

SAMSUNG

GSM TELEPHONE

GT-S5570

SERVICE *Manual*

GSM TELEPHONE



CONTENTS

1. Safety Precautions
2. Specification
3. Product Function
4. Exploded View and Parts list
5. MAIN Electrical Parts List
6. Level 1 Repair
7. Level 2 Repair
8. Level 3 Repair
9. Reference data

Notice :

All functionality, features, specifications and other product information provided in this document including, but not limited to, the benefits, design, pricing, components, performance, availability, and capabilities of the product are subject to change without notice or obligation. Samsung reserves the right to make changes to this document and the product described herein, at anytime, without obligation on Samsung to provide notification of such change.

**SAMSUNG
ELECTRONICS**



2. Specification

2-1. GSM General Specification

| | GSM850 Phase 1 | EGSM 900 Phase 2 | DCS1800 Phase 1 | PCS1900 | WCDMA2100 | WCDMA900 |
|------------------------------------|---------------------------|-----------------------------|----------------------------|------------------------|--|--|
| Freq. Band[MHz] Uplink/Downlink | 824~849 869~894 | 880~915 925~960 | 1710~1785 1805~1880 | 1850~1910 1930~1990 | 1922~1977 2112~2167 | 880~915 925~960 |
| ARFCN range | 128~251 | 0~124 & 975~1023 | 512~885 | 512~810 | UL:9612~9888 DL:10562~10838 | UL:2712~2863 DL:2937~3088 |
| Tx/Rx spacing | 45MHz | 45MHz | 95MHz | 80MHz | 190MHz | 45MHz |
| Mod. Bit rate/ Bit Period | 270.833kbps 3.692us | 270.833kbps 3.692us | 270.833kbps 3.692us | 270.833kbps 3.692us | 3.84Mcps | 3.84Mcps |
| Time Slot Period/Frame Period | 576.9us 4.615ms | 576.9us 4.615ms | 576.9us 4.615ms | 576.9us 4.615ms | FrameLength: 10ms Slotlength: 0.667ms | FrameLength: 10ms Slotlength: 0.667ms |
| Modulation | 0.3GMSK | 0.3GMSK | 0.3GMSK | 0.3GMSK | QPSKHQPSK | QPSKHQPSK |
| MS Power | 33dBm~5dBm | 33dBm~5dBm | 30dBm~0dBm | 30dBm~0dBm | 24dBm~-50dBm | 24dBm~-50dBm |
| Power Class | 5pcl ~ 19pcl | 5pcl ~ 19pcl | 0pcl ~ 15pcl | 0pcl ~ 15pcl | 3(max+24dBm) | 3(max+24dBm) |
| Sensitivity | -102dBm | -102dBm | -100dBm | -100dBm | -106.7dBm | -106.7dBm |
| TDMA Mux | 8 | 8 | 8 | 8 | 8 | 8 |
| Cell Radius | 35Km | 35Km | 2Km | 2Km | 2Km | 2Km |

2-2. GSM Tx Power Class

| TX Power control level | GSM850 | TX Power control level | EGSM900 | TX Power control level | DCS1800 | TX Power control level | PCS1900 |
|-------------------------------|---------------|-------------------------------|----------------|-------------------------------|----------------|-------------------------------|----------------|
| 5 | 33±2 dBm | 5 | 33±2 dBm | 0 | 30±3 dBm | 0 | 30±3 dBm |
| 6 | 31±2 dBm | 6 | 31±2 dBm | 1 | 28±3 dBm | 1 | 28±3 dBm |
| 7 | 29±2 dBm | 7 | 29±2 dBm | 2 | 26±3 dBm | 2 | 26±3 dBm |
| 8 | 27±2 dBm | 8 | 27±2 dBm | 3 | 24±3 dBm | 3 | 24±3 dBm |
| 9 | 25±2 dBm | 9 | 25±2 dBm | 4 | 22±3 dBm | 4 | 22±3 dBm |
| 10 | 23±2 dBm | 10 | 23±2 dBm | 5 | 20±3 dBm | 5 | 20±3 dBm |
| 11 | 21±2 dBm | 11 | 21±2 dBm | 6 | 18±3 dBm | 6 | 18±3 dBm |
| 12 | 19±2 dBm | 12 | 19±2 dBm | 7 | 16±3 dBm | 7 | 16±3 dBm |
| 13 | 17±2 dBm | 13 | 17±2 dBm | 8 | 14±3 dBm | 8 | 14±3 dBm |
| 14 | 15±2 dBm | 14 | 15±2 dBm | 9 | 12±4 dBm | 9 | 12±4 dBm |
| 15 | 13±2 dBm | 15 | 13±2 dBm | 10 | 10±4 dBm | 10 | 10±4 dBm |
| 16 | 11±3 dBm | 16 | 11±3 dBm | 11 | 8±4 dBm | 11 | 8±4 dBm |
| 17 | 9±3dBm | 17 | 9±3dBm | 12 | 6±4 dBm | 12 | 6±4 dBm |
| 18 | 7±3 dBm | 18 | 7±3 dBm | 13 | 4±4 dBm | 13 | 4±4 dBm |
| 19 | 5±3 dBm | 19 | 5±3 dBm | 14 | 2±5 dBm | 14 | 2±5 dBm |
| | | | | 15 | 0±5 dBm | 15 | 0±5 dBm |

3. Operation Instruction and Installation

Main Function

- GSM(2G EDGE/GPRS) 850/900/1800/1900
- HSDPA 7.2 Mbps
- 3.14" QVGA TFT Full Touch (c-type)
- Music player, Voice Recorder
- A-GPS / BT v3.0 / USB v2.0 / WiFi (802.11 b/n/g)
- 3M Camera
- FM Radio Receiver
- Bluetooth v3.0
- USB 2.0 FS / Wi-Fi 802.11n / GPS
- Sensors: Accelerometer, Compass
- TouchWiz 3.0 Light for Android(Multiple SNS(Facebook, Myspace, Twitter))

Multiple IM(Parling: AOL, G-talk)

- Touch WIZ 3.0 UI , Application store
- SMS/MMS/Email

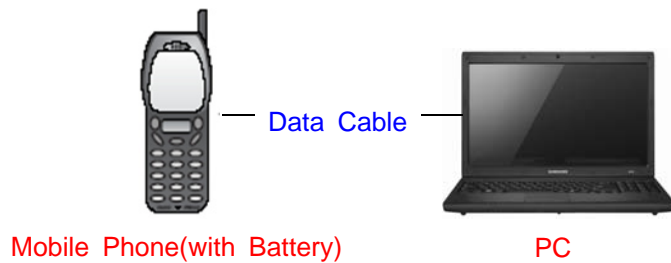
6. Level 1 Repair

6-1. Software Download

6-1-1. Pre-requisite for Download

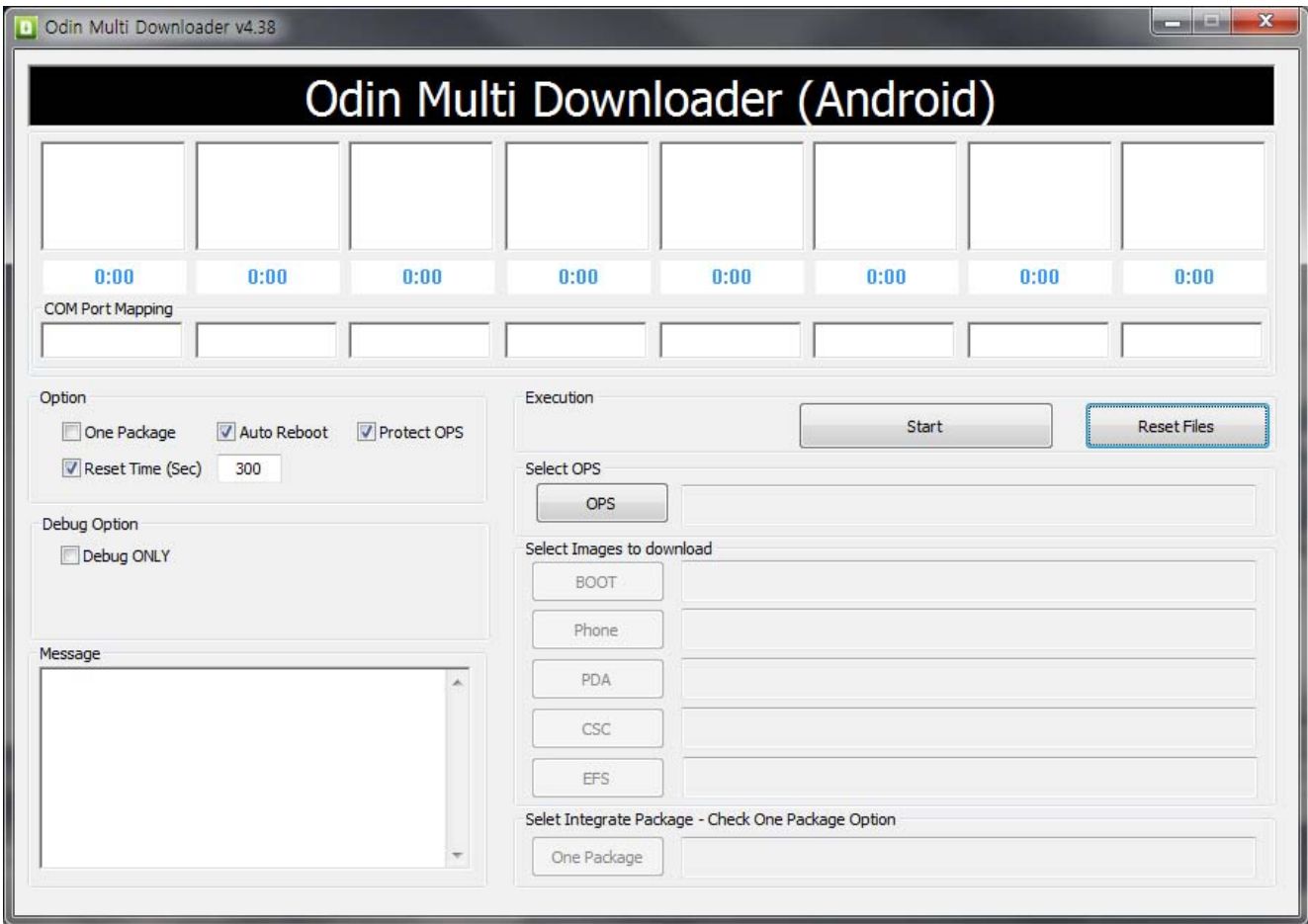
- Downloader Program ([Odin Multi Downloader v4.38](#))
- GT-S5570 Mobile Phone
- Data Cable
- JIG BOX (GH99-36900A)
- RF Test Cable (GH39-00985A)
- JIG Cable (GH39-01160A)
- Adapter (GH99-38251A)
- Binary files

- Diagram of Connection:

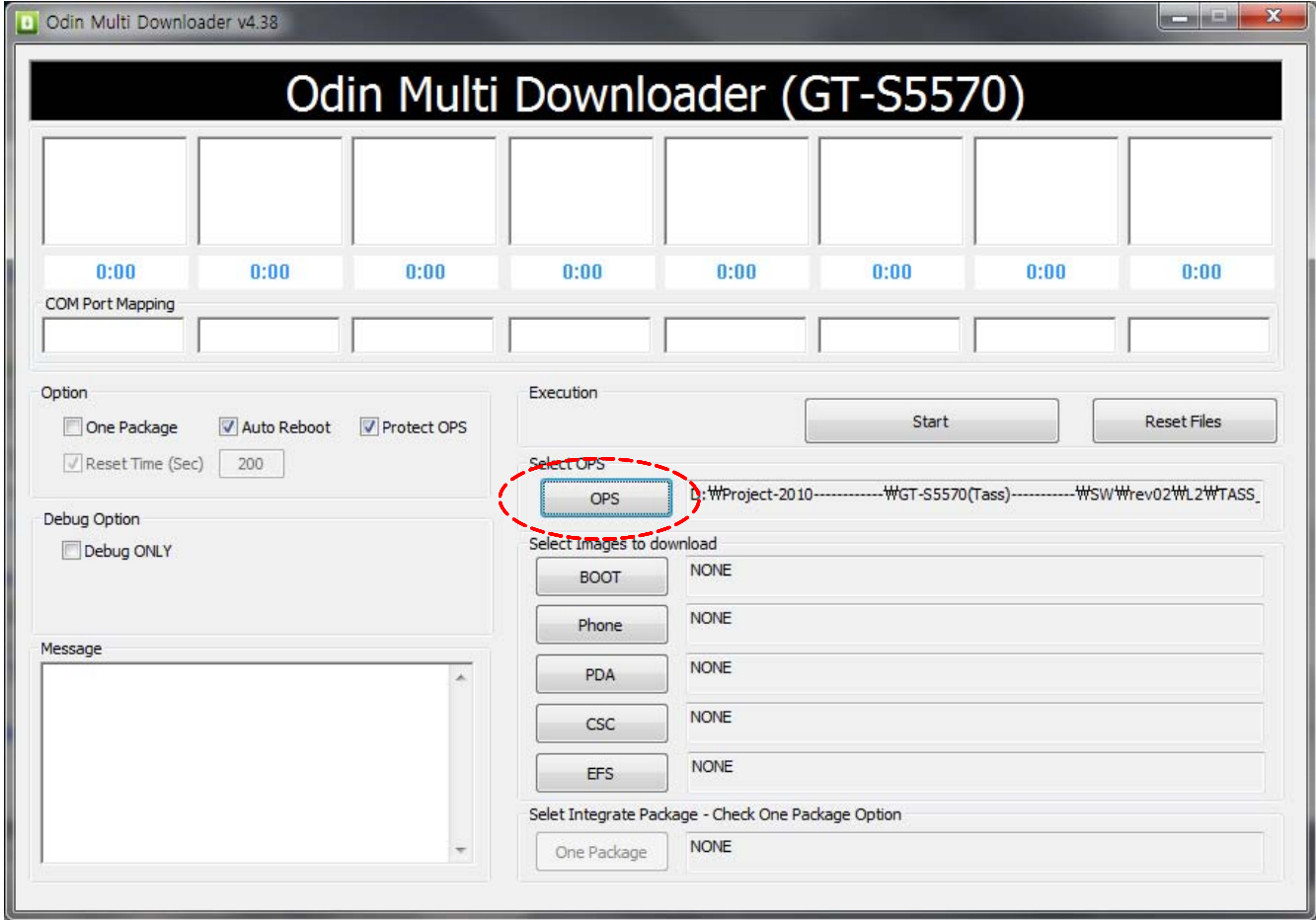


6-1-2. S/W Download Process

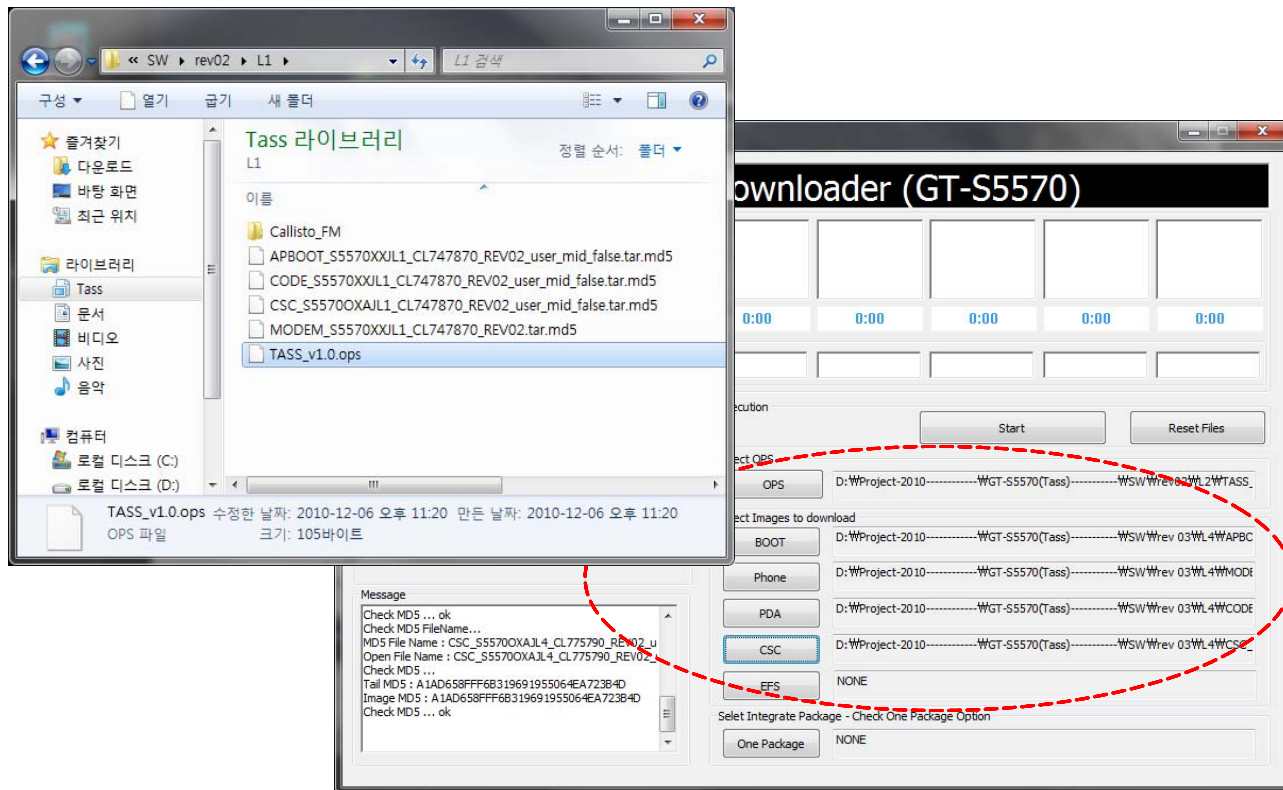
1. Load the binary download program by executing the "Odin Multi Downloader v4.38"



2. Select OPS file (TASS_v1.0.ops) from the folder that you saved the binary files.



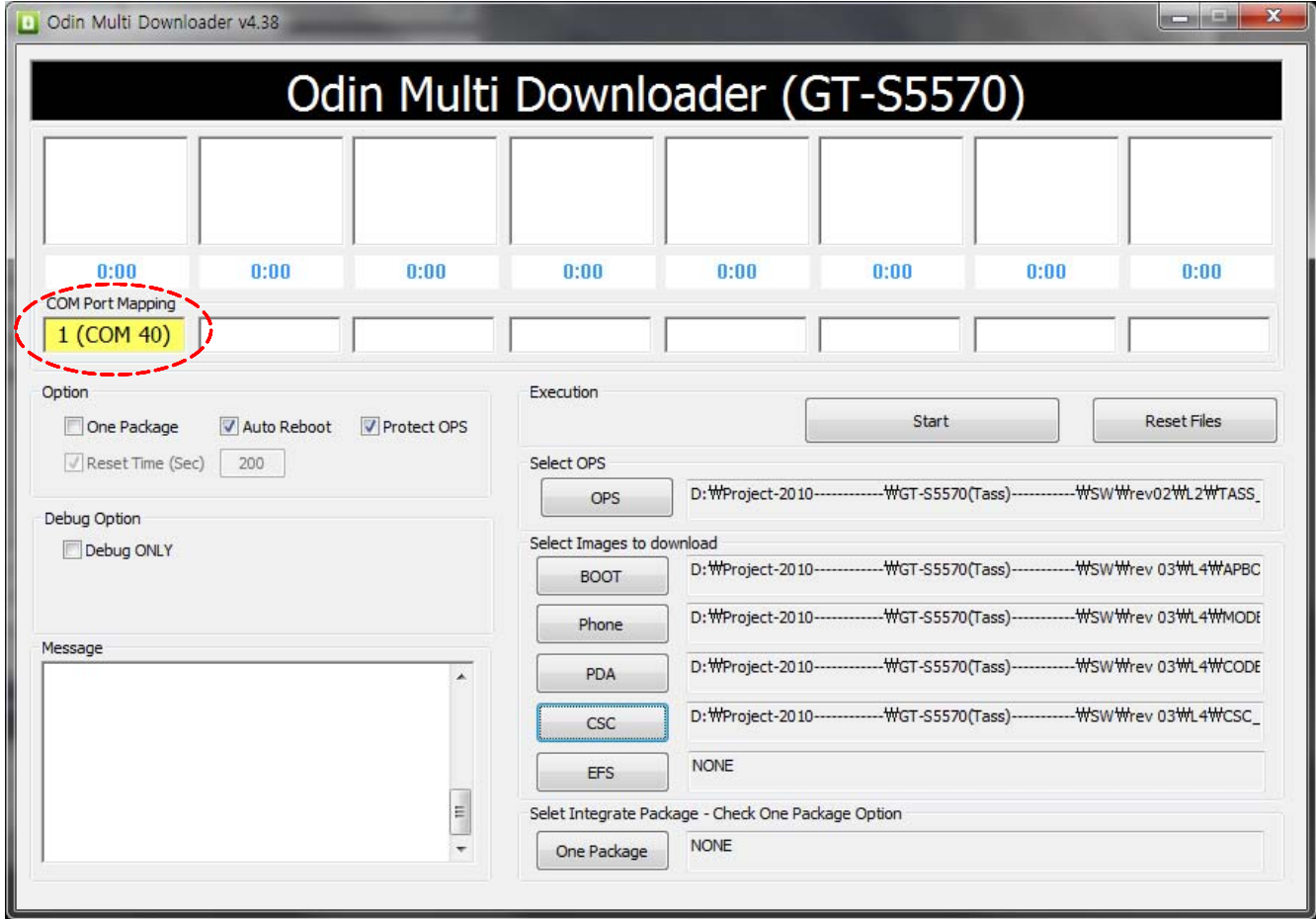
4. Load the file of Bootloader, Amss, PDA, CSC files from the folder that you saved the binary files.



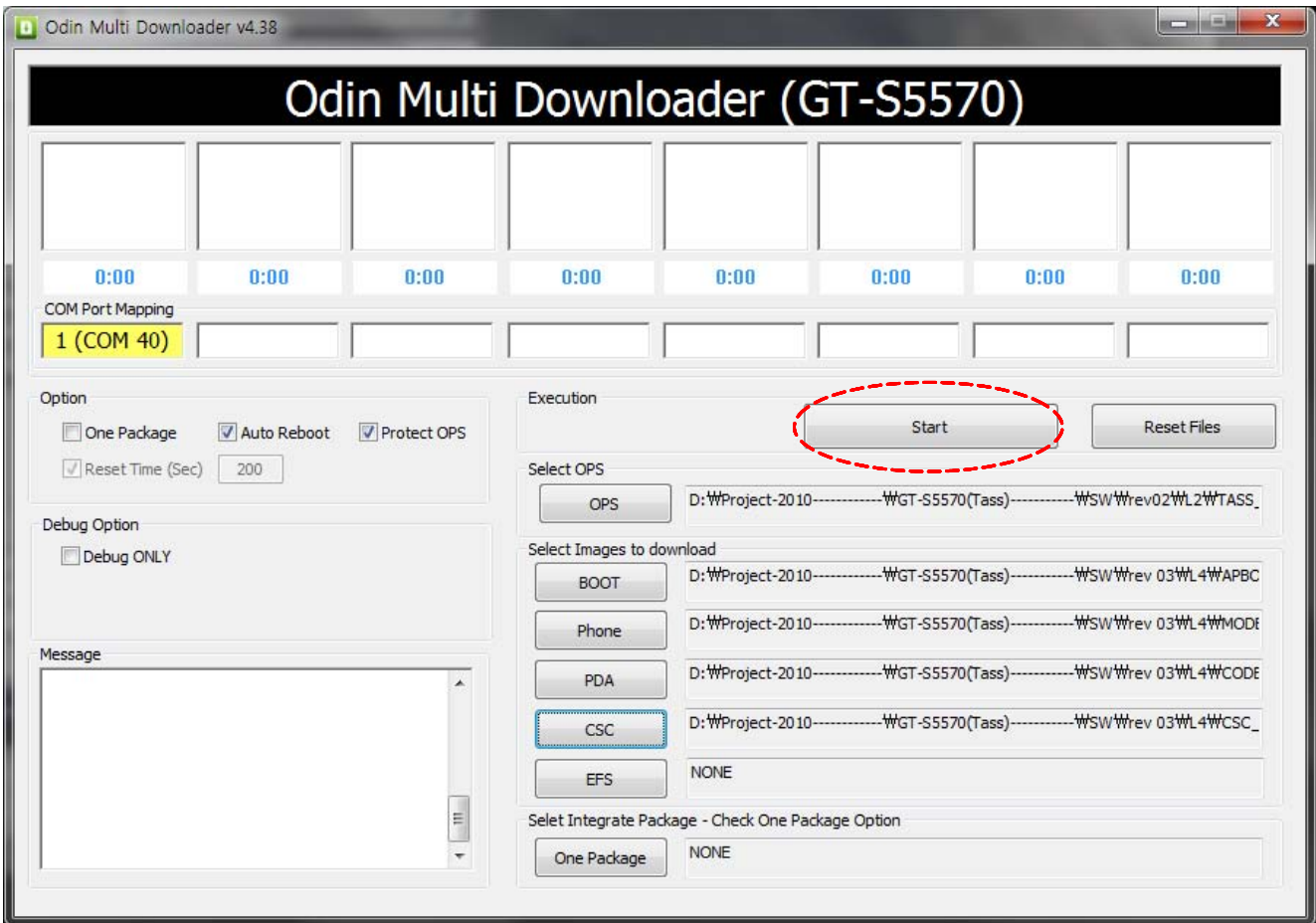
5. COM Port Mapping change to **yellow** colour when the phone with download mode is connected to PC by data cable.

cf. You have to set the phone as a download mode by pressing Volume down + Middle Key(Home Key) + Power key simultaneously before connecting to PC .

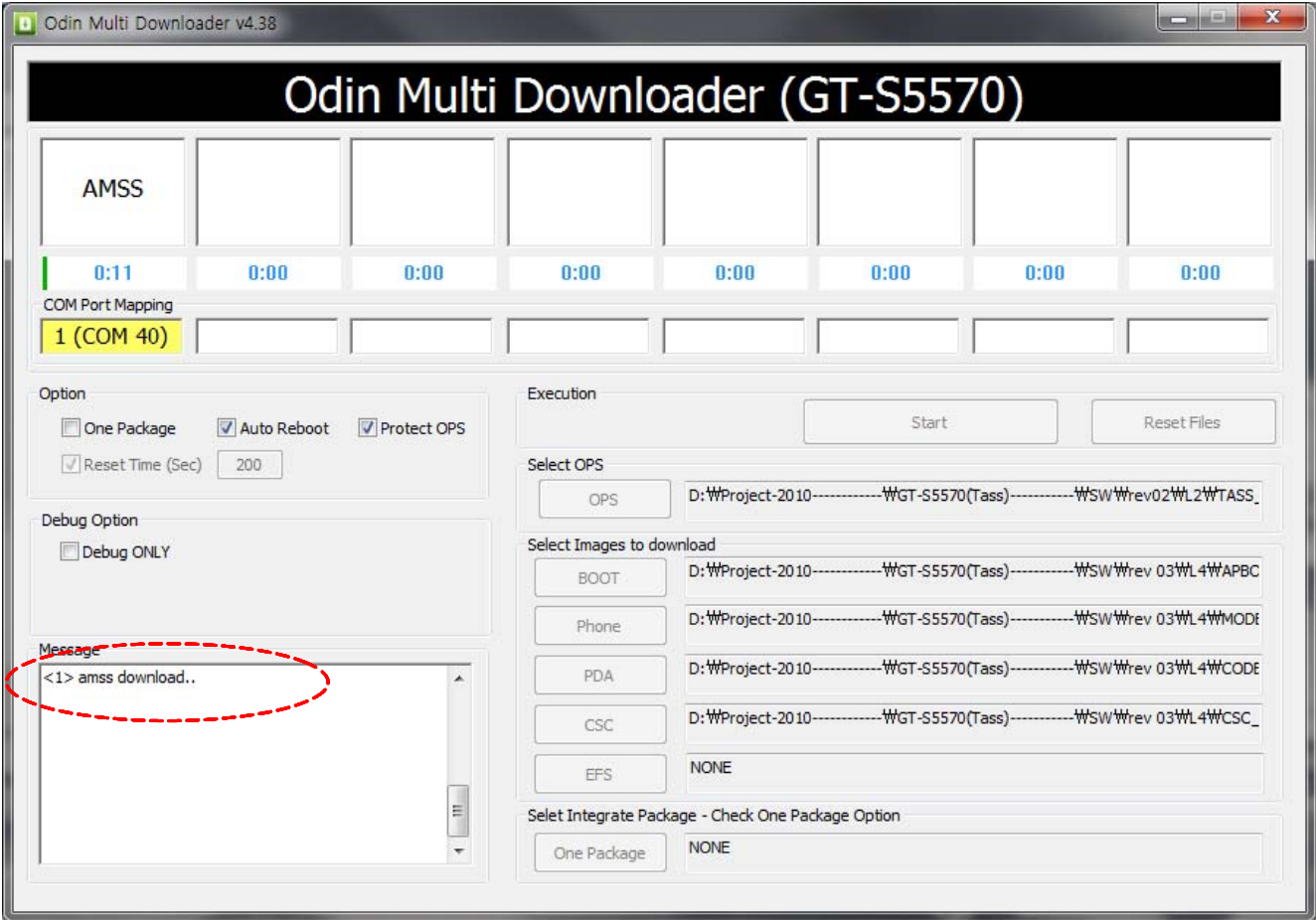
Then, the port would be searched.



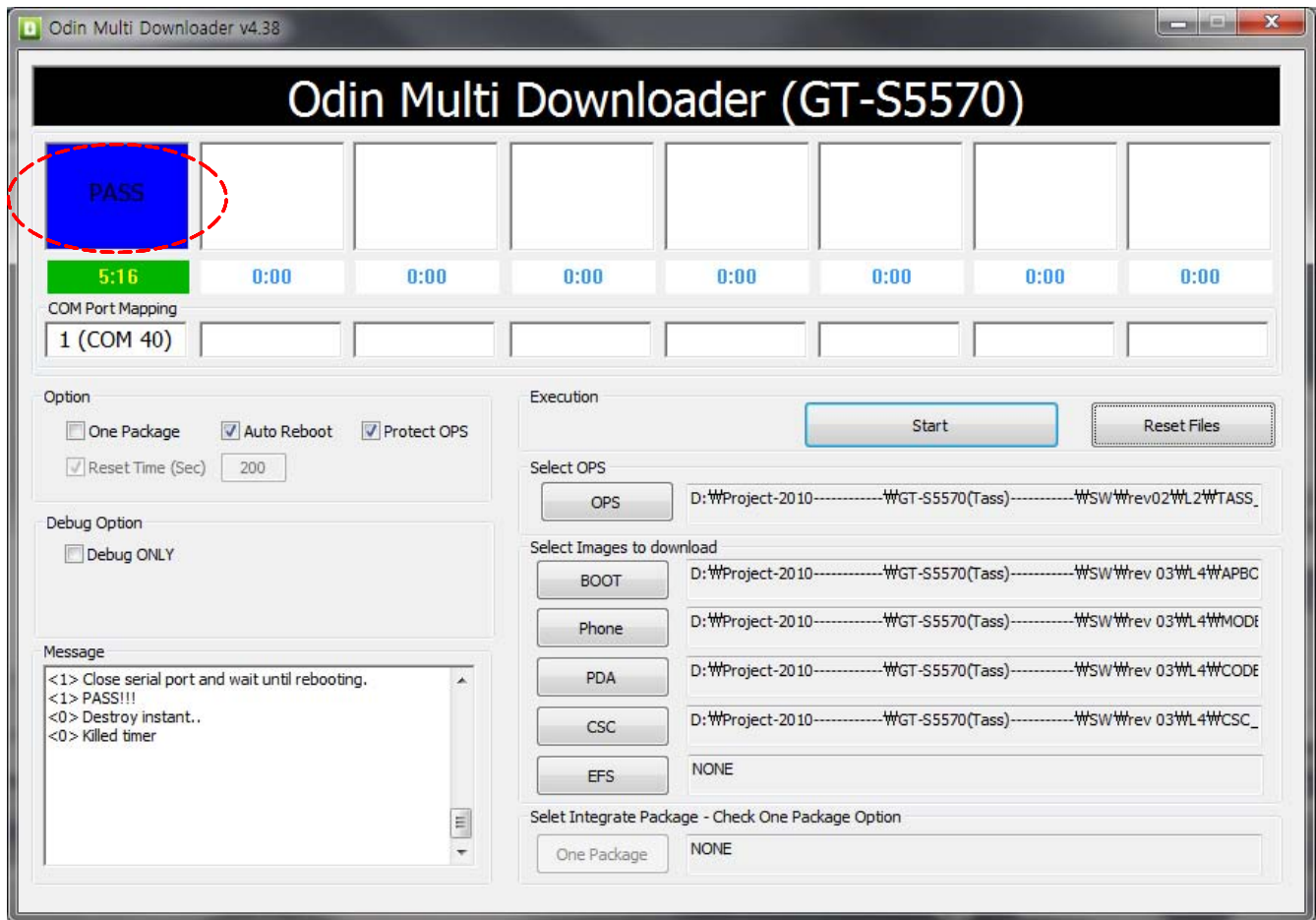
5. Click the **Start** button when the Port searched.



It will start to download.



6. When downloading is finished successfully, there is a "PASS" message.



7. Confirm the downloaded version name and etc. :

***#1234#**

9. Reference Abbreviate

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
- **CI** : Carrier to Interference
- **DMB** : Digital Multimedia Broadcasting
- **EN** : European Standard
- **ES** : Elementary Stream
- **ETSI**: European Telecommunications Standards Institute
- **MPEG**: Moving Picture Experts Group
- **PN** : Pseudo-random Noise
- **PS** : Pilot Symbol
- **QPSK**: Quadrature Phase Shift Keying
- **RS** : Reed-Solomon
- **SI** : Service Information
- **TDM** : Time Division Multiplexing
- **TS** : Transport Stream

1. Safety Precautions

1-1. Repair Precaution

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

1-2. ESD(Electrostatically Sensitive Devices) Precaution

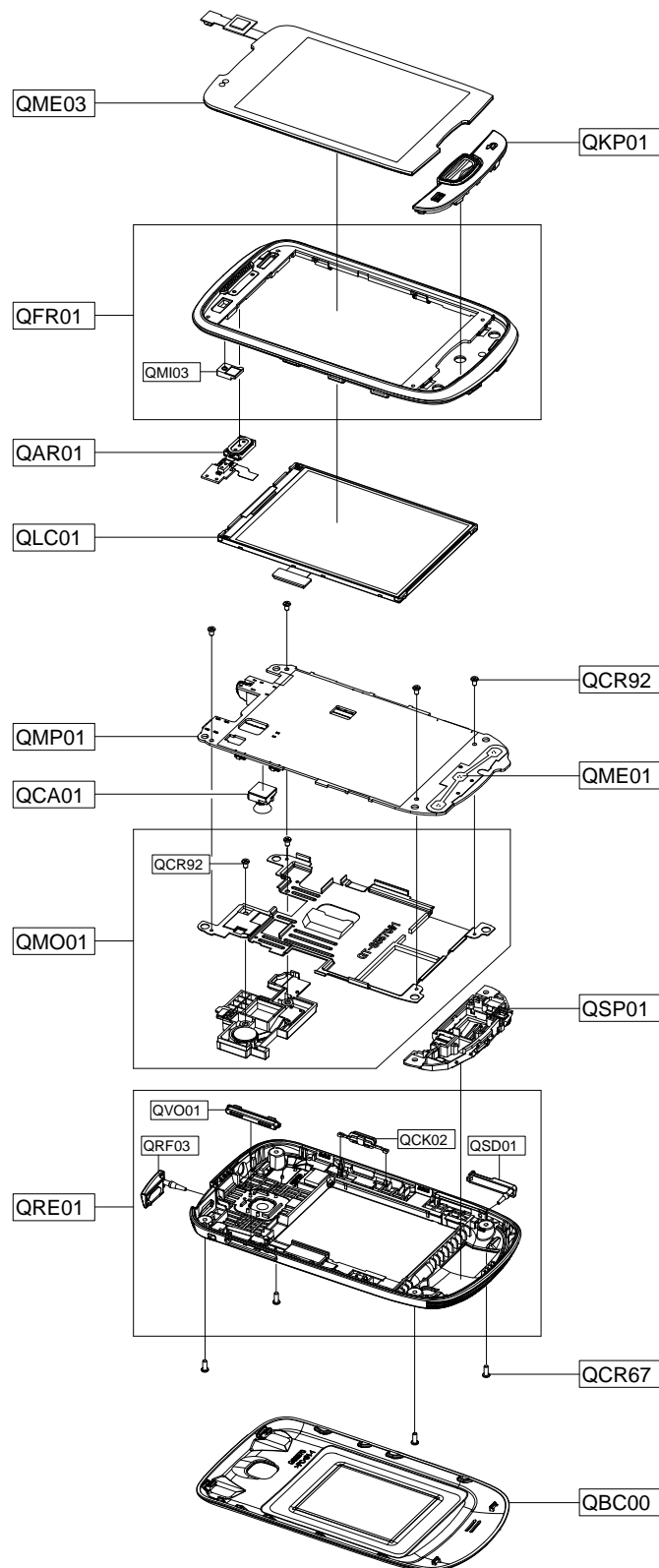
Several semiconductor may be damaged easily by static electricity. Such parts are called by ESD (Electrostatically Sensitive Devices), for example IC,BGA chip etc. Read Precaution below.

