

SAMSUNG

GSM TELEPHONE

SGH-E200

SERVICE *Manual*

GSM TELEPHONE



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1. Safety Precautions

1-1. Repair Precaution

- Repair in Shield Box, during detailed tuning.
Take specially care of tuning or test,
because specipcty of cellular phone is sensitive for surrounding interference(RF noise).
- Be careful to use a kind of magnetic object or tool,
because performance of parts is damaged by the influence of 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

- 1.3M Camera
- 1.8", QCIF, 65K colors
- Video Recording & Messaging
- Music Player(MP3/AAC/AAC+)
- Multimedia Message Service (MMS)
- Bluetooth Wireless Technology
- E-mail
- Voice recorder
- Java / WAP2.0
- Tri-band(900/1800/1900MHz)

4. Array course control

4-1. Software Adjustments

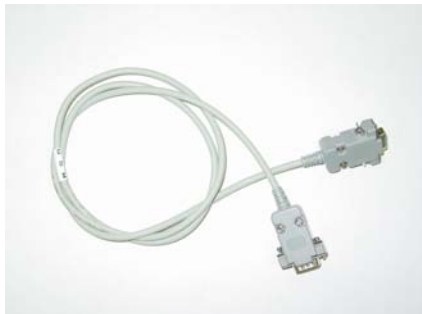
Test Jig (GH80-03306A)



Test Cable(GH39-00499B)



Serial Cable(CSA LL64151-A)



Power Supply Cable



4-2. Software Downloading

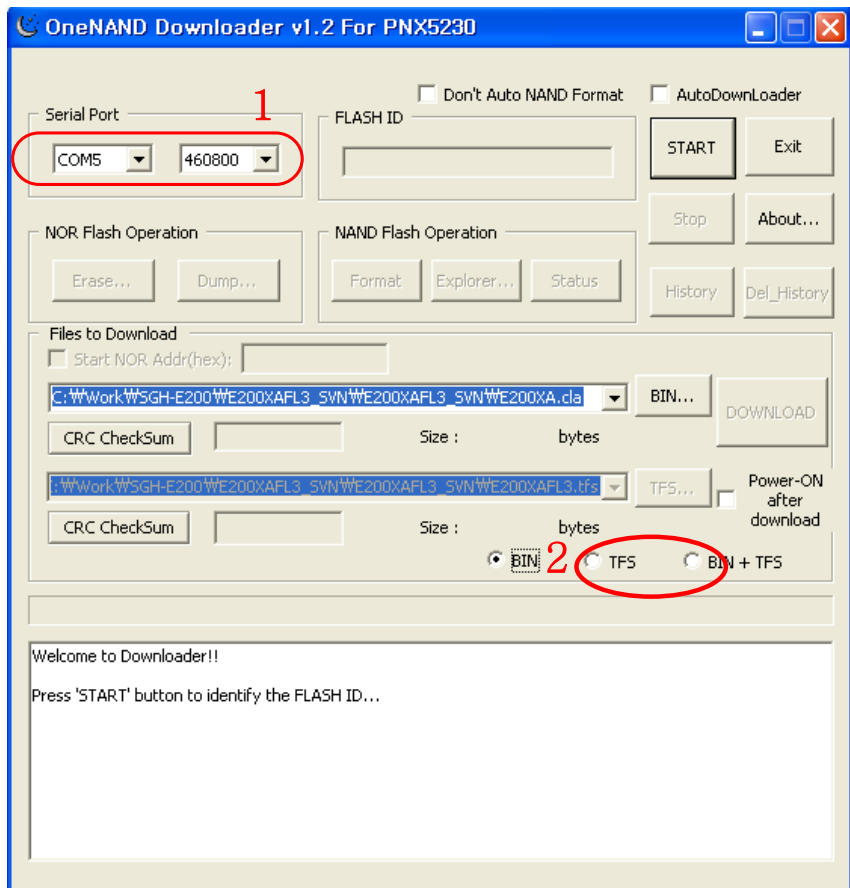
4-2-1. Pre-requisite for Downloading

- Downloader Program([OneNAND_Downloader_v12_for_PNX5230](#))
- E200Mobile Phone
- Data Cable
- Binary file, TFS file

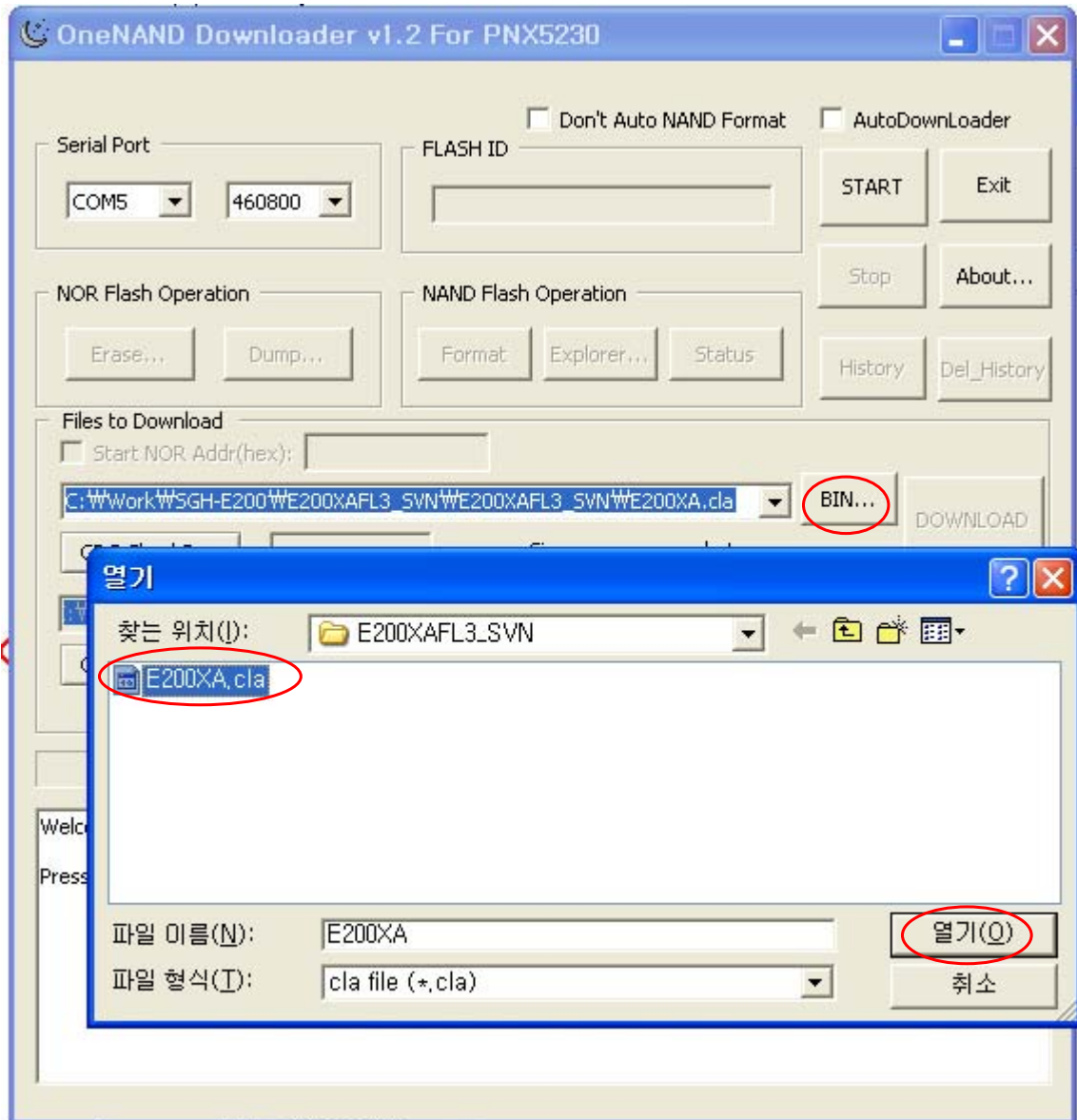
4-2-2. S/W Downloader Program

■ Load the binary download program by executing the [“OneNAND_Downloader_v12_for_PNX5230”](#)

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'

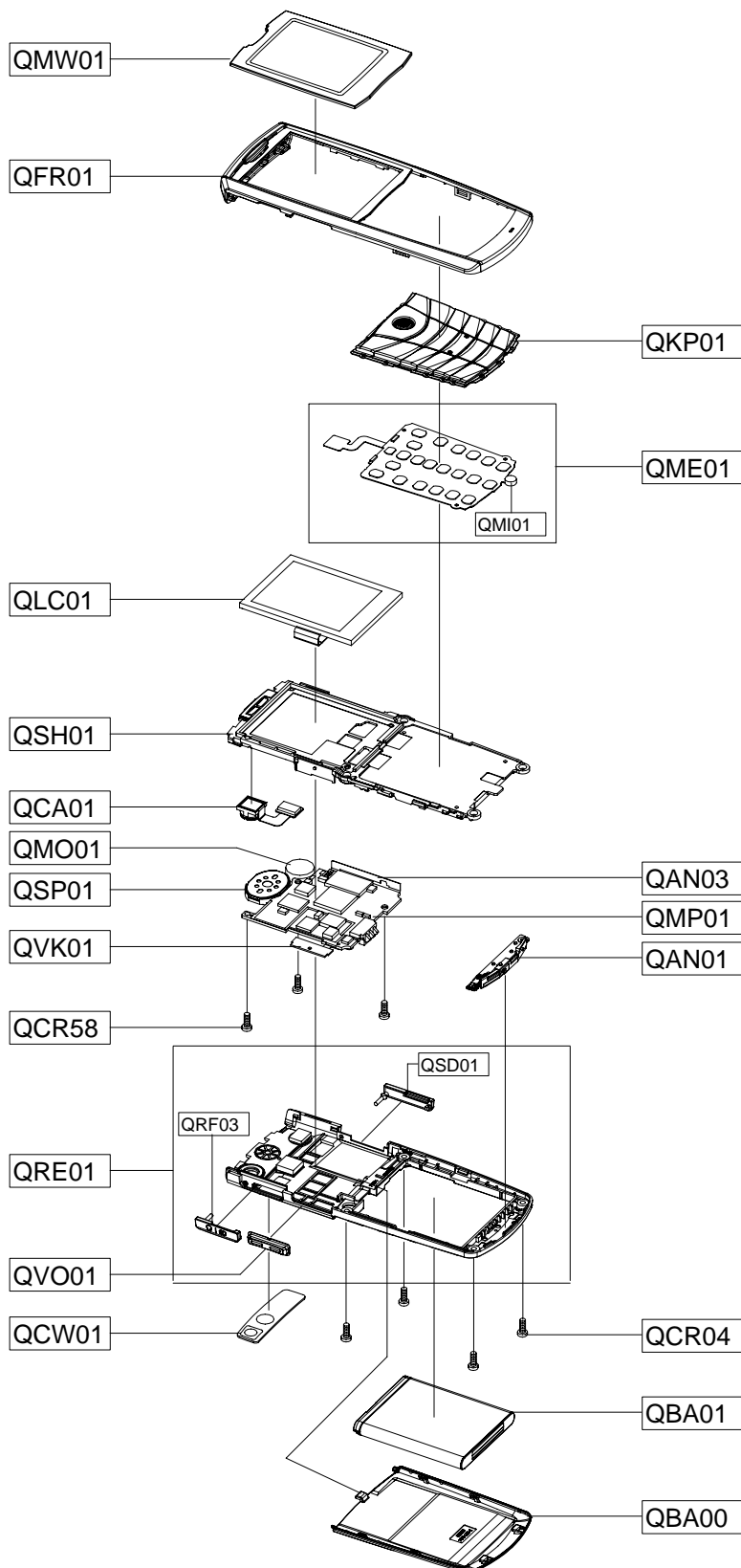


3. Select the file(s) what you want to download



5. Exploded View/Disassembly&Assembly Instructions

5-1. Cellular phone Exploded View




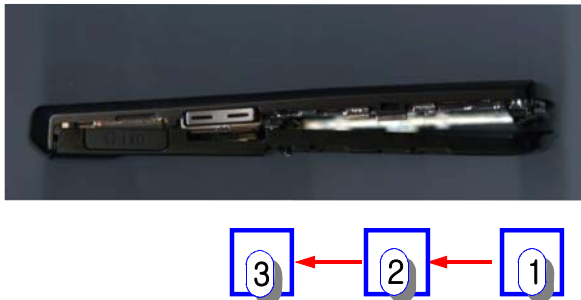

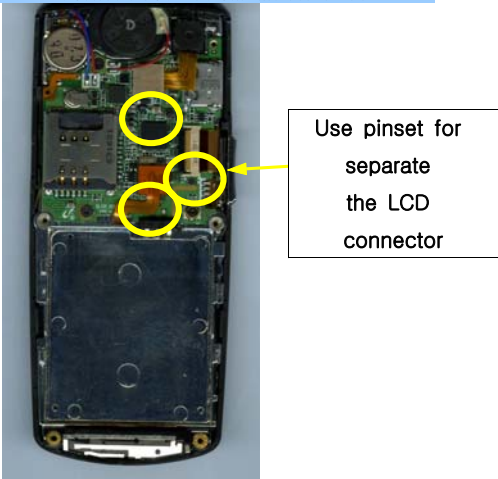
5-2. Cellular phone Parts list

Design LOC		Description	Sec Code
QAN01		ANTENNA	GH42-01116A
QAN03		FPCB ANTENNA CHIP-SGH E200	GH42-01099A
QBA01		INNER BATTERY PACK-800MAH , BL	GH43-02790A
QBA00		PMO-COVER BATT	GH72-36417A
QCA01		UNIT-CAMERA MODULE	GH59-03978A
QCR04		SCREW-MACHINE	6001-001479
QCR58		SCREW-MACHINE	6001-001870
QCW01		PCT-COVER CAMERA WINDOW	GH72-36429A
QFR01		ASSY CASE-FRONT	GH98-03281A
QKP01		ASSY KEYPAD-(SER/BLK)	GH98-03859A
QLC01		LCD-SGH E200 MODULE	GH07-01054A
QMO01		MOTOR DC-SGH E200	GH31-00301A
QMP01		PBA MAIN-SGHE200	GH92-03601A
QMW01		ASSY COVER-MAIN WINDOW	GH98-03886A
QSH01		ASSY BRACKET-SHIELD	GH98-03284A
QSP01		SPEAKER	3001-002124
QVK01		UNIT-VOLUME KEY	GH59-04001A
QVO01		ASSY KEY-VOLUME	GH98-04936A
QRE01		ASSY CASE-REAR	GH98-03282A
	QRF03	PMO-COVER EAR	GH72-36422A
	QSD01	PMO-COVER MICRO SD	GH72-36423A
QME01		UNIT-KEY FPCB	GH59-04005A
	QMI01	AS-MIC SVC	GH81-05445A

Description	Sec Code
BAG PE	6902-000634
CBF INTERFACE-DATA LINK CABLE	GH39-00444A
ADAPTOR-SGHE690,BLK,EU,A_TYPE	GH44-01361A
S/W CD-SGHE200 PC LINK CD	GH46-00407A
UNIT-20P,EARPHONE,BLK,B-TYPE	GH59-04029A
MANUAL-SFC	GH68-04336A
LABEL(P)-BARCODE RUSSIA	GH68-08494A
LABEL(R)-WATER SOAK	GH68-09361A
LABEL(R)-MAIN(SER)	GH68-14021C
MANUAL USERS-EU RUSSIAN	GH68-14288A
BOX-UNIT BOX(SER)	GH69-05106B
CUSHION-CASE(EU)	GH69-05109A
MPR-INSU TAPE	GH74-29553A
MPR-INSU TAPE	GH74-30538A
MPR-TAPE SHEET LABEL	GH74-31820A
MPR-TAPE MAIN WINDOW V2	GH74-32035A
VINYL-BOHO CAMERA WINDOW	GH74-32399A
VINYL-BOHO MAIN WINDOW	GH74-32939A

5-3. Disassembly and Assembly Instruction

5-3-1. Disassembly

<p>1 Unscrew 4 screws in rear cover</p>  <p>Unscrew marked 4 points</p>	<p>2 Separate the rear cover</p>  <p>From the bottom part separate the rear cover</p>
<p>1) Be careful of the damage of cover and scratch.</p>	<p>1) Be careful of the damage of cover and scratch.</p>
<p>3 Remove the Volume key and separate the Volume key PBA from case.</p> 	<p>4 Separate the Camera Connector, Main key PBA Connector and LCD Connector from Main PBA</p>  <p>Use pinset for separate the LCD connector</p>
<p>1) Be careful of the damage on key PBA</p>	

5 Separate the PBA ASSY from upper case

6 Unscrew 3 screws in PBA ASSY

Unscrew marked 3 points

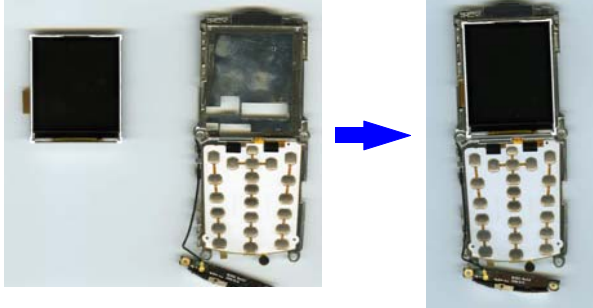

7 Separate the PBA from PBA ASSY Bracket



8 Separate the LCD from Bracket.



1) Speaker, camera, motor is attached by adhesive tape. Thus be careful when disassemble.

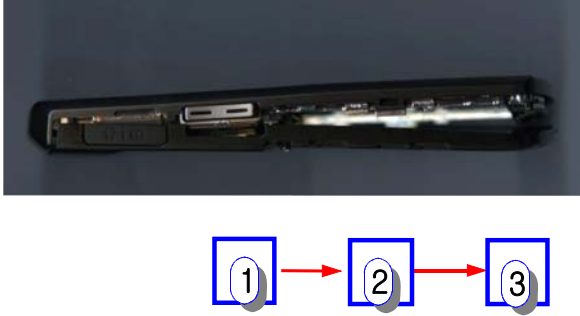

1) Adhesive tape is attached on back side of LCD. Thus be careful when disassemble.

