

SAMSUNG

GSM TELEPHONE

SGH-J200

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 specipicity 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 & WCDMA General Specification

	EGSM 900	DCS1800	PCS1900	W-CDMA
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 Slot Period/Frame Period	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	Frame length : 10ms
Modulation	0.3GMSK	0.3GMSK	0.3GMSK	QPSK HQPSK
MS Power	33dBm~5dBm	30dBm~0dBm	30dBm~0dBm	24dBm~-50dBm
Power Class	⁵ (max +33dBm)	⁰ (max +30dBm)	⁰ (max +30dBm)	³ (max +24dBm)
Sensitivity	-102dBm	-100dBm	-100dBm	-106.7dBm
TDMA Mux	8	8	8	
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	PCS1900
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±4dBm	11	8±4dBm
17	9±3dBm	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

- Built-in Digital Cameras(CMOS 1.3 Mega , CMOS VGA)
- 1.76" Main LCD (260K TFT)
- Video Telephony / Streaming
- Bluetooth V2.0 Wireless Technology
- USB 2.0
- MP3 player
- Navi Key(JOG style)
- Downloadable Game via JAVA
- Sending Photo & Video by MMS or E-Mail
- Supporting 72 Polyphonic Ring Tone
- WAP 2.0 Browser (Including XHTML/WCSS MP, w/HTTP)
- External Memory Card Socket(T-flash)
- GSM 900MHz & DCS1800MHz & 1900MHz & WCDMA 2100MHz
- GPRS Class 12

4. Array course control

4-1. Software Adjustments



1. JIG: Download, Trace, Calibration, etc
2. RF test cable: RF test
3. Test cable: JIG to phone
4. TA (Travel Adaptor)
5. Data Link Cable : USB cable
6. Serial cable: PC to JIG

4-2. Software Downloading

4-2-1. Downloading Binary Files

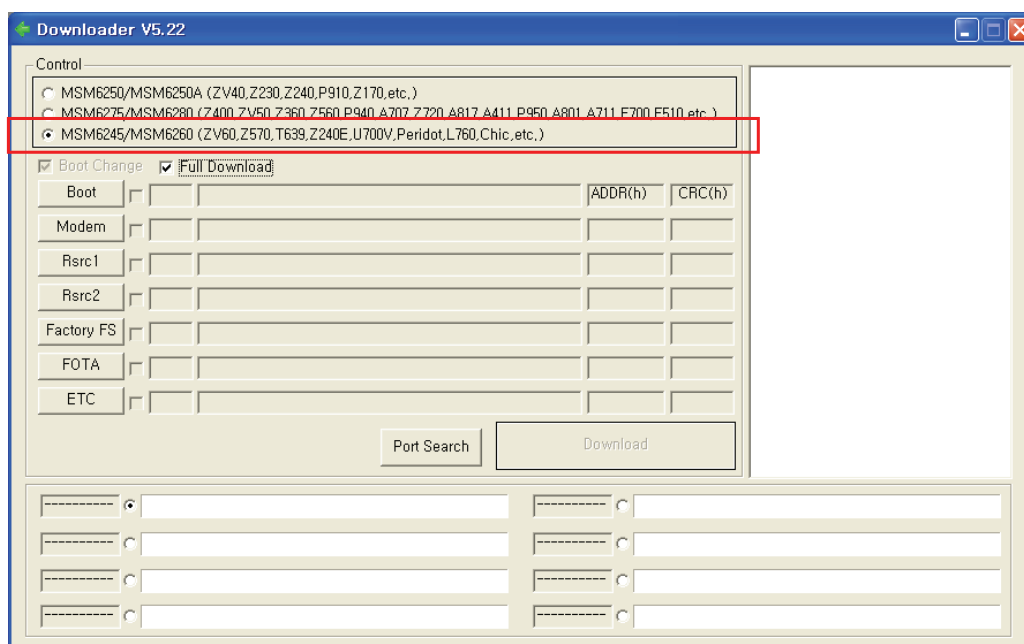
- Four binary files for downloading J200.
 - amss_compressed.bin : Modem binary for communication function
 & Mocha binary for user interface and various application
 - Rsrc1_J200_Generic.rc1: Files need for each application
 - Rsrc2_J200(Low).rc2 : Power on/off animation
 - FactoryFS_J200_Generic.ffc : Default file system to be put into in initial production

4-2-2. Pre-requisite for Downloading

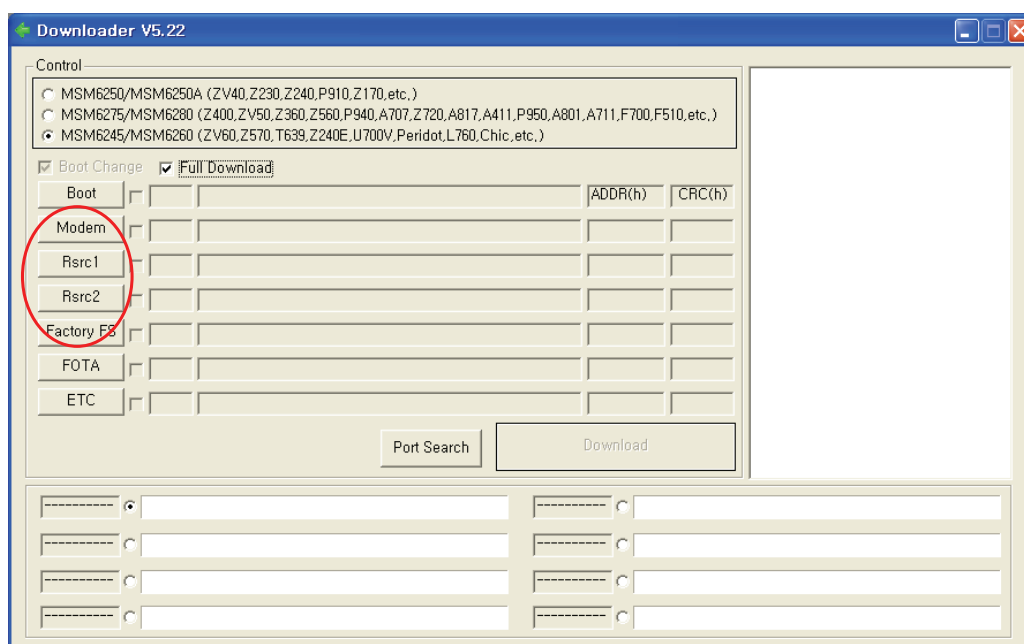
- Downloader Program(MultiLoader V5.32.exe)
- SGH-J200 Mobile Phone
- USB Data Link Cable
- Binary files

4-2-3. S/W Downloader Program

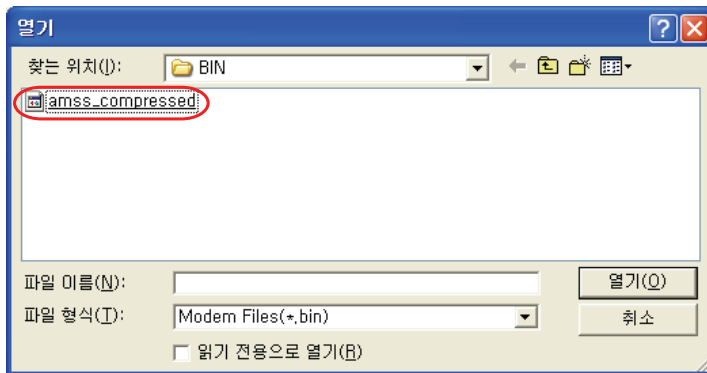
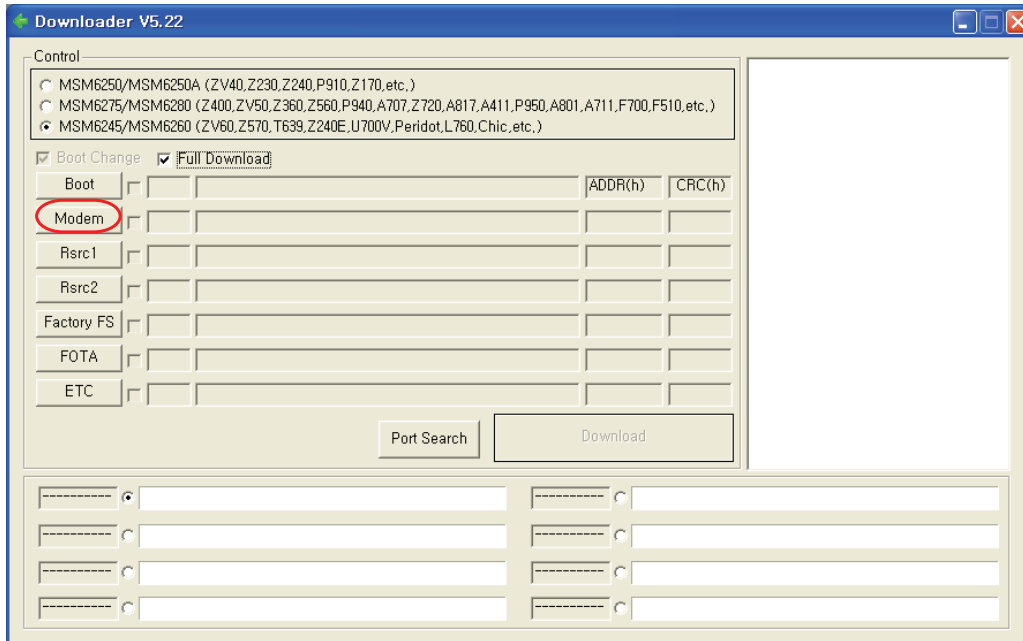
1. Boot the J200 by pressing 'Power ON key' + 'Number 9 key' at the same time-
If you do properly, you can see the following message on LCD "DOWNLOAD" or RED SCREEN
2. Load the binary download program by executing the "MultiLoader V5.32.exe". And then Check the 6245.



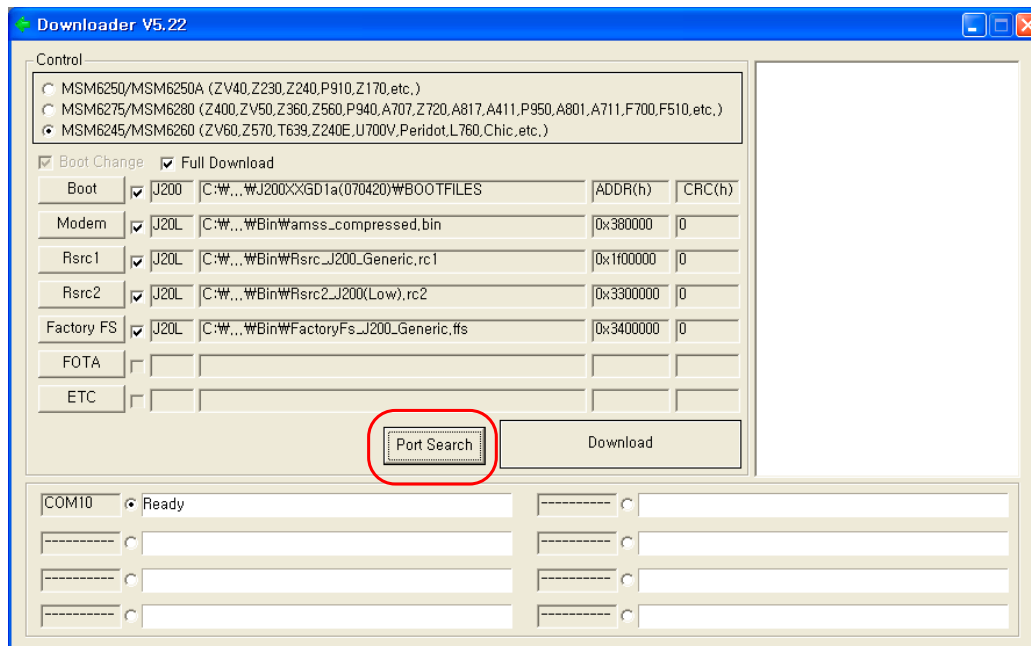
3. Select the check box what you want to download.



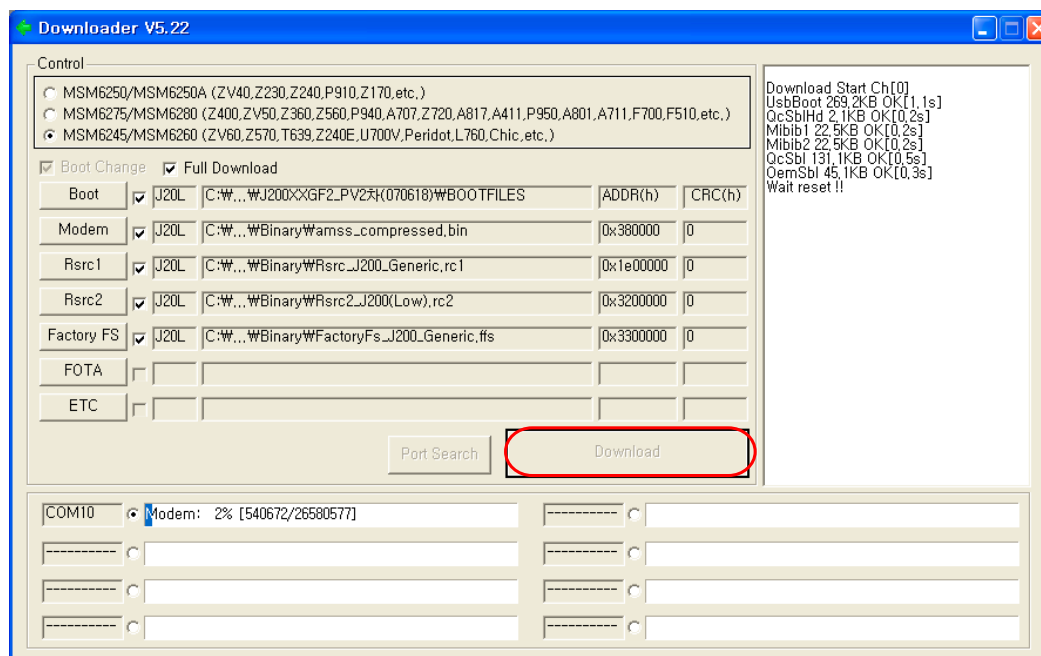
4. Select the binary file what you want to download



5. Now press the button 'Port Search'



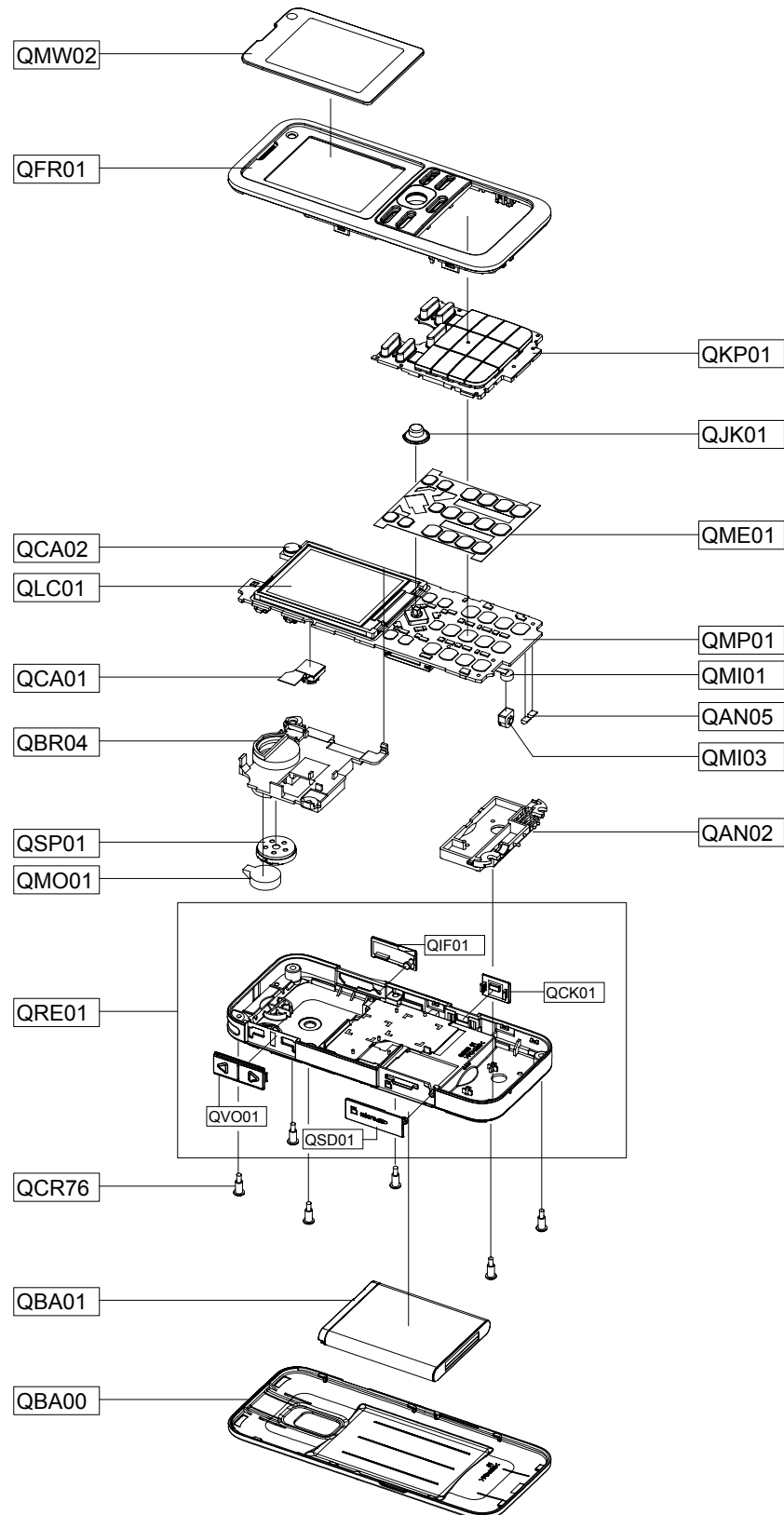
6. Now press the button 'Download'



7. When downloading is complete, UE reboot automatically.
- If there is difference in FactoryFs.bin, UE will format file system automatically.

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-SGHJ200	GH42-01296A
QAN05		ASSY RUBBER-INTENNA	GH98-01592A
QBA00		ASSY COVER-BATTERY	GH98-05118A
QBA01		INNER BATTERY PACK-880MAH , BL	GH43-02772A
QBR04		ASSY BRACKET-SPEAKER	GH98-06607A
QCA01		CAMERA MODULE-SGHJ200(1.3M)	GH59-04603A
QCA02		CAMERA MODULE-SGHJ200(VGA)	GH59-04604A
QCR76		SCREW-SPECIAL	6009-001525
QFR01		ASSY CASE-FRONT	GH98-05116A
QJK01		PMO KEY-JOY STIC	GH72-42275A
QKP01		ASSY KEYPAD-(EU/BLK)	GH98-05124A
QLC01		LCD-SGHJ200	GH07-01146A
QME01		DOME SHEET-J200 DOMESHEET 17KE	GH59-04651A
QMI01		MICROPHONE-ASSY	GH30-00405A
QMI03		RMO RUBBER-MIC	GH73-10752A
QMO01		MOTOR DC-SGHZ130	GH31-00154D
QMP01		PBA MAIN-SGHJ200	GH92-03871A
QMW02		PCT WINDOW-MAIN	GH72-42267A
QSP01		MICRO SPEAKER	3001-002221
QRE01		ASSY CASE-REAR	GH98-05117A
	QVO01	PMO KEY-VOLUME	GH72-42305A
	QCK01	PMO KEY-CAMERA	GH72-42306A
	QIF01	PMO COVER-IF V2	GH72-43256A
	QSD01	PMO COVER-SD V2	GH72-43257A

Description	SEC CODE
SCREW-TAPPING	6002-001409
BAG PE	6902-000634
ADAPTOR-ATADS10EBE,BLK,EU	GH44-01702A
EARPHONE-EARPHONE, BLK,S20P,A	GH59-04615A
LABEL(P)-UNIT SEAL	GH68-00518B
LABEL(P)-IMEI	GH68-01335D
LABEL(R)-WATER SOAK	GH68-09361A
MANUAL USERS-EU POLISH	GH68-16040A
LABEL(R)-MAIN(EU)	GH68-16245A
CUSHION-CASE(EU)	GH69-05857A
BOX-UNIT(POLD)	GH69-05983B
RMO RUBBER-MEMORY	GH73-10859A
RMO RUBBER-MODEM	GH73-10860A
VINYL-BOHO FRONT	GH74-34505A
VINYL-BOHO WINDOW	GH74-34507A
TAPE-CAMERA INSU	GH74-34508A
TAPE-PCB1	GH74-34509A
TAPE-PCB2	GH74-34510A
SPONGE-NAVI	GH74-35179A
TAPE-RF SHEET	GH74-35297A

6. Main Electrical Parts List

Design LOC	Description	SEC Code	STATUS
ANT100	NPR-ANTENNA CONTACT V2	GH71-06570A	SA
ANT101	NPR-ANTENNA CONTACT V2	GH71-06570A	SA
ANT102	ANTENNA-CHIP	4202-001360	SA
BAT400	BATTERY-LI(2ND)	4302-001180	SA
BT100	IC-TRANSCEIVER	1205-002942	SA
BTC700	HEADER-BATTERY	3711-006084	SA
C100	C-CER,CHIP	2203-005659	SA
C101	C-CER,CHIP	2203-005659	SA
C102	C-CER,CHIP	2203-005659	SA
C103	C-CER,CHIP	2203-005659	SA
C104	C-CER,CHIP	2203-005727	SA
C105	C-CER,CHIP	2203-000995	SA
C106	C-CER,CHIP	2203-005056	SA
C107	C-CER,CHIP	2203-005382	SA
C108	C-CER,CHIP	2203-005382	SA
C109	C-CER,CHIP	2203-001437	SA
C113	C-CER,CHIP	2203-005725	SA
C114	C-CER,CHIP	2203-005725	SA
C115	C-CER,CHIP	2203-005725	SA
C116	C-CER,CHIP	2203-006423	SA
C117	C-CER,CHIP	2203-006872	SA
C118	C-CER,CHIP	2203-006872	SA
C119	C-CER,CHIP	2203-000627	SNA
C120	C-CER,CHIP	2203-006379	SA
C121	C-CER,CHIP	2203-006423	SA
C122	C-CER,CHIP	2203-006872	SA
C123	C-CER,CHIP	2203-005725	SA
C124	C-CER,CHIP	2203-000233	SA
C125	C-CER,CHIP	2203-006423	SA
C126	C-CER,CHIP	2203-005682	SA
C127	R-CHIP	2007-000171	SA
C128	C-CER,CHIP	2203-000438	SA
C129	C-CER,CHIP	2203-000233	SA
C131	INDUCTOR-SMD	2703-001737	SA
C132	R-CHIP	2007-000171	SA
C133	C-CER,CHIP	2203-006872	SA
C134	C-CER,CHIP	2203-006872	SA
C135	C-CER,CHIP	2203-006872	SA
C136	C-CER,CHIP	2203-006872	SA
C137	C-CER,CHIP	2203-005682	SA
C138	C-CER,CHIP	2203-005682	SA
C140	C-CER,CHIP	2203-006194	SA
C141	C-CER,CHIP	2203-005725	SA
C142	C-CER,CHIP	2203-000438	SA
C143	C-CER,CHIP	2203-005725	SA
C144	C-CER,CHIP	2203-000233	SA
C146	C-CER,CHIP	2203-005789	SA
C147	C-CER,CHIP	2203-002709	SA
C148	C-CER,CHIP	2203-006562	SA
C149	C-CER,CHIP	2203-006872	SA
C150	C-CER,CHIP	2203-006562	SA
C151	C-CER,CHIP	2203-006872	SA
C152	C-CER,CHIP	2203-000233	SA

Design LOC	Description	SEC Code	STATUS
C153	C-CER,CHIP	2203-005736	SA
C154	C-CER,CHIP	2203-000233	SA
C155	C-CER,CHIP	2203-006305	SA
C156	C-CER,CHIP	2203-006562	SA
C157	C-CER,CHIP	2203-000386	SA
C158	C-CER,CHIP	2203-000330	SA
C159	C-CER,CHIP	2203-000233	SA
C160	C-CER,CHIP	2203-006842	SA
C161	C-CER,CHIP	2203-000854	SA
C162	C-CER,CHIP	2203-006648	SA
C163	C-CER,CHIP	2203-005789	SA
C164	C-CER,CHIP	2203-005682	SA
C165	C-CER,CHIP	2203-005682	SA
C166	C-CER,CHIP	2203-002668	SA
C167	C-CER,CHIP	2203-005288	SA
C200	C-CER,CHIP	2203-005390	SA
C201	C-TA,CHIP	2404-001381	SA
C202	C-CER,CHIP	2203-006194	SA
C203	C-CER,CHIP	2203-006194	SA
C204	C-CER,CHIP	2203-000854	SA
C205	C-CER,CHIP	2203-000679	SA
C207	C-CER,CHIP	2203-002668	SA
C208	C-CER,CHIP	2203-005725	SA
C209	C-CER,CHIP	2203-006194	SA
C210	C-CER,CHIP	2203-005736	SA
C211	C-CER,CHIP	2203-006423	SA
C212	C-CER,CHIP	2203-006194	SA
C213	C-CER,CHIP	2203-000438	SA
C214	C-CER,CHIP	2203-005682	SA
C215	C-CER,CHIP	2203-005482	SA
C216	C-CER,CHIP	2203-005806	SNA
C218	C-CER,CHIP	2203-000812	SA
C219	C-CER,CHIP	2203-005450	SA
C221	C-CER,CHIP	2203-005736	SA
C302	C-CER,CHIP	2203-000489	SA
C303	C-CER,CHIP	2203-006462	SA
C304	C-CER,CHIP	2203-005393	SA
C305	C-CER,CHIP	2203-006681	SA
C306	C-CER,CHIP	2203-006872	SA
C307	C-CER,CHIP	2203-006681	SA
C309	C-CER,CHIP	2203-006562	SA
C310	C-CER,CHIP	2203-006872	SA
C311	C-CER,CHIP	2203-006681	SA
C313	C-CER,CHIP	2203-006872	SA
C314	C-CER,CHIP	2203-006681	SA
C315	C-CER,CHIP	2203-006048	SA
C316	C-CER,CHIP	2203-000812	SA
C318	C-CER,CHIP	2203-006423	SA
C319	C-CER,CHIP	2203-000254	SA
C320	C-CER,CHIP	2203-000438	SA
C321	C-CER,CHIP	2203-000438	SA
C322	C-CER,CHIP	2203-000254	SA
C323	C-CER,CHIP	2203-006194	SA

Design LOC	Description	SEC Code	STATUS
C324	C-CER,CHIP	2203-006194	SA
C325	C-CER,CHIP	2203-006562	SA
C326	C-CER,CHIP	2203-000254	SA
C327	C-CER,CHIP	2203-006194	SA
C328	C-CER,CHIP	2203-006681	SA
C329	C-CER,CHIP	2203-000438	SA
C330	C-CER,CHIP	2203-000438	SA
C331	C-CER,CHIP	2203-000254	SA
C332	C-CER,CHIP	2203-000438	SA
C333	C-CER,CHIP	2203-000254	SA
C334	C-CER,CHIP	2203-006681	SA
C335	C-CER,CHIP	2203-006423	SA
C336	C-CER,CHIP	2203-006423	SA
C337	C-CER,CHIP	2203-006194	SA
C338	C-CER,CHIP	2203-006194	SA
C339	C-CER,CHIP	2203-006423	SA
C340	C-CER,CHIP	2203-006423	SA
C341	C-CER,CHIP	2203-006194	SA
C342	C-CER,CHIP	2203-006194	SA
C343	C-CER,CHIP	2203-006048	SA
C344	C-CER,CHIP	2203-000254	SA
C345	C-CER,CHIP	2203-006423	SA
C346	C-CER,CHIP	2203-006423	SA
C347	C-CER,CHIP	2203-006423	SA
C348	C-CER,CHIP	2203-006423	SA
C349	C-CER,CHIP	2203-005482	SA
C350	C-CER,CHIP	2203-006048	SA
C400	C-CER,CHIP	2203-006824	SA
C401	C-CER,CHIP	2203-006824	SA
C402	C-CER,CHIP	2203-006348	SA
C403	C-CER,CHIP	2203-006048	SA
C404	C-CER,CHIP	2203-000233	SA
C405	C-CER,CHIP	2203-000233	SA
C406	C-CER,CHIP	2203-006681	SA
C407	C-CER,CHIP	2203-000278	SA
C408	C-CER,CHIP	2203-006562	SA
C409	C-CER,CHIP	2203-000278	SA
C410	C-CER,CHIP	2203-006562	SA
C411	C-CER,CHIP	2203-000278	SA
C412	C-CER,CHIP	2203-006872	SA
C413	C-CER,CHIP	2203-006825	SA
C414	C-CER,CHIP	2203-000438	SA
C415	C-CER,CHIP	2203-006872	SA
C416	C-CER,CHIP	2203-006824	SA
C417	C-CER,CHIP	2203-000278	SA
C418	C-CER,CHIP	2203-006824	SA
C419	C-CER,CHIP	2203-000812	SA
C420	C-CER,CHIP	2203-006872	SA
C421	C-CER,CHIP	2203-006562	SA
C422	C-CER,CHIP	2203-006825	SA
C423	C-CER,CHIP	2203-000438	SA
C424	C-CER,CHIP	2203-006824	SA
C425	C-CER,CHIP	2203-000438	SA

Design LOC	Description	SEC Code	STATUS
C426	C-CER,CHIP	2203-000233	SA
C427	C-CER,CHIP	2203-000386	SA
C428	C-CER,CHIP	2203-000386	SA
C429	C-CER,CHIP	2203-006048	SA
C430	C-CER,CHIP	2203-006824	SA
C431	C-CER,CHIP	2203-006824	SA
C432	C-CER,CHIP	2203-006048	SA
C433	C-CER,CHIP	2203-006048	SA
C434	C-CER,CHIP	2203-006348	SA
C435	C-CER,CHIP	2203-006348	SA
C436	C-CER,CHIP	2203-006348	SA
C437	C-CER,CHIP	2203-006399	SA
C438	C-CER,CHIP	2203-000812	SA
C439	C-CER,CHIP	2203-000812	SA
C441	C-CER,CHIP	2203-005682	SA
C442	C-CER,CHIP	2203-006048	SA
C448	C-CER,CHIP	2203-006872	SA
C449	C-CER,CHIP	2203-000233	SA
C450	C-CER,CHIP	2203-006824	SA
C451	C-CER,CHIP	2203-000278	SA
C501	C-CER,CHIP	2203-000854	SA
C502	C-TA,CHIP	2404-001381	SA
C503	C-CER,CHIP	2203-000278	SA
C504	C-CER,CHIP	2203-000278	SA
C505	C-CER,CHIP	2203-000438	SA
C506	C-CER,CHIP	2203-000812	SA
C507	C-CER,CHIP	2203-000812	SA
C509	C-CER,CHIP	2203-006137	SA
C510	C-CER,CHIP	2203-006137	SA
C512	C-CER,CHIP	2203-000438	SA
C514	C-TA,CHIP	2404-001377	SA
C515	C-CER,CHIP	2203-005482	SA
C516	C-CER,CHIP	2203-000854	SA
C517	C-CER,CHIP	2203-000386	SA
C518	C-CER,CHIP	2203-000278	SA
C519	C-CER,CHIP	2203-000278	SA
C520	C-CER,CHIP	2203-000278	SA
C521	C-CER,CHIP	2203-006562	SA
C522	C-CER,CHIP	2203-005482	SA
C523	C-CER,CHIP	2203-000854	SA
C524	C-CER,CHIP	2203-006681	SA
C525	C-CER,CHIP	2203-006562	SA
C526	C-CER,CHIP	2203-000854	SA
C527	C-TA,CHIP	2404-001377	SA
C528	C-CER,CHIP	2203-006048	SA
C529	C-CER,CHIP	2203-000386	SA
C530	C-CER,CHIP	2203-000812	SA
C531	C-CER,CHIP	2203-000278	SA
C532	C-CER,CHIP	2203-006048	SA
C533	C-CER,CHIP	2203-000854	SA
C534	C-CER,CHIP	2203-005682	SA
C535	C-CER,CHIP	2203-005682	SA
C602	C-CER,CHIP	2203-000812	SA

