

SAMSUNG

GSM TELEPHONE SGH-X550

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 specipicty of cellular phone is sensitive for surrounding interference(RF noise).
- Be careful to use a kind of magnetic object or tool, because performance of parts is damaged by the influence of magnetic force.
- Surely use a standard screwdriver when you disassemble this product, otherwise screw will be worn away.
- Use a thicken twisted wire when you measure level. A thicken twisted wire has low resistance, therefore error of measurement is few.
- Repair after separate Test Pack and Set because for short danger (for example an overcurrent and furious flames of parts etc) when you repair board in condition of connecting Test Pack and tuning on.
- Take specially care of soldering, because Land of PCB is small and weak in heat.
- Surely tune on/off while using AC power plug, because a repair of battery charger is dangerous when tuning ON/OFF PBA and Connector after disassembling charger.
- Don't use as you pleases after change other material than replacement registered on SEC System. Otherwise engineer in charge isn't charged with problem that you don't keep this rules.

1-2. ESD(Electrostatically Sensitive Devices) Precaution

Several semiconductor may be damaged easily by static electricity. Such parts are called by ESD (Electrostatically Sensitive Devices), for example IC,BGA chip etc. Read Precaution below.

You can prevent from ESD damage by static electricity.

- Remove static electricity remained your body before you touch semiconductor or parts with semiconductor. There are ways that you touch an earthed place or wear static electricity prevention string on wrist.
- Use earthed soldering steel when you connect or disconnect ESD.
- Use soldering removing tool to break static electricity. , otherwise ESD will be damaged by static electricity.
- Don't unpack until you set up ESD on product. Because most of ESD are packed by box and aluminum plate to have conductive power,they are prevented from static electricity.
- You must maintain electric contact between ESD and place due to be set up until ESD is connected completely to the proper place or a circuit board.

2. Specification

2-1. GSM General Specification

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

2-2. GSM Tx Power Class

TX Power control level	GSM900	TX Power control level	DCS1800	TX Power control level	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±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. Operation Instruction and Installation

Main Function

- SMS/EMS/MMS Message Service
- WAP2.0
- Speaker phone
- TFT 1.9" Main Display
- Dual Display VGA Camera Folder
- 16 Poly Melody
- E-mail client
- Bluetooth

4. Array course control

4-1. Software Adjustments

Serial Cable(CSA LL64151-A)



Power Cable



USB DATA CABLE (CSA LL11105 AWM)



JIG BOX (GH80-01909A)



JIG CABLE (GH39-00217A)



4-2. Software Downloading

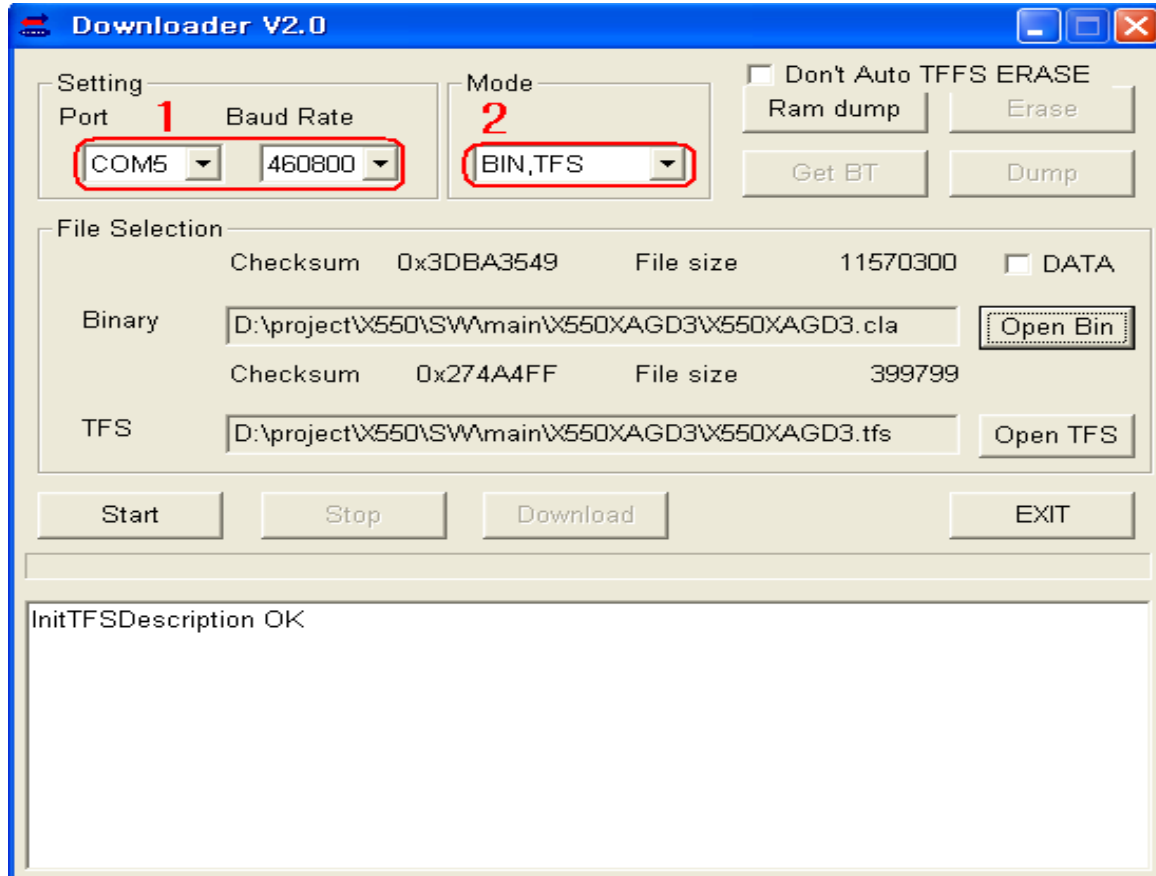
4-2-1. Pre-requisite for Downloading

- Downloader Program(S_Benz Downloader_V2.0.exe)
- X550 Mobile Phone
- Data Cable
- Binary file, TFS file

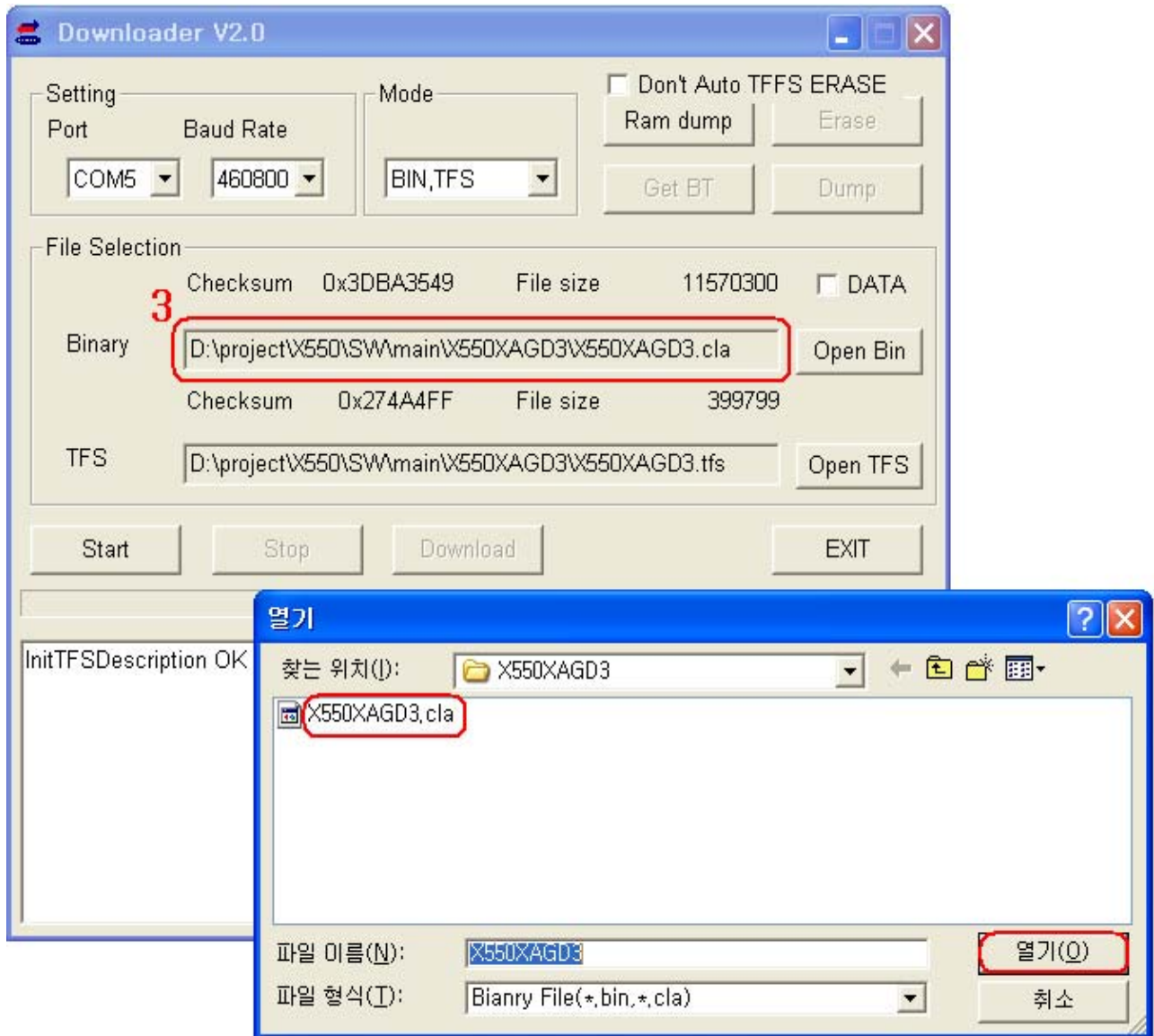
4-2-2. S/W Downloader Program

■ Load the binary download program by executing the "S_Benz Downloader_V2.0.exe"

1. Select the connected serial port and the rate of speed
2. Select the check box, the mode you want to download.
 - if the binary file wanted, check only 'BIN'
 - if the tfs file wanted, check only 'TFS'
 - if all the files wanted, check 'BIN+TFS'

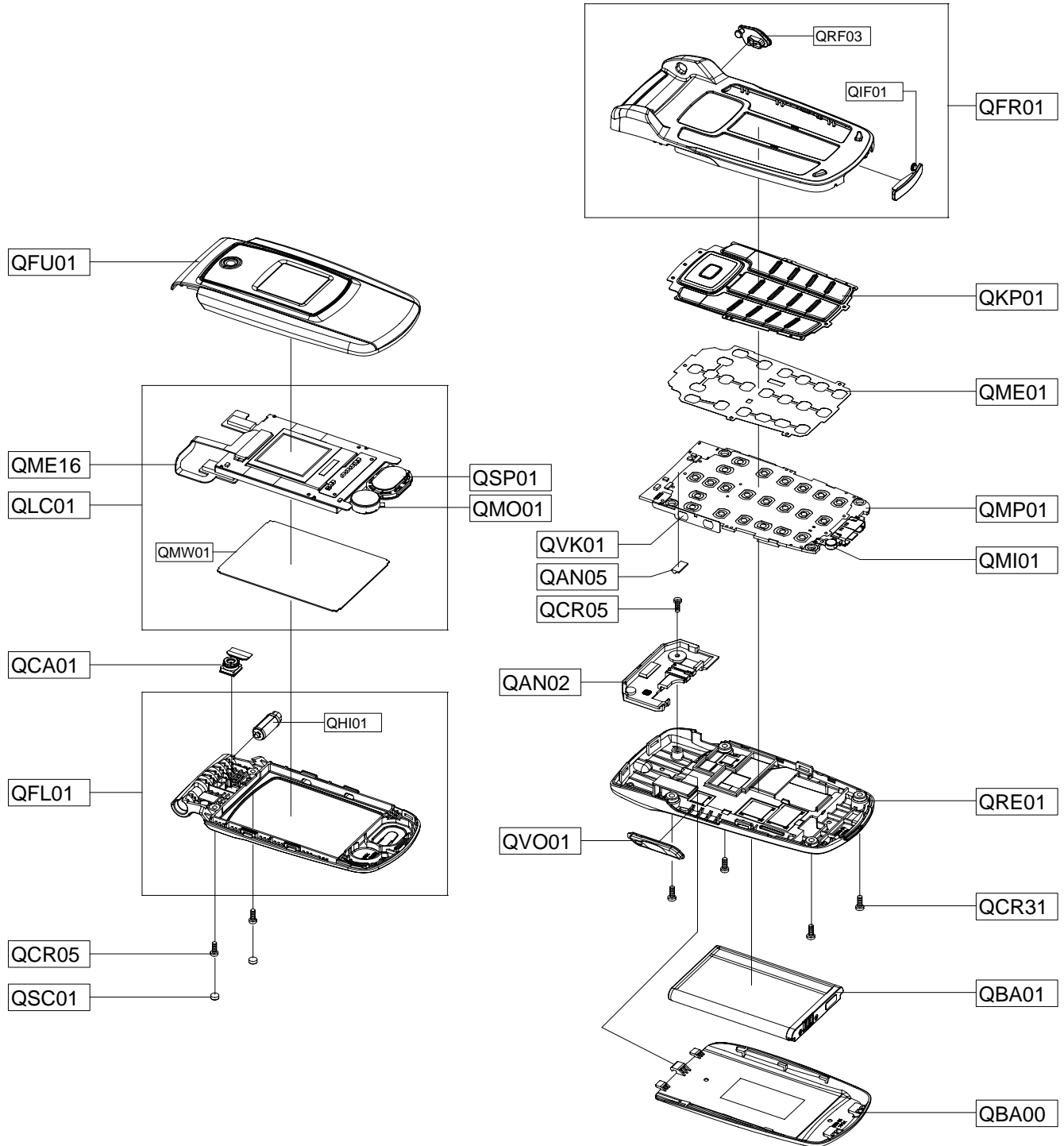


3. Select the file(s) what you want to download



5. Exploded View/Disassembly&Assembly Instructions

5-1. Cellular phone Exploded View



5-2. Cellular phone Parts list

Design LOC		Description	Sec Code
QAN02		INTENNA-SGH X550	GH42-01044A
QAN05		ASSY MEC-INTENNA CONTACT	GH75-08168A
QBA00		PCT CASE-BATT TFC(XEC)	GH72-41875A
QBA01		INNER BATTERY PACK-800MAH,MAIN	GH43-02589A
QCA01		UNIT-SGHX550 CAMERA MODULE	GH59-03869A
QCR05		SCREW-MACHINE	6001-001478
QCR05		SCREW-MACHINE	6001-001478
QCR31		SCREW-MACHINE	6001-001795
QFU01		ASSY CASE-FOLDER UPPER(XEC)	GH98-04939A
QKP01		ASSY KEYPAD-(XET/RED)	GH98-02693B
QME01		UNIT-METAL DOME	GH59-03832A
QME16		UNIT-CON TO CON ASSY	GH59-03813A
QMI01		MICROPHONE-ASSY	GH30-00321A
QMO01		MOTOR DC-SGHX550	GH31-00348A
QMP01		PBA MAIN-SGHX550	GH92-03766A
QRE01		ASSY CASE-REAR COVER	GH98-02691B
QSC01		RMO-RUBBER SCREW CAP	GH73-08379B
QSP01		SPEAKER	3001-002137
QVK01		UNIT-VOLUME KEY	GH59-03830A
QVO01		PMO-VOLUME KEY V2	GH72-39529A
QLC01		ELA ETC-SGH X550 LCD MODULE	GH96-02309A
	QMW01	ASSY COVER-MAIN WINDOW	GH98-02694A
QFR01		ASSY CASE-FRONT COVER	GH98-02690B
	QIF01	PMO-COVER IF	GH72-35231B
	QRF03	PMO-COVER EAR JACK V2	GH72-39434B
QFL01		ASSY CASE-FOLDER LOWER	GH98-02689B
	QHI01	ASSY HINGE-FOLDER	GH98-03351A

Description	Sec Code
BAG PE	6902-000634
ADAPTOR-SGHD500 TA	GH44-01451A
LABEL(R)-WATER SOAK	GH68-09361A
LABEL(R)-MAIN(EU)	GH68-14831A
MANUAL USERS-XEC SPANISH	GH68-15419A
BOX-UNIT(XEC)	GH69-05416B
CUSHION PLUP-CASE(XEC)	GH69-05602A
MPR-REMOVE TAPE LCD	GH74-13804A
MPR-TAPE LCD CONN COVER	GH74-14057A
MPR-TAPE LED	GH74-17926A
MPR-INSU TAPE	GH74-18595A
MPR-VINYL BOHO MAIN WINDOW	GH74-22341A
MPR-INSU TAPE SUB LCD	GH74-27510A
MPR-INSU TAPE	GH74-27512A
MPR-TAPE	GH74-29296A
MPR-TAPE MAIN FPCB	GH74-30860A
TAPE GASK	GH74-32900A
SPONGE-PBA IF	GH74-32903A
TAPE-FPCB HOLE MASK	GH74-33011A
TAPE-LED MASKING	GH74-33166A

5-3. Disassembly and Assembly Instructions

5-3-1. Disassembly

<div data-bbox="170 317 245 373" style="border: 1px solid black; padding: 2px; width: fit-content;">1</div> <div data-bbox="180 390 727 453" style="border: 1px solid black; padding: 5px;"> <p>1) Unscrew the REAR at the 4 points.</p> </div> <div data-bbox="337 520 586 974"> </div>	<div data-bbox="829 317 904 373" style="border: 1px solid black; padding: 2px; width: fit-content;">2</div> <div data-bbox="839 390 1442 474" style="border: 1px solid black; padding: 5px;"> <p>1) Disassemble the REAR from the LOWER using a disassembly stic.</p> </div> <div data-bbox="850 642 1430 869"> </div>
<p>1) Be careful not to make scratch and molding damage!</p>	<p>1) Be careful not to make scratch and molding damage! 2) Please remove the lower end locker first.</p>
<div data-bbox="170 1121 245 1178" style="border: 1px solid black; padding: 2px; width: fit-content;">3</div> <div data-bbox="180 1194 781 1320" style="border: 1px solid black; padding: 5px;"> <p>1) Detach the volume key F-PCB , LCD CONNECTOR and MIC from the FRONT ASS'Y. 2) Disassemble the PBA from the FRONT ASS'Y.</p> </div> <div data-bbox="225 1339 743 1772"> </div>	<div data-bbox="829 1121 904 1178" style="border: 1px solid black; padding: 2px; width: fit-content;">4</div> <div data-bbox="839 1215 1442 1299" style="border: 1px solid black; padding: 5px;"> <p>1) Disassemble the KEYPAD. 2) Detach the DUST PROTECTION TAPE from the LOWER.</p> </div> <div data-bbox="938 1339 1317 1717"> </div>
<p>1) Be careful not to damage F-PCBs. (Volume key, LCD, MIC)</p>	<p>1) Be careful not to make scratch and damage to the LCD F-PCB.</p>

5

1) Push the hinge between FOLDER UPPER and FOLDER LOWER, and disassemble the FRONT from the FOLDER.



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

6

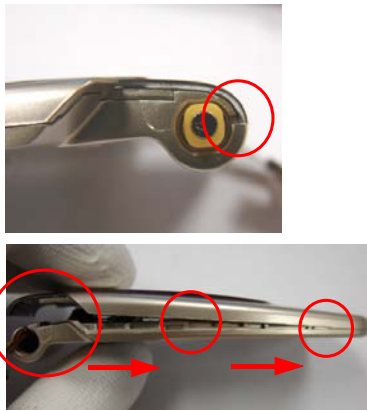
1) Remove screw rubber caps and unscrew the FOLDER UPPER at the 2 point.



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

7

1) By using an assembly stick, disassemble FOLDER UPPER from FOLDER LOWER (Use disassemble hole)



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

8

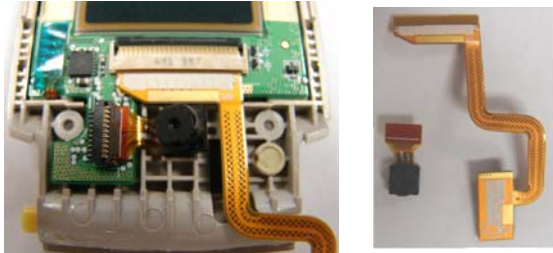
1) Disassemble the MOTOR, SPEAKER & CAMERA from the FOLDER LOWER by using a pincette.



1) Be careful not to make scratch and molding damage!
2) Be careful not to damage F-PCBs and Wire.

