

SAMSUNG

UMTS TELEPHONE

SGH-Z230

SERVICE *Manual*

UMTS TELEPHONE



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10. Reference data

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 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	⁴ (max +33dBm)	¹ (max +30dBm)	¹ (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	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. Product Function

Main Function

- Camera and Camcorder
- Image editor
- MP3 player
- Phonebook
- Name card
- Multimedia Message Service (MMS)
- E-mail
- Voice recorder
- Bluetooth
- Get personal with photo caller ID
- Web browser
- Java
- Calender

4. Array course control

Software Downloading

Test Jig(GH80-03307A)



Test Cable(GH39-00397A)



RF Test Cable(GH39-00283A)



4-1. Downloading Binary Files

Three binary files for downloading SGH-Z230.

- VMSZZ.bin : Modem Binary for Communication Function & Modem Binary for user interface and various interface
- Rsrc_Z230_TMN.rc1 : Files need for each application
- Rsrc2_Z230(Low).rc2 : Power ON/OFF animation
- FactoryFs_Z230_TMN.ffs : Default file system to be put into in initial production

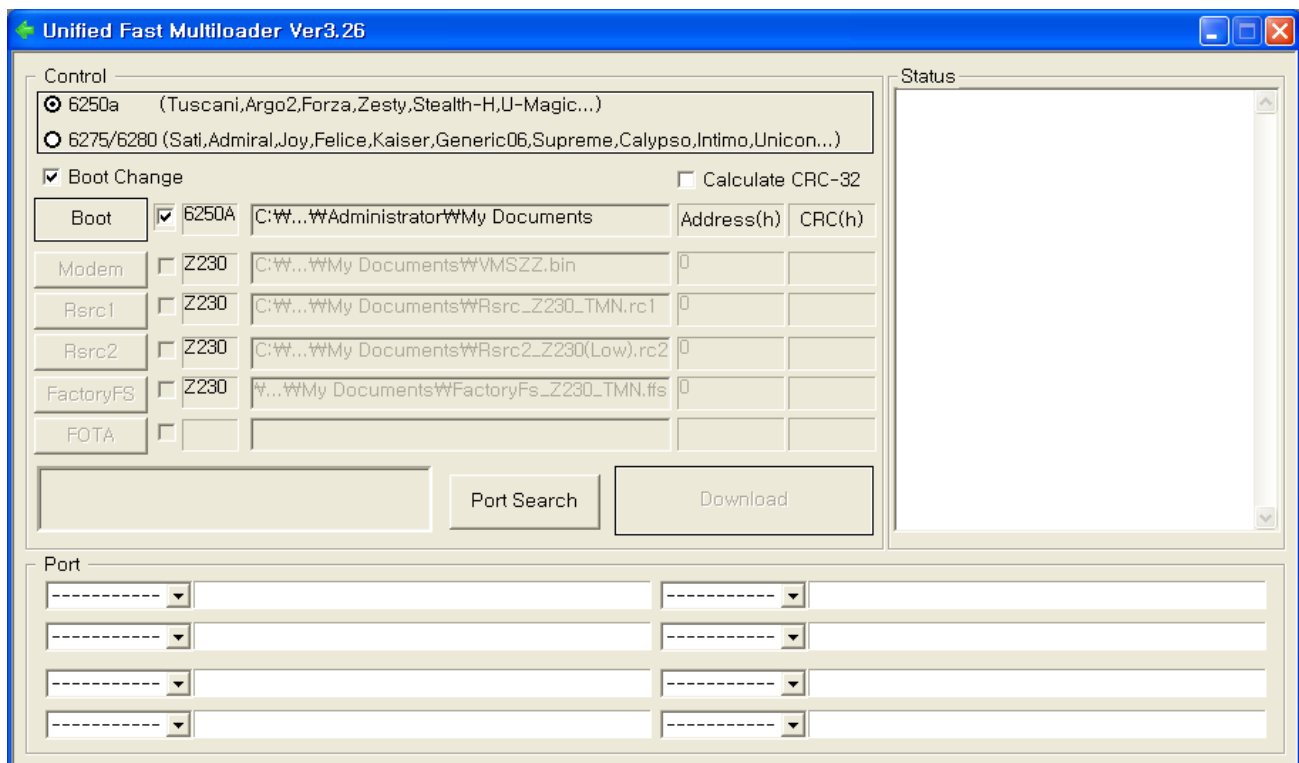
4-2. Pre-requisite for Downloading

- Downloader Program([FastMultiloader2.2.exe](#) / [FastMultiloader2.6.exe](#))
- Z230 Mobile Phone
- Data Cable
- Binary files

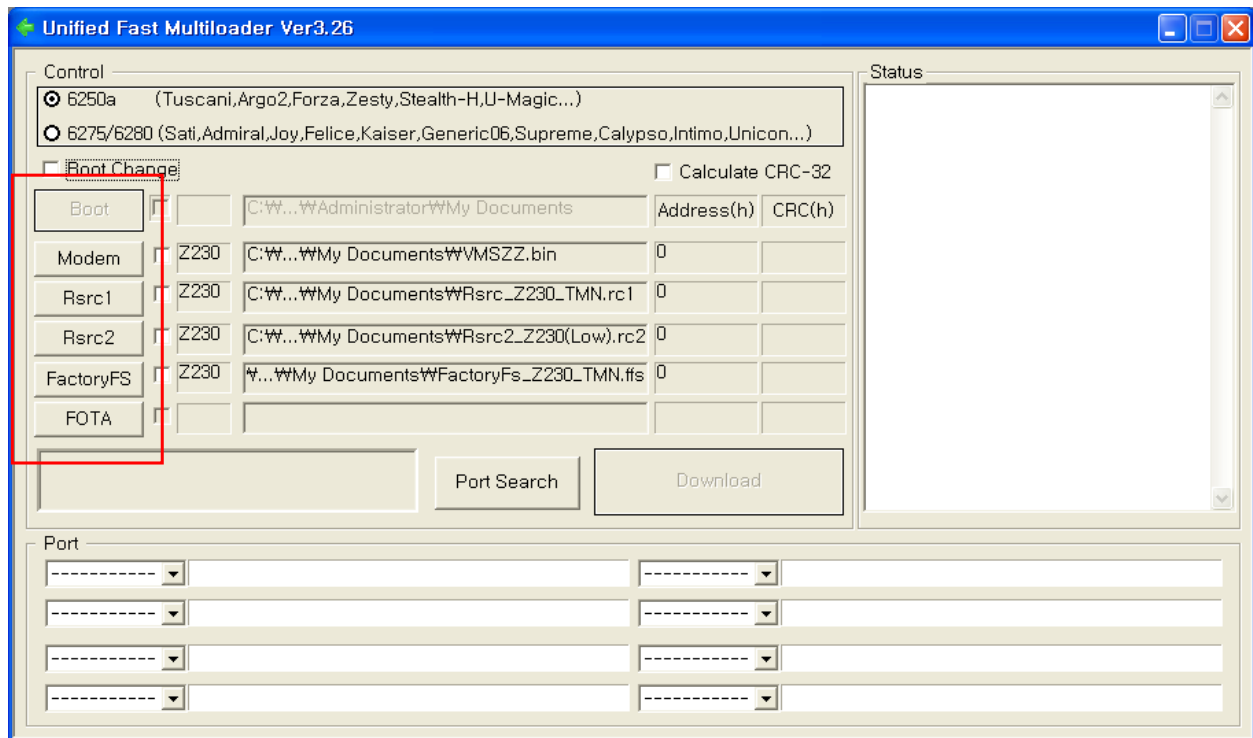
4-3. S/W Downloader Program

1. Boot the Z230 by pressing "Power ON key" + "Number 9 key" at the same time – If you do properly, you can see the following message on sub LCD
DOWNLOAD ZESTY

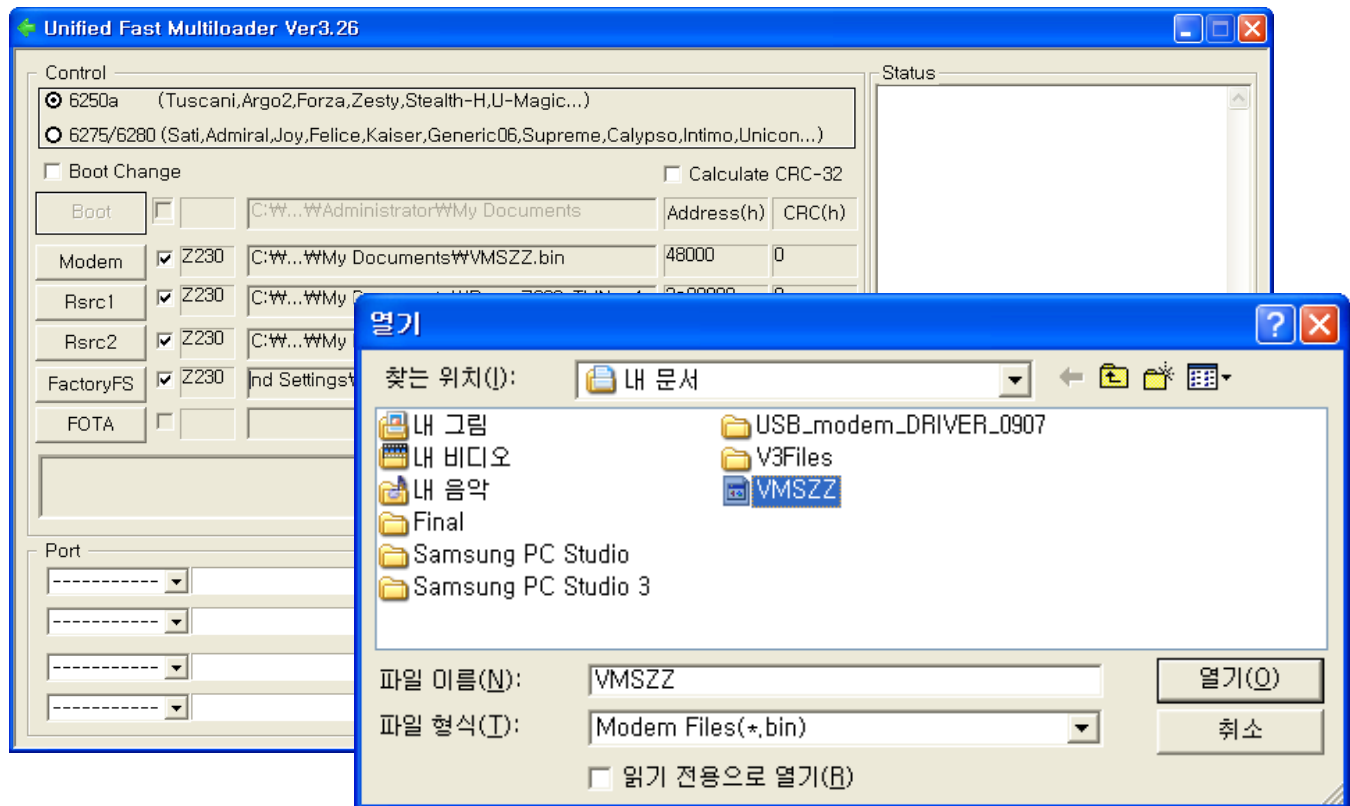
2. Load the binary download program by executing the "FastMultiloader2.6.exe "



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

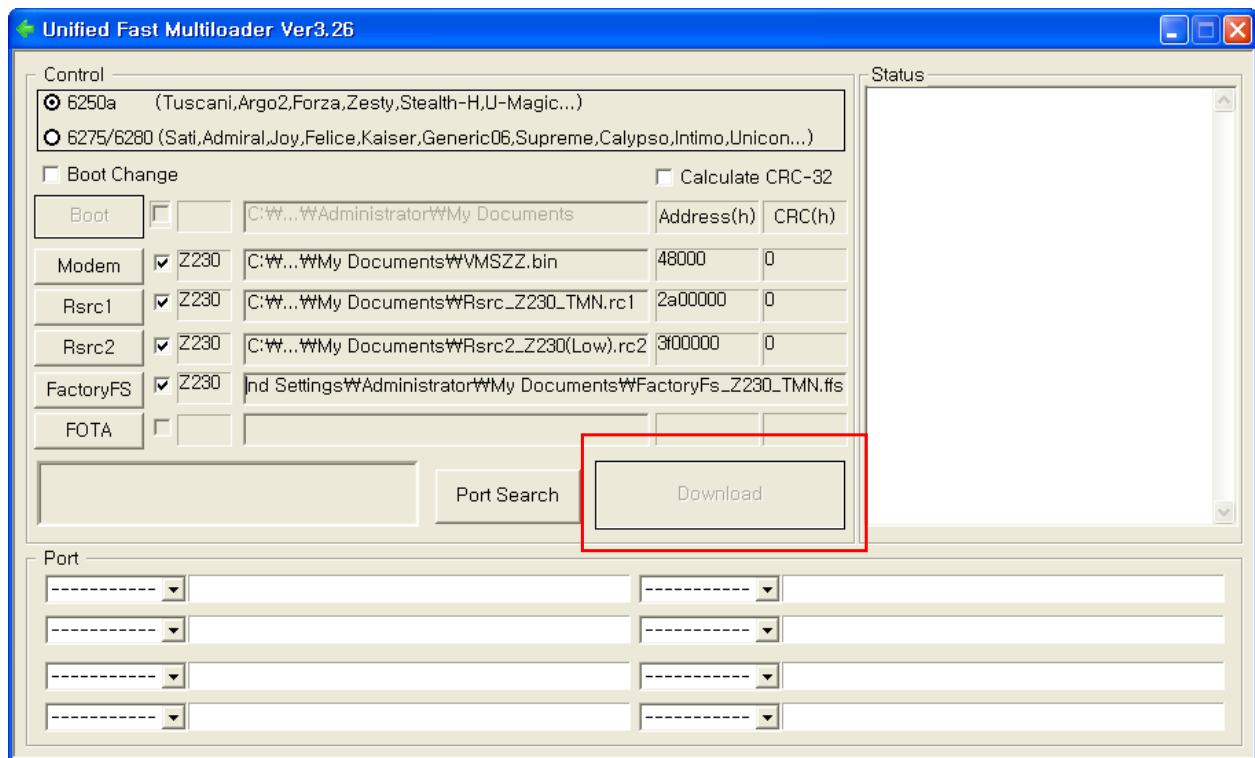


4. Select the binary file what you want to download



* Up to eight ports are supported.

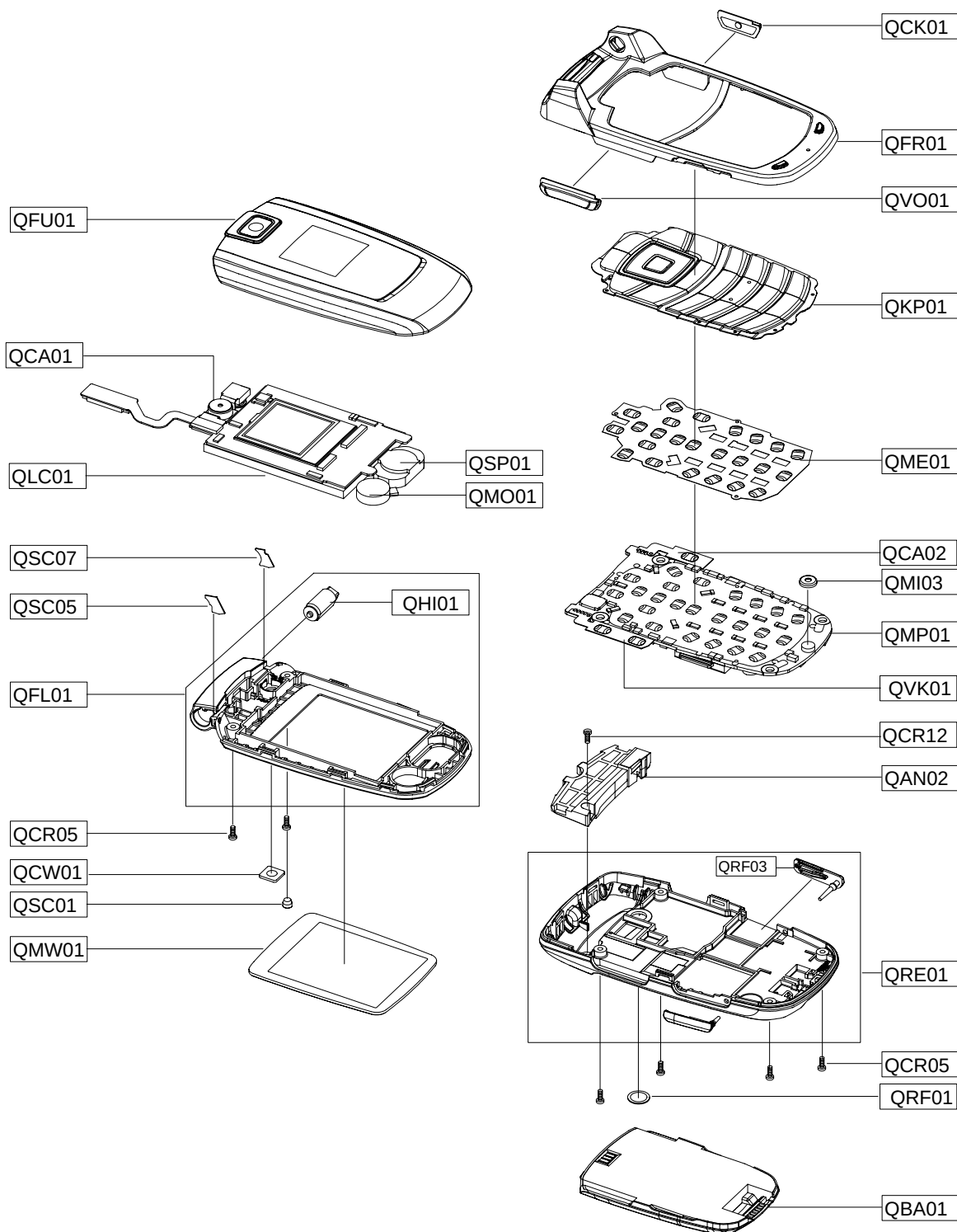
5. Now press the button 'DownLoad'



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

5. Exploded View / Disassembly&Assembly Instructions

5-1. Cellular phone Exploded View



5-2. Cellular phone Parts list

Design LOC		Description	Sec Code
QAN02		ANTENNA-SGHZ230	GH42-00887A
QBA01		BATTERY-1000MA,WARM SILVER,ENG	GH43-02523B
QCA01		UNIT-CAMERA 1/4"	GH59-03315A
QCA02		UNIT-CAMERA KEY	GH59-03322A
QCK01		PMO-CAMERA KEY	GH72-31685B
QCR05		SCREW-MACHINE	6001-001478
QCR05		SCREW-MACHINE	6001-001478
QCR12		SCREW-MACHINE	6001-001530
QFR01		ASSY CASE-FRONT	GH98-01244A
QFU01		ASSY CASE-UPPER FOLDER	GH98-01241B
QKP01		ASSY-KEY-KEYPAD(EU/BLK)	GH98-01238A
QLC01		ELA ETC-LCD MODULE	GH96-02207A
QME01		UNIT-METAL DOME	GH59-03324A
QMI03		RMO-CUSHION RUB HOLDER MIC	GH73-07273A
QMO01		MOTOR DC-SGHS342I	GH31-00119A
QMP01		PBA MAIN-SGH-Z230	GH92-02874A
QMW01		PCT-COVER WIN MAIN	GH72-31894A
QMW02		PCT-COVER WIN LOWER CAM	GH72-31895A
QRF01		MPR-TAPE RF COVER	GH74-24101B
QSC01		RMO-RUBBER COVER CAP SCREW	GH73-07535A
QSC05		MPR-TAPE LOWER FOLDER L	GH74-24102A
QSC07		MPR-TAPE LOWER FOLDER R	GH74-24103A
QSP01		MICRO SPEAKER	3001-002014
QVK01		UNIT-VOLUME KEY	GH59-03323A
QVO01		PMO-VOLUME KEY	GH72-31684B
QFL01		ASSY ACCE-LOWER FOLDER	GH98-01243A
	QHI01	ASSY MEC-HINGE (CAN TYPE)	GH75-09075A
QRE01		ASSY CASE-REAR	GH98-01242B
	QRF03	PMO-COVER EAR	GH72-31689B

