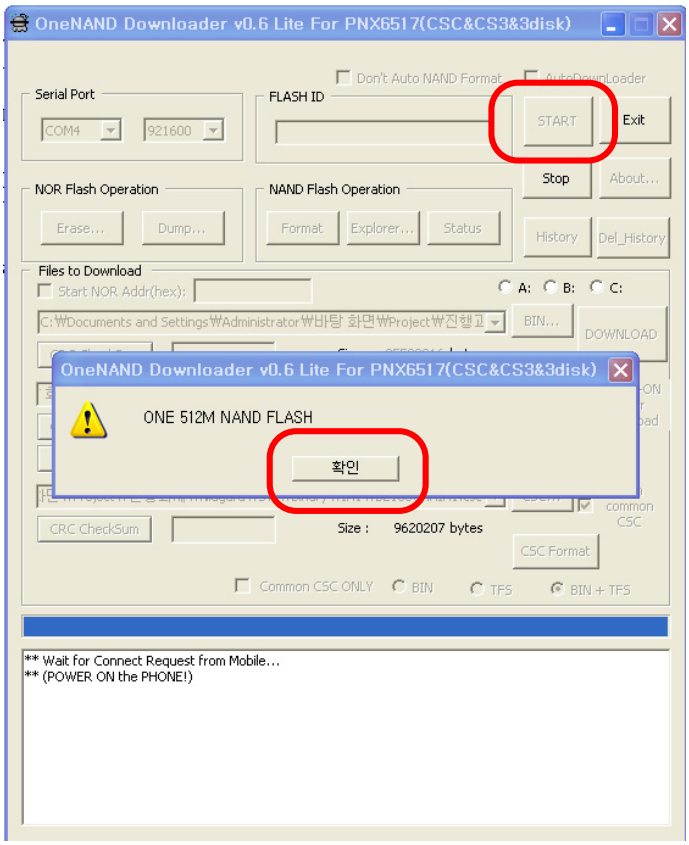
2. Select the Port, Baud Rate and Mode.



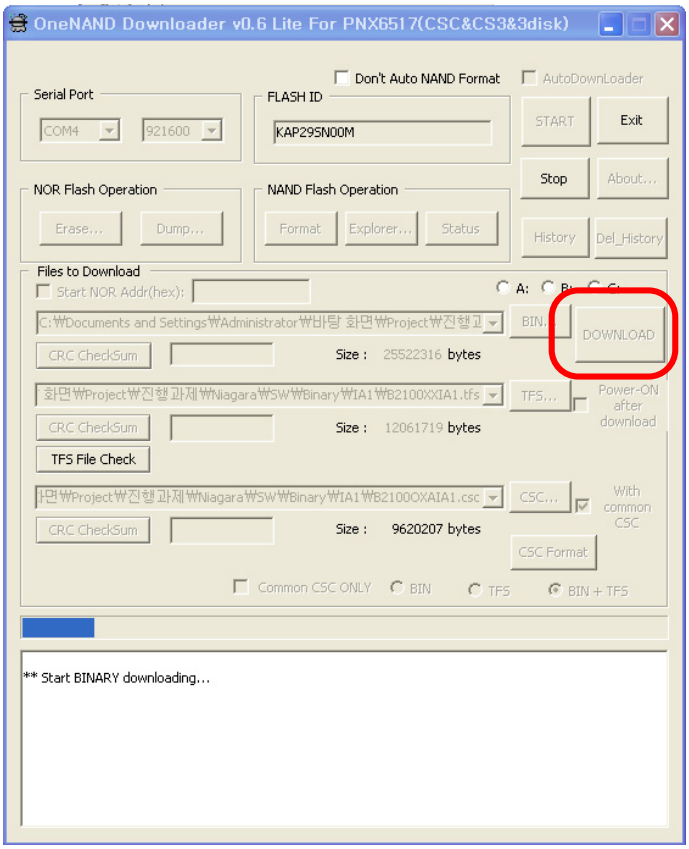
3. Select the binary files what you want to download



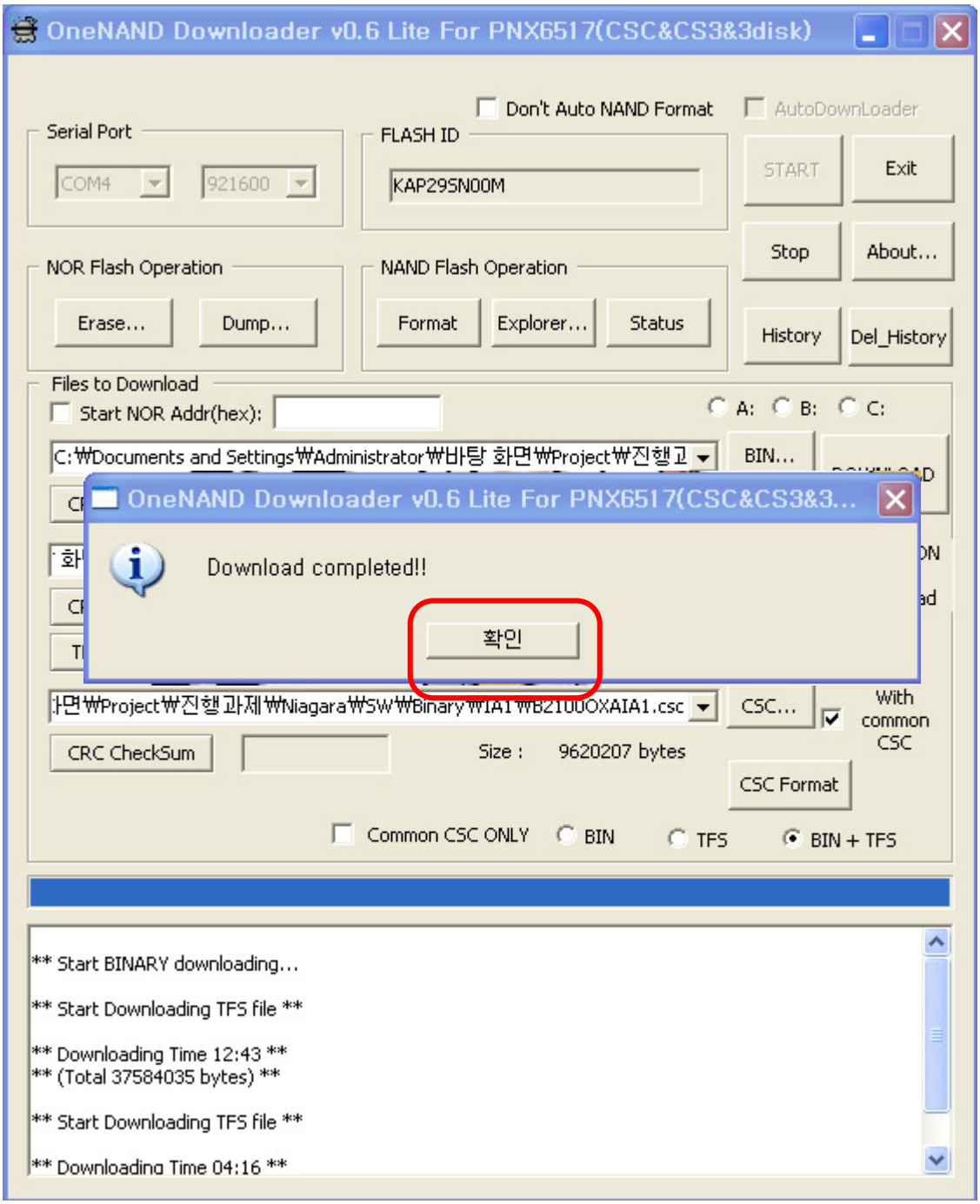
4. Press the "Start" button and connect the Handset, then press "확인".



5 Press the "Download" button.



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



11. 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

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.

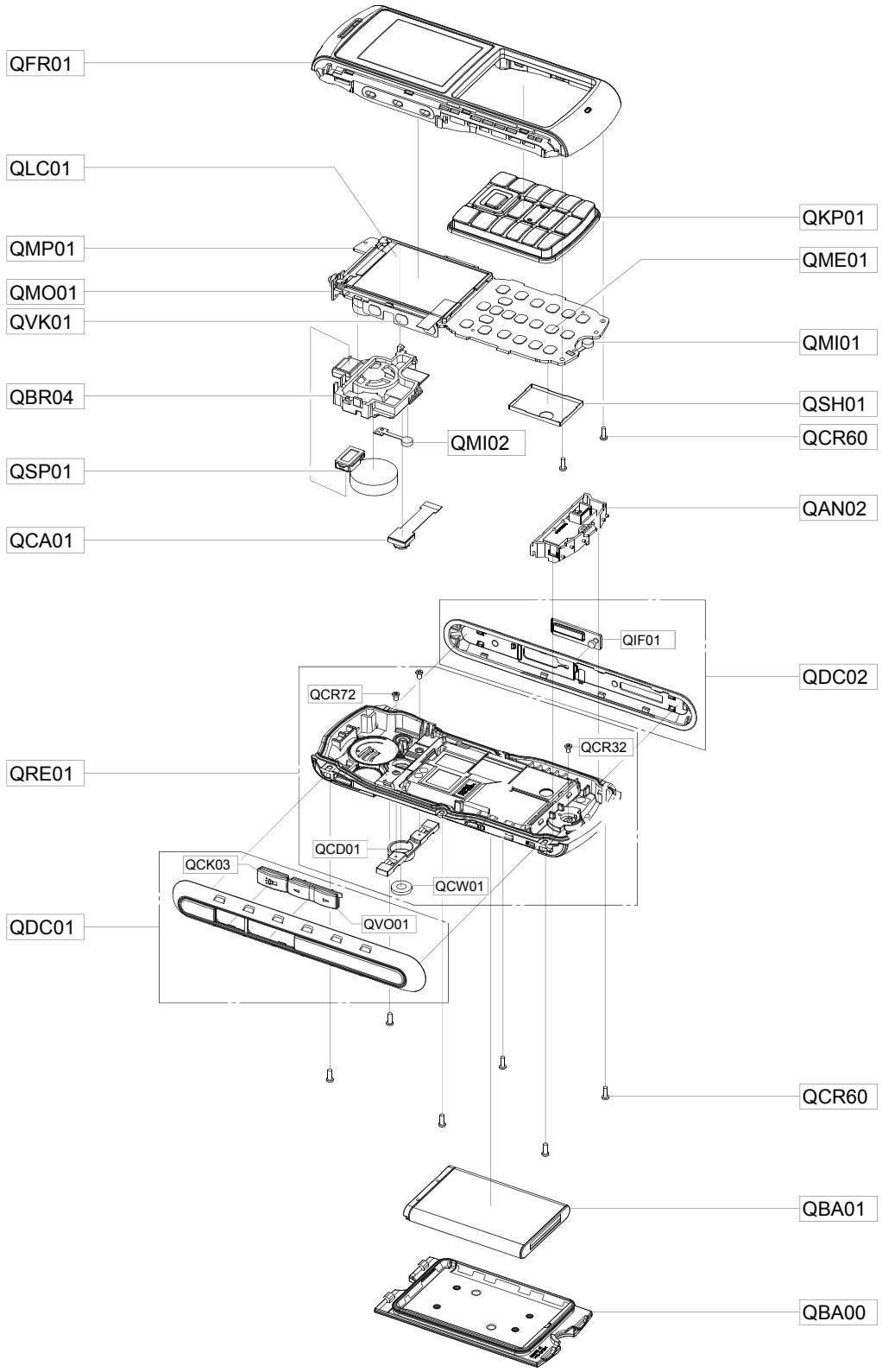
- Use soldering removing tool to break static electricity. , otherwise ESD will be damaged by static electricity.

- 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.

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-GT-B2100	GH42-01893A
QBA00		ASSY COVER-BATTERY	GH98-11726A
QBA01		INNER BATTERY PACK-1000MAH,BLK,ENG,EU	GH43-03184A
QBR04		ASSY BRACKET-SPEAKER	GH98-11441A
QCA01		ASSY CAMERA-GT-B2100	GH96-03555A
QCR60		SCREW-MACHINE	6001-002005
QFR01		ASSY CASE-FRONT	GH98-11436A
QKP01		ASSY KEYPAD-MAIN(EU/BLACK)	GH98-11438A
QLC01		LCD-SGH M150MODULE	GH07-01313A
QME01		DOME SHEET-GT-B2100 MAIN	GH59-06781A
QMI01		MICROPHONE-ASSY-GT-B2100(MAIN)	GH30-00562A
QMI02		MICROPHONE-ASSY-GT-B2100(SECOND)	GH30-00563A
QMO01		ASSY ETC-FLASH/MOT FPCB ASS'Y	GH59-06802A
QMP01		A/S ASSY-PBA MAIN(GT-B2100 SVC)	GH82-03564A
QSH01		ICT SHIELD-CAN	GH70-04666A
QSP01		MODULE-SPK/RCV MODULE(GT-B2100)	GH59-07304A
QVK01		KEY FPCB-VOLUME KEY FPCB	GH59-07012A
QRE01		ASSY CASE-REAR	GH98-11437A
	QCD01	NDC DECO-CAMERA	GH71-08719A
	QCR32	SCREW-MACHINE	6001-001700
	QCR72	SCREW-MACHINE	6001-002051
	QCW01	PCT WINDOW-CAMERA	GH72-51803A
QDC01		ASSY DECO-SIDE L	GH98-11439A
	QVO01	PMO KEY-VOLUME	GH72-51796A
	QCK03	PMO KEY-TORCH	GH72-51797A
QDC02		ASSY DECO-SIDE R	GH98-11440A
	QIF01	PMO COVER-IF	GH72-51790A

5-2. Cellular phone Parts list : GT-B2100SRATHL

Design LOC	Description	SEC CODE
QAN02	INTENNA-GT-B2100	GH42-01893A
QBA00	ASSY COVER-BATTERY	GH98-11726A
QBA01	INNER BATTERY PACK-1000MAH,BLK,ENG,EU	GH43-03184A
QBR04	ASSY BRACKET-SPEAKER	GH98-11441A
QCA01	ASSY CAMERA-GT-B2100	GH96-03555A
QCD01	NDC DECO-CAMERA	GH71-08719A
QCK03	PMO KEY-TORCH	GH72-51797A
QCR32	SCREW-MACHINE	6001-001700
QCR60	SCREW-MACHINE	6001-002005
QCR72	SCREW-MACHINE	6001-002051
QCW01	PCT WINDOW-CAMERA	GH72-51803A
QDC01	ASSY DECO-SIDE L	GH98-11439A
QDC02	ASSY DECO-SIDE R	GH98-11440A
QFR01	ASSY CASE-FRONT	GH98-11436A
QIF01	PMO COVER-IF	GH72-51790A
QLC01	LCD-SGH M150 MODULE	GH07-01313A
QME01	DOME SHEET-GT-B2100 MAIN	GH59-06781A
QMI01	MICROPHONE-ASSY-GT-B2100(MAIN)	GH30-00562A
QMI02	MICROPHONE-ASSY-GT-B2100(SECOND)	GH30-00563A
QMO01	ASSY ETC-FLASH/MOT FPCB ASS'Y	GH59-06802A
QRE01	ASSY CASE-REAR	GH98-11437A
QSH01	ICT SHIELD-CAN	GH70-04666A
QSP01	MODULE-SPK/RCV MODULE(GT-B2100)	GH59-07304A
QVK01	KEY FPCB-VOLUME KEY FPCB	GH59-07012A
QVO01	PMO KEY-VOLUME	GH72-51796A

6. MAIN Electrical Parts List

SEC CODE	Design LOC	Description
0403-001547	D300	TDZ5.6
0404-001172	D512	RB520S-30
0406-001286	D505	PESD5V0L5UV
0406-001288	D400	PESD5V0S1UL
0406-001288	D401	PESD5V0S1UL
0406-001288	D402	PESD5V0S1UL
0406-001288	D403	PESD5V0S1UL
0406-001288	D500	PESD5V0S1UL
0406-001289	D501	PESD5V0S1UL
0406-001290	D502	PESD5V0S1UL
0406-001291	D503	PESD5V0S1UL
0406-001288	D504	PESD5V0S1UL
0406-001289	D506	PESD5V0S1UL
0406-001290	D507	PESD5V0S1UL
0406-001291	D508	PESD5V0S1UL
0406-001288	ZD400	PESD5V0S1UL
0406-001289	ZD401	PESD5V0S1UL
0406-001290	ZD403	PESD5V0S1UL
0406-001288	ZD404	PESD5V0S1UL
0407-001002	D404	DAN222TL
0601-002591	LED500	WH104-LC
0601-002591	LED501	WH104-LC
0601-002591	LED502	WH104-LC
0601-002591	LED503	WH104-LC
0801-003024	U407	TC7SG32AFS
0801-003065	U110	TC7SH04FS
1001-001546	U400	STG5223QTR
1001-001546	U406	STG5223QTR
1108-000102	UME200	KAP29SN00A-DEEC
1201-002731	PAM100	SKY77534-11
1203-005235	PMU300	PCF50613HN/02/N3
1204-002979	U402	SI4708-B-GMR
1205-003310	U101	AERO4208HN/2
1205-003659	U200	PNX6508EL1/139/1A
1404-001221	VR300	NCP15WB473J04RC
2007-000138	R108	RC1005J101CS
2007-000138	R412	RC1005J101CS

SEC CODE	Design LOC	Description
2007-000138	R413	RC1005J101CS
2007-000140	R210	RC1005J102CS
2007-000140	R400	RC1005J102CS
2007-000141	R206	RC1005J222CS
2007-000141	R207	RC1005J222CS
2007-000141	R309	RC1005J222CS
2007-000141	R404	RC1005J222CS
2007-000141	R405	RC1005J222CS
2007-000141	R406	RC1005J222CS
2007-000141	R407	RC1005J222CS
2007-000143	R102	RC1005J472CS
2007-000143	R305	RC1005J472CS
2007-000148	R200R	RC1005J103CS
2007-000148	R211	RC1005J103CS
2007-000148	R212	RC1005J103CS
2007-000148	R308	RC1005J103CS
2007-000148	R403	RC1005J103CS
2007-000148	R408	RC1005J103CS
2007-000149	R209	RC1005J123CS
2007-000152	R201	RC1005J203CS
2007-000159	R301	RC1005J563CS
2007-000159	R302	RC1005J563CS
2007-000159	R303	RC1005J563CS
2007-000159	R304	RC1005J563CS
2007-000162	R105	RC1005J104CS
2007-000162	R310	RC1005J104CS
2007-000170	R501	RC1005J105CS
2007-000170	R508	RC1005J105CS
2007-000172	R401	RC1005J100CS
2007-000172	R402	RC1005J100CS
2007-001291	R502	RC1005J300CS
2007-001291	R506	RC1005J300CS
2007-001291	R507	RC1005J300CS
2007-001298	R510	RC1005J510CS
2007-001298	R511	RC1005J510CS
2007-001298	R512	RC1005J510CS
2007-001298	R513	RC1005J510CS

SEC CODE	Design LOC	Description
2007-001319	R204	RC1005J122CS
2007-001319	R205	RC1005J122CS
2007-001333	R314	MCR01MZP5J183
2007-001333	R315	MCR01MZP5J183
2007-001333	R503	MCR01MZP5J183
2007-002970	R101	MCR01MZP5J560
2007-002970	R103	MCR01MZP5J560
2007-007132	R104	RC1005F153CS
2007-007132	R307	RC1005F153CS
2007-007132	R410	RC1005F153CS
2007-007156	R107	RC1005J1ROCS
2007-007311	R411	MCR01MZP5F2202
2007-007589	R312	RK73H1ETP6802F
2007-007592	R300	RK73H1ETP2703F
2007-008354	R306	ERJ2RKF224X
2007-008354	R313	ERJ2RKF224X
2203-000233	C118	GRP1555C1H101J
2203-000254	C127	GRP155R71C103K
2203-000254	C130	GRP155R71C103K
2203-000254	C133	GRP155R71C103K
2203-000254	C135	GRP155R71C103K
2203-000254	C136	GRP155R71C103K
2203-000278	C114	GRP1555C1H100D
2203-000278	C128	GRP1555C1H100D
2203-000278	C132	GRP1555C1H100D
2203-000330	C413	GRP1555C1H120J
2203-000386	C313	GRP1555C1H150J
2203-000386	C316	GRP1555C1H150J
2203-000438	C115	GRP155R71H102K
2203-000438	C216	GRP155R71H102K
2203-000438	C411	GRP155R71H102K
2203-000466	C106	GRP1555C1H1R0C
2203-000466	C109	GRP1555C1H1R0C
2203-000466	C120	GRP1555C1H1R0C
2203-000466	C121	GRP1555C1H1R0C
2203-000585	C501	GRP155R71H221KD01E
2203-000812	C213	GRP1555C1H330J

SEC CODE	Design LOC	Description
2203-000812	C215	GRP1555C1H330J
2203-000812	C507	GRP1555C1H330J
2203-000854	C400	GRP1555C1H390J
2203-000854	C403	GRP1555C1H390J
2203-000854	C404	GRP1555C1H390J
2203-000854	C410	GRP1555C1H390J
2203-000854	C418	GRP1555C1H390J
2203-000854	C423	GRP1555C1H390J
2203-000854	C425	GRP1555C1H390J
2203-000854	C432	GRP1555C1H390J
2203-000854	C435	GRP1555C1H390J
2203-001072	C100	GRP1555C1H560JD01E
2203-001201	C102	GRP1555C1H7R0DZ01E
2203-001383	C108	GRP1555C1HR50C
2203-002677	C113	CL05CR75BBNC
2203-002709	C125	C1005Y5V1C104ZT
2203-002709	C126	C1005Y5V1C104ZT
2203-002709	C449	C1005Y5V1C104ZT
2203-003054	C502	GRP1555C1H9R0C
2203-003054	C503	GRP1555C1H9R0C
2203-005057	C412	GRP1555C1H8R2CZ01E
2203-005057	C419	GRP1555C1H8R2CZ01E
2203-005057	C424	GRP1555C1H8R2CZ01E
2203-005057	C426	GRP1555C1H8R2CZ01E
2203-005057	C433	GRP1555C1H8R2CZ01E
2203-005057	C436	GRP1555C1H8R2CZ01E
2203-005234	C122	GRP1555C1H1R2CZ01E
2203-005234	C123	GRP1555C1H1R2CZ01E
2203-005344	C422	GRM155R71E223KA61D
2203-005450	C205	GRP1555C1H5R6BZ01E
2203-005450	C207	GRP1555C1H5R6BZ01E
2203-005993	C219	CL05B683KONC
2203-006048	C112	GRM155R71A104K
2203-006048	C124	GRM155R71A104K
2203-006048	C131	GRM155R71A104K
2203-006048	C200	GRM155R71A104K
2203-006048	C201	GRM155R71A104K

SEC CODE	Design LOC	Description
2203-006048	C202	GRM155R71A104K
2203-006048	C203	GRM155R71A104K
2203-006048	C204	GRM155R71A104K
2203-006048	C206	GRM155R71A104K
2203-006048	C208	GRM155R71A104K
2203-006048	C209	GRM155R71A104K
2203-006048	C210	GRM155R71A104K
2203-006048	C214	GRM155R71A104K
2203-006048	C321	GRM155R71A104K
2203-006048	C326	GRM155R71A104K
2203-006048	C329	GRM155R71A104K
2203-006048	C401	GRM155R71A104K
2203-006048	C414	GRM155R71A104K
2203-006048	C420	GRM155R71A104K
2203-006048	C427	GRM155R71A104K
2203-006048	C434	GRM155R71A104K
2203-006048	C514	GRM155R71A104K
2203-006208	C303	CM105X5R475M06AT
2203-006208	C330	CM105X5R475M06AT
2203-006208	C515	CM105X5R475M06AT
2203-006257	C300	GRM155R60J474KE19E
2203-006257	C302	GRM155R60J474KE19E
2203-006257	C306	GRM155R60J474KE19E
2203-006257	C307	GRM155R60J474KE19E
2203-006257	C309	GRM155R60J474KE19E
2203-006257	C312	GRM155R60J474KE19E
2203-006257	C320	GRM155R60J474KE19E
2203-006257	C323	GRM155R60J474KE19E
2203-006257	C324	GRM155R60J474KE19E
2203-006257	C325	GRM155R60J474KE19E
2203-006260	C301	GRM155R61A224KE19E
2203-006260	C405	GRM155R61A224KE19E
2203-006260	C406	GRM155R61A224KE19E
2203-006260	C407	GRM155R61A224KE19E
2203-006260	C409	GRM155R61A224KE19E
2203-006260	C451	GRM155R61A224KE19E
2203-006260	C452	GRM155R61A224KE19E

SEC CODE	Design LOC	Description
2203-006324	C319	GRM188R61A225KE19D
2203-006348	C315	CV105X5R105K25AT
2203-006348	C500	CV105X5R105K25AT
2203-006399	C217	GRM155R60J105KE19D
2203-006399	C308	GRM155R60J105KE19D
2203-006399	C310	GRM155R60J105KE19D
2203-006399	C317	GRM155R60J105KE19D
2203-006399	C331	GRM155R60J105KE19D
2203-006399	C332	GRM155R60J105KE19D
2203-006399	C438	GRM155R60J105KE19D
2203-006399	C439	GRM155R60J105KE19D
2203-006399	C442	GRM155R60J105KE19D
2203-006562	C305	CV05X5R105K10AH
2203-006562	C402	CV05X5R105K10AH
2203-006562	C408	CV05X5R105K10AH
2203-006562	C415	CV05X5R105K10AH
2203-006562	C421	CV05X5R105K10AH
2203-006562	C508	CV05X5R105K10AH
2203-006562	C509	CV05X5R105K10AH
2203-006562	C510	CV05X5R105K10AH
2203-006562	C511	CV05X5R105K10AH
2203-006562	C512	CV05X5R105K10AH
2203-006562	C513	CV05X5R105K10AH
2203-006824	C437	CV105X5R475K10AT
2203-006841	C314	CV05X5R105K16AH
2203-006872	C110	GRM155R60J225ME15D
2203-006872	C134	GRM155R60J225ME15D
2203-006872	C137	GRM155R60J225ME15D
2203-006872	C447	GRM155R60J225ME15D
2203-006872	C450	GRM155R60J225ME15D
2203-006890	C304	CV105X5R106M06AT
2203-006890	C322	CV105X5R106M06AT
2203-006890	C328	CV105X5R106M06AT
2203-007271	C443	CL05A225KP5NSNC
2404-001377	TA401	F980J226MMA
2404-001381	TA400	F981A106MMA
2404-001415	TA100	TLJR106M010R3000