9

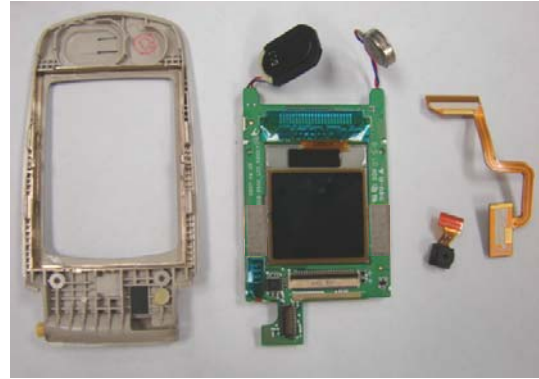
- 1) Detatch insulation tapes of the connectors.
- 2) Disassemble the LCD F-PCB and CAMERA module from the LCD module.



- 1) Be careful not to make scratch and molding damage.
- 2) Be careful not to damage F-PCBs.

10

- 1) Disassemble the LCD module from the FOLDER LOWER.



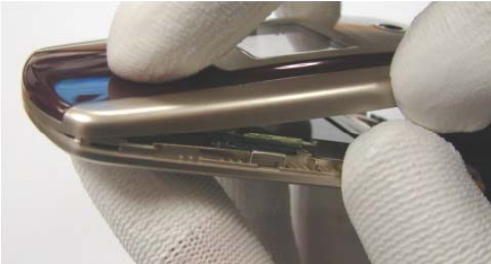
- 1) Be careful not to make scratch and molding damage!
- 2) Be careful not to damage the LCD module.

5-3-2. Assembly

<p>1</p> <p>1) Insert the LCD & CAMERA F-PCB to LCD module. 2) Attach the insulation tape on the connectors.</p> 	<p>2</p> <p>1) Insert the LCD F-PCB into the FOLDER LOWER.</p> 
<p>1) Be careful not to make scratch and molding damage!</p>	<p>1) Be careful not to make scratch and molding damage! 2) Be careful not to damage the LCD F-PCB.</p>
<p>3</p> <p>1) Insert the SPEAKER into FOLDER LOWER. 2) Twist MOTOR wire third times and insert into the FOLDER LOWER.</p> 	<p>4</p> <p>1) Insert the CAMERA module into the FOLDER LOWER.</p> 
<p>1) Be careful not to make scratch and molding damage! 2) Arrange Wires clearly as above picture is shown.</p>	<p>1) Be careful not to make scratch and molding damage! 2) Be careful not to damage the CAMERA F-PCB.</p>

5

1) Assemble FOLDER UPPER with FOLDER LOWER from the upper end to the lower end.



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

6

1) Screw up the FOLDER LOWER at two point.
2) Attach screw rubber caps on the screws by using a pincette.



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

7

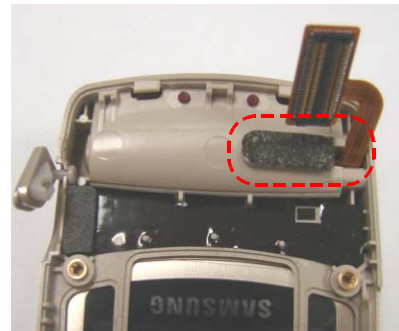
1) Insert LCD FPCB(which is connected to folder)into the bottom of FRONT HINGE.
2) The folder HINGE should be inserted into the front's hole.
3) Assemble FOLDER with FRONT.



1) Be careful not to make scratch and molding damage.
2) Be careful not to damage LCD F-PCB.

8

1) Attach the dust protection tape on the inside of the FRONT.



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

9

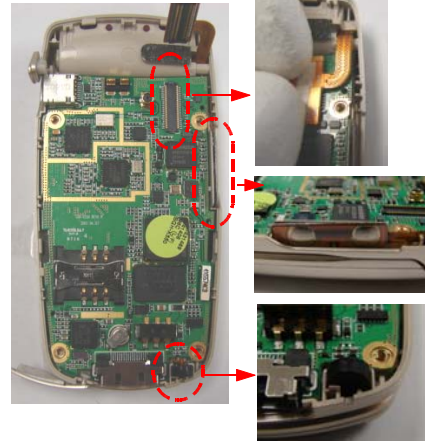
1) Insert the KEYPAD into FRONT.



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

10

- 1) Put the PBA on the FRONT ASS'Y.
- 2) Joint CON to CON FPCB with the PBA.
- 3) Attach the Volume key F-PCB to the FRONT.
- 4) Put the MIC on the FRONT MIC HOLE.



- 1) Be careful not to make scratch and molding damage!
- 2) Be careful not to unstably connect CON TO CON.

11

- 1) Locate VOLUME KEY and assemble REAR with FRONT.
- 2) Assembly the upper side of the REAR like the picture.



- 1) Be careful not to make scratch and molding damage!
- 2) Be careful not to damage LOCKER.

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1) Screw the REAR at 4 point



- 1) Be careful not to make scratch and molding damage!
- 2) Be careful not to damage LOCKER.
- 3) Use $1.3 \pm 0.1 \text{ Kg} \cdot \text{Cm}$

6. MAIN Electrical Parts List

Design LOC	Description	SEC Code	STATUS
ANT200	NPR-ANTENNA CONTACT	GH71-05666A	SA
ANT201	NPR-ANTENNA CONTACT	GH71-05666A	SA
ANT600	ANTENNA-CHIP	4202-001319	SA
BAT500	BATTERY-LI(2ND)	4302-001130	SA
BTC700	HEADER-BATTERY	3711-006249	SA
C100	C-CER,CHIP	2203-000278	SA
C101	C-CER,CHIP	2203-000854	SA
C102	C-CER,CHIP	2203-000278	SA
C103	C-CER,CHIP	2203-000854	SA
C104	C-CER,CHIP	2203-006048	SA
C105	C-CER,CHIP	2203-001607	SA
C106	C-CER,CHIP	2203-000278	SA
C107	C-CER,CHIP	2203-006681	SA
C108	C-CER,CHIP	2203-001397	SA
C109	C-CER,CHIP	2203-000233	SA
C110	C-CER,CHIP	2203-000254	SA
C111	C-CER,CHIP	2203-000233	SA
C112	C-CER,CHIP	2203-001153	SA
C113	C-CER,CHIP	2203-006562	SA
C114	C-CER,CHIP	2203-005446	SA
C115	C-CER,CHIP	2203-005446	SA
C116	C-CER,CHIP	2203-005446	SA
C117	C-CER,CHIP	2203-005446	SA
C118	C-CER,CHIP	2203-001153	SA
C119	C-CER,CHIP	2203-000233	SA
C120	C-CER,CHIP	2203-000278	SA
C121	C-CER,CHIP	2203-000854	SA
C122	C-CER,CHIP	2203-000254	SA
C123	C-CER,CHIP	2203-000854	SA
C124	C-CER,CHIP	2203-000679	SA
C125	C-CER,CHIP	2203-005234	SA
C126	C-CER,CHIP	2203-000995	SA
C127	C-CER,CHIP	2203-005281	SA
C128	C-CER,CHIP	2203-005281	SA
C129	C-CER,CHIP	2203-005234	SA
C130	C-CER,CHIP	2203-000679	SA
C131	C-CER,CHIP	2203-000995	SA
C132	C-CER,CHIP	2203-005395	SA
C133	C-CER,CHIP	2203-000278	SA
C134	C-CER,CHIP	2203-000278	SA
C200	C-CER,CHIP	2203-005395	SA
C201	C-CER,CHIP	2203-000995	SA
C202	INDUCTOR-SMD	2703-001181	SA
C203	C-CER,CHIP	2203-000812	SA
C204	C-CER,CHIP	2203-000812	SA
C205	C-CER,CHIP	2203-000812	SA
C206	C-CER,CHIP	2203-000812	SA
C207	C-CER,CHIP	2203-006048	SA
C209	C-CER,CHIP	2203-002668	SA
C210	C-CER,CHIP	2203-000278	SA
C211	C-CER,CHIP	2203-000278	SA
C212	C-CER,CHIP	2203-000489	SA
C214	C-CER,CHIP	2203-002668	SA

Main Electrical Parts List

Design LOC	Description	SEC Code	STATUS
C215	C-CER,CHIP	2203-000254	SA
C216	C-CER,CHIP	2203-000254	SA
C300	C-CER,CHIP	2203-006423	SA
C301	C-CER,CHIP	2203-002709	SA
C302	C-CER,CHIP	2203-002709	SA
C303	C-CER,CHIP	2203-002709	SA
C304	C-CER,CHIP	2203-000254	SA
C305	C-CER,CHIP	2203-002709	SA
C306	C-CER,CHIP	2203-006423	SA
C307	C-CER,CHIP	2203-006194	SA
C308	C-CER,CHIP	2203-006194	SA
C309	C-CER,CHIP	2203-006423	SA
C310	C-CER,CHIP	2203-006423	SA
C311	C-CER,CHIP	2203-000854	SA
C312	C-CER,CHIP	2203-005717	SA
C314	C-CER,CHIP	2203-006423	SA
C315	C-CER,CHIP	2203-006048	SA
C325	C-CER,CHIP	2203-000278	SA
C326	C-CER,CHIP	2203-005052	SA
C400	C-CER,CHIP	2203-006423	SA
C401	C-CER,CHIP	2203-006423	SA
C402	C-CER,CHIP	2203-000643	SA
C403	C-CER,CHIP	2203-006423	SA
C404	C-CER,CHIP	2203-006423	SA
C405	C-CER,CHIP	2203-000233	SA
C406	C-CER,CHIP	2203-006562	SA
C407	C-CER,CHIP	2203-006562	SA
C408	C-CER,CHIP	2203-006562	SA
C410	C-CER,CHIP	2203-006423	SA
C411	C-CER,CHIP	2203-000254	SA
C502	C-CER,CHIP	2203-000627	SNA
C506	C-CER,CHIP	2203-000233	SA
C507	C-CER,CHIP	2203-006257	SA
C508	C-CER,CHIP	2203-000812	SA
C509	C-CER,CHIP	2203-006208	SA
C510	C-CER,CHIP	2203-006562	SA
C511	C-CER,CHIP	2203-006208	SA
C512	C-CER,CHIP	2203-006257	SA
C513	C-CER,CHIP	2203-006257	SA
C515	C-CER,CHIP	2203-006825	SA
C516	C-CER,CHIP	2203-005482	SA
C518	C-CER,CHIP	2203-006257	SA
C520	C-CER,CHIP	2203-006208	SA
C521	C-CER,CHIP	2203-006257	SA
C522	C-CER,CHIP	2203-006257	SA
C523	C-CER,CHIP	2203-000627	SNA
C524	C-CER,CHIP	2203-005482	SA
C526	C-CER,CHIP	2203-006137	SA
C600	C-CER,CHIP	2203-006048	SA
C601	C-CER,CHIP	2203-000254	SA
C602	C-CER,CHIP	2203-000386	SA
C603	C-CER,CHIP	2203-000254	SA
C604	C-CER,CHIP	2203-005052	SA

Design LOC	Description	SEC Code	STATUS
C607	C-CER,CHIP	2203-006423	SA
C608	C-CER,CHIP	2203-005061	SA
C609	C-CER,CHIP	2203-002443	SA
C610	C-CER,CHIP	2203-006307	SA
C611	C-CER,CHIP	2203-006681	SA
C612	C-CER,CHIP	2203-000254	SA
C613	C-CER,CHIP	2203-006681	SA
C614	C-CER,CHIP	2203-005288	SA
C700	C-CER,CHIP	2203-005061	SA
C701	C-CER,CHIP	2203-000854	SA
C702	C-CER,CHIP	2203-005061	SA
C704	C-CER,CHIP	2203-002709	SA
C706	C-CER,CHIP	2203-005061	SA
C707	C-CER,CHIP	2203-005052	SA
C708	C-CER,CHIP	2203-000278	SA
C710	C-CER,CHIP	2203-005061	SA
C712	C-CER,CHIP	2203-000425	SA
C713	C-CER,CHIP	2203-006562	SA
C714	C-CER,CHIP	2203-006562	SA
C717	C-CER,CHIP	2203-000425	SA
C718	C-CER,CHIP	2203-000386	SA
C720	C-CER,CHIP	2203-000386	SA
C721	C-CER,CHIP	2203-000278	SA
C722	C-CER,CHIP	2203-006562	SA
C723	C-CER,CHIP	2203-006137	SA
C724	C-CER,CHIP	2203-000278	SA
C725	C-CER,CHIP	2203-005480	SA
C726	C-CER,CHIP	2203-006260	SA
C727	C-CER,CHIP	2203-006562	SA
C728	C-CER,CHIP	2203-006137	SA
C729	C-CER,CHIP	2203-005480	SA
C800	C-CER,CHIP	2203-006423	SA
C801	C-CER,CHIP	2203-006423	SA
C803	C-CER,CHIP	2203-005683	SA
C804	C-CER,CHIP	2203-005683	SA
C805	C-CER,CHIP	2203-005683	SA
C806	C-CER,CHIP	2203-005683	SA
C807	C-CER,CHIP	2203-005683	SA
C808	C-CER,CHIP	2203-005683	SA
C809	C-CER,CHIP	2203-005683	SA
C810	C-CER,CHIP	2203-005683	SA
C811	C-CER,CHIP	2203-001259	SA
C812	C-CER,CHIP	2203-001259	SA
C819	C-CER,CHIP	2203-005683	SA
C820	C-CER,CHIP	2203-005683	SA
C821	C-CER,CHIP	2203-005683	SA
C822	C-CER,CHIP	2203-005683	SA
D700	DIODE-TVS	0406-001150	SA
D702	DIODE-TVS	0406-001231	SA
D703	DIODE-TVS	0406-001231	SA
D704	DIODE-TVS	0406-001231	SA
D705	DIODE-TVS	0406-001231	SA
D706	DIODE-TVS	0406-001231	SA

Design LOC	Description	SEC Code	STATUS
D707	DIODE-TVS	0406-001231	SA
D708	DIODE-TVS	0406-001231	SA
D711	VARISTOR	1405-001183	SA
D712	DIODE-TVS	0406-001231	SA
D714	DIODE-TVS	0406-001197	SA
D800	DIODE-TVS	0406-001254	SA
D801	DIODE-TVS	0406-001254	SA
DUF200	DUPLEXER-FEM	2911-000046	SA
EAR700	JACK-PHONE	3722-002082	SA
F200	FILTER-EMI SMD	2901-001254	SA
F600	FILTER-LC	2909-001283	SA
F700	FILTER-EMI/ESD	2901-001348	SA
HEA800	HEADER-BOARD TO BOARD	3711-005873	SA
IFC700	CONNECTOR-INTERFACE	3710-001994	SA
L100	INDUCTOR-SMD	2703-002313	SA
L101	INDUCTOR-SMD	2703-001178	SA
L102	INDUCTOR-SMD	2703-001938	SA
L103	INDUCTOR-SMD	2703-001178	SA
L104	INDUCTOR-SMD	2703-002369	SA
L106	INDUCTOR-SMD	2703-002369	SA
L107	INDUCTOR-SMD	2703-001724	SA
L108	INDUCTOR-SMD	2703-001786	SA
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L110	INDUCTOR-SMD	2703-002203	SA
L111	INDUCTOR-SMD	2703-002199	SA
L112	INDUCTOR-SMD	2703-002309	SA
L113	INDUCTOR-SMD	2703-002314	SA
L114	INDUCTOR-SMD	2703-002309	SA
L115	INDUCTOR-SMD	2703-002203	SA
L116	INDUCTOR-SMD	2703-002314	SA
L117	INDUCTOR-SMD	2703-002268	SA
L118	INDUCTOR-SMD	2703-002206	SA
L119	INDUCTOR-SMD	2703-002267	SA
L120	INDUCTOR-SMD	2703-002268	SA
L121	INDUCTOR-SMD	2703-002206	SA
L122	INDUCTOR-SMD	2703-002268	SA
L123	INDUCTOR-SMD	2703-002204	SA
L201	INDUCTOR-SMD	2703-002313	SA
L203	INDUCTOR-SMD	2703-002313	SA
L204	INDUCTOR-SMD	2703-002313	SA
L205	INDUCTOR-SMD	2703-001749	SA
L601	BEAD-SMD	3301-001812	SA
L700	BEAD-SMD	3301-001729	SA
L701	BEAD-SMD	3301-001729	SA
LED701	LED	0601-002233	SA
LED702	LED	0601-002233	SA
OSC100	OSCILLATOR-VCTCXO	2809-001307	SA
OSC300	CRYSTAL-SMD	2801-004560	SA
PAM200	IC-POWER AMP	1201-002485	SA
Q400	FET-SILICON	0505-002088	SA
R100	INDUCTOR-SMD	2703-002313	SA
R101	R-CHIP	2007-007316	SA
R102	R-CHIP	2007-000982	SA

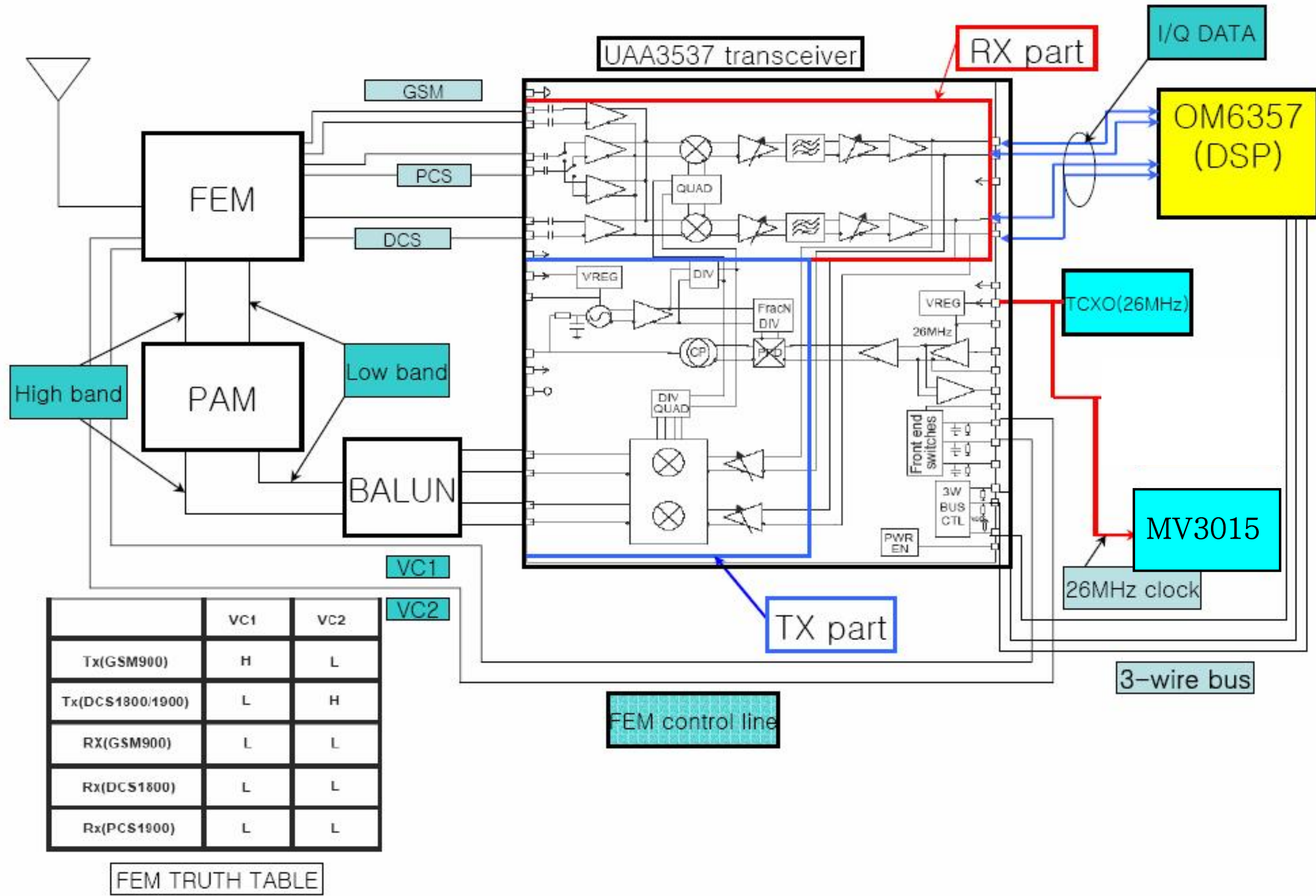
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R107	R-CHIP	2007-000932	SA
R108	R-CHIP	2007-000148	SA
R109	R-CHIP	2007-000171	SA
R110	R-CHIP	2007-000566	SA
R111	R-CHIP	2007-000143	SA
R112	R-CHIP	2007-003001	SA
R113	R-CHIP	2007-000143	SA
R114	R-CHIP	2007-000143	SA
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R117	R-CHIP	2007-000143	SA
R200	R-CHIP	2007-002797	SA
R300	R-CHIP	2007-000174	SA
R301	R-CHIP	2007-000171	SA
R302	R-CHIP	2007-000162	SA
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R308	R-CHIP	2007-007107	SA
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R312	R-CHIP	2007-008055	SA
R314	R-CHIP	2007-008542	SA
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R316	R-CHIP	2007-008588	SA
R317	R-CHIP	2007-008542	SA
R318	R-CHIP	2007-008483	SA
R319	R-CHIP	2007-000157	SA
R320	R-CHIP	2007-008052	SA
R403	R-CHIP	2007-008055	SA
R404	R-CHIP	2007-008055	SA
R405	R-CHIP	2007-000162	SA
R406	R-CHIP	2007-000932	SA
R407	R-CHIP	2007-008055	SA
R408	R-CHIP	2007-007014	SA
R409	R-CHIP	2007-000171	SA
R410	R-CHIP	2007-008055	SA
R411	R-CHIP	2007-000162	SA
R412	R-CHIP	2007-000162	SA
R413	R-CHIP	2007-000162	SA
R416	R-CHIP	2007-000171	SA
R417	R-CHIP	2007-000171	SA
R418	R-CHIP	2007-007014	SA
R502	R-CHIP	2007-007100	SA
R503	R-CHIP	2007-003000	SA
R504	R-CHIP	2007-000171	SA
R505	R-CHIP	2007-000166	SA
R508	R-CHIP	2007-001339	SA
R509	R-CHIP	2007-000758	SA
R510	R-CHIP	2007-000162	SA

