

11. Disassembly and Assembly Instructions

11-1. Disassembly

1

1) Unscrew the 6 points.



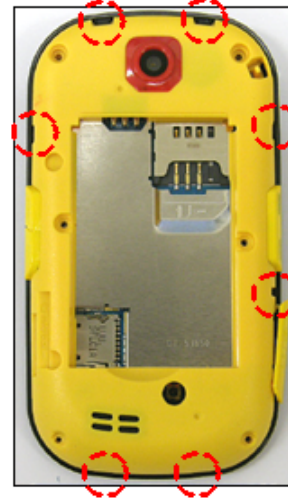
※ Caution

1) Be care of scratch and molding damage.

2

1) Separate the REAR CASE.

HOOK 7 POINT



※ Caution

1) Be care of scratch and molding damage.

3

1) Unscrew the 2 points.



※ Caution

1) Be care of damage to INTENNA

4

1) Separate the LCD and TSP CONNECTORS then disassemble the 2 hook.



※ Caution

1) Be care of scratch and molding damage.

5

- 1) Separate the BRACKET ASS'Y from the FRONT ASS'Y.



6

- 1) Separate LCD and KEYPAD from the FRONT CASE.



※ Caution

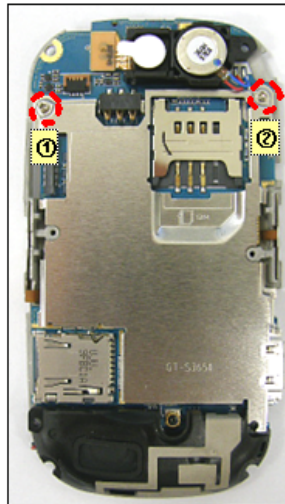
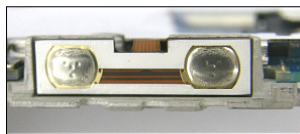
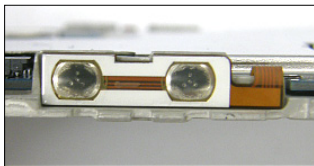
- 1) Be care of scratch and molding damage.

※ Caution

- 1) Be care of scratch and molding damage.
- 2) Be care of damage to the LCD.

7

- 1) Detach the SIDE KEY and CAM KEY FPCB from BRACKET.
- 2) Unscrew the 2 points.



8

- 1) Separate the MOTOR/SHIELD CAN /ANTENNA/CAMERA/ from the PBA.



※ Caution

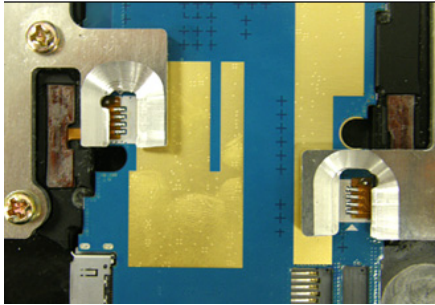
- 1) Be care of damage to FPCB.

※ Caution

11-2. Assembly

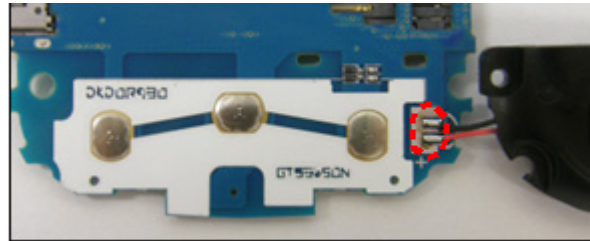
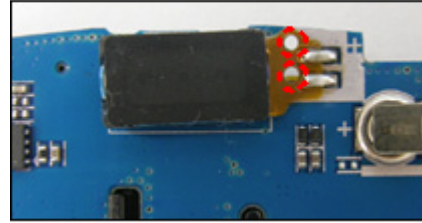
1

1) Solder the SIDE KEY,CAM KEY.



2

1) Solder the RECEIVER and SPEAKER.



※ Caution

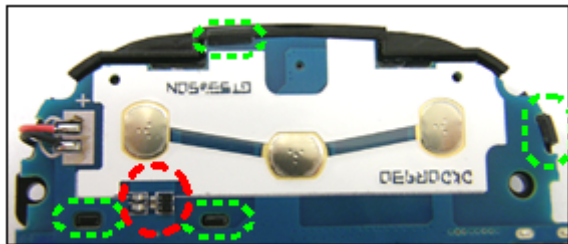
1) Be care of damage the FPCB.

※ Caution

1) Be care of damage the RECEIVER FPCB & SPK WIRE.

3

1) Assemble the SPEAKER MODULE to PBA.

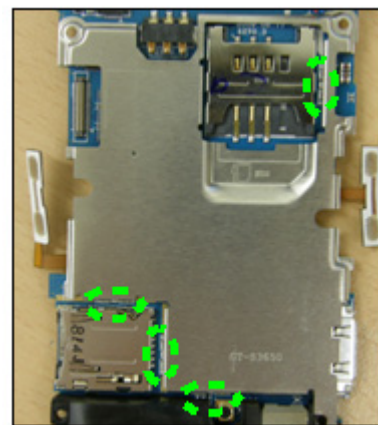


※ Caution

1) Be care of damage to ANTENNA PATTERN and PBA.

4

1) Assemble the SHIELD CAN.

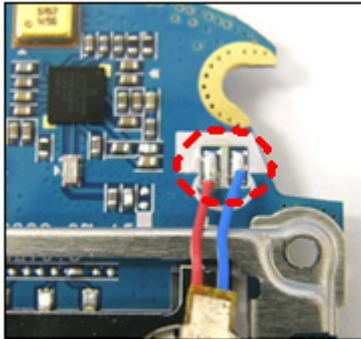


※ Caution

1) Be care of damage to PBA.

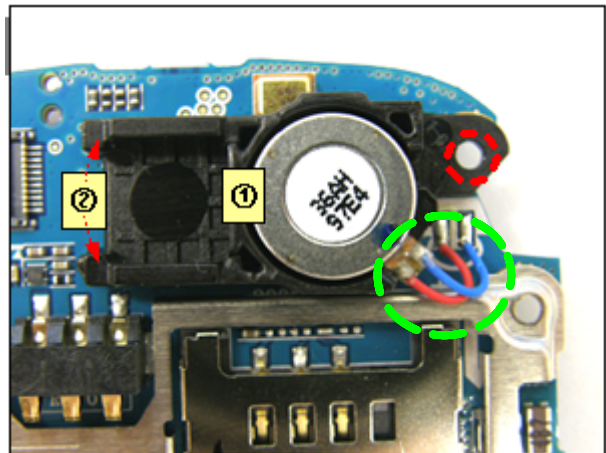
5

1) Solder the MOTOR.



6

1) Assemble the CAMERA CARRIER.
2) Assemble the MOTOR.



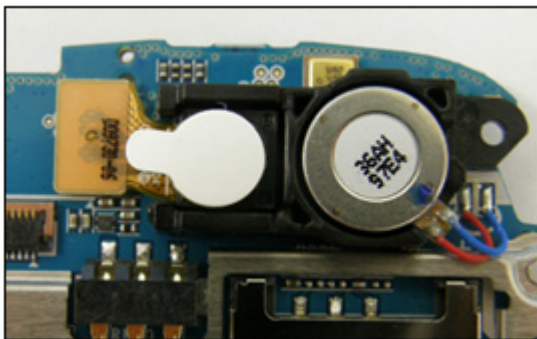
※ **Caution**

※ **Caution**

1) Be care of damage the MOTOR WIRE.

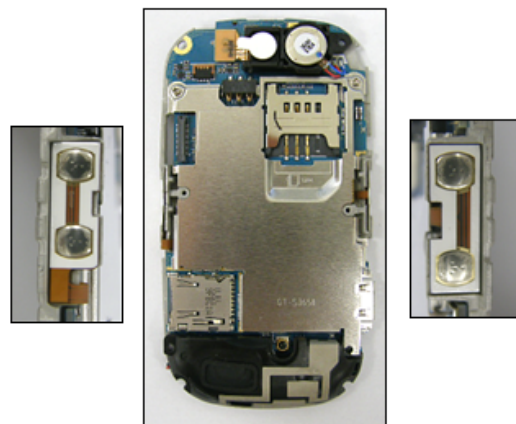
7

1) Assemble the CAMERA and connect the CONNECTOR.



8

1) Assemble the BRACKET.
2) Attach the SIDE KEY and CAM KEY FPCB.



※ **Caution**

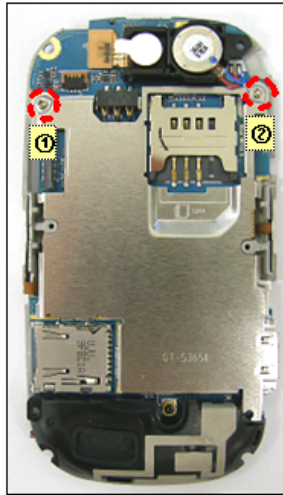
1) Be care of damage to CAMERA CONNECTOR & FPCB.

※ **Caution**

1) Be care of damage the SIDE KEY/CAMERA KEY FPCB.

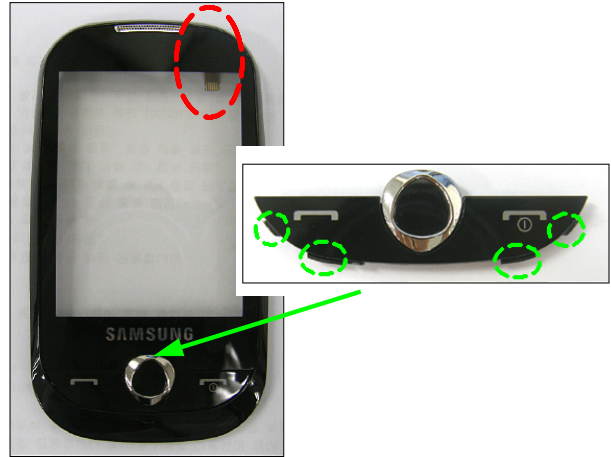
9

1) Screw 2 points.



10

1) Attach the TSP.
2) Assemble the KEYPAD.



※ **Caution**

※ **Caution**

1) Be care of scratch and molding damage.
2) Be care of damage to TSP FPCB.

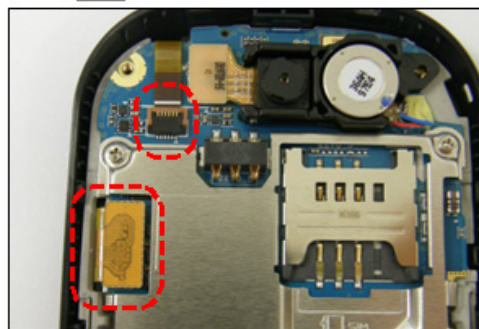
11

1) Assemble the LCD.



12

1) Assemble the PBA the to FRONT ASS'Y.
2) Connect the TSP connector & LCD connector.



※ **Caution**

1) Be care of damage to F-CPB and LCD.
2) Be care of scratch and molding damage.

※ **Caution**

1) Be care of damage to F-CPB.
2) Be care of scratch and molding damage.

13

1) Screw 2 points.



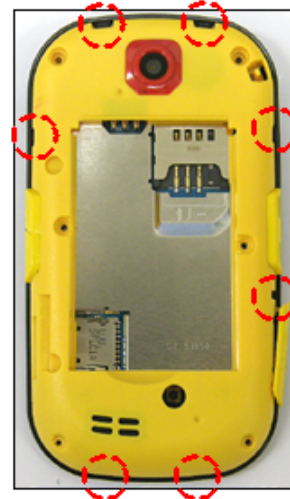
※ Caution

1) Be care of scratch and molding damage.

14

1) Assemble the REAR CASE.

HOOK 7 POINT



※ Caution

1) Be care of scratch and molding damage.

15

1) Screw 6 points.



※ Caution

1) Be care of scratch and molding damage.



Notice

Product	Broadcom	Notice No.	10-04
Model	GT-S5230, S3650,	Notice Date	1 th Feb '10
Subject	How to recover the boot for Broadcom model		

1. Purpose

- To inform All ASCs and Contact Centers of information about technical TIP.

2. Symptom

- Related to Power problem like as No Power, Lock up on booting and so on.

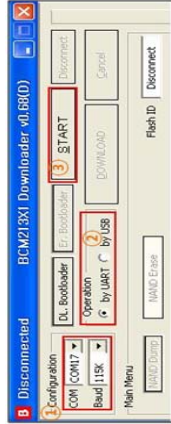
3. Instruction

	Description
Step 1. Anyways Jig Setting 1. Anyways JIG 2. TEST CABLE : GH39-01159A 3. Power Supply 4. Serial port(PC) 5. Adapter	
Program 1. UART_Downloader.zip - Extract UART_Downloader.zip and Use UART_Downloader.exe	

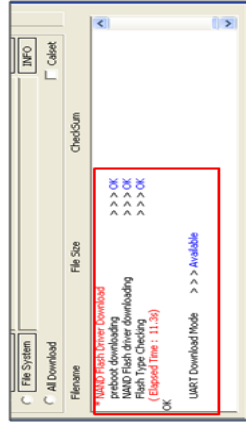
Step 2.

Boot File Erase

1. Run UART_Downloader.exe
2. Connect phone to the test cable.
 - Anyway JIG-Power off
 - Without battery
3. Set up the comport & baud rate
 - baud rate : ① 115K
4. Select operation “② By UART”
5. Click “③ Start”



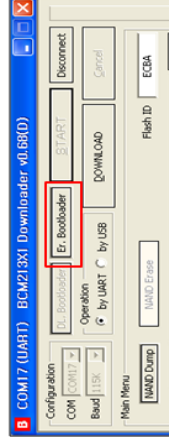
6. With the message like right picture, then power on the JIG box



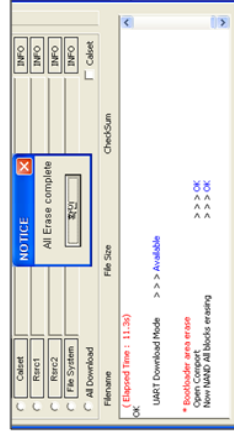
7. You can see the message like right picture

8. With the message “Available”, click “Er. Bootloader”

- start erasing(2~3 seconds)



9. The erasing is completed with the message ‘All Erase complete’
complete’



10. Click “Disconnect”

- Erasing bootloader is over



11. And then, you have to download new bootloader.

Step 3.

Boot File Download

1. Connect the phone to JIG-Uart

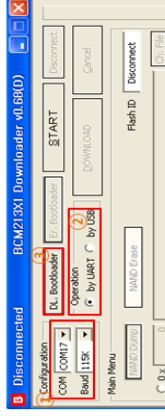
- Anyway JIG-Power on

- Without battery

2. ① Set up the Comport & baud rate

3. Select operation “② By UART”

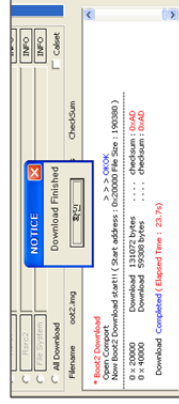
4. Click “ ③ DL.Bootloader ” and boot downloading start



5. You can see the message like right picture



6. The bootloader downloading is completed with the message “Download Finished”



7. Download full S/W binary by using USB data cable

SAMSUNG

GSM TELEPHONE

GT-S3650

SERVICE *Manual*

GSM TELEPHONE



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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

6. MAIN Electrical Parts List

SEC CODE	Design LOC	Description
0403-001688	ZD300	DIODE-ZENER
0406-001286	ZD404	DIODE-TVS
0406-001286	ZD406	DIODE-TVS
0406-001288	ZD301	DIODE-TVS
0406-001288	ZD400	DIODE-TVS
0406-001288	ZD401	DIODE-TVS
0406-001288	ZD402	DIODE-TVS
0406-001288	ZD403	DIODE-TVS
0406-001288	ZD500	DIODE-TVS
0406-001288	ZD503	DIODE-TVS
0406-001288	ZD504	DIODE-TVS
0502-001322	Q300	TR-POWER
0505-001518	Q200	FET-SILICON
0801-003026	U301	IC
0801-003130	U200	IC
1001-001410	U400	IC
1108-000296	UME200	MEMORY
1201-002494	U302	IC
1201-002932	U504	IC
1201-002943	PAM100	IC
1203-004604	U501	IC
1203-004925	U401	IC
1203-005521	U502	IC
1203-005562	U300	IC
1205-003656	UCP200	IC
1205-003839	U102	IC
1404-001221	VR200	THERMISTOR
2007-000138	R208	R-CHIP
2007-000138	R305	R-CHIP
2007-000138	R412	R-CHIP
2007-000140	R107	R-CHIP
2007-000140	R111	R-CHIP
2007-000141	R404	R-CHIP
2007-000141	R406	R-CHIP
2007-000143	R207	R-CHIP
2007-000143	R413	R-CHIP

SEC CODE	Design LOC	Description
2007-000144	R209	R-CHIP
2007-000144	R210	R-CHIP
2007-000144	R211	R-CHIP
2007-000144	R212	R-CHIP
2007-000144	R310	R-CHIP
2007-000148	R313	R-CHIP
2007-000152	R215	R-CHIP
2007-000157	R308	R-CHIP
2007-000157	R309	R-CHIP
2007-000157	R311	R-CHIP
2007-000157	R312	R-CHIP
2007-000162	R102	R-CHIP
2007-000162	R104	R-CHIP
2007-000162	R220	R-CHIP
2007-000162	R306	R-CHIP
2007-000162	R317	R-CHIP
2007-000162	R401	R-CHIP
2007-000162	R405	R-CHIP
2007-000162	R408	R-CHIP
2007-000162	R411	R-CHIP
2007-000162	R416	R-CHIP
2007-000162	R500	R-CHIP
2007-000162	R501	R-CHIP
2007-000164	R314	R-CHIP
2007-000164	R315	R-CHIP
2007-000165	R307	R-CHIP
2007-000172	R407	R-CHIP
2007-001319	R203	R-CHIP
2007-001319	R204	R-CHIP
2007-001319	R217	R-CHIP
2007-001319	R222	R-CHIP
2007-001319	R417	R-CHIP
2007-001319	R418	R-CHIP
2007-001333	R213	R-CHIP
2007-001339	R214	R-CHIP
2007-002796	R409	R-CHIP

SEC CODE	Design LOC	Description
2007-002796	R410	R-CHIP
2007-003014	R206	R-CHIP
2007-003018	R105	R-CHIP
2007-003018	R106	R-CHIP
2007-007100	R304	R-CHIP
2007-007132	R113	R-CHIP
2007-007156	R414	R-CHIP
2007-007156	R415	R-CHIP
2007-007193	R200	R-CHIP
2007-007312	R216	R-CHIP
2007-007315	R219	R-CHIP
2007-007981	R201	R-CHIP
2007-007981	R202	R-CHIP
2007-008275	R301	R-CHIP
2007-008401	R205	R-CHIP
2007-010071	R302	R-CHIP
2203-000233	C118	C-CERAMIC,CHIP
2203-000233	C235	C-CERAMIC,CHIP
2203-000233	C342	C-CERAMIC,CHIP
2203-000254	C104	C-CERAMIC,CHIP
2203-000254	C222	C-CERAMIC,CHIP
2203-000254	C237	C-CERAMIC,CHIP
2203-000254	C309	C-CERAMIC,CHIP
2203-000254	C336	C-CERAMIC,CHIP
2203-000254	C435	C-CERAMIC,CHIP
2203-000278	C100	C-CERAMIC,CHIP
2203-000278	C103	C-CERAMIC,CHIP
2203-000311	C419	C-CERAMIC,CHIP
2203-000311	C429	C-CERAMIC,CHIP
2203-000386	C416	C-CERAMIC,CHIP
2203-000386	C417	C-CERAMIC,CHIP
2203-000386	C420	C-CERAMIC,CHIP
2203-000386	C423	C-CERAMIC,CHIP
2203-000386	C426	C-CERAMIC,CHIP
2203-000425	C219	C-CERAMIC,CHIP
2203-000438	C233	C-CERAMIC,CHIP

SEC CODE	Design LOC	Description
2203-000438	C424	C-CERAMIC,CHIP
2203-000489	C332	C-CERAMIC,CHIP
2203-000489	C343	C-CERAMIC,CHIP
2203-000550	C310	C-CERAMIC,CHIP
2203-000550	C311	C-CERAMIC,CHIP
2203-000654	C108	C-CERAMIC,CHIP
2203-000679	C129	C-CERAMIC,CHIP
2203-000812	C119	C-CERAMIC,CHIP
2203-000812	C130	C-CERAMIC,CHIP
2203-000812	C134	C-CERAMIC,CHIP
2203-000812	C135	C-CERAMIC,CHIP
2203-000812	C307	C-CERAMIC,CHIP
2203-000812	C401	C-CERAMIC,CHIP
2203-000812	C402	C-CERAMIC,CHIP
2203-000812	C430	C-CERAMIC,CHIP
2203-000854	C232	C-CERAMIC,CHIP
2203-000854	C236	C-CERAMIC,CHIP
2203-000995	C205	C-CERAMIC,CHIP
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2203-000995	C231	C-CERAMIC,CHIP
2203-001101	C223	C-CERAMIC,CHIP
2203-001153	C432	C-CERAMIC,CHIP
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2203-001221	C127	C-CERAMIC,CHIP
2203-005234	C112	C-CERAMIC,CHIP
2203-005281	C115	C-CERAMIC,CHIP
2203-005450	C124	C-CERAMIC,CHIP
2203-005482	C105	C-CERAMIC,CHIP
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2203-005482	C128	C-CERAMIC,CHIP
2203-005482	C313	C-CERAMIC,CHIP
2203-005482	C422	C-CERAMIC,CHIP
2203-005482	C425	C-CERAMIC,CHIP
2203-006048	C201	C-CERAMIC,CHIP
2203-006048	C208	C-CERAMIC,CHIP
2203-006048	C210	C-CERAMIC,CHIP

SEC CODE	Design LOC	Description
2203-006048	C211	C-CERAMIC,CHIP
2203-006048	C212	C-CERAMIC,CHIP
2203-006048	C213	C-CERAMIC,CHIP
2203-006048	C217	C-CERAMIC,CHIP
2203-006048	C218	C-CERAMIC,CHIP
2203-006048	C306	C-CERAMIC,CHIP
2203-006048	C418	C-CERAMIC,CHIP
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2203-006048	U506	C-CERAMIC,CHIP
2203-006257	C406	C-CERAMIC,CHIP
2203-006257	C407	C-CERAMIC,CHIP
2203-006260	C404	C-CERAMIC,CHIP
2203-006260	C405	C-CERAMIC,CHIP
2203-006348	C308	C-CERAMIC,CHIP
2203-006399	C101	C-CERAMIC,CHIP
2203-006399	C102	C-CERAMIC,CHIP
2203-006399	C126	C-CERAMIC,CHIP
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2203-006399	C514	C-CERAMIC,CHIP
2203-006399	C515	C-CERAMIC,CHIP
2203-006399	C521	C-CERAMIC,CHIP
2203-006562	C209	C-CERAMIC,CHIP
2203-006562	C319	C-CERAMIC,CHIP
2203-006562	C328	C-CERAMIC,CHIP
2203-006562	C333	C-CERAMIC,CHIP
2203-006562	C400	C-CERAMIC,CHIP

SEC CODE	Design LOC	Description
2203-006562	C410	C-CERAMIC,CHIP
2203-006562	C415	C-CERAMIC,CHIP
2203-006562	C502	C-CERAMIC,CHIP
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2203-006562	C508	C-CERAMIC,CHIP
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2203-006681	C215	C-CERAMIC,CHIP
2203-006681	C225	C-CERAMIC,CHIP
2203-006681	C227	C-CERAMIC,CHIP
2203-006681	C431	C-CERAMIC,CHIP
2203-006824	C326	C-CERAMIC,CHIP
2203-006824	C330	C-CERAMIC,CHIP
2203-006825	C327	C-CERAMIC,CHIP
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2203-006841	C202	C-CERAMIC,CHIP
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2203-006872	C125	C-CERAMIC,CHIP
2203-006872	C203	C-CERAMIC,CHIP
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2203-006872	C220	C-CERAMIC,CHIP
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2203-006872	C224	C-CERAMIC,CHIP
2203-006872	C302	C-CERAMIC,CHIP
2203-006872	C303	C-CERAMIC,CHIP
2203-006872	C314	C-CERAMIC,CHIP
2203-006872	C315	C-CERAMIC,CHIP
2203-006872	C316	C-CERAMIC,CHIP
2203-006872	C317	C-CERAMIC,CHIP

SEC CODE	Design LOC	Description
2203-006872	C318	C-CERAMIC,CHIP
2203-006872	C320	C-CERAMIC,CHIP
2203-006872	C321	C-CERAMIC,CHIP
2203-006872	C322	C-CERAMIC,CHIP
2203-006872	C323	C-CERAMIC,CHIP
2203-006872	C324	C-CERAMIC,CHIP
2203-007271	C403	C-CERAMIC,CHIP
2203-007271	C428	C-CERAMIC,CHIP
2203-007271	C506	C-CERAMIC,CHIP
2404-001339	C312	C-TA,CHIP
2404-001381	TA301	C-TA,CHIP
2404-001381	TA400	C-TA,CHIP
2404-001414	TA401	C-TA,CHIP
2404-001430	TA300	C-TA,CHIP
2404-001496	TA100	C-TA,CHIP
2703-001726	L114	INDUCTOR-SMD
2703-001726	L115	INDUCTOR-SMD
2703-002199	L108	INDUCTOR-SMD
2703-002199	L111	INDUCTOR-SMD
2703-002203	L104	INDUCTOR-SMD
2703-002203	L105	INDUCTOR-SMD
2703-002208	L102	INDUCTOR-SMD
2703-002208	L106	INDUCTOR-SMD
2703-002208	L107	INDUCTOR-SMD
2703-002208	L112	INDUCTOR-SMD
2703-002208	L122	INDUCTOR-SMD
2703-002281	L113	INDUCTOR-SMD
2703-002281	L116	INDUCTOR-SMD
2703-002281	L117,	INDUCTOR-SMD
2703-002281	L120	INDUCTOR-SMD
2703-002308	L109	INDUCTOR-SMD
2703-002313	L402	INDUCTOR-SMD
2703-002313	L403	INDUCTOR-SMD
2703-002314	L103	INDUCTOR-SMD
2703-002314	L118	INDUCTOR-SMD
2703-002314	L119	INDUCTOR-SMD

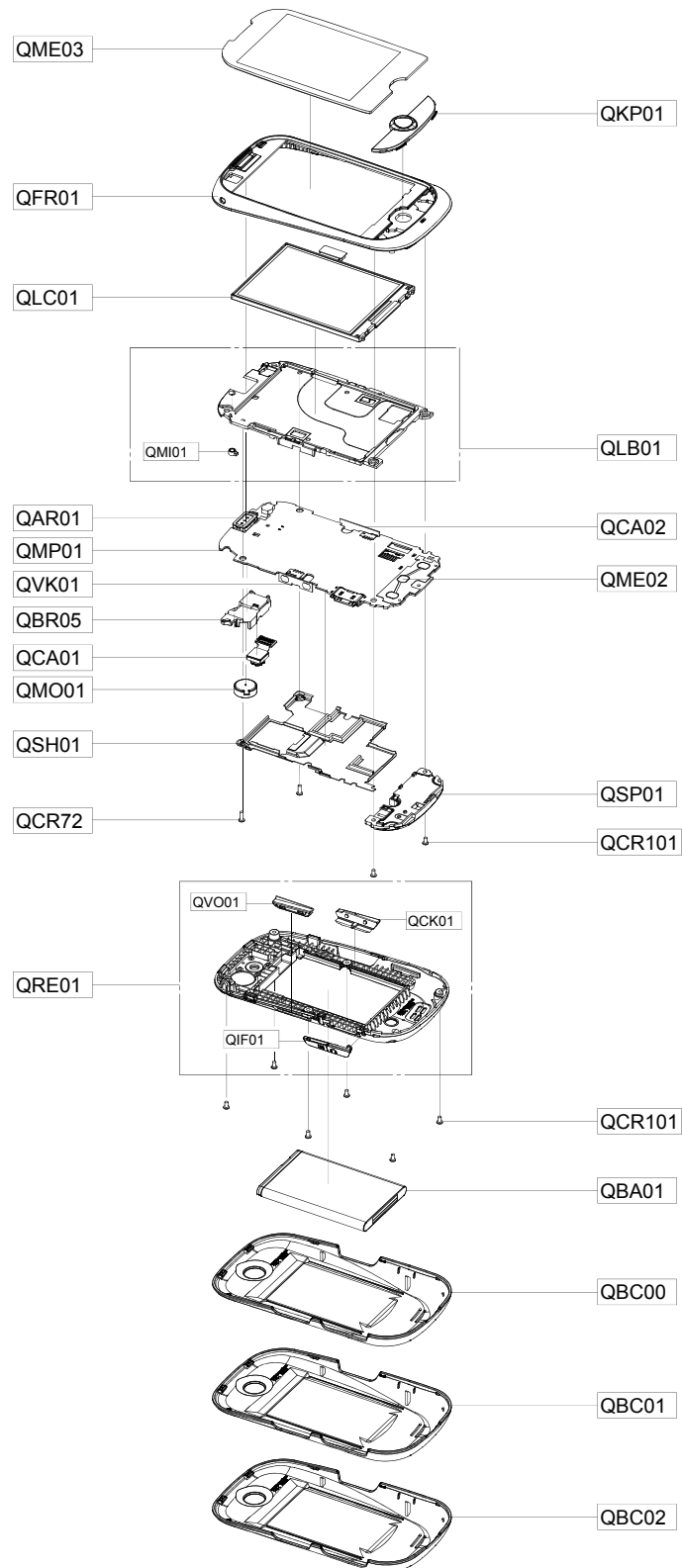
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2703-002369	L110	INDUCTOR-SMD
2703-003476	L412	INDUCTOR-SMD
2703-003476	L413	INDUCTOR-SMD
2703-003476	L414	INDUCTOR-SMD
2703-003545	L300	INDUCTOR-SMD
2703-003545	L301	INDUCTOR-SMD
2801-004373	OSC300	CRYSTAL-UNIT
2801-004815	OSC200	CRYSTAL-UNIT
2901-001435	F500	FILTER-EMI SMD
2901-001435	F501	FILTER-EMI SMD
2901-001435	F502	FILTER-EMI SMD
2901-001544	F400	FILTER-EMI SMD
2904-001912	F101	FILTER-SAW
2904-001913	F102	FILTER-SAW
2909-001312	F100	FILTER-DUPLEXER
3003-001138	MIC400	MIC-CONDENSOR
3003-001138	MIC401	MIC-CONDENSOR
3301-001659	L100	CORE-FERRITE BEAD
3301-001659	L101	CORE-FERRITE BEAD
3301-001659	L121	CORE-FERRITE BEAD
3301-001659	L200	CORE-FERRITE BEAD
3301-001659	L201	CORE-FERRITE BEAD
3301-001885	L405	CORE-FERRITE BEAD
3301-001885	L406	CORE-FERRITE BEAD
3301-001885	L407	CORE-FERRITE BEAD
3301-001885	L408	CORE-FERRITE BEAD
3301-001885	L409	CORE-FERRITE BEAD
3301-001885	L411	CORE-FERRITE BEAD
3301-001970	L501	CORE-FERRITE BEAD
3301-001970	L502	CORE-FERRITE BEAD
3705-001503	RFS100	CONNECTOR-COAXIAL
3708-002015	SLC400	CONNECTOR-FPC/FFC/PIC
3709-001488	SIM300	CONNECTOR-CARD EDGE
3709-001580	CD300	CONNECTOR-CARD EDGE
3710-002534	IFC400	CONNECTOR-SOCKET
3711-006105	HEA505	CONNECTOR-HEADER

SEC CODE	Design LOC	Description
3711-006405	HEA504	CONNECTOR-HEADER
3711-006808	BTC300	CONNECTOR-HEADER
4202-001463	ANT102	ANTENNA-CHIP
4302-001180	BAT300	BATTERY
GH70-03276A	SC100	ICT SHIELD-CAN CLIP
GH70-03276A	SC101	ICT SHIELD-CAN CLIP
GH70-03276A	SC103	ICT SHIELD-CAN CLIP
GH70-03276A	SC104	ICT SHIELD-CAN CLIP
GH71-08426A	ANT100	NPR-CONTACT ANT;HJ-ICT-02
GH71-08426A	ANT101	NPR-CONTACT ANT;HJ-ICT-02
GH80-03320A	R103	SOLDER-CREAM/SMT KOREA(FREE)
GH80-03320A	R316	SOLDER-CREAM/SMT KOREA(FREE)
GH80-03320A	R318	SOLDER-CREAM/SMT KOREA(FREE)
GH80-03320A	R419	SOLDER-CREAM/SMT KOREA(FREE)

Please consult the GSPN website (Samsung Portal) for the most recent version of the product's part list.

5. Exploded View and Parts List

5-1. Cellular phone Exploded View



5-2. Cellular phone Parts list

Design LOC		Description	SEC CODE
QAR01		AUDIO-RECEIVER	3009-001387
QBA01		INNER BATTERY PACK-960MAH,BLK,UNI,MAIN	GH43-03216A
QBC00		ASSY COVER-BATTERY	GH98-13936A
QBC01		ASSY COVER-BATTERY(K)	GH98-13936E
QBC02		ASSY COVER-BATTERY ADDED	GH98-15010A
QBR05		ASSY BRACKET-CAMERA	GH98-15105A
QCA01		CAMERA MODULE-GT-S3650_2.0M	GH59-08173A
QCA02		KEY FPCB-GT-S3650 CAM FPCB	GH59-07882A
QCR101		SCREW-MACHINE	6001-002005
QCR72		SCREW-MACHINE	6001-002051
QFR01		ASSY CASE-FRONT	GH98-13888A
QKP01		ASSY KEYPAD-(BLACK/OPEN)	GH98-13935A
QLC01		ELA MODULE-GT_S3650 LCD	GH96-04006A
QME02		DOME SHEET-SUB KEY(GT-S3650)	GH59-07885A
QME03		TOUCH/PANEL-GTS3650	GH59-08114A
QMO01		MOTOR DC-SCHC250	GH31-00323A
QMP01		A/S ASSY-PBA MAIN GT_S3650L	GH82-04094A
QSH01		ASSY BRACKET-SHIELD REAR	GH98-13934A
QSP01		MODULE-GTS3650L_SPK	GH59-08421A
QVK01		KEY FPCB-GT-S3650 VOL FPCB	GH59-07881A
QLB01		ASSY BRACKET-LCD V2	GH98-14828A
	QMI03	RMO RUBBER-MIC UP	GH73-13137A
QRE01		ASSY CASE-REAR	GH98-13889A
	QIF01	PMO COVER-IF V3	GH72-56516A
	QCK01	ASSY KEY-CAMERA	GH98-15162A
	QVO01	ASSY KEY-VOLUME	GH98-15163A

2. Specification

2-1. GSM General Specification

	GSM900 Phase 1	GSM850 Phase 1	DCS1800 Phase 1	PCS1900
Freq. Band[MHz] Uplink/Downlink	880~915 925~960	824.2~848.8 869.2~893.8	1710~1785 1805~1880	1850~1910 1930~1990
ARFCN range	0~124 & 975~1023	128~251	512~885	512~810
Tx/Rx spacing	45MHz	45MHz	95MHz	80MHz
Mod. Bit rate/ Bit Period	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us
Time Slot Period/Frame Period	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms
Modulation	0.3GMSK	0.3GMSK	0.3GMSK	0.3GMSK
MS Power	33dBm~5dBm	33dBm~5dBm	30dBm~0dBm	30dBm~0dBm
Power Class	5pcl ~ 19pcl	5pcl ~ 19pcl	0pcl ~ 15pcl	0pcl ~ 15pcl
Sensitivity	-102dBm	-102dBm	-100dBm	-100dBm
TDMA Mux	8	8	8	8
Cell Radius	35Km	35Km	2Km	-

2-2. GSM Tx Power Class

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

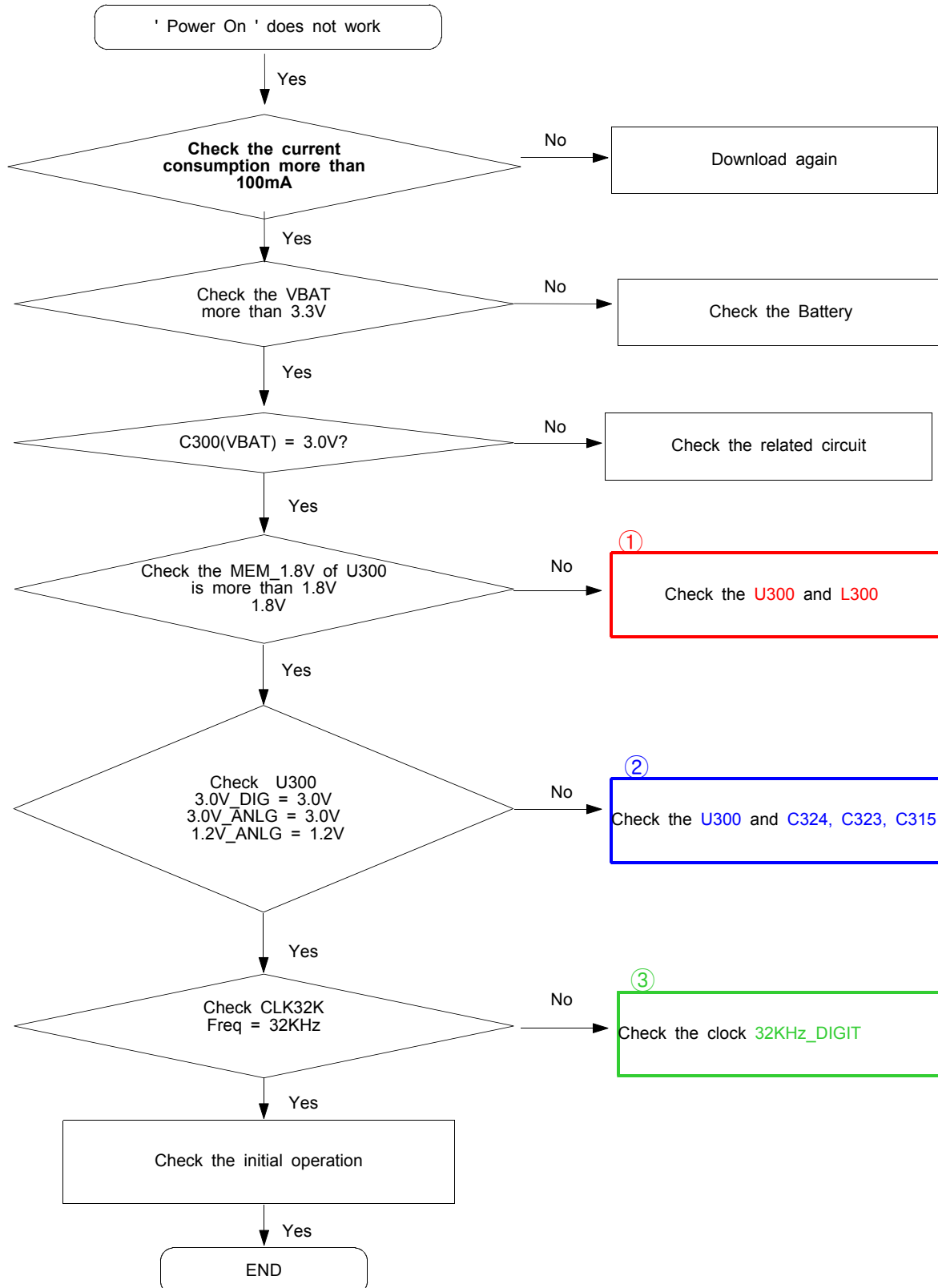
2-3. GSM EDGE TX power class

Only in Master

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

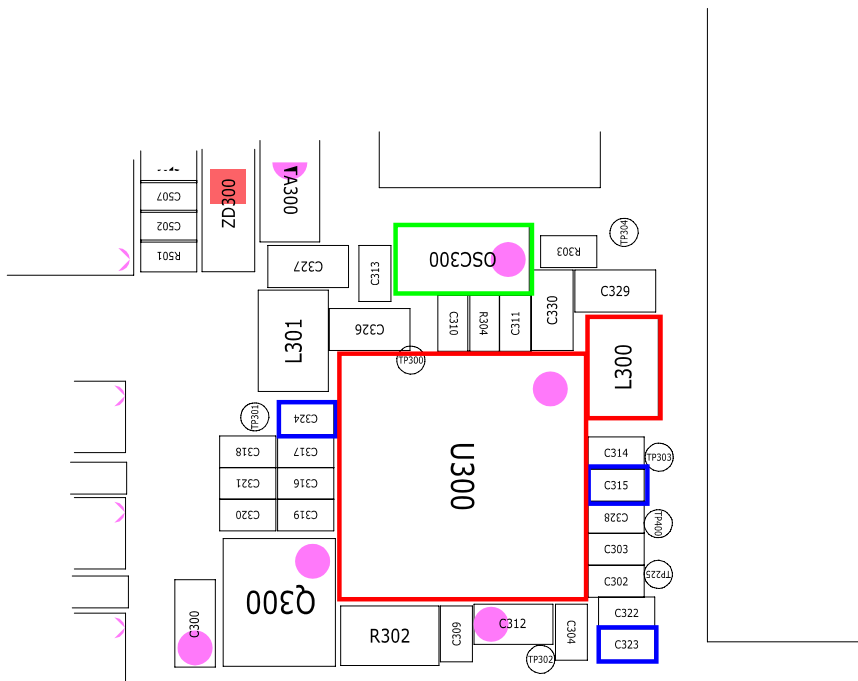
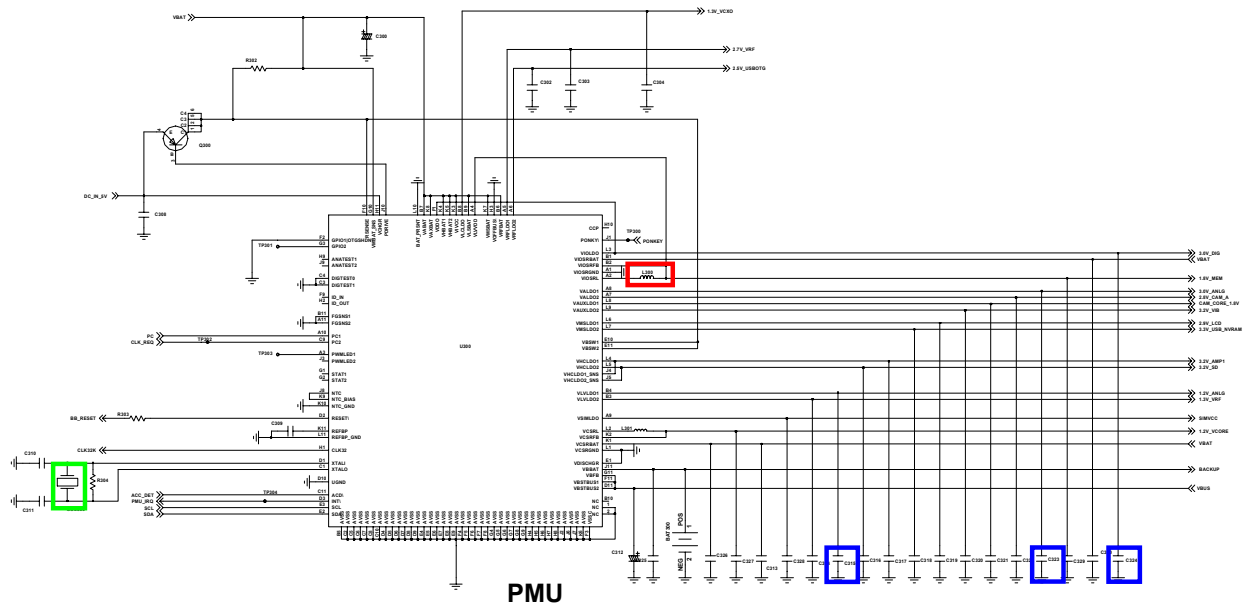
9. Flow Chart of Troubleshooting

9-1. Power On

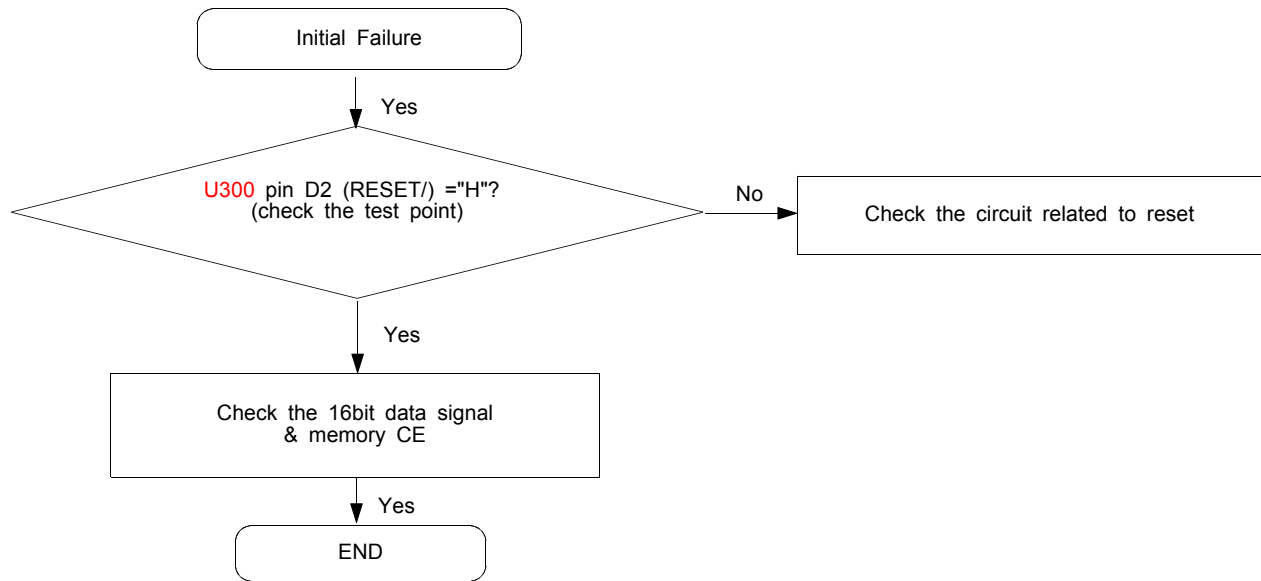


Flow Chart of Troubleshooting

ACCEPT AS AUTHORIZED BY SAMSUNG.

