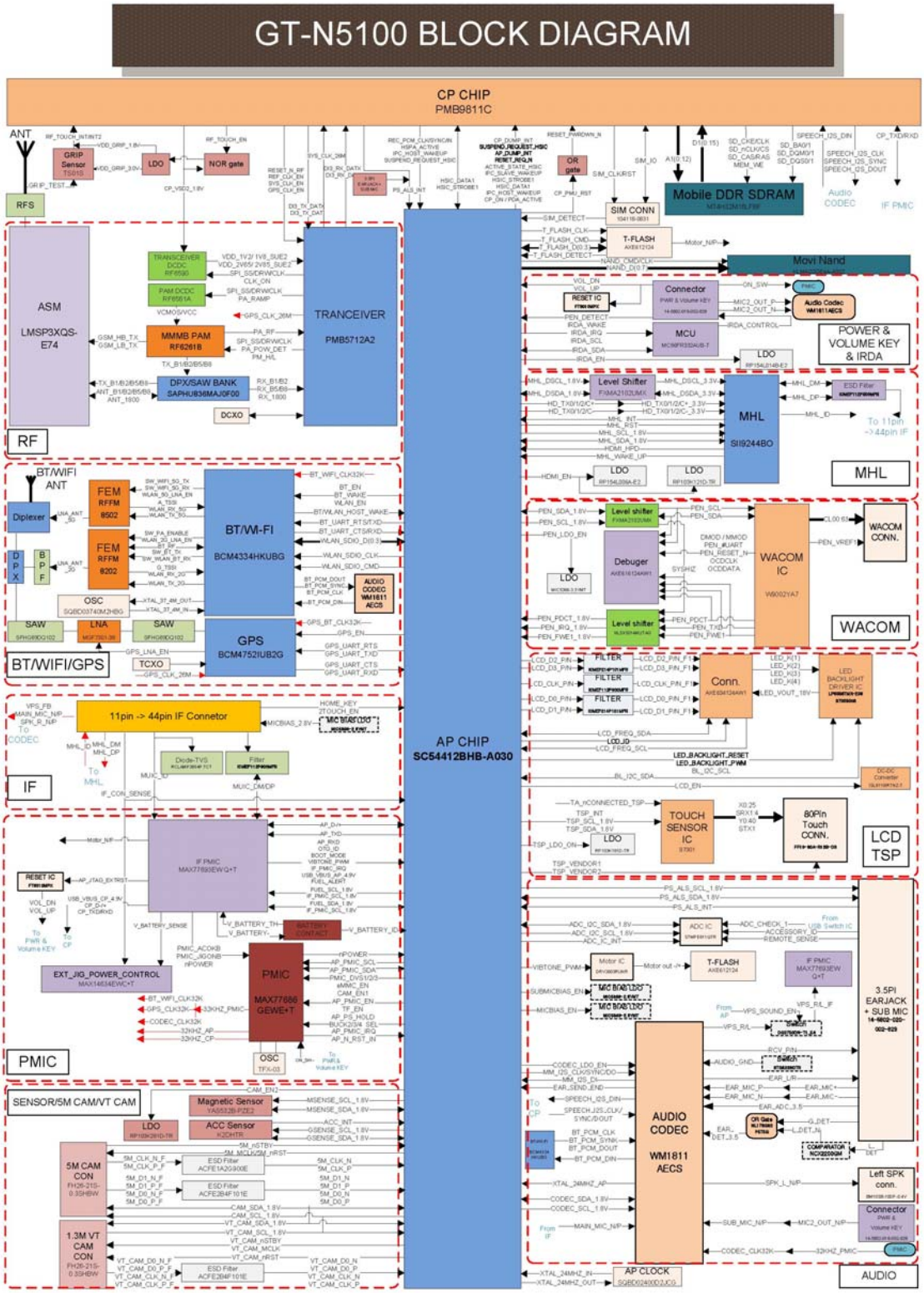
8. Level 3 Repair

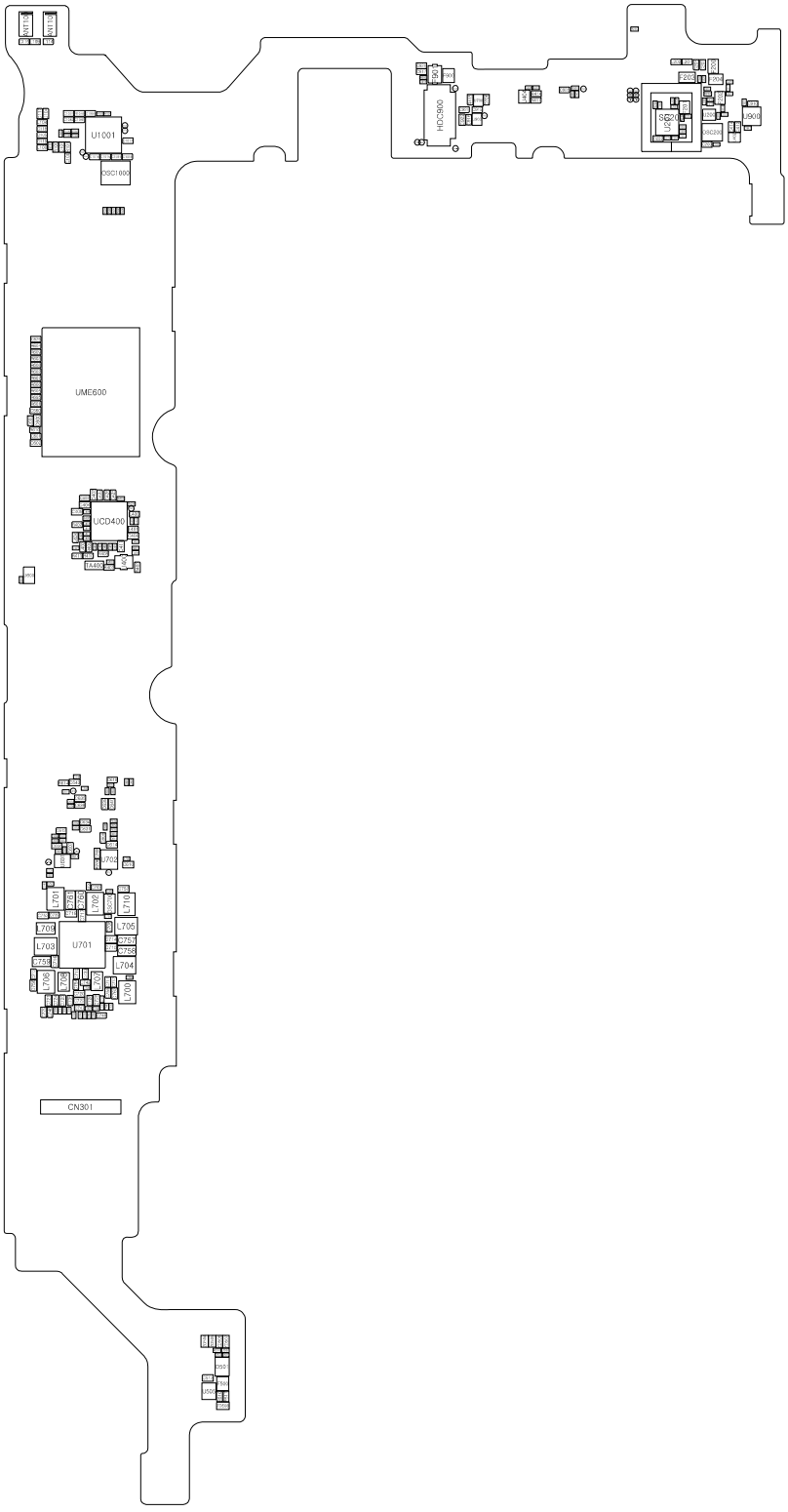
8-1. Block Diagram



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

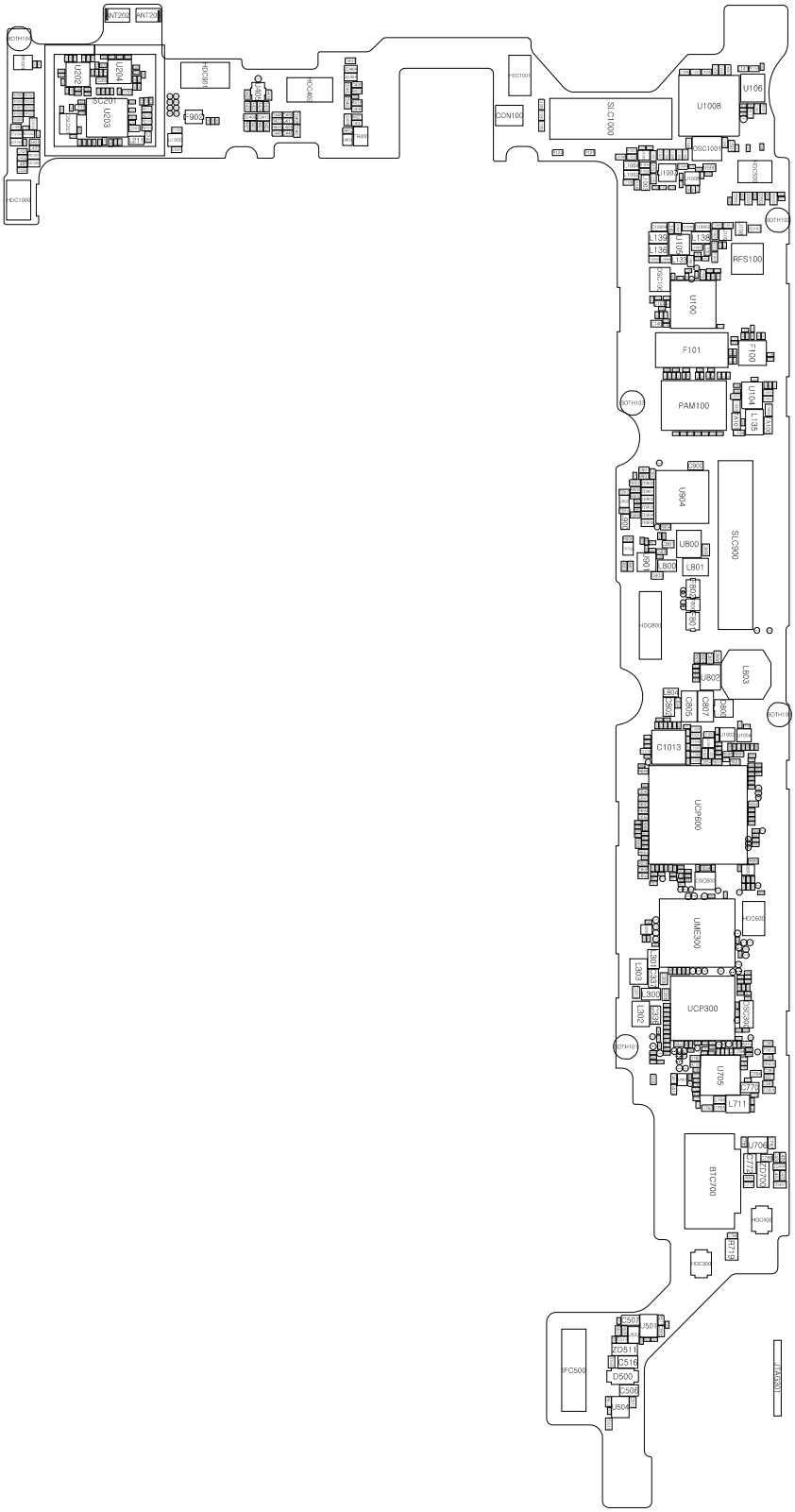
8-2. PCB Diagrams

8-2-1. Top



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

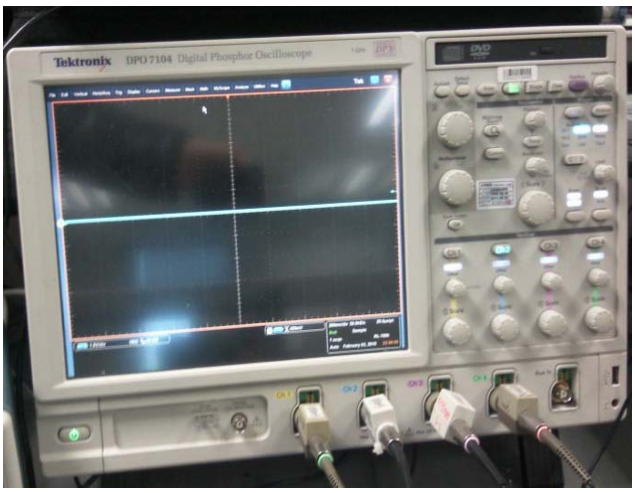
8-2-2. Bottom



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3. Flow Chart of Troubleshooting

