

SAMSUNG

GSM TELEPHONE

SGH-F480i

SERVICE *Manual*

GSM TELEPHONE



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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 specipcty 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 manetic 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

	EGSM900	DCS1800	PCS1900	WCDMA 2100
Freq. Band[MHz] Uplink/Downlink	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990	1920~1980 2110~2170
ARFCN range	0~124 & 975~1023	512~885	512~810	UL : 9612~9888 DL : 10562~10838
Tx/Rx spacing	45MHz	95MHz	80MHz	190MHz
Mod. Bit rate/ Bit Period	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	3.84Mcps
Time lot Period/ Frame Period	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	Frame length : 10ms Slot length : 0.667ms
Modulation	0.3GMSK	0.3GMSK	0.3GMSK	QPSK HQPSK
MS Power	33dBm~5dBm	30dBm~0dBm	30dBm~0dBm	24dBm~ -50dBm
Power Class	4 (Max +33dBm)	1 (Max +30dBm)	1 (Max +30dBm)	3 (Max +24dBm)
Sensitivity	-102dBm	-100dBm	-100dBm	-106.7dBm
TDMA Mux	8	8	8	NA
Cell Radius	35Km	2Km	2Km	2Km

2-2. GSM Tx Power Class

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

3. Product Function

Main Function

- HSDPA 7.2Mbps
- Touch Screen
- Bluetooth 2.1
- FM radio
- External Memory: micro SD
- High speed USB
- GPRS/EDGE : class 12
- BT : Braodcom BCM2070
- Battery: 1000mAh
- Weight: 85.4g (Include Battery : 106g)
- Memory: 3Gb NAND + 1Gb SDRAM
- Camera: 5Mega (LSI)
- LCD : 2.8" QVGA TFT
- Size: 98.4x54.8x11.9mm
- Band: GSM900/1800/1900, W2100
- BB: Broadcom BCM2153, BCM59035
- RF: STN AERO4228

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

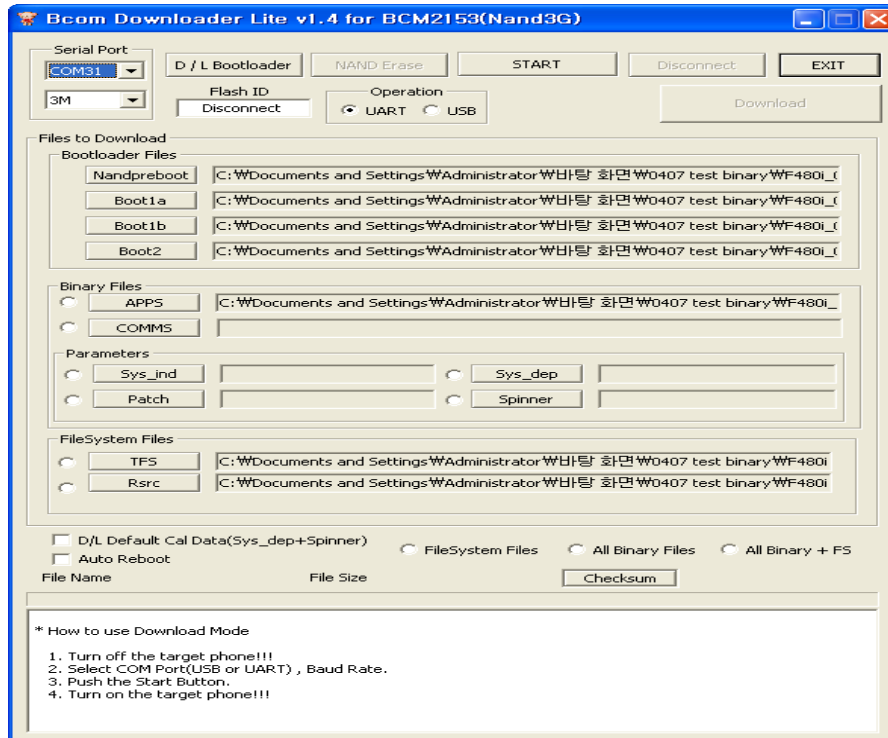
- 2 binary files for downloading F480i.
 - F480IXXI○○_BIN folder includes 2 folders
 - APPS : boot1a, boot1b, boot2, FUSE_APPS, nandpreboot_le
 - COMMS : COMMS, LE_HEDGE_NVRAM6_RF_SS_F480i_01, patch_dsp, sysparm_dep, sysparm_ind
 - F480IXX○○_TFS : F480IXX○○, F480IXX○○.rc1, F480IXX○○.tfs

4-2-2. Pre-requisite for Downloading

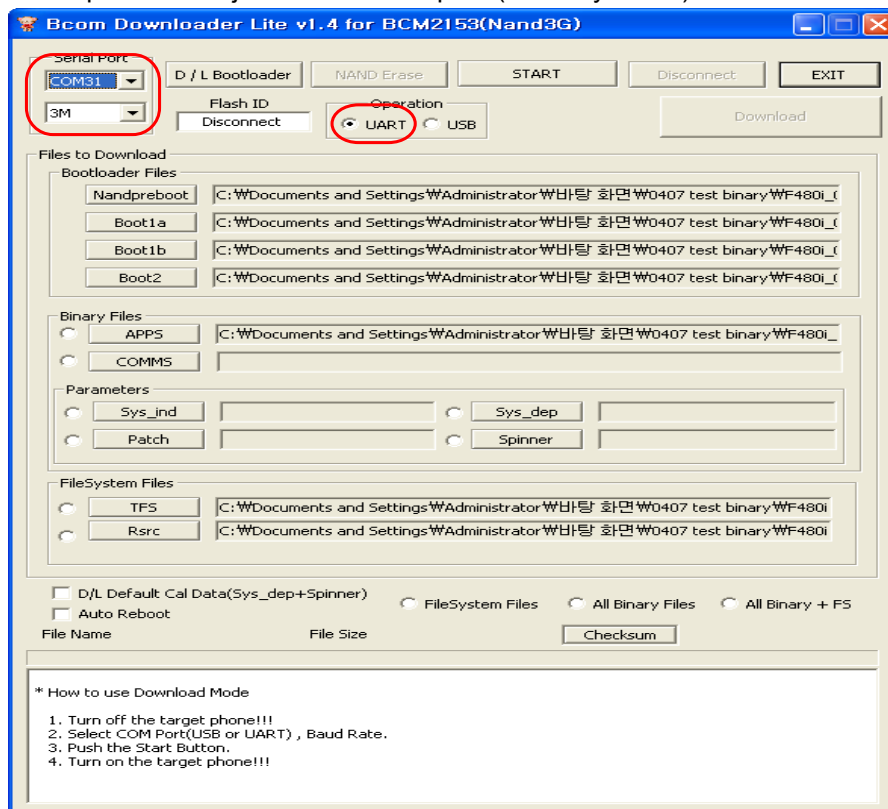
- Downloader Program([BcomDownloader Lite v1.4 for BCM2153\(Nand3G\)](#))
- SGH-F480i Mobile Phone
- JIG BOX
- Test Cable
- Serial Cable
- Binary files

4-2-3. S/W Downloader Program

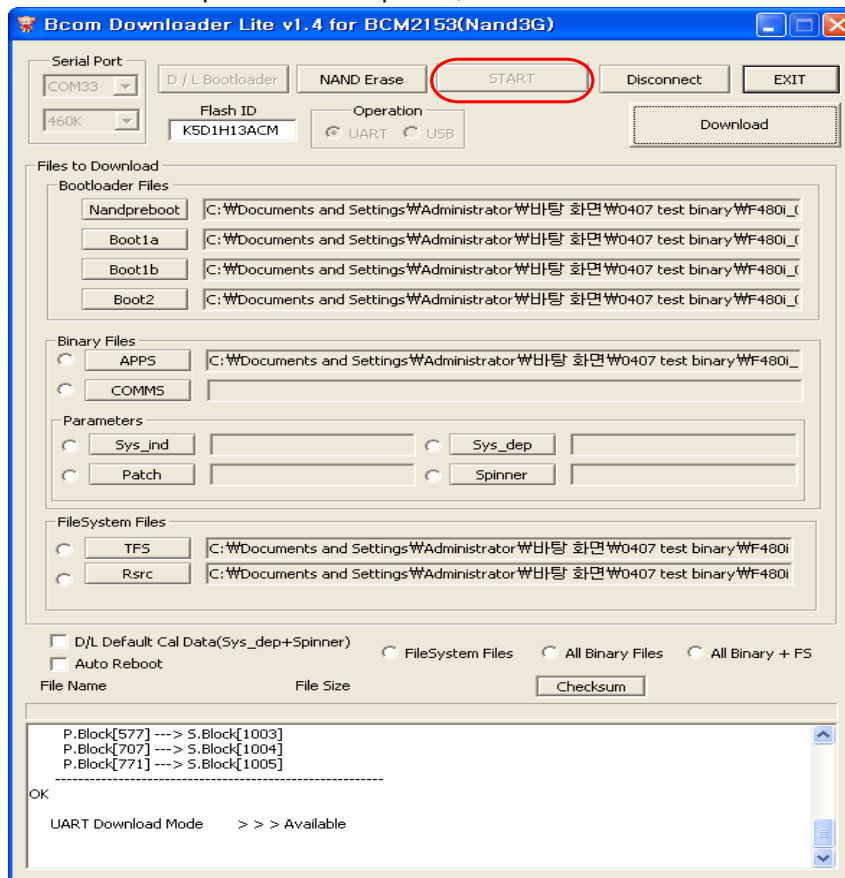
1. Load the binary download program by executing the " **BcomDownloader Lite v1.4 for BCM2153(Nand3G)** " IF you change the bootloader, go to number 2. Normally go to number 6



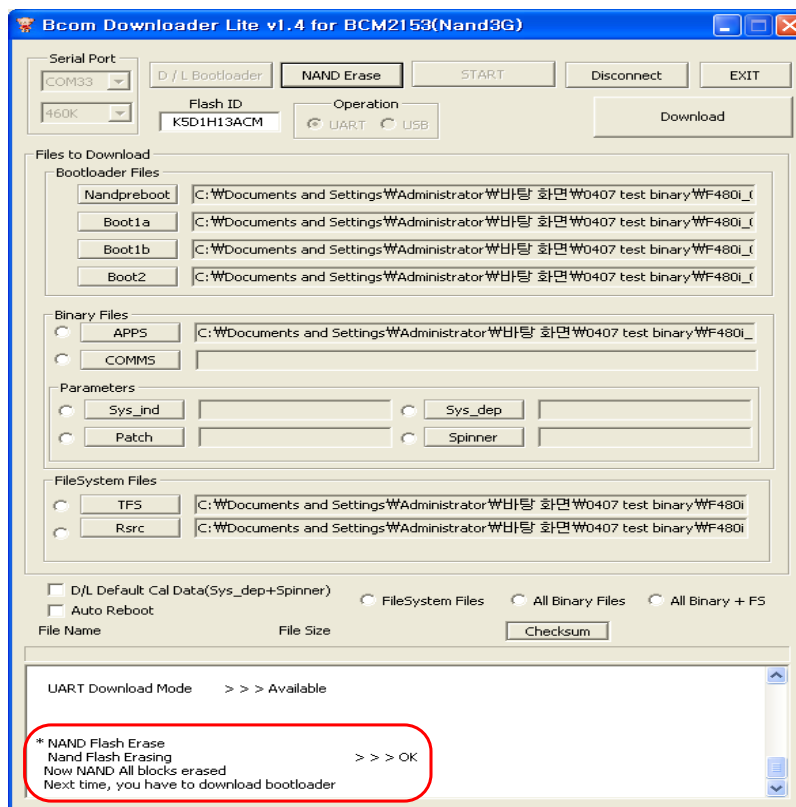
2. Change the UART port and adjust the UART speed(normally 921K)



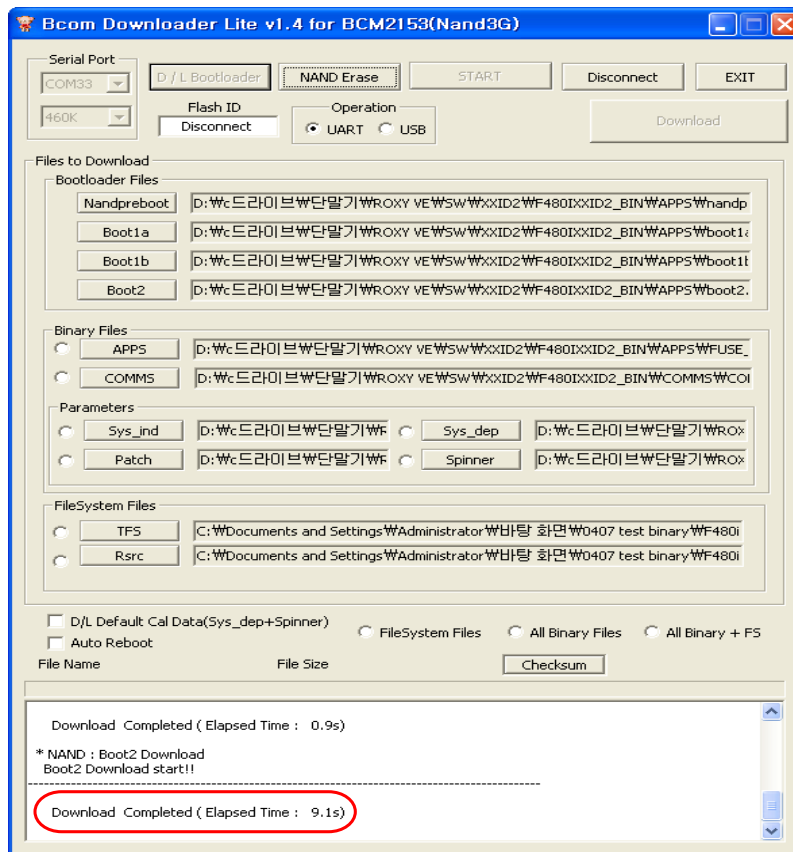
3. Check the START button and power on the phone, "UART Download mode >>> Available "



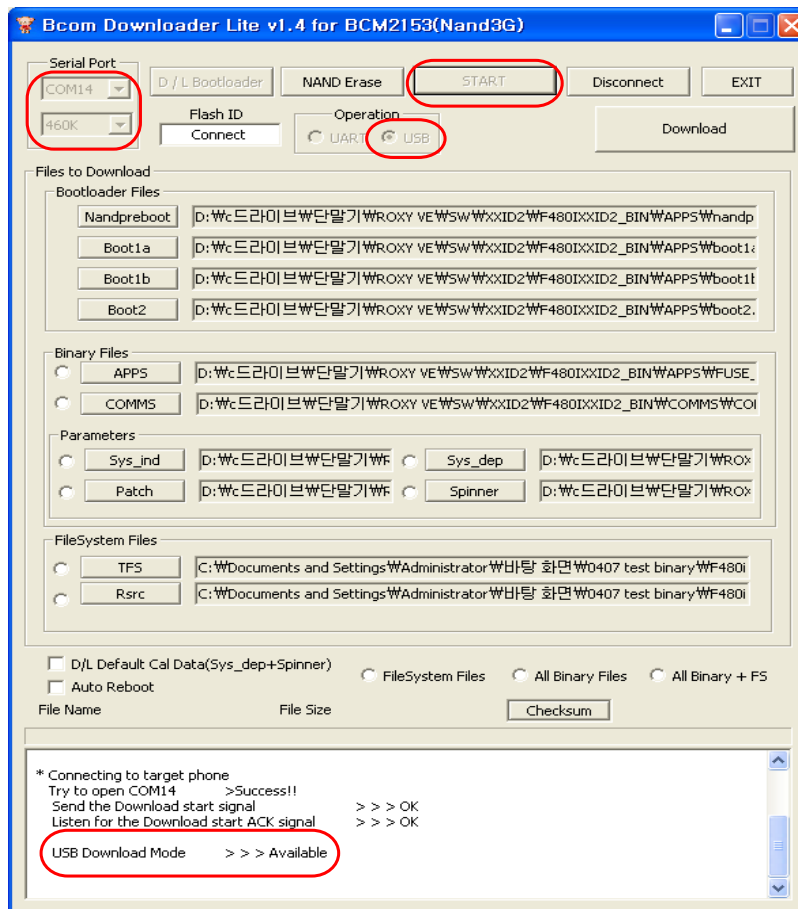
4. Check the NAND Erase button, " Next time, you have to download bootloader"



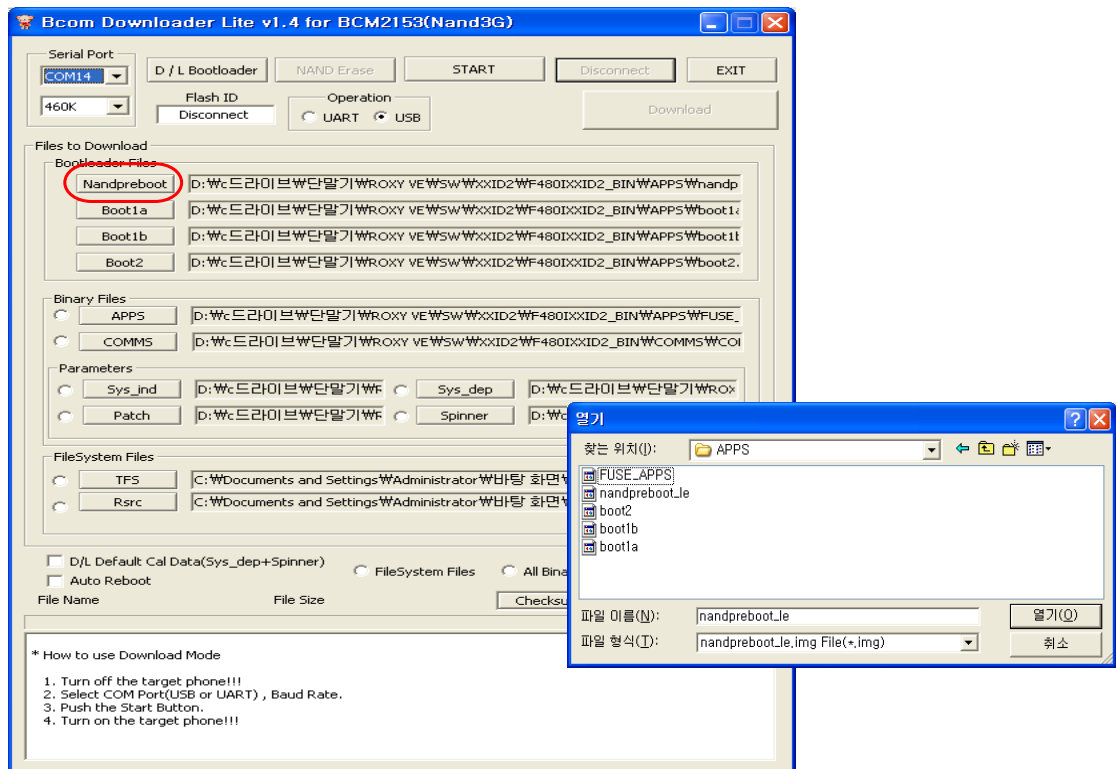
5. Check the Disconnect button and Bootloader button, "Download complete"



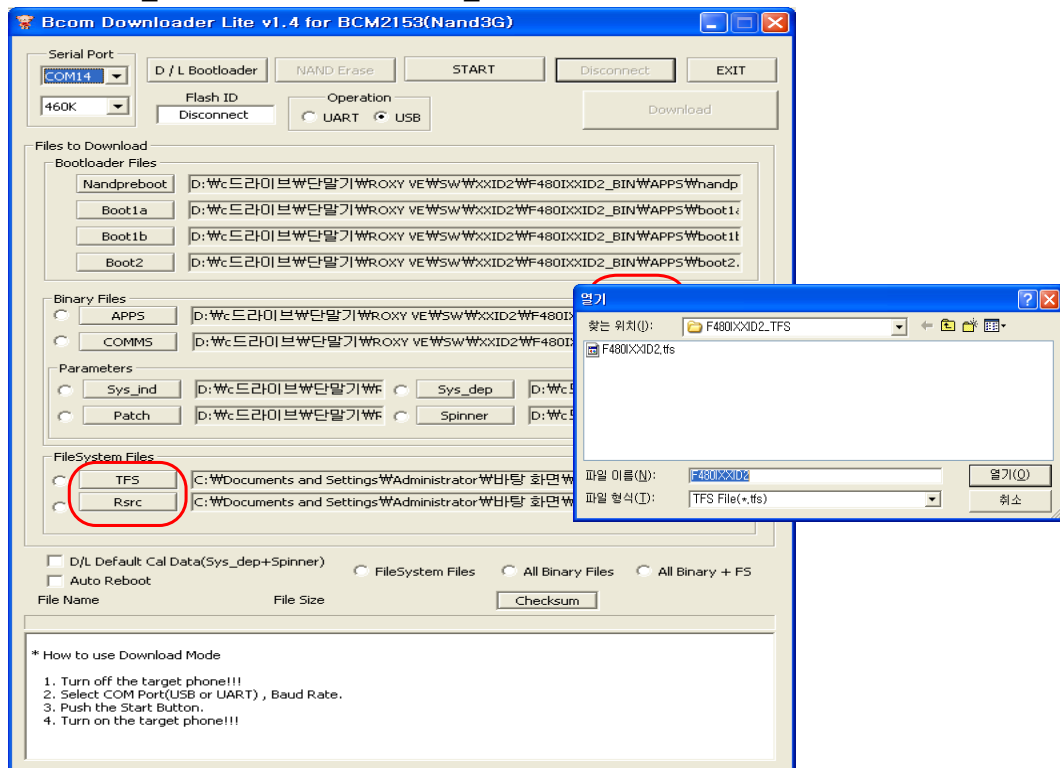
6. Change the USB Operation and port number. Push the START button and power on the phone. you see the "USB Download Mode >>> Available"



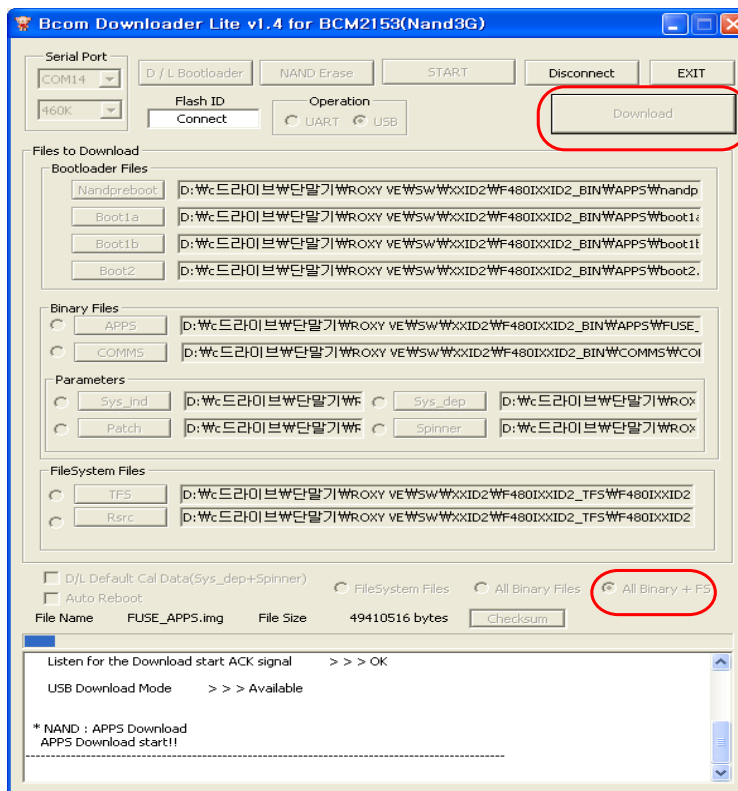
7. Check the Nandpreboot, and you click the Nandpreboot_le"F480I???_BIN\APPS". so Bootloader Files and Binary files is automatically loaded.



