

SAMSUNG

# GSM TELEPHONE

## Samsung M8800

# 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

**SAMSUNG  
ELECTRONICS**



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## 2. Specification

### 2-1. GSM850&900/DCS1800/PCS1900/WCDMA2100 General

Specification	EGSM 850	EGSM 900 Phase 2	DCS1800 Phase 1	PCS 1900	WCDMA
Freq. Band(MHZ) Uplink/Downlink	824~849 869~894	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990	1920~1980 2110~2170
ARFCN range	128~251	1~124 & 975~1023	512~885	512~810	10562~10838
Tx/Rx spacing	45MHz	45MHz	95 MHz	80 MHz	190MHz
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	3.84 Mcps/s
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 4.15 ms	10 ms
Modulation	0.3 GMSK	0.3 GMSK	0.3 GMSK	0.3 GMSK	UL : 2BPSK DL : QPSK
MS Power	33 dBm ~ 5dBm	33 dBm ~ 5dBm	30dBm~0dBm	30dBm~0dBm	MAX:24 (+1,-3)dBm MIN :<-50dBm
Power Class	5 pcl ~ 19 pcl	5 pcl ~ 19 pcl	0 pcl ~ 15pcl	0 pcl ~ 15pcl	CLASS3
Sensitivity	-103 dBm	-103 dBm	-100dBm	-100dBm	-106.7 dBm
TDMA Mux	8	8	8	8	-
Cell Radius	35Km	35 Km	2Km	-	-

## 2-2. GSM TX power class

TX POWER LEVEL CONTOL	EGSM 850/900	TX POWER LEVEL CONTOL	DCS 1800	TX POWER LEVEL CONTOL	PCS 1900
5	33±2 dBm	0	30±3 dBm	0	30±3 dBm
6	31±2 dBm	1	28±3 dBm	1	28±3 dBm
7	29±2 dBm	2	26±3 dBm	2	26±3 dBm
8	27±2 dBm	3	24±3 dBm	3	24±3 dBm
9	25±2 dBm	4	22±3 dBm	4	22±3 dBm
10	23±2 dBm	5	20±3 dBm	5	20±3 dBm
11	21±2 dBm	6	18±3 dBm	6	18±3 dBm
12	19±2 dBm	7	16±3 dBm	7	16±3 dBm
13	17±2 dBm	8	14±3 dBm	8	14±3 dBm
14	15±2 dBm	9	12±3 dBm	9	12±3 dBm
15	13±2 dBm	10	10±4 dBm	10	10±4 dBm
16	11±3 dBm	11	8±4 dBm	11	8±4 dBm
17	9±3 dBm	12	6±4 dBm	12	6±4 dBm
18	7±3 dBm	13	4±4 dBm	13	4±4 dBm
19	5±3 dBm	14	2±5 dBm	14	2±5 dBm
		15	0±5 dBm	15	0±5 dBm

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### **3. Product Function**

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#### **Main Function**

- 8M Camera / CIF Camera
- LCD - Main:3.2" 240x4000 262K Color TFT
- Video Recording & Messaging
- Music Player(MP3/AAC/AAC+/Enhanced ACC+)
- Multimedia Message Service (MMS)
- Bluetooth Wireless Technology
- E-mail
- Voice recorder
- Java / WAP2.0
- Four-band(850/900/1800/1900MHz), UMTS 2100MHz
- USB 2.0
- FM Radio
- GPS
- HSDPA 7.2

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## 11. Reference data

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### Reference Abbreviation

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

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# 1. Safety Precautions

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## 1-1. Repair Precaution

- Repair in Shield Box, during detailed tuning.  
Take specially care of tuning or test,  
because specificity of cellular phone is sensitive for surrounding interference(RF noise).
  
- Be careful to use a kind of magnetic object or tool,  
because performance of parts is damaged by the influence of magnetic force.
  
- Surely use a standard screwdriver when you disassemble this product,  
otherwise screw will be worn away.
  
- Use a thicker twisted wire when you measure level.  
A thicker twisted wire has low resistance, therefore error of measurement is few.
  
- Repair after separate Test Pack and Set because for short danger (for example an overcurrent and furious flames of parts etc) when you repair board in condition of connecting Test Pack and tuning on.
  
- Take specially care of soldering, because Land of PCB is small and weak in heat.
  
- Surely tune on/off while using AC power plug, because a repair of battery charger is dangerous when tuning ON/OFF PBA and Connector after disassembling charger.
  
- Don't use as you please after change other material than replacement registered on SEC System.  
Otherwise engineer in charge isn't charged with problem that you don't keep this rules.

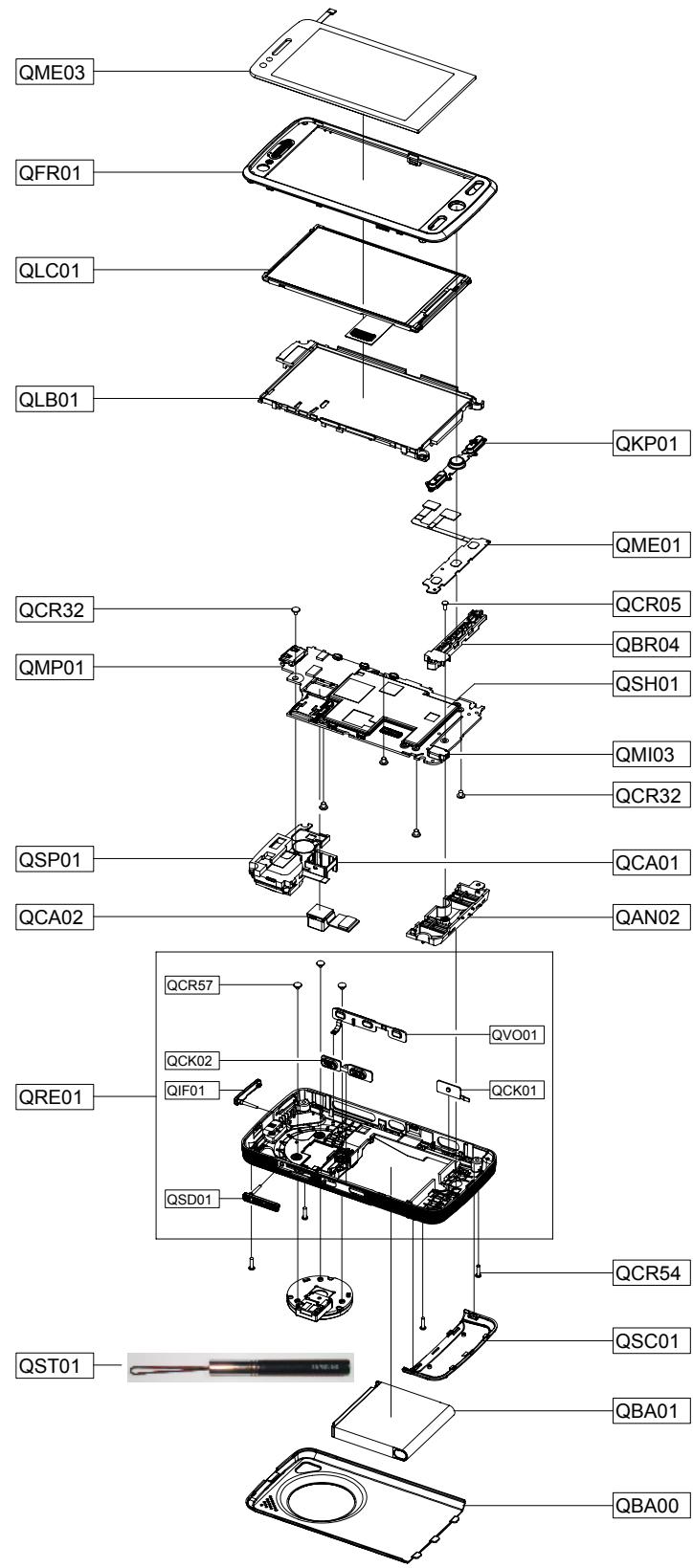
## 1-2. ESD(Electrostatically Sensitive Devices) Precaution

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

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

## 5. Exploded View and Parts List

### 5-1. Cellular phone Exploded View



## 5-2. Cellular phone Parts list

Design LOC	Description	SEC CODE
QAN02	INTENNA-GT_M8800	GH42-01779A
QBA00	NPR COVER-BATT	GH71-08641A
QBA01	INNER BATTERY PACK-1000MAH,BLK	GH43-02974A
QBR04	PMO BRACKET-KEY	GH72-49749A
QCA01	ASSY CAMERA-GT_M8800	GH96-03369A
QCA02	CAMERA MODULE-GT_M8800	GH59-06260A
QCR05	SCREW-MACHINE	6001-001478
QCR32	SCREW-MACHINE	6001-001700
QCR54	SCREW-MACHINE	6001-001645
QFR01	ASSY CASE-FRONT	GH98-10189A
QKP01	ASSY KEYPAD-(EU/BLACK)	GH98-10192A
QLB01	ASSY BRACKET-LCD	GH98-10193A
QLC01	ASSY LCD-LCD MODULE ASSY(M8800	GH96-03364A
QME01	KEY FPCB-GT_M8800,FPCB ASS'Y	GH59-06339A
QME03	UNIT-TOUCH WINDOW(M8800)	GH59-06337A
QMI03	RMO RUBBER-MIC HOLDER	GH73-12285A
QMP01	A/S ASSY-PBA MAIN (GT_M8800 SV	GH82-03272A
QSC01	PMO COVER-SCREW	GH72-50997A
QSH01	ASSY BRACKET-SHIELD CAN	GH98-10194A
QSP01	UNIT-MODULE SPEAKER(AUDIO RECE	GH59-06318A
QST01	ASSY STYLUS PEN-HANDSTRAP	GH98-09735A
QRE01	ASSY CASE-REAR	GH98-10190A
QCK01	ASSY KEY-CAM	GH98-10648B
QCK02	PMO KEY-HOLD	GH72-49762A
QCR57	SCREW-MACHINE	6001-002001
QIF01	PMO COVER-IF V2	GH72-50420A
QSD01	PMO COVER-SD V2	GH72-50419A
QVO01	PMO KEY-VOL V2	GH72-50421A

## 7. Disassembly and Assembly Instructions

### 7-1. Disassembly

1) Unscrew 4 points from the rear case



2) Disjoint hooks



1) Be care of Shooting out damage and scratch not to occur.

1) When you disjoint a rear case from right side to left side, be care of hooks and key hanging.

3) Disjoint a rear case using a disjointing knife.



4) Disjoint a rear case using a disjointing knife.



1) Be care of Shooting out damage and scratch not to occur..

1) Be care of Shooting out damage and scratch not to occur..

5

1) Disjoint a rear ase using a disjointing knife.



6

1) Disjoint a rear ase using a disjointing knife.



1) Be care of Shooting out damage and scratch not to occur.

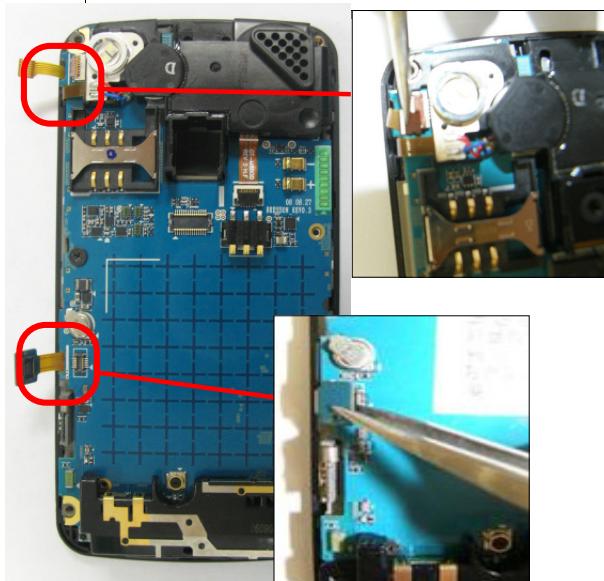
7

1) Disassemble a REAR case.



8

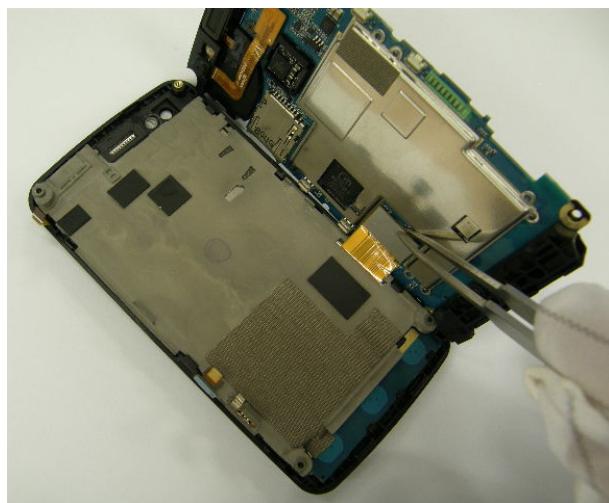
1) Disassemble a SUB PBA Connector and TSP FPCB.



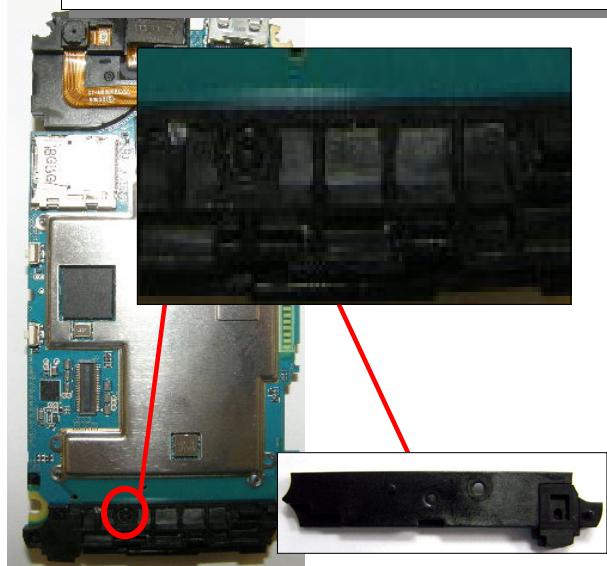
1) Be care of damage of connector and FPCB.

**9**

1) Disassemble LCD FPCB Connector

**10**

1) First unscrew Intenna screw 1point and disjoint Intenna.

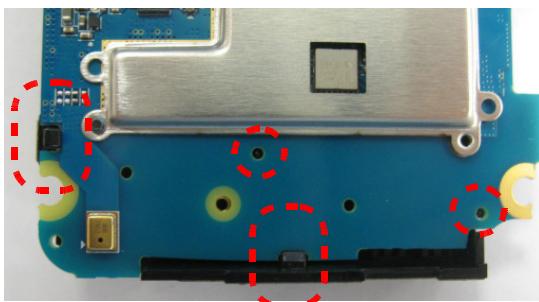
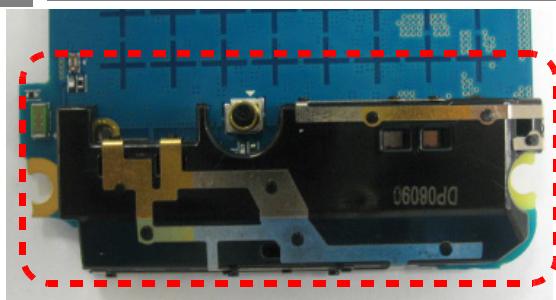


1) Be care of damage of connector and FPCB.

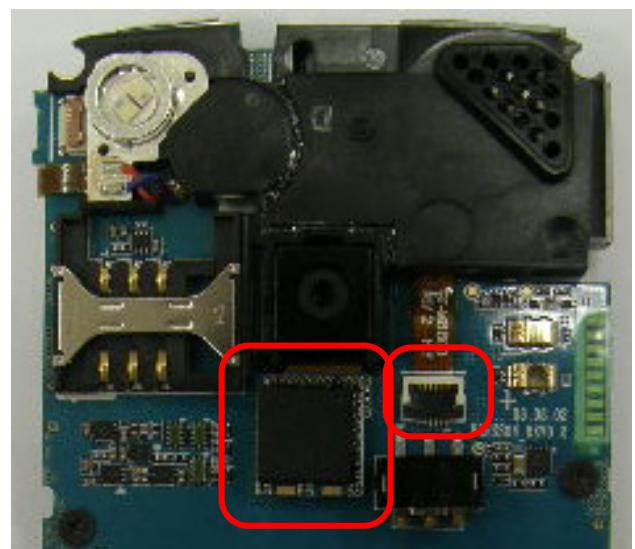
1) When unscrew, be care of Shooting out damage and scratch not to occur

**11**

1) Disjoint Intenna.

**12**

1) Disassemble connector.

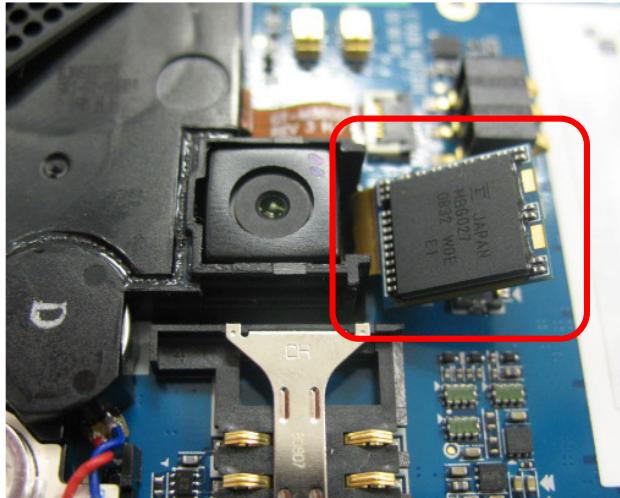


1) Be care of damage of surrounding components.

1) Be care of damage of connector and FPCB.

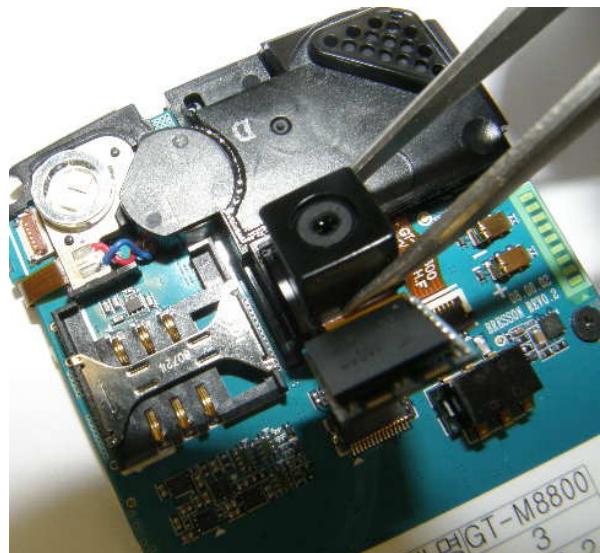
13

Disjoint camera connector.



14

1) Disassemble Camera

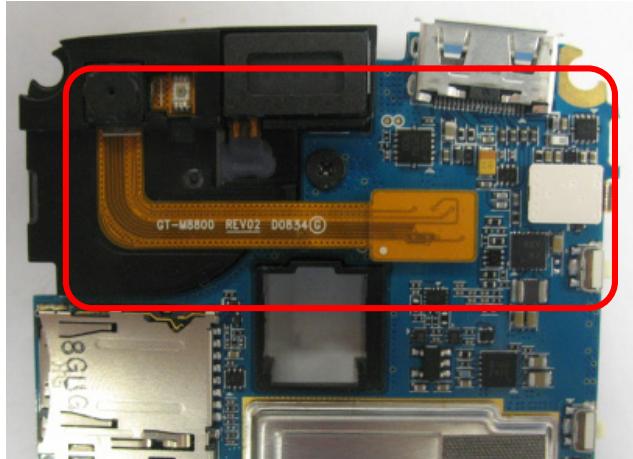


1) Be care of damage of connector and FPCB.

1) Be care of shooting out Camera module and scratch not to occur.

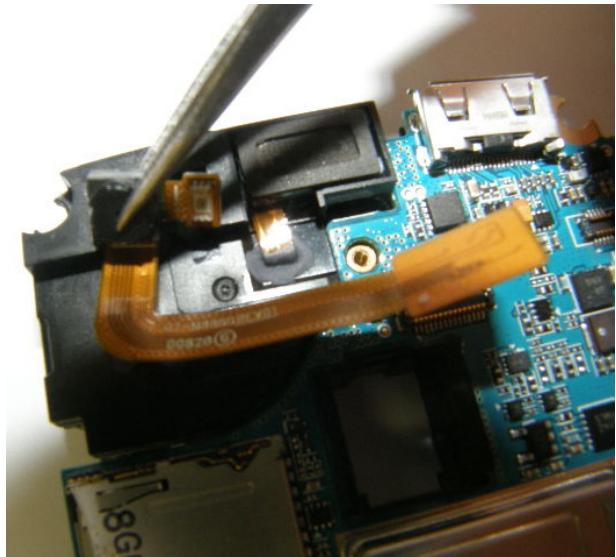
15

1) Disjoint Connector and screw 1 point



16

1) Disassemble CIF Camera



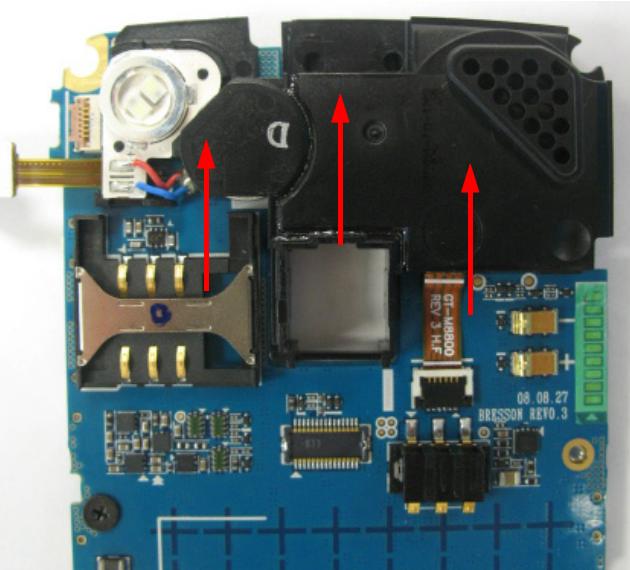
1) When unscrew,be care of damage and scratch not to occur.

2) Be care of damage of connector and FPCB.

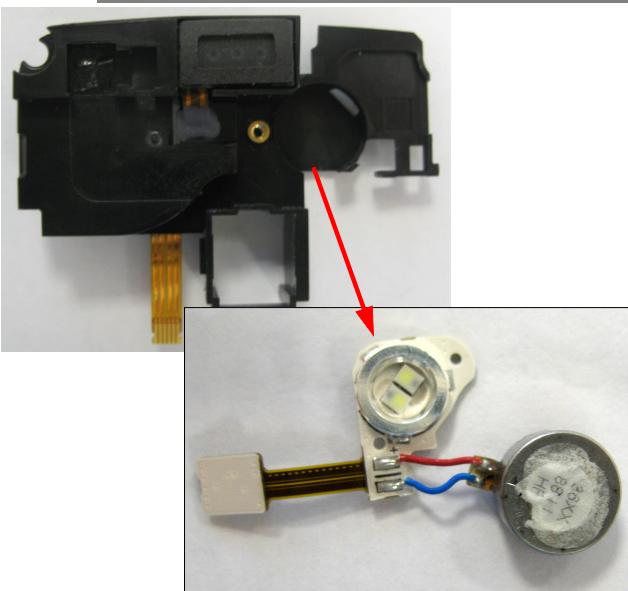
1) Be care of shooting out Camera module and damage of FPCB

**17**

1) Disassemble speaker bracket

**18**

1) Disassemble LED and vibration motor.

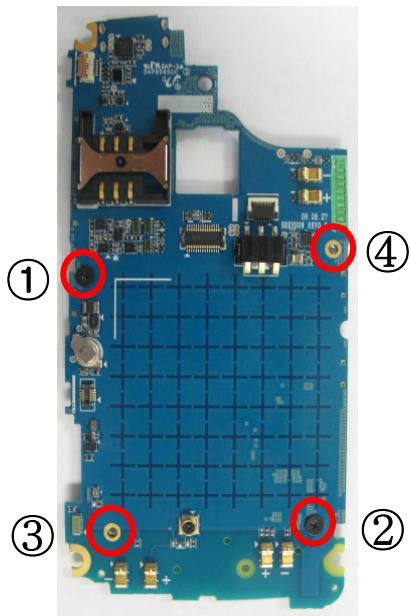


1) Be care of Shooting out damage and scratch not to occur.

1) Be care of Shooting out damage and scratch not to occur. .

**19**

1) Unscrew 4point of shieldcan screw.

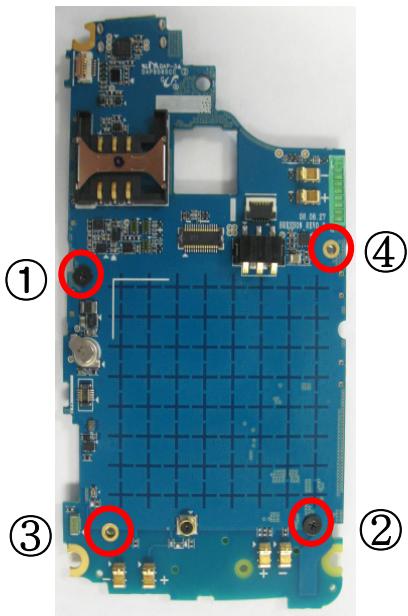


1) Be care of Shooting out damage and scratch not to occur.

