

### 8-1. Block Diagram



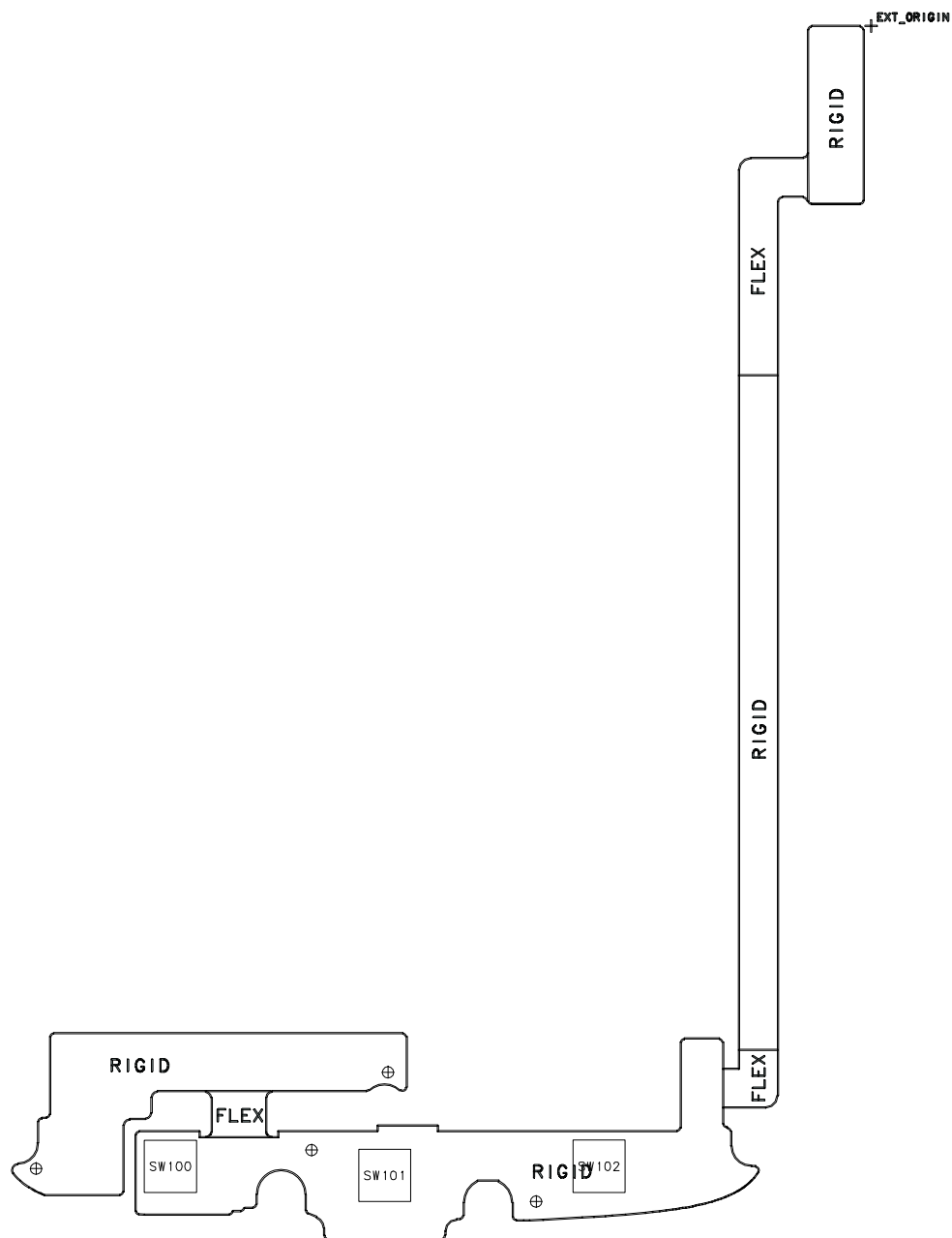
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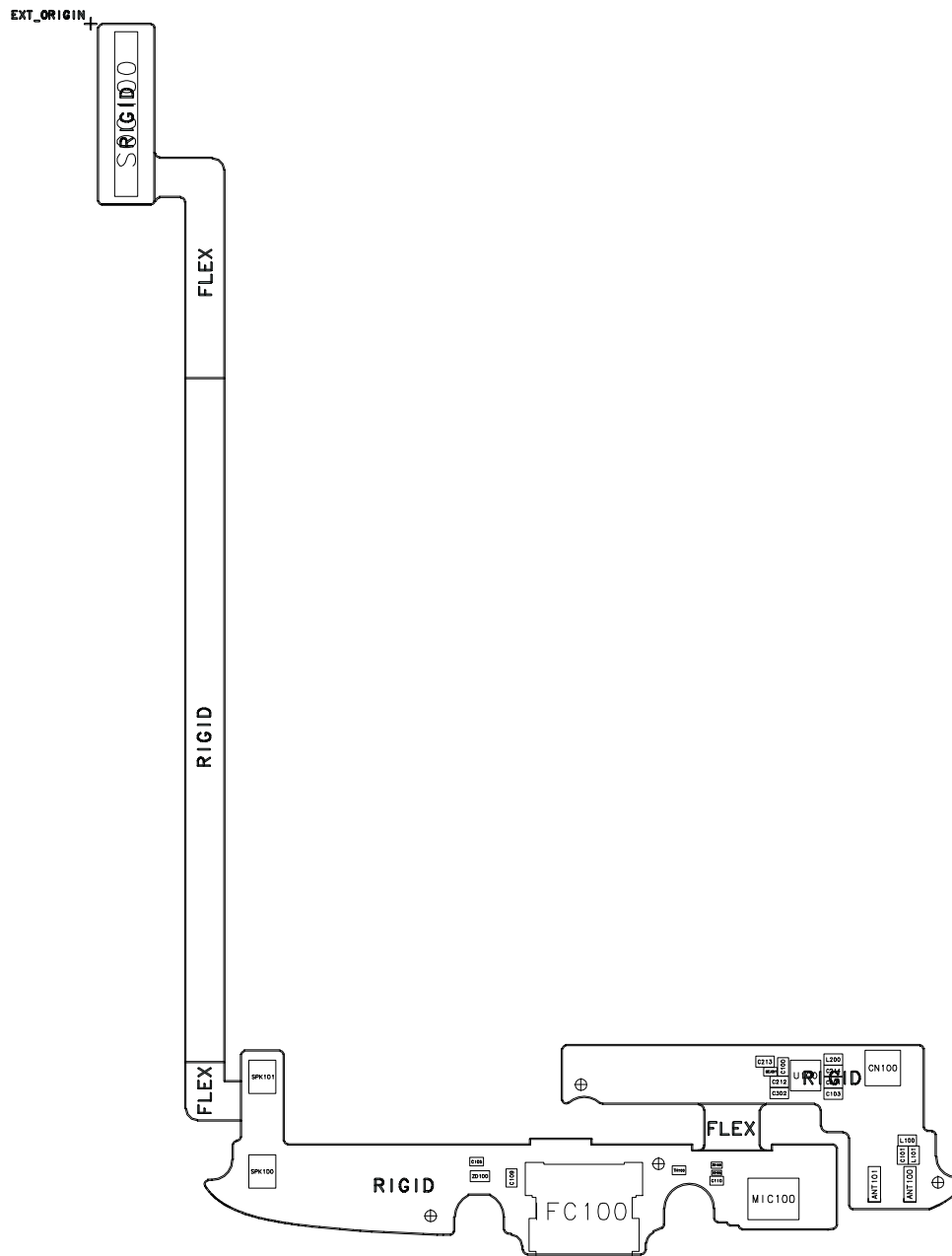
## 8-2-2. Bottom



### 8-2-3. Sub PCB Top

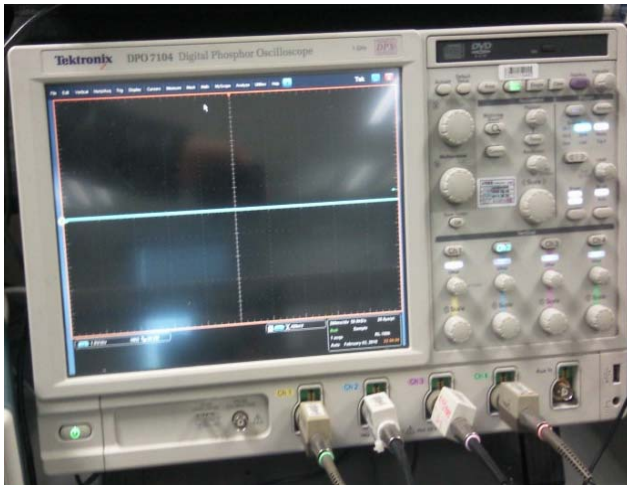


## 8-2-4. Sub PCB Bottom



### 8-3. Flow Chart of Troubleshooting

#### Equipments



↑ Oscilloscope



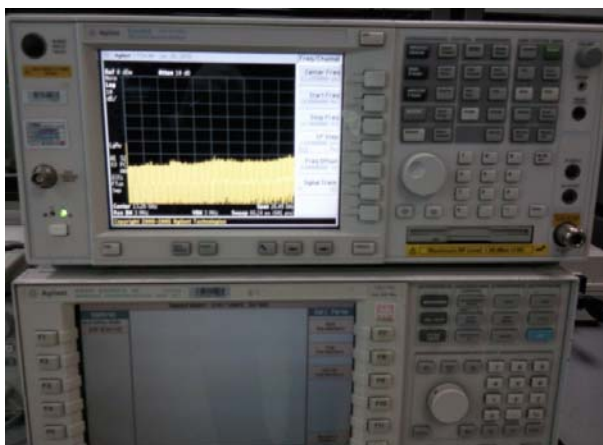
↗ Digital Multimeter



↗ Power Supply



↗ + driver, ESD Safe Tweezer

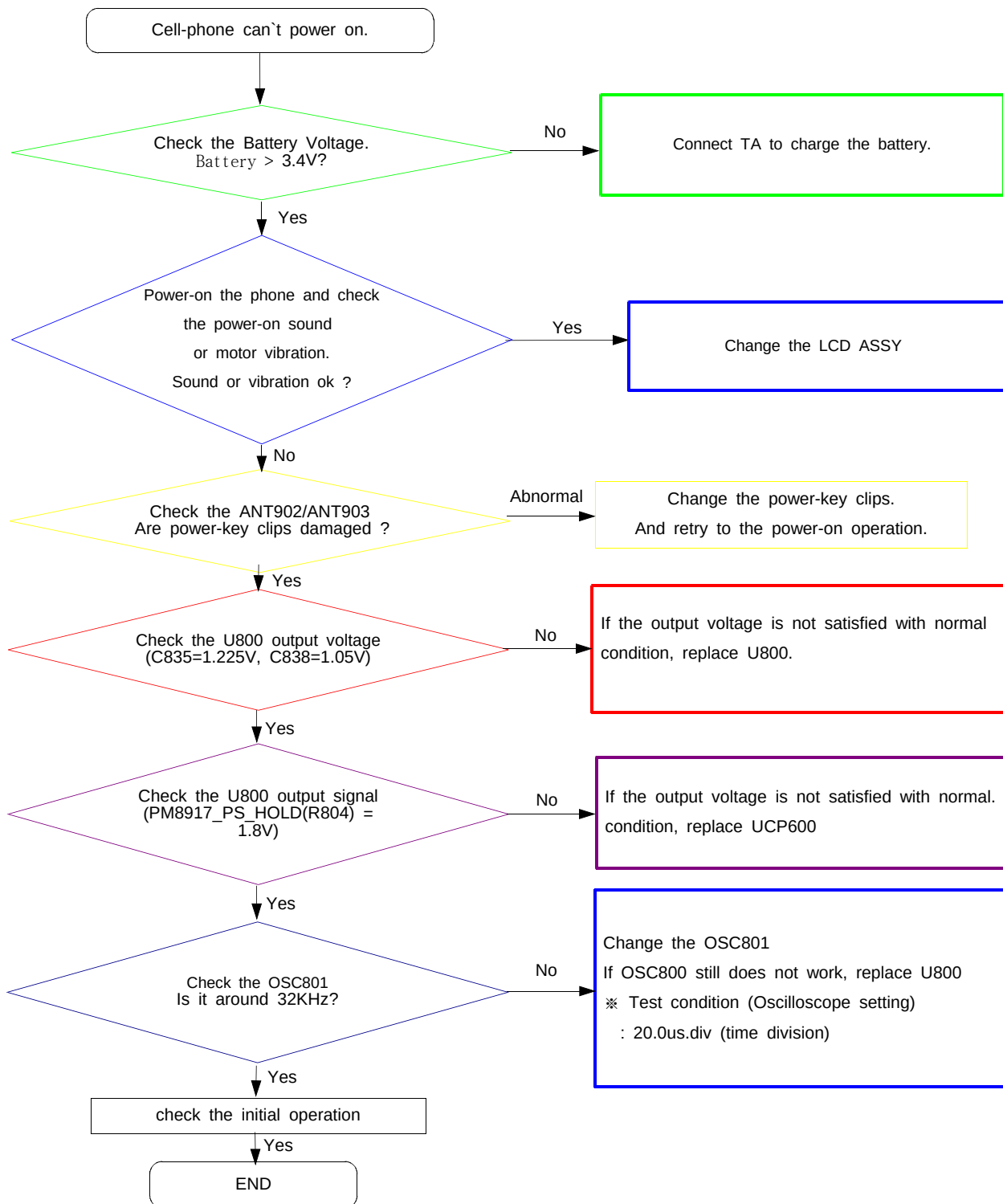


↑ 8960 & Spectrum Analyzer



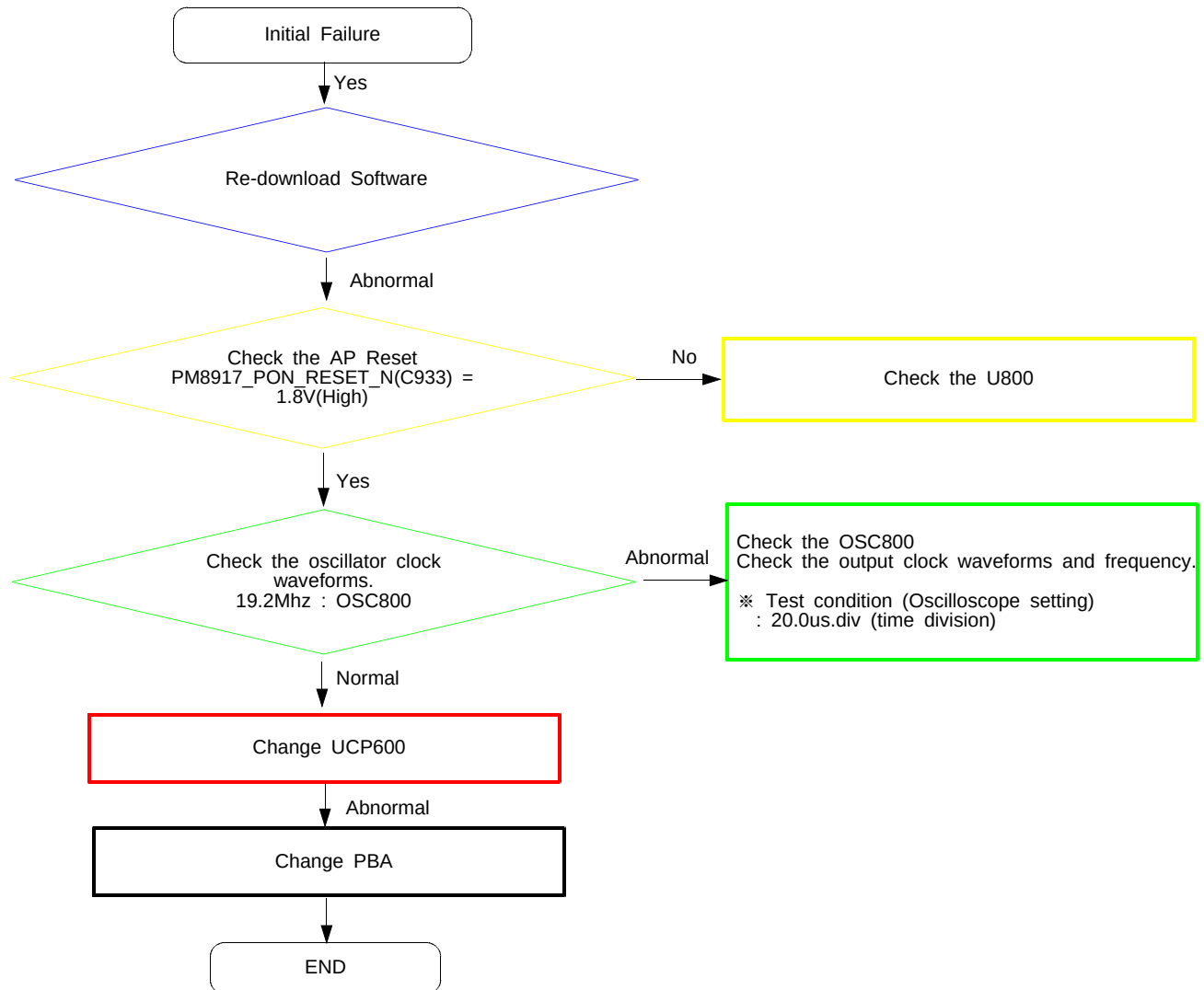
↗ Soldering iron

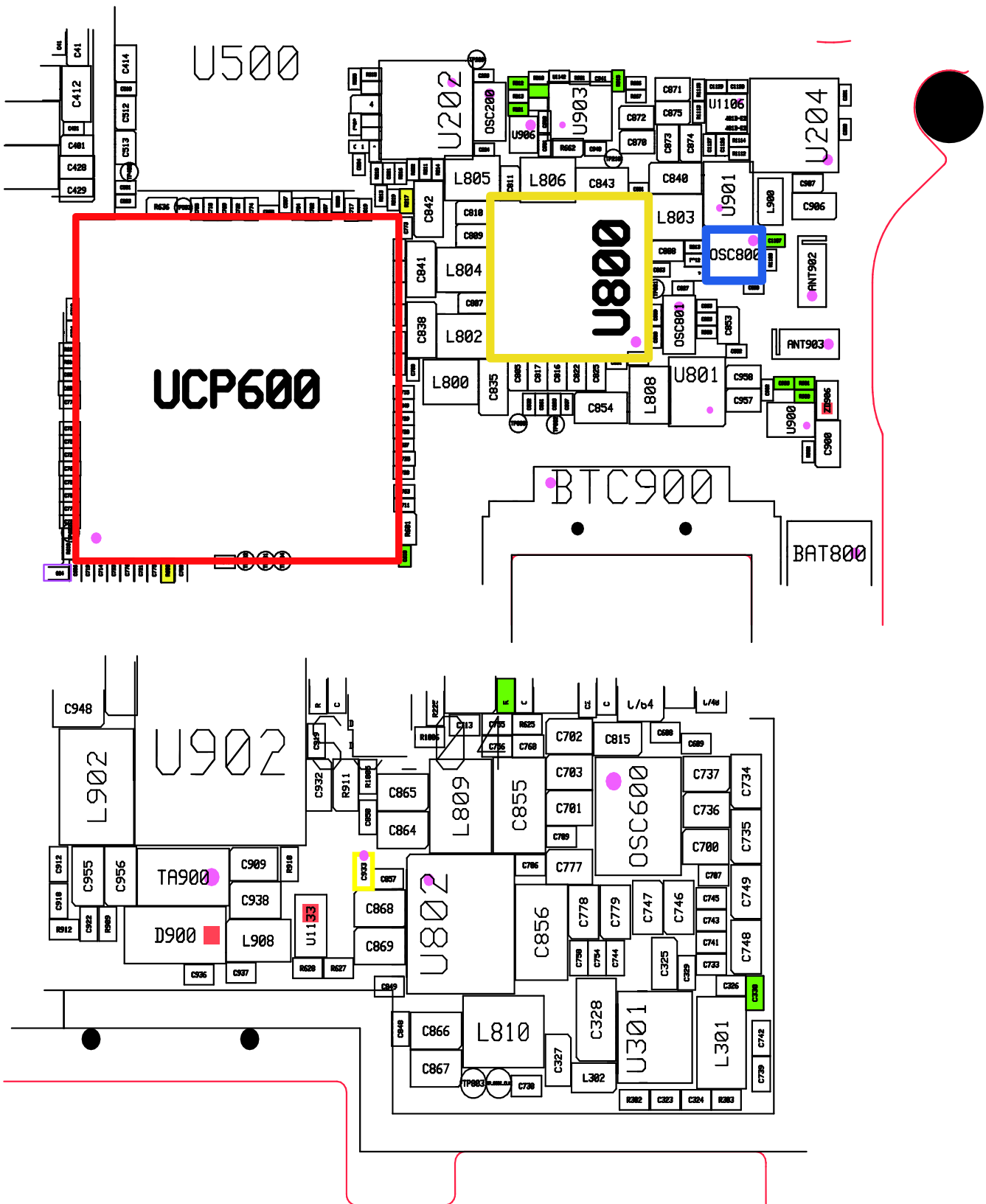
## 8-3-1. Power On



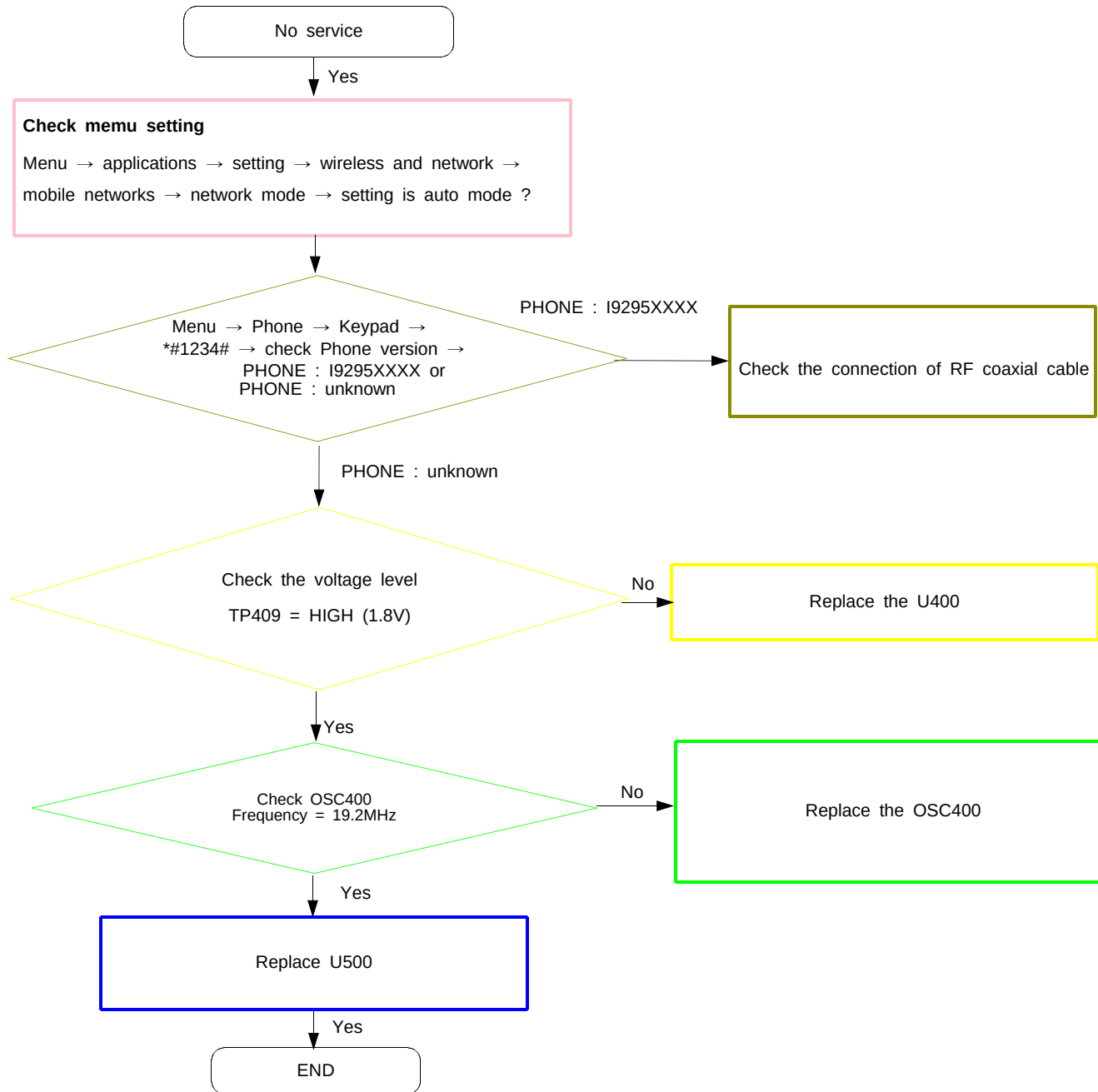


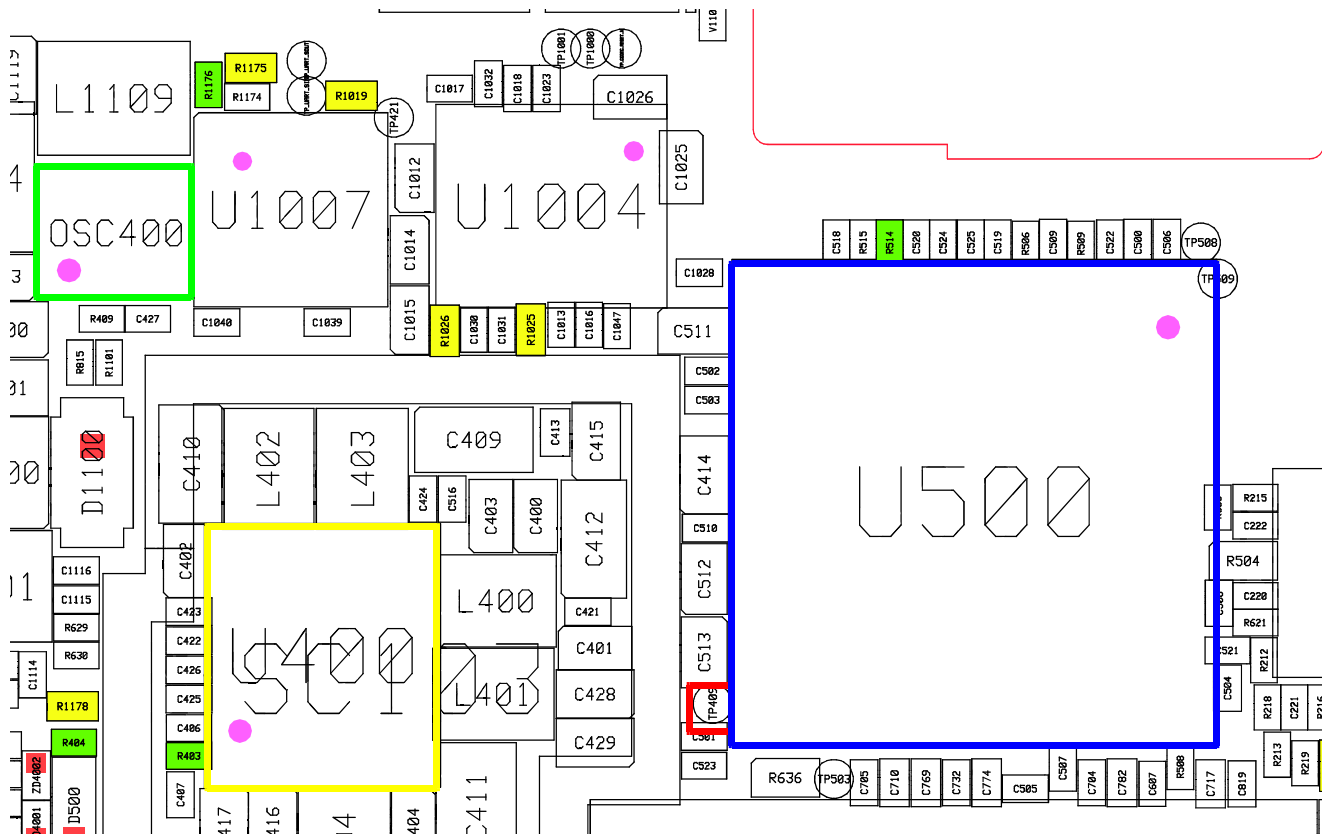
## 8-3-2. Initial



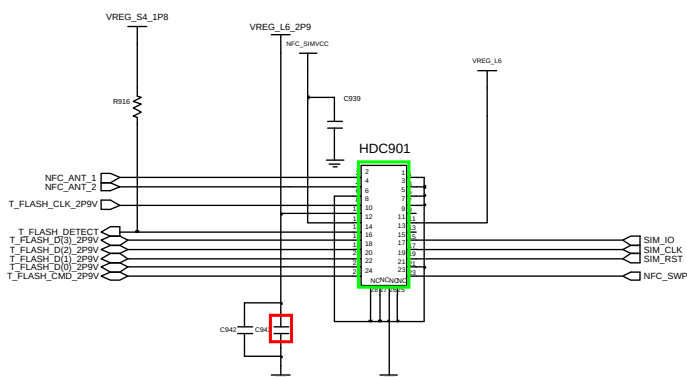
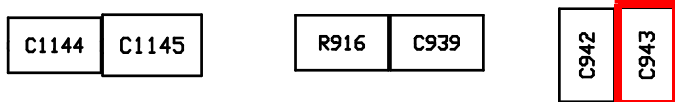
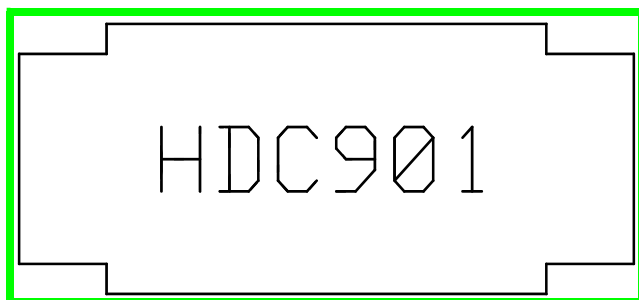
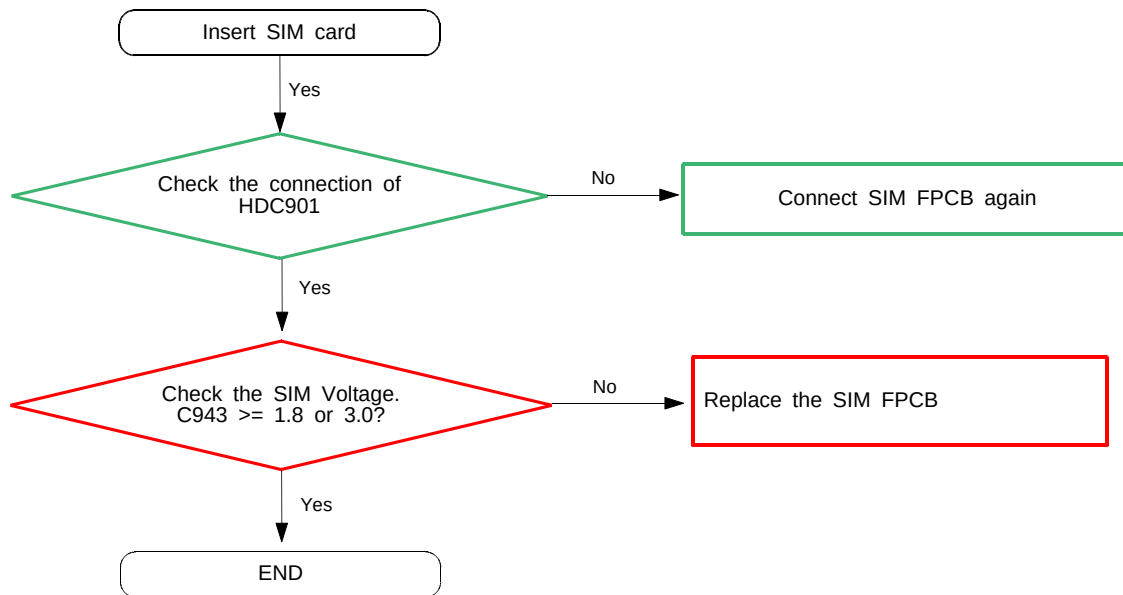


## 8-3-3. No Service

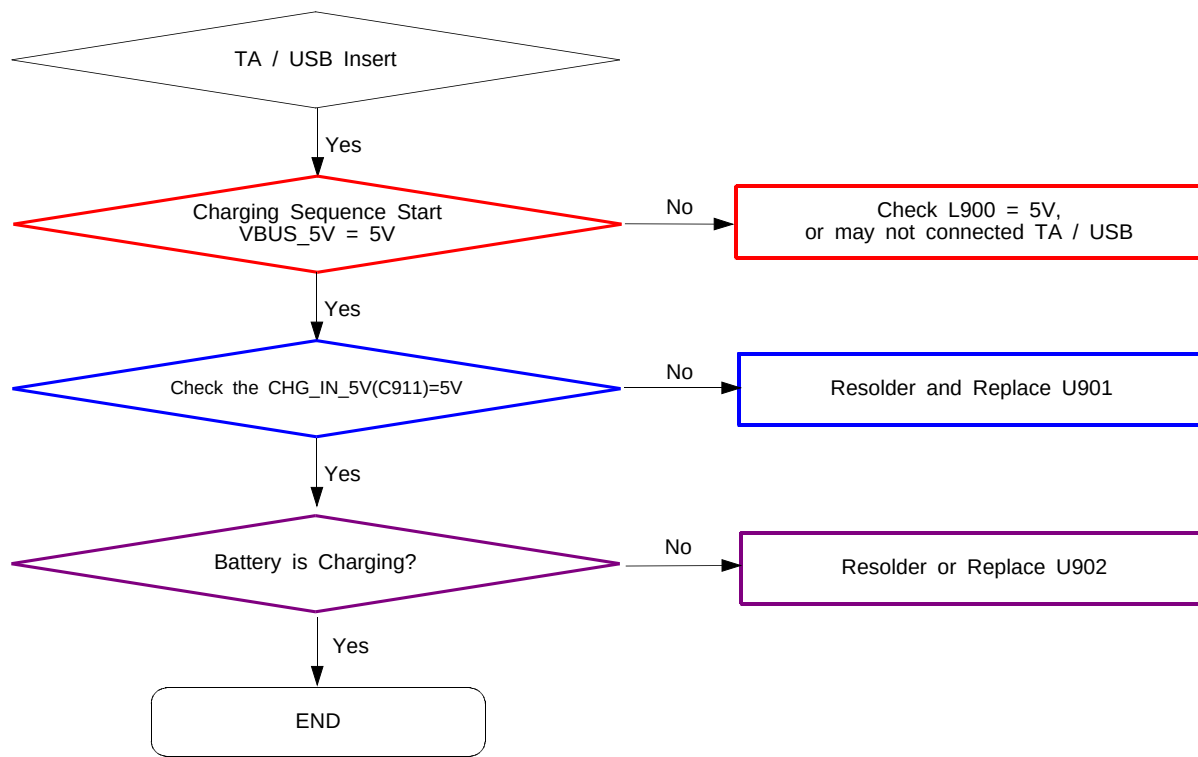


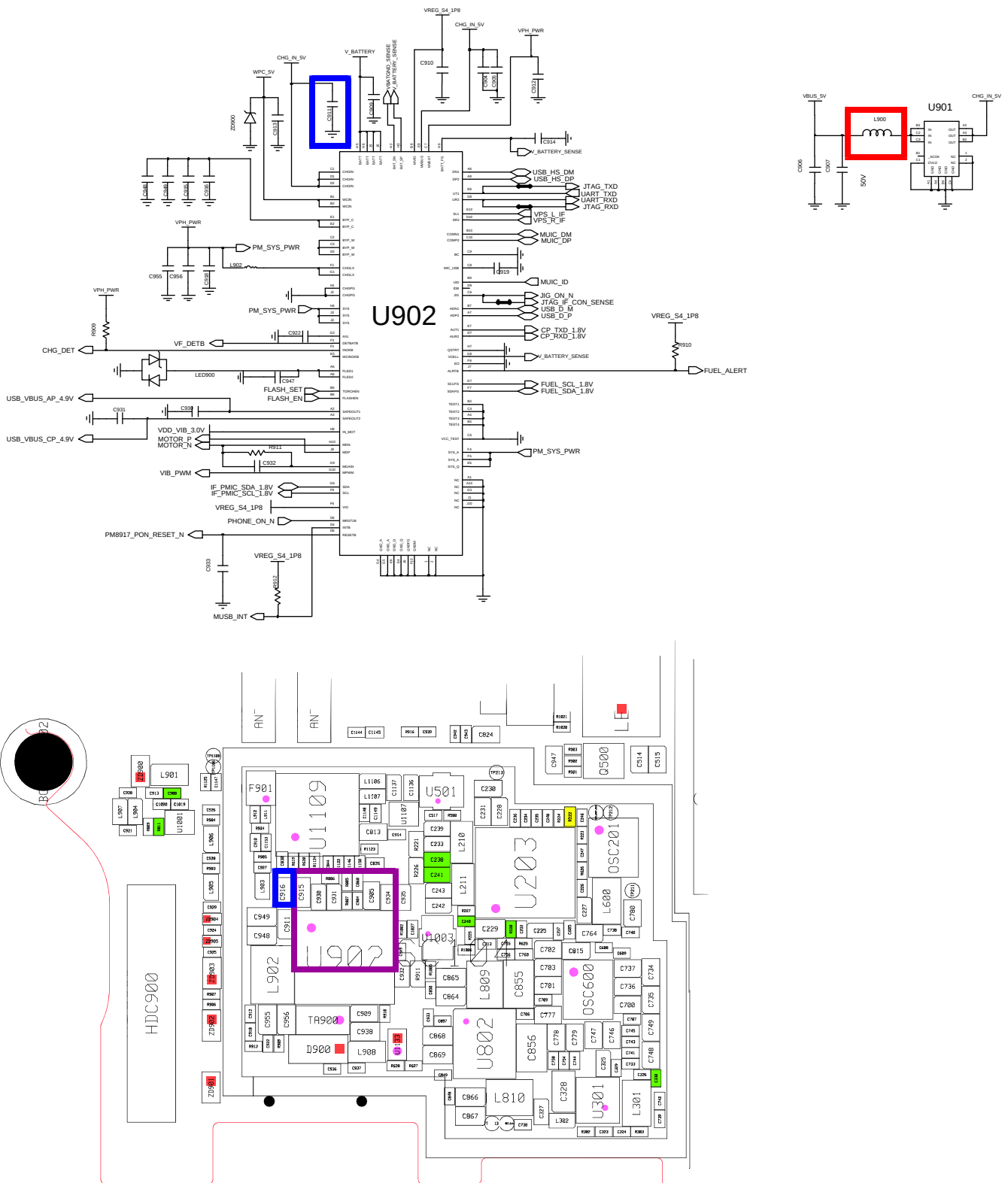


## 8-3-4. Sim Part

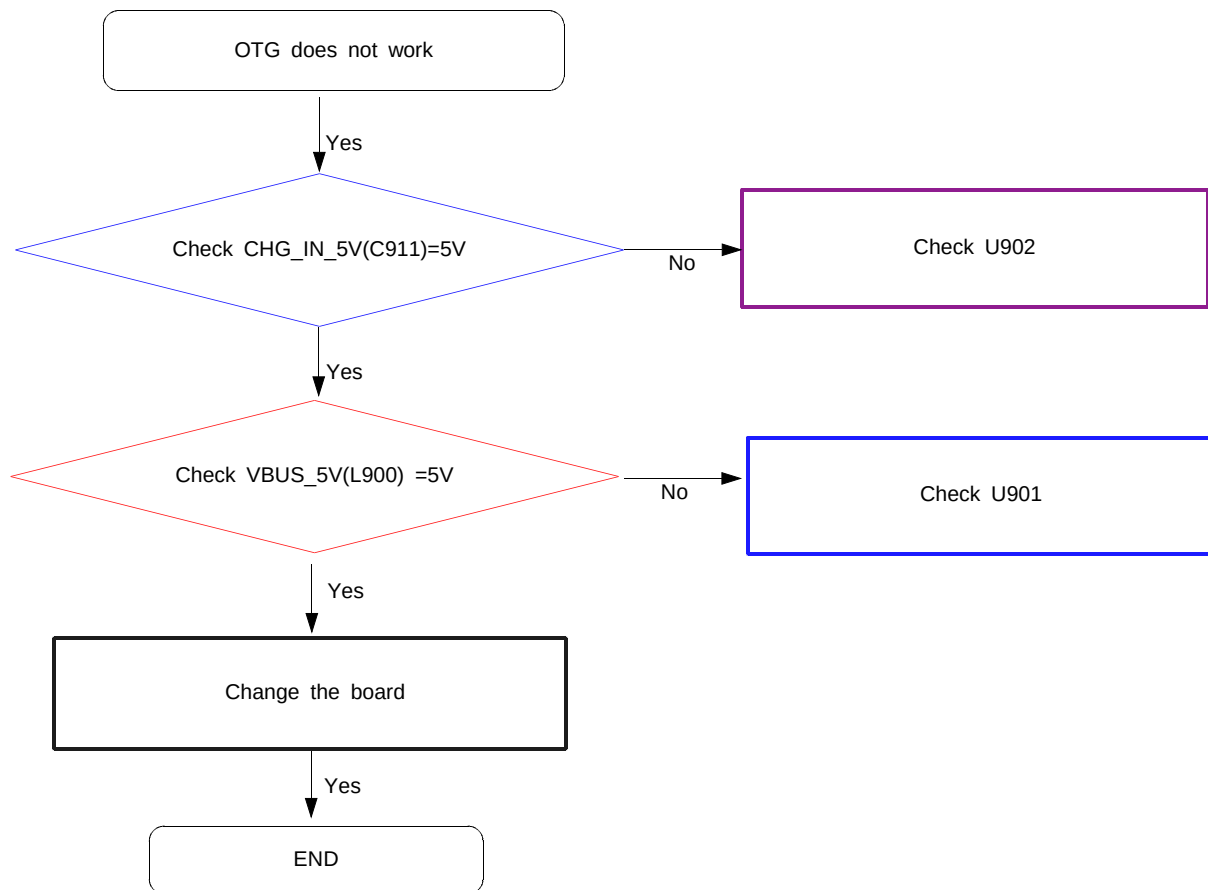


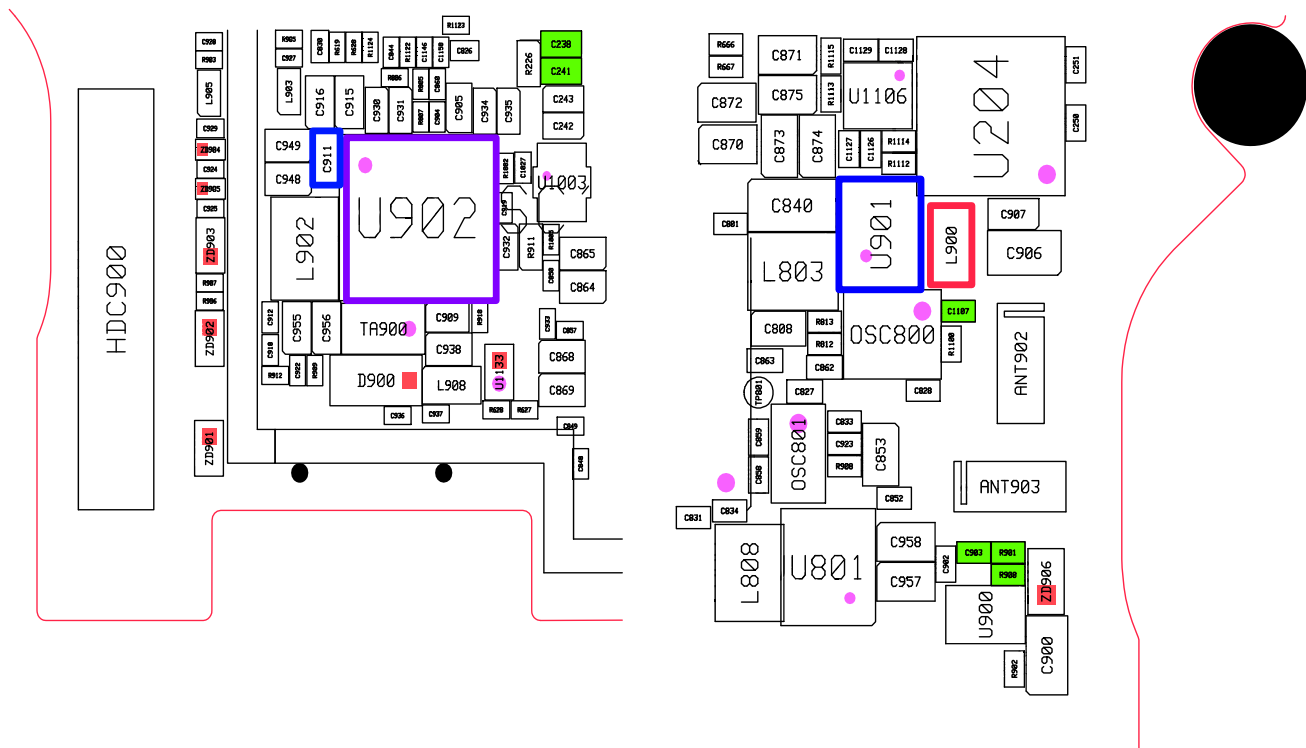
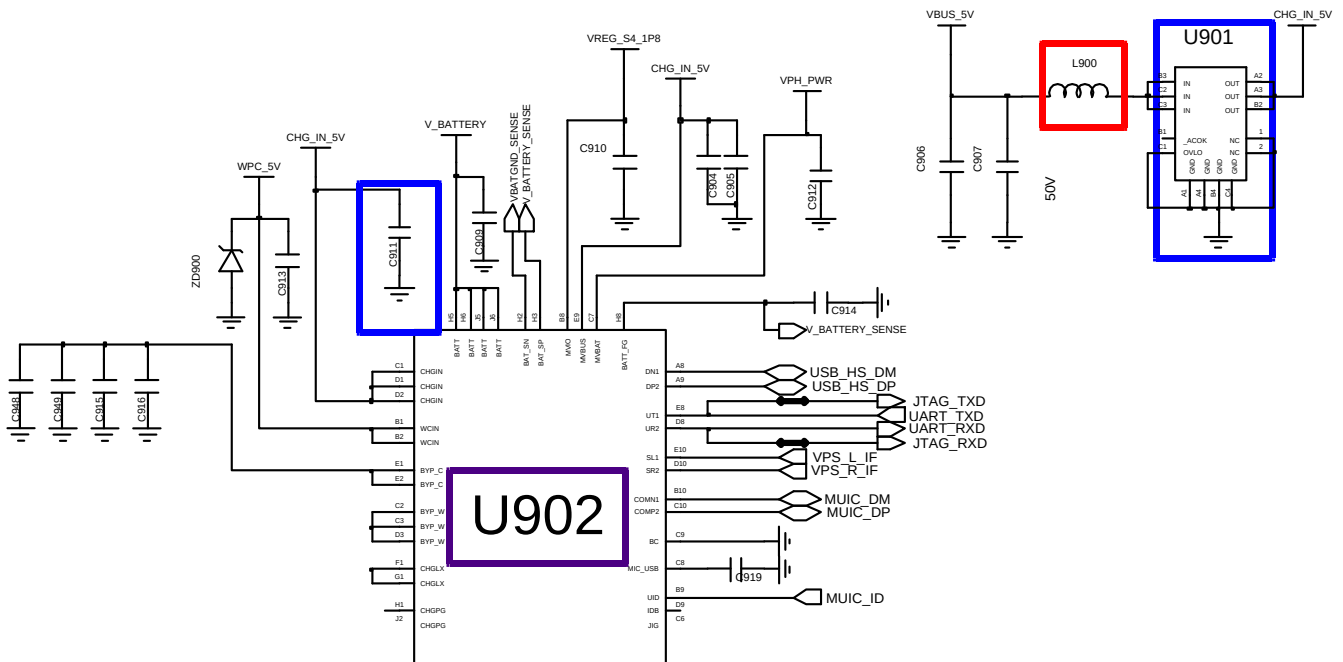
### 8-3-5. Charging Part



