

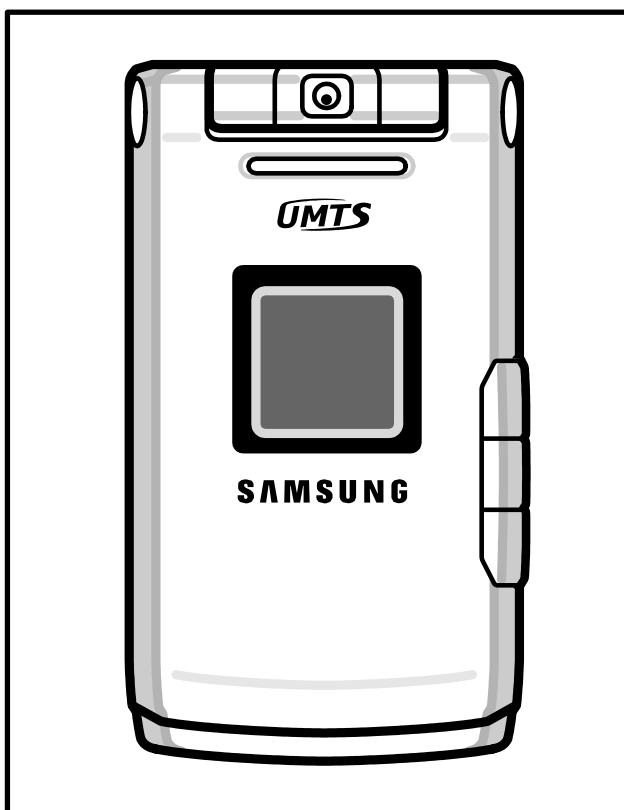
**SAMSUNG**

# UMTS TELEPHONE

## SGH-Z510

# ***SERVICE*** *Manual*

### UMTS TELEPHONE



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# 1. SGH-Z510 Specification

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## 1-1. UMTS General Specification

|                                     | GSM900<br>Phase 1      | EGSM 900<br>Phase 2    | DCS1800<br>Phase 1     | PCS1900                | WCDMA<br>2100           |
|-------------------------------------|------------------------|------------------------|------------------------|------------------------|-------------------------|
| Freq. Band[MHz]<br>Uplink/Downlink  | 890~915<br>935~960     | 880~915<br>925~960     | 1710~1785<br>1805~1880 | 1850~1910<br>1930~1990 | 1920~1980<br>2110~2170  |
| ARFCN range                         | 1~124                  | 0~124 &<br>975~1023    | 512~885                | 512~810                | 9612~988<br>10562~10838 |
| Tx/Rx spacing                       | 45MHz                  | 45MHz                  | 95MHz                  | 80MHz                  | 190MHz                  |
| Mod. Bit rate/<br>Bit Period        | 270.833kbps<br>3.692us | 270.833kbps<br>3.692us | 270.833kbps<br>3.692us | 270.833kbps<br>3.692us | 4.096Mcps               |
| Time Slot<br>Period/Frame<br>Period | 576.9us<br>4.615ms     | 576.9us<br>4.615ms     | 576.9us<br>4.615ms     | 576.9us<br>4.615ms     | 10ms                    |
| Modulation                          | 0.3GMSK                | 0.3GMSK                | 0.3GMSK                | 0.3GMSK                | QPSK                    |
| MS Power                            | 33dBm~13dBm            | 33dBm~5dBm             | 30dBm~0dBm             | 30dBm~0dBm             | 24dBm ~<br>-50dBm       |
| Power Class                         | 5pcl ~ 15pcl           | 5pcl ~ 19pcl           | 0pcl ~ 15pcl           | 0pcl ~ 15pcl           | Power Class3            |
| Sensitivity                         | -102dBm                | -102dBm                | -100dBm                | -100dBm                | -106.7dBm               |
| TDMA Mux                            | 8                      | 8                      | 8                      | 8                      | -                       |
| Cell Radius                         | 35Km                   | 35Km                   | 2Km                    | -                      | -                       |

## 1-2. GSM Tx Power Class

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

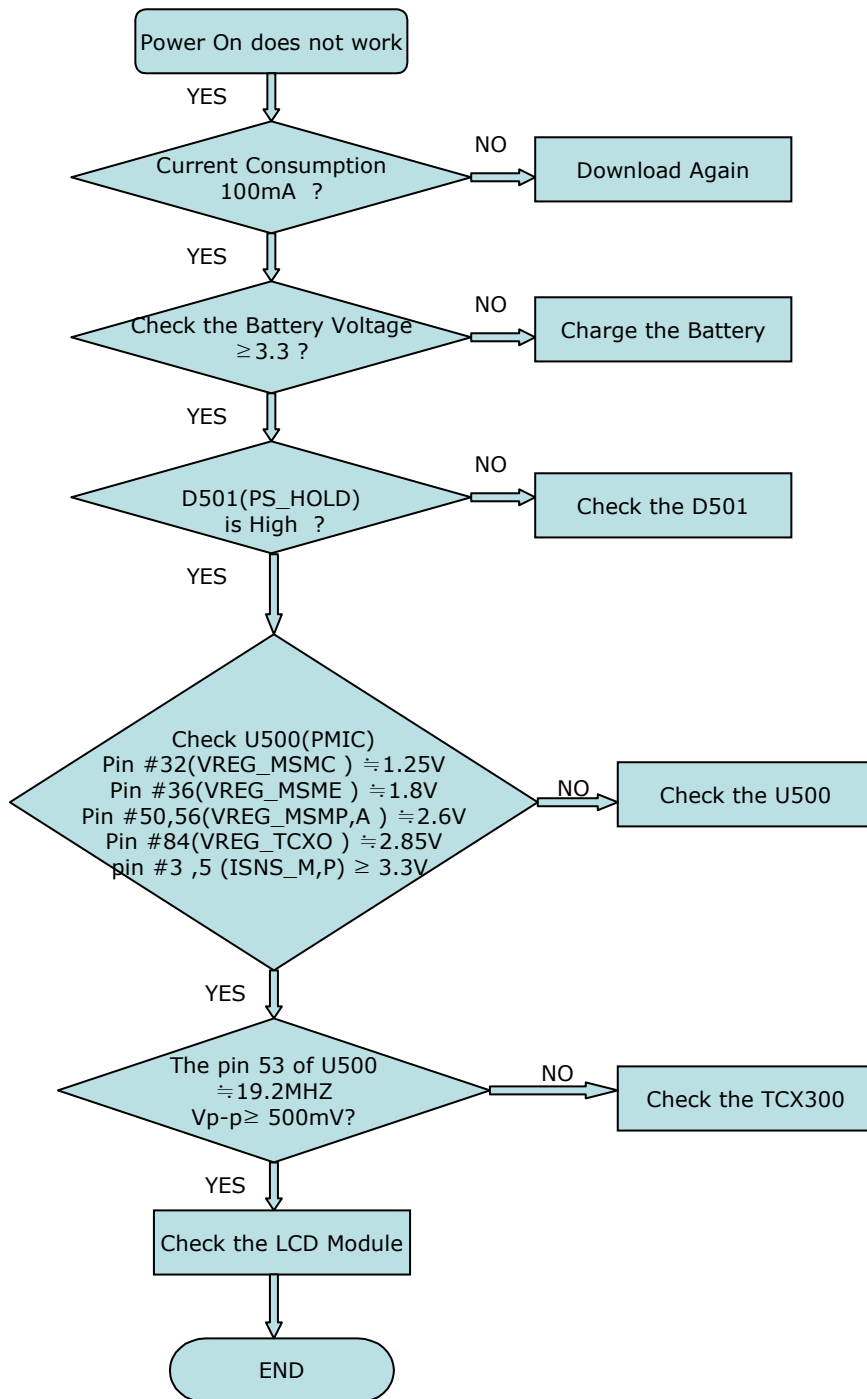
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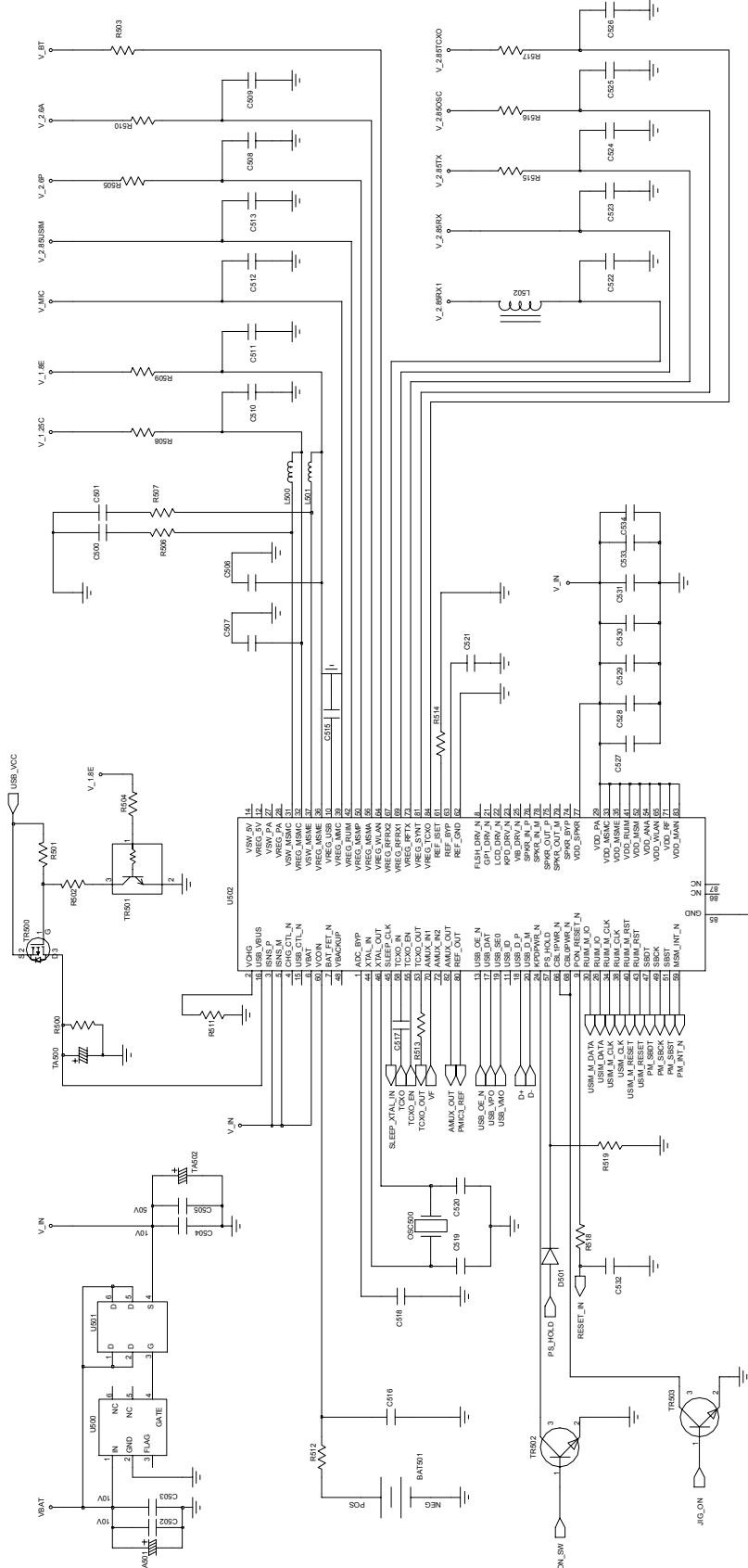
## 2. SGH-Z510 Flow Chart of Troubleshooting and Circuit Diagrams

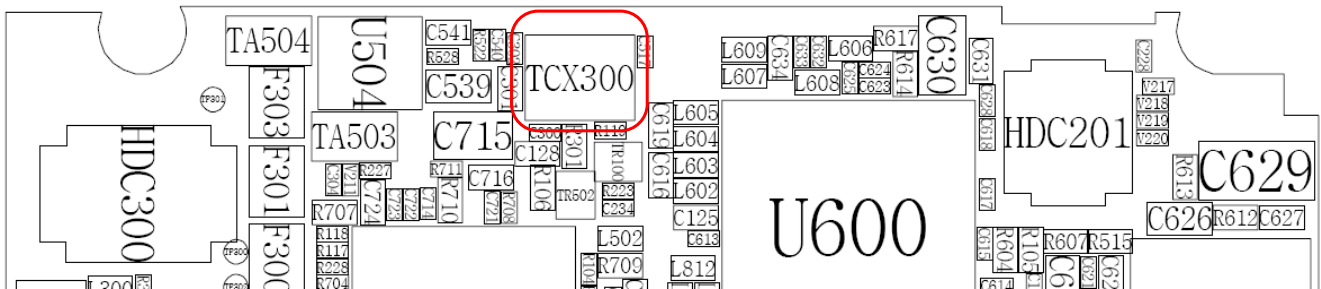
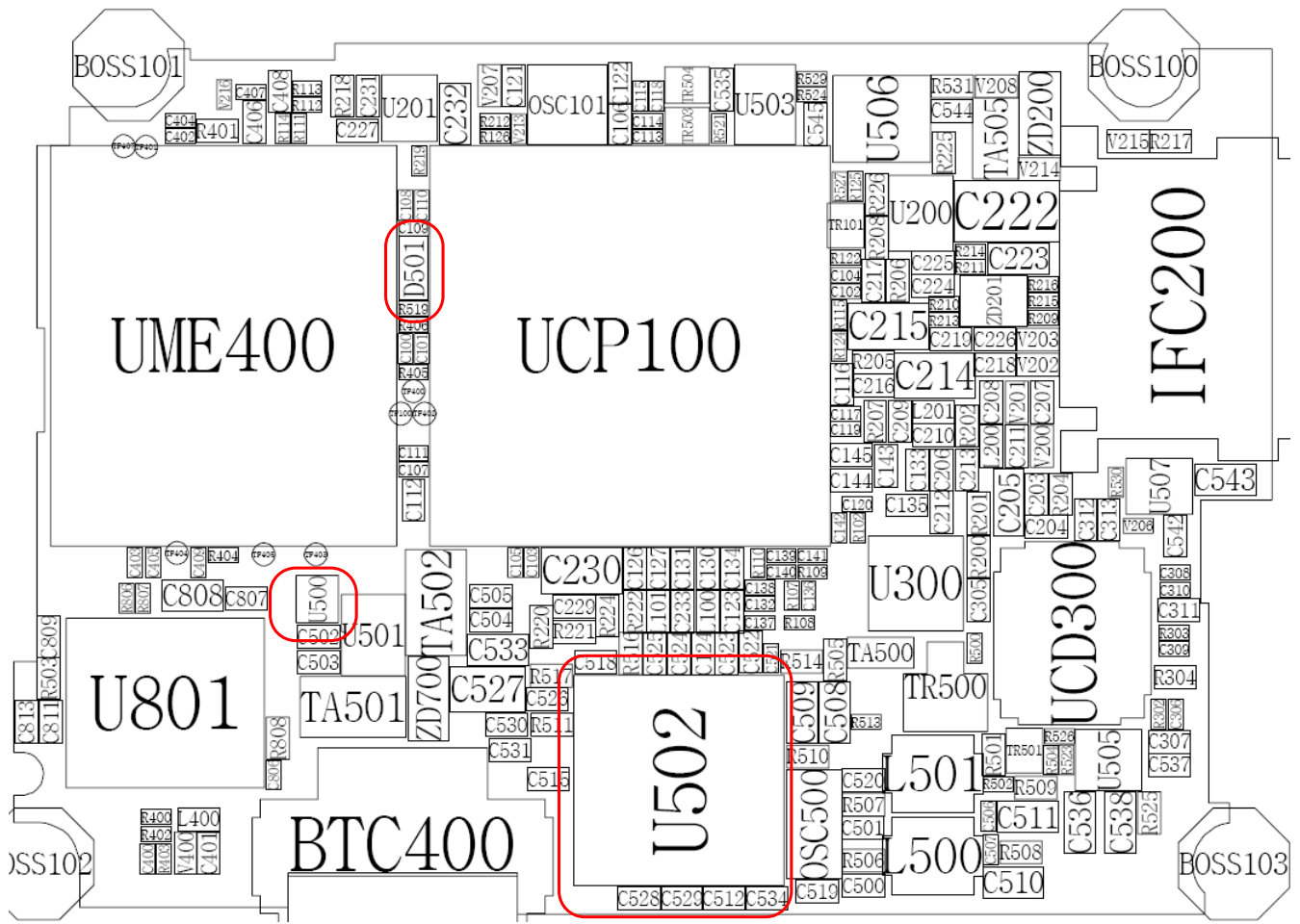
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### 2-1.Baseband

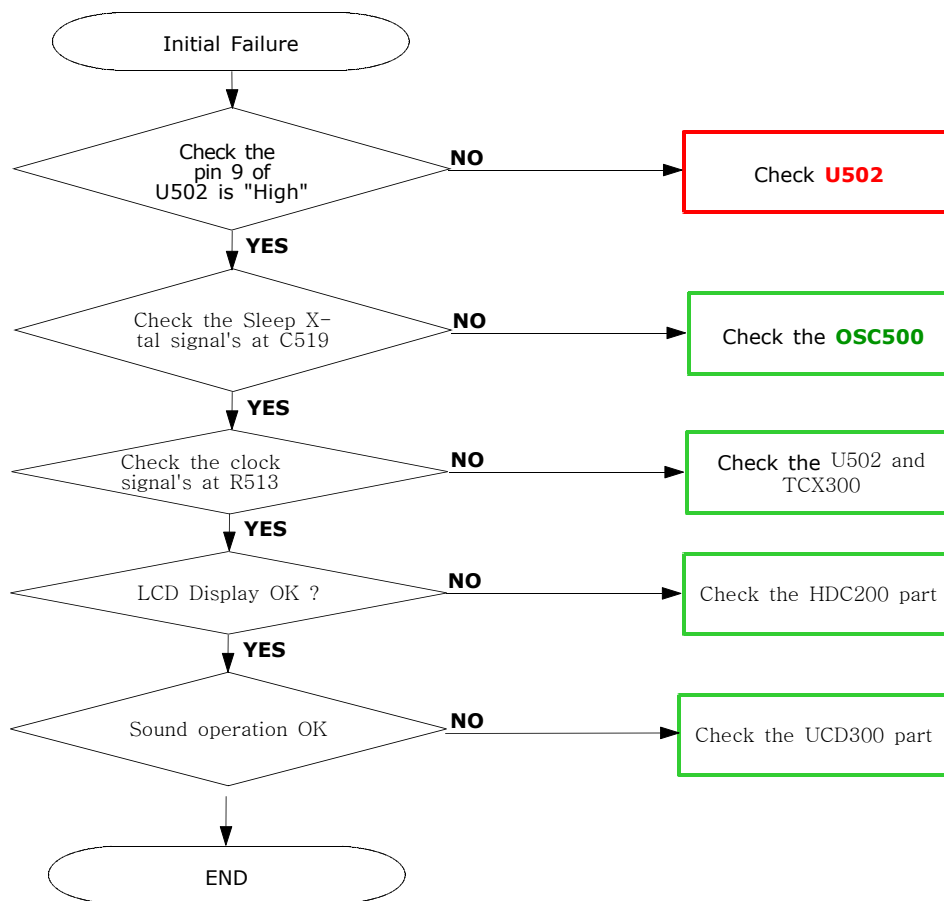
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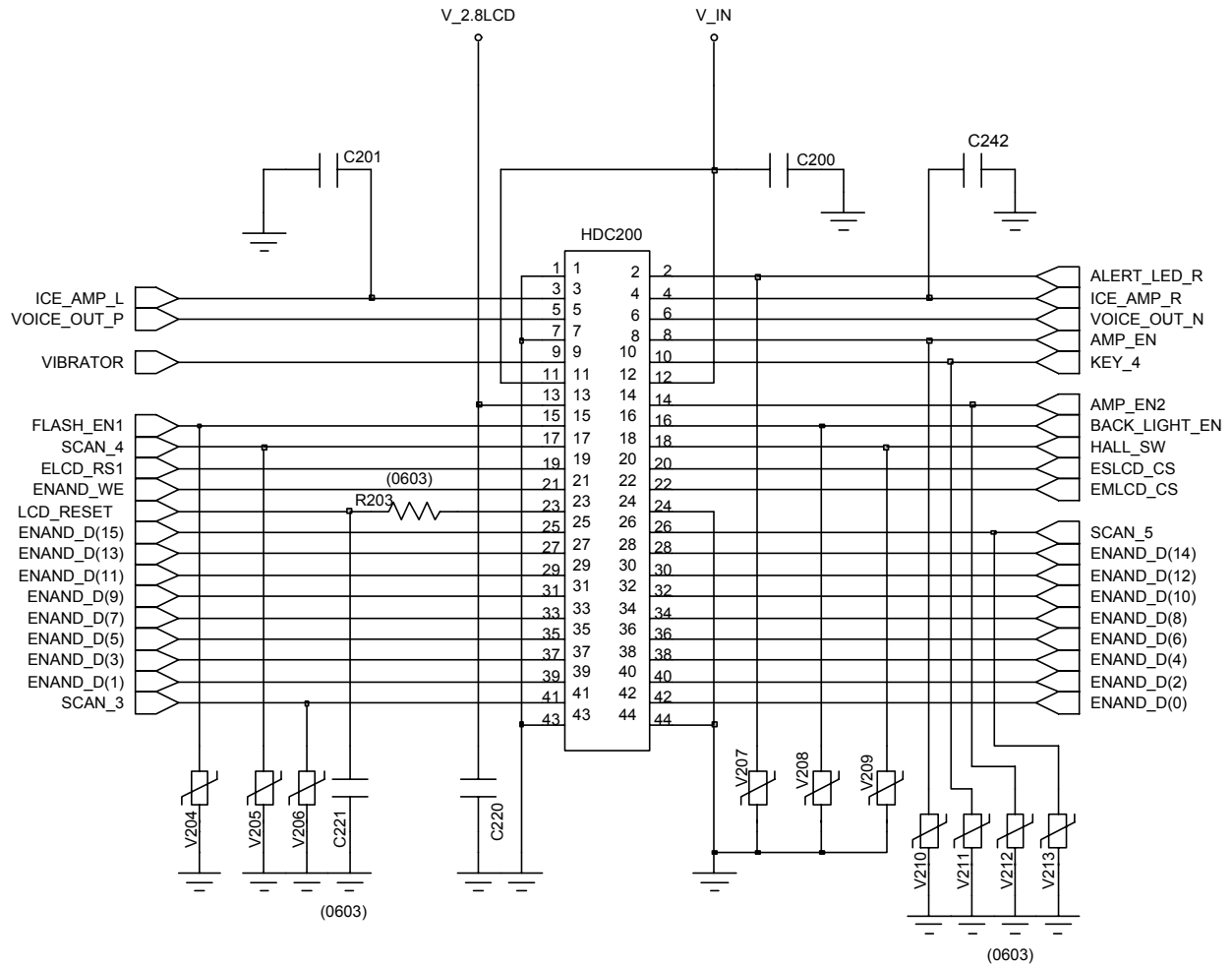