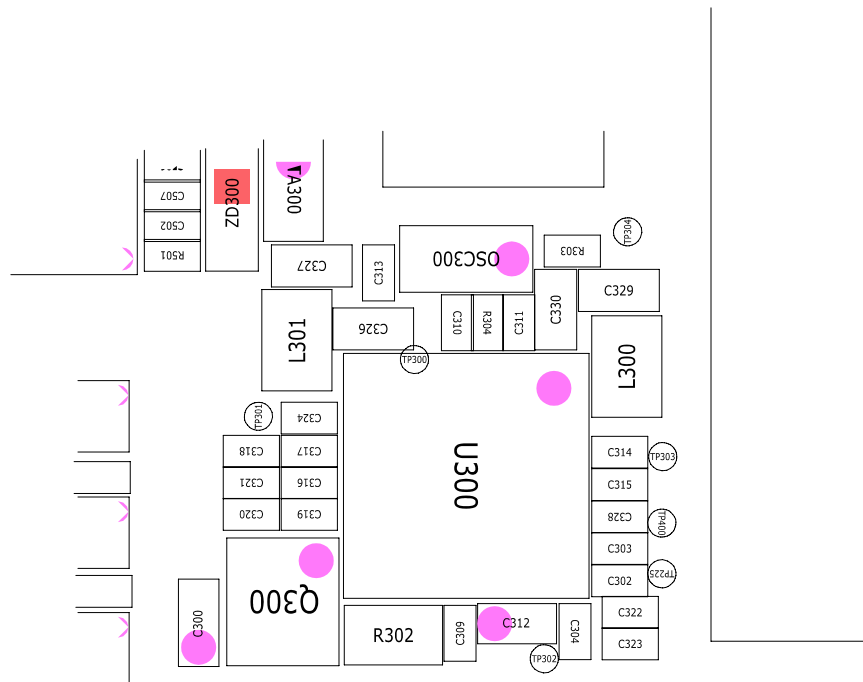
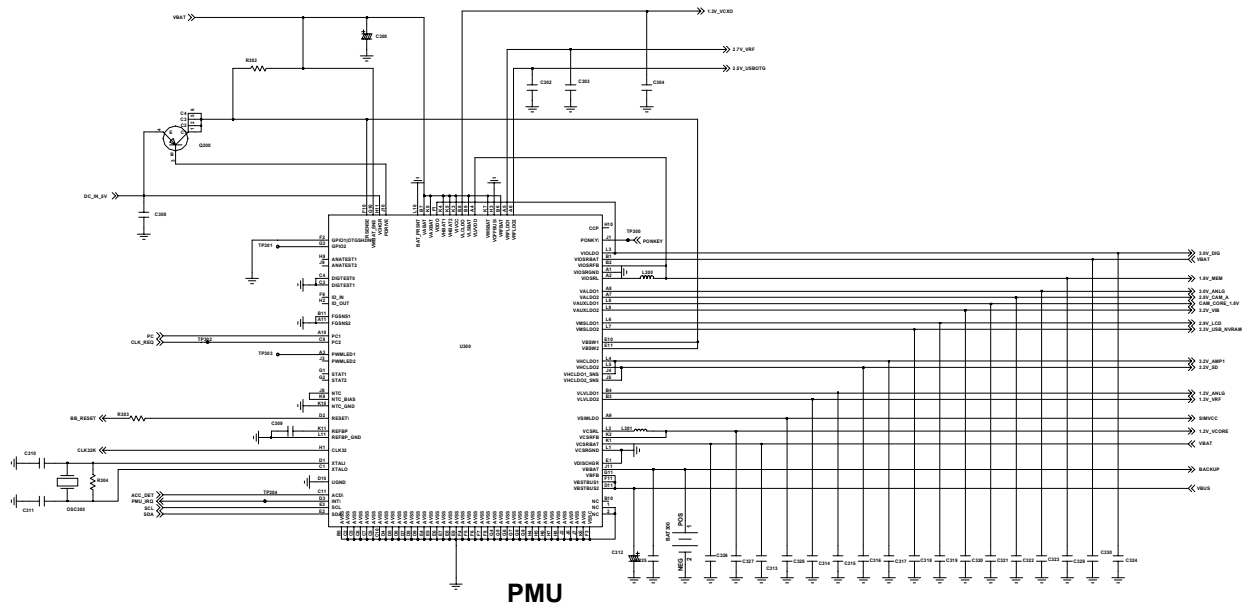


9-2. Initial

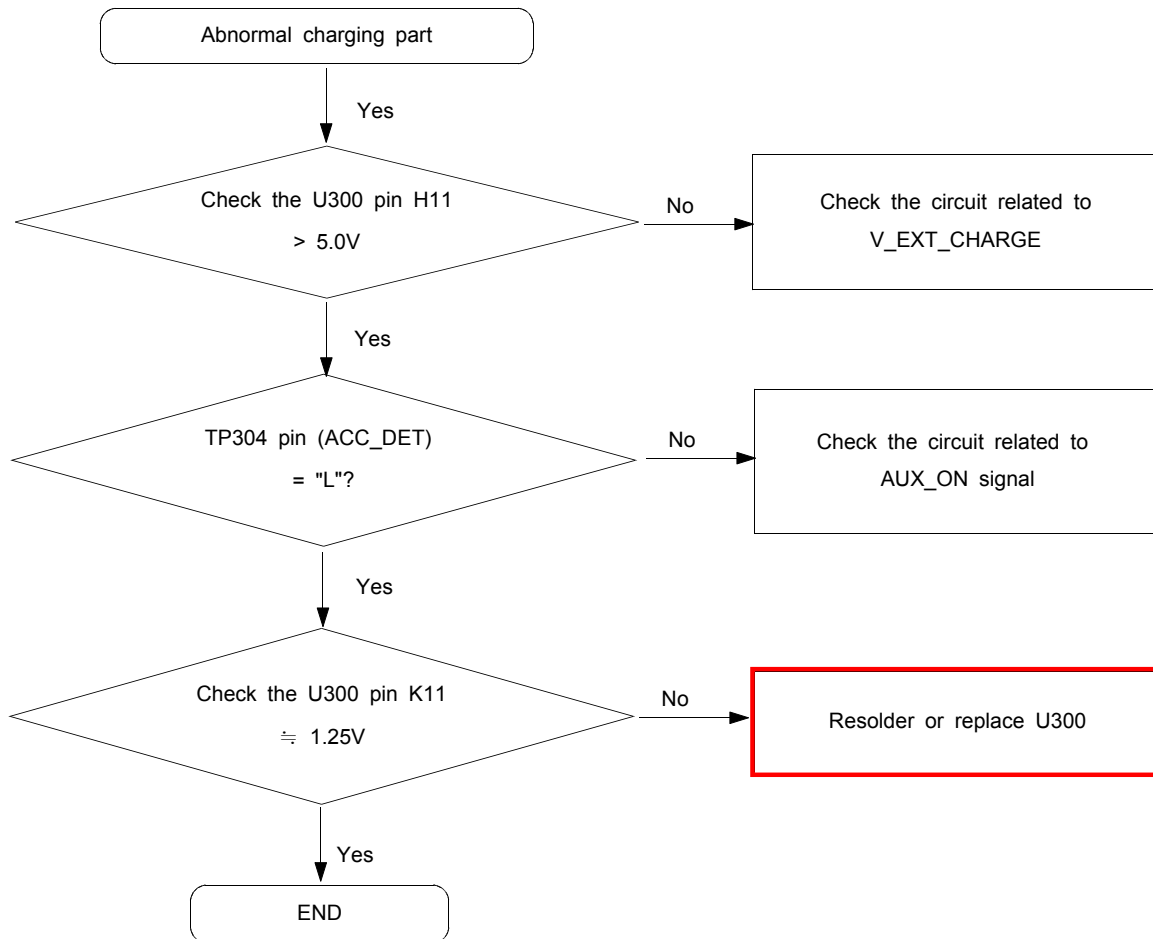


Flow Chart of Troubleshooting

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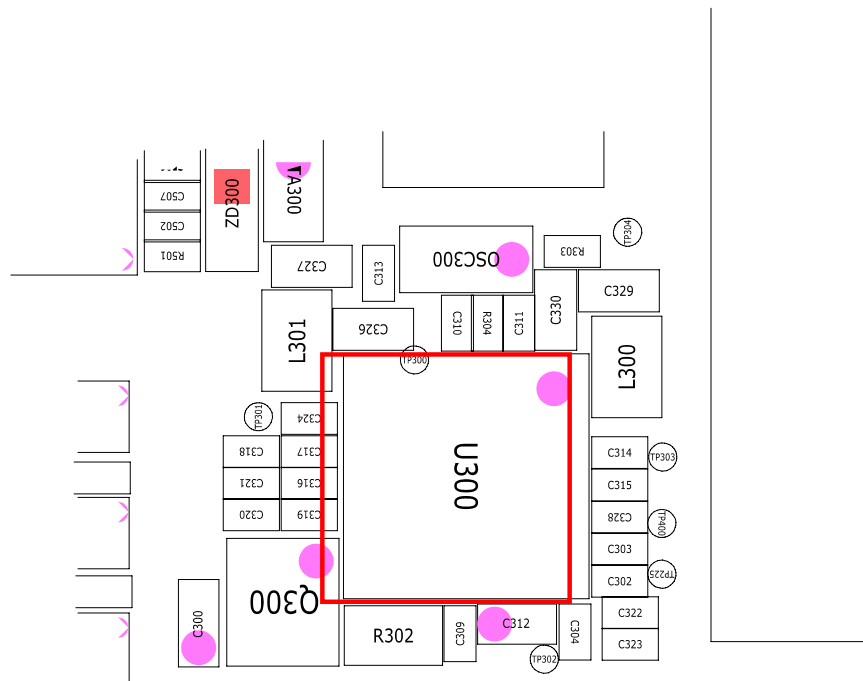
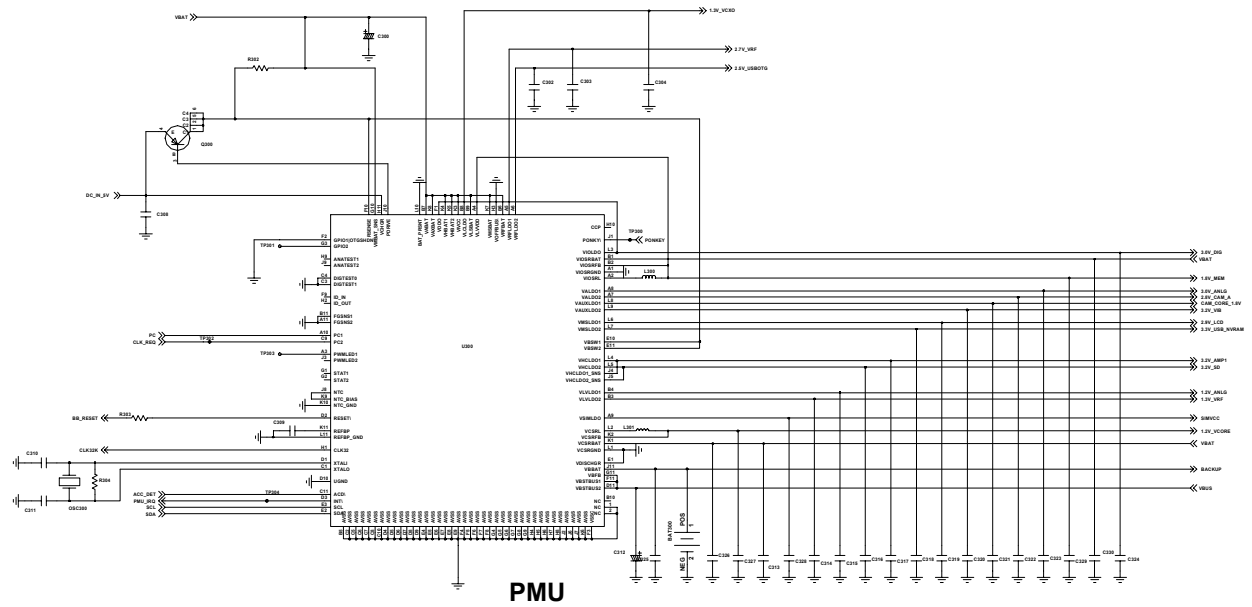


9-3. Charging Part

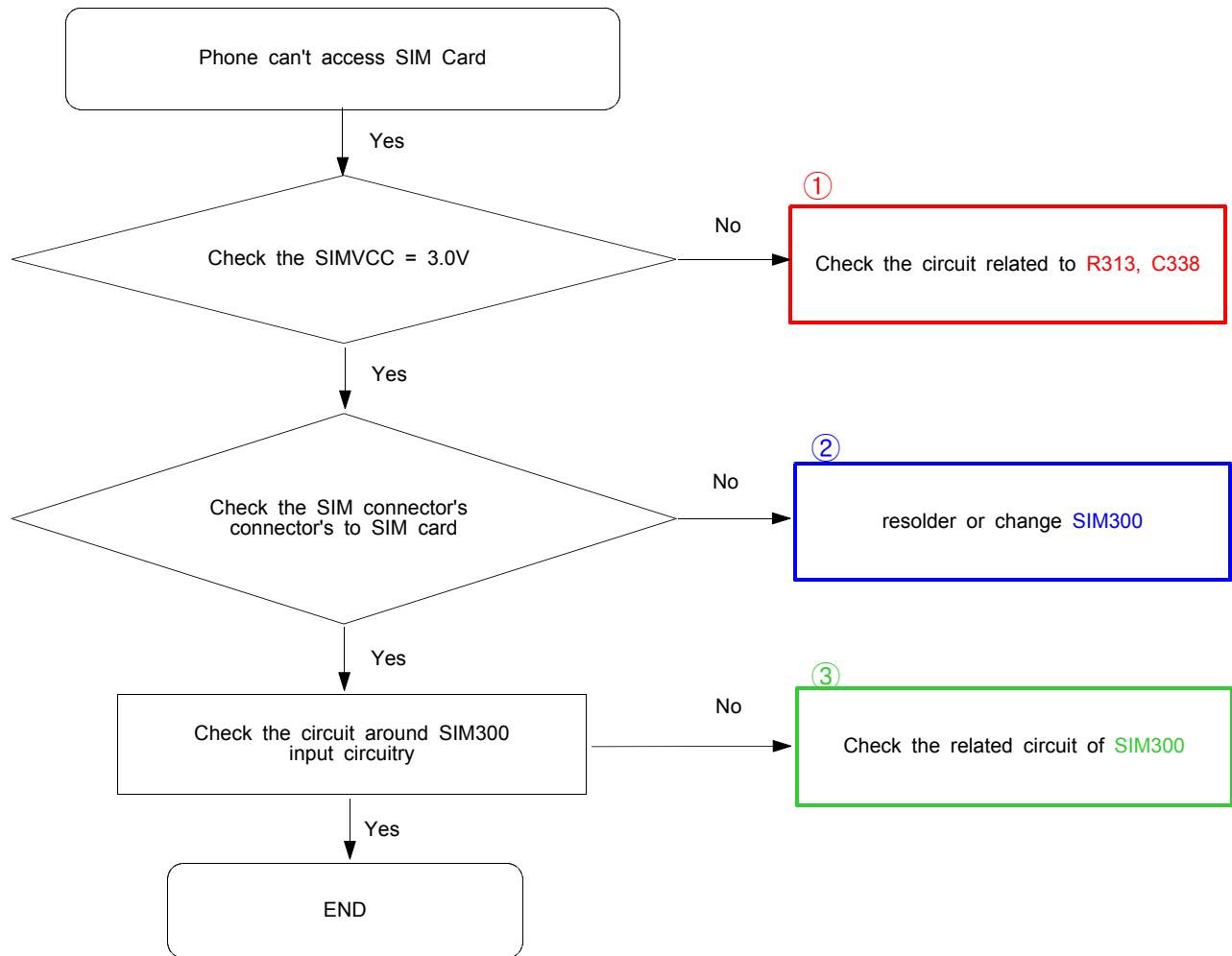


Flow Chart of Troubleshooting

SCRIPT AS AUTHORIZED BY SAMSUNG.

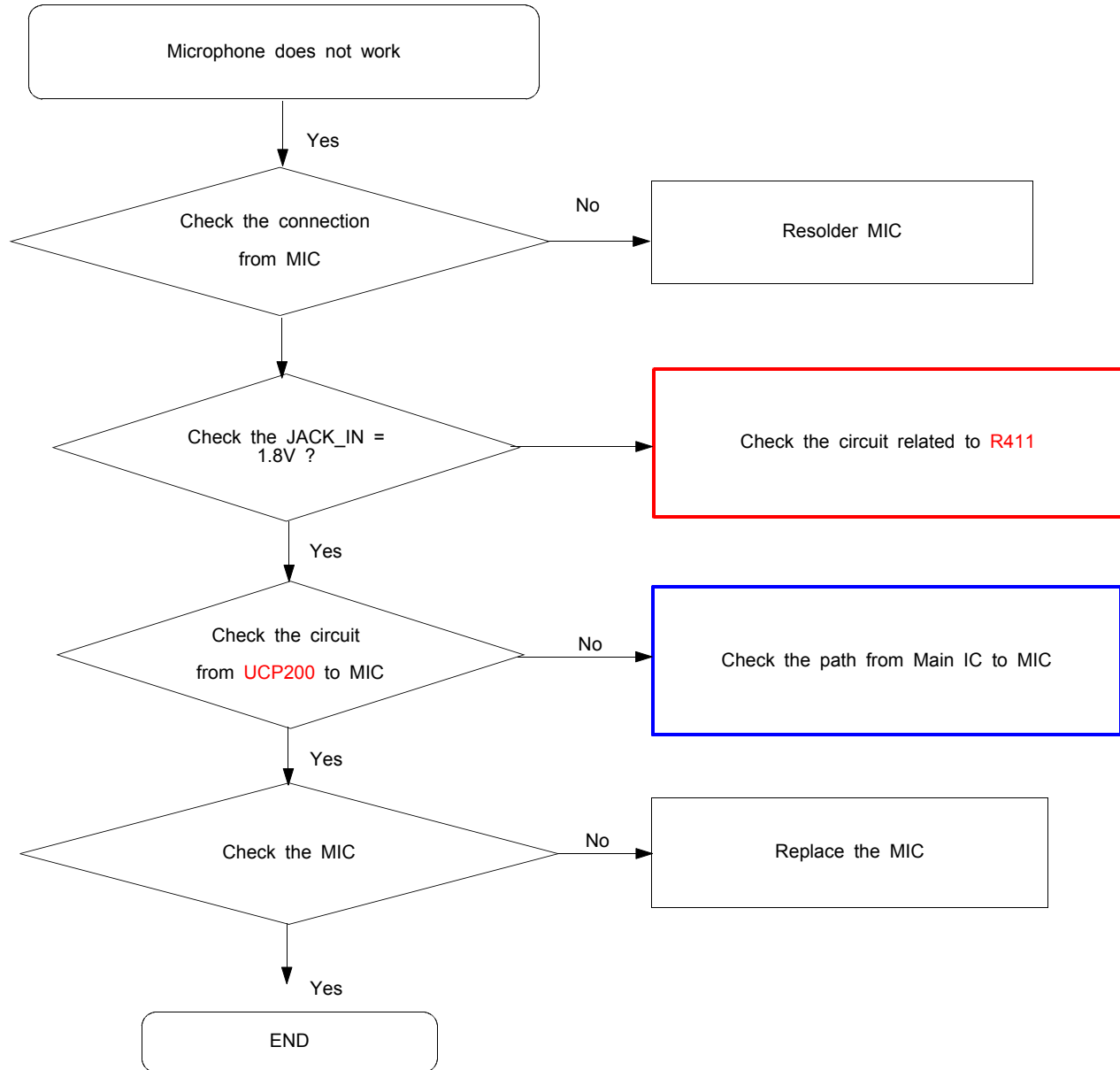


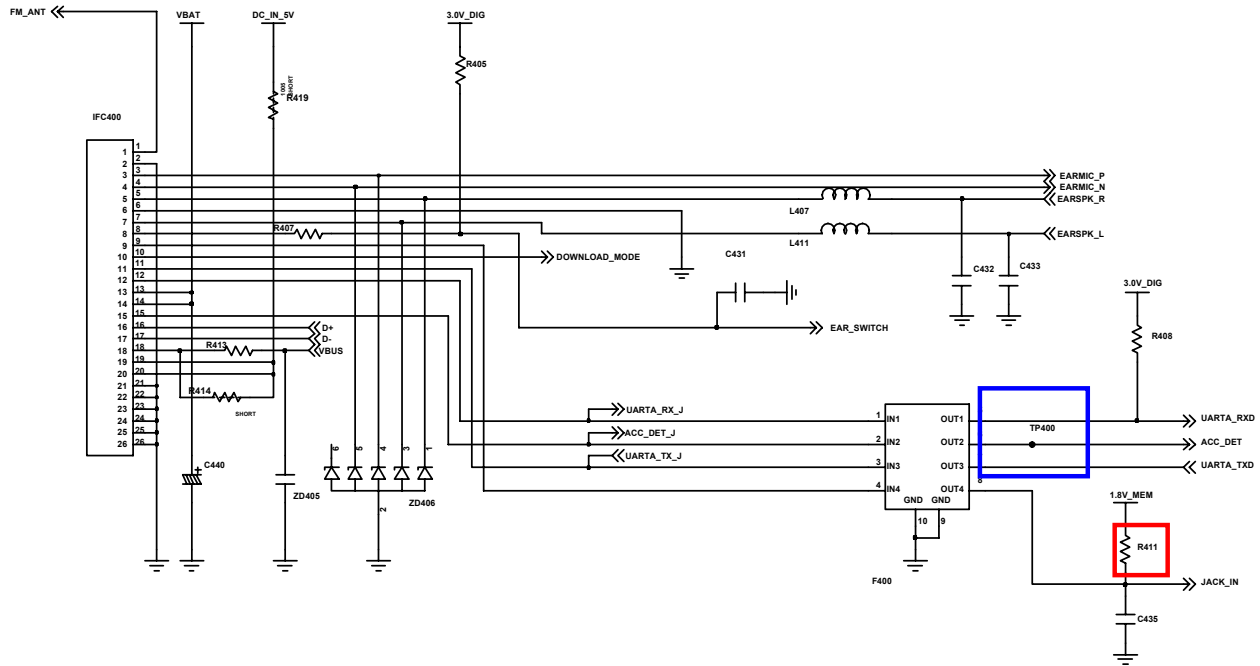
9-4. Sim Part



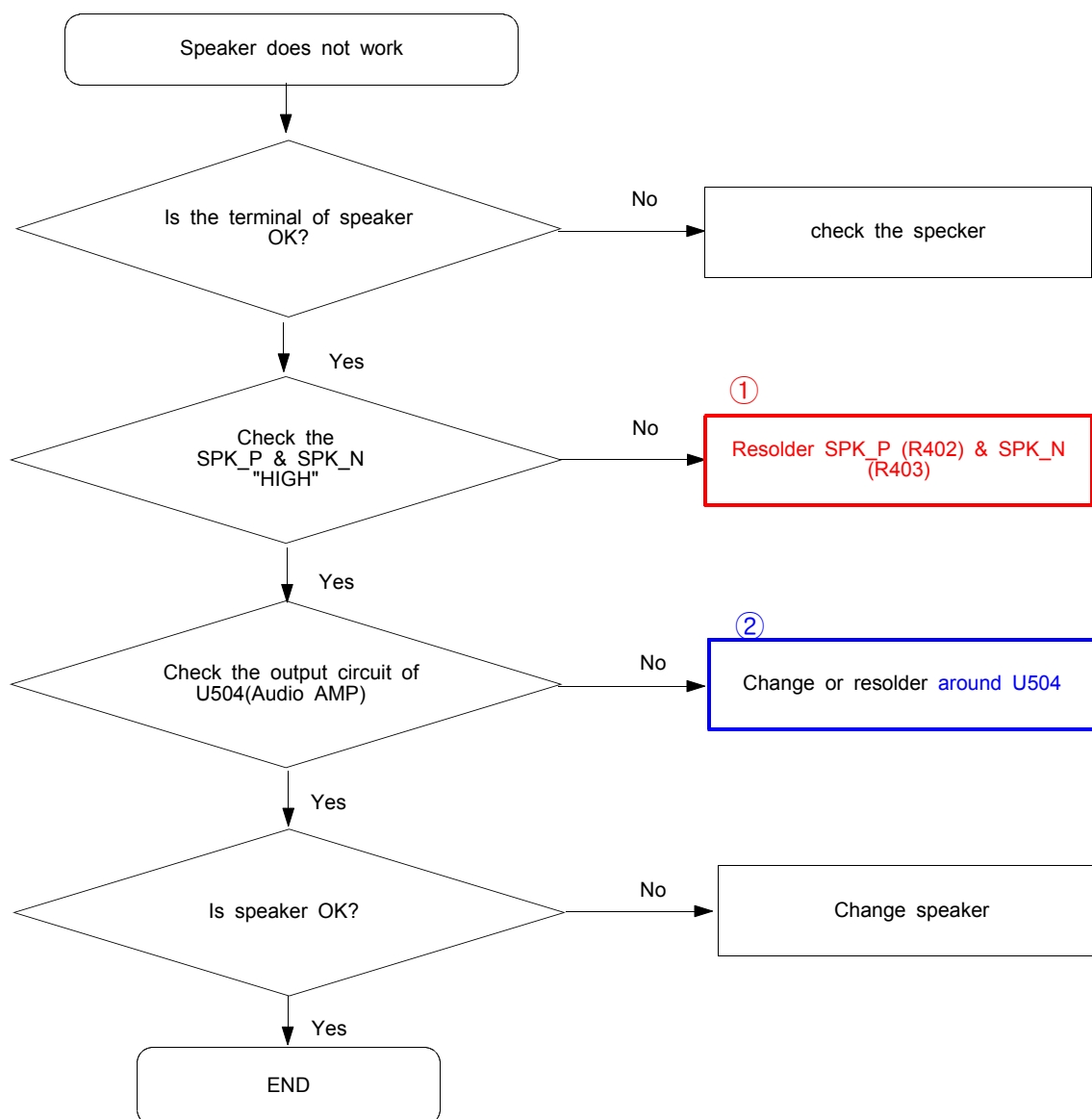


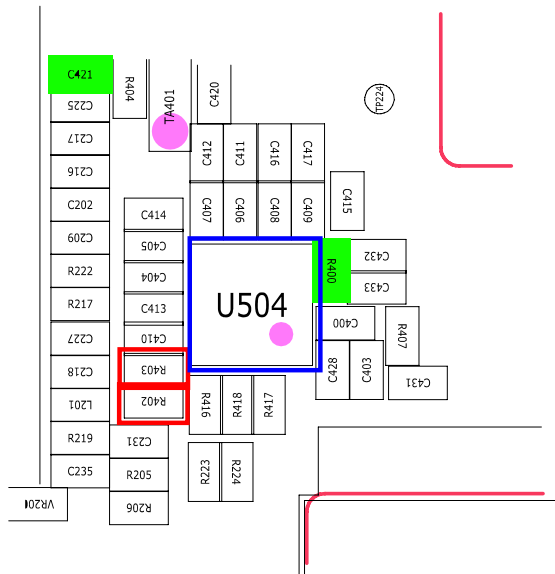
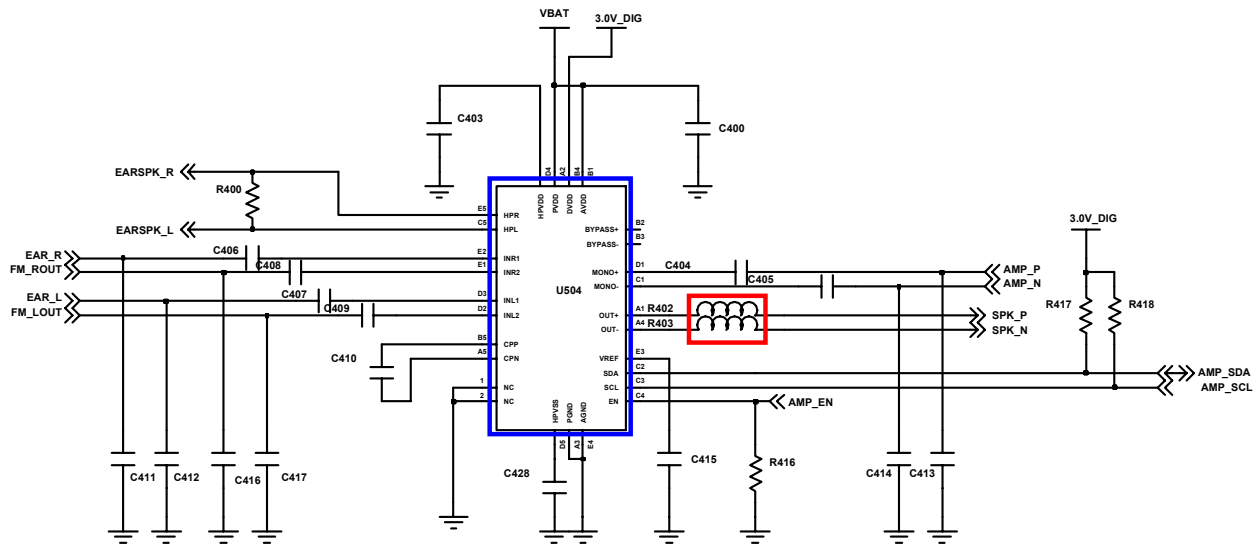
9-5. Microphone Part



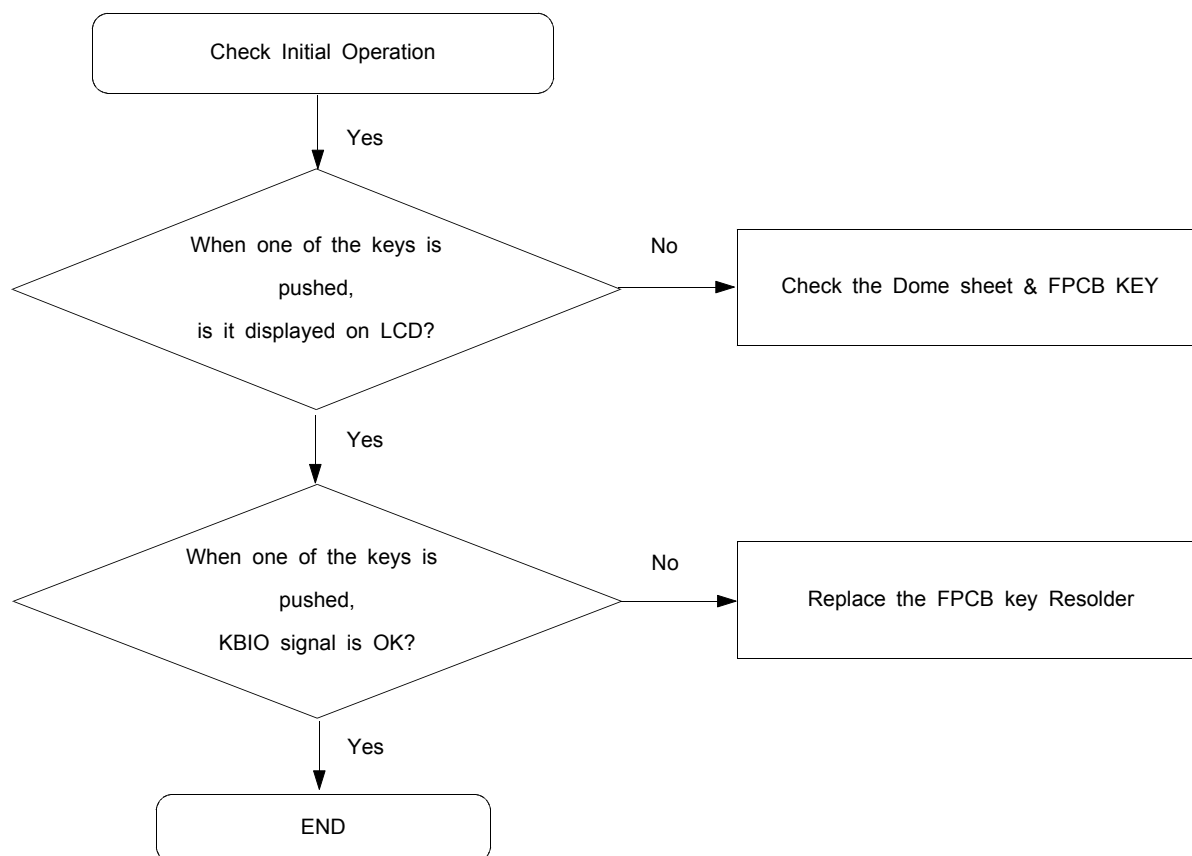


9-6. Speaker Part(Melody)

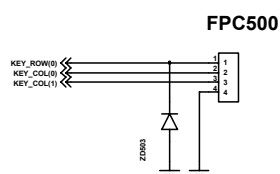




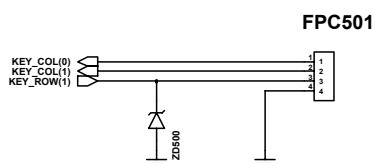
9-7. Key Data Input



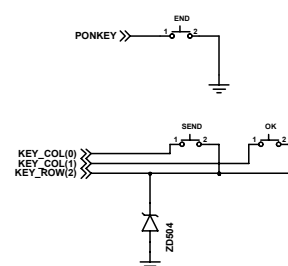
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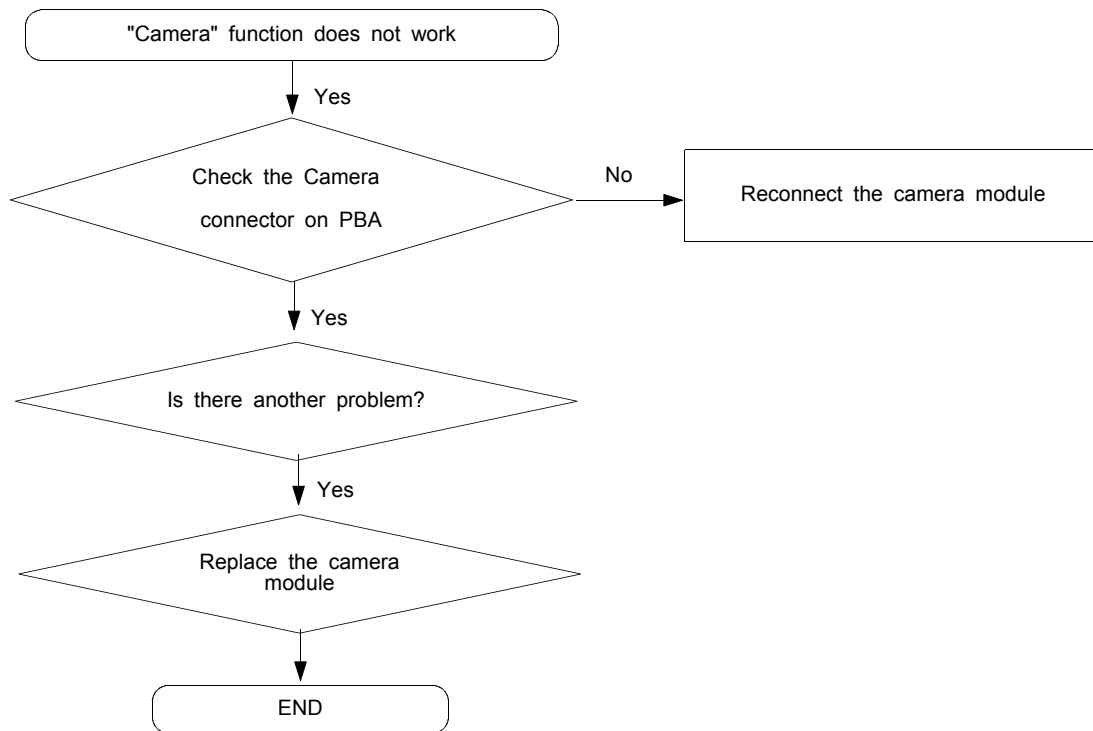
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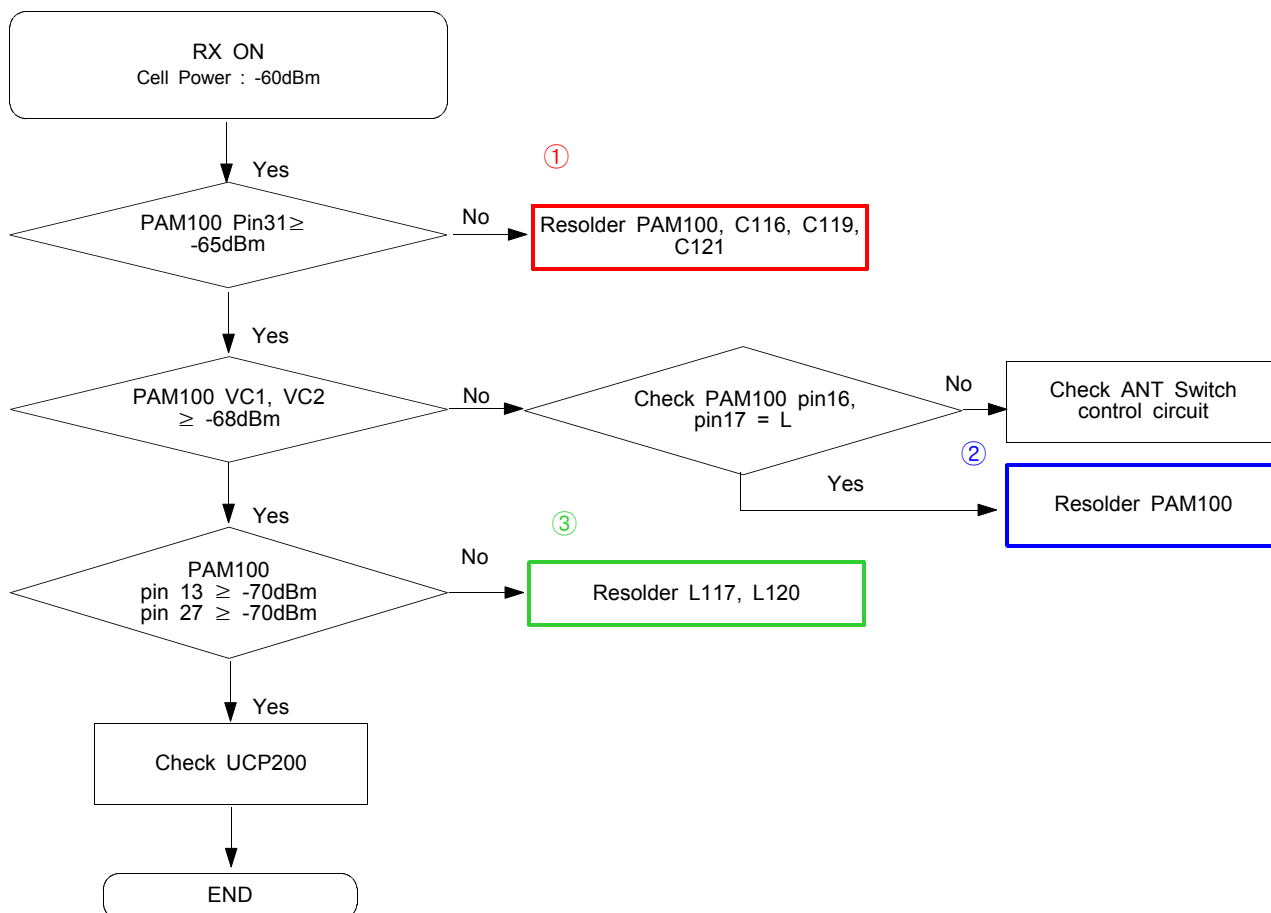
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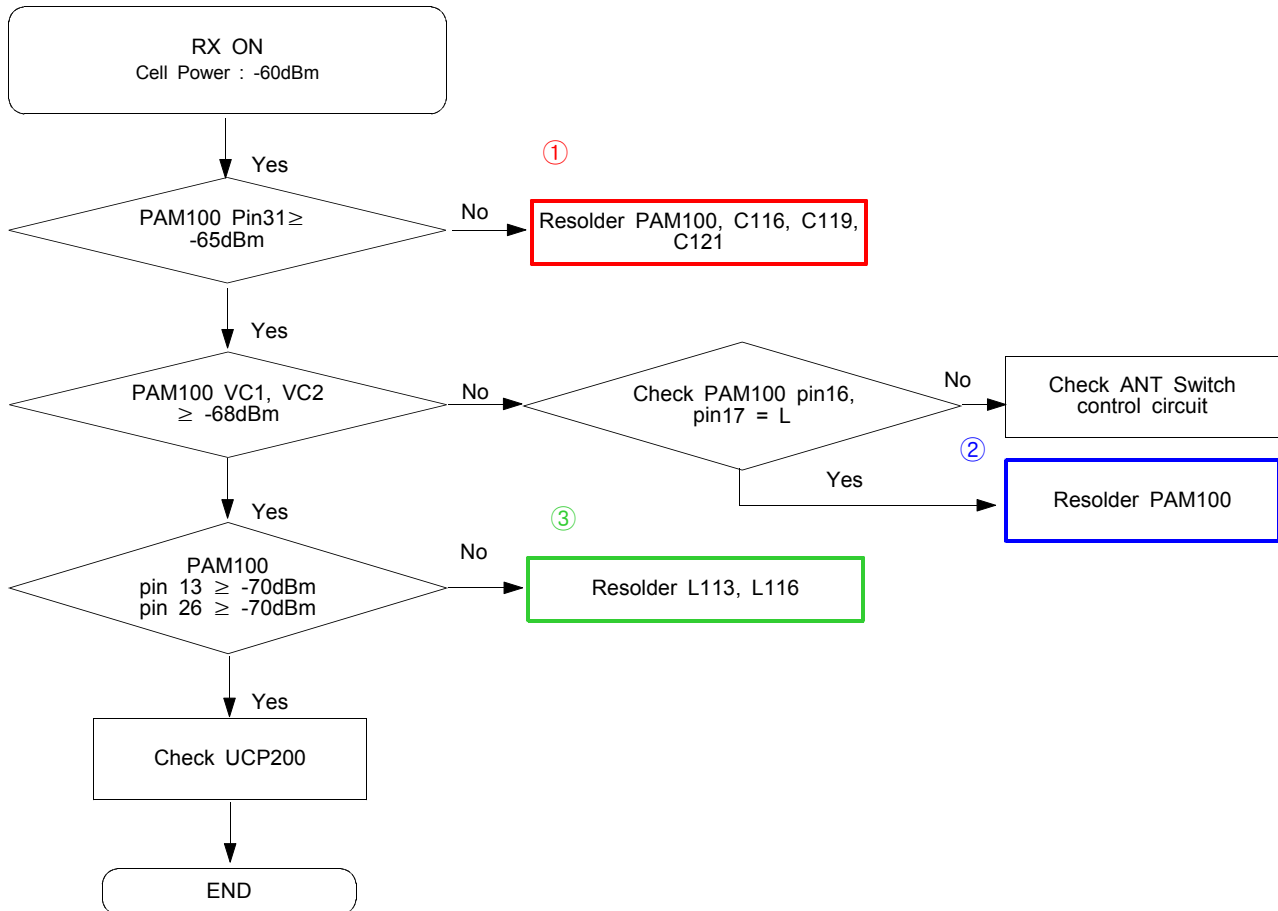
9-8. Camera part