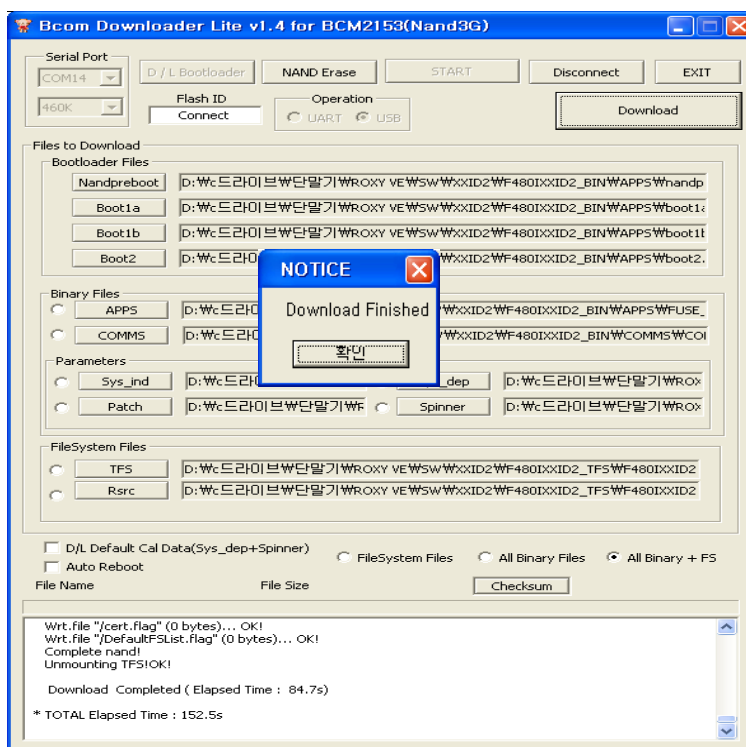
8. Check the TFS"F480I???_TFS" and Rsrc"F480I???_TFS" file.



9. Check the All Binary + FS and push the Download button

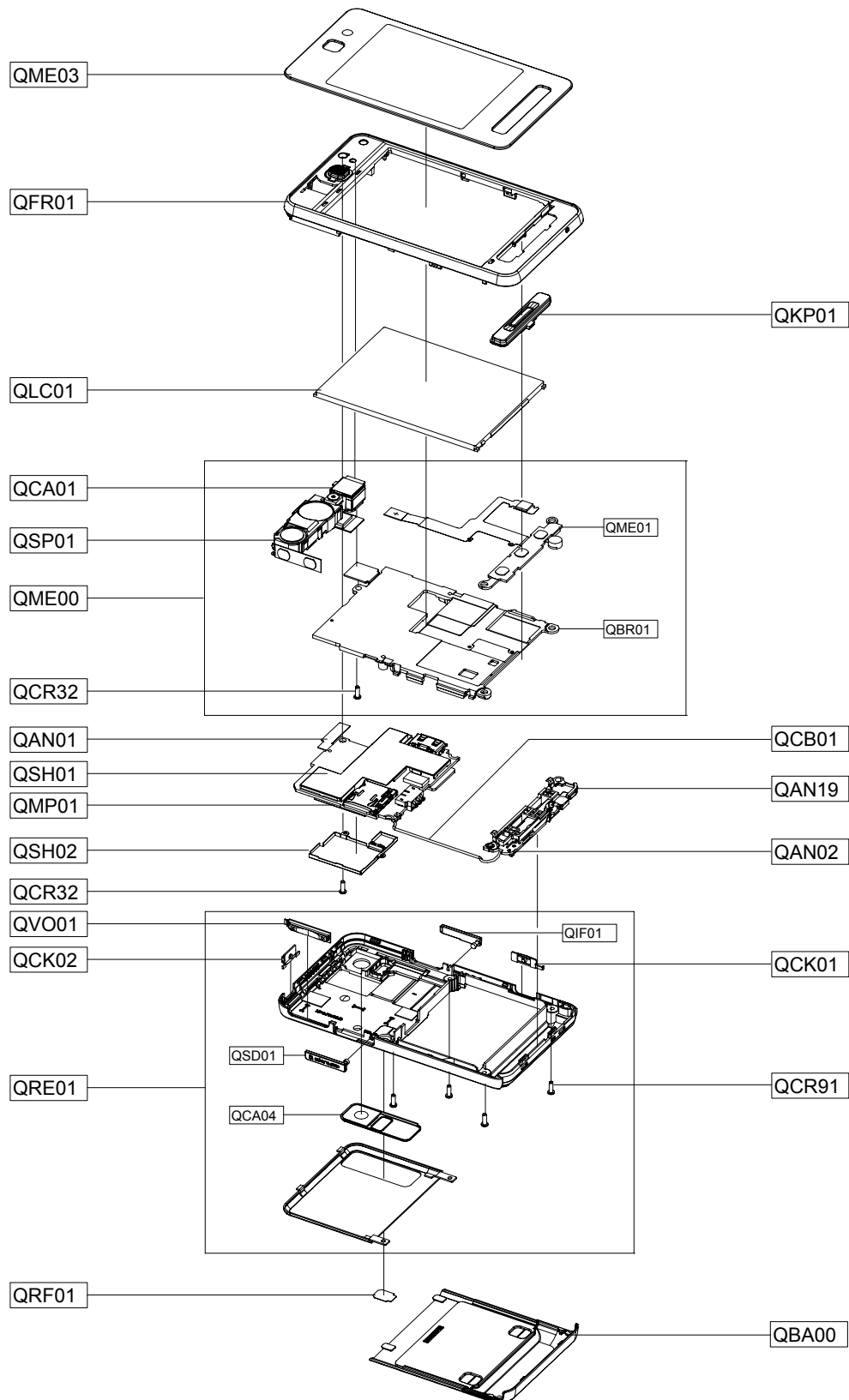


10. "Download Finished" window(pop up) is appeared. Download is finished.



5. Exploded View and Parts List

5-1. Cellular phone Exploded View



5-2. Cellular phone Parts list

Design LOC		Description	SEC CODE
QAN01		FPCB ANTENNA CHIP-SGH F480	GH42-01496A
QAN02		INTENNA-SGH F480	GH42-01506A
QAN19		PMO CASE-INTENNA CARRIER	GH72-48495A
QBA00		ASSY COVER-BATTERY(G)	GH98-10008A
QCA01		CAMERA MODULE	GH59-07398A
QCB01		CBF COAXIAL CABLE-SGHF480	GH39-01061A
QCK01		PMO KEY-CAMERA	GH72-45768A
QCK02		PMO KEY-HOLD	GH72-45770A
QCR32		SCREW-MACHINE	6001-001700
QCR32		SCREW-MACHINE	6001-001700
QCR91		SCREW-MACHINE	6001-002260
QFR01		ASSY CASE-FRONT	GH98-07382A
QKP01		ASSY KEYPAD-(EU/SIL)	GH98-07495A
QLC01		LCD	GH07-01428A
QME03		TOUCH/PANEL-EU BRN(F480)	GH59-05546A
QMP01		A/S ASSY-PBA MAIN(SGH-F480I SVC)	GH82-03722A
QRF01		TAPE-RF SHEET	GH74-38134A
QSH01		ASSY COVER-SHIELD CAN A(I)	GH98-12479A
QSH02		ASSY COVER-SHIELD CAN B(I)	GH98-13369A
QSP01		UNIT-SPK/MOT/KEYFPCB	GH59-05577A
QVO01		PMO KEY-VOLUME	GH72-45769A
QME00		ASSY MODULE-SUB KEY FPC BRACKET ASS'Y	GH96-03887A
	QME01	KEY FPCB-SUB KEY (SGH-F480I)	GH59-07690A
	QBR01	ASSY BRACKET-SHIELD CAN	GH98-07497A
QRE01		ASSY CASE-REAR(G)	GH98-10010A
	QIF01	PMO COVER-IF	GH72-45766A
	QSD01	PMO COVER-SD	GH72-45767A
	QCA04	ASSY COVER-CAMERA	GH98-07496A

6. MAIN Electrical Parts List

SEC Code	Design LOC	Description
0403-001547	D705	DIODE-ZENER
0403-001547	ZD601	DIODE-ZENER
0404-001172	D603	DIODE-SCHOTTKY
0406-001208	U744	DIODE-TVS
0406-001208	U745	DIODE-TVS
0406-001208	ZD401	DIODE-TVS
0406-001267	D502	DIODE-TVS
0406-001286	ZD600	DIODE-TVS
0406-001288	D500	DIODE-TVS
0406-001288	D501	DIODE-TVS
0406-001288	D704	DIODE-TVS
0406-001306	ZD602	DIODE-TVS
0502-001322	Q400	TR-POWER
0601-002456	LED600	LED
0801-002882	U300	IC-CMOS LOGIC
1001-001470	U504	IC-ANALOG SWITCH
1003-002047	U610	IC-MOTOR DRIVER
1108-000266	UME300	IC-MCP
1201-002304	U501	IC-AUDIO AMP
1201-002742	PAM100	IC-POWER AMP
1201-002765	PAM201	IC-POWER AMP
1201-002864	U500	IC-AUDIO AMP
1203-004540	U611	IC-DC/DC CONVERTER
1203-004857	U608	IC-DC/DC CONVERTER
1203-005409	U601	IC-POWER SUPERVISOR
1203-005512	U612	IC-POS.FIXED REG.
1203-005809	U400	IC-POWER SUPERVISOR
1204-003026	U502	IC-TUNER
1205-003754	U100	IC-BLUETOOTH
1205-003761	U200	IC-TRANSCIVER
1205-003764	UCP300	IC-MODEM
1404-001221	V300	THERMISTOR-NTC
2007-000148	R101	R-CHIP
2007-000156	R708	R-CHIP
2007-000157	R209	R-CHIP
2007-000157	R210	R-CHIP
2007-000164	R625	R-CHIP
2007-000173	R505	R-CHIP

2007-000173	U741	R-CHIP
2007-000775	R204	R-CHIP
2007-000775	R208	R-CHIP
2007-001291	R609	R-CHIP
2007-003014	R308	R-CHIP
2007-007001	R206	R-CHIP
2007-007100	R421	R-CHIP
2007-007132	R506	R-CHIP
2007-007132	R509	R-CHIP
2007-007137	R502	R-CHIP
2007-007137	R508	R-CHIP
2007-007137	R513	R-CHIP
2007-007137	R515	R-CHIP
2007-007148	R207	R-CHIP
2007-007156	R713	R-CHIP
2007-007156	U747	R-CHIP
2007-007189	R507	R-CHIP
2007-007189	U743	R-CHIP
2007-007309	R629	R-CHIP
2007-007318	R512	R-CHIP
2007-007318	R519	R-CHIP
2007-007489	R305	R-CHIP
2007-007592	R637	R-CHIP
2007-007981	R309	R-CHIP
2007-008045	R347	R-CHIP
2007-008045	R348	R-CHIP
2007-008045	R349	R-CHIP
2007-008045	R350	R-CHIP
2007-008045	R550	R-CHIP
2007-008055	R105	R-CHIP
2007-008055	R106	R-CHIP
2007-008055	R312	R-CHIP
2007-008055	R345	R-CHIP
2007-008055	U600	R-CHIP
2007-008213	R343	R-CHIP
2007-008218	R627	R-CHIP
2007-008354	R626	R-CHIP
2007-008401	R318	R-CHIP
2007-008419	R107	R-CHIP

2007-008419	R108	R-CHIP
2007-008419	R109	R-CHIP
2007-008419	R110	R-CHIP
2007-008419	R303	R-CHIP
2007-008516	R211	R-CHIP
2007-008516	R418	R-CHIP
2007-008516	R705	R-CHIP
2007-008588	R301	R-CHIP
2007-008588	R302	R-CHIP
2007-008588	R703	R-CHIP
2007-008588	R704	R-CHIP
2007-008785	R605	R-CHIP
2007-008785	R640	R-CHIP
2007-008798	R103	R-CHIP
2007-008809	R320	R-CHIP
2007-008809	R321	R-CHIP
2007-008809	R325	R-CHIP
2007-008809	R326	R-CHIP
2007-008809	R422	R-CHIP
2007-008809	R444	R-CHIP
2007-009084	R401	R-CHIP
2007-009084	R602	R-CHIP
2007-009111	R711	R-CHIP
2007-009157	R313	R-CHIP
2007-009157	R524	R-CHIP
2007-009157	R712	R-CHIP
2007-009170	R600	R-CHIP
2007-009212	R416	R-CHIP
2007-010071	R443	R-CHIP
2203-000233	C223	C-CER,CHIP
2203-000233	L210	C-CER,CHIP
2203-000254	C202	C-CER,CHIP
2203-000254	C204	C-CER,CHIP
2203-000254	C278	C-CER,CHIP
2203-000278	C128	C-CER,CHIP
2203-000386	C222	C-CER,CHIP
2203-000425	C409	C-CER,CHIP
2203-000425	C410	C-CER,CHIP
2203-000438	C218	C-CER,CHIP

2203-000438	C227	C-CER,CHIP
2203-000438	C277	C-CER,CHIP
2203-000438	C551	C-CER,CHIP
2203-000438	C552	C-CER,CHIP
2203-000679	L211	C-CER,CHIP
2203-000696	C232	C-CER,CHIP
2203-000725	C618	C-CER,CHIP
2203-000812	U746	C-CER,CHIP
2203-001153	C276	C-CER,CHIP
2203-001259	R153	C-CER,CHIP
2203-002668	C102	C-CER,CHIP
2203-002668	C154	C-CER,CHIP
2203-002709	C702	C-CER,CHIP
2203-005281	C226	C-CER,CHIP
2203-005281	C228	C-CER,CHIP
2203-005281	C273	C-CER,CHIP
2203-005281	C274	C-CER,CHIP
2203-005281	C275	C-CER,CHIP
2203-005393	C133	C-CER,CHIP
2203-005395	L109	C-CER,CHIP
2203-005446	C219	C-CER,CHIP
2203-005446	C221	C-CER,CHIP
2203-005682	C103	C-CER,CHIP
2203-005682	C143	C-CER,CHIP
2203-005682	C153	C-CER,CHIP
2203-005682	C347	C-CER,CHIP
2203-005682	C348	C-CER,CHIP
2203-005682	C362	C-CER,CHIP
2203-005682	C365	C-CER,CHIP
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2203-005682	C369	C-CER,CHIP
2203-005682	C446	C-CER,CHIP
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2203-005682	C527	C-CER,CHIP
2203-005682	C528	C-CER,CHIP
2203-005682	C529	C-CER,CHIP
2203-005682	C636	C-CER,CHIP
2203-005682	C720	C-CER,CHIP
2203-005683	C541	C-CER,CHIP

2203-005683	C555	C-CER,CHIP
2203-005727	C104	C-CER,CHIP
2203-005727	C118	C-CER,CHIP
2203-005729	C224	C-CER,CHIP
2203-005731	C448	C-CER,CHIP
2203-005732	C272	C-CER,CHIP
2203-005736	C111	C-CER,CHIP
2203-005736	C233	C-CER,CHIP
2203-005736	C237	C-CER,CHIP
2203-005736	C367	C-CER,CHIP
2203-005736	C533	C-CER,CHIP
2203-005736	C534	C-CER,CHIP
2203-005779	C522	C-CER,CHIP
2203-005779	C526	C-CER,CHIP
2203-005779	C600	C-CER,CHIP
2203-005779	C604	C-CER,CHIP
2203-005779	C639	C-CER,CHIP
2203-005779	C640	C-CER,CHIP
2203-005779	C641	C-CER,CHIP
2203-005806	C108	C-CER,CHIP
2203-006047	C638	C-CER,CHIP
2203-006048	C112	C-CER,CHIP
2203-006048	C354	C-CER,CHIP
2203-006048	C359	C-CER,CHIP
2203-006048	C445	C-CER,CHIP
2203-006048	C700	C-CER,CHIP
2203-006048	C721	C-CER,CHIP
2203-006194	C130	C-CER,CHIP
2203-006194	C131	C-CER,CHIP
2203-006194	C205	C-CER,CHIP
2203-006194	C206	C-CER,CHIP
2203-006194	C208	C-CER,CHIP
2203-006194	C209	C-CER,CHIP
2203-006194	C235	C-CER,CHIP
2203-006194	C305	C-CER,CHIP
2203-006194	C306	C-CER,CHIP
2203-006194	C334	C-CER,CHIP
2203-006194	C408	C-CER,CHIP
2203-006208	C424	C-CER,CHIP

2203-006208	C427	C-CER,CHIP
2203-006208	C615	C-CER,CHIP
2203-006208	C616	C-CER,CHIP
2203-006208	C629	C-CER,CHIP
2203-006260	C509	C-CER,CHIP
2203-006260	C512	C-CER,CHIP
2203-006305	C132	C-CER,CHIP
2203-006305	C213	C-CER,CHIP
2203-006324	C603	C-CER,CHIP
2203-006324	C621	C-CER,CHIP
2203-006399	C109	C-CER,CHIP
2203-006399	C203	C-CER,CHIP
2203-006399	C210	C-CER,CHIP
2203-006399	C404	C-CER,CHIP
2203-006399	C405	C-CER,CHIP
2203-006399	C513	C-CER,CHIP
2203-006399	C514	C-CER,CHIP
2203-006399	U735	C-CER,CHIP
2203-006423	C201	C-CER,CHIP
2203-006423	C234	C-CER,CHIP
2203-006423	C238	C-CER,CHIP
2203-006423	C269	C-CER,CHIP
2203-006423	C304	C-CER,CHIP
2203-006423	C307	C-CER,CHIP
2203-006423	C308	C-CER,CHIP
2203-006423	C309	C-CER,CHIP
2203-006423	C313	C-CER,CHIP
2203-006423	C315	C-CER,CHIP
2203-006423	C319	C-CER,CHIP
2203-006423	C324	C-CER,CHIP
2203-006423	C328	C-CER,CHIP
2203-006423	C331	C-CER,CHIP
2203-006423	C333	C-CER,CHIP
2203-006423	C335	C-CER,CHIP
2203-006423	C340	C-CER,CHIP
2203-006423	C343	C-CER,CHIP
2203-006423	C360	C-CER,CHIP
2203-006423	C371	C-CER,CHIP
2203-006423	C550	C-CER,CHIP