Equipments

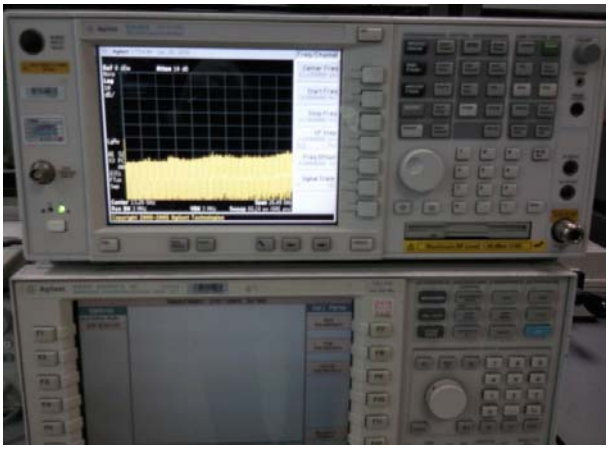


↑ Oscilloscope

↑ Digital Multimeter

↑ Power Supply

↑ + driver, ESD Safe Tweezer

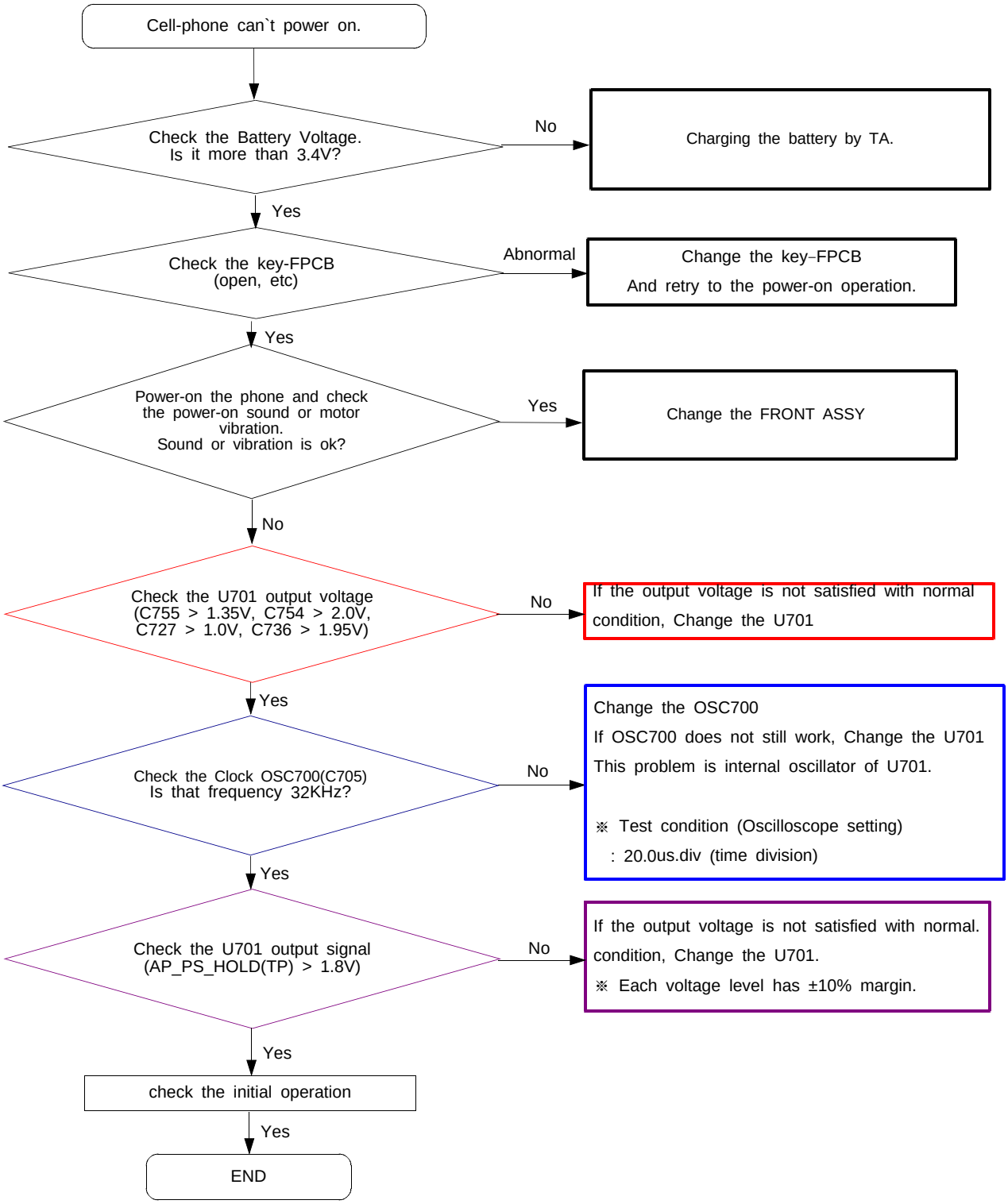


↑ 8960 & Spectrum Analyzer

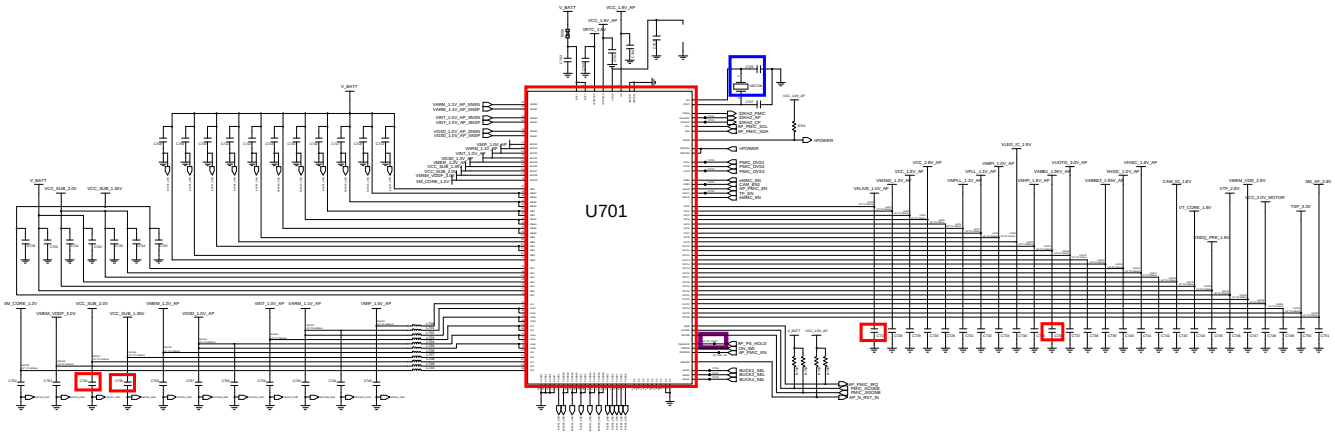
↑ Soldering iron

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3-1. Power On

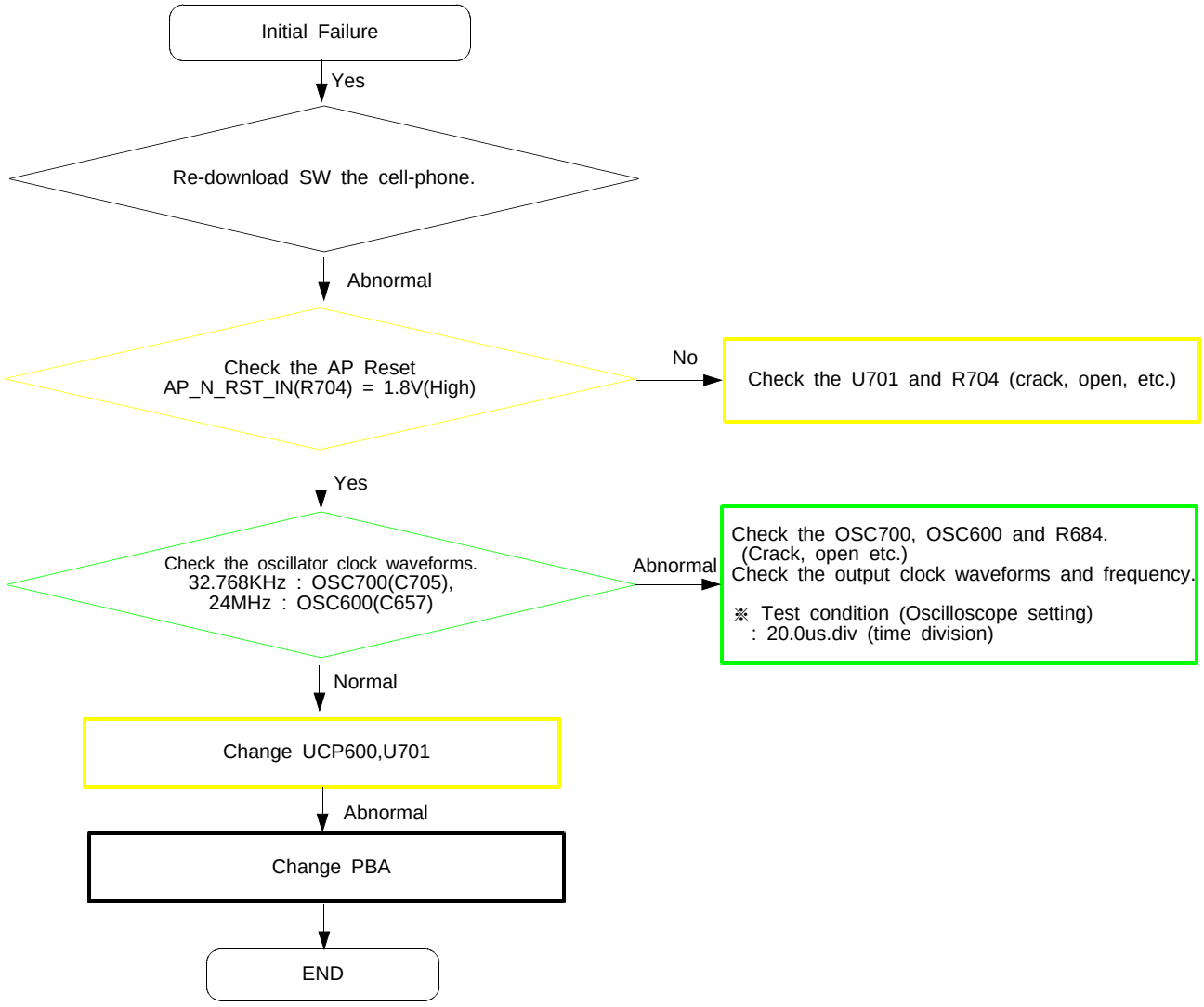


