SAMSUNG

GSM TELEPHONE

SGH-E840

SERVICE Manual

GSM TELEPHONE

CONTENTS

1. Specification
2. Exploded View and Parts list
3. Chart of Troubleshooting
4. Array course control
5. Block Diagrams
6. PCB Diagrams
7. MAIN Electrical Parts List
8. Reference data
9. Safety Precautions
10. Product Function

Contents

1. Specification

1-1. GSM/CDMA General Specification 1-1
1-2. GSM TX power class 1-2

2. Exploded View and Parts list

2-1. Cellular phone Exploded View 2-1
2-2. Cellular phone Parts list 2-2
2-3. Disassembly 2-4
2-4. Assembly 2-8

3. Chart of Troubleshooting

3-1. Baseband 3-1
3-1-1. Power ON 3-1
3-1-2. System Initial 3-6
3-1-3. SIM Part 3-8
3-1-4. Charging Part 3-10
3-1-5. Microphone Part 3-13
3-1-6. Speaker Part 3-16
3-1-7. Receiver Part 3-20
3-1-8. Camera Part 3-22
3-1-9. LCD 3-26
3-2. RF 3-13
3-2-1. EGSM Receiver 3-30
3-2-2. EGSM Transmitter 3-31
3-2-3. DCS Receiver 3-32
3-2-4. DCS Transmitter 3-33
3-2-5. PCS Receiver 3-34
3-2-6. PCS Transmitter 3-35
3-2-7. UMTS Receiver 3-40
3-2-8. UMTS Transmitter 3-41
3-2-9. BLUETOOTH 3-45

Contents

4. Array course control

4-1. Downloading Binary Files 4-2

4-2. Pre-requsite for Downloading 4-2

4-3. S/W Downloader Program 4-3

5. Block Diagrams

6. PCB Diagrams

7. MAIN Electrical Parts List

8. Reference data

8-1. Reference Abbreviate 8-1

9. Safety Precautions

9-1. Repair Precaution 9-1

9-2. ESD(Electrostaically Sensitive Devices) Precaution 9-2

10. Product Function

1. Specification

1-1. GSM/WCDMA General Specification

	EGSM 900 Phase 2	EGSM 900 Phase 2	DCS1800 Phase 1	PCS1900
Freq. Band[MHz] Uplink/Downlink	824~849 869~894	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990
ARFCN range	128~251	0~124 & 975~1023	512~885	512~810
Tx/Rx spacing	45 MHz	45 MHz	95 MHz	80 MHz
Mod. Bit rate/ Bit Period	270.833 kbps 3.692 us	270.833 kbps 3.692 us	270.833 kbps 3.692 us	270.833 kbps 3.692 us
Time Slot Period/Frame Period	576.9 us 4.615 ms	576.9 us 4.615 ms	576.9 us 4.615 ms	576.9 us 4.615 ms
Modulation	0.3 GMSK	0.3 GMSK	0.3 GMSK	0.3 GMSK
MS Power	33 dBm~5 dBm	33 dBm~5 dBm	30 dBm~0 dBm	30 dBm~0 dBm
Power Class	5 pcl ~ 19 pcl	5 pcl ~ 19 pcl	0 pcl ~ 15 pcl	0 pcl ~ 15 pcl
Sensitivity	-102 dBm	-102 dBm	-100 dBm	-100 dBm
TDMA Mux	8	8	8	8
Cell Radius	35 Km	35 Km	2 Km	-

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1-2. GSM TX power class

TX Power control level	EGSM850 EGSM900
5	33±2 dBm
6	31±2 dBm
7	29±2 dBm
8	27±2 dBm
9	25±2 dBm
10	23±2 dBm
11	21±2 dBm
12	19±2 dBm
13	17±2 dBm
14	15±2 dBm
15	13±2 dBm
16	11±3 dBm
17	9± 3dBm
18	7±3 dBm
19	5±3 dBm

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

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

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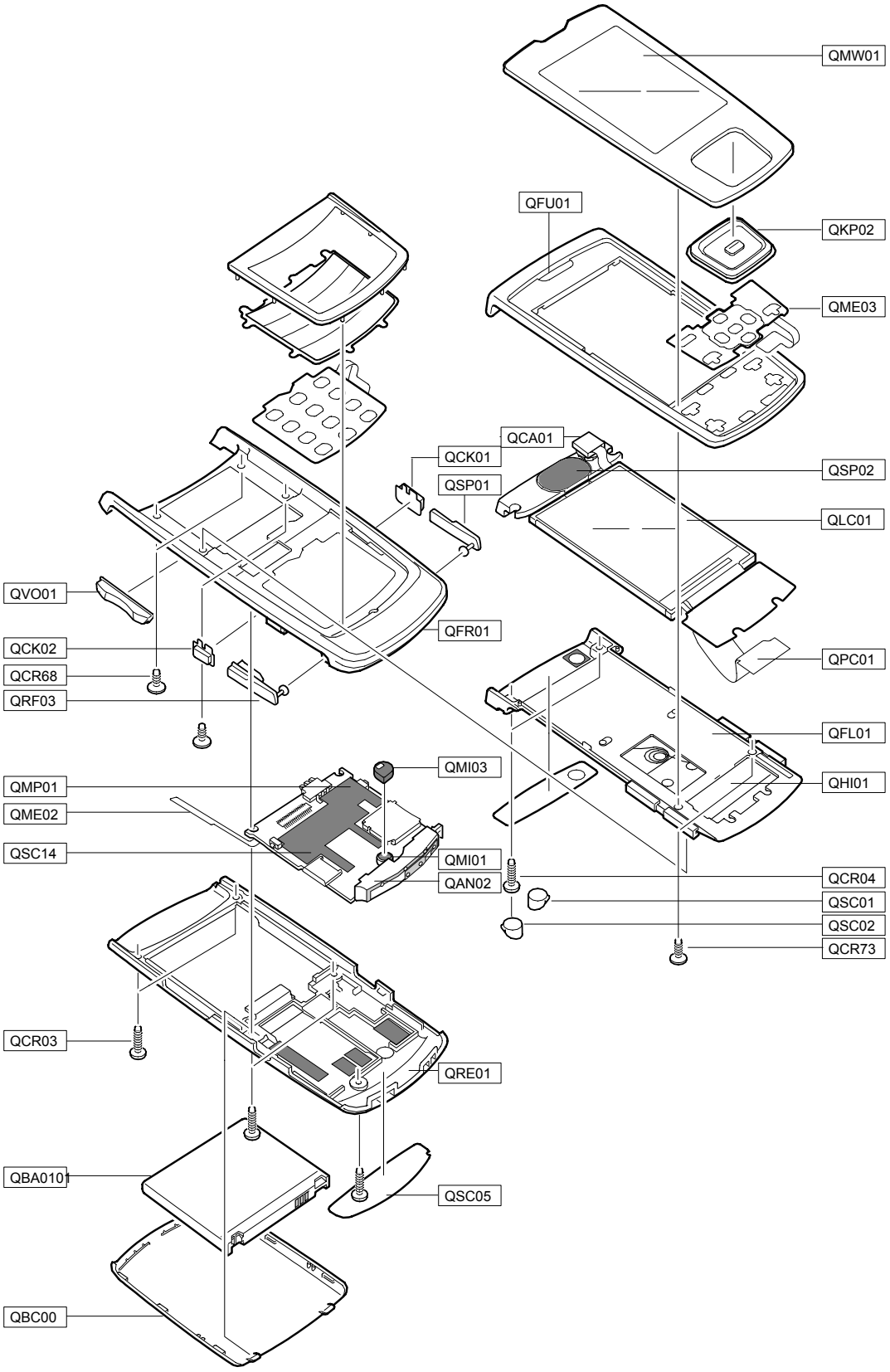
2. Exploded View and Parts List

2-1. Cellular phone Exploded View



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2-2. Cellular phone Parts list

Design LOC		Discription	SEC CODE
QAN02		INTENNA-SGHE840	GH42-01159A
QBA01		INNER BATTERY PACK-690MAH,BLK,	GH43-02834A
QBC00		PMO-COVER BATTERY	GH72-37452A
QCA01		UNIT-SGHE840,CAMERA MODULE	GH59-04333A
QCK01		ASSY KEY-CAMERA	GH98-03699A
QCK02		PMO-KEY POWER	GH72-37454A
QCR03		SCREW-MACHINE	6001-001811
QCR04		SCREW-MACHINE	6001-001479
QCR66		SCREW-MACHINE	6001-002047
QCR68		SCREW-MACHINE	6001-002067
QCR73		SCREW-MACHINE	6001-002102
QKP02		ASSY KEYPAD-SUB(OPEN/SIL)	GH98-03703A
QLC01		LCD-SGHE840	GH07-01113A
QME02		UNIT-SGHE840,SIDE KEY FPCB	GH59-04330A
QME03		UNIT-SGHE840,TOUCH KEY FPCB	GH59-04332A
QMI01		MICROPHONE-ASSY-SGHE840	GH30-00355A
QMP01		PBA MAIN-SGHE840	GH92-03451A
QMW01		ASSY COVER-MAIN WINDOW	GH98-05194A
QPC01		MEA-SLIDE FPCB KIT	GH97-07677A
QRE01		ASSY CASE-REAR	GH98-03698A
QSC01		PMO-SCREW CAP L	GH72-37444A
QSC02		PMO-SCREW CAP R	GH72-37445A
QSC05		PMO-DECO REAR	GH72-37453A
QSC14		ASSY RUBBER-BGA FRONT	GH98-05356A
QSP02		UNIT-SPK,MOT ASSY	GH59-04270A
QVO01		ASSY KEY-VOLUME	GH98-04996A
QFU01		ASSY CASE-SLIDE UPPER	GH98-03695A
	QGI11	ASSY COVER-GRILL	GH98-04104A
QFL01		ASSY CASE-SLIDE LOWER	GH98-03696A
	QHI01	ASSY HINGE-SLIDE	GH98-04444A
QFR01		ASSY CASE-FRONT	GH98-03697A

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	QRF03	PMO-COVER EAR/IF	GH72-37442A
	QSD01	PMO-COVER MICRO SD	GH72-37443A
	QMI03	RMO-RUBBER MIC HOLDER	GH73-09017A

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Discription	SEC CODE
BAG PE	6902-000634
CBF INTERFACE-DLC,X830,SIL,PCB	GH39-00720B
ADAPTOR-SGHE690,SIL,EU,A_TYPE	GH44-01361B
S/W CD-SGHE840,PC STUDIO 3.1	GH46-00431A
UNIT-SGHU600,HEADSET,SIL,A TYP	GH59-04446B
LABEL(R)-WATER SOAK	GH68-09361A
LABEL(P)-OPEN MP3	GH68-11246A
LABEL(R)-MAIN(XEF)	GH68-14354G
MANUAL USERS-EU FRENCH	GH68-14560A
BOX(P)-UNIT MAIN(EU)	GH69-05225A
CUSHION-CASE(EU)	GH69-05227A
MPR-TAPE LCD PCB	GH74-30805A
MPR-TAPE	GH74-31892A
MPR-INSU TAPE	GH74-31894A
MPR-GASK TAPE LCD FPCB	GH74-31896A
MPR-TAPE	GH74-31898A
MPR-VINYL BOHO WIN F	GH74-31904A
MPR-SPONGE	GH74-31906A
TAPE-T-FLASH	GH74-32427A
VINYL-BOHO UPPER	GH74-33378A

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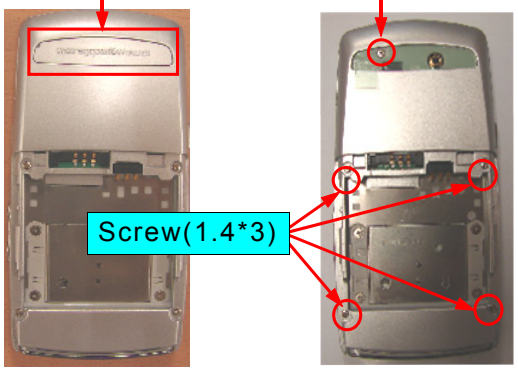
2-3. Disassembly

1



< Figure 1 > < Figure 2 >

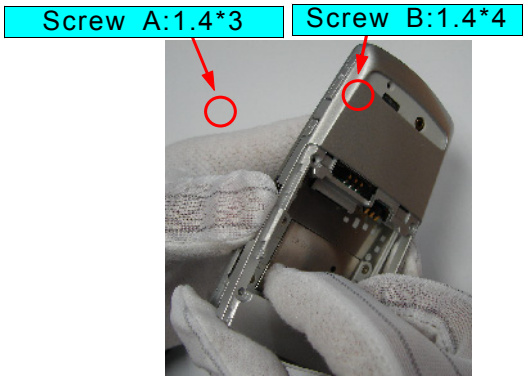
1) Detach from rear deco the back of a set with tweezer.[Figure 1]
2) Unscrew 5points rear bolts the back of a set.[Figure 2]

※ **caution**

1) Notice the Scratch on the Rear Cover when the set disjoint.

2

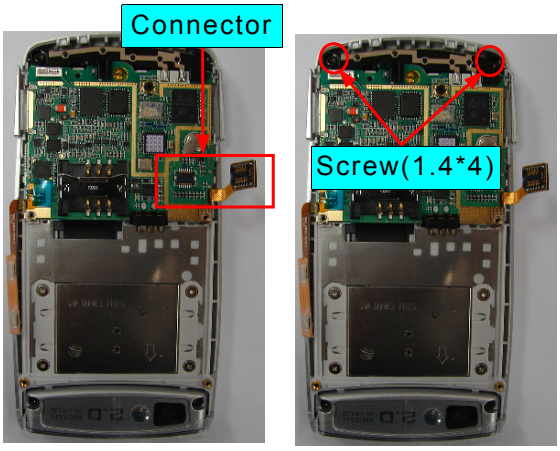
< Figure 1 >



< Figure 2 >

1) Open the Micro SD Card Cover and Rear Cover with round tweezer.[Figure 1]
2) Disjoint carefully Rear Cover shaking right and left[Figure 2]

3

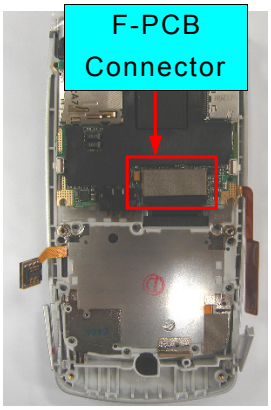


< Figure 1 > < Figure 2 >

1) Detach the Connecter of 3*4 key F-PCB. [Figure 1]
2) Unscrew 2points in intenna module.[Figure 2]

4

< Figure 1 >



< Figure 2 >

1) Lift the intenna and PBA with tweezer.[Figure 1]
2) Detach the F-PCB.[Figure 2]

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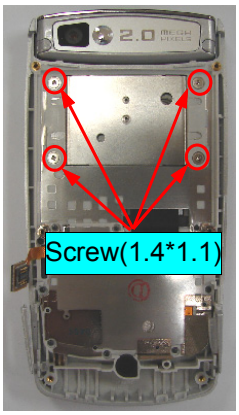

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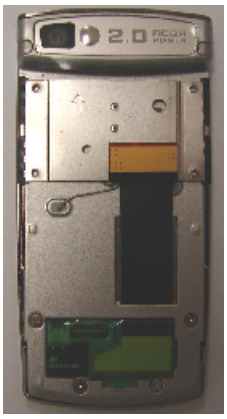
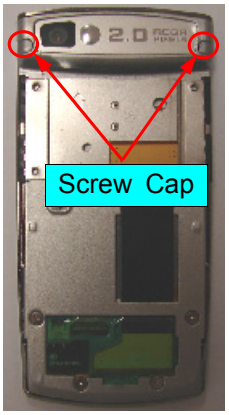


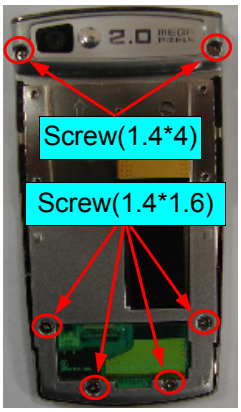
< Figure 2 >

1) Unscrew 4points Front Cover.[Figure 1]
2) Remove the Front Cover.[Figure 2]

6



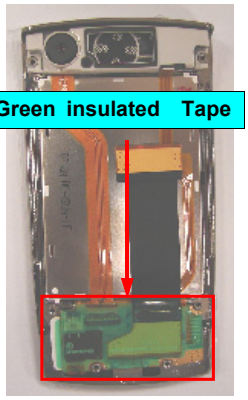
< Figure 1 >



< Figure 2 >

1) Remove the Screw cap 2points[Figure 1]
2) Unscrew 6points Slide Lower.[Figure 2]

7



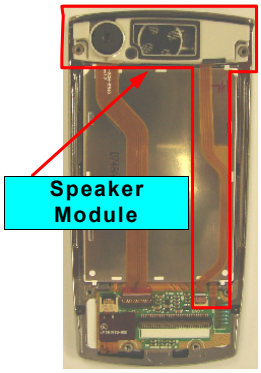
< Figure 1 >

< Figure 2 >

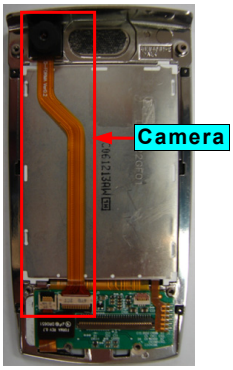
1) Remove the Slide Lower.[Figure 1]
2) Detach the green insulated Tape and Pull out the FPCB.[Figure 2]

※ caution
1) Detach the Green insulated tape carefully.

8



< Figure 1 >



< Figure 2 >

1) Detach the Speaker Module.[Figure 1]
2) Detach the Camera.[Figure 2]

※ caution
1) Notice the F-PCB so as not to damage.

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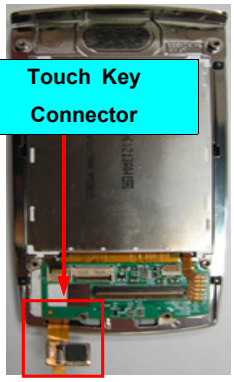

1) Pull out the Touch key connecter.[Figure 1]
2) Lift the LCD F-PCB and detach the LCD with Window.[Figure 2]

※ caution

1) Be careful with the damage of LCD.

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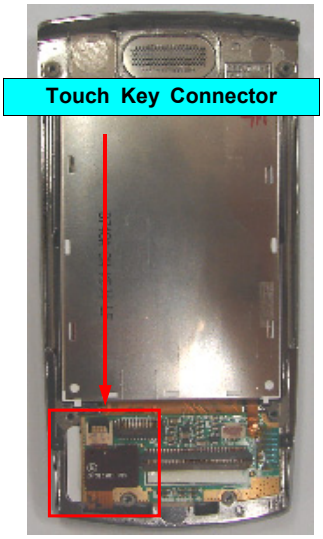
2-4. Assembly

1

< Figure 1 >



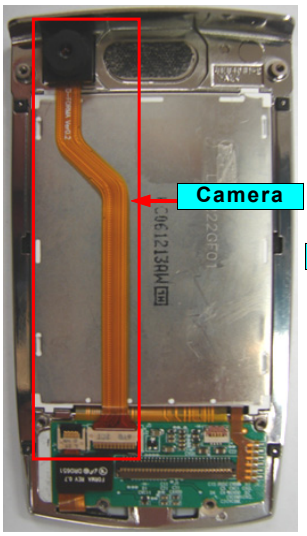
< Figure 2 >

1) Combine LCD Module.[Figure 1]
2) Insert the Touch Key F-PCB [Figure 2]

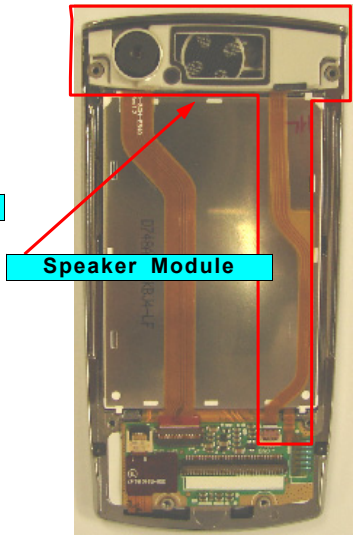
※ caution

1) Be careful of the possible damage on FPCB

2



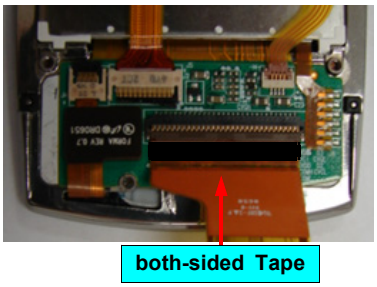
< Figure 1 >



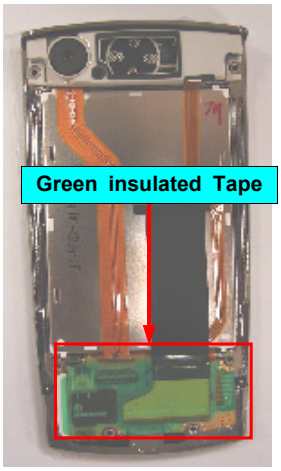
< Figure 2 >

1) Combine Camera module.[Figure 1]
2) Combine Speaker module.[Figure 2]

3



< Figure 1 >



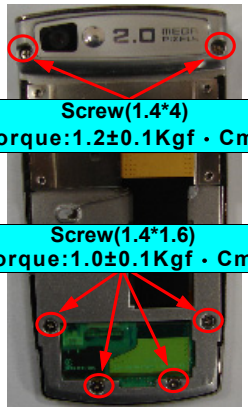
< Figure 2 >

1) Fix the MIC in position like the picture.

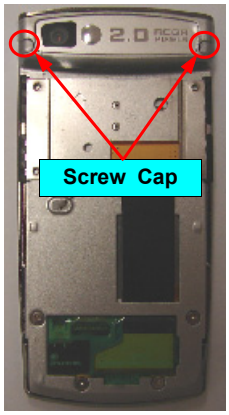
※ caution

1) Check the damage of F-PCB with an eye.

4



< Figure 1 >



< Figure 2 >

1) Assemble the mic cover and then screw 2 points.
2) Attach the KEY PAD.
3) Press down the KEY PAD so as not to be detached it.

※ caution

1) Check the connecting condition of KEY PAD.

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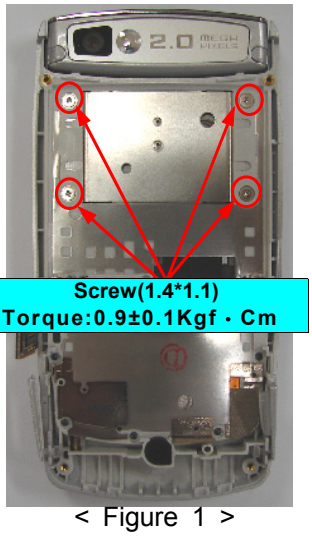
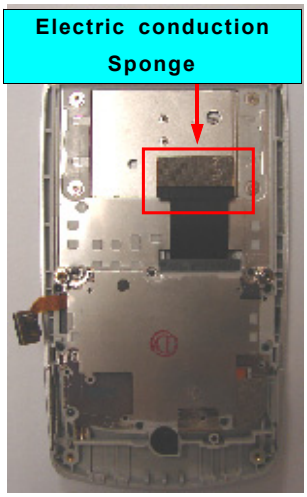


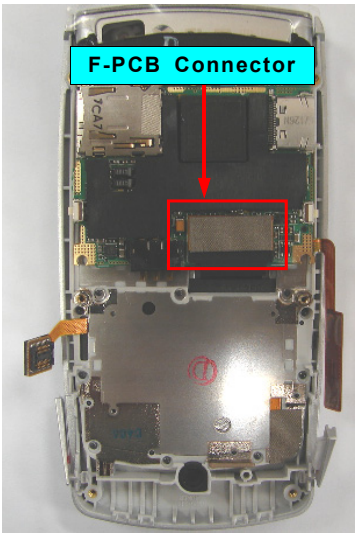
< Figure 1 >



< Figure 2 >

1) After combine Front Cover, the 4 Bolts. [Figure 1]
2) Attach "electric conduction sponge" on connector. [Figure 2]

6

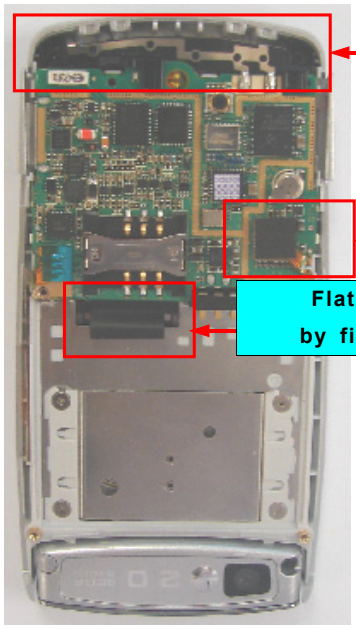


1) Insert "F-PCB" to the connector in PBA.