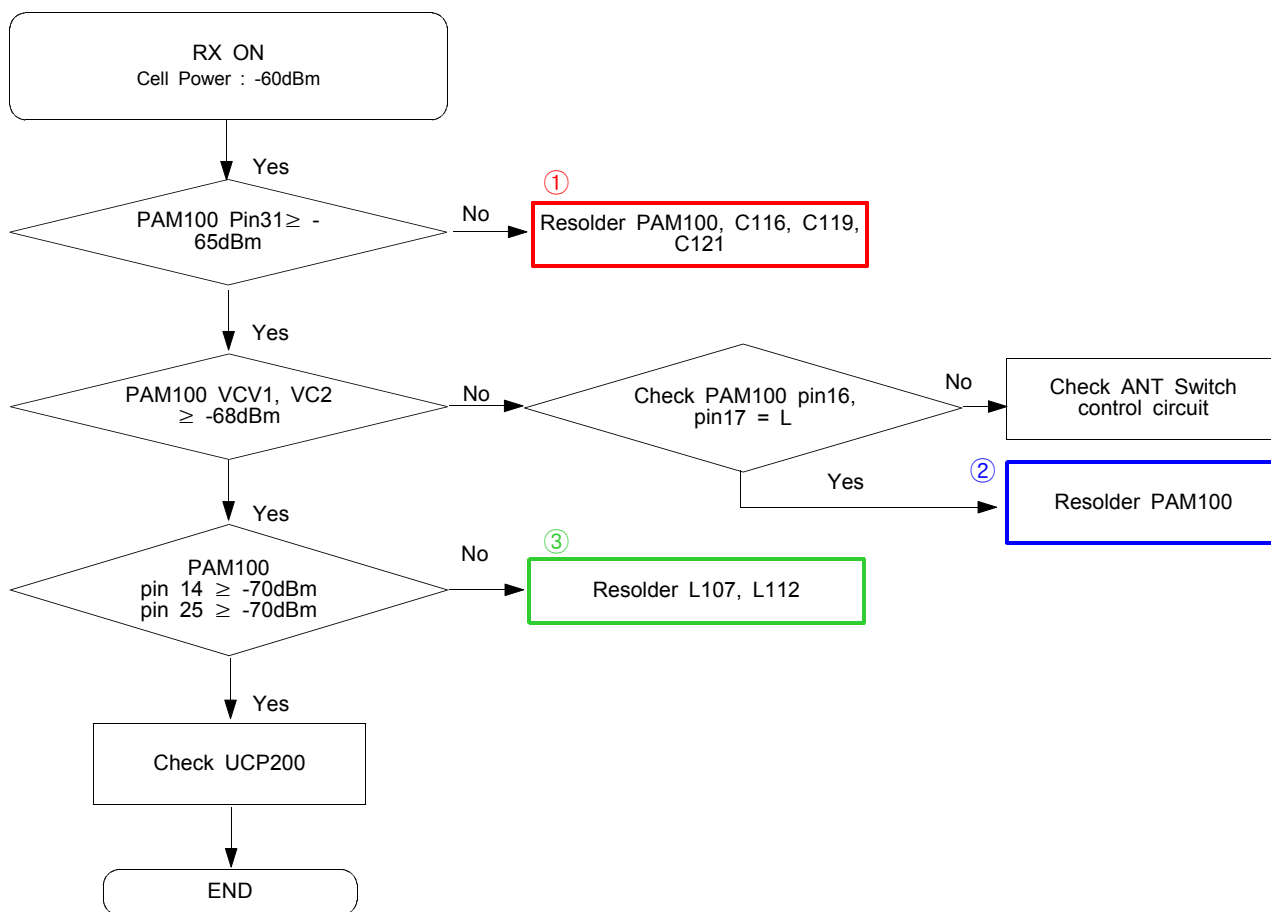
9-9. GSM850 Receiver



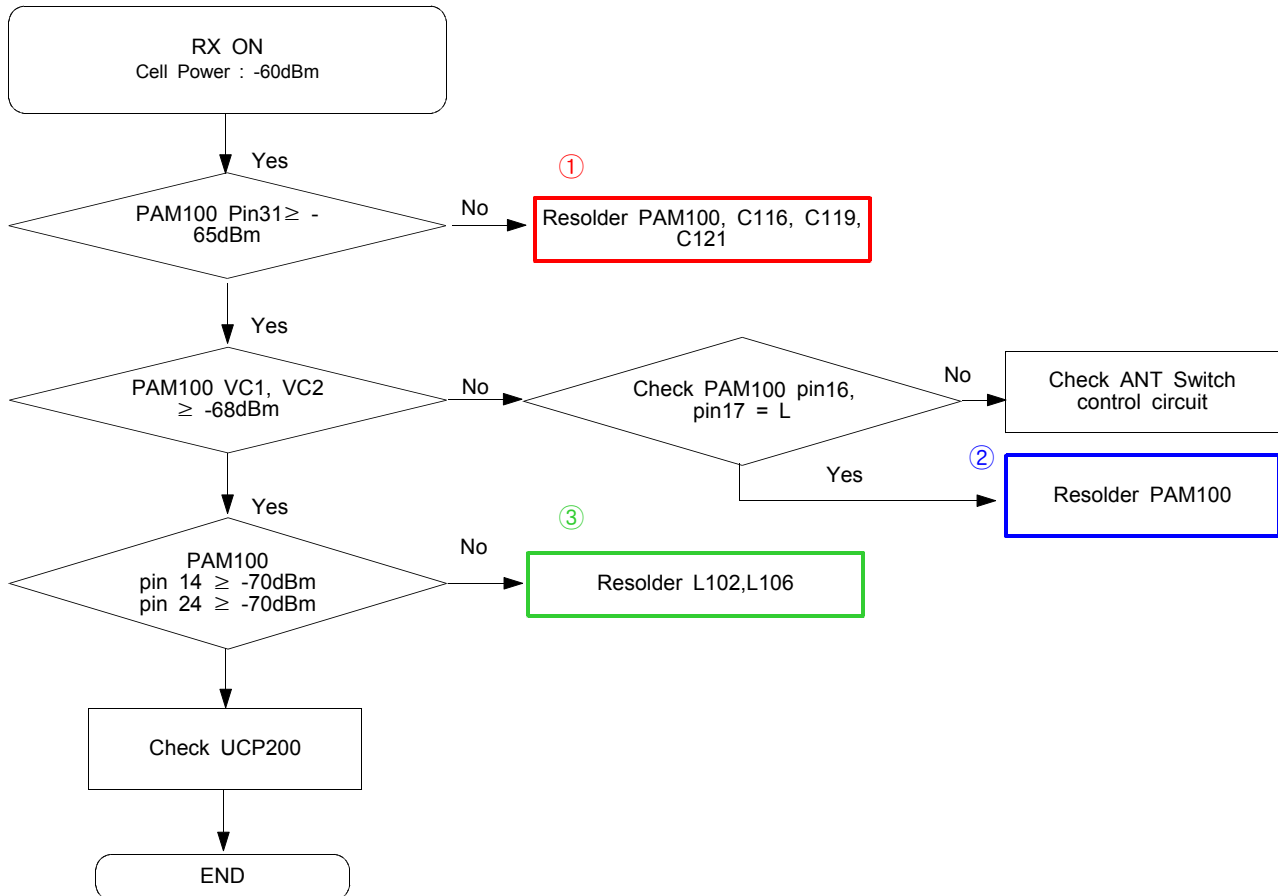
9-10. GSM Receiver

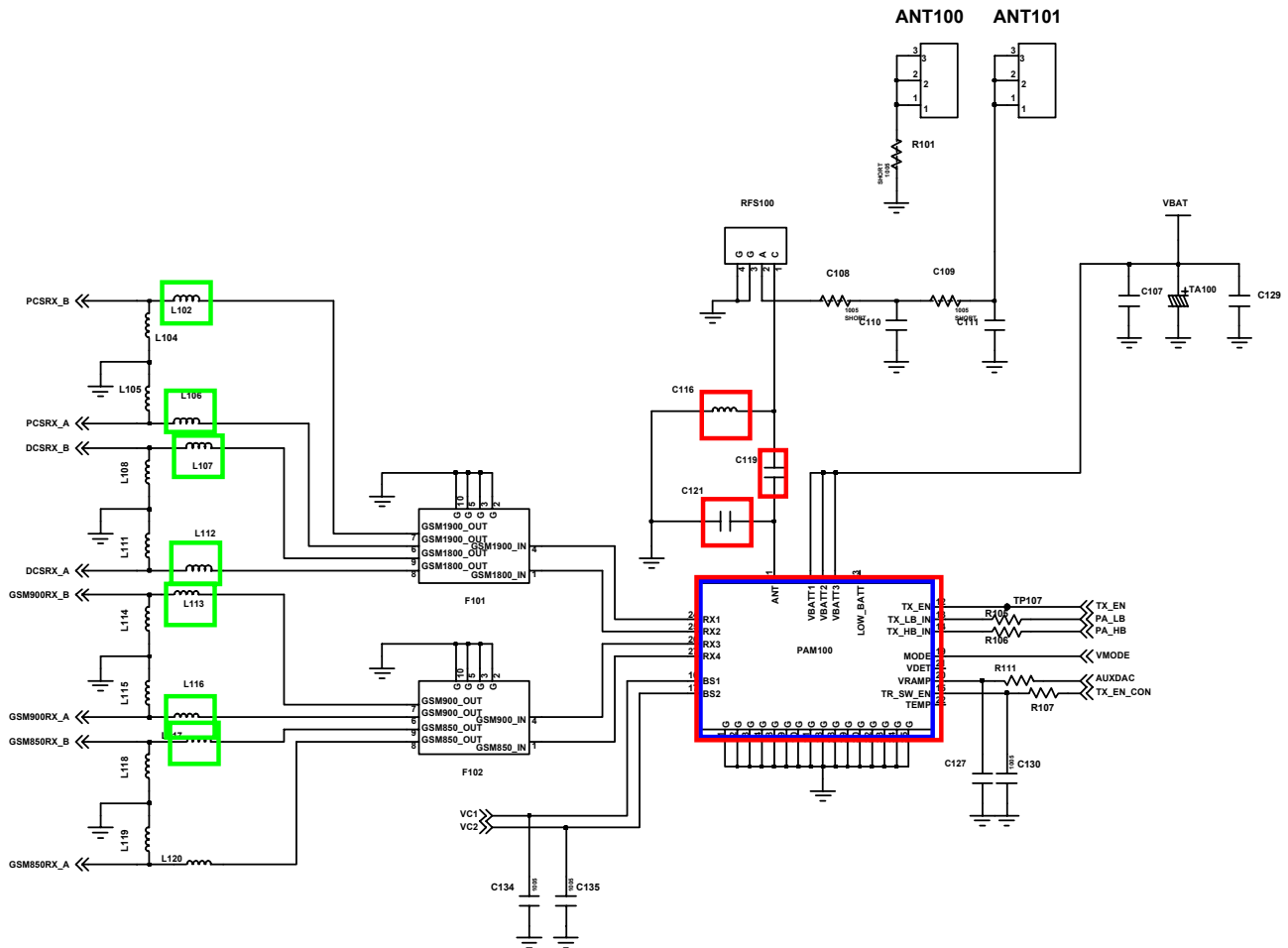


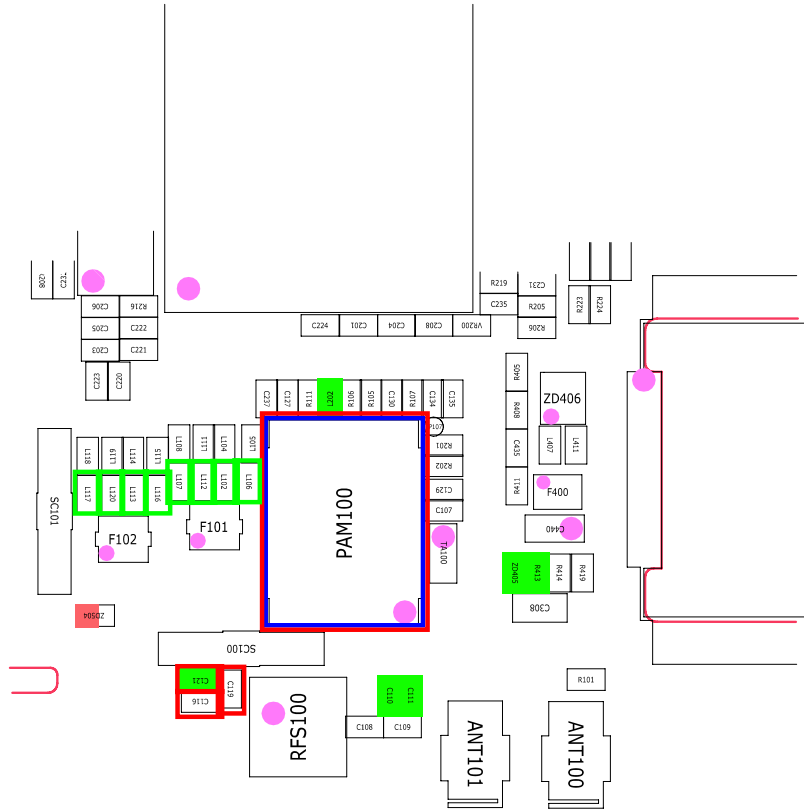
9-11. DCS Receiver



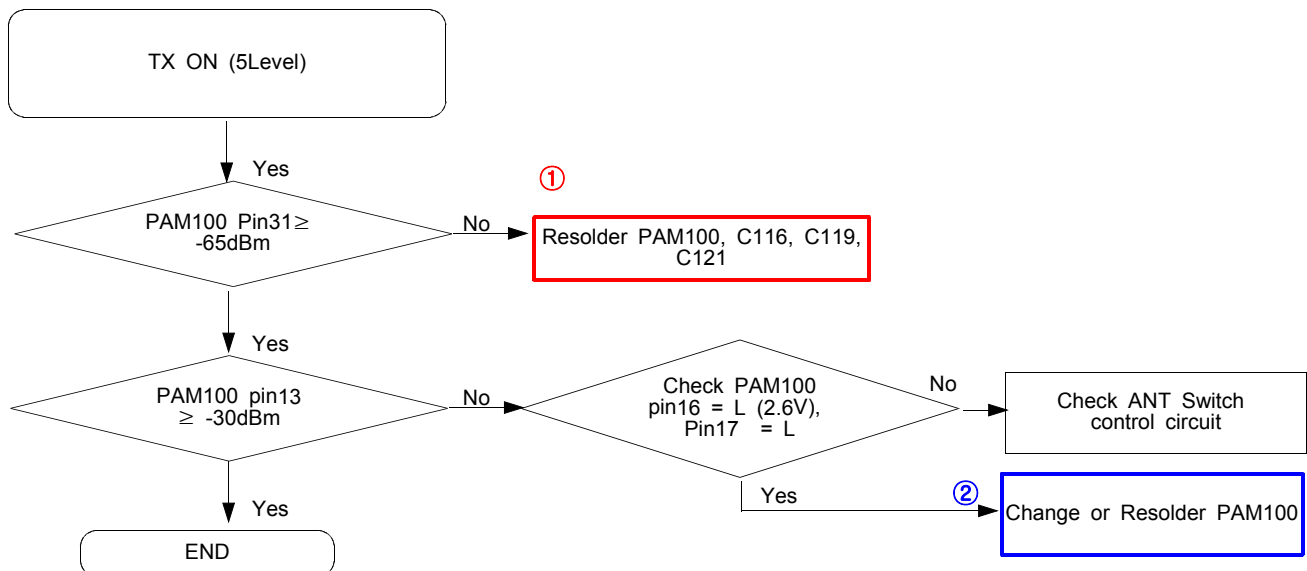
9-12. PCS Receiver



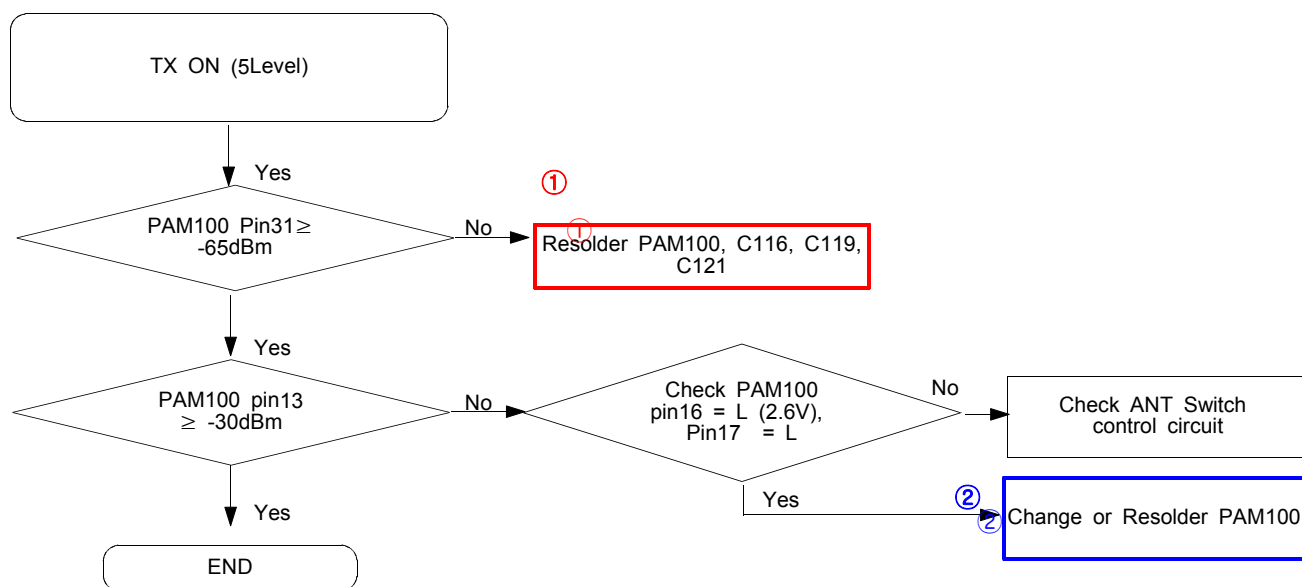




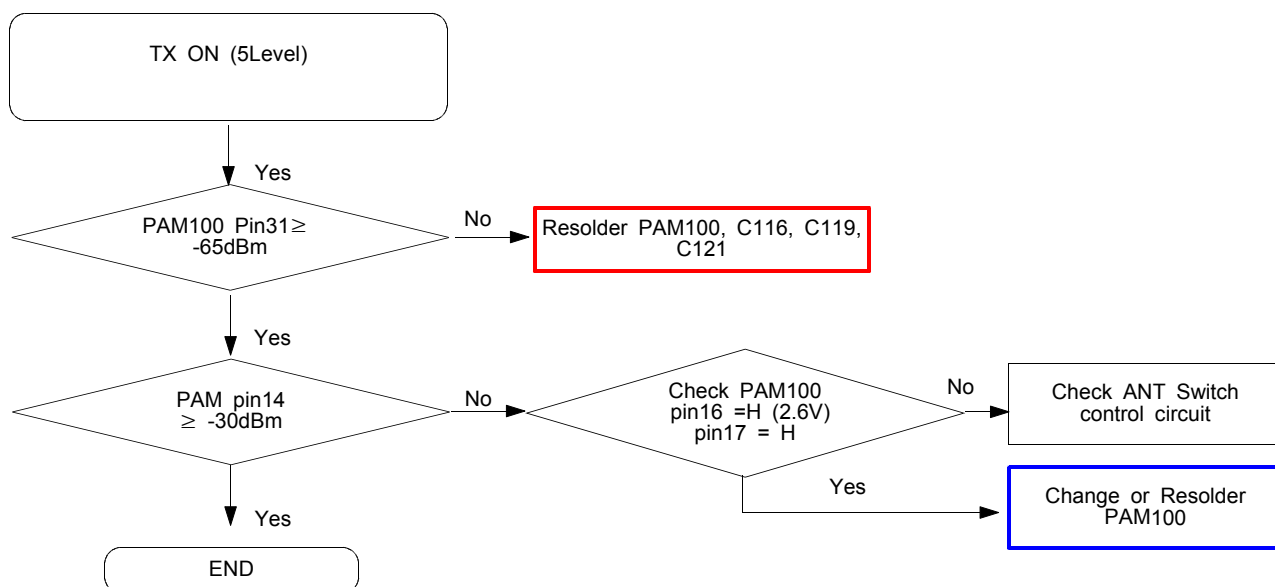
9-13. GSM850 Transmitter



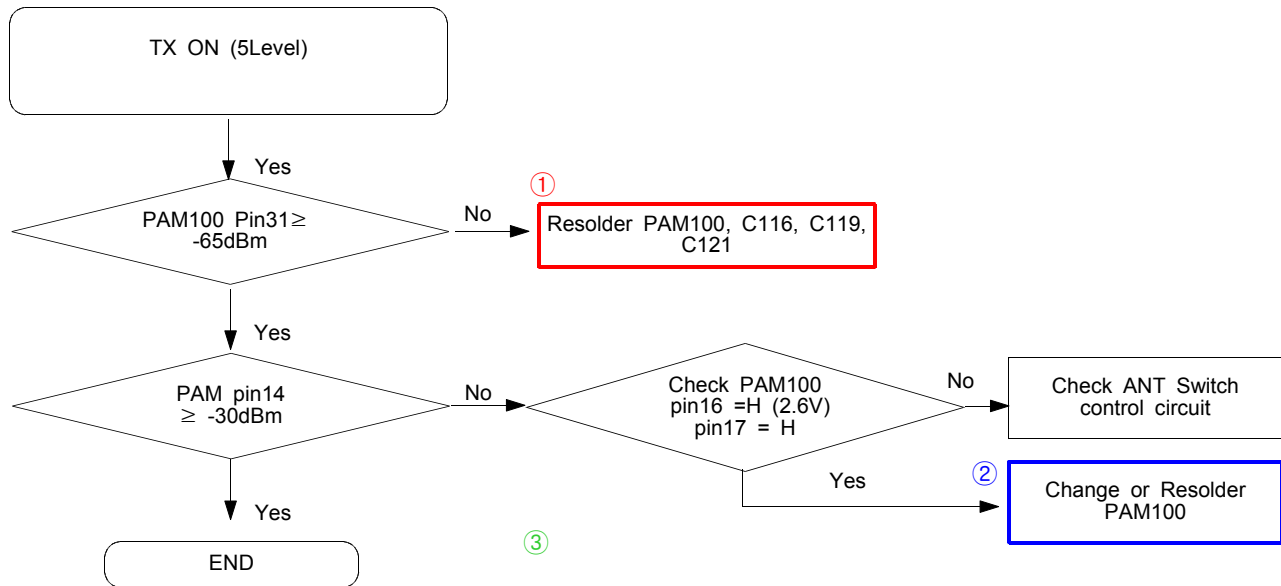
9-14. GSM Transmitter

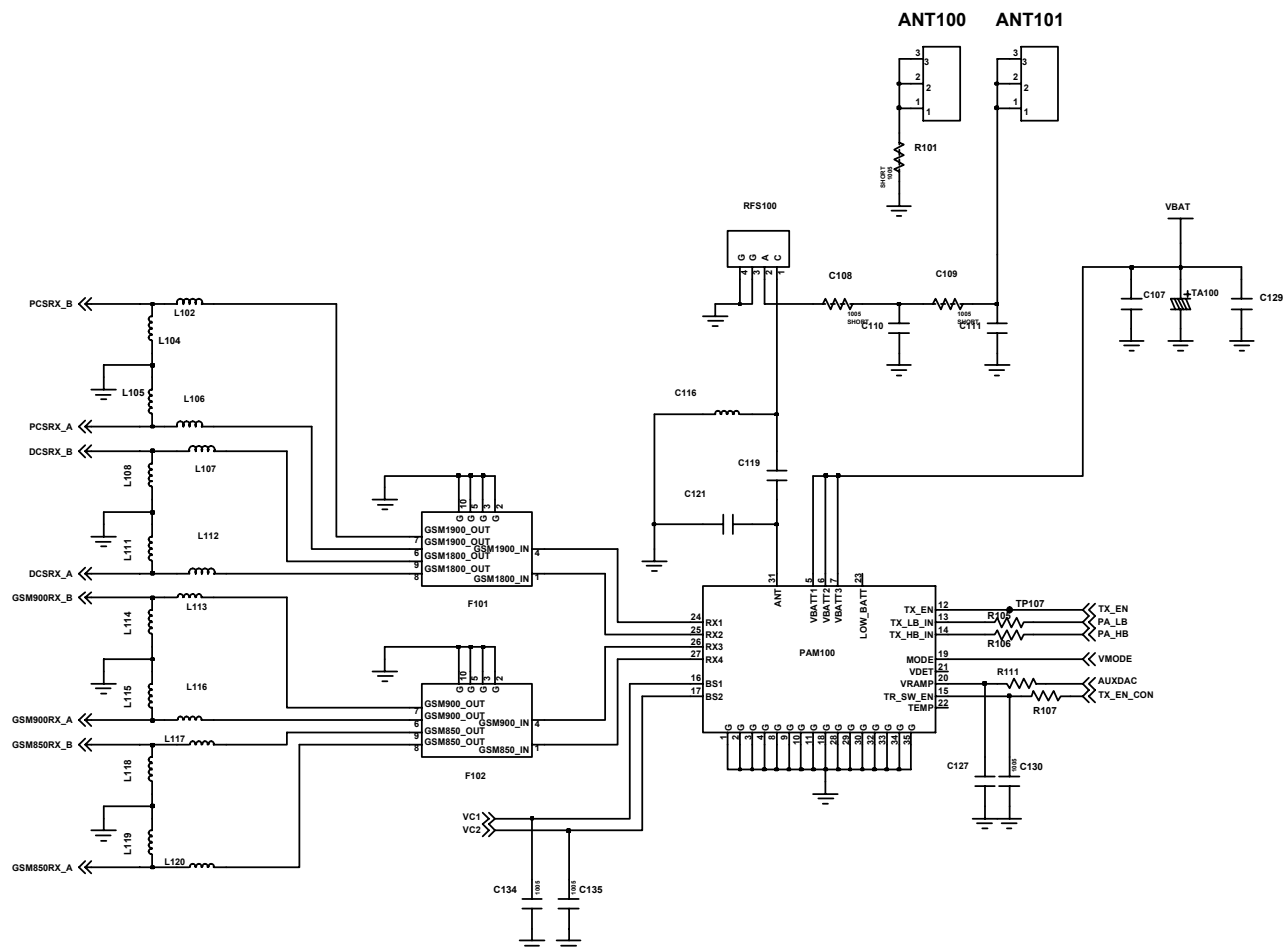


9-15. DCS Transmitter



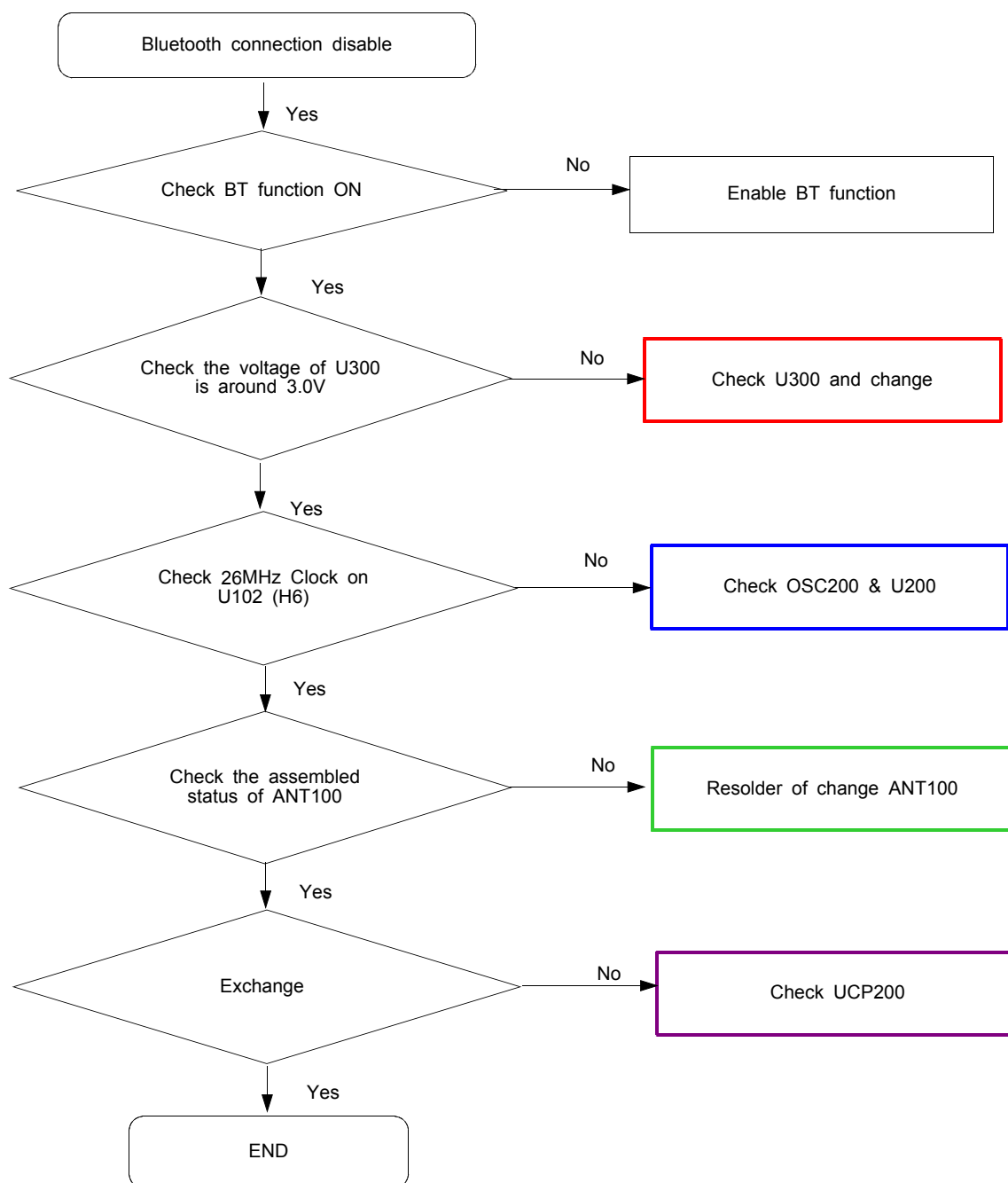
9-16 PCS Transmitter

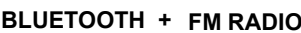




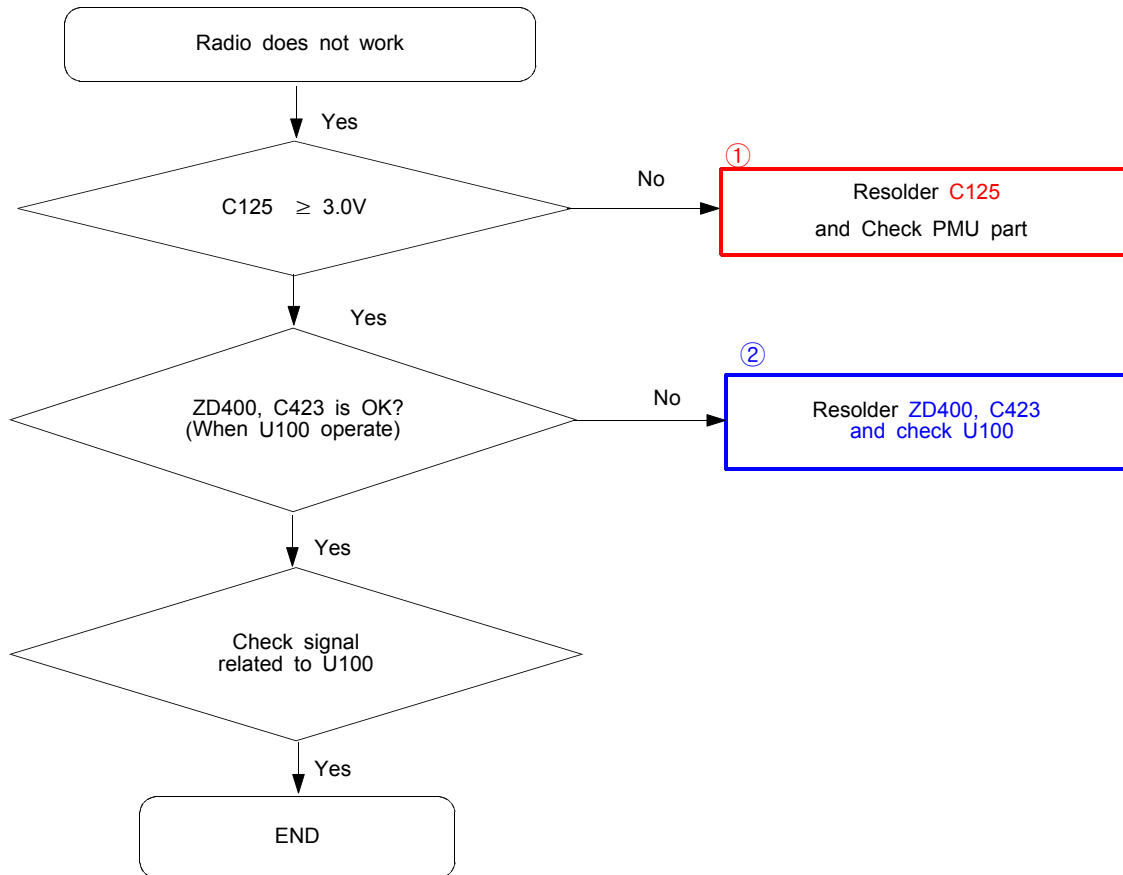


9-17 Bluetooth part





9-18. Radio part



SAMSUNG

GSM TELEPHONE

GT-S3650C

SERVICE *Manual*

GSM TELEPHONE



CONTENTS

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2. Specification
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7. Block Diagrams
8. PCB Diagrams
9. Chart of Troubleshooting
10. Reference data
11. Disassembly and Assembly Instructions

**SAMSUNG
ELECTRONICS**

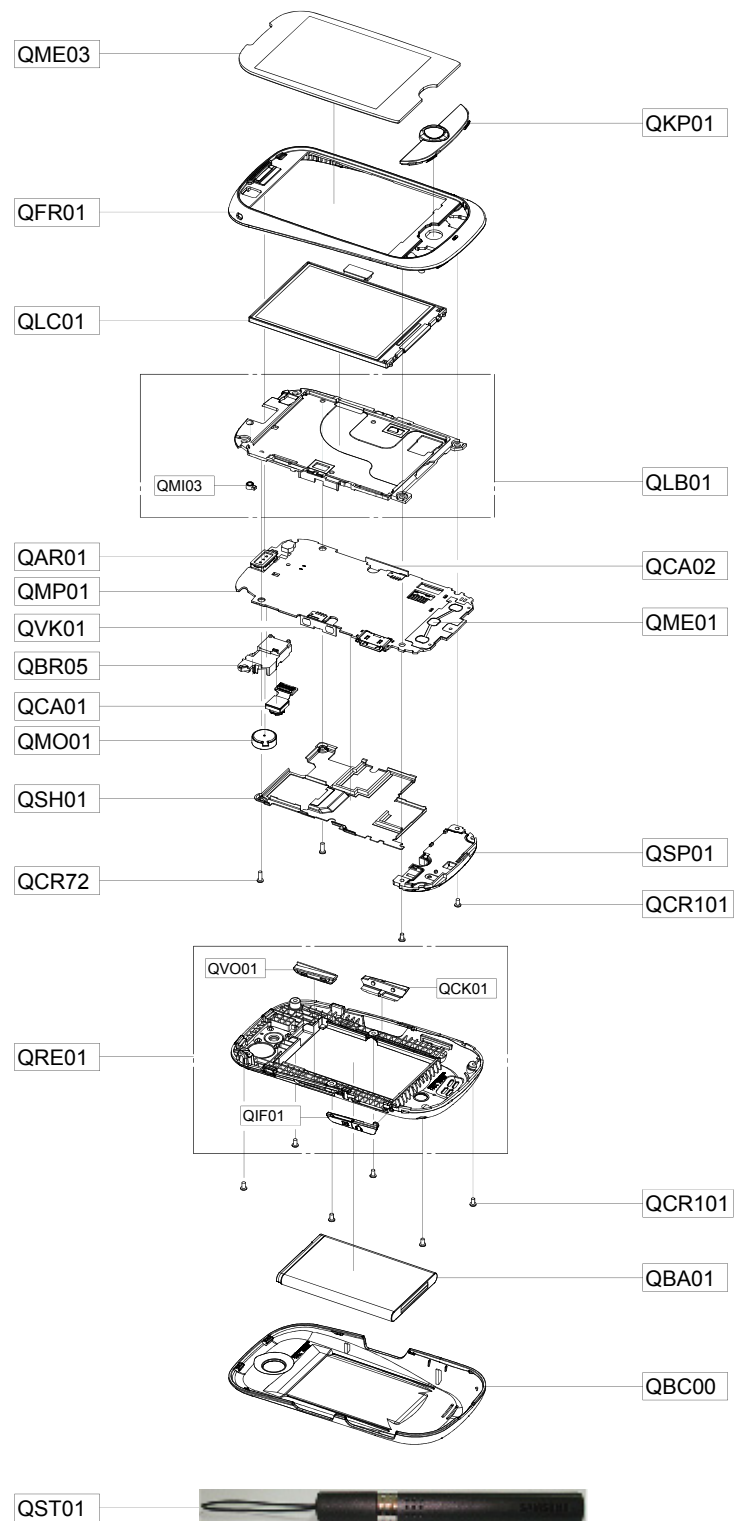


GSPN (Global Service Partner Network)

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

5. Exploded View and Parts List

5-1. Cellular phone Exploded View



- This Document can not be used without Samsung's authorization -

5-2. Cellular phone Parts list : GT-S3650CWASER

Design LOC	Description	SEC CODE
QAR01	AUDIO-RECEIVER	3009-001387
QBA01	INNER BATTERY PACK-960MAH,BLK,UNI,MAIN	GH43-03216A
QBA01	INNER BATTERY PACK-AB463651BU,960MAH	GH43-03216A
QBC00	PMO COVER-BATTERY V2	GH72-56279C
QBC02	PMO COVER-BATTERY V2(IK)	GH72-56279E
QBC02	PMO COVER-BATTERY ADDED(CW)	GH72-56515C
QBR05	ASSY BRACKET-CAMERA	GH98-15105A
QCA01	CAMERA MODULE-GT-S3650_2.0M	GH59-08173A
QCA02	KEY FPCB-GT-S3650 CAM FPCB	GH59-07882A
QCK01	ASSY KEY-CAMERA	GH98-15162C
QCR101	SCREW-MACHINE	6001-002005
QCR72	SCREW-MACHINE	6001-002051
QFR01	ASSY CASE-FRONT	GH98-13888A
QIF01	PMO COVER-JF V3	GH72-56516C
QKP01	ASSY KEYPAD-(BLACK/OPEN)	GH98-13935A
QLB01	ASSY BRACKET-LCD V2	GH98-14828A
QLC01	ASSY LCD-2.8" QVGA GT-S3650 NUDE PNL	GH96-04170A
QLC01	ASSY LCD-2.8"QVGA GT-S3650 SMD ASSY	GH96-04223A
QME02	DOME SHEET-SUB KEY(GT-S3650)	GH59-07885A
QME03	TOUCH/PANEL-GTS3650	GH59-08114A
QM103	RMO RUBBER-MIC UP	GH73-13137A
QMO01	MOTOR DC-SCHC250	GH31-00323A
QMP01	A/S ASSY-GTS3650 PBA MAIN	GH82-04009A
QMP01	ASSY PBA MAIN-GT-S3650	GH92-06137A
QRE01	ASSY CASE-REAR	GH98-13889C
QSH01	ASSY BRACKET-SHIELD REAR	GH98-13934A
QSP01	MODULE-GTS3650_SPK	GH59-07905A
QVK01	KEY FPCB-GT-S3650 VOL FPCB	GH59-07881A
QVO01	ASSY KEY-VOLUME	GH98-15163C

2. Specification

2-1. GSM General Specification

	GSM900 Phase 1	GSM850 Phase 1	DCS1800 Phase 1	PCS1900
Freq. Band[MHz] Uplink/Downlink	880~915 925~960	824.2~848.8 869.2~893.8	1710~1785 1805~1880	1850~1910 1930~1990
ARFCN range	0~124 & 975~1023	128~251	512~885	512~810
Tx/Rx spacing	45MHz	45MHz	95MHz	80MHz
Mod. Bit rate/ Bit Period	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us
Time Slot Period/Frame Period	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms
Modulation	0.3GMSK	0.3GMSK	0.3GMSK	0.3GMSK
MS Power	33dBm~5dBm	33dBm~5dBm	30dBm~0dBm	30dBm~0dBm
Power Class	5pcl ~ 19pcl	5pcl ~ 19pcl	0pcl ~ 15pcl	0pcl ~ 15pcl
Sensitivity	-102dBm	-102dBm	-100dBm	-100dBm
TDMA Mux	8	8	8	8
Cell Radius	35Km	35Km	2Km	-

2-2. GSM Tx Power Class

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

2-3. GSM EDGE TX power class

Only in Master

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

3. Product Function

Main Function

- 101.9 x 58.5 x 12.9 mm
- 2 Mega Pixel Camera
- USB v2.0 High-speed, Bluetooth v2.1
- S20 Pin TA
- Quad Band(850/900/1800/1900)
- FM Radio w/RDS & FM Recording
- SMS/MMS/EMS (OMA v1.2)
- WAP 2.0 Browser
- MP3/AAC/AAC+/EAAC+/WMA
- MicroSD Card Support

4. Array course control

4-1. Software Adjustments



Test Jig (GH99-36900A)



Test Cable (GH39-01160A)



RF Test Cable (GH39-00985A)



Adapter (GH99-38251A)

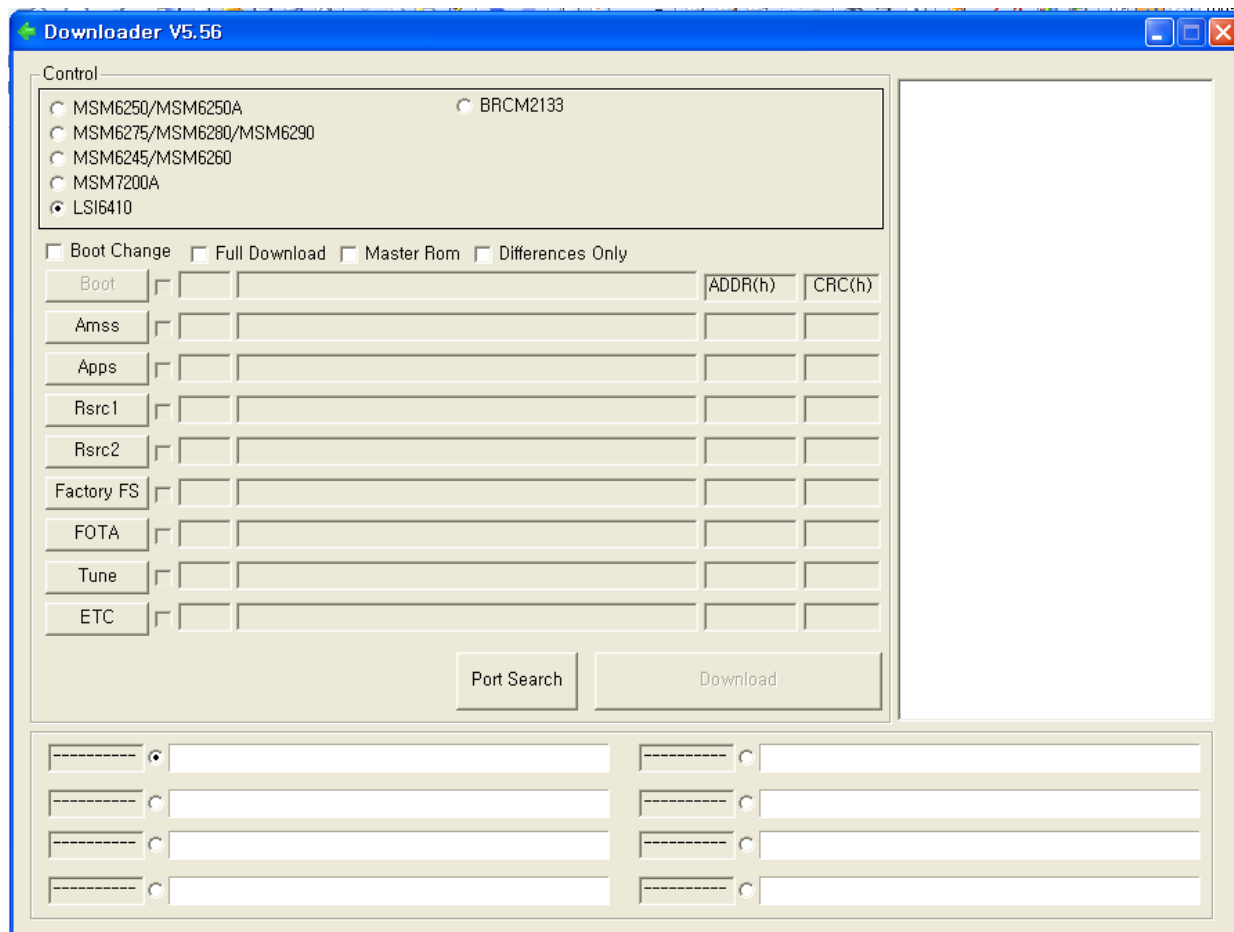
4-2. Software Downloading

4-2-1. Pre-requisite for Downloading

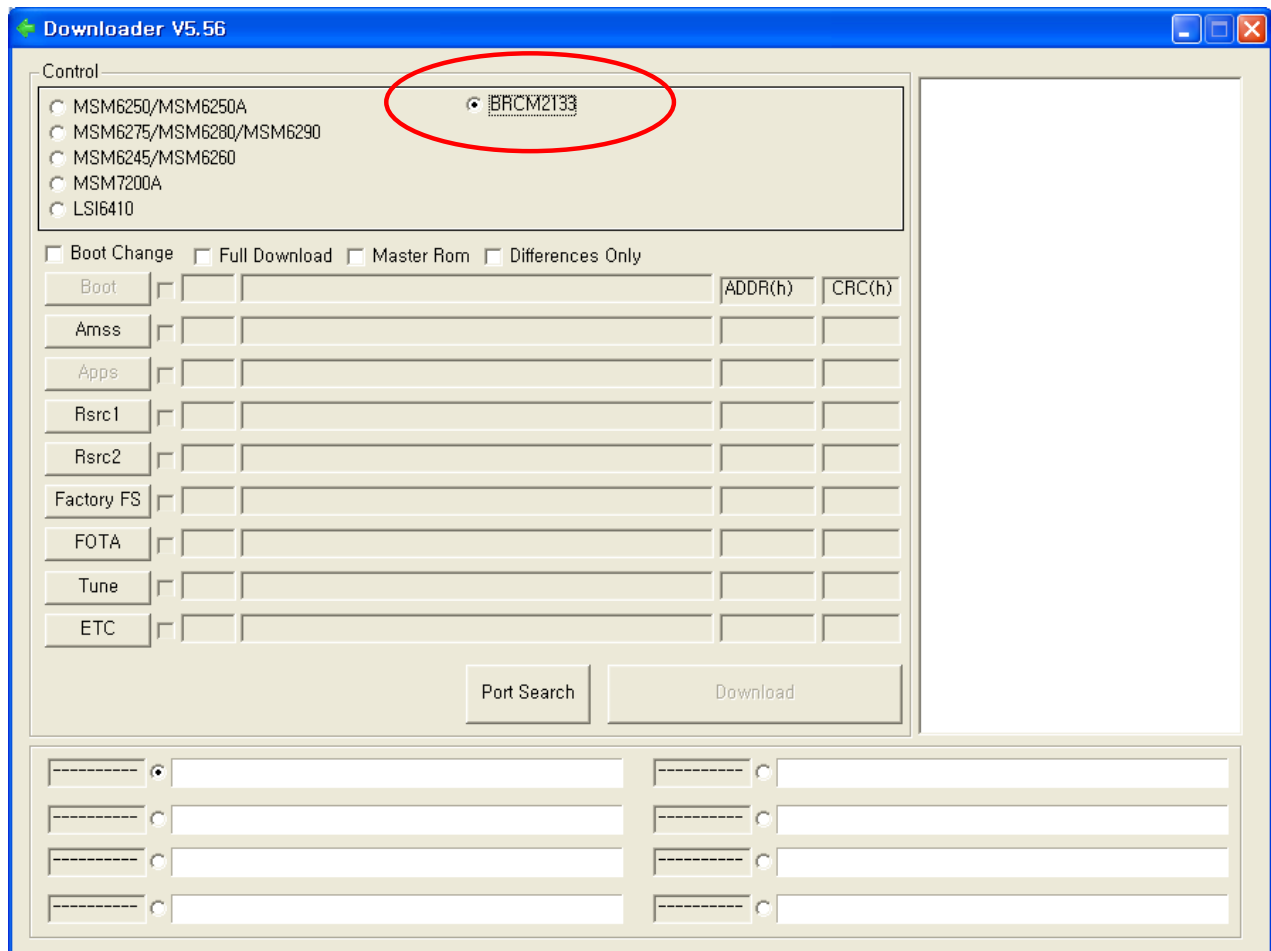
- Downloader Program ([Downloader V5.56](#))
- GT-S3650C Mobile Phone
- Data Cable
- Binary files

4-2-1. S/W Downloader Program

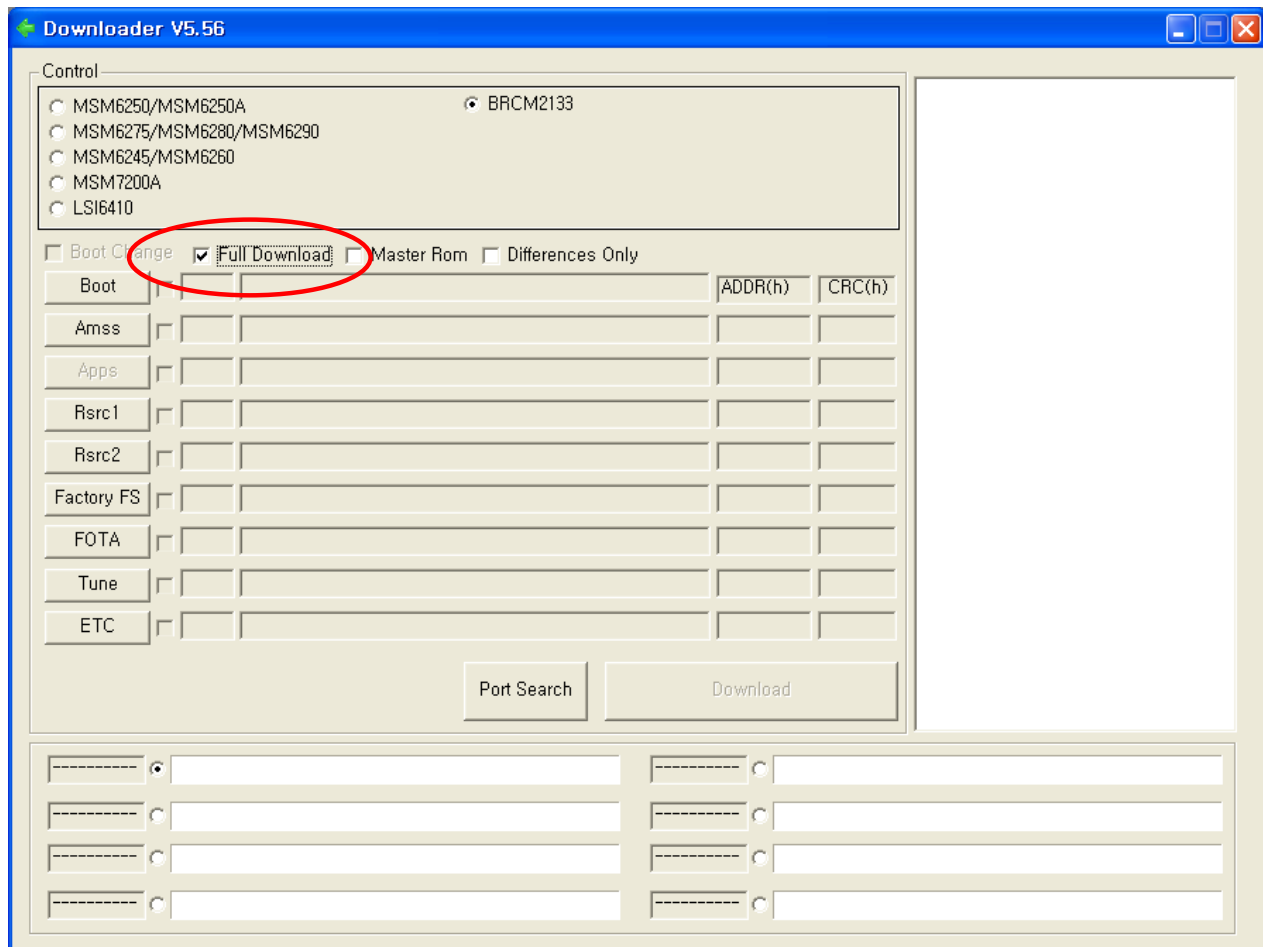
1. Load the binary download program by executing the "[Downloader V5.56](#)"



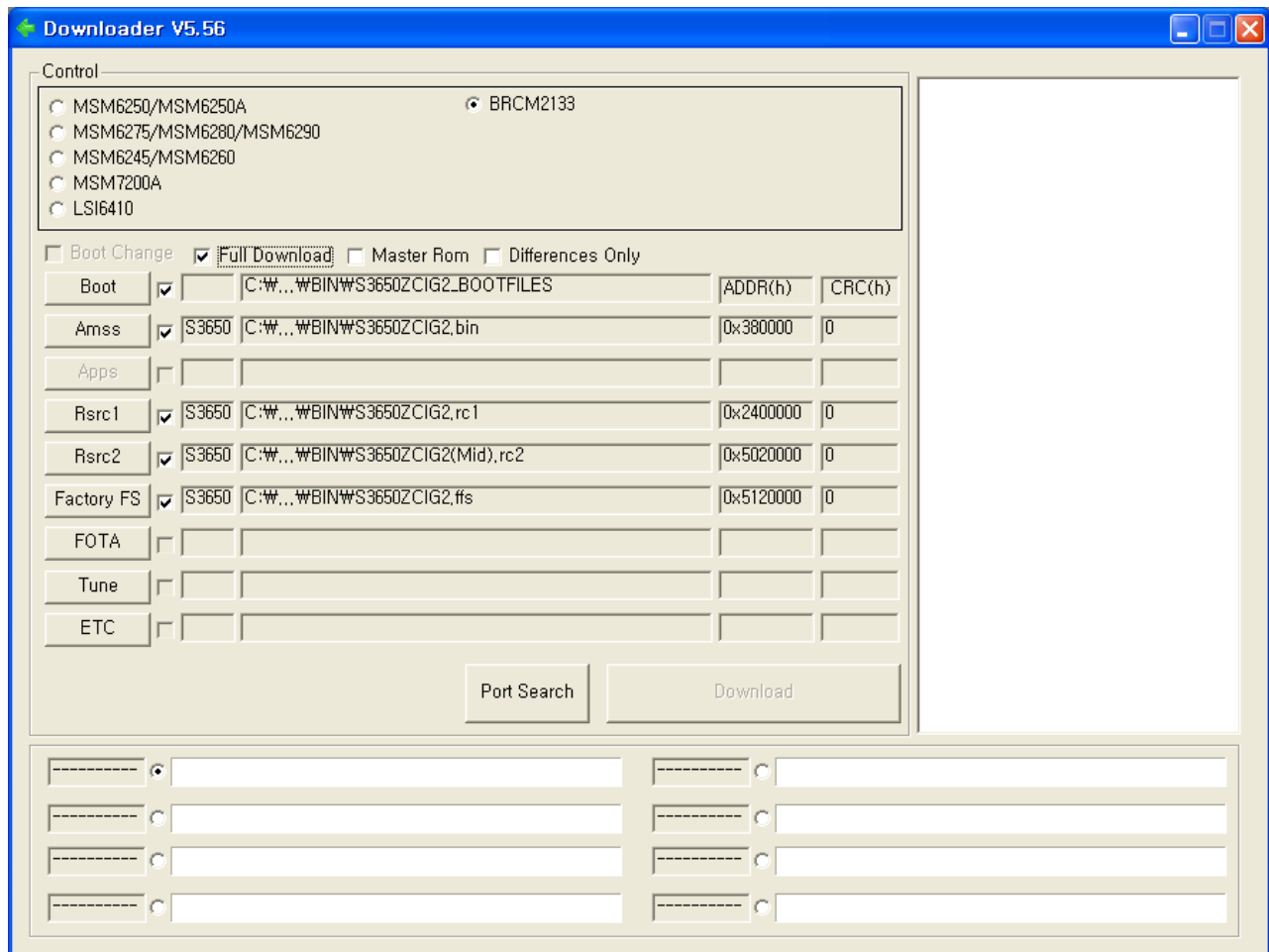
2. Select the "**BRCM2133**". as Control.



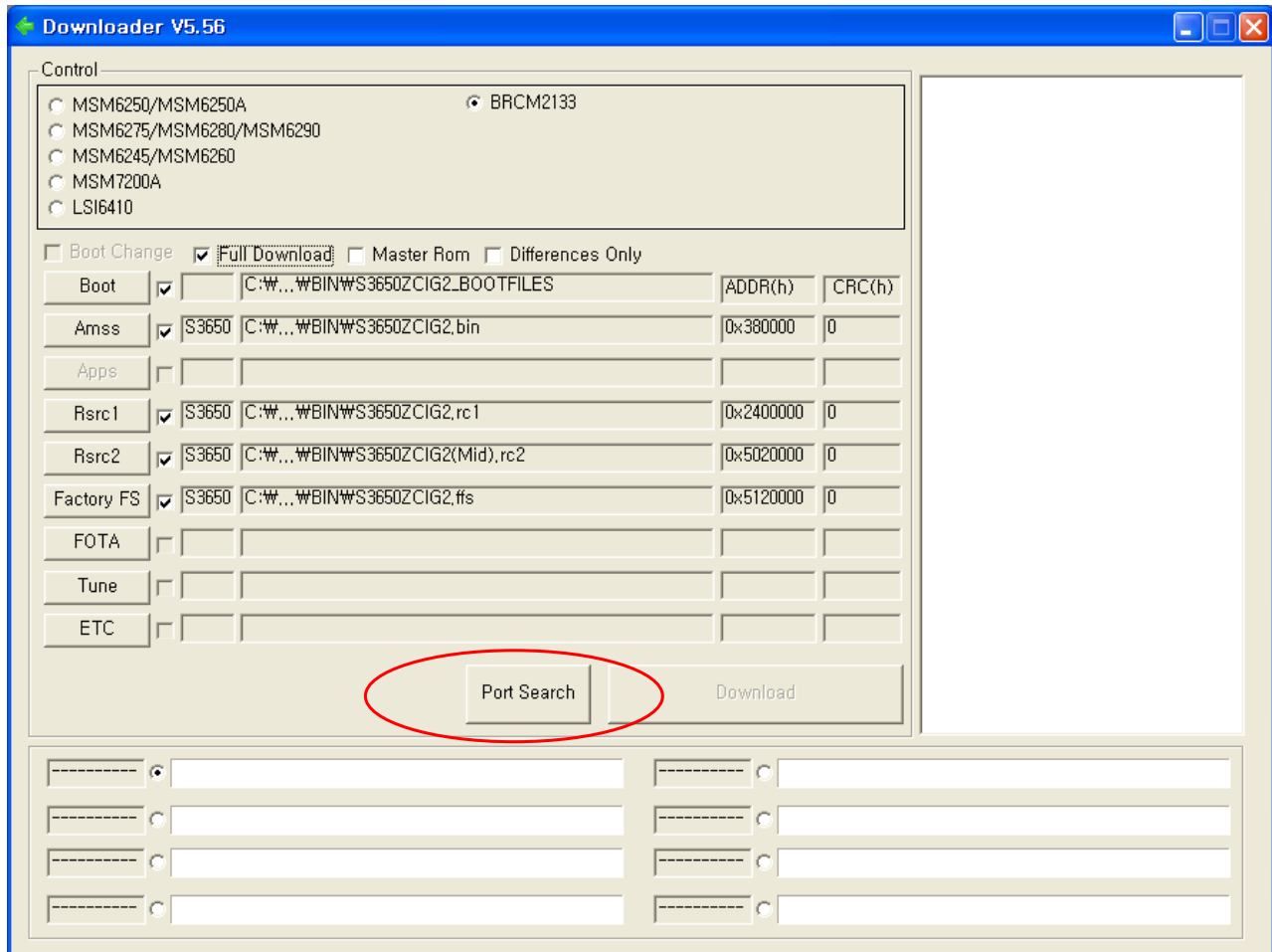
3. Select the Full Download.



4. Load the file of Boot, Amss, Apps, Rsrc 1. Rsrc2, Factory FS from the folder that you saved the binary files.



5. Click the **Port Search** button when the download cable is connected to PC.



cf. You have to set the phone as a download mode by pressing Volume down + Camera + End key simultaneously before connecting to PC .

6. Then the down loader can search the port.

Downloader V5.60

Control

☐ MSM6250/MSM6250A ☒ BRM2133

☐ MSM6275/MSM6280/MSM6290

☐ MSM6245/MSM6260

☐ MSM7200A

☐ LSI6410

☐ Boot Change ☒ Full Download ☐ Master Rom ☐ Differences Only

		ADDR(h)	CRC(h)
Boot	☒	D:\W...Wg2WBOOTFILES	
Amss	☐		
Apps	☒	S3650 D:\W...Wg2Wapps_compressed.bin	0x360000 0
Rsrc1	☒	S3650 D:\W...Wg2WRsrc_S3650_Open_China.rc1	0x2400000 0
Rsrc2	☒	S3650 D:\W...Wg2WRsrc2_S3650_China(Mid).rc2	0x5000000 0
Factory FS	☒	S3650 D:\W...Wg2WFactoryFs_S3650_Open_China.ffs	0x5100000 0
FOTA	☐		
Tune	☐		
ETC	☐		

Port Search Download

COM21 ☒ Ready - [S3650]

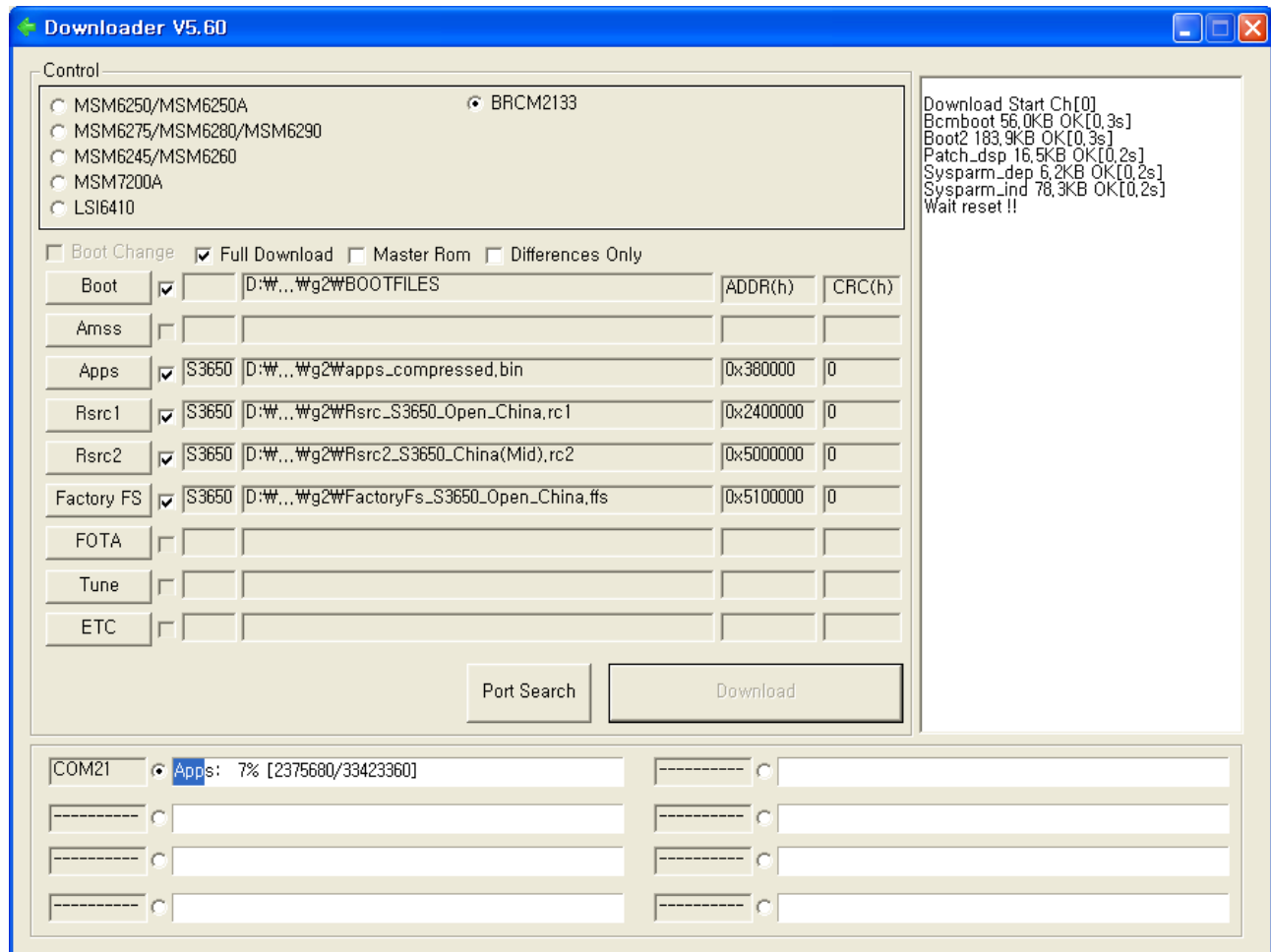
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7. Click the **Download** button when the Port searched.
It will start to download.



8. When downloading is finished successfully, there is a "All files complete" message.

10. Reference data

Reference Abbreviate

- **AAC**: Advanced Audio Coding.
- **AVC** : Advanced Video Coding.
- **BER** : Bit Error Rate
- **BPSK**: Binary Phase Shift Keying
- **CA** : Conditional Access
- **CDM** : Code Division Multiplexing
- **C/I** : Carrier to Interference
- **DMB** : Digital Multimedia Broadcasting
- **EN** : European Standard
- **ES** : Elementary Stream
- **ETSI**: European Telecommunications Standards Institute
- **MPEG**: Moving Picture Experts Group
- **PN** : Pseudo-random Noise
- **PS** : Pilot Symbol
- **QPSK**: Quadrature Phase Shift Keying
- **RS** : Reed-Solomon
- **SI** : Service Information
- **TDM** : Time Division Multiplexing
- **TS** : Transport Stream

1. Safety Precautions

1-1. 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 magnetic force.
- Surely use a standard screwdriver when you disassemble this product, otherwise screw will be worn away.
- Use a thicken twisted wire when you measure level.
A thicken twisted wire has low resistance, therefore error of measurement is few.
- Repair after separate Test Pack and Set because for short danger (for example an overcurrent and furious flames of parts etc) when you repair board in condition of connecting Test Pack and tuning on.
- Take specially care of soldering, because Land of PCB is small and weak in heat.
- Surely tune on/off while using AC power plug, because a repair of battery charger is dangerous when tuning ON/OFF PBA and Connector after disassembling charger.
- Don't use as you pleases after change other material than replacement registered on SEC System. Otherwise engineer in charge isn't charged with problem that you don't keep this rules.

1-2. ESD(Electrostatically Sensitive Devices) Precaution

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

You can prevent from ESD damage by static electricity.

- Remove static electricity remained your body before you touch semiconductor or parts with semiconductor. There are ways that you touch an earthed place or wear static electricity prevention string on wrist.
- Use earthed soldering steel when you connect or disconnect ESD.
- Use soldering removing tool to break static electricity. , otherwise ESD will be damaged by static electricity.
- Don't unpack until you set up ESD on product. Because most of ESD are packed by box and aluminum plate to have conductive power,they are prevented from static electricity.
- You must maintain electric contact between ESD and place due to be set up until ESD is connected completely to the proper place or a circuit board.

