

SAMSUNG

GSM TELEPHONE

Samsung i8510

SERVICE *Manual*

GSM TELEPHONE



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2. Specification

2-1. GSM General Specification

	EGSM 850	EGSM 900	DCS 1800	PCS 1900	WCDMA 900	WCDMA 2100
Freq. Band[MHz] Uplink/Downlink	824~849 869~894	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990	880~915 925~960	1920~1980 2110~2170
ARFCN range	128~251	0~124 & 975~1023	512~885	512~810	UL:2712~2863 DL:2937~3088	UL:9612~9888 DL:10562~10838
Tx/Rx spacing	10MHz	10MHz	20MHz	20MHz	45MHz	190MHz
Mod. Bit rate/ Bit Period	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	3.84Mcps (chip rate)	3.84Mcps (chip rate)
Time Slot Period/ Frame Period	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	Frame length : 10ms Slot length : 0.667ms	Frame length : 10ms Slot length : 0.667ms
Modulation	0.3GMSK	0.3GMSK	0.3GMSK	0.3GMSK	QPSK HPSK	QPSK HPSK
MS Power	33dBm ~5dBm	33dBm ~5dBm	30dBm ~0dBm	30dBm ~0dBm	24dBm ~-50dBm	24dBm ~-50dBm
Power Class	4 (max +33dBm)	4 (max +33dBm)	1 (max +30dBm)	1 (max +30dBm)	3 (max +24dBm)	3 (max +24dBm)
Sensitivity	-102dBm	-102dBm	-102dBm	-102dBm	-103.7	-106.7dBm
TDMA Mux	8	8	8	8		
Cell Radius		35Km	2Km	2Km	2Km	2Km

2-2. GSM TX power class

TX Power control level	GSM850 GSM900	TX Power control level	DCS1800	TX Power control level	PCS1900
5	33±2 dBm	0	30±3 dBm	0	30±3 dBm
6	31±2 dBm	1	28±3 dBm	1	28±3 dBm
7	29±2 dBm	2	26±3 dBm	2	26±3 dBm
8	27±2 dBm	3	24±3 dBm	3	24±3 dBm
9	25±2 dBm	4	22±3 dBm	4	22±3 dBm
10	23±2 dBm	5	20±3 dBm	5	20±3 dBm
11	21±2 dBm	6	18±3 dBm	6	18±3 dBm
12	19±2 dBm	7	16±3 dBm	7	16±3 dBm
13	17±2 dBm	8	14±3 dBm	8	14±3 dBm
14	15±2 dBm	9	12±4 dBm	9	12±4 dBm
15	13±2 dBm	10	10±4 dBm	10	10±4 dBm
16	11±3 dBm	11	8±4 dBm	11	8±4 dBm
17	9±3 dBm	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

- HSDPA(900/2100), EDGE, GPRS(850/900/1800/1900)
- 2.8 QVGA 16M TFT LCD
- 8 Megapixel CMOS with AF and Dual Power LED
- Smart Reader, Image Stabilizer, Auto-Panorama Shot, Smile Shot, Blink Shot, Wide Dynamic Range (WDR), Face Detection
- Video Player (DivX / H.263 / H.264 / WMV / MP4)
- QVGA 120 fps Video recording, VGA 30 fps recording
- Bluetooth v2.0 + EDR
- USB v2.0 HS compatible
- WLAN 802.11 b/g
- FM Radio with RDS
- A-GPS
- 16GB Flash + External Memory slot : microSDHC™ (up to 16GB)
- Optical Mouse, Accelerometer
- Music Player (MP3/ AAC / AAC+ / eAAC+ / WMA / AMR/ RealAudio)
- Instant Messaging capability
- E-mail
- Featured applications provide alarms, calendar, calculator, record audio, converter, timer, stopwatch, and world time.
- File viewer (MS office, PDF)
- Multimedia Message Service (MMS)
- Multimedia capability (with included Media player)
- Photo caller ID
- Speakerphone capability
- WEB/WAP browser (HTMS, XHTML, WML)

11. Reference data

Reference Abbreviation

- **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

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 thickened twisted wire when you measure level.
A thickened 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 please 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.

4. Array course control

4-1. Software Adjustments

- There is 2 set to download the binary image into your device.

[First set]



1. JIG BOX (UMTS TEST JIG; GH80-03308A)
2. USB Cable : JIG to PC
3. Test Cable : JIG to I8510 (0.4M:GH39-01088A, 1.5M: GH39-01090A)
4. Power Cable : JIG to power supply
5. Serial Cable : JIG to PC
6. Power Supply
7. Rf Cable : GH39-00985A

[Second Set]

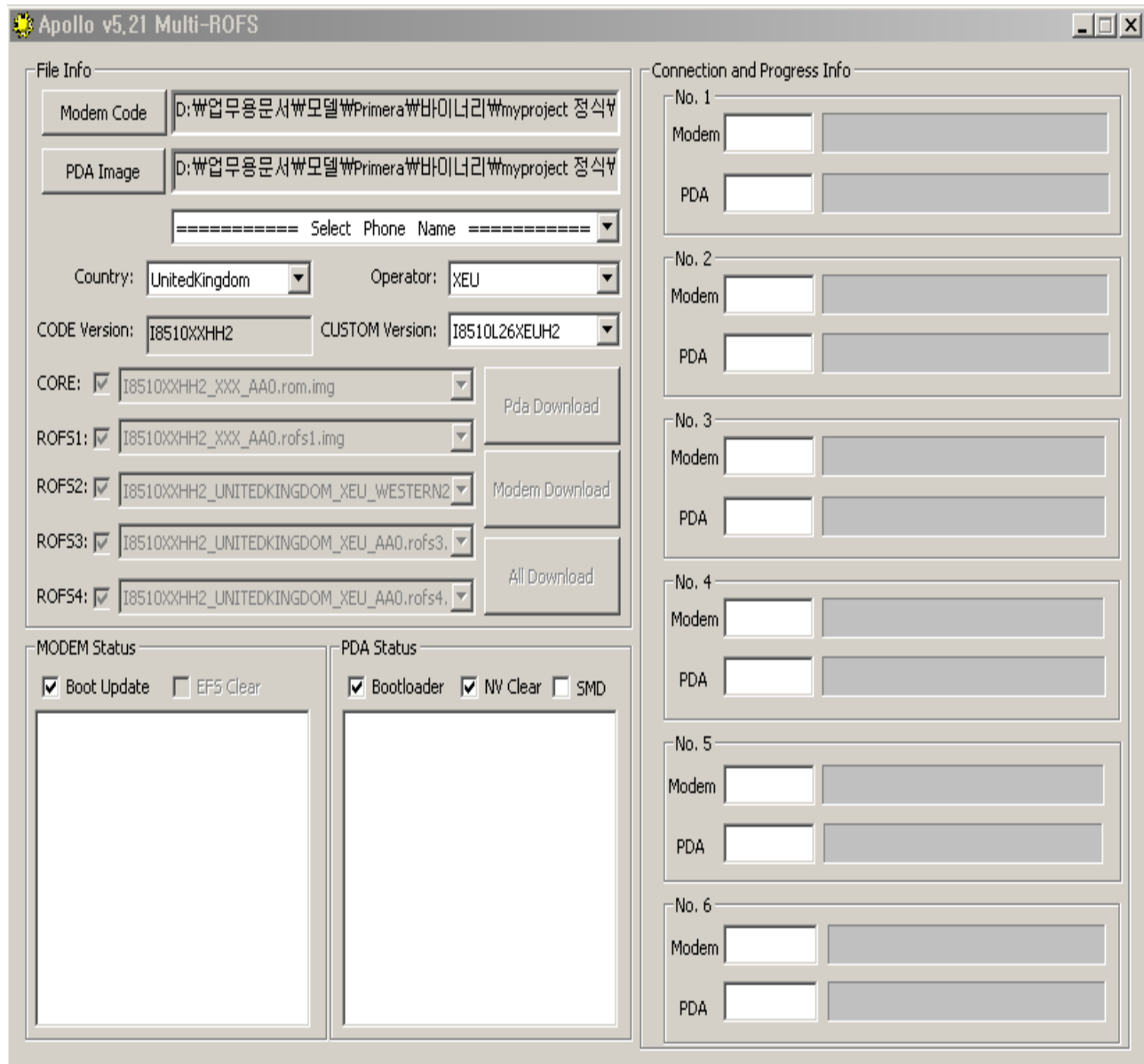


**USB Data Link Cable : I8510 to PC (GH39-00922A)
Standard Battery for I8510 (GH43-02986A)**

4-2. Software Download

4-2-1. Preparation

- : Downloader application. Proper version for a ROM image.
- USB Driver for Apollo: This differs to USB driver for PC Studio.
 - : Extract SS60_Downloader_Driver.zip to a folder
- UNRAR.DLL : It needs to copy unrar.dll into c:\windows\system32.
- MSXML.MSI : It needs to install MSXML.MSI.
- ROM Images : PDA(*.XML) has several images and one xml file. PHONE(*.BIN) has a one image.
- USB Cable
- Charged battery(Upper level 3)



4-2-2. Concepts & cautions.

There are two ways to download. Use Apollo with images or use .EXE package which is an integrated executable of Apollo and required images. User can download PDA or PHONE separately but it is always recommended to download both at the same time with same version.

To download an image, the phone need to be set to a proper download mode. There are 3 download modes.

- PDA download : Hold 1, 4 keys and power on
-> blue screen with information.
- PHONE download : Hold 7, * keys and power on
->“MODEM DOWNLOAD” displayed on red background
- PDA + PHONE download : Hold 4, 7 keys and power on
->“ALL DOWNLOAD” displayed on red background

For PDA download, the phone displays progress on the screen while it displays the sentence “MODEM DOWNLOAD” with red background.

For PDA + PHONE download mode, PHONE image is downloaded first then PDA downloading starts after rebooting.

Do NOT interrupt downloading process or the phone will be damaged.

You would not be able to boot up the phone or to re-flash the phone.

Let it finish download process even though you are flashing wrong images.

You need to flash same image 3 times whenever the bootloader or partition configuration is changed. Check the release information to get details. If the phone doesn't boot up properly after flashing, try to flash twice more.

Apollo version should match with specific image releases. Check release information to figure out correct Apollo version. If you are not sure use latest version.

4-2-3. USB Driver installation for PDA

Execution Apollo.exe.

I8510 connect to the Host computer using download equipment set.

Hold “1+4” key and insert power supplied test cable when use equipment set 1
or Hold “1+4” key and press power on key when use equipment set 2.

Install PDA side driver.

Follow New H/W Installation Manager.

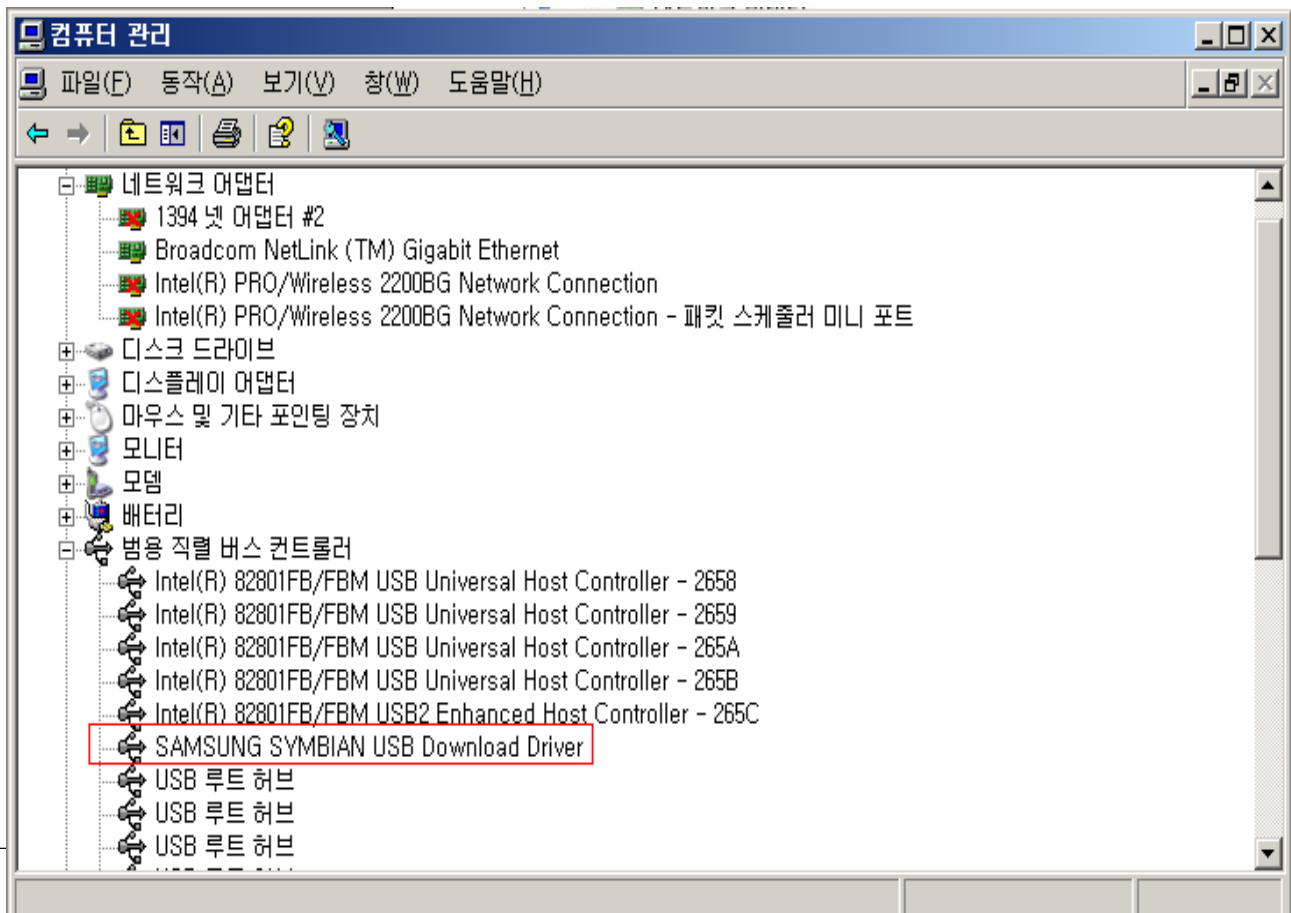
Select 'IBootHostUSB.inf'file under 'i550_Apollo_Drivers\PDA_driver' folder when
Windows asks for new h/w driver. It is safe to choose “Yes” for the warning window.

Confirm “[SAMSUNG Symbian USB Downloader](#)” Installed.

Refer to Next Page.

**** If Windows doesn't ask for USB driver, it means USB driver installation was failed before. Open Hardware Manager then delete devices with ? or ! mark then try again. If it doesn't work, you need to right click on the device then try Driver Update.**

After installing PDA driver, Apollo shows the connection status if it is installed properly.



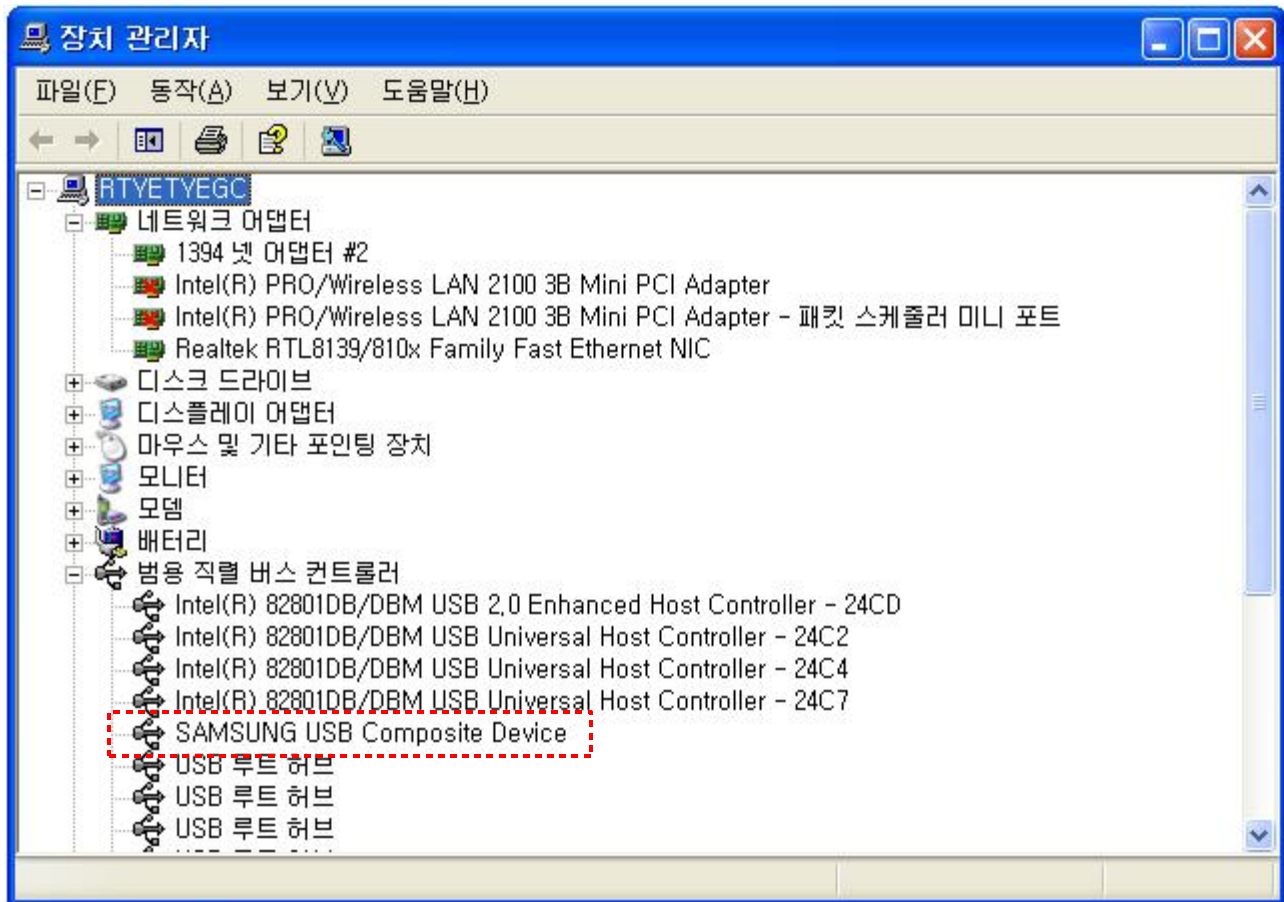
4-2-4. USB Driver installation for MODEM

Hold “7 + *” key and insert power supplied test cable when use equipment set 1 or
Hold “7+ *” key and press power on key when use equipment set 2.

Install Modem side driver.

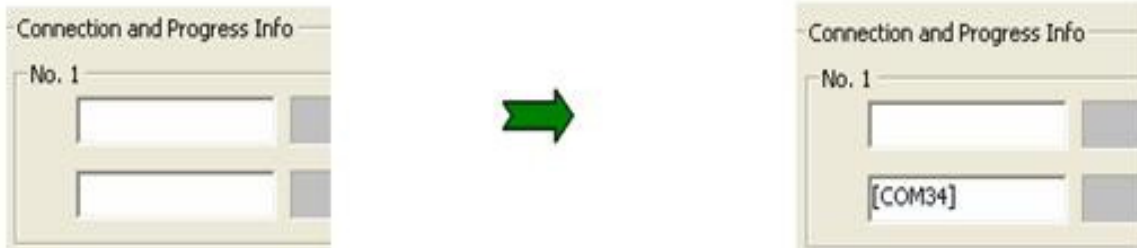
Execute ‘Setup.exe’file under ‘i450_Apollo_Drivers\PHONE_driver’ folder when
Windows asks for new h/w driver.

Confirm “SAMSUNG USB Composite Device” Installed.



4-2-5. USB Driver installation

1. After installing PDA driver. Apollo shows the connection status if it is installed properly.



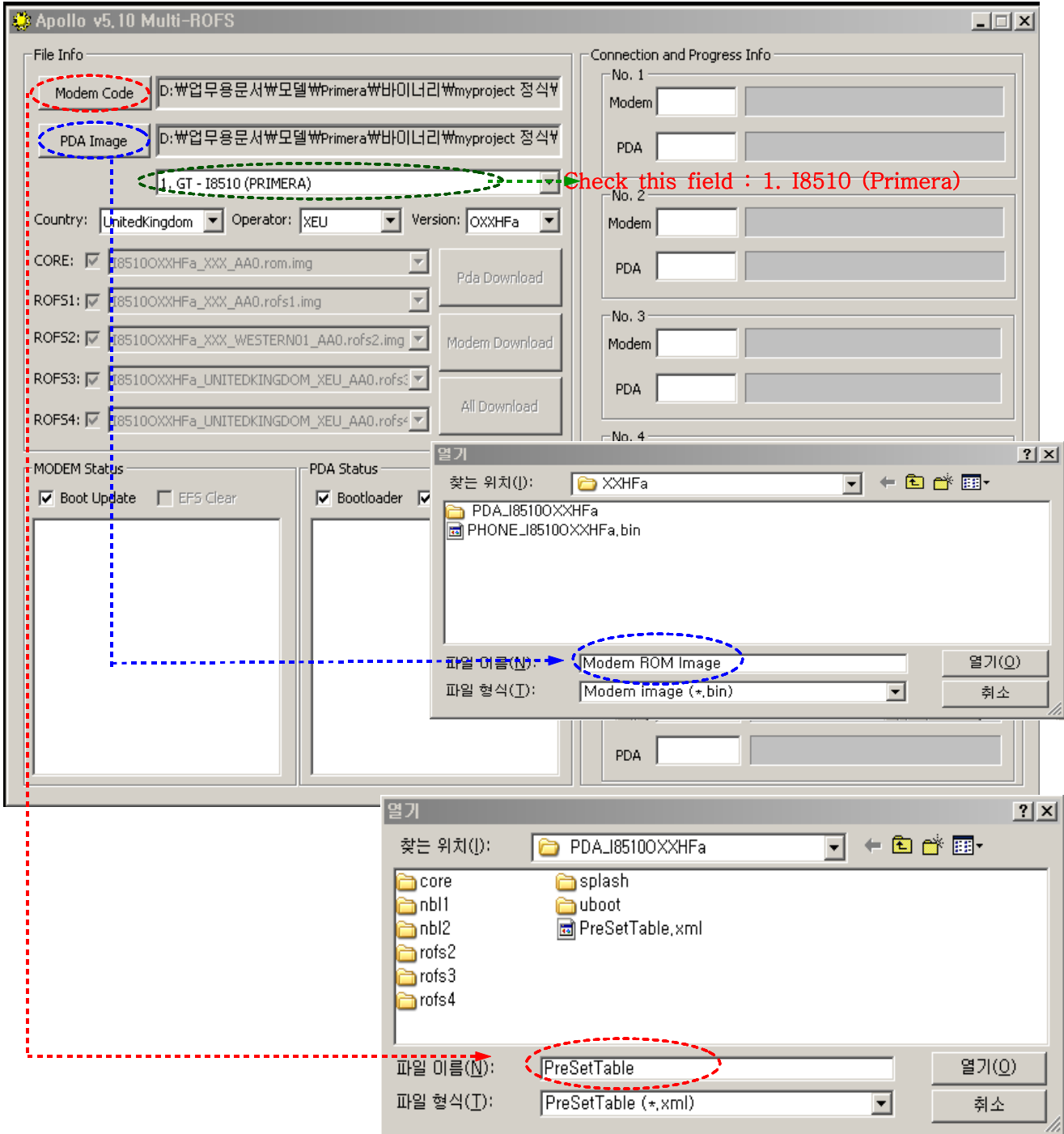
2. After installing Modem driver. Apollo shows the connection status if it is installed properly.



4-2-6. Download the image using APOLLO

Execution Apollo.exe.

Select a Rom Image to download



Select the proper check option .

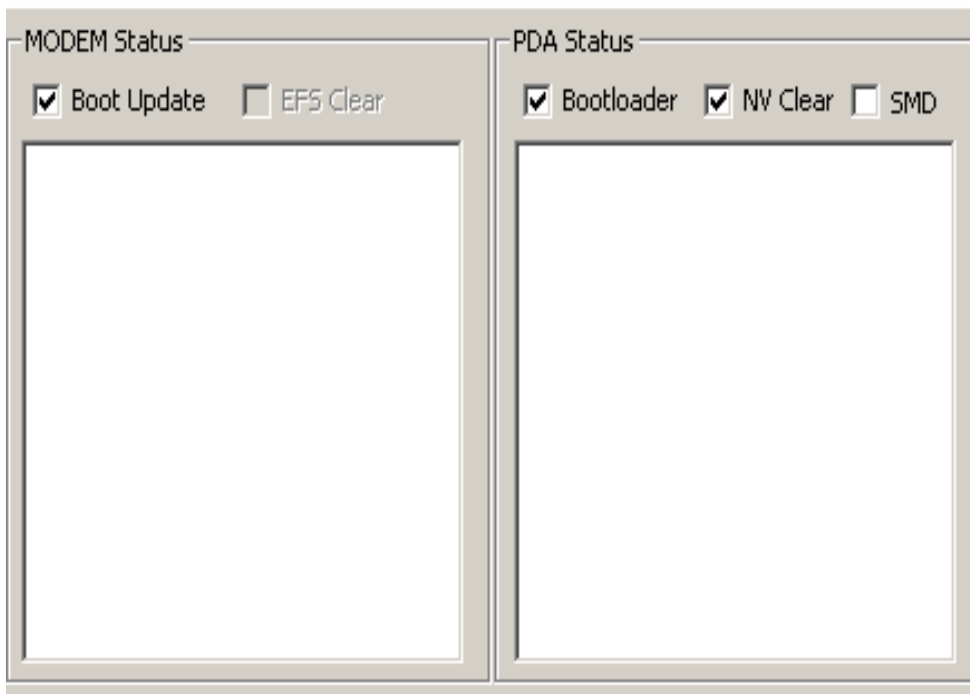
PDA status

- Bootloader : Update PDA Bootloader section.
- NV Clear : IMEI section erase.

You can see following message when you click this option

MODEM Status

- Boot Update : Update Modem Bootloader section.

**Select country, Operator and Custom version**

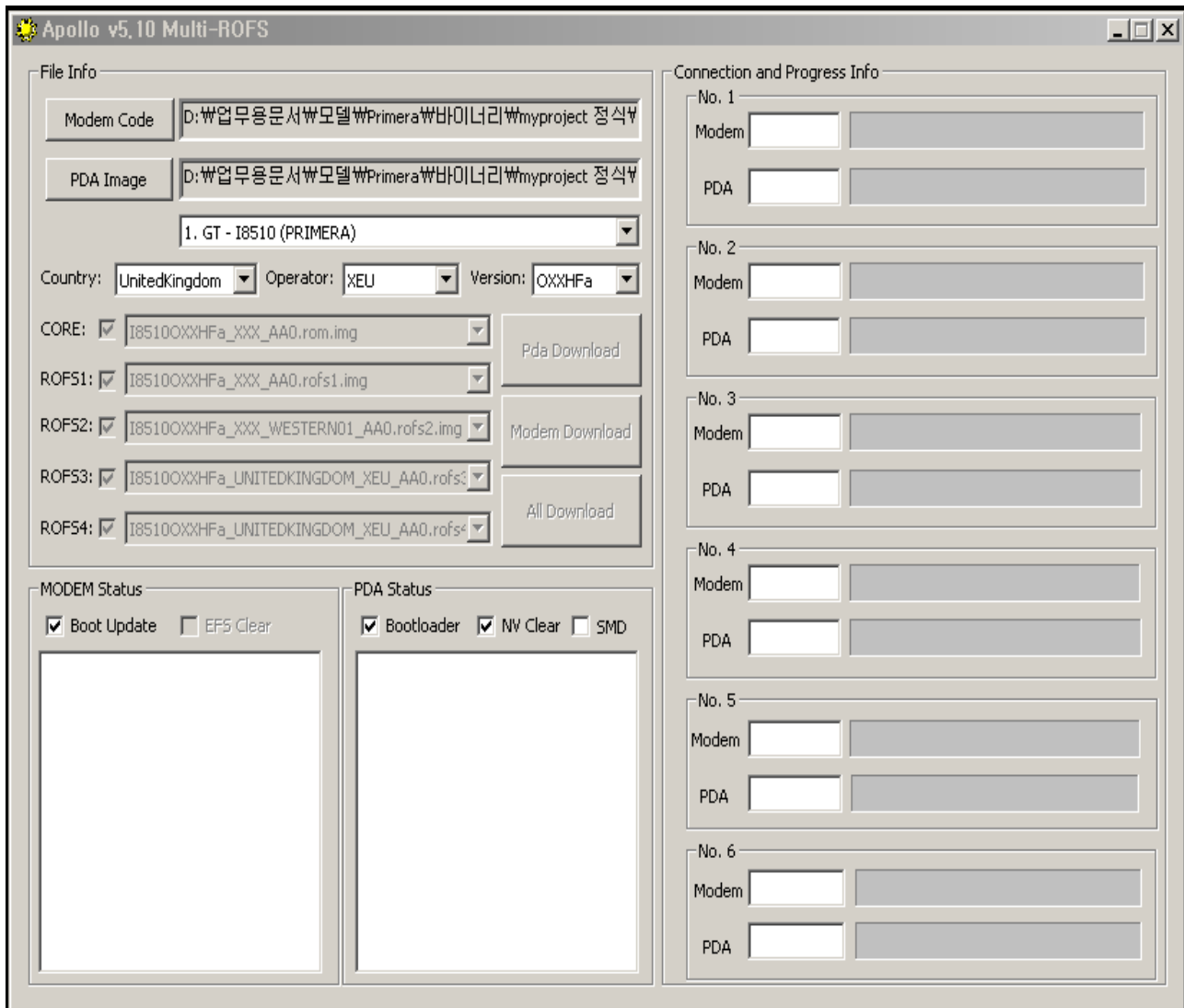
Country:	<input type="text" value="UnitedKingdom"/>	Operator:	<input type="text" value="XEU"/>
CODE Version:	<input type="text" value="I8510XXHH2"/>	CUSTOM Version:	<input type="text" value="I8510L26XEUH2"/>

Make sure that phone and host computer connection, click proper download button.

PDA download : Hold 1, 4 keys and power on -> Blue screen with some information.

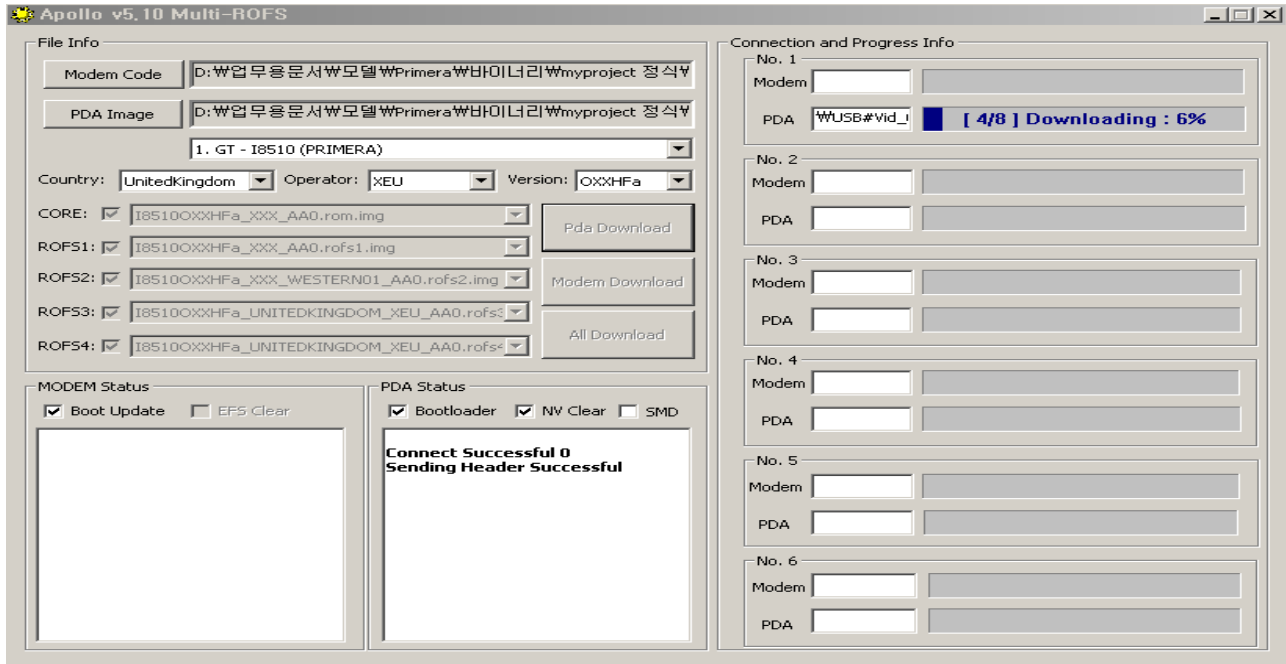
MODEM download : Hold 7, * keys and power on -> Blinking "MODEM DOWNLOAD" on blue screen

All download : Hold 4, 7 keys and power on -> Blinking "ALL DOWNLOAD" on blue screen

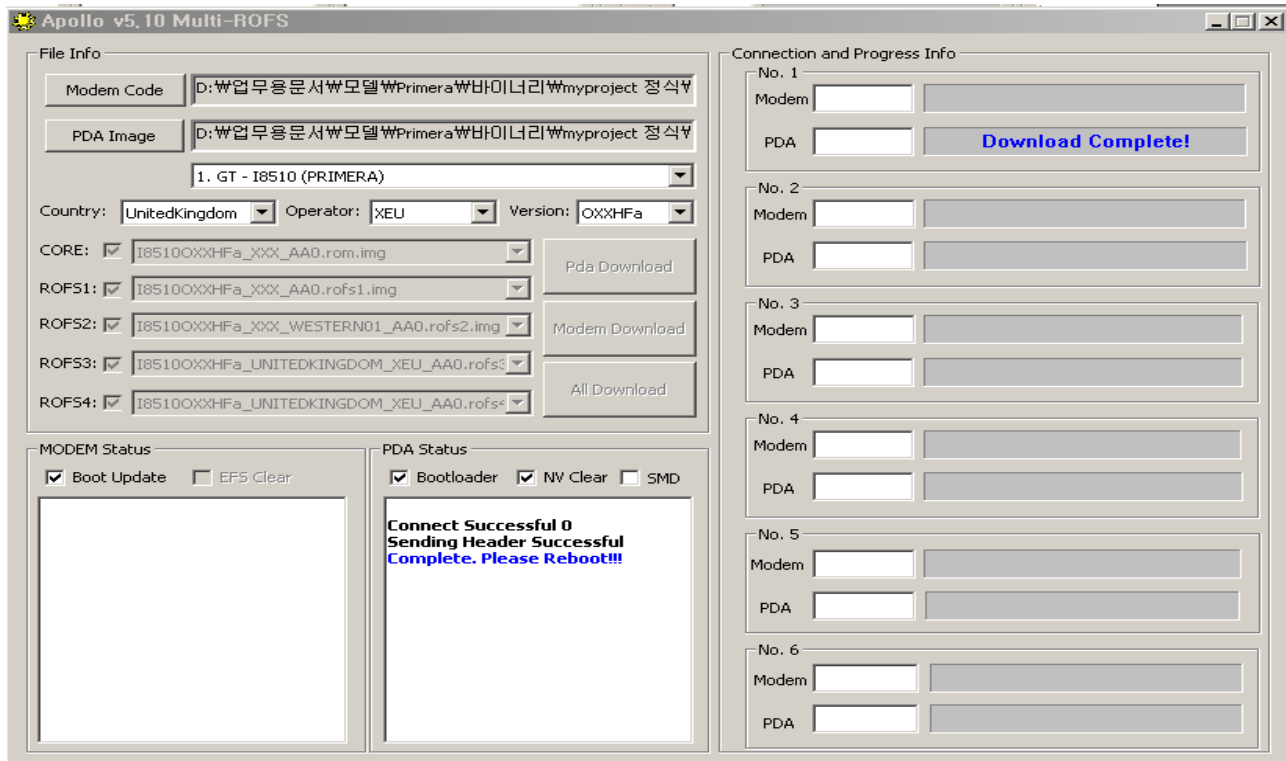


Do NOT interrupt downloading process.

- Pda download time: About 1 min.
- Modem download time : About 2 min.
- All download time: About 3 min.



Confirm Download Complete.



- I8510 will be reboot when PDA download complete.

4-2-7. Troubleshooting

Unable to install USB driver.

Try another Download equipment

Try another I8510.

Consult to R&D team.

Download stops in the middle.

Close and launch Apollo again then try again.

Check the battery is charged enough.

Download doesn't start

Check the connection between Apollo and a I8510.

Check the image that is not damaged.

Select an image and download again.

Phone doesn't boot up after downloading.

Check the release version of PDA and MODEM. They should be same.

Make sure that rom image, and then try to download.