You can prevent from ESD damage by static electricity.

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

4. Exploded View and Parts List

4-1. Cellular phone Exploded View



4-2. Cellular phone Parts list

| Design LOC | | Description | SEC CODE |
|------------|-------|---------------------------------------|-------------|
| QCR67 | | SCREW-MACHINE | 6001-002083 |
| QCR92 | | SCREW-MACHINE | 6001-002261 |
| QCA01 | | CAMERA MODULE-GT-S5330 3M | GH59-09906A |
| QAR01 | | ASSY ETC-RCV+SENSOR FPCB(GT_S5570) | GH59-10625A |
| QME01 | | DOME SHEET-GT_S5570 | GH59-10628A |
| QME03 | | TOUCH/PANEL-GT_S5570(EU/BLACK) | GH59-10651A |
| QSP01 | | MODULE-SPK+INT | GH59-10663A |
| QMP01 | | A/S ASSY-PBA MAIN (COMM) | GH82-05484A |
| QLC01 | | ELA MODULE-LCD (GT_S5570) | GH96-05032A |
| QKP01 | | ASSY KEYPAD-GT-S5570 | GH98-19187A |
| QBC00 | | ASSY COVER-BATT | GH98-19190A |
| QMO01 | | MODULE-MOT+BRACKET+SHIELD CAN(GT_S557 | GH59-10768A |
| | QCR92 | SCREW-MACHINE | 6001-002261 |
| QFR01 | | ASSY CASE-FRONT | GH98-19183A |
| | QMI03 | ASSY RUBBER-MIC UP | GH98-19272A |
| QRE01 | | ASSY CASE-REAR | GH98-19189A |
| | QVO01 | PMO COVER-VOL_KEY | GH72-62658A |
| | QCK02 | PMO COVER-POWER_KEY | GH72-62659A |
| | QSD01 | PMO COVER-SD | GH72-62660A |
| | QRF03 | PMO COVER-USB | GH72-62661A |

5. MAIN Electrical Parts List (2010.12.22)

| Design LOC | SEC CODE | Description |
|---------------------|-------------|----------------|
| D600 | 0403-001870 | DIODE-ZENER |
| U637 | 0404-001646 | DIODE-SCHOTTKY |
| ZD501 | 0406-001286 | DIODE-TVS |
| ZD502 | 0406-001329 | DIODE-TVS |
| D400,D500 | 0407-001002 | DIODE-ARRAY |
| Q601 | 0504-001138 | TR-DIGITAL |
| Q600 | 0505-001325 | FET-SILICON |
| U619 | 0505-002341 | FET-SILICON |
| U301 | 0801-003265 | IC |
| U303 | 0801-003383 | IC |
| U609 | 1001-001645 | IC |
| U500,U635 | 1001-001655 | IC |
| UME300 | 1108-000411 | MEMORY |
| PAM102 | 1201-002967 | IC |
| PAM101 | 1201-003088 | IC |
| U200 | 1201-003168 | IC |
| PAM100 | 1201-003210 | IC |
| U508 | 1202-001068 | IC |
| U503 | 1203-006331 | IC |
| U501 | 1203-006346 | IC |
| U615 | 1203-006732 | IC |
| U101 | 1205-003297 | IC |
| UCP300 | 1205-004035 | IC |
| U202 | 1205-004076 | IC |
| U201 | 1205-004113 | IC |
| C522 | 1209-002023 | IC |
| U509 | 1209-002030 | IC |
| TH300 | 1404-001221 | THERMISTOR |
| U614,V500,V503,V504 | 1405-001298 | VARISTOR |
| V505,V600,V601,V602 | 1405-001298 | VARISTOR |
| VR500,VR501,VR502 | 1405-001298 | VARISTOR |
| R116,R325,R509 | 2007-000137 | R-CHIP |
| R100,R322,R326,R500 | 2007-000138 | R-CHIP |
| R506,R527,R606 | 2007-000138 | R-CHIP |
| R4112,U628 | 2007-000140 | R-CHIP |
| R119 | 2007-000141 | R-CHIP |

| Design LOC | SEC CODE | Description |
|---------------------|-------------|-------------|
| R400 | 2007-000144 | R-CHIP |
| R501,R526,R600,R607 | 2007-000148 | R-CHIP |
| R615 | 2007-000148 | R-CHIP |
| R605 | 2007-000149 | R-CHIP |
| R616,R617 | 2007-000151 | R-CHIP |
| U617 | 2007-000153 | R-CHIP |
| R608,R609,R610,R611 | 2007-000157 | R-CHIP |
| R612 | 2007-000157 | R-CHIP |
| R300,R318,R324,R327 | 2007-000162 | R-CHIP |
| R409,R505,U638 | 2007-000162 | R-CHIP |
| R516,U616 | 2007-000165 | R-CHIP |
| R614,U618 | 2007-000168 | R-CHIP |
| R502 | 2007-000170 | R-CHIP |
| U639 | 2007-000172 | R-CHIP |
| R329,R404,R405 | 2007-001292 | R-CHIP |
| R109,R401 | 2007-001298 | R-CHIP |
| R521 | 2007-001333 | R-CHIP |
| R613 | 2007-001339 | R-CHIP |
| R507 | 2007-002796 | R-CHIP |
| U630 | 2007-003004 | R-CHIP |
| R603,R604 | 2007-003015 | R-CHIP |
| U629 | 2007-003030 | R-CHIP |
| R406 | 2007-007107 | R-CHIP |
| R204 | 2007-007132 | R-CHIP |
| R309,R313 | 2007-007139 | R-CHIP |
| R110 | 2007-007309 | R-CHIP |
| R402 | 2007-007334 | R-CHIP |
| R408 | 2007-007468 | R-CHIP |
| R407 | 2007-007480 | R-CHIP |
| R410 | 2007-007573 | R-CHIP |
| R105 | 2007-008044 | R-CHIP |
| R106,R107 | 2007-008045 | R-CHIP |
| R302,R319,R321,R335 | 2007-008055 | R-CHIP |
| R301 | 2007-008298 | R-CHIP |
| R111,R303 | 2007-008419 | R-CHIP |
| R308 | 2007-008516 | R-CHIP |

| Design LOC | SEC CODE | Description |
|---------------------|-------------|----------------|
| R121 | 2007-008531 | R-CHIP |
| R332 | 2007-008564 | R-CHIP |
| R304,R305,R306,R307 | 2007-008588 | R-CHIP |
| R314,R315,R316,R317 | 2007-008588 | R-CHIP |
| R323 | 2007-008766 | R-CHIP |
| R120 | 2007-008774 | R-CHIP |
| R330 | 2007-008806 | R-CHIP |
| R403 | 2007-008812 | R-CHIP |
| R205 | 2007-009794 | R-CHIP |
| C109,C127,C154,C215 | 2203-000233 | C-CERAMIC,CHIP |
| C434,L111 | 2203-000233 | C-CERAMIC,CHIP |
| C103,C110,C205 | 2203-000254 | C-CERAMIC,CHIP |
| C200,C204,C214,C230 | 2203-000278 | C-CERAMIC,CHIP |
| C511 | 2203-000278 | C-CERAMIC,CHIP |
| R200 | 2203-000311 | C-CERAMIC,CHIP |
| C237 | 2203-000330 | C-CERAMIC,CHIP |
| L116 | 2203-000386 | C-CERAMIC,CHIP |
| C530 | 2203-000425 | C-CERAMIC,CHIP |
| C101,C104,C114,C218 | 2203-000438 | C-CERAMIC,CHIP |
| C519,C520 | 2203-000438 | C-CERAMIC,CHIP |
| C328 | 2203-000489 | C-CERAMIC,CHIP |
| C432,C433 | 2203-000550 | C-CERAMIC,CHIP |
| C427 | 2203-000585 | C-CERAMIC,CHIP |
| C322,L119 | 2203-000696 | C-CERAMIC,CHIP |
| C102,C105,C203,C206 | 2203-000812 | C-CERAMIC,CHIP |
| C210,C220,C221,C324 | 2203-000812 | C-CERAMIC,CHIP |
| C506,C516,C517,C606 | 2203-000812 | C-CERAMIC,CHIP |
| R104 | 2203-000812 | C-CERAMIC,CHIP |
| C235 | 2203-000940 | C-CERAMIC,CHIP |
| C329,C428 | 2203-000995 | C-CERAMIC,CHIP |
| C406,C407 | 2203-001405 | C-CERAMIC,CHIP |
| C108 | 2203-002668 | C-CERAMIC,CHIP |
| C224,C226,C227,C229 | 2203-002709 | C-CERAMIC,CHIP |
| C232,C233,C243,C305 | 2203-002709 | C-CERAMIC,CHIP |
| C318,C524,C527,C603 | 2203-002709 | C-CERAMIC,CHIP |
| U302 | 2203-002709 | C-CERAMIC,CHIP |

| Design LOC | SEC CODE | Description |
|---------------------|-------------|----------------|
| C167,C211 | 2203-005052 | C-CERAMIC,CHIP |
| C234,C236 | 2203-005056 | C-CERAMIC,CHIP |
| C512 | 2203-005057 | C-CERAMIC,CHIP |
| C238 | 2203-005444 | C-CERAMIC,CHIP |
| C219 | 2203-005450 | C-CERAMIC,CHIP |
| C325 | 2203-005480 | C-CERAMIC,CHIP |
| C131,C144,C145,C148 | 2203-005682 | C-CERAMIC,CHIP |
| C158 | 2203-005682 | C-CERAMIC,CHIP |
| C149,C151,C164 | 2203-005725 | C-CERAMIC,CHIP |
| C132,C133 | 2203-005732 | C-CERAMIC,CHIP |
| C165 | 2203-005736 | C-CERAMIC,CHIP |
| C153 | 2203-005806 | C-CERAMIC,CHIP |
| C100,C244,C300,C301 | 2203-006048 | C-CERAMIC,CHIP |
| C303,C326,C435,C436 | 2203-006048 | C-CERAMIC,CHIP |
| C441,C442,C501,C502 | 2203-006048 | C-CERAMIC,CHIP |
| C507,C508,C514,C515 | 2203-006048 | C-CERAMIC,CHIP |
| C518,C528,C532,C604 | 2203-006048 | C-CERAMIC,CHIP |
| U632 | 2203-006048 | C-CERAMIC,CHIP |
| C121,C122 | 2203-006187 | C-CERAMIC,CHIP |
| C400 | 2203-006260 | C-CERAMIC,CHIP |
| C608 | 2203-006348 | C-CERAMIC,CHIP |
| C201,C202,C216,C217 | 2203-006399 | C-CERAMIC,CHIP |
| C223,C302,C304,C306 | 2203-006399 | C-CERAMIC,CHIP |
| C307,C317,C319,C320 | 2203-006399 | C-CERAMIC,CHIP |
| C321,C408,C409,C415 | 2203-006399 | C-CERAMIC,CHIP |
| C416,C417,C418,C422 | 2203-006399 | C-CERAMIC,CHIP |
| C423,C425,C426,C429 | 2203-006399 | C-CERAMIC,CHIP |
| C431,C444,C503,C601 | 2203-006399 | C-CERAMIC,CHIP |
| C602,U602,U603,U608 | 2203-006399 | C-CERAMIC,CHIP |
| U610 | 2203-006399 | C-CERAMIC,CHIP |
| C147,C150,C160,C163 | 2203-006423 | C-CERAMIC,CHIP |
| C207,C208,C308,C309 | 2203-006423 | C-CERAMIC,CHIP |
| C311,C312,C313,C314 | 2203-006423 | C-CERAMIC,CHIP |
| C315,C323,C327 | 2203-006423 | C-CERAMIC,CHIP |
| C330 | 2203-006556 | C-CERAMIC,CHIP |
| C424,C430,C443,C500 | 2203-006562 | C-CERAMIC,CHIP |

| Design LOC | SEC CODE | Description |
|---------------------|-------------|----------------|
| L101,L103 | 2203-006604 | C-CERAMIC,CHIP |
| C135,C138,C155,C159 | 2203-006665 | C-CERAMIC,CHIP |
| C119,C120 | 2203-006707 | C-CERAMIC,CHIP |
| C401,C402,C403,C404 | 2203-006824 | C-CERAMIC,CHIP |
| C405,C437,C438,C439 | 2203-006824 | C-CERAMIC,CHIP |
| C440,U612 | 2203-006824 | C-CERAMIC,CHIP |
| C209,C222,C225,C228 | 2203-006872 | C-CERAMIC,CHIP |
| C231,C241 | 2203-006872 | C-CERAMIC,CHIP |
| C152,C162 | 2203-006979 | C-CERAMIC,CHIP |
| C504,U502 | 2203-007133 | C-CERAMIC,CHIP |
| C505 | 2203-007240 | C-CERAMIC,CHIP |
| C242,C410,C411,C412 | 2203-007271 | C-CERAMIC,CHIP |
| C413,C414,C420,C421 | 2203-007271 | C-CERAMIC,CHIP |
| C609,C610 | 2203-007271 | C-CERAMIC,CHIP |
| C111,C310,C316,C523 | 2203-007279 | C-CERAMIC,CHIP |
| C161 | 2203-007317 | C-CERAMIC,CHIP |
| C124,C134 | 2203-007393 | C-CERAMIC,CHIP |
| U620 | 2203-007687 | C-CERAMIC,CHIP |
| C525,C605 | 2203-007701 | C-CERAMIC,CHIP |
| BAT400 | 2404-001506 | C-TA,CHIP |
| L104 | 2703-001729 | INDUCTOR-SMD |
| L105 | 2703-001733 | INDUCTOR-SMD |
| C137,L107 | 2703-001737 | INDUCTOR-SMD |
| L118 | 2703-002170 | INDUCTOR-SMD |
| C107,C128 | 2703-002199 | INDUCTOR-SMD |
| C106,C130 | 2703-002205 | INDUCTOR-SMD |
| L112 | 2703-002207 | INDUCTOR-SMD |
| L109,L110 | 2703-002208 | INDUCTOR-SMD |
| C129,C213 | 2703-002267 | INDUCTOR-SMD |
| C113 | 2703-002314 | INDUCTOR-SMD |
| C126 | 2703-002365 | INDUCTOR-SMD |
| C125 | 2703-002369 | INDUCTOR-SMD |
| L122 | 2703-002842 | INDUCTOR-SMD |
| L124 | 2703-002858 | INDUCTOR-SMD |
| L120 | 2703-002901 | INDUCTOR-SMD |
| L123 | 2703-002907 | INDUCTOR-SMD |

| Design LOC | SEC CODE | Description |
|---------------------|-------------|---------------------|
| R510 | 2703-003064 | INDUCTOR-SMD |
| L502 | 2703-003121 | INDUCTOR-SMD |
| L508 | 2703-003485 | INDUCTOR-SMD |
| L400,L401,L402,L403 | 2703-003686 | INDUCTOR-SMD |
| L106,L108,L115 | 2703-003915 | INDUCTOR-SMD |
| C115,C118,L102 | 2703-004024 | INDUCTOR-SMD |
| OSC400 | 2801-004551 | CRYSTAL-UNIT |
| OSC200 | 2801-005045 | CRYSTAL-UNIT |
| OSC100 | 2809-001277 | OSCILLATOR-VCTCXO |
| F600,F601,F602,F603 | 2901-001424 | FILTER-EMI SMD |
| F604,F605 | 2901-001424 | FILTER-EMI SMD |
| F607,F608 | 2901-001469 | FILTER-EMI SMD |
| F102 | 2904-001847 | FILTER-SAW |
| F104 | 2904-001864 | FILTER-SAW |
| F100 | 2904-001889 | FILTER-SAW |
| F101 | 2904-001920 | FILTER-SAW |
| DUF100 | 2910-000099 | FILTER |
| DUF101 | 2910-000117 | FILTER |
| F200 | 2911-000158 | FILTER |
| MIC500 | 3003-001136 | MIC-CONDENSOR |
| L203 | 3301-001438 | CORE-FERRITE BEAD |
| L200,L201 | 3301-001659 | CORE-FERRITE BEAD |
| L100,L601,L602 | 3301-001756 | CORE-FERRITE BEAD |
| L512 | 3301-001762 | CORE-FERRITE BEAD |
| L600 | 3301-001789 | CORE-FERRITE BEAD |
| L500,L501,L503,L504 | 3301-001885 | CORE-FERRITE BEAD |
| L505,L507,L513,L514 | 3301-001885 | CORE-FERRITE BEAD |
| L515 | 3301-001885 | CORE-FERRITE BEAD |
| L516 | 3301-002062 | CORE-FERRITE BEAD |
| R202,R203 | 3301-002065 | CORE-FERRITE BEAD |
| L510,L511 | 3301-002078 | CORE-FERRITE BEAD |
| TACT500,TAC_DN | 3404-001303 | SWITCH-TACT |
| TAC_UP | 3404-001303 | SWITCH-TACT |
| RFS100 | 3705-001731 | CONNECTOR-COAXIAL |
| CD600 | 3709-001575 | CONNECTOR-CARD EDGE |
| SIM600 | 3709-001645 | CONNECTOR-CARD EDGE |



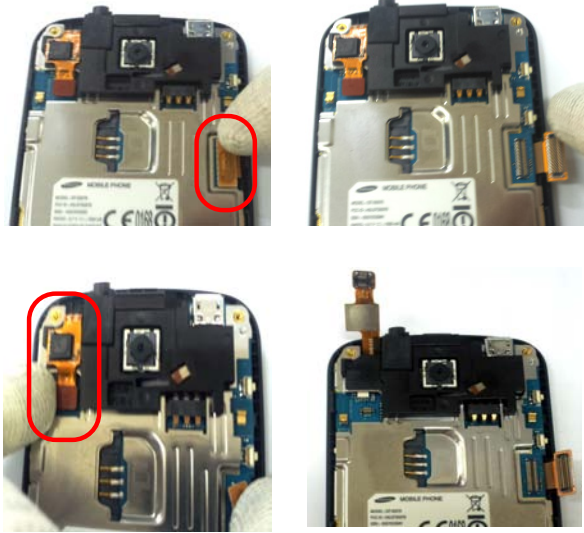
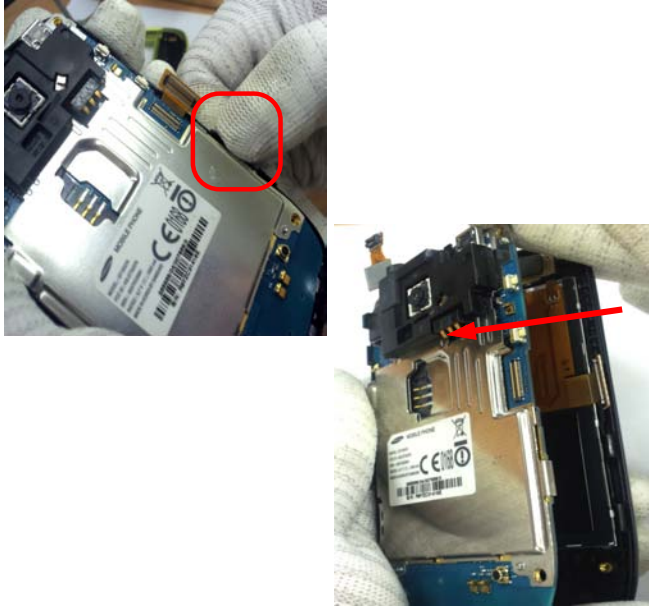
| Design LOC | SEC CODE | Description |
|----------------------|-------------|------------------|
| HDC600 | 3710-002632 | CONNECTOR-SOCKET |
| SOC600 | 3710-003306 | CONNECTOR-SOCKET |
| HDC601 | 3711-006843 | CONNECTOR-HEADER |
| BTC600 | 3711-007393 | CONNECTOR-HEADER |
| ANT100,ANT101,ANT200 | 3712-001332 | CONNECTOR |
| ANT201,MOT500,MOT501 | 3712-001332 | CONNECTOR |
| SPK500,SPK501 | 3712-001332 | CONNECTOR |
| IFC600 | 3722-003115 | JACK-PHONE |
| EAR1 | 3722-003221 | JACK-PHONE |

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

7. Level 2 Repair

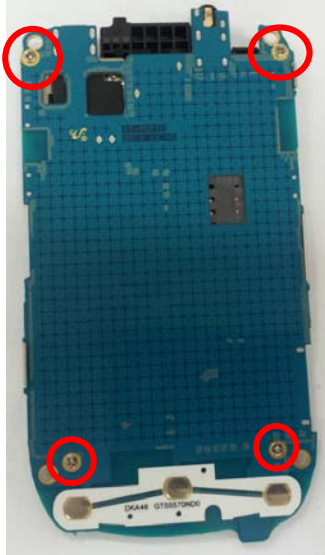
7-1. Disassembly and Assembly Instructions

7-1-1. Disassembly

| | |
|--|--|
| <div data-bbox="175 344 792 405" style="border: 1px solid black; padding: 2px;"> <p>1 Unscrew Rear Case</p> </div>  | <div data-bbox="829 344 1446 405" style="border: 1px solid black; padding: 2px;"> <p>2 Separate the Rear Case</p> </div>  |
| <p>Unscrew 4 points on Rear Case.</p> | <p>Separate Rear part corner using a decomposition tool.</p> |
| <div data-bbox="175 1142 792 1203" style="border: 1px solid black; padding: 2px;"> <p>3 Separate 2 connectors.</p> </div>  | <div data-bbox="829 1142 1446 1203" style="border: 1px solid black; padding: 2px;"> <p>4 Separate the PBA from Front Ass'y.</p> </div>  |
| <p>Separate 2 connectors from the PBA with care.</p> | <p>Lift the Hook & Separate the PBA from Front Ass'y.</p> |

5

Unscrew PBA



Unscrew 4 points on the PBA.

6

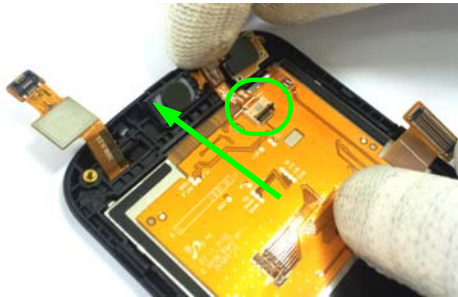
Separate Shield Can



Separate the Shield Can.

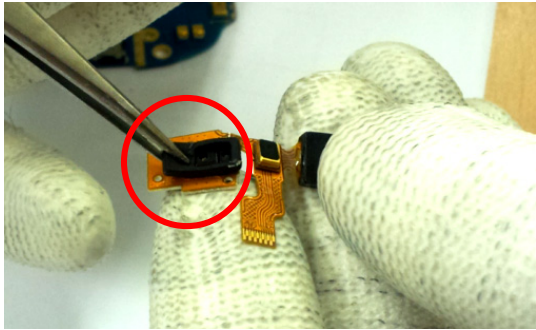
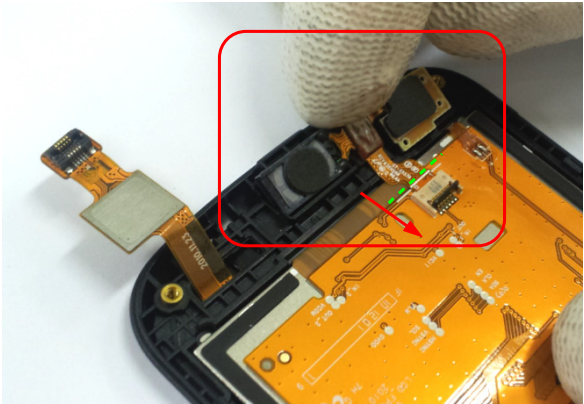
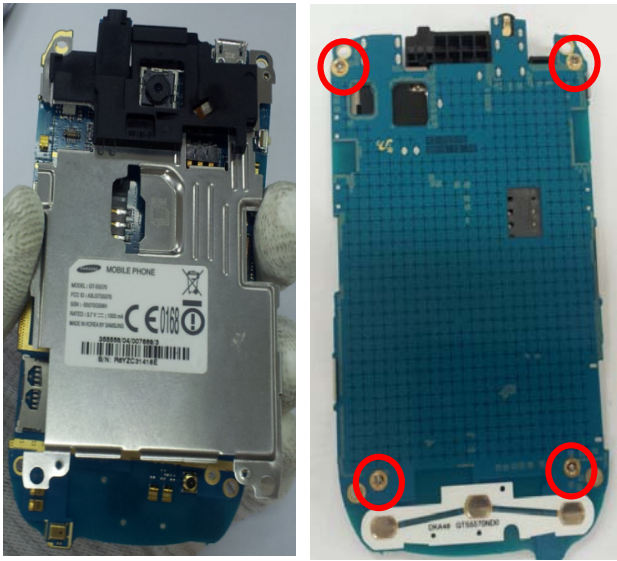

7

Separate the Receiver-FPCB from LCD.



Separate Receiver-FPCB to Open lever of ZIP-TYPE connector.

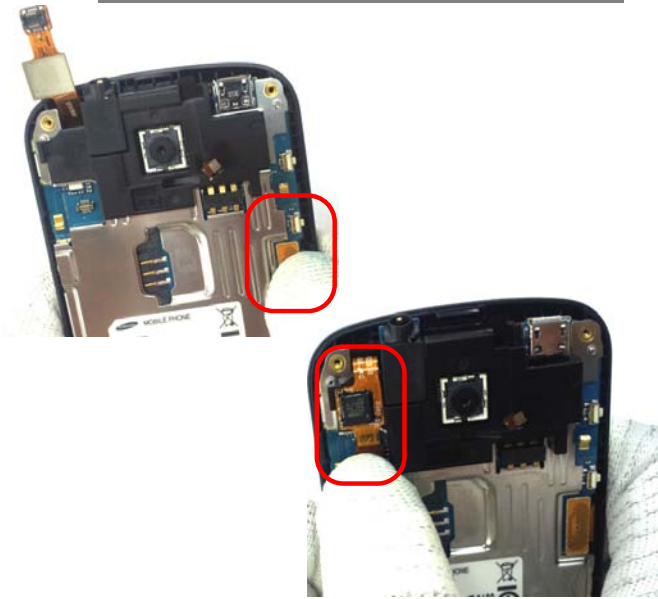
7-1-2. Assembly

| | |
|--|--|
| <p>1 Insert the Rubber on the Sensor.</p> | <p>2 Assemble the Receiver Module.</p> |
|  |  |
| <p>Insert the Rubber on the Sensor. Assemble the Receiver-Module to LCD.</p> | |
| <p>3 Assemble the Shield-Can</p> | <p>4 Assemble the PBA to FRONT Ass'y.</p> |
|  |  |
| <p>Attach the Shield-Can and screw 4 points on the PBA. Place PBA carefully on hook.</p> | |

7. Level 2 Repair

5

Assemble the PBA to FRONT Ass'y.



Assemble the LCD Connector & TSP Connector.

6

Assemble the Rear Case



Assemble the Rear Case to FRONT Ass'y.

7

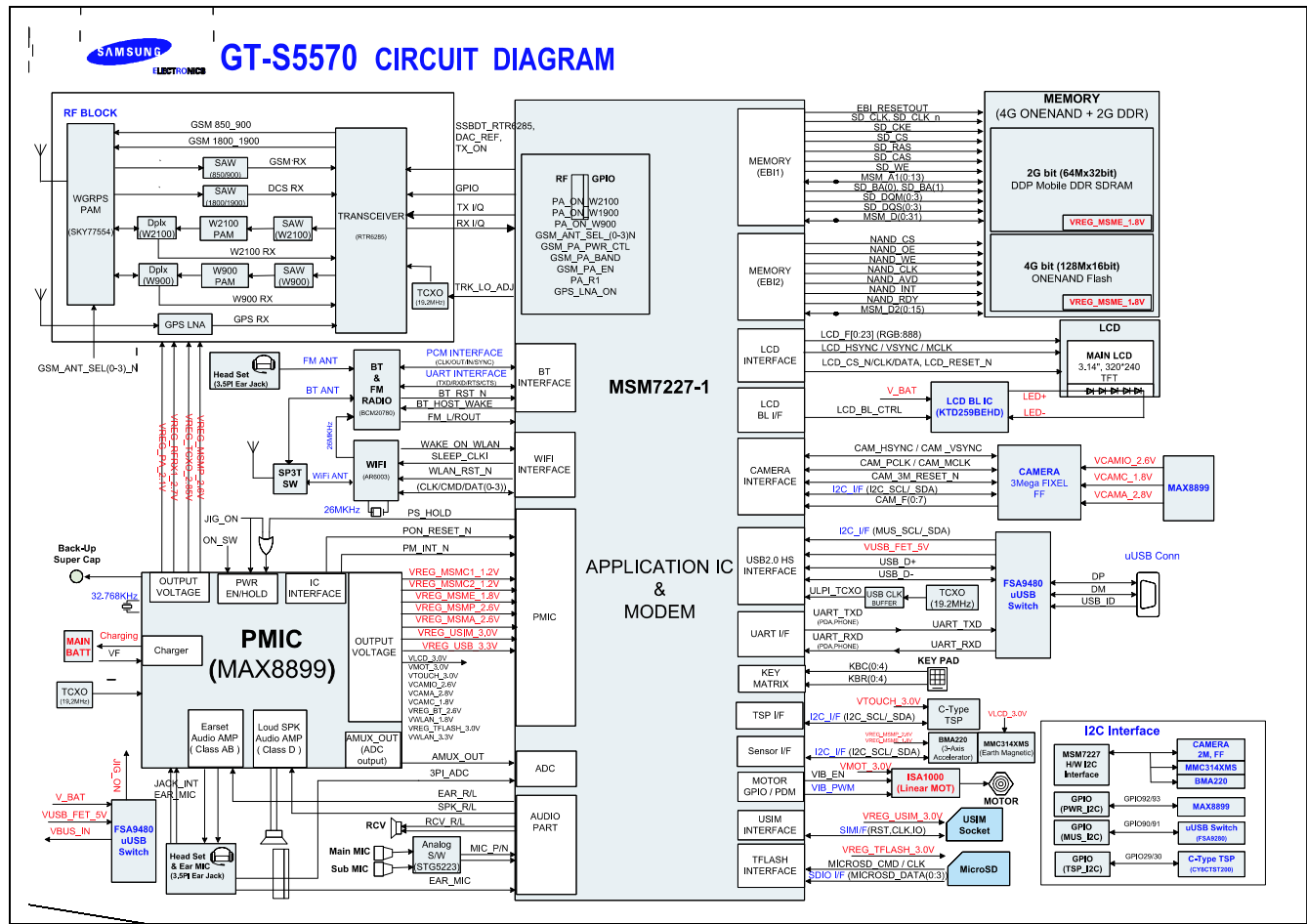
Screw REAR 4-point



Land REAR on PBA and screw REAR 4-point.
(Torque 1.1)