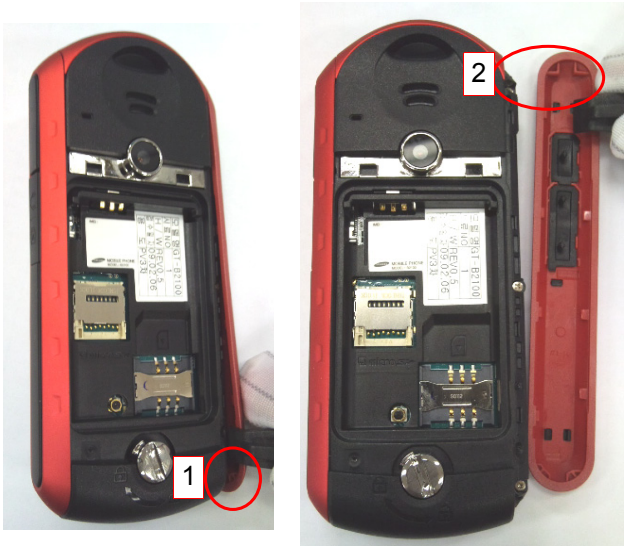
SEC CODE	Design LOC	Description
2703-001723	L405	LL1005-FH33NJ
2703-001723	L406	LL1005-FH33NJ
2703-001723	L407	LL1005-FH33NJ
2703-001723	L408	LL1005-FH33NJ
2703-001723	L412	LL1005-FH33NJ
2703-001723	L413	LL1005-FH33NJ
2703-001723	L502	LL1005-FH33NJ
2703-001723	L503	LL1005-FH33NJ
2703-001723	L504	LL1005-FH33NJ
2703-001723	L505	LL1005-FH33NJ
2703-001723	L506	LL1005-FH33NJ
2703-001723	L507	LL1005-FH33NJ
2703-001726	L110	LL1005-FH27NJ
2703-001726	L112	LL1005-FH27NJ
2703-001726	L113	LL1005-FH27NJ
2703-002170	L105	CIH05T6N8JNC
2703-002170	L106	CIH05T6N8JNC
2703-002201	L411	CIH05T33NJNC
2703-002201	L414	CIH05T33NJNC
2703-002203	L100	CIH05T15NJNC
2703-002203	L400	CIH05T15NJNC
2703-002203	L401	CIH05T15NJNC
2703-002203	L409	CIH05T15NJNC
2703-002203	L410	CIH05T15NJNC
2703-002207	L102	CIH05T3N3SNC
2703-002208	L103	CIH05T2N2SNC
2703-002268	L104	CIH05T8N2JNC
2703-002268	L107	CIH05T8N2JNC
2703-002268	L109	CIH05T8N2JNC
2703-003293	L402	MLG1005SR12JT
2703-003476	L417	LQG15HSR27J02D
2703-003533	L301	LPS181214T-6R8M
2801-003856	OSC300	MC-146(32.768KHz,20ppm)
2801-004587	OSC100	TSX-3225(TN4-26412)
2901-001408	F500	ICVE10054E250R201FR
2901-001540	F501	AMLV-14S-03Q-022-200F
2901-001540	F502	AMLV-14S-03Q-022-200F

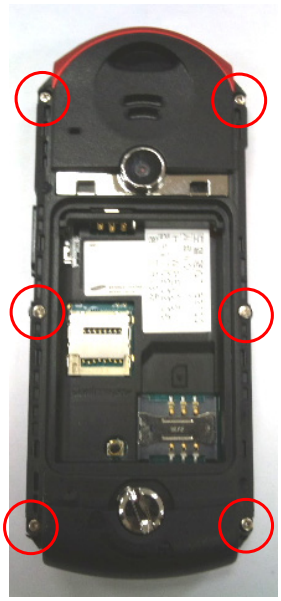
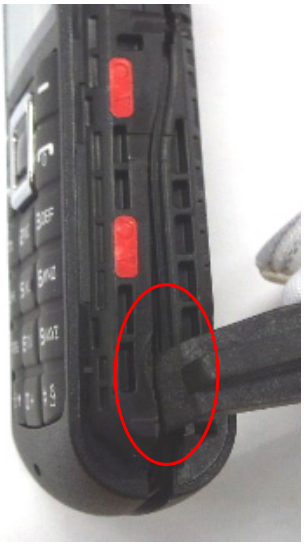
SEC CODE	Design LOC	Description
2901-001540	F503	AMLV-14S-03Q-022-200F
2909-001312	F100	LCB10B2450K3
3301-001659	L101	BLM15AG601SN1
3301-001756	L403	BLM15HG102SN1D
3301-001756	L404	BLM15HG102SN1D
3301-001756	L500	BLM15HG102SN1D
3301-001756	L501	BLM15HG102SN1D
3705-001503	RFS100	KMS-560
3708-002222	SLC400	FH26-21S-0.3SHBW
3709-001394	CD300	SCHB1A0103
3709-001447	SIM300	5000-6P-1.9S
3710-002683	IFC500	HY20-AB0310
3711-006228	BTC300	2005-03-261A
4202-001463	ANT102	ODBTP3015
GH70-03276A	SC100	ONBOARD-CLIP-4
GH70-03276A	SC101	ONBOARD-CLIP-4
GH70-03276A	SC102	ONBOARD-CLIP-4
GH70-03276A	SC103	ONBOARD-CLIP-4
1203-005596	U404	AAT2848
1205-003729	U100	BCM2070A0KUBG
1201-002864	U401	MAX9877AERP-T
1203-005521	U300	MIC5365-2.8YMT
2904-001892	F101	SAWEN1G84CW0F00
2904-001889	F102	SFRM81DY102

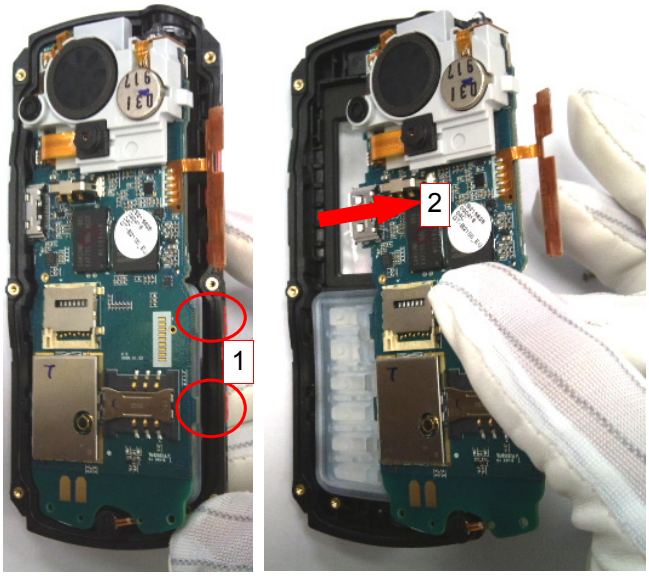
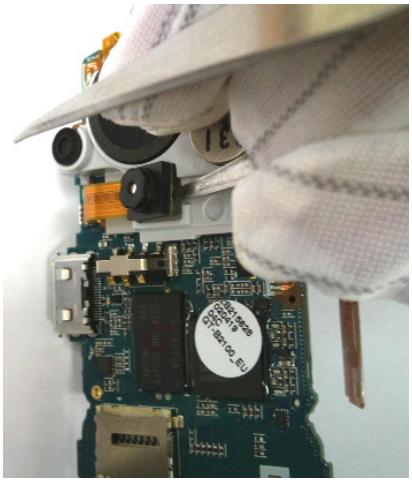
Please consult the GSPN website (Samsung Portal) for the most recent version of the product's part list.

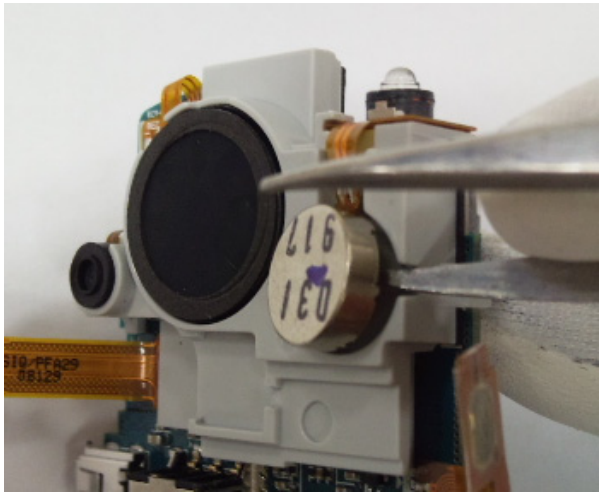
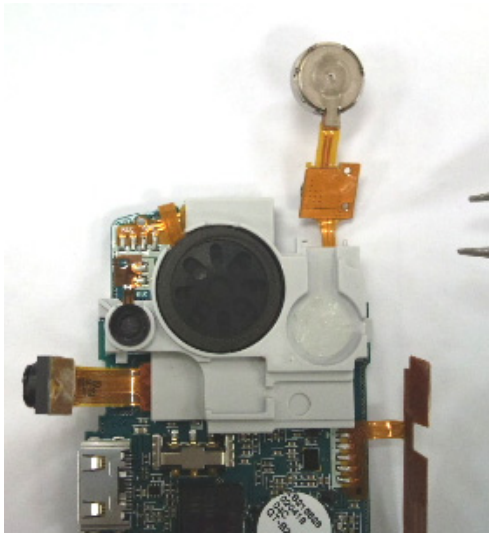
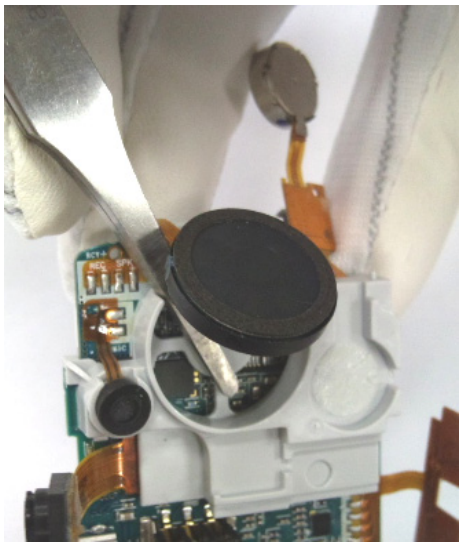
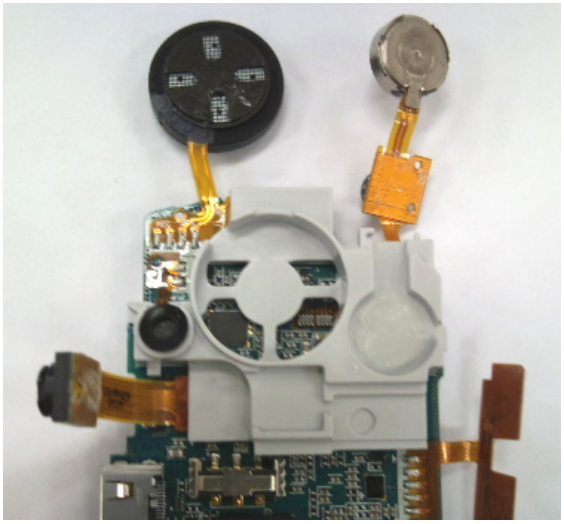
7. Disassembly and Assembly Instructions

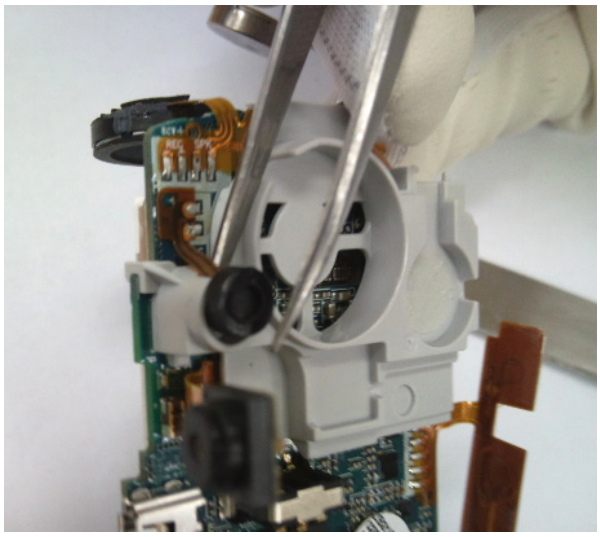
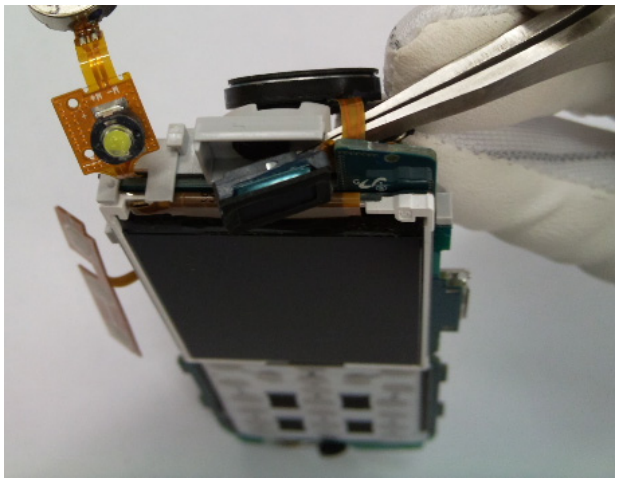
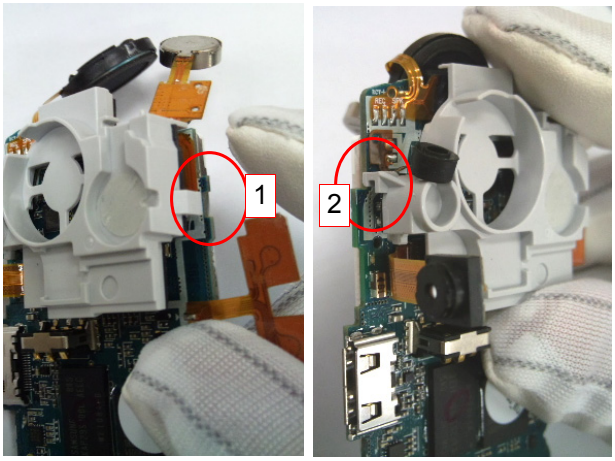
7-1. Disassembly

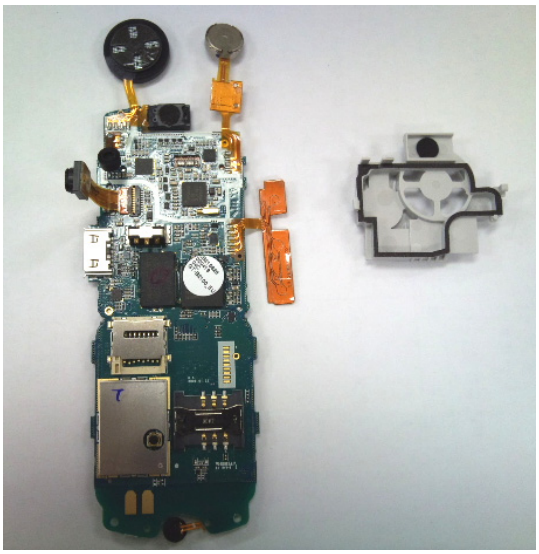
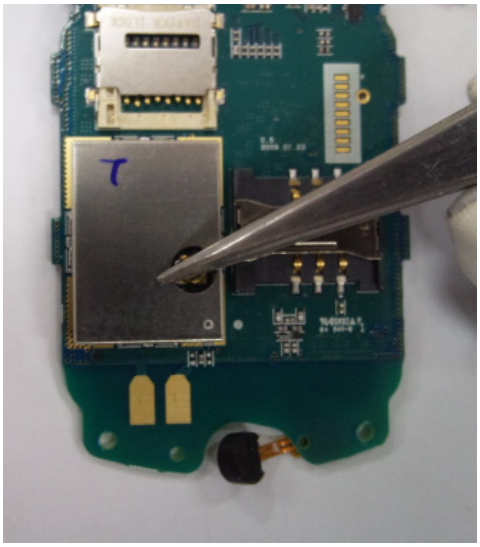
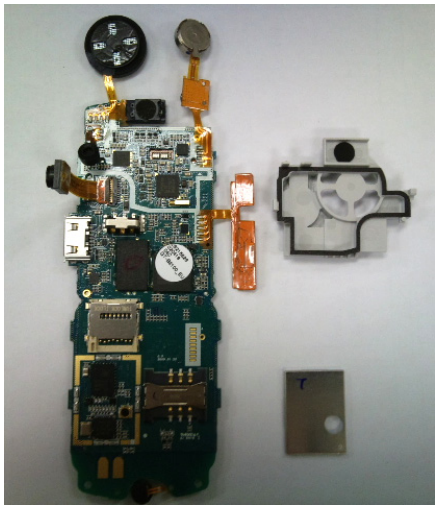
1 Disjoint 3 hooks on the side cover 	2 Disjoint bottom hook and top hook 
1) Be careful not to make scratch and molding damage!	1) Be careful not to make scratch and molding damage!
3 Disjoint 3 hooks on the side cover 	4 Disjoint bottom hook and top hook 
1) Be careful not to make scratch and molding damage!	1) Be careful not to make scratch and molding damage!

5 Disassembled set ass'y and side covers 	6 Release 6 screws at set ass'y 
1) Be careful not to make scratch and molding damage!	1) Be careful not to make scratch and molding damage!
7 Disassemble font/rear using gap on the picture below 	8 Disassembled front and rear cover 
1) Be careful not to make scratch and molding damage!	1) Be careful not to make scratch and molding damage!

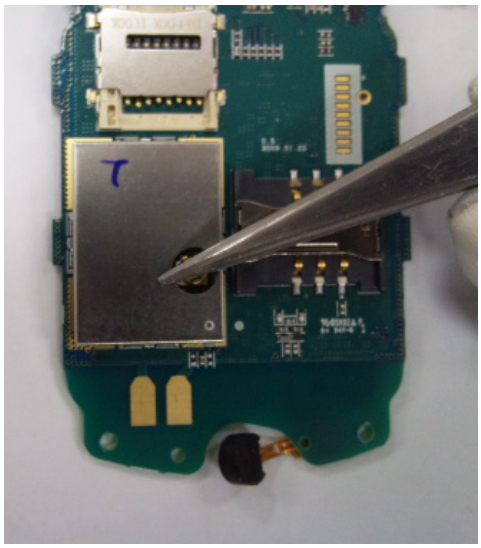
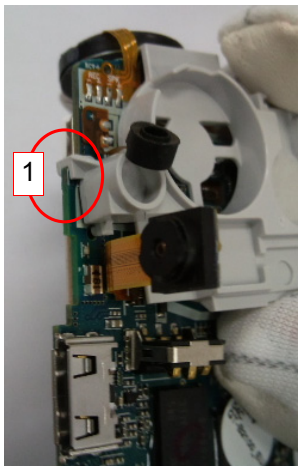
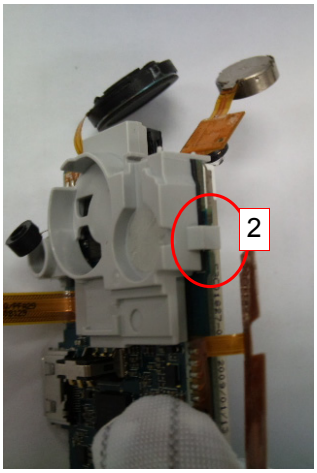
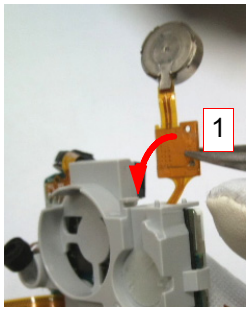
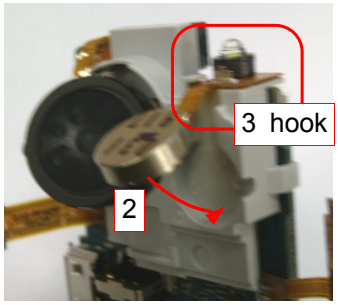
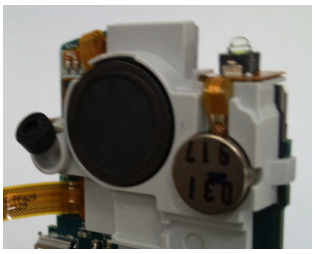
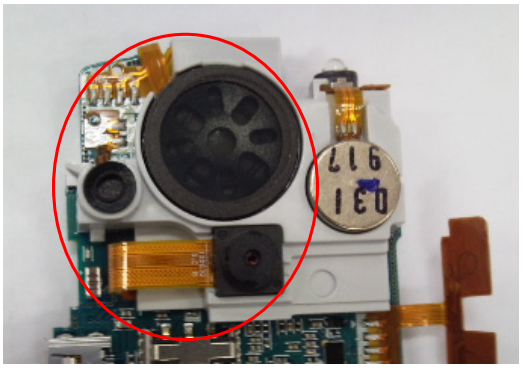
9 Release screws 2 points at PBA	10 Disjoint 2 hooks and pull out PBA from front cover
	
1) Beware that you do not damage PBA	1) Be careful not to make scratch and molding damage!
11 Disassembled PBA, front cover, keypad	12 Disassemble camera module from pba ass'y with pincette
	
1) Beware that you do not damage PBA	1) Beware that you do not damage PBA & MIC & fpcb

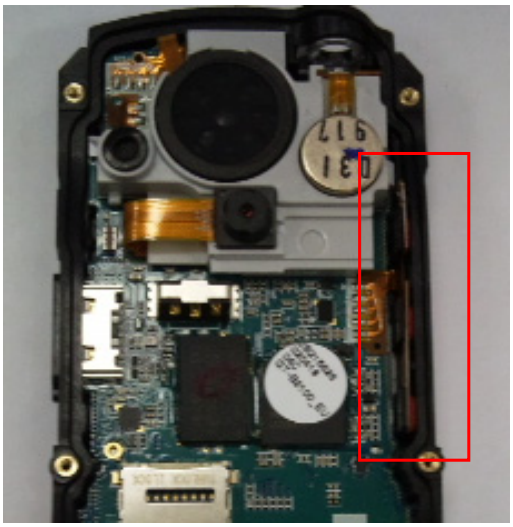
13 Disassemble Motor and torch from PBA ass'y with pincette 	14 Disassembled PBA and motor and torch 
1) Beware that you do not damage PBA, receiver, speaker, torch, motor, camera, side key, and fpcbs	1) Beware that you do not damage PBA, receiver, speaker, torch, motor, camera, side key, and fpcbs
11 Disassemble speaker with round pincette 	12 Disassembled speaker and PBA ass'y 
1) Beware that you do not damage PBA, receiver, speaker, torch, motor, camera, side key, and fpcbs	1) Beware that you do not damage PBA, receiver, speaker, torch, motor, camera, side key, and fpcbs

13 Disassemble sub MIC with pincette 	14 Disassembled PBA and sub MIC 
1) Beware that you do not damage PBA, receiver, speaker, torch, motor, camera, side key, and fpcbs	1) Beware that you do not damage PBA, receiver, speaker, torch, motor, camera, side key, and fpcbs
11 Disassemble receiver with round pincette 	12 Disjoint (1) right hook and (2) left hook of speaker bracket 
1) Beware that you do not damage PBA, receiver, speaker, torch, motor, camera, side key, and fpcbs	1) Beware that you do not damage PBA, receiver, speaker, torch, motor, camera, side key, and fpcbs

13 Disassemble PBA and speaker bracket 	14 Disassemble shield can from PBA 
1) Beware that you do not damage PBA, receiver, speaker, torch, motor, camera, side key, and fpcbs	1) Beware that you do not damage PBA, receiver, speaker, torch, motor, camera, side key, and fpcbs
11 Disassembled shield can and PBA 	
1) Beware that you do not damage PBA, receiver, speaker, torch, motor, camera, side key, and fpcbs	

7-2 Assembly

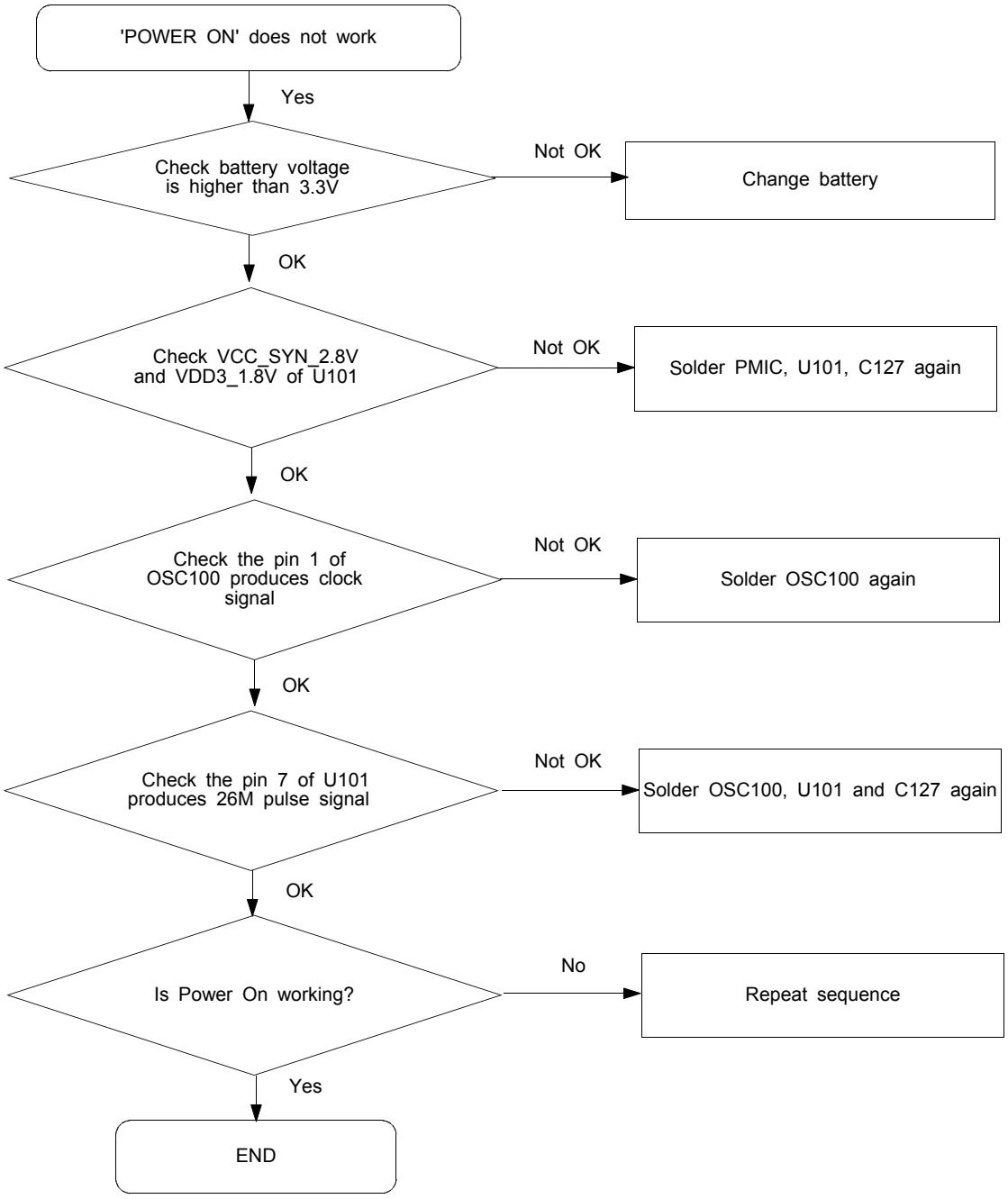
1 Assemble shield can on the PBA 	2 Assemble right hook and left hook on the PBA  
1) Beware that you do not damage PBA & MIC & Camera	1) Beware that you do not damage PBA, receiver, speaker, torch, motor, camera, side key, and fpcbs
3 Assemble torch light and motor   	4 Assemble receiver,speaker,sub MIC,camera  
1) Beware that you do not damage PBA, receiver, speaker, torch, motor, camera, side key, and fpcbs	1) Beware that you do not damage PBA, receiver, speaker, torch, motor, camera, side key, and fpcbs

5 Put the keypad on font cover 	6 Assemble pba on front cover and press pba on the picture below  
1) Be careful not to make scratch and molding damage!	1) Beware that you do not damage PBA, shield can, SIM connector, Micro SD card socket
7 Assemble volume key Fpcb on front cover 	8 Drives screws 2 points on the PBA 
1) Be careful not to make scratch and molding damage!	1) Be careful not to make scratch and molding damage!

