

**SAMSUNG**

# GSM TELEPHONE

## SGH-B100

# **SERVICE** *Manual*

**GSM TELEPHONE**



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**SAMSUNG  
ELECTRONICS**



GSPN (Global Service Partner Network)

| <b>Country</b>   | <b>Web Site</b>  |
|------------------|--|
| North America    | <a href="http://service.samsungportal.com">service.samsungportal.com</a> |
| Latin America    | <a href="http://latin.samsungportal.com">latin.samsungportal.com</a>     |
| CIS              | <a href="http://cis.samsungportal.com">cis.samsungportal.com</a>         |
| Europe           | <a href="http://europe.samsungportal.com">europe.samsungportal.com</a>   |
| China            | <a href="http://china.samsungportal.com">china.samsungportal.com</a>     |
| Asia             | <a href="http://asia.samsungportal.com">asia.samsungportal.com</a>       |
| Mideast & Africa | <a href="http://mea.samsungportal.com">mea.samsungportal.com</a>         |

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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 specipcty of cellular phone is sensitive for surrounding interference(RF noise).
- Be careful to use a kind of magnetic object or tool,  
because performance of parts is damaged by the influence of manetic force.
- Surely use a standard screwdriver when you disassemble this product,  
otherwise screw will be worn away.
- Use a thicken twisted wire when you measure level.  
A thicken twisted wire has low resistance, therefore error of measurement is few.
- Repair after separate Test Pack and Set because for short danger (for example an  
overcurrent and furious flames of parts etc) when you repair board in condition of  
connecting Test Pack and tuning on.
- Take specially care of soldering, because Land of PCB is small and weak in heat.
- Surely tune on/off while using AC power plug, because a repair of battery charger is  
dangerous when tuning ON/OFF PBA and Connector after 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.

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## 2. Specification

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### 2-1. GSM General Specification

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

## 2-2. GSM Tx Power Class

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

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## 3. Product Function

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### Main Function

- Speed dial
- Phonebook memory status
- SDN(Service Dialling Numbers)
- Network services
- Read SMS or MMS messages
- Send SMS or MMS messages
- Voicemail
- Broadcast message
- MMS profile
- SOS messages
- Web browser
- Menu shortcuts

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## 4. Array course control

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**Test Jig (GH80-00865A)**



**Test Cable  
(GH39-00895A/GH39-00892A)**



**RF Test Cable (GH39-00397A)**



## **Software Downloading**

### **4-1. Downloading Binary Files**

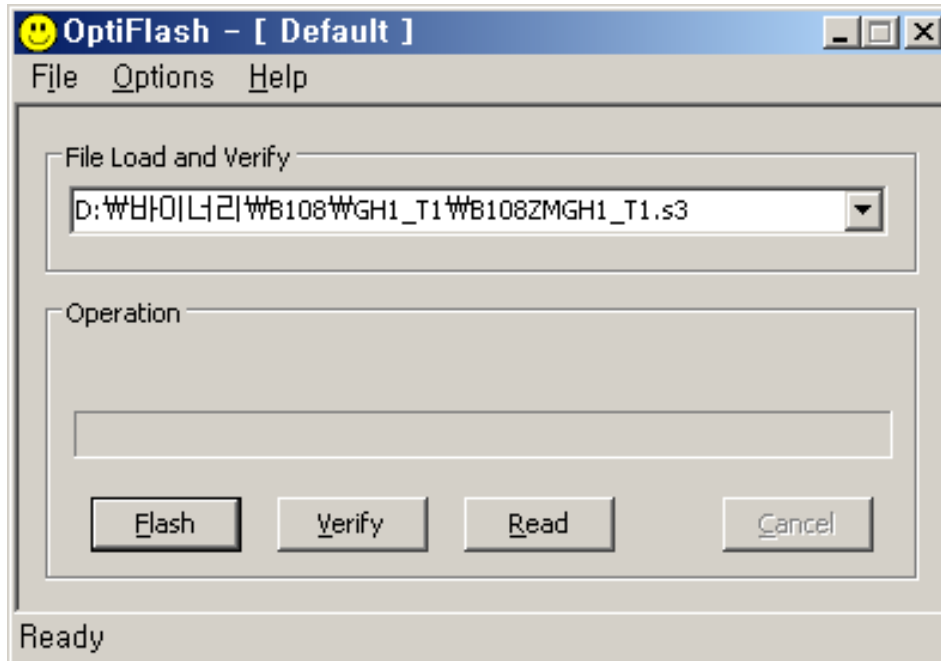
- Three binary files for downloading B100.
  - B100XXYY.s3 : Main source code binary.

### **4-2. Pre-requisite for Downloading**

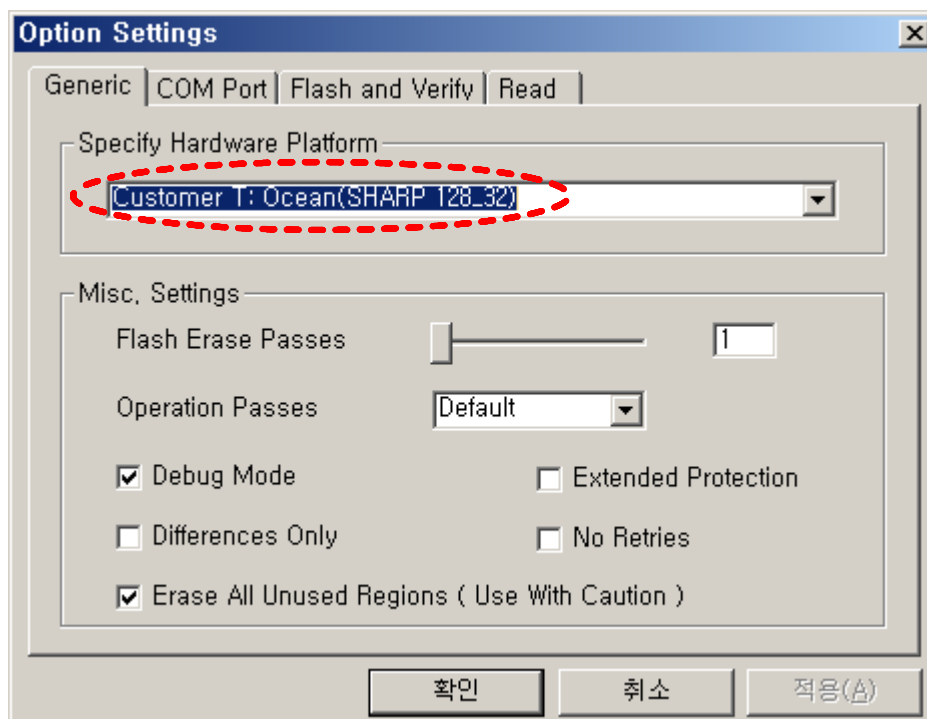
- Downloader Program([OptiFlash.exe](#))
- B100 Mobile Phone
- Data Cable
- Binary files

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

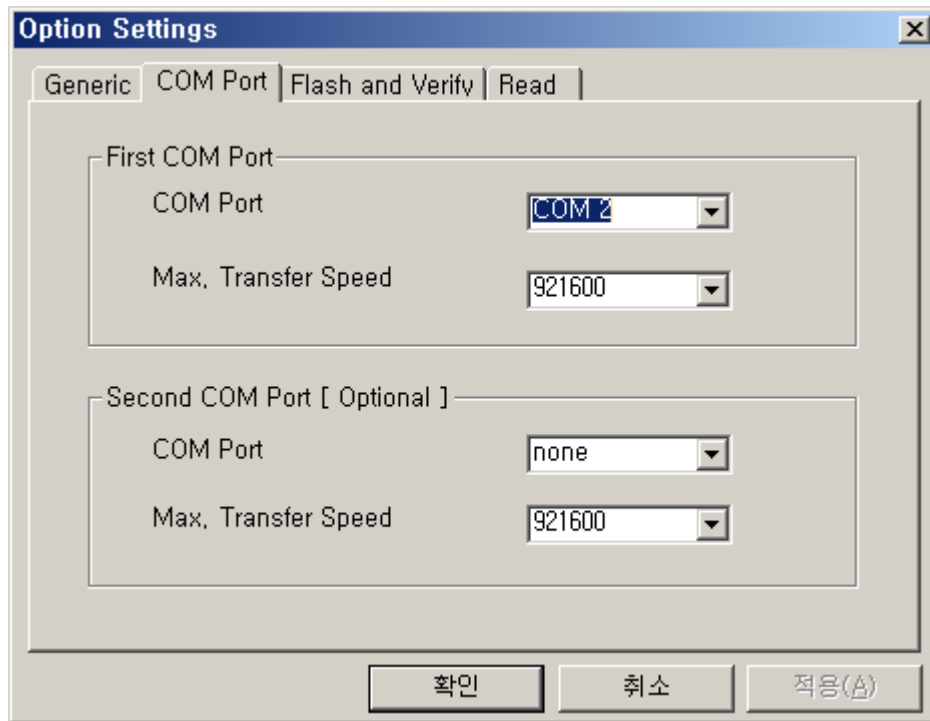
1. Load the binary download program by executing the “**OptiFlash.exe**”



2. Select the “**Options**” -> “**Settings**” -> “**Generic**” -> “**Specify hardware platform**”. Choose hardware platform for the downloader file setting. Set the everything else as the default values which are shown below



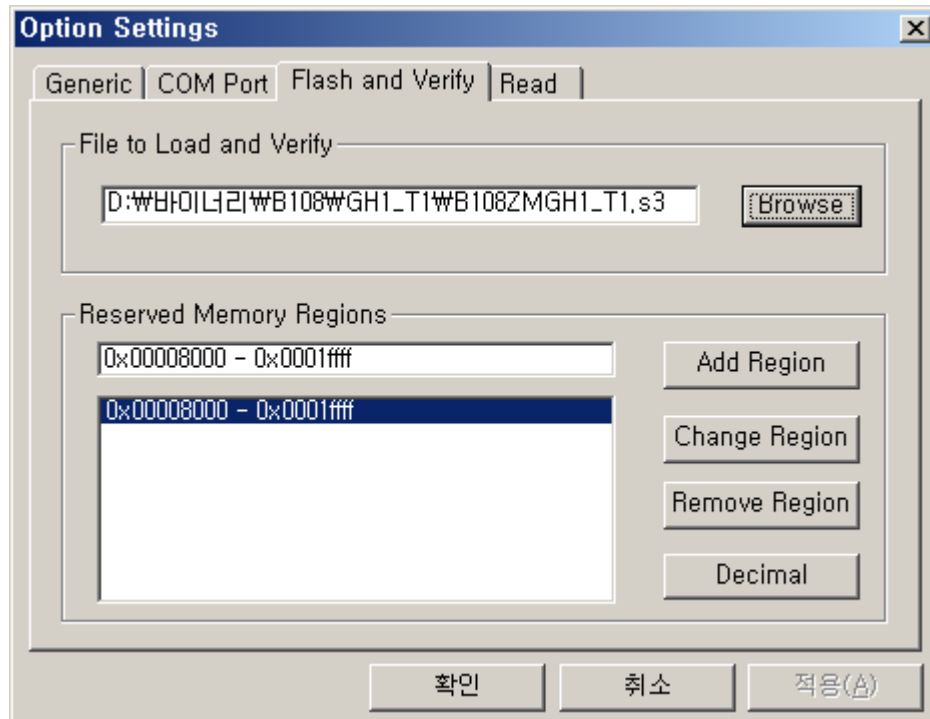
3. Select the **COM port** when the download cable is connected



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

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

Set the directory path and choose the latest s/w binary, for example “B100XXYY.s3”, for the downloader binary setting.



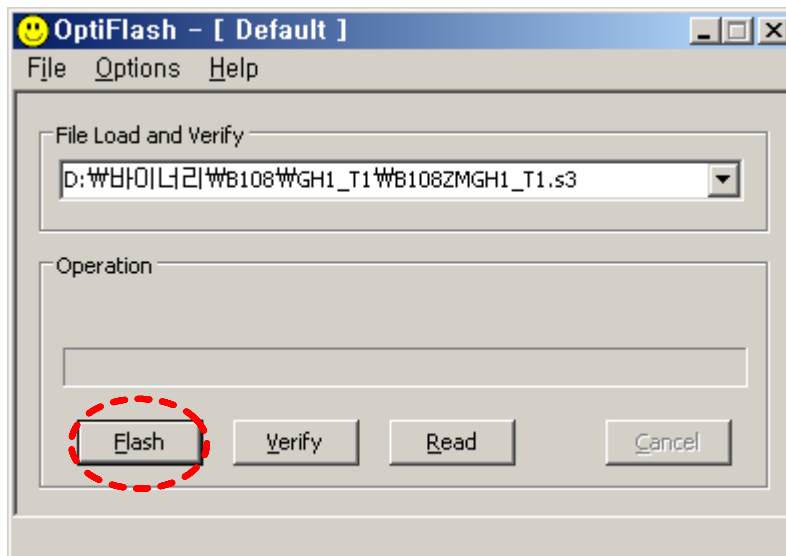
**Make sure that not to change the reserved memory regions.**

**In case of B108 the reserved memory regions are :  
-0x00008000 - 0x0001ffff**

5. Click “**OK**” button then press “**Flash**”.

(Before pressing ‘Flash’ button, push the button “\*” and ‘END’ at the same time. Then press ‘Flash’.)

Downloader will upload the binary file as below for the downloading.