Design LOC	Description	SEC Code	STATUS
C603	C-CER,CHIP	2203-000812	SA
C606	C-CER,CHIP	2203-006377	SA
C607	C-CER,CHIP	2203-006681	SA
C608	C-CER,CHIP	2203-006562	SA
C609	C-CER,CHIP	2203-000425	SA
C610	C-CER,CHIP	2203-000425	SA
C611	C-CER,CHIP	2203-000425	SA
C612	C-TA,CHIP	2404-001381	SA
C613	C-CER,CHIP	2203-006562	SA
C614	C-CER,CHIP	2203-006562	SA
C615	C-CER,CHIP	2203-006872	SA
C616	C-CER,CHIP	2203-006562	SA
C617	C-CER,CHIP	2203-006872	SA
C618	C-CER,CHIP	2203-006825	SA
C619	C-CER,CHIP	2203-006562	SA
C620	C-CER,CHIP	2203-006872	SA
C621	C-CER,CHIP	2203-006872	SA
C622	C-CER,CHIP	2203-006562	SA
C623	C-CER,CHIP	2203-006562	SA
C624	C-CER,CHIP	2203-006562	SA
C625	C-CER,CHIP	2203-006872	SA
C626	C-CER,CHIP	2203-006562	SA
C627	C-CER,CHIP	2203-006562	SA
C628	C-CER,CHIP	2203-006562	SA
C629	C-CER,CHIP	2203-006872	SA
C630	C-CER,CHIP	2203-006562	SA
C700	C-CER,CHIP	2203-006872	SA
C701	C-CER,CHIP	2203-006872	SA
C702	C-CER,CHIP	2203-006872	SA
C703	C-CER,CHIP	2203-006681	SA
C704	C-CER,CHIP	2203-000812	SA
C705	C-CER,CHIP	2203-000812	SA
C706	C-CER,CHIP	2203-000812	SA
C707	C-CER,CHIP	2203-000812	SA
C708	C-CER,CHIP	2203-000812	SA
C709	C-CER,CHIP	2203-006872	SA
C710	C-CER,CHIP	2203-006872	SA
C711	C-CER,CHIP	2203-006872	SA
C712	C-CER,CHIP	2203-000812	SA
C713	C-TA,CHIP	2404-001474	SA
C714	C-CER,CHIP	2203-006872	SA
C715	C-CER,CHIP	2203-006872	SA
C800	C-CER,CHIP	2203-000812	SA
C801	C-CER,CHIP	2203-000812	SA
C802	C-CER,CHIP	2203-000812	SA
C803	C-CER,CHIP	2203-000812	SA
C804	C-CER,CHIP	2203-000812	SA
C805	C-CER,CHIP	2203-000812	SA
C806	C-CER,CHIP	2203-000812	SA
CPL200	COUPLER-DIRECTION	4709-001399	SA
D400	DIODE-ARRAY	0407-001002	SA
D401	DIODE-TVS	0406-001215	SA
D402	DIODE-TVS	0406-001215	SA

Design LOC	Description	SEC Code	STATUS
D500	DIODE-TVS	0406-001254	SA
D501	DIODE-TVS	0406-001254	SA
D601	DIODE-TVS	0406-001208	SA
D603	DIODE-TVS	0406-001208	SA
D700	DIODE-ARRAY	0407-001002	SA
D701	DIODE-ZENER	0403-001547	SA
DUF100	FILTER-LC	2909-001285	SA
DUX200	DUPLEXER-SAW	2910-000034	SA
F100	DUPLEXER-FEM	2911-000090	SA
F101	FILTER-SAW	2904-001623	SA
F102	FILTER-SAW	2904-001703	SA
F200	FILTER-SAW	2904-001658	SA
F300	FILTER-EMI SMD	2901-001283	SA
F700	FILTER-EMI/ESD	2901-001418	SA
F701	FILTER-EMI/ESD	2901-001418	SA
F702	FILTER-EMI/ESD	2901-001418	SA
F703	FILTER-EMI/ESD	2901-001418	SA
F705	FILTER-EMI SMD	2901-001413	SA
F707	FILTER-EMI SMD	2901-001413	SA
IFC600	SOCKET-INTERFACE	3710-002499	SA
L101	INDUCTOR-SMD	2703-002204	SA
L102	INDUCTOR-SMD	2703-002204	SA
L103	INDUCTOR-SMD	2703-002551	SNA
L104	INDUCTOR-SMD	2703-002901	SNA
L105	INDUCTOR-SMD	2703-002858	SA
L106	C-CER,CHIP	2203-005736	SA
L109	INDUCTOR-SMD	2703-002858	SA
L110	INDUCTOR-SMD	2703-001750	SA
L111	INDUCTOR-SMD	2703-002793	SA
L112	C-CER,CHIP	2203-005736	SA
L114	INDUCTOR-SMD	2703-001178	SA
L115	INDUCTOR-SMD	2703-002793	SA
L116	INDUCTOR-SMD	2703-002901	SNA
L119	INDUCTOR-SMD	2703-002901	SNA
L121	INDUCTOR-SMD	2703-001786	SA
L124	BEAD-SMD	3301-001534	SA
L201	INDUCTOR-SMD	2703-001747	SA
L208	BEAD-SMD	3301-001756	SA
L209	INDUCTOR-SMD	2703-001750	SA
L301	INDUCTOR-SMD	2703-001747	SA
L400	INDUCTOR-SMD	2703-002872	SA
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L501	BEAD-SMD	3301-001756	SA
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L602	BEAD-SMD	3301-001756	SA
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L700	BEAD-SMD	3301-001534	SA
LED801	LED	0601-002265	SA

Design LOC	Description	SEC Code	STATUS
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LED803	LED	0601-002265	SA
LED804	LED	0601-002265	SA
LED805	LED	0601-002265	SA
LED806	LED	0601-002265	SA
LED807	LED	0601-002265	SA
LED808	LED	0601-002265	SA
LED809	LED	0601-002265	SA
LED810	LED	0601-002397	SA
LED811	LED	0601-002265	SA
LED812	LED	0601-002397	SA
LED813	LED	0601-002397	SA
LED814	LED	0601-002265	SA
LED815	LED	0601-002265	SA
LED816	LED	0601-002397	SA
OSC100	CRYSTAL-SMD	2801-004515	SA
OSC200	OSCILLATOR-VCTCXO	2809-001280	SA
OSC400	CRYSTAL-SMD	2801-004339	SA
PAM100	IC-POWER AMP	1201-002534	SA
PAM200	IC-POWER AMP	1201-002305	SA
Q200	TR-DIGITAL	0504-001151	SA
Q400	TR-DIGITAL	0504-000168	SA
R101	R-CHIP	2007-008542	SA
R102	R-CHIP	2007-008542	SA
R104	R-CHIP	2007-008542	SA
R105	R-CHIP	2007-008542	SA
R106	R-CHIP	2007-009315	SA
R107	R-CHIP	2007-008774	SA
R108	R-CHIP	2007-007309	SA
R109	R-CHIP	2007-008419	SA
R110	R-CHIP	2007-008419	SA
R111	R-CHIP	2007-008774	SA
R112	R-CHIP	2007-009315	SA
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R114	R-CHIP	2007-008531	SA
R117	R-CHIP	2007-001298	SA
R118	R-CHIP	2007-001305	SA
R119	R-CHIP	2007-001305	SA
R120	R-CHIP	2007-003022	SA
R121	R-CHIP	2007-008588	SA
R122	R-CHIP	2007-001303	SA
R123	R-CHIP	2007-001303	SA
R124	R-CHIP	2007-000170	SA
R125	R-CHIP	2007-007489	SA
R127	R-CHIP	2007-000171	SA
R128	R-CHIP	2007-000171	SA
R129	R-CHIP	2007-008542	SA
R130	R-CHIP	2007-000171	SA
R200	R-CHIP	2007-001298	SA
R201	R-CHIP	2007-001305	SA
R202	R-CHIP	2007-001217	SA
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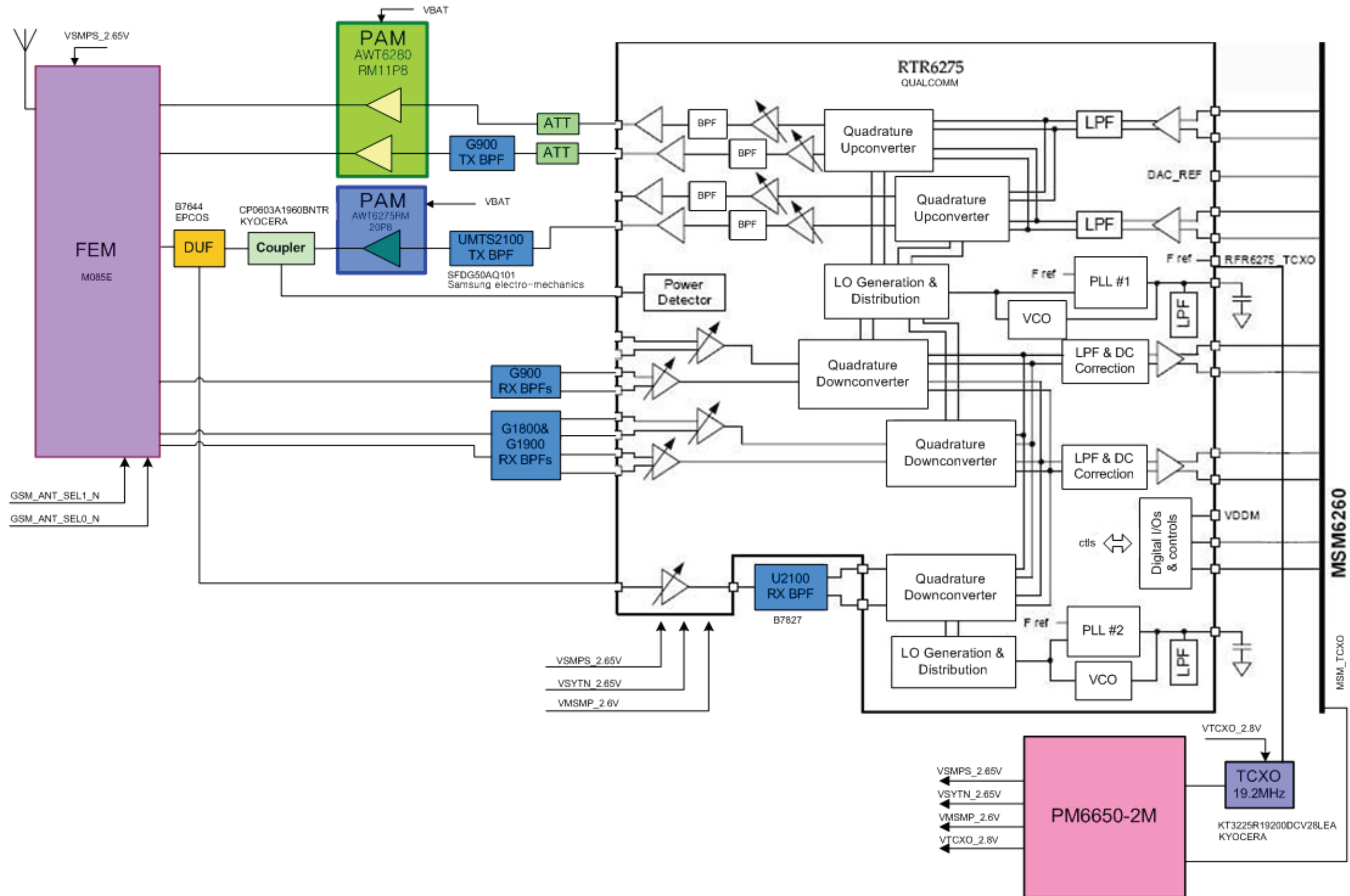
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R303	R-CHIP	2007-008049	SA
R307	R-CHIP	2007-008542	SA
R311	R-CHIP	2007-000170	SA
R313	R-CHIP	2007-007318	SA
R316	R-CHIP	2007-007314	SA
R317	R-CHIP	2007-007135	SA
R318	R-CHIP	2007-000171	SA
R322	R-CHIP	2007-009171	SA
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R326	R-CHIP	2007-007014	SA
R328	R-CHIP	2007-009170	SA
R329	R-CHIP	2007-007317	SA
R330	R-CHIP	2007-007317	SA
R331	R-CHIP	2007-000148	SA
R332	R-CHIP	2007-000148	SA
R334	R-CHIP	2007-000140	SA
R335	R-CHIP	2007-000140	SA
R336	R-CHIP	2007-000171	SA
R400	R-CHIP	2007-000157	SA
R401	R-CHIP	2007-007586	SA
R402	R-CHIP	2007-000162	SA
R403	R-CHIP	2007-000148	SA
R404	R-CHIP	2007-007698	SA
R405	R-CHIP	2007-001298	SA
R406	R-CHIP	2007-007468	SA
R407	R-CHIP	2007-007014	SA
R408	R-CHIP	2007-000165	SA
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R421	R-CHIP	2007-000165	SA
R422	R-CHIP	2007-008263	SA
R423	R-CHIP	2007-007588	SA
R424	R-CHIP	2007-000140	SA
R427	R-CHIP	2007-007132	SA
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R506	R-CHIP	2007-000148	SA
R507	R-CHIP	2007-000140	SA

Design LOC	Description	SEC Code	STATUS
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R511	R-CHIP	2007-000138	SA
R512	R-CHIP	2007-001298	SA
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R810	R-CHIP	2007-001217	SA
R811	R-CHIP	2007-002970	SA
R812	R-CHIP	2007-000138	SA
R813	R-CHIP	2007-000138	SA
R814	R-CHIP	2007-000162	SA
R815	R-CHIP	2007-007009	SA
R816	R-CHIP	2007-007009	SA
RFS100	CONNECTOR-COAXIAL	3705-001358	SA
SC100	ICT SHIELD-FRAME 1	GH70-02609A	SA
SC101	ICT SHIELD-FRAME 2	GH70-02610A	SA
SIM400	CONNECTOR-CARD EDGE	3709-001465	SA
SLC700	CONNECTOR-FPC/FFC/PIC	3708-002222	SA
SLC701	CONNECTOR-FPC/FFC/PIC	3708-002222	SA

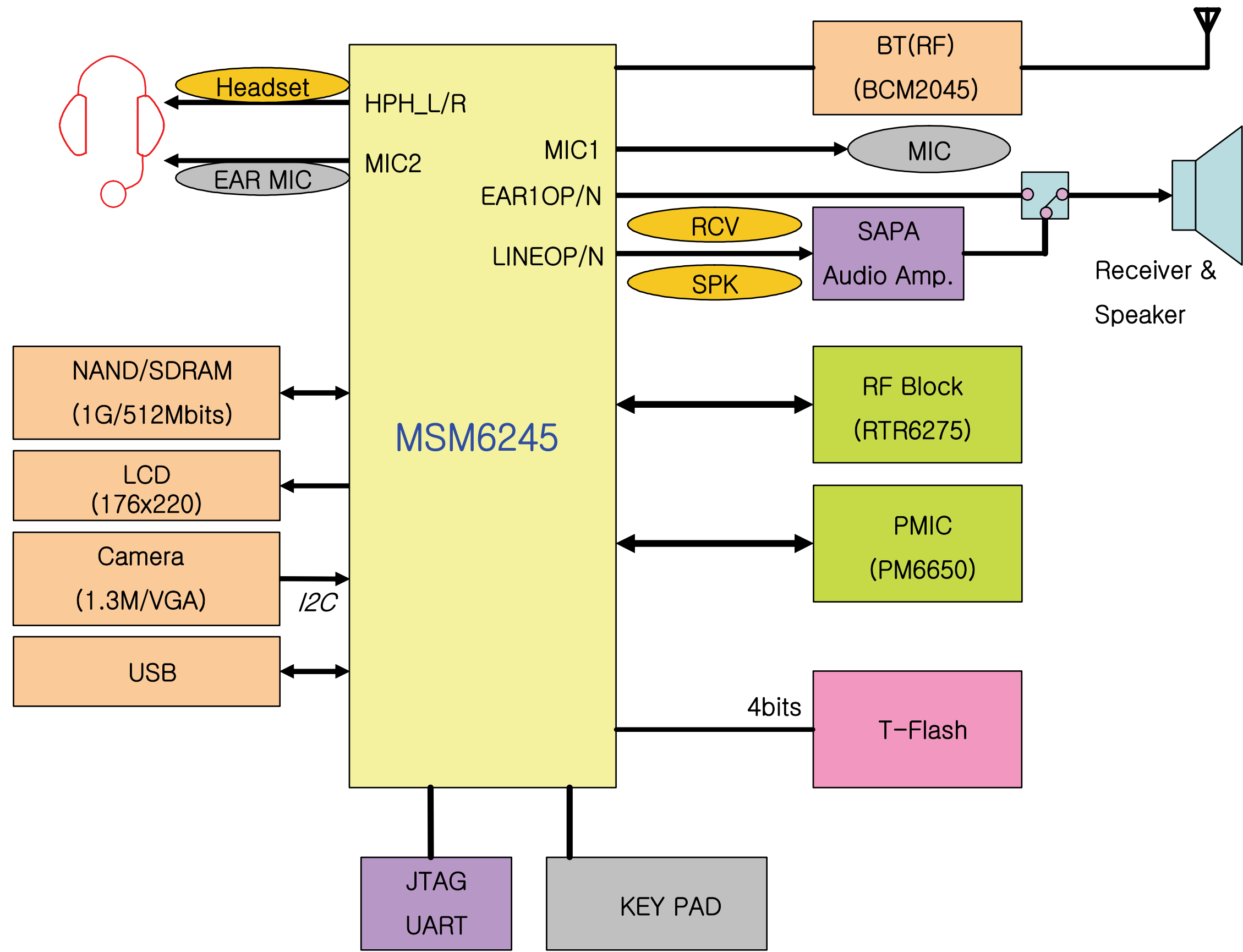
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TA400	C-TA,CHIP	2404-001377	SA
TAC800	SWITCH-TACT	3404-001303	SA
TAC801	SWITCH-TACT	3404-001303	SA
TAC802	SWITCH-TACT	3404-001303	SA
U100	IC-TRANSCEIVER	1205-003285	SA
U302	IC-ANALOG SWITCH	1001-001336	SA
U400	IC-POWER SUPERVISOR	1203-004101	SA
U401	IC-BATTERY	1203-004656	SA
U500	IC-AUDIO AMP	1201-002233	SA
U502	IC-ANALOG MULTIPLEX	1001-001405	SA
U503	IC-ANALOG MULTIPLEX	1001-001405	SA
U600	IC-MULTI REG.	1203-004330	SA
U601	IC-MULTI REG.	1203-004340	SA
U602	IC-MULTI REG.	1203-004291	SA
U603	IC-DC/DC CONVERTER	1203-003708	SA
U604	IC-POS.FIXED REG.	1203-004153	SA
U605	IC-MULTI REG.	1203-004340	SA
U800	IC-ANALOG SWITCH	1001-001336	SA
U801	KEY FPCB-SGHJ200,JOG KEY	GH59-04723A	SA
U802	FILTER-EMI SMD	2901-001413	SA
U803	FILTER-EMI SMD	2901-001413	SA
UCP300	IC-MODEM	1205-003206	SA
UME300	IC-MCP	1108-000129	SA
VR300	THERMISTOR-NTC	1404-001224	SA
VR600	VARISTOR	1405-001177	SA
VR800	DIODE-TVS	0406-001231	SA
VR801	DIODE-TVS	0406-001231	SA
VR802	DIODE-TVS	0406-001231	SA
VR803	DIODE-TVS	0406-001231	SA
VR804	DIODE-TVS	0406-001231	SA
VR805	DIODE-TVS	0406-001231	SA
VR806	DIODE-TVS	0406-001231	SA
VR807	DIODE-TVS	0406-001231	SA
VR808	DIODE-TVS	0406-001231	SA
VR809	DIODE-TVS	0406-001231	SA
VR810	DIODE-TVS	0406-001231	SA
VR811	DIODE-TVS	0406-001231	SA
VR812	DIODE-TVS	0406-001231	SA
VR813	DIODE-TVS	0406-001231	SA
VR814	DIODE-TVS	0406-001231	SA
VR815	DIODE-TVS	0406-001231	SA
VR816	DIODE-TVS	0406-001231	SA
VR817	DIODE-TVS	0406-001231	SA
VR818	DIODE-TVS	0406-001231	SA
VR819	DIODE-TVS	0406-001231	SA
VR820	DIODE-TVS	0406-001231	SA
VR821	DIODE-TVS	0406-001231	SA
VR822	DIODE-TVS	0406-001231	SA
ZD500	DIODE-TVS	0406-001254	SA
ZD501	DIODE-TVS	0406-001254	SA

7. Block Diagrams

7-1. RF Solution Block Diagram

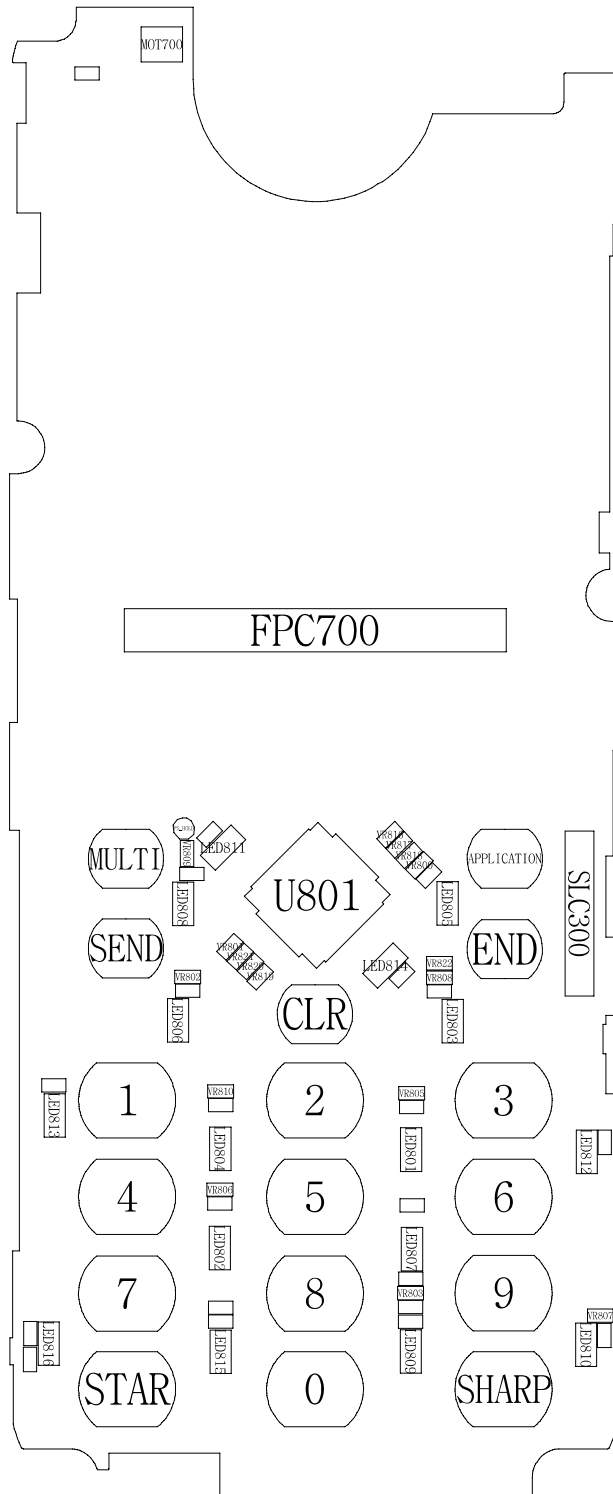


7-2. Base Band Solution Block Diagram



8. PCB Diagrams

TOP

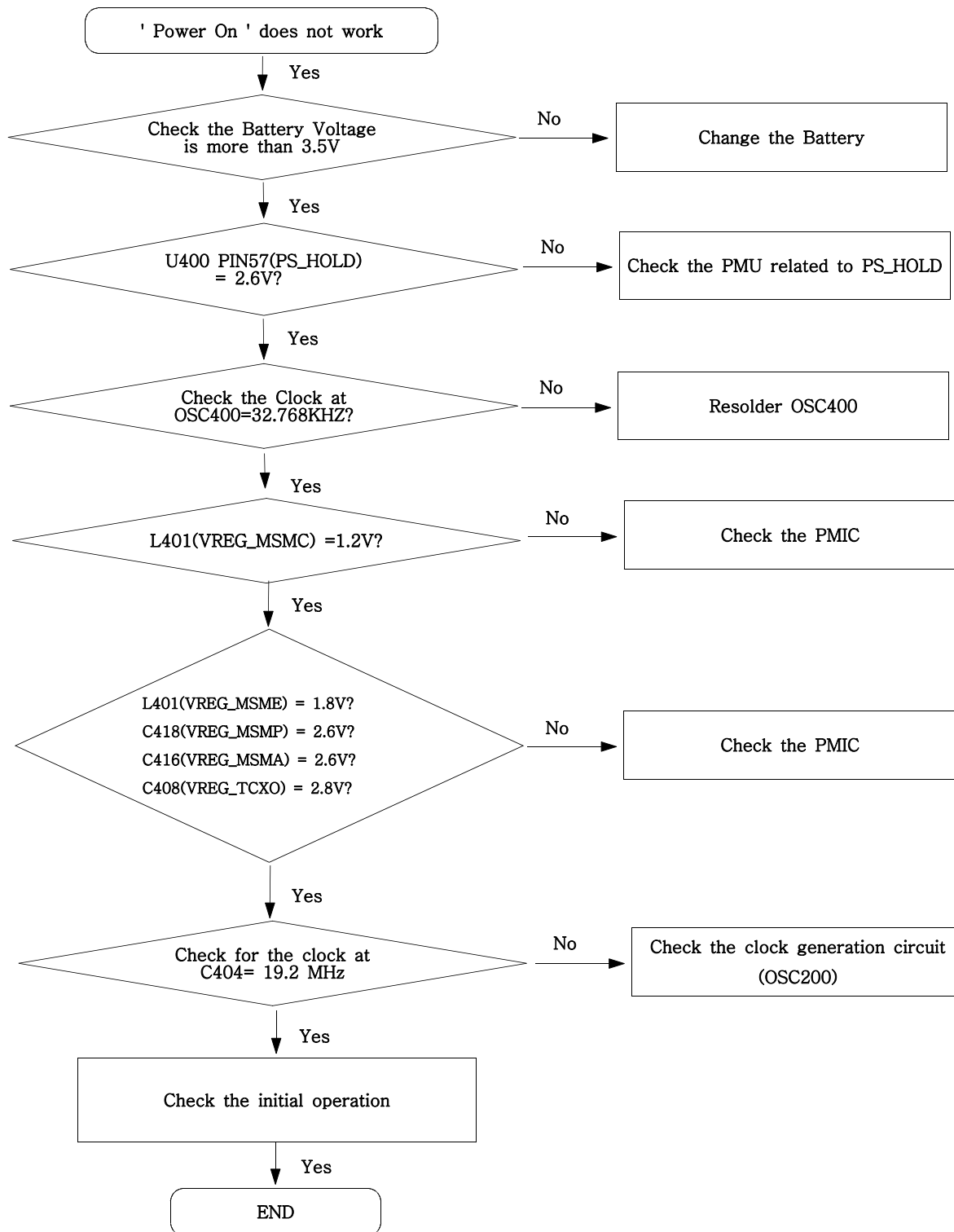


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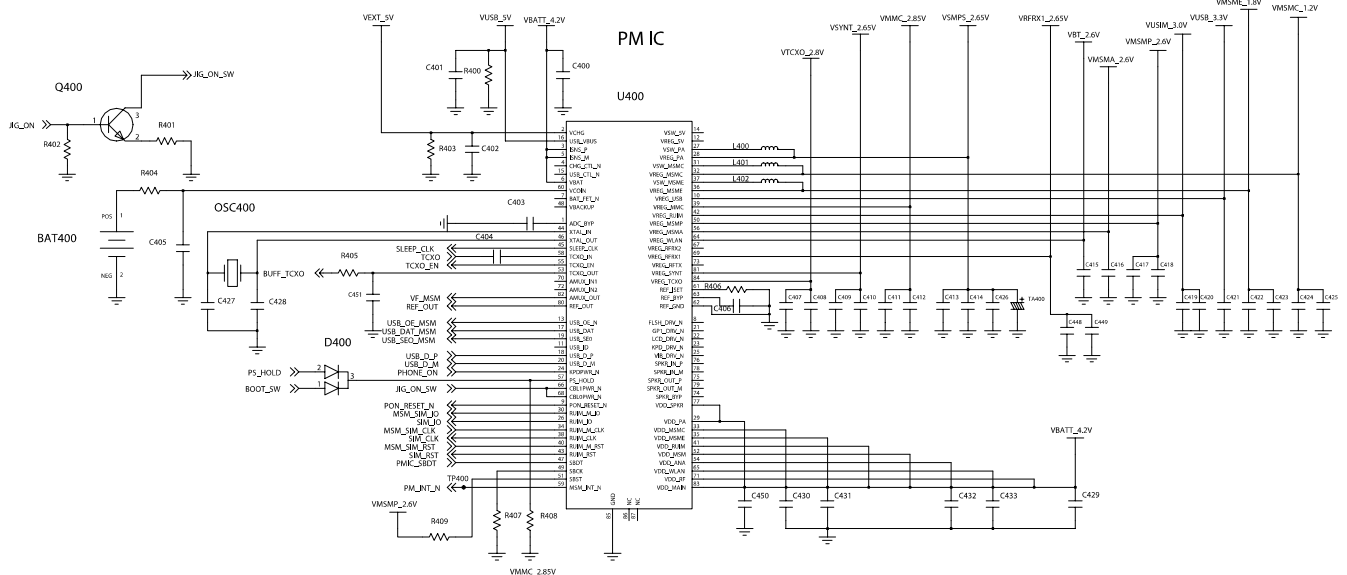


9. Flow Chart of Troubleshooting

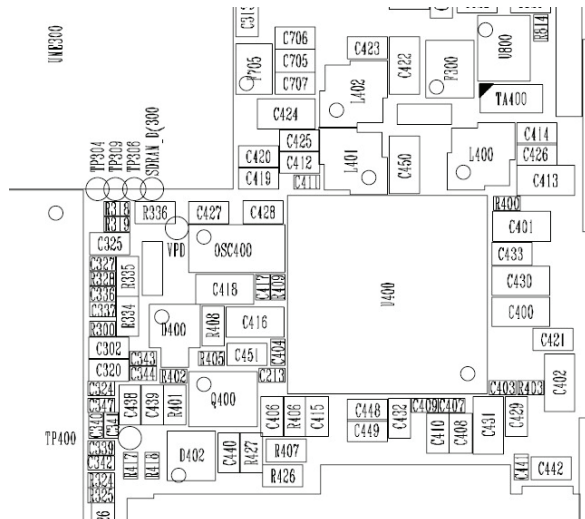
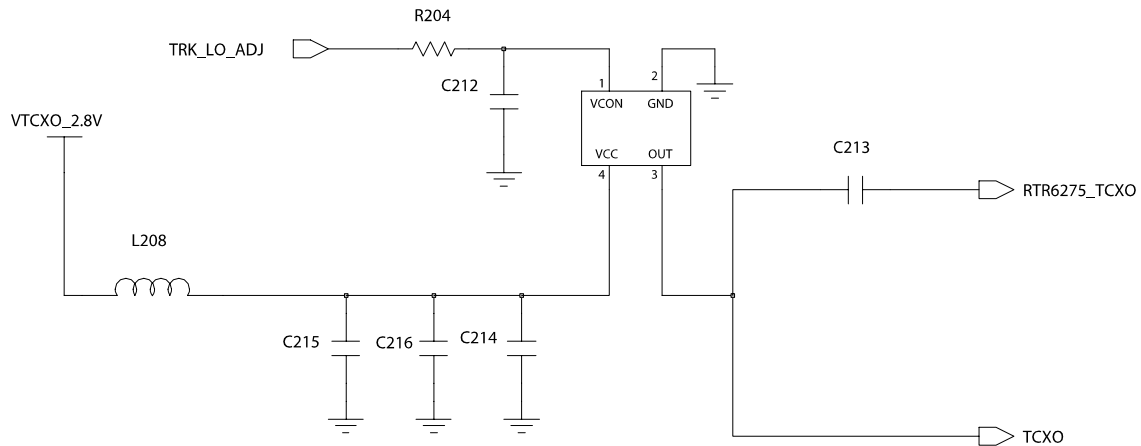
9-1. Power On