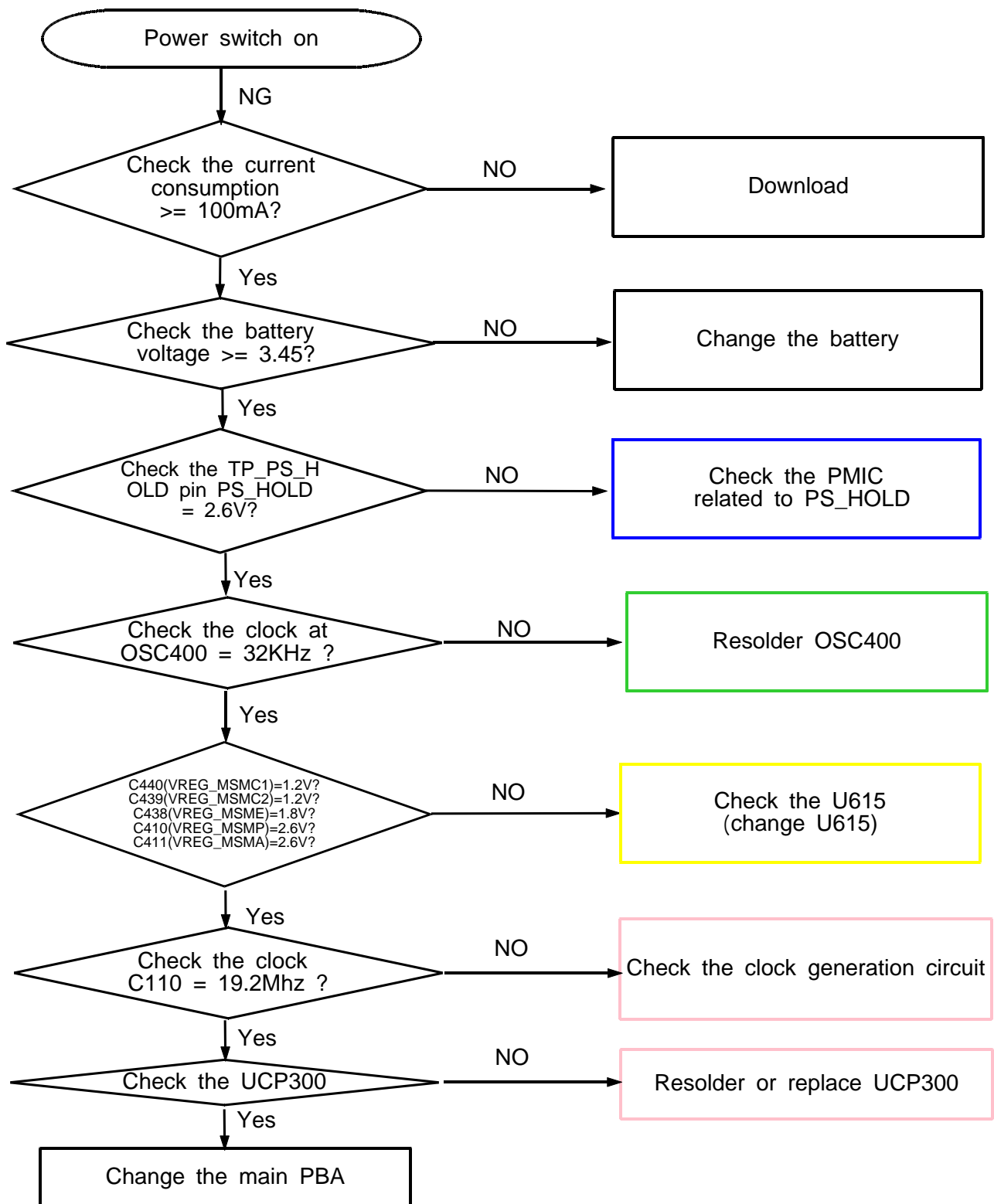
8. Level 3 Repair

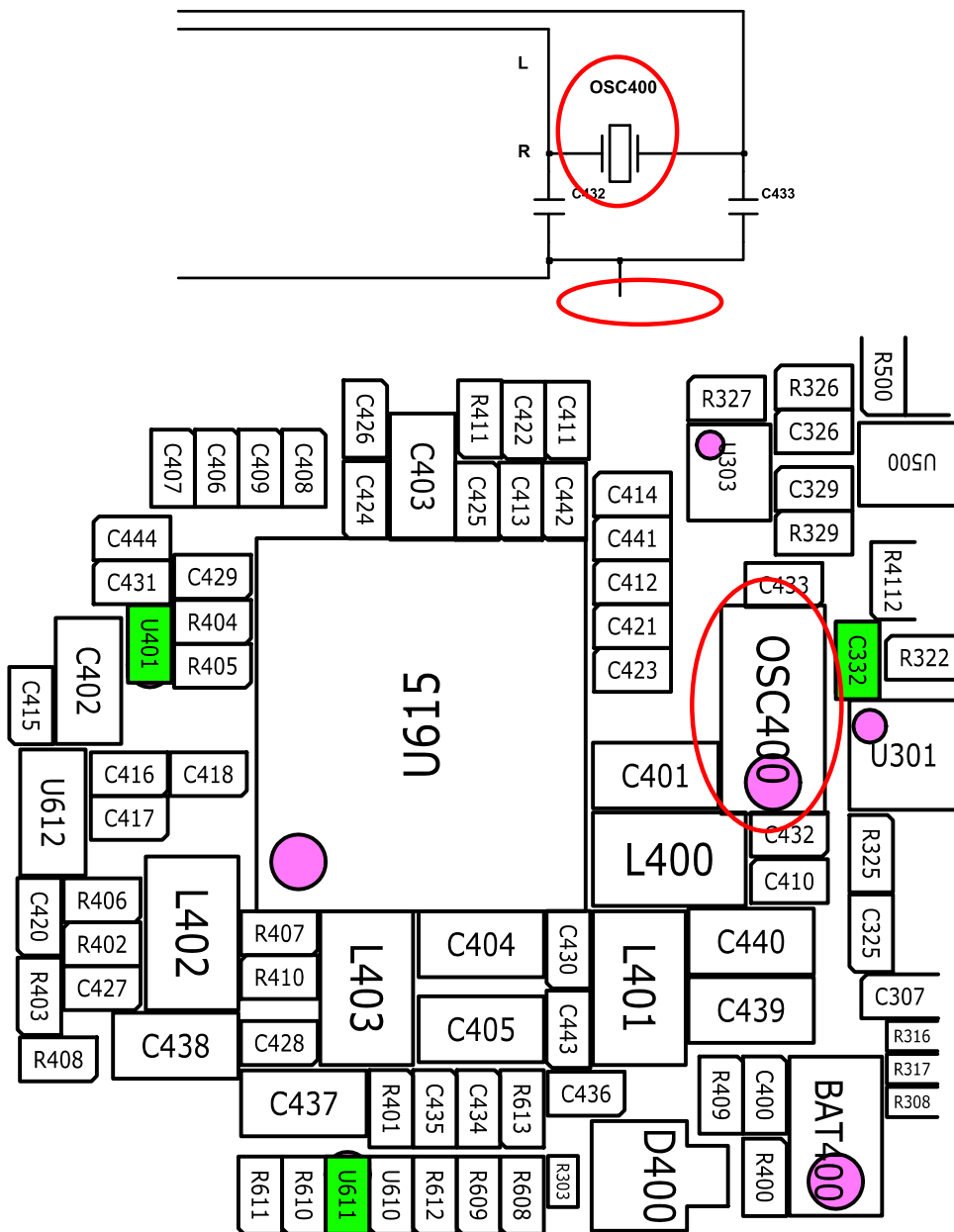
8-1. Block Diagram

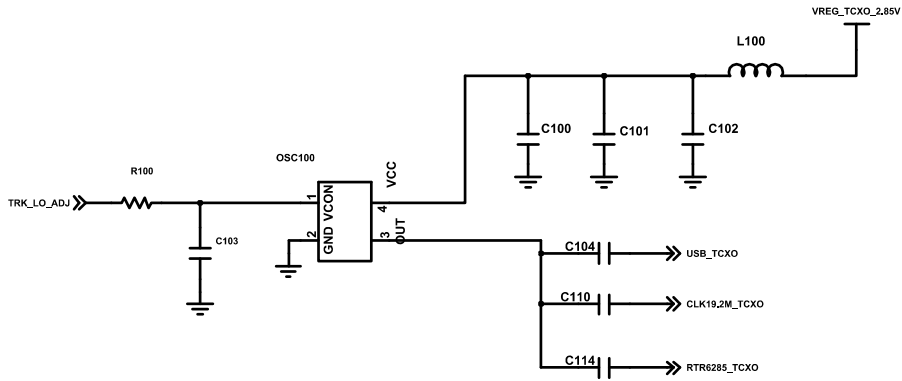


8-3. LOGIC

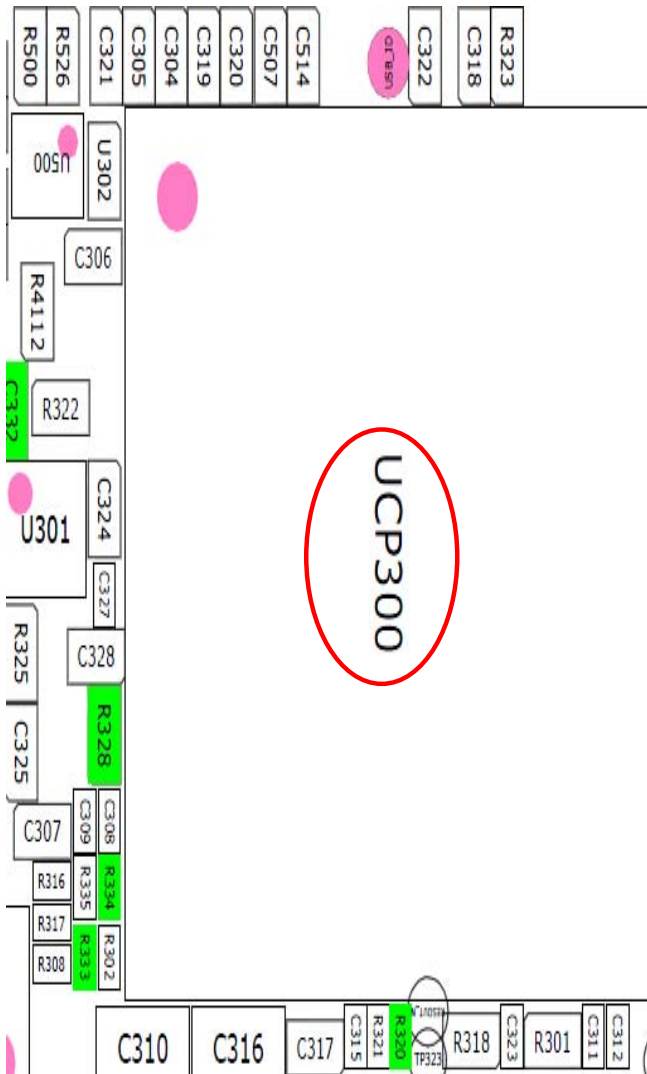
8-3-1. Power On



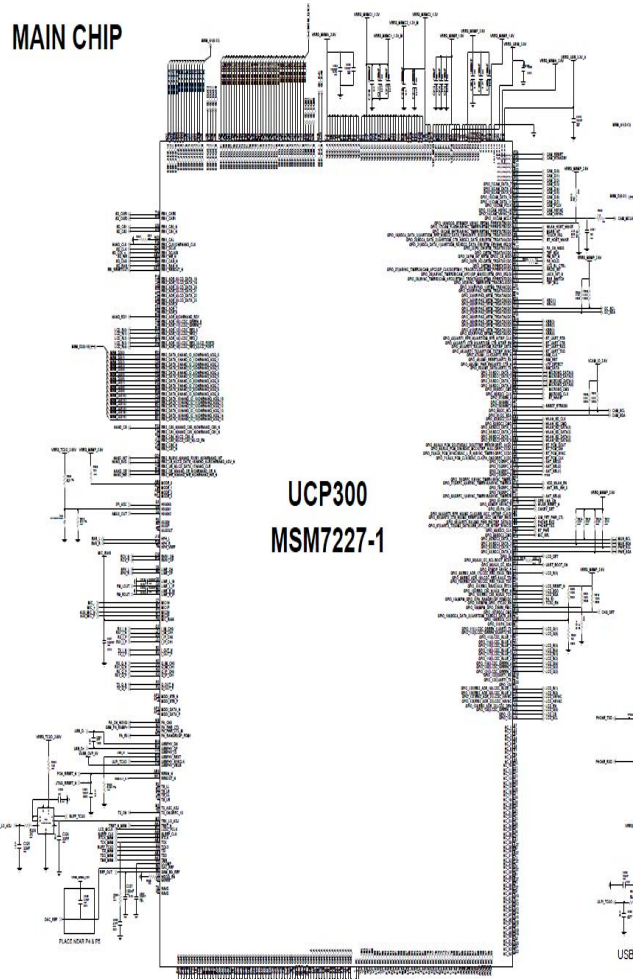




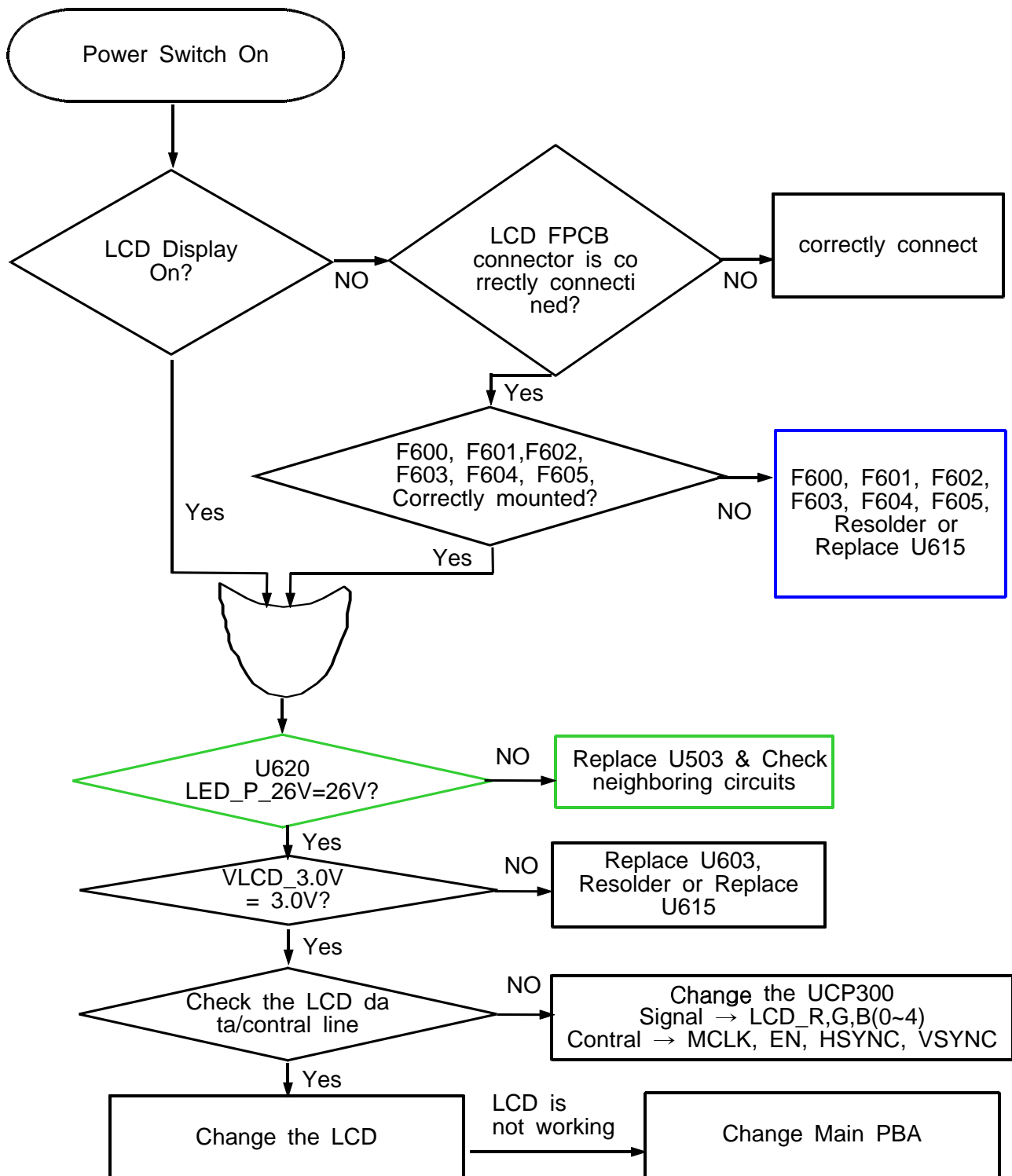
< TCXO >

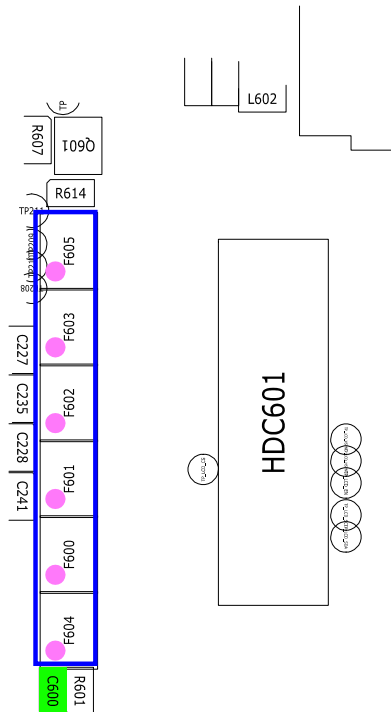
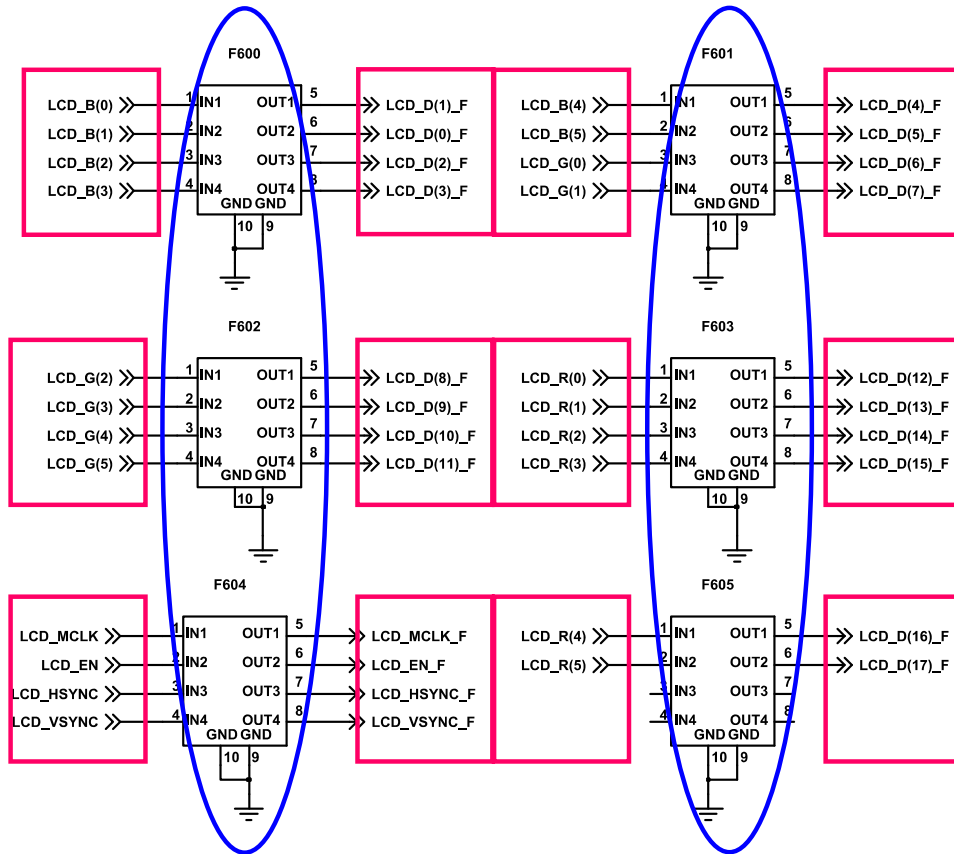


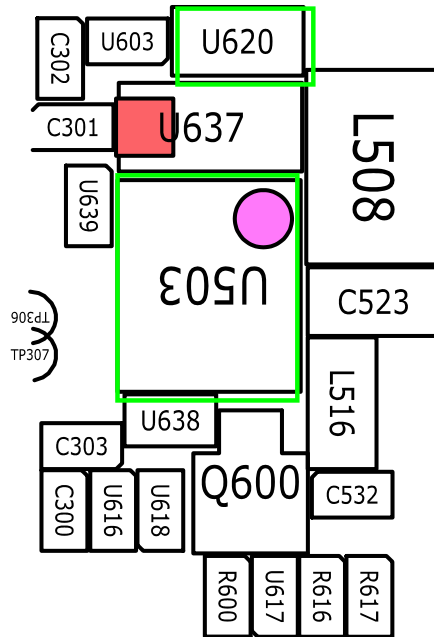
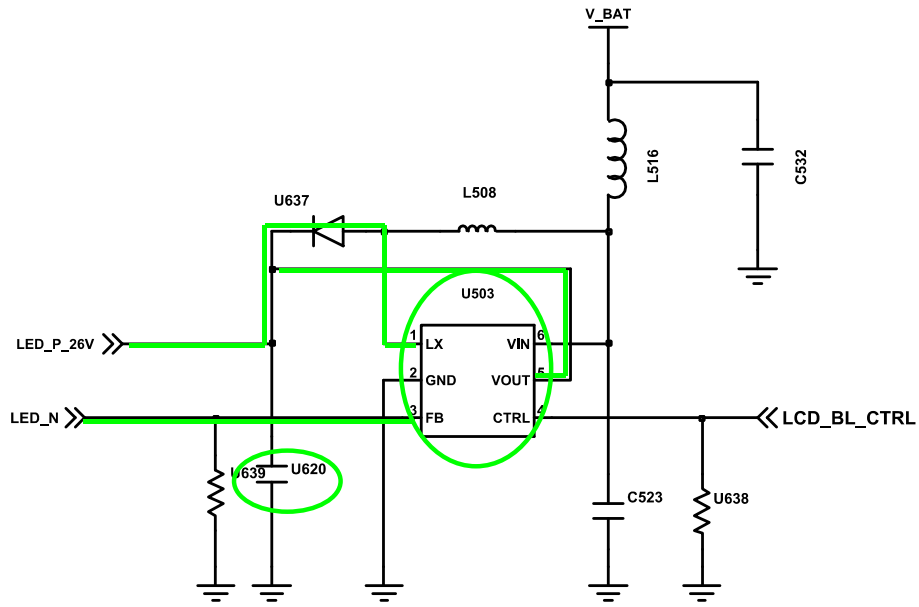
MAIN CHIP

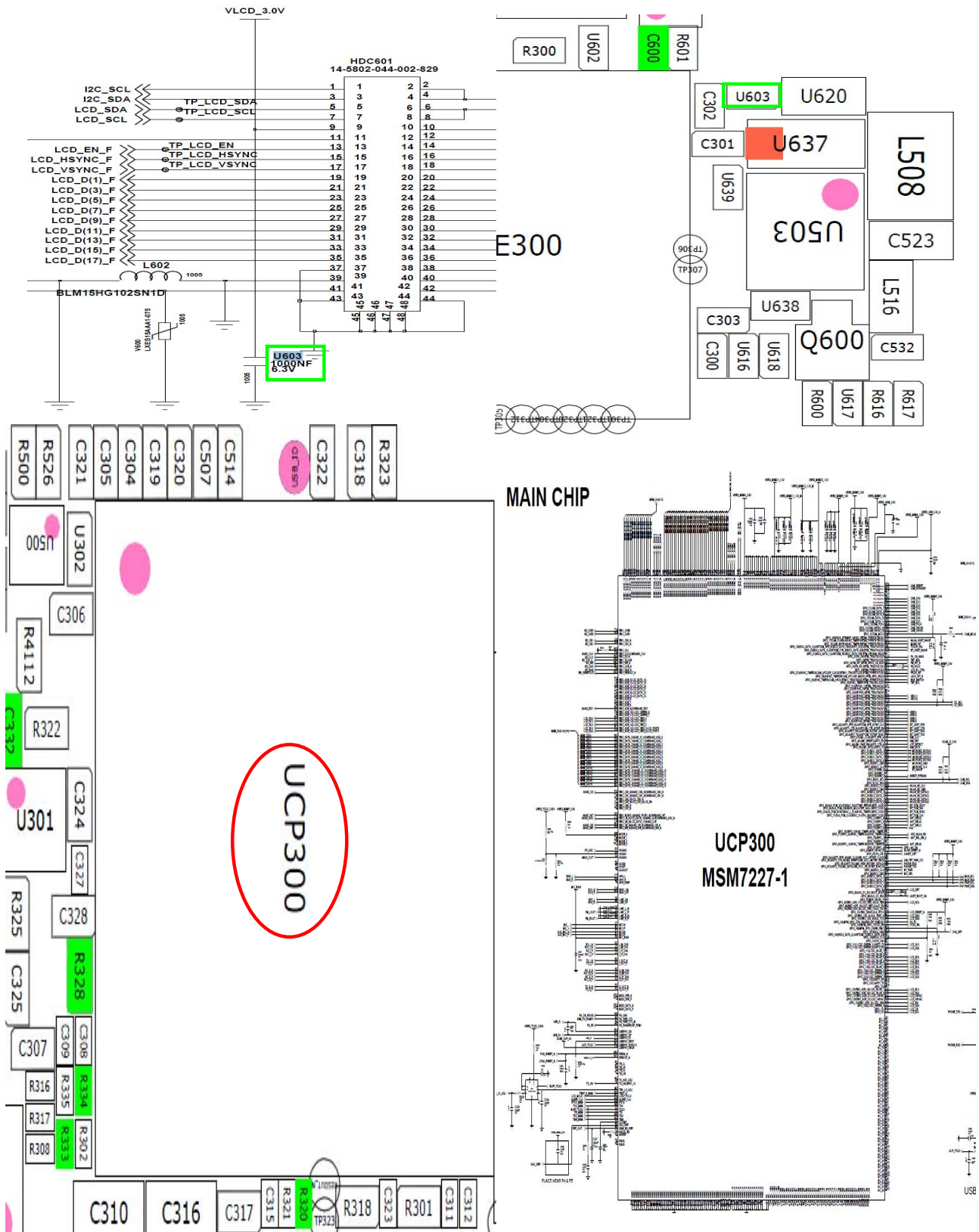


8-3-2. LCD Working

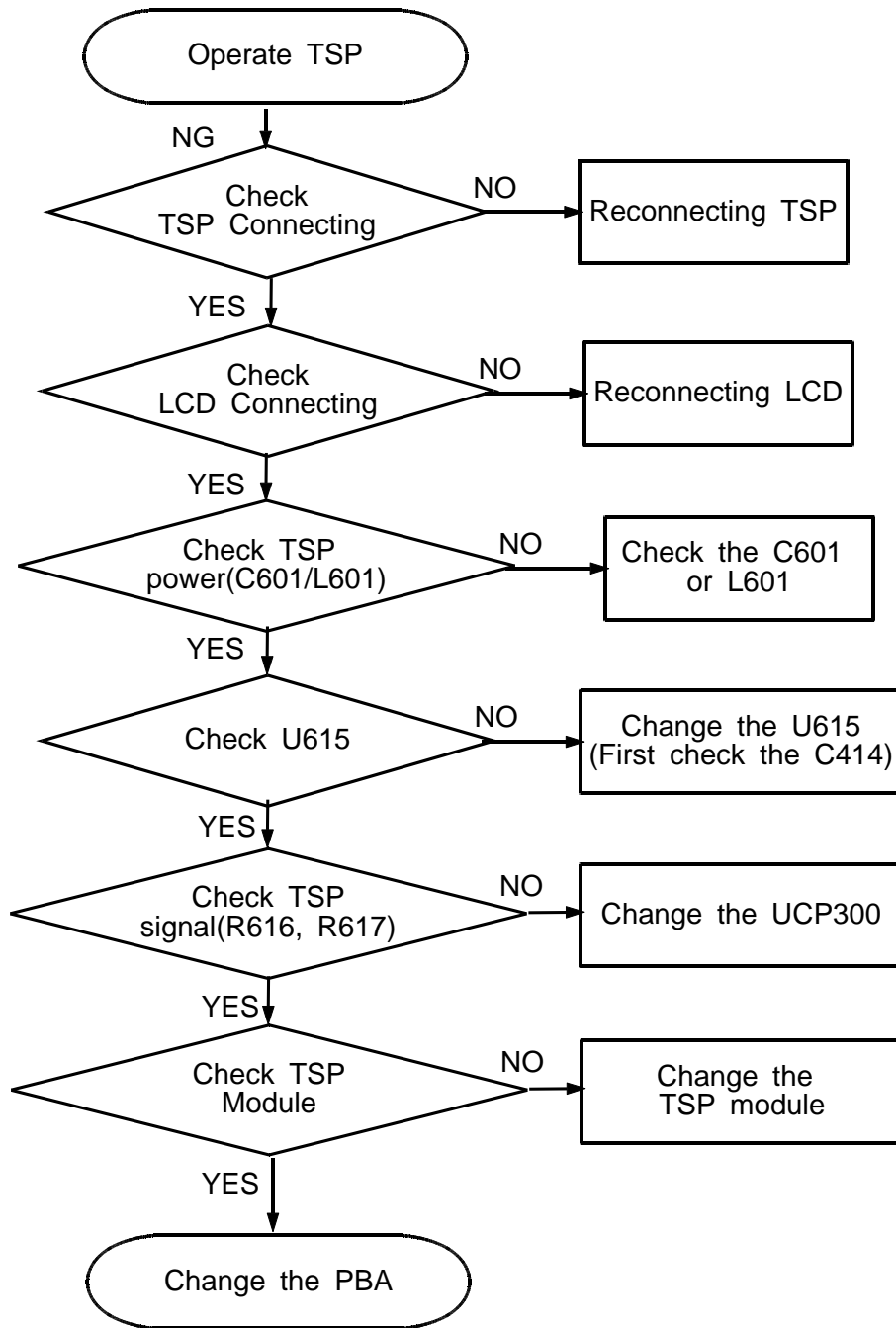


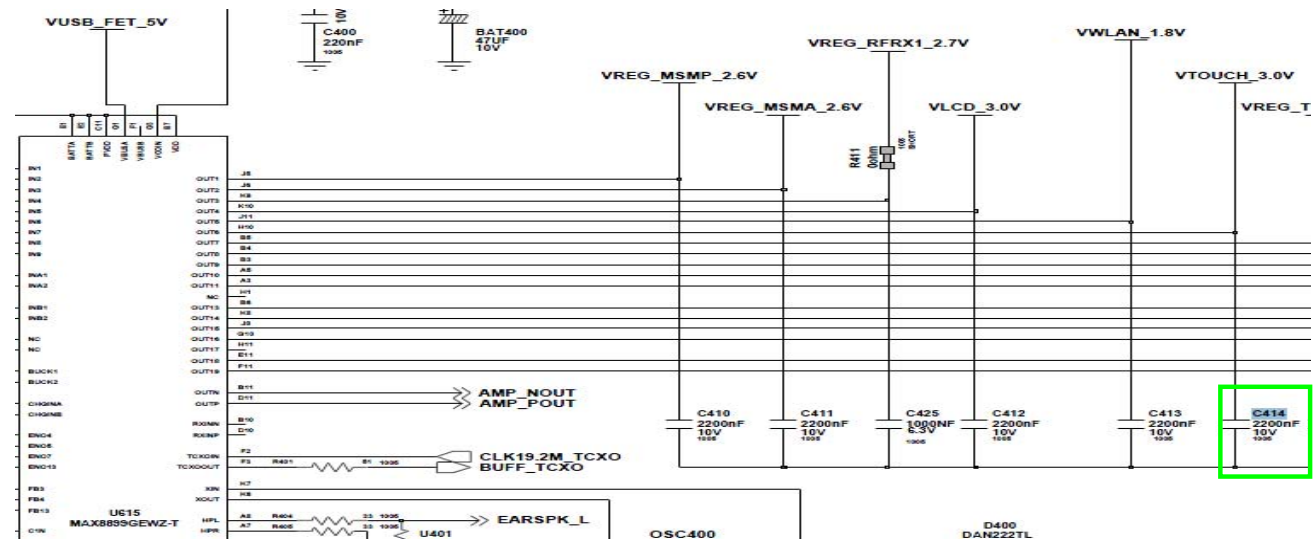
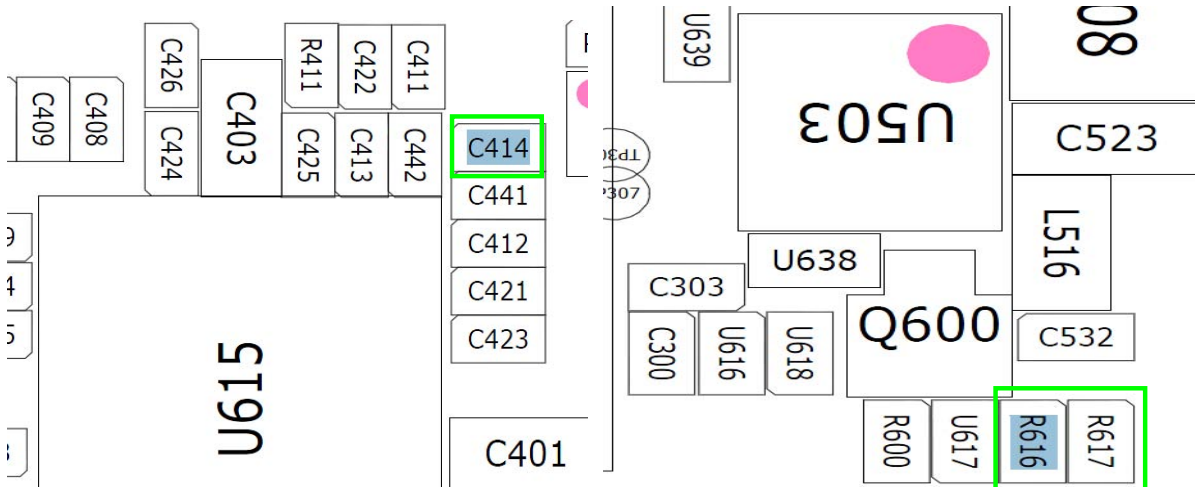
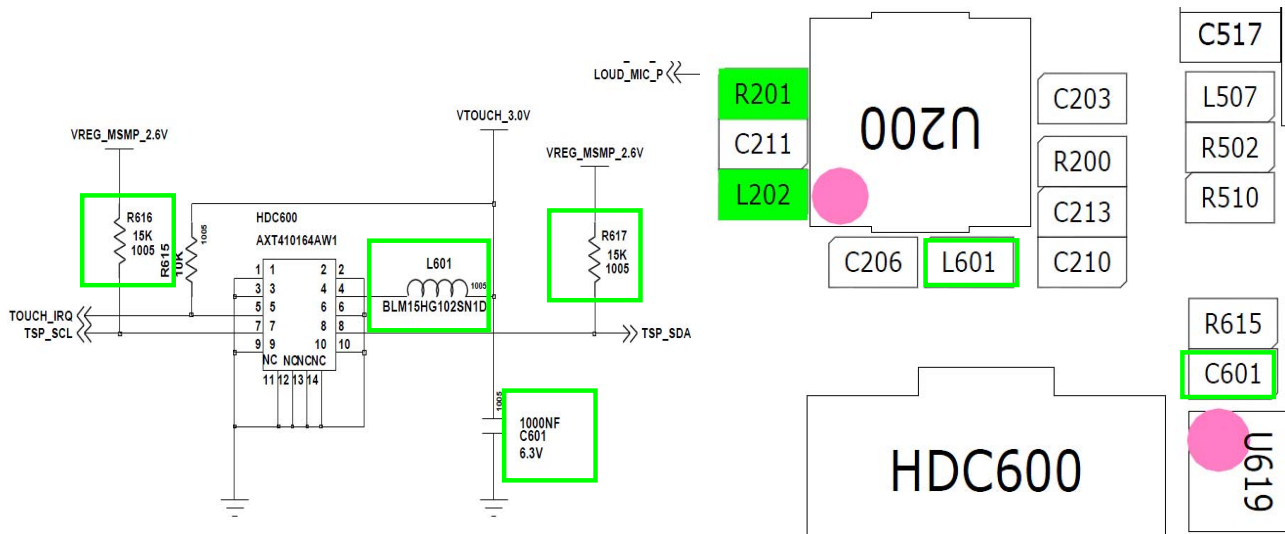


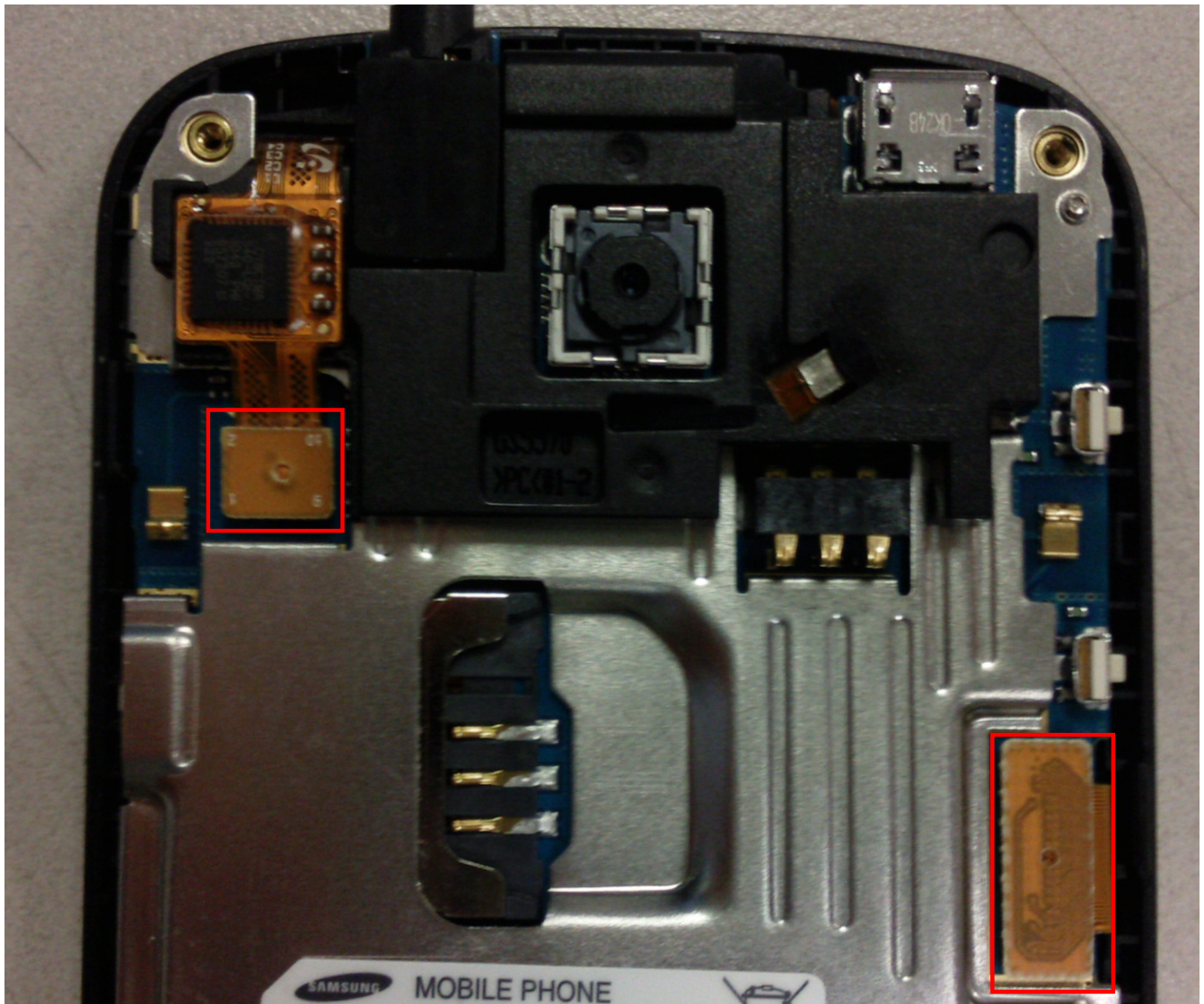




8-3-3. TSP

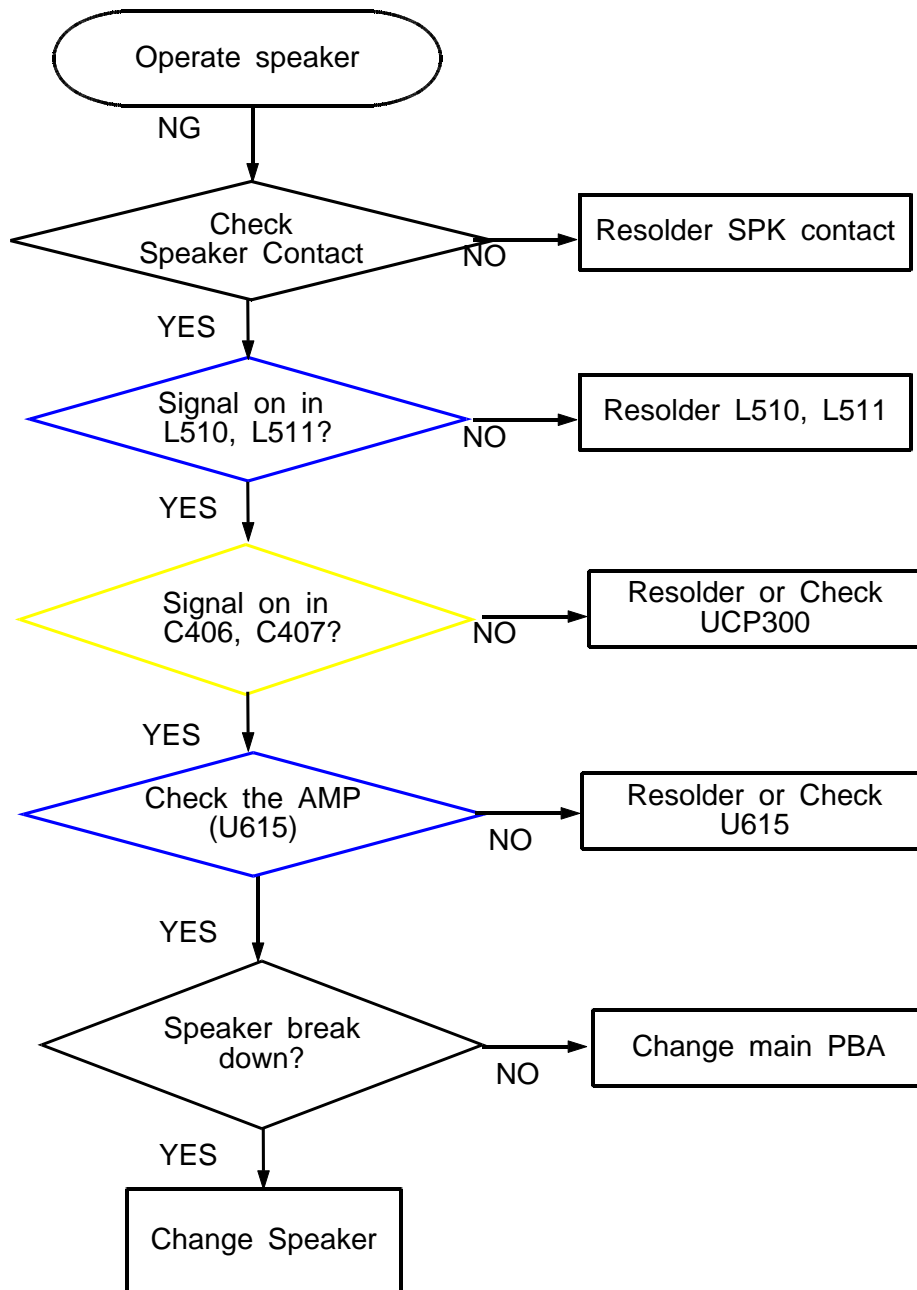


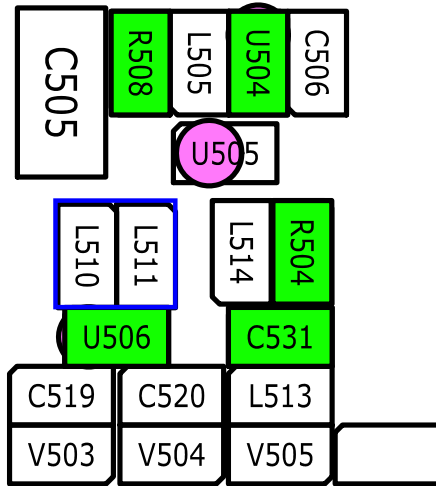
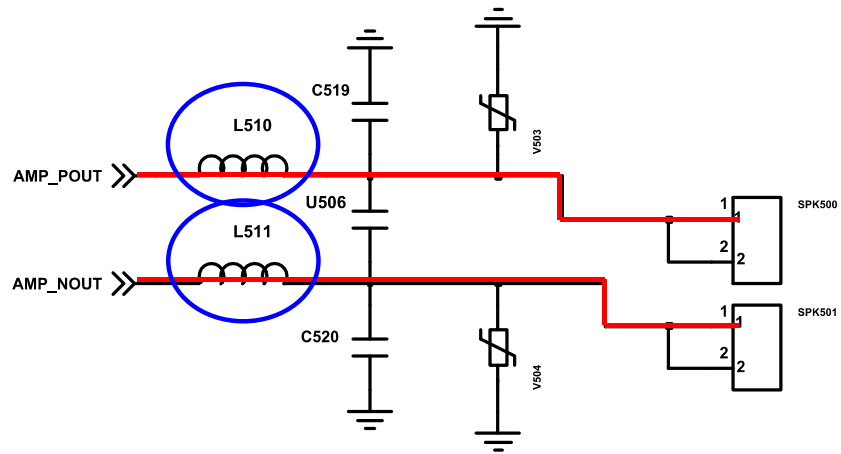