5-3-2. Assembly

<p>1 Insert LCD to Bracket(front side).</p> 	<p>2 Insert PBA to bracket(back side)</p> 
<p>1) Adhesive tape is attached on back side of Speaker, motor, camer. Thus be careful when assemble.</p>	

<p>3 Screw to the PBA ASSY</p>  <p>Screwing 3 points</p>	<p>4 Assemble the PBA ASSY with the front case</p> 

<p>5 Insert the connector and fpcb to market socket.</p>  <p>Use pinset for insert the LCD connector</p>	<p>6 Attach the Volume key PBA on case and locate the Volume key .</p> 
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<p>7 Assemble the Rear Case</p> 	<p>8 Screw the rear cover</p>  <p>Screw marked 4 points</p>
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6. MAIN Electrical Parts List

Design LOC	Description	SEC Code	STATUS
BAT400	BATTERY-LI(2ND)	4302-001181	SA
BTC600	CONNECTOR-BATTERY	3711-006003	SA
C101	C-CER,CHIP	2203-005234	SA
C102	C-CER,CHIP	2203-000696	SA
C103	C-CER,CHIP	2203-000812	SA
C104	C-CER,CHIP	2203-005234	SA
C105	C-CER,CHIP	2203-005234	SA
C106	C-CER,CHIP	2203-000233	SA
C107	C-CER,CHIP	2203-000233	SA
C108	C-CER,CHIP	2203-005234	SA
C109	C-CER,CHIP	2203-005234	SA
C111	C-CER,CHIP	2203-005382	SA
C112	C-CER,CHIP	2203-005281	SA
C114	C-CER,CHIP	2203-000233	SA
C115	C-CER,CHIP	2203-000233	SA
C116	C-CER,CHIP	2203-000233	SA
C117	C-CER,CHIP	2203-000278	SA
C118	C-CER,CHIP	2203-005482	SA
C119	C-CER,CHIP	2203-000812	SA
C122	C-CER,CHIP	2203-002709	SA
C123	C-CER,CHIP	2203-002709	SA
C125	C-CER,CHIP	2203-001221	SA
C126	C-CER,CHIP	2203-002709	SA
C131	C-CER,CHIP	2203-000233	SA
C132	C-CER,CHIP	2203-005736	SA
C201	C-CER,CHIP	2203-005482	SA
C202	C-CER,CHIP	2203-000812	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
C208	C-CER,CHIP	2203-005482	SA
C209	C-CER,CHIP	2203-005482	SA
C210	C-CER,CHIP	2203-006562	SA
C211	C-CER,CHIP	2203-000254	SA
C212	C-CER,CHIP	2203-005482	SA
C213	C-CER,CHIP	2203-000812	SA
C214	C-CER,CHIP	2203-005482	SA
C215	C-CER,CHIP	2203-000425	SA
C216	C-CER,CHIP	2203-006824	SA
C221	C-CER,CHIP	2203-005482	SA
C222	C-CER,CHIP	2203-000425	SA
C301	C-CER,CHIP	2203-006423	SA
C302	C-CER,CHIP	2203-006423	SA
C303	C-CER,CHIP	2203-005482	SA
C304	C-CER,CHIP	2203-005482	SA
C305	C-CER,CHIP	2203-005482	SA
C306	C-CER,CHIP	2203-005482	SA
C307	C-CER,CHIP	2203-006423	SA
C308	C-CER,CHIP	2203-000696	SA

Design LOC	Description	SEC Code	STATUS
C309	C-CER,CHIP	2203-000995	SA
C310	C-CER,CHIP	2203-000233	SA
C315	C-CER,CHIP	2203-006562	SA
C316	C-CER,CHIP	2203-006562	SA
C317	C-CER,CHIP	2203-006423	SA
C318	C-CER,CHIP	2203-006562	SA
C319	C-CER,CHIP	2203-006838	SA
C321	C-CER,CHIP	2203-006838	SA
C322	C-CER,CHIP	2203-006305	SA
C323	C-CER,CHIP	2203-000233	SA
C324	C-CER,CHIP	2203-006842	SA
C325	C-CER,CHIP	2203-000278	SA
C326	C-CER,CHIP	2203-000278	SA
C400	C-CER,CHIP	2203-006257	SA
C401	C-CER,CHIP	2203-006562	SA
C402	C-CER,CHIP	2203-006562	SA
C403	C-CER,CHIP	2203-006257	SA
C404	C-CER,CHIP	2203-006824	SA
C405	C-CER,CHIP	2203-006257	SA
C407	C-CER,CHIP	2203-006257	SA
C409	C-CER,CHIP	2203-006824	SA
C410	C-CER,CHIP	2203-006824	SA
C411	C-CER,CHIP	2203-006257	SA
C412	C-CER,CHIP	2203-005736	SA
C413	C-CER,CHIP	2203-006257	SA
C414	C-CER,CHIP	2203-006562	SA
C415	C-CER,CHIP	2203-006562	SA
C416	C-CER,CHIP	2203-000550	SA
C417	C-CER,CHIP	2203-000550	SA
C420	C-CER,CHIP	2203-006257	SA
C421	C-CER,CHIP	2203-006324	SA
C422	C-CER,CHIP	2203-006423	SA
C425	C-CER,CHIP	2203-006361	SA
C426	C-CER,CHIP	2203-006474	SA
C430	C-CER,CHIP	2203-006562	SA
C431	C-CER,CHIP	2203-006348	SA
C432	C-CER,CHIP	2203-006825	SA
C501	C-CER,CHIP	2203-006194	SA
C502	C-CER,CHIP	2203-005482	SA
C503	C-CER,CHIP	2203-005496	SA
C504	C-CER,CHIP	2203-005483	SA
C505	C-CER,CHIP	2203-005496	SA
C506	C-CER,CHIP	2203-005483	SA
C507	C-CER,CHIP	2203-005482	SA
C508	C-CER,CHIP	2203-000233	SA
C509	C-CER,CHIP	2203-000643	SA
C511	C-CER,CHIP	2203-005395	SA
C512	C-CER,CHIP	2203-005395	SA
C513	C-CER,CHIP	2203-005482	SA
C514	C-CER,CHIP	2203-005482	SA

Design LOC	Description	SEC Code	STATUS
C515	C-CER,CHIP	2203-000679	SA
C516	C-CER,CHIP	2203-000679	SA
C517	C-CER,CHIP	2203-000330	SA
C518	C-CER,CHIP	2203-000330	SA
C519	C-CER,CHIP	2203-005482	SA
C520	C-CER,CHIP	2203-005482	SA
C521	C-CER,CHIP	2203-005395	SA
C522	C-CER,CHIP	2203-005395	SA
C523	C-CER,CHIP	2203-006260	SA
C524	C-CER,CHIP	2203-006260	SA
C525	C-CER,CHIP	2203-005482	SA
C526	C-CER,CHIP	2203-006137	SA
C540	C-CER,CHIP	2203-000278	SA
C542	C-CER,CHIP	2203-005050	SA
C543	C-CER,CHIP	2203-003054	SA
C544	C-CER,CHIP	2203-000278	SA
C546	C-CER,CHIP	2203-000278	SA
C548	C-CER,CHIP	2203-001259	SA
C549	C-CER,CHIP	2203-005050	SA
C551	C-CER,CHIP	2203-000278	SA
C552	C-CER,CHIP	2203-000386	SA
C553	C-CER,CHIP	2203-000386	SA
C554	C-CER,CHIP	2203-000386	SA
C602	C-CER,CHIP	2203-006562	SA
C605	C-CER,CHIP	2203-006562	SA
C606	C-CER,CHIP	2203-006562	SA
C607	C-CER,CHIP	2203-006562	SA
C608	C-CER,CHIP	2203-006562	SA
C609	C-CER,CHIP	2203-006048	SA
C610	C-CER,CHIP	2203-006824	SA
C611	C-CER,CHIP	2203-005482	SA
C614	C-CER,CHIP	2203-000425	SA
C615	C-CER,CHIP	2203-006423	SA
C616	C-CER,CHIP	2203-000812	SA
C617	C-CER,CHIP	2203-006562	SA
C700	C-CER,CHIP	2203-005682	SA
C701	C-CER,CHIP	2203-005682	SA
C702	C-CER,CHIP	2203-006562	SA
C703	C-CER,CHIP	2203-006562	SA
C704	C-CER,CHIP	2203-006562	SA
C705	C-CER,CHIP	2203-006562	SA
C716	C-CER,CHIP	2203-006423	SA
C717	C-CER,CHIP	2203-006423	SA
D600	DIODE-SWITCHING	0401-001141	SA
F100	DUPLEXER-FEM	2911-000072	SA
F300	FILTER-LC	2909-001279	SA
F500	FILTER-EM/ESD	2901-001376	SA
F704	FILTER-EM/ESD	2901-001319	SA
F705	FILTER-EM/ESD	2901-001319	SA
F706	FILTER-EM/ESD	2901-001319	SA

Design LOC	Description	SEC Code	STATUS
F707	FILTER-EMI/ESD	2901-001319	SA
F708	FILTER-EMI/ESD	2901-001319	SA
HDC601	HEADER-BOARD TO BOARD	3711-005659	SA
HDC602	HEADER-BOARD TO BOARD	3711-005659	SA
IFC500	SOCKET-INTERFACE	3710-002442	SA
L101	INDUCTOR-SMD	2703-002612	SA
L102	INDUCTOR-SMD	2703-002544	SA
L103	INDUCTOR-SMD	2703-002586	SA
L104	INDUCTOR-SMD	2703-002608	SA
L105	INDUCTOR-SMD	2703-002558	SA
L106	INDUCTOR-SMD	2703-002155	SA
L108	INDUCTOR-SMD	2703-002586	SA
L303	BEAD-SMD	3301-001659	SA
L400	INDUCTOR-SMD	2703-003113	SA
L500	BEAD-SMD	3301-001729	SA
L501	BEAD-SMD	3301-001729	SA
L502	BEAD-SMD	3301-001876	SA
L503	BEAD-SMD	3301-001876	SA
L504	INDUCTOR-SMD	2703-002313	SA
L505	BEAD-SMD	3301-001876	SA
OSC100	CRYSTAL-SMD	2801-004587	SA
OSC300	CRYSTAL-SMD	2801-004560	SA
OSC400	CRYSTAL-SMD	2801-004466	SA
PAM100	IC-POWER AMP	1201-002423	SA
R101	R-CHIP	2007-001313	SA
R102	R-CHIP	2007-000143	SA
R104	R-CHIP	2007-000171	SA
R107	R-CHIP	2007-008419	SA
R204	R-CHIP	2007-000148	SA
R205	R-CHIP	2007-000148	SA
R206	R-CHIP	2007-002796	SA
R208	R-CHIP	2007-000148	SA
R209	R-CHIP	2007-000140	SA
R210	R-CHIP	2007-000171	SA
R211	R-CHIP	2007-000148	SA
R212	R-CHIP	2007-000170	SA
R213	R-CHIP	2007-000148	SA
R214	R-CHIP	2007-000170	SA
R215	R-CHIP	2007-001319	SA
R217	R-CHIP	2007-001319	SA
R218	R-CHIP	2007-000758	SA
R221	R-CHIP	2007-000171	SA
R223	R-CHIP	2007-000758	SA
R225	R-CHIP	2007-000171	SA
R226	R-CHIP	2007-000171	SA
R227	R-CHIP	2007-000171	SA
R301	R-CHIP	2007-000162	SA
R302	R-CHIP	2007-008055	SA
R303	R-CHIP	2007-000171	SA
R306	R-CHIP	2007-000141	SA

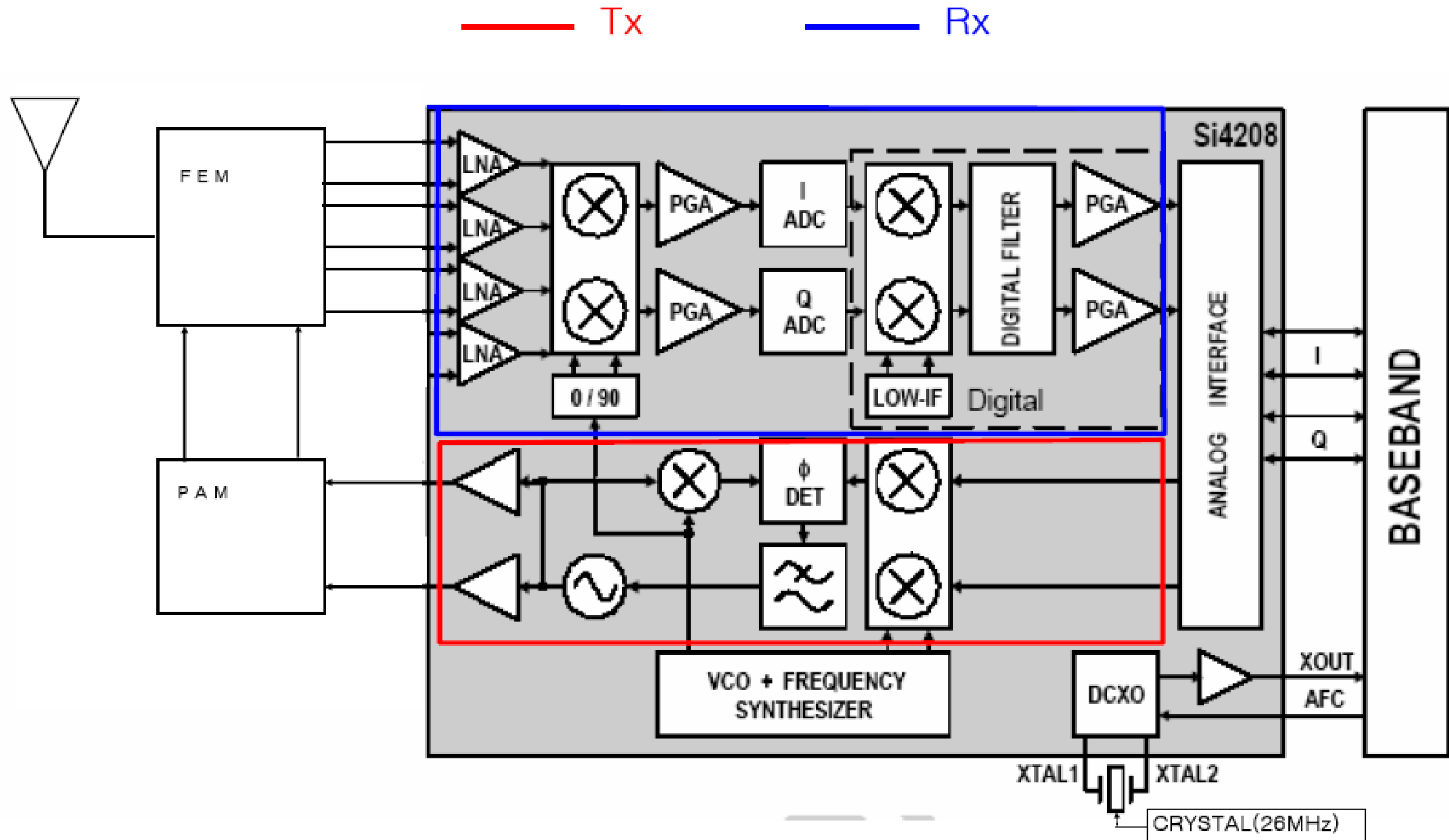
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R308	R-CHIP	2007-001303	SA
R309	R-CHIP	2007-007014	SA
R310	R-CHIP	2007-000162	SA
R311	R-CHIP	2007-007014	SA
R312	R-CHIP	2007-000170	SA
R313	R-CHIP	2007-007489	SA
R319	R-CHIP	2007-000170	SA
R322	R-CHIP	2007-000148	SA
R400	R-CHIP	2007-007573	SA
R401	R-CHIP	2007-008354	SA
R402	R-CHIP	2007-000162	SA
R403	R-CHIP	2007-009168	SA
R405	R-CHIP	2007-008542	SA
R407	R-CHIP	2007-009157	SA
R408	R-CHIP	2007-008542	SA
R409	R-CHIP	2007-008542	SA
R410	R-CHIP	2007-007100	SA
R411	R-CHIP	2007-007311	SA
R412	R-CHIP	2007-008542	SA
R413	R-CHIP	2007-007317	SA
R414	R-CHIP	2007-008542	SA
R416	R-CHIP	2007-009314	SA
R501	R-CHIP	2007-009112	SNA
R502	R-CHIP	2007-009155	SNA
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R504	R-CHIP	2007-009112	SNA
R505	R-CHIP	2007-007741	SA
R506	R-CHIP	2007-000172	SA
R507	R-CHIP	2007-002796	SA
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R603	R-CHIP	2007-007142	SA
R604	R-CHIP	2007-008419	SA
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R607	R-CHIP	2007-000159	SA

Design LOC	Description	SEC Code	STATUS
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R609	R-CHIP	2007-009314	SA
R610	R-CHIP	2007-008516	SA
R611	R-CHIP	2007-007107	SA
R612	R-CHIP	2007-000152	SA
R613	R-CHIP	2007-009112	SNA
R614	R-CHIP	2007-009168	SA
R615	R-CHIP	2007-009168	SA
R701	R-CHIP	2007-000162	SA
R703	R-CHIP	2007-009168	SA
RFS100	CONNECTOR-COAXIAL	3705-001358	SA
RFS101	CONNECTOR-COAXIAL	3705-001448	SA
SIM600	CONNECTOR-CARD EDGE	3709-001453	SA
SLC700	CONNECTOR-FPC/FFC/PIC	3708-002202	SA
TA100	C-TA,CHIP	2404-001474	SA
TA400	C-TA,CHIP	2404-001430	SA
TA500	C-TA,CHIP	2404-001377	SA
TA501	C-TA,CHIP	2404-001377	SA
TA502	C-TA,CHIP	2404-001381	SA
TA503	C-TA,CHIP	2404-001226	SA
TA504	C-TA,CHIP	2404-001474	SA
TA600	C-TA,CHIP	2404-001268	SA
TA601	C-TA,CHIP	2404-001381	SA
TR600	FET-SILICON	0505-002111	SA
U102	IC-TRANSCEIVER	1205-003093	SA
U202	FILTER-EMI SMD	2901-001316	SA
U301	IC-CMOS LOGIC	0801-002237	SA
U302	IC-CMOS LOGIC	0801-002237	SA
U303	IC ASIC-SGHE490	GH13-00044A	SA
U304	IC-TRANSCEIVER	1205-002942	SA
U400	IC-POWER SUPERVISOR	1203-004382	SA
U401	IC-POSI.FIXED REG.	1203-003737	SA
U402	IC-POSI.FIXED REG.	1203-003737	SA
U500	IC-AUDIO AMP	1201-002356	SA
U501	IC-TUNER	1204-002700	SA
U502	IC-CMOS LOGIC	0801-003025	SA
U503	IC-ANALOG MULTIPLEX	1001-001428	SA
U600	IC-POSI.FIXED REG.	1203-003737	SA
U601	IC-MULTI REG.	1203-004291	SA
U700	IC-DC/DC CONVERTER	1203-003708	SA
UCP200	IC-COMM. CONTROLLER	1205-003082	SA
UME300	IC-MCP	1108-000104	SA
VR600	THERMISTOR-NTC	1404-001221	SA
VR604	VARISTOR	1405-001082	SA
VR701	VARISTOR	1405-001082	SA
ZD400	DIODE-ZENER	0403-001547	SA
ZD500	DIODE-TVS	0406-001215	SA
ZD501	DIODE-TVS	0406-001254	SA
ZD502	DIODE-TVS	0406-001254	SA
ZD503	DIODE-ZENER	0403-001547	SA