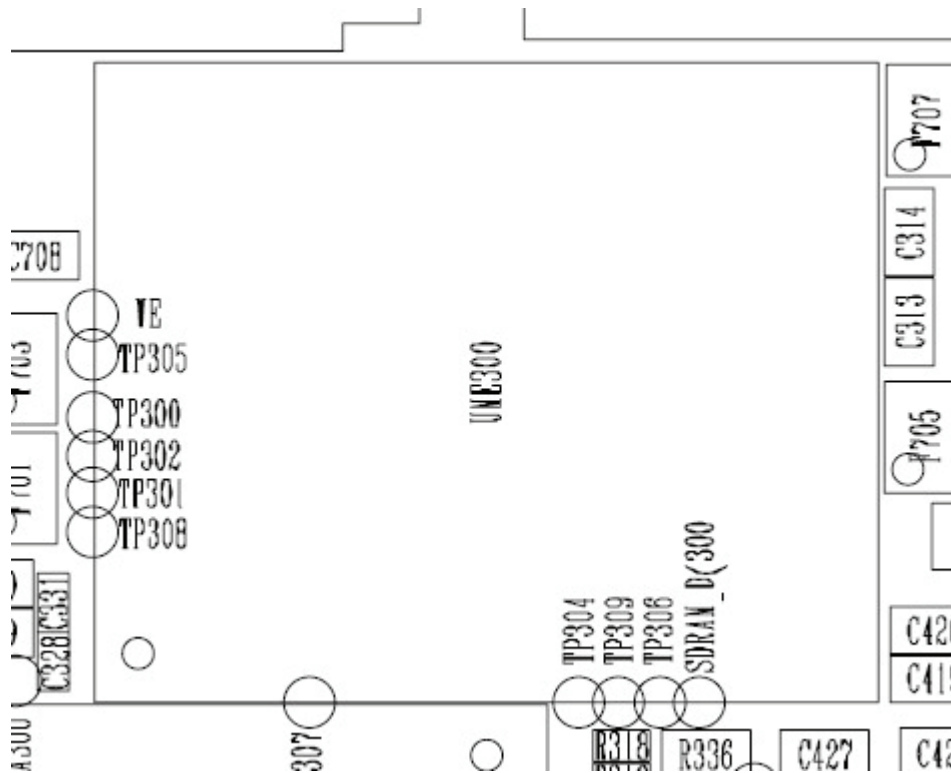
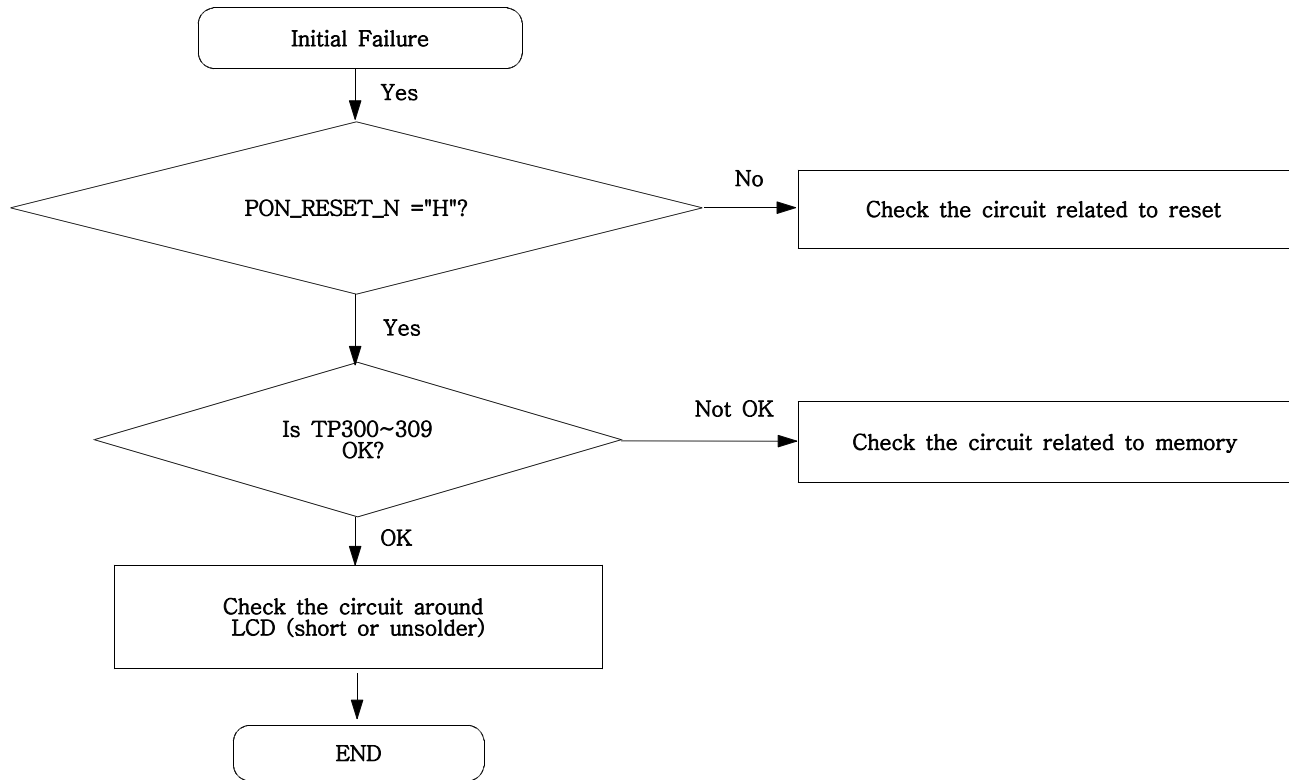
Power On



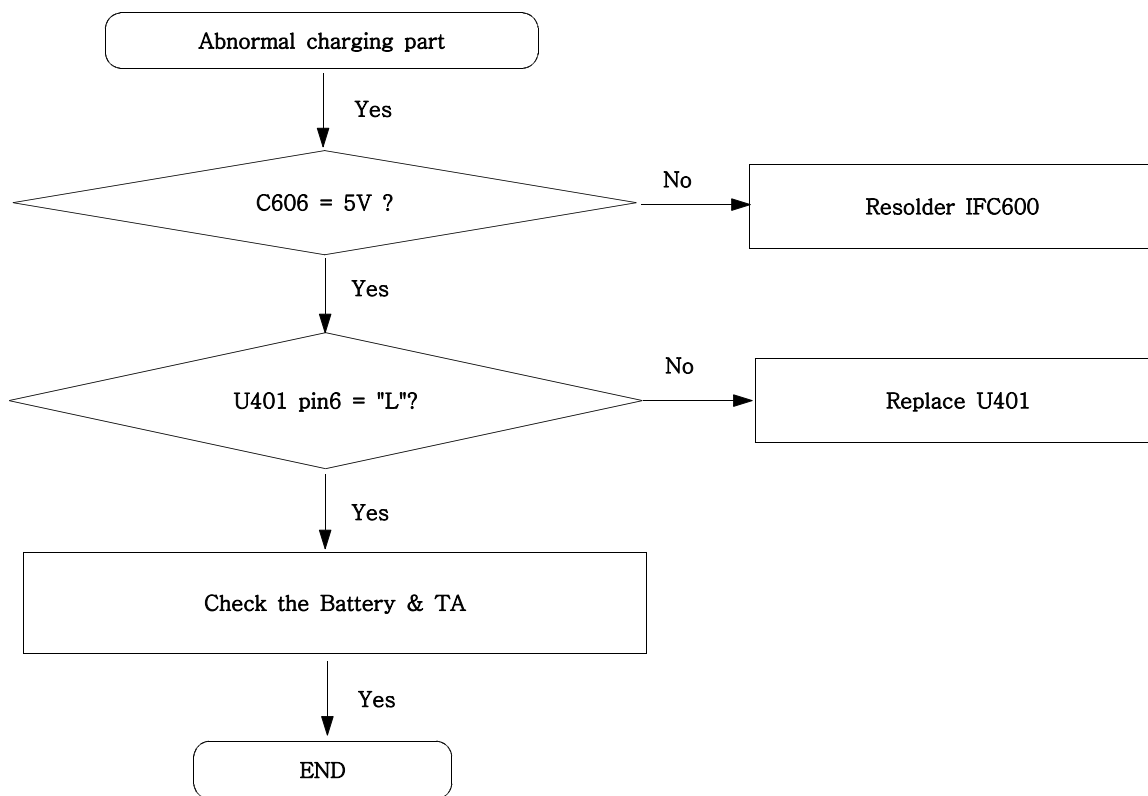
OSC200 TCXO



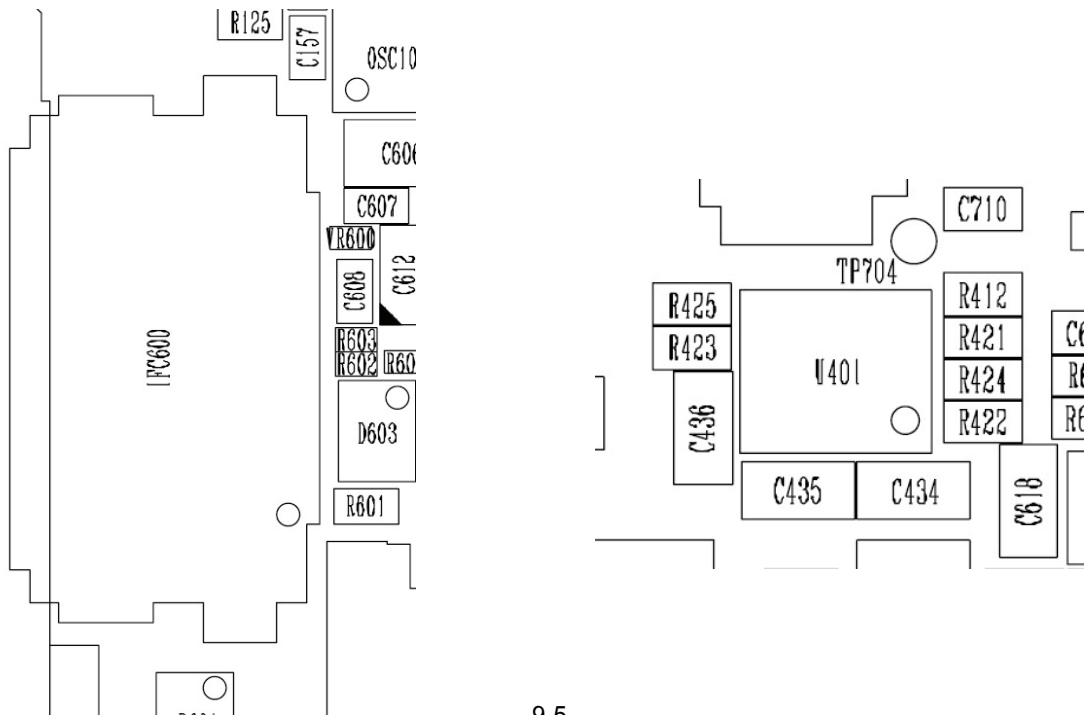
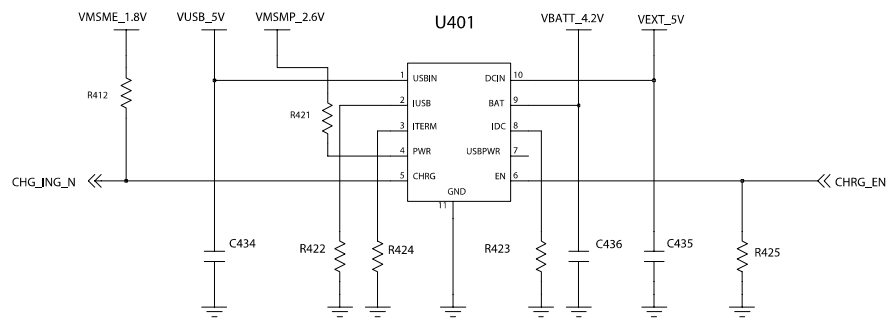
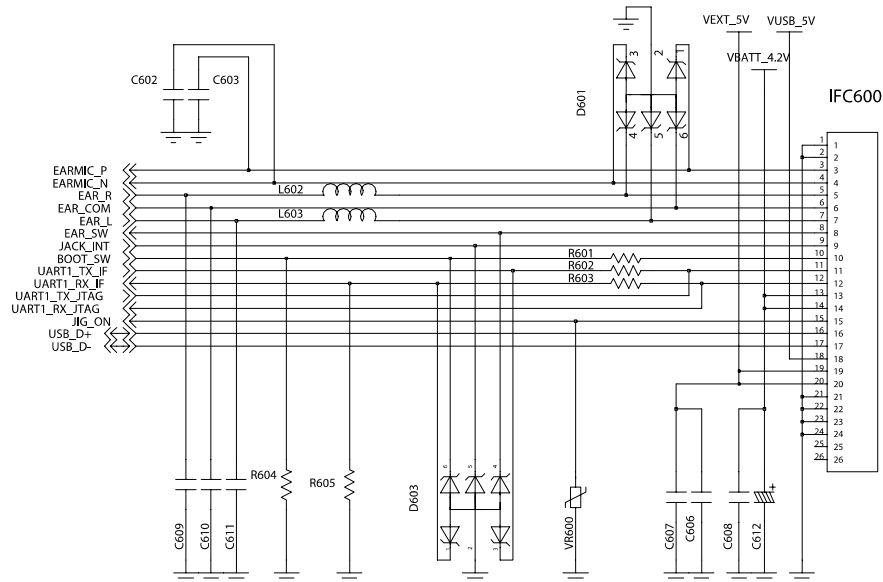
9-2. Initial



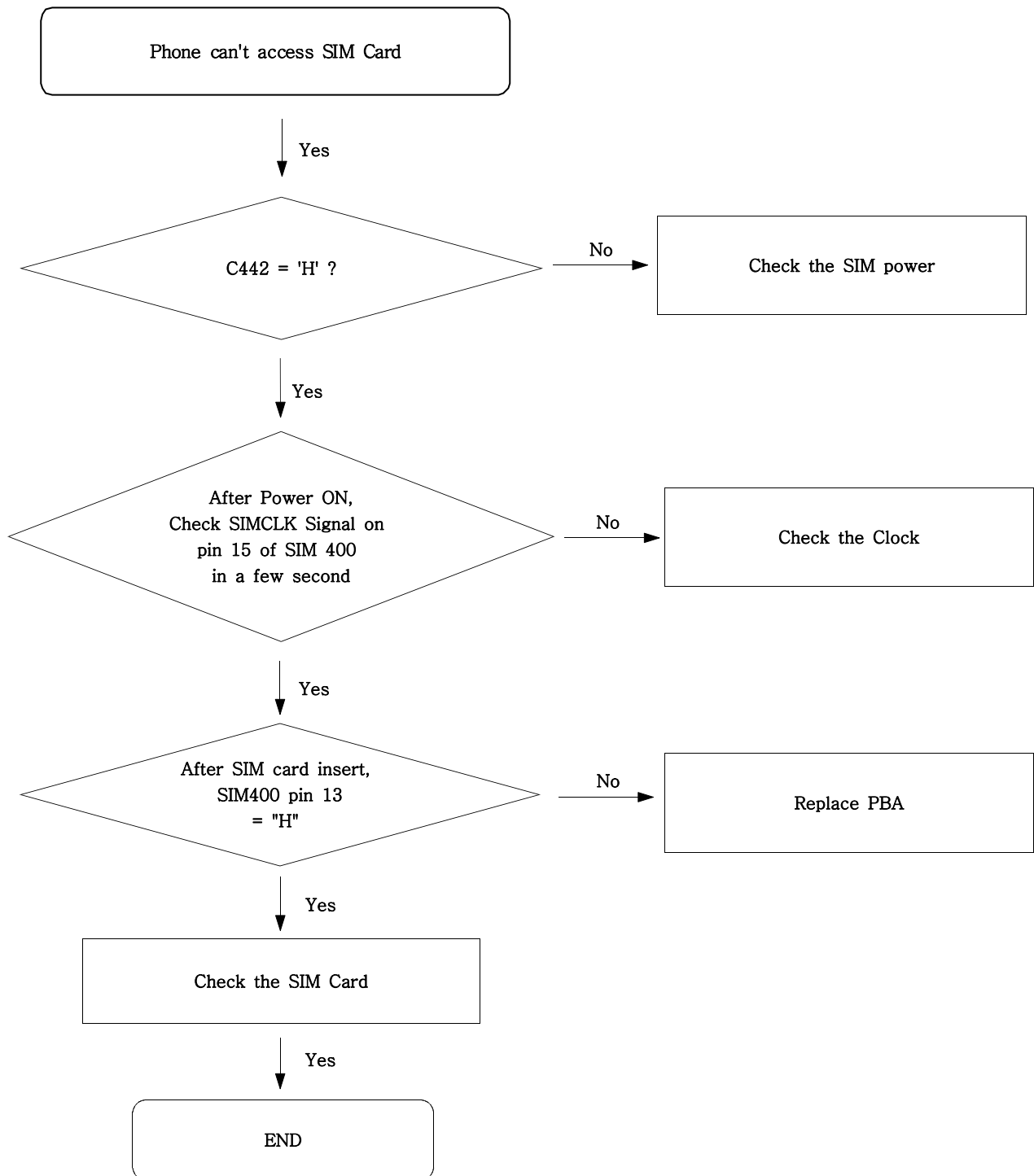
9-3. Charging Part

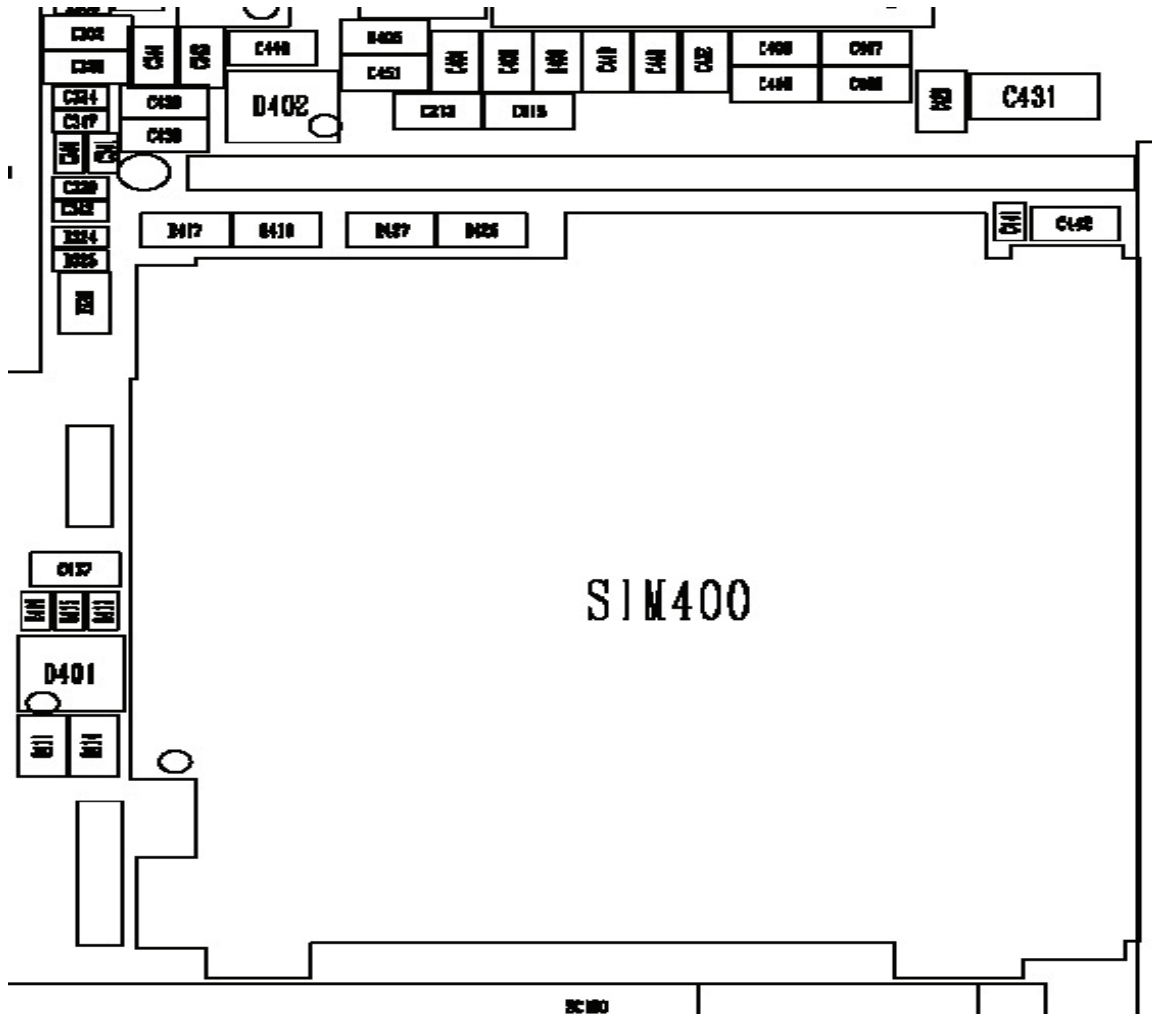
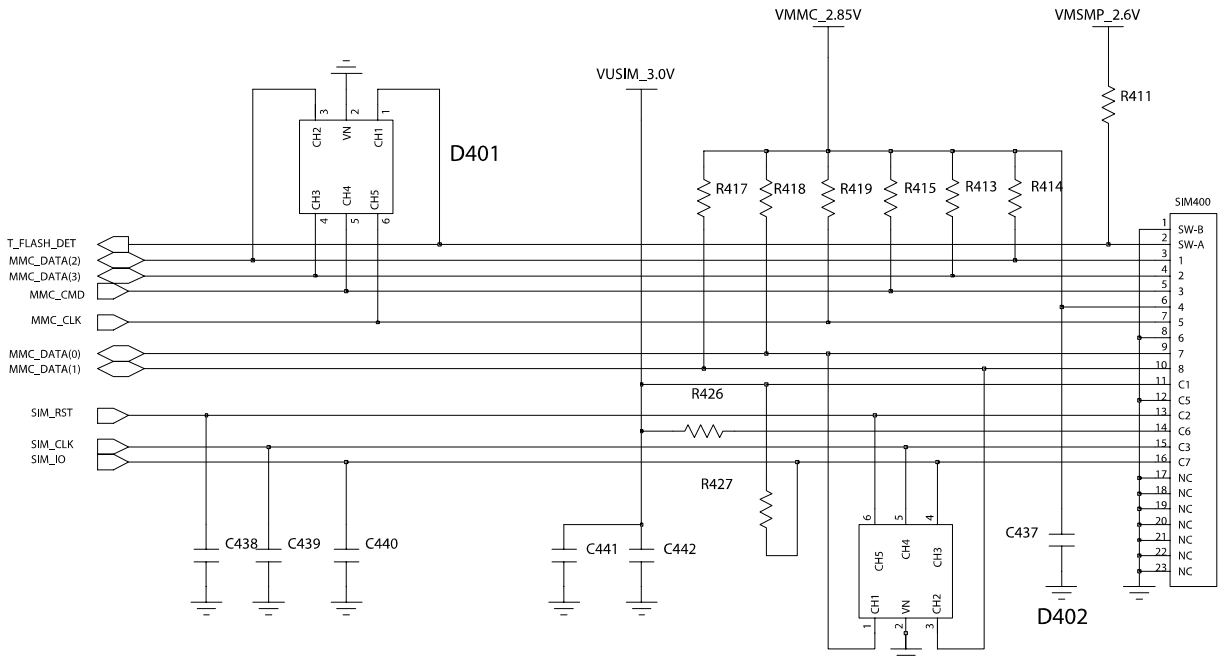


IF CONNECTOR

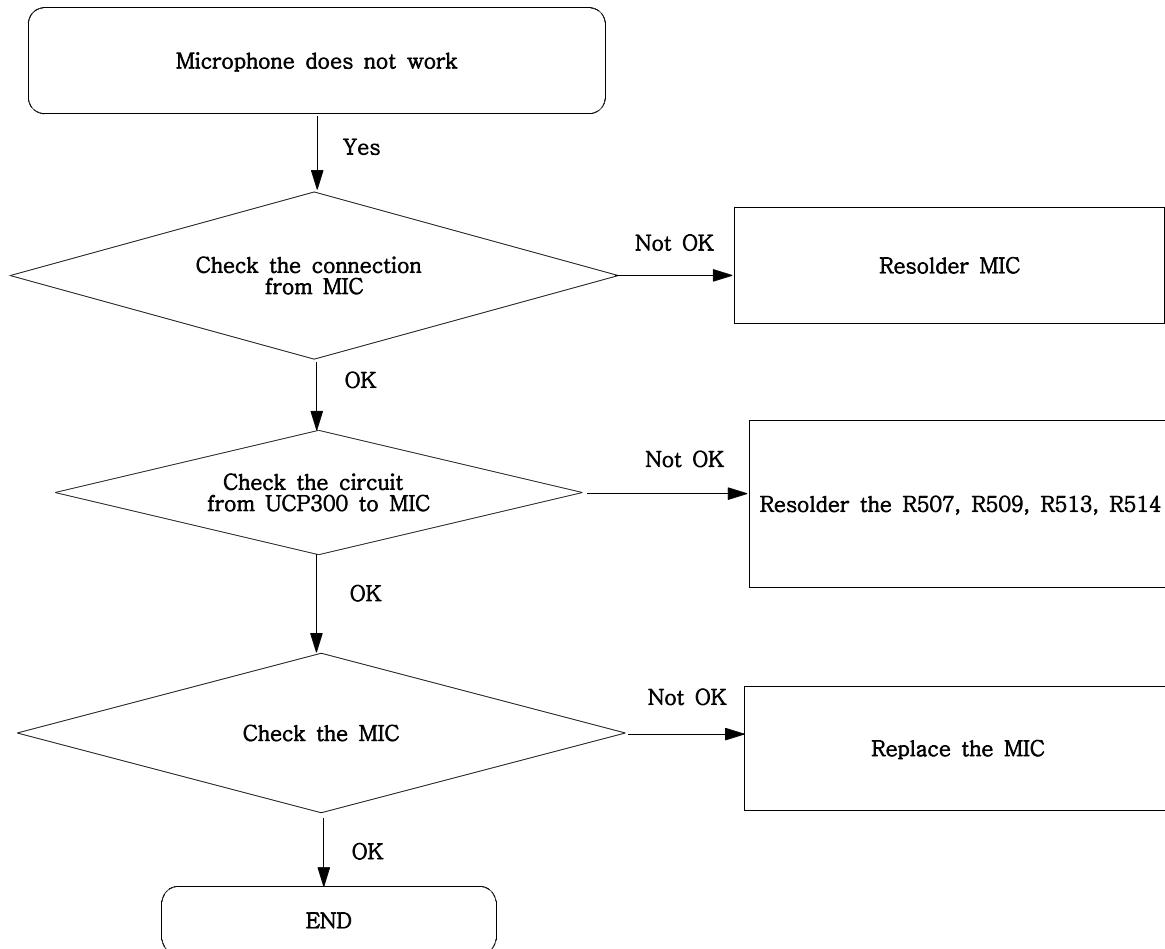


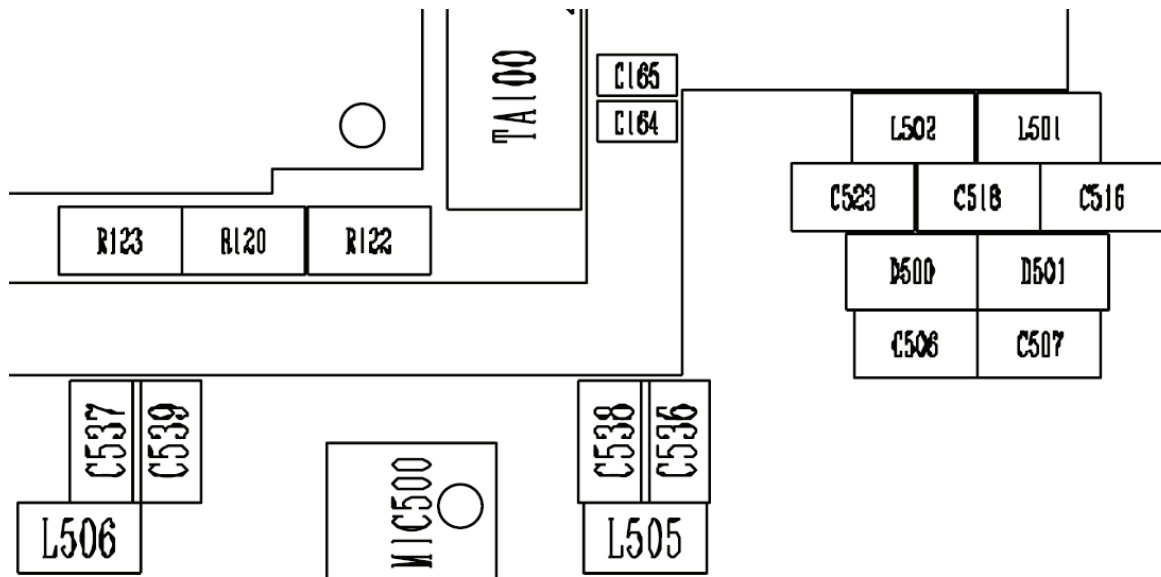
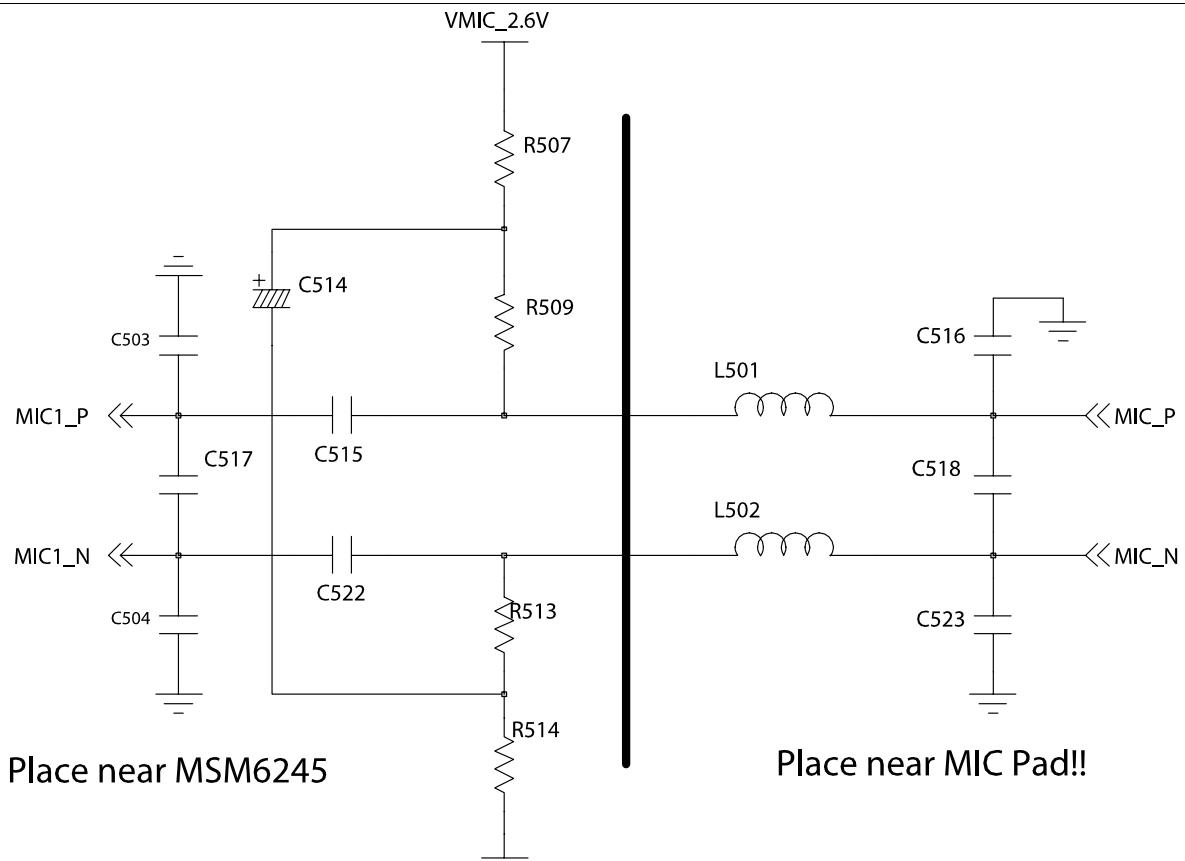
9-4. SIM Part