Design LOC	Description	SEC Code	STATUS
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R613	R-CHIP	2007-007334	SA
R615	R-CHIP	2007-007139	SA
R616	R-CHIP	2007-000171	SA
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R713	R-CHIP	2007-000140	SA
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R716	R-CHIP	2007-001319	SA
R717	R-CHIP	2007-000171	SA
R719	R-CHIP	2007-001319	SA
R720	R-CHIP	2007-000140	SA
R721	R-CHIP	2007-000140	SA
R723	R-CHIP	2007-000148	SA
R724	R-CHIP	2007-001290	SA
R725	R-CHIP	2007-001290	SA
R726	R-CHIP	2007-001284	SA
R727	R-CHIP	2007-001284	SA
R738	R-CHIP	2007-008055	SA
R739	R-CHIP	2007-001339	SA
R740	R-CHIP	2007-008547	SNA
R744	R-CHIP	2007-008055	SA
R745	R-CHIP	2007-007573	SA
R746	R-CHIP	2007-007529	SA
R753	R-CHIP	2007-000172	SA
R754	R-CHIP	2007-000172	SA
R755	R-CHIP	2007-007142	SA
R756	R-CHIP	2007-007142	SA
R757	R-CHIP	2007-000162	SA
RFS200	CONNECTOR-COAXIAL	3705-001358	SA
SIM500	CONNECTOR-CARD EDGE	3709-001447	SA
SW600	IC-HALL EFFECT S/W	1009-001018	SA
TA200	C-TA,CHIP	2404-001474	SA
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TA700	C-TA,CHIP	2404-001377	SA

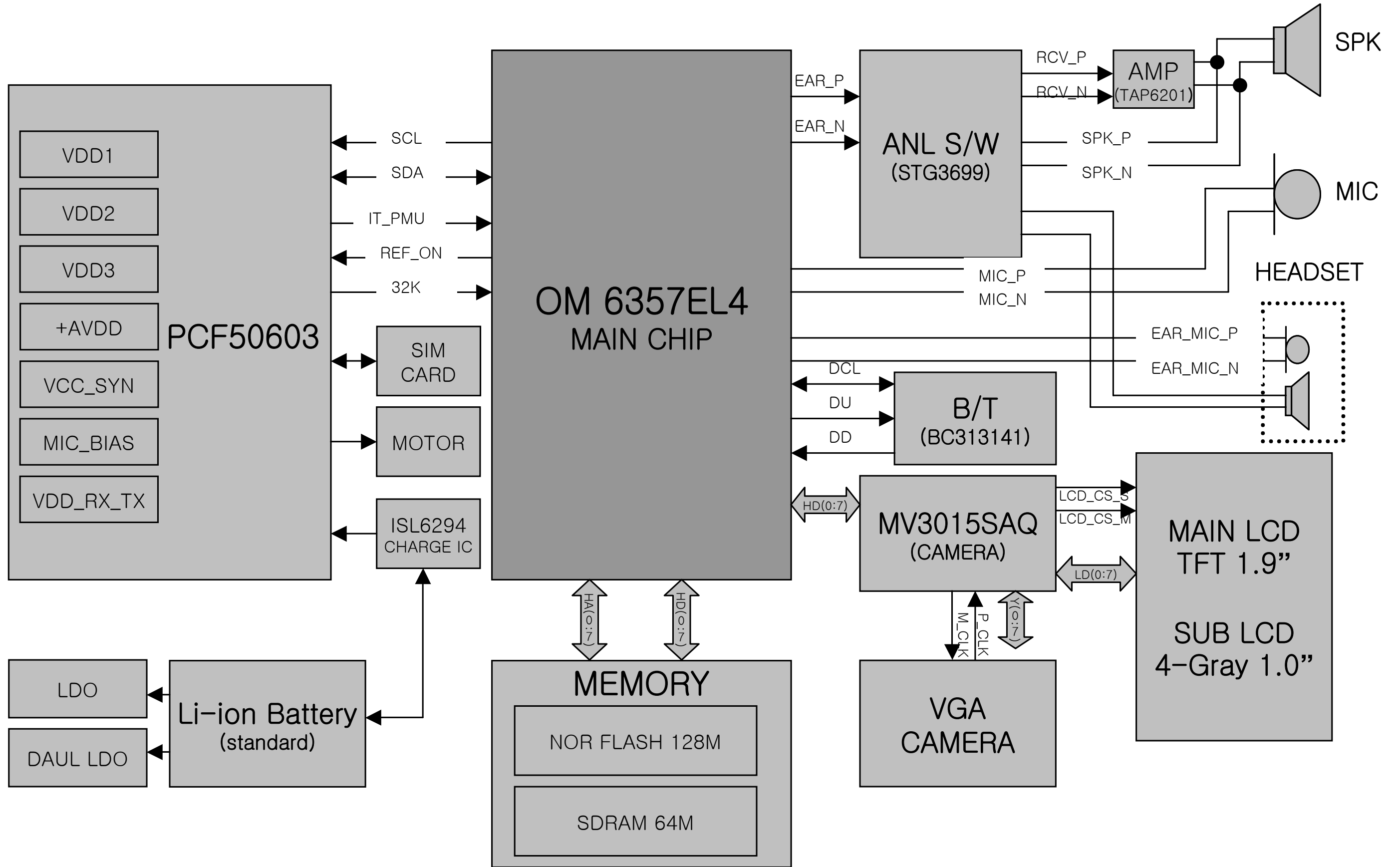
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U100	IC-TRANSCIEVER	1205-002689	SA
U401	IC ASIC-SGHE420	GH13-00042A	SA
U402	FET-SILICON	0505-001923	SA
U500	IC-POWER SUPERVISOR	1203-003882	SA
U502	IC-CMOS LOGIC	0801-002507	SA
U600	IC-CMOS LOGIC	0801-003025	SA
U601	IC-ANALOG MULTIPLEX	1001-001447	SA
U606	IC-DATA COMM./GEN.	1205-003064	SA
U608	IC-BATTERY	1203-003663	SA
U700	IC-POSI.FIXED REG.	1203-003737	SA
U701	IC-VOLTAGE COMP.	1202-001068	SA
U707	IC-AUDIO AMP	1201-002494	SA
U709	IC-ANALOG MULTIPLEX	1001-001349	SA
U973	INDUCTOR-SMD	2703-002204	SA
UCP300	IC-COMM. CONTROLLER	1205-003065	SA
UME400	IC-MCP	1108-000059	SA
V500	VARISTOR	1405-001082	SA
V800	VARISTOR	1405-001183	SA
V801	VARISTOR	1405-001183	SA
V802	VARISTOR	1405-001183	SA
V803	VARISTOR	1405-001183	SA
V804	VARISTOR	1405-001183	SA
V805	VARISTOR	1405-001183	SA
V806	VARISTOR	1405-001183	SA
V807	VARISTOR	1405-001183	SA
V809	VARISTOR	1405-001161	SA
V810	VARISTOR	1405-001161	SA
V811	VARISTOR	1405-001161	SA
V812	VARISTOR	1405-001161	SA
X500	CRYSTAL-SMD	2801-004373	SA
ZD700	DIODE-ZENER	0403-001547	SA
ZD701	DIODE-TVS	0406-001201	SA
ZD705	DIODE-TVS	0406-001254	SA

7. Block Diagrams

7-1. RF Solution Block Diagram

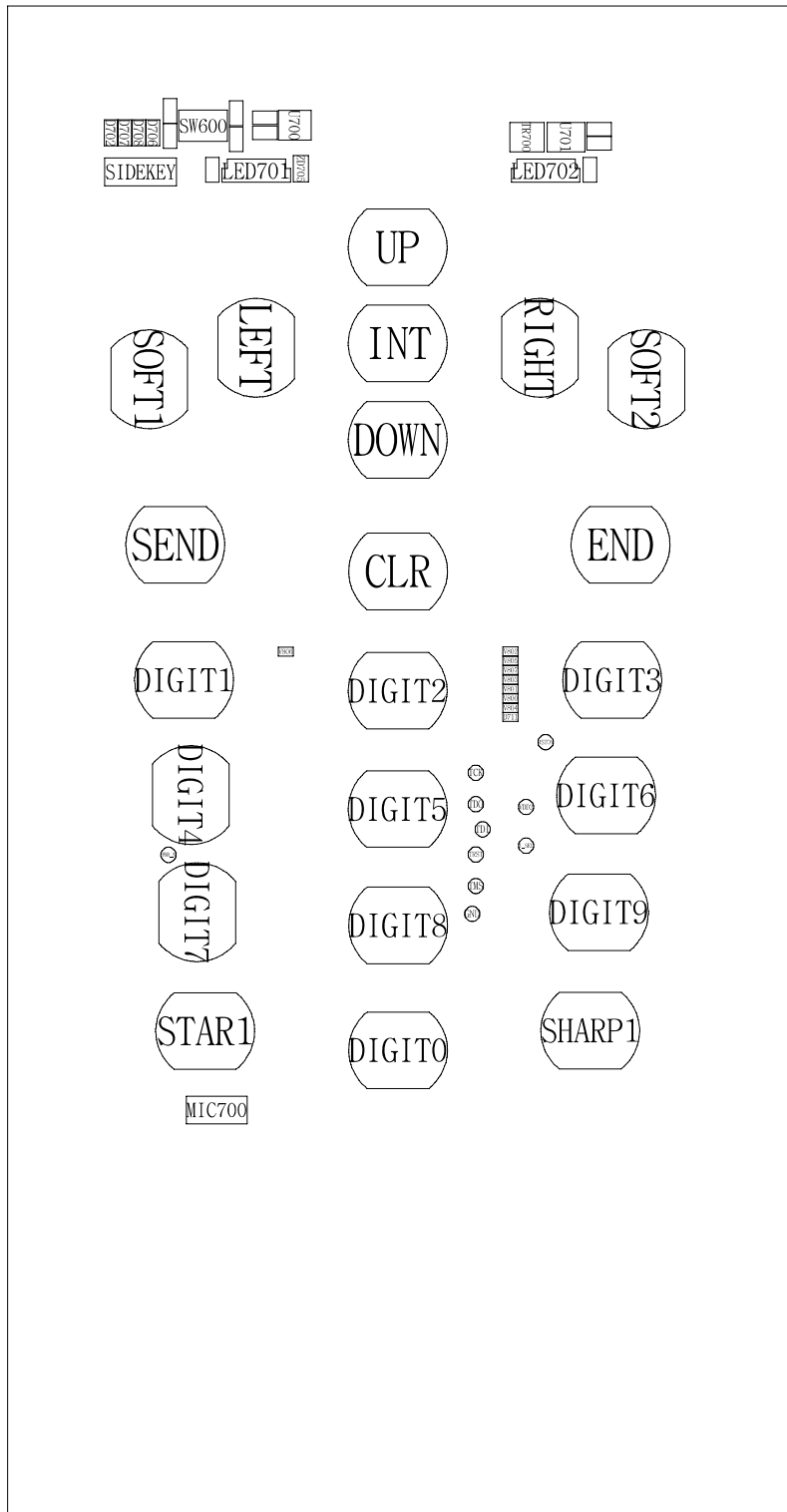


7-2. Base Band Solution Block Diagram



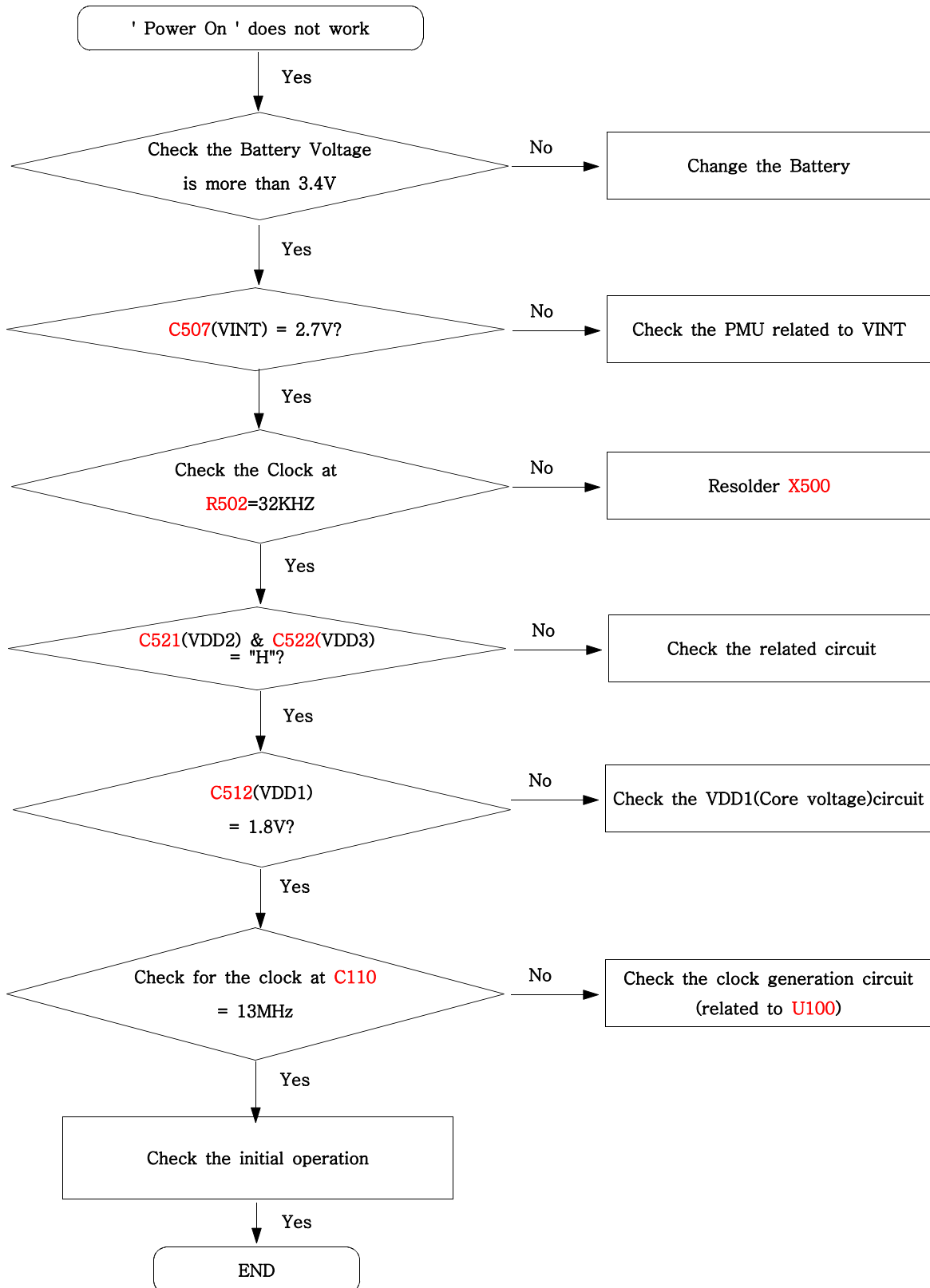
8. PCB Diagrams

Top

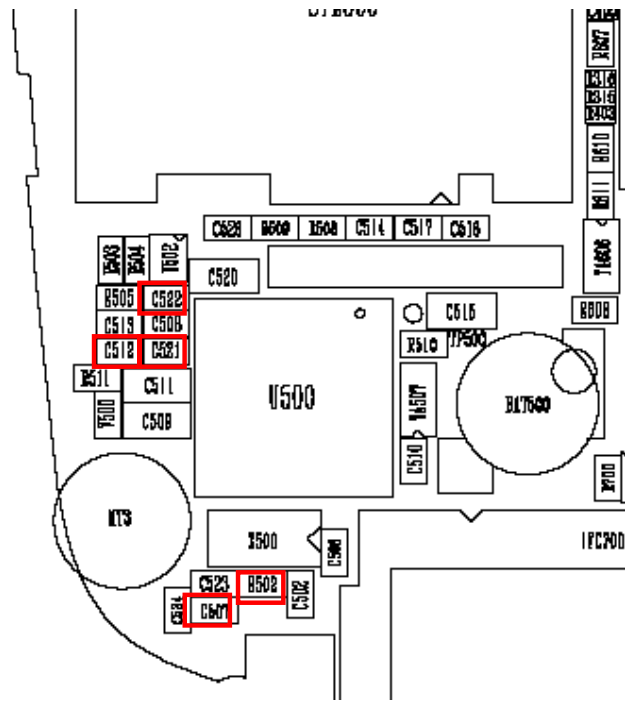
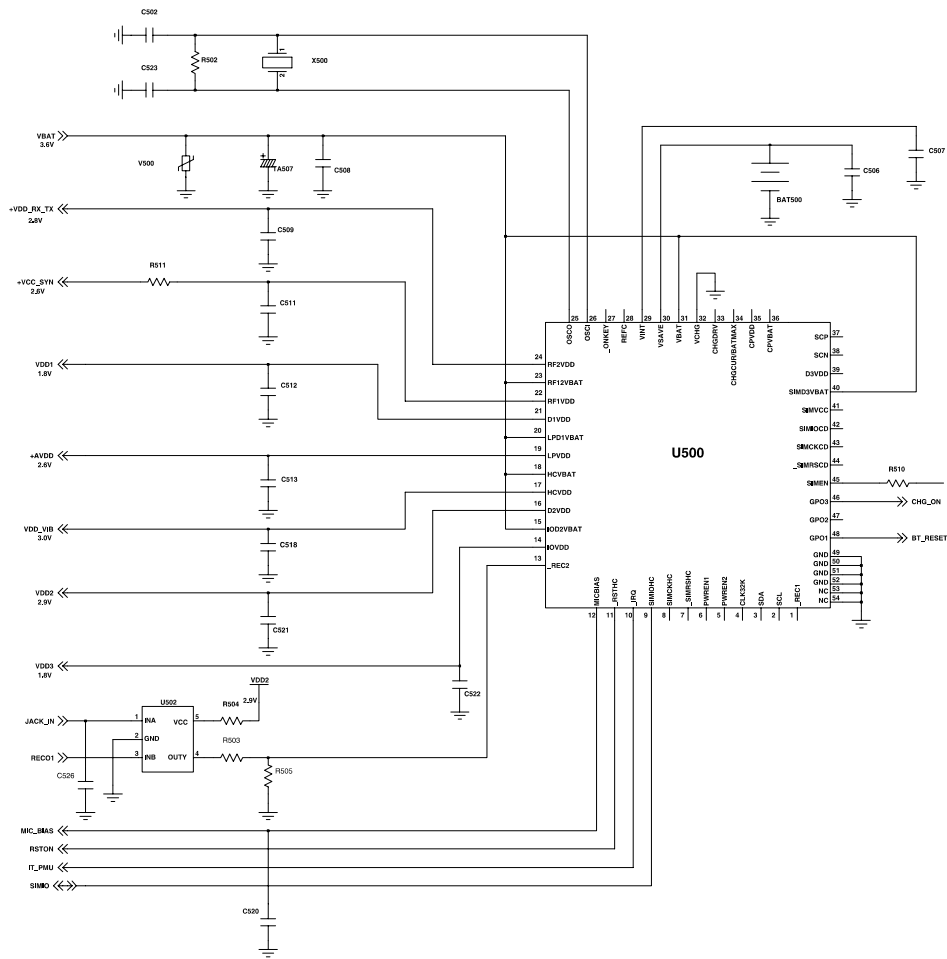