※ **caution**

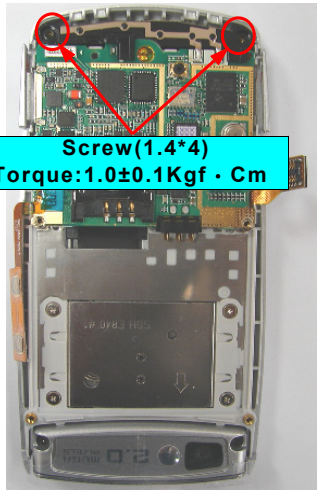
1) Connector should be certainly clicked along the marked line.

7

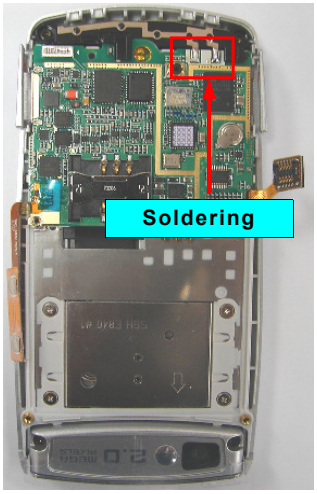


1) Insert "3*4 key PCB" to the connector in PBA.
2) Flatten F-PCB by finger while open and close slide.
3) Insert the Antenna module.

8



< Figure 1 >



< Figure 2 >

1) Screw the 2 Bolts.[Figure 1]
2) As seen figure 2, soldering the antenna module.

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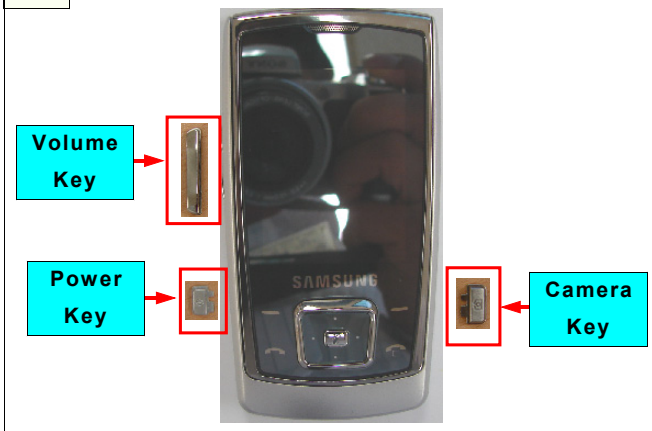
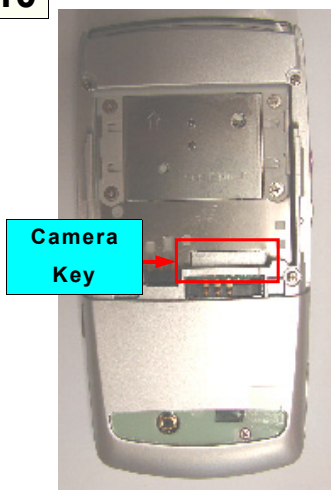
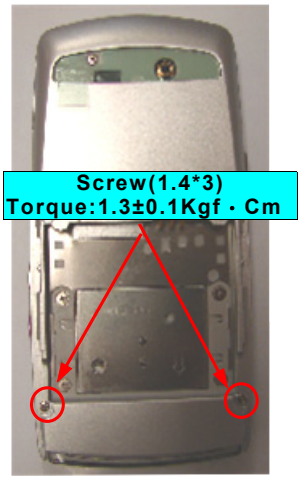


1) After combine Front Cover, the 4 Bolts. [Figure 1]
2) Attach "electric conduction sponge" on connector. [Figure 2]

10



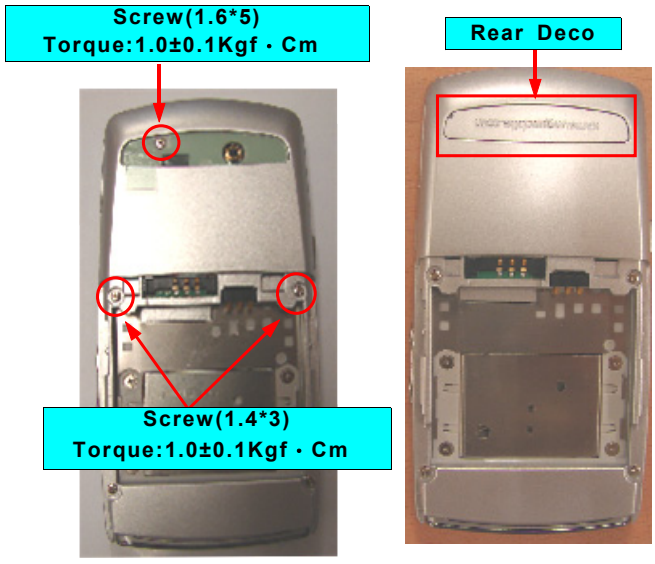
< Figure 1 >



< Figure 2 >

1) Push the parts, as seen Figure 1.
2) Screw the 2 Bolts, as seen above.[Figure 2]

11



1) Screw the 3 Bolts, as seen above. [Figure 1]
2) Attach the Rear Deco. [Figure 2]

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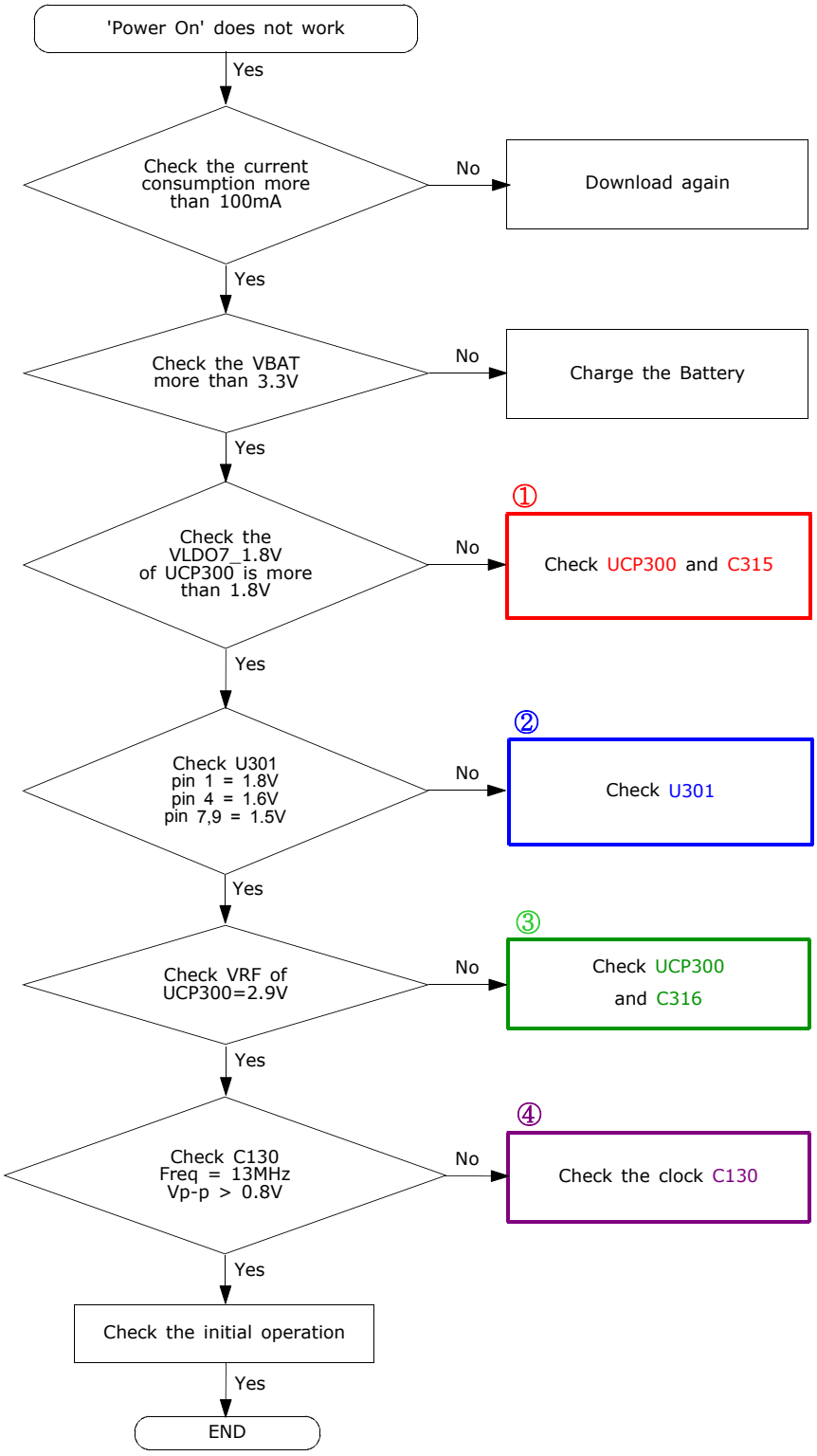
3. Flow Chart of Troubleshooting

3-1 BASEBAND

3-1-1. Power ON



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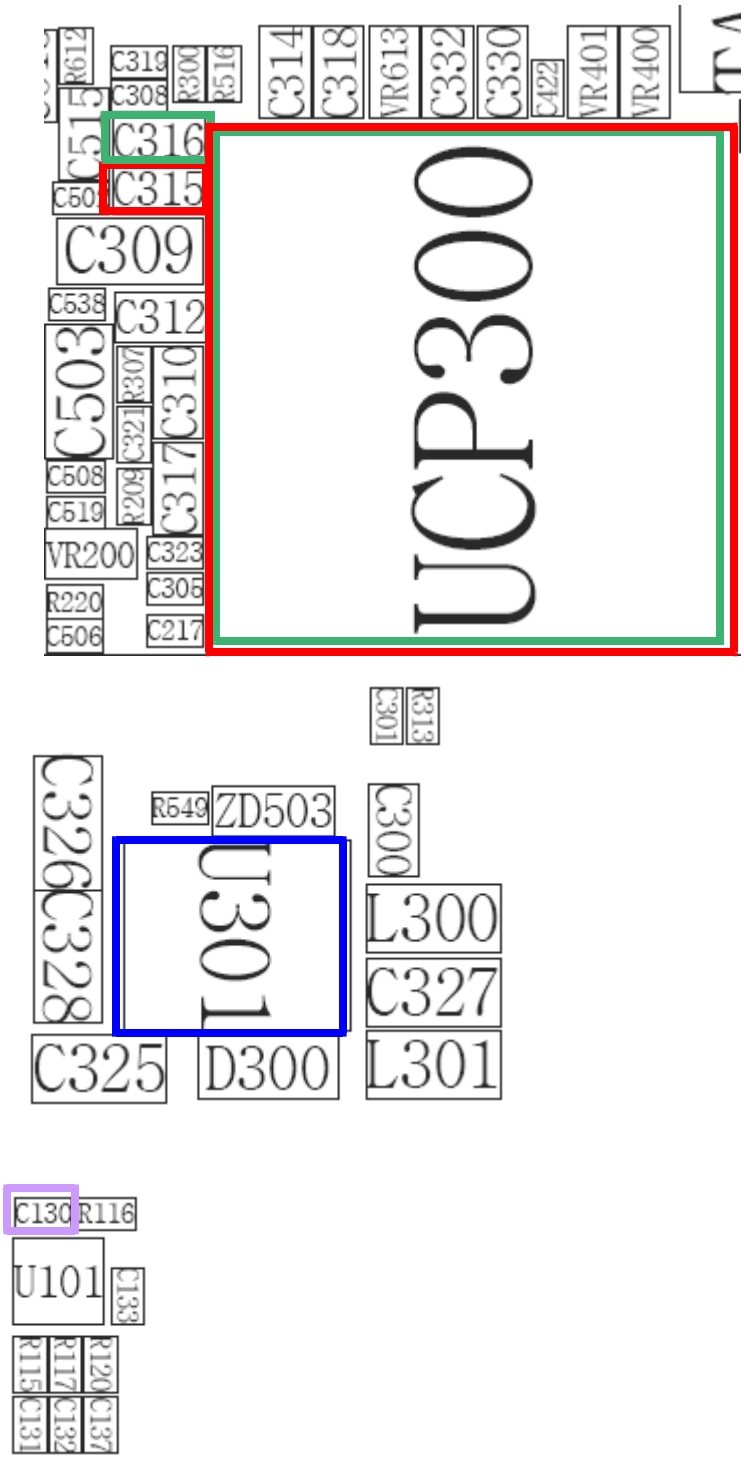

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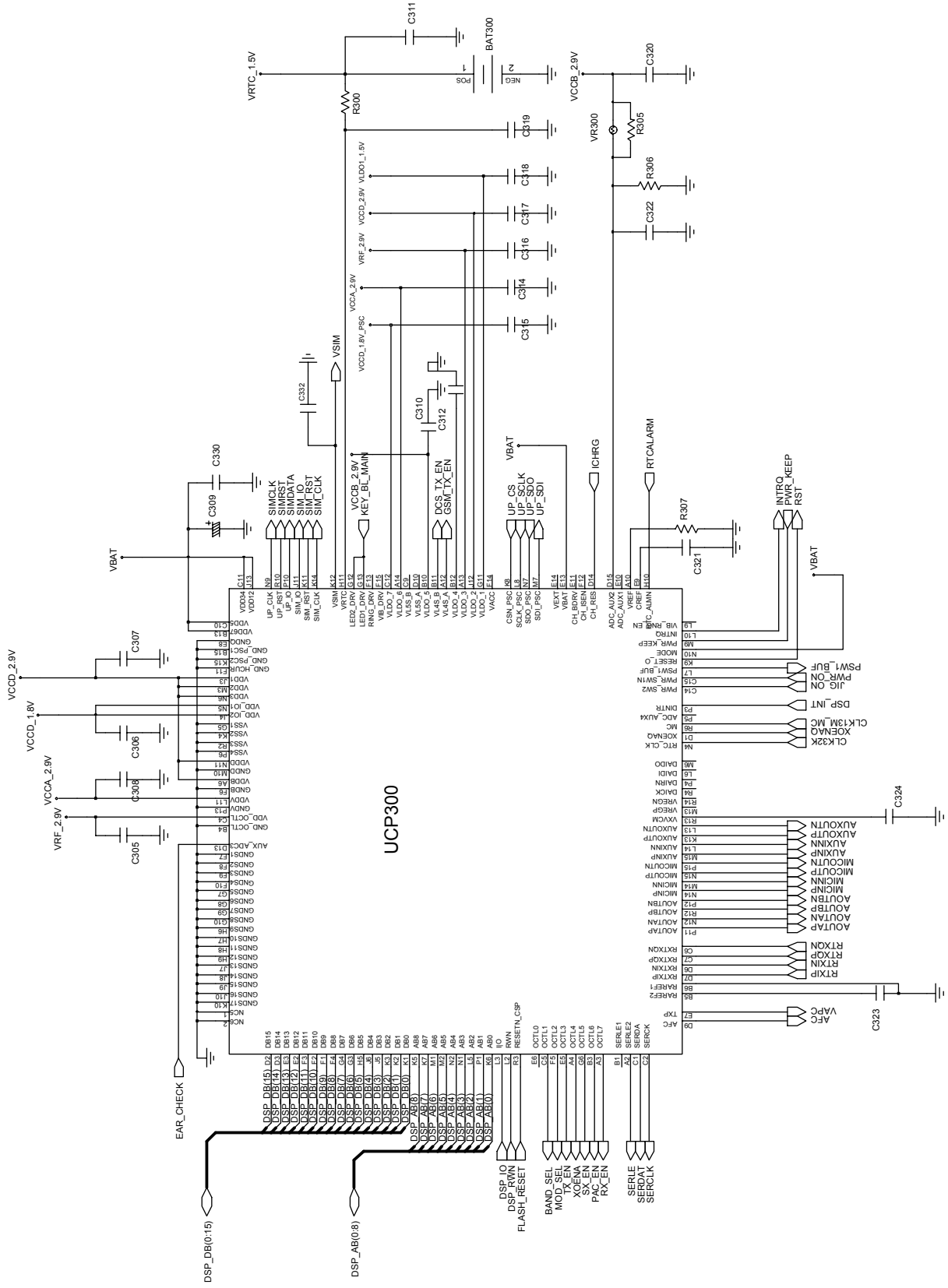

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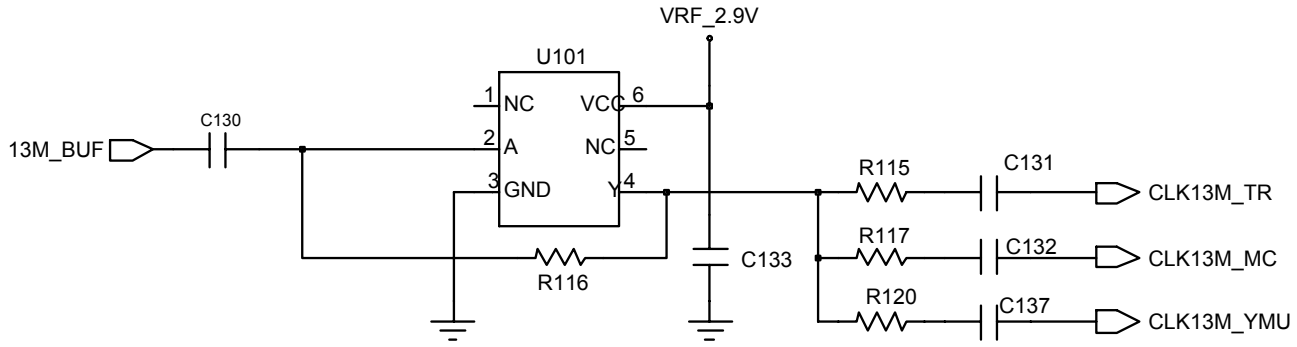

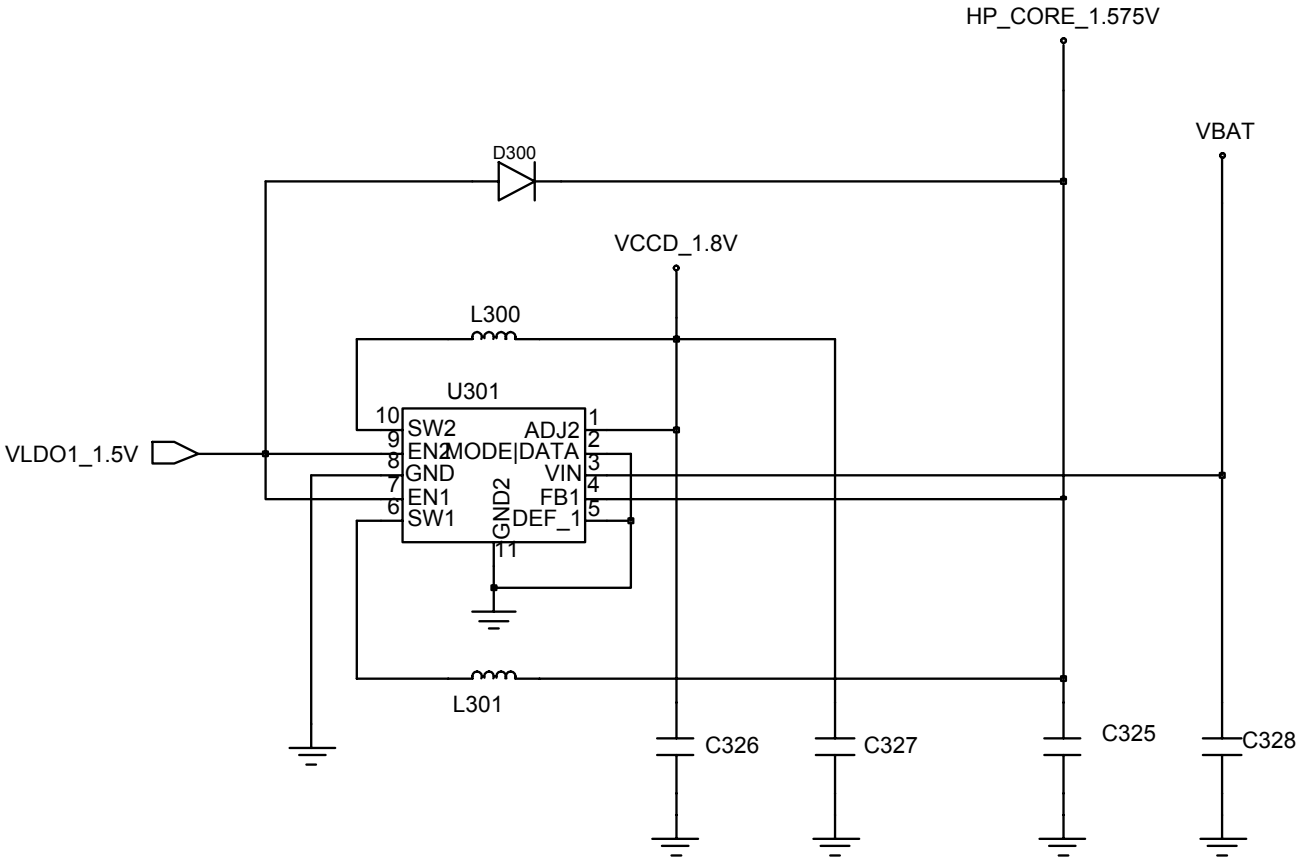

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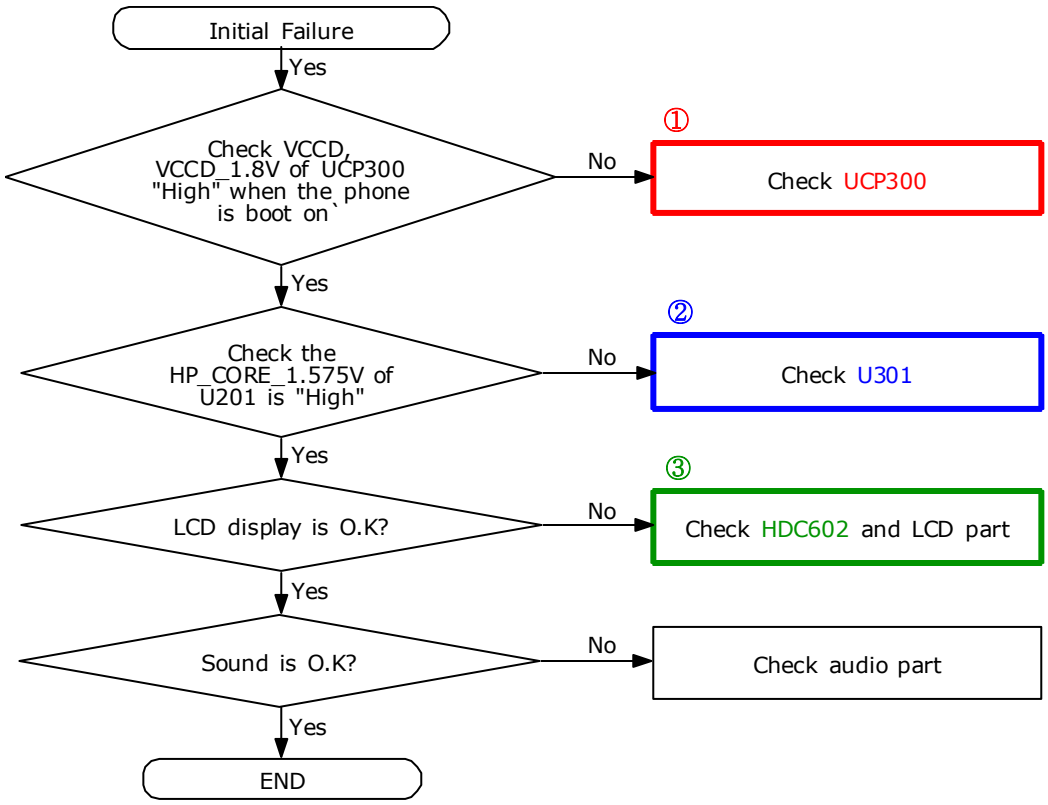
3-1-2. Initial