Description	Sec Code
BAG PE	6902-000634
ADAPTOR-SGHD800 TA(EU)	GH44-01060A
UNIT-EARPHONE(BLK)	GH59-02499A
LABEL(P)-WATER SOAK	GH68-02026A
LABEL(P)-WATER SOAK	GH68-02026A
LABEL(R)-MAIN(EU)	GH68-11570B
MANUAL USERS-EU ENGLISH	GH68-11605A
MANUAL USERS-EU PORTUGUESE	GH68-11606A
BOX-UNIT(EU)	GH69-04120B
CUSHION-CASE(NEW)	GH69-04318A
MPR-REMOVE TAPE LCD	GH74-13804A
MPR-BOHO VINYL LCD CONN	GH74-15350A
MPR-TAPE VOLUME KEY	GH74-17547A
MPR-TAPE LED	GH74-17926A
MPR-TAPE REMOVE LCD	GH74-18286A
MPR-TAPE SUB LCD INSUL	GH74-18531A
CONE-TAPE SUB LCD INSUL	GH74-19756A
MPR-TAPE FRONT CASE	GH74-24104A
MPR-VINYL BOHO SUB WINDOW 1	GH74-25004A
MPR-VINYL BOHO MAIN WINDOW 1	GH74-25005A
MPR-VINYL BOHO LOWER SPONGE	GH74-25006A
MPR-VINYL BOHO LOWER FOLDER	GH74-25013A
MPR-VINYL BOHO SUB WINDOW 2	GH74-25014A
MPR-TAPE LCD FPCB	GH74-25016A
MPR-TAPE CAMERA	GH74-25019A
MPR-GASKET DOME SHEET	GH74-25021A
MPR-TAPE CAMERA FPCB	GH74-26243A
MPR-INSU TAPE MAIN LDI	GH74-26596A
MPR-GASK TAPE PBA L	GH74-26766A
MPR-GASK TAPE PBA R	GH74-26767A
MPR-INSU TAPE PBA L	GH74-26768A
MPR-INSU TAPE PBA R	GH74-26769A
MPR-TAPE	GH74-26821A
MPR-GASK TAPE KEY SIDE FPCB L	GH74-26905A
MPR-GASK TAPE KEY SIDE FPCB R	GH74-26906A
MPR-GASK TAPE LCD FPCB	GH74-27064A
ASSY RUBBER-PCB CON	GH98-01796A

5-3. Disassembly & Assembly Instructions

— Disassembly

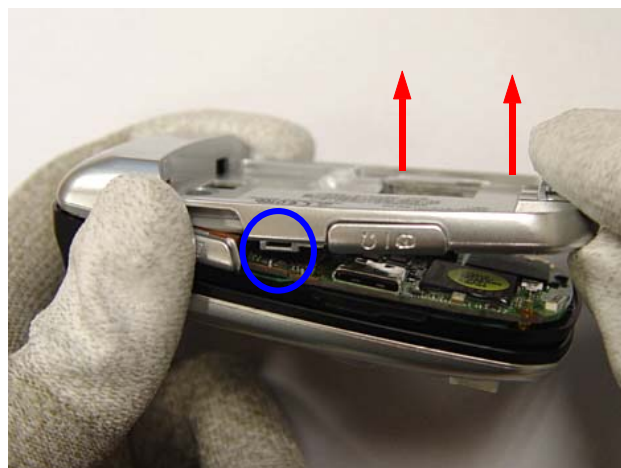
1

- 1) Remove 4Screws on Rear Case.
- 2) Open the IF COVER.
- 3) Open the EAR COVER.



2

- 1) Unlock the both side of locker and Disassemble the Rear Cover like this.

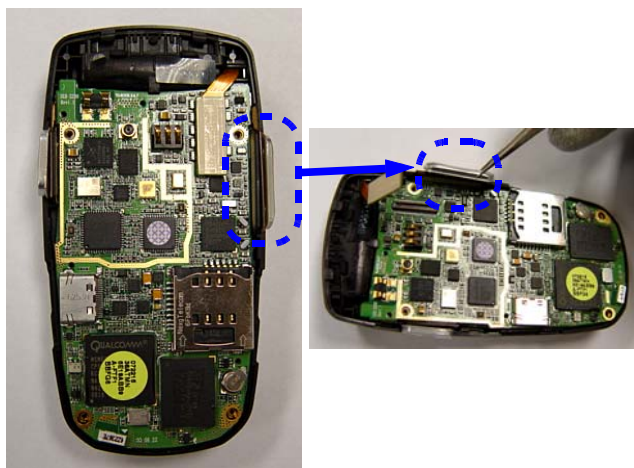


1) Be careful not to get a damage.

1) Be careful not to get a damage of Rear Case.

3

- 1) Detach the LCD con.
- 2) Detach the VOL KEY FPCB with tweezers.
- 3) Separate the PBA from the Assy.
- 4) Remove the Keypad.



1) Be careful not to get a damage of FPCB when Detaching LCD CONNECTOR & VOLUME KEY FPCB.

4

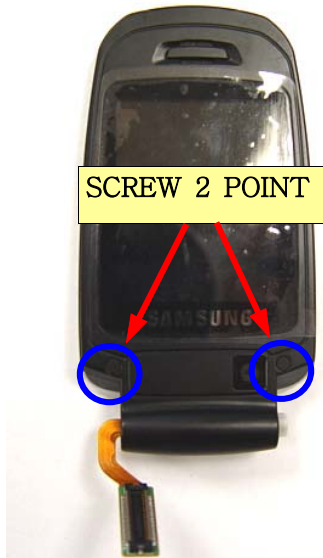


- 1) Remove the right side Tape.
- 2) Disassemble the Front Cover from Front Case By Separating Bar.

1) Be Careful not to get a damage.
2) Be Careful not to get a damage of LCD CONNECTOR FPCB.

5

- 1) Remove the SCREW CAPs.
- 2) UNSCREW 2 POINTs.



- 1) Be Careful not to get a damage.
- 2) Be Careful not to get a damage of LCD FPCB.

6

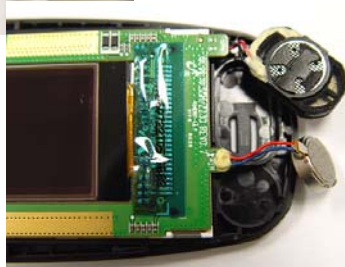
- 1) Disassemble the the Folder Upper and Folder lower by an assembly stick(Opposite Side is same)



- 1) Be Careful not to get a damage.

7

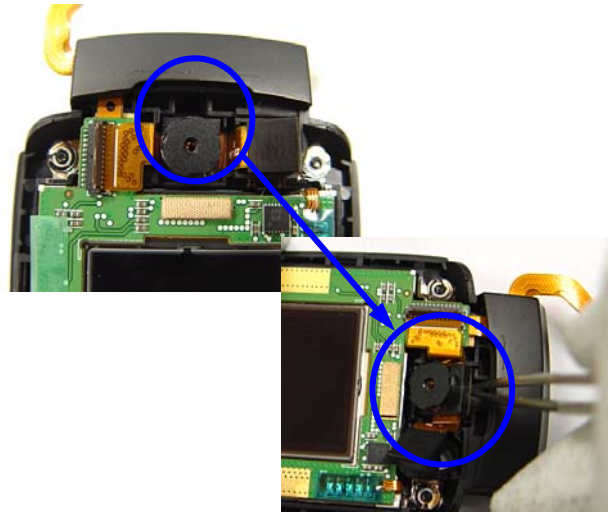
- 1) Separate the motor from lower case by a Pincette.
- 2) Separate the speaker from lower case by a Pincette.



- 1) Be careful not to get a damage of Speaker & Motor.

8

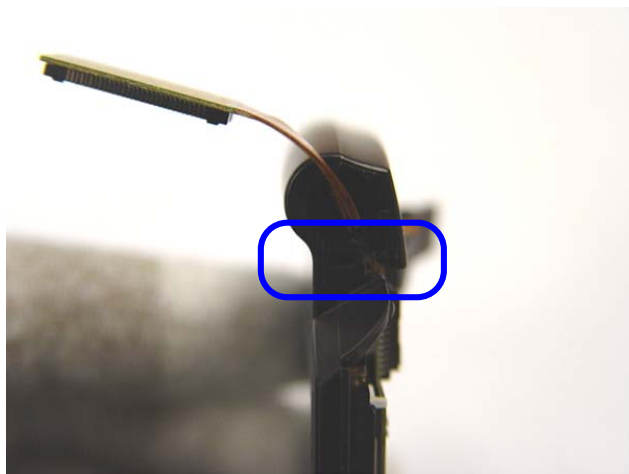
- 1) After Opening the Camera con. Serarae VGA CAMERA form Lower.
- 2) Separate the Mega Camera from lower case by a Pincette.



- 1) Be careful not to get a damage of FPCB & CAMERA SENSOR.

9

1) Remove the LCD FPCB Tape from HINGE.



1) Be careful not to get a damage of LCD CONNECTOR

10

1) Separate the LCD Module from the Lower.
2) Separate the Camera from LCD Module.



1) Be careful not to get a damage of Camera Module Because of adhesive length.

— Assembly

1

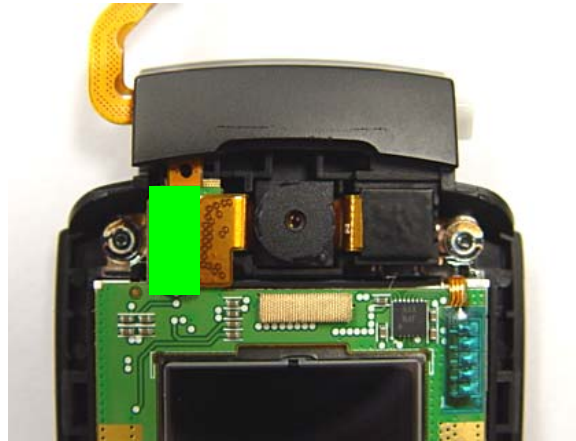
- 1) Place the LCD Module on the Lower.
- 2) Insert LCD CONNECTOR FPCB in the Hinge.
- 3) Combine the CAMERA and LCD.



- 1) Be careful not to get a damage

2

- 1) Place the MEGA CAMERA on the LOWER.
- 2) Place the VGA CAMERA on the LOWER.
- 3) Attach the insulation TAPE to the CAMERA CONNECTOR.



- 1) Be careful not to get a damage of Camera & FPCB.

3

- 1) In the first place, Place the speaker.
- 2) Place the Motor



- 1) Be careful of wire direction when placing the Motor.

4

- 1) When combining the Upper & Lower, First of all ,Lock the end side of the Upper and lower and then lock the both right and left sides.



- 1) Be careful not to get a damage of outward.

5

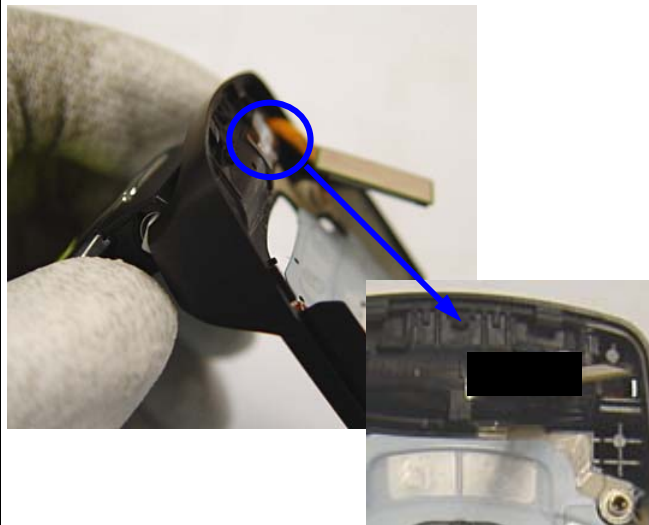
- 1) SCREW the 2POINTS.
- 2) Cover the SCREW CAPS.
- 3) Attach the protective Tape at the Hinge part.



1) Screwdriver torque : 1.3 ± 0.05 Kgf.cm

6

- 1) In the first place, insert the LCD con. and then push the Hinge when combining Folder &Front.
- 2) Attach the TAPE like below



1) Be careful not to get a damage of LCD CONNECTOR FPCB.

7

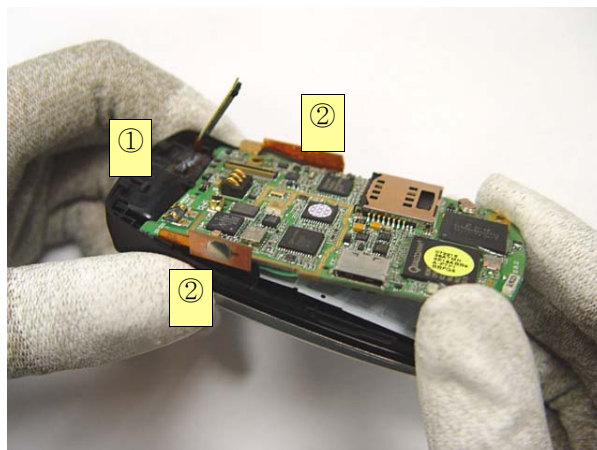
- 1) Place the Keypad like below.



1) Be careful of assembly holl.

8

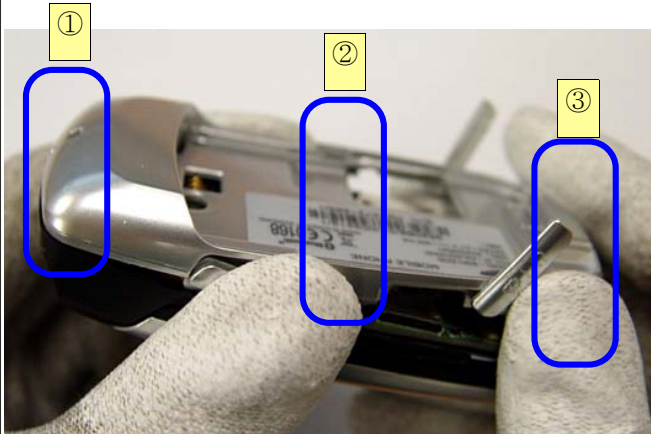
- 1) Insert the PBA under Hooker.
- 2) Place the VOL KEY FPCB and CAM KEY FPCB
- 3) Combine the LCD CONNECTOR with accuracy.



1) Be careful not to get a damage of Hooker.(It's very weak)

9

- 1) Assemble the Camara & Volume KEY.
- 2) First of all, lock the upper HOOKER and then assemble in good order like below.



1) Be careful not to get a damage.

10

- 1) SCREW the 4POINTS.



1) Be careful not to get a damage.

6. MAIN Electrical Parts List

Design LOC	Description	SEC Code	STATUS
ANT400	ANTENNA-CHIP	4202-001204	SA
BAT500	BATTERY-LI(2ND)	4302-001130	SA
BTC401	HEADER-BATTERY	3711-006026	SA
C100	C-CER,CHIP	2203-005717	SNA
C101	C-CER,CHIP	2203-005808	SA
C102	C-CER,CHIP	2203-005806	SNA
C103	C-CER,CHIP	2203-005682	SA
C106	C-CER,CHIP	2203-006423	SA
C107	C-CER,CHIP	2203-005682	SA
C108	C-CER,CHIP	2203-005682	SA
C109	C-CER,CHIP	2203-006423	SA
C110	C-CER,CHIP	2203-005719	SA
C111	C-CER,CHIP	2203-006423	SA
C112	C-CER,CHIP	2203-005682	SA
C113	C-CER,CHIP	2203-005682	SA
C114	C-CER,CHIP	2203-006423	SA
C115	C-CER,CHIP	2203-006379	SA
C116	C-CER,CHIP	2203-006423	SA
C117	C-CER,CHIP	2203-005806	SNA
C119	C-CER,CHIP	2203-005808	SA
C120	C-CER,CHIP	2203-006556	SA
C121	C-CER,CHIP	2203-005682	SA
C122	C-CER,CHIP	2203-005682	SA
C123	C-CER,CHIP	2203-006556	SA
C124	C-CER,CHIP	2203-005682	SA
C125	C-CER,CHIP	2203-005808	SA
C126	C-CER,CHIP	2203-006423	SA
C127	C-CER,CHIP	2203-000725	SA
C130	C-CER,CHIP	2203-000836	SA
C131	C-CER,CHIP	2203-002677	SA
C132	C-CER,CHIP	2203-006423	SA
C133	C-CER,CHIP	2203-006423	SA
C134	C-CER,CHIP	2203-005682	SA
C135	C-CER,CHIP	2203-005682	SA
C136	C-CER,CHIP	2203-000438	SA
C138	C-CER,CHIP	2203-006423	SA
C139	C-CER,CHIP	2203-006194	SA
C140	C-CER,CHIP	2203-005719	SA
C141	C-CER,CHIP	2203-006399	SA
C142	C-CER,CHIP	2203-006194	SA
C143	C-CER,CHIP	2203-005682	SA
C144	C-CER,CHIP	2203-006838	SA
C145	C-CER,CHIP	2203-006423	SA
C146	C-CER,CHIP	2203-005503	SA
C147	C-CER,CHIP	2203-002443	SA
C148	C-CER,CHIP	2203-005234	SA
C149	C-CER,CHIP	2203-005729	SA
C150	C-CER,CHIP	2203-006194	SA
C151	C-CER,CHIP	2203-006194	SA
C152	C-CER,CHIP	2203-006194	SA
C153	C-CER,CHIP	2203-005729	SA
C154	C-CER,CHIP	2203-000311	SA
C155	C-CER,CHIP	2203-000438	SA