6. When downloading is finished successfully, there is a “All is well” message.

7. After finishing downloading, Certain memory resets should be done to guarantee the normal performance.

8. Confirm the downloaded version name and etc. :

**\*#1111#**

Full Reset :

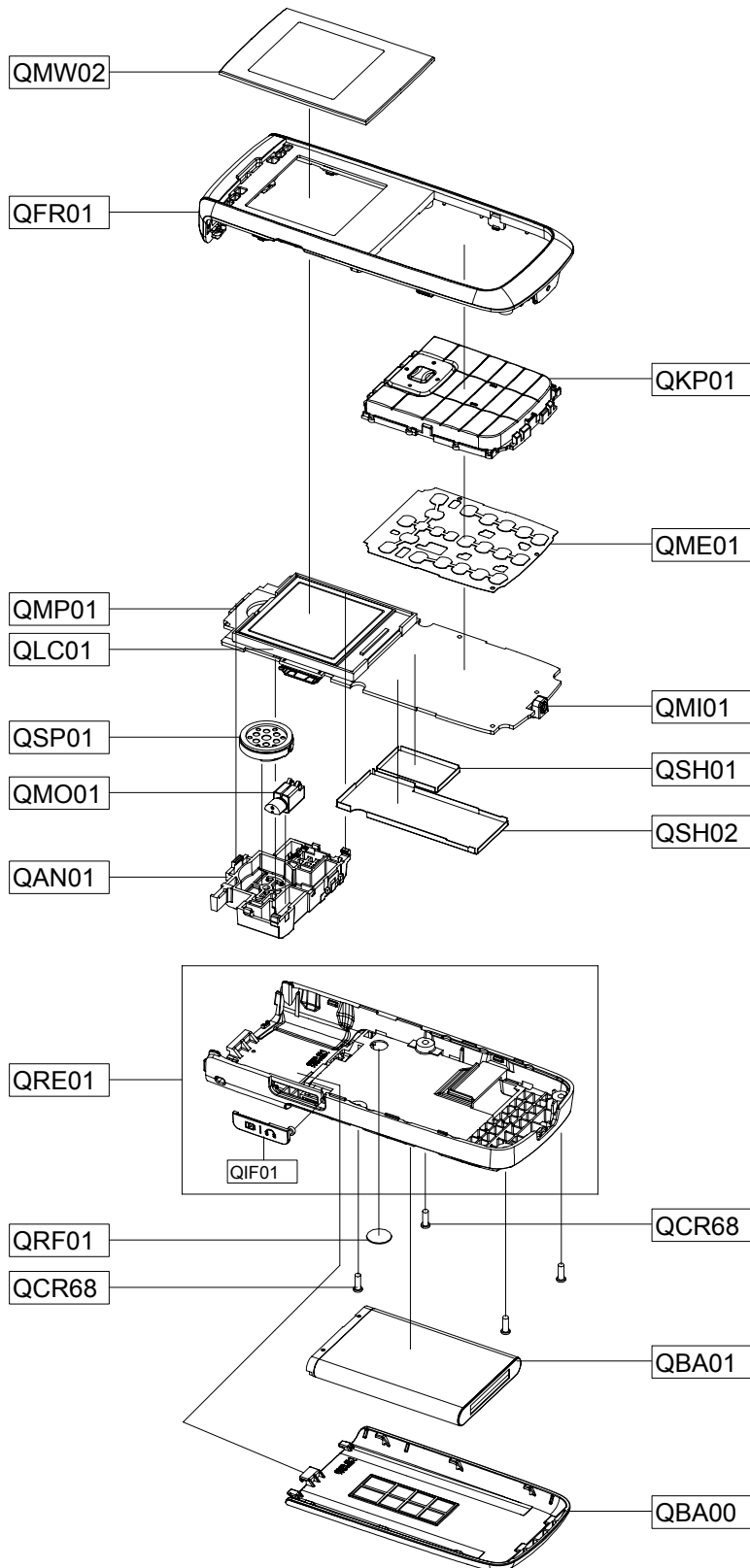
**\*2767\*3855#**

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## 5. Exploded View and Parts List

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### 5-1. Cellular phone Exploded View



**5-2. Cellular phone Parts list**

| Design LOC |       | Discription                    | SEC CODE    |
|------------|-------|--------------------------------|-------------|
| QAN01      |       | INTENNA-SGH_B108               | GH42-01421A |
| QBA00      |       | PMO COVER-BATTERY              | GH72-45634A |
| QBA01      |       | INNER BATTERY PACK-1000MAH,BLA | GH43-02424A |
| QCR68      |       | SCREW-TAPPING                  | 6002-001399 |
| QCR68      |       | SCREW-TAPPING                  | 6002-001399 |
| QFR01      |       | ASSY CASE-FRONT                | GH98-06846A |
| QKP01      |       | ASSY KEYPAD-(XEF/LKA)          | GH98-07043A |
| QLC01      |       | LCD-LCD MODULE                 | GH07-01056A |
| QME01      |       | DOME SHEET-22 KEY              | GH59-05216A |
| QMI01      |       | MICROPHONE-ASSY-SGH_B108       | GH30-00447A |
| QMO01      |       | MOTOR DC-SCH-S369              | GH31-00392A |
| QMP01      |       | PBA MAIN-SGH_B100              | GH92-04320A |
| QMW02      |       | PMO WINDOW-LCD                 | GH72-45617A |
| QRF01      |       | TAPE-RF SHEET                  | GH74-36593A |
| QSH01      |       | IPR SHIELD-COVER A             | GH70-02974A |
| QSH02      |       | IPR SHIELD-COVER B             | GH70-02975A |
| QSP01      |       | SPEAKER                        | 3001-002289 |
| QRE01      |       | ASSY CASE-REAR                 | GH98-06845A |
|            | QIF01 | PMO COVER-IF                   | GH72-45106A |

| Discription               | SEC CODE    |
|---------------------------|-------------|
| BAG PE                    | 6902-000297 |
| ADAPTOR-ATADS10EBE,BLK,EU | GH44-01702A |
| LABEL(P)-UNIT SEAL        | GH68-00518B |
| LABEL(R)-WATER SOAK       | GH68-09361A |
| MANUAL USERS-EU SPANISH   | GH68-17128A |
| LABEL(R)-MAIN(EU)         | GH68-17232A |
| BOX(P)-UNIT MAIN EU       | GH69-06338A |
| SPONGE-INTENNA            | GH74-35738A |
| SPONGE-SPK                | GH74-35739A |
| VINYL-BOHO WINDOW A       | GH74-36876A |



## 6. MAIN Electrical Parts List

| SEC CODE    | Design LOC | Discription         | STATUS |
|-------------|------------|---------------------|--------|
| 0401-001141 | D600       | DIODE-SWITCHING     | SA     |
| 0403-001547 | ZD300      | DIODE-ZENER         | SA     |
| 0406-001286 | ZD301      | DIODE-TVS           | SA     |
| 0406-001286 | ZD302      | DIODE-TVS           | SA     |
| 0504-000168 | TR300      | TR-DIGITAL          | SA     |
| 0601-002361 | LED600     | LED                 | SA     |
| 0601-002361 | LED601     | LED                 | SA     |
| 0601-002361 | LED602     | LED                 | SA     |
| 0601-002361 | LED603     | LED                 | SA     |
| 0601-002361 | LED604     | LED                 | SA     |
| 0601-002361 | LED605     | LED                 | SA     |
| 0801-003206 | U104       | IC-CMOS LOGIC       | SA     |
| 1001-001349 | U603       | IC-ANALOG MULTIPLEX | SA     |
| 1001-001371 | U401       | IC-ANALOG SWITCH    | SA     |
| 1108-000111 | UME200     | IC-MCP              | SA     |
| 1201-002490 | PAM100     | IC-POWER AMP        | SA     |
| 1203-003897 | UCP300     | IC-POWER SUPERVISOR | SA     |
| 1203-004640 | U602       | IC-DC/DC CONVERTER  | SA     |
| 1203-005005 | U301       | IC-BATTERY          | SA     |
| 1204-002783 | U400       | IC-SOUND GENERATOR  | SA     |
| 1205-003098 | U103       | IC-TRANSCEIVER      | SA     |
| 1205-003412 | UCP200     | IC-COMM. CONTROLLER | SA     |
| 1404-001165 | TH200      | THERMISTOR-NTC      | SA     |
| 1405-001082 | VR300      | VARISTOR            | SA     |
| 1405-001082 | VR301      | VARISTOR            | SA     |
| 1405-001082 | VR302      | VARISTOR            | SA     |
| 1405-001082 | VR402      | VARISTOR            | SA     |
| 1405-001082 | VR403      | VARISTOR            | SA     |
| 1405-001082 | VR600      | VARISTOR            | SA     |
| 1405-001082 | VR601      | VARISTOR            | SA     |
| 1405-001082 | VR602      | VARISTOR            | SA     |
| 1405-001082 | VR603      | VARISTOR            | SA     |
| 1405-001082 | VR604      | VARISTOR            | SA     |
| 1405-001082 | VR605      | VARISTOR            | SA     |
| 1405-001082 | VR606      | VARISTOR            | SA     |
| 1405-001082 | VR607      | VARISTOR            | SA     |
| 1405-001082 | VR608      | VARISTOR            | SA     |

| SEC CODE    | Design LOC | Discription | STATUS |
|-------------|------------|-------------|--------|
| 1405-001082 | VR609      | VARISTOR    | SA     |
| 1405-001082 | VR610      | VARISTOR    | SA     |
| 1405-001121 | VR400      | VARISTOR    | SA     |
| 1405-001121 | VR401      | VARISTOR    | SA     |
| 2007-000138 | R304       | R-CHIP      | SA     |
| 2007-000138 | R412       | R-CHIP      | SA     |
| 2007-000140 | R307       | R-CHIP      | SA     |
| 2007-000140 | R308       | R-CHIP      | SA     |
| 2007-000140 | R309       | R-CHIP      | SA     |
| 2007-000140 | R310       | R-CHIP      | SA     |
| 2007-000140 | R311       | R-CHIP      | SA     |
| 2007-000140 | R312       | R-CHIP      | SA     |
| 2007-000140 | R313       | R-CHIP      | SA     |
| 2007-000141 | R410       | R-CHIP      | SA     |
| 2007-000141 | R506       | R-CHIP      | SA     |
| 2007-000148 | R102       | R-CHIP      | SA     |
| 2007-000148 | R316       | R-CHIP      | SA     |
| 2007-000148 | R317       | R-CHIP      | SA     |
| 2007-000148 | R408       | R-CHIP      | SA     |
| 2007-000148 | R409       | R-CHIP      | SA     |
| 2007-000148 | R502       | R-CHIP      | SA     |
| 2007-000148 | R504       | R-CHIP      | SA     |
| 2007-000157 | R204       | R-CHIP      | SA     |
| 2007-000157 | R303       | R-CHIP      | SA     |
| 2007-000157 | R419       | R-CHIP      | SA     |
| 2007-000160 | R401       | R-CHIP      | SA     |
| 2007-000161 | R503       | R-CHIP      | SA     |
| 2007-000161 | R505       | R-CHIP      | SA     |
| 2007-000162 | R203       | R-CHIP      | SA     |
| 2007-000162 | R205       | R-CHIP      | SA     |
| 2007-000162 | R207       | R-CHIP      | SA     |
| 2007-000162 | R301       | R-CHIP      | SA     |
| 2007-000170 | R107       | R-CHIP      | SA     |
| 2007-000170 | R110       | R-CHIP      | SA     |
| 2007-000170 | R314       | R-CHIP      | SA     |
| 2007-000170 | R315       | R-CHIP      | SA     |
| 2007-000171 | R100       | R-CHIP      | SA     |

| SEC CODE    | Design LOC | Discription | STATUS |
|-------------|------------|-------------|--------|
| 2007-000171 | R105       | R-CHIP      | SA     |
| 2007-000171 | R109       | R-CHIP      | SA     |
| 2007-000171 | R111       | R-CHIP      | SA     |
| 2007-000171 | R420       | R-CHIP      | SA     |
| 2007-000171 | R421       | R-CHIP      | SA     |
| 2007-000172 | R200       | R-CHIP      | SA     |
| 2007-000172 | R202       | R-CHIP      | SA     |
| 2007-000172 | R402       | R-CHIP      | SA     |
| 2007-000172 | R403       | R-CHIP      | SA     |
| 2007-000172 | R600       | R-CHIP      | SA     |
| 2007-000172 | R601       | R-CHIP      | SA     |
| 2007-000172 | R602       | R-CHIP      | SA     |
| 2007-000172 | R603       | R-CHIP      | SA     |
| 2007-000172 | R604       | R-CHIP      | SA     |
| 2007-000172 | R605       | R-CHIP      | SA     |
| 2007-000242 | R407       | R-CHIP      | SA     |
| 2007-000242 | R501       | R-CHIP      | SA     |
| 2007-000775 | R400       | R-CHIP      | SA     |
| 2007-000982 | R209       | R-CHIP      | SA     |
| 2007-001119 | R405       | R-CHIP      | SA     |
| 2007-001119 | R500       | R-CHIP      | SA     |
| 2007-001284 | R201       | R-CHIP      | SA     |
| 2007-001284 | R300       | R-CHIP      | SA     |
| 2007-001288 | R417       | R-CHIP      | SA     |
| 2007-001288 | R418       | R-CHIP      | SA     |
| 2007-001292 | R305       | R-CHIP      | SA     |
| 2007-001292 | R306       | R-CHIP      | SA     |
| 2007-001301 | R103       | R-CHIP      | SA     |
| 2007-001307 | R108       | R-CHIP      | SA     |
| 2007-001308 | R106       | R-CHIP      | SA     |
| 2007-001325 | R404       | R-CHIP      | SA     |
| 2007-001339 | R302       | R-CHIP      | SA     |
| 2007-002797 | R104       | R-CHIP      | SA     |
| 2007-007148 | R318       | R-CHIP      | SA     |
| 2007-007590 | R406       | R-CHIP      | SA     |
| 2007-007590 | R411       | R-CHIP      | SA     |
| 2007-007741 | R101       | R-CHIP      | SA     |

| SEC CODE    | Design LOC | Discription | STATUS |
|-------------|------------|-------------|--------|
| 2007-008403 | R206       | R-CHIP      | SA     |
| 2007-008403 | R208       | R-CHIP      | SA     |
| 2203-000233 | C220       | C-CER,CHIP  | SA     |
| 2203-000233 | C302       | C-CER,CHIP  | SA     |
| 2203-000254 | C203       | C-CER,CHIP  | SA     |
| 2203-000254 | C204       | C-CER,CHIP  | SA     |
| 2203-000254 | C208       | C-CER,CHIP  | SA     |
| 2203-000254 | C209       | C-CER,CHIP  | SA     |
| 2203-000254 | C210       | C-CER,CHIP  | SA     |
| 2203-000254 | C213       | C-CER,CHIP  | SA     |
| 2203-000254 | C215       | C-CER,CHIP  | SA     |
| 2203-000254 | C217       | C-CER,CHIP  | SA     |
| 2203-000254 | C300       | C-CER,CHIP  | SA     |
| 2203-000330 | C222       | C-CER,CHIP  | SA     |
| 2203-000359 | C401       | C-CER,CHIP  | SA     |
| 2203-000386 | C129       | C-CER,CHIP  | SA     |
| 2203-000386 | C221       | C-CER,CHIP  | SA     |
| 2203-000438 | C133       | C-CER,CHIP  | SA     |
| 2203-000438 | C324       | C-CER,CHIP  | SA     |
| 2203-000438 | C413       | C-CER,CHIP  | SA     |
| 2203-000466 | C115       | C-CER,CHIP  | SA     |
| 2203-000489 | C408       | C-CER,CHIP  | SA     |
| 2203-000489 | C411       | C-CER,CHIP  | SA     |
| 2203-000627 | C134       | C-CER,CHIP  | SNA    |
| 2203-000679 | C132       | C-CER,CHIP  | SA     |
| 2203-000679 | C206       | C-CER,CHIP  | SA     |
| 2203-000812 | C119       | C-CER,CHIP  | SA     |
| 2203-000812 | C120       | C-CER,CHIP  | SA     |
| 2203-000812 | C121       | C-CER,CHIP  | SA     |
| 2203-000812 | C131       | C-CER,CHIP  | SA     |
| 2203-000812 | C305       | C-CER,CHIP  | SA     |
| 2203-000812 | C306       | C-CER,CHIP  | SA     |
| 2203-000812 | C600       | C-CER,CHIP  | SA     |
| 2203-000812 | C601       | C-CER,CHIP  | SA     |
| 2203-000812 | C602       | C-CER,CHIP  | SA     |
| 2203-000812 | C603       | C-CER,CHIP  | SA     |
| 2203-000812 | C604       | C-CER,CHIP  | SA     |