## 7-2. Assembly

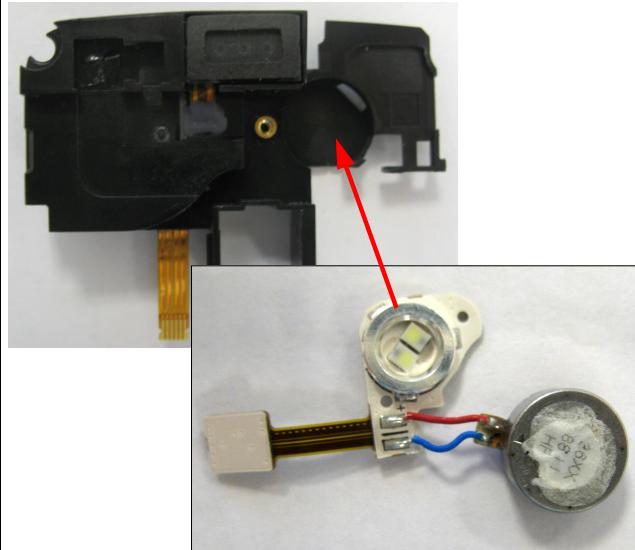
**1**

1) screw 4point of shieldcan.



**2**

1) Joint a LED and a vibration motor.



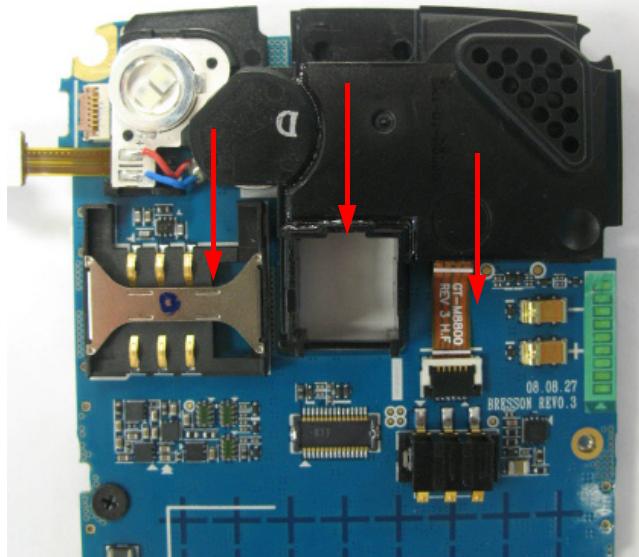
1) Be care of Shooting out damage and scratch not to occur.

2) Screw size :

TORQUE :

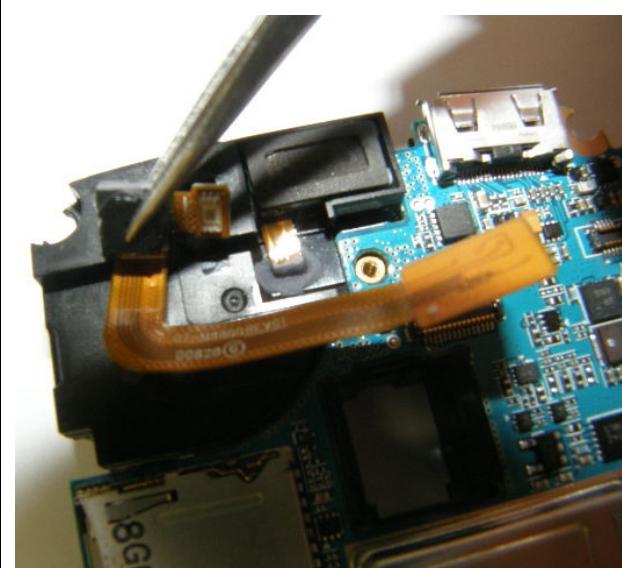
**3**

1) Assemble a speaker bracket.



**4**

1) Jiont a CIF Camera

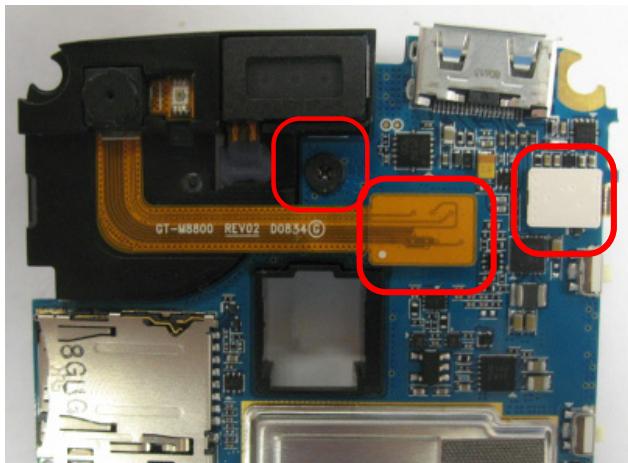


1) Be care of Shooting out damage and scratch not to occur.

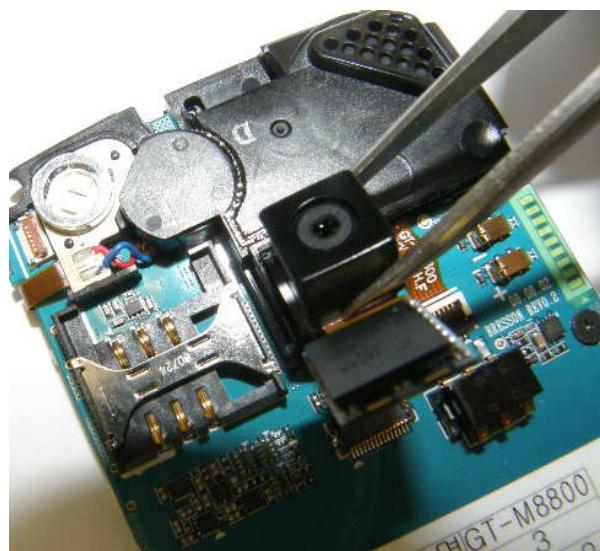
1) Be care of shooting out a Camera module and damage of a FPCB.

**5**

1) Assemble a Connector and screw 1 point

**6**

1) joint a Camera



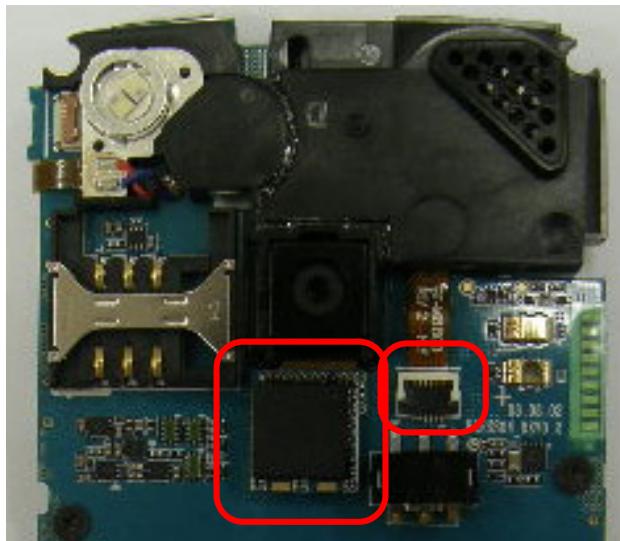
1) Be care of Shooting out damage and scratch not to occur.

1) Be care of damage of FPCB.

Check the silkline.

**7**

1) joint a Connector

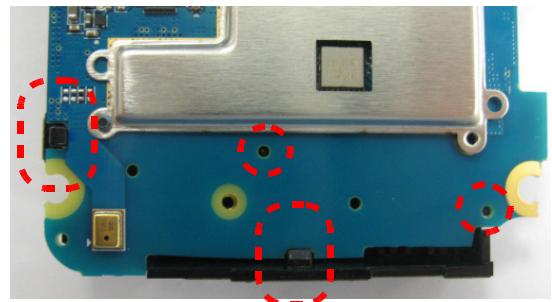
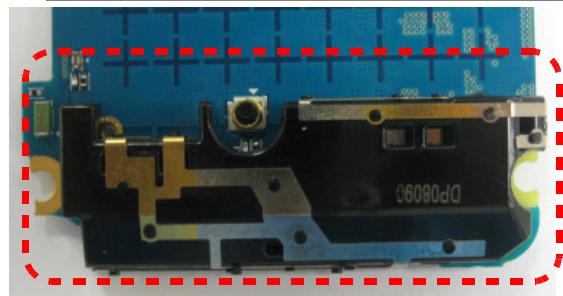


1) Be care of FPCB's damage.

Check the silkline.

**8**

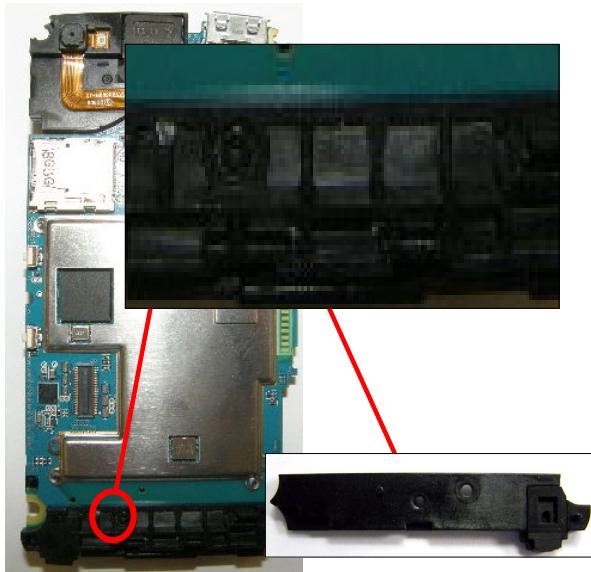
1) Assemble a intenna



1) Be care of damage and scratch.

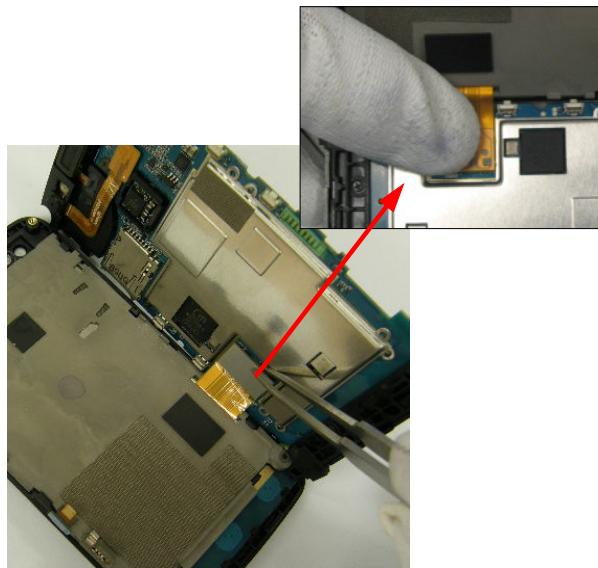
**9**

1) Joint Intenna screw 1 point



**10**

1) Assemble a LCD FPCB Connector.



1) Be care of damage and scratch

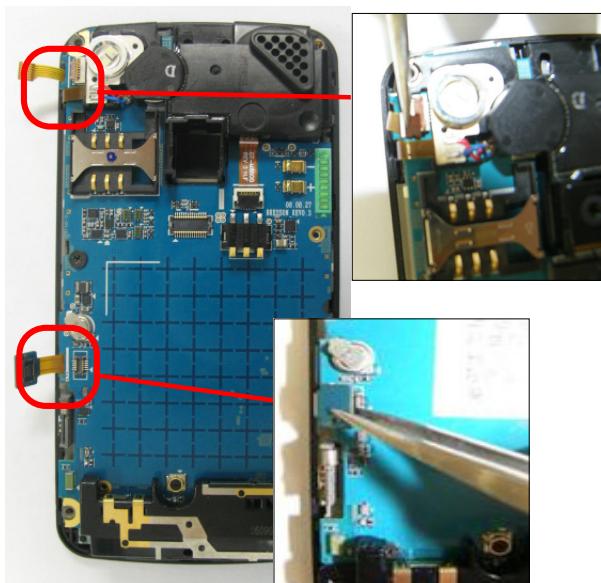
2) Screw size :

TORQUE :

1) Be care of FPCB's damage

**11**

1) Joint SUB PBA Connector and TSP FPCB



**12**

1) Joint rear's hooks



1) Be care of connector and FPCB's damage.

1) When you joint a rear case from left side to right side, be care of hooks and key hanging.

2) Screw size :

TORQUE :

13

1) Joint screw 4 point of rear.

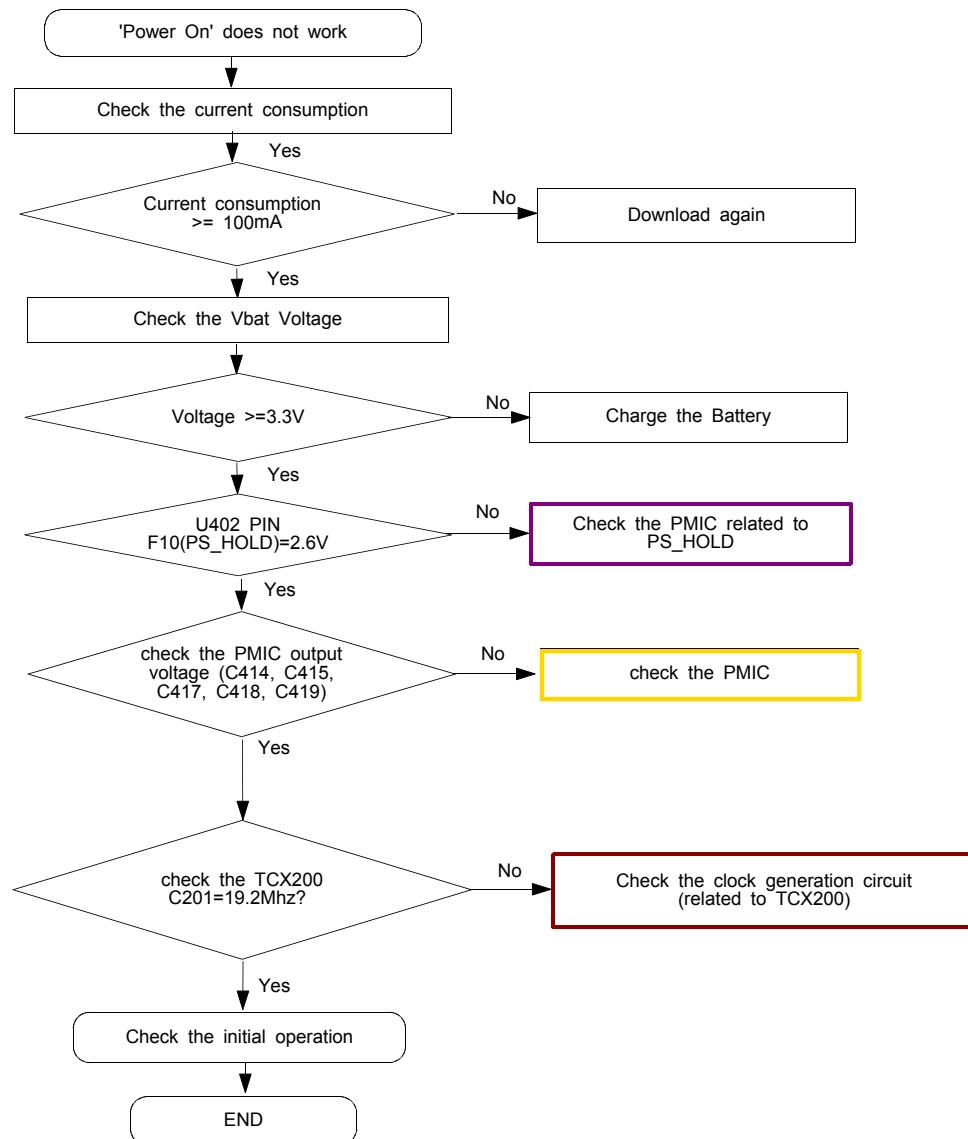


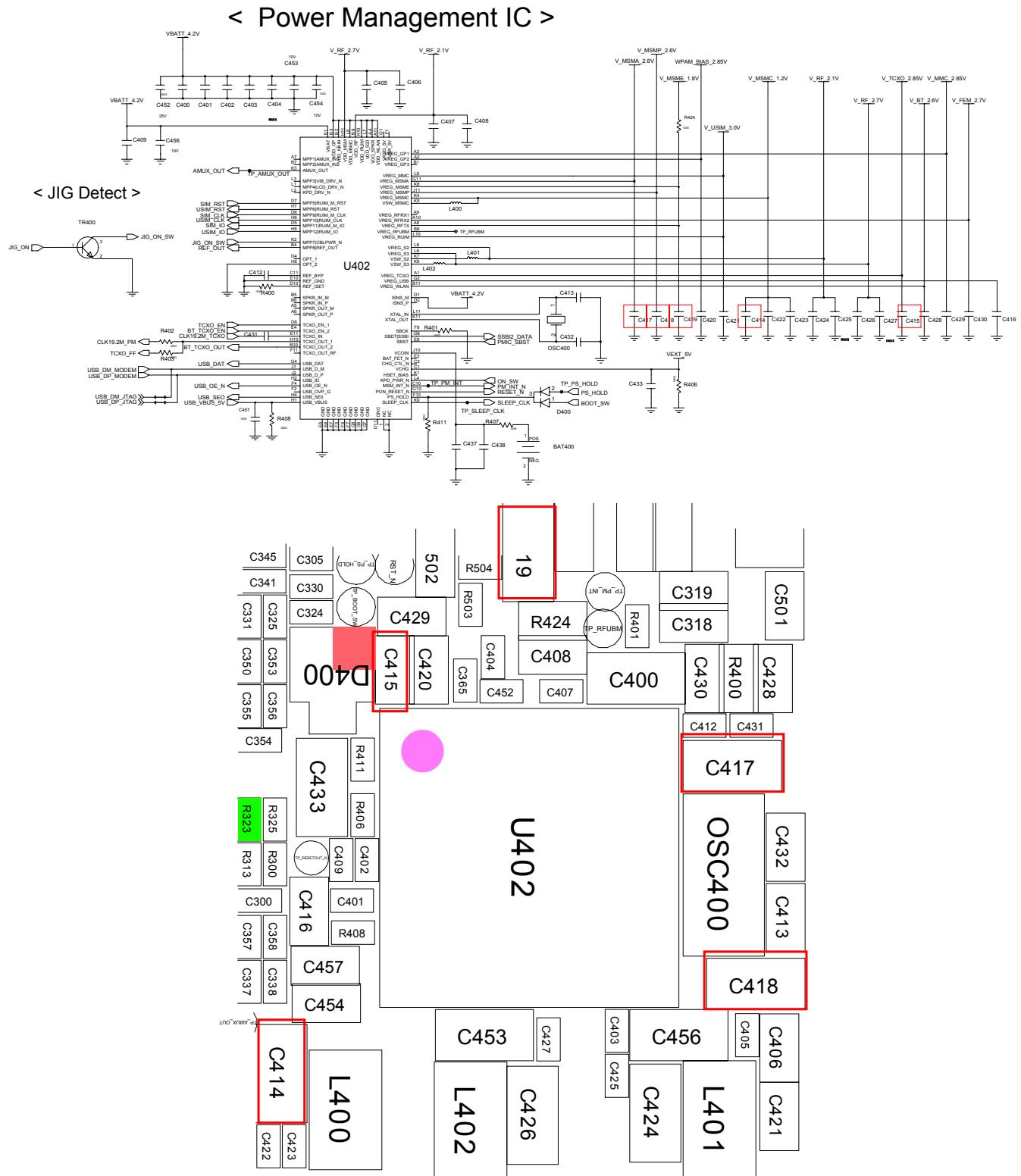
1) Be care of damage and scratch

## 10. Flow Chart of Troubleshooting

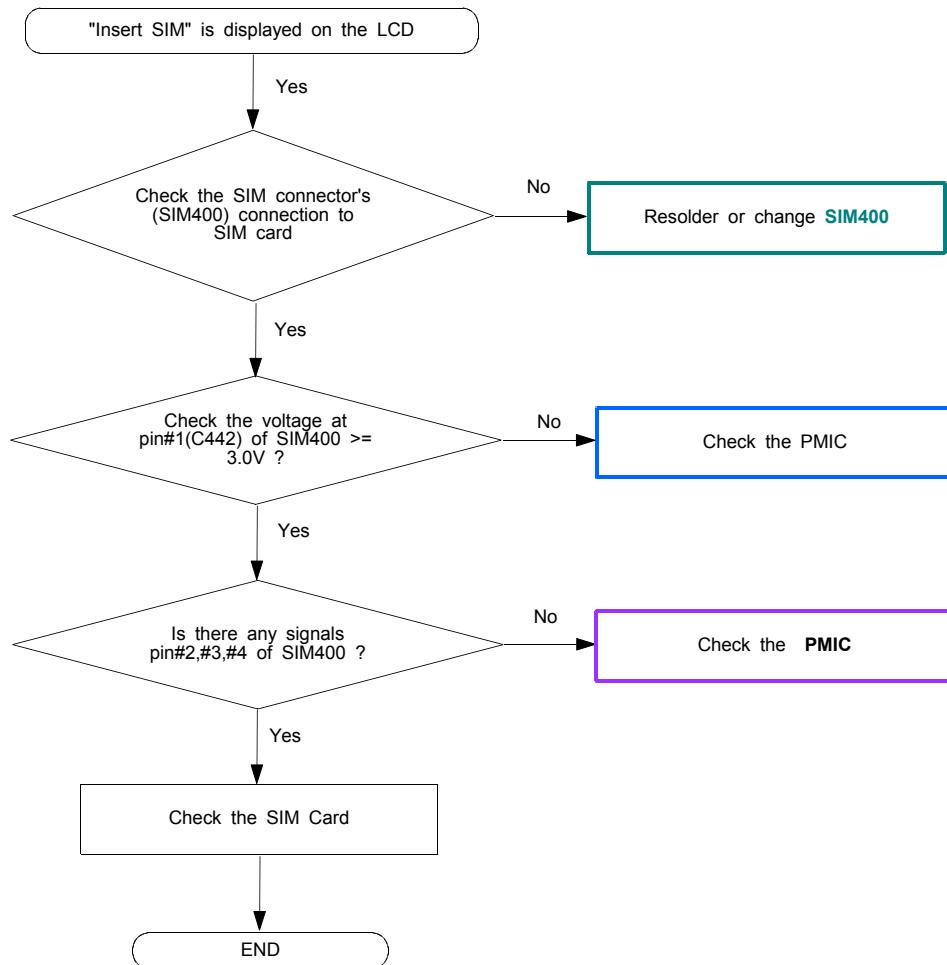
### 10-1 BASEBAND

#### 10-1-1. Power ON

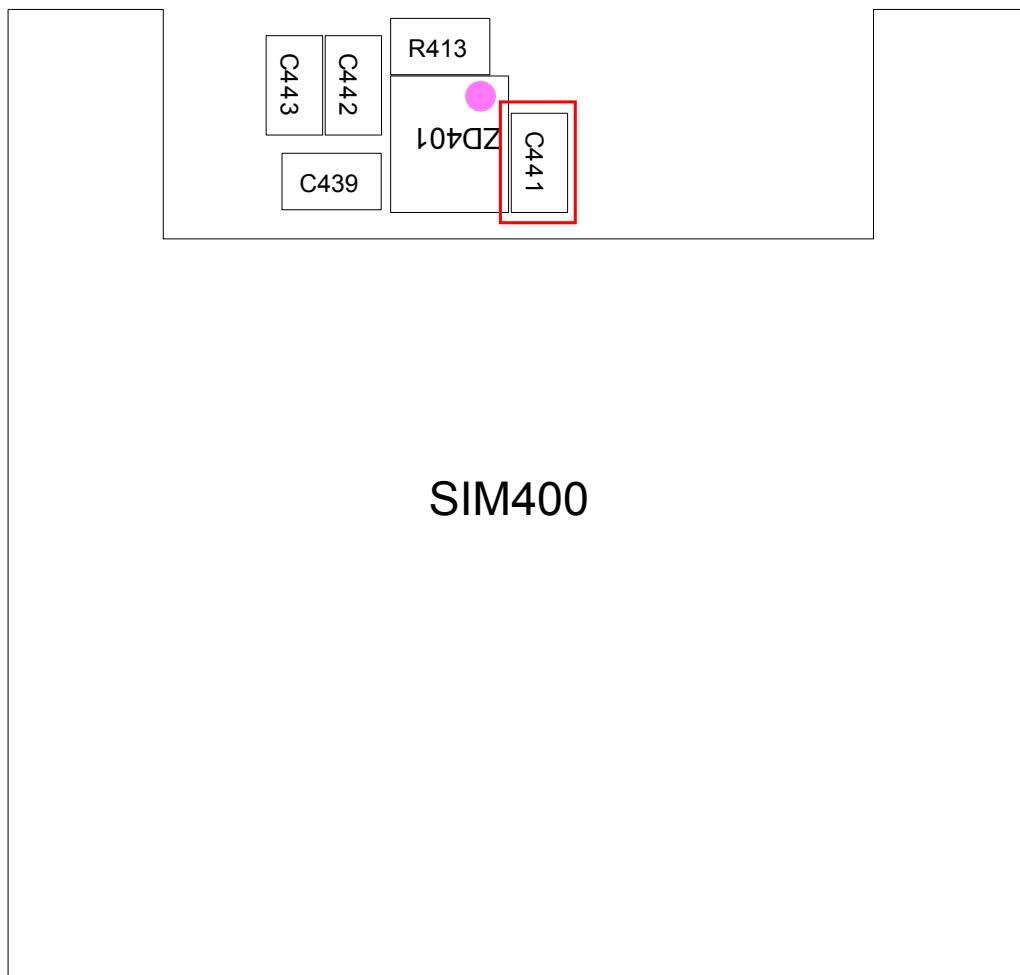
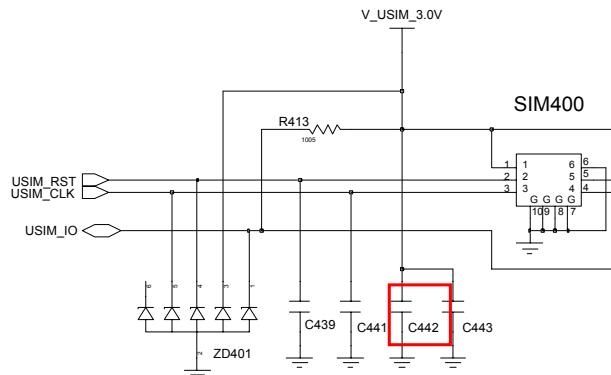