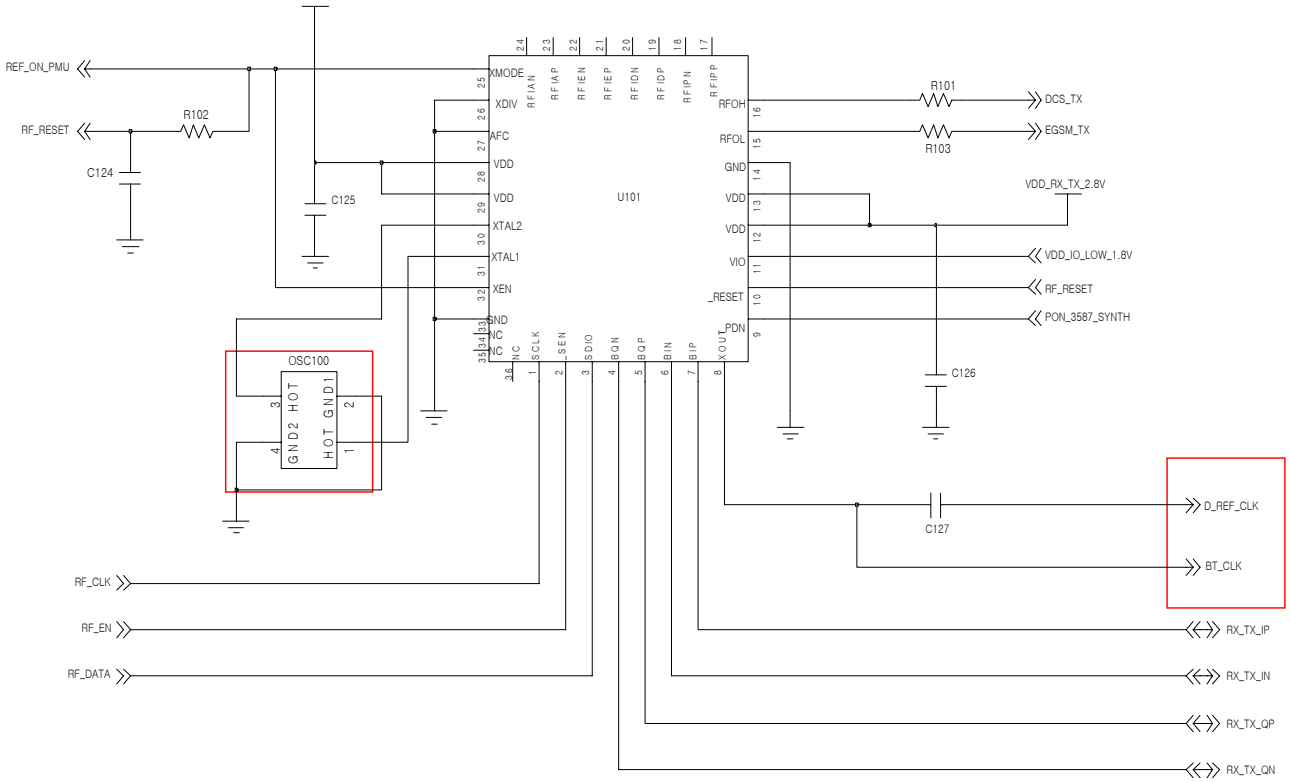
9 Assemble rear and drivers 6 point screws on the rear 	9 Assemble left side cover 
1) Be careful not to make scratch and molding damage!	1) Be careful not to make scratch and molding damage!
9 Assemble right side cover 	
1) Be careful not to make scratch and molding damage!	