SAMSUNG

GSM TELEPHONE

GT-S3650C

SERVICE *Manual*

GSM TELEPHONE



CONTENTS

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

1. Safety Precautions

1-1. Repair Precaution

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

2. Specification

2-1. GSM General Specification

	GSM900 Phase 1	GSM850 Phase 1	DCS1800 Phase 1	PCS1900
Freq. Band[MHz] Uplink/Downlink	880~915 925~960	824.2~848.8 869.2~893.8	1710~1785 1805~1880	1850~1910 1930~1990
ARFCN range	0~124 & 975~1023	128~251	512~885	512~810
Tx/Rx spacing	45MHz	45MHz	95MHz	80MHz
Mod. Bit rate/ Bit Period	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us
Time Slot Period/Frame Period	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms
Modulation	0.3GMSK	0.3GMSK	0.3GMSK	0.3GMSK
MS Power	33dBm~5dBm	33dBm~5dBm	30dBm~0dBm	30dBm~0dBm
Power Class	5pcl ~ 19pcl	5pcl ~ 19pcl	0pcl ~ 15pcl	0pcl ~ 15pcl
Sensitivity	-102dBm	-102dBm	-100dBm	-100dBm
TDMA Mux	8	8	8	8
Cell Radius	35Km	35Km	2Km	-

2-2. GSM Tx Power Class

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

2-3. GSM EDGE TX power class

Only in Master

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

3. Product Function

Main Function

- 101.9 x 58.5 x 12.9 mm
- 2 Mega Pixel Camera
- USB v2.0 High-speed, Bluetooth v2.1
- S20 Pin TA
- Quad Band(850/900/1800/1900)
- FM Radio w/RDS & FM Recording
- SMS/MMS/EMS (OMA v1.2)
- WAP 2.0 Browser
- MP3/AAC/AAC+/EAAC+/WMA
- MicroSD Card Support

4. Array course control

4-1. Software Adjustments



Test Jig (GH99-36900A)



Test Cable (GH39-01160A)



RF Test Cable (GH39-00985A)



Adapter (GH99-38251A)

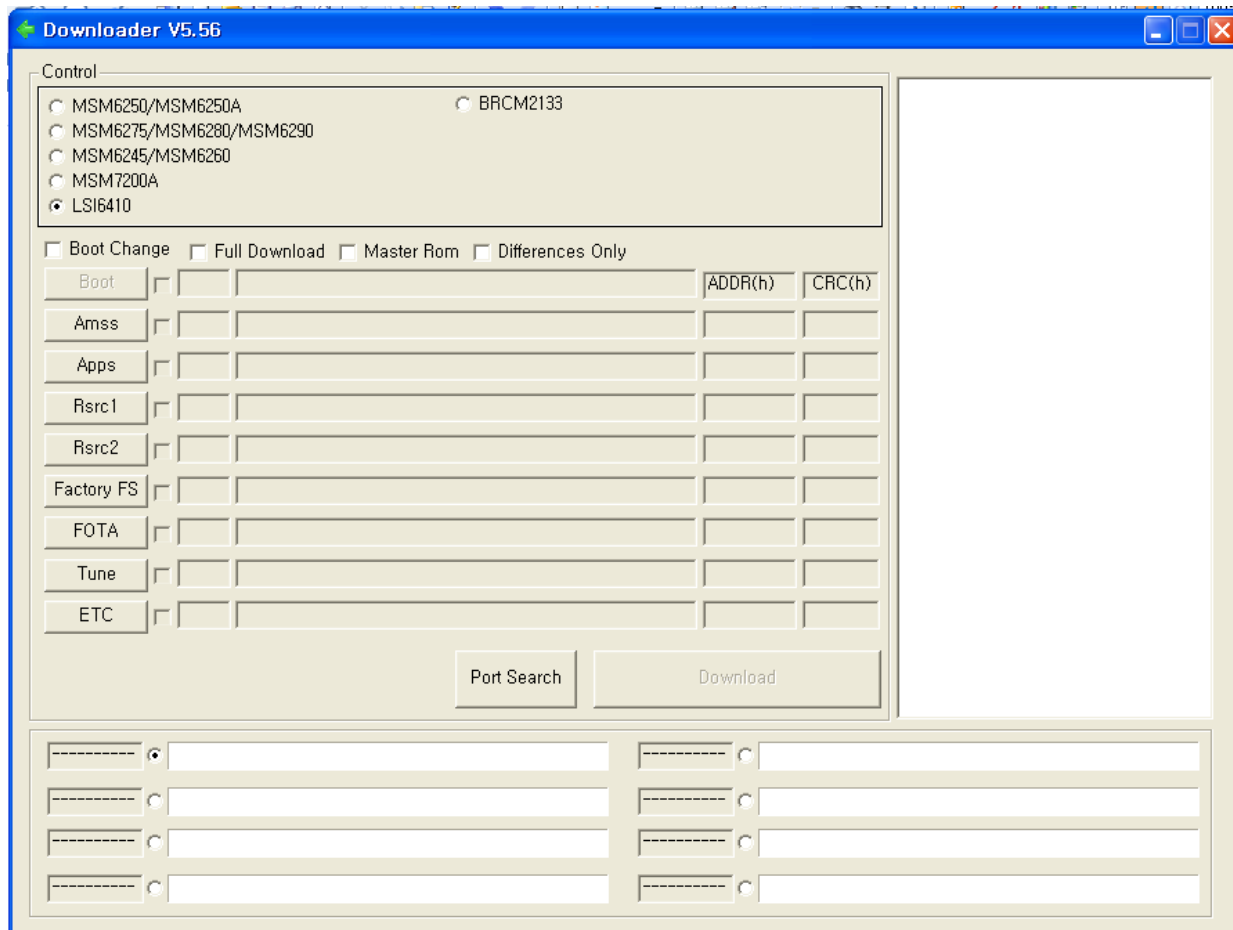
4-2. Software Downloading

4-2-1. Pre-requisite for Downloading

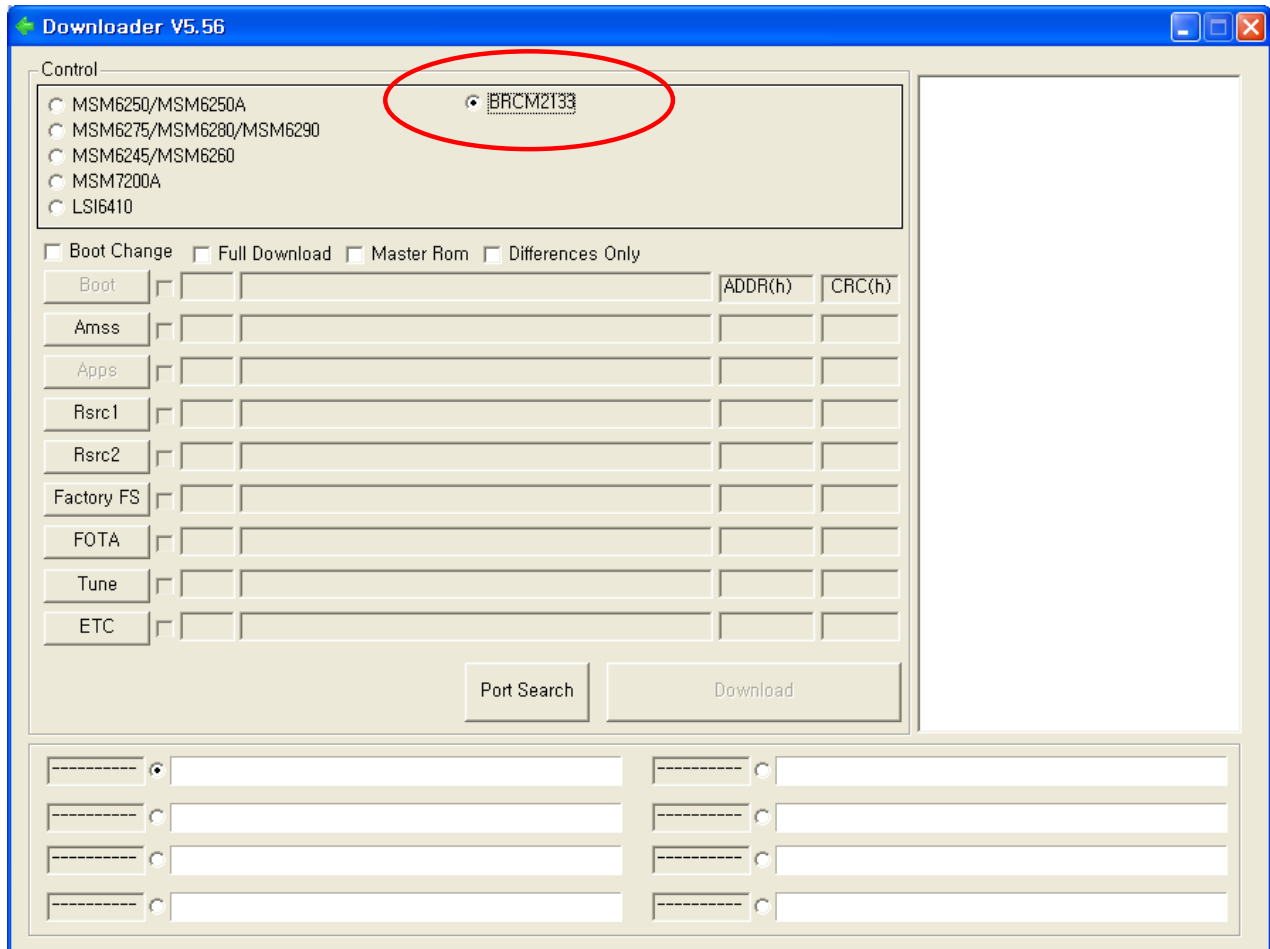
- Downloader Program ([Downloader V5.56](#))
- GT-S3650C Mobile Phone
- Data Cable
- Binary files

4-2-1. S/W Downloader Program

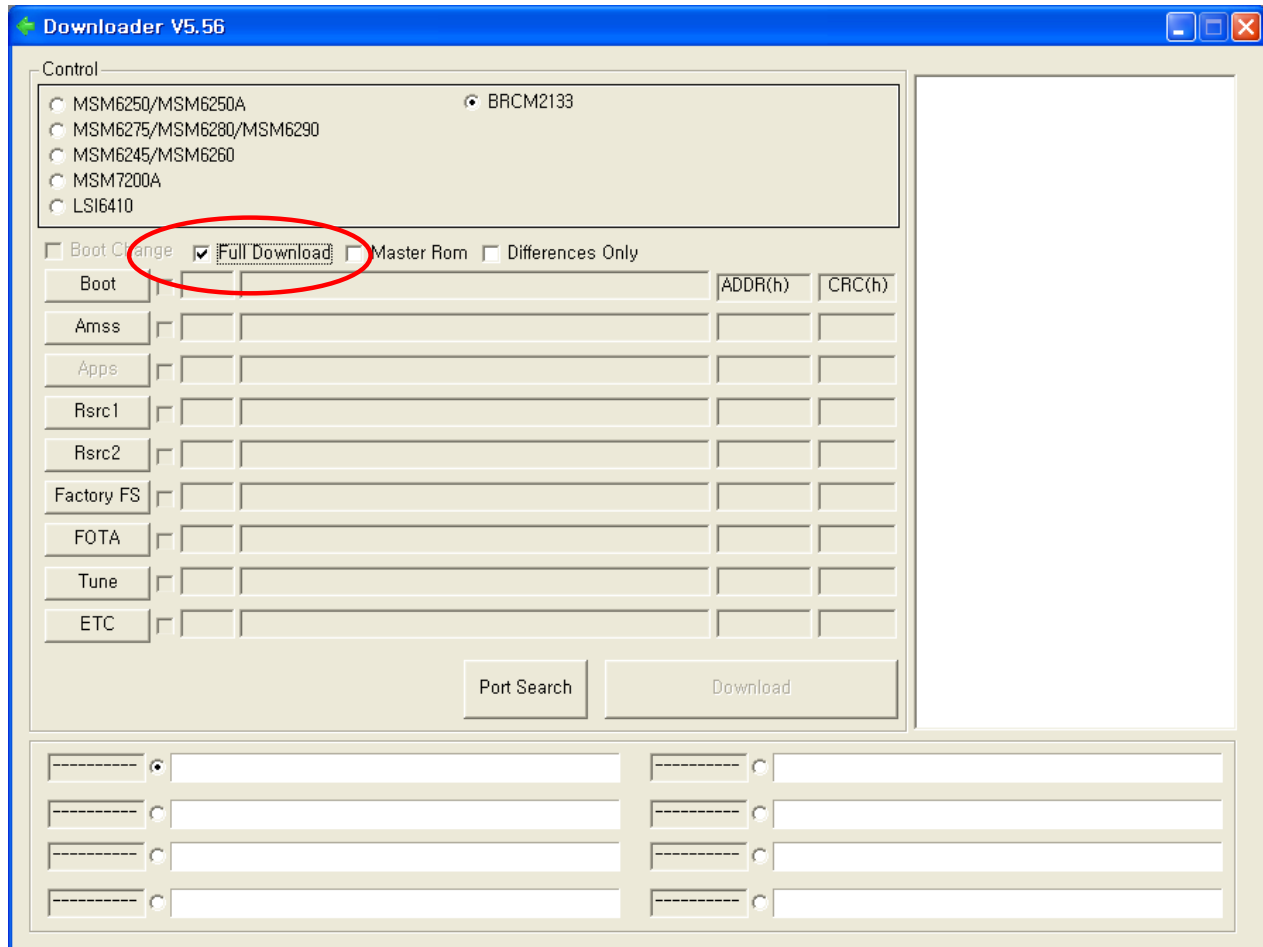
1. Load the binary download program by executing the "[Downloader V5.56](#)"



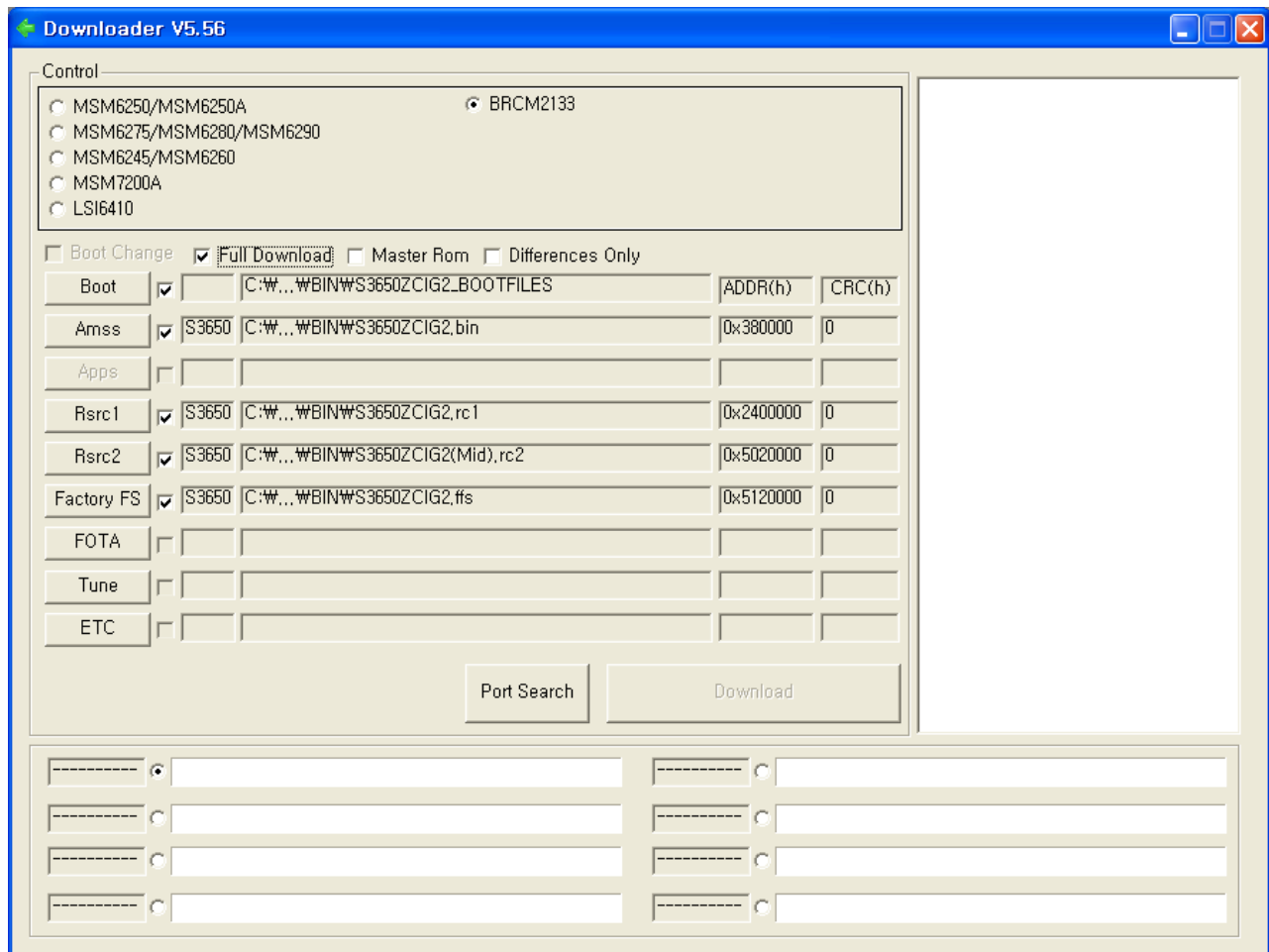
2. Select the "**BRCM2133**". as Control.



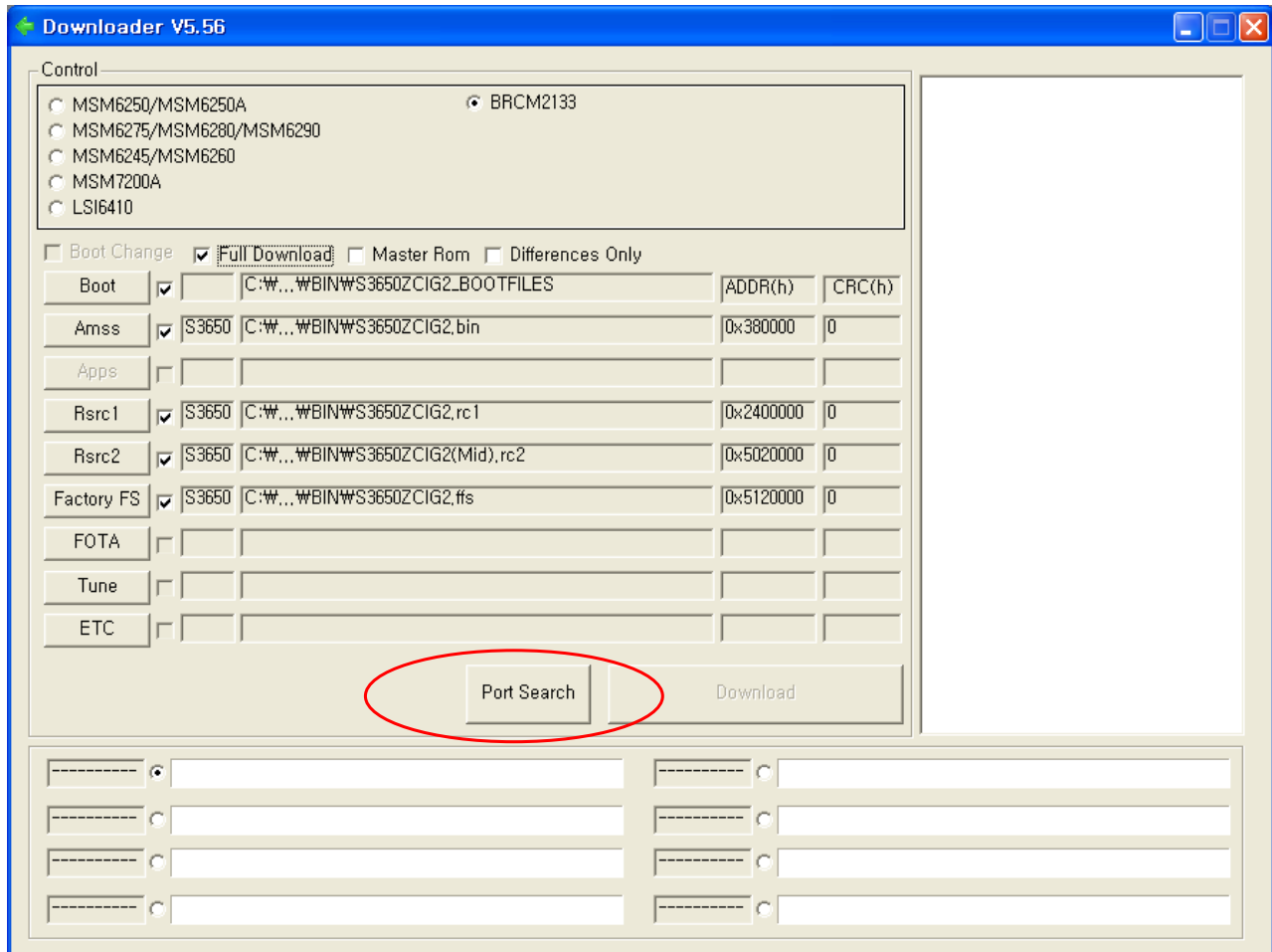
3. Select the Full Download.



4. Load the file of Boot, Amss, Apps, Rsrc 1. Rsrc2, Factory FS from the folder that you saved the binary files.



5. Click the **Port Search** button when the download cable is connected to PC.



cf. You have to set the phone as a download mode by pressing Volume down + Camera + End key simultaneously before connecting to PC .

6. Then the down loader can search the port.

Downloader V5.60

Control

☐ MSM6250/MSM6250A ☒ BRCM2133

☐ MSM6275/MSM6280/MSM6290

☐ MSM6245/MSM6260

☐ MSM7200A

☐ LSI6410

☐ Boot Change ☒ Full Download ☐ Master Rom ☐ Differences Only

	Boot	Amss	Apps	Rsrc1	Rsrc2	Factory FS	FOTA	Tune	ETC
	☒	☐	☒	☒	☒	☒	☐	☐	☐
	D:\W...Wg2WBOOTFILES								
	ADDR(h) CRC(h)								
	D:\W...Wg2Wapps_compressed.bin								
	0x360000 0								
	D:\W...Wg2WRsrc_S3650_Open_China.rc1								
	0x2400000 0								
	D:\W...Wg2WRsrc2_S3650_China(Mid).rc2								
	0x5000000 0								
	D:\W...Wg2WFactoryFs_S3650_Open_China.ffs								
	0x5100000 0								

Port Search Download

COM21 ☒ Ready - [S3650]

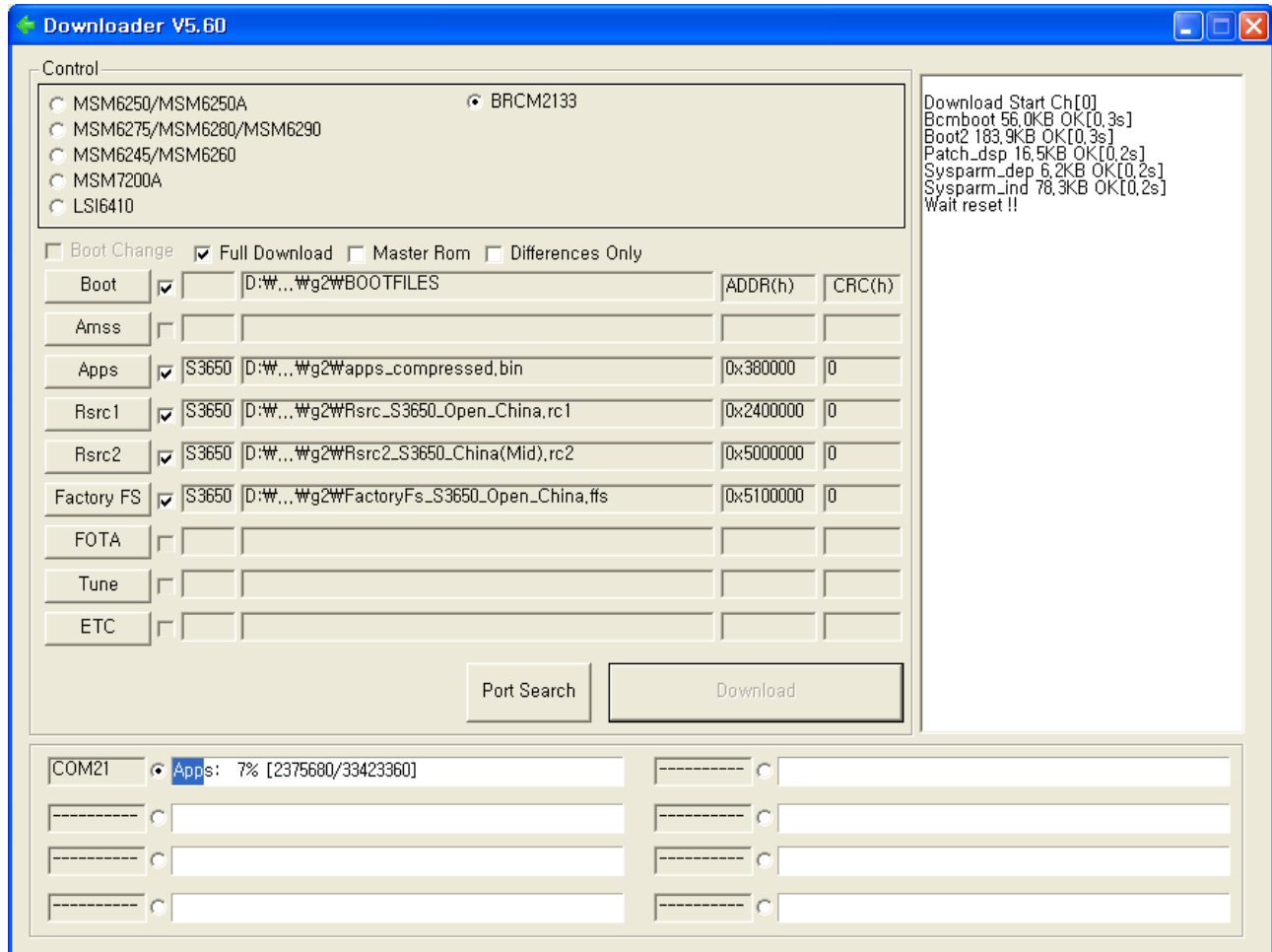
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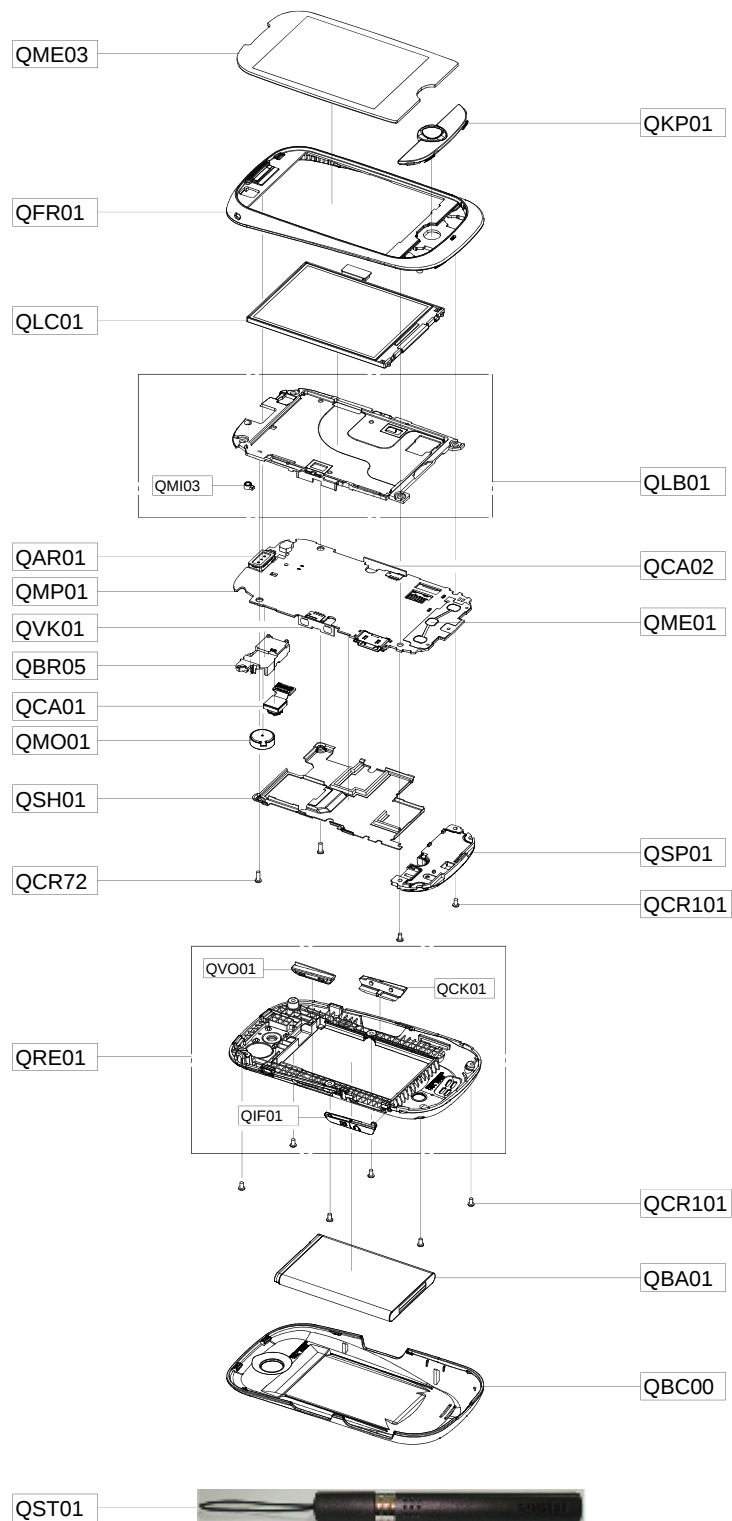
7. Click the **Download** button when the Port searched.
It will start to download.



8. When downloading is finished successfully, there is a "All files complete" message.

5. Exploded View and Parts List

5-1. Cellular phone Exploded View



5-2. Cellular phone Parts list

Design LOC		Description	SEC CODE
QAR01		AUDIO-RECEIVER	3009-001387
QBA01		INNER BATTERY PACK-960MA,BLK,CHI,MAIN	GH43-02647A
QBC00		PMO COVER-BATTERY V2(CY)	GH72-56279A
QBR05		ASSY BRACKET-CAMERA	GH98-15160A
QCA01		CAMERA MODULE-GT-S3650_2.0M	GH59-08173A
QME01		DOME SHEET-GTS3650CSUB	GH59-08591A
QCA02		KEY FPCB-GT-S3650 CAM FPCB	GH59-07882A
QCR101		SCREW-MACHINE	6001-002005
QCR72		SCREW-MACHINE	6001-002051
QFR01		ASSY CASE-FRONT	GH98-14859A
QKP01		ASSY KEYPAD-(CY/CTC)	GH98-14860A
QLC01		ELA MODULE-GT_S3650 LCD	GH96-04006A
QME03		TOUCH/PANEL-GTS3650C	GH59-08408A
QMO01		MOTOR DC-SCHC250	GH31-00323A
QMP01		ASSY PBA MAIN-GTS3650C	GH92-06530A
QSH01		ASSY BRACKET-SHIELD REAR	GH98-13934A
QSP01		MODULE-GTS3650_SPK	GH59-07905A
QST01		ASSY STYLUS PEN-RELOADED	GH98-12411A
QVK01		KEY FPCB-GT-S3650 VOL FPCB	GH59-07881A
QLB01		ASSY BRACKET-LCD	GH98-14862A
	QMI03	RMO RUBBER-MIC UP	GH73-13137A
QRE01		ASSY CASE-REAR	GH98-13889A
	QIF01	PMO COVER-IF V3	GH72-56516A
	QCK01	ASSY KEY-CAMERA	GH98-15162A
	QVO01	ASSY KEY-VOLUME	GH98-15163A

6. MAIN Electrical Parts List

SEC CODE	Design LOC	Description
0403-001547	ZD300	DIODE-ZENER
0406-001208	ZD409	DIODE-TVS
0406-001286	ZD406	DIODE-TVS
0406-001288	ZD301	DIODE-TVS
0406-001288	ZD400	DIODE-TVS
0406-001288	ZD401	DIODE-TVS
0406-001288	ZD402	DIODE-TVS
0406-001288	ZD403	DIODE-TVS
0406-001288	ZD502	DIODE-TVS
0406-001288	ZD503	DIODE-TVS
0406-001288	ZD504	DIODE-TVS
0502-001322	Q300	TR-POWER
0505-001518	Q200	FET-SILICON
0801-003026	U301	IC-CMOS LOGIC
0801-003130	U200	IC-CMOS LOGIC
1001-001410	U400	IC-ANALOG SWITCH
1108-000296	UME200	IC-MCP
1201-002494	U302	IC-AUDIO AMP
1201-002932	U504	IC-AUDIO AMP
1201-002943	PAM100	IC-AUDIO AMP
1203-004604	U501	IC-DC/DC CONVERTER
1203-005521	U502	IC-DC/DC CONVERTER
1203-005562	U300	IC-DC/DC CONVERTER
1205-003656	UCP200	IC-MODEM
1205-003839	U102	IC-MODEM
1404-001221	VR200	THERMISTOR-NTC
2007-000137	R224	R-CHIP
2007-000138	R208	R-CHIP
2007-000138	R305	R-CHIP
2007-000140	R107	R-CHIP
2007-000140	R111	R-CHIP
2007-000140	R303	R-CHIP
2007-000141	R404	R-CHIP
2007-000141	R406	R-CHIP
2007-000143	R207	R-CHIP
2007-000143	R420	R-CHIP

SEC CODE	Design LOC	Description
2007-000143	R421	R-CHIP
2007-000144	R209	R-CHIP
2007-000144	R210	R-CHIP
2007-000144	R211	R-CHIP
2007-000144	R212	R-CHIP
2007-000144	R310	R-CHIP
2007-000148	R313	R-CHIP
2007-000152	R215	R-CHIP
2007-000157	R308	R-CHIP
2007-000157	R309	R-CHIP
2007-000157	R311	R-CHIP
2007-000157	R312	R-CHIP
2007-000162	R102	R-CHIP
2007-000162	R104	R-CHIP
2007-000162	R220	R-CHIP
2007-000162	R306	R-CHIP
2007-000162	R317	R-CHIP
2007-000162	R405	R-CHIP
2007-000162	R408	R-CHIP
2007-000162	R411	R-CHIP
2007-000162	R416	R-CHIP
2007-000162	R501	R-CHIP
2007-000164	R314	R-CHIP
2007-000164	R315	R-CHIP
2007-000165	R307	R-CHIP
2007-000172	R407	R-CHIP
2007-001319	R203	R-CHIP
2007-001319	R204	R-CHIP
2007-001319	R217	R-CHIP
2007-001319	R222	R-CHIP
2007-001319	R417	R-CHIP
2007-001319	R418	R-CHIP
2007-001333	R213	R-CHIP
2007-001333	R500	R-CHIP
2007-001339	R214	R-CHIP
2007-003014	R206	R-CHIP

SEC CODE	Design LOC	Description
2007-003018	R105	R-CHIP
2007-003018	R106	R-CHIP
2007-007100	R304	R-CHIP
2007-007132	R113	R-CHIP
2007-007193	R200	R-CHIP
2007-007306	R412	R-CHIP
2007-007312	R216	R-CHIP
2007-007315	R219	R-CHIP
2007-007981	R201	R-CHIP
2007-007981	R202	R-CHIP
2007-008275	R301	R-CHIP
2007-008401	R205	R-CHIP
2007-010071	R302	R-CHIP
2203-000233	C118	C-CER,CHIP
2203-000233	C235	C-CER,CHIP
2203-000233	C342	C-CER,CHIP
2203-000254	C104	C-CER,CHIP
2203-000254	C222	C-CER,CHIP
2203-000254	C237	C-CER,CHIP
2203-000254	C309	C-CER,CHIP
2203-000254	C336	C-CER,CHIP
2203-000254	C435	C-CER,CHIP
2203-000278	C100	C-CER,CHIP
2203-000278	C103	C-CER,CHIP
2203-000311	C419	C-CER,CHIP
2203-000311	C429	C-CER,CHIP
2203-000386	C411	C-CER,CHIP
2203-000386	C412	C-CER,CHIP
2203-000386	C413	C-CER,CHIP
2203-000386	C414	C-CER,CHIP
2203-000386	C416	C-CER,CHIP
2203-000386	C417	C-CER,CHIP
2203-000386	C420	C-CER,CHIP
2203-000386	C423	C-CER,CHIP
2203-000386	C426	C-CER,CHIP
2203-000425	C219	C-CER,CHIP

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2203-000466	C113	C-CER,CHIP
2203-000489	C332	C-CER,CHIP
2203-000489	C343	C-CER,CHIP
2203-000550	C310	C-CER,CHIP
2203-000550	C311	C-CER,CHIP
2203-000679	C129	C-CER,CHIP
2203-000812	C119	C-CER,CHIP
2203-000812	C130	C-CER,CHIP
2203-000812	C134	C-CER,CHIP
2203-000812	C135	C-CER,CHIP
2203-000812	C307	C-CER,CHIP
2203-000812	C401	C-CER,CHIP
2203-000812	C402	C-CER,CHIP
2203-000812	C430	C-CER,CHIP
2203-000854	C232	C-CER,CHIP
2203-000854	C236	C-CER,CHIP
2203-000995	C205	C-CER,CHIP
2203-000995	C216	C-CER,CHIP
2203-000995	C231	C-CER,CHIP
2203-001101	C223	C-CER,CHIP
2203-001153	C432	C-CER,CHIP
2203-001153	C433	C-CER,CHIP
2203-001221	C127	C-CER,CHIP
2203-005050	C112	C-CER,CHIP
2203-005450	C124	C-CER,CHIP
2203-005482	C105	C-CER,CHIP
2203-005482	C107	C-CER,CHIP
2203-005482	C128	C-CER,CHIP
2203-005482	C313	C-CER,CHIP
2203-005482	C422	C-CER,CHIP
2203-005482	C425	C-CER,CHIP
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2203-006048	C208	C-CER,CHIP
2203-006048	C210	C-CER,CHIP

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2203-006048	C306	C-CER,CHIP
2203-006048	C418	C-CER,CHIP
2203-006048	C434	C-CER,CHIP
2203-006048	C436	C-CER,CHIP
2203-006048	C437	C-CER,CHIP
2203-006048	U506	C-CER,CHIP
2203-006260	C404	C-CER,CHIP
2203-006260	C405	C-CER,CHIP
2203-006260	C406	C-CER,CHIP
2203-006260	C407	C-CER,CHIP
2203-006260	C408	C-CER,CHIP
2203-006260	C409	C-CER,CHIP
2203-006348	C308	C-CER,CHIP
2203-006399	C101	C-CER,CHIP
2203-006399	C102	C-CER,CHIP
2203-006399	C126	C-CER,CHIP
2203-006399	C132	C-CER,CHIP
2203-006399	C133	C-CER,CHIP
2203-006399	C207	C-CER,CHIP
2203-006399	C229	C-CER,CHIP
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2203-006399	C304	C-CER,CHIP
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2203-006562	C319	C-CER,CHIP
2203-006562	C328	C-CER,CHIP

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2203-006562	C410	C-CER,CHIP
2203-006562	C415	C-CER,CHIP
2203-006562	C502	C-CER,CHIP
2203-006562	C503	C-CER,CHIP
2203-006562	C504	C-CER,CHIP
2203-006562	C505	C-CER,CHIP
2203-006562	C507	C-CER,CHIP
2203-006562	C508	C-CER,CHIP
2203-006562	C524	C-CER,CHIP
2203-006562	C525	C-CER,CHIP
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2203-006681	C215	C-CER,CHIP
2203-006681	C225	C-CER,CHIP
2203-006681	C227	C-CER,CHIP
2203-006681	C431	C-CER,CHIP
2203-006824	C326	C-CER,CHIP
2203-006824	C330	C-CER,CHIP
2203-006825	C327	C-CER,CHIP
2203-006825	C329	C-CER,CHIP
2203-006841	C202	C-CER,CHIP
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2203-006872	C206	C-CER,CHIP
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2203-006872	C221	C-CER,CHIP
2203-006872	C224	C-CER,CHIP
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2203-006872	C316	C-CER,CHIP

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2203-006872	C320	C-CER,CHIP
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2203-006872	C322	C-CER,CHIP
2203-006872	C323	C-CER,CHIP
2203-006872	C324	C-CER,CHIP
2203-007271	C403	C-CER,CHIP
2203-007271	C428	C-CER,CHIP
2203-007271	C506	C-CER,CHIP
2404-001339	C312	C-TA,CHIP
2404-001377	TA401	C-TA,CHIP
2404-001381	C300	C-TA,CHIP
2404-001381	C440	C-TA,CHIP
2404-001381	TA100	C-TA,CHIP
2404-001430	TA300	C-TA,CHIP
2703-001726	L114	INDUCTOR-SMD
2703-001726	L115	INDUCTOR-SMD
2703-001726	L415	INDUCTOR-SMD
2703-002199	L108	INDUCTOR-SMD
2703-002199	L111	INDUCTOR-SMD
2703-002203	L104	INDUCTOR-SMD
2703-002203	L105	INDUCTOR-SMD
2703-002208	L102	INDUCTOR-SMD
2703-002208	L106	INDUCTOR-SMD
2703-002208	L107	INDUCTOR-SMD
2703-002208	L112	INDUCTOR-SMD
2703-002281	L113	INDUCTOR-SMD
2703-002281	L116	INDUCTOR-SMD
2703-002281	L117	INDUCTOR-SMD
2703-002281	L120	INDUCTOR-SMD
2703-002313	L402	INDUCTOR-SMD
2703-002313	L403	INDUCTOR-SMD
2703-002314	C116	INDUCTOR-SMD
2703-002314	L118	INDUCTOR-SMD
2703-002314	L119	INDUCTOR-SMD

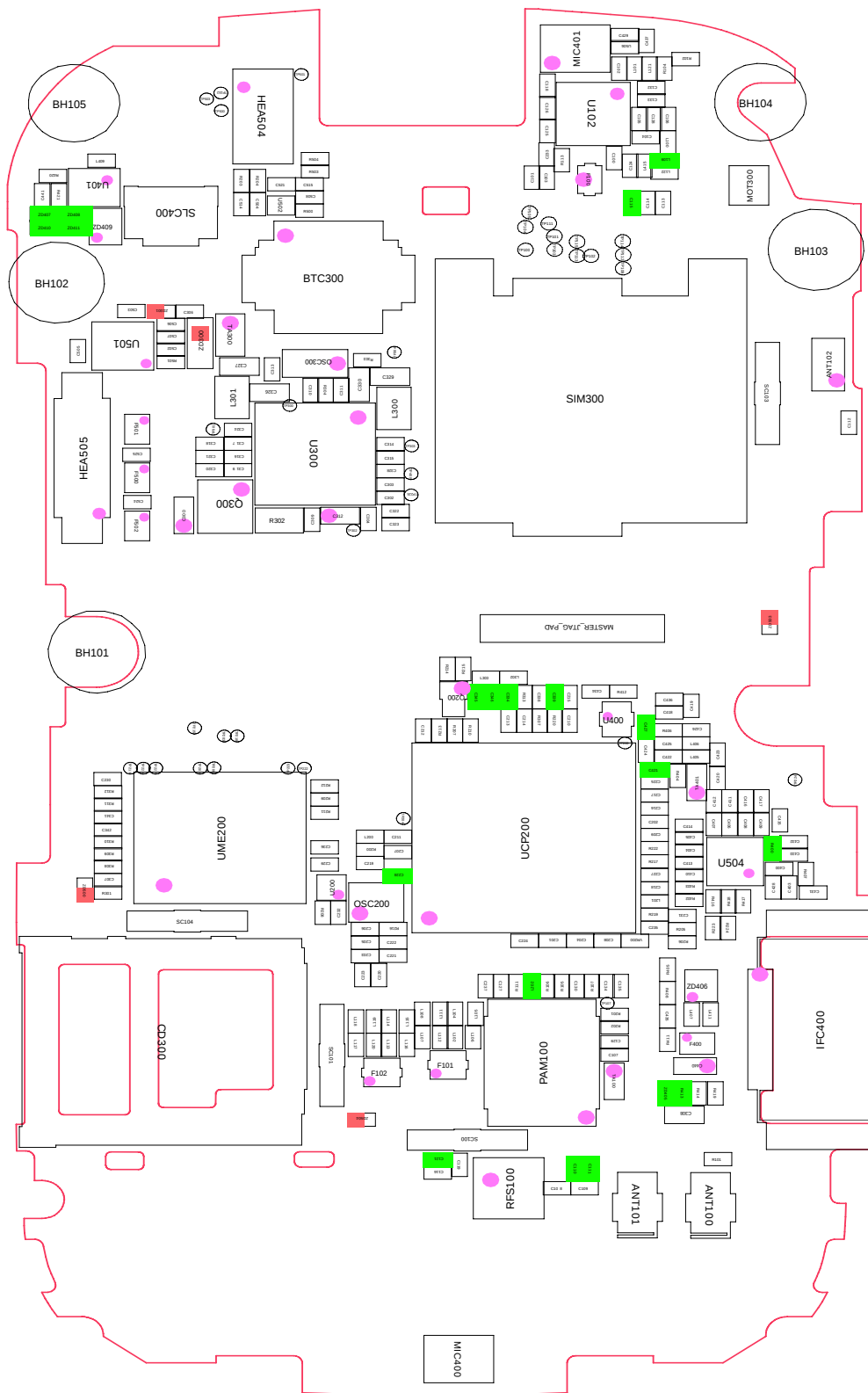
SEC CODE	Design LOC	Description
2703-002367	C114	INDUCTOR-SMD
2703-003293	L122	INDUCTOR-SMD
2703-003545	L300	INDUCTOR-SMD
2703-003545	L301	INDUCTOR-SMD
2801-004373	OSC300	CRYSTAL-SMD
2801-004815	OSC200	CRYSTAL-SMD
2901-001435	F500	FILTER-EMI/ESD
2901-001435	F501	FILTER-EMI/ESD
2901-001435	F502	FILTER-EMI/ESD
2901-001544	F400	FILTER-EMI/ESD
2904-001912	F101	FILTER-SAW
2904-001913	F102	FILTER-SAW
2909-001312	F100	FILTER-LC
3003-001138	MIC400	MIC MEMS
3003-001138	MIC401	MIC MEMS
3301-001659	L100	BEAD-SMD
3301-001659	L101	BEAD-SMD
3301-001659	L121	BEAD-SMD
3301-001659	L200	BEAD-SMD
3301-001659	L201	BEAD-SMD
3301-001812	L407	BEAD-SMD
3301-001812	L409	BEAD-SMD
3301-001812	L411	BEAD-SMD
3301-001812	R402	BEAD-SMD
3301-001812	R403	BEAD-SMD
3301-001885	L405	BEAD-SMD
3301-001885	L406	BEAD-SMD
3301-001970	R503	BEAD-SMD
3301-001970	R504	BEAD-SMD
3705-001503	RFS100	CONNECTOR-COAXIAL
3708-002015	SLC400	CONNECTOR-FPC/FFC/PIC
3709-001464	CD300	CONNECTOR-CARD EDGE
3709-001488	SIM300	CONNECTOR-CARD EDGE
3710-002534	IFC400	SOCKET-INTERFACE
3711-006105	HEA505	HEADER-BOARD TO BOARD
3711-006405	HEA504	HEADER-BOARD TO BOARD

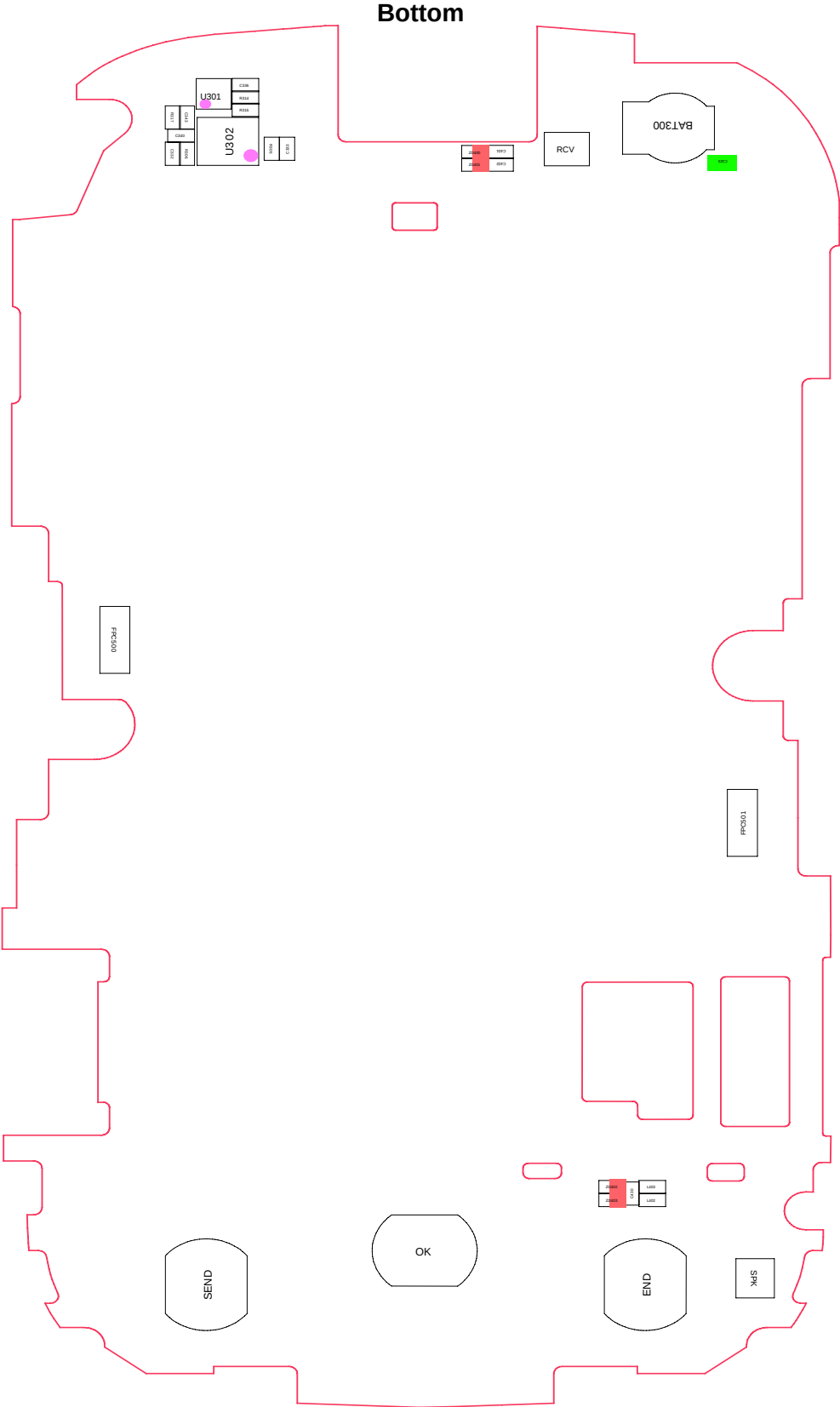
SEC CODE	Design LOC	Description
3711-006808	BTC300	HEADER-BOARD TO BOARD
4202-001463	ANT102	ANTENNA-CHIP
4302-001180	BAT300	BATTERY-LI(2ND)
GH70-03276A	SC100	ICT SHIELD-CAN CLIP
GH70-03276A	SC101	ICT SHIELD-CAN CLIP
GH70-03276A	SC103	ICT SHIELD-CAN CLIP
GH70-03276A	SC104	ICT SHIELD-CAN CLIP
GH71-08426A	ANT100	NPR CONTACT-ANTENNA
GH71-08426A	ANT101	NPR CONTACT-ANTENNA
GH80-03320A	C108	SOLDER-CREAM/SMT KOREA(FREE)
GH80-03320A	C109	SOLDER-CREAM/SMT KOREA(FREE)
GH80-03320A	L302	SOLDER-CREAM/SMT KOREA(FREE)
GH80-03320A	L303	SOLDER-CREAM/SMT KOREA(FREE)
GH80-03320A	R101	SOLDER-CREAM/SMT KOREA(FREE)
GH80-03320A	R414	SOLDER-CREAM/SMT KOREA(FREE)
GH80-03320A	R419	SOLDER-CREAM/SMT KOREA(FREE)

Please consult the GSPN website (Samsung Portal) for the most recent version of the product's part list.