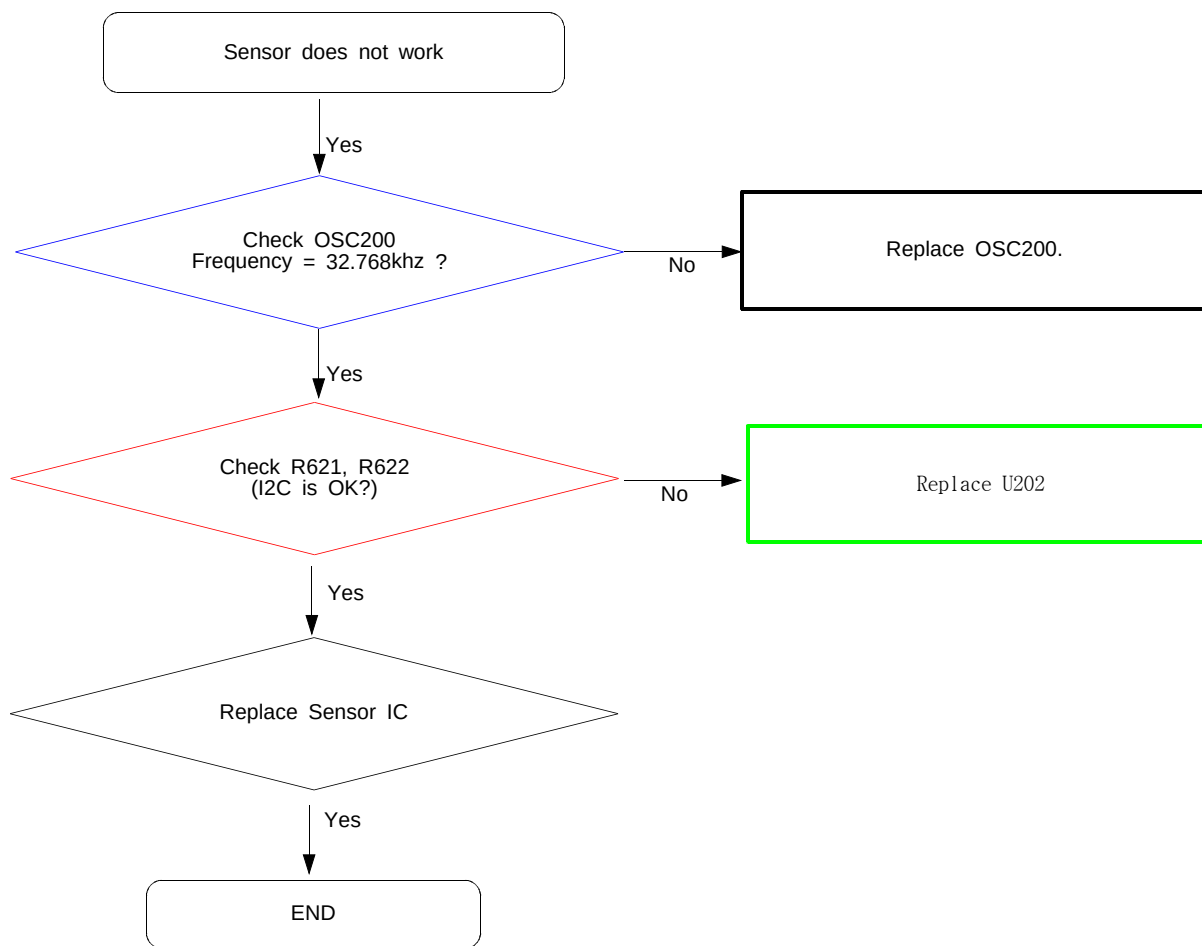


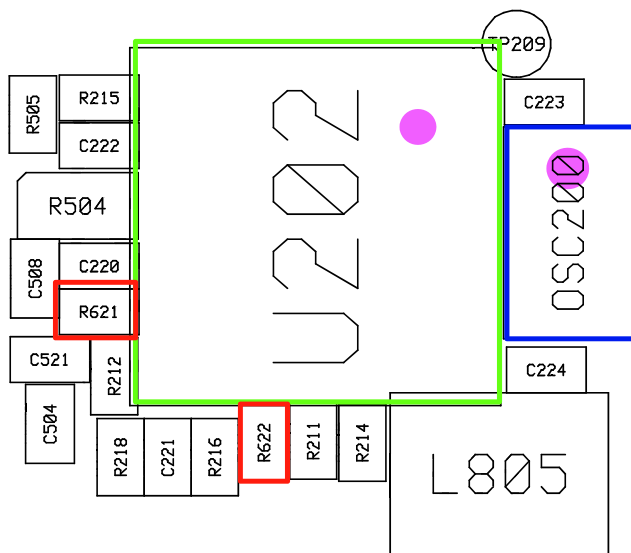
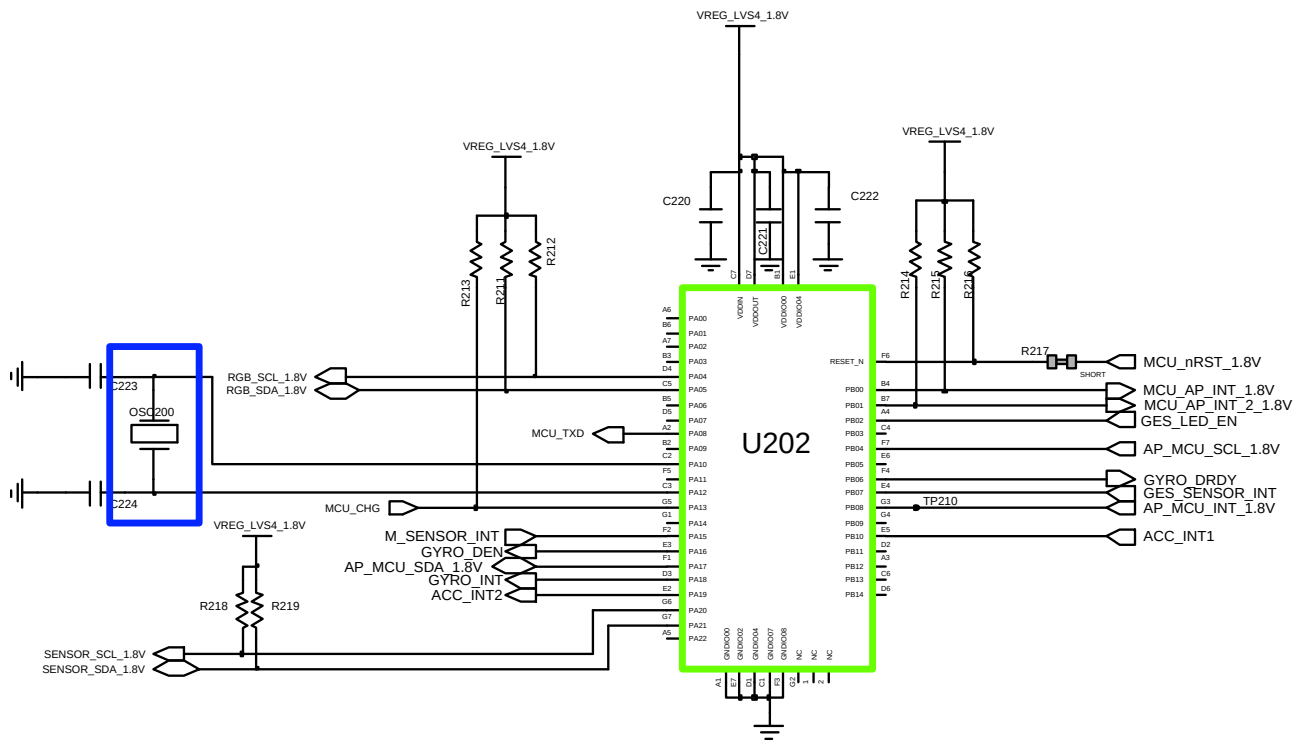
### 8-3-6. OTG



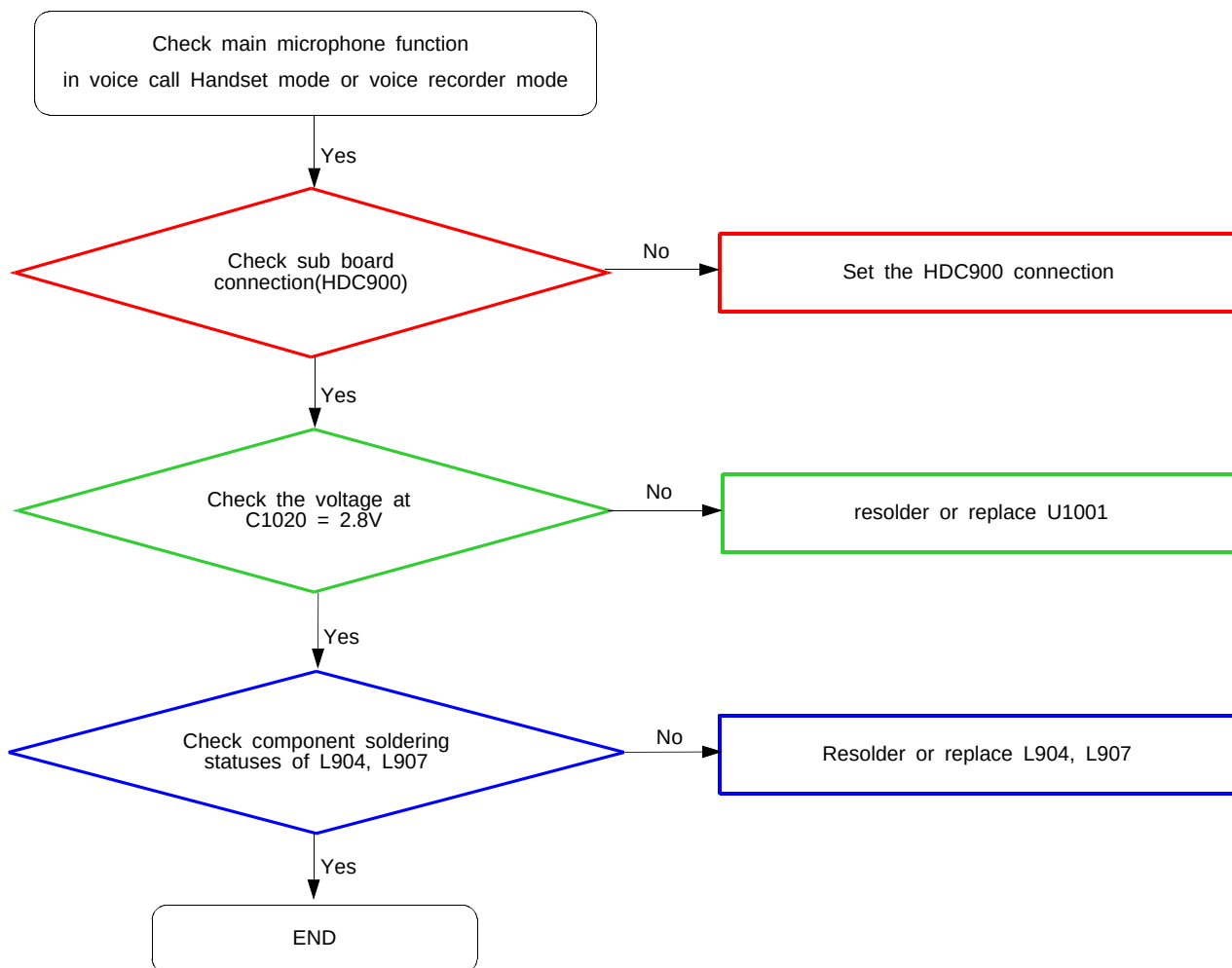


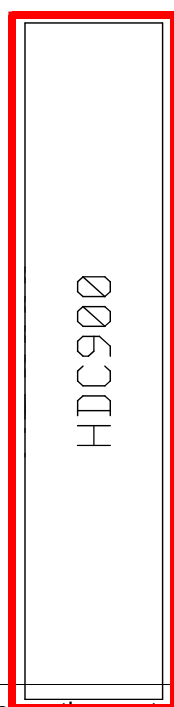
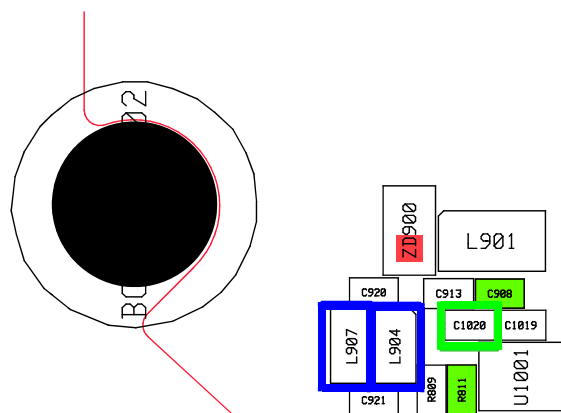
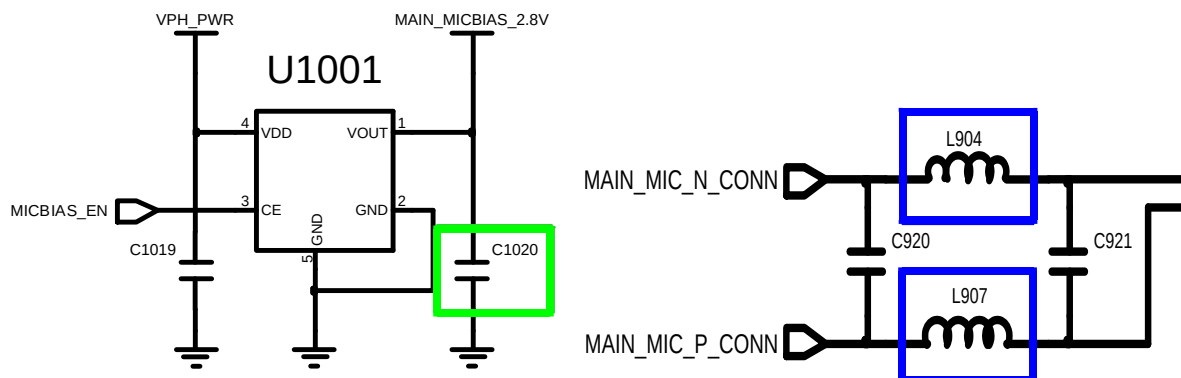
### 8-3-7. Sensor



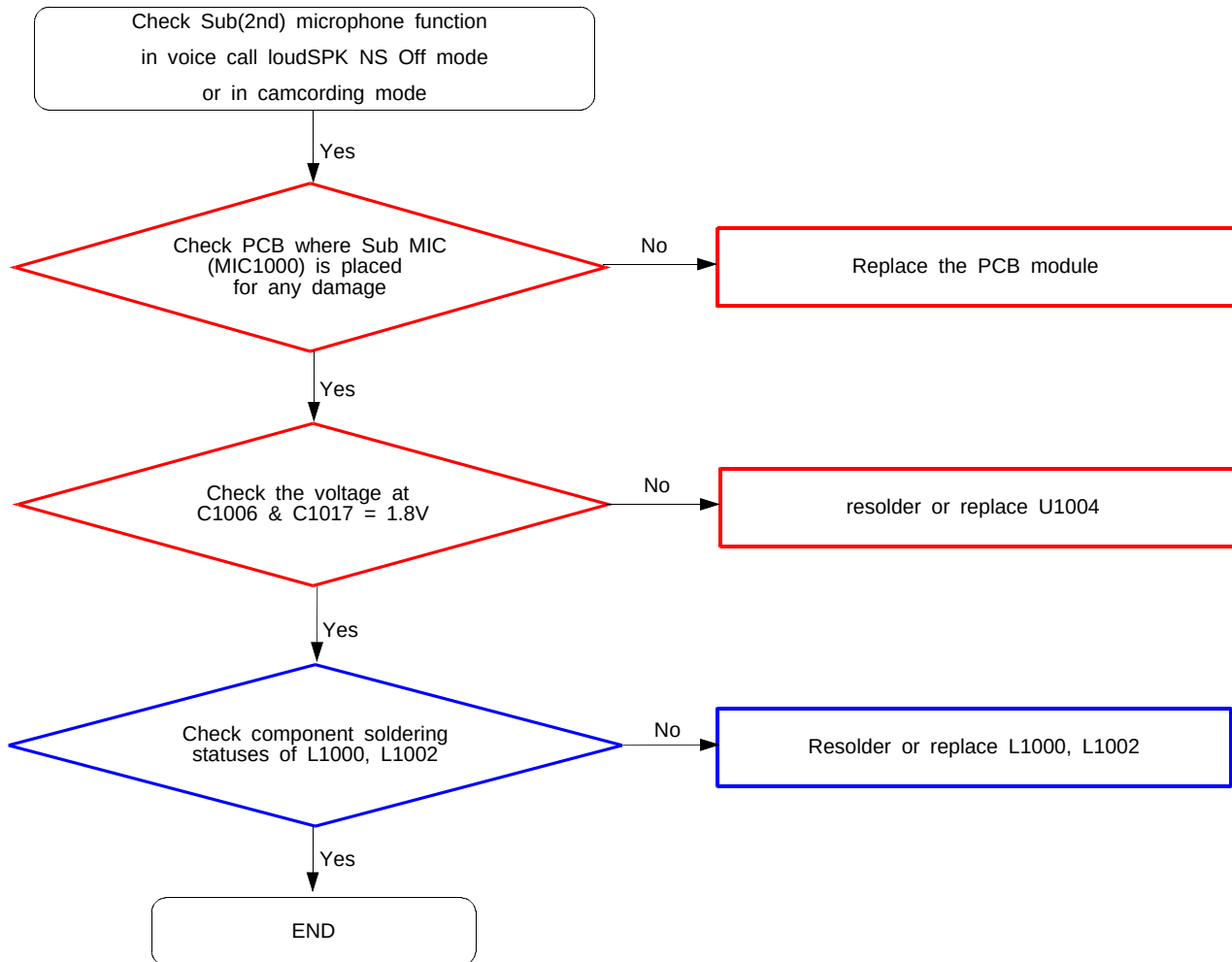


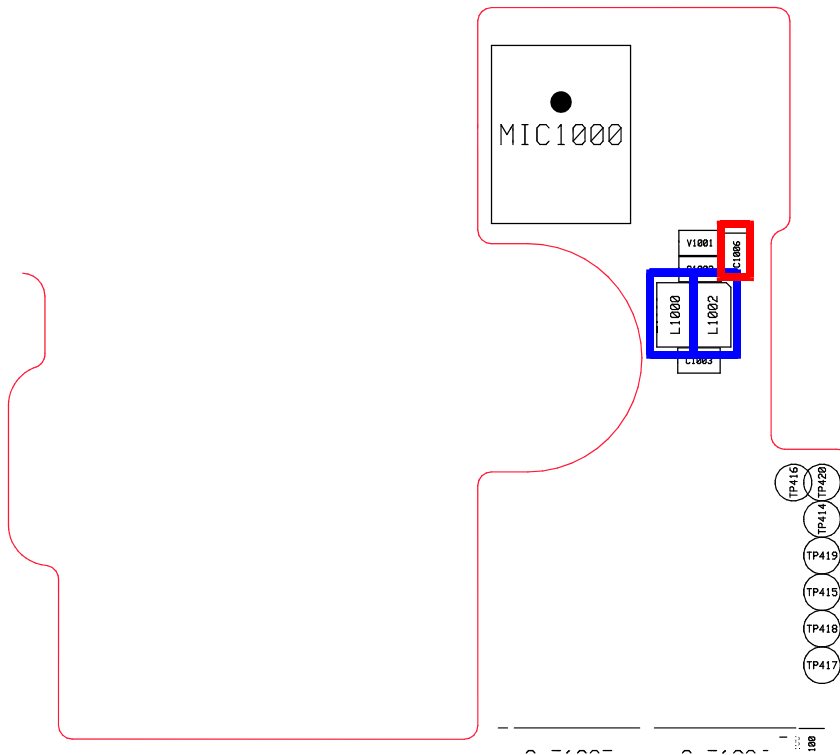
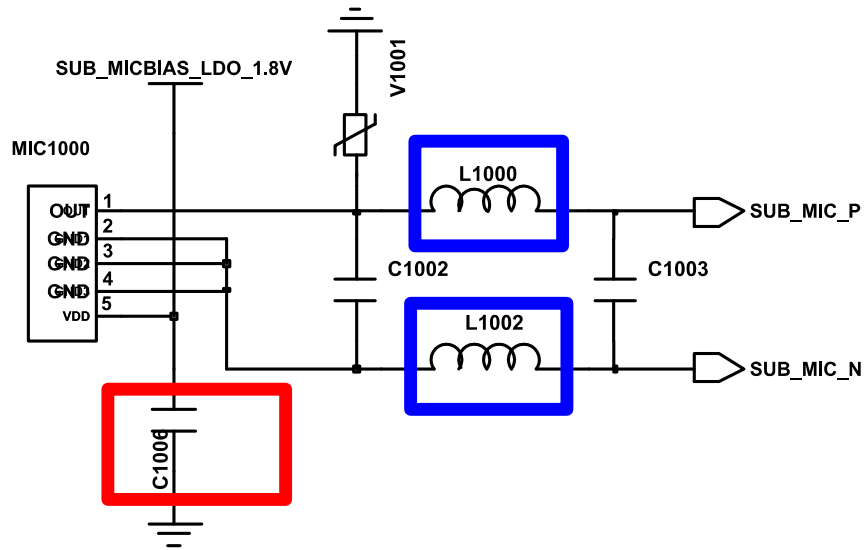
### 8-3-8-1 Microphone Part – Main MIC

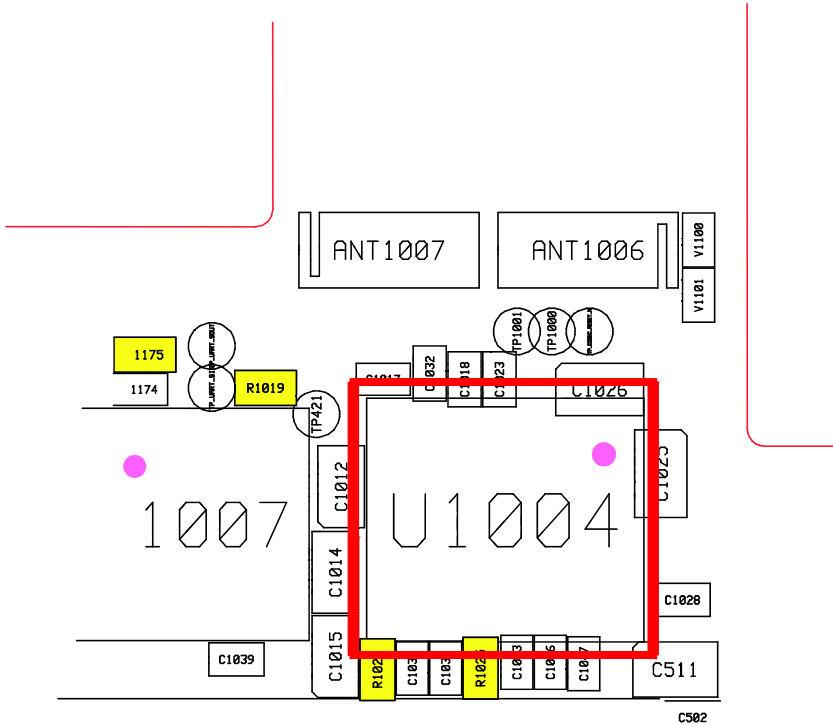




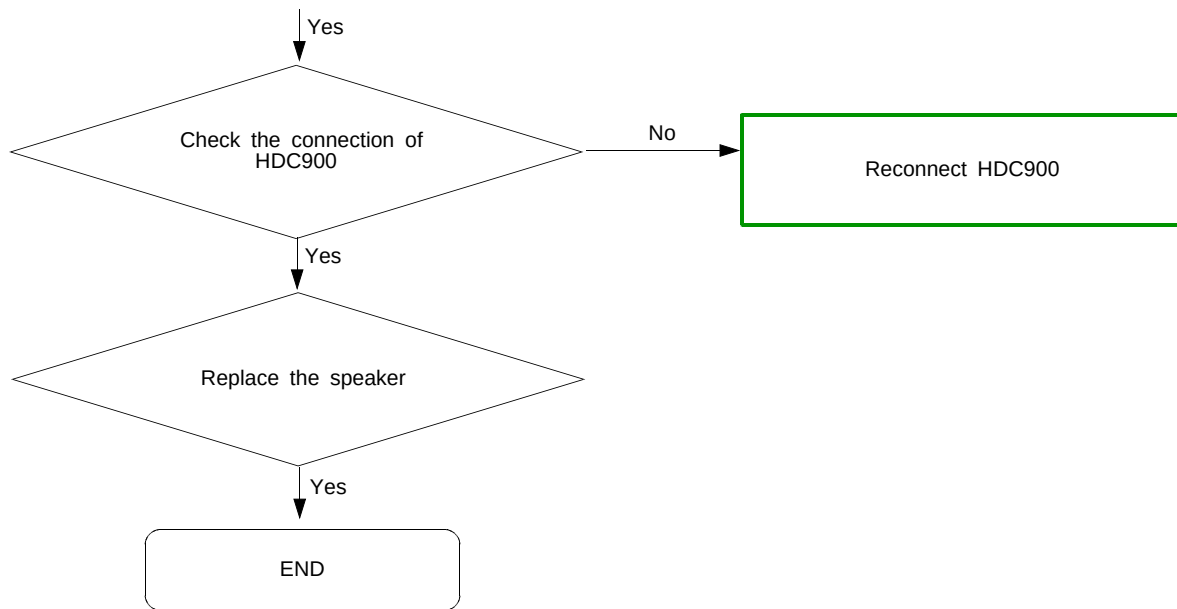
### 8-3-8-2. Microphone Part - Sub(2nd) MIC

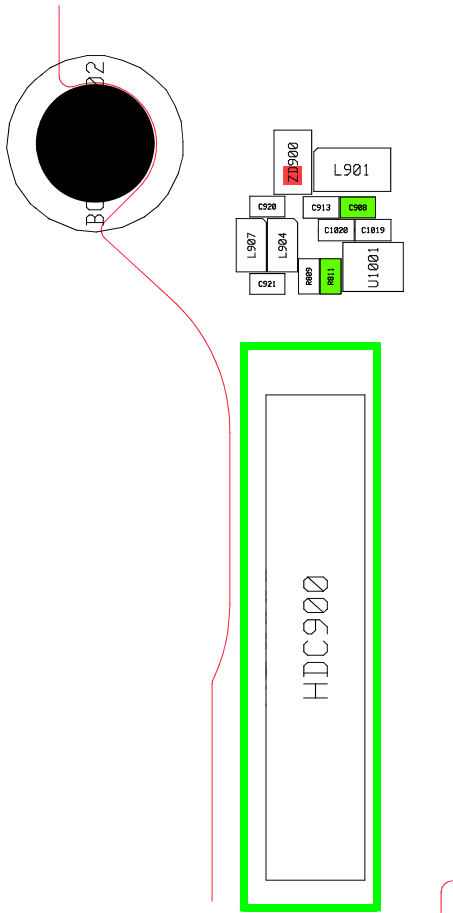




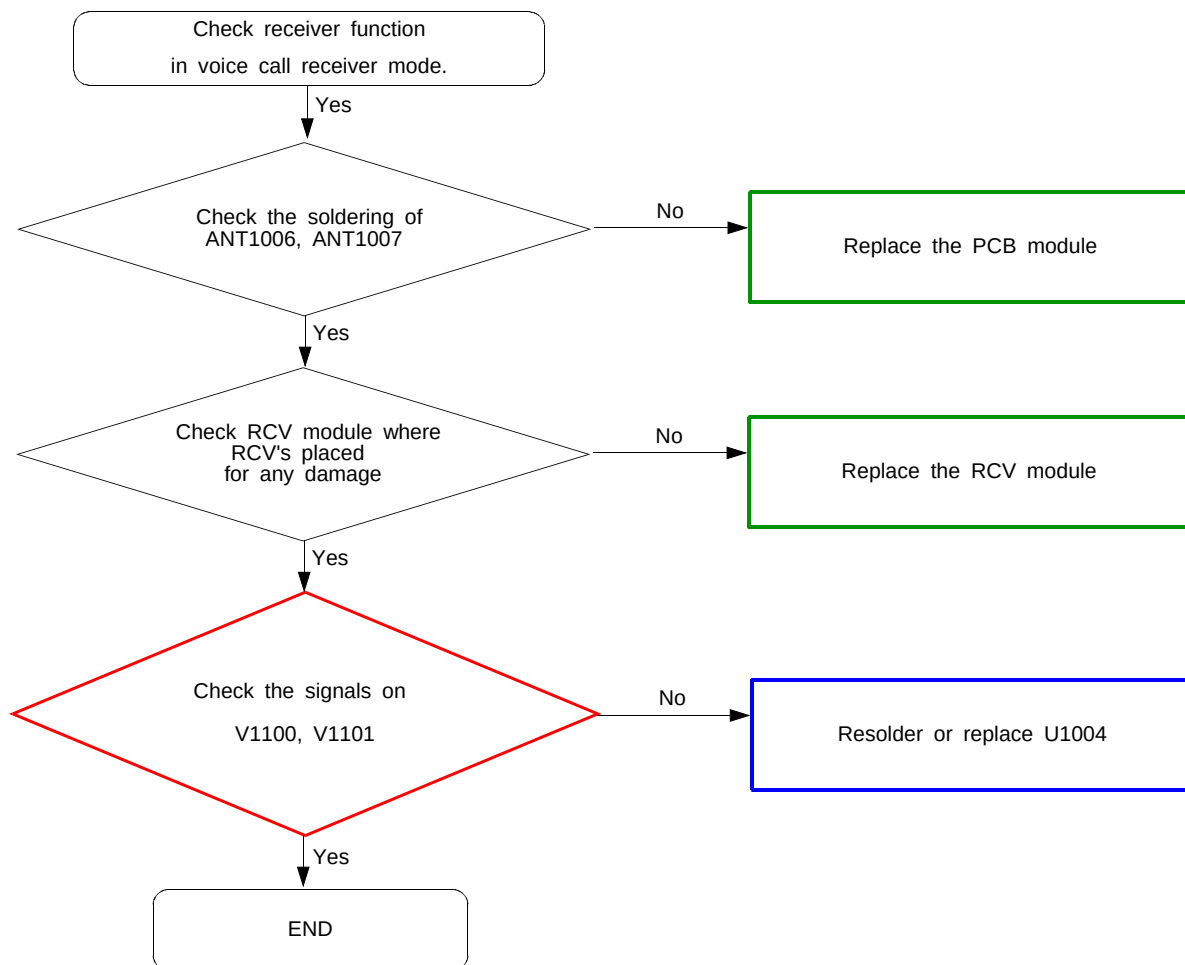


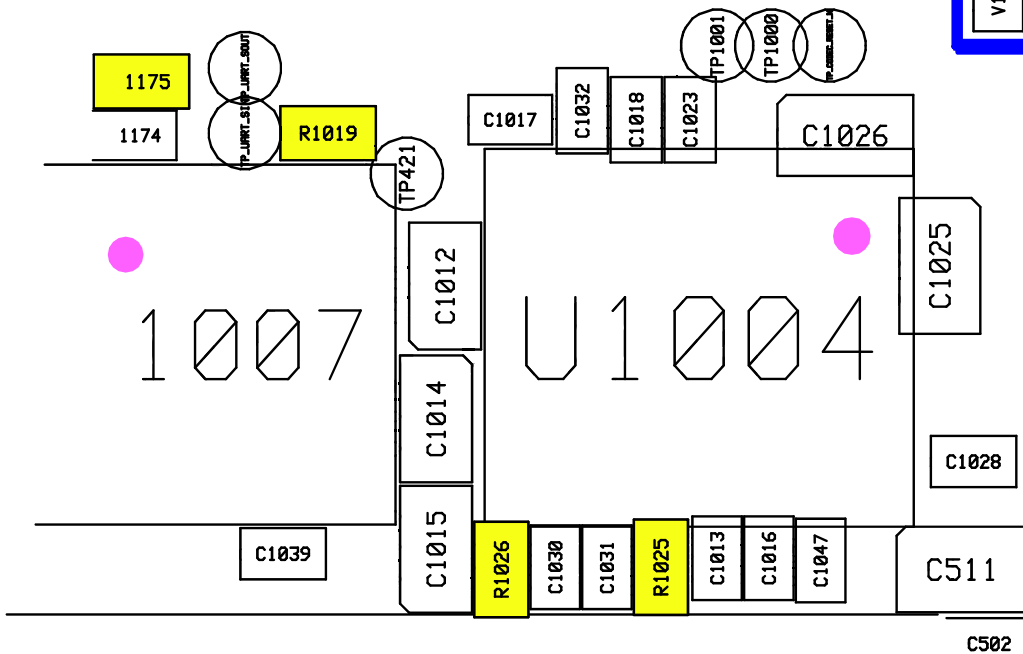
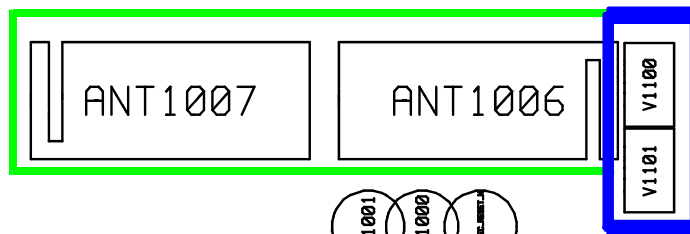
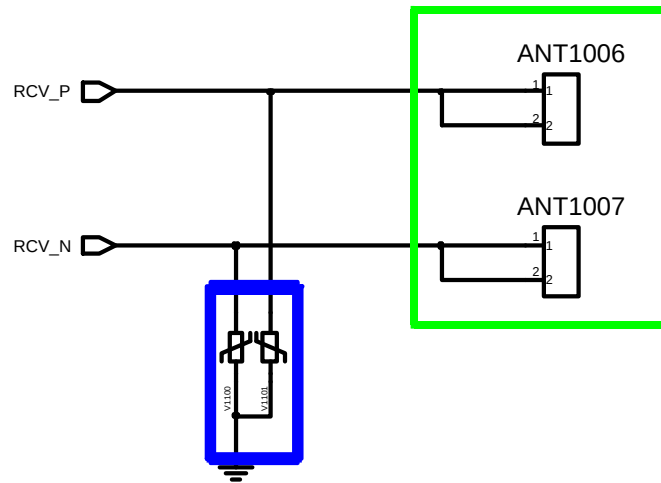
## 8-3-9. Speaker Part