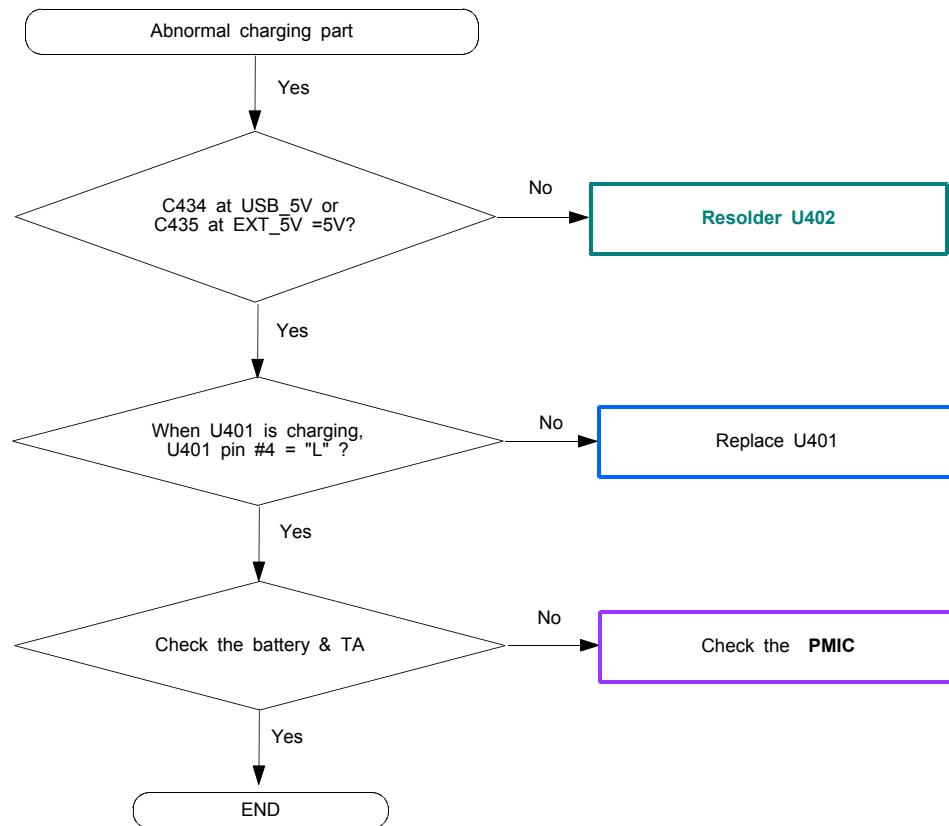
## 10-1-2. Sim Part



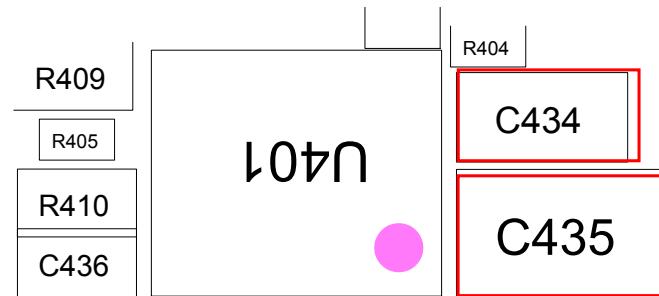
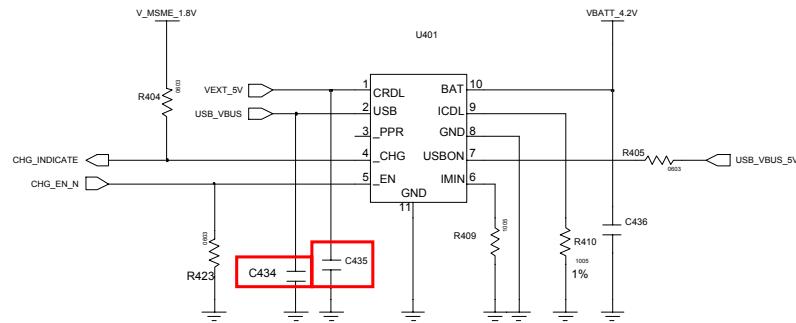
## < USIM Connector >



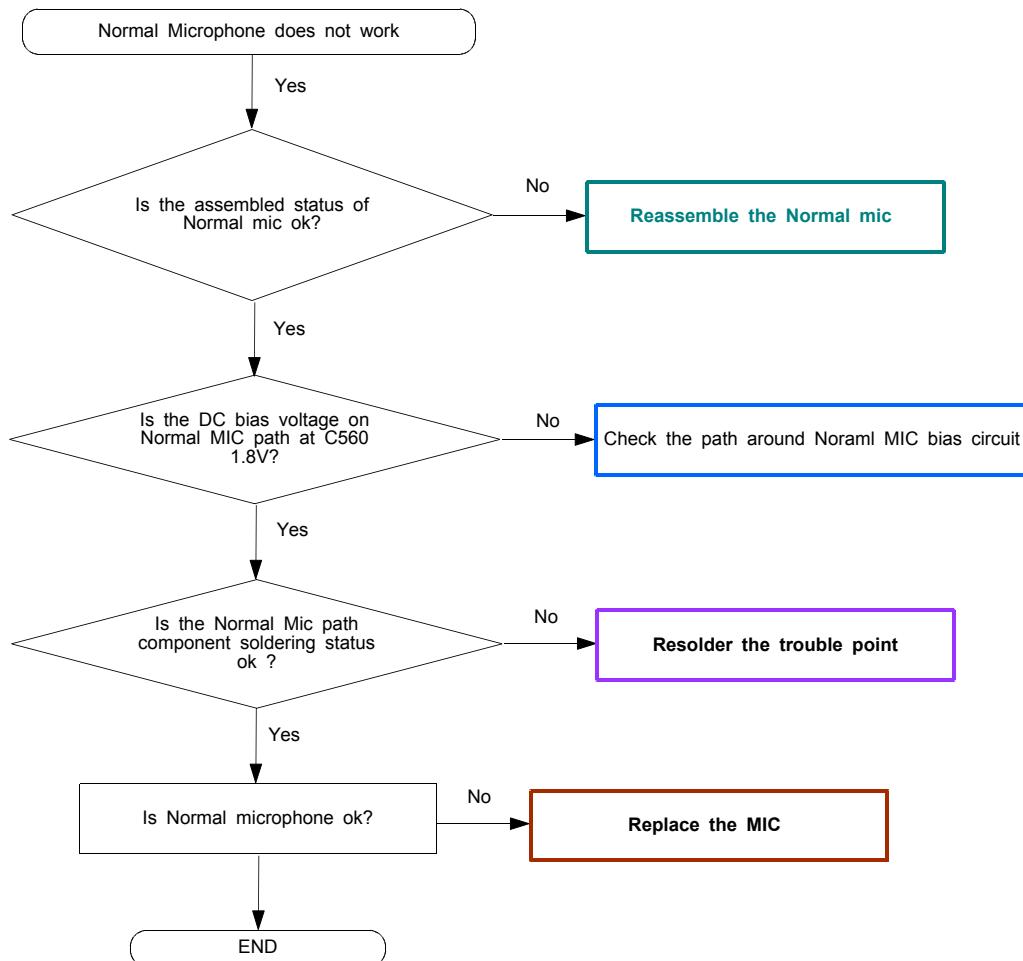
## 10-1-3. Charging Part

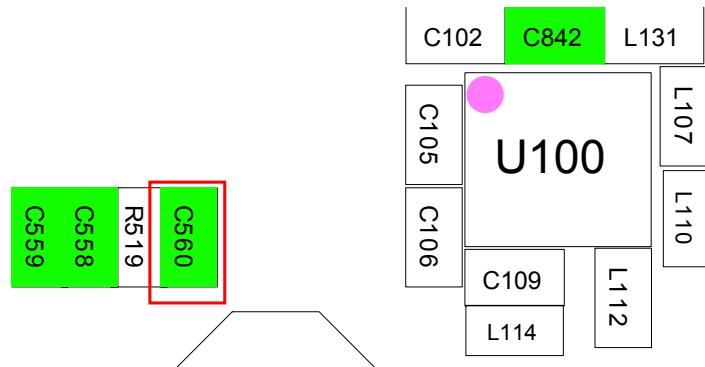
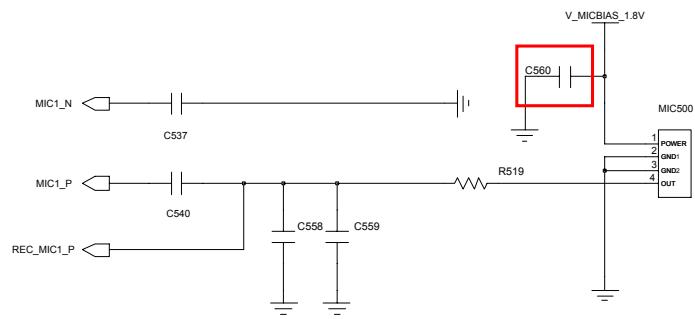