2203-006562	C211	C-CER,CHIP
2203-006562	C300	C-CER,CHIP
2203-006562	C310	C-CER,CHIP
2203-006562	C311	C-CER,CHIP
2203-006562	C316	C-CER,CHIP
2203-006562	C323	C-CER,CHIP
2203-006562	C326	C-CER,CHIP
2203-006562	C329	C-CER,CHIP
2203-006562	C330	C-CER,CHIP
2203-006562	C342	C-CER,CHIP
2203-006562	C353	C-CER,CHIP
2203-006562	C356	C-CER,CHIP
2203-006562	C417	C-CER,CHIP
2203-006562	C423	C-CER,CHIP
2203-006562	C426	C-CER,CHIP
2203-006562	C502	C-CER,CHIP
2203-006562	C508	C-CER,CHIP
2203-006562	C523	C-CER,CHIP
2203-006562	C525	C-CER,CHIP
2203-006562	C542	C-CER,CHIP
2203-006562	C605	C-CER,CHIP
2203-006562	C607	C-CER,CHIP
2203-006562	C608	C-CER,CHIP
2203-006562	C609	C-CER,CHIP
2203-006562	C610	C-CER,CHIP
2203-006562	C617	C-CER,CHIP
2203-006562	C623	C-CER,CHIP
2203-006562	C711	C-CER,CHIP
2203-006562	C712	C-CER,CHIP
2203-006562	C713	C-CER,CHIP
2203-006562	C714	C-CER,CHIP
2203-006562	C715	C-CER,CHIP
2203-006562	C725	C-CER,CHIP
2203-006626	C511	C-CER,CHIP
2203-006626	C553	C-CER,CHIP
2203-006647	C642	C-CER,CHIP
2203-006648	C536	C-CER,CHIP
2203-006648	C601	C-CER,CHIP
2203-006681	C507	C-CER,CHIP

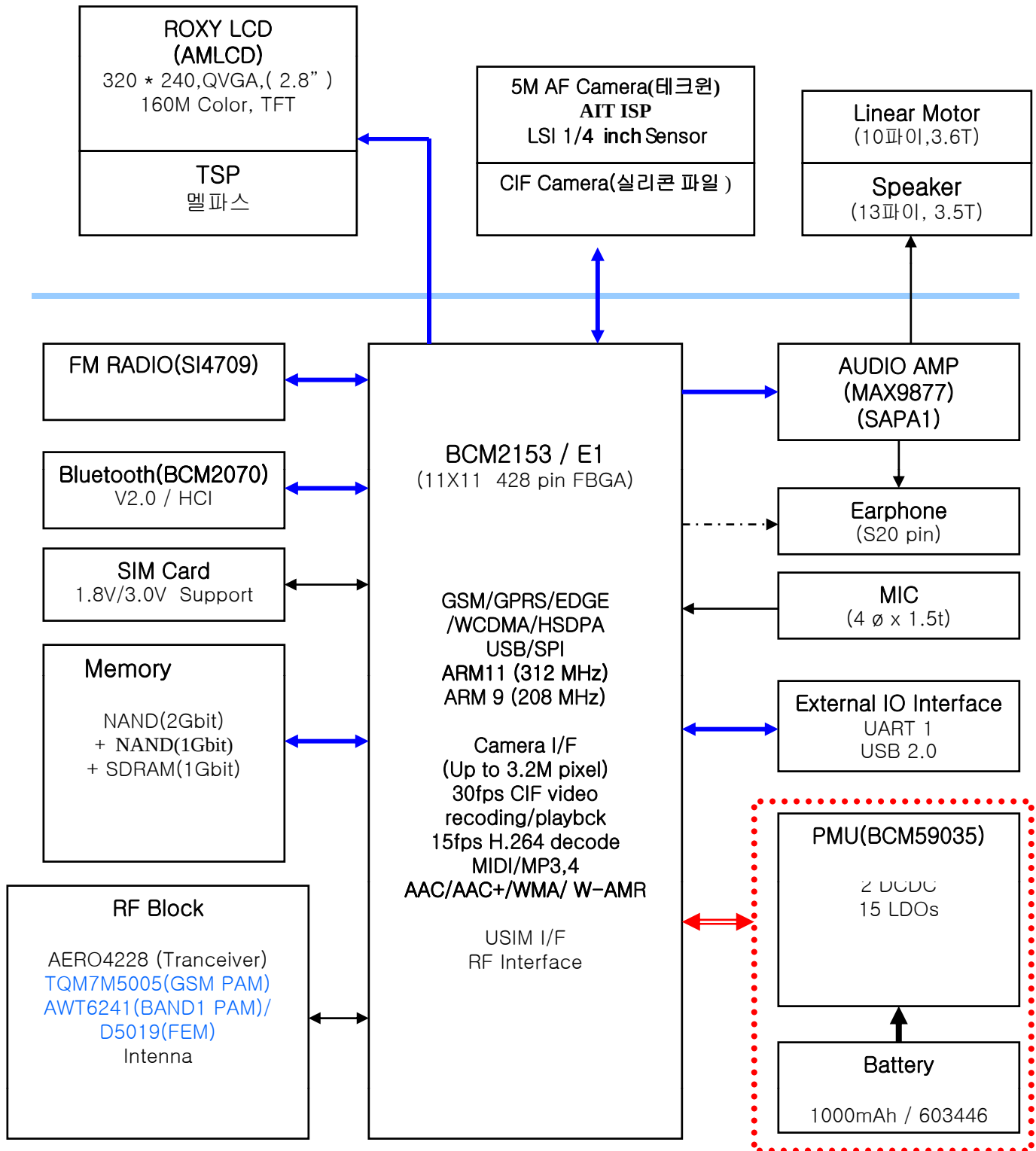
2203-006824	C155	C-CER,CHIP
2203-006825	C429	C-CER,CHIP
2203-006825	C441	C-CER,CHIP
2203-006838	C402	C-CER,CHIP
2203-006838	C403	C-CER,CHIP
2203-006838	C406	C-CER,CHIP
2203-006838	C413	C-CER,CHIP
2203-006838	C415	C-CER,CHIP
2203-006838	C416	C-CER,CHIP
2203-006838	C419	C-CER,CHIP
2203-006838	C420	C-CER,CHIP
2203-006838	C421	C-CER,CHIP
2203-006838	C422	C-CER,CHIP
2203-006838	C440	C-CER,CHIP
2203-006872	C127	C-CER,CHIP
2203-006872	C129	C-CER,CHIP
2203-006872	C147	C-CER,CHIP
2203-006872	C212	C-CER,CHIP
2203-006872	C637	C-CER,CHIP
2203-006890	C220	C-CER,CHIP
2203-006901	C428	C-CER,CHIP
2203-006978	C619	C-CER,CHIP
2203-006978	C620	C-CER,CHIP
2203-006979	C114	C-CER,CHIP
2203-006979	C115	C-CER,CHIP
2203-006979	C126	C-CER,CHIP
2203-007210	C231	C-CER,CHIP
2203-007210	C504	C-CER,CHIP
2203-007210	C538	C-CER,CHIP
2203-007270	C156	C-CER,CHIP
2203-007270	C556	C-CER,CHIP
2203-007315	C503	C-CER,CHIP
2203-007315	C554	C-CER,CHIP
2404-001339	C216	C-TA,CHIP
2404-001377	TA502	C-TA,CHIP
2404-001381	TA200	C-TA,CHIP
2404-001430	TA400	C-TA,CHIP
2703-001409	L114	INDUCTOR-SMD
2703-001708	C250	INDUCTOR-SMD

2703-001729	C229	INDUCTOR-SMD
2703-001737	C257	INDUCTOR-SMD
2703-001737	C258	INDUCTOR-SMD
2703-001737	L112	INDUCTOR-SMD
2703-001747	C106	INDUCTOR-SMD
2703-001752	L115	INDUCTOR-SMD
2703-001938	C139	INDUCTOR-SMD
2703-002204	L205	INDUCTOR-SMD
2703-002281	L203	INDUCTOR-SMD
2703-002281	L207	INDUCTOR-SMD
2703-002368	L113	INDUCTOR-SMD
2703-002369	L204	INDUCTOR-SMD
2703-002958	L102	INDUCTOR-SMD
2703-003064	L601	INDUCTOR-SMD
2703-003182	L604	INDUCTOR-SMD
2703-003260	L605	INDUCTOR-SMD
2703-003285	L603	INDUCTOR-SMD
2703-003343	L400	INDUCTOR-SMD
2703-003343	L401	INDUCTOR-SMD
2703-003485	L202	INDUCTOR-SMD
2801-004373	OSC400	CRYSTAL-SMD
2809-001281	OSC200	CRYSTAL-SMD
2901-001353	F707	FILTER-EMI/ESD
2901-001353	F708	FILTER-EMI/ESD
2901-001353	F709	FILTER-EMI/ESD
2901-001540	F600	FILTER-EMI/ESD
2901-001540	F700	FILTER-EMI/ESD
2901-001540	F701	FILTER-EMI/ESD
2901-001540	F702	FILTER-EMI/ESD
2901-001540	F703	FILTER-EMI/ESD
2901-001540	F704	FILTER-EMI/ESD
2901-001540	F705	FILTER-EMI/ESD
2901-001540	F706	FILTER-EMI/ESD
2909-001312	F100	FILTER-LC
2910-000070	F201	DUPLEXER-SAW
2911-000129	FEM100	DUPLEXER-FEM
3301-001158	L502	BEAD-SMD
3301-001158	L503	BEAD-SMD
3301-001438	L500	BEAD-SMD

3301-001438	L501	BEAD-SMD
3301-001438	L600	BEAD-SMD
3301-001438	L608	BEAD-SMD
3301-001659	L100	BEAD-SMD
3301-001756	L606	BEAD-SMD
3301-001756	L607	BEAD-SMD
3301-001876	L300	BEAD-SMD
3301-001876	L301	BEAD-SMD
3301-001876	L302	BEAD-SMD
3301-001876	L303	BEAD-SMD
3301-001929	L200	BEAD-SMD
3705-001448	RFS100	CONNECTOR-COAXIAL
3705-001503	RFS101	CONNECTOR-COAXIAL
3709-001391	SIM400	CONNECTOR-CARD EDGE
3709-001464	CD400	CONNECTOR-FPC/FFC/PIC
3710-002681	IFC600	SOCKET-INTERFACE
3711-005581	HDC702	HEADER-BOARD TO BOARD
3711-005930	HDC700	HEADER-BOARD TO BOARD
3711-005976	HDC703	HEADER-BOARD TO BOARD
3711-006348	BTC700	HEADER-BATTERY
3711-006919	HDC701	HEADER-BOARD TO BOARD
4302-001130	BAT400	BATTERY-LI(2ND)
GH70-03349A	SC100	IPR SHIELD-CAN CLIP
GH70-03349A	SC101	IPR SHIELD-CAN CLIP
GH70-03349A	SC102	IPR SHIELD-CAN CLIP
GH70-03349A	SC103	IPR SHIELD-CAN CLIP
GH70-03349A	SC104	IPR SHIELD-CAN CLIP
GH70-03349A	SC105	IPR SHIELD-CAN CLIP
GH70-03349A	SC106	IPR SHIELD-CAN CLIP
GH70-03349A	SC107	IPR SHIELD-CAN CLIP
GH70-03349A	SC108	IPR SHIELD-CAN CLIP
GH70-03349A	SC109	IPR SHIELD-CAN CLIP
GH70-03349A	SC110	IPR SHIELD-CAN CLIP
GH70-03349A	SC111	IPR SHIELD-CAN CLIP
GH70-03349A	SC112	IPR SHIELD-CAN CLIP
GH70-03349A	SC113	IPR SHIELD-CAN CLIP
GH70-03349A	SC114	IPR SHIELD-CAN CLIP

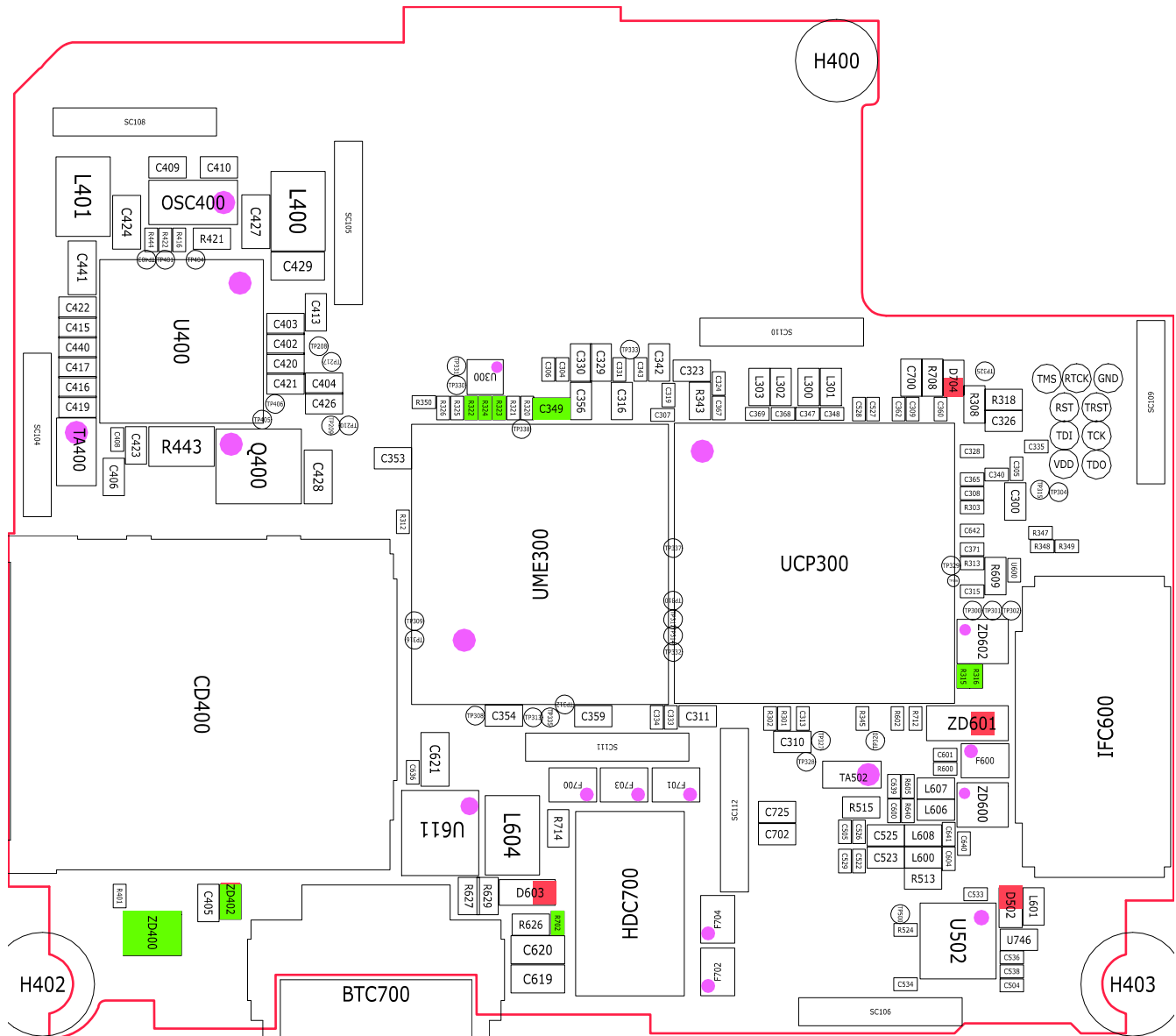
Please consult the GSPN website (Samsung Portal) for the most recent version of the product's part list.