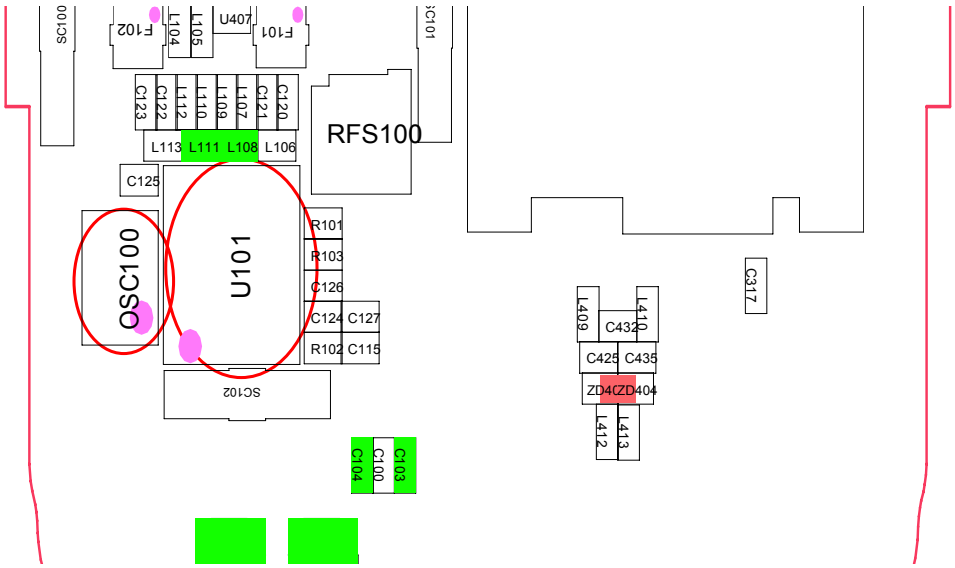
10. Flow Chart of Troubleshooting

10-1. Power On

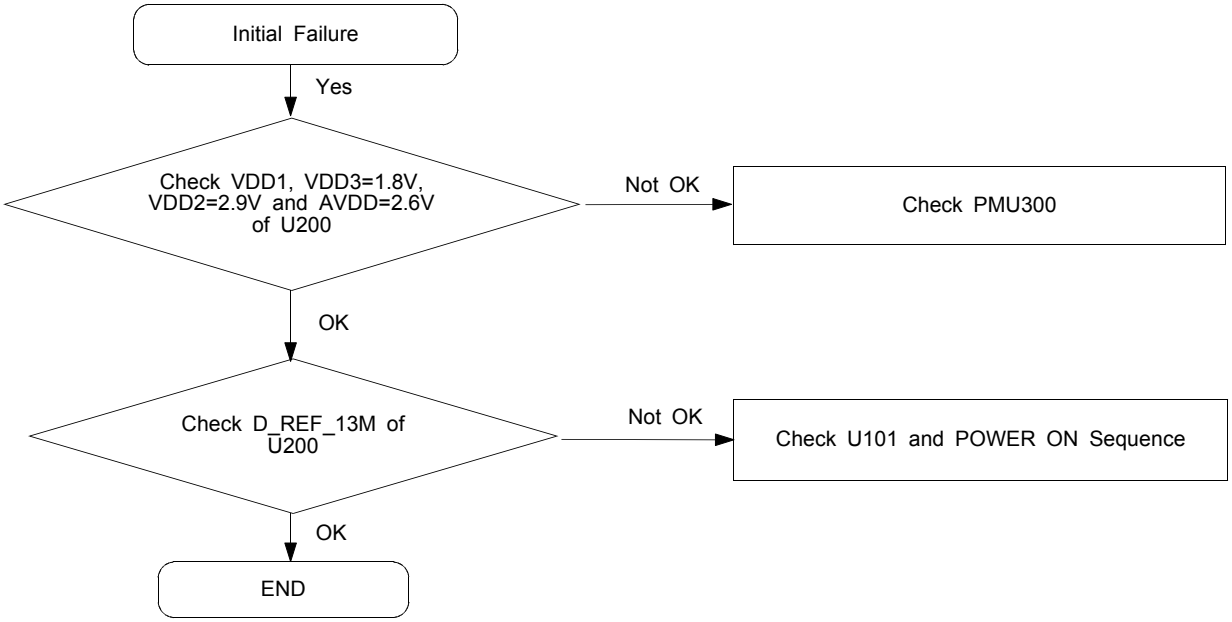


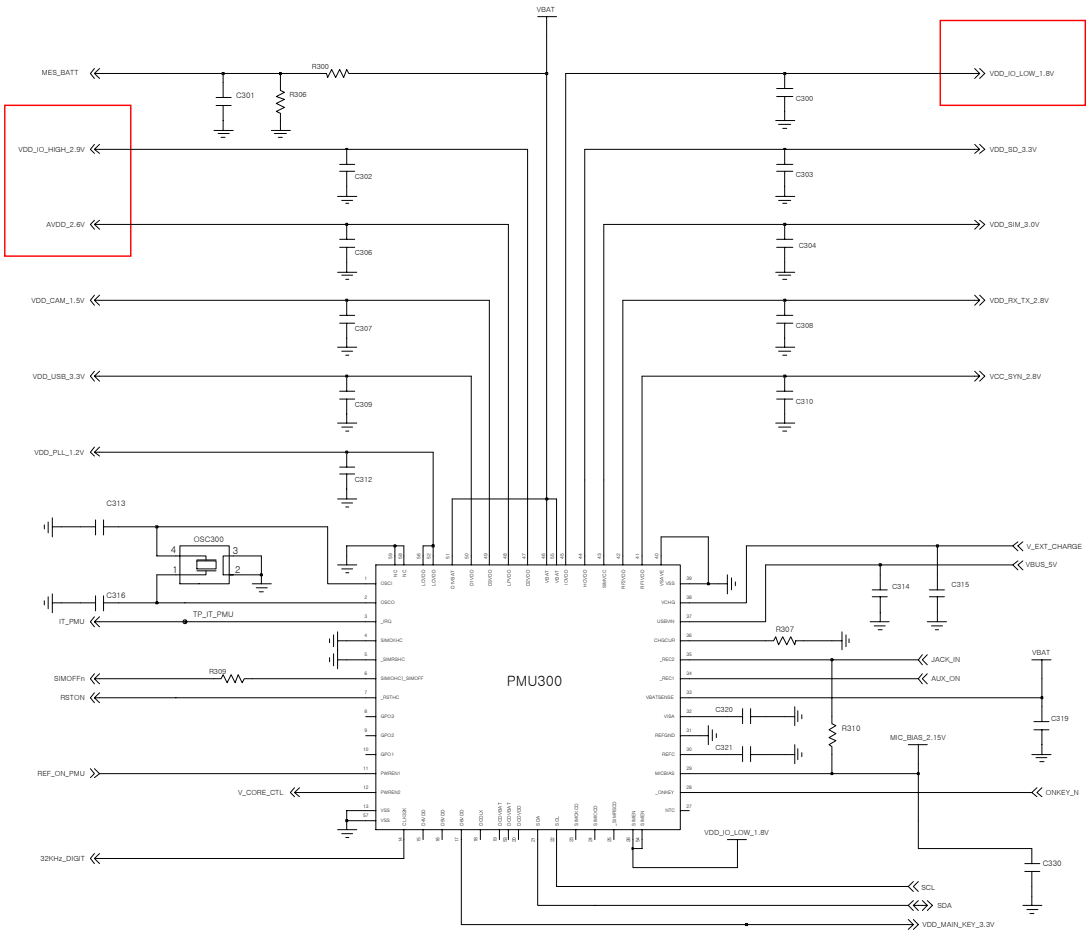
Power On

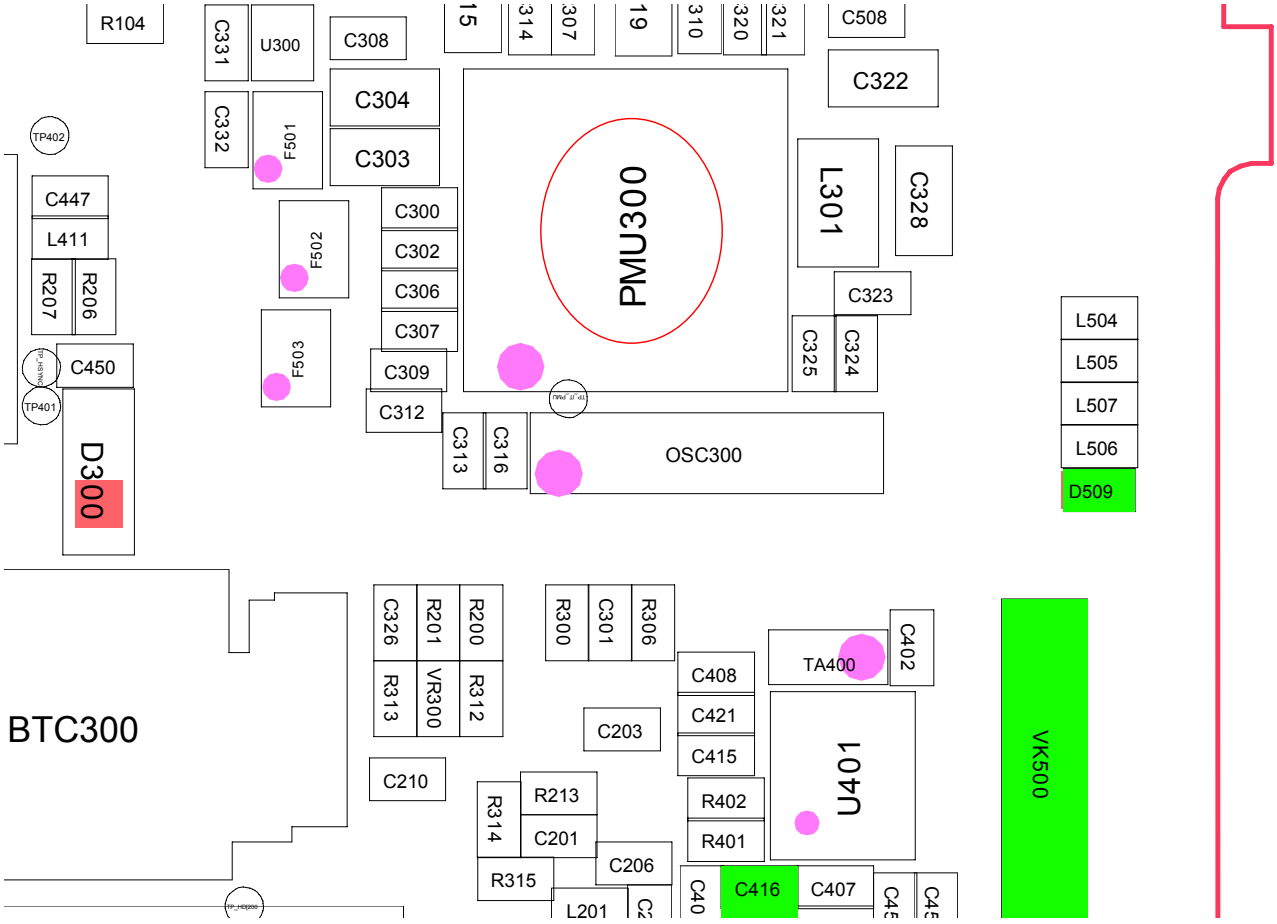




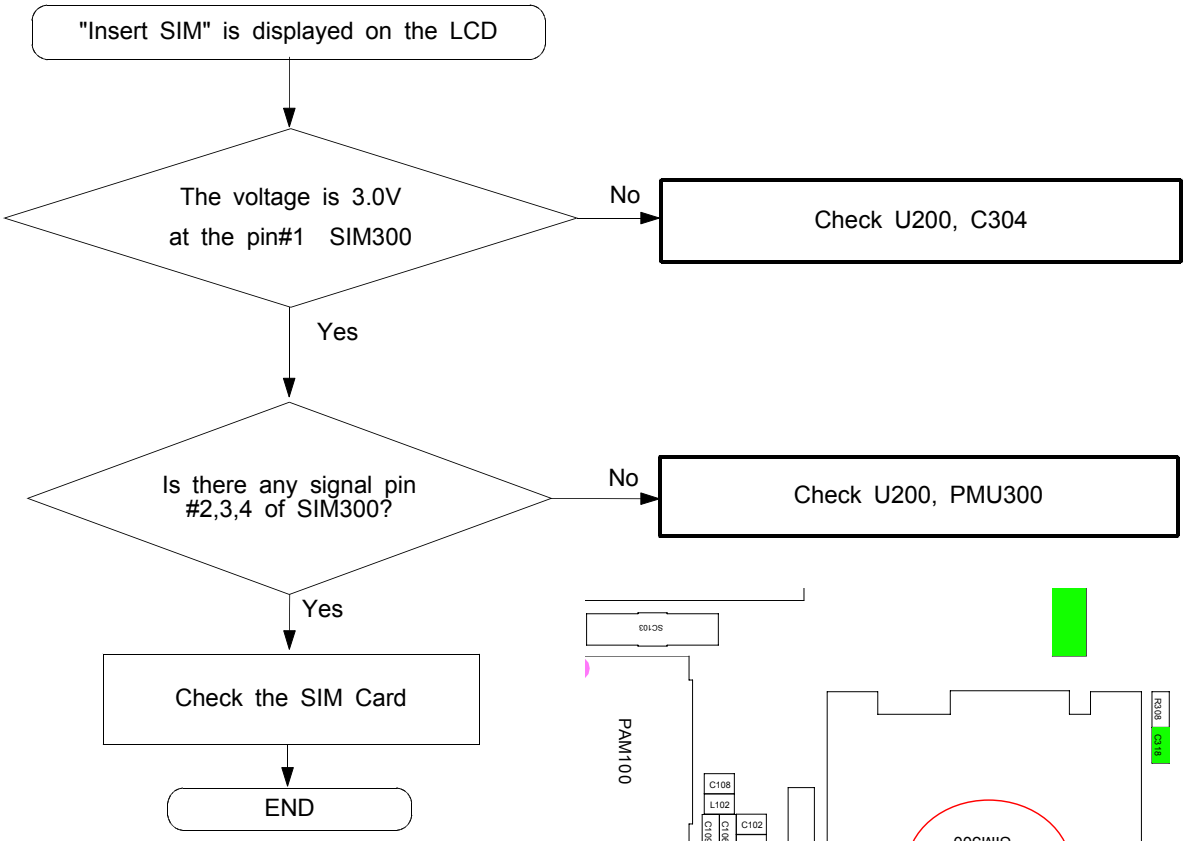
10-2. Initial

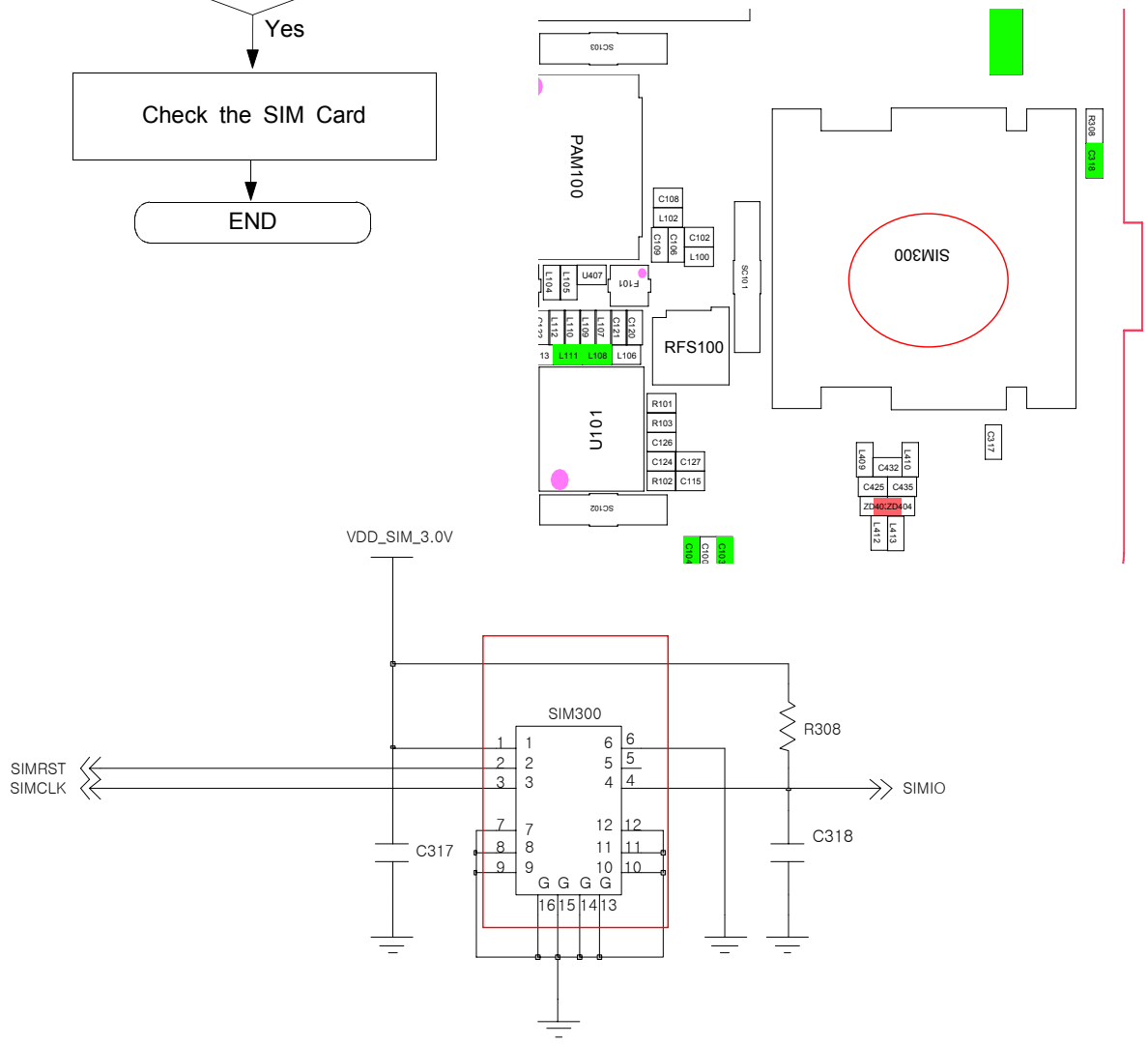




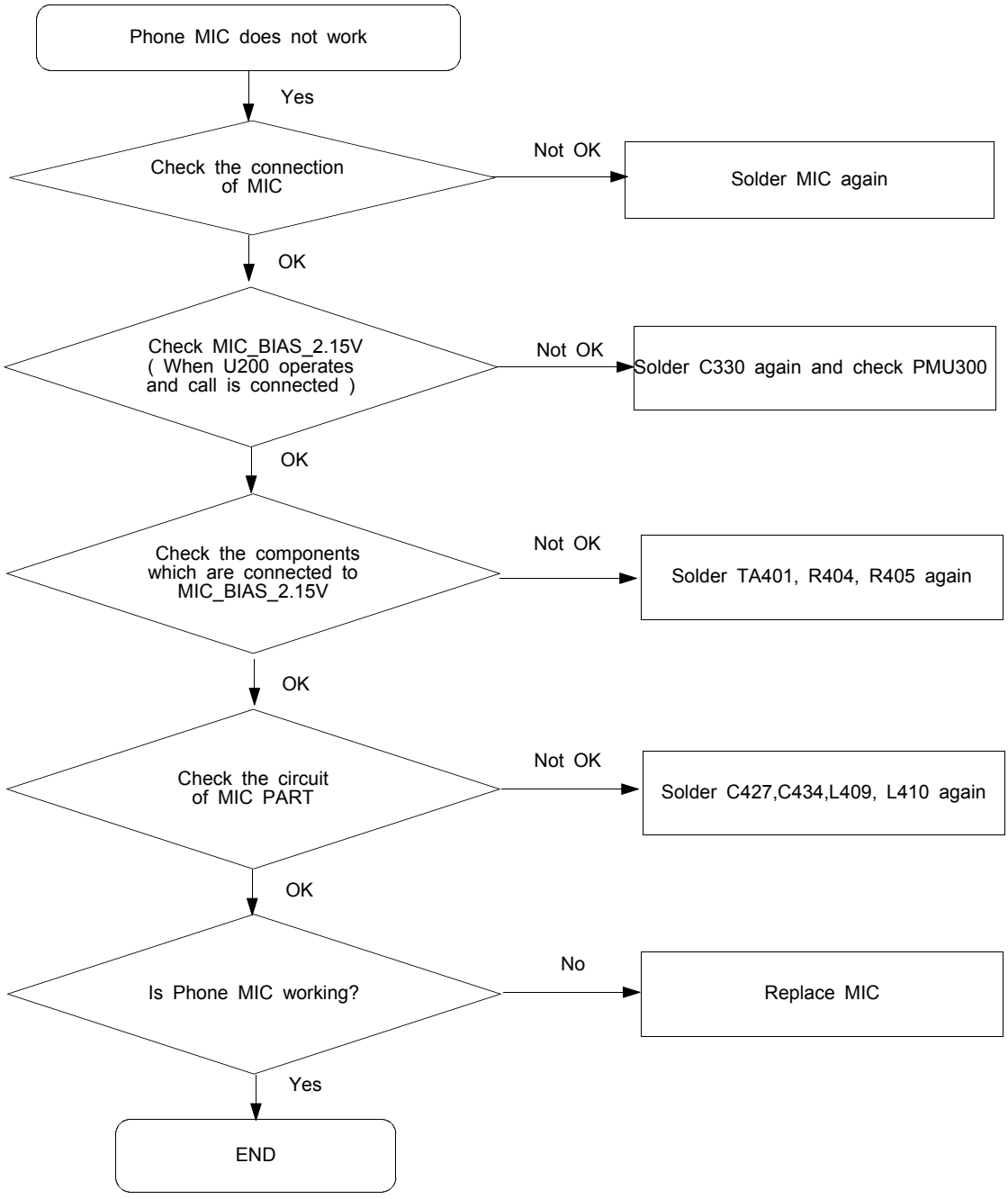


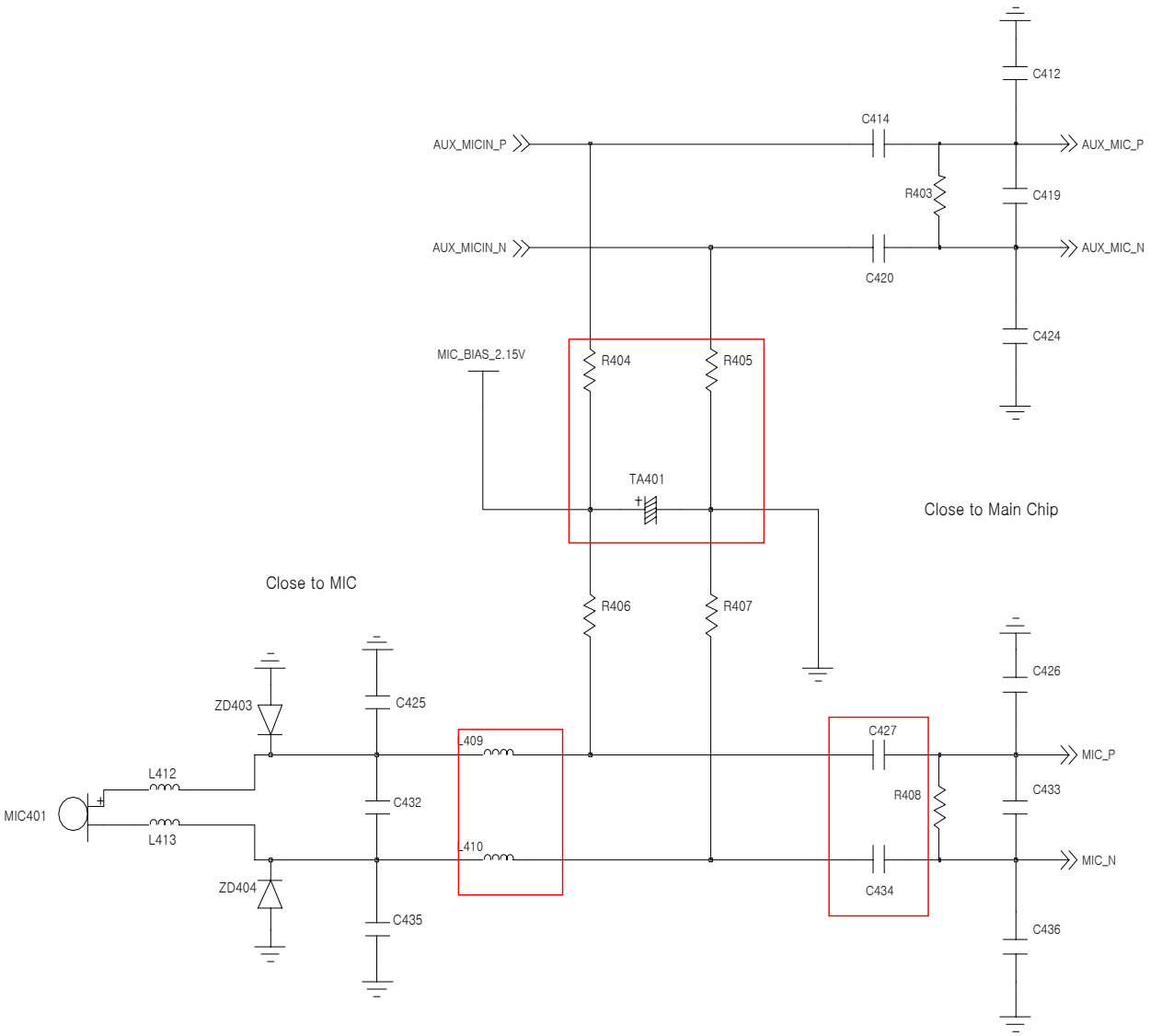
10-3. SIM Part

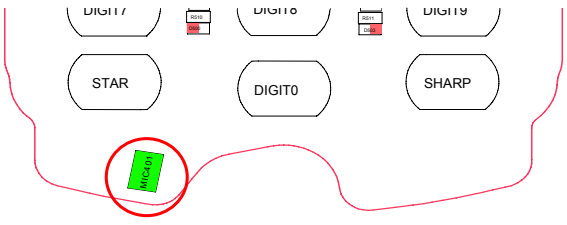


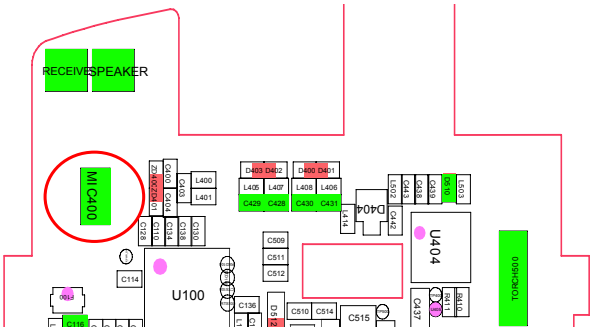


