SAMSUNG

GSM TELEPHONE
SGH-D900i

SERVICE Manual

GSM TELEPHONE

CONTENTS

SAMSUNG ELECTRONICS

GSPN (Global Service Partner Network)

Country	Web Site
North America	service.samsungportal.com
Latin America	latin.samsungportal.com
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Europe	europe.samsungportal.com
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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 specificity 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.

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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.

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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	-

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2-2. GSM TX power class

TX Power control level	GSM900 GSM850
5	33±2 dBm
6	31±3 dBm
7	29±3 dBm
8	27±3 dBm
9	25±3 dBm
10	23±3 dBm
11	21±3 dBm
12	19±3 dBm
13	17±3 dBm
14	15±3 dBm
15	13±3 dBm
16	11±5 dBm
17	9±5 dBm
18	7±5 dBm
19	5±5 dBm

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

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

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2-3. GSM EDGE TX power class

TX Power control level	GSM900 GSM850
8	27±3 dBm
9	25±3 dBm
10	23±3 dBm
11	21±3 dBm
12	19±3 dBm
13	17±3 dBm
14	15±3 dBm
15	13±3 dBm
16	11±5 dBm
17	9±5 dBm
18	7±5 dBm
19	5±5 dBm

TX Power control level	DCS1800
2	26 -4/+3 dBm
3	24±3 dBm
4	22±3 dBm
5	20±3 dBm
6	18±3 dBm
7	16±3 dBm
8	12±3 dBm
9	10±3 dBm
10	14±3 dBm
11	12±4 dBm
12	10±4 dBm
13	8±4dBm
14	6±4 dBm
15	4±4 dBm

TX Power control level	PCS1900
2	26 -4/+3 dBm
3	24±3 dBm
4	22±3 dBm
5	20±3 dBm
6	18±3 dBm
7	16±3 dBm
8	12±3 dBm
9	10±3 dBm
10	14±3 dBm
11	12±4 dBm
12	10±4 dBm
13	8±4dBm
14	6±4 dBm
15	4±4 dBm

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3. Operation Instruction and Installation

Main Function

-SlimSlide Design Intenna
-3M AF CMOS Camera
-Bluetooth V.2.0
-Stereo Bluetooth Headset
-Mobile Tracker & SOS Messaging
-Large 2.1" 256K Color TFT Display
-SMS/MMS/E-Mail
-WAP 2.0 / Java MIDP 2.0
-MP3, AAC, MP4, 3GPP Decoding
-Video Recording and Messaging
-GSM/GPRS/EDGE Class 10
-Quard Band(GSM850,900/DCS,PCS)
-TV-oput, FM radio
-Speaker Phone
-Voice Clarity

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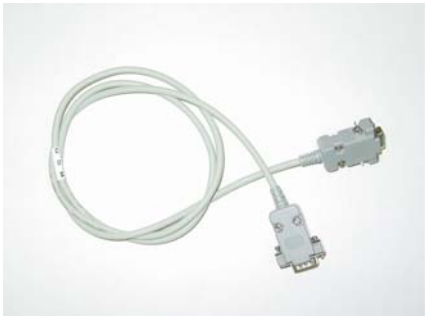
4. Array course control

4-1. Software Adjustments

Test Jig (GH80-03306A)

Test Cable (GH39-00499A)

Serial Cable(CSA LL64151-A)



Power Supply Cable

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4-2. Software Downloading

4-2-1. Pre-requsite for Downloading

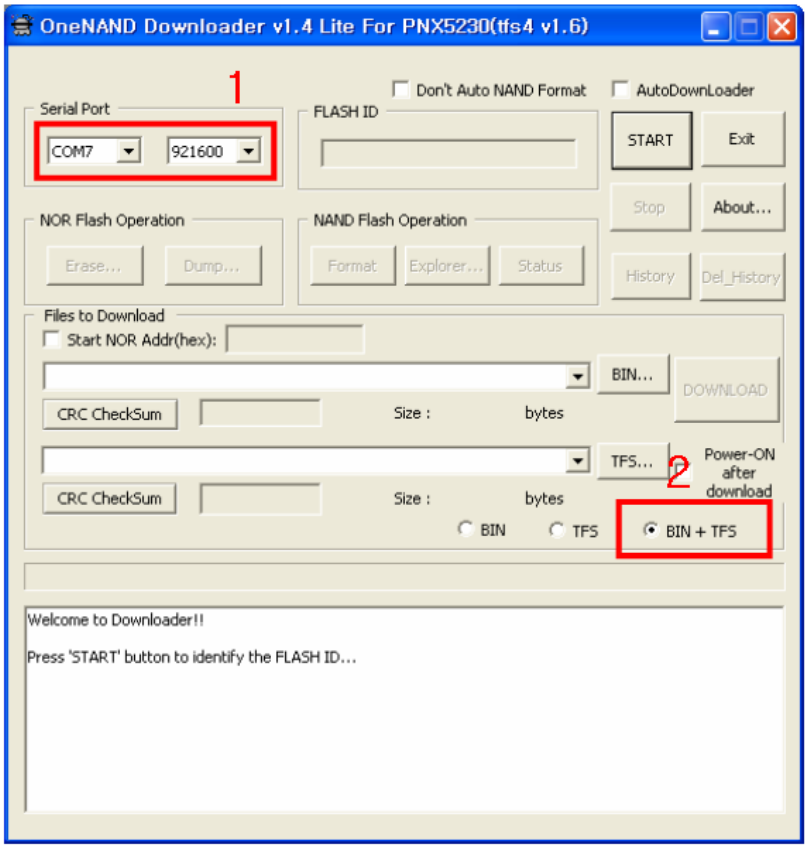
- Downloader Program(**OneNAND Downloder V1.4 Lite For PNX5230.exe**)
- E250 Mobile Phone
- Data Cable
- Binary file, TFS file

4-2-2. S/W Downloader Program

■ Load the binary download program by executing the
"**OneNAND Downloder V1.4 Lite For PNX5230.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'



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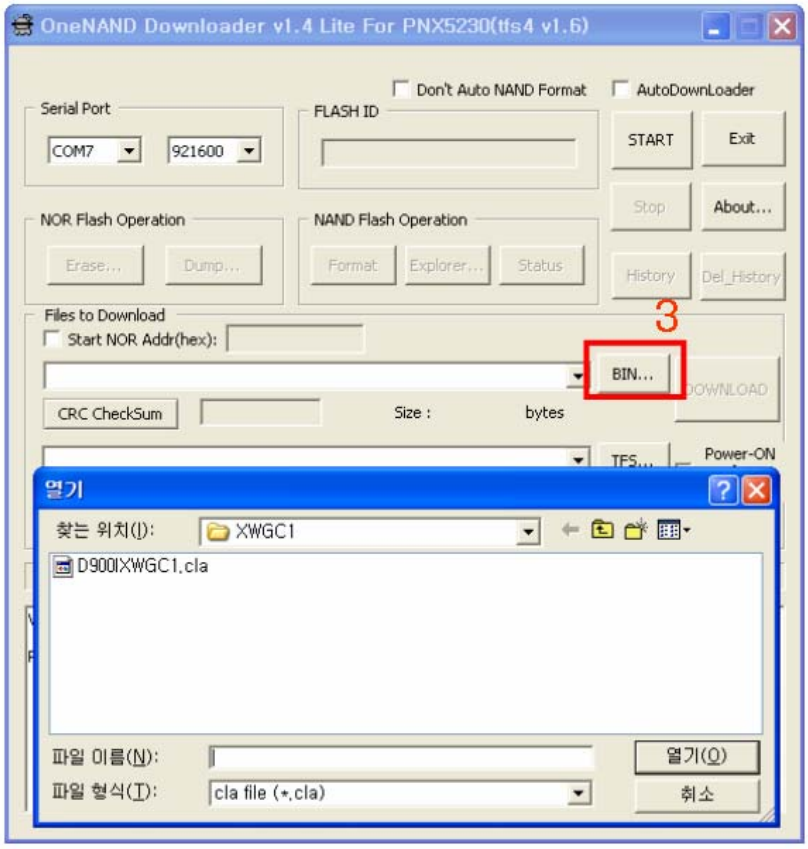
3. Select the file(s) what you want to download



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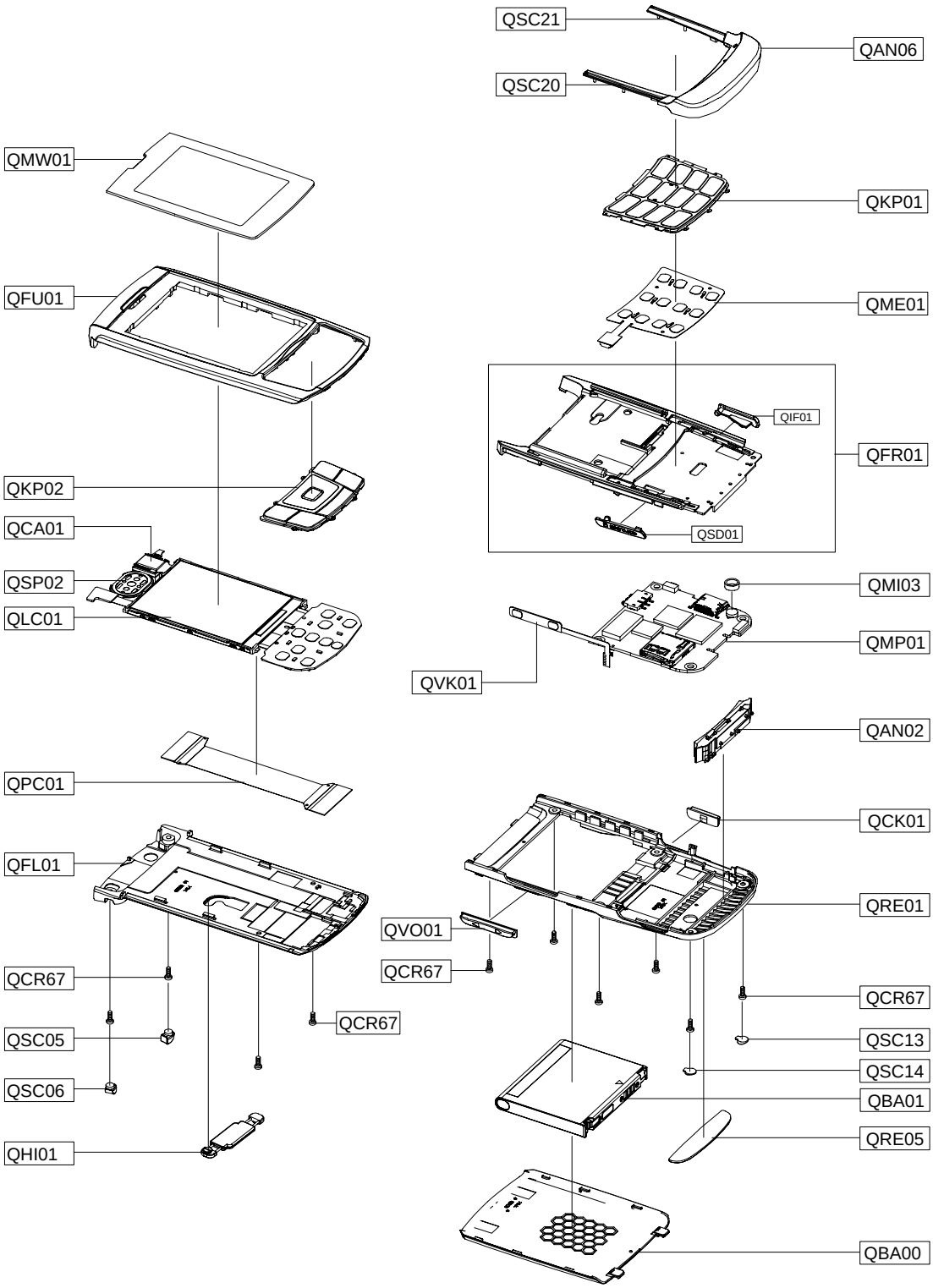
5. Exploded View/Disassembly&Assembly Instructions

5-1. Cellular phone Exploded View



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5-2. Cellular phone Parts list

Design LOC	Description	SEC CODE
QAN02	INTENNA-SGHD900I	GH42-01163A
QAN06	ASSY CASE-INTENNA	GH98-02033A
QBA00	ASSY CASE-BATT UPPER	GH98-02312C
QBA01	INNER BATTERY PACK-800MAH, BLA	GH43-02539A
QCA01	UNIT-CAMERA MODULE	GH59-04230A
QCK01	PMO-CAMERA KEY	GH72-31741A
QCR67	SCREW-MACHINE	6001-002051
QCR67	SCREW-MACHINE	6001-002083
QCR67	SCREW-MACHINE	6001-002083
QCR67	SCREW-MACHINE	6001-002083
QFL01	ASSY CASE-SLIDE LOWER	GH98-01211C
QFR01	ASSY CASE-FRONT	GH98-01212C
QFU01	ASSY CASE-SLIDE UPPER	GH98-01210C
QHI01	ASSY HINGE-PUSH ROD	GH98-03808A
QIF01	PMO-COVER IF	GH72-31739C
QKP01	ASSY KEYPAD-(SER/XBA)	GH98-01859C
QKP02	ASSY KEYPAD-SUB(EU/XBA)	GH98-01215C
QLC01	MEA-LCD MODULE KIT(D900I)	GH97-07522A
QME01	UNIT-KEY FPCB	GH59-04124A
QMI03	RMO-RUBBER MIC HOLDER	GH73-08321A
QMP01	PBA MAIN-SGHD900I	GH92-03533A
QMW01	ASSY COVER-MAIN WINDOW	GH98-01676A
QPC01	MEA-SLIDER FPCB KIT(D900I)	GH97-07523A
QRE01	ASSY CASE-REAR	GH98-01239C
QRE05	PMO-REAR DECO	GH72-31740C
QSC05	RMO-COVER SLIDE SCREW L	GH73-07227C
QSC06	RMO-COVER SLIDE SCREW R	GH73-07228C
QSC13	RMO-COVER REAR SCREW	GH73-07232C
QSC14	RMO-COVER REAR SCREW R	GH73-07743C
QSC20	PMO-FRONT DAMPER L	GH72-31668C
QSC21	PMO-FRONT DAMPER R	GH72-31670C
QSD01	PMO-COVER SD	GH72-31738C
QSP02	UNIT-SPEAKER MODULE	GH59-03347A
QVK01	UNIT-VOLUME KEY	GH59-03265A
QVO01	PMO-VOLUME KEY	GH72-31742A

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Description	SEC CODE
CBF INTERFACE-DATA LINK CABLE	GH39-00444A
ADAPTOR-SGHE690,BLK,EU,A_TYPE	GH44-01361A
MPR-TAPE SIDE KEY	GH74-25679A
LABEL(R)-WATER SOAK	GH68-09361A
AS-DOME SHEET SVC	GH81-05846A
MPR-BOHO VINYL LCD CONN	GH74-15350A
MPR-INSU TAPE	GH74-16483A
MPR-BOHO VINYL LCD	GH74-19127A
MPR-INSU TAPE	GH74-25670A
MPR-INSU TAPE	GH74-25677A
MPR-SPONGE CAMERA FPCB	GH74-25687A
MPR-TAPE SLIDE FPCB	GH74-25688A
MPR-TAPE LCD ESD	GH74-26151A
MPR-TAPE LCD FPCB ESD	GH74-26186A
MPR-SPONGE FRONT	GH74-26581A
MPR-VINYL BOHO WINDOW	GH74-26582A
MPR-TAPE WINDOW MAIN	GH74-25307A
MPR-SPONGE CAMERA KEY	GH74-25689A
MPR-SPONGE CAMERA KEY	GH74-25689A
MPR-TAPE MASKING J TAG	GH74-14051A
S/W CD-SGHD900I PC LINK CD	GH46-00406A
MANUAL-SFC	GH68-04336A
MANUAL USERS-EU RUSSIAN	GH68-14238A
BAG PE	6902-000634
CUSHION-CASE(EU-TA2)	GH69-04708A
LABEL(R)-MAIN(SER)	GH68-14312B
BOX(P)-UNIT(SER)	GH69-05179B
UNIT-20P,EARPHONE,BLK,B-TYPE	GH59-04029A
MPR-VINYL BOHO MAIN WINDOW V2	GH74-26156A

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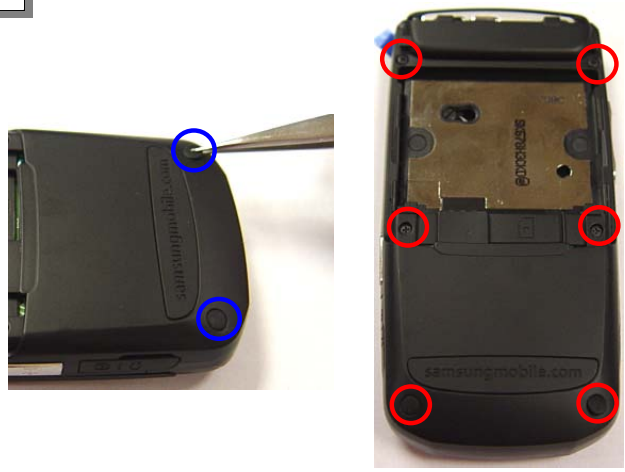
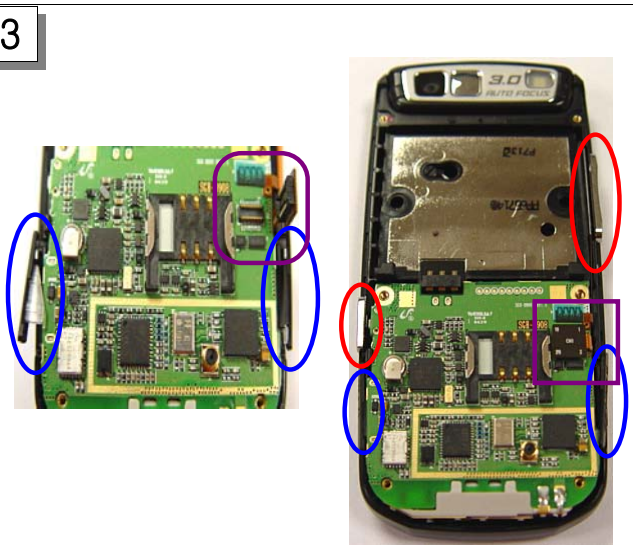
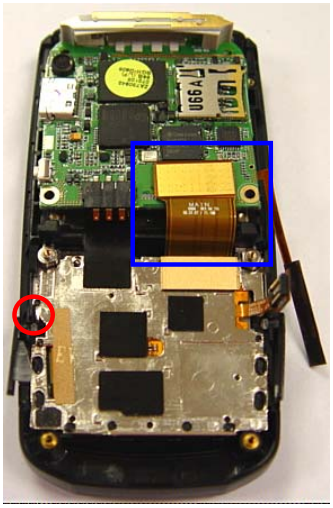
5-3. Disassembly and Assembly Instructions

5-3-1. Disassembly

1 	2 
1. Remove 2 screw caps. 2. Loosen a screw this six point form Rear.	1. Make the space between rear cover and front cover using assembly stick. 2. And then widen space with hand and separate 2 parts.
3 	4 
1. Remove 2 keys. (Red) 2. Open 2 covers. (Blue) 3. Open the Key connector. (Violet)	1. Upside down the main PBA with moving slide. Be careful the hook. (Red) 2. Open the LCD connector. (Blue)

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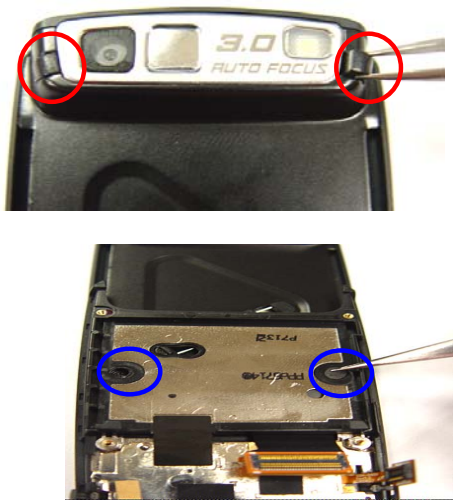
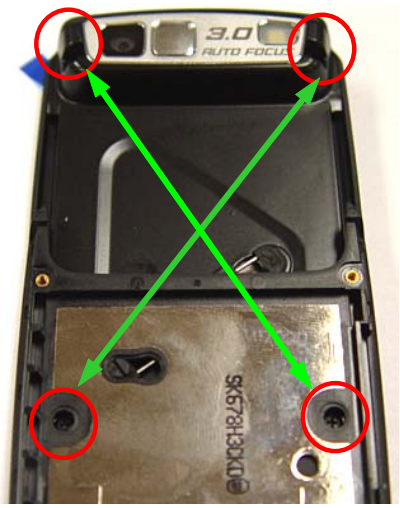
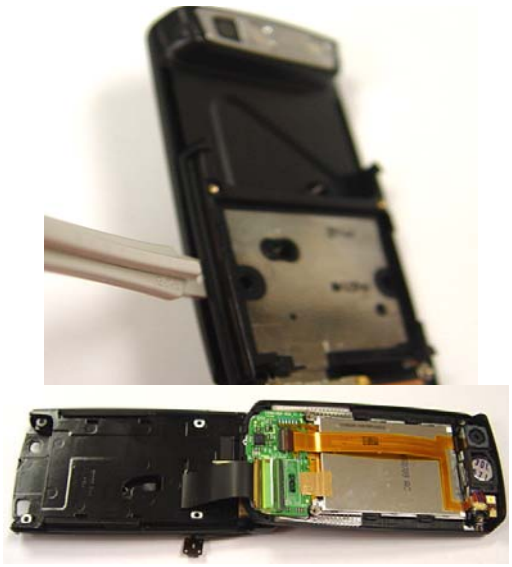
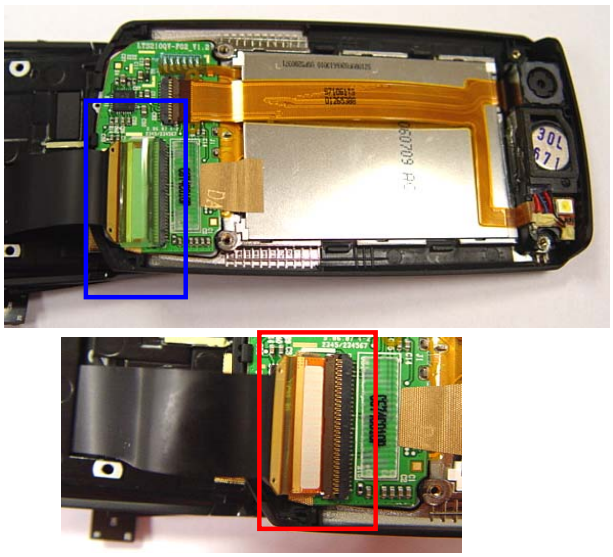
5  	6 
1. Open the slide. (Slide up) 2. Remove the 4 screw caps with pinset.	1. Loosen a screw 4 point form Lower.
7 	8 
1. Make the space between slide upper and slide lower using assembly stick. 2. And then widen space with hand and separate 2 parts.	1. Remove the insulation tape. 2. And separate LCD connector from sub-PBA.

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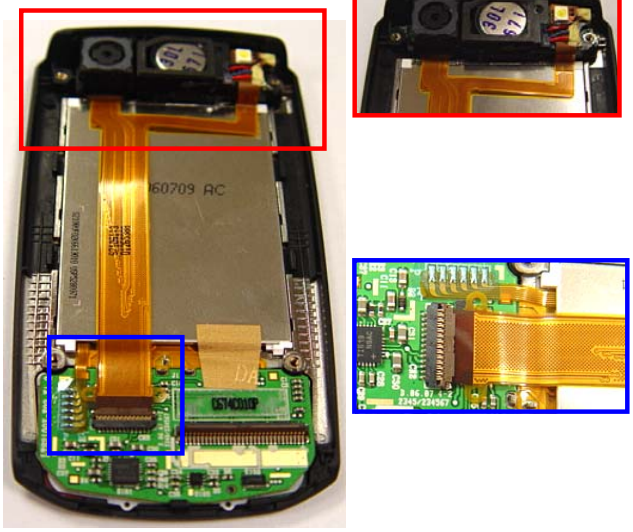
9 	10 
1. Separate Camera connector from sub-PBA and speaker module and camera from slide upper.	1. Separate sub-PBA from slide upper. And then caution the hook. 2. Separate LCD module from slide upper using 4 white points.