# < Charging IC >

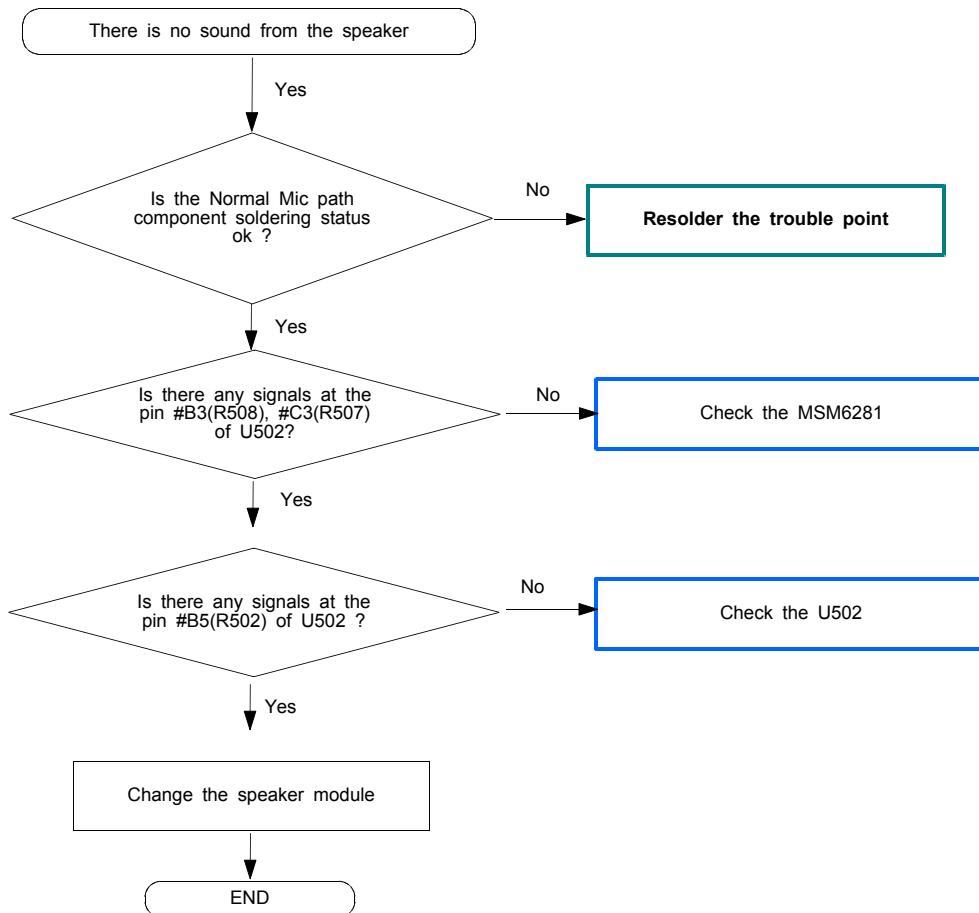


## 10-1-4. Microphone Part - PHONE Mic

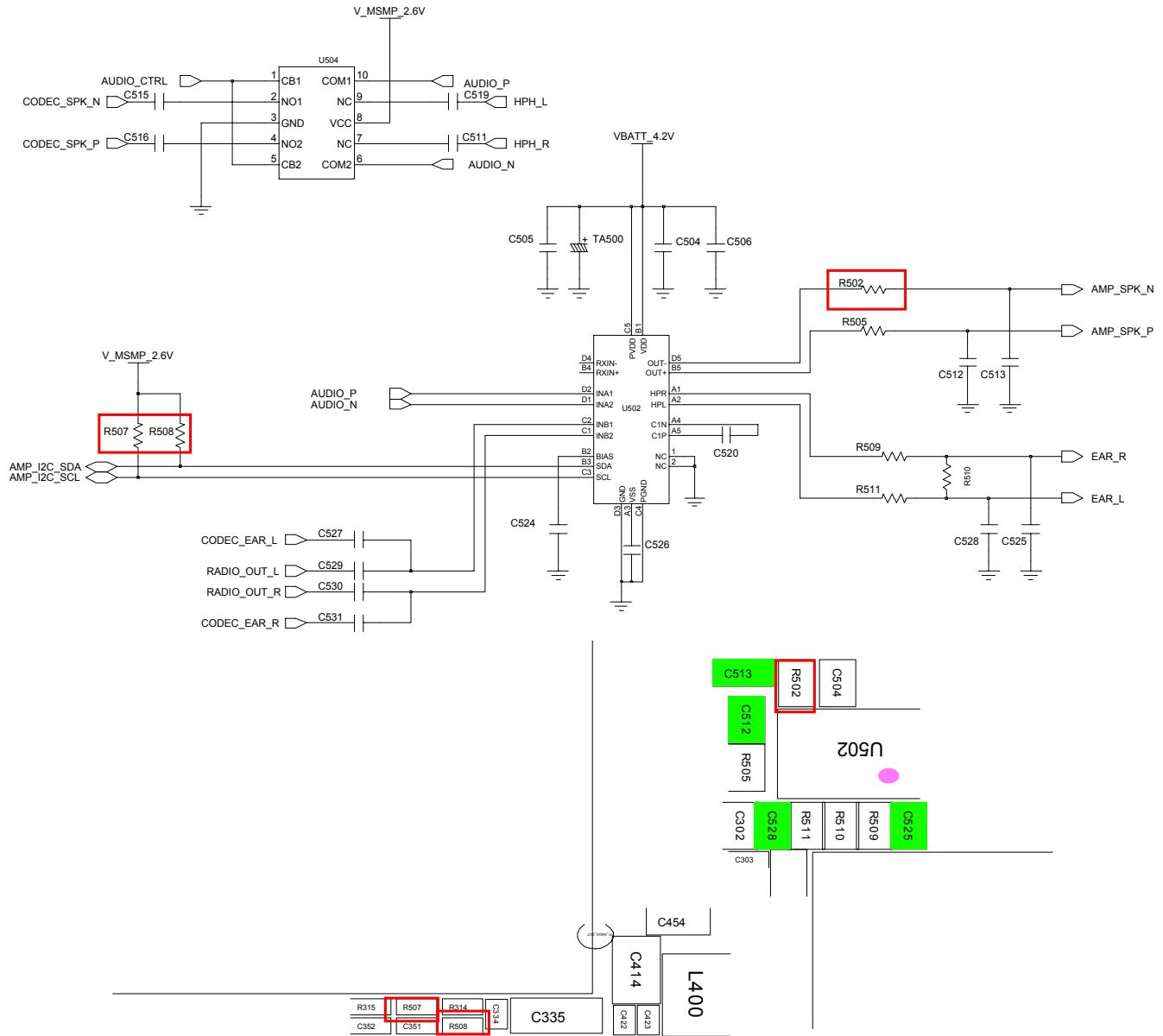




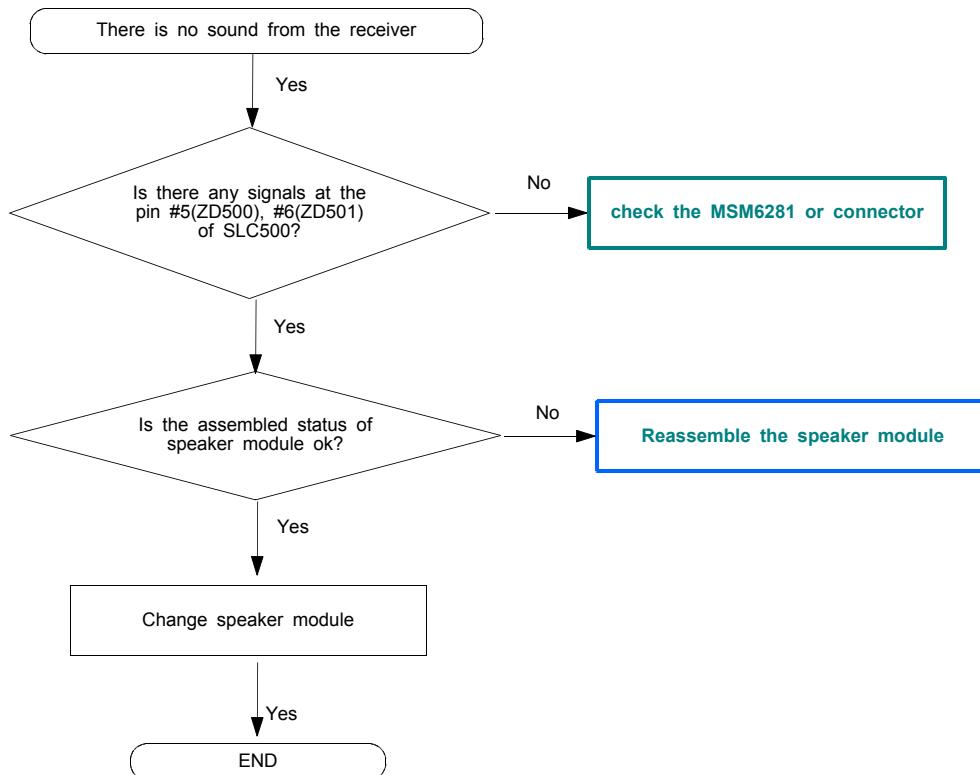
## 10-1-5. Speaker part



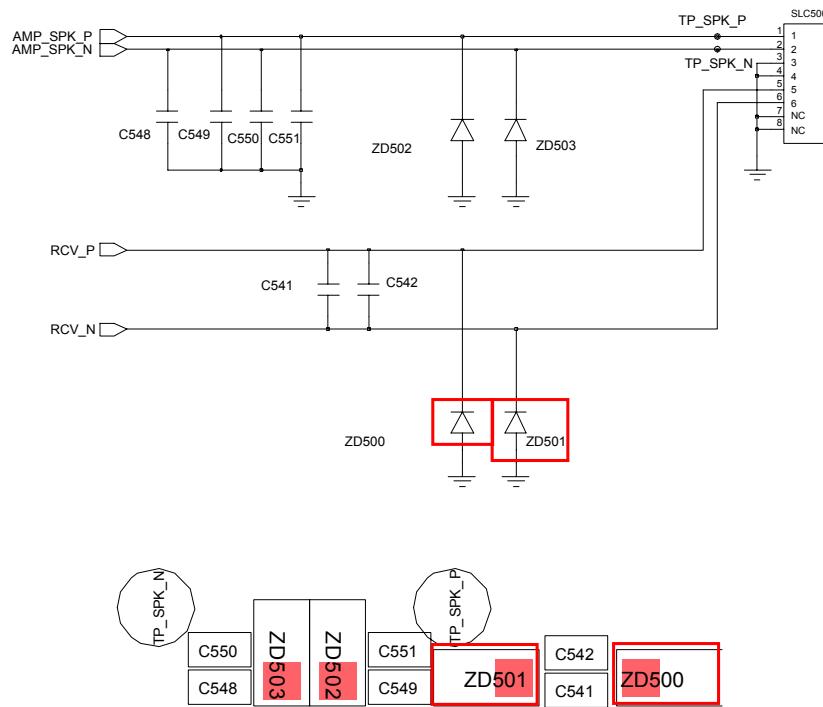
## < Mono Class-D AMP >



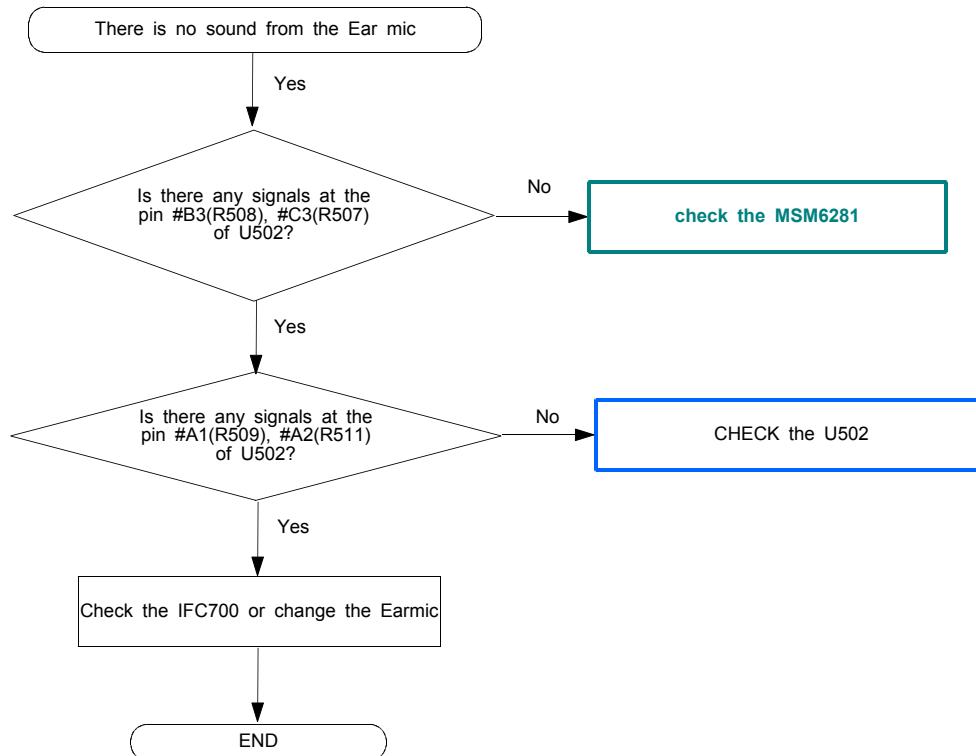
## 10-1-6. Receiver part



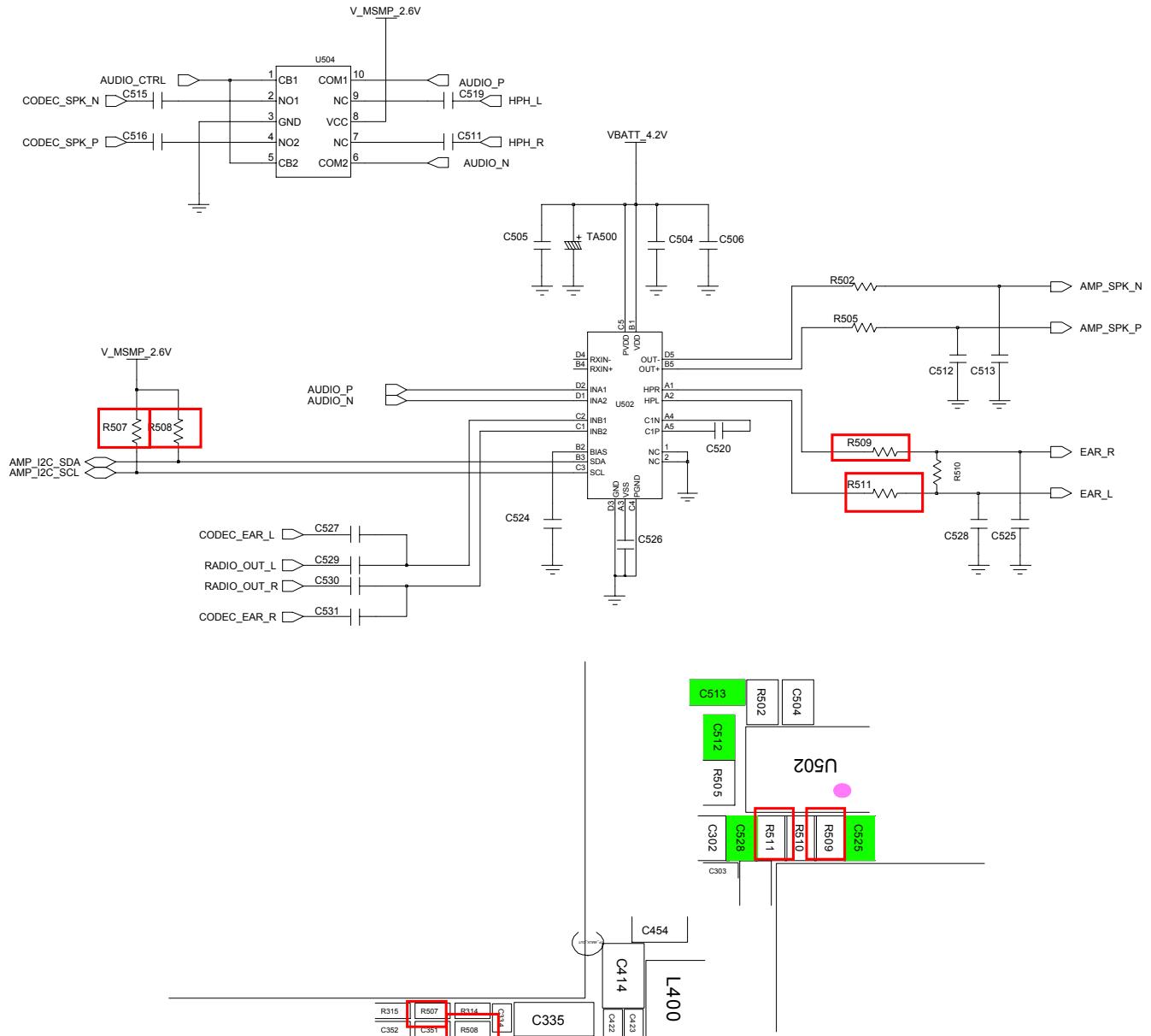
# < Speaker / Receiver CON >



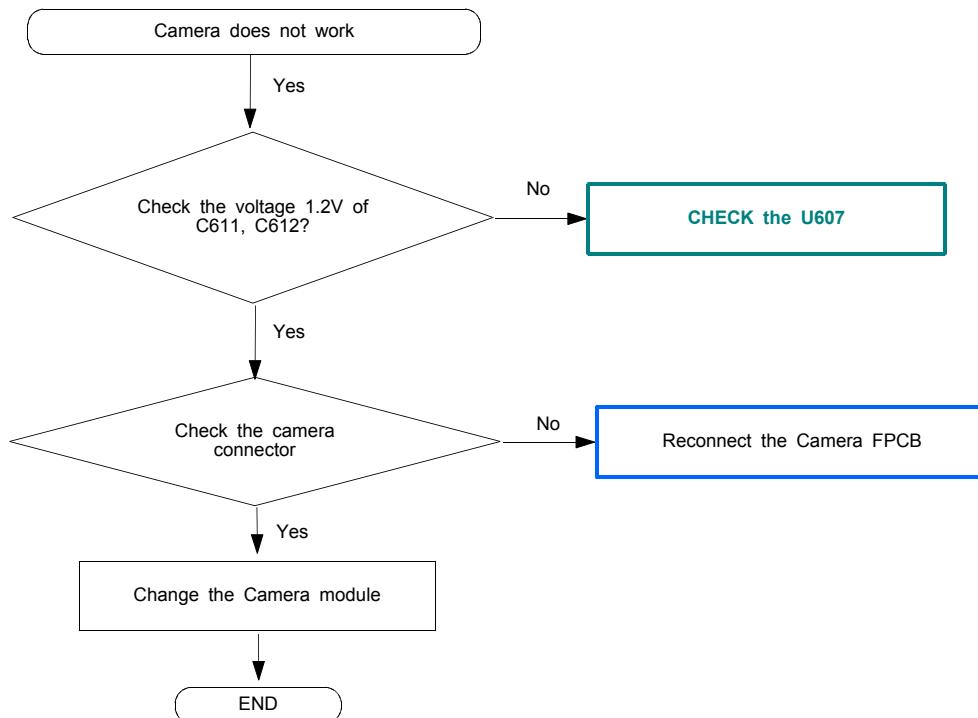
## 10-1-7. Ear mic Part - MIC CABLE



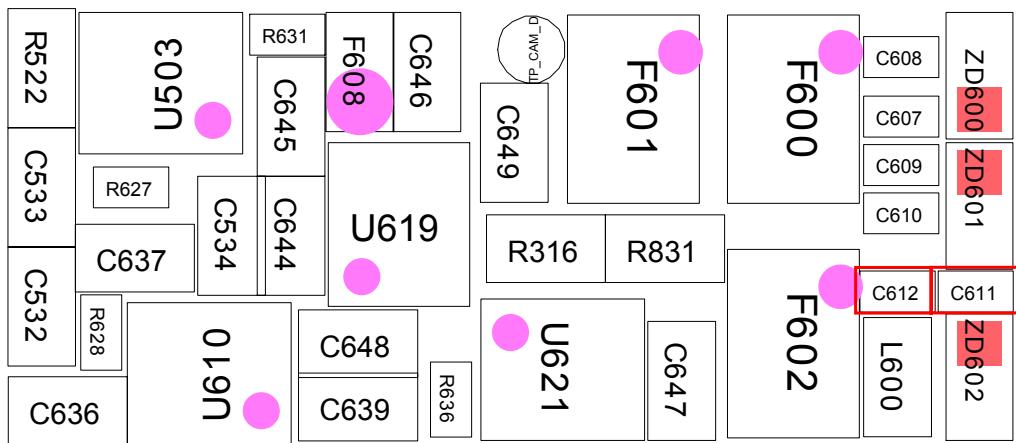
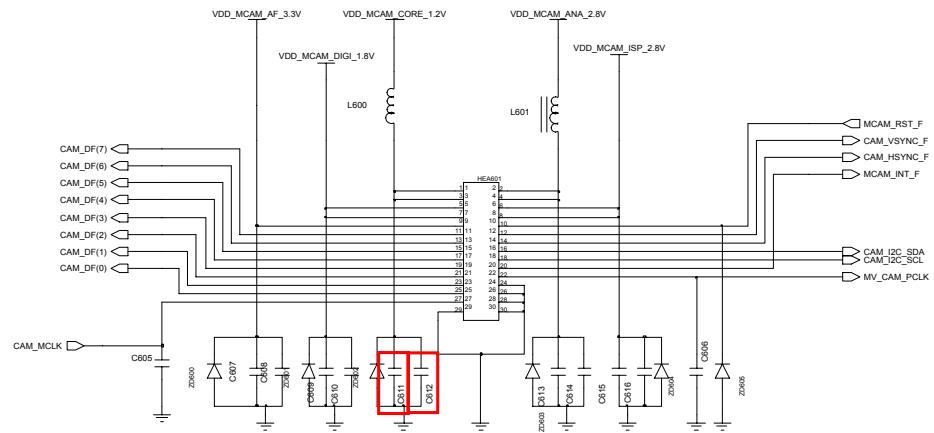
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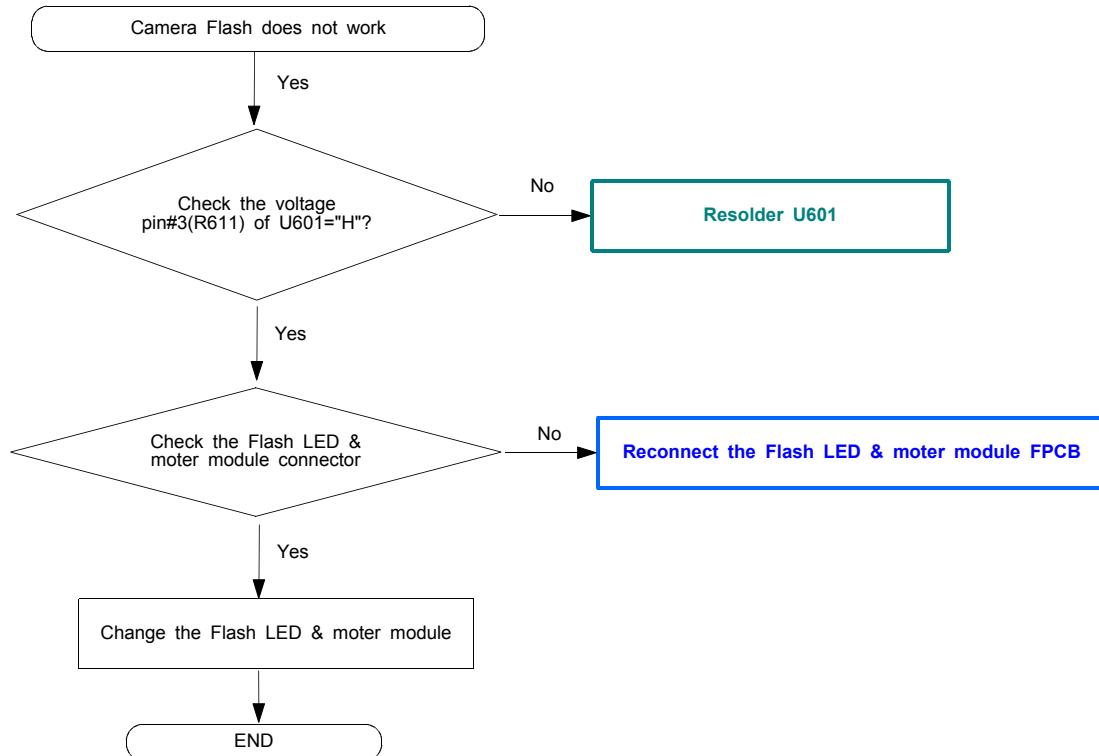
## 10-1-8-1. Camera



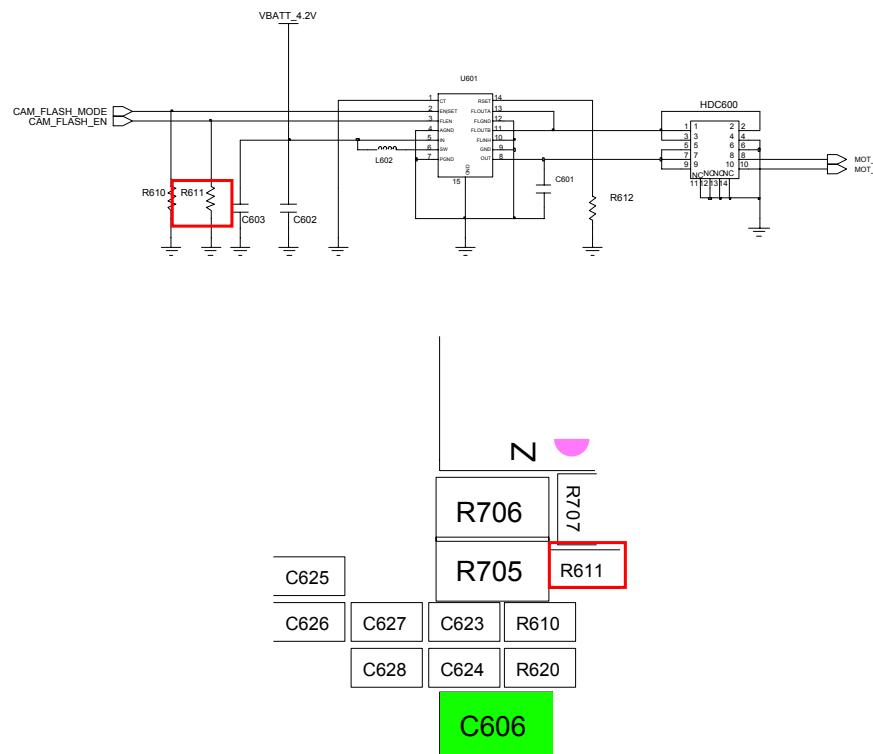
## < 8MP Camera Connector >



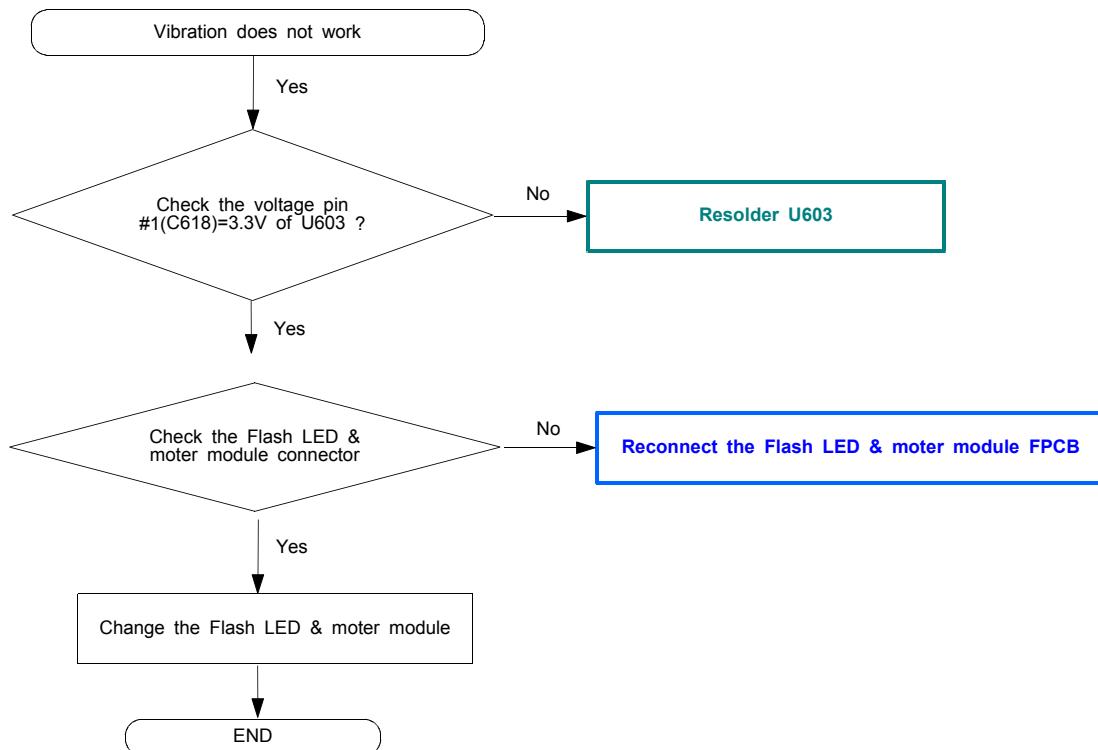
## 10-1-8-2. Camera Flash



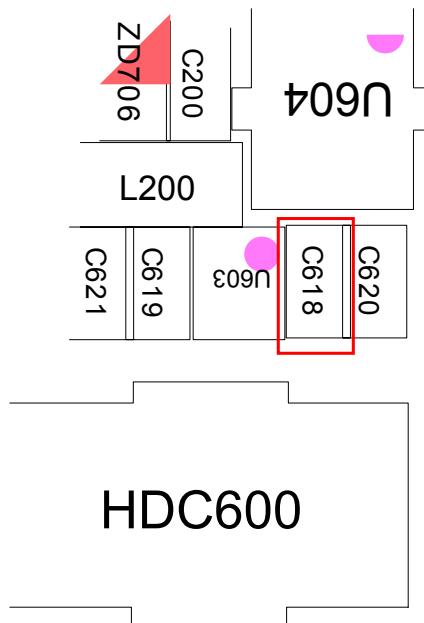
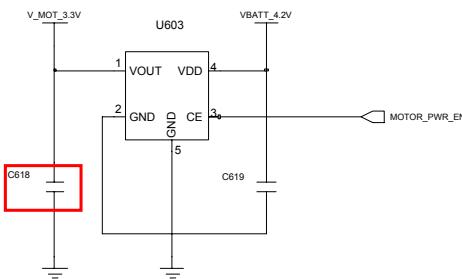
## &lt; CAM FLASH LED DRIVER &gt;



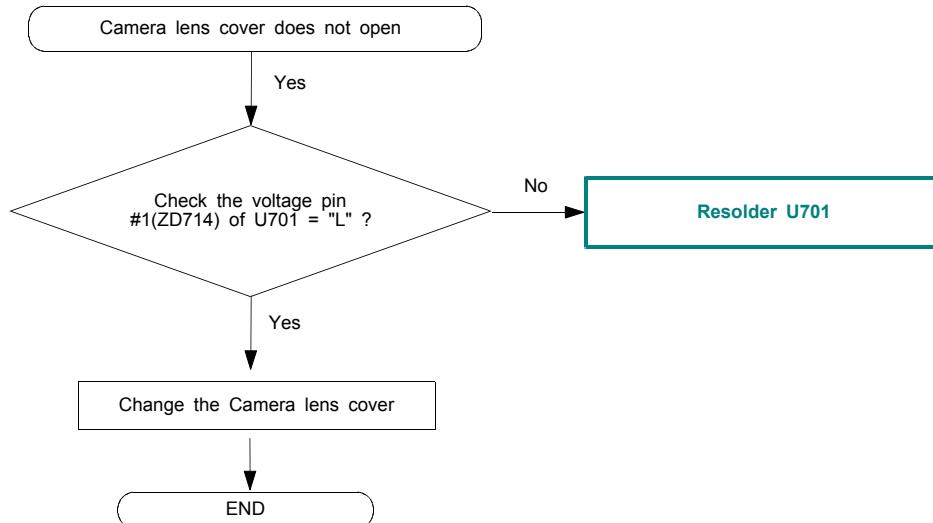
## 10-1-8-3. Vibration



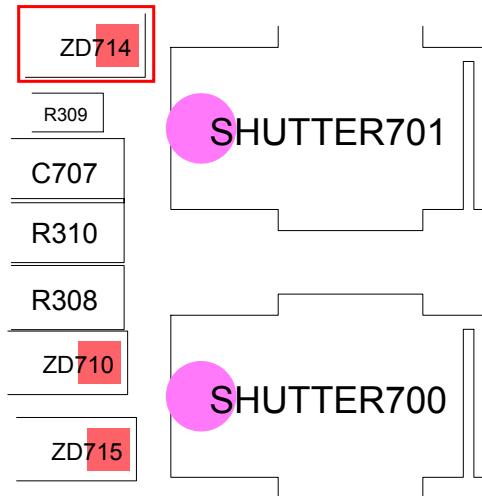
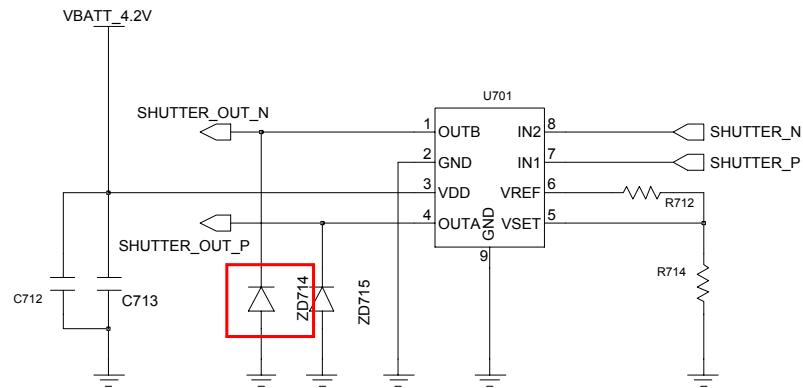
## < Motor Power - 3.3V >