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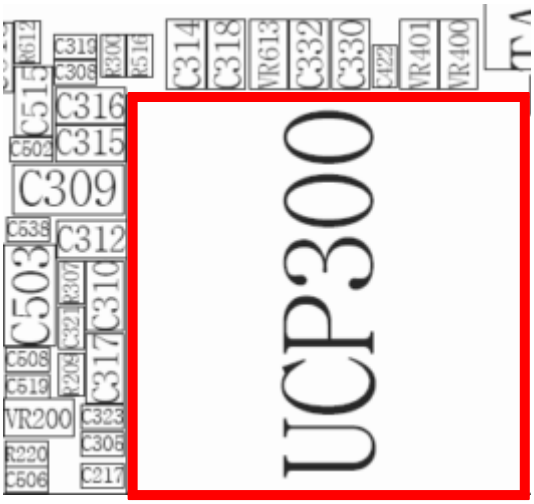

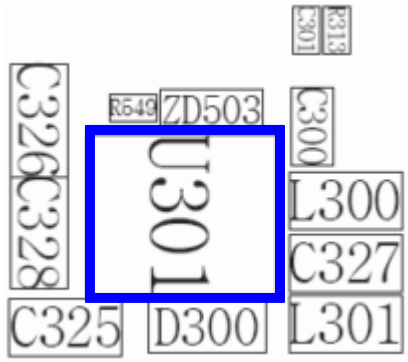

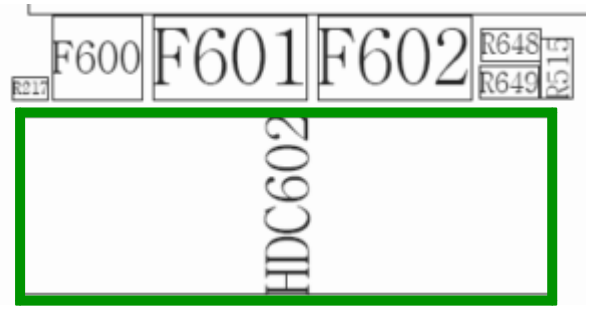

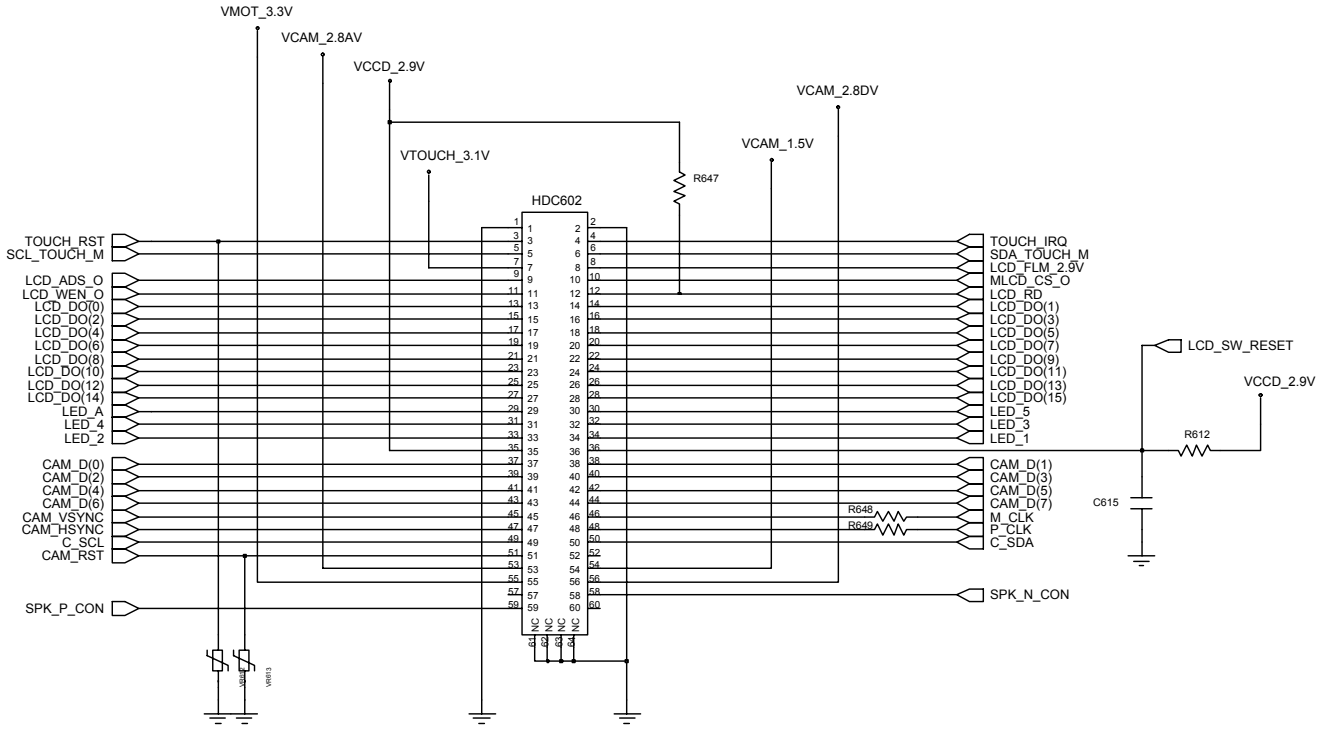

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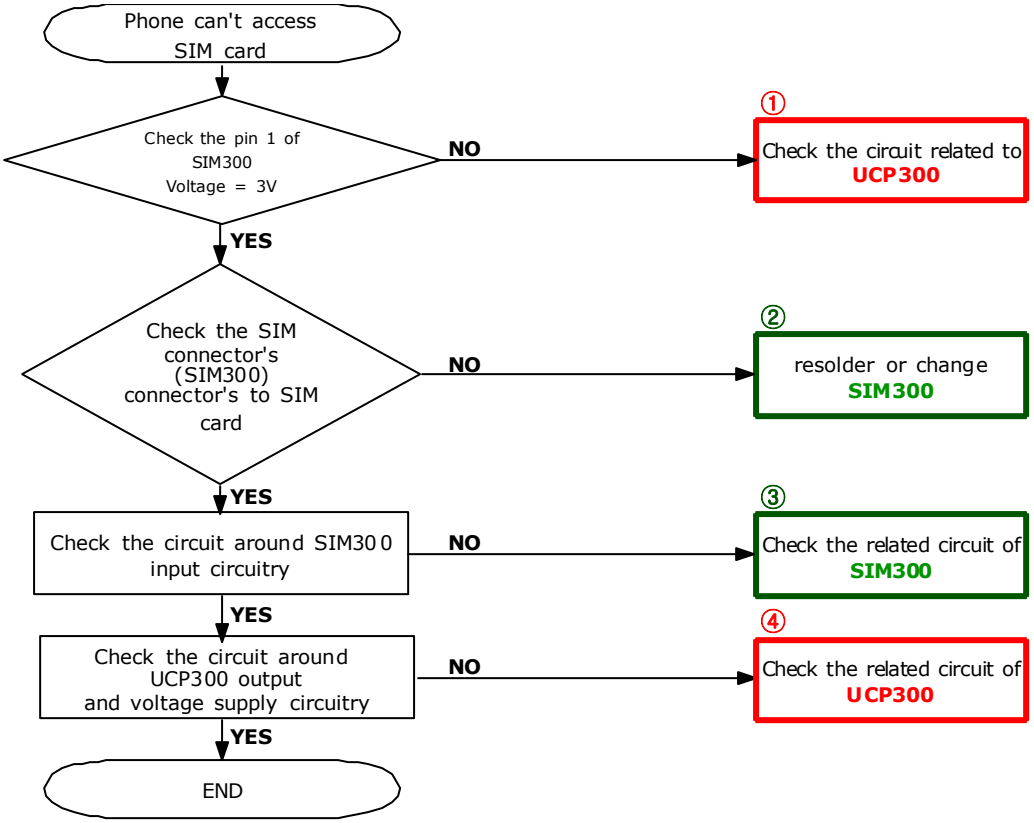
3-1-3. Sim Part



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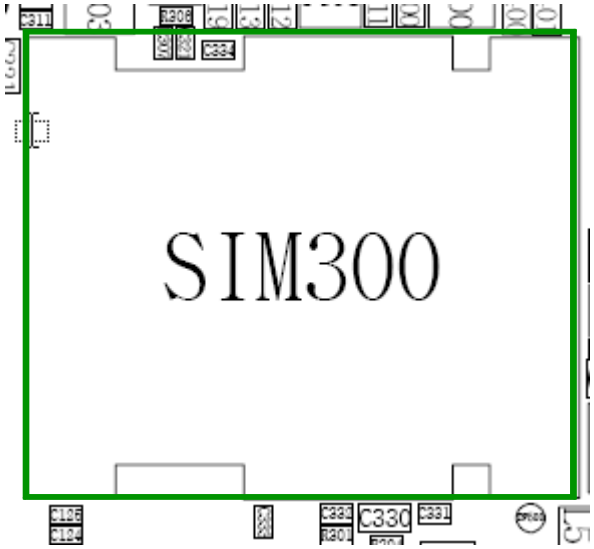

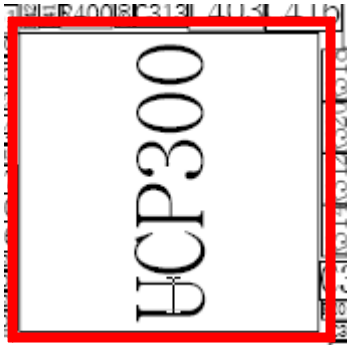

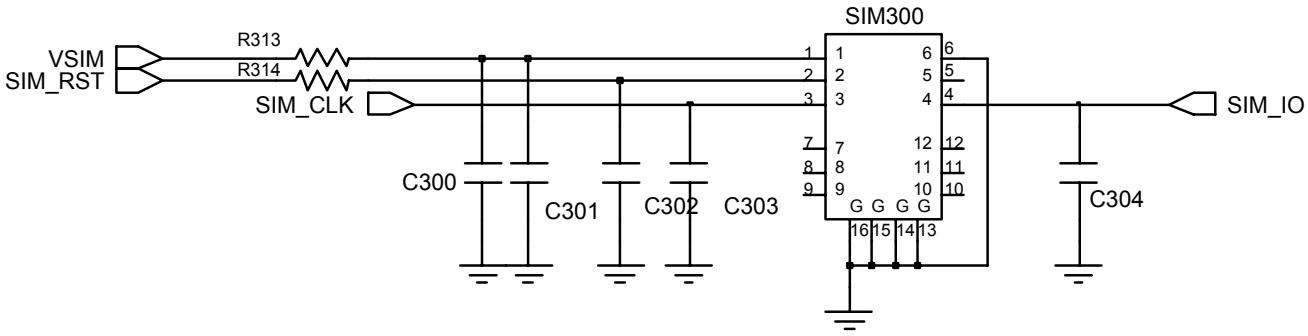

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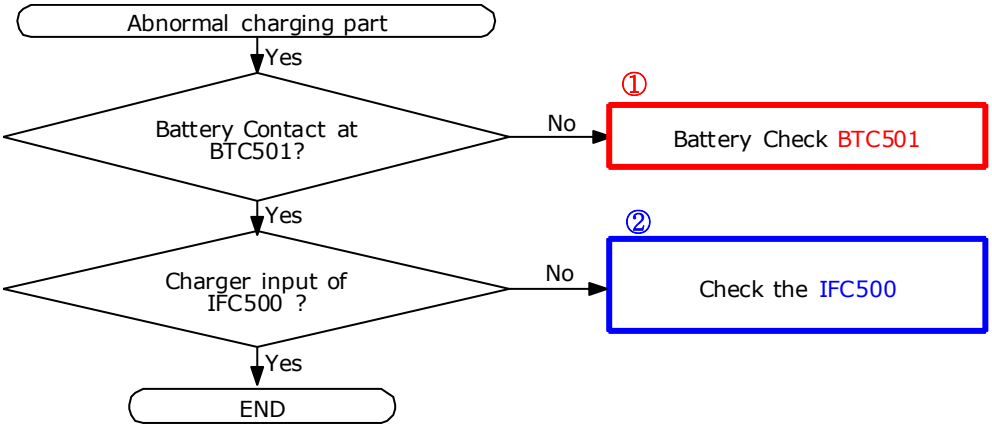

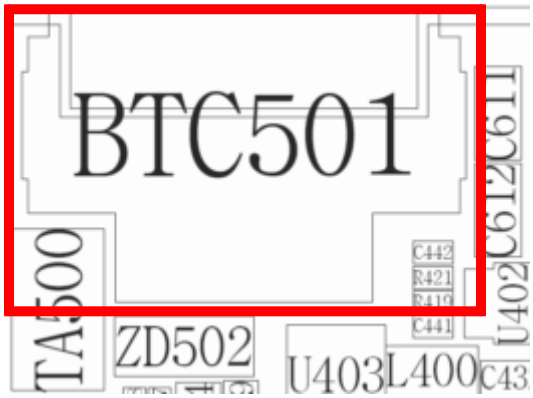

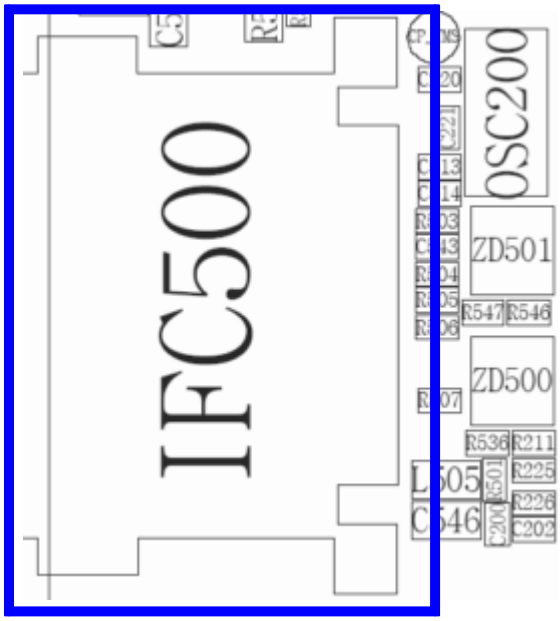

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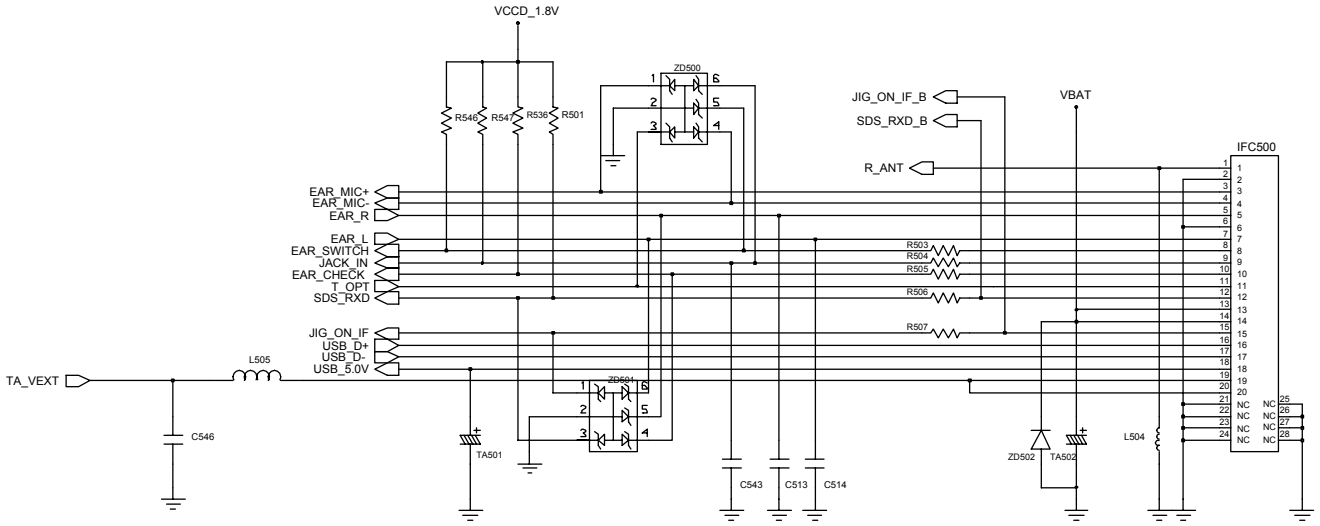

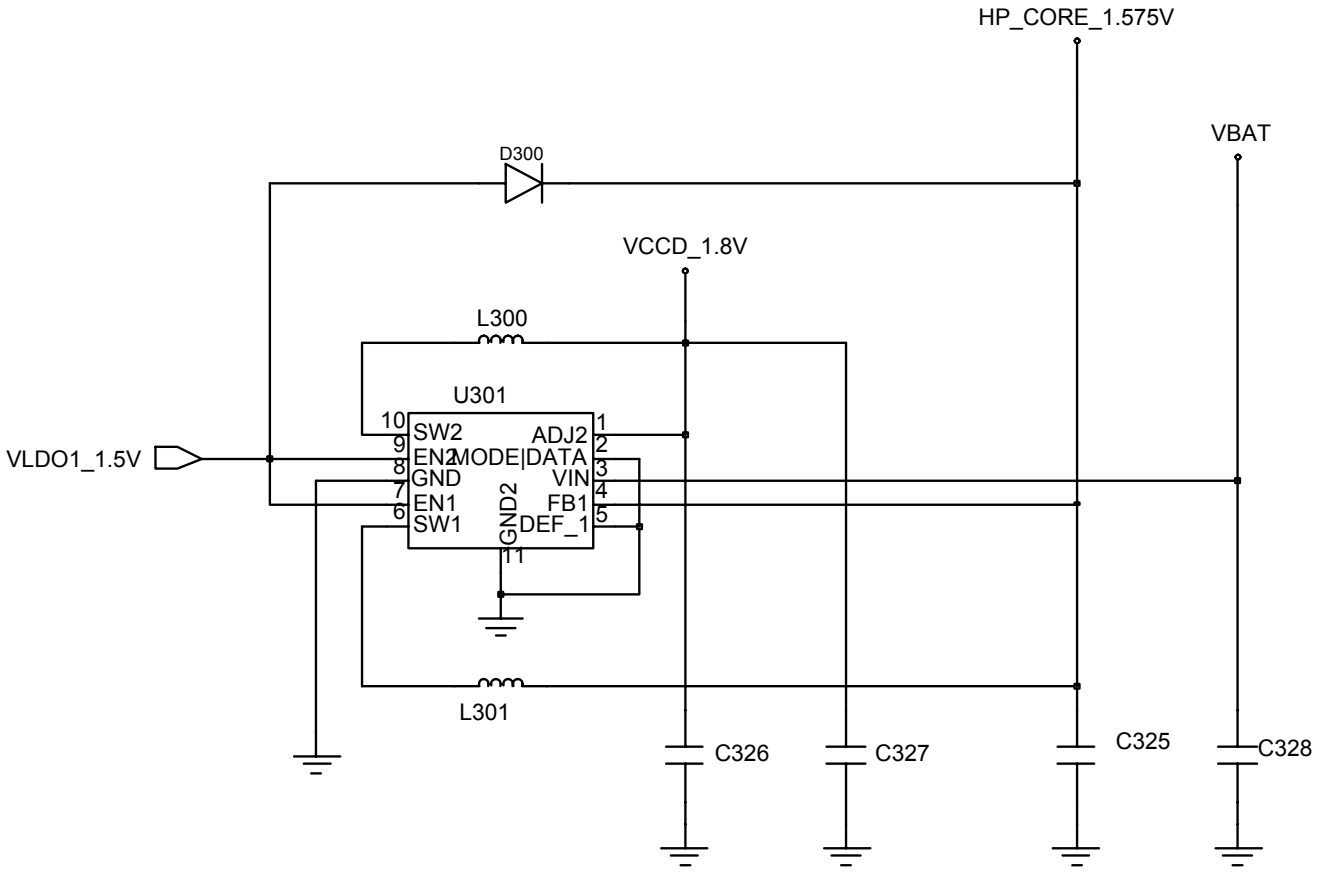

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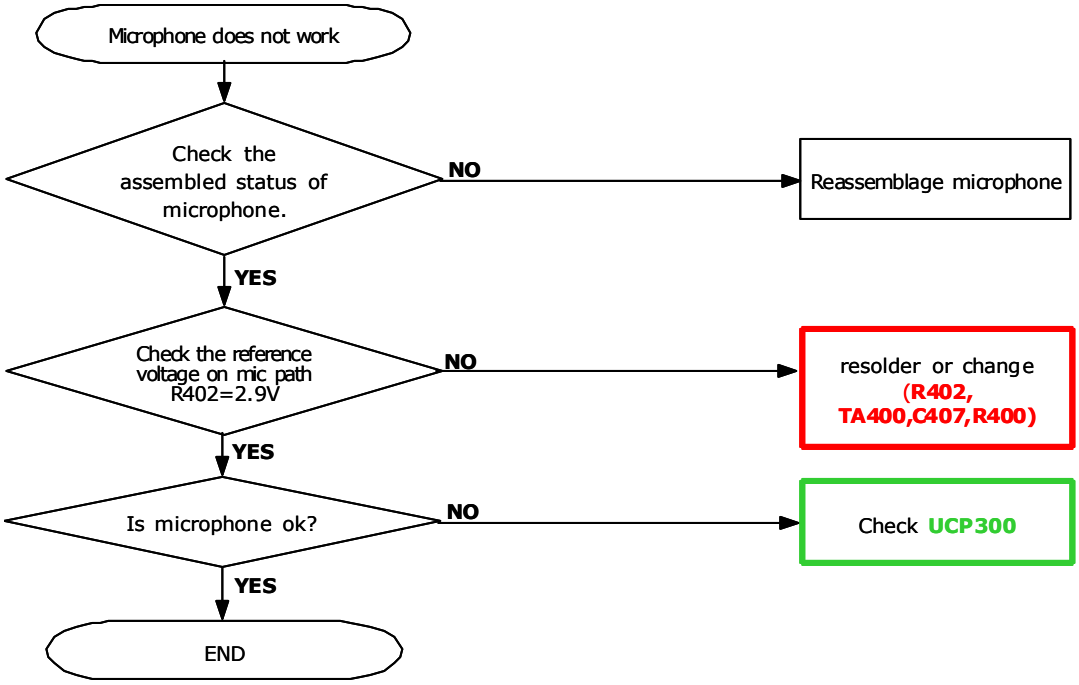
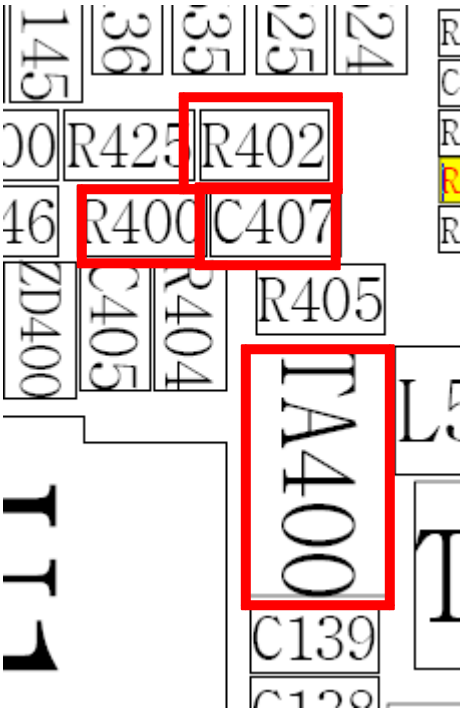
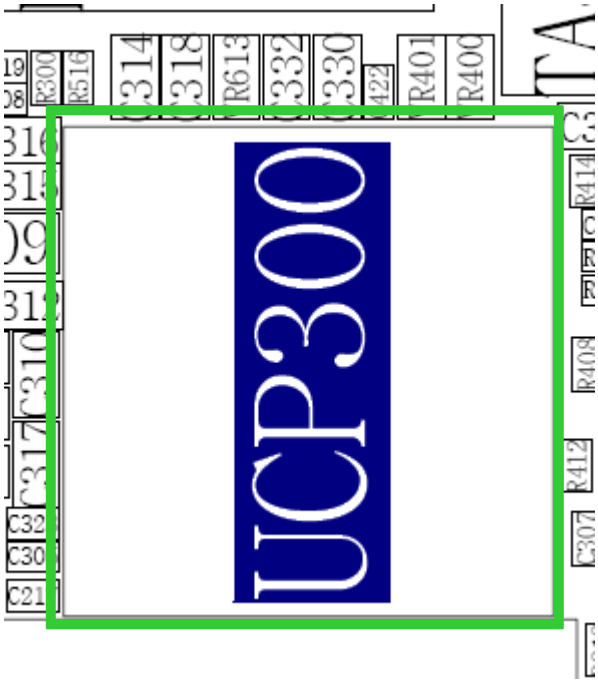
3-1-5. Microphone Part