5-2. Cellular phone Parts list

Design LOC	Description	SEC CODE
QAN02	INTENNA-SGHI960	GH42-01606A
QAN06	ASSY RUBBER-ANTENNA	GH98-07824A
QAR01	AUDIO-RECEIVER	3009-001295
QBA00	NPR COVER-BATT(BLANKING)	GH71-08461B
QBA01	INNER BATTERY PACK-1200MAH,BLK	GH43-02986A
QCA01	CAMERA MODULE-SGHI960 8M CAMER	GH59-05799A
QCA02	ELA UNIT-CAMERA ASSY(GT_I8510	GH96-03242A
QCK01	ASSY KEY-CAMERA	GH98-09218A
QCK02	PMO KEY-SIDE FUNCTION	GH72-48797B
QCK04	ASSY COVER-OJ KEY ACTUATOR	GH98-10318A
QCR03	SCREW-MACHINE	6001-001811
QCR03	SCREW-MACHINE	6001-001811
QCR03	SCREW-MACHINE	6001-001811
QCR32	SCREW-MACHINE	6001-001700
QCR57	SCREW-MACHINE	6001-002001
QCR57	SCREW-MACHINE	6001-002001
QCR60	SCREW-MACHINE	6001-002005
QCW15	ASSY COVER-CAM AUTO CAP	GH98-09147A
QFL01	ASSY CASE-SLIDE LOWER	GH98-09219B
QFR01	ASSY CASE-FRONT	GH98-09216B
QFU01	ASSY CASE-SLIDE UPPER	GH98-09215B
QHI01	ASSY HINGE-MODULE	GH98-09220A
QHI03	ASSY HINGE-WIRE ROPE	GH98-09701A
QJK01	UNIT-SGHI960 OPTICAL JOYSTICK	GH59-05681A
QKP01	ASSY KEYPAD-MAIN(XEN/RK)	GH98-09223B
QKP02	ASSY KEYPAD-SUB(XEN/RK)	GH98-09222B
QLC01	LCD-MODULE SSGHI960	GH07-01299A
QME01	DOME SHEET-SGHI960 MAIN	GH59-05679A
QME02	DOME SHEET-SGHI960 SUB	GH59-05680A
QME03	ASSY ETC-SGHI960 FLASH LED MOD	GH59-05755A
QMI01	MICROPHONE-ASSY-SGH-A237	GH30-00492A
QMO01	MOTOR DC-SGHT809	GH31-00196A
QMP01	A/S ASSY-PBA MAIN	GH82-03219A
QPC01	FPC-SGHI960 SLIDE FPCB	GH41-02136A
QRE01	ASSY CASE-REAR	GH98-09217B
QRF07	PMO COVER-MICRO USB	GH72-48796B
QSC01	TAPE-SCREW CAP L	GH74-39264A
QSD01	PMO COVER-MICRO SD	GH72-48795B
QSH01	ASSY COVER-SHIELD	GH98-09898A
QSH02	ASSY COVER-SHIELD CAN FRONT	GH98-10232A
QSH03	IPR SHIELD-CAN REAR A	GH70-03837A
QSH04	IPR SHIELD-CAN REAR B	GH70-03838A
QSP01	ASSY ETC-SGHI960 SPEAKER	GH59-05756A
QVK01	KEY FPCB-SGHI960 DOUBLE ACTION	GH59-05884A
QVO01	PMO KEY-VOLUME	GH72-48798B

6. MAIN Electrical Parts List

SEC CODE	Design LOC	Discription
0403-001547	D701	DIODE-ZENER
0406-001150	ZD901	DIODE-TVS
0406-001201	ZD707	DIODE-TVS
0406-001223	ZD500	DIODE-TVS
0406-001223	ZD601	DIODE-TVS
0406-001223	ZD701	DIODE-TVS
0406-001223	ZD7010	DIODE-TVS
0406-001223	ZD702	DIODE-TVS
0406-001223	ZD703	DIODE-TVS
0406-001223	ZD704	DIODE-TVS
0406-001223	ZD709	DIODE-TVS
0406-001223	ZD904	DIODE-TVS
0406-001254	V500	DIODE-TVS
0406-001254	V501	DIODE-TVS
0406-001256	ZD705	DIODE-TVS
0406-001256	ZD706	DIODE-TVS
0406-001267	ZD201	DIODE-TVS
0406-001267	ZD202	DIODE-TVS
0406-001267	ZD602	DIODE-TVS
0406-001267	ZD603	DIODE-TVS
0406-001267	ZD902	DIODE-TVS
0406-001267	ZD903	DIODE-TVS
0407-001002	D400	DIODE-ARRAY
0407-001002	D901	DIODE-ARRAY
0407-001002	D903	DIODE-ARRAY
0407-001007	D902	DIODE-ARRAY
0504-000168	TR902	TR-DIGITAL
0504-001113	TR400	TR-DIGITAL
0504-001113	TR402	TR-DIGITAL
0505-001165	TR901	FET-SILICON
0505-002088	TR401	FET-SILICON
0601-002268	LED701	LED
0601-002268	LED702	LED
0801-002294	U902	IC-CMOS LOGIC
0801-002294	U903	IC-CMOS LOGIC
0801-002321	U913	IC-CMOS LOGIC
0801-003012	U901	IC-CMOS LOGIC

MAIN Electrical Parts List

SEC CODE	Design LOC	Discription
0801-003013	U302	IC-CMOS LOGIC
0801-003052	U904	IC-CMOS LOGIC
0801-003055	U603	IC-CMOS LOGIC
0801-003129	U914	IC-CMOS LOGIC
0801-003130	U405	IC-CMOS LOGIC
0801-003213	U802	IC-CMOS LOGIC
0904-002227	UCP800	IC-DSP
1001-001336	U907	IC-ANALOG SWITCH
1001-001461	U804	IC-ANALOG SWITCH
1001-001461	U805	IC-ANALOG SWITCH
1001-001481	U911	IC-ANALOG SWITCH
1001-001483	U701	IC-ANALOG SWITCH
1001-001483	U702	IC-ANALOG SWITCH
1001-001483	U707	IC-ANALOG SWITCH
1001-001483	U708	IC-ANALOG SWITCH
1001-001483	U709	IC-ANALOG SWITCH
1001-001483	U710	IC-ANALOG SWITCH
1001-001488	U600	IC-ANALOG SWITCH
1003-002049	U604	IC-MOTOR DRIVER
1003-002139	U806	IC-LEVEL DRIVER
1009-001035	U905	IC-HALL EFFECT S/W
1009-001035	U906	IC-HALL EFFECT S/W
1106-001511	UME901	IC-SRAM
1107-001770	U803	IC-FLASH MEMORY
1108-000127	UME301	IC-MCP
1108-000135	UCP800	IC-MCP
1201-002581	F203	IC-RF AMP
1201-002610	U501	IC-AUDIO AMP
1201-002703	PAM101	IC-POWER AMP
1201-002745	U500	IC-AUDIO AMP
1201-002748	U101	IC-POWER AMP
1201-002757	PAM102	IC-POWER AMP
1202-001068	U406	IC-VOLTAGE COMP
1202-001079	U601	IC-VOLTAGE COMP
1202-001079	U602	IC-VOLTAGE COMP
1203-002716	U801	IC-VOL. DETECTOR
1203-003787	U605	IC-POSI.FIXED REG

SEC CODE	Design LOC	Discription
1203-003787	U610	IC-POSI.FIXED REG
1203-004430	U400	IC-VOL. DETECTOR
1203-004548	U615	IC-DC/DC CONVERTER
1203-004607	U614	IC-MULTI REG
1203-004621	U502	IC-POWER SUPERVISOR
1203-004728	U607	IC-POSI.FIXED REG
1203-004763	U915	IC-VOL. DETECTOR;
1203-004778	U401	IC-POWER SUPERVISOR
1203-004838	U403	IC-BATTERY
1203-004857	U609	IC-DC/DC CONVERTER
1203-005111	U611	IC-MULTI REG
1203-005111	U612	IC-MULTI REG
1203-005244	U606	IC-MULTI REG
1203-005244	U613	IC-MULTI REG
1203-005250	U608	IC-MULTI REG.
1204-002746	U203	IC-TUNER
1205-002767	U912	IC-SWITCH
1205-003297	U201	IC-TRANSCEIVER
1205-003498	UCP301	IC-MODEM
1209-001823	U404	IC-SENSOR
1404-001221	VR301	THERMISTOR-
1405-001093	V714	VARISTOR
1405-001133	V701	VARISTOR
1405-001133	V702	VARISTOR
1405-001133	V703	VARISTOR
1405-001133	V704	VARISTOR
1405-001133	V705	VARISTOR
1405-001133	V706	VARISTOR
1405-001177	V603	VARISTOR
1405-001201	V715	VARISTOR
1405-001201	V716	VARISTOR
2007-000137	R317	R-CHIP
2007-000140	R701	R-CHIP
2007-000140	R914	R-CHIP
2007-000140	R920	R-CHIP
2007-000162	R910	R-CHIP
2007-000162	R919	R-CHIP

MAIN Electrical Parts List

SEC CODE	Design LOC	Discription
2007-000169	R609	R-CHIP
2007-000169	R610	R-CHIP
2007-000170	R904	R-CHIP
2007-000171	C102	R-CHIP
2007-000171	C273	R-CHIP
2007-000171	R222	R-CHIP
2007-001285	R211	R-CHIP
2007-001285	R212	R-CHIP
2007-001290	R315	R-CHIP
2007-001292	R906	R-CHIP
2007-001298	R311	R-CHIP
2007-001298	R406	R-CHIP
2007-001298	R511	R-CHIP
2007-002796	R203	R-CHIP
2007-002965	R718	R-CHIP
2007-002965	R719	R-CHIP
2007-007137	R703	R-CHIP
2007-007142	R723	R-CHIP
2007-007190	R800	R-CHIP
2007-007190	R803	R-CHIP
2007-007306	R821	R-CHIP
2007-007315	R815	R-CHIP
2007-007317	R705	R-CHIP
2007-007317	R801	R-CHIP
2007-007317	R802	R-CHIP
2007-007318	R816	R-CHIP
2007-007318	R817	R-CHIP
2007-007468	R402	R-CHIP
2007-007489	R617	R-CHIP
2007-007698	R409	R-CHIP
2007-007698	R414	R-CHIP
2007-007741	R218	R-CHIP
2007-007741	U921	R-CHIP
2007-007741	U922	R-CHIP
2007-007942	R602	R-CHIP
2007-008015	R818	R-CHIP
2007-008040	R101	R-CHIP

SEC CODE	Design LOC	Discription
2007-008045	R217	R-CHIP
2007-008045	R600	R-CHIP
2007-008045	R709	R-CHIP
2007-008045	R814	R-CHIP
2007-008045	R822	R-CHIP
2007-008045	R915	R-CHIP
2007-008045	R924	R-CHIP
2007-008045	R941	R-CHIP
2007-008046	R102	R-CHIP
2007-008046	R105	R-CHIP
2007-008046	R106	R-CHIP
2007-008050	R619	R-CHIP
2007-008051	R313	R-CHIP
2007-008052	R804	R-CHIP
2007-008052	R813	R-CHIP
2007-008052	R823	R-CHIP
2007-008055	R214	R-CHIP
2007-008055	R215	R-CHIP
2007-008055	R411	R-CHIP
2007-008055	R412	R-CHIP
2007-008055	R421	R-CHIP
2007-008055	R503	R-CHIP
2007-008055	R507	R-CHIP
2007-008055	R508	R-CHIP
2007-008055	R513	R-CHIP
2007-008055	R603	R-CHIP
2007-008055	R606	R-CHIP
2007-008055	R607	R-CHIP
2007-008055	R608	R-CHIP
2007-008055	R612	R-CHIP
2007-008055	R614	R-CHIP
2007-008055	R615	R-CHIP
2007-008055	R616	R-CHIP
2007-008055	R618	R-CHIP
2007-008055	R620	R-CHIP
2007-008055	R621	R-CHIP
2007-008055	R622	R-CHIP

MAIN Electrical Parts List

SEC CODE	Design LOC	Discription
2007-008055	R625	R-CHIP
2007-008055	R710	R-CHIP
2007-008055	R716	R-CHIP
2007-008055	R903	R-CHIP
2007-008055	R907	R-CHIP
2007-008055	R908	R-CHIP
2007-008055	R909	R-CHIP
2007-008055	R911	R-CHIP
2007-008055	R912	R-CHIP
2007-008055	R913	R-CHIP
2007-008055	R921	R-CHIP
2007-008055	R922	R-CHIP
2007-008055	R942	R-CHIP
2007-008117	R416	R-CHIP
2007-008419	R210	R-CHIP
2007-008419	R501	R-CHIP
2007-008419	R512	R-CHIP
2007-008419	R731	R-CHIP
2007-008419	R732	R-CHIP
2007-008483	R410	R-CHIP
2007-008483	R613	R-CHIP
2007-008483	R711	R-CHIP
2007-008483	R712	R-CHIP
2007-008483	R713	R-CHIP
2007-008483	R714	R-CHIP
2007-008486	R401	R-CHIP
2007-008516	R316	R-CHIP
2007-008516	R318	R-CHIP
2007-008516	R319	R-CHIP
2007-008516	R408	R-CHIP
2007-008516	R611	R-CHIP
2007-008516	R715	R-CHIP
2007-008516	R730	R-CHIP
2007-008542	R111	R-CHIP
2007-008542	R229	R-CHIP
2007-008542	R523	R-CHIP
2007-008542	R624	R-CHIP

SEC CODE	Design LOC	Discription
2007-008542	R706	R-CHIP
2007-008542	R708	R-CHIP
2007-008544	R418	R-CHIP
2007-008544	R506	R-CHIP
2007-008548	R502	R-CHIP
2007-008548	R510	R-CHIP
2007-008588	R939	R-CHIP
2007-008686	R108	R-CHIP
2007-008686	R604	R-CHIP
2007-008686	R605	R-CHIP
2007-008774	R205	R-CHIP
2007-008785	R206	R-CHIP
2007-008798	R518	R-CHIP
2007-008798	R519	R-CHIP
2007-008798	R520	R-CHIP
2007-008798	R521	R-CHIP
2007-009084	R312	R-CHIP
2007-009084	R601	R-CHIP
2007-009108	R419	R-CHIP
2007-009157	R303	R-CHIP
2007-009157	R309	R-CHIP
2007-009168	R923	R-CHIP
2007-009170	R422	R-CHIP
2007-009171	R405	R-CHIP
2007-009171	R807	R-CHIP
2007-009171	R808	R-CHIP
2007-009171	R809	R-CHIP
2007-009171	R810	R-CHIP
2007-009171	R811	R-CHIP
2007-009171	R812	R-CHIP
2007-009233	R420	R-CHIP
2007-009402	R509	R-CHIP
2007-009408	R226	R-CHIP
2007-009408	R227	R-CHIP
2007-009408	R228	R-CHIP
2007-009408	R504	R-CHIP
2007-009408	R505	R-CHIP

MAIN Electrical Parts List

SEC CODE	Design LOC	Discription
2007-009410	R717	R-CHIP
2007-009420	R201	R-CHIP
2007-009801	R103	R-CHIP
2007-009801	R104	R-CHIP
2007-009801	R109	R-CHIP
2007-009801	R110	R-CHIP
2203-000233	C426	C-CER,CHIP
2203-000233	U919	C-CER,CHIP
2203-000254	C729	C-CER,CHIP
2203-000278	U918	C-CER,CHIP
2203-000438	C130	C-CER,CHIP
2203-000438	C533	C-CER,CHIP
2203-000438	C534	C-CER,CHIP
2203-000438	C535	C-CER,CHIP
2203-000438	C536	C-CER,CHIP
2203-000627	C274	C-CER,CHIP
2203-000696	C280	C-CER,CHIP
2203-000812	C726	C-CER,CHIP
2203-000940	C606	C-CER,CHIP
2203-000995	C303	C-CER,CHIP
2203-000995	C505	C-CER,CHIP
2203-001017	R202	C-CER,CHIP
2203-001072	C243	C-CER,CHIP
2203-001124	U920	C-CER,CHIP
2203-002443	C129	C-CER,CHIP
2203-002668	C121	C-CER,CHIP
2203-002668	L103	C-CER,CHIP
2203-005281	C214	C-CER,CHIP
2203-005446	C103	C-CER,CHIP
2203-005450	R221	C-CER,CHIP
2203-005480	C339	C-CER,CHIP
2203-005482	C140	C-CER,CHIP
2203-005482	C301	C-CER,CHIP
2203-005482	C530	C-CER,CHIP
2203-005482	C901	C-CER,CHIP
2203-005482	C908	C-CER,CHIP
2203-005482	C916	C-CER,CHIP

SEC CODE	Design LOC	Discription
2203-005682	C101	C-CER,CHIP
2203-005682	C114	C-CER,CHIP
2203-005682	C115	C-CER,CHIP
2203-005682	C116	C-CER,CHIP
2203-005682	C222	C-CER,CHIP
2203-005682	C338	C-CER,CHIP
2203-005682	C406	C-CER,CHIP
2203-005682	C419	C-CER,CHIP
2203-005682	C519	C-CER,CHIP
2203-005682	C553	C-CER,CHIP
2203-005682	C722	C-CER,CHIP
2203-005682	C725	C-CER,CHIP
2203-005682	C823	C-CER,CHIP
2203-005682	C824	C-CER,CHIP
2203-005725	C134	C-CER,CHIP
2203-005725	C135	C-CER,CHIP
2203-005725	C205	C-CER,CHIP
2203-005725	C207	C-CER,CHIP
2203-005725	C209	C-CER,CHIP
2203-005725	C210	C-CER,CHIP
2203-005725	C216	C-CER,CHIP
2203-005725	C221	C-CER,CHIP
2203-005725	C225	C-CER,CHIP
2203-005725	C226	C-CER,CHIP
2203-005725	C231	C-CER,CHIP
2203-005725	C232	C-CER,CHIP
2203-005725	C236	C-CER,CHIP
2203-005725	C238	C-CER,CHIP
2203-005725	C240	C-CER,CHIP
2203-005725	C241	C-CER,CHIP
2203-005725	C246	C-CER,CHIP
2203-005725	C248	C-CER,CHIP
2203-005725	C252	C-CER,CHIP
2203-005727	C211	C-CER,CHIP
2203-005727	C411	C-CER,CHIP
2203-005727	C424	C-CER,CHIP
2203-005729	C542	C-CER,CHIP

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SEC CODE	Design LOC	Discription
2203-005729	C543	C-CER,CHIP
2203-005729	C723	C-CER,CHIP
2203-005731	C515	C-CER,CHIP
2203-005731	C516	C-CER,CHIP
2203-005731	C643	C-CER,CHIP
2203-005731	C644	C-CER,CHIP
2203-005731	C645	C-CER,CHIP
2203-005732	C201	C-CER,CHIP
2203-005732	C202	C-CER,CHIP
2203-005734	C108	C-CER,CHIP
2203-005734	C109	C-CER,CHIP
2203-005734	C110	C-CER,CHIP
2203-005734	C111	C-CER,CHIP
2203-005736	C122	C-CER,CHIP
2203-005736	C133	C-CER,CHIP
2203-005736	C212	C-CER,CHIP
2203-005736	C217	C-CER,CHIP
2203-005736	C228	C-CER,CHIP
2203-005736	C230	C-CER,CHIP
2203-005736	C249	C-CER,CHIP
2203-005736	C253	C-CER,CHIP
2203-005736	C256	C-CER,CHIP
2203-005736	C258	C-CER,CHIP
2203-005736	C260	C-CER,CHIP
2203-005736	C265	C-CER,CHIP
2203-005736	C418	C-CER,CHIP
2203-005736	C420	C-CER,CHIP
2203-005736	C422	C-CER,CHIP
2203-005736	C731	C-CER,CHIP
2203-005736	C732	C-CER,CHIP
2203-005736	C733	C-CER,CHIP
2203-005736	C734	C-CER,CHIP
2203-005736	C735	C-CER,CHIP
2203-005736	C736	C-CER,CHIP
2203-005736	C737	C-CER,CHIP
2203-005739	C136	C-CER,CHIP
2203-005777	R107	C-CER,CHIP

SEC CODE	Design LOC	Discription
2203-005789	C124	C-CER,CHIP
2203-005792	C286	C-CER,CHIP
2203-006048	C314	C-CER,CHIP
2203-006048	C336	C-CER,CHIP
2203-006048	C558	C-CER,CHIP
2203-006048	C728	C-CER,CHIP
2203-006048	C828	C-CER,CHIP
2203-006048	C907	C-CER,CHIP
2203-006120	C126	C-CER,CHIP
2203-006120	C127	C-CER,CHIP
2203-006120	C128	C-CER,CHIP
2203-006137	C430	C-CER,CHIP
2203-006137	C609	C-CER,CHIP
2203-006194	C270	C-CER,CHIP
2203-006194	C279	C-CER,CHIP
2203-006194	C282	C-CER,CHIP
2203-006194	C304	C-CER,CHIP
2203-006194	C305	C-CER,CHIP
2203-006194	C312	C-CER,CHIP
2203-006194	C315	C-CER,CHIP
2203-006194	C320	C-CER,CHIP
2203-006194	C822	C-CER,CHIP
2203-006208	C629	C-CER,CHIP
2203-006305	C518	C-CER,CHIP
2203-006318	C112	C-CER,CHIP
2203-006318	C113	C-CER,CHIP
2203-006318	C284	C-CER,CHIP
2203-006324	C142	C-CER,CHIP
2203-006324	C403	C-CER,CHIP
2203-006324	C425	C-CER,CHIP
2203-006324	C600	C-CER,CHIP
2203-006324	C610	C-CER,CHIP
2203-006324	C616	C-CER,CHIP
2203-006324	C628	C-CER,CHIP
2203-006348	C918	C-CER,CHIP
2203-006399	C802	C-CER,CHIP
2203-006410	C106	C-CER,CHIP

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SEC CODE	Design LOC	Discription
2203-006410	C107	C-CER,CHIP
2203-006410	C261	C-CER,CHIP
2203-006423	C203	C-CER,CHIP
2203-006423	C204	C-CER,CHIP
2203-006423	C206	C-CER,CHIP
2203-006423	C208	C-CER,CHIP
2203-006423	C218	C-CER,CHIP
2203-006423	C220	C-CER,CHIP
2203-006423	C229	C-CER,CHIP
2203-006423	C247	C-CER,CHIP
2203-006423	C250	C-CER,CHIP
2203-006423	C254	C-CER,CHIP
2203-006423	C257	C-CER,CHIP
2203-006423	C259	C-CER,CHIP
2203-006423	C264	C-CER,CHIP
2203-006423	C266	C-CER,CHIP
2203-006423	C268	C-CER,CHIP
2203-006423	C272	C-CER,CHIP
2203-006423	C275	C-CER,CHIP
2203-006423	C306	C-CER,CHIP
2203-006423	C307	C-CER,CHIP
2203-006423	C313	C-CER,CHIP
2203-006423	C316	C-CER,CHIP
2203-006423	C321	C-CER,CHIP
2203-006423	C322	C-CER,CHIP
2203-006423	C330	C-CER,CHIP
2203-006423	C331	C-CER,CHIP
2203-006423	C332	C-CER,CHIP
2203-006423	C335	C-CER,CHIP
2203-006423	C431	C-CER,CHIP
2203-006423	C432	C-CER,CHIP
2203-006423	C433	C-CER,CHIP
2203-006423	C527	C-CER,CHIP
2203-006423	C528	C-CER,CHIP
2203-006423	C551	C-CER,CHIP
2203-006423	C730	C-CER,CHIP
2203-006423	C801	C-CER,CHIP

SEC CODE	Design LOC	Discription
2203-006423	C803	C-CER,CHIP
2203-006423	C805	C-CER,CHIP
2203-006423	C806	C-CER,CHIP
2203-006423	C808	C-CER,CHIP
2203-006423	C811	C-CER,CHIP
2203-006423	C812	C-CER,CHIP
2203-006423	C814	C-CER,CHIP
2203-006423	C818	C-CER,CHIP
2203-006423	C819	C-CER,CHIP
2203-006423	C820	C-CER,CHIP
2203-006423	C821	C-CER,CHIP
2203-006423	C825	C-CER,CHIP
2203-006423	C829	C-CER,CHIP
2203-006423	C831	C-CER,CHIP
2203-006423	C834	C-CER,CHIP
2203-006423	C909	C-CER,CHIP
2203-006423	C910	C-CER,CHIP
2203-006423	C914	C-CER,CHIP
2203-006423	C915	C-CER,CHIP
2203-006423	C917	C-CER,CHIP
2203-006474	C421	C-CER,CHIP
2203-006474	C423	C-CER,CHIP
2203-006556	C105	C-CER,CHIP
2203-006556	C242	C-CER,CHIP
2203-006556	C244	C-CER,CHIP
2203-006556	C514	C-CER,CHIP
2203-006562	C276	C-CER,CHIP
2203-006562	C310	C-CER,CHIP
2203-006562	C311	C-CER,CHIP
2203-006562	C317	C-CER,CHIP
2203-006562	C318	C-CER,CHIP
2203-006562	C323	C-CER,CHIP
2203-006562	C326	C-CER,CHIP
2203-006562	C327	C-CER,CHIP
2203-006562	C329	C-CER,CHIP
2203-006562	C333	C-CER,CHIP
2203-006562	C410	C-CER,CHIP

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SEC CODE	Design LOC	Discription
2203-006562	C427	C-CER,CHIP
2203-006562	C428	C-CER,CHIP
2203-006562	C502	C-CER,CHIP
2203-006562	C506	C-CER,CHIP
2203-006562	C508	C-CER,CHIP
2203-006562	C510	C-CER,CHIP
2203-006562	C511	C-CER,CHIP
2203-006562	C512	C-CER,CHIP
2203-006562	C513	C-CER,CHIP
2203-006562	C520	C-CER,CHIP
2203-006562	C521	C-CER,CHIP
2203-006562	C522	C-CER,CHIP
2203-006562	C523	C-CER,CHIP
2203-006562	C524	C-CER,CHIP
2203-006562	C525	C-CER,CHIP
2203-006562	C526	C-CER,CHIP
2203-006562	C529	C-CER,CHIP
2203-006562	C537	C-CER,CHIP
2203-006562	C540	C-CER,CHIP
2203-006562	C541	C-CER,CHIP
2203-006562	C544	C-CER,CHIP
2203-006562	C547	C-CER,CHIP
2203-006562	C548	C-CER,CHIP
2203-006562	C549	C-CER,CHIP
2203-006562	C559	C-CER,CHIP
2203-006562	C611	C-CER,CHIP
2203-006562	C612	C-CER,CHIP
2203-006562	C613	C-CER,CHIP
2203-006562	C614	C-CER,CHIP
2203-006562	C615	C-CER,CHIP
2203-006562	C618	C-CER,CHIP
2203-006562	C625	C-CER,CHIP
2203-006562	C626	C-CER,CHIP
2203-006562	C627	C-CER,CHIP
2203-006562	C630	C-CER,CHIP
2203-006562	C634	C-CER,CHIP
2203-006562	C635	C-CER,CHIP

SEC CODE	Design LOC	Discription
2203-006562	C636	C-CER,CHIP
2203-006562	C637	C-CER,CHIP
2203-006562	C638	C-CER,CHIP
2203-006562	C639	C-CER,CHIP
2203-006562	C702	C-CER,CHIP
2203-006562	C703	C-CER,CHIP
2203-006562	C717	C-CER,CHIP
2203-006562	C800	C-CER,CHIP
2203-006562	C804	C-CER,CHIP
2203-006562	C807	C-CER,CHIP
2203-006562	C810	C-CER,CHIP
2203-006562	C813	C-CER,CHIP
2203-006562	C816	C-CER,CHIP
2203-006562	C817	C-CER,CHIP
2203-006562	C827	C-CER,CHIP
2203-006562	C830	C-CER,CHIP
2203-006562	C833	C-CER,CHIP
2203-006562	C836	C-CER,CHIP
2203-006562	C904	C-CER,CHIP
2203-006562	C905	C-CER,CHIP
2203-006562	C911	C-CER,CHIP
2203-006562	C912	C-CER,CHIP
2203-006562	C920	C-CER,CHIP
2203-006562	C921	C-CER,CHIP
2203-006604	C138	C-CER,CHIP
2203-006626	C552	C-CER,CHIP
2203-006626	C554	C-CER,CHIP
2203-006647	C617	C-CER,CHIP
2203-006648	C408	C-CER,CHIP
2203-006665	C119	C-CER,CHIP
2203-006665	C120	C-CER,CHIP
2203-006665	C263	C-CER,CHIP
2203-006668	C141	C-CER,CHIP
2203-006668	C337	C-CER,CHIP
2203-006674	C117	C-CER,CHIP
2203-006674	C118	C-CER,CHIP
2203-006681	C839	C-CER,CHIP

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SEC CODE	Design LOC	Discription
2203-006712	C224	C-CER,CHIP
2203-006712	C271	C-CER,CHIP
2203-006824	C251	C-CER,CHIP
2203-006824	C255	C-CER,CHIP
2203-006824	C325	C-CER,CHIP
2203-006824	C404	C-CER,CHIP
2203-006824	C405	C-CER,CHIP
2203-006824	C413	C-CER,CHIP
2203-006824	C416	C-CER,CHIP
2203-006824	C417	C-CER,CHIP
2203-006824	C560	C-CER,CHIP
2203-006824	C605	C-CER,CHIP
2203-006825	C131	C-CER,CHIP
2203-006838	C215	C-CER,CHIP
2203-006838	C290	C-CER,CHIP
2203-006838	C412	C-CER,CHIP
2203-006838	C414	C-CER,CHIP
2203-006838	C415	C-CER,CHIP
2203-006838		C-CER,CHIP
2203-006838	C607	C-CER,CHIP
2203-006838	C608	C-CER,CHIP
2203-006838	C620	C-CER,CHIP
2203-006838	C621	C-CER,CHIP
2203-006838	C622	C-CER,CHIP
2203-006838	C623	C-CER,CHIP
2203-006838	C624	C-CER,CHIP
2203-006838	C631	C-CER,CHIP
2203-006838	C632	C-CER,CHIP
2203-006838	C640	C-CER,CHIP
2203-006838	C704	C-CER,CHIP
2203-006838	C705	C-CER,CHIP
2203-006838	C706	C-CER,CHIP
2203-006838	C707	C-CER,CHIP
2203-006838	C708	C-CER,CHIP
2203-006838	C711	C-CER,CHIP
2203-006838	C712	C-CER,CHIP
2203-006838	C809	C-CER,CHIP

SEC CODE	Design LOC	Discription
2203-006838	C815	C-CER,CHIP
2203-006838	C826	C-CER,CHIP
2203-006838	C838	C-CER,CHIP
2203-006838	C840	C-CER,CHIP
2203-006839	C233	C-CER,CHIP
2203-006839	C235	C-CER,CHIP
2203-006839	C237	C-CER,CHIP
2203-006839	C239	C-CER,CHIP
2203-006839	C400	C-CER,CHIP
2203-006839	C401	C-CER,CHIP
2203-006839	C402	C-CER,CHIP
2203-006839	C409	C-CER,CHIP
2203-006839	C619	C-CER,CHIP
2203-006839	C724	C-CER,CHIP
2203-006839	C835	C-CER,CHIP
2203-006839	C919	C-CER,CHIP
2203-006840	C633	C-CER,CHIP
2203-006841	C503	C-CER,CHIP
2203-006841	C509	C-CER,CHIP
2203-006841	C550	C-CER,CHIP
2203-006846	R225	C-CER,CHIP
2203-006872	C324	C-CER,CHIP
2203-006890	C104	C-CER,CHIP
2203-006890	C308	C-CER,CHIP
2203-006890	C507	C-CER,CHIP
2203-006890	C555	C-CER,CHIP
2203-006979	C223	C-CER,CHIP
2203-006979	C262	C-CER,CHIP
2203-006979	C531	C-CER,CHIP
2203-006979	C532	C-CER,CHIP
2203-006979	C538	C-CER,CHIP
2203-006979	C539	C-CER,CHIP
2203-007195	C557	C-CER,CHIP
2203-007230	C227	C-CER,CHIP
2404-001381	C727	C-TA,CHIP
2404-001381	C902	C-TA,CHIP
2404-001381	C903	C-TA,CHIP

MAIN Electrical Parts List

SEC CODE	Design LOC	Discription
2404-001381	C906	C-TA,CHIP
2404-001381	TA500	C-TA,CHIP
2404-001381	TA502	C-TA,CHIP
2404-001381	TA503	C-TA,CHIP
2404-001381	TA504	C-TA,CHIP
2404-001396	C546	C-TA,CHIP
2404-001557	C500	C-TA,CHIP
2404-001557	C701	C-TA,CHIP
2404-001557	TA501	C-TA,CHIP
2703-000295	L605	INDUCTOR-SMD
2703-001178	L211	INDUCTOR-SMD
2703-001750	L206	INDUCTOR-SMD
2703-001938	U503	INDUCTOR-SMD
2703-001990	L506	INDUCTOR-SMD
2703-002203	L101	INDUCTOR-SMD
2703-002208	L204	INDUCTOR-SMD
2703-002544	L212	INDUCTOR-SMD
2703-002649	L109	INDUCTOR-SMD
2703-002793	L111	INDUCTOR-SMD
2703-002795	L107	INDUCTOR-SMD
2703-002795	L116	INDUCTOR-SMD
2703-002858	C139	INDUCTOR-SMD
2703-002866	L608	INDUCTOR-SMD
2703-002870	C245	INDUCTOR-SMD
2703-002872	L400	INDUCTOR-SMD
2703-002872	L401	INDUCTOR-SMD
2703-002872	L402	INDUCTOR-SMD
2703-002872	U926	INDUCTOR-SMD
2703-002900	L105	INDUCTOR-SMD
2703-002901	L207	INDUCTOR-SMD
2703-002901	L208	INDUCTOR-SMD
2703-002906	L112	INDUCTOR-SMD
2703-002906	L113	INDUCTOR-SMD
2703-002910	L104	INDUCTOR-SMD
2703-002917	L203	INDUCTOR-SMD
2703-002917	L205	INDUCTOR-SMD
2703-002918	L115	INDUCTOR-SMD

SEC CODE	Design LOC	Discription
2703-002919	L117	INDUCTOR-SMD
2703-002953	R224	INDUCTOR-SMD
2703-002958	L106	INDUCTOR-SMD
2703-002960	C295	INDUCTOR-SMD
2703-003003	C132	INDUCTOR-SMD
2703-003004	L102	INDUCTOR-SMD
2703-003298	L501	INDUCTOR-SMD
2703-003298	L505	INDUCTOR-SMD
2703-003347	L606	INDUCTOR-SMD
2801-004466	OSC400	CRYSTAL-SMD
2801-004466	OSC500	CRYSTAL-SMD
2804-001748	TCX500	OSCILLATOR-CLOCK
2804-001762	OSC201	OSCILLATOR-CLOCK
2809-001324	TCX201	OSCILLATOR-VCTCXO
2901-001413	F800	FILTER-EMI SMD
2901-001413	F801	FILTER-EMI SMD
2901-001413	F802	FILTER-EMI SMD
2901-001413	F803	FILTER-EMI SMD
2901-001413	F804	FILTER-EMI SMD
2901-001413	F805	FILTER-EMI SMD
2901-001413	F806	FILTER-EMI SMD
2901-001413	F807	FILTER-EMI SMD
2904-001592	F102	FILTER-SAW
2904-001599	F103	FILTER-SAW
2904-001600	F104	FILTER-SAW
2904-001658	F105	FILTER-SAW
2904-001702	F201	FILTER-SAW
2904-001759	F202	FILTER-SAW
2904-001773	F101	FILTER-SAW
2904-001850	F108	FILTER-SAW
2910-000024	F106	DUPLEXER-SAW
2910-000056	F107	DUPLEXER-FBAR
3301-001120	L607	BEAD-SMD
3301-001341	F600	BEAD-SMD
3301-001342	F301	BEAD-SMD
3301-001342	L901	BEAD-SMD
3301-001438	L500	BEAD-SMD

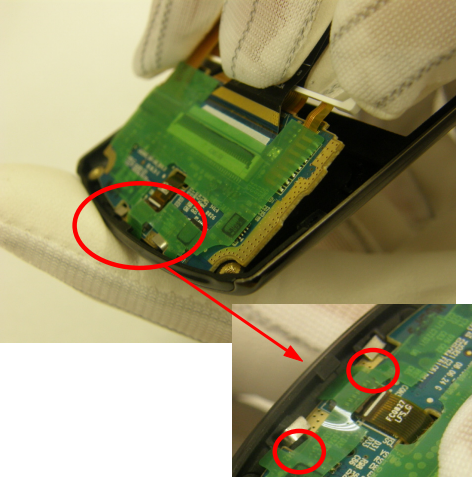



MAIN Electrical Parts List

SEC CODE	Design LOC	Discription
3301-001438	L502	BEAD-SMD
3301-001756	L209	BEAD-SMD
3301-001885	L503	BEAD-SMD
3301-001885	L504	BEAD-SMD
3301-001917	L600	BEAD-SMD
3301-001917	L601	BEAD-SMD
3301-001917	L602	BEAD-SMD
3301-001917	L603	BEAD-SMD
3301-001917	L604	BEAD-SMD
3404-001303	TAC_DOWN	SWITCH-TACT
3404-001303	TAC_UP	SWITCH-TACT
3408-001143	CN703	SWITCH-SLIDE
3705-001503	CN101	CONNECTOR-COAXIAL
3709-001447	SIM701	CONNECTOR-CARD EDGE
3709-001464	CD701	CONNECTOR-CARD EDGE
3711-005933	HEA701	HEADER-BOARD TO BOARD
3711-006228	BTC701	HEADER-BATTERY
3711-006327	CN702	HEADER-BOARD TO BOARD
3711-006568	HDC701	HEADER-BOARD TO BOARD\
3722-002643	IFC902	JACK-USB
3722-002658	CN600	JACK-EAR PHONE
4302-001130	BAT400	BATTERY-LI(2ND)
4709-001405	CPL101	COUPLER-DIRECTION
4709-001559	U202	W-LAN MODULE
GH41-02139A		PCB MAIN-SGHI960
GH70-03349A	SC101	IPR SHIELD-CAN CLIP
GH70-03349A	SC102	IPR SHIELD-CAN CLIP
GH70-03349A	SC105	IPR SHIELD-CAN CLIP
GH70-03349A	SC106	IPR SHIELD-CAN CLIP
GH70-03349A	SC107	IPR SHIELD-CAN CLIP
GH70-03349A	SC111	IPR SHIELD-CAN CLIP
GH70-03349A	SC112	IPR SHIELD-CAN CLIP
GH70-03349A	SC113	IPR SHIELD-CAN CLIP
GH70-03349A	SC120	IPR SHIELD-CAN CLIP
GH70-03349A	SC121	IPR SHIELD-CAN CLIP
GH70-03349A	SC122	IPR SHIELD-CAN CLIP
GH70-03349A	SC123	IPR SHIELD-CAN CLIP

SEC CODE	Design LOC	Discription
GH70-03349A	SC124	IPR SHIELD-CAN CLIP
GH70-03349A	SC125	IPR SHIELD-CAN CLIP
GH70-03349A	SC126	IPR SHIELD-CAN CLIP
GH70-03349A	SC127	IPR SHIELD-CAN CLIP
GH70-03349A	SC128	IPR SHIELD-CAN CLIP
GH70-03349A	SC130	IPR SHIELD-CAN CLIP
GH70-03349A	SC131	IPR SHIELD-CAN CLIP
GH70-03349A	SC132	IPR SHIELD-CAN CLIP
GH70-03349A	SC133	IPR SHIELD-CAN CLIP
GH70-03349A	SC801	IPR SHIELD-CAN CLIP
GH70-03349A	SC803	IPR SHIELD-CAN CLIP
GH70-03349A	SC804	IPR SHIELD-CAN CLIP
GH70-03349A	SC806	IPR SHIELD-CAN CLIP
GH70-03349A	SC807	IPR SHIELD-CAN CLIP
GH70-03349A	SC808	IPR SHIELD-CAN CLIP
GH70-03349A	SC809	IPR SHIELD-CAN CLIP
GH70-03349A	SC810	IPR SHIELD-CAN CLIP

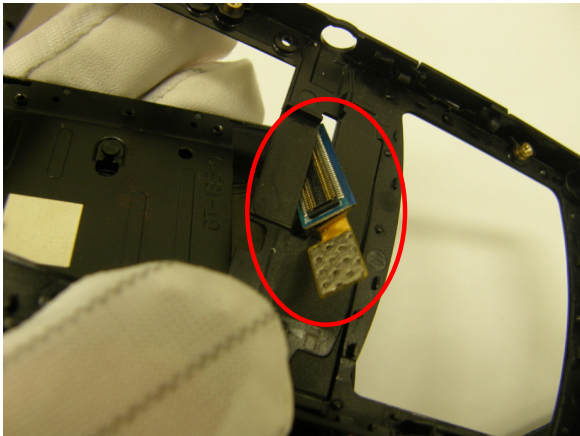
7. Disassembly and Assembly Instructions

7-1. Assembly

<p>1 Land SUB PBA on the UPPER.</p> 	<p>2 Land receiver and camera on the UPPER.</p> 
<p>1. Land PBA after PBA is inserted in UPPER SUS hall.</p>	<p>1. Push down not to get loose.</p>
<p>3 Assemble LOWER</p> 	<p>4 Screw LOWER</p> 
<p>1. Insert FPCB into the LOWER hole 2. Land LOWER after LOWER is inserted into the hole of the lower end.</p>	<p>1. screw : 1.1 kgf.cm</p>

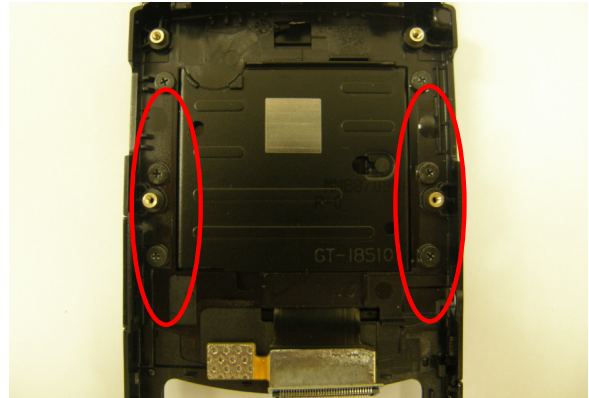
5

Assemble FRONT



6

Fix FRONT by screwing

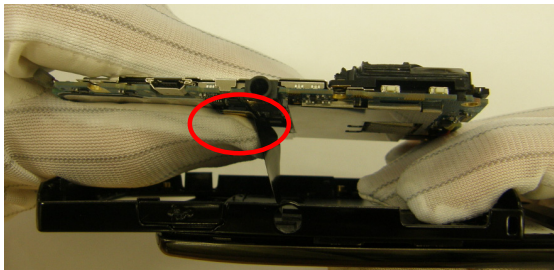


1. Insert SLIDE FPCB in the FRONT hole.
2. Hold up a Hinge and then Land the Front matched to screw hall.

1. screw torque : 1.1 kgf.cm

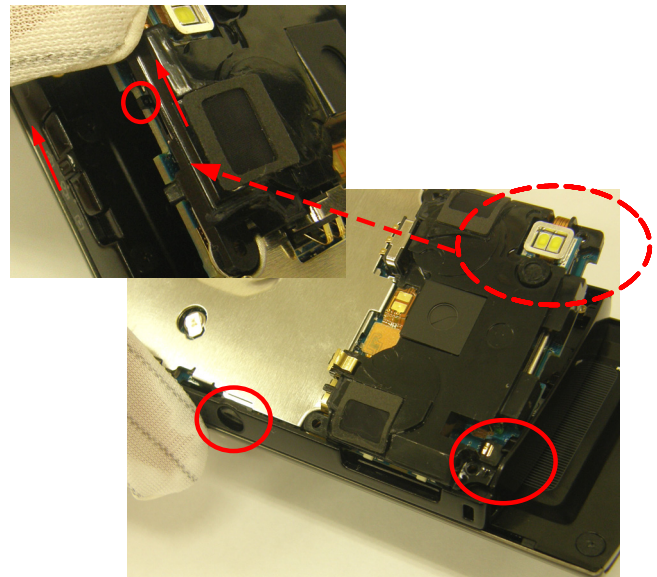
7

Assemble Slide FPCB and PBA.



8

Add FRONT AND BOARD.

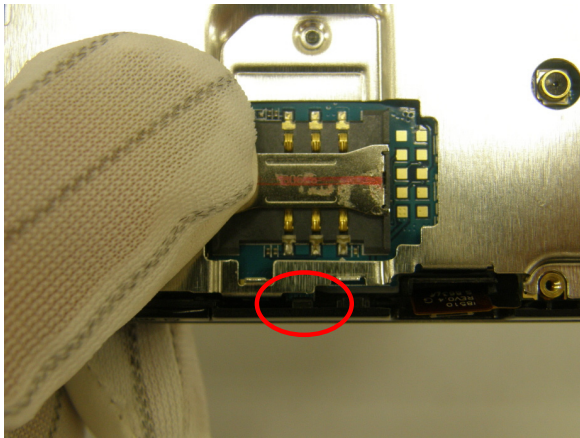


- 1 Put down FRONT to get Slide FPCB loose at maximum

1. PBA lands, starting right side. At this time, be careful not to stuck in earjack and the hook of the upper end.

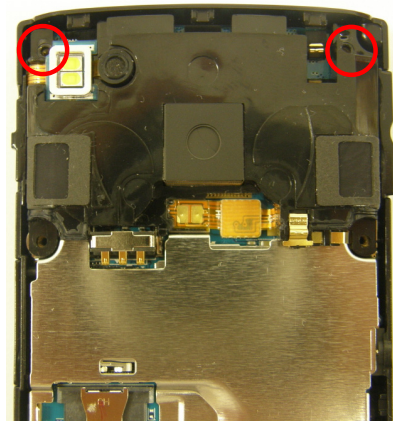
9

Land BOARD on the front



10

Screw the upper end of the resonance tube at 2 point



1. Push down BOARD to be fixed in the hook of the left side Front.

1. Screw torque : 1.1 kgf.cm

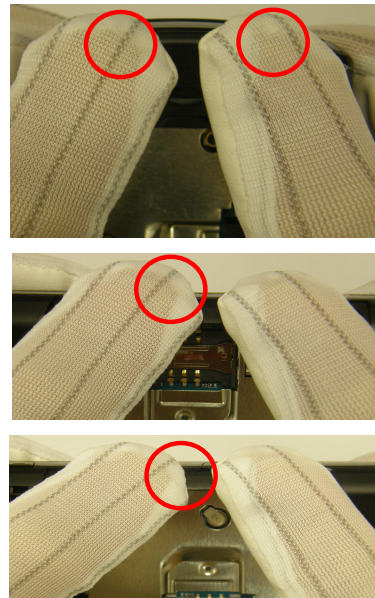
11

Assembly rear



12

Land rear

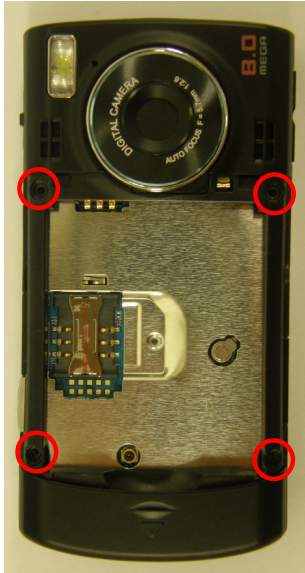


1. Land REAR after REAR is inserted in the hook of the upper end of FRONT.

1. Fix REAR by pushing down the hook indicated like pictures above.

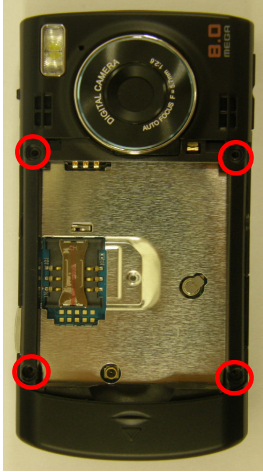
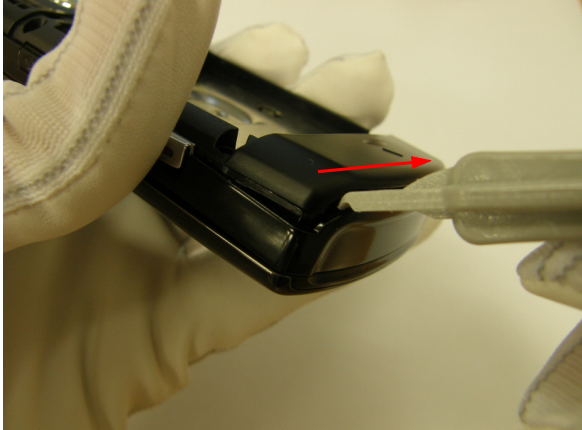

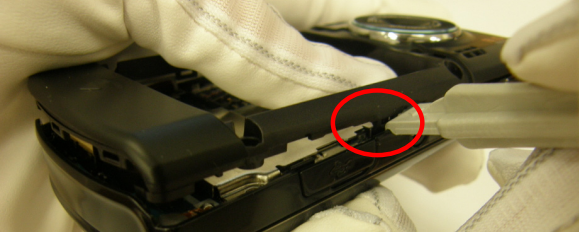
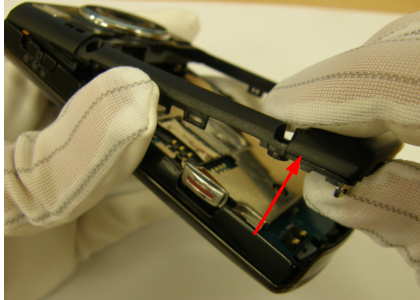
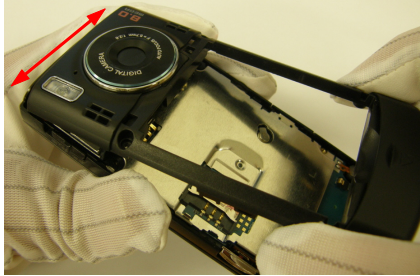
13

Screw REAR at 4 points



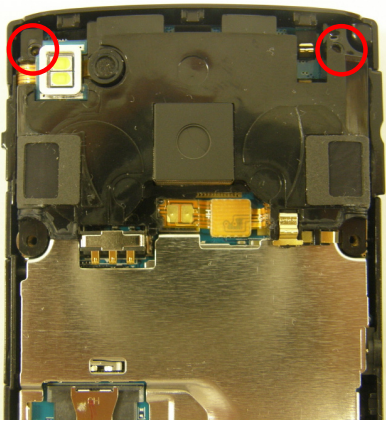
1. Screw torque : 1.1 kgf.cm

7-2. Disassembly

<p>1 Unscrew REAR.</p> 	<p>2 Disassemble REAR.</p> 
<p>Widen the distance between REAR and FRONT on the right side with disassembling knife after inserting the assembling knife into the lower end.</p>	
<p>3 Disassemble REAR.</p>  	<p>4 Detach REAR.</p>  
<p>1. Widen the hook of the upper end of the left CAMKEY with disassembling knife with disassembling knife</p> <p>2. widen the hook of the lower end of the right earphone jack.</p>	<p>1. Grab the lower end widened and raise it up. .</p> <p>2. Detach REAR from FRONT shaking the upper end from side to side.</p>

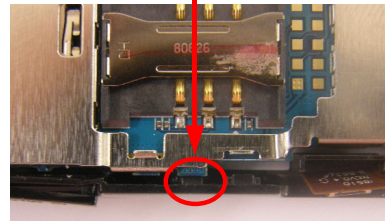
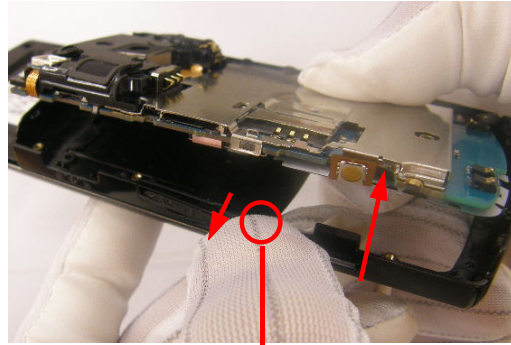
5

Unscrew the upper end of the resonance tube at 2 point.