8. PCB Diagrams

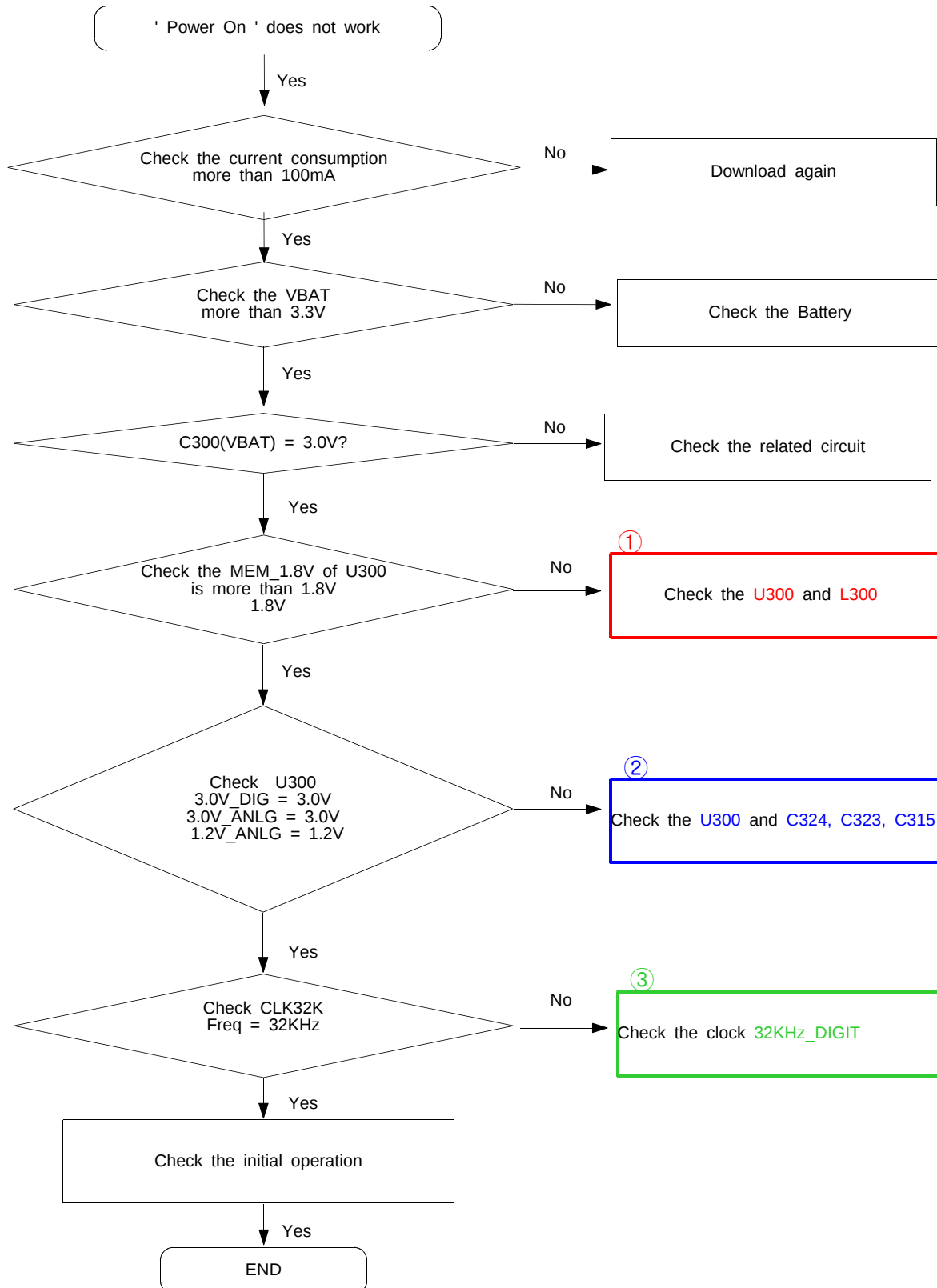
Top



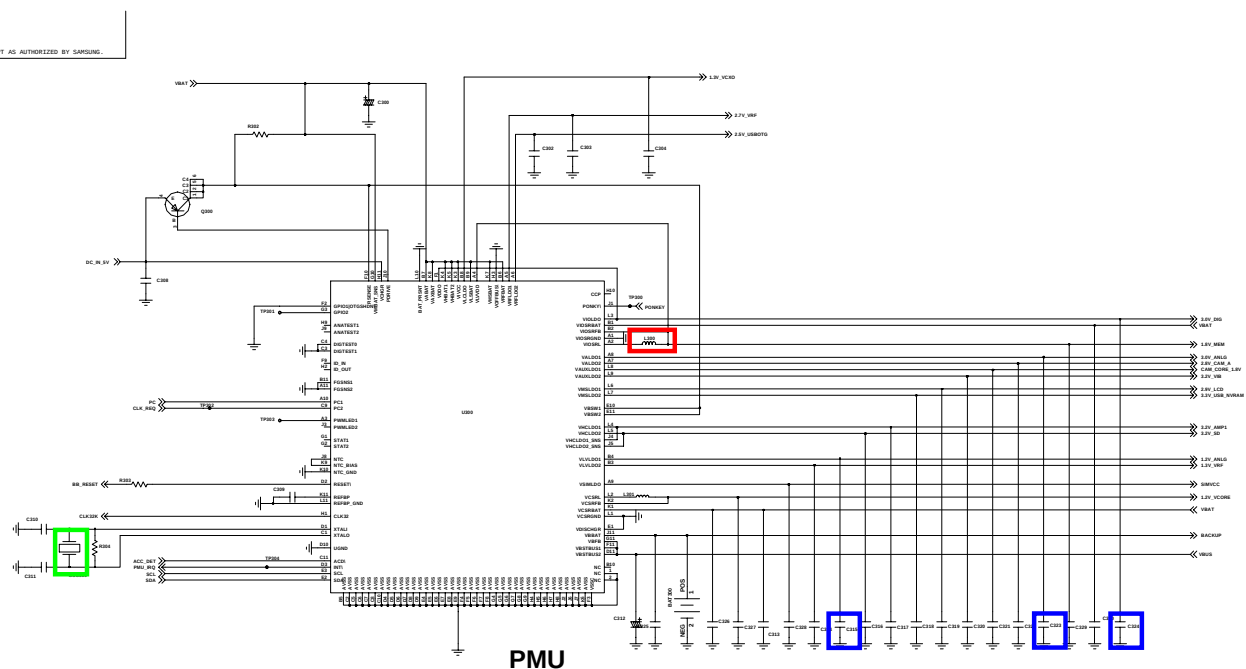


9. Flow Chart of Troubleshooting

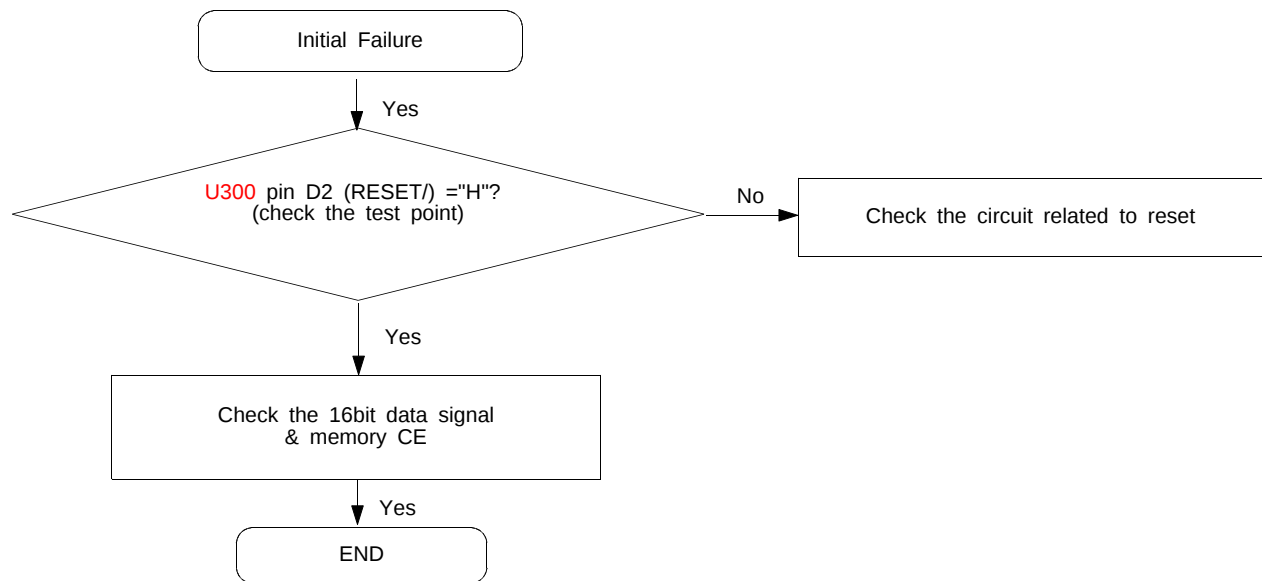
9-1. Power On



Flow Chart of Troubleshooting

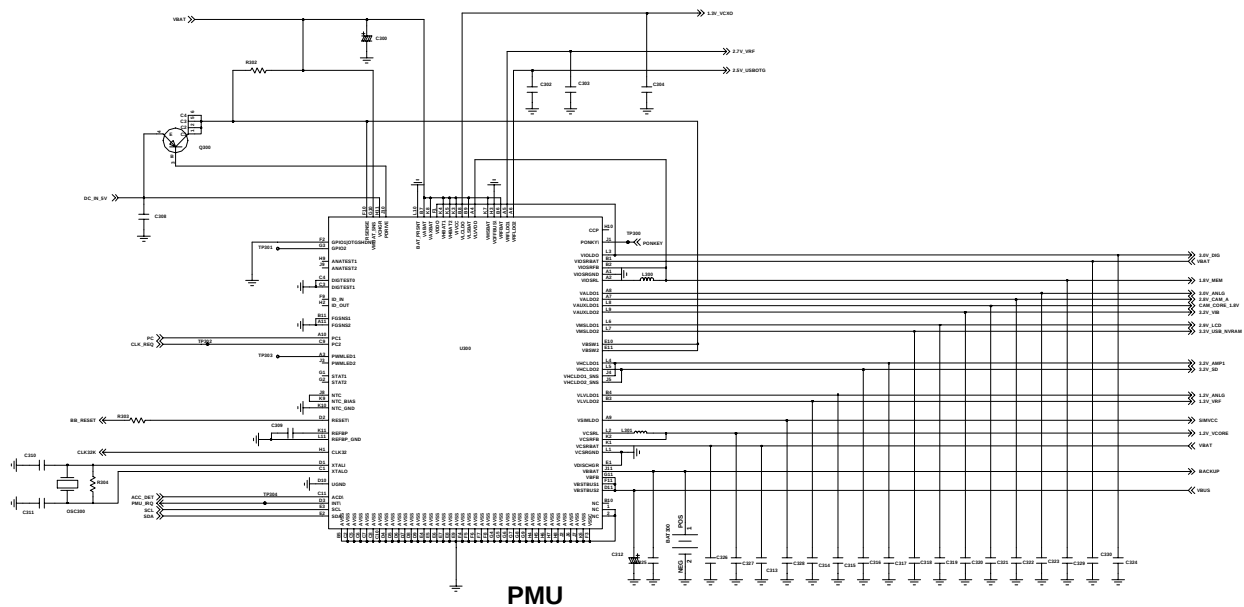


9-2. Initial

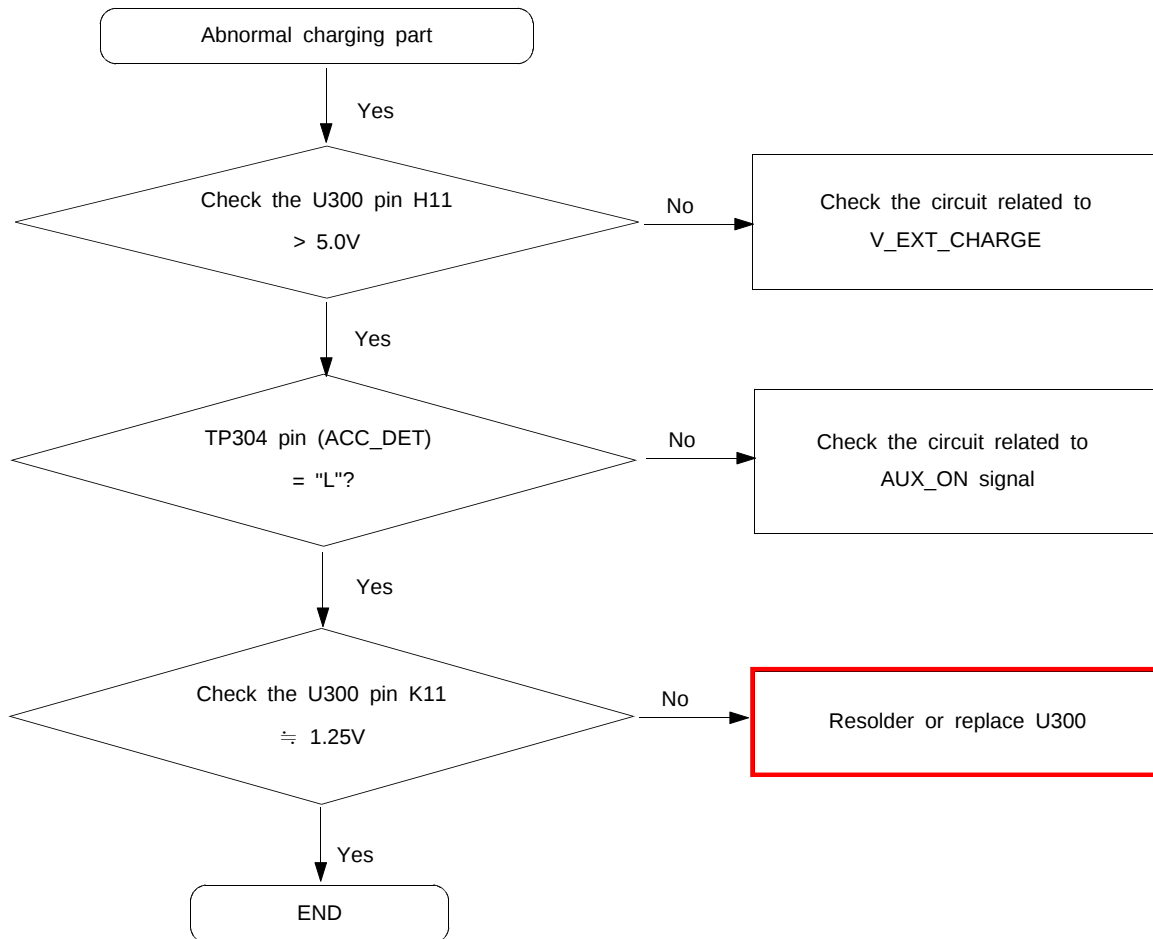


Flow Chart of Troubleshooting

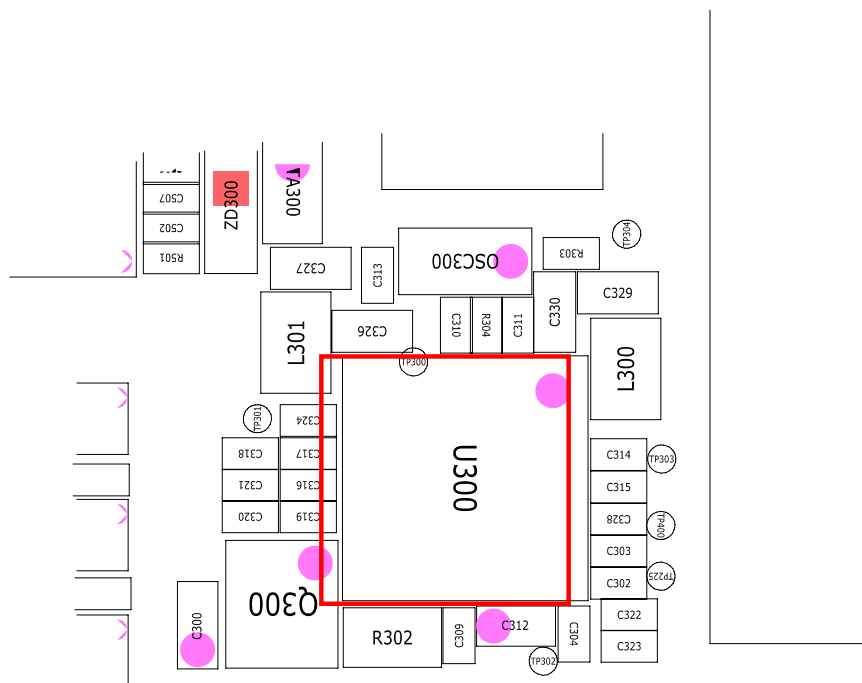
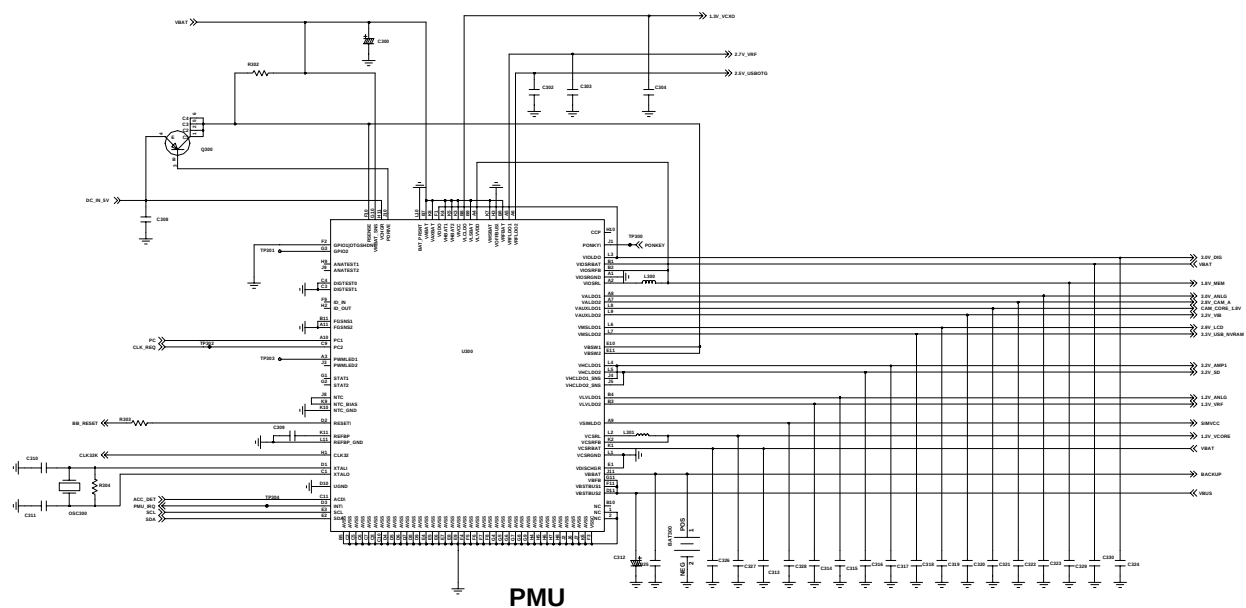
ACCEPT AS AUTHORIZED BY SAMSUNG.



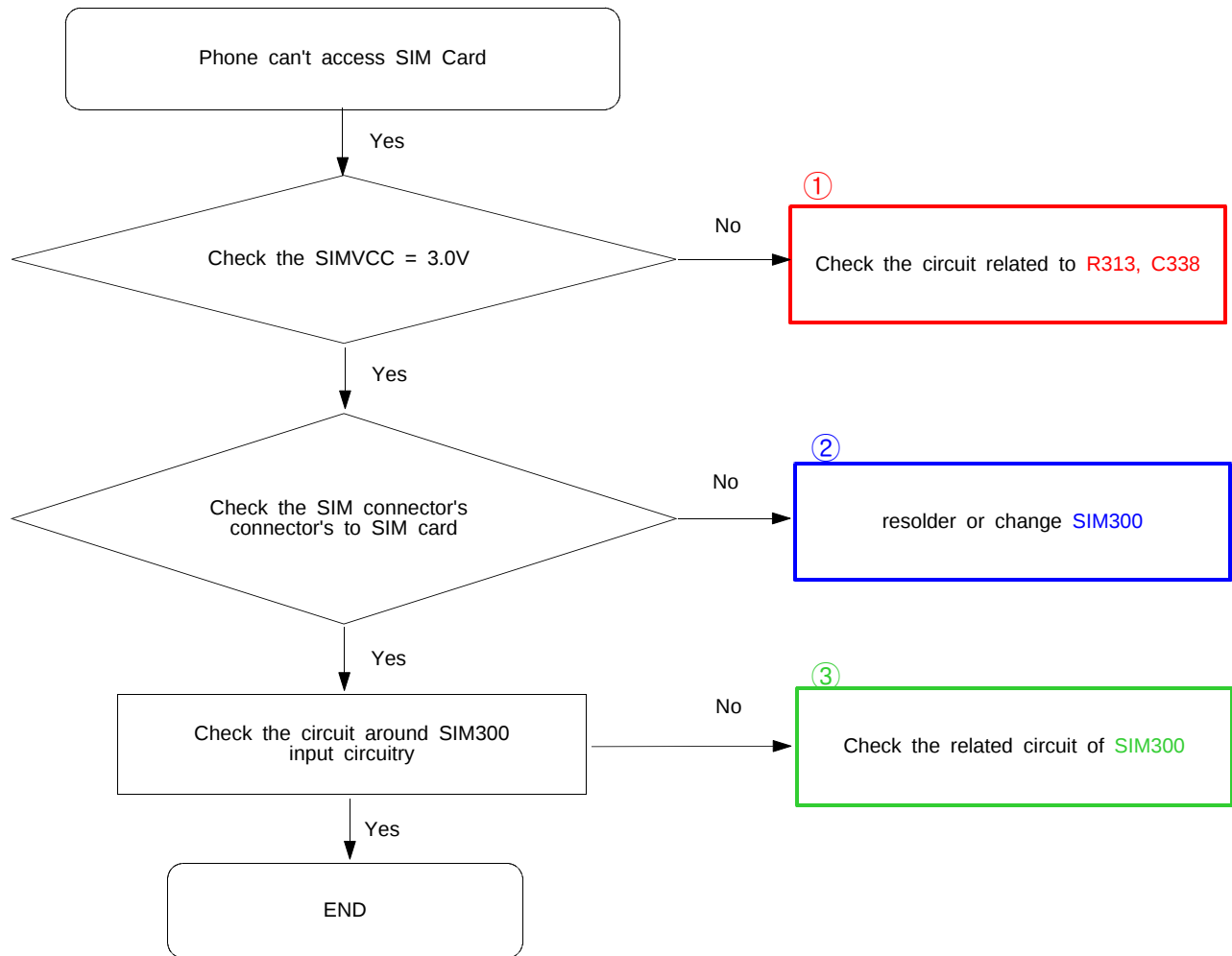
9-3. Charging Part

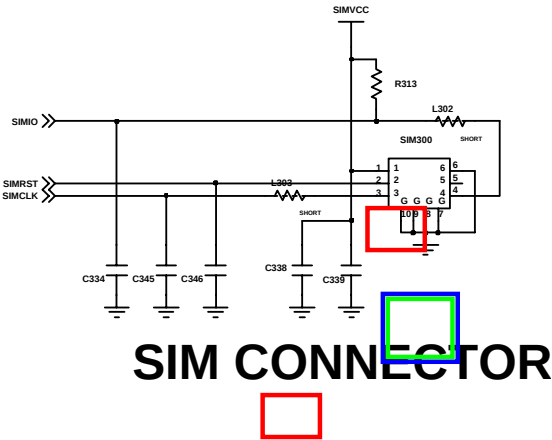


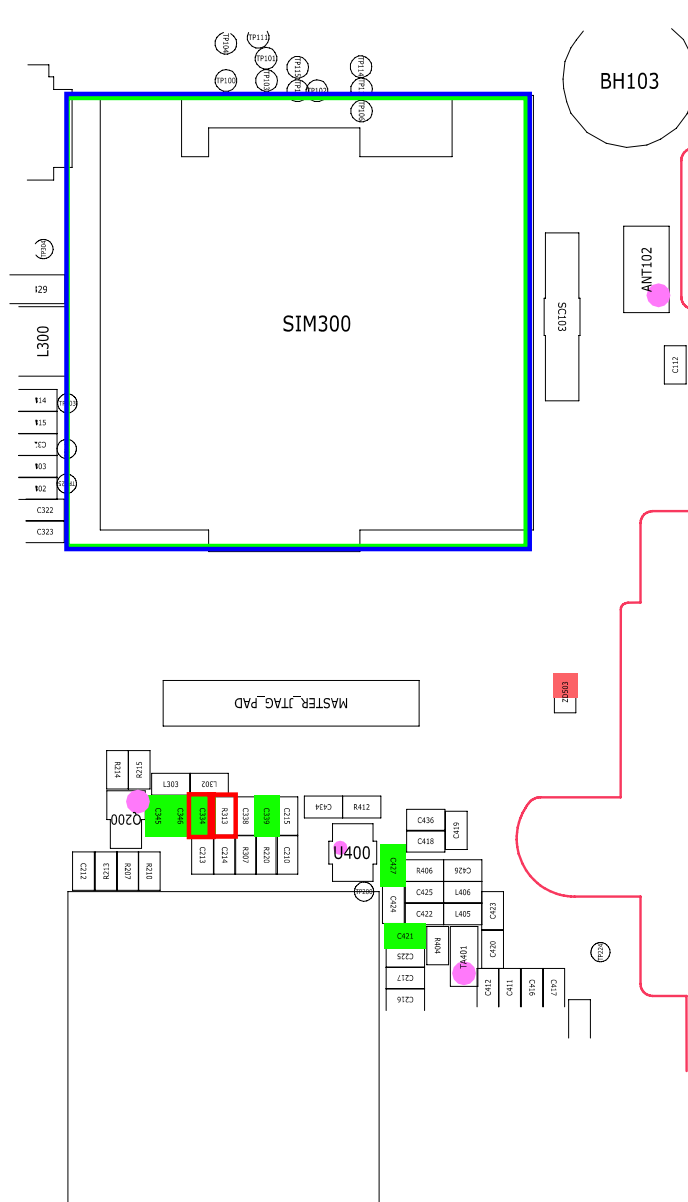
Flow Chart of Troubleshooting



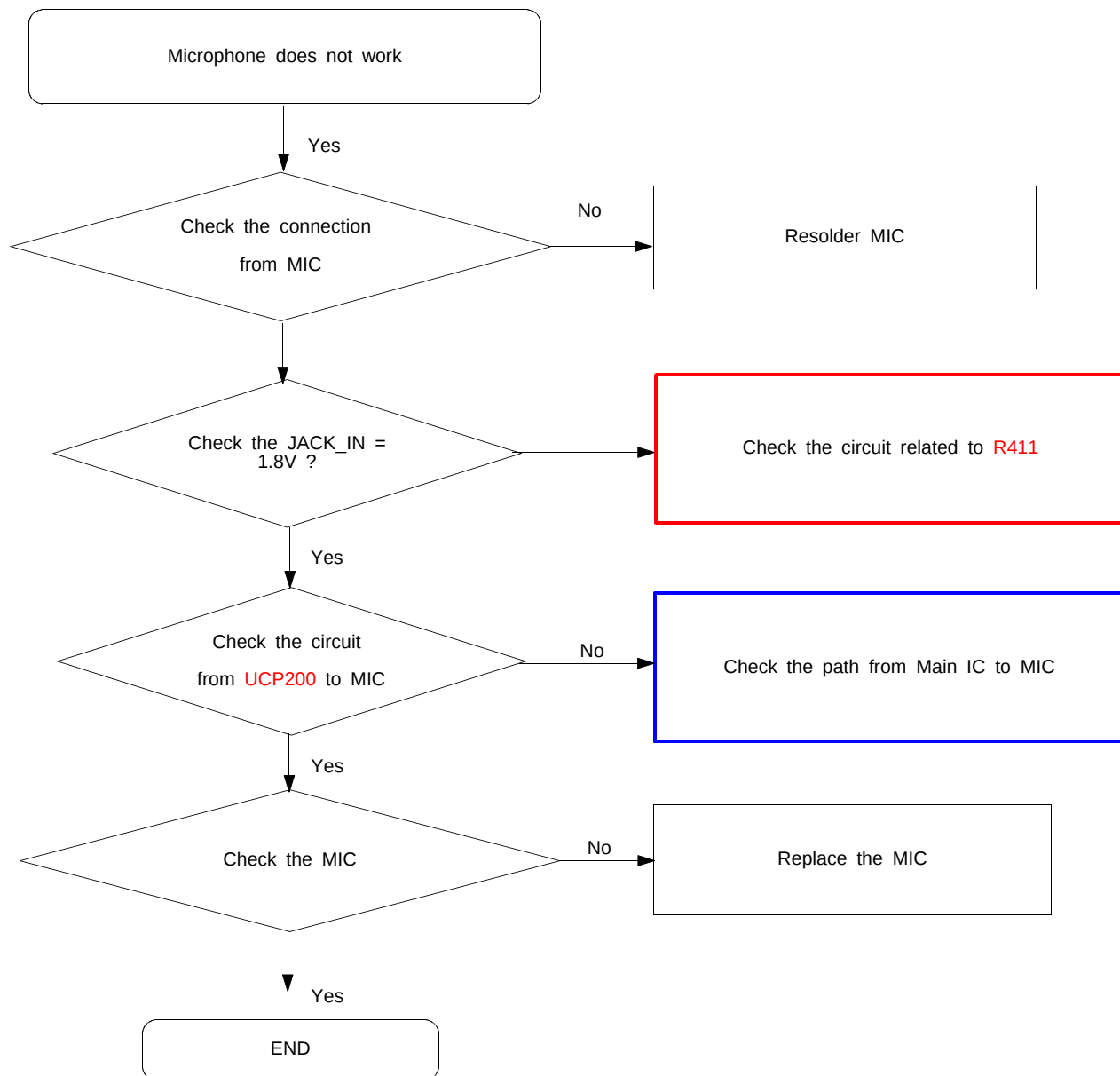
9-4. Sim Part

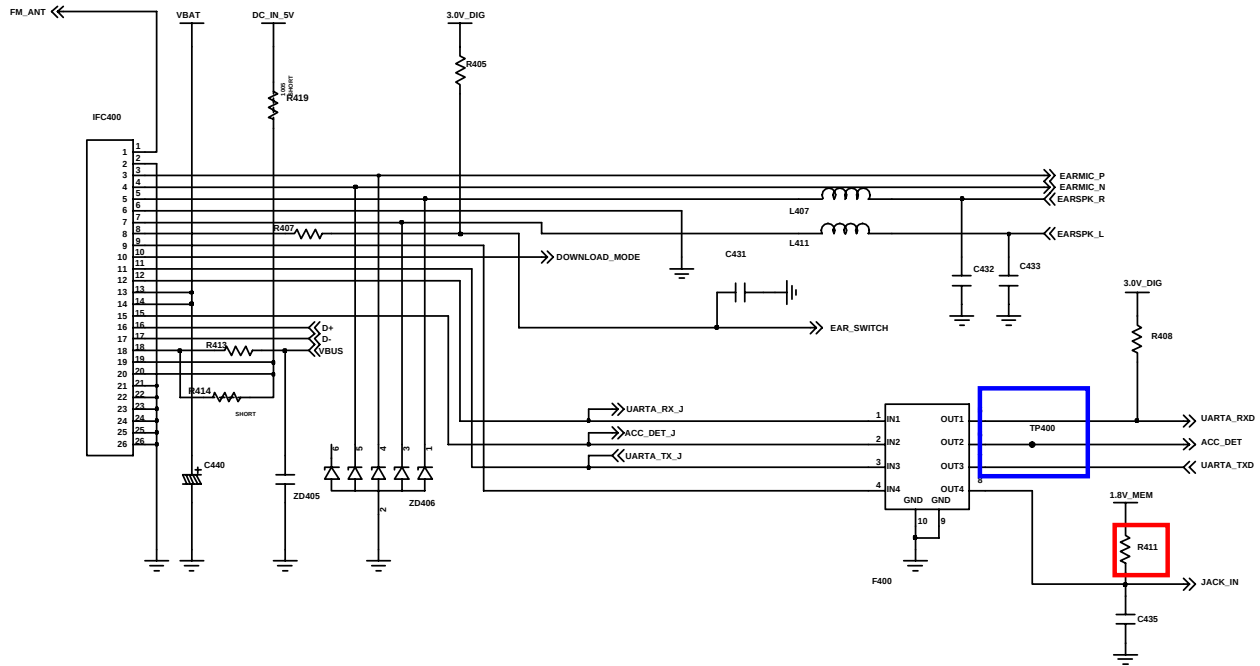


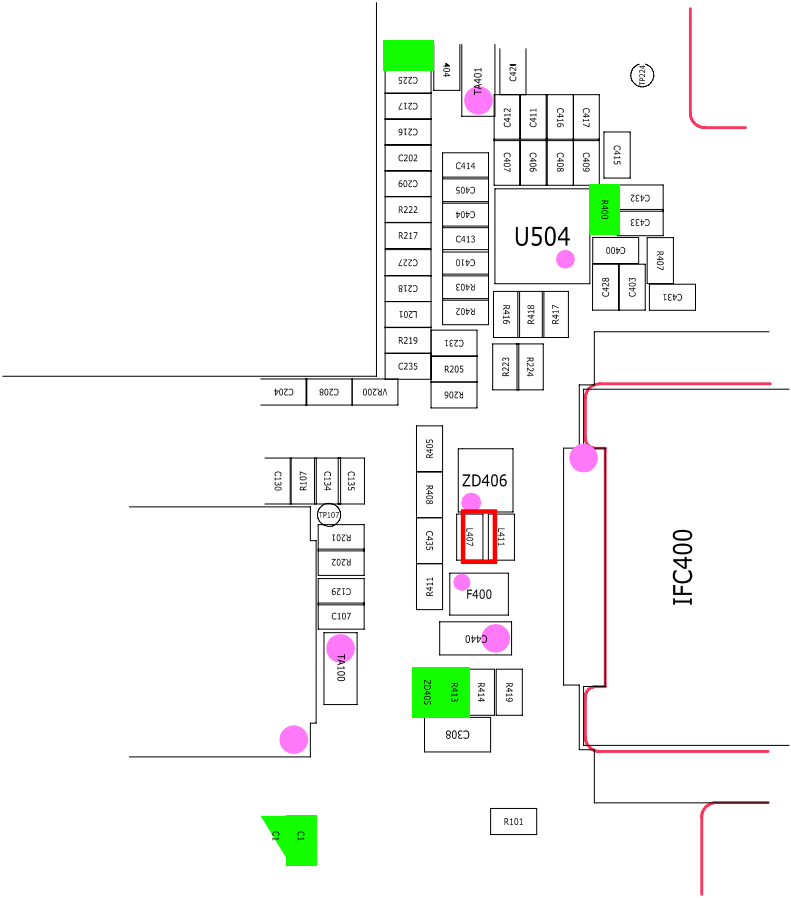




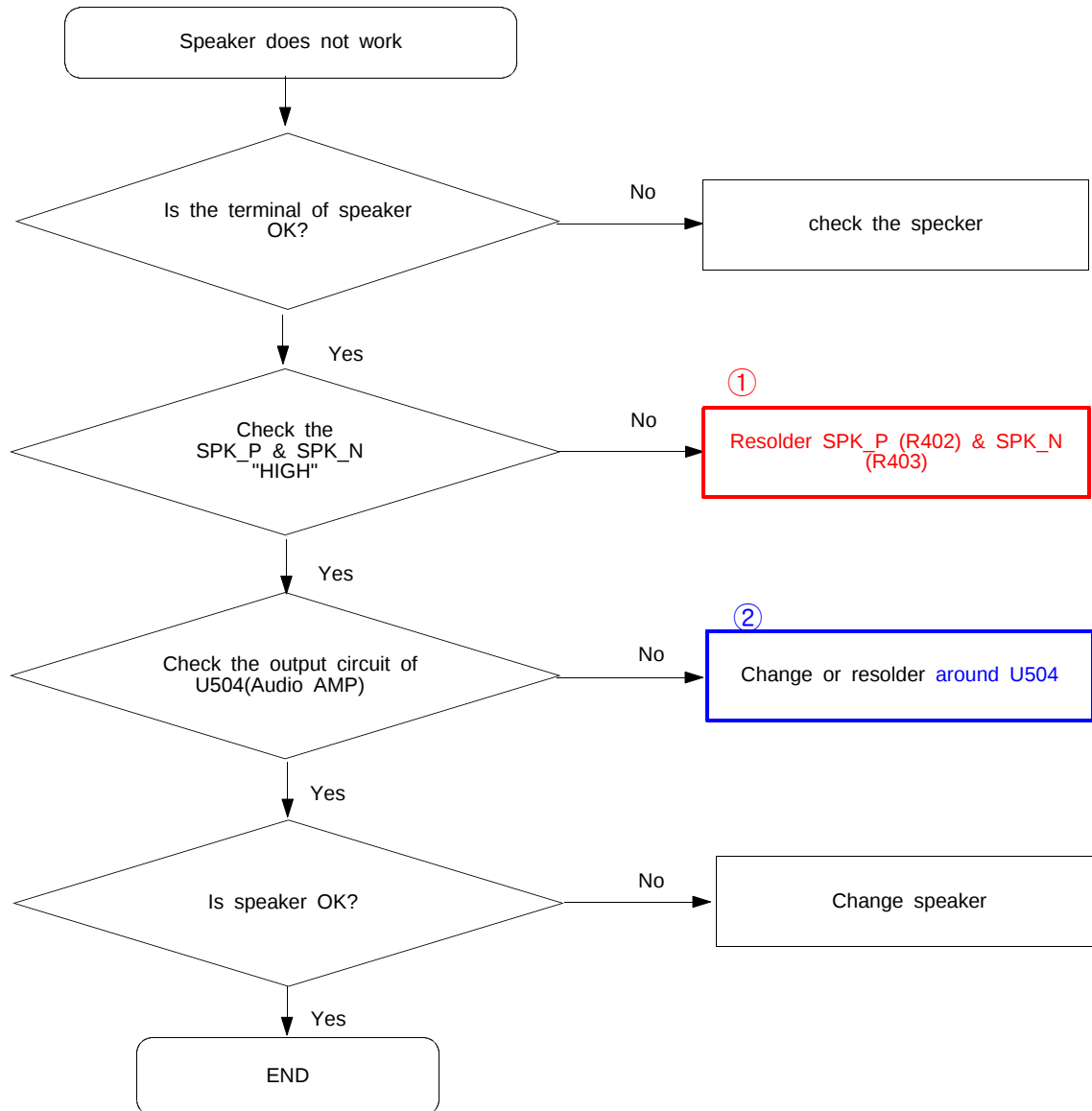
9-5. Microphone Part

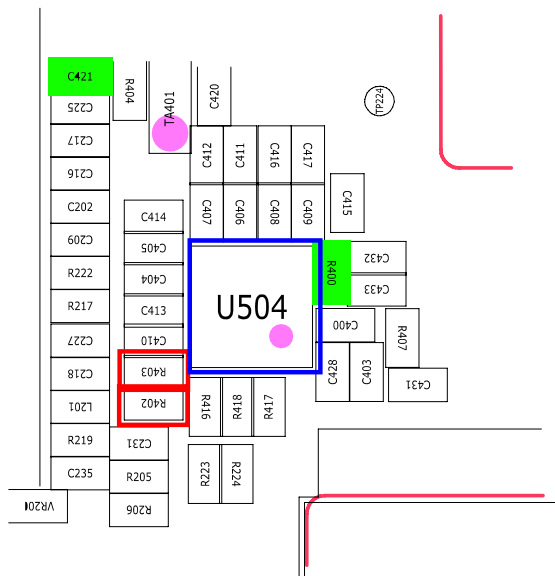
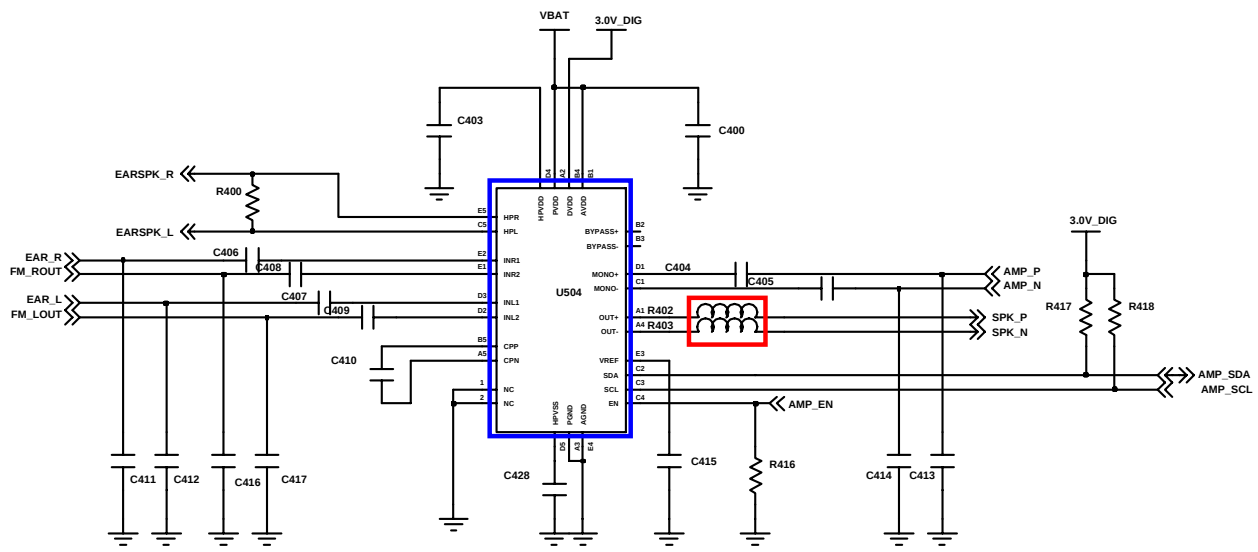




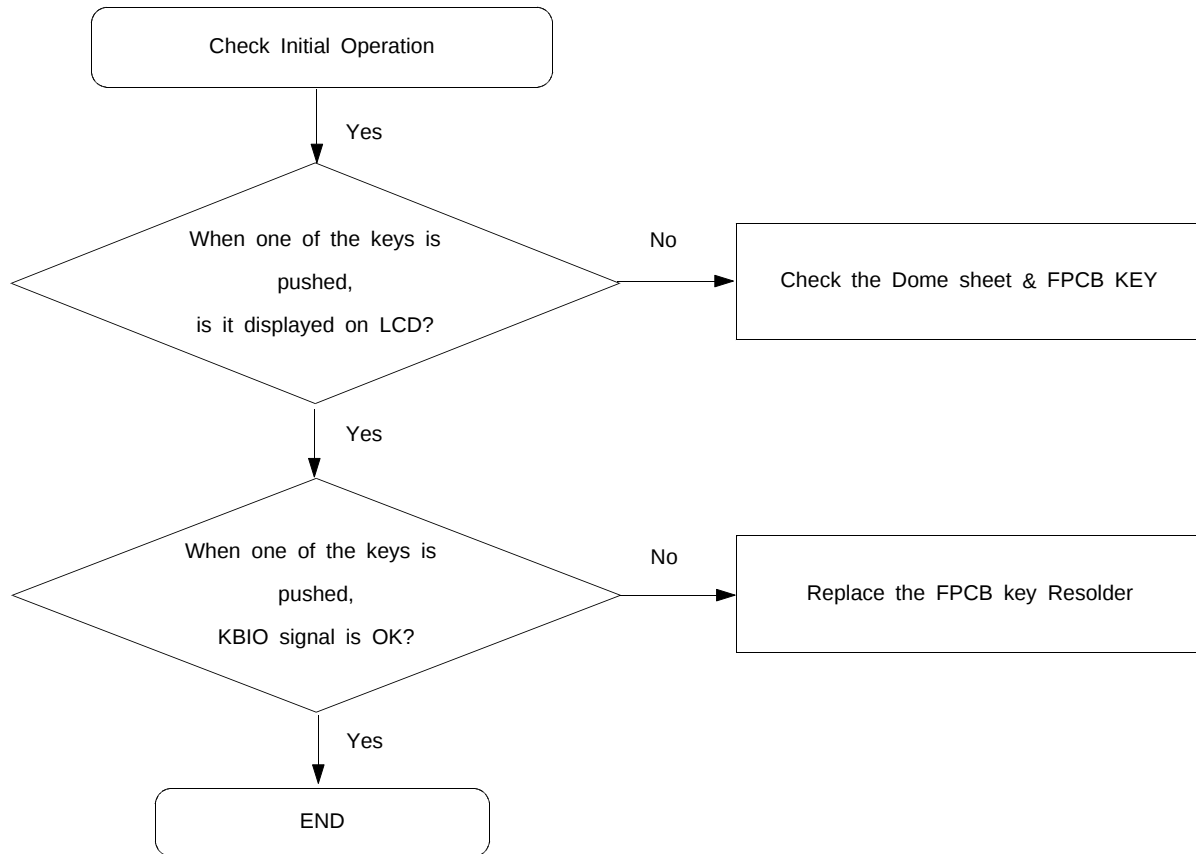


9-6. Speaker Part(Melody)

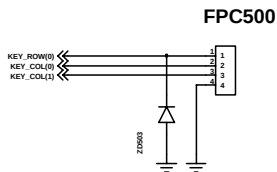




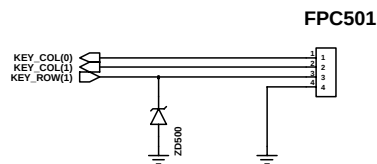
9-7. Key Data Input



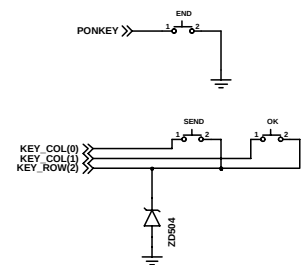
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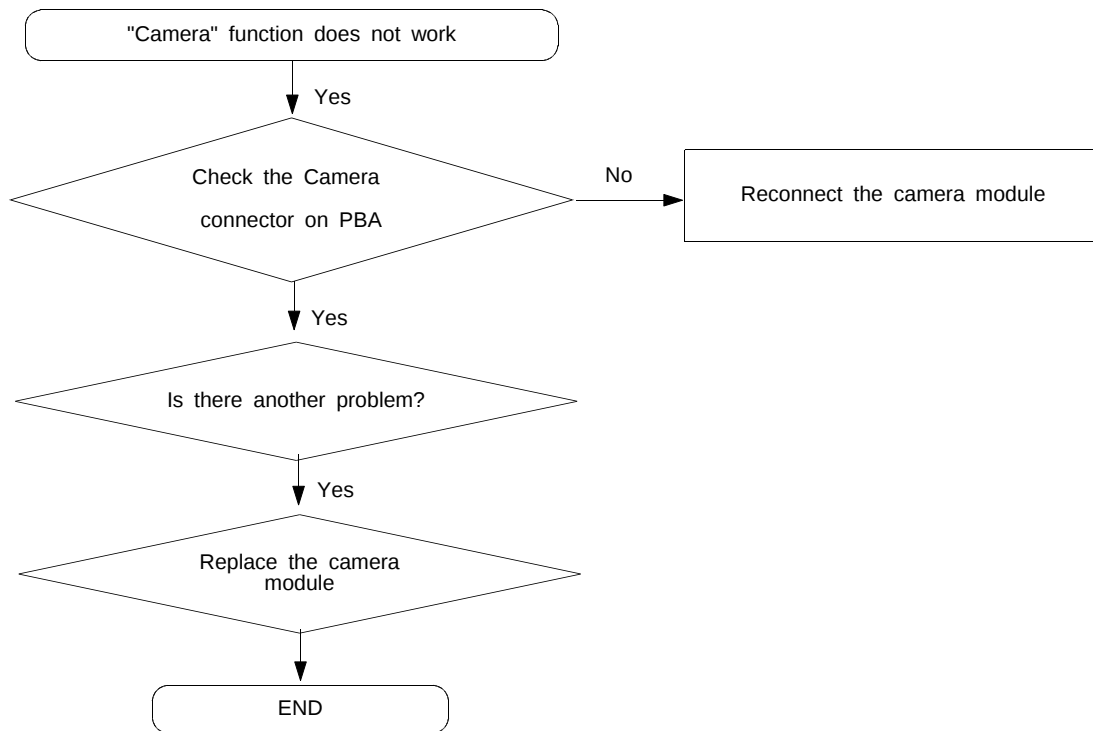
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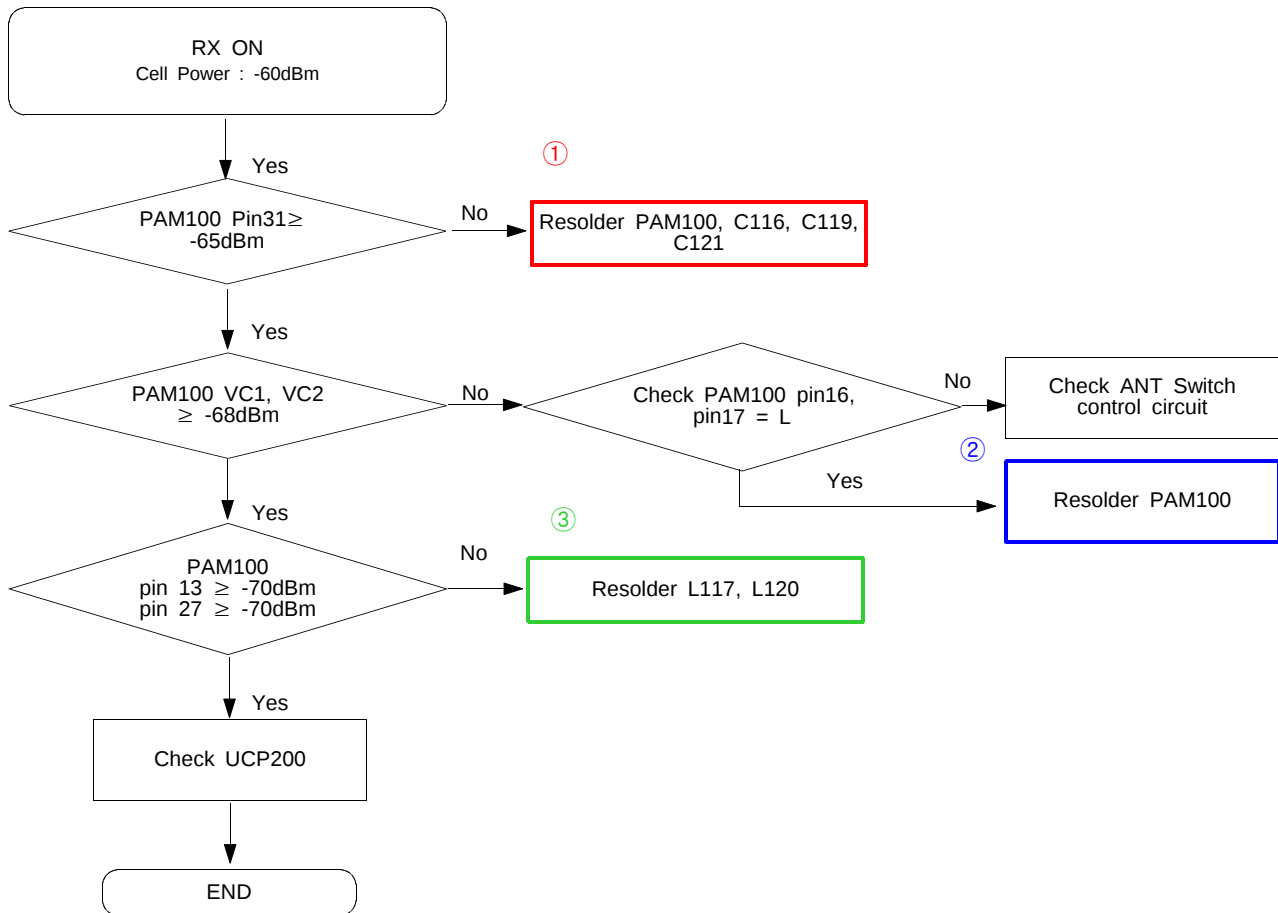
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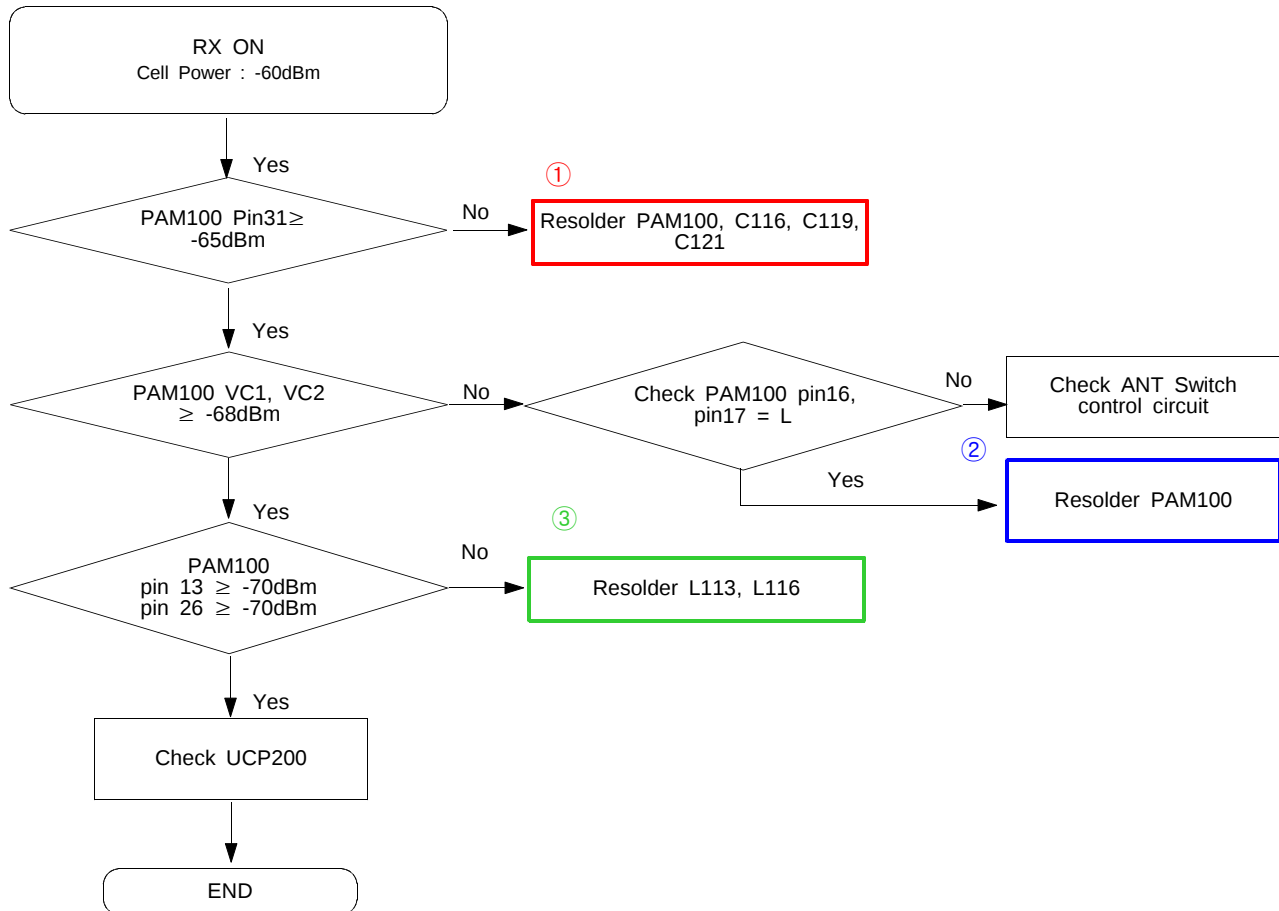
9-8. Camera part