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

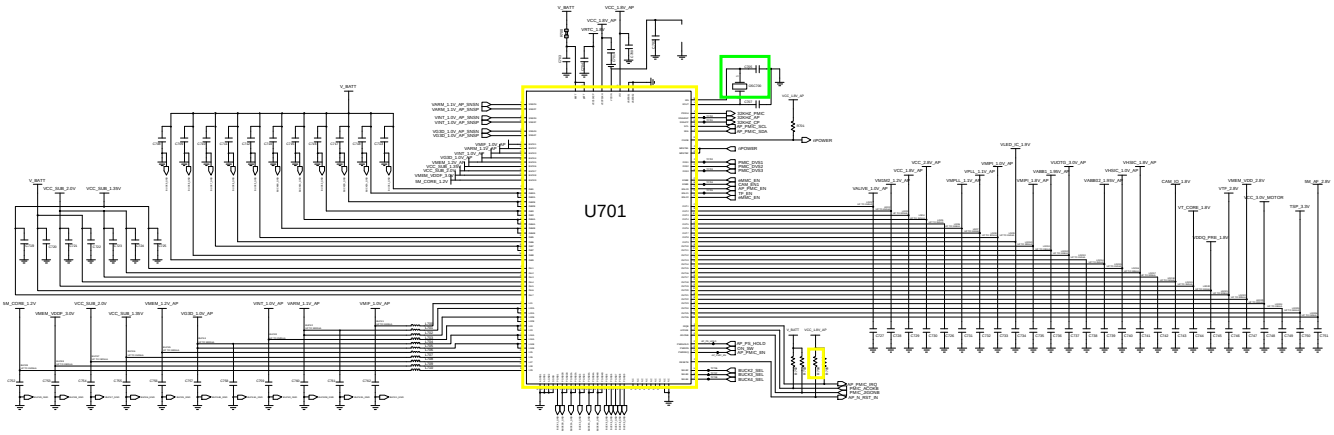


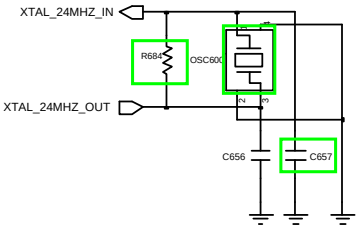
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

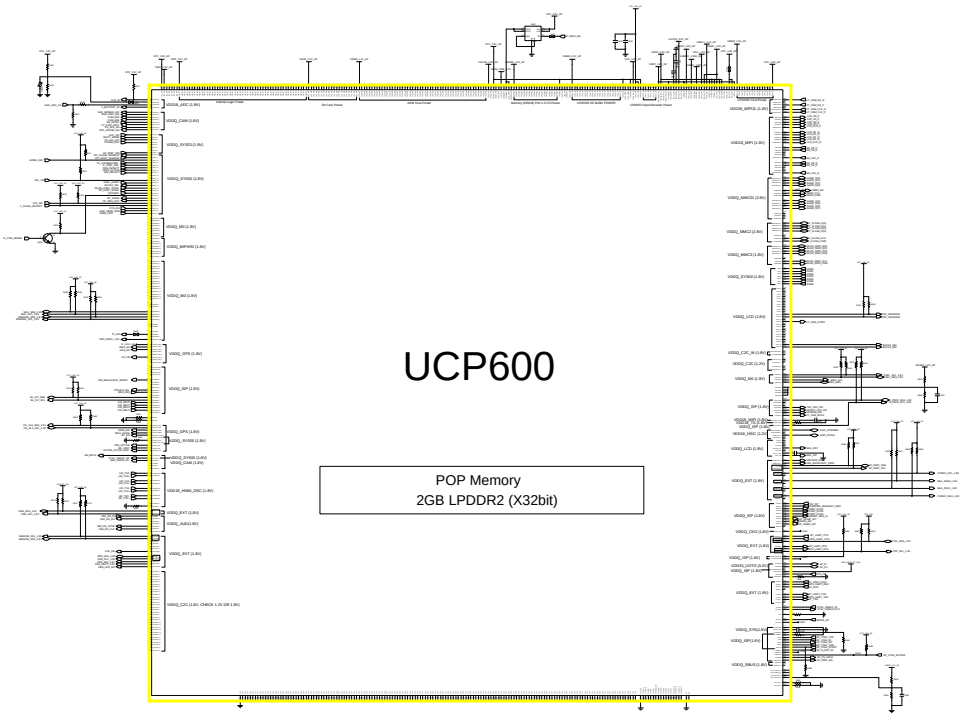
8-3-2. Initial



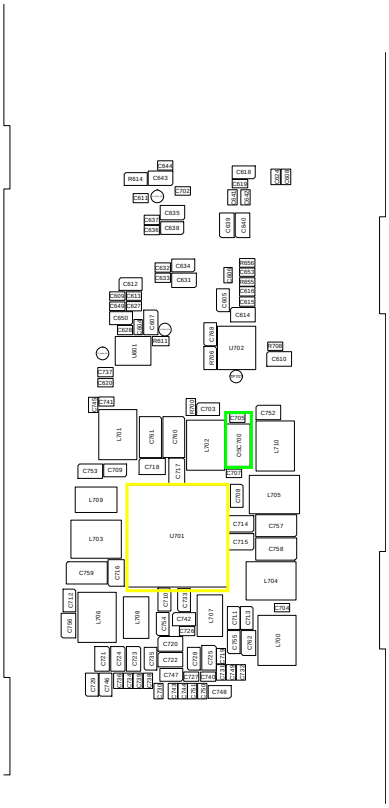
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