10-4. Microphone Part - Phone MIC

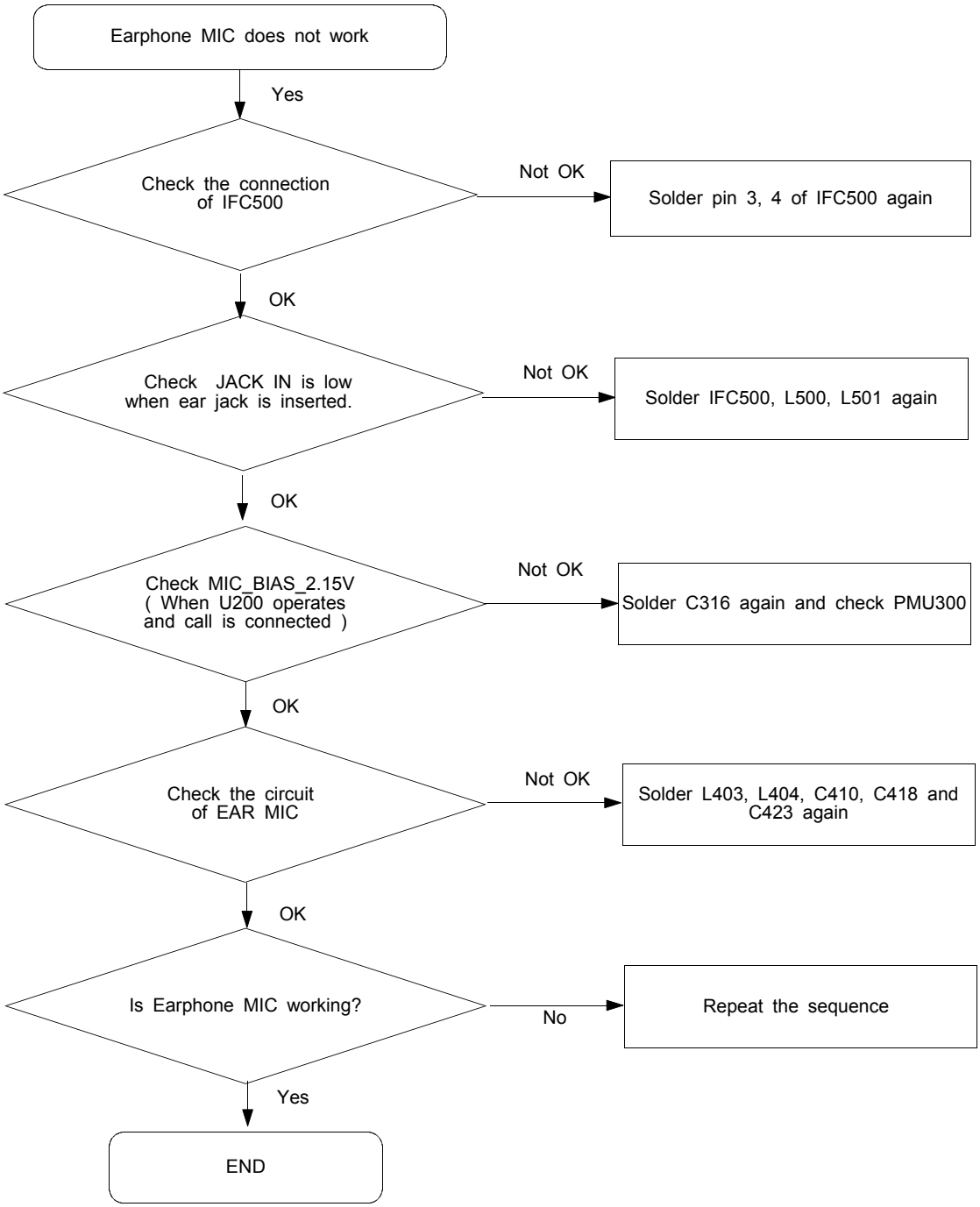


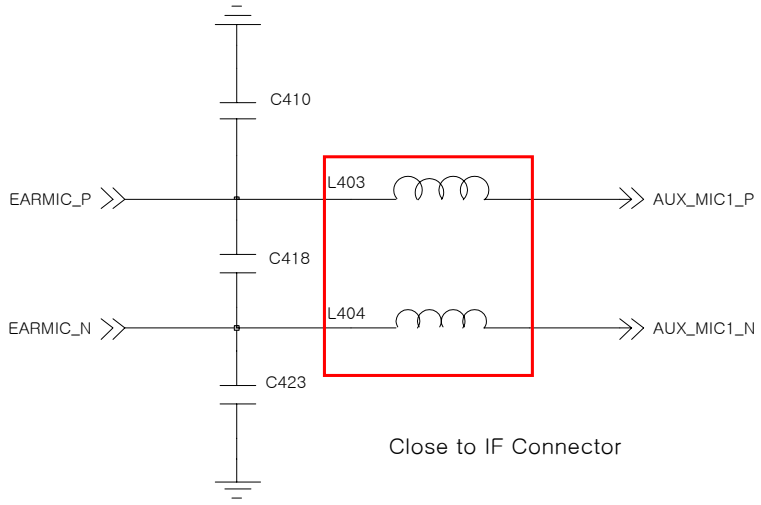


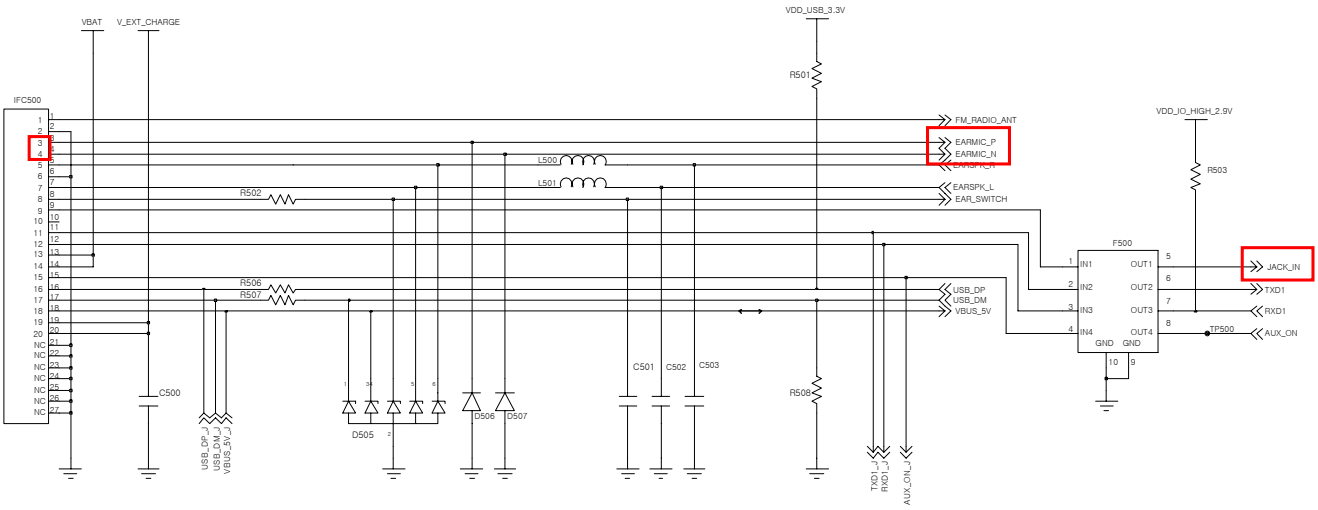


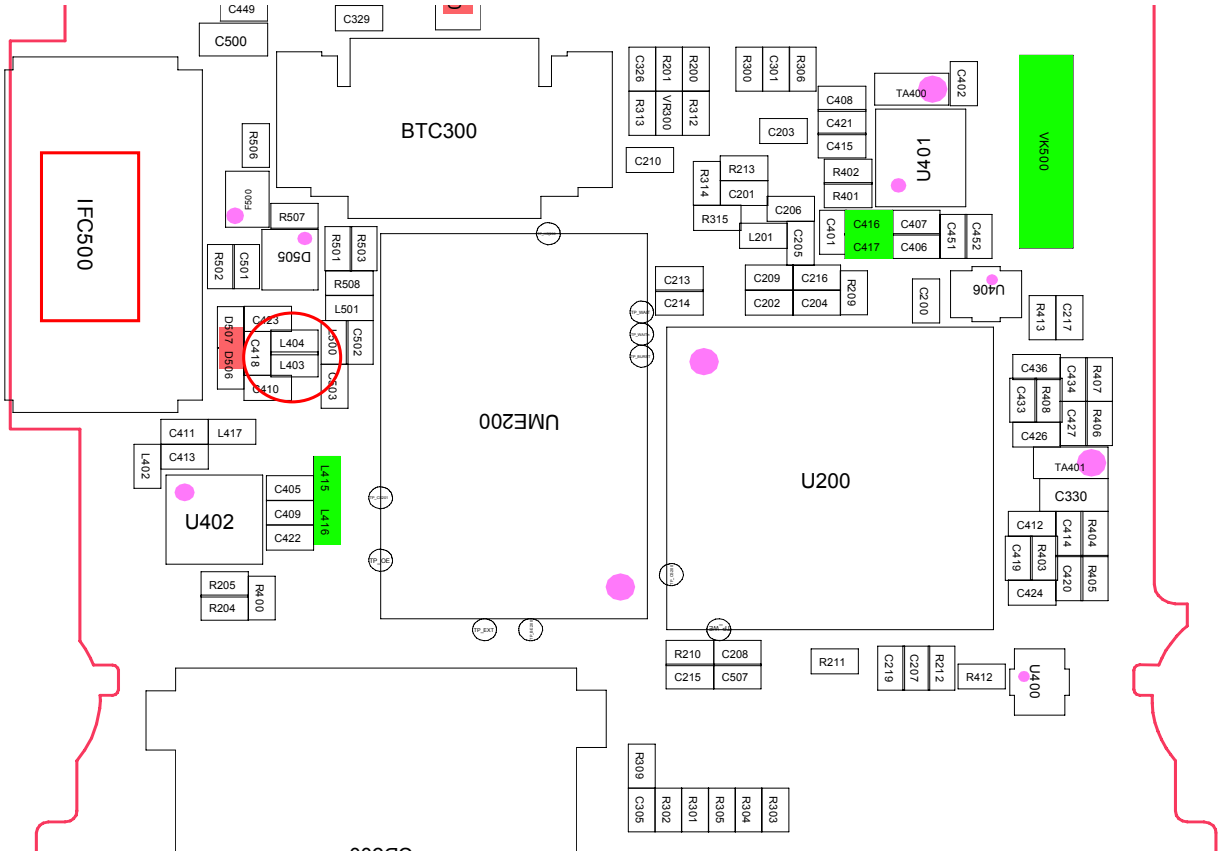


10-5. Microphone Part - Earphone MIC

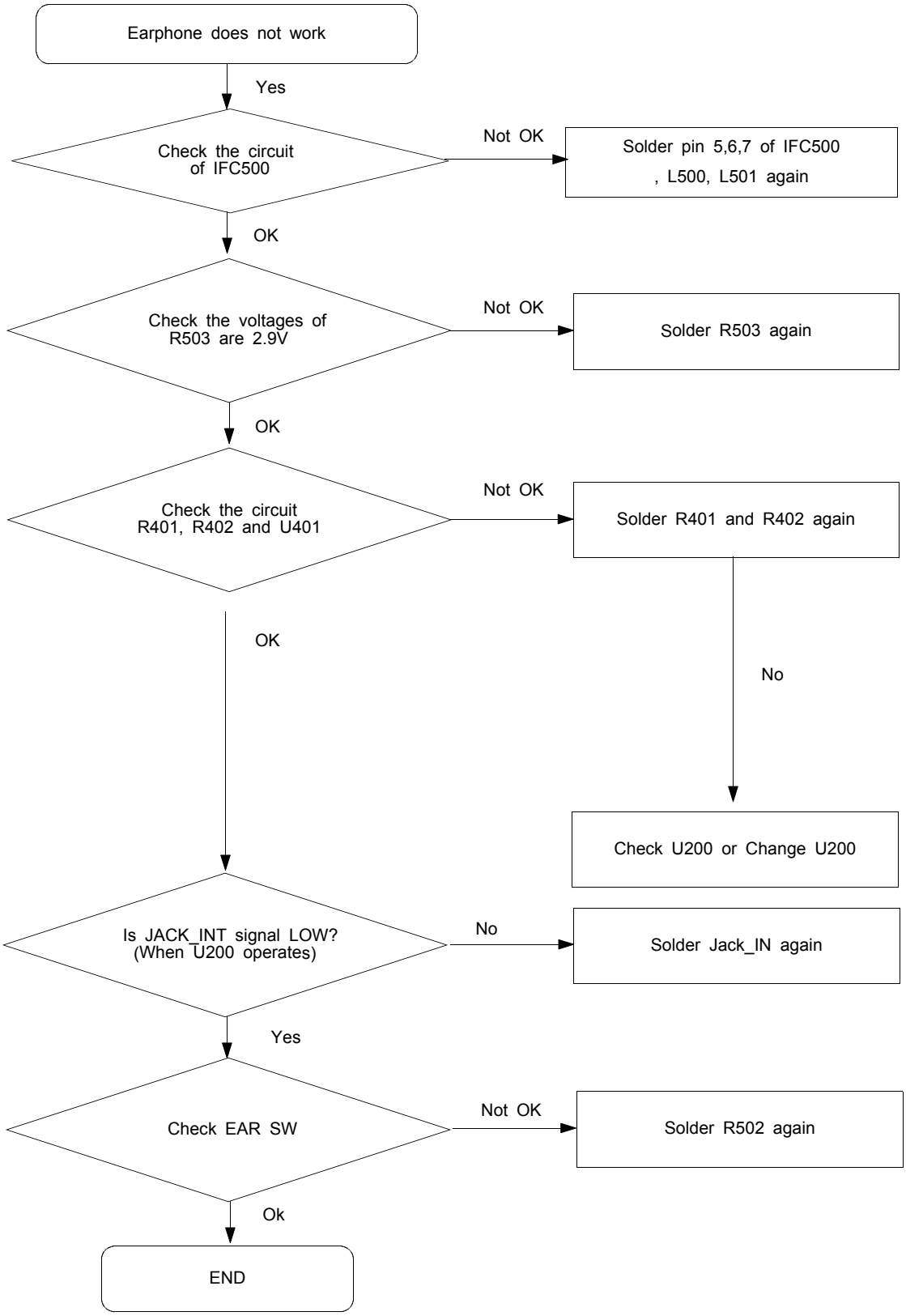


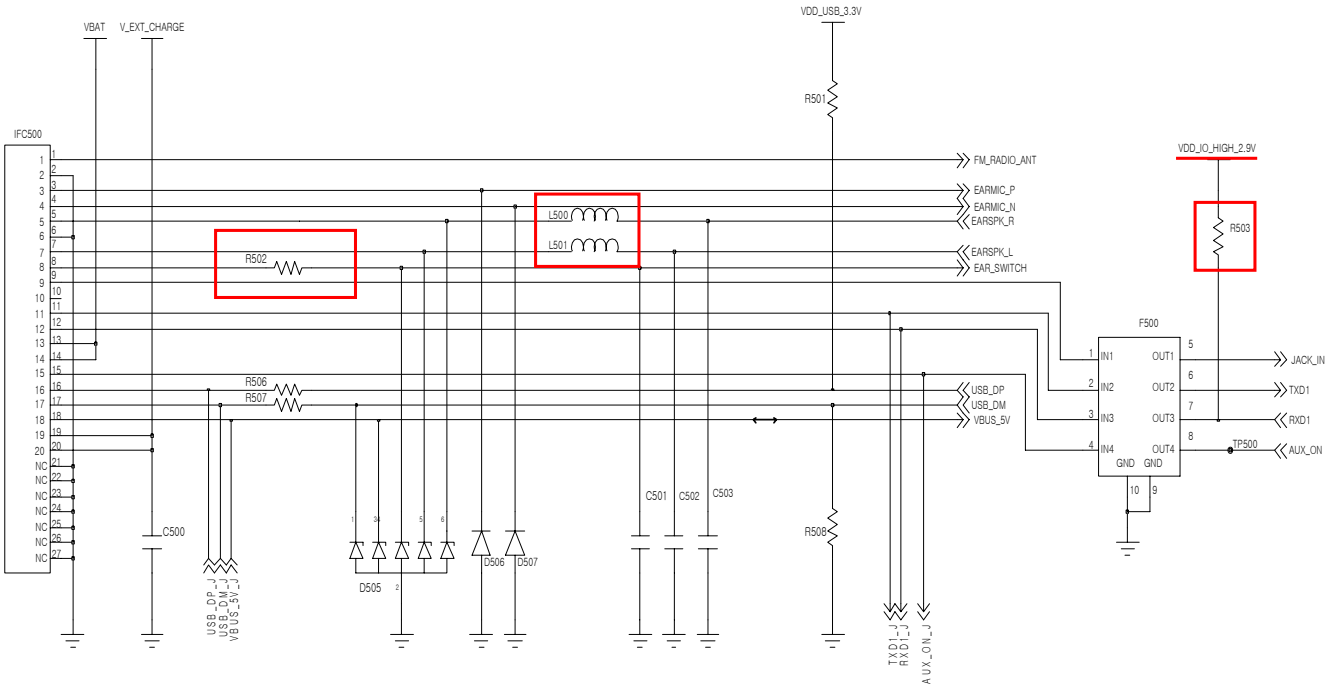


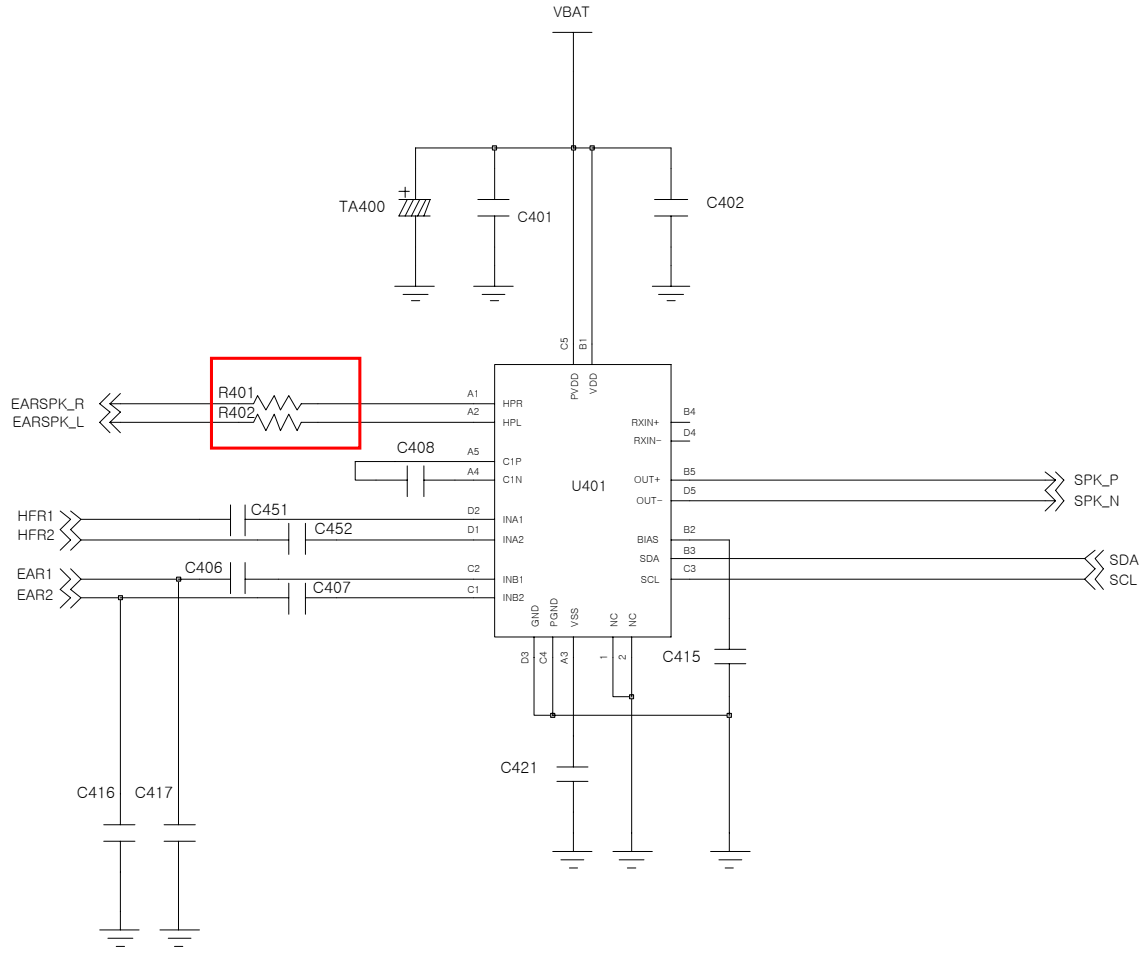


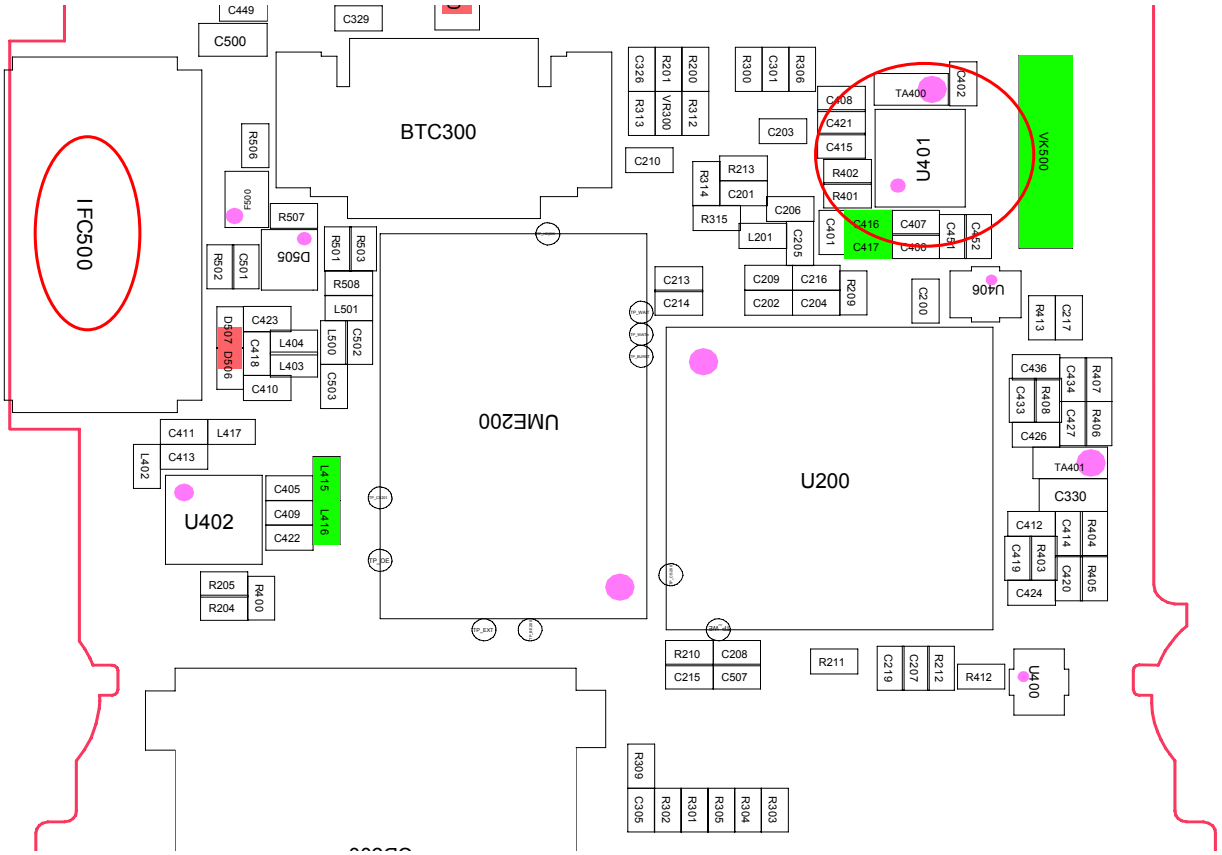


10-6. Earphone Part

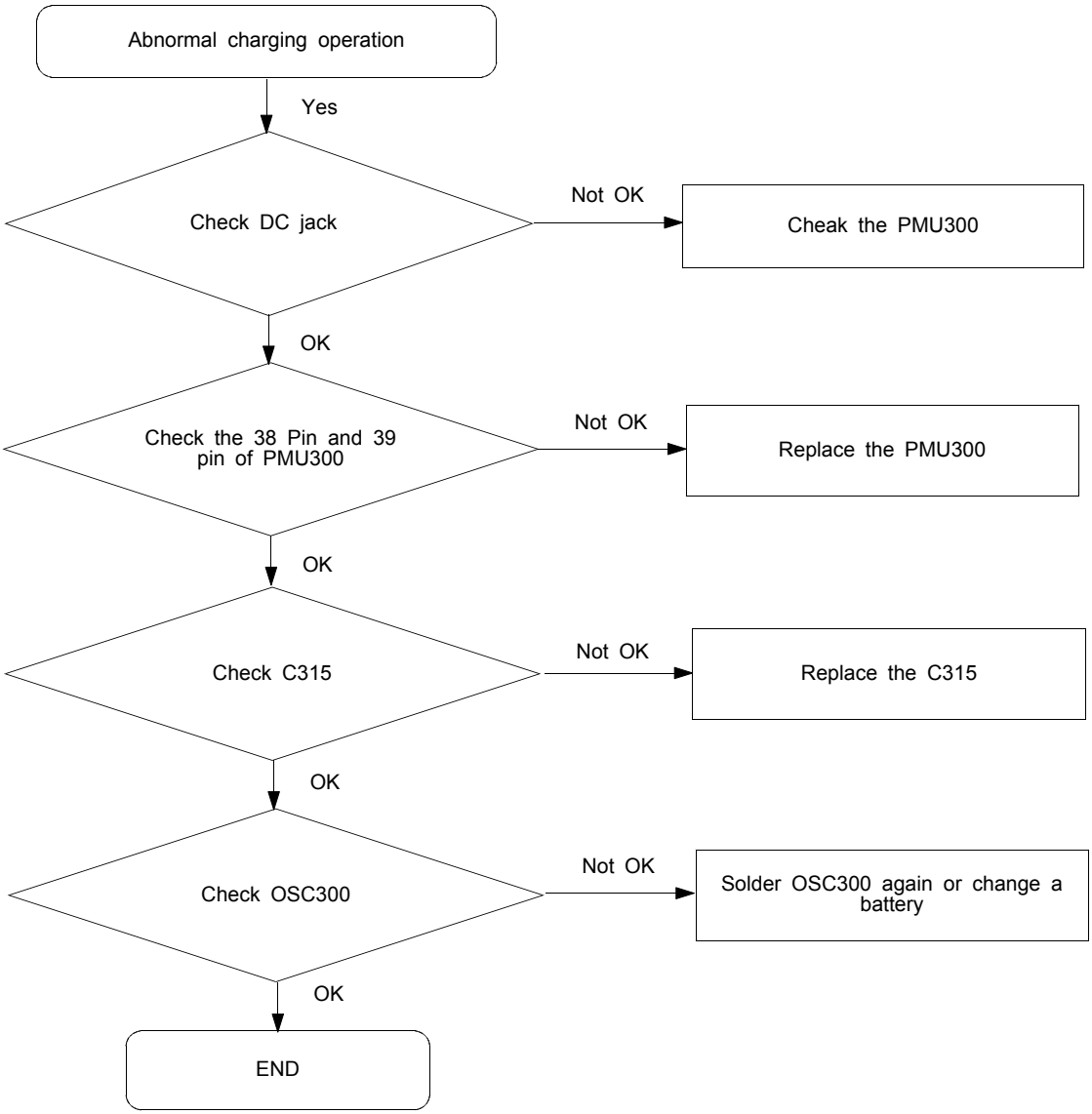