6

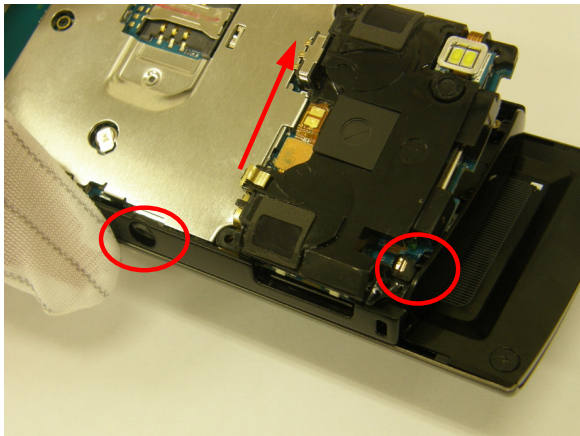
Raise BOARD.



1. Raise keypad after widening the hook of the left side of FRONT.

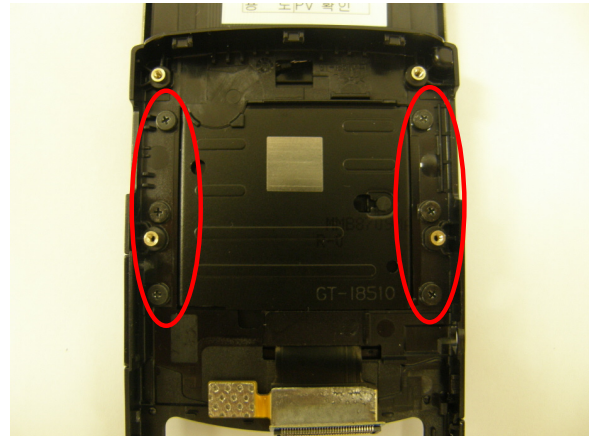
7

Detach BOARD from FRONT.



8

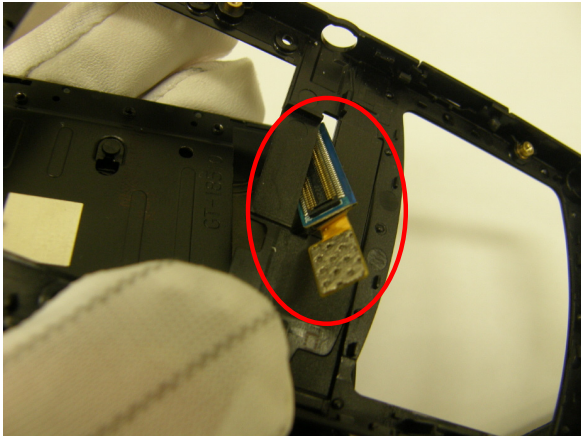
Unscrew FRONT.



1. When disassembling, be careful not to stick in earphone jack and the hook of the upper end of FRONT

9

Disassemble FRONT.



10

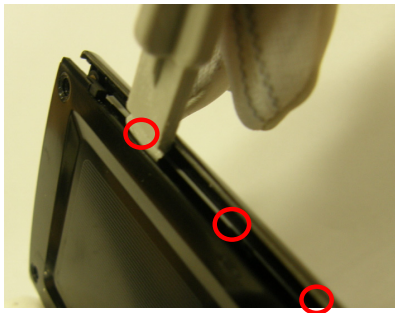
Unscrew LOWER.



1. Be careful FPCB is not stuck in FRONT FPCB hall.

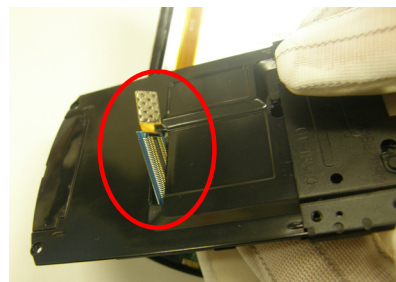
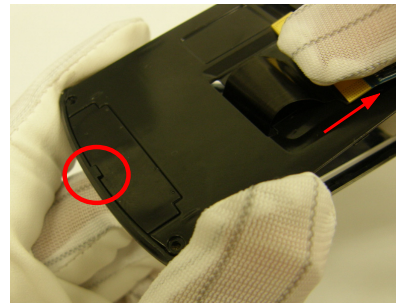
11

Disassemble LOWER



12

Detach LOWER

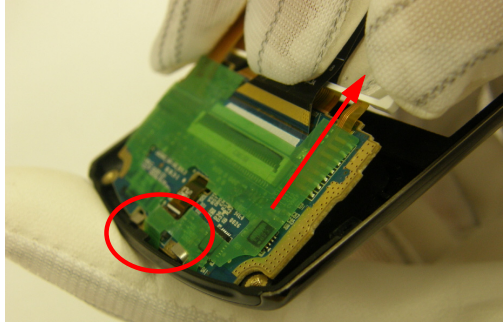
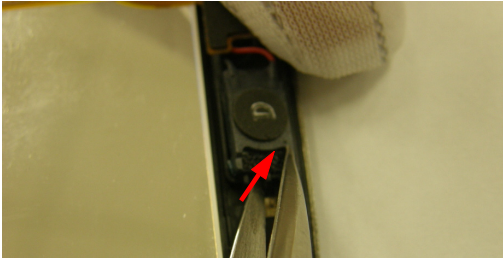


1. Disassemble LOWER by Inserting disassemble knife into hook hall.

1. Detach LOWER with care of the hook of the lower end UPPER
2. Be careful Slide FPCB is not stuck in LOWER hole.

13

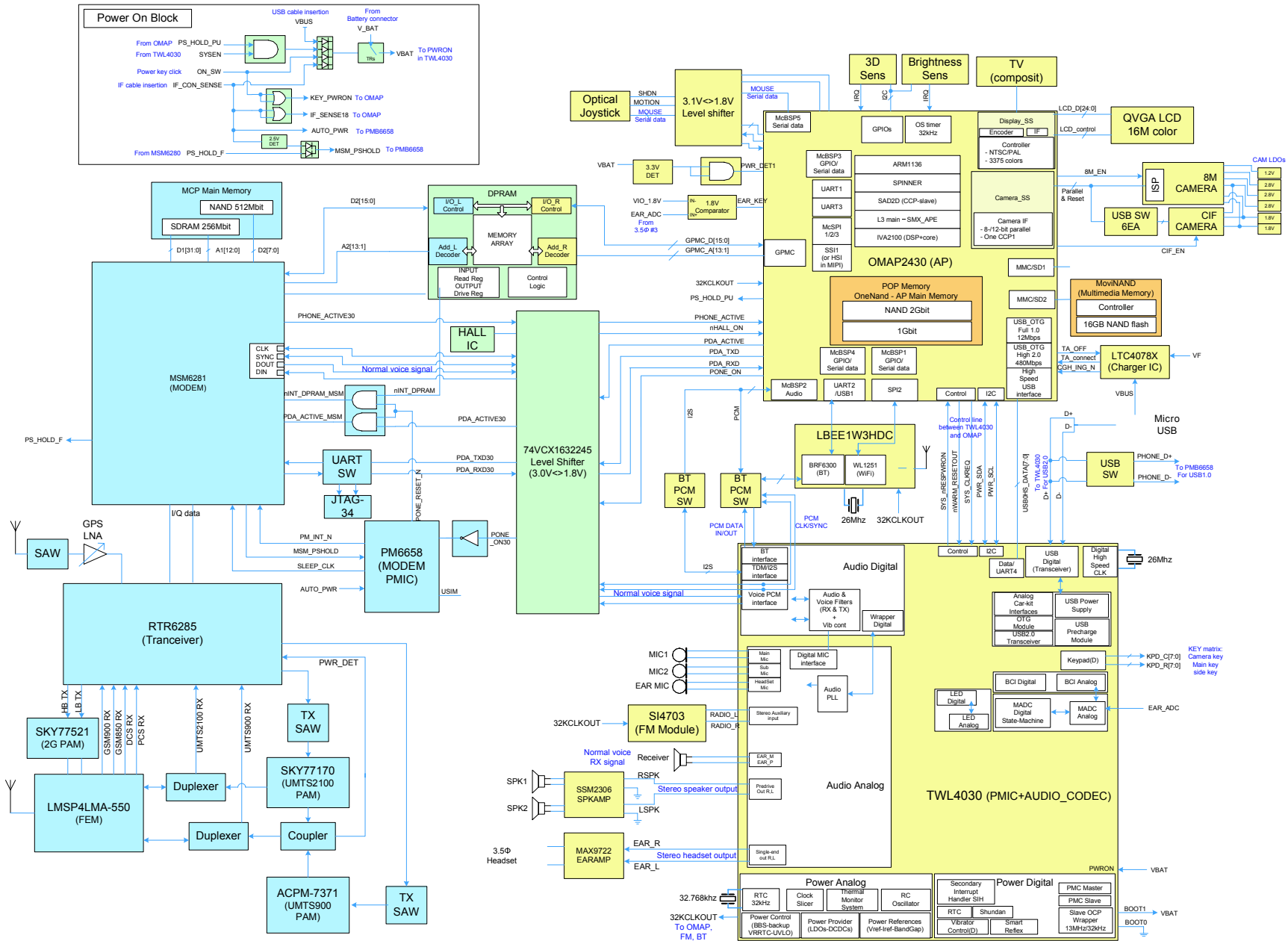
Disassemble LCD ASS'Y



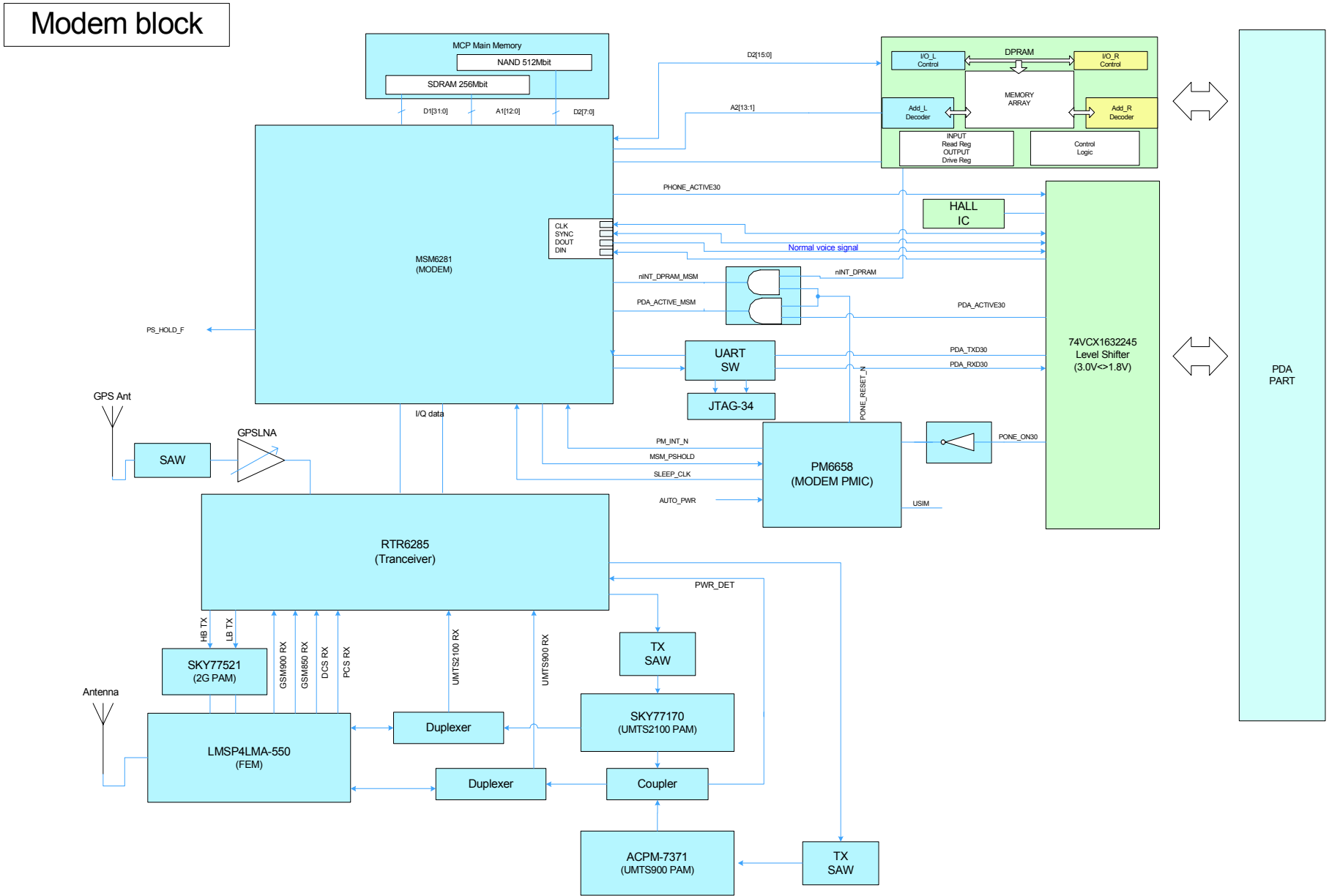
1. Raise RECEIVER AND CAMERA up by inserting tweezers
2. Be careful not to stuck in UPPER SUS hook.

8. Block Diagrams

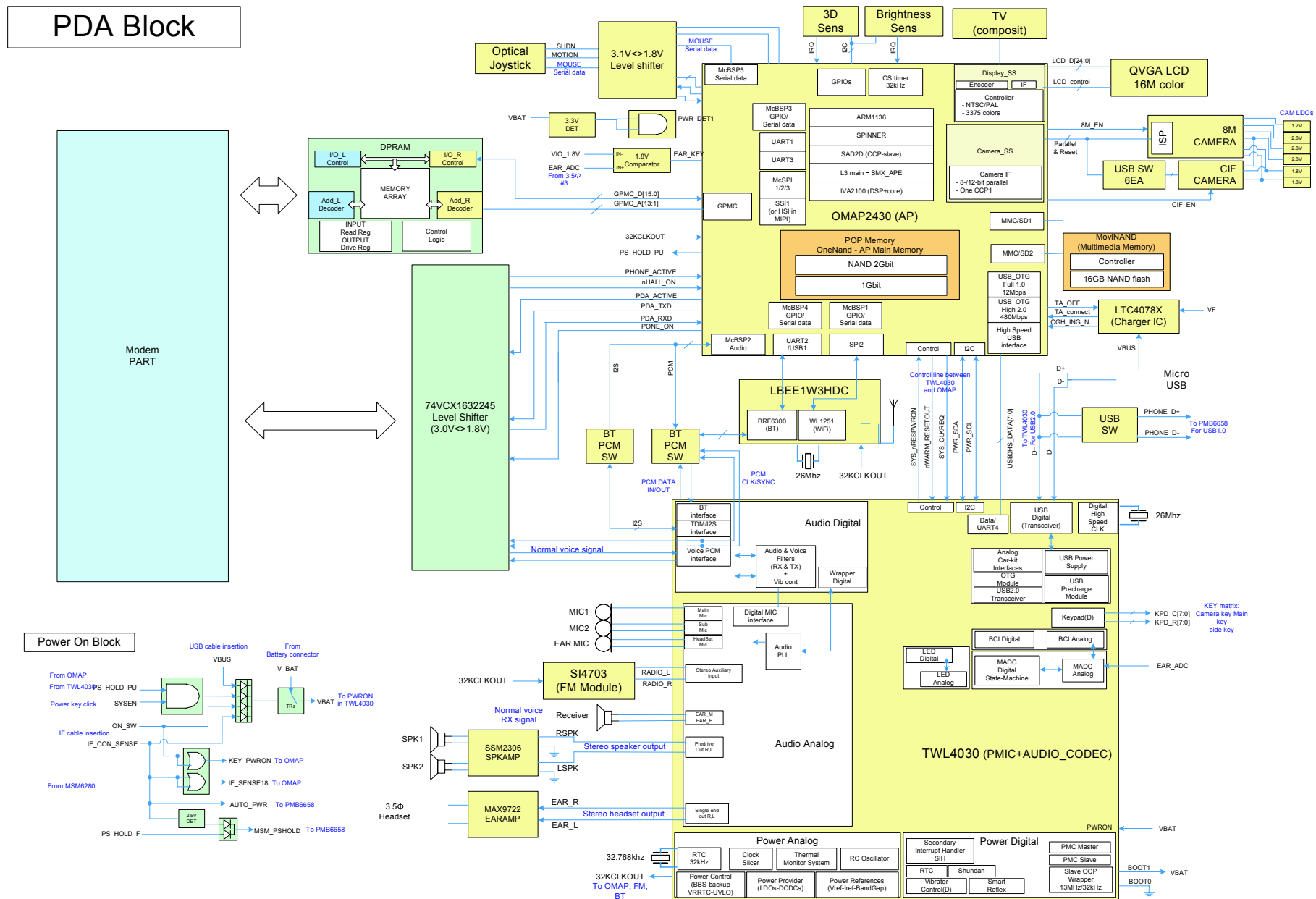
8-1. Block Diagram



8-2. RF Solution Block Diagram

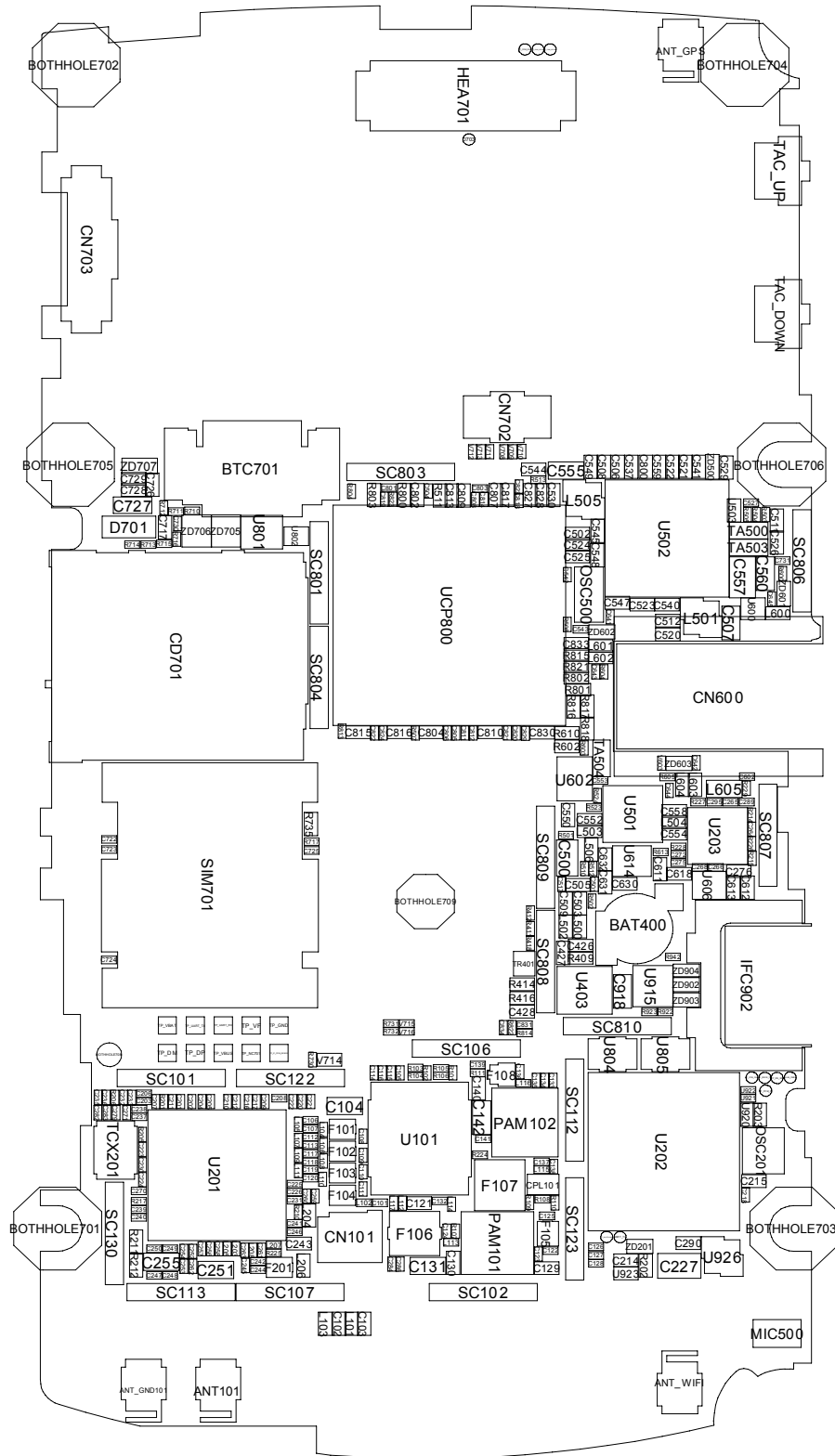


8-3. Baseband Solution Block Diagram



9. PCB Diagrams

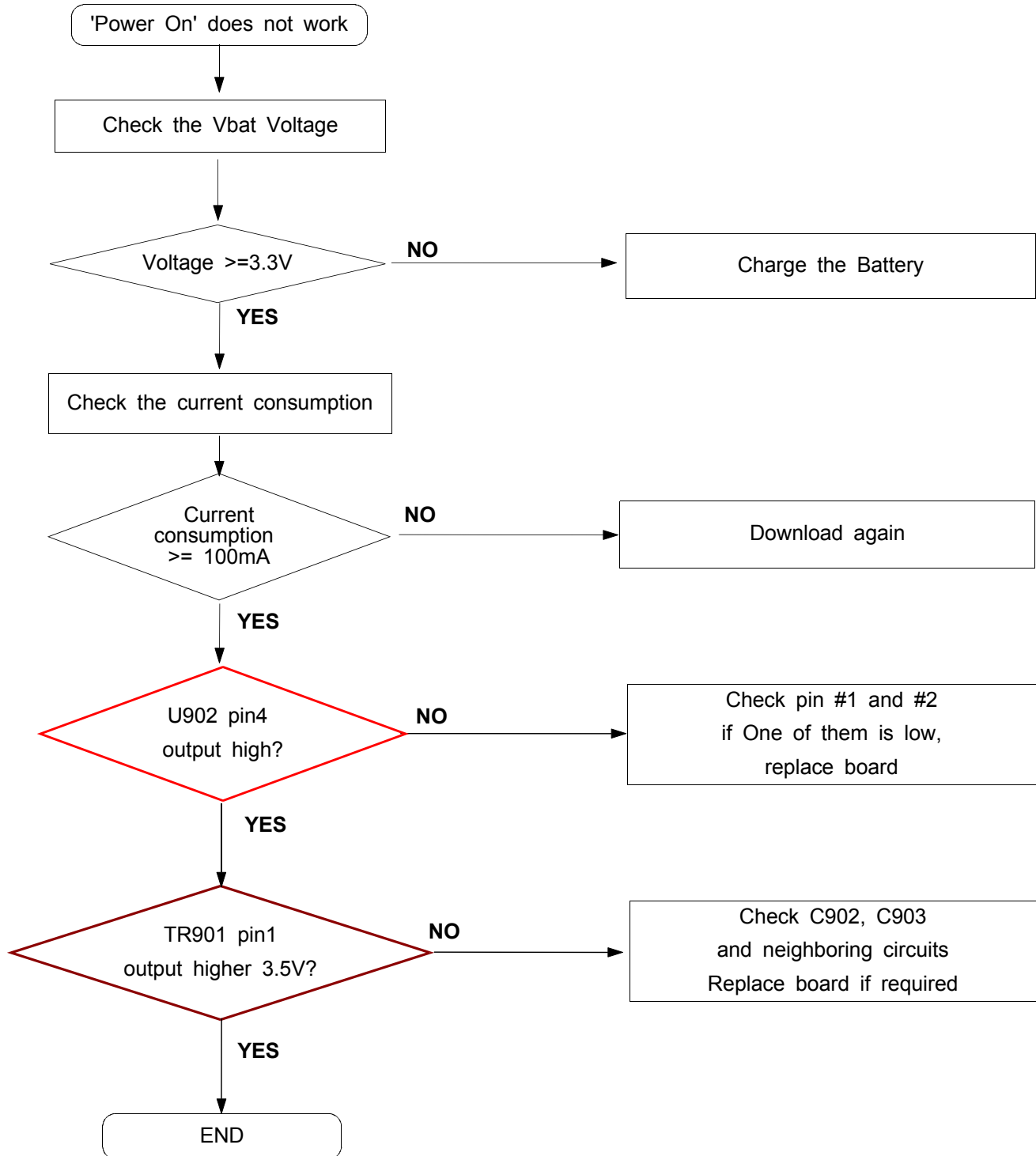
MAIN Top

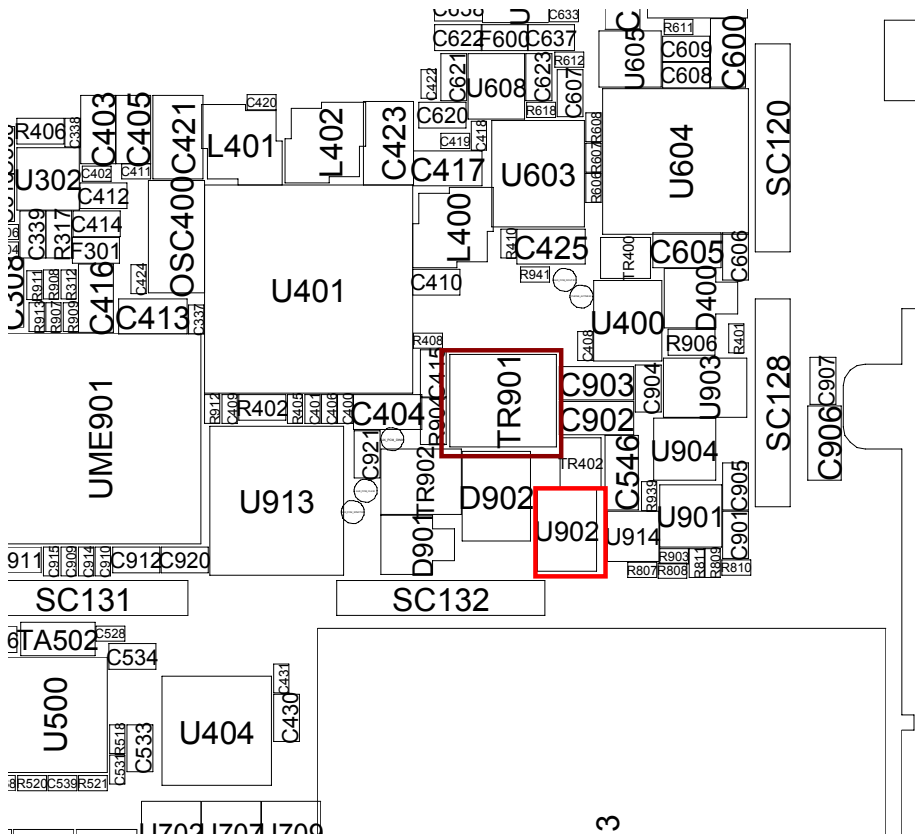
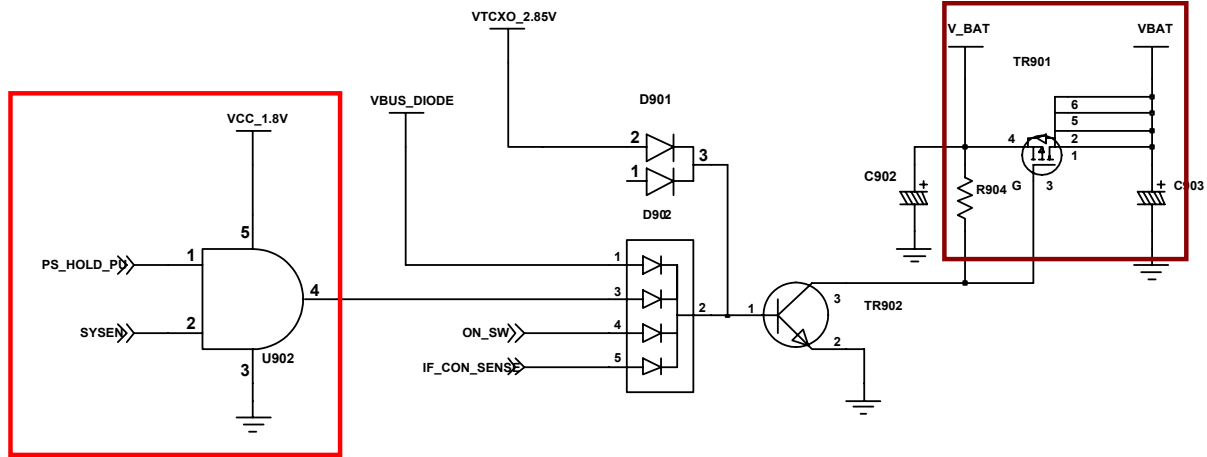


10. Flow Chart of TroubleShooting

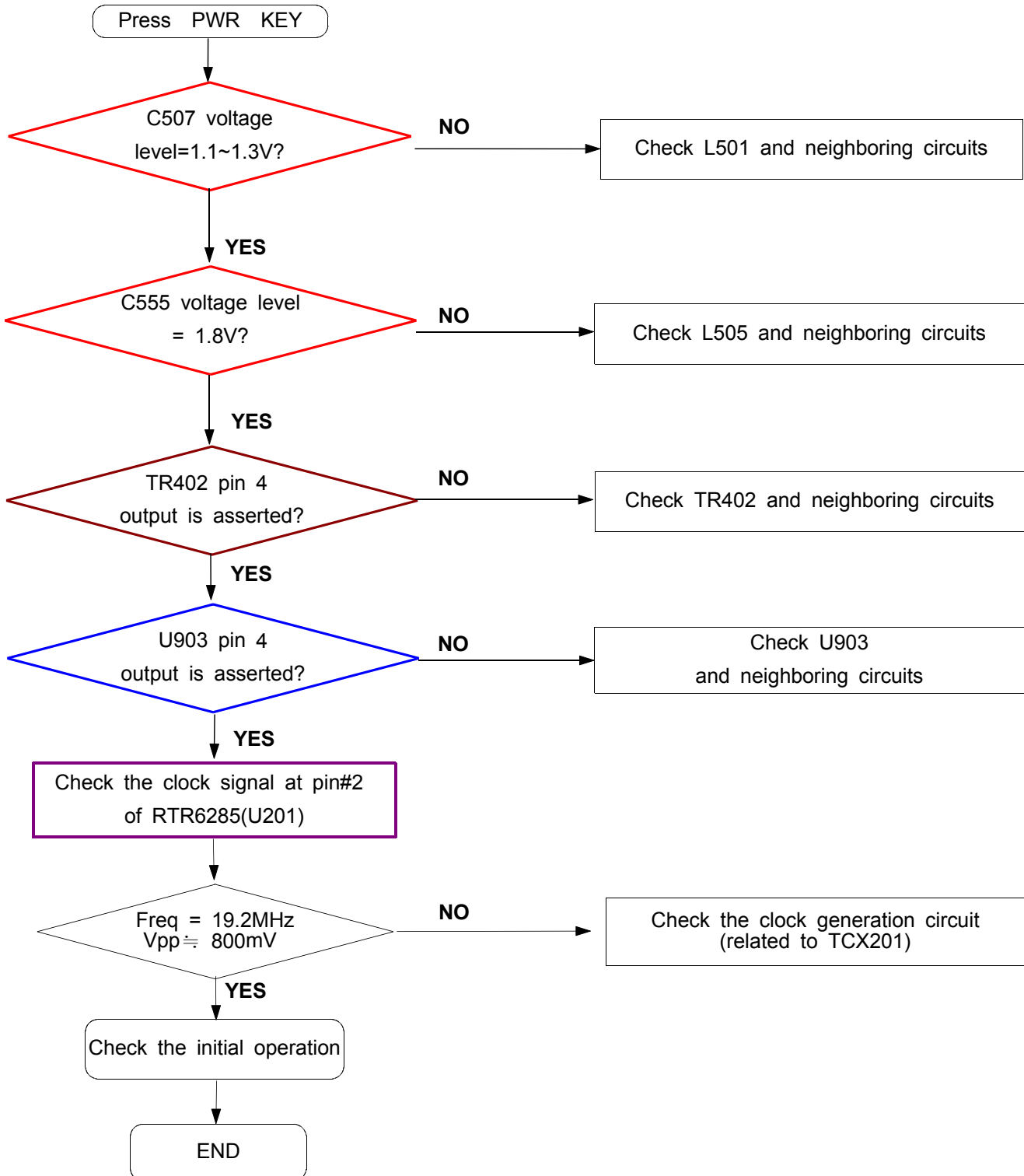
10-1. Logic Section

10-1-1 : No Power

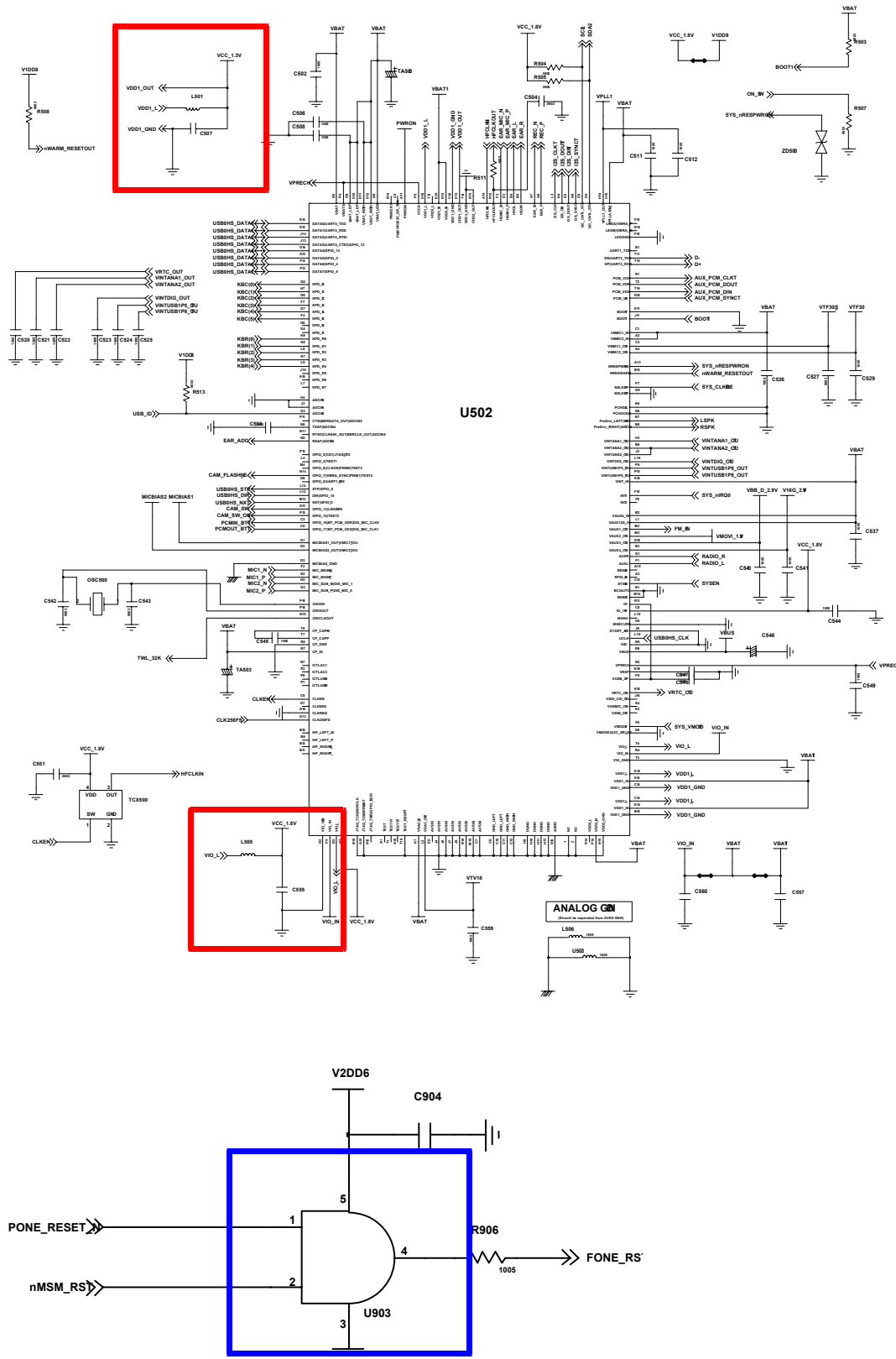


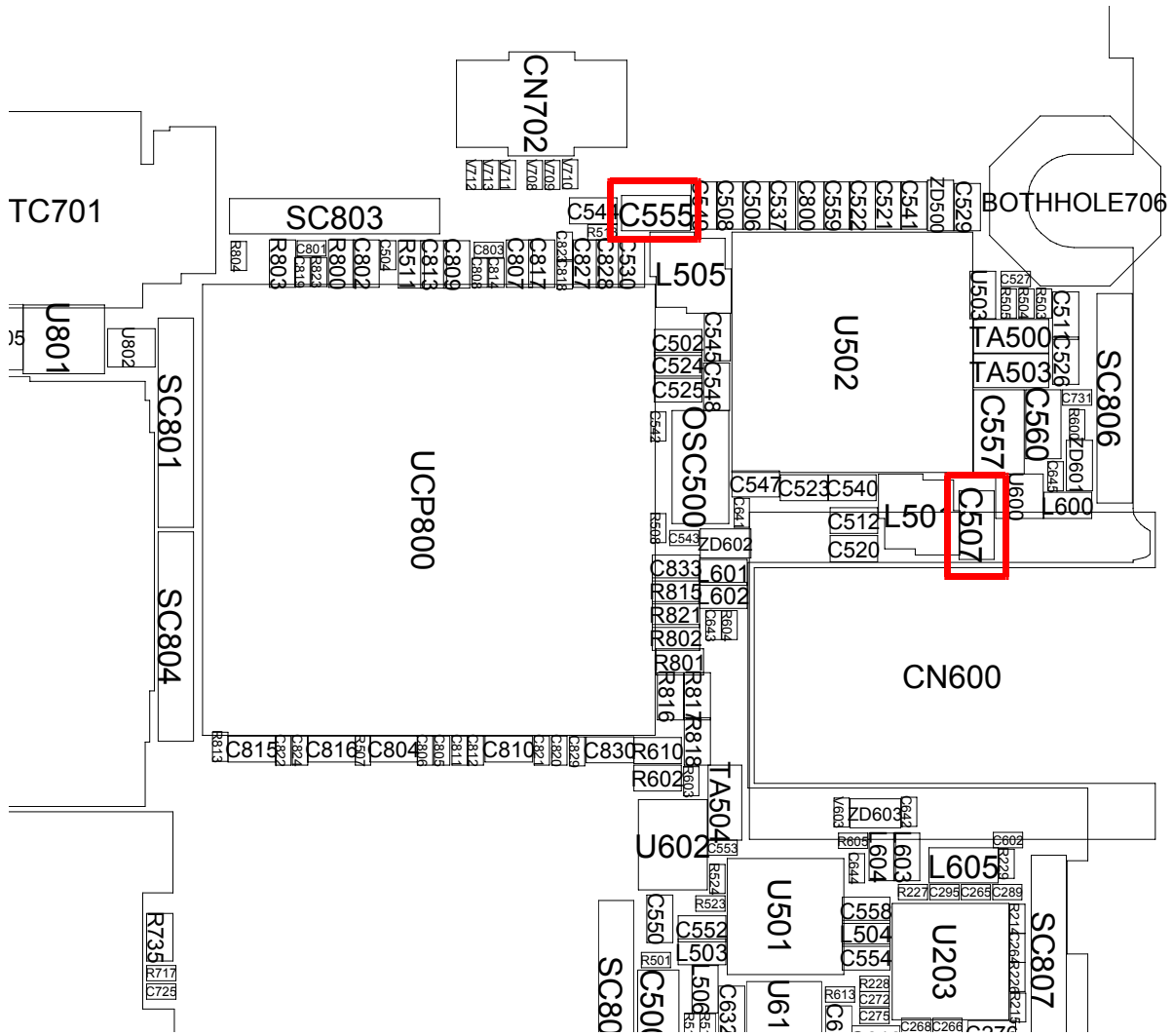


10-1-2 : Abnormal initial operation (Normal +4.0V voltage source)