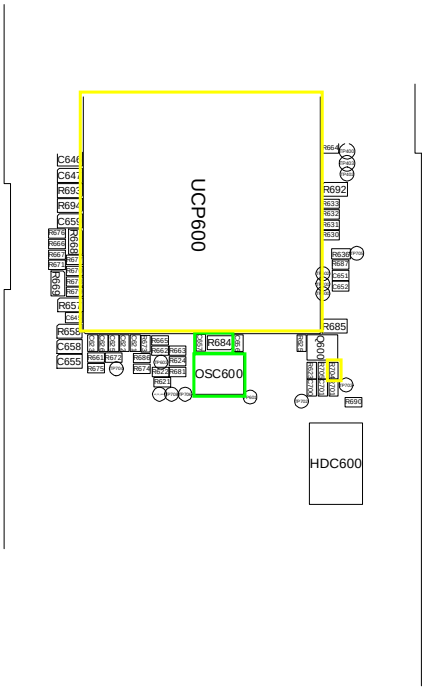






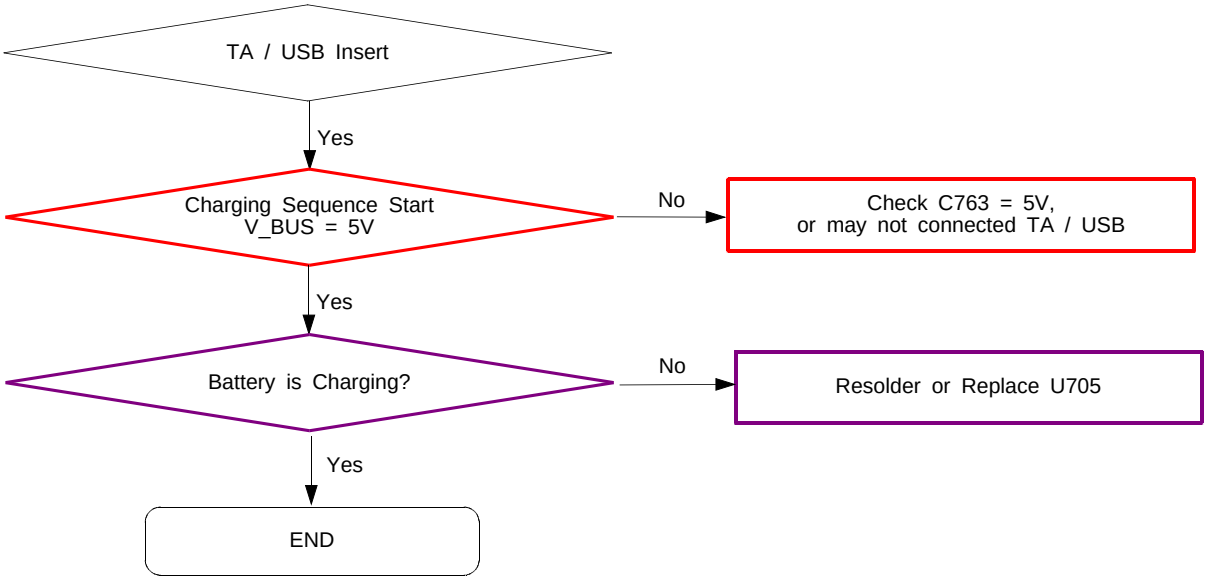
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