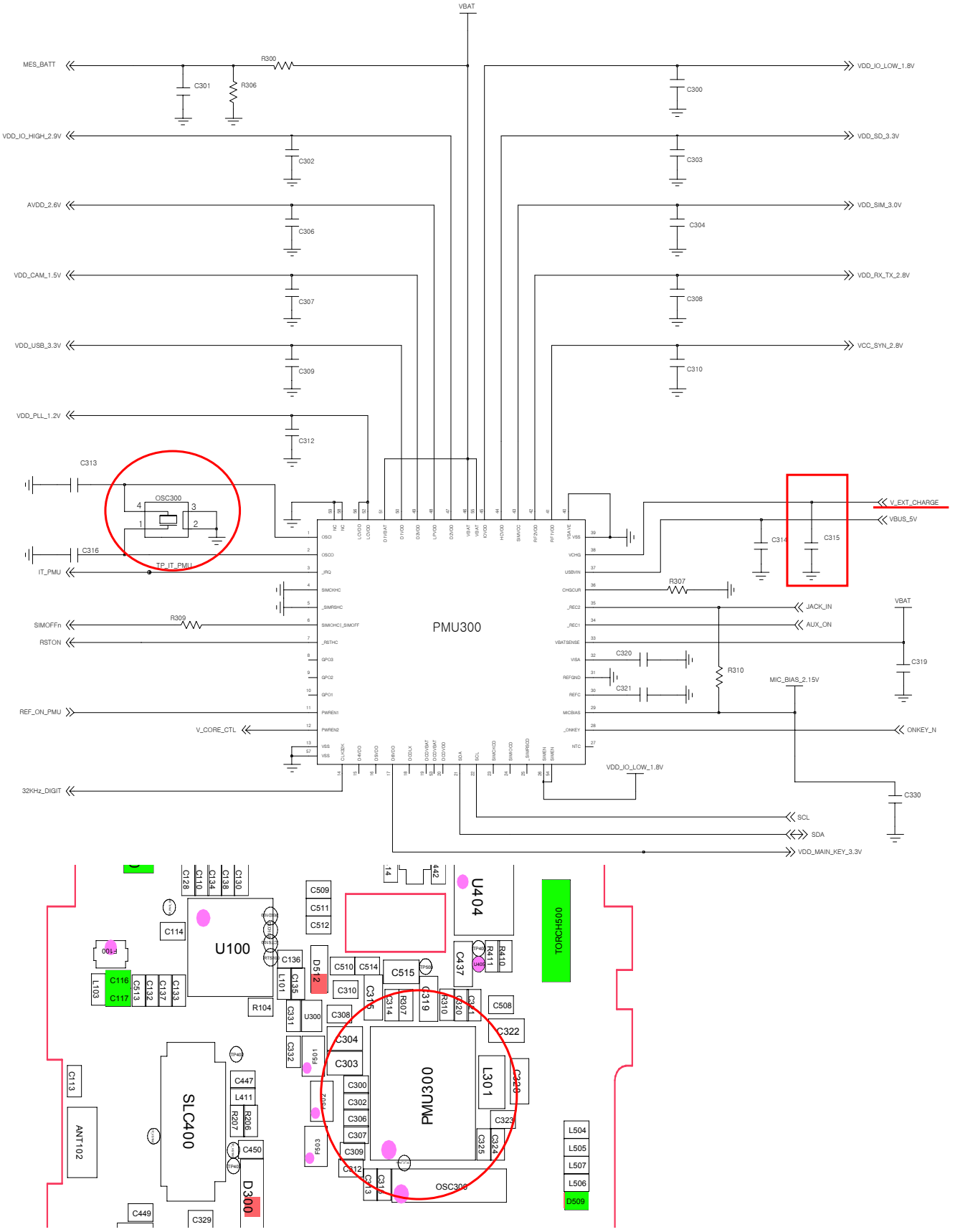




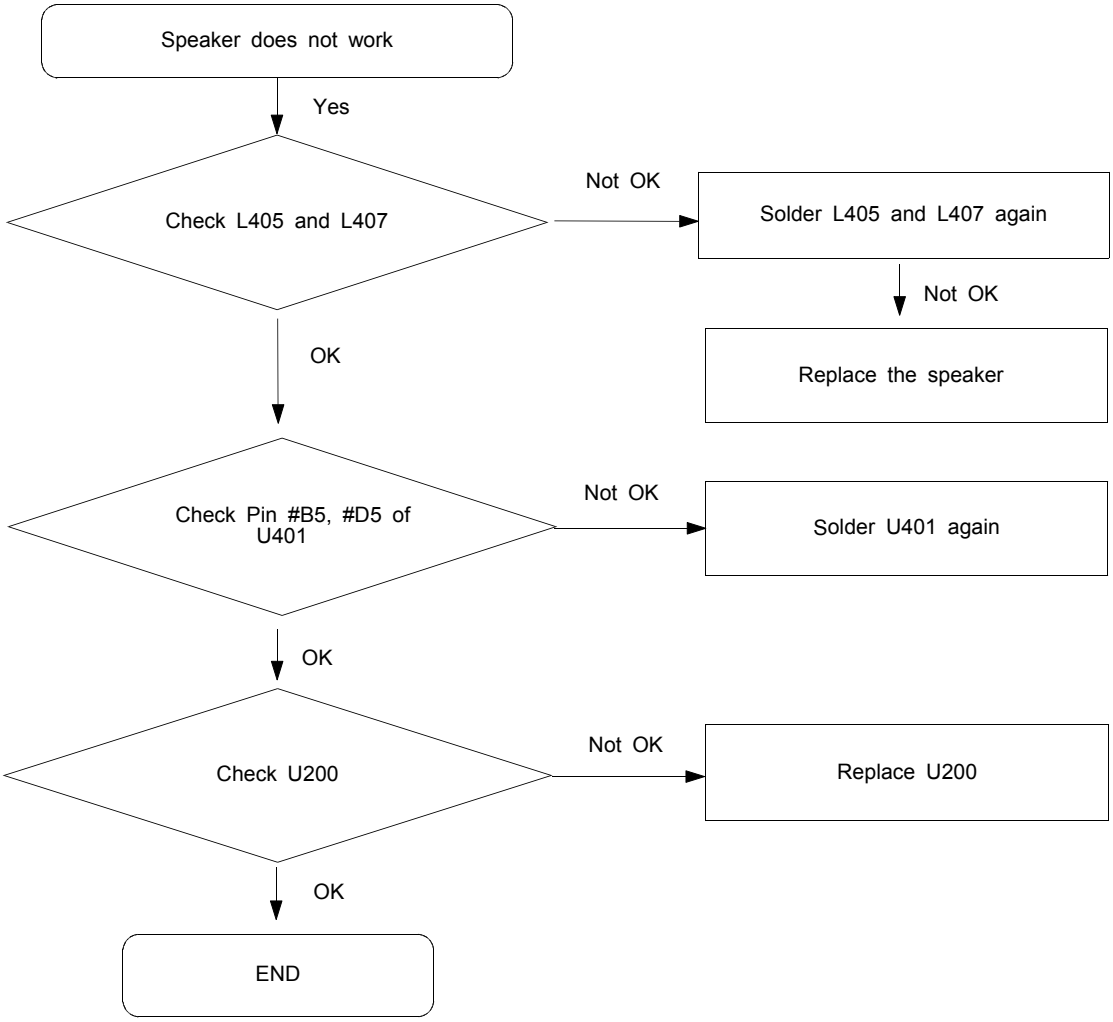


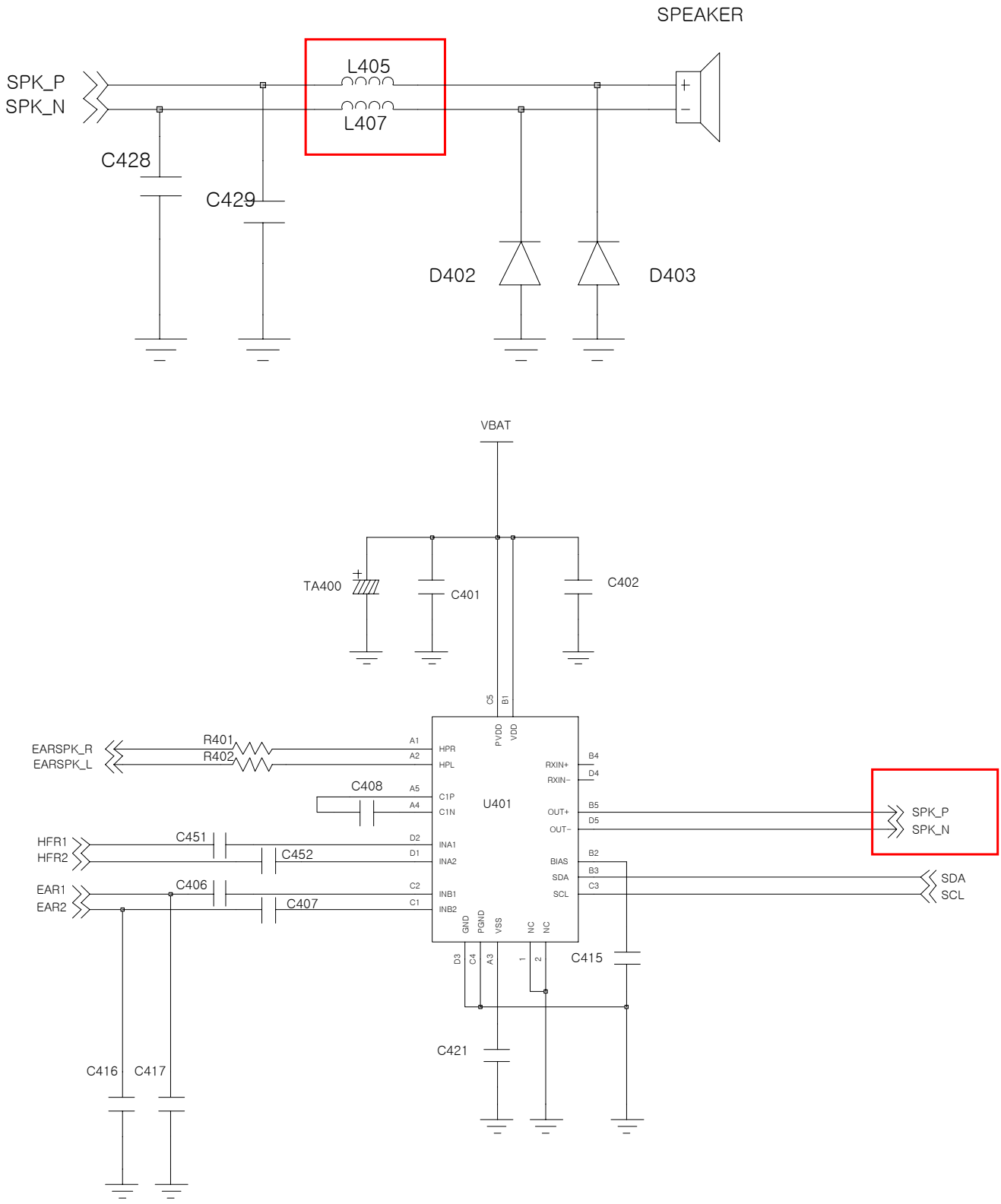
10-7. Charging Part

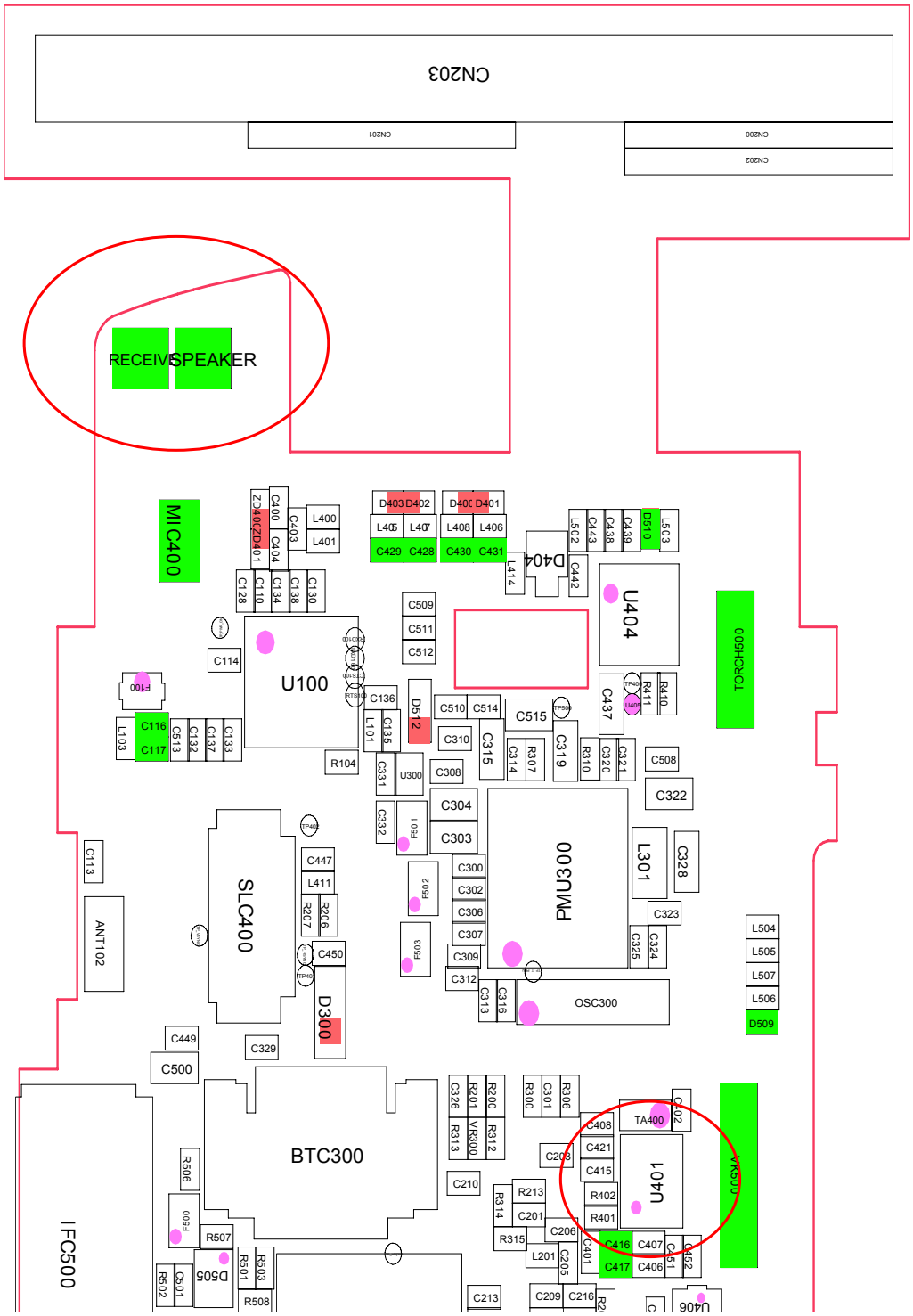




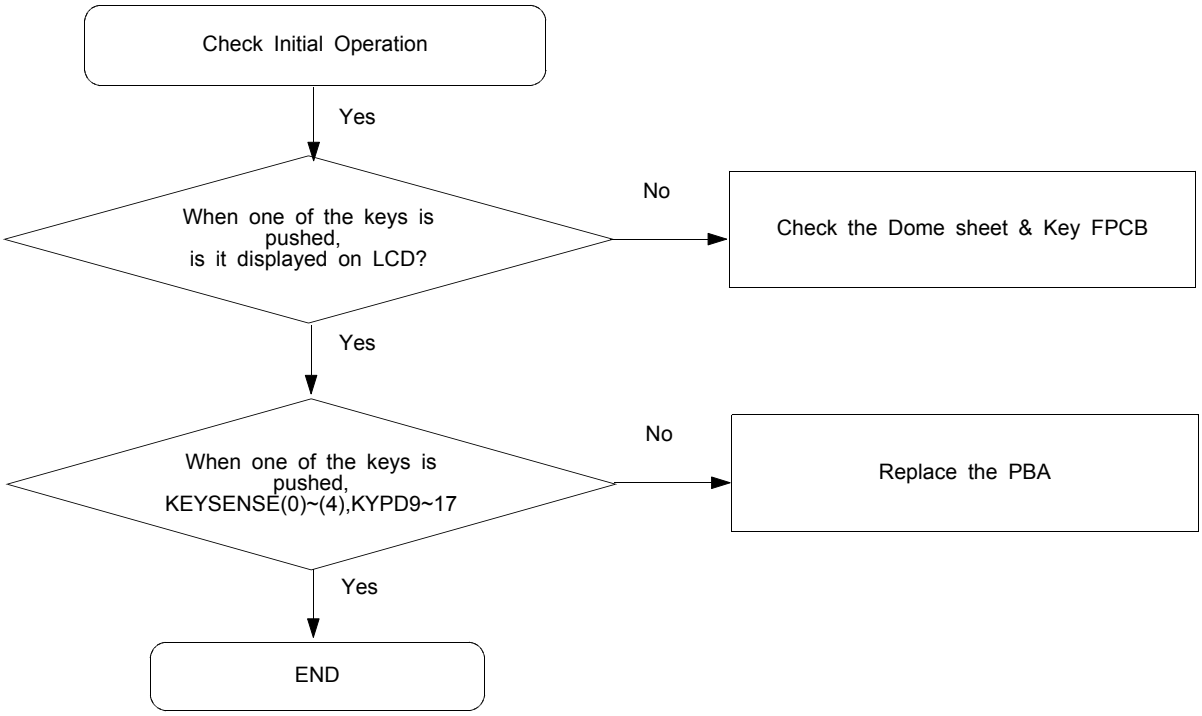
10-8. Speaker Part

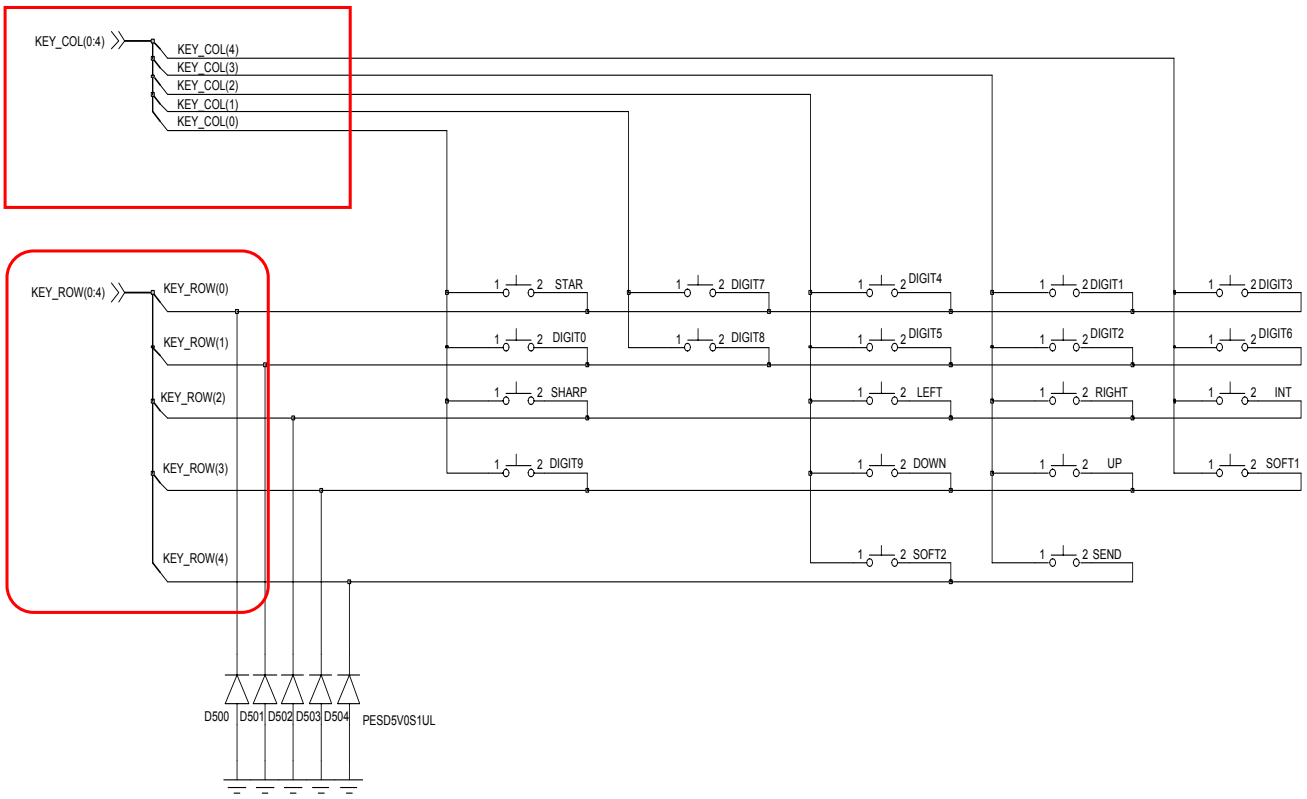




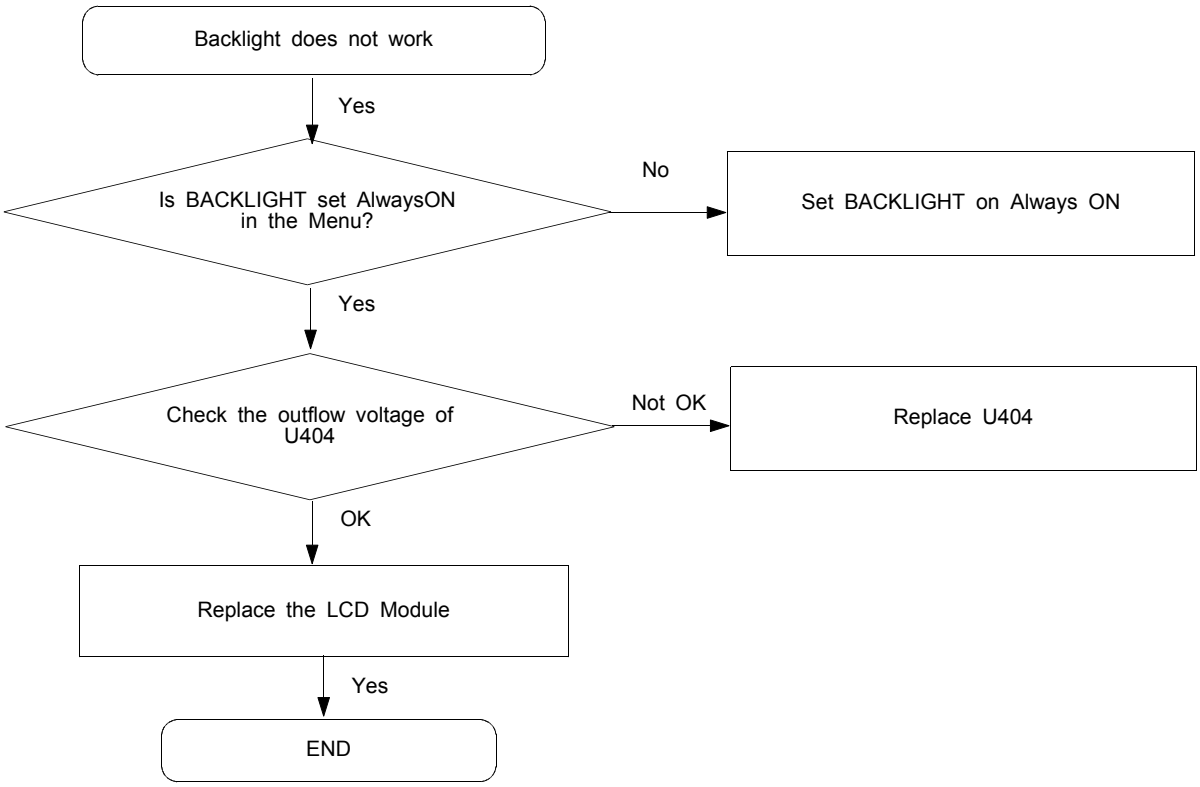


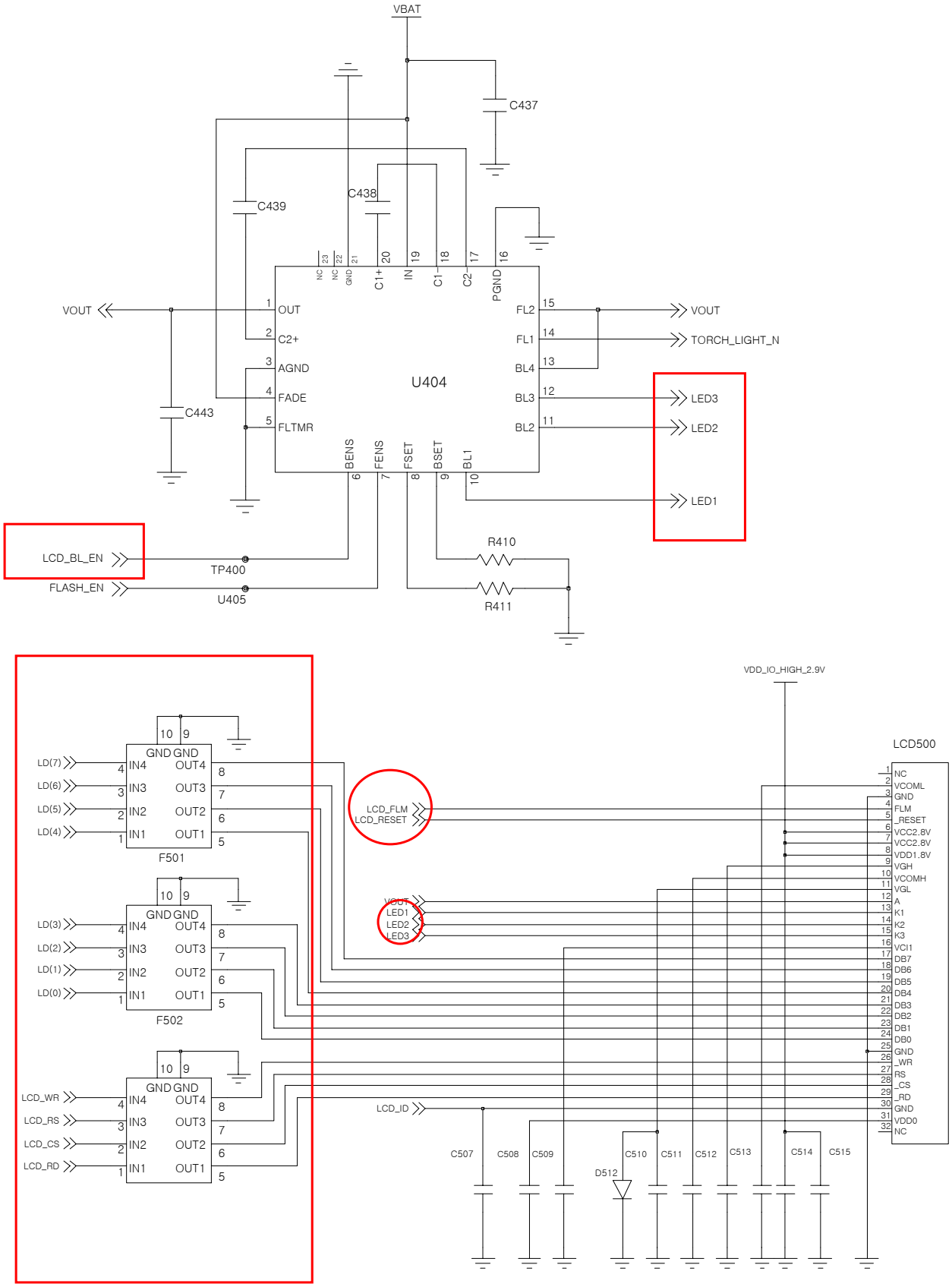
10-9. Key Data Input



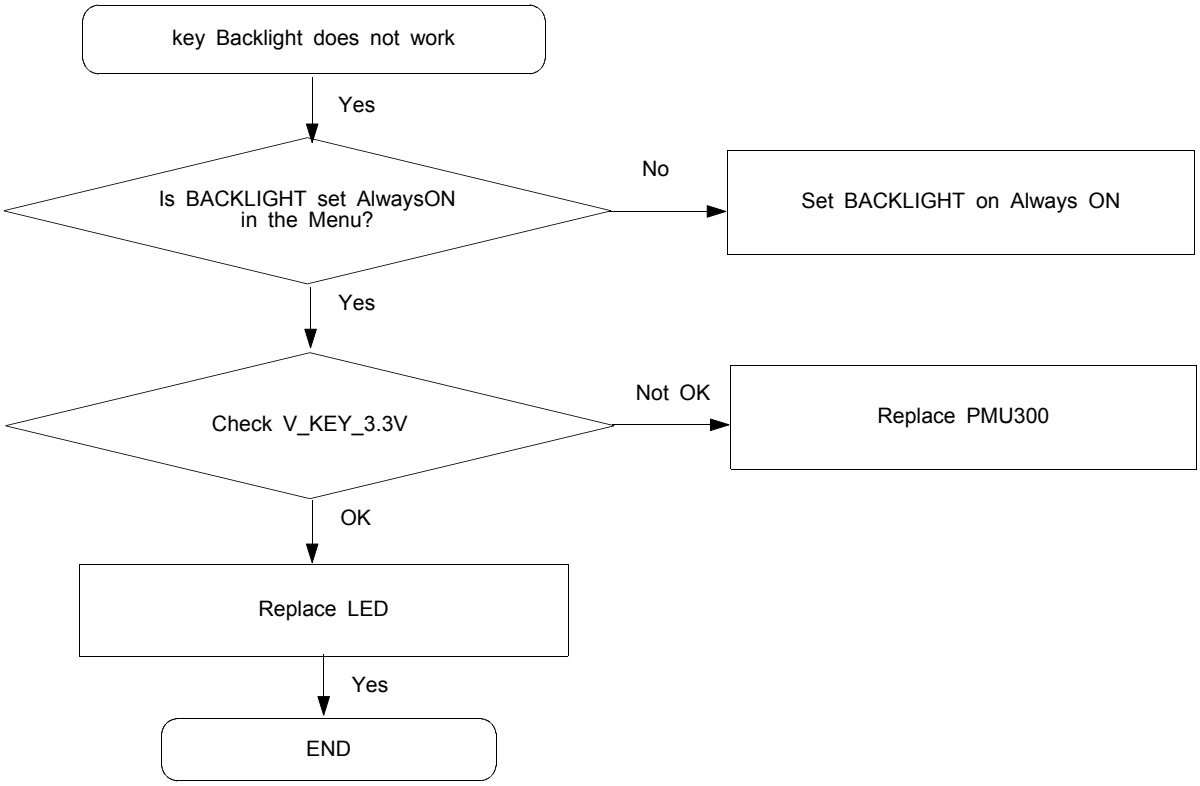


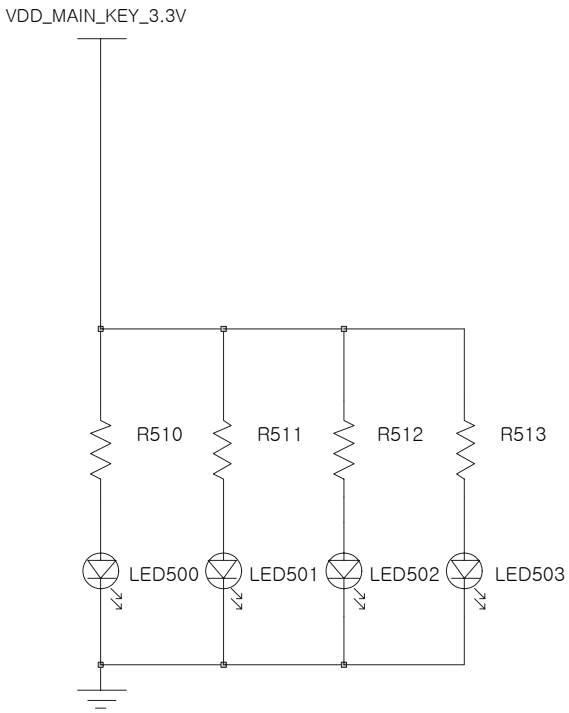
10-10. Back Light (for Color Main LCD)