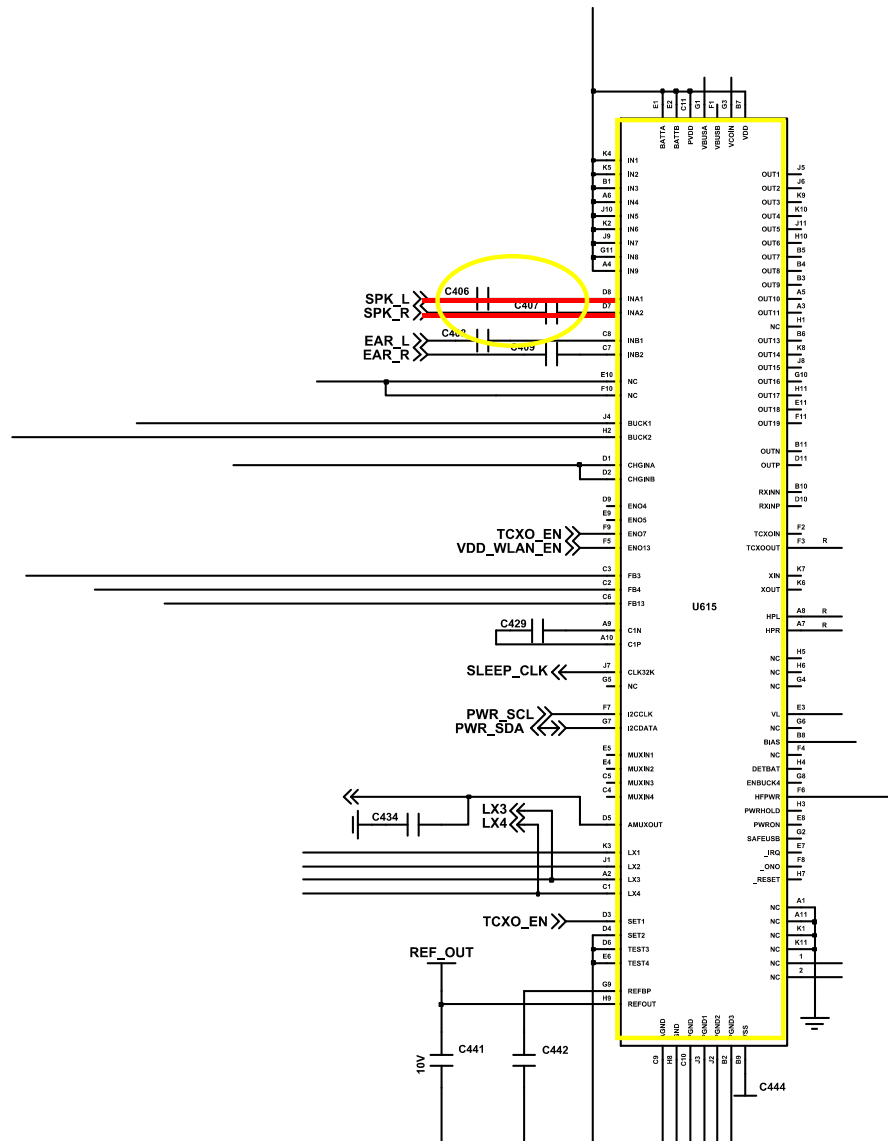


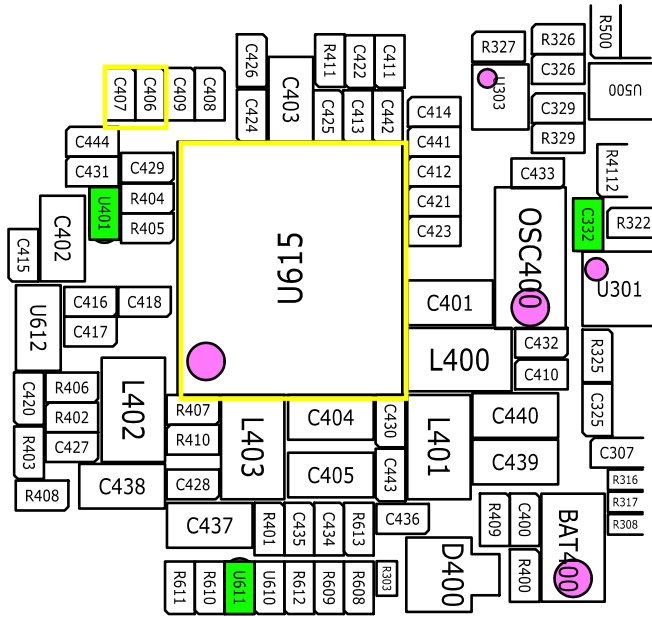
8-3-3. Audio Working

● Speaker Working

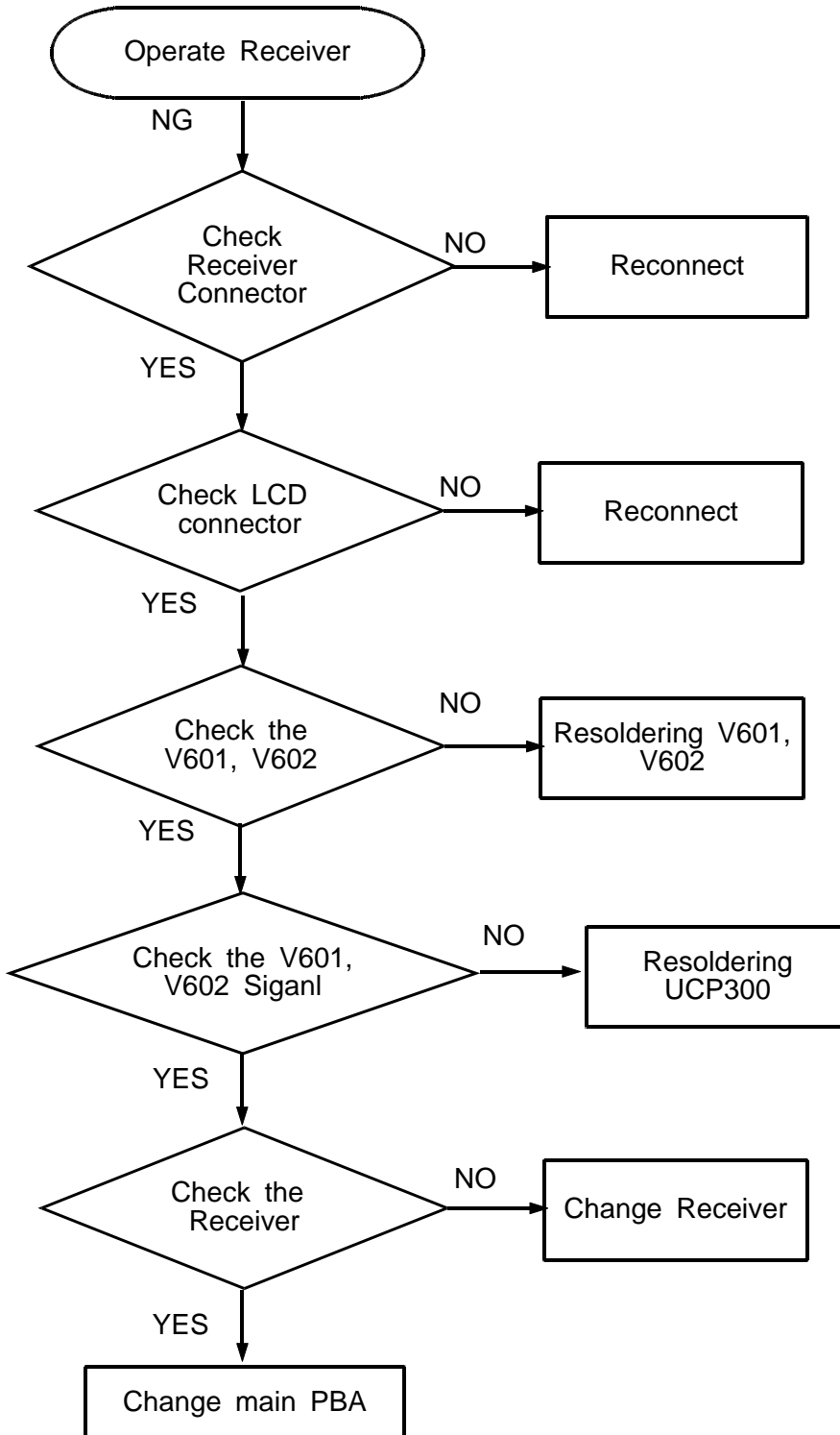


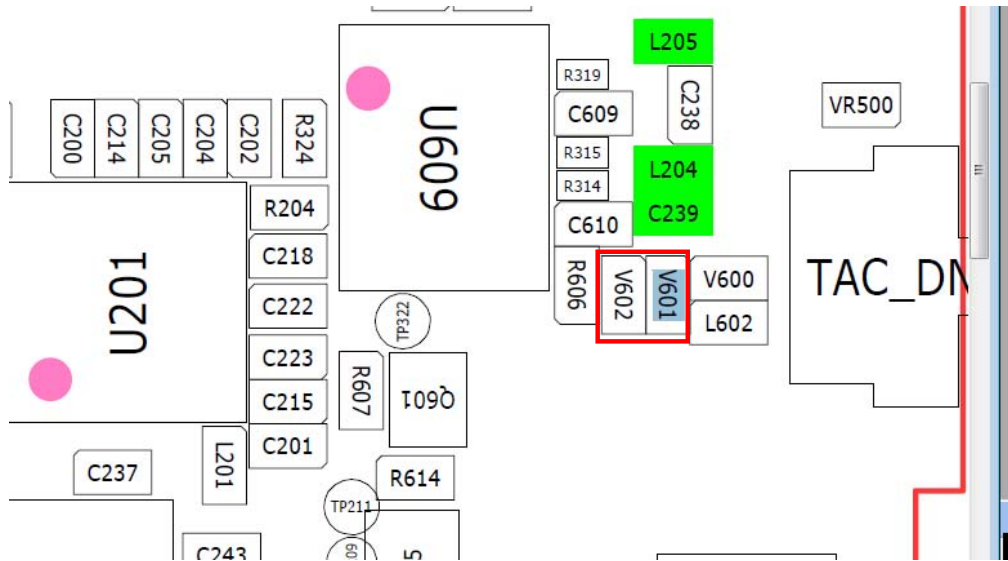
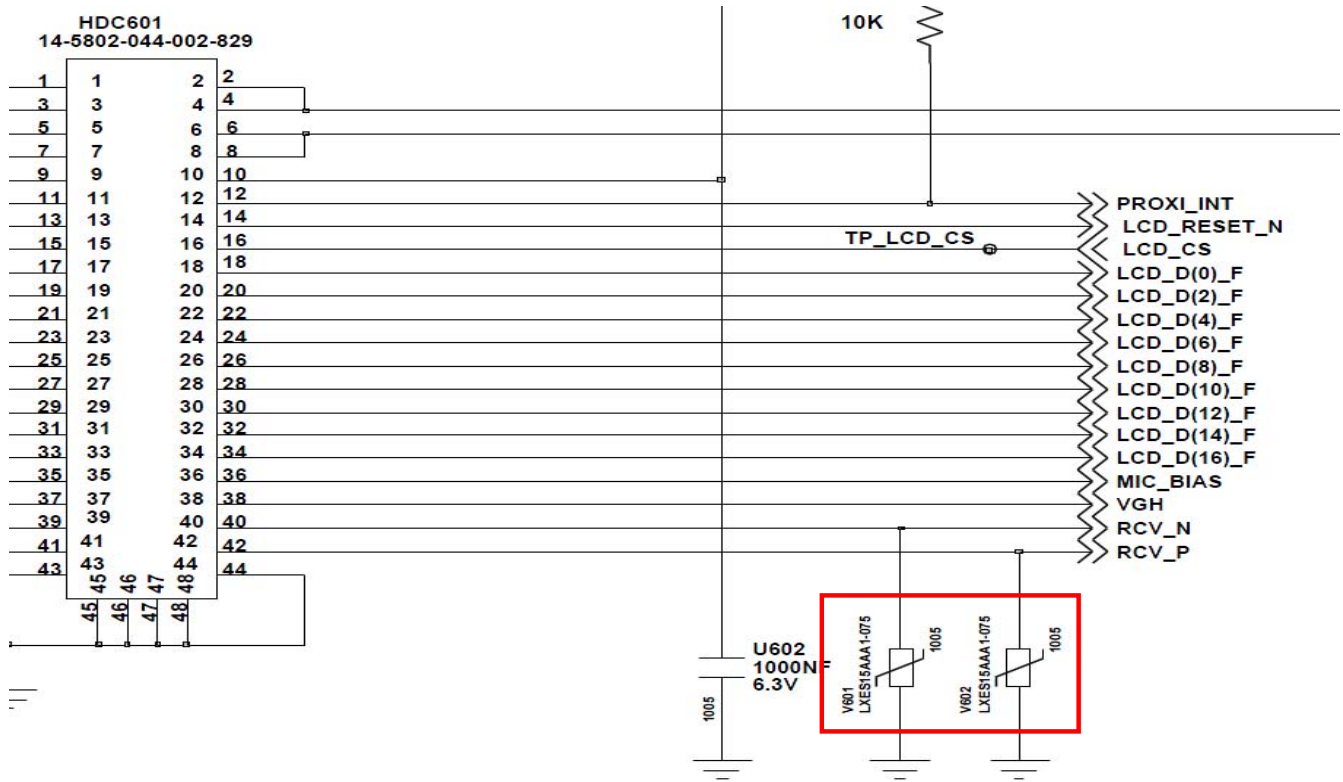


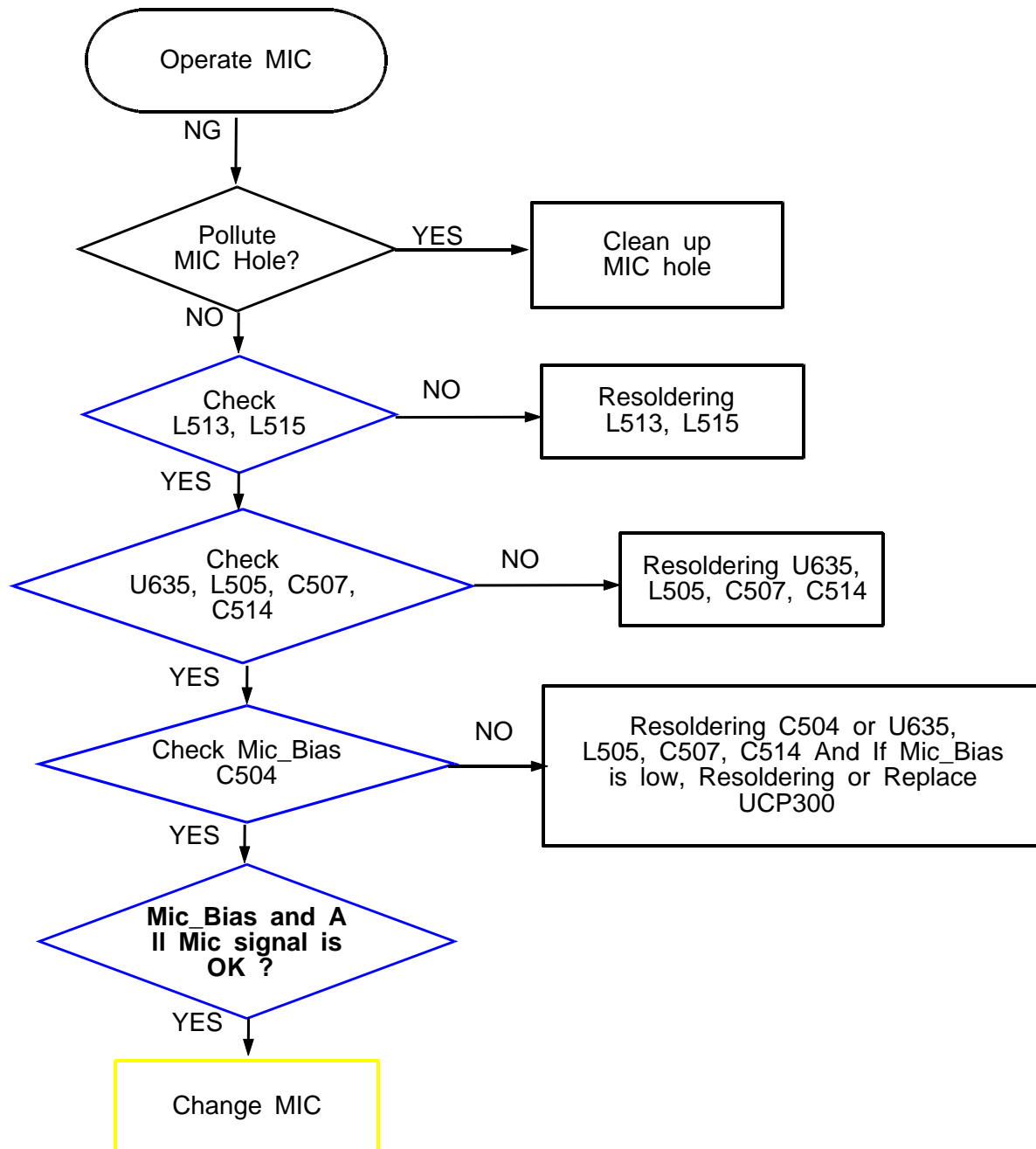


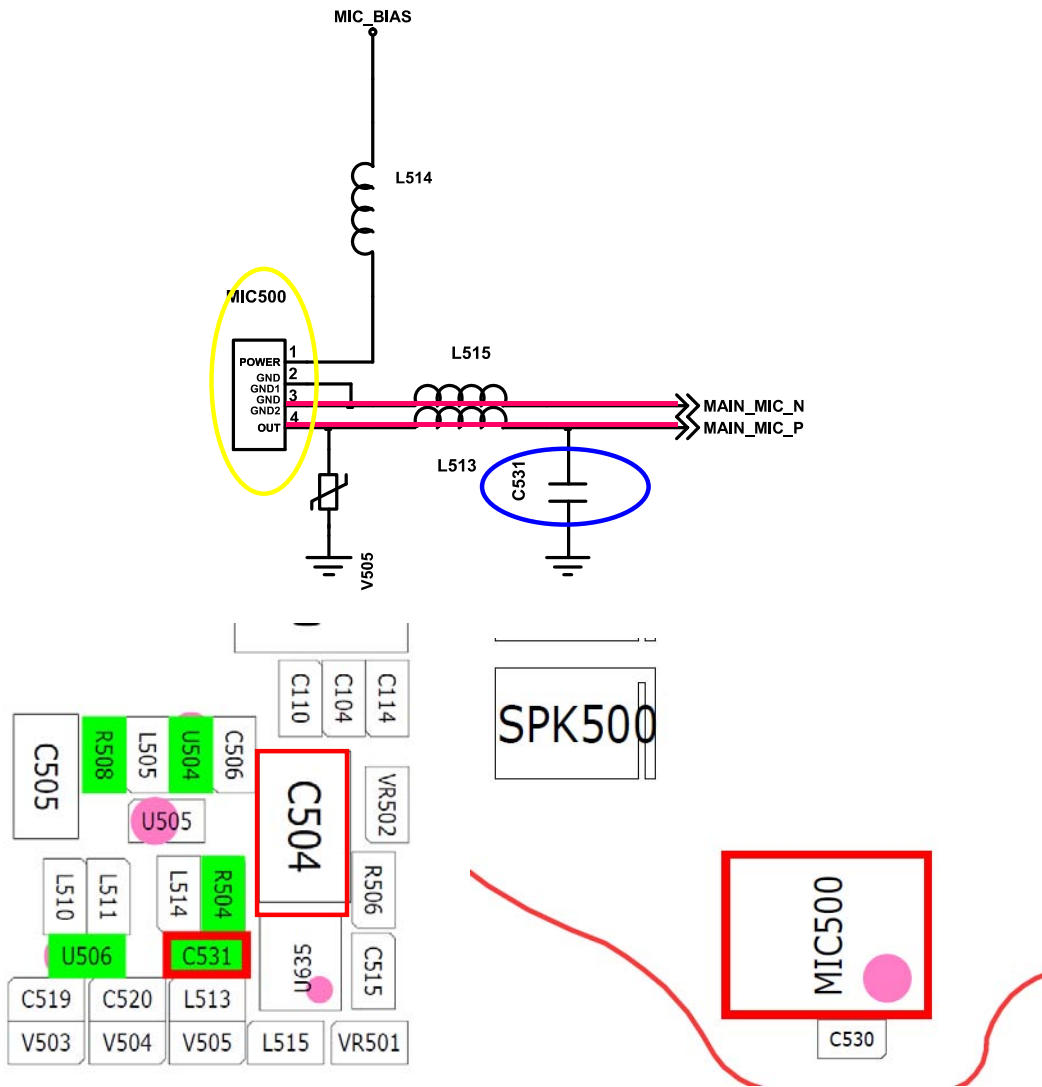


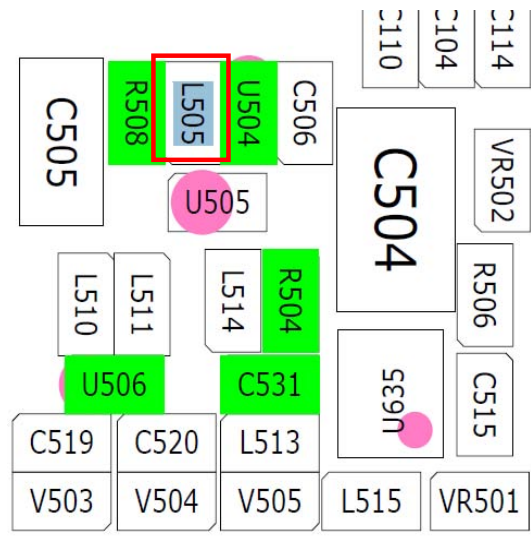
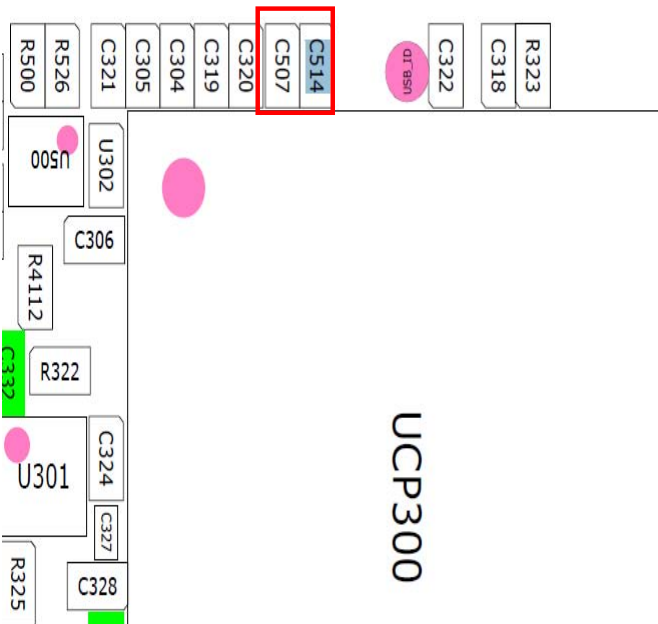
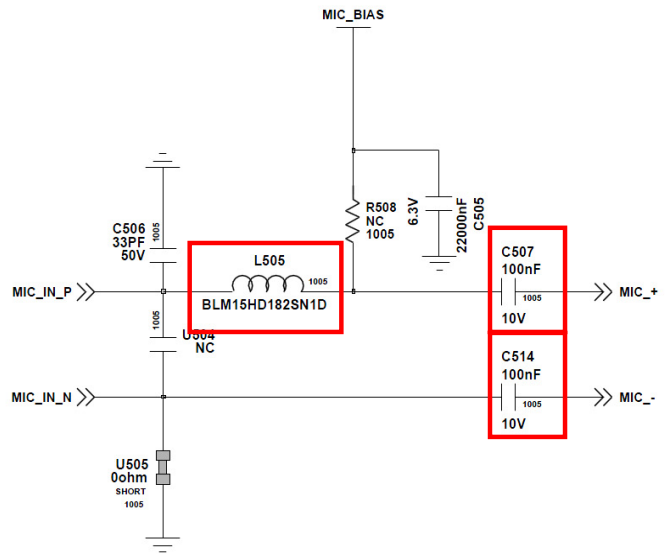
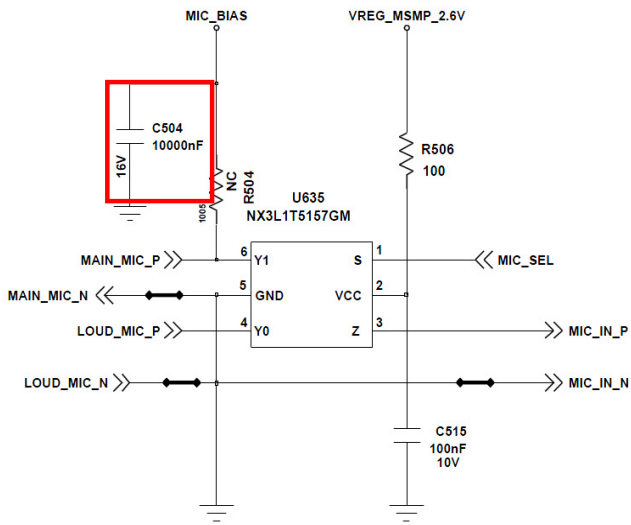
● Receiver Working



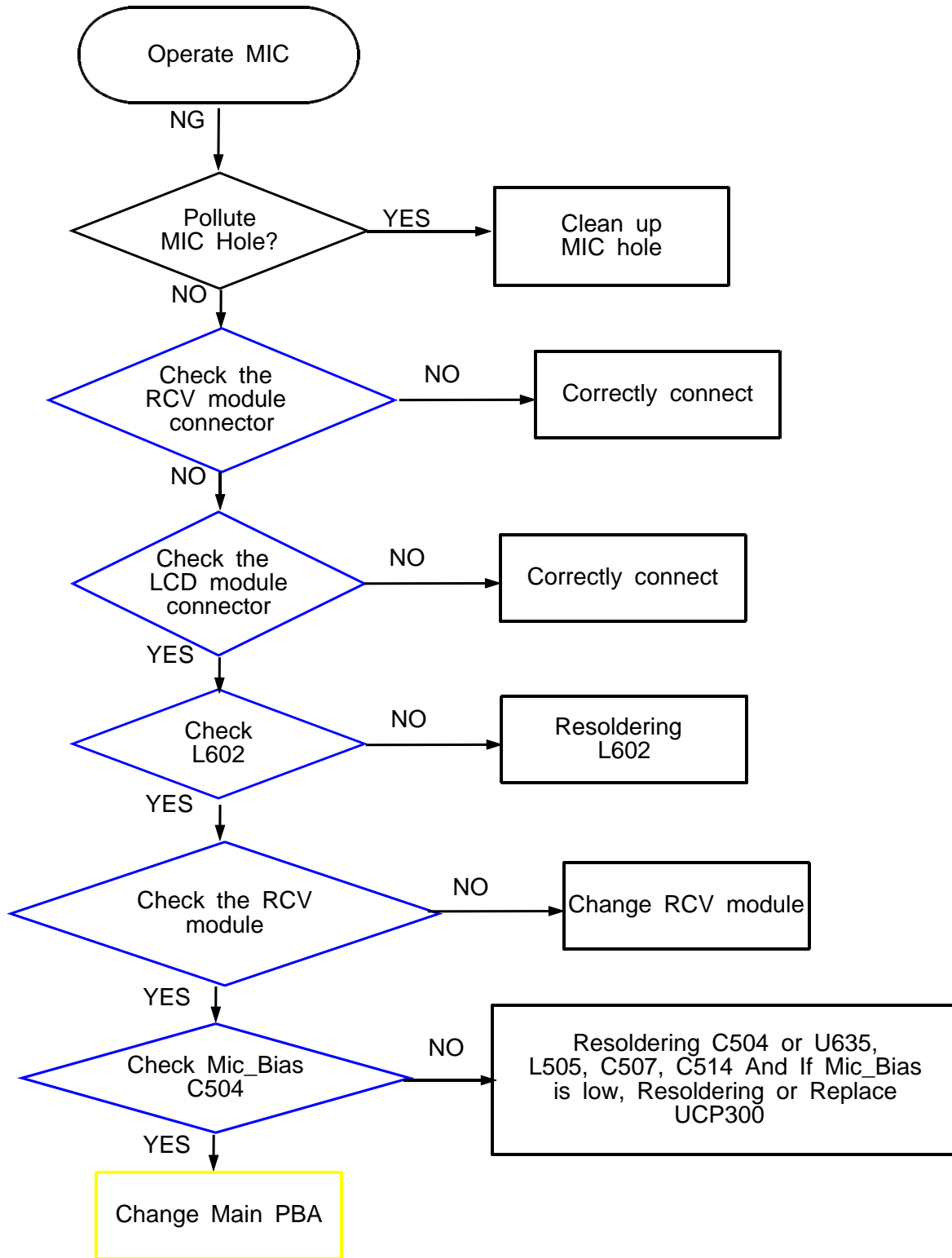


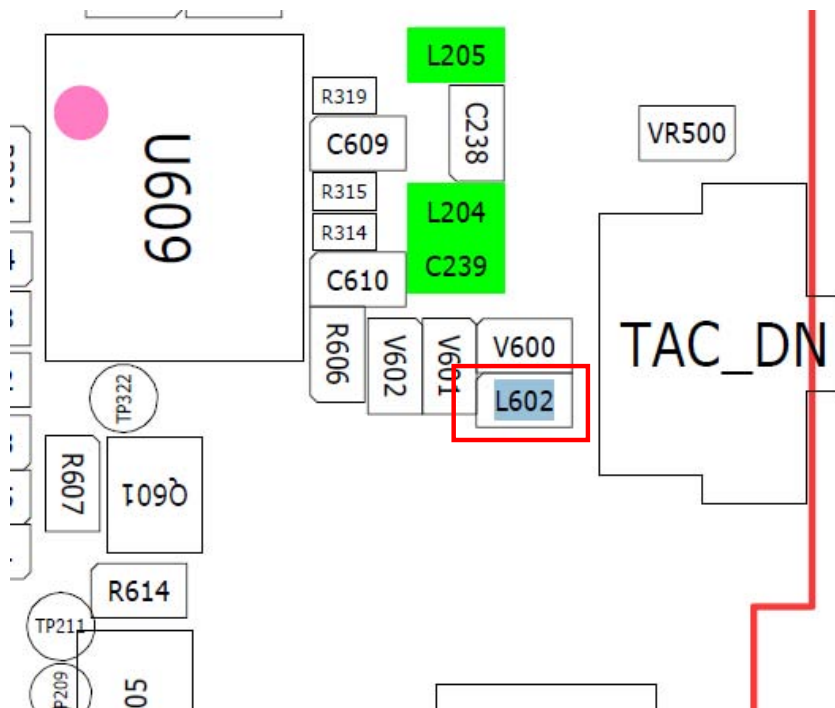
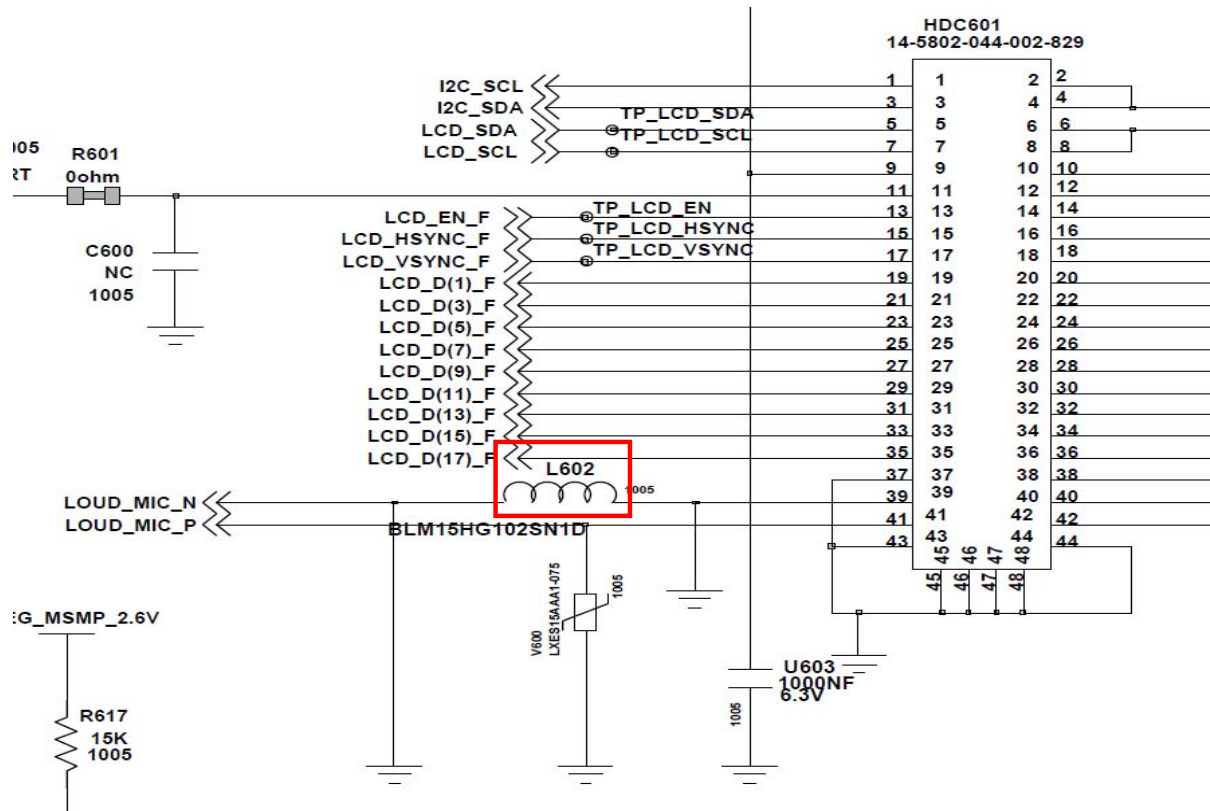
● Main MIC Working