Design LOC	Description	SEC Code	STATUS
C156	C-CER,CHIP	2203-005682	SA
C157	C-CER,CHIP	2203-005344	SA
C158	C-CER,CHIP	2203-006665	SA
C200	C-CER,CHIP	2203-000330	SA
C202	C-CER,CHIP	2203-006838	SA
C205	C-CER,CHIP	2203-000330	SA
C208	C-CER,CHIP	2203-005682	SA
C209	C-CER,CHIP	2203-005682	SA
C210	C-CER,CHIP	2203-005736	SA
C211	C-CER,CHIP	2203-006120	SA
C212	C-CER,CHIP	2203-005682	SA
C213	C-CER,CHIP	2203-005806	SNA
C214	C-CER,CHIP	2203-006194	SA
C215	C-CER,CHIP	2203-005736	SA
C216	C-CER,CHIP	2203-006423	SA
C217	C-CER,CHIP	2203-000438	SA
C218	C-CER,CHIP	2203-000725	SA
C219	C-CER,CHIP	2203-005288	SA
C220	C-CER,CHIP	2203-006194	SA
C221	C-CER,CHIP	2203-006121	SA
C222	C-CER,CHIP	2203-000330	SA
C223	C-CER,CHIP	2203-005288	SA
C225	C-CER,CHIP	2203-000940	SA
C226	C-CER,CHIP	2203-005682	SA
C227	C-CER,CHIP	2203-006556	SA
C228	C-CER,CHIP	2203-005736	SA
C229	C-CER,CHIP	2203-006423	SA
C230	C-CER,CHIP	2203-006423	SA
C231	C-CER,CHIP	2203-006305	SA
C232	C-CER,CHIP	2203-006423	SA
C233	C-CER,CHIP	2203-006305	SA
C234	C-CER,CHIP	2203-006194	SA
C235	C-CER,CHIP	2203-006194	SA
C236	C-CER,CHIP	2203-006423	SA
C237	C-CER,CHIP	2203-005806	SNA
C300	C-CER,CHIP	2203-006194	SA
C301	C-CER,CHIP	2203-006194	SA
C302	C-CER,CHIP	2203-006194	SA
C303	C-CER,CHIP	2203-006194	SA
C304	C-CER,CHIP	2203-005806	SNA
C305	C-CER,CHIP	2203-006194	SA
C306	C-CER,CHIP	2203-006194	SA
C307	C-CER,CHIP	2203-005806	SNA
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C309	C-CER,CHIP	2203-006562	SA
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Design LOC	Description	SEC Code	STATUS
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C329	C-CER,CHIP	2203-006562	SA
C330	C-CER,CHIP	2203-006423	SA
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C332	C-CER,CHIP	2203-006194	SA
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C334	C-CER,CHIP	2203-005725	SA
C335	C-CER,CHIP	2203-006668	SA
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C337	C-CER,CHIP	2203-006423	SA
C338	C-CER,CHIP	2203-005736	SA
C339	C-CER,CHIP	2203-005682	SA
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C427	C-CER,CHIP	2203-006838	SA
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C501	C-CER,CHIP	2203-006838	SA
C502	C-CER,CHIP	2203-006838	SA
C503	C-CER,CHIP	2203-006562	SA
C504	C-CER,CHIP	2203-006708	SA
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Design LOC	Description	SEC Code	STATUS
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C553	C-CER,CHIP	2203-005682	SA
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C556	C-CER,CHIP	2203-006562	SA
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C621	C-CER,CHIP	2203-000278	SA
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C623	C-CER,CHIP	2203-006648	SA
C624	C-CER,CHIP	2203-006648	SA
C625	C-CER,CHIP	2203-005806	SNA
C626	C-CER,CHIP	2203-006838	SA
C627	C-CER,CHIP	2203-006423	SA
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C629	C-CER,CHIP	2203-005719	SA
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C631	C-CER,CHIP	2203-005719	SA

Design LOC	Description	SEC Code	STATUS
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C638	C-CER,CHIP	2203-006423	SA
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C640	C-CER,CHIP	2203-003054	SA
C641	C-CER,CHIP	2203-006194	SA
C642	C-CER,CHIP	2203-006423	SA
C643	C-CER,CHIP	2203-005719	SA
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C646	C-CER,CHIP	2203-006562	SA
C647	C-CER,CHIP	2203-005806	SNA
C648	C-CER,CHIP	2203-005481	SA
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C719	C-CER,CHIP	2203-006423	SA
C720	C-CER,CHIP	2203-006423	SA
C721	C-CER,CHIP	2203-006423	SA
CN100	CONNECTOR-COAXIAL	3705-001358	SA
CN500	CONNECTOR-CARD EDGE	3709-001452	SA
D400	DIODE-TVS	0406-001215	SA
D401	DIODE-TVS	0406-001215	SA
D402	DIODE-TVS	0406-001215	SA
D403	DIODE-ZENER	0403-001427	SA
D404	DIODE-ZENER	0403-001547	SA
D405	DIODE-ARRAY	0407-001038	SA
D500	DIODE-SCHOTTKY	0404-001089	SA
D501	DIODE-SWITCHING	0401-001141	SA
D502	DIODE-TVS	0406-001215	SA

Design LOC	Description	SEC Code	STATUS
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D600	DIODE-TVS	0406-001215	SA
D700	DIODE-TVS	0406-001215	SA
D701	DIODE-TVS	0406-001215	SA
D702	DIODE-ARRAY	0407-001002	SA
D703	DIODE-TVS	0406-001215	SA
D704	DIODE-TVS	0406-001215	SA
D705	DIODE-SCHOTTKY	0404-001089	SA
DUF200	DUPLEXER-SAW	2910-000010	SA
F201	FILTER-SAW	2904-001665	SA
F202	FILTER-SAW	2904-001623	SA
F700	FILTER-EMI/ESD	2901-001326	SA
F701	FILTER-EMI/ESD	2901-001326	SA
F702	FILTER-EMI/ESD	2901-001326	SA
F703	FILTER-EMI/ESD	2901-001326	SA
F704	FILTER-EMI/ESD	2901-001326	SA
F705	FILTER-EMI/ESD	2901-001326	SA
F706	FILTER-EMI/ESD	2901-001326	SA
F707	FILTER-EMI/ESD	2901-001326	SA
F708	FILTER-EMI/ESD	2901-001326	SA
F709	FILTER-EMI/ESD	2901-001326	SA
HEA1	HEADER-BOARD TO BOARD	3711-005777	SA
IFC400	SOCKET-INTERFACE	3710-002442	SA
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L101	NPR-ANTENNA CONTACT	GH71-04302A	SA
L102	INDUCTOR-SMD	2703-002176	SA
L103	BEAD-SMD	3301-001756	SA
L104	INDUCTOR-SMD	2703-002870	SA
L105	INDUCTOR-SMD	2703-002918	SA
L106	INDUCTOR-SMD	2703-002870	SA
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L115	INDUCTOR-SMD	2703-002907	SNA
L116	INDUCTOR-SMD	2703-002870	SA
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L121	INDUCTOR-SMD	2703-002205	SA
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L200	INDUCTOR-SMD	2703-002369	SA
L201	INDUCTOR-SMD	2703-001729	SA
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L203	INDUCTOR-SMD	2703-002267	SA
L204	INDUCTOR-SMD	2703-002281	SA

Design LOC	Description	SEC Code	STATUS
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L207	INDUCTOR-SMD	2703-003003	SA
L208	INDUCTOR-SMD	2703-002367	SA
L300	BEAD-SMD	3301-001534	SA
L401	BEAD-SMD	3301-001534	SA
L500	BEAD-SMD	3301-001534	SA
L501	BEAD-SMD	3301-001534	SA
L502	INDUCTOR-SMD	2703-002872	SA
L503	INDUCTOR-SMD	2703-002872	SA
L504	BEAD-SMD	3301-001534	SA
L505	BEAD-SMD	3301-001534	SA
L600	BEAD-SMD	3301-001756	SA
L601	BEAD-SMD	3301-001756	SA
L602	INDUCTOR-SMD	2703-001938	SA
L603	INDUCTOR-SMD	2703-001938	SA
L700	BEAD-SMD	3301-001534	SA
L702	BEAD-SMD	3301-001534	SA
L703	BEAD-SMD	3301-001534	SA
L704	BEAD-SMD	3301-001534	SA
L705	BEAD-SMD	3301-001534	SA
L706	BEAD-SMD	3301-001534	SA
LED700	LED	0601-002053	SA
LED701	LED	0601-002053	SA
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LED712	LED	0601-002053	SA
MIC60	MICROPHONE-ASSY-SMD MIC	GH30-00265A	SA
OSC300	RESONATOR-CERAMIC	2802-001182	SA
OSC500	CRYSTAL-SMD	2801-004339	SA
PAM101	IC-POWER AMP	1201-002218	SA
PAM200	IC-POWER AMP	1201-002325	SA
Q200	TR-DIGITAL	0504-001151	SA
Q500	TR-DIGITAL	0504-001113	SA
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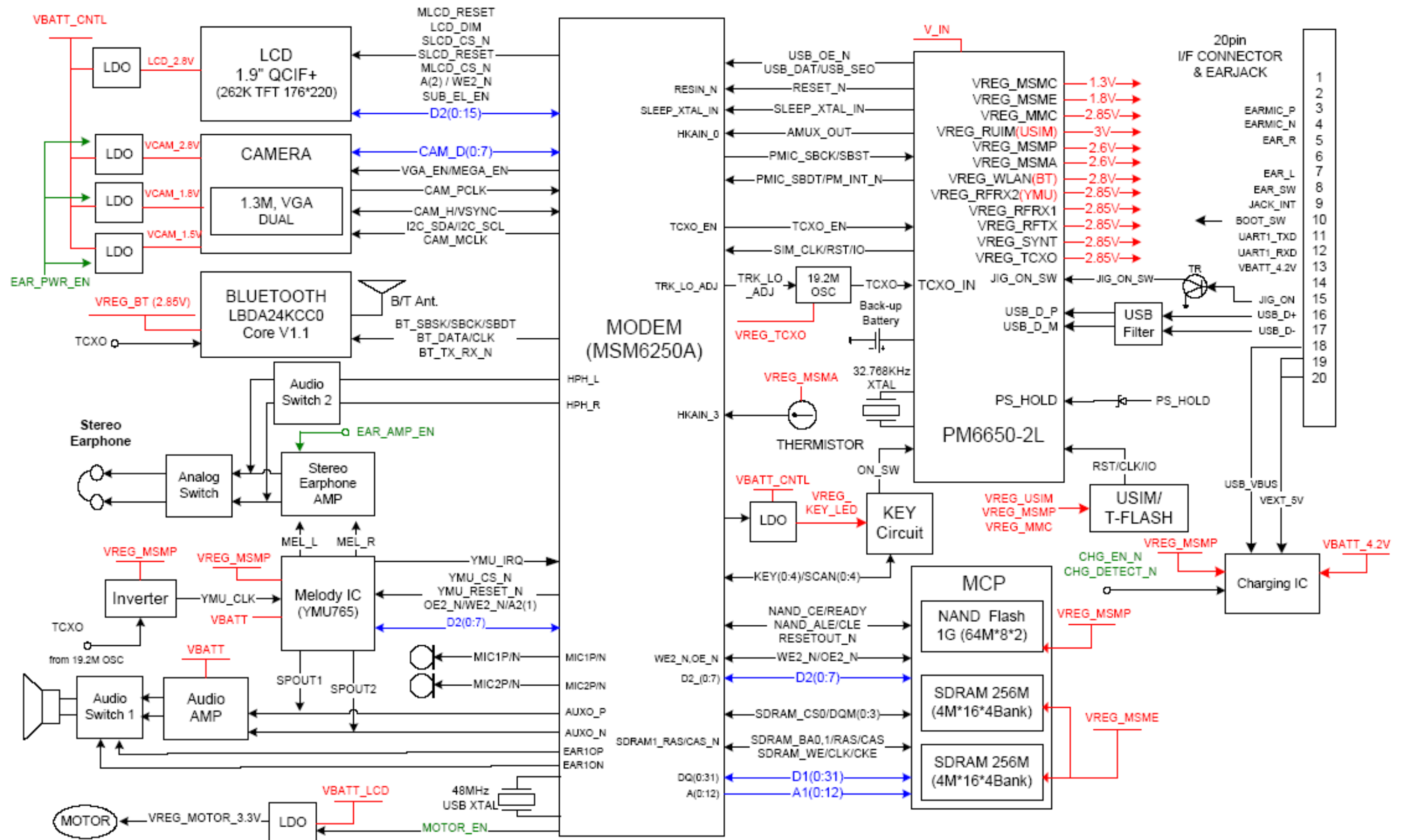
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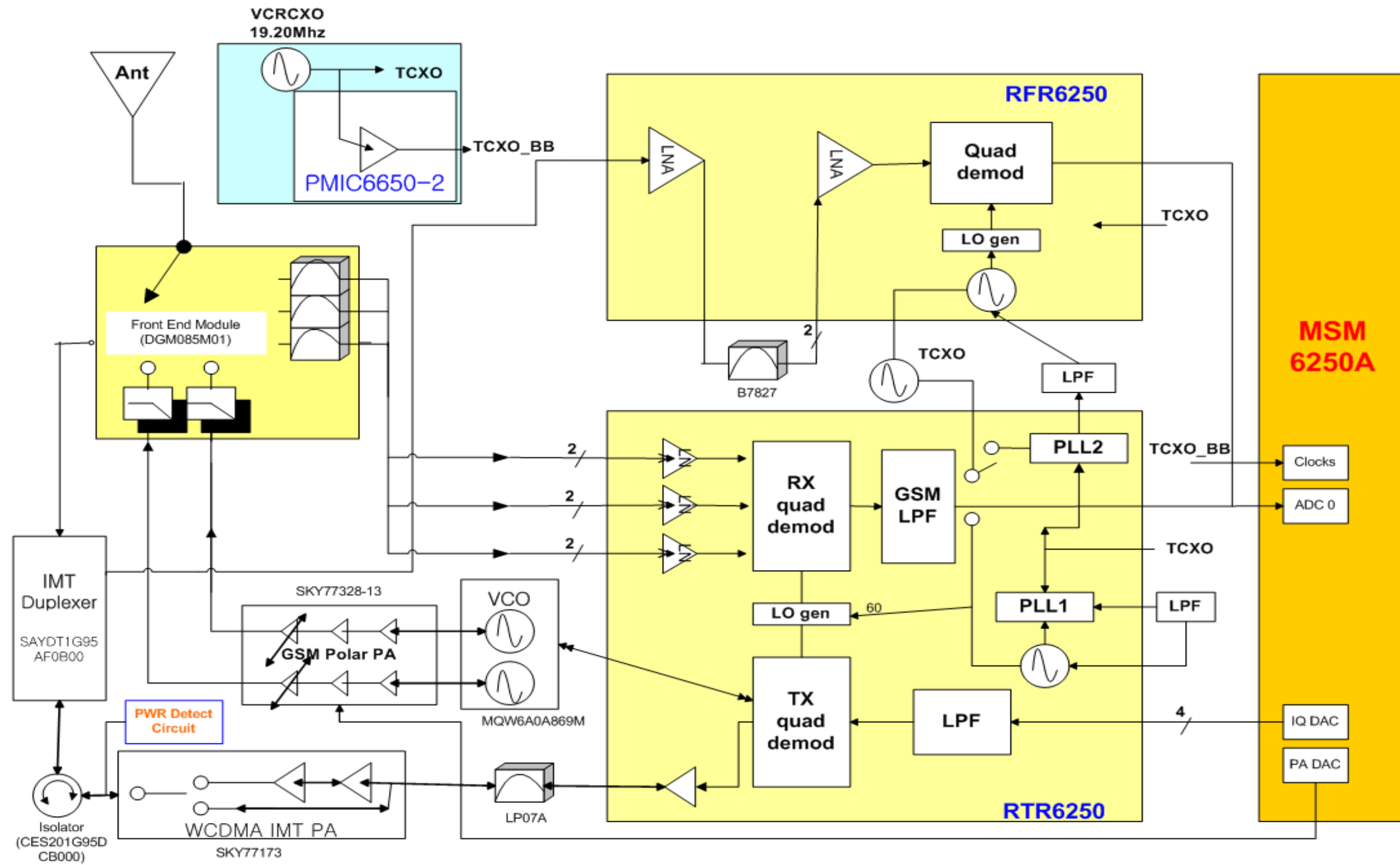
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R416	R-CHIP	2007-009170	SA
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R418	R-CHIP	2007-008052	SA
R419	R-CHIP	2007-000636	SA
R420	R-CHIP	2007-008542	SA
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R618	R-CHIP	2007-000146	SA
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R620	R-CHIP	2007-008516	SA
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Design LOC	Description	SEC Code	STATUS
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R701	R-CHIP	2007-000174	SA
R702	R-CHIP	2007-000174	SA
R703	R-CHIP	2007-000174	SA
R704	R-CHIP	2007-003112	SA
R705	R-CHIP	2007-003112	SA
R706	R-CHIP	2007-000174	SA
R707	R-CHIP	2007-000174	SA
R708	R-CHIP	2007-000174	SA
R709	R-CHIP	2007-000174	SA
R710	R-CHIP	2007-003112	SA
R711	R-CHIP	2007-003112	SA
R712	R-CHIP	2007-008055	SA
R713	R-CHIP	2007-000174	SA
TA137	C-TA,CHIP	2404-001474	SA
TA412	C-TA,CHIP	2404-001381	SA
TA413	C-TA,CHIP	2404-001381	SA
TA420	C-TA,CHIP	2404-001474	SA
TA421	C-TA,CHIP	2404-001381	SA
TA422	C-TA,CHIP	2404-001381	SA
TA535	C-TA,CHIP	2404-001381	SA
TA616	C-TA,CHIP	2404-001422	SA
TA617	C-TA,CHIP	2404-001422	SA
TA636	C-TA,CHIP	2404-001381	SA
TA644	C-TA,CHIP	2404-001381	SA
TCX200	OSCILLATOR-VCTCXO	2809-001312	SA
U100	DUPLEXER-FEM	2911-000045	SA
U102	IC-TRANSCIEVER	1205-002645	SA
U201	IC-RECEIVER	1205-002781	SA
U300	IC-SWITCH	1205-002784	SA
U302	IC-HALL EFFECT S/W	1009-001020	SA
U400	IC-ANALOG MULTIPLEX	1001-001349	SA
U401	IC-ANALOG MULTIPLEX	1001-001349	SA
U403	IC-SWITCH	1205-002784	SA
U404	BLUETOOTH MODULE	4709-001424	SA
U501	IC-VOL. DETECTOR	1203-004045	SA
U502	IC-POWER SUPERVISOR	1203-004101	SA
U505	IC-BATTERY	1203-003823	SA
U506	IC-POSIFIXED REG.	1203-003737	SA
U507	IC-POSIFIXED REG.	1203-003737	SA
U508	IC-POSIFIXED REG.	1203-003787	SA
U509	IC-POSIFIXED REG.	1203-003688	SA
U510	IC-POSIFIXED REG.	1203-003767	SA
U511	IC-POSIFIXED REG.	1203-003787	SA
U600	IC-MELODY	1204-002138	SA
U601	IC-CMOS LOGIC	0801-000306	SA
U602	IC-ANALOG MULTIPLEX	1001-001358	SA
U603	IC-AUDIO AMP	1201-002233	SA
U604	IC-AUDIO AMP	1201-002195	SA
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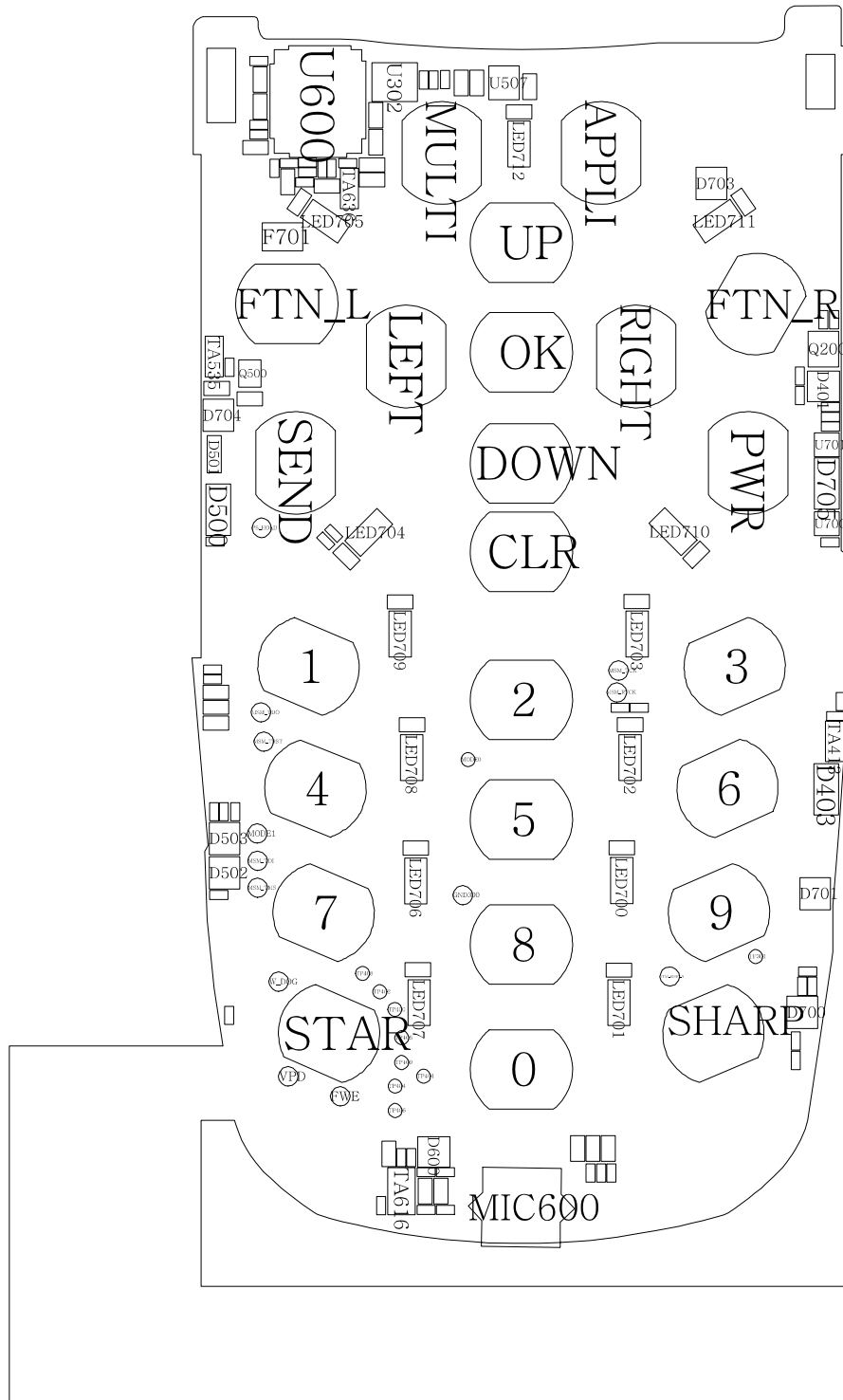
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UCP300	IC-MODEM	1205-002780	SA
UME400	IC-MCP	1108-000061	SA
V300	THERMISTOR-NTC	1404-001224	SA
VCO100	OSCILLATOR-VCO	2806-001380	SA