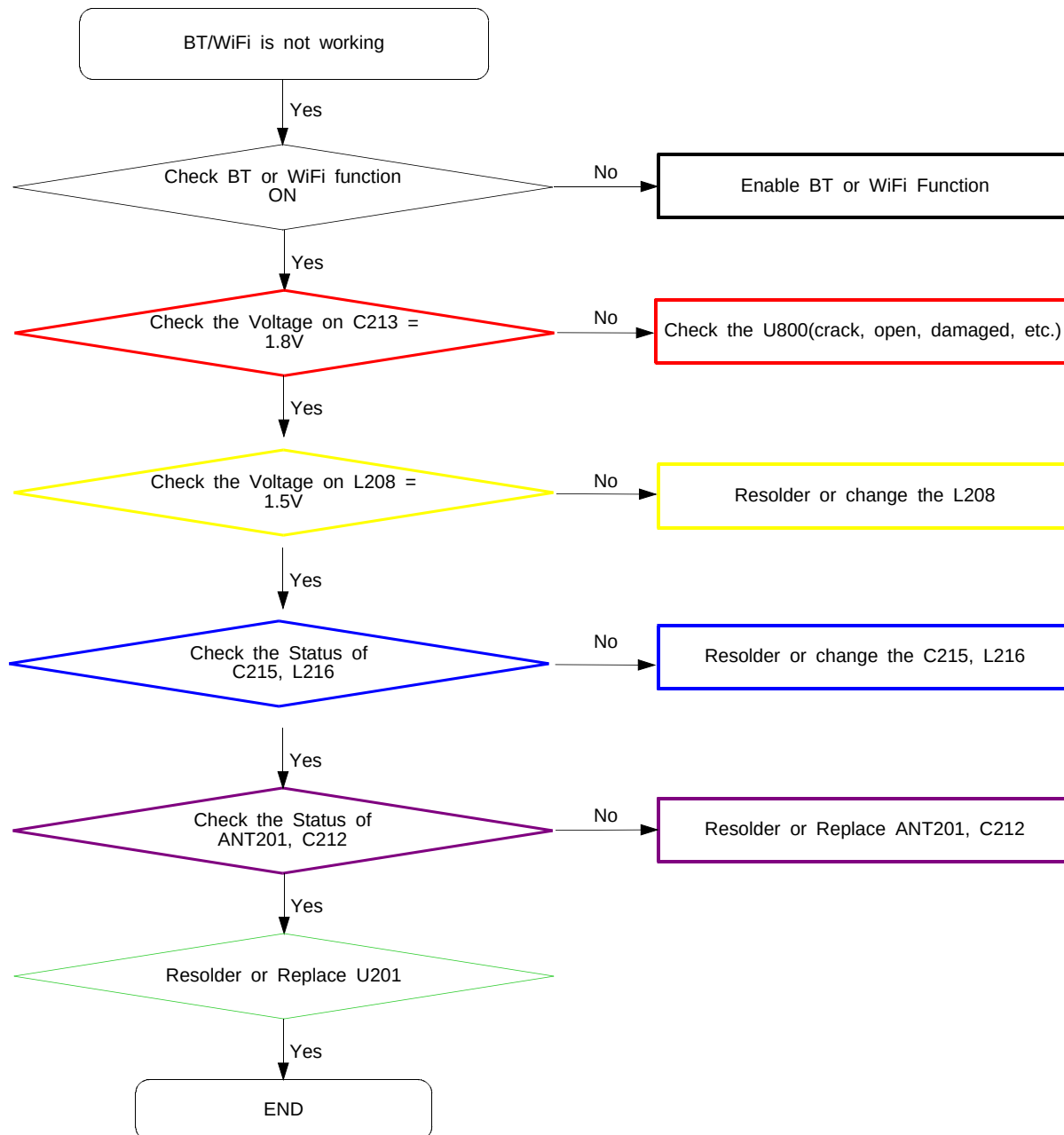


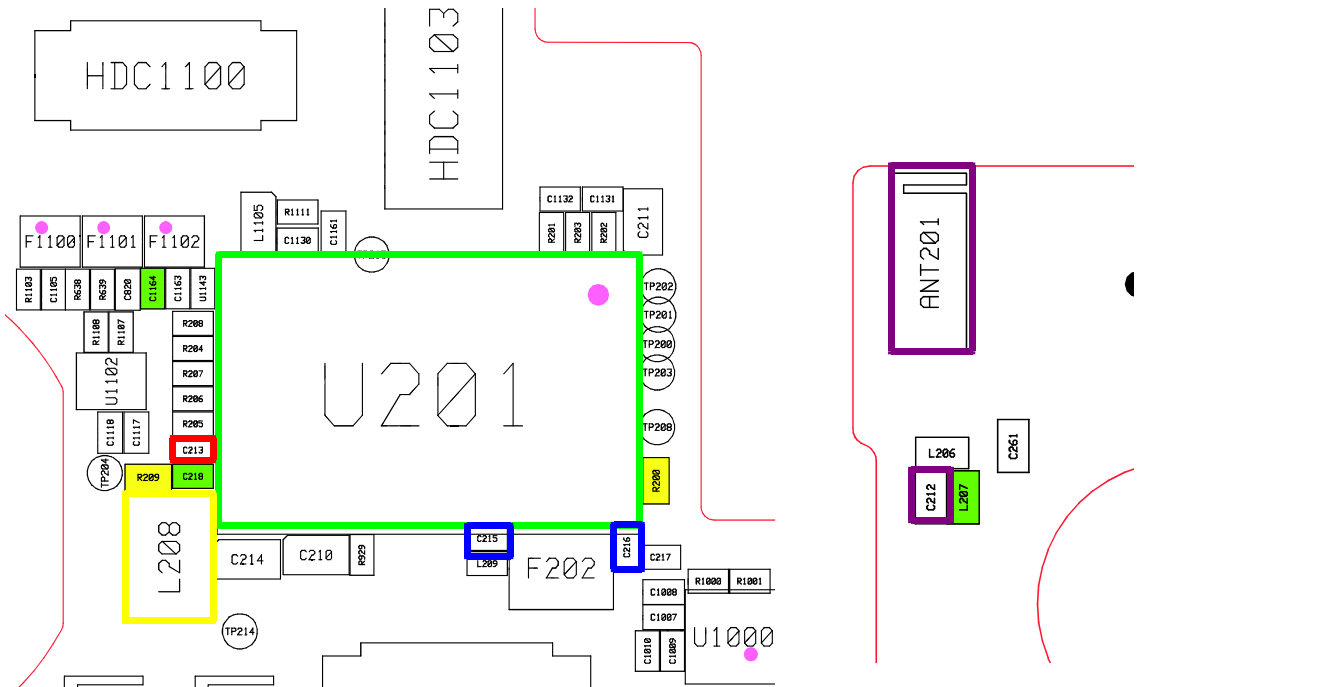
## 8-3-10. Receiver Part



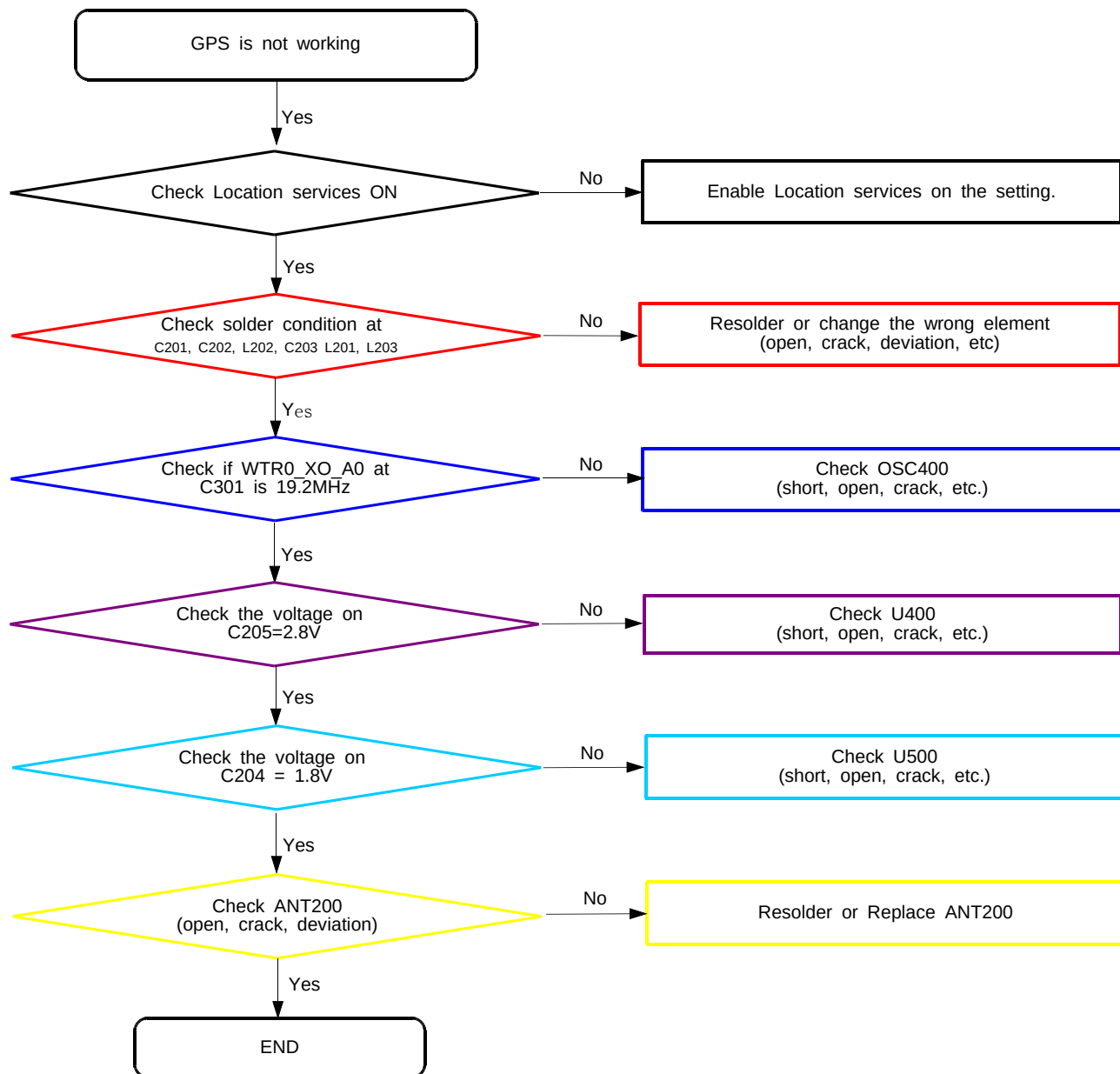


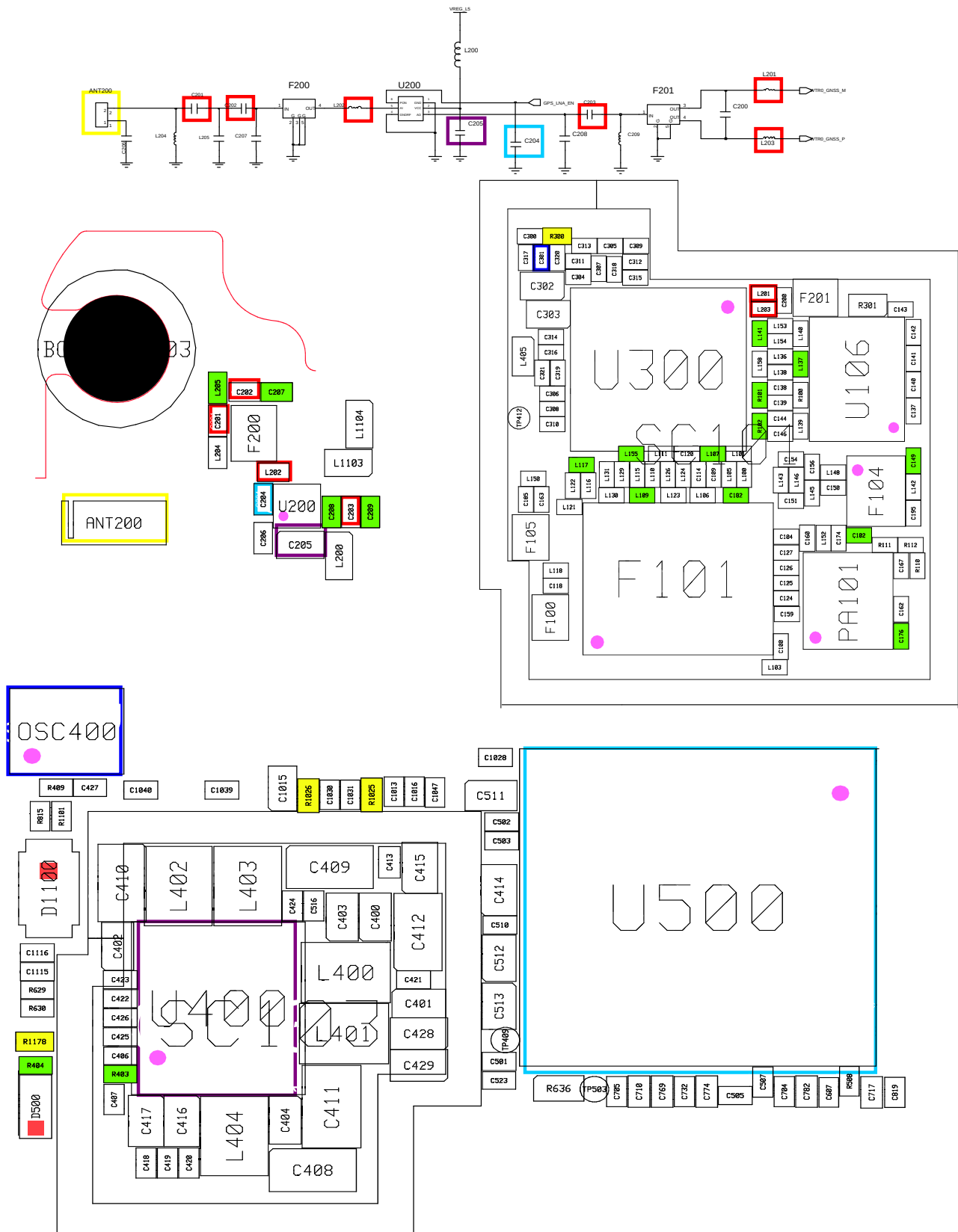
## 8-3-11. BT/WIFI



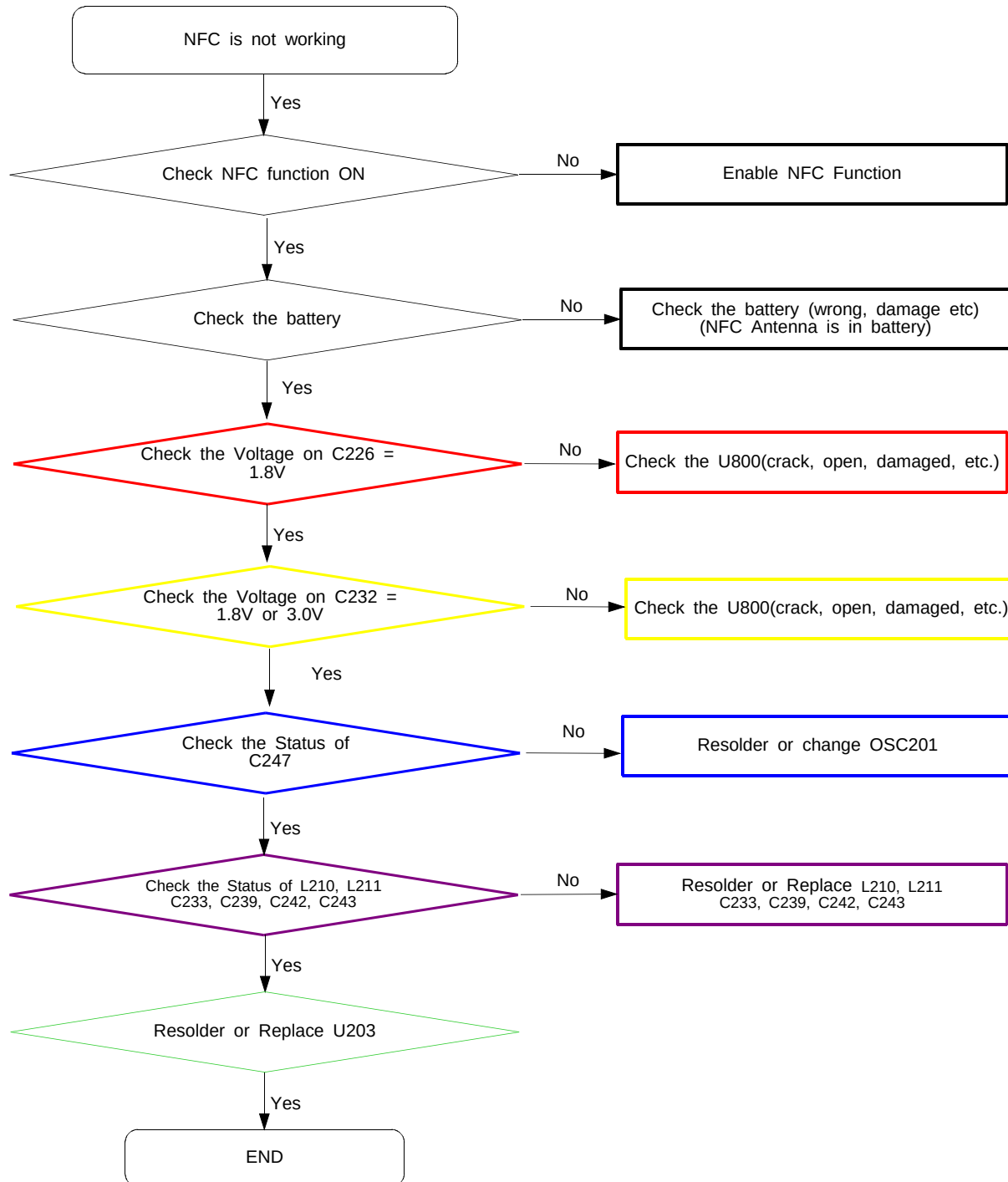


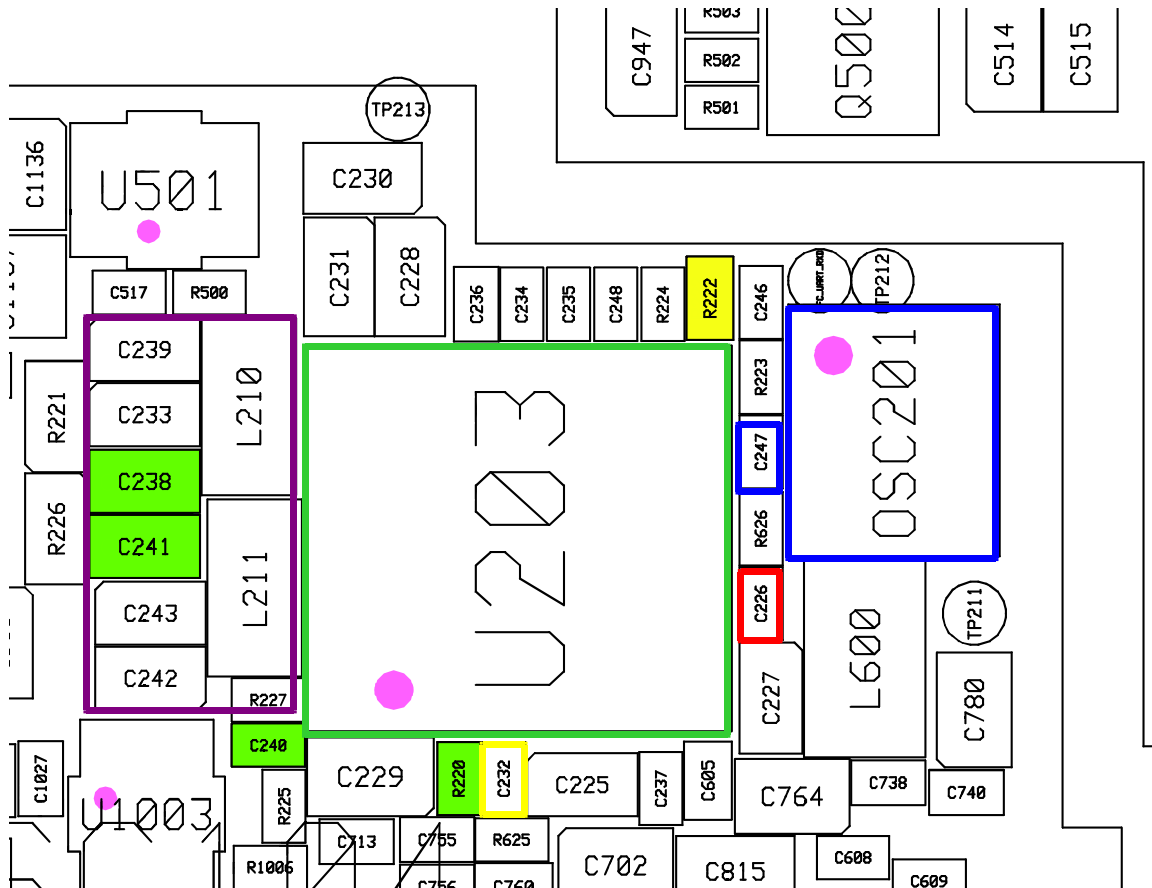
## 8-3-12. GPS



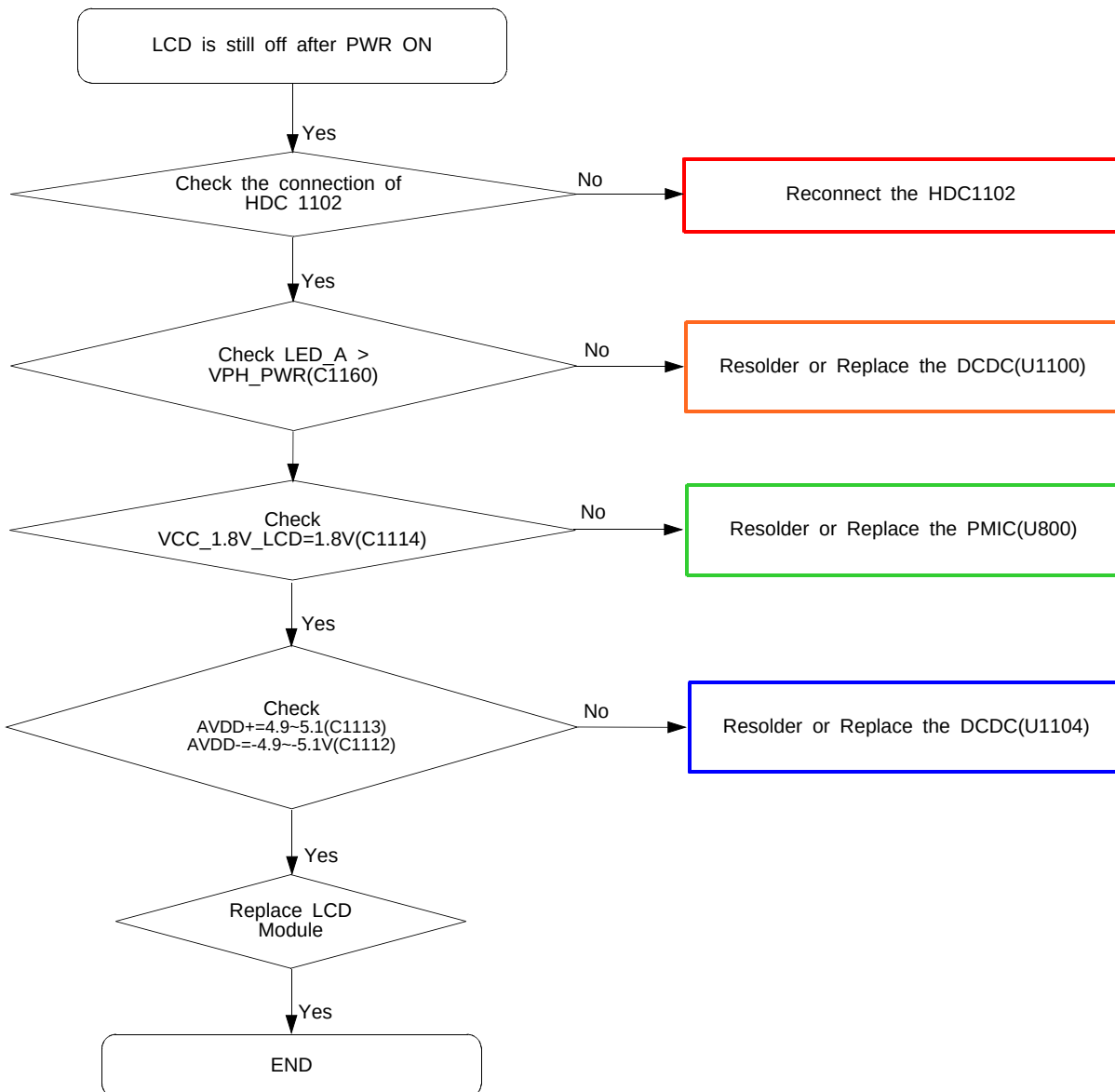


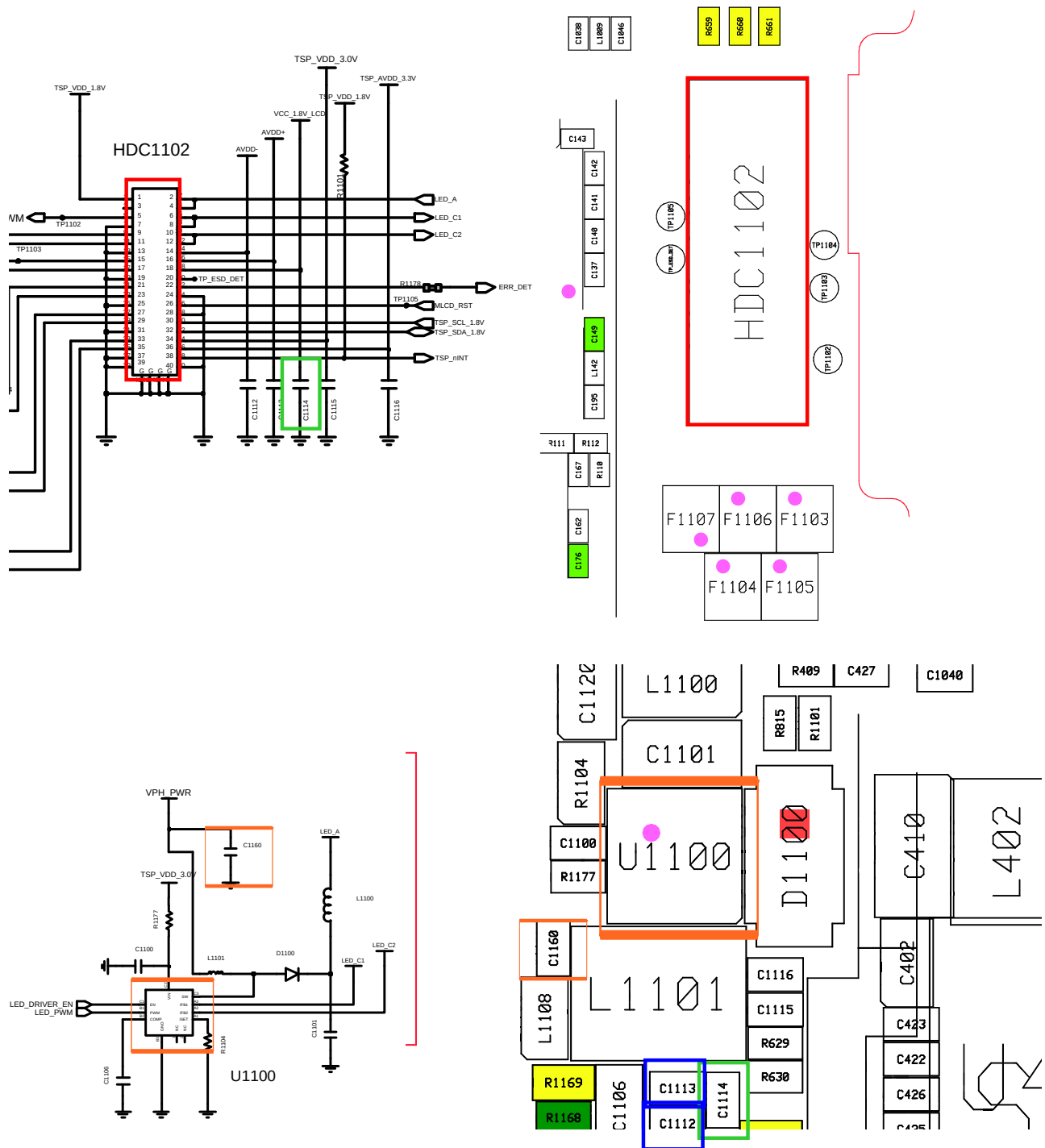
## 8-3-13. NFC

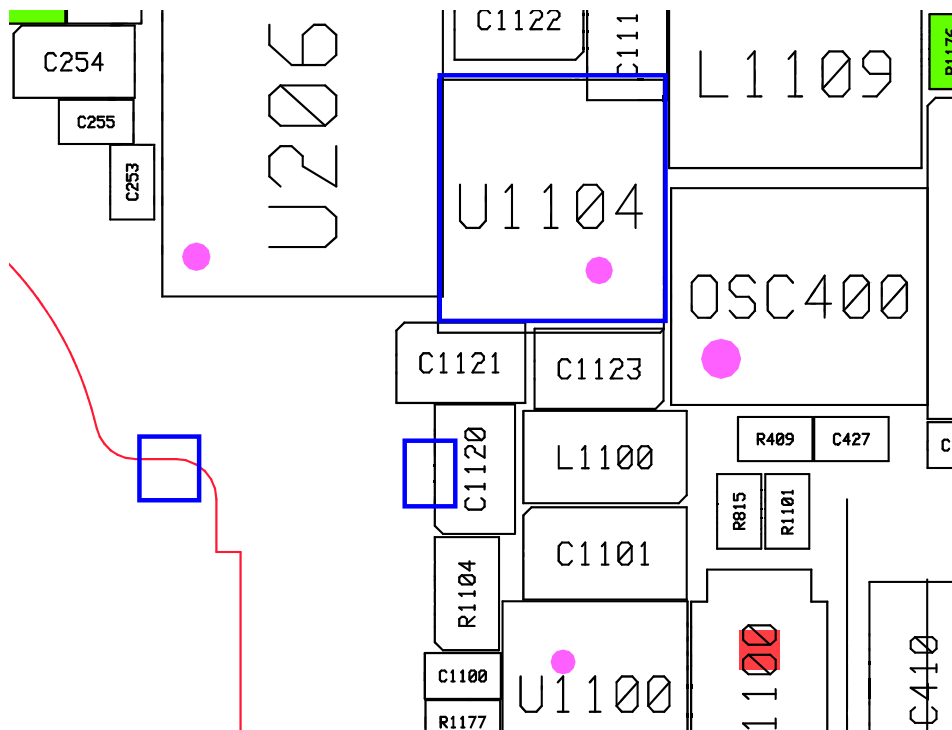
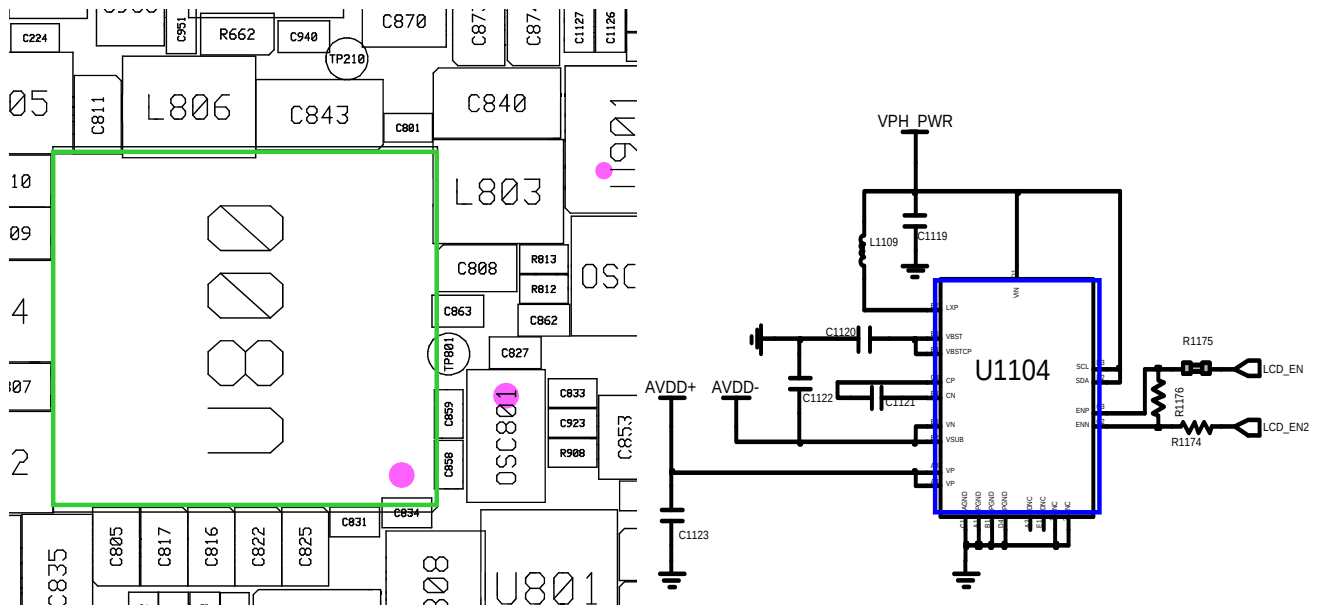




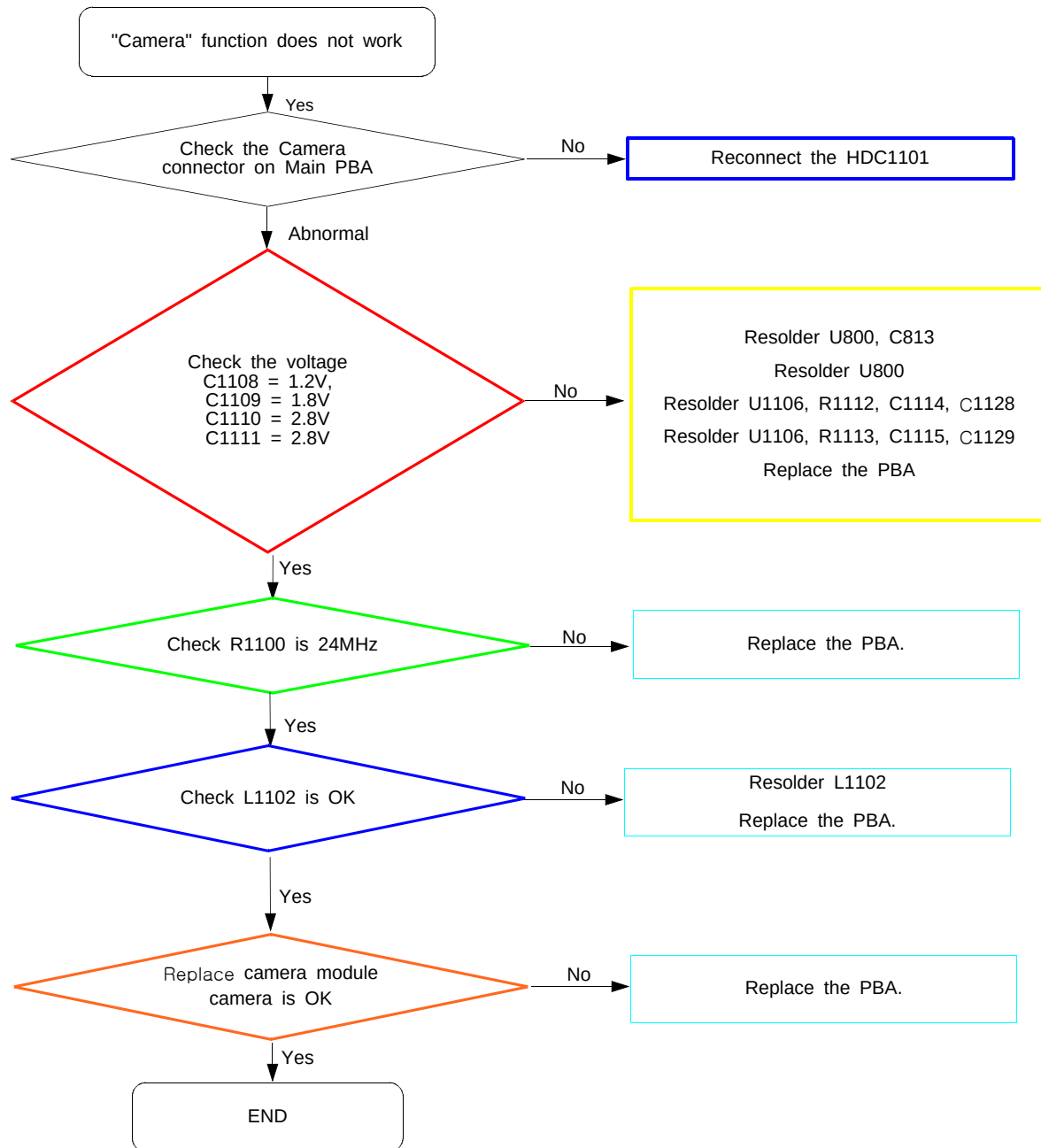
## 8-3-14. LCD

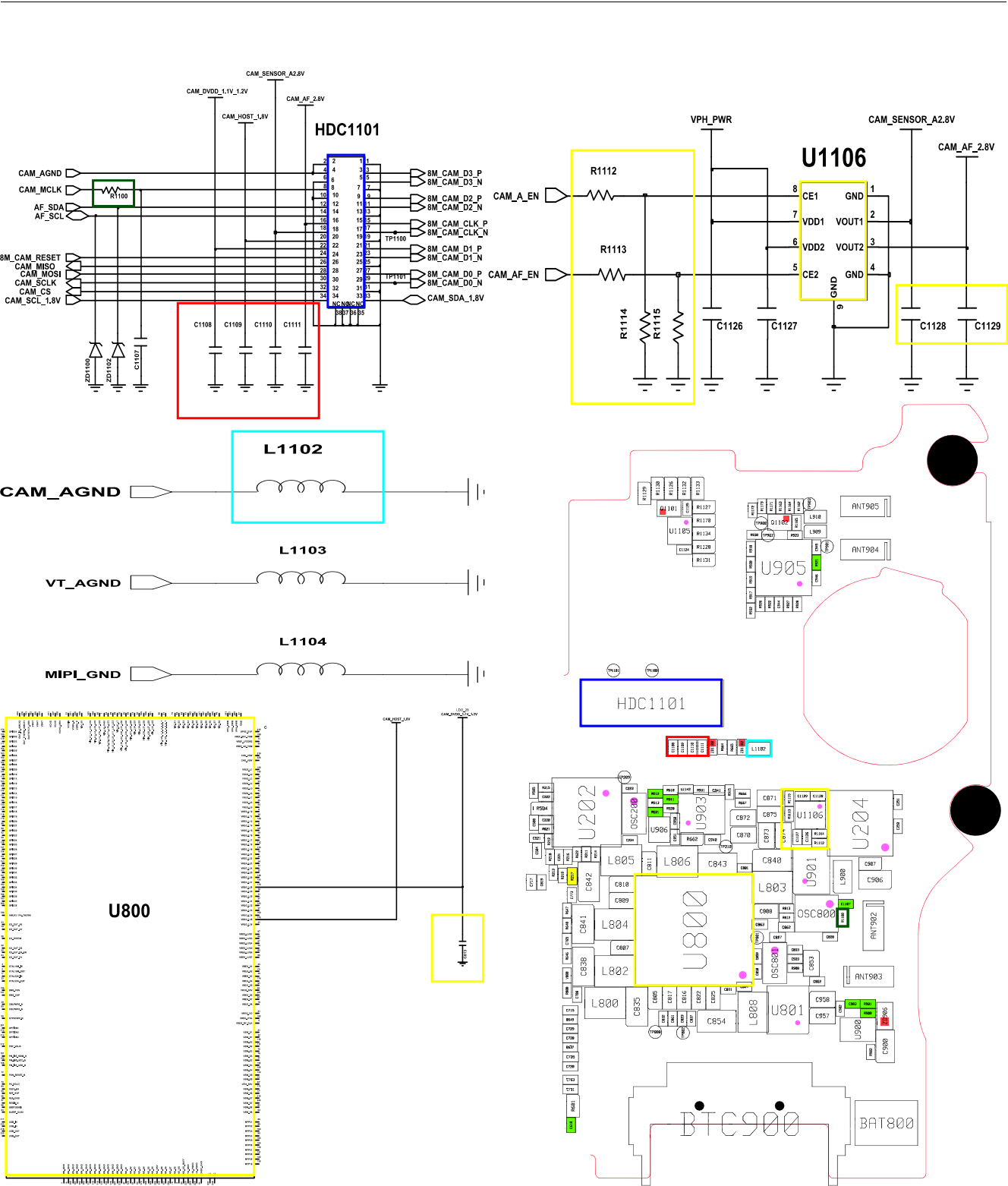




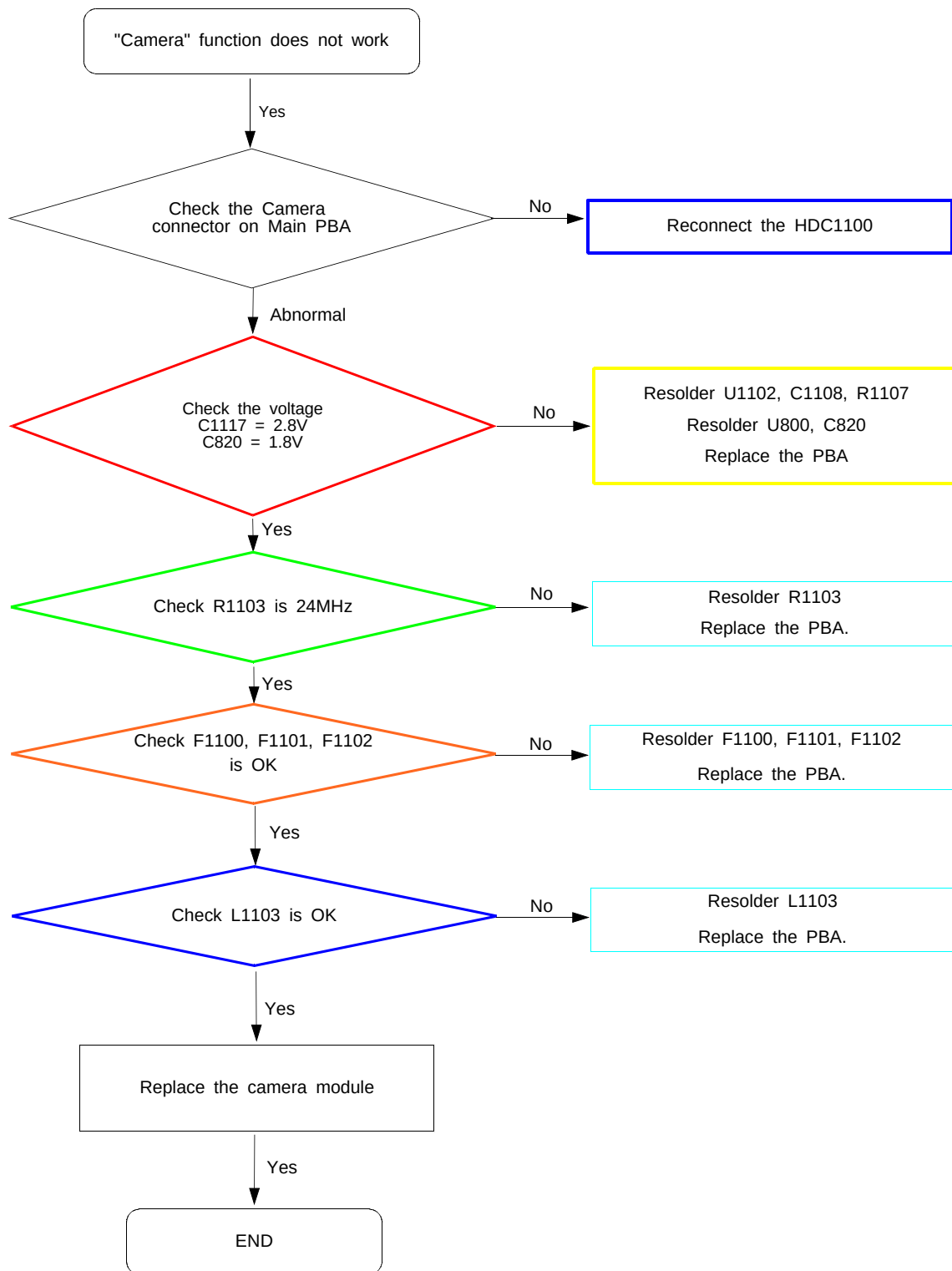


## 8-3-15. 8M CAM



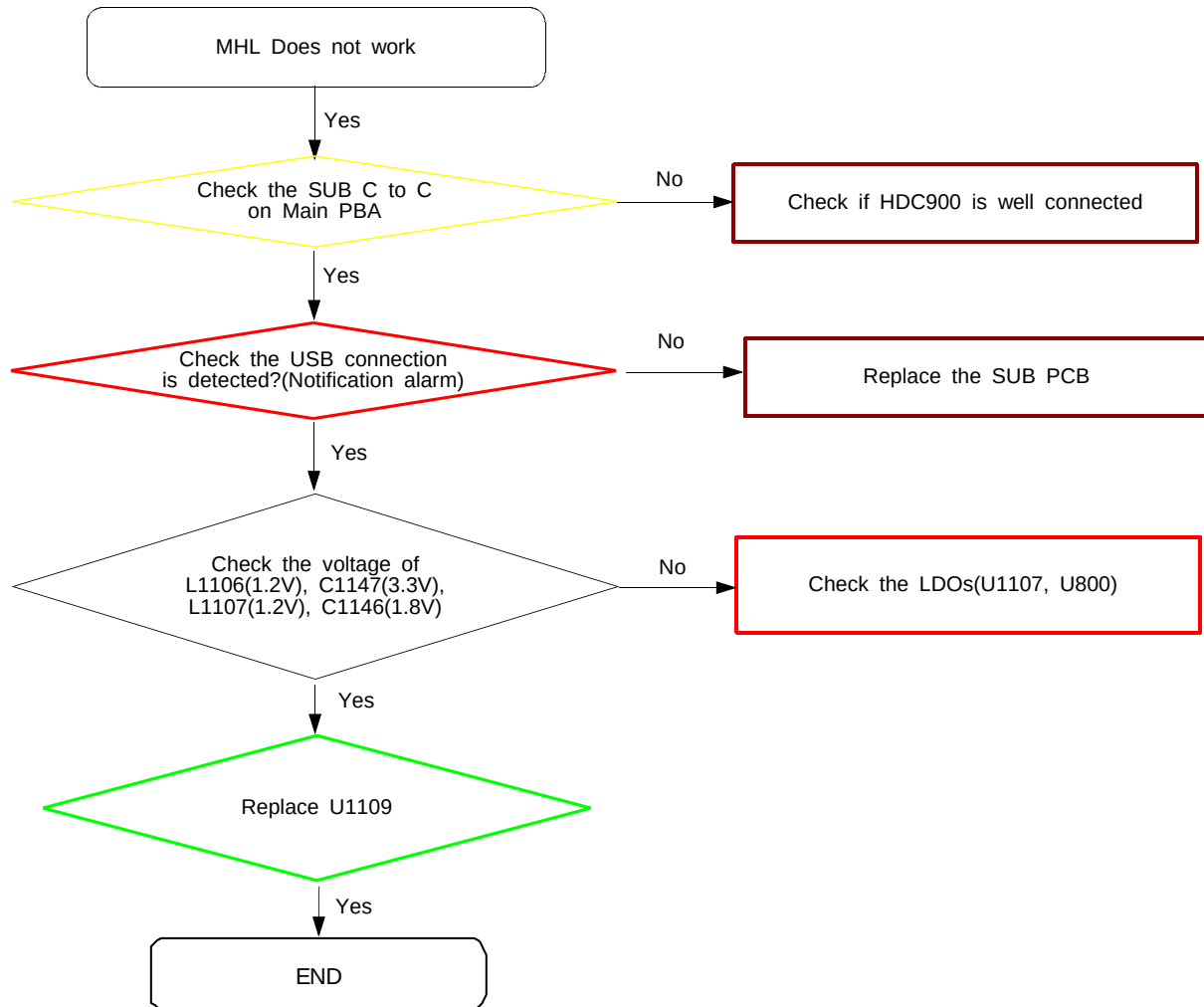


## 8-3-16. VT CAM



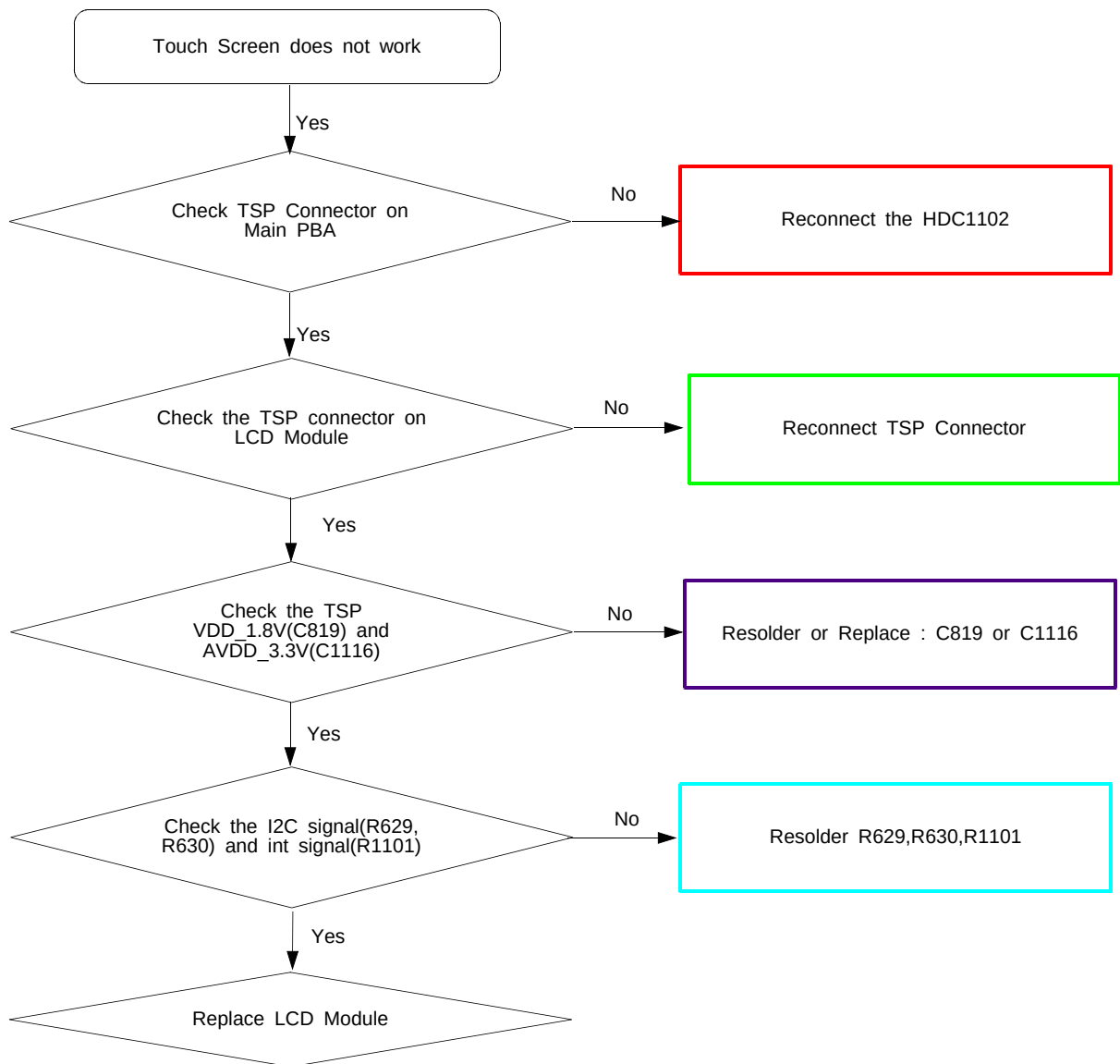


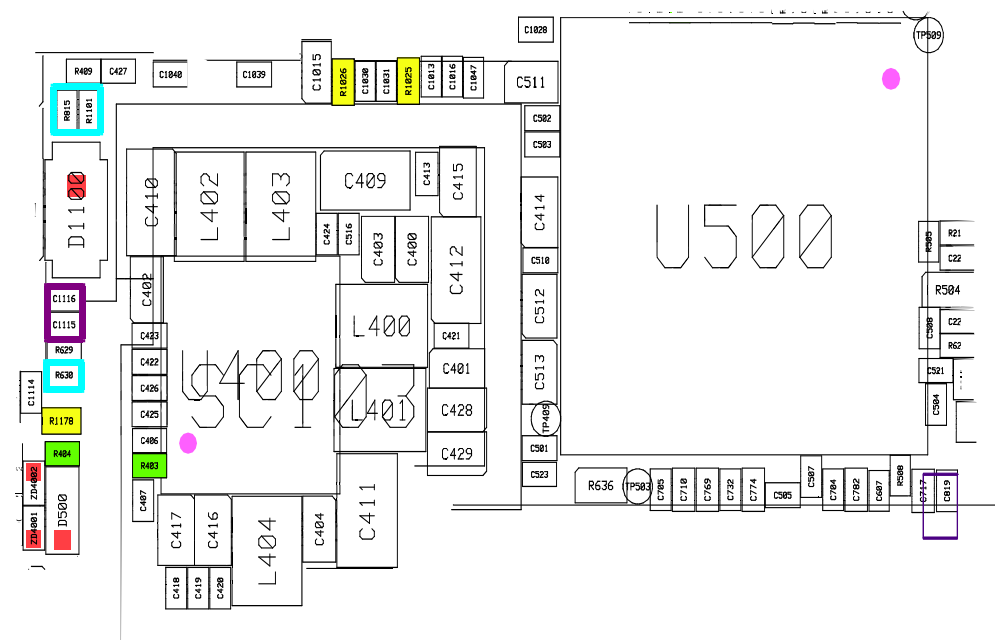
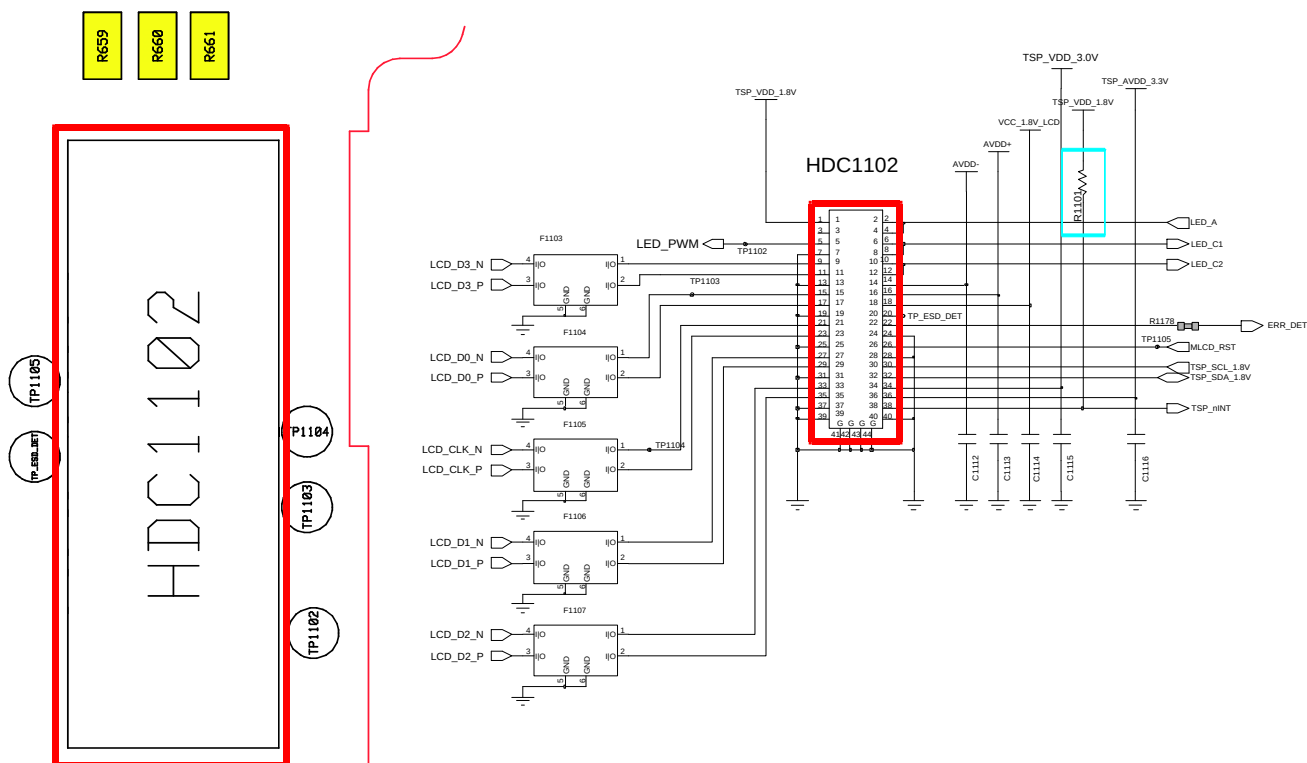
### 8-3-17. MHL