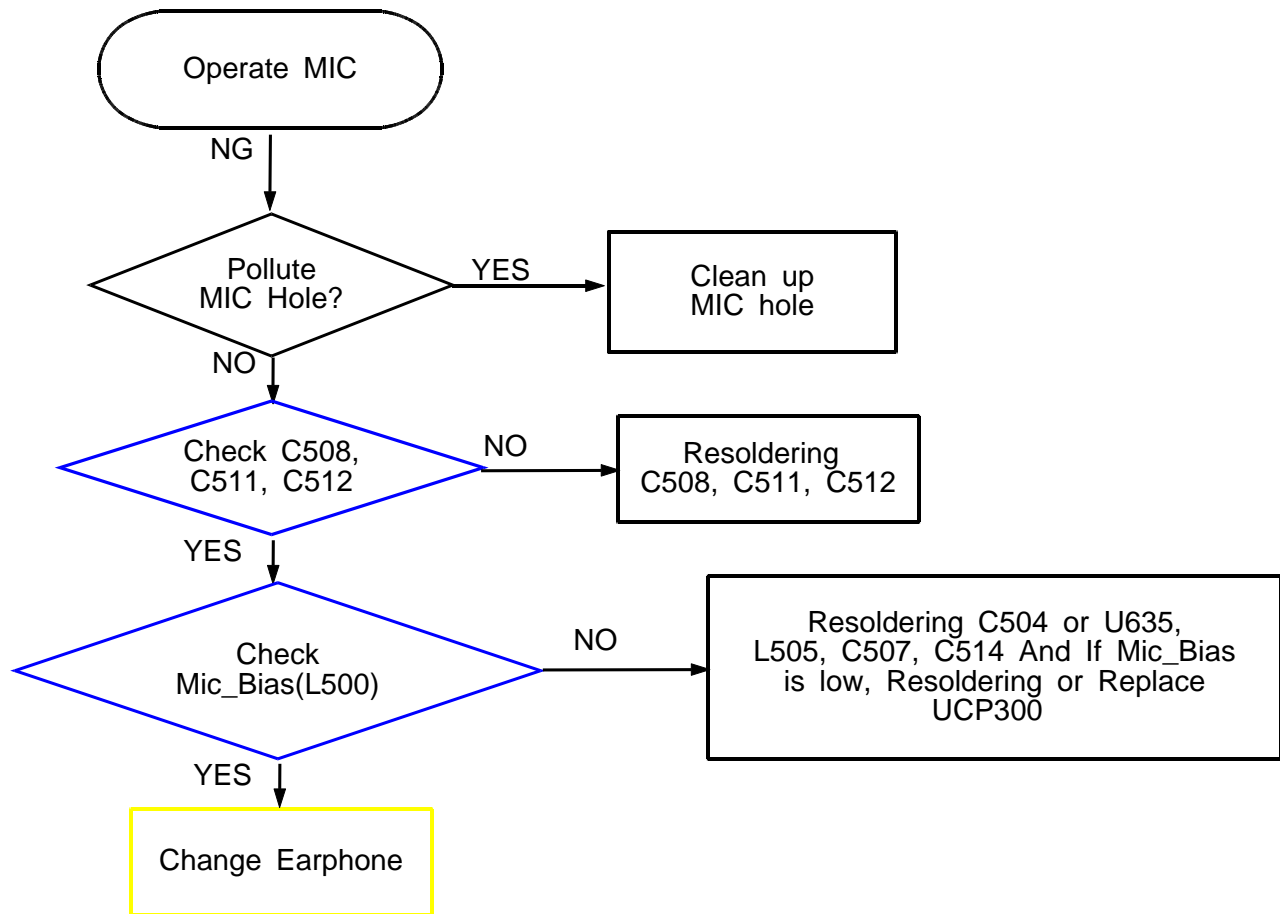


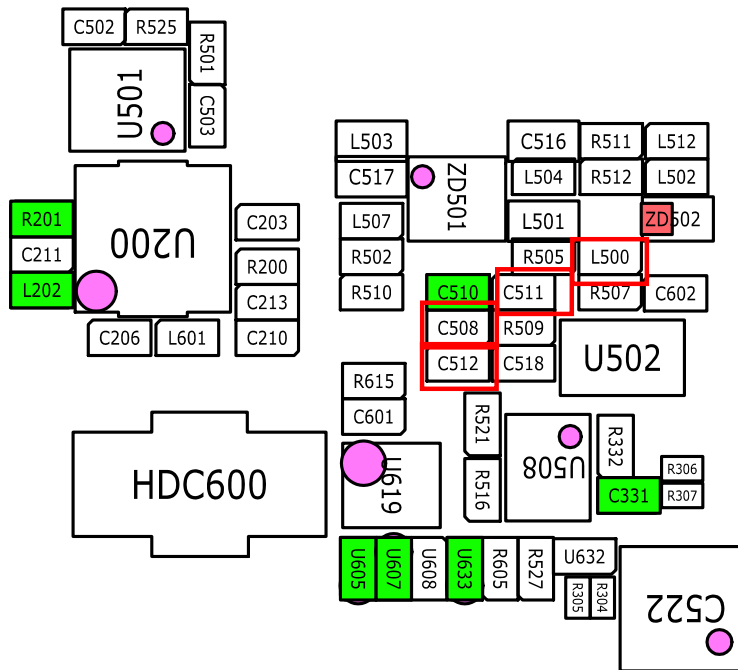
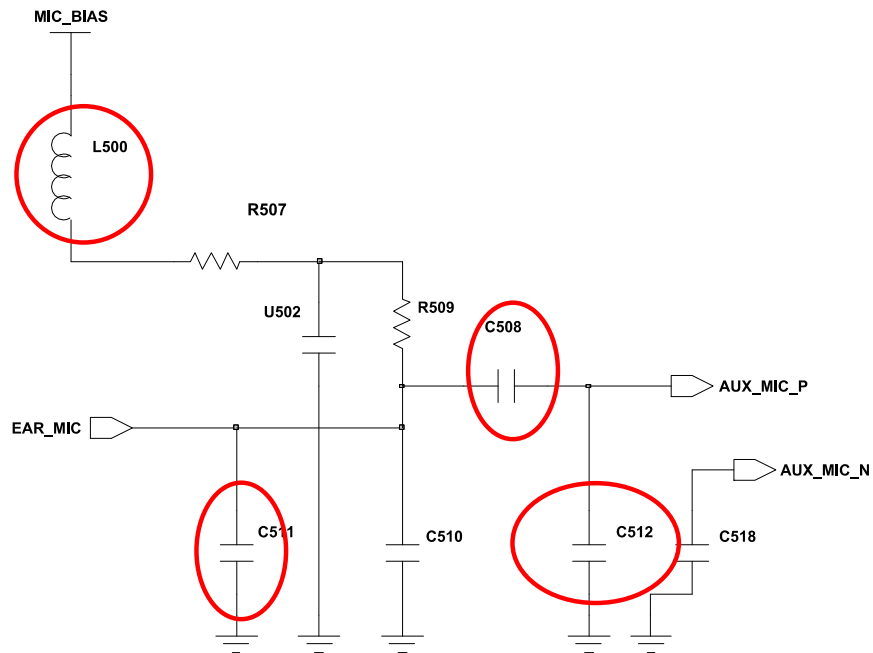
I Sub MIC Working



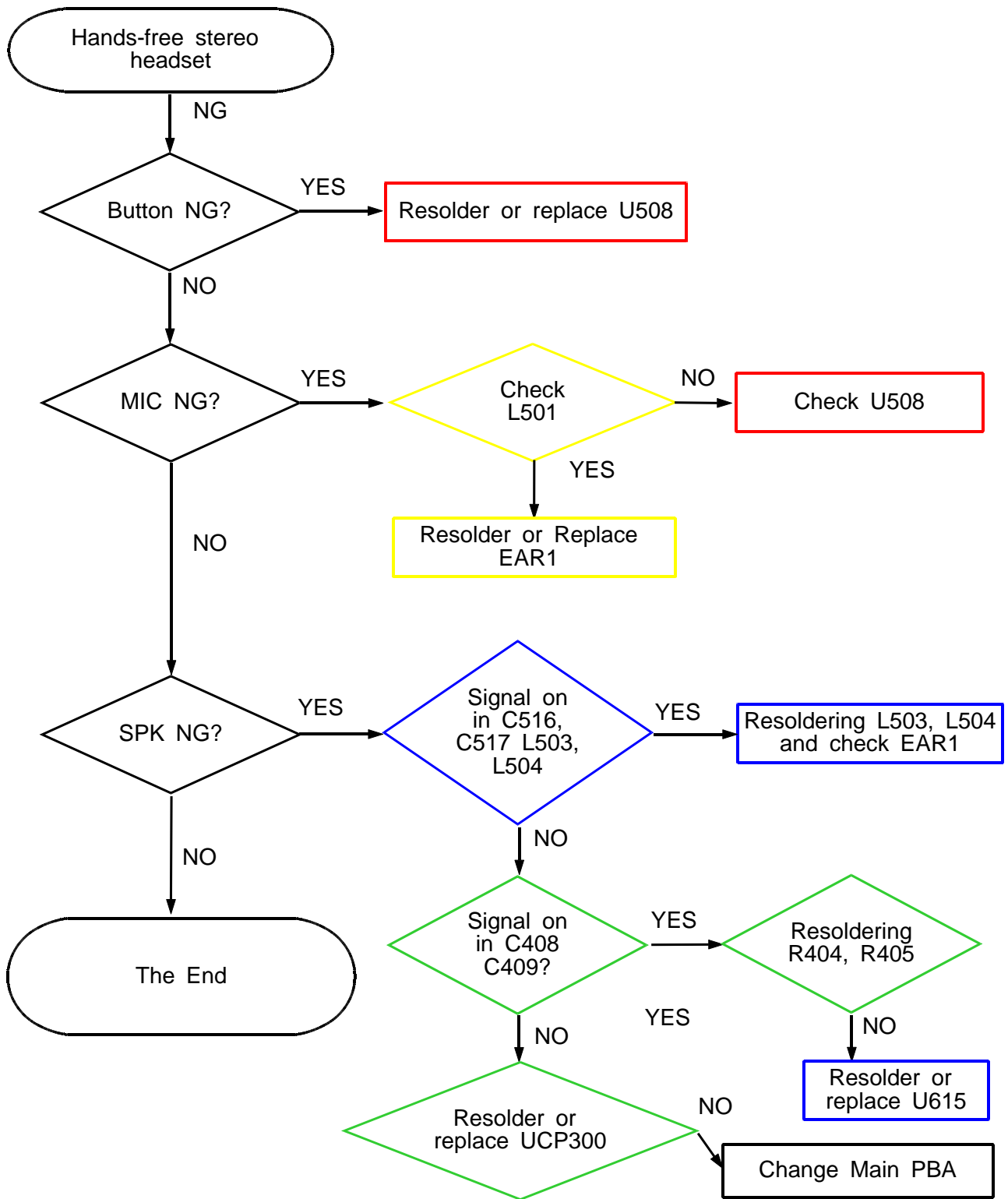


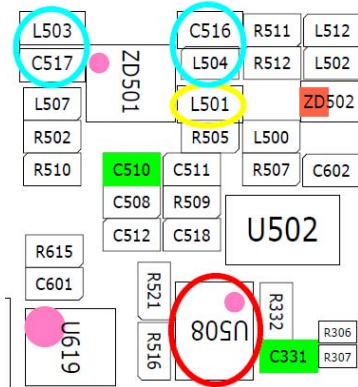
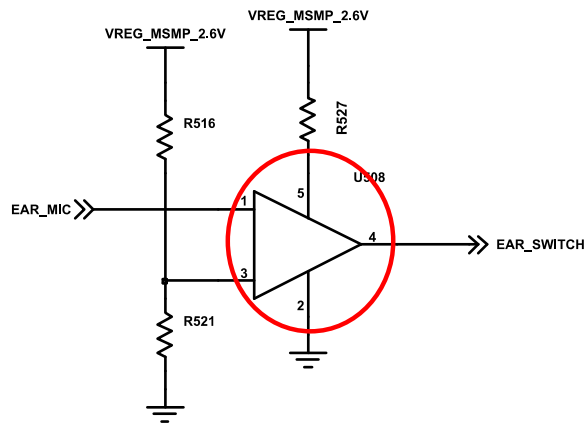
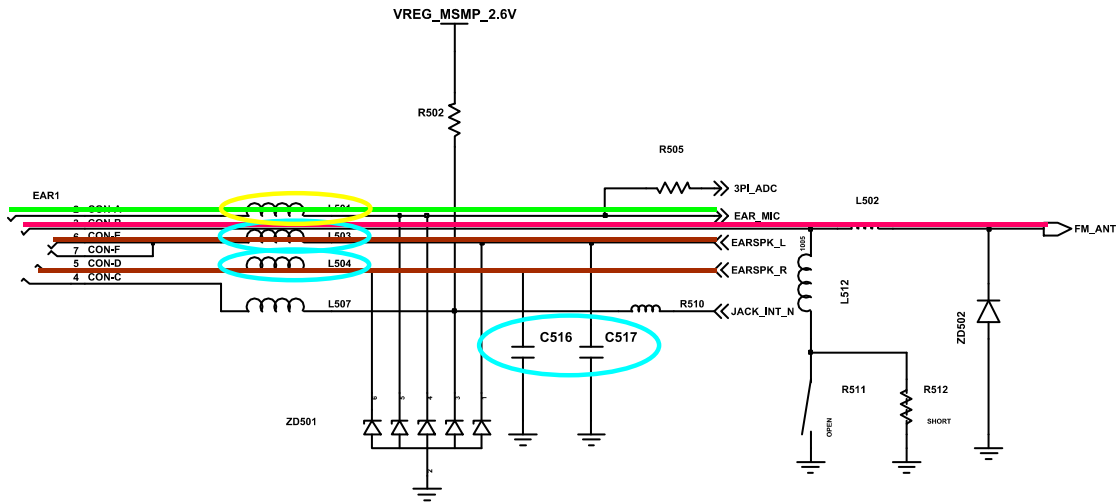
● Ear MIC Working

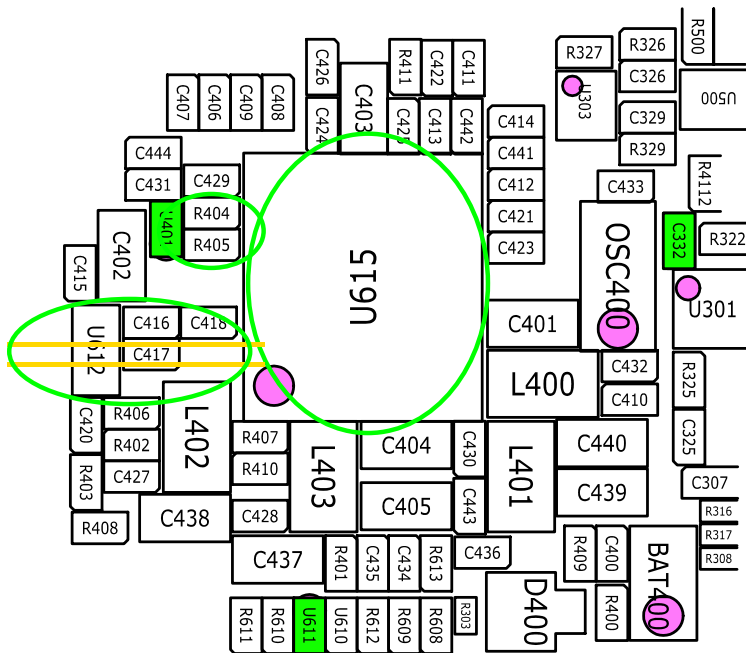
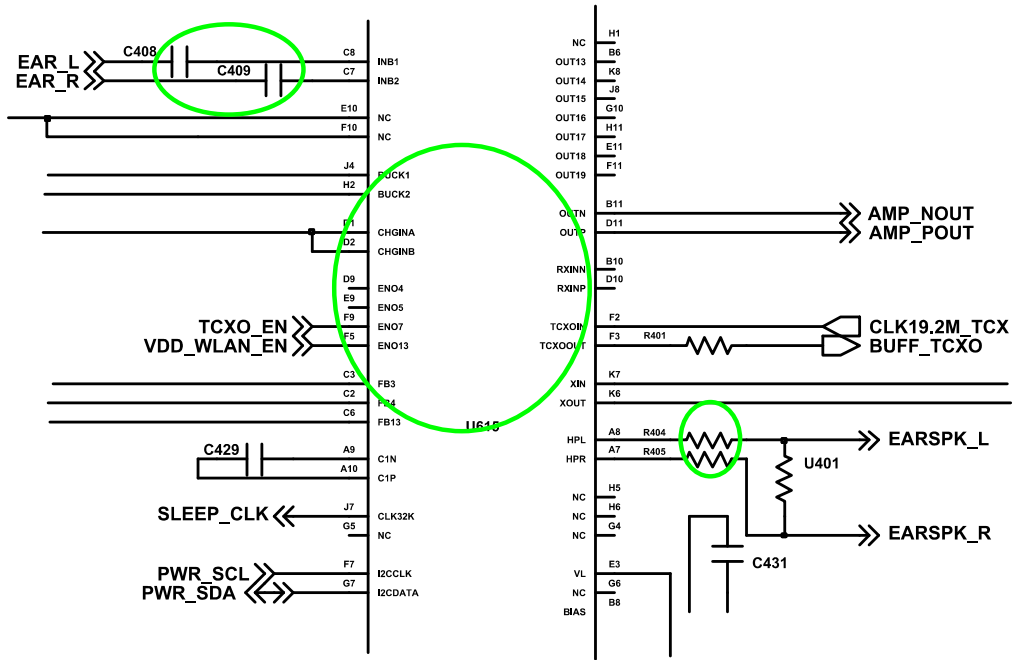




● Stereo Headset Working

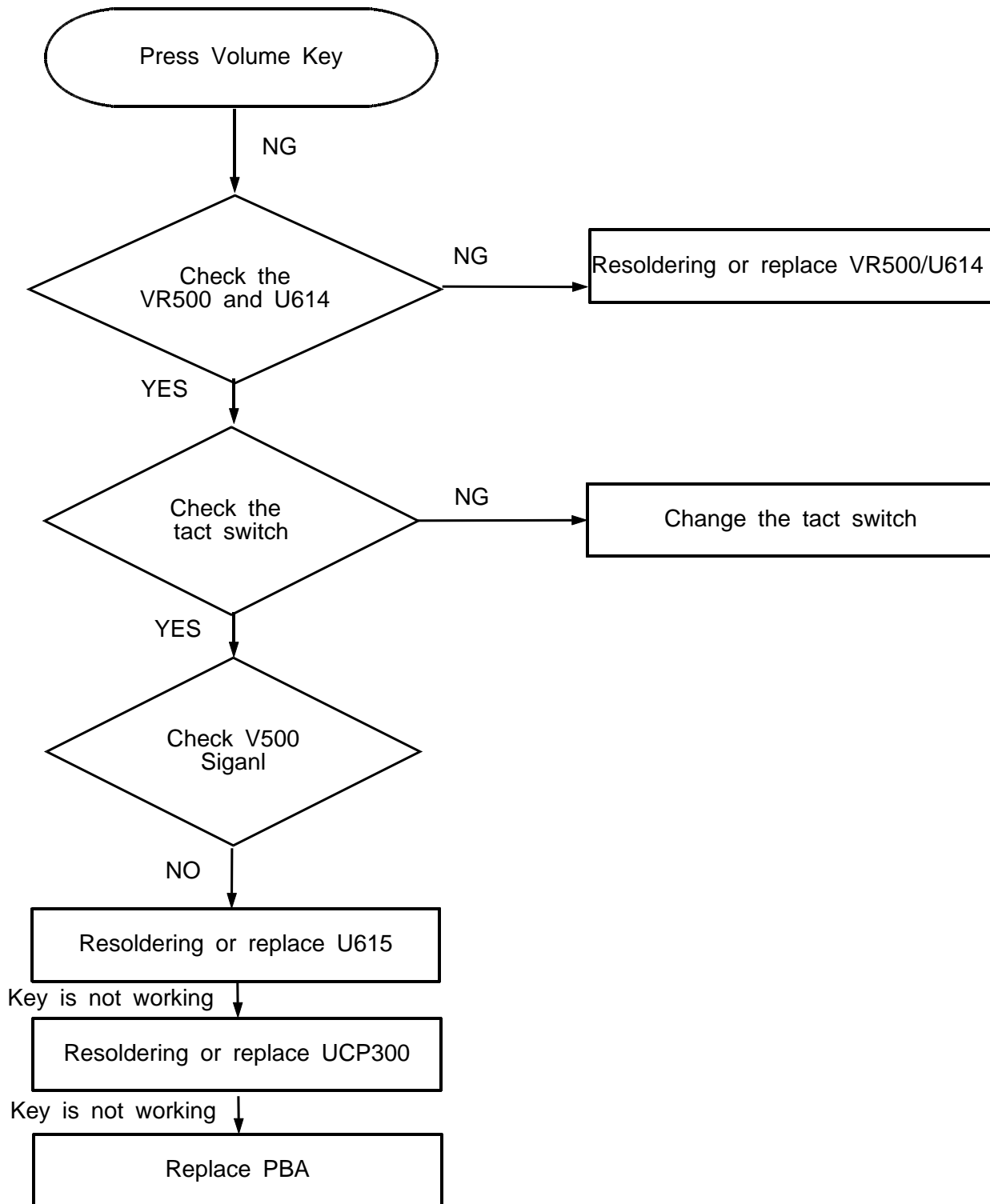


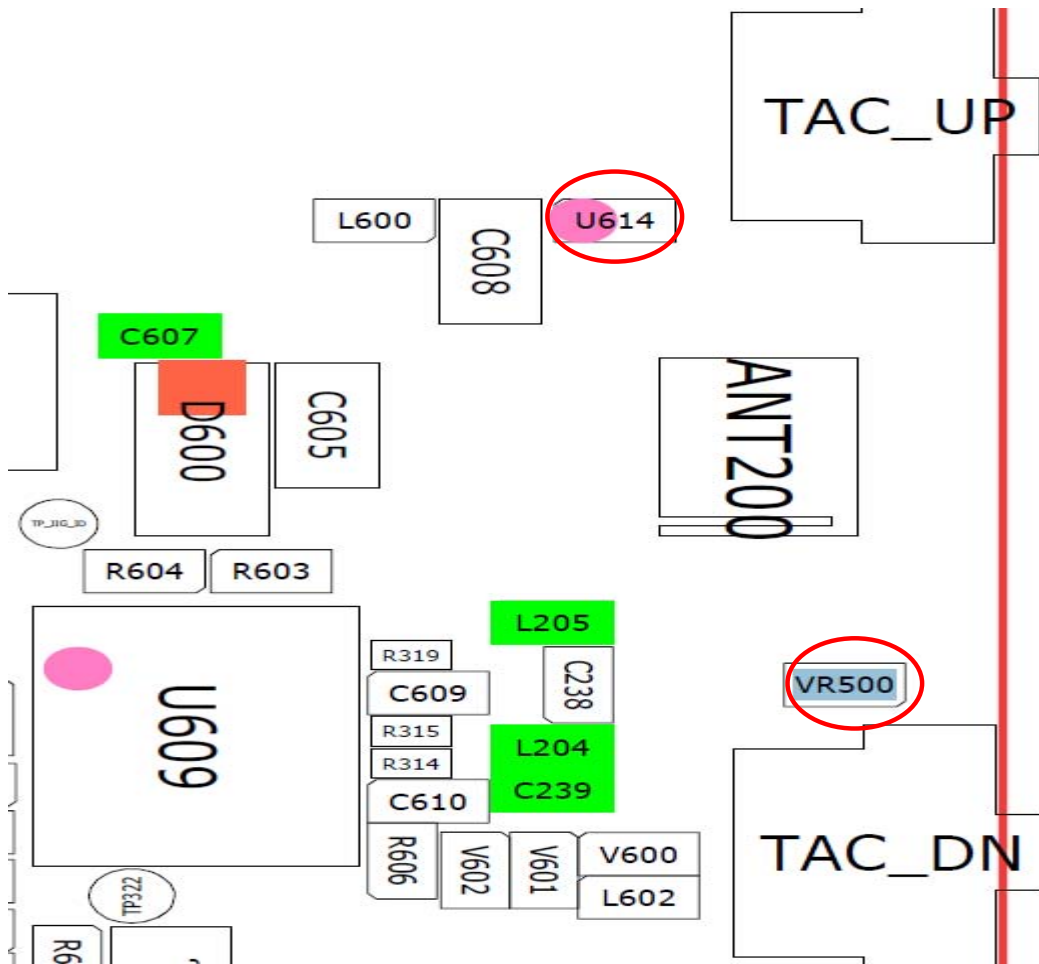
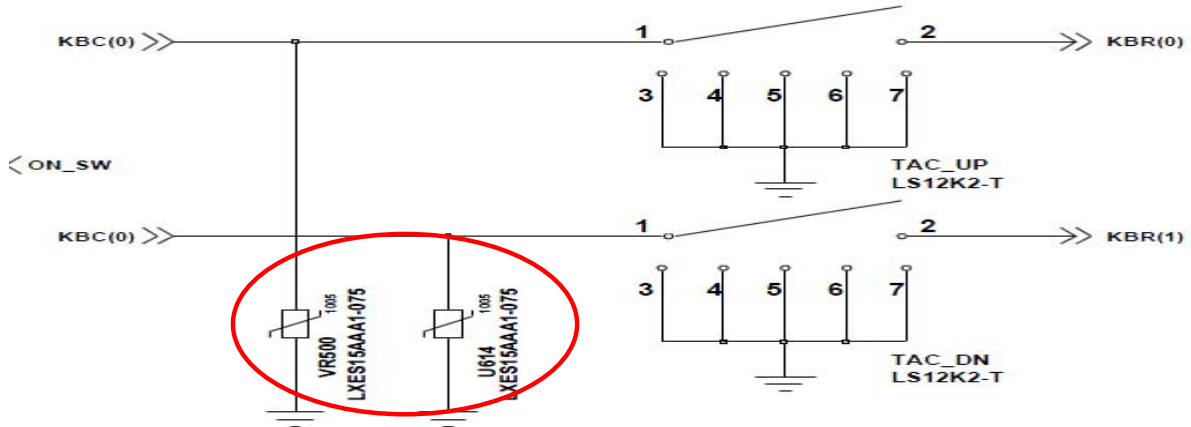




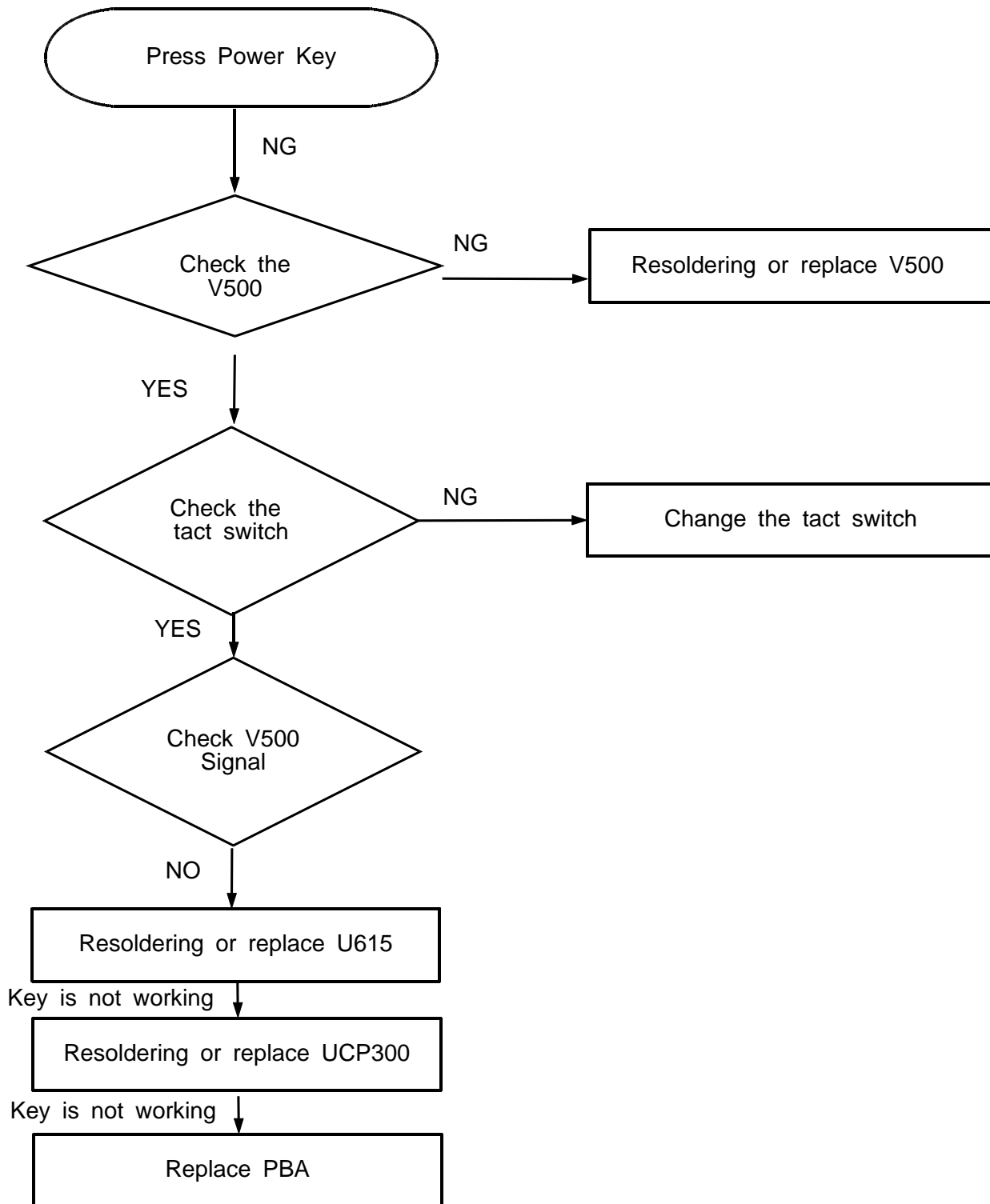
8-3-5. KEY Working

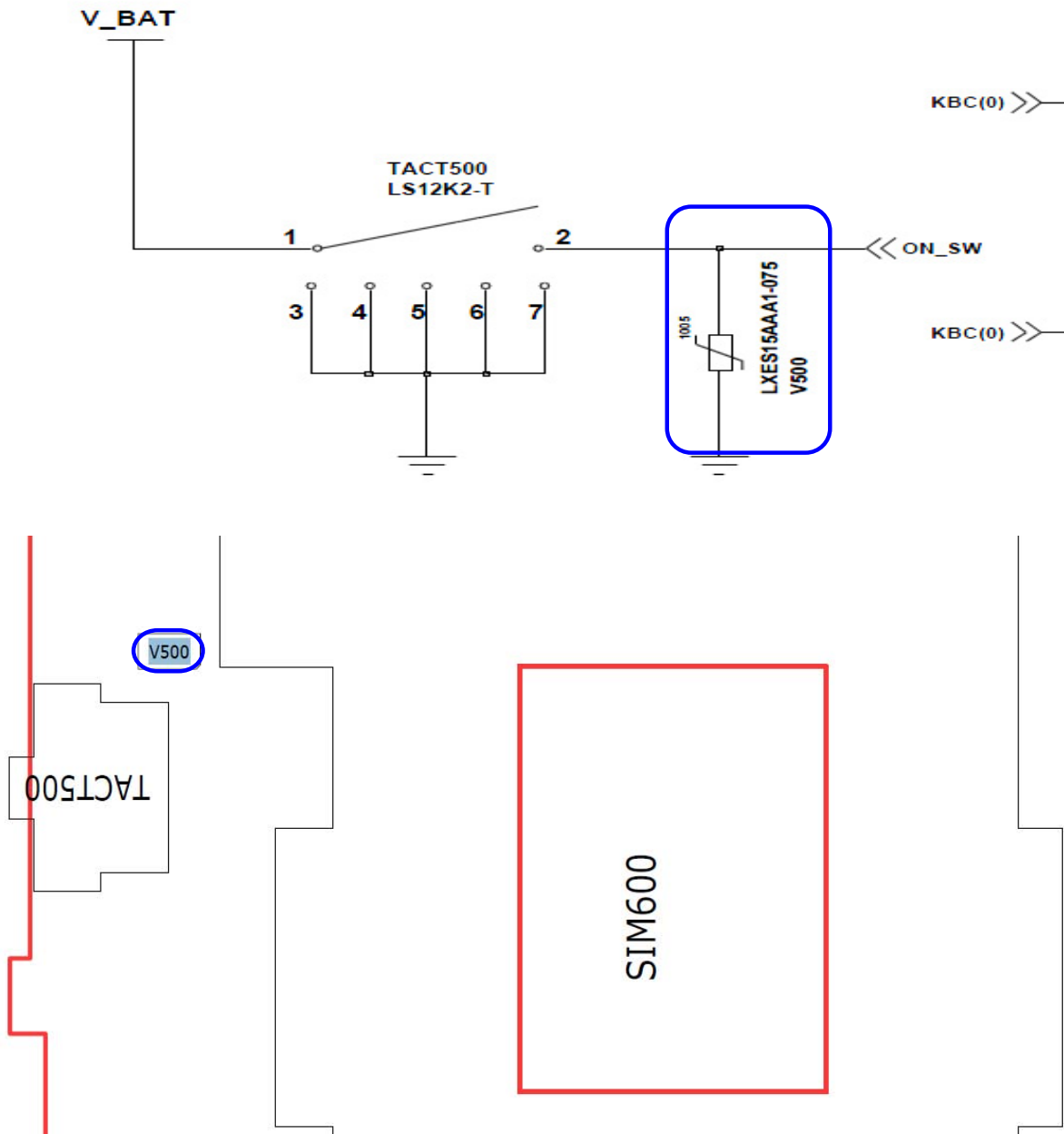
● Volume KEY

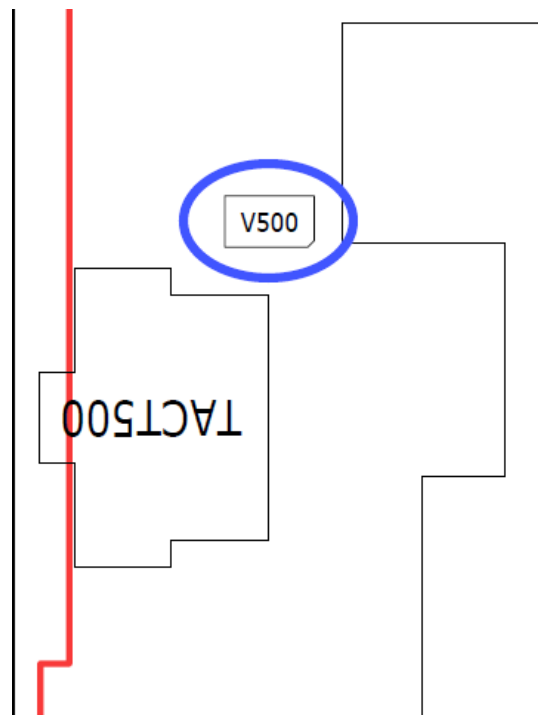
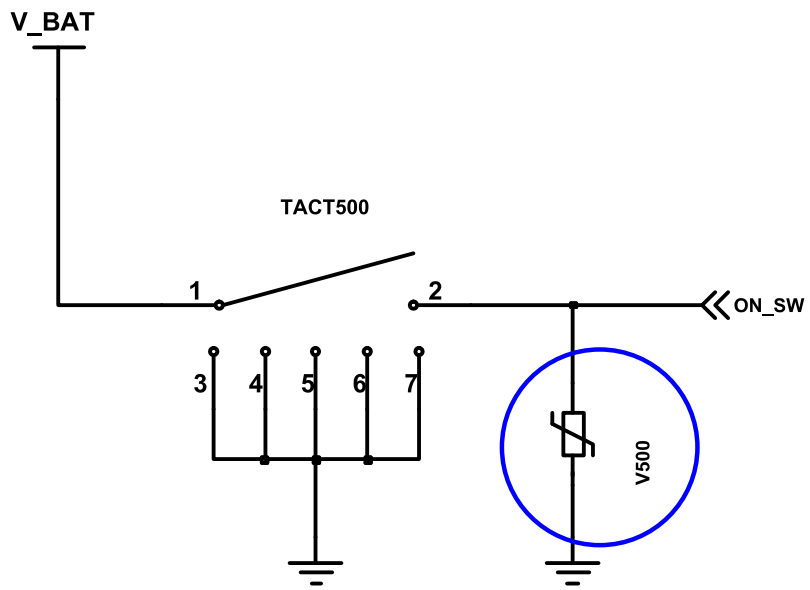