7. Block Diagrams





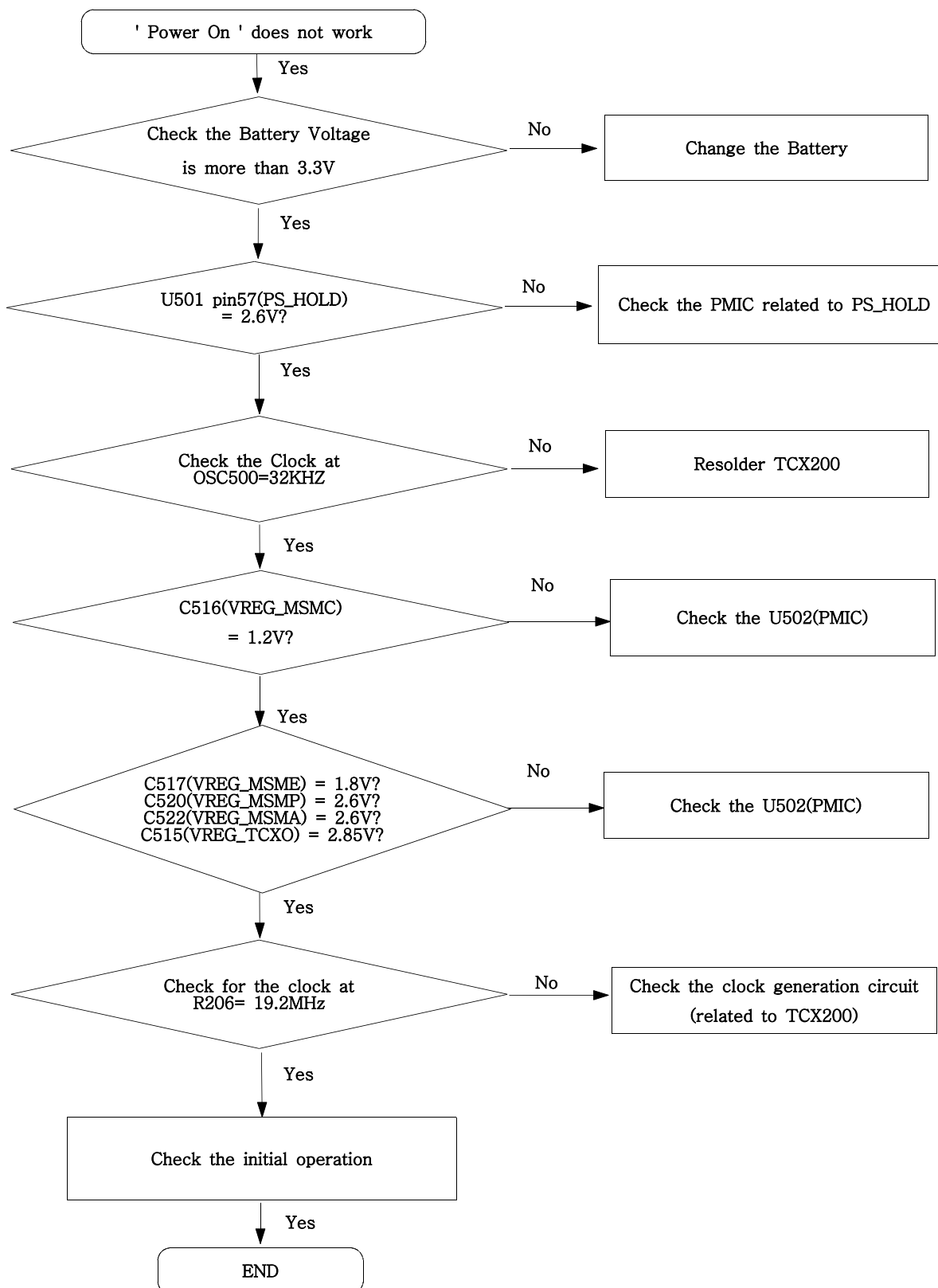
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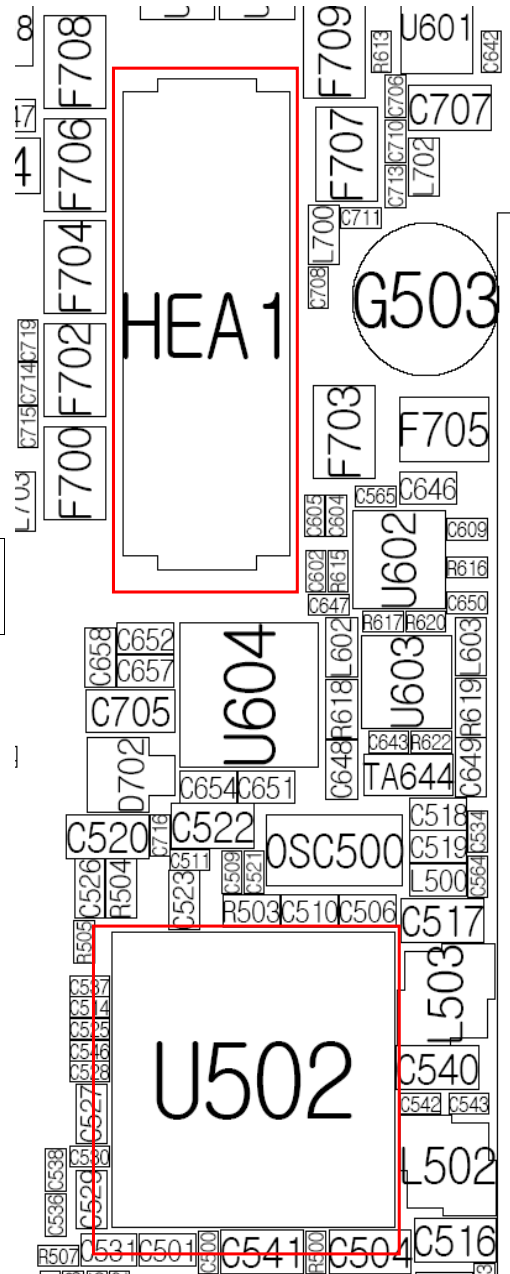
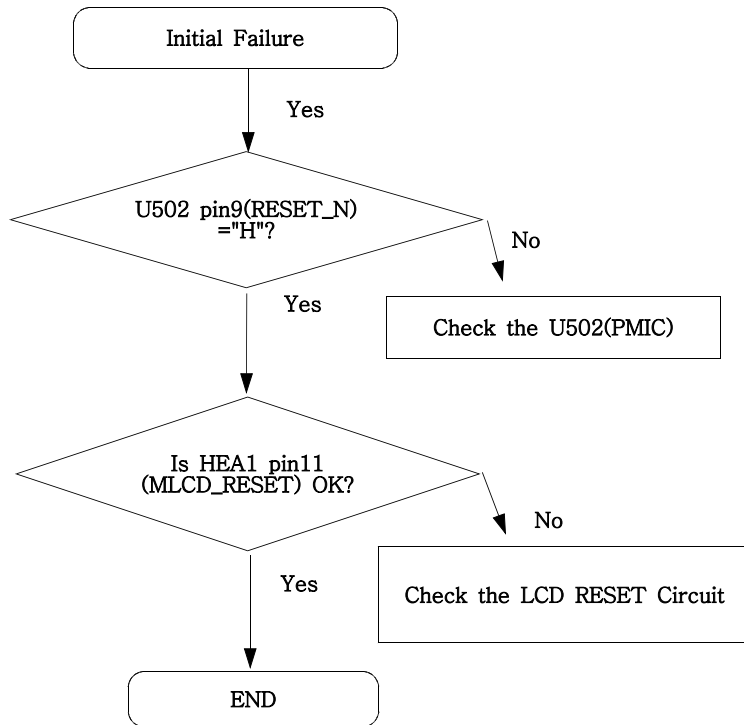