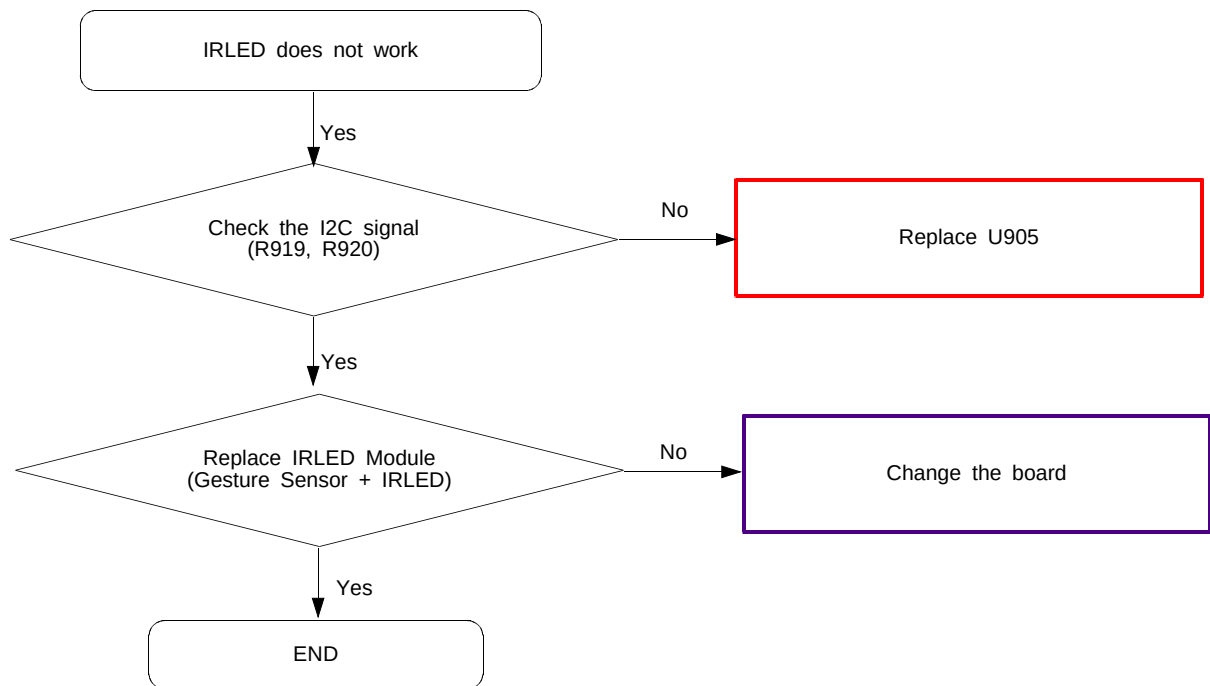


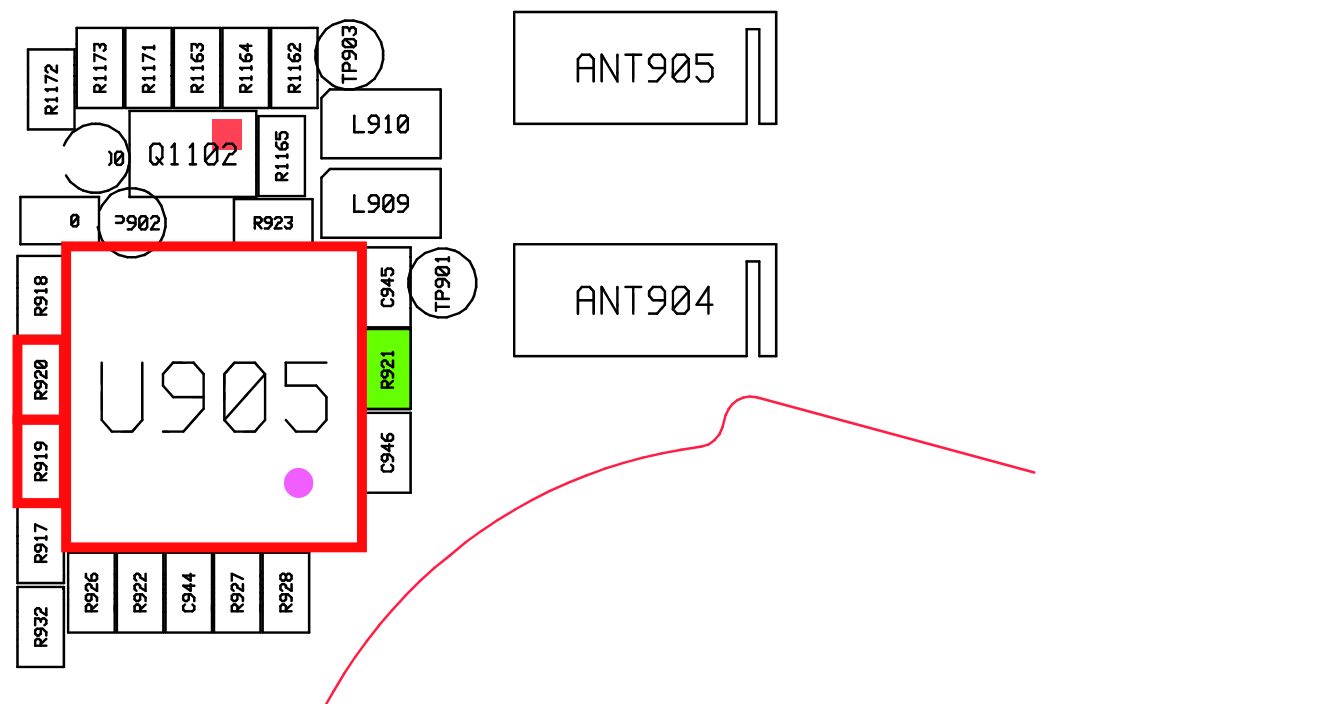
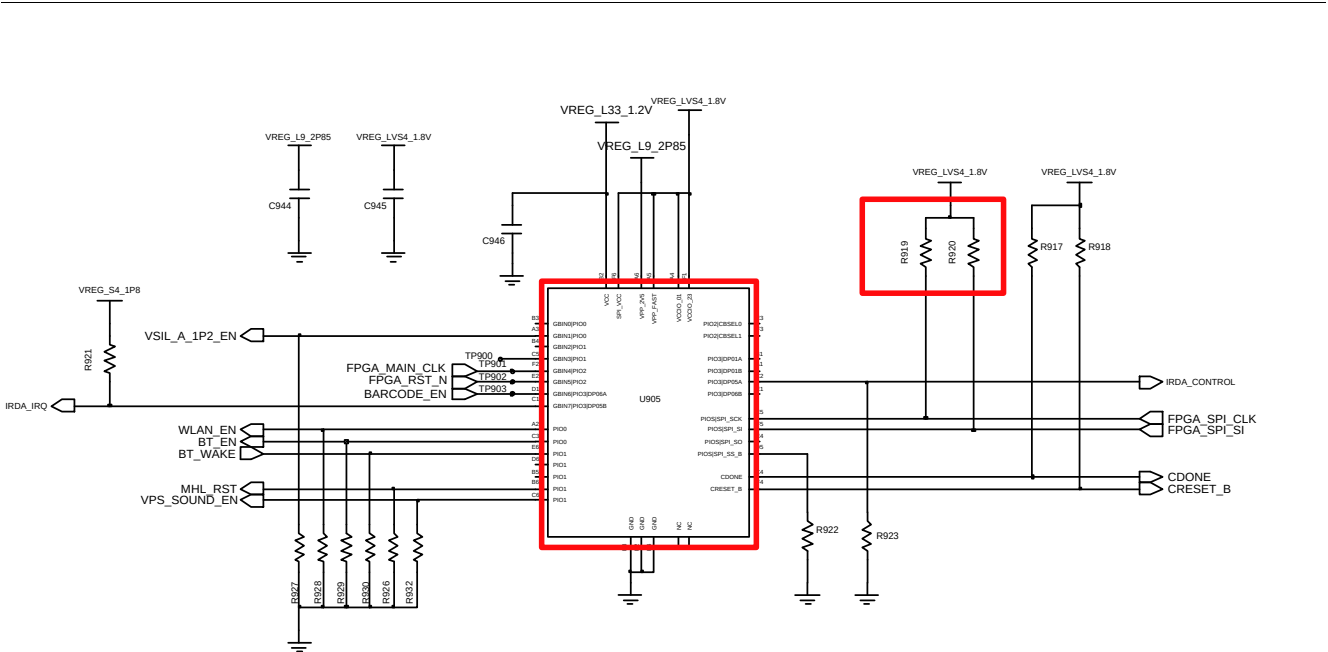
### 8-3-18. TSP



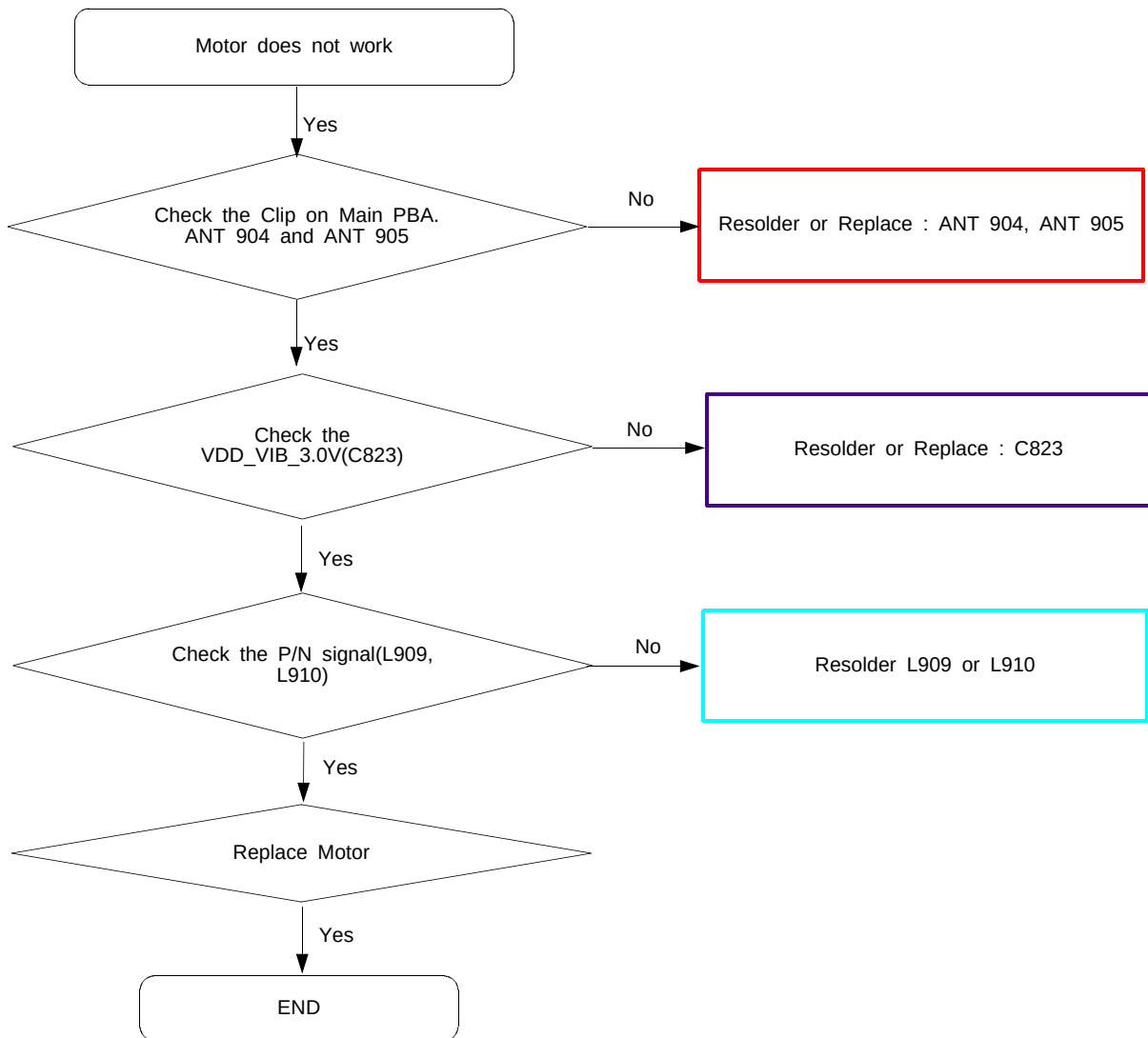


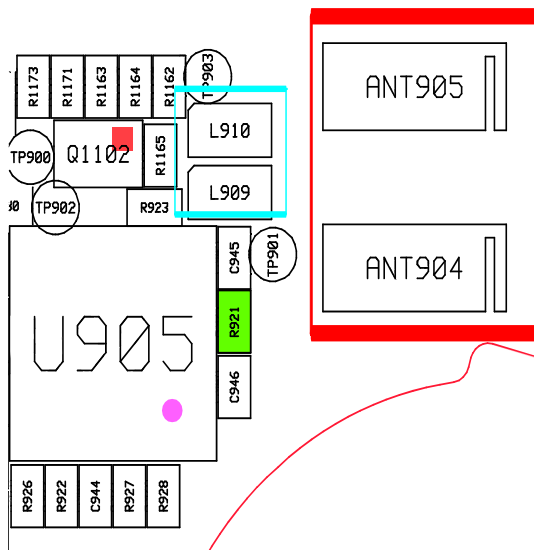
### 8-3-19. IRLED



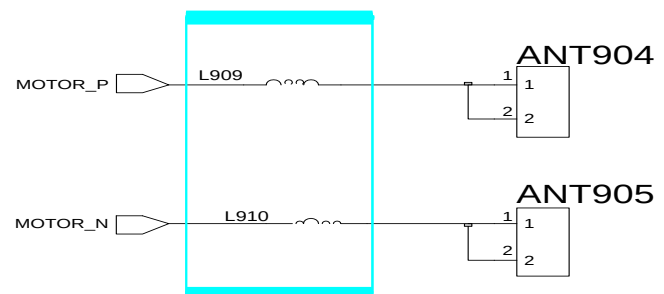
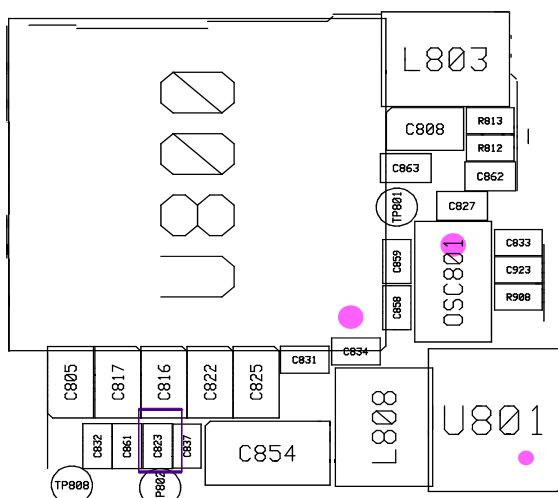


## 8-3-20. Motor

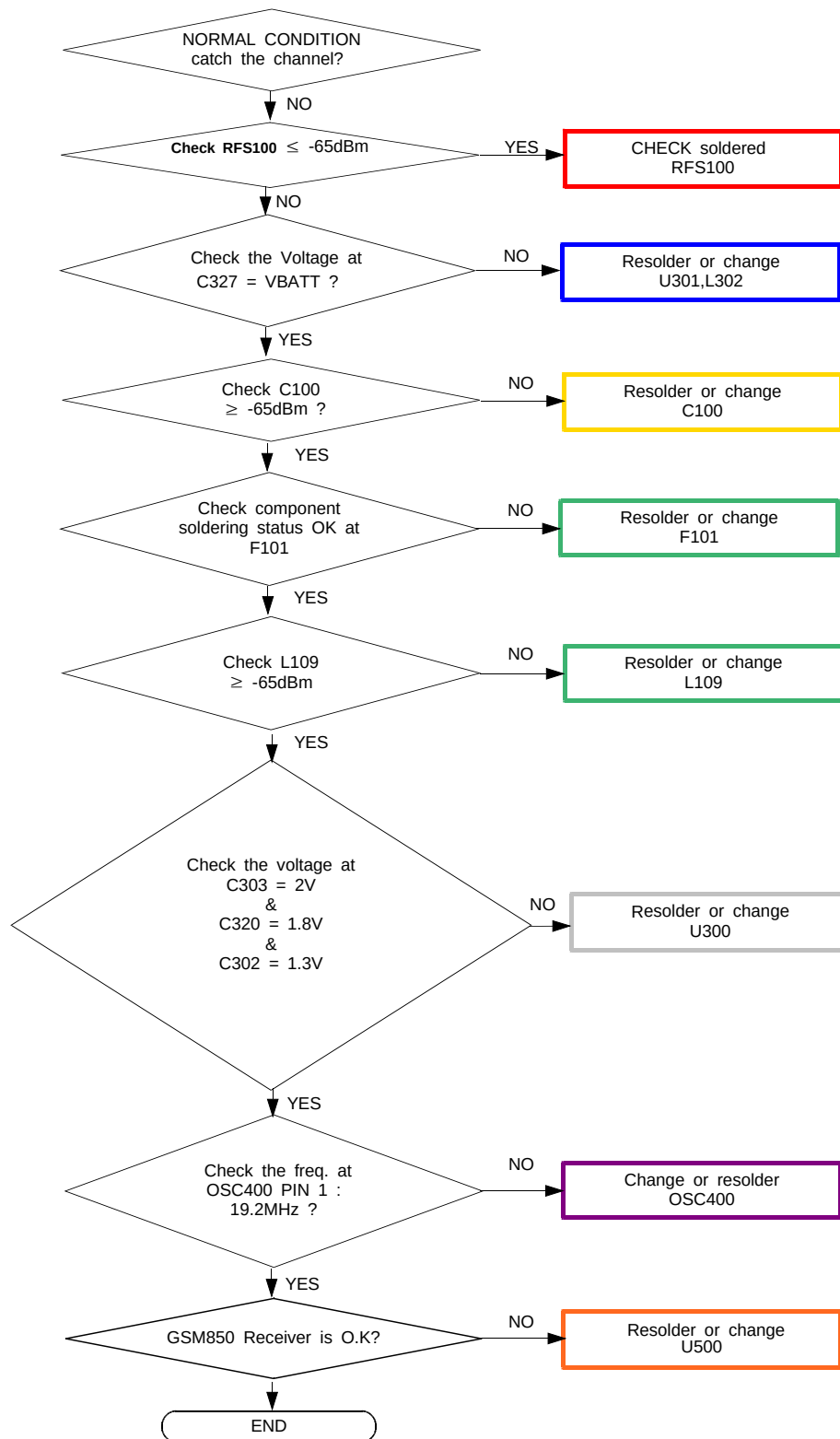




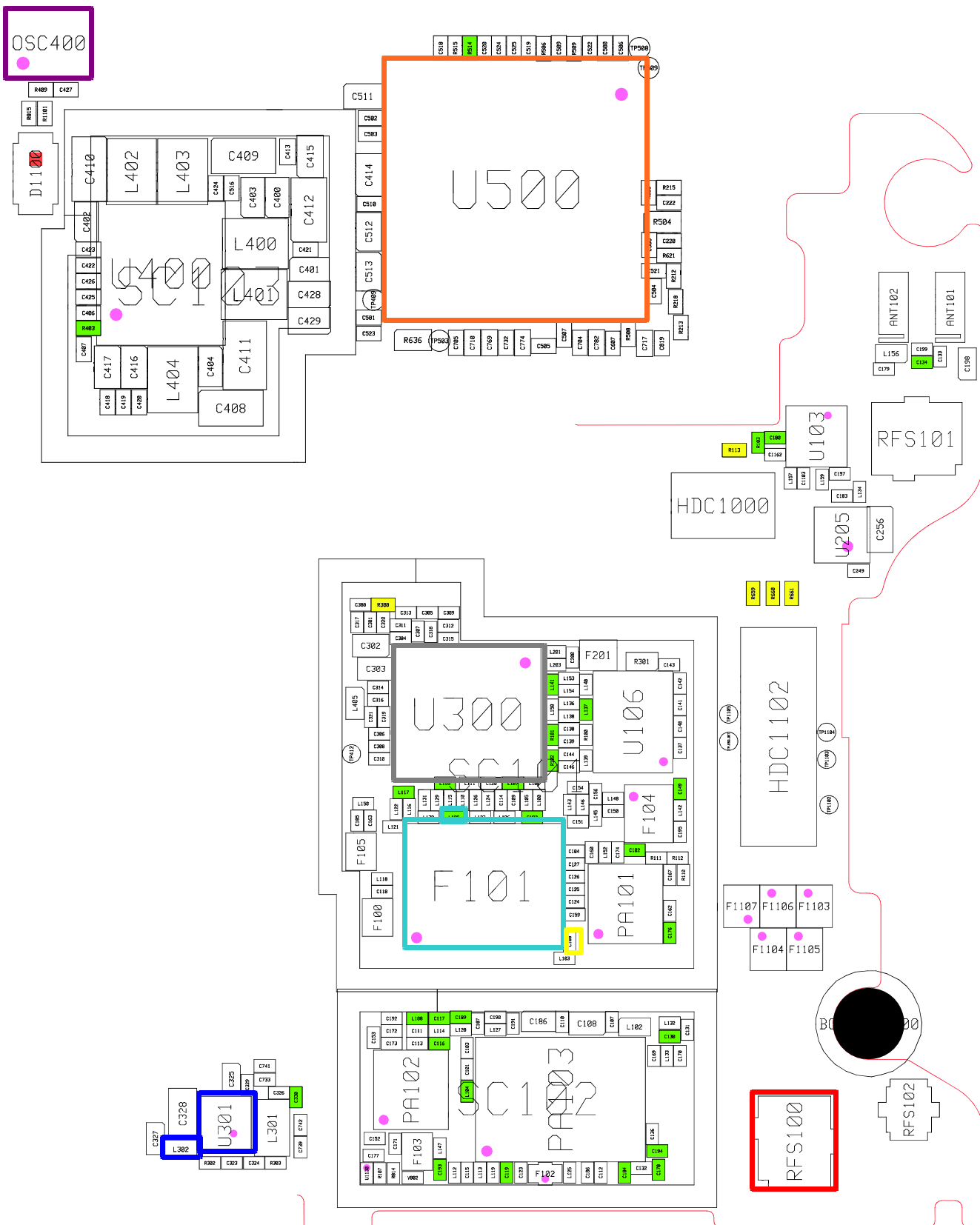
VDD\_VIB\_3.0V



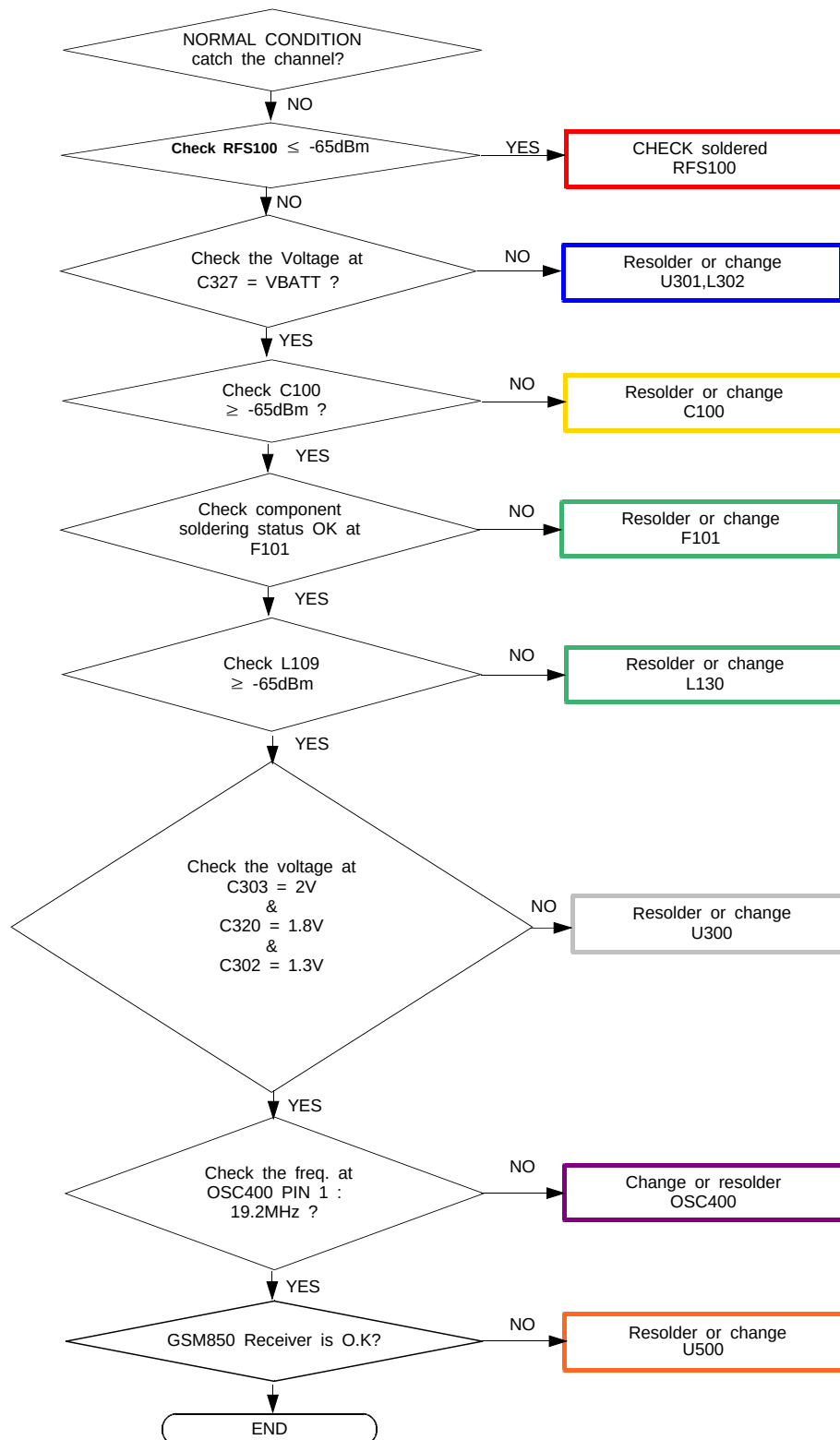
### 8-3-21. GSM850 RX



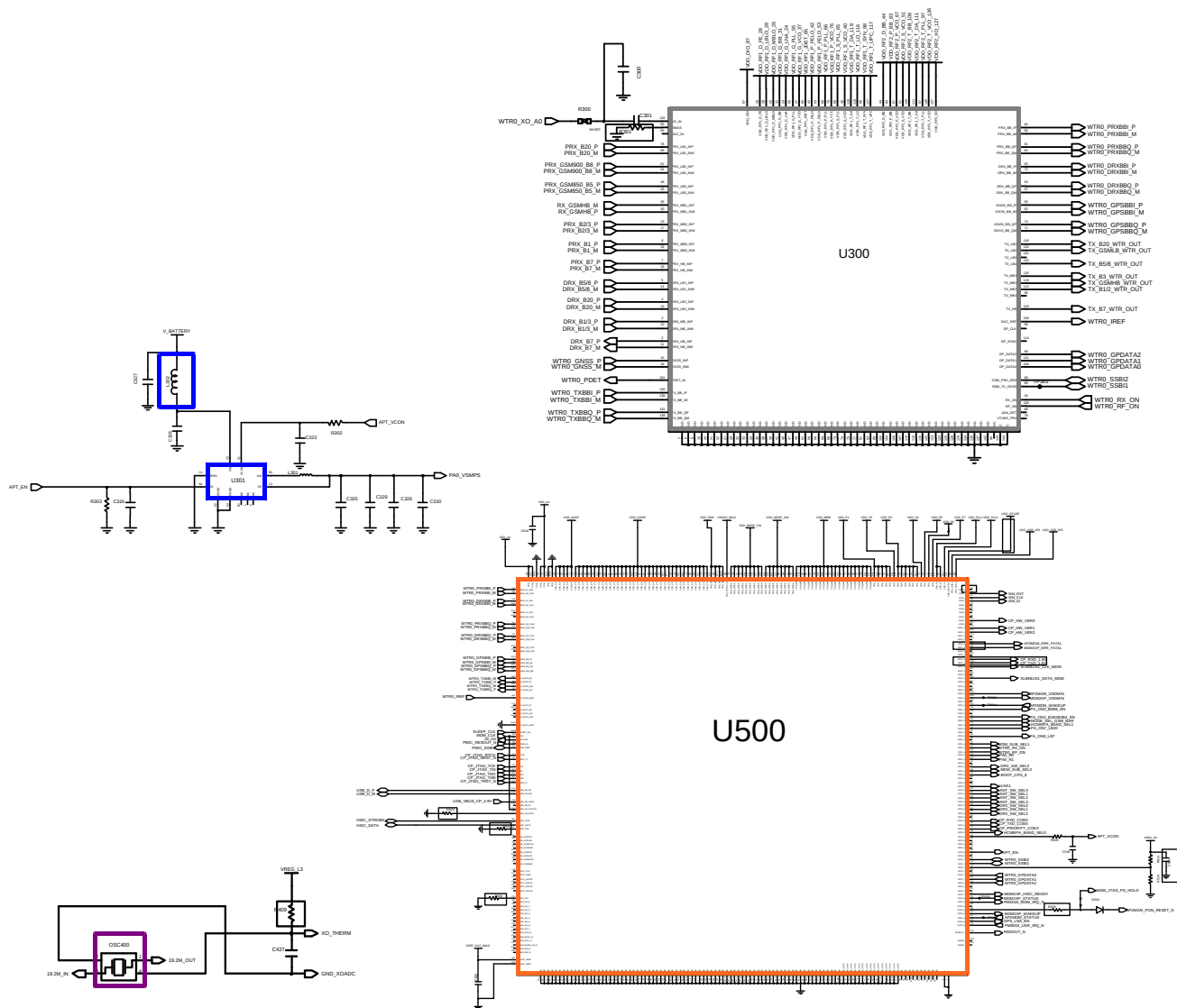
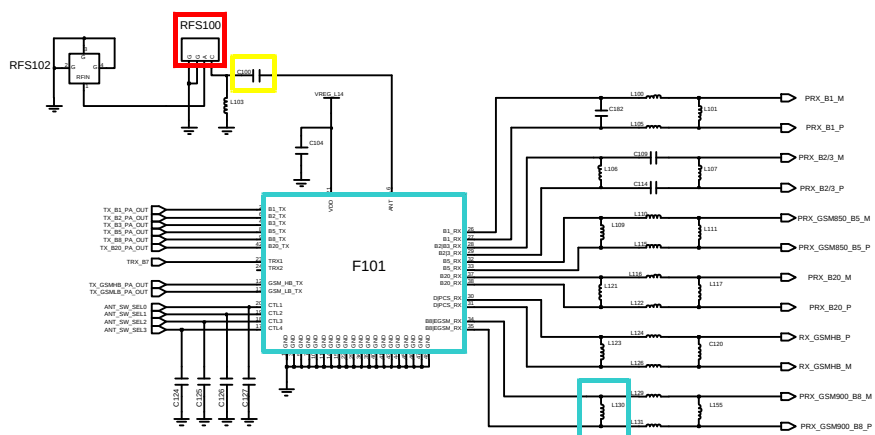


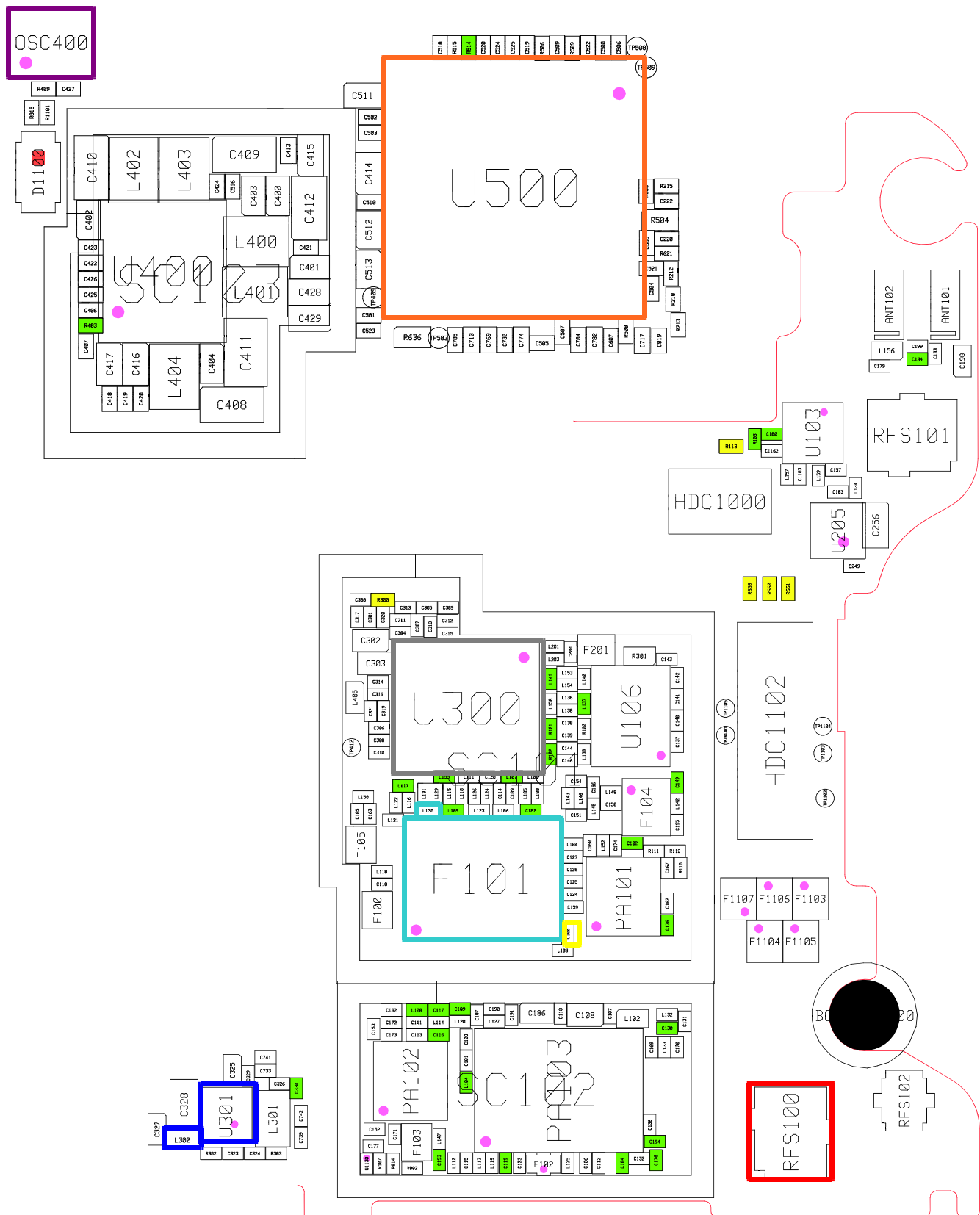


## 8-3-22. GSM900 RX

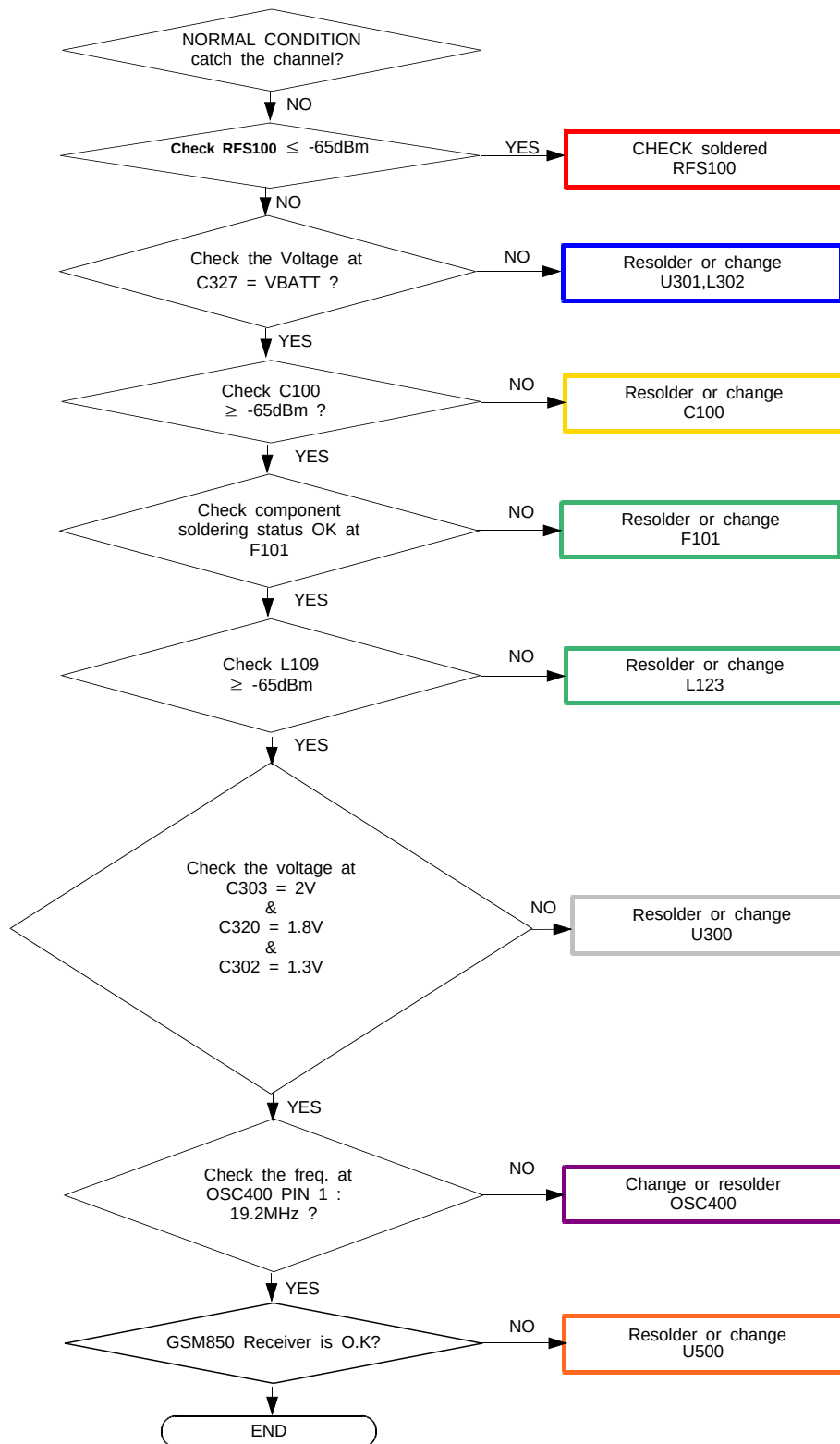


CONTINUOUS RX ON  
RF INPUT : 62CH  
AMP : -50dBm

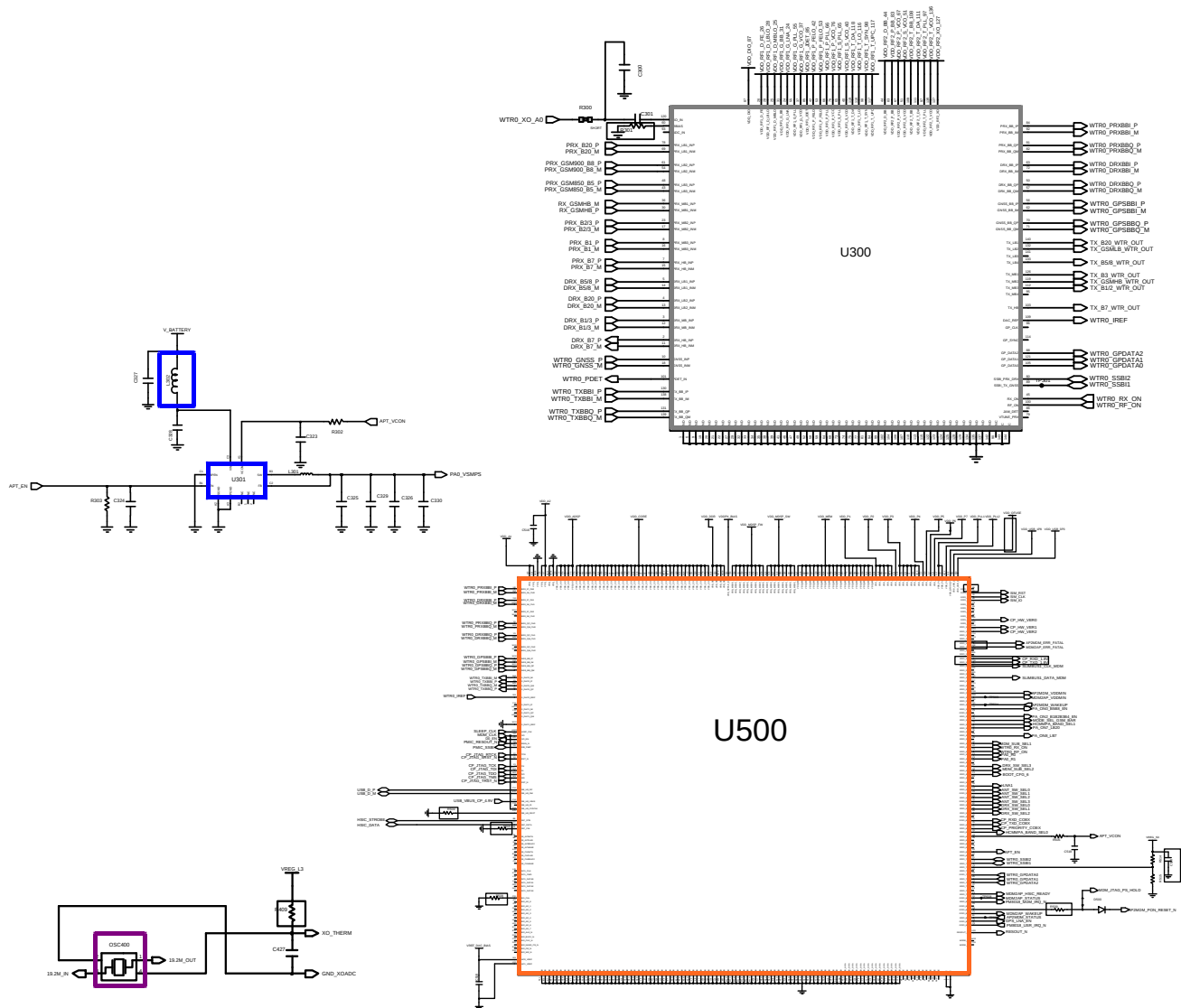
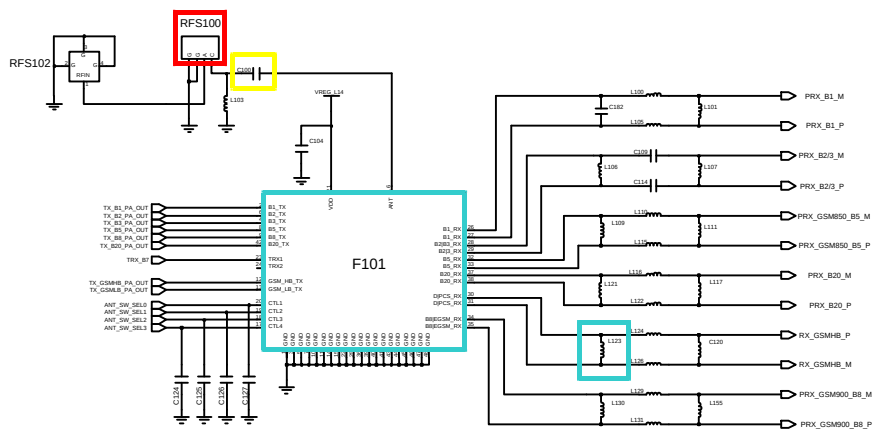