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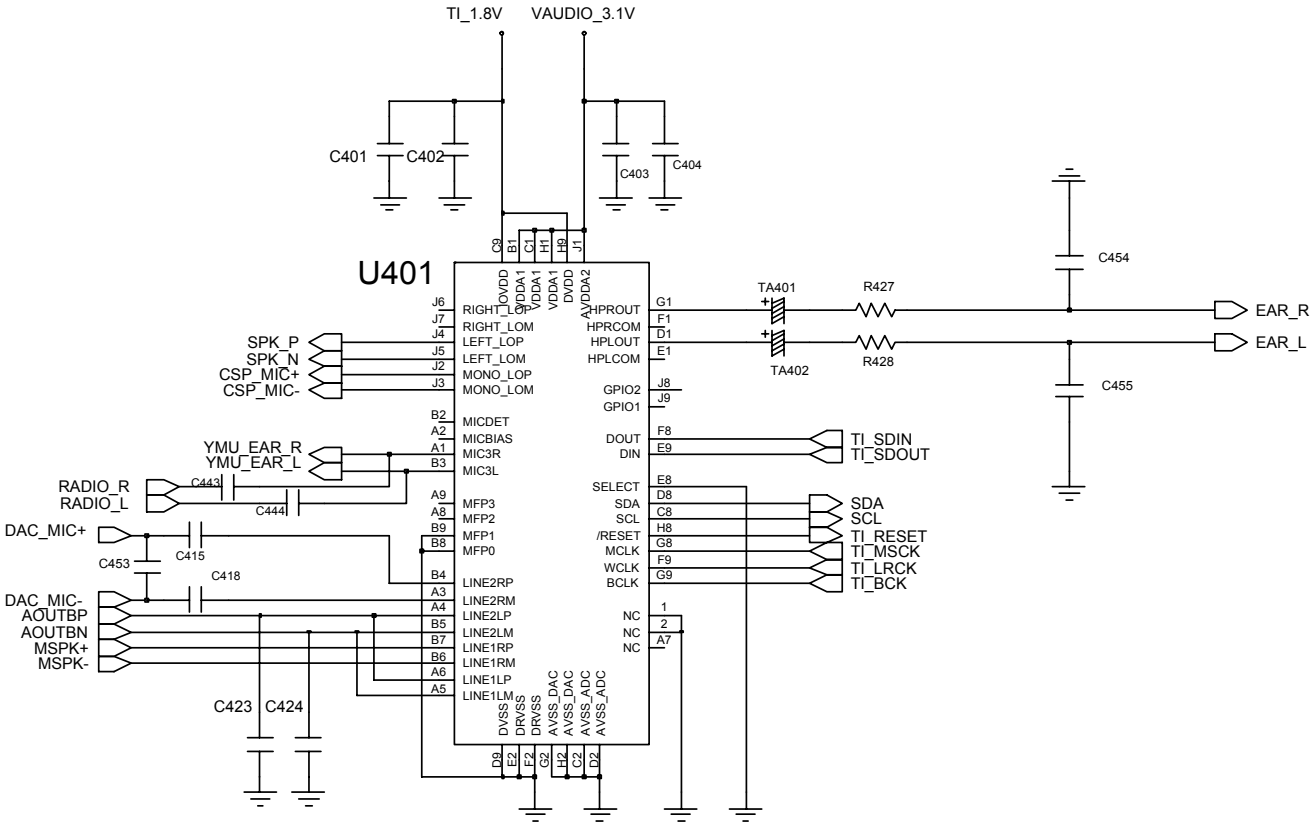

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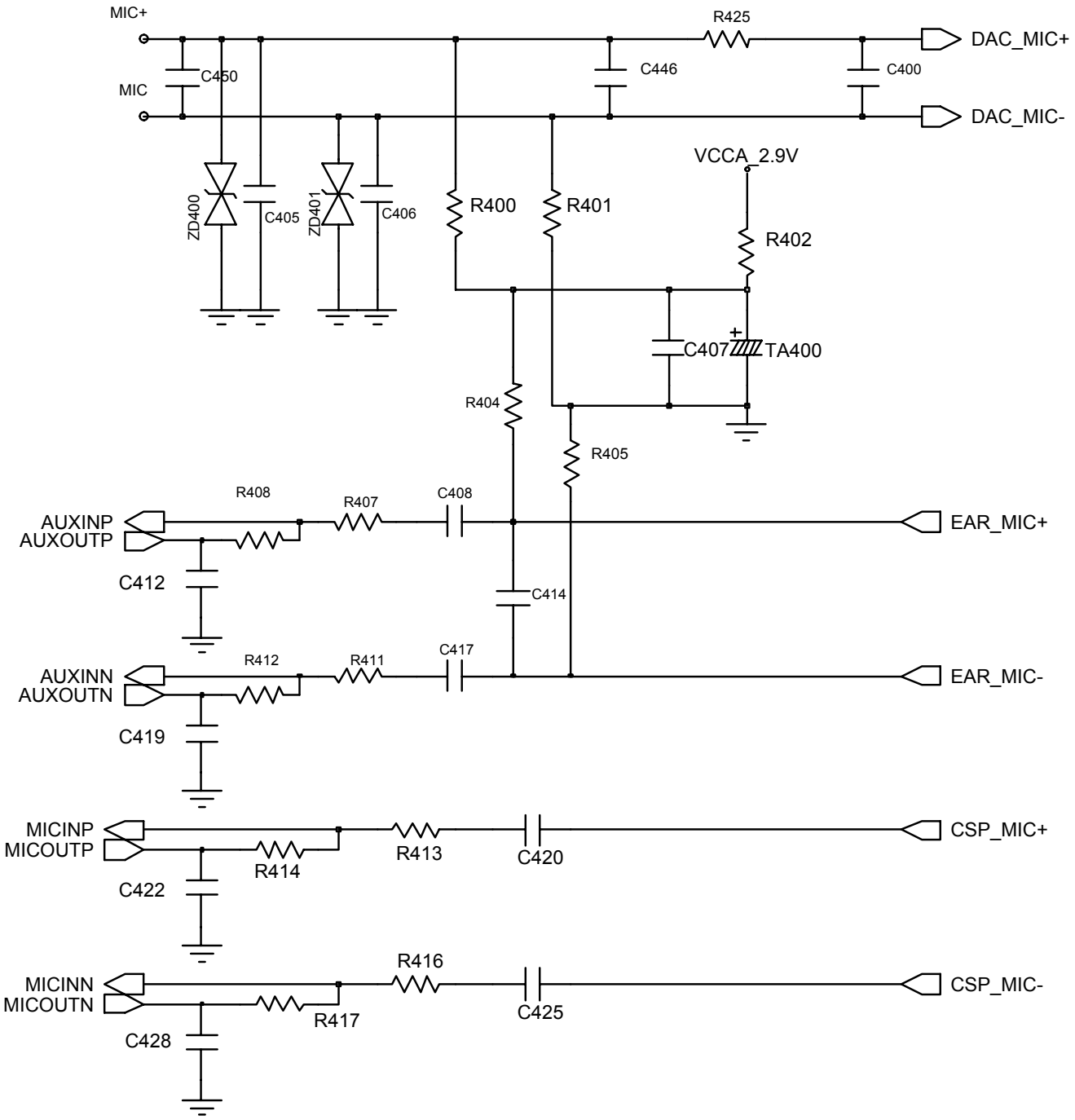

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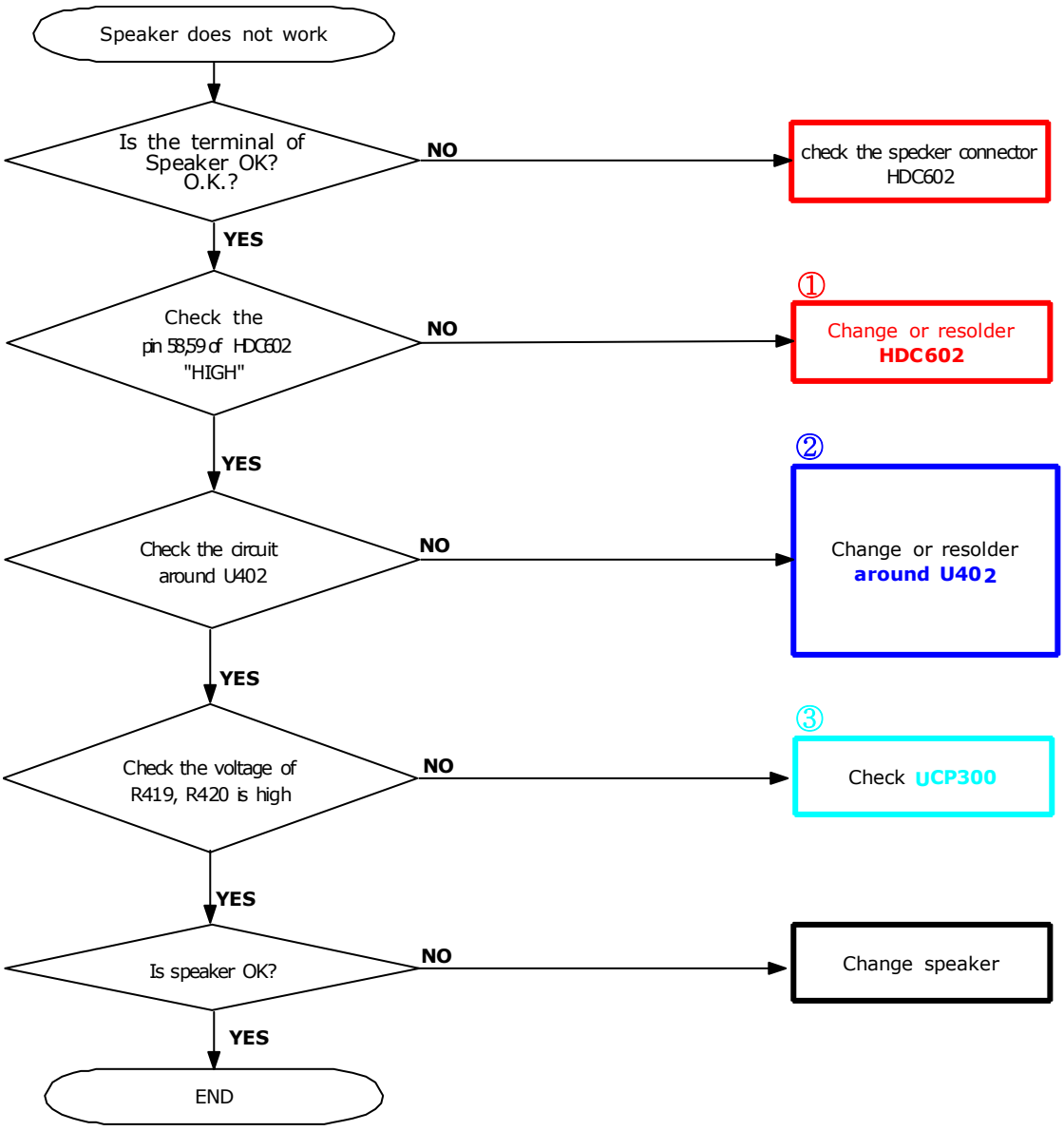
3-1-6. Speaker Part



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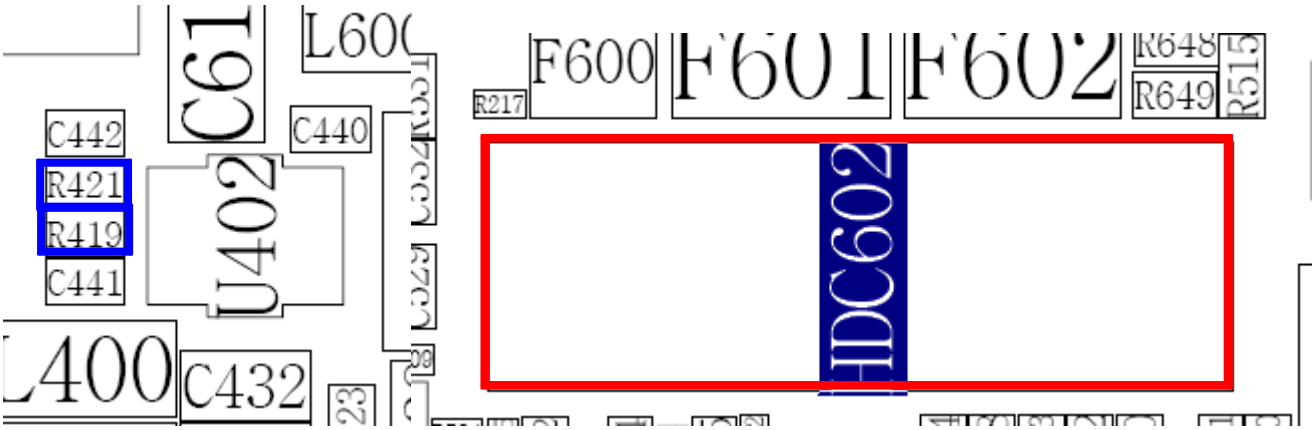

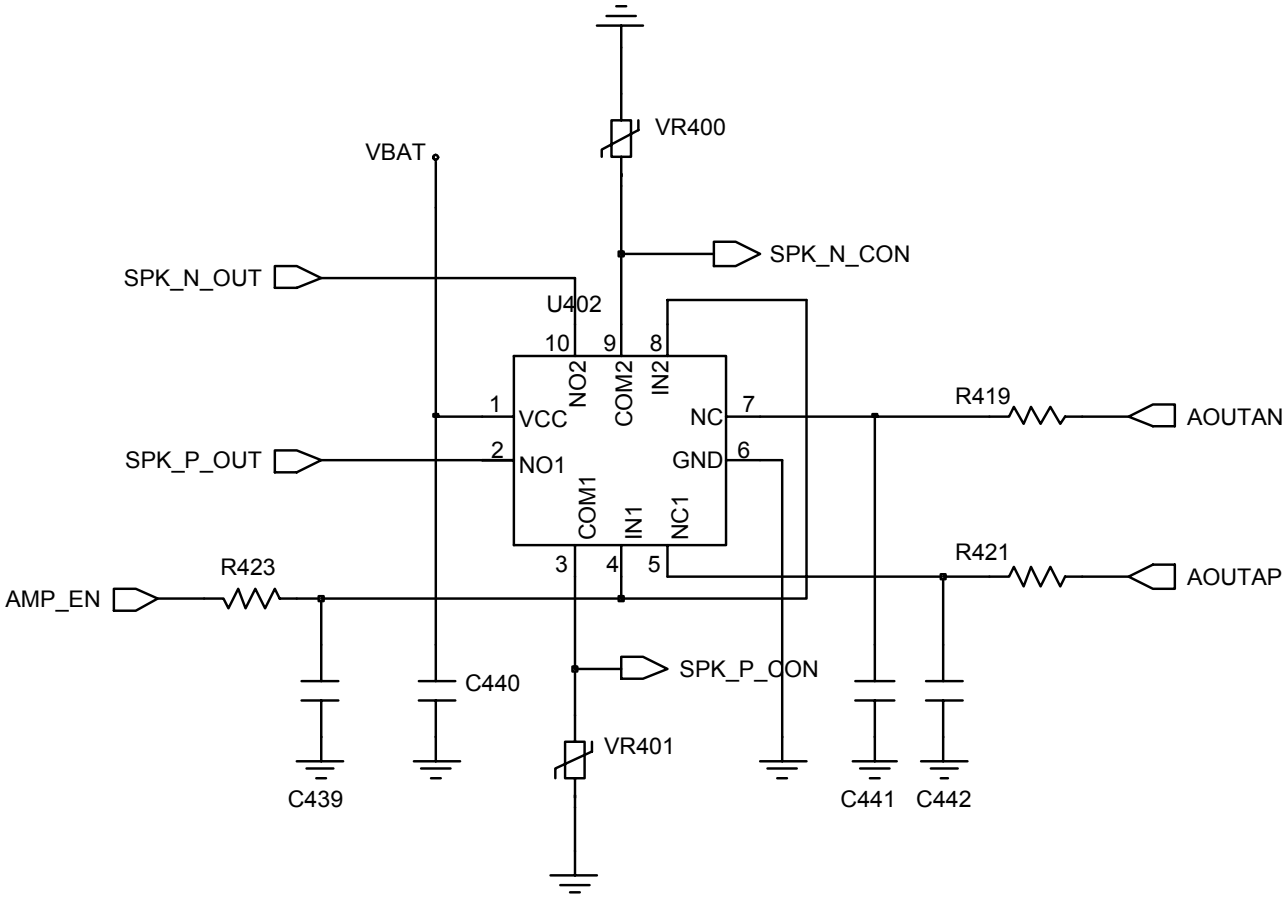

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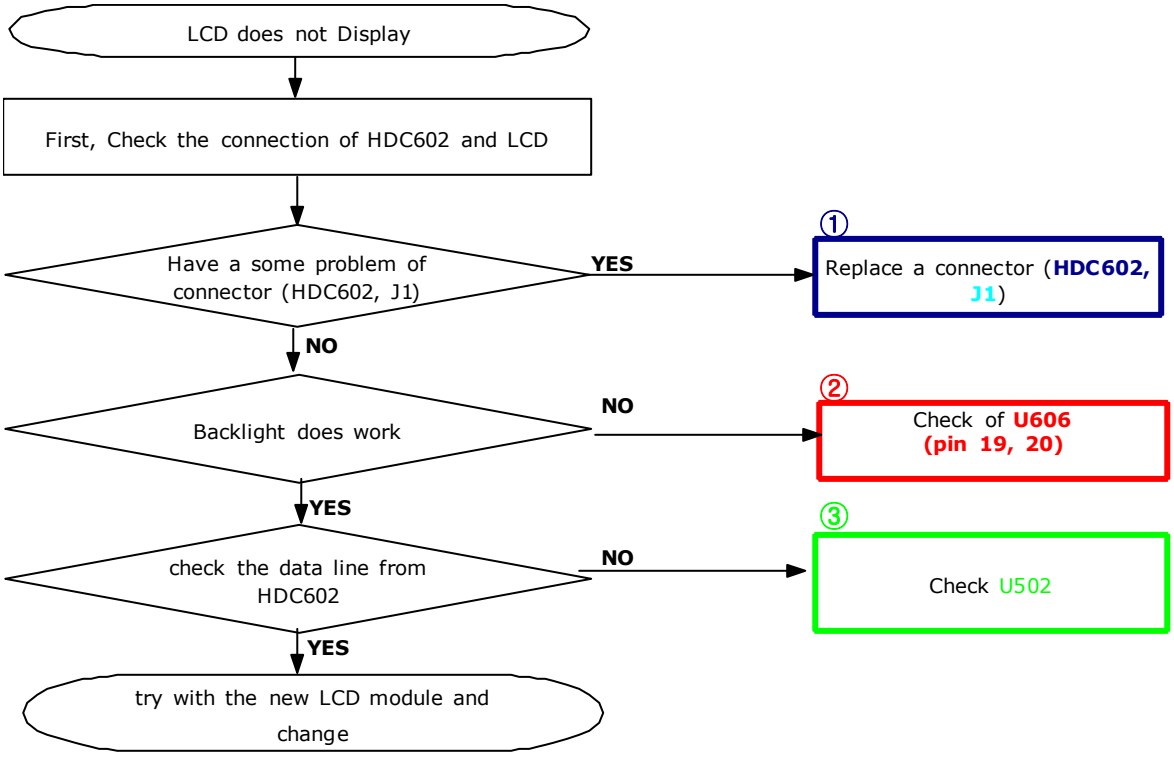
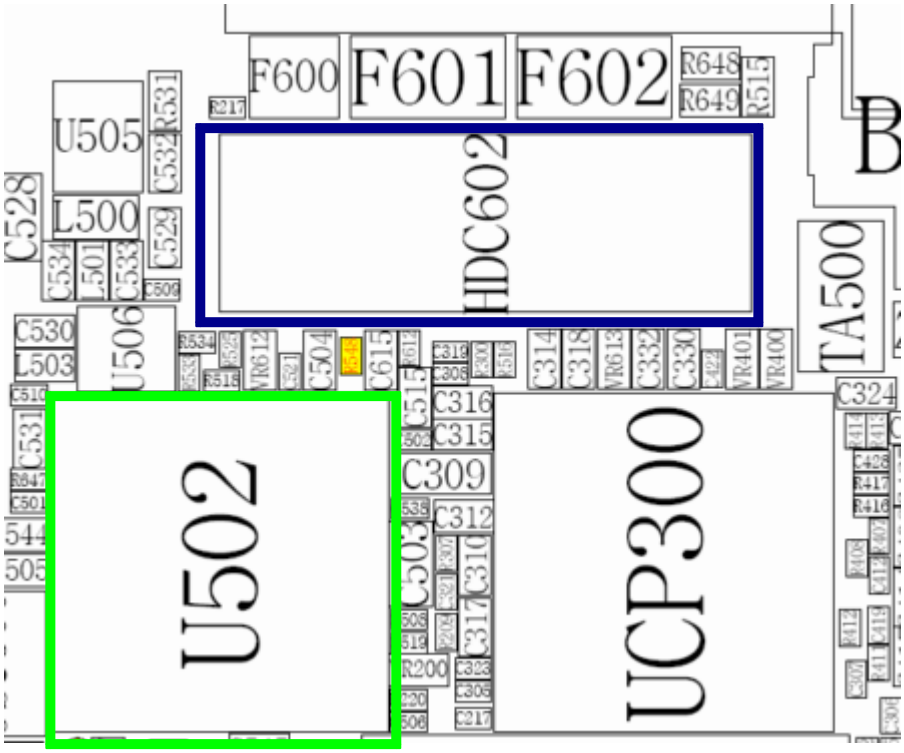
3-1-7. LCD





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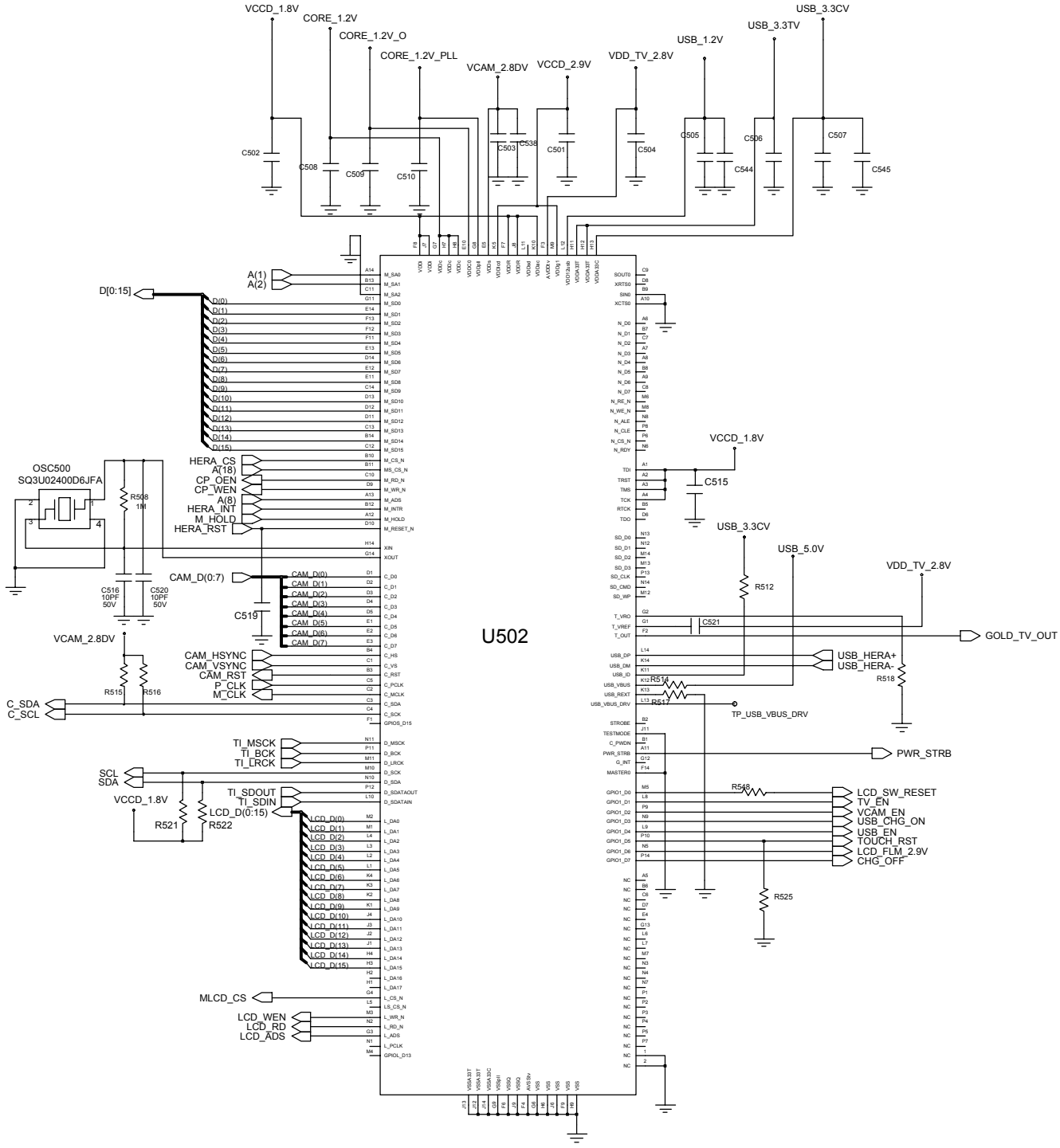