9. Flow Chart of Troubleshooting

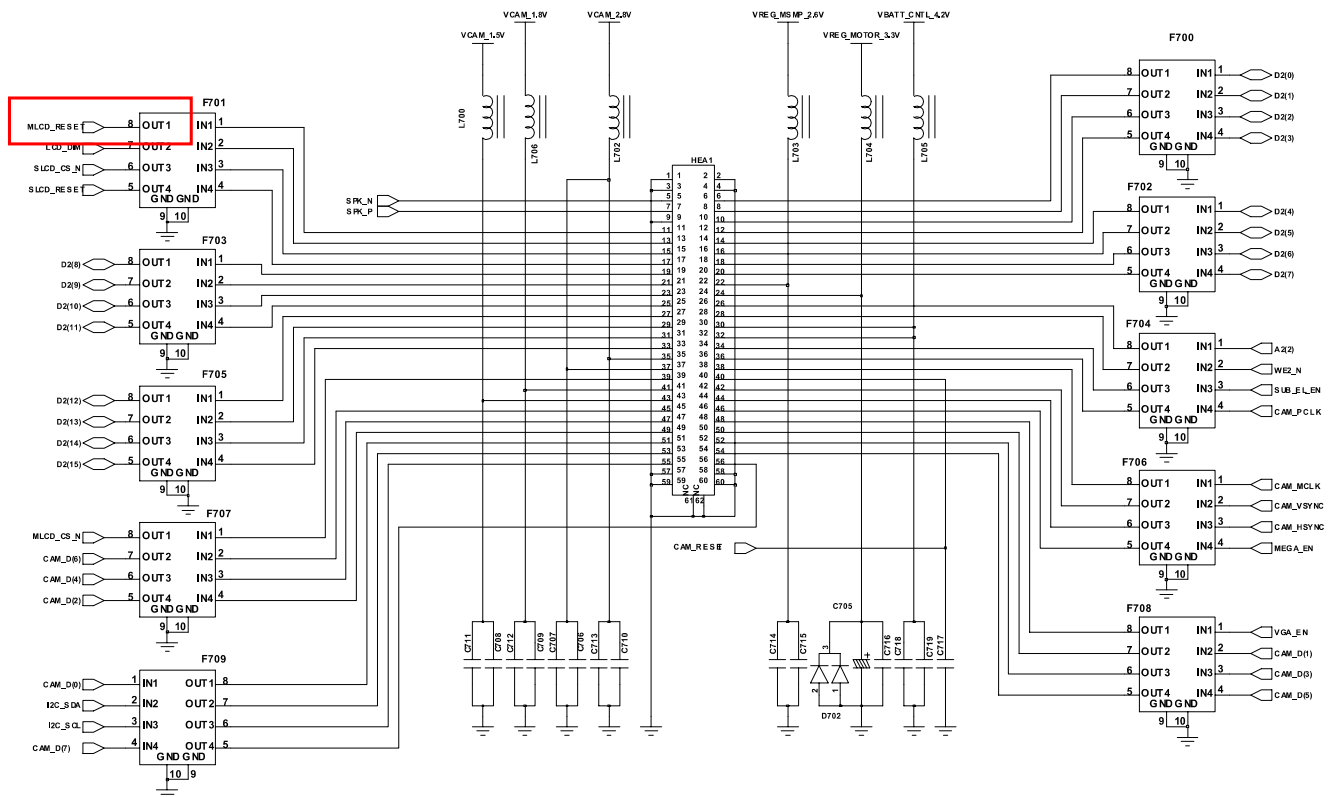
9-1. Power On



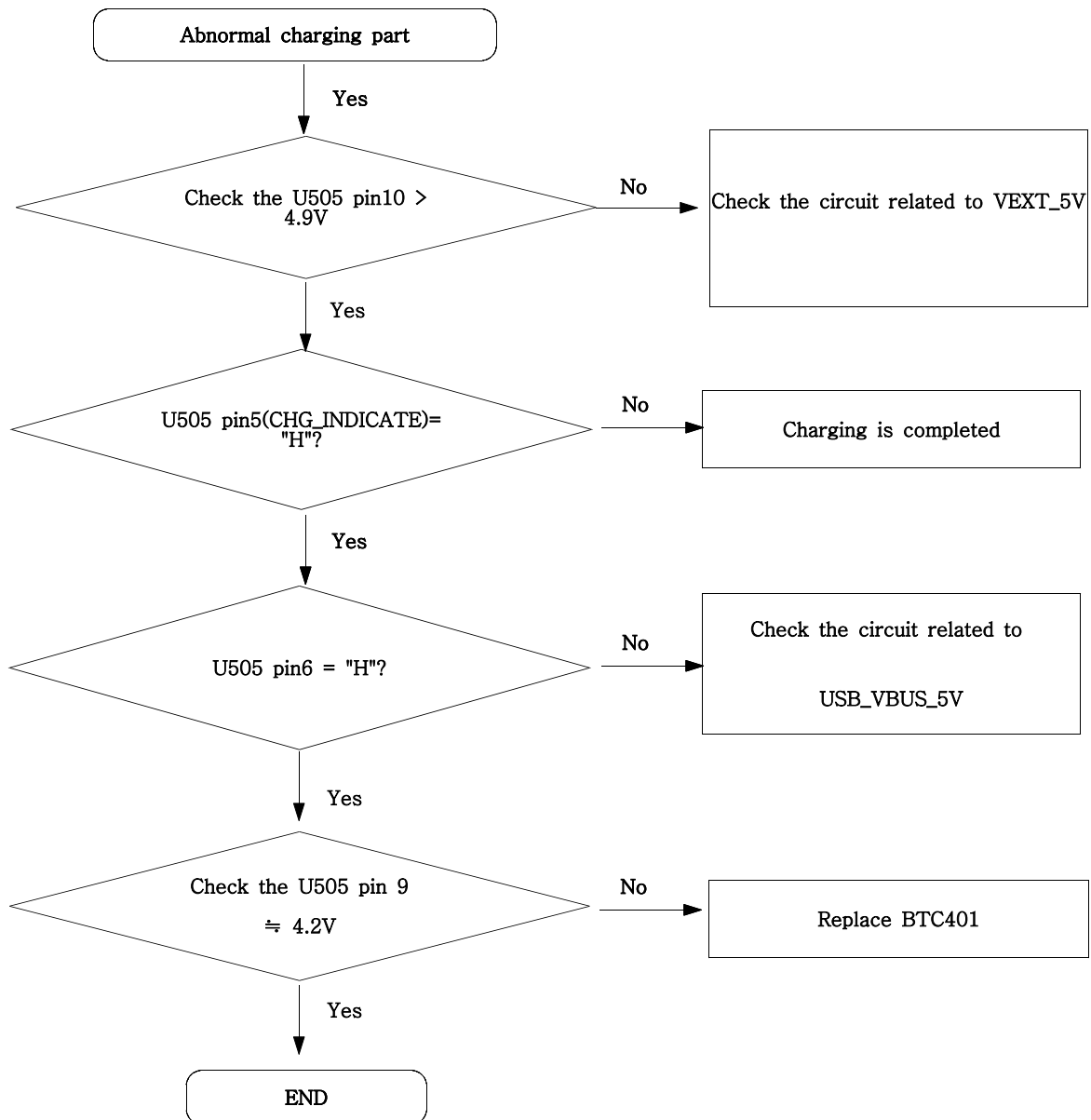
9-2. Initial



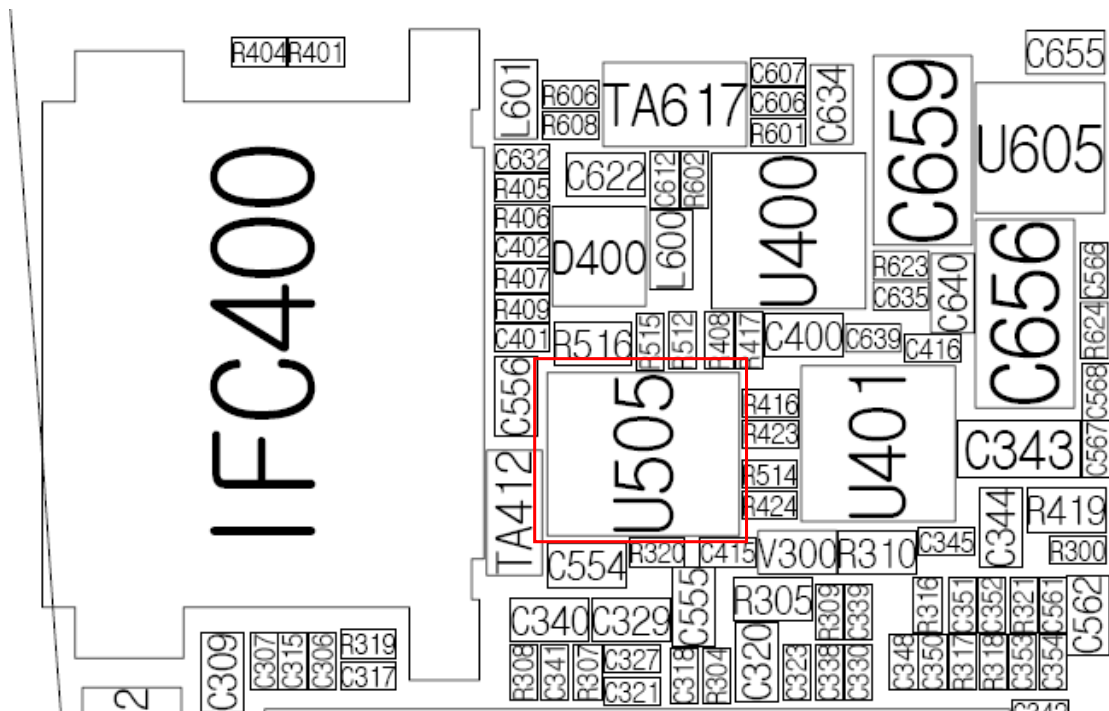
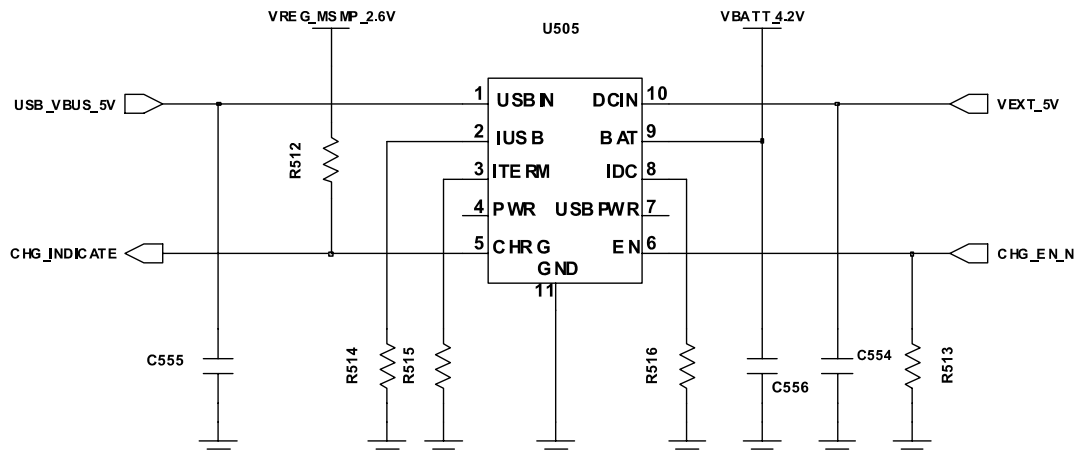
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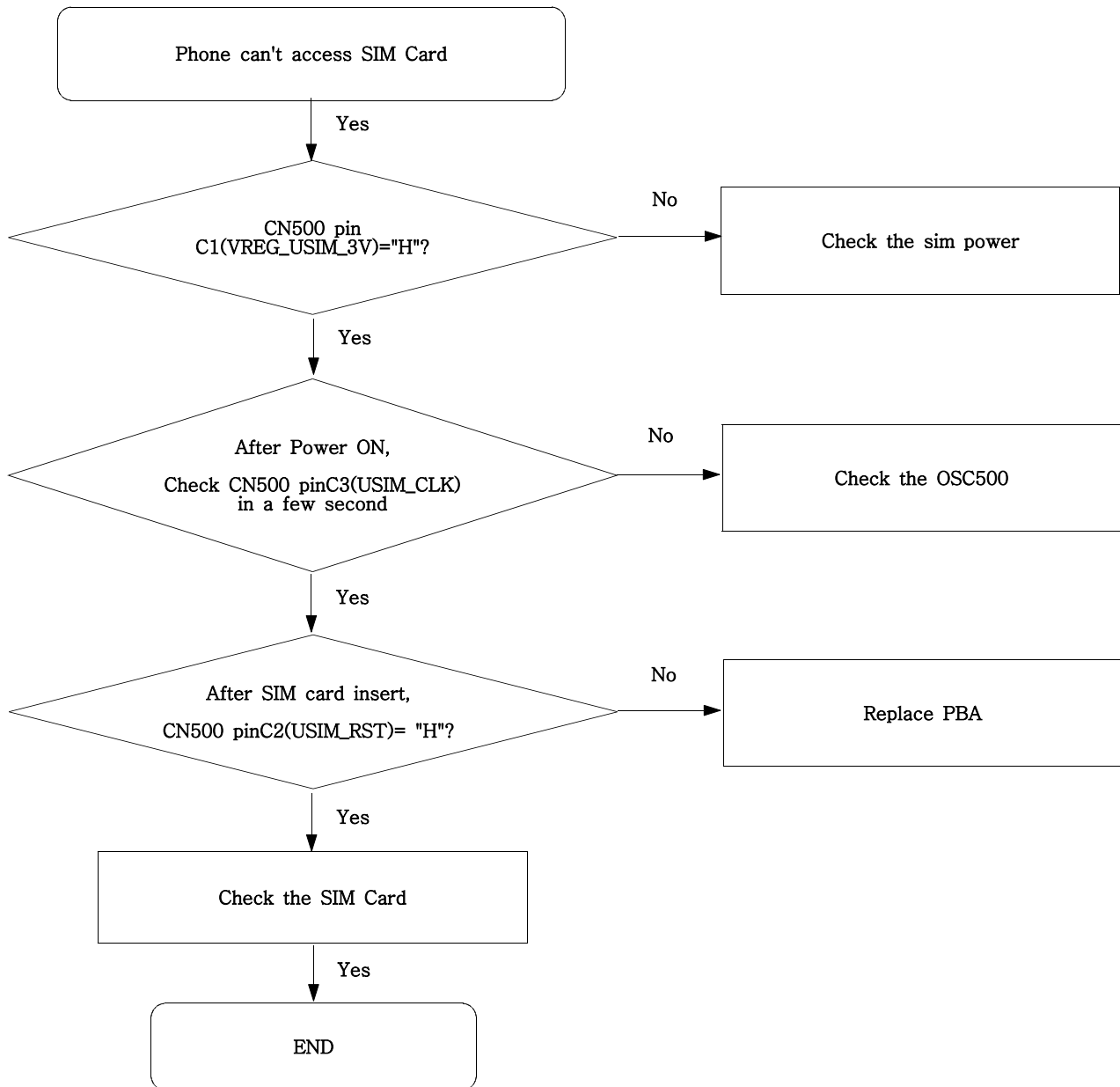
9-3. Charging Part



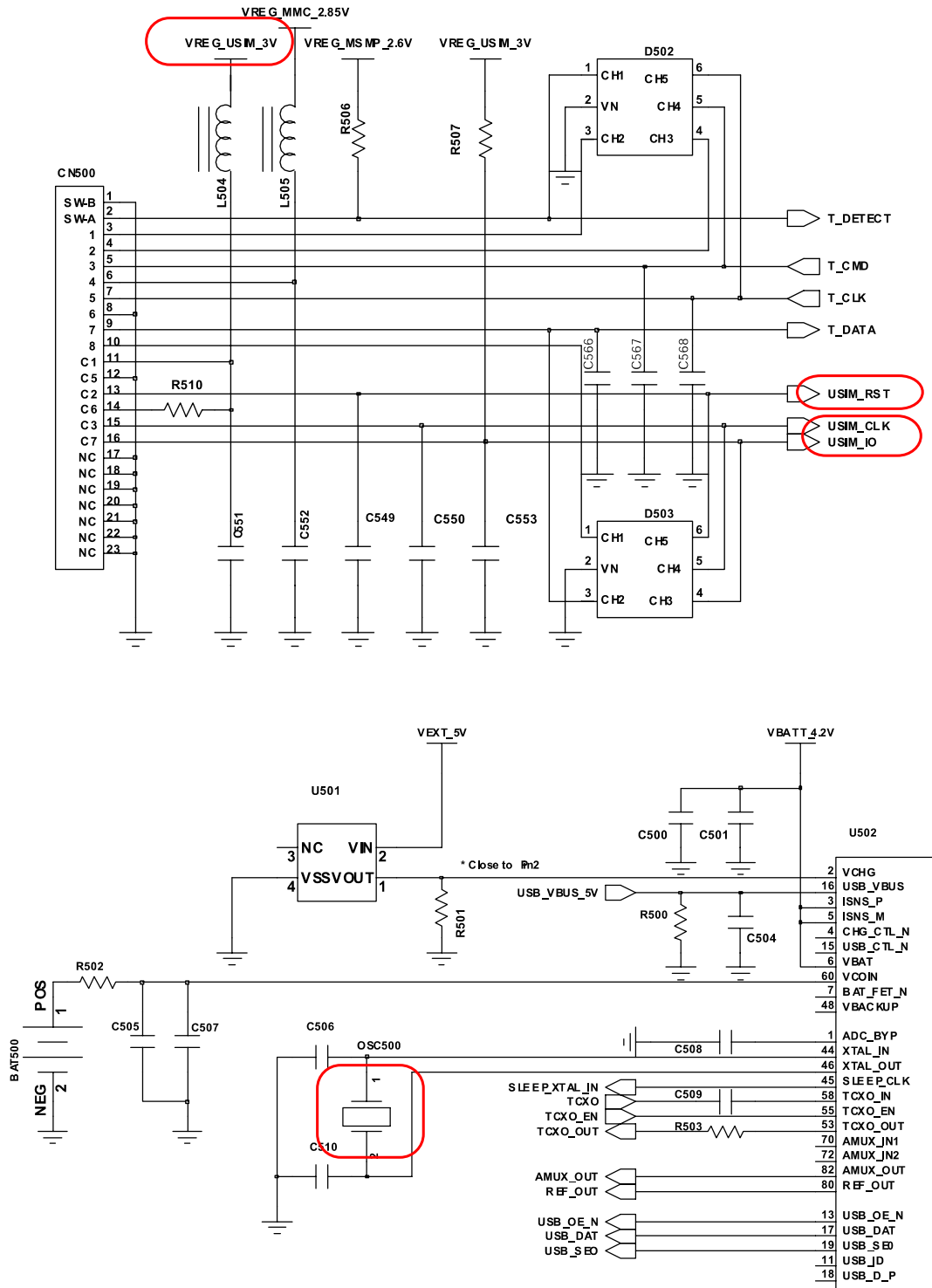
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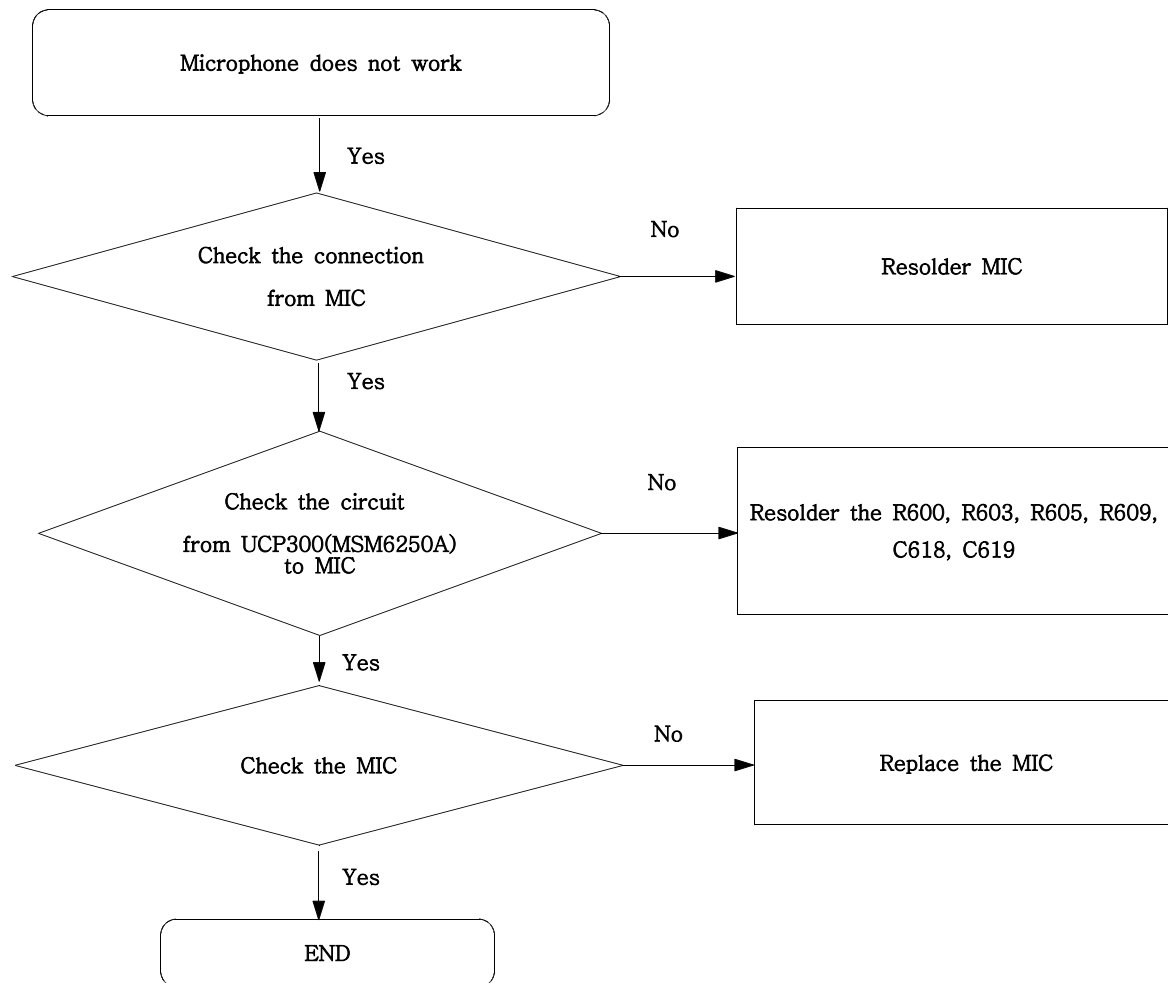
9-4. Sim Part



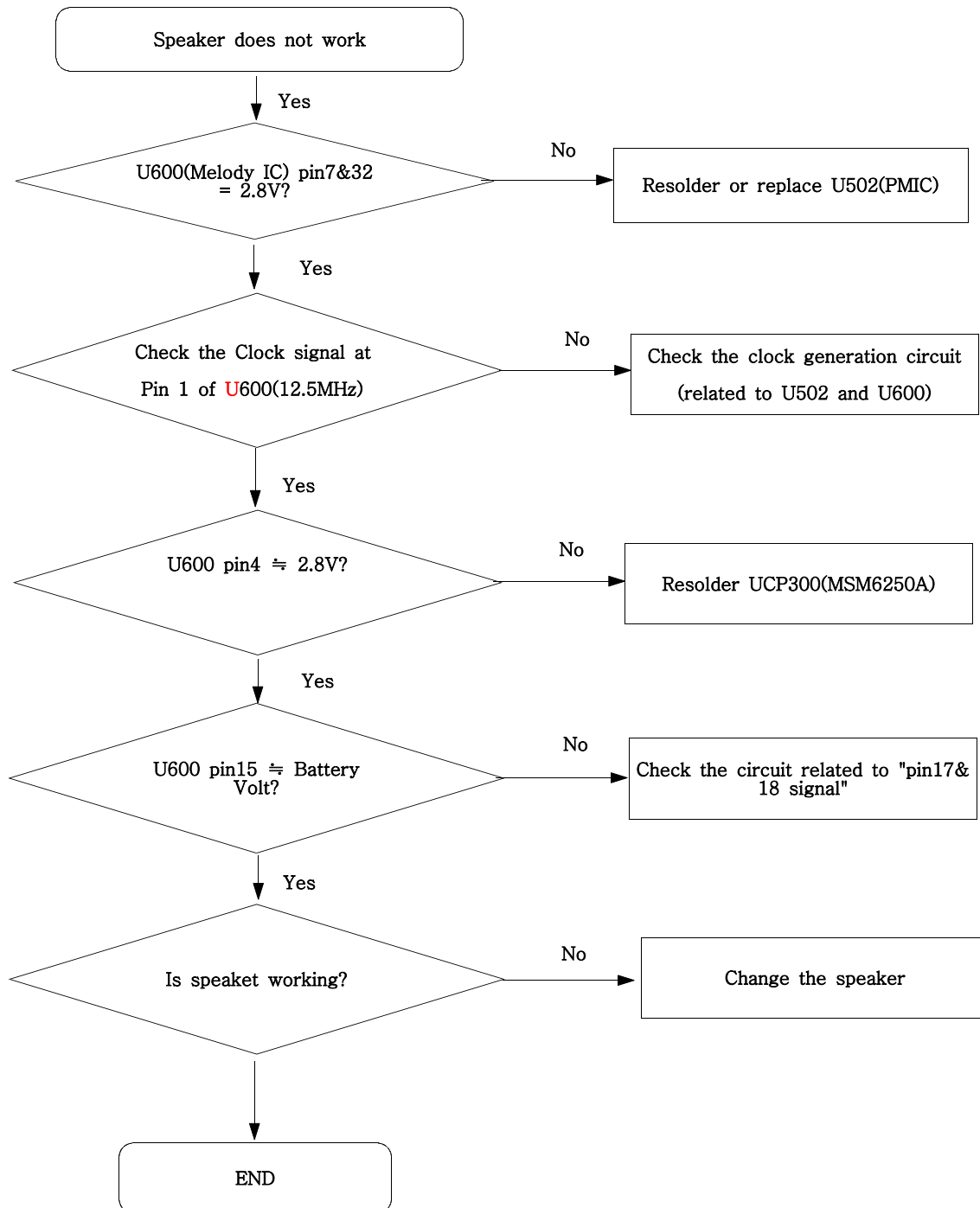
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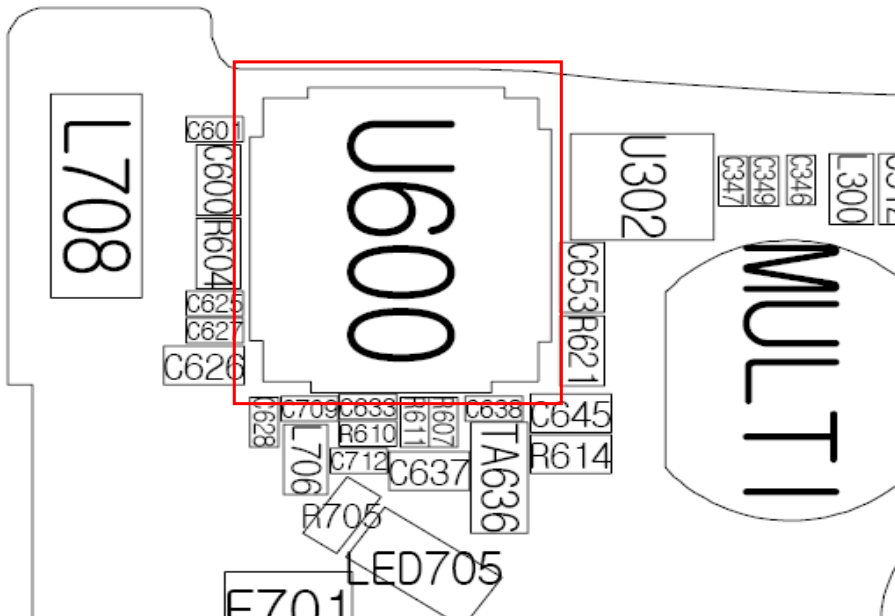
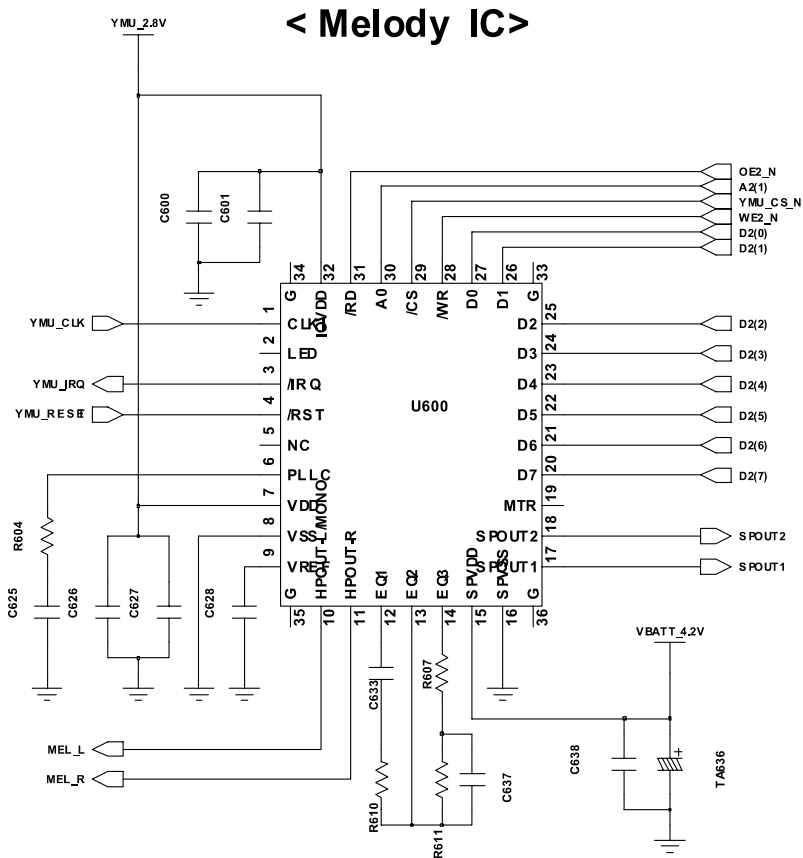