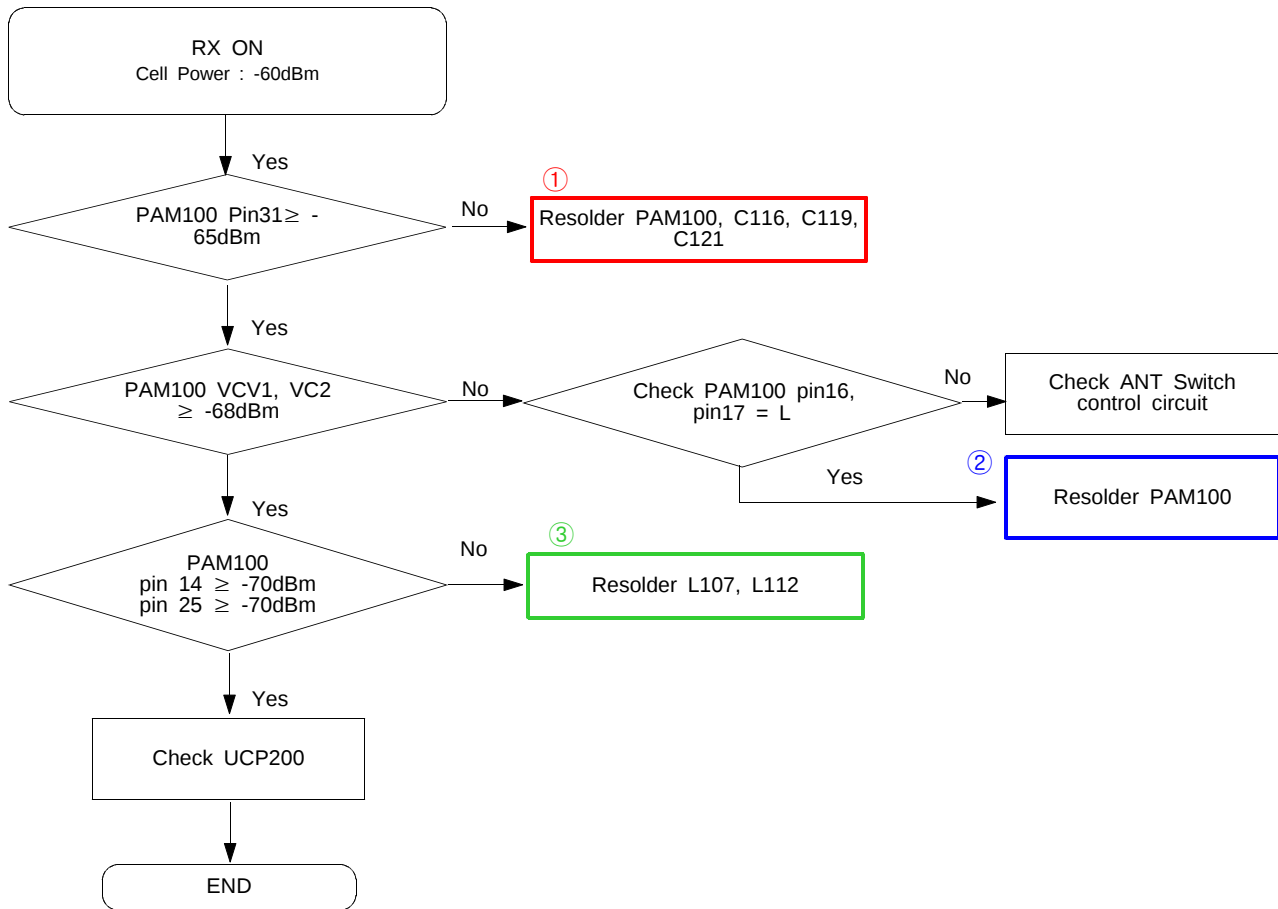
9-9. GSM850 Receiver



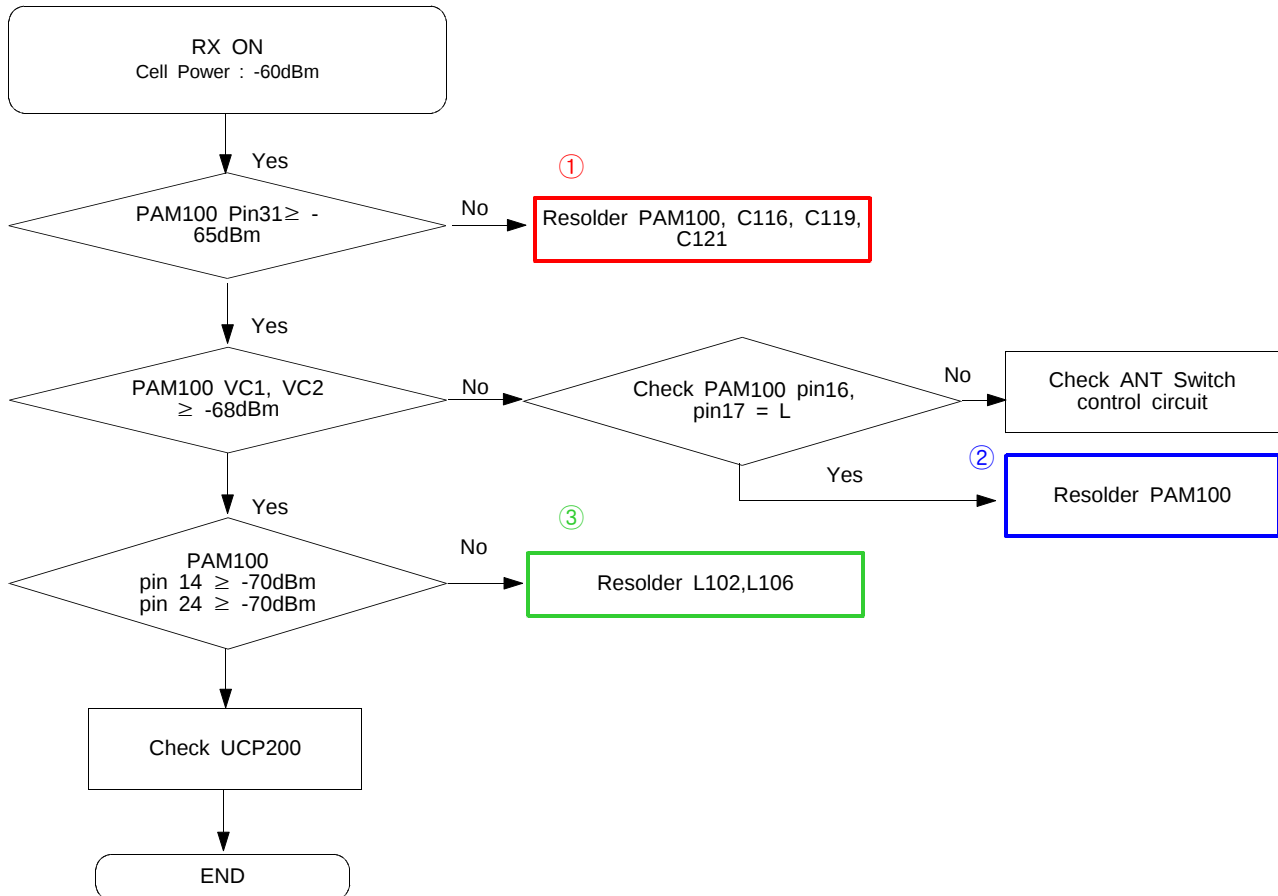
9-10. GSM Receiver

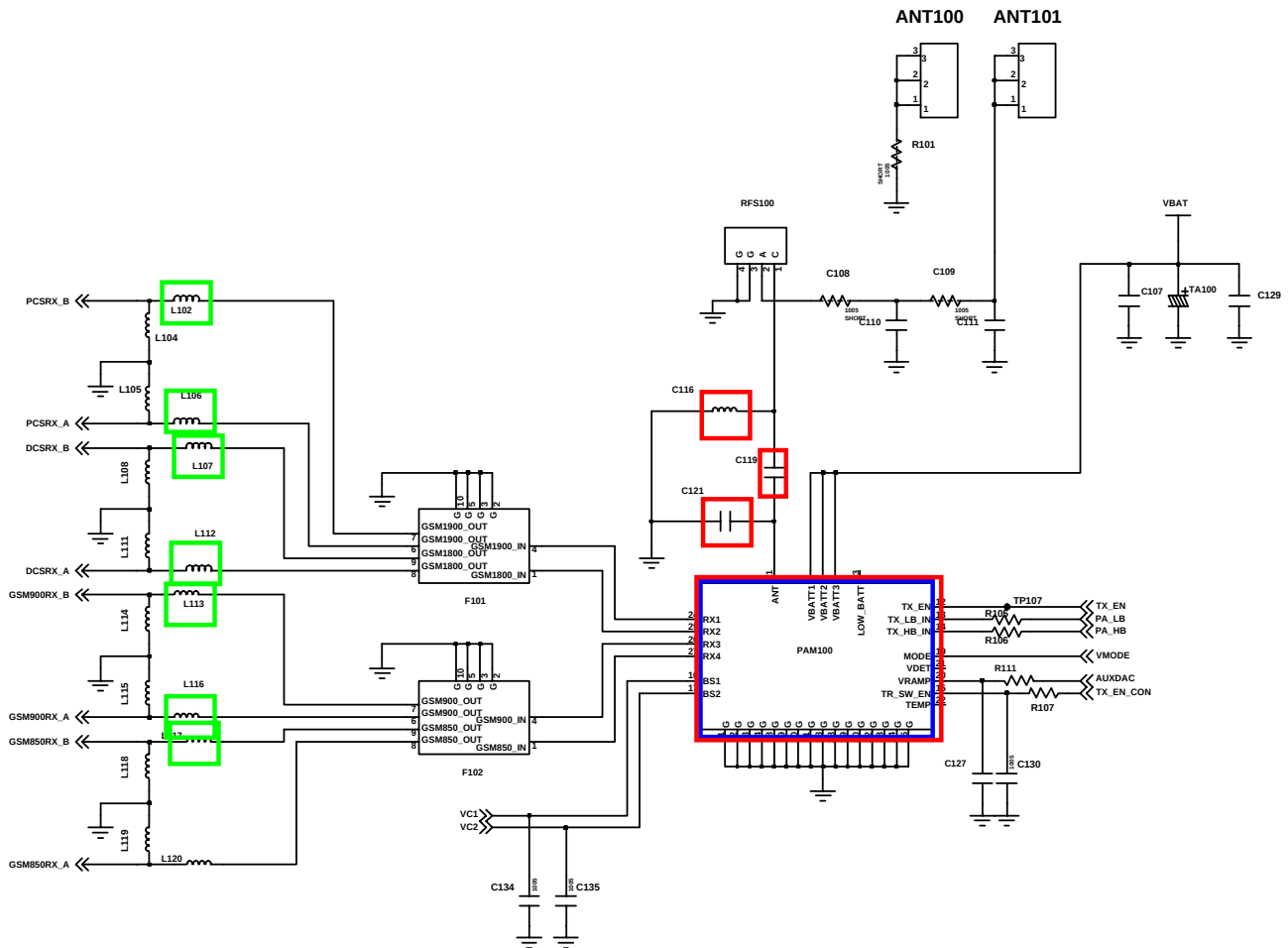


9-11. DCS Receiver



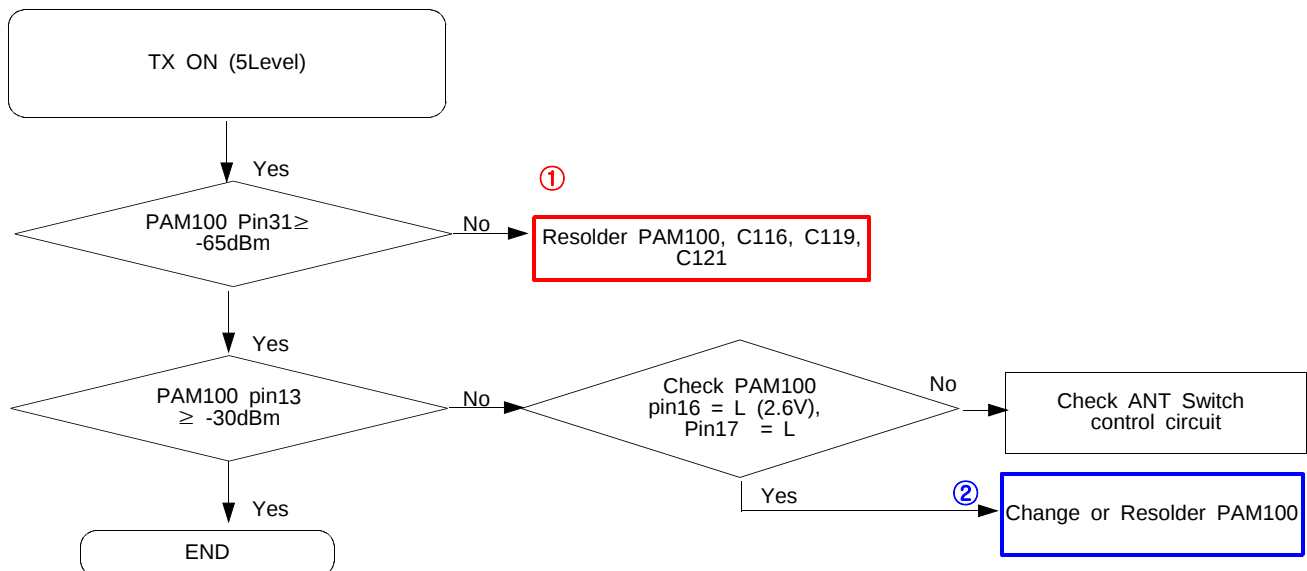
9-12. PCS Receiver



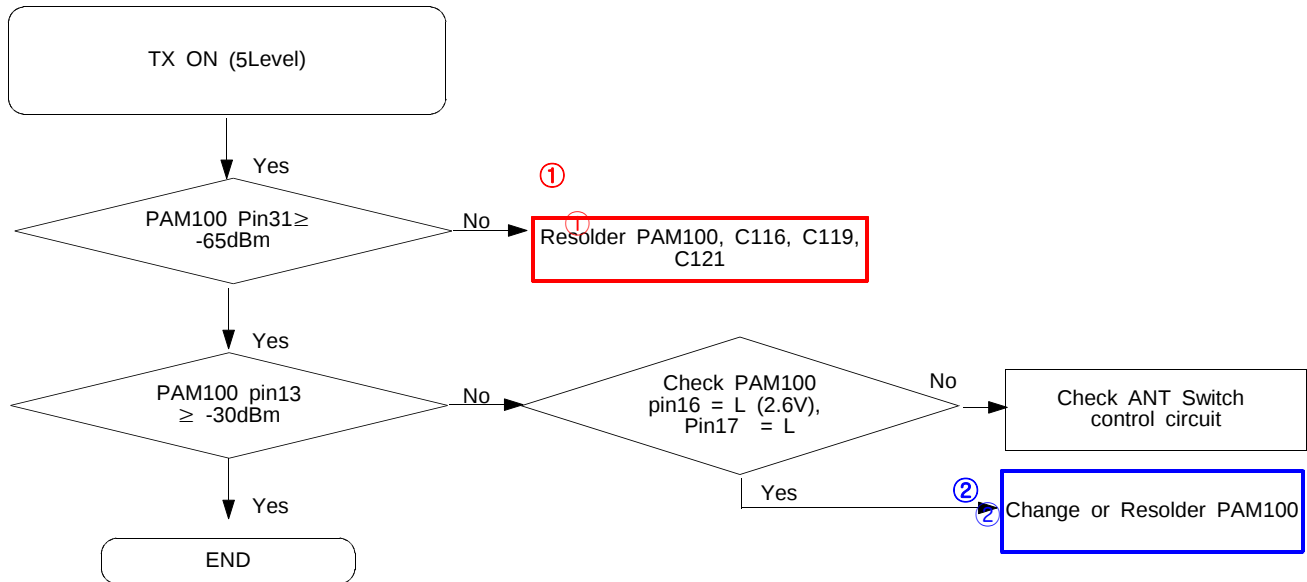




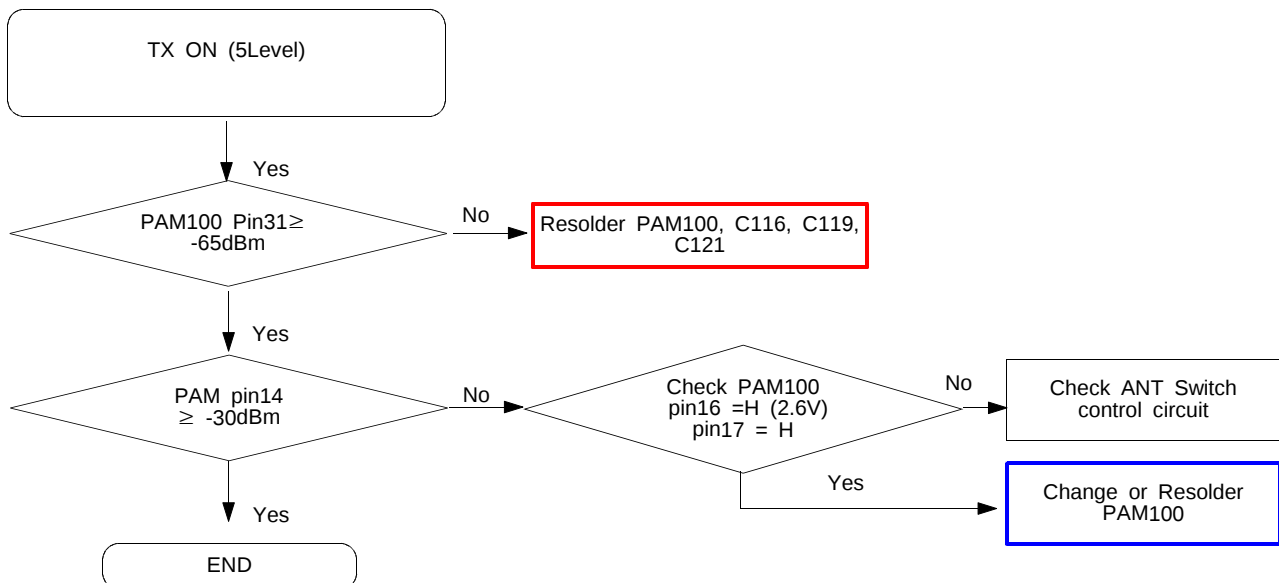
9-13. GSM850 Transmitter



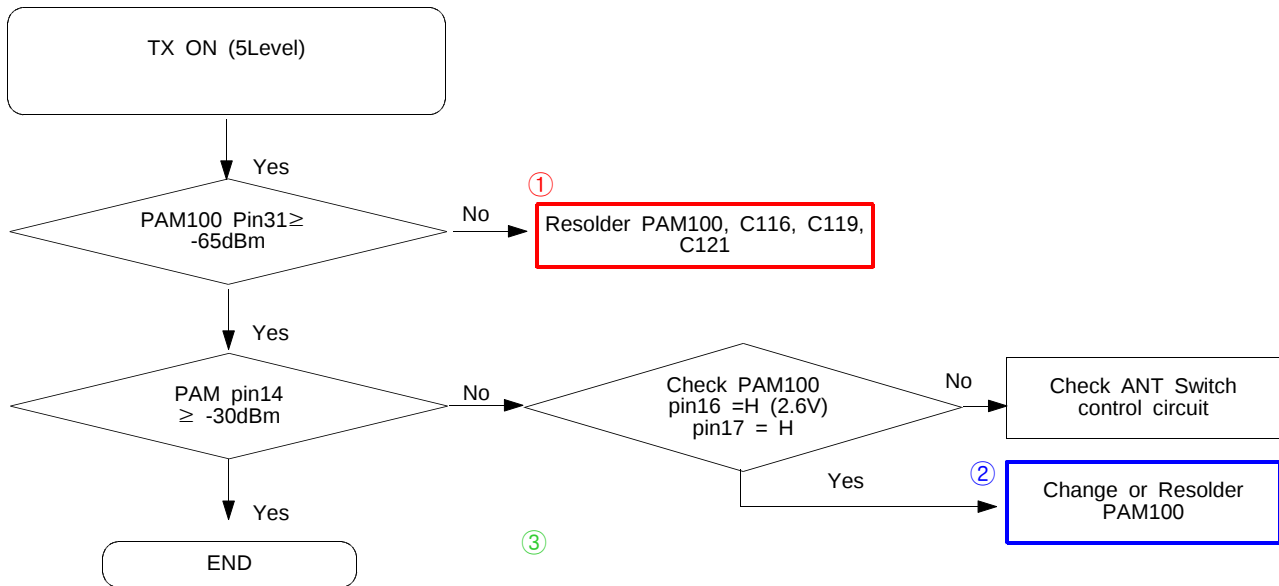
9-14. GSM Transmitter

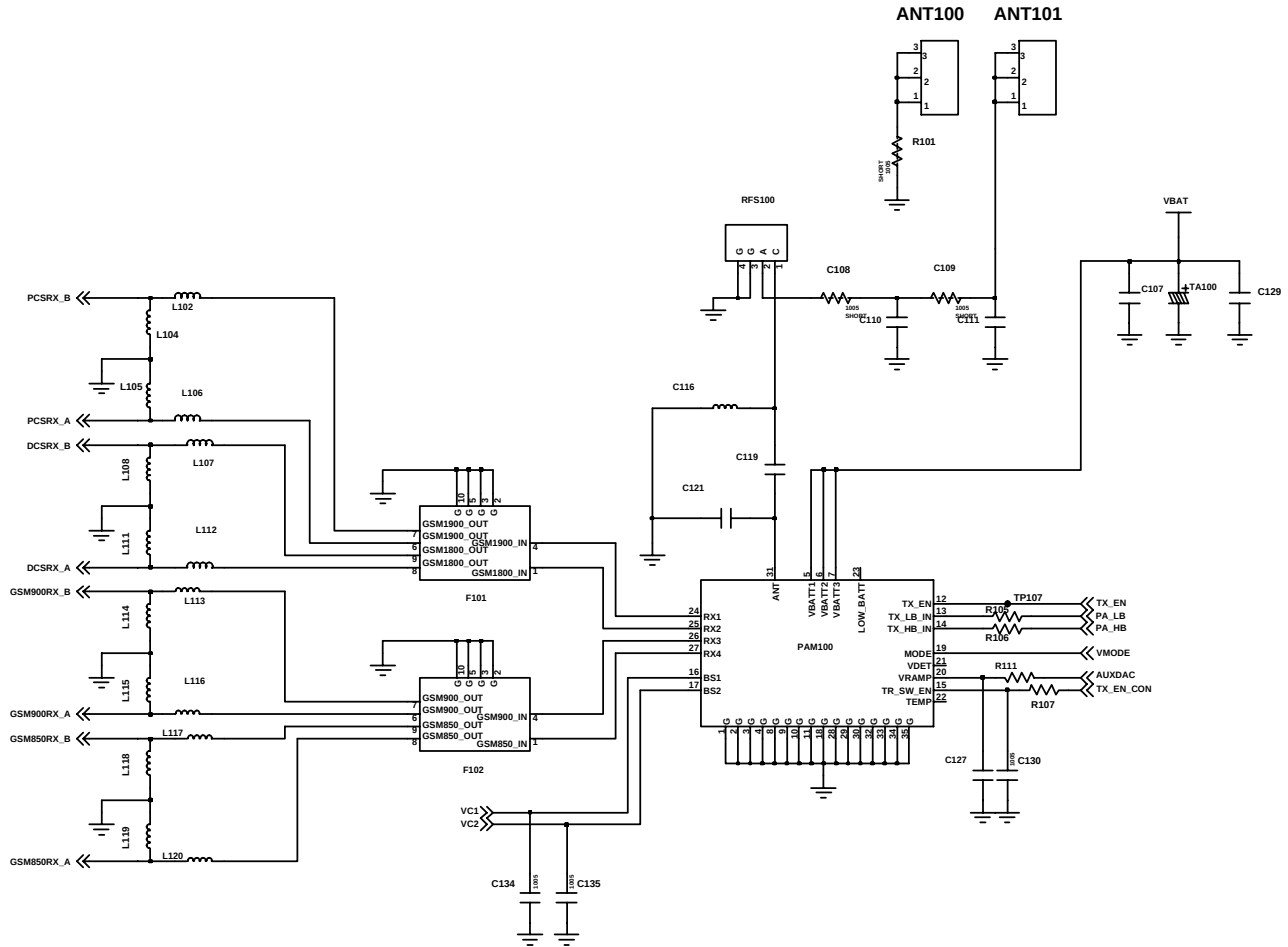


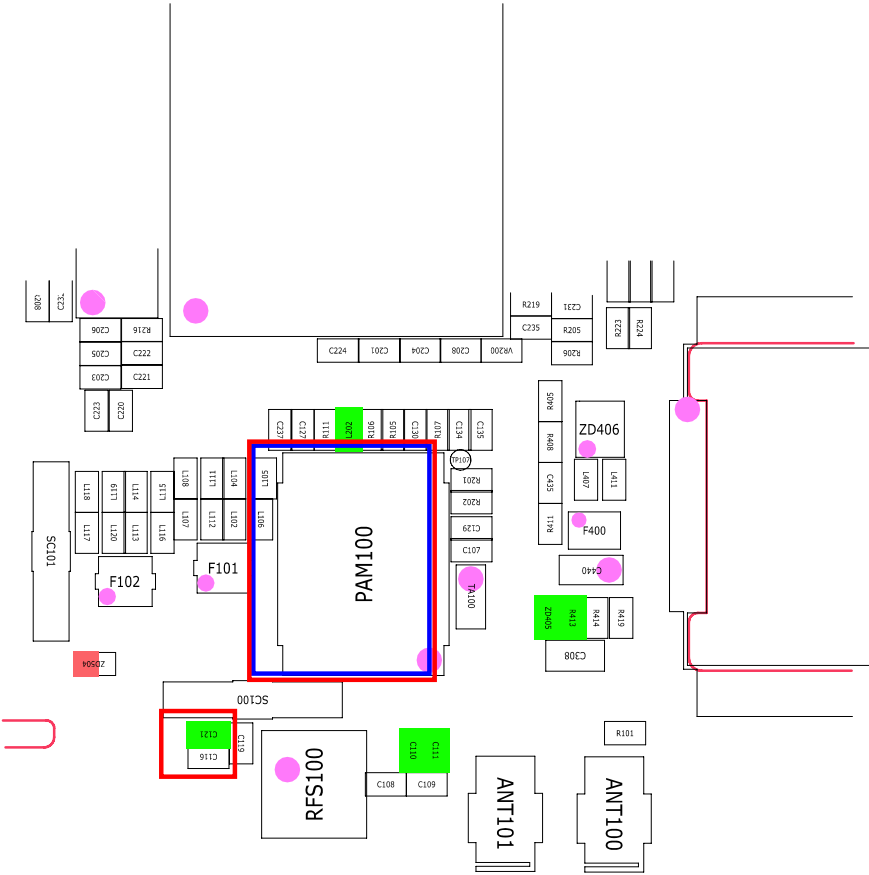
9-15. DCS Transmitter



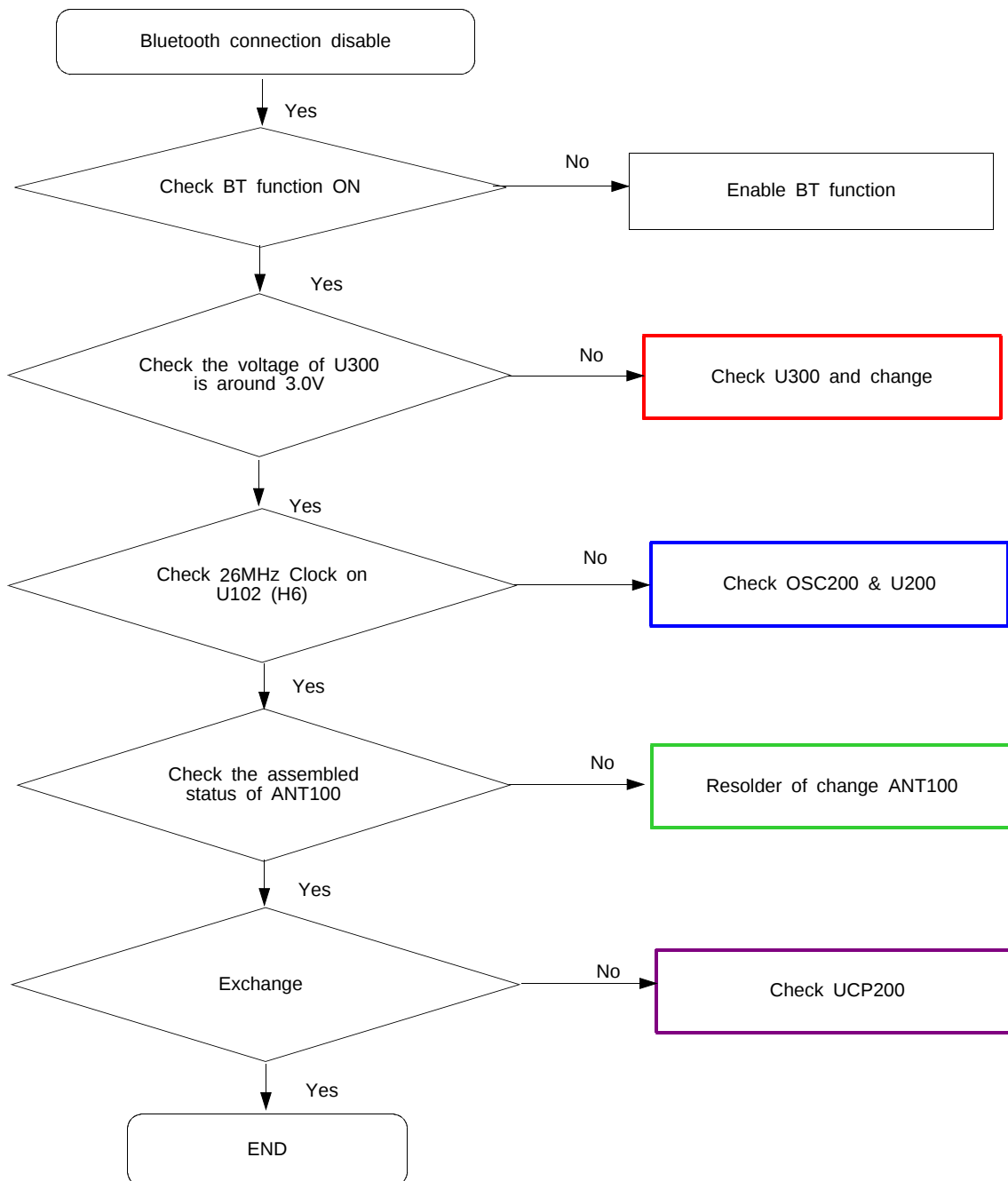
9-16 PCS Transmitter

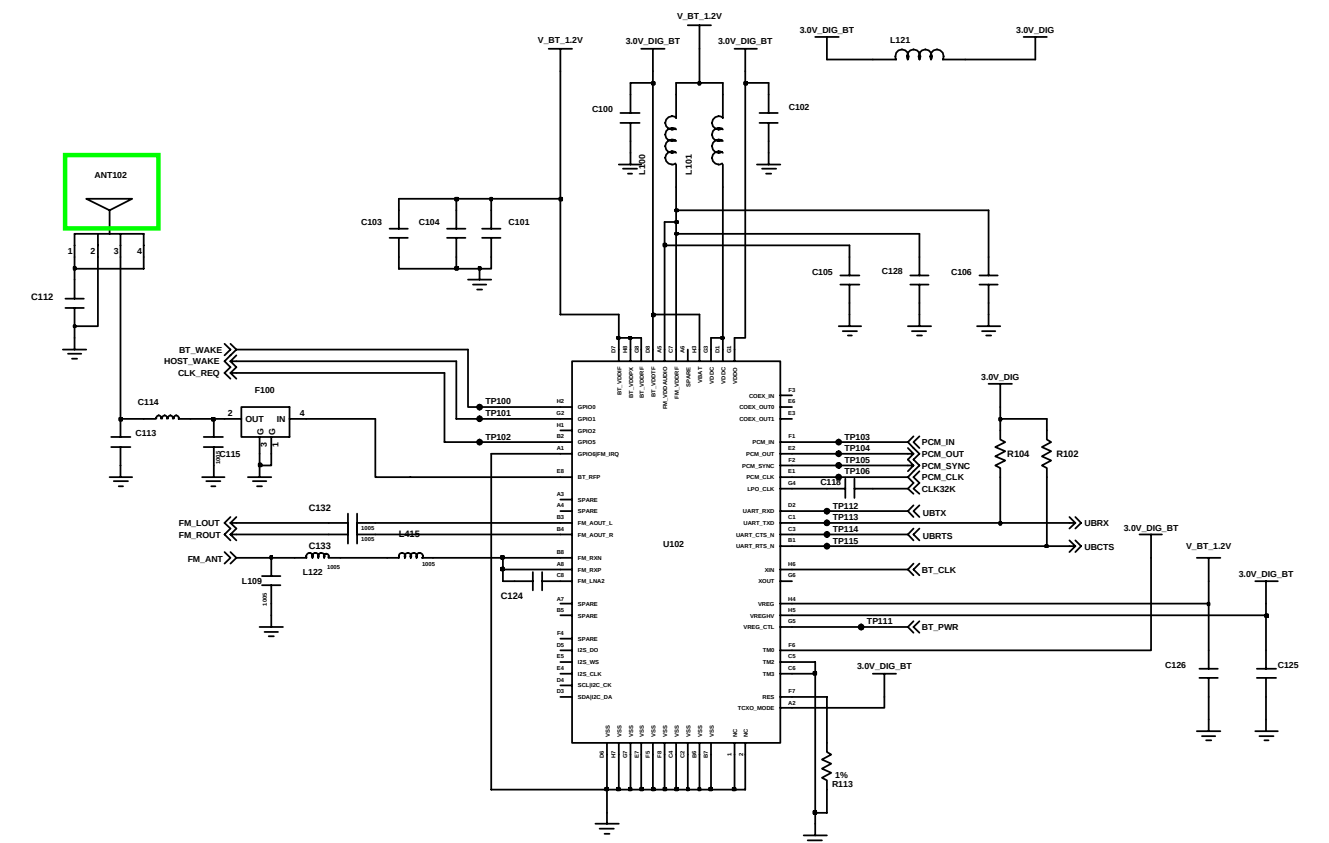




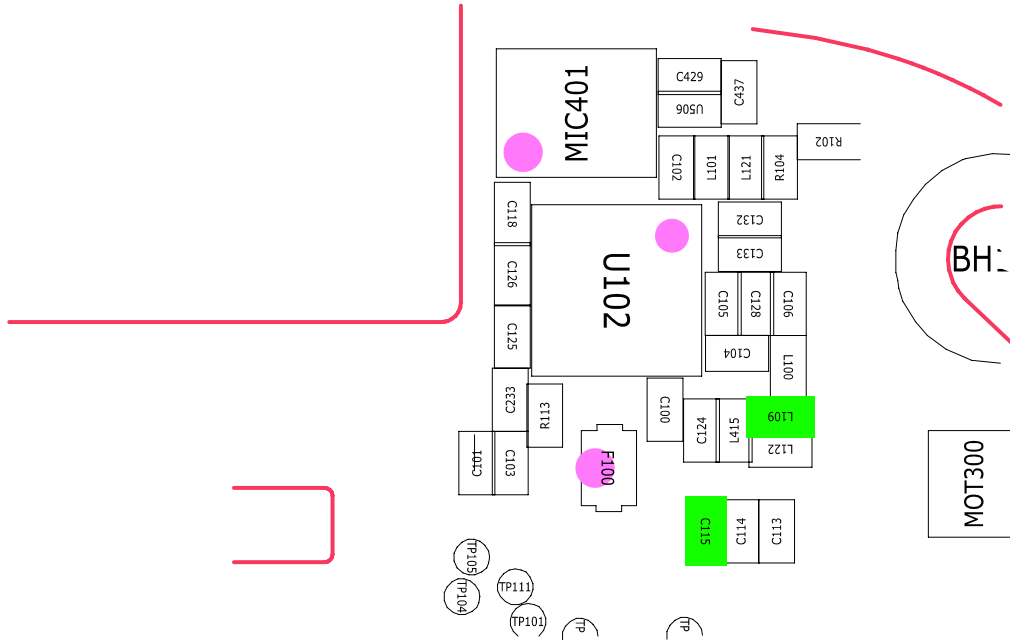


9-17 Bluetooth part

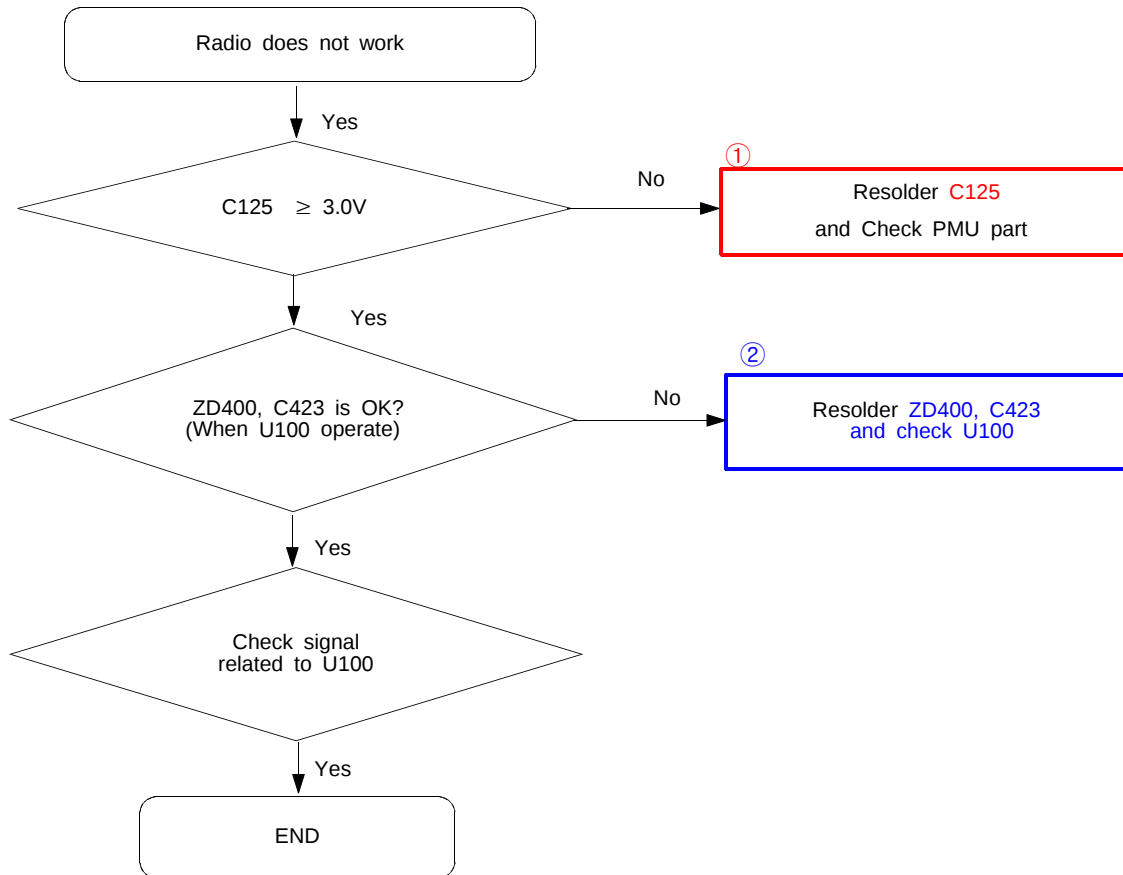




BLUETOOTH + FM RADIO

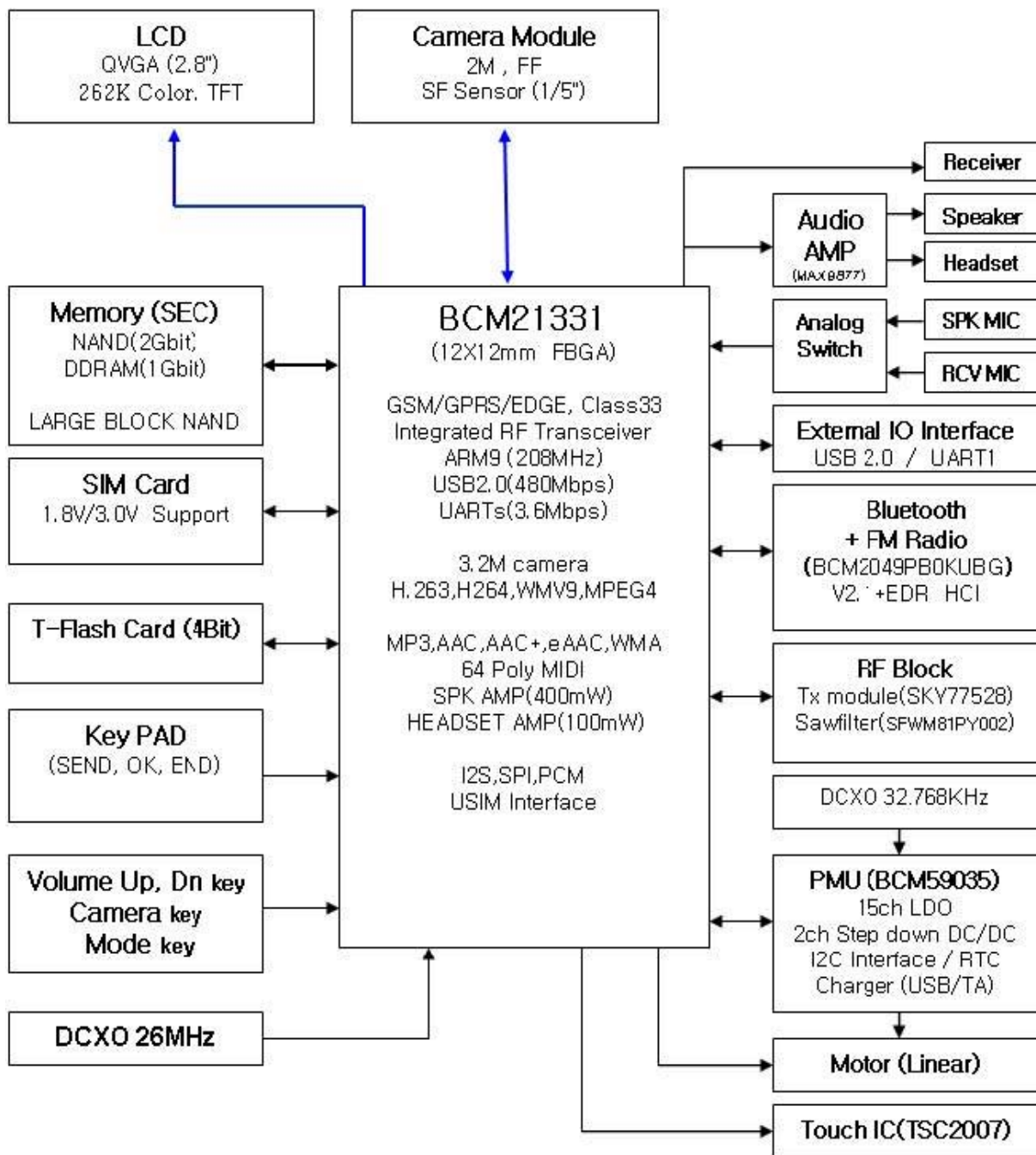


9-18. Radio part

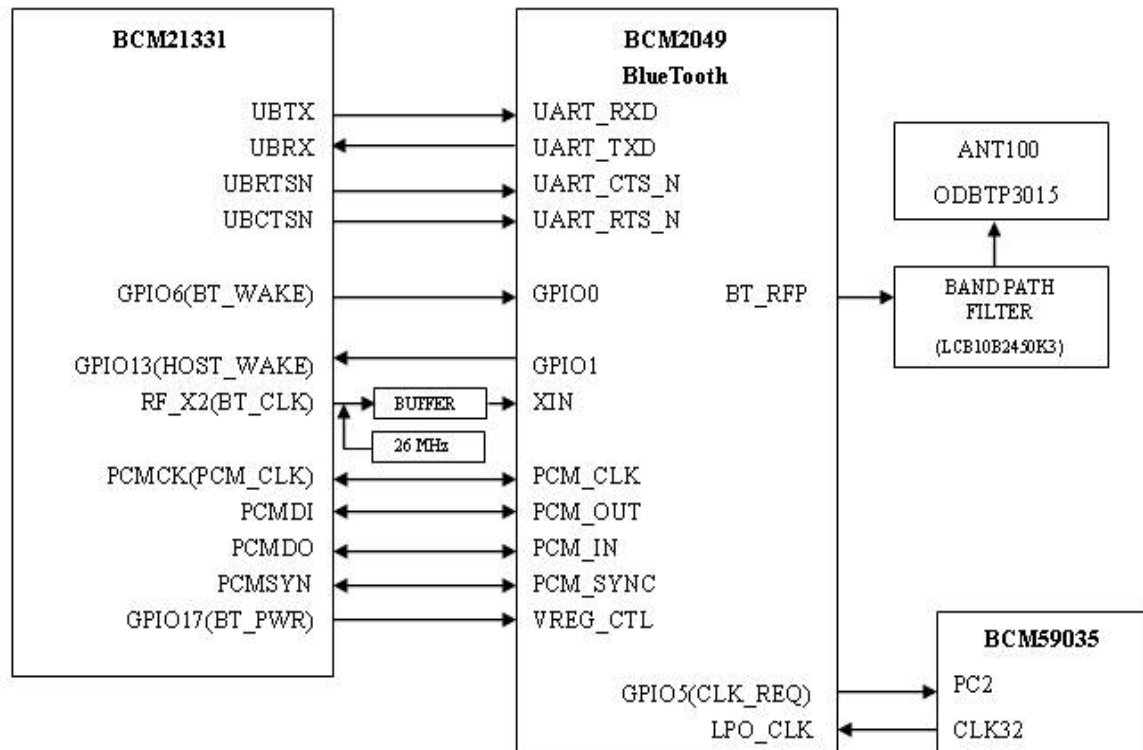


7. Block Diagrams

7-1. RF/BB Block Diagram



7-2. BLUETOOTH



11. Disassembly and Assembly Instructions

11-1. Disassembly

1

1) Unscrew the 6 points.



2

1) Separate the REAR CASE.

HOOK 7 POINT



※ Caution

1) Be care of scratch and molding damage.

※ Caution

1) Be care of scratch and molding damage.

3

1) Unscrew the 2 points.



4

1) Separate the LCD and TSP CONNECTORS then disassemble the 2 hook.



※ Caution

1) Be care of damage to INTENNA

※ Caution

1) Be care of scratch and molding damage.

5

- 1) Separate the BRACKET ASS'Y from the FRONT ASS'Y.



6

- 1) Separate LCD and KEYPAD from the FRONT CASE.



※ Caution

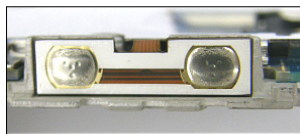
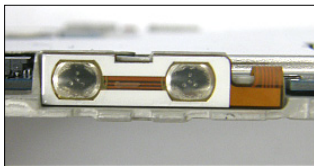
- 1) Be care of scratch and molding damage.

※ Caution

- 1) Be care of scratch and molding damage.
- 2) Be care of damage to the LCD.

7

- 1) Detach the SIDE KEY and CAM KEY FPCB from BRACKET.
- 2) Unscrew the 2 points.



8

- 1) Separate the MOTOR/SHIELD CAN /ANTENNA/CAMERA/ from the PBA.



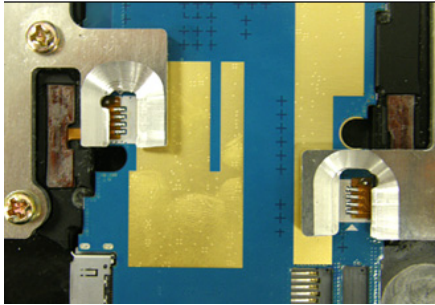
※ Caution

- 1) Be care of damage to FPCB.

※ Caution

11-2. Assembly

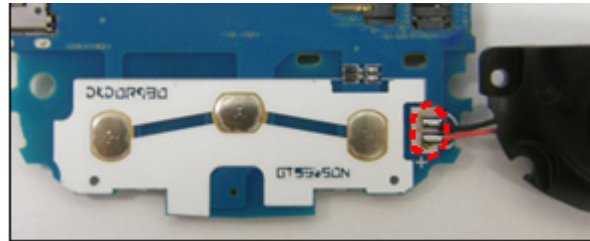
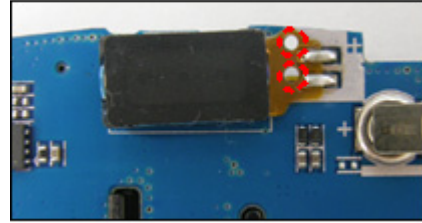
1 1) Solder the SIDE KEY,CAM KEY.



※ **Caution**

1) Be care of damage the FPCB.

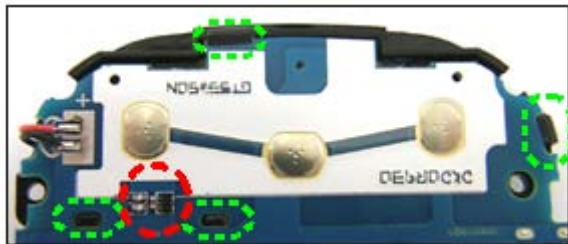
2 1) Solder the RECEIVER and SPEAKER.