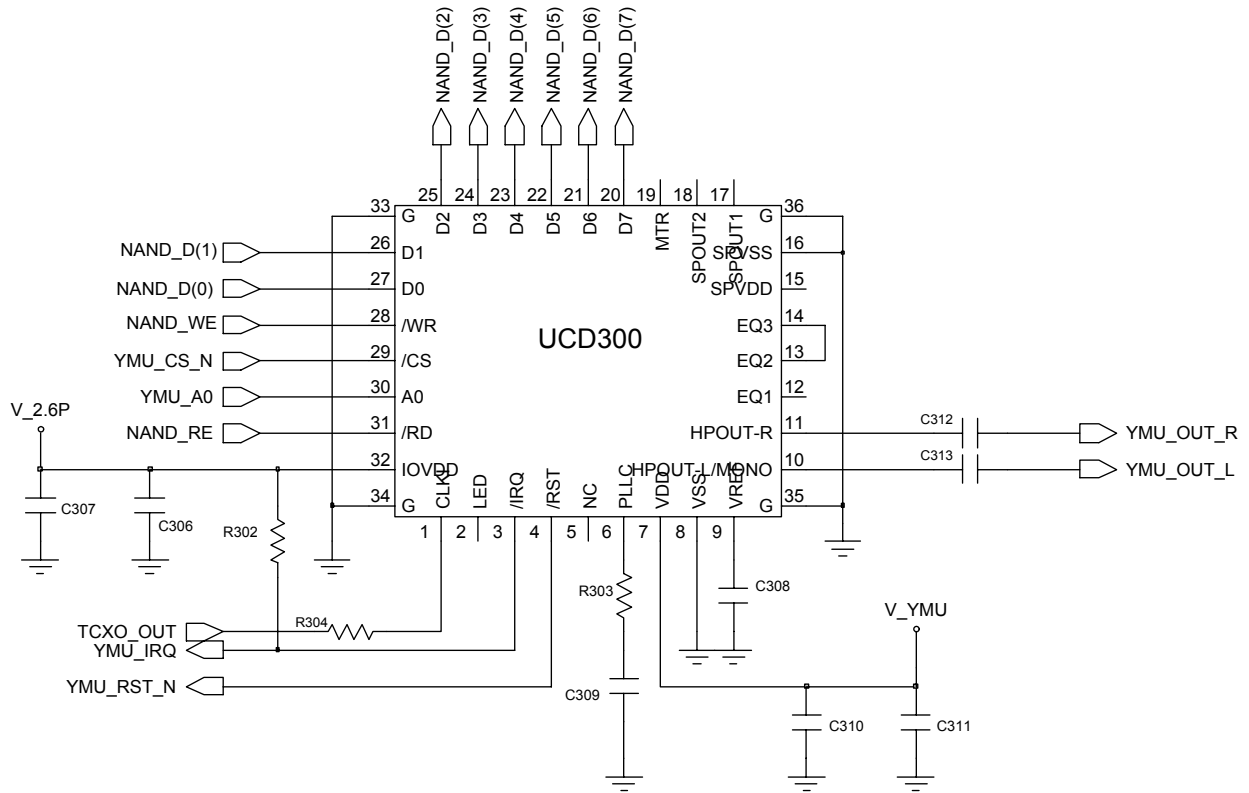


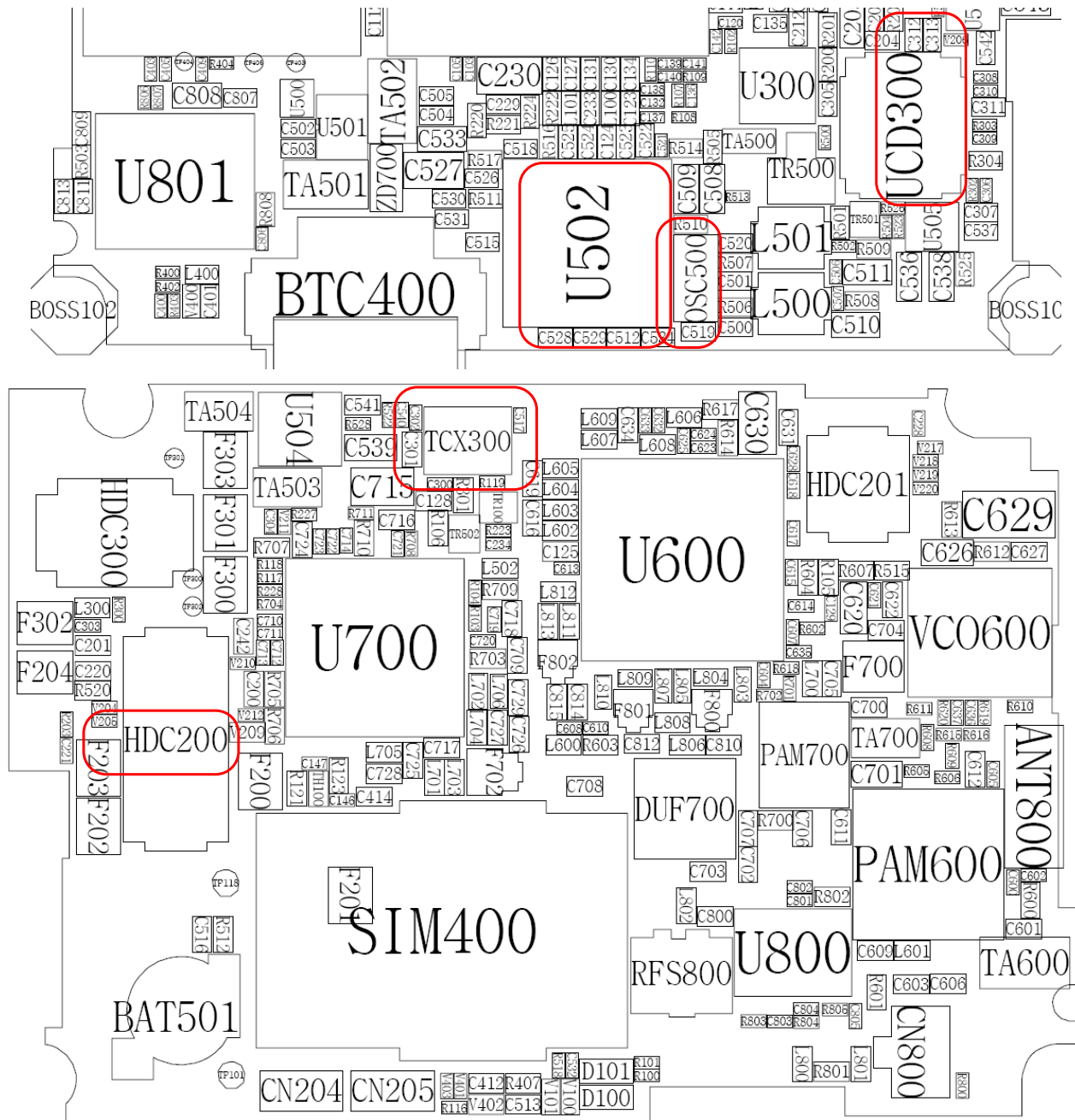


## 2-1-2. Initial

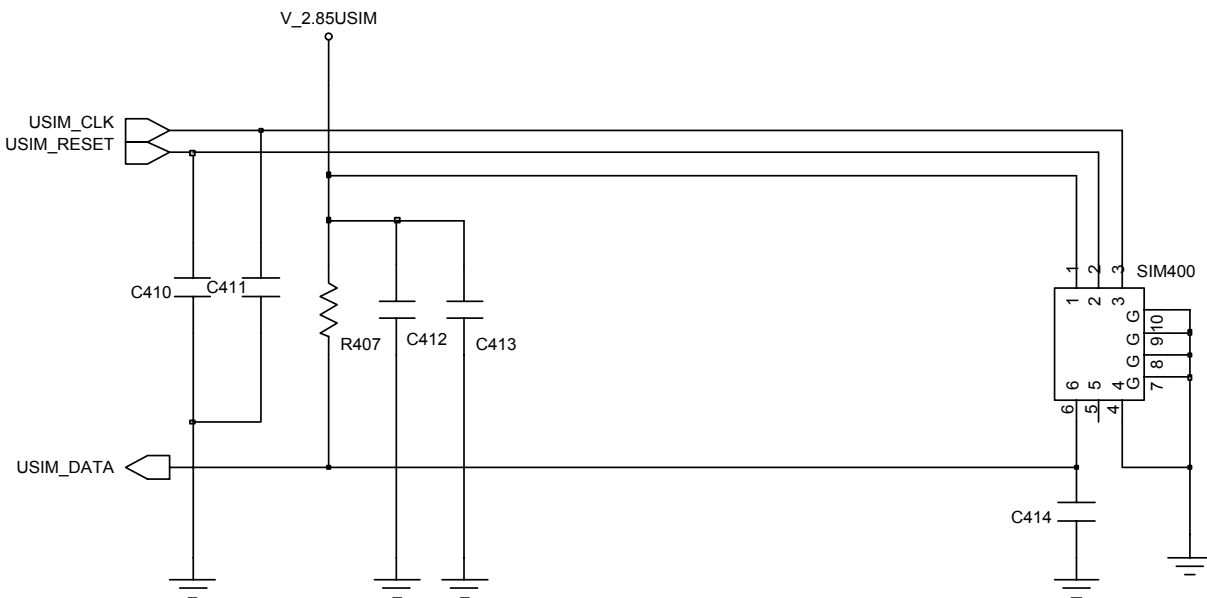
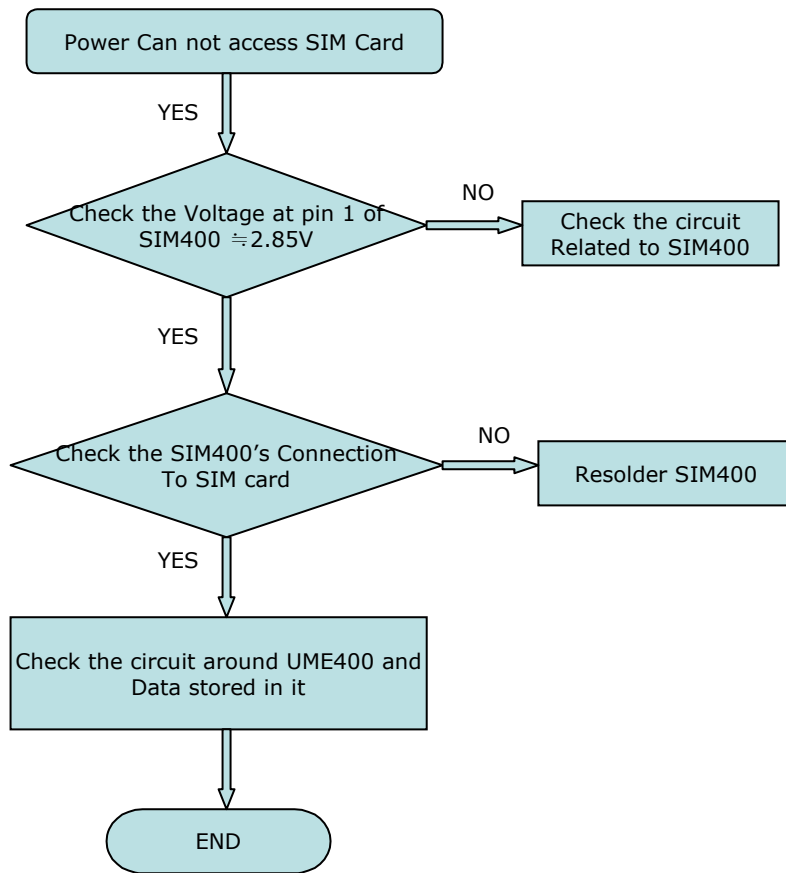






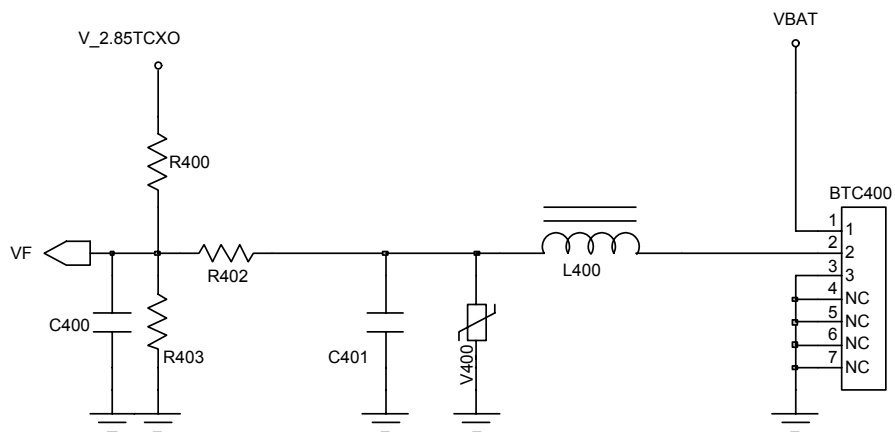
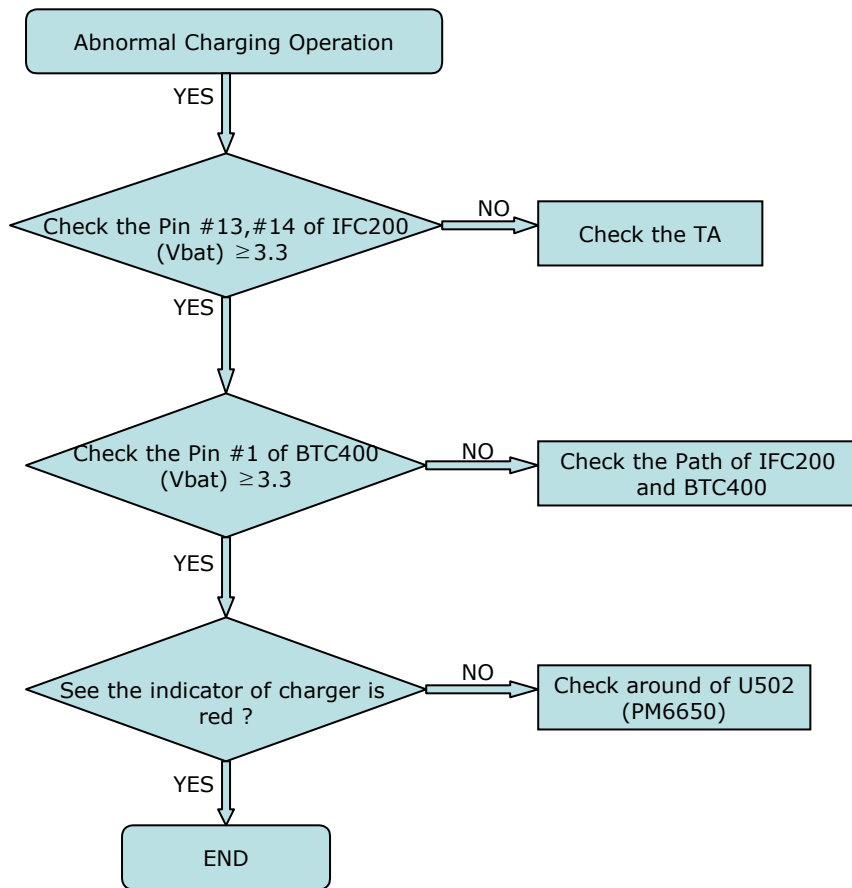