| SEC CODE    | Design LOC | Discription | STATUS |
|-------------|------------|-------------|--------|
| 2203-000812 | C605       | C-CER,CHIP  | SA     |
| 2203-000812 | C606       | C-CER,CHIP  | SA     |
| 2203-000812 | C607       | C-CER,CHIP  | SA     |
| 2203-000812 | C608       | C-CER,CHIP  | SA     |
| 2203-000812 | C610       | C-CER,CHIP  | SA     |
| 2203-000812 | C611       | C-CER,CHIP  | SA     |
| 2203-000812 | C612       | C-CER,CHIP  | SA     |
| 2203-000940 | C303       | C-CER,CHIP  | SA     |
| 2203-000995 | C307       | C-CER,CHIP  | SA     |
| 2203-000995 | C501       | C-CER,CHIP  | SA     |
| 2203-002709 | C614       | C-CER,CHIP  | SA     |
| 2203-005065 | C312       | C-CER,CHIP  | SA     |
| 2203-005065 | C313       | C-CER,CHIP  | SA     |
| 2203-005065 | C315       | C-CER,CHIP  | SA     |
| 2203-005065 | C316       | C-CER,CHIP  | SA     |
| 2203-005065 | C317       | C-CER,CHIP  | SA     |
| 2203-005234 | C105       | C-CER,CHIP  | SA     |
| 2203-005234 | L100       | C-CER,CHIP  | SA     |
| 2203-005344 | C207       | C-CER,CHIP  | SA     |
| 2203-005344 | C219       | C-CER,CHIP  | SA     |
| 2203-005344 | C319       | C-CER,CHIP  | SA     |
| 2203-005382 | C103       | C-CER,CHIP  | SA     |
| 2203-005482 | C128       | C-CER,CHIP  | SA     |
| 2203-005482 | C130       | C-CER,CHIP  | SA     |
| 2203-005482 | C402       | C-CER,CHIP  | SA     |
| 2203-005683 | C108       | C-CER,CHIP  | SA     |
| 2203-005683 | C110       | C-CER,CHIP  | SA     |
| 2203-005719 | C101       | C-CER,CHIP  | SA     |
| 2203-005719 | C106       | C-CER,CHIP  | SA     |
| 2203-005719 | C107       | C-CER,CHIP  | SA     |
| 2203-005719 | C117       | C-CER,CHIP  | SA     |
| 2203-005719 | C124       | C-CER,CHIP  | SA     |
| 2203-005736 | C111       | C-CER,CHIP  | SA     |
| 2203-005736 | C118       | C-CER,CHIP  | SA     |
| 2203-005736 | C125       | C-CER,CHIP  | SA     |
| 2203-005777 | C114       | C-CER,CHIP  | SA     |
| 2203-005819 | C321       | C-CER,CHIP  | SA     |

| SEC CODE    | Design LOC | Discription | STATUS |
|-------------|------------|-------------|--------|
| 2203-005819 | C619       | C-CER,CHIP  | SA     |
| 2203-005819 | C621       | C-CER,CHIP  | SA     |
| 2203-005819 | C622       | C-CER,CHIP  | SA     |
| 2203-006048 | C200       | C-CER,CHIP  | SA     |
| 2203-006048 | C201       | C-CER,CHIP  | SA     |
| 2203-006048 | C202       | C-CER,CHIP  | SA     |
| 2203-006048 | C205       | C-CER,CHIP  | SA     |
| 2203-006048 | C211       | C-CER,CHIP  | SA     |
| 2203-006048 | C212       | C-CER,CHIP  | SA     |
| 2203-006048 | C214       | C-CER,CHIP  | SA     |
| 2203-006048 | C216       | C-CER,CHIP  | SA     |
| 2203-006048 | C218       | C-CER,CHIP  | SA     |
| 2203-006048 | C301       | C-CER,CHIP  | SA     |
| 2203-006048 | C311       | C-CER,CHIP  | SA     |
| 2203-006048 | C314       | C-CER,CHIP  | SA     |
| 2203-006048 | C318       | C-CER,CHIP  | SA     |
| 2203-006048 | C320       | C-CER,CHIP  | SA     |
| 2203-006048 | C323       | C-CER,CHIP  | SA     |
| 2203-006048 | C405       | C-CER,CHIP  | SA     |
| 2203-006048 | C407       | C-CER,CHIP  | SA     |
| 2203-006048 | C409       | C-CER,CHIP  | SA     |
| 2203-006048 | C410       | C-CER,CHIP  | SA     |
| 2203-006048 | C414       | C-CER,CHIP  | SA     |
| 2203-006048 | C417       | C-CER,CHIP  | SA     |
| 2203-006048 | C418       | C-CER,CHIP  | SA     |
| 2203-006048 | C500       | C-CER,CHIP  | SA     |
| 2203-006048 | C502       | C-CER,CHIP  | SA     |
| 2203-006137 | C326       | C-CER,CHIP  | SA     |
| 2203-006137 | C400       | C-CER,CHIP  | SA     |
| 2203-006194 | C104       | C-CER,CHIP  | SA     |
| 2203-006194 | C112       | C-CER,CHIP  | SA     |
| 2203-006257 | C304       | C-CER,CHIP  | SA     |
| 2203-006257 | C309       | C-CER,CHIP  | SA     |
| 2203-006257 | C403       | C-CER,CHIP  | SA     |
| 2203-006260 | C127       | C-CER,CHIP  | SA     |
| 2203-006324 | C308       | C-CER,CHIP  | SA     |
| 2203-006348 | C322       | C-CER,CHIP  | SA     |

| SEC CODE    | Design LOC | Discription  | STATUS |
|-------------|------------|--------------|--------|
| 2203-006361 | C613       | C-CER,CHIP   | SA     |
| 2203-006423 | C100       | C-CER,CHIP   | SA     |
| 2203-006423 | C122       | C-CER,CHIP   | SA     |
| 2203-006423 | C123       | C-CER,CHIP   | SA     |
| 2203-006462 | C126       | C-CER,CHIP   | SA     |
| 2203-006556 | C116       | C-CER,CHIP   | SA     |
| 2203-006562 | C412       | C-CER,CHIP   | SA     |
| 2203-006562 | C415       | C-CER,CHIP   | SA     |
| 2203-006562 | C421       | C-CER,CHIP   | SA     |
| 2203-006626 | C113       | C-CER,CHIP   | SA     |
| 2203-006824 | C325       | C-CER,CHIP   | SA     |
| 2203-006824 | C404       | C-CER,CHIP   | SA     |
| 2203-006839 | C109       | C-CER,CHIP   | SA     |
| 2203-006841 | C327       | C-CER,CHIP   | SA     |
| 2203-006872 | C406       | C-CER,CHIP   | SA     |
| 2203-006872 | C416       | C-CER,CHIP   | SA     |
| 2404-001336 | TA400      | C-TA,CHIP    | SA     |
| 2404-001336 | TA500      | C-TA,CHIP    | SA     |
| 2404-001406 | TA300      | C-TA,CHIP    | SA     |
| 2404-001415 | TA100      | C-TA,CHIP    | SA     |
| 2404-001415 | TA600      | C-TA,CHIP    | SA     |
| 2703-001236 | L106       | INDUCTOR-SMD | SA     |
| 2703-001722 | L103       | INDUCTOR-SMD | SA     |
| 2703-001723 | L603       | INDUCTOR-SMD | SA     |
| 2703-001723 | L604       | INDUCTOR-SMD | SA     |
| 2703-001723 | L605       | INDUCTOR-SMD | SA     |
| 2703-001723 | L606       | INDUCTOR-SMD | SA     |
| 2703-001737 | L101       | INDUCTOR-SMD | SA     |
| 2703-001737 | L107       | INDUCTOR-SMD | SA     |
| 2703-001747 | L104       | INDUCTOR-SMD | SA     |
| 2703-001990 | L108       | INDUCTOR-SMD | SA     |
| 2703-002200 | L400       | INDUCTOR-SMD | SA     |
| 2703-002200 | L401       | INDUCTOR-SMD | SA     |
| 2703-002484 | L102       | INDUCTOR-SMD | SA     |
| 2801-003856 | OSC200     | CRYSTAL-SMD  | SA     |
| 2801-004689 | OSC100     | CRYSTAL-SMD  | SA     |
| 2904-001792 | F100       | FILTER-SAW   | SA     |

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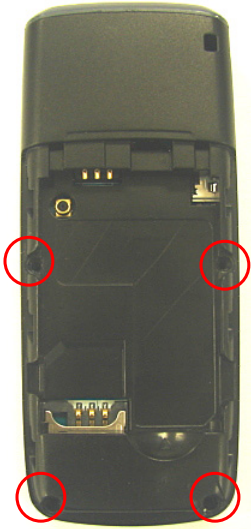

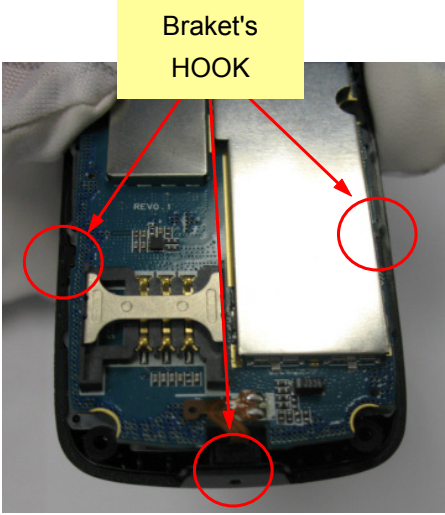
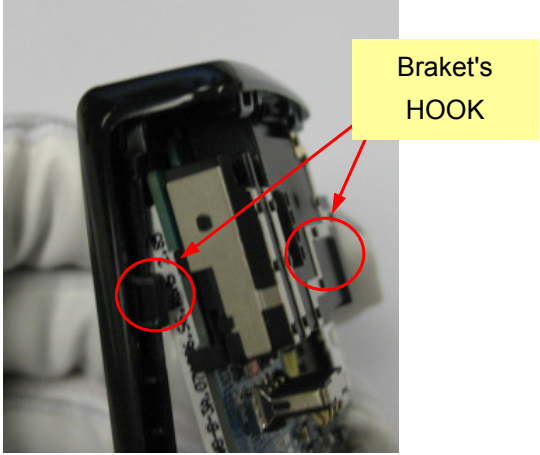
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|-------------|------------|---------------------|--------|
| 3301-001534 | L105       | BEAD-SMD            | SA     |
| 3301-001729 | L600       | BEAD-SMD            | SA     |
| 3705-001358 | RFS100     | CONNECTOR-COAXIAL   | SA     |
| 3709-001355 | SIM300     | CONNECTOR-CARD EDGE | SA     |
| 3710-002499 | IFC300     | SOCKET-INTERFACE    | SA     |
| 3711-006084 | BTC300     | HEADER-BATTERY      | SA     |
| GH70-02367A | SC100      | ICT-ON-BOARD CLIP   | SA     |
| GH70-02367A | SC104      | ICT-ON-BOARD CLIP   | SA     |
| GH70-02640A | SC101      | ICT SHIELD-CAN CLIP | SA     |
| GH70-02640A | SC102      | ICT SHIELD-CAN CLIP | SA     |
| GH70-02640A | SC103      | ICT SHIELD-CAN CLIP | SA     |
| GH70-02640A | SC105      | ICT SHIELD-CAN CLIP | SA     |
| GH71-07891A | U604       | NPR SHIELD-FRAME A  | SA     |

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



# 7. Disassembly and Assembly Instructions

## 7-1. Disassembly

|  |   |
|--|---|
| <p><b>1</b></p>   | <p><b>2</b></p>   |
| <p>1) Release SCREW 4 POINT at Rear<br/>         ※ <b>caution</b><br/>         1) Be careful not to make scratch and molding damage!</p>             | <p>1) Disjoint HOOK from down to up.<br/>         ※ <b>caution</b><br/>         1) Be careful not to make scratch and molding damage!</p>             |
| <p><b>3</b></p>   | <p><b>4</b></p>   |
| <p>1) Disjoint the Low Bracket's HOOK (3 point)<br/>         ※ <b>caution</b><br/>         1) Be careful not to make scratch and molding damage!</p> | <p>1) Disjoint the HIGH Bracket's HOOK (2 point)<br/>         ※ <b>caution</b><br/>         1) Be careful not to make scratch and molding damage!</p> |


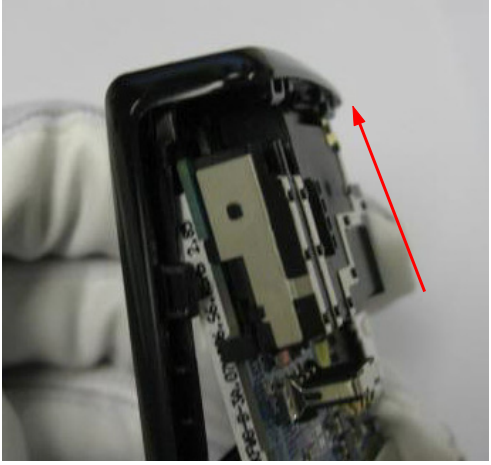
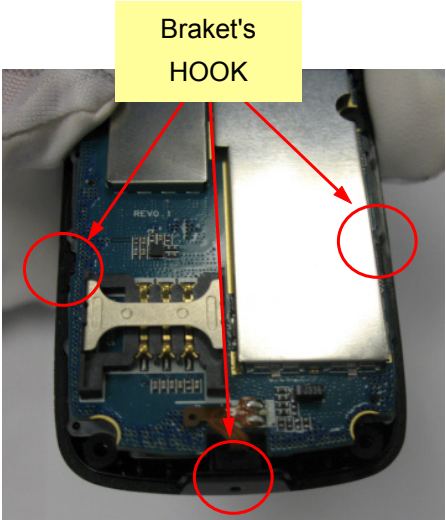
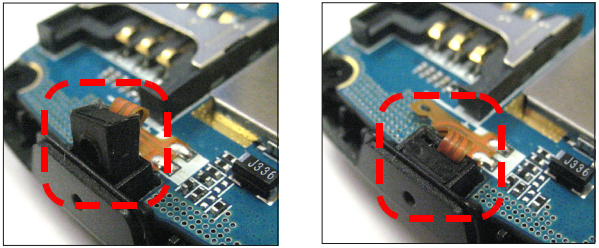
**5**

1 Separate Bracket from the main PBA.

※ **caution**

- 1) Be careful not to make scratch and molding damage!
- 2) Beware that you do not damage MIC F-PCB.