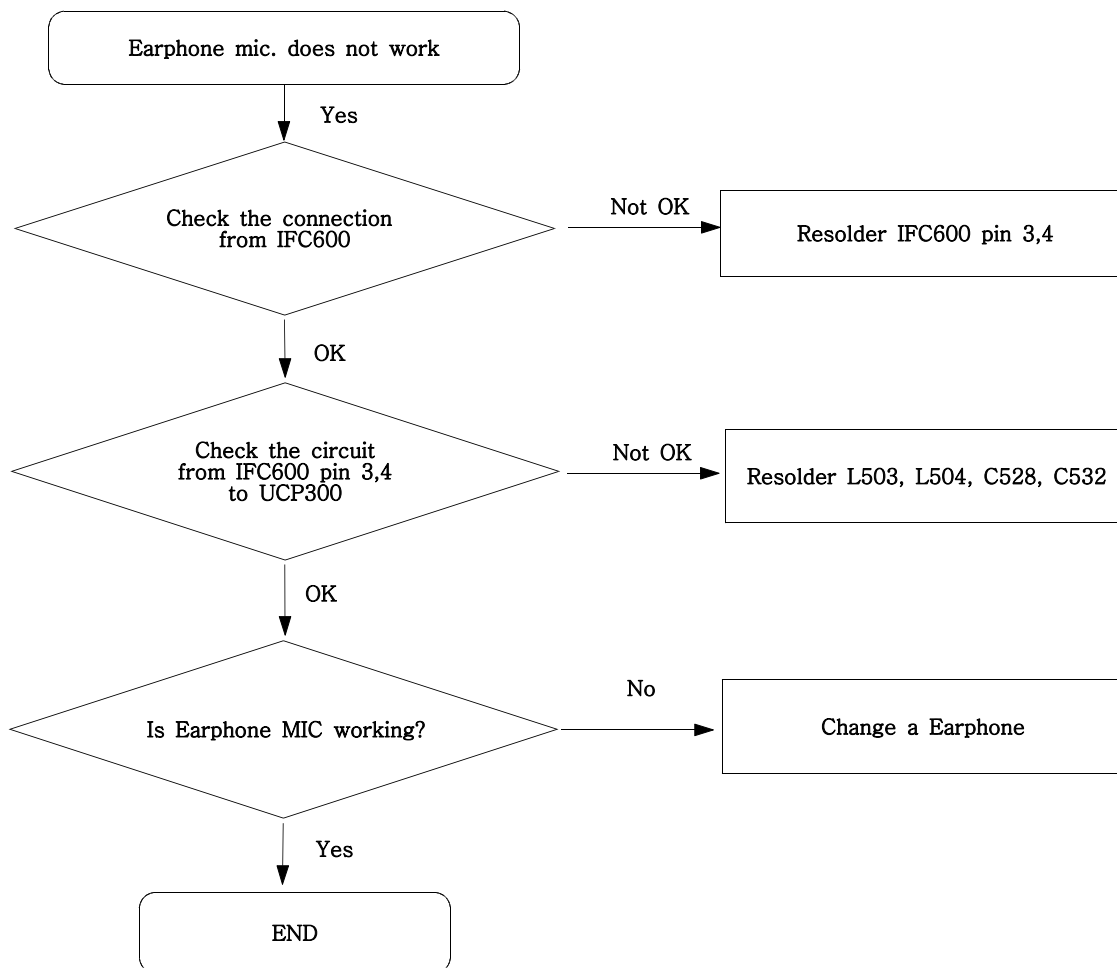


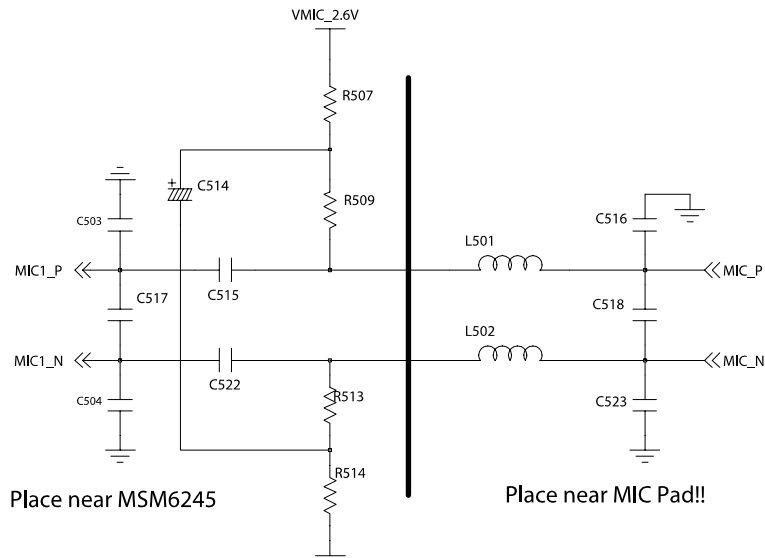
9-5. Microphone Part – Phone MIC



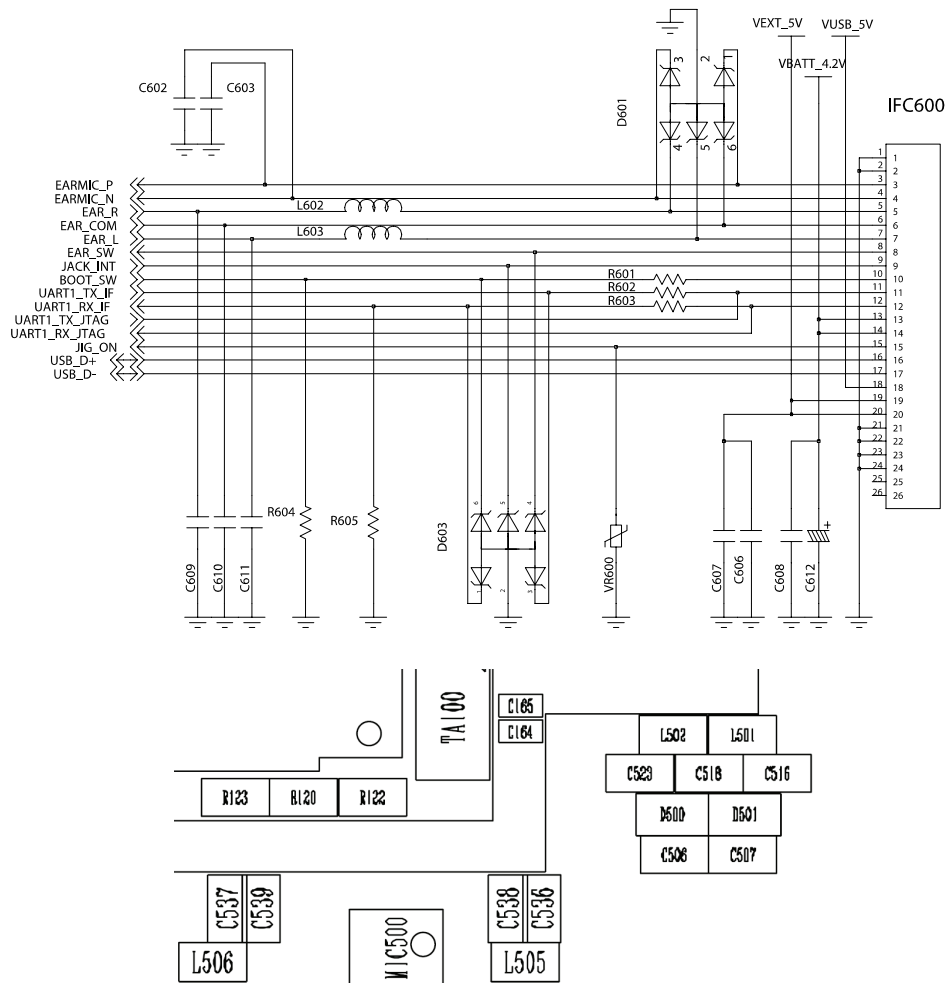


9-6 Microphone Part – Earphone MIC

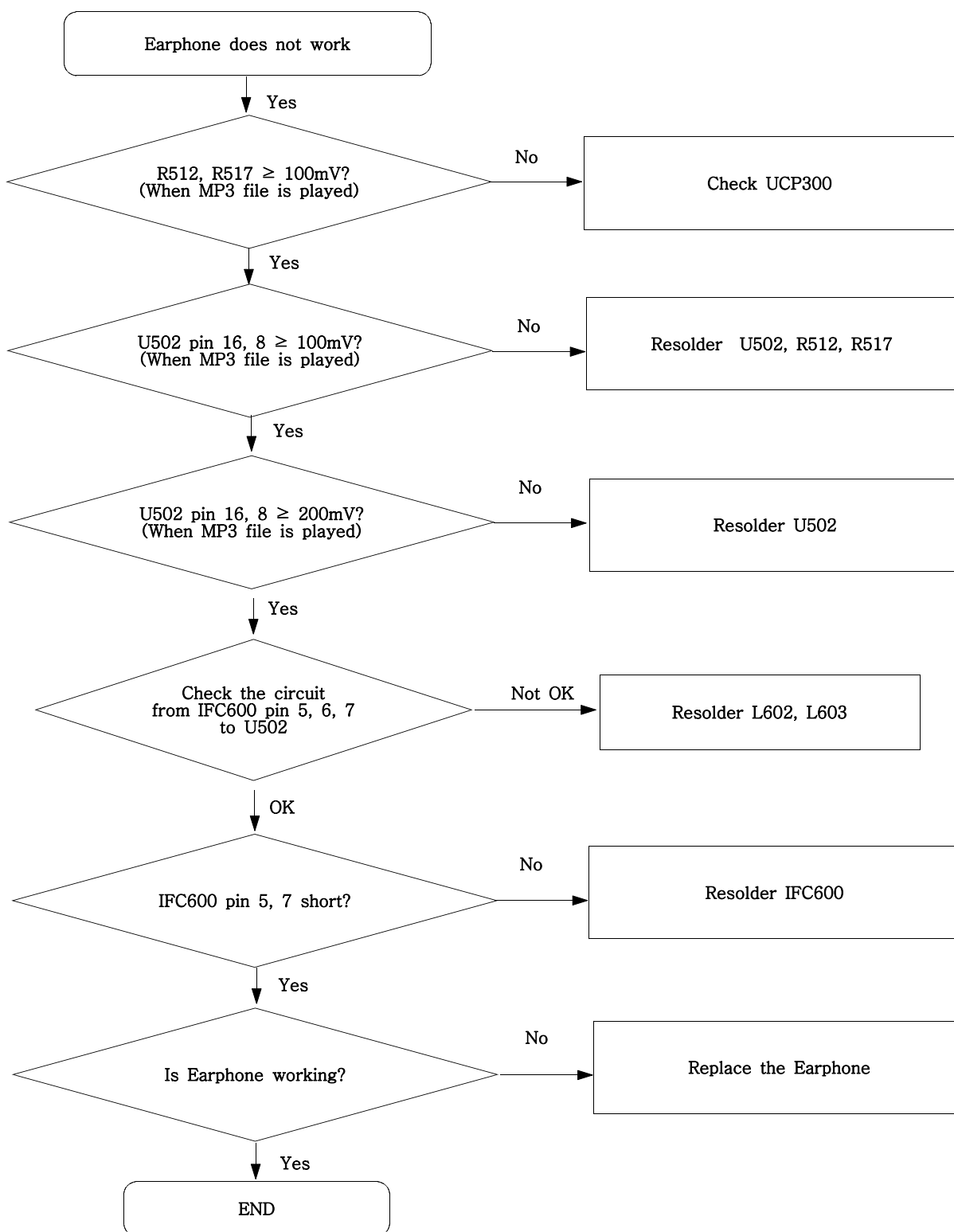


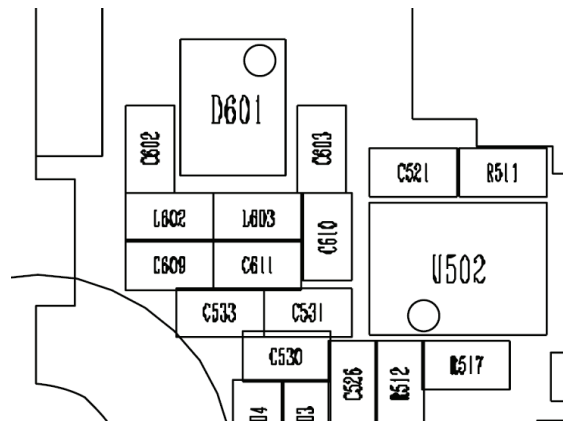
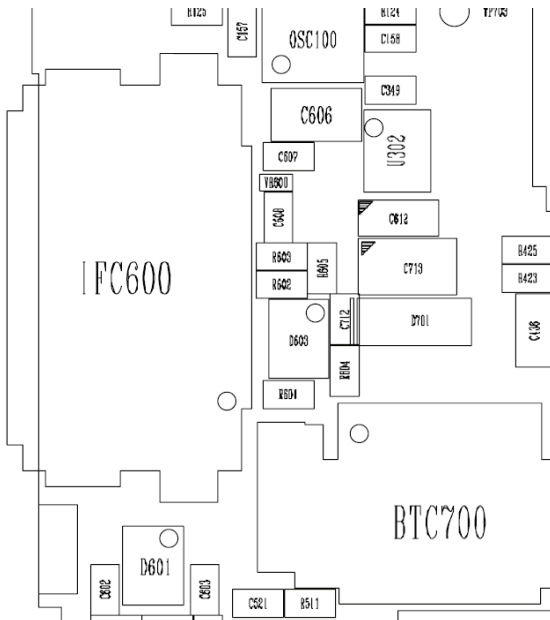
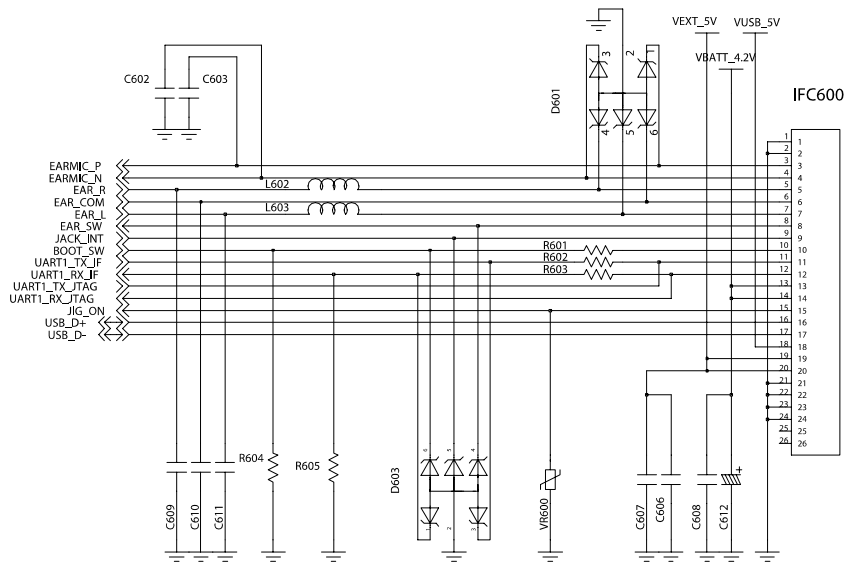
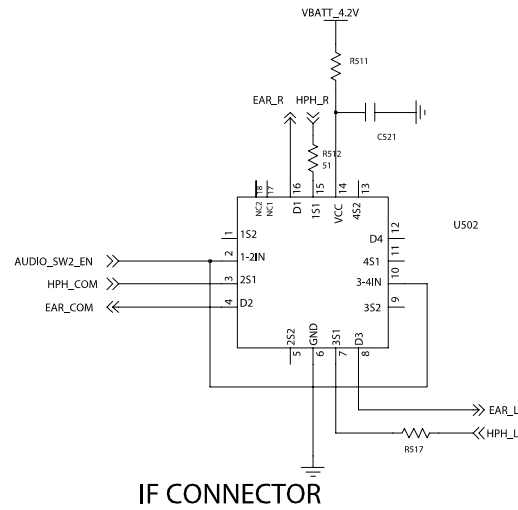


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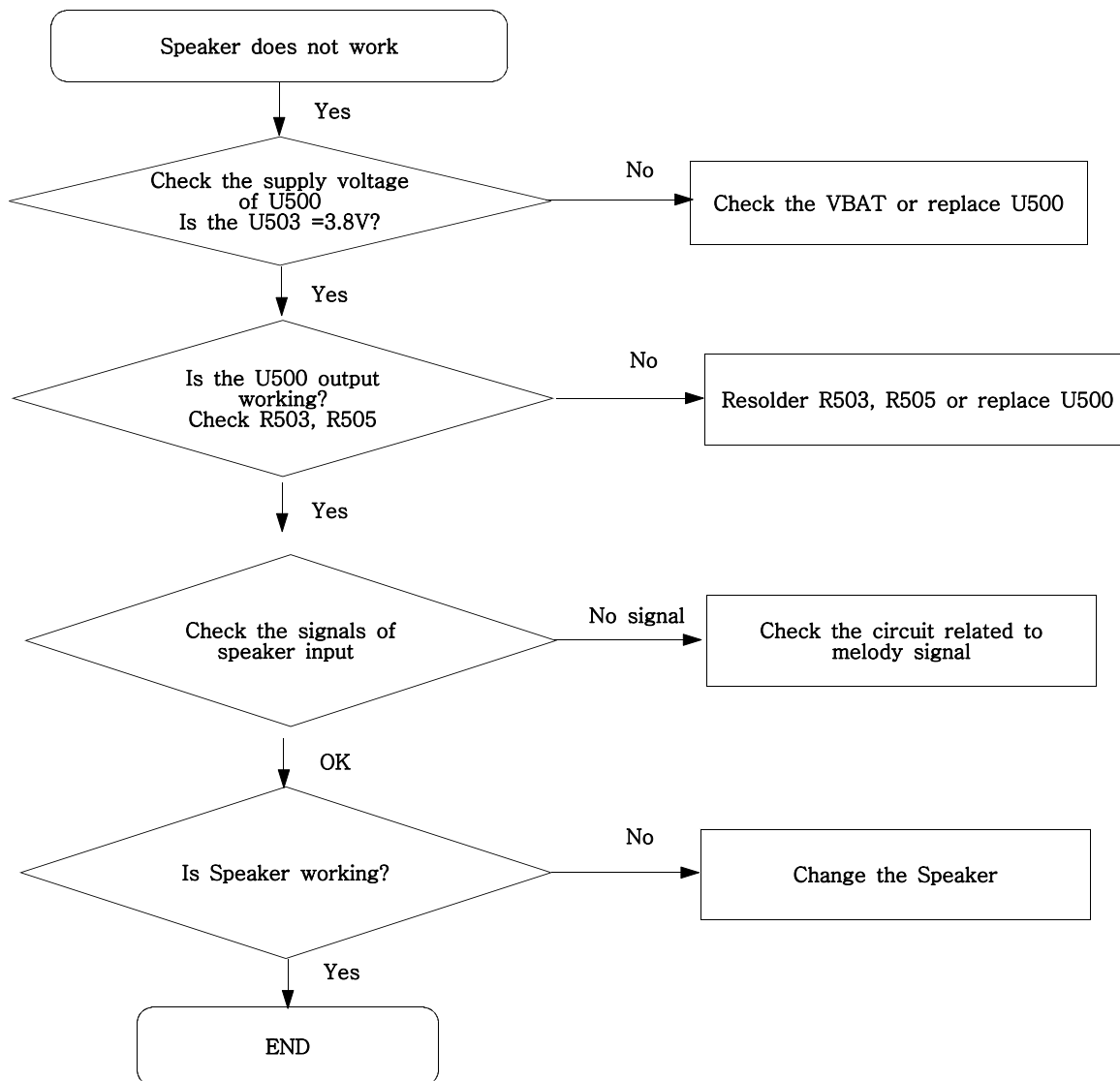


9-7. Earphone Part

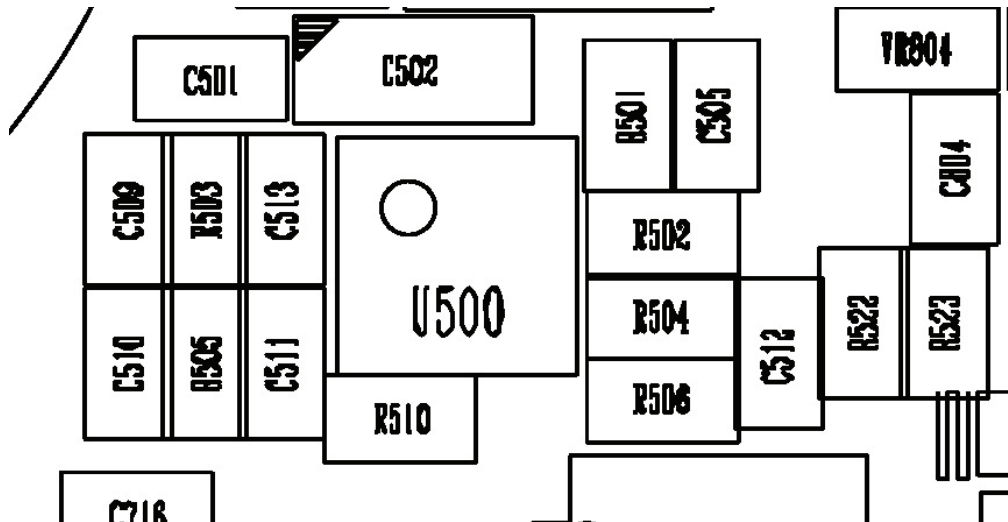
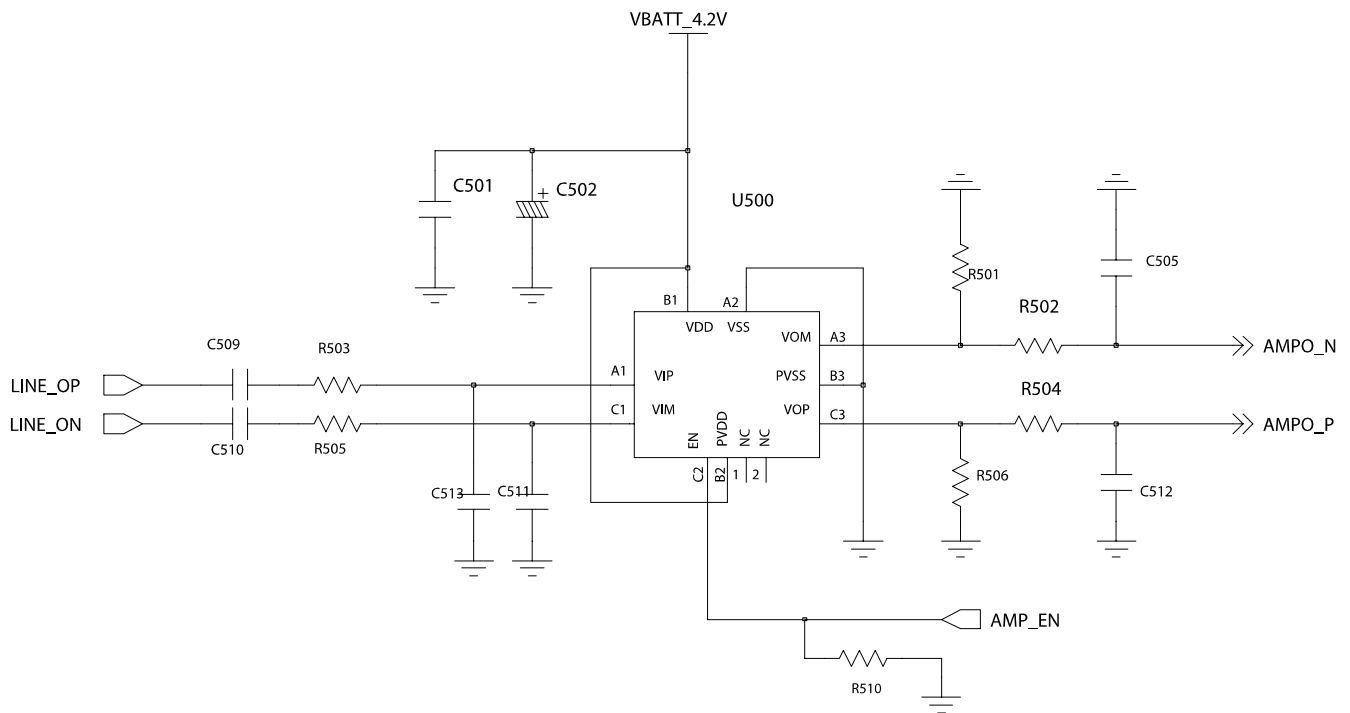