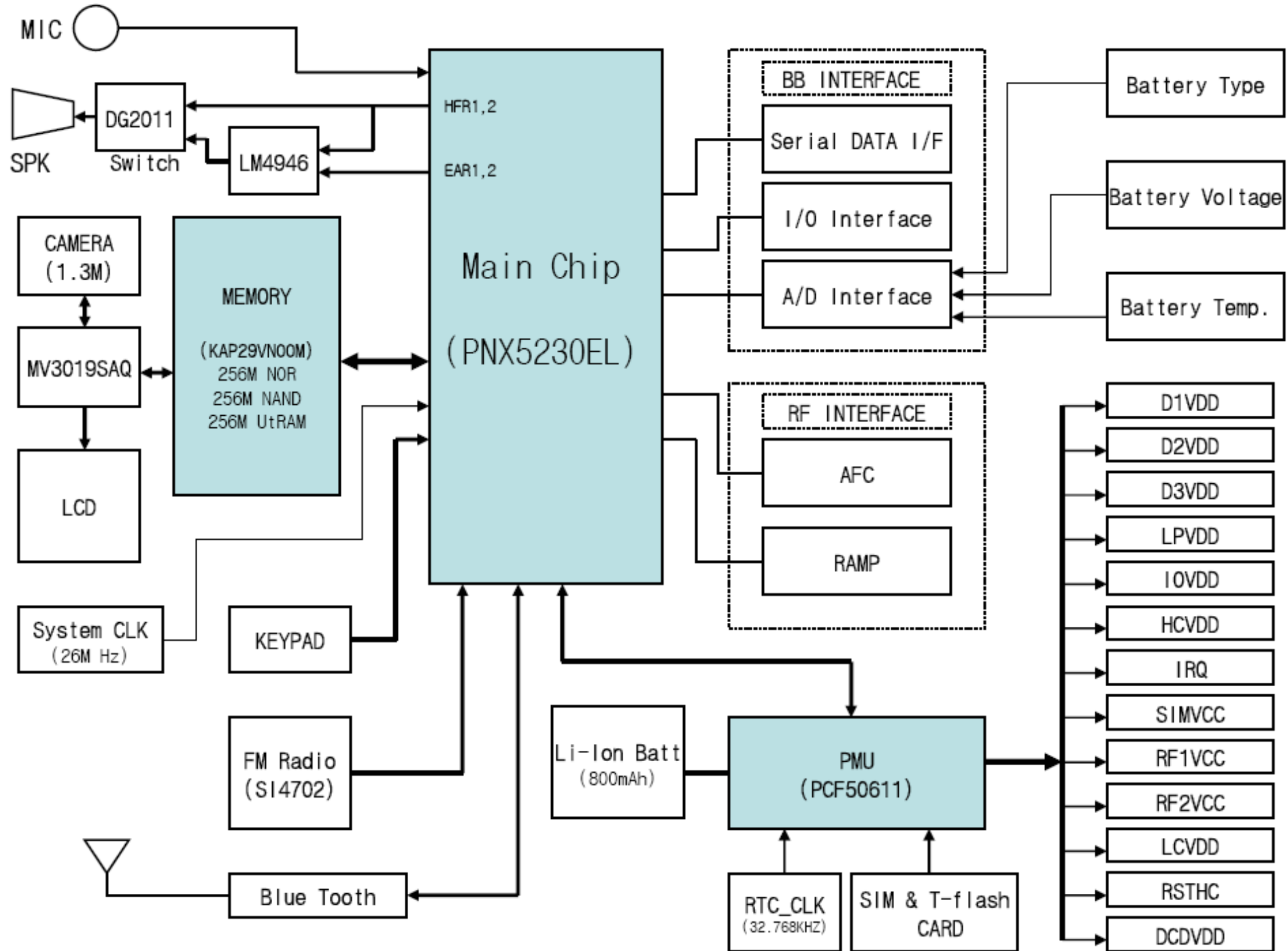
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ZD603	DIODE-TVS	0406-001215	SA
ZD604	DIODE-TVS	0406-001215	SA
ZD605	DIODE-TVS	0406-001254	SA
ZD606	DIODE-TVS	0406-001254	SA
ZD703	DIODE-TVS	0406-001215	SA