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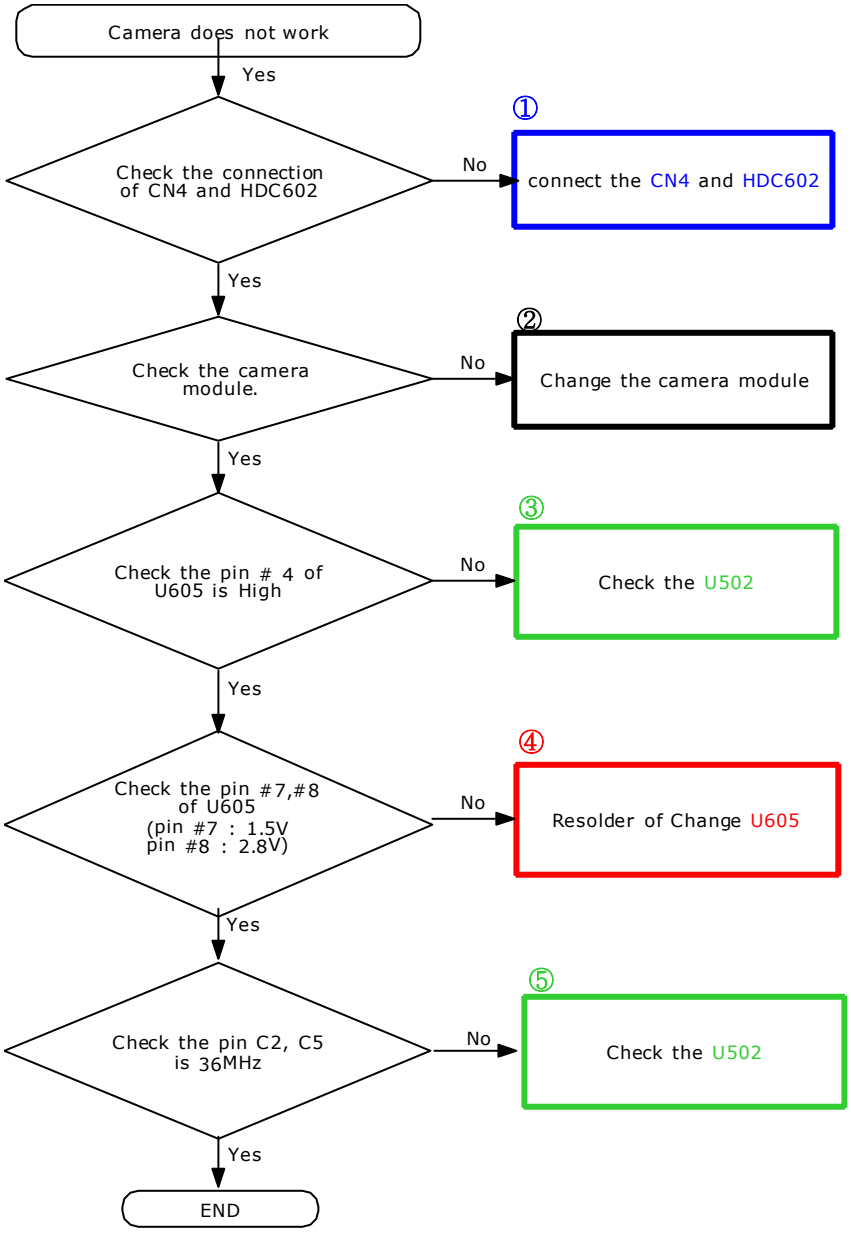
3-1-8. Camera



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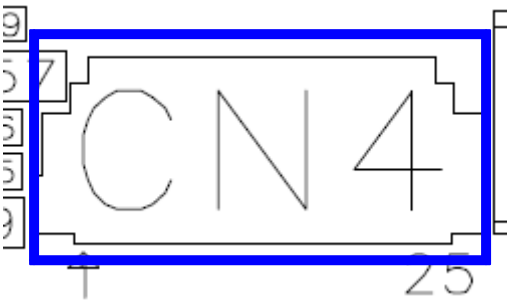

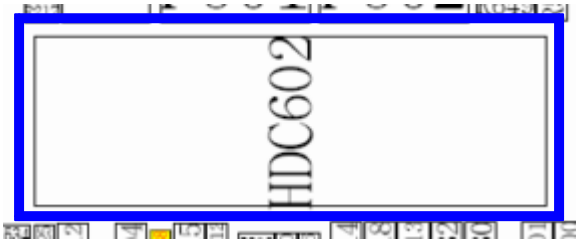

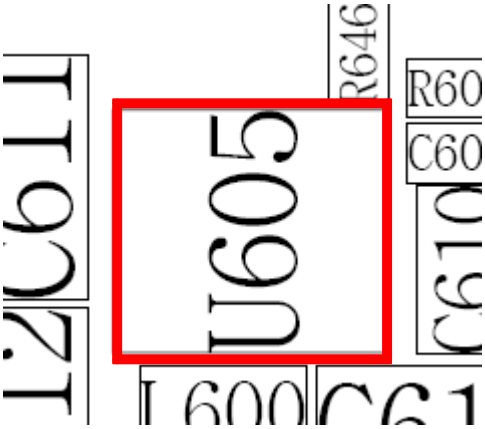

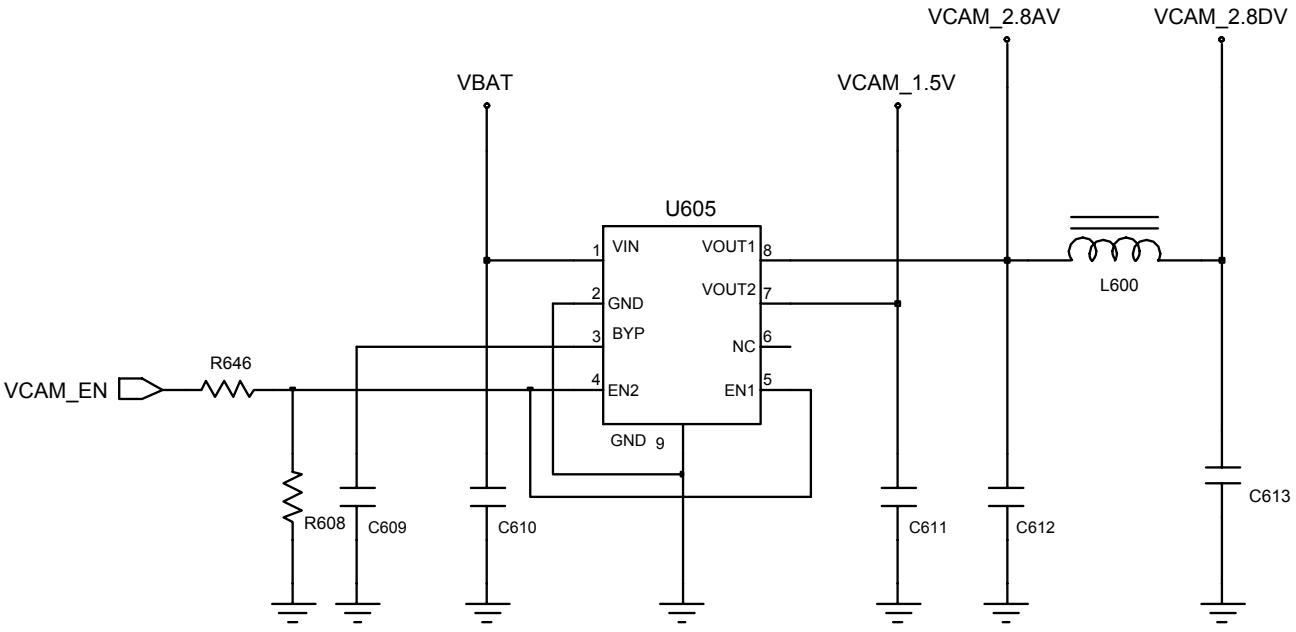

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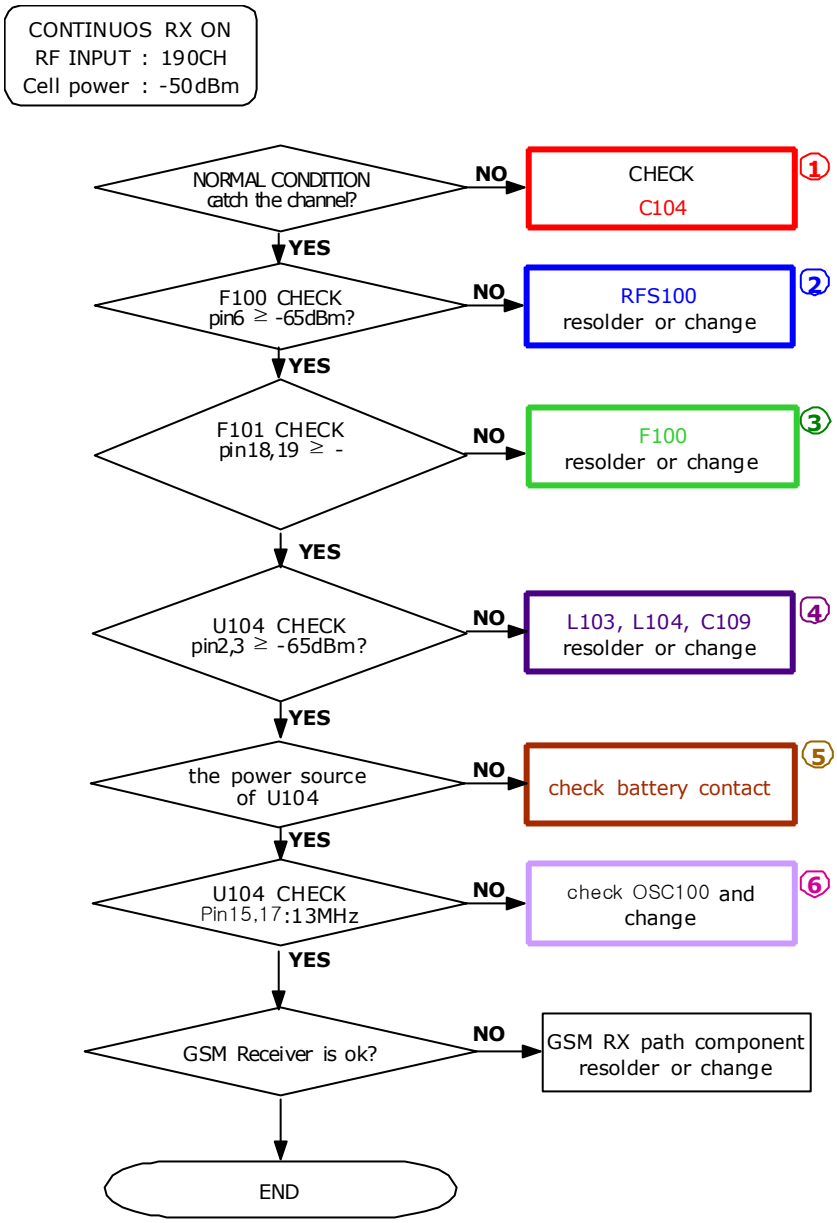
3-2. RF

3-2-1. GSM850 Receiver



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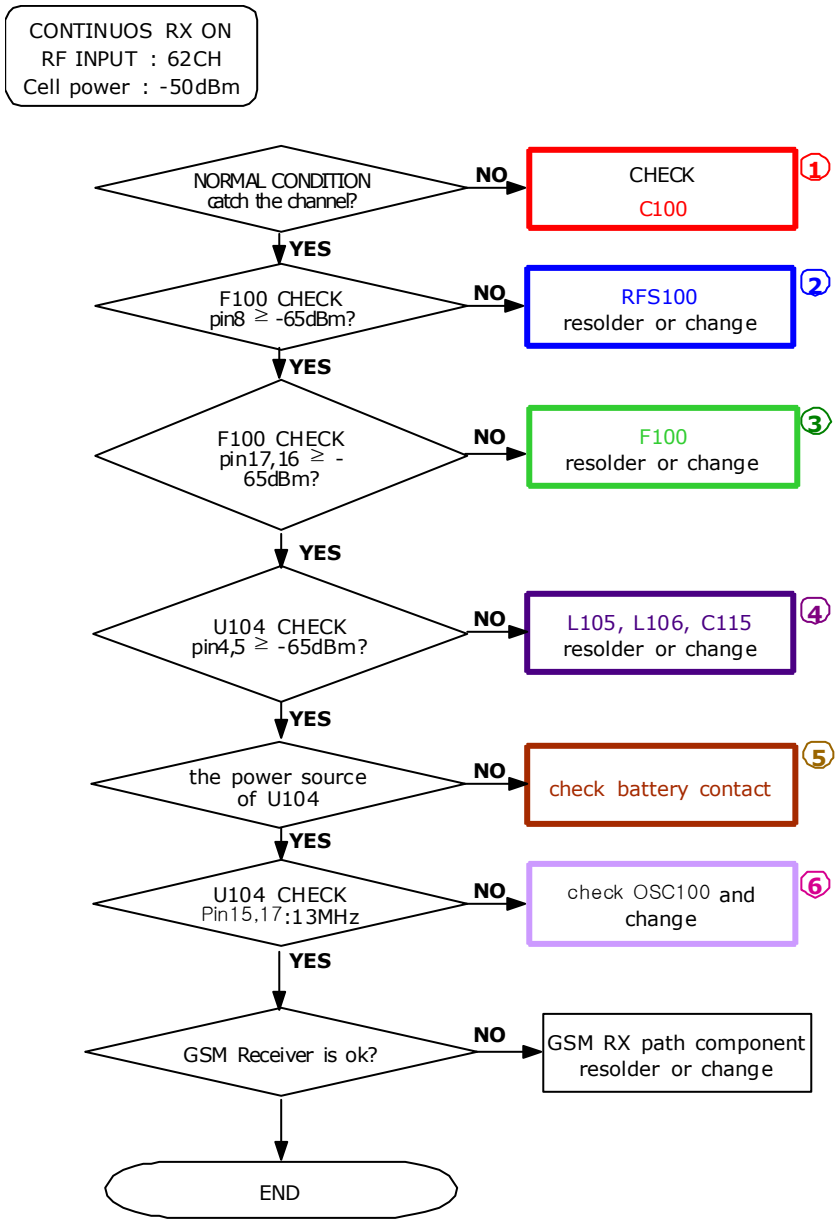
3-2-2. GSM900 Receiver



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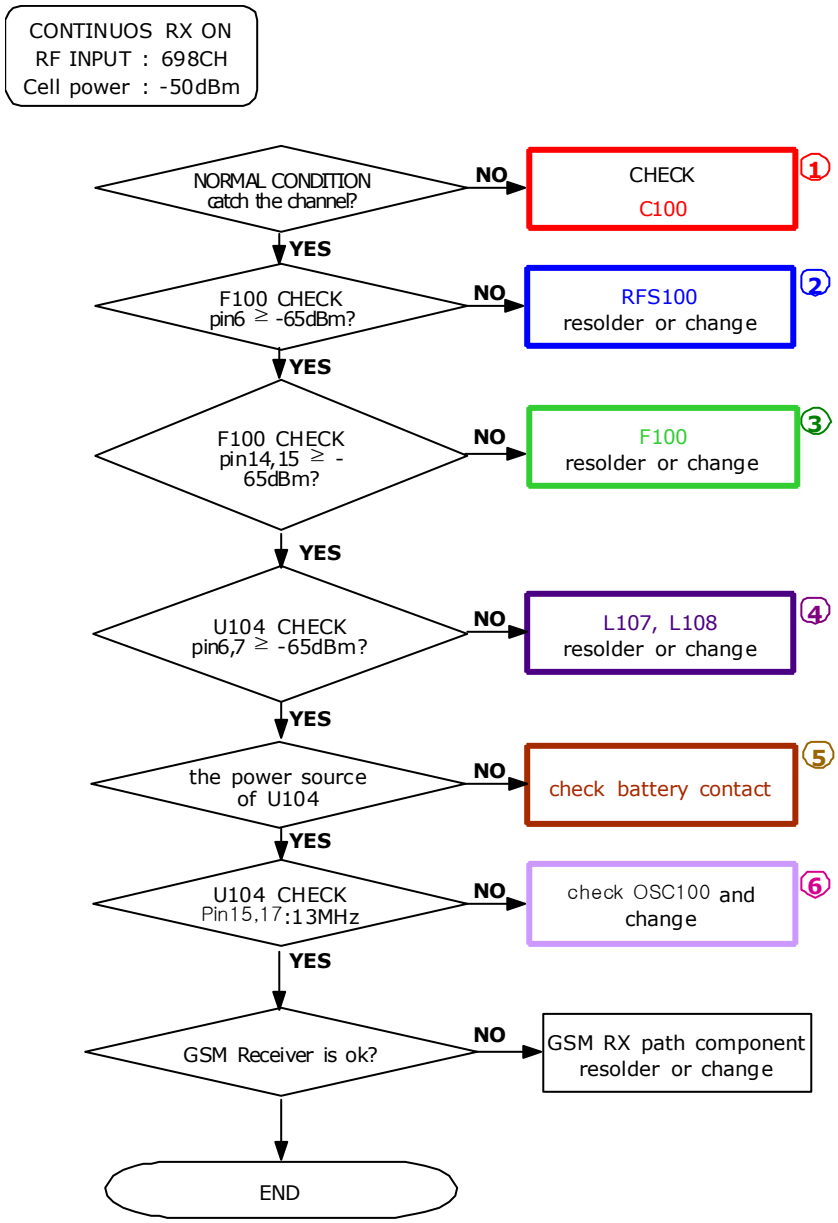
3-2-3. DCS Receiver



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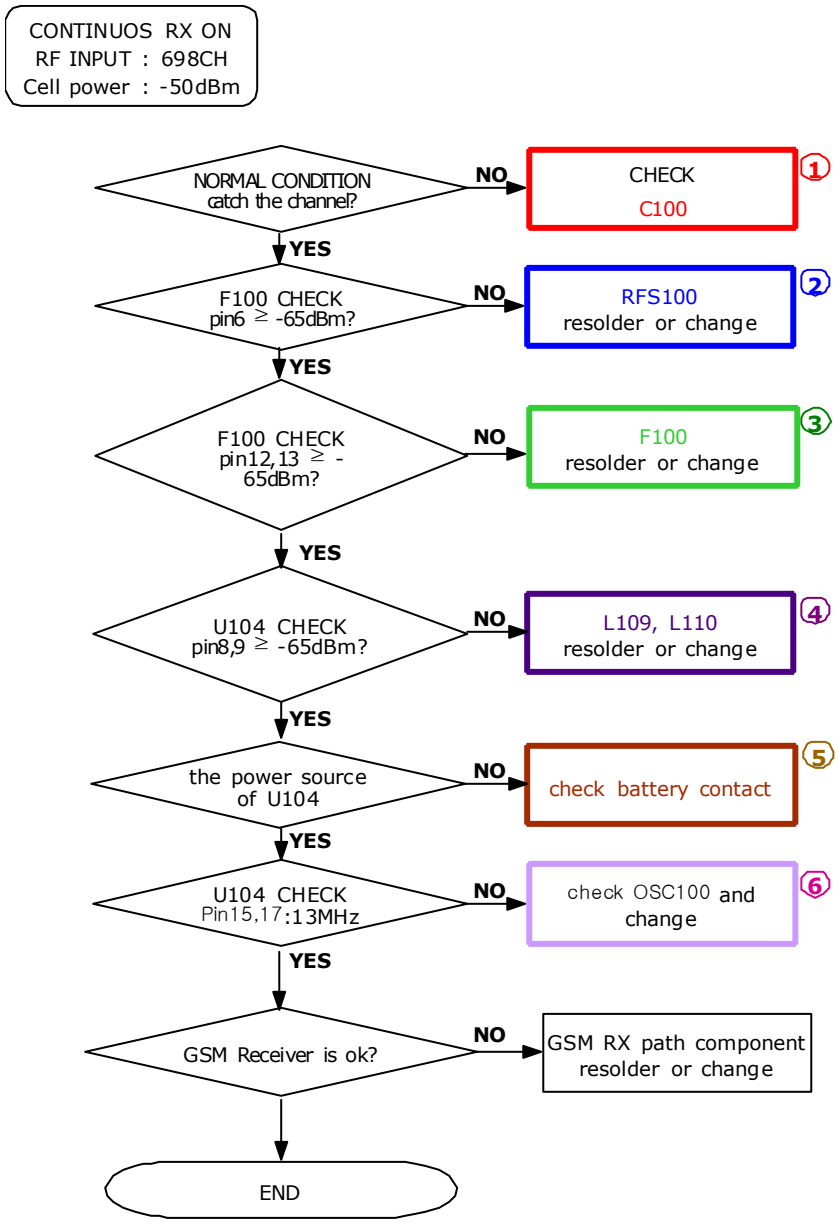
3-2-4. PCS Receiver



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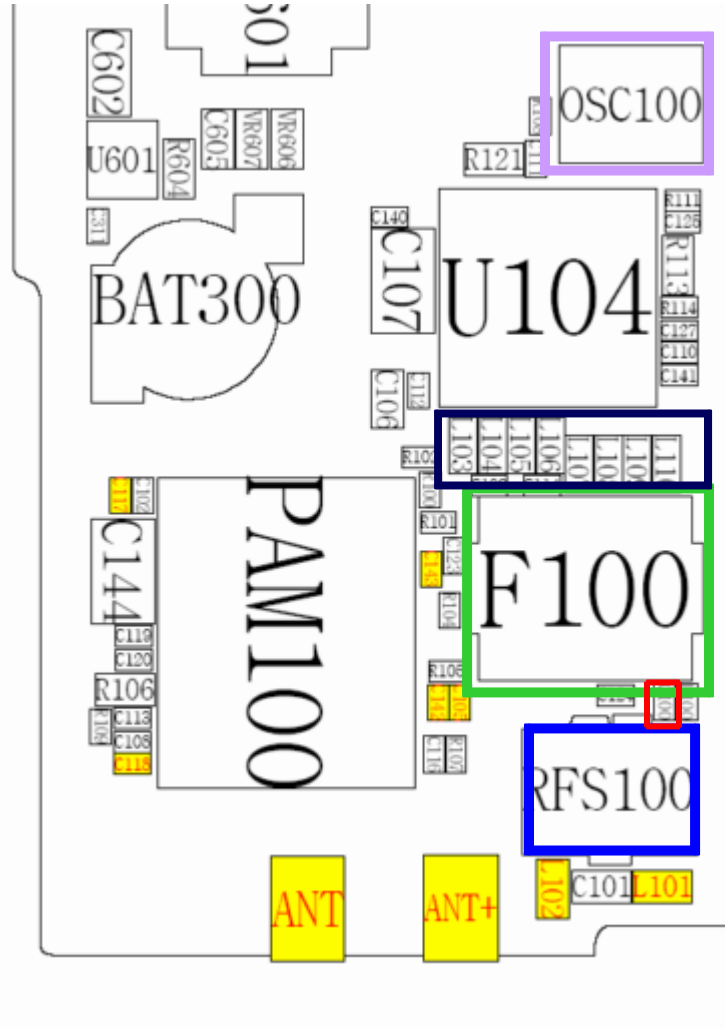