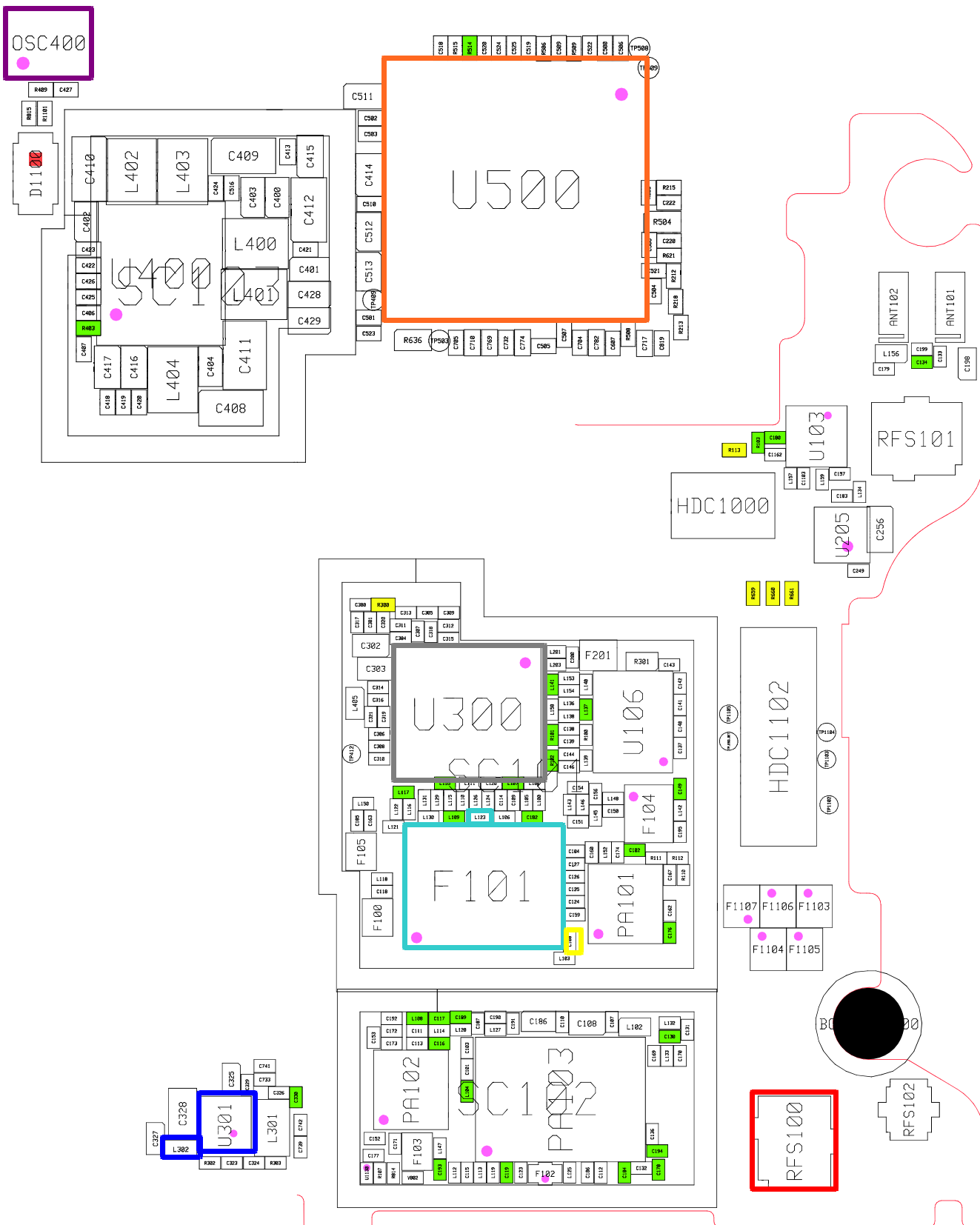


### 8-3-23. GSM1800/1900 RX



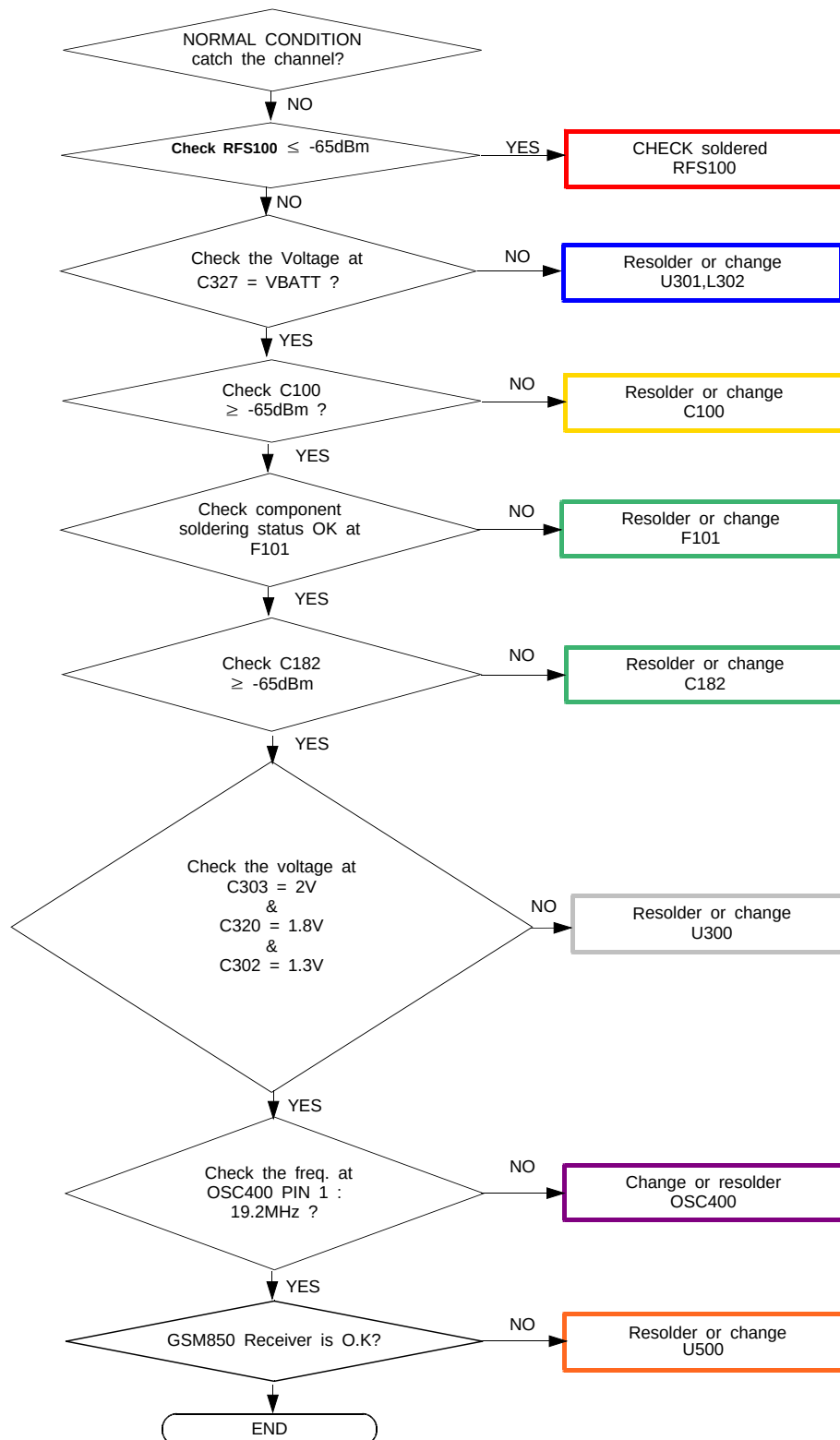
CONTINUOUS RX ON  
RF INPUT : 660CH  
AMP : -50dBm

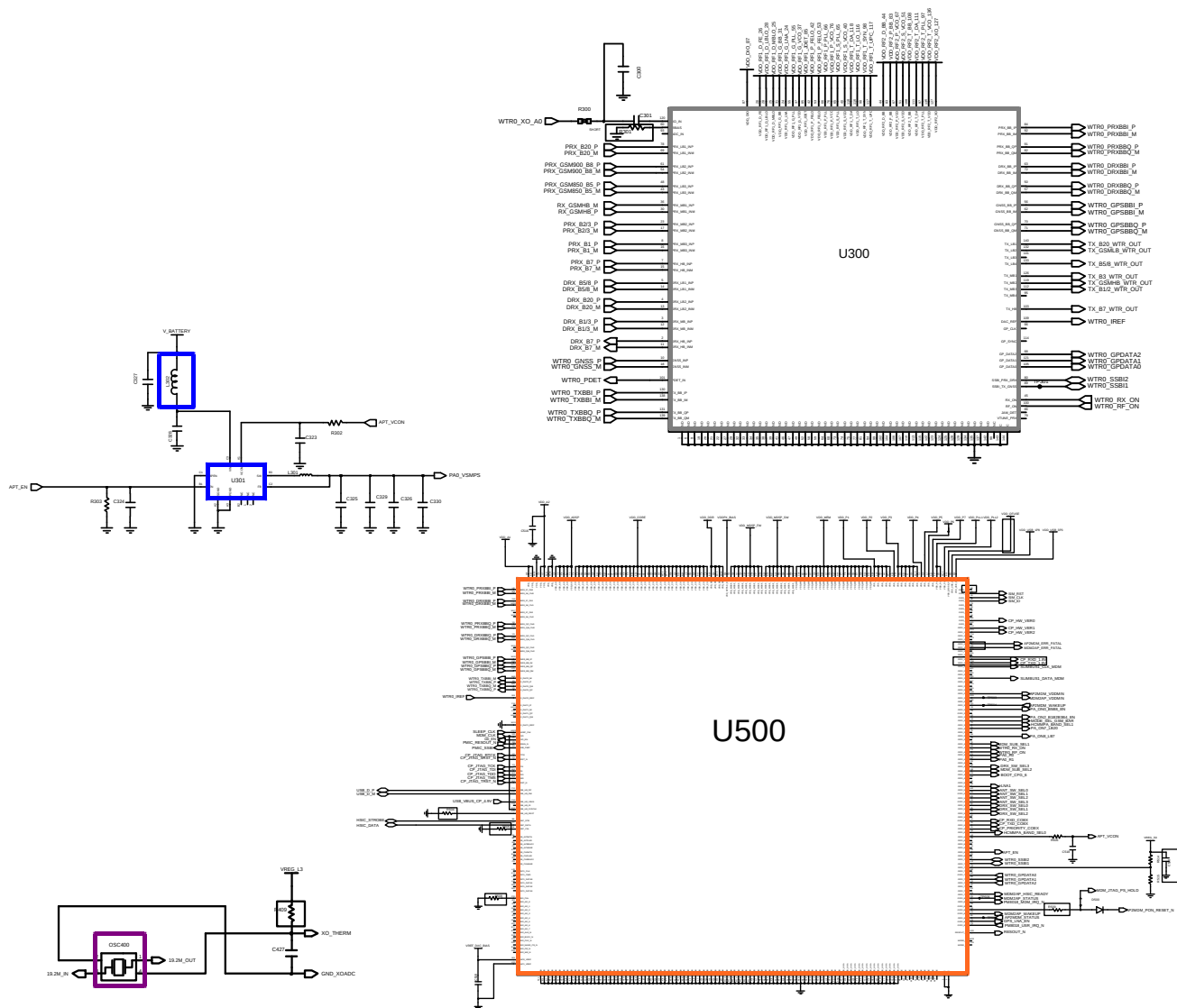
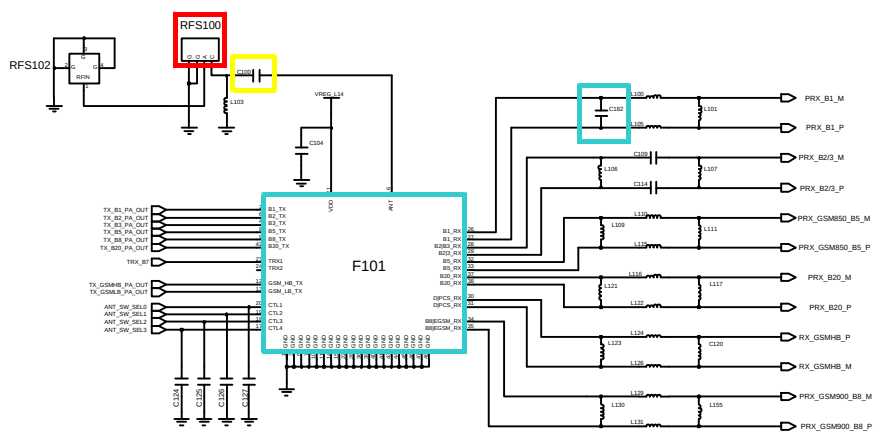




## 8-3-24. WCDMA2100 RX

CONTINUOUS RX ON  
RF INPUT : 10700CH  
AMP : -50dBm

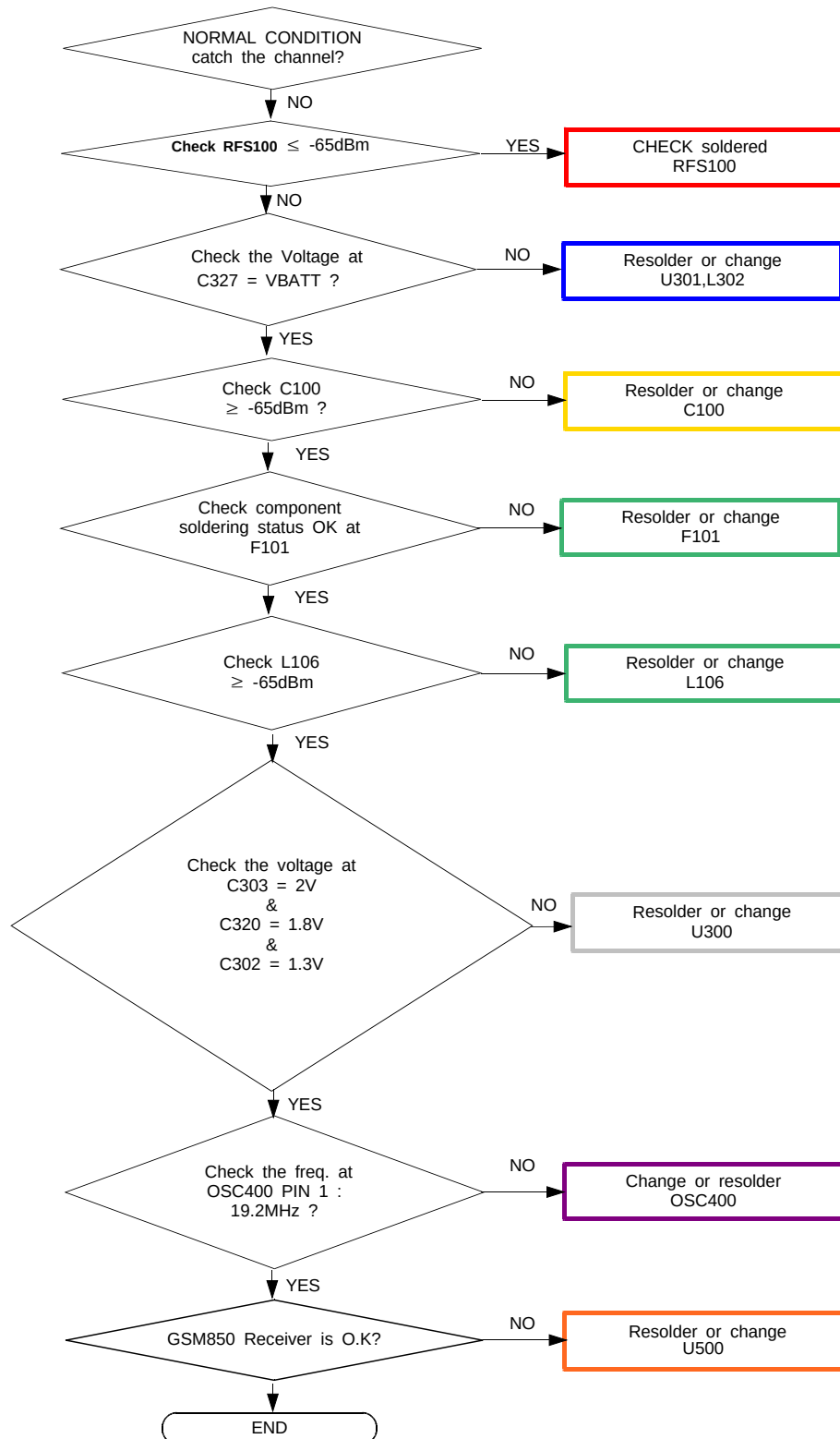




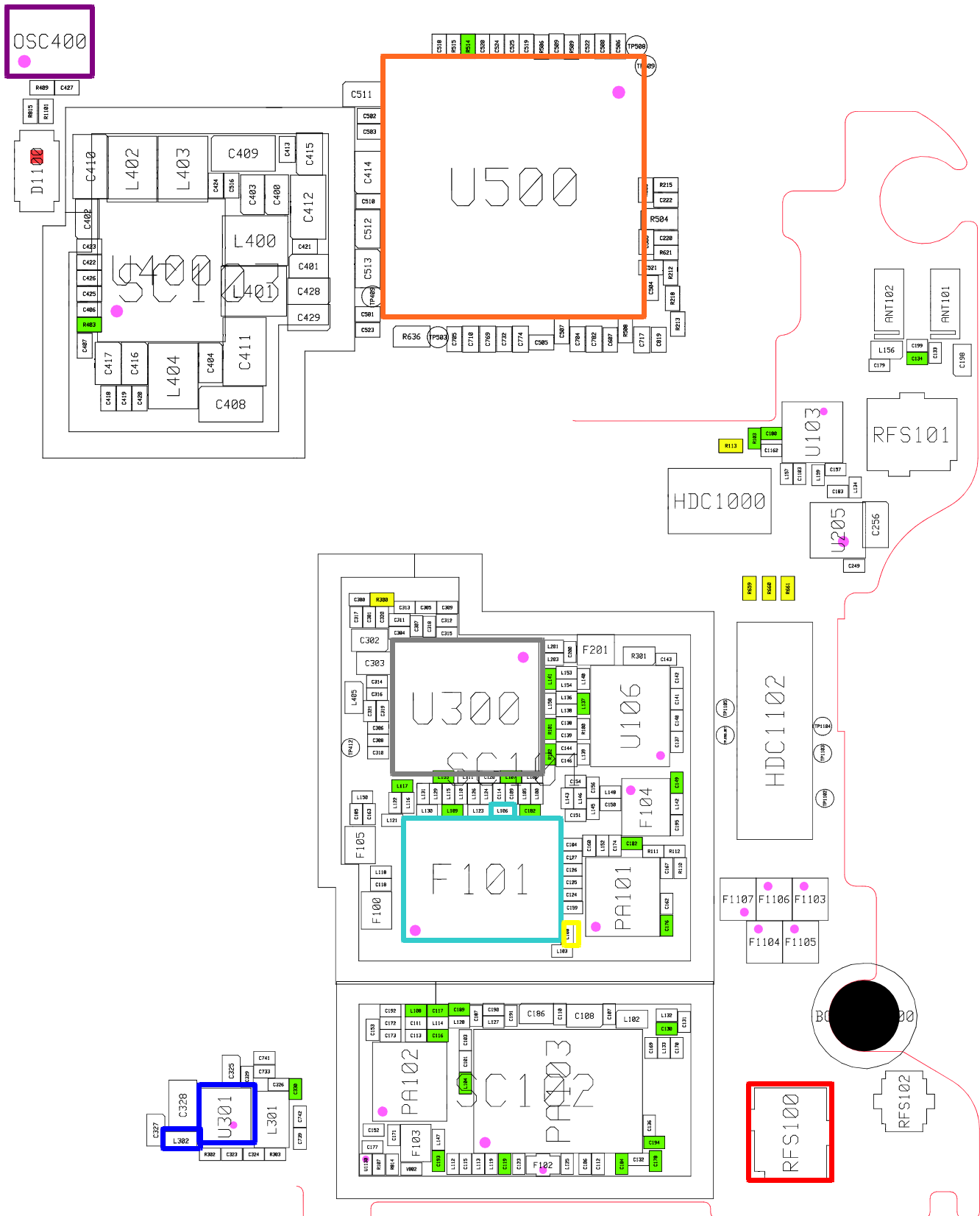


## 8-3-25. WCDMA1900 RX

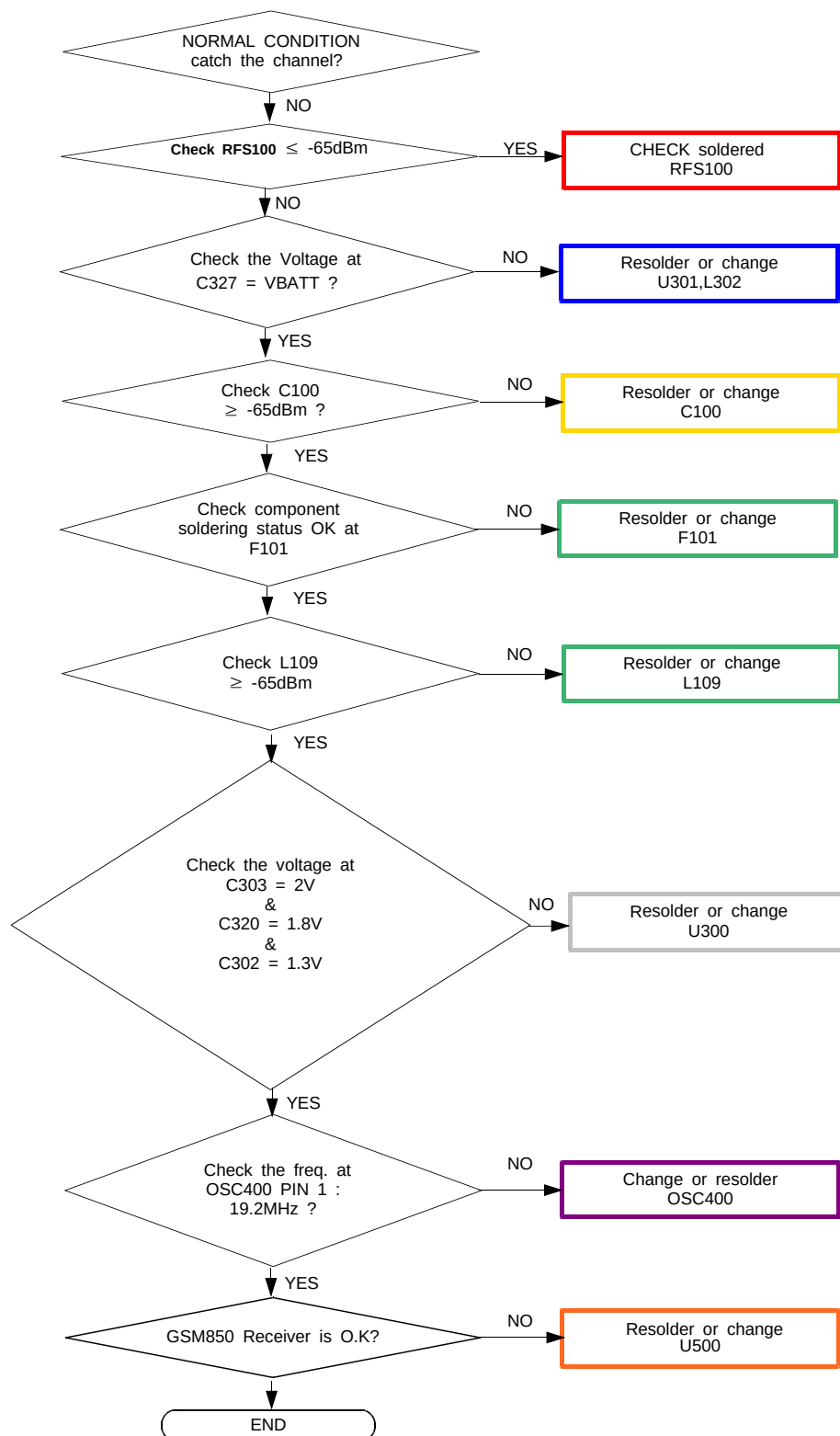
CONTINUOUS RX ON  
RF INPUT : 9800CH  
AMP : -50dBm



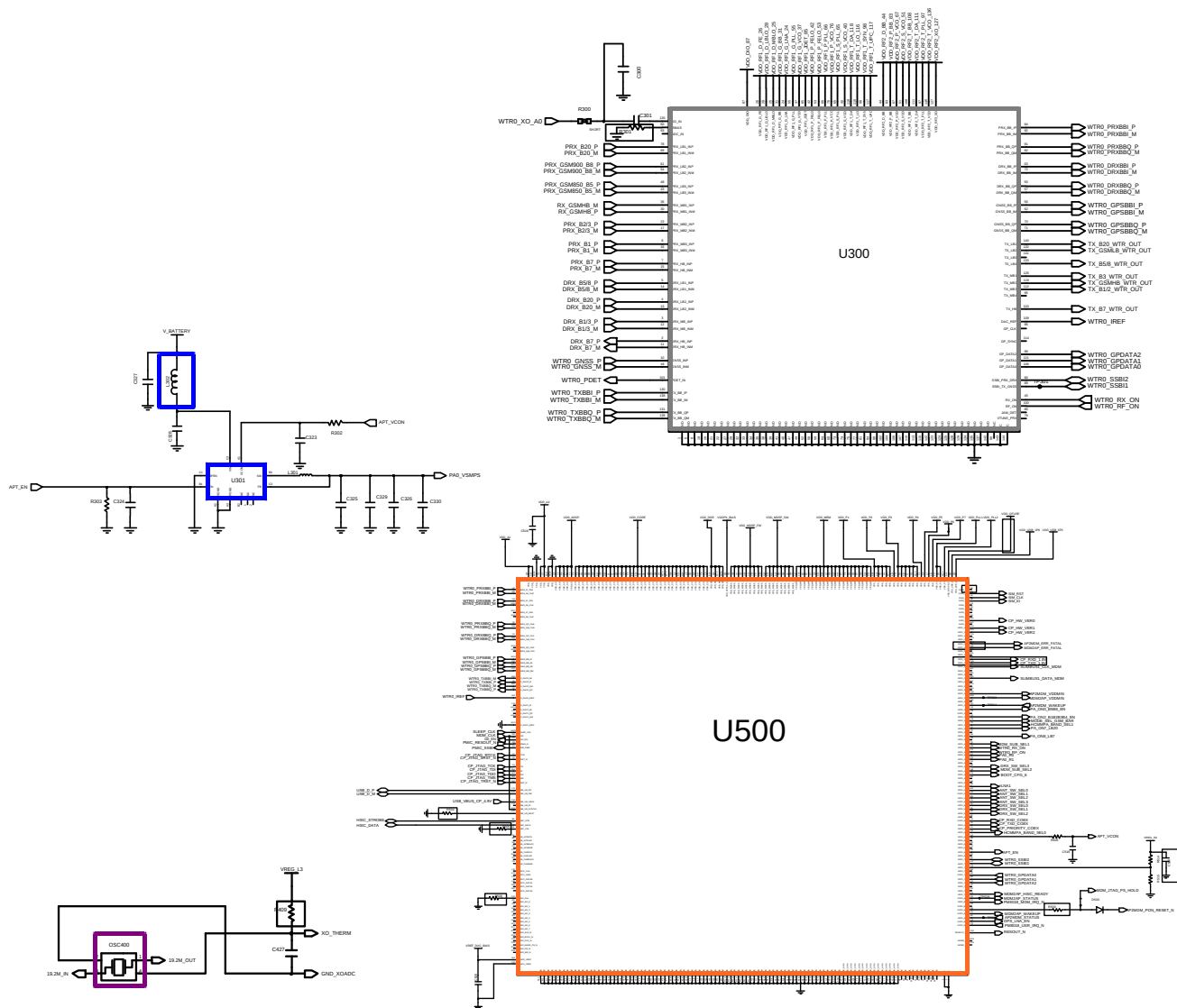
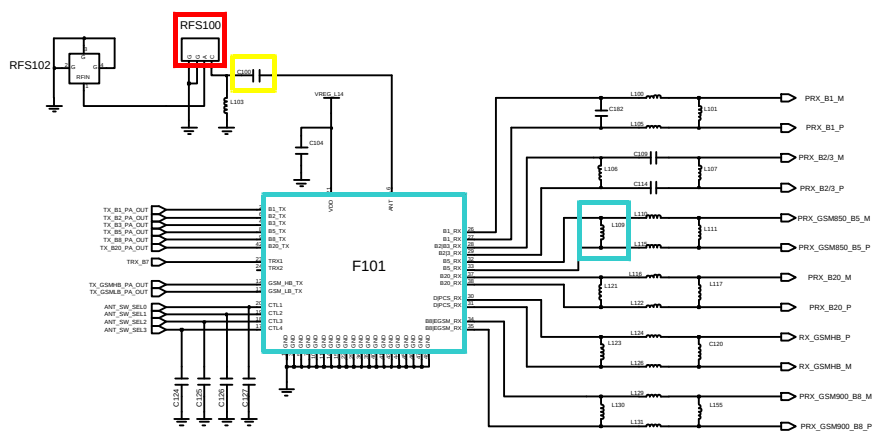




## 8-3-26. WCDMA850 RX

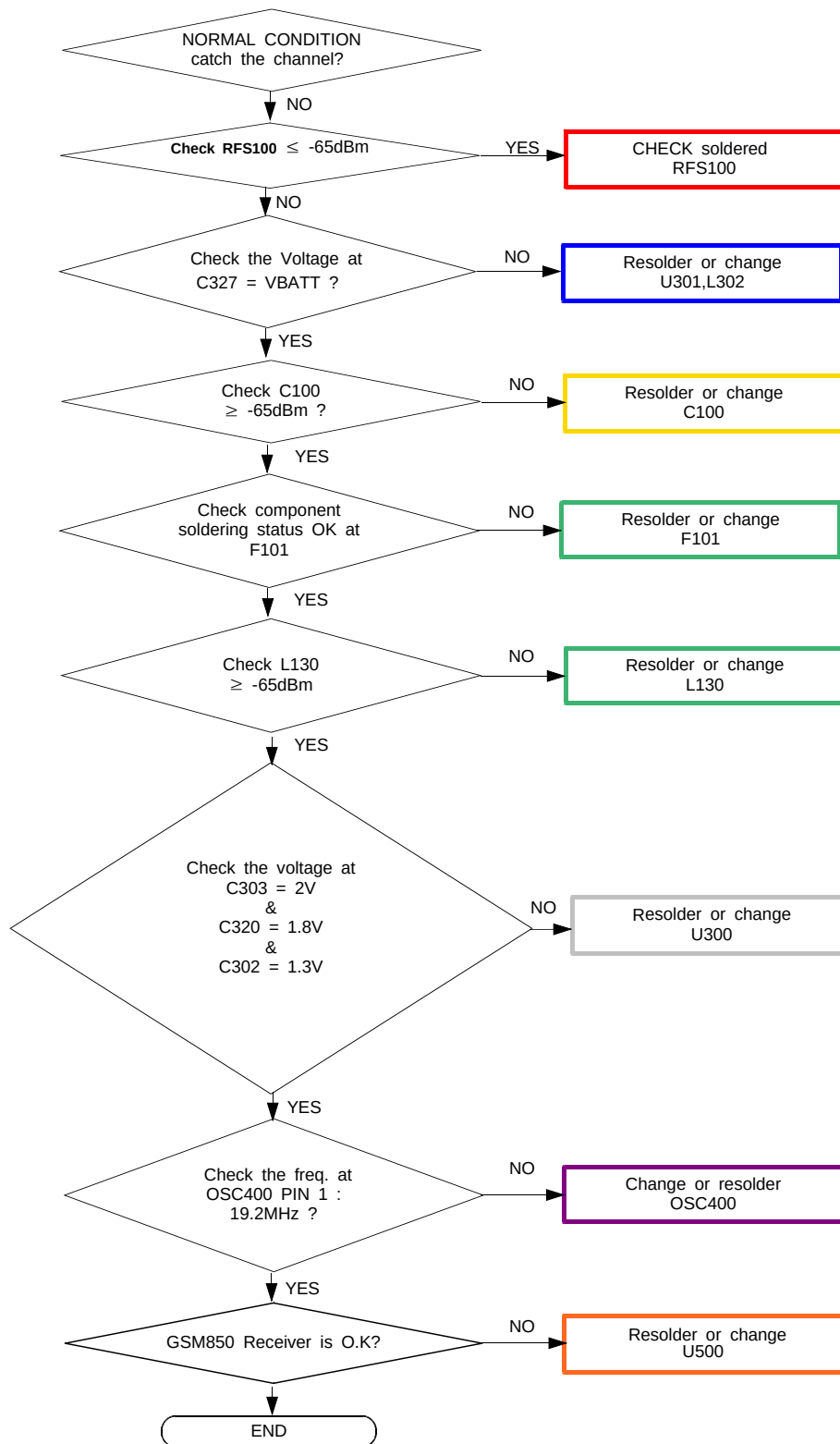


CONTINUOUS RX ON  
RF INPUT : 4407CH  
AMP : -50dBm



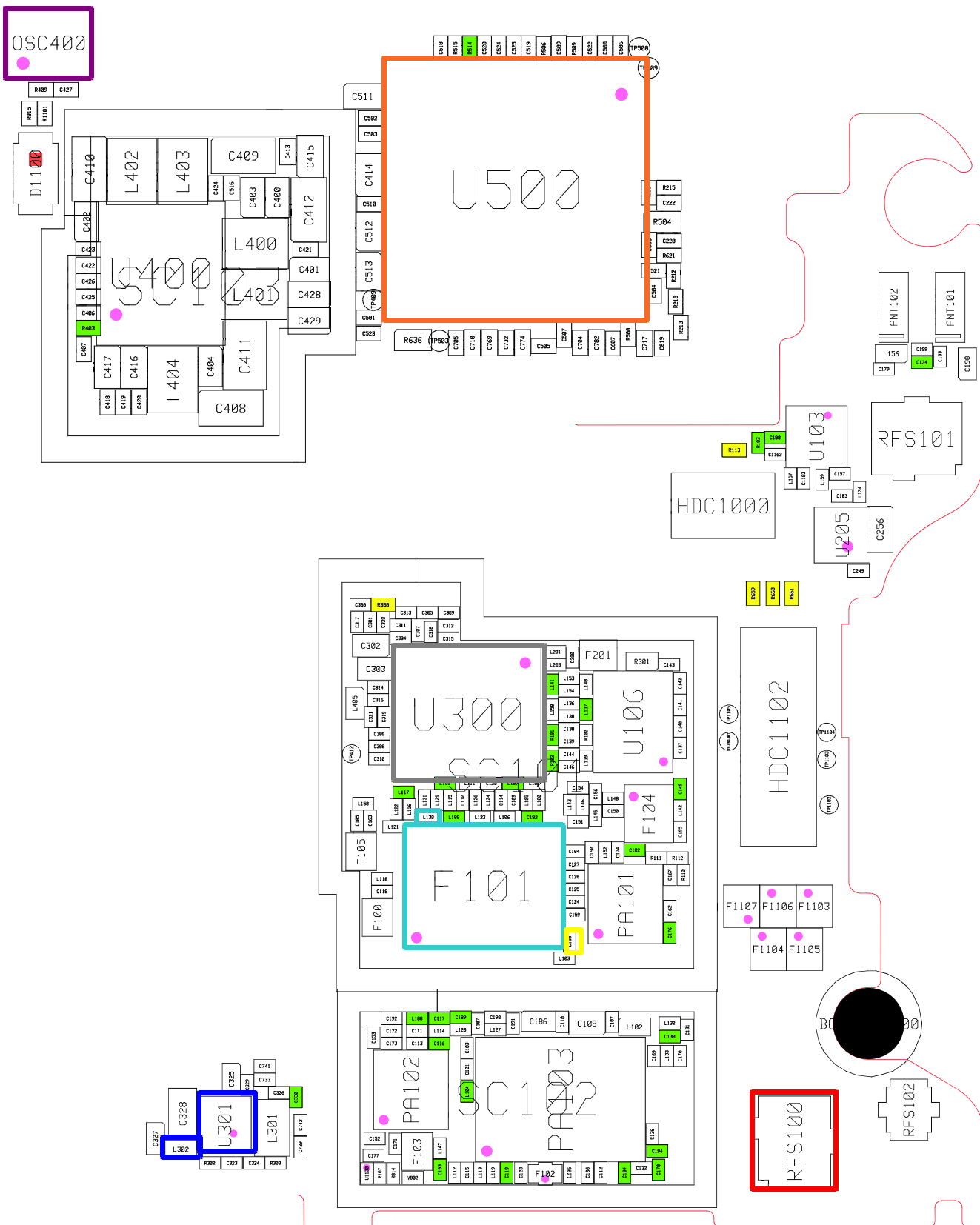


### 8-3-27. WCDMA900 RX

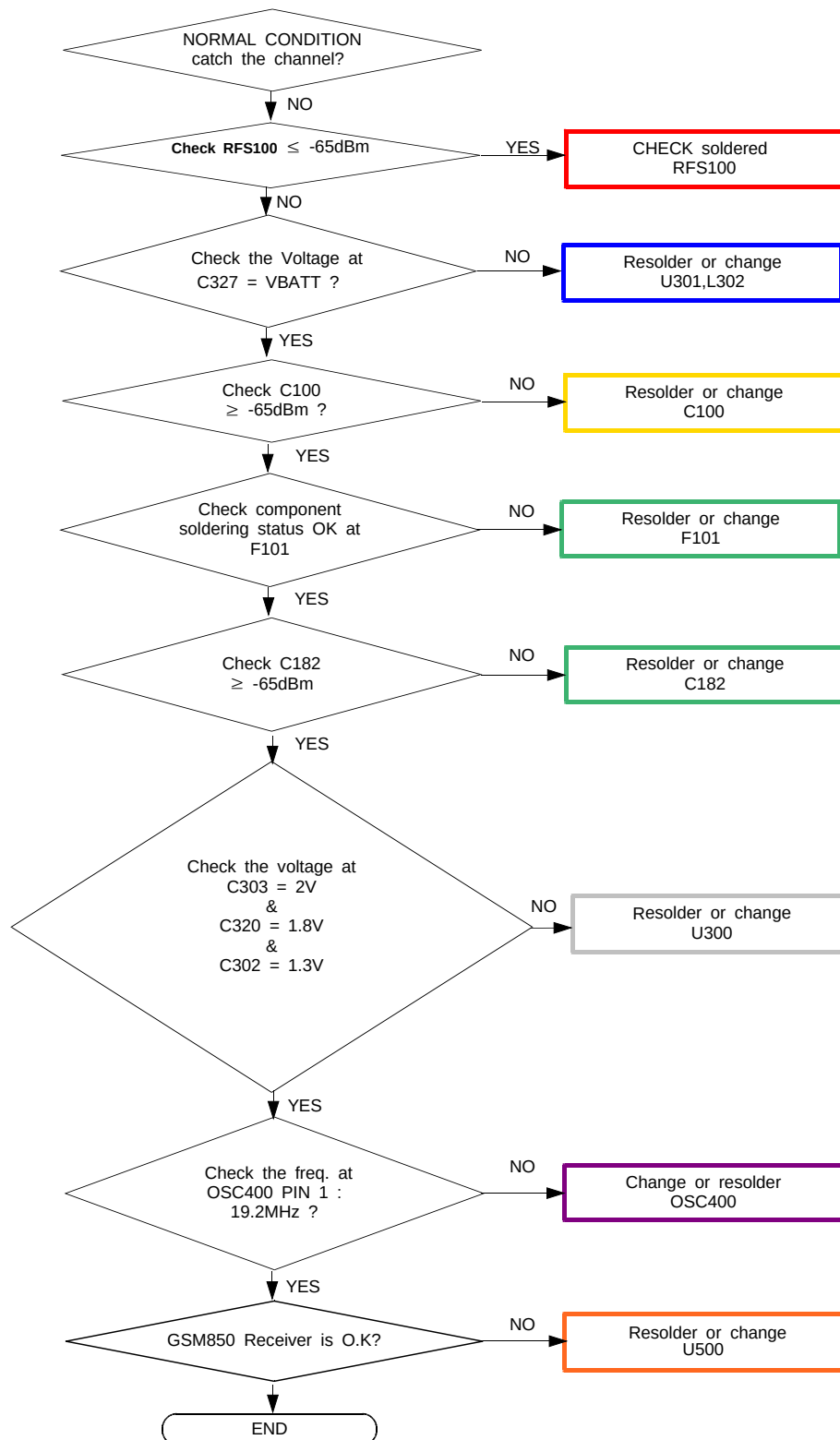


CONTINUOUS RX ON  
RF INPUT : 3013CH  
AMP : -50dBm

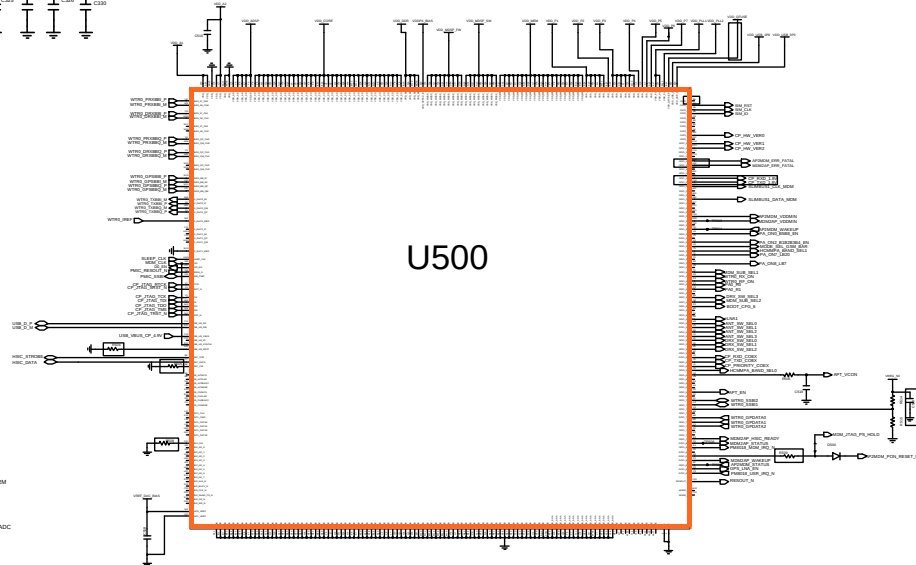
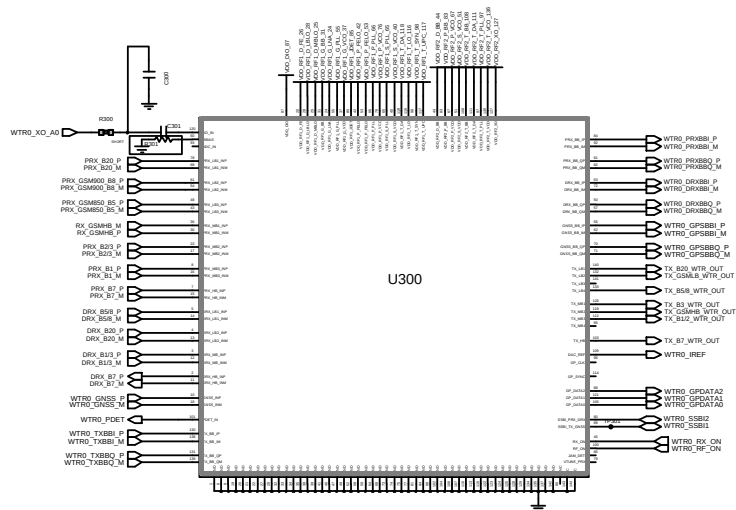