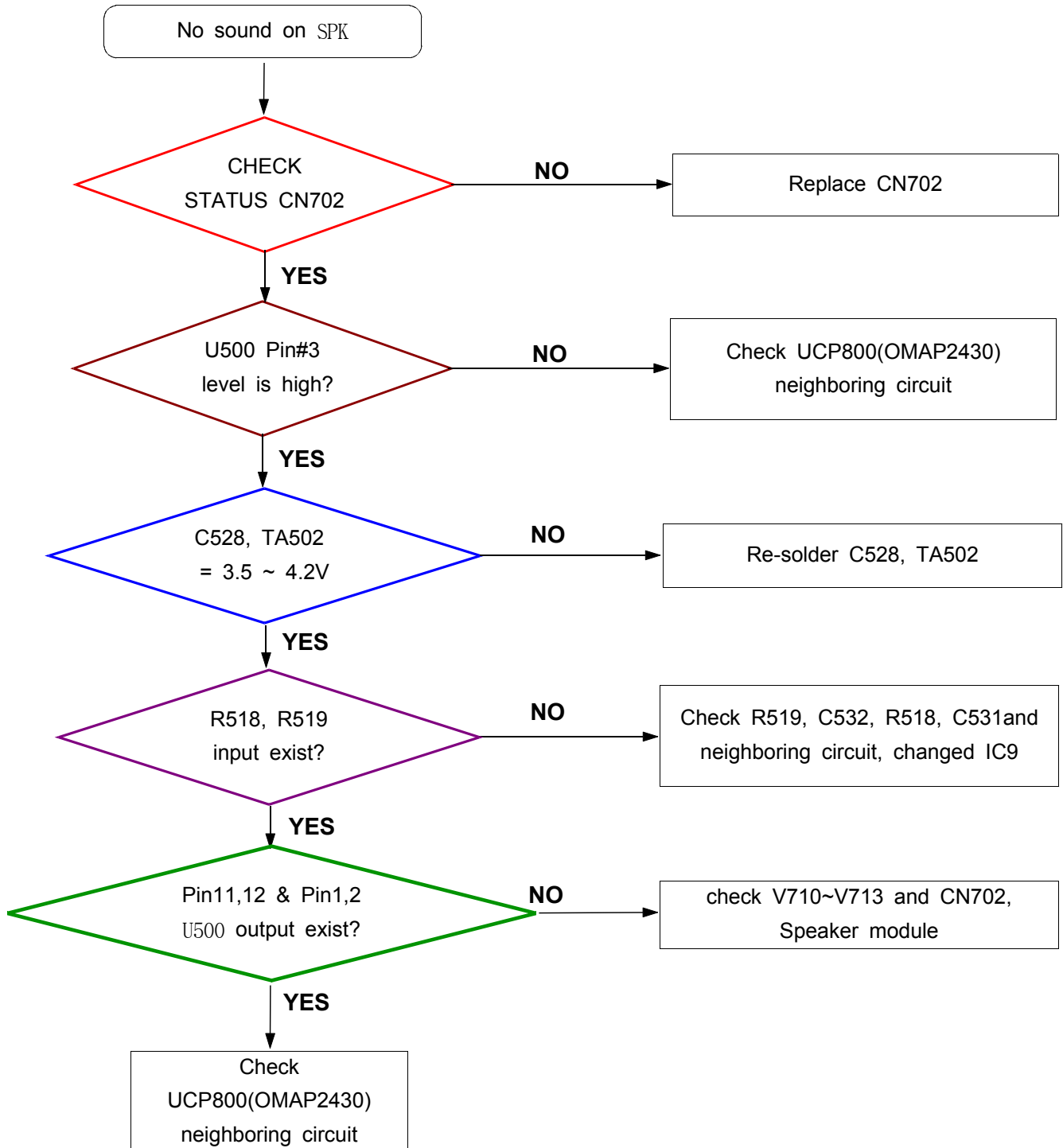
Flow Chart of Troubleshooting

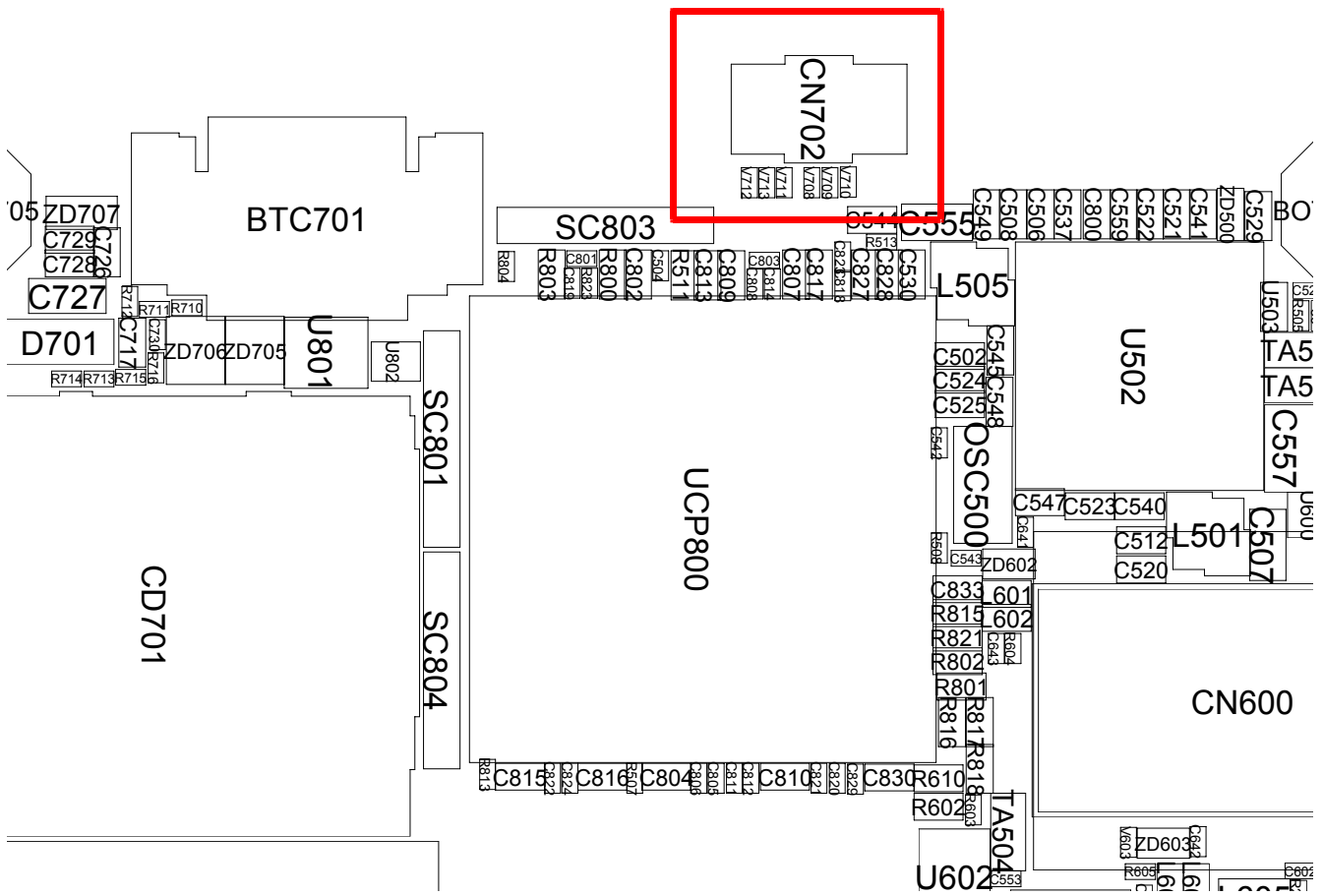
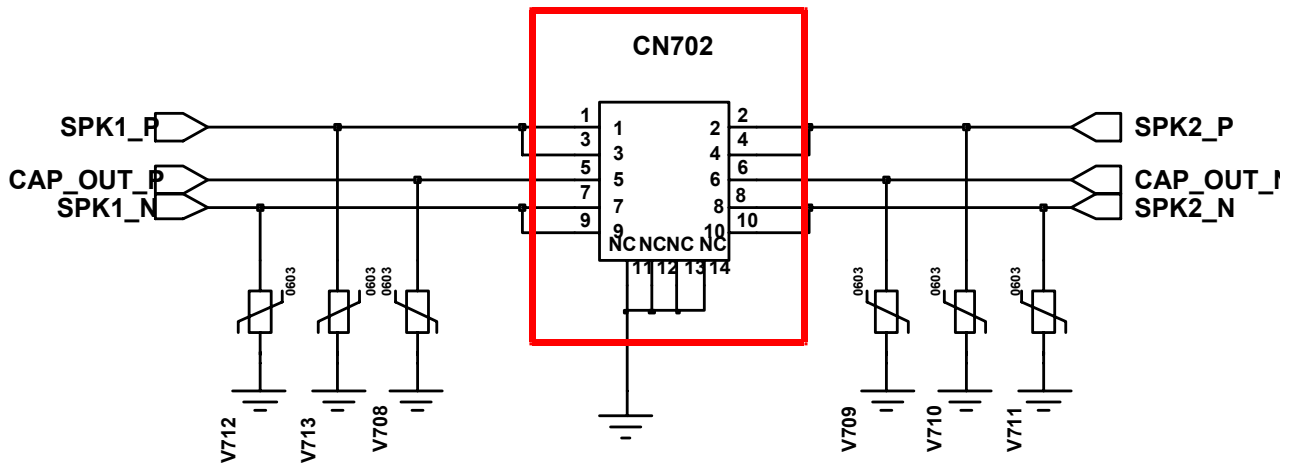




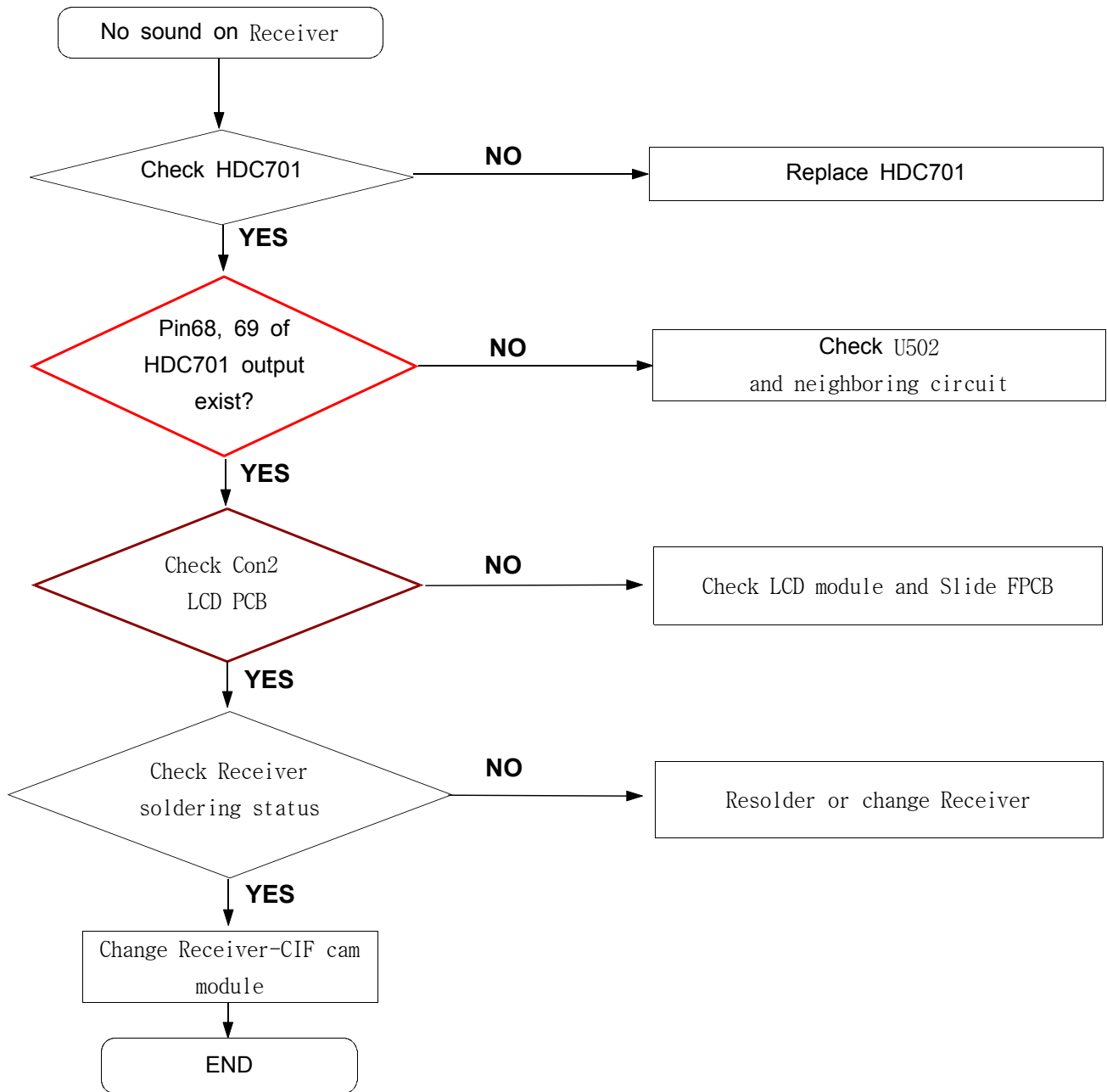
10-1-3 : Abnormal Sound operation

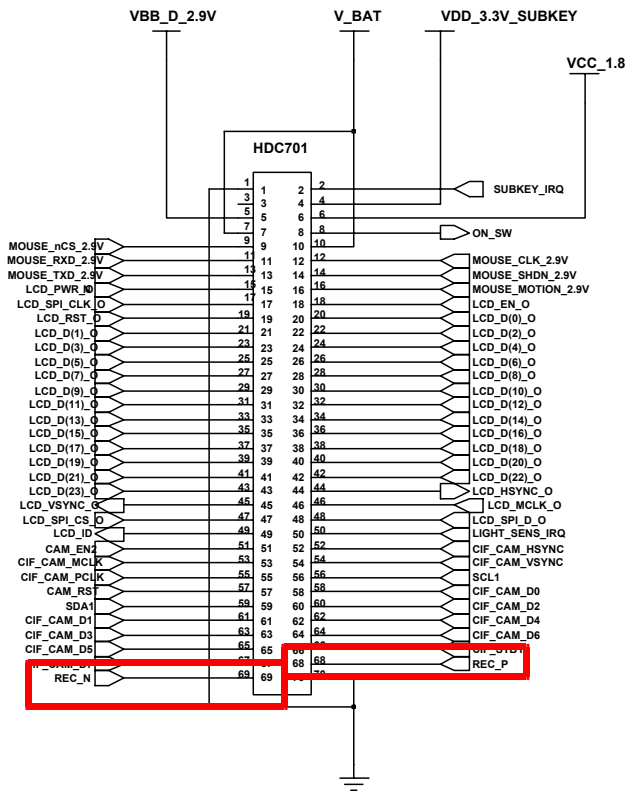
1) No Sound on Stereo Spk



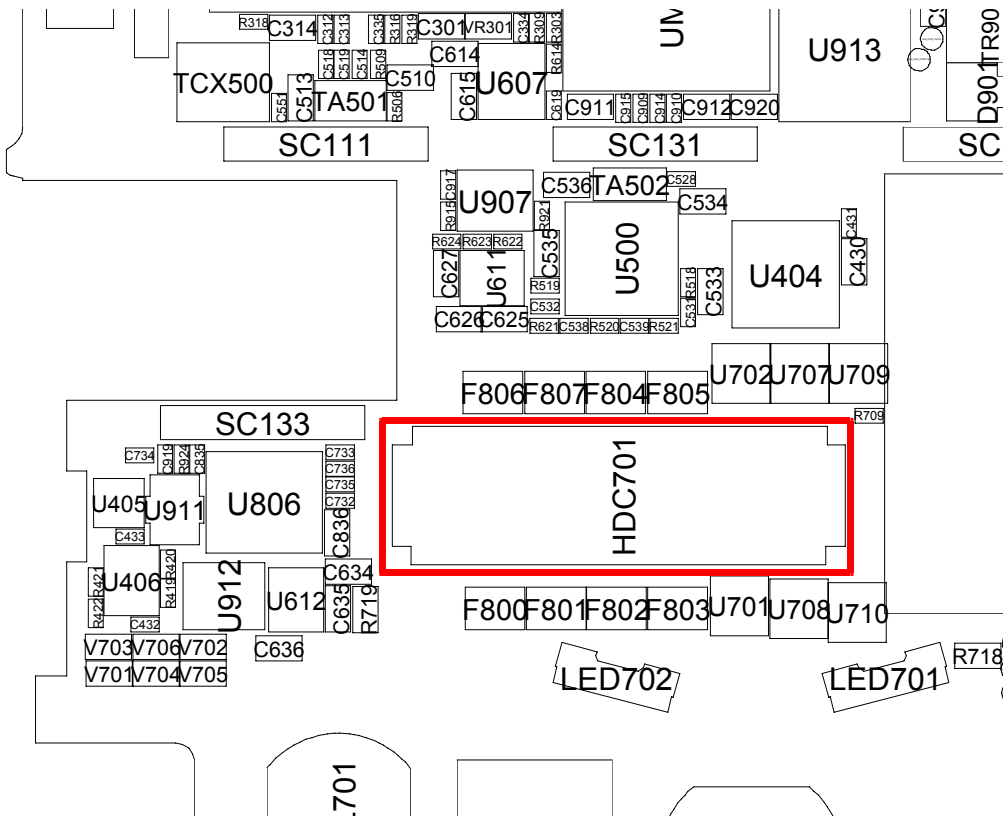


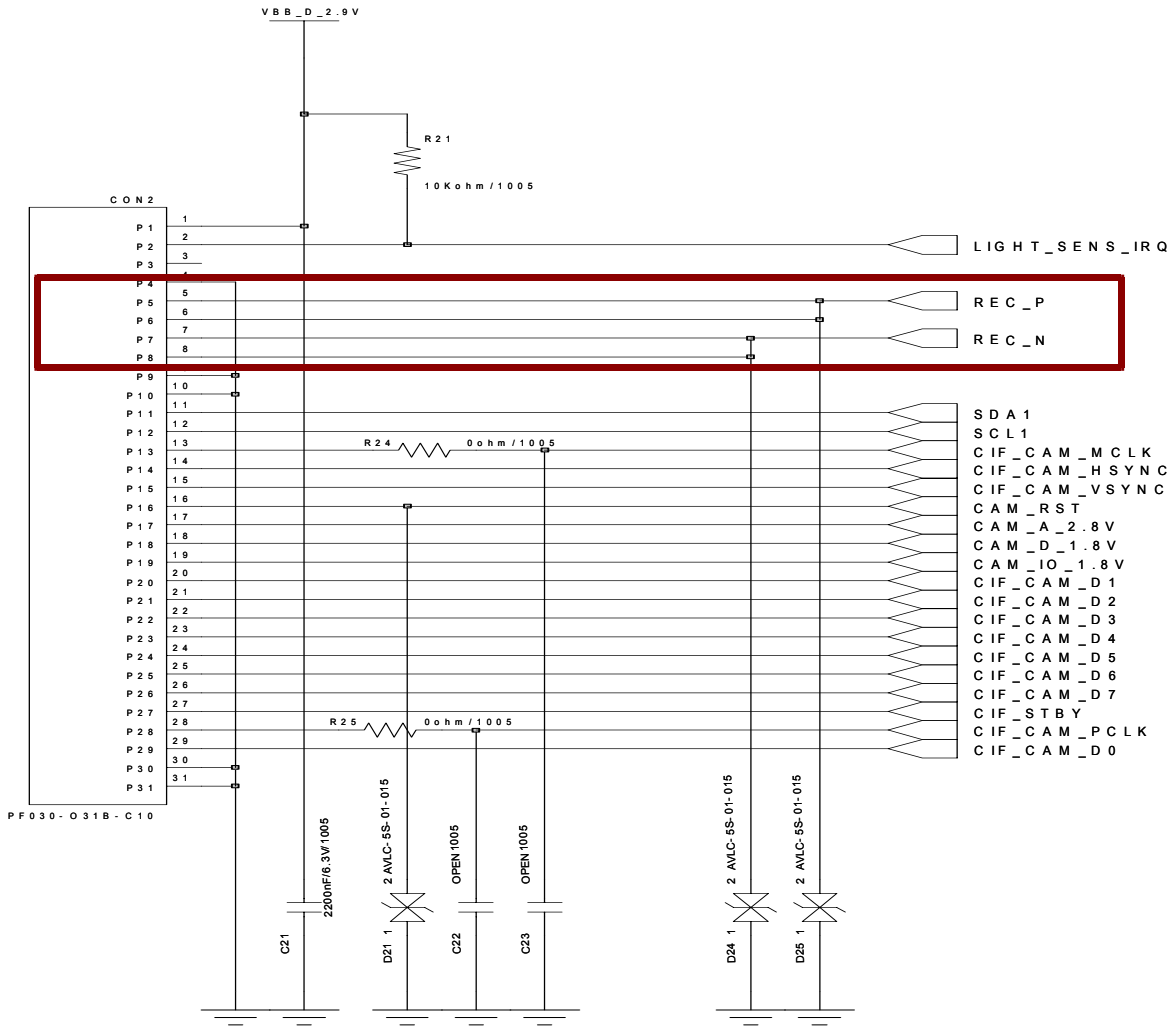
2) No Sound on Receiver

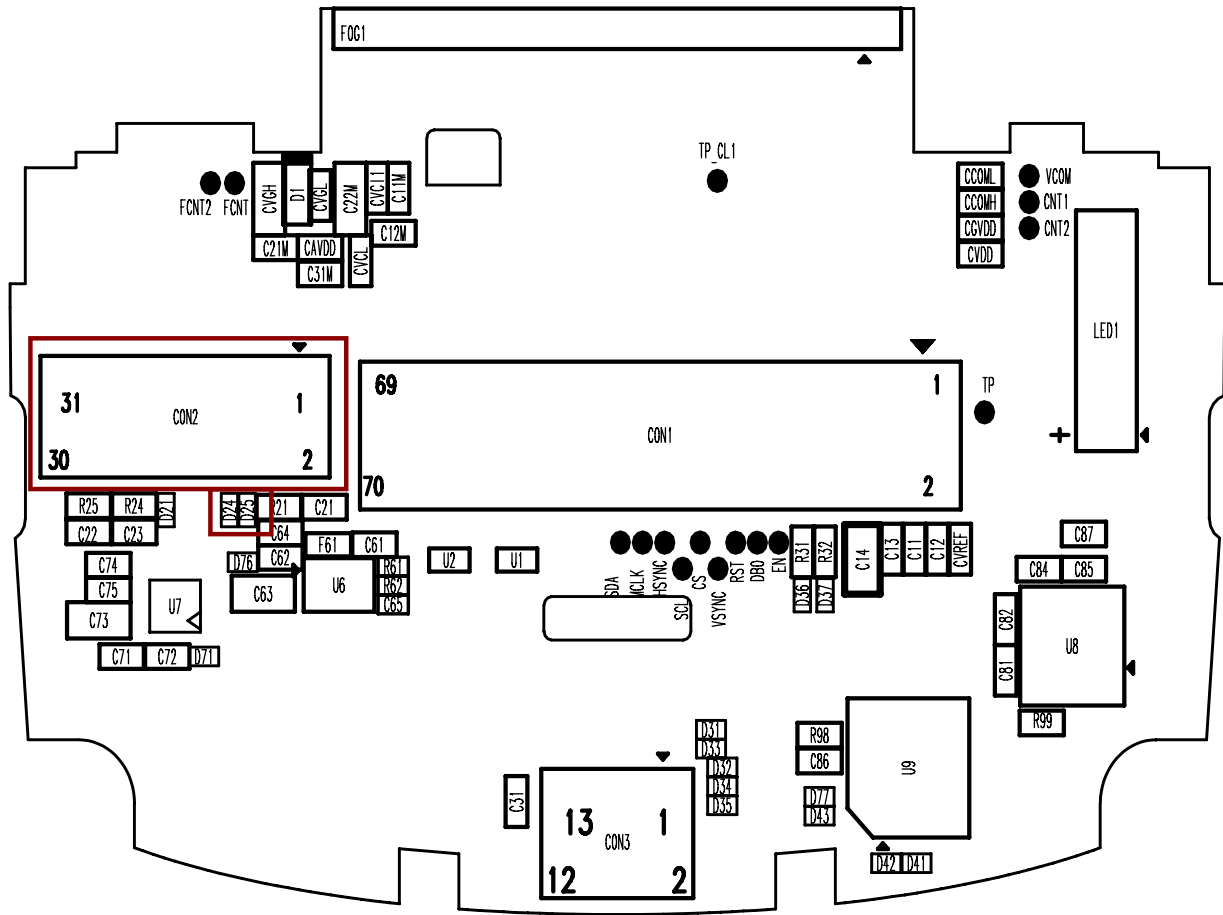




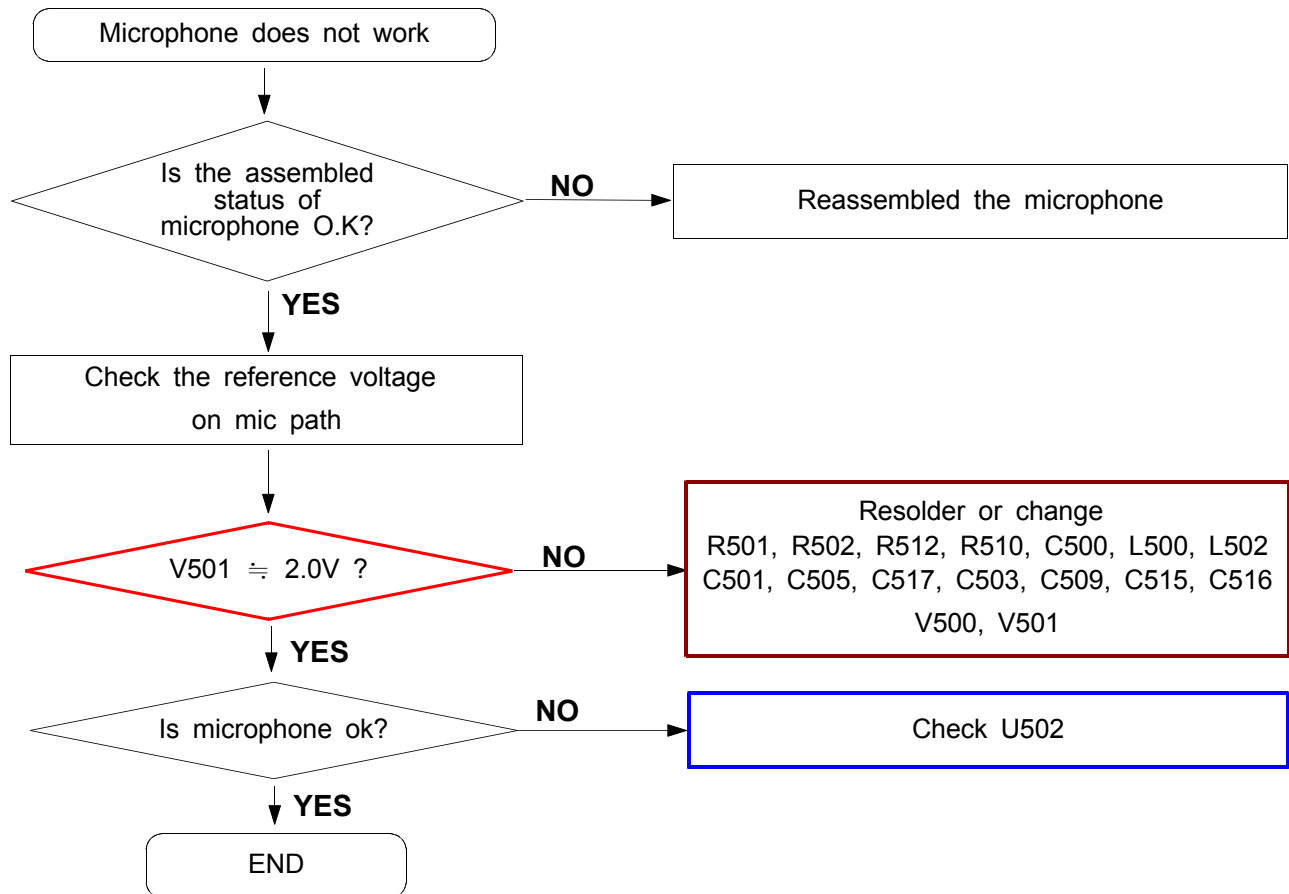
SLIDE FPCB CONNECTOR

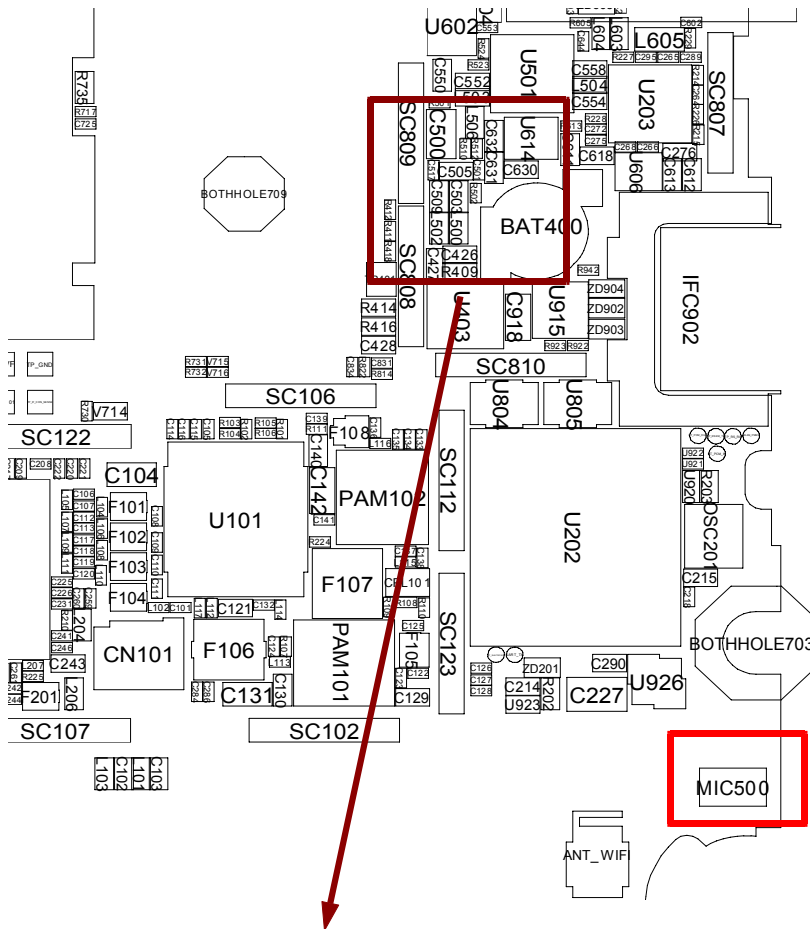
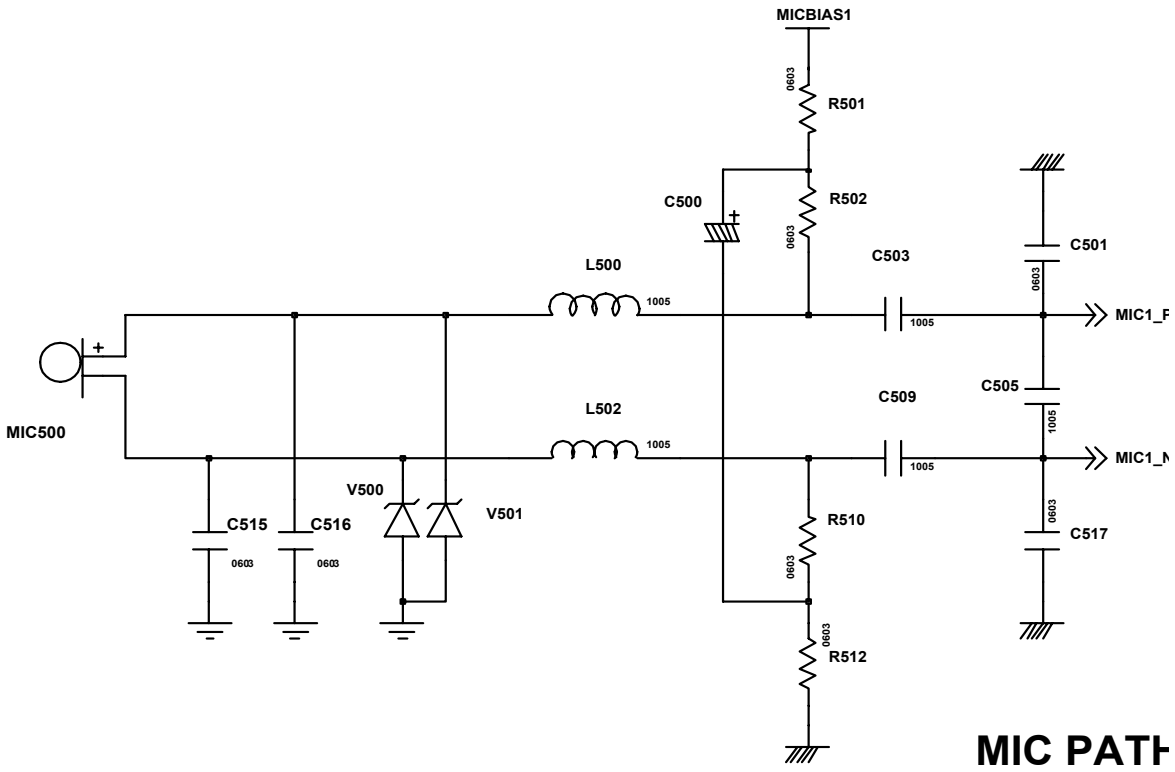


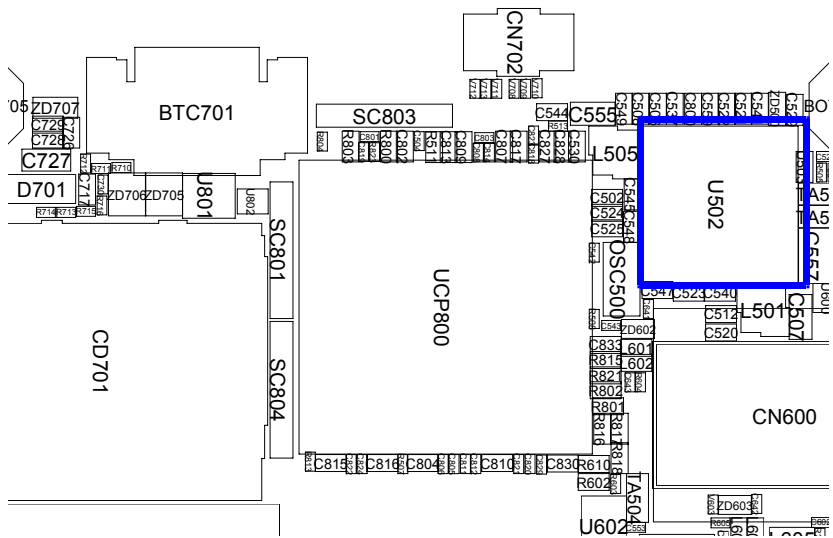
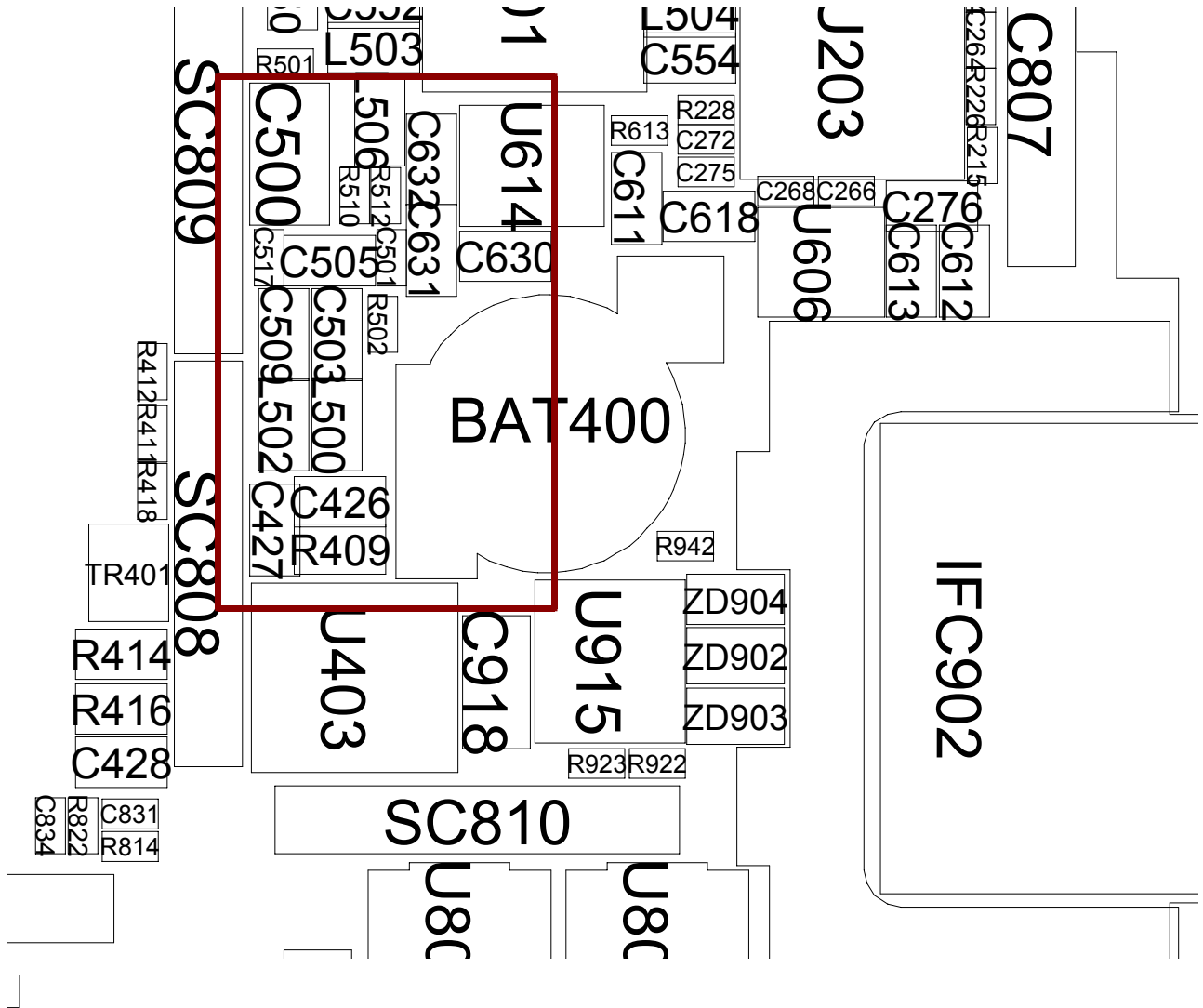


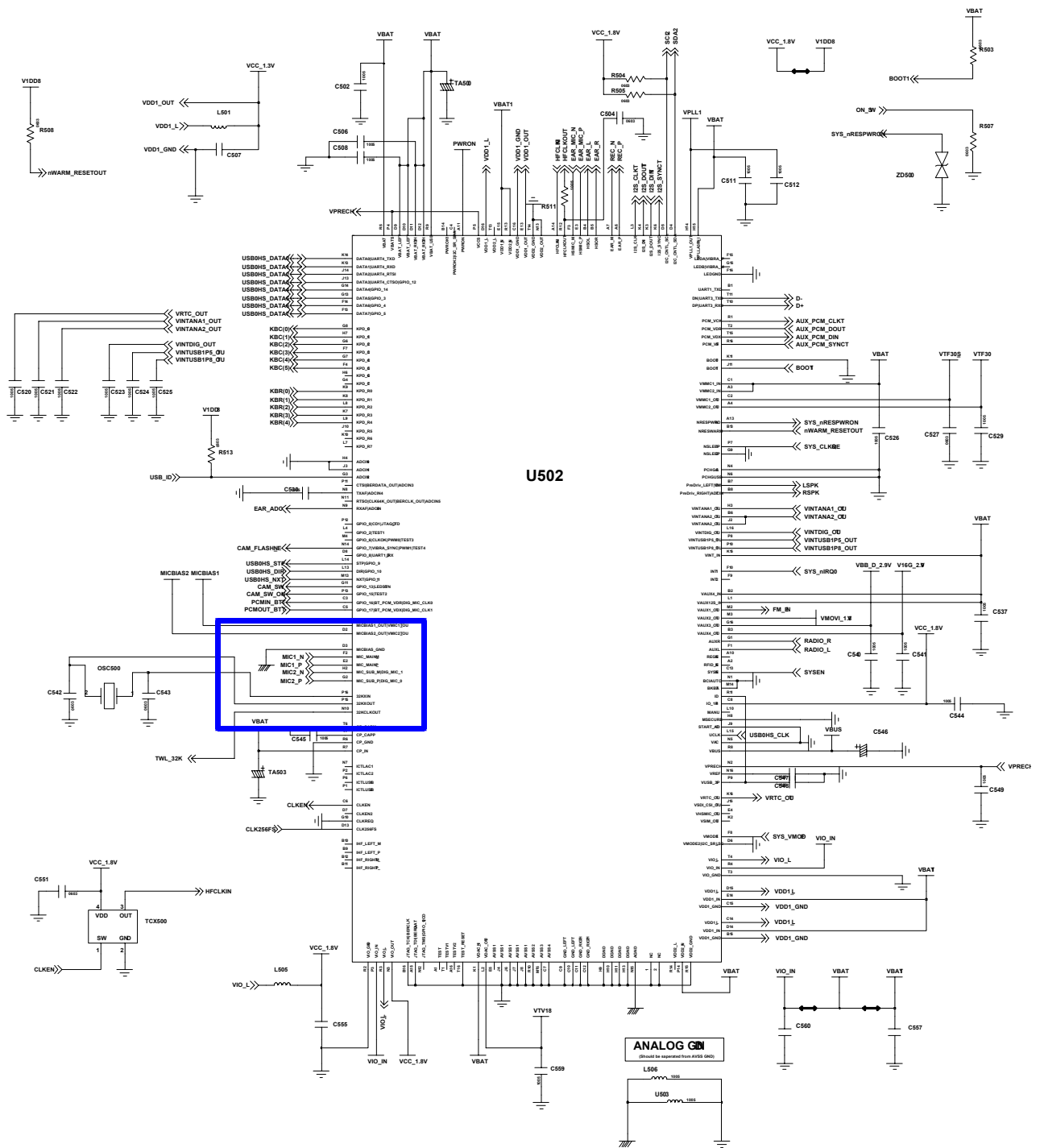


3) No Sound on main mic (calling)