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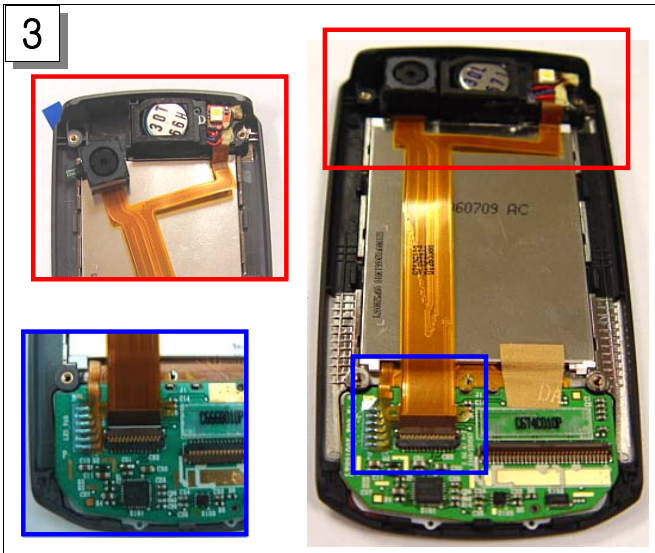
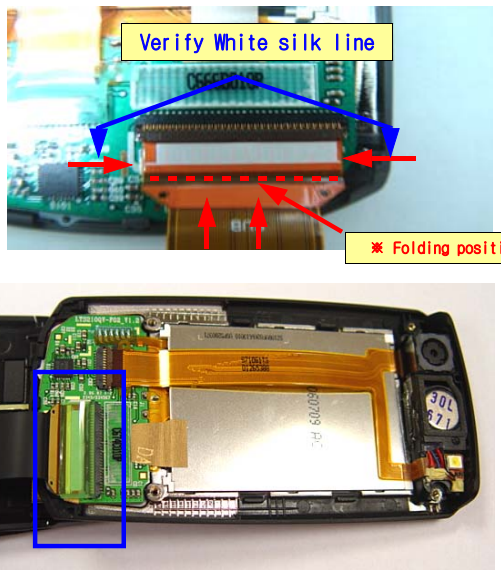
5-3-2. Assembly

1 	2 
1. Prepare the slide upper and LCD module.	1. At first attach LCD to main window and put the sub PBA considering sub hook(blue circle).
3 	4 
1. At first put the speaker and motor module. 2. And put the camera at slide upper. (Red) 3. And combined camera connector to sub-PBA. (Blue) 4. And put insulation tape on connector.	1. At first combined LCD connector to sub-PBA accoding to picture. 2. And put insulation tape on connector.

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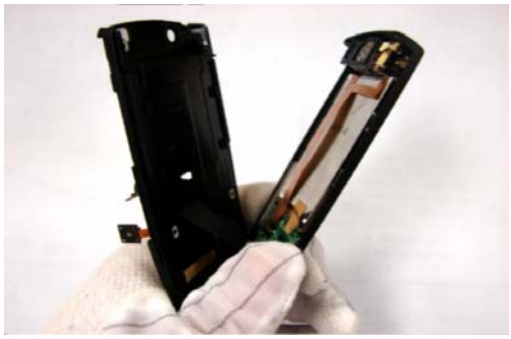
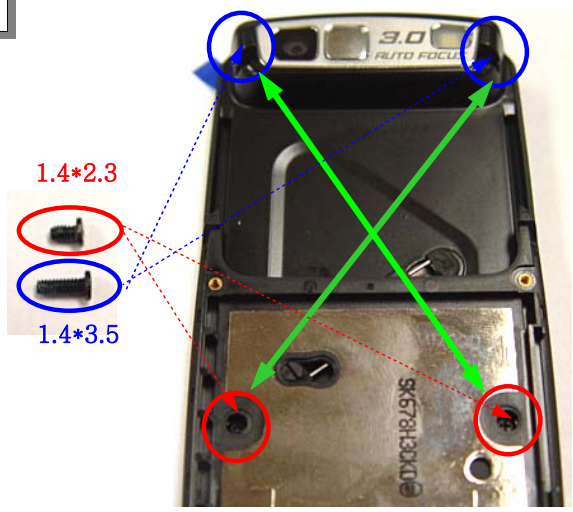
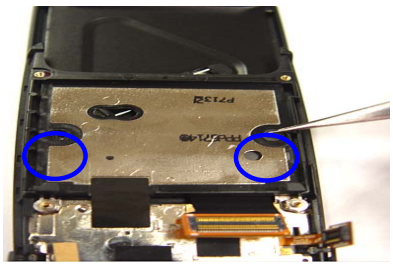
5  	6 
1. Combined slide upper and lower from top side after slide up. 2. And push the edge side for locking.	1. Fasten a screw at 4 points with driver after slide up. 2. Caution screw size.
7  	8 
1. Put the 2 kind of screw caps on screw hole.	1. Put the main-PBA on front cover. 2. Combined LCD connector to main-PBA.

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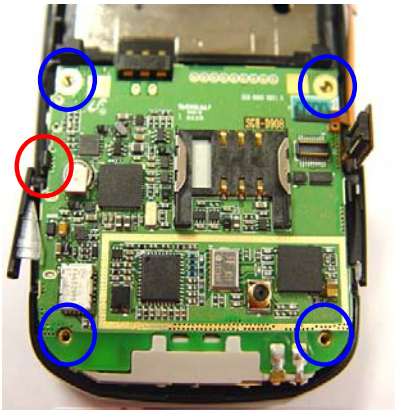
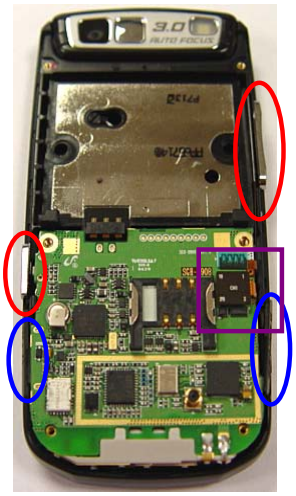
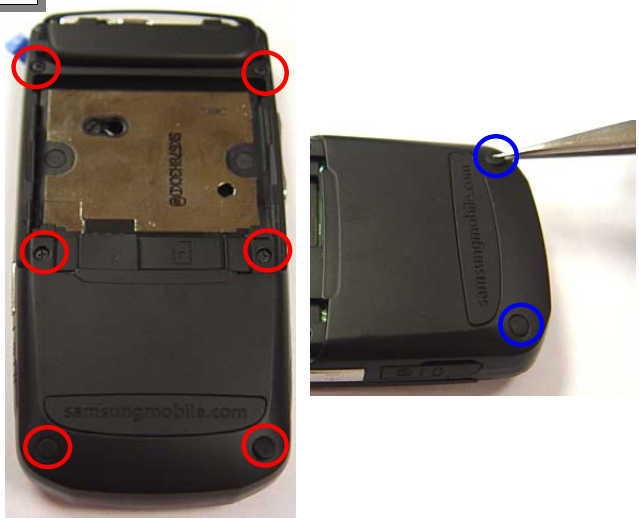
9	10
	
1. Put the main-PBA on 4 screw hole. (Blue) 2. Locking the one hook. (Rec)	1. Combined Key connector and put side key and camera key.(Violet, Red) 2. Close the cover. (Blue)

11	12
	
1. Put rear cover on Assay and lock. 2. Be careful losing key.	1. Fasten a screw at 6 points with driver. 2. Put the screw cap on below hole with pinset

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6. Electrical Parts List

Design LOC	Description	SEC CODE	STATUS
ANT700	ANTENNA-CHIP	4202-001301	SA
BAT400	BATTERY-LI(2ND)	4302-001181	SA
C100	C-CER,CHIP	2203-005054	SA
C101	C-CER,CHIP	2203-005054	SA
C102	C-CER,CHIP	2203-000233	SA
C103	C-CER,CHIP	2203-000233	SA
C104	C-CER,CHIP	2203-005288	SA
C105	C-CER,CHIP	2203-005288	SA
C106	C-CER,CHIP	2203-000628	SA
C107	C-CER,CHIP	2203-006562	SA
C108	C-CER,CHIP	2203-000233	SA
C109	C-CER,CHIP	2203-005050	SA
C110	C-CER,CHIP	2203-005050	SA
C111	C-CER,CHIP	2203-000278	SA
C112	C-CER,CHIP	2203-005288	SA
C113	C-CER,CHIP	2203-005052	SA
C114	C-CER,CHIP	2203-005382	SA
C116	C-CER,CHIP	2203-000278	SA
C117	C-CER,CHIP	2203-000233	SA
C118	C-CER,CHIP	2203-000812	SA
C119	C-CER,CHIP	2203-006048	SA
C120	C-CER,CHIP	2203-000714	SA
C121	C-CER,CHIP	2203-005061	SA
C122	C-CER,CHIP	2203-005061	SA
C124	C-CER,CHIP	2203-000438	SA
C125	C-CER,CHIP	2203-000233	SA
C126	C-CER,CHIP	2203-005288	SA
C200	C-CER,CHIP	2203-005482	SA
C201	C-CER,CHIP	2203-000812	SA
C202	C-CER,CHIP	2203-005482	SA
C203	C-CER,CHIP	2203-005482	SA
C204	C-CER,CHIP	2203-005482	SA
C205	C-CER,CHIP	2203-005482	SA
C206	C-CER,CHIP	2203-005482	SA
C207	C-CER,CHIP	2203-005482	SA
C208	C-CER,CHIP	2203-005482	SA
C209	C-CER,CHIP	2203-005482	SA
C210	C-CER,CHIP	2203-000254	SA
C211	C-CER,CHIP	2203-005482	SA
C212	C-CER,CHIP	2203-000812	SA
C213	C-CER,CHIP	2203-005482	SA
C214	C-CER,CHIP	2203-006562	SA
C216	C-CER,CHIP	2203-006562	SA
C217	C-CER,CHIP	2203-000425	SA
C218	C-CER,CHIP	2203-000425	SA
C300	C-CER,CHIP	2203-006399	SA
C301	C-CER,CHIP	2203-006423	SA
C302	C-CER,CHIP	2203-006423	SA
C303	C-CER,CHIP	2203-006399	SA
C304	C-CER,CHIP	2203-006562	SA
C305	C-CER,CHIP	2203-005482	SA
C306	C-CER,CHIP	2203-006562	SA
C307	C-CER,CHIP	2203-005482	SA
C308	C-CER,CHIP	2203-005482	SA
C309	C-CER,CHIP	2203-006562	SA
C310	C-CER,CHIP	2203-006562	SA

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Design LOC	Description	SEC CODE	STATUS
C311	C-CER,CHIP	2203-005482	SA
C312	C-CER,CHIP	2203-005482	SA
C313	C-CER,CHIP	2203-005482	SA
C314	C-CER,CHIP	2203-000425	SA
C315	C-CER,CHIP	2203-000425	SA
C316	C-CER,CHIP	2203-006562	SA
C317	C-CER,CHIP	2203-006562	SA
C322	C-CER,CHIP	2203-006562	SA
C400	C-CER,CHIP	2203-006257	SA
C401	C-CER,CHIP	2203-006201	SA
C402	C-CER,CHIP	2203-006562	SA
C403	C-CER,CHIP	2203-006257	SA
C404	C-CER,CHIP	2203-006208	SA
C405	C-CER,CHIP	2203-006257	SA
C406	C-CER,CHIP	2203-006257	SA
C407	C-CER,CHIP	2203-006208	SA
C408	C-CER,CHIP	2203-006562	SA
C409	C-CER,CHIP	2203-006562	SA
C410	C-CER,CHIP	2203-006257	SA
C411	C-CER,CHIP	2203-006208	SA
C412	C-CER,CHIP	2203-006257	SA
C413	C-CER,CHIP	2203-000233	SA
C414	C-CER,CHIP	2203-000386	SA
C415	C-CER,CHIP	2203-000425	SA
C416	C-CER,CHIP	2203-006348	SA
C417	C-CER,CHIP	2203-006562	SA
C418	C-CER,CHIP	2203-006324	SA
C419	C-CER,CHIP	2203-006257	SA
C420	C-CER,CHIP	2203-000254	SA
C421	C-CER,CHIP	2203-005482	SA
C422	C-CER,CHIP	2203-006423	SA
C423	C-CER,CHIP	2203-006423	SA
C424	C-CER,CHIP	2203-006208	SA
C427	C-CER,CHIP	2203-006423	SA
C428	C-CER,CHIP	2203-000679	SA
C429	C-CER,CHIP	2203-000995	SA
C430	C-CER,CHIP	2203-006361	SA
C431	C-CER,CHIP	2203-000233	SA
C432	C-CER,CHIP	2203-006474	SA
C501	C-CER,CHIP	2203-000425	SA
C502	C-CER,CHIP	2203-001437	SA
C503	C-CER,CHIP	2203-001259	SA
C504	C-CER,CHIP	2203-000995	SA
C505	C-CER,CHIP	2203-001437	SA
C506	C-CER,CHIP	2203-000425	SA
C507	C-CER,CHIP	2203-000812	SA
C509	C-CER,CHIP	2203-000254	SA
C510	C-CER,CHIP	2203-006562	SA
C511	C-CER,CHIP	2203-006399	SA
C512	C-CER,CHIP	2203-005482	SA
C513	C-CER,CHIP	2203-006399	SA
C514	C-CER,CHIP	2203-000425	SA
C600	C-CER,CHIP	2203-005482	SA
C601	C-CER,CHIP	2203-000995	SA
C602	C-CER,CHIP	2203-005050	SA
C603	C-CER,CHIP	2203-005482	SA

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Design LOC	Description	SEC CODE	STATUS
C604	C-CER,CHIP	2203-000995	SA
C605	C-CER,CHIP	2203-006423	SA
C606	C-CER,CHIP	2203-000311	SA
C607	C-CER,CHIP	2203-005061	SA
C700	C-CER,CHIP	2203-006838	SA
C701	C-CER,CHIP	2203-006838	SA
C702	C-CER,CHIP	2203-006423	SA
C703	C-CER,CHIP	2203-006423	SA
C704	C-CER,CHIP	2203-005055	SA
C705	INDUCTOR-SMD	2703-002367	SA
C706	C-CER,CHIP	2203-006838	SA
C707	C-CER,CHIP	2203-006423	SA
C708	C-CER,CHIP	2203-000278	SA
C709	C-CER,CHIP	2203-006562	SA
C710	C-CER,CHIP	2203-006842	SA
C711	C-CER,CHIP	2203-005682	SA
C712	C-CER,CHIP	2203-000812	SA
C713	C-CER,CHIP	2203-005682	SA
C714	C-CER,CHIP	2203-005682	SA
C715	C-CER,CHIP	2203-005682	SA
C716	C-CER,CHIP	2203-005682	SA
C717	C-CER,CHIP	2203-005682	SA
C718	C-CER,CHIP	2203-005682	SA
C719	C-CER,CHIP	2203-005682	SA
C720	C-CER,CHIP	2203-005682	SA
C721	C-CER,CHIP	2203-005682	SA
C722	C-CER,CHIP	2203-006562	SA
C725	C-CER,CHIP	2203-005682	SA
C726	C-CER,CHIP	2203-005682	SA
C727	C-CER,CHIP	2203-005682	SA
C728	C-CER,CHIP	2203-006562	SA
C729	C-CER,CHIP	2203-005682	SA
C730	C-CER,CHIP	2203-000812	SA
C731	C-CER,CHIP	2203-005682	SA
C732	C-CER,CHIP	2203-005682	SA
C733	C-CER,CHIP	2203-005682	SA
C734	C-CER,CHIP	2203-000812	SA
C735	C-CER,CHIP	2203-000812	SA
C736	C-CER,CHIP	2203-005682	SA
C737	C-CER,CHIP	2203-005682	SA
C738	C-CER,CHIP	2203-005682	SA
C739	C-CER,CHIP	2203-005682	SA
C740	C-CER,CHIP	2203-005682	SA
C741	C-CER,CHIP	2203-005682	SA
C742	C-CER,CHIP	2203-005682	SA
C743	C-CER,CHIP	2203-005682	SA
C744	C-CER,CHIP	2203-005682	SA
C745	C-CER,CHIP	2203-006423	SA
C746	C-CER,CHIP	2203-005682	SA
C749	C-CER,CHIP	2203-000438	SA
C803	C-CER,CHIP	2203-006562	SA
C804	C-CER,CHIP	2203-006562	SA
C805	C-CER,CHIP	2203-005482	SA
C806	C-CER,CHIP	2203-006260	SA
C807	C-CER,CHIP	2203-000812	SA
C808	C-CER,CHIP	2203-006260	SA

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Design LOC	Description	SEC CODE	STATUS
C809	C-CER,CHIP	2203-005482	SA
C810	C-CER,CHIP	2203-000812	SA
C811	C-CER,CHIP	2203-001432	SA
C813	C-CER,CHIP	2203-005482	SA
C814	C-CER,CHIP	2203-001432	SA
C815	C-CER,CHIP	2203-006562	SA
C816	C-CER,CHIP	2203-006562	SA
C817	C-CER,CHIP	2203-006399	SA
C818	C-CER,CHIP	2203-006399	SA
C819	C-CER,CHIP	2203-006562	SA
C820	C-CER,CHIP	2203-005482	SA
C821	C-CER,CHIP	2203-006562	SA
C822	C-CER,CHIP	2203-006562	SA
C823	C-CER,CHIP	2203-005482	SA
C824	C-CER,CHIP	2203-005482	SA
C825	C-CER,CHIP	2203-006562	SA
C828	C-CER,CHIP	2203-006562	SA
C829	C-CER,CHIP	2203-006562	SA
CD502	CONNECTOR-CARD EDGE	3709-001344	SA
CN500	SOCKET-INTERFACE	3710-002465	SA
CN501	CONNECTOR-CARD EDGE	3709-001400	SA
CN600	HEADER-BATTERY	3711-006108	SA
CN700	HEADER-BOARD TO BOARD	3711-005456	SA
CN701	HEADER-BOARD TO BOARD	3711-005933	SA
D500	DIODE-TVS	0406-001231	SA
D501	DIODE-TVS	0406-001231	SA
D502	DIODE-TVS	0406-001231	SA
D504	DIODE-TVS	0406-001200	SA
D505	DIODE-TVS	0406-001203	SA
D600	DIODE-TVS	0406-001223	SA
D601	DIODE-TVS	0406-001223	SA
D700	DIODE-TVS	0406-001231	SA
D701	DIODE-TVS	0406-001231	SA
D702	DIODE-TVS	0406-001231	SA
D703	DIODE-TVS	0406-001231	SA
D704	DIODE-TVS	0406-001231	SA
D705	DIODE-TVS	0406-001208	SA
D706	DIODE-TVS	0406-001208	SA
DUF700	FILTER-LC	2909-001279	SA
F100	DUPLEXER-FEM	2911-000076	SA
F500	FILTER-EMI/ESD	2901-001376	SA
F501	FILTER-EMI SMD	2901-001315	SA
L100	INDUCTOR-SMD	2703-002314	SA
L101	INDUCTOR-SMD	2703-002203	SA
L102	C-CER,CHIP	2203-001385	SA
L103	INDUCTOR-SMD	2703-002558	SA
L104	C-CER,CHIP	2203-001385	SA
L105	INDUCTOR-SMD	2703-002558	SA
L106	INDUCTOR-SMD	2703-002608	SA
L107	INDUCTOR-SMD	2703-001751	SA
L108	INDUCTOR-SMD	2703-002608	SA
L201	BEAD-SMD	3301-001789	SA
L400	INDUCTOR-SMD	2703-002910	SA
L401	INDUCTOR-SMD	2703-001673	SA
L402	INDUCTOR-SMD	2703-002829	SA
L403	BEAD-SMD	3301-001120	SA

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Design LOC	Description	SEC CODE	STATUS
L500	INDUCTOR-SMD	2703-001231	SNA
L600	BEAD-SMD	3301-001438	SA
L601	BEAD-SMD	3301-001438	SA
L602	BEAD-SMD	3301-001438	SA
L603	BEAD-SMD	3301-001438	SA
L701	BEAD-SMD	3301-001534	SA
L702	BEAD-SMD	3301-001659	SA
L800	BEAD-SMD	3301-001729	SA
L801	BEAD-SMD	3301-001812	SA
L802	BEAD-SMD	3301-001812	SA
L803	BEAD-SMD	3301-001729	SA
MIC600	MIC-CONDENSOR	3003-001107	SA
OSC100	CRYSTAL-SMD	2801-004426	SA
OSC300	CRYSTAL-SMD	2801-004285	SA
OSC400	CRYSTAL-SMD	2801-003856	SA
PAM100	IC-POWER AMP	1201-002460	SA
R100	R-CHIP	2007-000140	SA
R101	R-CHIP	2007-001313	SA
R102	R-CHIP	2007-000143	SA
R200	R-CHIP	2007-000148	SA
R201	R-CHIP	2007-000758	SA
R204	R-CHIP	2007-000171	SA
R206	R-CHIP	2007-000758	SA
R207	R-CHIP	2007-000140	SA
R208	R-CHIP	2007-000148	SA
R209	R-CHIP	2007-001319	SA
R210	R-CHIP	2007-001319	SA
R211	R-CHIP	2007-001319	SA
R212	R-CHIP	2007-001319	SA
R213	R-CHIP	2007-000148	SA
R307	R-CHIP	2007-000162	SA
R308	R-CHIP	2007-000162	SA
R309	R-CHIP	2007-000162	SA
R311	R-CHIP	2007-000170	SA
R312	R-CHIP	2007-000143	SA
R314	R-CHIP	2007-008055	SA
R315	R-CHIP	2007-000162	SA
R317	R-CHIP	2007-008588	SA
R318	R-CHIP	2007-008588	SA
R319	R-CHIP	2007-008055	SA
R323	R-CHIP	2007-007009	SA
R324	R-CHIP	2007-001306	SA
R400	R-CHIP	2007-007573	SA
R401	R-CHIP	2007-000162	SA
R402	R-CHIP	2007-008354	SA
R403	R-CHIP	2007-000171	SA
R404	R-CHIP	2007-007100	SA
R405	R-CHIP	2007-000162	SA
R406	R-CHIP	2007-009154	SNA
R407	R-CHIP	2007-007311	SA
R409	R-CHIP	2007-000148	SA
R410	R-CHIP	2007-000141	SA
R411	R-CHIP	2007-000162	SA
R412	R-CHIP	2007-002796	SA
R413	R-CHIP	2007-009112	SNA
R414	R-CHIP	2007-000758	SA