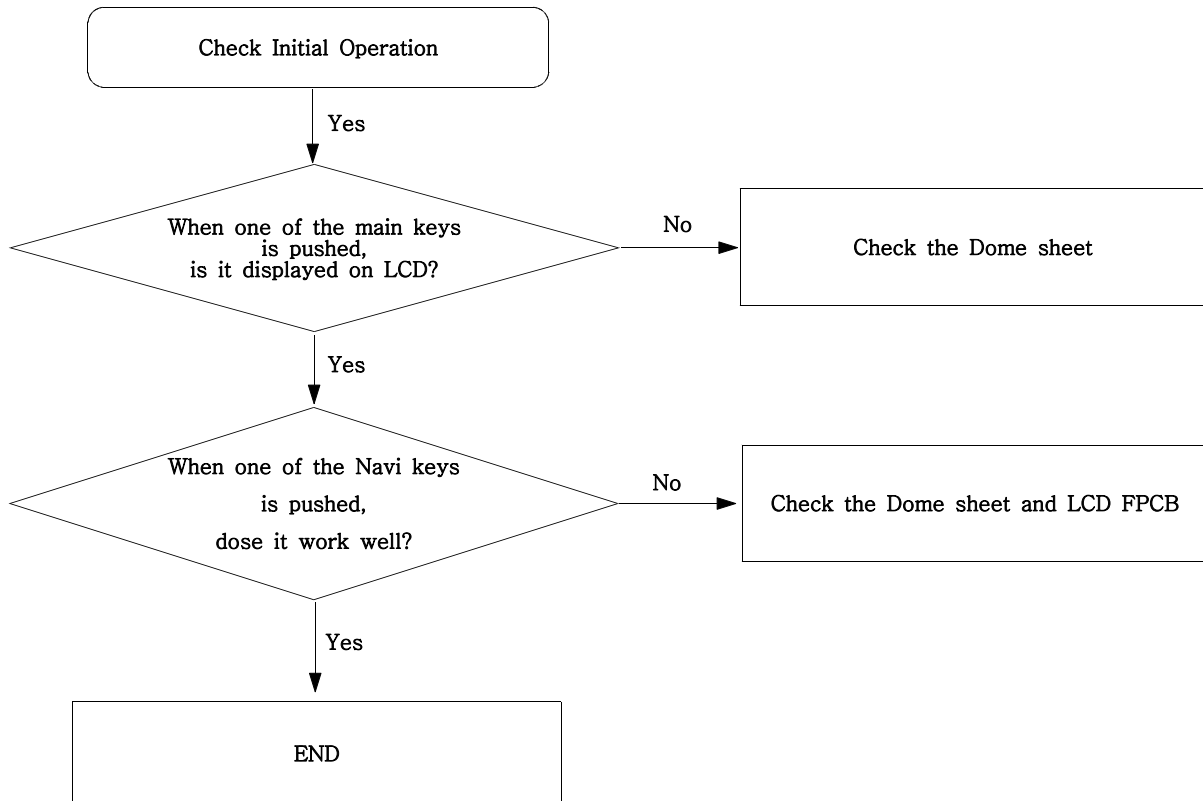
9-8. Speaker Part



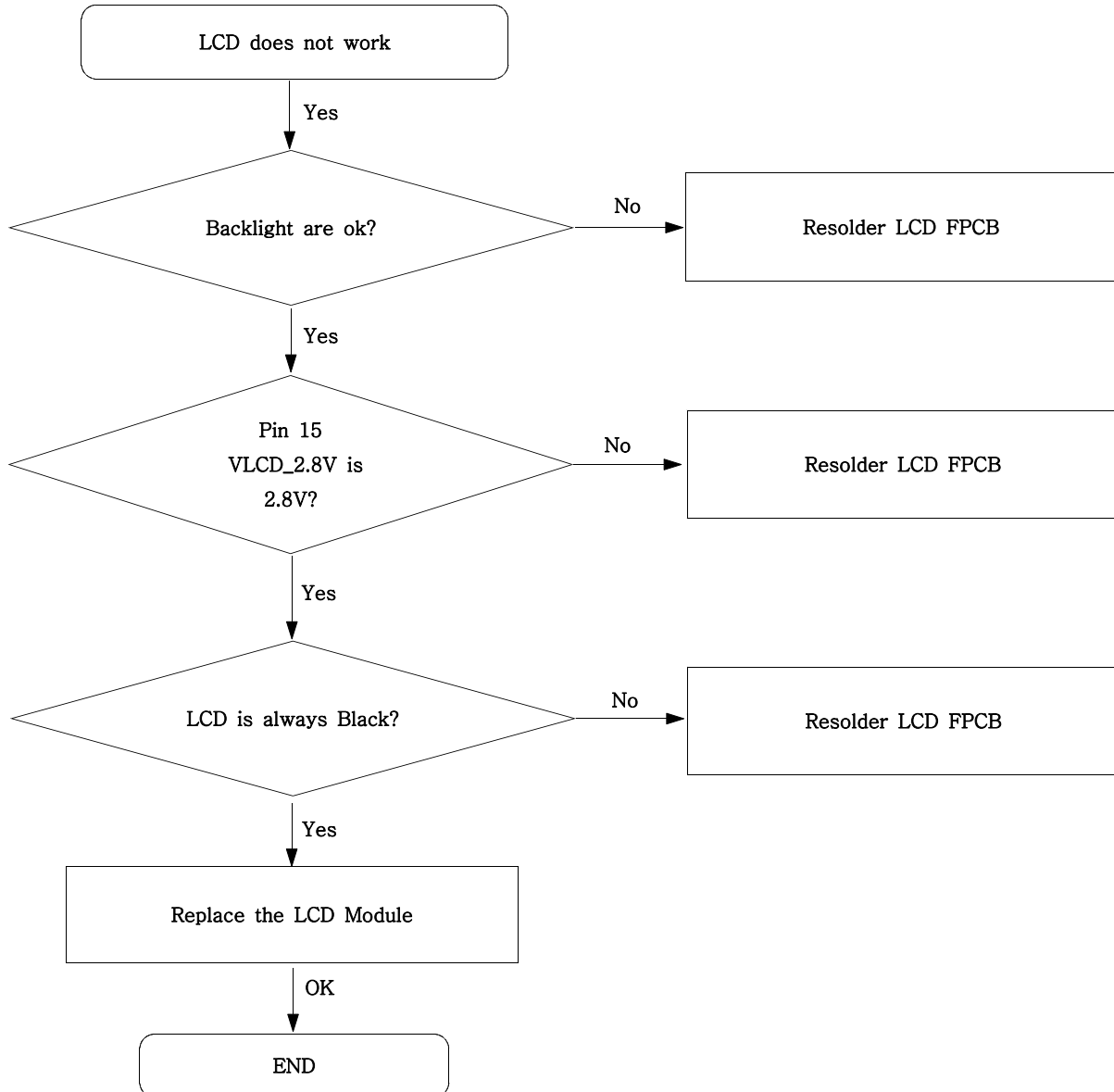
AUDIO AMP



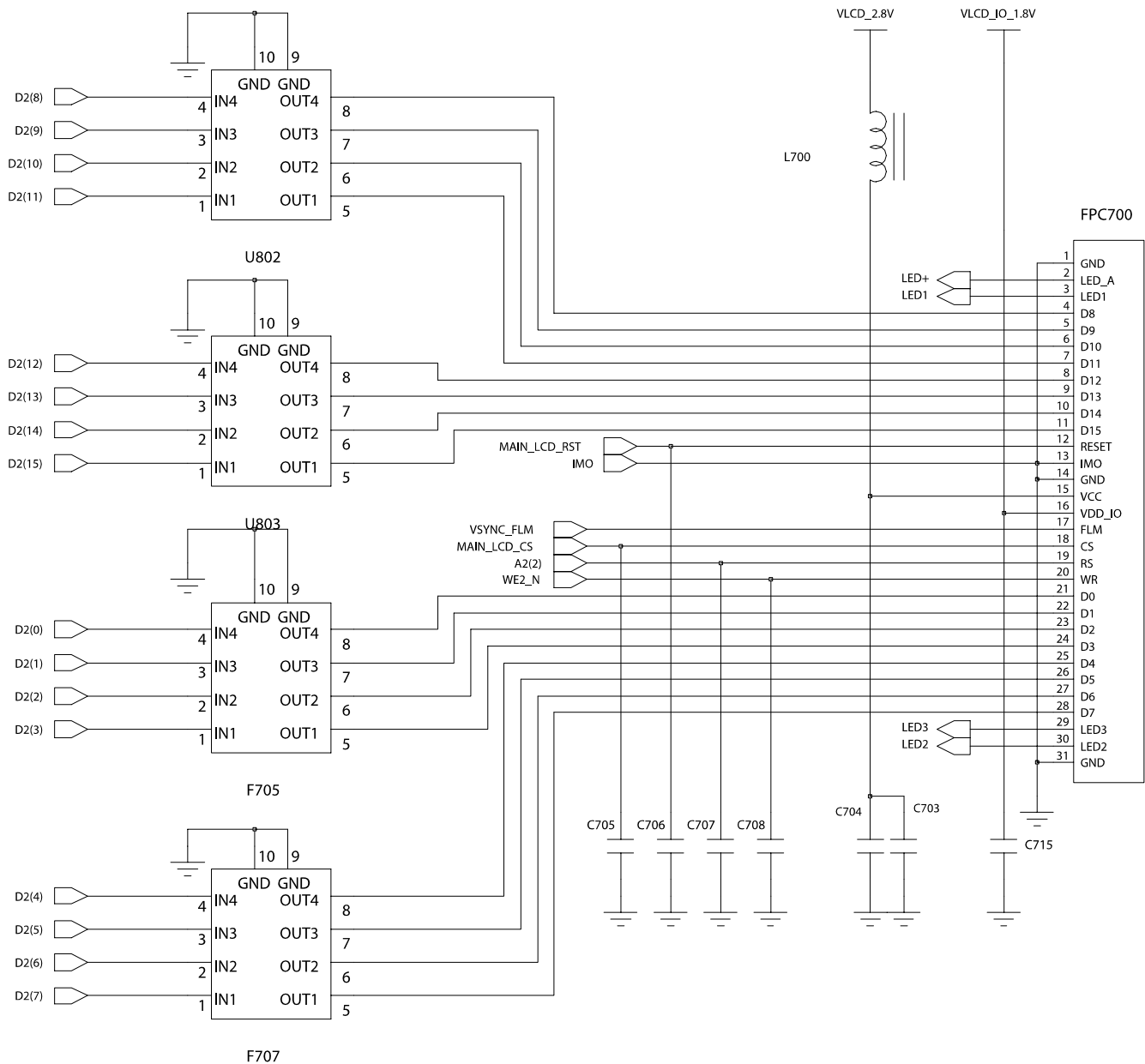
9-9. Key Data Input



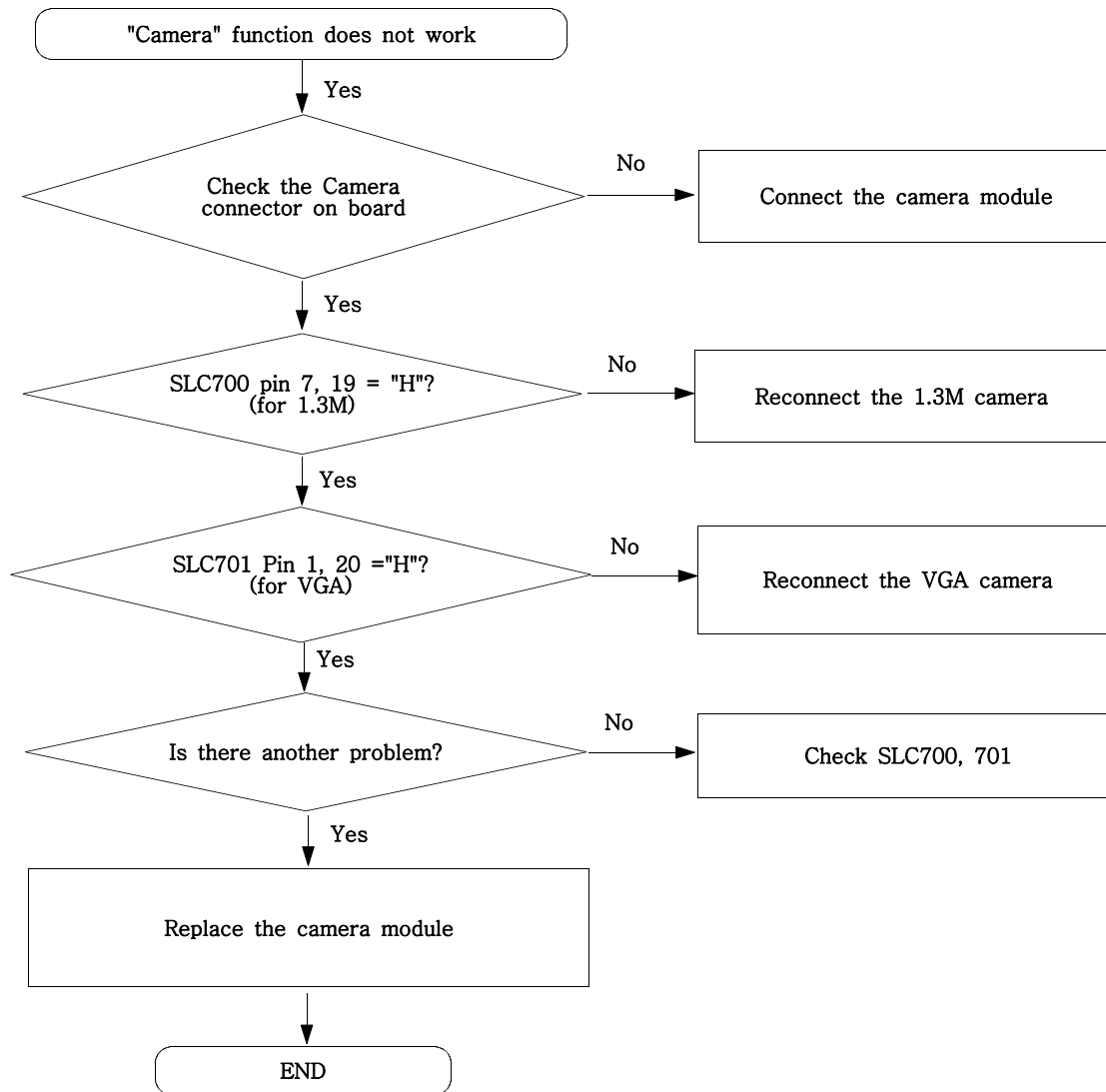
9-10. LCD part



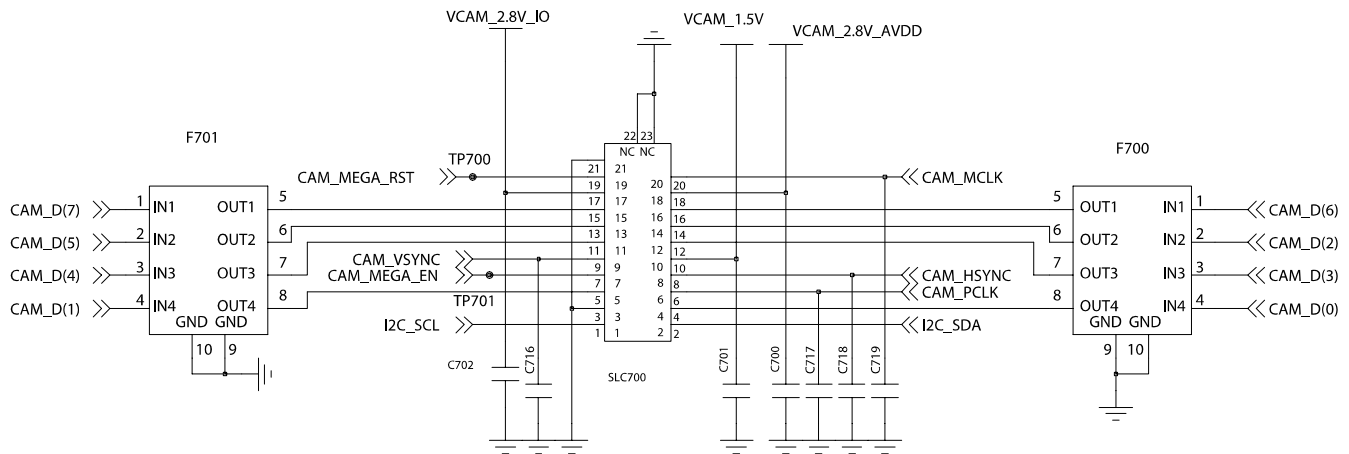
LCD CONNECTOR



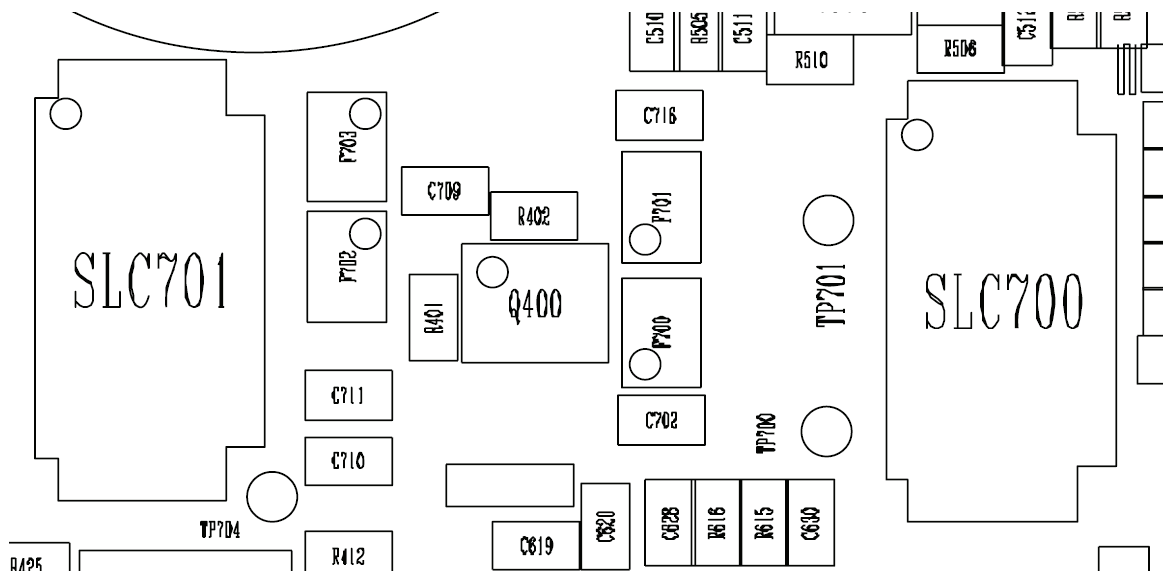
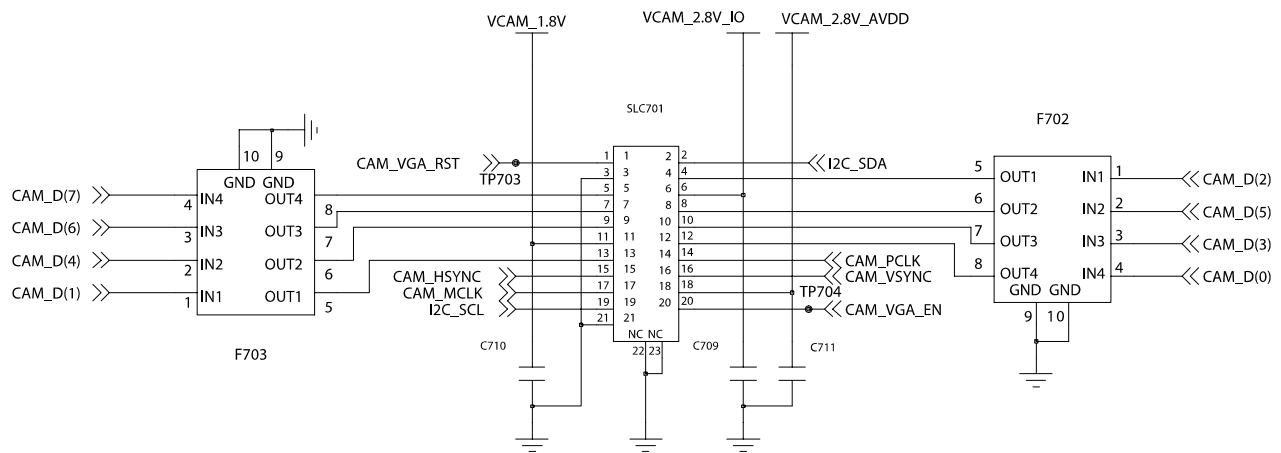
9-11. Camera part



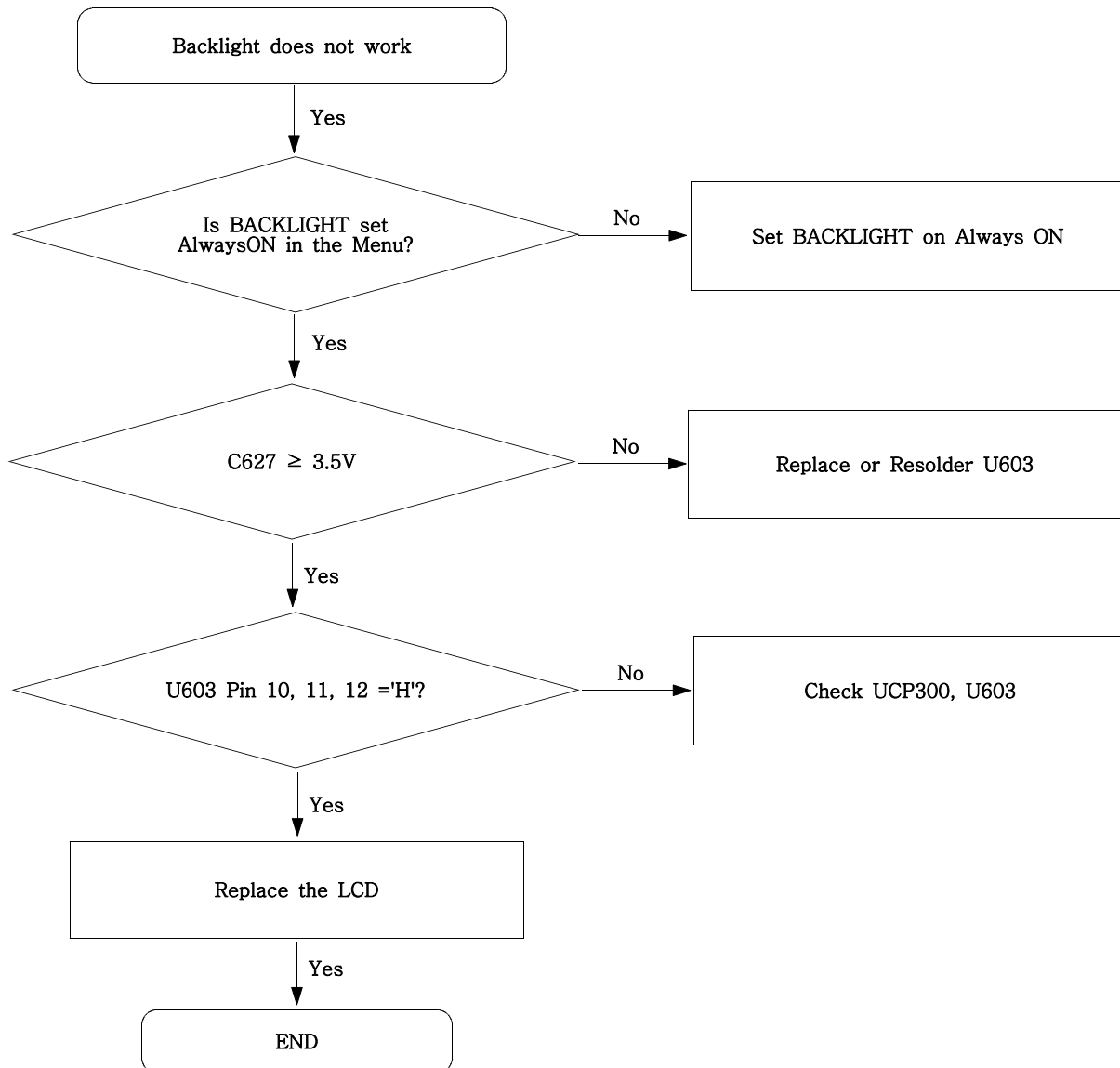
CAMERA(1.3M) CONNECTOR

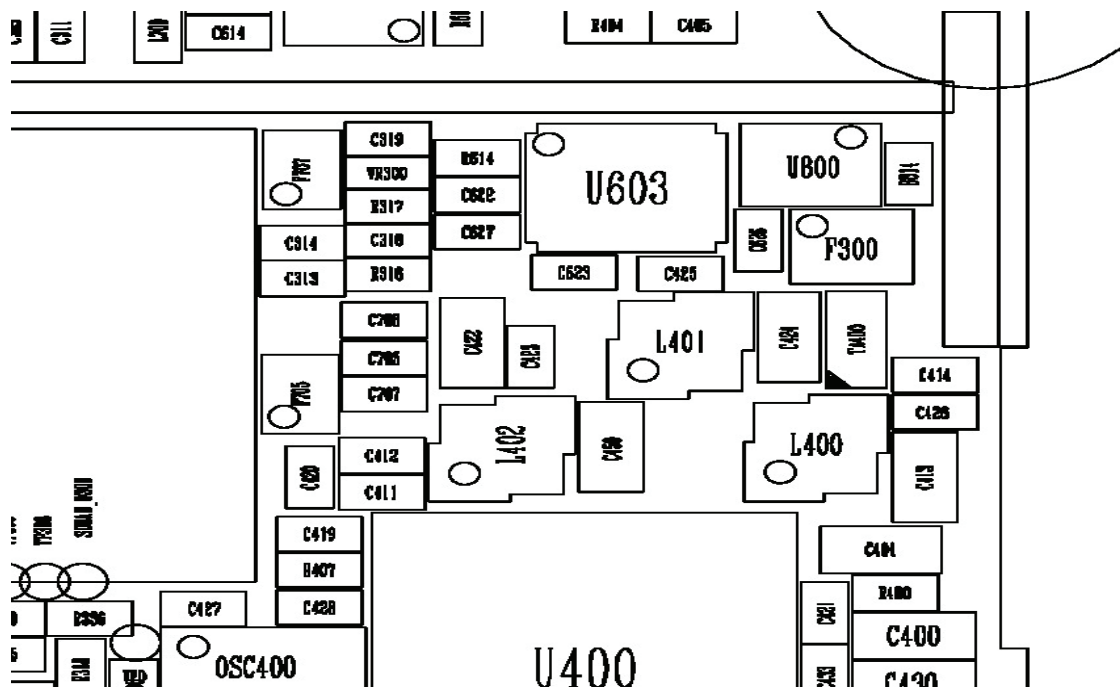
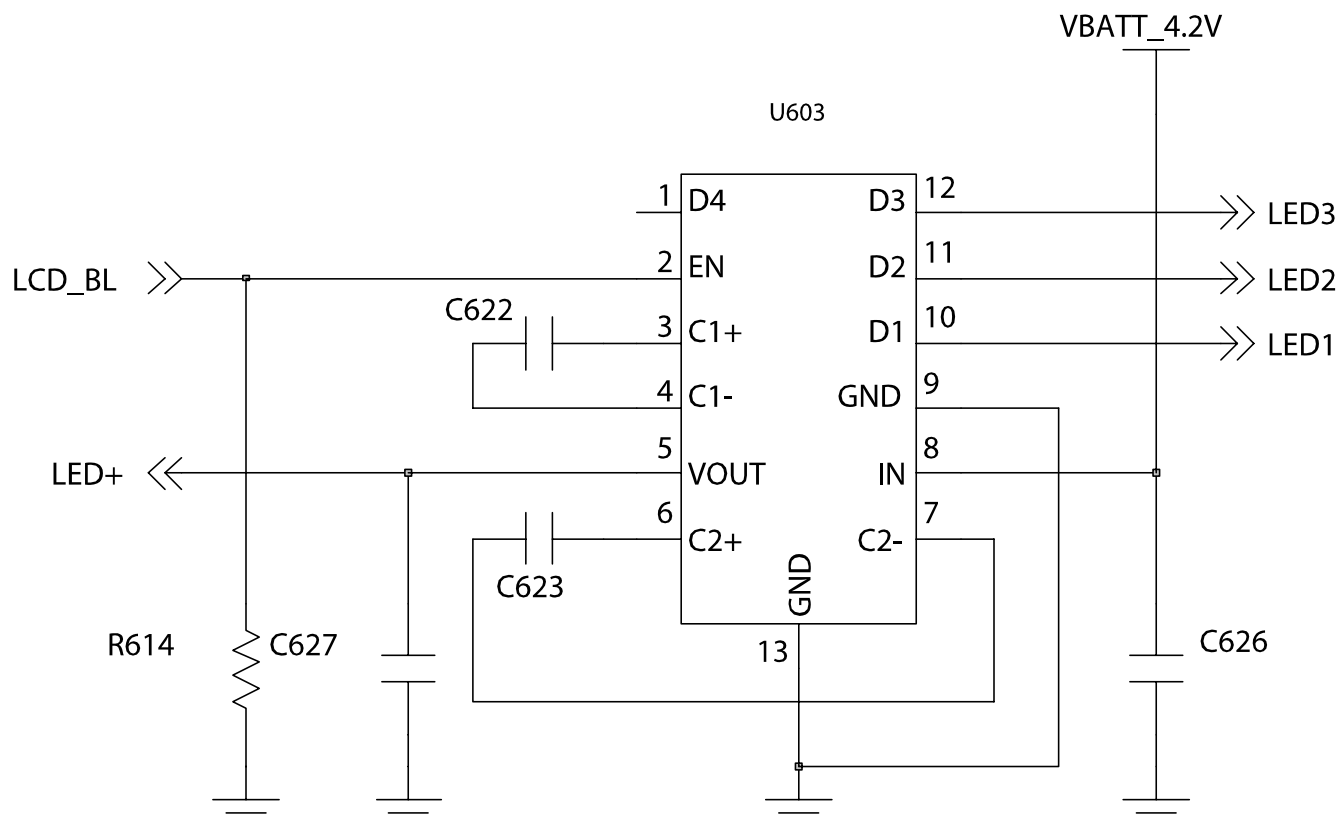


CAMERA(VGA) CONNECTOR

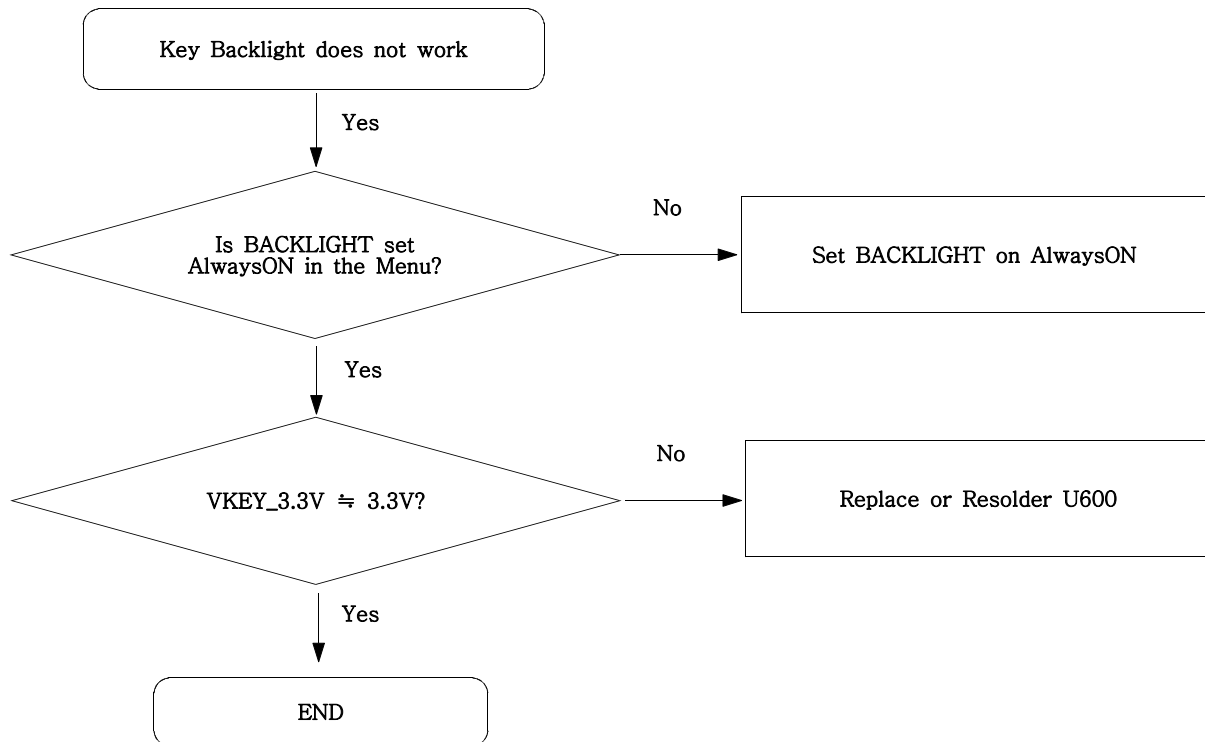


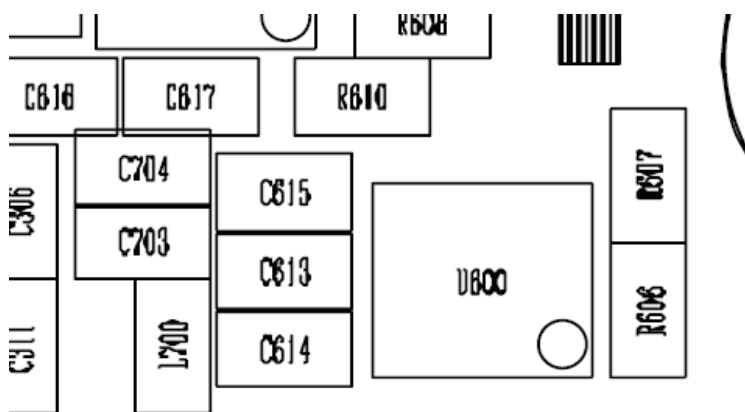
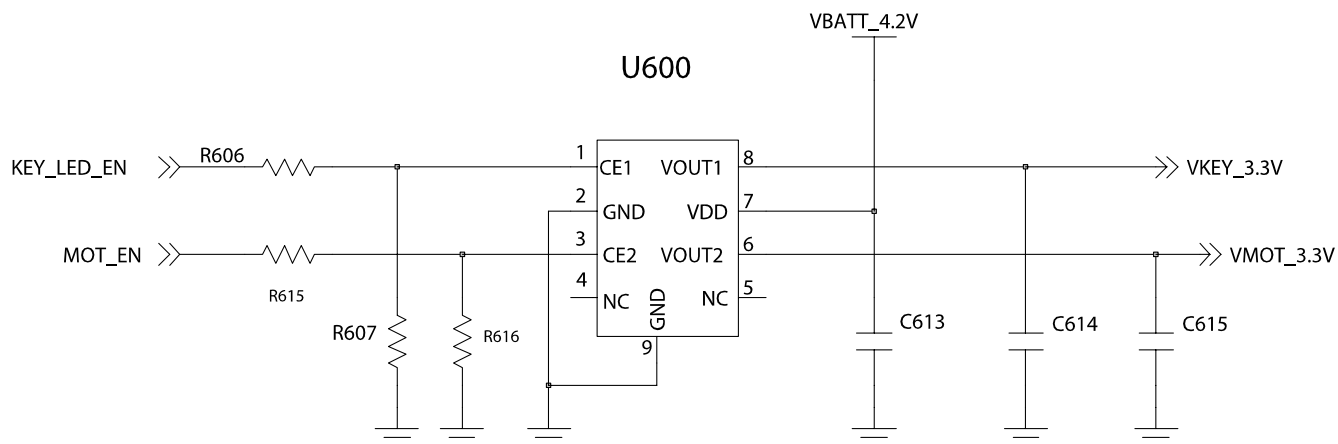
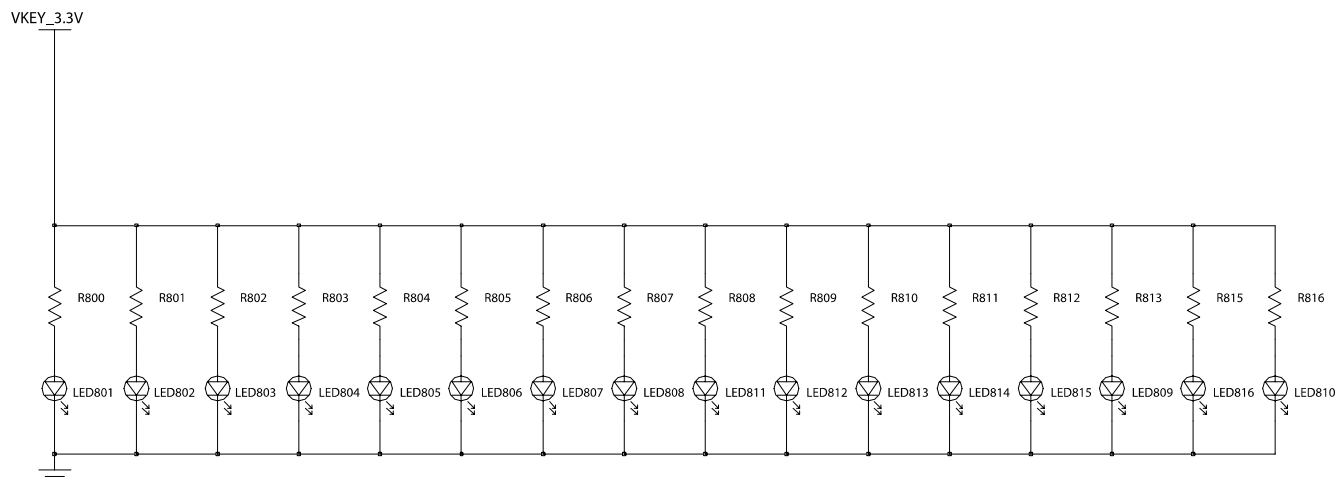
9-12. LCD Back Light