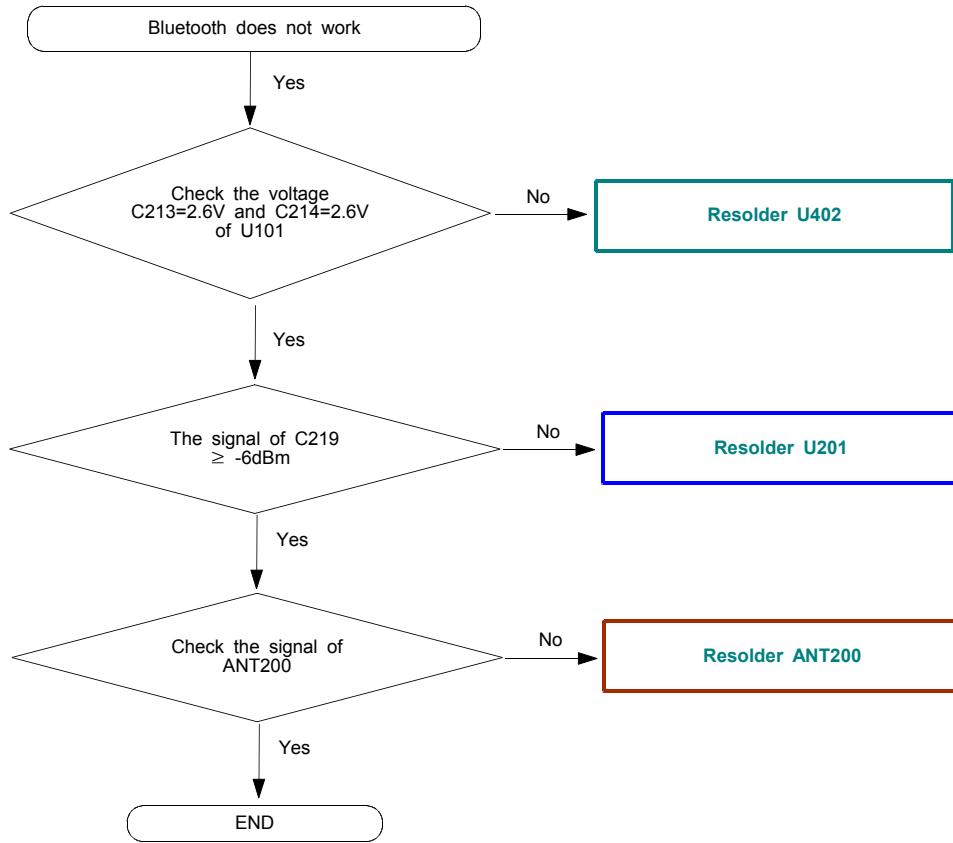
## 10-1-8-3. Camera Lens Cover



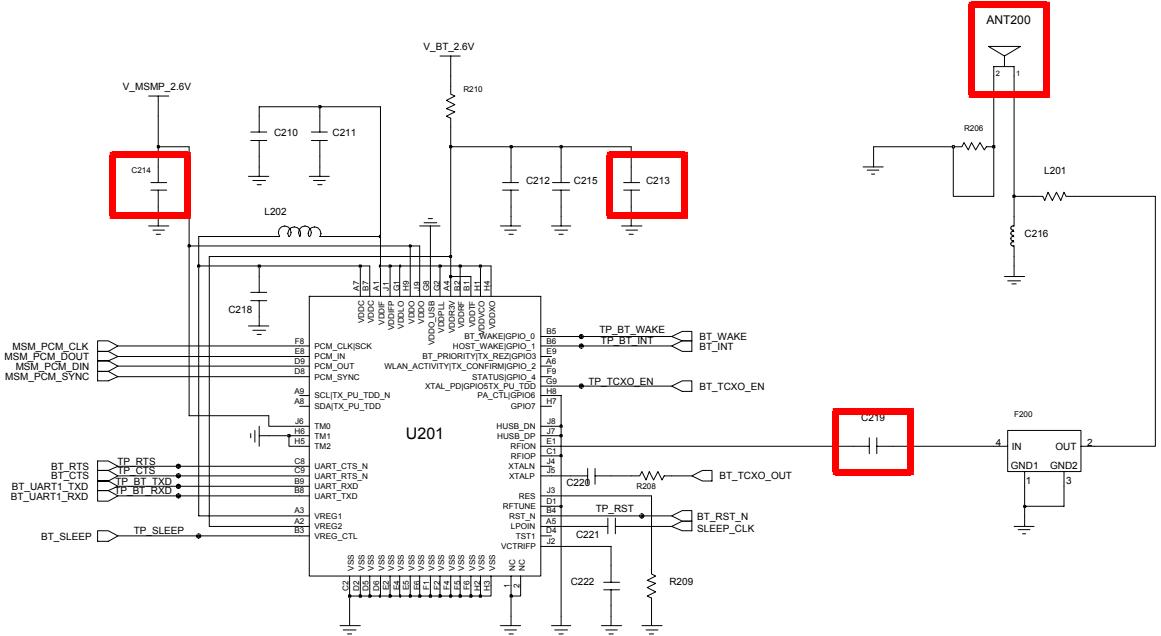
## < Camera Lens Cover >

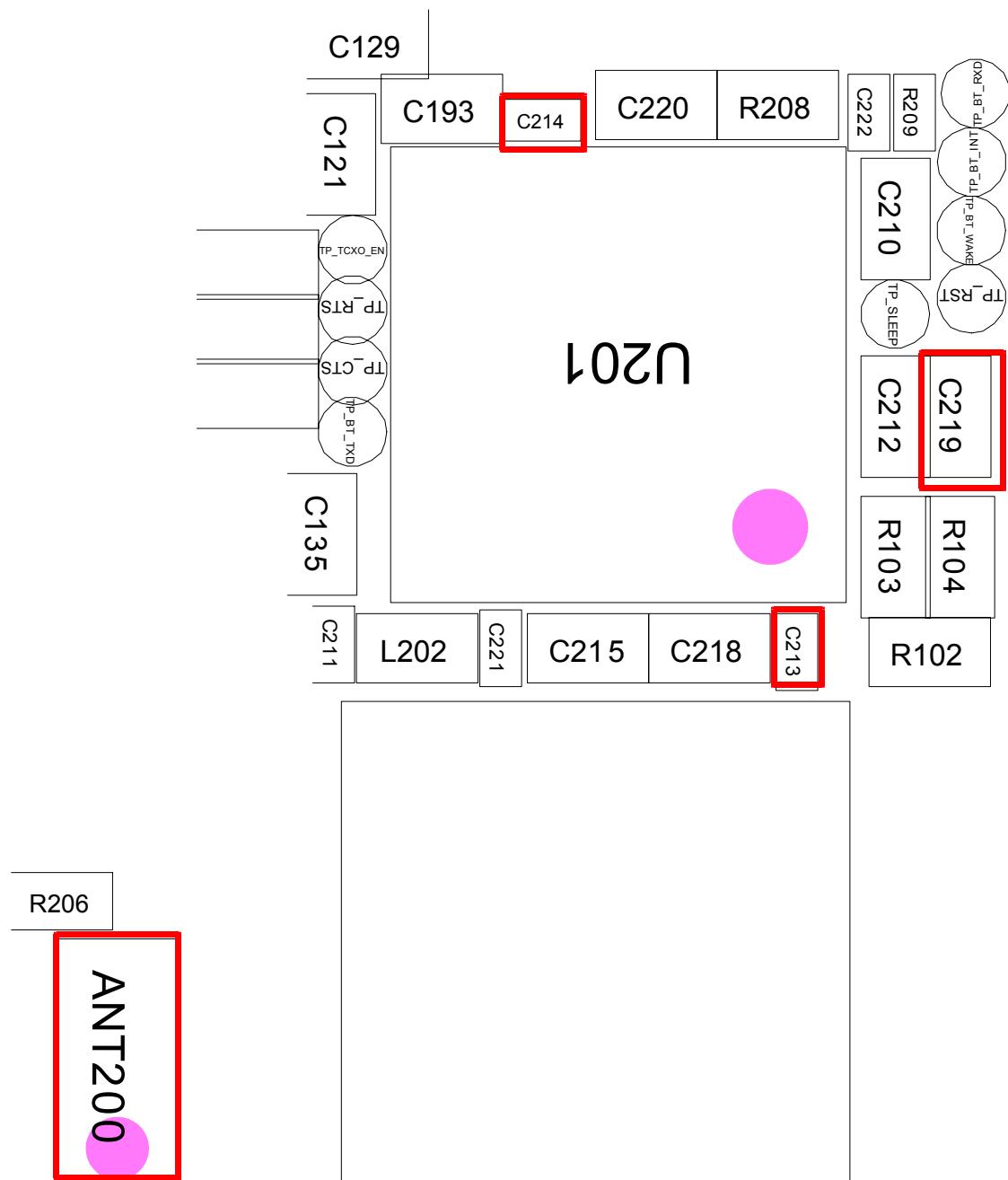


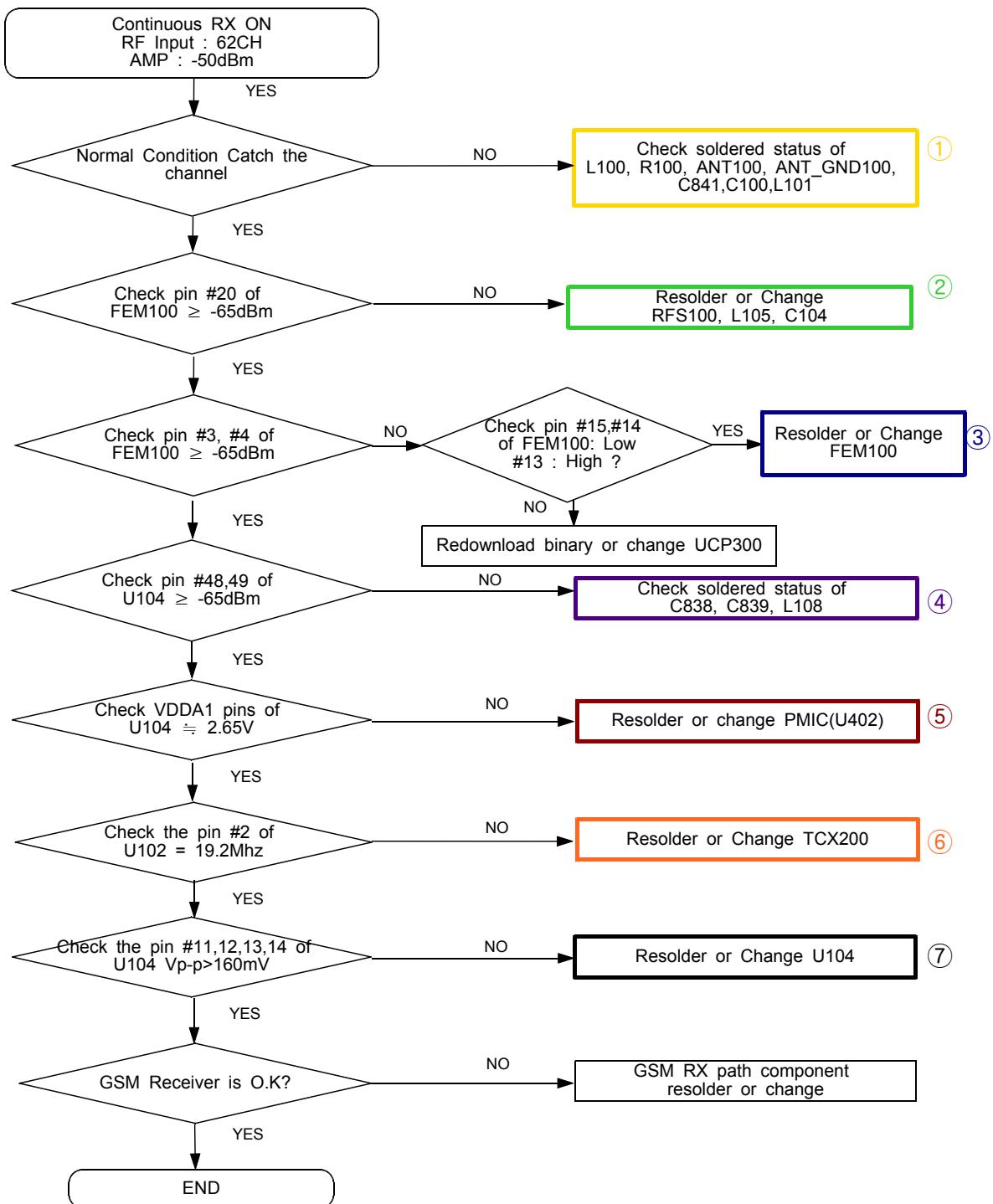
## 10-1-9. Bluetooth

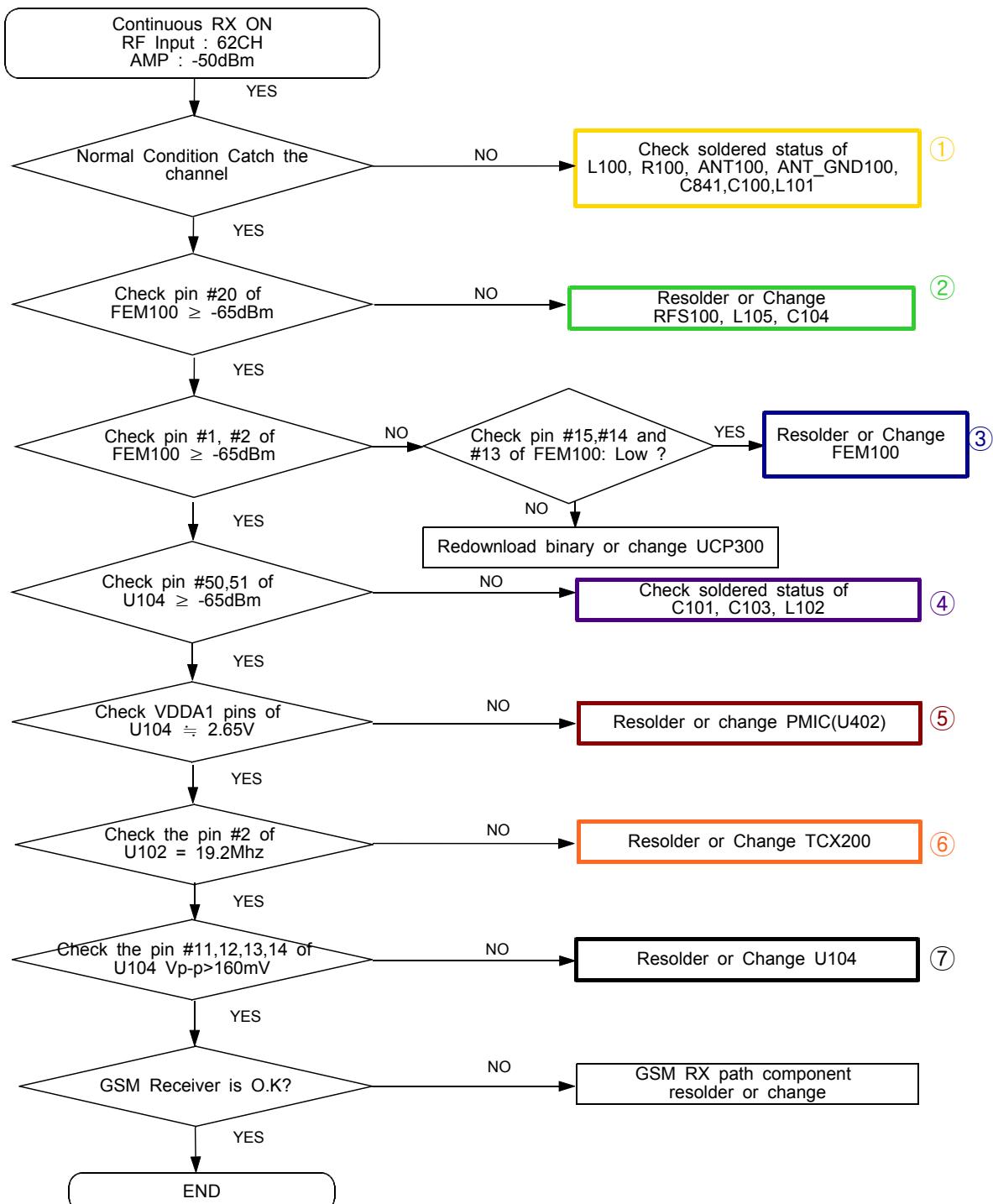


## &lt; BLUETOOTH &gt;

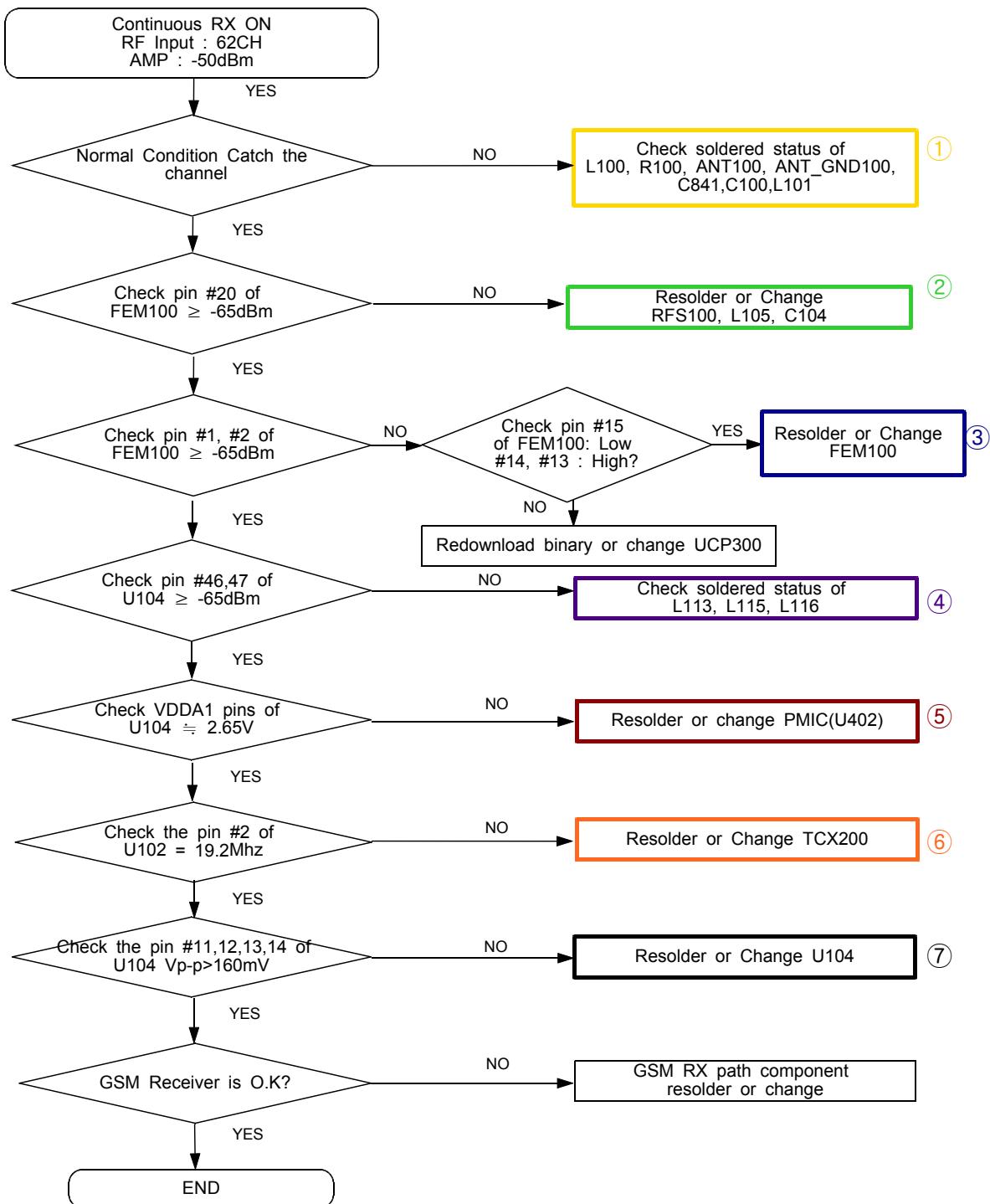


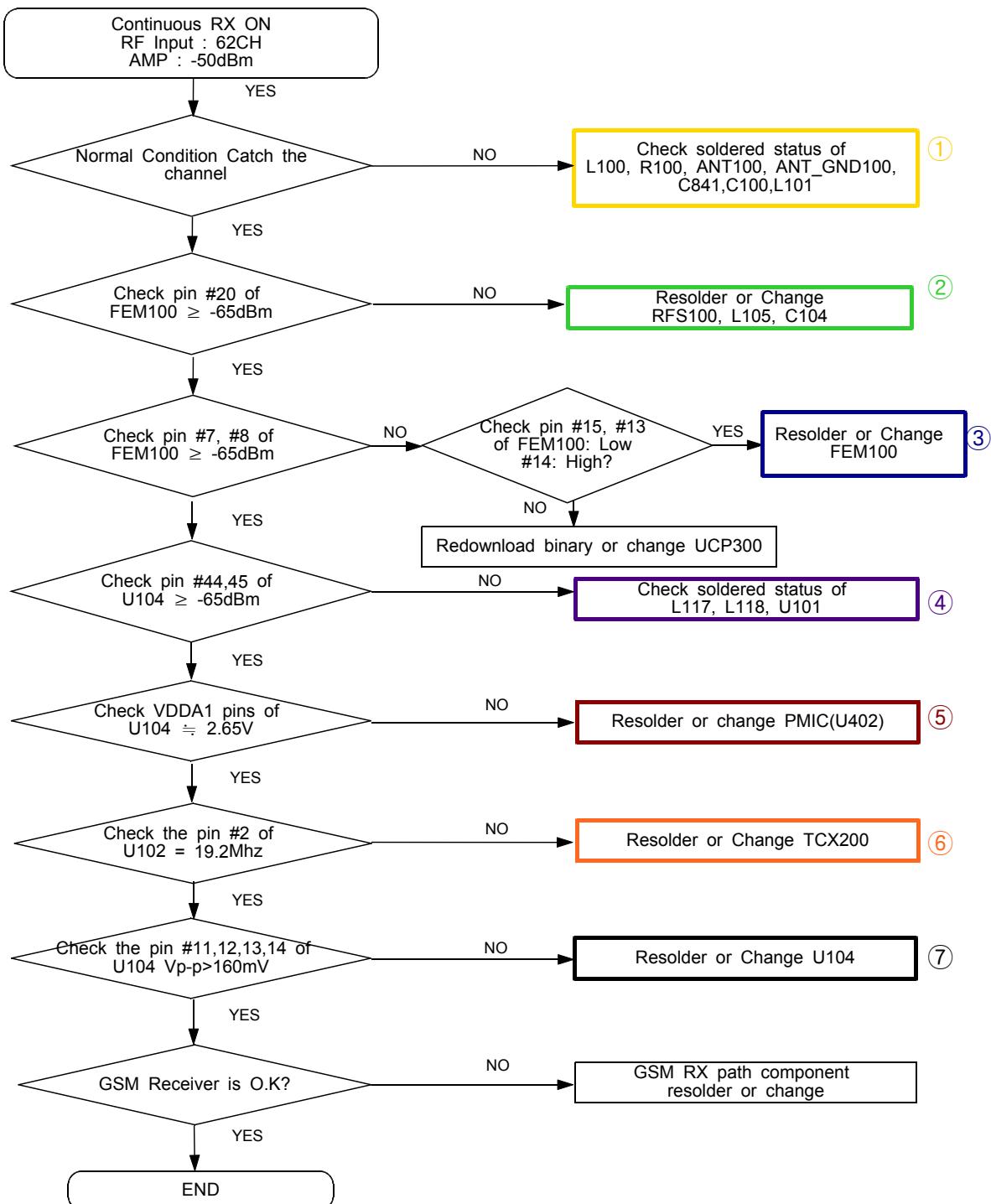


**10-2.RF****10-2-1. EGSM Rx**

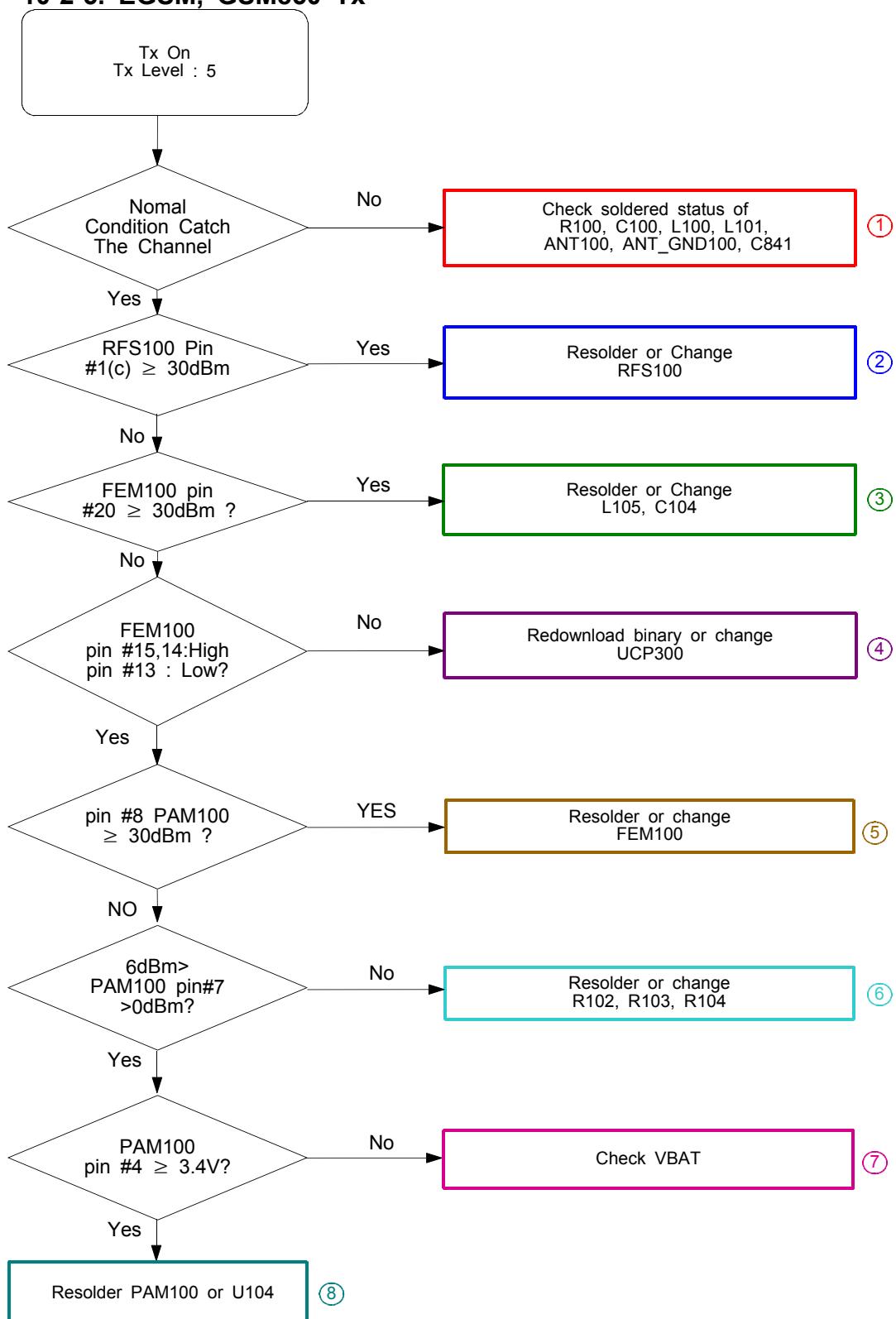
**10-2-2. GSM850 Rx**

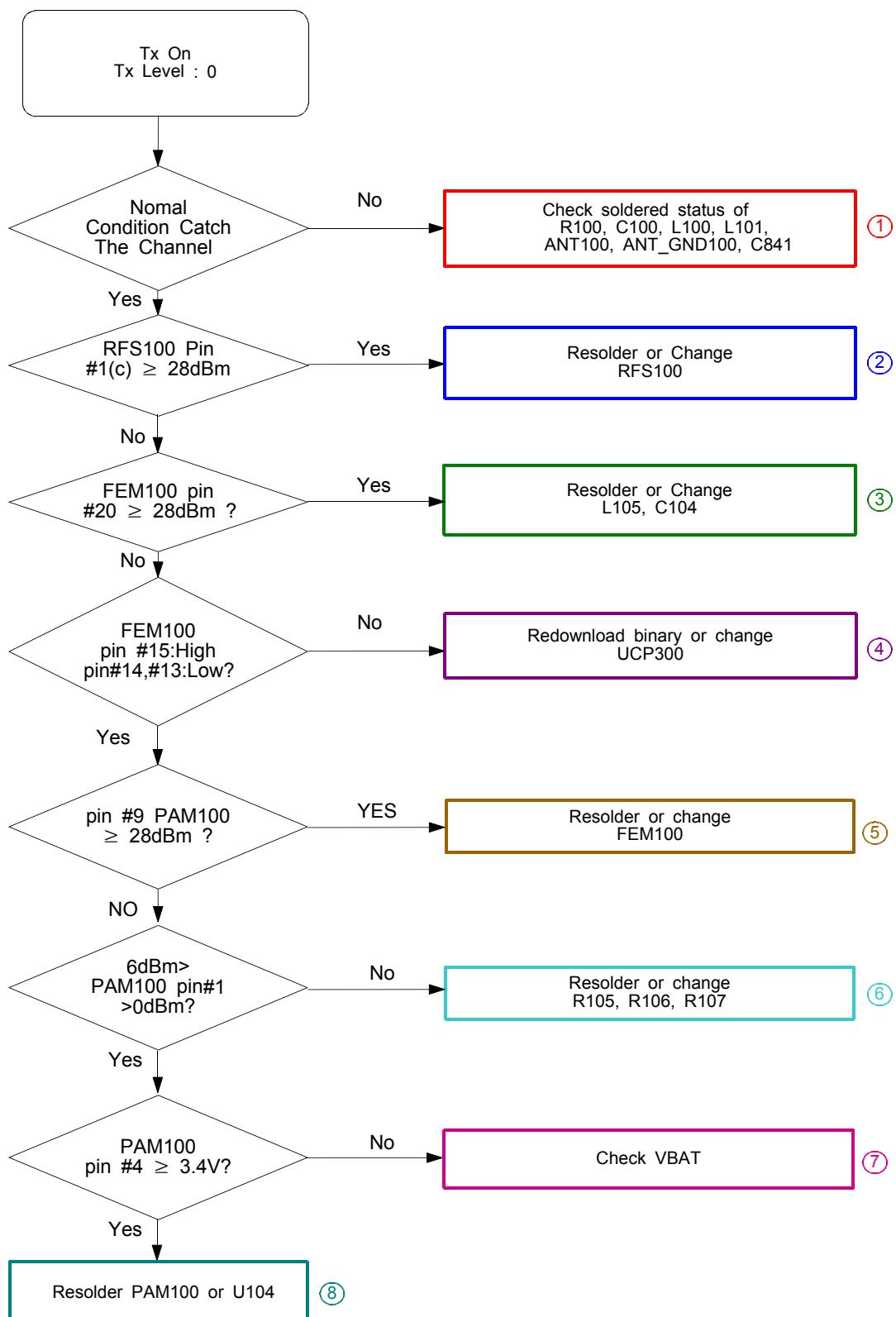
## 10-2-3. DCS Rx



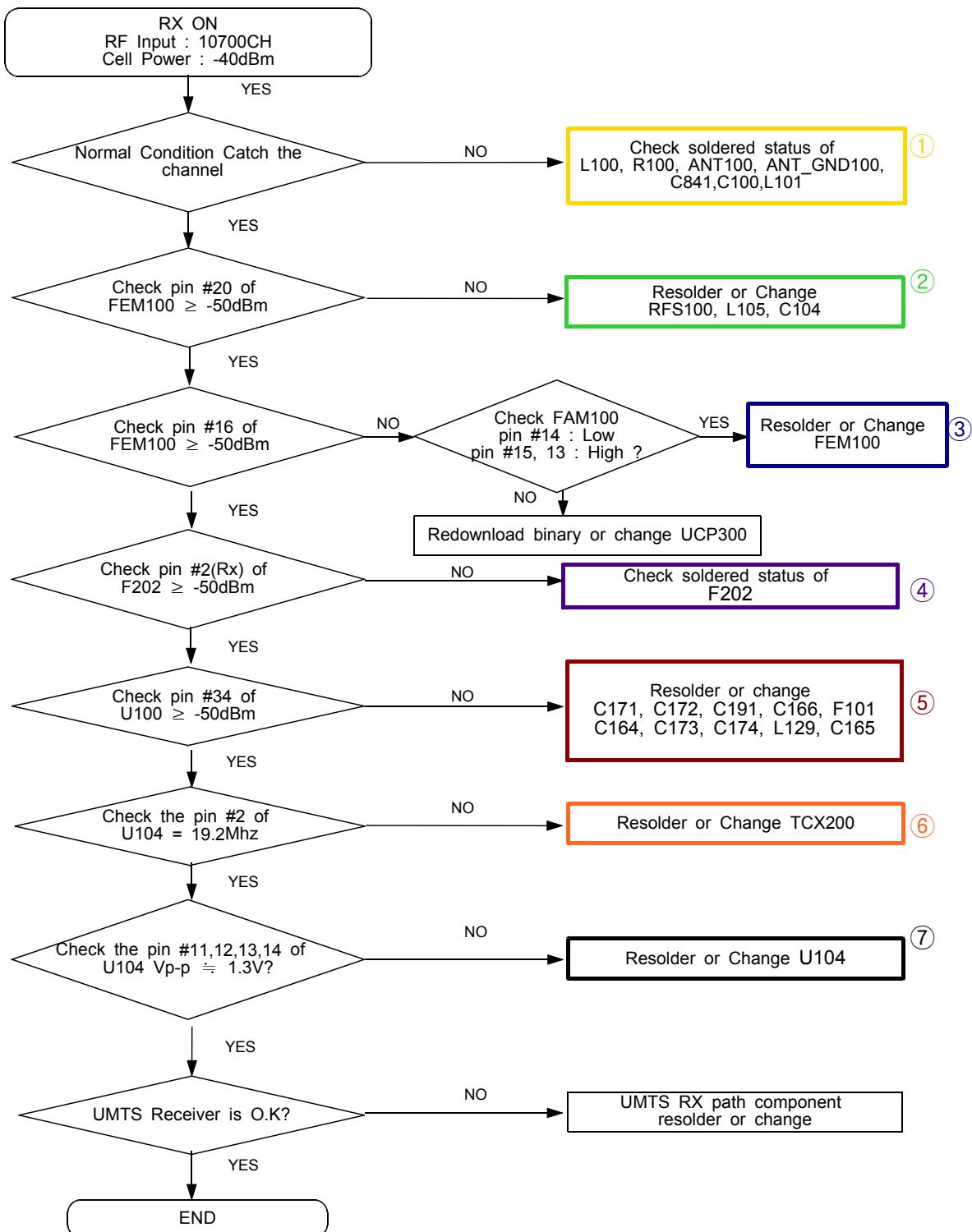
**10-2-4. PCS Rx**

### 10-2-5. EGSM, GSM850 Tx

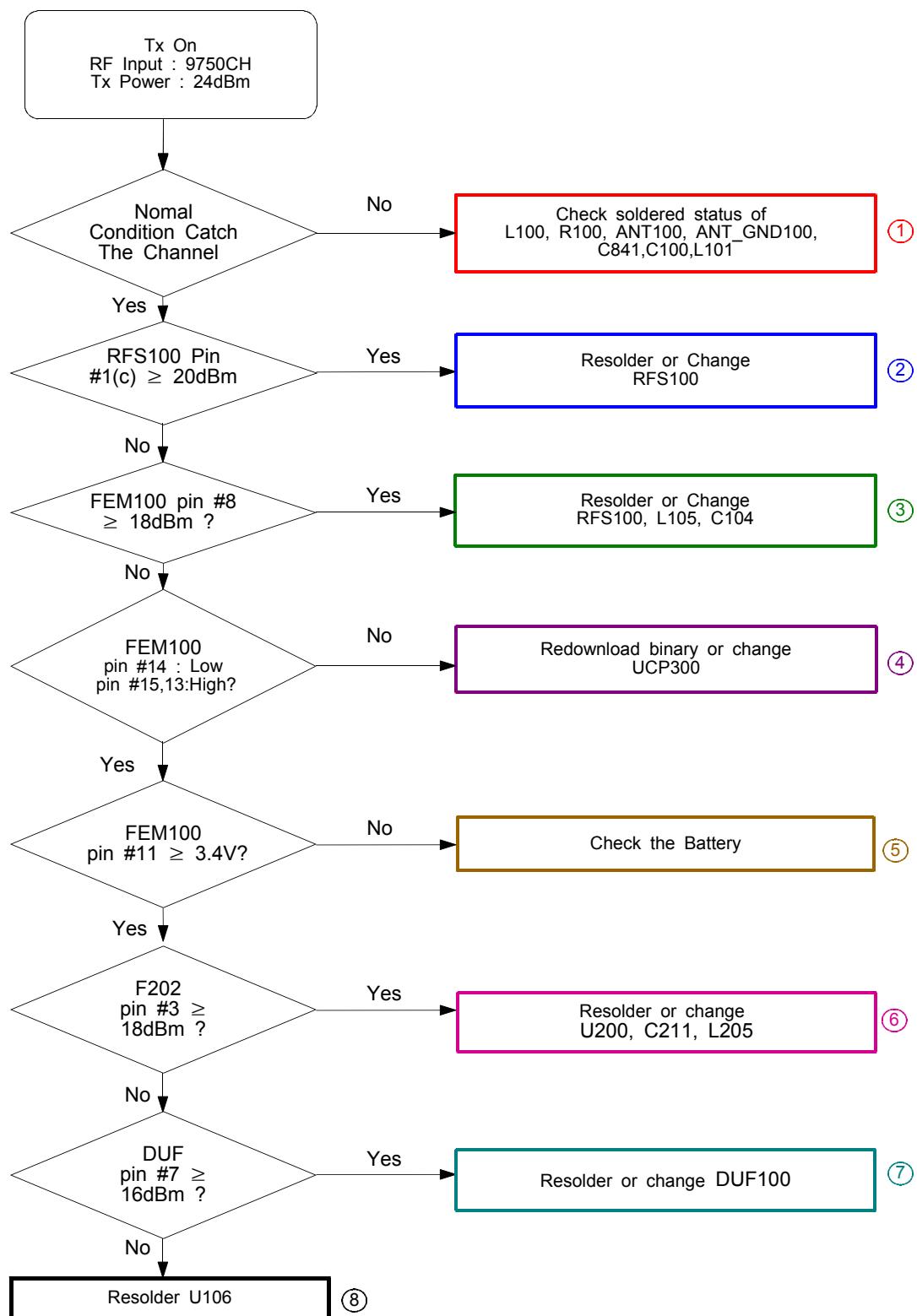


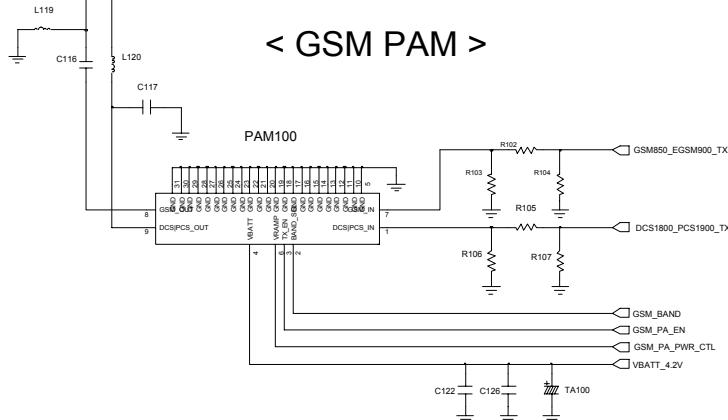
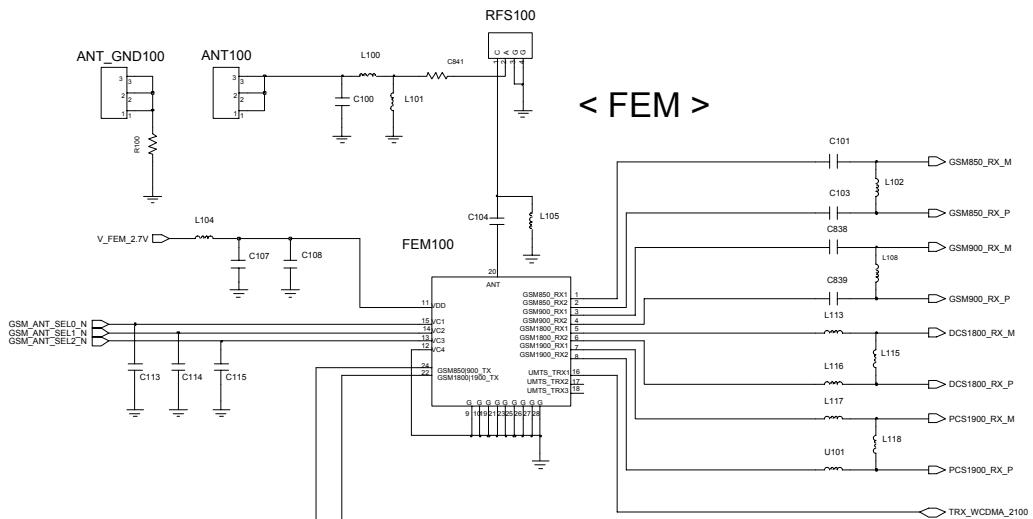
**10-2-6. DCS, PCS Tx**

### 10-2-7. UMTS Rx



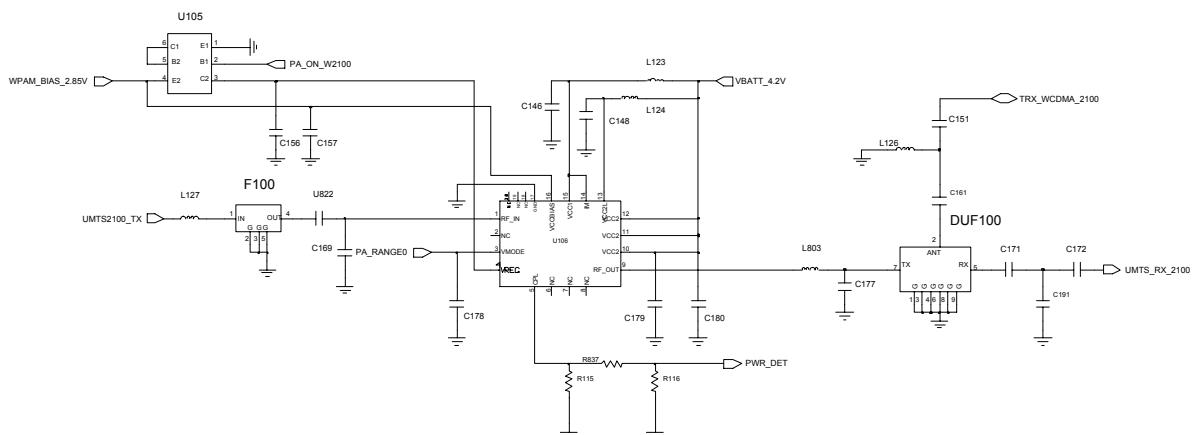