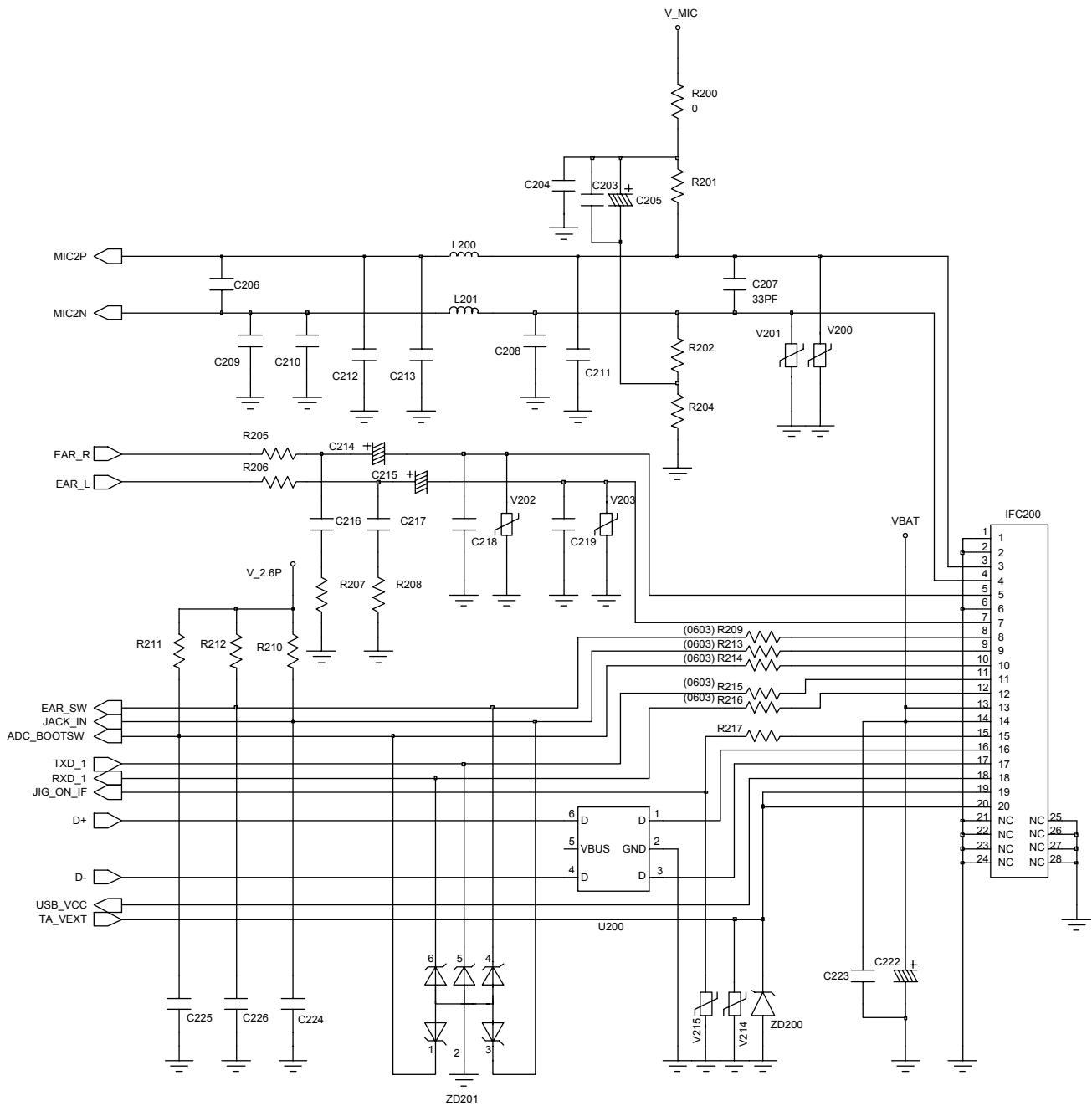
### 2-1-3. Sim Part

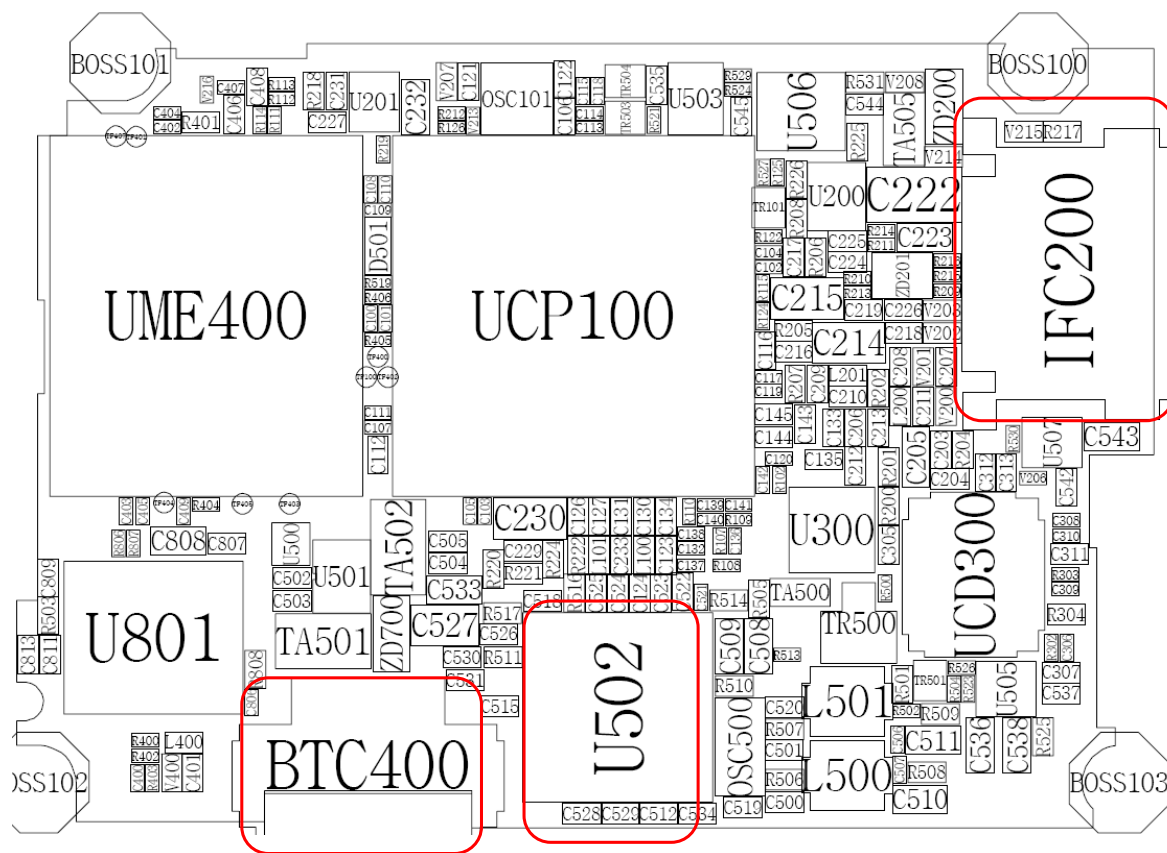




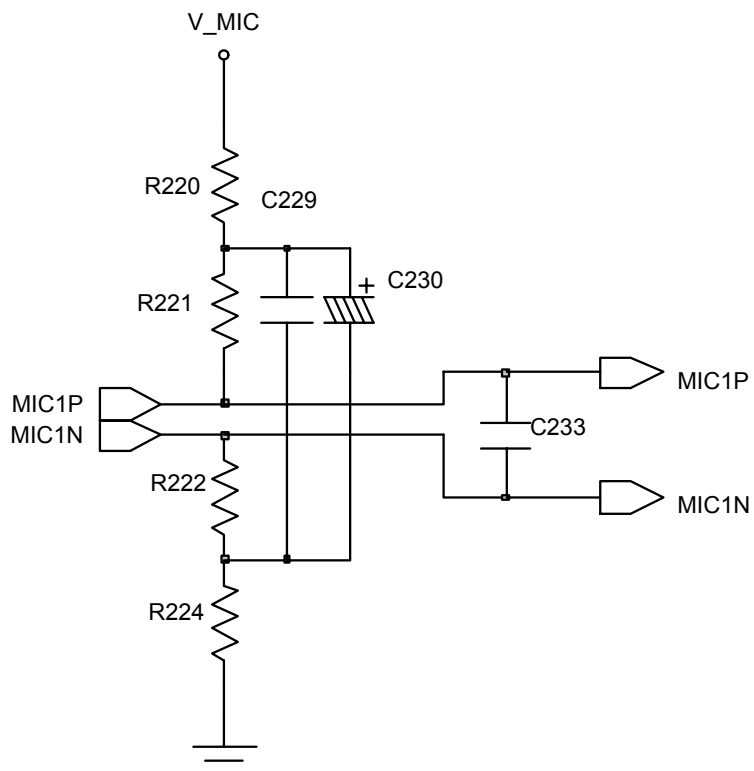
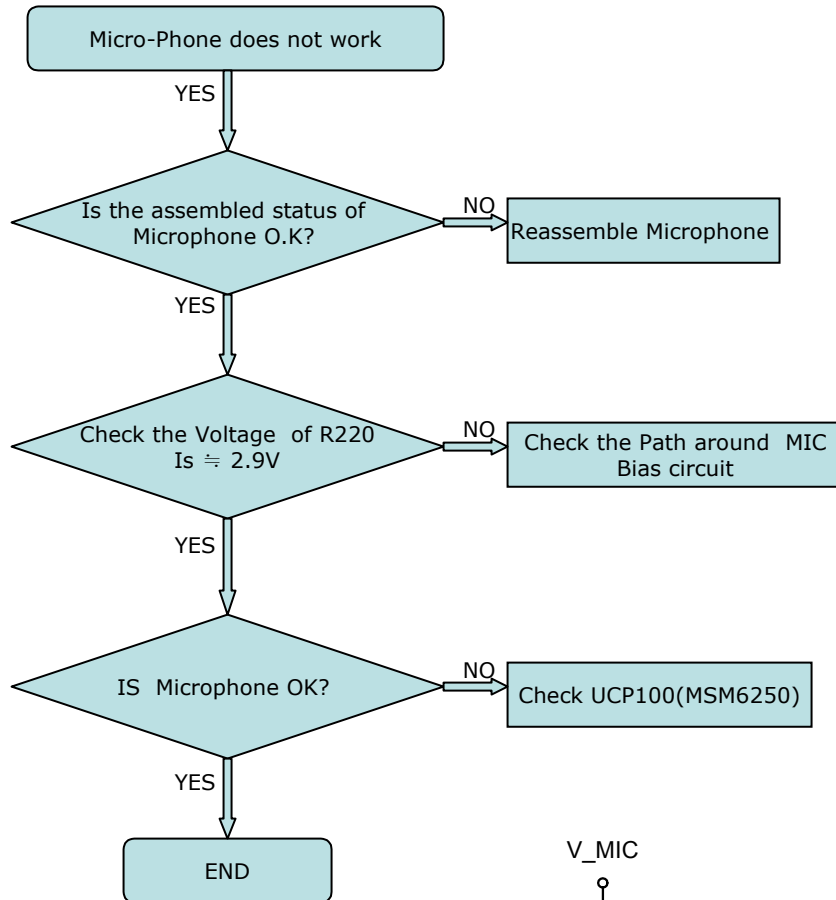
## 2-1-4. Charging Part



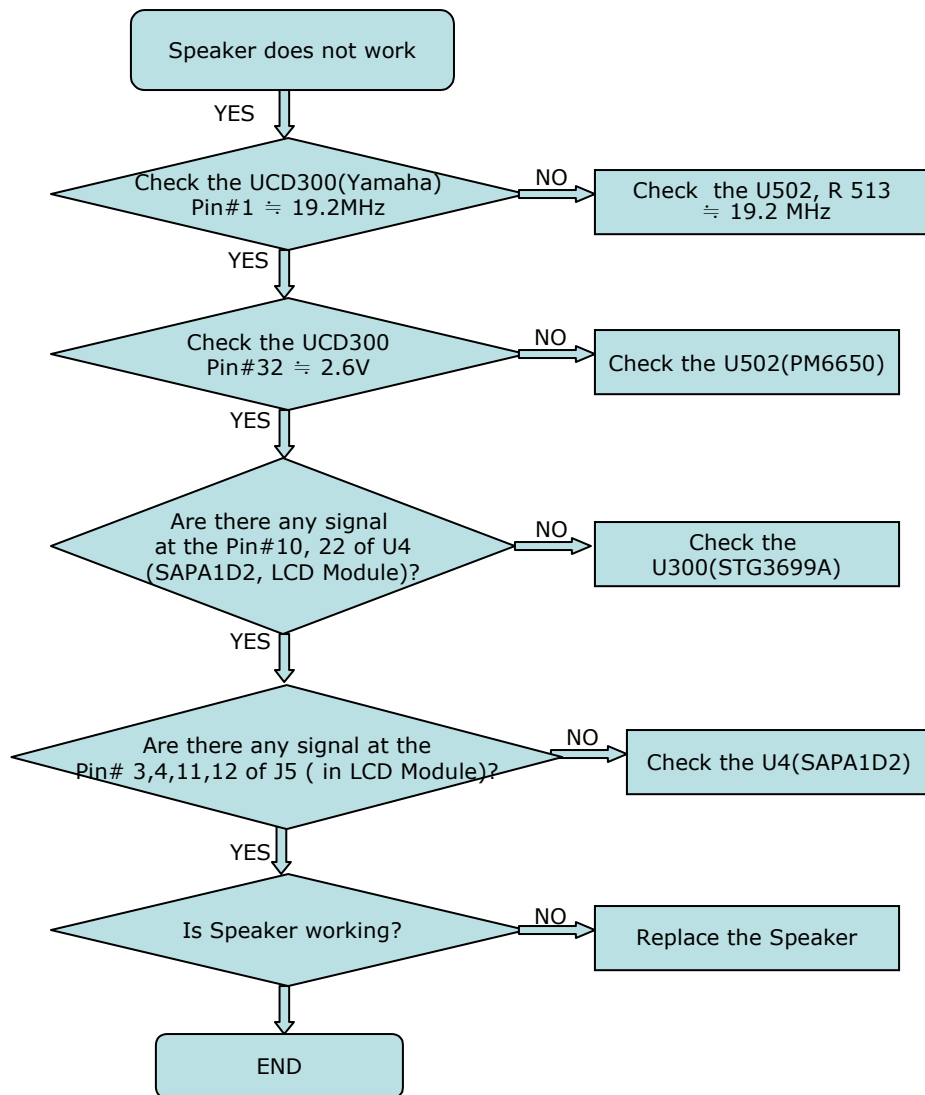




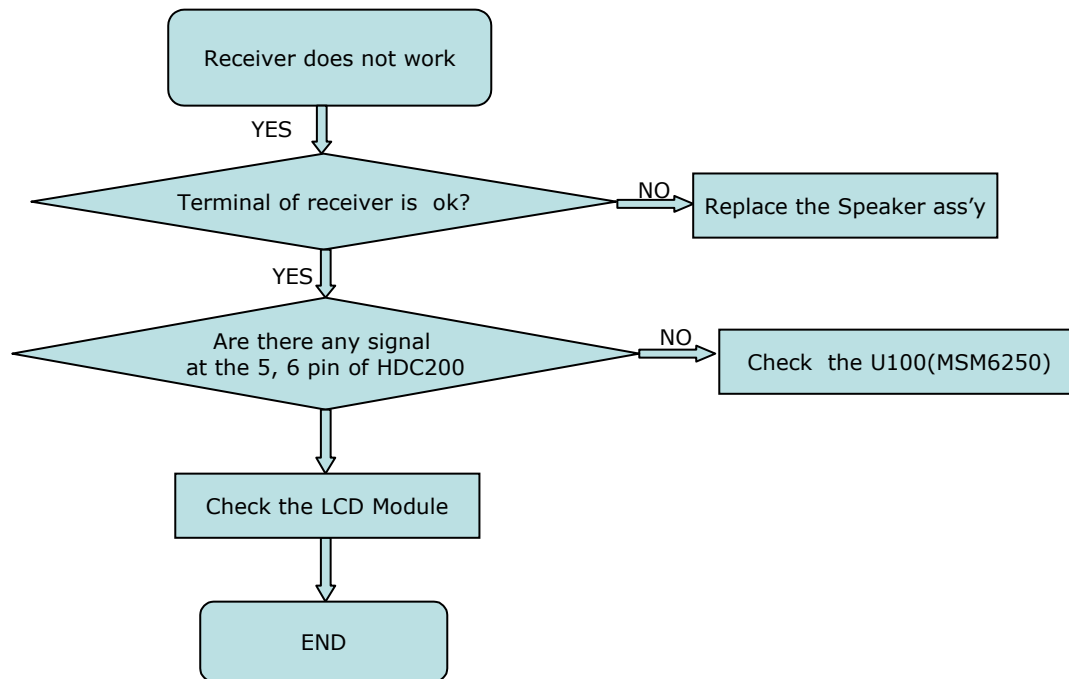
## 2-1-5. Microphone Part

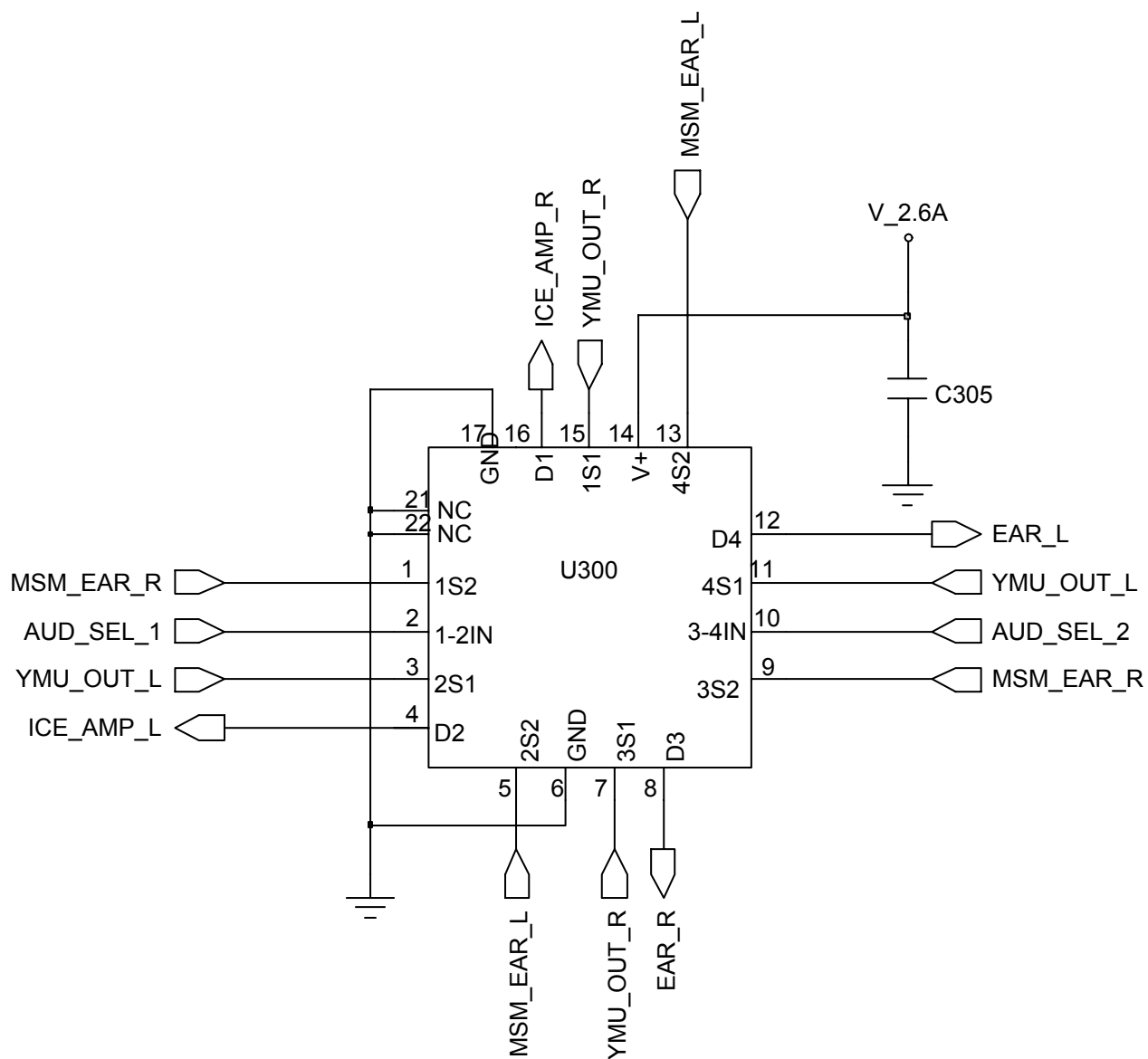




**2-1-6. Speaker**

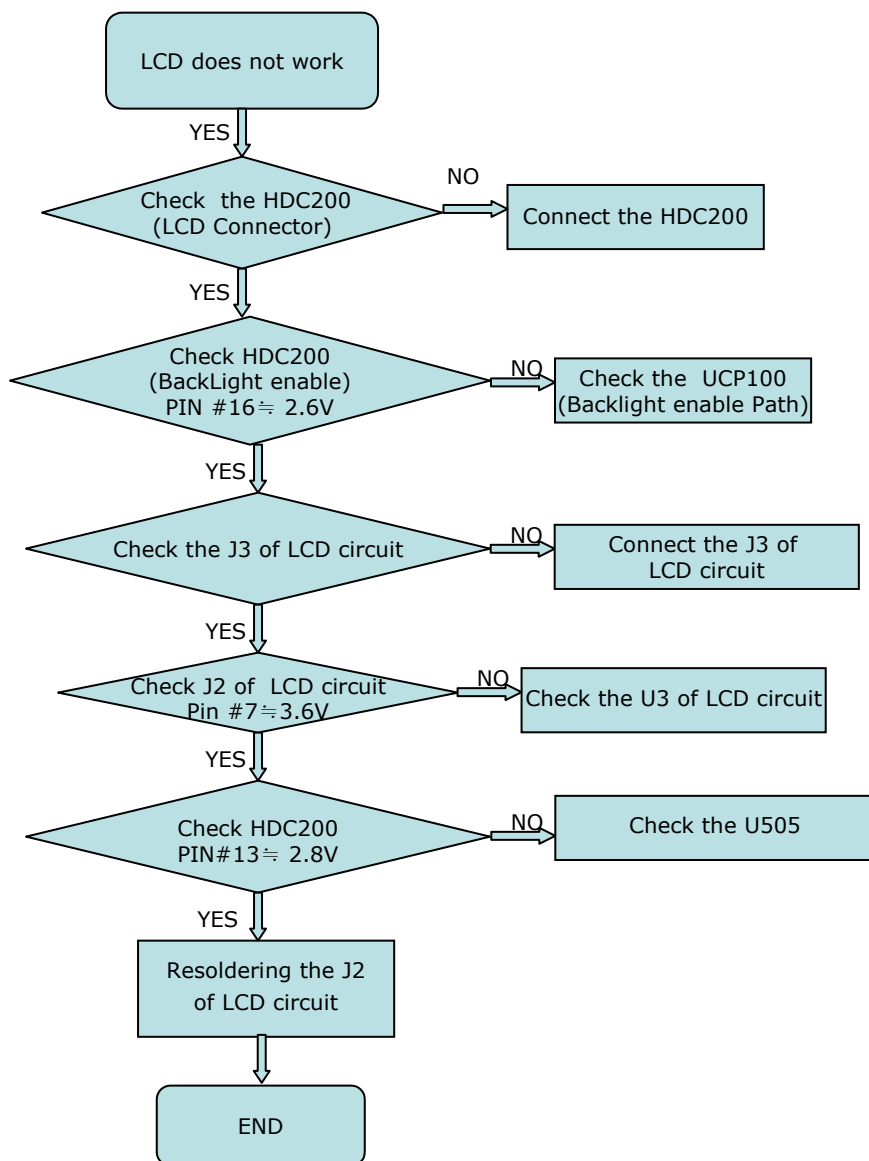
## 2-1-7. Receiver Part

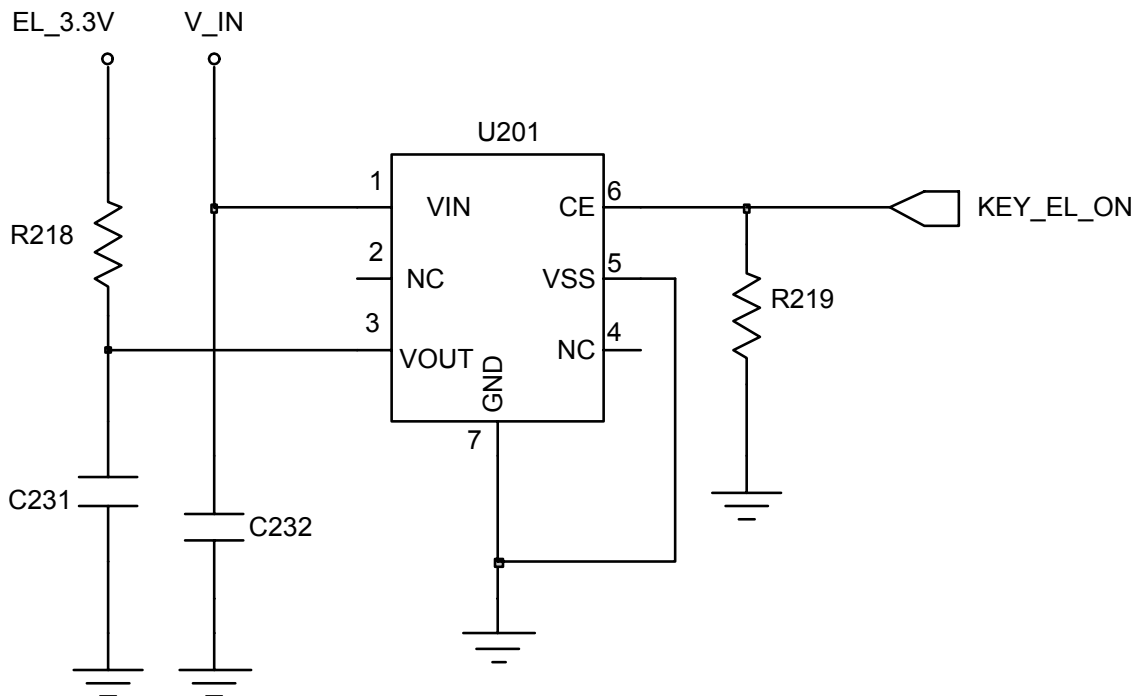
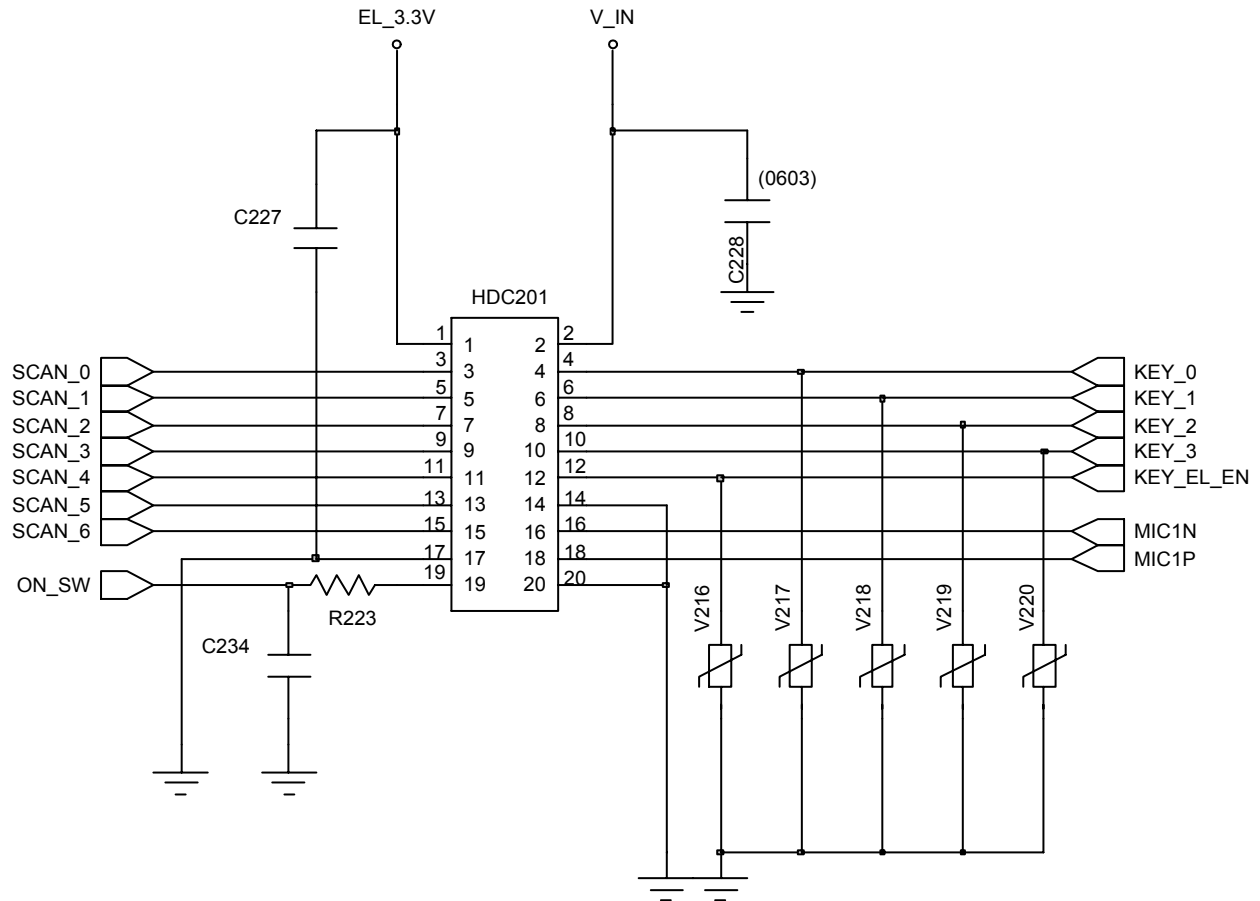