## 7-2. Assembly

|   |   |
|---|---|
| <p><b>1</b></p>    | <p><b>2</b></p>   |
| <p>1) Set a PBA on the FRONT.<br/>         ※ <b>caution</b><br/>         1) Be careful not to make scratch and molding damage!</p>  | <p>1) Put the PBA on the FRONT.<br/>         ※ <b>caution</b><br/>         1) Be careful not to make scratch and molding damage!</p>  |
| <p><b>3</b></p>    | <p><b>4</b></p>   |
| <p>1) Assemble the FRONT's hook 3point.<br/>         ※ <b>caution</b><br/>         1) Be careful not to make scratch and molding damage!<br/>         2) Beware that you do not damage MIC F-PCB.</p> | <p>1) Put the MIC on the FRONT.<br/>         ※ <b>caution</b><br/>         1) Be careful not to make scratch and molding damage!<br/>         2) Beware that you do not damage MIC F-PCB.</p> |

5



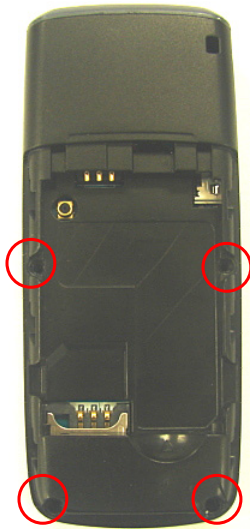
- 1) Assemble REAR and FRONT ass'y.  
※ caution
- 1) Be careful not to make scratch and molding damage!

6



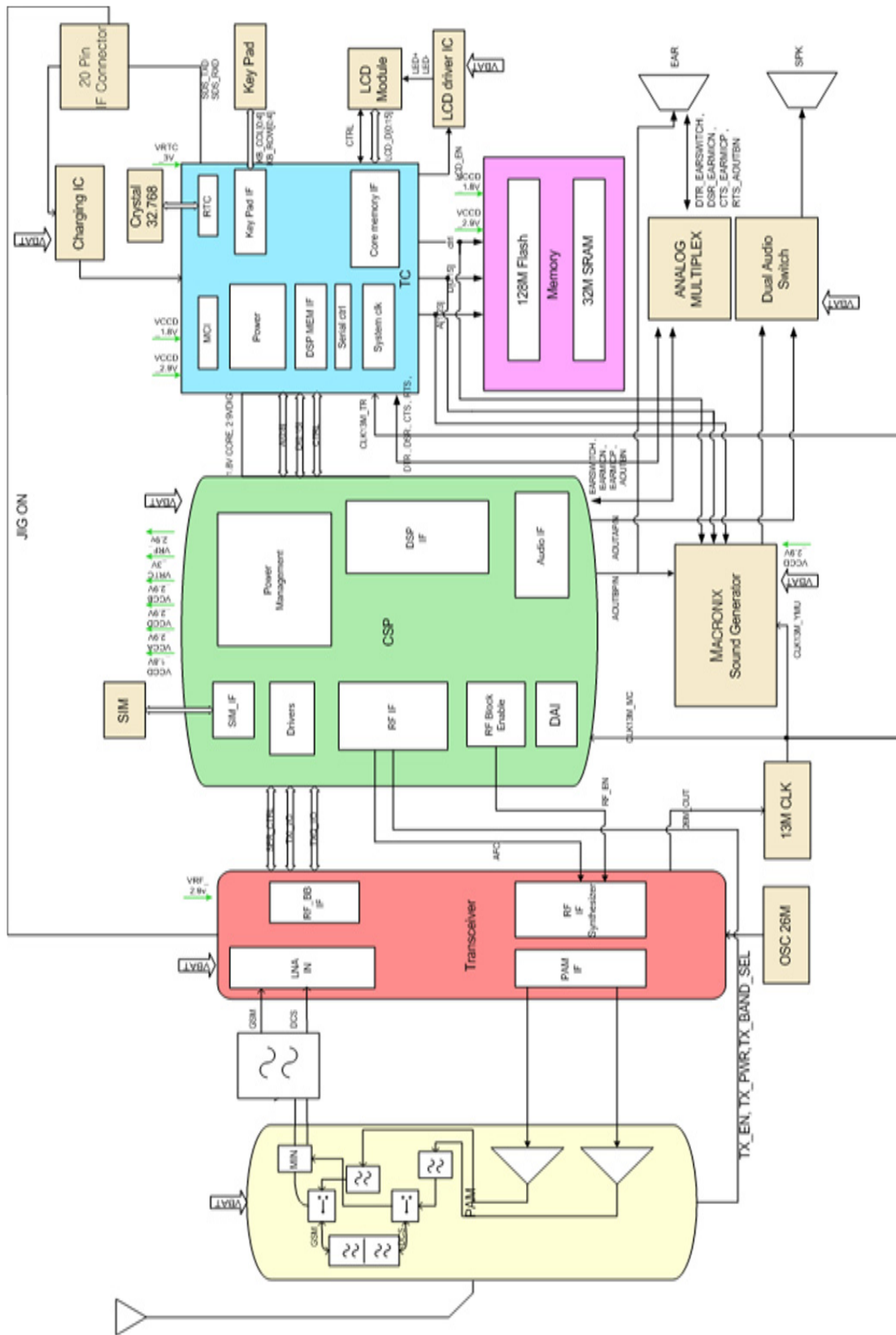
- 1) Assemble the FRONT's hook  
※ caution
- 1) Be careful not to make scratch and molding damage!

7

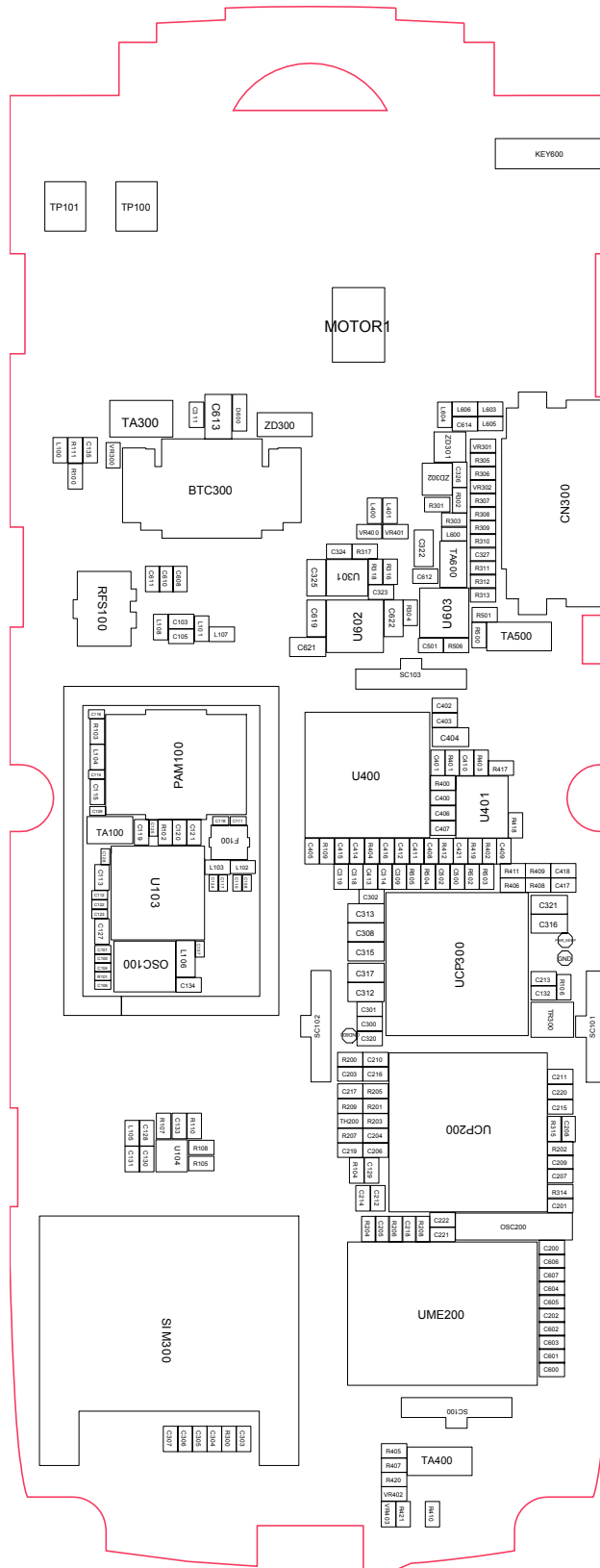


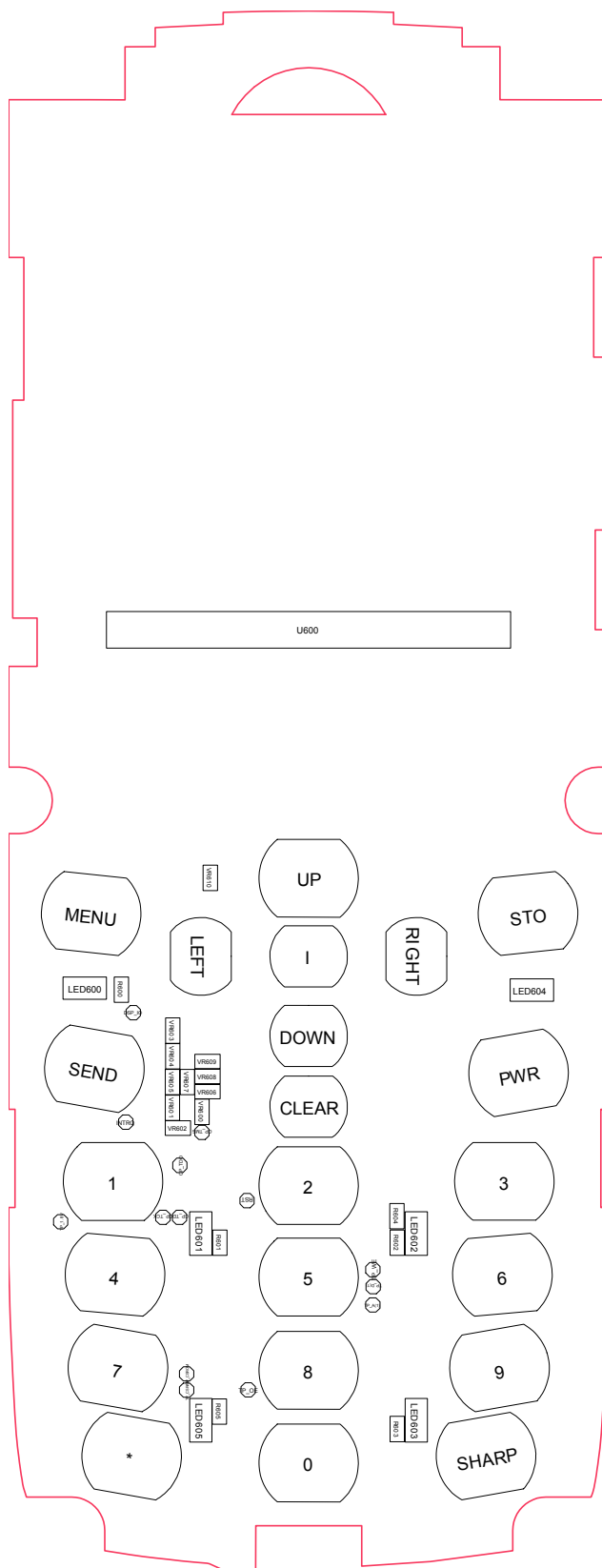
- 1) Drivers 4 screws on the REAR.  
※ caution
- 1) Be careful not to make scratch and molding damage!