7. Block Diagrams

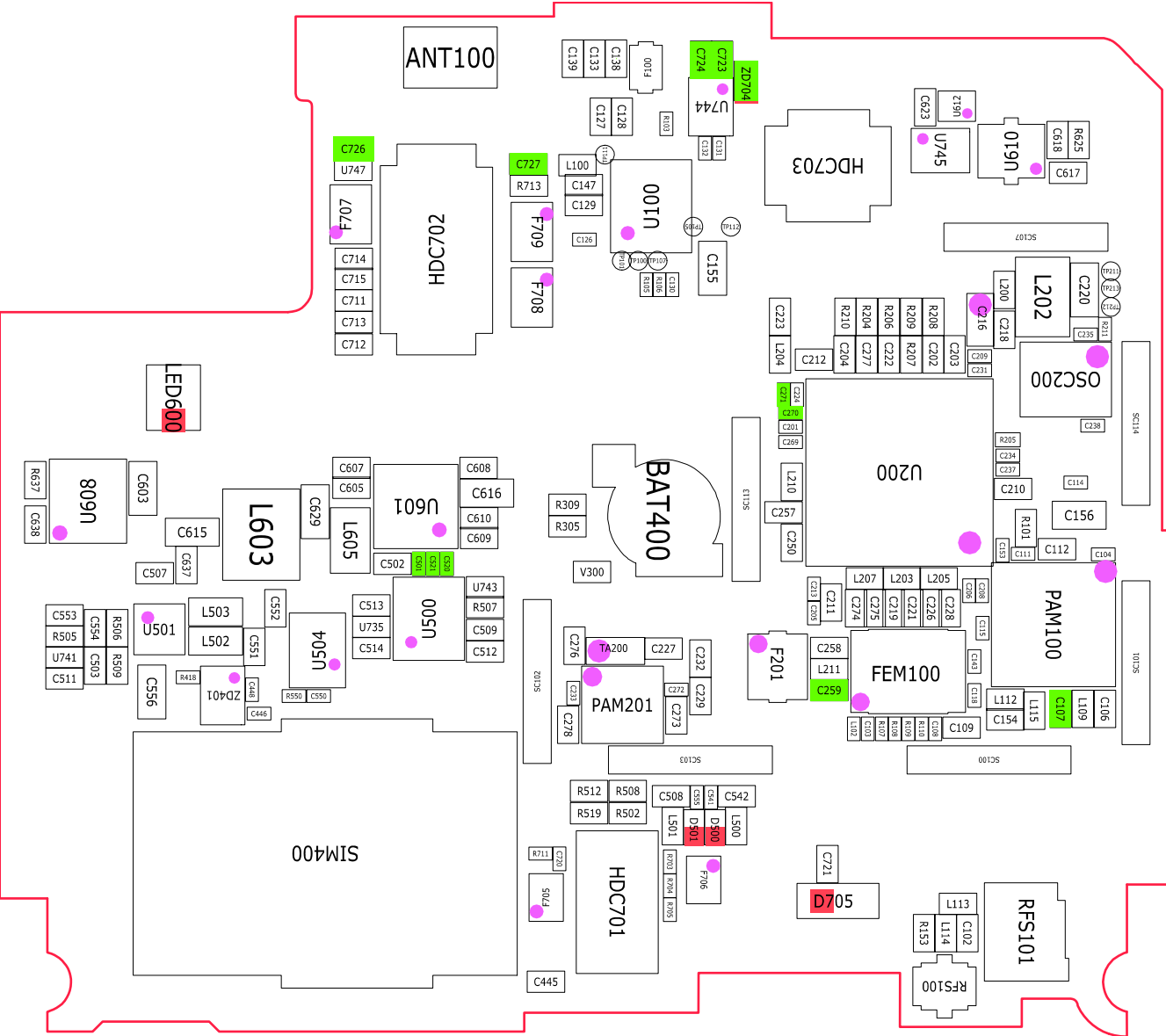


8. PCB Diagrams

1. Main top

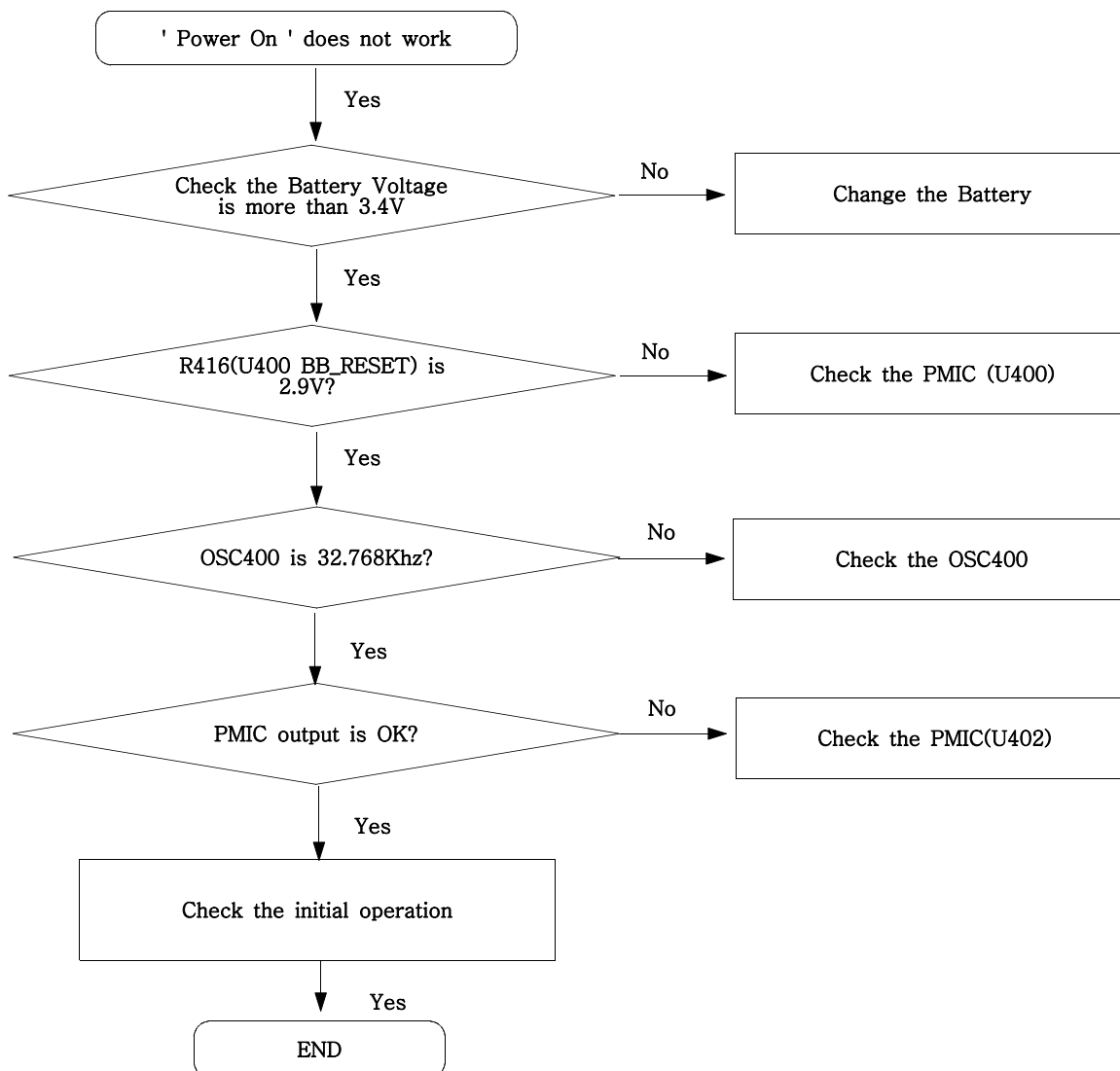


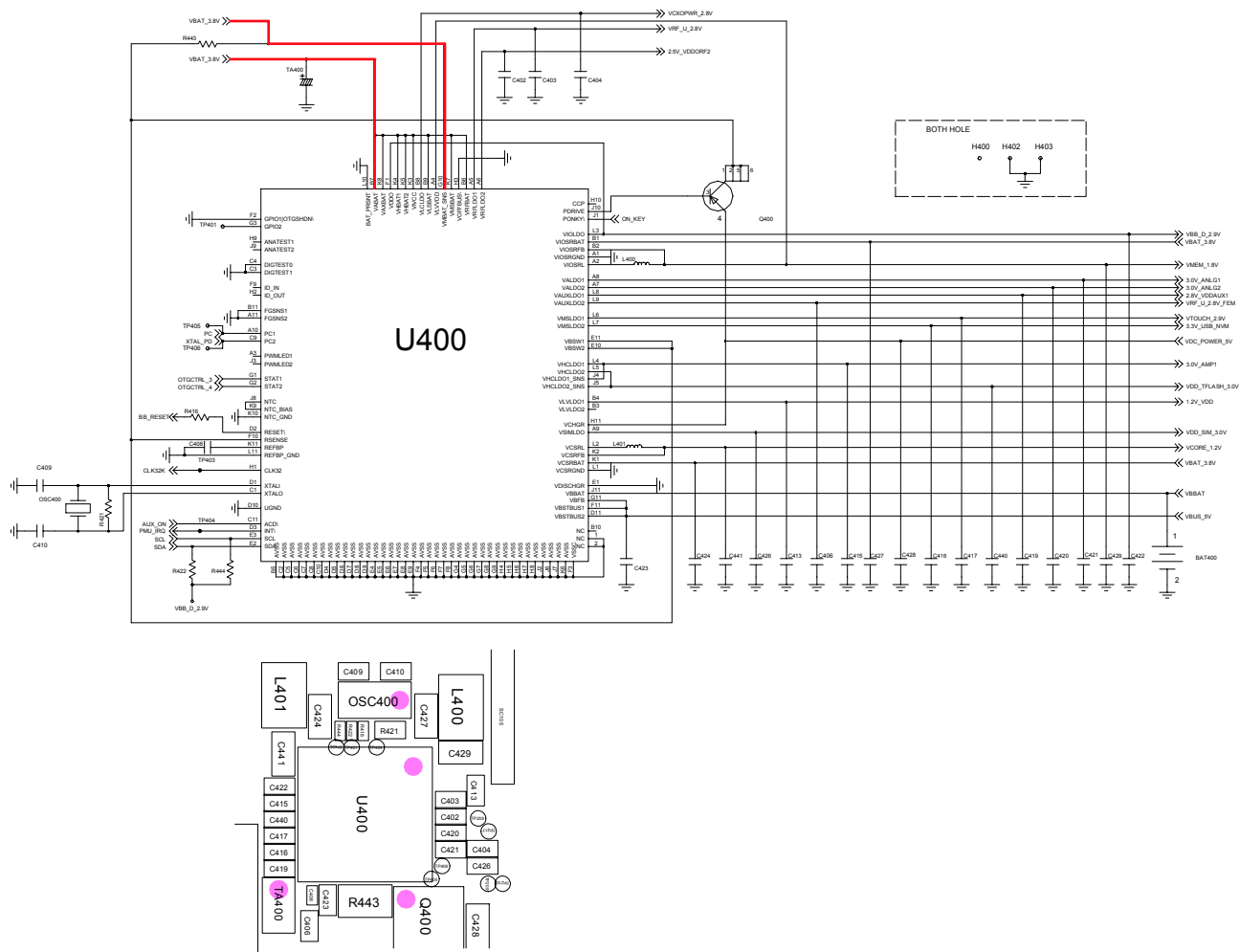
2. Main bottom



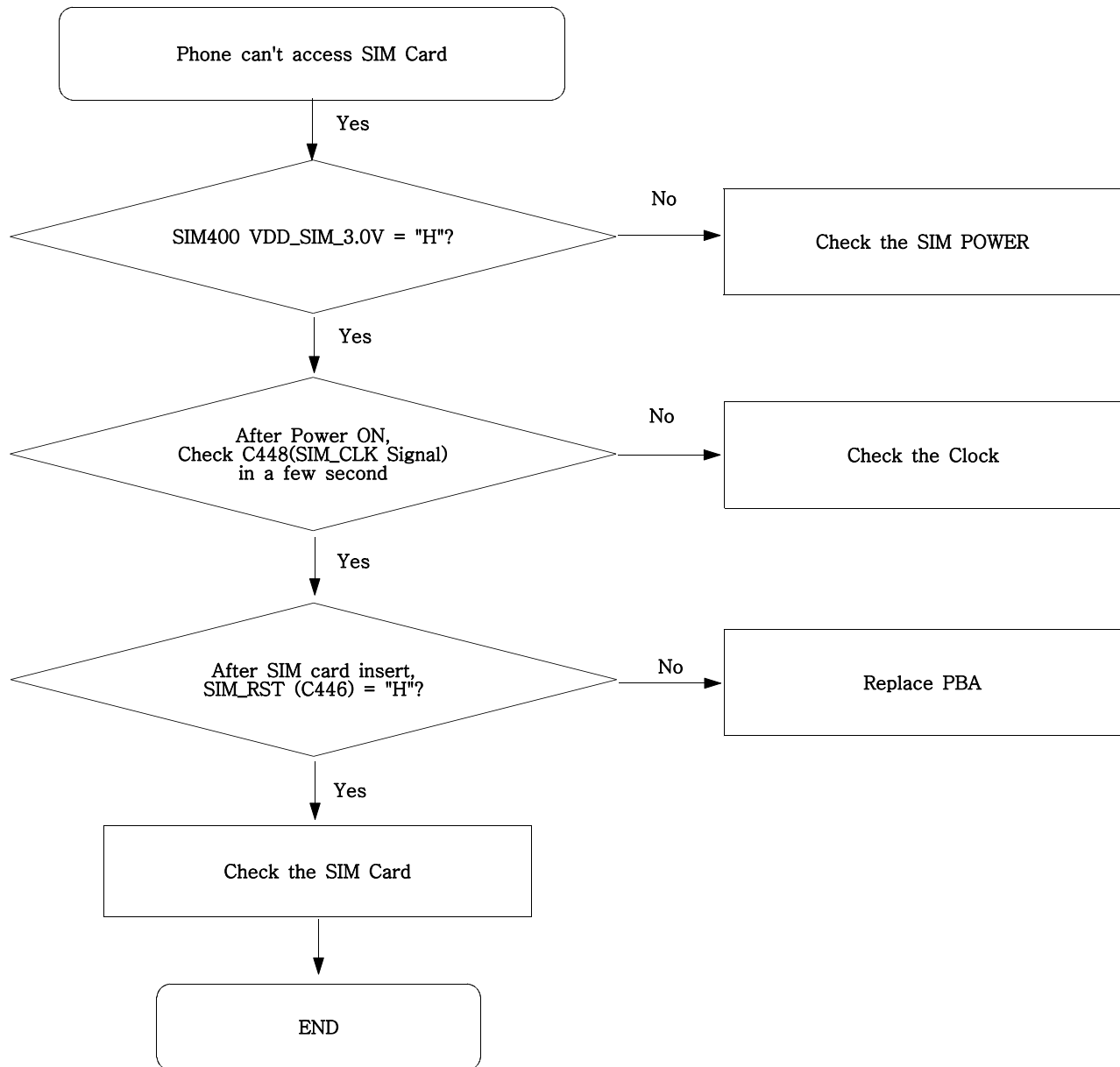
9. Flow Chart of Troubleshooting

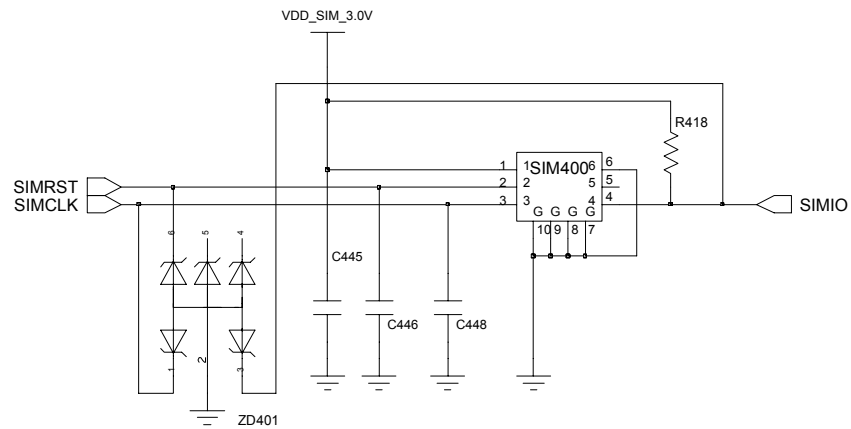
9-1. Power On



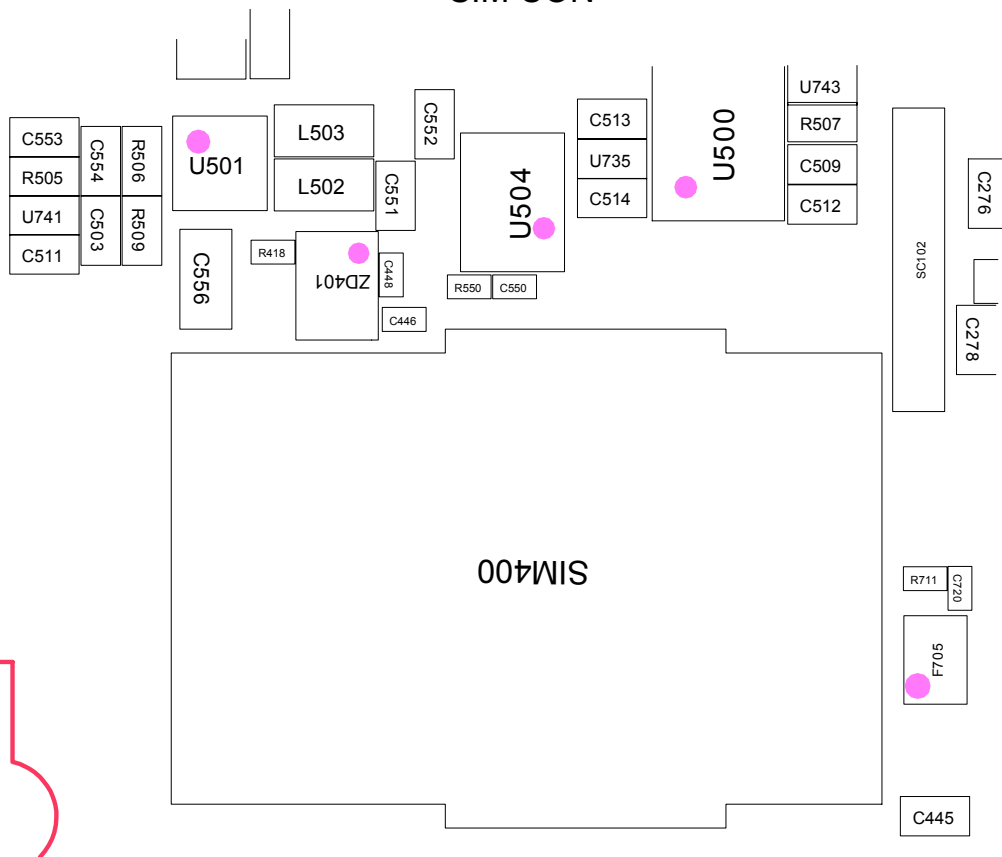


9-2. Sim Part

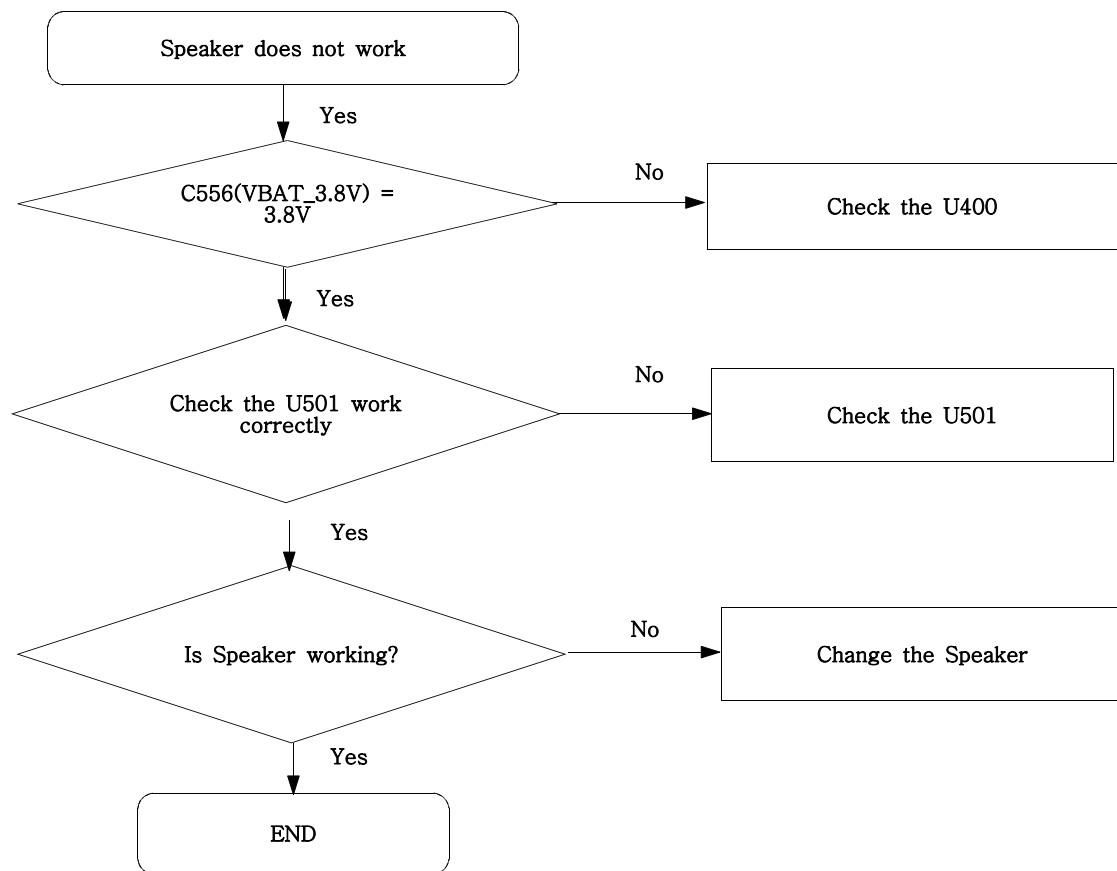


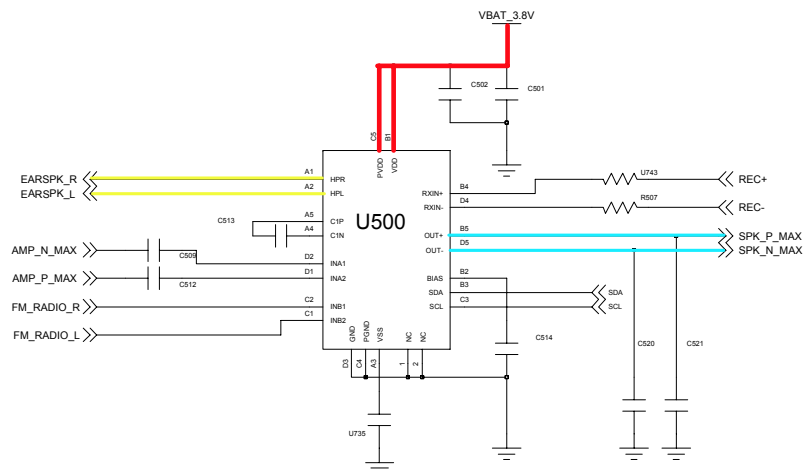