## 8-3-28. LTE B1 RX

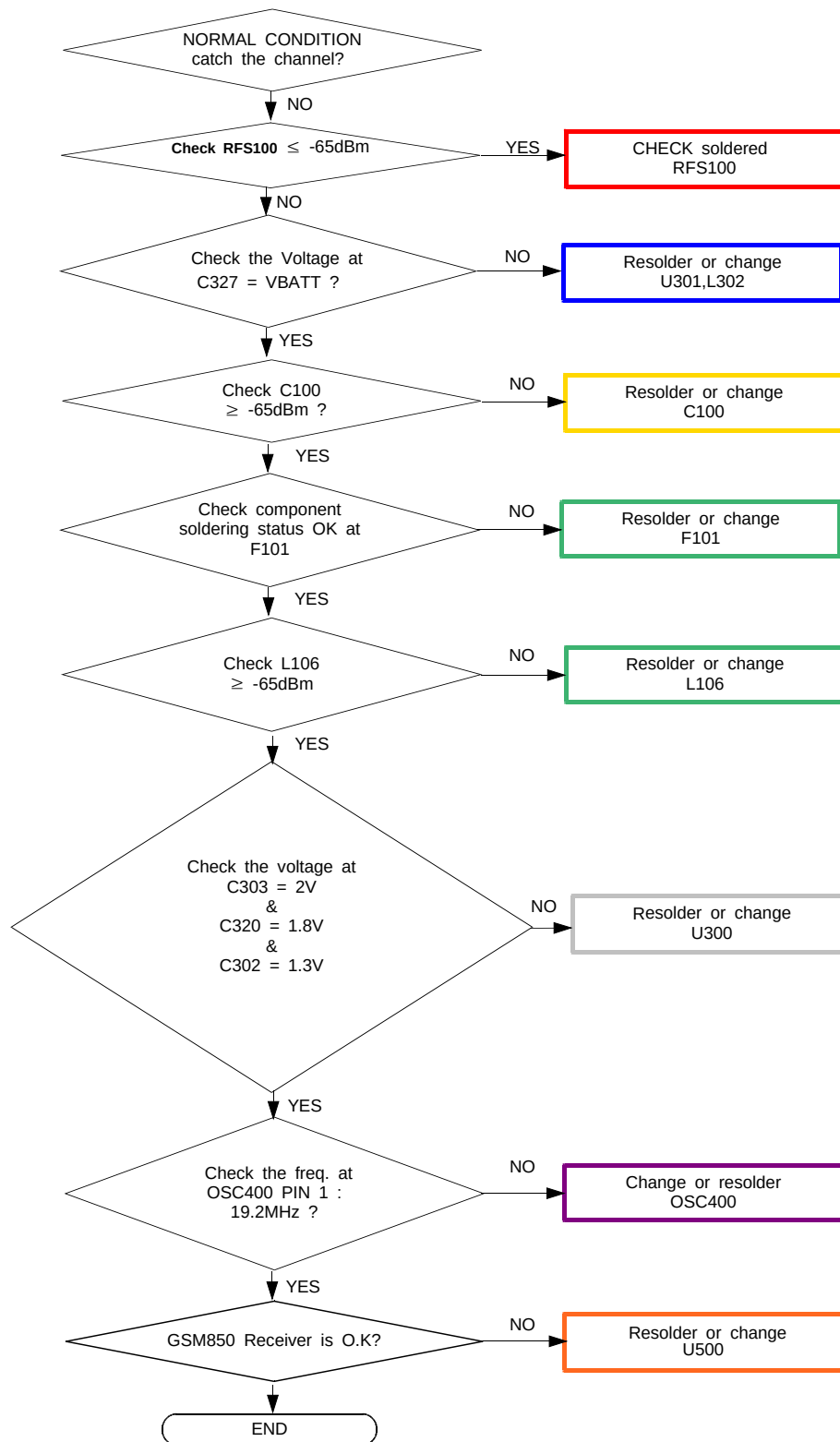


CONTINUOUS RX ON  
RF INPUT : 300CH  
AMP : -50dBm

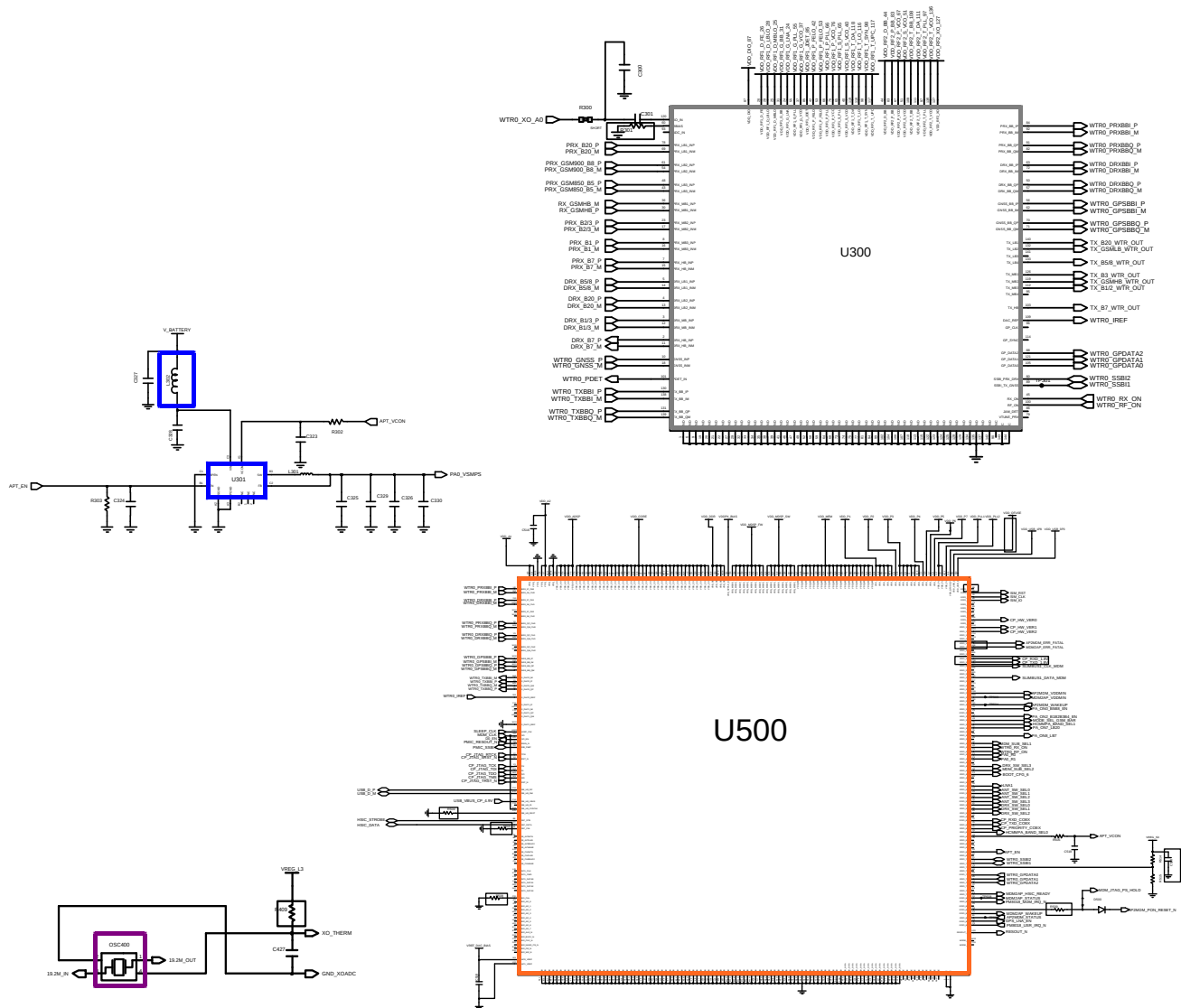
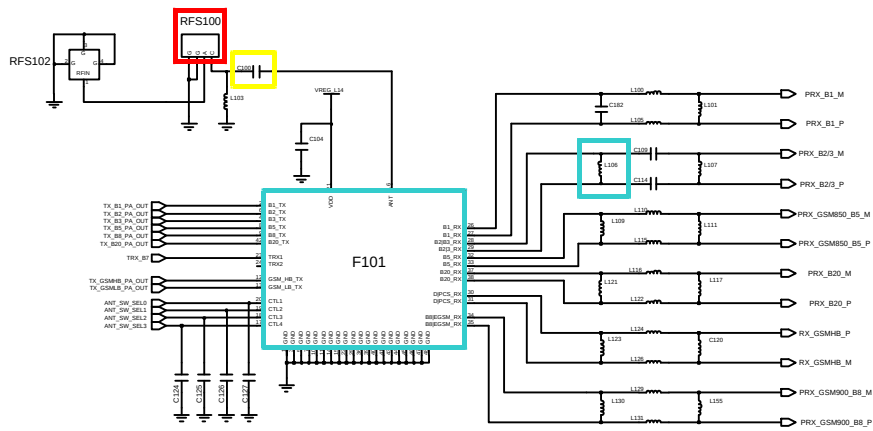


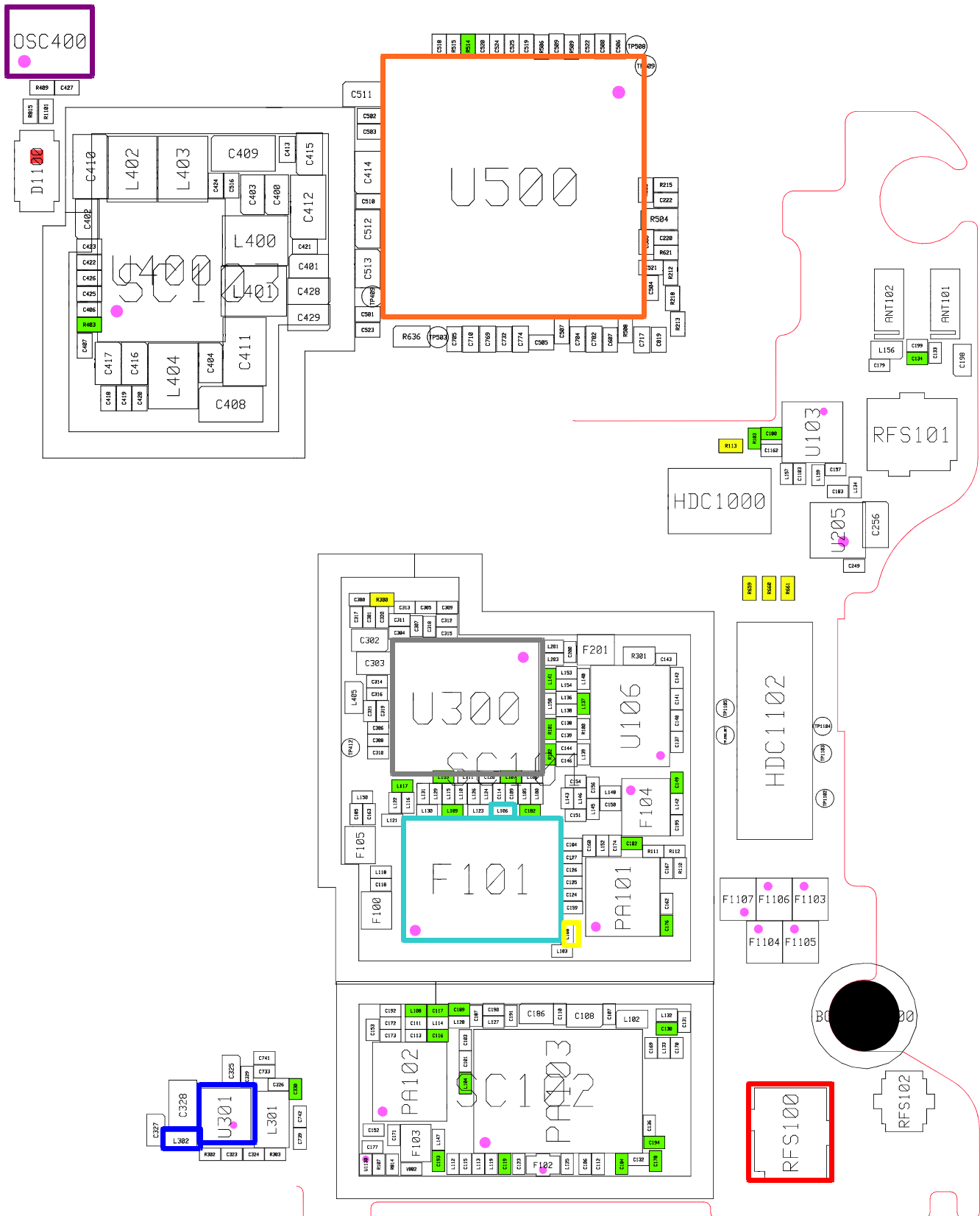


### 8-3-29. LTE B3 RX

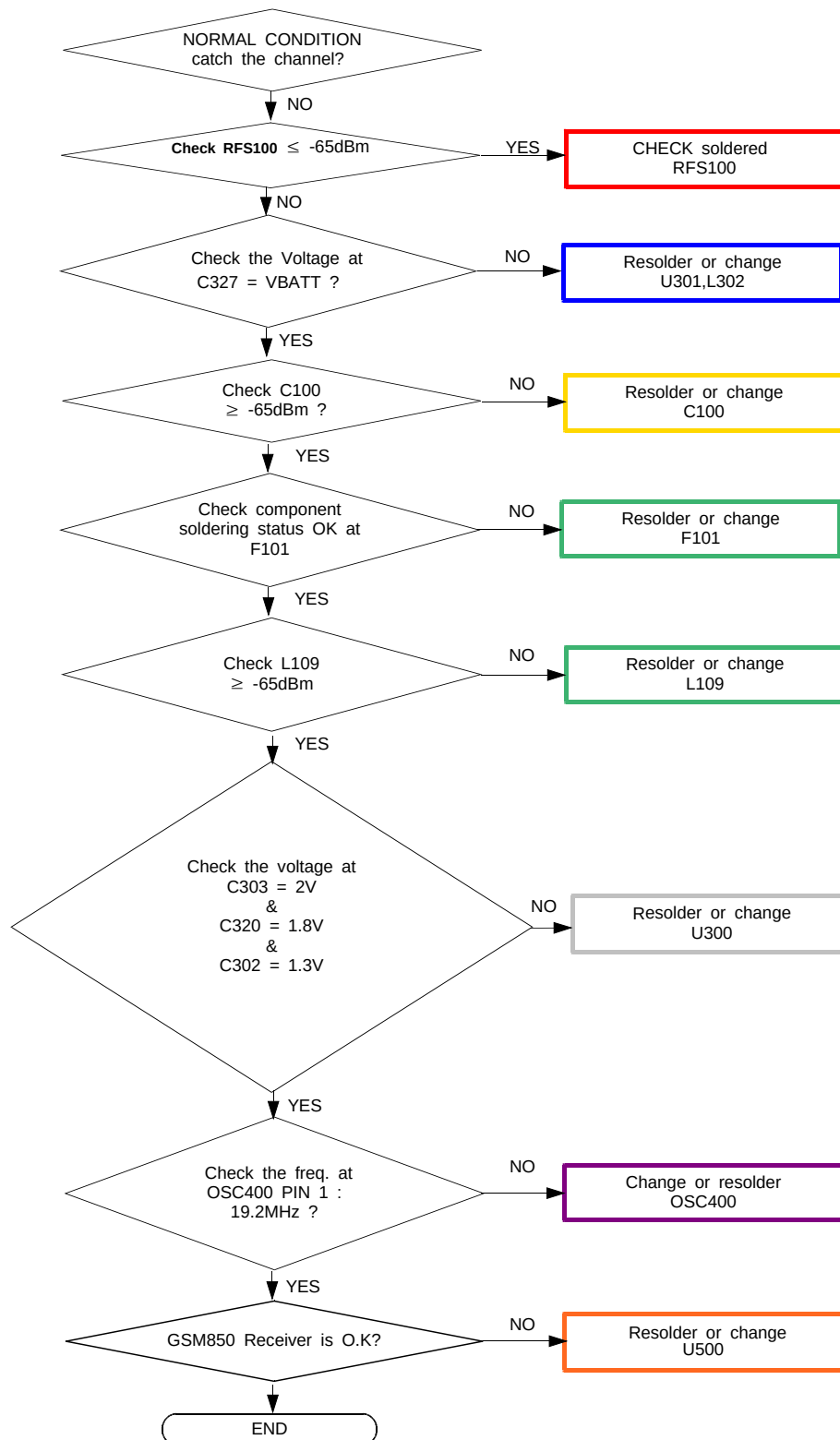


CONTINUOUS RX ON  
RF INPUT : 1575CH  
AMP : -50dBm

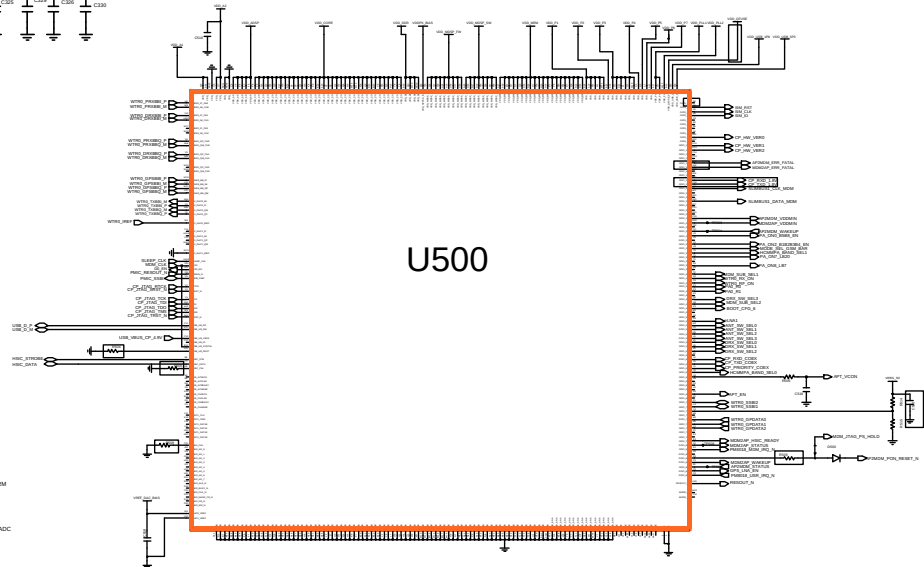
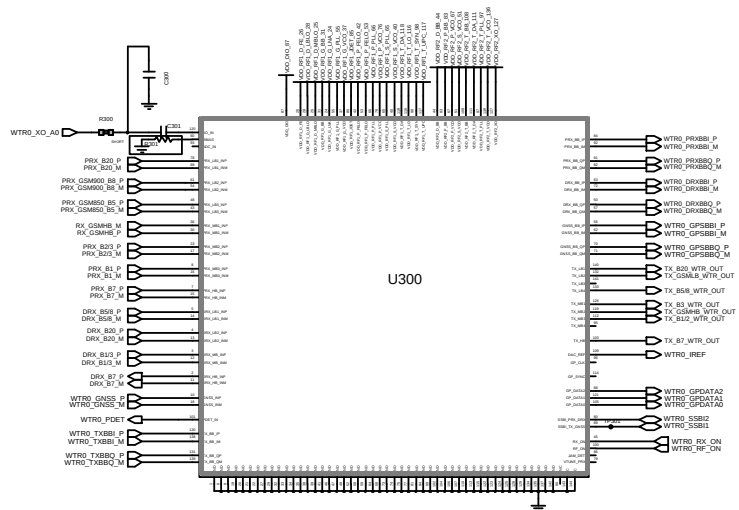


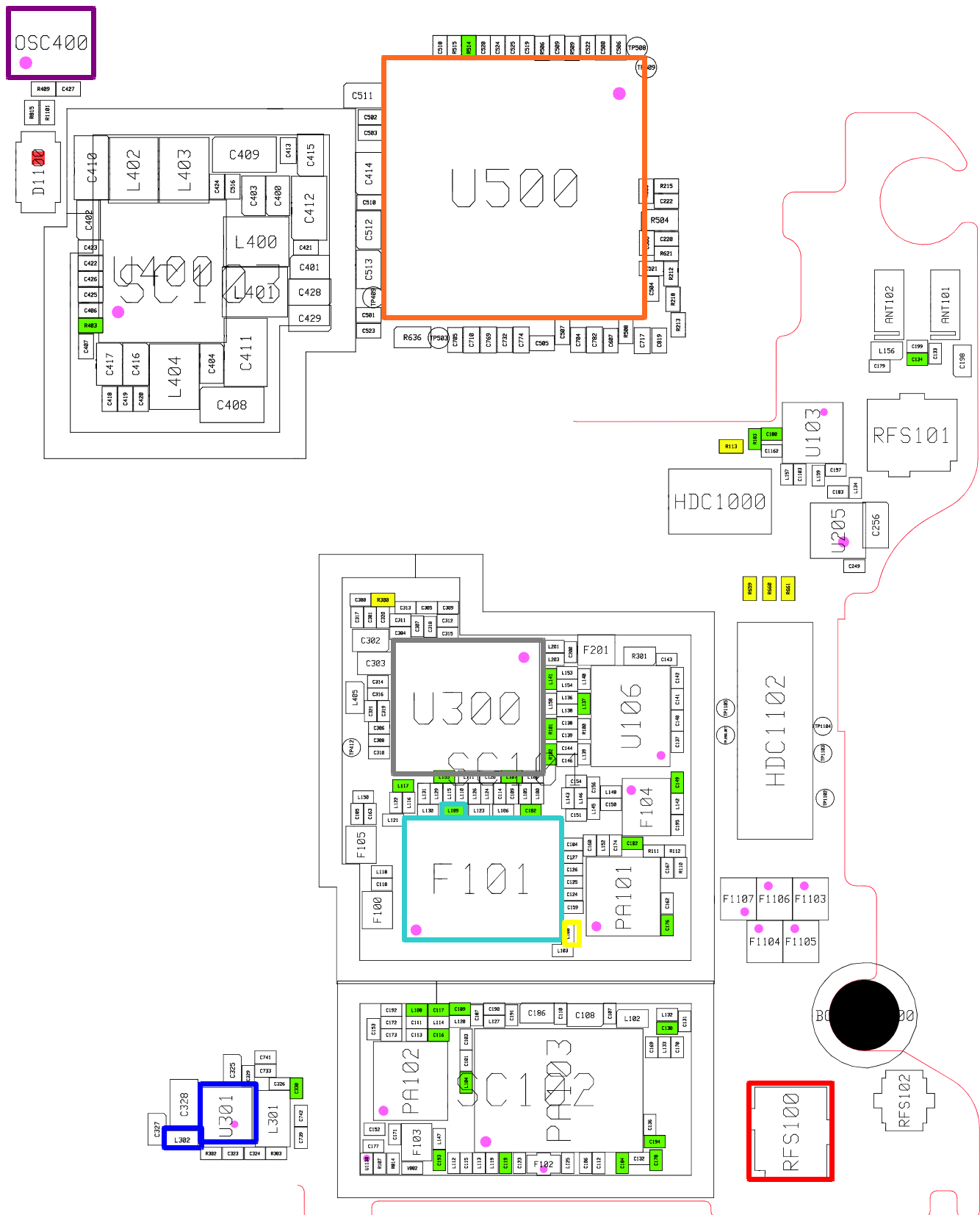


## 8-3-30. LTE B5 RX

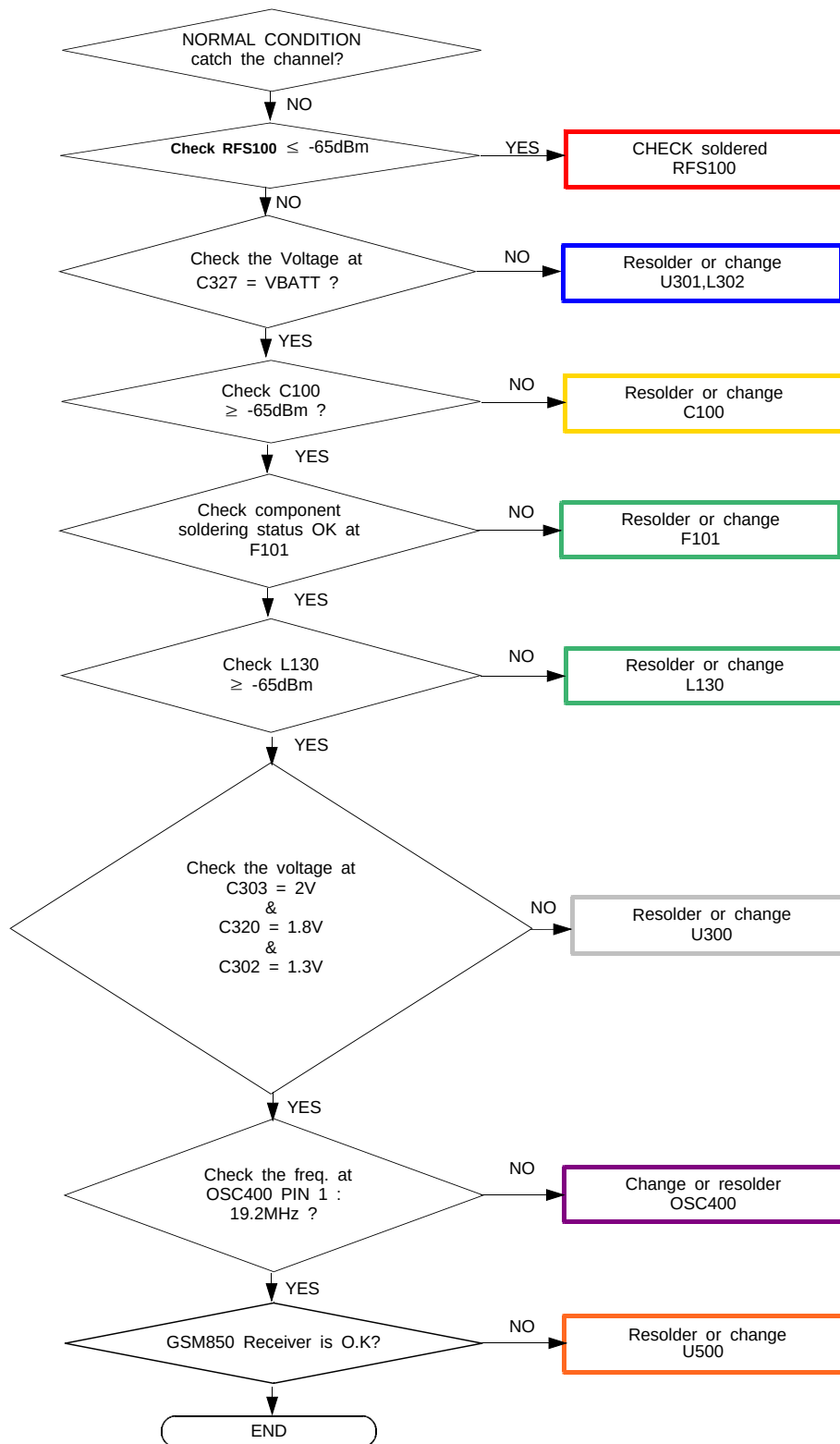


CONTINUOUS RX ON  
RF INPUT : 2525CH  
AMP : -50dBm

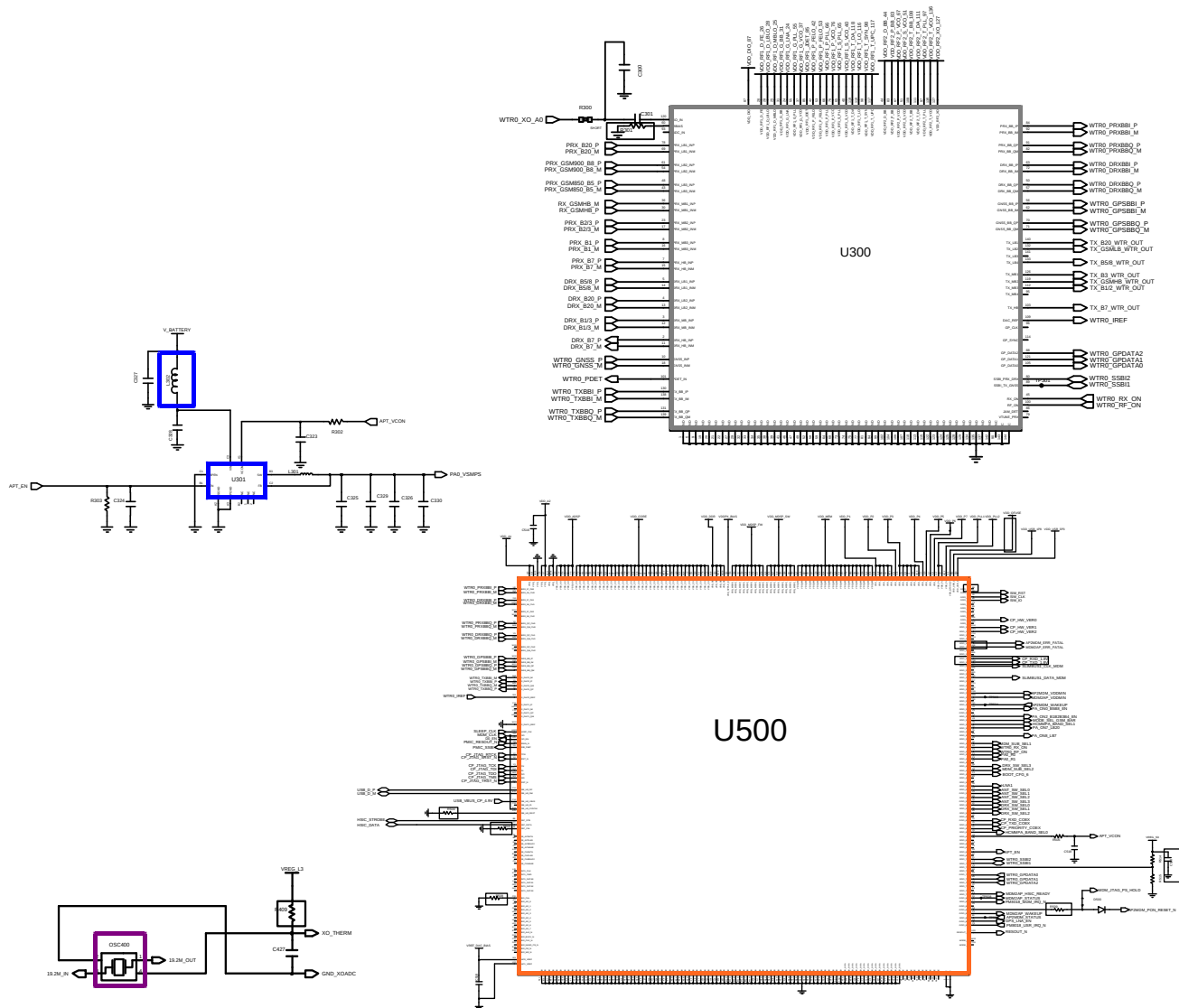
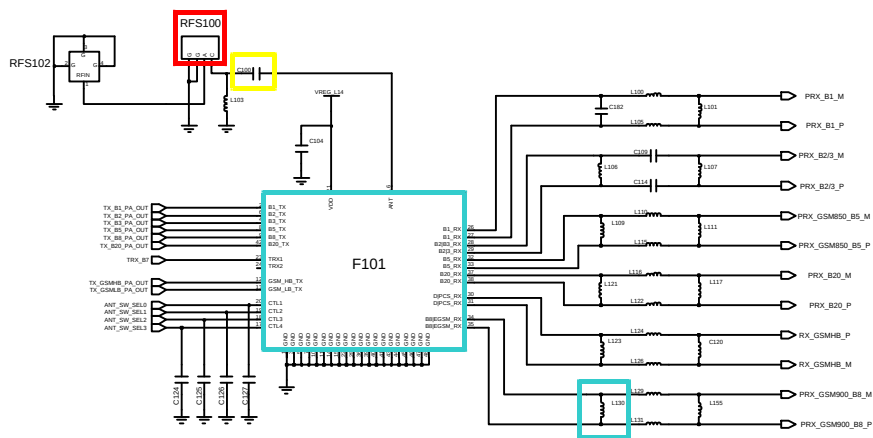