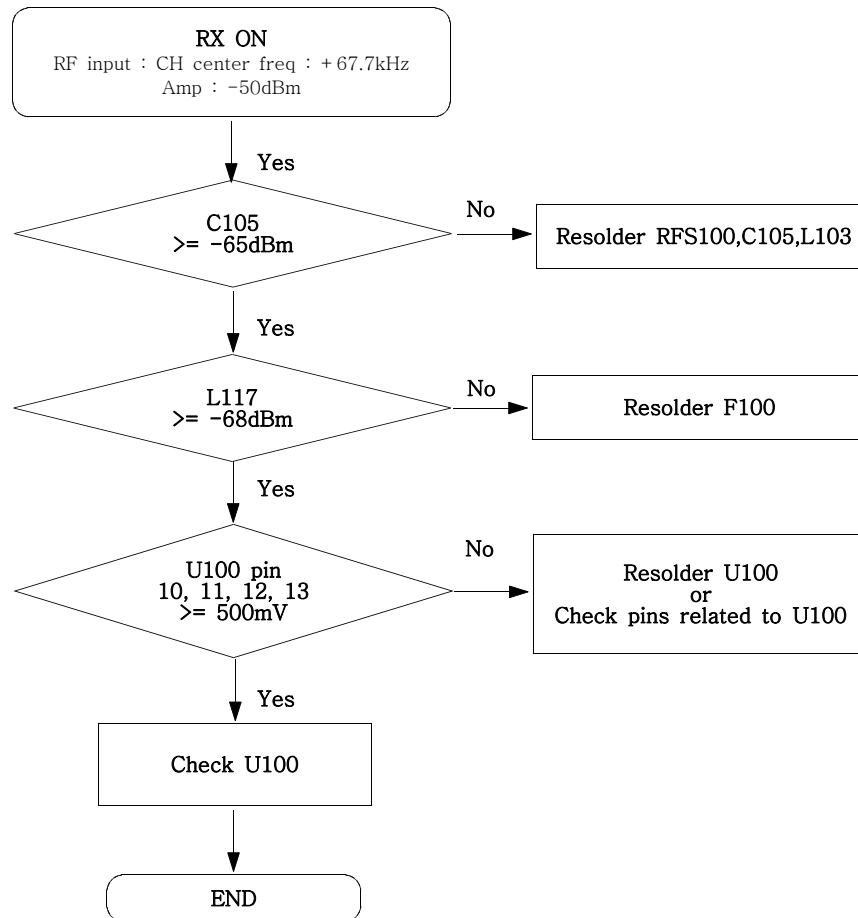


9-13. Key Back Light

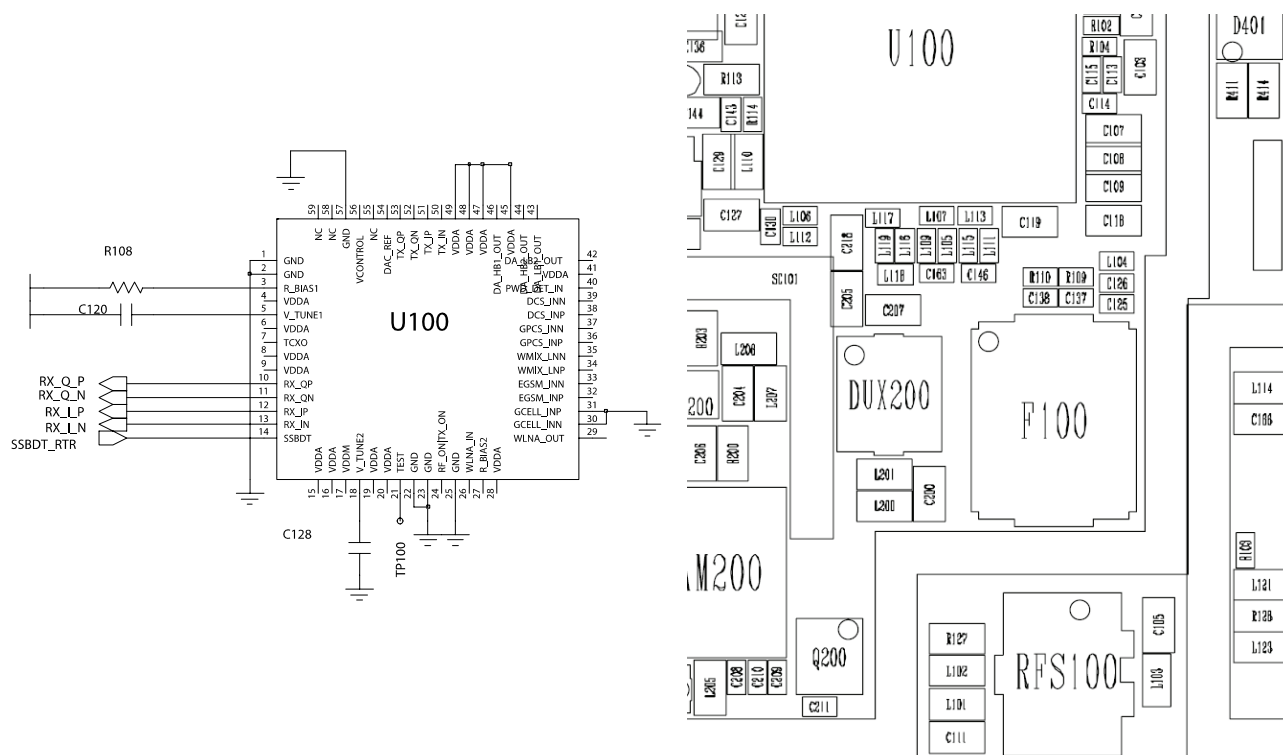
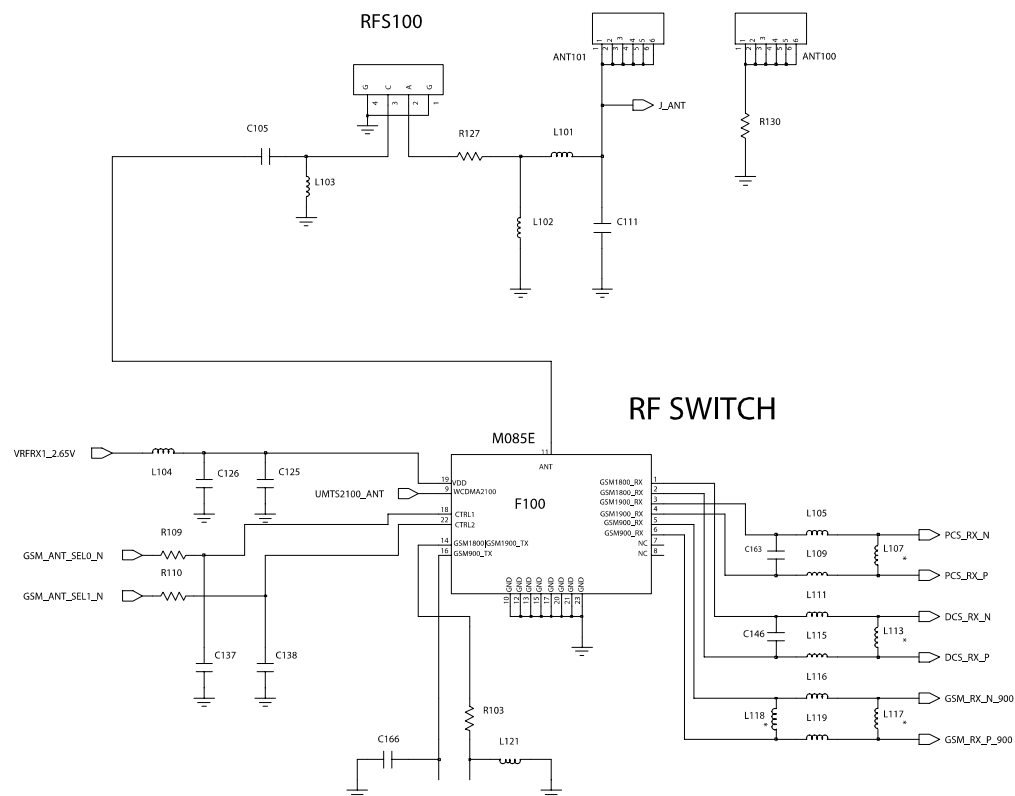




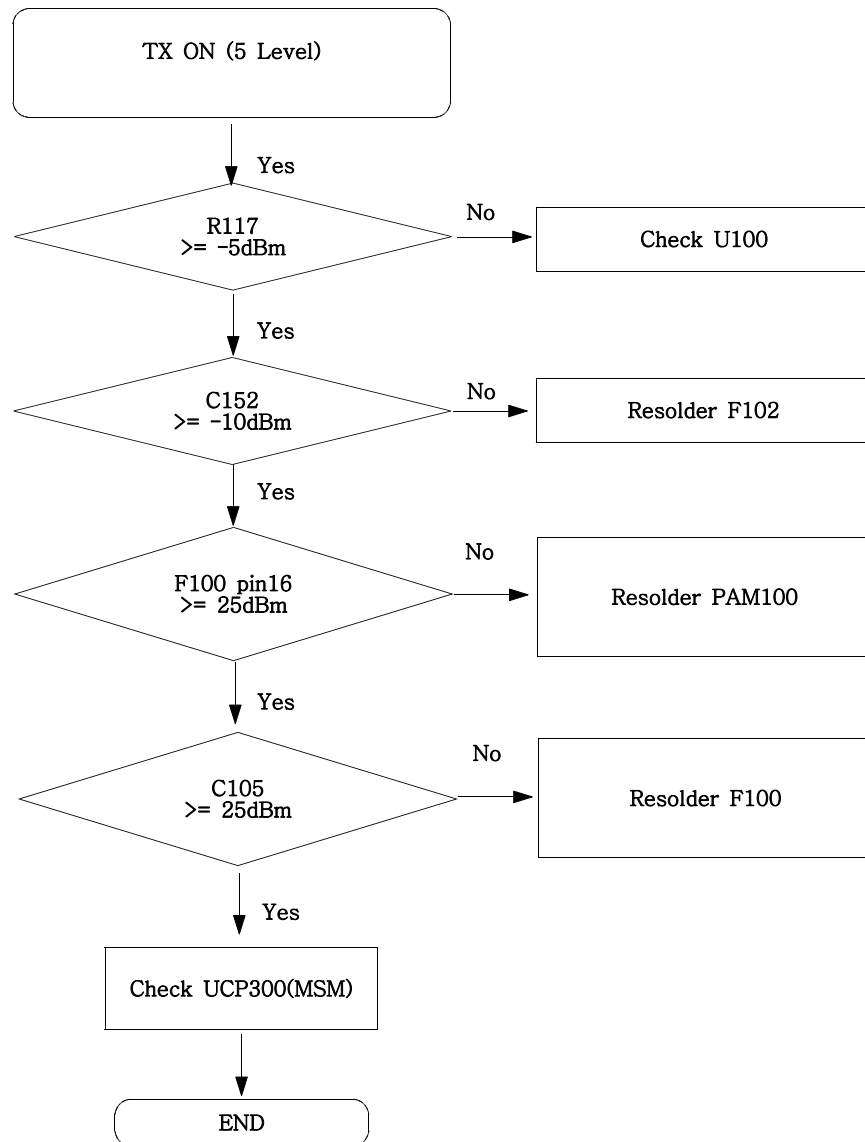
9-14. GSM Receiver



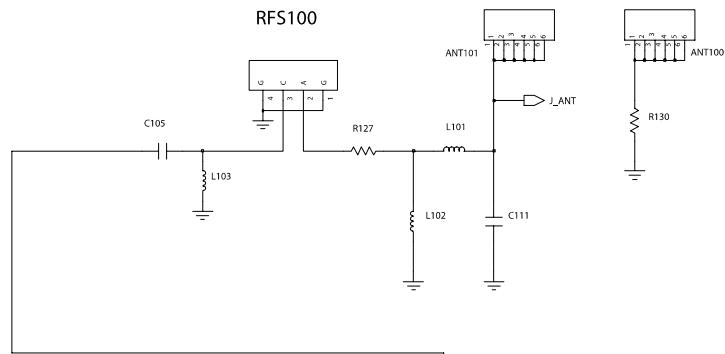
RF CONNECT



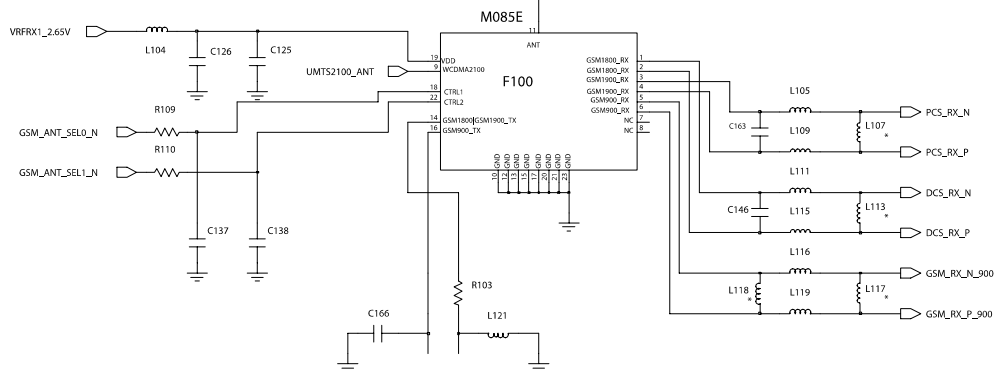
9-15. GSM Transmitter



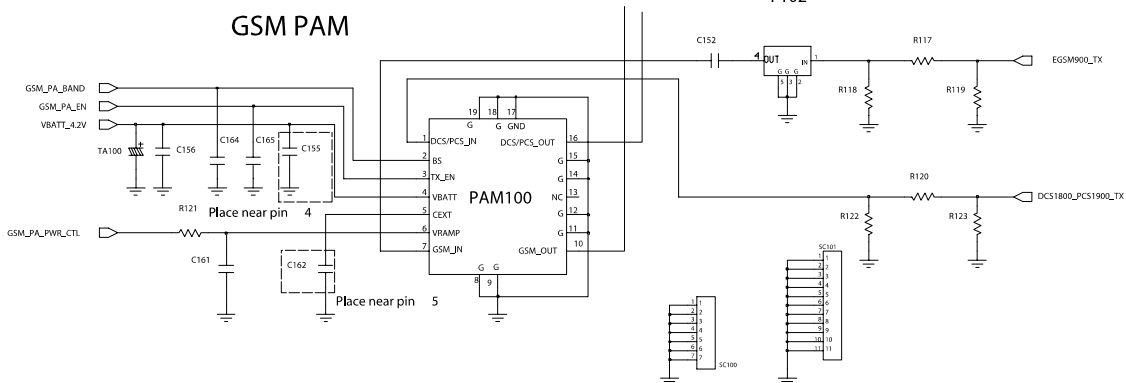
RF CONNECT



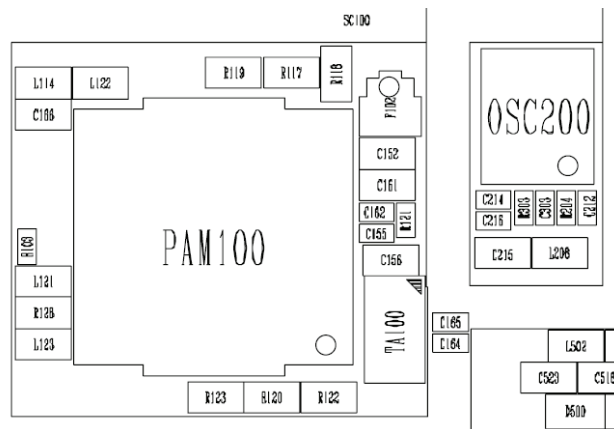
RF SWITCH



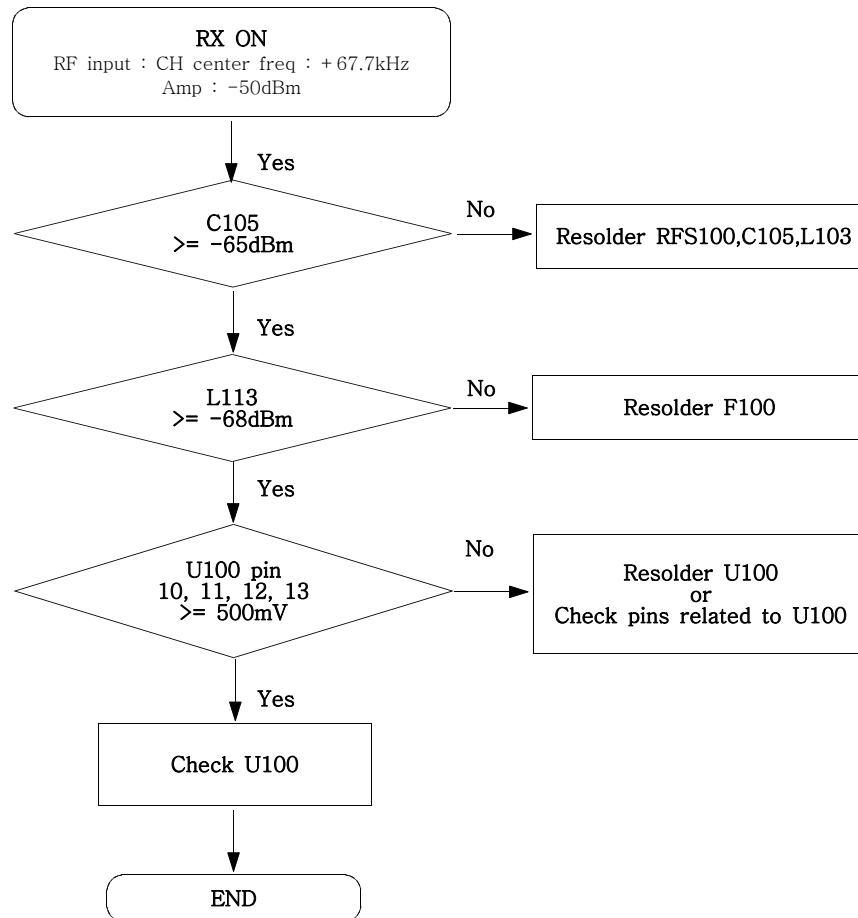
GSM PAM



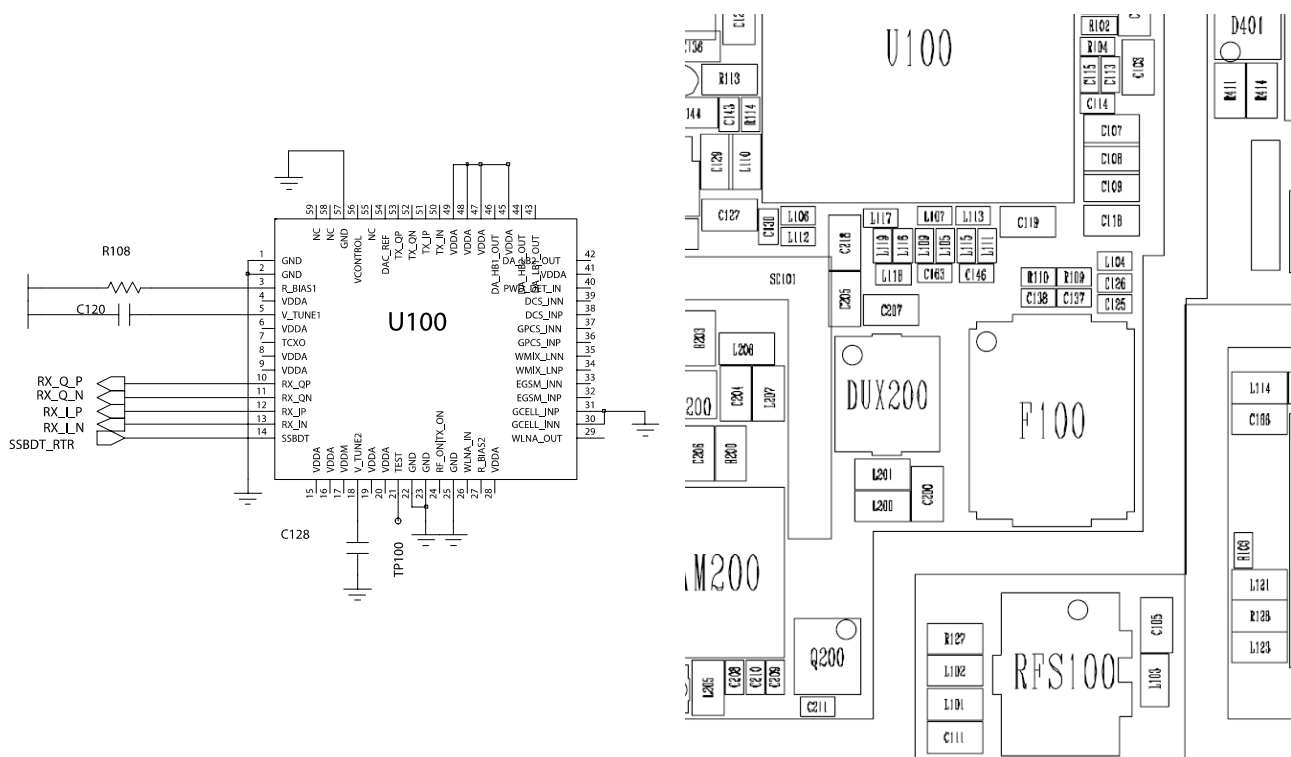
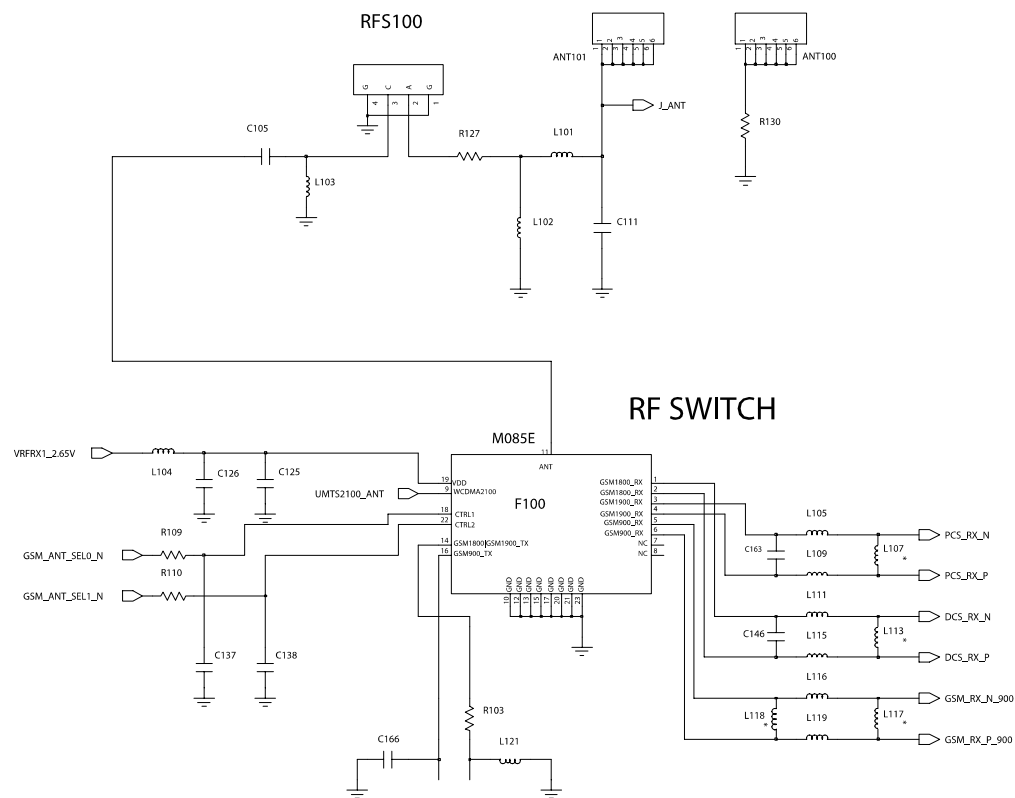
SHIELDCAN



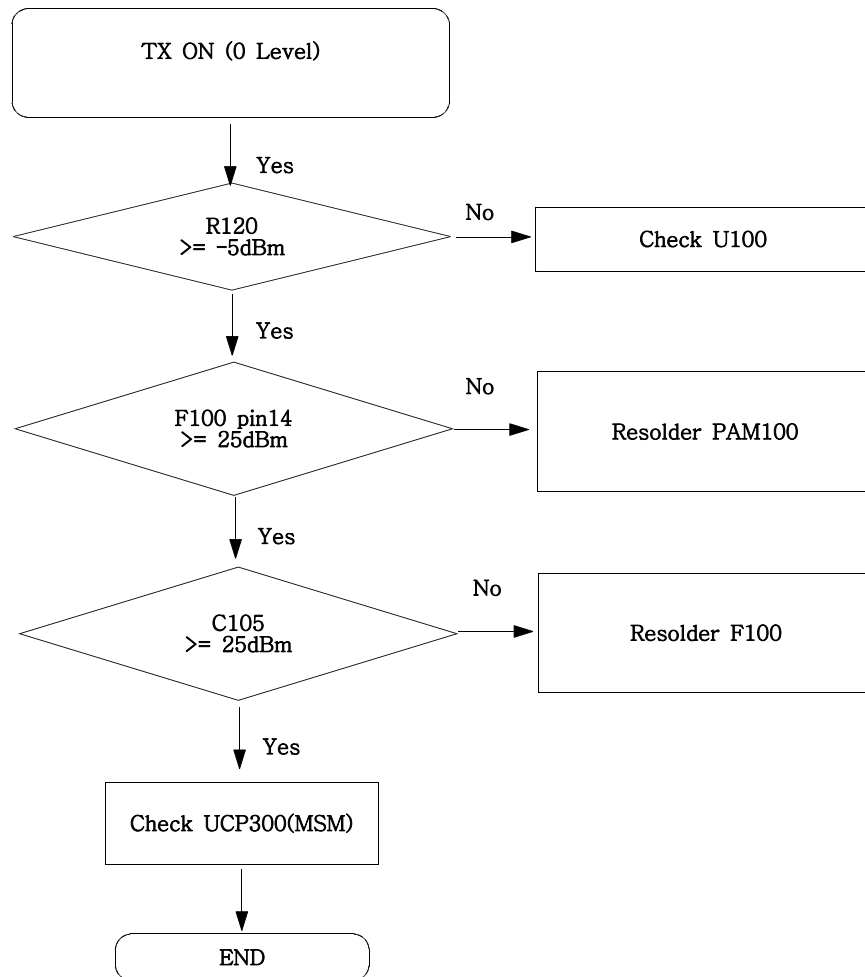
9-16. DCS Receiver



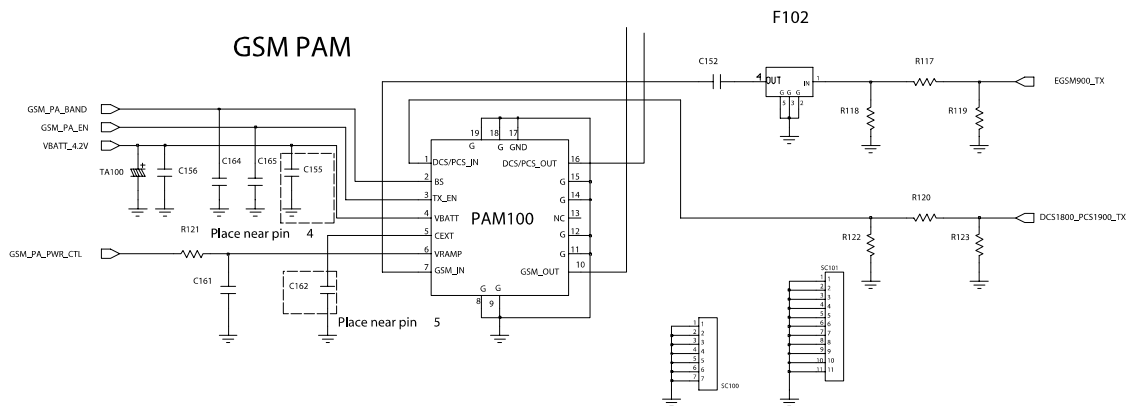
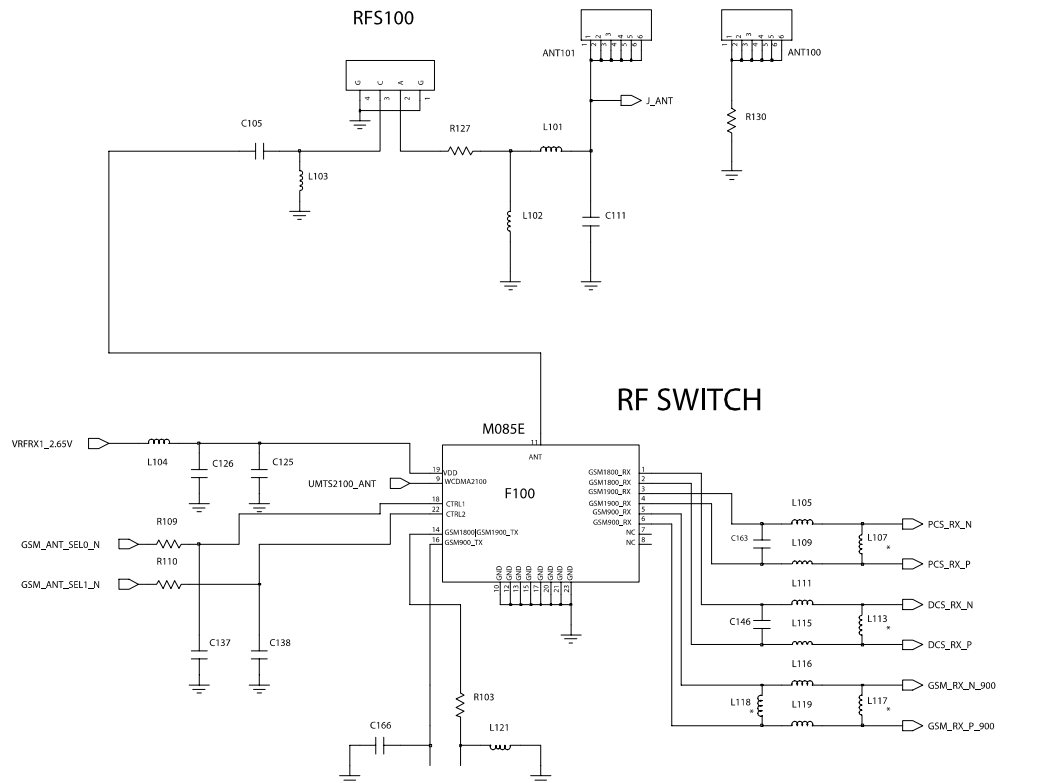
RF CONNECT



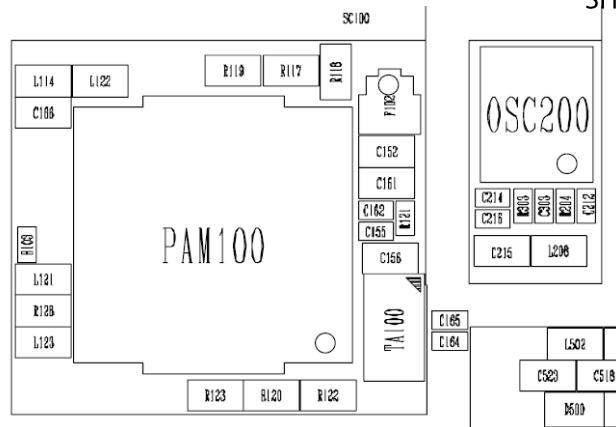
9-17. DCS Transmitter



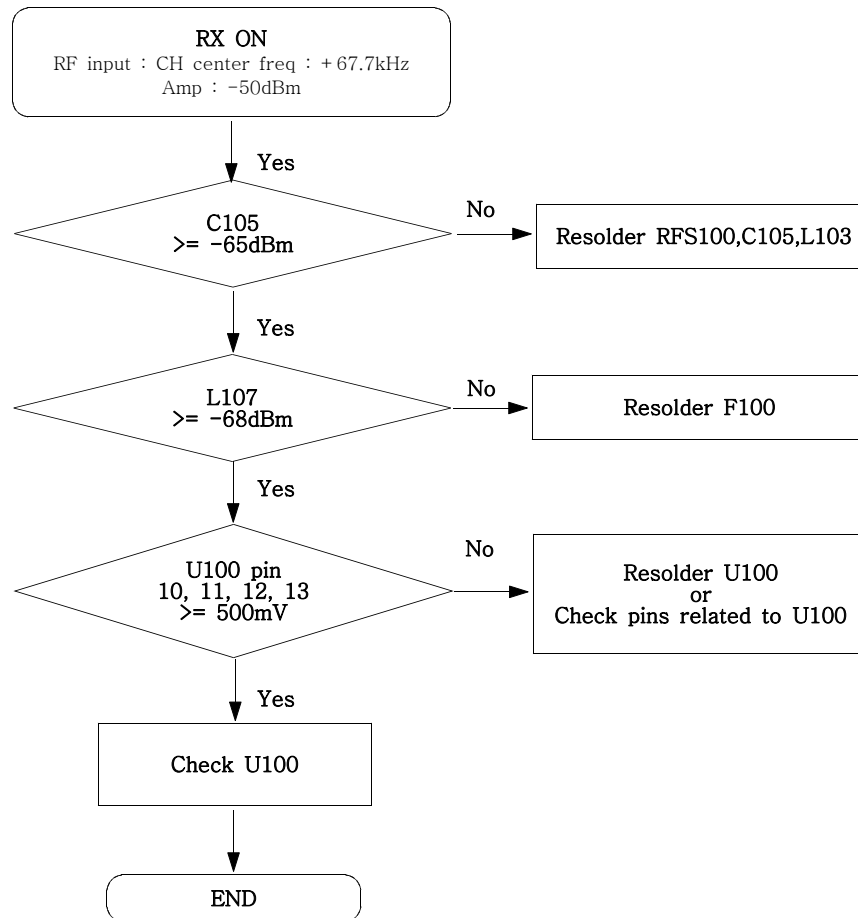
RF CONNECT



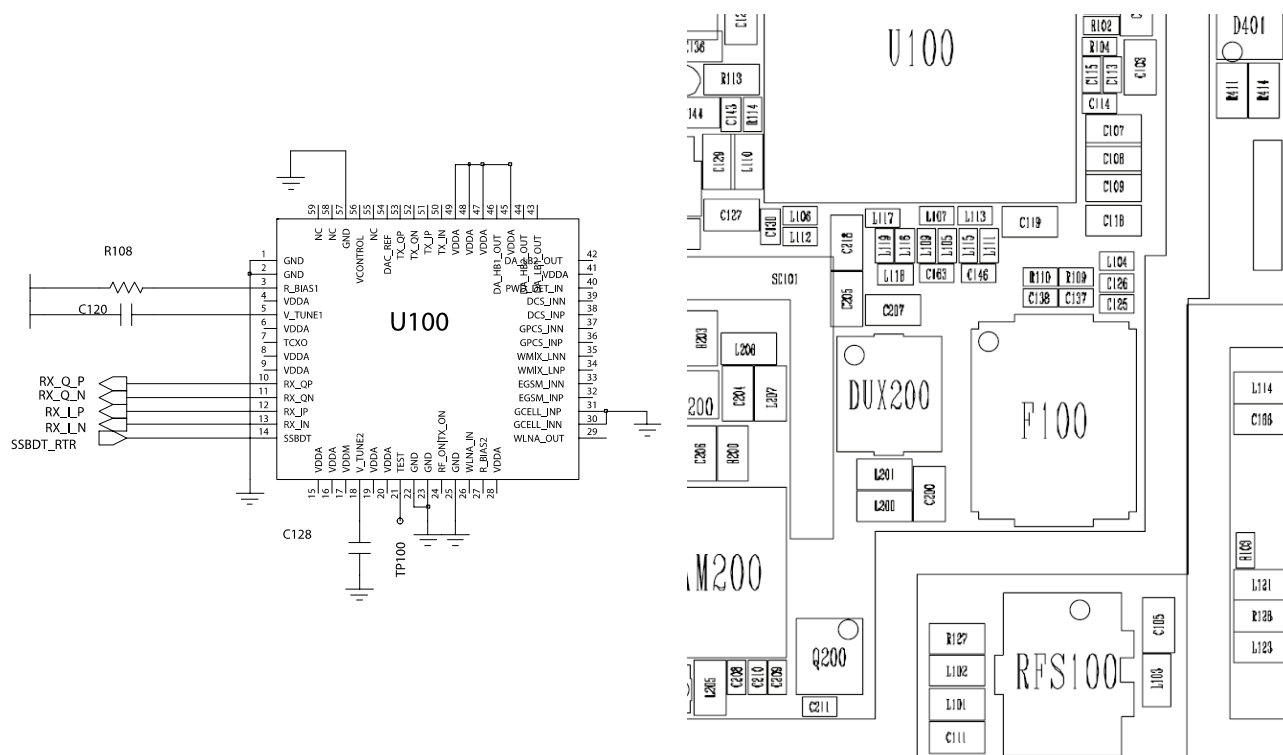
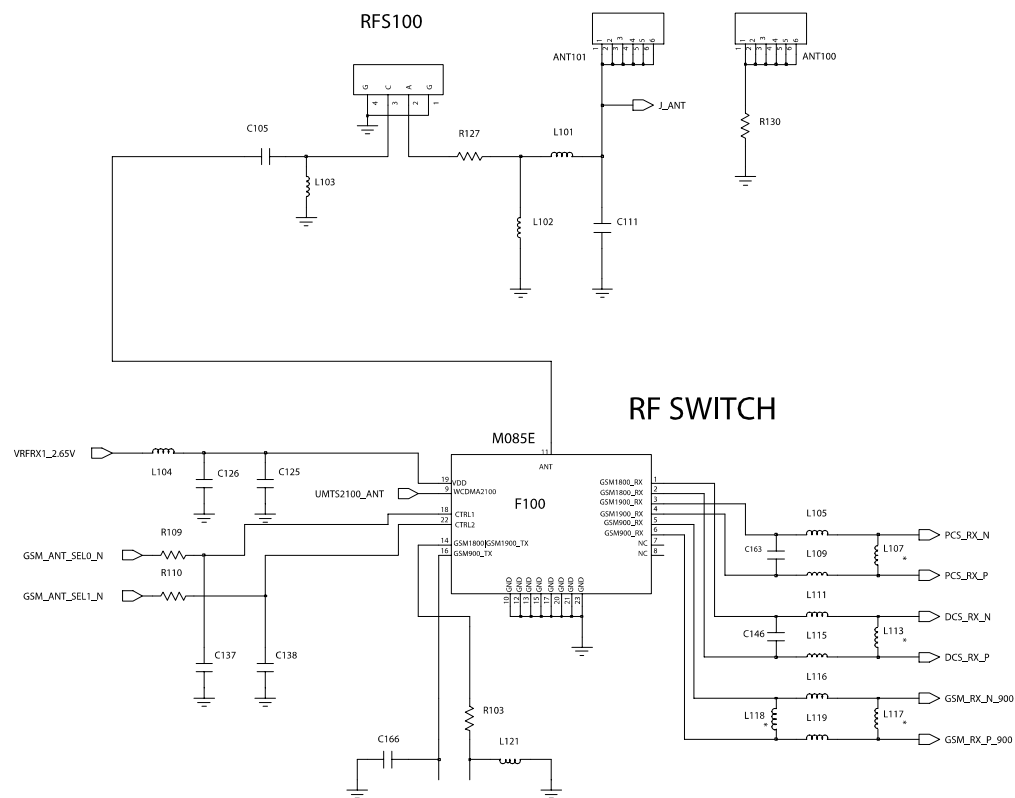
SHIELDCAN