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Design LOC	Description	SEC CODE	STATUS
R500	R-CHIP	2007-001333	SA
R501	R-CHIP	2007-001339	SA
R503	R-CHIP	2007-001333	SA
R505	R-CHIP	2007-007142	SA
R506	R-CHIP	2007-007334	SA
R507	R-CHIP	2007-000162	SA
R508	R-CHIP	2007-001333	SA
R509	R-CHIP	2007-001333	SA
R511	R-CHIP	2007-000140	SA
R512	R-CHIP	2007-000162	SA
R513	R-CHIP	2007-000162	SA
R514	R-CHIP	2007-000159	SA
R515	R-CHIP	2007-000162	SA
R516	R-CHIP	2007-000170	SA
R517	R-CHIP	2007-000170	SA
R518	R-CHIP	2007-000166	SA
R600	R-CHIP	2007-007318	SA
R601	R-CHIP	2007-007528	SA
R602	R-CHIP	2007-000148	SA
R603	R-CHIP	2007-007528	SA
R604	R-CHIP	2007-007318	SA
R605	R-CHIP	2007-002796	SA
R606	R-CHIP	2007-007107	SA
R609	R-CHIP	2007-008516	SA
R610	R-CHIP	2007-008800	SA
R700	R-CHIP	2007-008055	SA
R702	R-CHIP	2007-008055	SA
R703	R-CHIP	2007-007489	SA
R704	R-CHIP	2007-008516	SA
R705	R-CHIP	2007-008516	SA
R706	R-CHIP	2007-000157	SA
R707	R-CHIP	2007-000162	SA
R708	R-CHIP	2007-000162	SA
R711	R-CHIP	2007-000171	SA
R801	R-CHIP	2007-000162	SA
R803	R-CHIP	2007-000171	SA
R804	R-CHIP	2007-000171	SA
R806	R-CHIP	2007-000157	SA
R807	R-CHIP	2007-008516	SA
R809	R-CHIP	2007-008045	SA
R810	R-CHIP	2007-008045	SA
R811	R-CHIP	2007-001301	SA
R812	R-CHIP	2007-001301	SA
RFS100	CONNECTOR-COAXIAL	3705-001358	SA
TA100	C-TA,CHIP	2404-001496	SA
TA300	C-TA,CHIP	2404-001225	SA
TA400	C-TA,CHIP	2404-001381	SA
TA401	C-TA,CHIP	2404-001225	SA
TA500	C-TA,CHIP	2404-001381	SA
TA600	C-TA,CHIP	2404-001414	SA
TA601	C-TA,CHIP	2404-001225	SA
TA602	C-TA,CHIP	2404-001381	SA
TA800	C-TA,CHIP	2404-001396	SA
TA801	C-TA,CHIP	2404-001381	SA
TAC700	SWITCH-TACT	3404-001152	SA
TC801	C-TA,CHIP	2404-001396	SA

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Design LOC	Description	SEC CODE	STATUS
TR400	TR-DIGITAL	0504-001151	SA
TR500	FET-SILICON	0505-002111	SA
U101	C-CER,CHIP	2203-005736	SA
U104	C-CER,CHIP	2203-005736	SA
U106	IC-TRANSCEIVER	1205-003093	SA
U1220	C-CER,CHIP	2203-000812	SA
U200	IC-COMM. CONTROLLER	1205-003082	SA
U300	IC-POSI.FIXED REG.	1203-004135	SA
U301	IC-CMOS LOGIC	0801-003022	SA
U303	IC-CODEC	1205-003210	SA
U305	IC-POSI.FIXED REG.	1203-003787	SA
U400	IC-POSI.FIXED REG.	1203-003737	SA
U401	IC-POSI.FIXED REG.	1203-003787	SA
U402	IC-POWER SUPERVISOR	1203-004382	SA
U403	IC-DEMODULATOR	1204-002688	SA
U500	IC-ANALOG SWITCH	1001-001394	SA
U501	IC-POSI.FIXED REG.	1203-003815	SA
U600	IC-ANALOG MULTIPLEX	1001-001349	SA
U704	IC-POSI.FIXED REG.	1203-003688	SA
U7047	IC-CMOS LOGIC	0801-003012	SA
U705	C-CER,CHIP	2203-006562	SA
U706	IC-TRANSCEIVER	1205-002942	SA
U800	IC-AUDIO AMP	1201-002511	SA
U801	IC-CODEC	1205-003214	SA
U802	IC-ANALOG SWITCH	1001-001394	SA
U803	IC-POSI.FIXED REG.	1203-003737	SA
U804	IC-ANALOG SWITCH	1001-001394	SA
UEP300	IC-VIDEO AMP	1201-002147	SA
UME300	IC-MCP	1108-000112	SA
V501	VARISTOR	1405-001177	SA
V502	VARISTOR	1405-001177	SA
V503	VARISTOR	1405-001177	SA
V504	VARISTOR	1405-001177	SA
V505	VARISTOR	1405-001177	SA
VR600	THERMISTOR-NTC	1404-001221	SA
ZD600	DIODE-ZENER	0403-001547	SA

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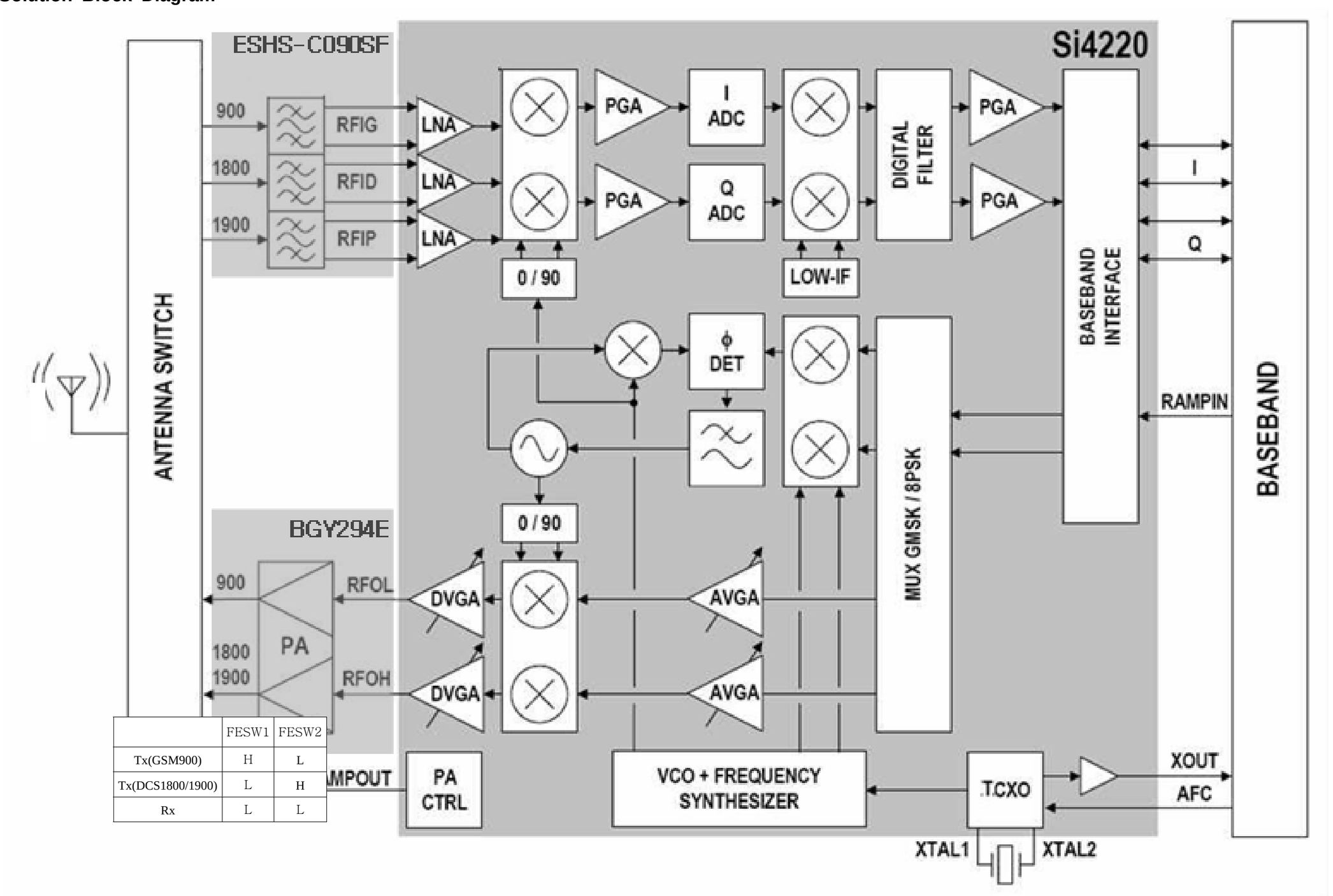
7. Block Diagrams

7-1. RF Solution Block Diagram



	FESW1	FESW2
Tx(GSM900)	H	L
Tx(DCS1800/1900)	L	H
Rx	L	L

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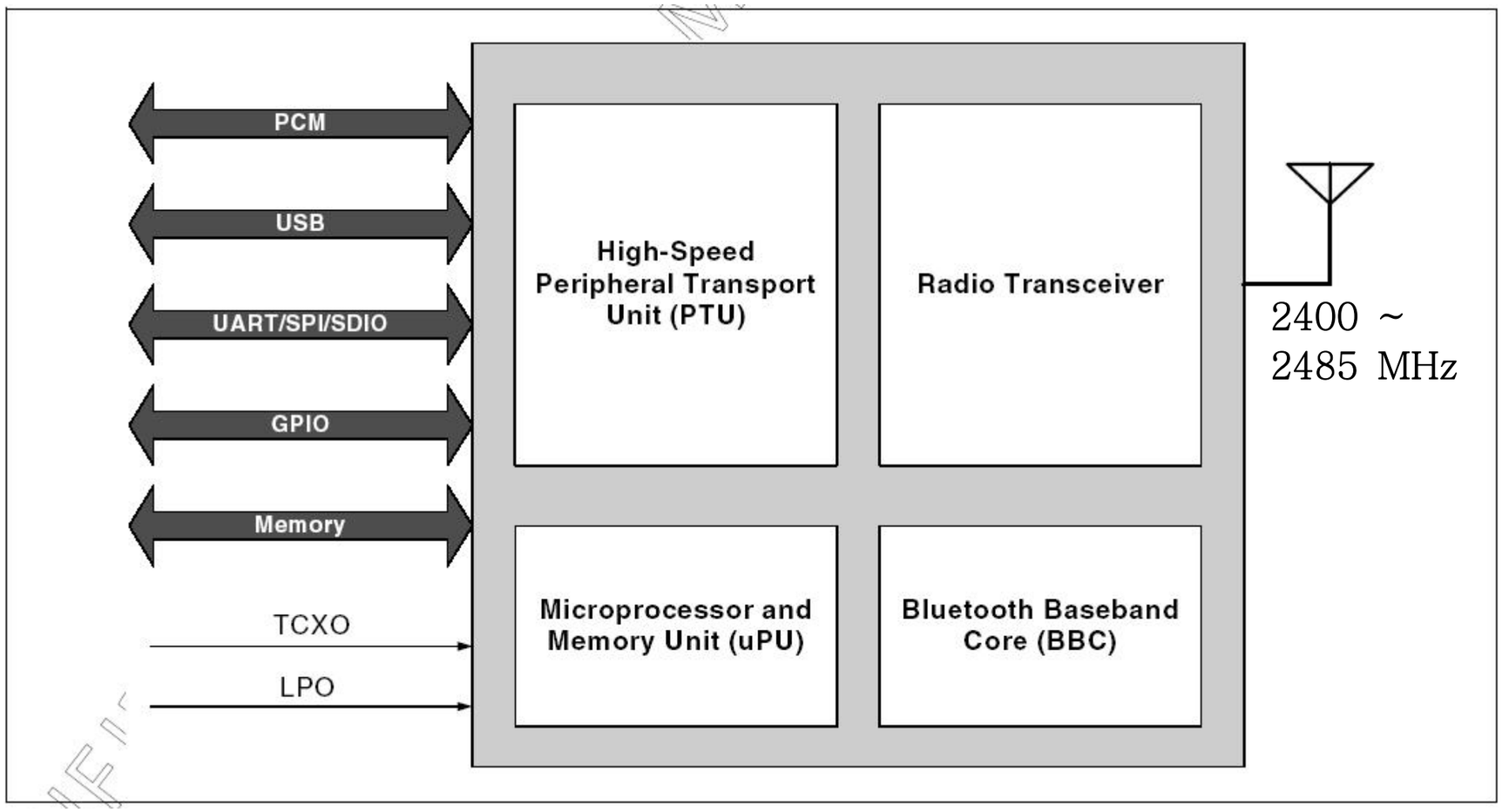
7-2. BT Solution Block Diagram



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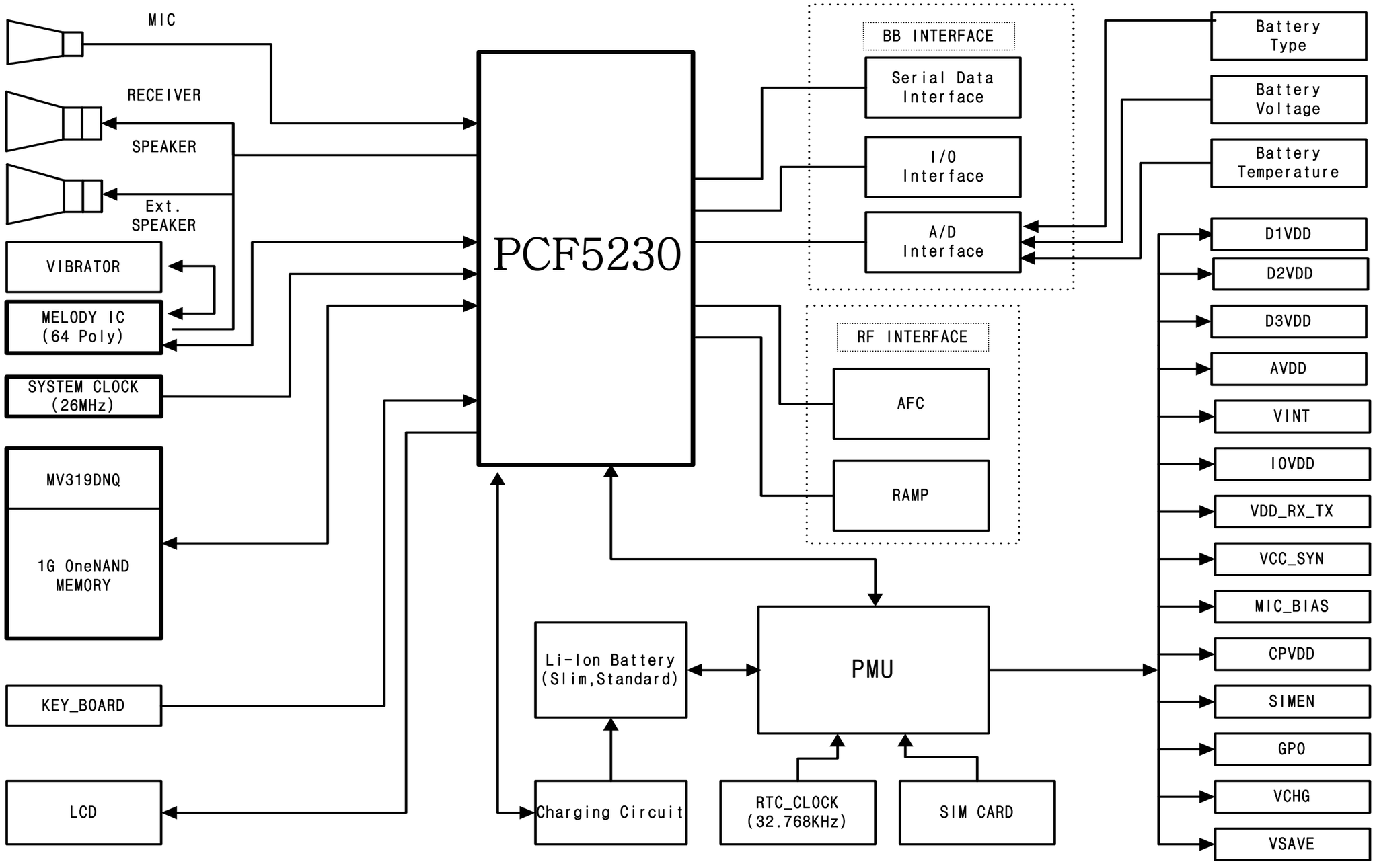
7-3. Base Band Solution Block Diagram



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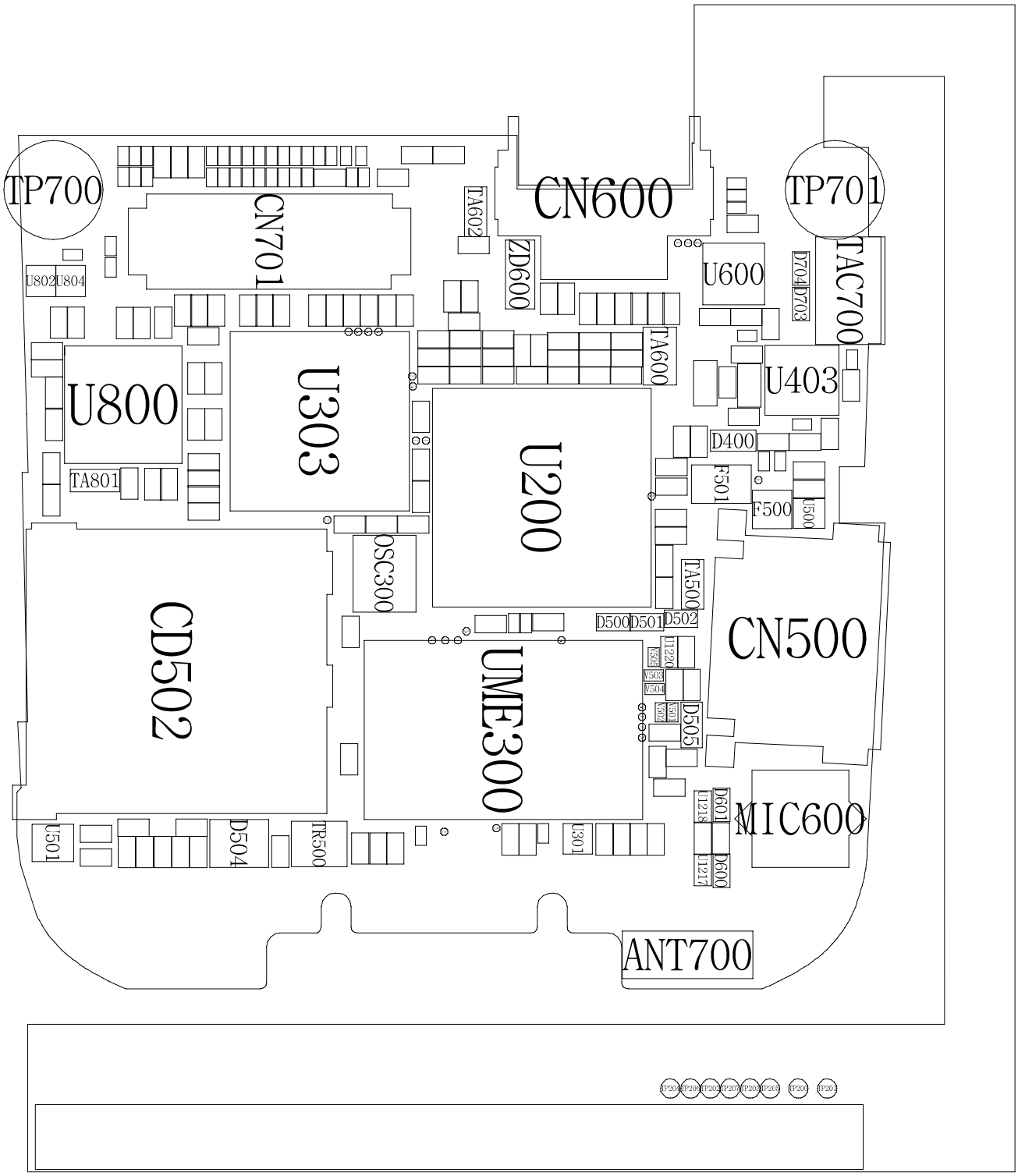
8. PCB Diagrams

Top



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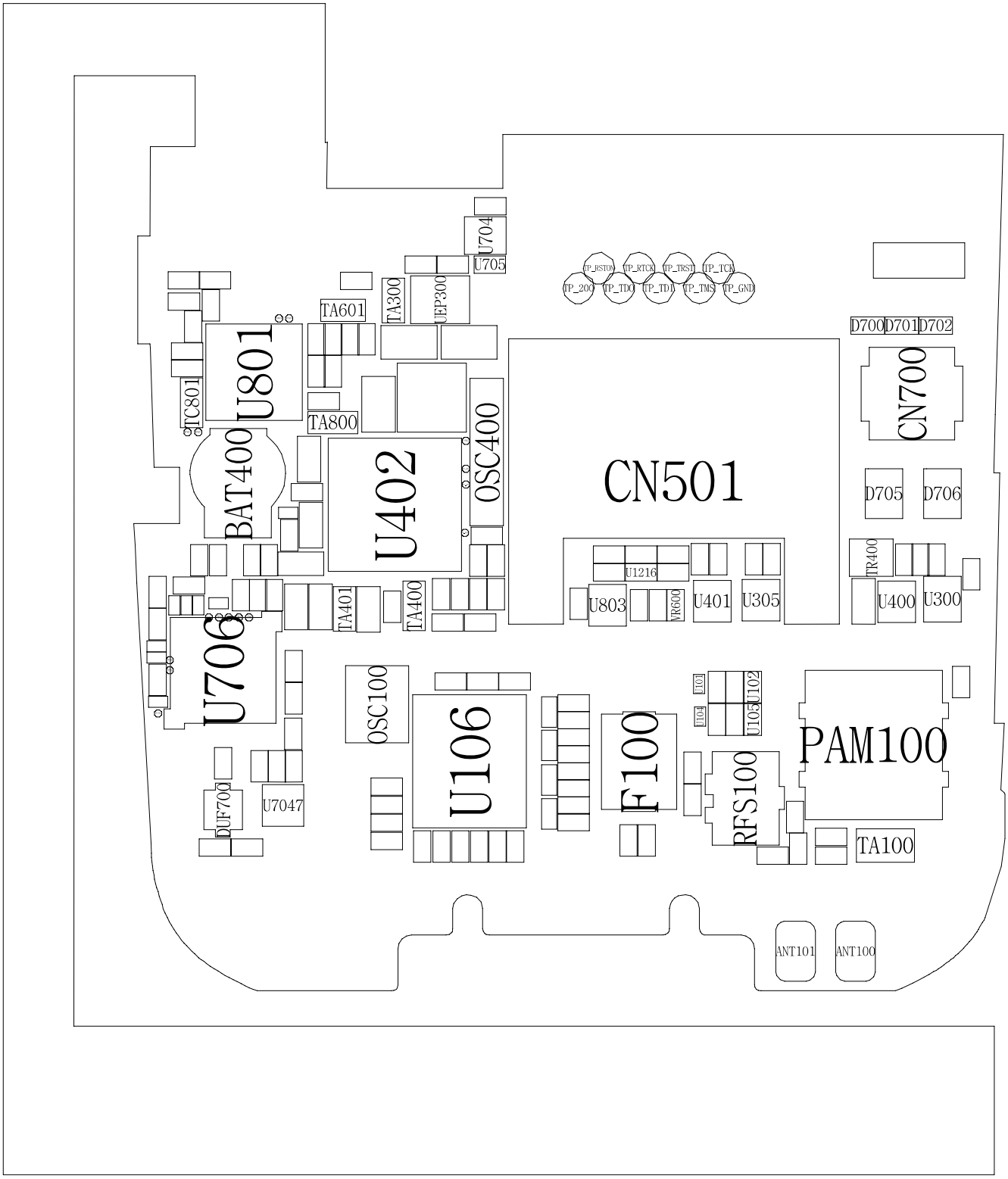
Bottom