7. Block Diagrams

7-1. RF Solution Block Diagram

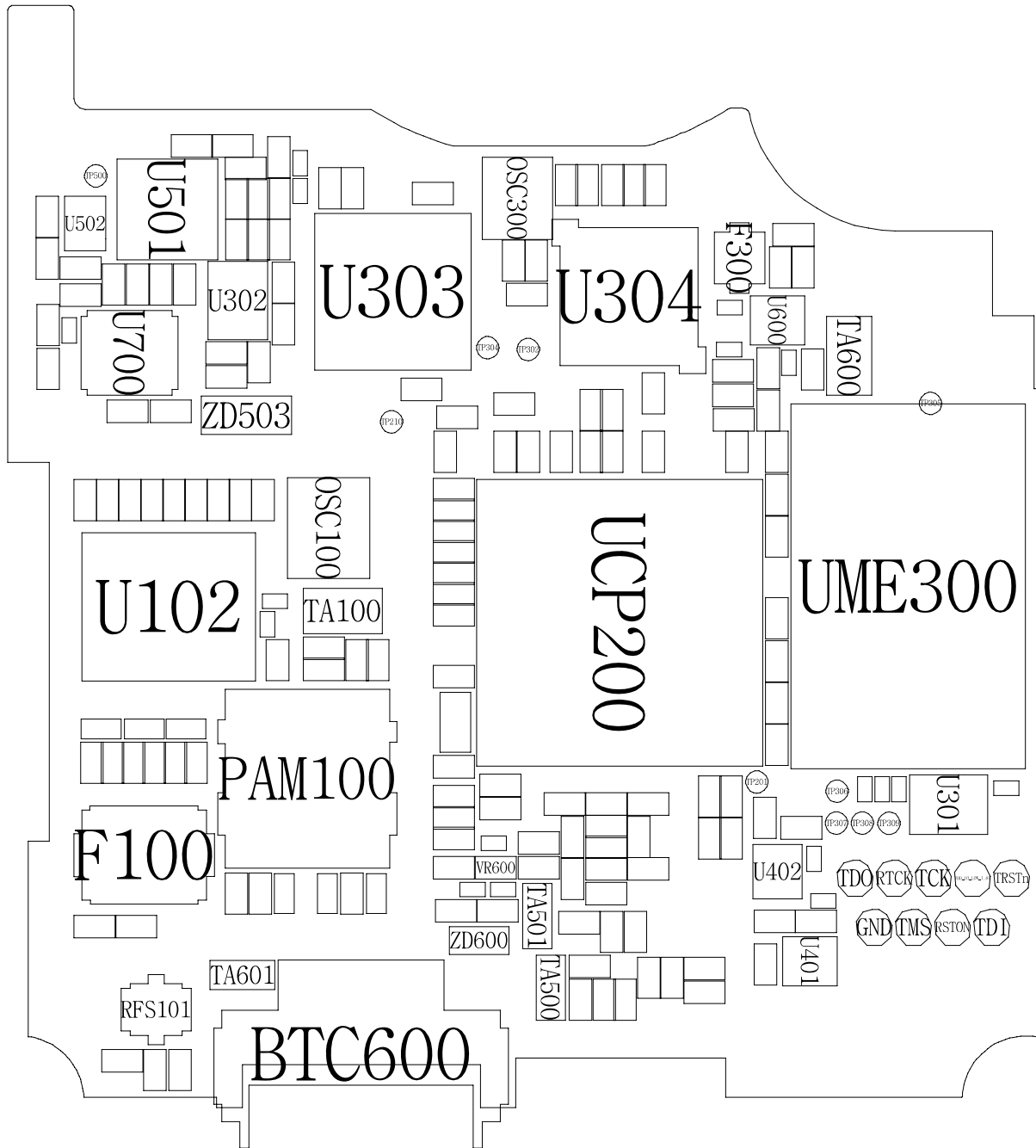


7-2. Base Band Solution Block Diagram



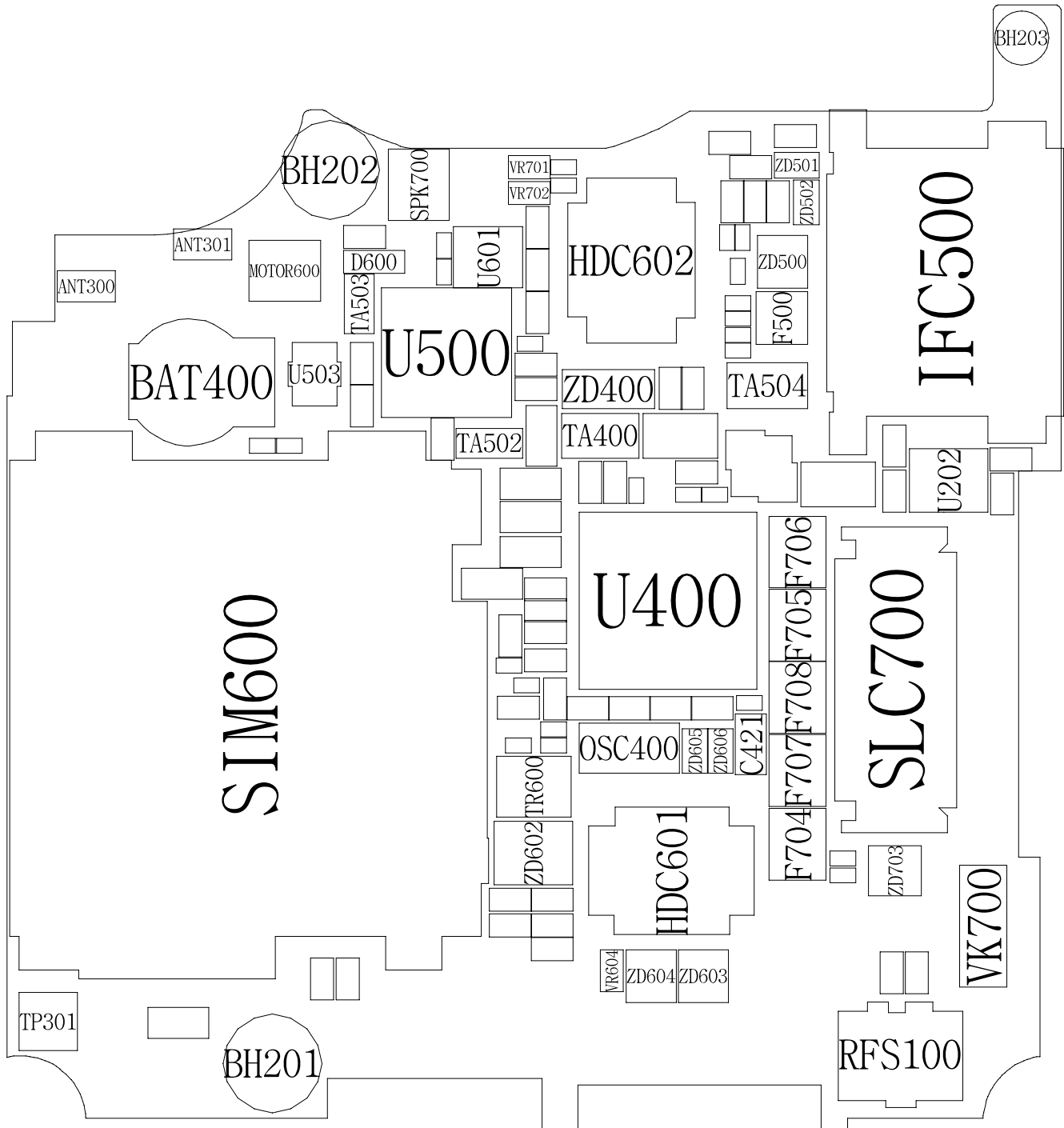
8. PCB Diagrams

Top



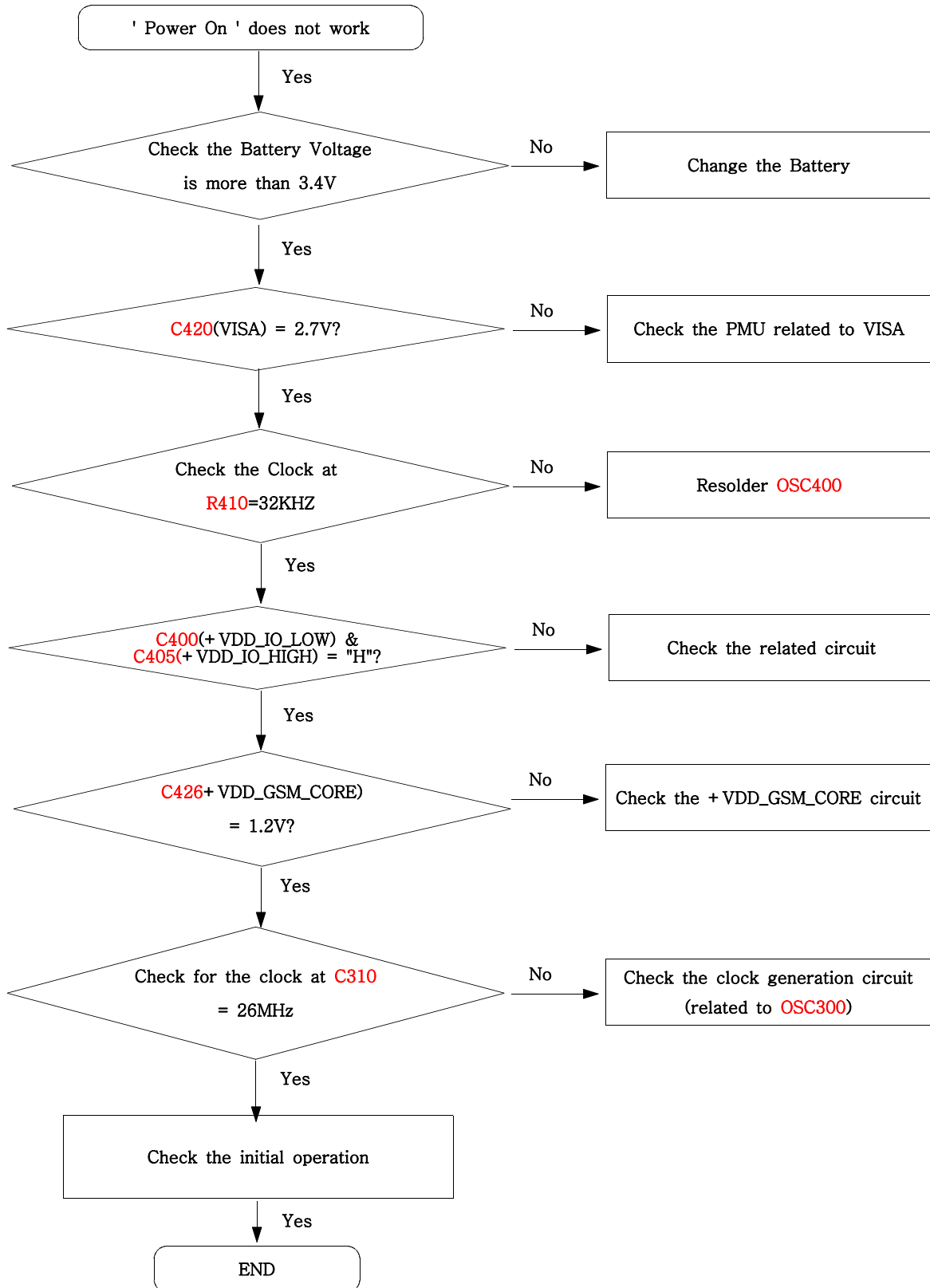
JTAG200

Bottom

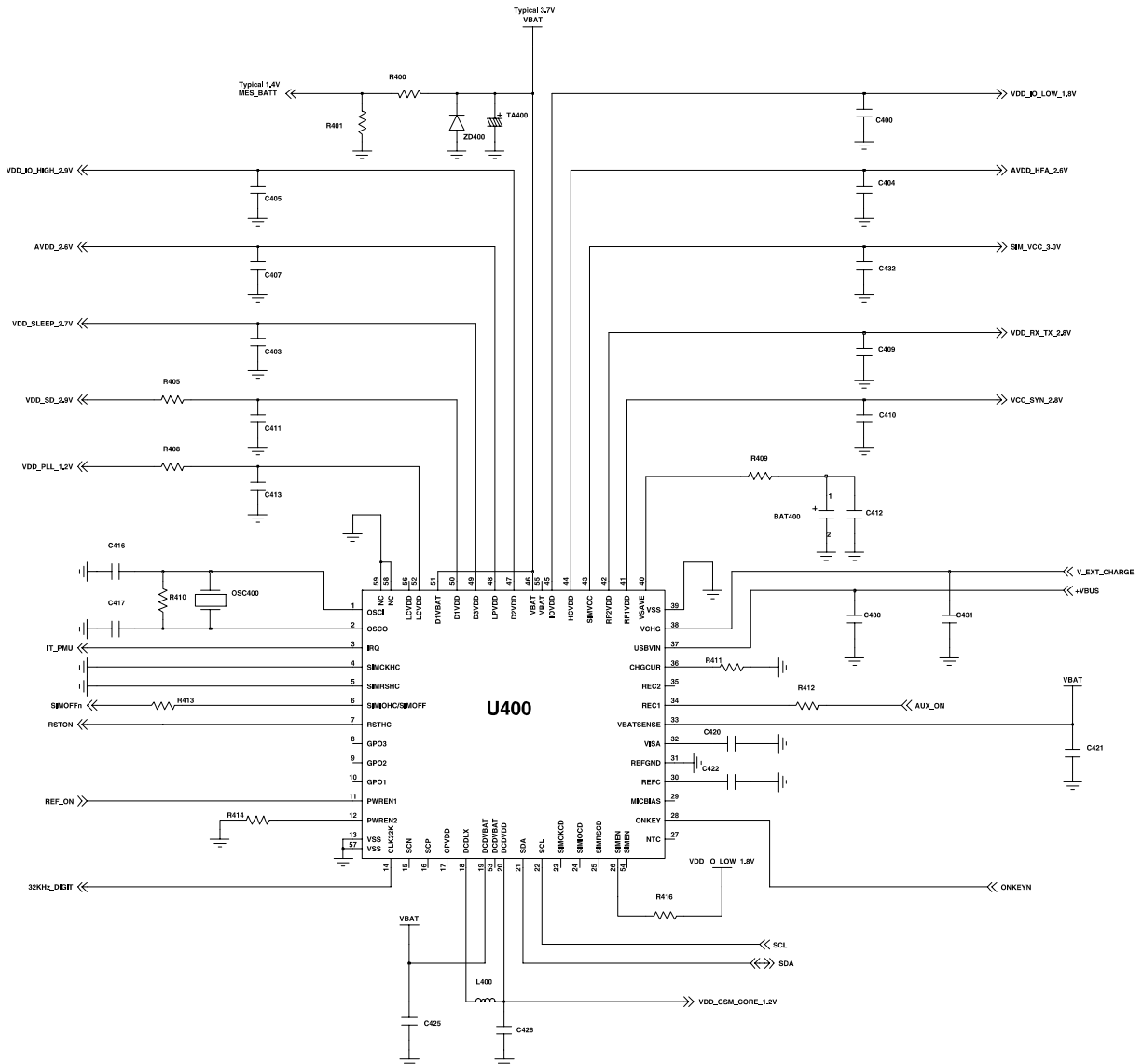


9. Flow Chart of Troubleshooting

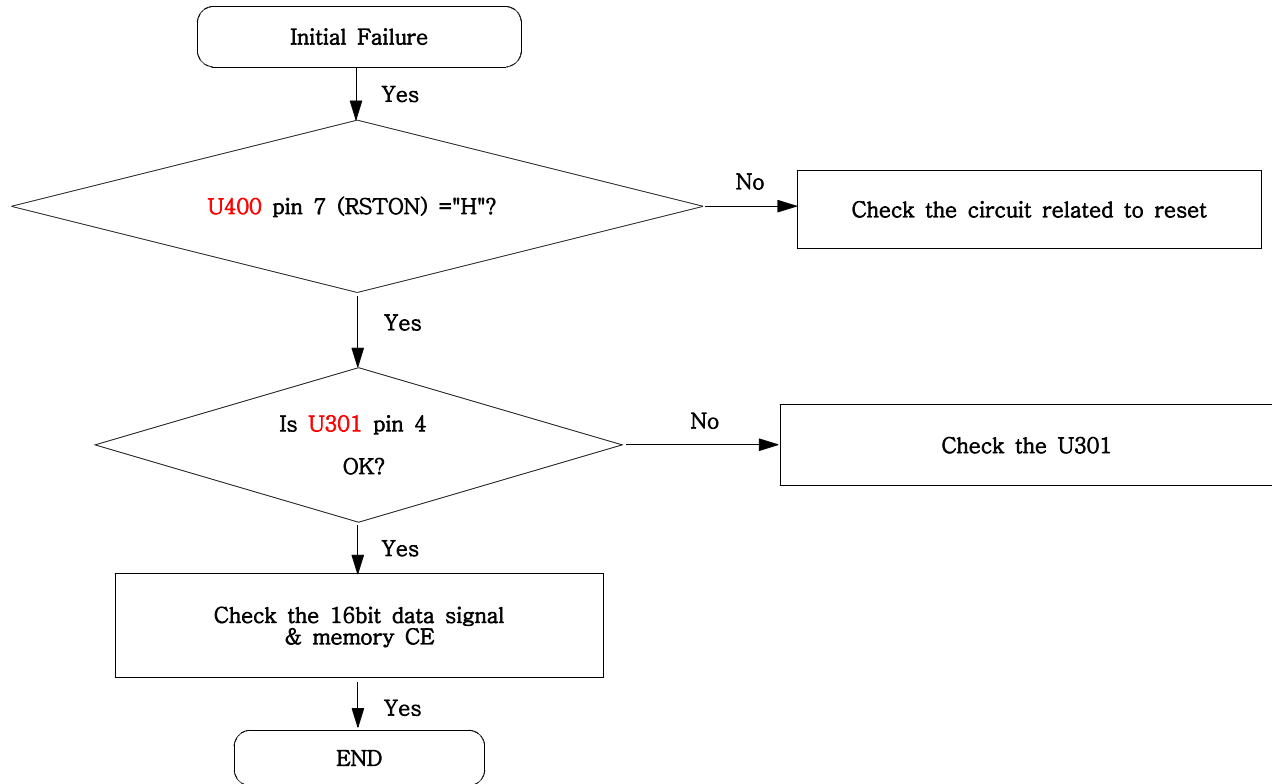
9-1. Power On

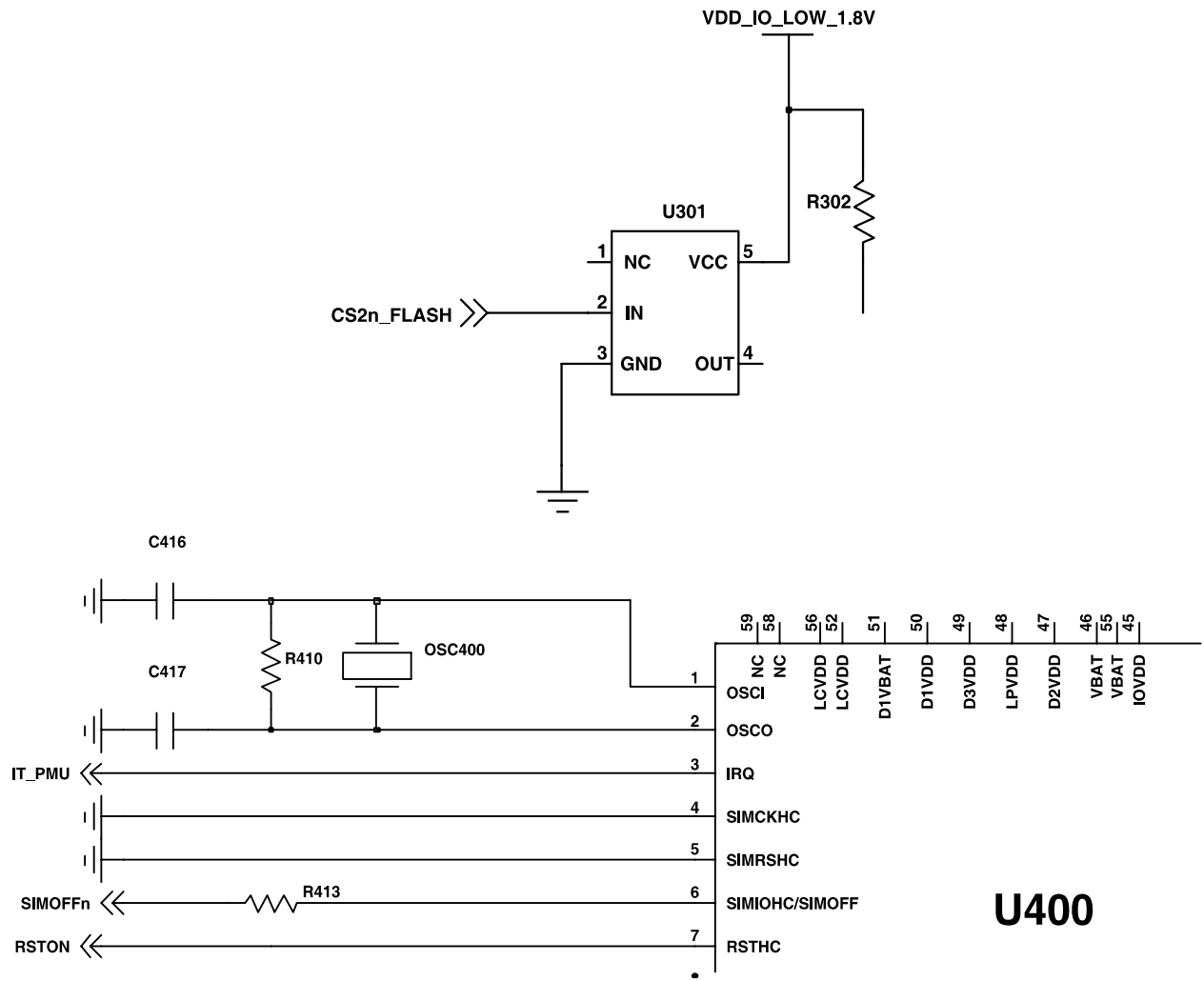


Flow Chart of Troubleshooting

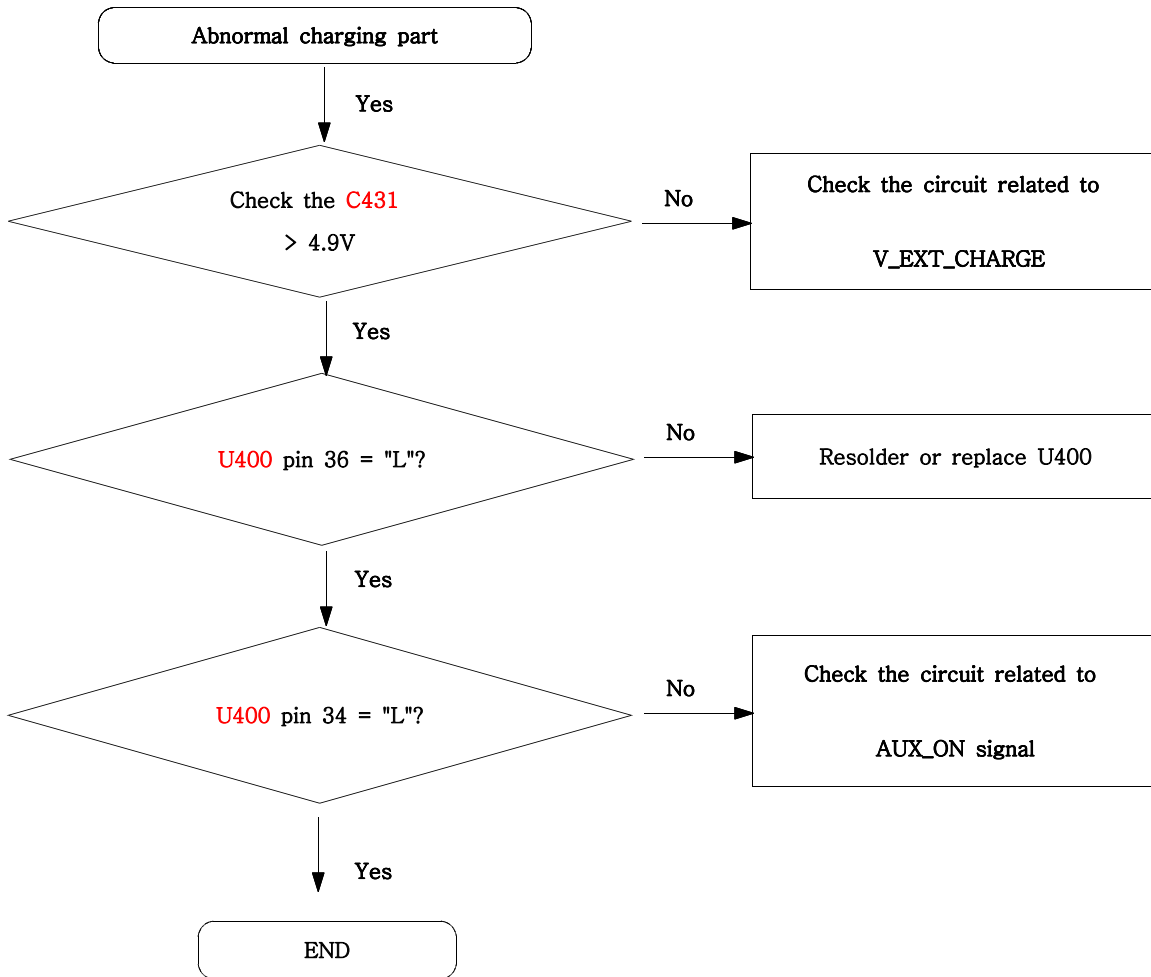


9-2. Initial

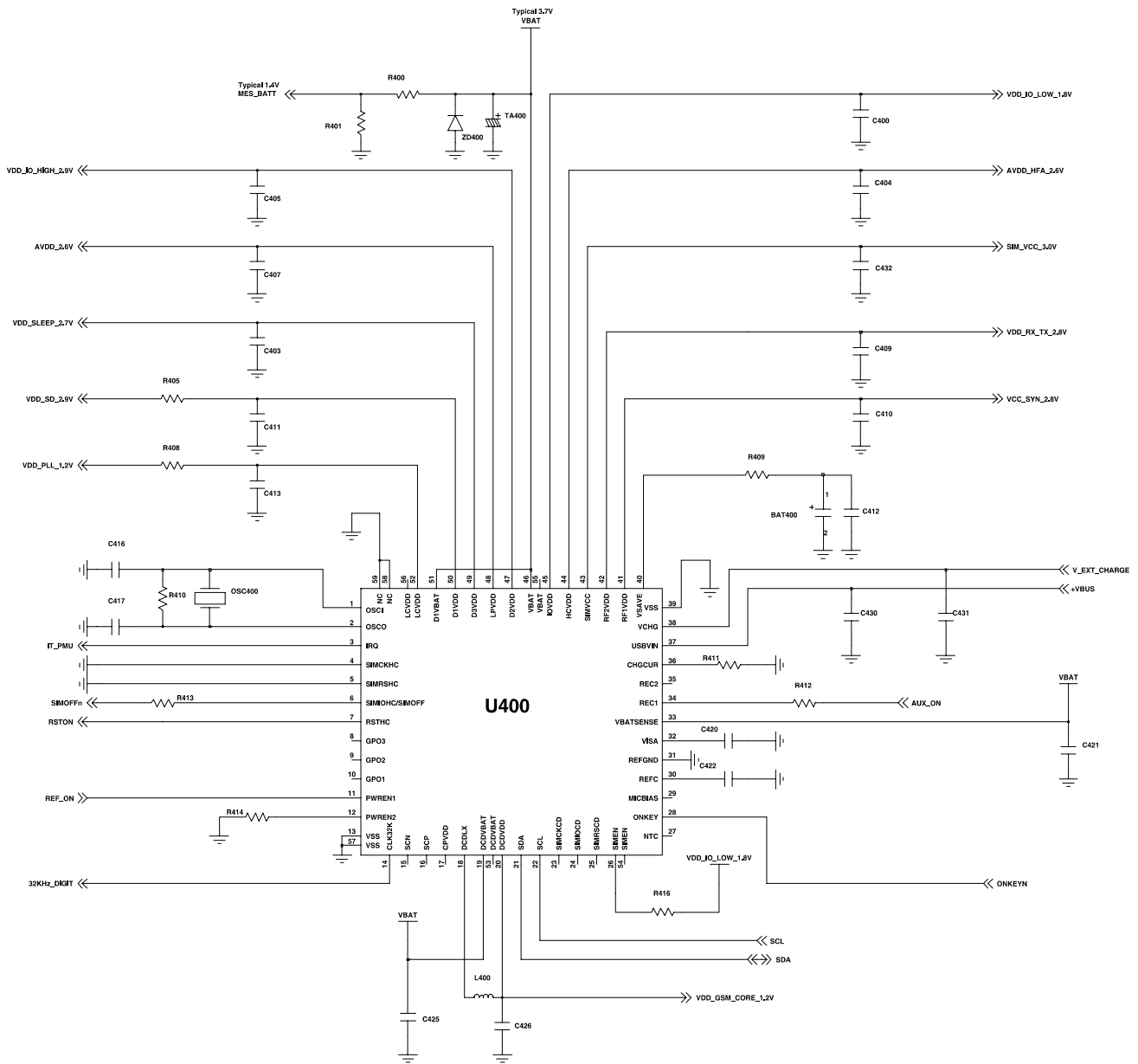




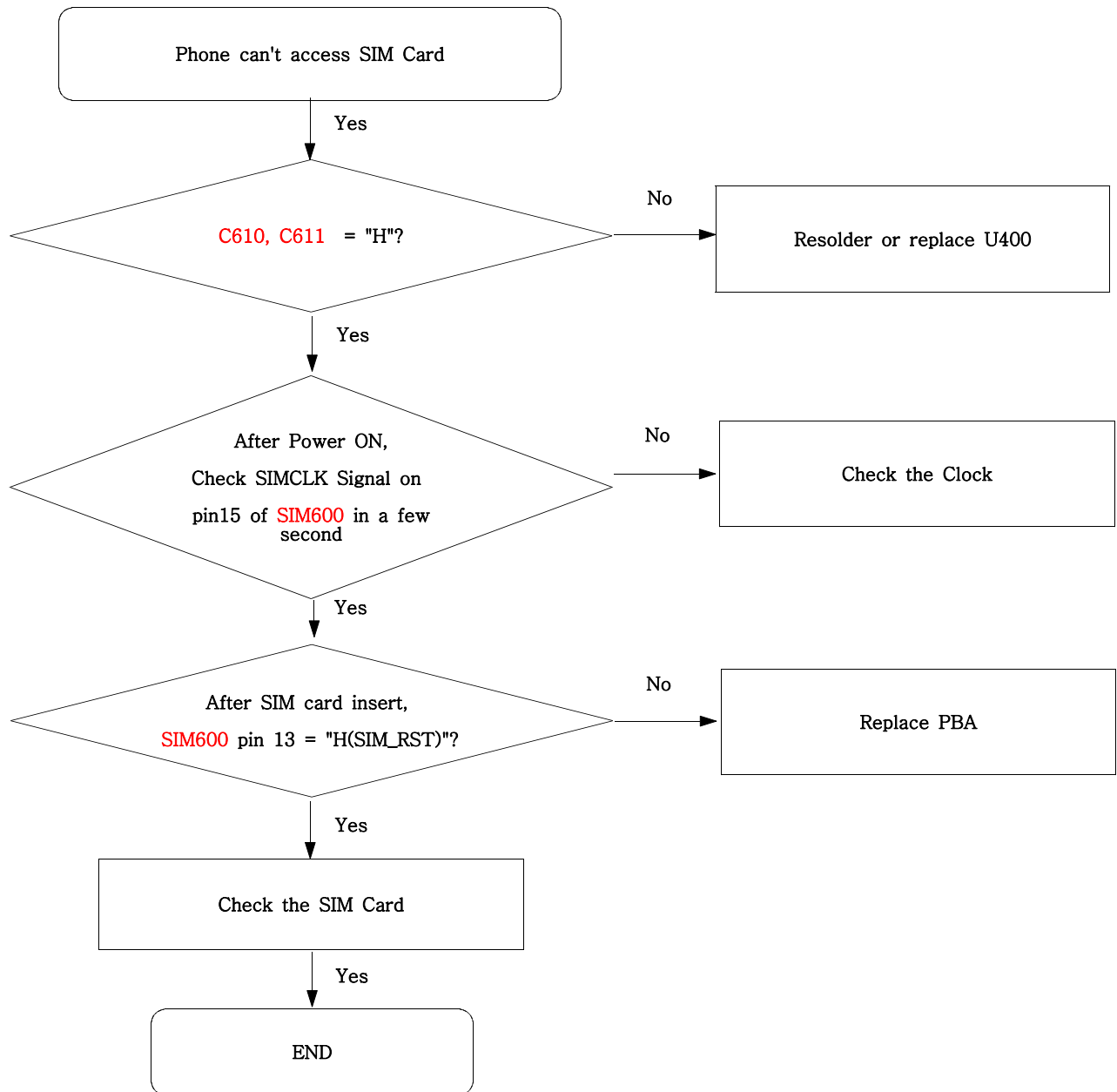
9-3. Charging Part



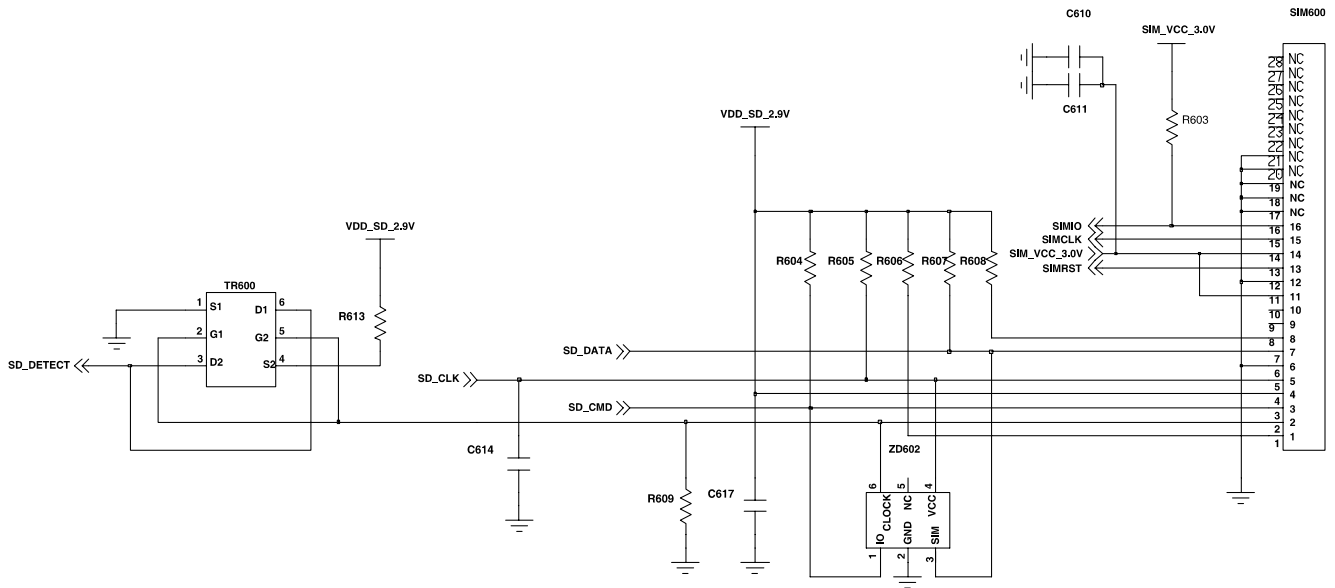
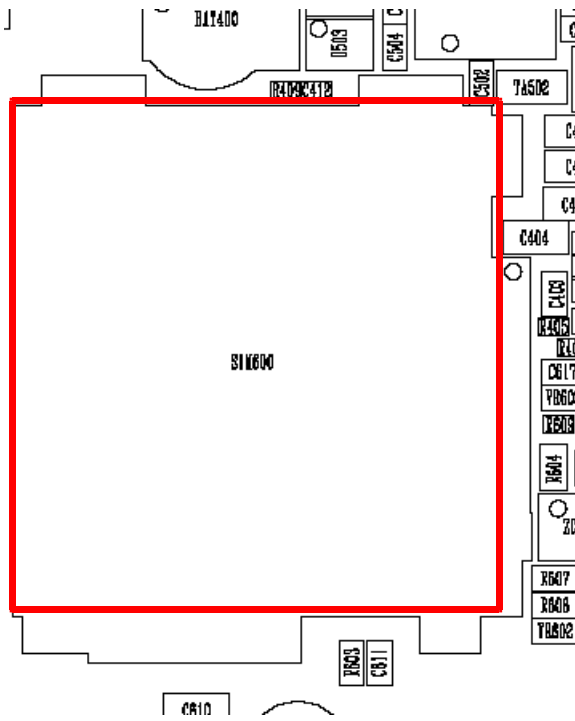
Flow Chart of Troubleshooting