# 8. Block Diagrams



# 9. PCB Diagrams

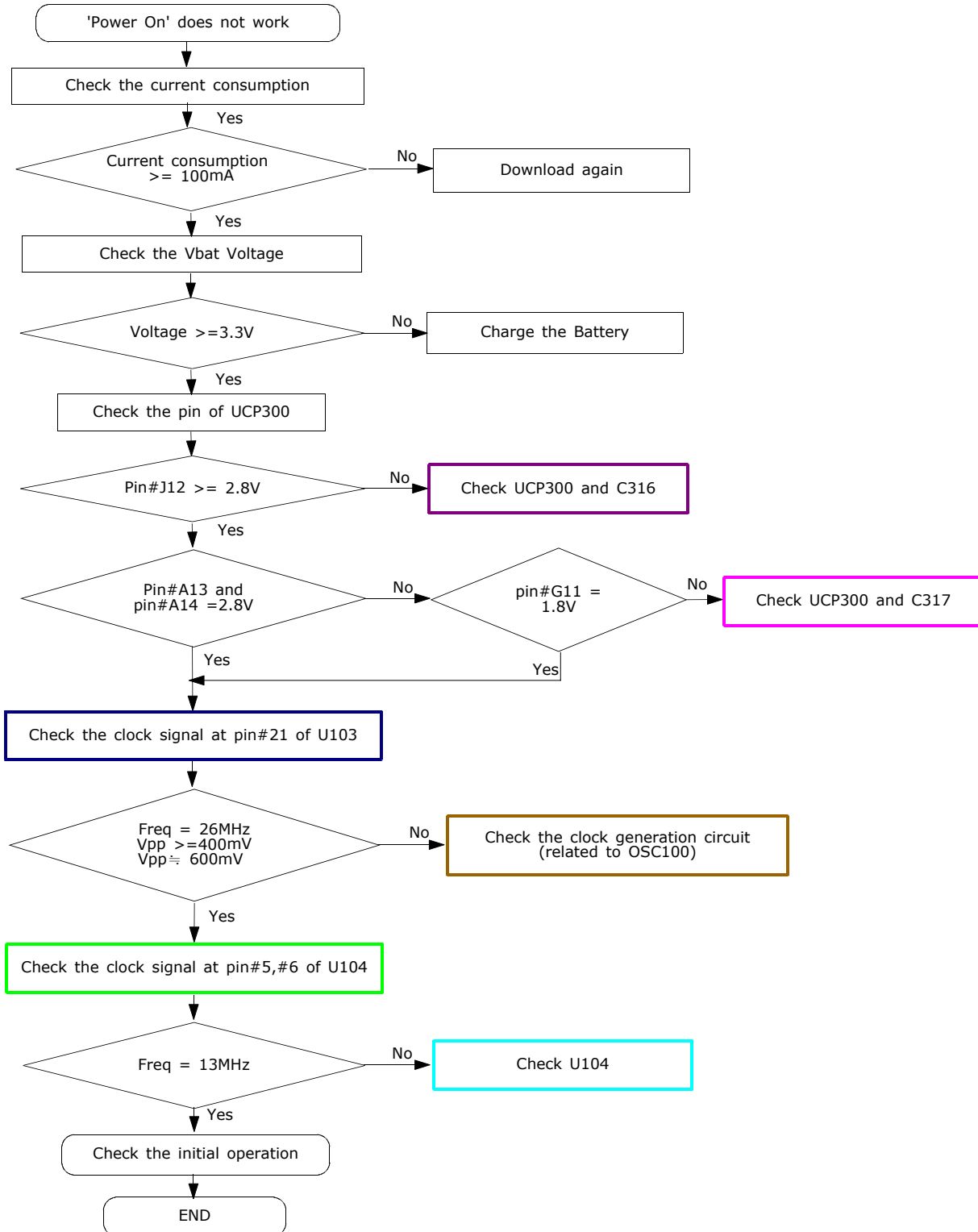




# 10. Flow Chart of Troubleshooting

## 10-1. Baseband

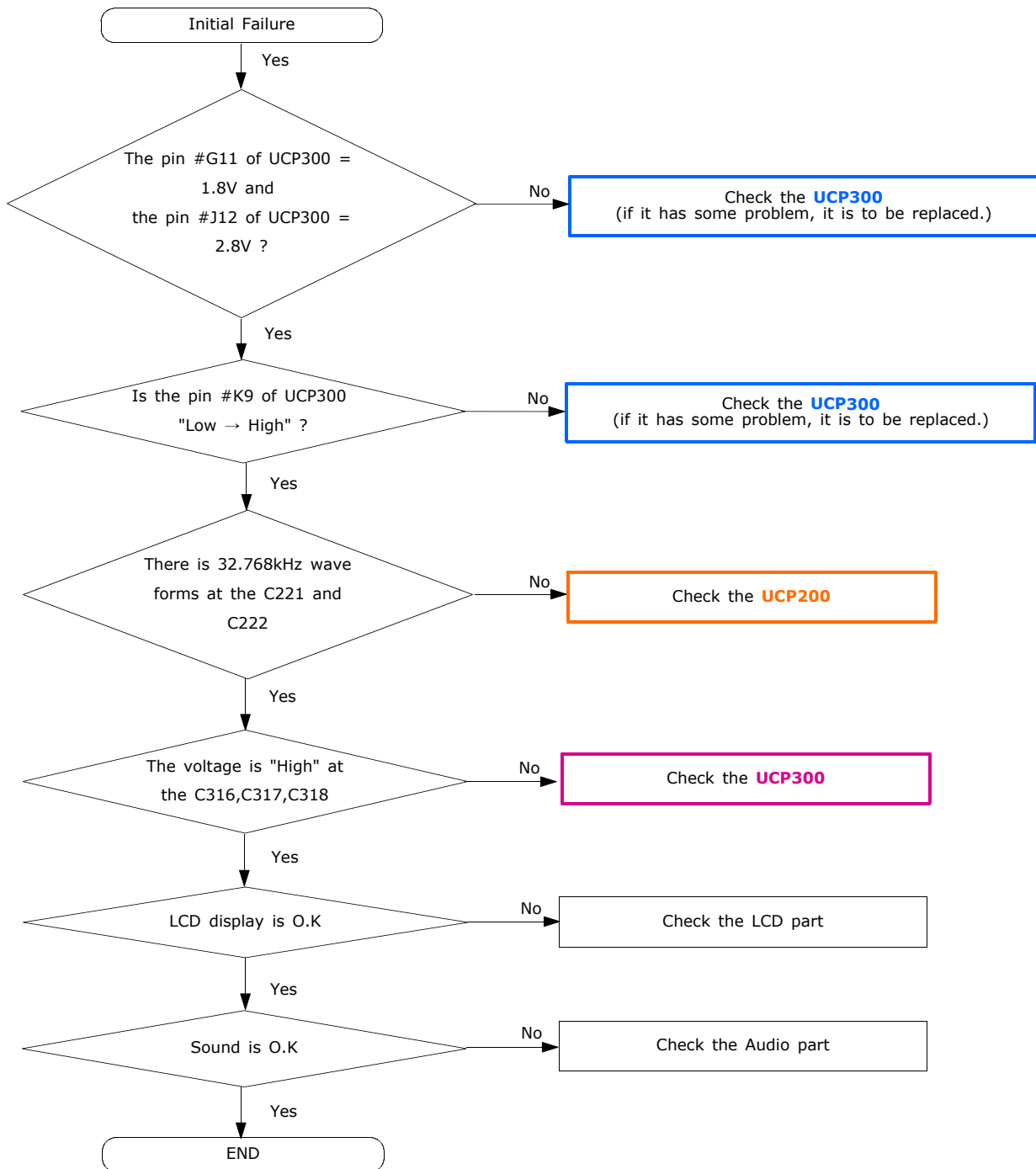
### 10-1-1. Power ON

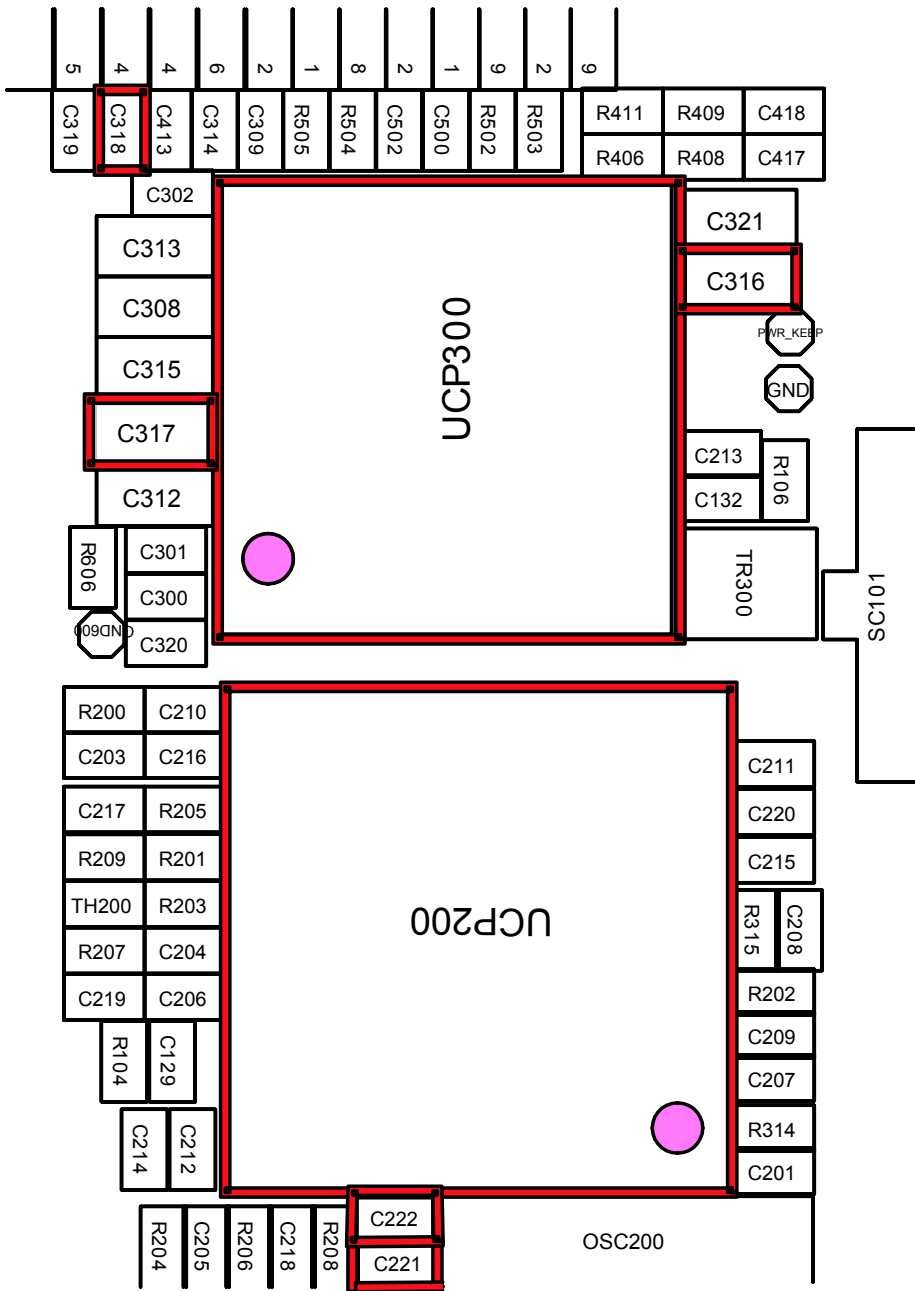


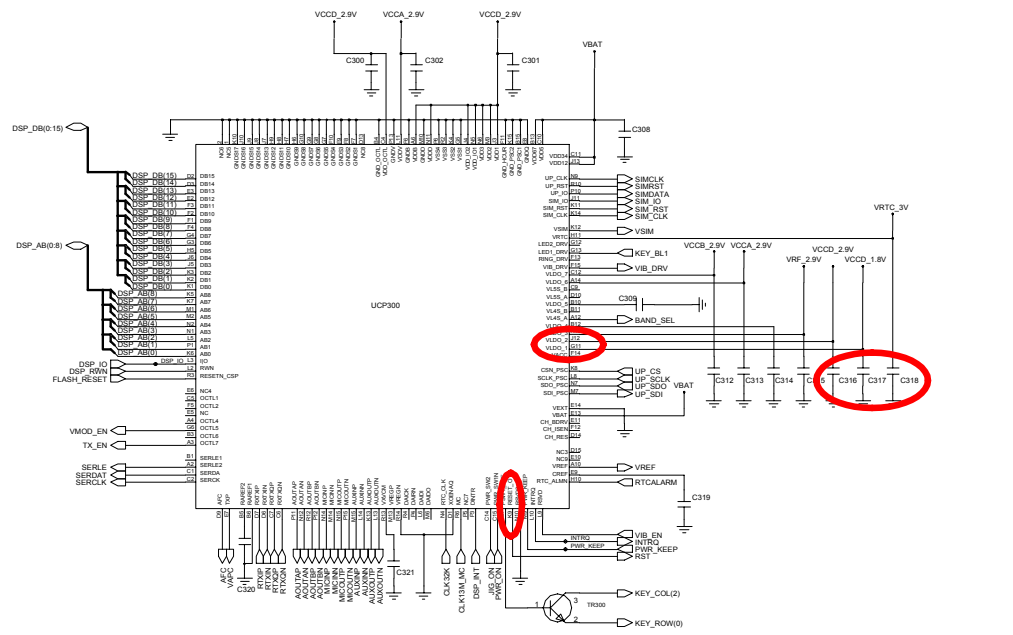
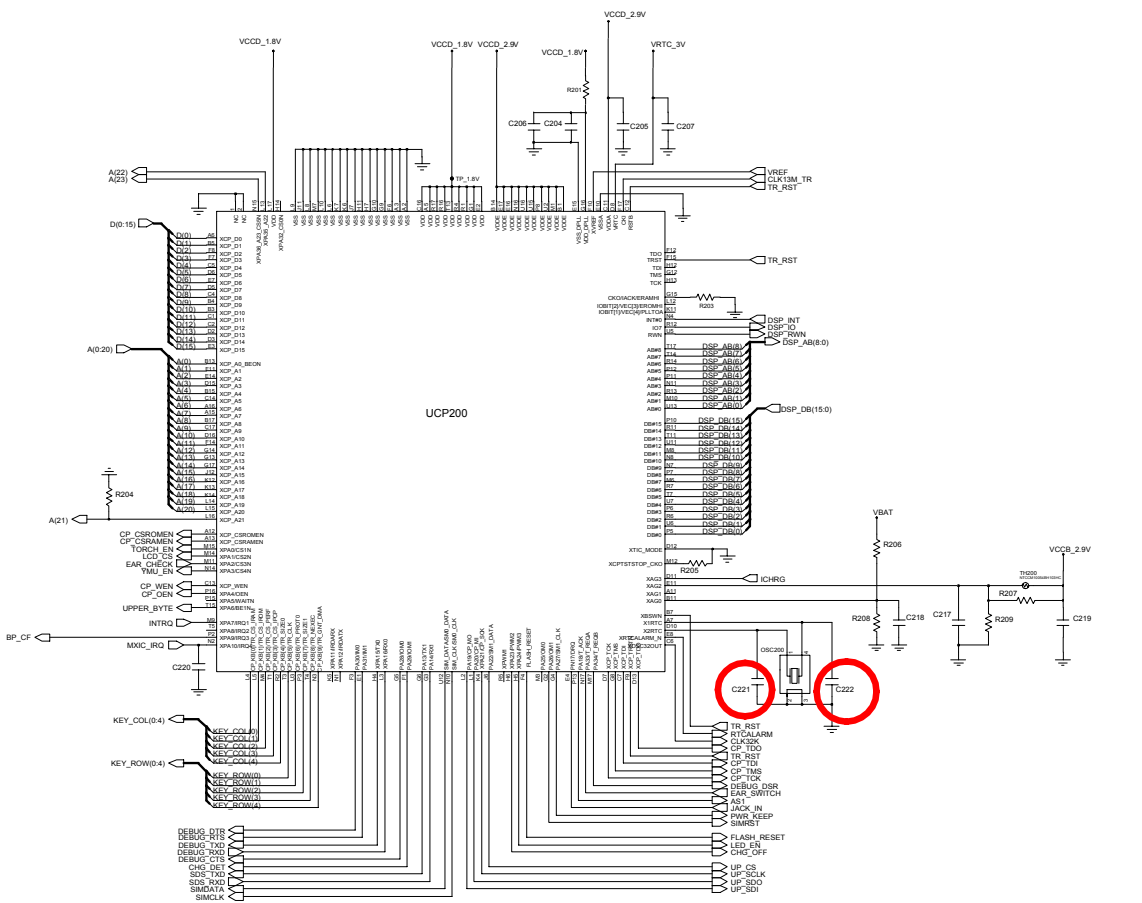