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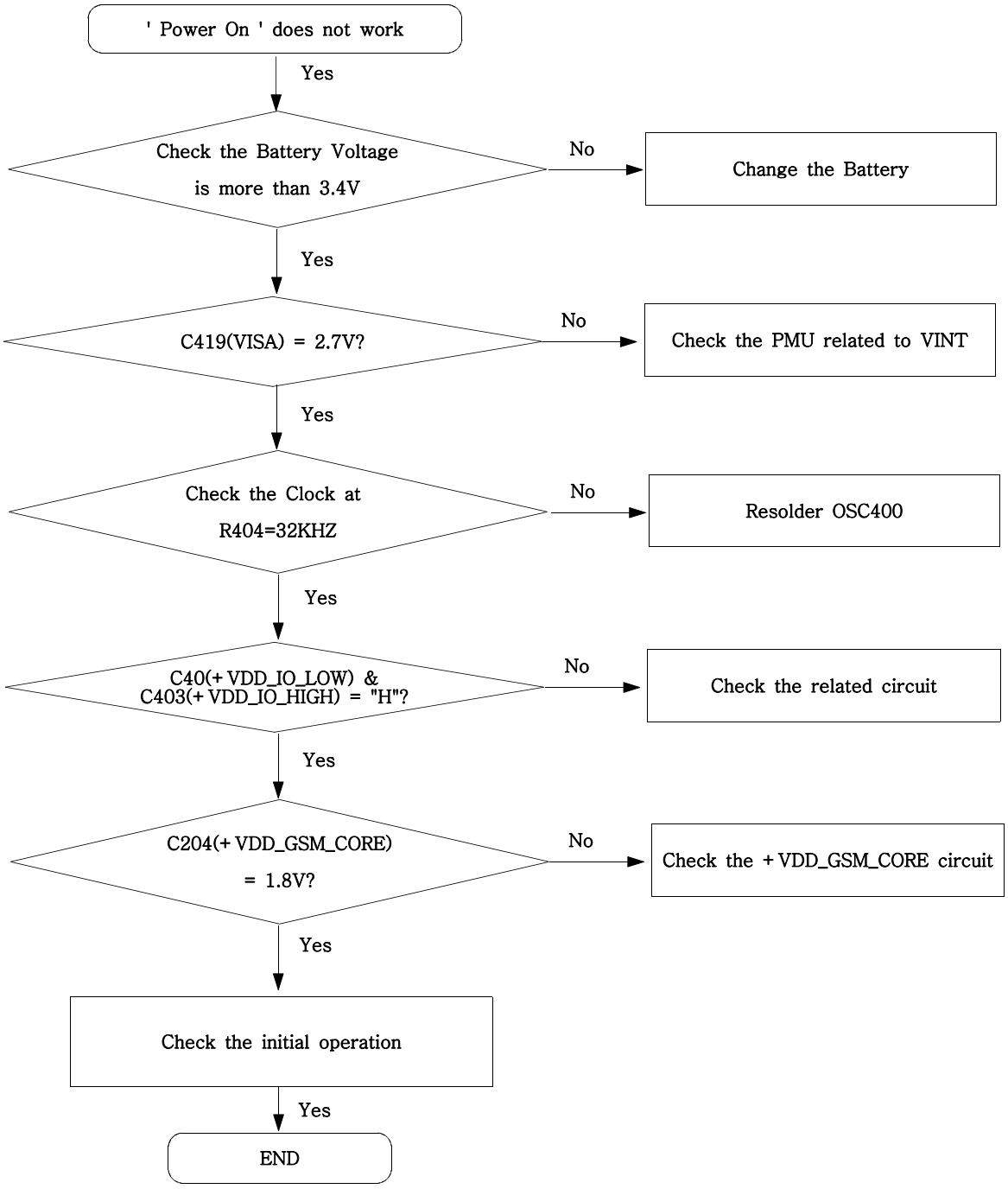
9. Flow Chart of Troubleshooting

9-1. Power On



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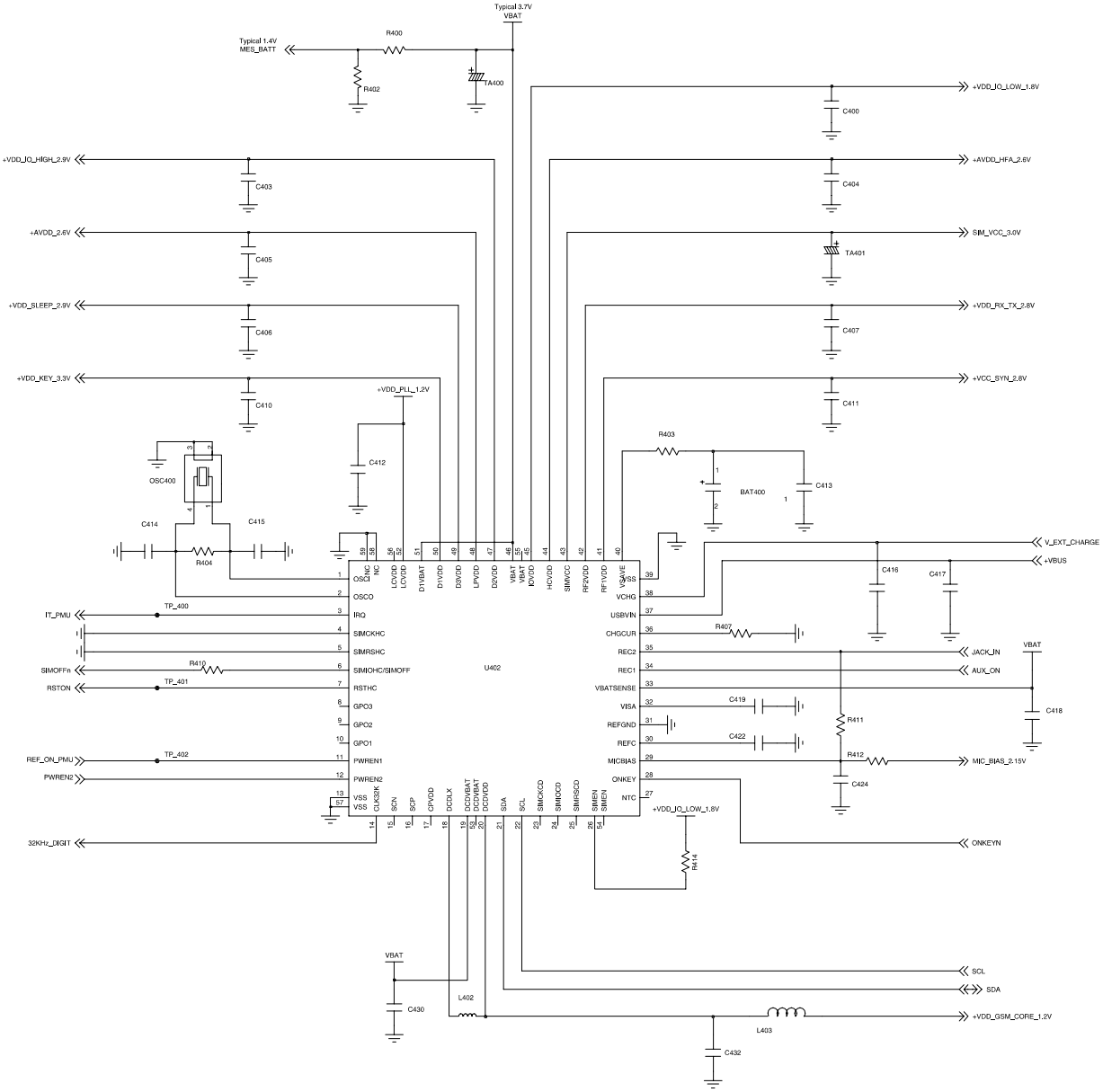

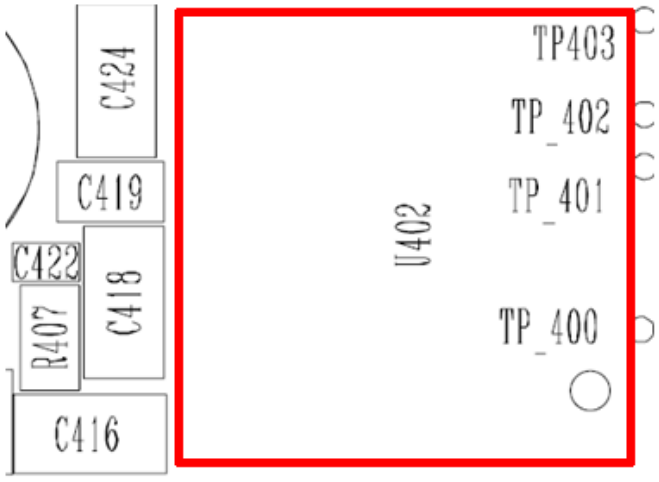

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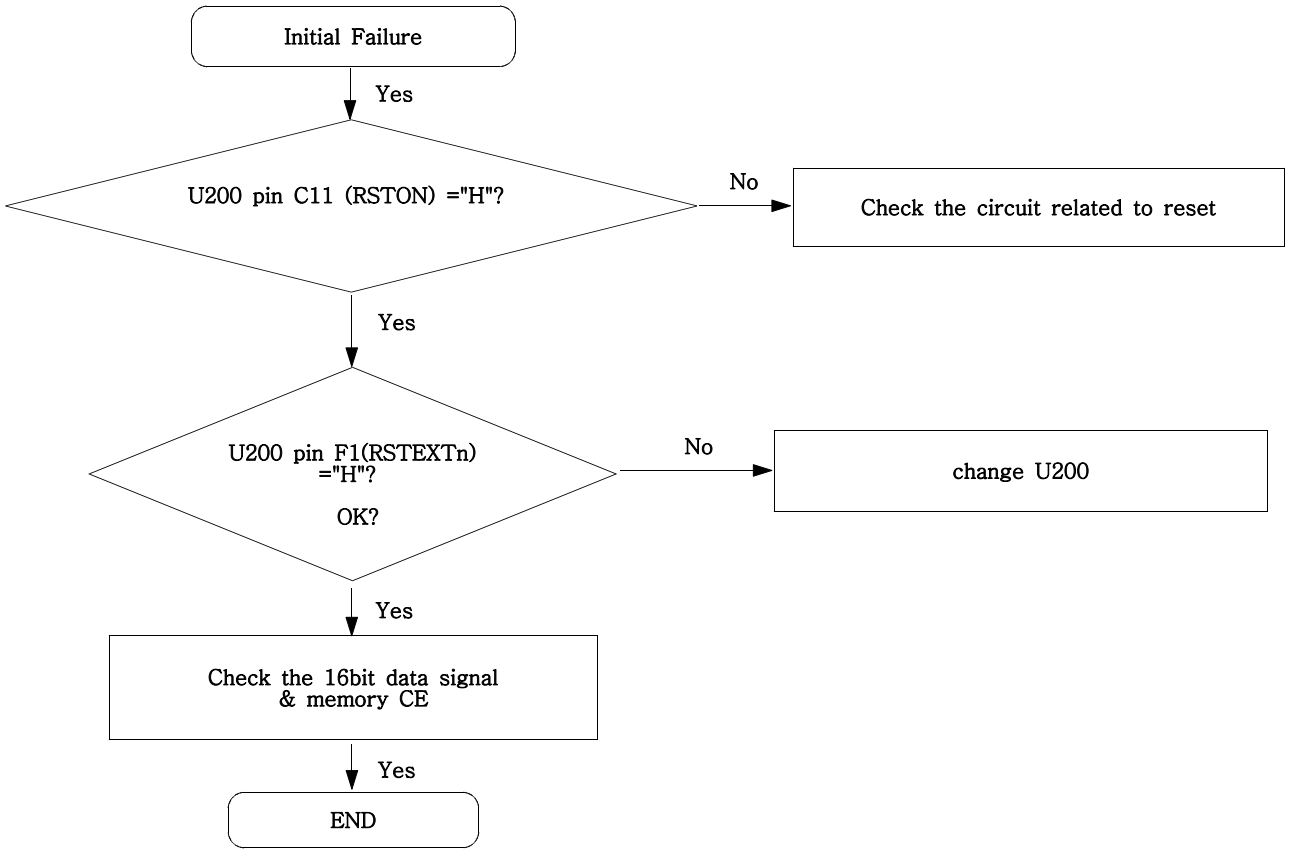
9-2. Initial



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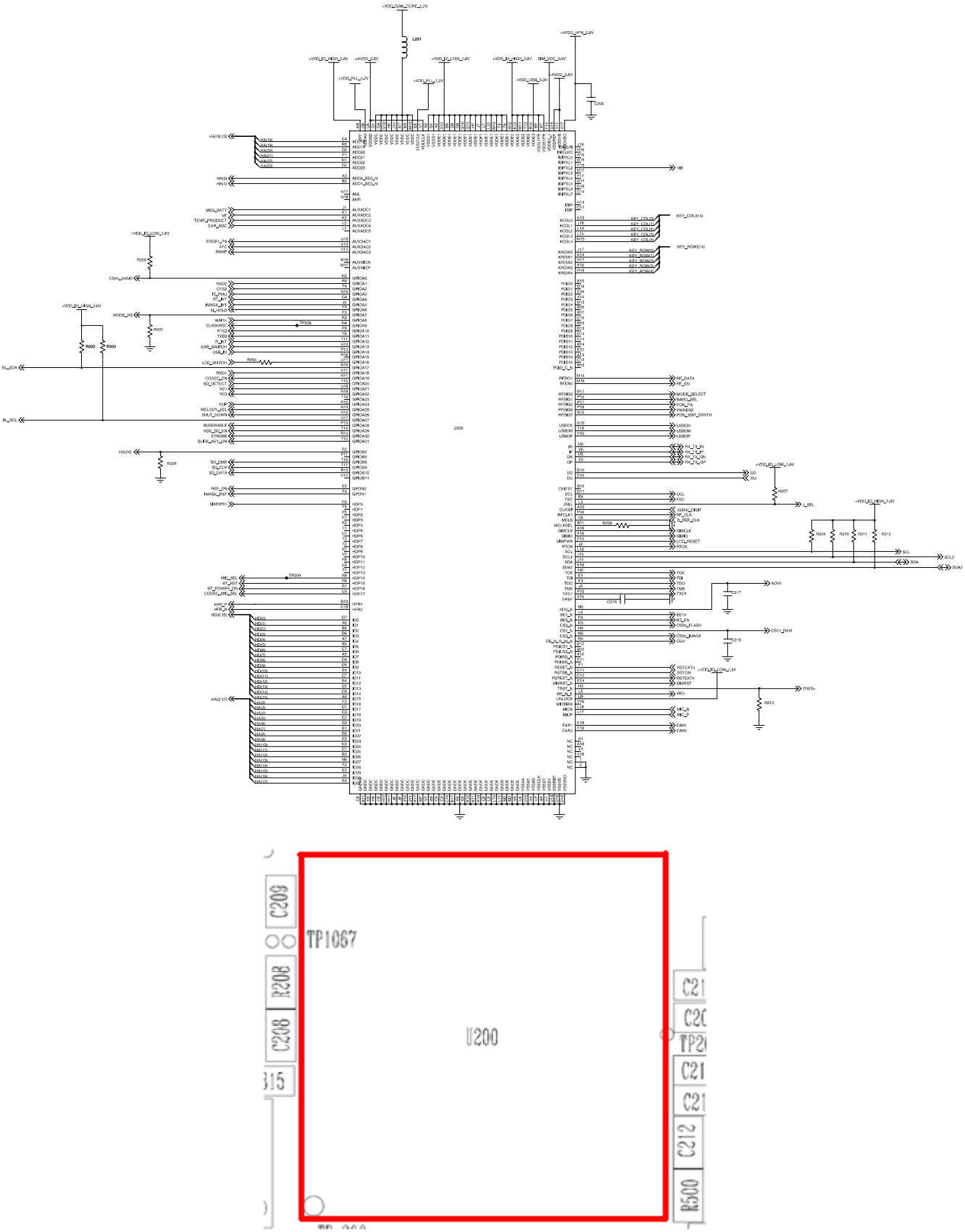

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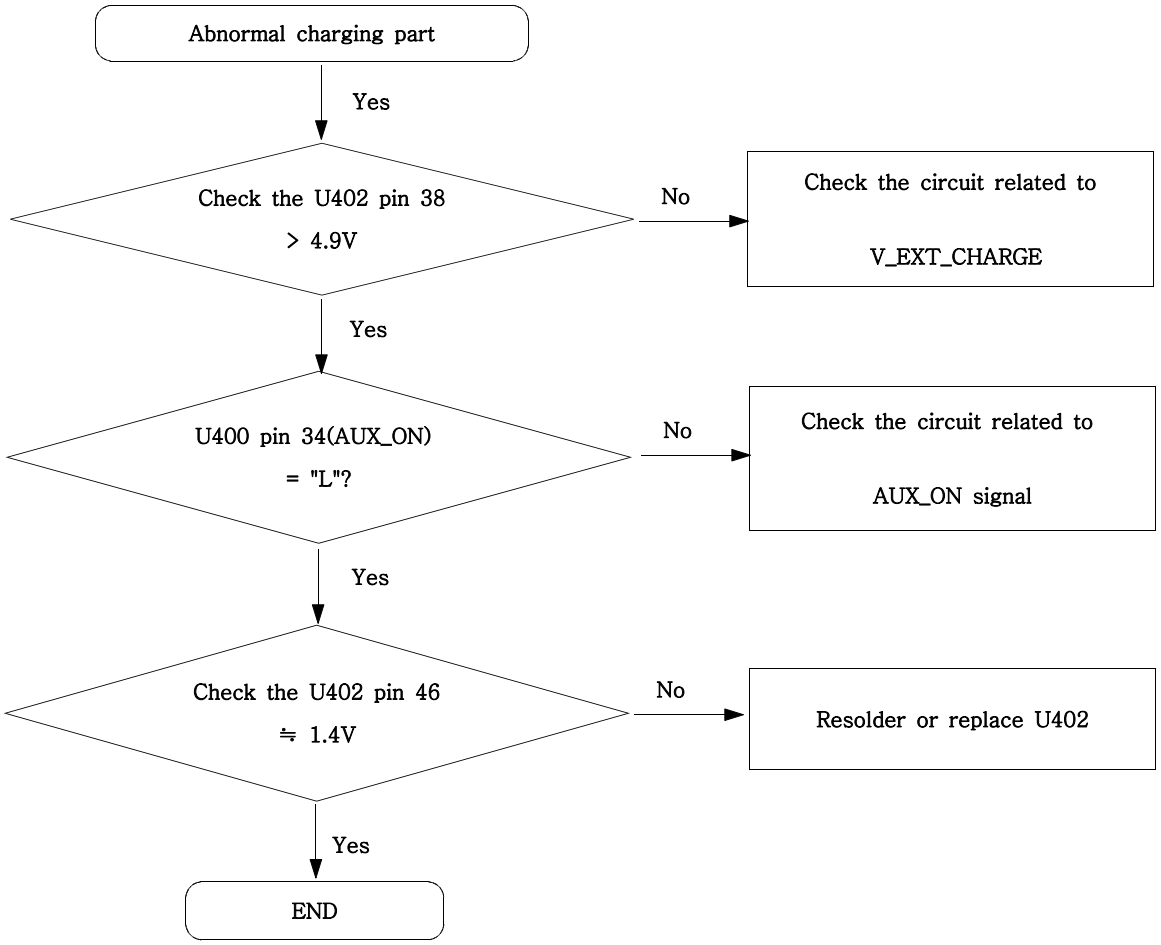

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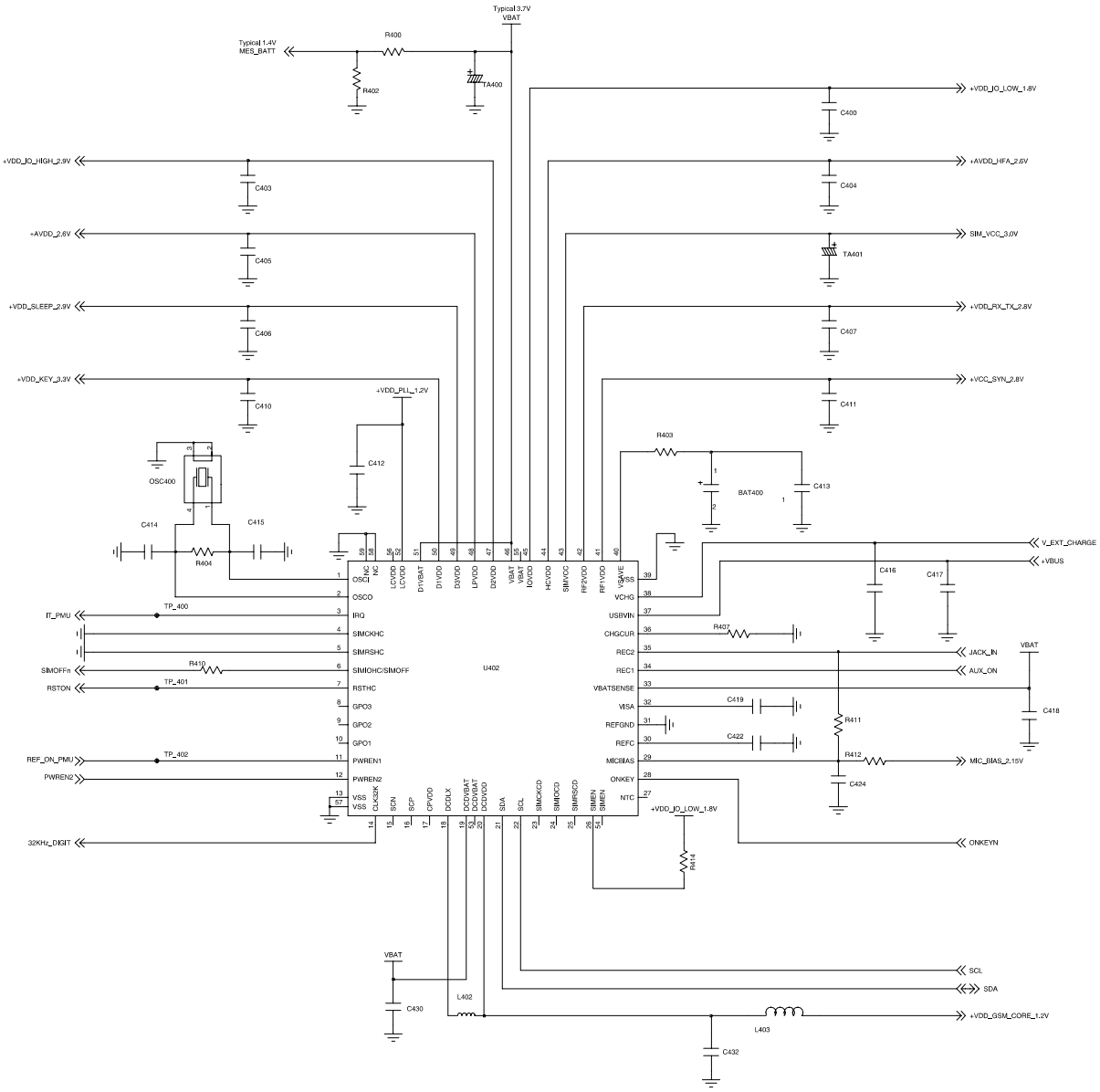