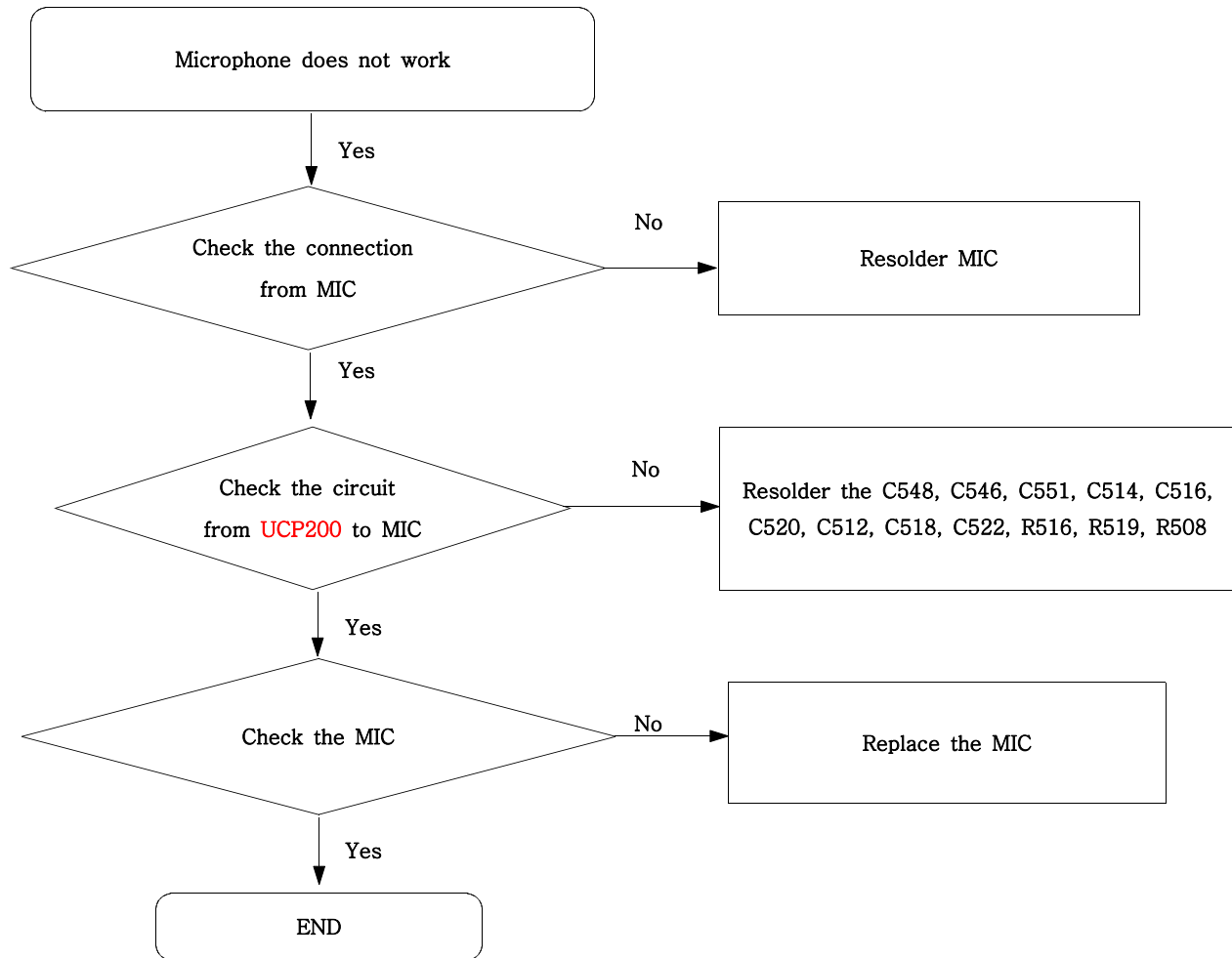
9-4. Sim Part

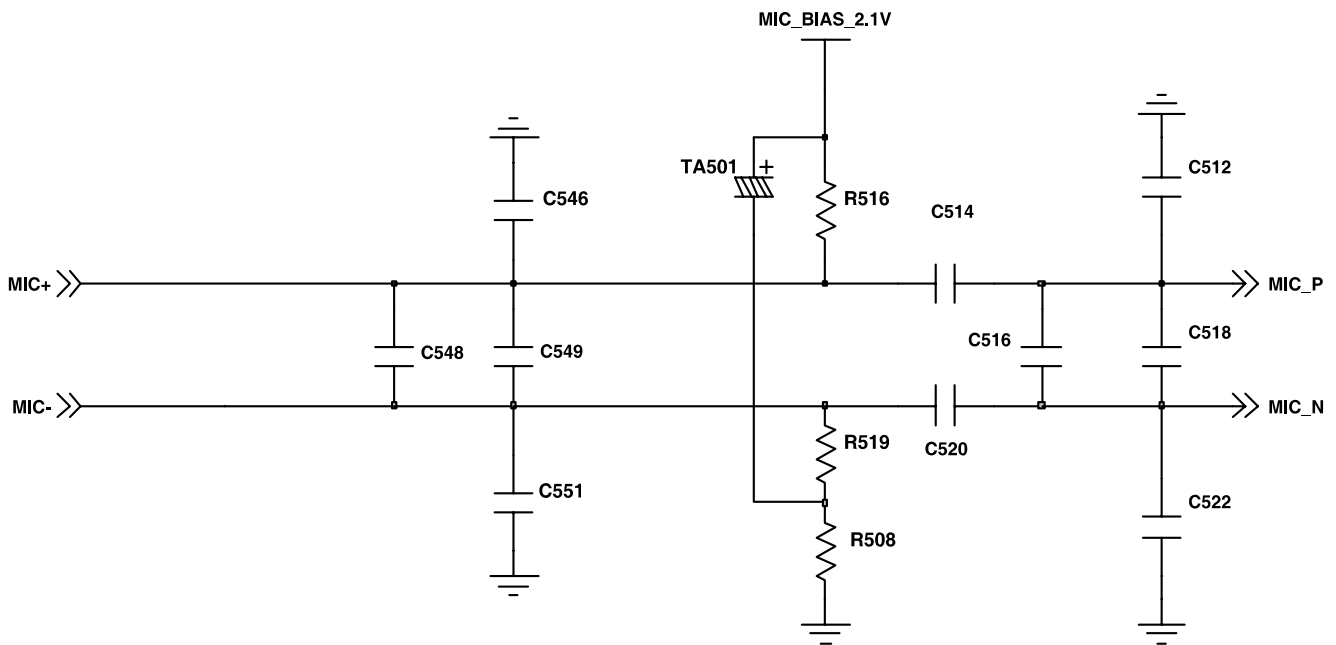
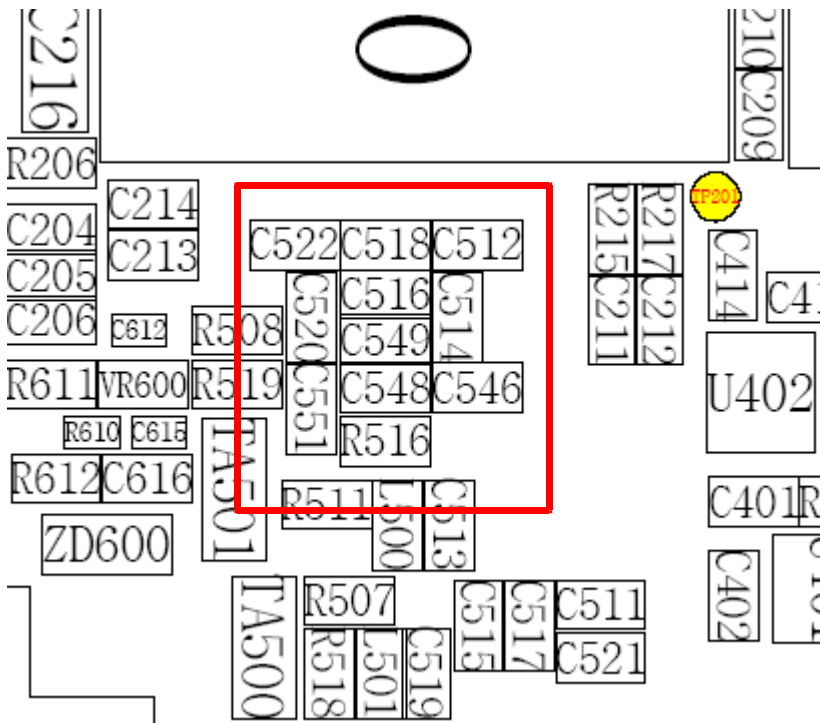


Flow Chart of Troubleshooting

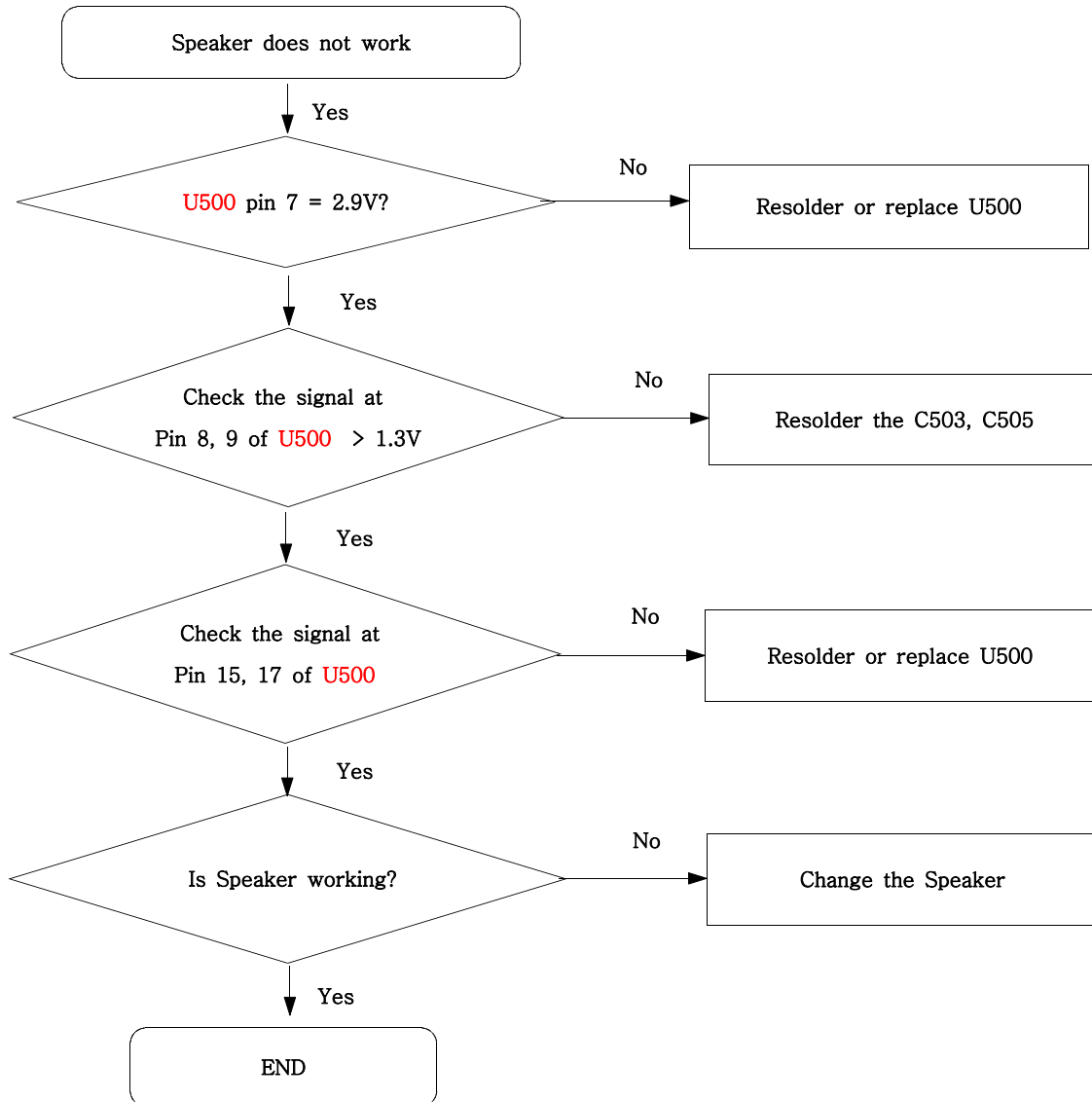


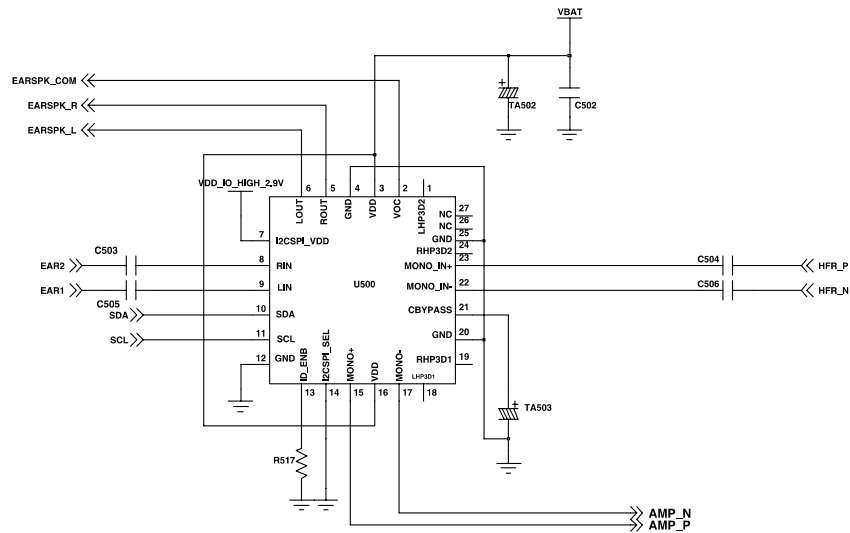
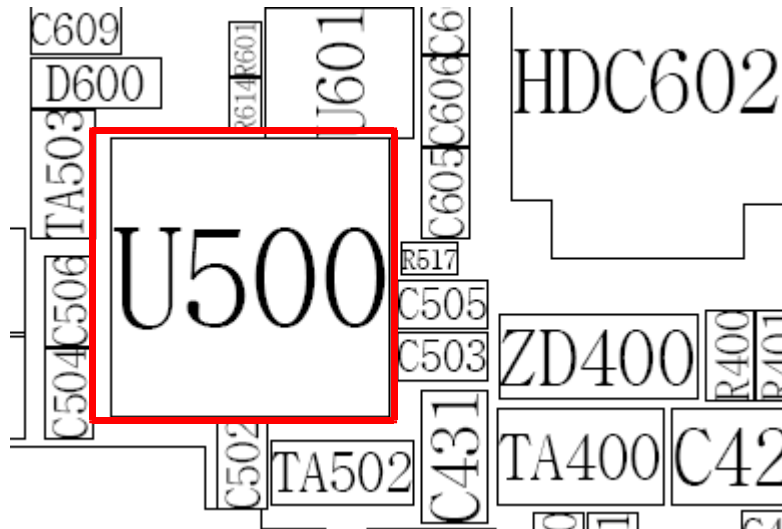
9-5. Microphone Part



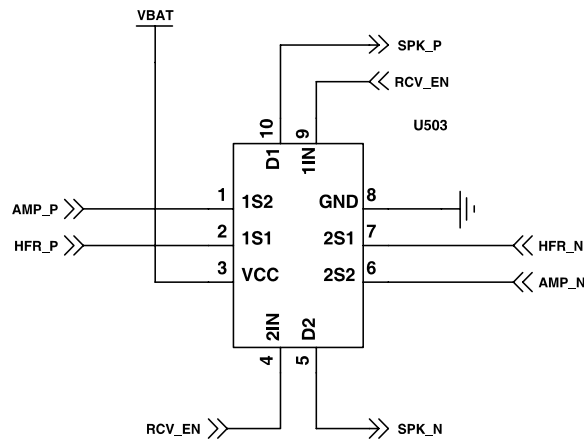


9-6. Speaker Part(Melody)