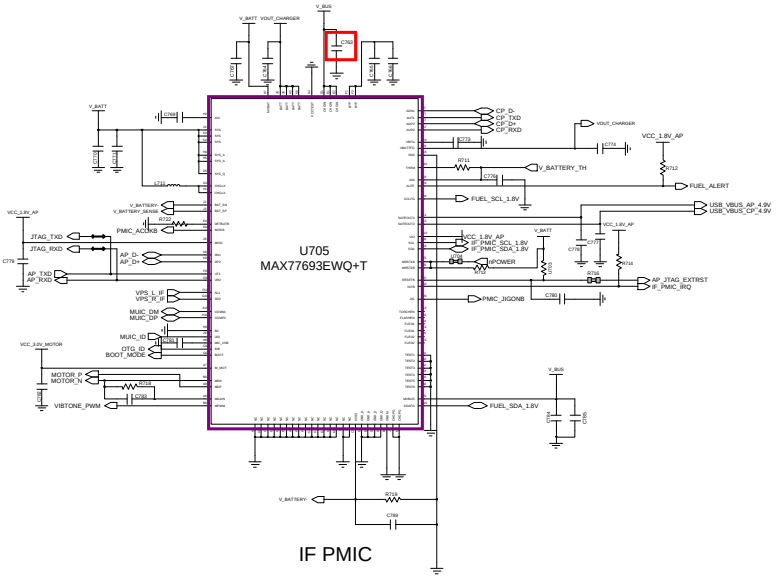


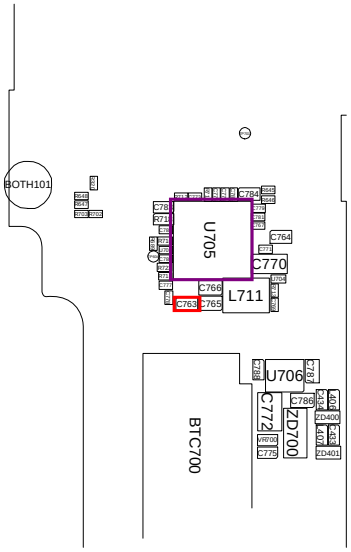


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3-3. Charging Part

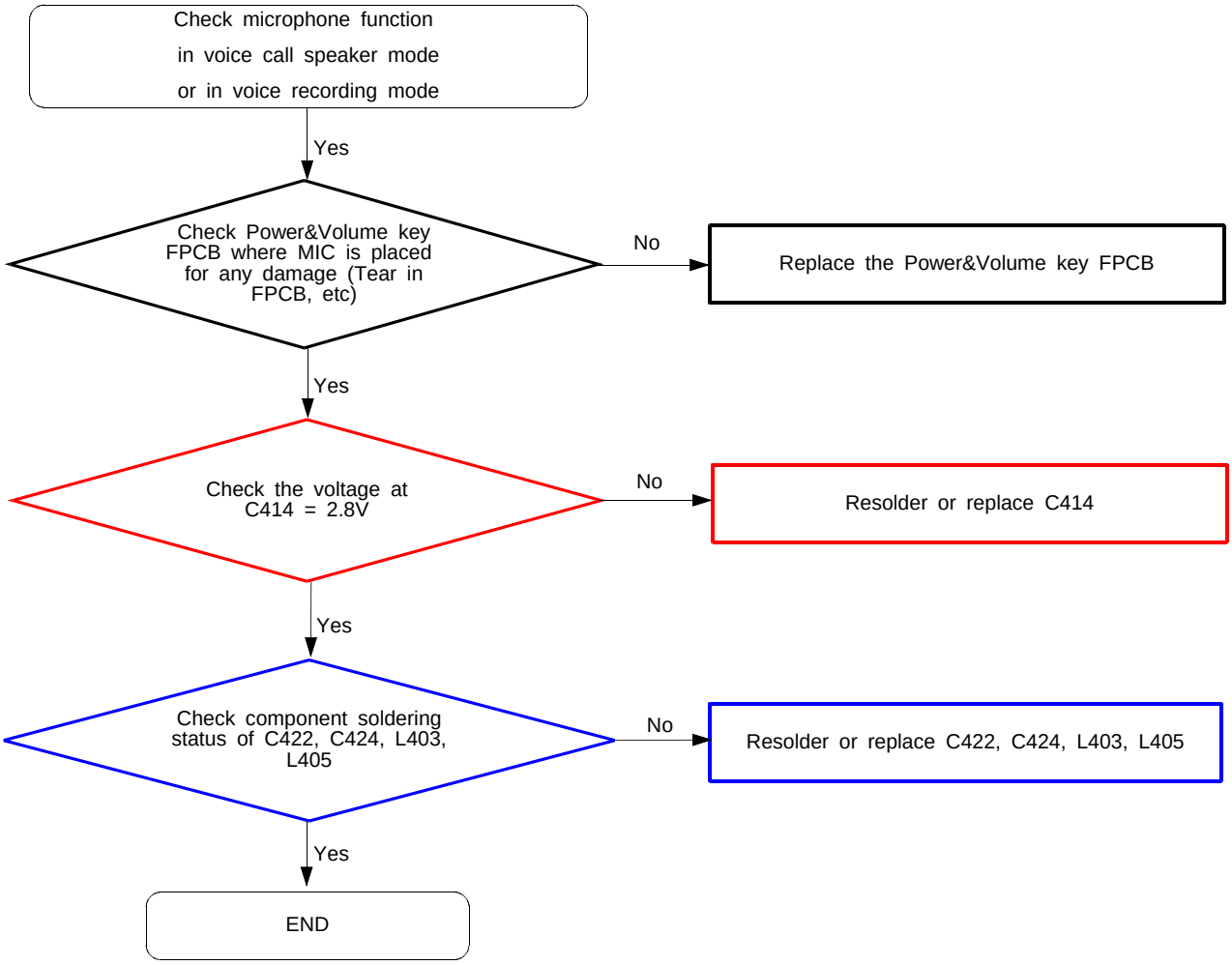




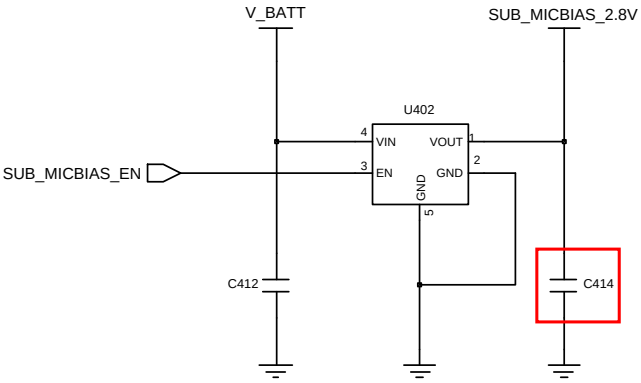


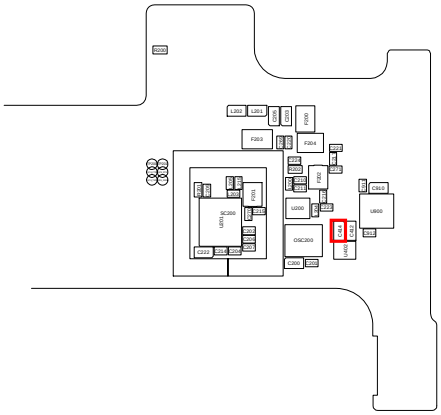
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

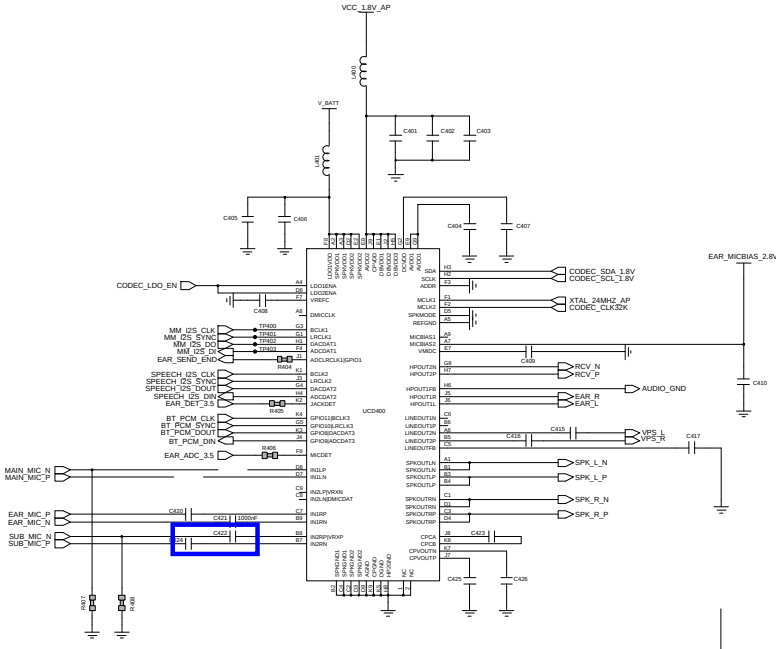
8-3-4. Microphone Part

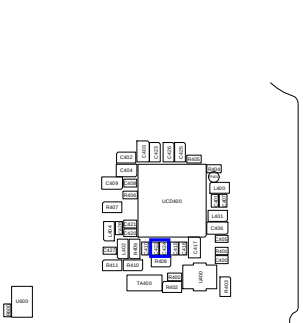


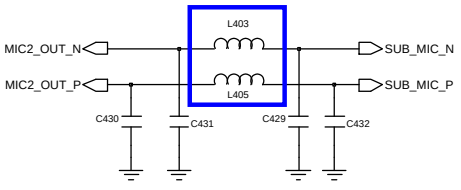
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