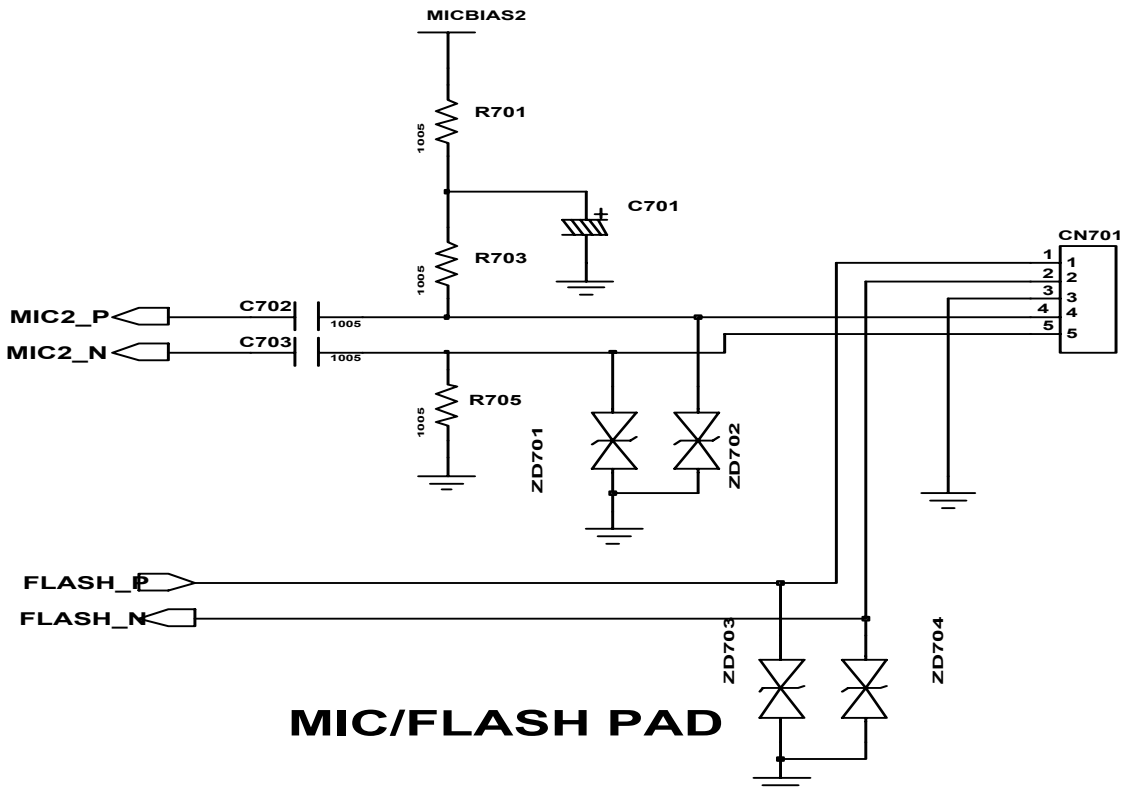
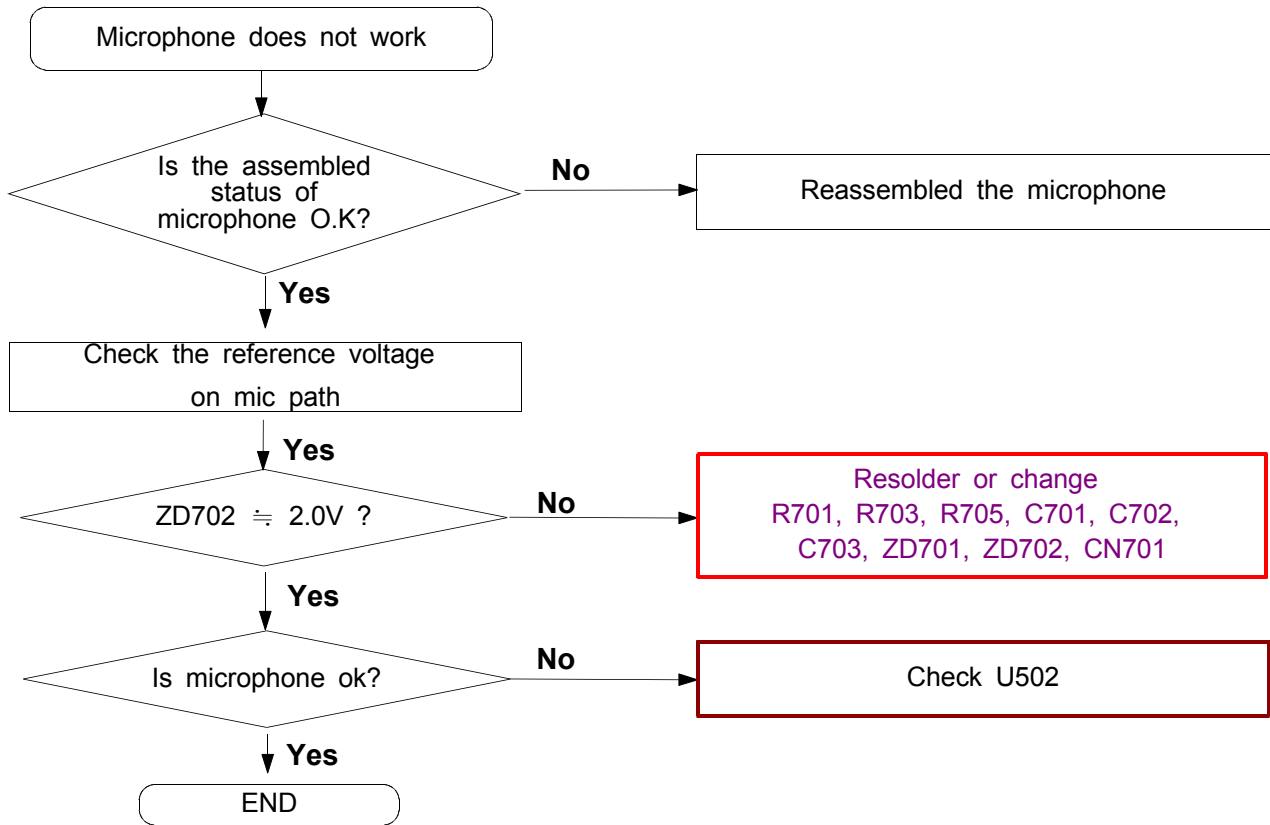


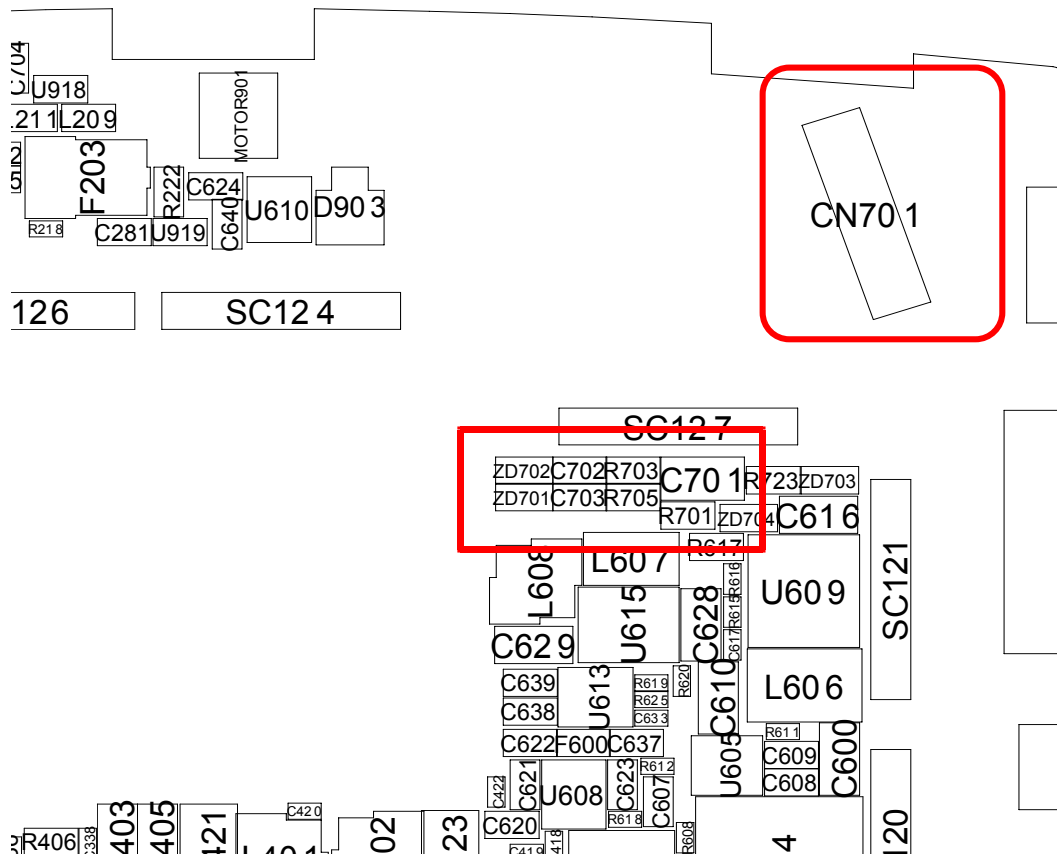




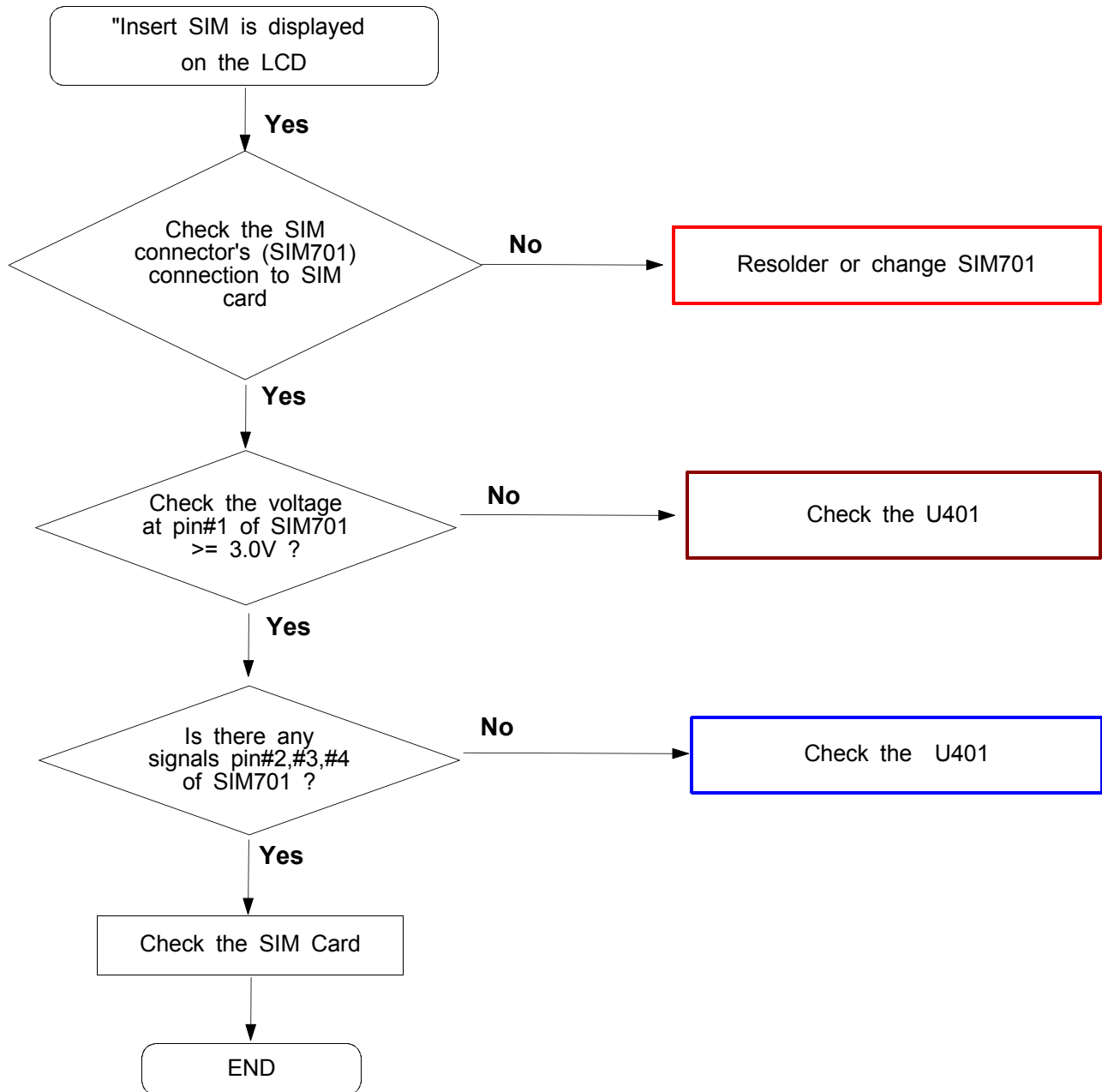


4) No Sound on main mic (camcorder)

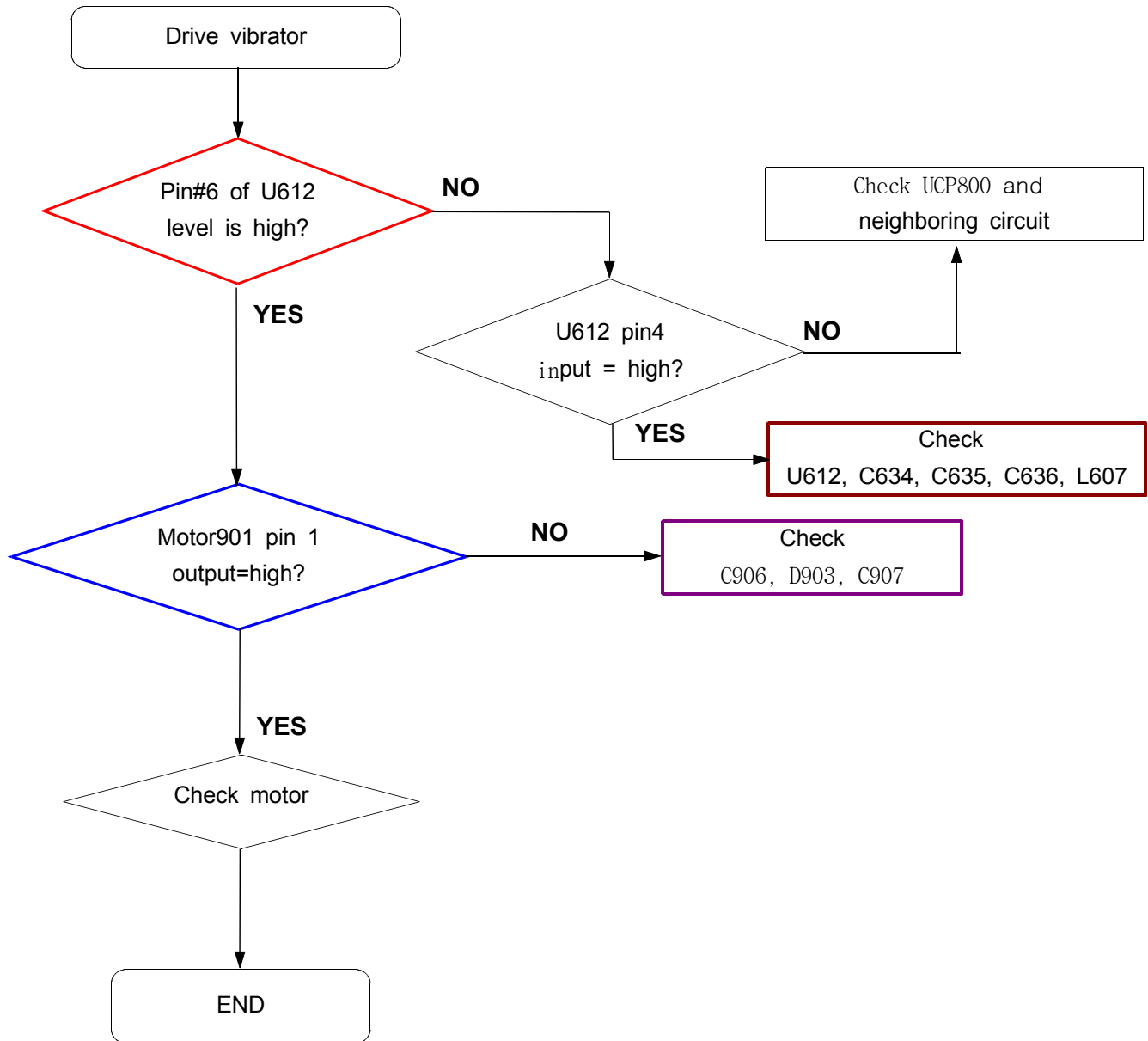


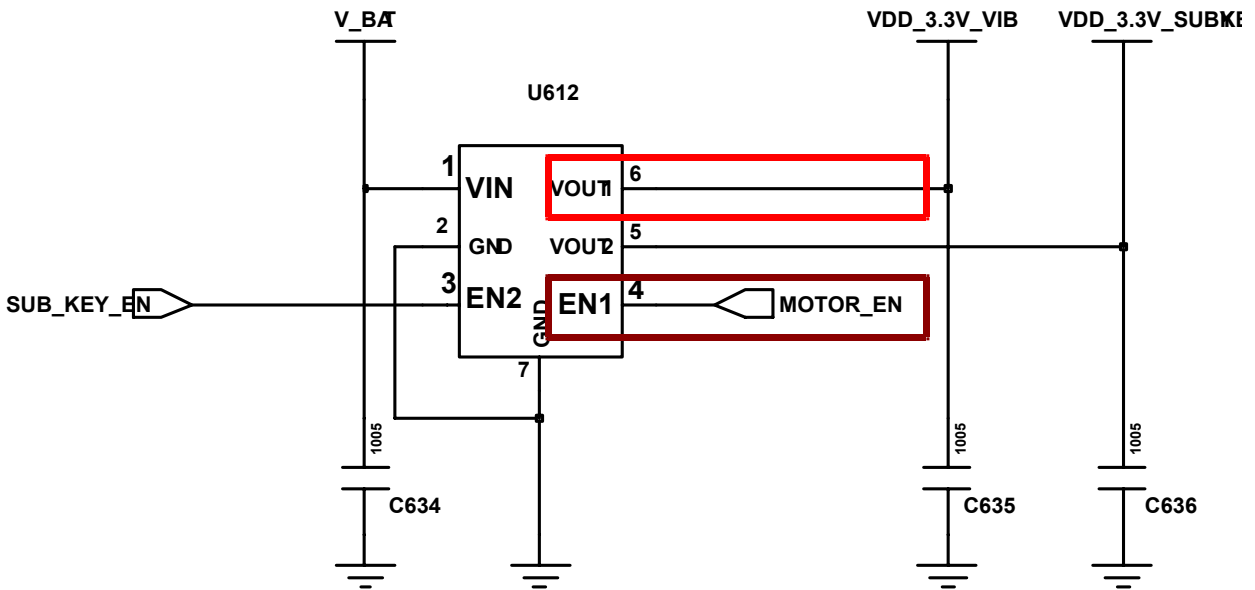


10-1-4 Sim Part

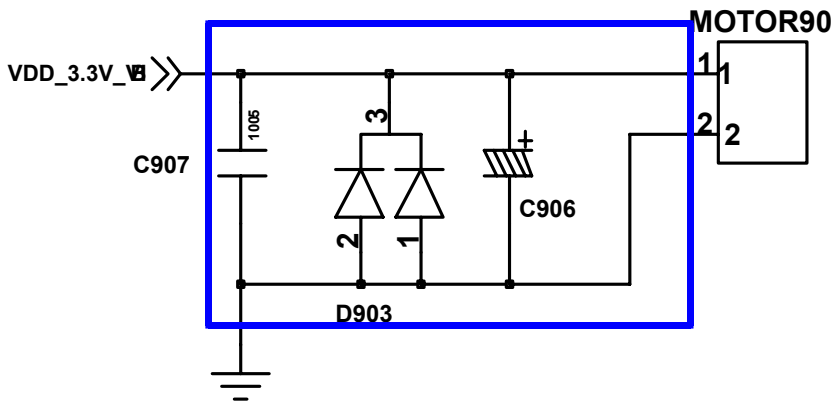


10-1-5 : Abnormal Vibrator operation



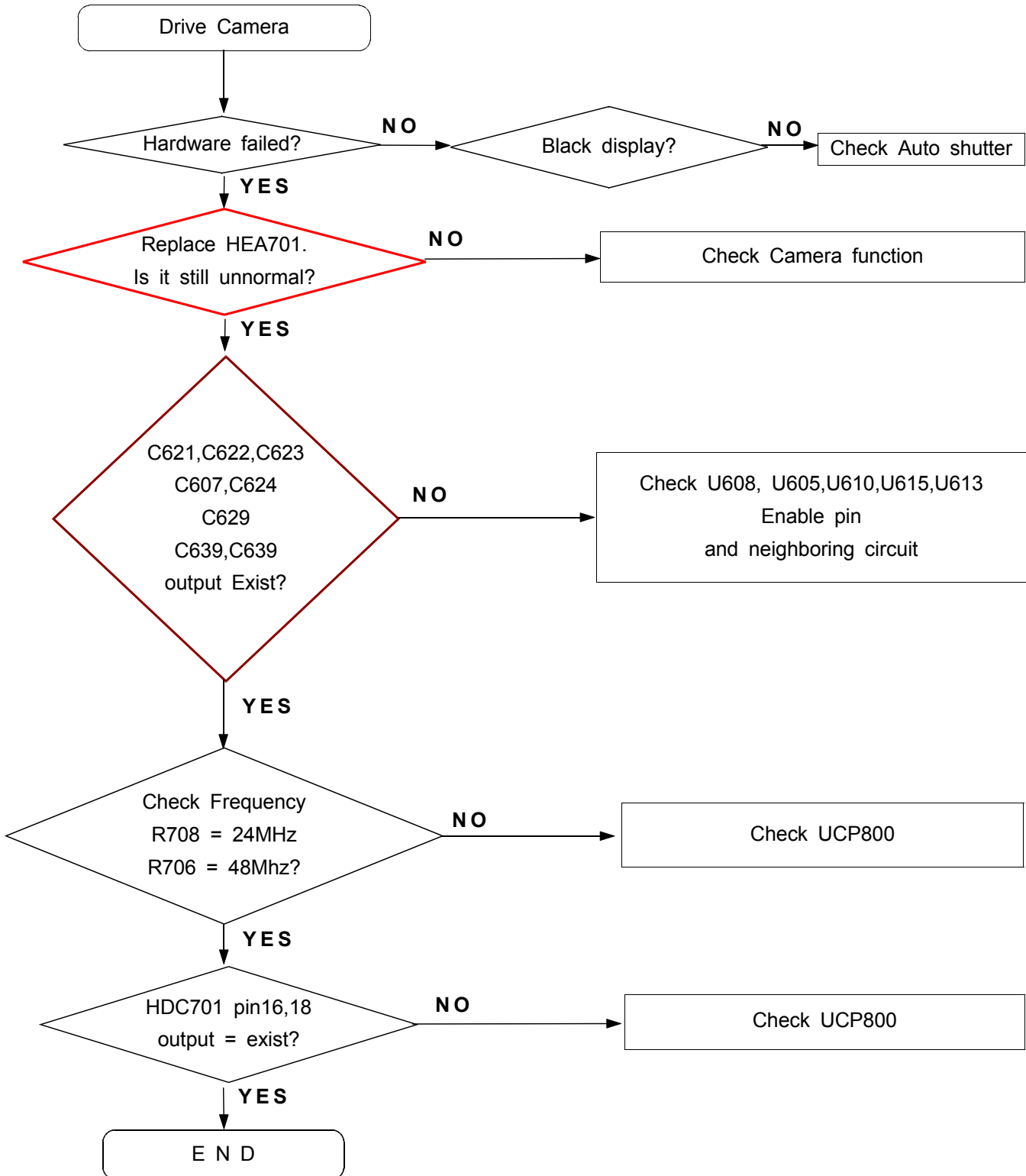


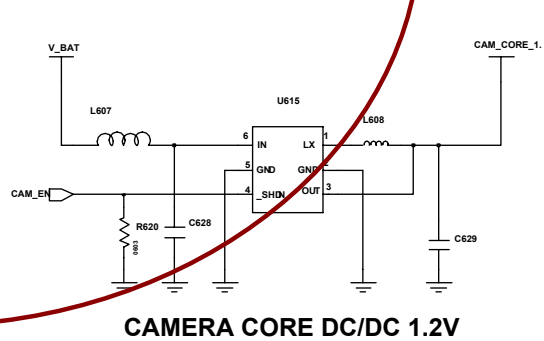
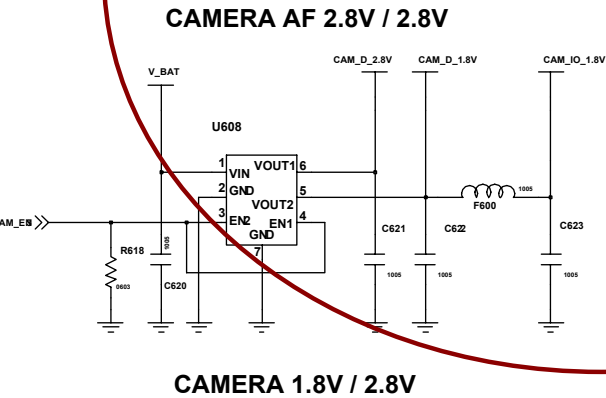
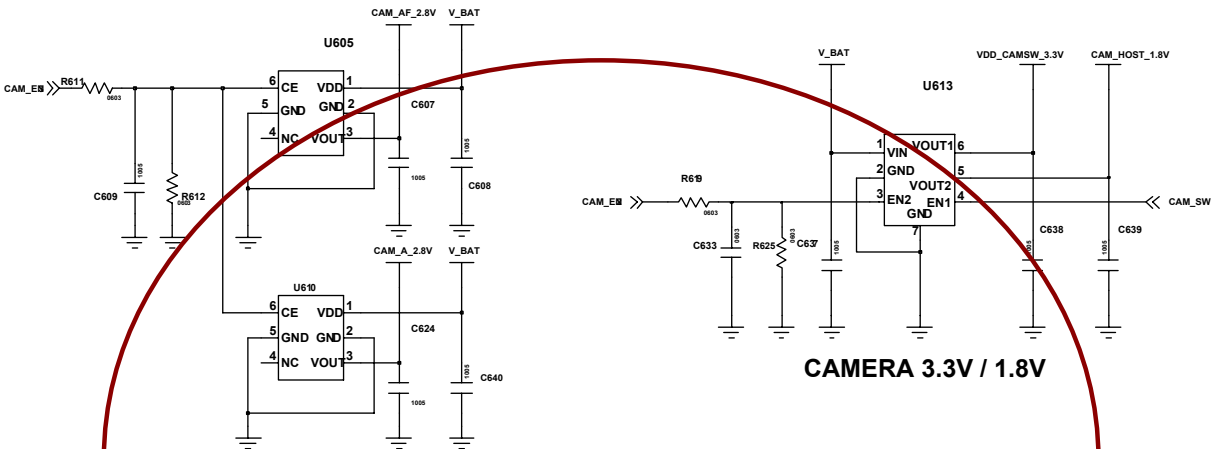
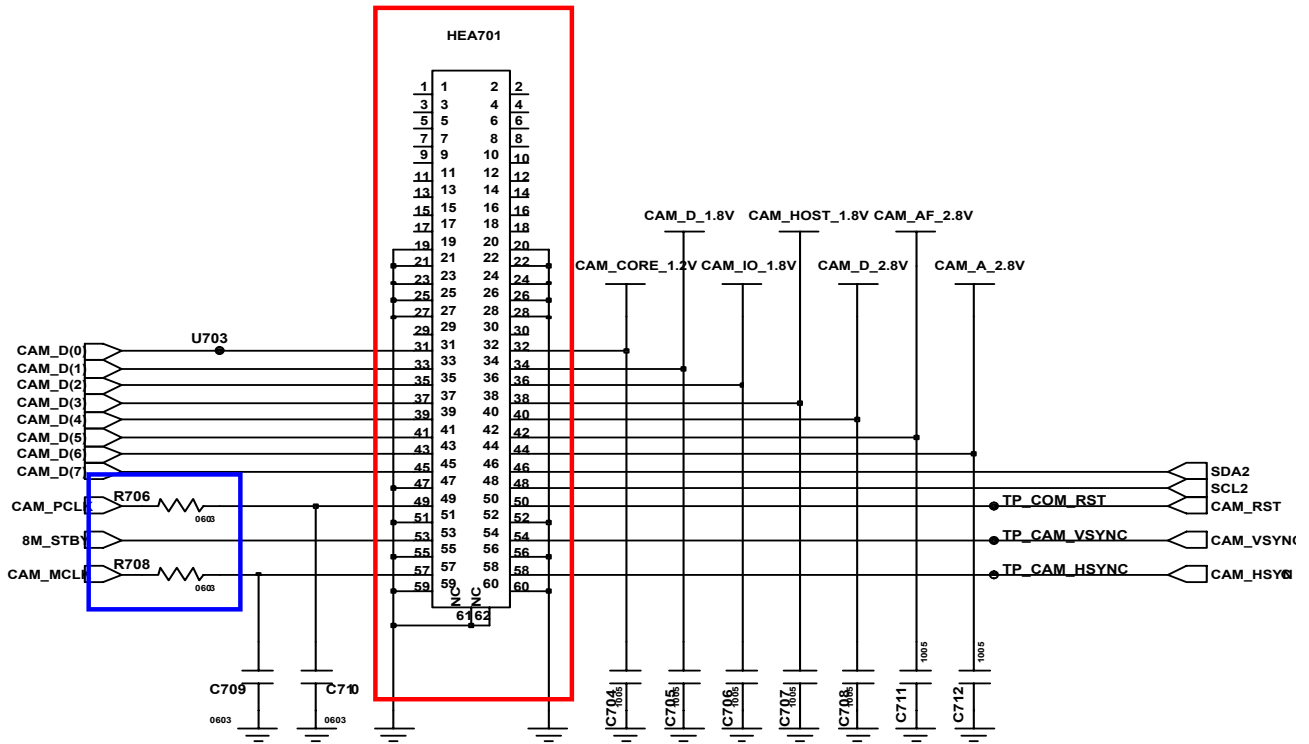
VIB 3.3V / SUBKEY 3.3V



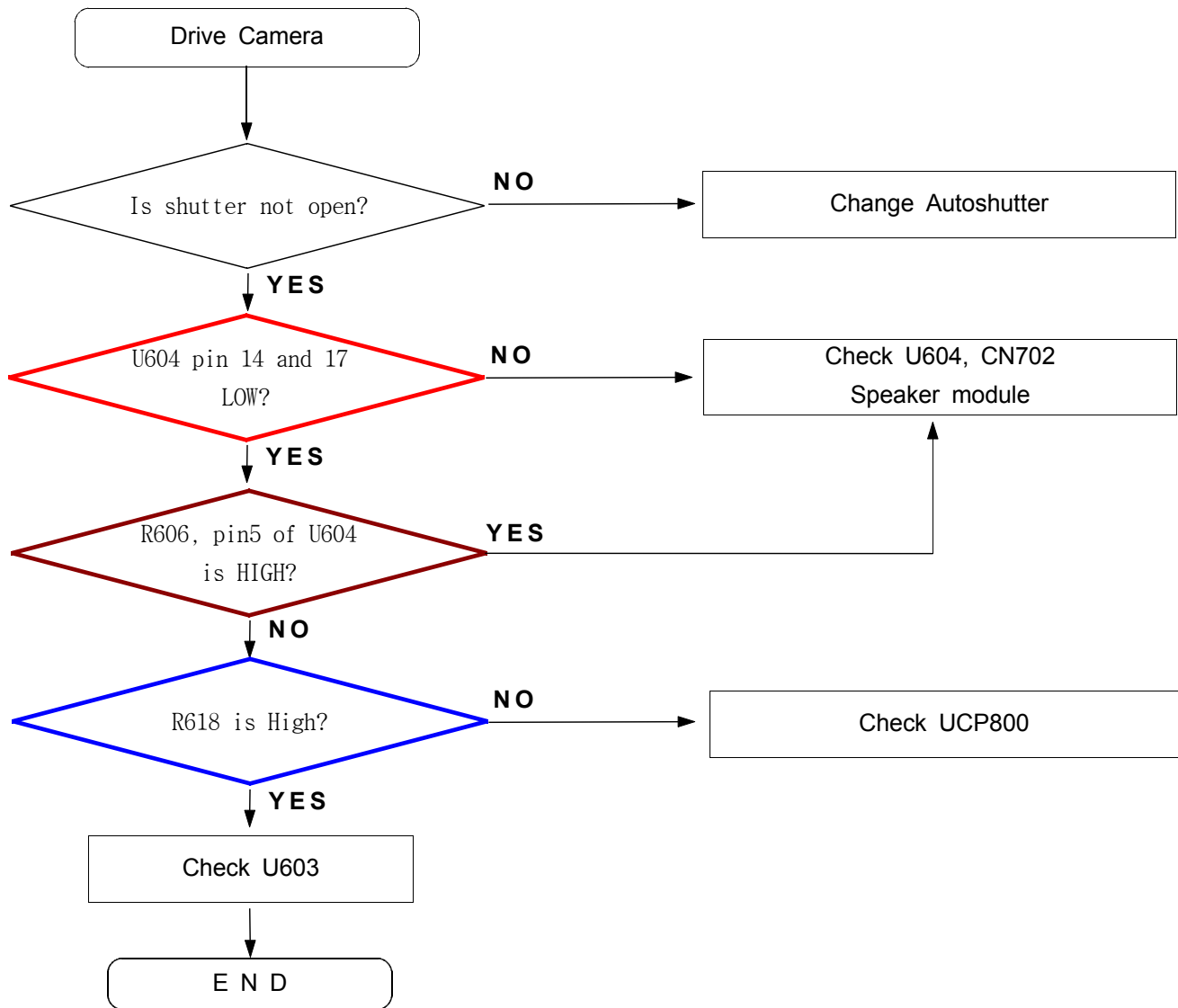
10-1-6 : Abnormal Camera operation

1) Camera operation

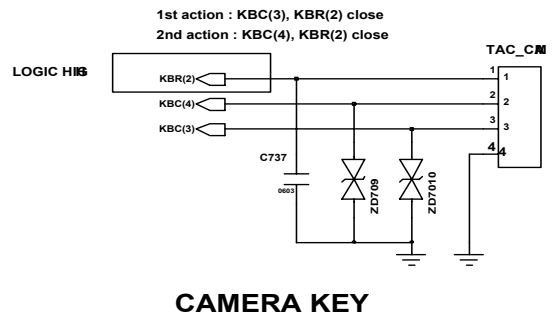
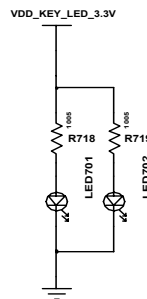
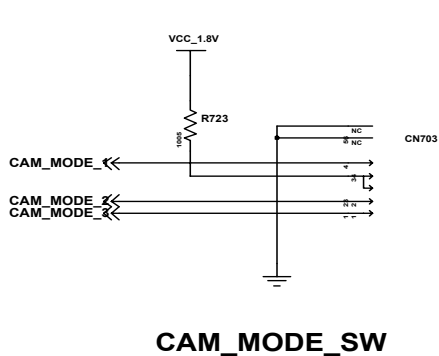
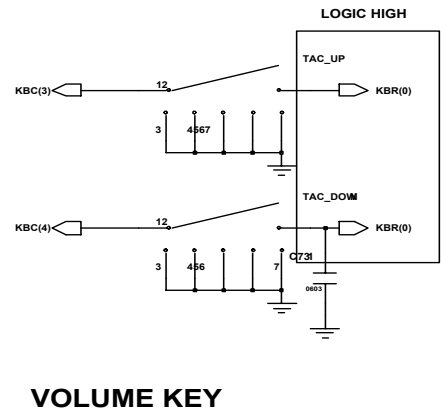
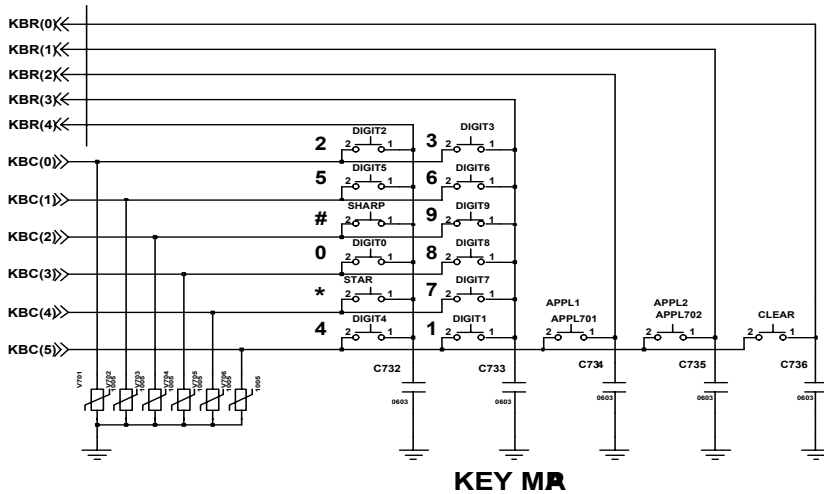
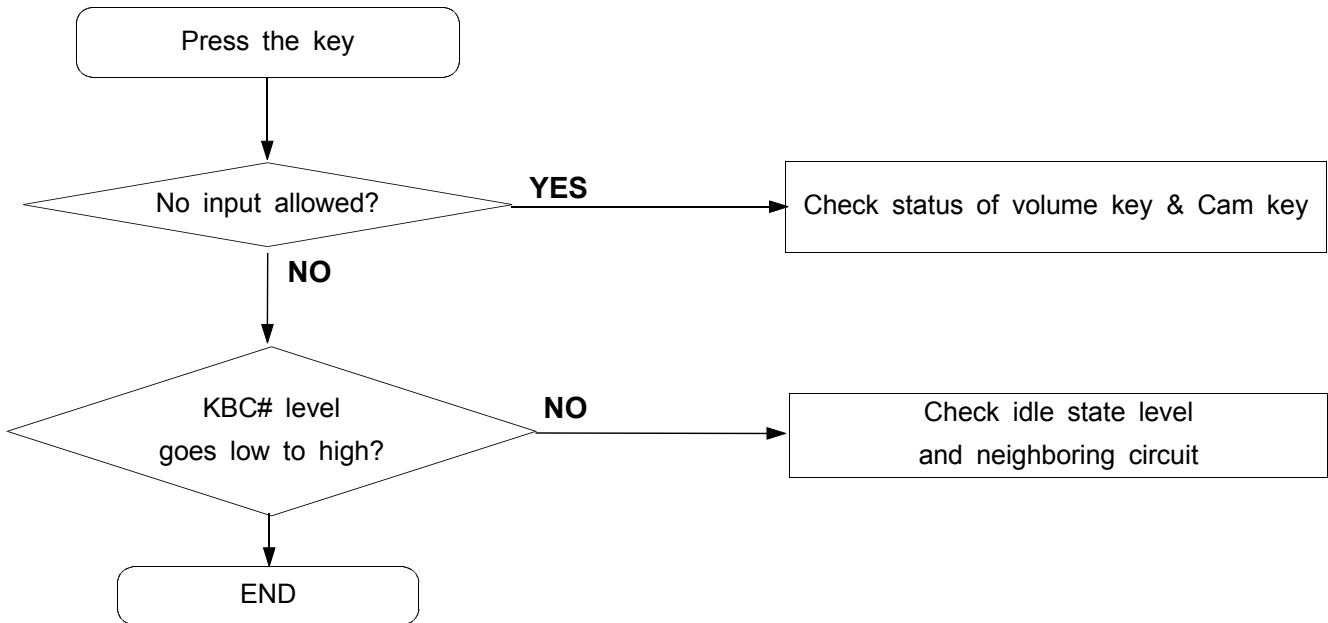