※ **Caution**

1) Be care of damage the RECEIVER FPCB & SPK WIRE.

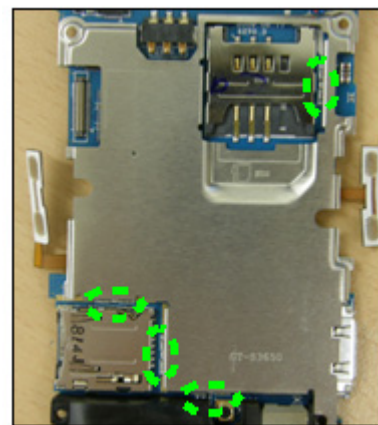
3 1) Assemble the SPEAKER MODULE to PBA.



※ **Caution**

1) Be care of damage to ANTENNA PATTERN and PBA.

4 1) Assemble the SHIELD CAN.

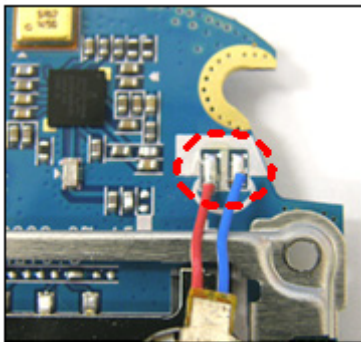


※ **Caution**

1) Be care of damage to PBA.

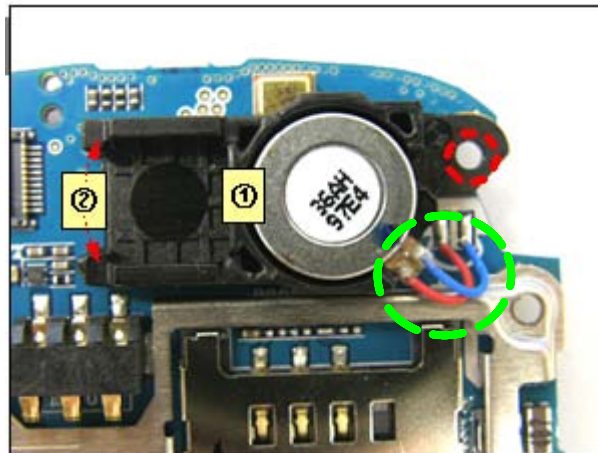
5

1) Solder the MOTOR.



6

1) Assemble the CAMERA CARRIER.
2) Assemble the MOTOR.



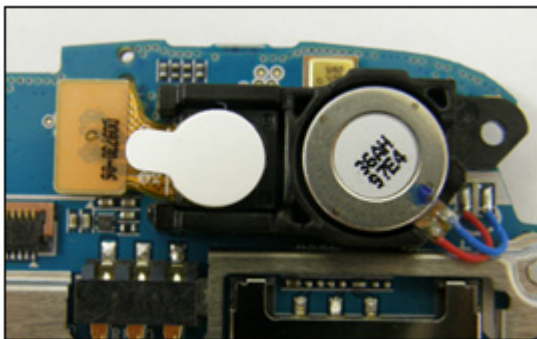
※ Caution

※ Caution

1) Be care of damage the MOTOR WIRE.

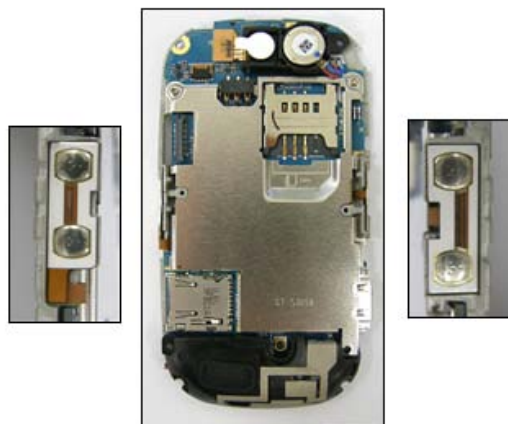
7

1) Assemble the CAMERA and connect the CONNECTOR.



8

1) Assemble the BRACKET.
2) Attach the SIDE KEY and CAM KEY FPCB.



※ Caution

1) Be care of damage to CAMERA CONNECTOR & FPCB.

※ Caution

1) Be care of damage the SIDE KEY/CAMERA KEY FPCB.

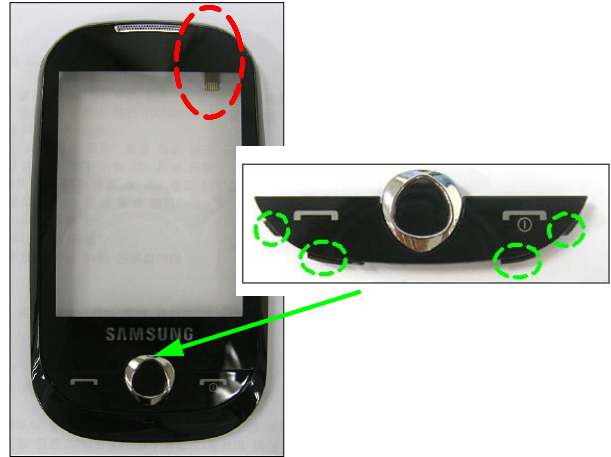
9

1) Screw 2 points.



10

1) Attach the TSP.
2) Assemble the KEYPAD.



※ Caution

※ Caution

1) Be care of scratch and molding damage.
2) Be care of damage to TSP FPCB.

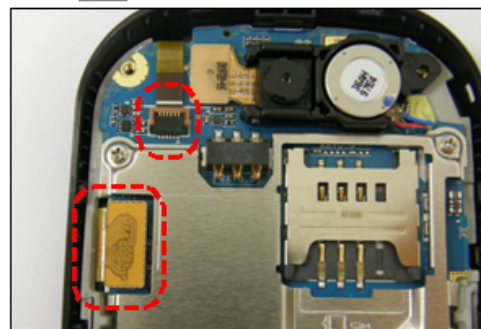
11

1) Assemble the LCD.



12

1) Assemble the PBA the to FRONT ASS'Y.
2) Connect the TSP connector & LCD connector.



※ Caution

1) Be care of damage to F-CPB and LCD.
2) Be care of scratch and molding damage.

※ Caution

1) Be care of damage to F-CPB.
2) Be care of scratch and molding damage.

13

1) Screw 2 points.



※ Caution

1) Be care of scratch and molding damage.

14

1) Assemble the REAR CASE.

HOOK 7 POINT



※ Caution

1) Be care of scratch and molding damage.

15

1) Screw 6 points.



※ Caution

1) Be care of scratch and molding damage.

10. Reference data

Reference Abbreviate

- **AAC**: Advanced Audio Coding.
- **AVC** : Advanced Video Coding.
- **BER** : Bit Error Rate
- **BPSK**: Binary Phase Shift Keying
- **CA** : Conditional Access
- **CDM** : Code Division Multiplexing
- **C/I** : Carrier to Interference
- **DMB** : Digital Multimedia Broadcasting
- **EN** : European Standard
- **ES** : Elementary Stream
- **ETSI**: European Telecommunications Standards Institute
- **MPEG**: Moving Picture Experts Group
- **PN** : Pseudo-random Noise
- **PS** : Pilot Symbol
- **QPSK**: Quadrature Phase Shift Keying
- **RS** : Reed-Solomon
- **SI** : Service Information
- **TDM** : Time Division Multiplexing
- **TS** : Transport Stream

**SAMSUNG
ELECTRONICS**

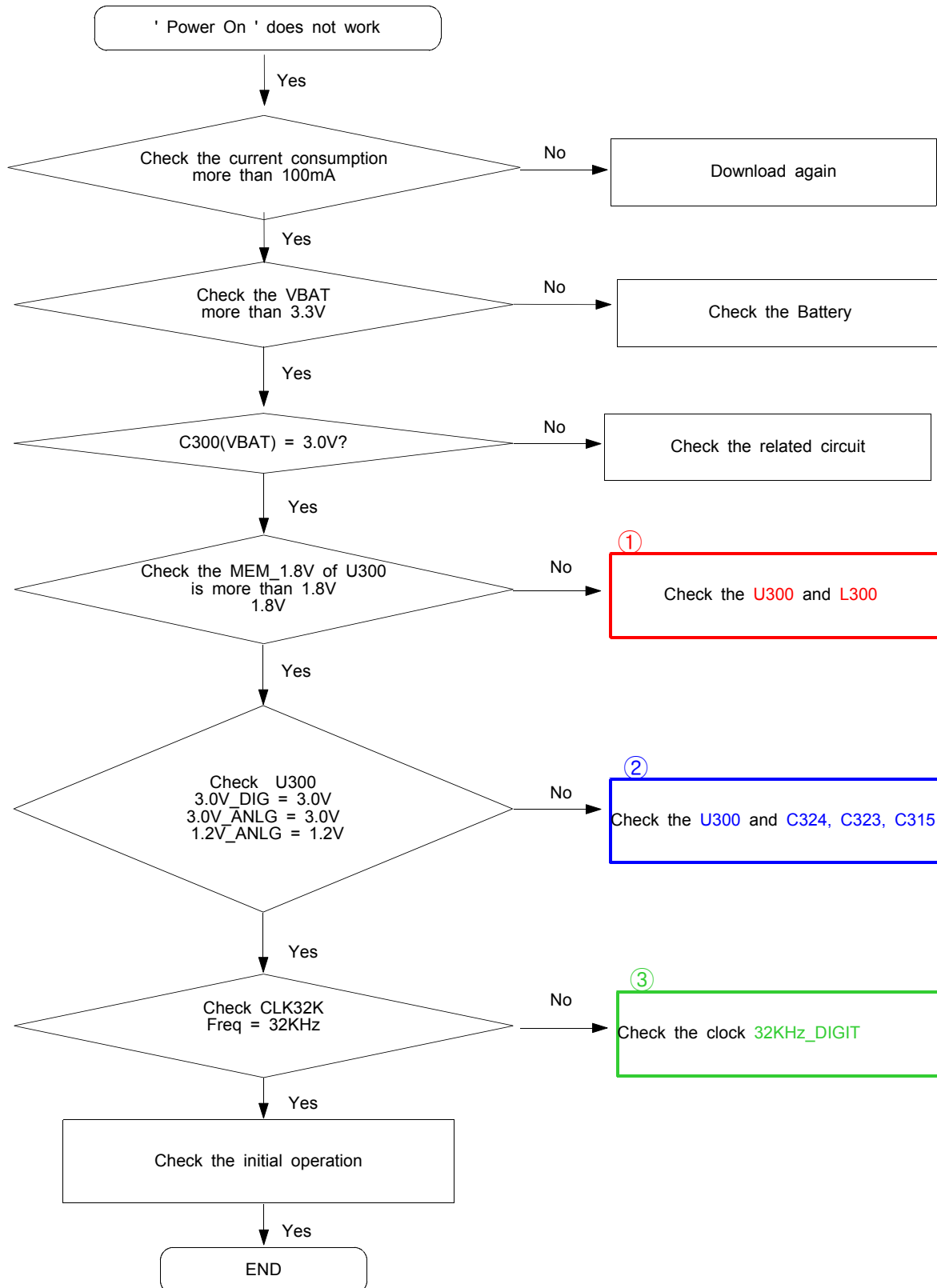


GSPN (Global Service Partner Network)

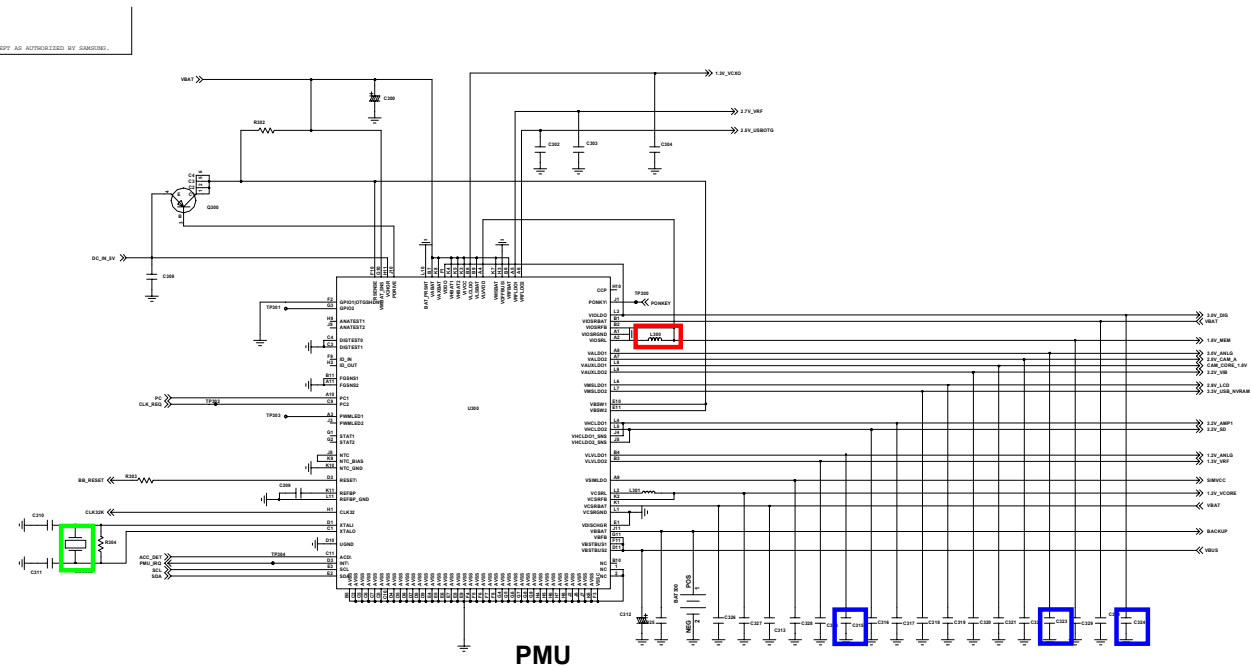
Country	Web Site
North America	service.samsungportal.com
Latin America	latin.samsungportal.com
CIS	cis.samsungportal.com
Europe	europe.samsungportal.com
China	china.samsungportal.com
Asia	asia.samsungportal.com
Mideast & Africa	mea.samsungportal.com

9. Flow Chart of Troubleshooting

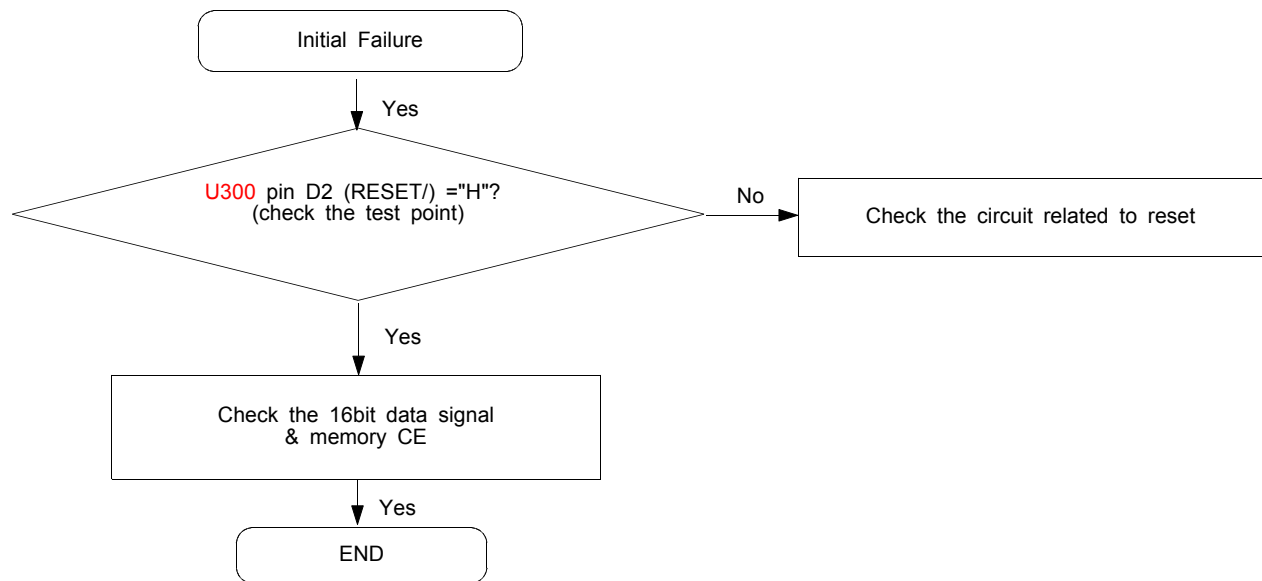
9-1. Power On



Flow Chart of Troubleshooting

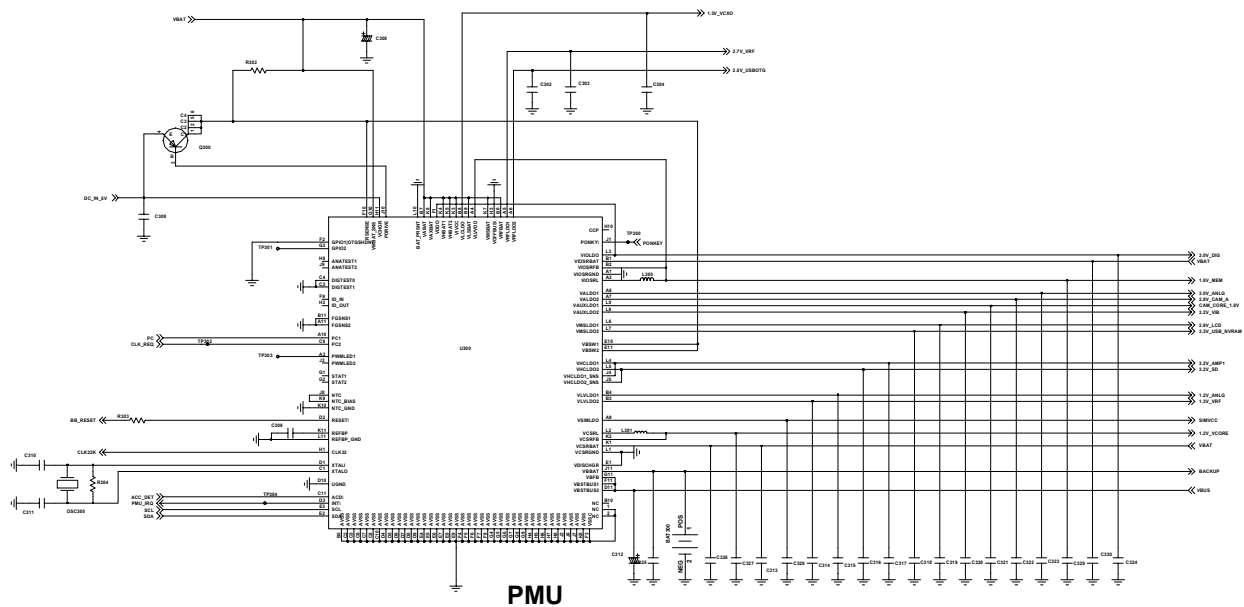


9-2. Initial

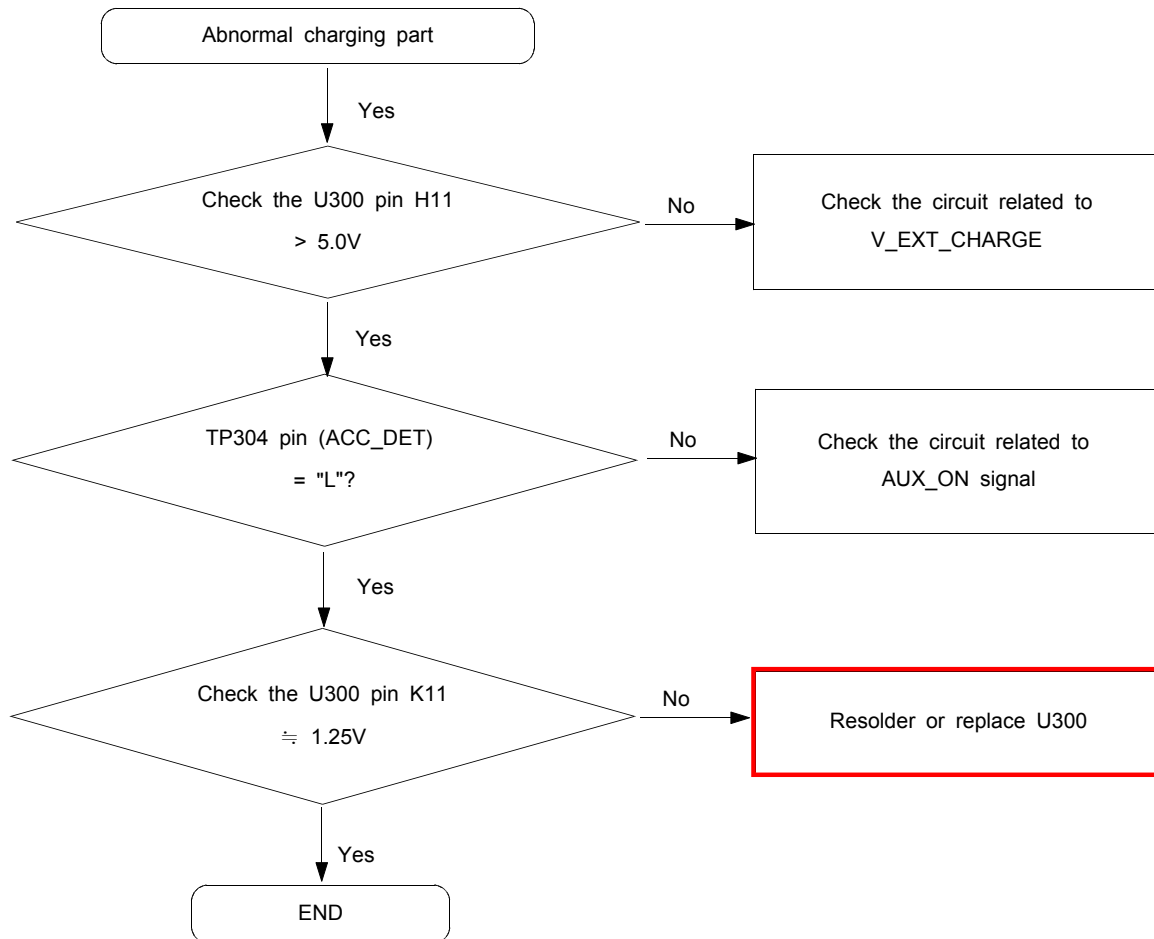


Flow Chart of Troubleshooting

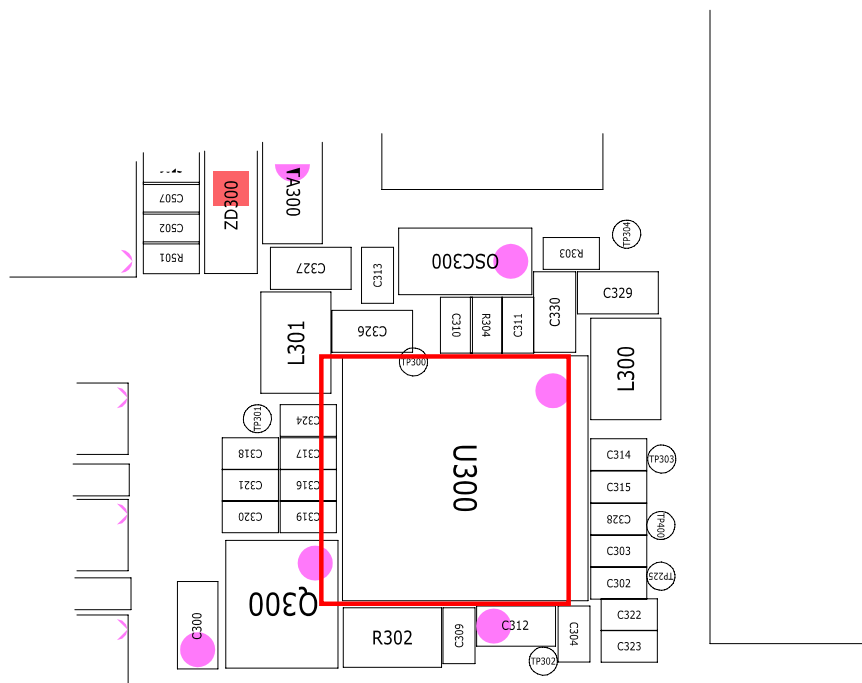
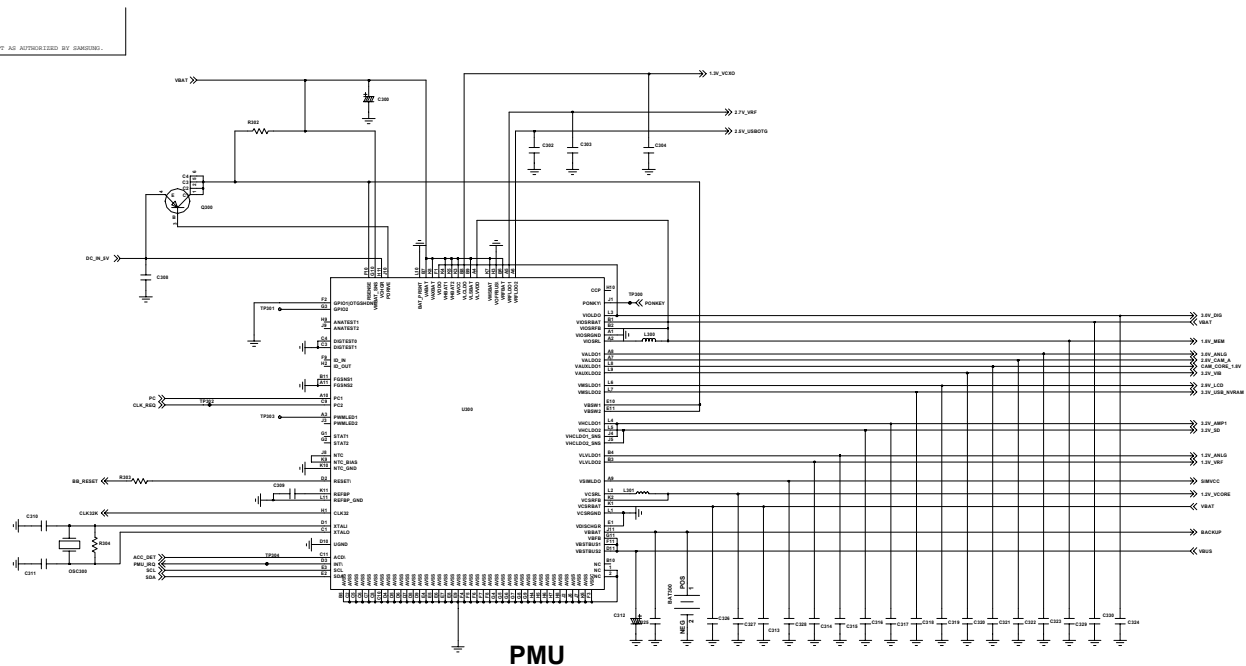
ACCEPT AS AUTHORIZED BY SAMSUNG.



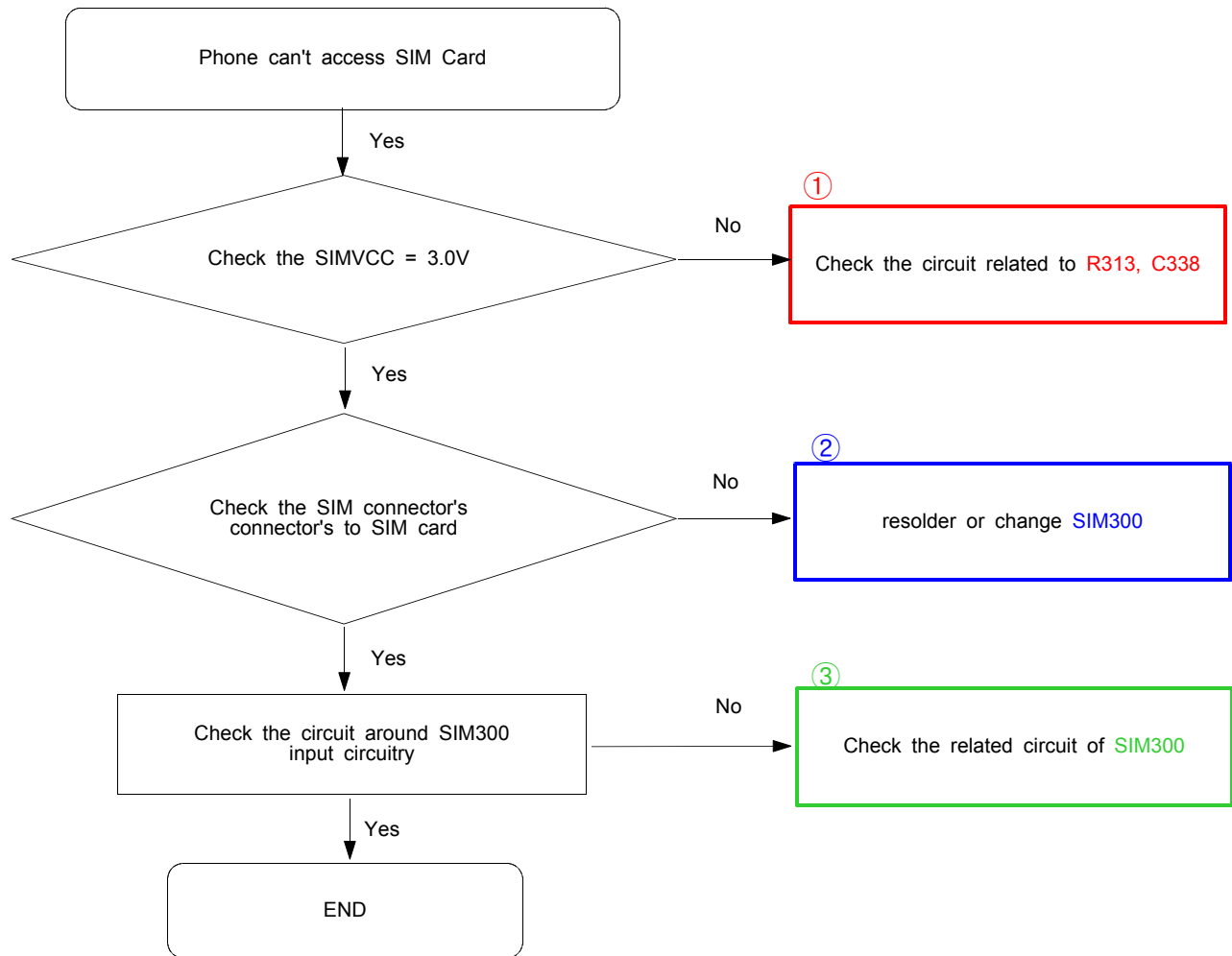
9-3. Charging Part

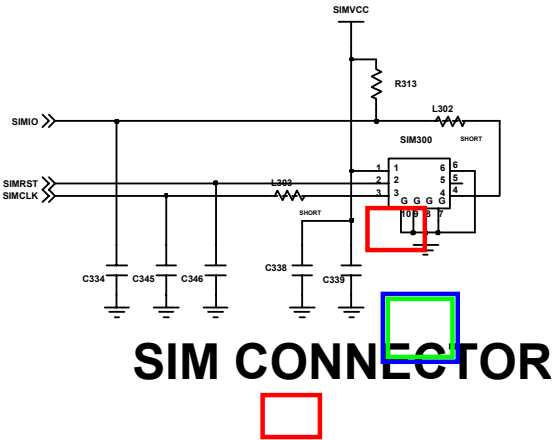


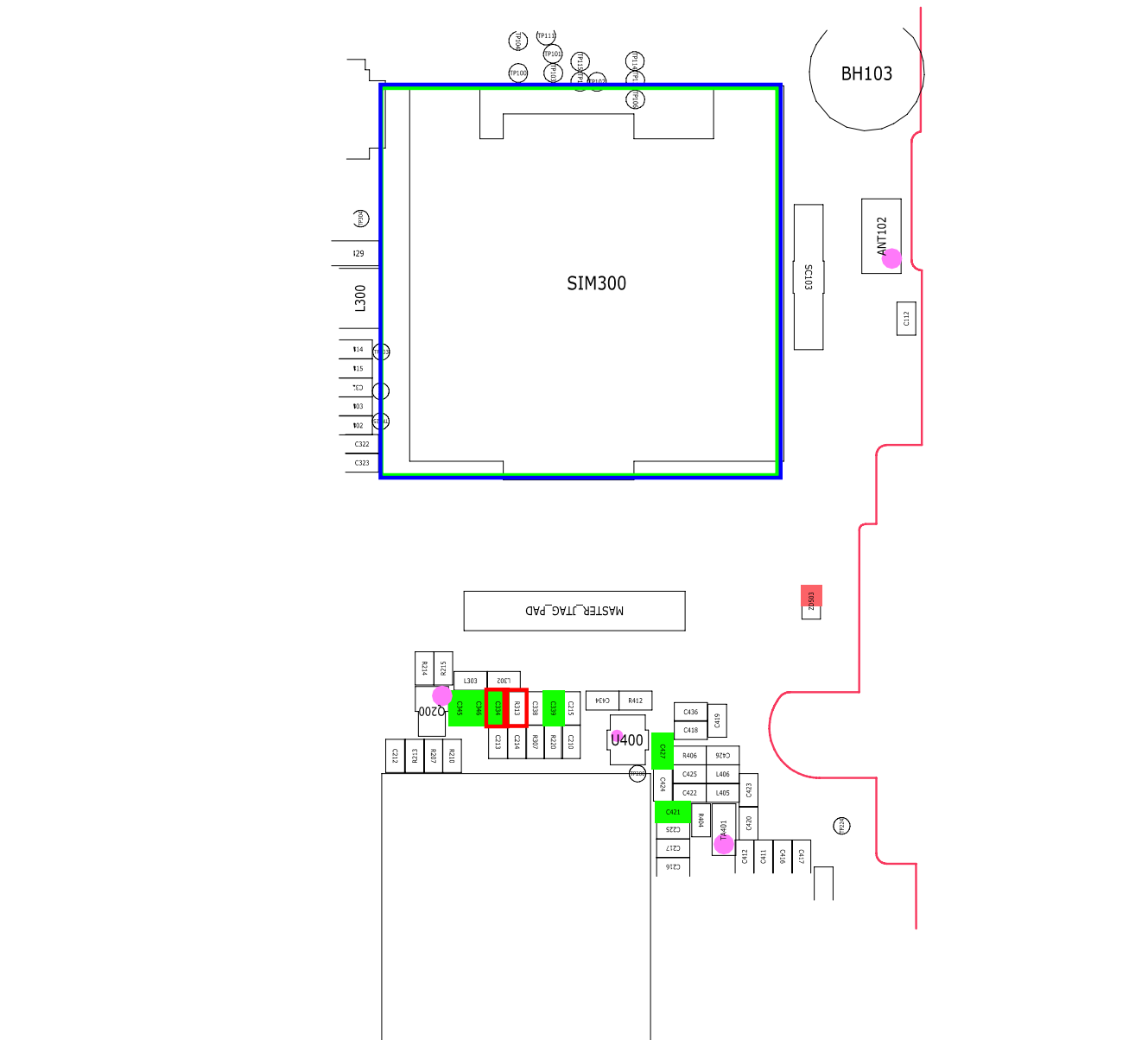
Flow Chart of Troubleshooting



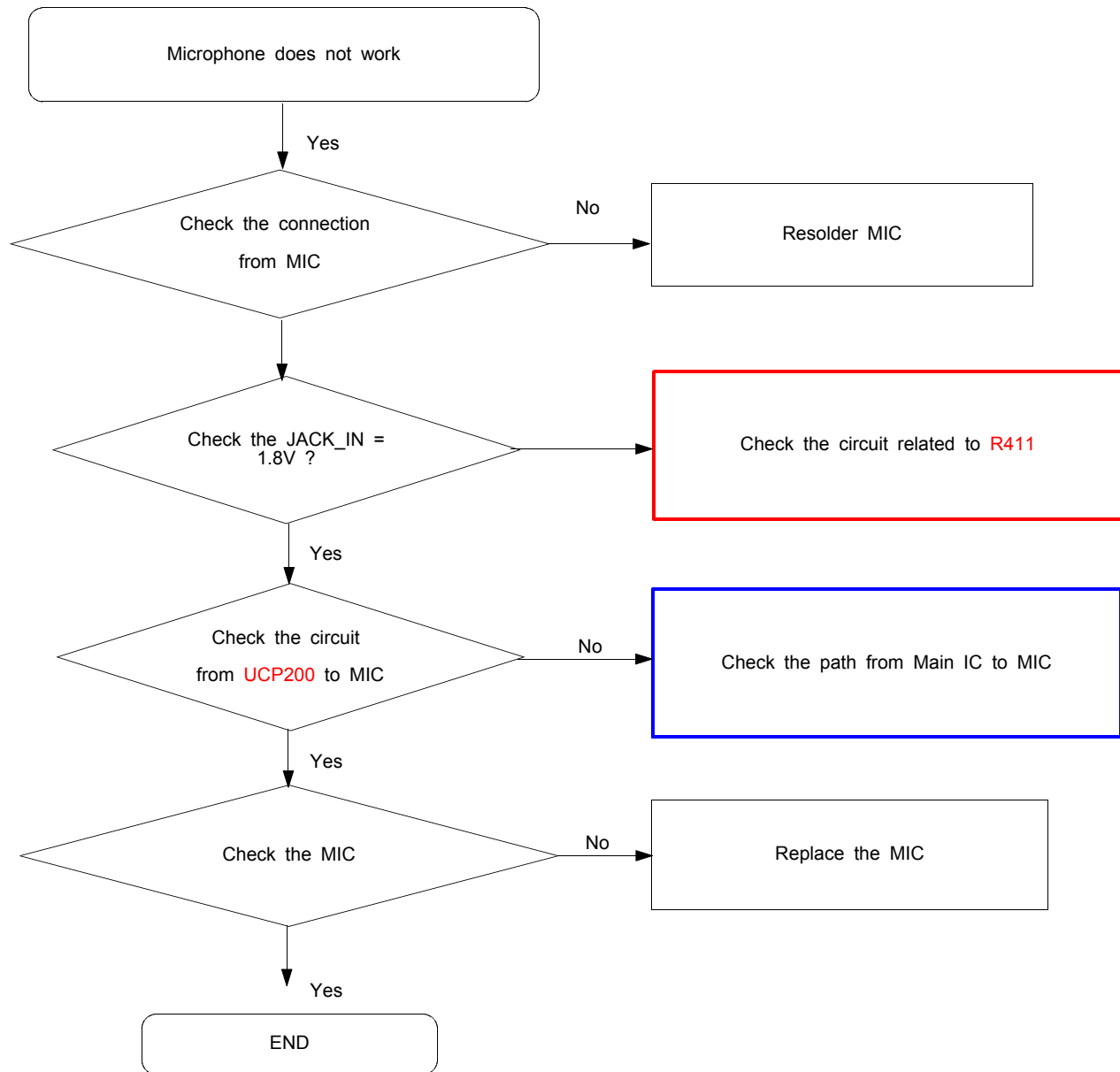
9-4. Sim Part

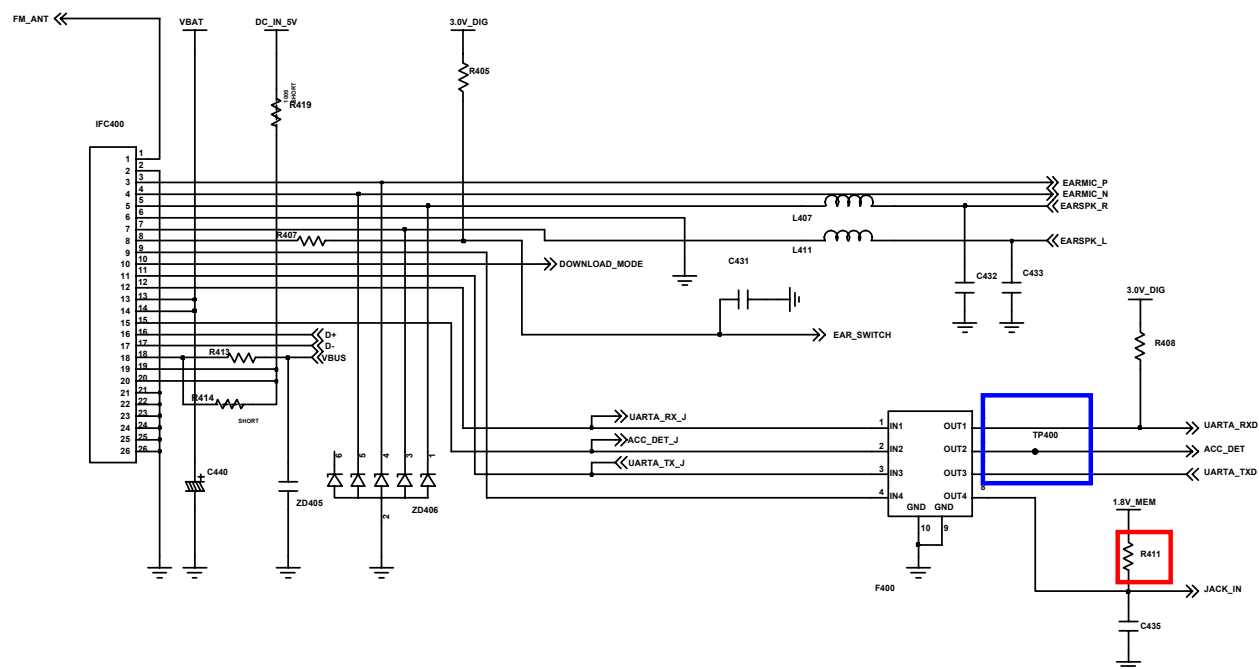






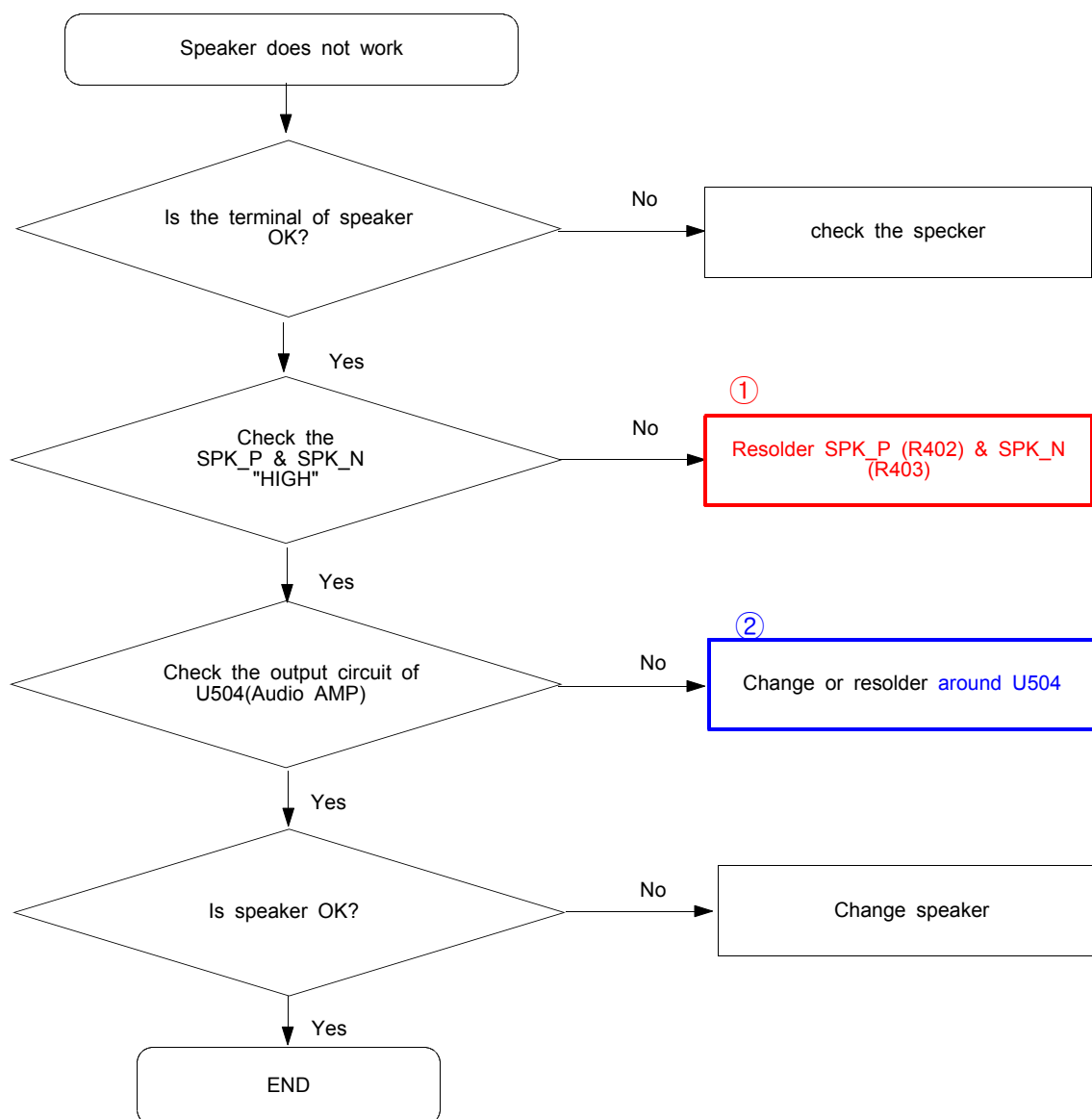
9-5. Microphone Part

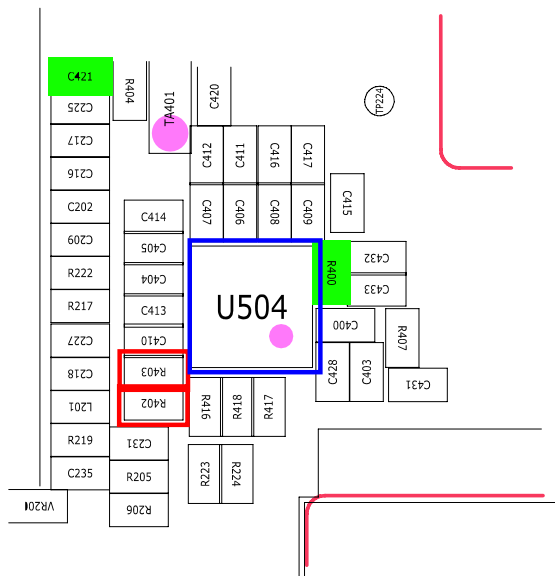
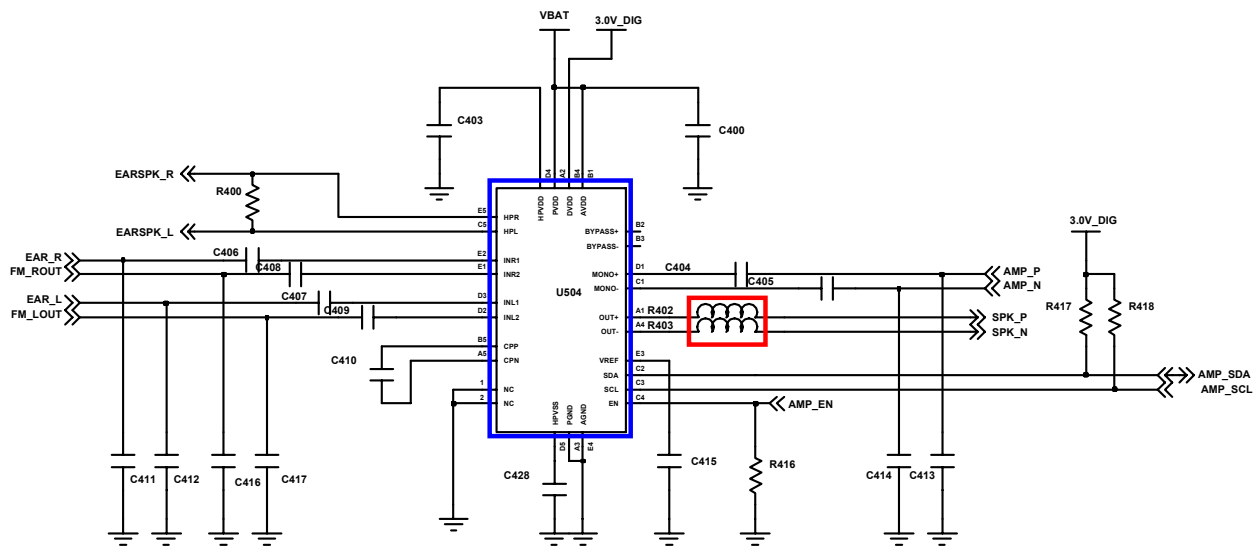




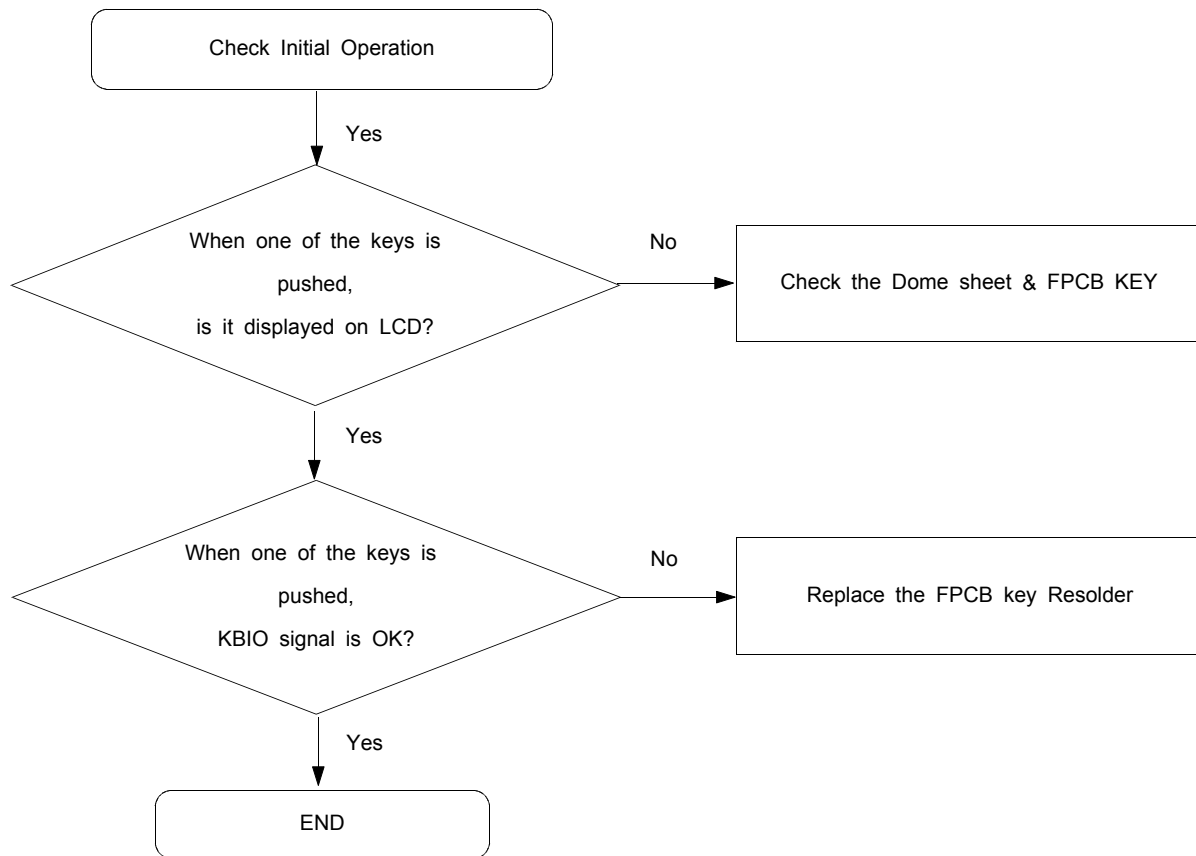


9-6. Speaker Part(Melody)