SIM CON

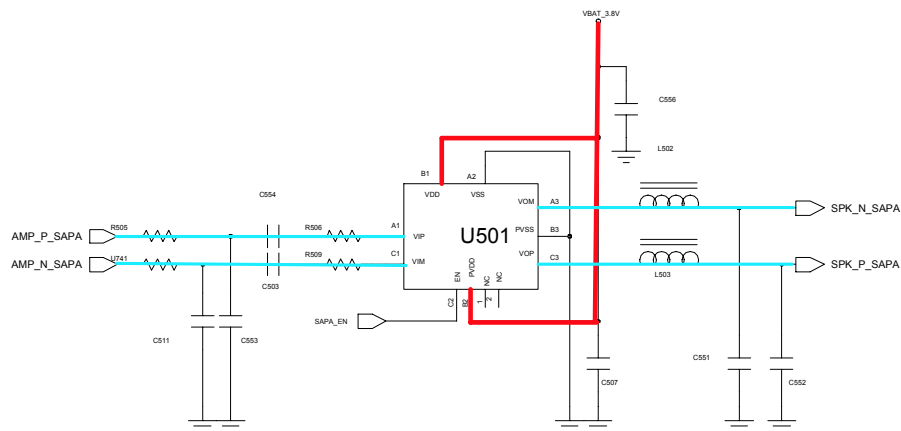


9-3. Speaker Part

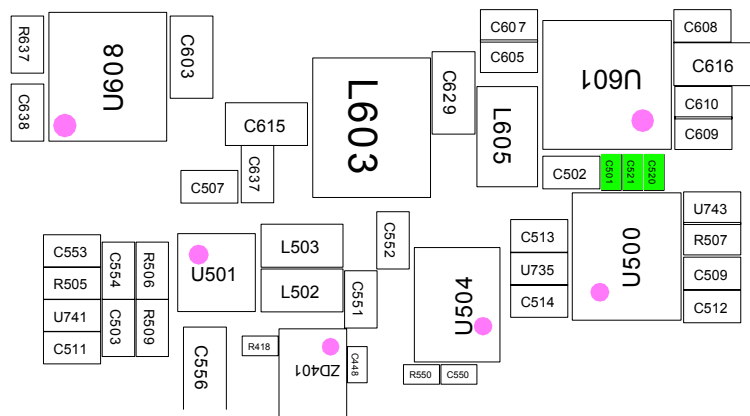




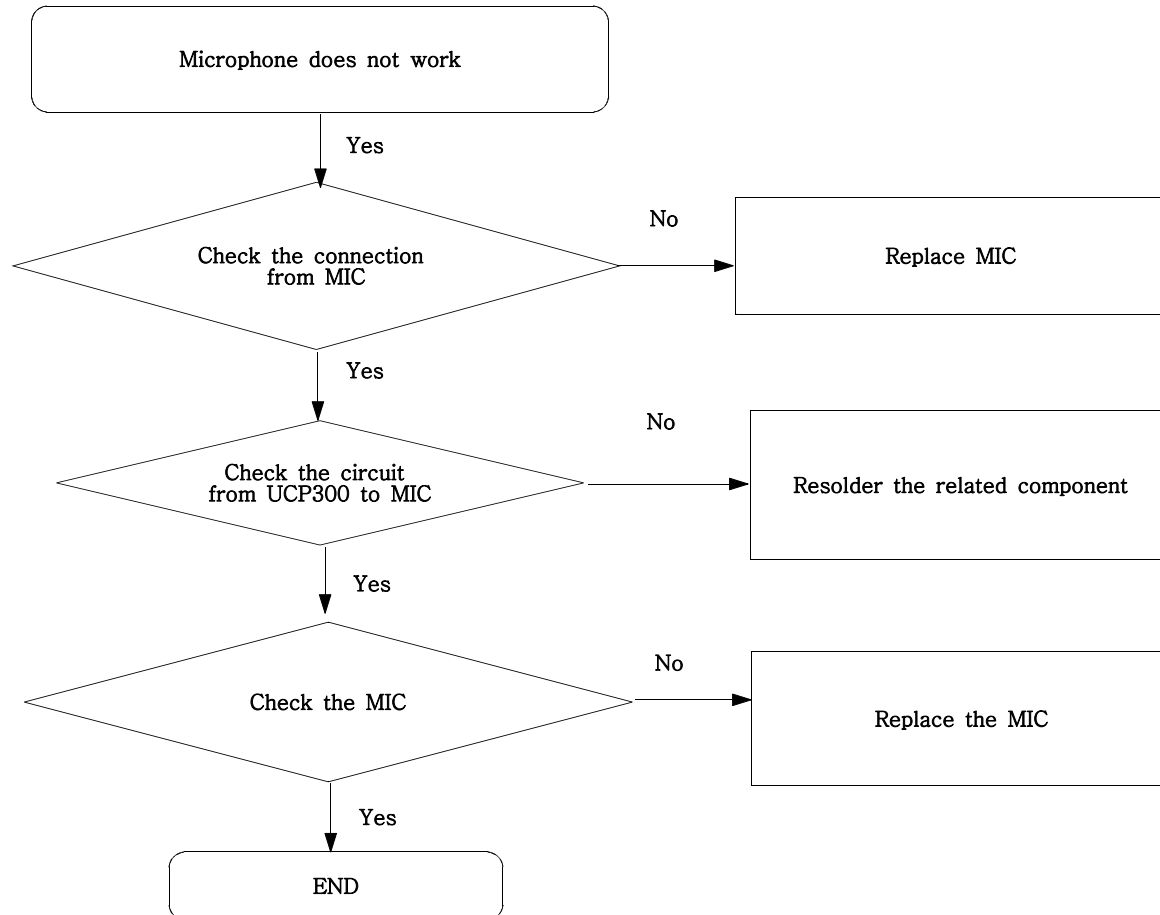
AUDIO AMP(MAX9877)

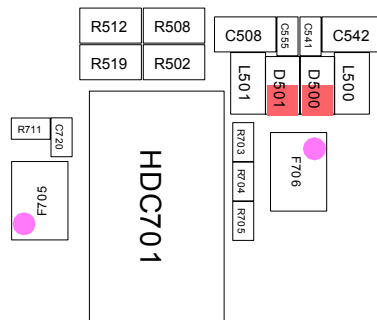
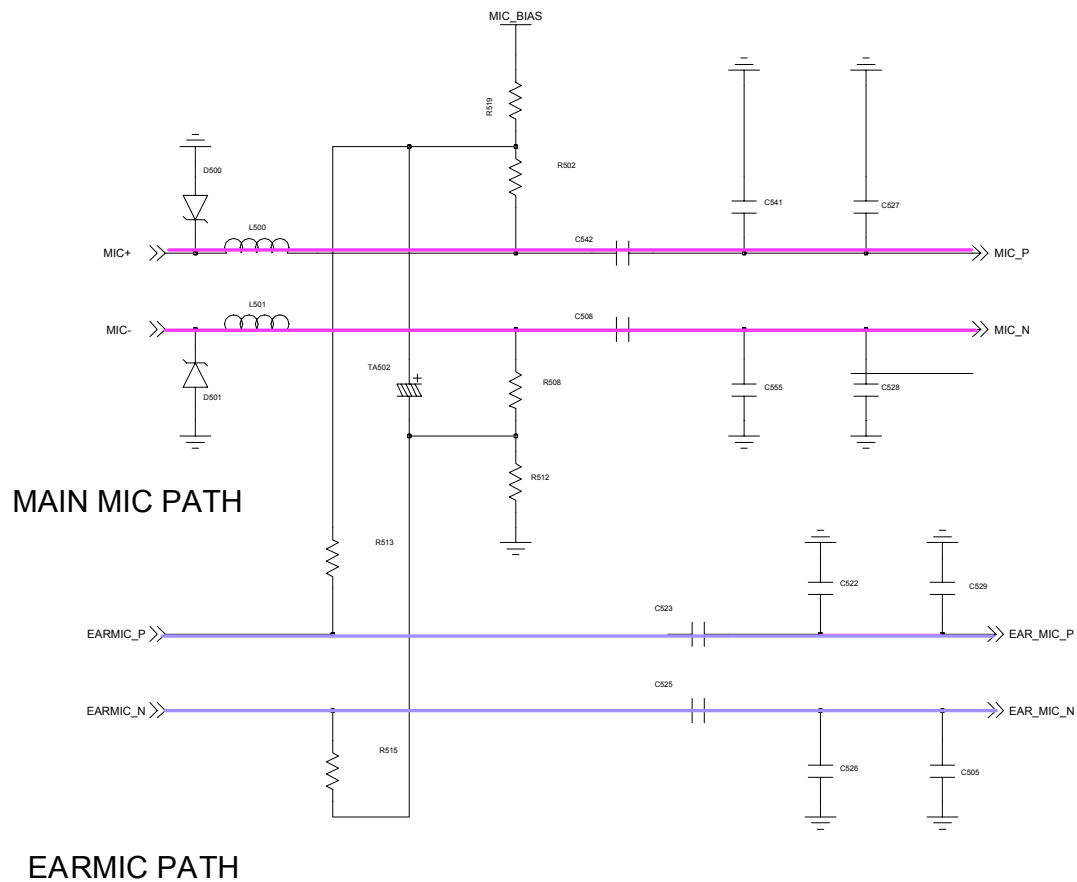


AUDIO AMP(SAPA)

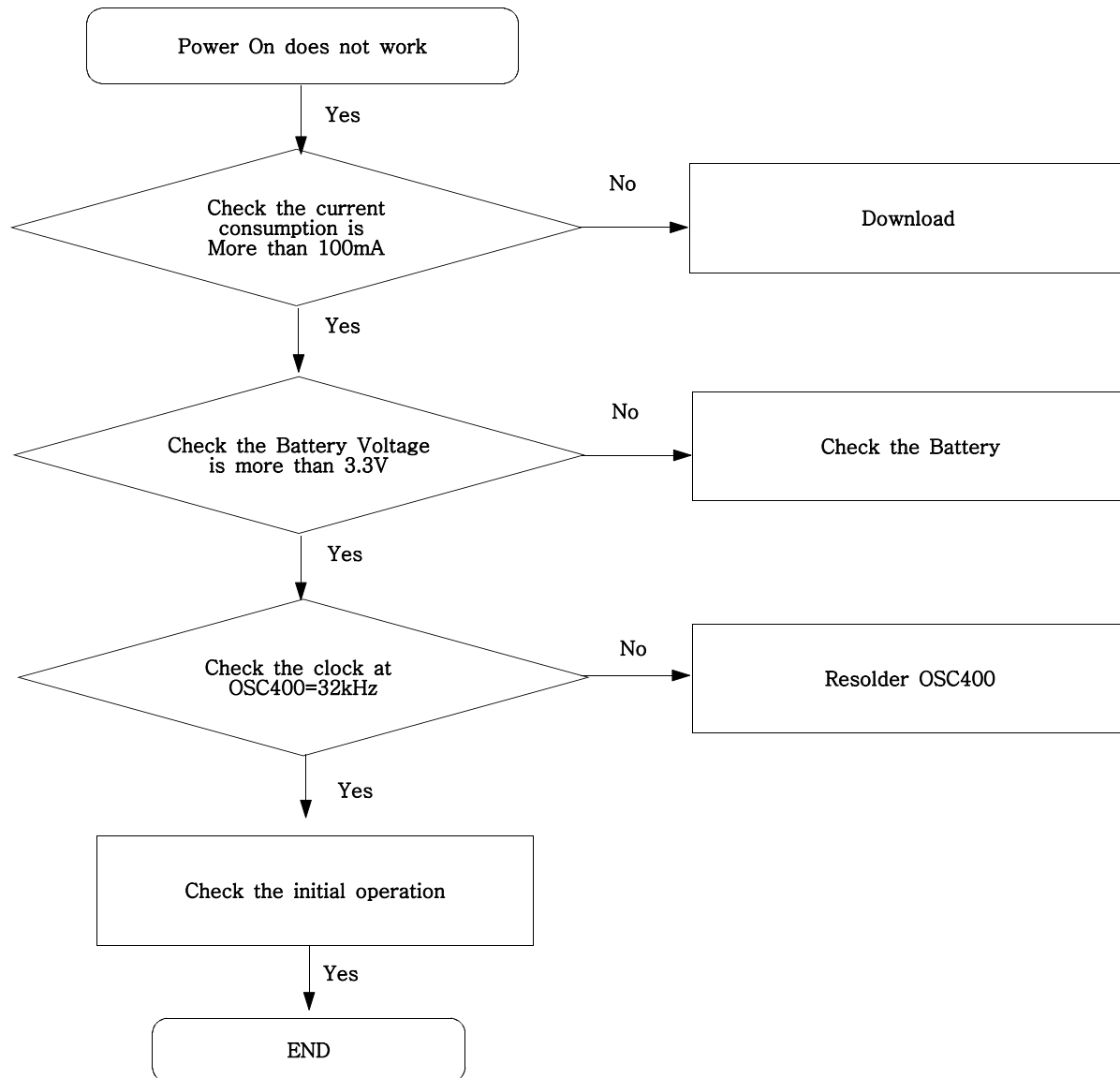


9-4. Microphone Part

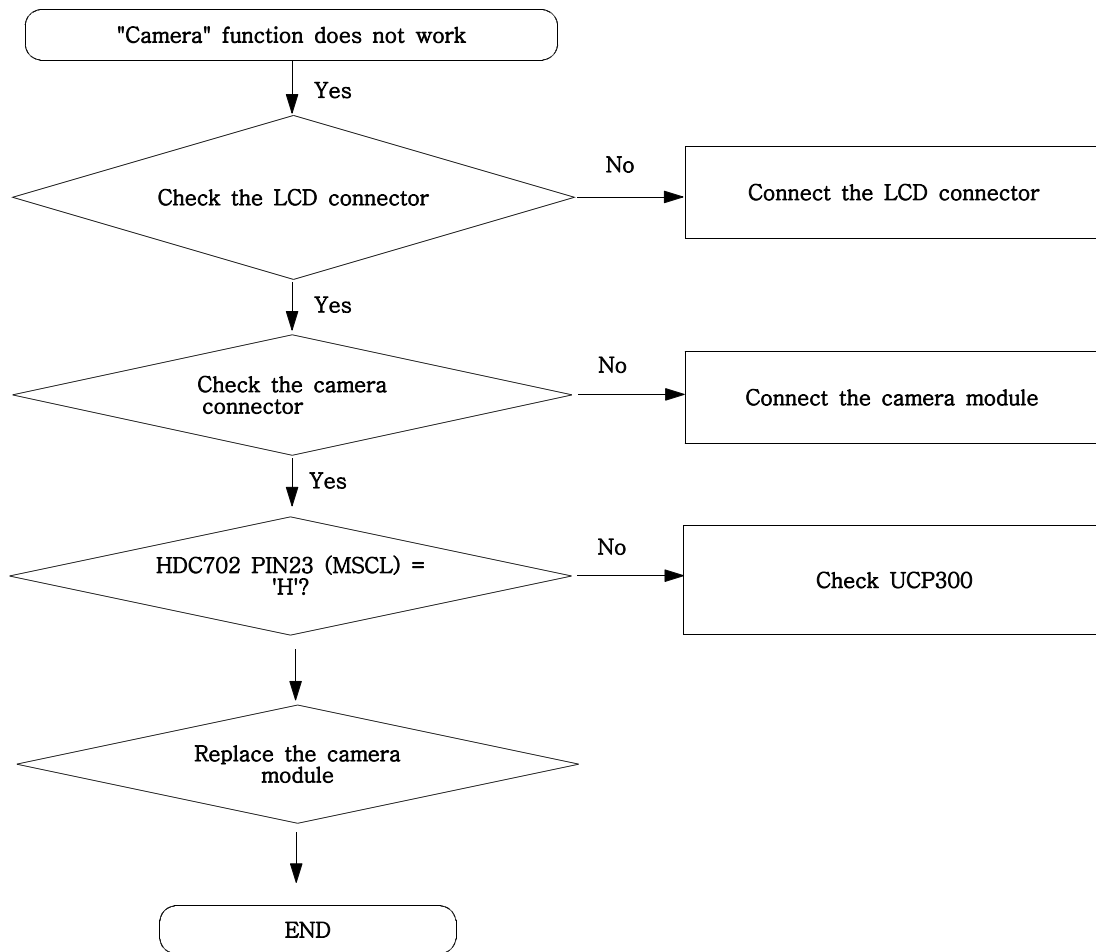


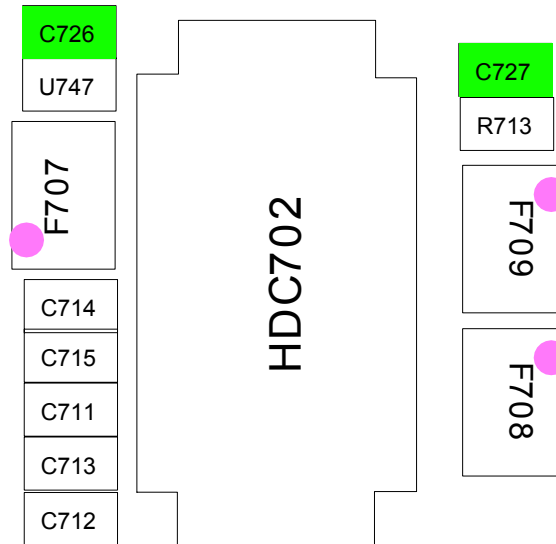
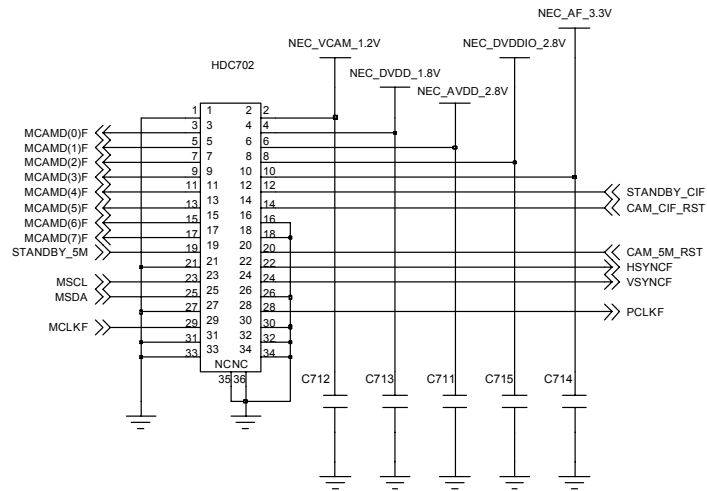