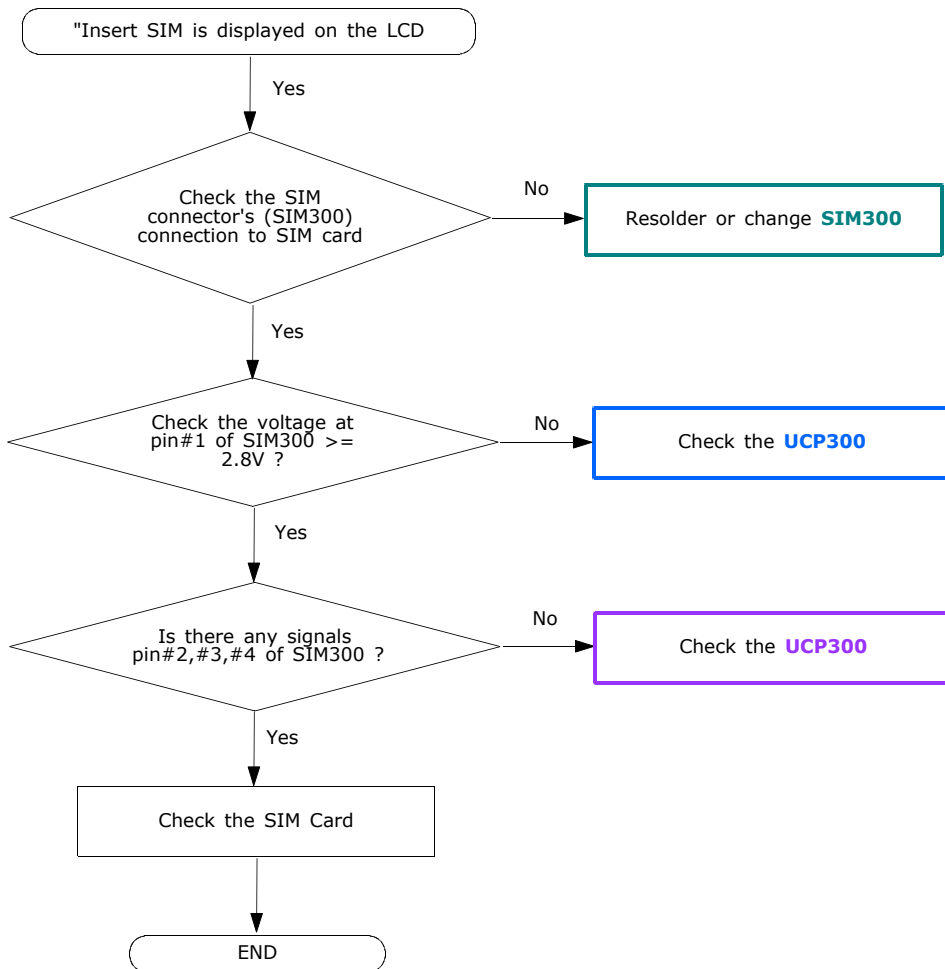
### 10-1-2. System Initial







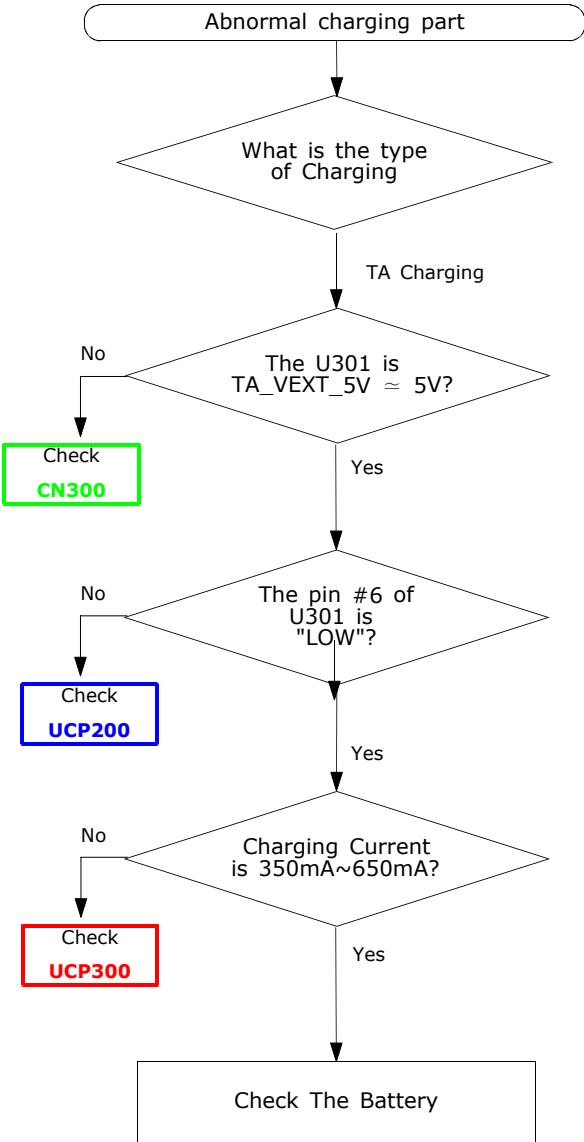
### 10-1-3. Sim Part





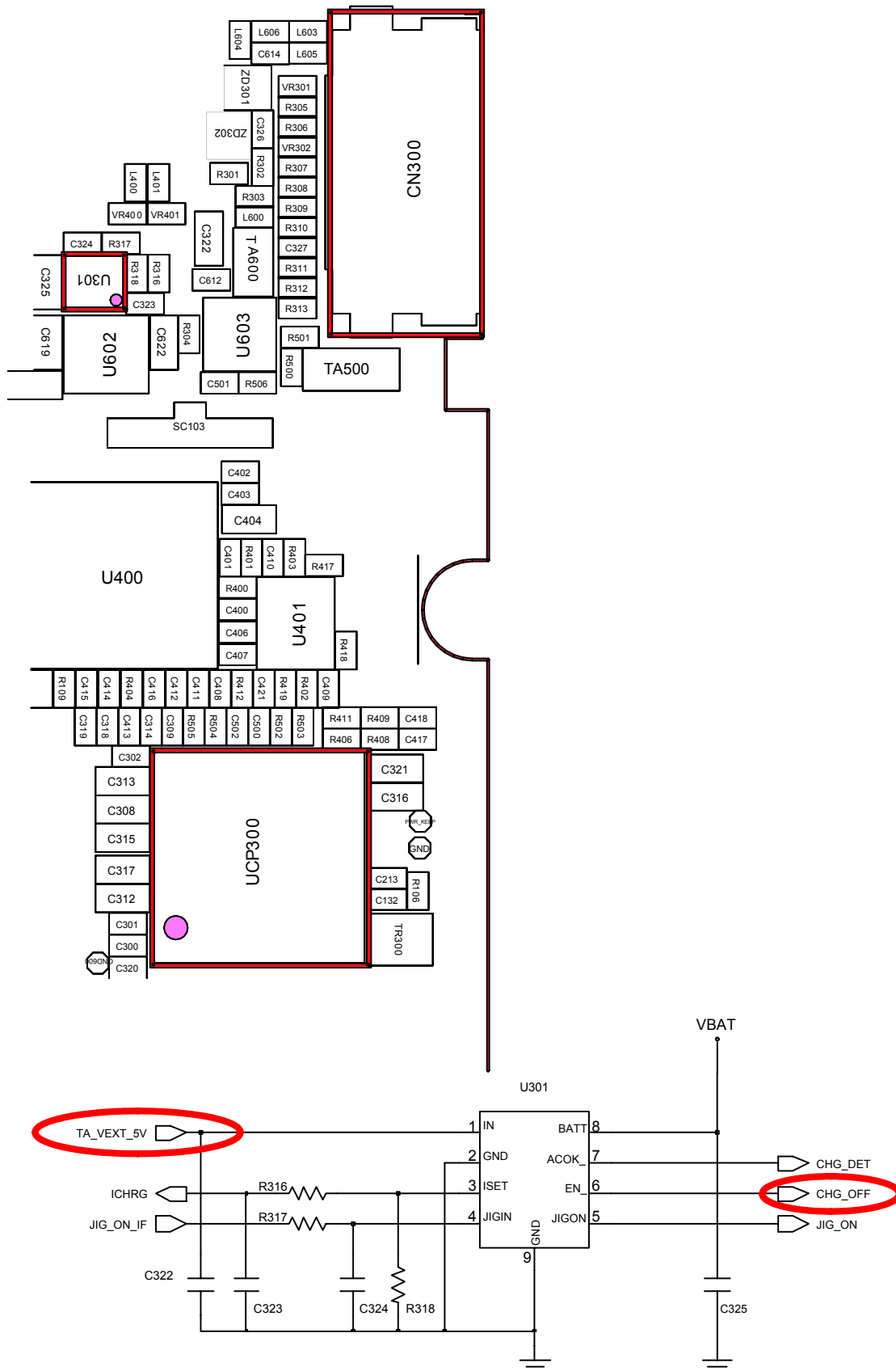


10-1-4. Charging Part

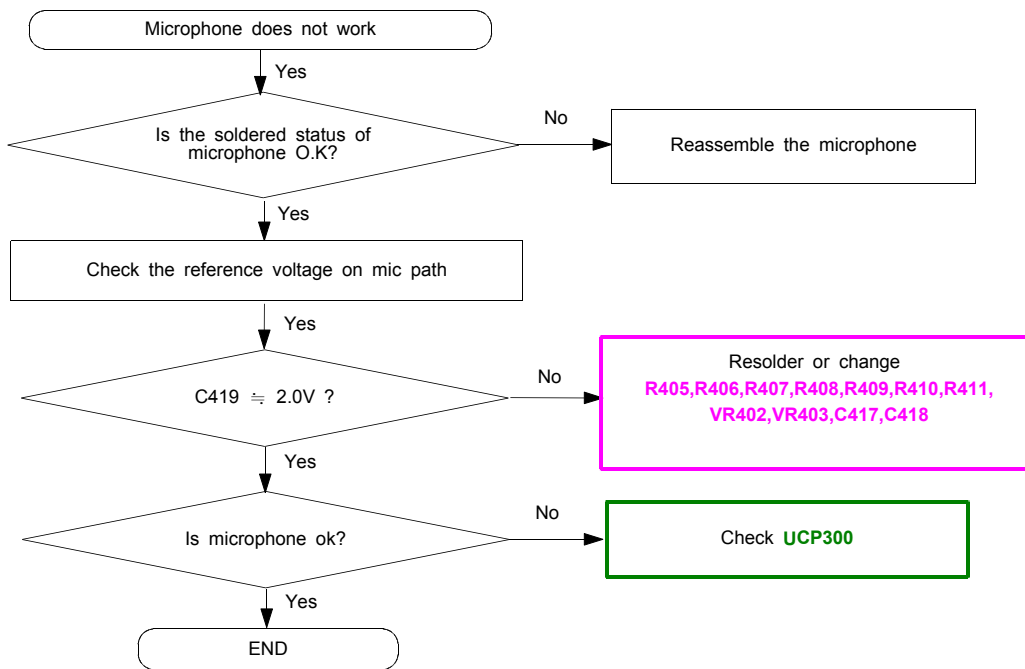




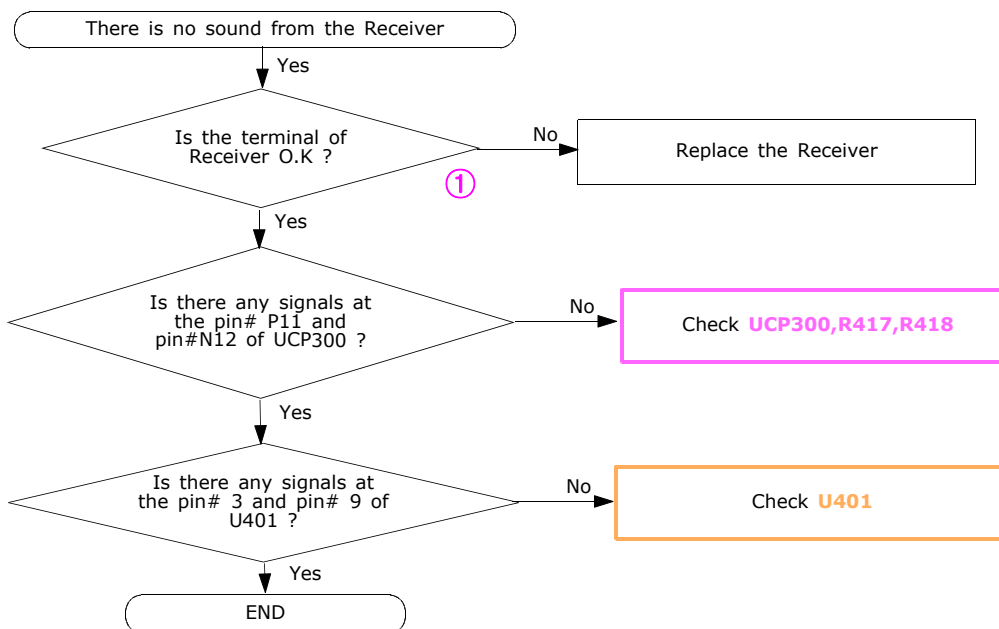
Flow Chart of Troubleshooting



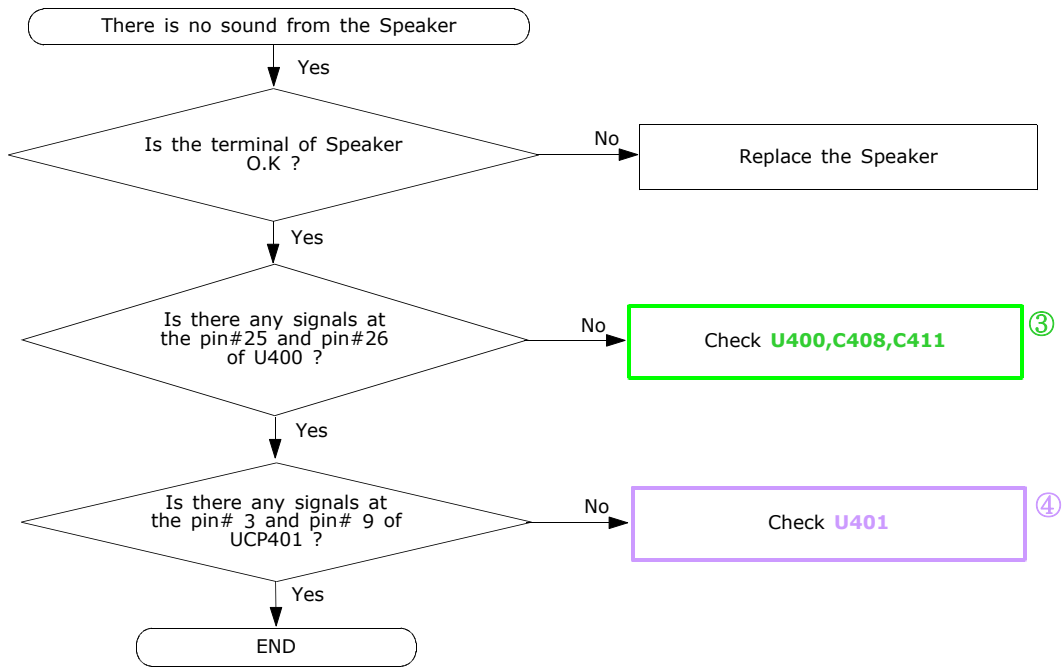
### 10-1-5. Microphone Part

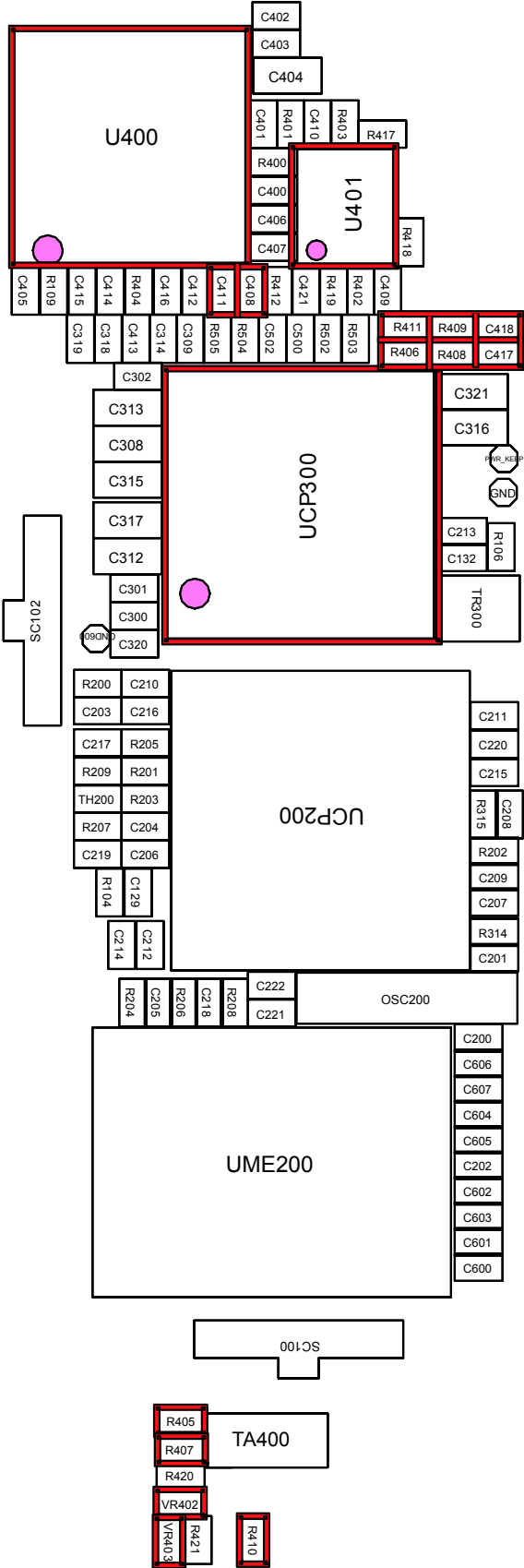