9. Flow Chart of Troubleshooting

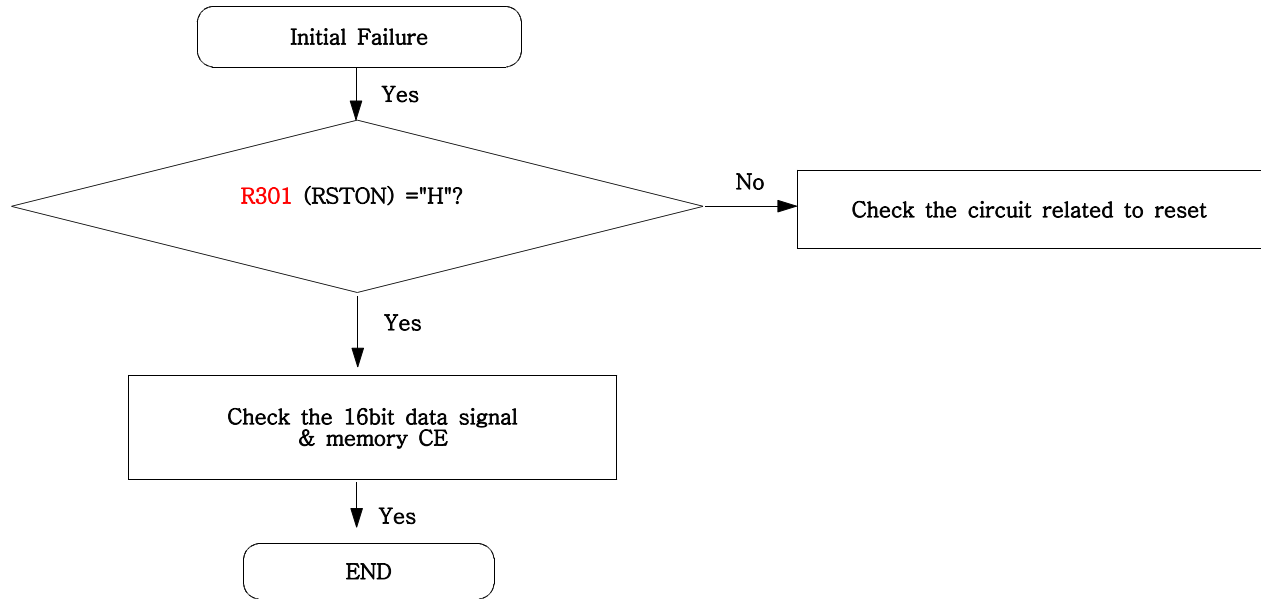
9-1. Power On



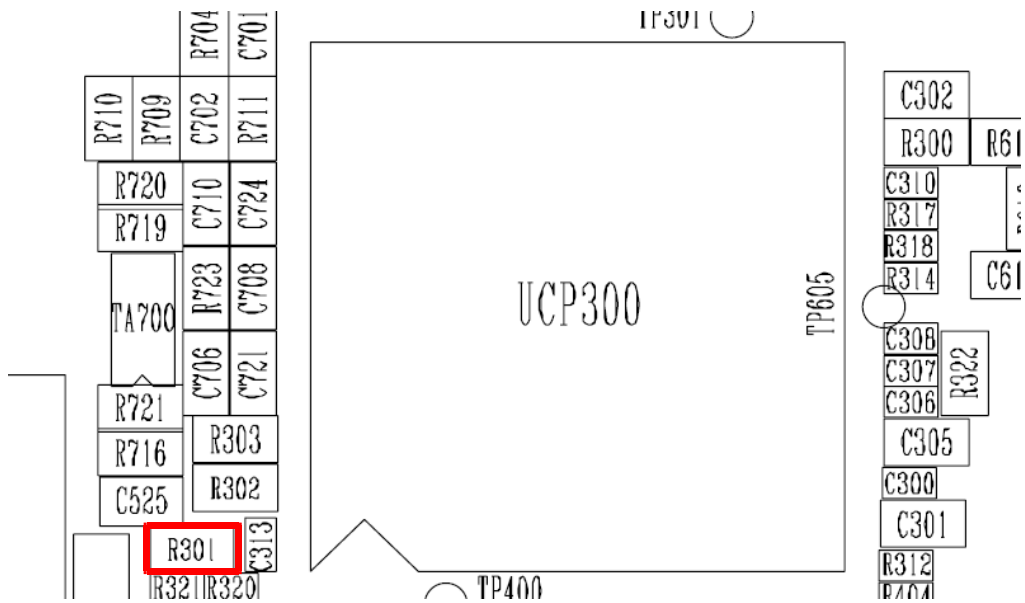
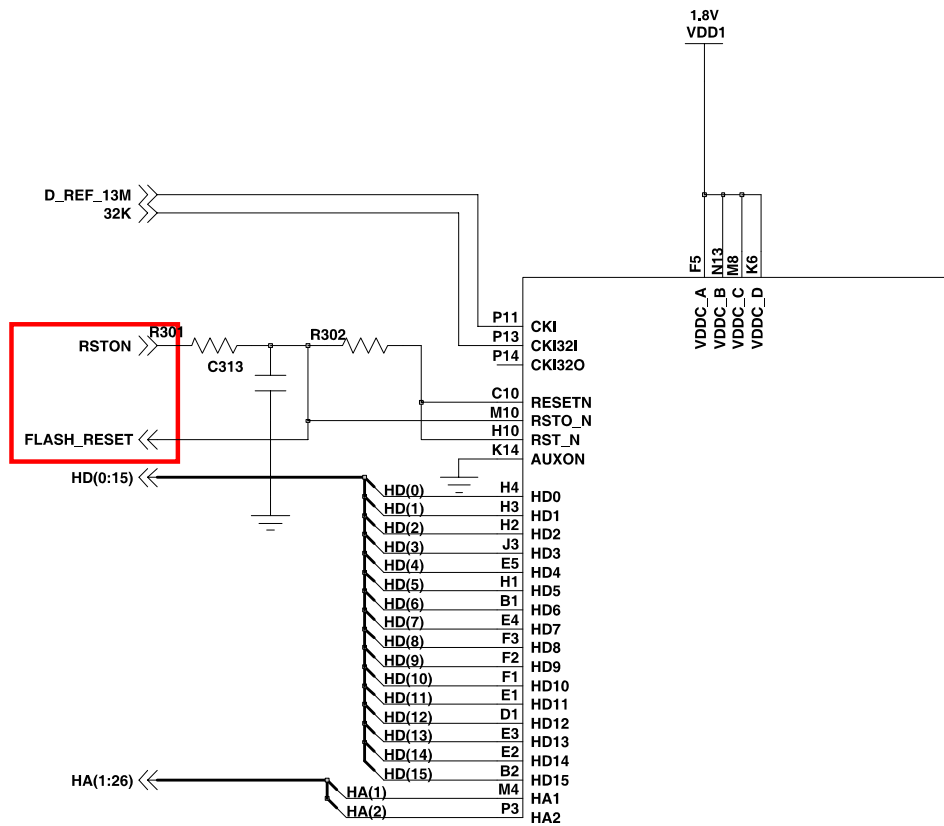
Flow Chart of Troubleshooting



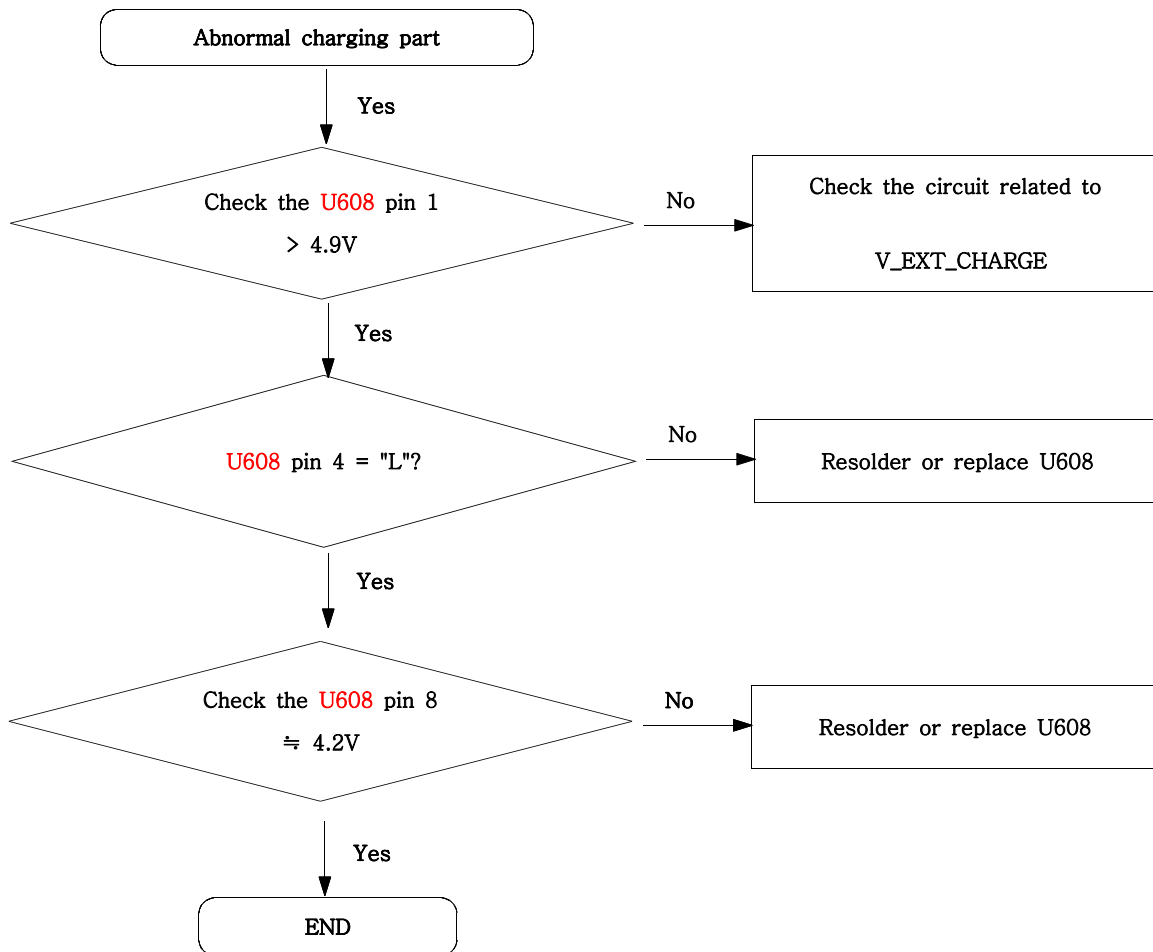
9-2. Initial

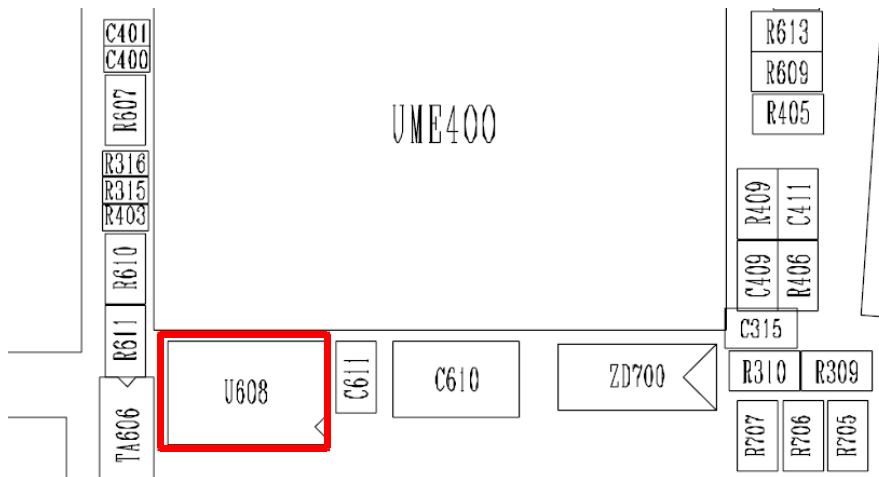
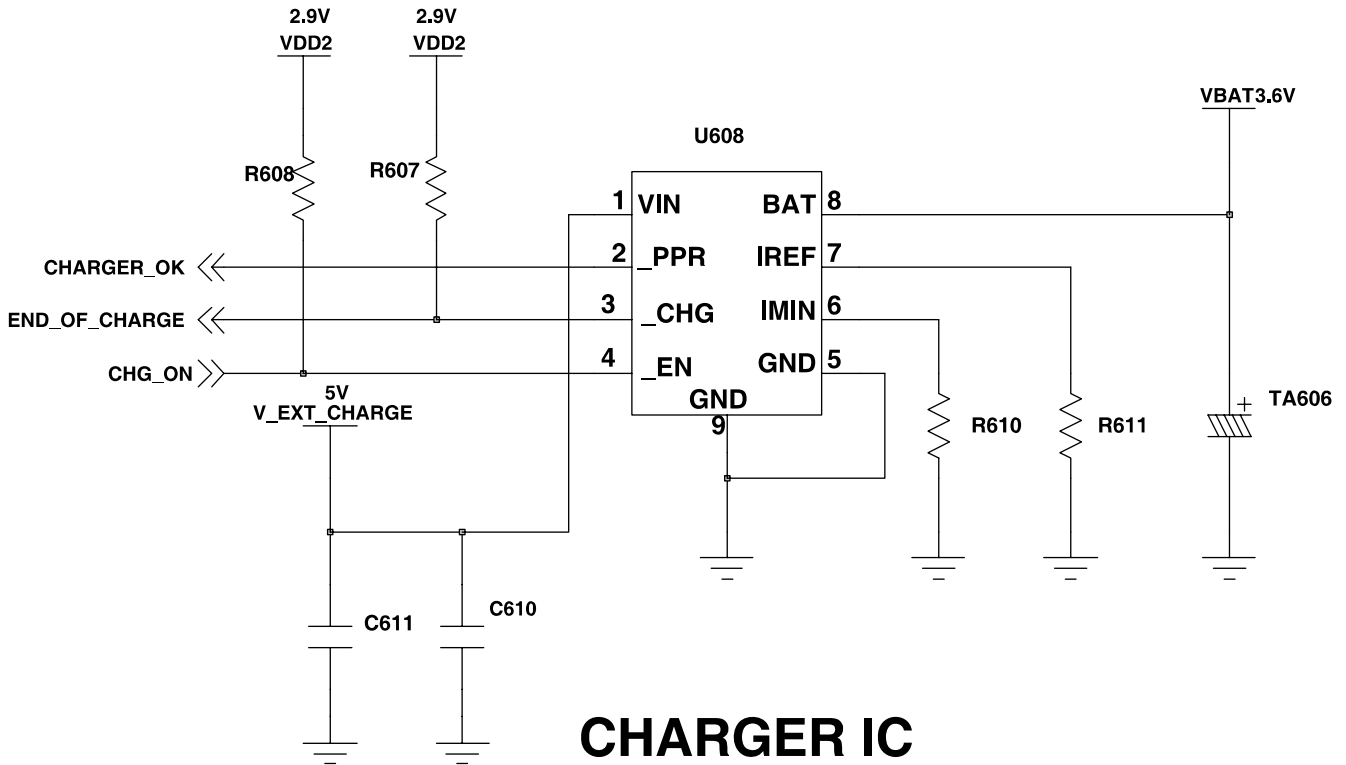