9-5. Microphone Part

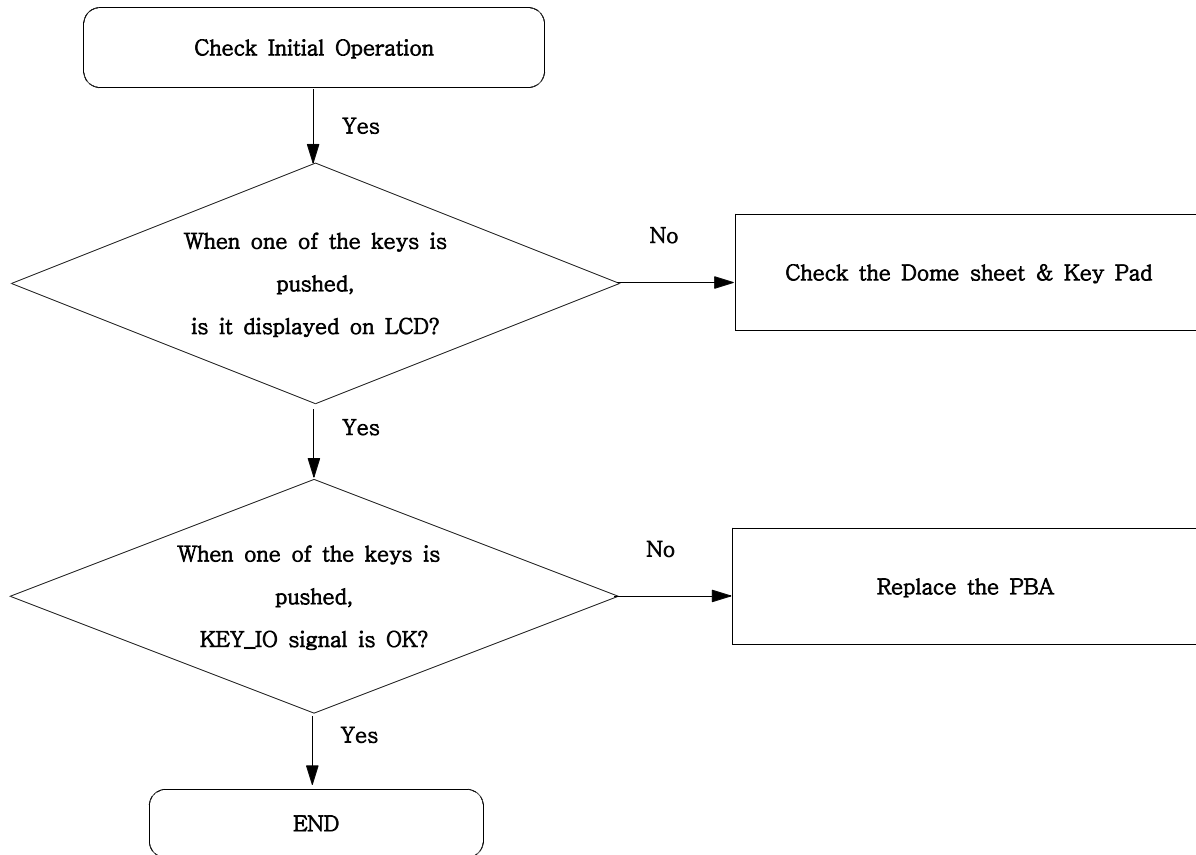


9-6. Speaker Part(Melody)

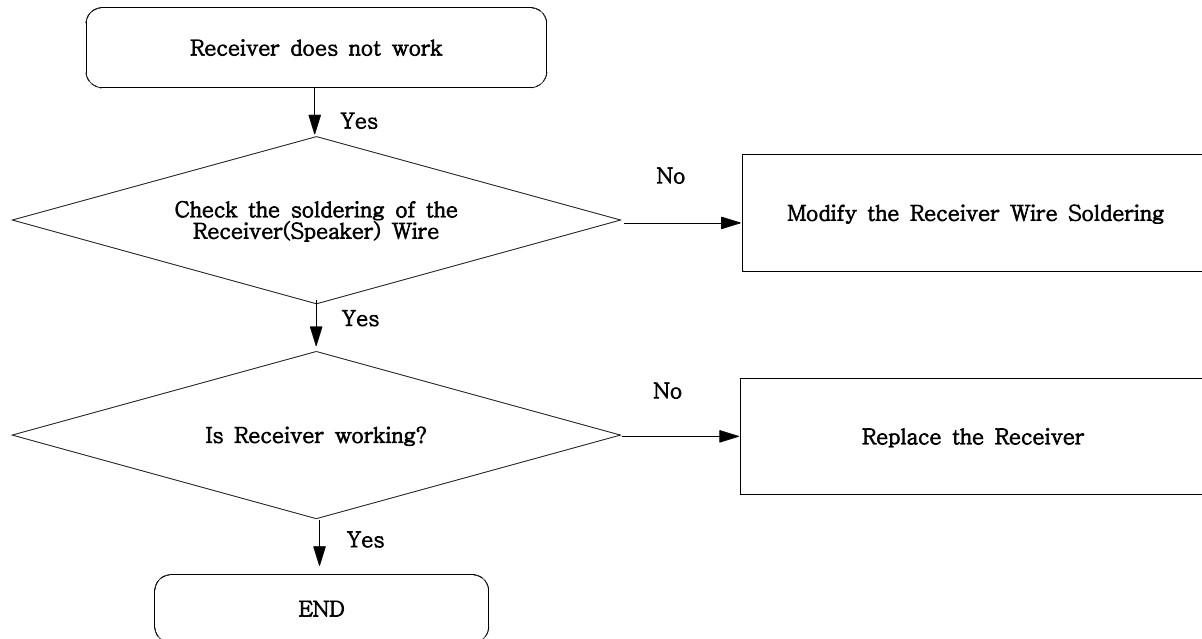




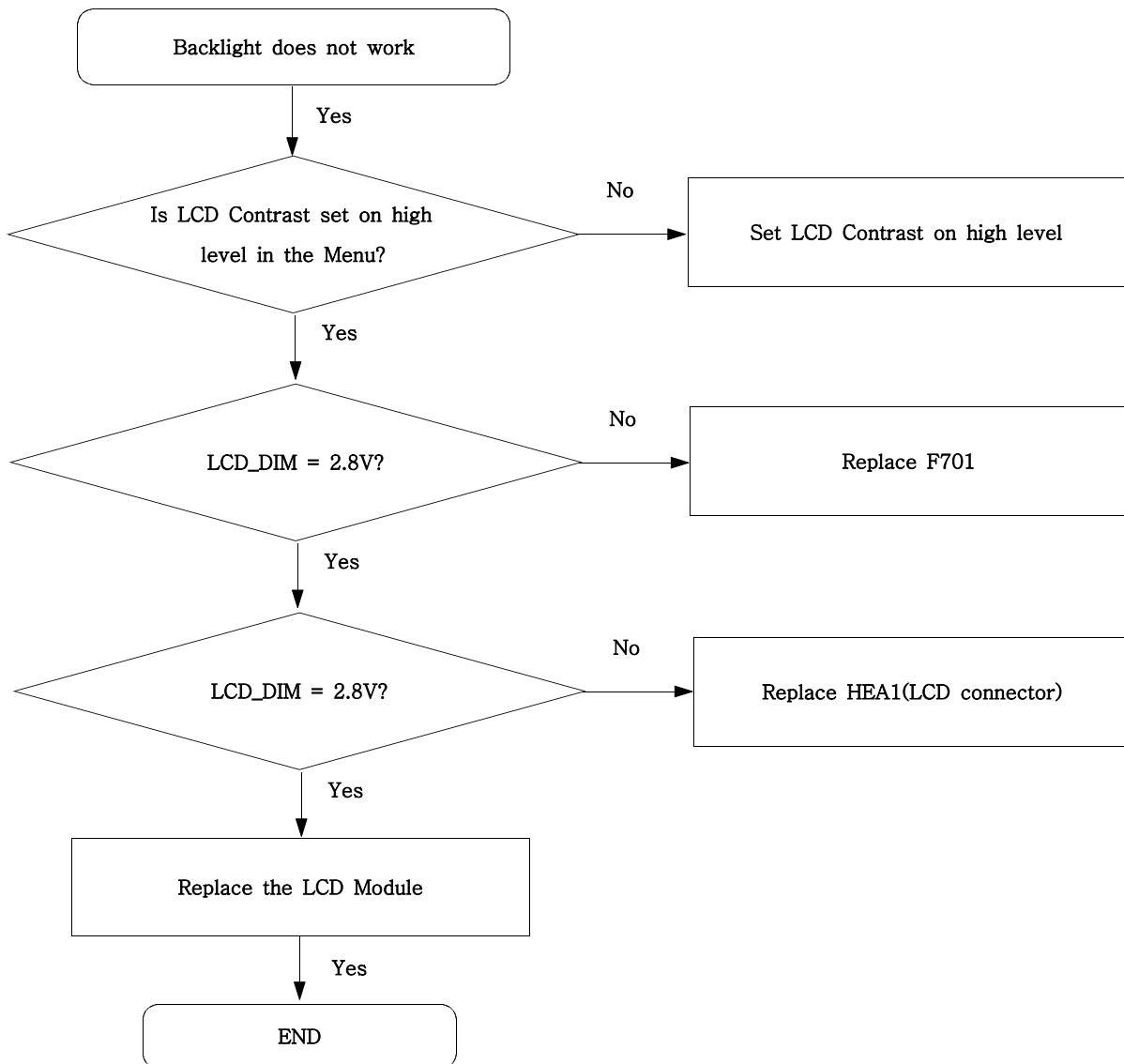
9-7. Key Data Input



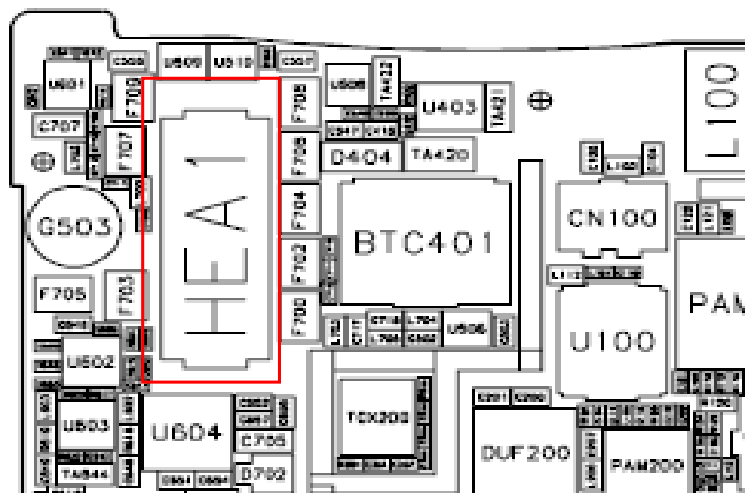
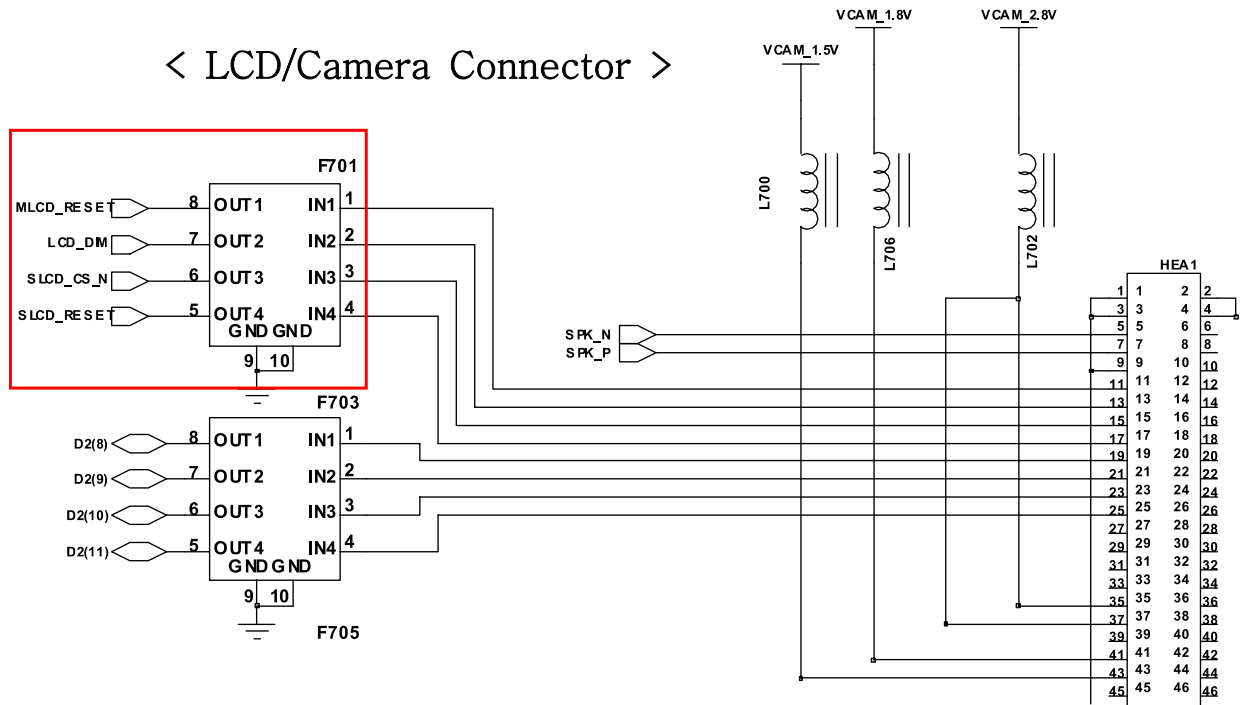
9-8. Receiver Part