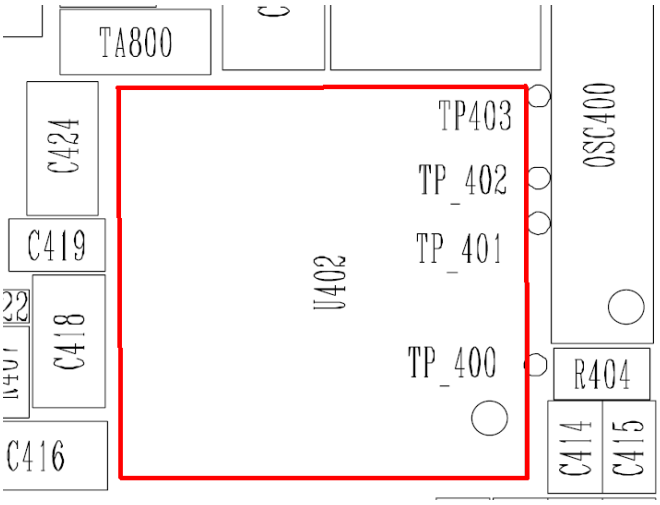

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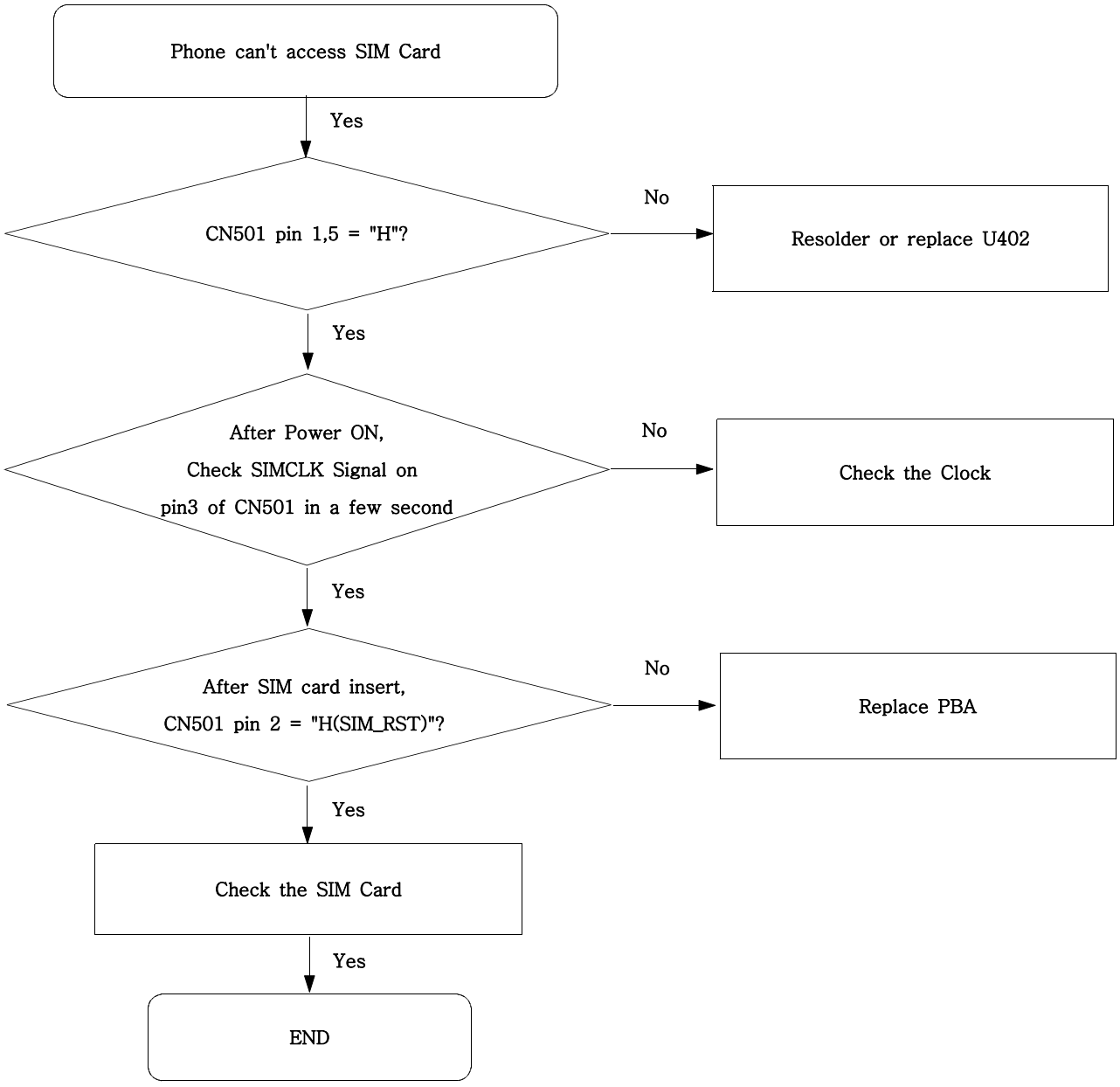

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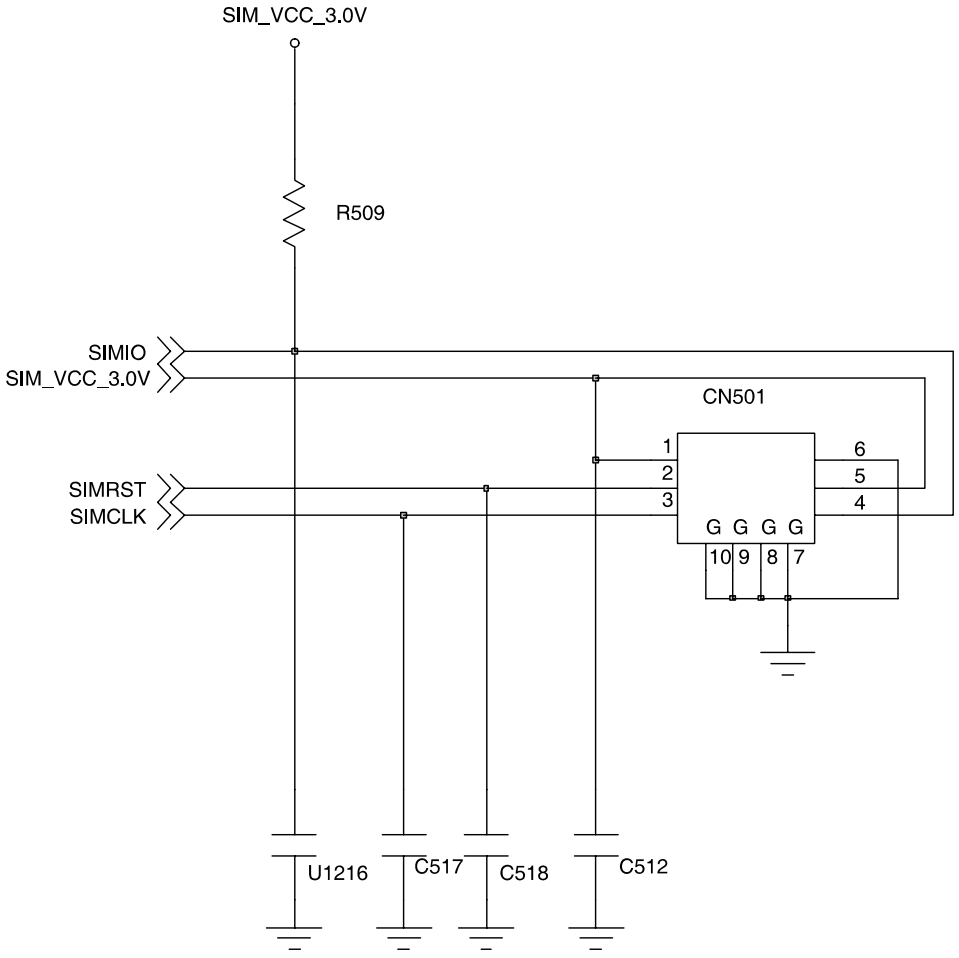

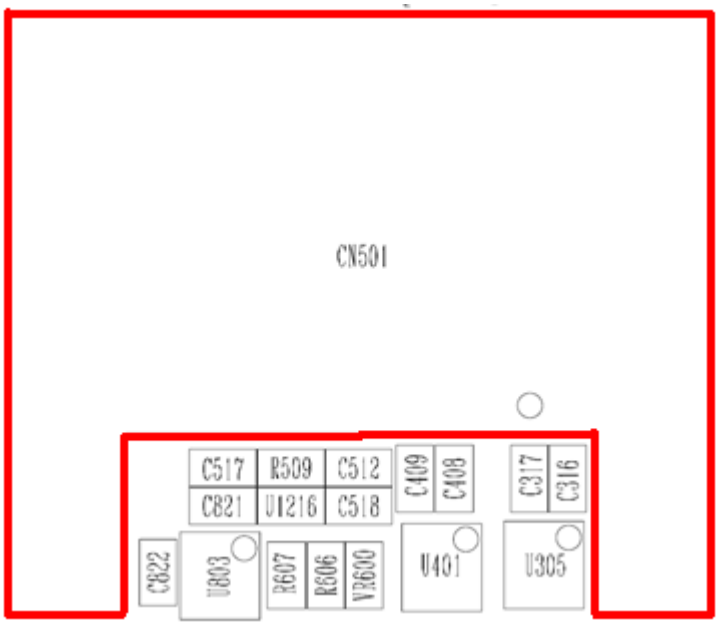

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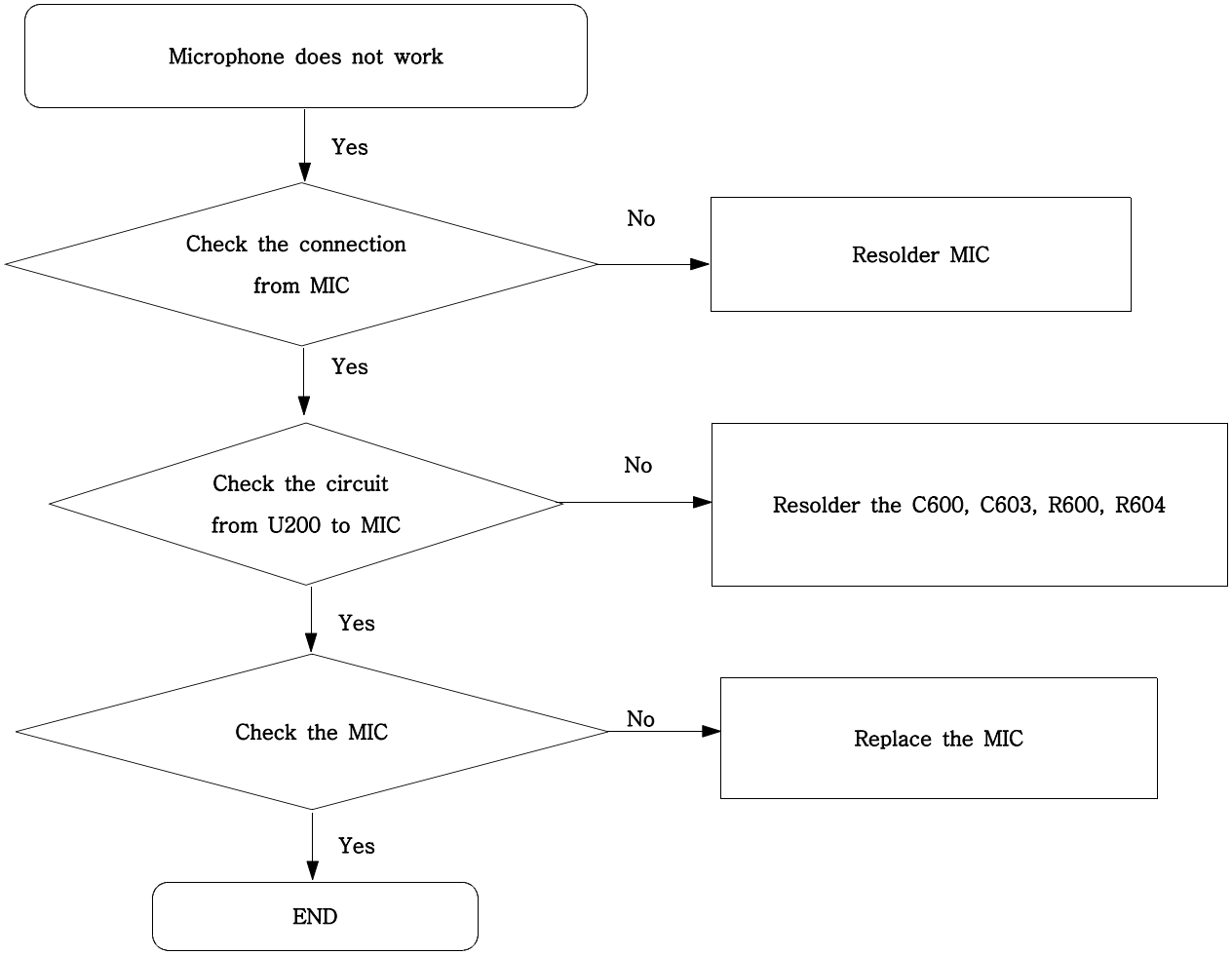

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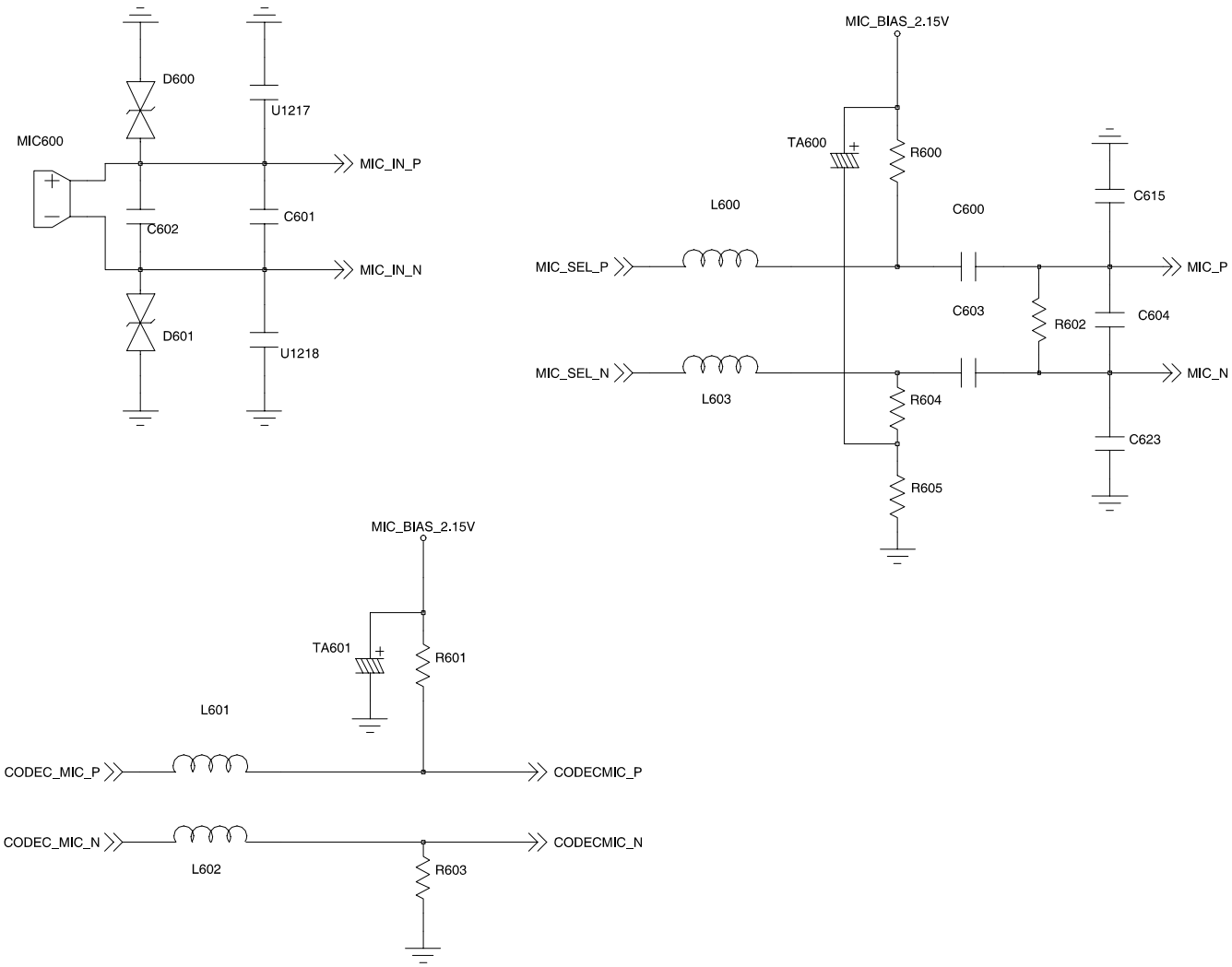

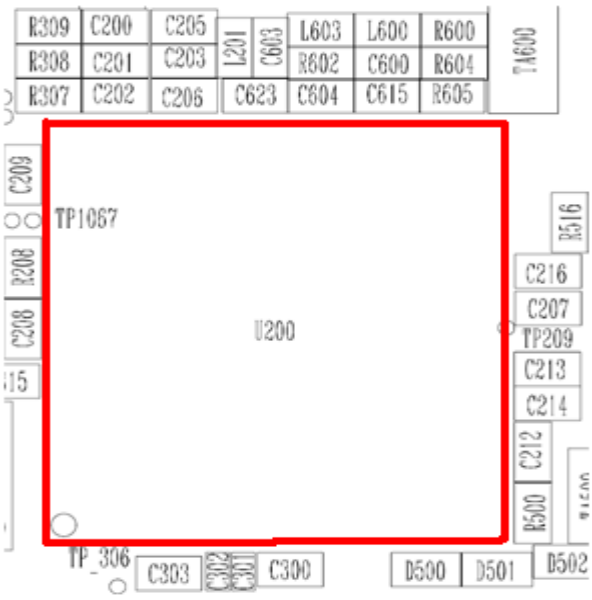

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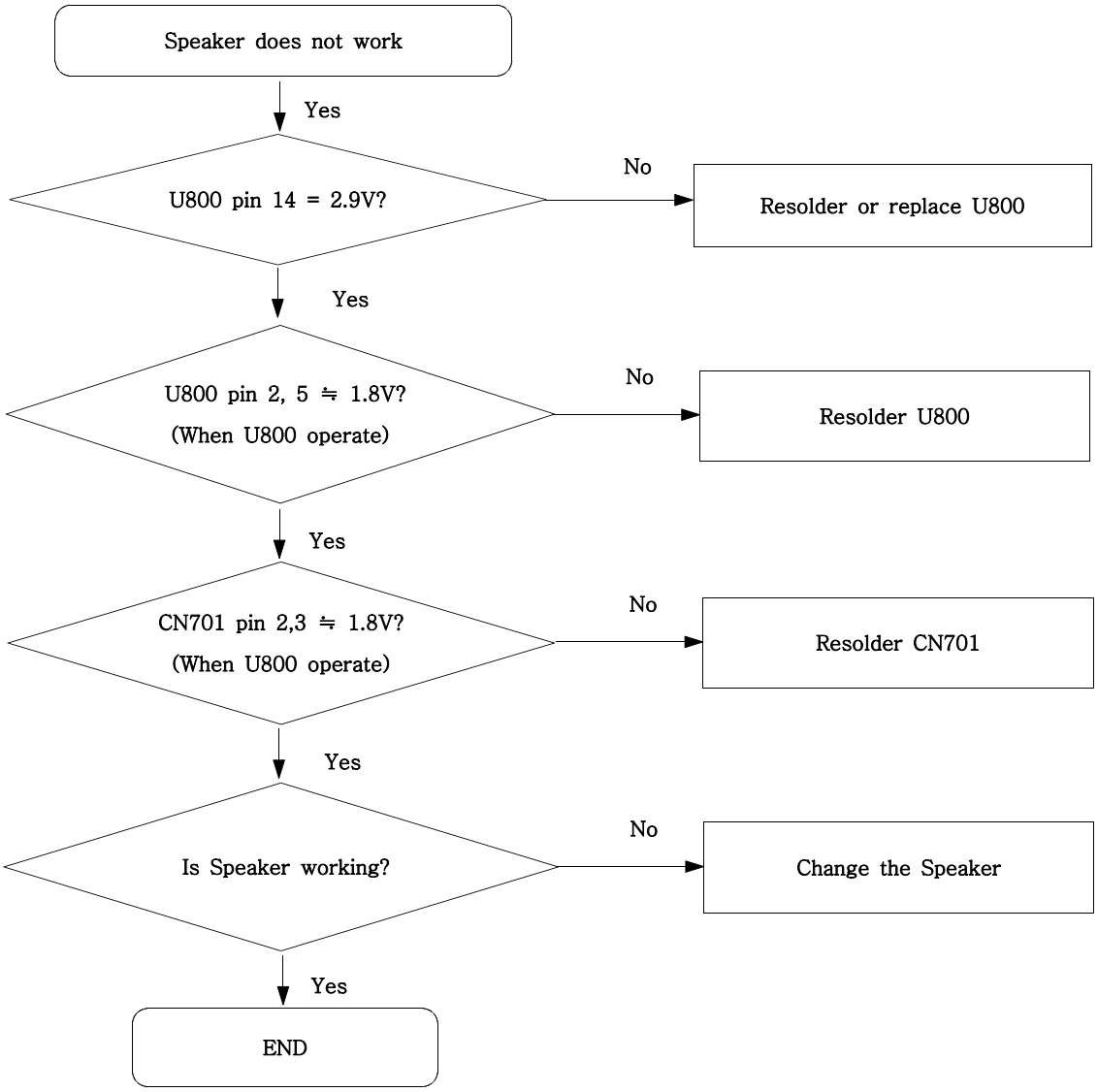
9-6. Speaker Part(Melody)



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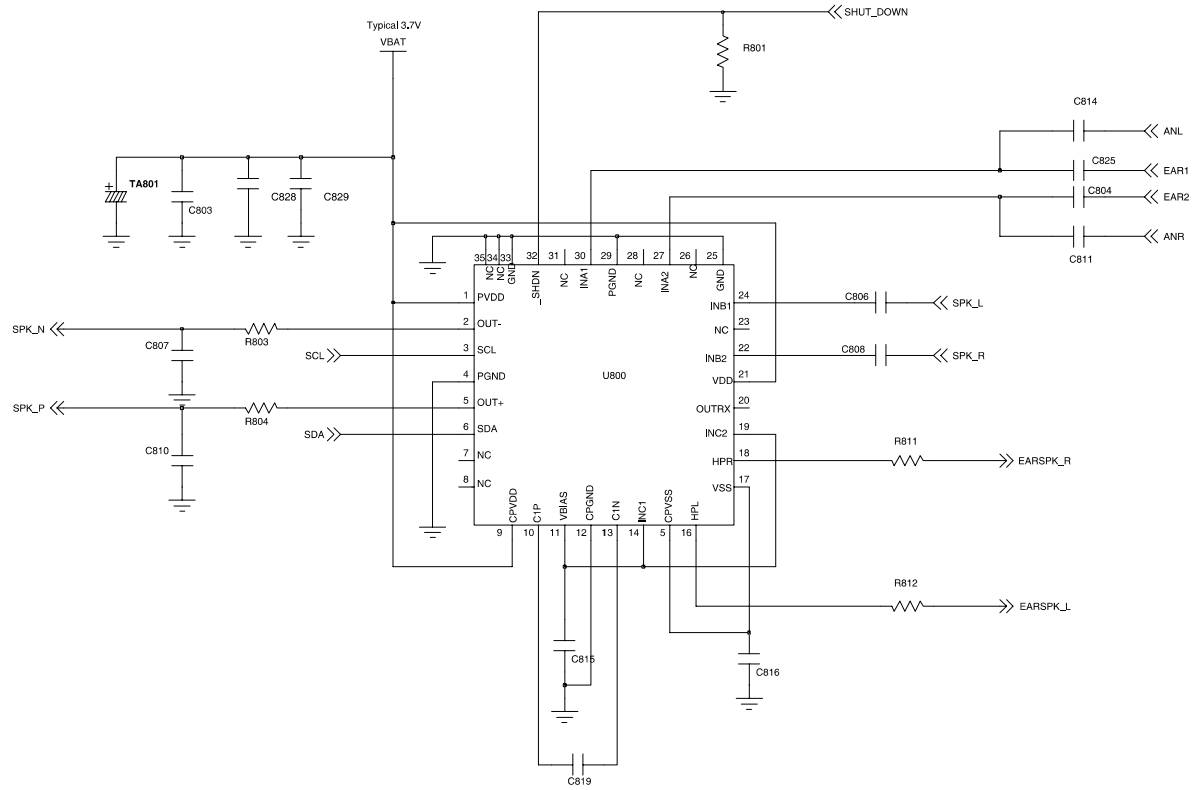