### 10-1-6. Receiver Part

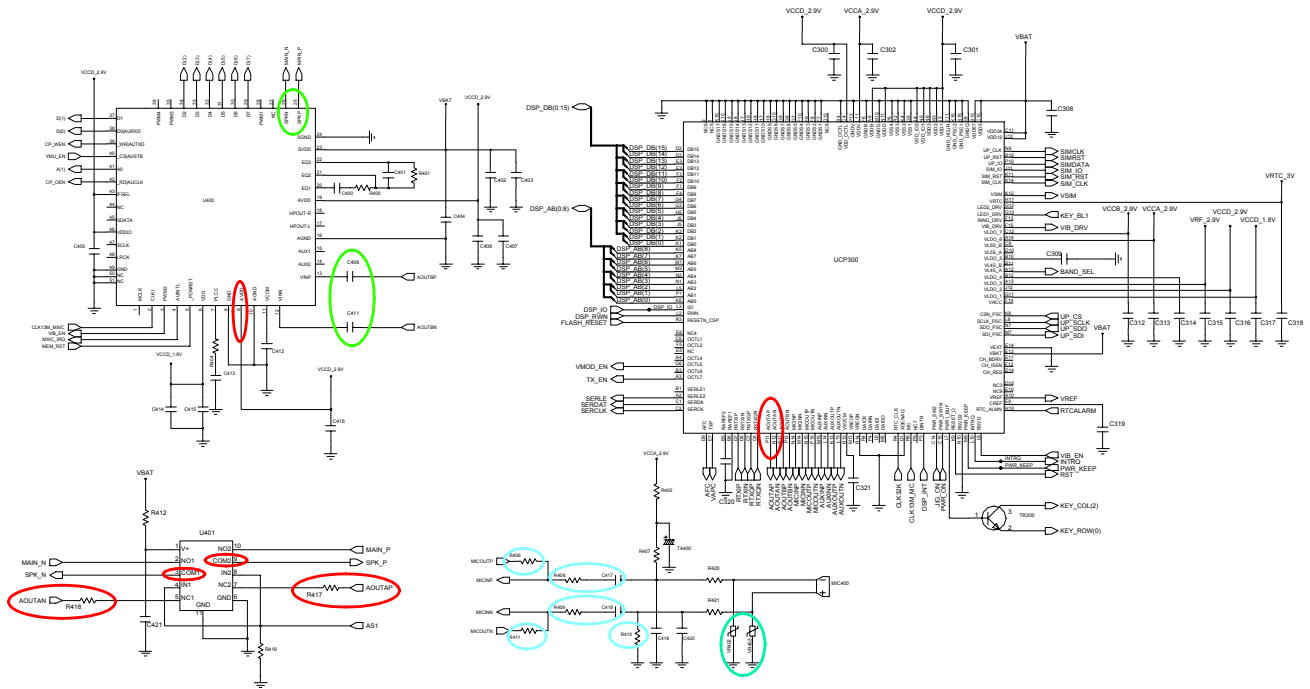


### 10-1-7. Speaker Part

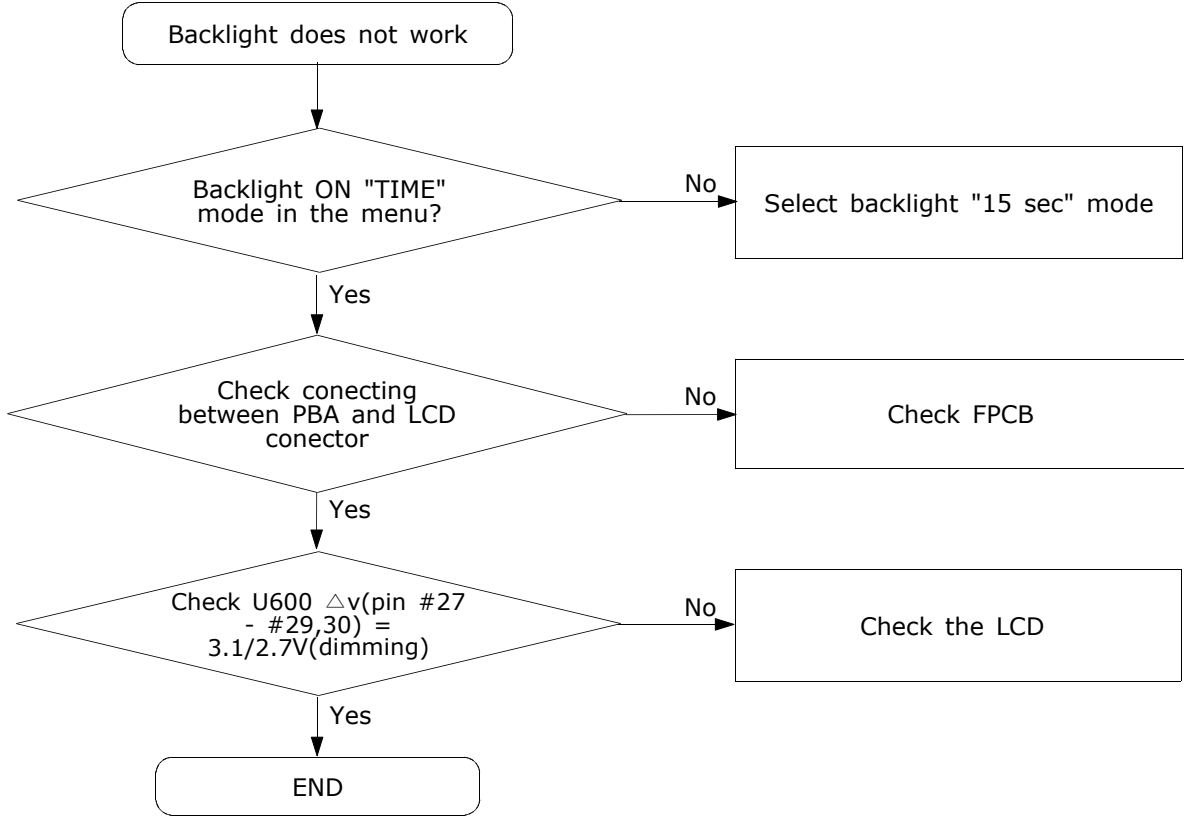




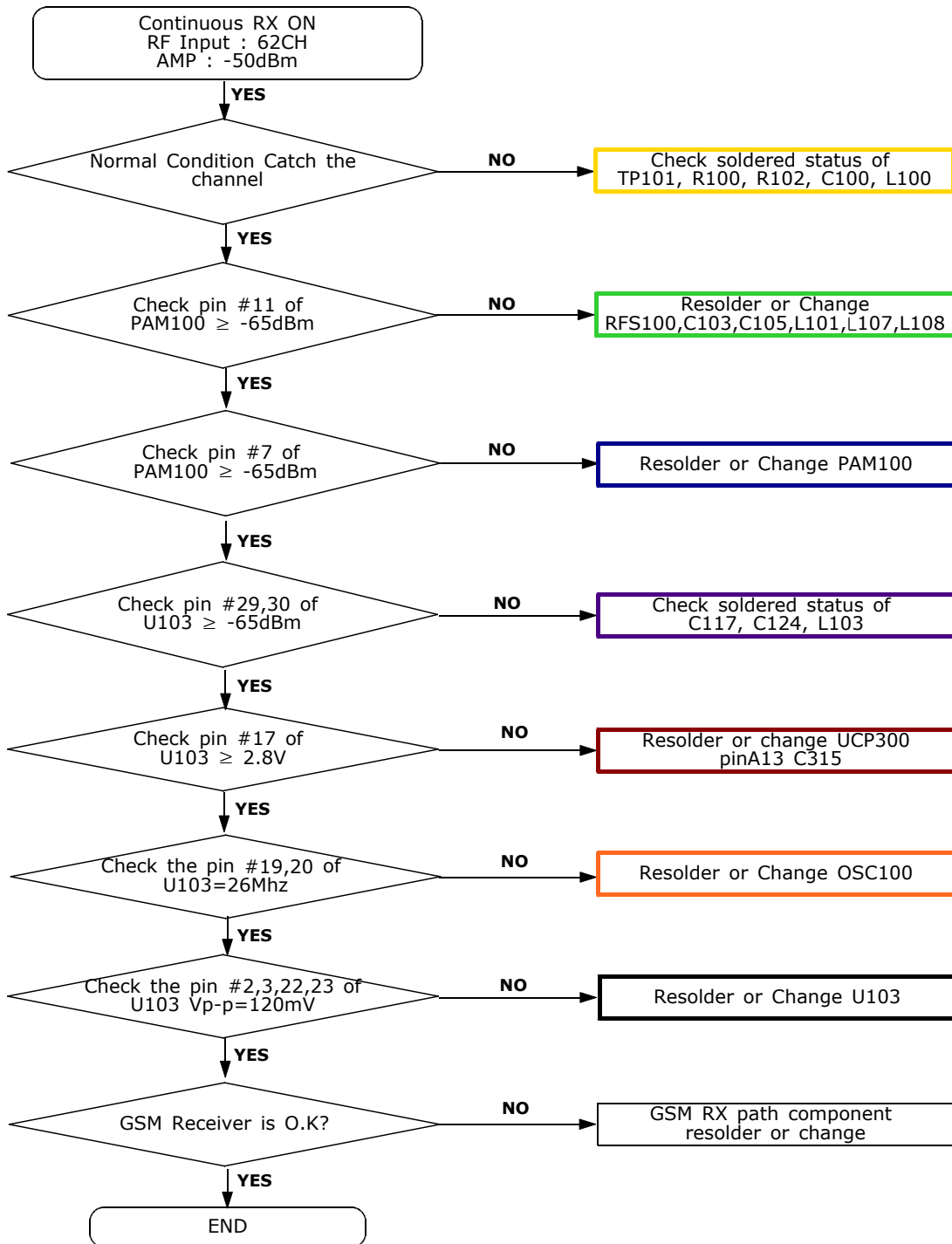
# Flow Chart of Troubleshooting



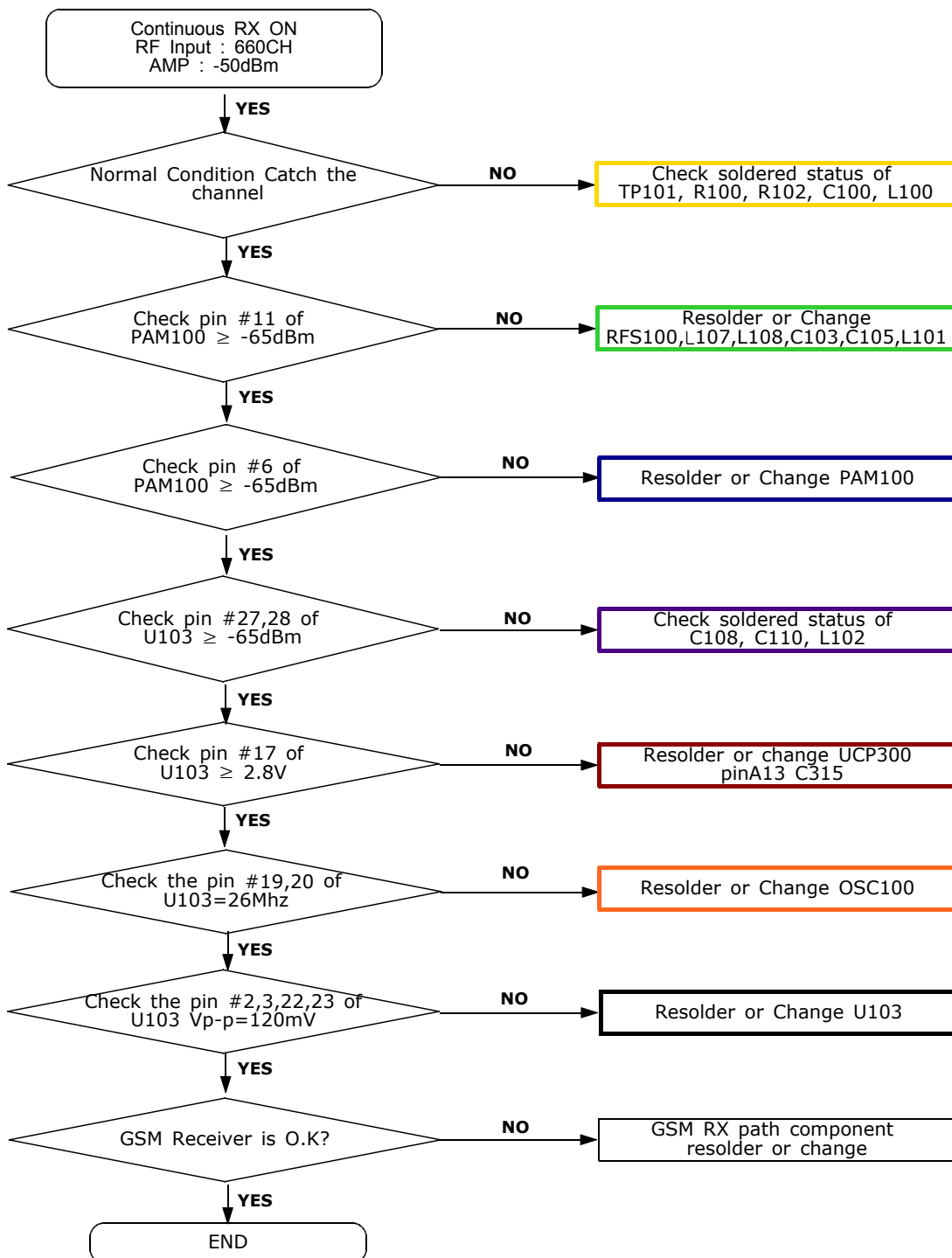
10-1-8. LCD



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

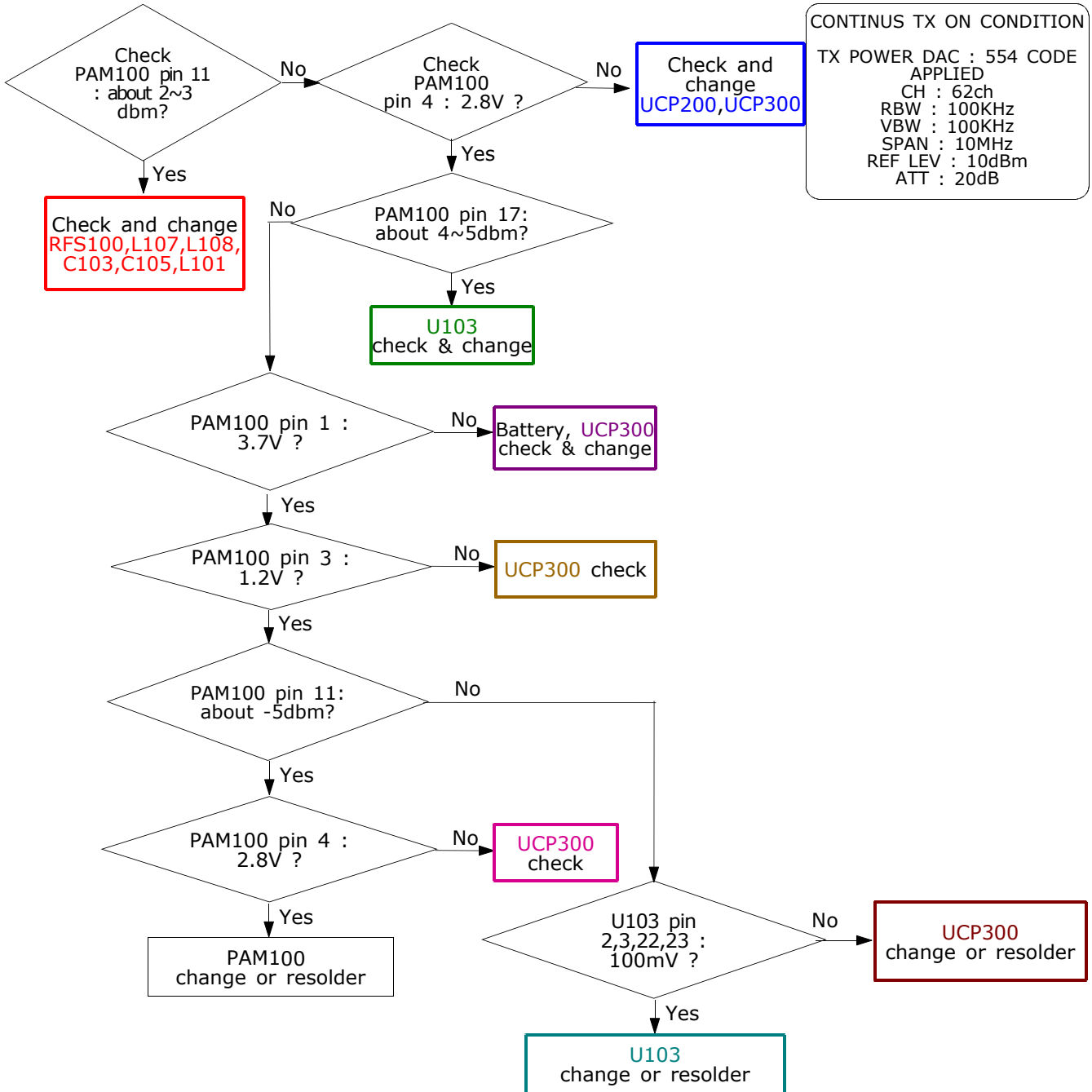


## 10-2-2. DCS Rx

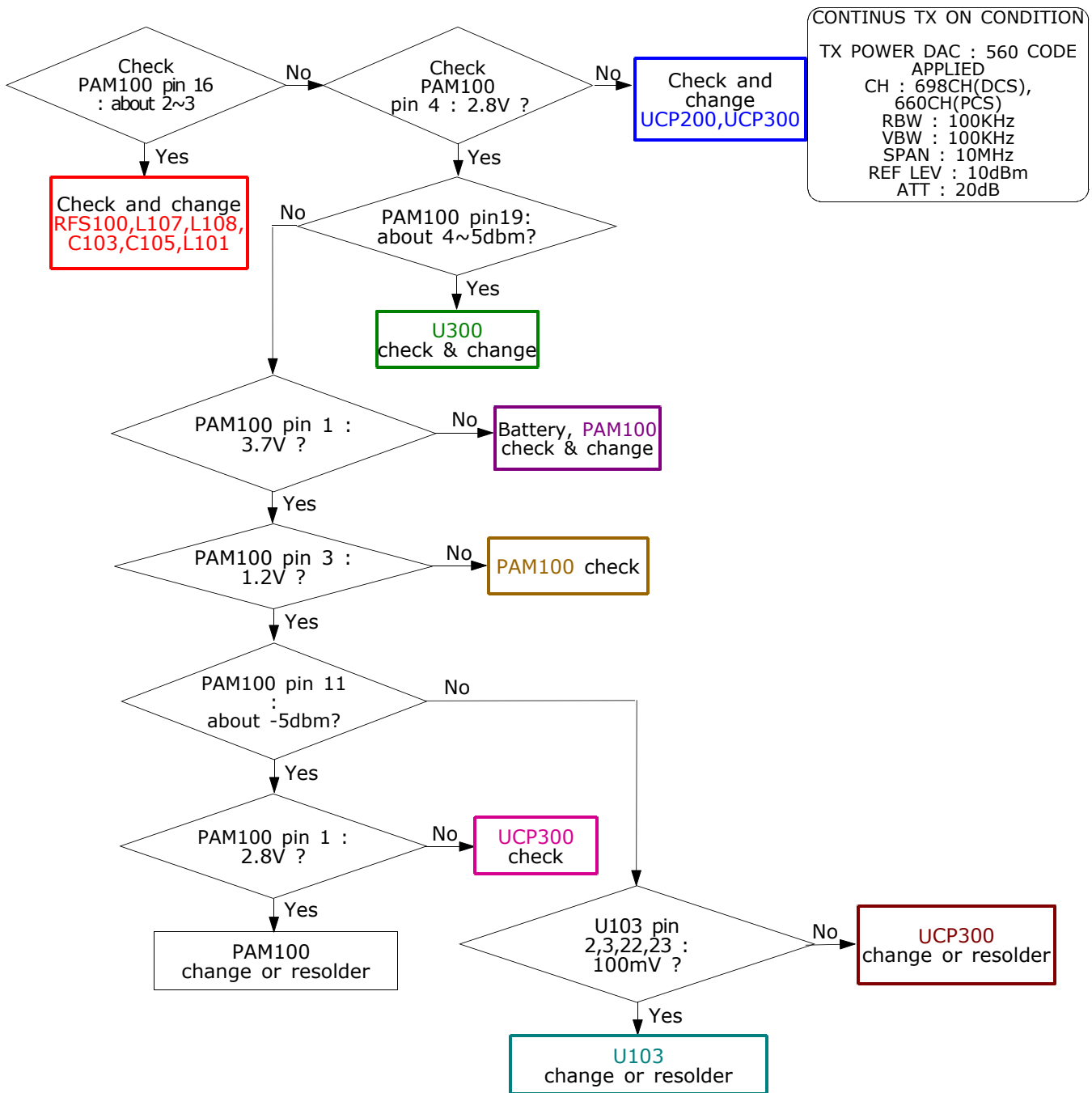




10-2-3. EGSM Tx

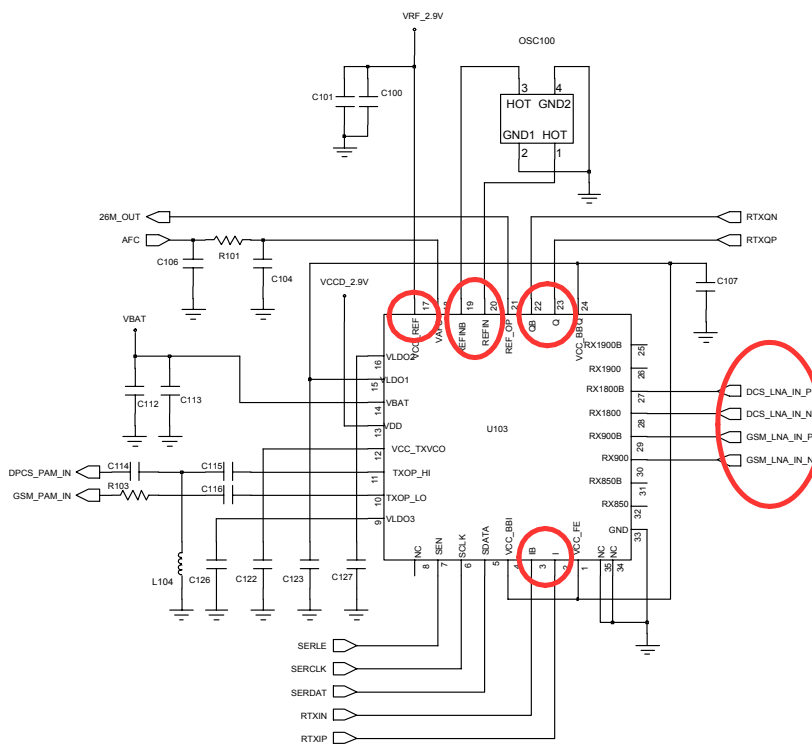