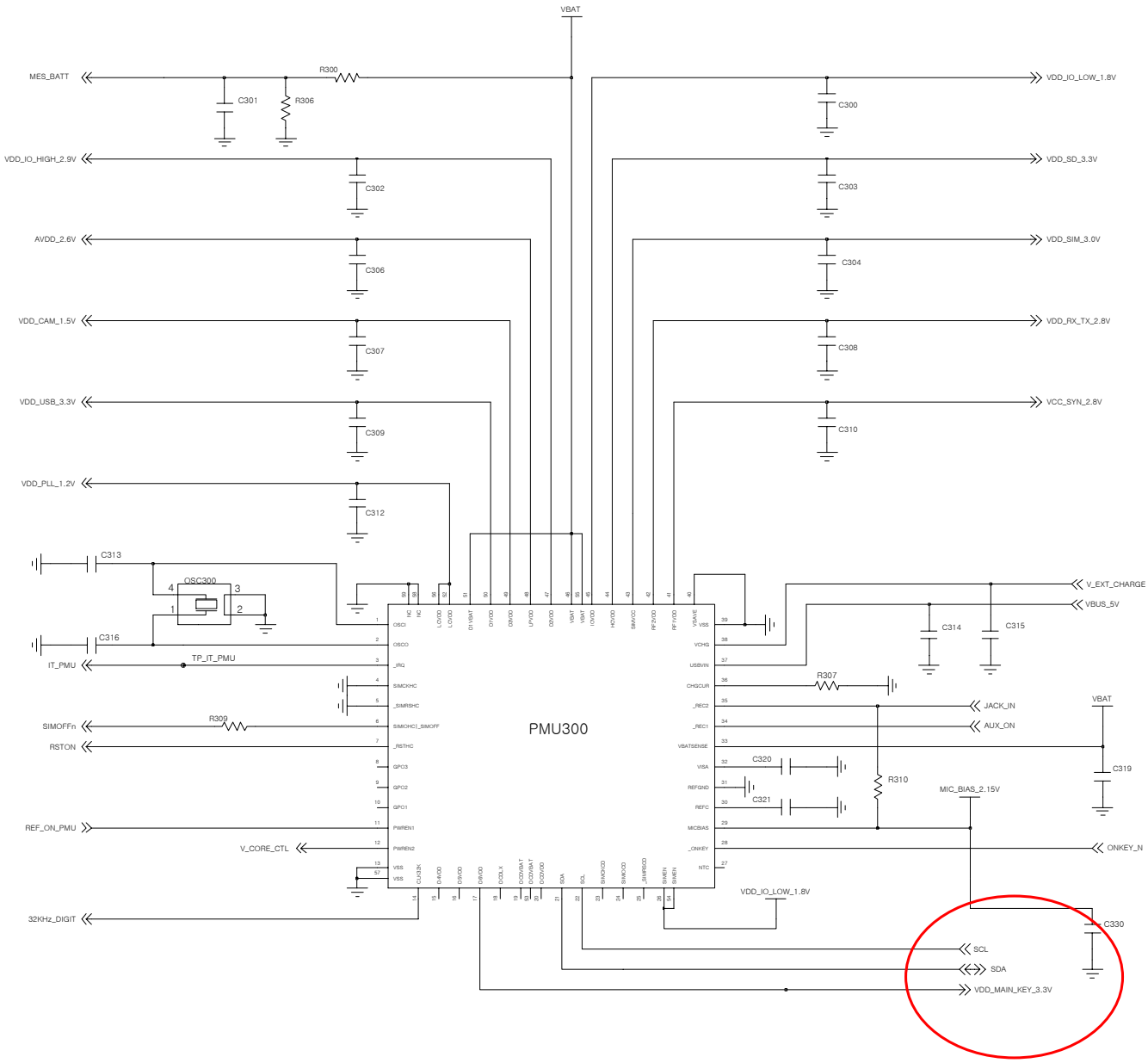


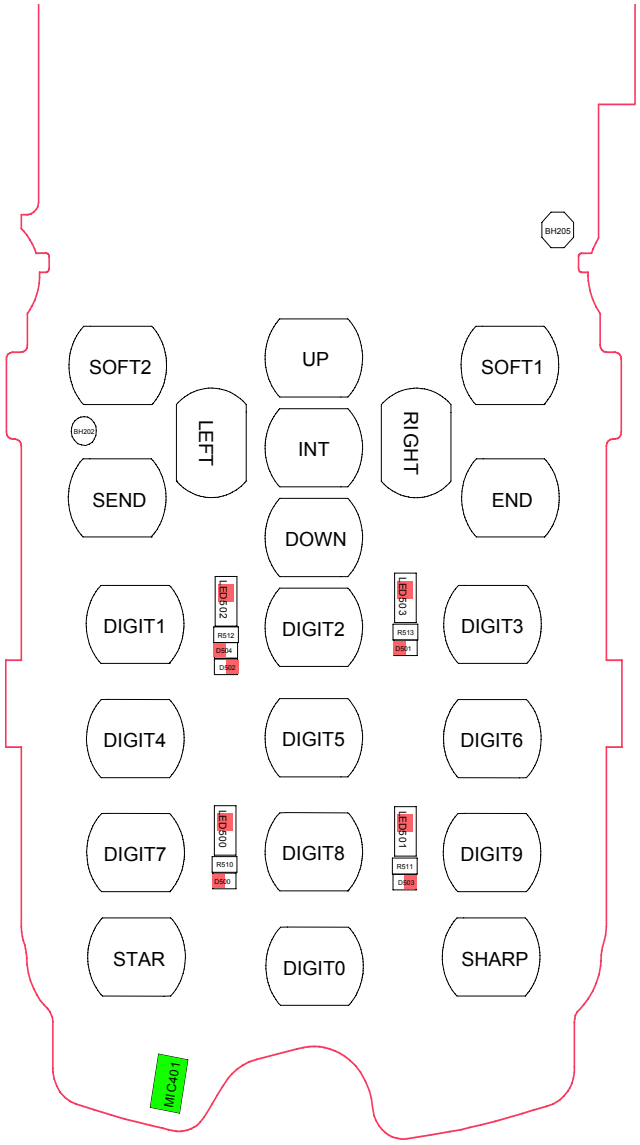


10-11. Key Back Light

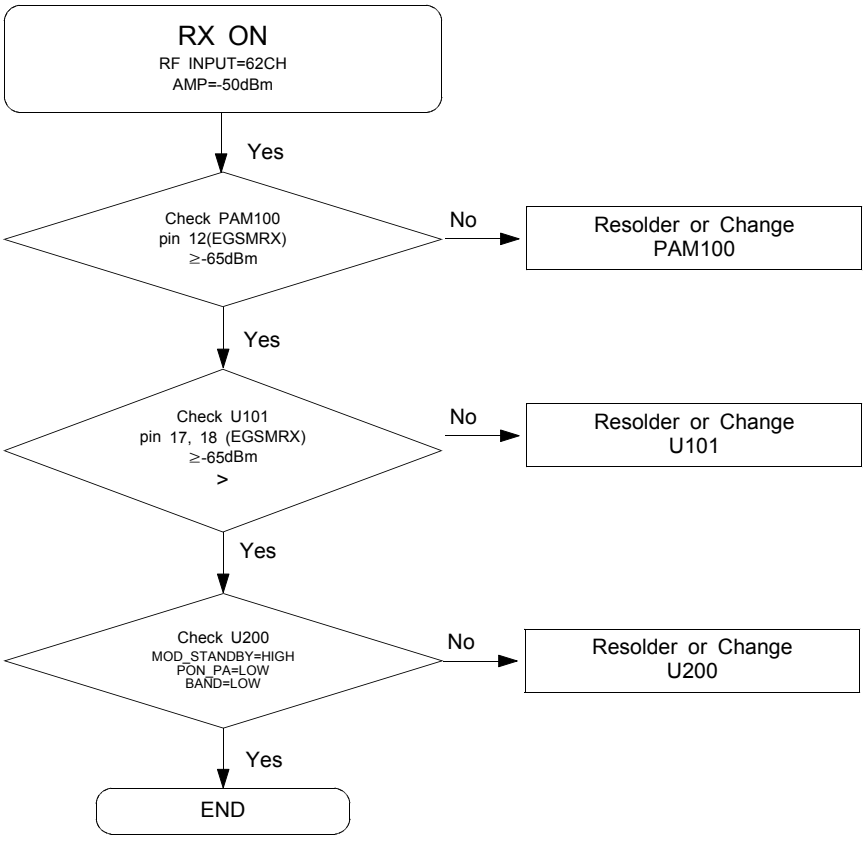


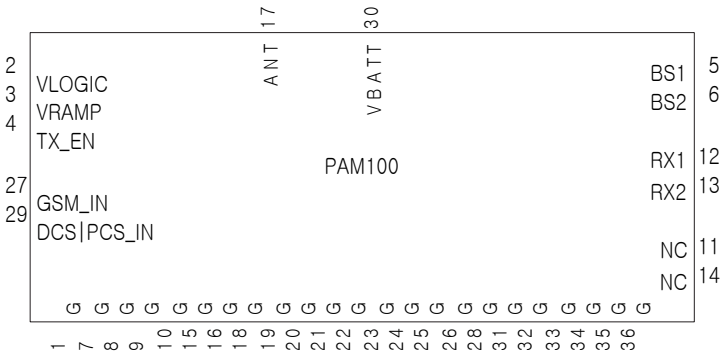


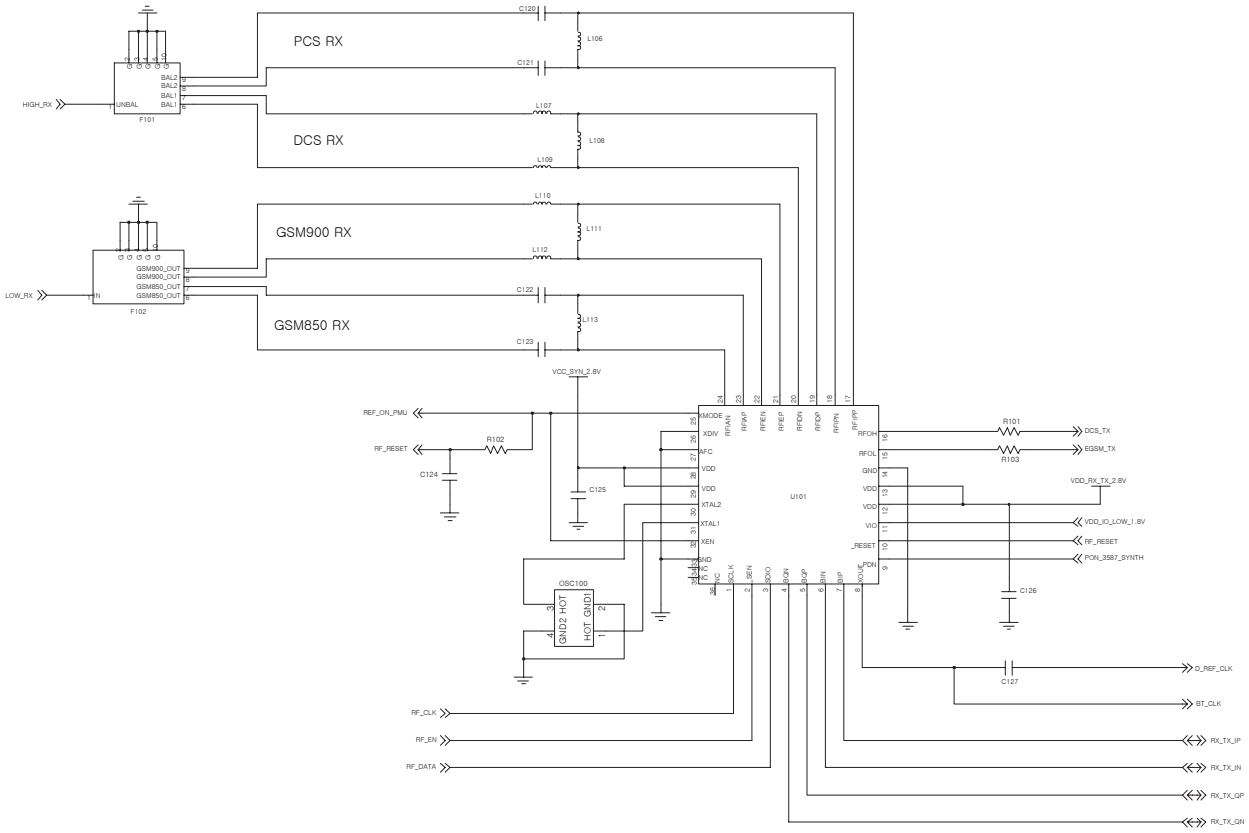


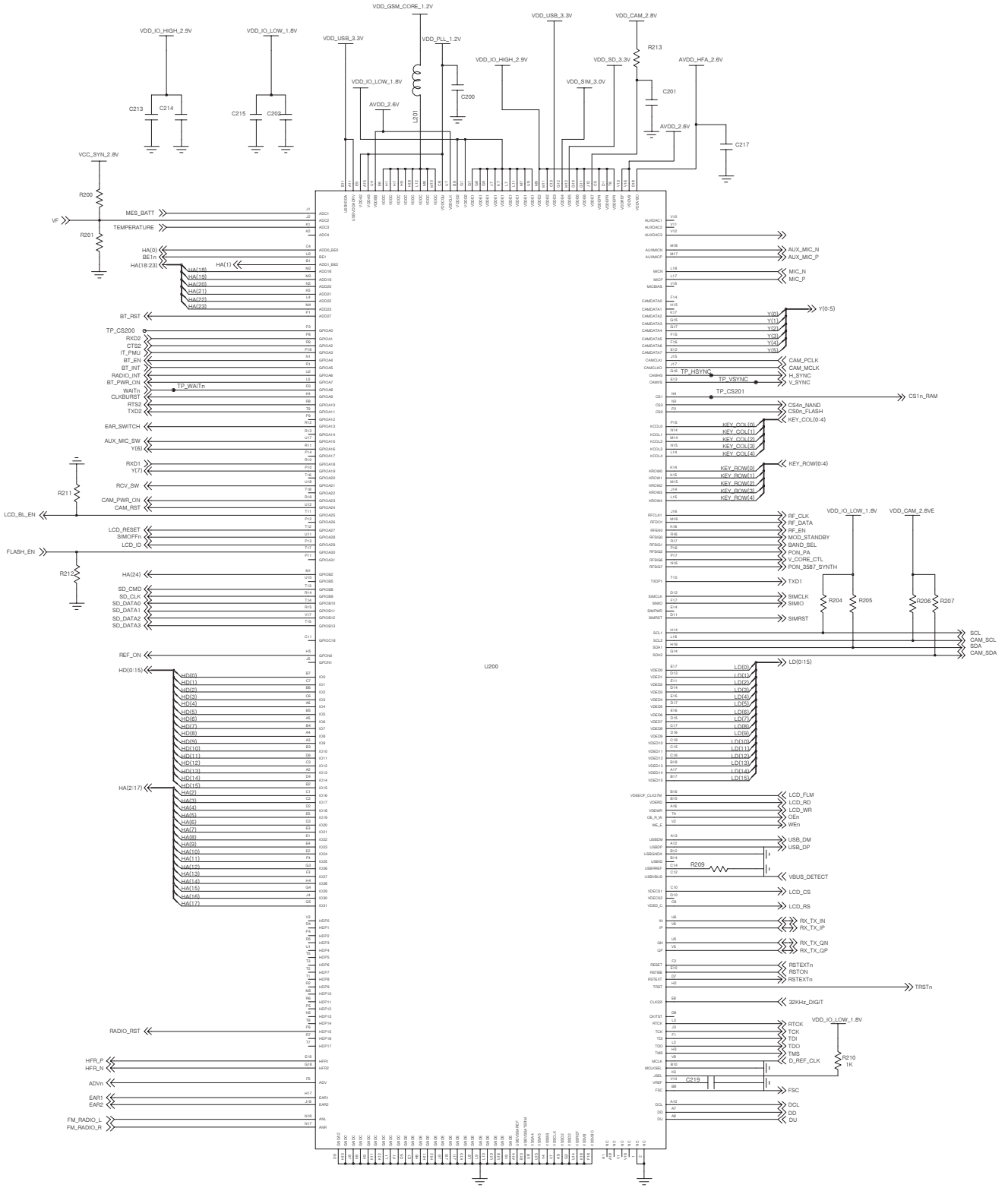


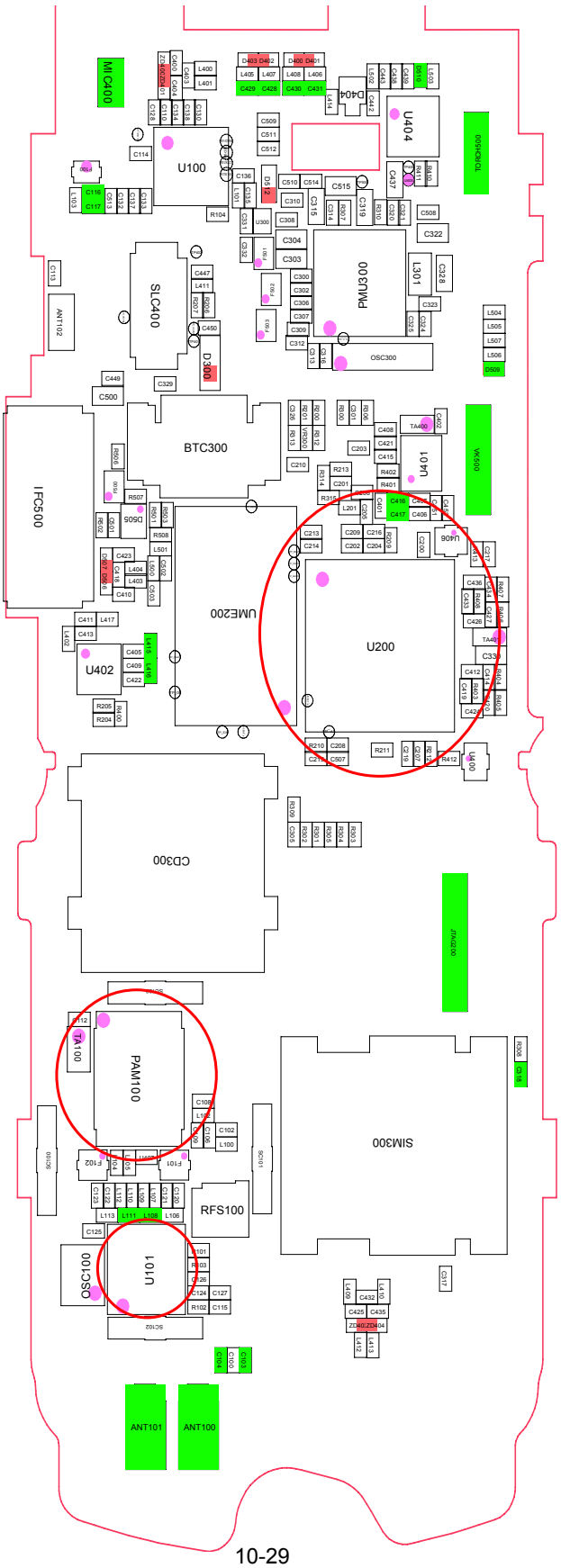
10-12. GSM Receiver



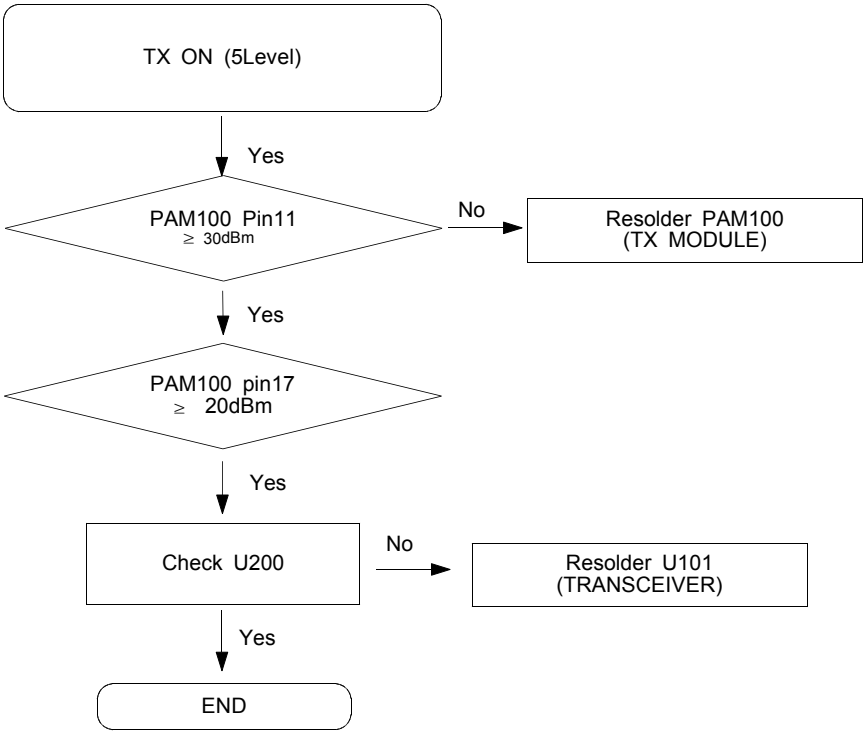


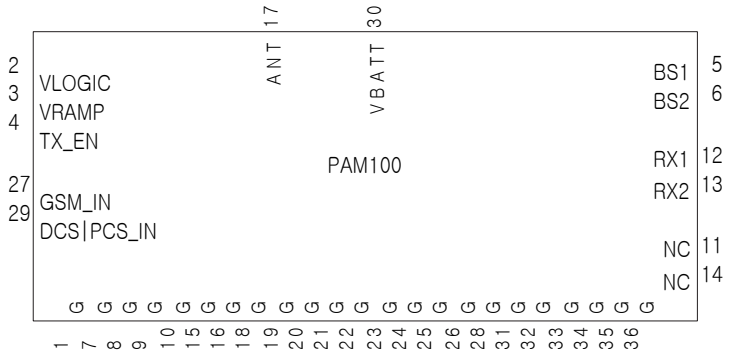


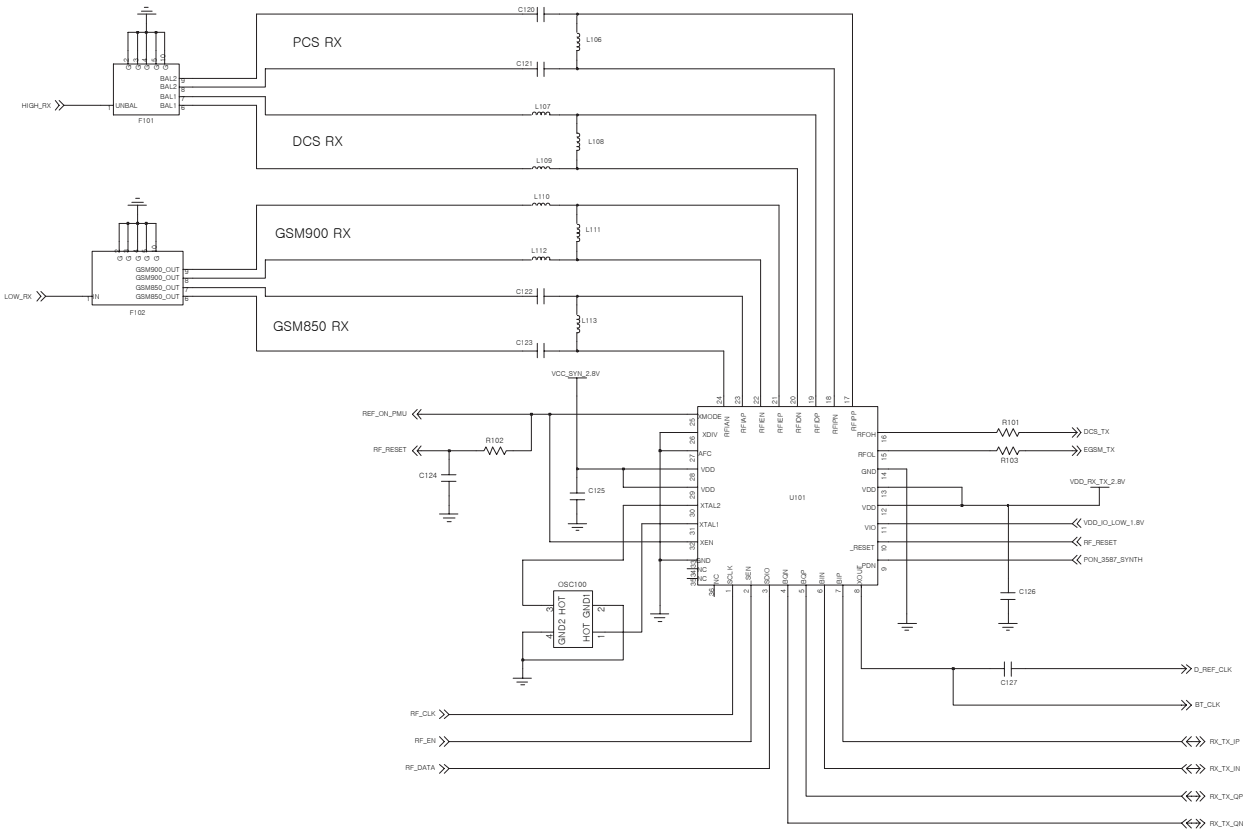


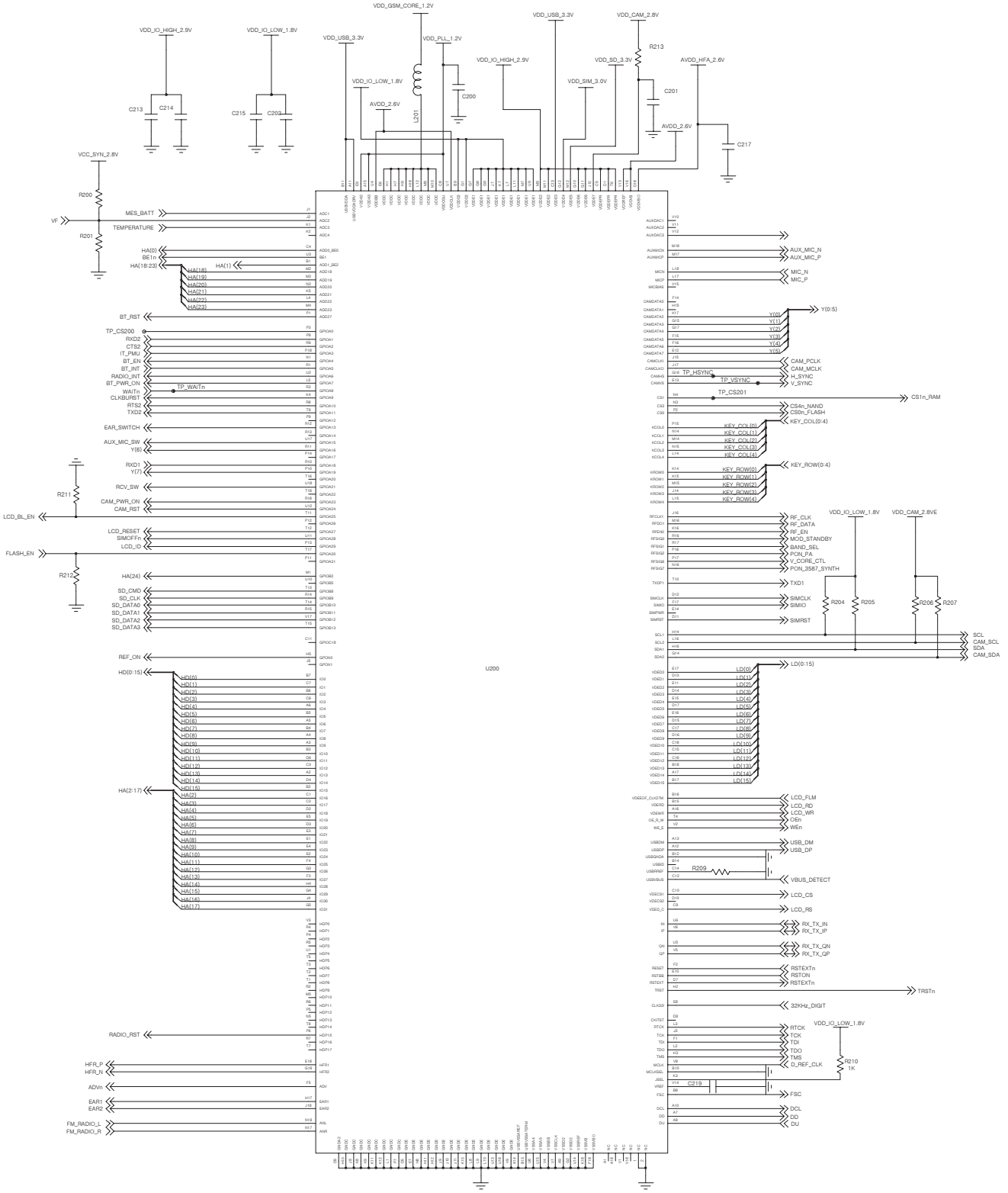


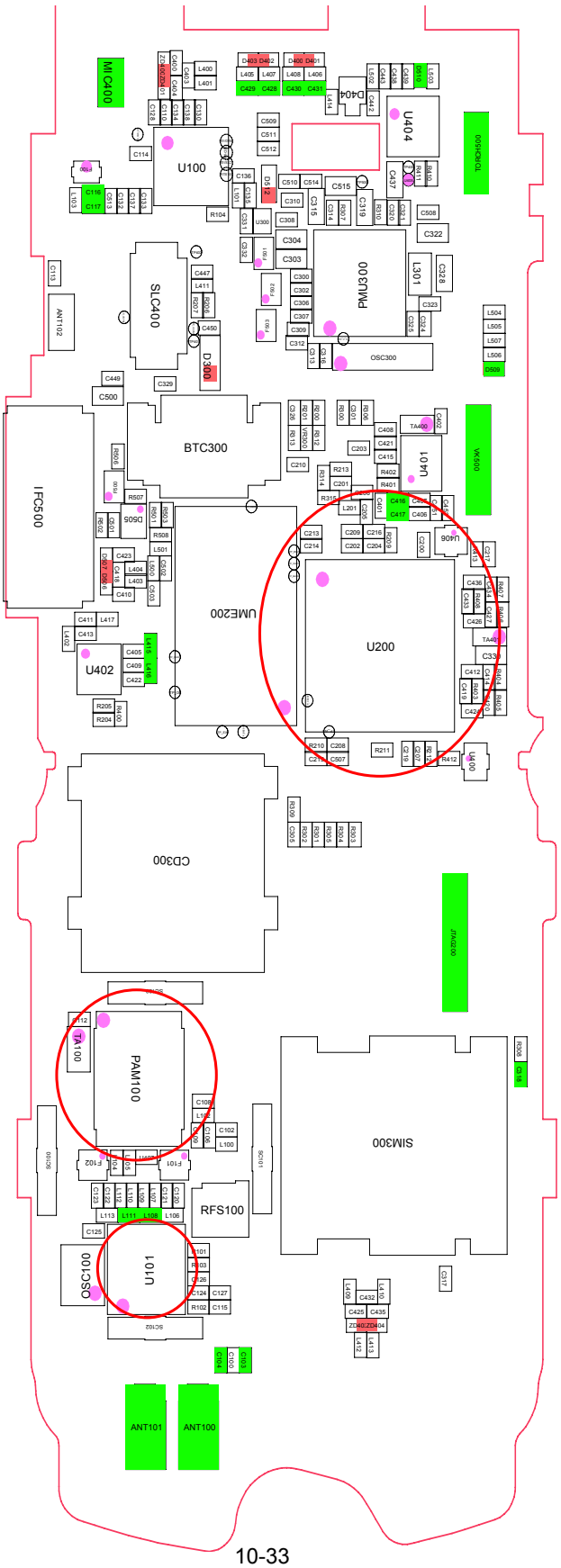
10-13. GSM Transmitter



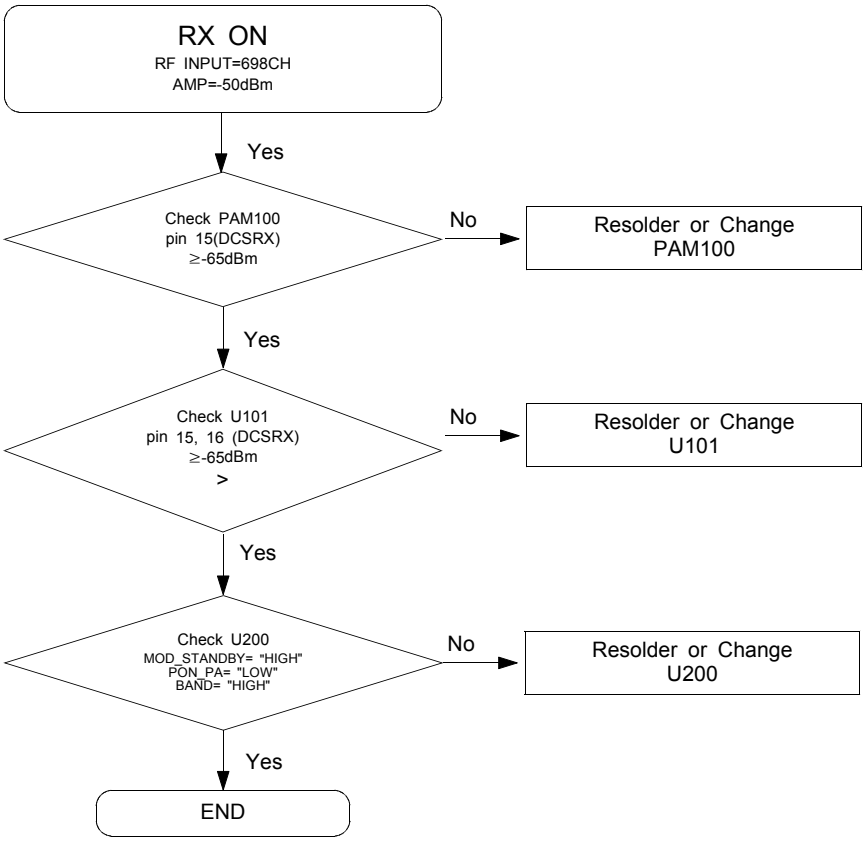


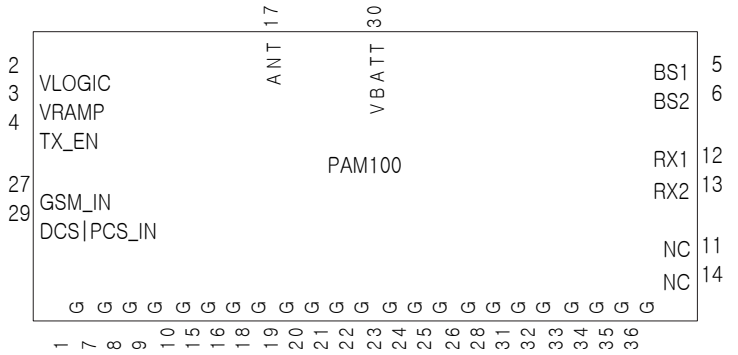