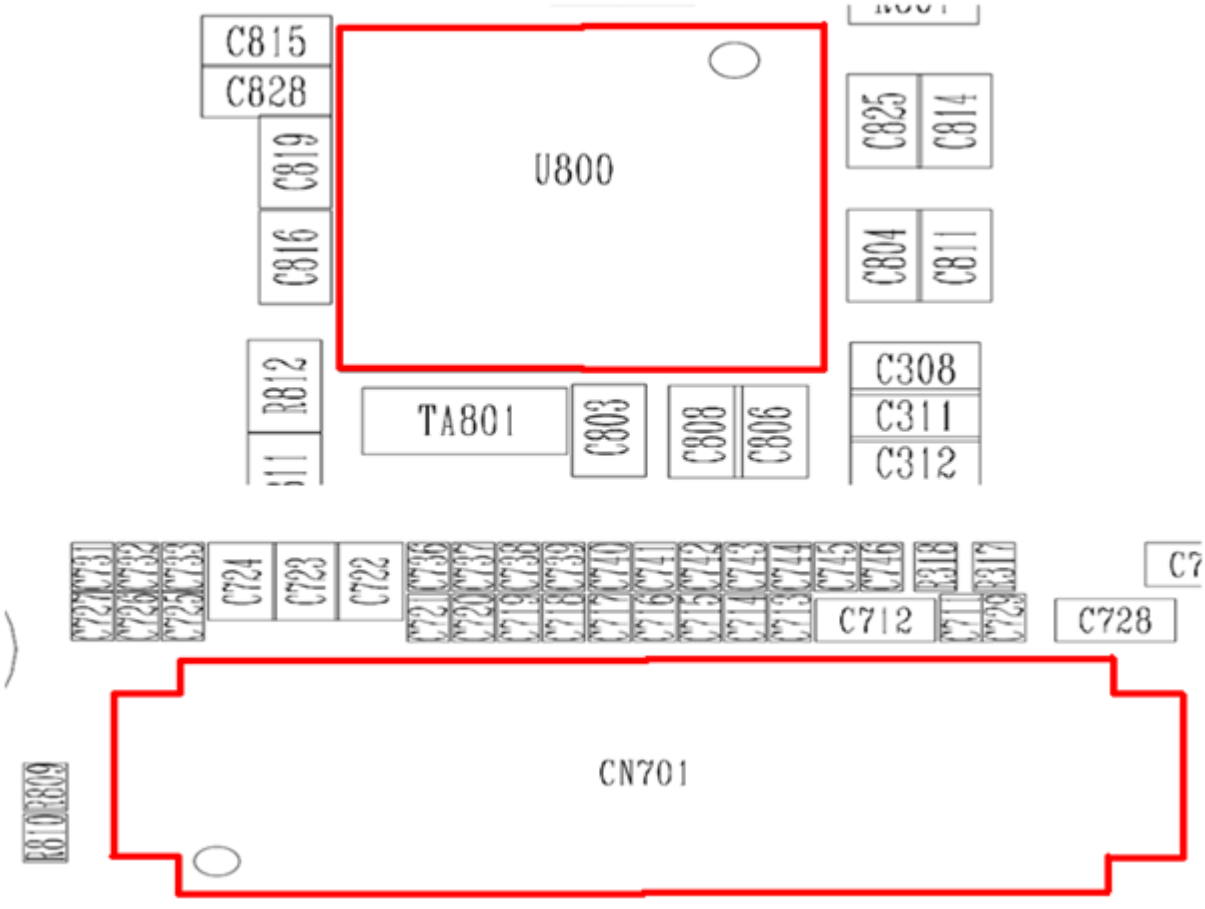

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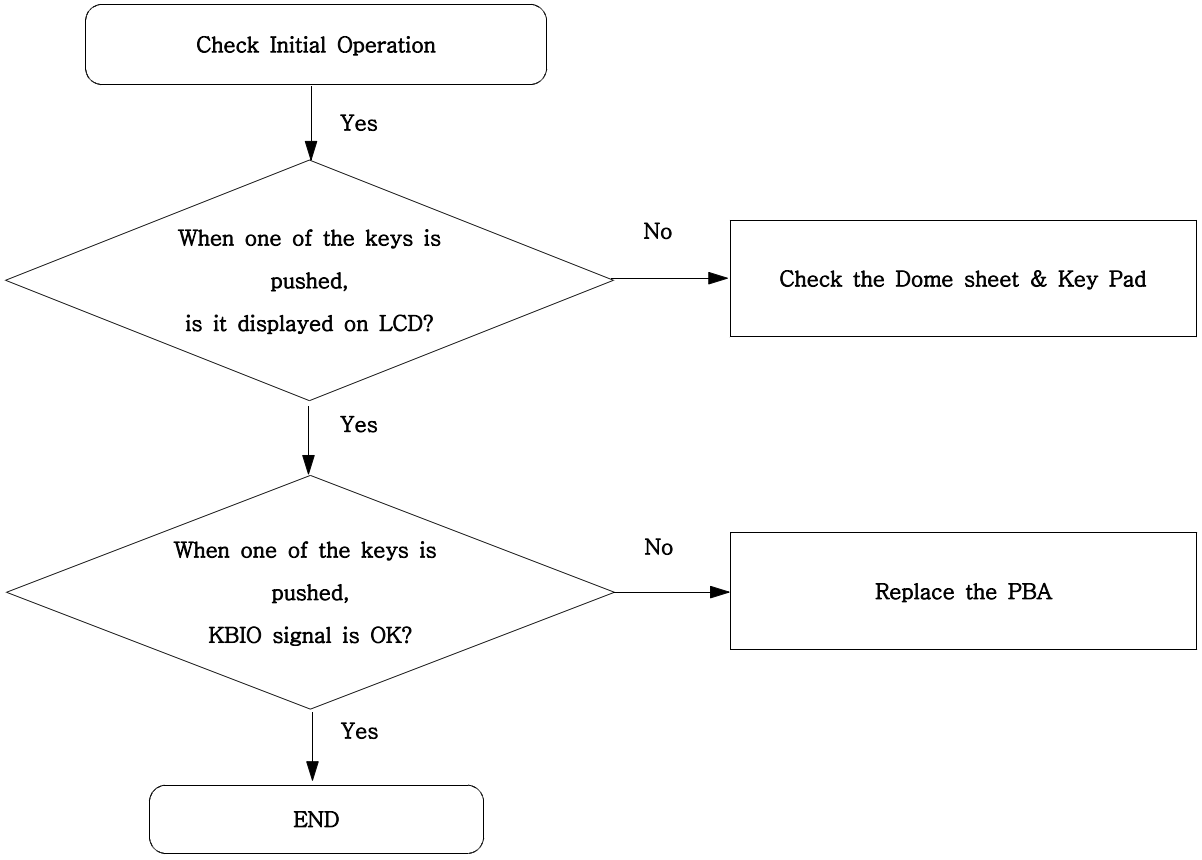
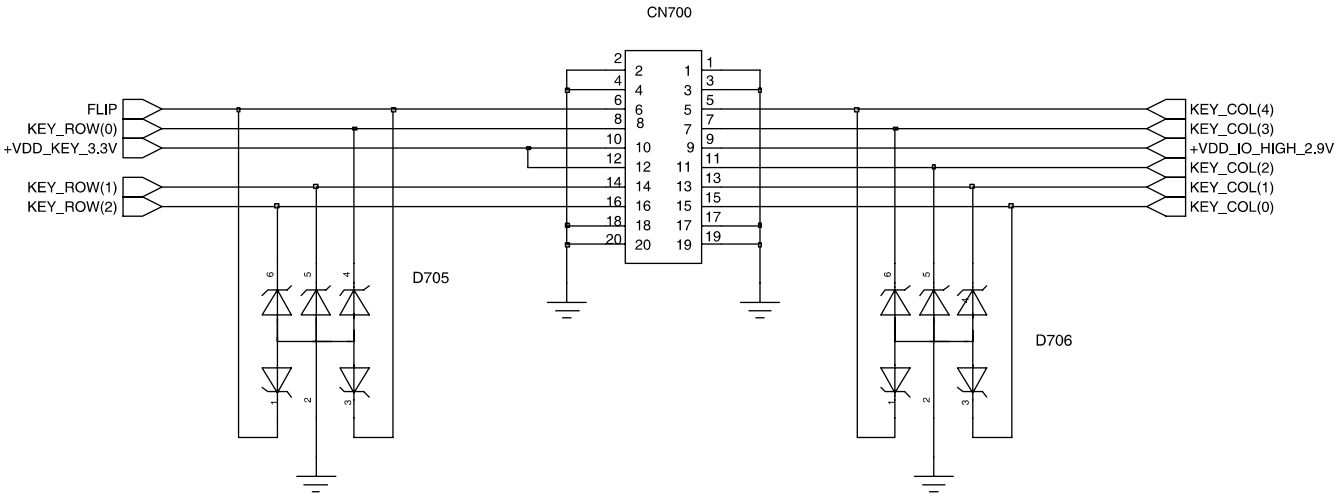
9-7. Key Data Input





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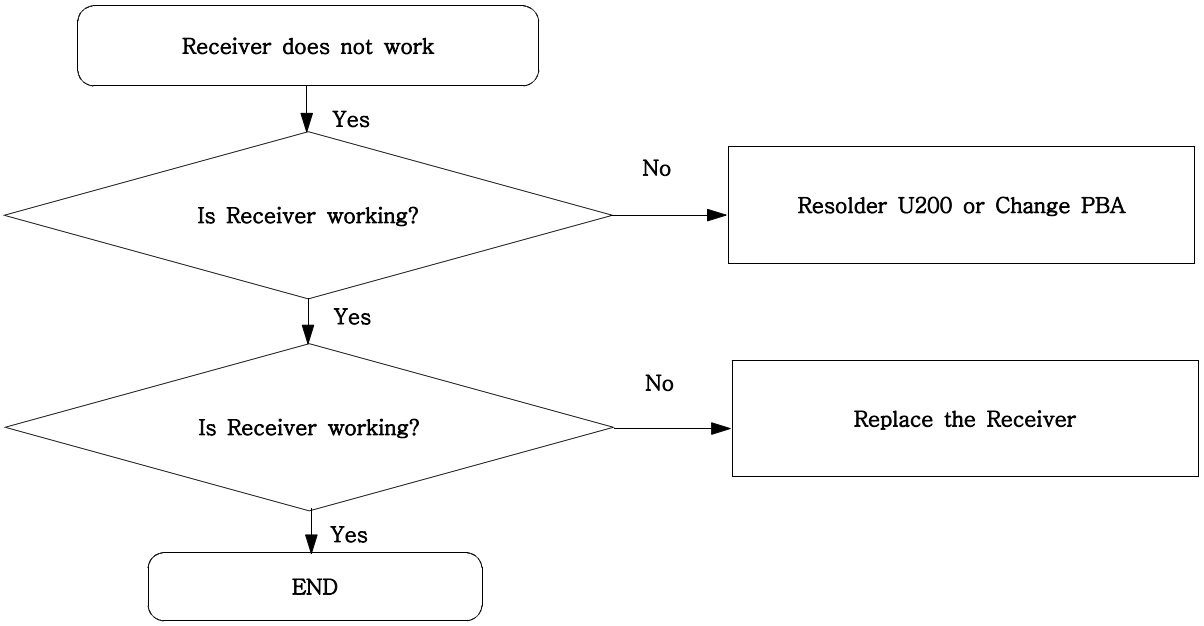
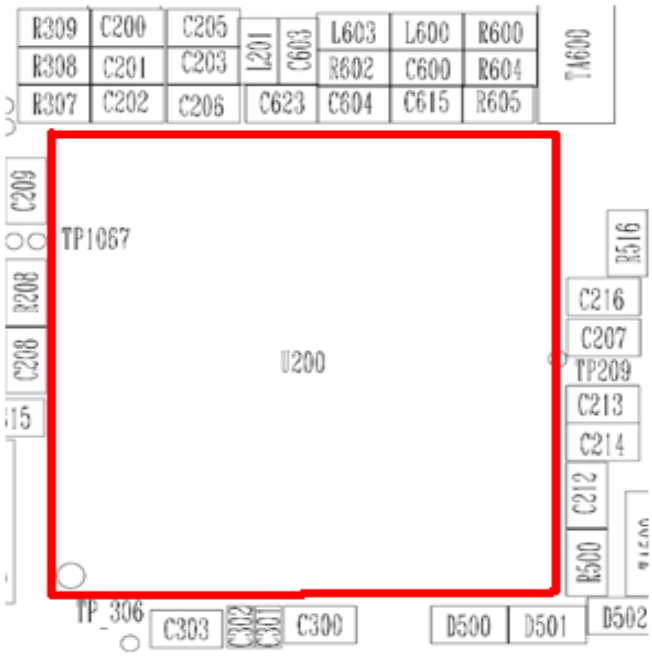
9-8. Receiver Part





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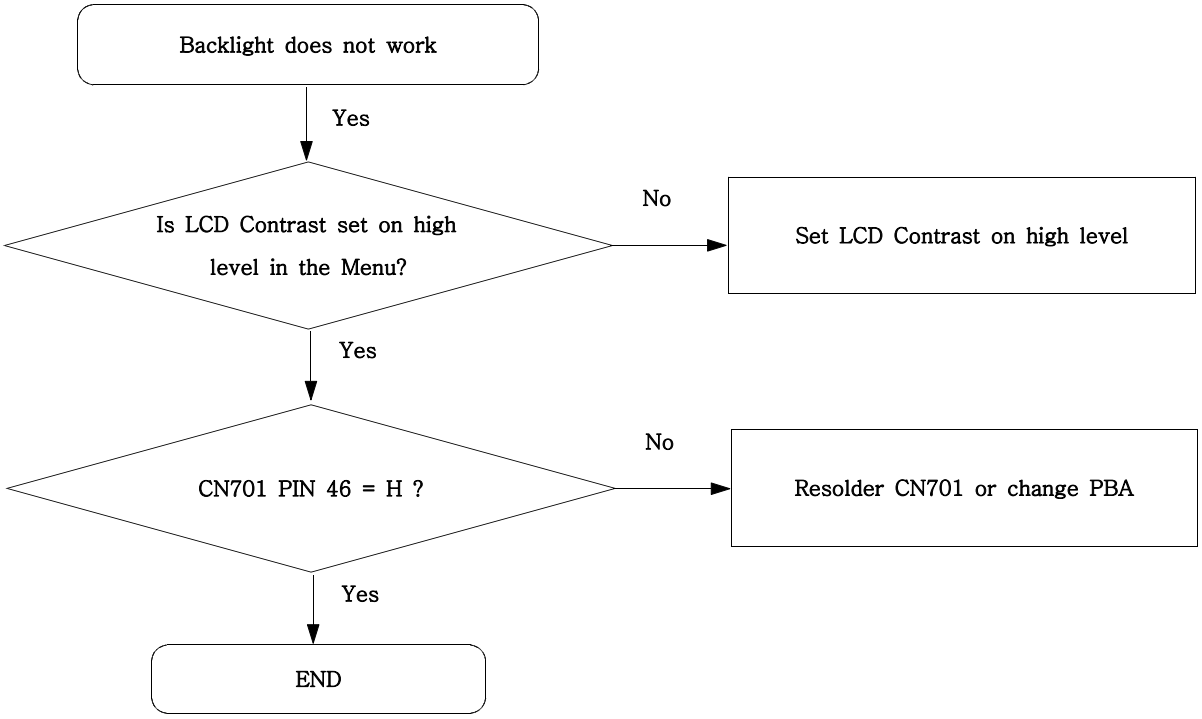
9-9. Back Light (for Color Main LCD)



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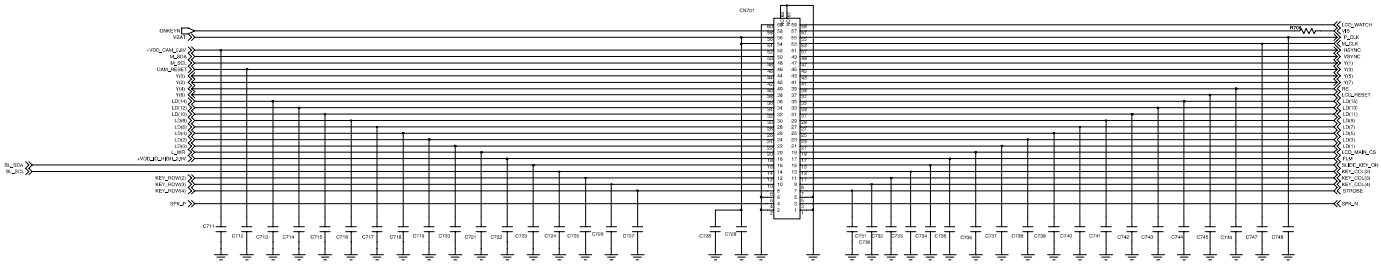

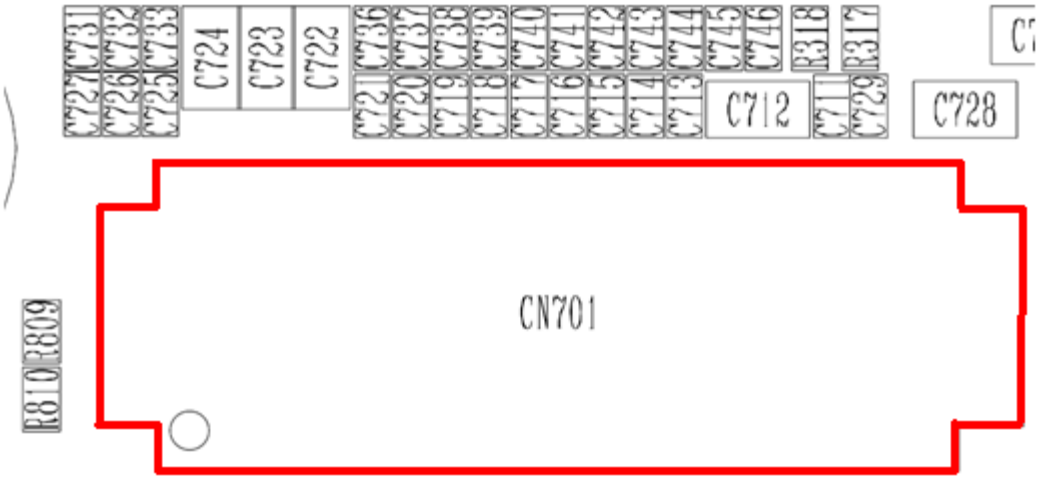

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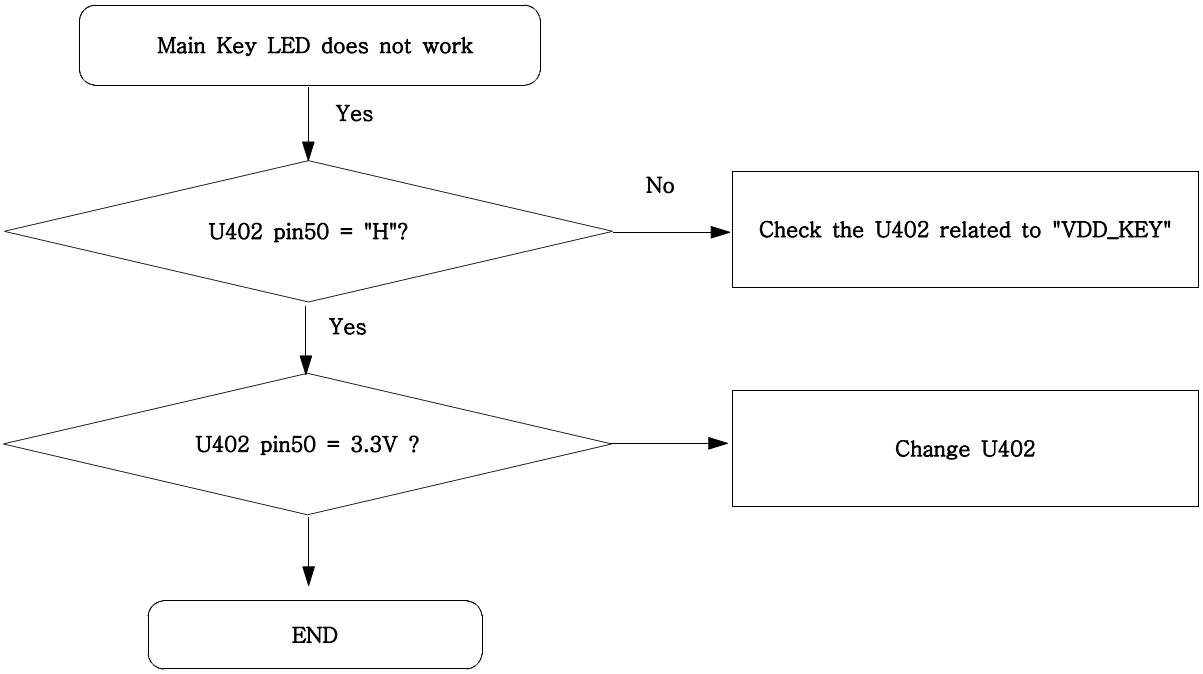
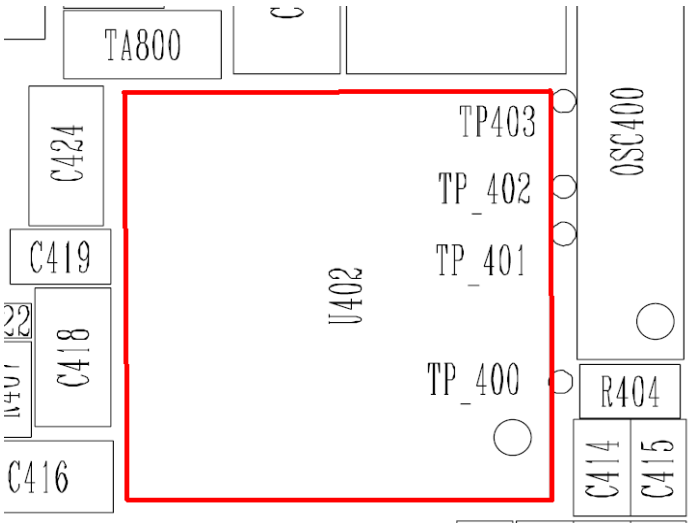
9-10. Key Back Light





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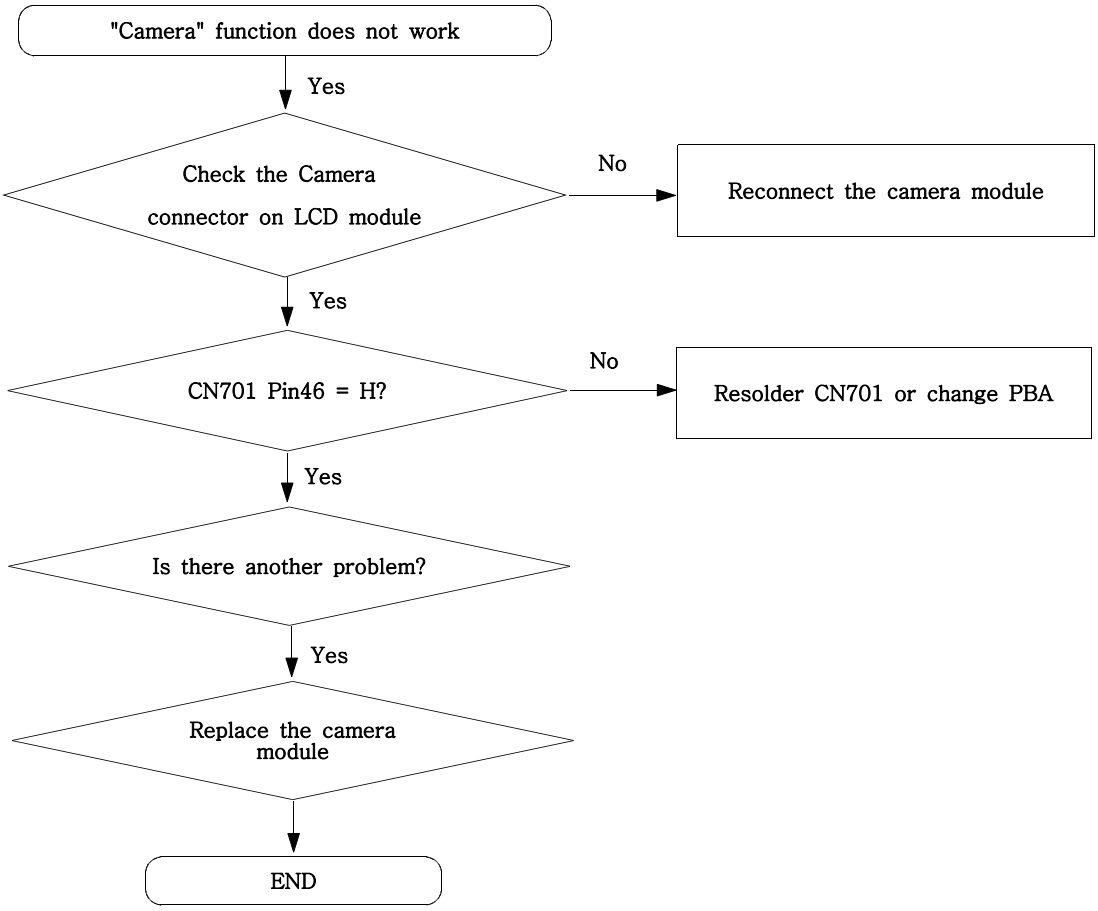
9-11. Camera part