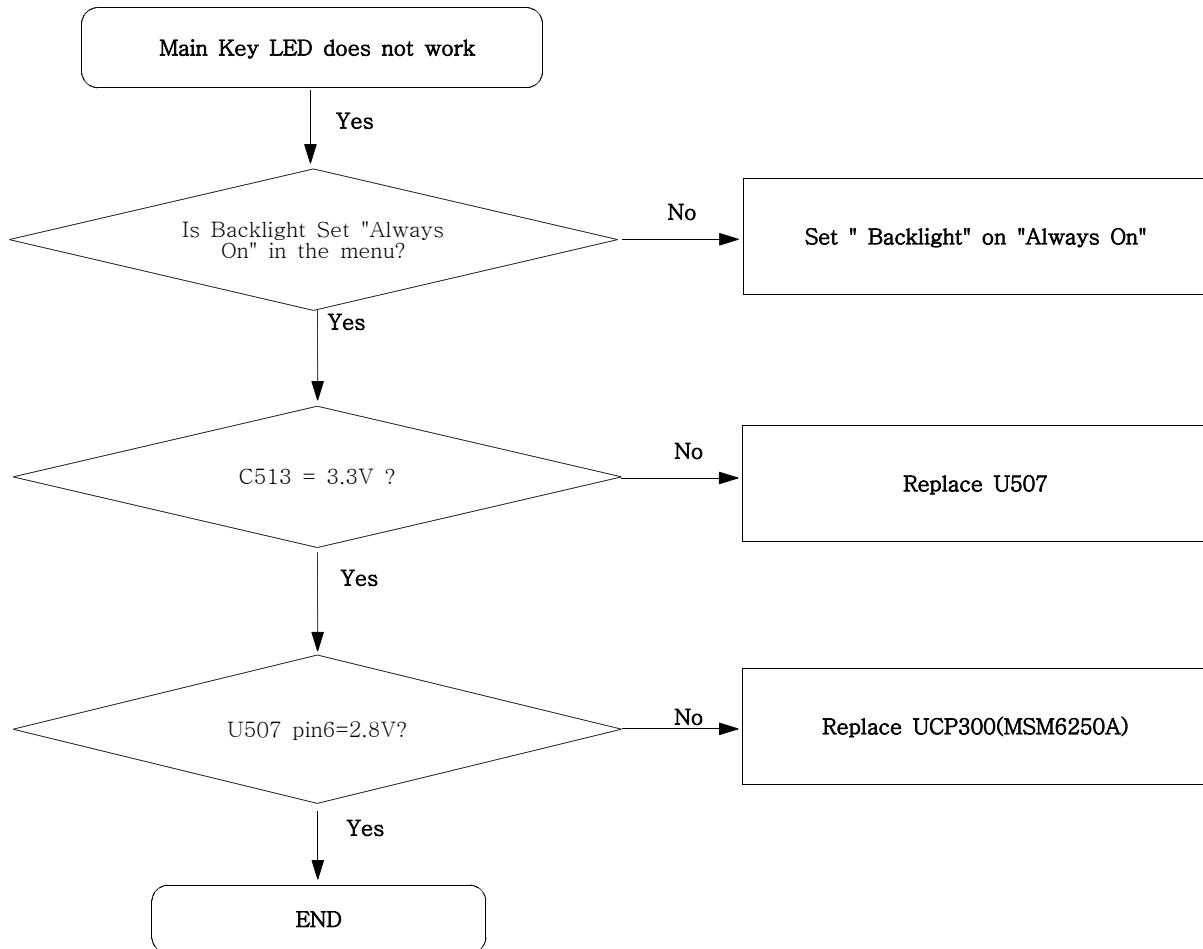
9-9. Back Light



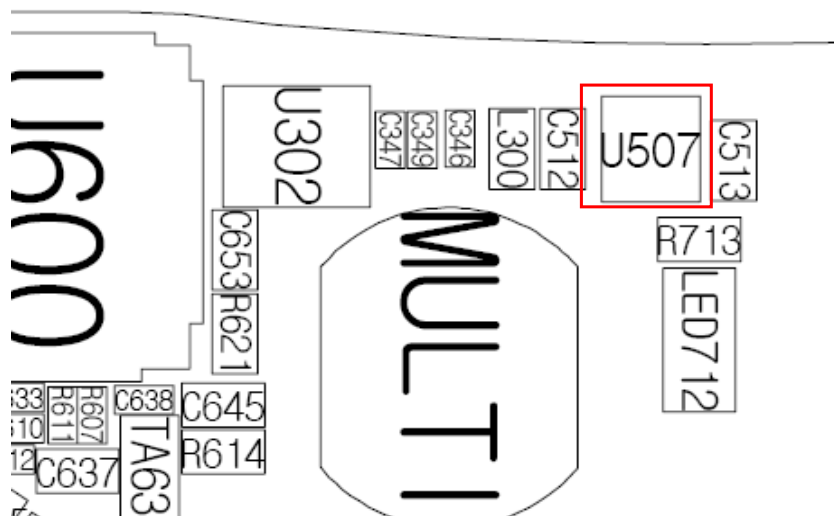
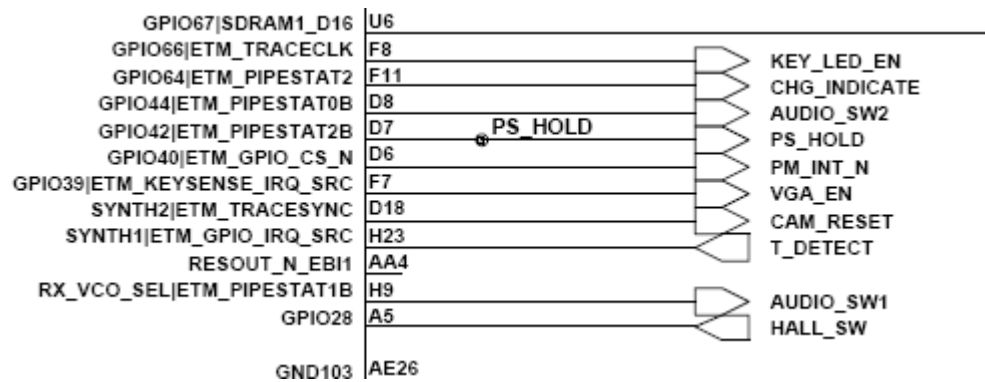
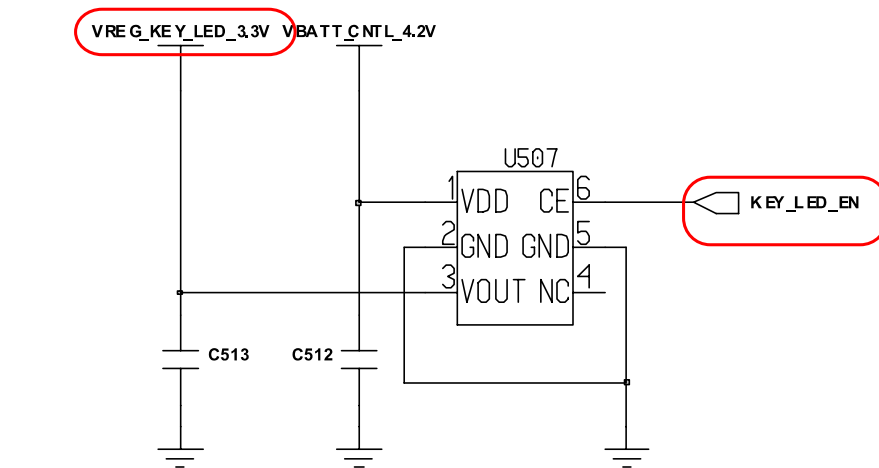
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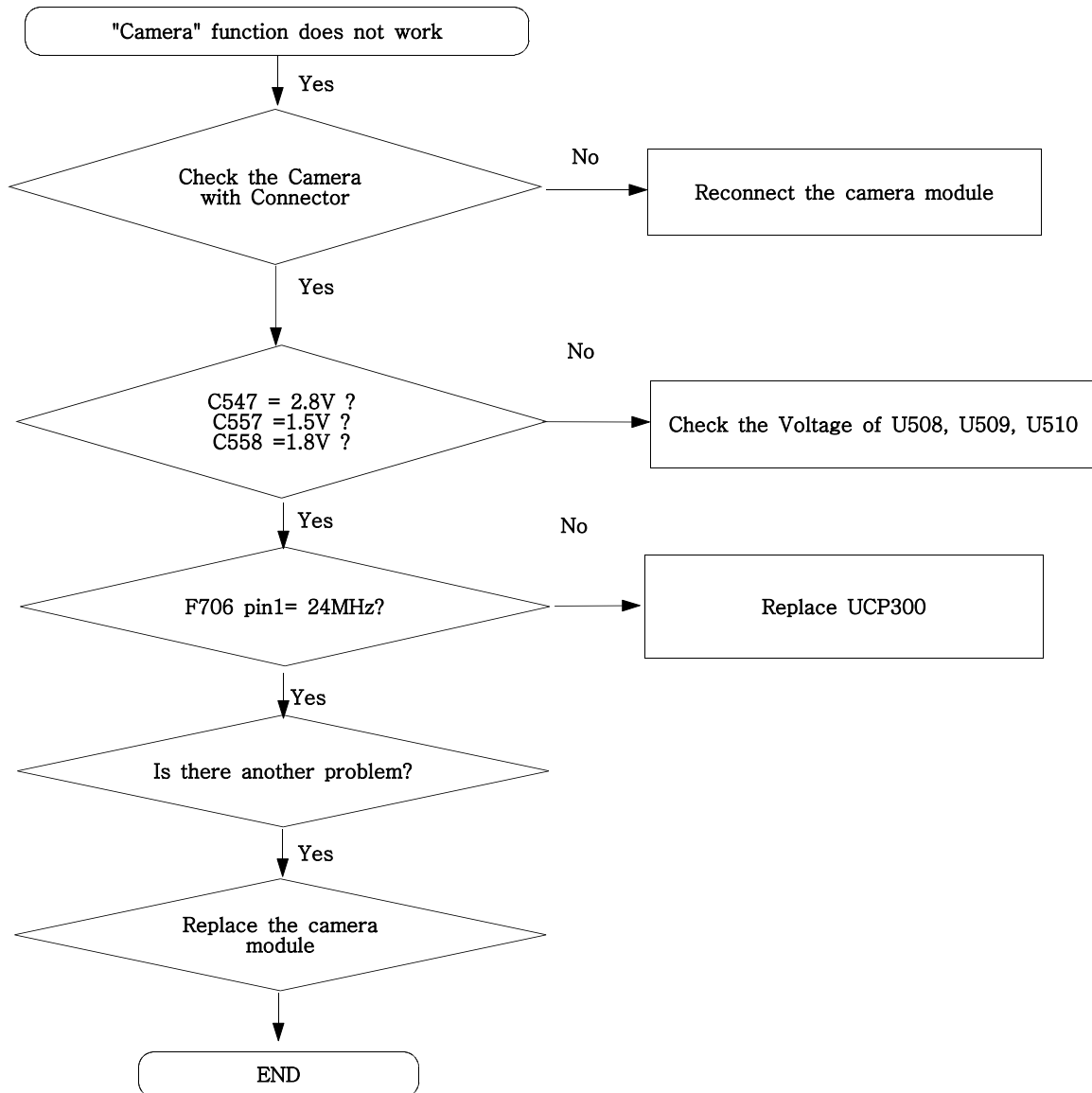
9-10. Key Back Light



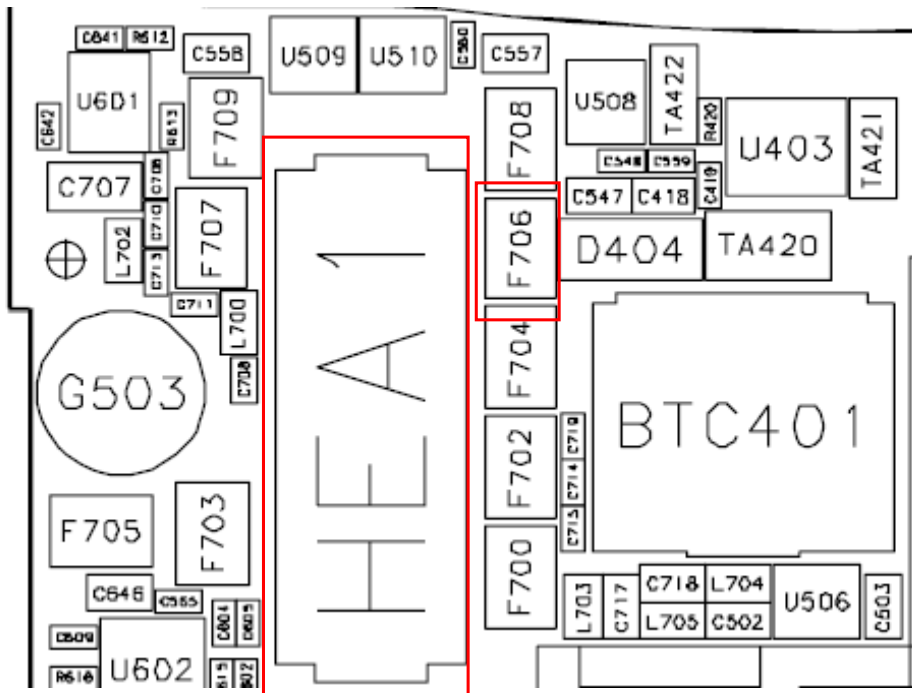
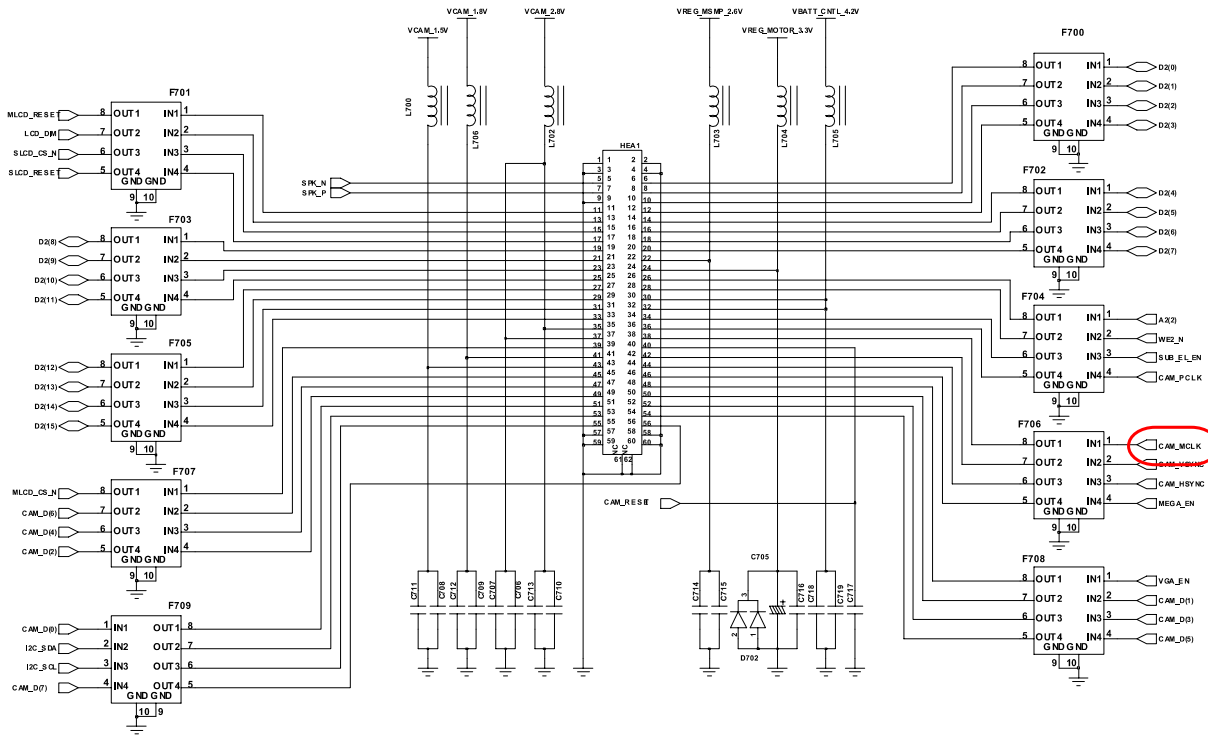
< Keypad LED Power >



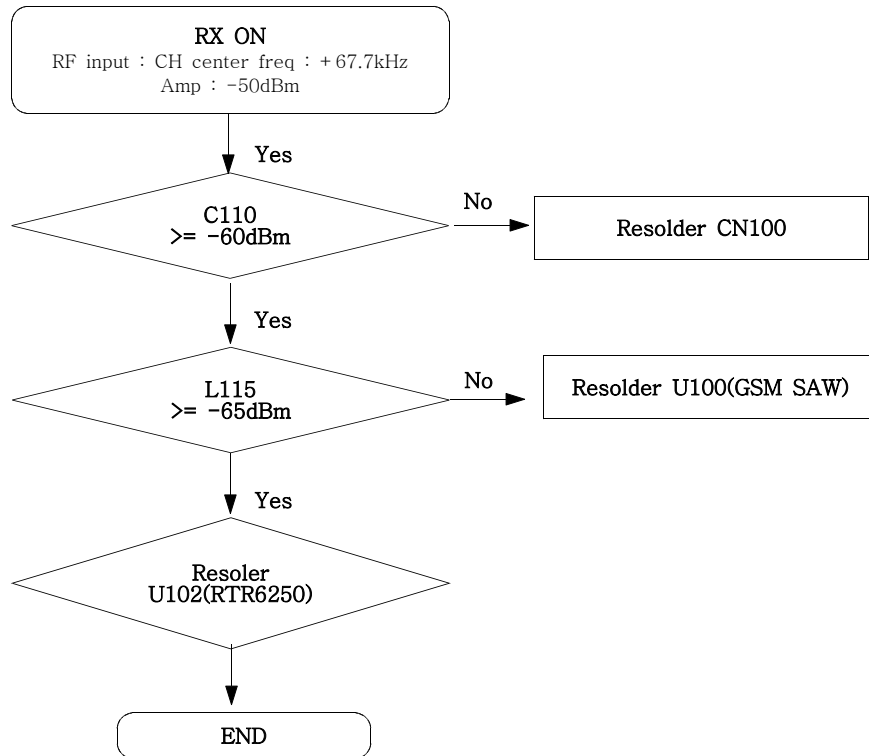
9-11. Camera part



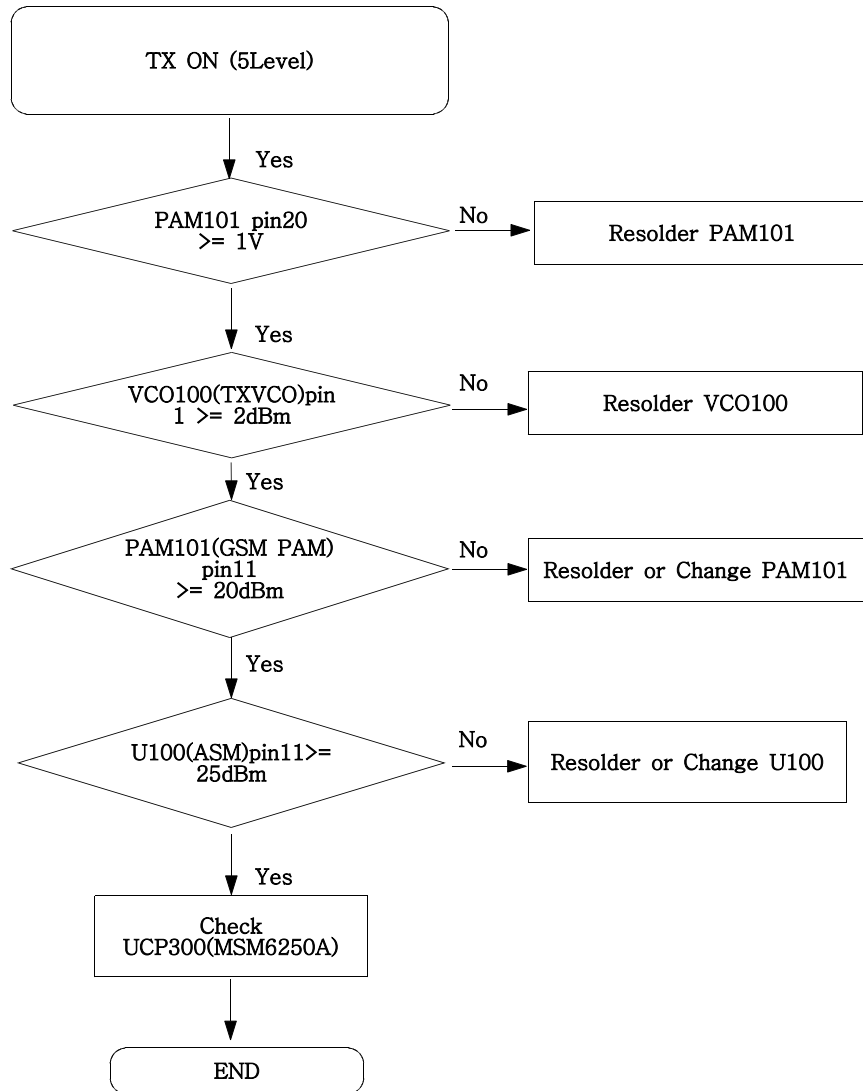
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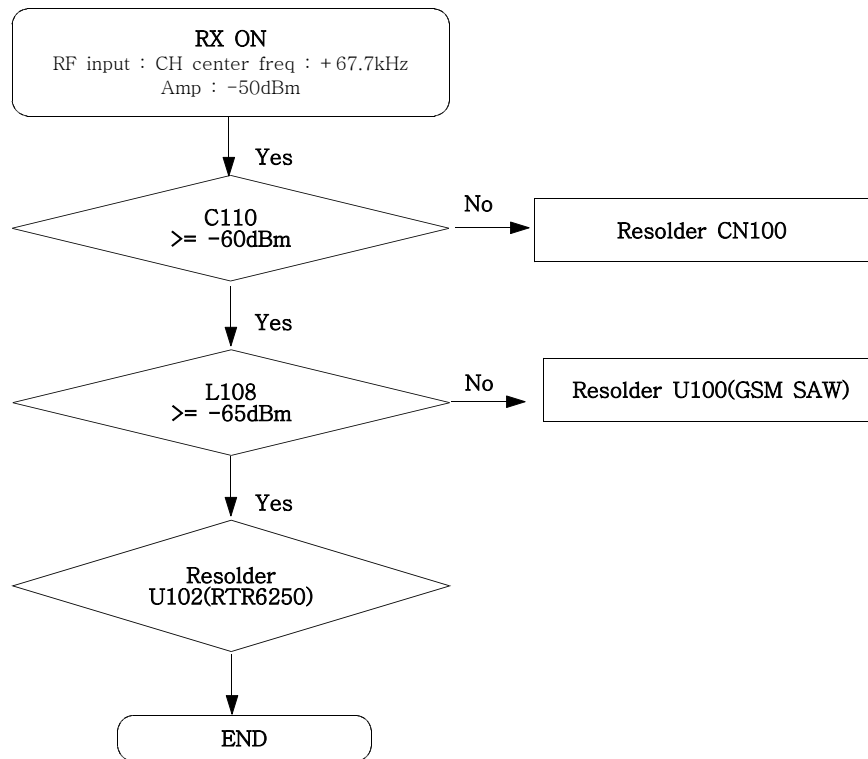
9-12. GSM Receiver