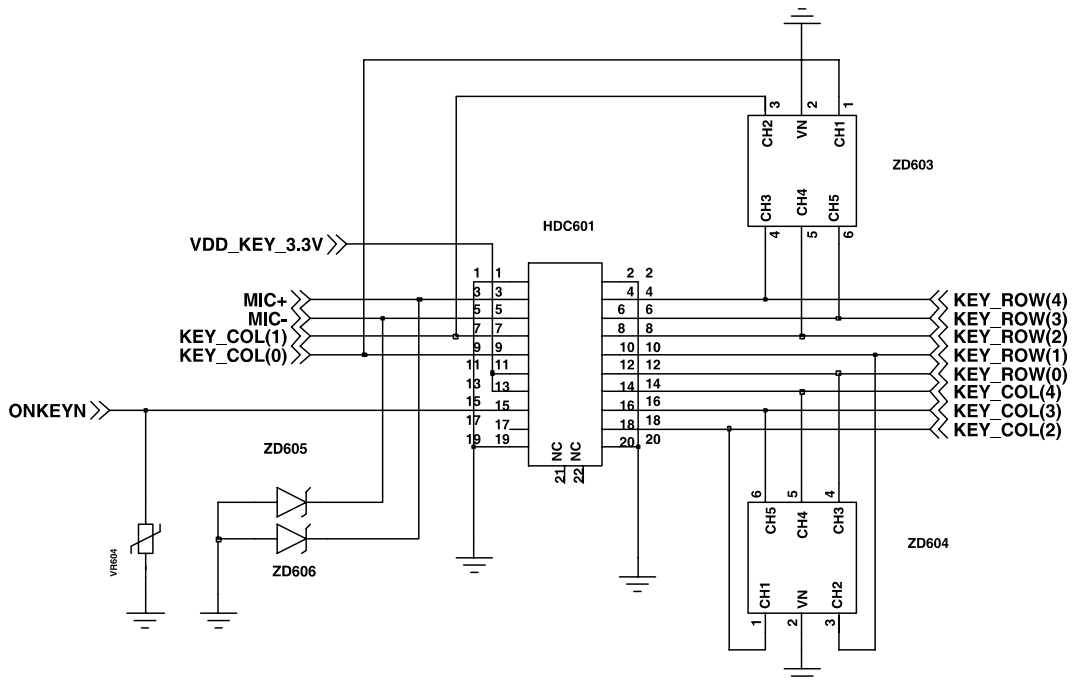
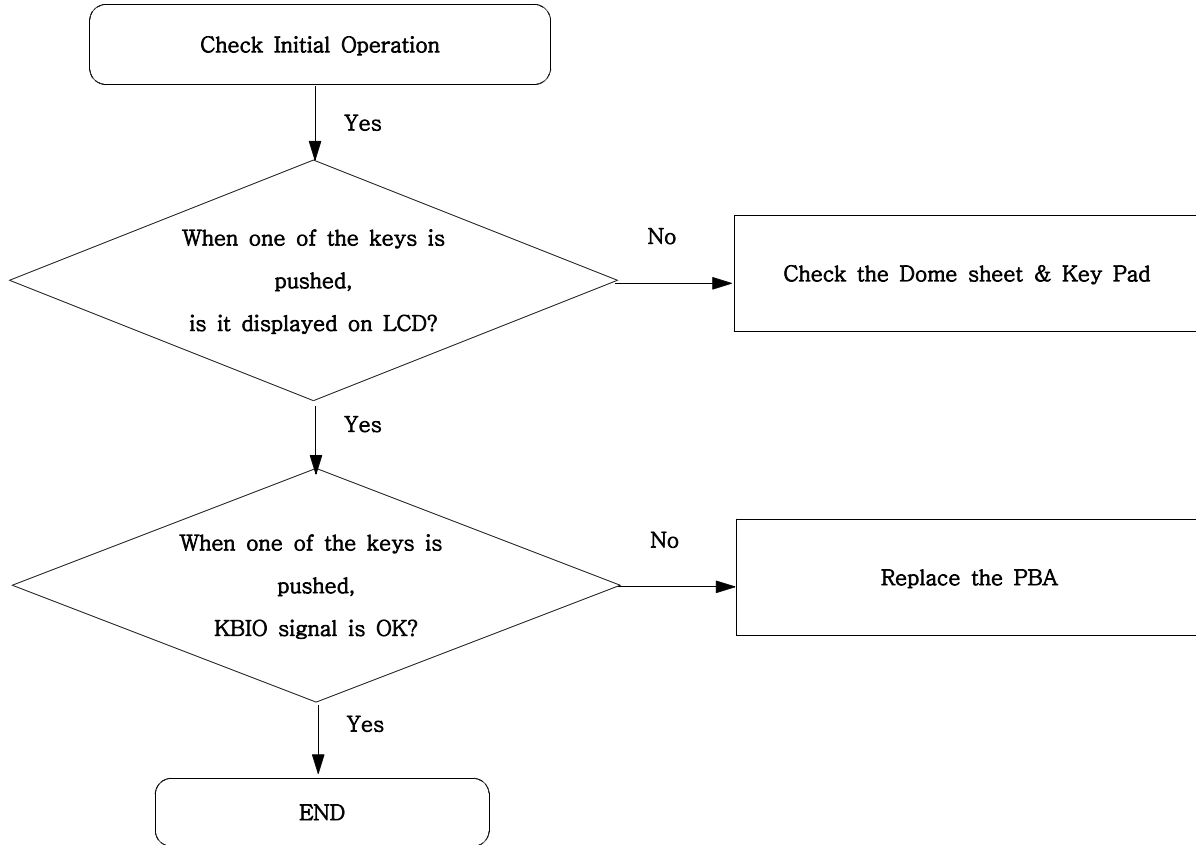




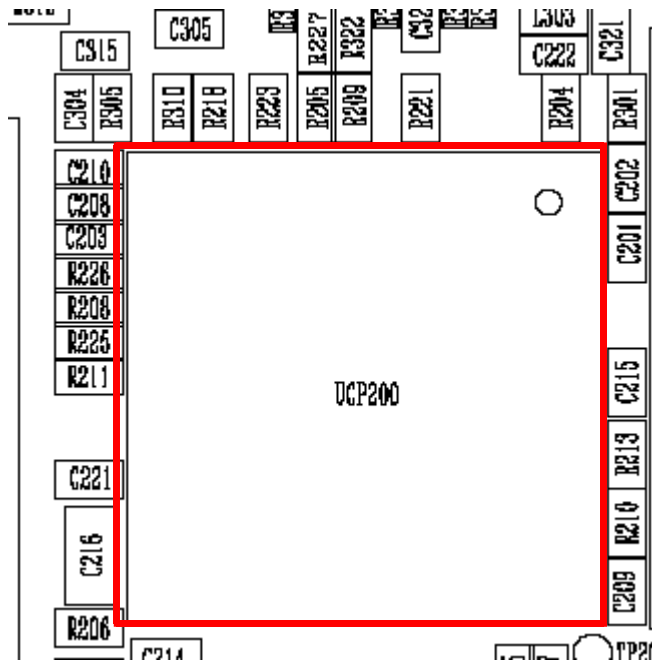
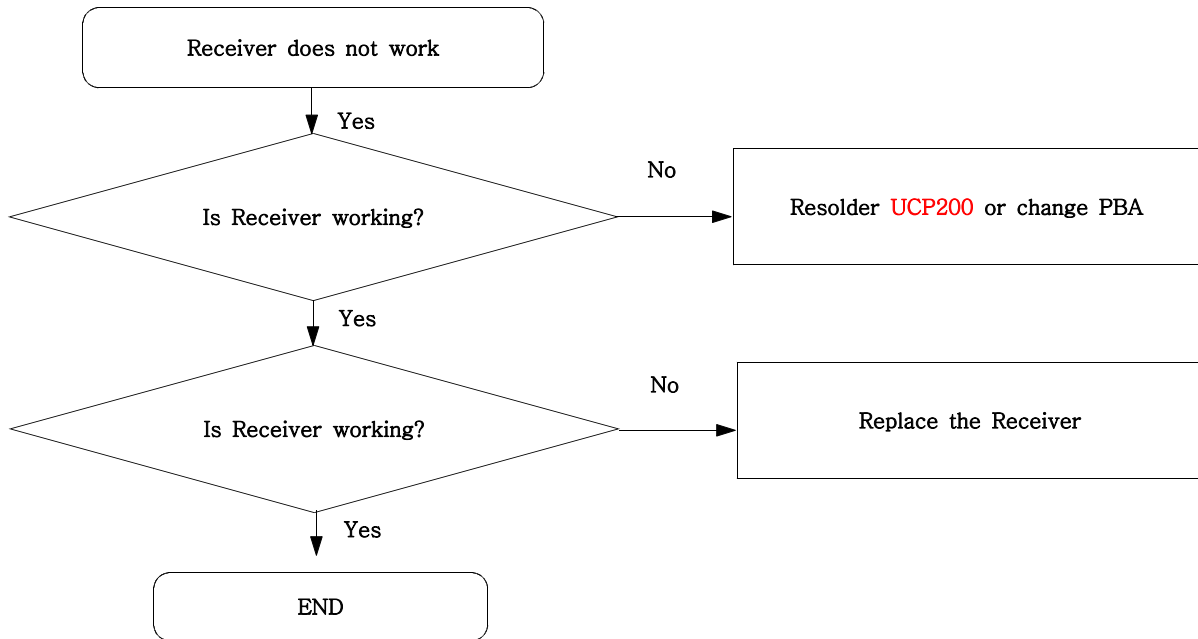
AUDIO AMP



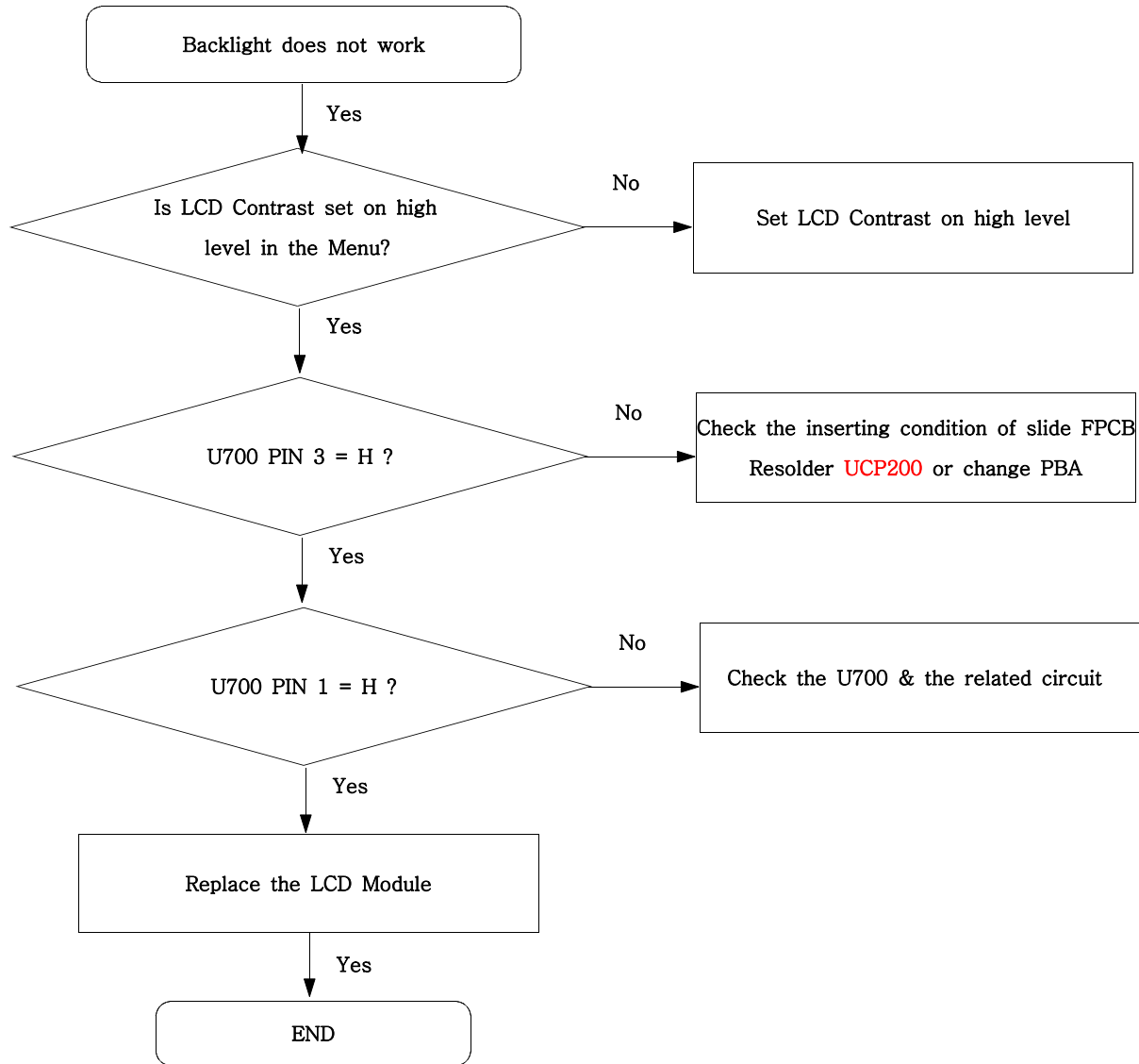
9-7. Key Data Input

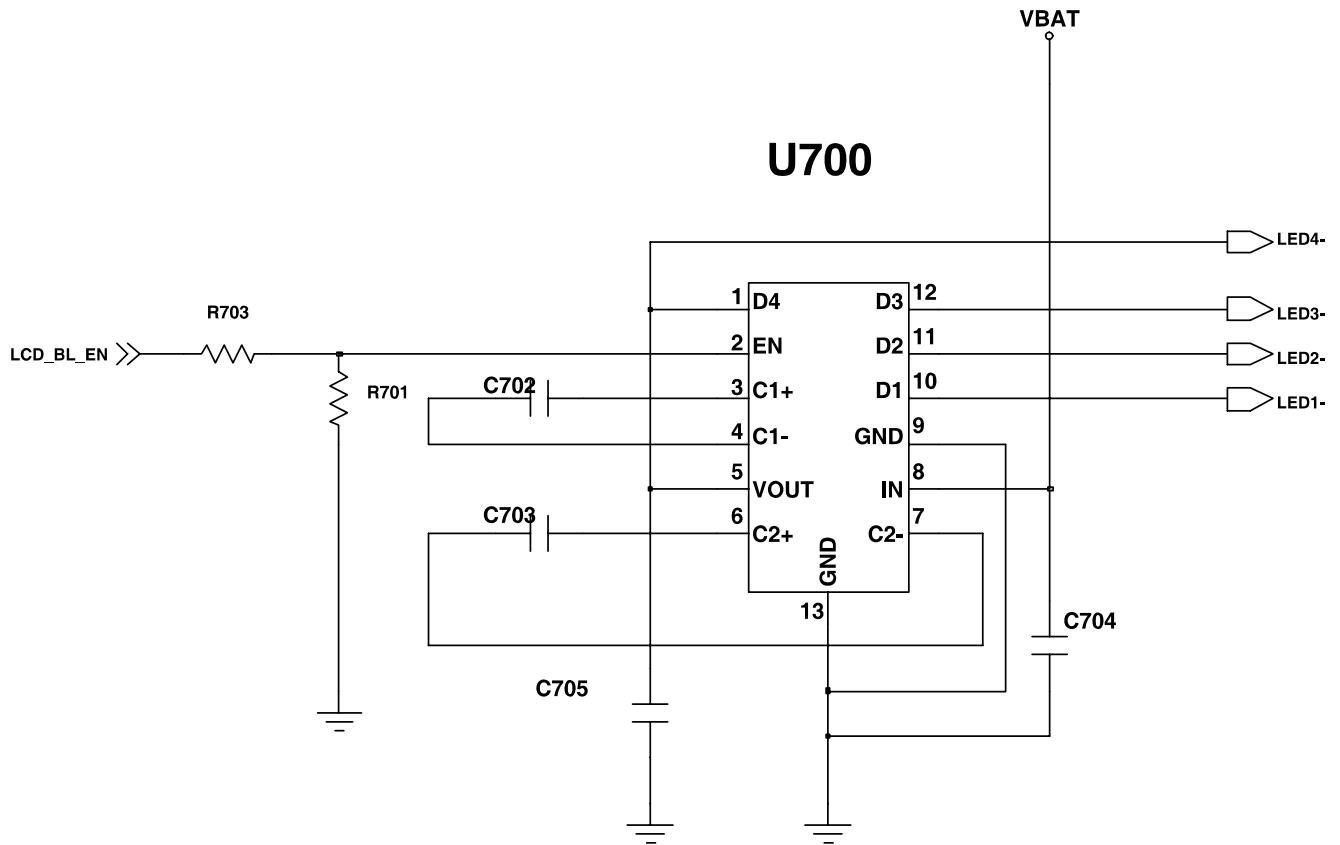
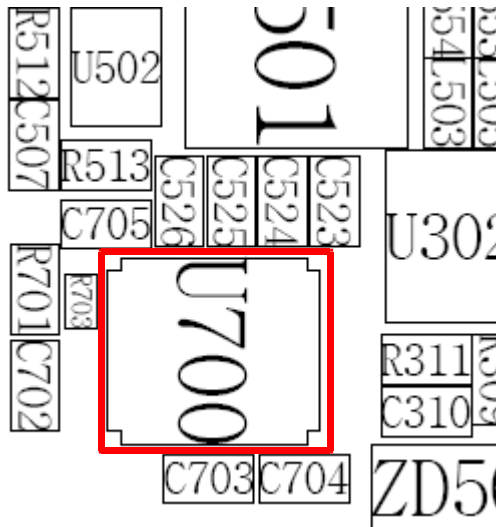


9-8. Receiver Part

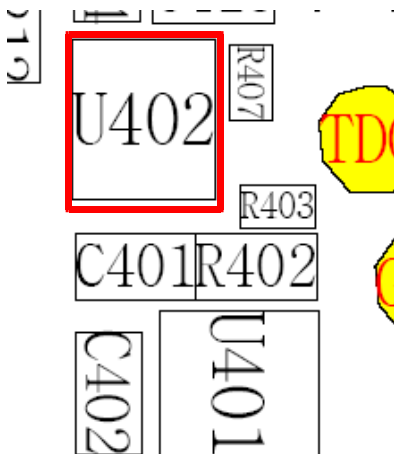
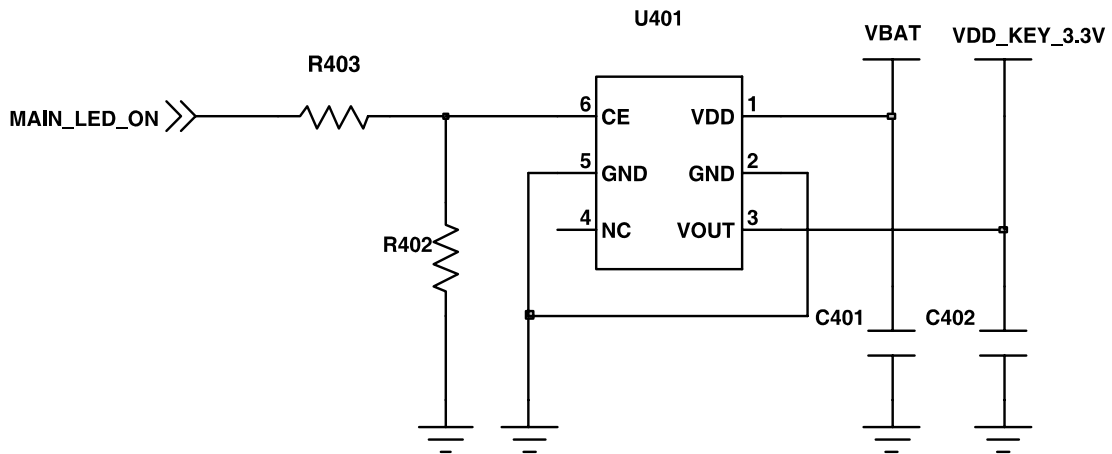
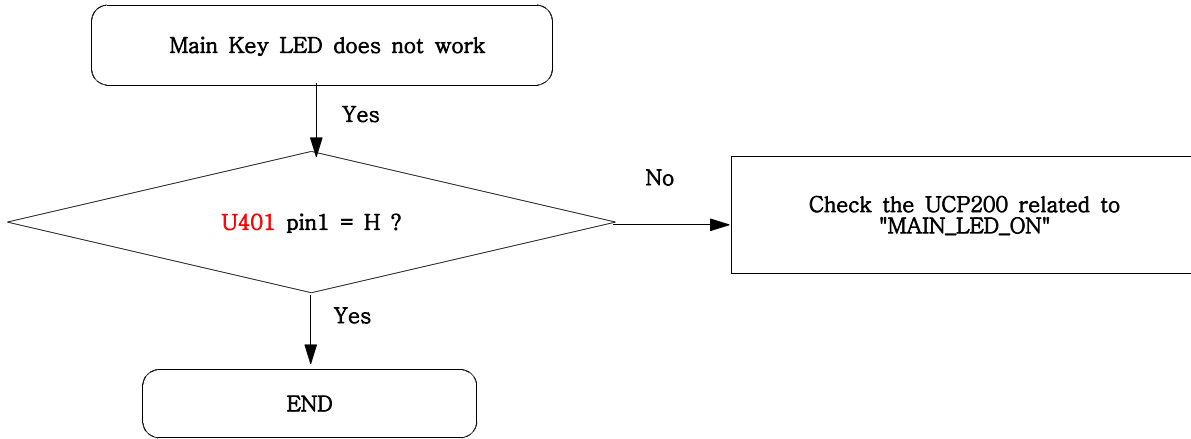