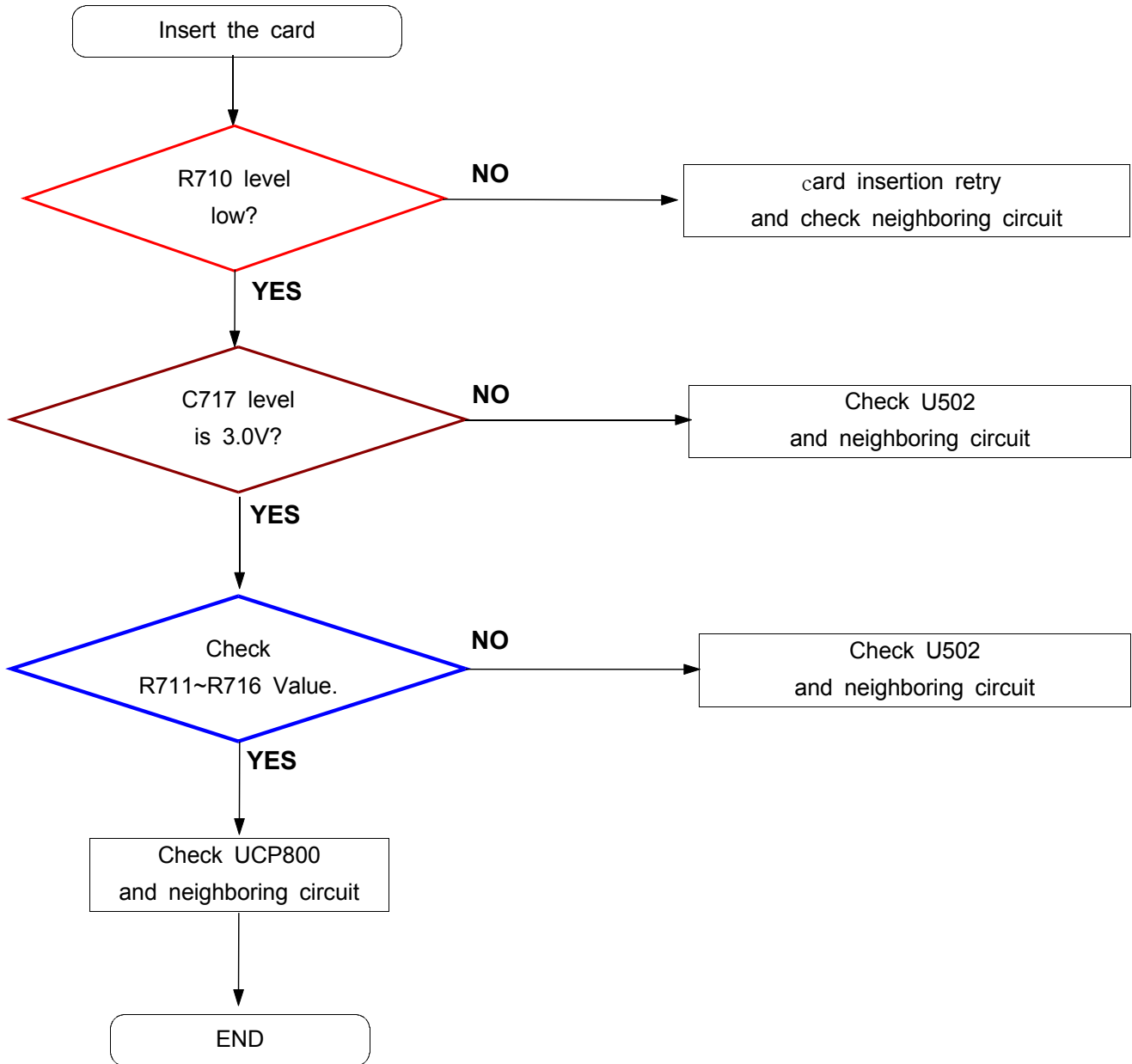
2)Abnormal Autoshutter operation

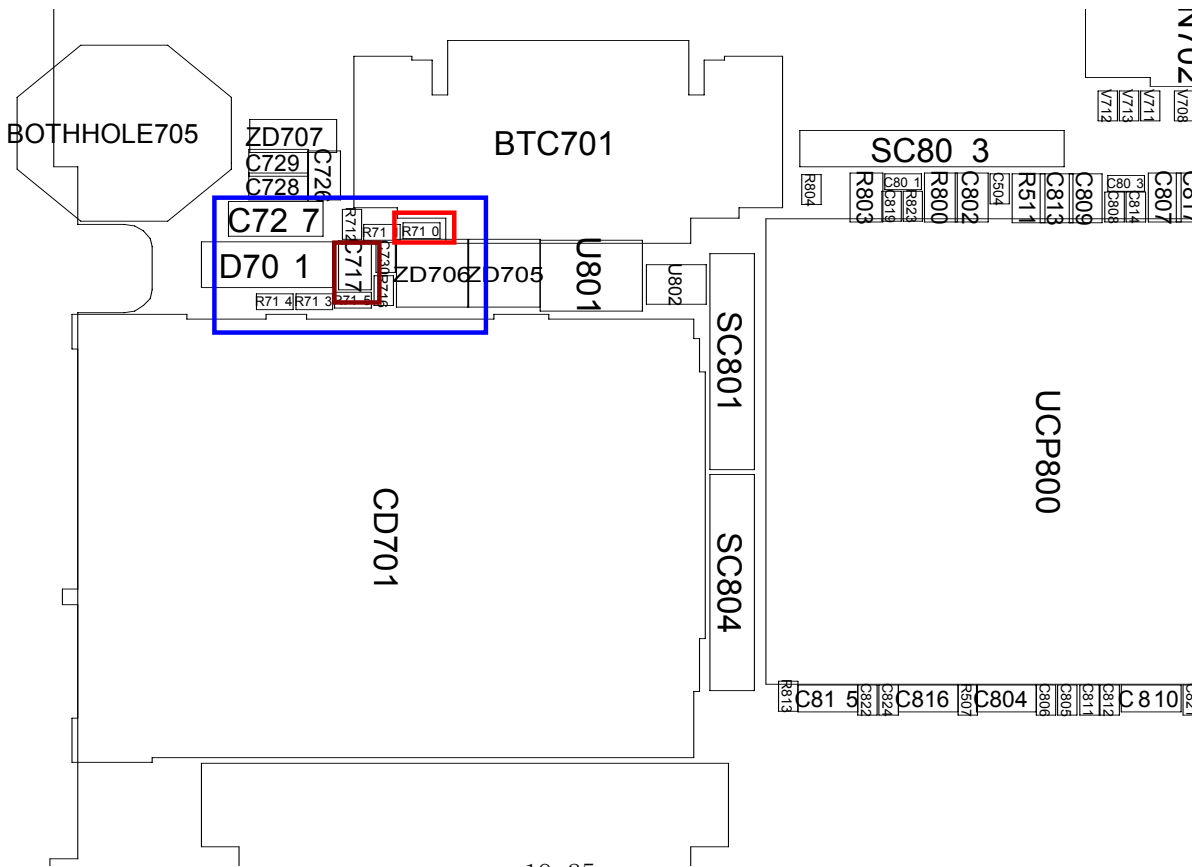
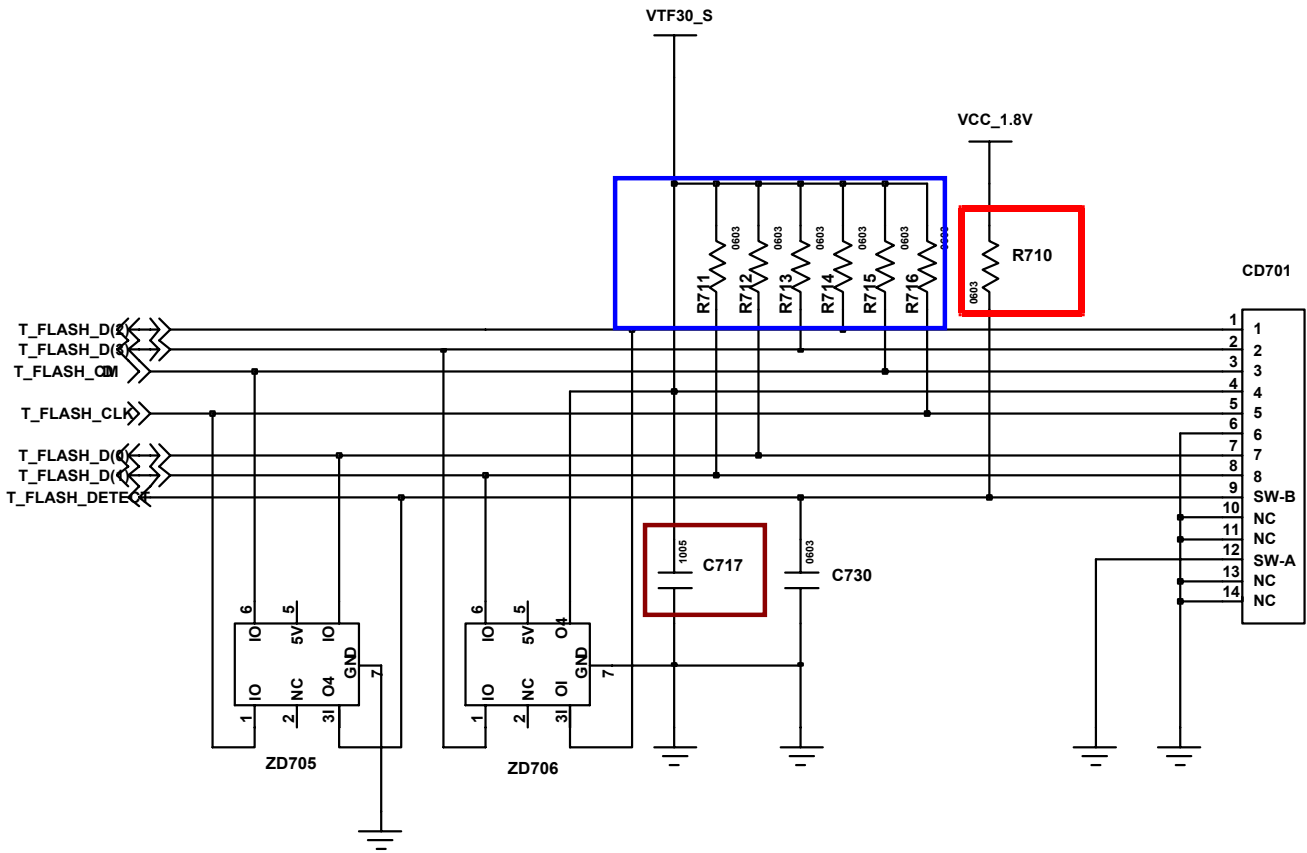


10-1-7 : Abnormal 3X5 KEY operation

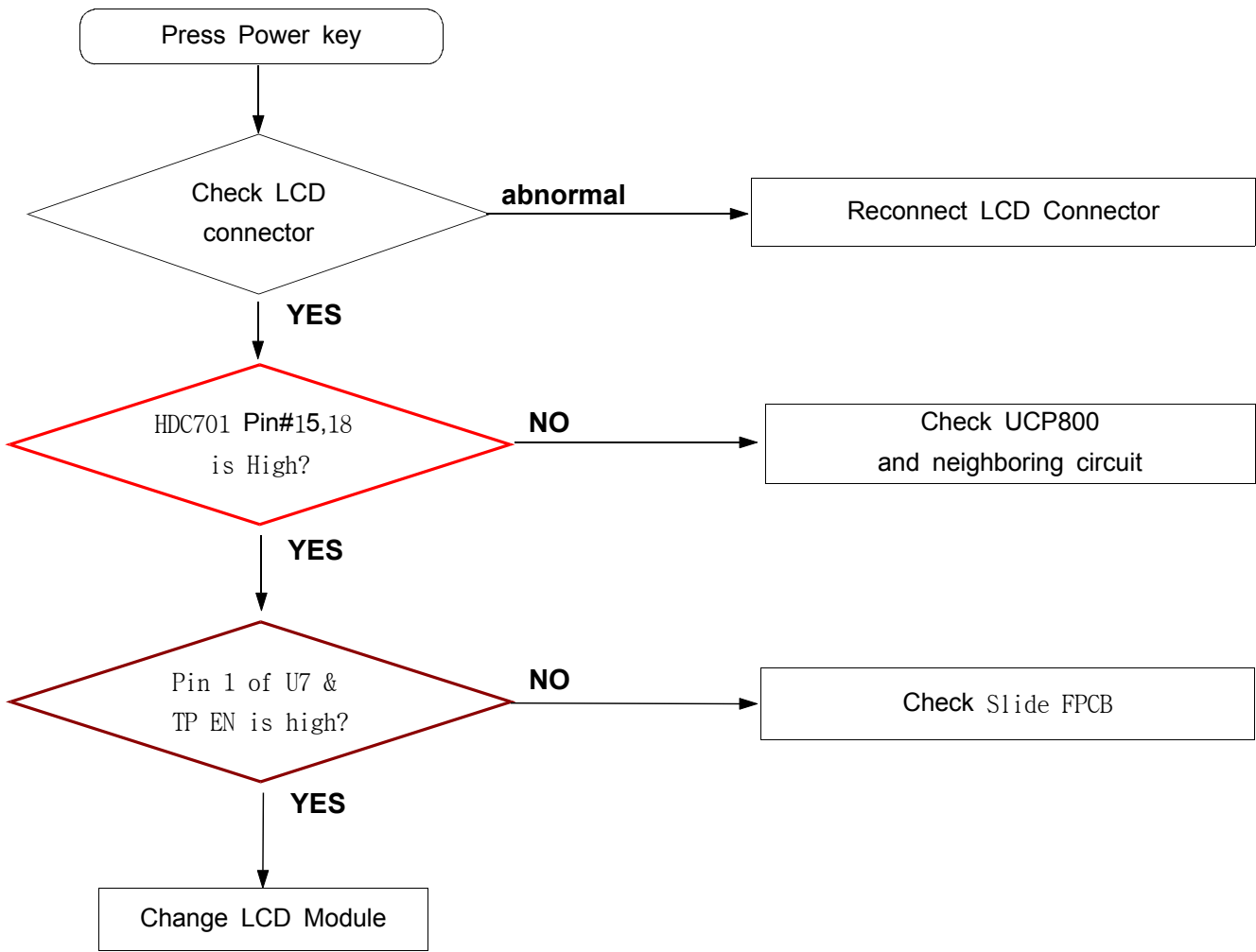


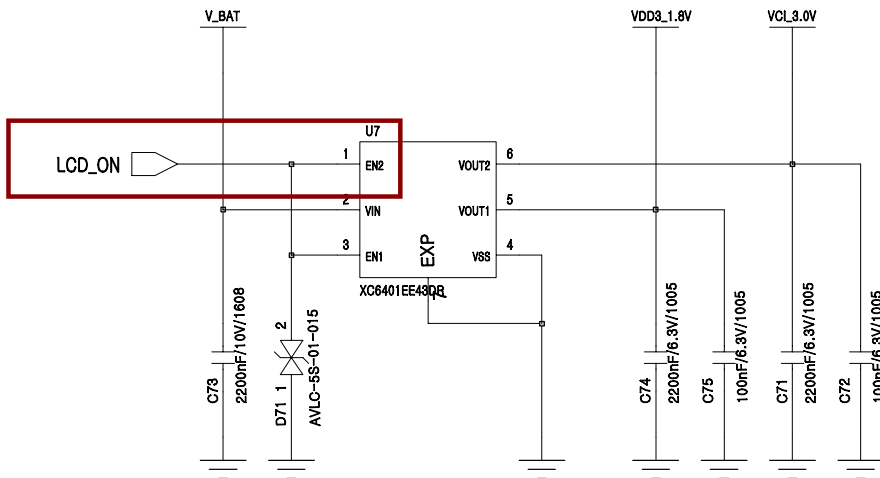
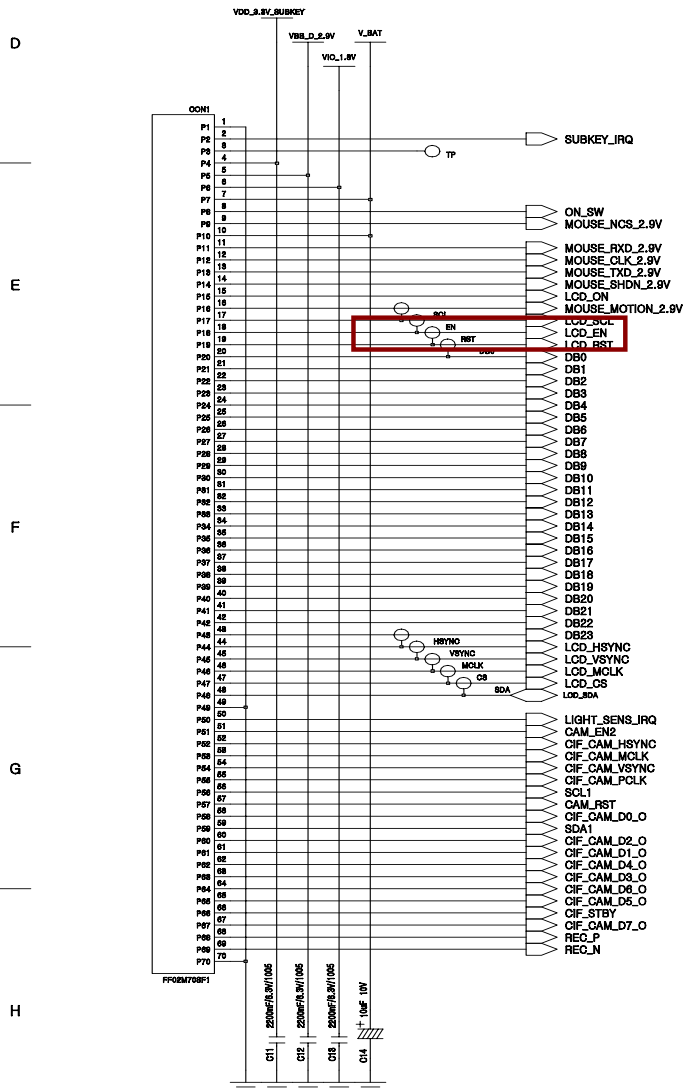
10-1-8 : Abnormal micro-SD operation

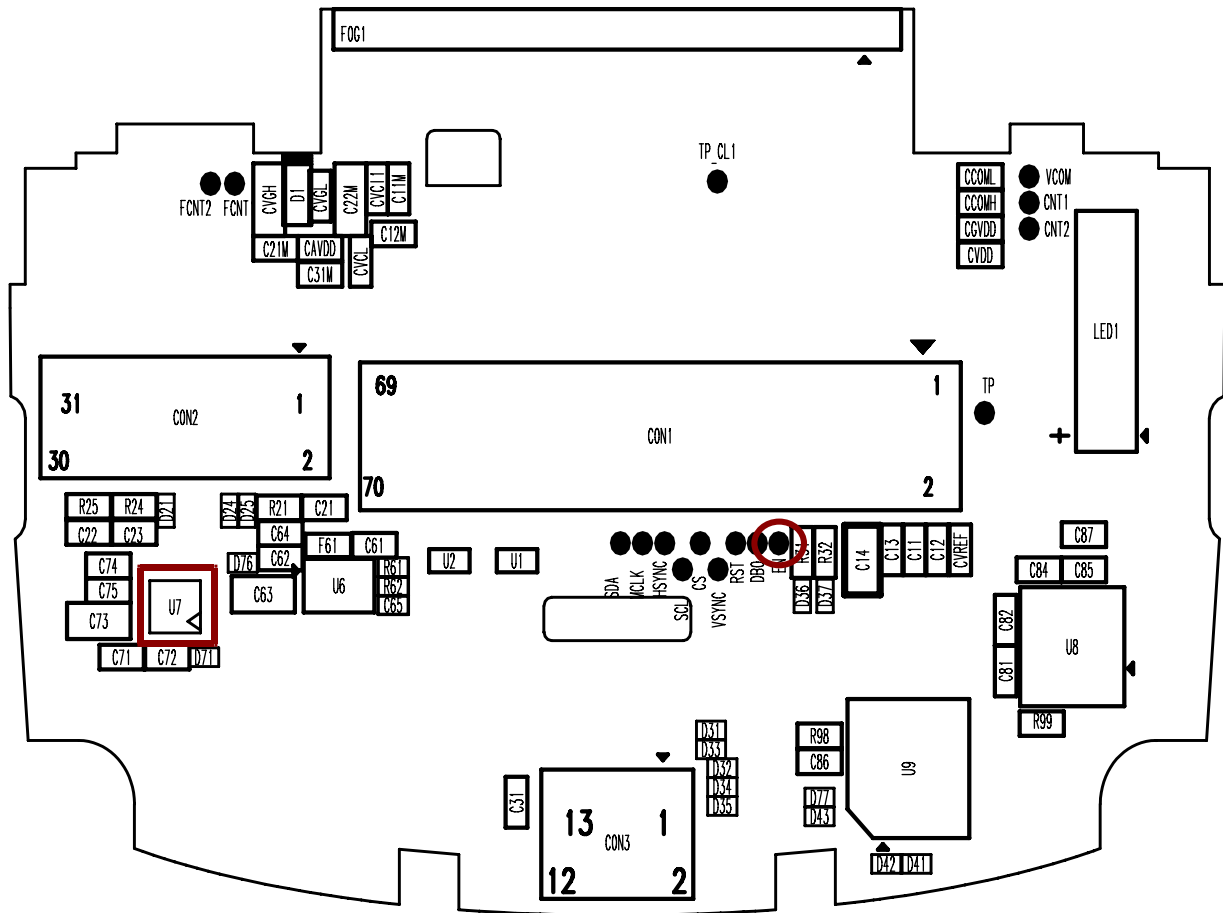




10-1-9 : Abnormal LCD operation

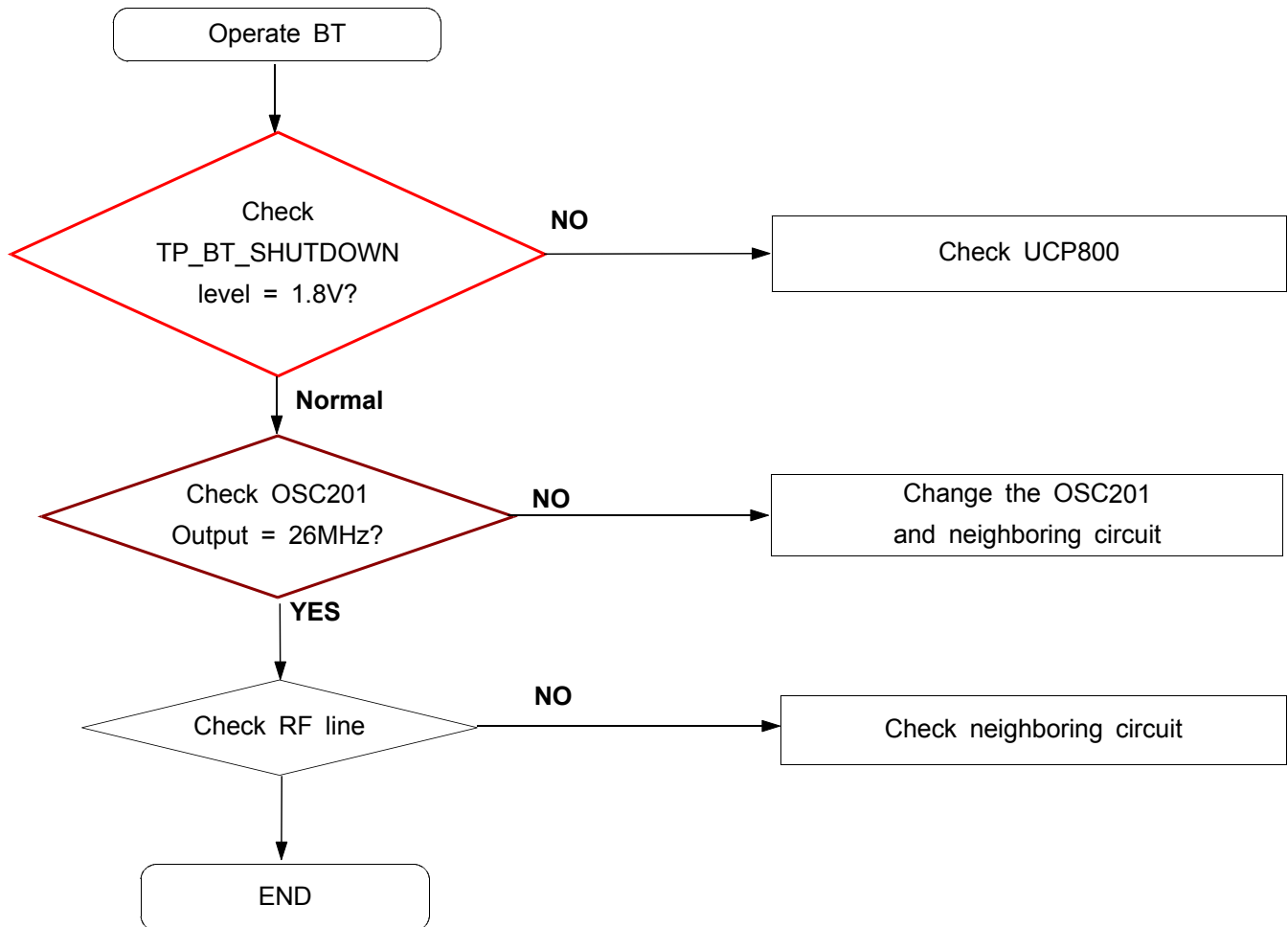




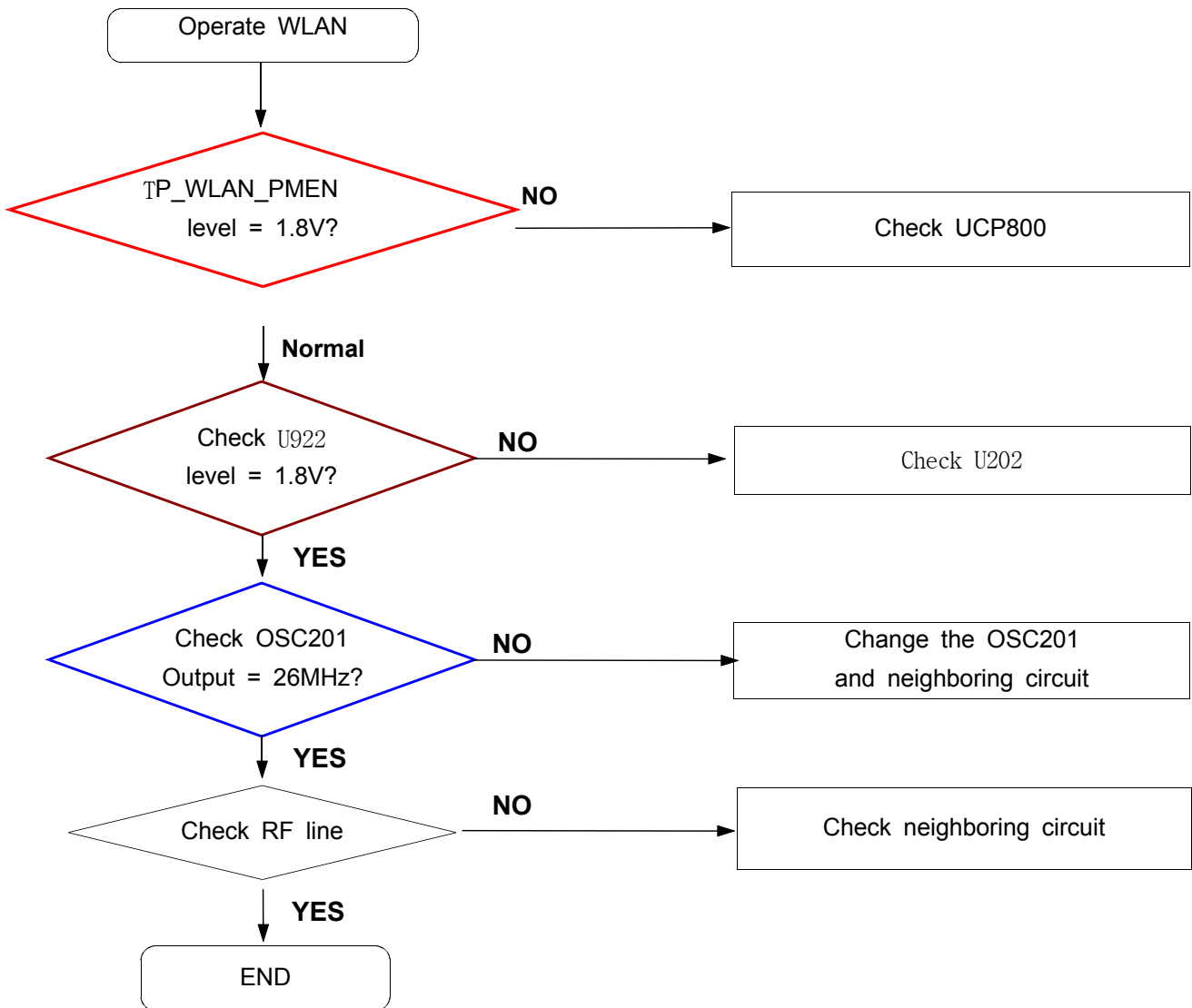


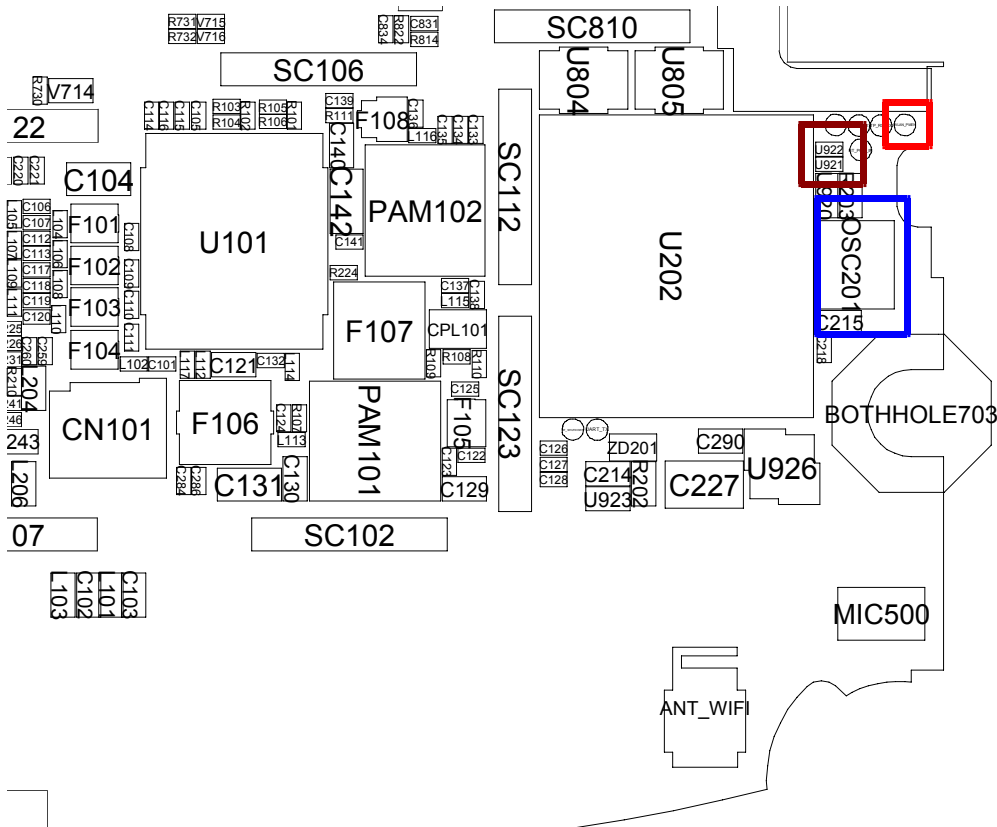
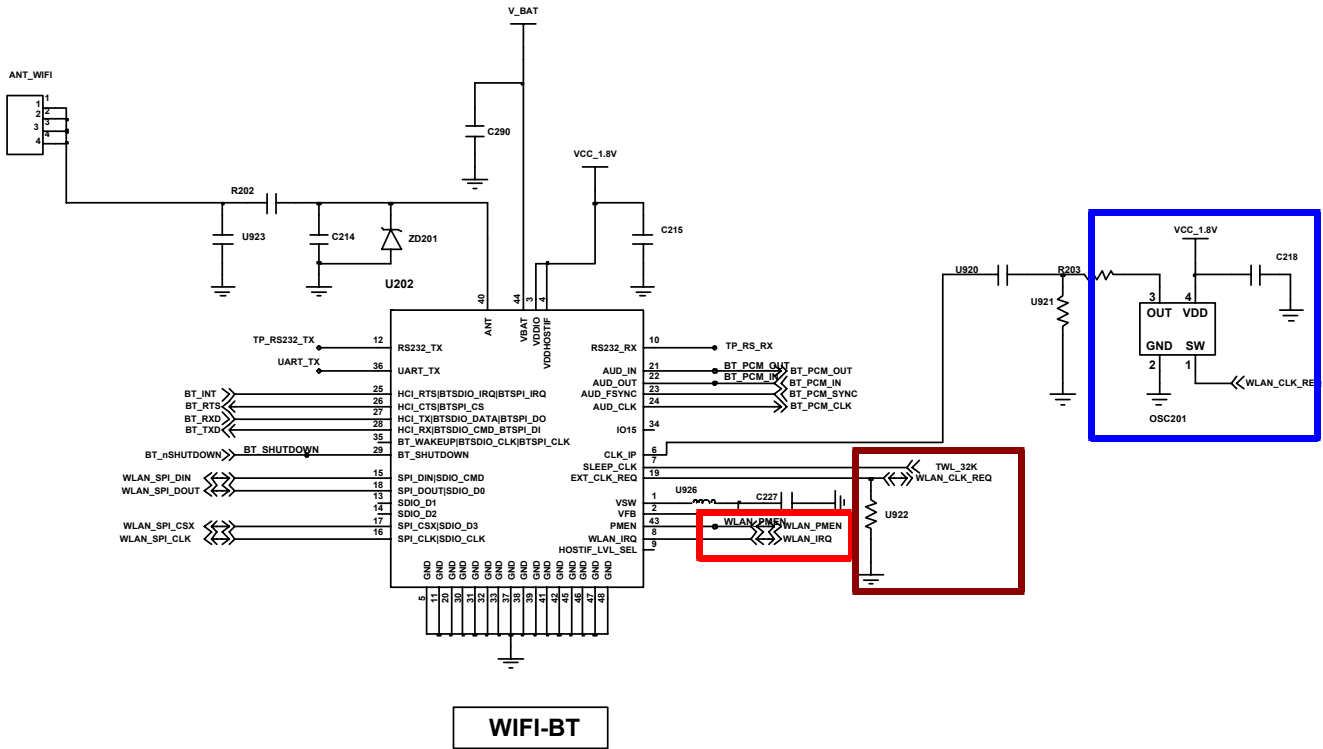
10-2. RF Part