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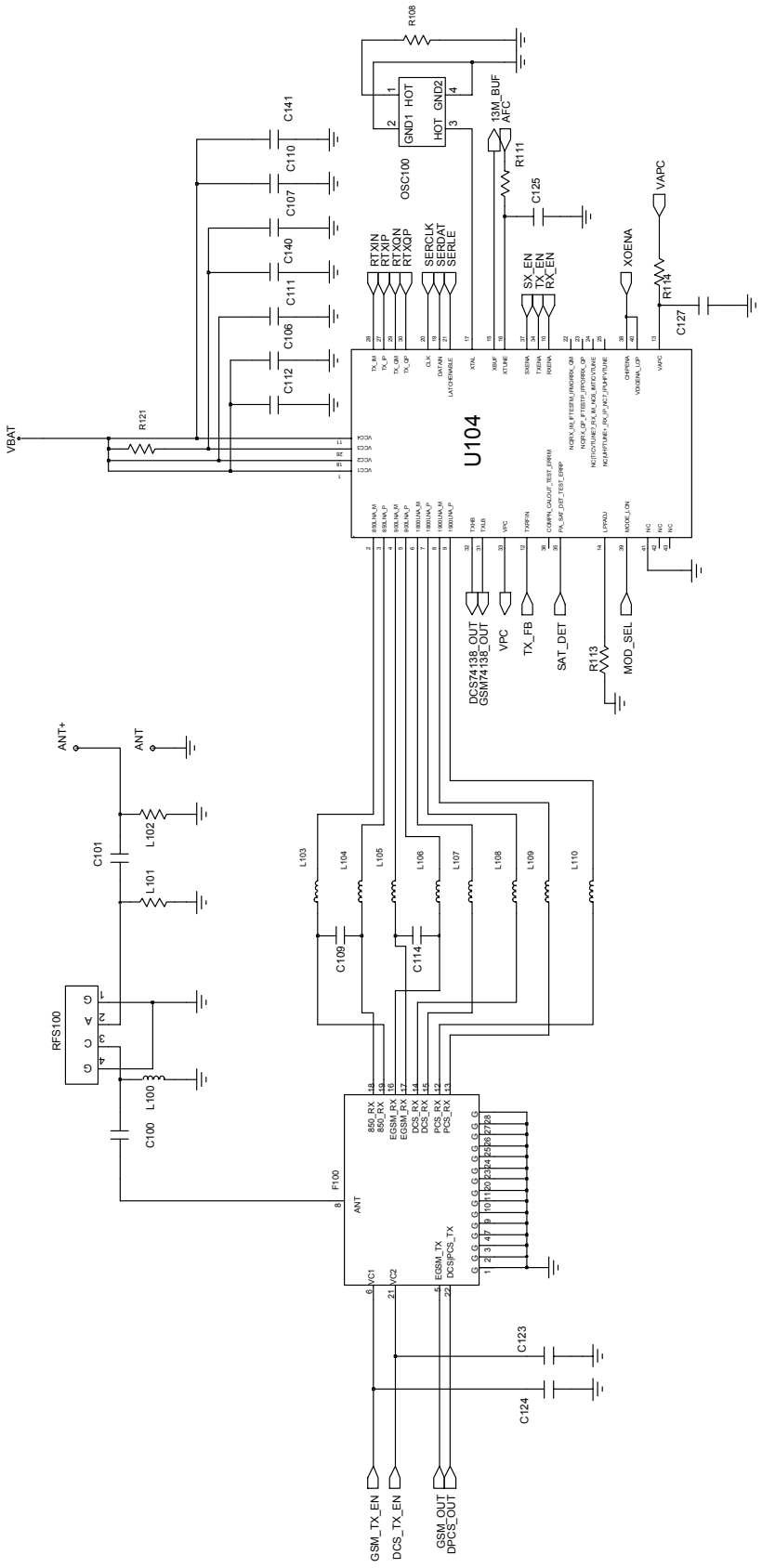

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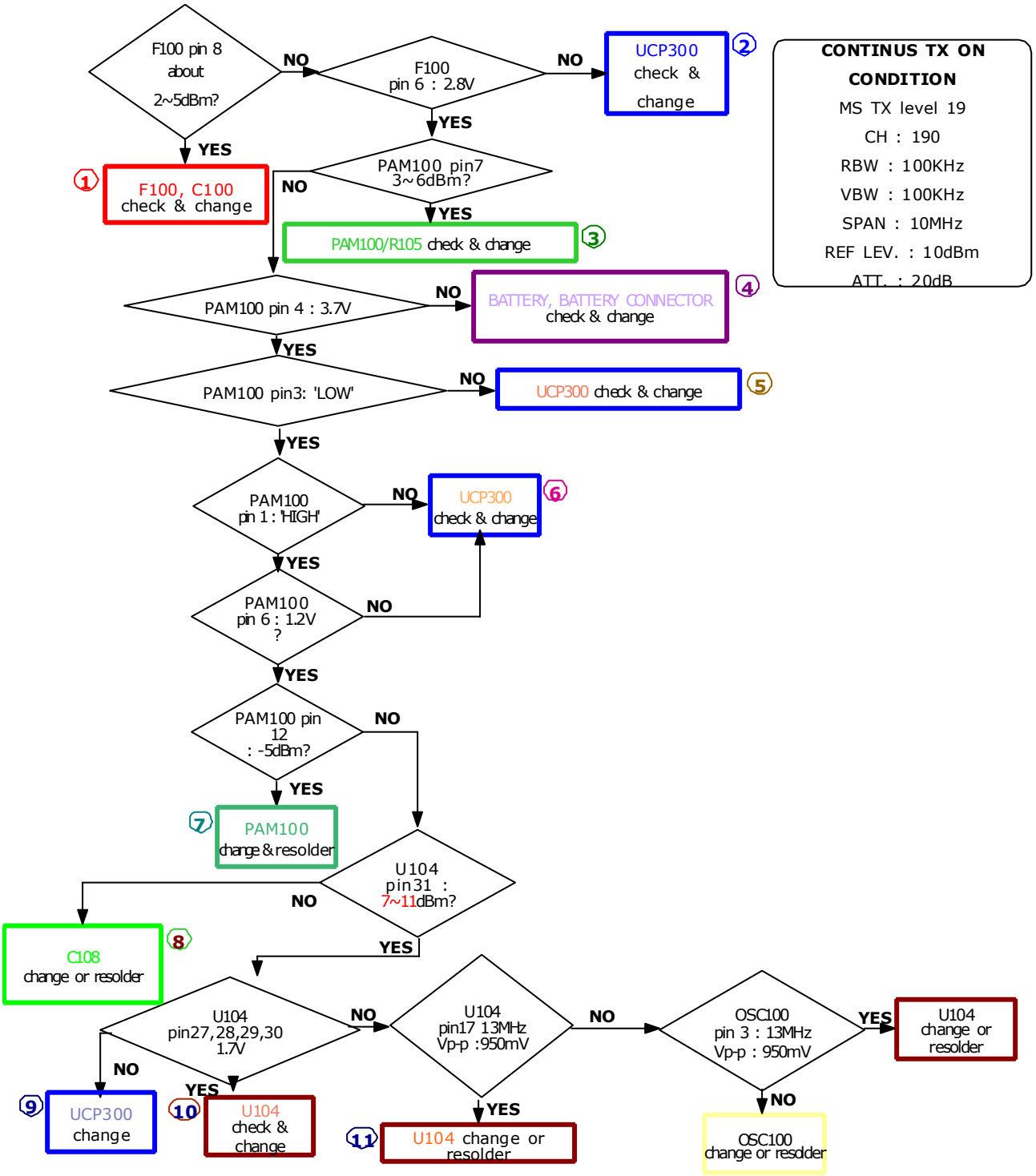
3-2-5. GSM850 Transmitter



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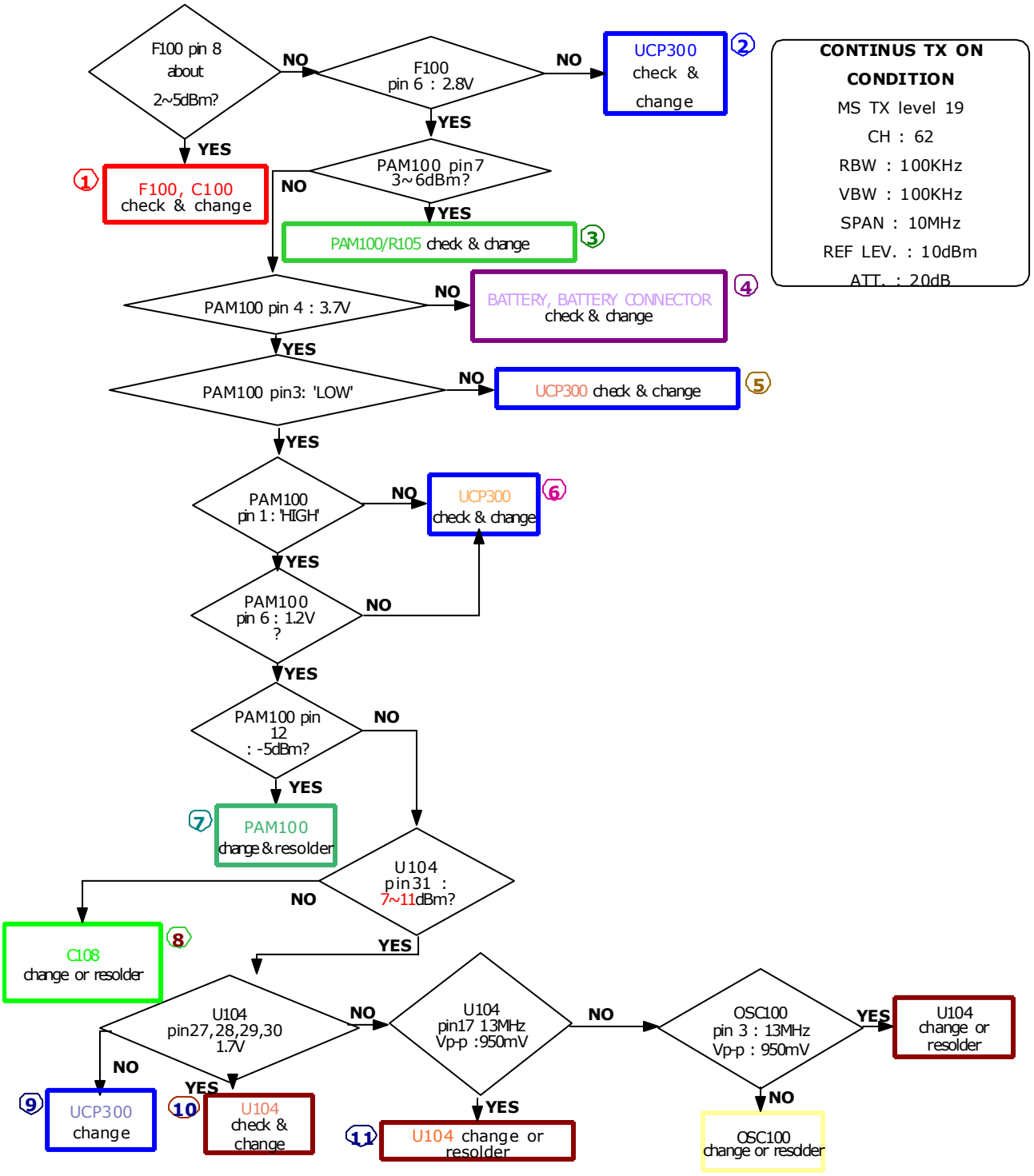
3-2-6. GSM900 Transmitter



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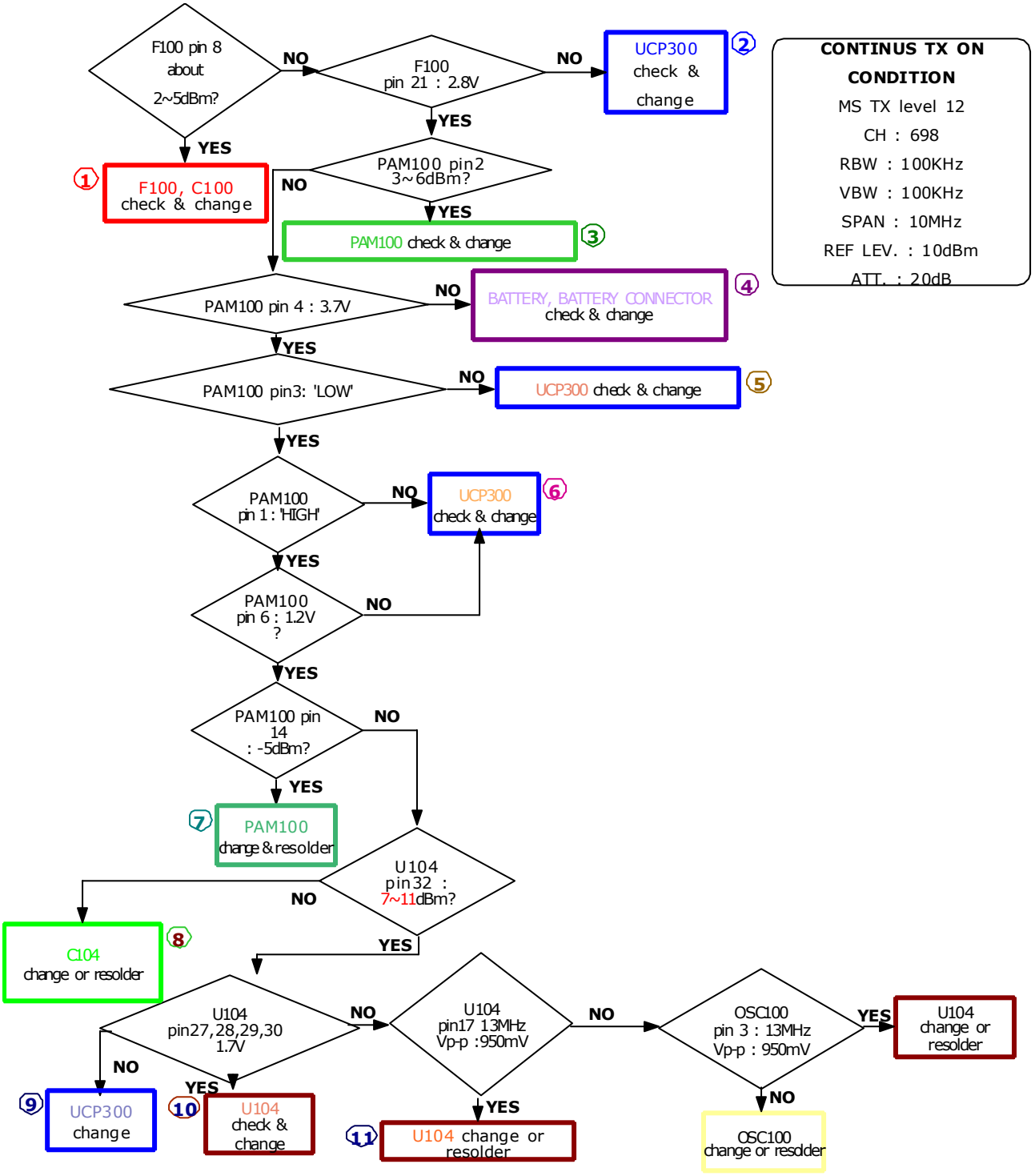
3-2-7. DCS Transmitter



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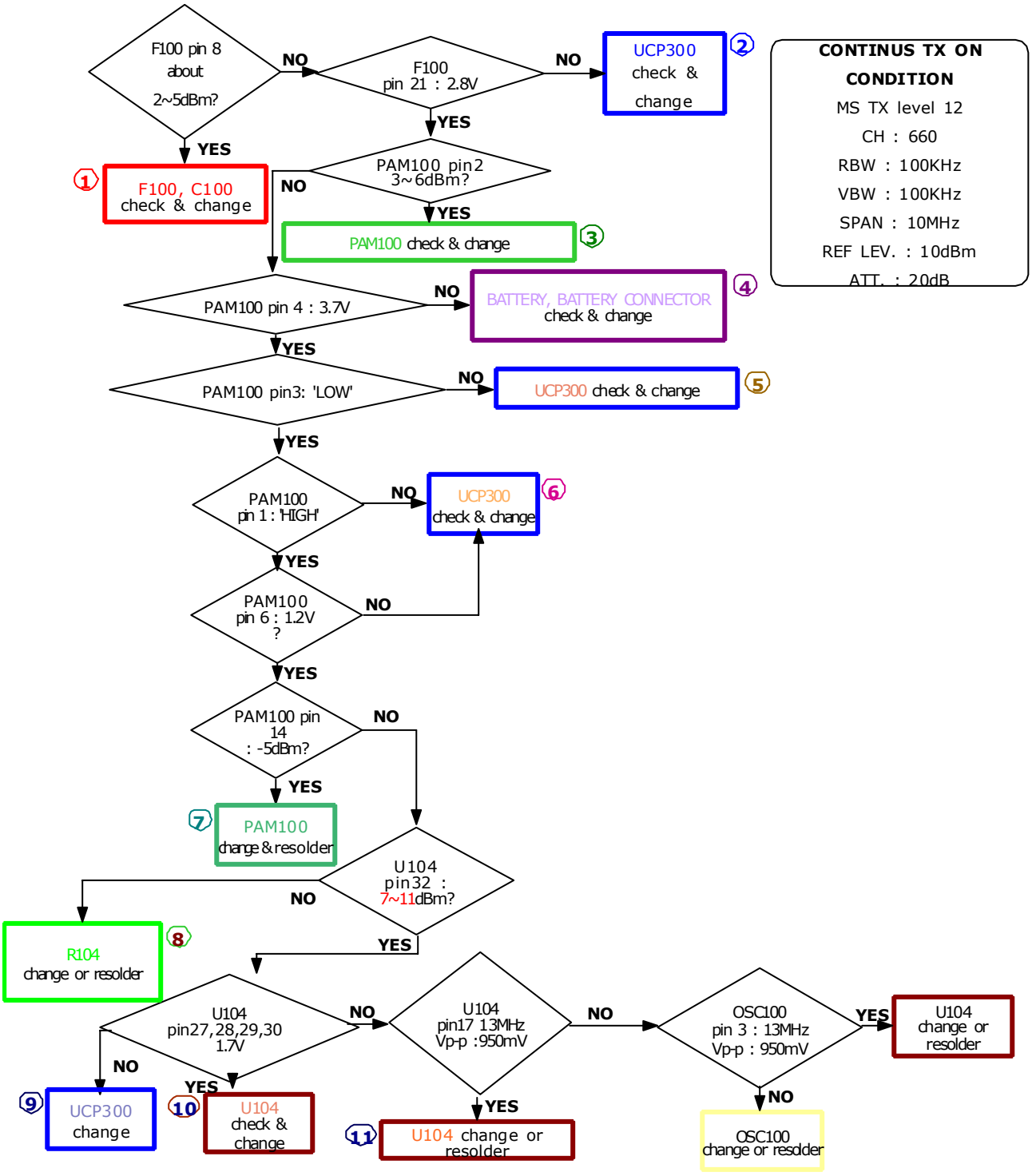
3-2-8. PCS Transmitter



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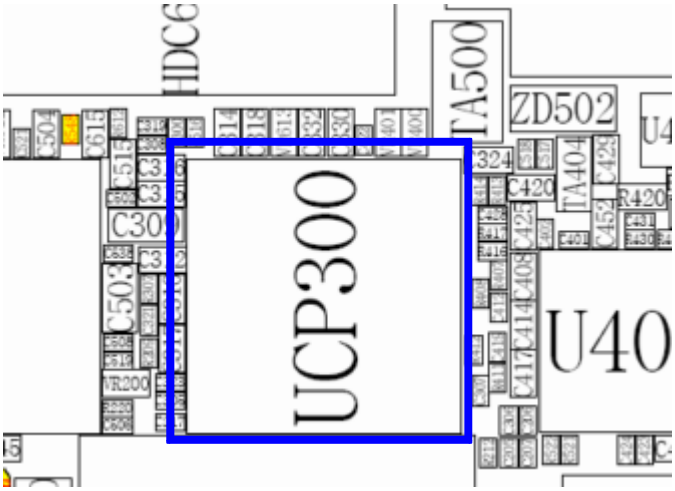

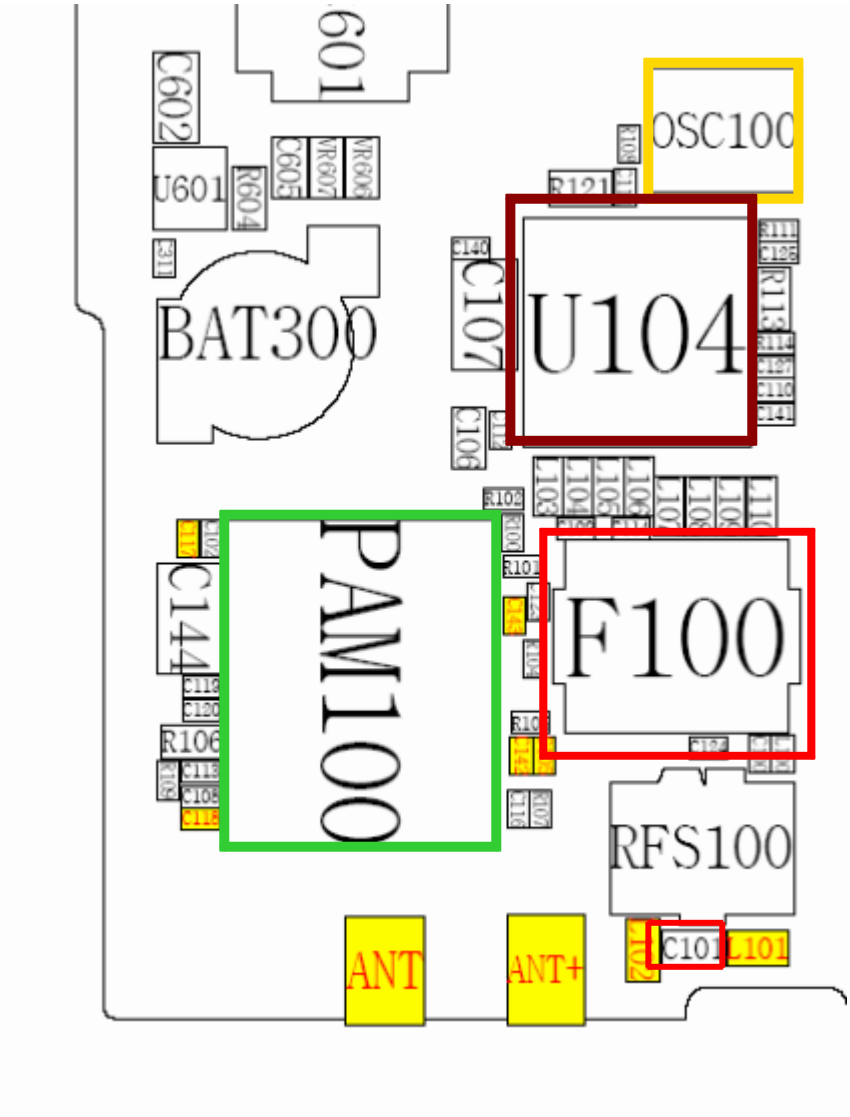

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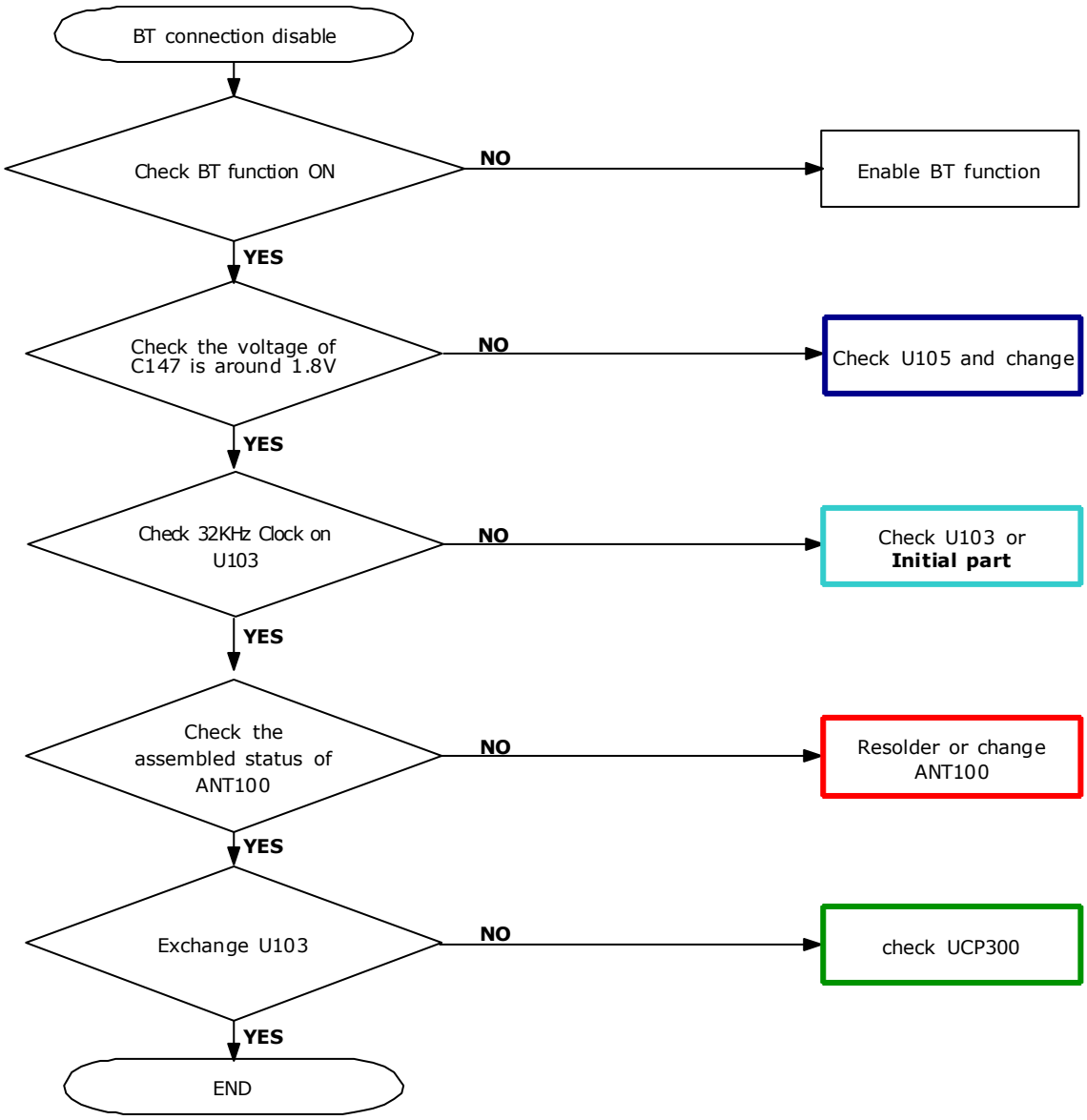
3-2-9. Bluetooth Part