## 10-2-8. UMTS Tx



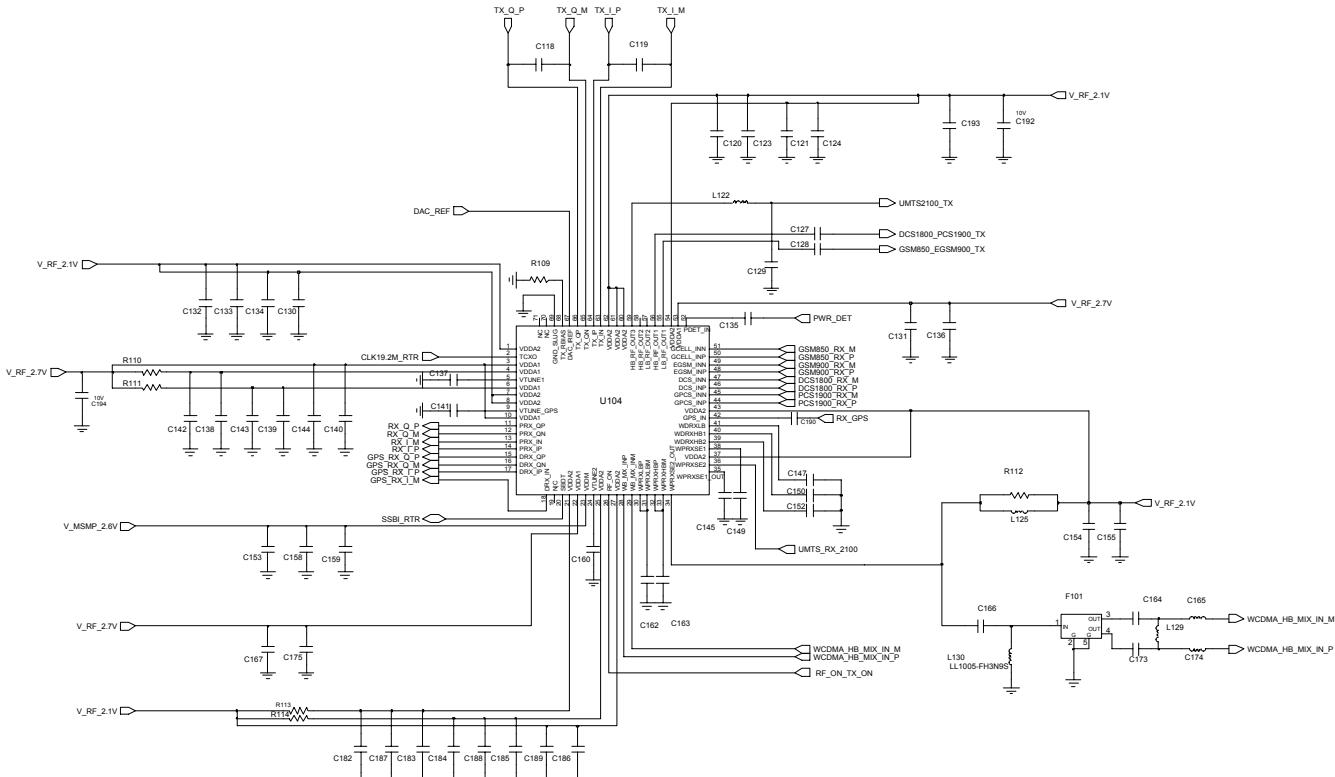


### < WCDMA PAM >

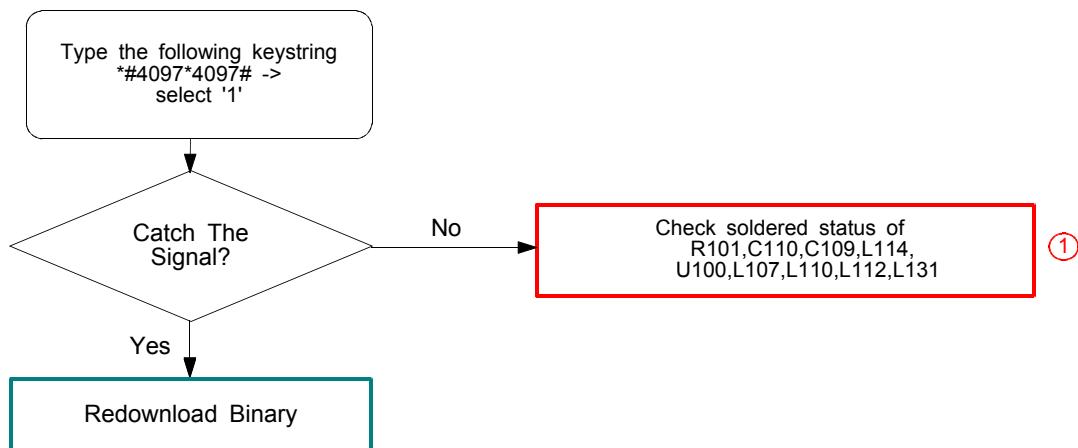
(BAND1\_W2100)



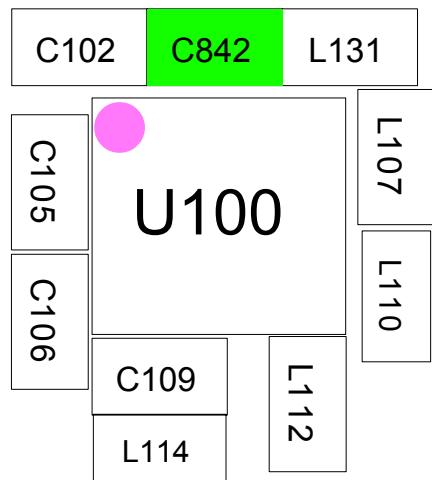
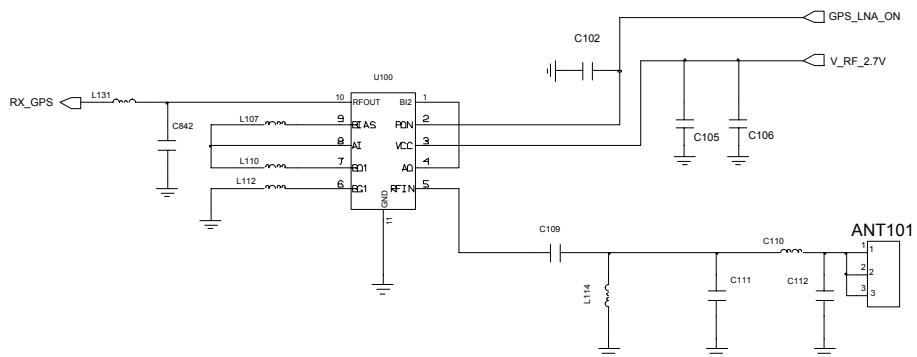
## < RF TRANCEIVER >

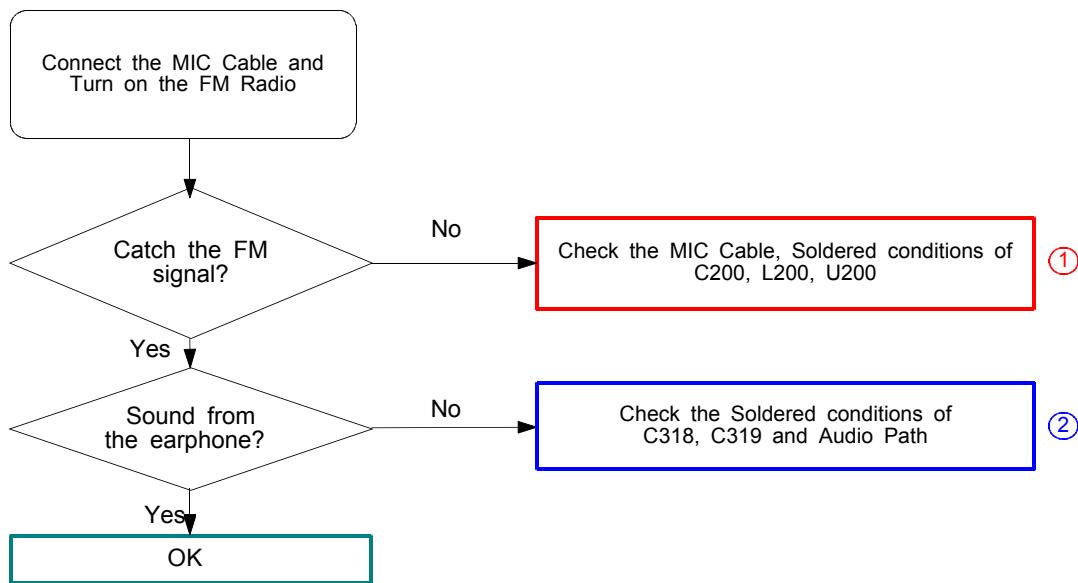


## 10-2-9. GPS

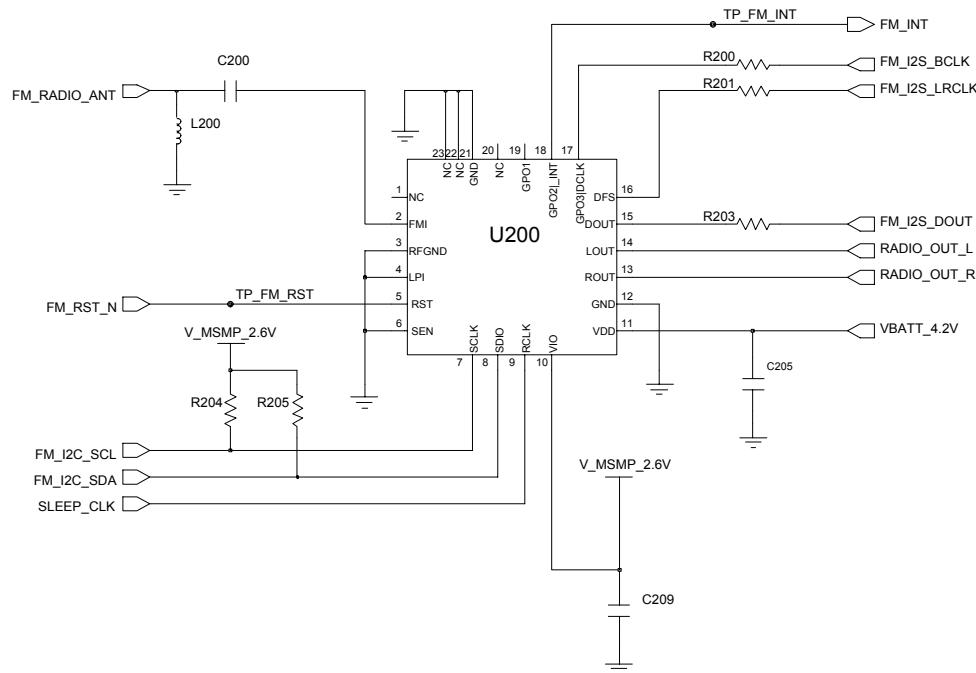


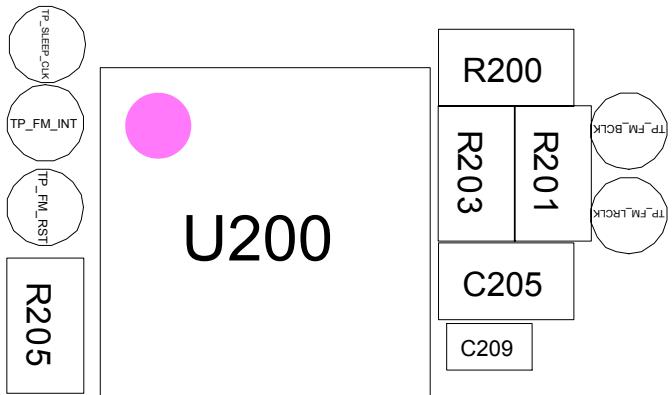
## < LNA\_GPS >



**10-2-10. FM Radio**

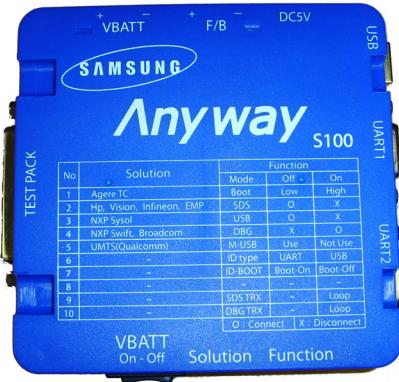
&lt; FM RADIO &gt;





## 4. Array Course Control

### 4-1. Software Adjustments



Test Jig (GH99-36900A)



Test Cable (GH39-01160A)



RF Test Cable (GH39-00985A)



RF Test Cable (GH99-38251A)

## 4-2. Software Downloading

### 4-2-1. Pre-requisite for Download

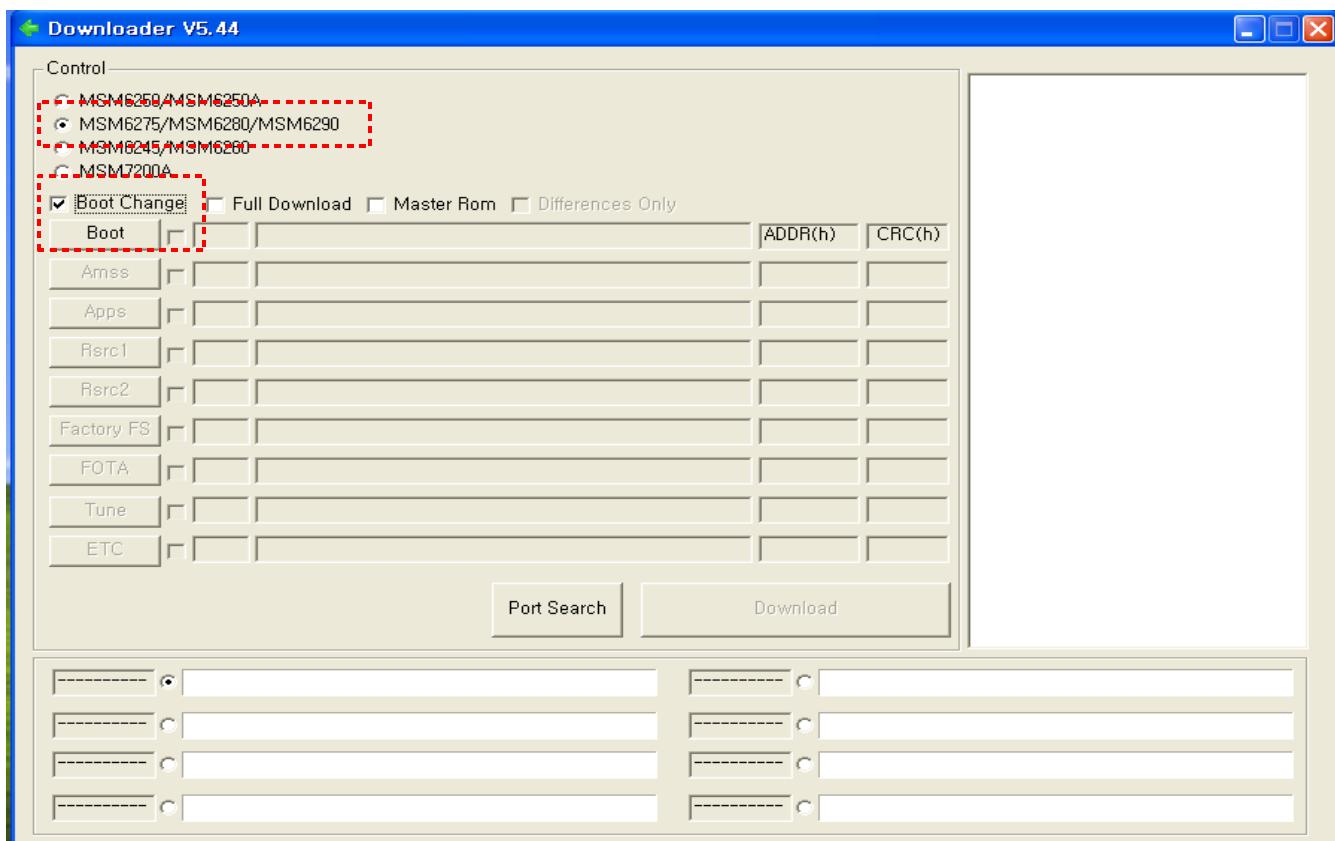
- Downloader Program([Multiloader V5.50.exe](#))
- M8800 Mobile Phone
- USB Data Link Cable
- Binary files