10-2-1. Bluetooth Tx/Rx

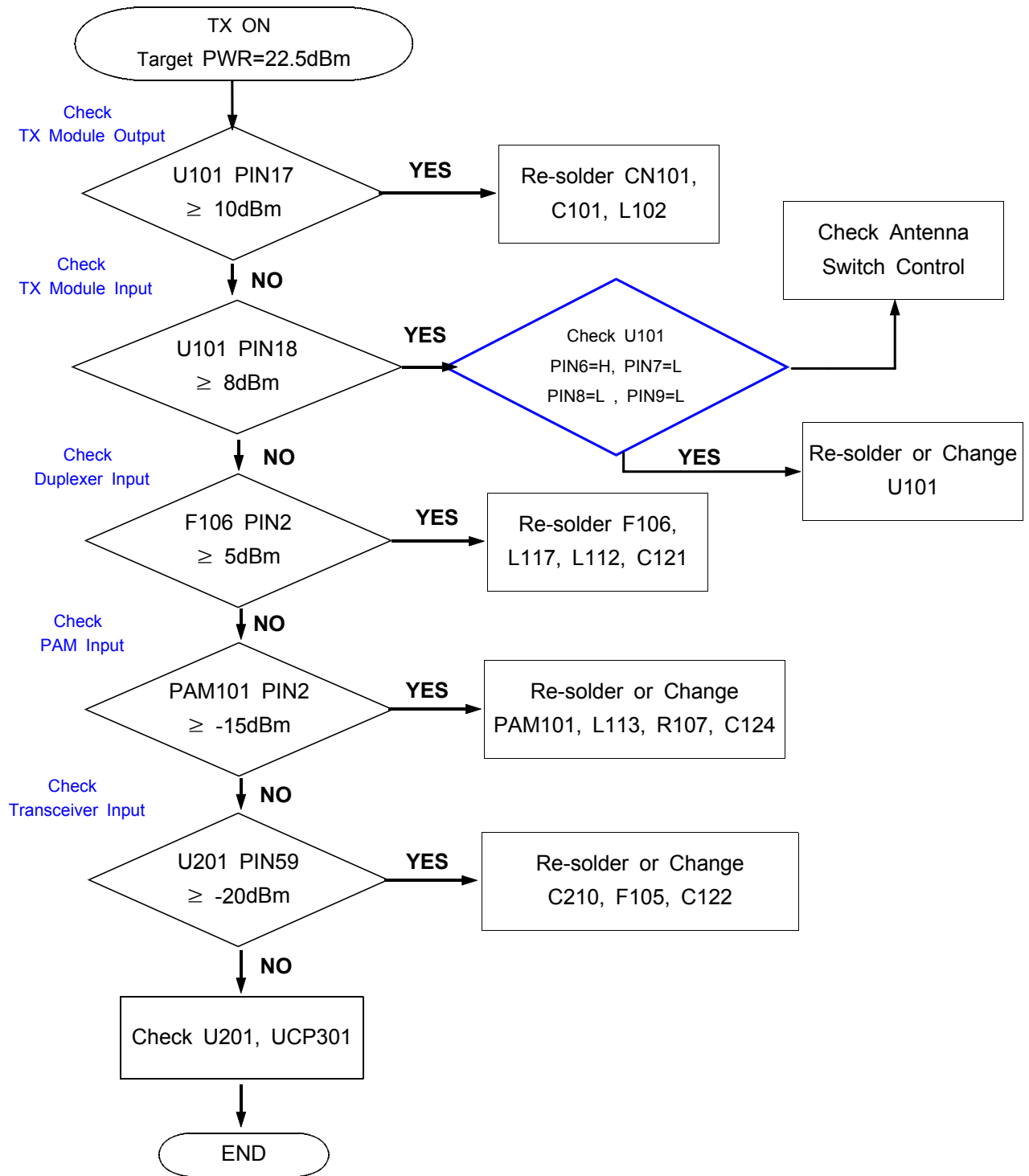


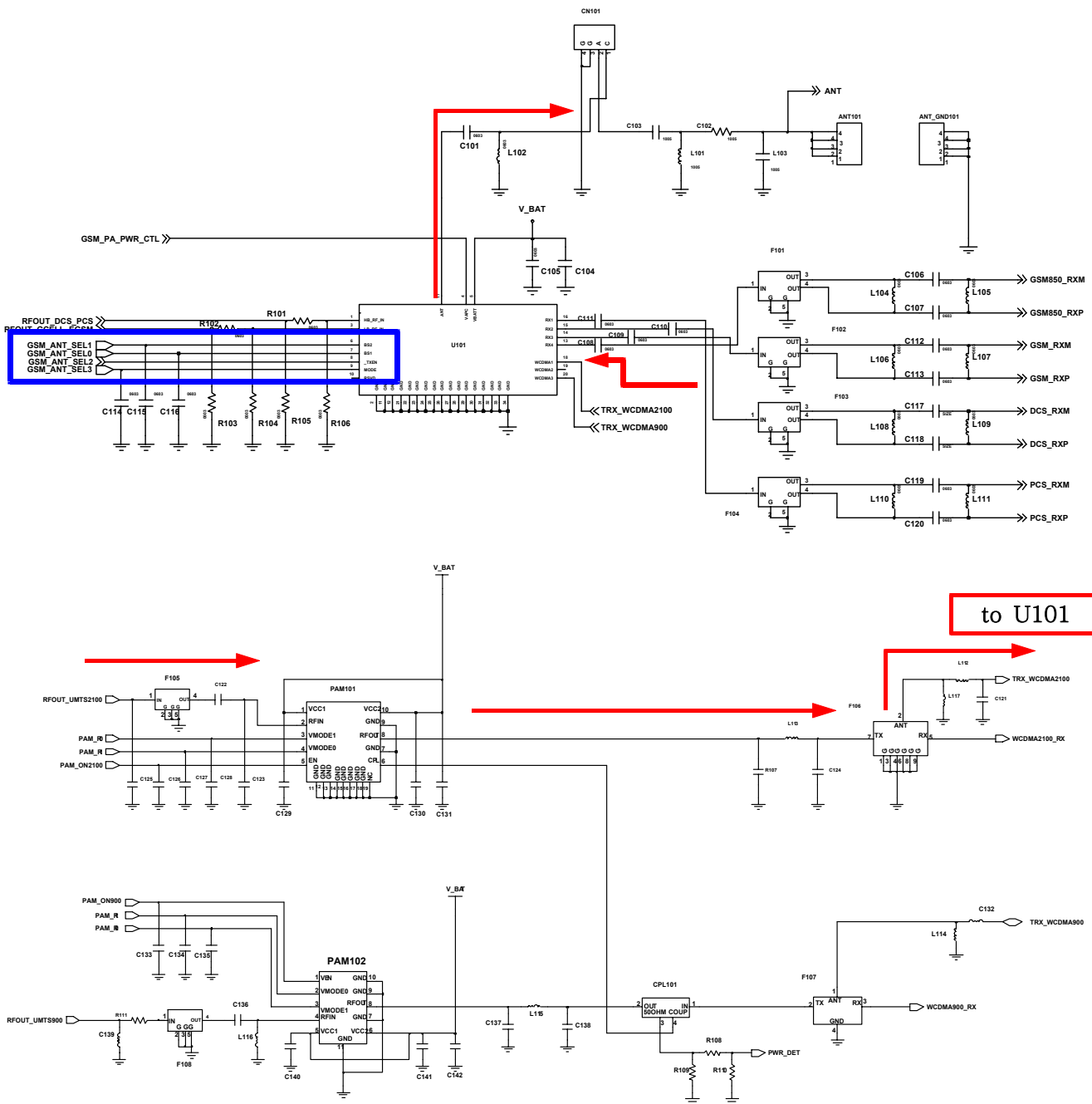
10-2-2 Wlan Tx/Rx



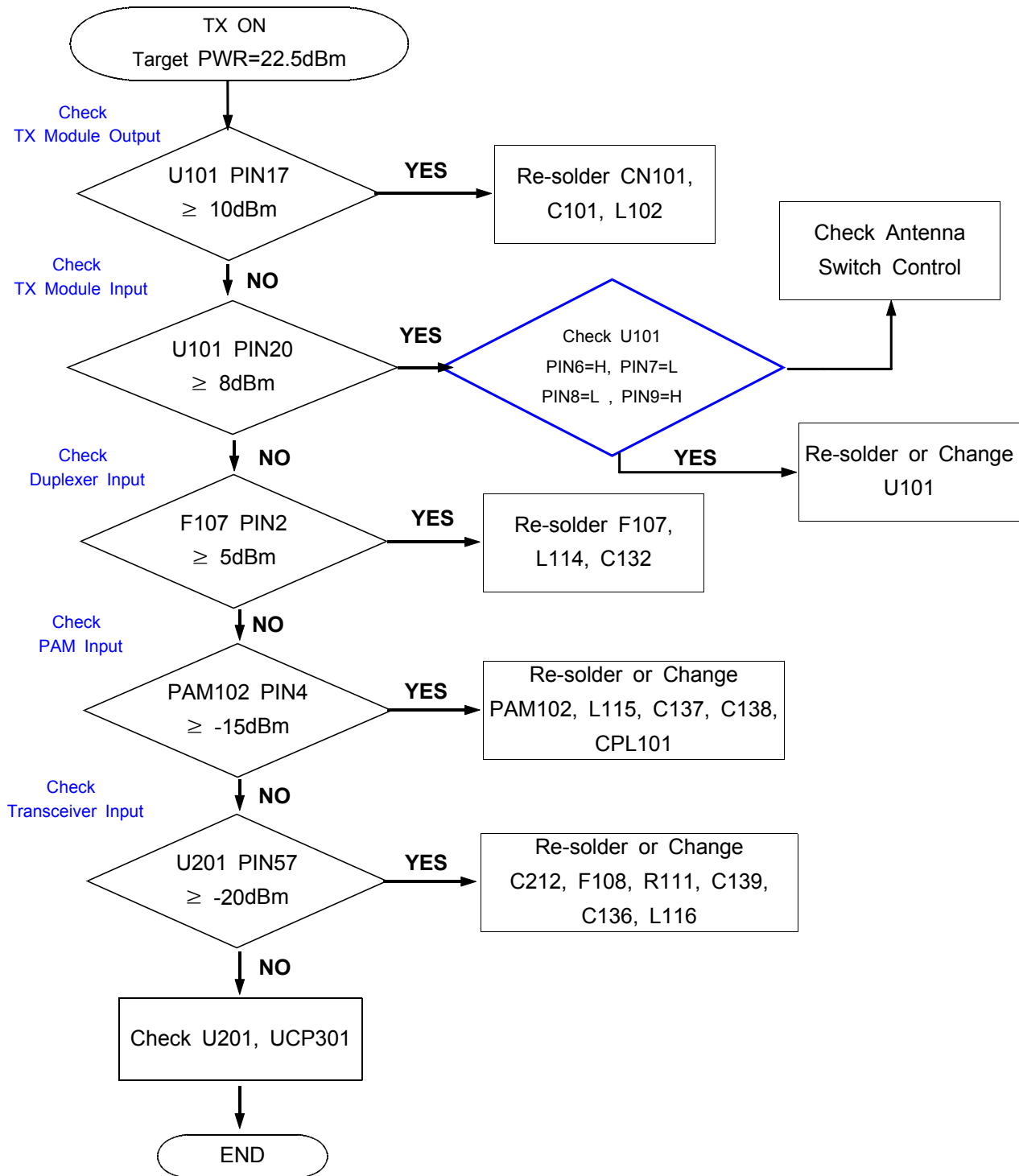


10-2-3. WCDMA2100 TX

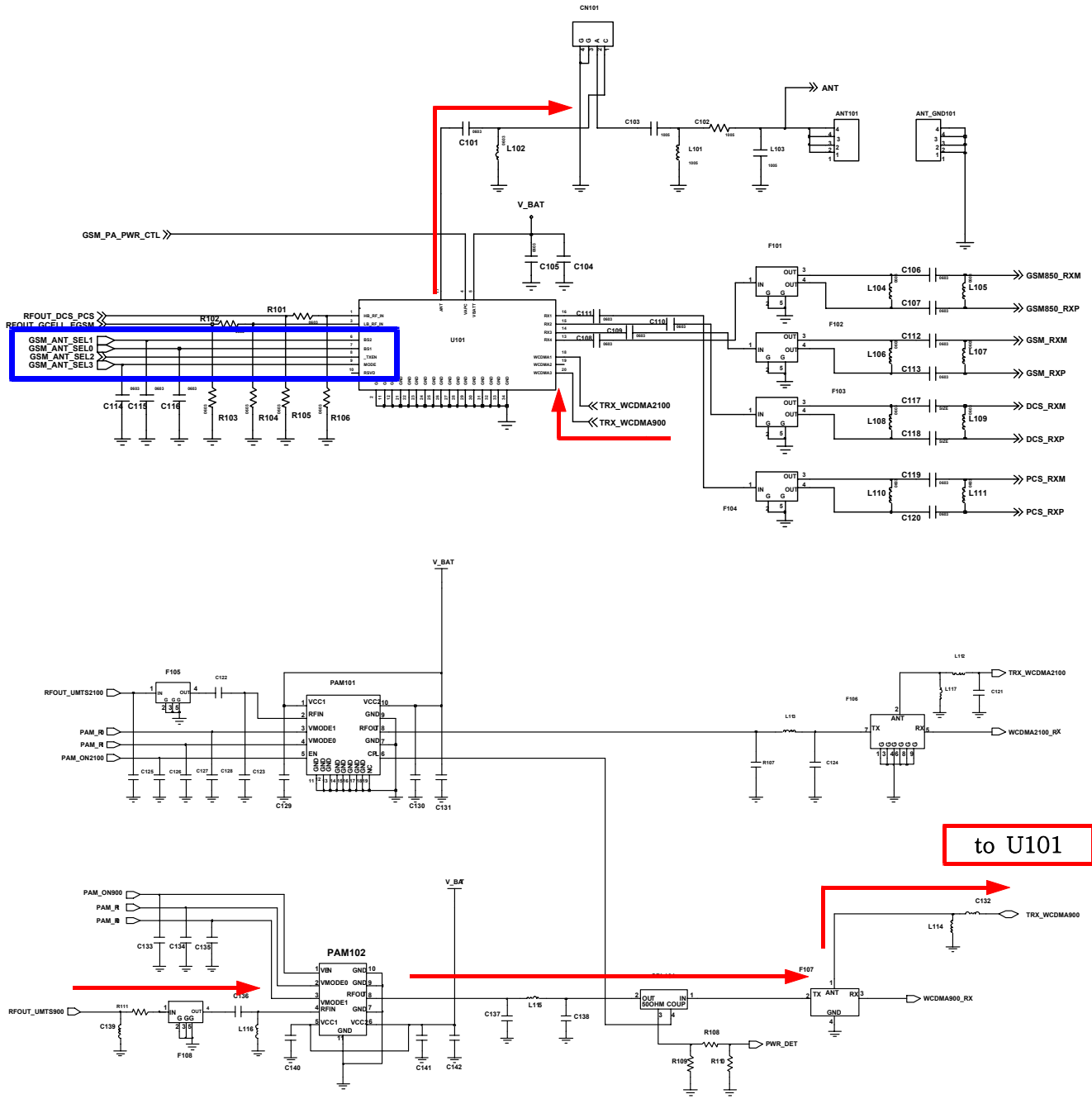




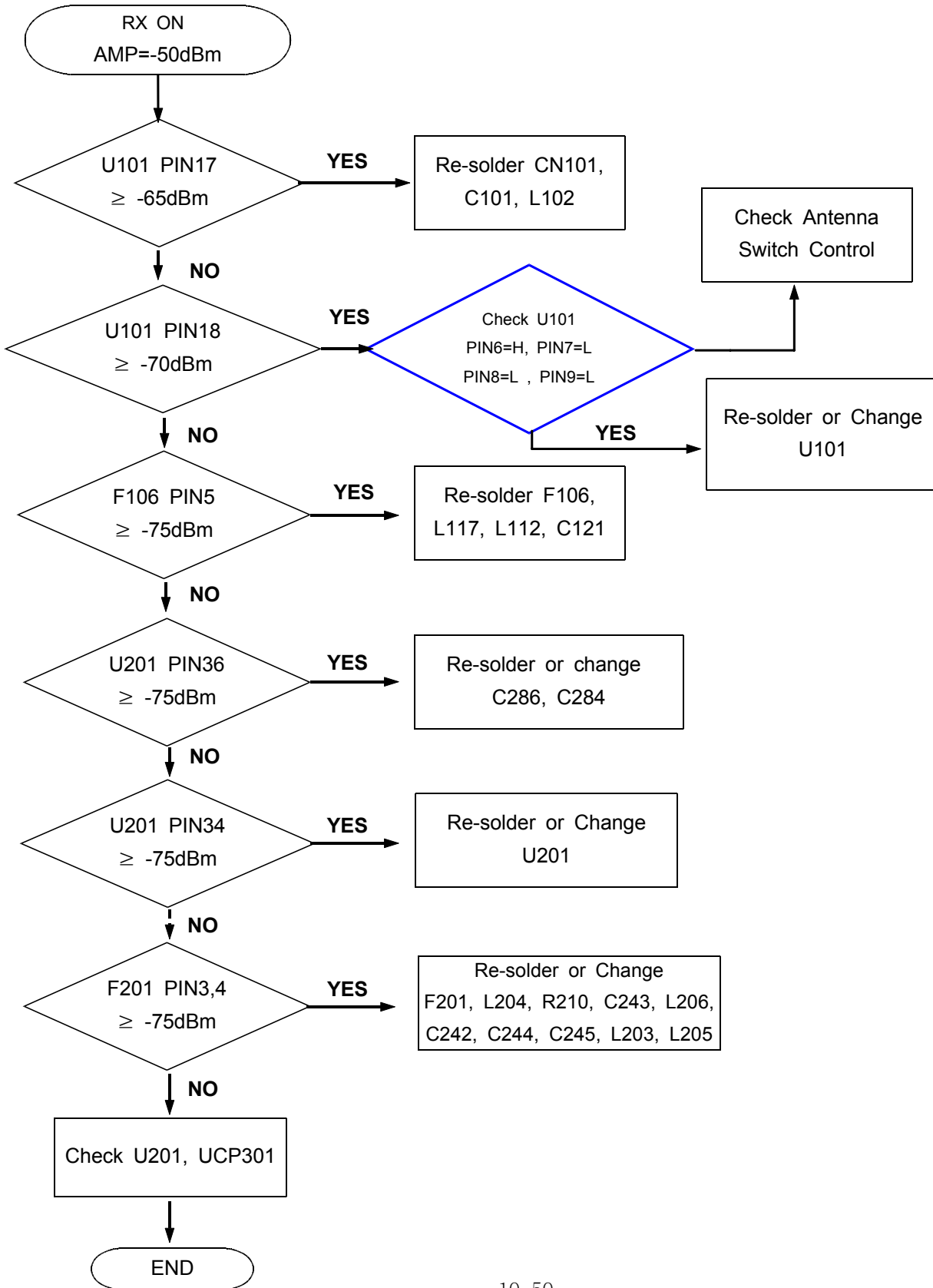
10-2-4. WCDMA900 Tx

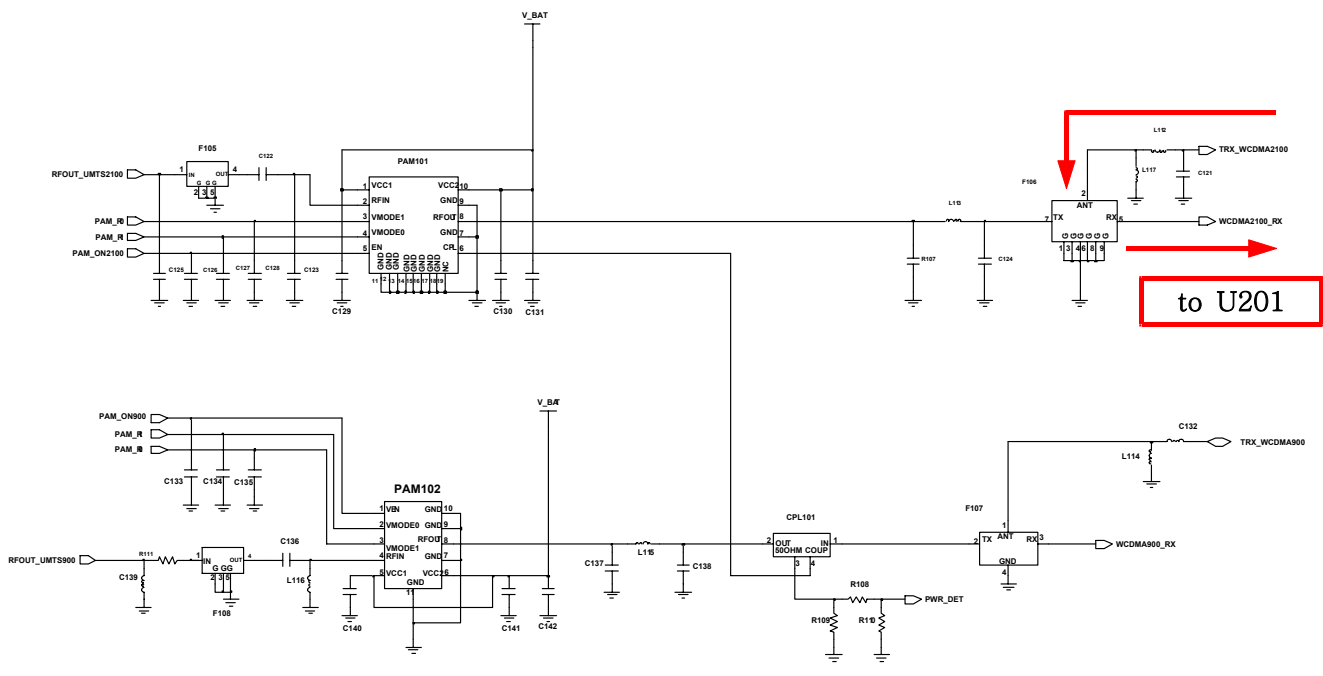
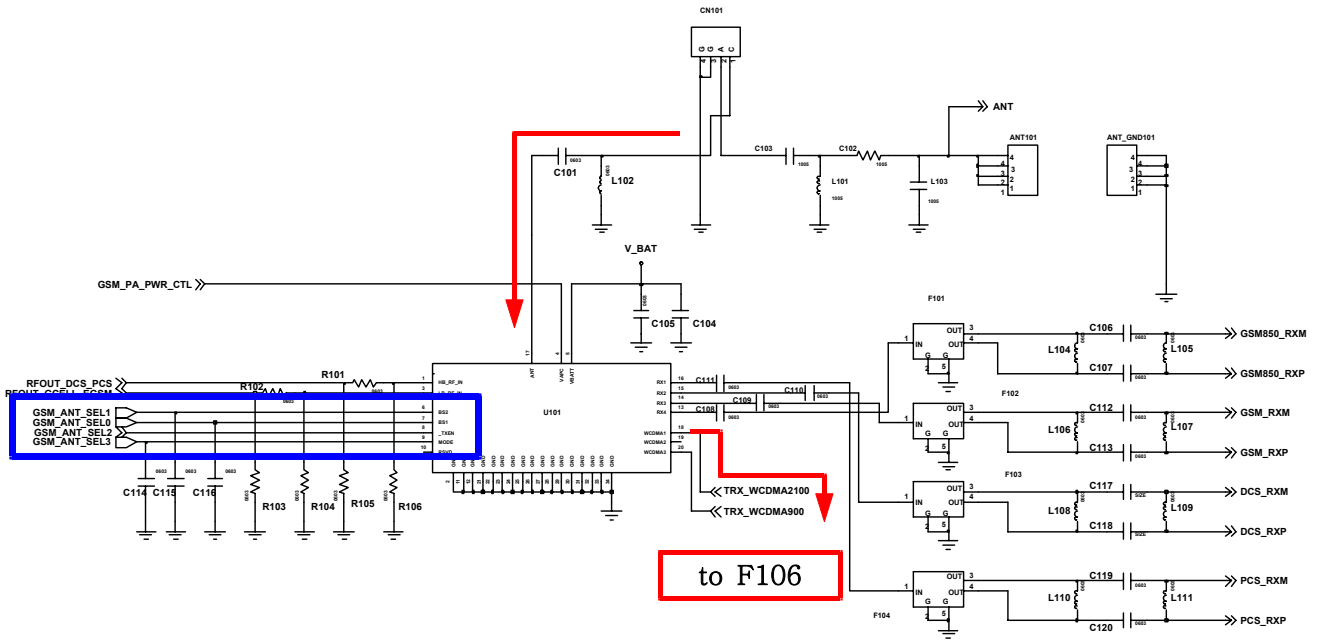


Flow Chart of Troubleshooting

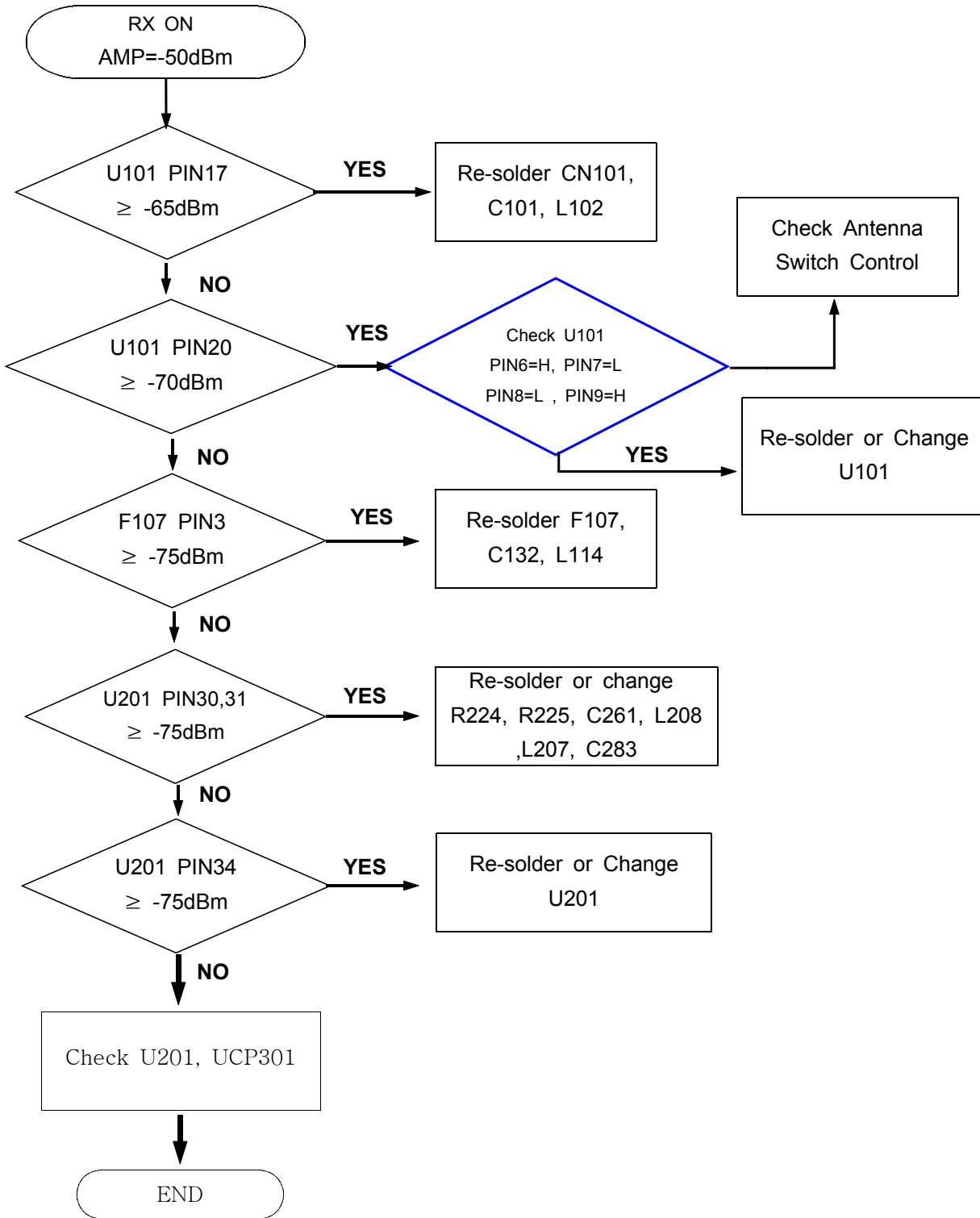


10-2-5. WCDMA2100 RX

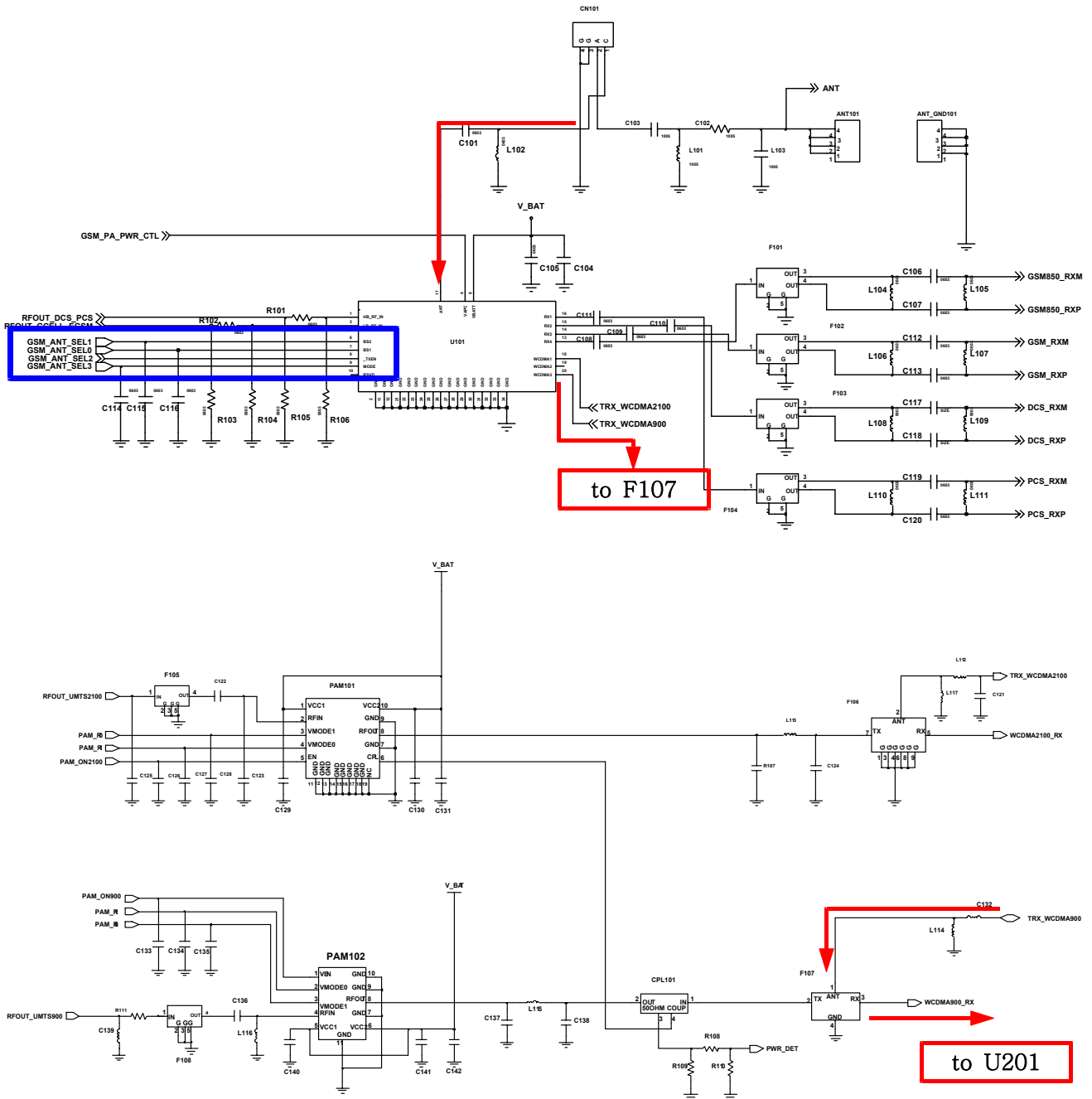




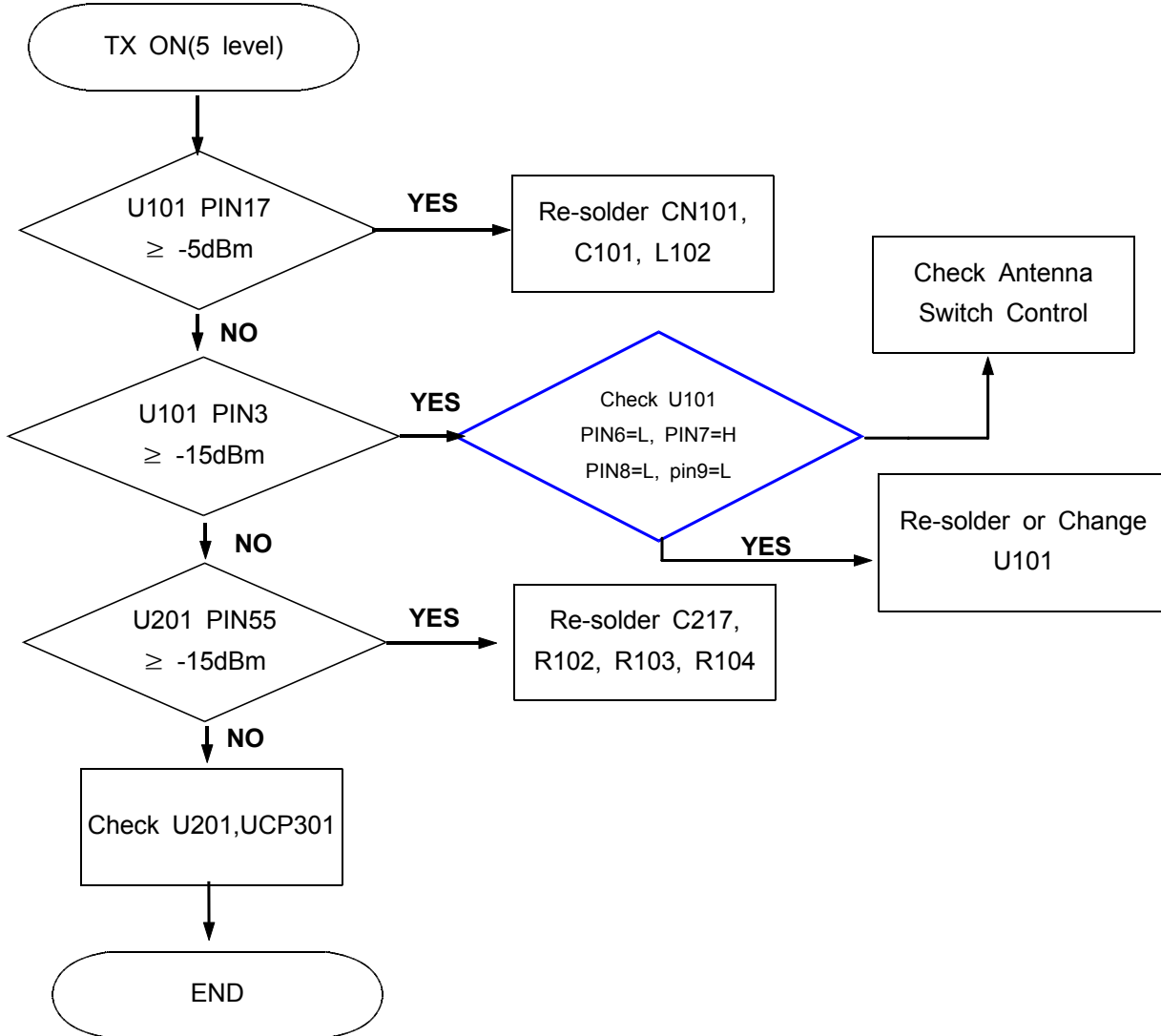
10-2-6. WCDMA900 RX

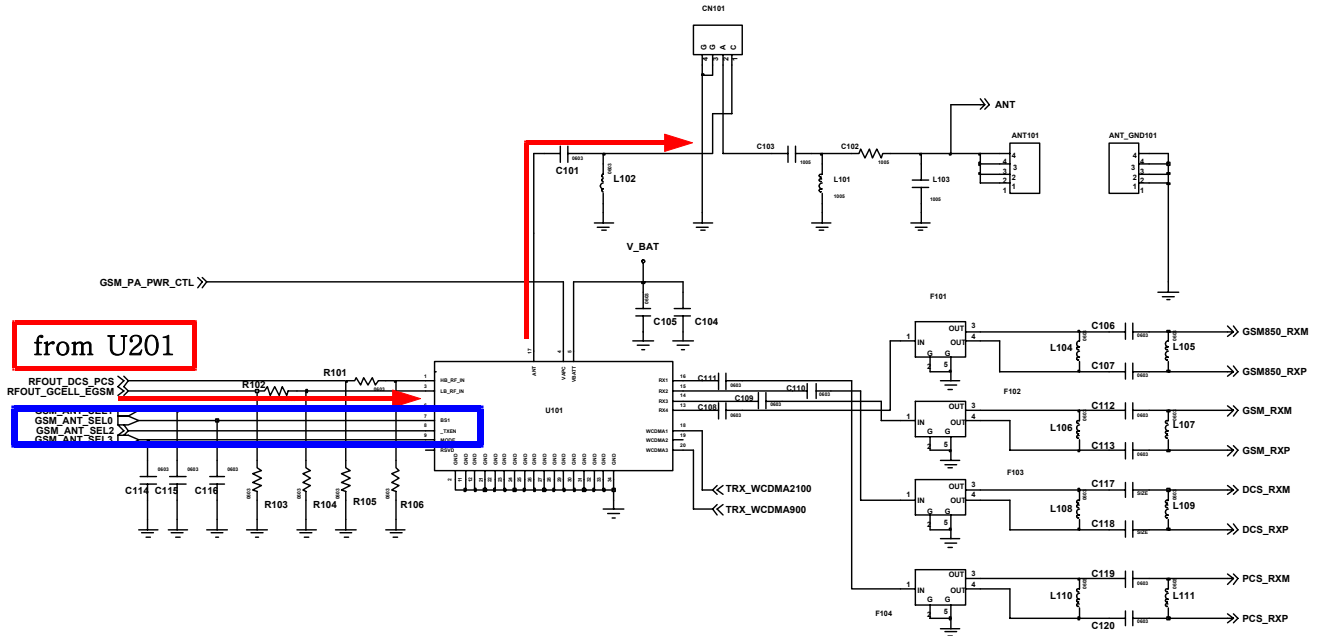


Flow Chart of Troubleshooting



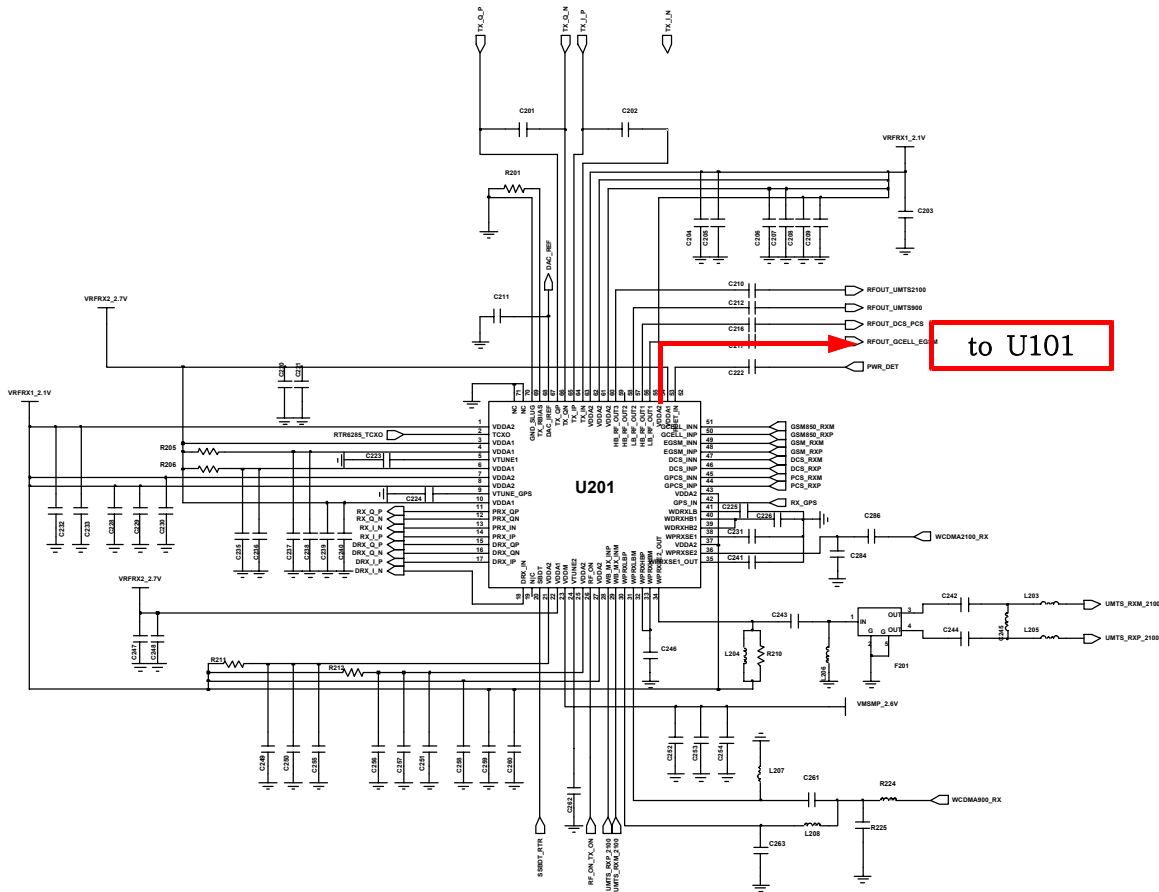
10-2-7. EGSM/GSM850 Tx

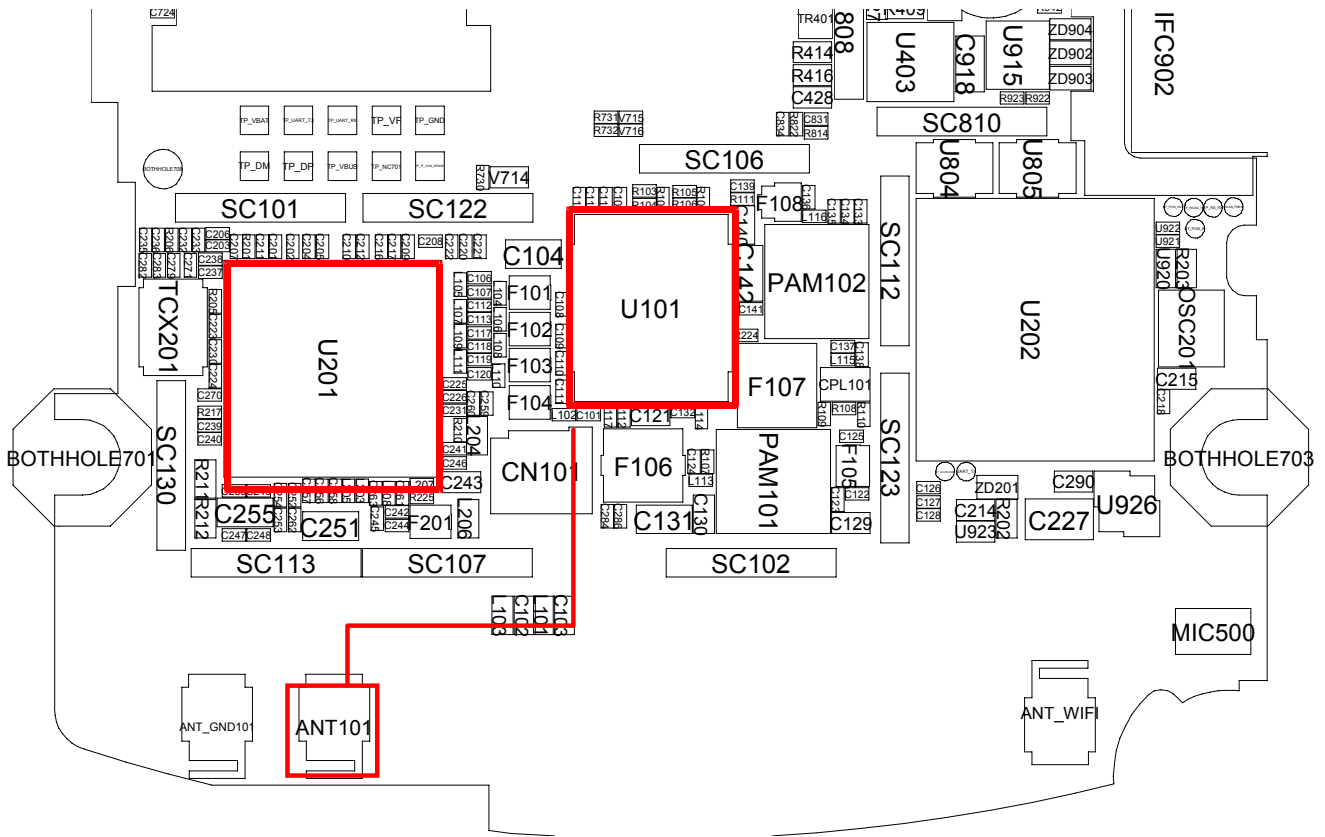




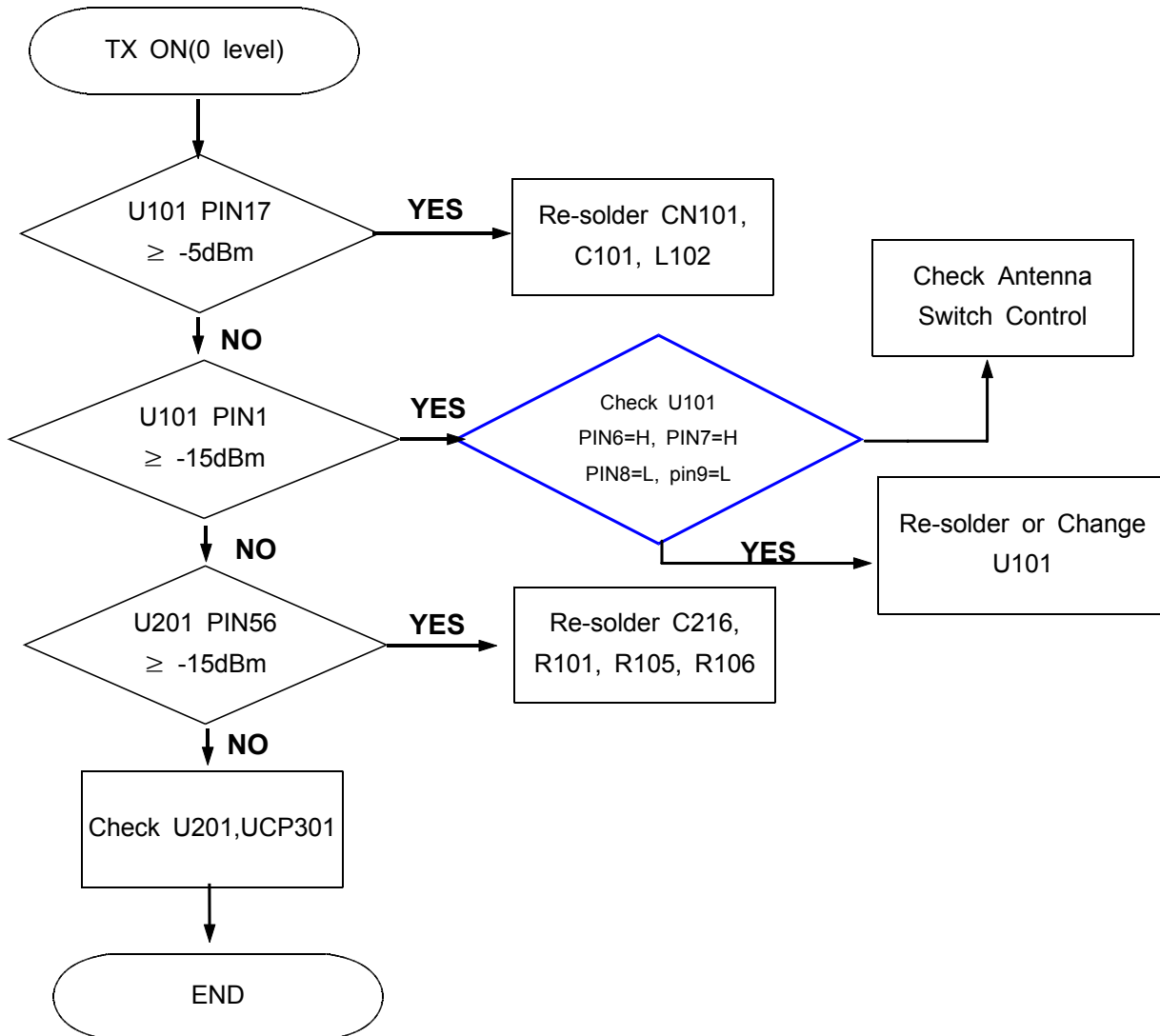
from U201

to U101

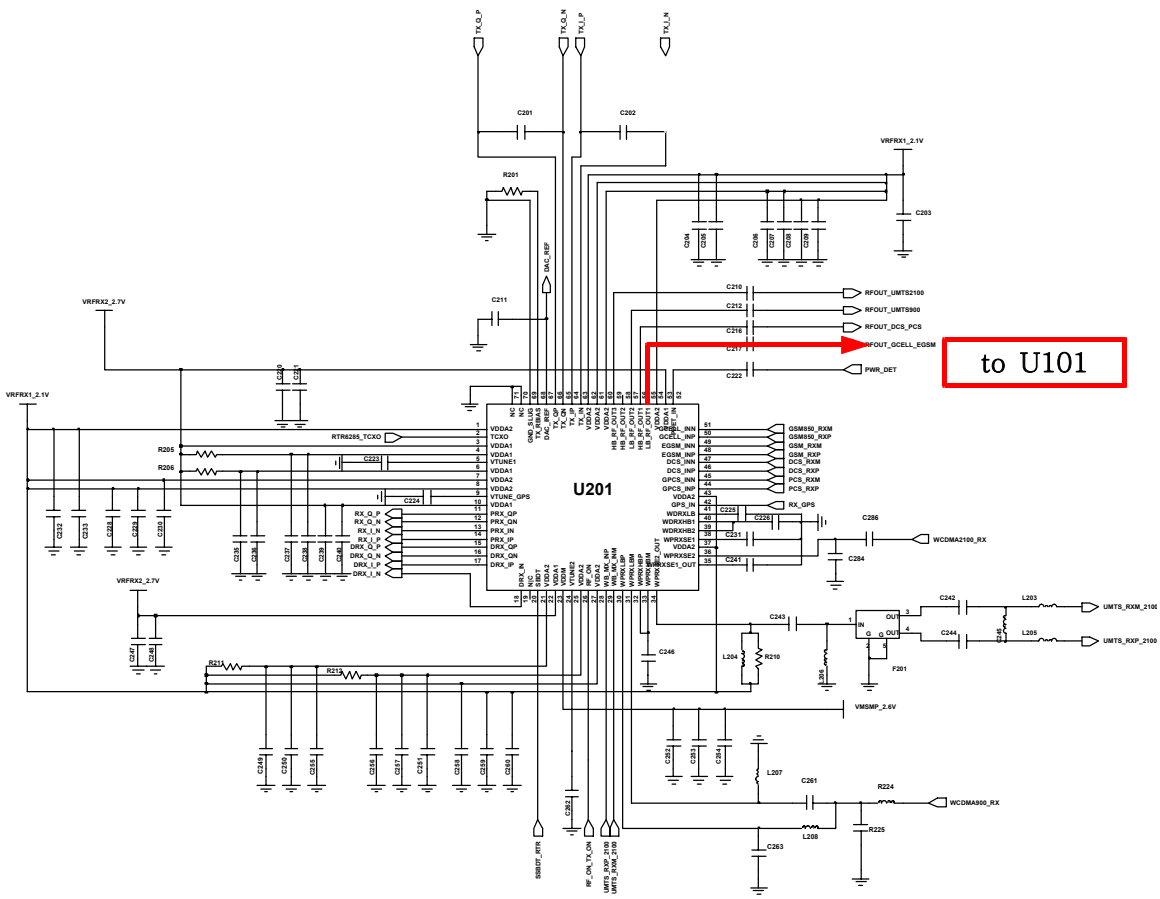
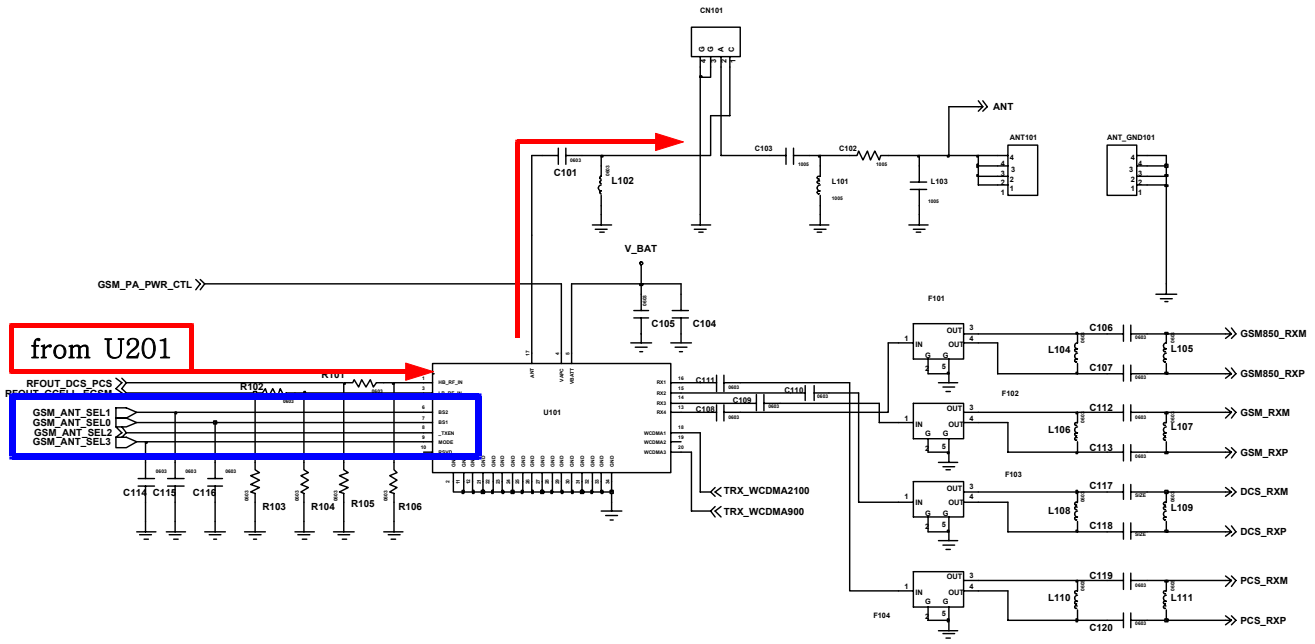