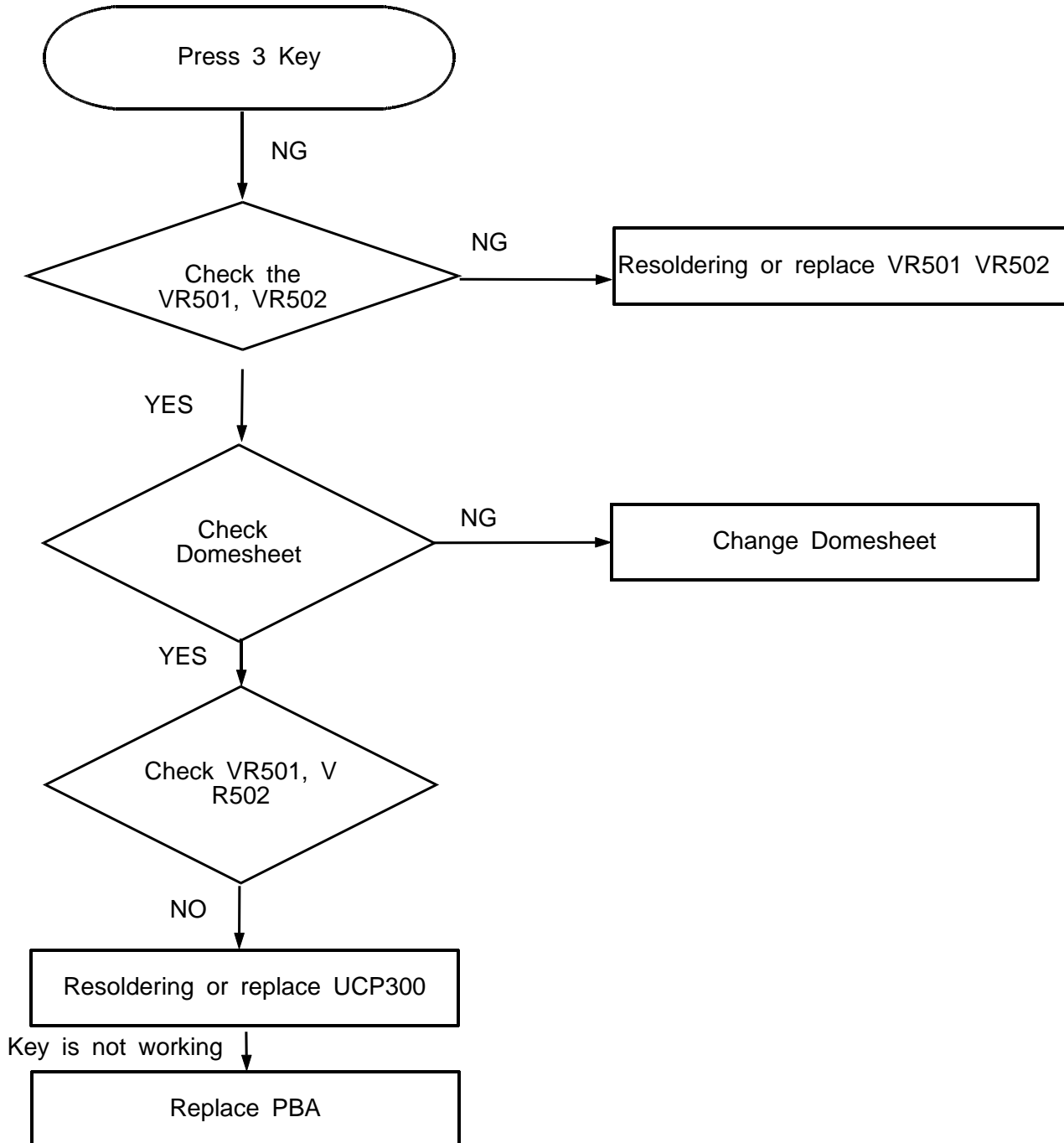
● Power Key

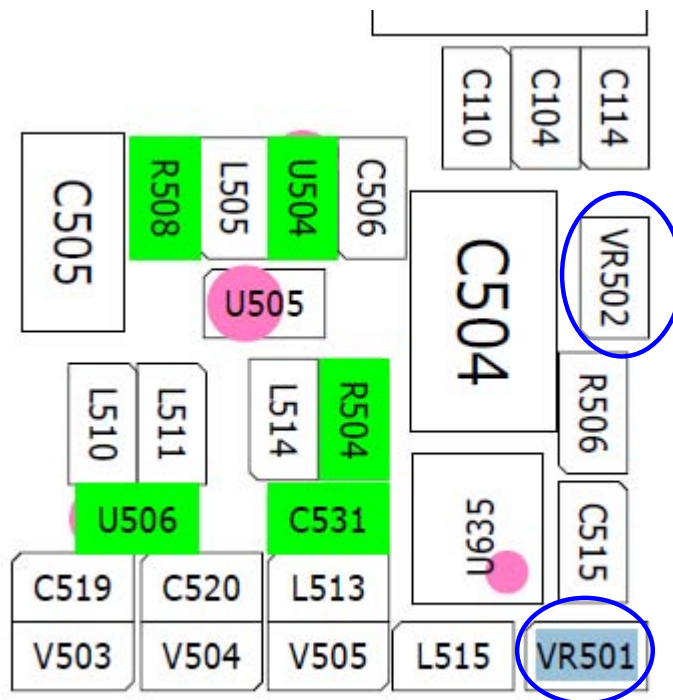
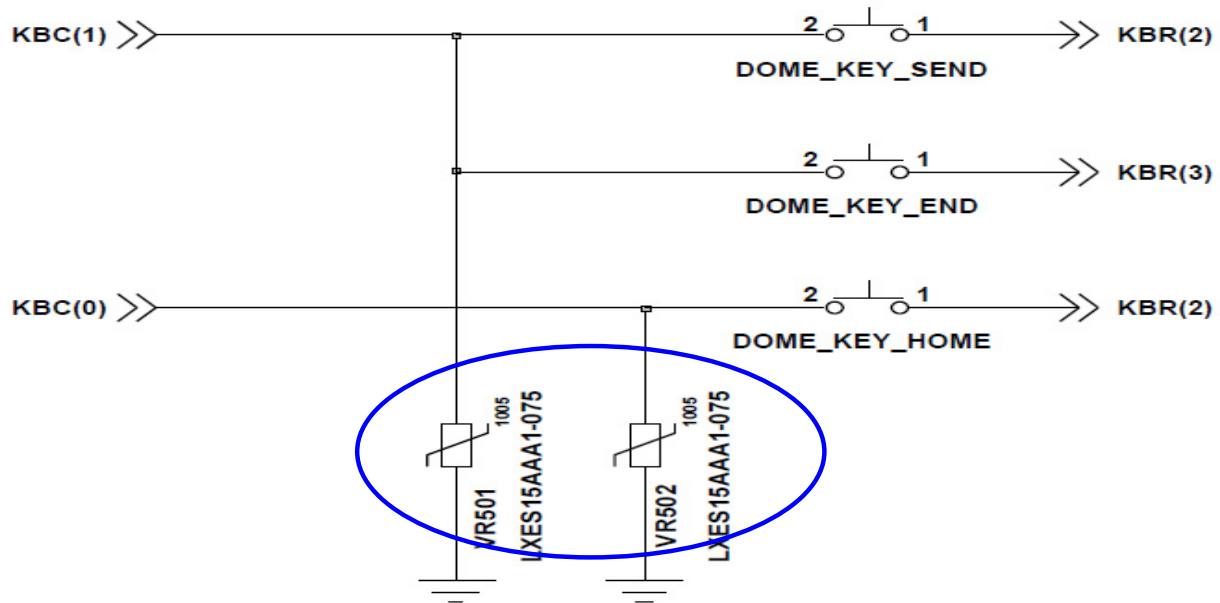




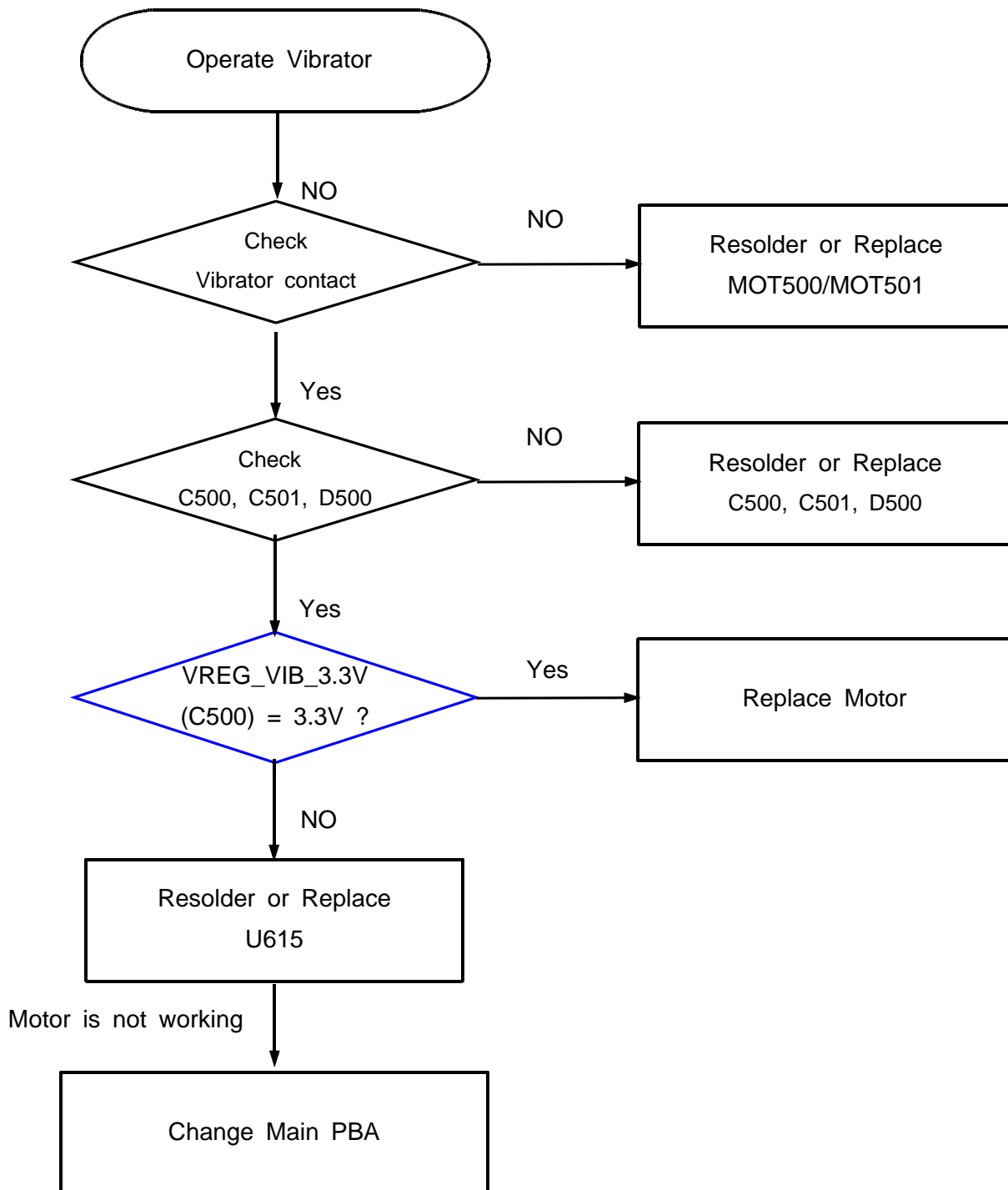


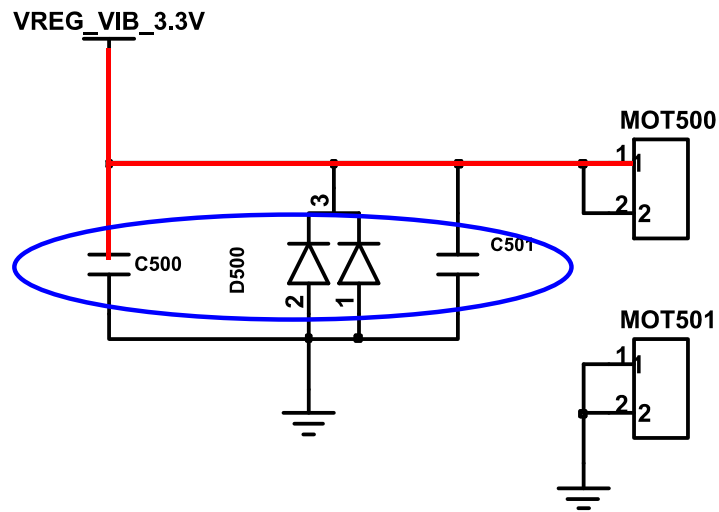
- 3 Key
-



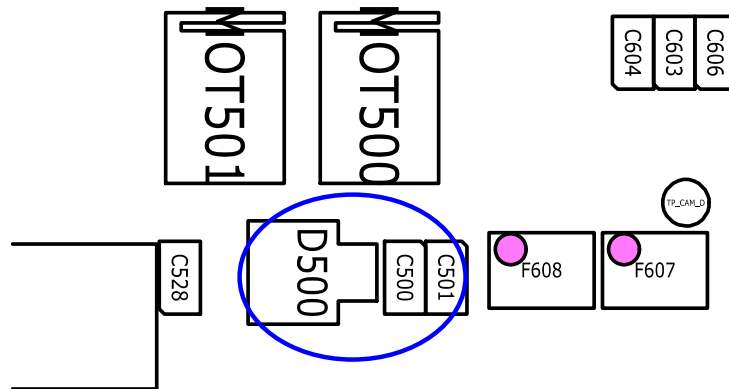


8-3-6. Vibrator Working

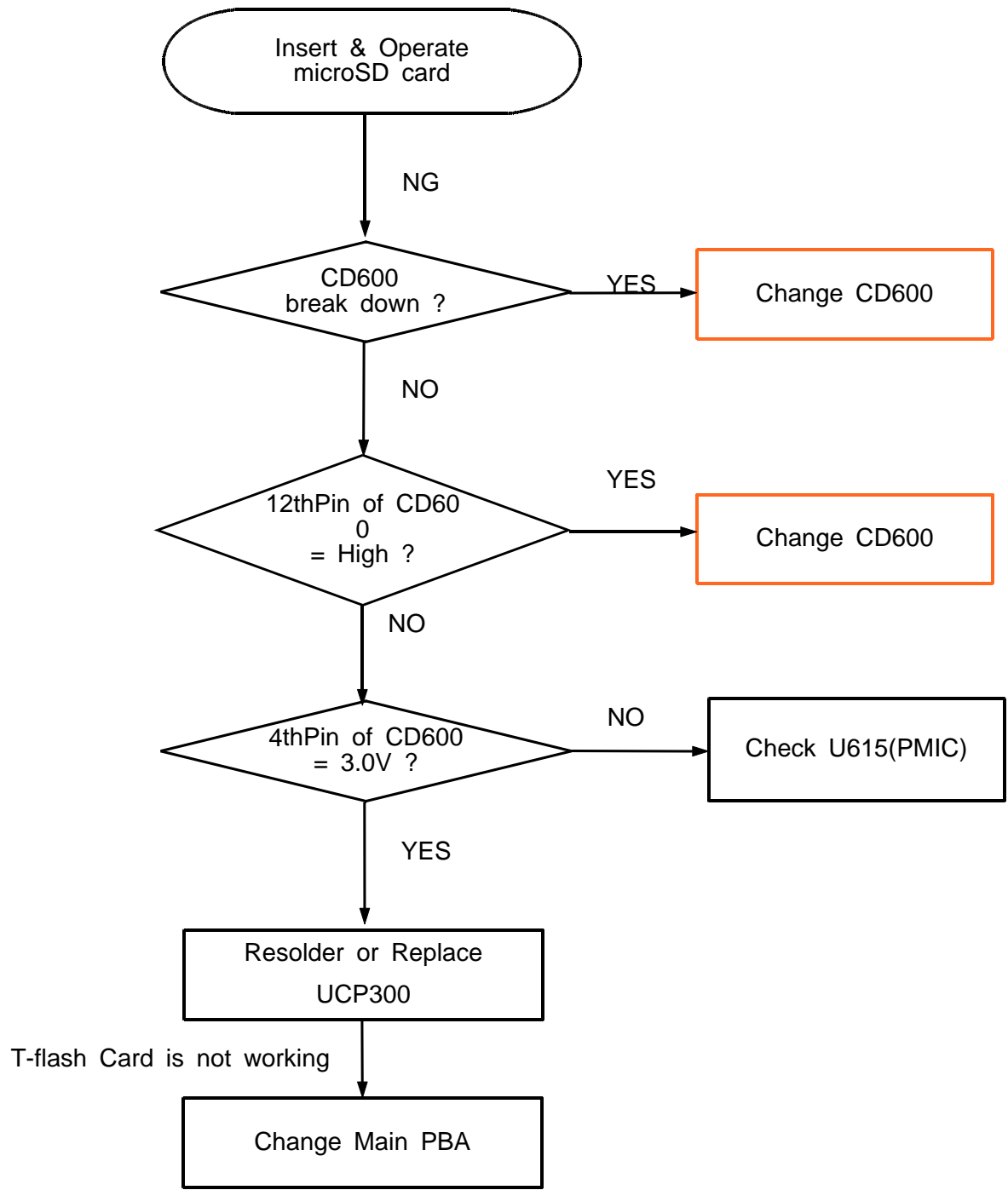


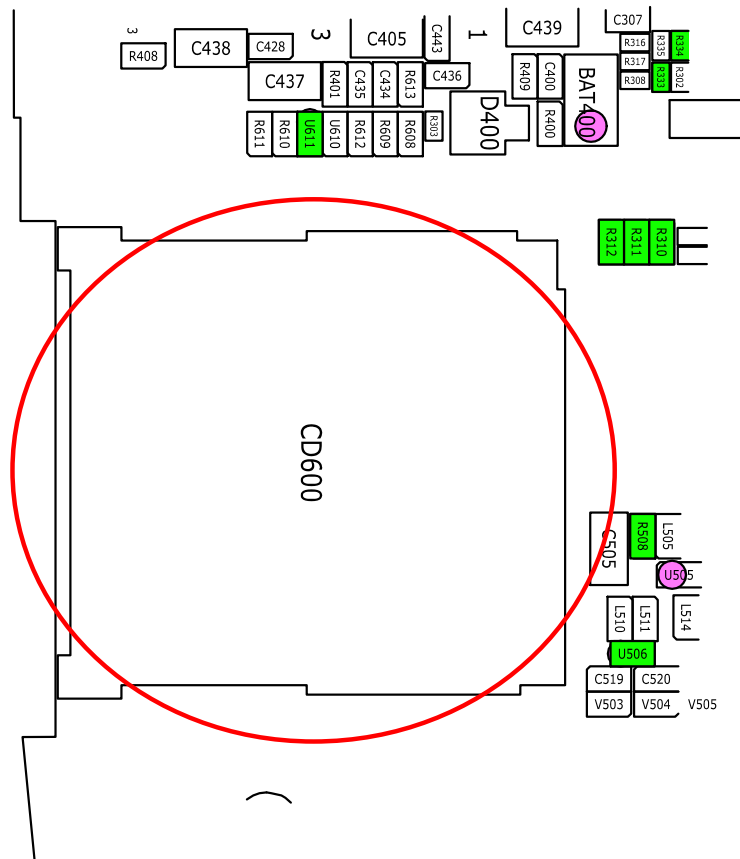
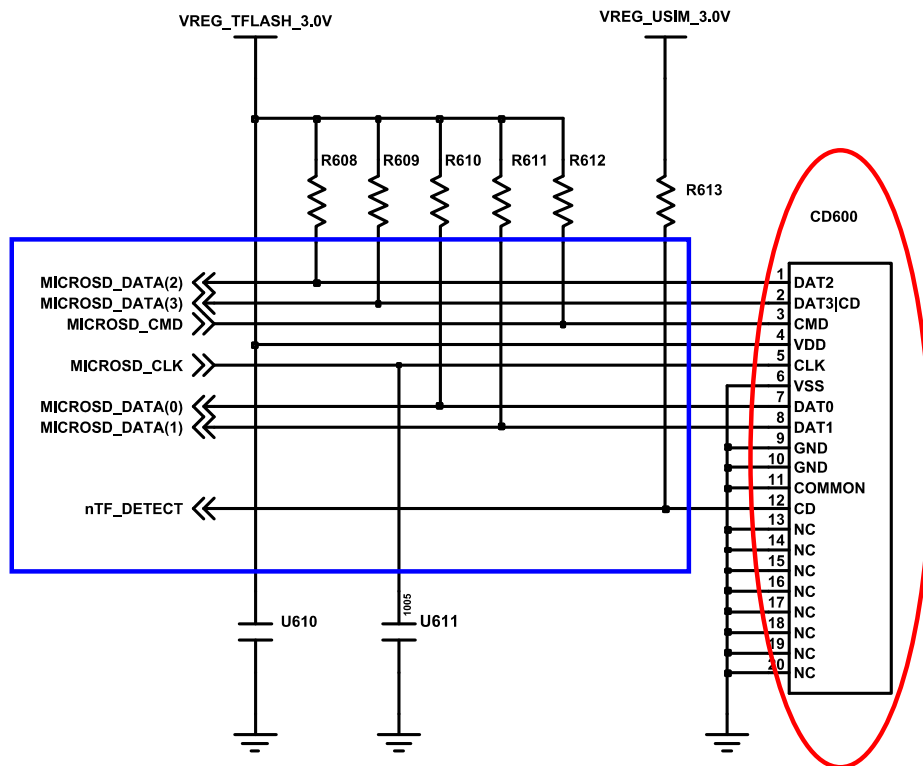


MOTOR

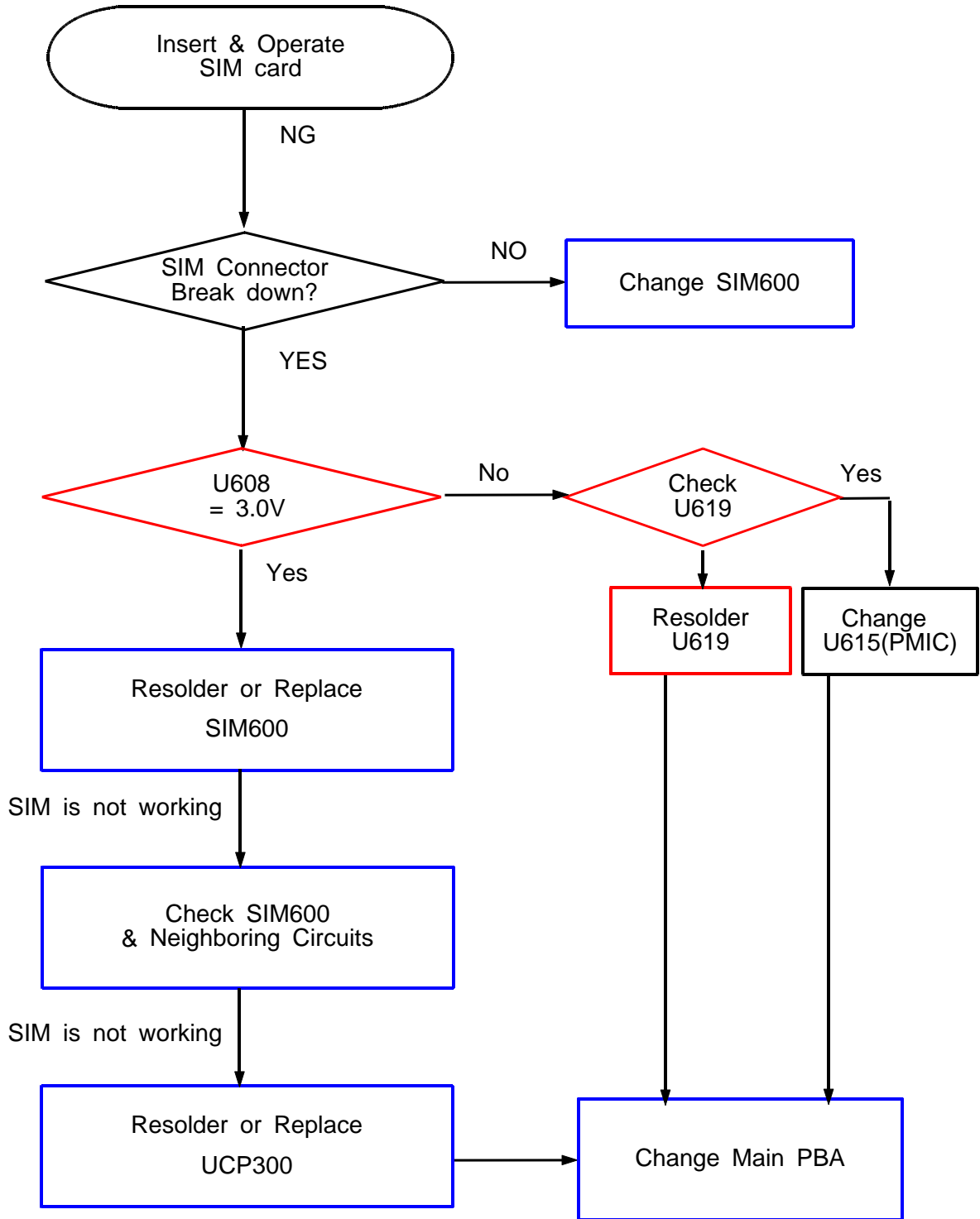


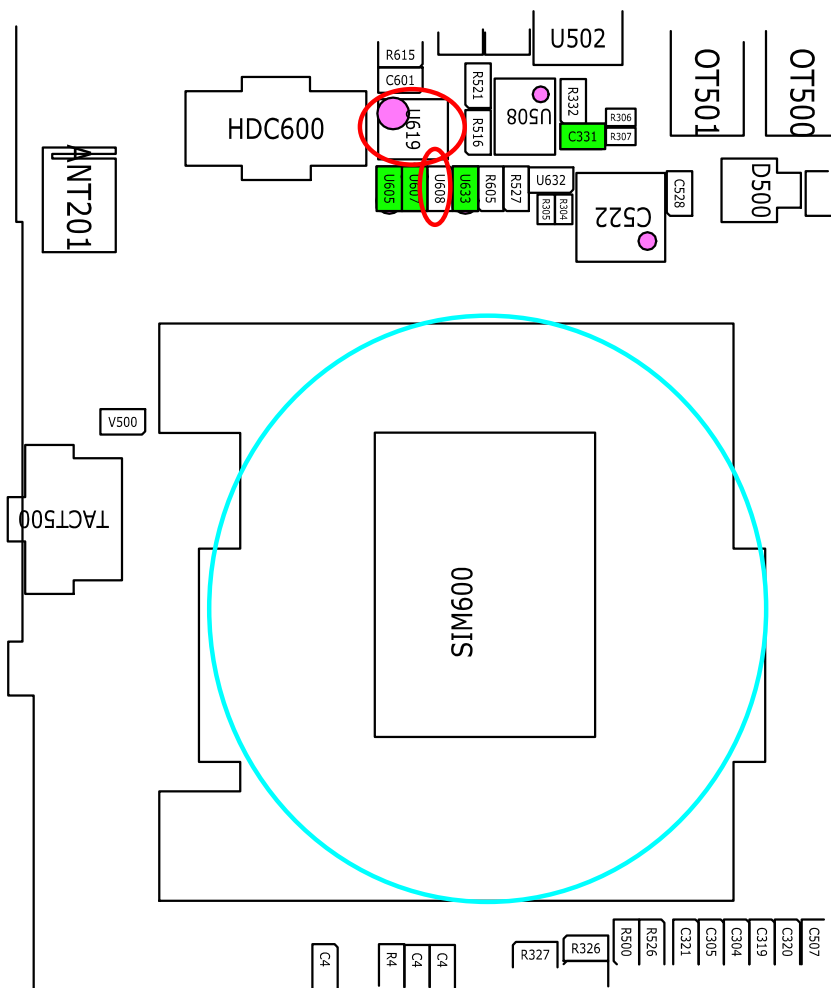
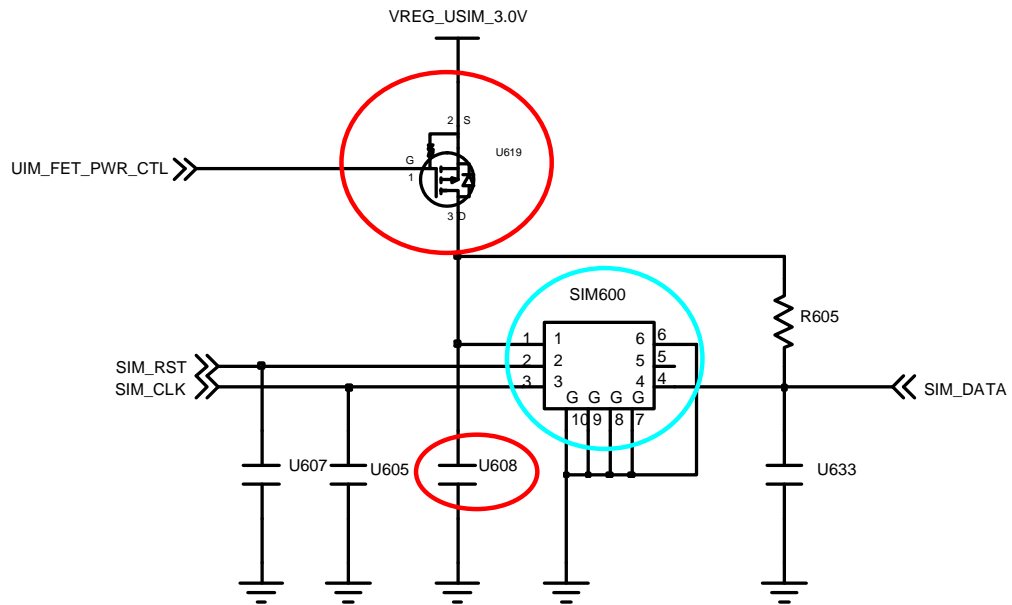
8-3-7. T-Flash Card Working



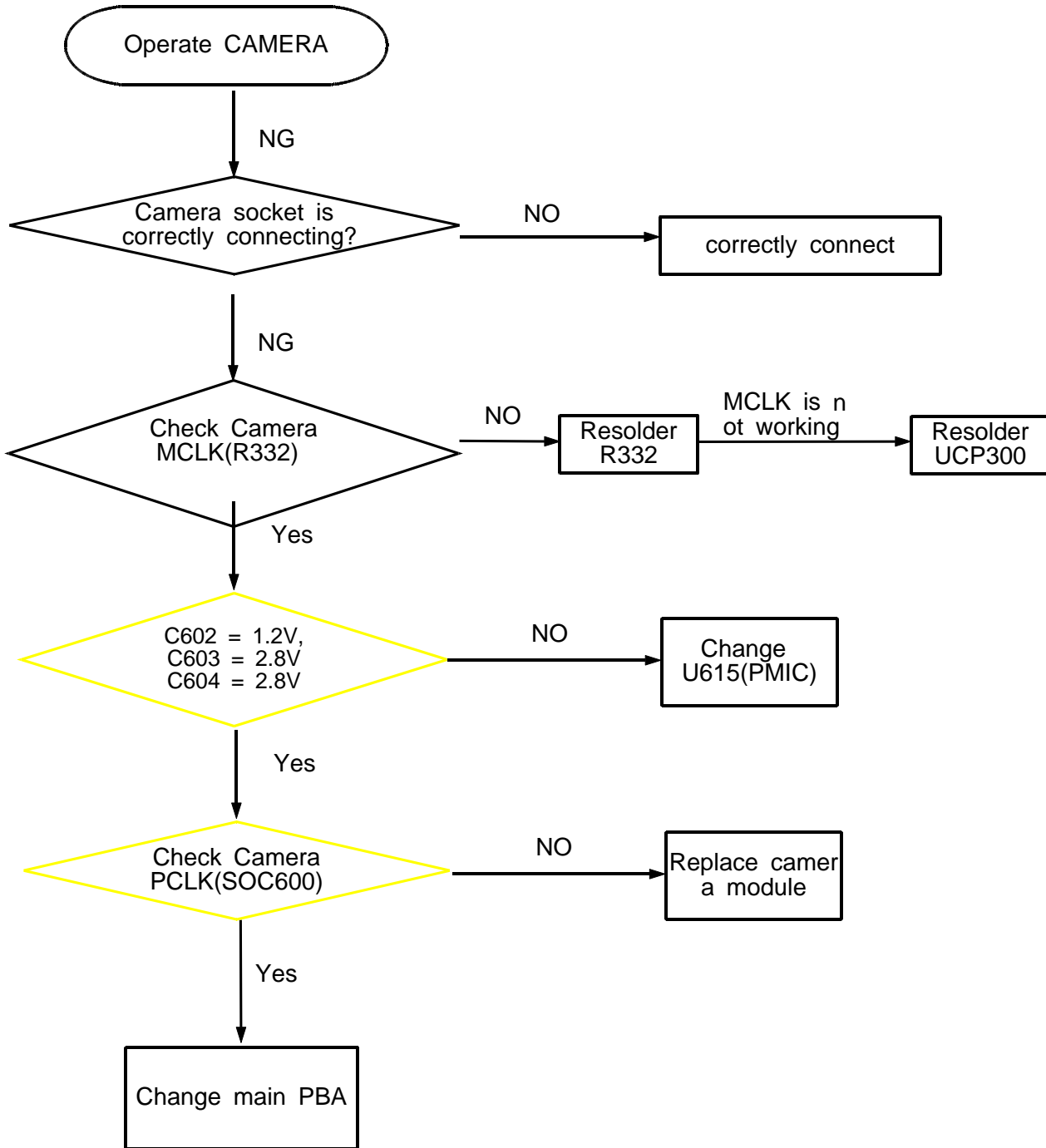


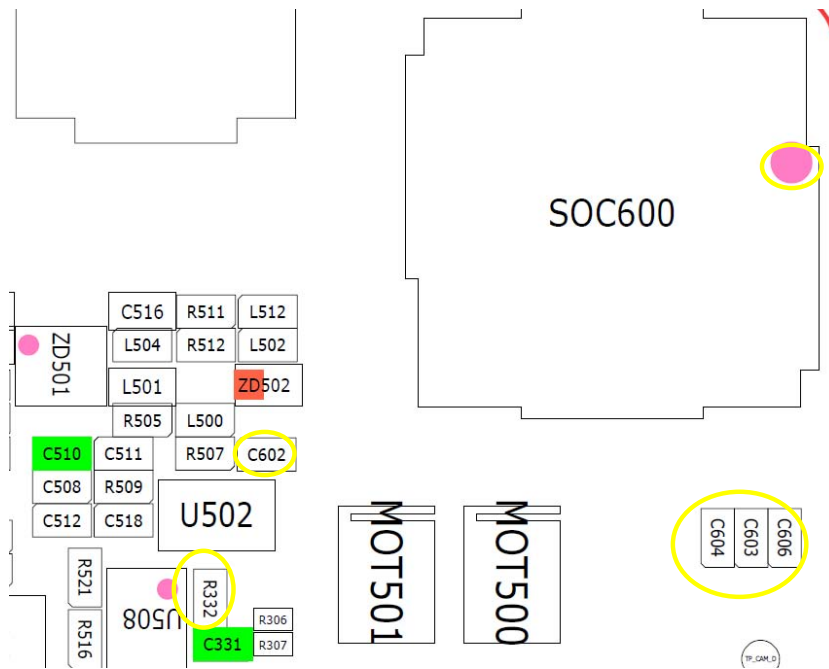
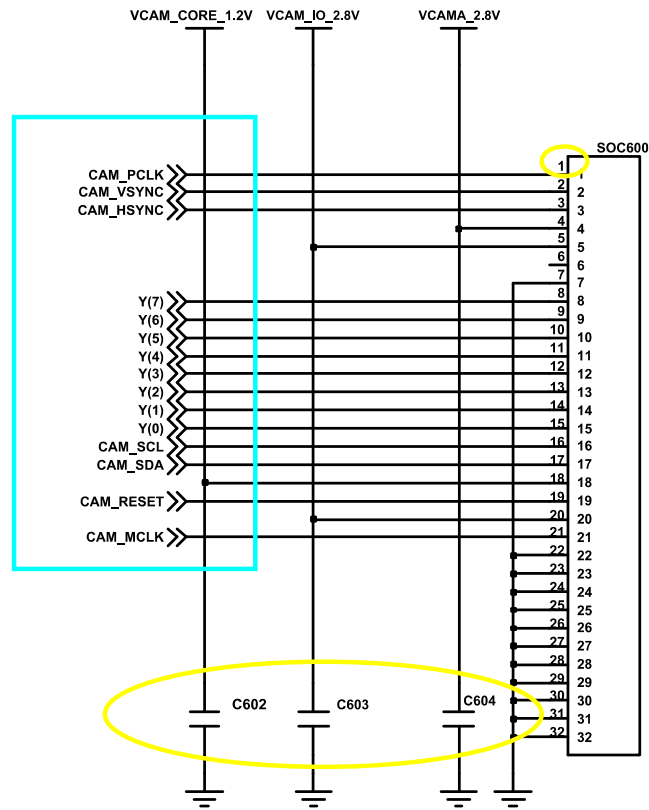
8-3-8. SIM Card Working