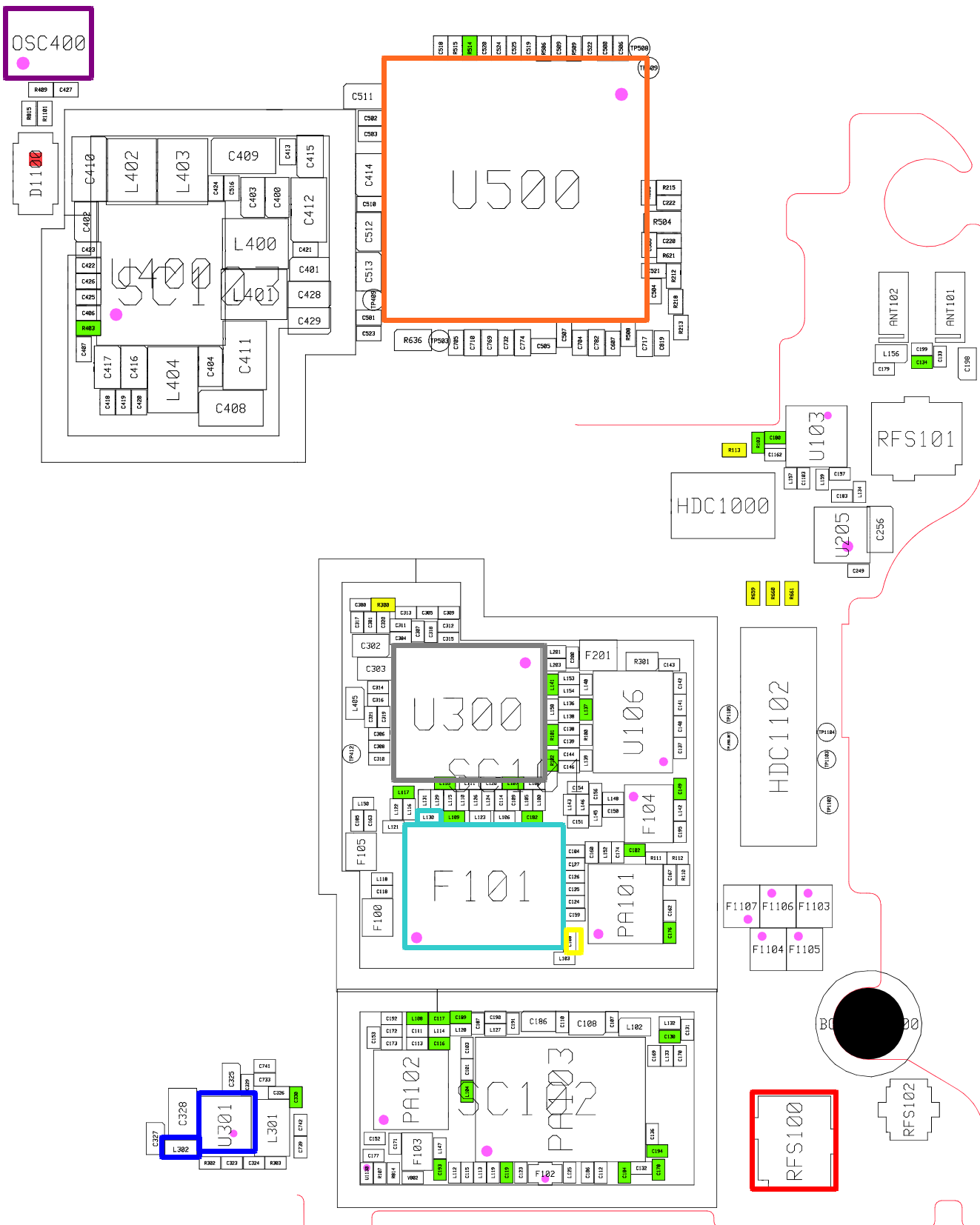


### 8-3-31. LTE B8 RX

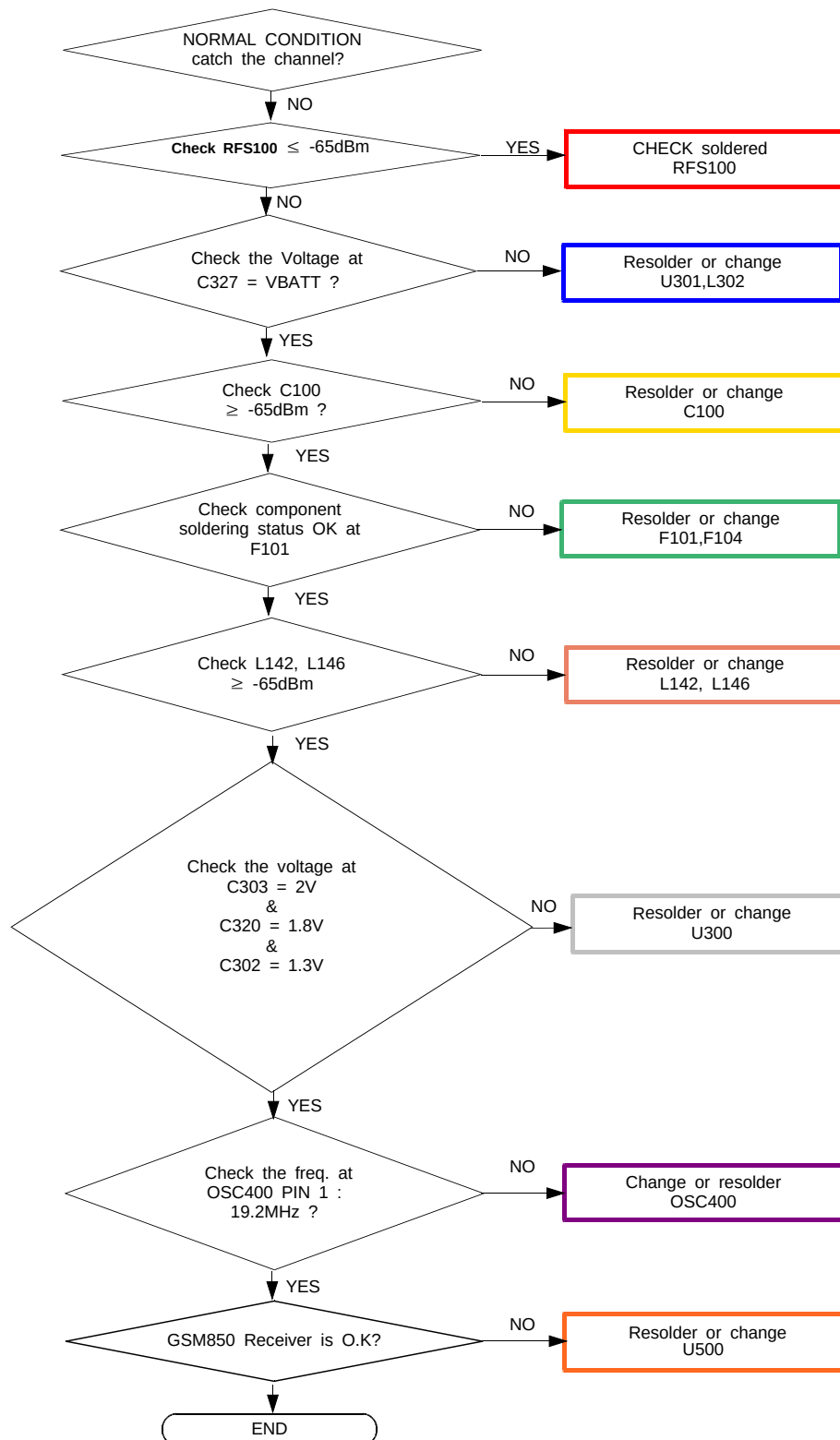


CONTINUOUS RX ON  
RF INPUT : 3625CH  
AMP : -50dBm

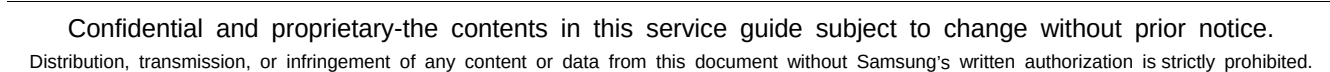


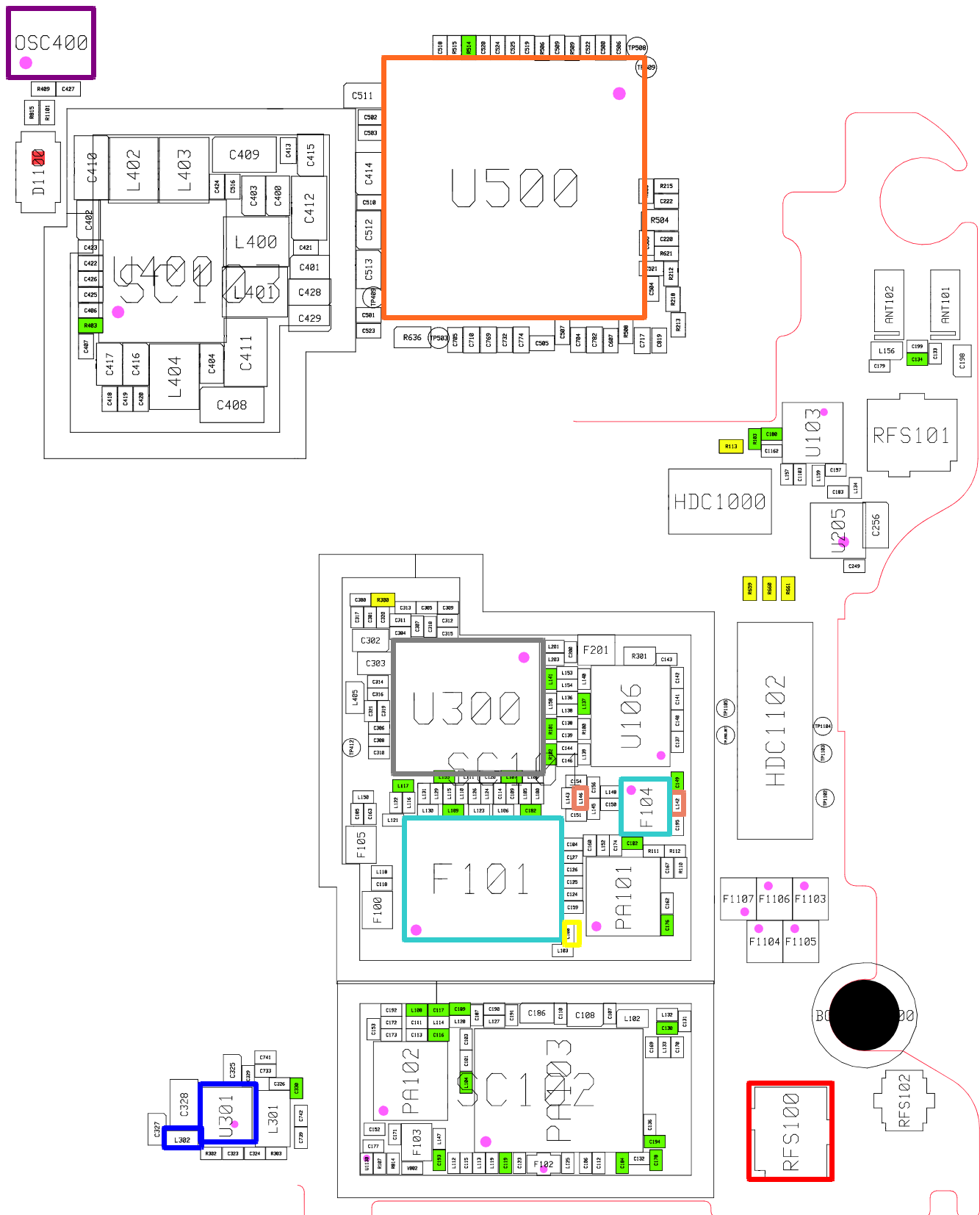


## 8-3-32. LTE B7 RX

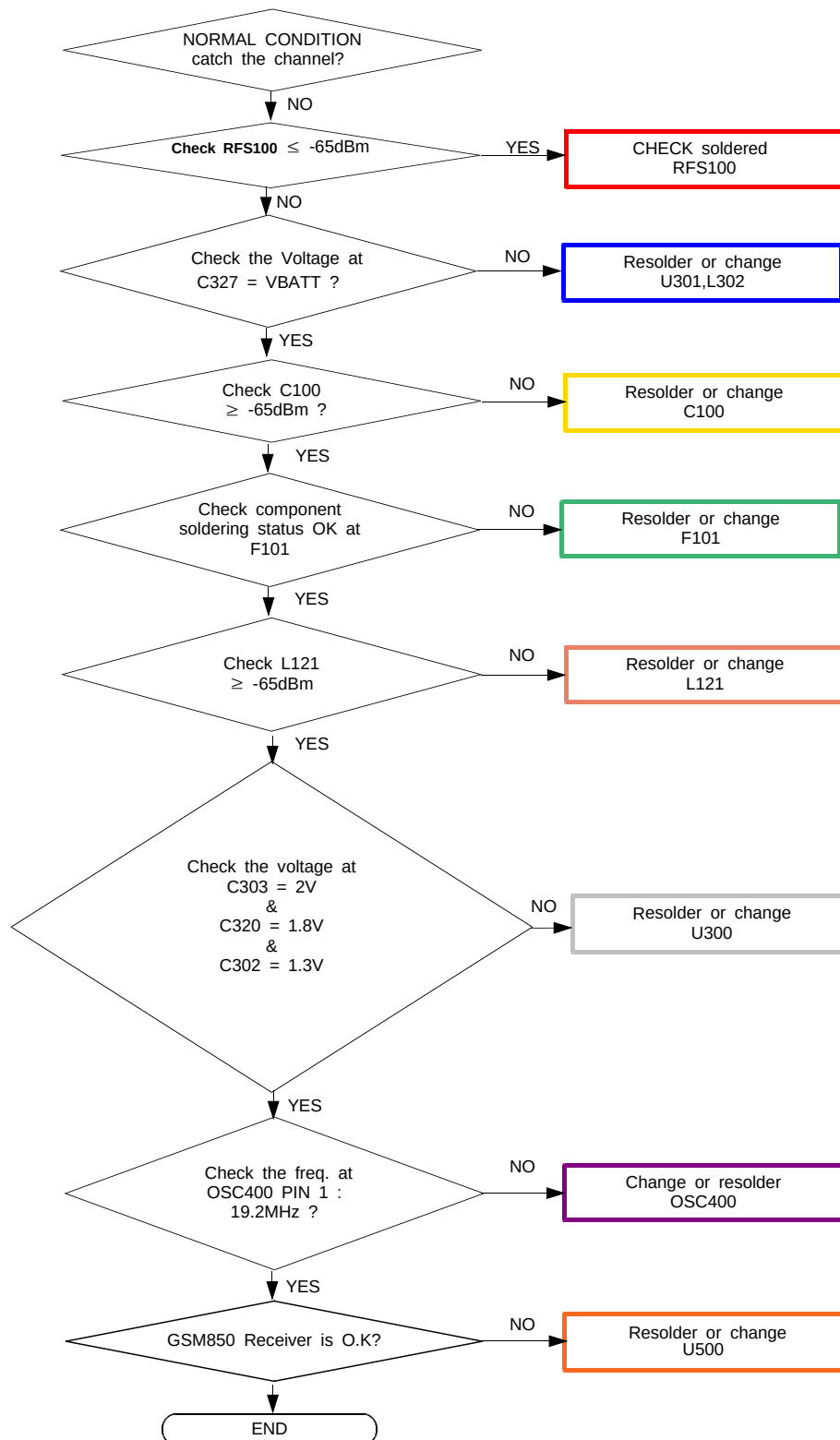


CONTINUOUS RX ON  
RF INPUT : 3100CH  
AMP : -50dBm



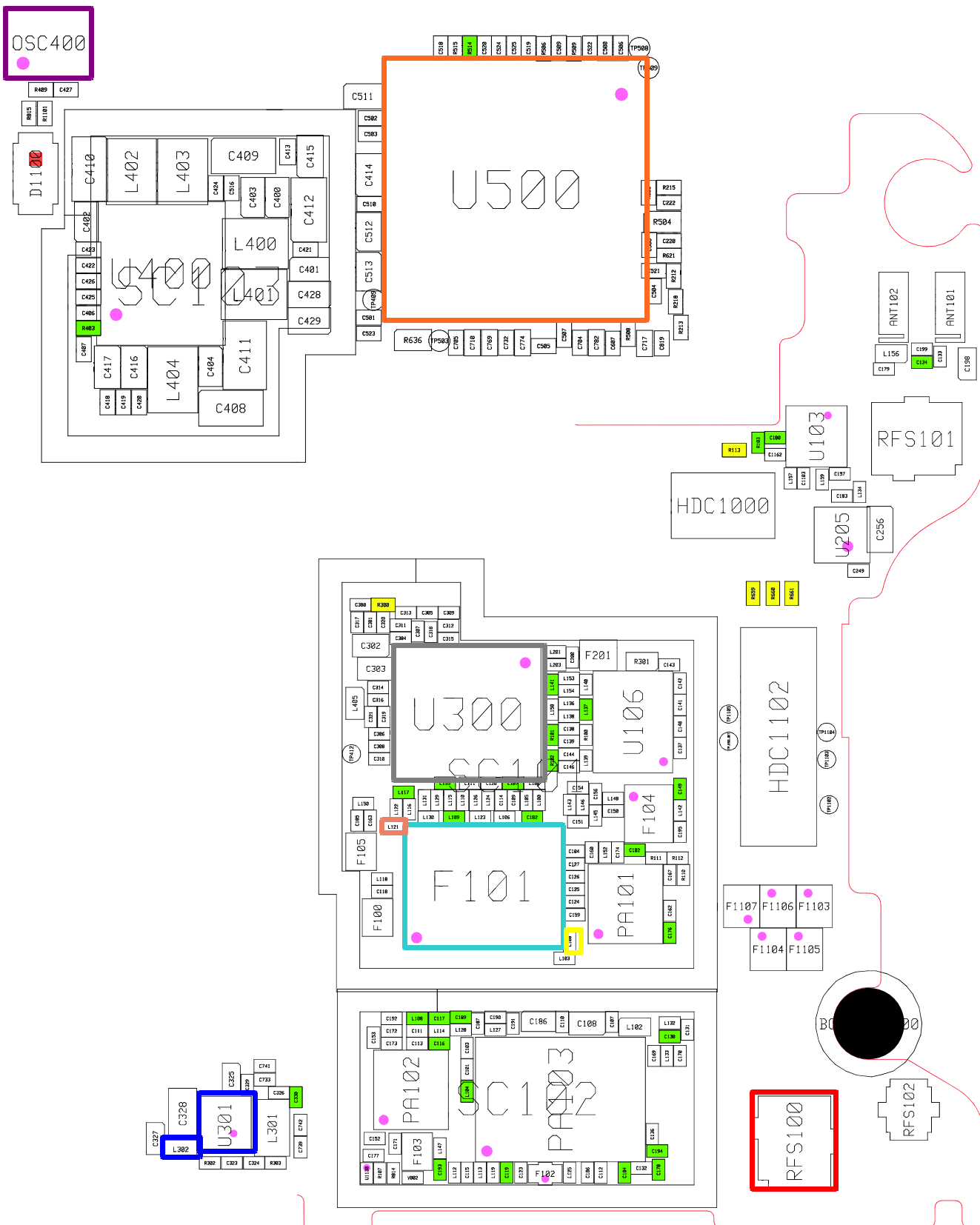


## 8-3-33. LTE B20 RX



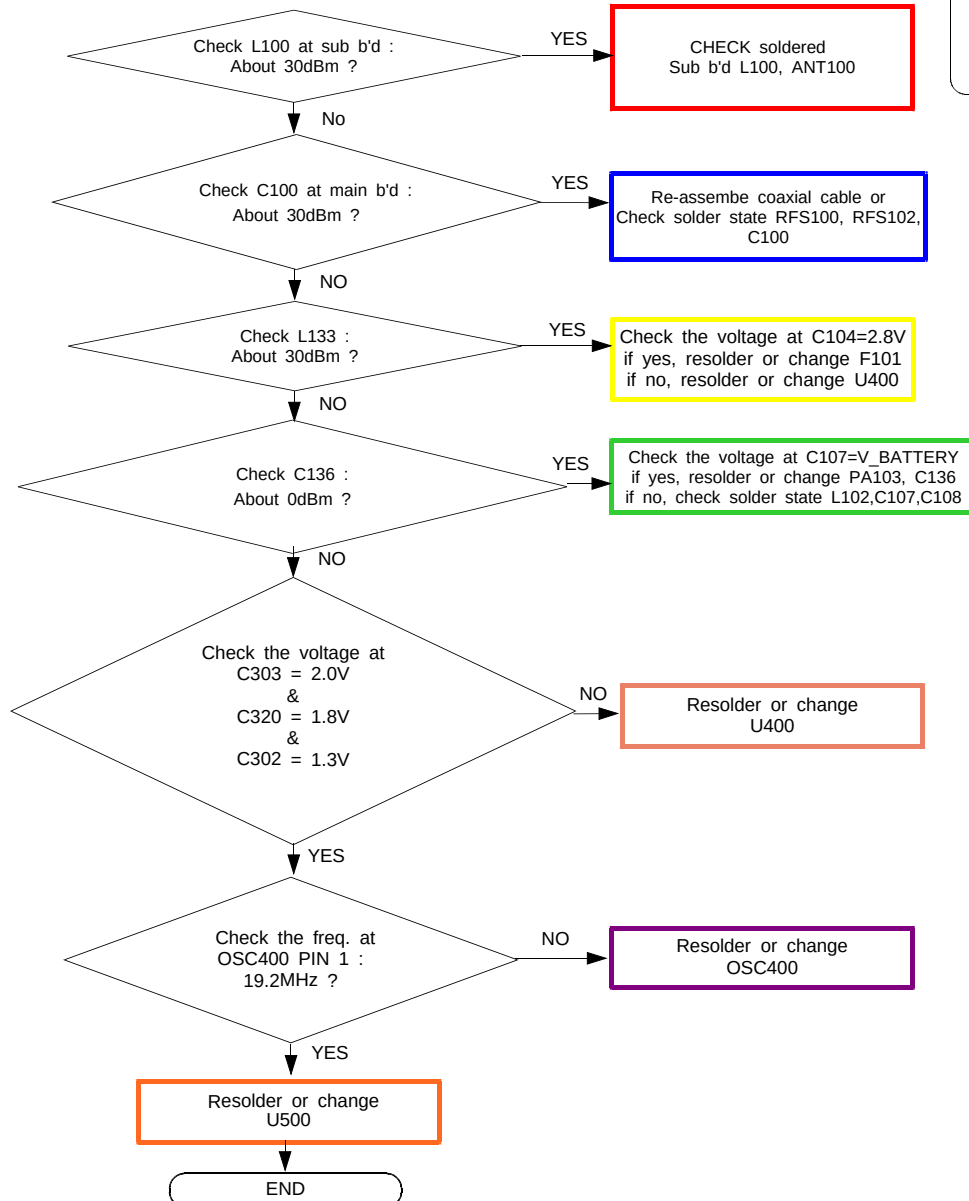
CONTINUOUS RX ON  
RF INPUT : 6300CH  
AMP : -50dBm

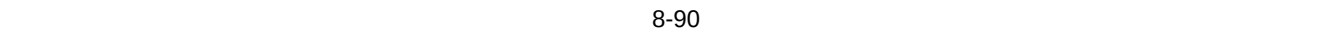


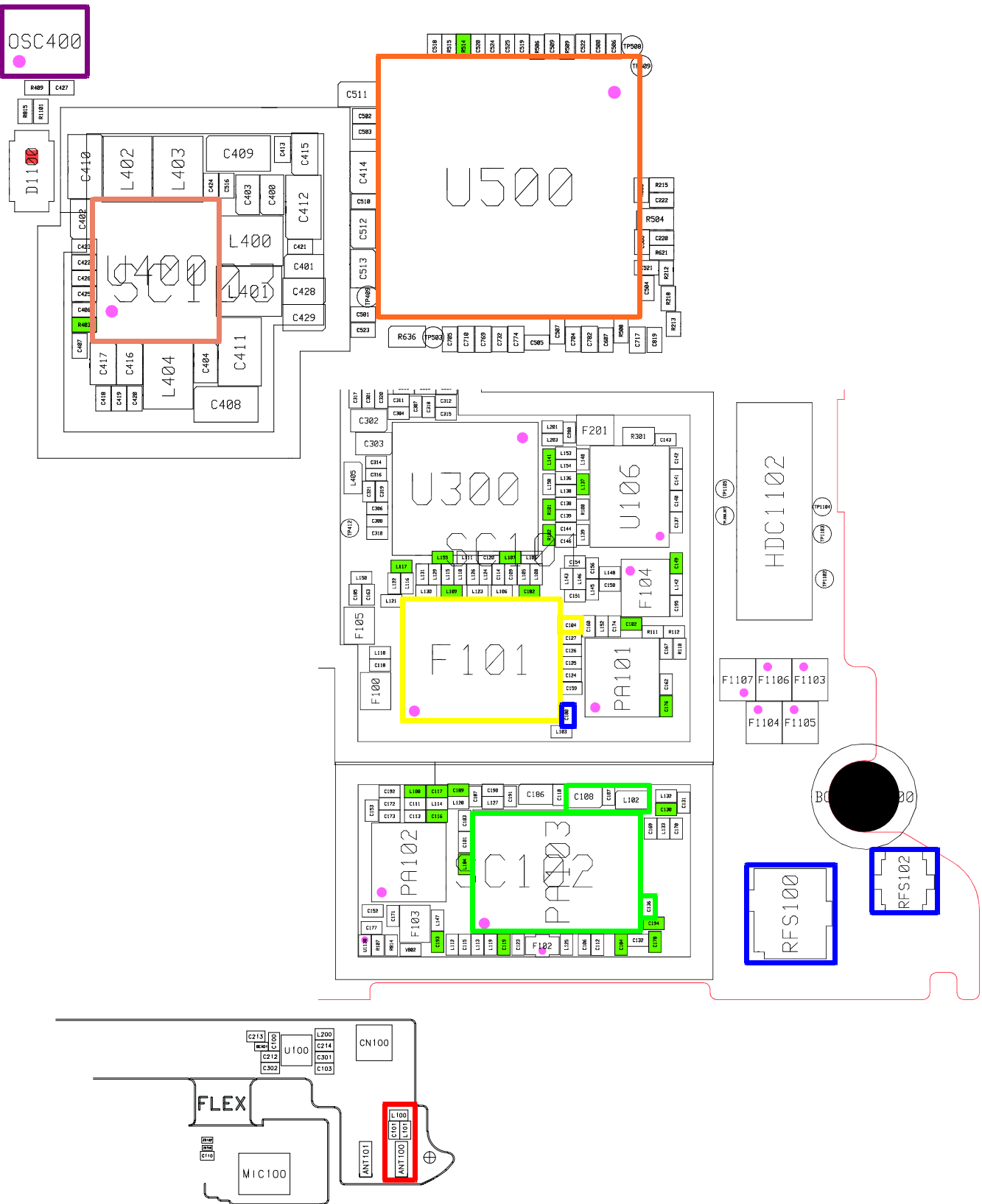


## 8-3-34. GSM850/GSM900 TX

CONTINUOUS TX ON CONDITION  
 TX POWER IDX1 APPLIED  
 GSM850 CH : 190  
 GSM900 CH : 62  
 RBW : 100KHz  
 VBW : 100KHz  
 SPAN : 10MHz  
 REF LEV. : 10dBm  
 ATT. : 20dB

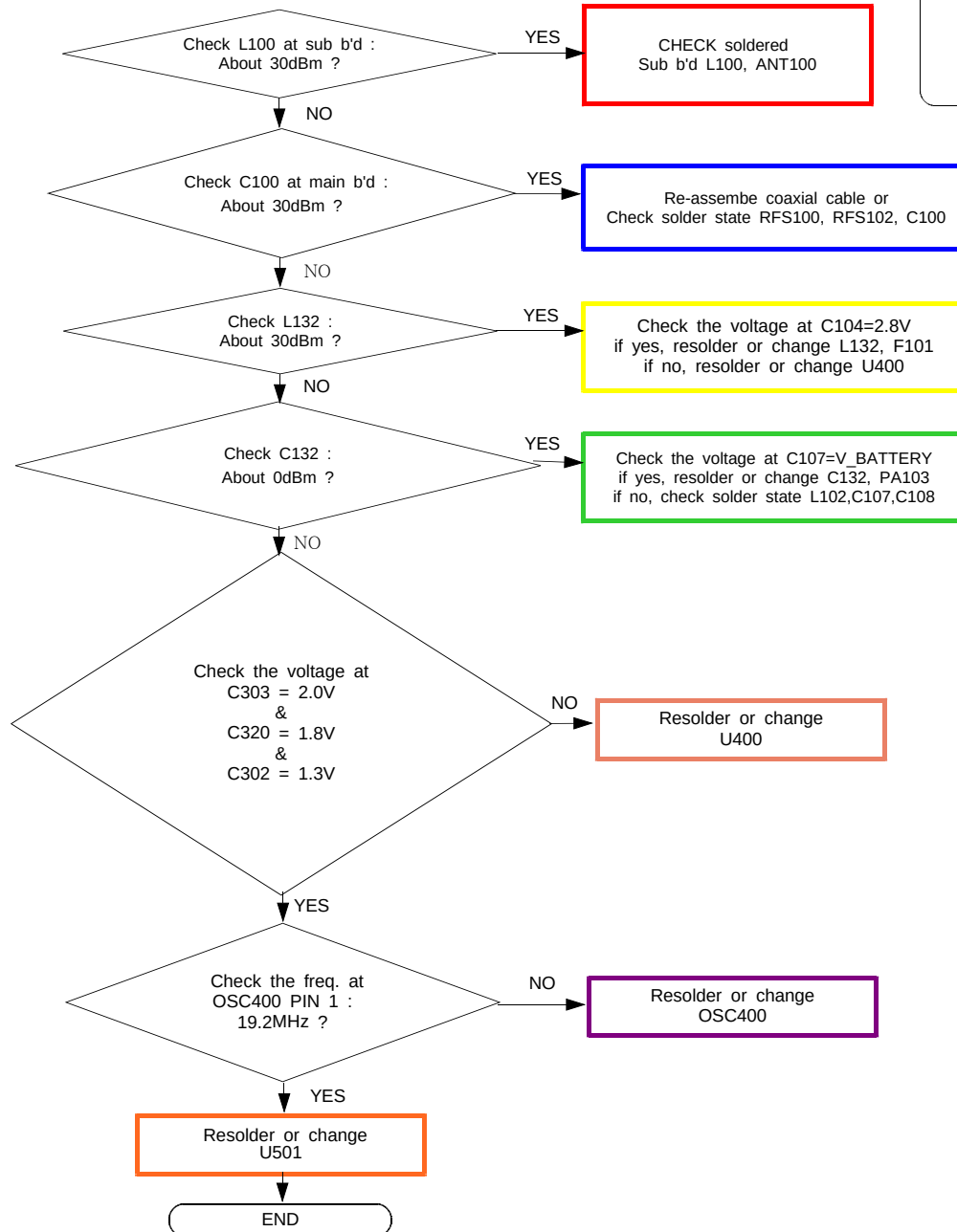


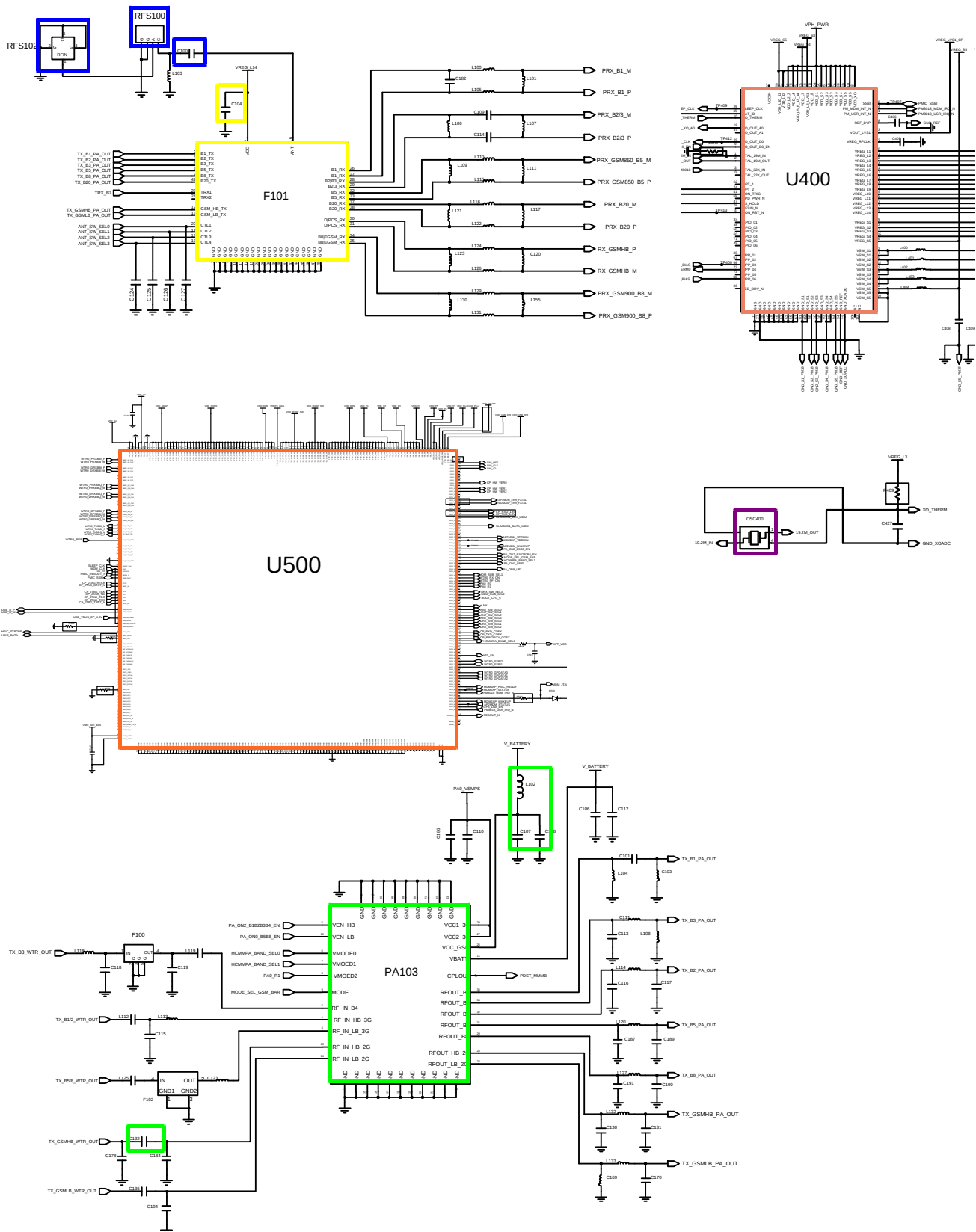


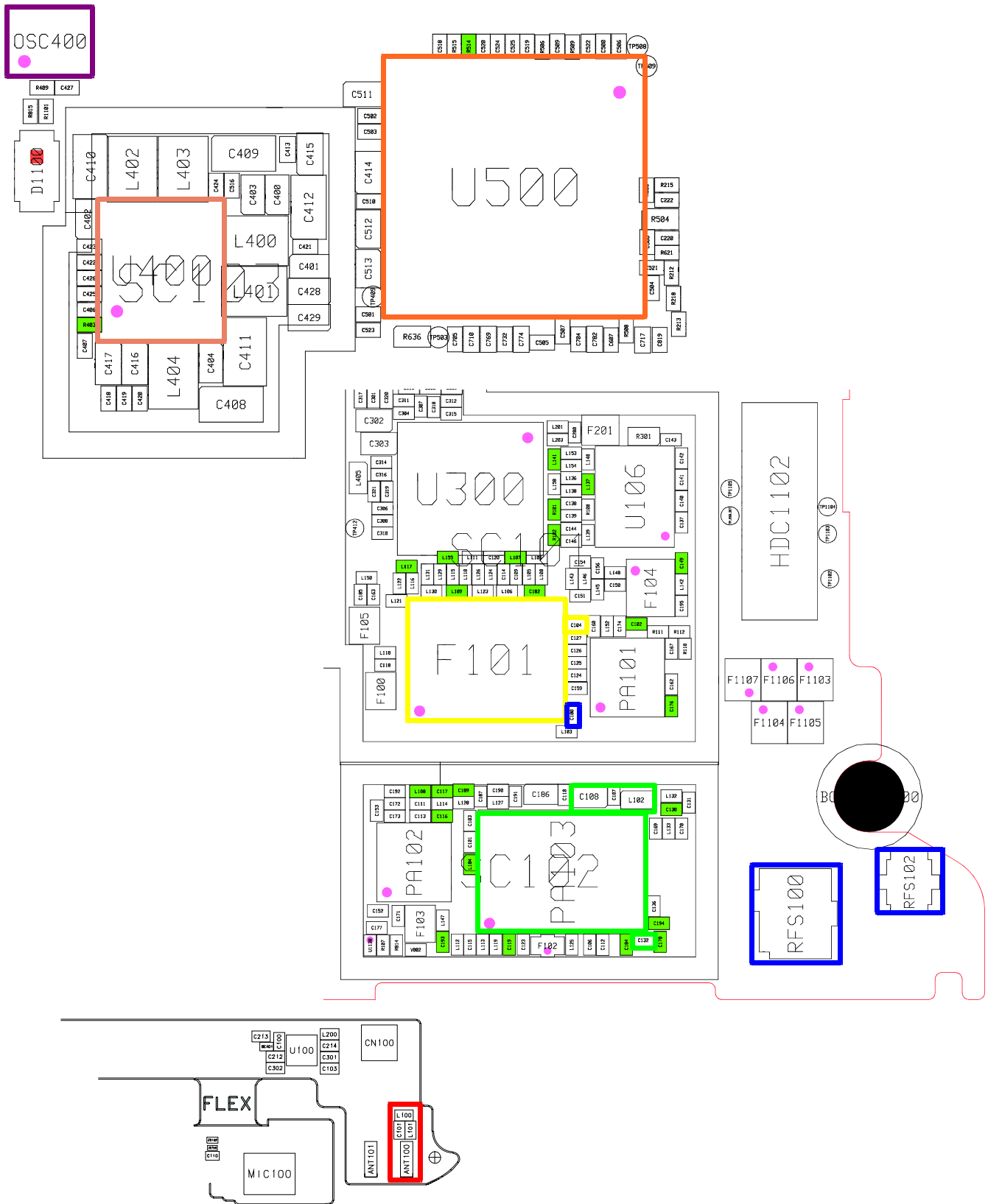


# 8-3-35. DCS/PCS TX

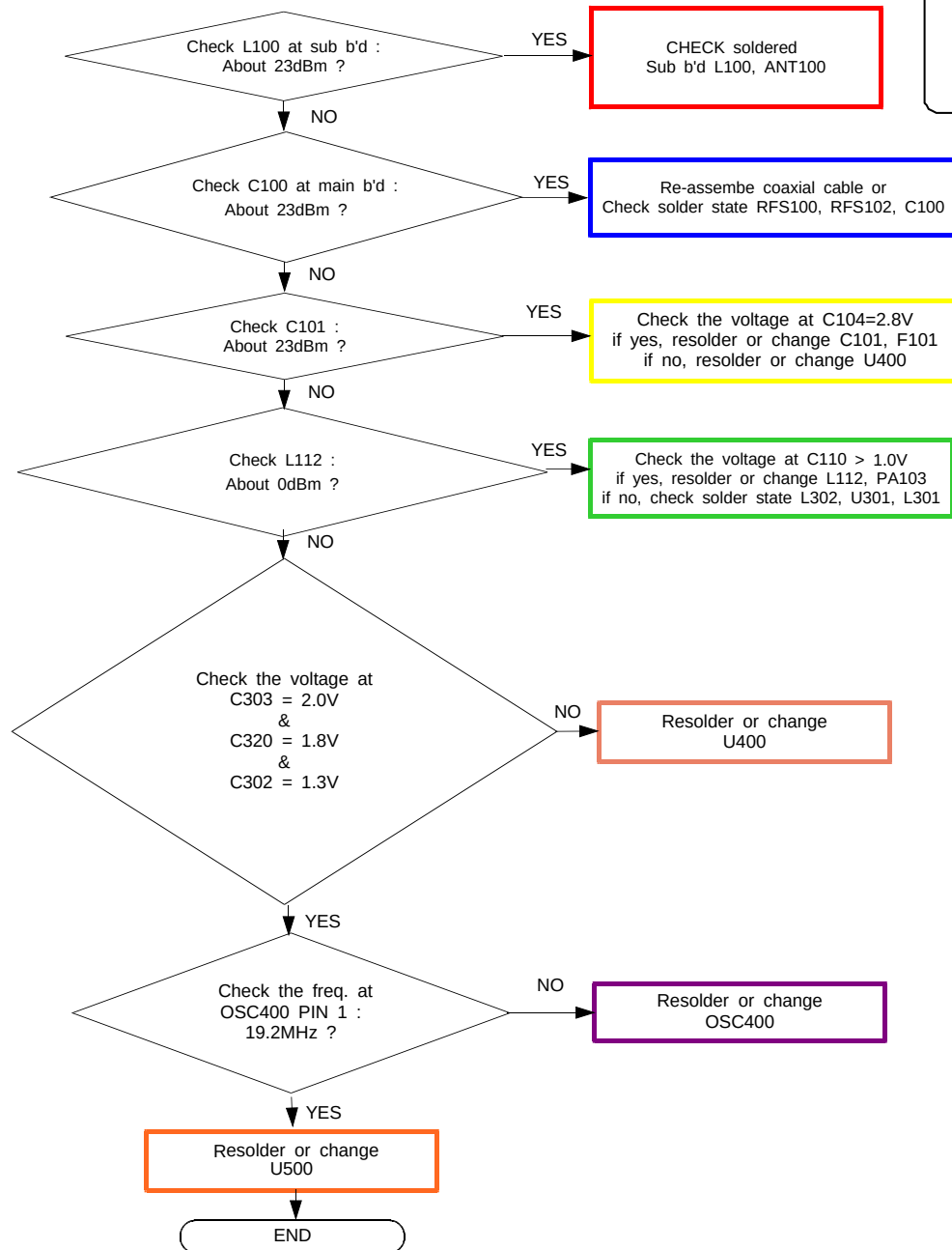
CONTINUOUS TX ON CONDITION  
TX POWER IDX1 APPLIED  
DCS CH : 698  
PCS CH : 661  
RBW : 100KHz  
VBW : 100KHz  
SPAN : 10MHz  
REF. LEV. : 10dBm  
ATT. : 20dB



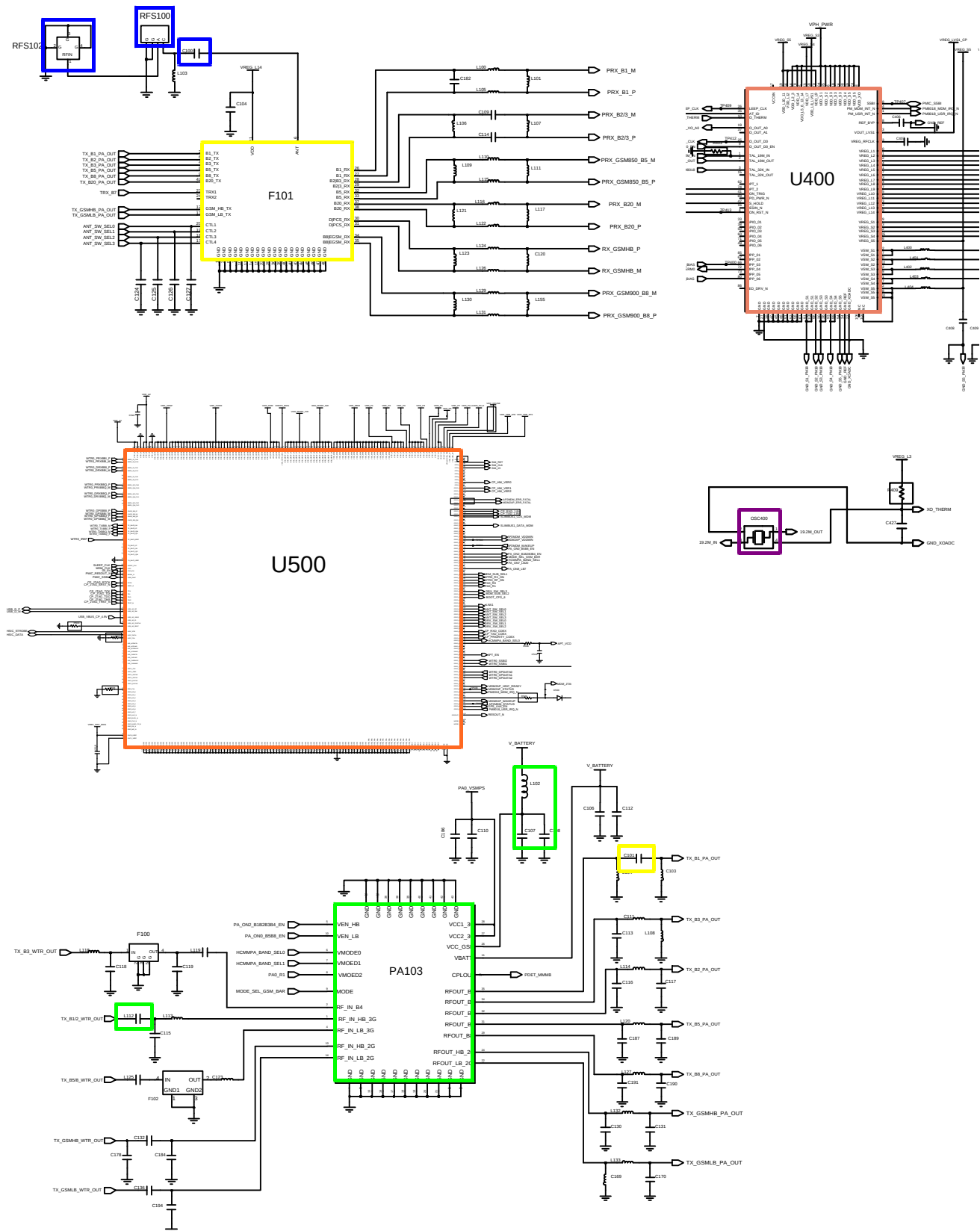




## 8-3-36. WCDMA2100 / LTE B1 TX



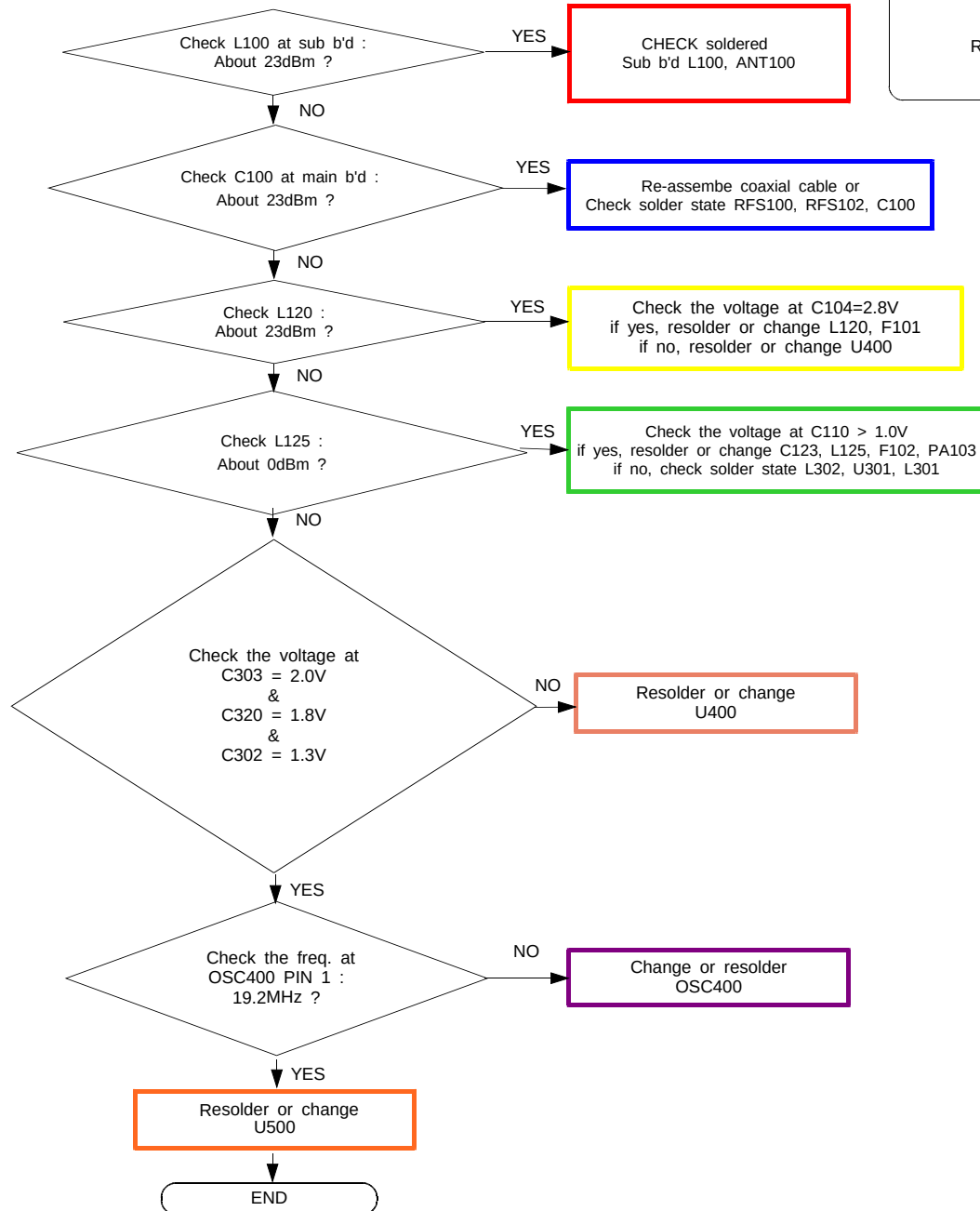
CONTINUOUS TX ON CONDITION  
 TX POWER IDX1 APPLIED  
 WCDMA2100 CH : 9750  
 LTE Band1 CH : 18300  
 RBW : 100KHz  
 VBW : 100KHz  
 SPAN : 10MHz  
 REF LEV. : 10dBm  
 ATT. : 20dB



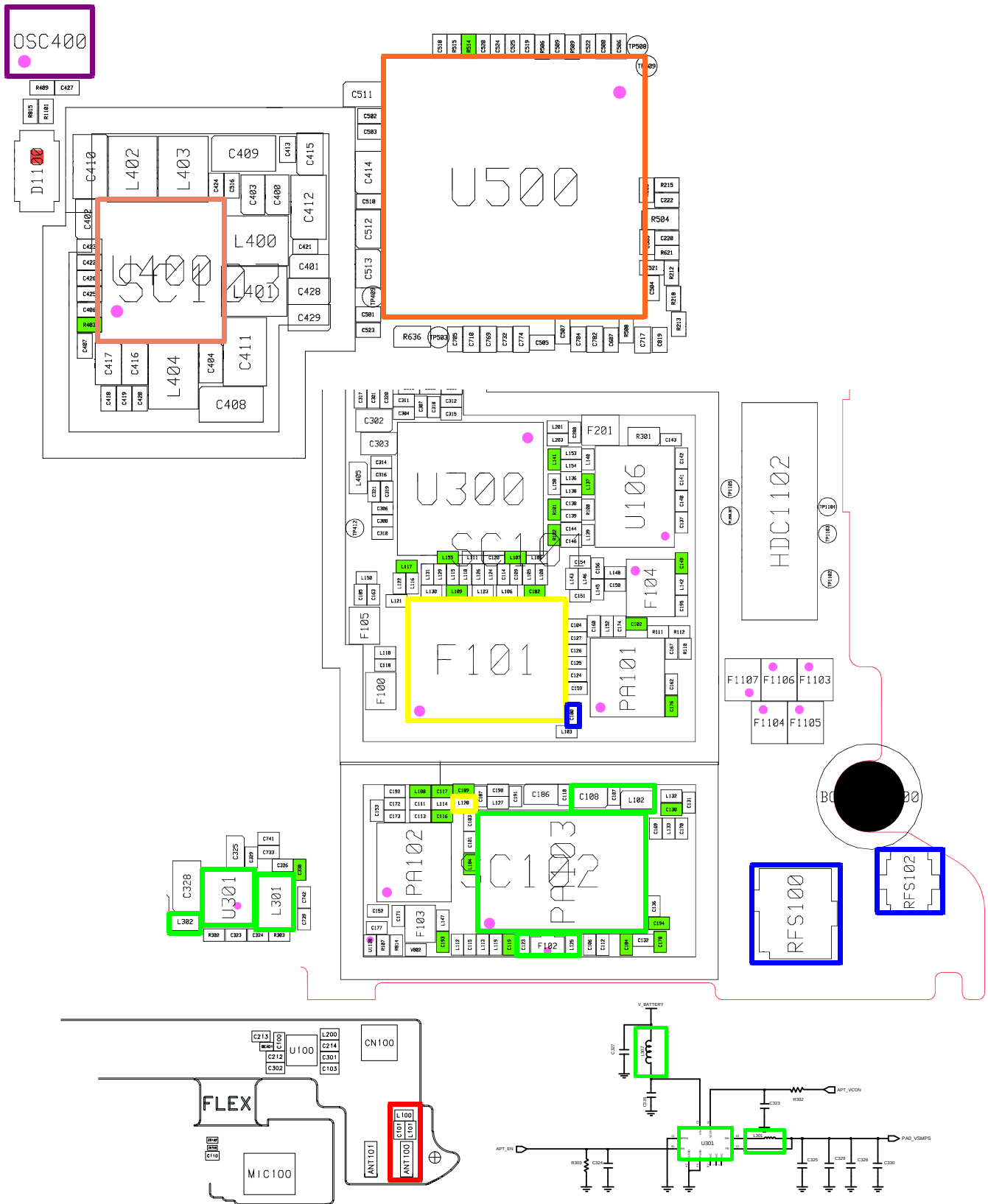


## 8-3-37. WCDMA850 / LTE B5 TX

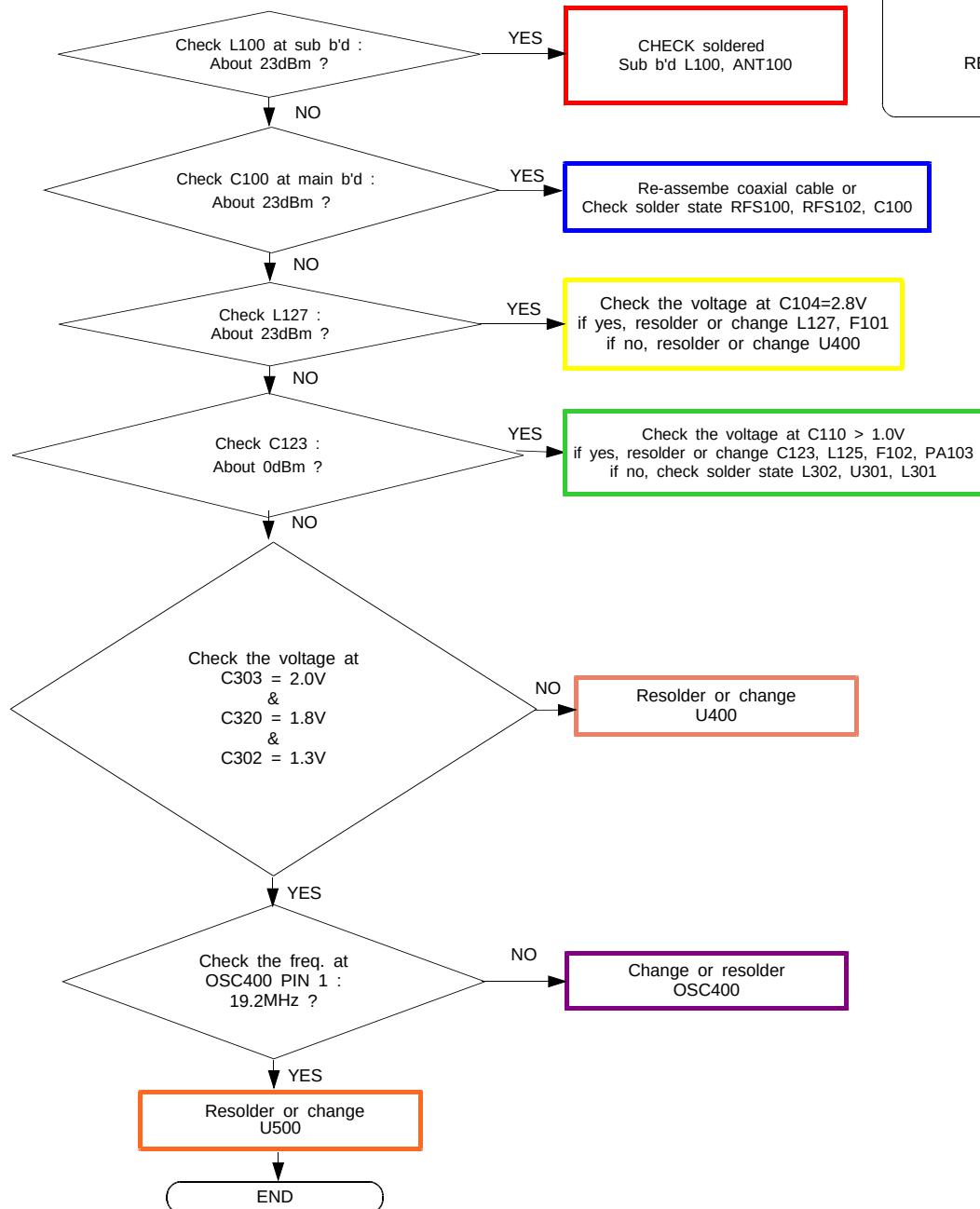
CONTINUOUS TX ON CONDITION  
 TX POWER IDX1 APPLIED  
 WCDMA850 CH : 4182  
 LTE Band 5 CH : 20525  
 RBW : 100KHz  
 VBW : 100KHz  
 SPAN : 10MHz  
 REF LEV. : 10dBm  
 ATT. : 20dB