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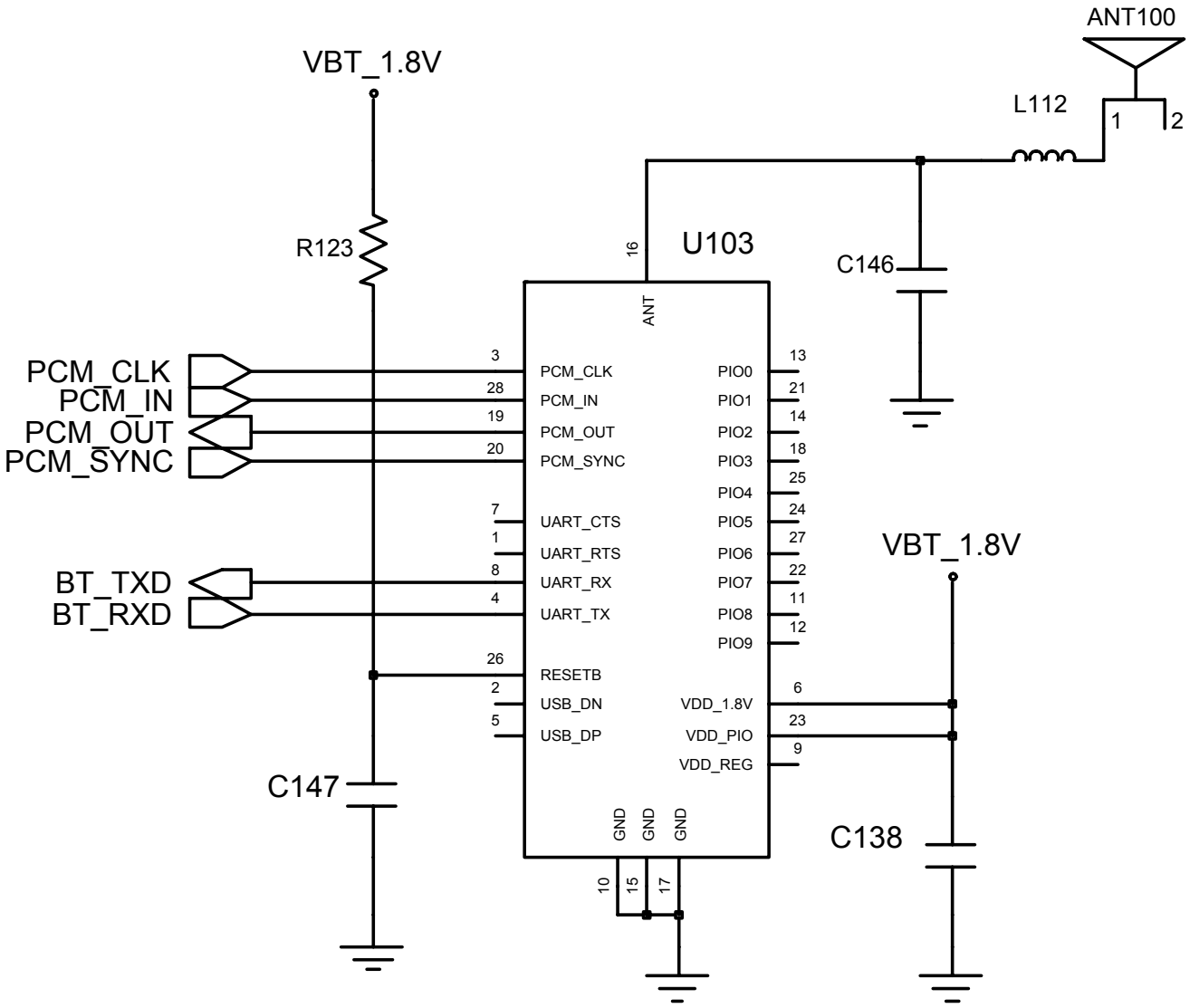

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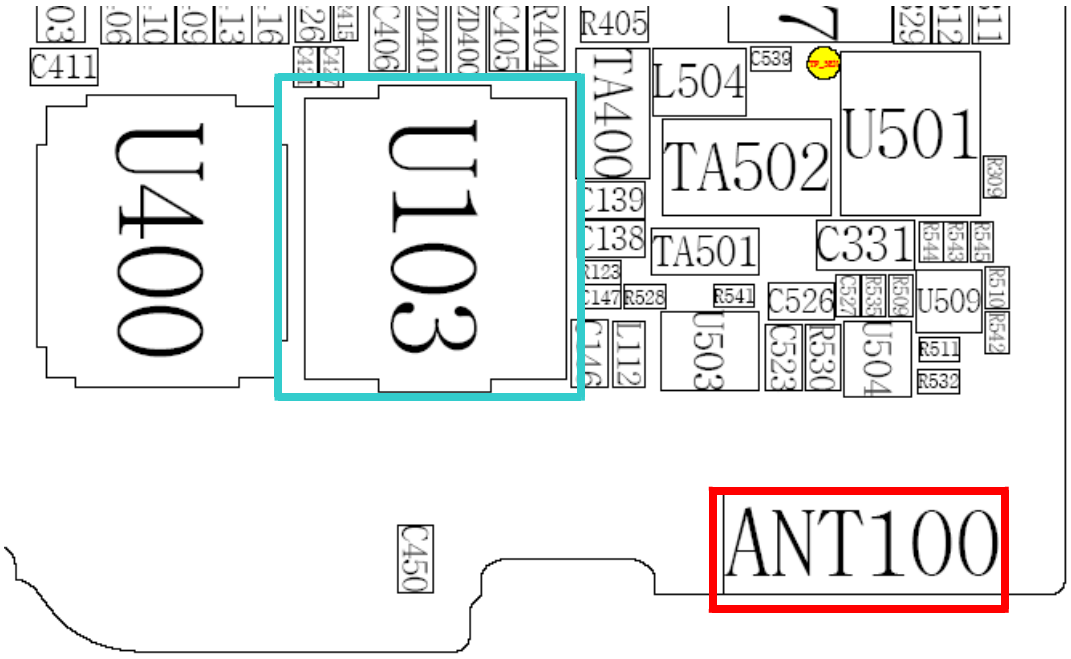

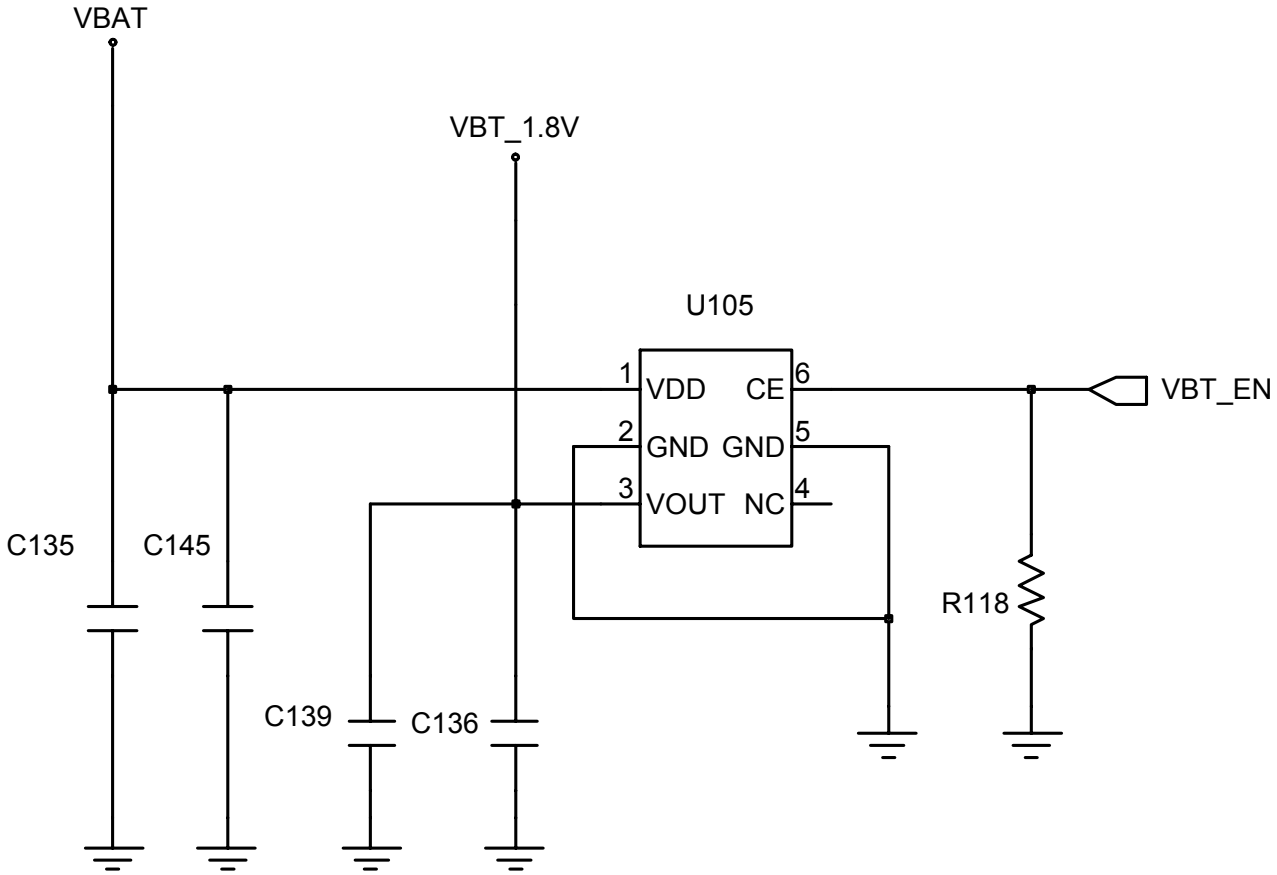

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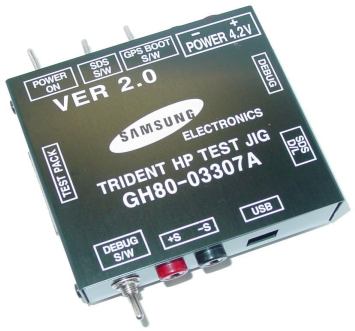
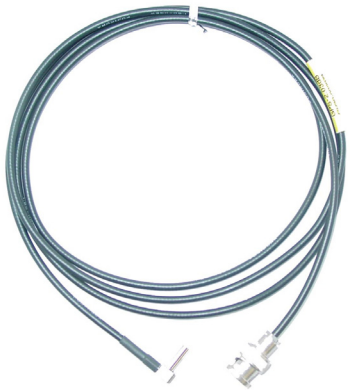
4. Array course control



Test Jig (GH80-03307A)

Test Cable (GH39-00478A)



RF Test Cable (GH39-00397A)

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Software Downloading

4-1. Downloading Binary Files

- Three binary files for downloading E840.
  - E840XXYY.s3 : Main source code binary.

4-2. Pre-requsite for Downloading

- Downloader Program(OptiFlash.exe)
- E840 Mobile Phone
- Data Cable
- Binary files

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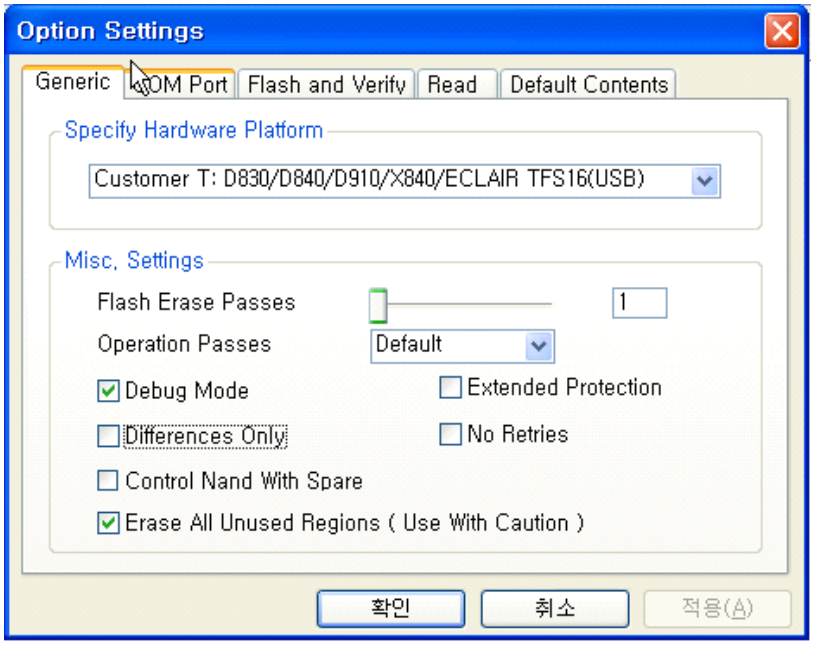
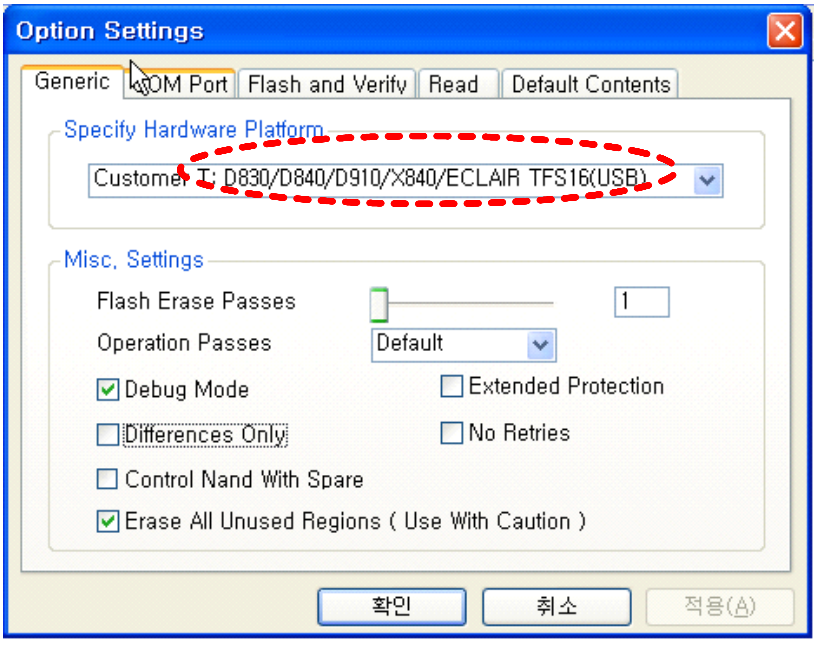
4-3. S/W Downloader Program

1. Load the binary download program by executing the "**OptiFlash.exe**"



2. Select the **"Options" -> "Settings" -> "Generic" -> "Specify hardware platform"**. Choose hardware platform for the downloader file setting.

Set the everything else as the default values which are shown below



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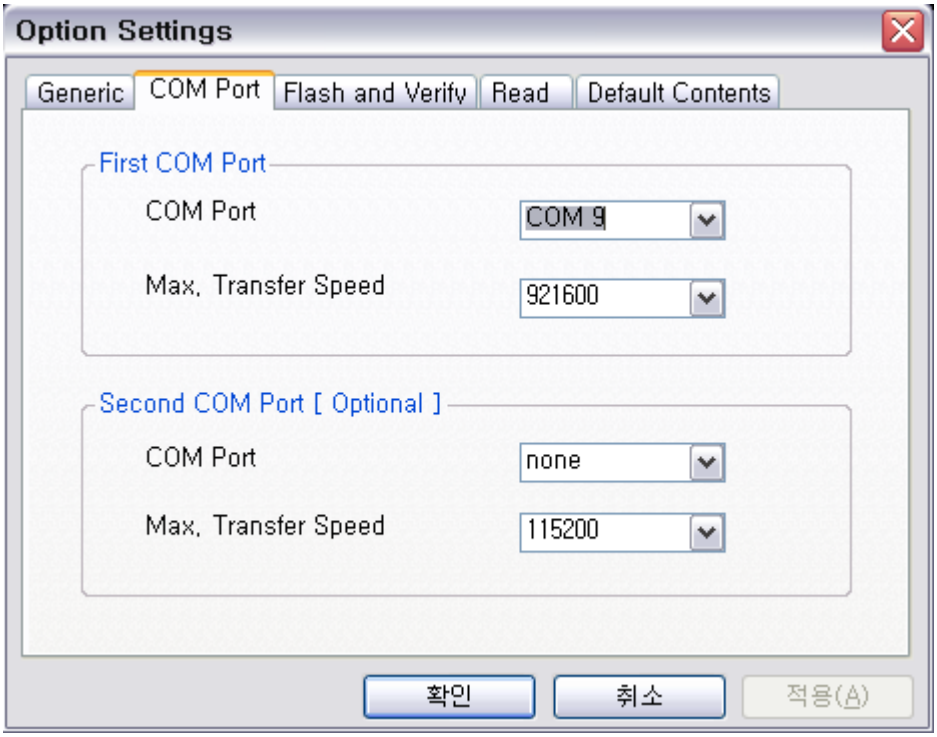
3. Select the **COM port** when the download cable is connected



Up to twelve ports are supported. Additionally you can select the maximum transfer speed OptiFlash will use to communicate with the phone. However, OptiFlash will use a slower speed if either the PC's or the phone's serial hardware is incapable of handling the selected speed

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4. Select the“**Flash&Verify” -> “Browse**”

Set the directory path and choose the latest s/w binary, for example “ E840XXYY.s3”, for the downloader binary setting.

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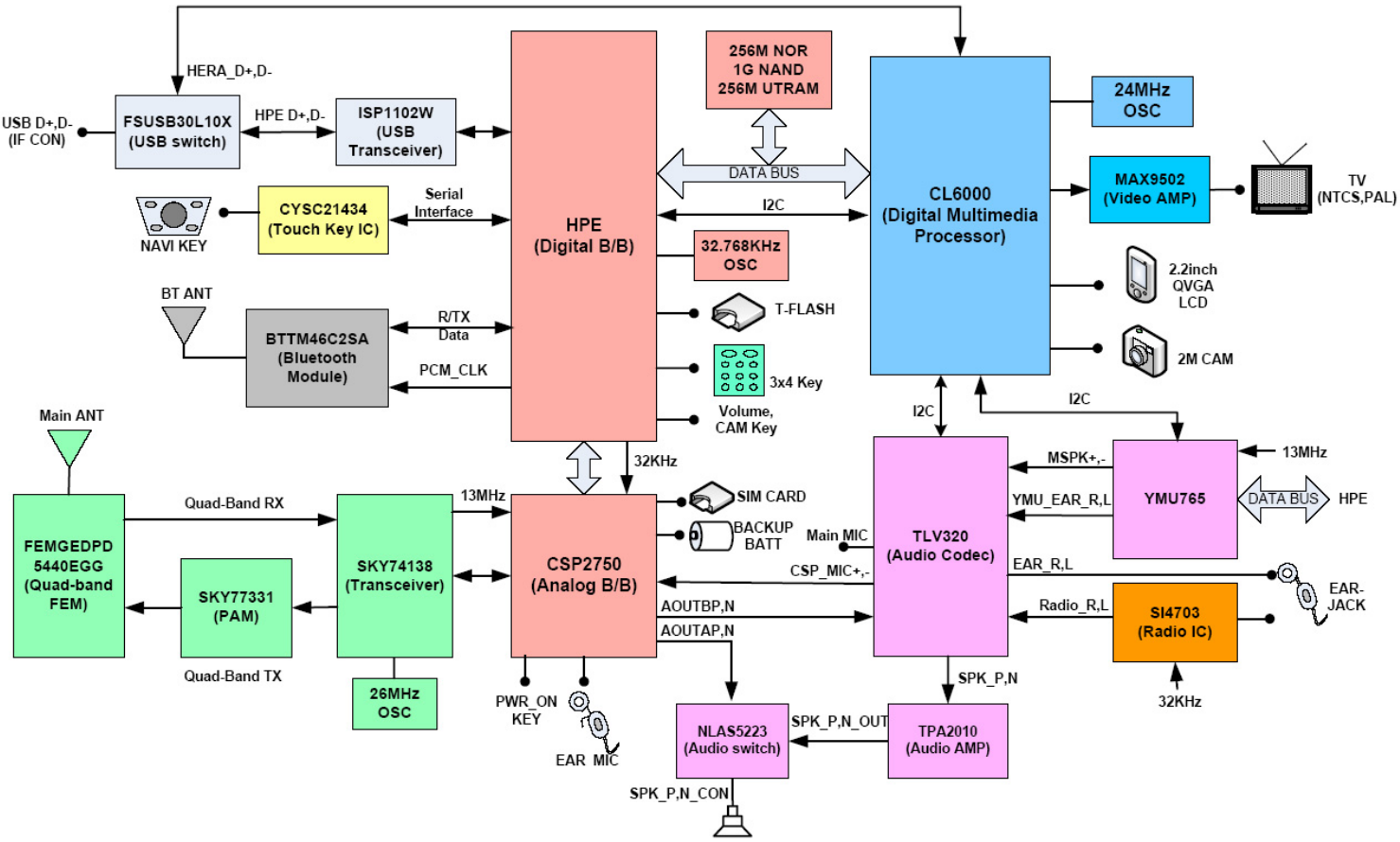
5. Block Diagrams