9-9. Back Light (for Color Main LCD)

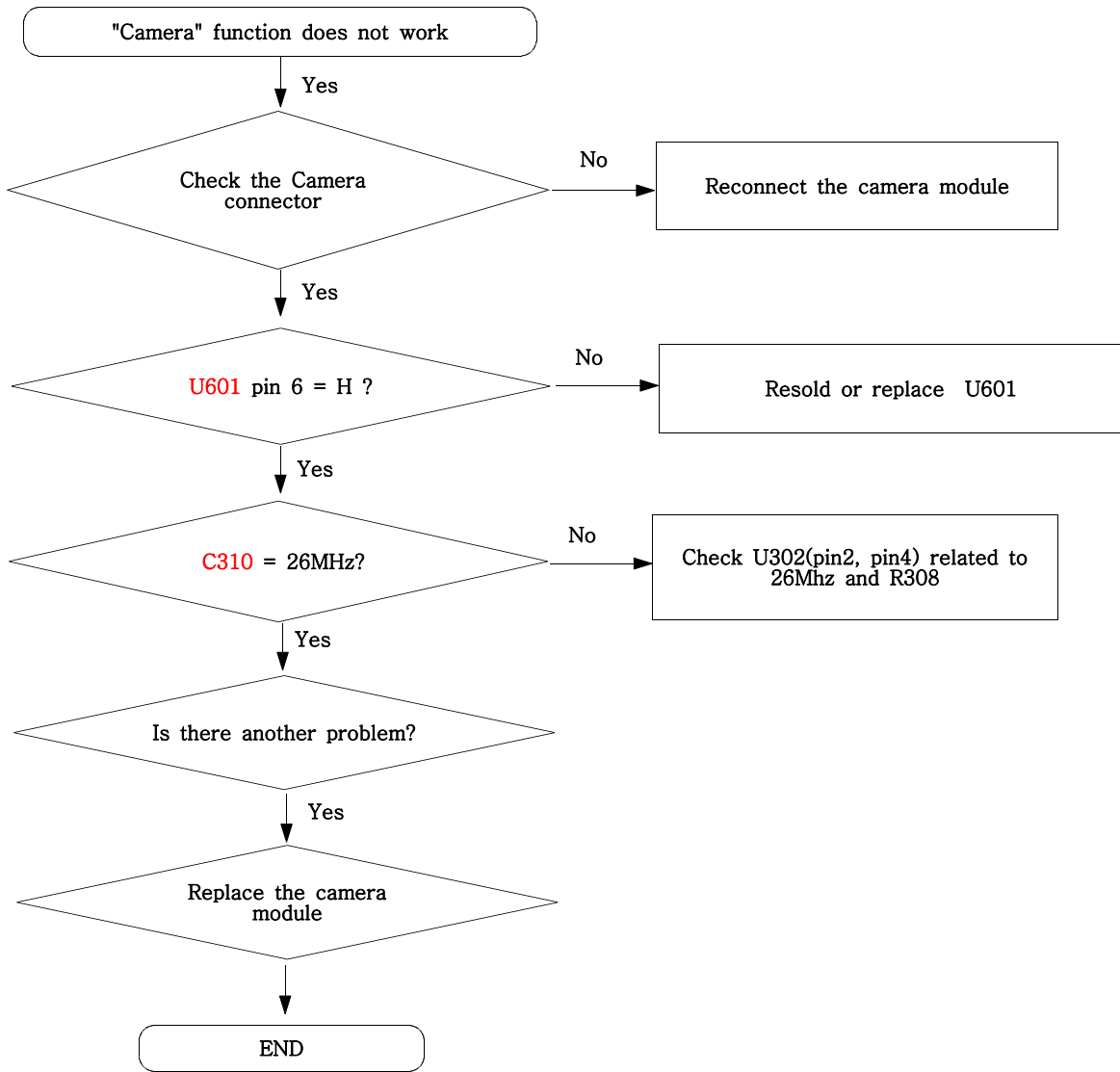


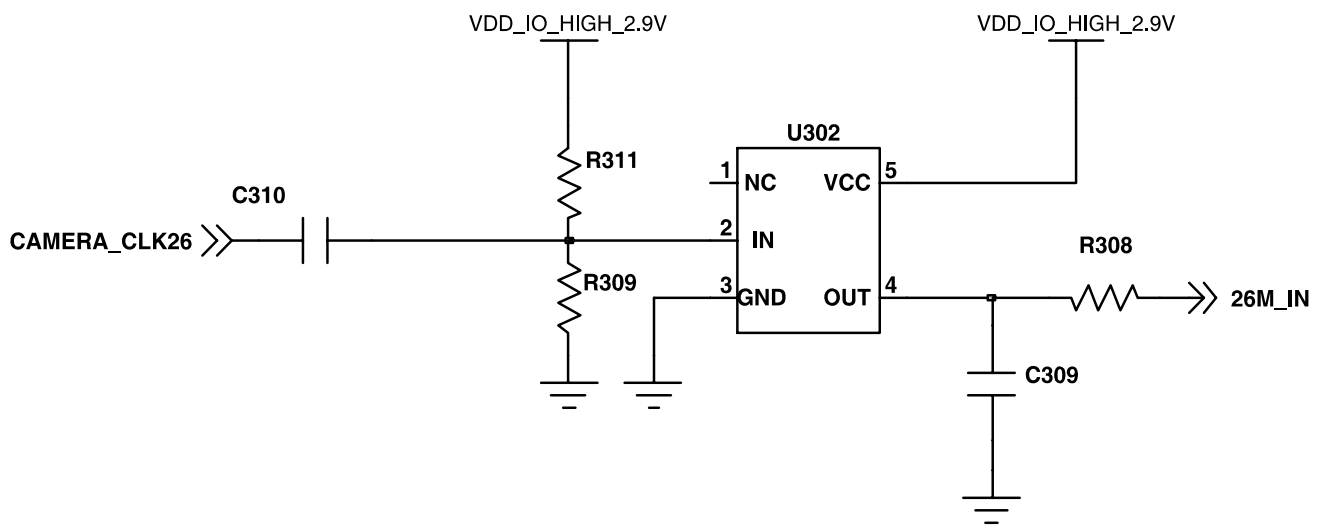
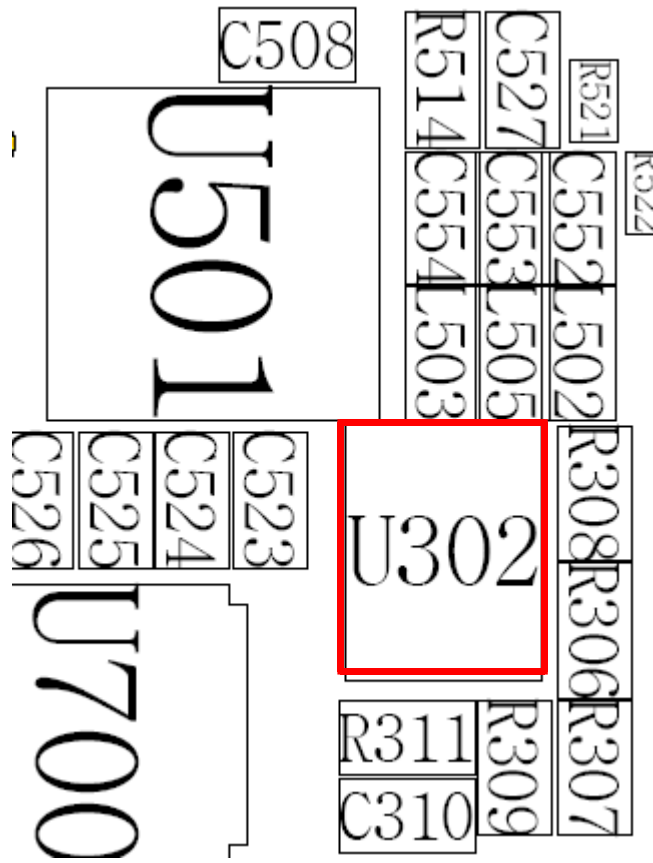