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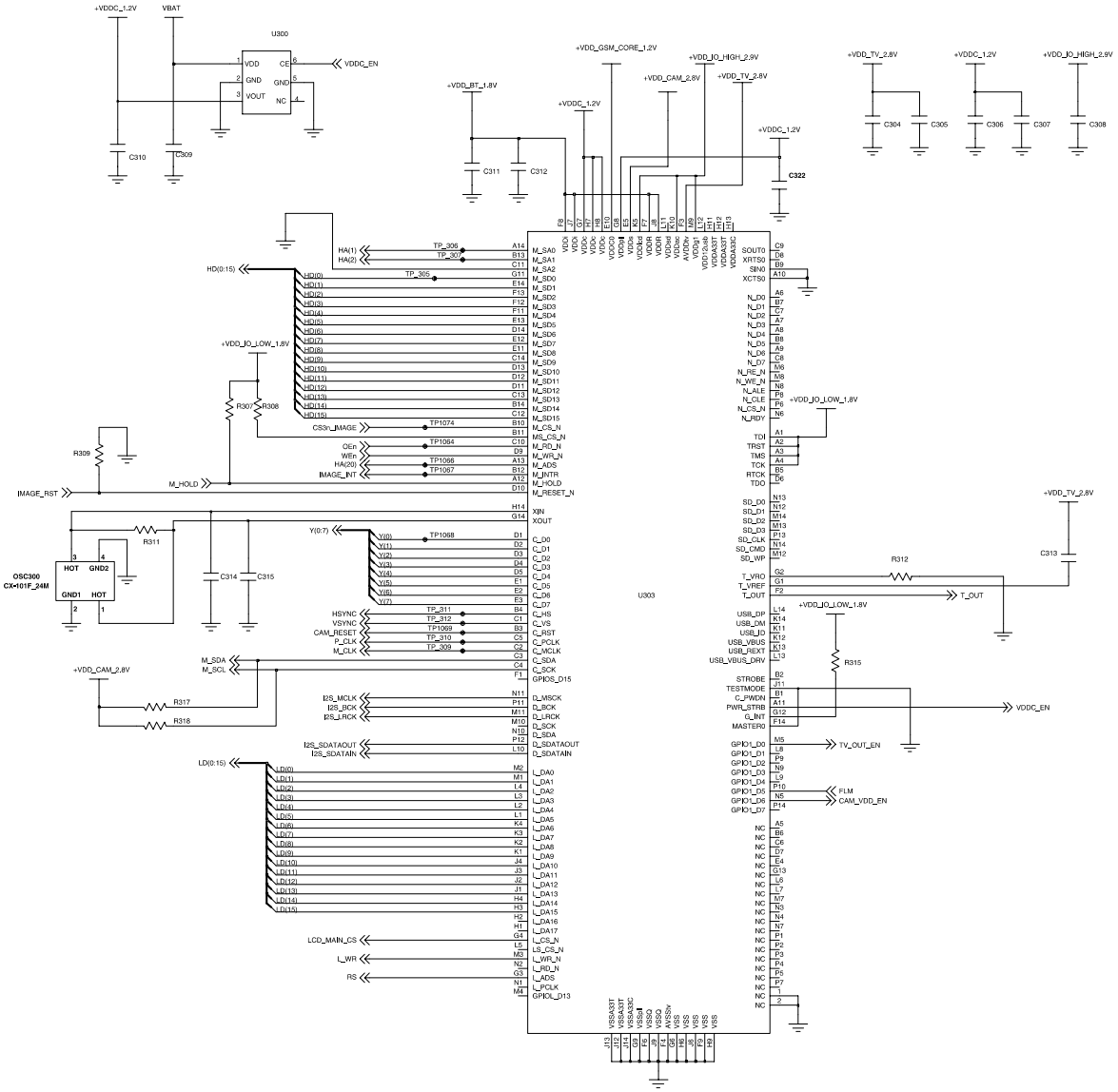

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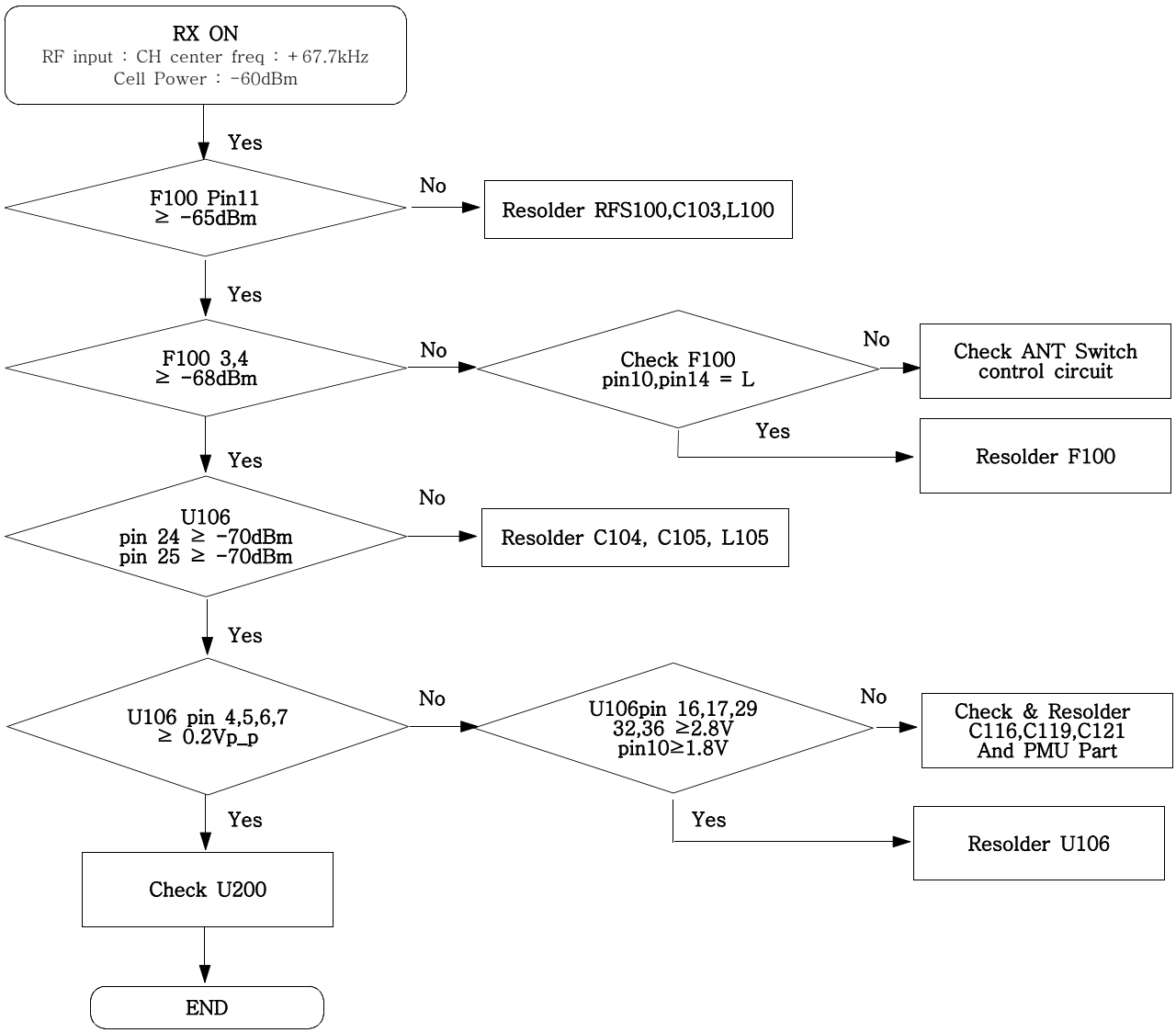
9-12. GSM Receiver



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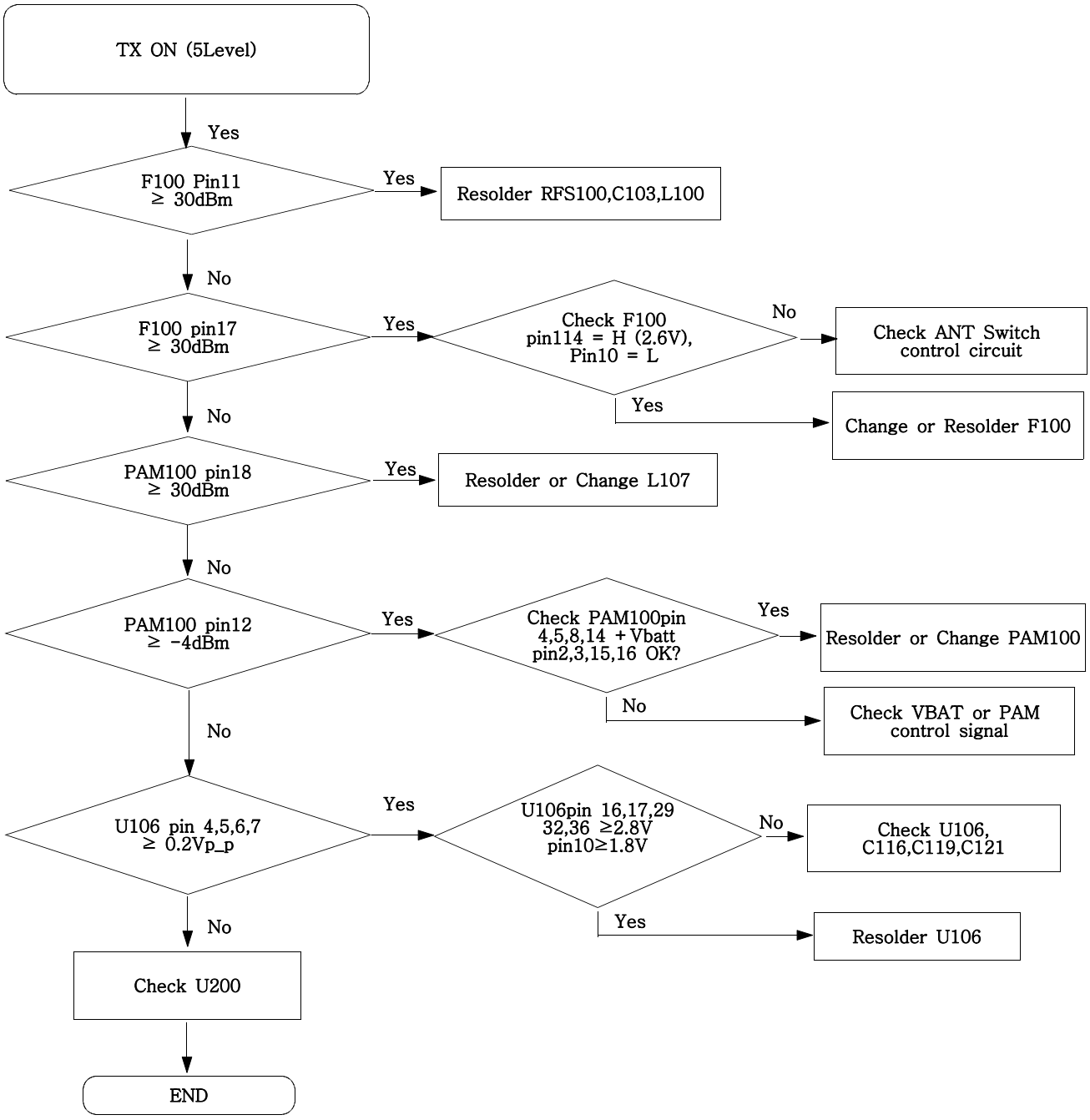
9-13. GSM Transmitter



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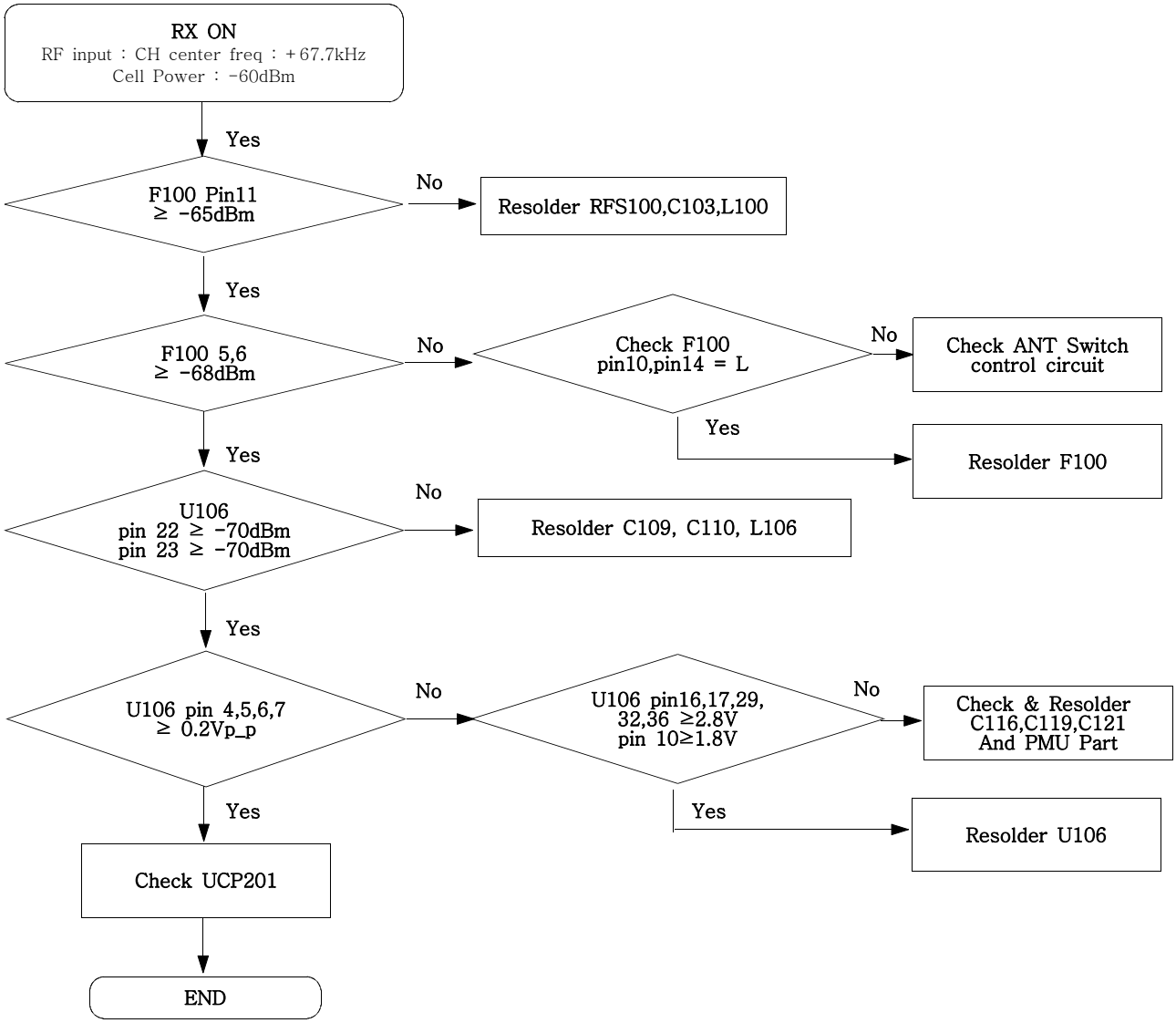
9-14. DCS Receiver



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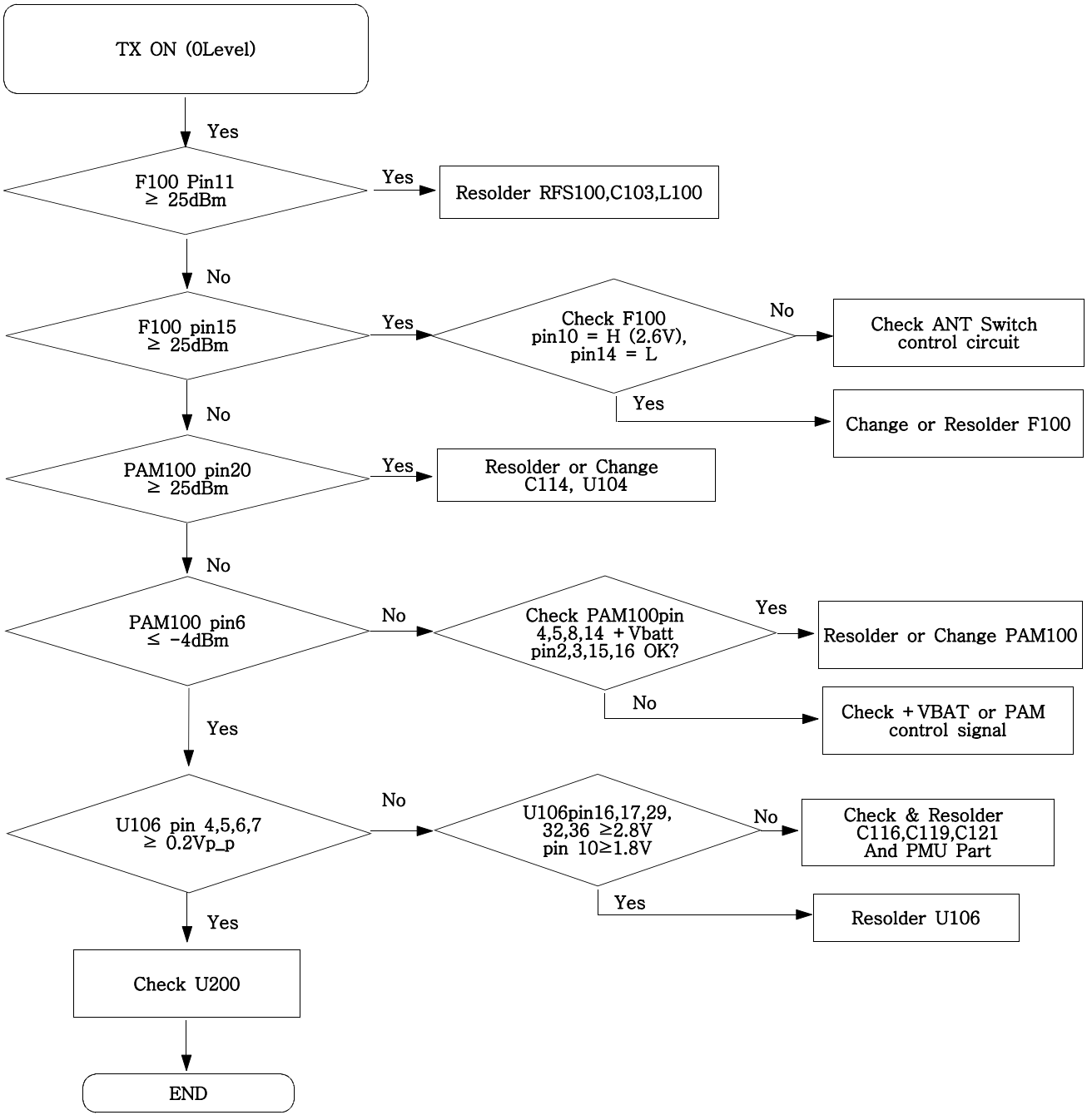
9-15. DCS Transmitter



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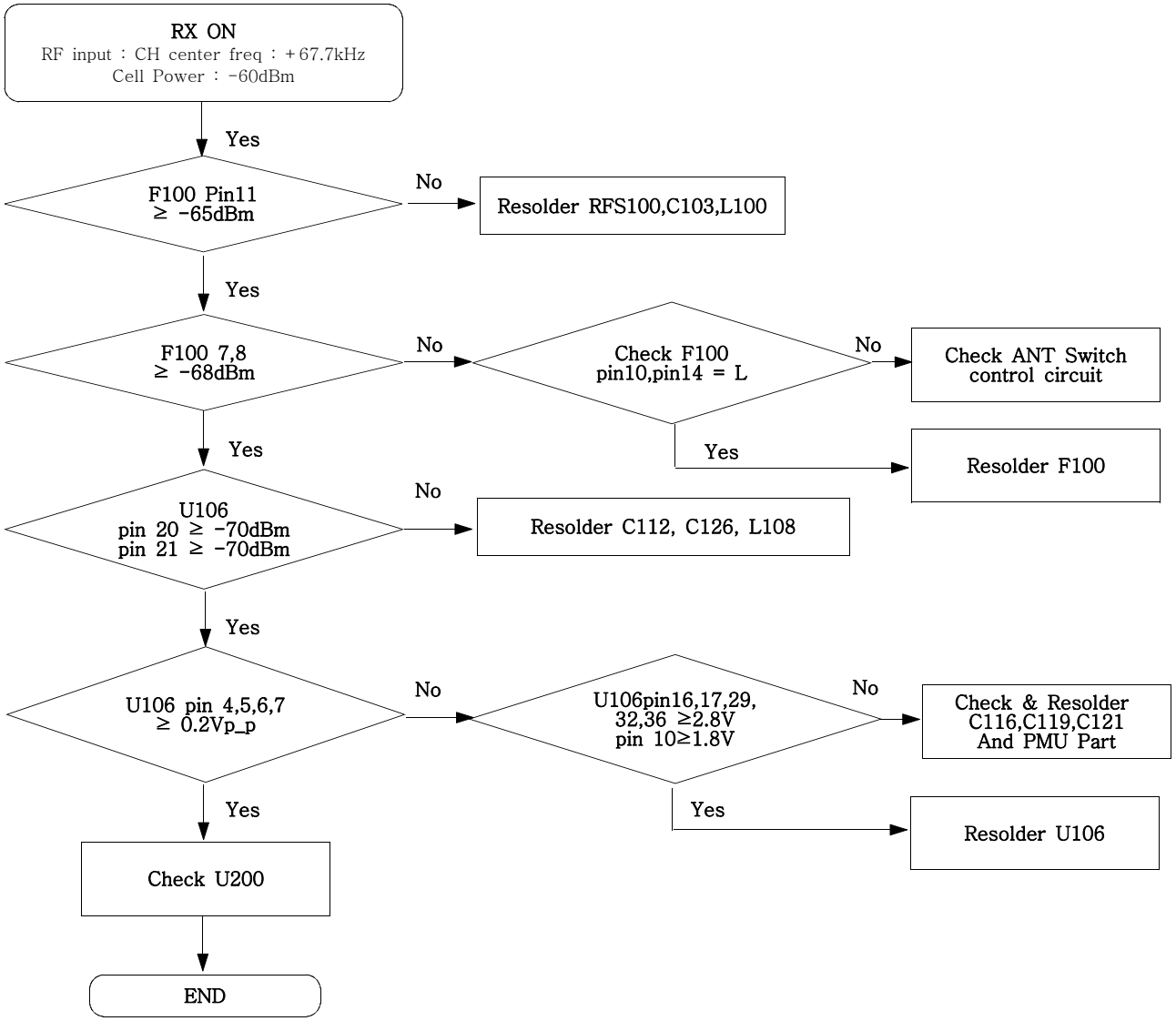
9-16. PCS Receiver