### 4-2-2. S/W Download Process

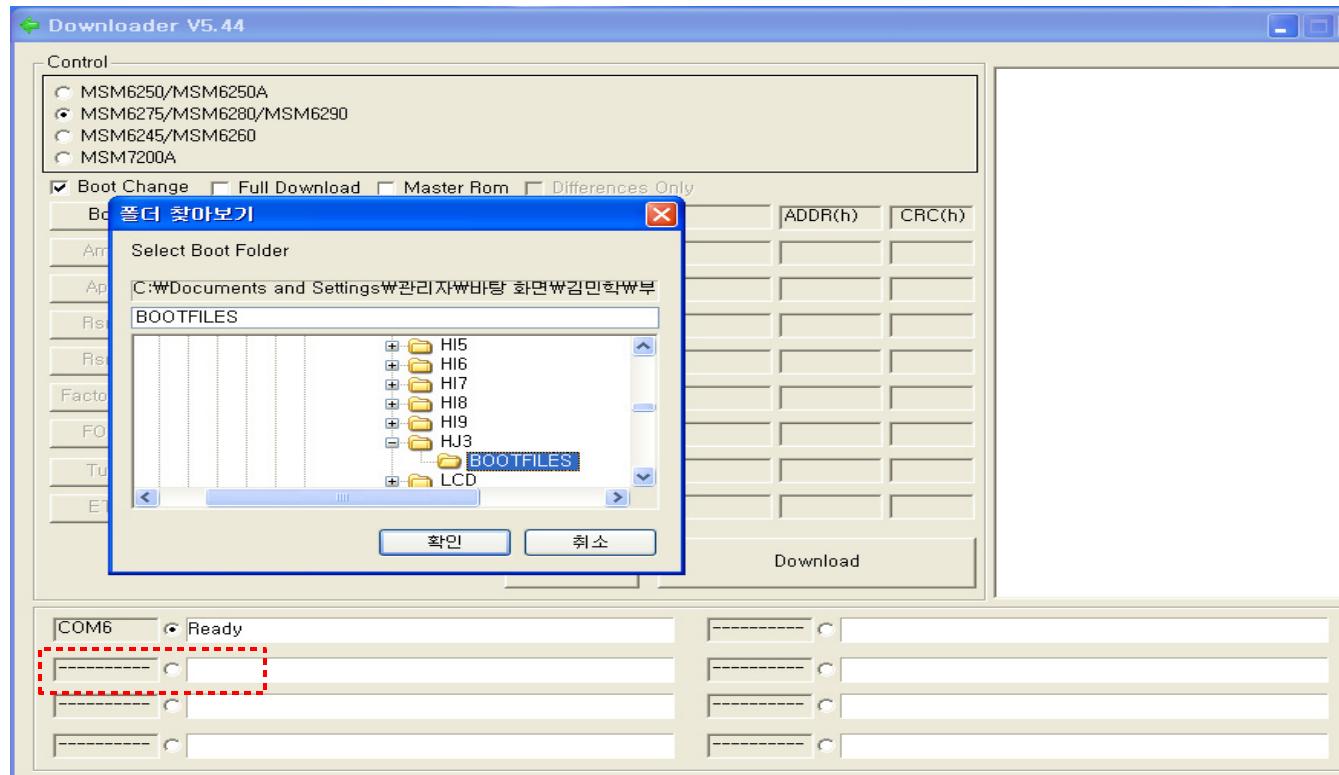
■ Load the binary download program by executing the ["Multiloader V5.33.exe"](#)

1. Execute the download SW, Multiloader.exe.
2. Boot the M8800 by pressing 'Power ON Key' + 'CAMERA key' + 'VOLUME DOWN Key' at the same time.
  - if you do properly, you can see the 'DOWMLOAD' in the middle of the screen.
3. Connet the USB data cable to the M8800.
4. Choose MSM6275/MSM6280 and check 'Boot Change', then the 'Boot' button will be activate

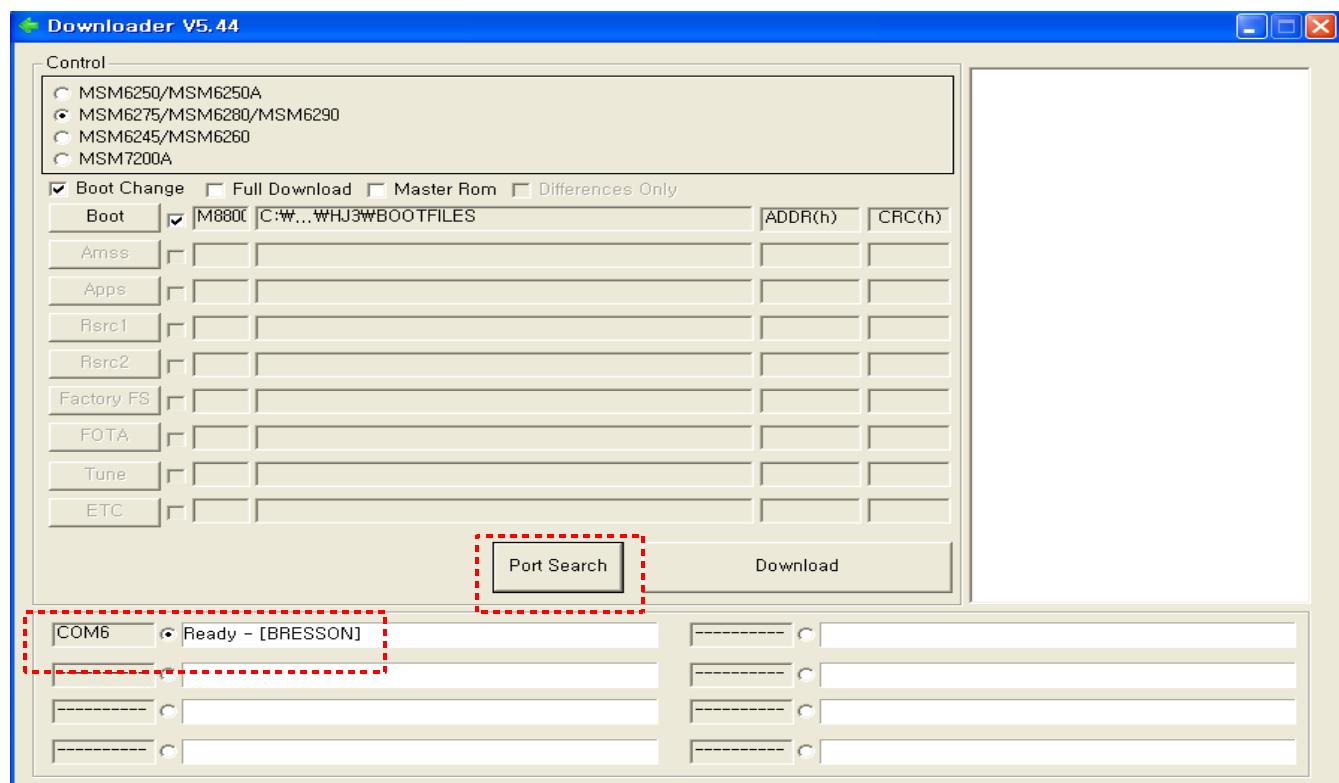
d.



5. Click the 'Boot', then the dialogue box is opened. Select the wanted directory, and press 'OK'.



6. Select 'Port Search', then 'Port' is activated.



7. Click 'Download', then downloading is executed successively. After 10seconds,

M8800 rebooting.

9. Disconnect the USB data cable to the M8800.

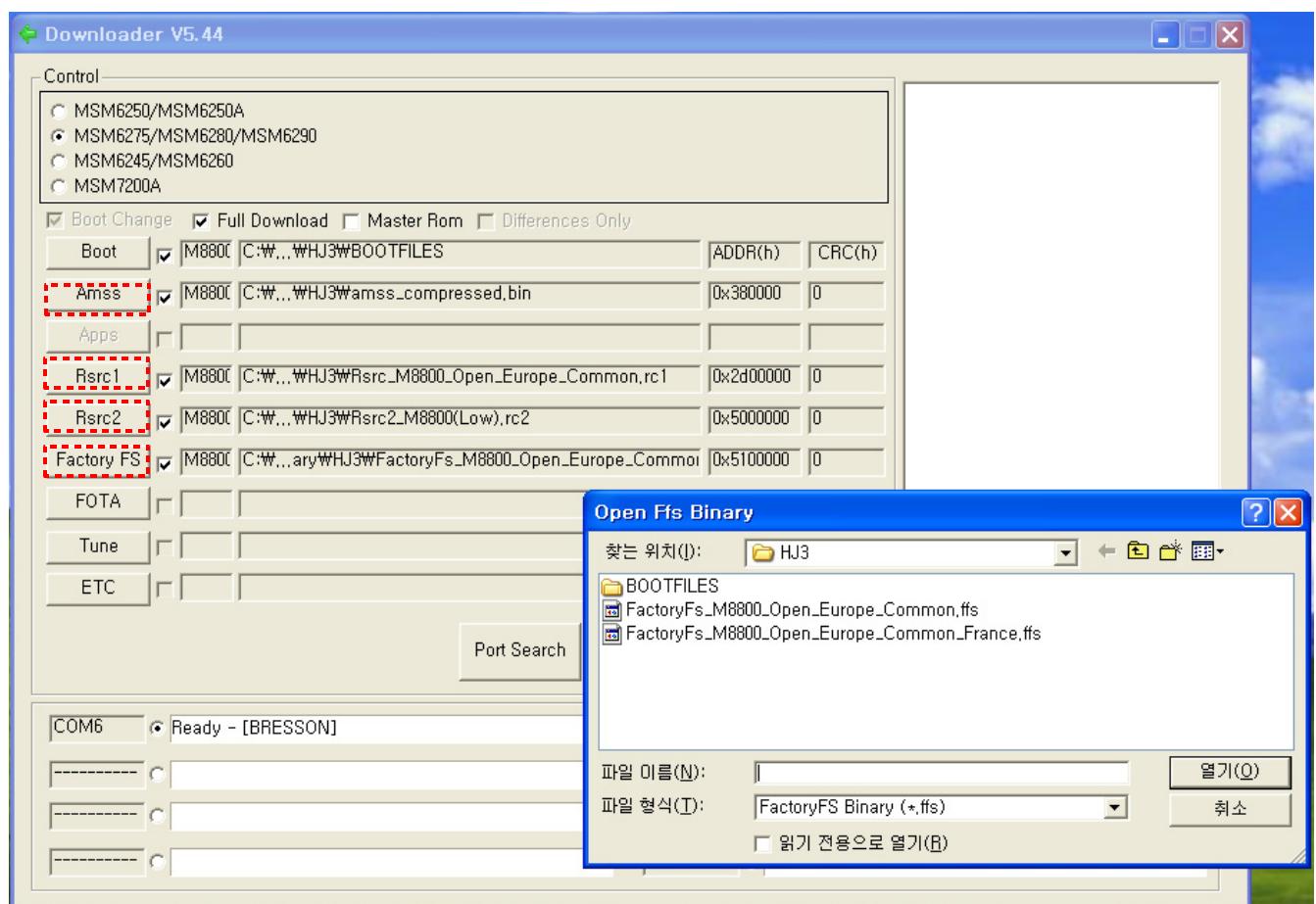
10. One more Boot the M8800 by pressing '**Power ON Key**' + '**CAMERA key**' + '**VOLUME DOWN Key**' at the same time.

- if you do properly, you can see the 'DOWMLOAD' in the middle of the screen.

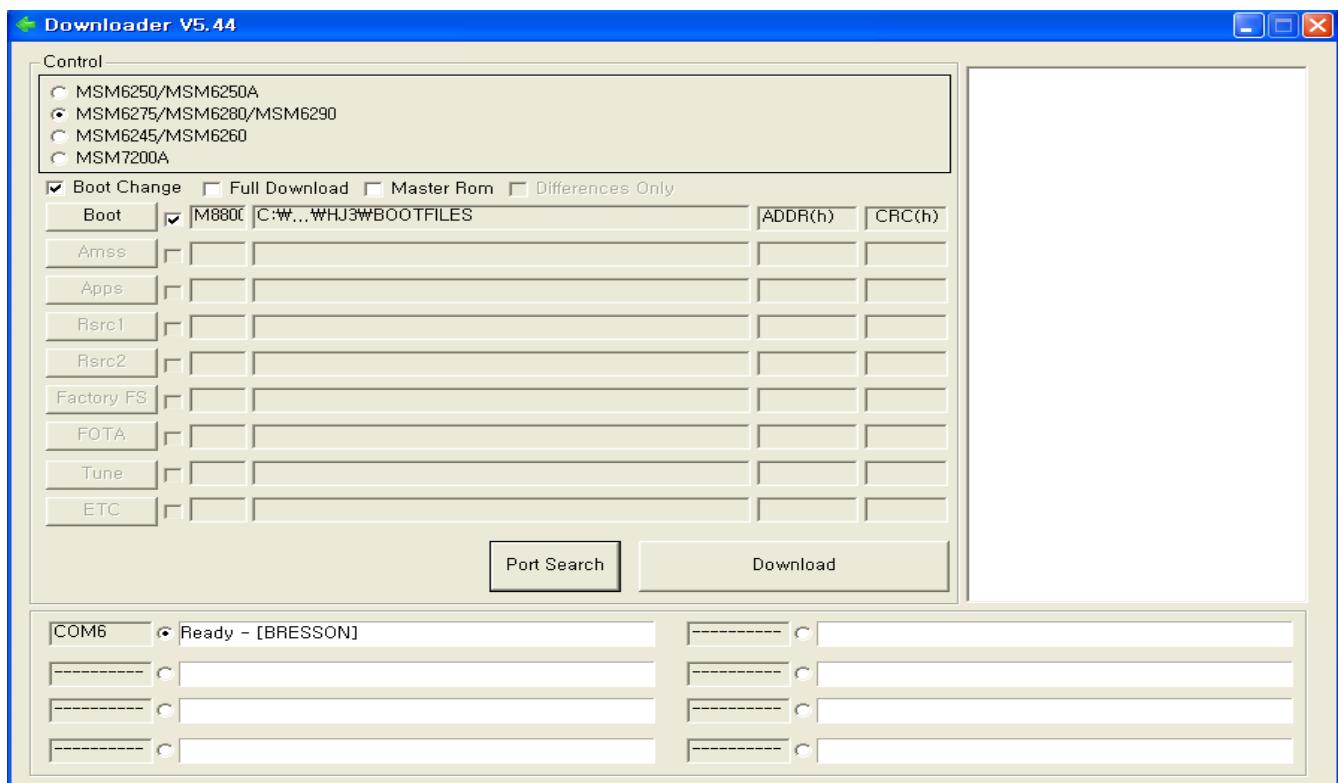
11. Connect the USB data cable to the M8800.

12. Select the 'Boot Change' once more, then 'Boot' button will be inactivated, and the others('Amss', 'Rsrc1', 'Rsrc2', 'FactoryFS', 'FOTA', and 'ETC') are activated.

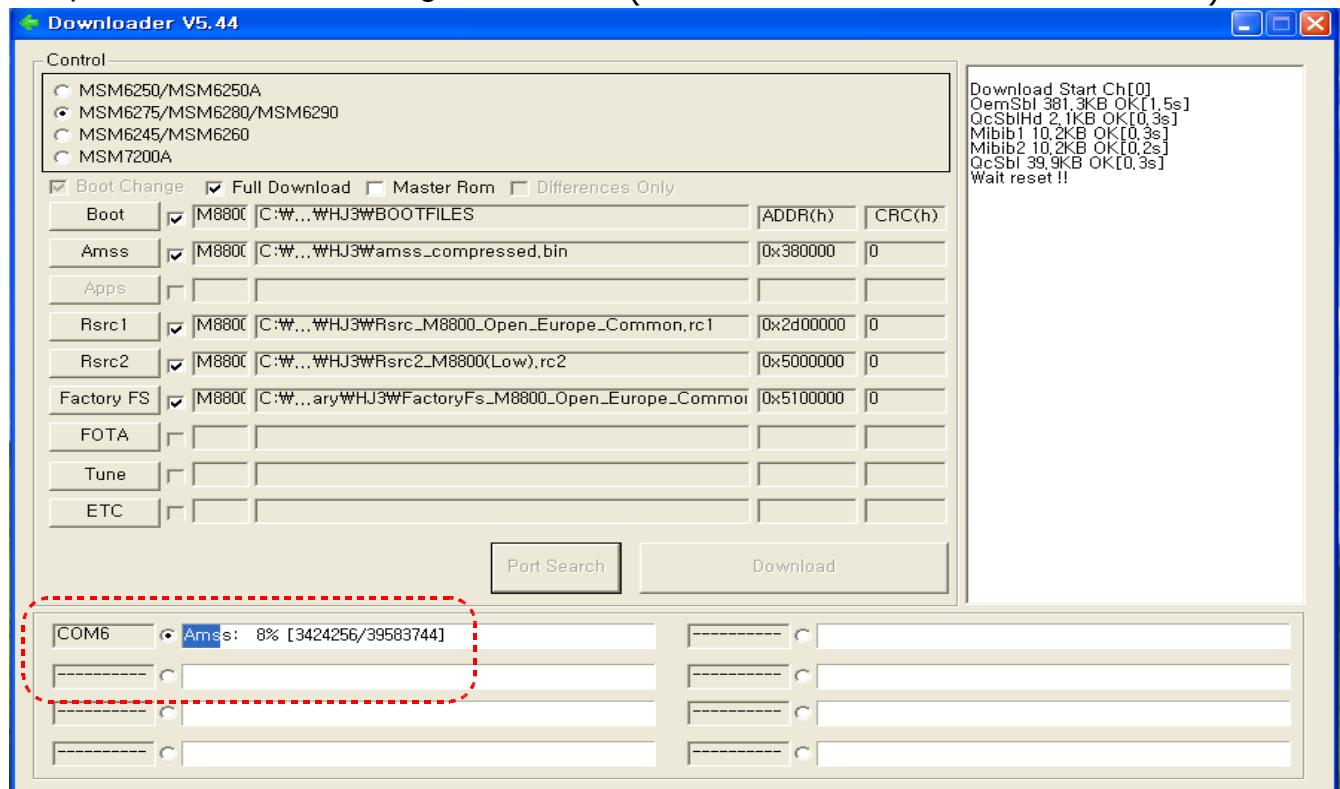
- Click 'AMSS', 'Rsrc1', 'Rsrc2', and 'FactoryFS' each, and select wanted files.



12. Select 'Port Search', then 'Port' is activated.

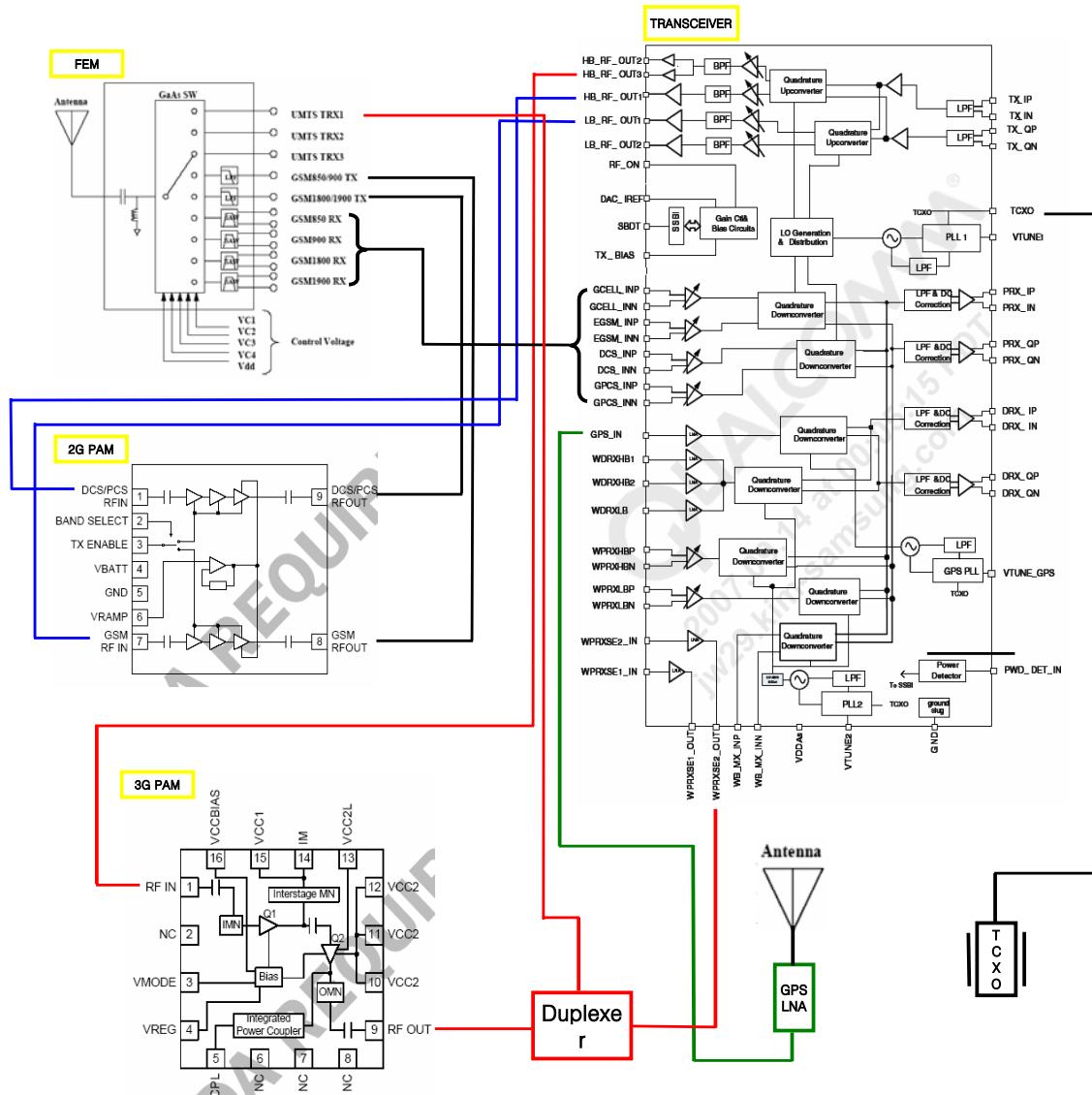


13. Click 'Download', then downloading is executed successively. If the download is completed, S/W downloading is finished. (Download time : about 5 minutes)