Flow Chart of Troubleshooting

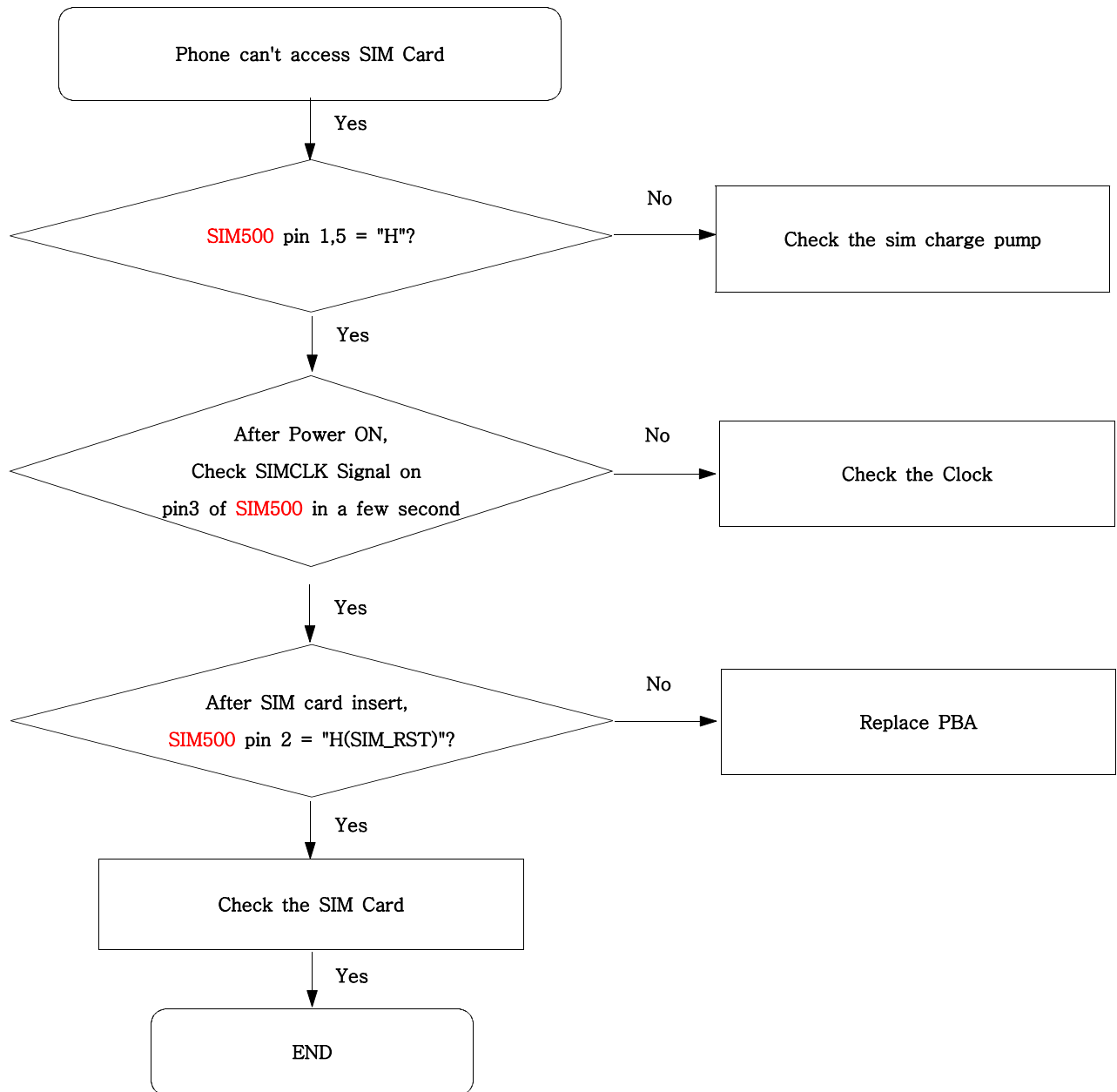


9-3. Charging Part

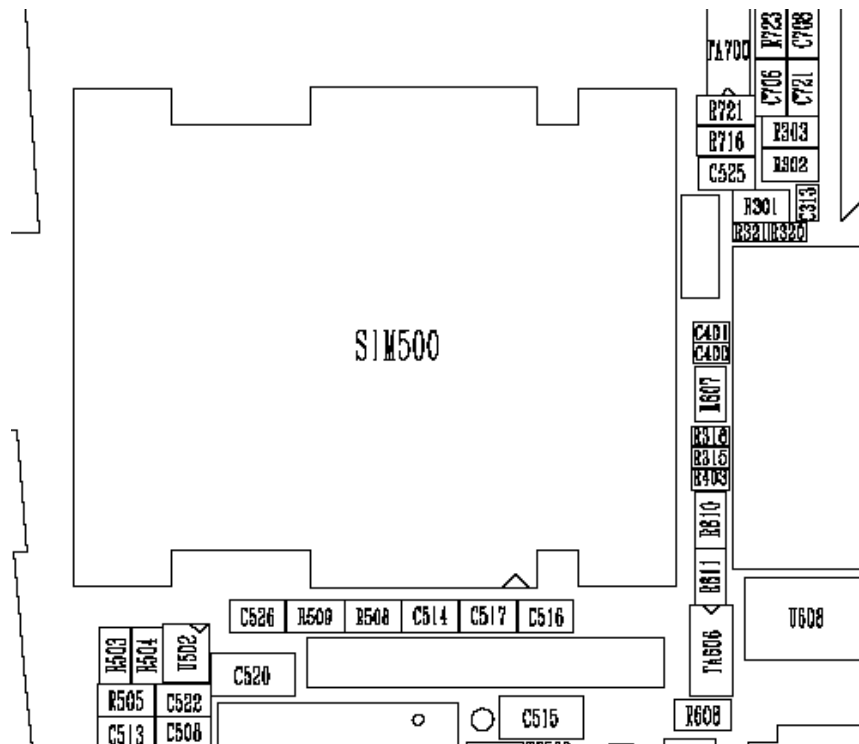
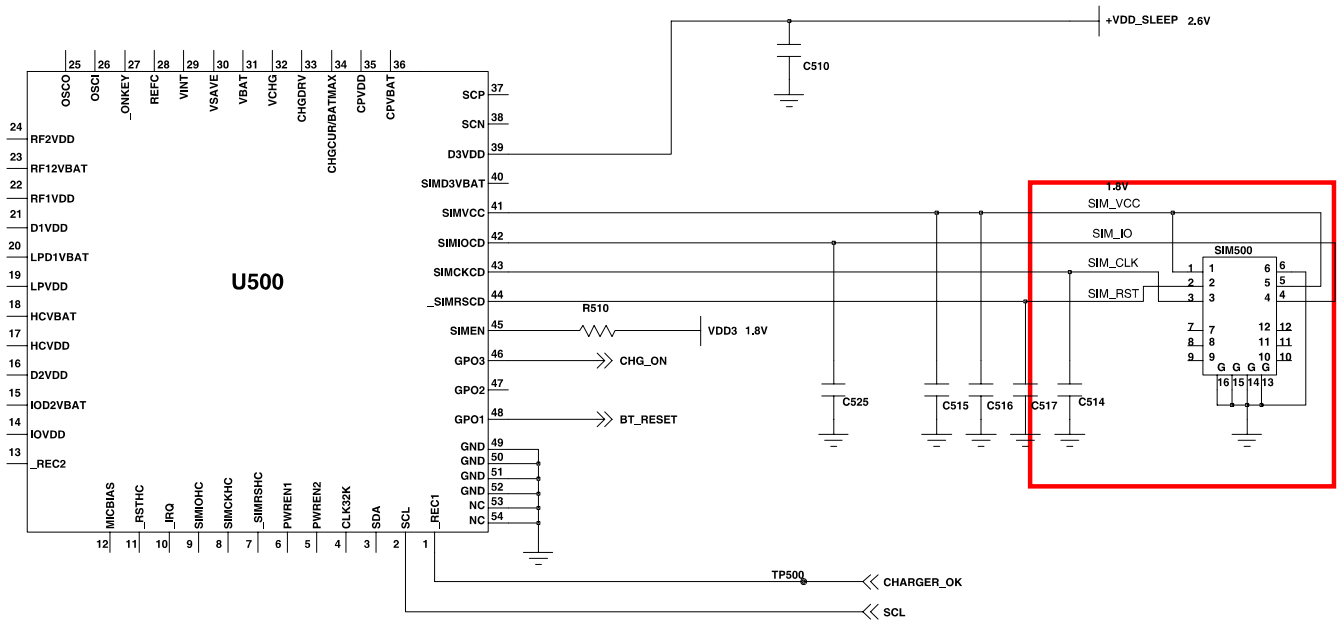




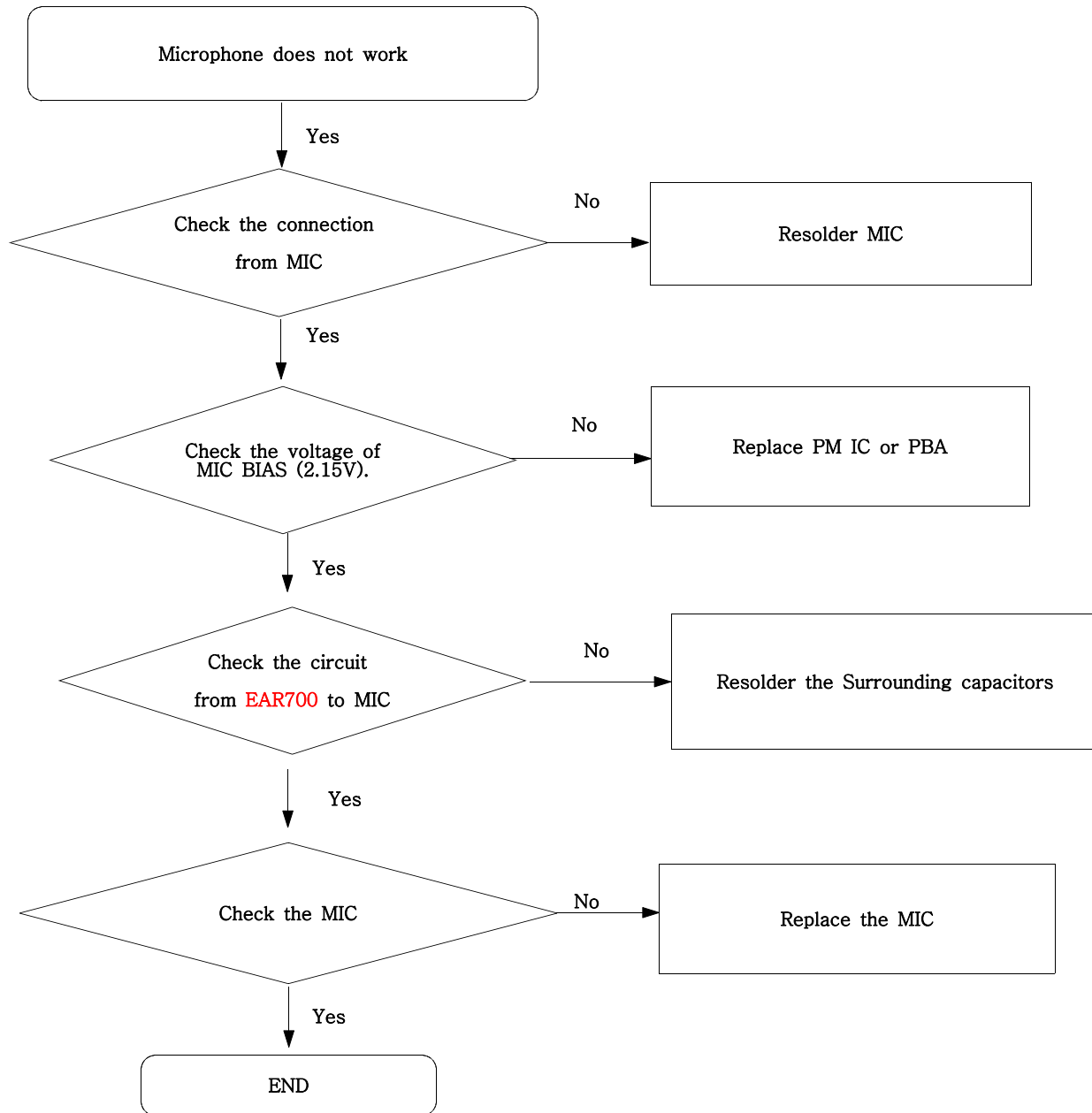
9-4. Sim Part



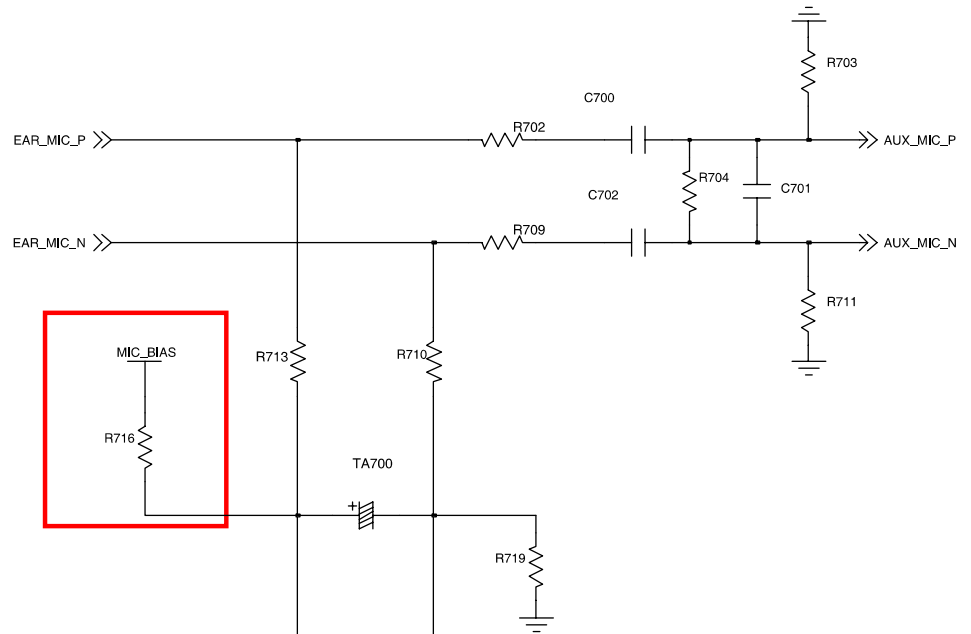
Flow Chart of Troubleshooting



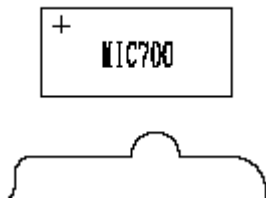
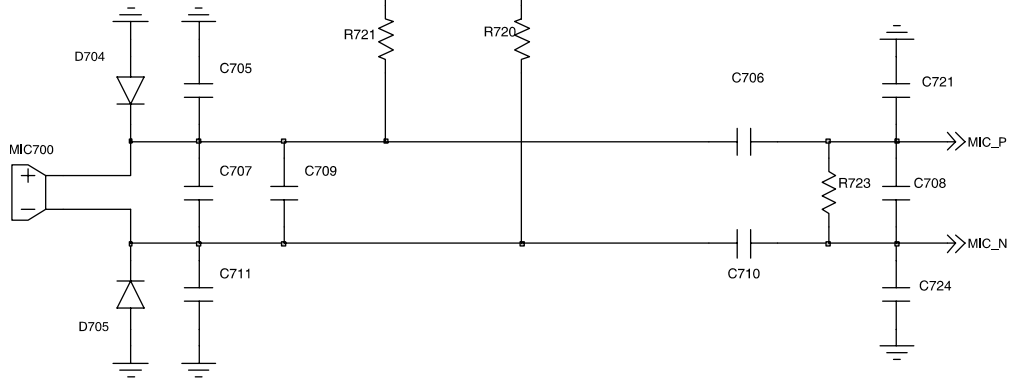
9-5. Microphone Part



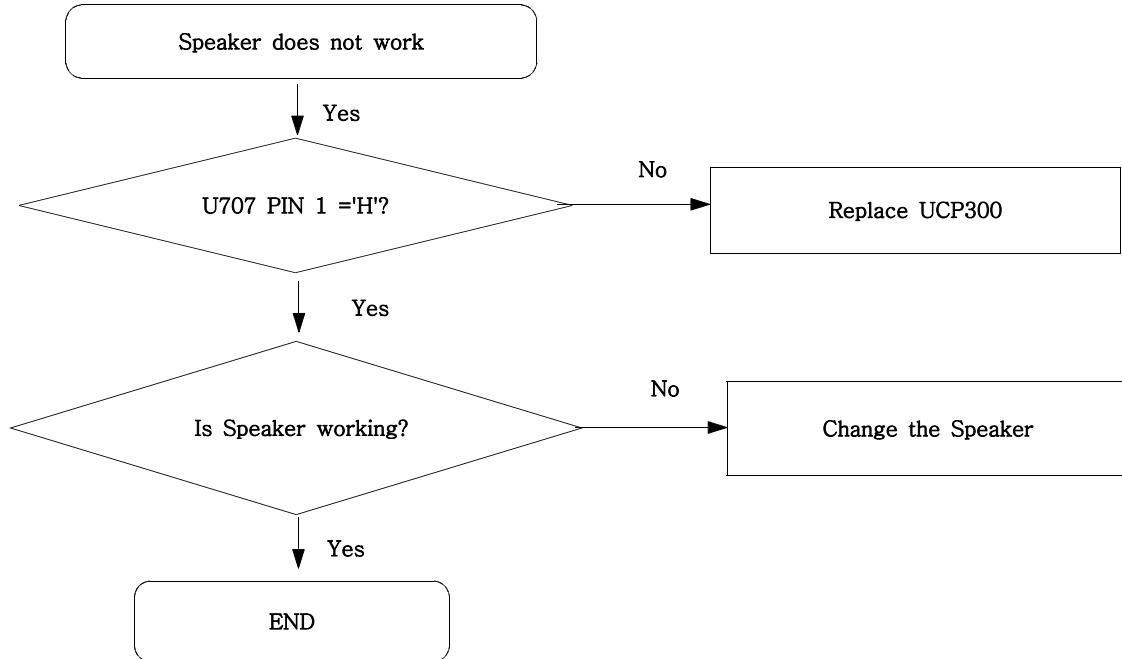
EARPHONE MIC



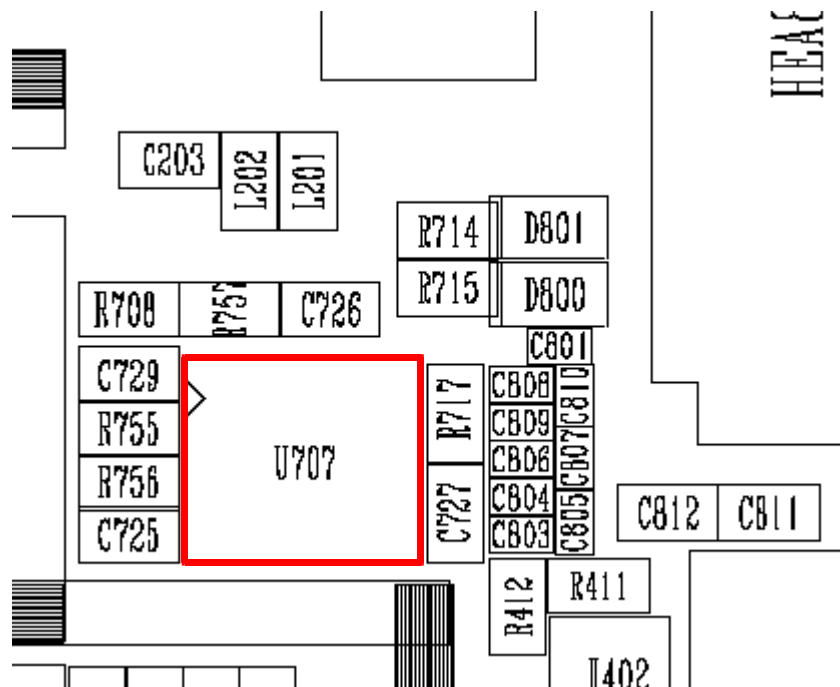
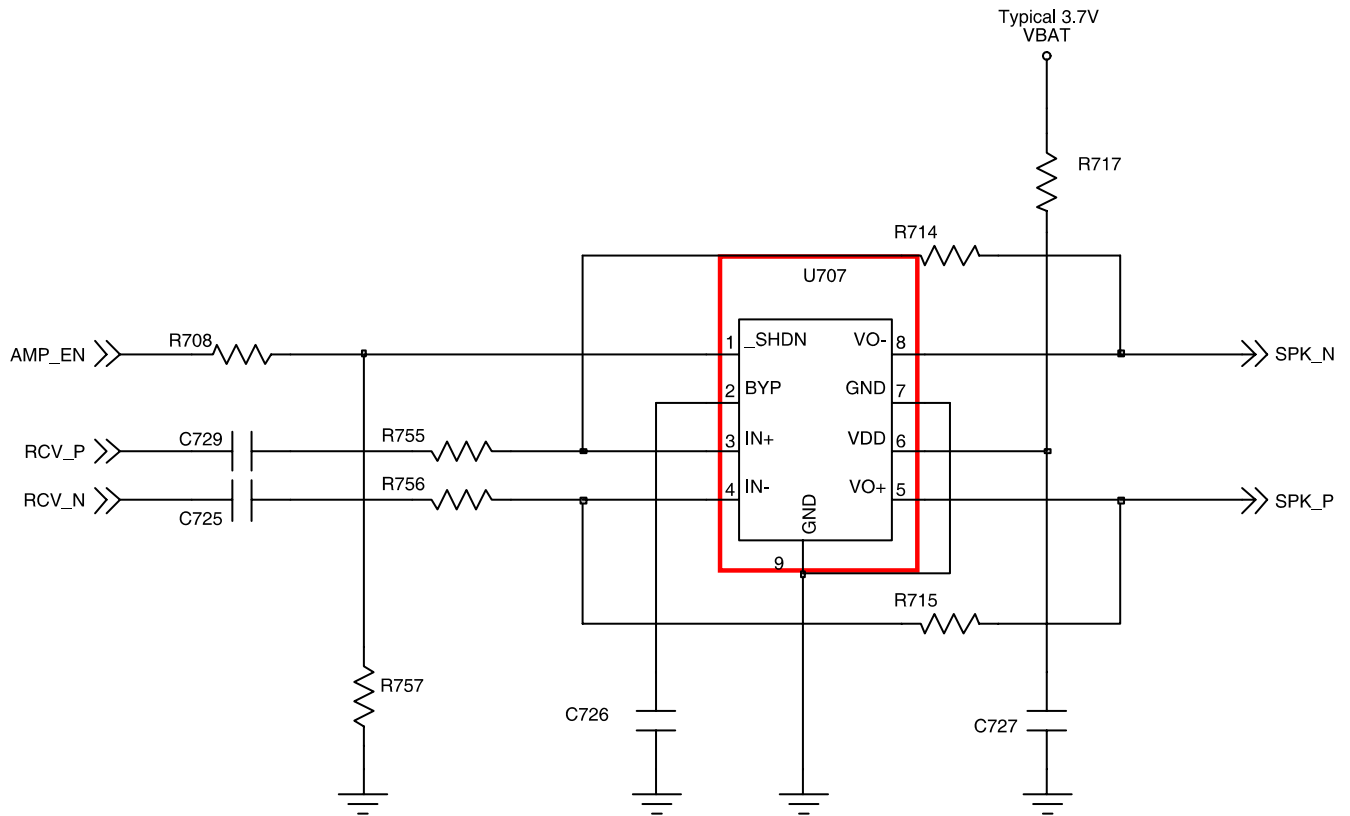
MAIN MIC