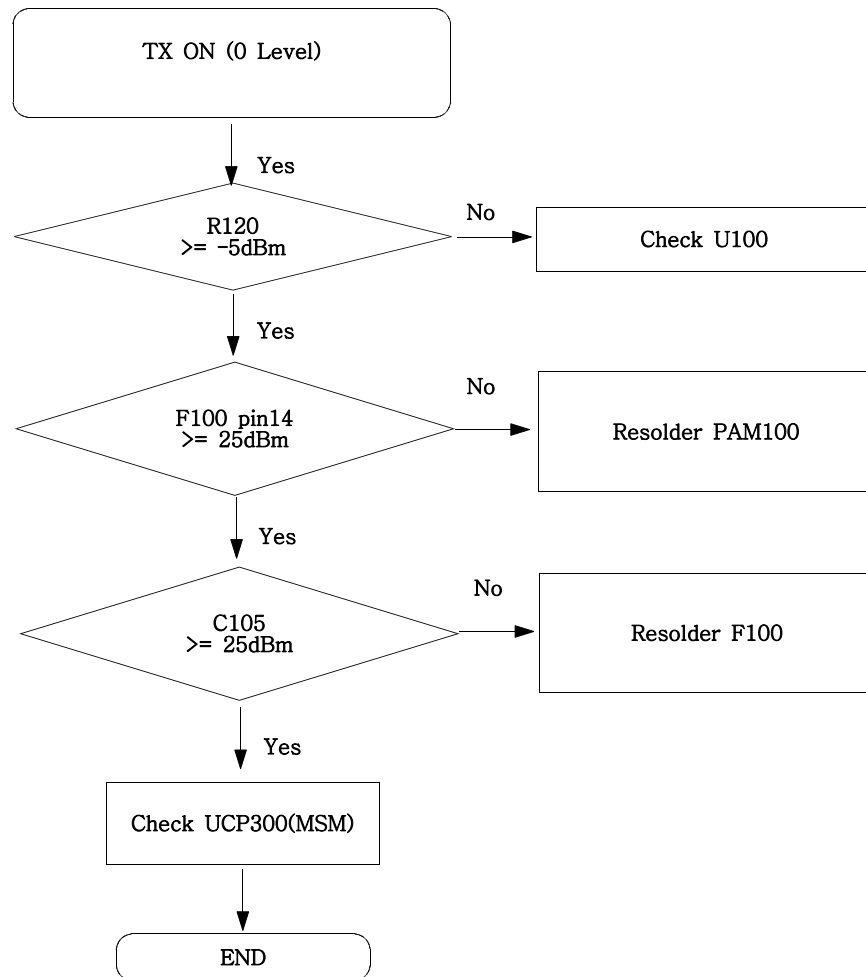
9-18. PCS Receiver



RF CONNECT

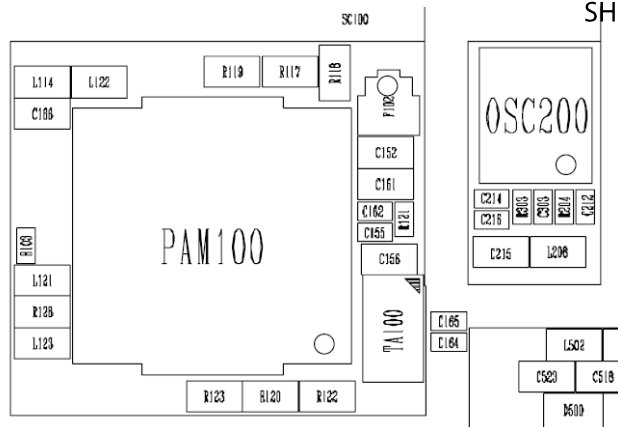


9-19. PCS Transmitter

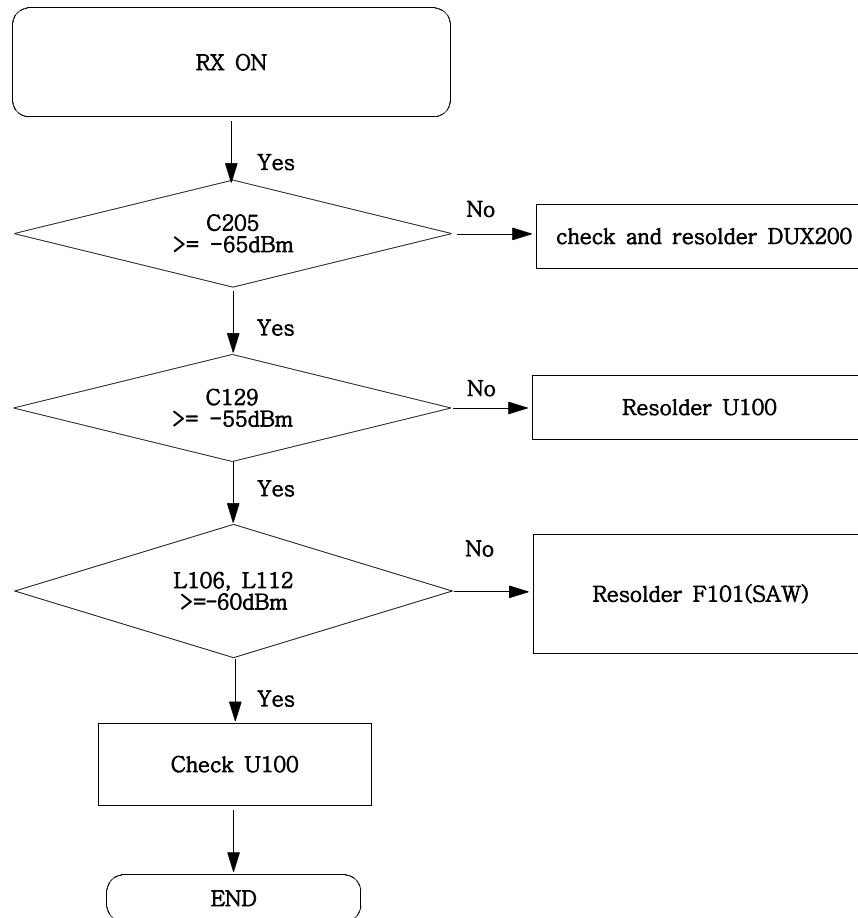


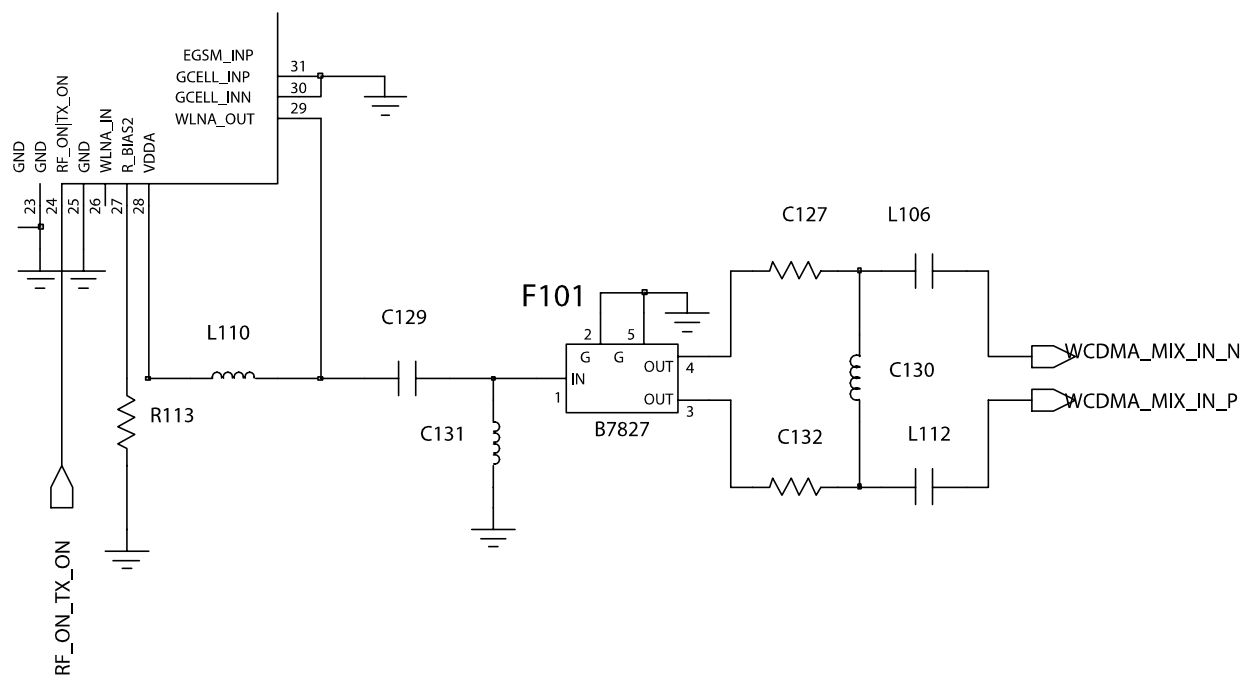


10/10/2016

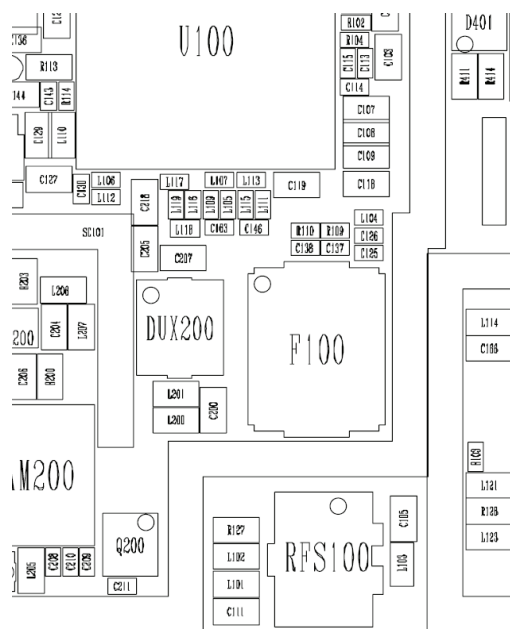
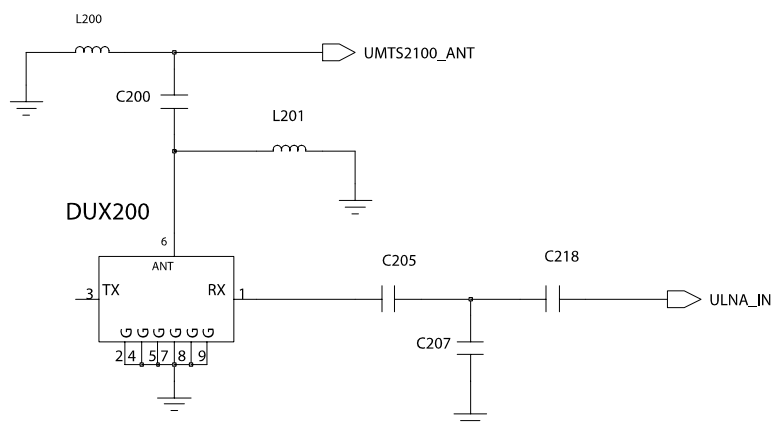


9-20. WCDMA Receiver

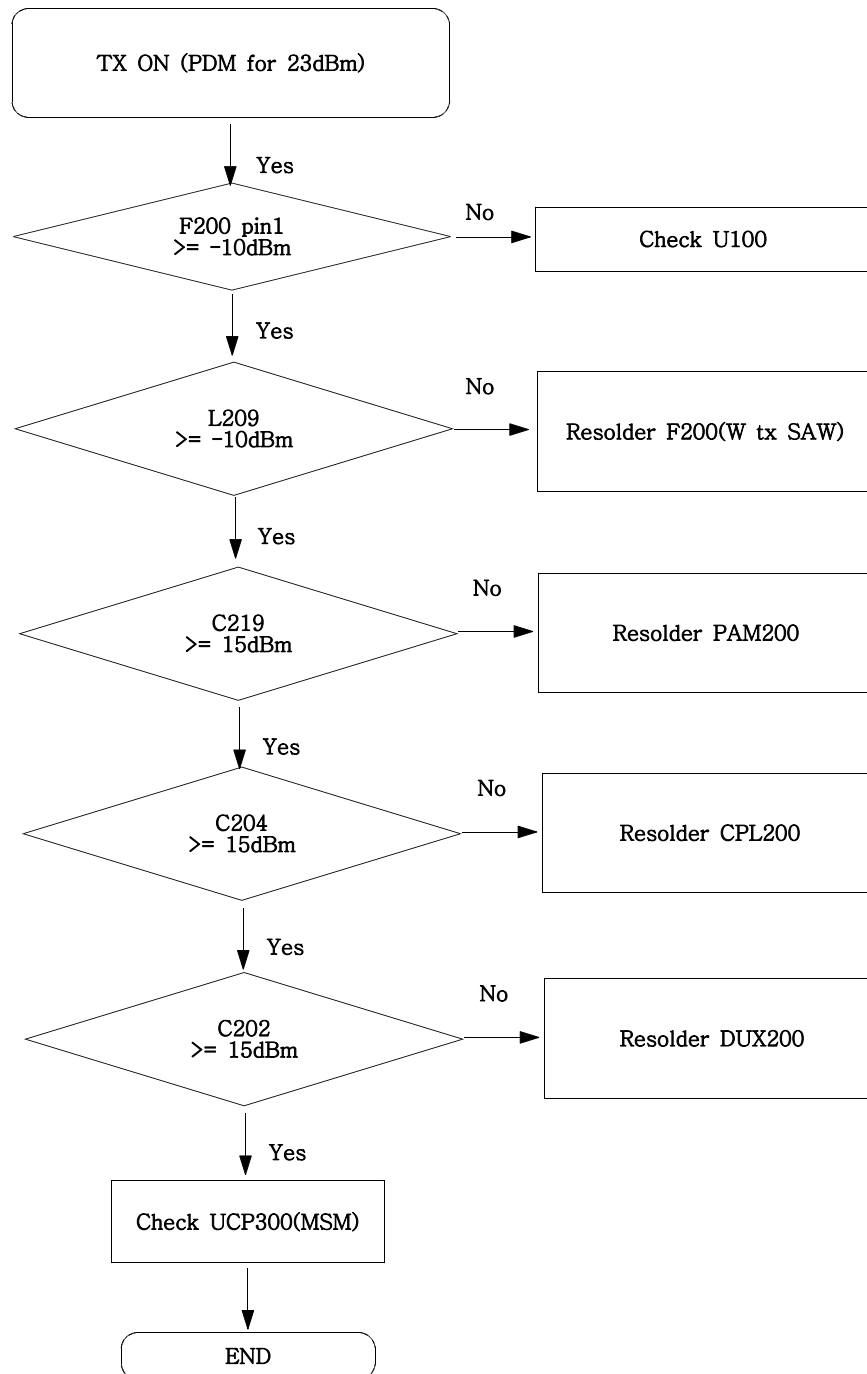


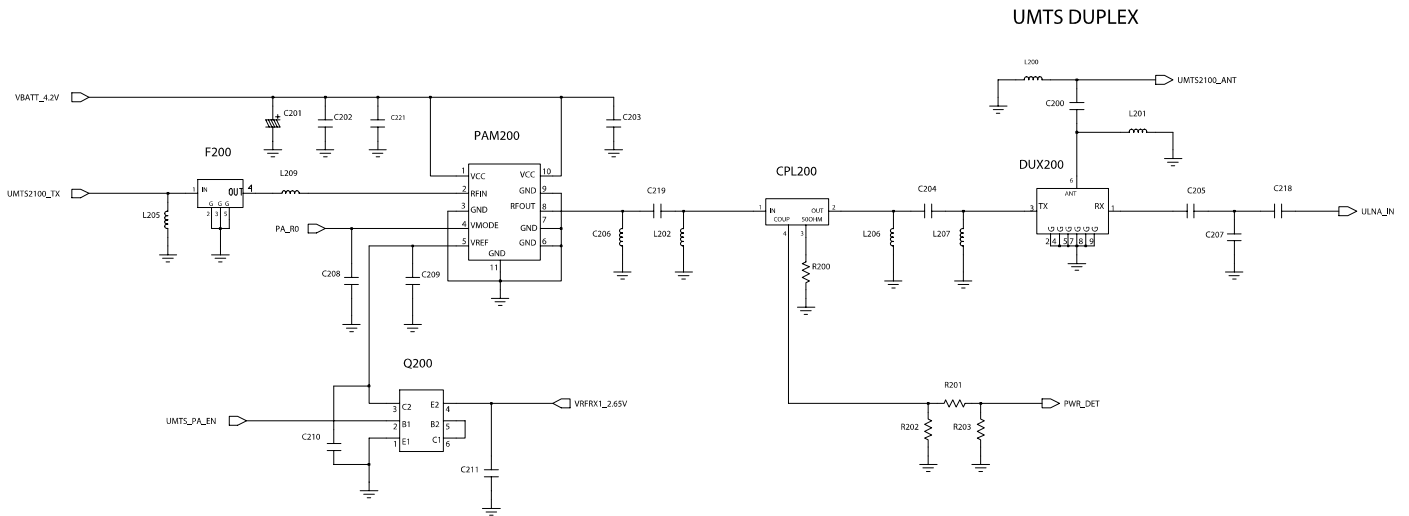


UMTS DUPLEX



9-21. WCDMA Transmitter





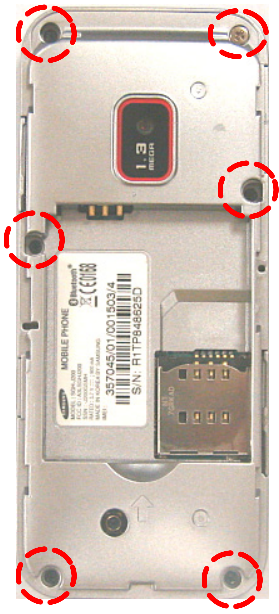
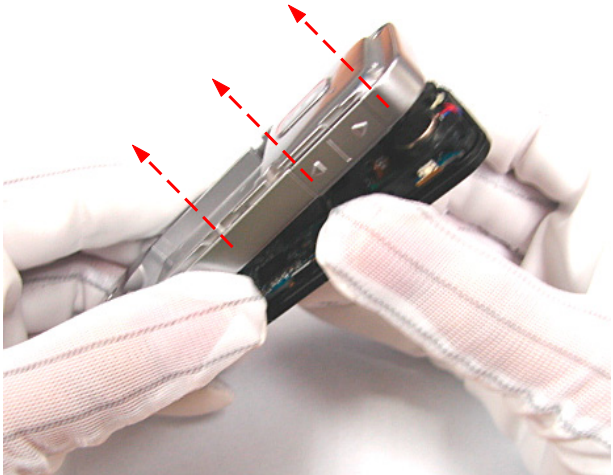
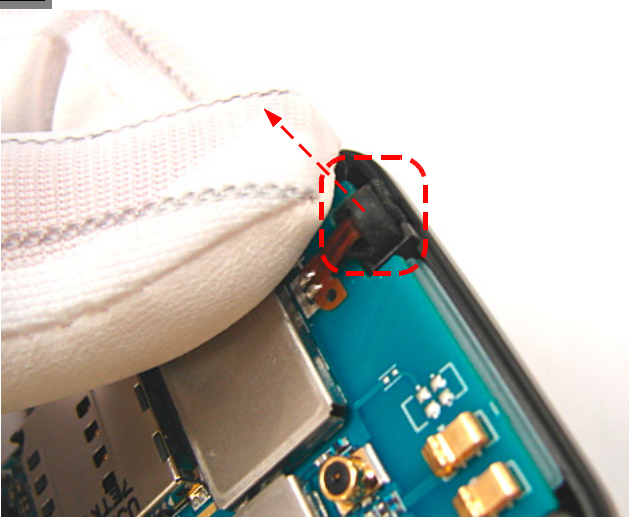
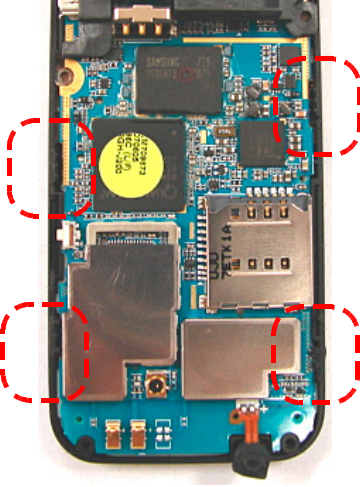
10. Reference data

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

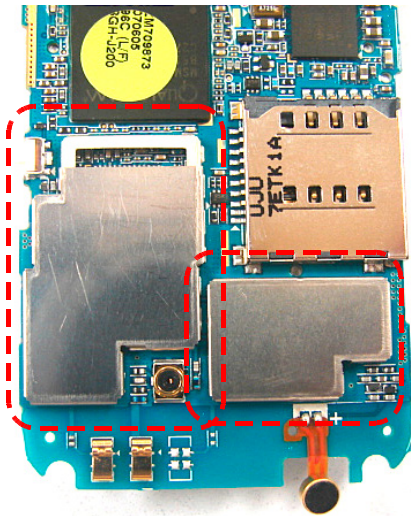
11. Disassembly and Assembly Instructions

11-1. Disassembly Instructions

1 	2 
SCREW remove Remove SET SCREW 6 POINTs. (SILVER 1 POINT)	REAR COVER separation Separate REAR COVER from FRONT.
3 	4 
MIC separation Separate MIC in SET.(When separate, keep in mind to MIC F-PCB's CRACK.)	FRONT HOOK separation Separate PBA from FRONT's HOOK. ※Take care of HOOK damage

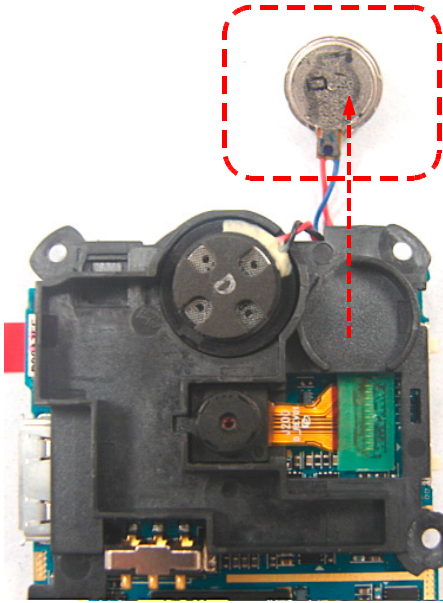
5 PBA separation Separate PBA ASS' Y from FRONT.	6 KEY PAD exclusion Remove KEY PAD on FRONT.
7 Image that is parted PBA ASS' Y	8 JOG KEY PAD separation Separate JOG KEY PAD from PBA ASS' Y.

9

**SMD SHIELD CAN separation**

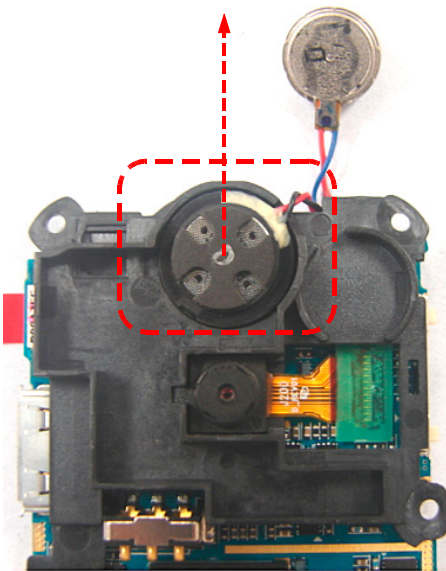
Separate SMD SHIELD CAN from PBA ASS' Y.

10

**MOTOR exclusion**

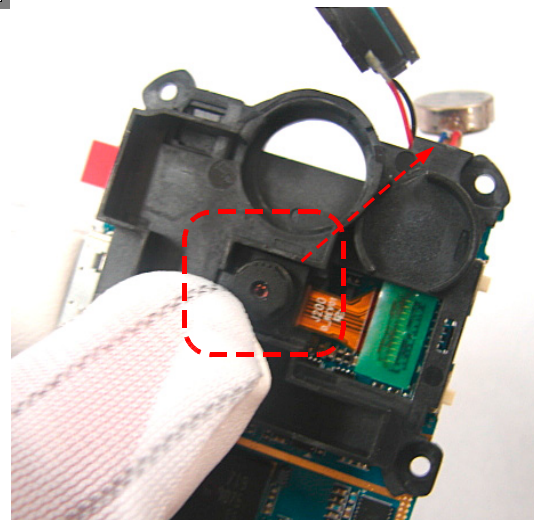
Separate MOTOR from BRACKET.

11

**SPEAKER exclusion**

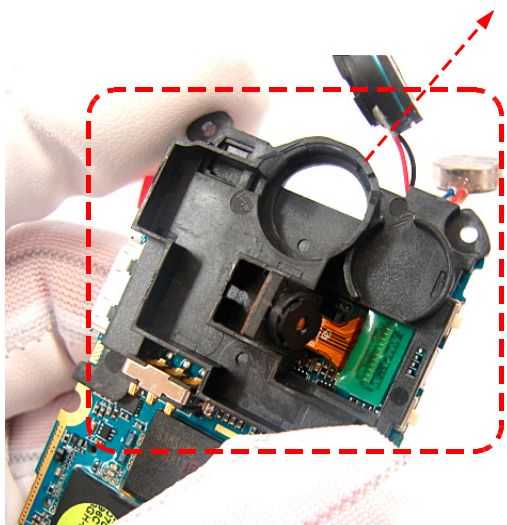
Separate SPEAKER from BRACKET.

12

**1.3MEGA CAMERA separation**

Separate 1.3 MEGA CAMERAs from BRACKET.

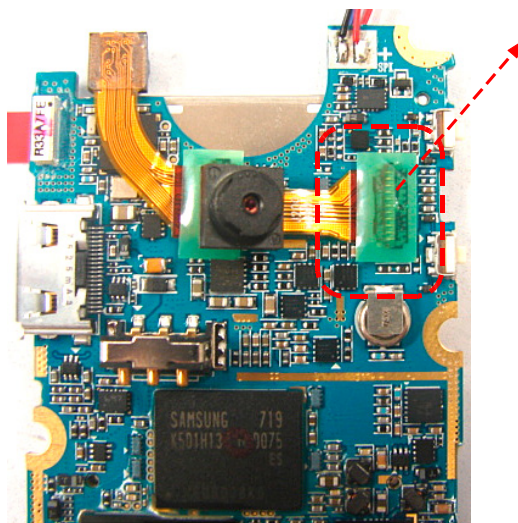
13



BRACKET separation

Separate BRACKET from PBA ASS' Y.

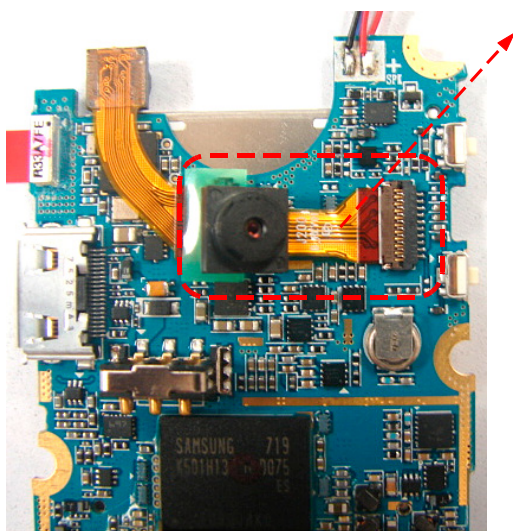
14



Anti-loose TAPE 1 exclusion

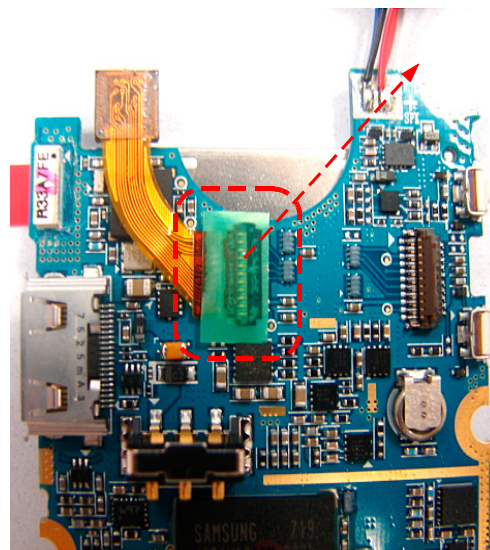
loosing that stick on 1.3 MEGA CAMERA CONNECTORs
Remove prevention TAPE.

15



1.3MEGA CAMERA exclusion

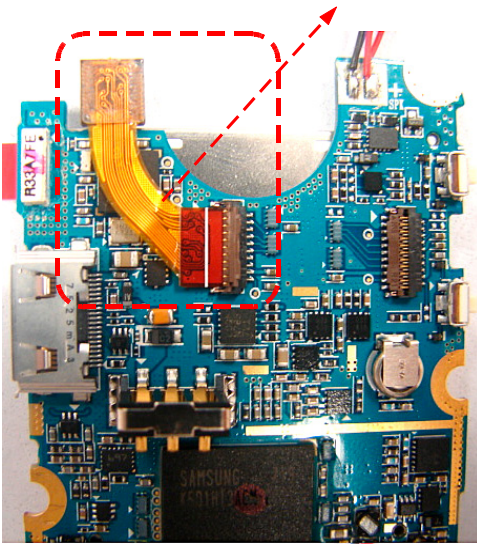
Remove 1.3 MEGA CAMERAs from PBA.