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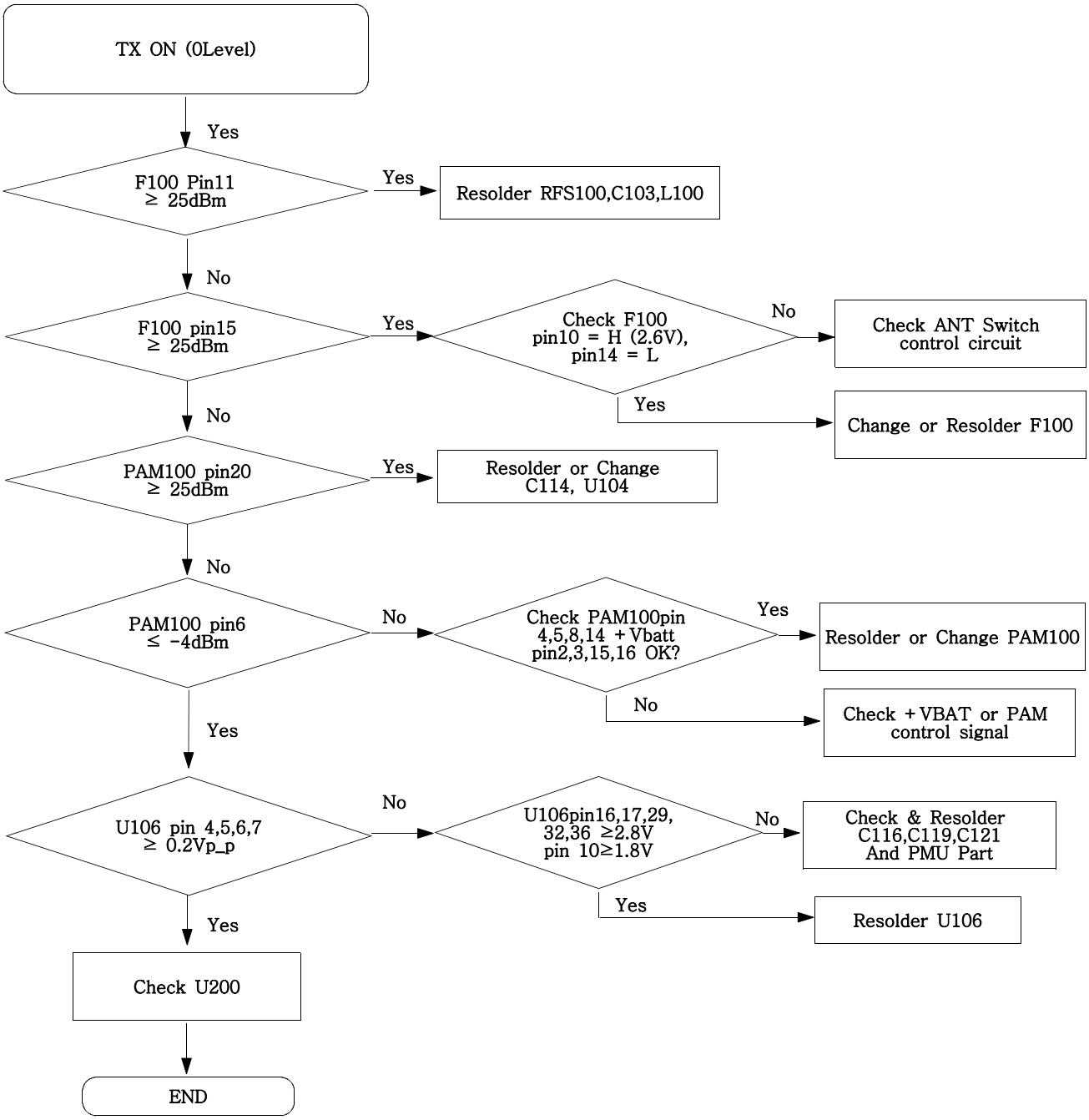
9-17. PCS Transmitter



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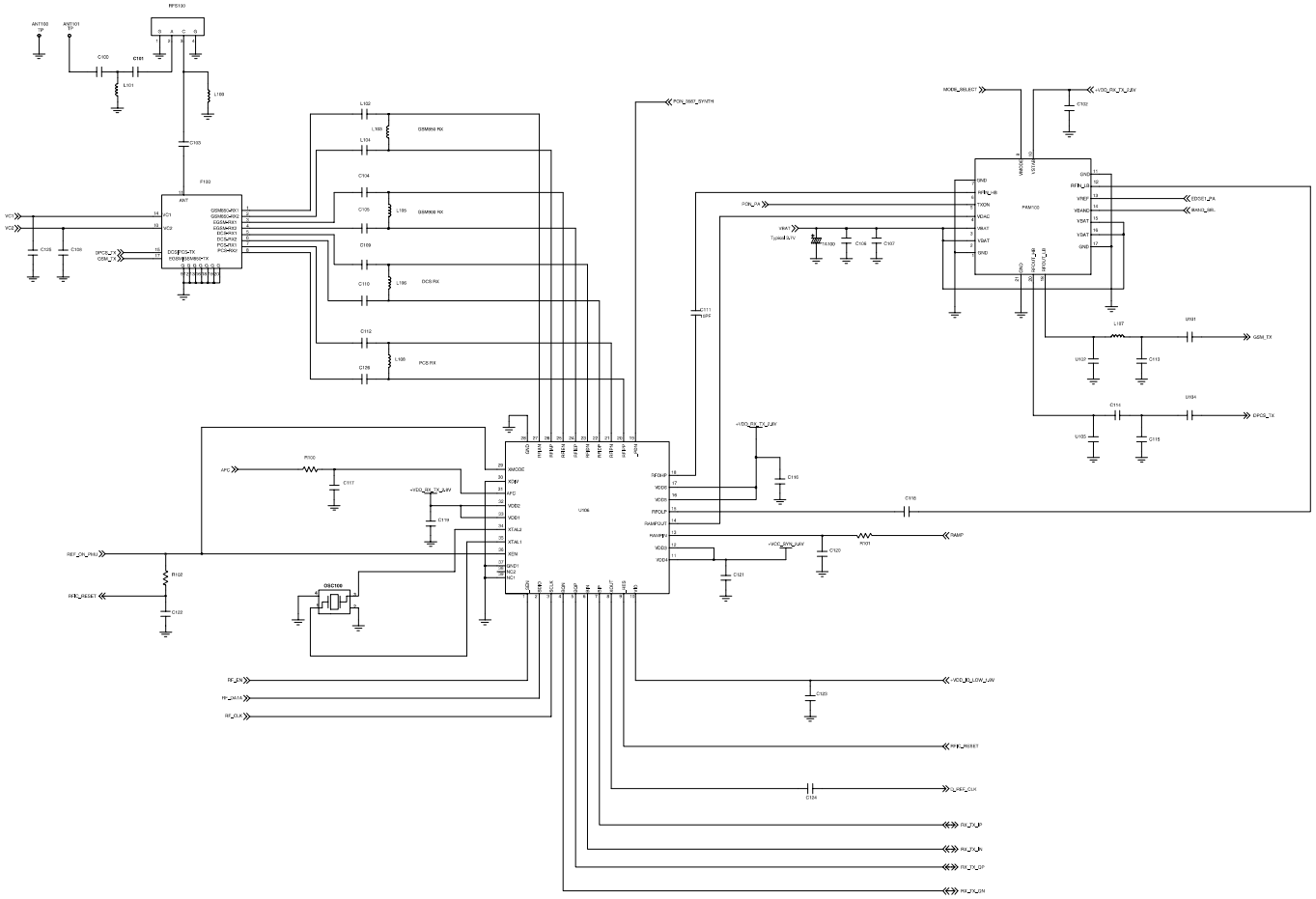

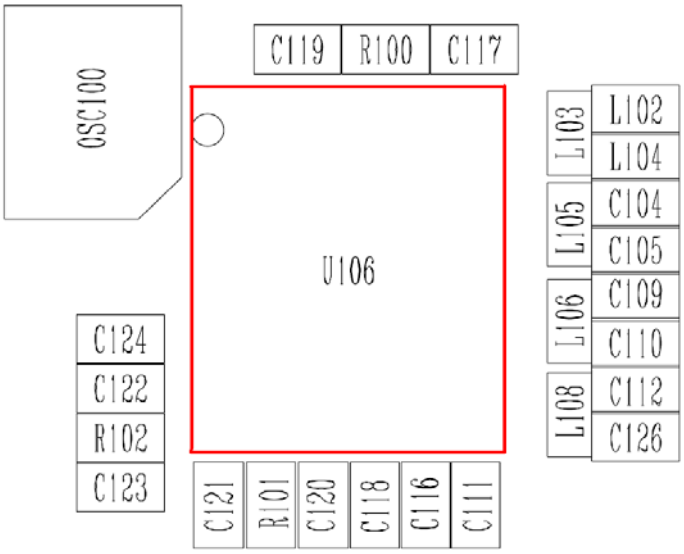

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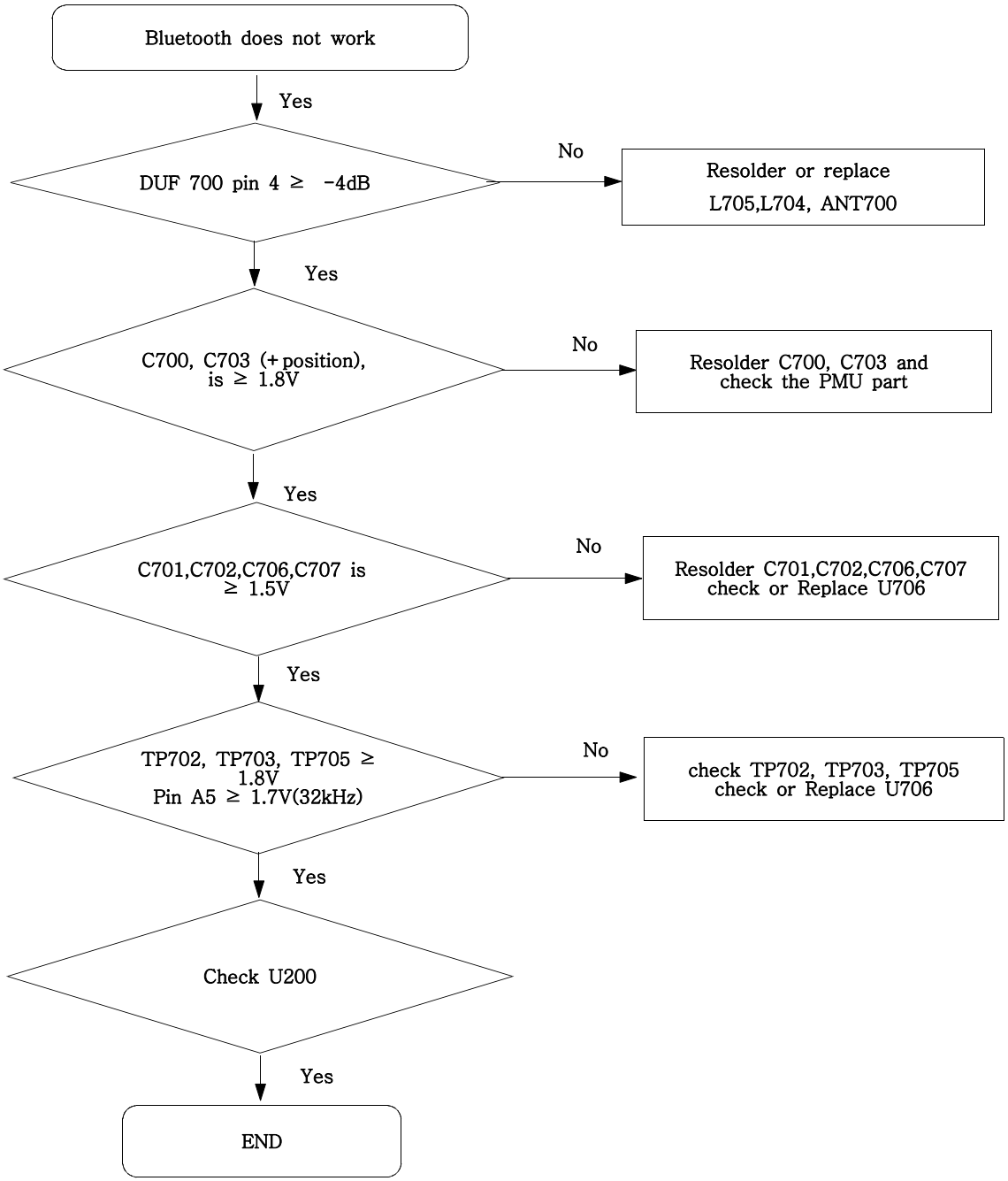
9-18. Bluetooth part



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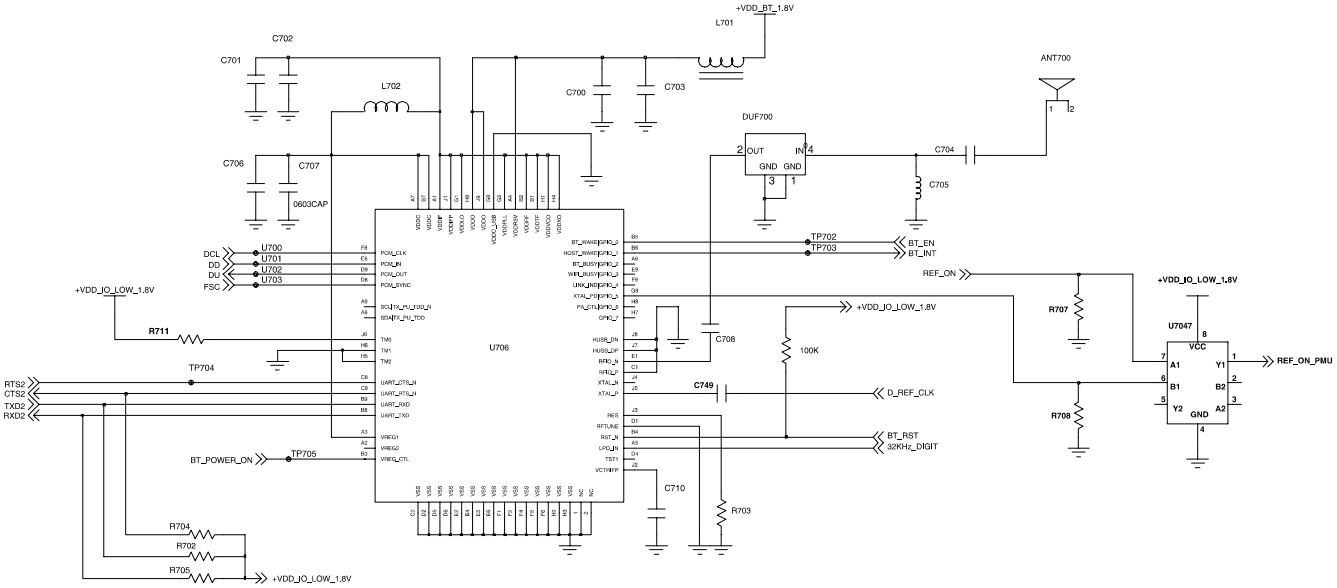

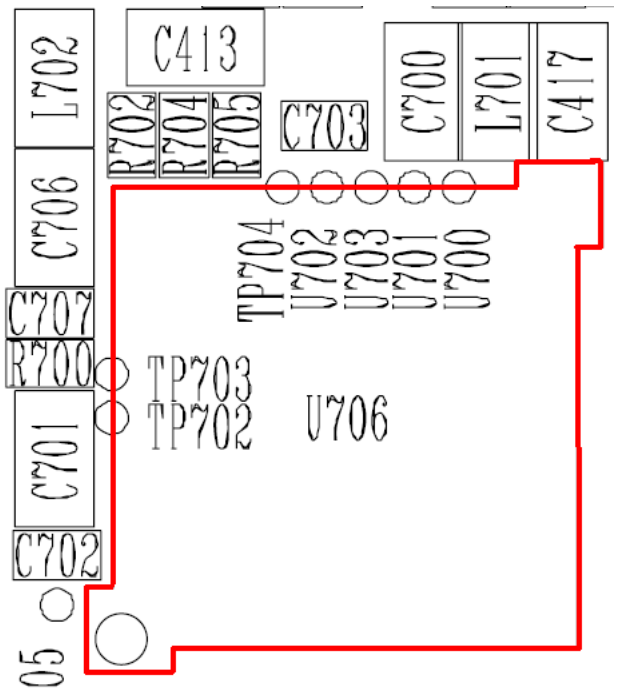

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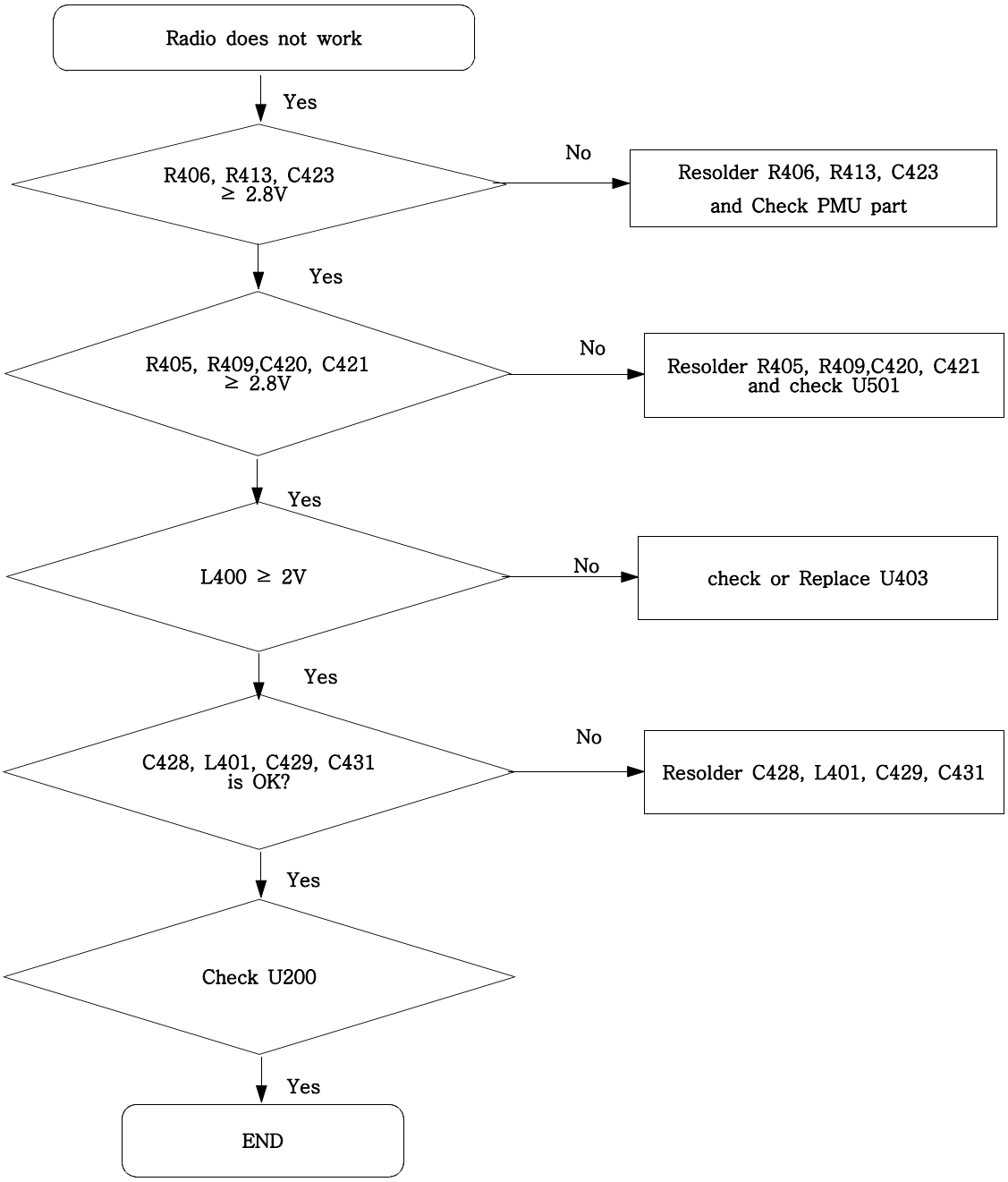
9-19. Radio part



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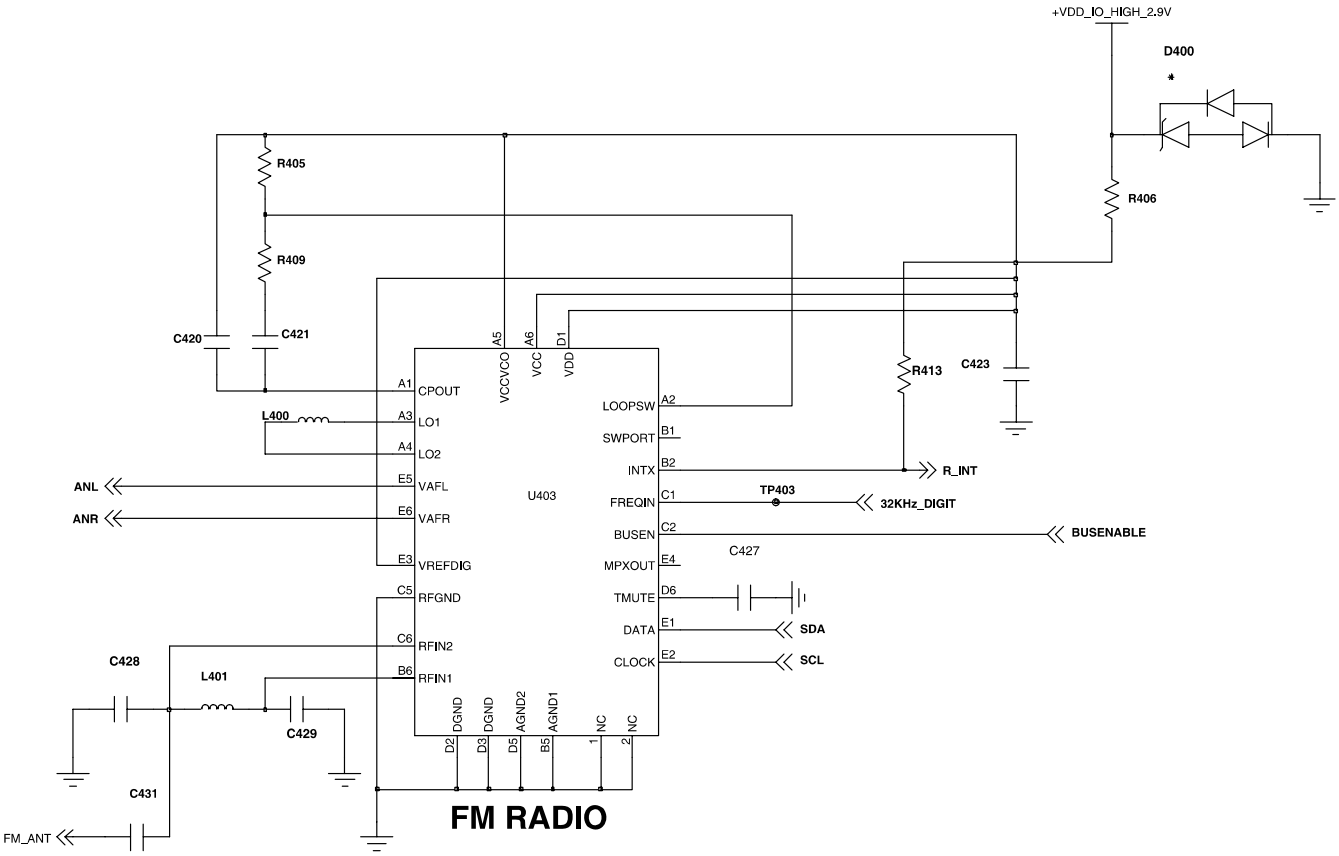
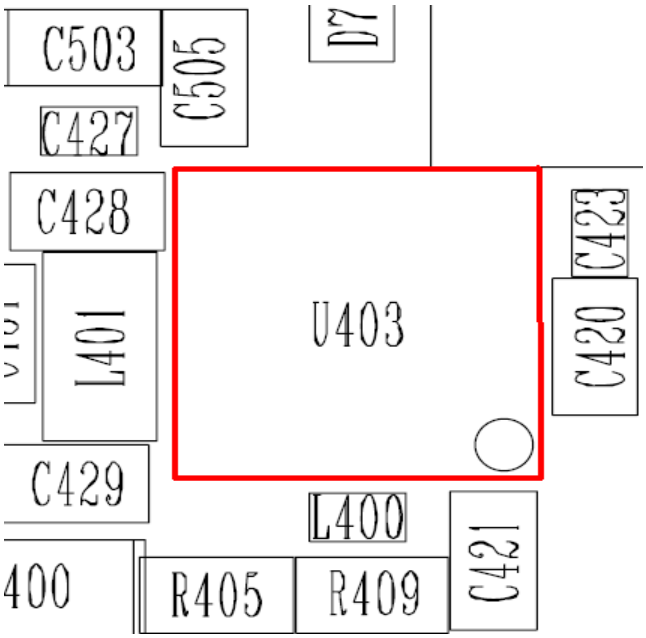


FM RADIO



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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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