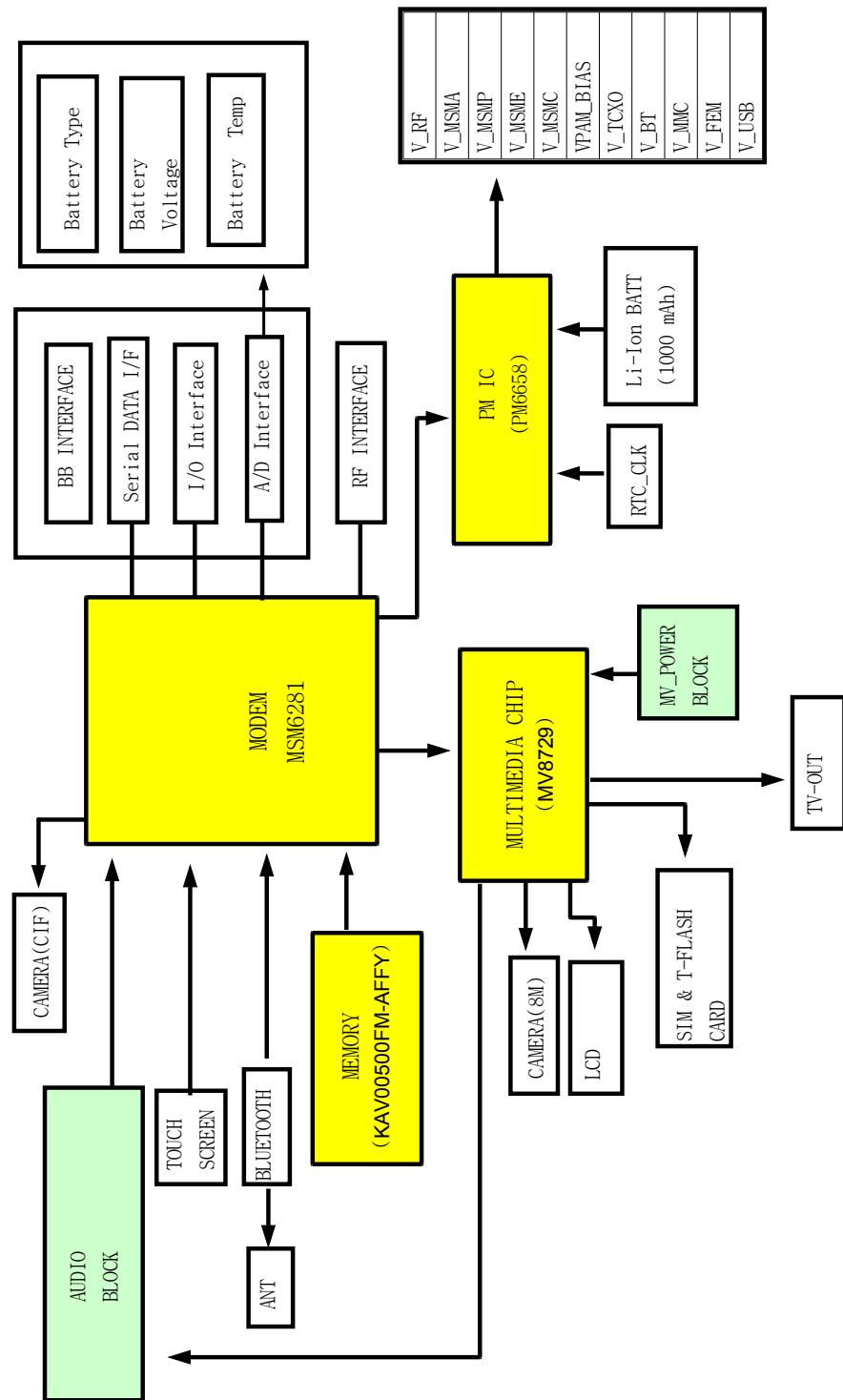


## 8. Block Diagrams

### 8-1 RF



## 2 Baseband



## 6. MAIN Electrical Parts List

SEC CODE	Design LOC	Description
0403-001547	ZD709	DIODE-ZENER
0404-001153	D300	DIODE-SCHOTTKY
0406-001267	ZD704,ZD705,ZD706	DIODE-TVS
0406-001279	D401,D402,D801,D802	DIODE-TVS
0406-001279	D803,D804,ZD500	DIODE-TVS
0406-001279	ZD501,ZD502,ZD503	DIODE-TVS
0406-001279	ZD600,ZD601,ZD602	DIODE-TVS
0406-001279	ZD603,ZD604,ZD605	DIODE-TVS
0406-001279	ZD700,ZD701,ZD707	DIODE-TVS
0406-001279	ZD708,ZD710,ZD711	DIODE-TVS
0406-001279	ZD712,ZD713,ZD714	DIODE-TVS
0406-001279	ZD715	DIODE-TVS
0406-001286	ZD400,ZD401,ZD702	DIODE-TVS
0406-001286	ZD703	DIODE-TVS
0407-001002	D400	IC-ANALOG SWITCH
0504-001113	TR400	TRANSISTOR
0504-001151	U105	IC-ANALOG SWITCH
0801-003013	U300	IC-ANALOG SWITCH
1001-001394	U602,U700,U815,U818	IC-ANALOG SWITCH
1001-001436	U504	IC-ANALOG SWITCH
1001-001447	U302,U600	IC-ANALOG SWITCH
1001-001481	U403	IC-ANALOG SWITCH
1003-002047	U604	IC-DRIVER
1003-002169	U701	IC-DRIVER
1108-000210	UME300	IC-MCP
1201-002733	U502	IC-AUDIO AMP
1201-002774	U100	LNA_GPS
1201-002775	U106	IC-TRANSCEIVER
1201-002778	PAM100	IC-TRANSCEIVER
1203-004422	U811	IC-DC/DC CONVERTER
1203-004518	U401	IC-POWER AMP
1203-004596	U503	IC-DC/DC CONVERTER
1203-004776	U603,U810	IC-DC/DC CONVERTER
1203-004778	U402	IC-POWER SUPERVISOR
1203-004819	U816	IC-DC/DC CONVERTER
1203-004857	U601	IC-DRIVER
1203-004978	U619	IC-DC/DC CONVERTER

SEC CODE	Design LOC	Description
1203-005069	U400	IC-DC/DC CONVERTER
1203-005250	U610,U621	IC-DC/DC CONVERTER
1203-005403	U800	IC-DC/DC CONVERTER
1203-005478	U607	IC-DC/DC CONVERTER
1203-005479	U615	IC-DRIVER
1203-005485	U620,U821	IC-DC/DC CONVERTER
1203-005487	U801	IC-DC/DC CONVERTER
1204-002924	U200	IC-MULTI REG
1205-003228	U501	IC-MULTI REG
1205-003288	U817	IC-DRIVER
1205-003297	U104	IC-TRANSCEIVER
1205-003419	U201	IC-TRANSCEIVER
1205-003498	UCP300	IC-MODEM
1205-003611	U802	IC-DC/DC CONVERTER
1209-001766	U702	IC-DRIVER
1404-001224	TH300	THERMISTOR-NTC
2007-000137	R200,R201	R-CHIP
2007-000140	R112,R706	R-CHIP
2007-000143	R204,R205,R828,R829	R-CHIP
2007-000144	R407	R-CHIP
2007-000145	R621	R-CHIP
2007-000147	R308	R-CHIP
2007-000148	R712	R-CHIP
2007-000151	R413	R-CHIP
2007-000157	R842	R-CHIP
2007-000161	R310	R-CHIP
2007-000162	R522	R-CHIP
2007-000163	R804	R-CHIP
2007-000164	R619	R-CHIP
2007-000165	R320,R630	R-CHIP
2007-000171	C841,L201,R100,R101	R-CHIP
2007-000171	R206,R210,R316,R424	R-CHIP
2007-000171	R502,R505,R519,R831	R-CHIP
2007-000171	R846,R847	R-CHIP
2007-000172	R111,R208,R632,R633	R-CHIP
2007-000174	R105	R-CHIP
2007-001119	R515,R521	R-CHIP

SEC CODE	Design LOC	Description
2007-001217	R102	R-CHIP
2007-001285	R114	R-CHIP
2007-001291	R509,R511	R-CHIP
2007-001298	R113	R-CHIP
2007-001305	R106,R107	R-CHIP
2007-001333	R714	R-CHIP
2007-001339	R807	R-CHIP
2007-002797	R203	R-CHIP
2007-003015	R110	R-CHIP
2007-003030	R103,R104	R-CHIP
2007-007092	R510,R709	R-CHIP
2007-007132	R410	R-CHIP
2007-007197	R702,R703,R705,R715	R-CHIP
2007-007197	R716	R-CHIP
2007-007309	R109	R-CHIP
2007-007310	R818	R-CHIP
2007-007314	R409	R-CHIP
2007-007334	R612	R-CHIP
2007-007468	R400	R-CHIP
2007-007528	R517,R520	R-CHIP
2007-007586	R311	R-CHIP
2007-007741	R312	R-CHIP
2007-008040	R837	R-CHIP
2007-008045	R202,R318,R412,R600	R-CHIP
2007-008045	R614,R708,R801,R824	R-CHIP
2007-008045	R840	R-CHIP
2007-008046	R115,R116	R-CHIP
2007-008049	R305	R-CHIP
2007-008052	R507,R508,R626,R711	R-CHIP
2007-008052	R713,U611	R-CHIP
2007-008055	R325,R421,R610,R611	R-CHIP
2007-008055	R817	R-CHIP
2007-008419	R309	R-CHIP
2007-008483	R408	R-CHIP
2007-008486	R404,R405,R411,R414	R-CHIP
2007-008486	R422,R830	R-CHIP
2007-008516	R300,R302,R303,R304	R-CHIP

SEC CODE	Design LOC	Description
2007-008516	R306,R406,R415,R416	R-CHIP
2007-008516	R417,R419,R423,R627	R-CHIP
2007-008516	R628,R631,R636,R637	R-CHIP
2007-008516	R827,R832	R-CHIP
2007-008542	R319,R620	R-CHIP
2007-008548	R704	R-CHIP
2007-008588	R503,R504,R601,R607	R-CHIP
2007-008686	R812	R-CHIP
2007-008806	R321,R402,R403	R-CHIP
2007-009084	R317,R833	R-CHIP
2007-009111	R707,R815	R-CHIP
2007-009115	R307,R835	R-CHIP
2007-009157	R822	R-CHIP
2007-009158	R209	R-CHIP
2007-009170	R700,R701,R823	R-CHIP
2007-009171	R313,R314,R315,R401	R-CHIP
2007-009408	R326,R327	R-CHIP
2203-000233	C105,C123,C124,C128	C-CER,CHIP
2203-000233	C134,C154,C158,C187	C-CER,CHIP
2203-000233	C189	C-CER,CHIP
2203-000254	C137,C160,C707	C-CER,CHIP
2203-000278	C102,C219,C552,C554	C-CER,CHIP
2203-000330	C413,C432	C-CER,CHIP
2203-000386	C833,C834,C835,C836	C-CER,CHIP
2203-000438	C141,C146,C148,C180	C-CER,CHIP
2203-000438	C200	C-CER,CHIP
2203-000466	C220	C-CER,CHIP
2203-000489	C106	C-CER,CHIP
2203-000627	C127,C136,C142,C143	C-CER,CHIP
2203-000627	C145,C149,C150,C152	C-CER,CHIP
2203-000627	C159,C162,C163,C175	C-CER,CHIP
2203-000627	C188,C812	C-CER,CHIP
2203-000696	C161,C191	C-CER,CHIP
2203-000725	C621	C-CER,CHIP
2203-000812	C104,C108,C113,C114	C-CER,CHIP
2203-000812	C115,C135,C147,C151	C-CER,CHIP
2203-000812	C164,C171,C172,C173	C-CER,CHIP

SEC CODE	Design LOC	Description
2203-000812	C190,C439,C441,C443	C-CER,CHIP
2203-000812	C553	C-CER,CHIP
2203-000854	C545,C546,C556,C557	C-CER,CHIP
2203-000995	C122	C-CER,CHIP
2203-001383	C177	C-CER,CHIP
2203-001385	C101,C103,C117,C129	C-CER,CHIP
2203-001385	C838,C839	C-CER,CHIP
2203-001405	C205,C511,C515,C516	C-CER,CHIP
2203-001405	C519,C547,C555	C-CER,CHIP
2203-002709	C825	C-CER,CHIP
2203-005234	C100	C-CER,CHIP
2203-005288	C166	C-CER,CHIP
2203-005382	C116	C-CER,CHIP
2203-005552	C109	C-CER,CHIP
2203-005682	C208,C311,C314,C317	C-CER,CHIP
2203-005682	C423,C425,C427,C444	C-CER,CHIP
2203-005682	C446,C447,C448,C451	C-CER,CHIP
2203-005682	C452,C542,C550,C551	C-CER,CHIP
2203-005682	C607,C609,C611,C613	C-CER,CHIP
2203-005682	C615,C623,C625,C627	C-CER,CHIP
2203-005682	C700,C701,C705,U822	C-CER,CHIP
2203-005719	C445,C449	C-CER,CHIP
2203-005725	C133,C144	C-CER,CHIP
2203-005727	C548,C549,C831,C832	C-CER,CHIP
2203-005729	C709,C710,C711	C-CER,CHIP
2203-005732	C118,C119	C-CER,CHIP
2203-005736	C221,C422,C431,C438	C-CER,CHIP
2203-005777	C169	C-CER,CHIP
2203-005806	C201,C203,C211,C301	C-CER,CHIP
2203-005806	C324,C325,C326,C327	C-CER,CHIP
2203-005806	C328,C336,C339,C340	C-CER,CHIP
2203-005806	C341,C342,C346,C351	C-CER,CHIP
2203-005806	C365	C-CER,CHIP
2203-006047	C316	C-CER,CHIP
2203-006048	C442,C537,C538,C540	C-CER,CHIP
2203-006048	C702,C706,C827	C-CER,CHIP
2203-006121	C222	C-CER,CHIP

SEC CODE	Design LOC	Description
2203-006194	C202,C204,C207,C310	C-CER,CHIP
2203-006194	C313,C329,C330,C331	C-CER,CHIP
2203-006194	C332,C333,C334,C337	C-CER,CHIP
2203-006194	C343,C344,C345,C347	C-CER,CHIP
2203-006194	C349,C350,C355,C357	C-CER,CHIP
2203-006208	C632,C634,C635,C815	C-CER,CHIP
2203-006257	C518,C522,C523,C527	C-CER,CHIP
2203-006257	C529,C530,C531	C-CER,CHIP
2203-006260	C126	C-CER,CHIP
2203-006305	C541	C-CER,CHIP
2203-006307	C435	C-CER,CHIP
2203-006324	C601,C602,C603	C-CER,CHIP
2203-006348	C433,C434,C703	C-CER,CHIP
2203-006361	C712	C-CER,CHIP
2203-006399	C318,C319,C415,C416	C-CER,CHIP
2203-006423	C132,C140,C206,C303	C-CER,CHIP
2203-006423	C304,C305,C306,C308	C-CER,CHIP
2203-006423	C309,C312,C315,C320	C-CER,CHIP
2203-006423	C321,C322,C323,C338	C-CER,CHIP
2203-006423	C348,C352,C353,C354	C-CER,CHIP
2203-006423	C356,C358,C360,C361	C-CER,CHIP
2203-006423	C362,C363,C412,C500	C-CER,CHIP
2203-006423	C503,C608,C610,C612	C-CER,CHIP
2203-006423	C614,C616,C624,C626	C-CER,CHIP
2203-006423	C628,C640,C641,C708	C-CER,CHIP
2203-006423	C713,C715,C800,C803	C-CER,CHIP
2203-006423	C804,C805,C806,C807	C-CER,CHIP
2203-006423	C808,C813,C814,C817	C-CER,CHIP
2203-006423	C818,C819,C820,U806	C-CER,CHIP
2203-006423	U808	C-CER,CHIP
2203-006556	C364	C-CER,CHIP
2203-006562	C410,C411,C436,C450	C-CER,CHIP
2203-006562	C504,C520,C524,C526	C-CER,CHIP
2203-006562	C532,C533,C534,C618	C-CER,CHIP
2203-006562	C619,C620,C629,C636	C-CER,CHIP
2203-006562	C637,C638,C639,C642	C-CER,CHIP
2203-006562	C643,C644,C645,C646	C-CER,CHIP

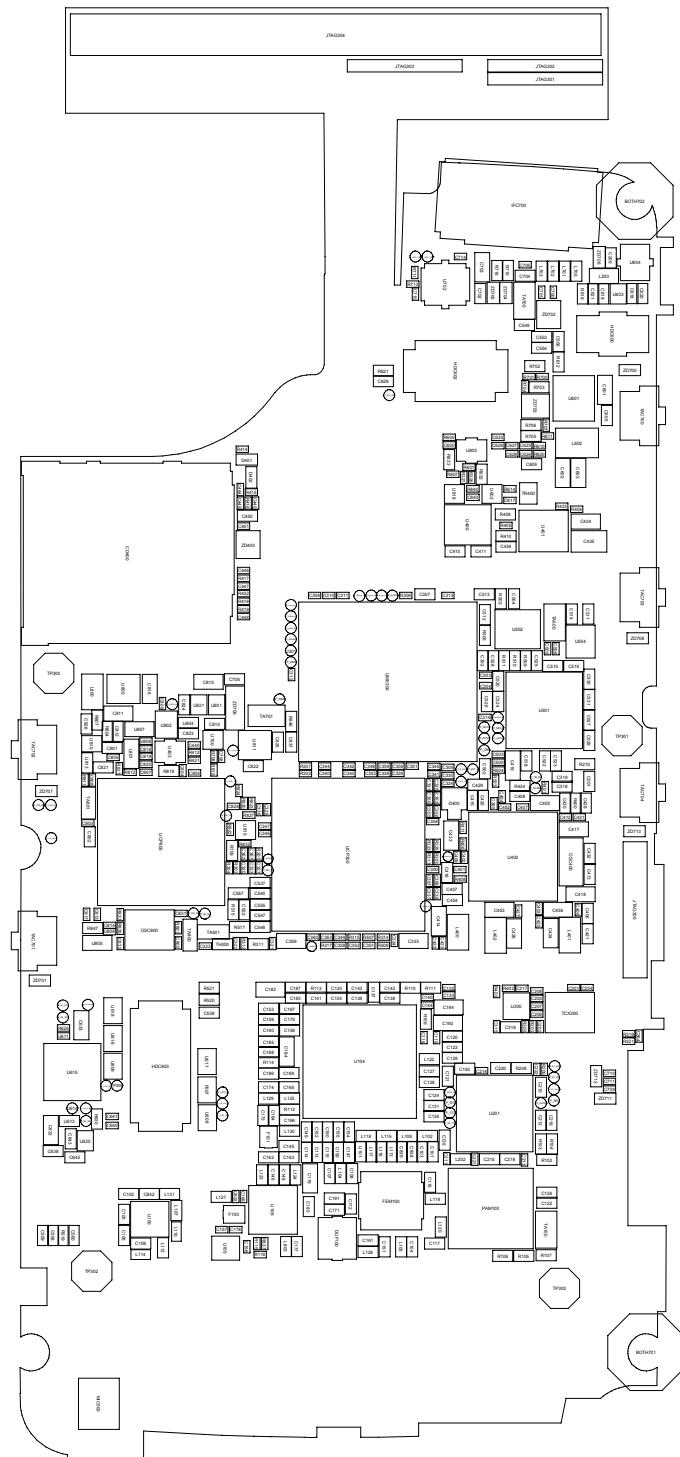
SEC CODE	Design LOC	Description
2203-006562	C647,C648,C649,C704	C-CER,CHIP
2203-006562	C826,C829,C830,U613	C-CER,CHIP
2203-006648	C714	C-CER,CHIP
2203-006668	C300	C-CER,CHIP
2203-006681	C107,C120,C121,C130	C-CER,CHIP
2203-006681	C131,C138,C139,C153	C-CER,CHIP
2203-006681	C155,C167,C183,C185	C-CER,CHIP
2203-006681	C186,C193	C-CER,CHIP
2203-006712	C156,C157,C178	C-CER,CHIP
2203-006824	C179,C182,C184,C400	C-CER,CHIP
2203-006824	C414,C417,C418,C419	C-CER,CHIP
2203-006824	C816	C-CER,CHIP
2203-006825	C335,C359	C-CER,CHIP
2203-006838	C457,C801,C802,C821	C-CER,CHIP
2203-006838	C822,C823,C824,C837	C-CER,CHIP
2203-006838	U813	C-CER,CHIP
2203-006839	C209,C213,C214,C401	C-CER,CHIP
2203-006839	C402,C403,C404,C405	C-CER,CHIP
2203-006839	C407,C409,C440,C505	C-CER,CHIP
2203-006839	C506,C600,C617,C809	C-CER,CHIP
2203-006839	C828,C840	C-CER,CHIP
2203-006841	C437,C810,U804	C-CER,CHIP
2203-006872	C210,C212,C215,C218	C-CER,CHIP
2203-006872	C406,C408,C420,C421	C-CER,CHIP
2203-006872	C428,C429,C430,C501	C-CER,CHIP
2203-006872	C502	C-CER,CHIP
2203-006890	U805,U80	C-CER,CHIP
2203-007270	C192,C194,C424,C426	C-CER,CHIP
2203-007270	C453,C456,C633,C811	C-CER,CHIP
2203-007271	C302,C307,C454	C-CER,CHIP
2404-001339	TA802	C-TA,CHIP
2404-001377	TA501	C-TA,CHIP
2404-001381	TA800,TA801	C-TA,CHIP
2404-001496	TA100,TA700,TA701	C-TA,CHIP
2404-001506	TA500	C-TA,CHIP
2703-001178	L112,L803	INDUCTOR-SMD
2703-001231	L801	INDUCTOR-SMD

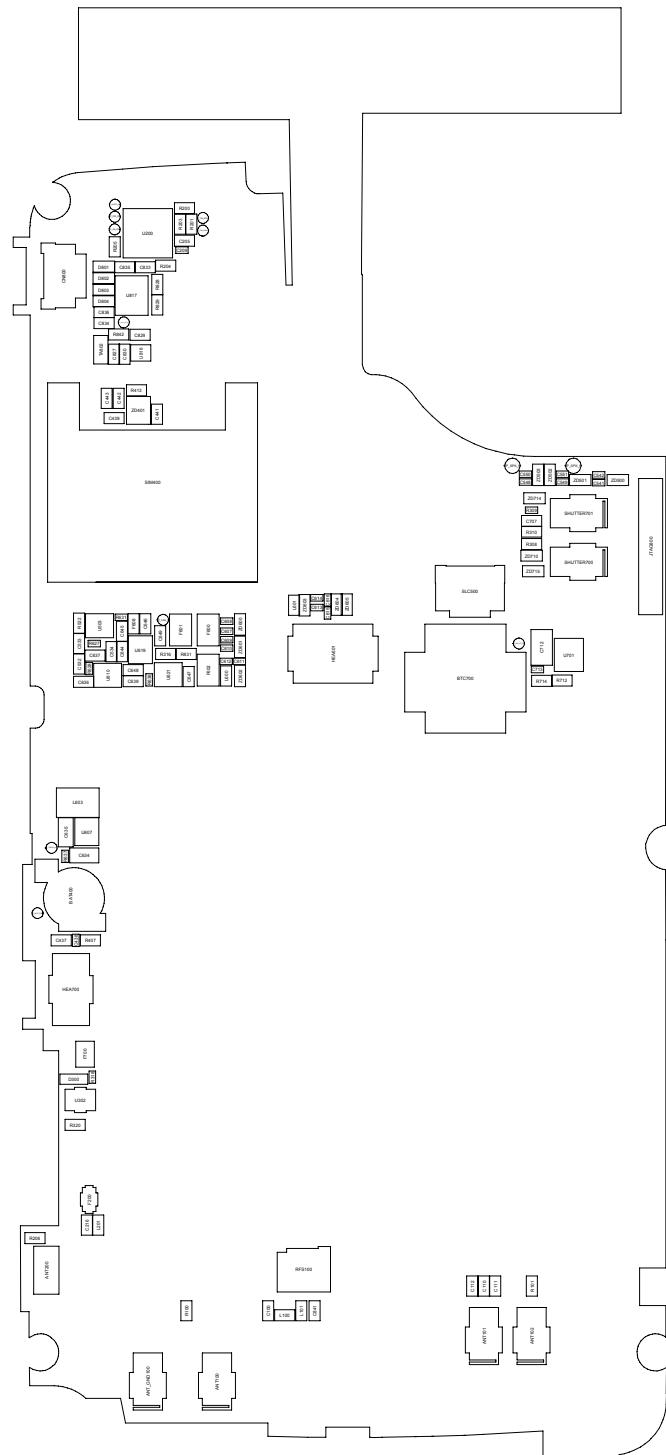
SEC CODE	Design LOC	Description
2703-001409	L115,L118	INDUCTOR-SMD
2703-001733	L129	INDUCTOR-SMD
2703-001737	C110	INDUCTOR-SMD
2703-001748	L126	INDUCTOR-SMD
2703-001749	L131	INDUCTOR-SMD
2703-001751	L130	INDUCTOR-SMD
2703-002170	L117,U101	INDUCTOR-SMD
2703-002176	L122	INDUCTOR-SMD
2703-002198	L101,L123,L124	INDUCTOR-SMD
2703-002200	L102,L108	INDUCTOR-SMD
2703-002203	L104	INDUCTOR-SMD
2703-002204	L119	INDUCTOR-SMD
2703-002207	L127	INDUCTOR-SMD
2703-002208	L125	INDUCTOR-SMD
2703-002268	L113,L116	INDUCTOR-SMD
2703-002308	L107	INDUCTOR-SMD
2703-002314	L105	INDUCTOR-SMD
2703-002365	L100	INDUCTOR-SMD
2703-002368	C216,L120	INDUCTOR-SMD
2703-002506	C165,C174	INDUCTOR-SMD
2703-002557	L200	INDUCTOR-SMD
2703-002700	L114	INDUCTOR-SMD
2703-002710	L110	INDUCTOR-SMD
2703-003258	L400,L401,L402	INDUCTOR-SMD
2703-003260	L800	INDUCTOR-SMD
2703-003347	L602,L603	INDUCTOR-SMD
2801-004339	OSC400	CRYSTAL-SMD
2801-004458	OSC800	CRYSTAL-SMD
2809-001280	TCX200	OSCILLATOR-VCTCXO
2901-001353	F600,F601,F602	FILTER-EMI SMD
2901-001498	F607,F700,U608,U609	FILTER-EMI SMD
2901-001498	U616,U617,U618	FILTER-EMI SMD
2901-001498	F100	FILTER-SAW
2904-001658	F101	FILTER-SAW
2904-001702	F200	FILTER-LC
2909-001307	DUF100	DUPLEXER-FBAR
2910-000024	FEM100	FEM

SEC CODE	Design LOC	Description
2911-000096	MIC500	MICPHONE
3003-001136	F608,L600,L601	BEAD-SMD
3301-001534	L202	BEAD-SMD
3301-001659	L700,L701,L702,L703	BEAD-SMD
3301-001812	TAC700,TAC701,TAC702	SWITCH-TACT
3404-001303	TAC703,TAC704	SWITCH-TACT
3404-001303	RFS100	CONNECTOR-COAXIAL
3705-001503	CN800	CONNECTOR-ZIP
3708-001947	SLC500	CONNECTOR-ZIP
3709-001336	SIM400	CONNECTOR-CARD EDGE
3709-001464	CD400	CONNECTOR-CARD EDGE
3710-002681	IFC700	SOCKET-INTERFACE
3711-005728	HDC602	HEADER-BOARD TO BOARD
3711-005836	HEA601	HEADER-BOARD TO BOARD
3711-006141	HDC603	HEADER-BOARD TO BOARD
3711-006327	HDC600,HEA700	HEADER-BOARD TO BOARD
3711-006803	BTC700	HEADER-BATTERY
4202-001446	ANT200	NPR-ANTENNA CONTACT
4302-001130	BAT400	BATTERY-LI(2ND)
GH13-00066A	UCP800	IC-MULTI REG
GH71-08426A	ANT100,ANT101,ANT102	NPR-ANTENNA CONTACT
GH71-08426A	ANT_GND100	NPR-ANTENNA CONTACT
GH71-08426A	SHUTTER700	NPR-ANTENNA CONTACT
GH71-08426A	SHUTTER701	NPR-ANTENNA CONTACT
2007-010045	R811	R-CHIP

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

## 9. PCB Diagrams





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