8-3-9 CAMERA Working

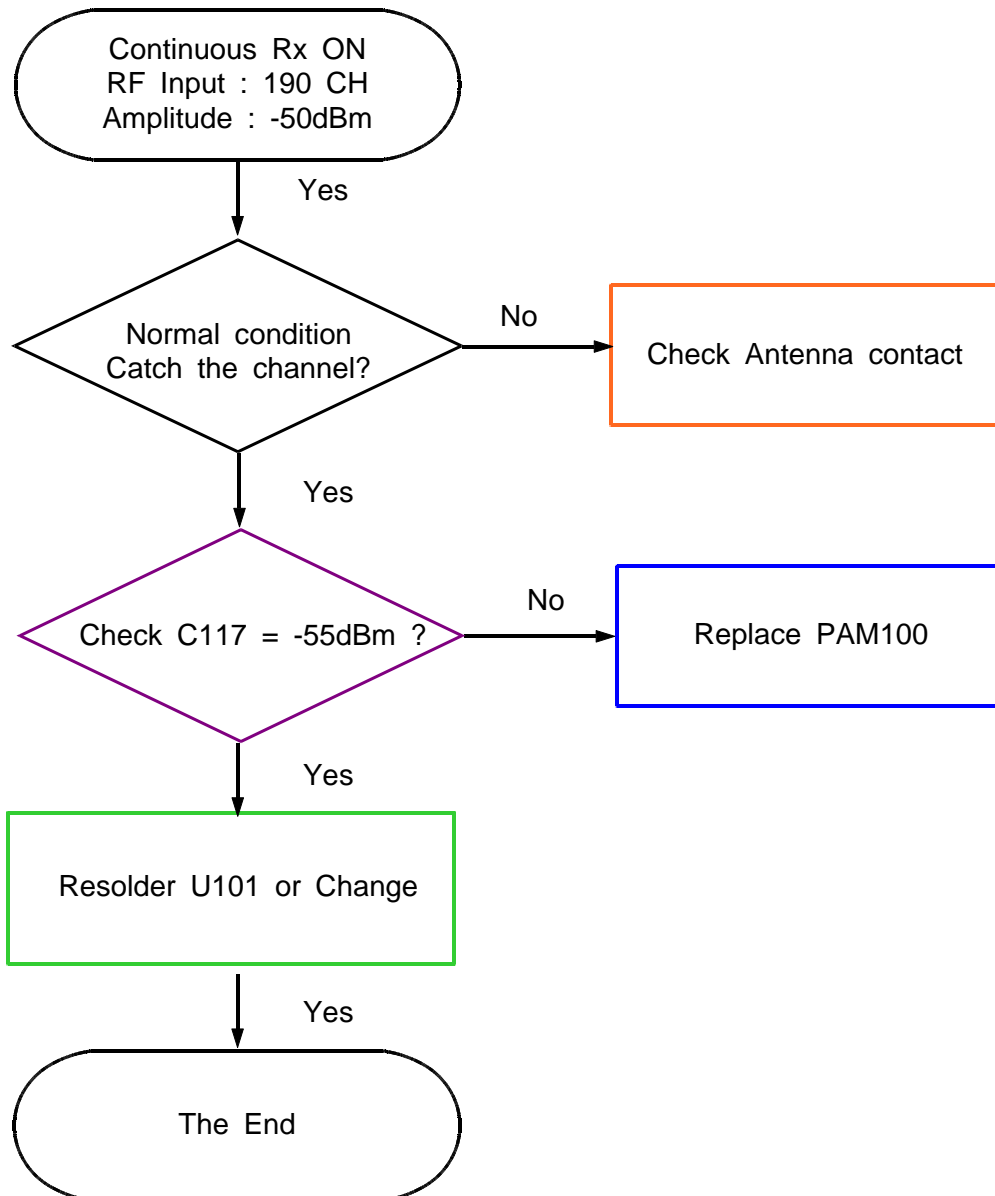




8-4-1. GSM850 RX

**If you check the tx chain,

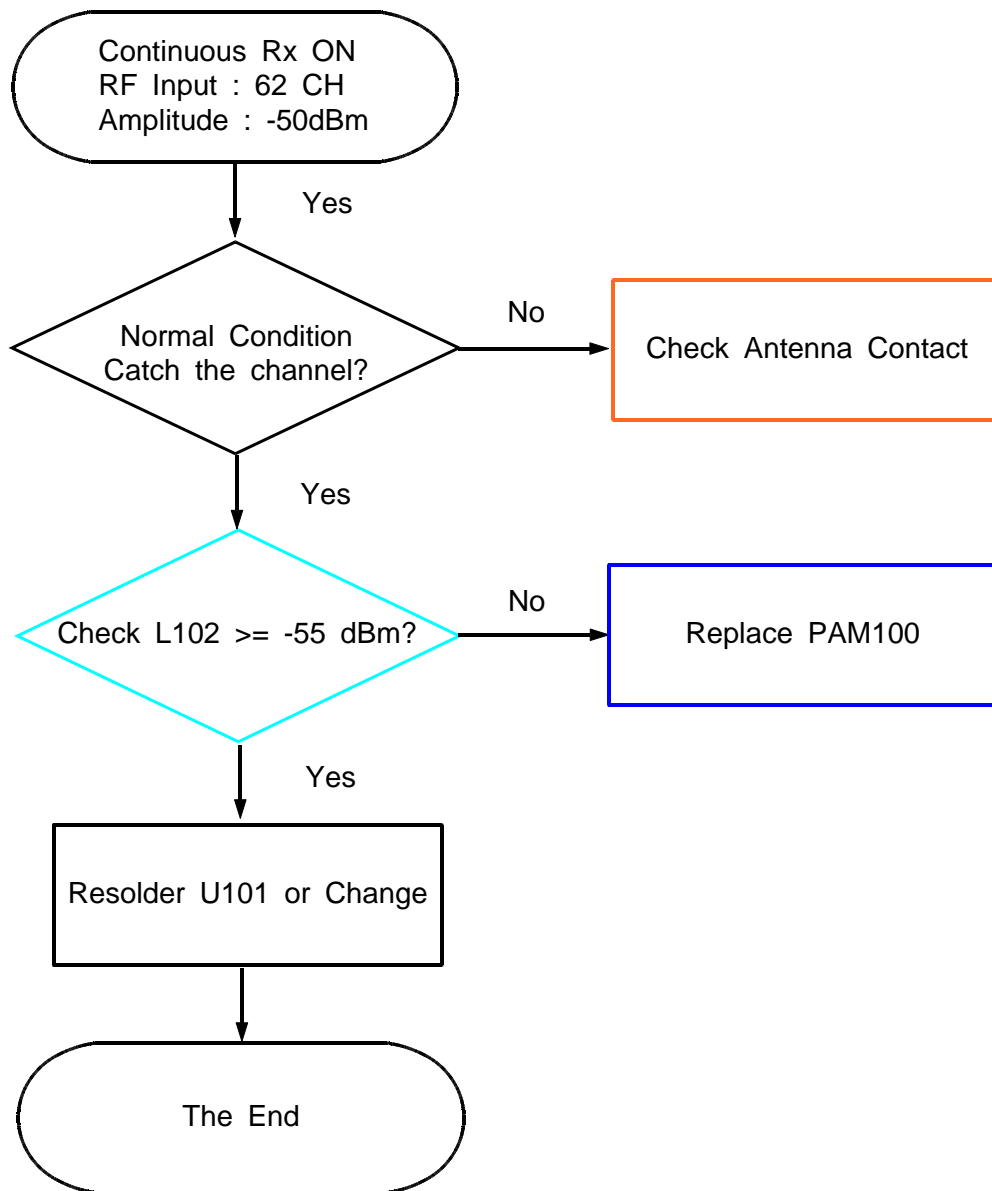
Check the not only RF Device but also resistor, inductor and capacitor.



8-4-2. GSM900 RX

**If you check the tx chain,

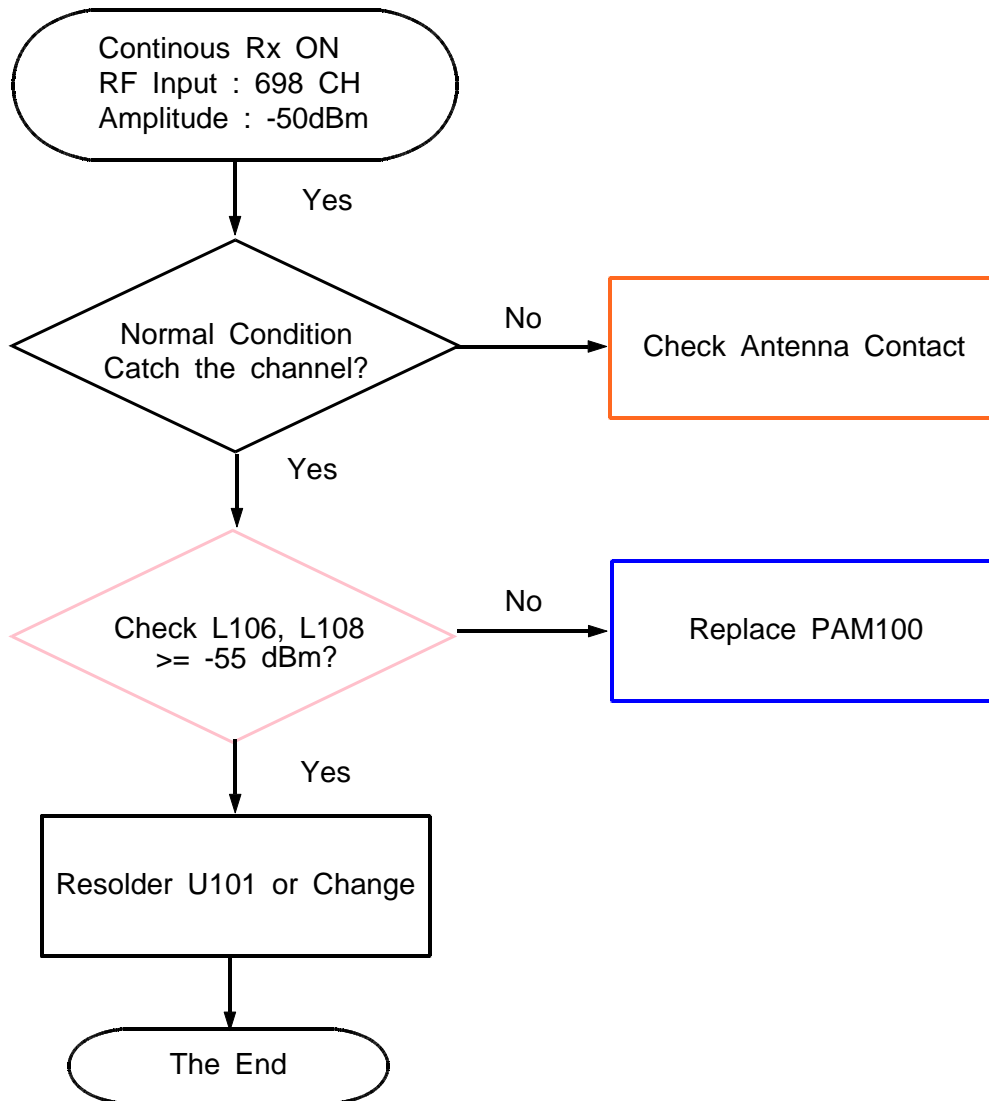
Check the not only RF Device but also resistor, inductor and capacitor.

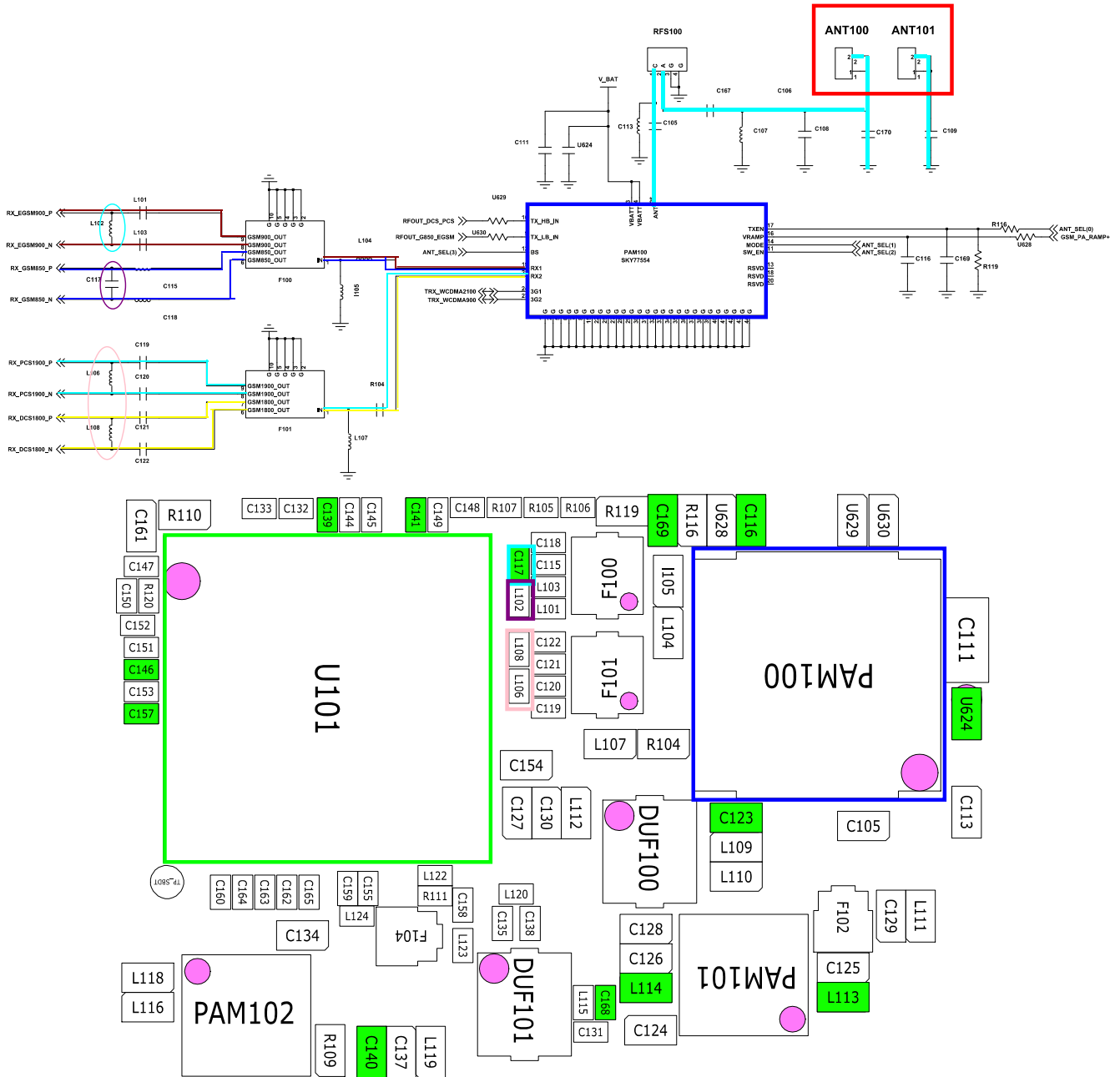


8-4-3. DCS/PCS RX

**If you check the tx chain,

Check the not only RF Device but also resistor, inductor and capacitor.

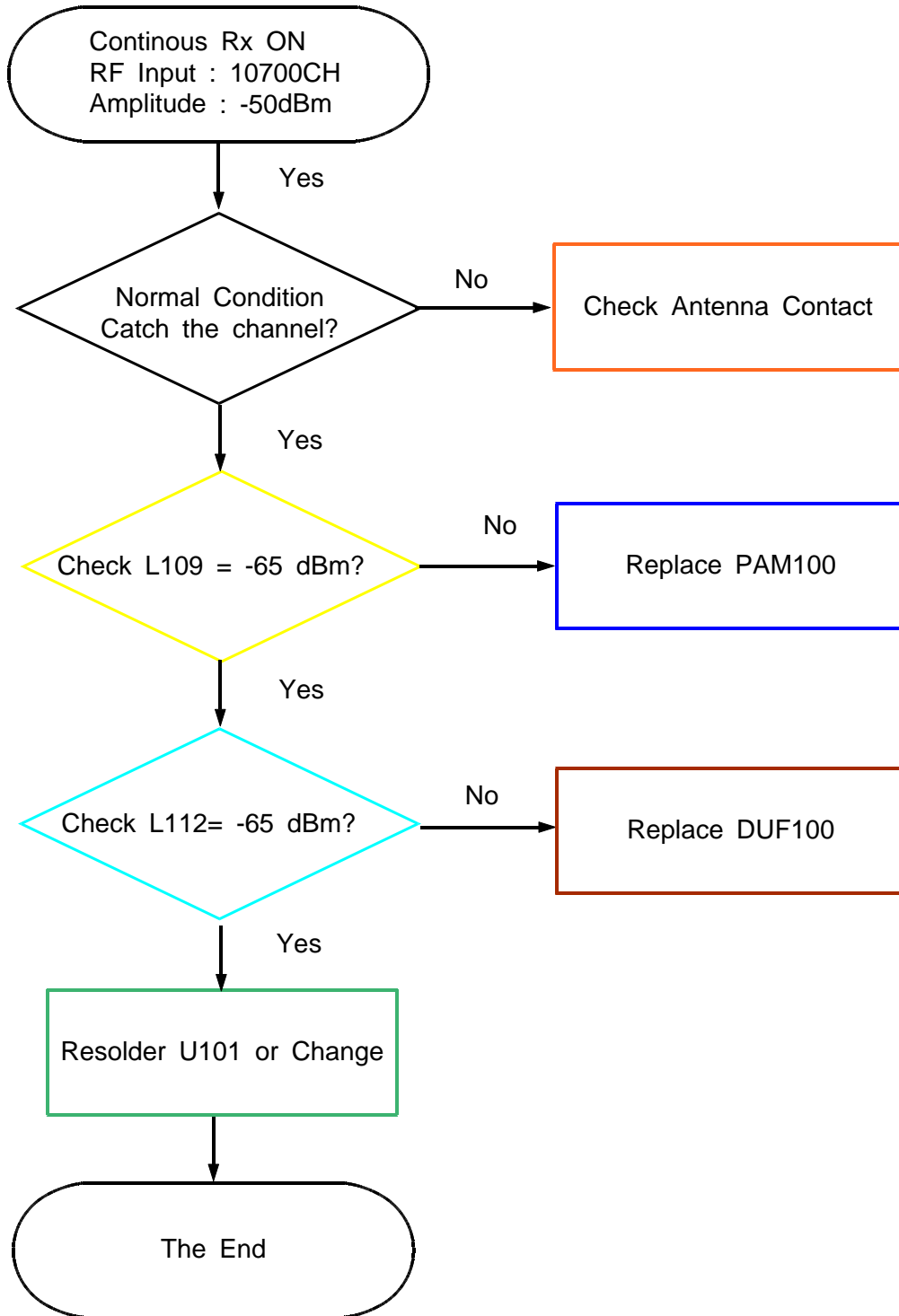




8-4-4. WCDMA Band1 RX

**If you check the tx chain,

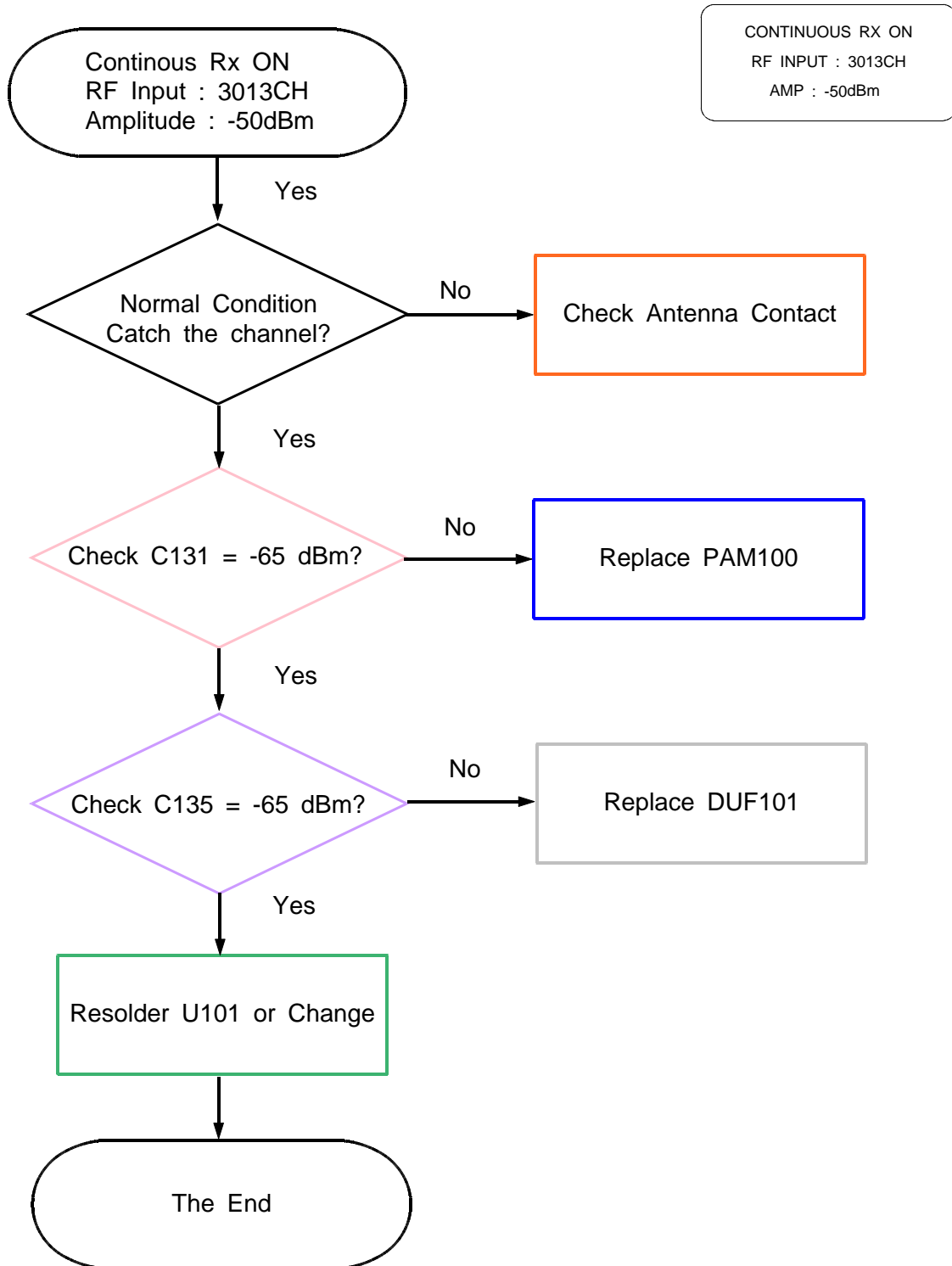
Check the not only RF Device but also resistor, inductor and capacitor.

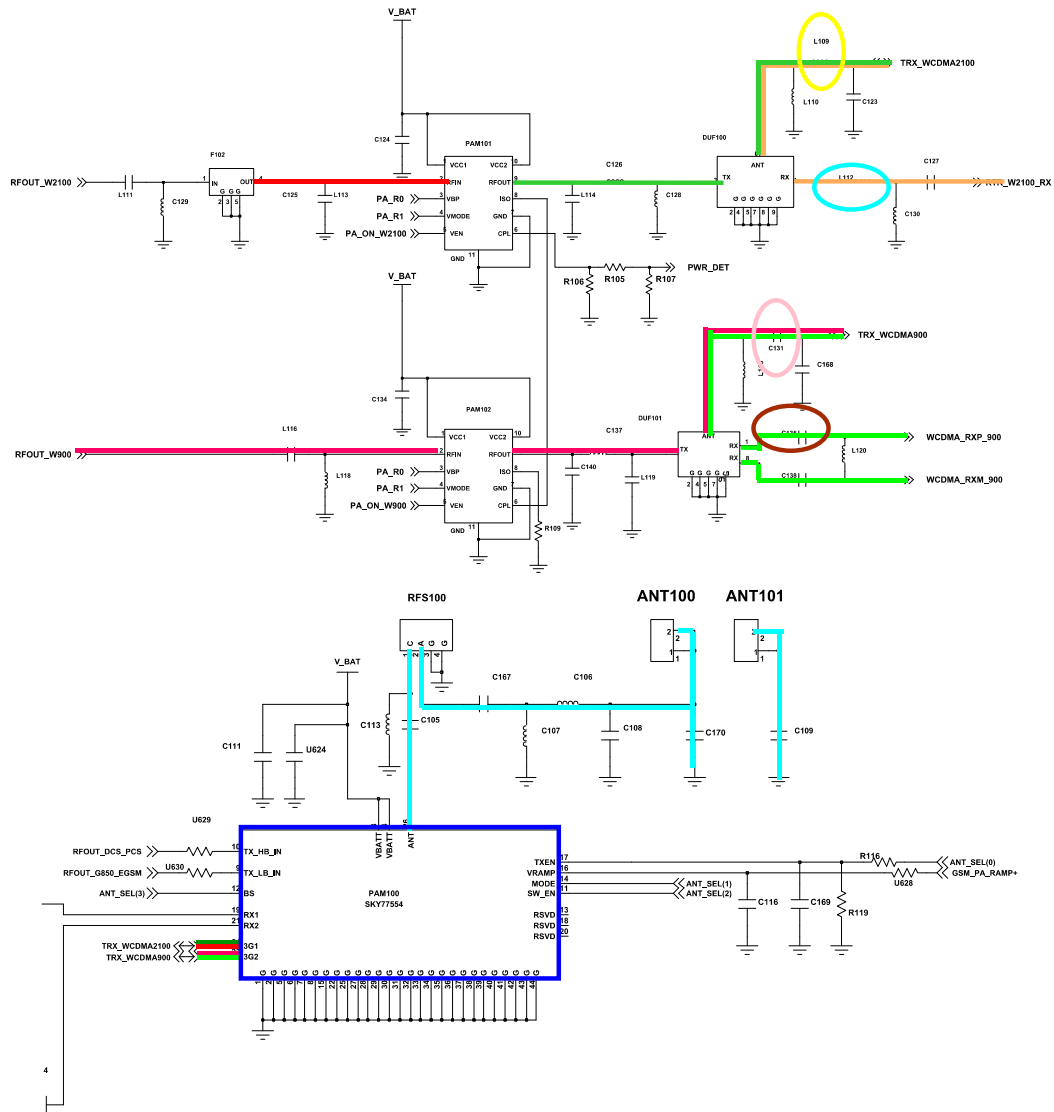


8-4-5. WCDMA Band8 RX

**If you check the tx chain,

Check the not only RF Device but also resistor, inductor and capacitor.

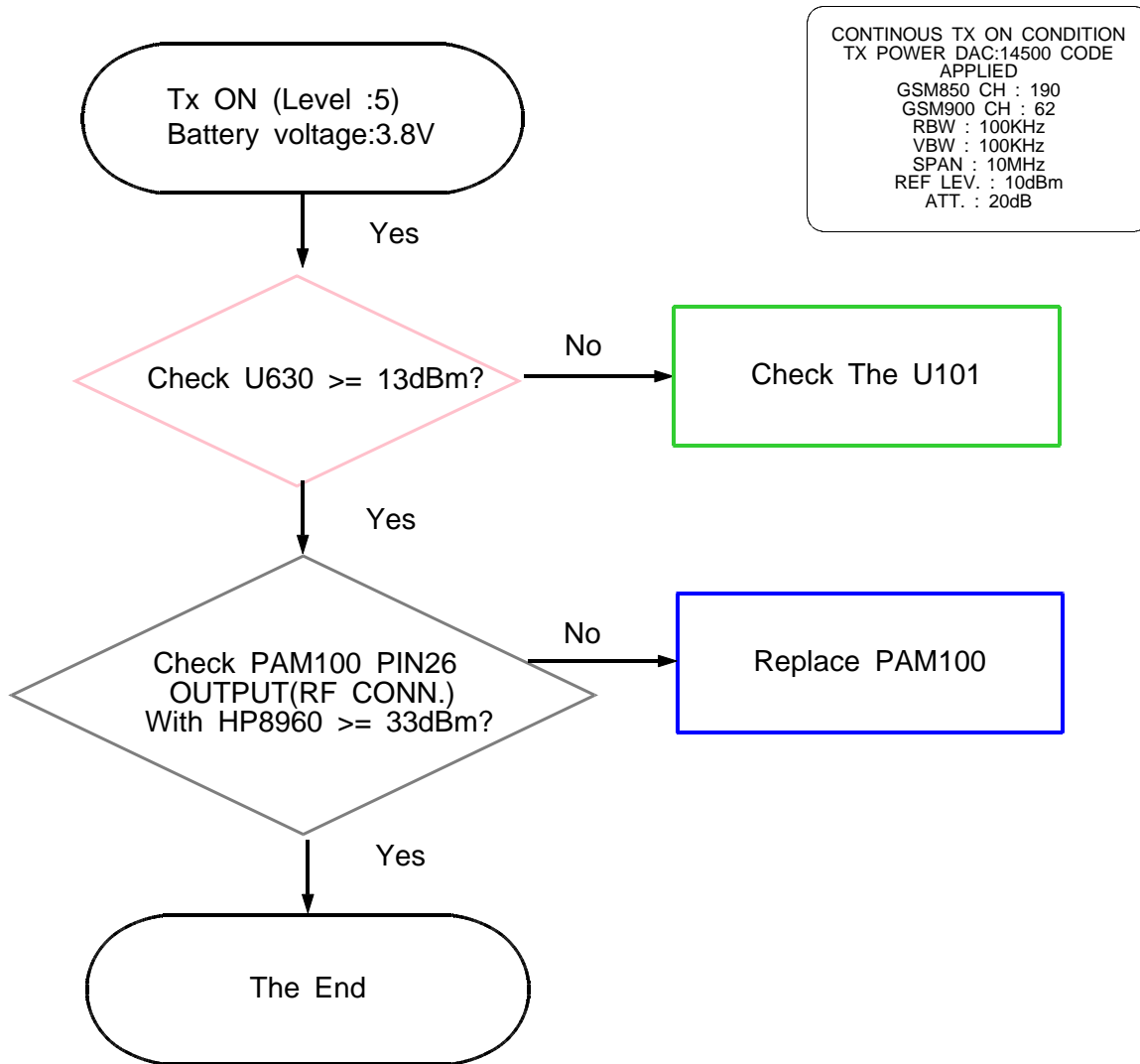




8-4-6. GSM850/900 TX

**If you check the tx chain,

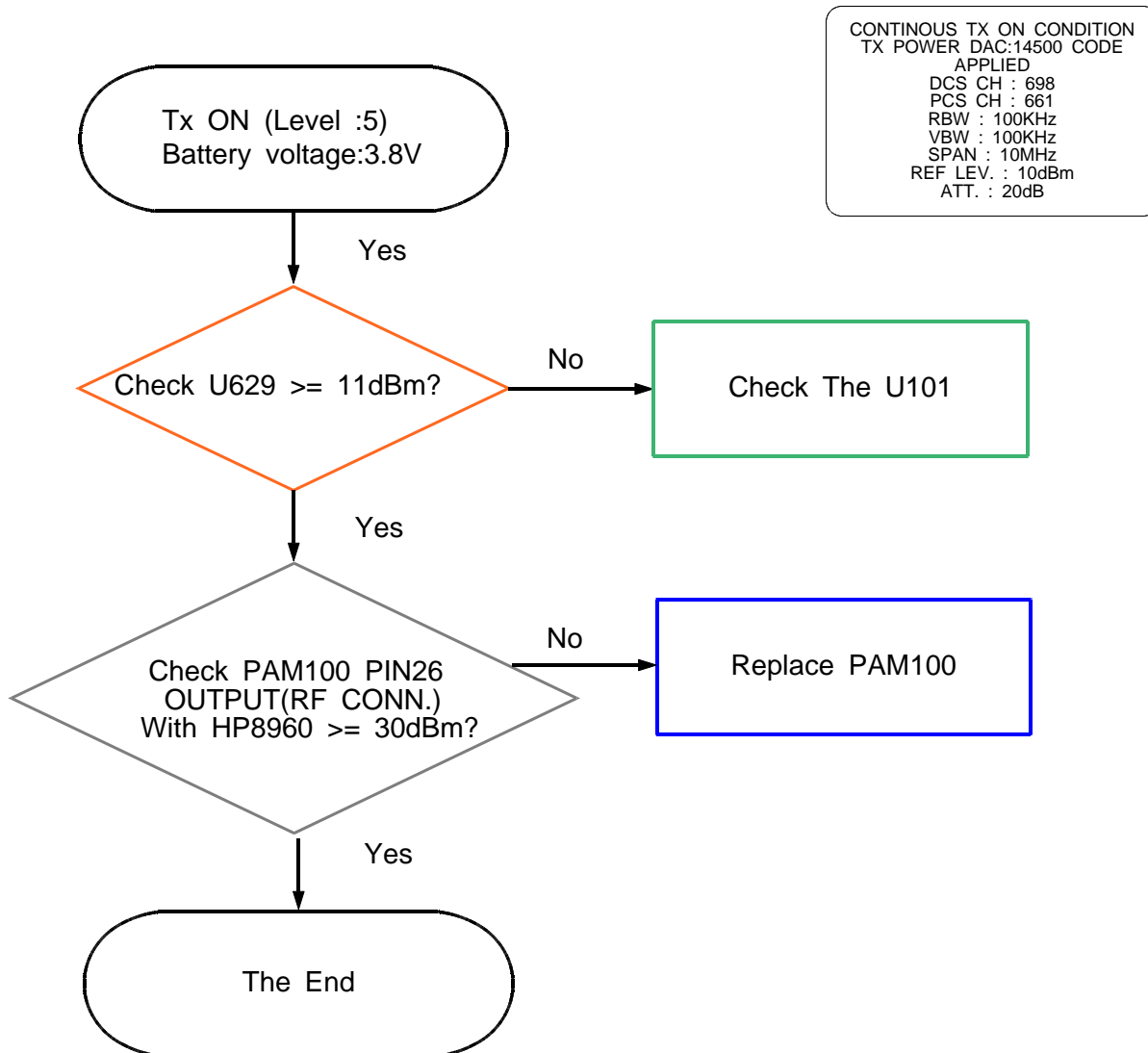
Check the not only RF Device but also resistor, inductor and capacitor.