Anti-loose TAPE 2 exclusion

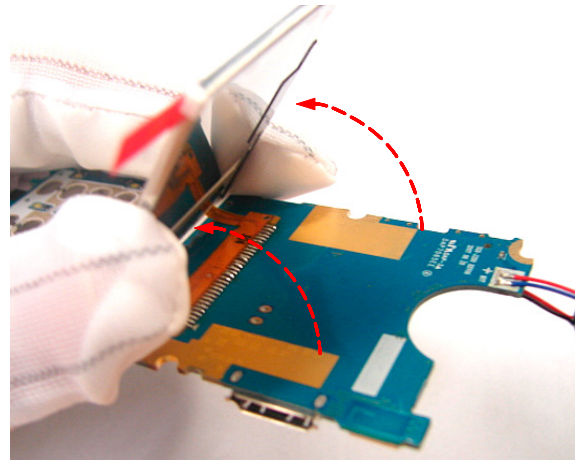
Remove anti-loose TAPE that stick on VGA CAMERA CONNECTOR.

16



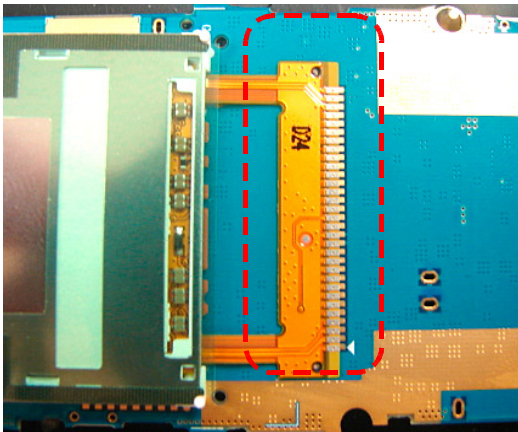
VGA CAMERA exclusion
Remove VGA CAMERA from PBA.

17



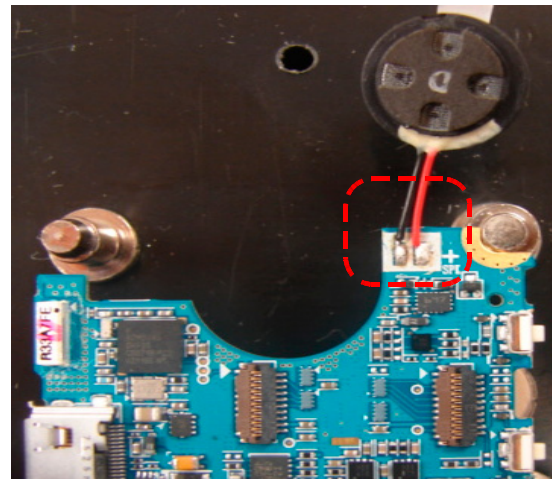
LCD MODULE exclusion
Remove LCD MODULE from PBA.

18



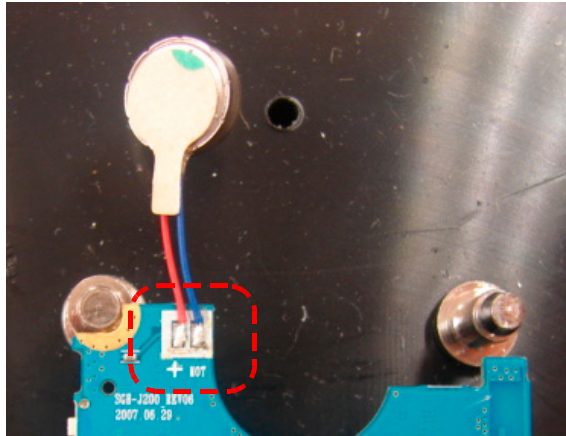
LCD SOLDERING PART exclusion
Remove segment that become SOLDERING to PBA.

19



SPEAKER exclusion
Remove SPEAKER that become SOLDERING on the PBA top portion

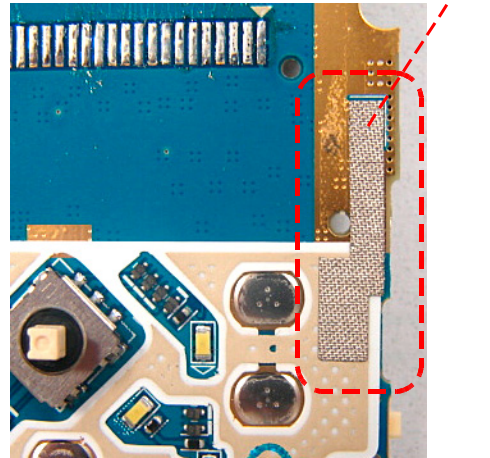
20



MOTOR exclusion

Remove MOTOR that become SOLDERING on the PBA top portion.

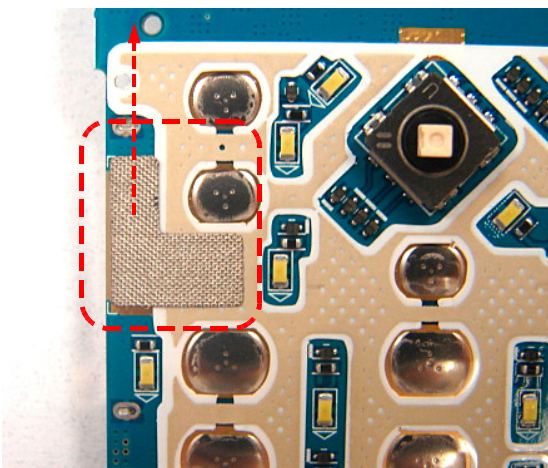
21



electric SPONGE 1 exclusion

Remove TAPE that is attached to PBA right side middle.

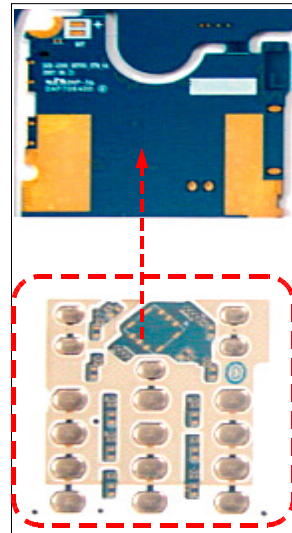
22



electric SPONGE 2 exclusion

Remove TAPE that is attached to PBA left side middle.

23

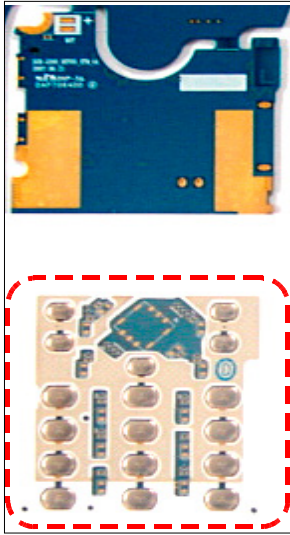


3*4 KEY DOME SHEET exclusion

Remove 3*4 KEY DOME SHEET from PBA.

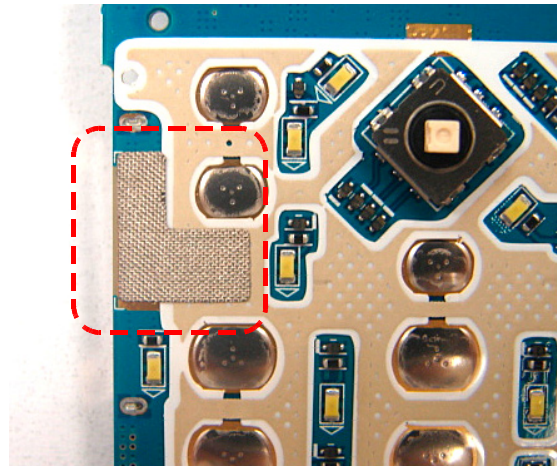
11-2. Assembly Instructions

1



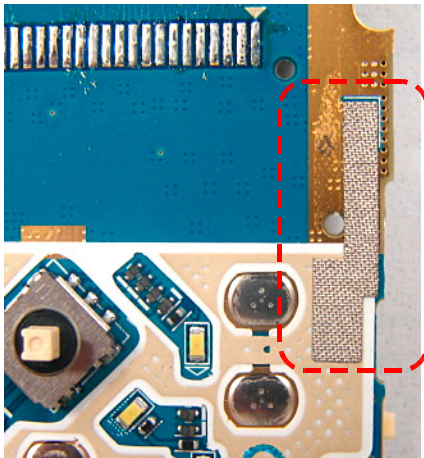
3*4 KEY DOME SHEET attachment
Attach 3*4 KEY DOME SHEET from PBA.

2



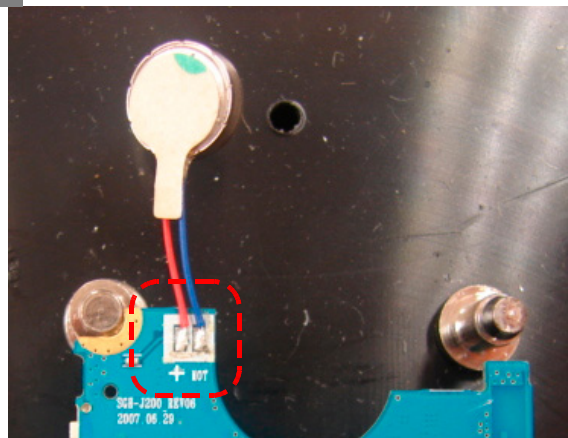
electric SPONGE 1 attachment
Attach TAPE at PBA left side middle.

3



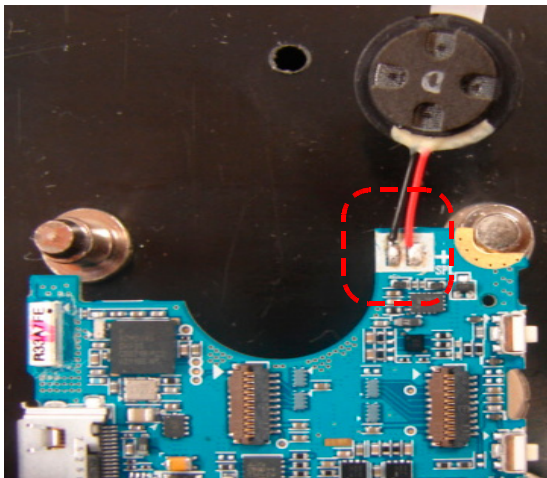
electric SPONGE 2 attachment
Attach TAPE at PBA left side middle.

4



MOTOR SOLDERING
Do MOTOR SOLDERING on the PBA top portion.

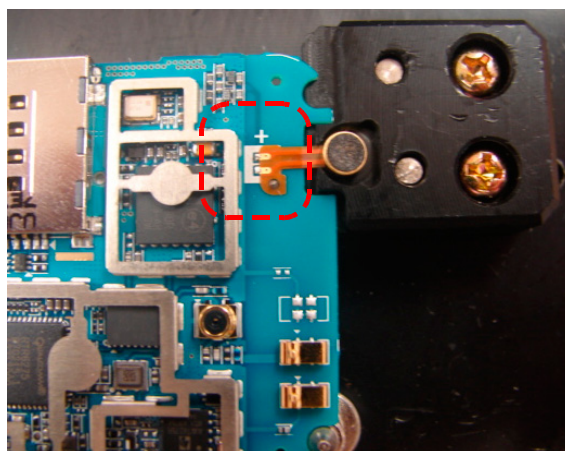
5



SPEAKER SOLDERING

Do SPEAKER SOLDERING on the PBA top portion.

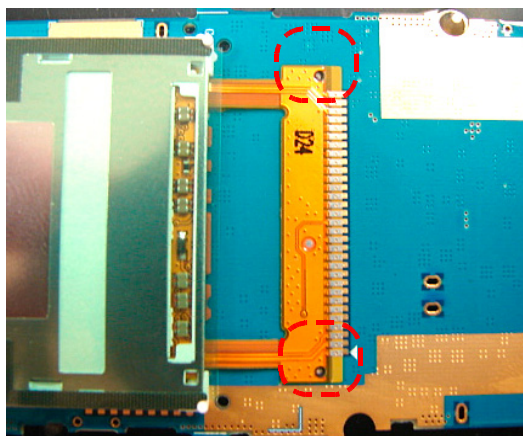
6



MIC SOLDERING

Do MIC SOLDERING on PBA lower column.

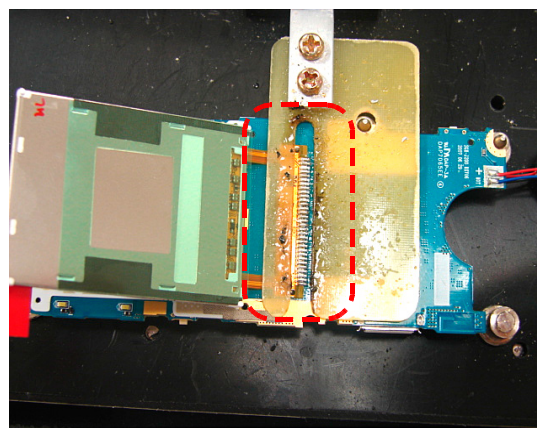
7



LCD MODULE SOLDERING preparation

LCD MODULE sets LCD F-PCB to right and left side HOLE before do SOLDERING.

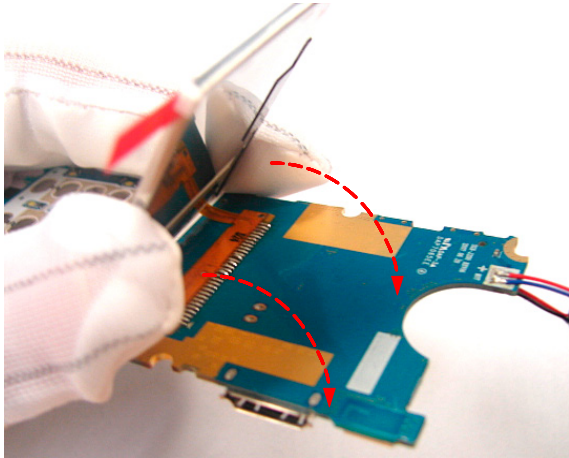
8



LCD MODULE SOLDERING

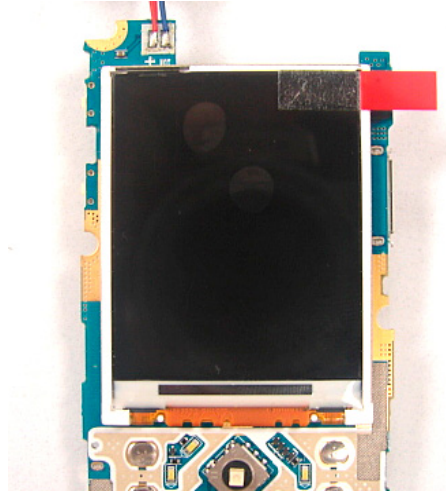
Do SOLDERING LCD F-PCB to PBA.

9

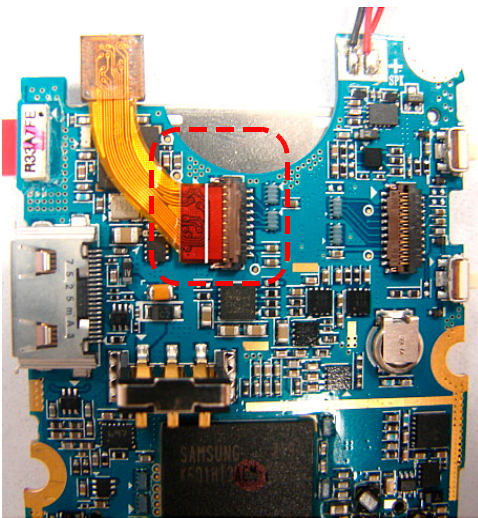
**LCD MODULE attachment**

Attach LCD MODULE that become SOLDERING to PBA.

10

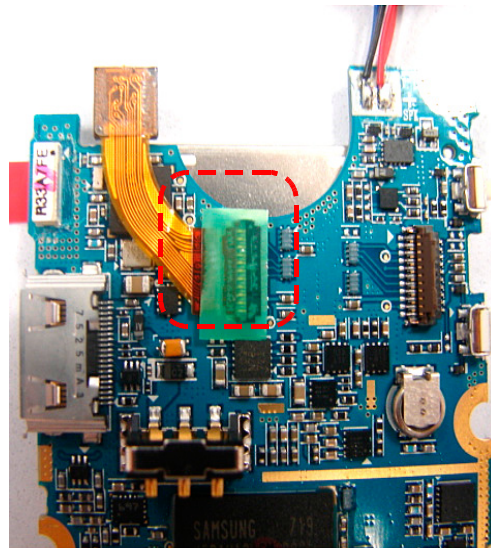
**State that LCD MODULE attaches**

11

**VGA CAMERA Combination**

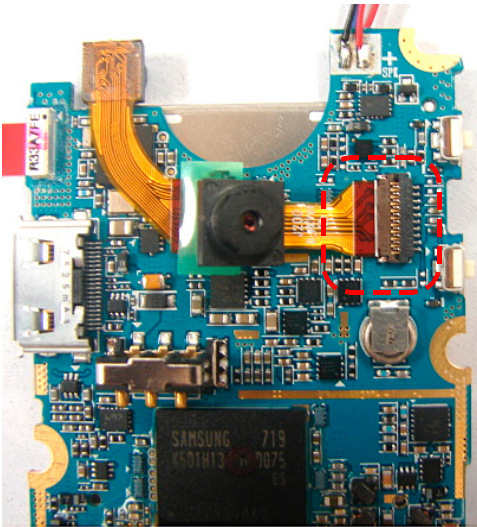
Combine VGA CAMERA to PBA's left side CONNECTOR.

12

**Anti-loose TAPE 1 attachment**

Attach anti-loose TAPE on VGA CAMERA CONNETOR.

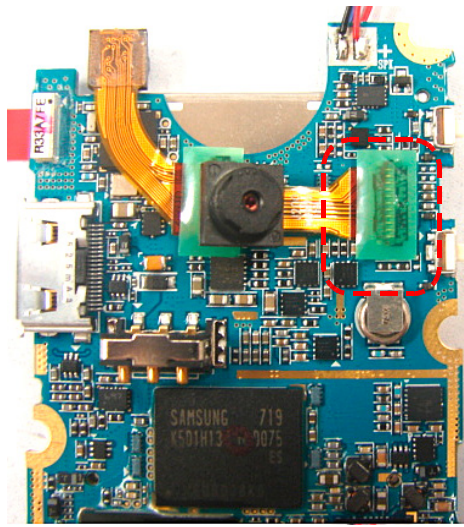
13



1.3MEGA CAMERA Combination

Combine 1.3 MEGA CAMERAs to PBA's right side CONNECTOR.

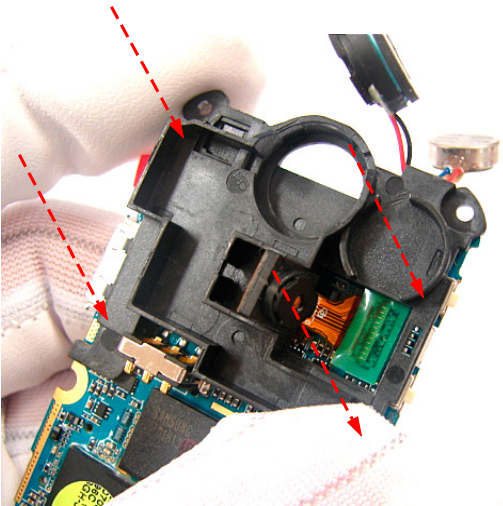
14



Anti-loose TAPE 2 attachment

Attach anti-loose TAPE on 1.3 MEGA CAMERA CONNETORs.

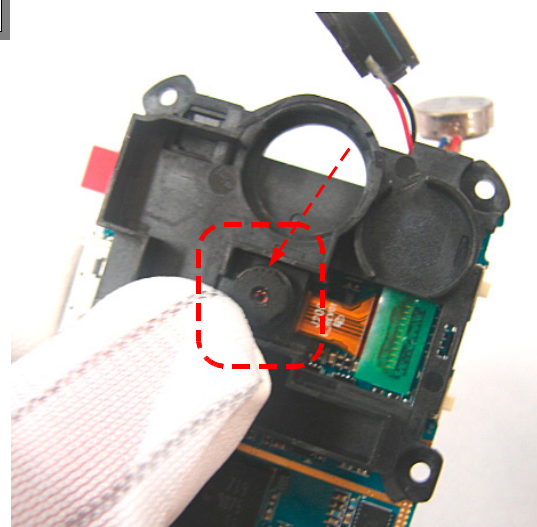
15



BRACKET assembly

Assemble BRACKET to PBA.

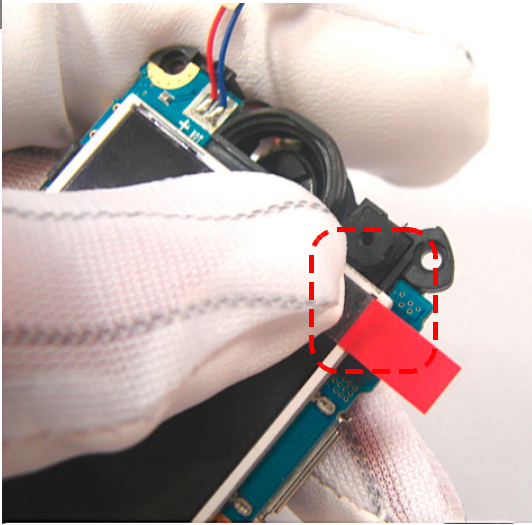
16



1.3MEGA CAMERA Combination

Combine To BARCKET 1.3 MEGA CAMERA

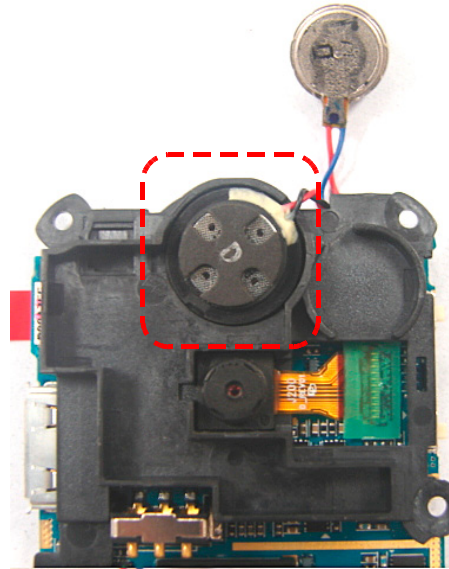
17



VGA CAMERA assembly

Assemble VGA CAMERA to BRACKET of the LCD MODULE top portion.

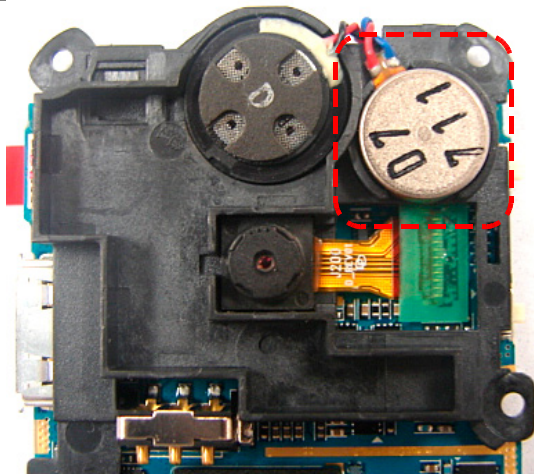
18



SPEAKER Combination

Combine SPEAKER to BRACKET.

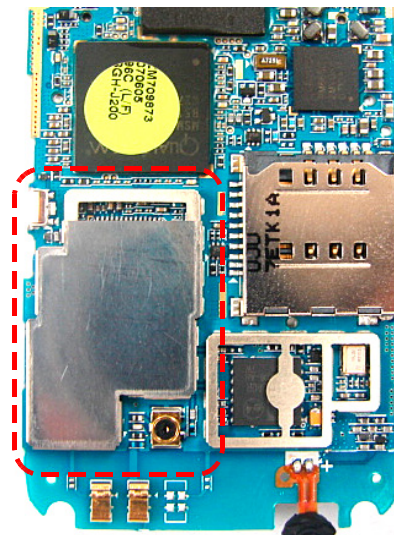
19



MOTOR Combination

Combine MOTOR to BRAKCKET, like picture.

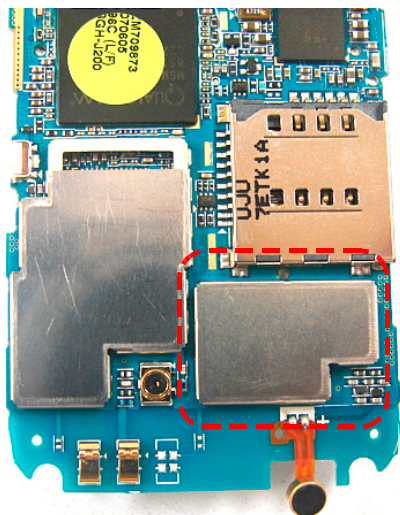
17



SHIELD CAN1 Combination

Combine SHIELD CAN in PBA left side lower part.

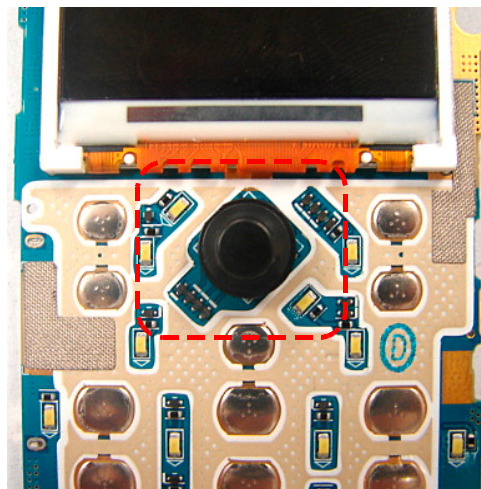
18



SHIELD CAN 2 Combination

Combine SHIELD CAN in PBA left side lower part.

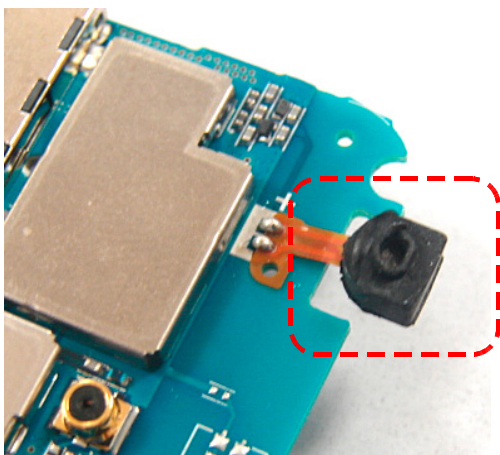
19



JOG KEY PAD Combination

Combine JOG KEY PAD with picture.

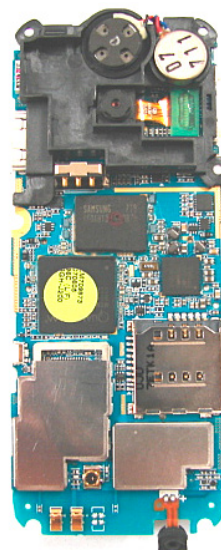
20



MIC HOLDER Combination

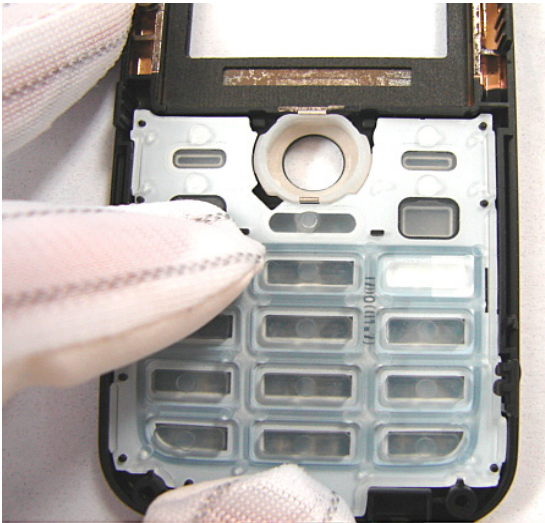
Combine HOLDER to MIC with picture.

21



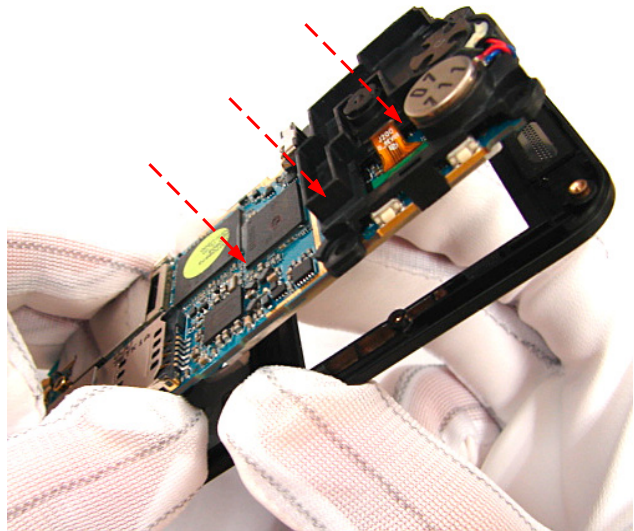
State that become PBA ASS' Y

22



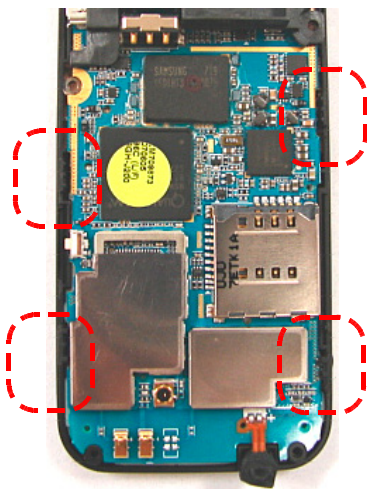
3*4 KEY PAD Combination
Combine 3*4 KEY PAD to FRONT.

23



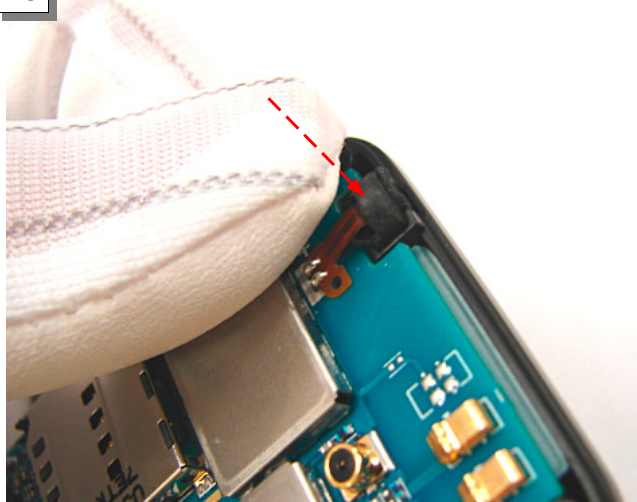
PBA ASS' Y Combination
Combine PBA ASS' Y to FRONT .

24



FRONT HOOK check
Keep in mind PBA ASS' Y to HOOK when combine to FRONT.

25



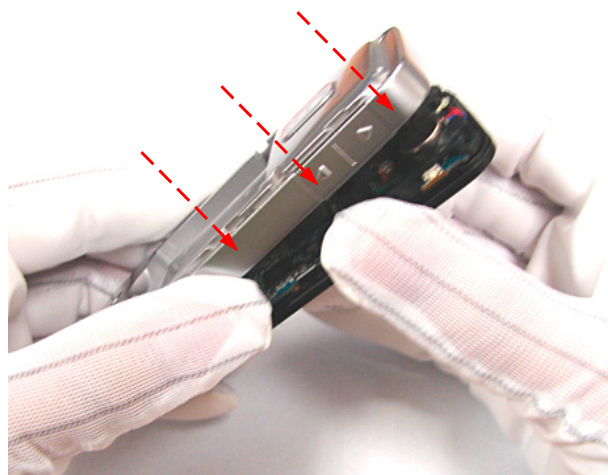
MIC Combination
Combine To FRONT COVER MIC.

26



MAIN WINDOW attachment
Attach MAIN WINDOW to FRONT COVER.

27



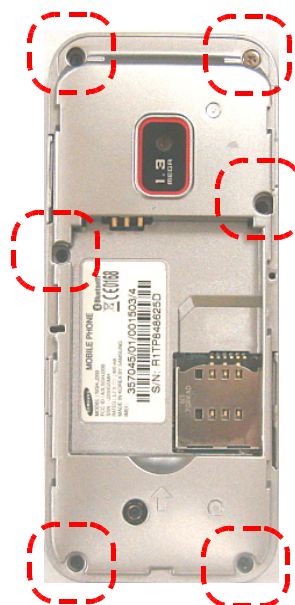
REAR COVER assembly
Assemble REAR COVER to FRONT COVER, like picture.

28



SET assembly
When assemble SET, assemble over downward.

29



SCREW Combination
Tighten SCREW 6 POINTs to SET.

**SAMSUNG
ELECTRONICS**



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