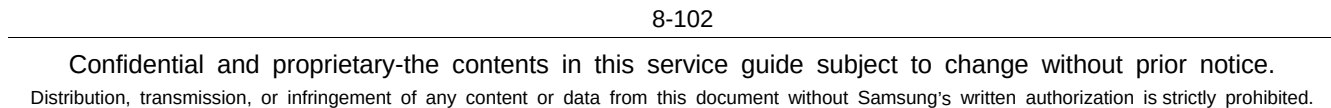


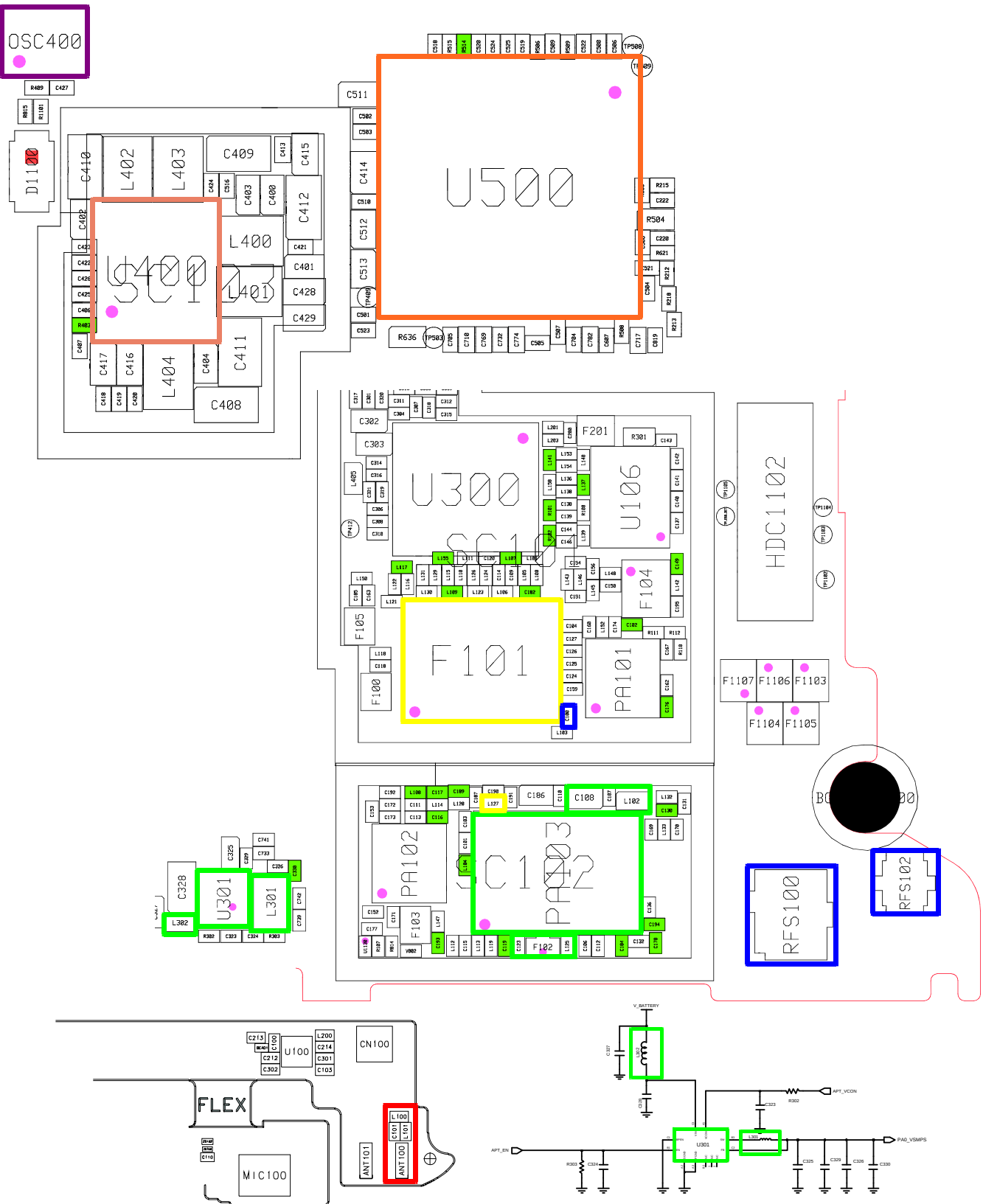




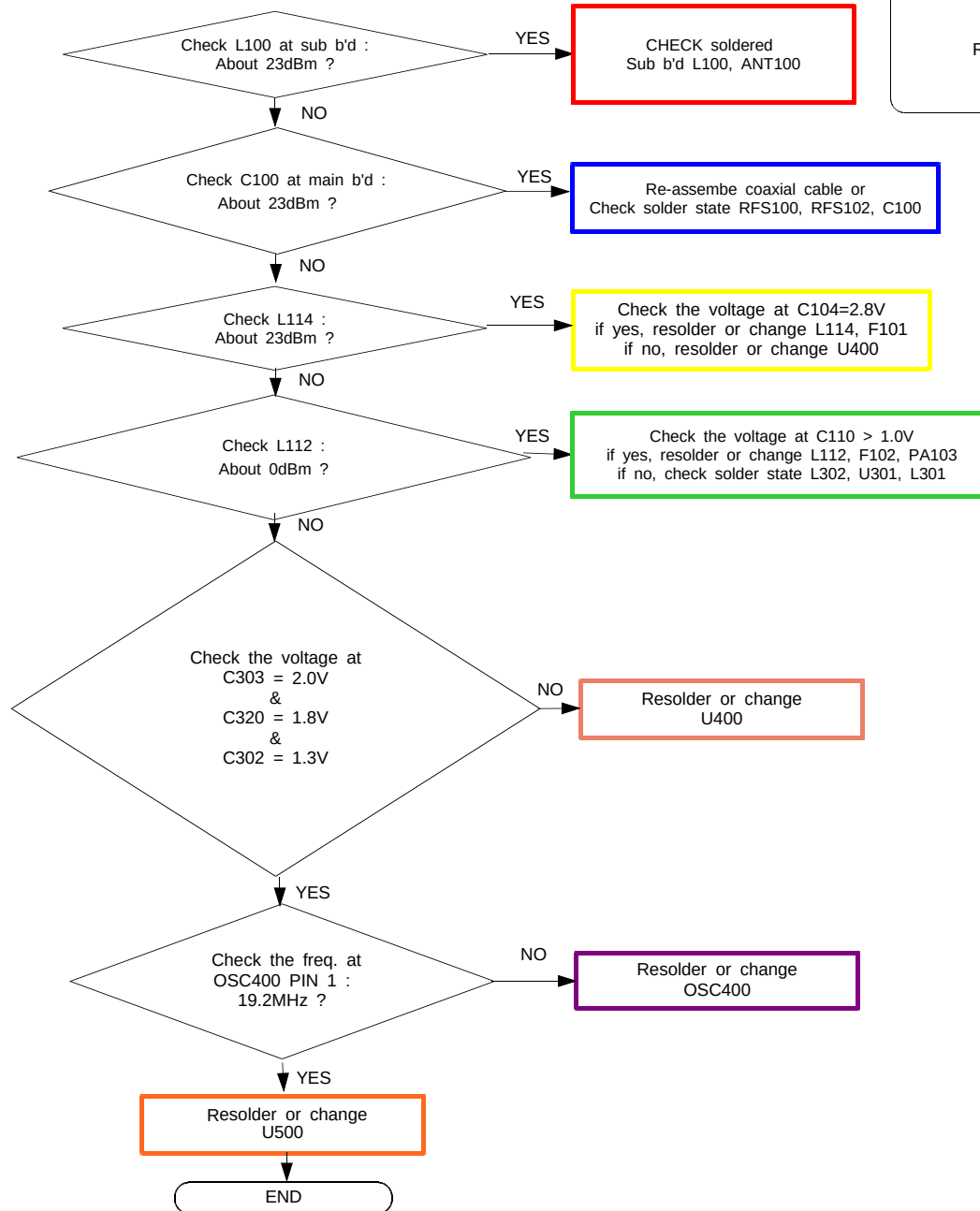
## 8-3-38. WCDMA900 / LTE B8 TX



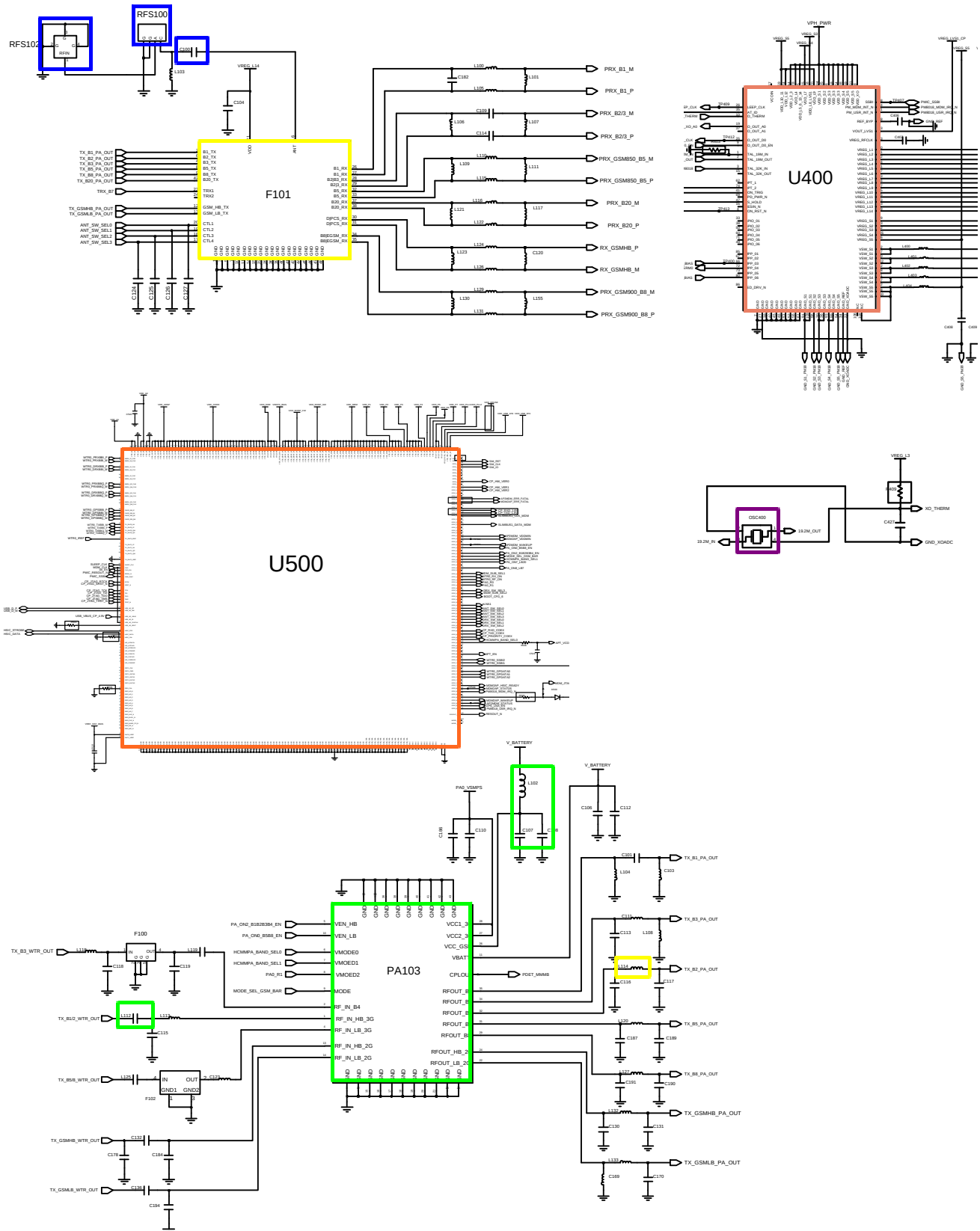


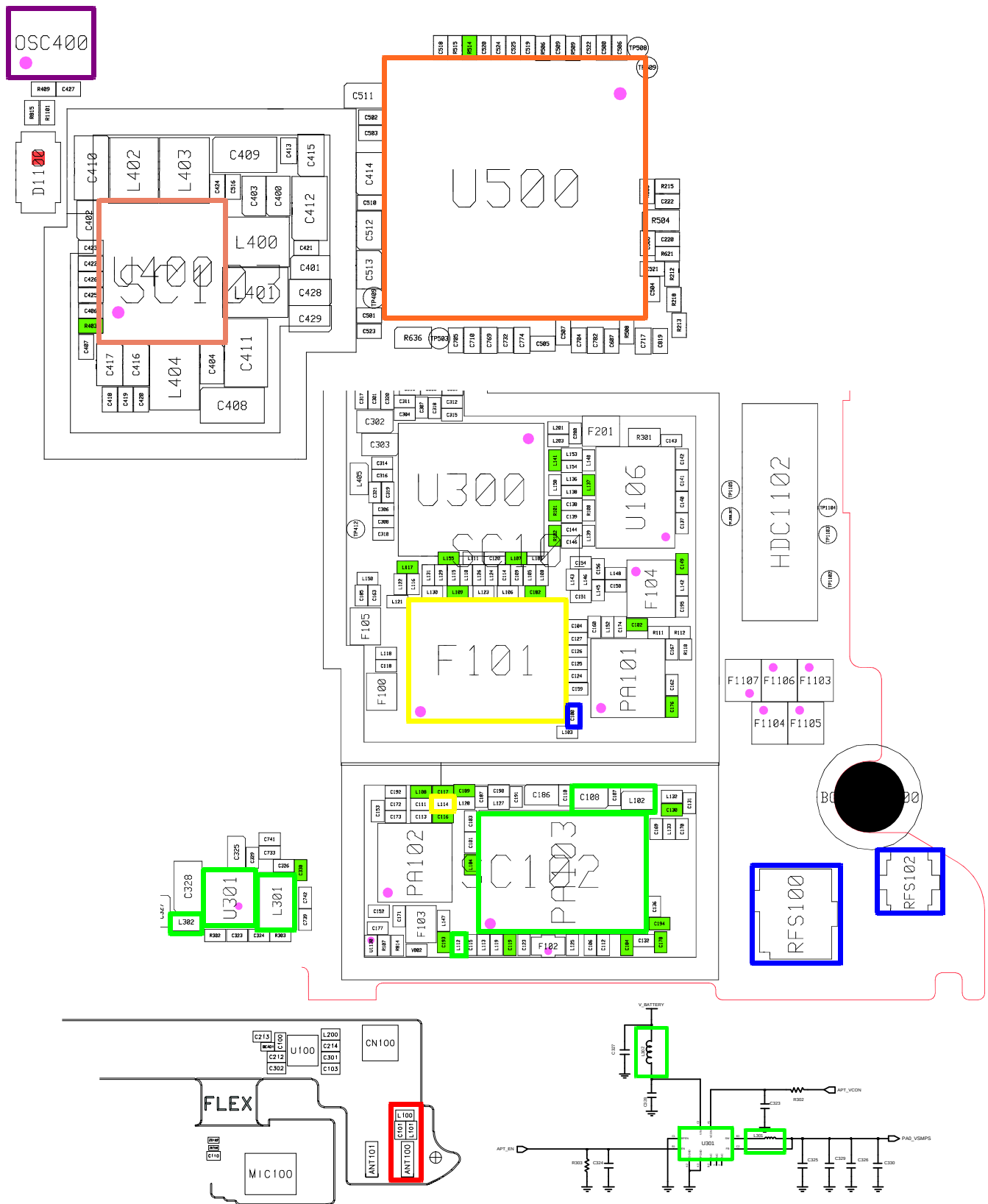


# 8-3-39. WCDMA1900 TX

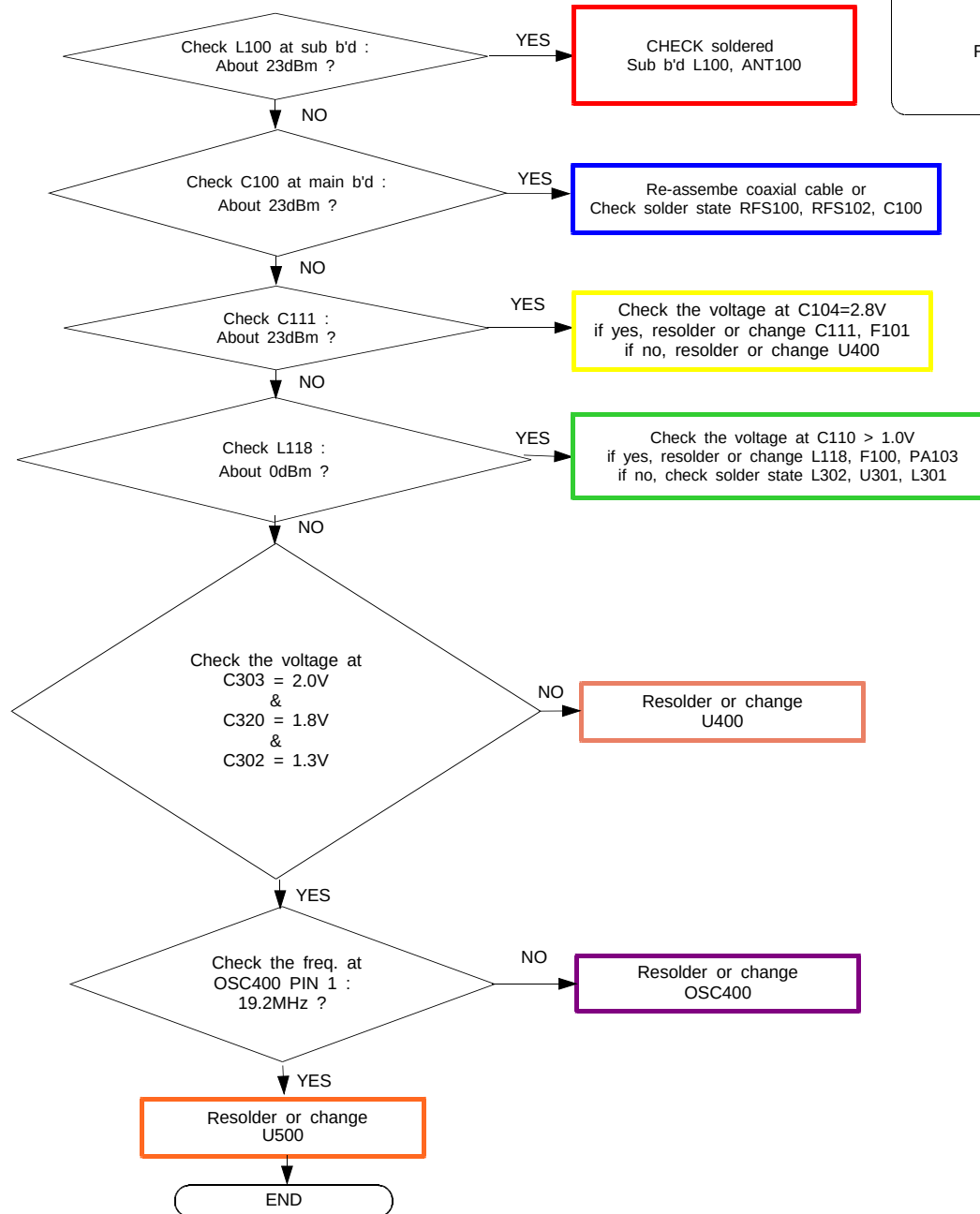


CONTINUOUS TX ON CONDITION  
APPLIED  
WCDMA 1900 CH : 9400  
RBW : 100KHz  
VBW : 100KHz  
SPAN : 10MHz  
REF LEV. : 10dBm  
ATT. : 20dB

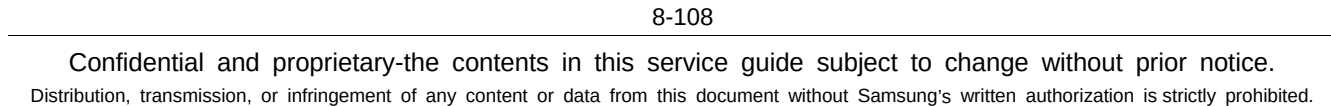


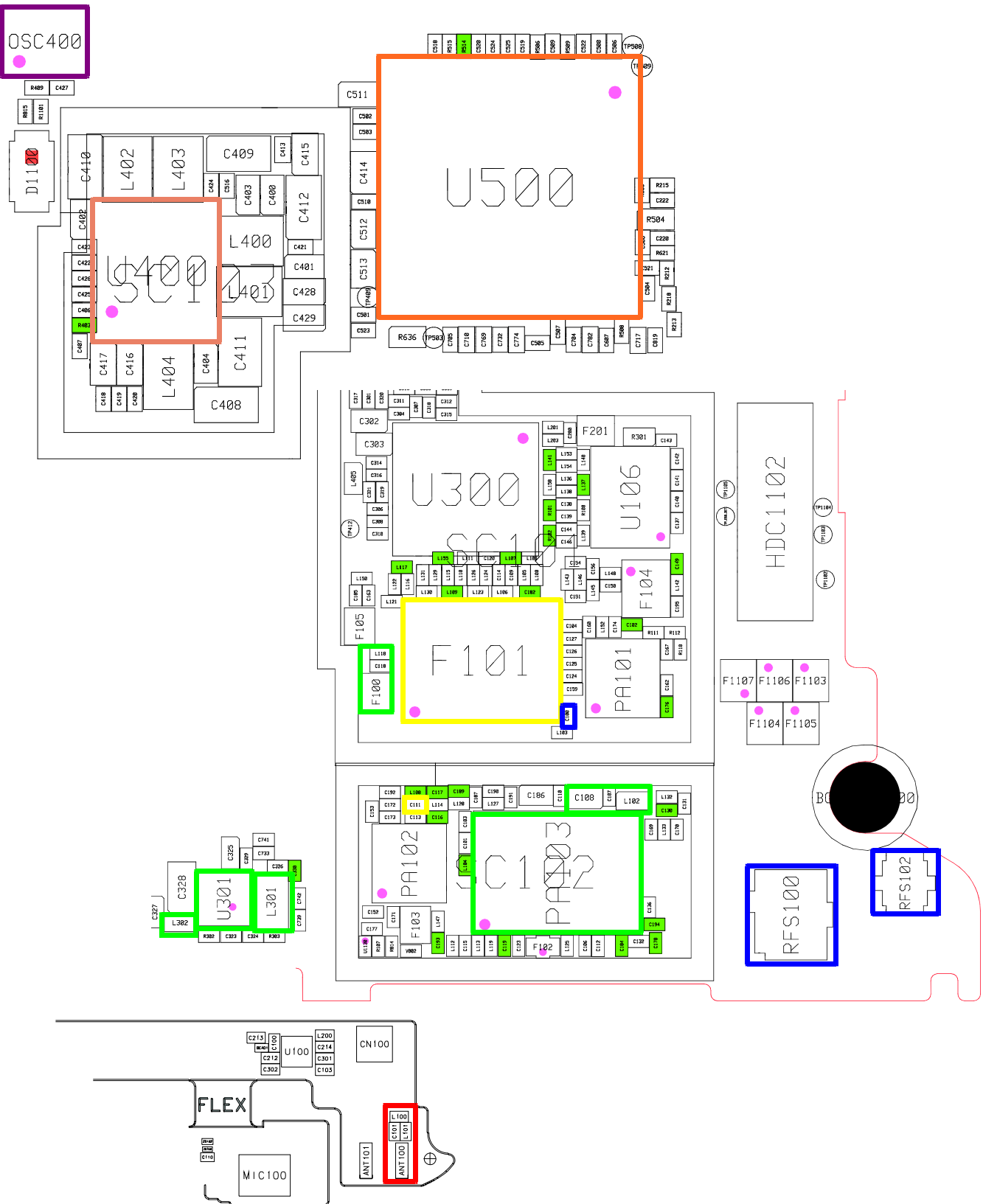


## 8-3-40. LTE B3 TX

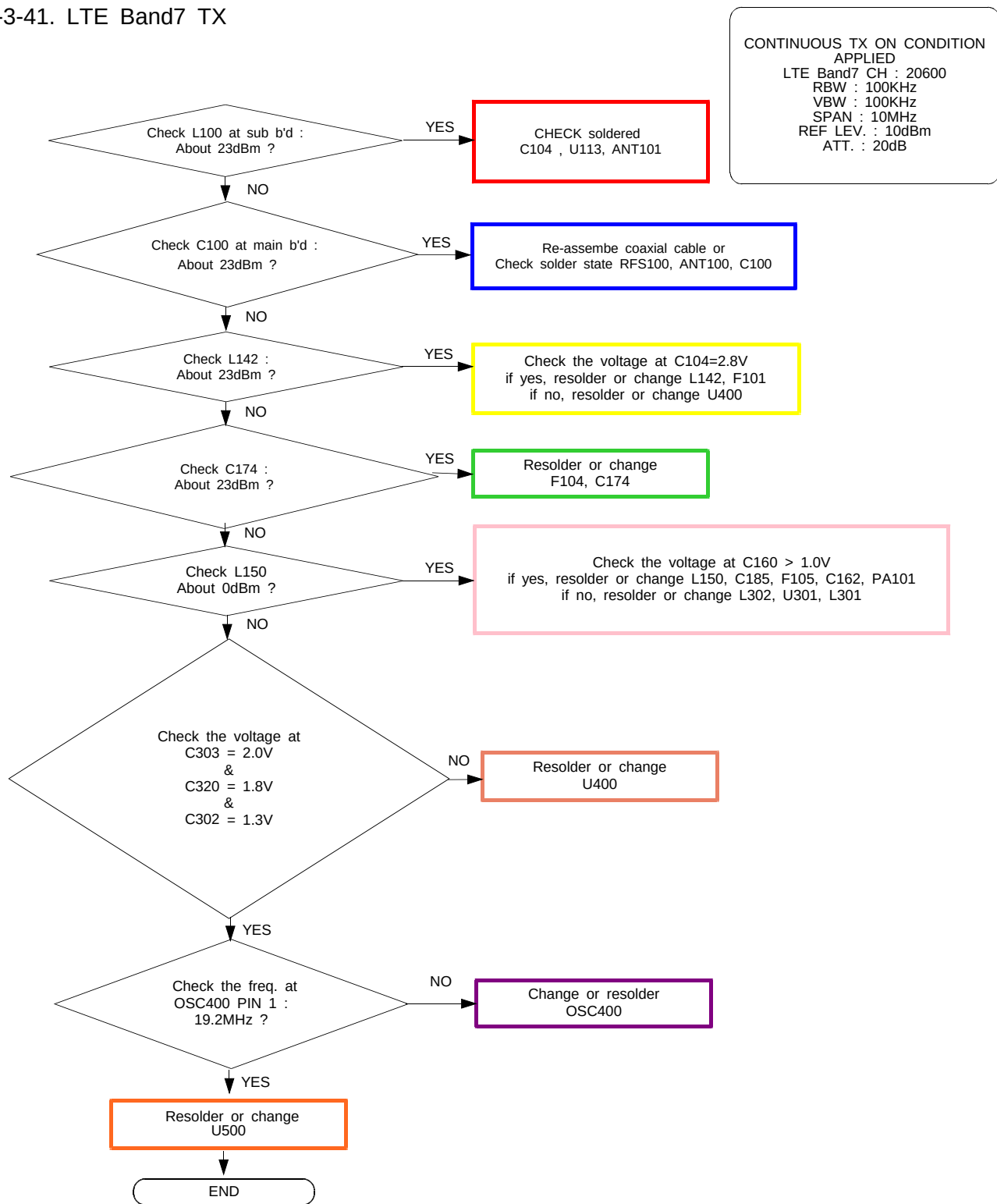


CONTINUOUS TX ON CONDITION  
APPLIED  
LTE Band8 CH : 21600  
RBW : 100KHz  
VBW : 100KHz  
SPAN : 10MHz  
REF LEV. : 10dBm  
ATT. : 20dB

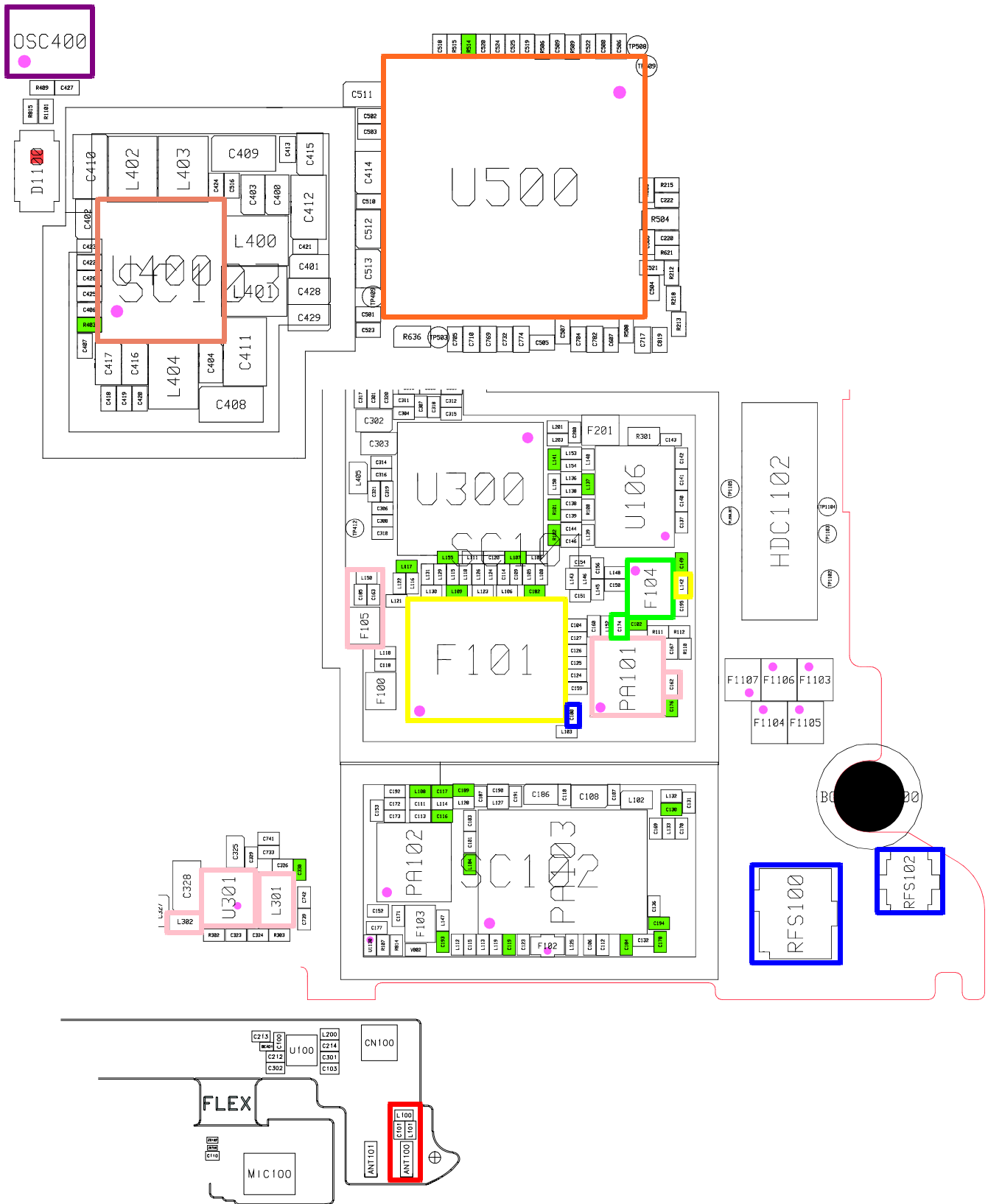




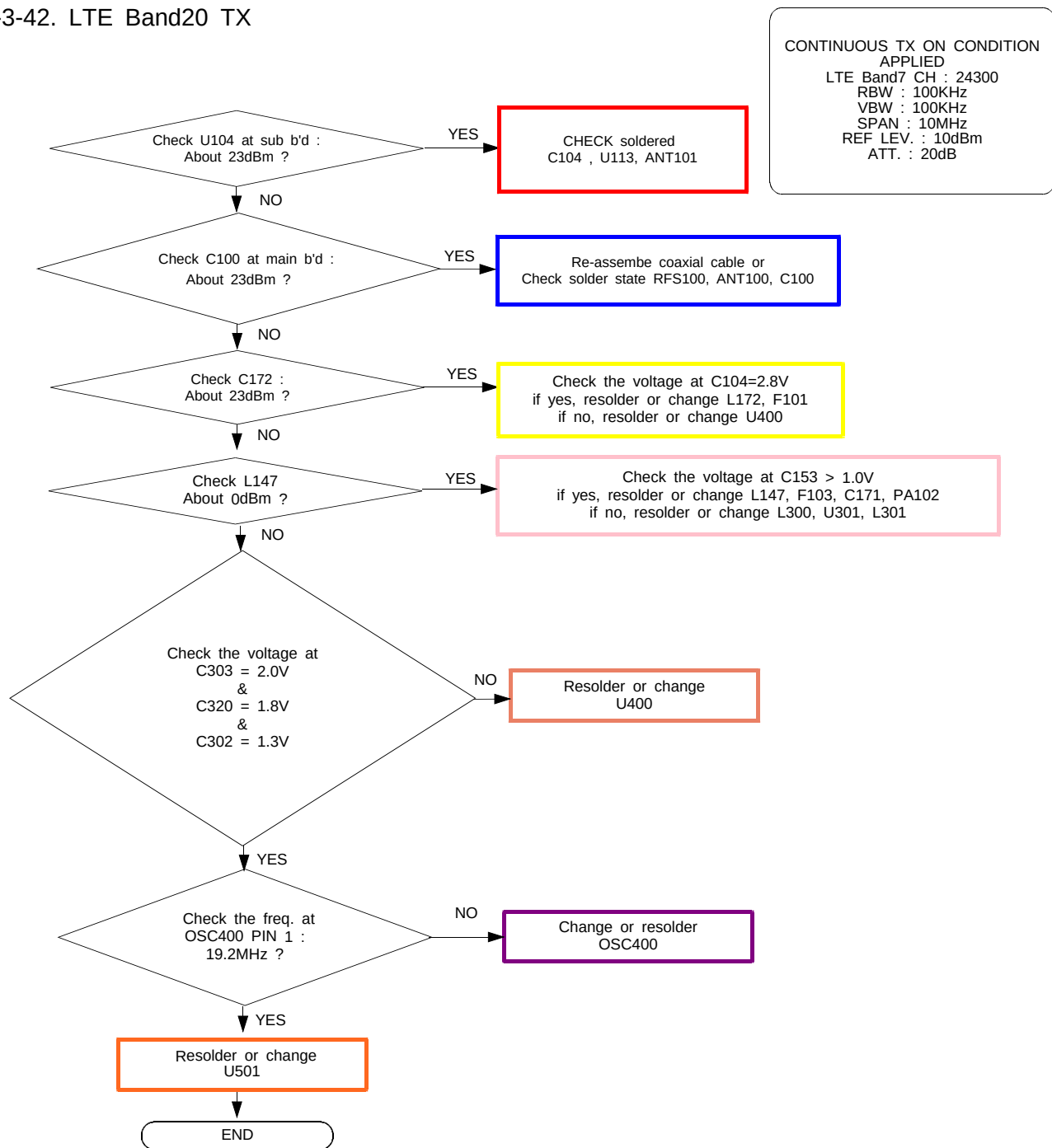
## 8-3-41. LTE Band7 TX

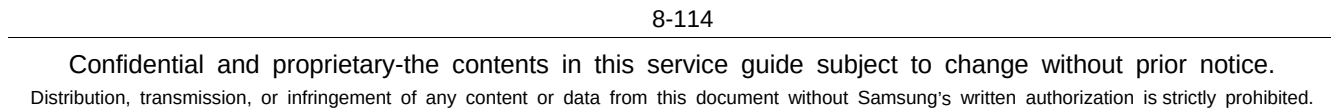


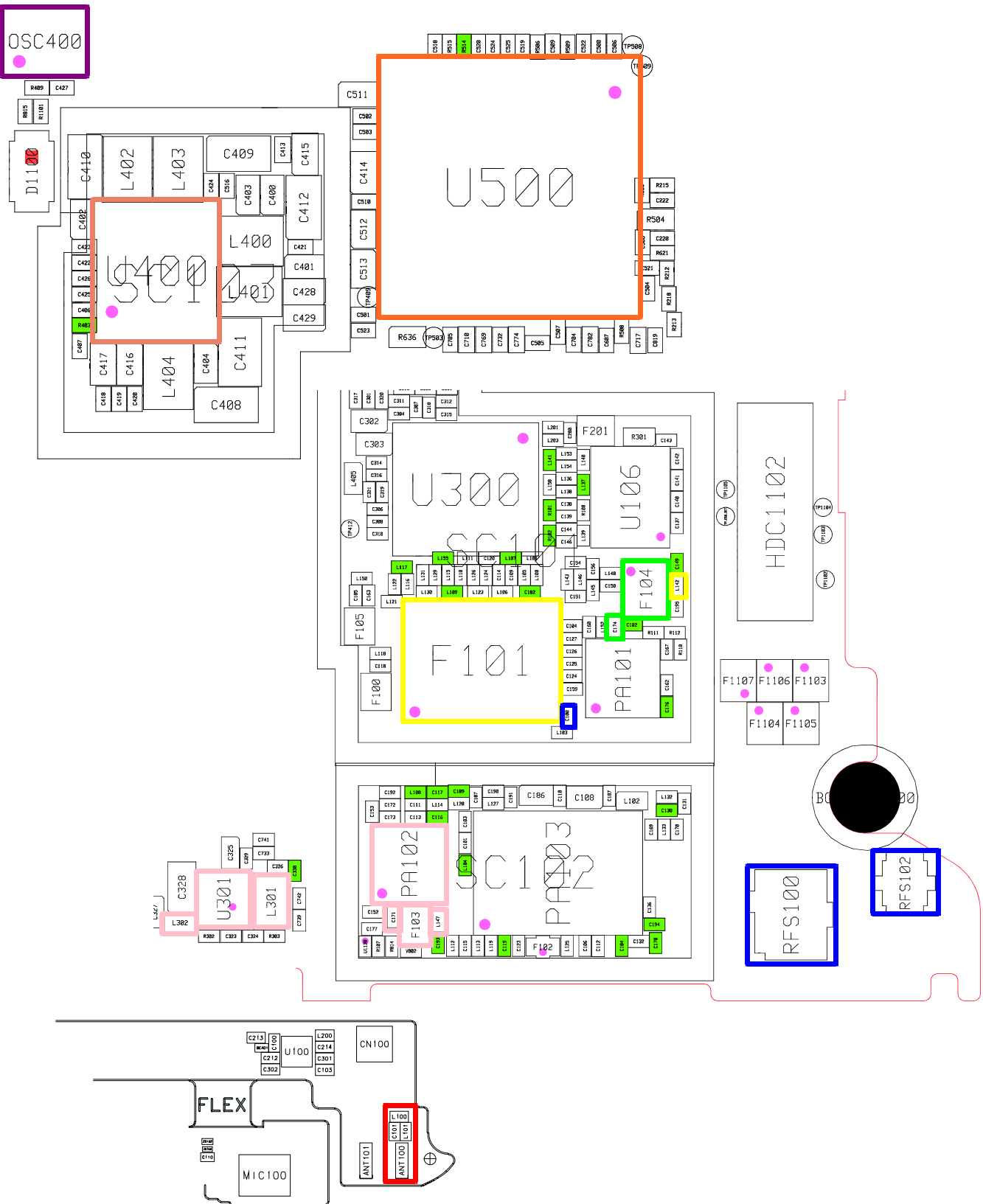




## 8-3-42. LTE Band20 TX







## 8-4. Service Schematics

## - NC Point(Top View)

●: NC

|   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| A | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| B | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| C | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| D | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| E | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| F | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| G | ○ | ● | ○ | ○ | ○ | ○ | ○ |

U202

|   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|
| A | ○ |   | ○ |   | ○ |   | ○ |   | ○ |    | ○  |    | ○  |    | ○  |    | ○  |
| B |   | ○ |   | ○ |   | ○ |   | ○ |   | ○  |    | ○  |    | ○  |    | ○  |    |
| C | ○ |   | ○ |   | ○ |   |   |   | ○ |    |    |    |    |    | ○  |    | ○  |
| D |   | ○ |   |   |   | ○ |   | ○ |   | ○  |    | ○  |    | ○  |    | ○  |    |
| E | ○ |   | ○ |   | ○ |   | ○ |   | ○ |    |    |    |    |    |    |    | ○  |
| F |   | ○ |   | ○ |   | ○ |   | ○ |   | ○  |    |    |    | ○  |    | ○  |    |
| G |   |   |   |   | ○ |   |   |   | ○ |    |    |    | ○  |    | ○  |    | ○  |
| H |   | ○ |   | ○ |   |   |   | ○ |   | ○  |    |    |    | ○  |    | ○  |    |
| J | ○ |   | ○ |   | ○ |   |   |   | ○ |    | ○  |    | ○  |    |    |    | ○  |
| K |   | ○ |   | ○ |   | ○ |   | ○ |   | ○  |    | ○  |    | ○  |    | ○  |    |
| L | ○ |   | ○ |   | ○ |   | ○ |   | ○ |    | ○  |    | ○  |    | ○  |    | ○  |
| M |   | ○ |   | ○ |   | ○ |   | ○ |   | ○  |    | ○  |    | ○  |    | ●  |    |
| N | ○ |   | ○ |   | ○ |   | ● |   | ○ |    | ○  |    | ●  |    | ○  |    | ○  |
| P |   | ● |   | ○ |   | ○ |   | ○ |   | ○  |    | ○  |    | ○  |    | ○  |    |
| R | ○ |   | ○ |   | ○ |   | ○ |   | ○ |    | ○  |    | ○  |    | ○  |    | ○  |
| T |   | ○ |   | ● |   |   |   | ○ |   | ○  |    | ○  |    | ○  |    | ○  |    |
| U | ○ |   | ○ |   |   |   | ○ |   | ○ |    |    |    | ○  |    | ○  |    | ○  |
| V |   | ○ |   | ○ |   |   |   | ○ |   | ○  |    | ○  |    | ○  |    | ○  |    |
| W | ○ |   | ○ |   | ○ |   | ○ |   | ○ |    | ○  |    | ○  |    | ○  |    | ○  |

U301

|   | 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 | ● | ● | ○ | ○ | ○ | ○ | ○ | ● | ● | ○  | ●  | ●  | ●  | ●  |

UME600

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

U903

|   | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| A | ○ | ○ | ○ | ○ | ○ | ○ |
| B | ○ | ○ | ○ | ○ | ○ | ○ |
| C | ○ | ○ | ● | ● | ○ | ○ |
| D | ○ | ○ | ● | ● | ○ | ○ |
| E | ○ | ○ | ○ | ○ | ○ | ○ |
| F | ○ | ○ | ○ | ○ | ○ | ○ |

U1007

|   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| A | ○ | ○ | ○ | ○ | ● | ● | ○ |
| B | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| C | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| D | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| E | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| F | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| G | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

U1109