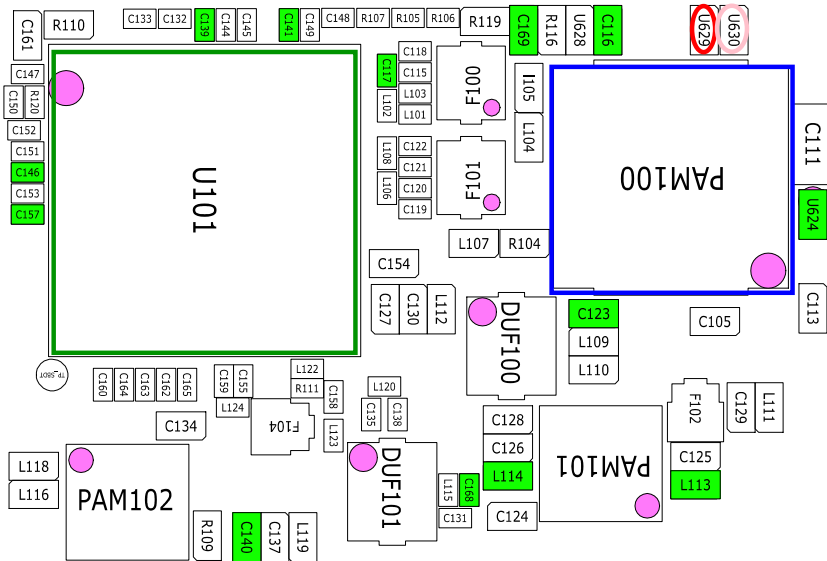
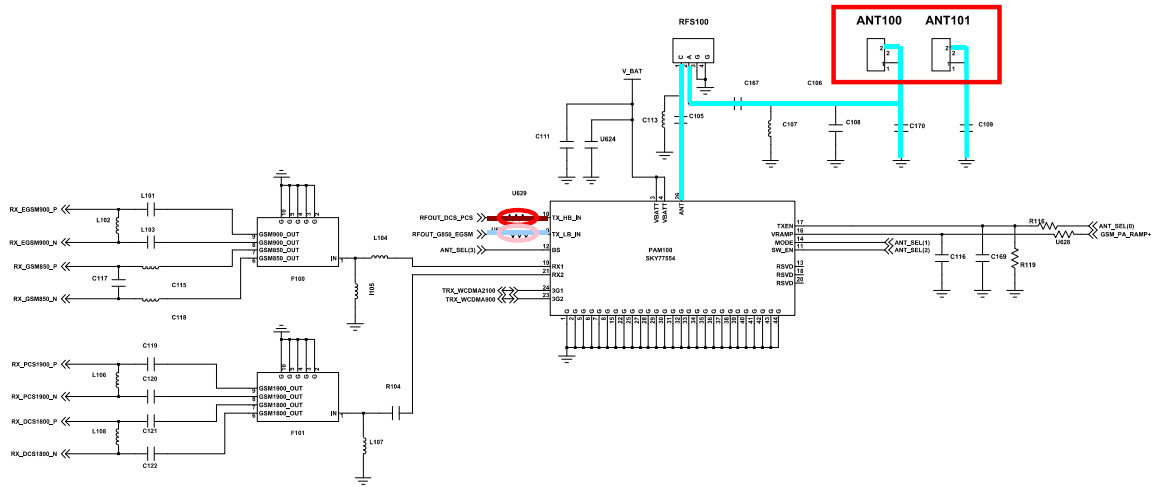


8-4-7. DCS/PCS TX

**If you check the tx chain,

Check the not only RF Device but also resistor, inductor and capacitor.

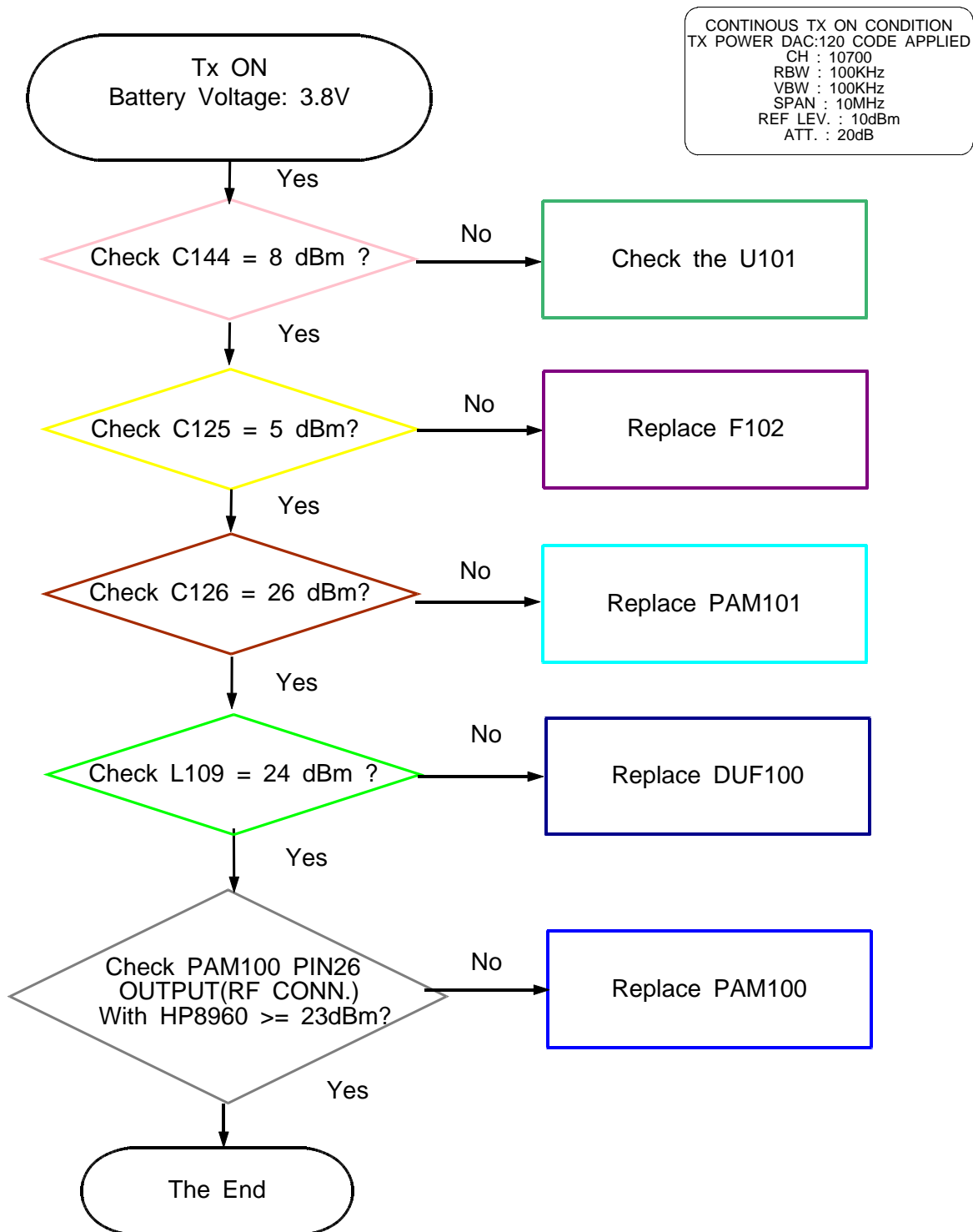




8-4-8. WCDMA Band1 TX

**If you check the tx chain,

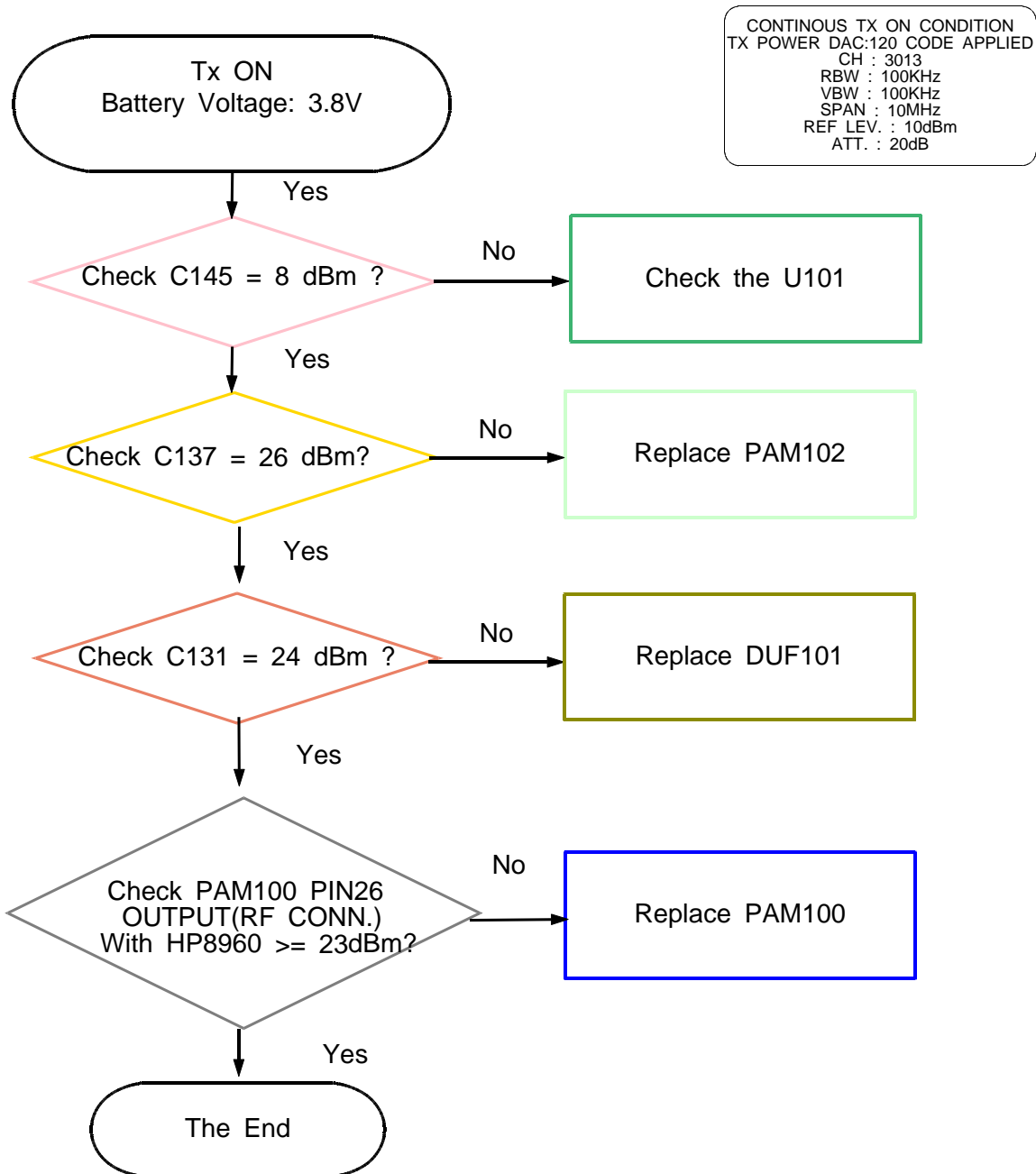
Check the not only RF Device but also resistor, inductor and capacitor.

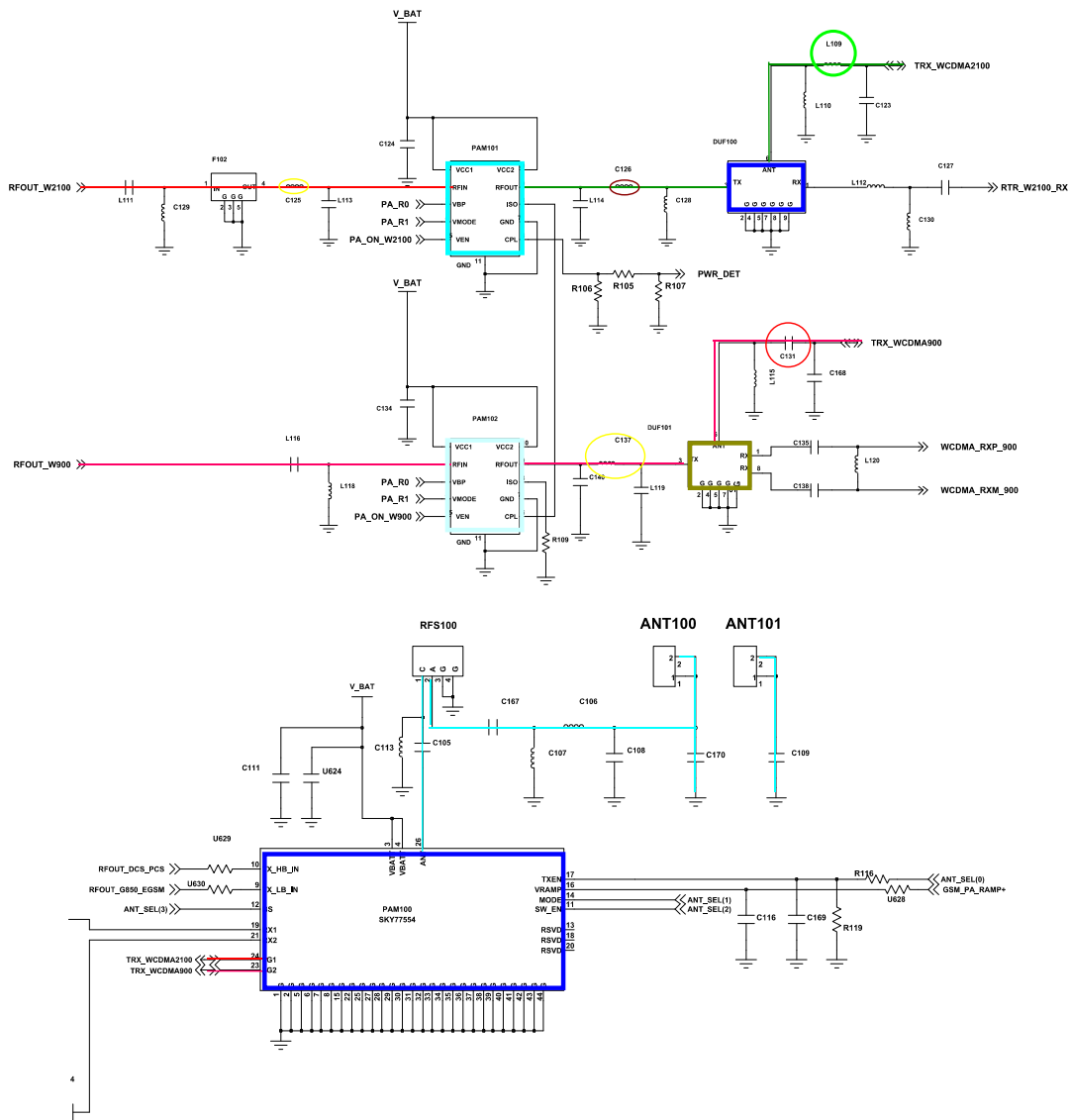


8-4-9. WCDMA Band8 TX

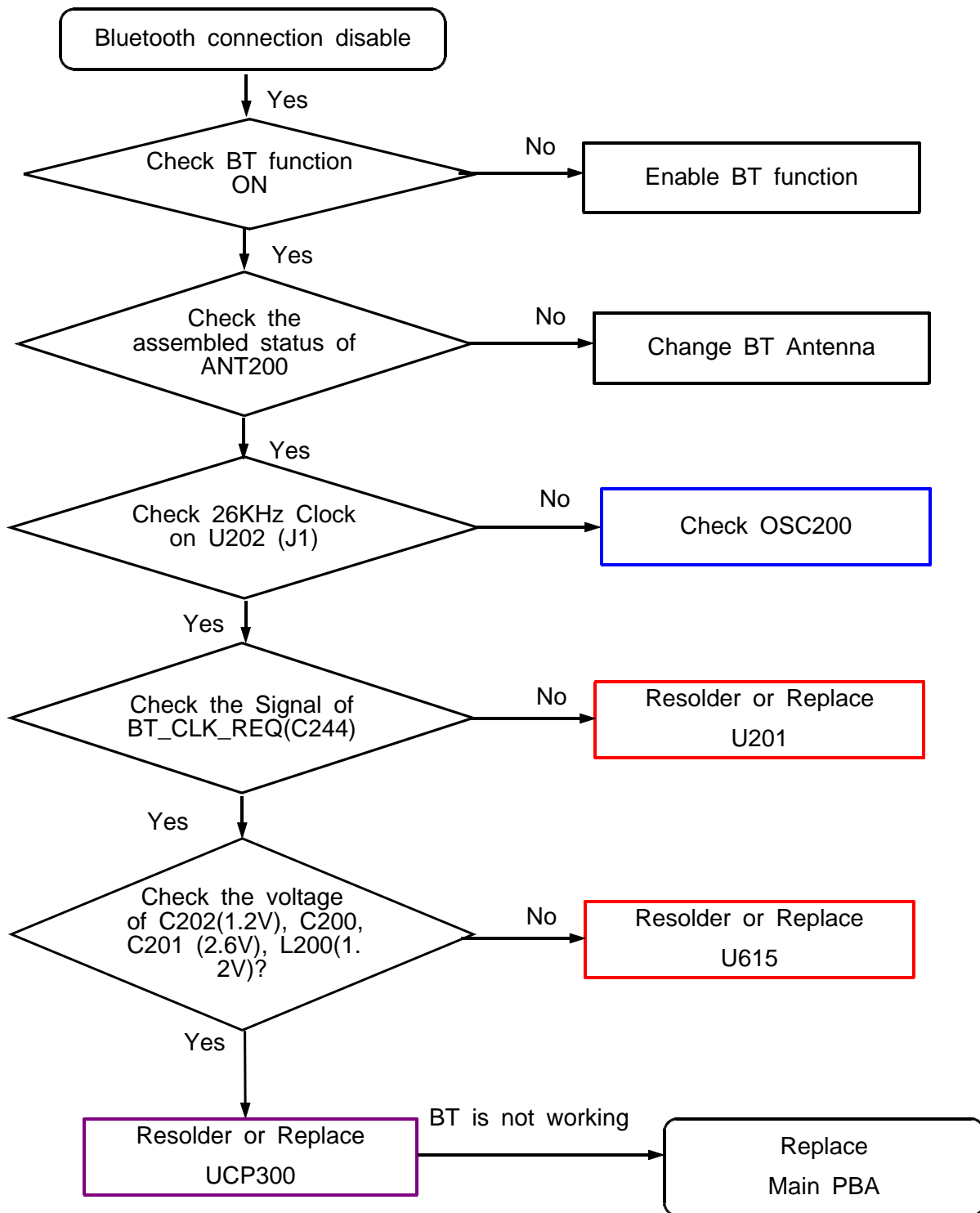
**If you check the tx chain,

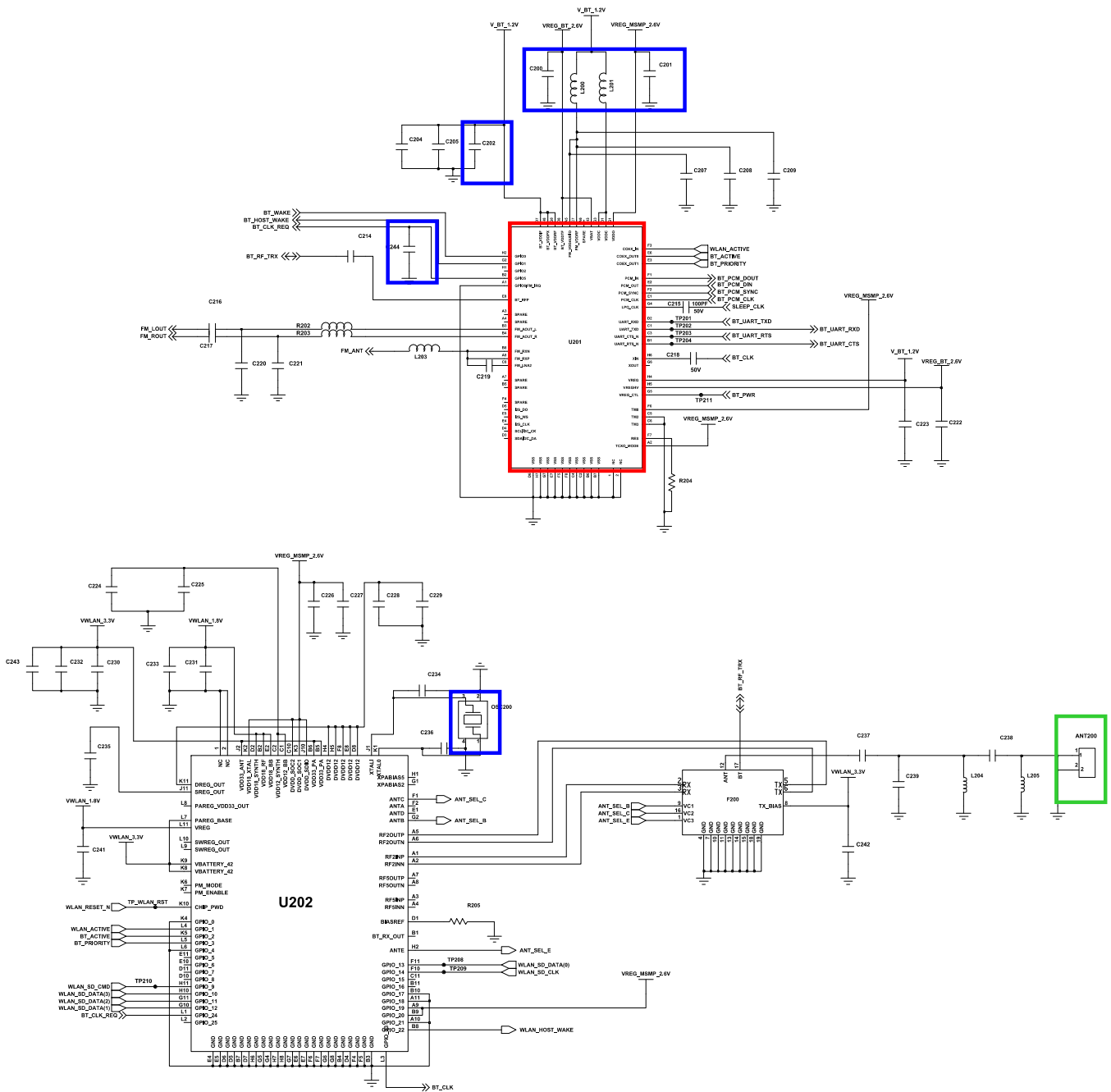
Check the not only RF Device but also resistor, inductor and capacitor.



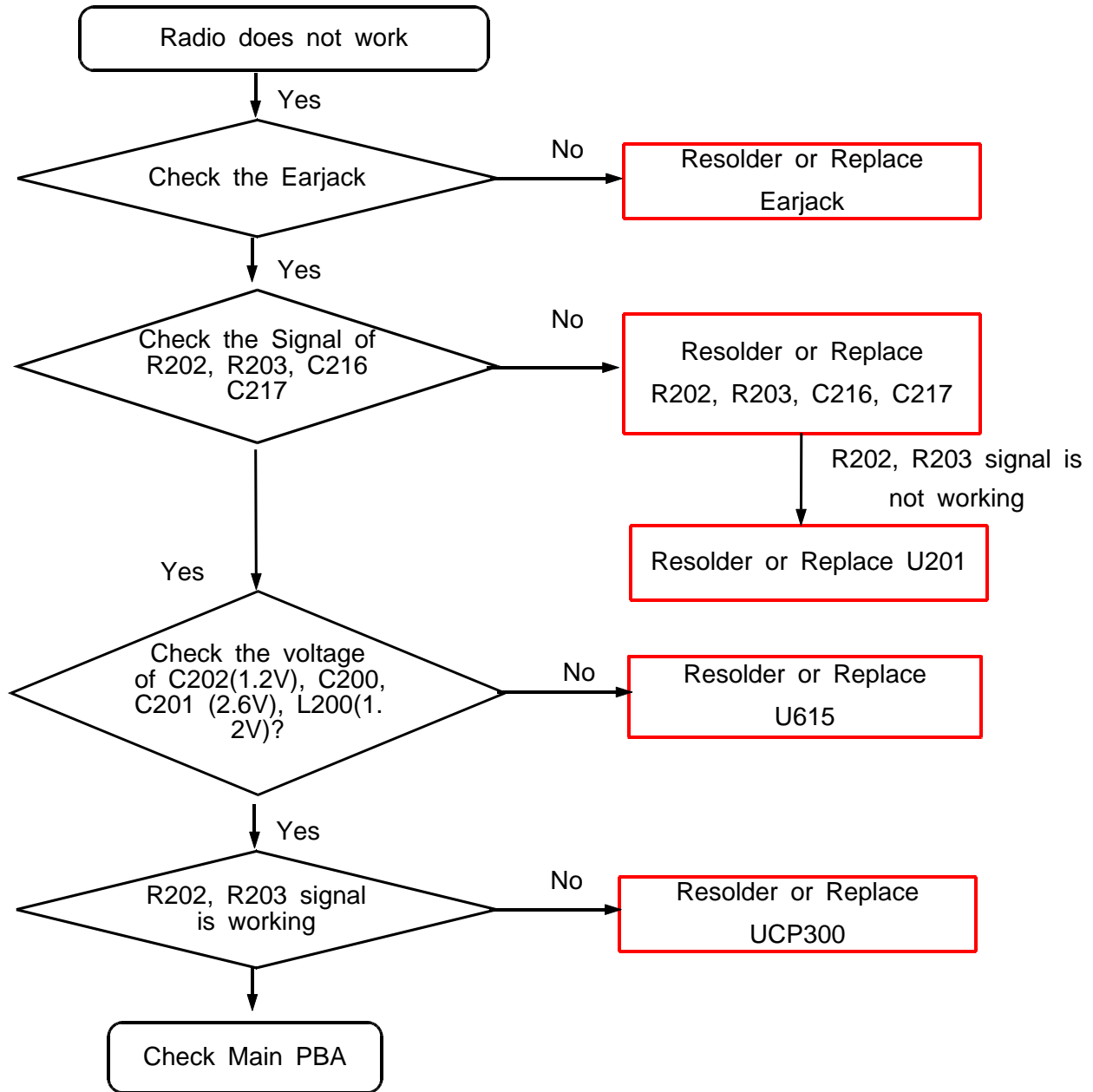


8-4-10. BLUETOOTH

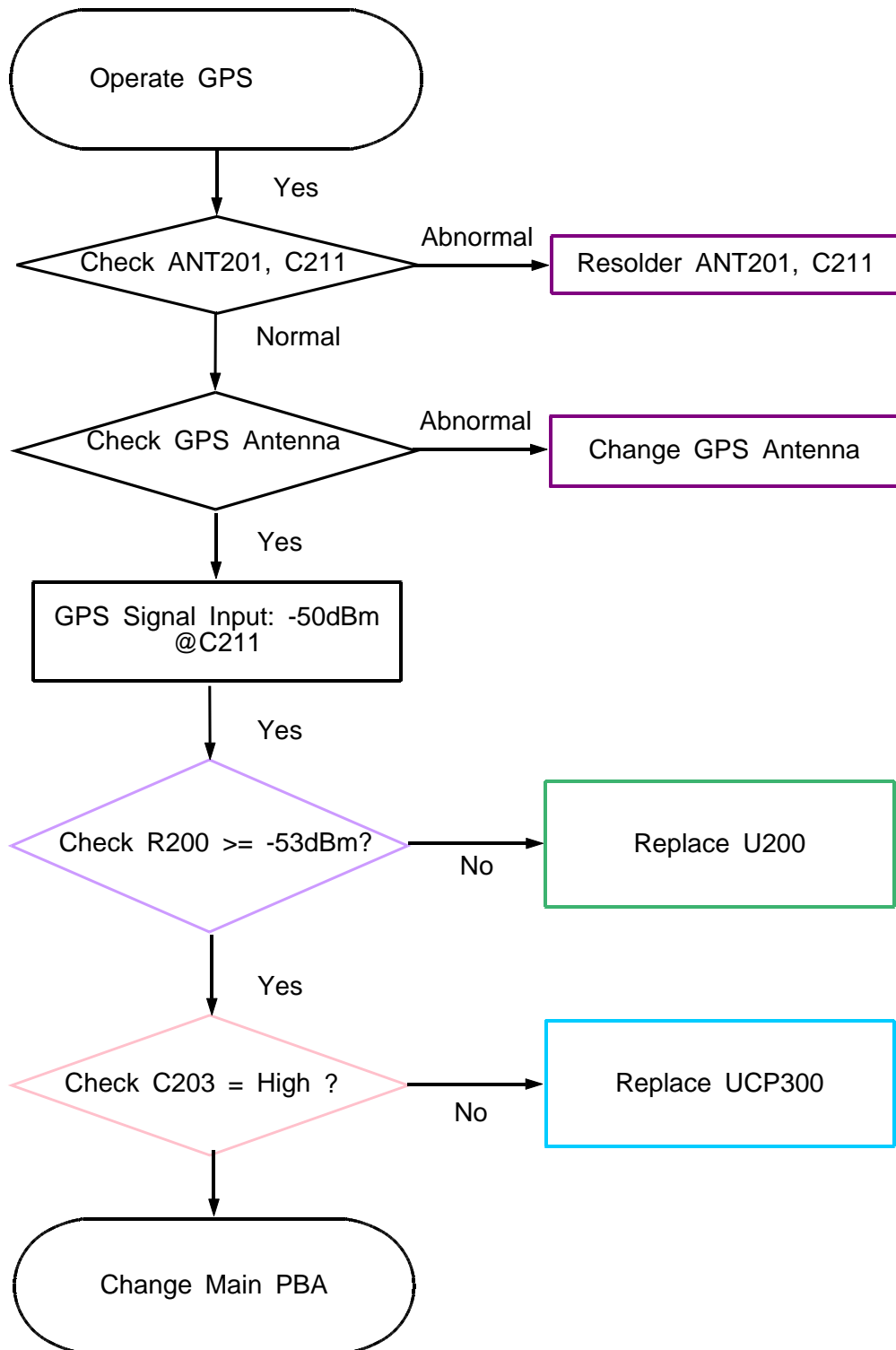


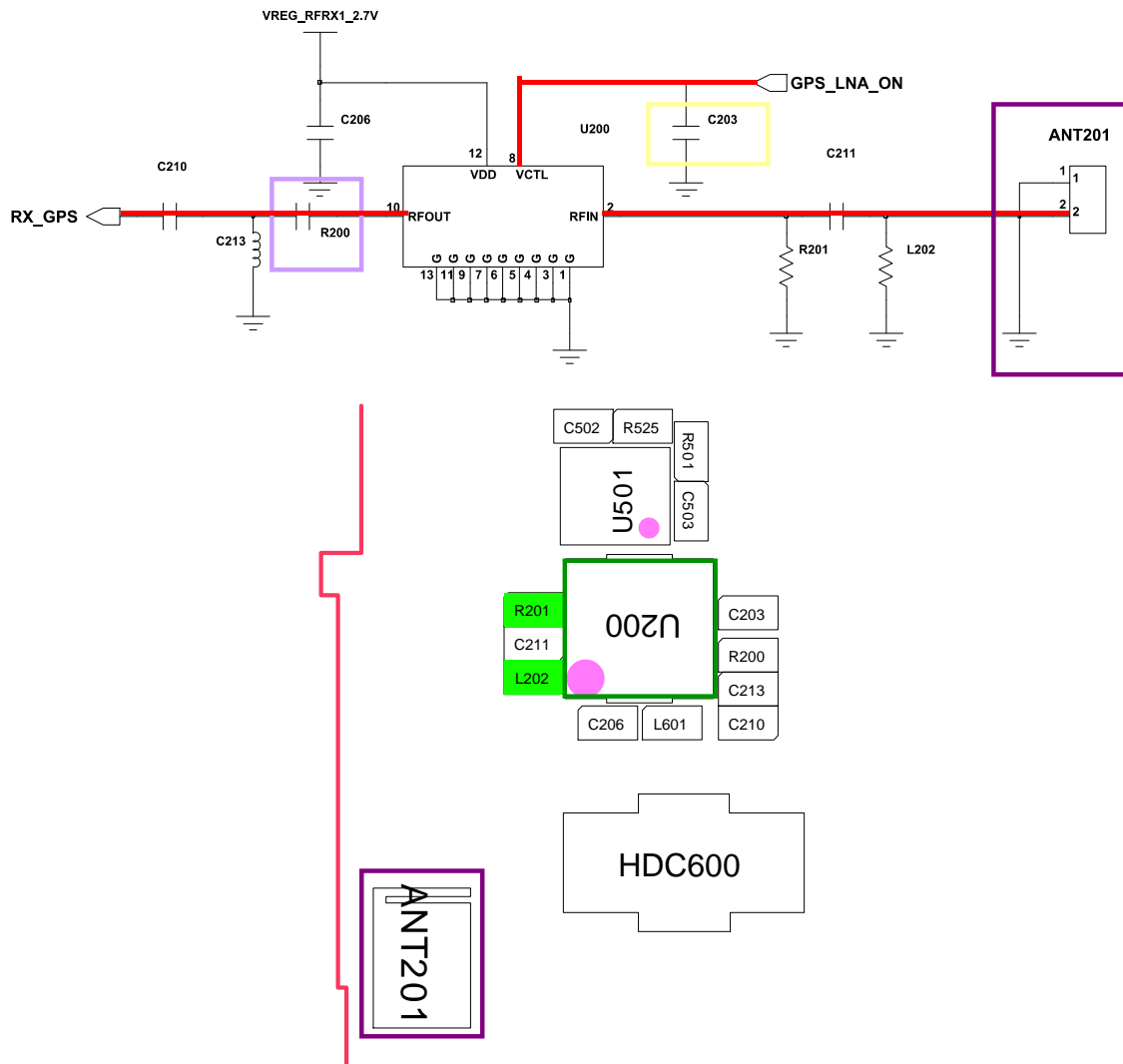


8-4-11. FM RADIO



8-4-12. GPS





8-5. Service Schematics

- NC Point(Top View)

● : NC

UME300

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|
| A | ○ | ○ | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| B | ○ | ○ | ○ | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| C | ○ | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| D | ○ | ○ | ○ | ○ | | | | | | | | ○ | ○ | ○ |
| E | ○ | ○ | ○ | | ○ | ● | ● | ○ | ● | ● | | ○ | ○ | ○ |
| F | ○ | ○ | ○ | | ○ | | | | | ● | | ○ | ○ | ○ |
| G | ○ | ○ | ○ | | ○ | | | | | ● | | ○ | ○ | ○ |
| H | ○ | ○ | ○ | | ○ | | | | | ○ | | ○ | ○ | ○ |
| J | ○ | ○ | ○ | | ○ | | | | | ○ | | ○ | ○ | ○ |
| K | ○ | ○ | ○ | | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ○ | ○ |
| L | ○ | ○ | ○ | | | | | | | | | ○ | ○ | ○ |
| M | ○ | ○ | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| N | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| P | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

U401

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | |
|---|---|---|---|---|---|---|---|---|---|----|----|---|
| A | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● |
| B | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| C | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| D | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| E | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● | ○ |
| F | ○ | ○ | ○ | ● | ○ | ○ | ○ | ○ | ○ | ○ | ● | ○ |
| G | ○ | ○ | ○ | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ |
| H | ● | ○ | ○ | ○ | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ |
| J | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| K | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● |

UCP300

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | |
|----|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| A | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | A | |
| B | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● | B |
| C | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● | C |
| D | ● | ○ | ○ | | | | | | | | | | | | | | | | | | | | | | ○ | ○ | ● | D | |
| E | ● | ○ | ○ | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ○ | ● | E | |
| F | ● | ○ | ○ | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ○ | ● | F | |
| G | ● | ○ | ○ | | ○ | ○ | | | | | | | | | | | | | | | | ○ | ○ | | ○ | ○ | ● | G | |
| H | ● | ○ | ○ | | ○ | ○ | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ○ | | ○ | ○ | ● | H |
| J | ● | ○ | ○ | | ○ | ○ | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ○ | | ○ | ○ | ● | J | |
| K | ● | ○ | ○ | | ○ | ○ | | ○ | ○ | | | | | | | | | | | ○ | ○ | | ○ | ○ | | ○ | ○ | ● | K |
| L | ● | ○ | ○ | | ○ | ○ | | ○ | ○ | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ○ | | ○ | ○ | | ○ | ○ | ● | L | |
| M | ● | ○ | ○ | | ○ | ○ | | ○ | ○ | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ○ | | ○ | ○ | | ○ | ○ | ● | M | |
| N | ● | ○ | ○ | | ○ | ○ | | ○ | ○ | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ○ | | ○ | ○ | | ○ | ○ | ● | N | |
| P | ● | ○ | ○ | | ○ | ○ | | ○ | ○ | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ○ | | ○ | ○ | | ○ | ○ | ● | P | |
| R | ● | ○ | ○ | | ○ | ○ | | ○ | ○ | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ○ | | ○ | ○ | | ○ | ○ | ● | R | |
| T | ● | ○ | ○ | | ○ | ○ | | ○ | ○ | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ○ | | ○ | ○ | | ○ | ○ | ● | T | |
| U | ● | ○ | ○ | | ○ | ○ | | ○ | ○ | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ○ | | ○ | ○ | | ○ | ○ | ● | U | |
| V | ● | ○ | ○ | | ○ | ○ | | ○ | ○ | | | | | | | | | | ○ | ○ | | ○ | ○ | | ○ | ○ | ● | V | |
| W | ● | ○ | ○ | | ○ | ○ | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ○ | | ○ | ○ | ● | W | |
| Y | ● | ○ | ○ | | ○ | ○ | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ○ | | ○ | ○ | ● | Y | |
| AA | ● | ○ | ○ | | ○ | ○ | | | | | | | | | | | | | | | | ○ | ○ | | ○ | ○ | ● | AA | |
| AB | ● | ○ | ○ | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ○ | ● | AB | |
| AC | ● | ○ | ○ | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ○ | ● | AC | |
| AD | ● | ○ | ○ | | | | | | | | | | | | | | | | | | | | | | ○ | ○ | ● | AD | |
| AE | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● | AE |
| AF | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● | AF |
| AG | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | AG |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | | |

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