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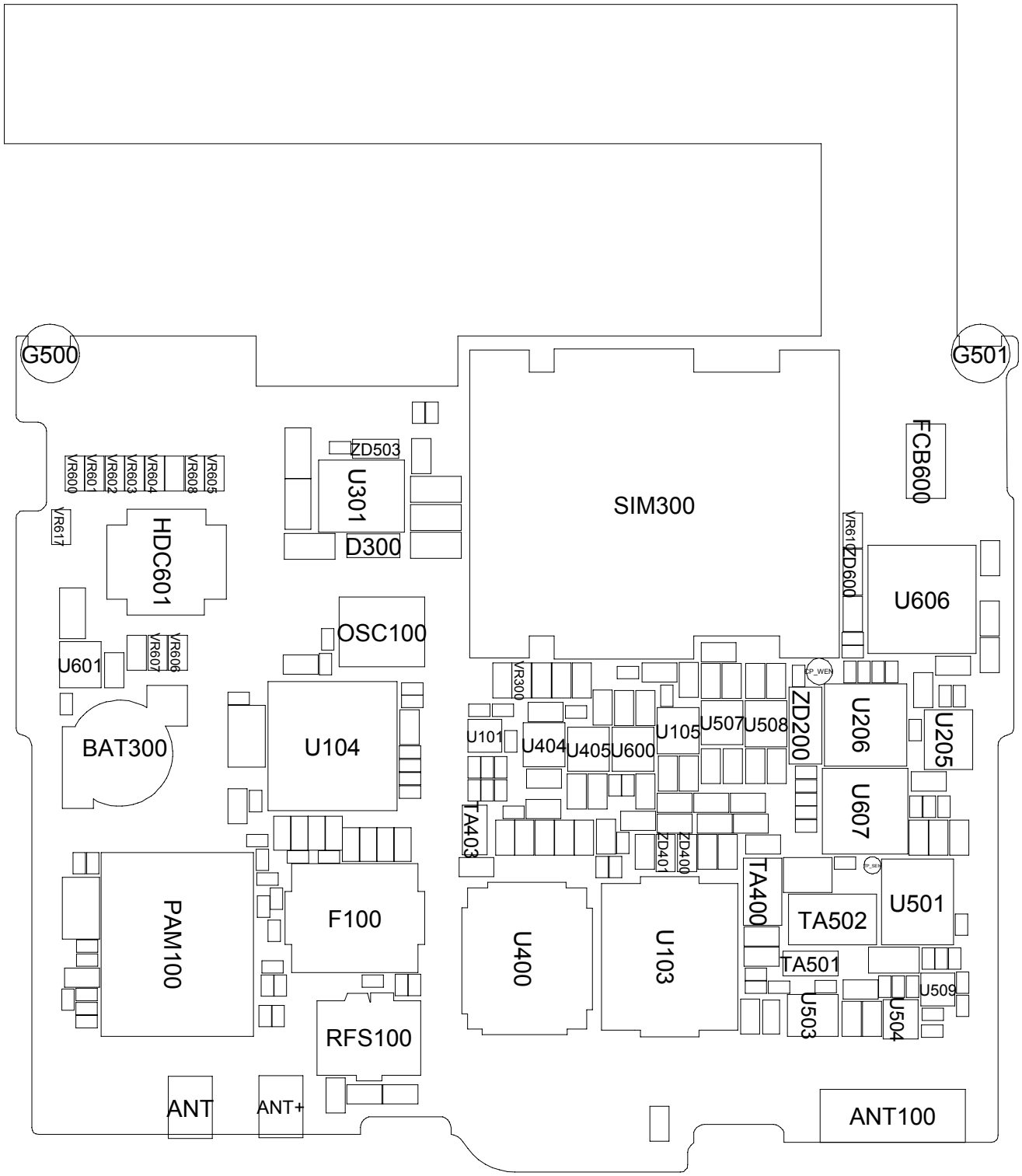
6. PCB Diagrams



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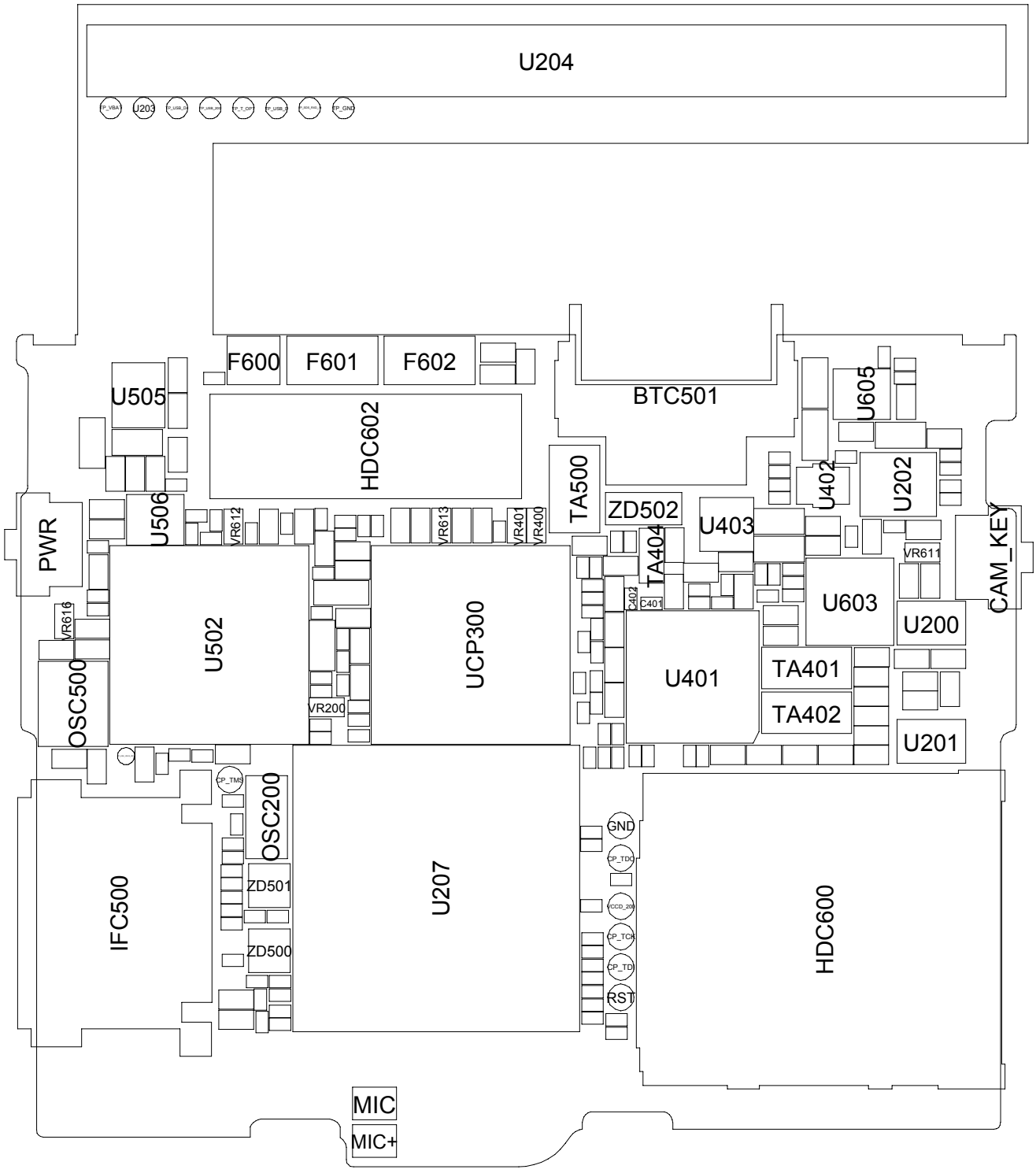

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7. MAIN Electrical Parts List

SEC CODE	Design LOC	Discription	STATUS
0403-001547	ZD200	DIODE-ZENER	SA
0403-001547	ZD502	DIODE-ZENER	SA
0404-001172	D300	DIODE-SCHOTTKY	SA
0406-001210	ZD503	DIODE-TVS	SA
0406-001210	ZD600	DIODE-TVS	SA
0406-001223	ZD400	DIODE-TVS	SA
0406-001223	ZD401	DIODE-TVS	SA
0406-001241	ZD500	DIODE-TVS	SA
0406-001241	ZD501	DIODE-TVS	SA
0505-002207	U506	FET-SILICON	SA
0801-002958	U101	IC-CMOS LOGIC	SA
0801-002995	U509	IC-CMOS LOGIC	SA
1001-001231	U503	IC-ANALOG SWITCH	SA
1001-001401	U205	IC-ANALOG SWITCH	SA
1001-001410	U402	IC-ANALOG SWITCH	SA
1006-001322	U202	IC-LINE TRANSCEIVER	SA
1009-001018	U200	IC-HALL EFFECT S/W	SA
1009-001018	U201	IC-HALL EFFECT S/W	SA
1108-000063	U207UP	IC-MCP	SA
1201-002190	U403	IC-AUDIO AMP	SA
1201-002368	PAM100	IC-POWER AMP	SA
1201-002413	U504	IC-VIDEO AMP	SA
1203-003340	U404	IC-POSI.FIXED REG.	SA
1203-003340	U600	IC-POSI.FIXED REG.	SA
1203-003432	U405	IC-POSI.FIXED REG.	SA
1203-003688	U105	IC-POSI.FIXED REG.	SA
1203-003737	U601	IC-POSI.FIXED REG.	SA
1203-003754	U507	IC-POSI.FIXED REG.	SA
1203-003787	U508	IC-POSI.FIXED REG.	SA
1203-003789	U603	IC-POWER SUPERVISOR	SA
1203-004104	U606	IC-DC/DC CONVERTER	SA
1203-004119	UCP300	IC-POWER SUPERVISOR	SA
1203-004482	U301	IC-DC/DC CONVERTER	SA
1203-004518	U501	IC-BATTERY	SA
1203-004548	U505	IC-DC/DC CONVERTER	SA
1203-004692	U605	IC-MULTI REG.	SA

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SEC CODE	Design LOC	Discription	STATUS
1204-002138	U400	IC-MELODY	SA
1204-002746	U607	IC-TUNER	SA
1205-002272	U206	IC-TRANSCEIVER	SA
1205-002946	U401	IC-CODEC	SA
1205-003203	U104	IC-TRANSCEIVER	SA
1205-003210	U502	IC-CODEC	SA
1404-001165	VR300	THERMISTOR-NTC	SA
1405-001082	VR200	VARISTOR	SA
1405-001082	VR612	VARISTOR	SA
1405-001082	VR613	VARISTOR	SA
1405-001133	VR400	VARISTOR	SA
1405-001133	VR401	VARISTOR	SA
1405-001133	VR600	VARISTOR	SA
1405-001133	VR601	VARISTOR	SA
1405-001133	VR602	VARISTOR	SA
1405-001133	VR603	VARISTOR	SA
1405-001133	VR604	VARISTOR	SA
1405-001133	VR605	VARISTOR	SA
1405-001133	VR606	VARISTOR	SA
1405-001133	VR607	VARISTOR	SA
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1405-001133	VR609	VARISTOR	SA
1405-001133	VR610	VARISTOR	SA
1405-001133	VR611	VARISTOR	SA
1405-001133	VR616	VARISTOR	SA
1405-001133	VR617	VARISTOR	SA
2007-000141	R515	R-CHIP	SA
2007-000157	R422	R-CHIP	SA
2007-000157	R526	R-CHIP	SA
2007-000157	R604	R-CHIP	SA
2007-000162	R202	R-CHIP	SA
2007-000163	R418	R-CHIP	SA
2007-000163	R420	R-CHIP	SA
2007-000170	R508	R-CHIP	SA
2007-000171	R124	R-CHIP	SA
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SEC CODE	Design LOC	Discription	STATUS
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2007-000174	R427	R-CHIP	SA
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2007-007142	R409	R-CHIP	SA
2007-007156	R121	R-CHIP	SA
2007-007314	R311	R-CHIP	SA
2007-007316	R517	R-CHIP	SA
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2007-007741	R114	R-CHIP	SA
2007-007741	R407	R-CHIP	SA
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2007-007741	R413	R-CHIP	SA
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2007-008052	R217	R-CHIP	SA
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SEC CODE	Design LOC	Discription	STATUS
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SEC CODE	Design LOC	Discription	STATUS
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2007-008808	R417	R-CHIP	SA
2007-008816	R426	R-CHIP	SA
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2007-009111	R419	R-CHIP	SA
2007-009111	R421	R-CHIP	SA
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2007-009168	R509	R-CHIP	SA
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2007-009233	R310	R-CHIP	SA
2007-009314	R116	R-CHIP	SA
2203-000254	C322	C-CER,CHIP	SA
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2203-000278	C618	C-CER,CHIP	SA
2203-000330	C304	C-CER,CHIP	SA
2203-000386	C453	C-CER,CHIP	SA
2203-000438	C426	C-CER,CHIP	SA
2203-000438	C432	C-CER,CHIP	SA
2203-000438	C433	C-CER,CHIP	SA
2203-000627	C405	C-CER,CHIP	SNA
2203-000627	C406	C-CER,CHIP	SNA
2203-000812	C303	C-CER,CHIP	SA
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2203-000812	C414	C-CER,CHIP	SA
2203-000812	C446	C-CER,CHIP	SA
2203-000995	C214	C-CER,CHIP	SA
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2203-002709	C415	C-CER,CHIP	SA
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SEC CODE	Design LOC	Discription	STATUS
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2203-005719	C442	C-CER,CHIP	SA
2203-005725	C100	C-CER,CHIP	SA
2203-005725	C140	C-CER,CHIP	SA
2203-005727	C123	C-CER,CHIP	SA
2203-005727	C124	C-CER,CHIP	SA
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2203-005736	C311	C-CER,CHIP	SA
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SEC CODE	Design LOC	Discription	STATUS
2203-005736	C401	C-CER,CHIP	SA
2203-005736	C404	C-CER,CHIP	SA
2203-005736	C539	C-CER,CHIP	SA
2203-005777	C109	C-CER,CHIP	SA
2203-005777	C114	C-CER,CHIP	SA
2203-005993	C302	C-CER,CHIP	SA
2203-006121	C113	C-CER,CHIP	SA
2203-006123	C102	C-CER,CHIP	SA
2203-006194	C125	C-CER,CHIP	SA
2203-006194	C147	C-CER,CHIP	SA
2203-006194	C200	C-CER,CHIP	SA
2203-006194	C202	C-CER,CHIP	SA
2203-006194	C205	C-CER,CHIP	SA
2203-006194	C207	C-CER,CHIP	SA
2203-006194	C209	C-CER,CHIP	SA
2203-006194	C222	C-CER,CHIP	SA
2203-006194	C305	C-CER,CHIP	SA
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2203-006194	C609	C-CER,CHIP	SA
2203-006257	C312	C-CER,CHIP	SA
2203-006257	C332	C-CER,CHIP	SA
2203-006257	C439	C-CER,CHIP	SA
2203-006260	C408	C-CER,CHIP	SA
2203-006260	C417	C-CER,CHIP	SA
2203-006260	C615	C-CER,CHIP	SA
2203-006305	C130	C-CER,CHIP	SA
2203-006305	C131	C-CER,CHIP	SA
2203-006318	C410	C-CER,CHIP	SA
2203-006324	C528	C-CER,CHIP	SA
2203-006348	C331	C-CER,CHIP	SA
2203-006361	C107	C-CER,CHIP	SA
2203-006361	C144	C-CER,CHIP	SA
2203-006423	C111	C-CER,CHIP	SA
2203-006423	C133	C-CER,CHIP	SA
2203-006423	C141	C-CER,CHIP	SA
2203-006423	C201	C-CER,CHIP	SA

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2203-006423	C204	C-CER,CHIP	SA
2203-006423	C206	C-CER,CHIP	SA
2203-006423	C210	C-CER,CHIP	SA
2203-006423	C215	C-CER,CHIP	SA
2203-006423	C216	C-CER,CHIP	SA
2203-006423	C217	C-CER,CHIP	SA
2203-006423	C218	C-CER,CHIP	SA
2203-006423	C219	C-CER,CHIP	SA
2203-006423	C301	C-CER,CHIP	SA
2203-006423	C306	C-CER,CHIP	SA
2203-006423	C307	C-CER,CHIP	SA
2203-006423	C323	C-CER,CHIP	SA
2203-006423	C402	C-CER,CHIP	SA
2203-006423	C421	C-CER,CHIP	SA
2203-006423	C427	C-CER,CHIP	SA
2203-006423	C435	C-CER,CHIP	SA
2203-006423	C440	C-CER,CHIP	SA
2203-006423	C501	C-CER,CHIP	SA
2203-006423	C502	C-CER,CHIP	SA
2203-006423	C506	C-CER,CHIP	SA
2203-006423	C507	C-CER,CHIP	SA
2203-006423	C508	C-CER,CHIP	SA
2203-006423	C509	C-CER,CHIP	SA
2203-006423	C510	C-CER,CHIP	SA
2203-006423	C519	C-CER,CHIP	SA
2203-006423	C521	C-CER,CHIP	SA
2203-006423	C527	C-CER,CHIP	SA
2203-006423	C538	C-CER,CHIP	SA
2203-006423	C541	C-CER,CHIP	SA
2203-006423	C542	C-CER,CHIP	SA
2203-006423	C601	C-CER,CHIP	SA
2203-006423	C603	C-CER,CHIP	SA
2203-006562	C135	C-CER,CHIP	SA
2203-006562	C136	C-CER,CHIP	SA
2203-006562	C211	C-CER,CHIP	SA

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2203-006562	C212	C-CER,CHIP	SA
2203-006562	C213	C-CER,CHIP	SA
2203-006562	C223	C-CER,CHIP	SA
2203-006562	C224	C-CER,CHIP	SA
2203-006562	C300	C-CER,CHIP	SA
2203-006562	C310	C-CER,CHIP	SA
2203-006562	C314	C-CER,CHIP	SA
2203-006562	C315	C-CER,CHIP	SA
2203-006562	C316	C-CER,CHIP	SA
2203-006562	C317	C-CER,CHIP	SA
2203-006562	C318	C-CER,CHIP	SA
2203-006562	C324	C-CER,CHIP	SA
2203-006562	C329	C-CER,CHIP	SA
2203-006562	C407	C-CER,CHIP	SA
2203-006562	C413	C-CER,CHIP	SA
2203-006562	C416	C-CER,CHIP	SA
2203-006562	C429	C-CER,CHIP	SA
2203-006562	C443	C-CER,CHIP	SA
2203-006562	C444	C-CER,CHIP	SA
2203-006562	C504	C-CER,CHIP	SA
2203-006562	C515	C-CER,CHIP	SA
2203-006562	C523	C-CER,CHIP	SA
2203-006562	C525	C-CER,CHIP	SA
2203-006562	C532	C-CER,CHIP	SA
2203-006562	C535	C-CER,CHIP	SA
2203-006562	C540	C-CER,CHIP	SA
2203-006562	C604	C-CER,CHIP	SA
2203-006562	C605	C-CER,CHIP	SA
2203-006562	C607	C-CER,CHIP	SA
2203-006562	C610	C-CER,CHIP	SA
2203-006562	C619	C-CER,CHIP	SA
2203-006562	C620	C-CER,CHIP	SA
2203-006562	C621	C-CER,CHIP	SA
2203-006562	C622	C-CER,CHIP	SA
2203-006626	C145	C-CER,CHIP	SA
2203-006626	C420	C-CER,CHIP	SA

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2203-006626	C425	C-CER,CHIP	SA
2203-006626	C434	C-CER,CHIP	SA
2203-006626	C437	C-CER,CHIP	SA
2203-006626	C451	C-CER,CHIP	SA
2203-006626	C452	C-CER,CHIP	SA
2203-006648	C321	C-CER,CHIP	SA
2203-006648	C543	C-CER,CHIP	SA
2203-006668	C430	C-CER,CHIP	SA
2203-006668	C431	C-CER,CHIP	SA
2203-006681	C546	C-CER,CHIP	SA
2203-006824	C503	C-CER,CHIP	SA
2203-006825	C325	C-CER,CHIP	SA
2203-006825	C326	C-CER,CHIP	SA
2203-006825	C327	C-CER,CHIP	SA
2203-006825	C328	C-CER,CHIP	SA
2203-006825	C602	C-CER,CHIP	SA
2203-006825	C611	C-CER,CHIP	SA
2203-006825	C612	C-CER,CHIP	SA
2203-006825	C613	C-CER,CHIP	SA
2203-006838	C106	C-CER,CHIP	SA
2203-006838	C330	C-CER,CHIP	SA
2203-006838	C526	C-CER,CHIP	SA
2203-006838	C529	C-CER,CHIP	SA
2203-006838	C530	C-CER,CHIP	SA
2203-006838	C531	C-CER,CHIP	SA
2203-006838	C533	C-CER,CHIP	SA
2203-006838	C534	C-CER,CHIP	SA
2203-006838	C536	C-CER,CHIP	SA
2203-006838	C537	C-CER,CHIP	SA
2203-006838	C600	C-CER,CHIP	SA
2203-006872	C138	C-CER,CHIP	SA
2203-006872	C139	C-CER,CHIP	SA
2203-006872	C403	C-CER,CHIP	SA
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2203-006872	C438	C-CER,CHIP	SA
2203-006872	C544	C-CER,CHIP	SA

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SEC CODE	Design LOC	Discription	STATUS
2203-006872	C545	C-CER,CHIP	SA
2203-006896	C127	C-CER,CHIP	SA
2203-006979	C112	C-CER,CHIP	SA
2203-006979	C119	C-CER,CHIP	SA
2404-001339	TA403	C-TA,CHIP	SA
2404-001352	TA400	C-TA,CHIP	SA
2404-001353	TA401	C-TA,CHIP	SA
2404-001353	TA402	C-TA,CHIP	SA
2404-001381	C309	C-TA,CHIP	SA
2404-001381	TA404	C-TA,CHIP	SA
2404-001396	TA501	C-TA,CHIP	SA
2404-001406	TA500	C-TA,CHIP	SA
2404-001406	TA502	C-TA,CHIP	SA
2703-001728	L111	INDUCTOR-SMD	SA
2703-002597	L103	INDUCTOR-SMD	SA
2703-002597	L104	INDUCTOR-SMD	SA
2703-002597	L105	INDUCTOR-SMD	SA
2703-002597	L106	INDUCTOR-SMD	SA
2703-002636	L107	INDUCTOR-SMD	SA
2703-002636	L108	INDUCTOR-SMD	SA
2703-002700	L109	INDUCTOR-SMD	SA
2703-002700	L110	INDUCTOR-SMD	SA
2703-002870	L113	INDUCTOR-SMD	SA
2703-002910	L100	INDUCTOR-SMD	SA
2703-003001	L300	INDUCTOR-SMD	SA
2703-003001	L301	INDUCTOR-SMD	SA
2703-003001	L500	INDUCTOR-SMD	SA
2703-003196	L504	INDUCTOR-SMD	SA
2801-004458	OSC500	CRYSTAL-SMD	SA
2801-004466	OSC200	CRYSTAL-SMD	SA
2801-004552	OSC100	CRYSTAL-SMD	SA
2901-001348	F601	FILTER-EMI/ESD	SA
2901-001348	F602	FILTER-EMI/ESD	SA
2901-001349	F600	FILTER-EMI/ESD	SA
2911-000049	F100	DUPLEXER-FEM	SA
3301-001158	L400	BEAD-SMD	SA

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SEC CODE	Design LOC	Discription	STATUS
3301-001158	L401	BEAD-SMD	SA
3301-001342	L600	BEAD-SMD	SA
3301-001810	L200	BEAD-SMD	SA
3301-001810	L201	BEAD-SMD	SA
3301-001810	L501	BEAD-SMD	SA
3301-001810	L502	BEAD-SMD	SA
3301-001810	L503	BEAD-SMD	SA
3301-001879	L505	BEAD-SMD	SA
3404-001303	CAM_KEY	SWITCH-TACT	SA
3404-001303	PWR	SWITCH-TACT	SA
3705-001421	RFS100	CONNECTOR-COAXIAL	SA
3709-001447	SIM300	CONNECTOR-CARD EDGE	SA
3709-001464	HDC600	CONNECTOR-CARD EDGE	SA
3710-002465	IFC500	SOCKET-INTERFACE	SA
3711-005976	HDC601	HEADER-BOARD TO BOARD	SA
3711-006108	BTC501	HEADER-BATTERY	SA
3711-006323	HDC602	HEADER-BOARD TO BOARD	SA
4202-001293	ANT100	ANTENNA-CHIP	SA
4302-001158	BAT300	BATTERY-LI(2ND)	SA
4709-001533	U103	BLUETOOTH MODULE	SA
GH09-00045A	U207	IC MICOM	SA

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8. Reference data

8-1. 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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9. Safety Precautions

9-1. Repair Precaution

- Repair in Shield Box, during detailed tuning.
  Take specially care of tuning or test,
  because specipicty of cellular phone is sensitive for surrounding interference(RF noise).

- Be careful to use a kind of magnetic object or tool,
  because performance of parts is damaged by the influence of manetic 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 disassembing charger.

- Don't use as you pleases after change other material than replacement registered on SEC System.
  Otherwise engineer in charge isn't charged with problem that you don't keep this rules.

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9-2. ESD(Electrostatically Sensitive Devices) Precaution

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

- Remove static electricity remained your body before you touch semiconductor or parts with semiconductor. There are ways that you touch an earthed place or wear static electricity prevention string on wrist.

- Use earthed soldering steel when you connect or disconnect ESD.

- Use soldering removing tool to break static electricity. , otherwise ESD will be damaged by static electricity.

- Don't unpack until you set up ESD on product. Because most of ESD are packed by box and aluminum plate to have conductive power,they are prevented from static electricity.

- You must maintain electric contact between ESD and place due to be set up until ESD is connected completely to the proper place or a circuit board.

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10. Product Function

Main Function

- Camera and camcorder
- Synchronisation with Windows Media Player
- Music player
- Image editor
- Photo printing
- Phone to TV
- Offline mode
- FM radio
- Bluetooth
- File viewer
- SOS message

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SAMSUNG ELECTRONICS

GSPN (Global Service Partner Network)

Country	Web Site
North America	service.samsungportal.com
Latin America	latin.samsungportal.com
CIS	cis.samsungportal.com
Europe	europe.samsungportal.com
China	china.samsungportal.com
Asia	asia.samsungportal.com
Mideast & Africa	mea.samsungportal.com

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