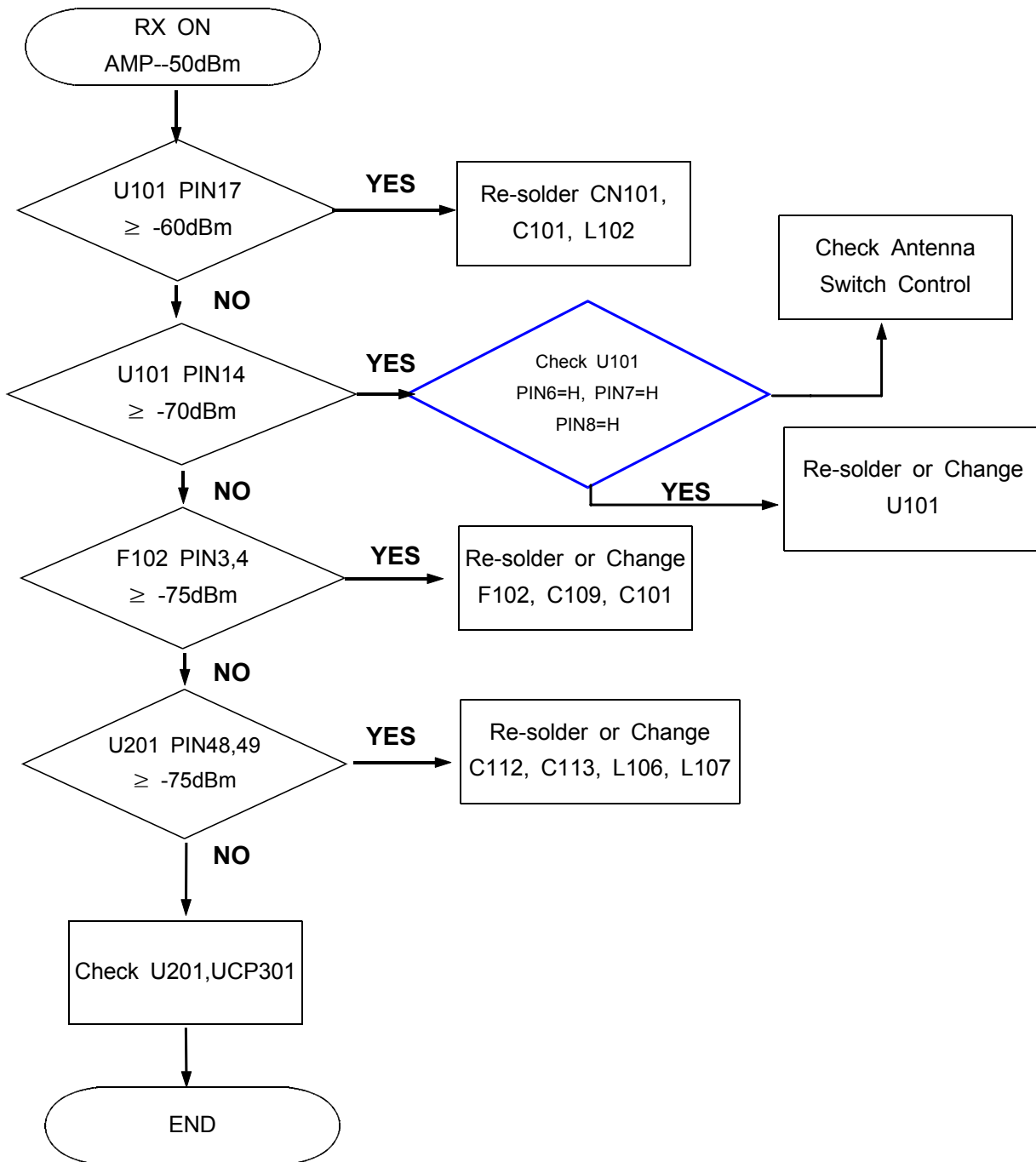
10-2-8. DCS/PCS TX

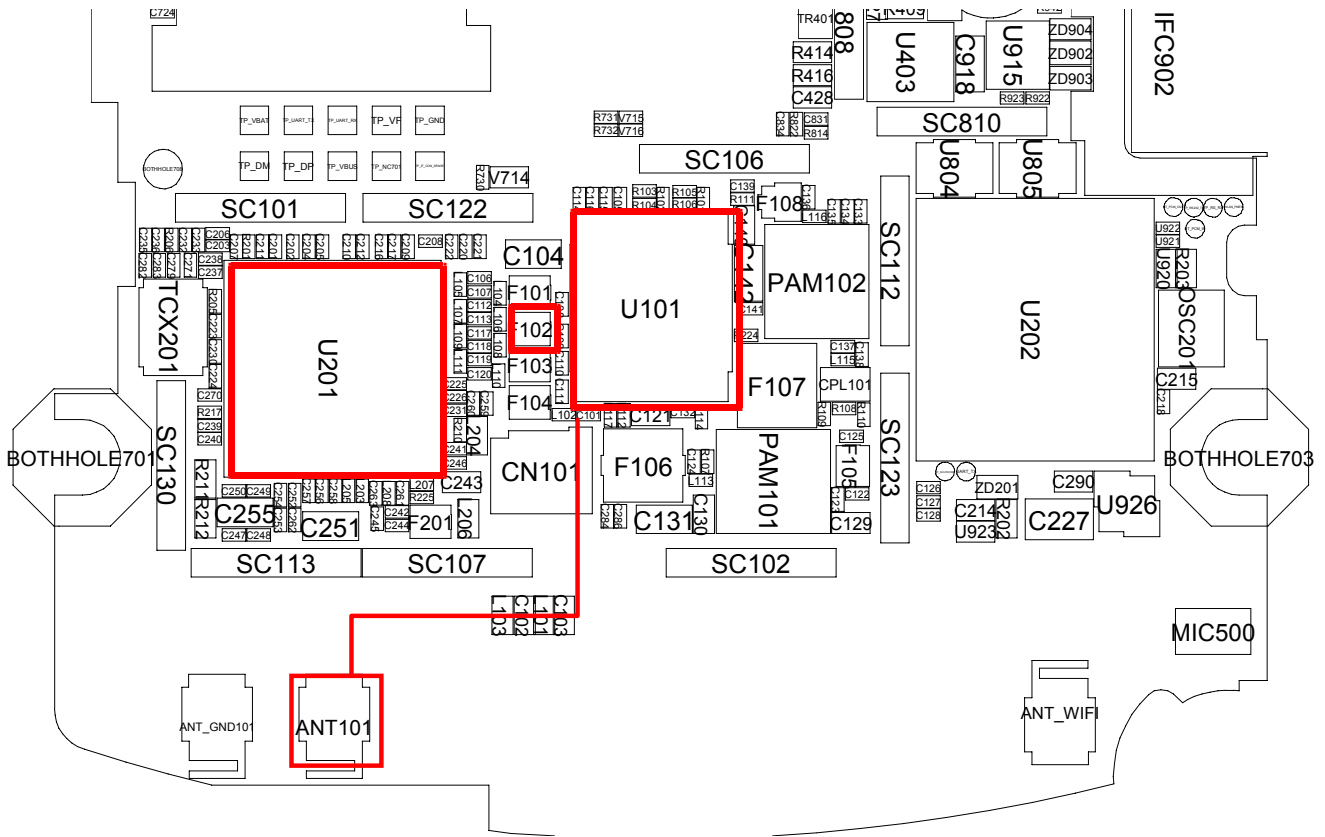


Flow Chart of Troubleshooting

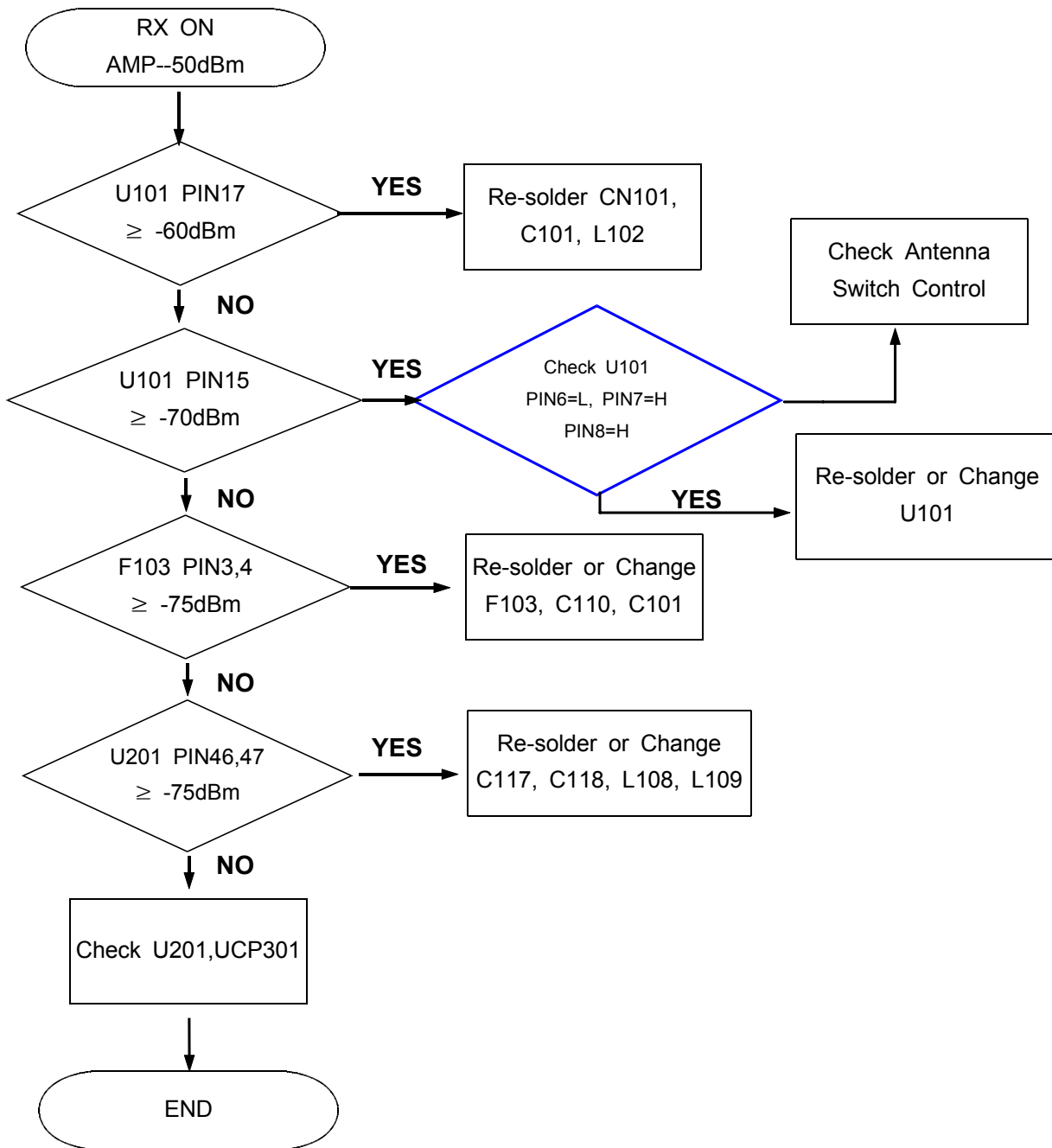


10-2-9. EGSM RX

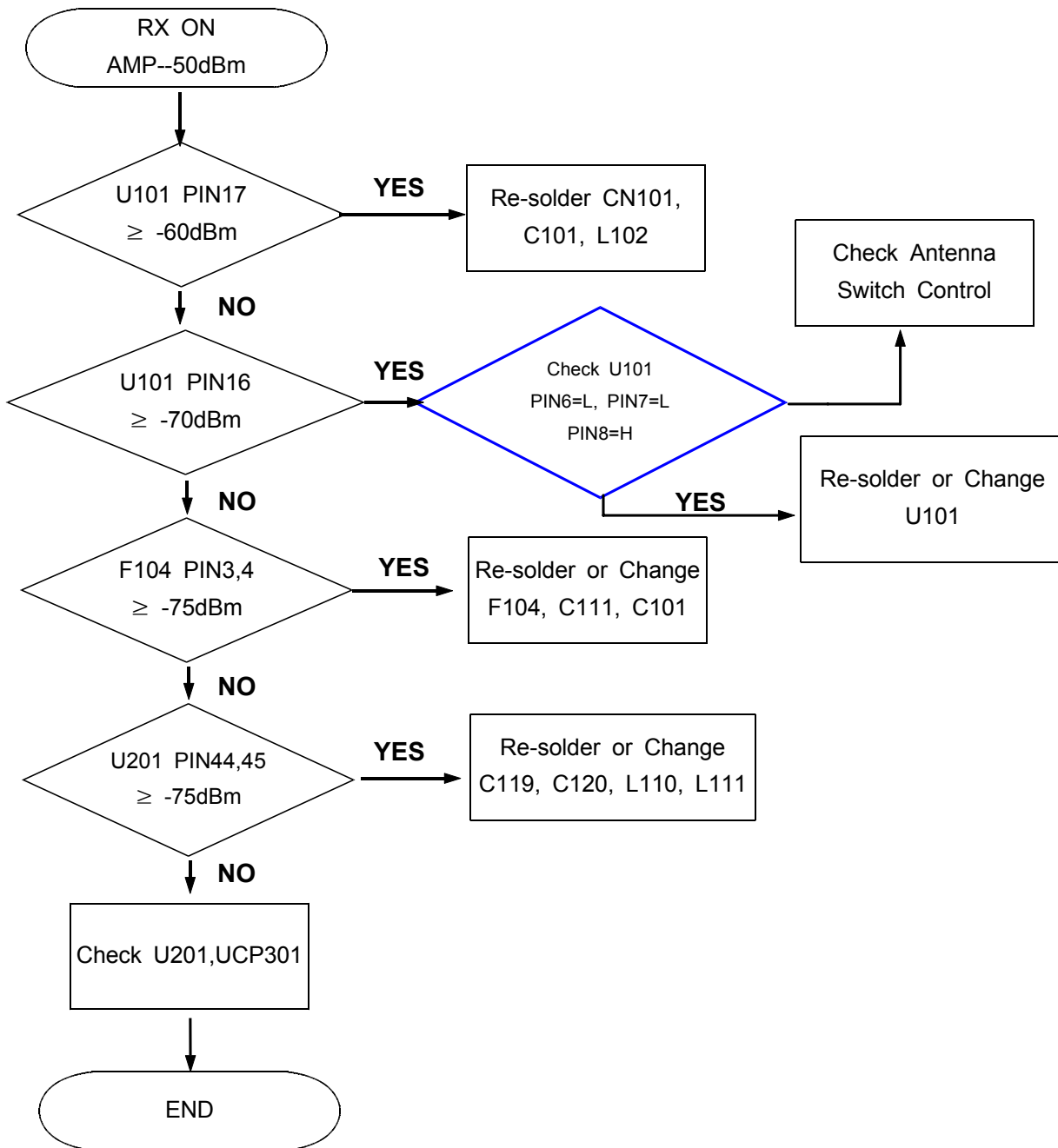


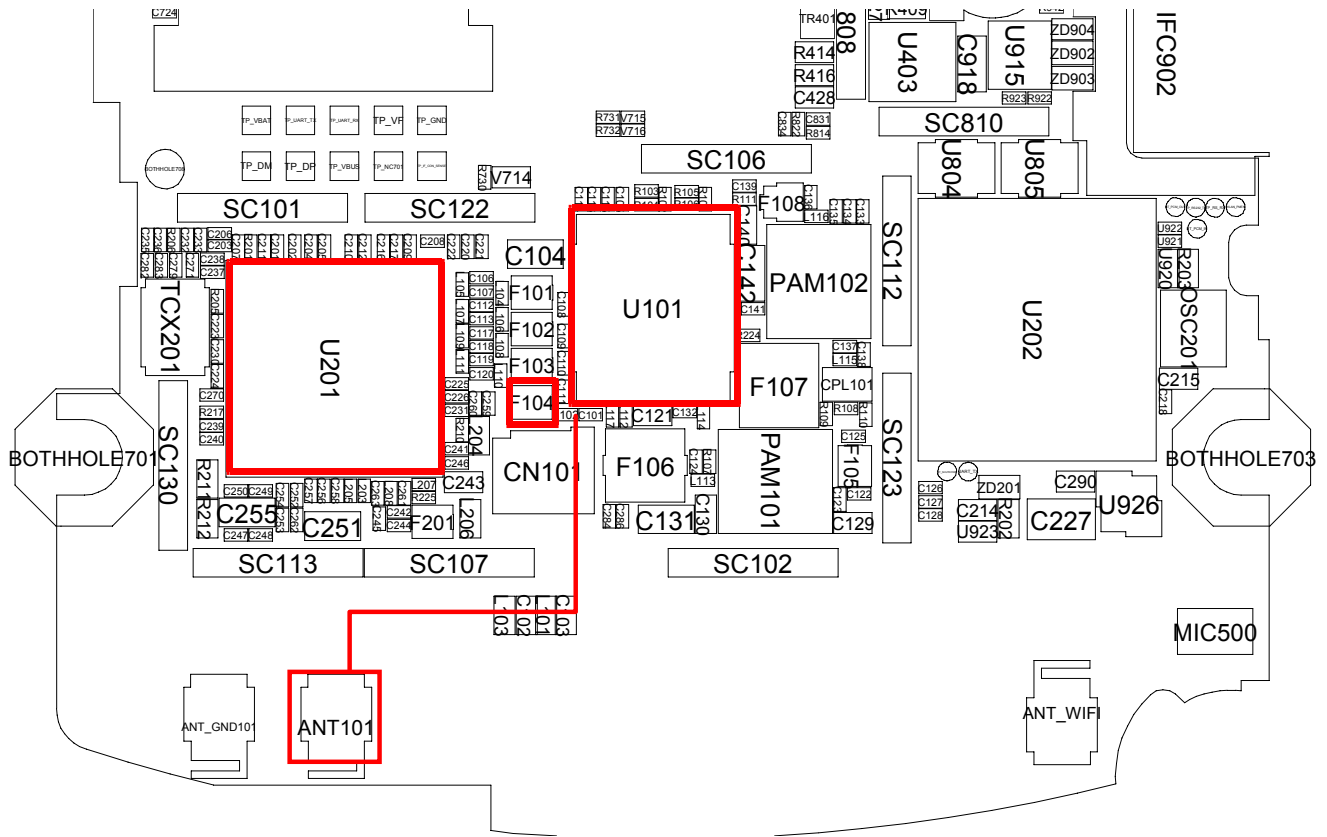


10-2-10. DCS RX

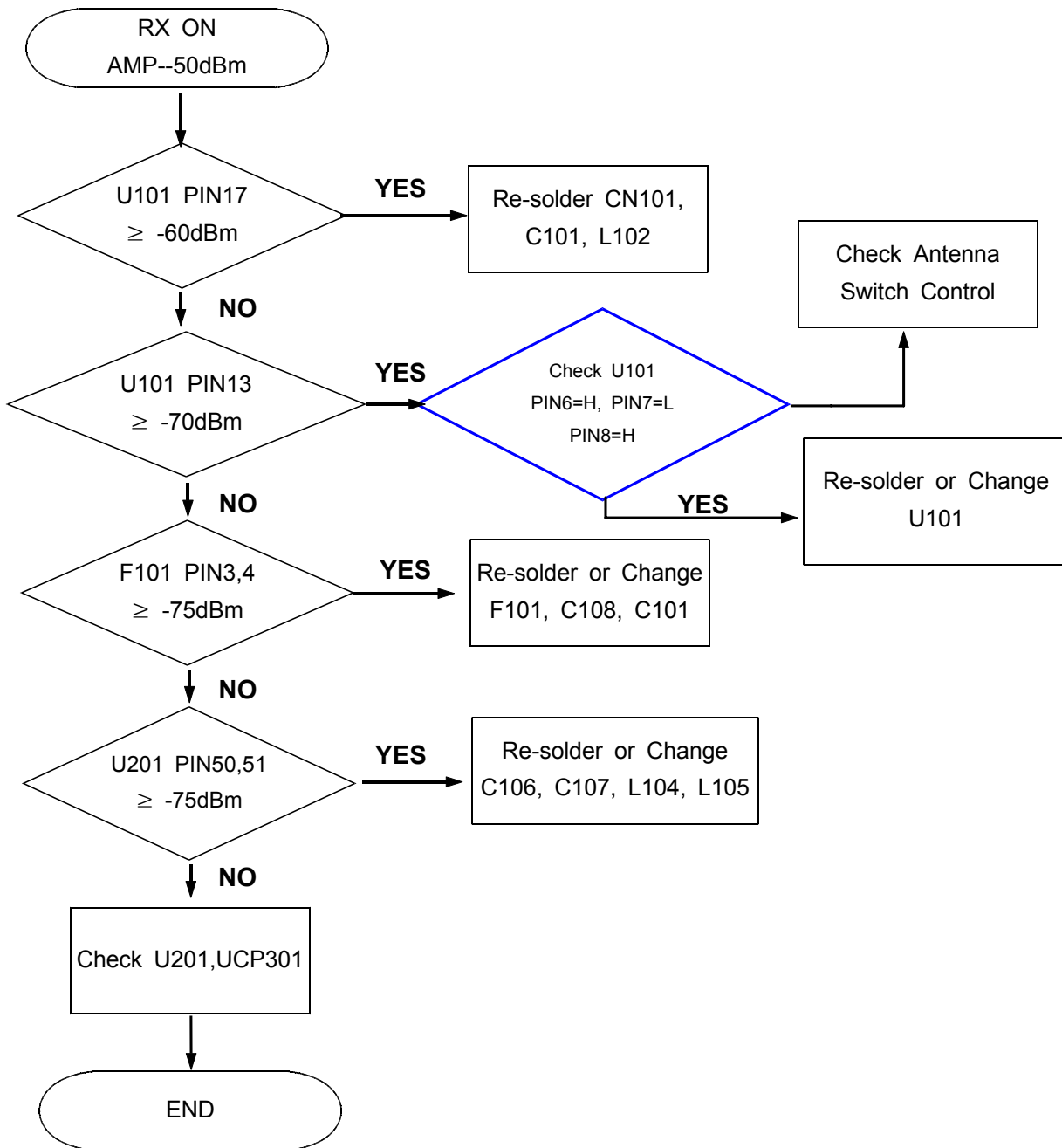


10-2-11.. PCS RX

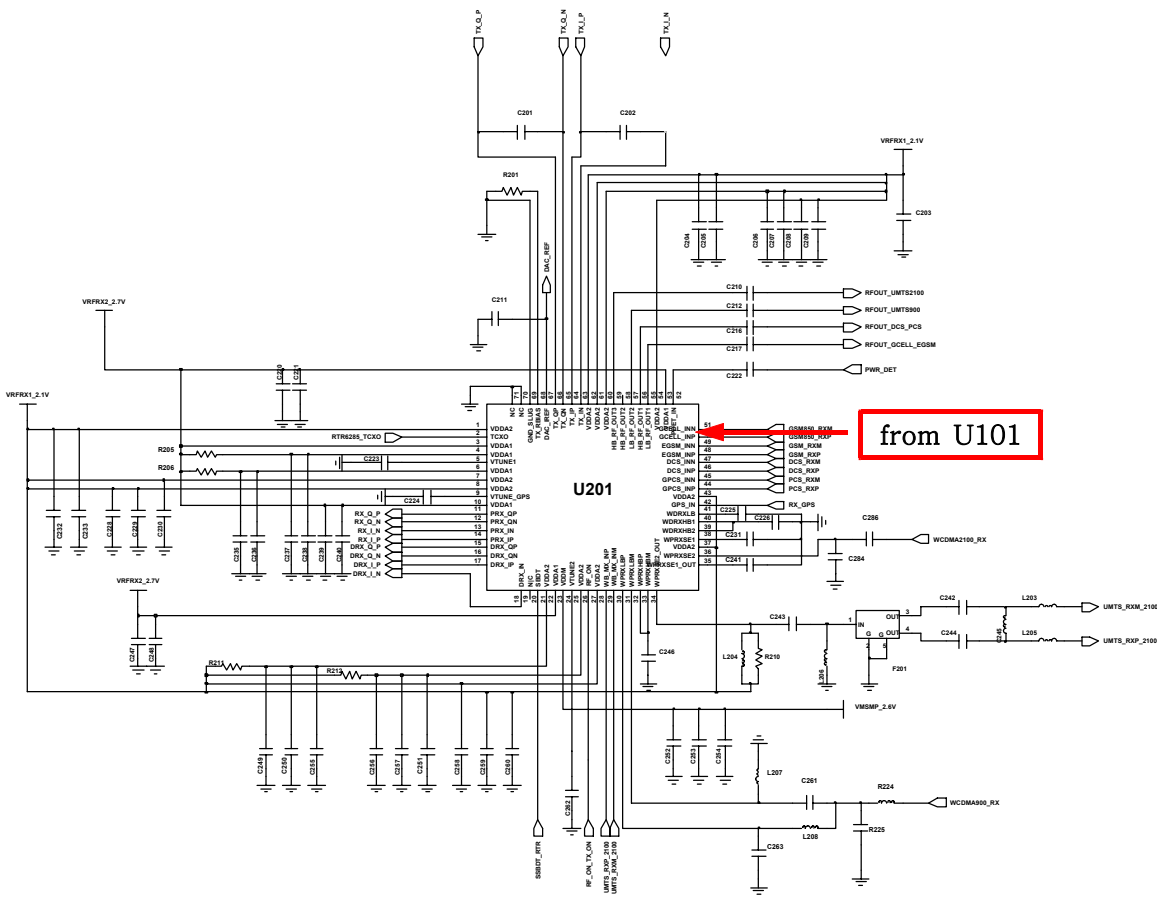
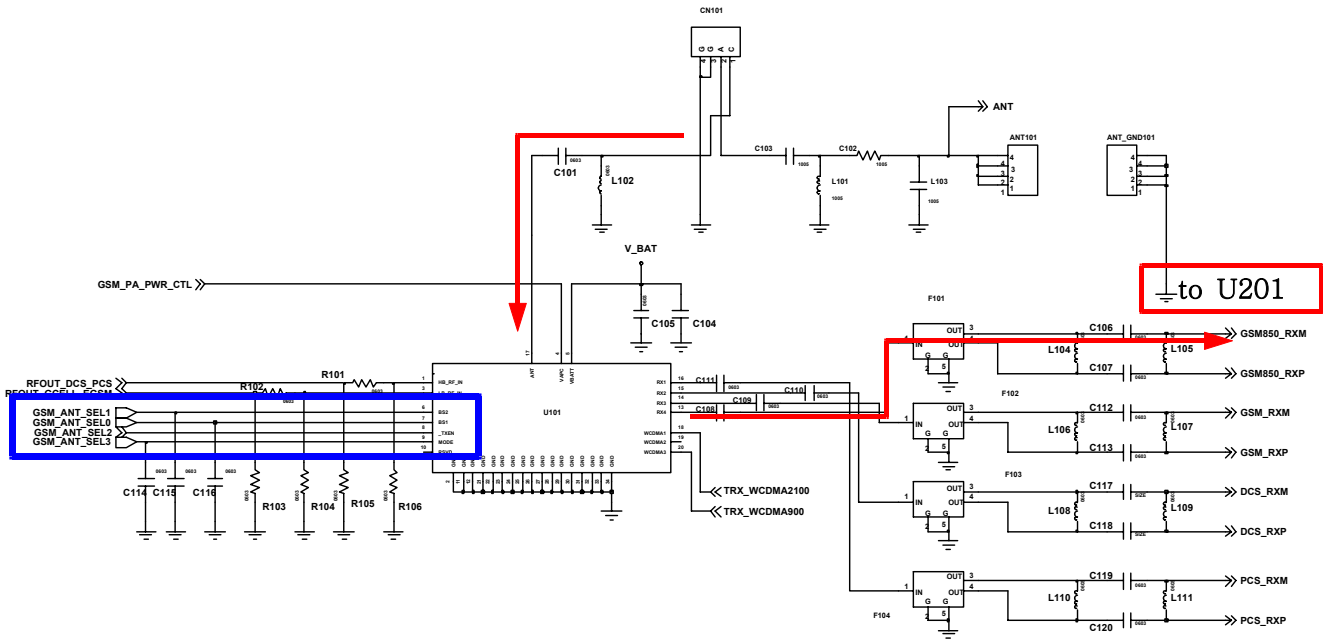




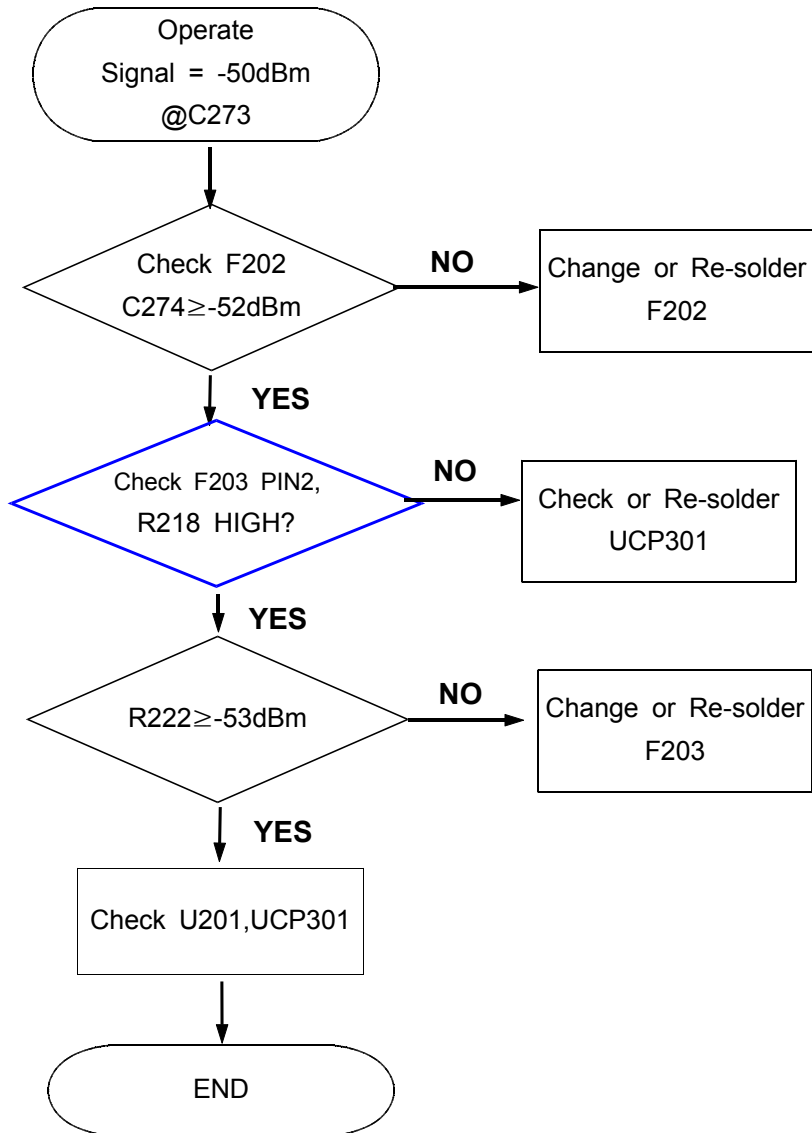
10-2-12. GSM850 RX

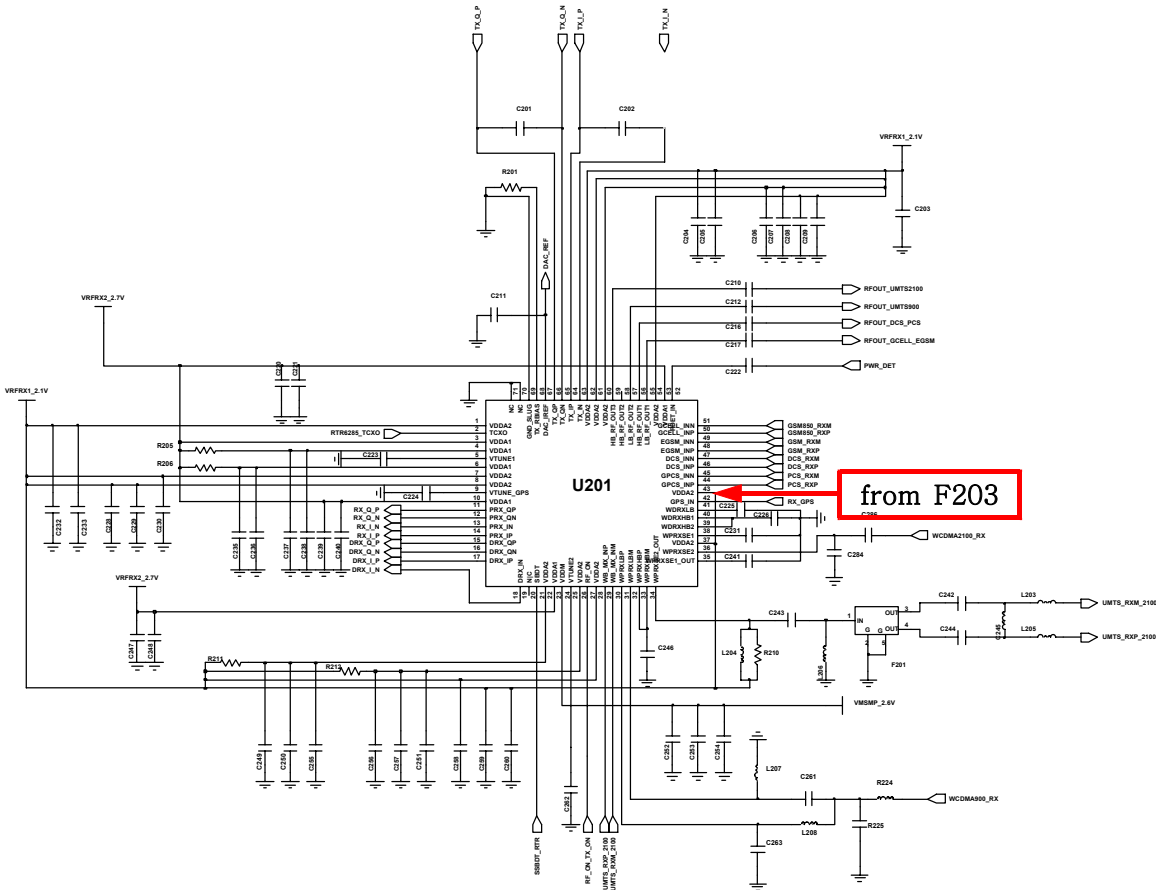
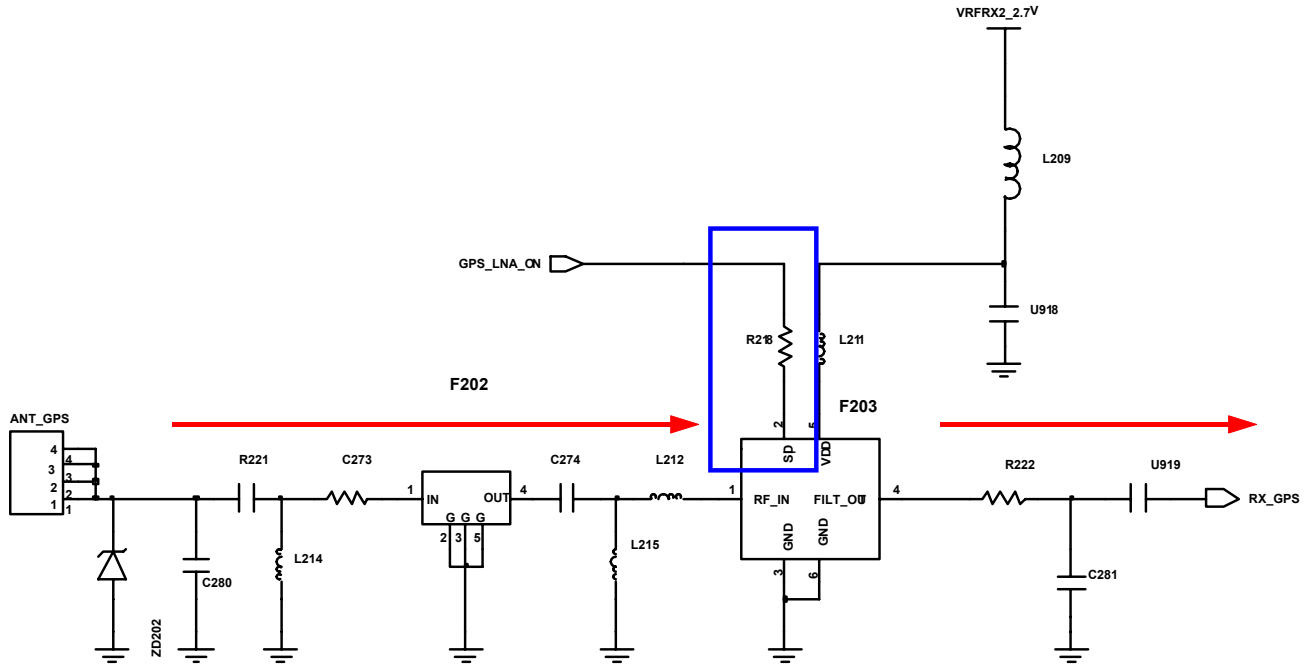


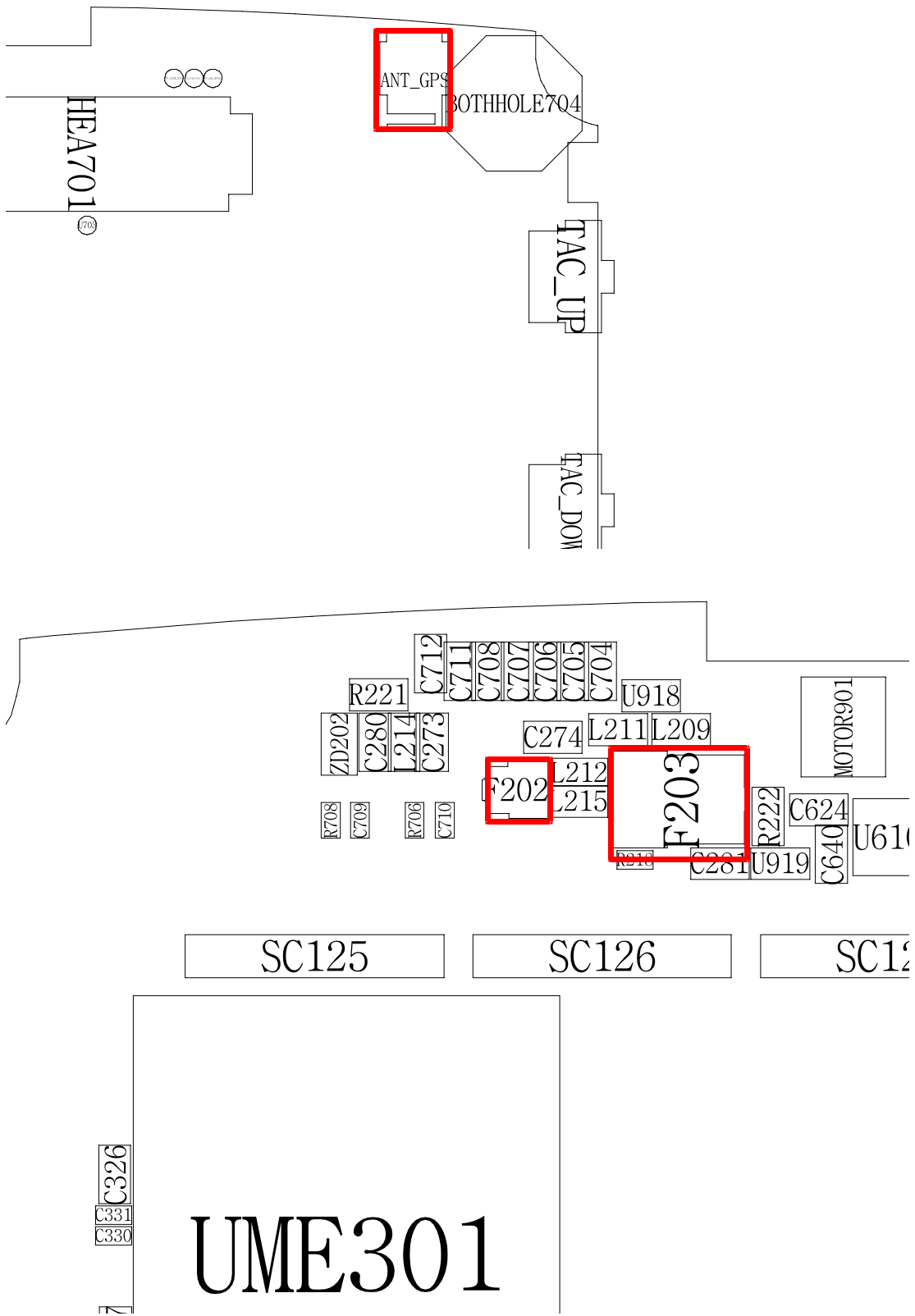
Flow Chart of Troubleshooting



10-2-13. GPS RX







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ELECTRONICS**



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