9-10. Key Back Light

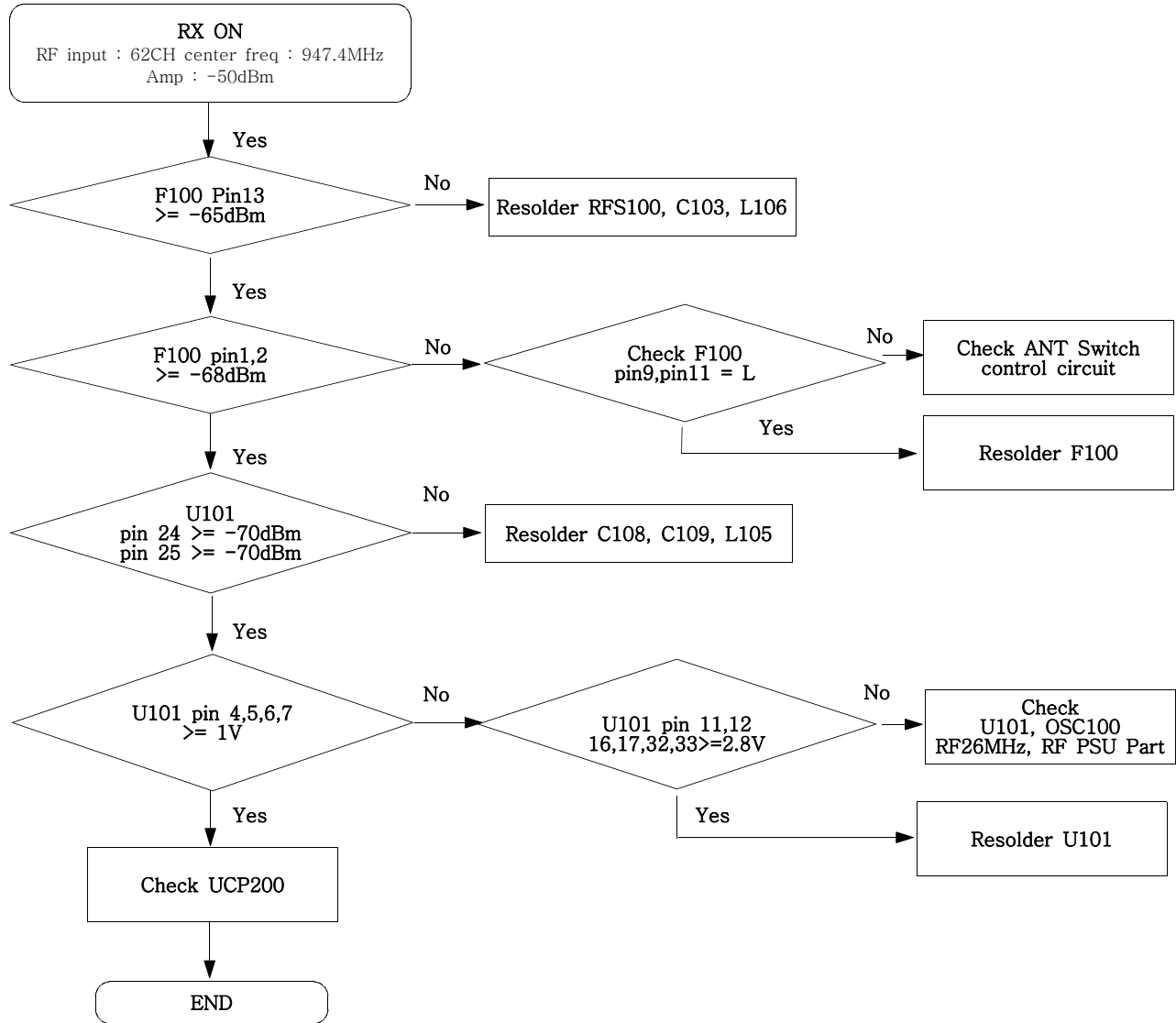


9-11. Camera part

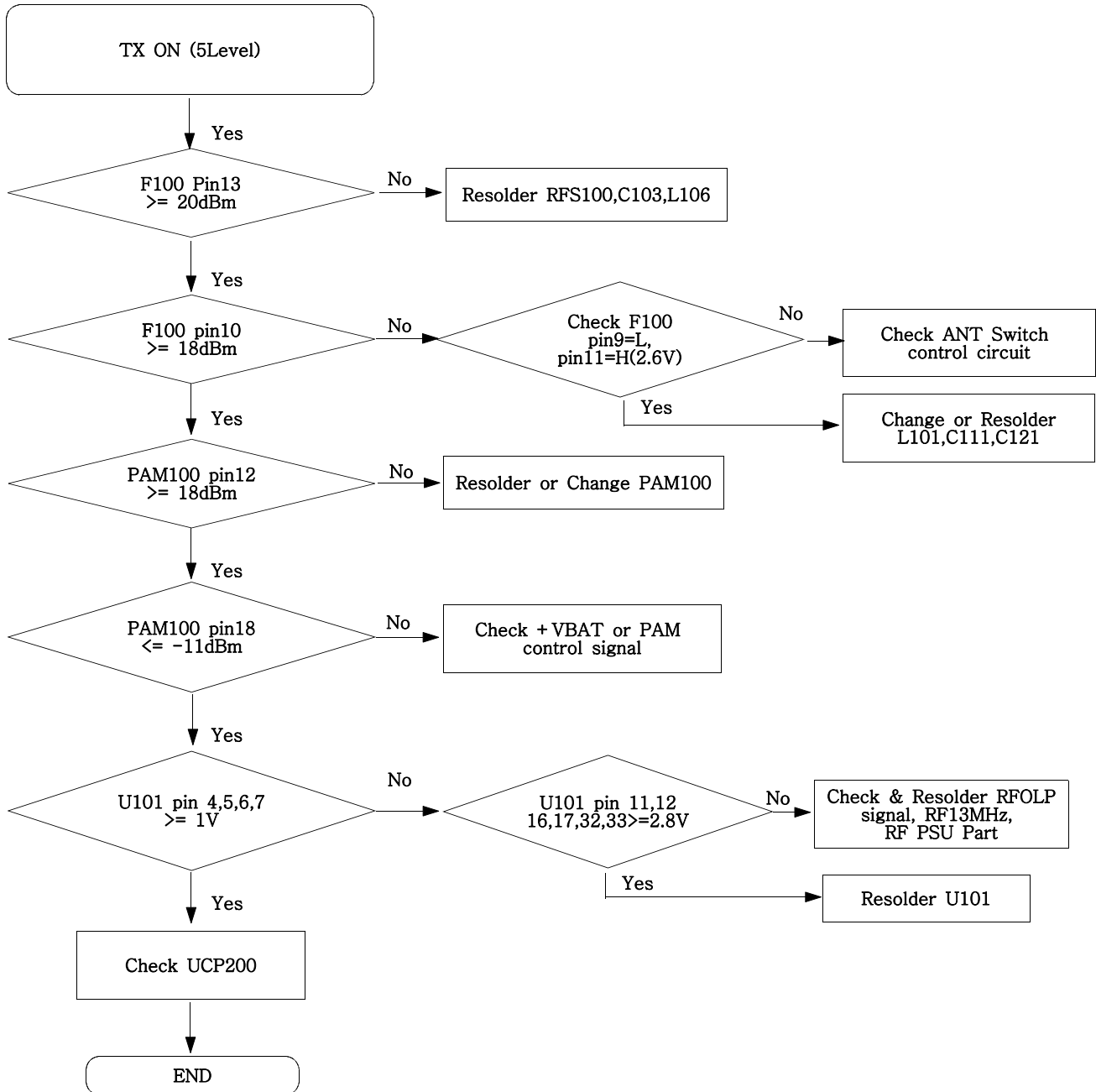




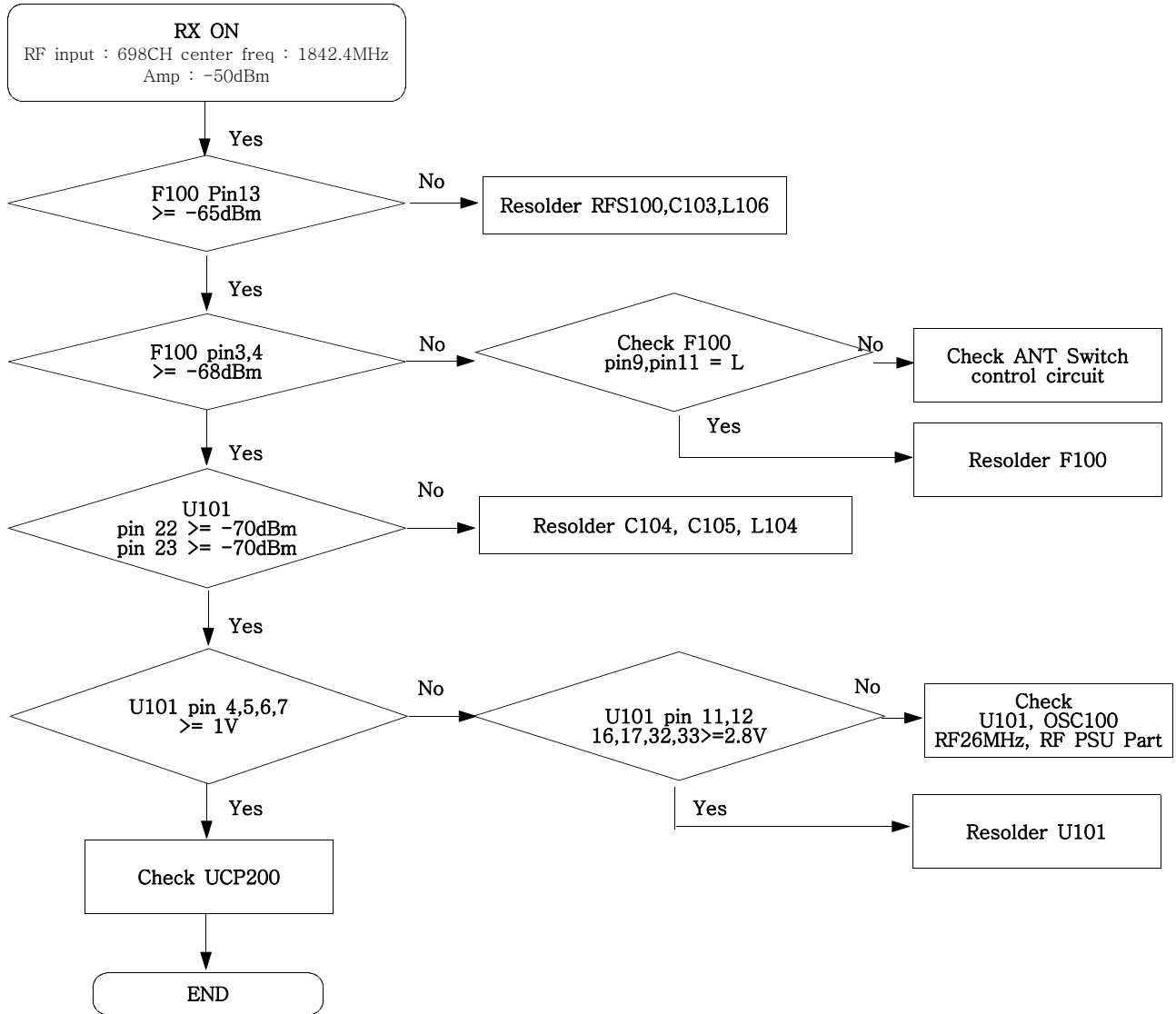
9-12. GSM Receiver



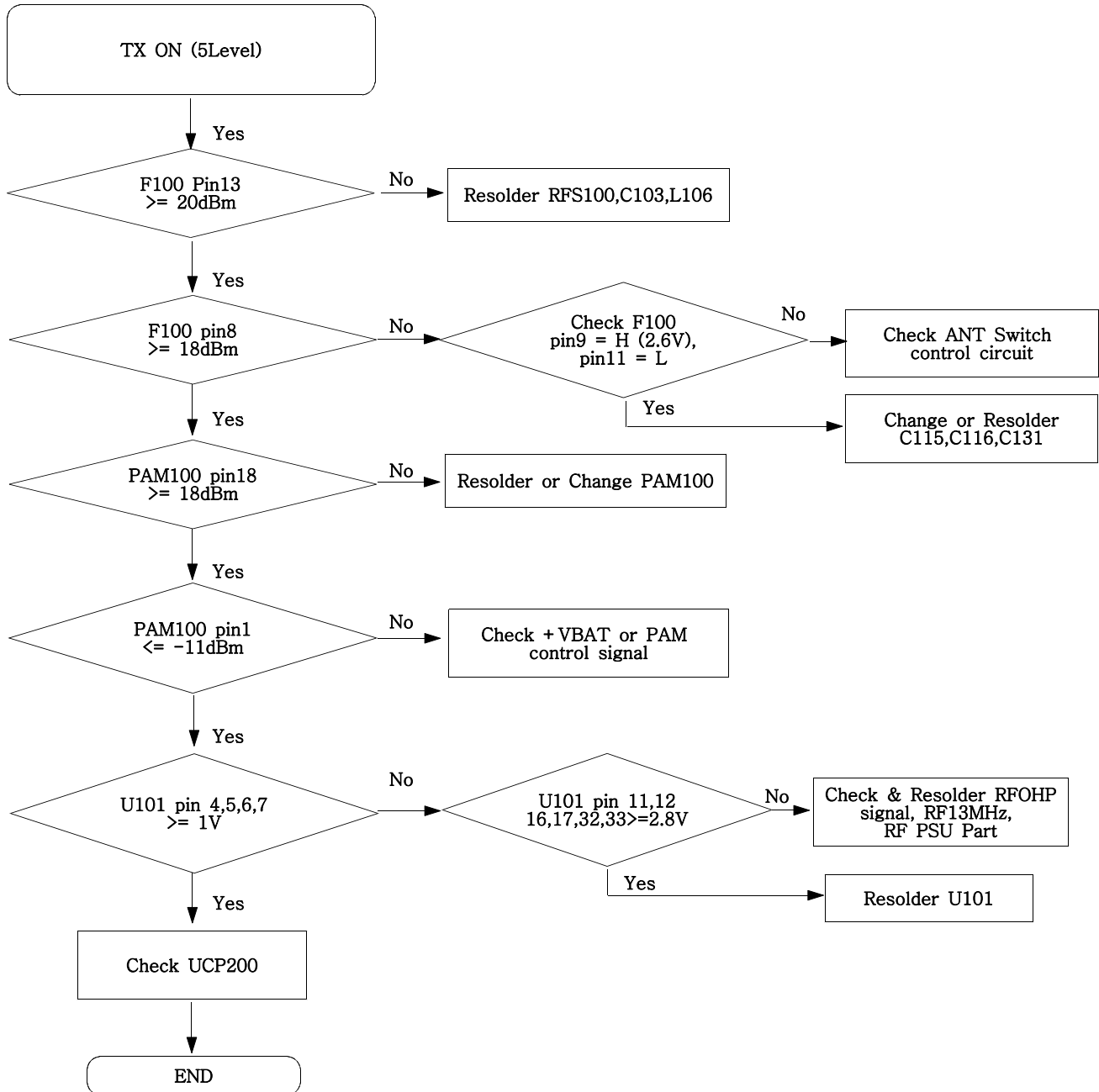
9-13. GSM Transmitter



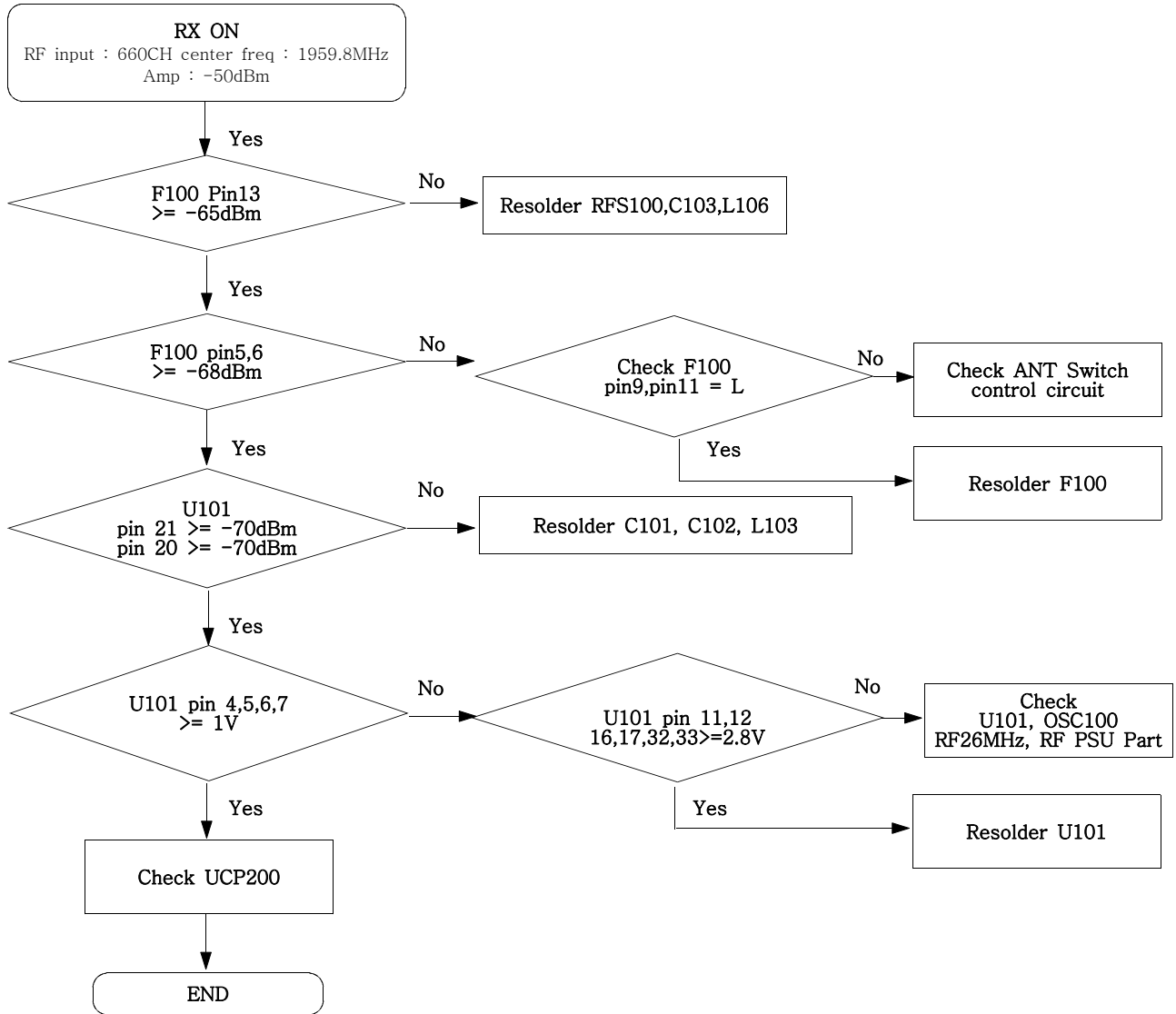
9-14. DCS Receiver



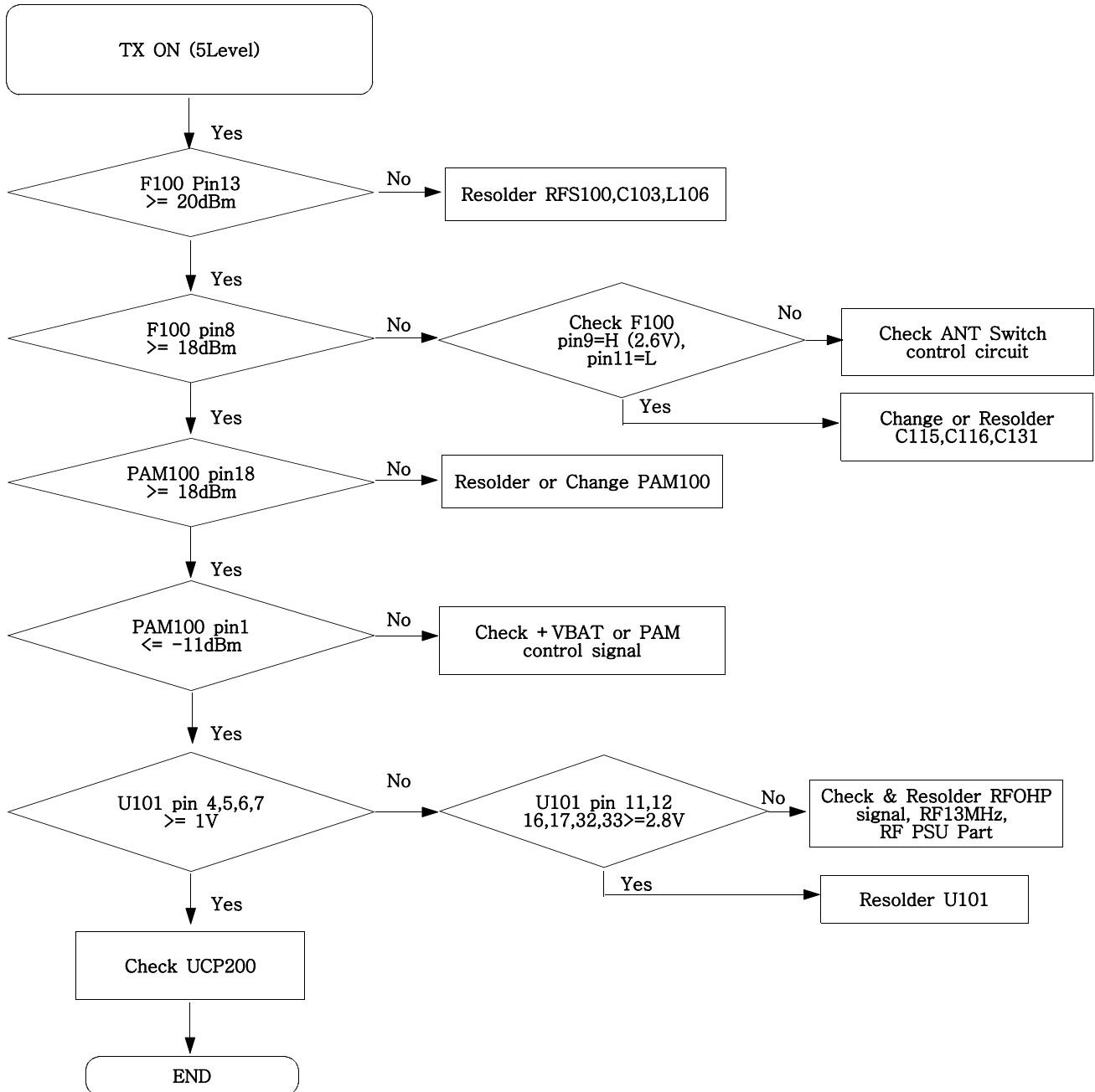
9-15. DCS Transmitter

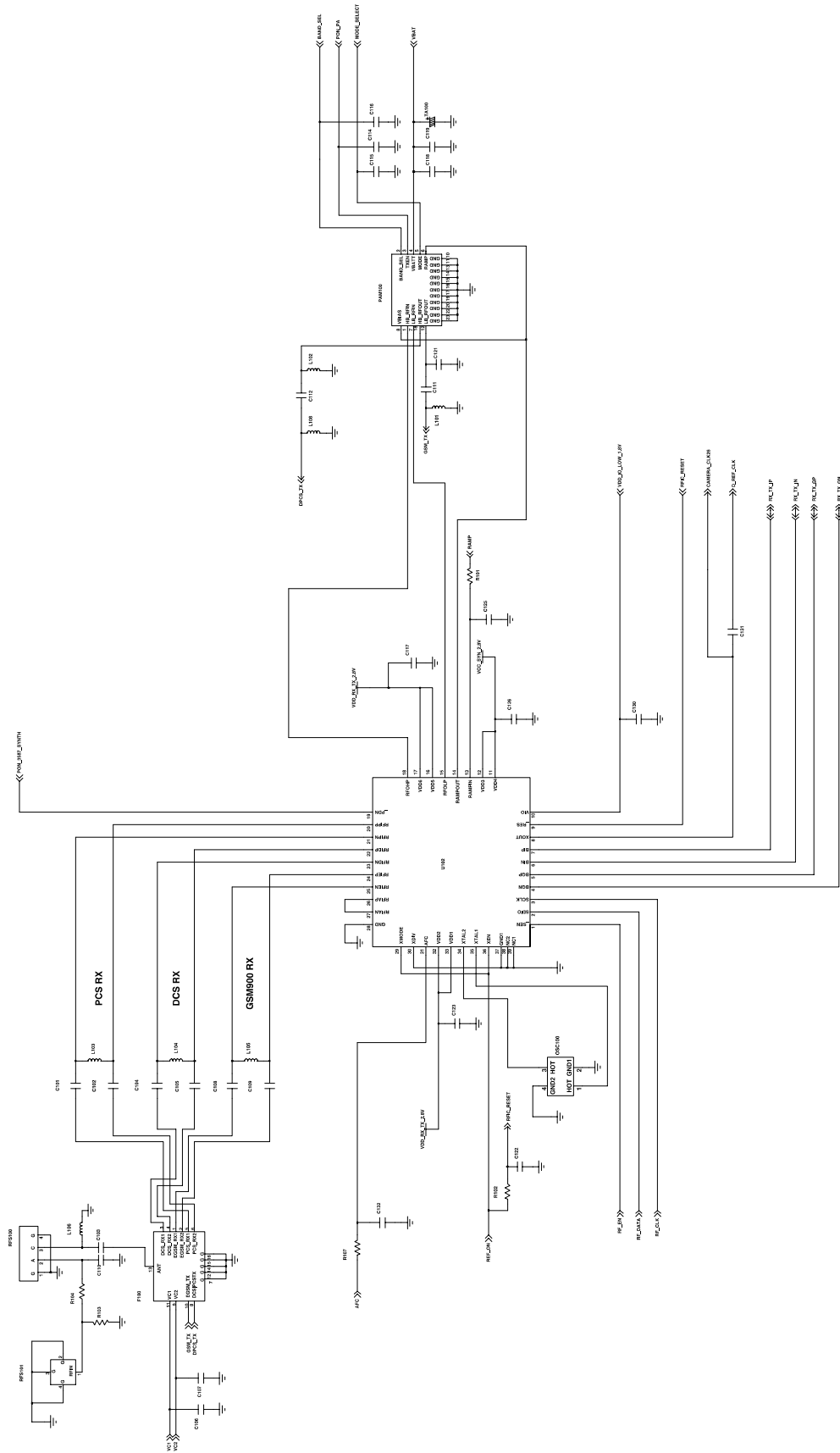


9-16. PCS Receiver

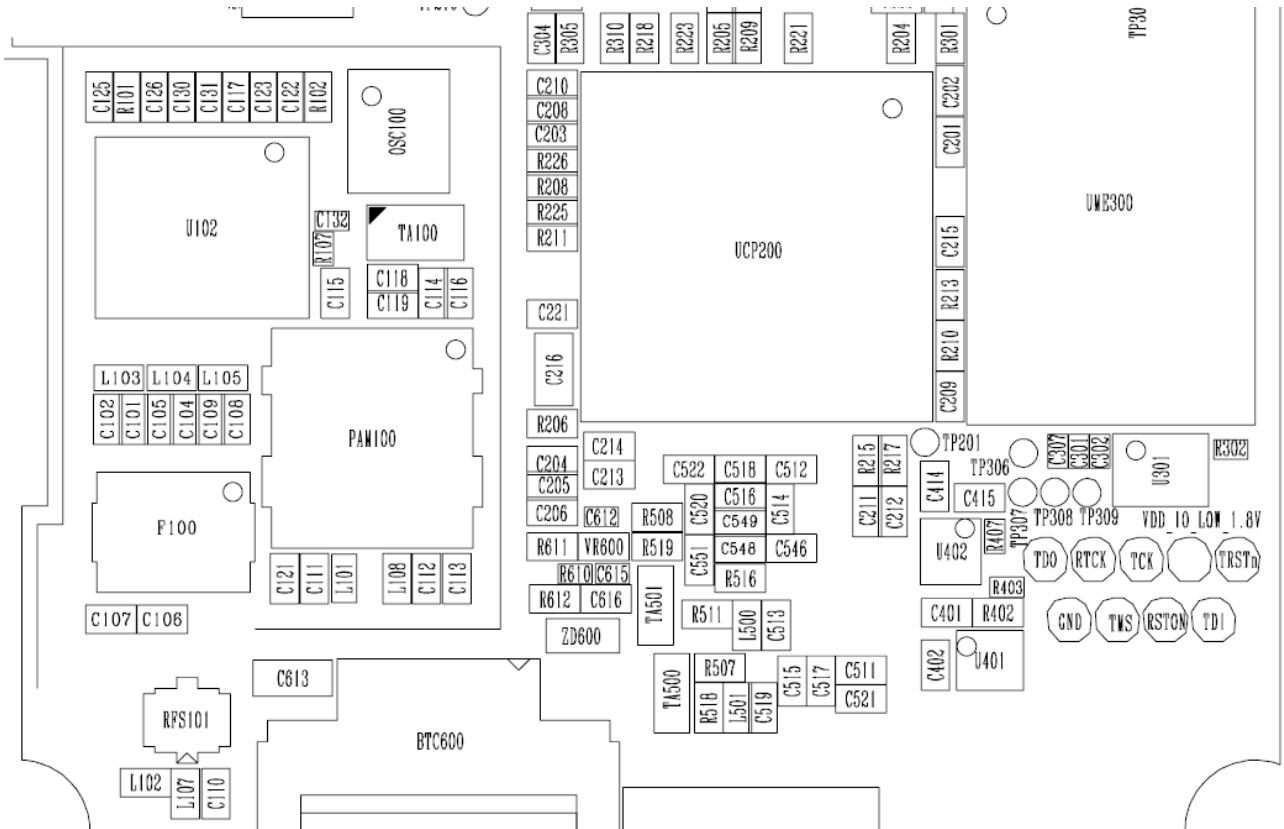


9-17. PCS Transmitter





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

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