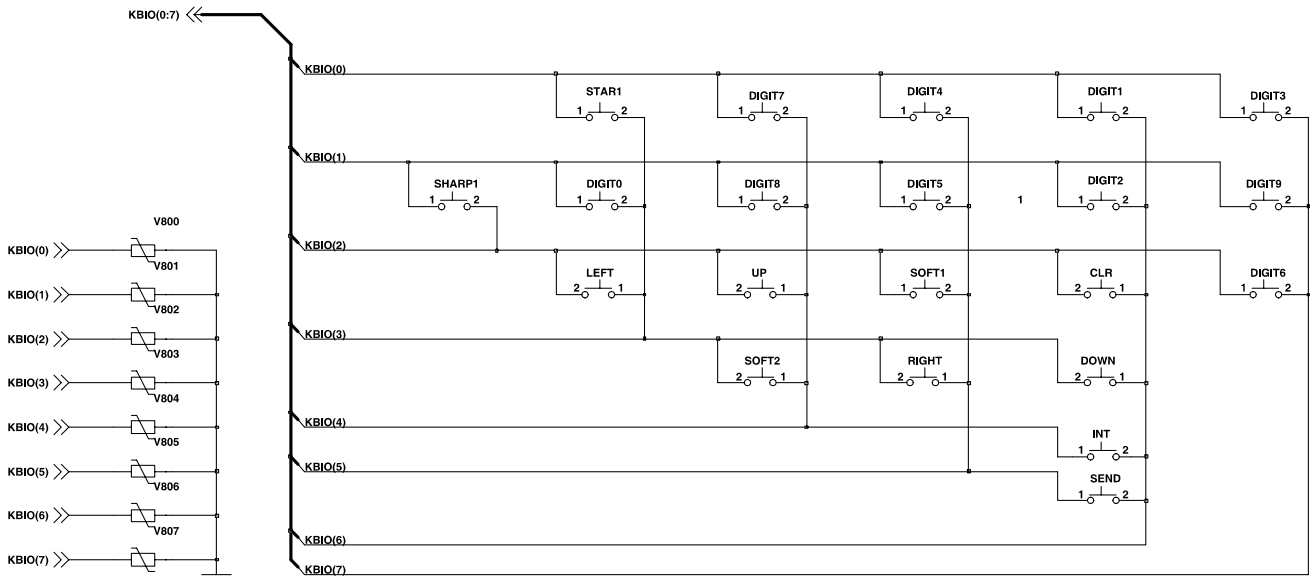
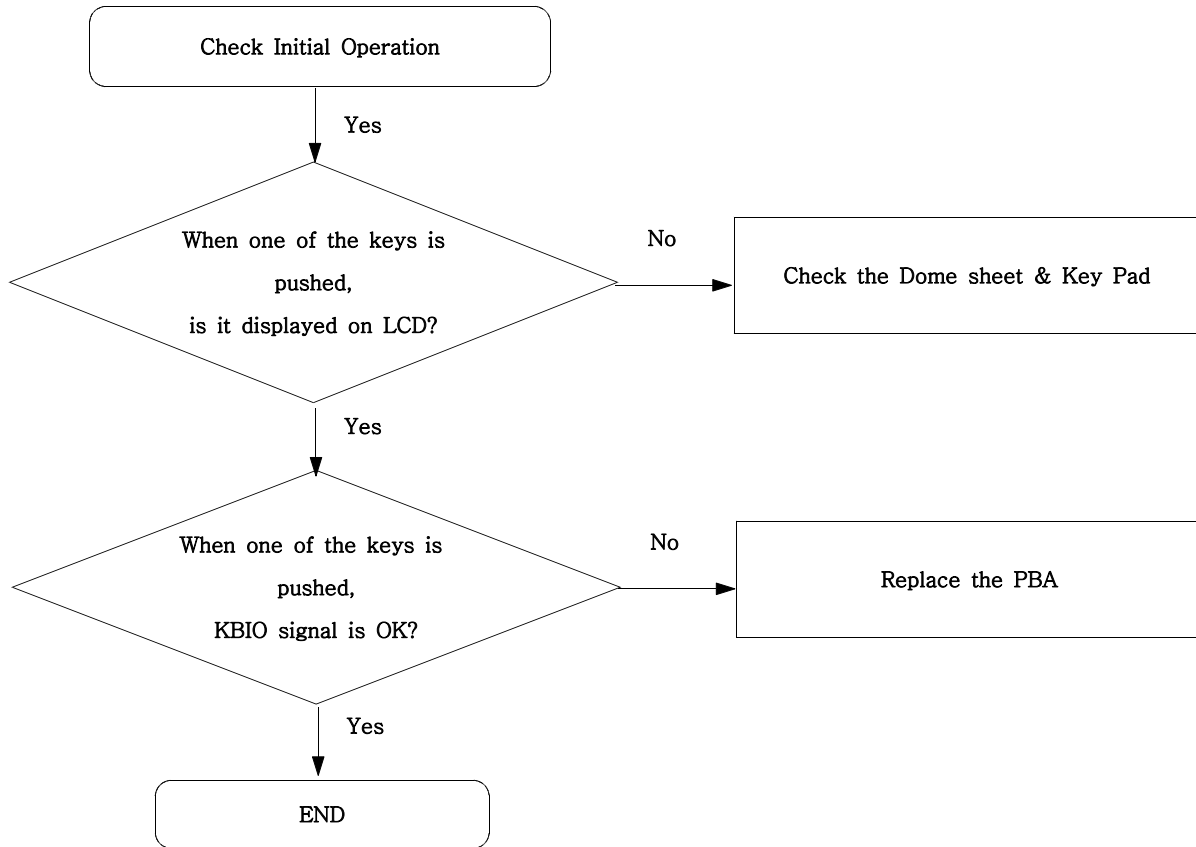
9-6. Speaker Part(Melody)



Flow Chart of Troubleshooting

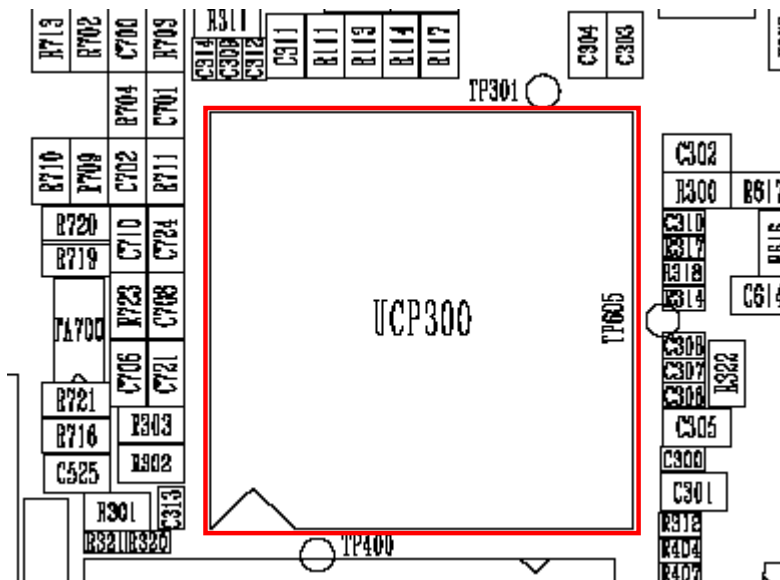
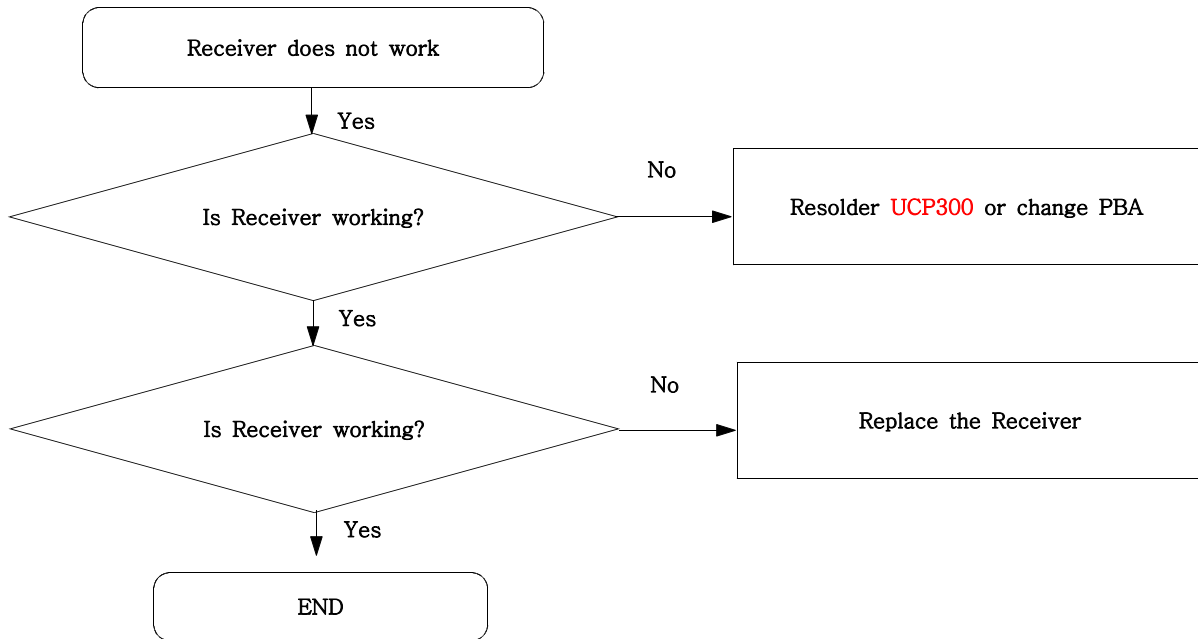


9-7. Key Data Input

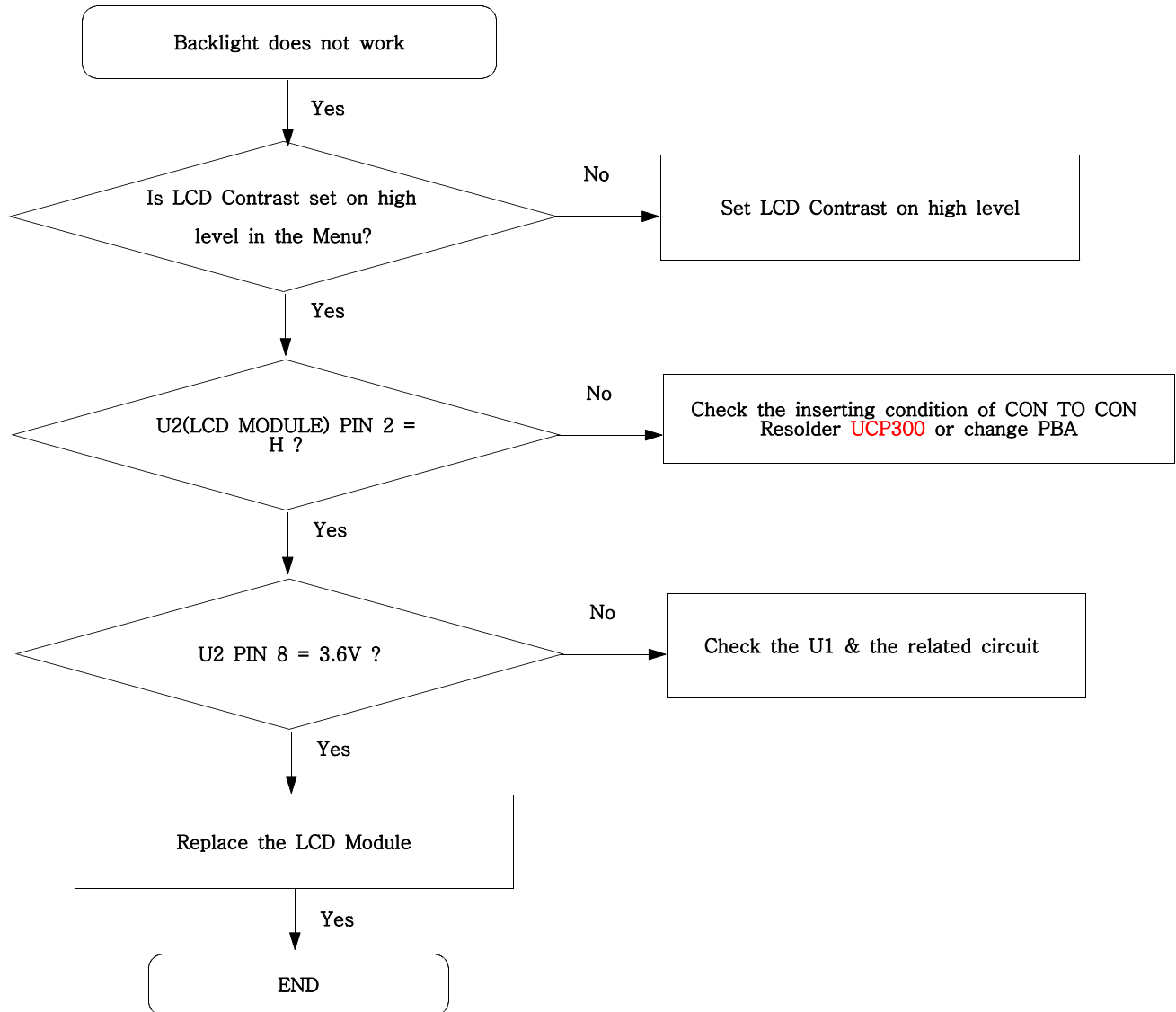


MAIN KEY MAP

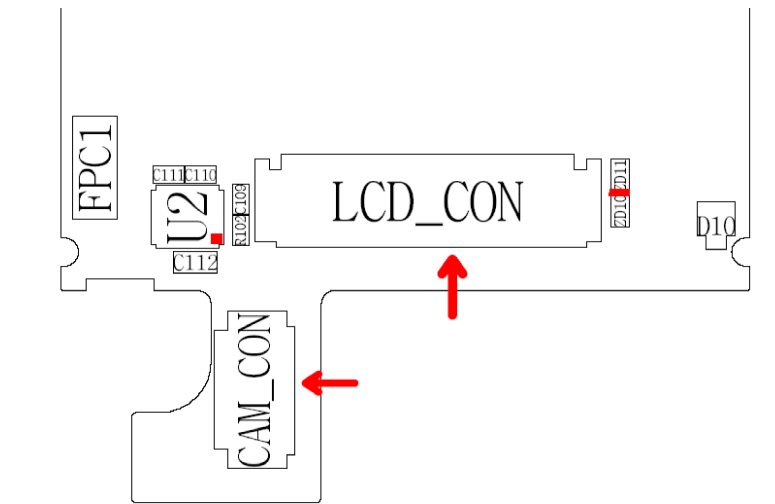
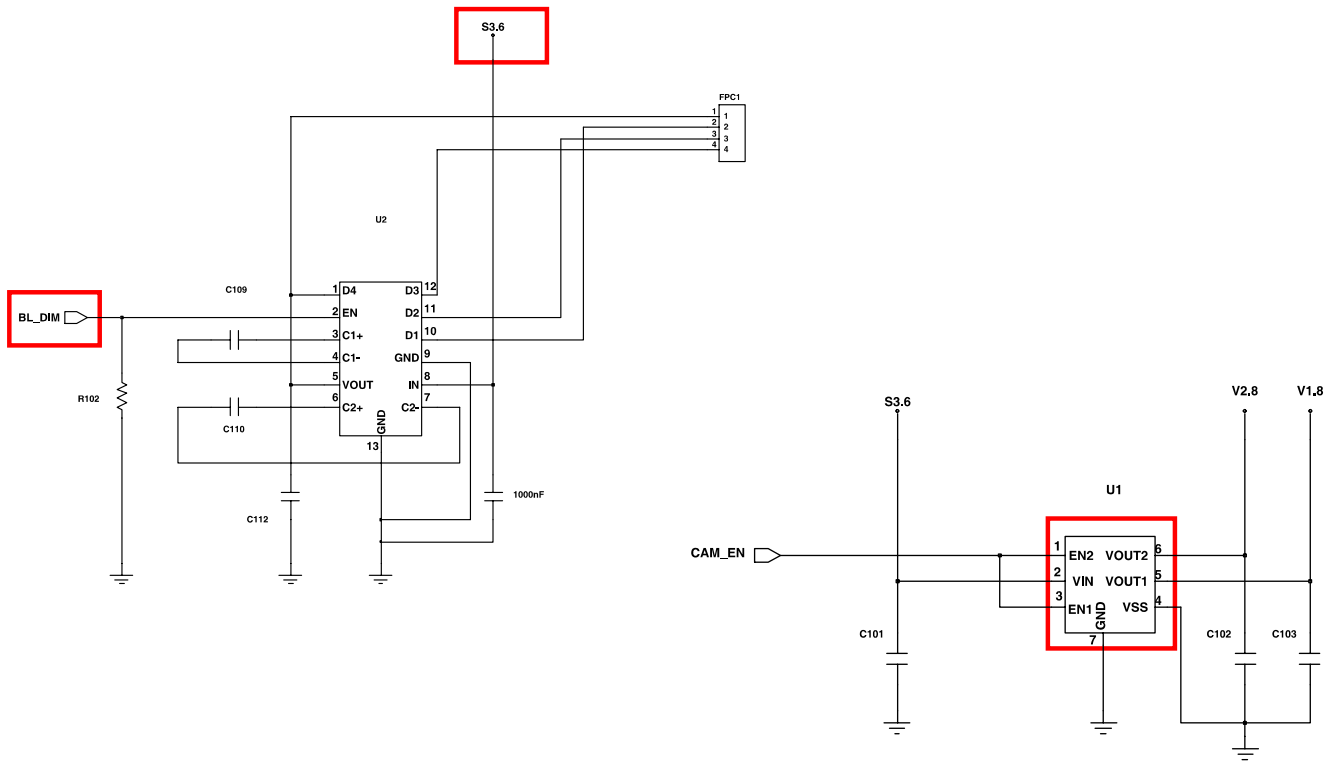
9-8. Receiver Part



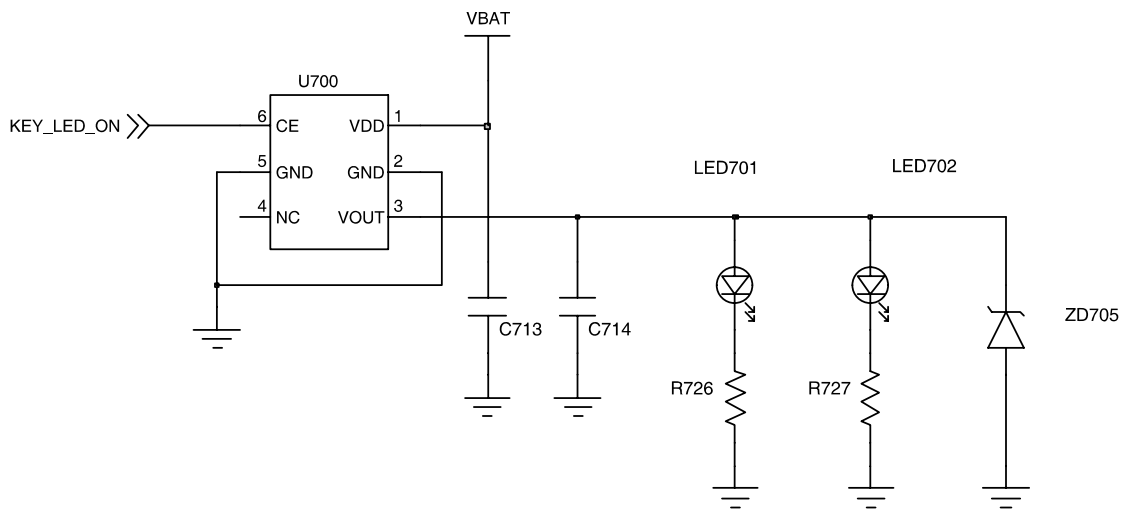
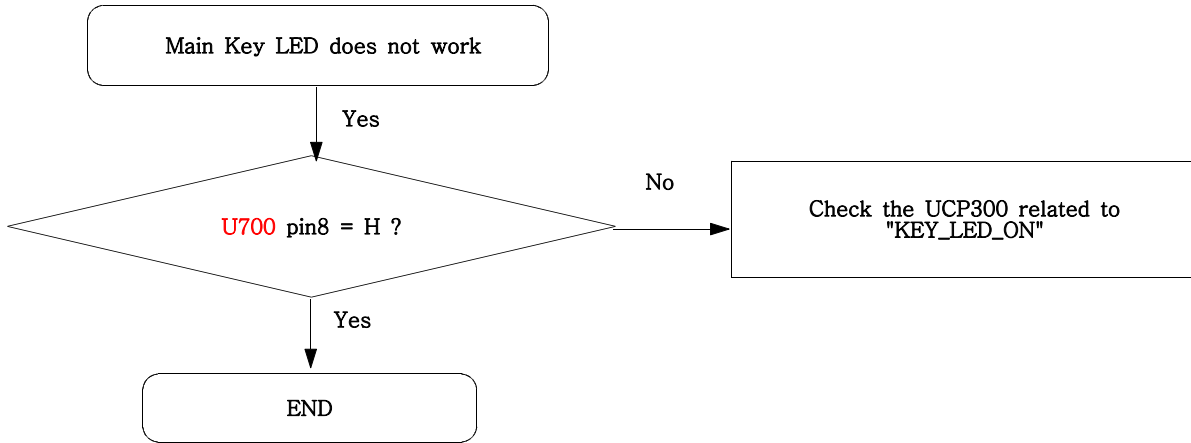
9-9. Back Light (for Color Main LCD)



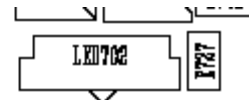
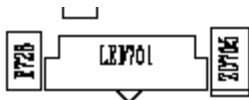
Flow Chart of Troubleshooting