9-5. LCD Part

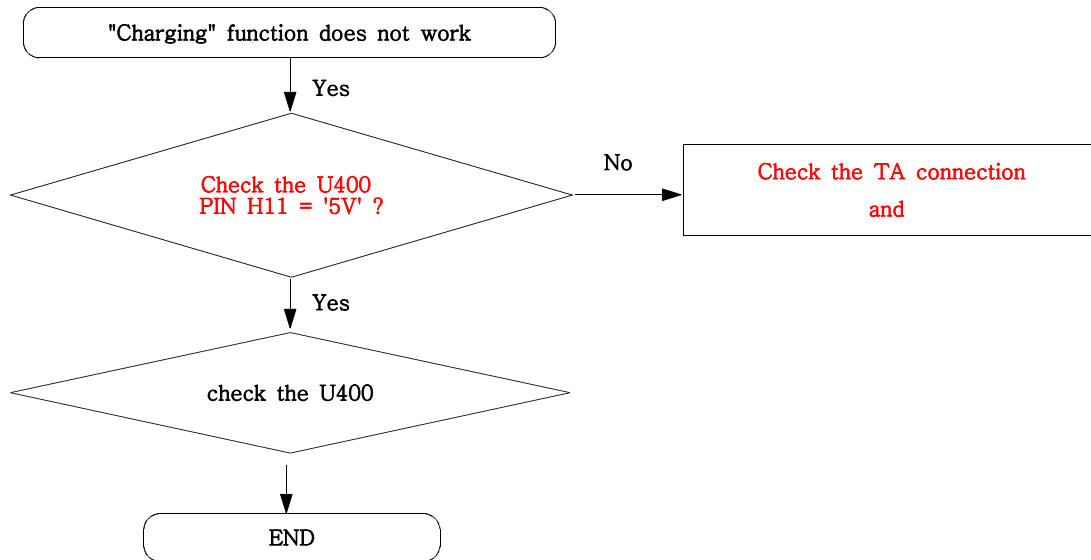


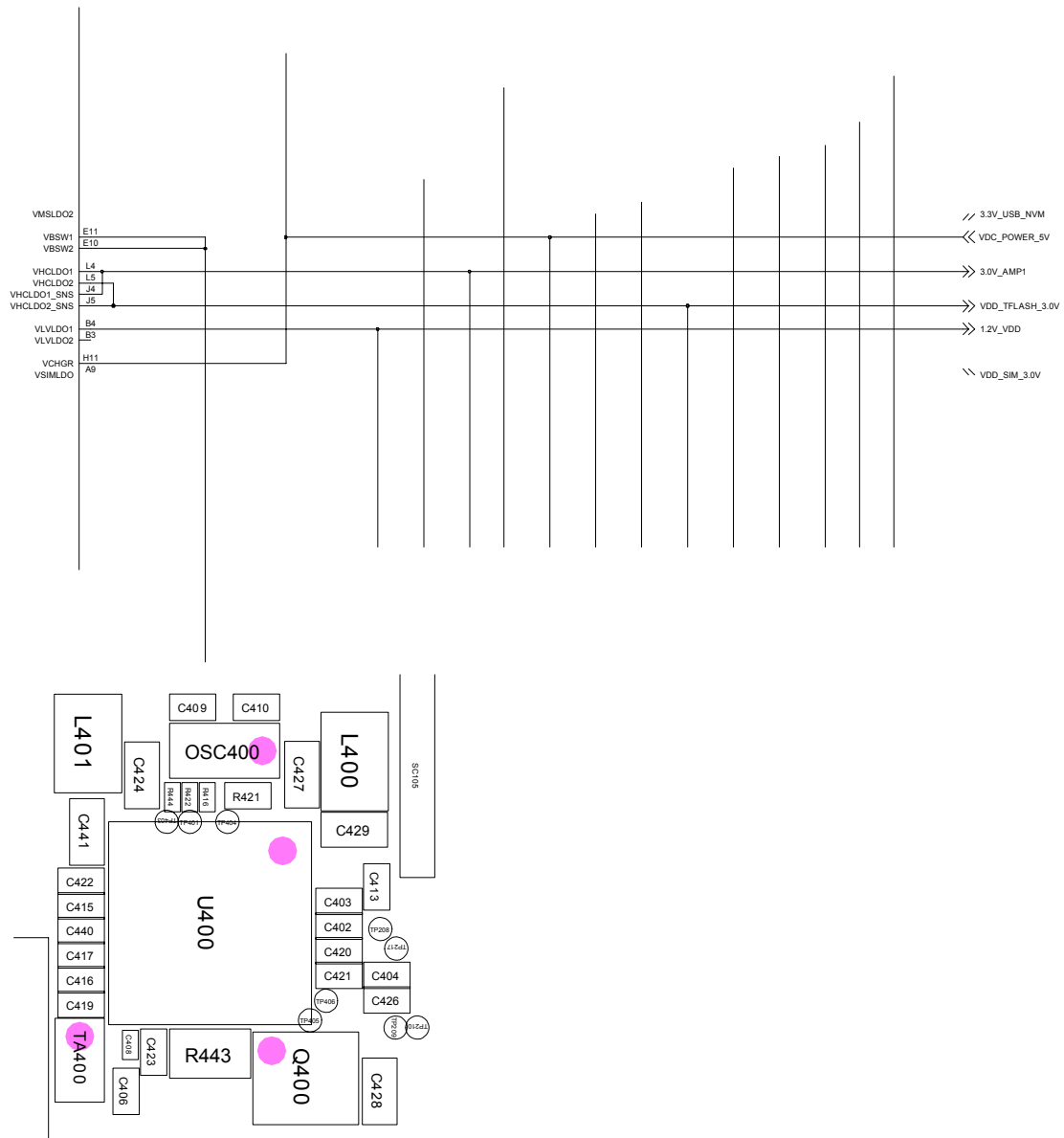
9-6. CAMERA PART



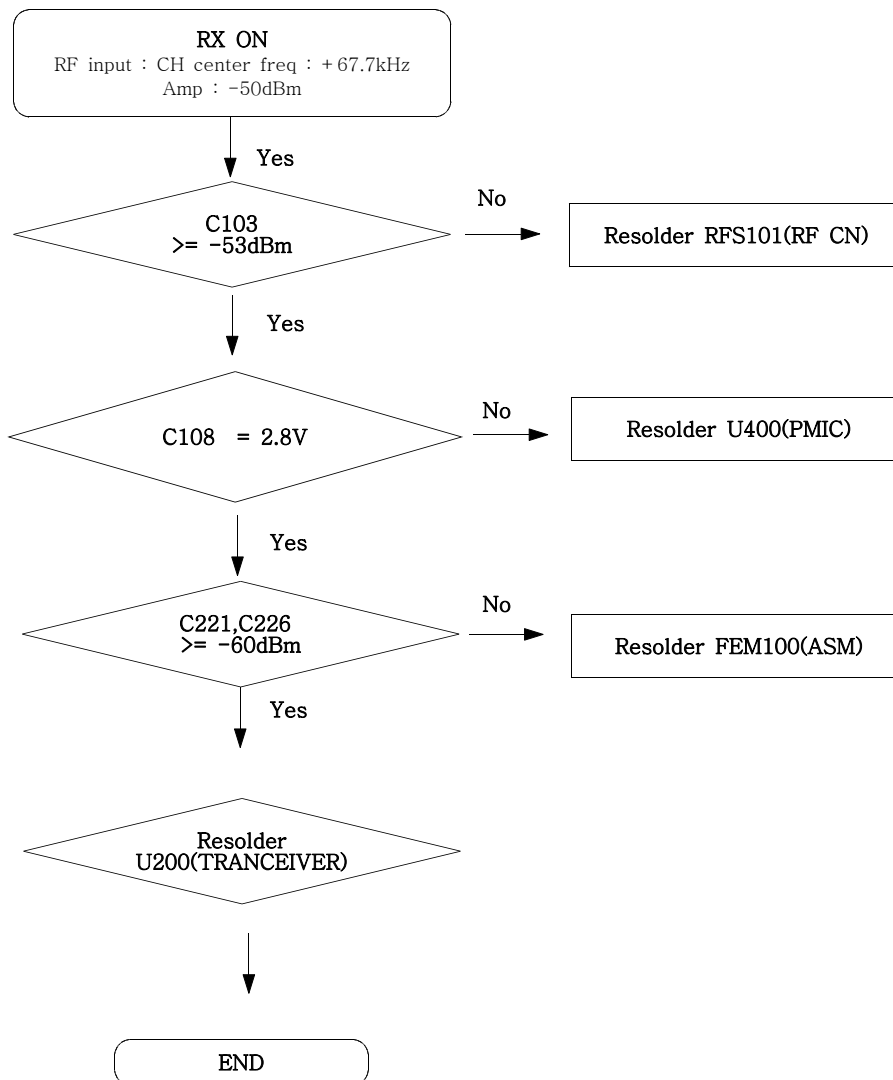


9-8. Charging Part

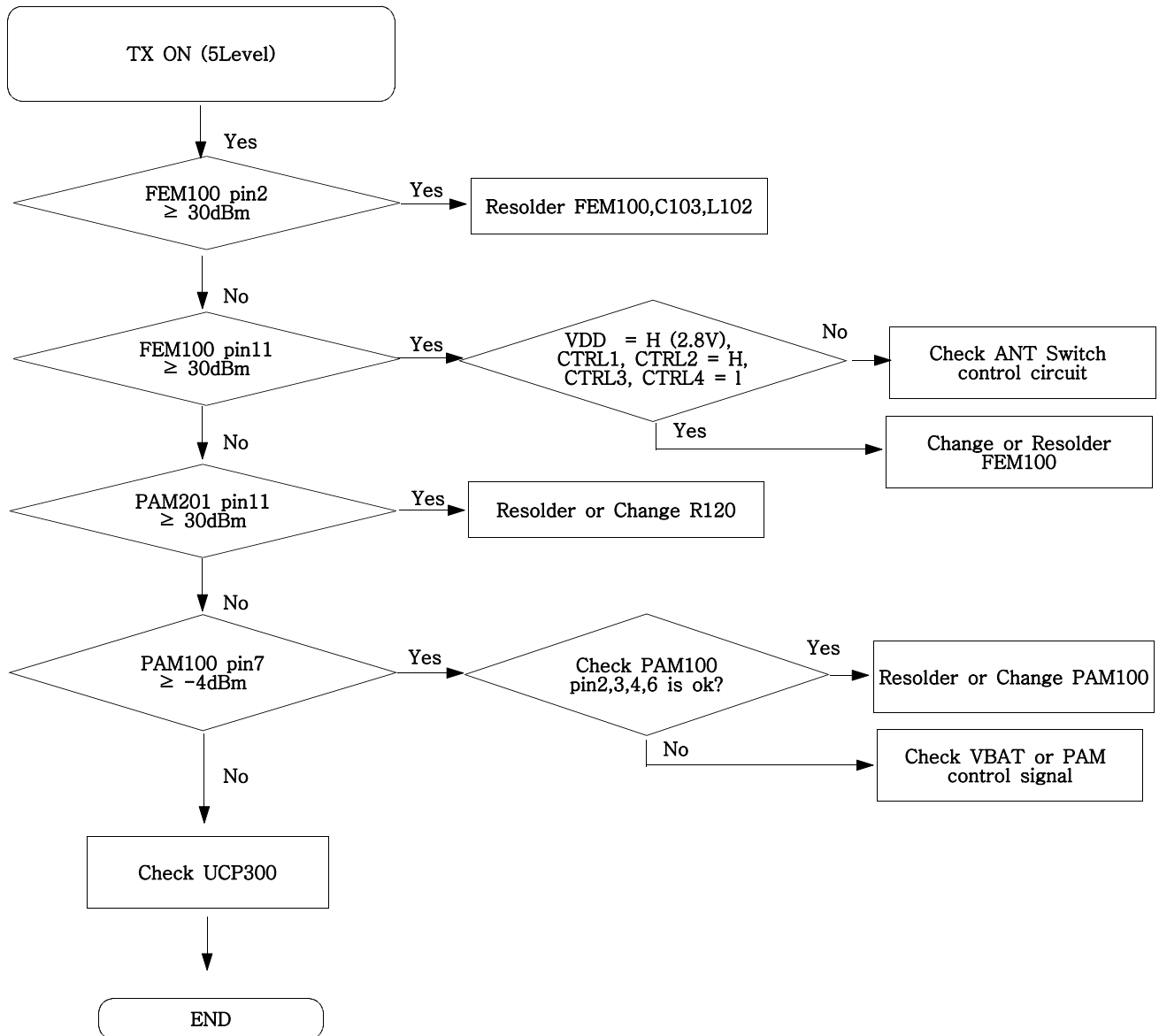




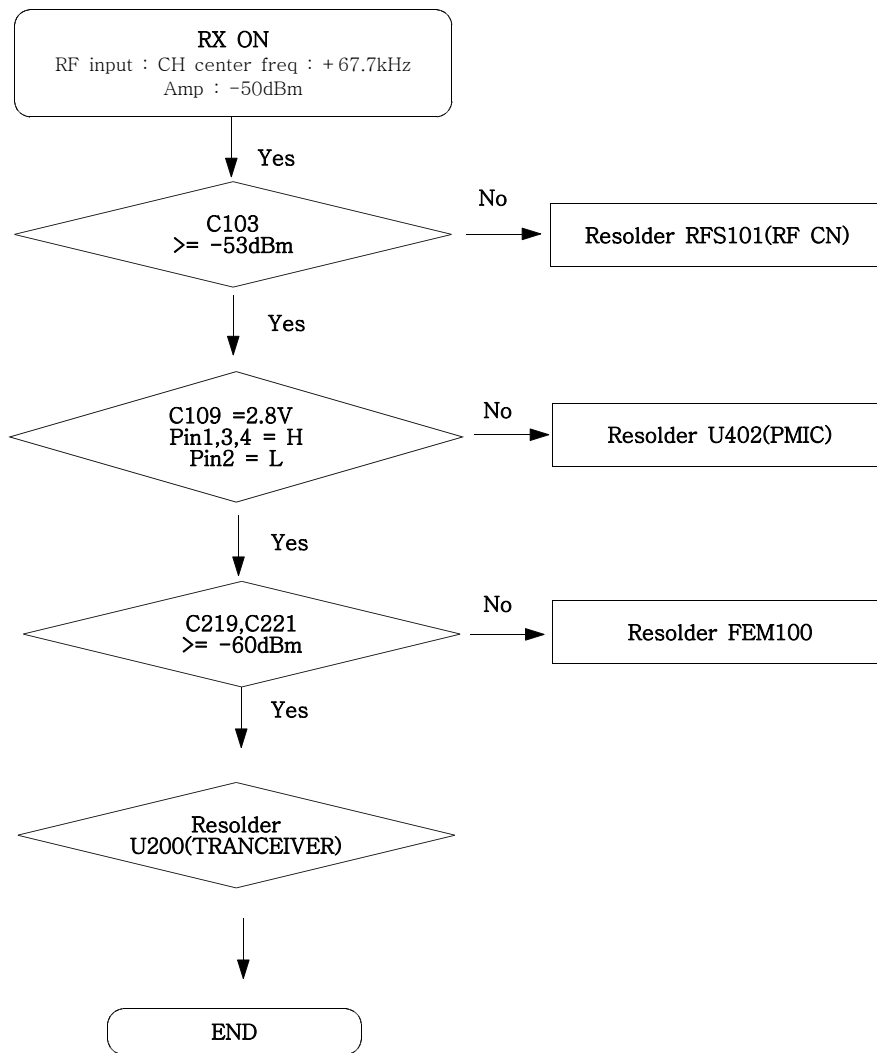
9-9. GSM Receiver



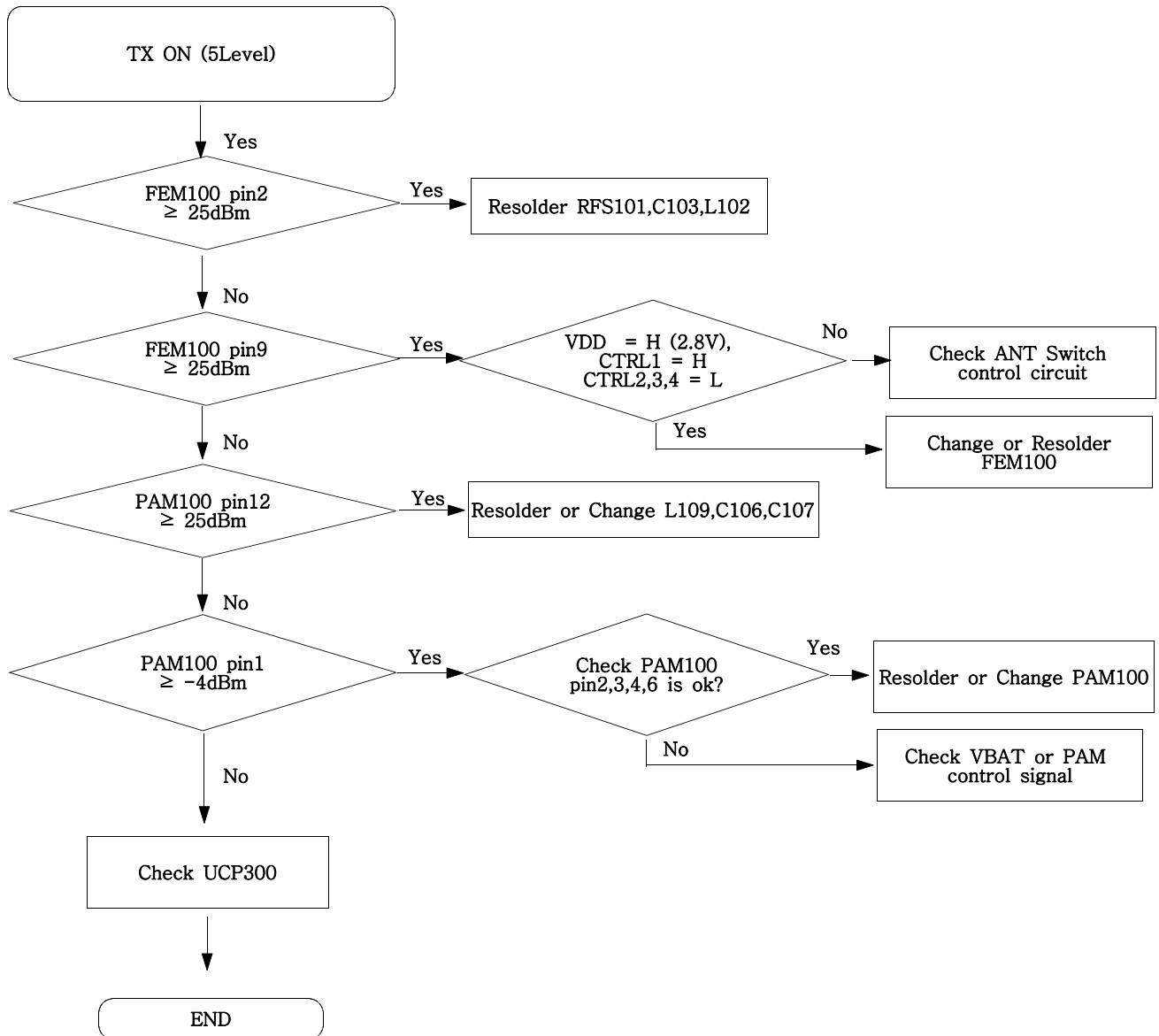
9-10. GSM Transmitter



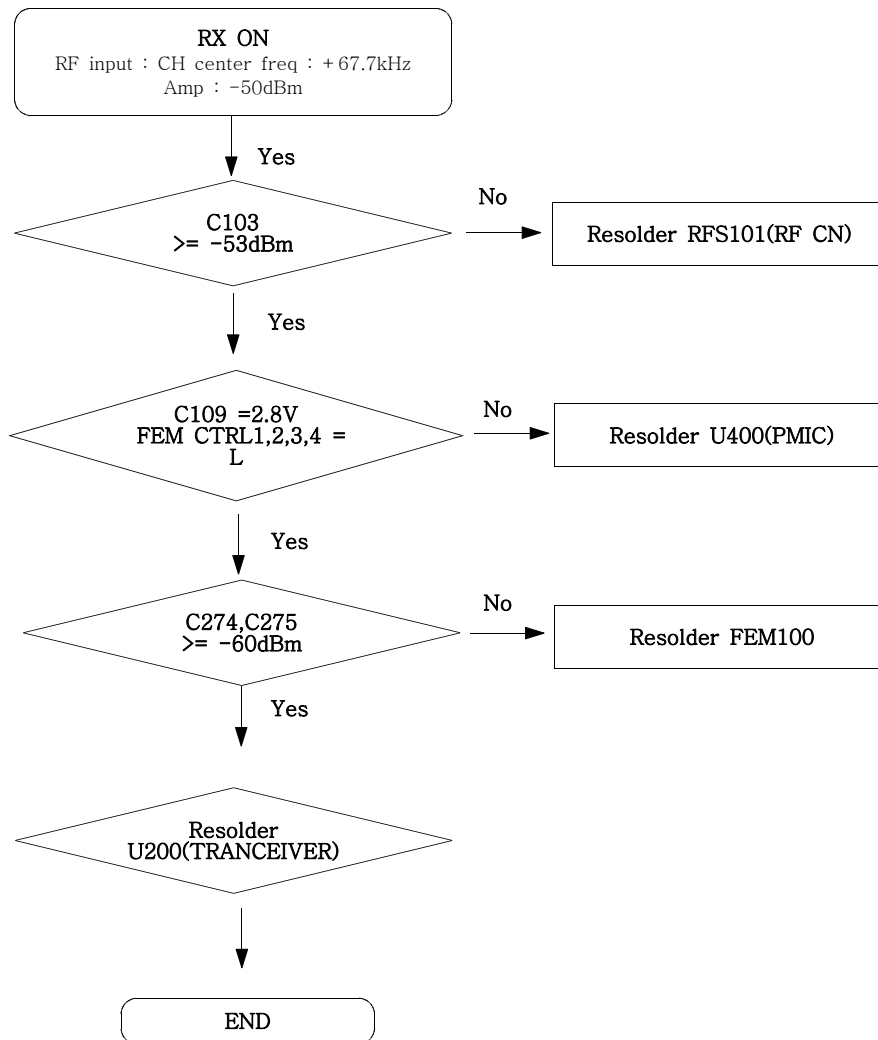
9-11. DCS Receiver



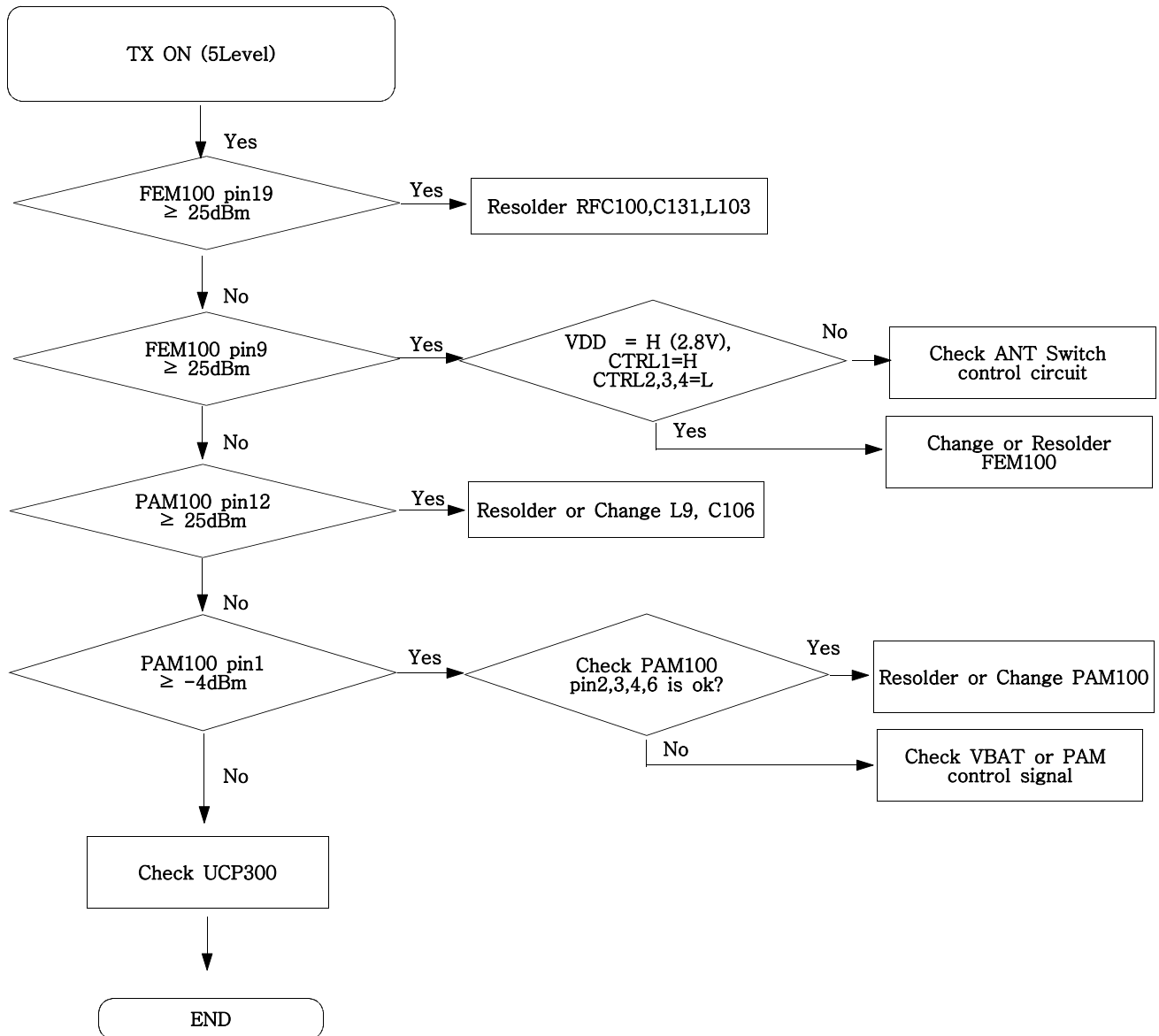
9-12. DCS Transmitter



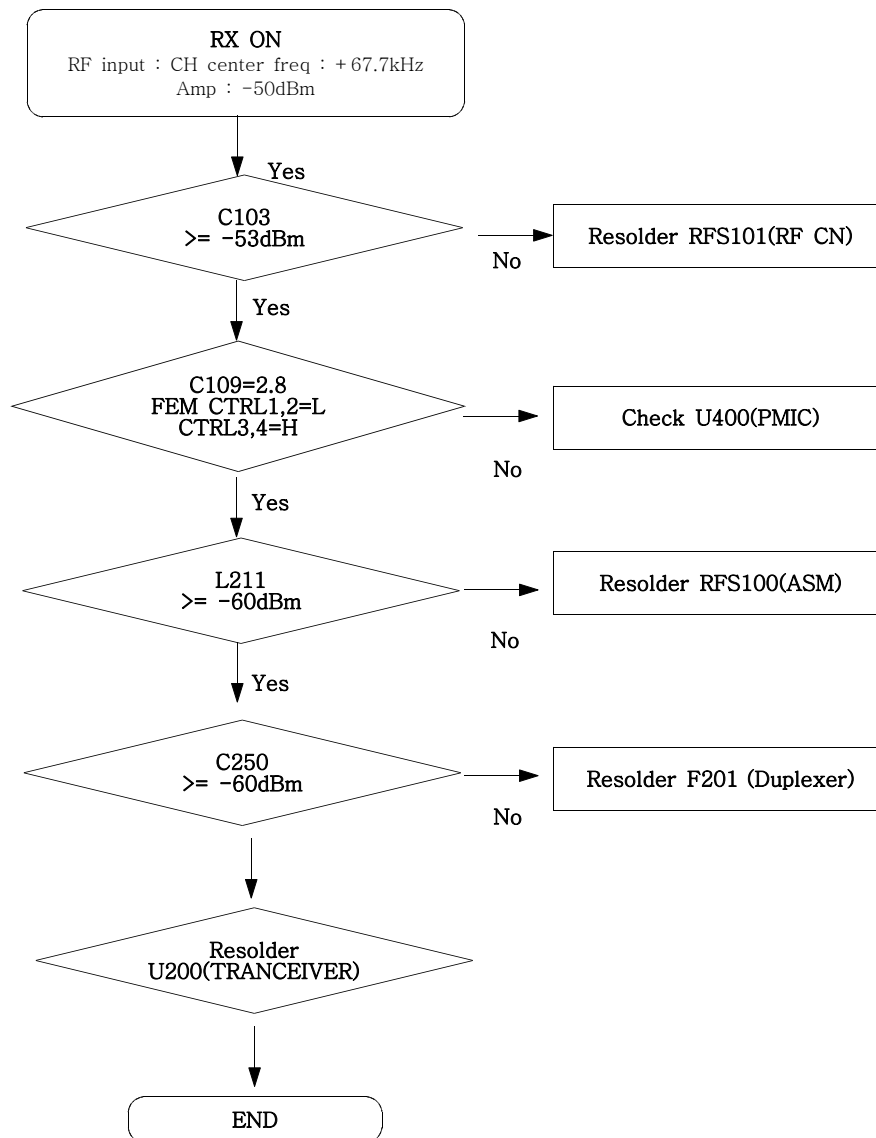
9-13. PCS Receiver



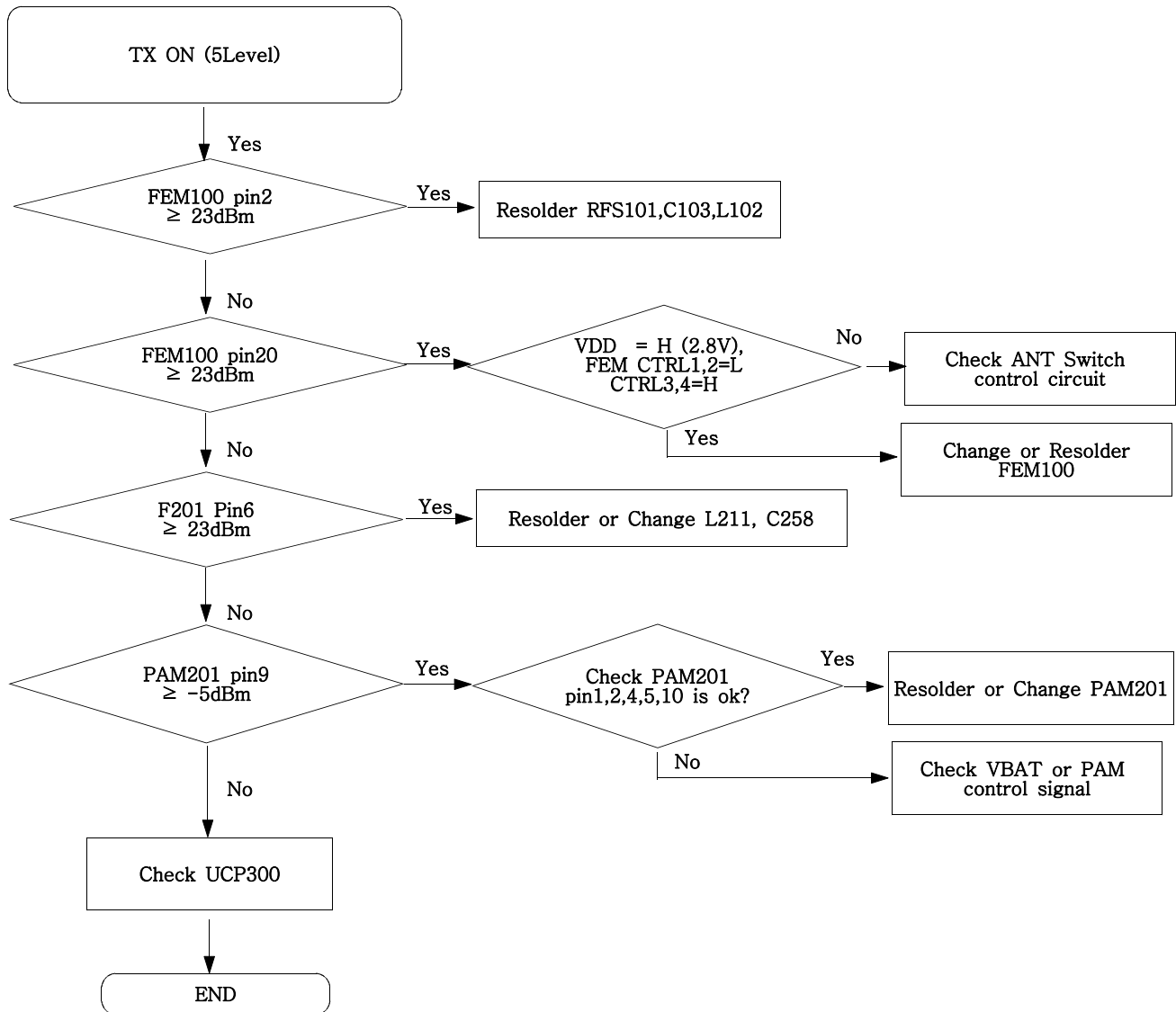
9-14. PCS Transmitter

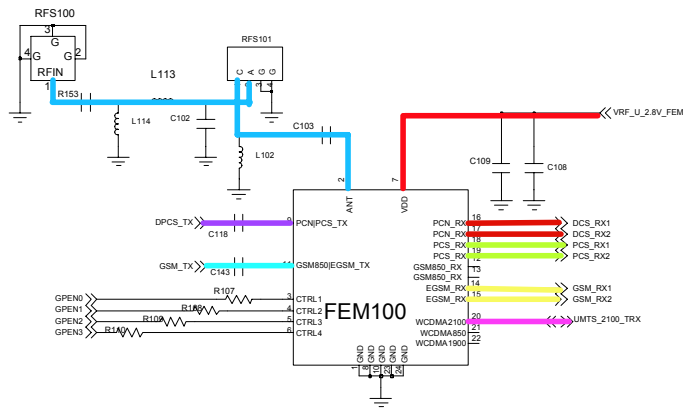


9-15. WCDMA Receiver

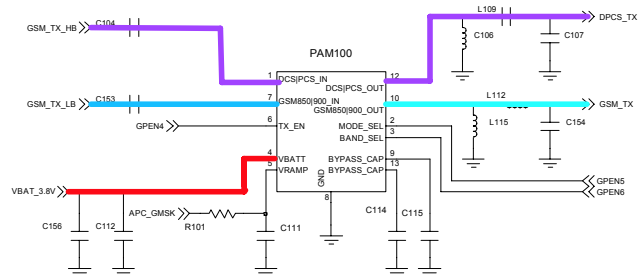


9-16. WCDMA Transmitter

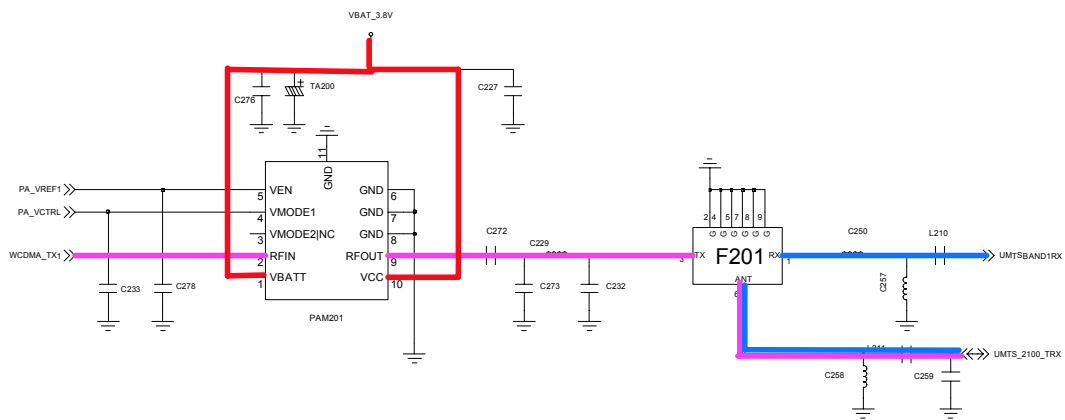




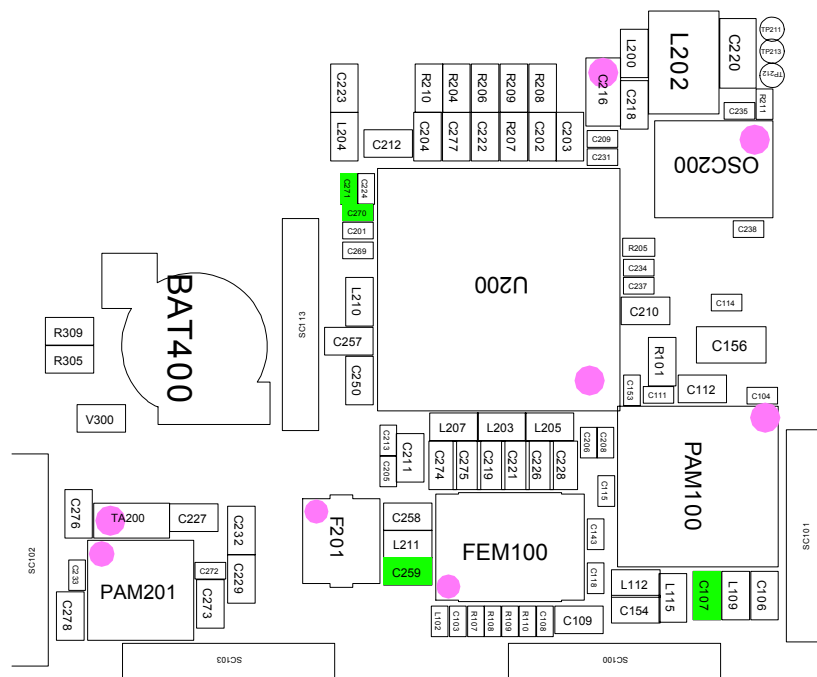
[ASM(GSM/UMTS)]



[PAM(GSM)]



[PAM(UMTS)]



10. Reference data

10-1. 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) Unscrew the REAR at the four points.
- 2) Disassemble the IF cover and SD card cover



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

2

- 1) Disassemble the Rear from the bottom side to the upper side.



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

3

- 1) Disassemble the touch-key connector, antenna cable, SPK connector, camera connector
- 2) Unscrew the screw