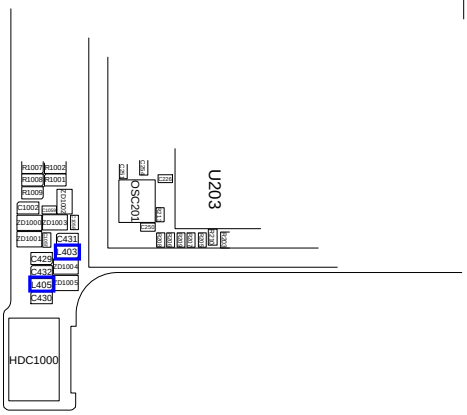






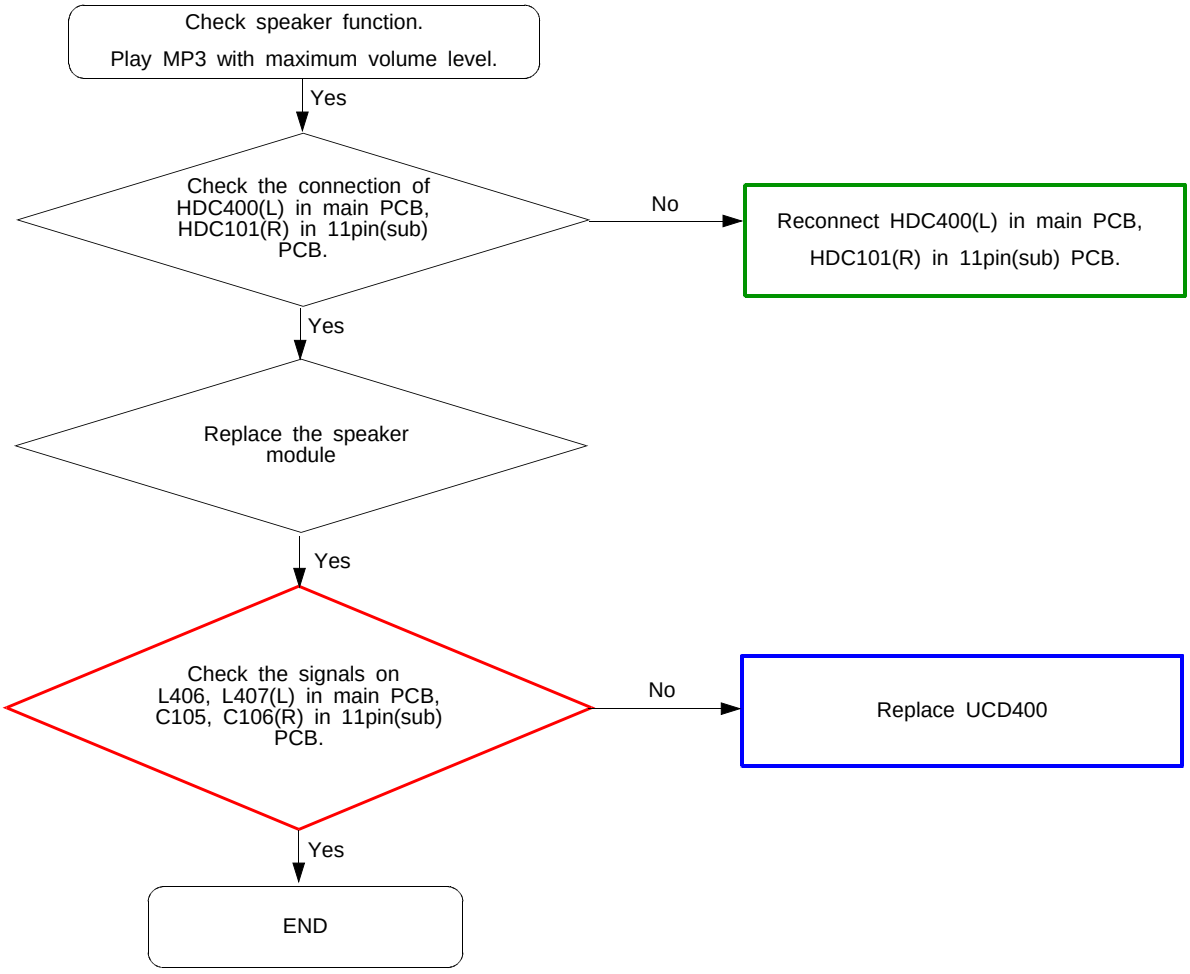




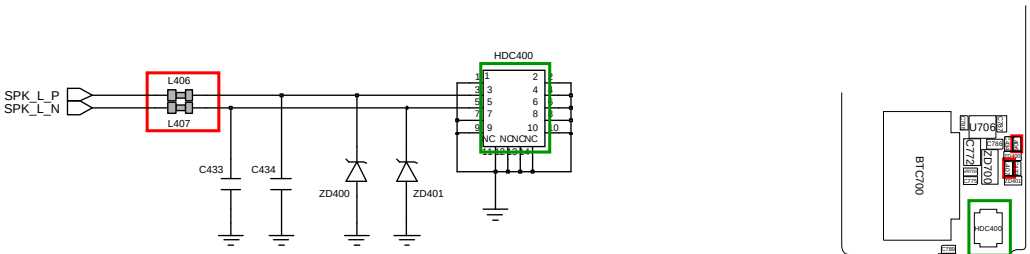


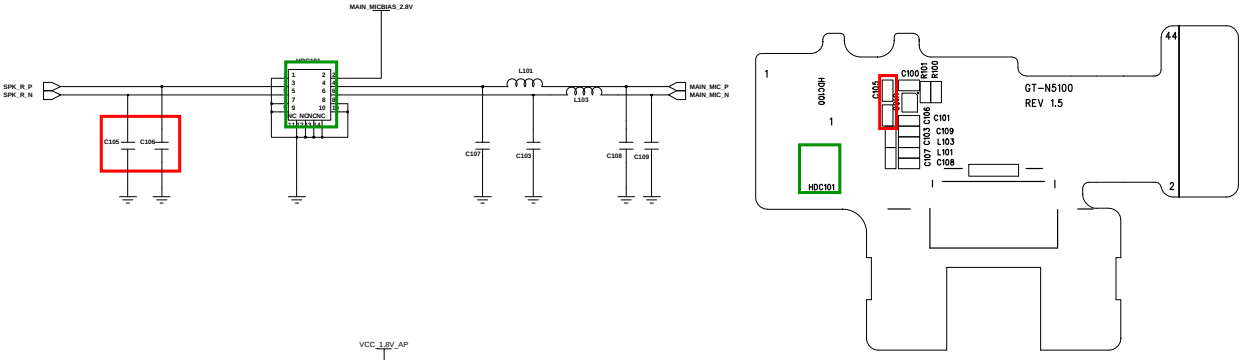
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