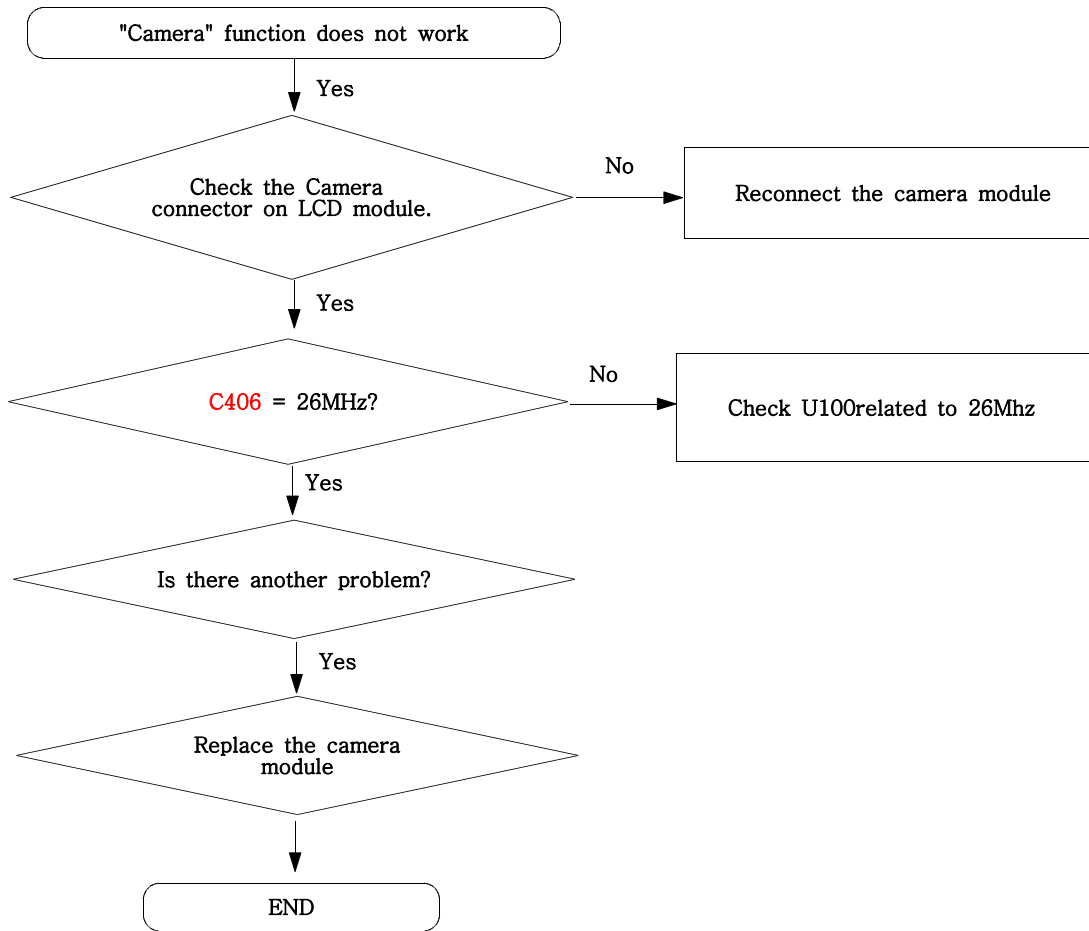
9-10. Key Back Light

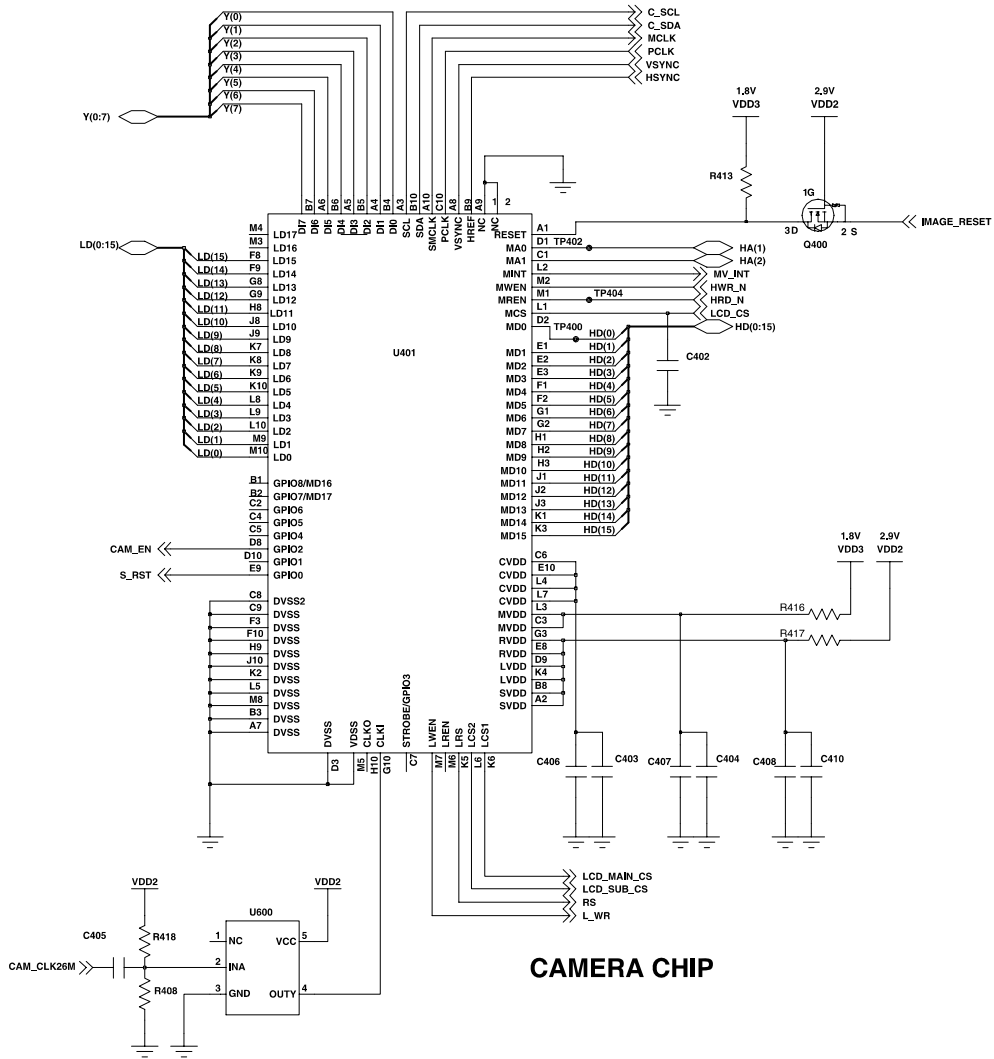


KEY LED

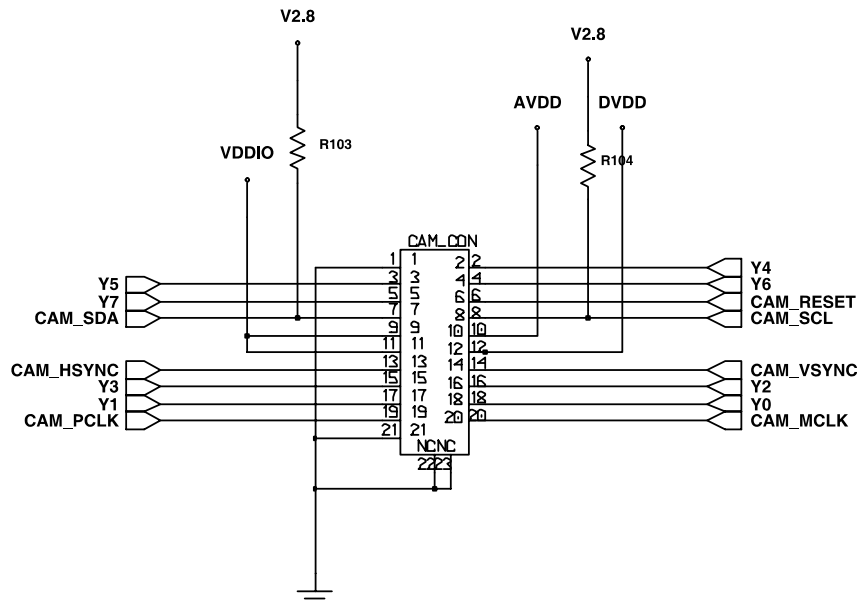


9-11. Camera part

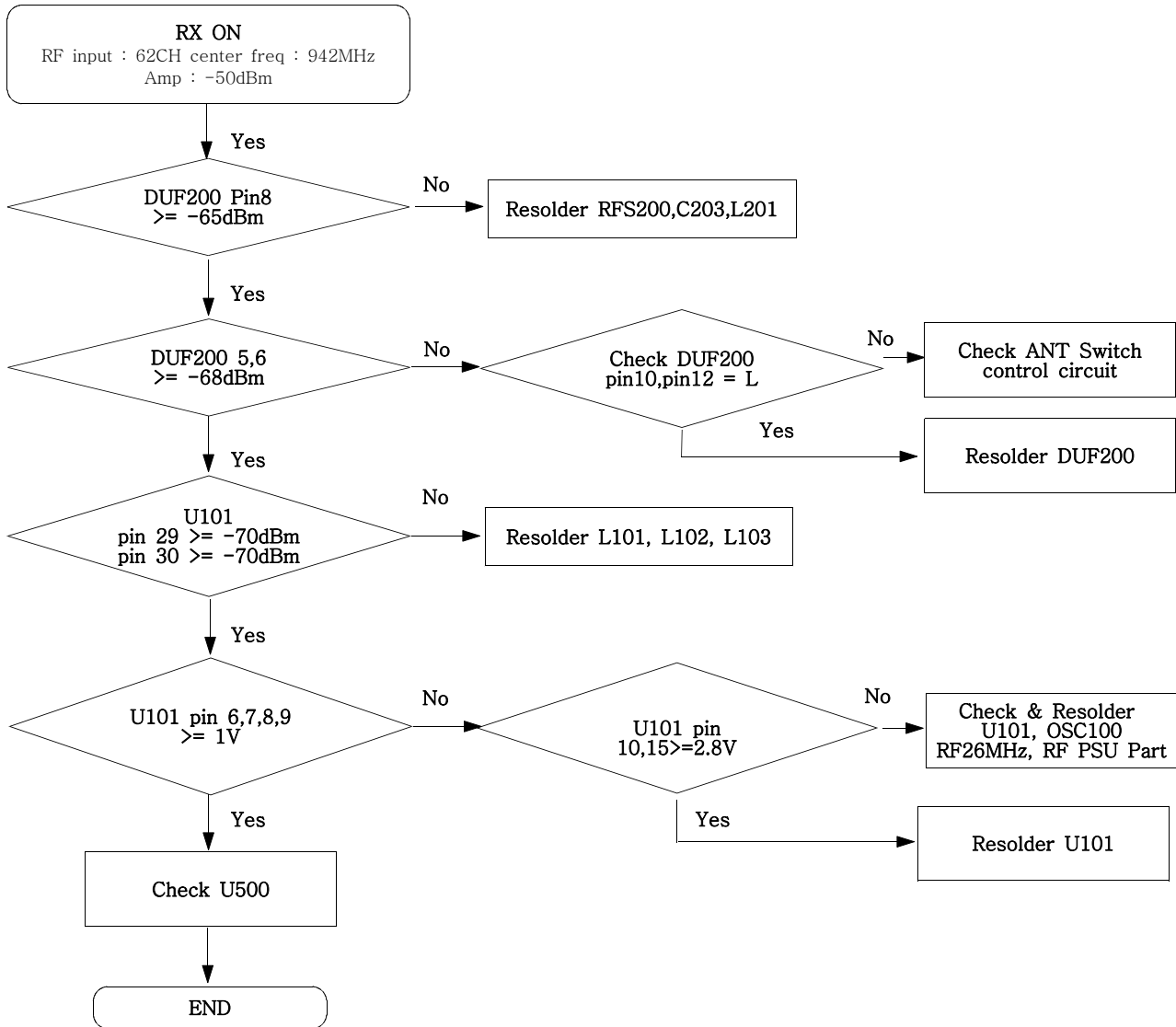




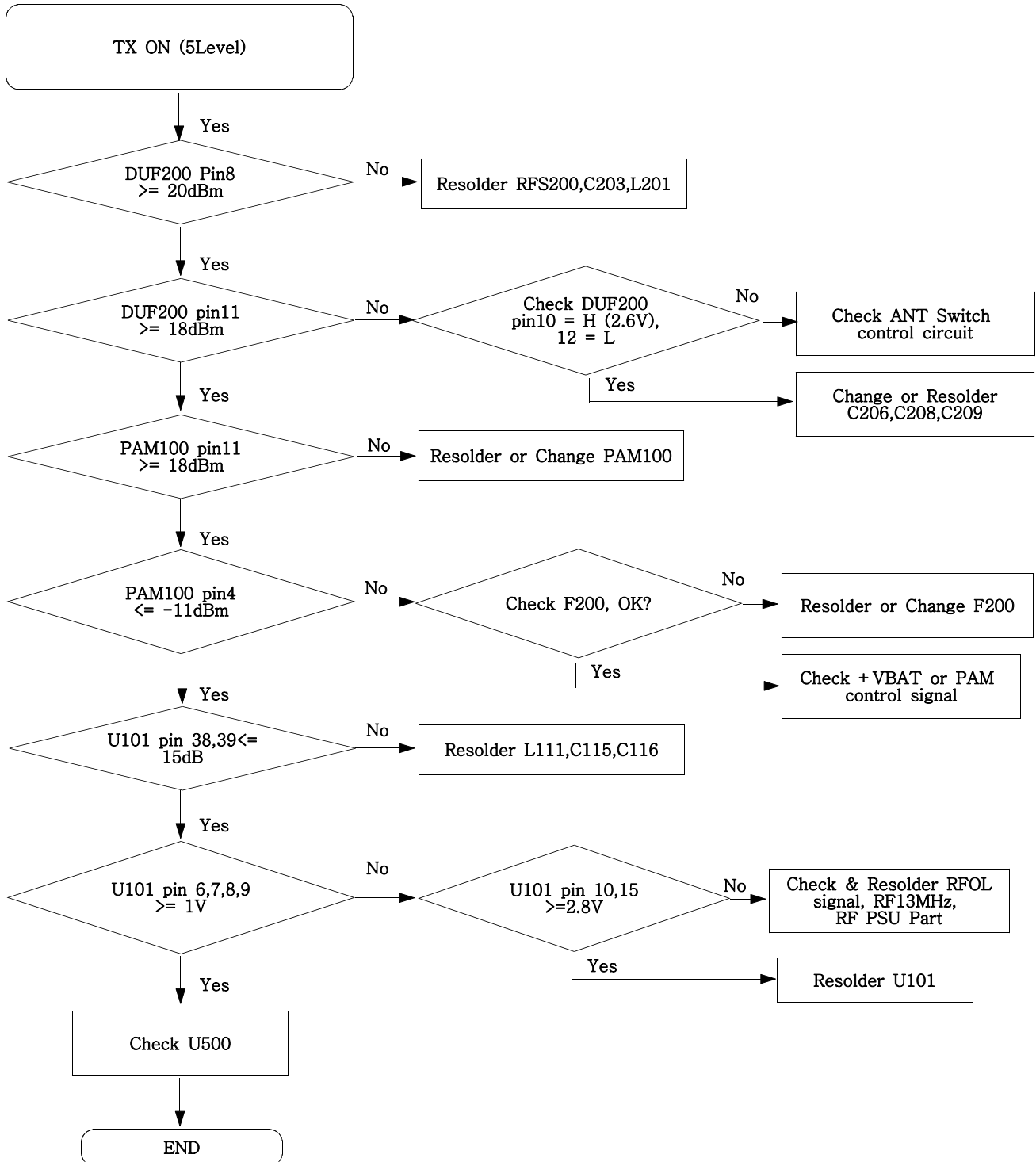
CAMERA CHIP



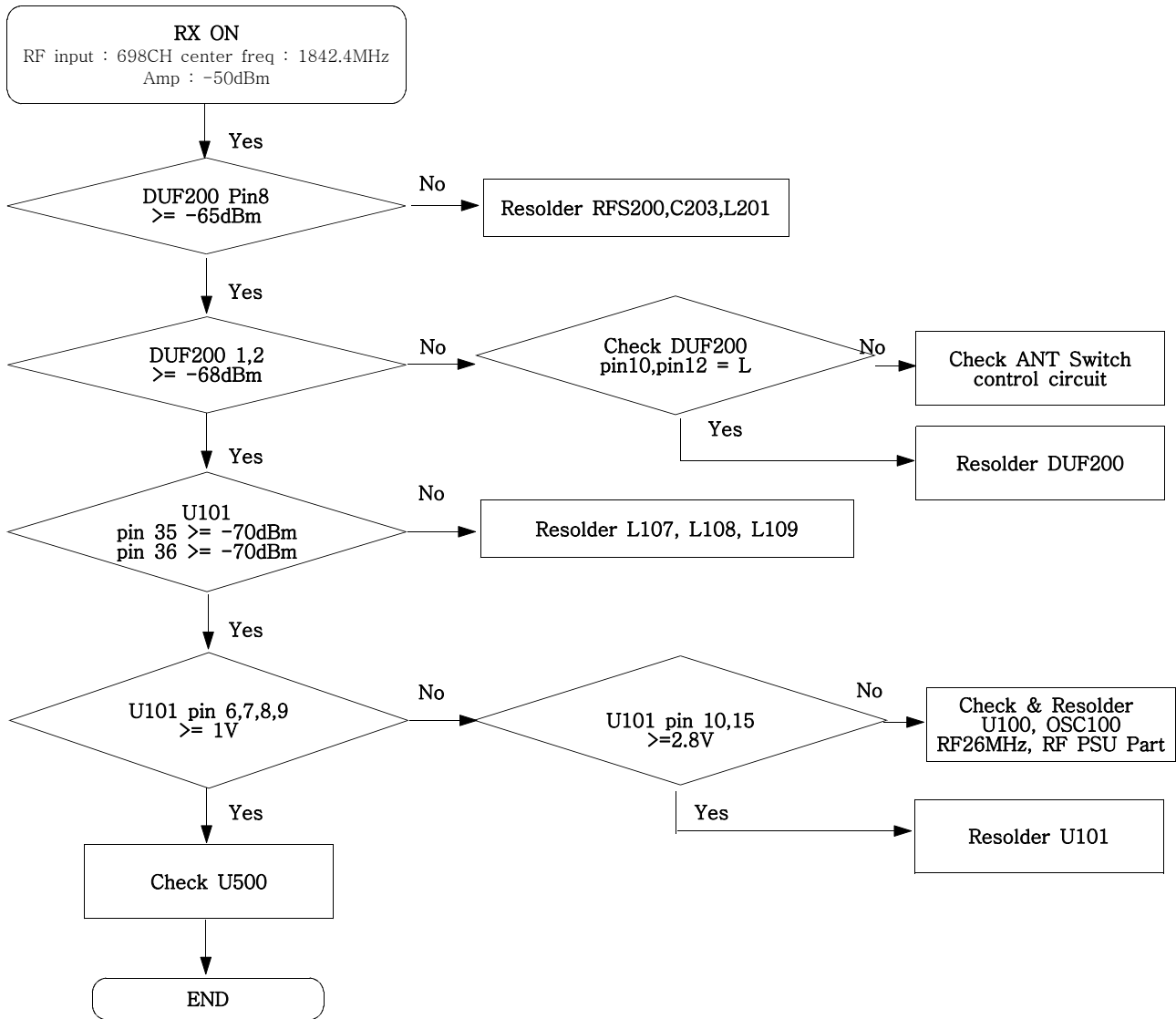
9-12. GSM Receiver



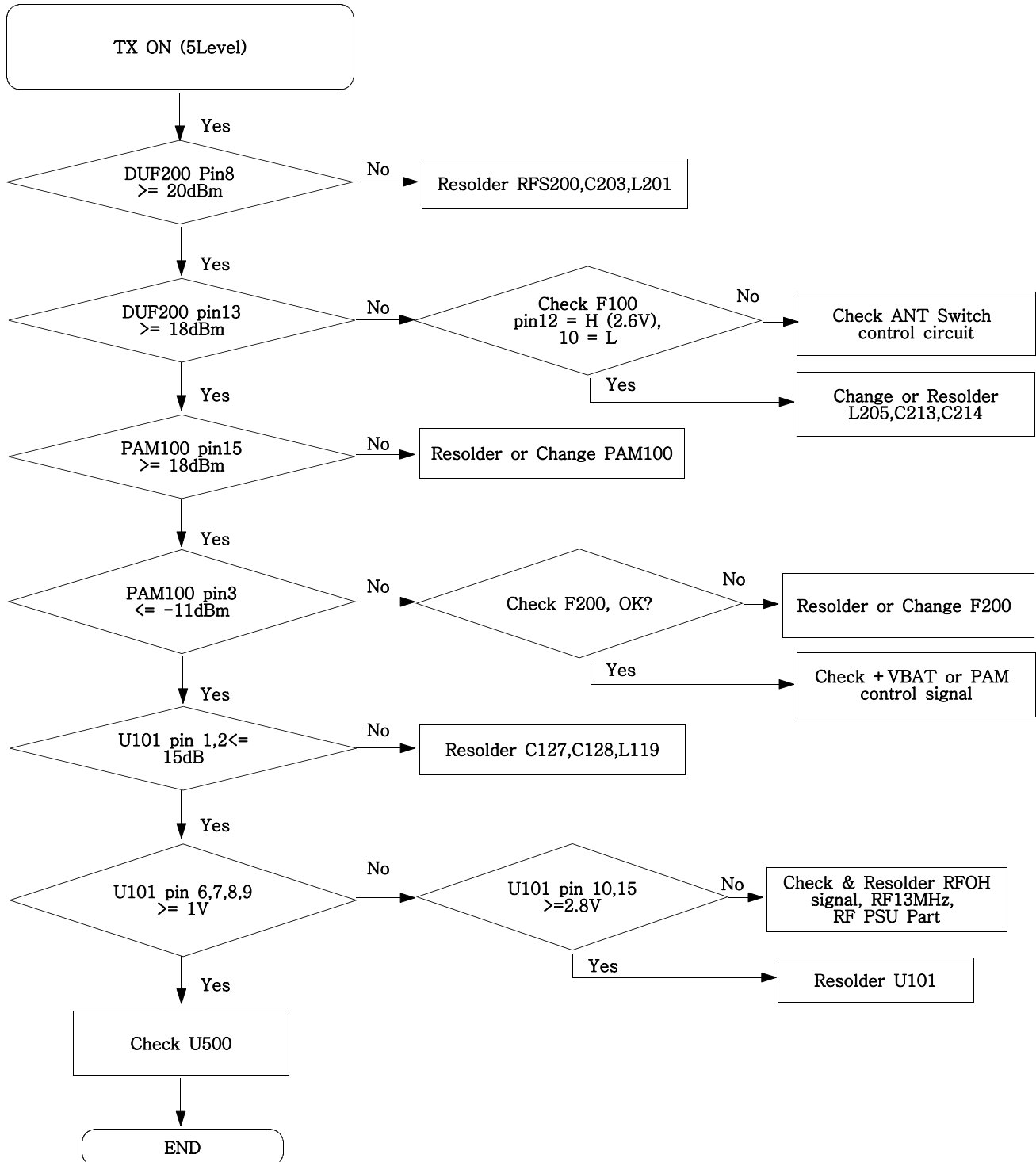
9-13. GSM Transmitter



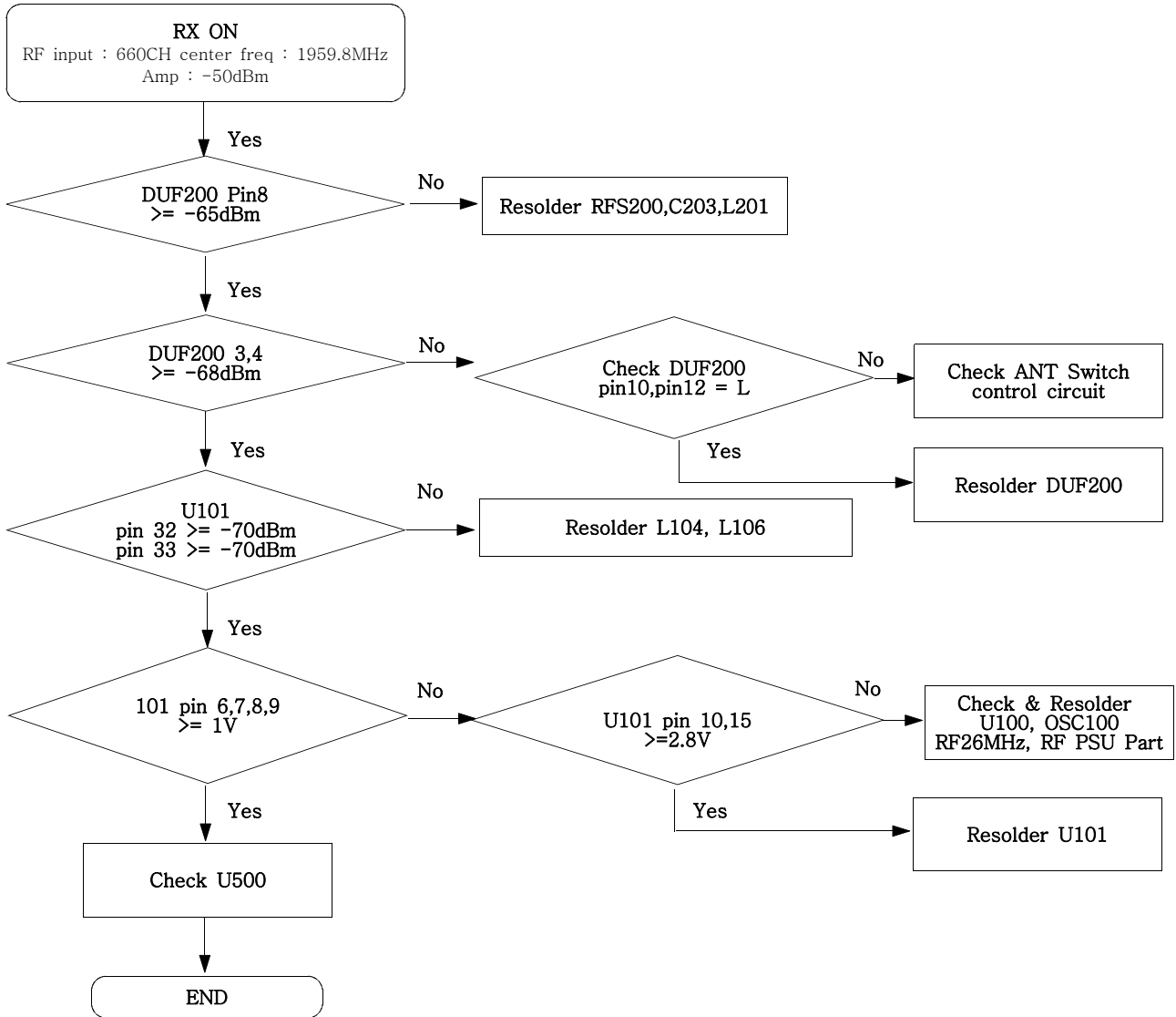