1) When PBA is separated from LCD Connector, Be careful not to damage!

4

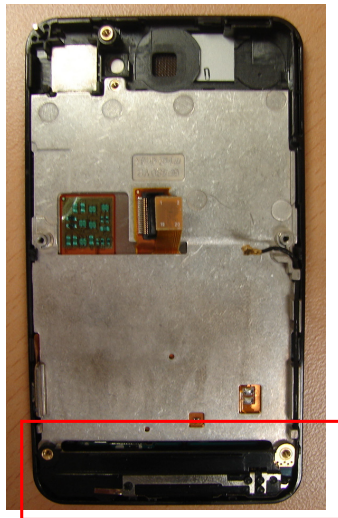
- 1) Disassemble the PBA from the FRONT ASS'Y



1) Be careful not to damage FPCB!

5

1) Remove the antenna and antenna cable



1) Be careful not to damage antenna cable !

6

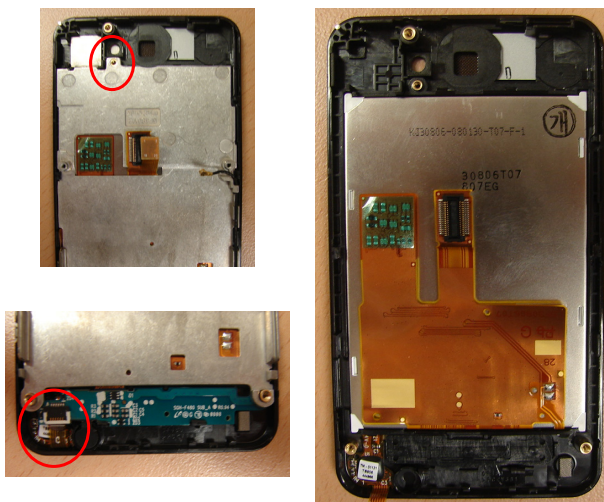
1) Remove the SPK ass'y and camera



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

7

1) Remove the screw
2) Disassemble the touch key FPCB
3) Remove the bracket



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

11-2. Assembly Instructions

1

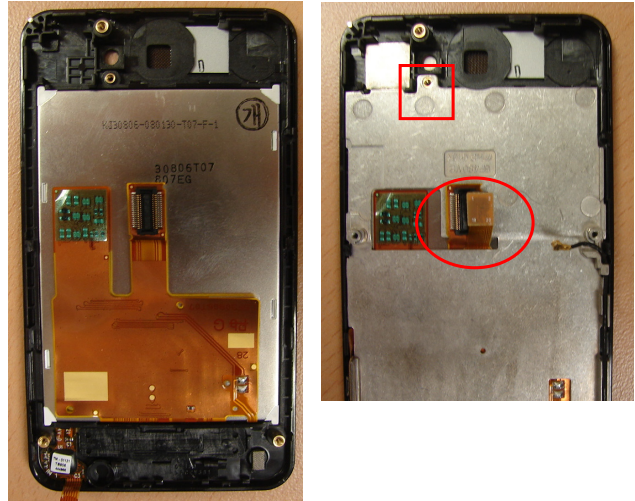
1) Assemble the LCD on the front



1) Be careful not to damage LCD FPCB!

2

1) Insert the key pad in the front
2) Assemble the bracket on the front and insert the screw

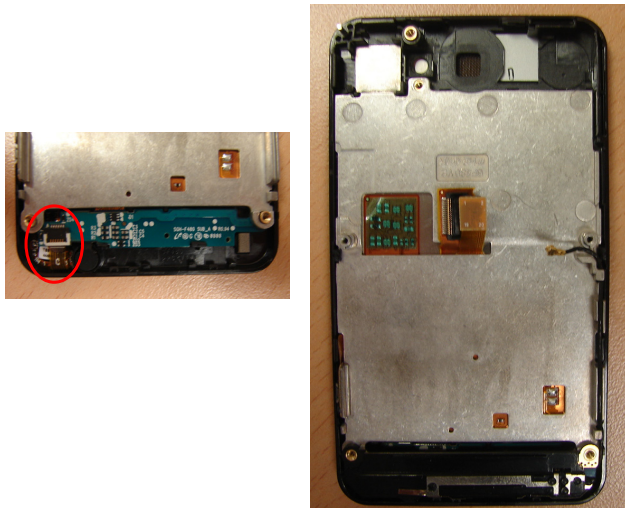


1) Be careful not to damage LCD FPCB!

2) Torque **kgf.cm**

3

1) Insert the touch key FPCB
2) Assemble Antenna and take care of the antenna cable



1) Be careful not to damage the antenna cable !

4

1) Connect the LCD connector and assemble the PBA on the bracket
2) Connect the touch-key connector, antenna cable, SPK connector



1) Be sure to connect the connectors!

5

1) Insert the screw and connect the camera connector



6

1) Assemble the side key , camera key and power key.
2) Then assemble the rear .