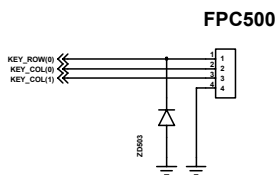




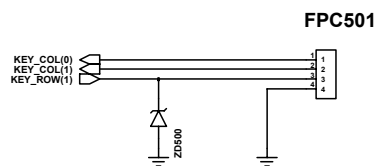
9-7. Key Data Input



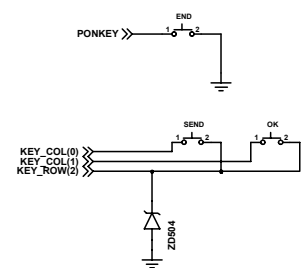
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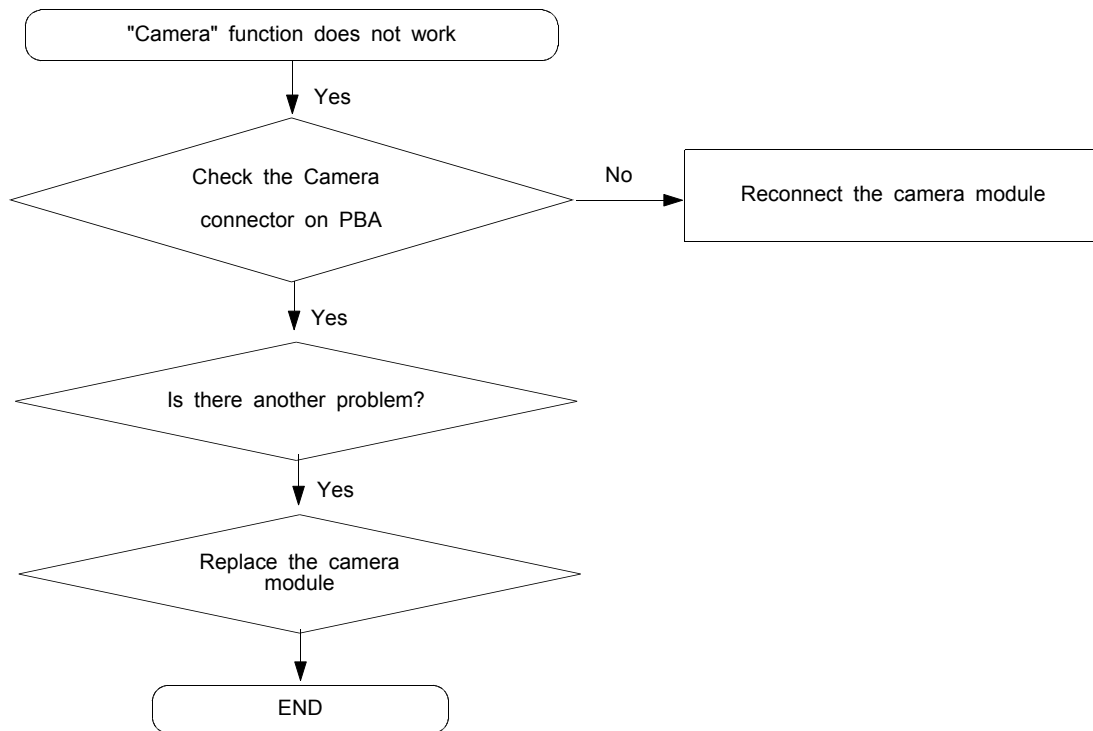
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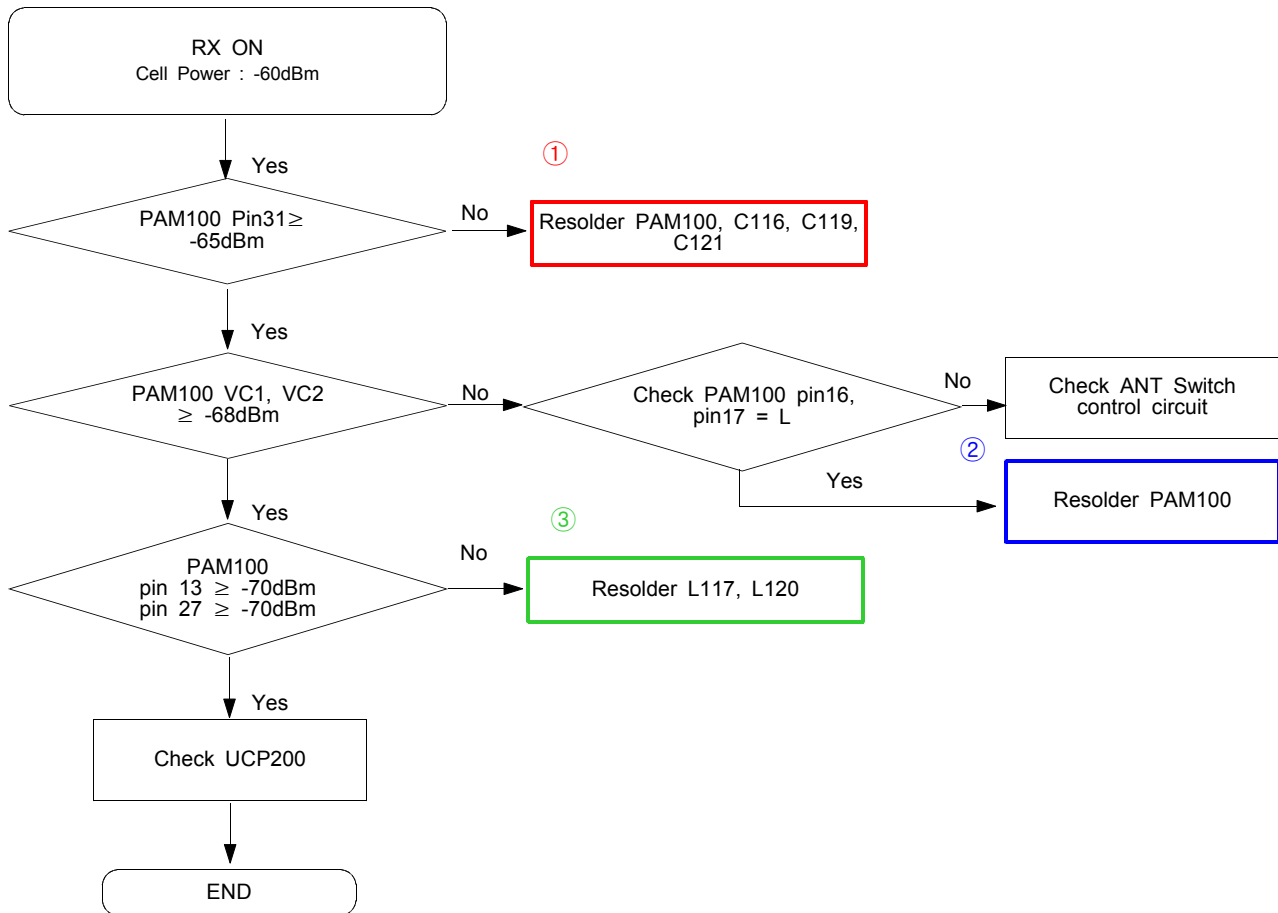
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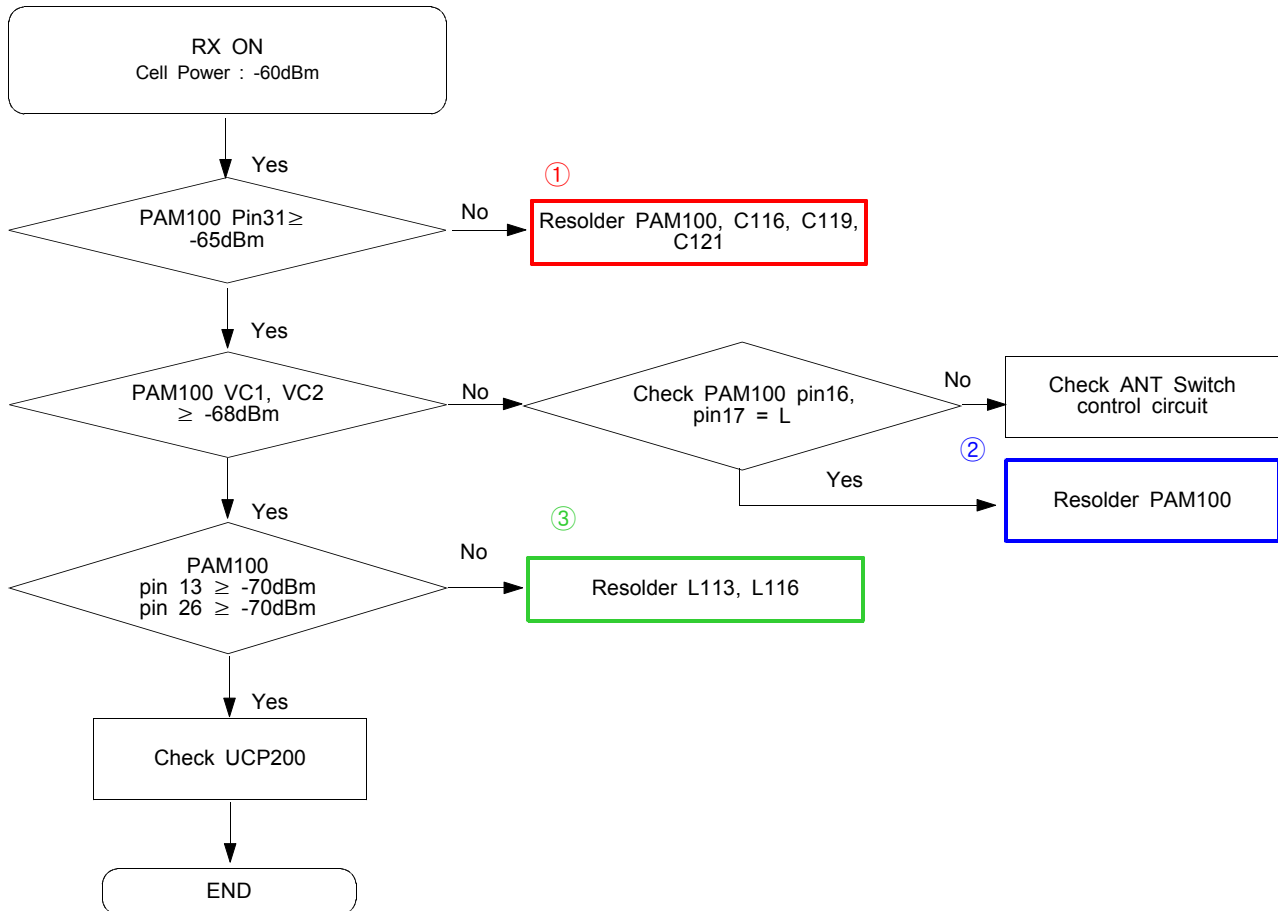
9-8. Camera part



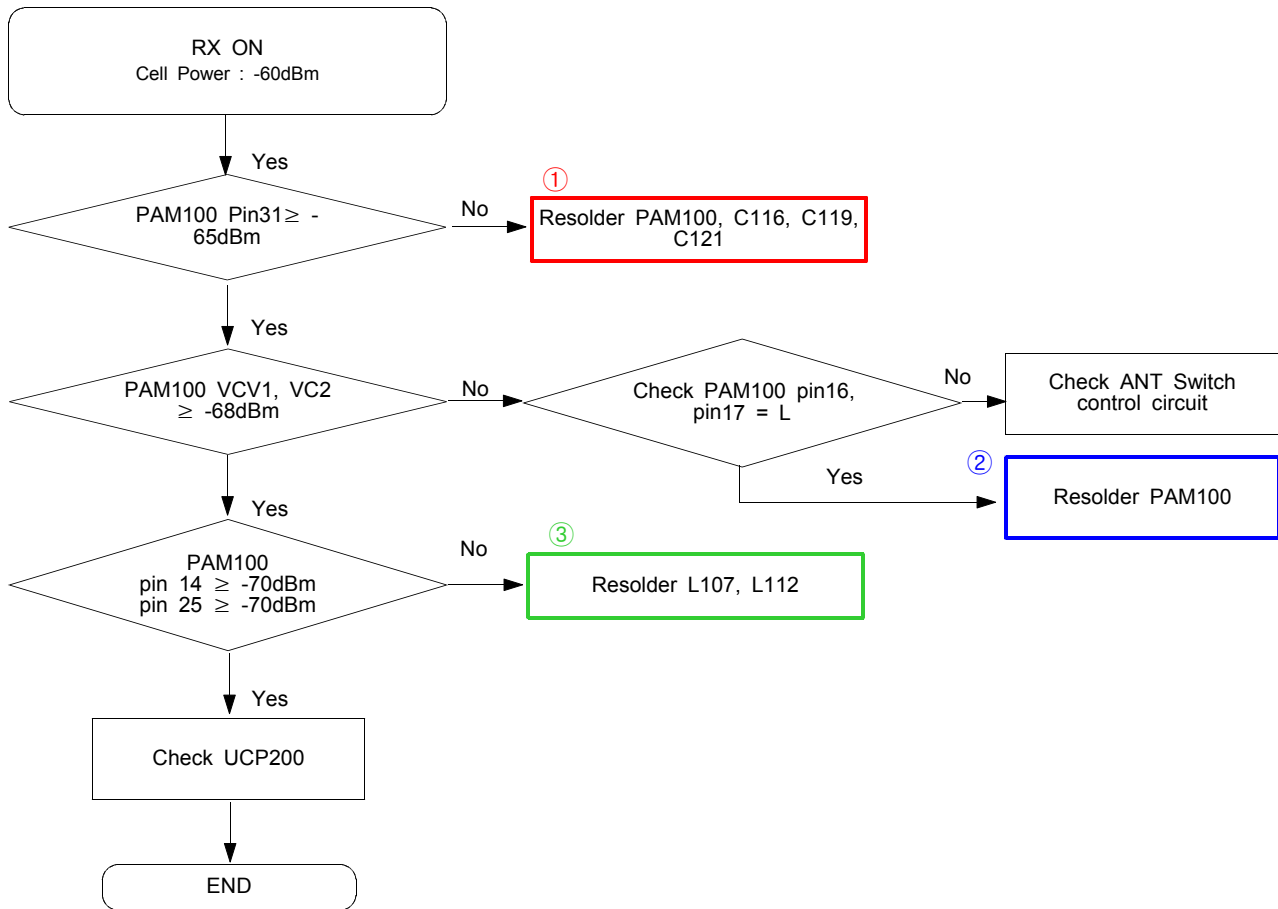
9-9. GSM850 Receiver



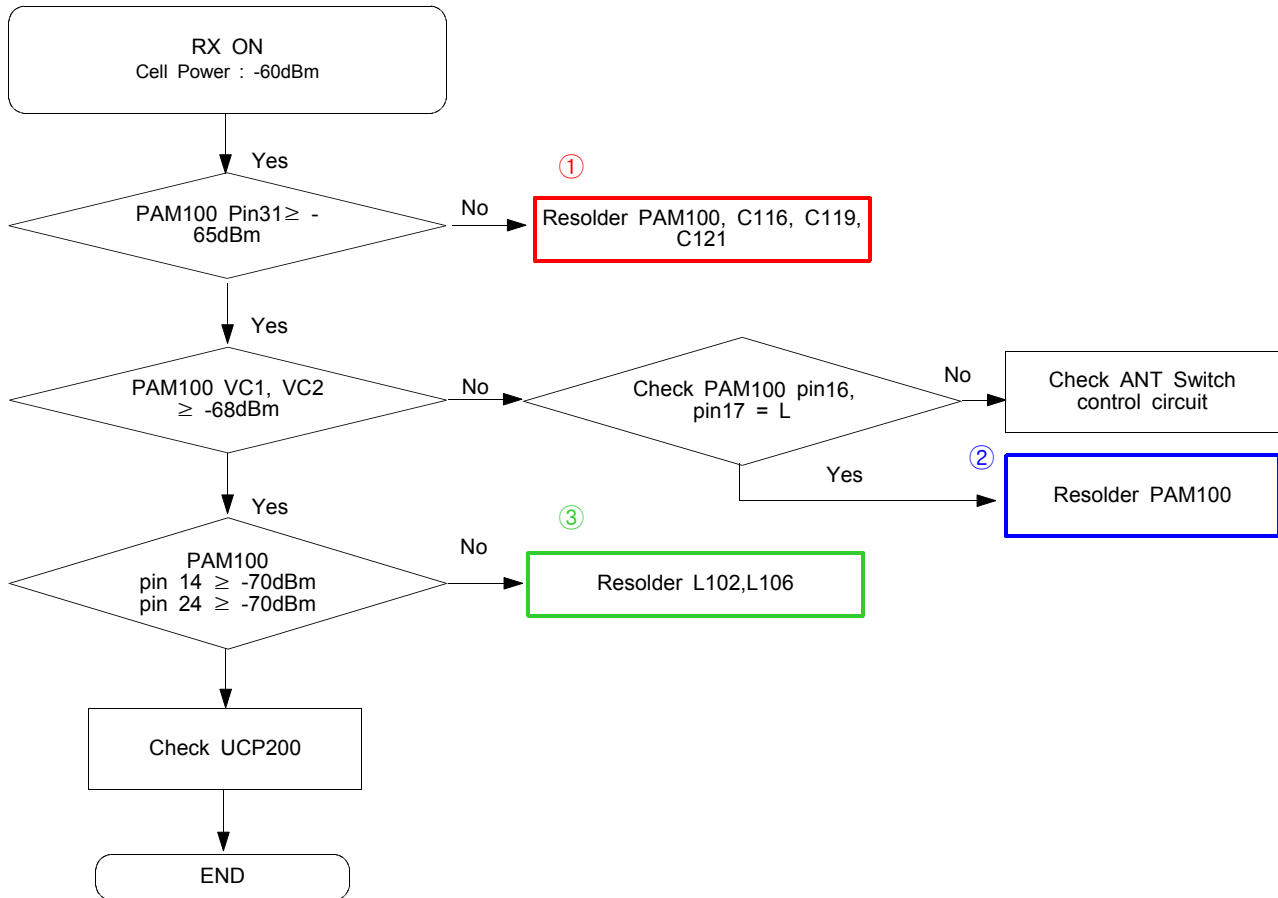
9-10. GSM Receiver

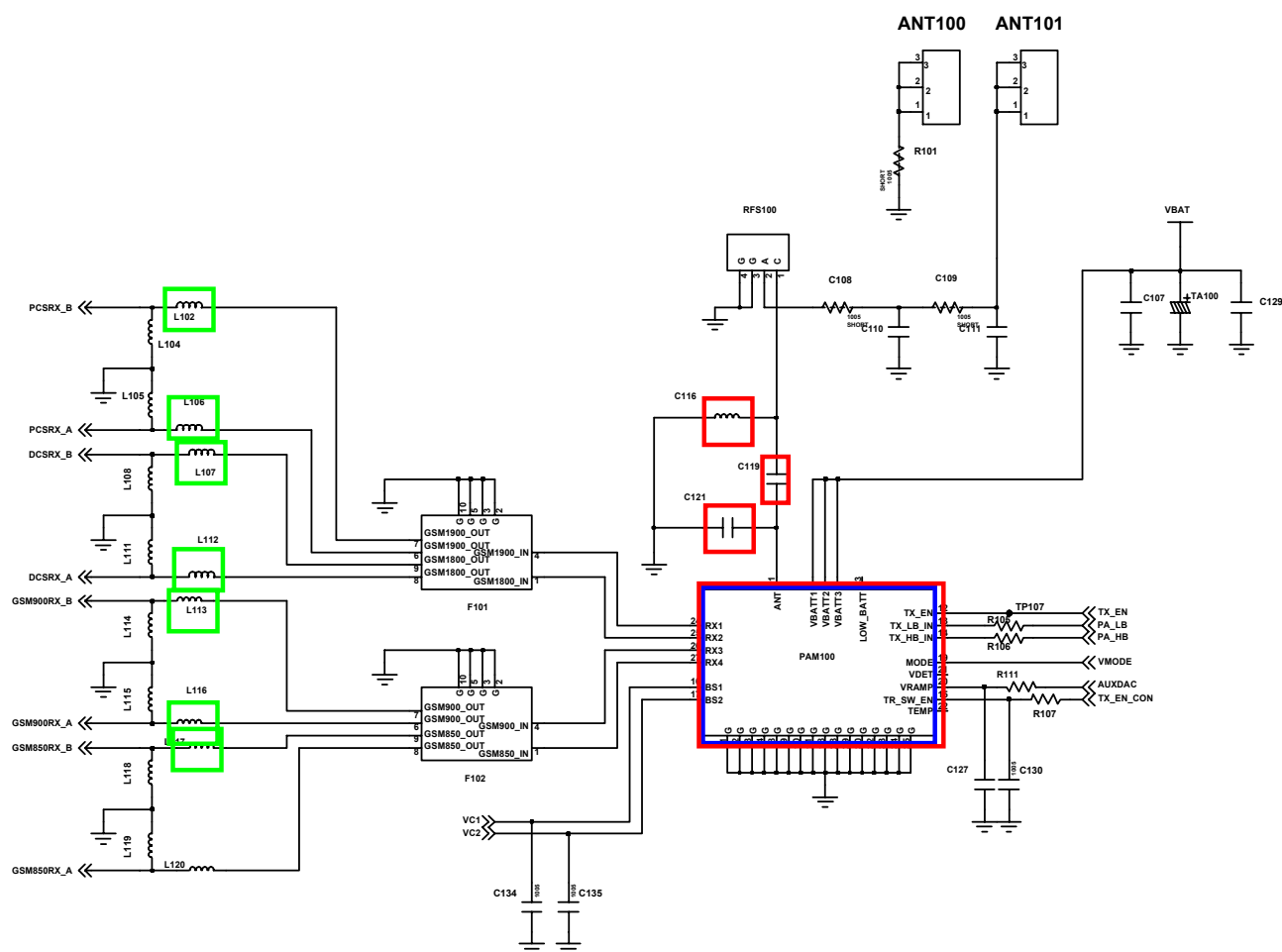


9-11. DCS Receiver



9-12. PCS Receiver

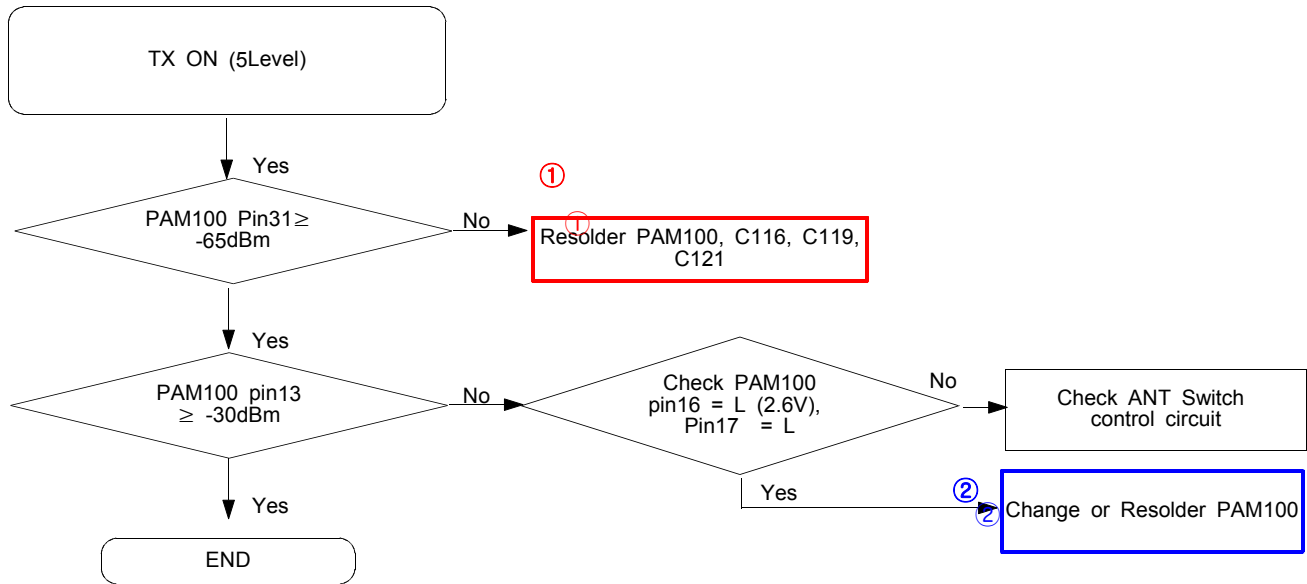




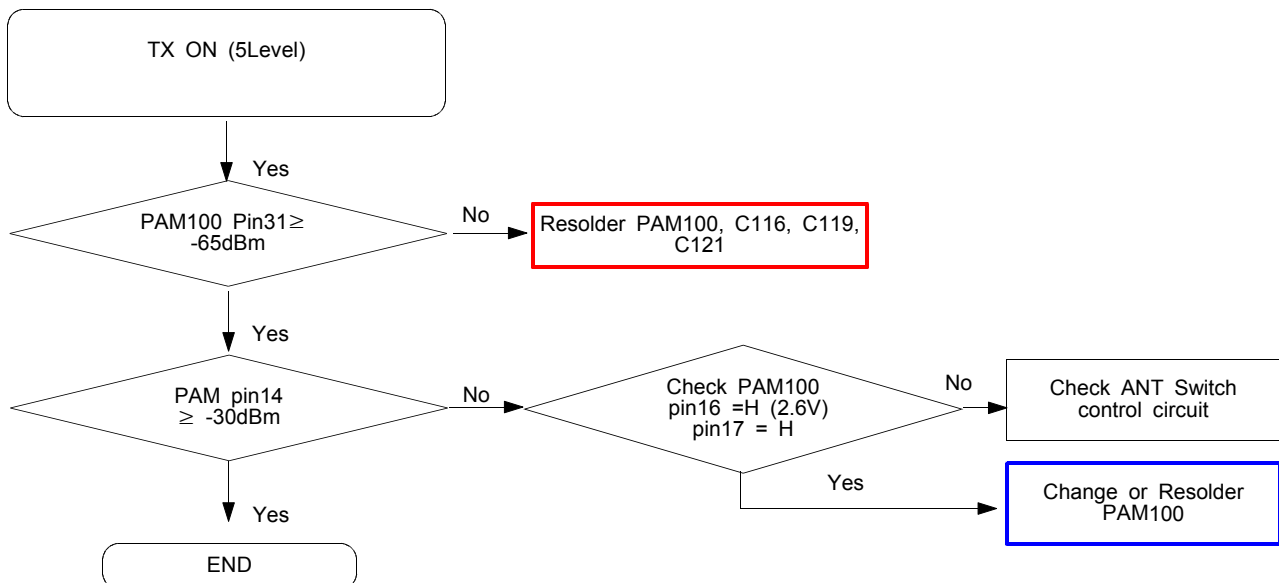
```
graph TD; Start([TX ON (5Level)]) --> D1{PAM100 Pin31 ≥ -65dBm}; D1 -- Yes --> D2{PAM100 pin13 ≥ -30dBm}; D1 -- No --> R1[Resolder PAM100, C116, C119, C121]; D2 -- Yes --> End([END]); D2 -- No --> D3{Check PAM100  
pin16 = L (2.6V),  
Pin17 = L}; D3 -- No --> R2[Check ANT Switch control circuit]; D3 -- Yes --> R3[Change or Resolder PAM100];
```

The flowchart outlines the troubleshooting steps for the PAM100 antenna. It begins with the transmitter (TX) turned on at a 5-level power. The first decision point checks if the signal at PAM100 Pin31 is at least -65dBm. If not, the instruction is to resolder PAM100, C116, C119, and C121. If the signal is sufficient, the next step is to check PAM100 pin13 for a signal of at least -30dBm. If this check fails, the user is directed to check the PAM100 pin16 voltage (should be 2.6V) and Pin17 level (should be L). If these checks fail, the user should check the ANT Switch control circuit. If they pass, the final instruction is to change or resolder PAM100. If the initial pin13 check passes, the process ends.

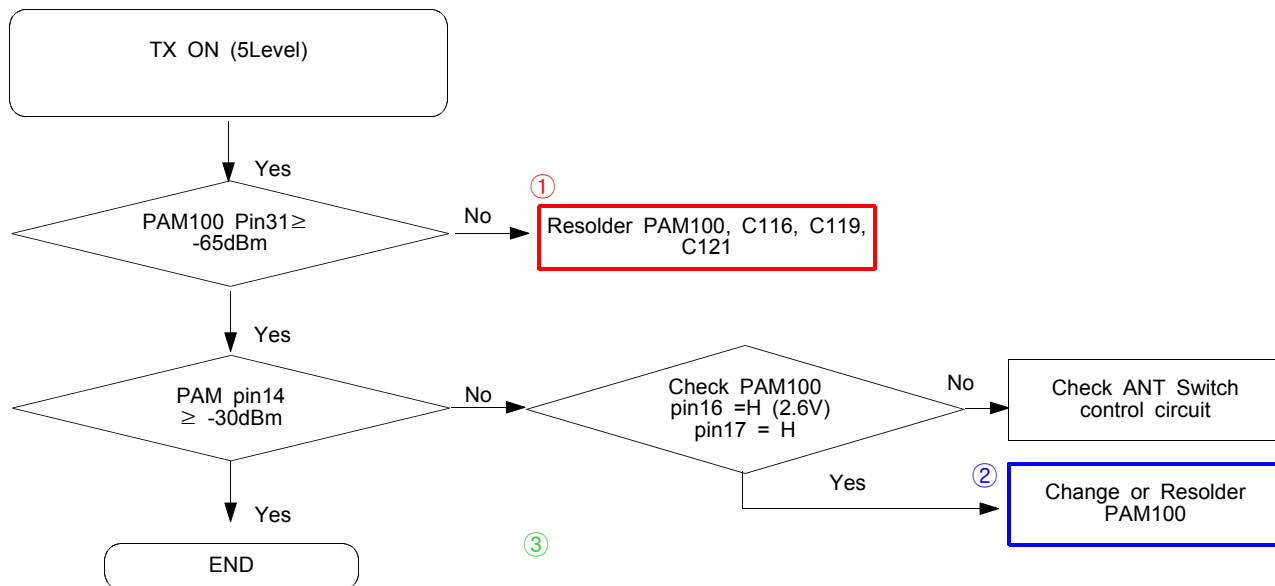
9-14. GSM Transmitter

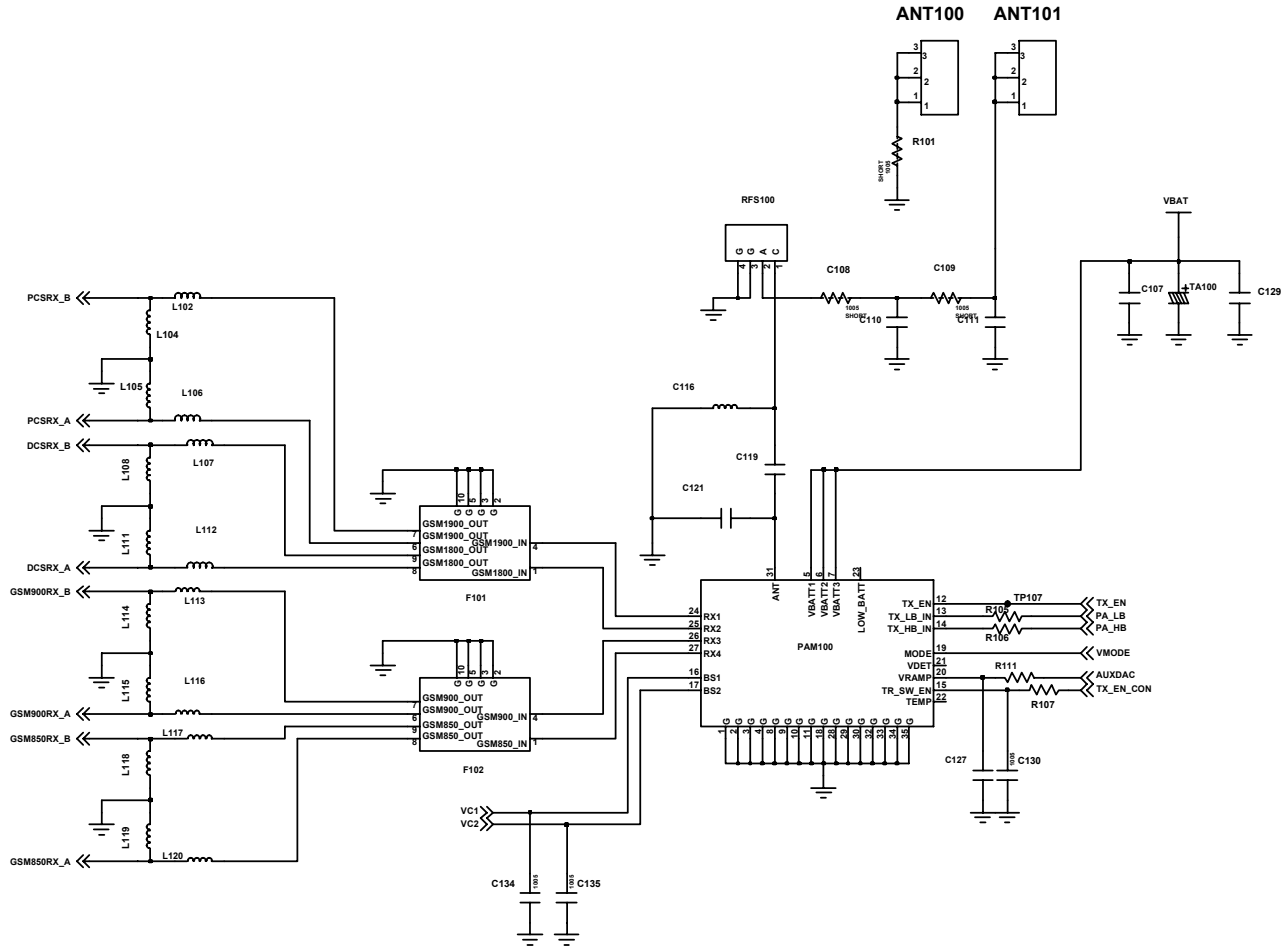


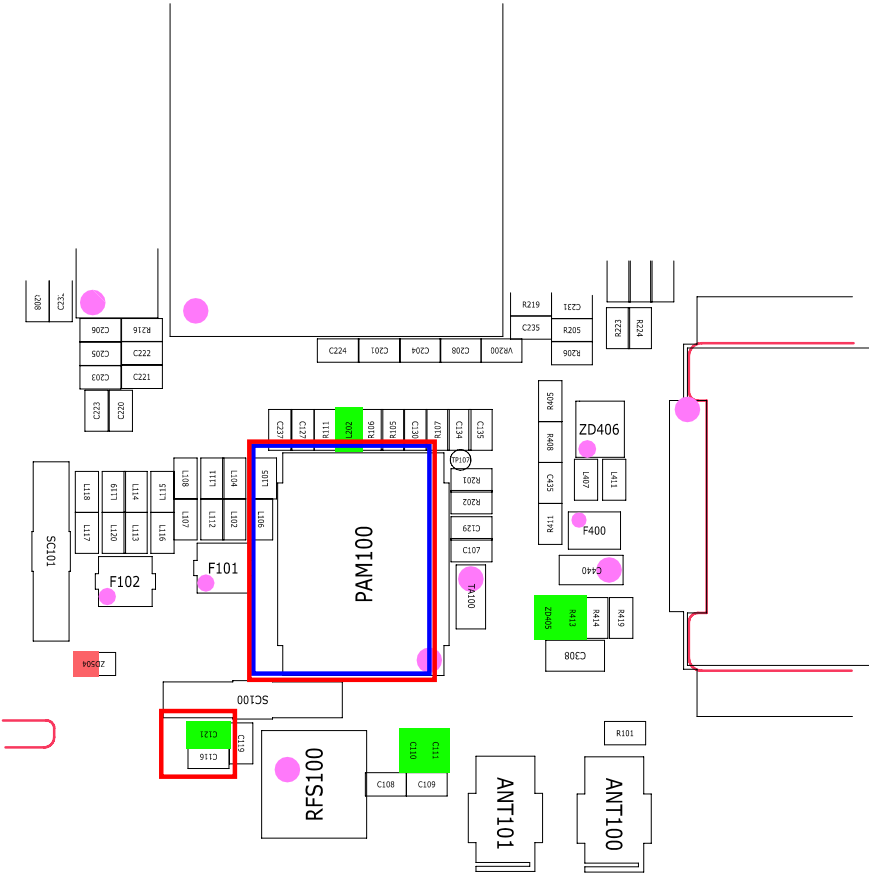
9-15. DCS Transmitter



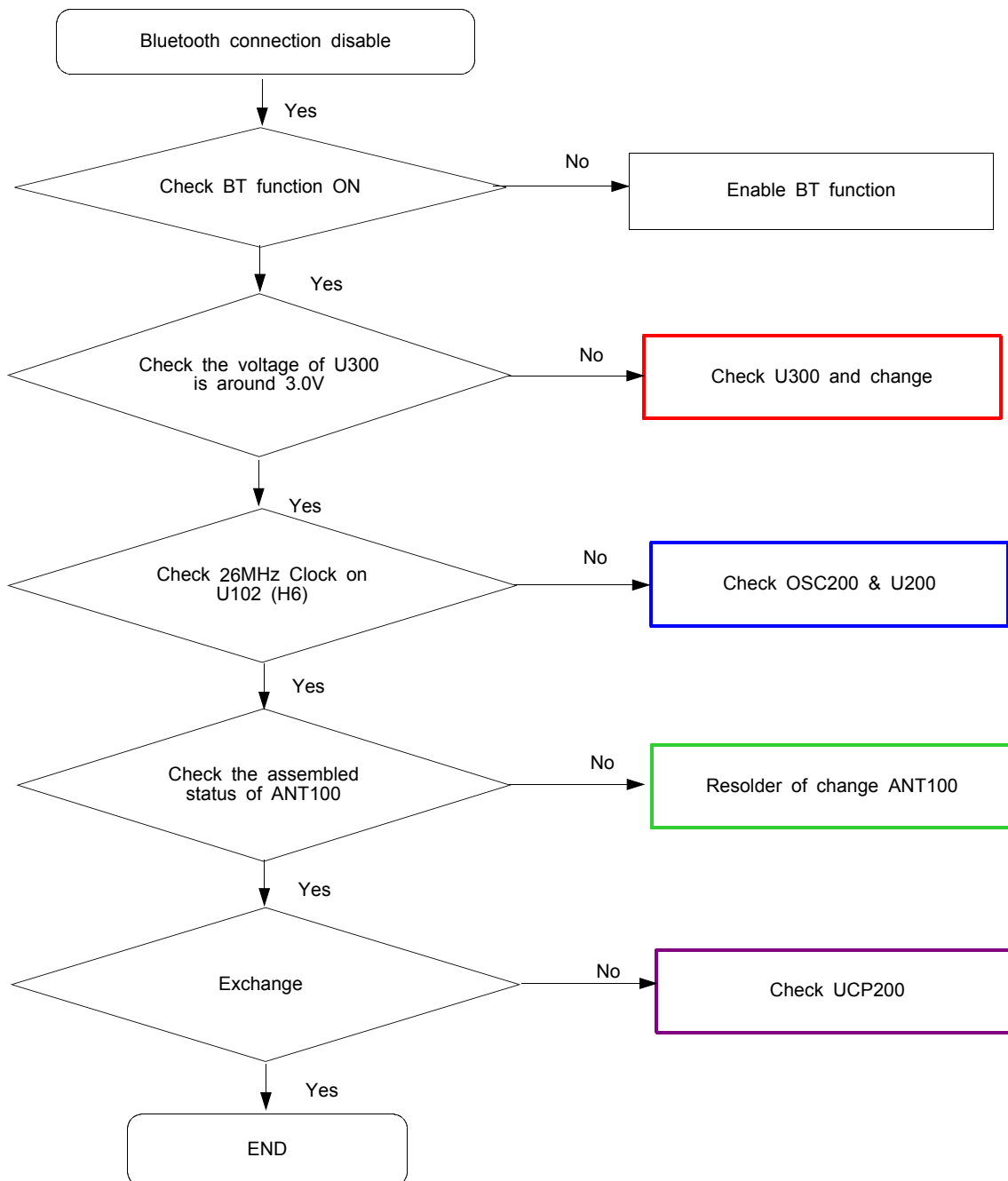
9-16 PCS Transmitter

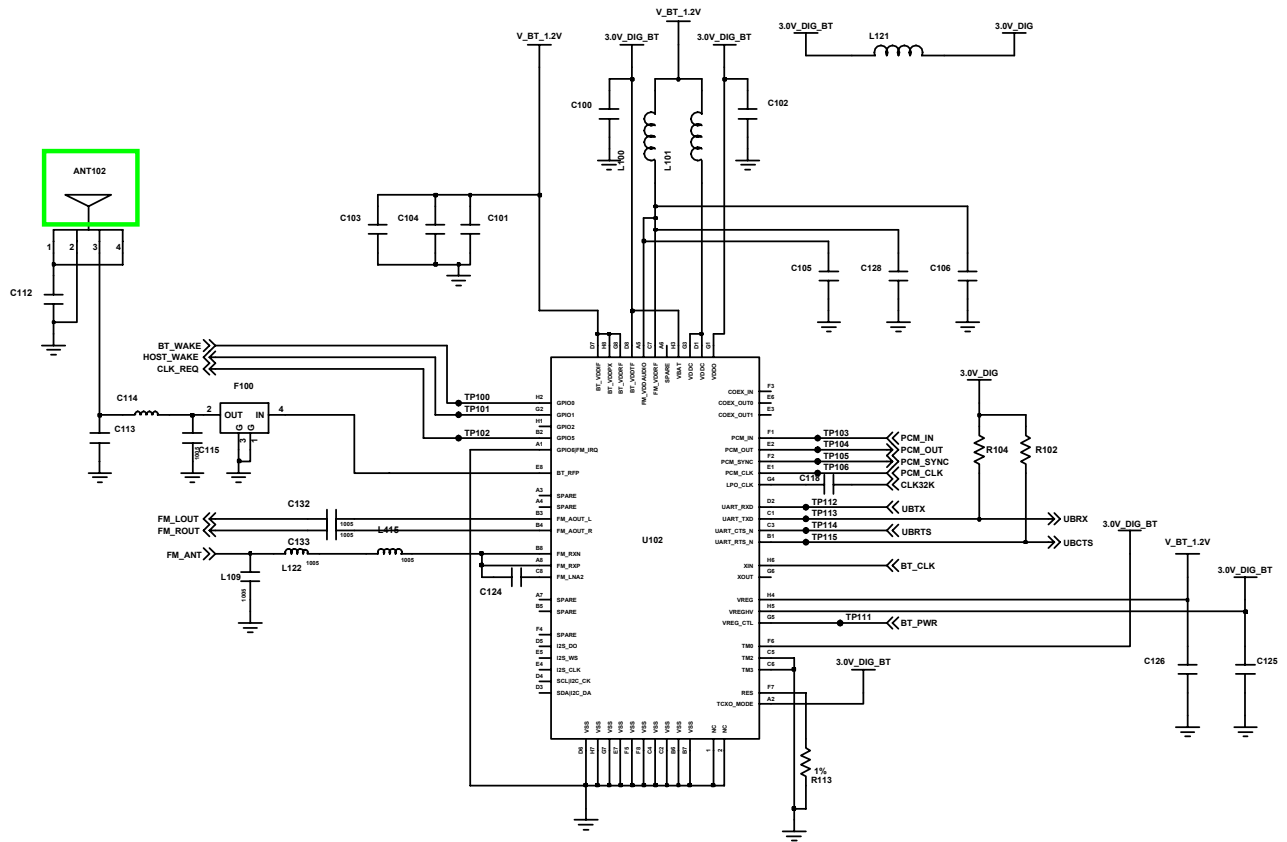






9-17 Bluetooth part

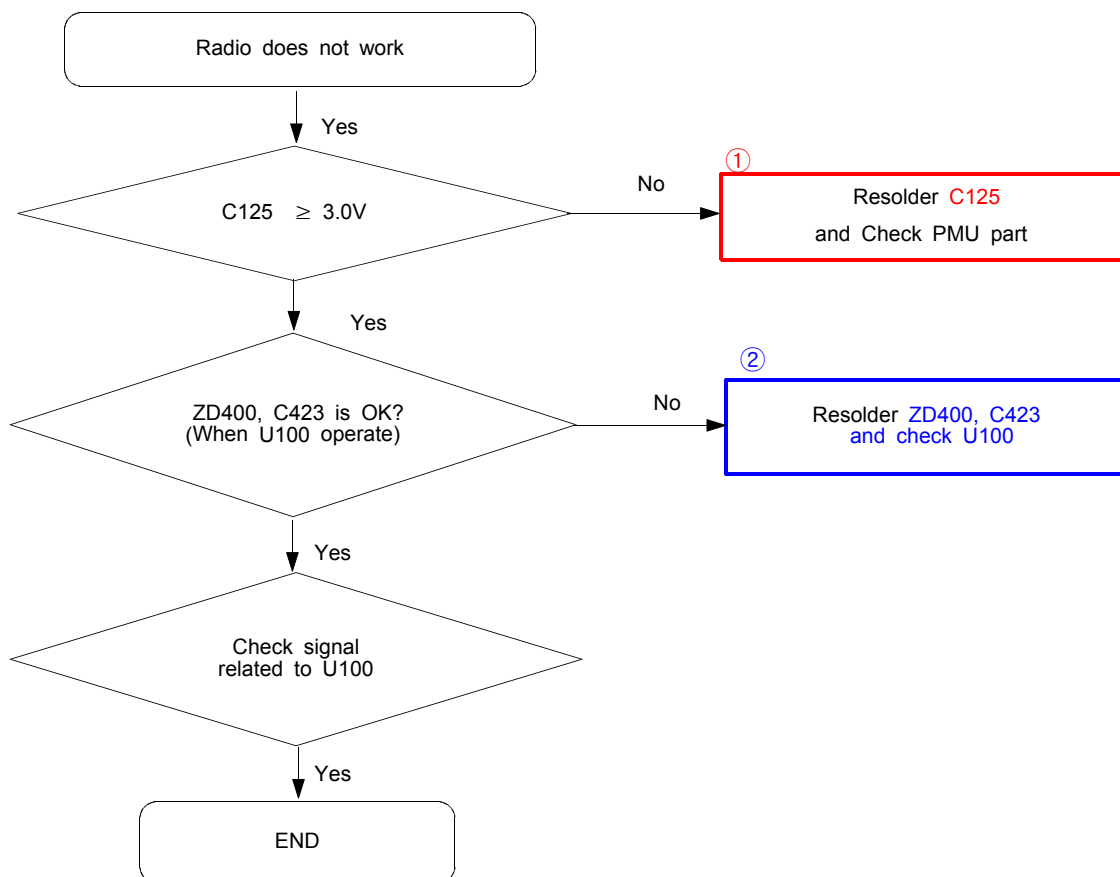




BLUETOOTH + FM RADIO

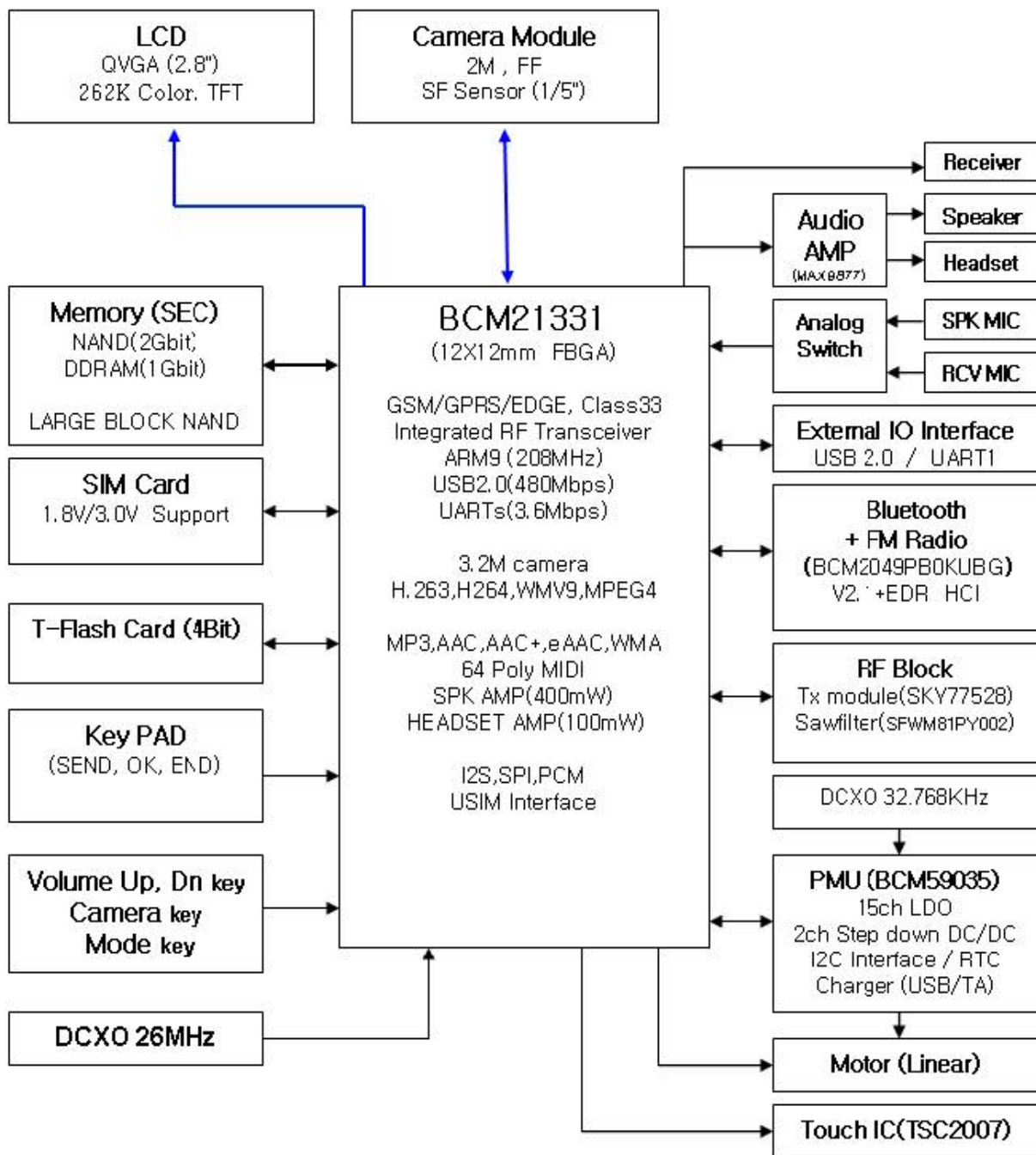


9-18. Radio part

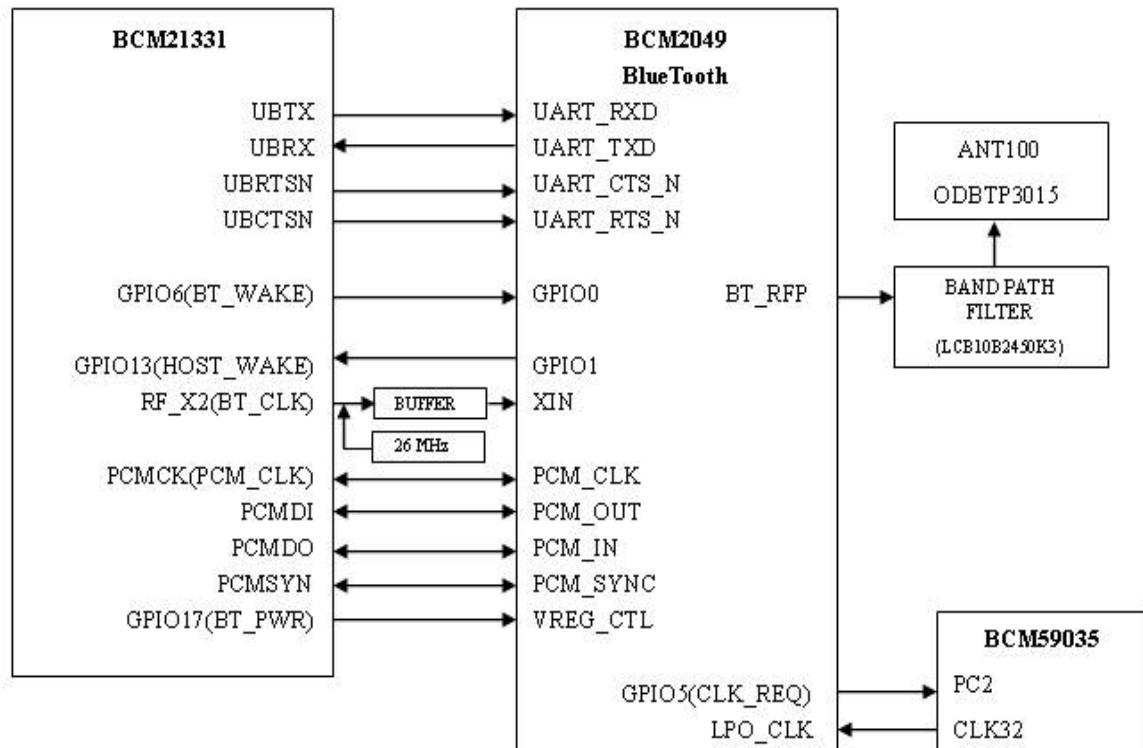


7. Block Diagrams

7-1. RF/BB Block Diagram



7-2. BLUETOOTH



8. PCB Diagrams

Top