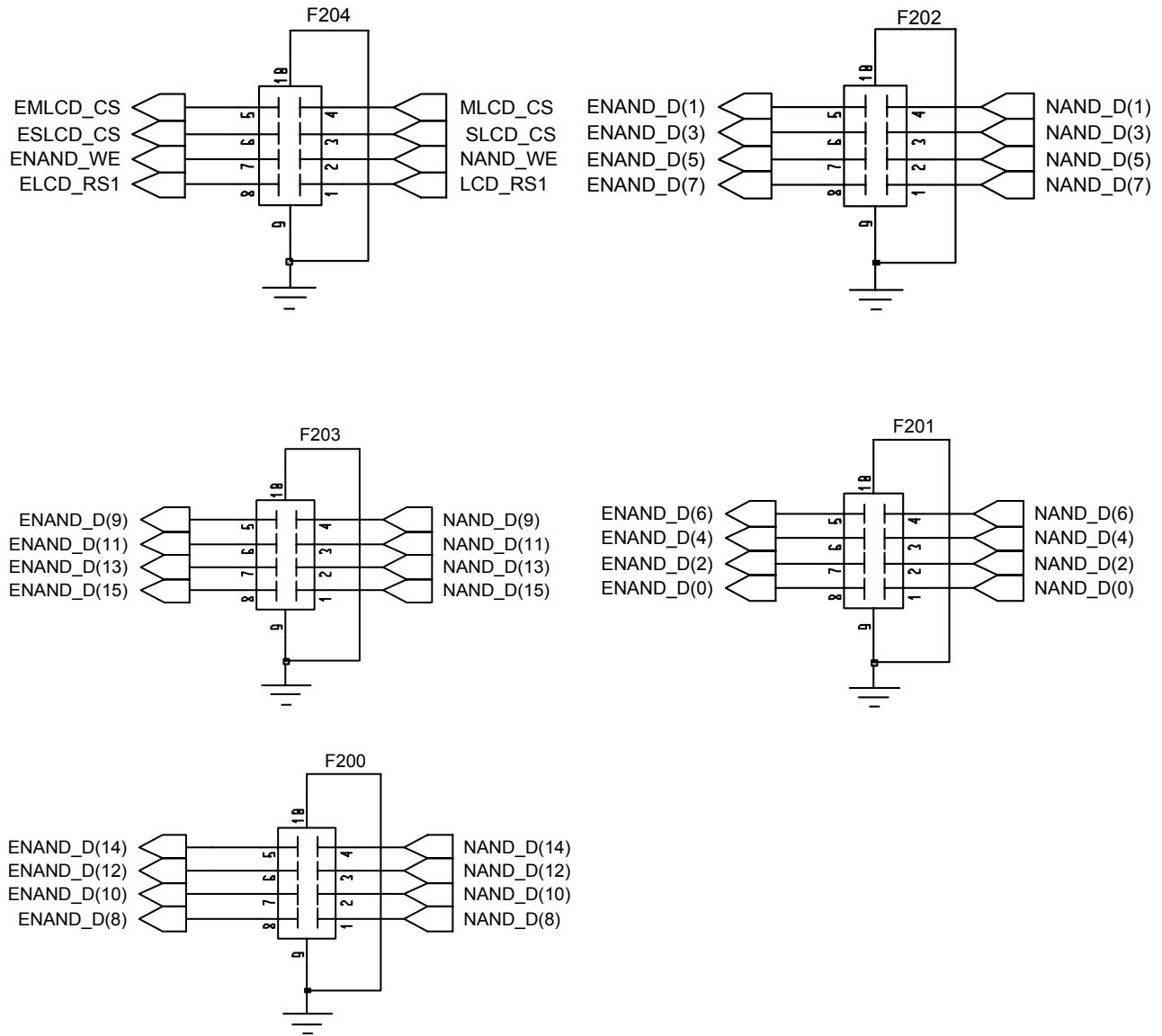




## 2-1-8. LCD

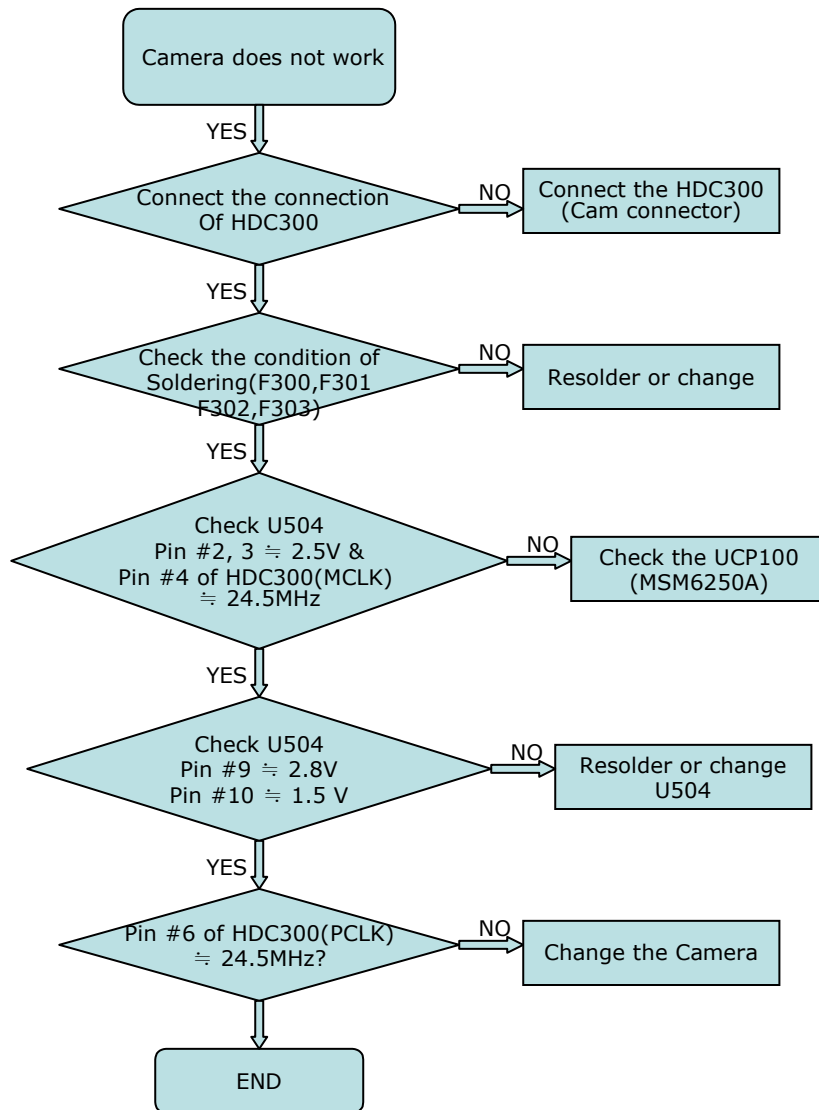


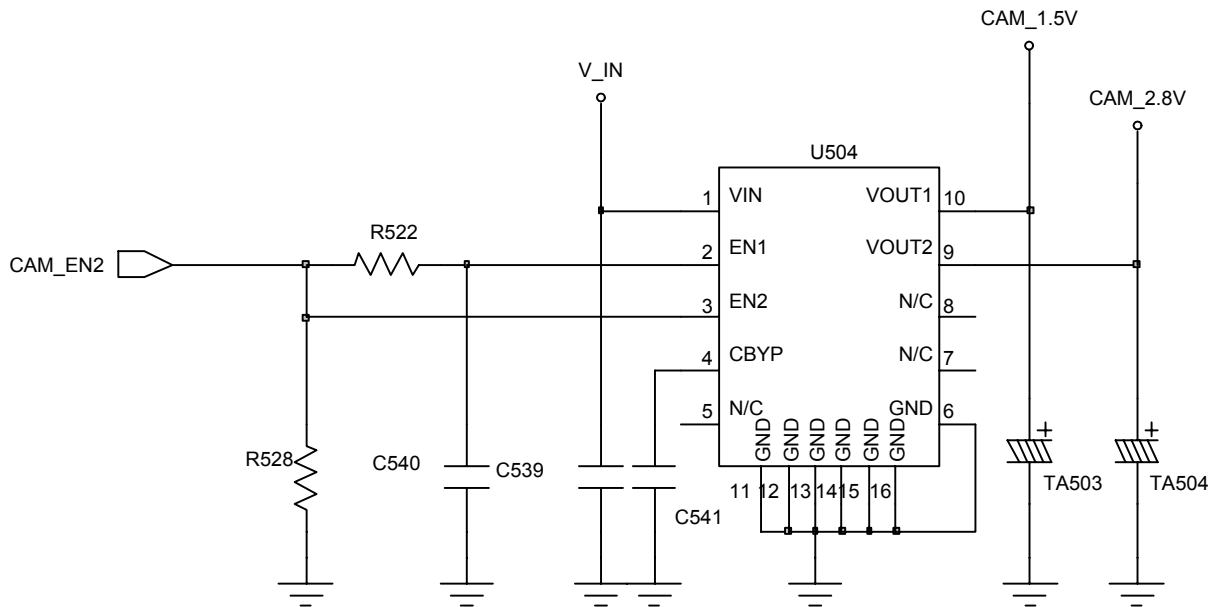
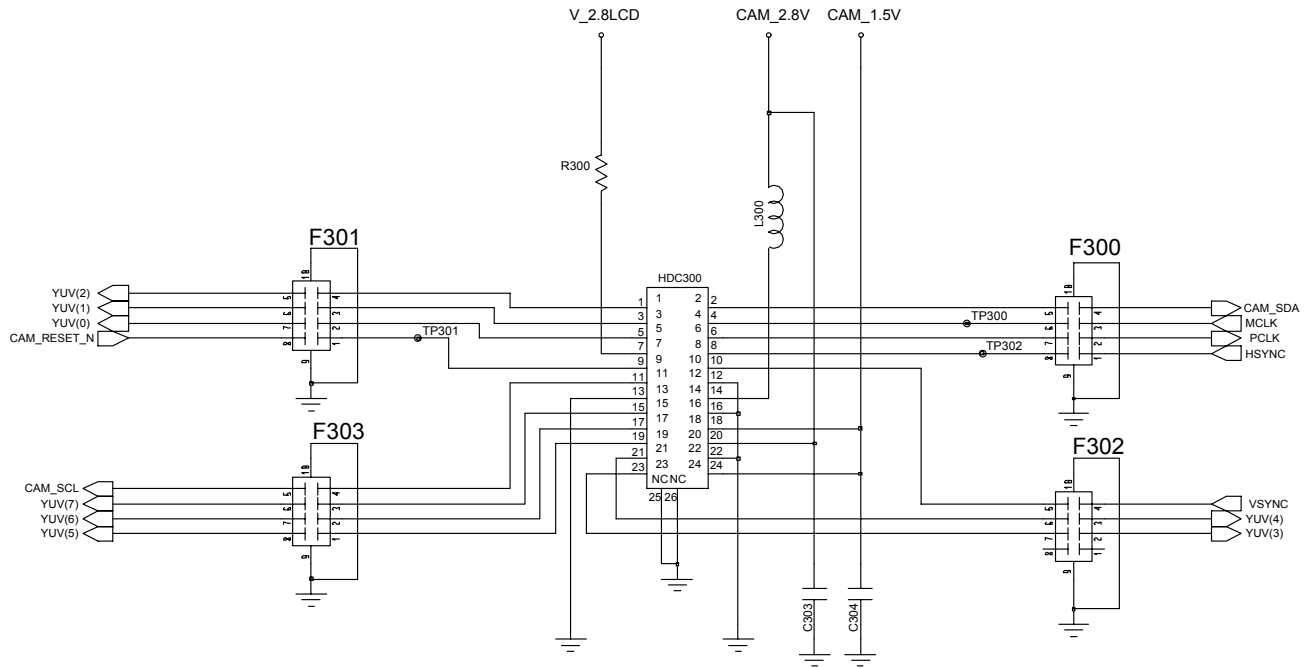