1) Torque **kgf.cm**

1) Be sure the direction of side key

7

1) Screw up the REAR at 4 Points.
[]



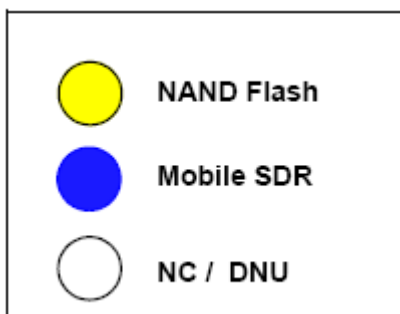
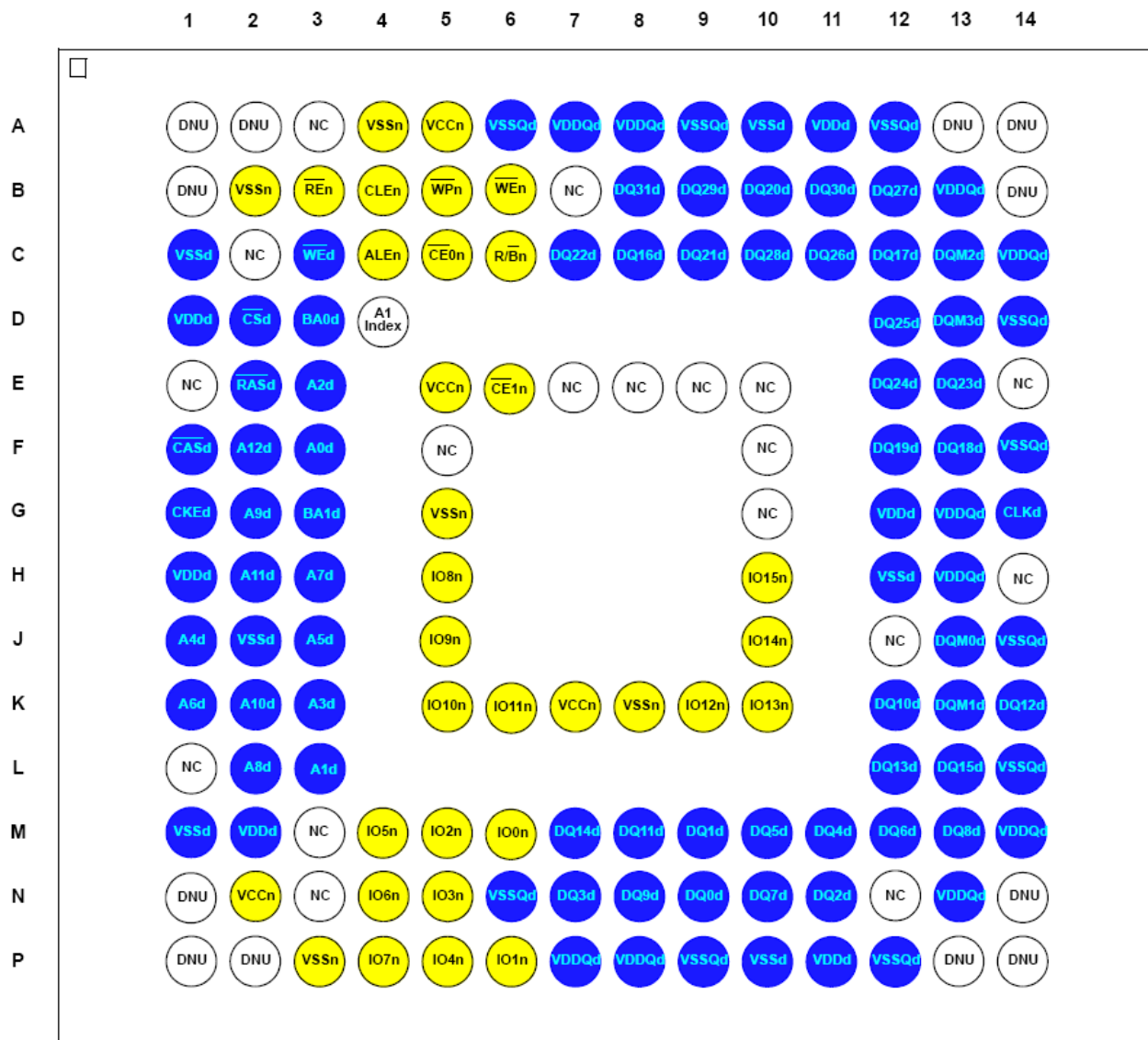
1) Torque **Kgf/cm²**

12. Schematic Diagram

- NC Point

 : NC Point

UME300



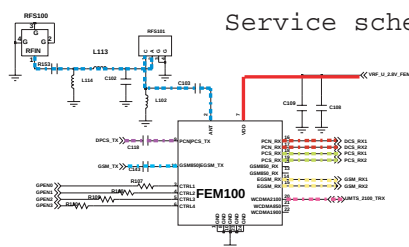
U200

	1	2	3	4	5	6	7	8	9	10	11	12	13
A	○	○	○	○	○	○	○	○	○	○	○	○	○
B	●	○	○	○	○	○	○	○	○	○	○	○	○
C	○	○	○								○	○	○
D	○	○	○		○	○	○	○	○		○	○	○
E	○	○	○		○	○	○	○	○		○	○	○
F	○	●	○		○	○	○	○	○		○	○	○
G	○	●	○		○	○	○	○	○		○	○	○
H	○	○	○		○	○	○	○	○		○	●	○
J	○	○	○		○	○	○	○	○		○	○	○
K	○	○	○		○	○	○	○	○		○	○	○
L	○	○	○								○	○	○
M	○	○	○	○	○	○	●	○	○	○	○	○	○
N	○	○	○	○	○	○	○	○	○	○	○	○	○
												● : NC	

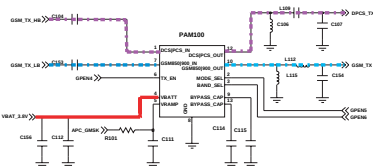
U400

11	10	9	8	7	6	5	4	3	2	1	
○	○	○	○	○	○	○	○	○	○	○	L
○	○	○	○	○	○	○	○	○	○	○	K
○	○	○	○	○	○	○	○	○	○	○	J
○	○	○	○	○	○	○	○	○	○	○	H
○	○	○	○	○	○	○	○	○	○	○	G
○	○	○	○	○	○	○	○	○	○	○	F
○	○	○	○	○	○	○	○	○	○	○	E
○	○	○	○	○	○	○	○	○	○	○	D
○	○	○	○	○	○	○	○	○	○	○	C
○	●	○	○	○	○	○	○	○	○	○	B
○	○	○	○	○	○	○	○	○	○	○	A

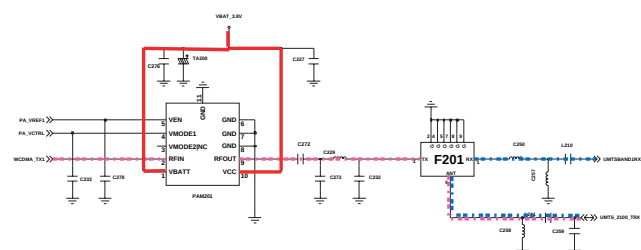
Service schematics



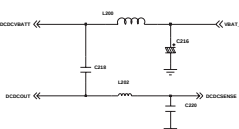
[ASM(GSM/UMTS)]



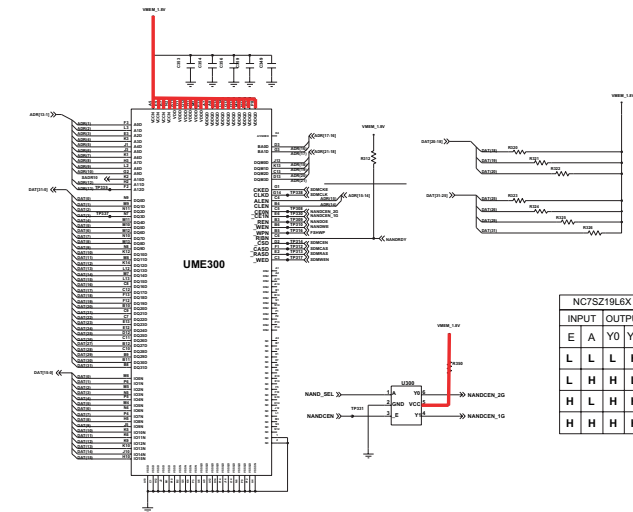
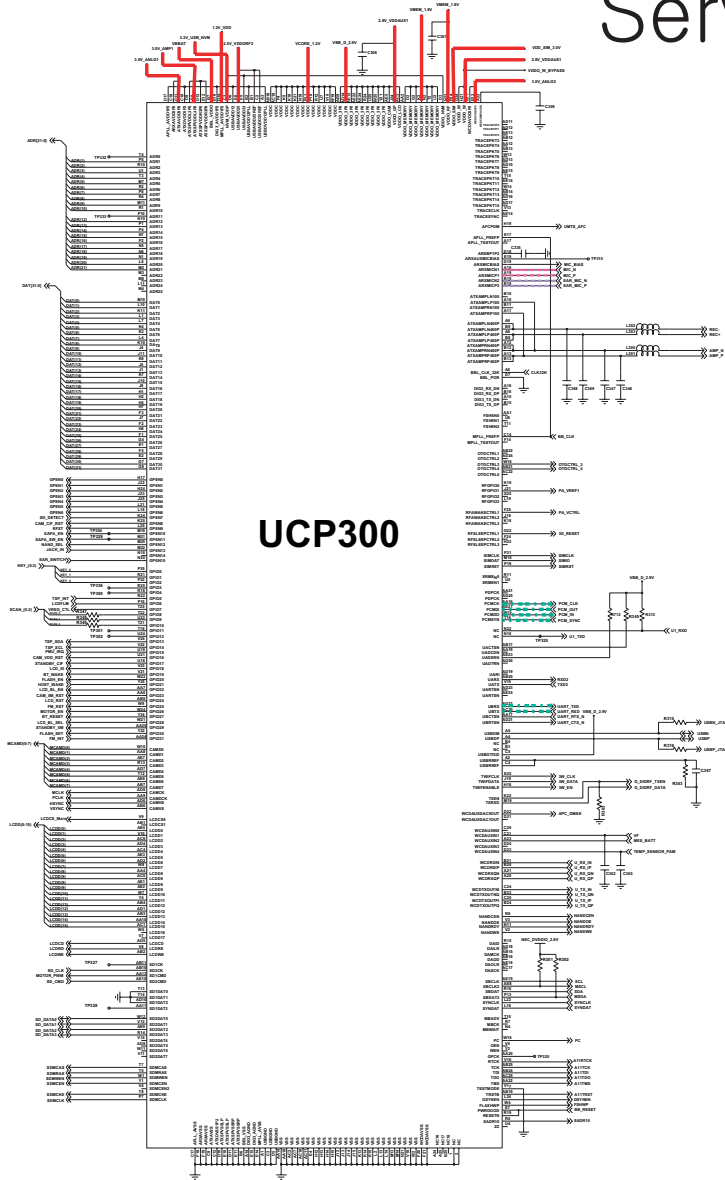
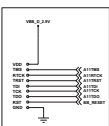
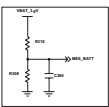
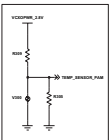
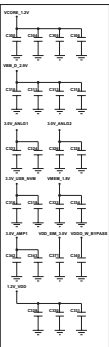
[PAM(GSM)]



[PAM(UMTS)]



Service schematics



< 2G NAND+ 1G NAND + 1G SDRAM MEMORY >

< Test JTAG PAD >

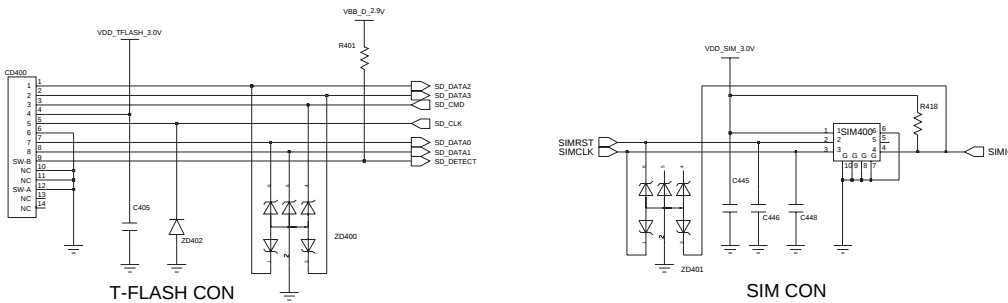
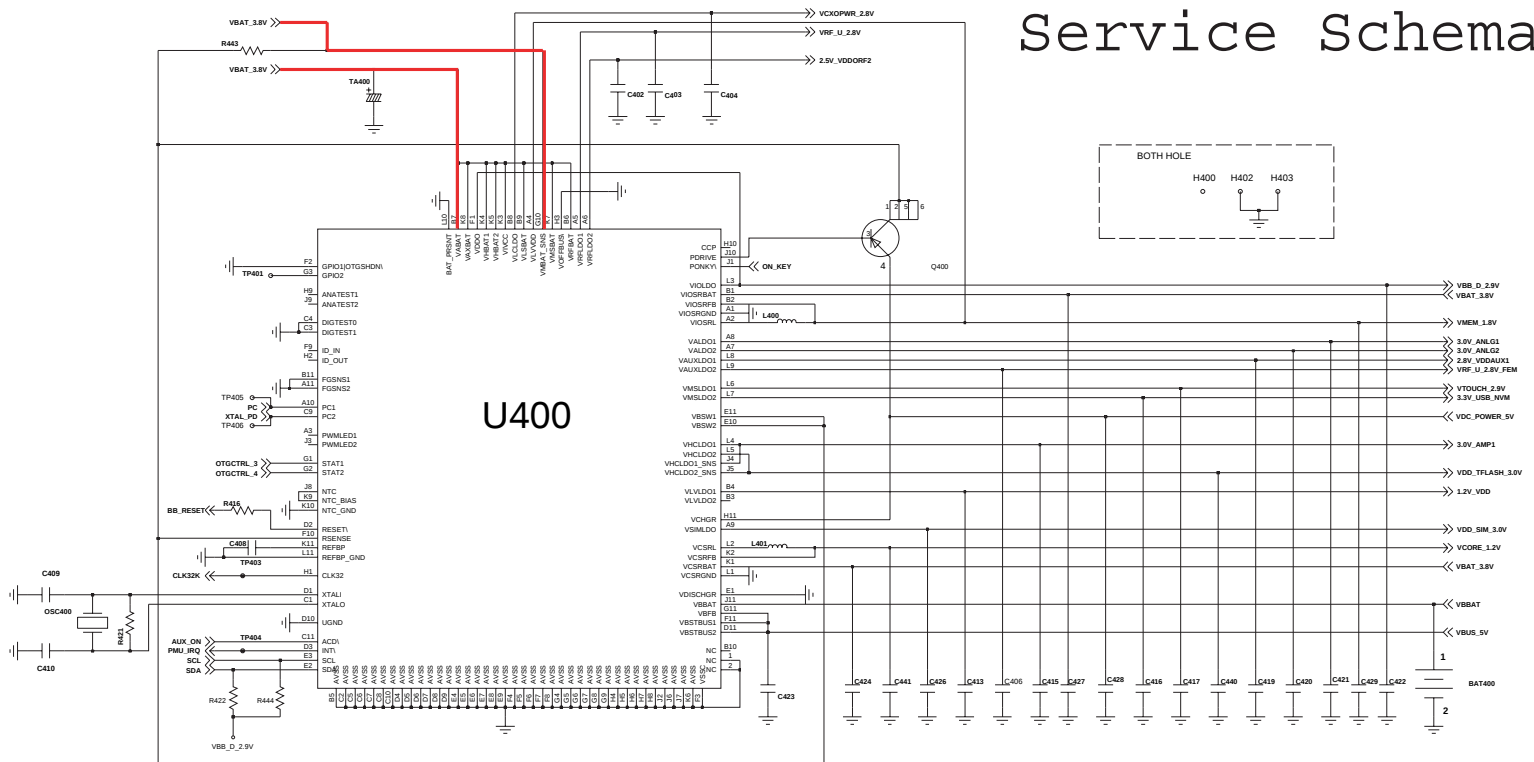


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NC7SZ19L6X			
INPUT	OUTPUT		
E	A	Y0	Y1
L	L	L	H
L	H	H	L
H	L	H	H
H	H	H	H

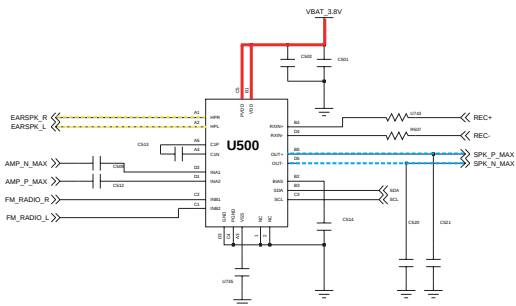
Service Schematic



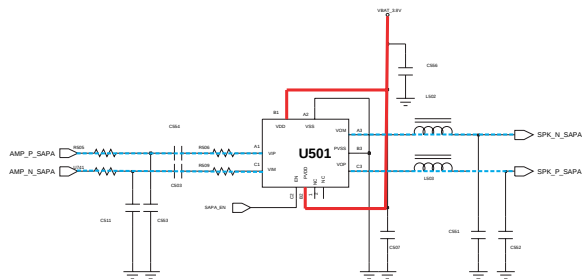
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Service Schematic

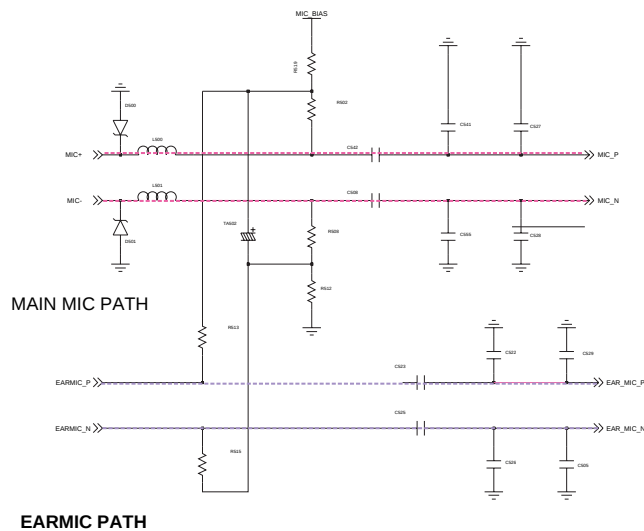
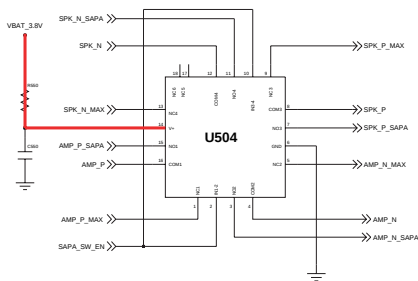
AUDIO AMP(MAX9877)



AUDIO AMP(SAPA)

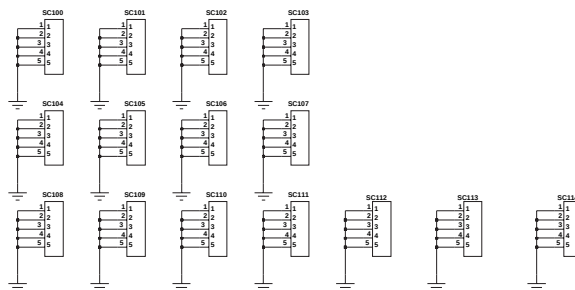


AUDIO SWITCH

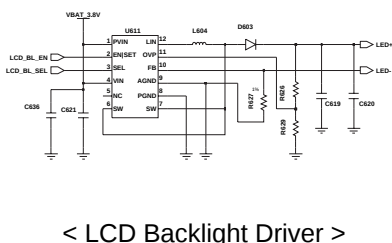
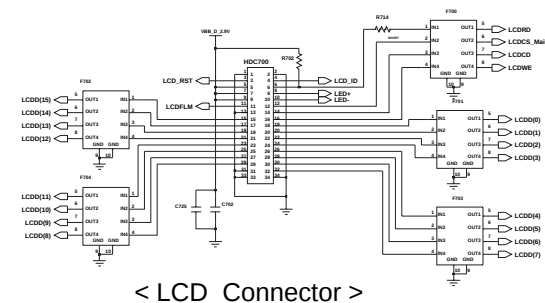
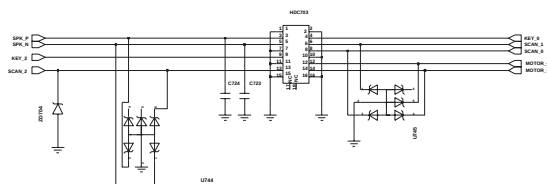
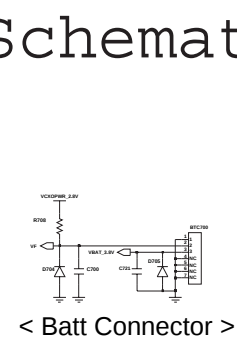
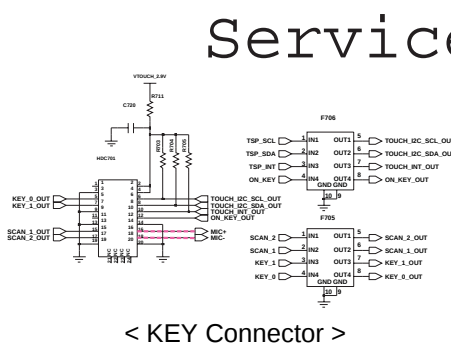
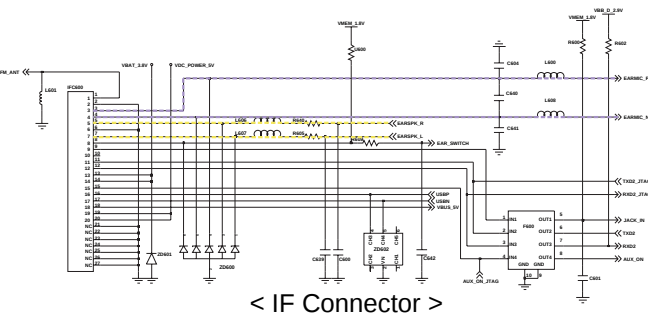


*AUDIO Part

Speaker
EAR Speaker
EAR MIC
Main MIC

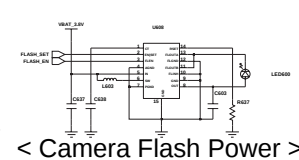
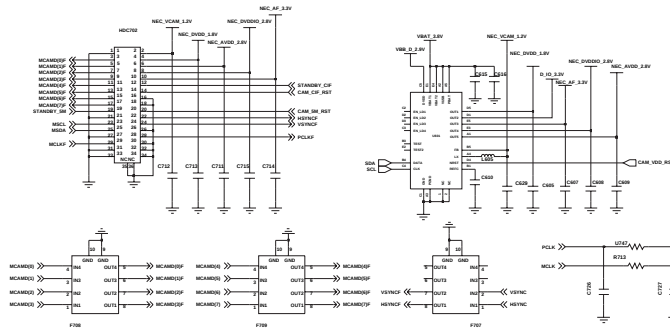
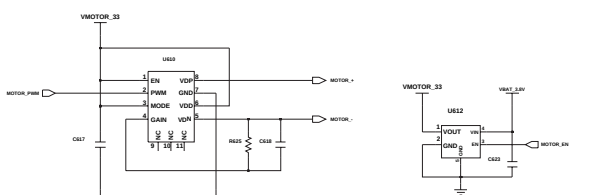


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<CAM CONNECTOR>

< CAMERA POWER >



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