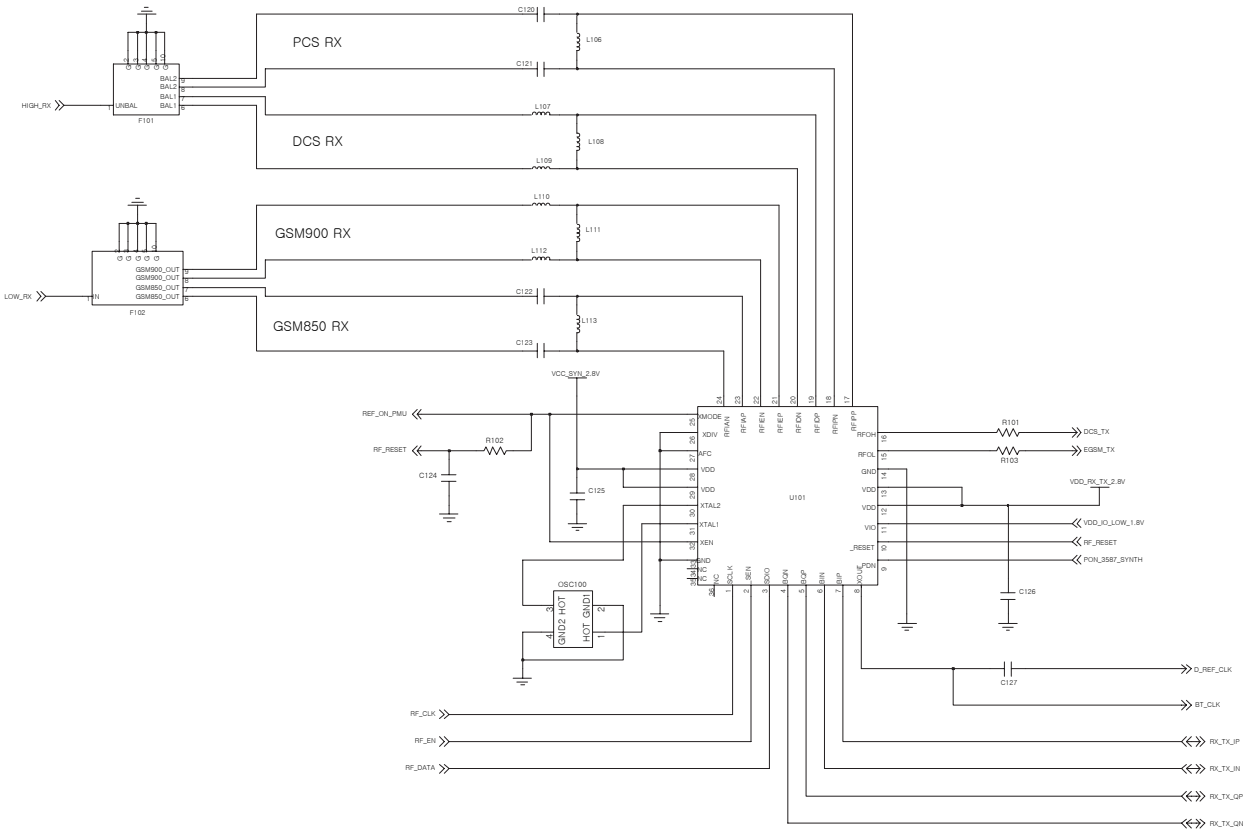


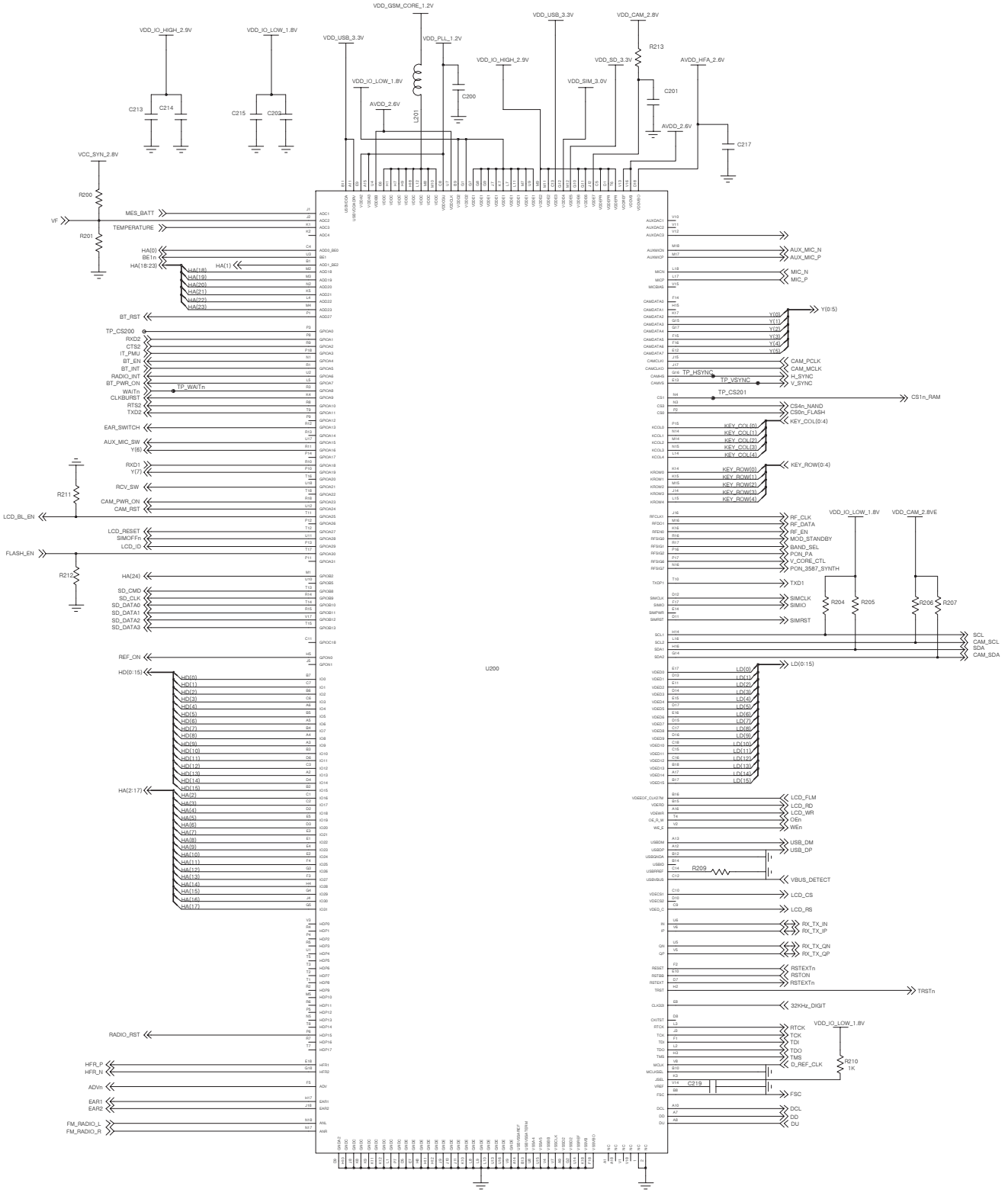


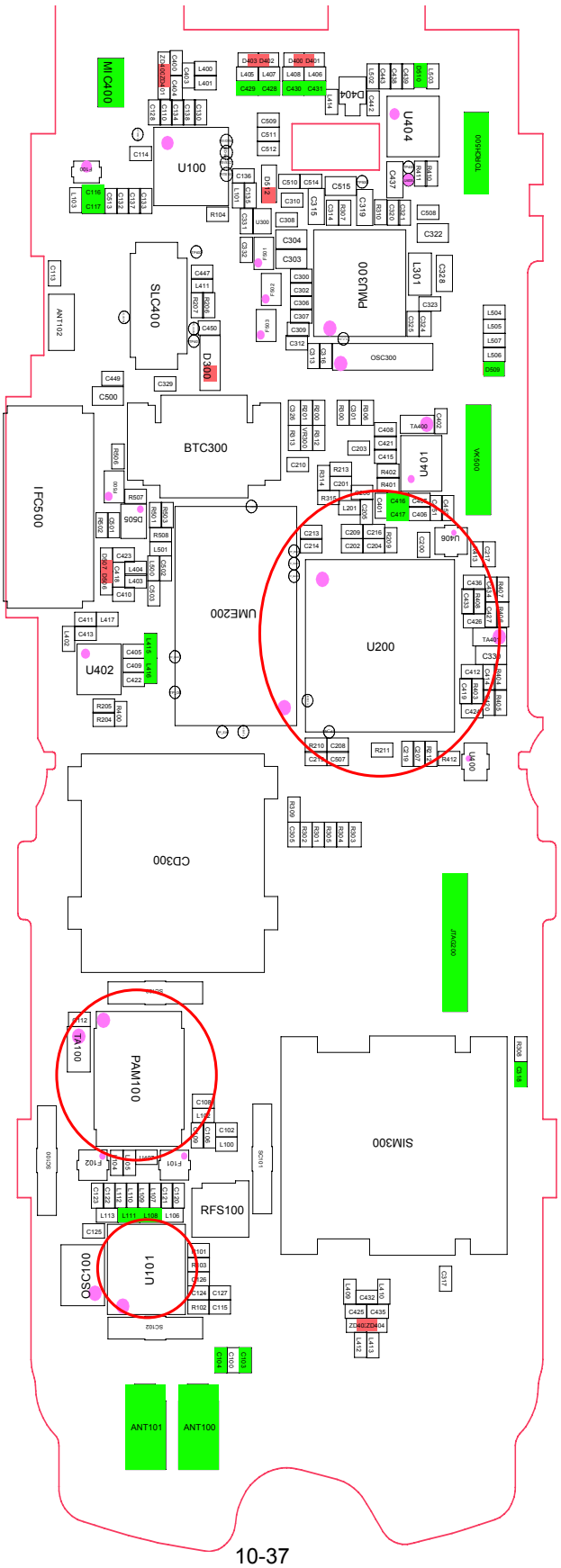
10-14. DCS Receiver



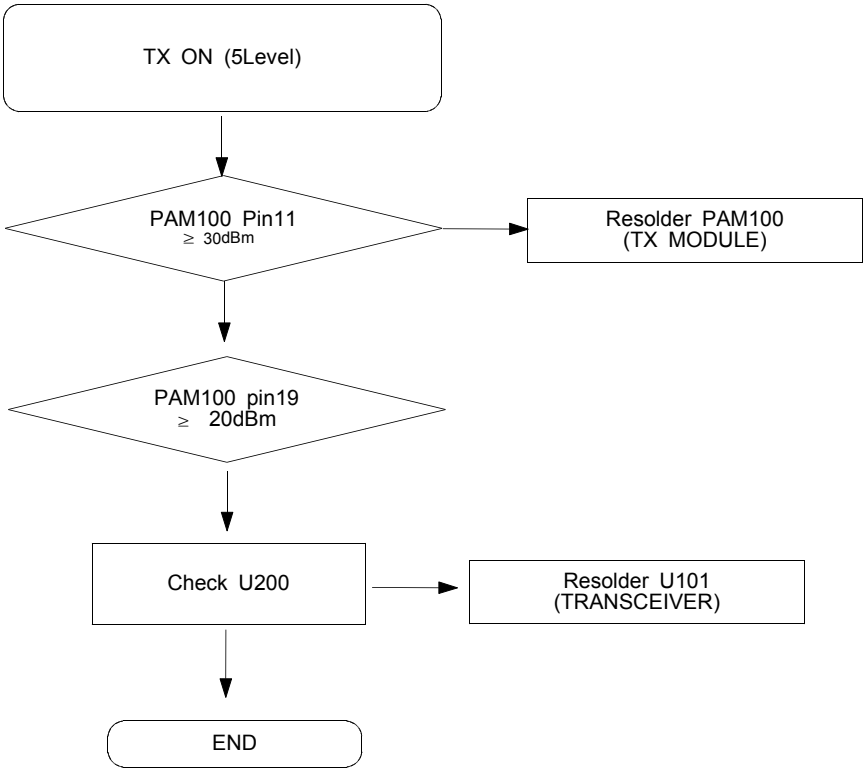


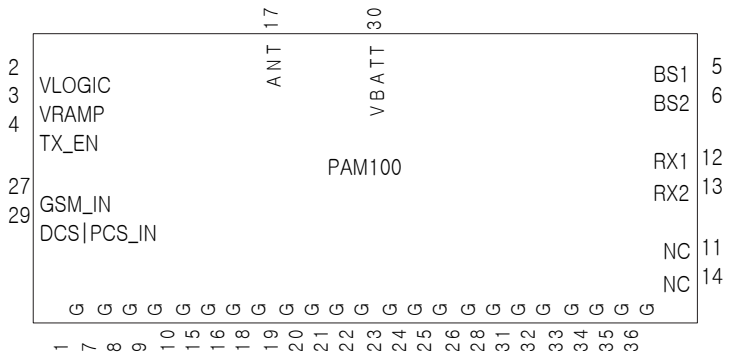


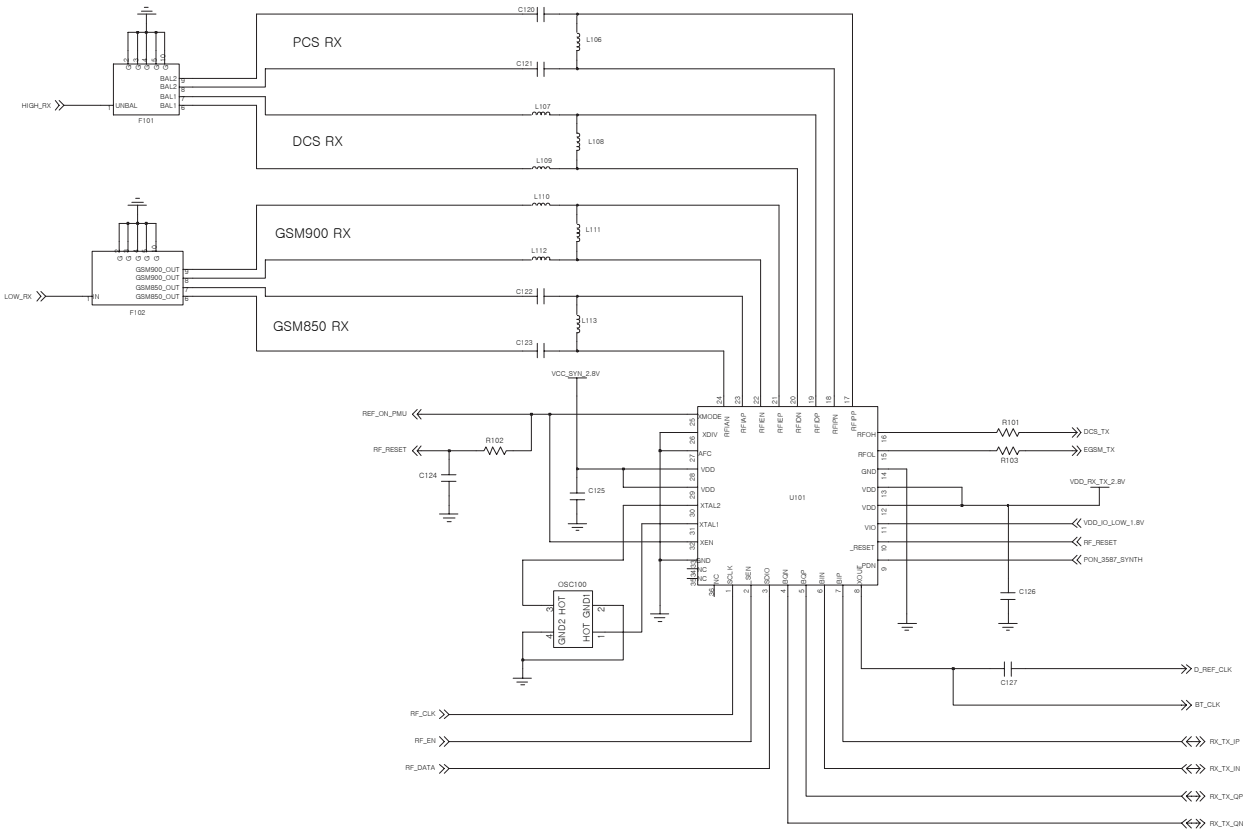


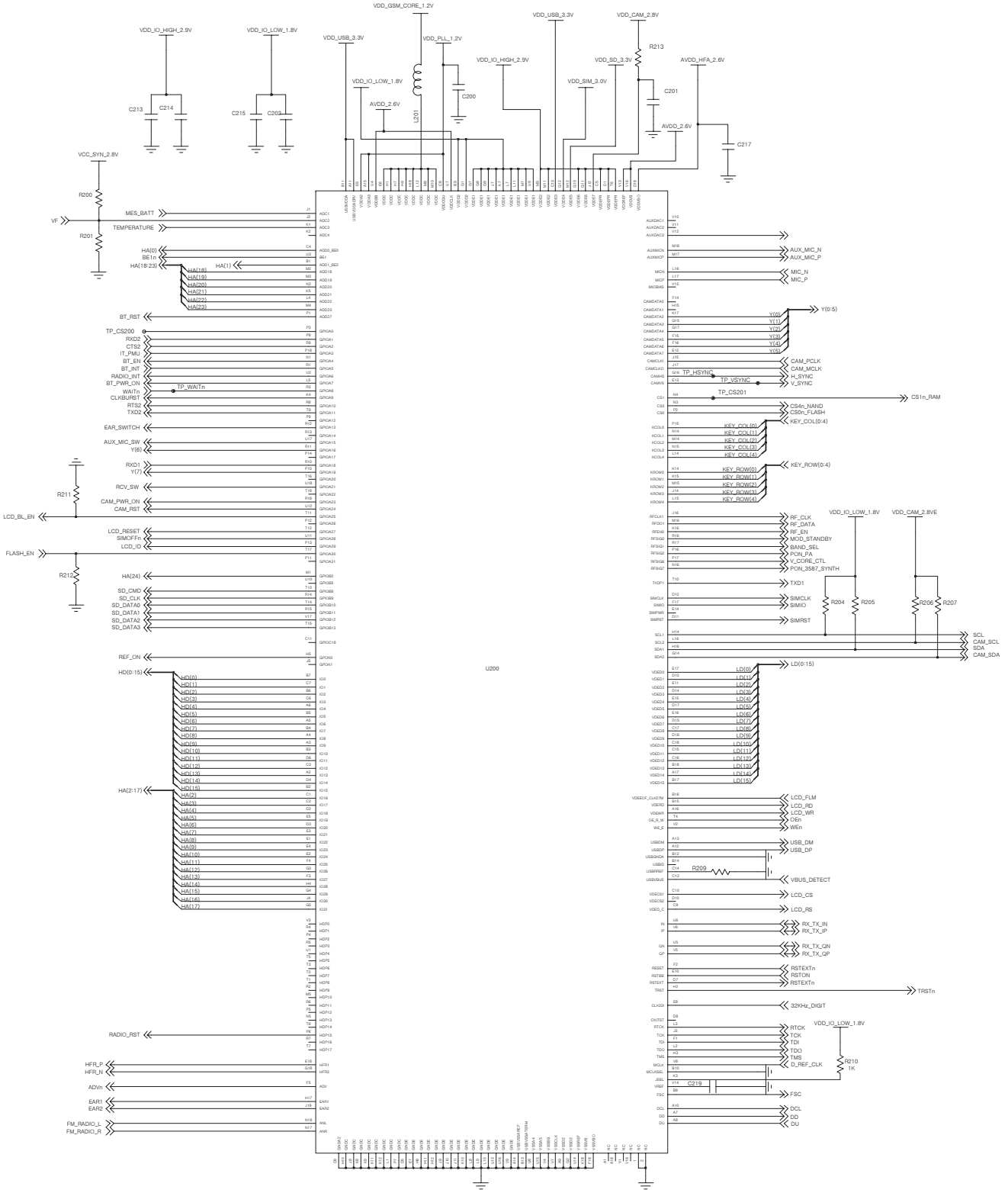


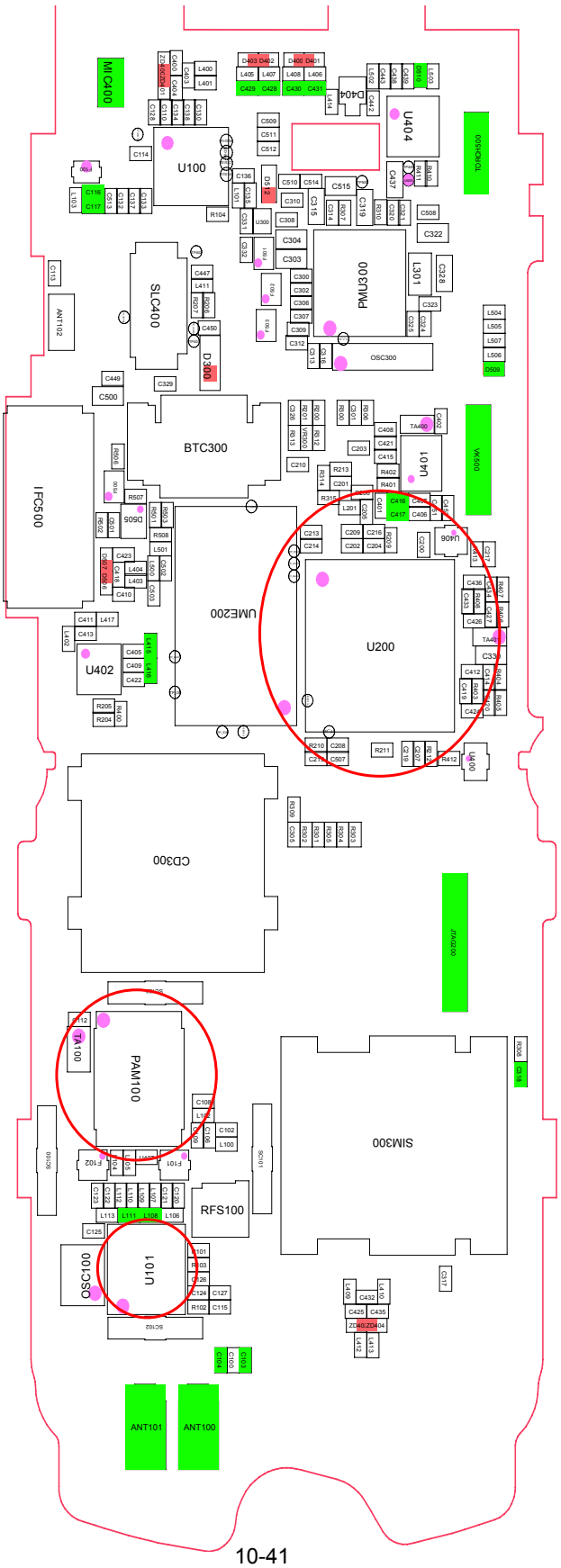
10-15. DCS Transmitter





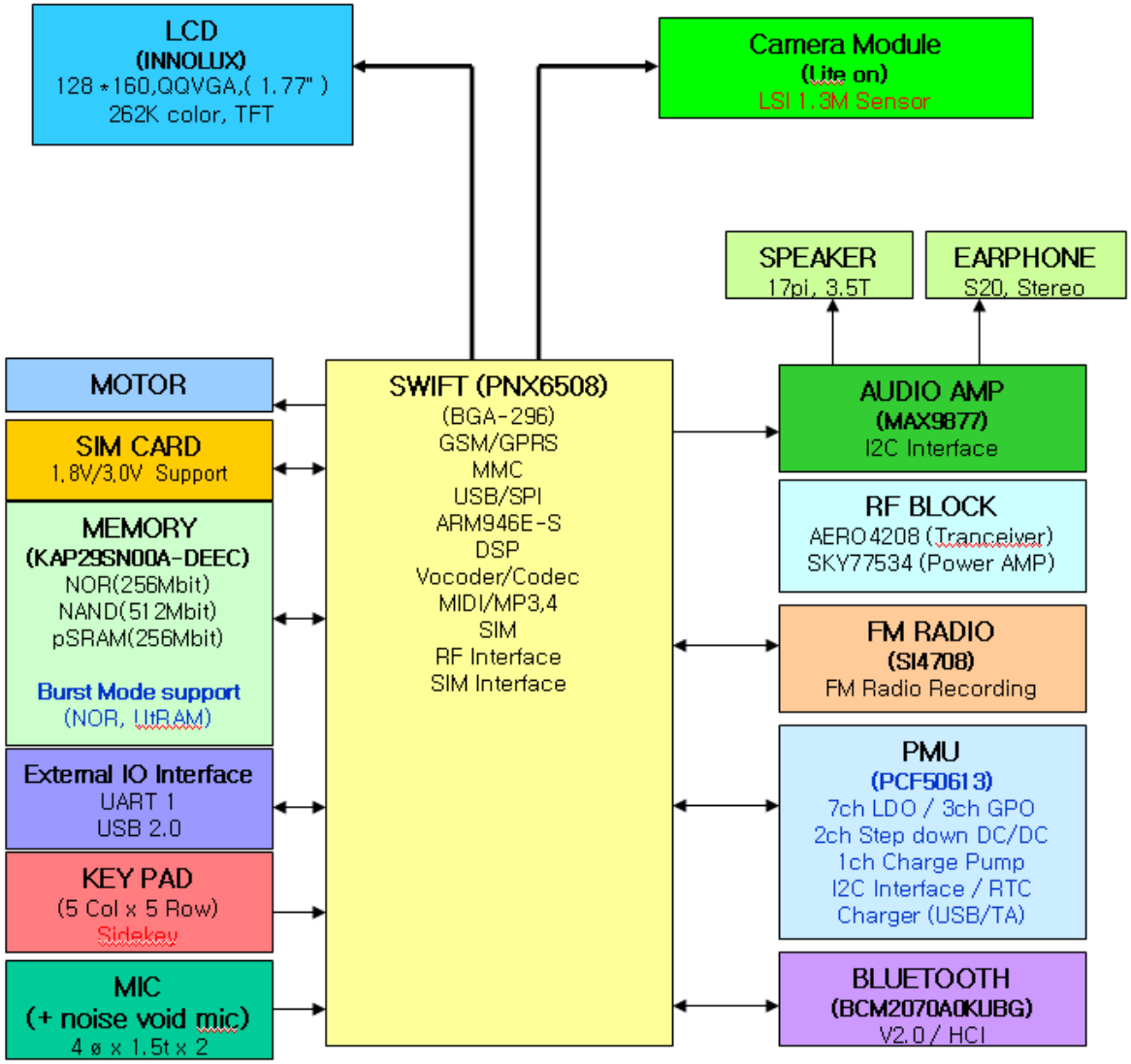




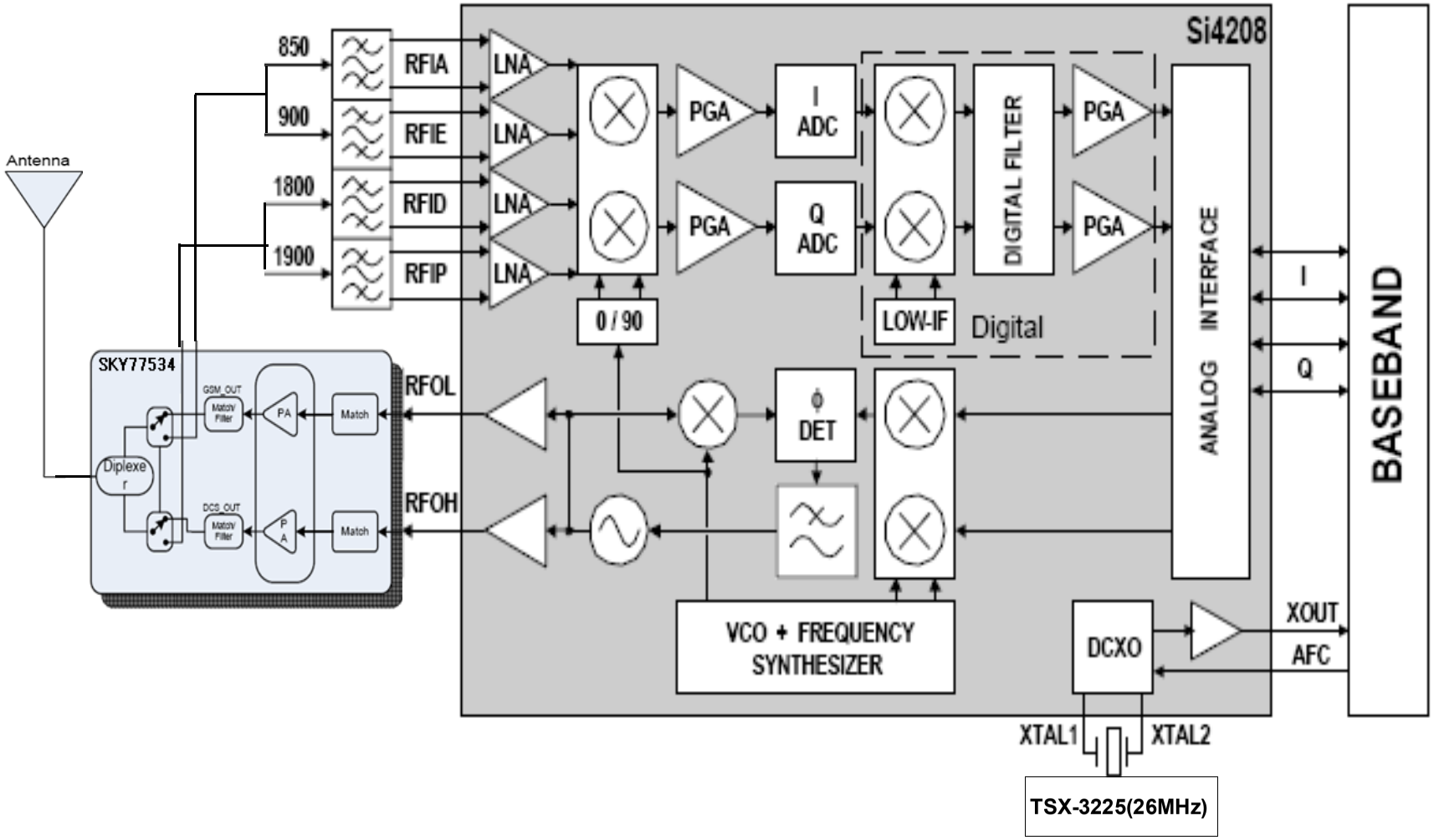


8. Block Diagrams

8-1. Main Block Diagram

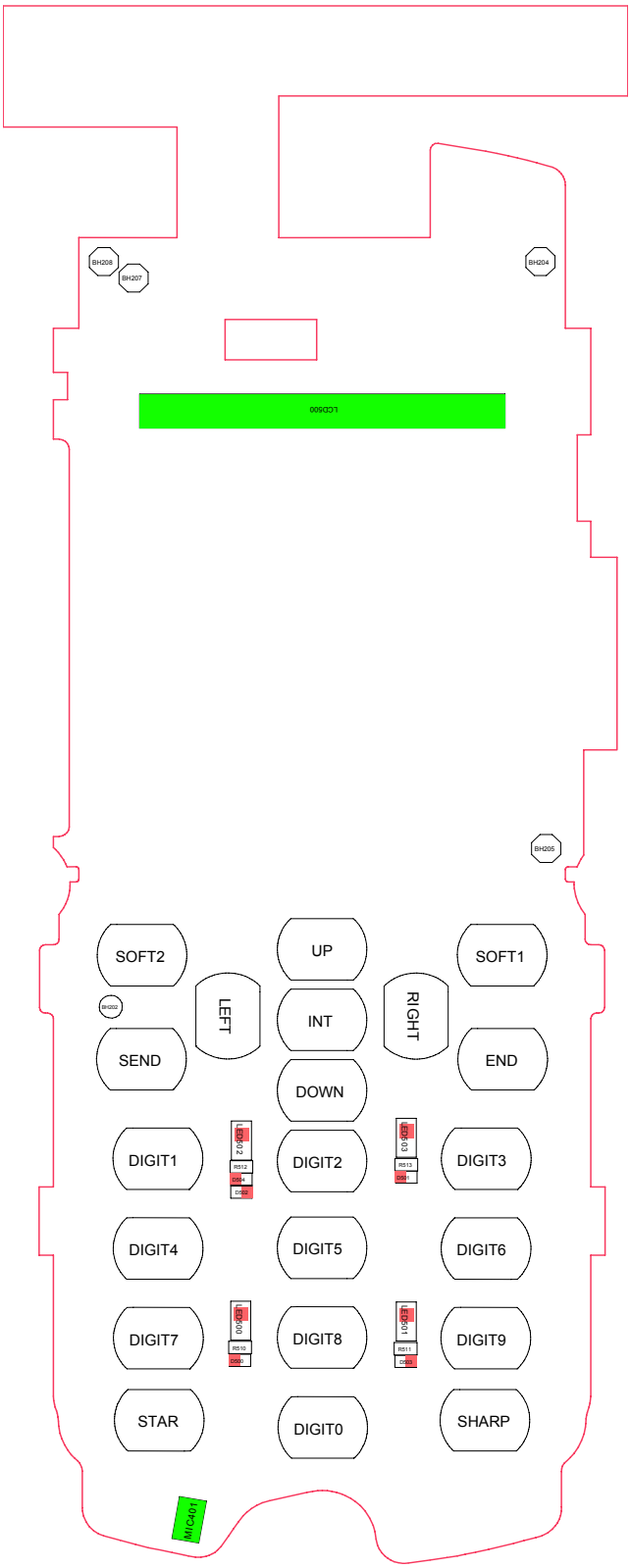


8-2. RF Solution Block Diagram



9. PCB Diagrams

Top



Bottom