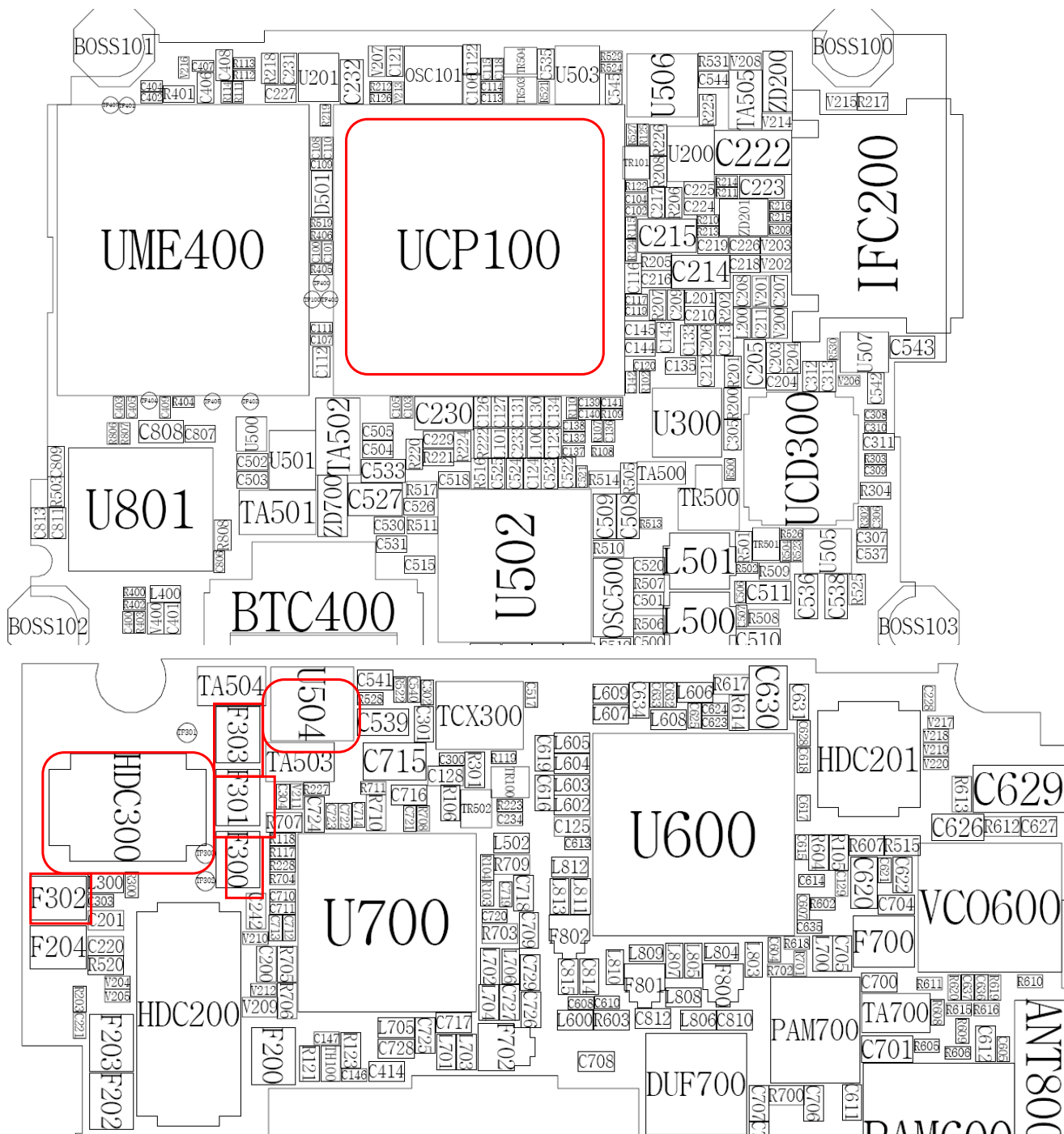


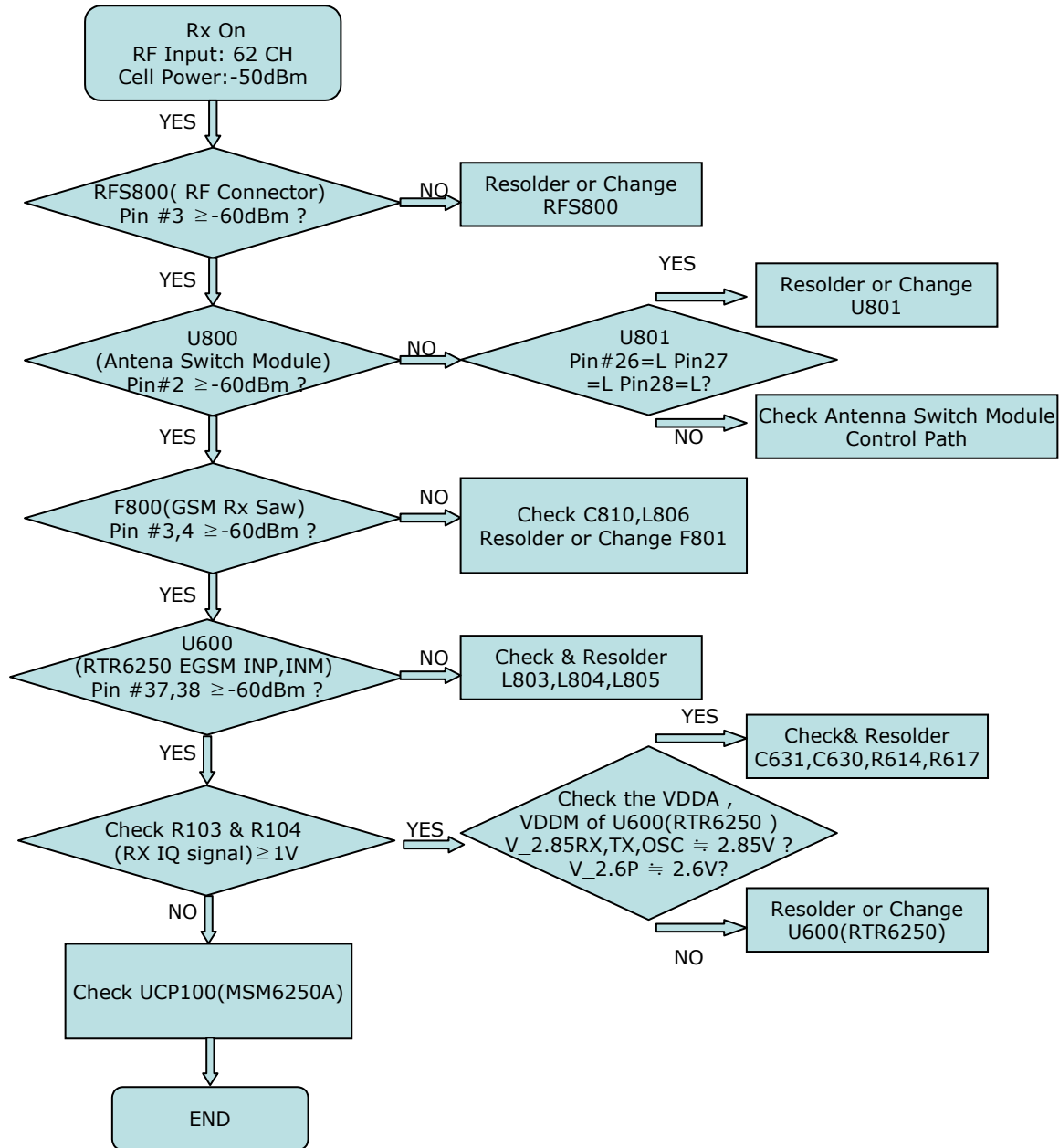


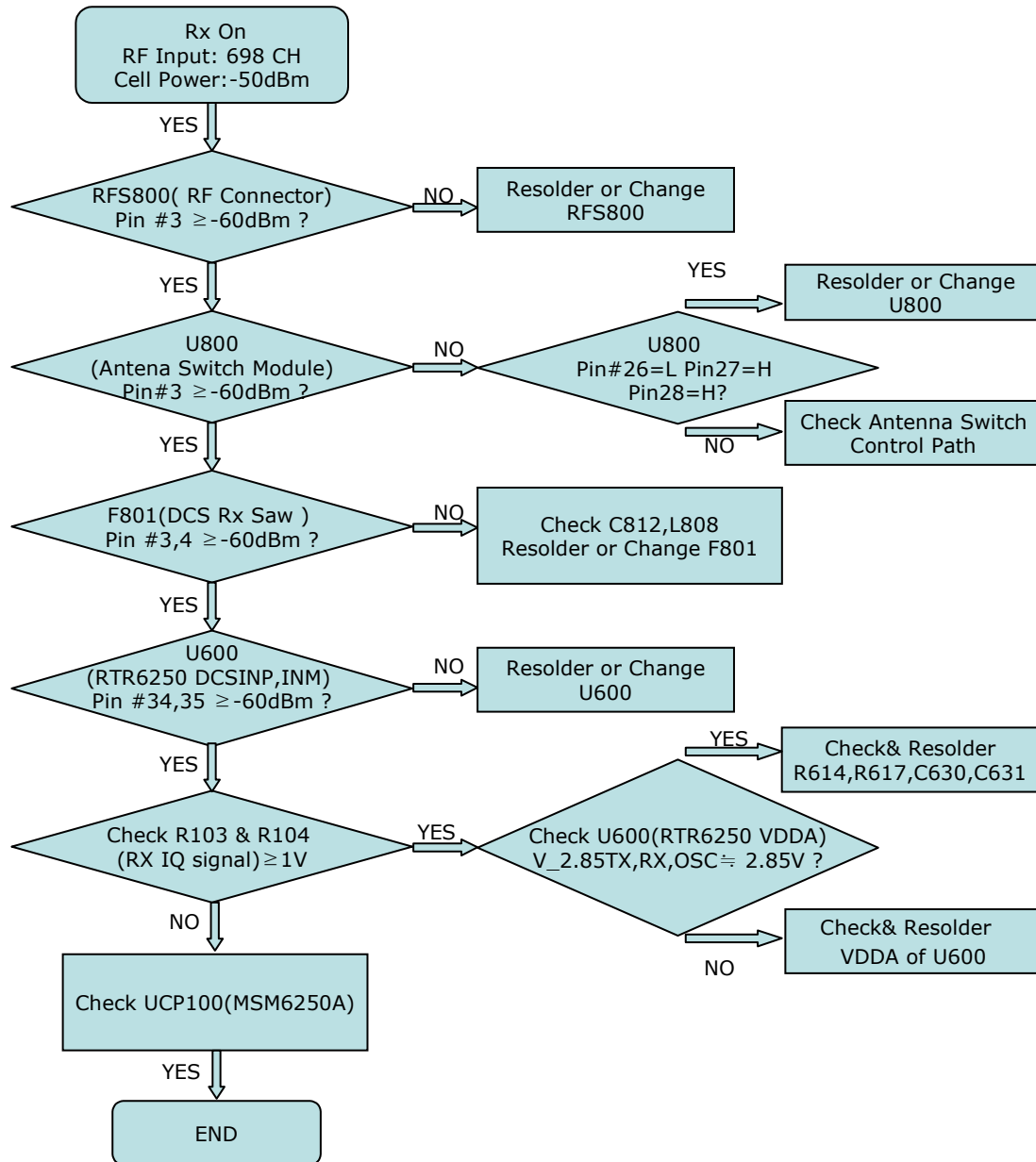
## 2-1-9. Camera



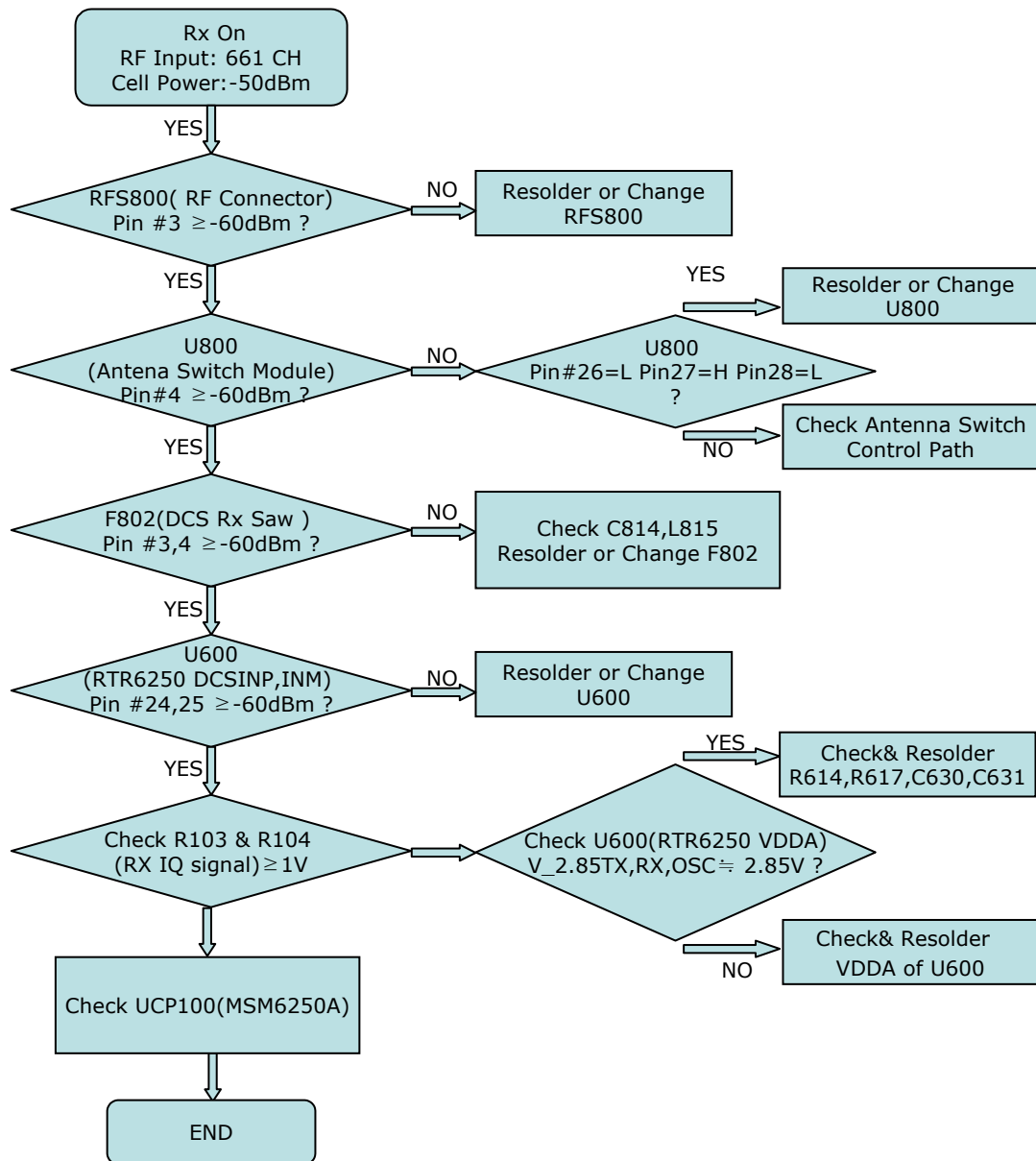




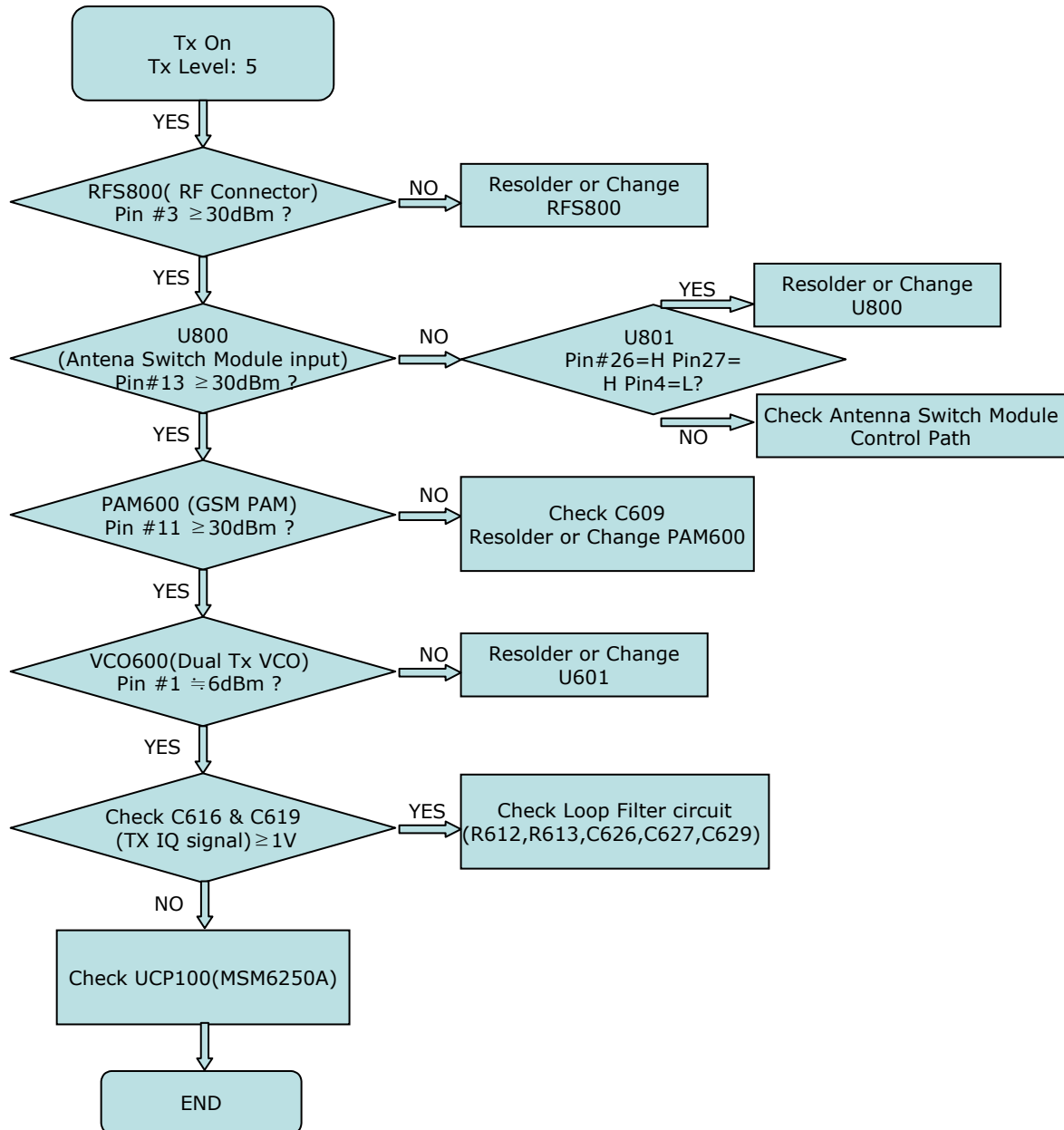
**2-2.RF****2-2-1. GSM Receiver**

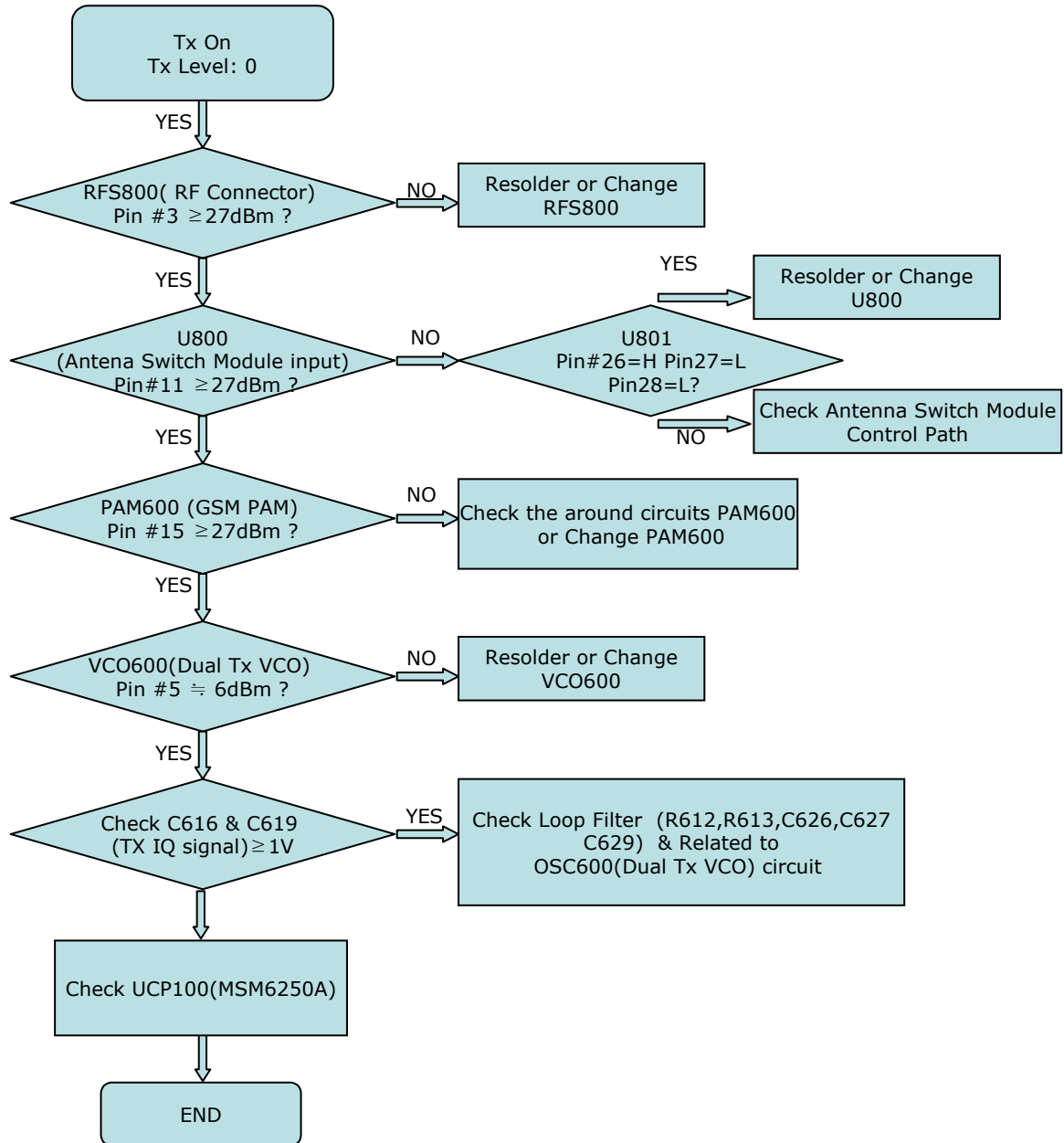
**2-2-2. DCS Receiver**

## 2-2-3. PCS Receiver

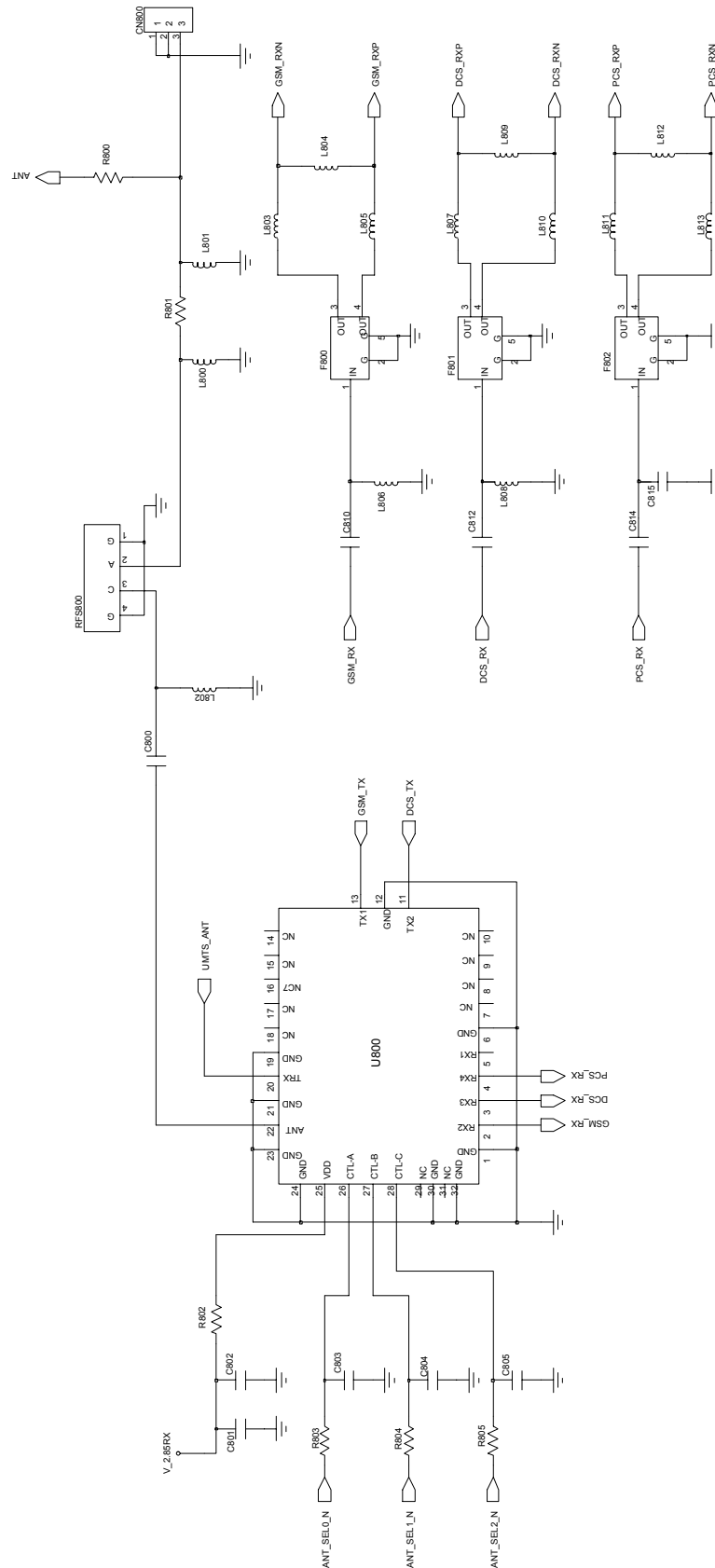