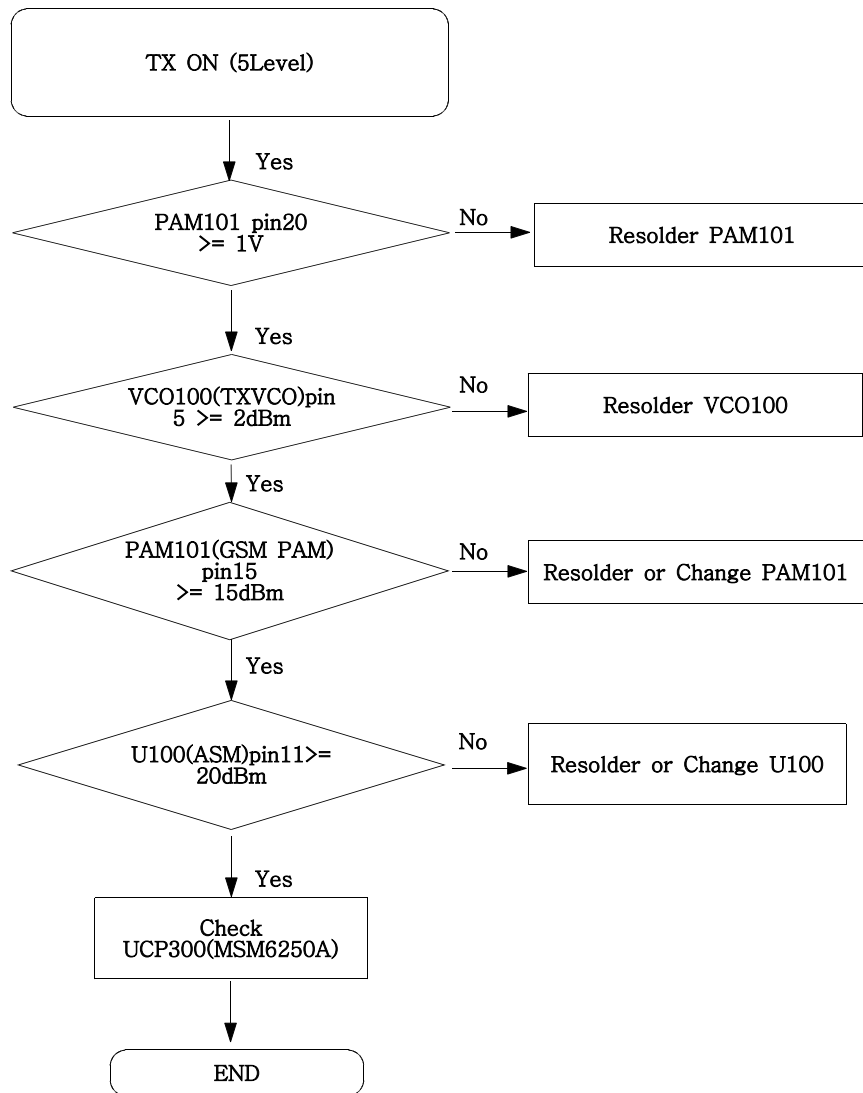
9-13. GSM Transmitter



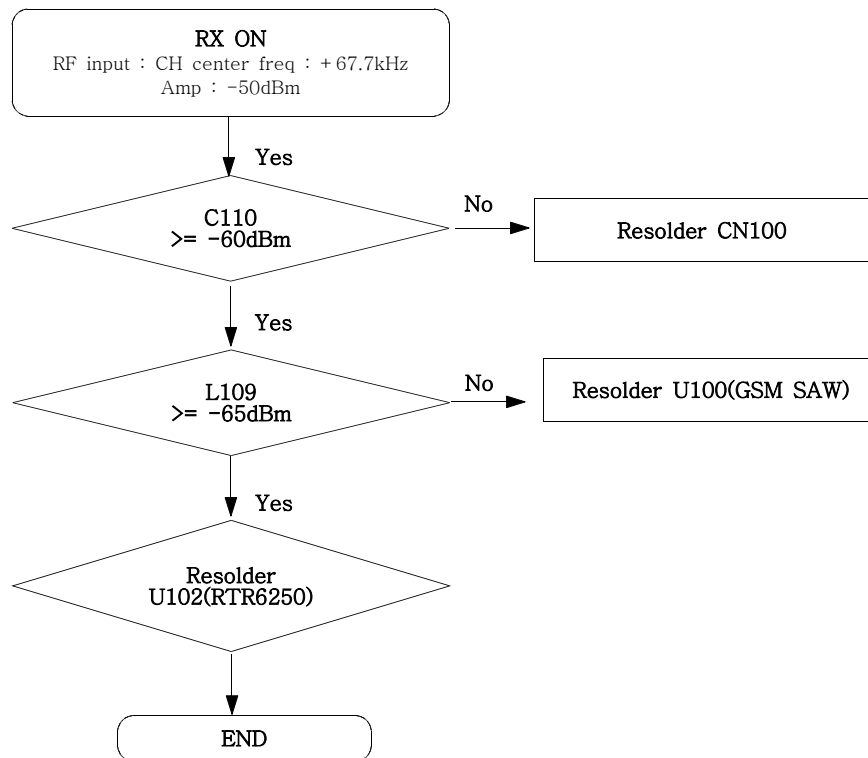
9-14. DCS Receiver



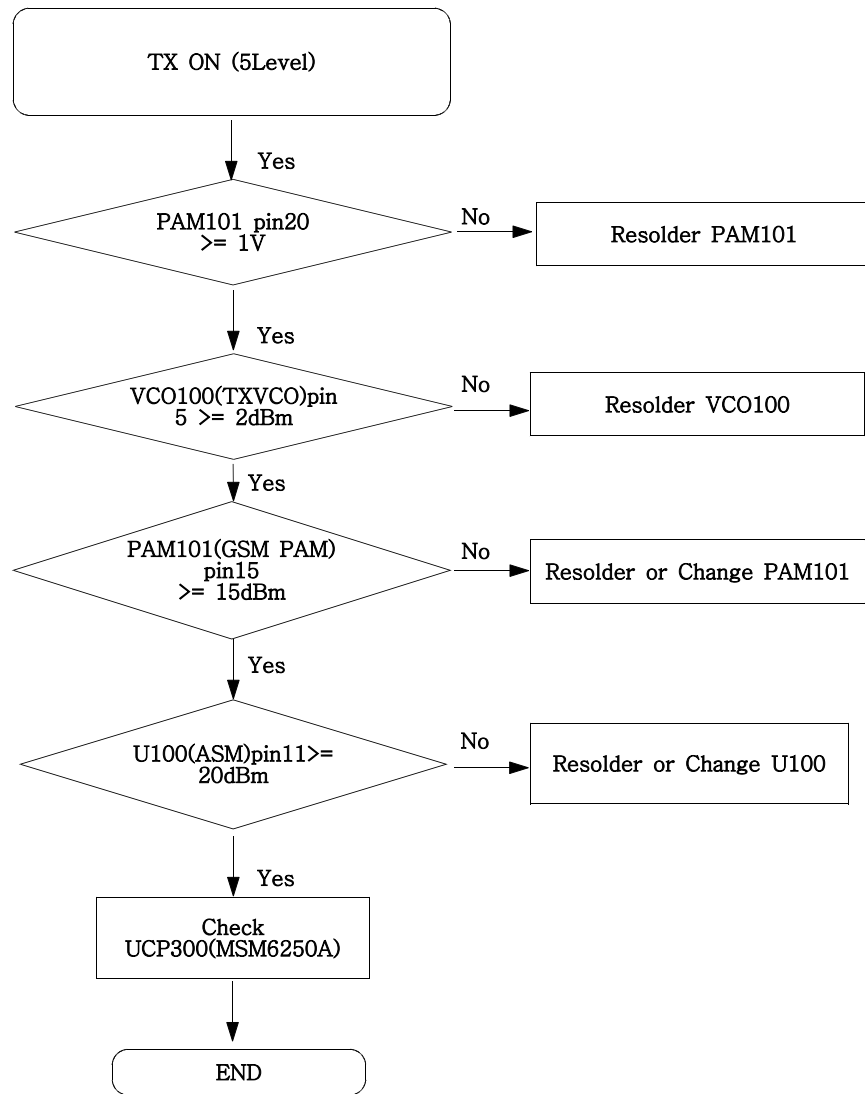
9-15. DCS Transmitter



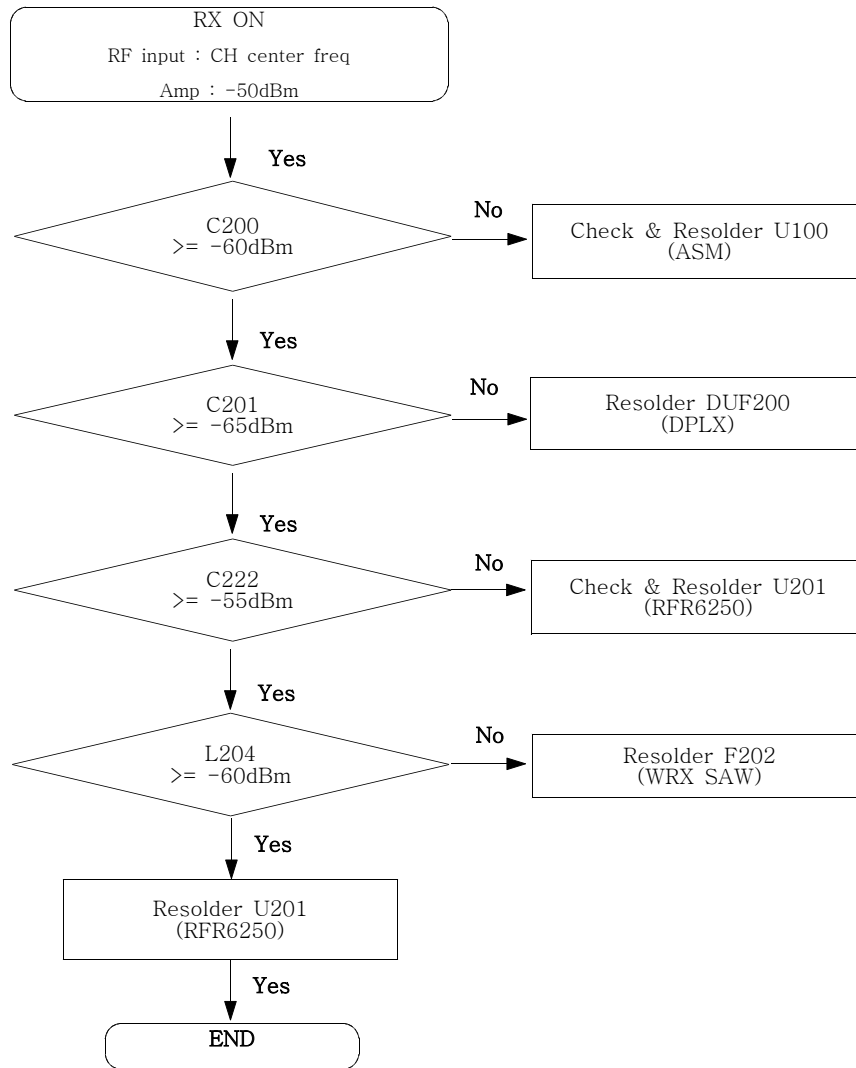
9-16. PCS Receiver



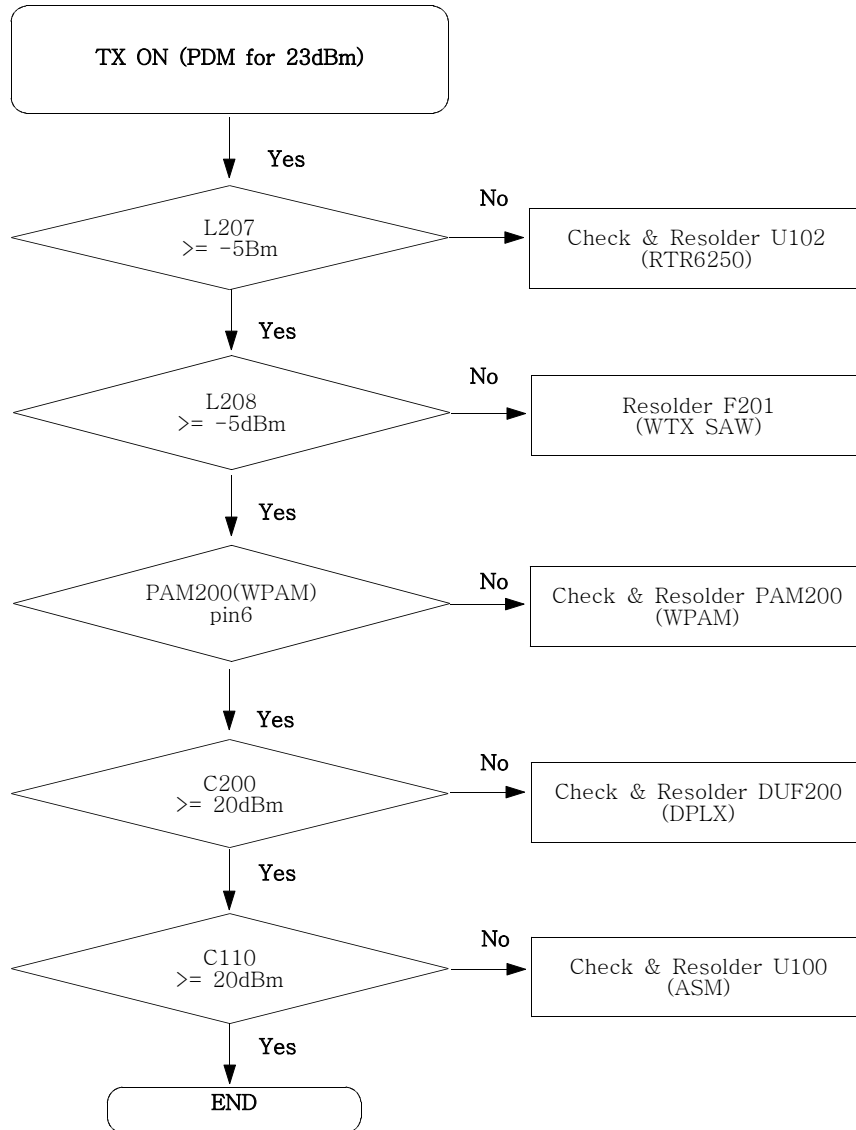
9-17. PCS Transmitter

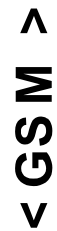


9-18. WCDMA Receiver

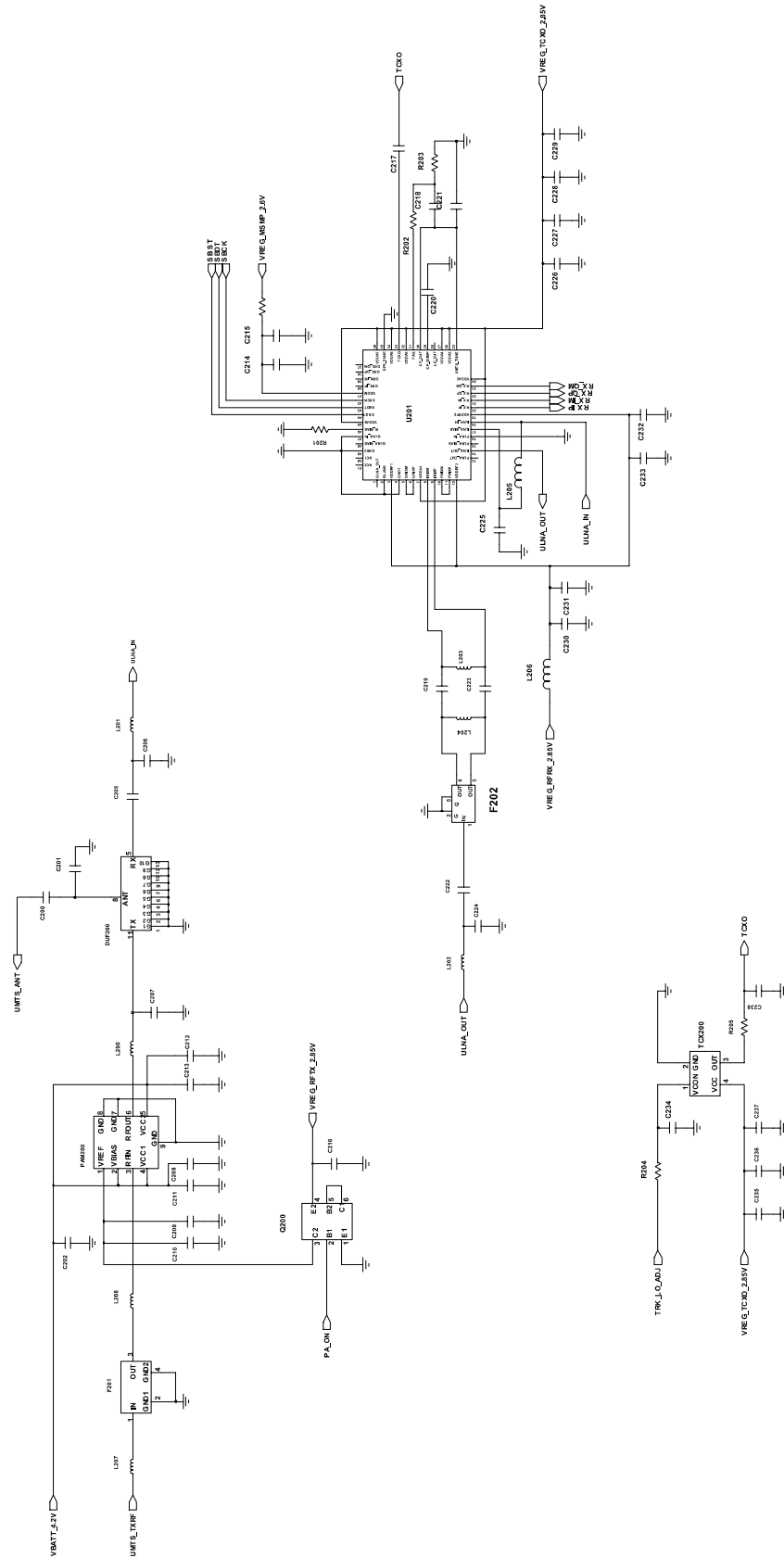


9-19. WCDMA Transmitter





< WCDMA >



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

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