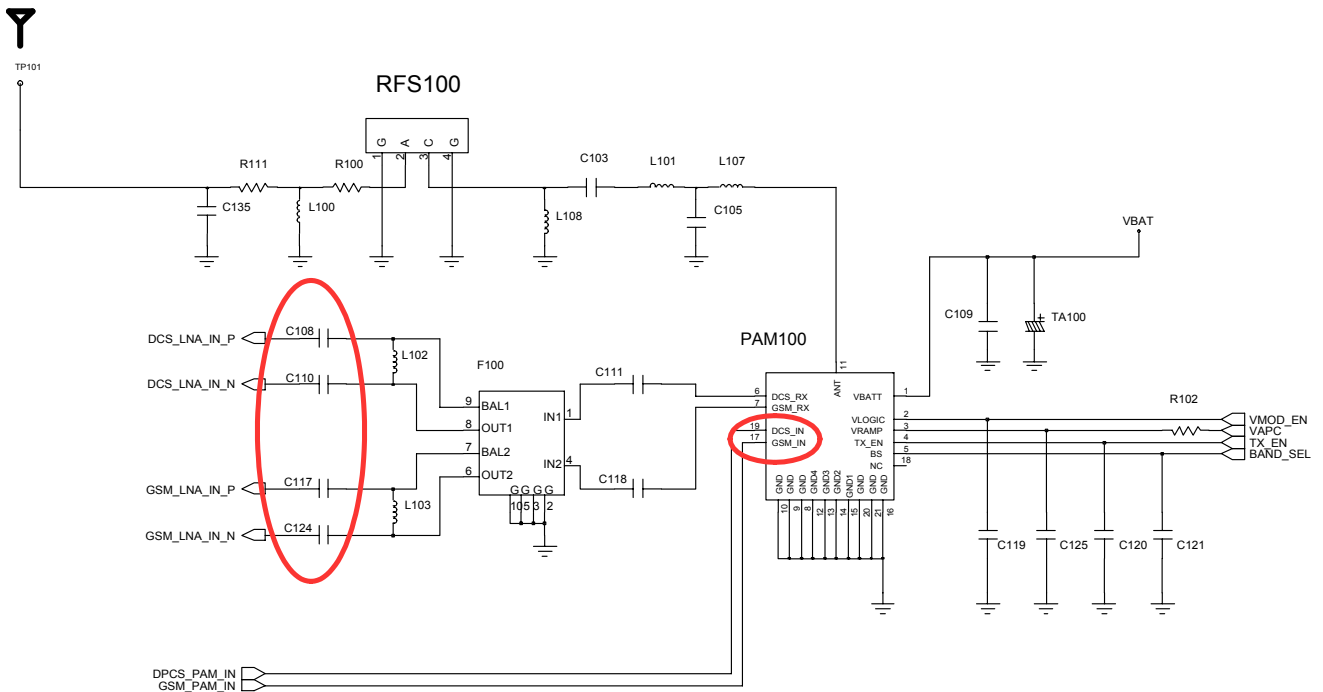


10-2-4. DCS Tx



CONTINUS TX ON CONDITION  
 TX POWER DAC : 560 CODE APPLIED  
 CH : 698CH(DCS), 660CH(PCS)  
 RBW : 100KHz  
 VBW : 100KHz  
 SPAN : 10MHz  
 REF LEV : 10dBm  
 ATT : 20dB





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## 11. Reference data

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### 11-1. Reference Abbreviate

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