## 2-2-4. GSM Transmitter

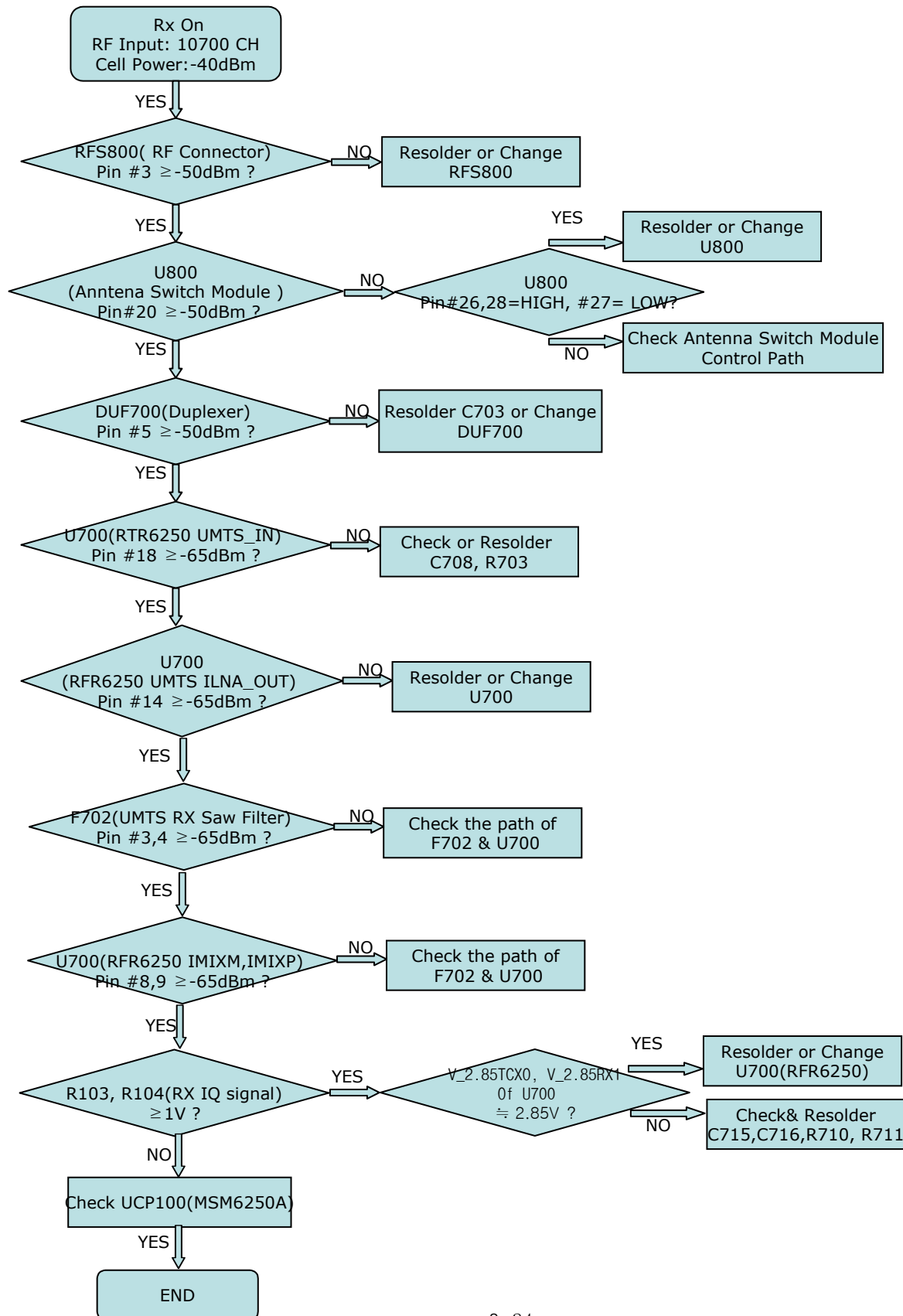


**2-2-5. DCS & PCS Transmitter**

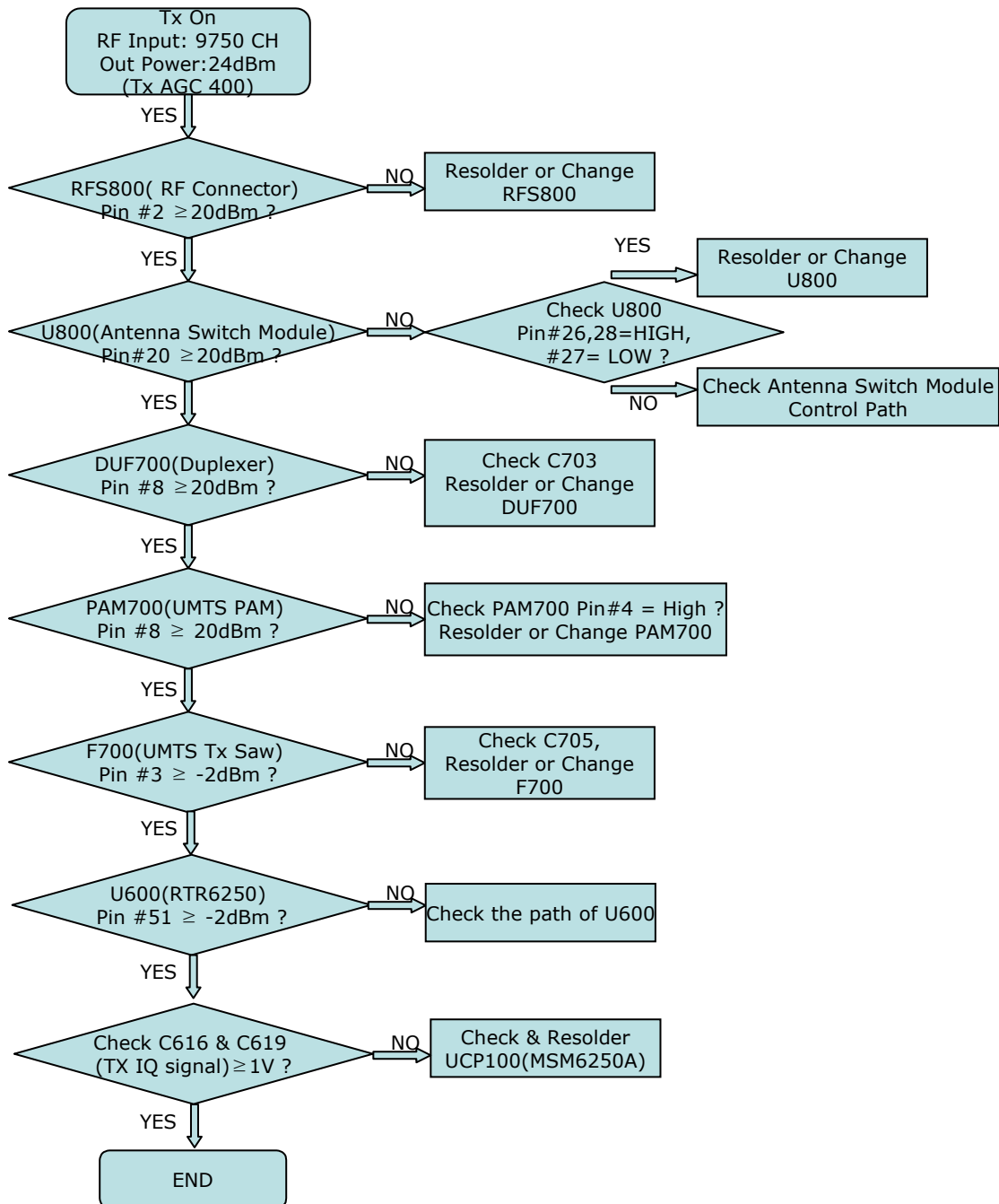




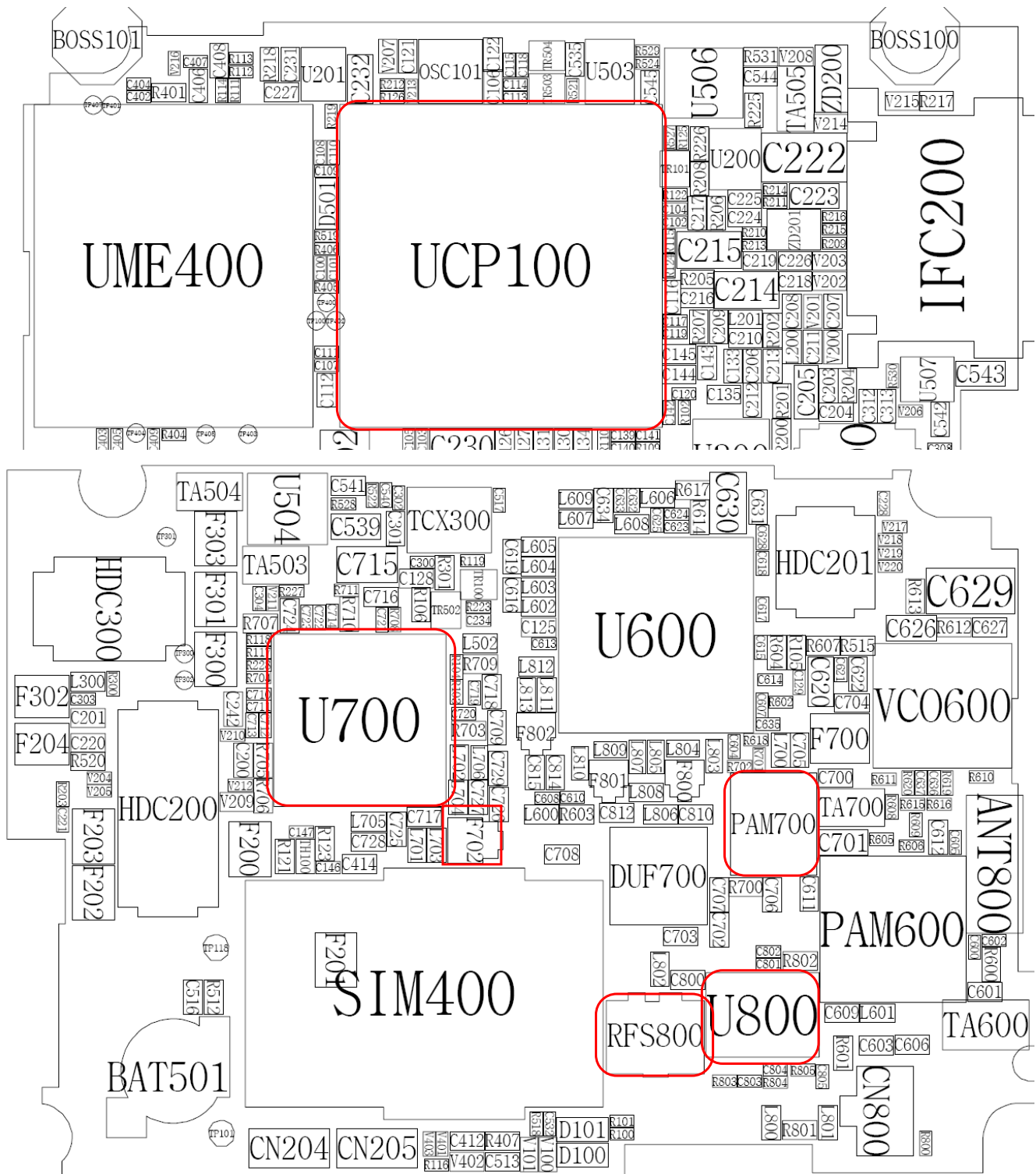


**2-2-6. WCDMA Receiver**

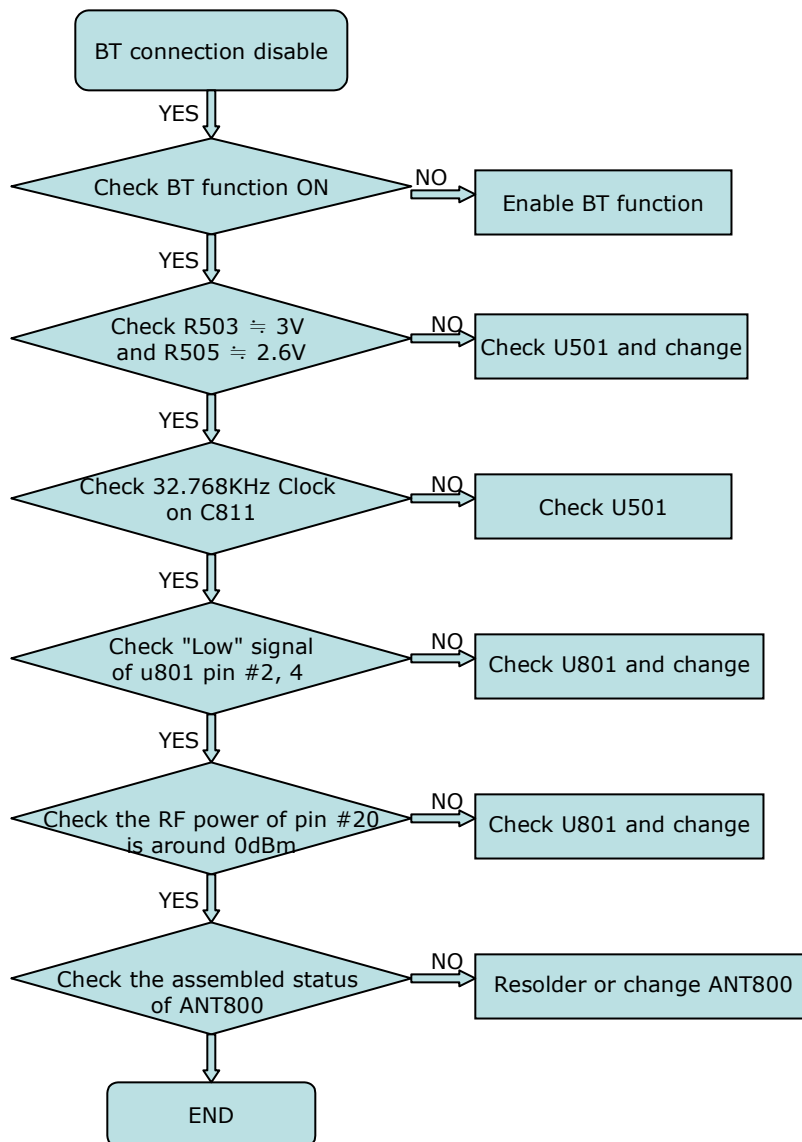
## 2-2-7. WCDMA Transmitter

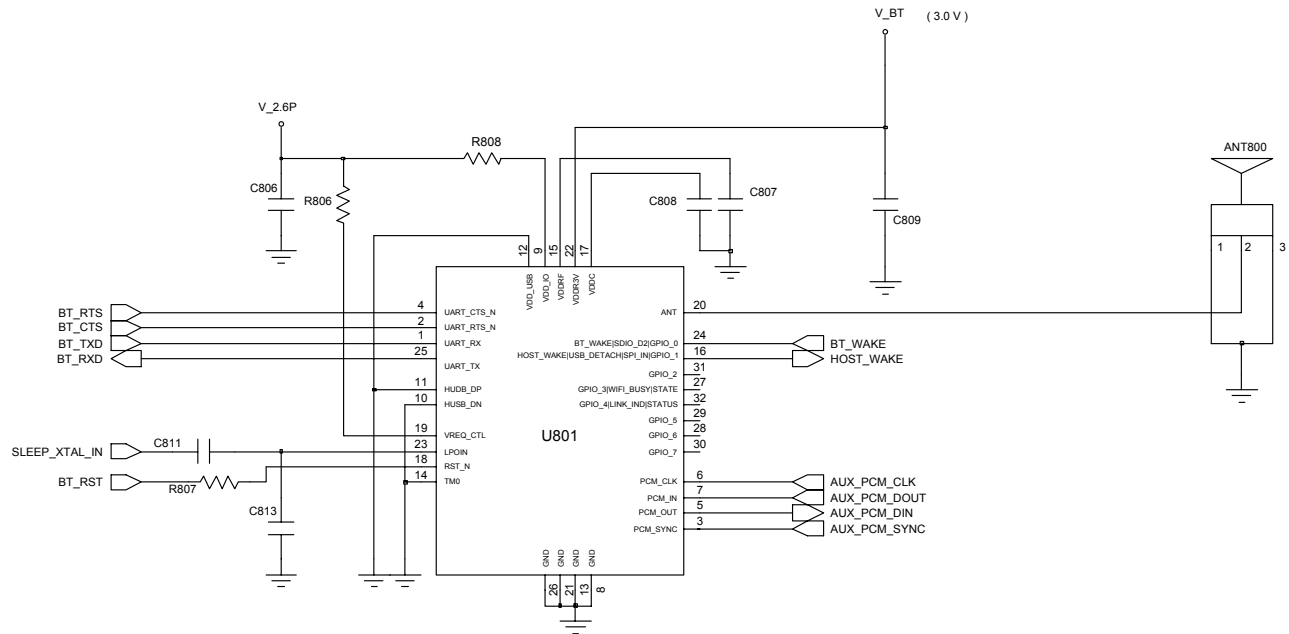


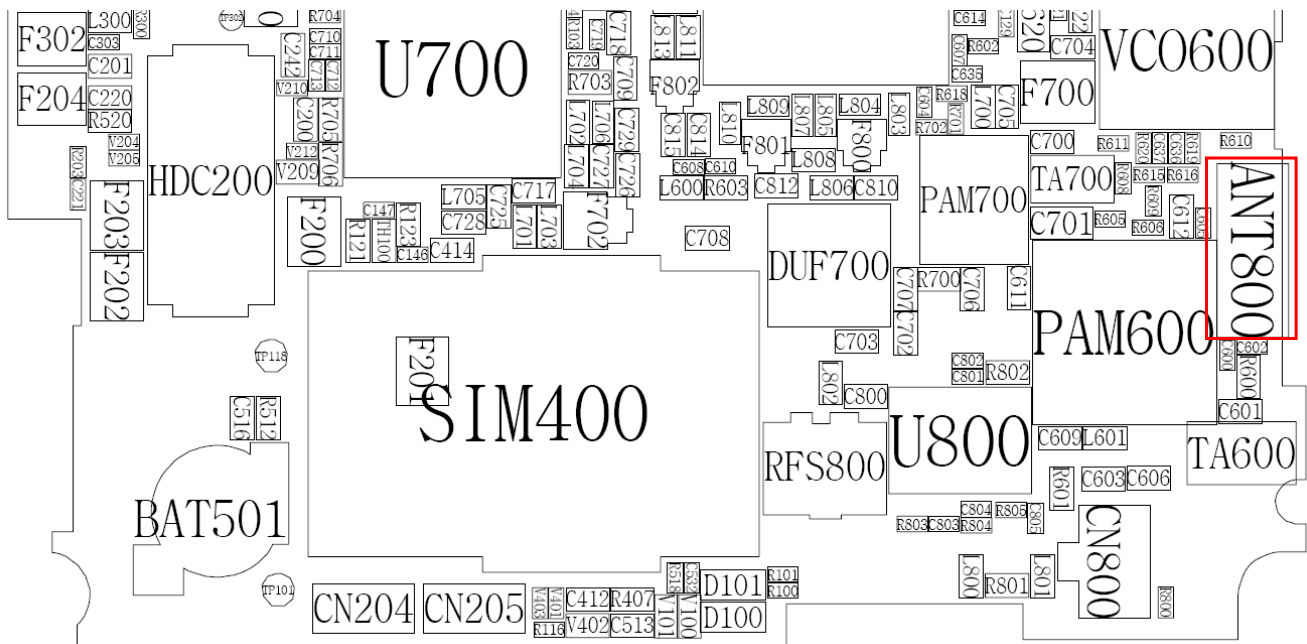
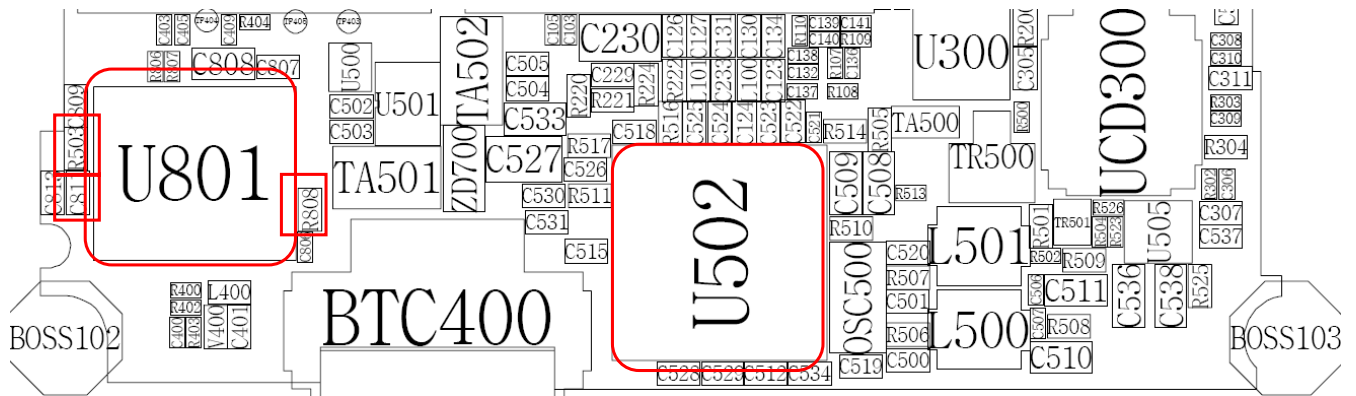