9-14. DCS Receiver



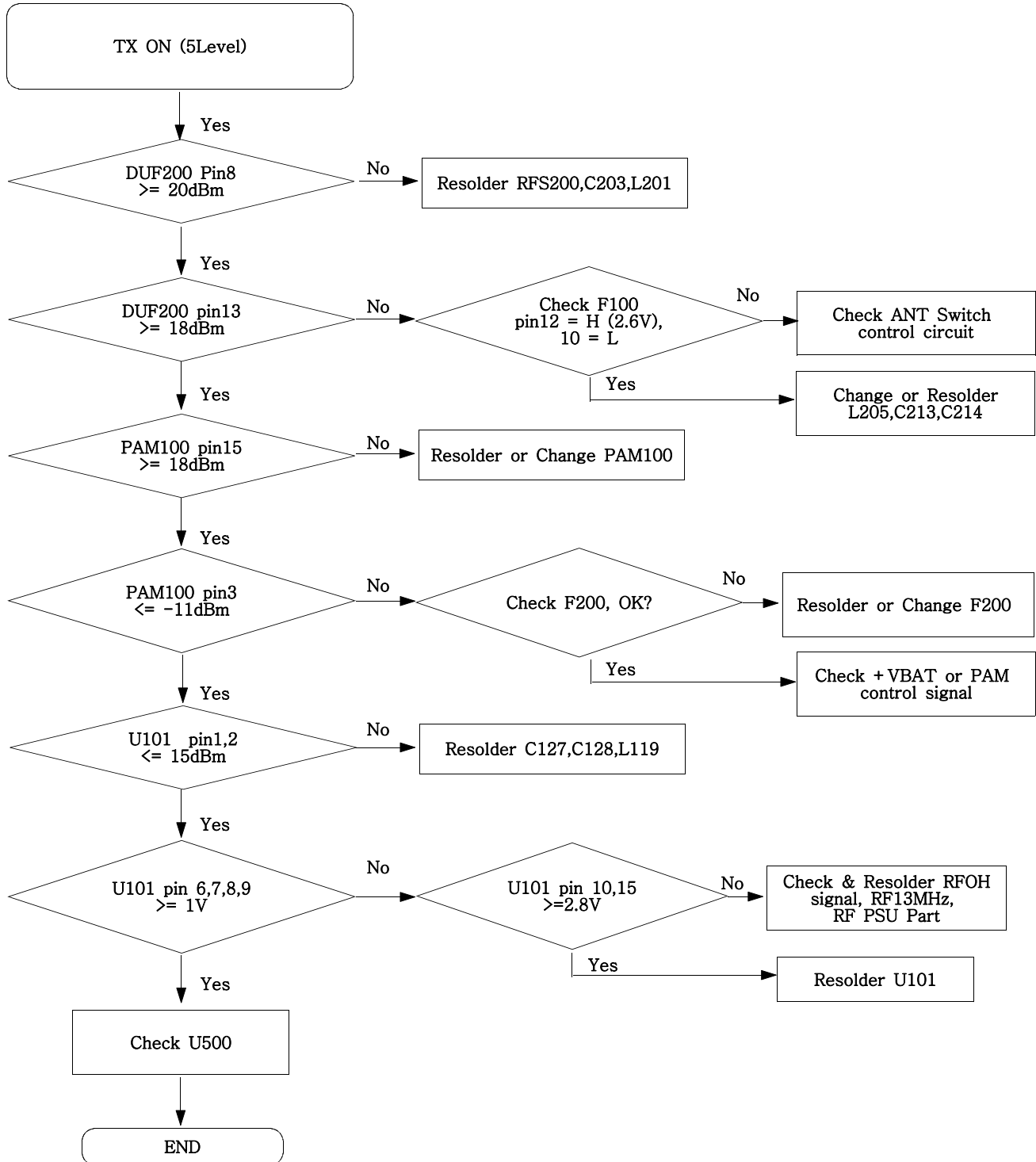
9-15. DCS Transmitter



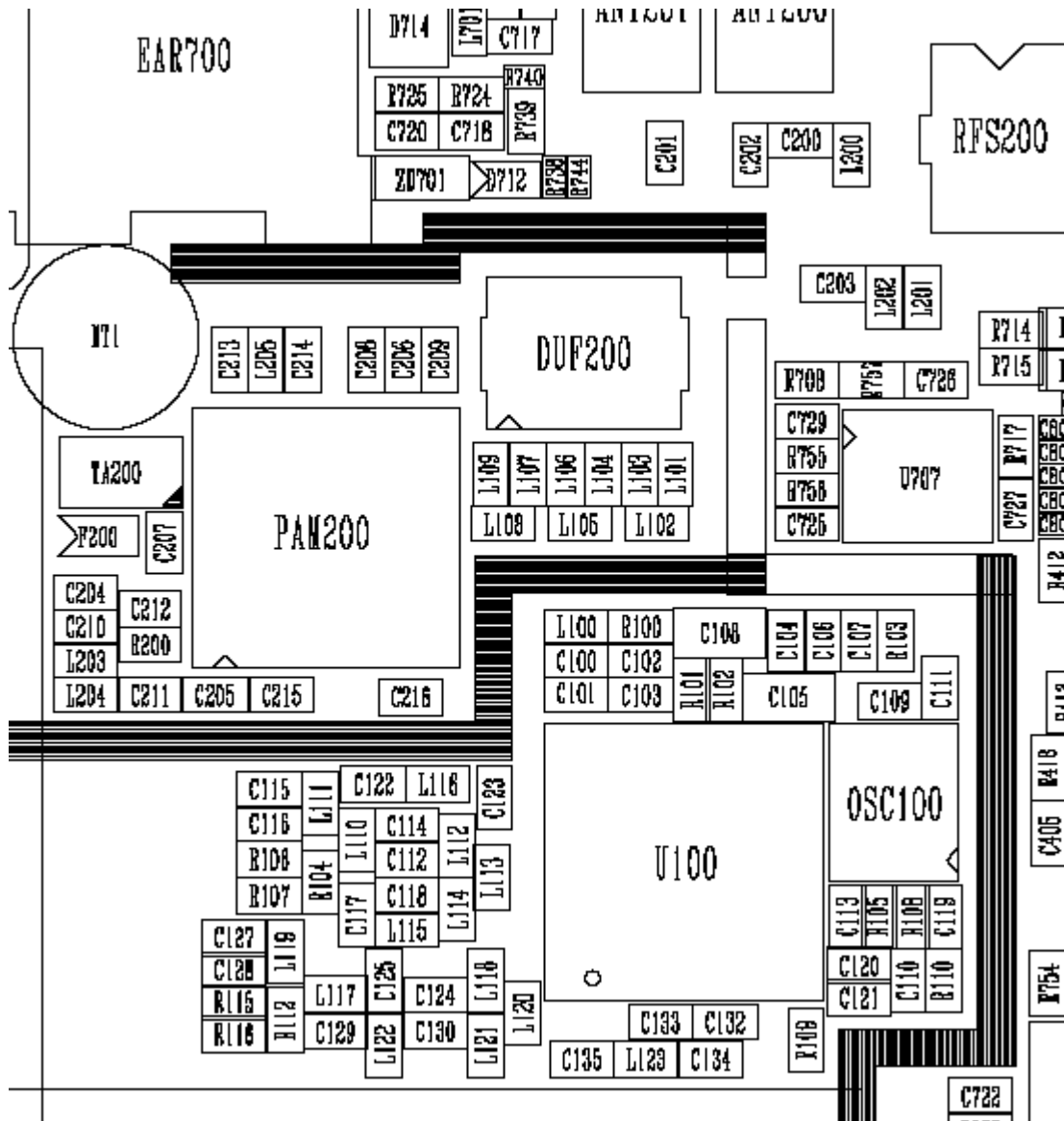
9-16. PCS Receiver

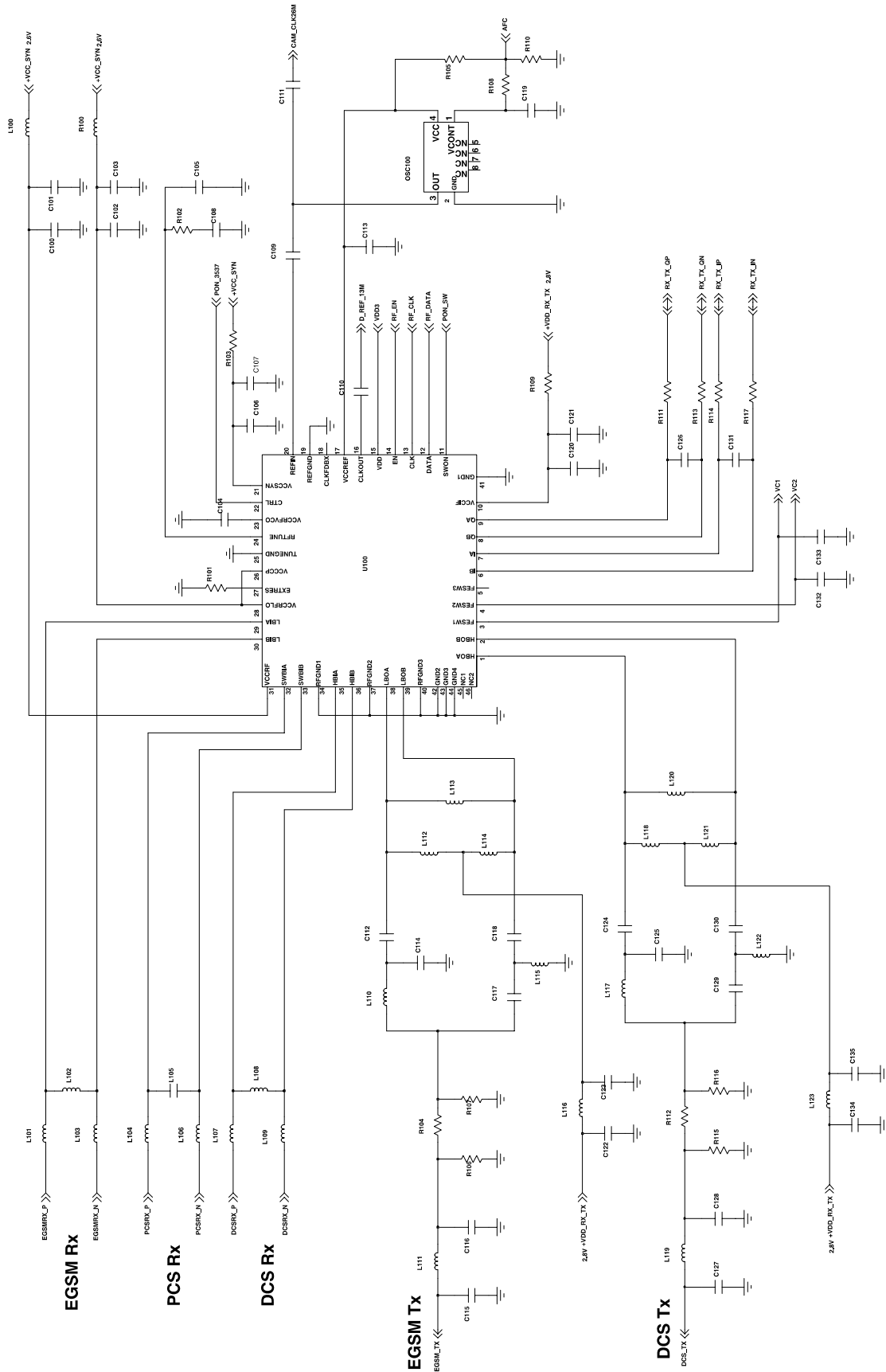


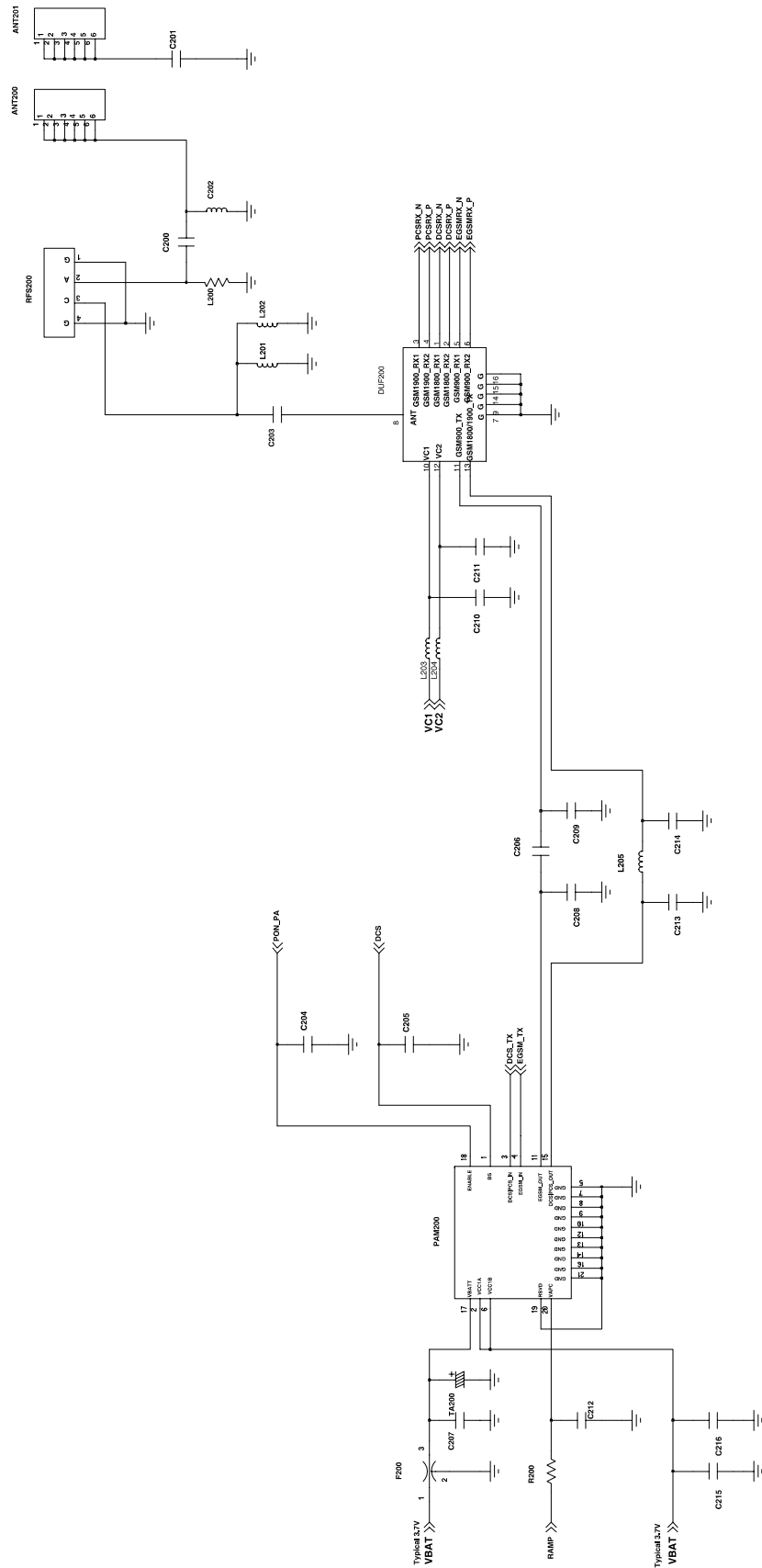
9-17. PCS Transmitter



Flow Chart of Troubleshooting







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

**SAMSUNG
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