### 2-3-1. Bluetooth Part

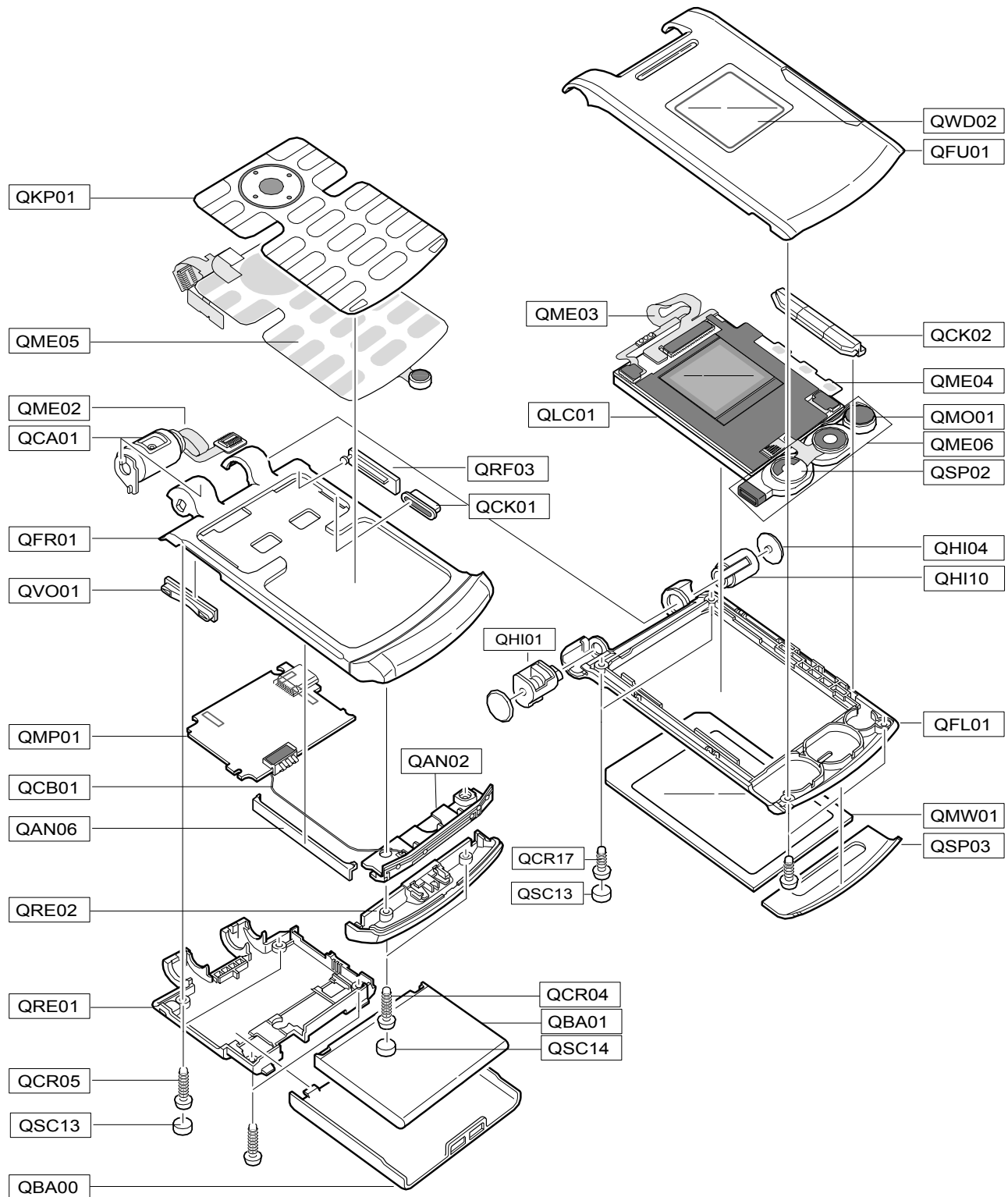






## 3. SGH-Z510 Exploded View and Parts List

### 3-1. Cellular phone Exploded View

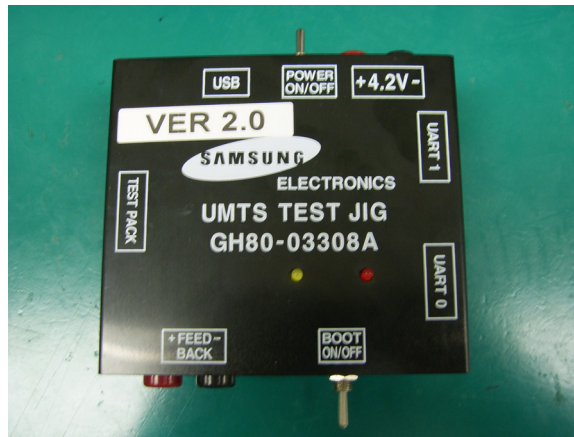


### 3-2. Cellular phone Parts list

| Location No |       | Description                | SEC CODE    |
|-------------|-------|----------------------------|-------------|
| QAN02       |       | INTENNA-SGHZ510            | GH42-00707A |
| QAN06       |       | MEC-ANT CABLE COVER        | GH75-08320A |
| QBA00       |       | MEC-BATTERY COVER          | GH75-08560A |
| QBA01       |       | BATTERY-800MAH,BLACK,ENG,M | GH43-02098A |
| QCA01       |       | UNIT-CAMERA                | GH59-02459A |
| QCB01       |       | CBF COAXIAL CABLE          | GH39-00469A |
| QCK01       |       | MEC-CAMERA KEY             | GH75-07728A |
| QCR04       |       | SCREW-MACHINE              | 6001-001479 |
| QCR05       |       | SCREW-MACHINE              | 6001-001478 |
| QCR17       |       | SCREW-MACHINE              | 6001-001460 |
| QFL01       |       | MEC-FOLDER LOWER SUB       | GH75-08559A |
| QHI01       |       | MEC-HINGE                  | GH75-07726A |
| QHI04       |       | MEC-SIDE DUMMY             | GH75-08040A |
| QHI10       |       | NDC-HINGE DUMMY            | GH71-05816A |
| QKP01       |       | MEC-KEYPAD(TIM/DAA)        | GH75-08079A |
| QLC01       |       | MEA-LCD MODULE KIT         | GH97-05173A |
| QME02       |       | UNIT-FLASH FPCB            | GH59-02467A |
| QME03       |       | UNIT-FPCB TAIL             | GH59-02469A |
| QME04       |       | UNIT-MP3 KEY FPCB          | GH59-02468A |
| QME05       |       | UNIT-EL KEYPAD FPCB        | GH59-02470A |
| QMP01       |       | PBA MAIN-SGHZ510           | GH92-02329A |
| QMW01       |       | MEC-MAIN WINDOW            | GH75-08037A |
| QRE01       |       | MEC-REAR COVER             | GH75-07724A |
| QRE02       |       | MEC-REAR BOTTOM COVER      | GH75-07725A |
| QSC13       |       | RMO-REAR HOLE COVER        | GH73-05184A |
| QSC14       |       | RMO-REAR BOTTOM CAP        | GH73-05185A |
| QSP03       |       | MEC-SPK DUMMY              | GH75-08039A |
| QVO01       |       | MEC-VOLUME KEY             | GH75-07727A |
| QWD02       |       | PMO-DUAL WINDOW            | GH72-24018A |
| QME06       |       | UNIT-SPK_MOT FPCB          | GH59-02533A |
|             | QMO01 | AS-VIBRATION MOTOR         | GH81-02743A |
|             | QSP02 | AS-SPEAKER FPCB ASS'Y      | GH81-02744A |
| QFR01       |       | MEC-FRONT COVER            | GH75-07721A |
|             | QRF03 | PMO-EAR JACK COVER         | GH72-24014A |
| QFU01       |       | MEC-FOLDER UPPER           | GH75-07723A |
|             | QCK02 | MEC-MP3 KEY                | GH75-08038A |

| <b>Description</b>            | <b>SEC CODE</b> |
|-------------------------------|-----------------|
| BAG PE                        | 6902-000297     |
| BAG PE                        | 6902-000378     |
| CBF INTERFACE-DATA LINK CABLE | GH39-00444A     |
| ADAPTOR-SGHD800 TA(EU)        | GH44-01060A     |
| S/W CD-SAMSGPCSTUDIO 3.0      | GH46-00182A     |
| UNIT-EARPHONE                 | GH59-02499A     |
| LABEL(P)-WATER SOAK           | GH68-02026A     |
| MANUAL-USER                   | GH68-08374A     |
| LABEL(R)-MAIN (TIM)           | GH68-08505B     |
| BOX(P)-UNIT MAIN              | GH69-03456A     |
| BOX(P)-SLIP CASE (TIM)        | GH69-03464B     |
| RMO-MSM RUBBER                | GH73-05405A     |
| RMO-MEMORY RUBBER             | GH73-05406A     |
| RMO-CUSHION LEFT LCD RB       | GH73-06051A     |
| RMO-CUSHION RIGHT LCD RB      | GH73-06052A     |
| MPR-KEY FPCB INSUL TAPE1      | GH74-05407A     |
| MPR-BOHO VINYL C/DUMMY        | GH74-13530A     |
| MPR-BOHO VINYL LCD CONN       | GH74-15350A     |
| MPR-MIC BACK PORON            | GH74-17626A     |
| MPR-PORON DUAL WINDOW         | GH74-17630A     |
| MPR-BOHO VINYL MAIN WIN       | GH74-17798A     |
| MPR-BOHO VINYL CAMERA         | GH74-17799A     |
| MPR-BOHO VINYL DUAL WIN       | GH74-17800A     |
| MPR-BOHO VINYL MAIN WIN       | GH74-18441A     |
| MPR-TAPE LCD INSUL LEFT       | GH74-18443A     |
| MPR-TAPE LCD INSUL RIGHT      | GH74-18444A     |
| MPR-TAPE LCD INSUL BTM        | GH74-18445A     |
| MPR-TAPE LCD FPCB CONN        | GH74-18446A     |
| MPR-TAPE LED1 FPCB CONN       | GH74-18447A     |
| MPR-TAPE SPK FPCB CONN        | GH74-18448A     |
| MPR-LCD CONNECTOR GASKET      | GH74-18449A     |
| MPR-KEY PCB GASKET            | GH74-18450A     |
| MPR-FOLDER UPPER GASKET       | GH74-18451A     |
| MPR-DUAL LCD PORON            | GH74-19169A     |
| MPR-BOHO VINYL FOLDER B       | GH74-19170A     |
| MPR-EL COIL ABSORBER          | GH74-19177A     |
| MPR-TAPE LCD FPCB BOTTOM      | GH74-19178A     |
| MPR-TAPE FRONT CONCEALIN      | GH74-19179A     |
| MPR-TAPE LCD CONDUCTION       | GH74-19379A     |
| MPR-TAPE FRONT BOSS           | GH74-19380A     |
| MPR-TAPE LCD SUS              | GH74-19381A     |
| MPR-TAPE MP3 GAP              | GH74-19741A     |
| MPR-TAPE SPK GASKET           | GH74-19802A     |
| MPR-TAPE PAM                  | GH74-19803A     |
| MPR-TAPE BATTERY CONTACT      | GH74-19991A     |

### 3-3. Test Jig (GH80-03308A)



3-3-1. RF Test Cable  
(GH39-00283A)



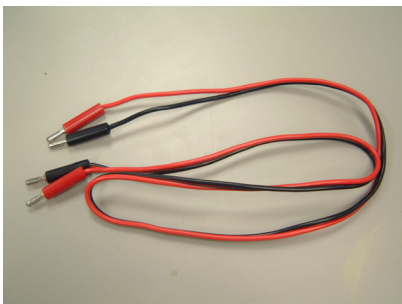
3-3-2. DATA CABLE  
(GH39-00444A)



3-3-3. Serial Cable



3-3-4. Power Supply Cable



3-3-5. Test Cable  
(GH39-00478A)



3-3-6. TA  
(GH44-01060A)



## 4. SGH-Z510 MAIN Electrical Parts List

| SEC Code    | Design LOC | Discription         | STATUS |
|-------------|------------|---------------------|--------|
| 0403-001411 | ZD700      | DIODE-ZENER         | SA     |
| 0403-001427 | ZD200      | DIODE-ZENER         | SA     |
| 0404-001172 | D100       | DIODE-SCHOTTKY      | SA     |
| 0404-001172 | D101       | DIODE-SCHOTTKY      | SA     |
| 0404-001172 | D501       | DIODE-SCHOTTKY      | SA     |
| 0406-001208 | ZD201      | DIODE-TVS           | SA     |
| 0504-001113 | TR100      | TR-DIGITAL          | SA     |
| 0504-001113 | TR101      | TR-DIGITAL          | SA     |
| 0504-001113 | TR502      | TR-DIGITAL          | SA     |
| 0504-001113 | TR503      | TR-DIGITAL          | SA     |
| 0504-001163 | TR501      | TR-DIGITAL          | SA     |
| 0504-001171 | TR504      | TR-DIGITAL          | SA     |
| 0505-001217 | TR500      | FET-GAAS            | SA     |
| 0505-001889 | U501       | FET-SILICON         | SA     |
| 0801-002529 | U503       | IC-CMOS LOGIC       | SA     |
| 1001-001306 | U300       | IC-ANALOG MULTIPLEX | SA     |
| 1108-000042 | UME400     | IC-MCP              | SNA    |
| 1201-002218 | PAM600     | IC-POWER AMP        | SA     |
| 1201-002219 | PAM700     | IC-POWER AMP        | SA     |
| 1203-003109 | U506       | IC-BATTERY          | SA     |
| 1203-003275 | U504       | IC-MULTI REG.       | SA     |
| 1203-003531 | U201       | IC-POSI.FIXED REG.  | SA     |
| 1203-003531 | U507       | IC-POSI.FIXED REG.  | SA     |
| 1203-003629 | U505       | IC-POSI.FIXED REG.  | SA     |
| 1203-003728 | U500       | IC-VOL. DETECTOR    | SA     |
| 1203-003877 | U502       | IC-POWER SUPERVISOR | SA     |
| 1204-001915 | U200       | IC-FILTER           | SA     |
| 1204-002138 | UCD300     | IC-MELODY           | SA     |
| 1205-002645 | U600       | IC-TRANSCEIVER      | SA     |
| 1205-002724 | U800       | IC-SWITCH           | SA     |
| 1205-002780 | UCP100     | IC-MODEM            | SNA    |
| 1205-002781 | U700       | IC-RECEIVER         | SA     |
| 1404-001224 | TH100      | THERMISTOR-NTC      | SA     |
| 1405-001082 | V100       | VARISTOR            | SA     |
| 1405-001082 | V101       | VARISTOR            | SA     |
| 1405-001082 | V209       | VARISTOR            | SA     |
| 1405-001082 | V402       | VARISTOR            | SA     |
| 1405-001108 | V200       | VARISTOR            | SA     |
| 1405-001108 | V201       | VARISTOR            | SA     |
| 1405-001108 | V202       | VARISTOR            | SA     |

| SEC Code    | Design LOC | Discription | STATUS |
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| 1405-001108 | V203       | VARISTOR    | SA     |
| 1405-001108 | V214       | VARISTOR    | SA     |
| 1405-001110 | V207       | VARISTOR    | SA     |
| 1405-001110 | V208       | VARISTOR    | SA     |
| 1405-001110 | V215       | VARISTOR    | SA     |
| 1405-001110 | V400       | VARISTOR    | SA     |
| 1405-001158 | F300       | VARISTOR    | SA     |
| 1405-001158 | F301       | VARISTOR    | SA     |
| 1405-001158 | F302       | VARISTOR    | SA     |
| 1405-001158 | F303       | VARISTOR    | SA     |
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| 1405-001161 | F201       | VARISTOR    | SA     |
| 1405-001161 | F202       | VARISTOR    | SA     |
| 1405-001161 | F203       | VARISTOR    | SA     |
| 1405-001161 | F204       | VARISTOR    | SA     |
| 1405-001177 | V204       | VARISTOR    | SA     |
| 1405-001177 | V205       | VARISTOR    | SA     |
| 1405-001177 | V206       | VARISTOR    | SA     |
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| 1405-001177 | V403       | VARISTOR    | SA     |
| 2007-000137 | R106       | R-CHIP      | SA     |
| 2007-000140 | R202       | R-CHIP      | SA     |
| 2007-000145 | R614       | R-CHIP      | SA     |
| 2007-000145 | R617       | R-CHIP      | SA     |
| 2007-000148 | R512       | R-CHIP      | SA     |
| 2007-000151 | R407       | R-CHIP      | SA     |
| 2007-000171 | R127       | R-CHIP      | SA     |
| 2007-000171 | R200       | R-CHIP      | SA     |
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| 2007-000171 | R218       | R-CHIP      | SA     |
| 2007-000171 | R401       | R-CHIP      | SA     |

| SEC Code    | Design LOC | Discription | STATUS |
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| 2007-000171 | R505       | R-CHIP      | SA     |
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| 2007-000171 | R509       | R-CHIP      | SA     |
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| 2007-000171 | R520       | R-CHIP      | SA     |
| 2007-000171 | R525       | R-CHIP      | SA     |
| 2007-000171 | R700       | R-CHIP      | SA     |
| 2007-000171 | R703       | R-CHIP      | SA     |
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| 2007-000171 | R808       | R-CHIP      | SA     |
| 2007-000172 | R207       | R-CHIP      | SA     |
| 2007-000172 | R208       | R-CHIP      | SA     |
| 2007-000172 | R225       | R-CHIP      | SA     |
| 2007-000172 | R226       | R-CHIP      | SA     |
| 2007-000173 | R205       | R-CHIP      | SA     |
| 2007-000173 | R206       | R-CHIP      | SA     |
| 2007-000174 | R613       | R-CHIP      | SA     |
| 2007-000242 | R221       | R-CHIP      | SA     |
| 2007-000242 | R222       | R-CHIP      | SA     |
| 2007-000242 | R304       | R-CHIP      | SA     |
| 2007-000775 | R217       | R-CHIP      | SA     |
| 2007-001119 | R220       | R-CHIP      | SA     |
| 2007-001217 | R612       | R-CHIP      | SA     |
| 2007-001284 | R607       | R-CHIP      | SA     |
| 2007-001284 | R705       | R-CHIP      | SA     |
| 2007-001284 | R707       | R-CHIP      | SA     |
| 2007-001329 | R201       | R-CHIP      | SA     |
| 2007-003015 | R506       | R-CHIP      | SA     |
| 2007-003015 | R507       | R-CHIP      | SA     |
| 2007-003030 | R224       | R-CHIP      | SA     |
| 2007-007132 | R600       | R-CHIP      | SA     |
| 2007-007142 | R511       | R-CHIP      | SA     |
| 2007-007306 | R301       | R-CHIP      | SA     |
| 2007-007313 | R121       | R-CHIP      | SA     |

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| 2007-007318 | R105       | R-CHIP      | SA     |
| 2007-007318 | R604       | R-CHIP      | SA     |
| 2007-007468 | R514       | R-CHIP      | SA     |
| 2007-007491 | R603       | R-CHIP      | SA     |
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| 2007-007943 | R501       | R-CHIP      | SA     |
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| 2007-008055 | R122       | R-CHIP      | SA     |
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| 2007-008055 | R212       | R-CHIP      | SA     |
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| 2007-008297 | R123       | R-CHIP      | SA     |
| 2007-008419 | R209       | R-CHIP      | SA     |
| 2007-008419 | R213       | R-CHIP      | SA     |
| 2007-008419 | R214       | R-CHIP      | SA     |
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| 2007-008419 | R805       | R-CHIP      | SA     |
| 2007-008483 | R102       | R-CHIP      | SA     |
| 2007-008483 | R111       | R-CHIP      | SA     |

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| 2007-008588 | R118       | R-CHIP      | SA     |

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| 2007-008806 | R704       | R-CHIP      | SA     |
| 2007-008806 | R708       | R-CHIP      | SA     |
| 2007-009167 | R103       | R-CHIP      | SA     |
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| 2007-009170 | R107       | R-CHIP      | SA     |
| 2007-009170 | R110       | R-CHIP      | SA     |
| 2007-009170 | R210       | R-CHIP      | SA     |
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| 2203-000254 | C537       | C-CER,CHIP  | SA     |
| 2203-000254 | C601       | C-CER,CHIP  | SA     |
| 2203-000254 | C611       | C-CER,CHIP  | SA     |
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| 2203-000254 | C700       | C-CER,CHIP  | SA     |
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| 2203-000386 | C121       | C-CER,CHIP  | SA     |
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| 2203-000425 | C811       | C-CER,CHIP  | SA     |
| 2203-000466 | C707       | C-CER,CHIP  | SA     |
| 2203-000466 | C815       | C-CER,CHIP  | SA     |
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| 2203-000812 | C242       | C-CER,CHIP  | SA     |
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| 2203-000812 | C810       | C-CER,CHIP  | SA     |
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| 2203-000995 | C616       | C-CER,CHIP  | SA     |
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| 2203-005717 | C610       | C-CER,CHIP  | SA     |
| 2203-005727 | C636       | C-CER,CHIP  | SA     |
| 2203-005727 | C637       | C-CER,CHIP  | SA     |
| 2203-005732 | C602       | C-CER,CHIP  | SA     |
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| 2203-005808 | C402       | C-CER,CHIP  | SA     |
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| 2203-005808 | C407       | C-CER,CHIP  | SA     |
| 2203-006137 | C131       | C-CER,CHIP  | SA     |
| 2203-006137 | C134       | C-CER,CHIP  | SA     |
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| SEC Code    | Design LOC | Discription | STATUS |
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| 2203-006194 | C129       | C-CER,CHIP  | SA     |
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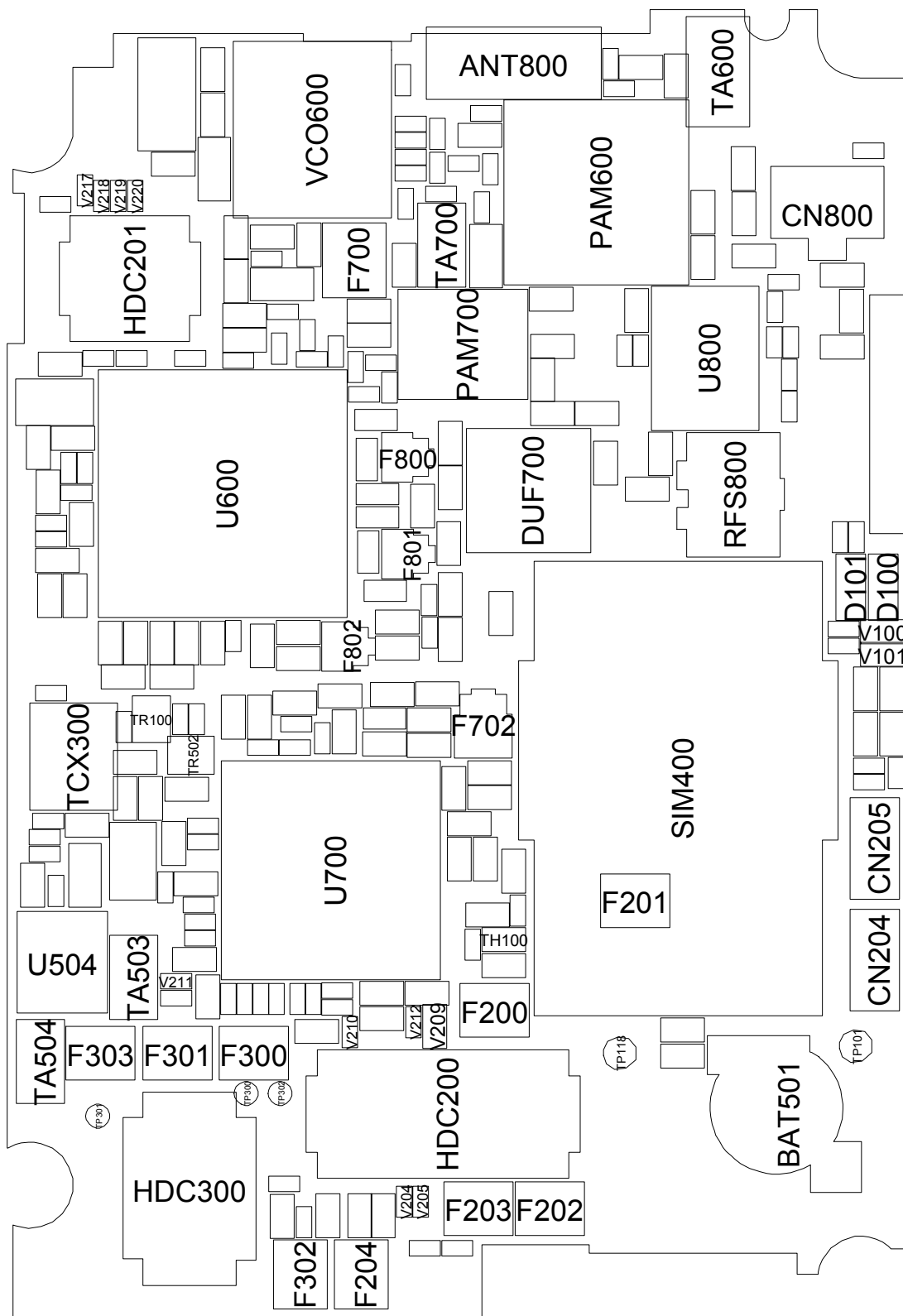
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| 2203-006423 | C115       | C-CER,CHIP  | SA     |
| 2203-006423 | C117       | C-CER,CHIP  | SA     |
| 2203-006423 | C120       | C-CER,CHIP  | SA     |
| 2203-006423 | C132       | C-CER,CHIP  | SA     |
| 2203-006423 | C137       | C-CER,CHIP  | SA     |
| 2203-006423 | C138       | C-CER,CHIP  | SA     |
| 2203-006423 | C140       | C-CER,CHIP  | SA     |
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| 2203-006423 | C146       | C-CER,CHIP  | SA     |
| 2203-006423 | C228       | C-CER,CHIP  | SA     |
| 2203-006423 | C303       | C-CER,CHIP  | SA     |
| 2203-006423 | C304       | C-CER,CHIP  | SA     |
| 2203-006423 | C306       | C-CER,CHIP  | SA     |
| 2203-006423 | C308       | C-CER,CHIP  | SA     |
| 2203-006423 | C310       | C-CER,CHIP  | SA     |
| 2203-006423 | C521       | C-CER,CHIP  | SA     |
| 2203-006423 | C540       | C-CER,CHIP  | SA     |
| 2203-006423 | C604       | C-CER,CHIP  | SA     |
| 2203-006423 | C607       | C-CER,CHIP  | SA     |
| 2203-006423 | C608       | C-CER,CHIP  | SA     |
| 2203-006423 | C613       | C-CER,CHIP  | SA     |
| 2203-006423 | C617       | C-CER,CHIP  | SA     |
| 2203-006423 | C621       | C-CER,CHIP  | SA     |
| 2203-006423 | C623       | C-CER,CHIP  | SA     |
| 2203-006423 | C632       | C-CER,CHIP  | SA     |
| 2203-006423 | C710       | C-CER,CHIP  | SA     |
| 2203-006423 | C712       | C-CER,CHIP  | SA     |
| 2203-006423 | C713       | C-CER,CHIP  | SA     |
| 2203-006423 | C719       | C-CER,CHIP  | SA     |
| 2203-006423 | C723       | C-CER,CHIP  | SA     |
| 2203-006423 | C801       | C-CER,CHIP  | SA     |
| 2203-006423 | C806       | C-CER,CHIP  | SA     |
| 2203-006562 | C106       | C-CER,CHIP  | SA     |
| 2203-006562 | C112       | C-CER,CHIP  | SA     |
| 2203-006562 | C116       | C-CER,CHIP  | SA     |
| 2203-006562 | C200       | C-CER,CHIP  | SA     |
| 2203-006562 | C220       | C-CER,CHIP  | SA     |
| 2203-006562 | C227       | C-CER,CHIP  | SA     |
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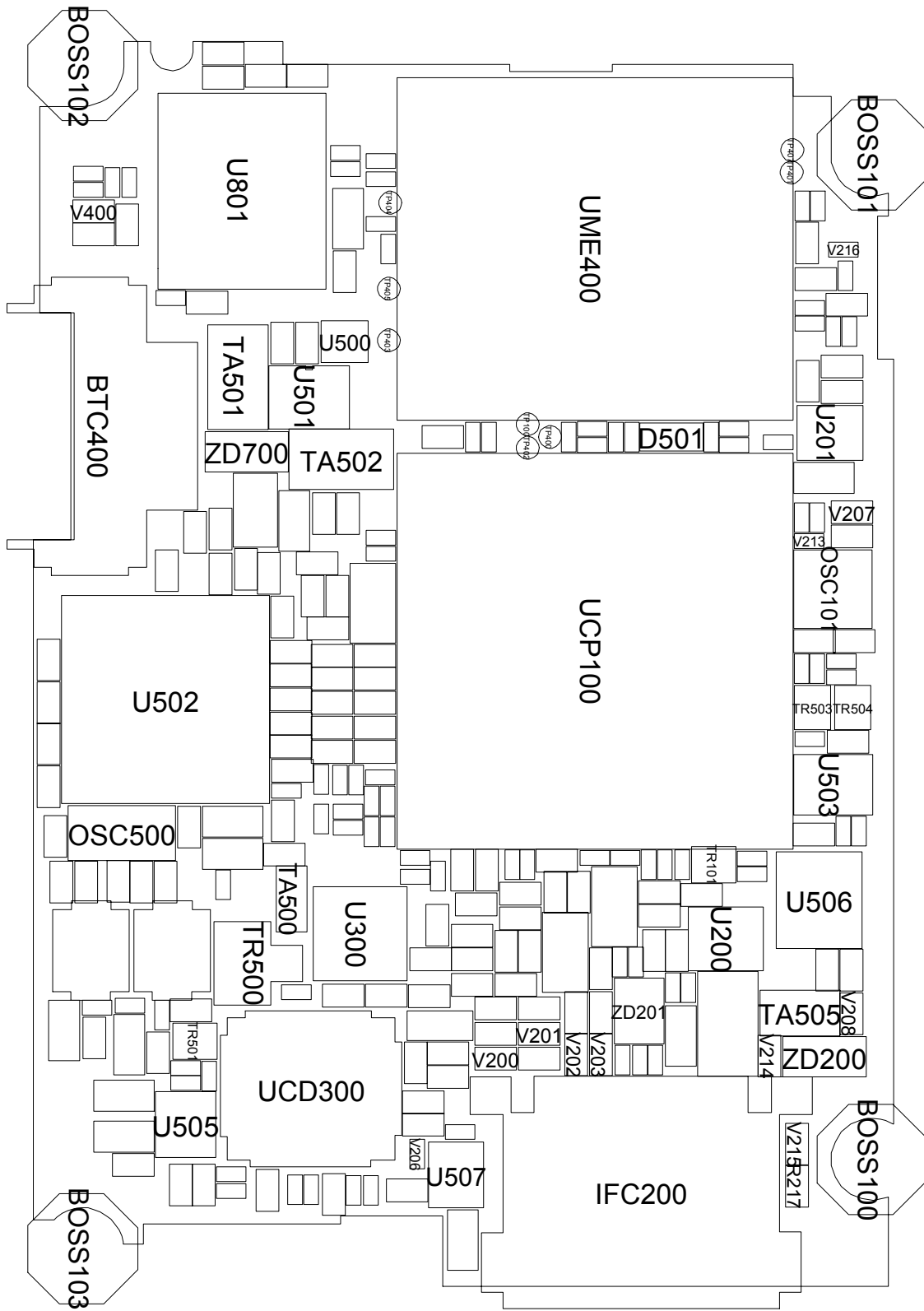
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| 2203-006562 | C408       | C-CER,CHIP     | SA     |
| 2203-006562 | C502       | C-CER,CHIP     | SA     |
| 2203-006562 | C513       | C-CER,CHIP     | SA     |
| 2203-006562 | C515       | C-CER,CHIP     | SA     |
| 2203-006562 | C516       | C-CER,CHIP     | SA     |
| 2203-006562 | C525       | C-CER,CHIP     | SA     |
| 2203-006562 | C526       | C-CER,CHIP     | SA     |
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| 2203-006562 | C531       | C-CER,CHIP     | SA     |
| 2203-006562 | C534       | C-CER,CHIP     | SA     |
| 2203-006562 | C718       | C-CER,CHIP     | SA     |
| 2203-006562 | C807       | C-CER,CHIP     | SA     |
| 2203-006617 | C136       | C-CER,CHIP     | SA     |
| 2203-006617 | C139       | C-CER,CHIP     | SA     |
| 2203-006648 | C142       | C-CER,CHIP     | SA     |
| 2203-006677 | C629       | C-CER,CHIP     | SA     |
| 2203-006678 | C626       | C-CER,CHIP     | SA     |
| 2203-006825 | C543       | C-CER,CHIP     | SNA    |
| 2203-006838 | C231       | C-CER,CHIP     | SNA    |
| 2203-006838 | C301       | C-CER,CHIP     | SNA    |
| 2203-006838 | C307       | C-CER,CHIP     | SNA    |
| 2203-006838 | C311       | C-CER,CHIP     | SNA    |
| 2203-006838 | C406       | C-CER,CHIP     | SNA    |
| 2203-006838 | C512       | C-CER,CHIP     | SNA    |
| 2203-006838 | C522       | C-CER,CHIP     | SNA    |
| 2203-006838 | C523       | C-CER,CHIP     | SNA    |
| 2203-006838 | C524       | C-CER,CHIP     | SNA    |
| 2203-006838 | C542       | C-CER,CHIP     | SNA    |
| 2203-006838 | C809       | C-CER,CHIP     | SNA    |
| 2203-006842 | C716       | C-CER,CHIP     | SA     |
| 2301-001475 | C630       | C-FILM,SMD-PPS | SA     |
| 2301-001475 | C715       | C-FILM,SMD-PPS | SA     |
| 2404-001268 | TA505      | C-TA,CHIP      | SA     |
| 2404-001268 | TA700      | C-TA,CHIP      | SA     |
| 2404-001274 | C222       | C-TA,CHIP      | SA     |
| 2404-001274 | TA501      | C-TA,CHIP      | SA     |
| 2404-001274 | TA502      | C-TA,CHIP      | SA     |
| 2404-001339 | TA500      | C-TA,CHIP      | SA     |

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| 2404-001352 | C214       | C-TA,CHIP    | SA     |
| 2404-001352 | C215       | C-TA,CHIP    | SA     |
| 2404-001352 | C230       | C-TA,CHIP    | SA     |
| 2404-001352 | TA503      | C-TA,CHIP    | SA     |
| 2404-001352 | TA504      | C-TA,CHIP    | SA     |
| 2404-001377 | C205       | C-TA,CHIP    | SA     |
| 2404-001406 | TA600      | C-TA,CHIP    | SA     |
| 2703-001748 | L701       | INDUCTOR-SMD | SA     |
| 2703-001748 | L705       | INDUCTOR-SMD | SA     |
| 2703-001750 | L704       | INDUCTOR-SMD | SA     |
| 2703-001751 | L703       | INDUCTOR-SMD | SA     |
| 2703-001990 | L702       | INDUCTOR-SMD | SA     |
| 2703-002155 | L802       | INDUCTOR-SMD | SA     |
| 2703-002198 | L806       | INDUCTOR-SMD | SA     |
| 2703-002199 | L812       | INDUCTOR-SMD | SA     |
| 2703-002203 | L808       | INDUCTOR-SMD | SA     |
| 2703-002205 | L811       | INDUCTOR-SMD | SA     |
| 2703-002205 | L813       | INDUCTOR-SMD | SA     |
| 2703-002313 | L100       | INDUCTOR-SMD | SA     |
| 2703-002313 | L101       | INDUCTOR-SMD | SA     |
| 2703-002313 | L200       | INDUCTOR-SMD | SA     |
| 2703-002313 | L201       | INDUCTOR-SMD | SA     |
| 2703-002314 | L600       | INDUCTOR-SMD | SA     |
| 2703-002314 | L606       | INDUCTOR-SMD | SA     |
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| 2703-002314 | L608       | INDUCTOR-SMD | SA     |
| 2703-002314 | L609       | INDUCTOR-SMD | SA     |
| 2703-002485 | L804       | INDUCTOR-SMD | SA     |
| 2703-002596 | L809       | INDUCTOR-SMD | SA     |
| 2703-002608 | L803       | INDUCTOR-SMD | SA     |
| 2703-002608 | L805       | INDUCTOR-SMD | SA     |
| 2703-002636 | L807       | INDUCTOR-SMD | SA     |
| 2703-002636 | L810       | INDUCTOR-SMD | SA     |
| 2703-002700 | L706       | INDUCTOR-SMD | SA     |
| 2703-002782 | L500       | INDUCTOR-SMD | SA     |
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| 2703-002819 | L602       | INDUCTOR-SMD | SA     |
| 2703-002819 | L603       | INDUCTOR-SMD | SA     |
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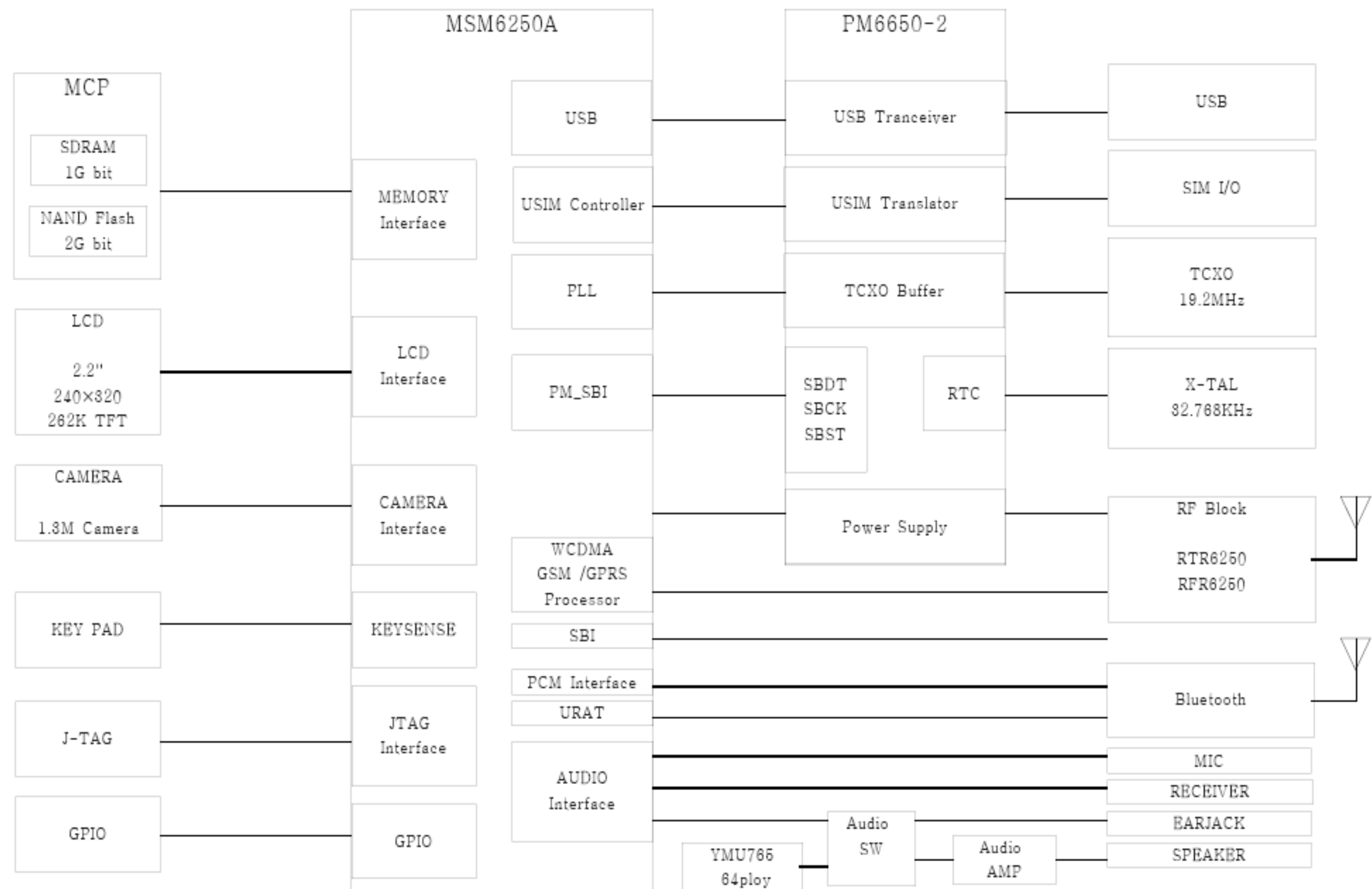
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| 2801-004373 | OSC500     | CRYSTAL-SMD           | SA     |
| 2802-001182 | OSC101     | RESONATOR-CERAMIC     | SA     |
| 2806-001371 | VCO600     | OSCILLATOR-VCO        | SA     |
| 2809-001280 | TCX300     | OSCILLATOR-VCTCXO     | SA     |
| 2904-001599 | F801       | FILTER-SAW            | SA     |
| 2904-001600 | F802       | FILTER-SAW            | SA     |
| 2904-001622 | F702       | FILTER-SAW            | SA     |
| 2904-001628 | F800       | FILTER-SAW            | SA     |
| 2904-001629 | F700       | FILTER-SAW            | SA     |
| 2910-000010 | DUF700     | DUPLEXER-SAW          | SA     |
| 3301-001534 | L400       | BEAD-SMD              | SA     |
| 3301-001534 | L502       | BEAD-SMD              | SA     |
| 3301-001659 | L300       | BEAD-SMD              | SA     |
| 3705-001225 | CN800      | CONNECTOR-COAXIAL     | SA     |
| 3705-001358 | RFS800     | CONNECTOR-COAXIAL     | SA     |
| 3709-001391 | SIM400     | CONNECTOR-CARD EDGE   | SNA    |
| 3710-002306 | IFC200     | SOCKET-INTERFACE      | SA     |
| 3711-005345 | HDC201     | HEADER-BOARD TO BOARD | SA     |
| 3711-005643 | HDC300     | HEADER-BOARD TO BOARD | SA     |
| 3711-005845 | HDC200     | HEADER-BOARD TO BOARD | SA     |
| 3711-006003 | BTC400     | CONNECTOR-BATTERY     | SA     |
| 4202-001086 | ANT800     | ANTENNA-CHIP          | SA     |
| 4302-001130 | BAT501     | BATTERY-LI(2ND)       | SA     |
| 4709-001381 | U801       | BLUETOOTH MODULE      | SA     |

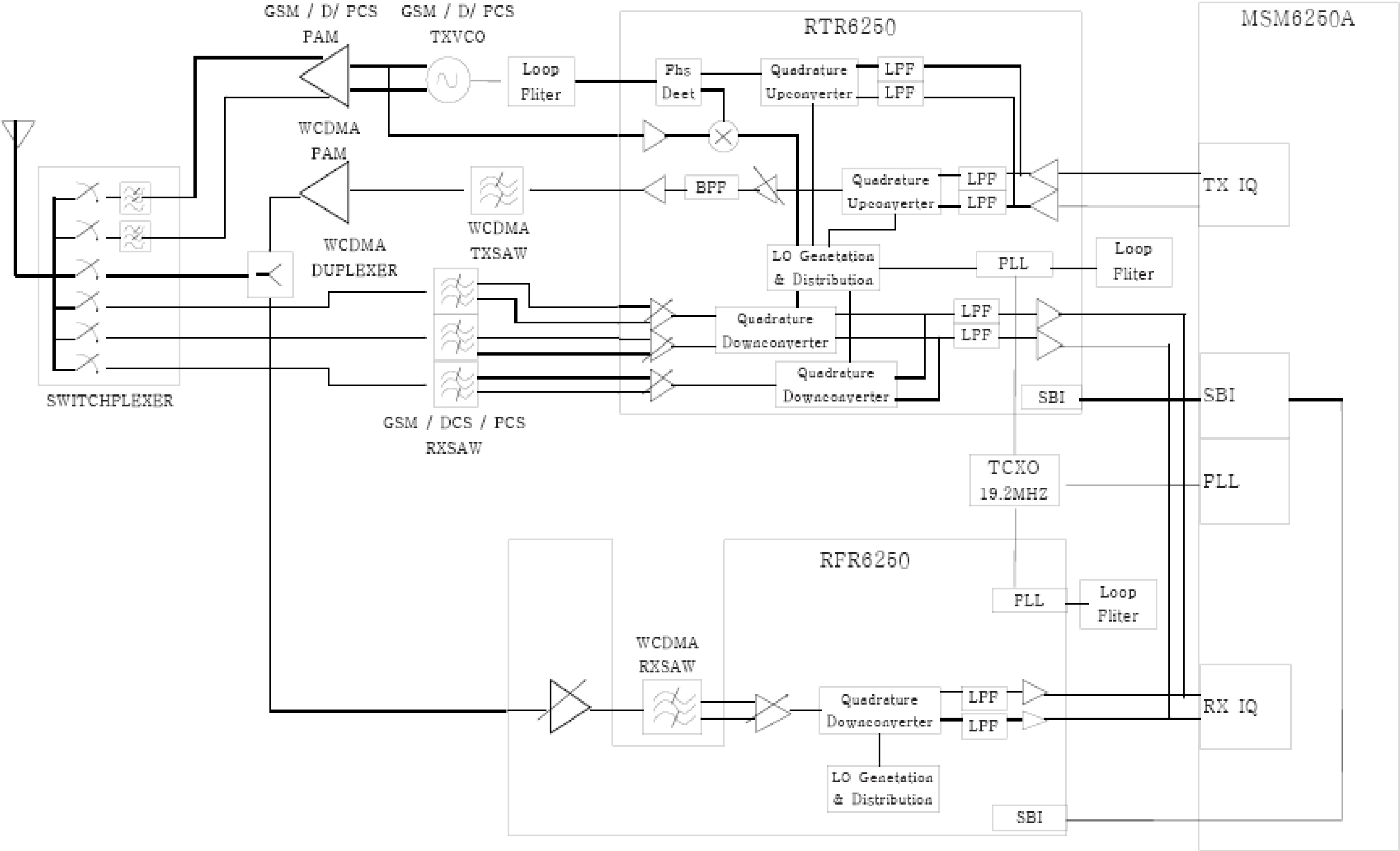
## 5. SGH-Z510 PCB Diagrams





6. SGH-Z510 Block Diagrams





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