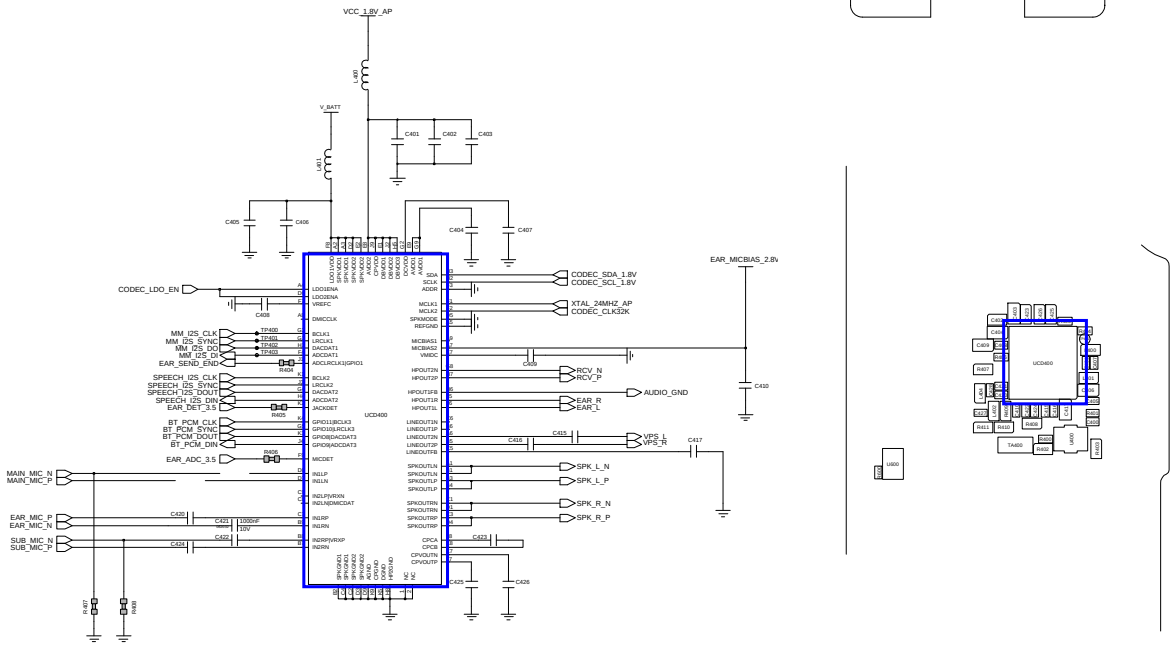
8-3-5. Speaker Part



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

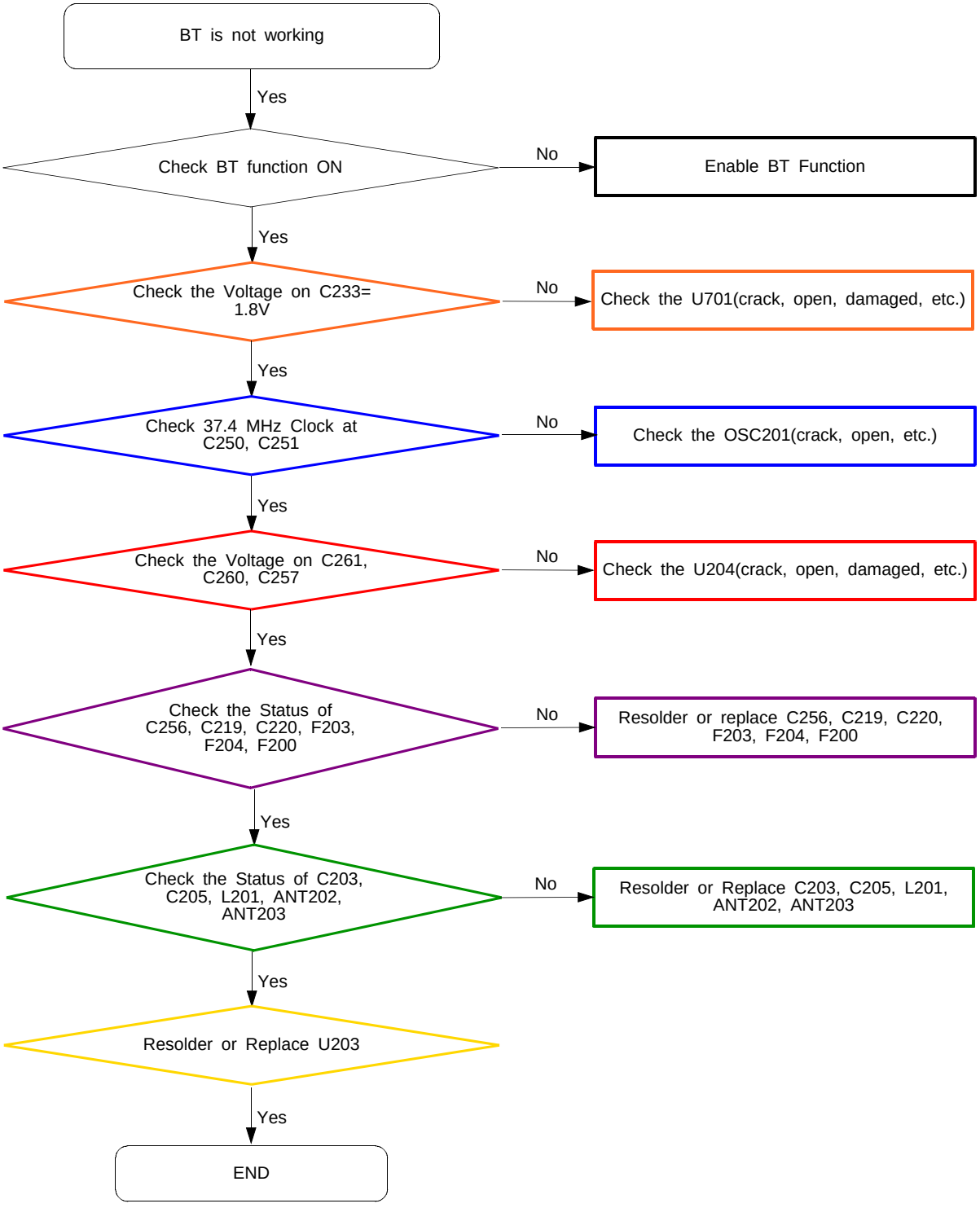




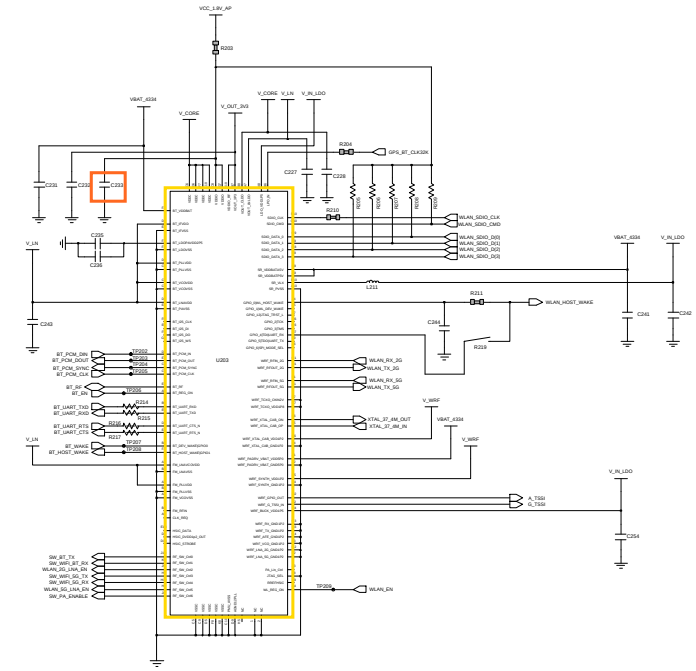


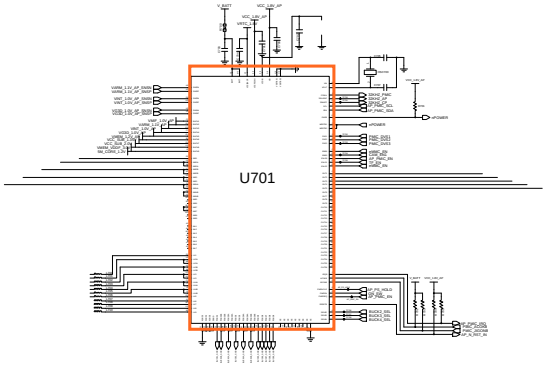
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

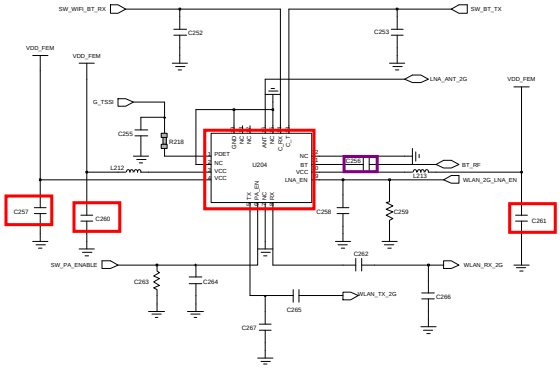
8-3-6. BT Part

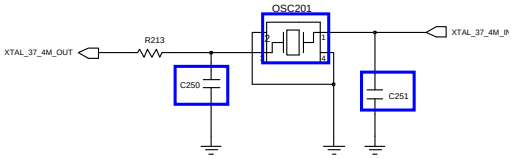


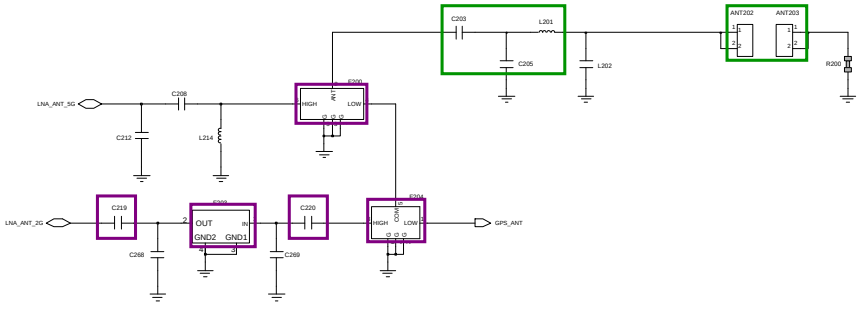
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



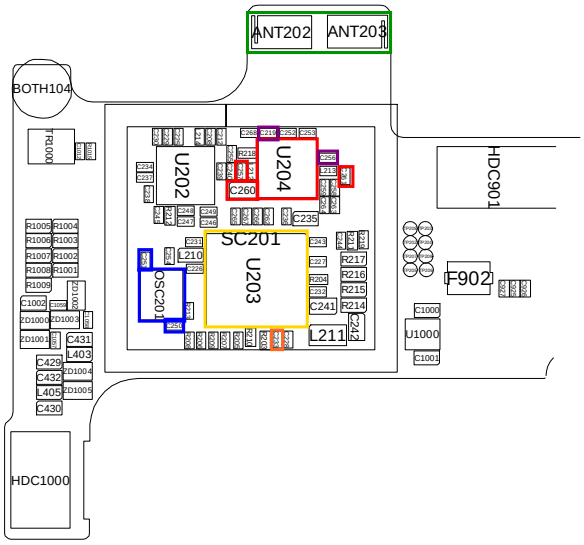


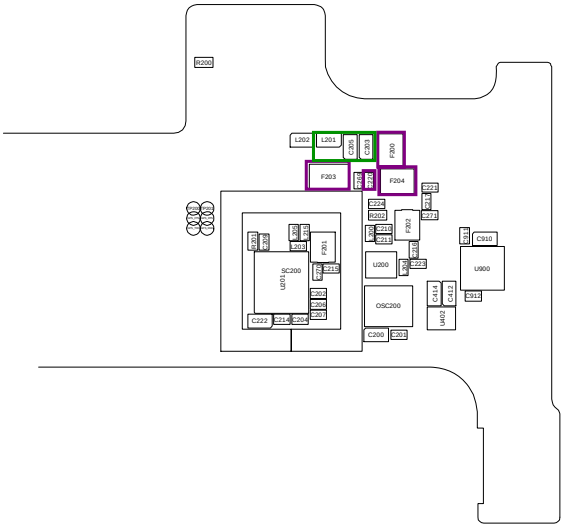






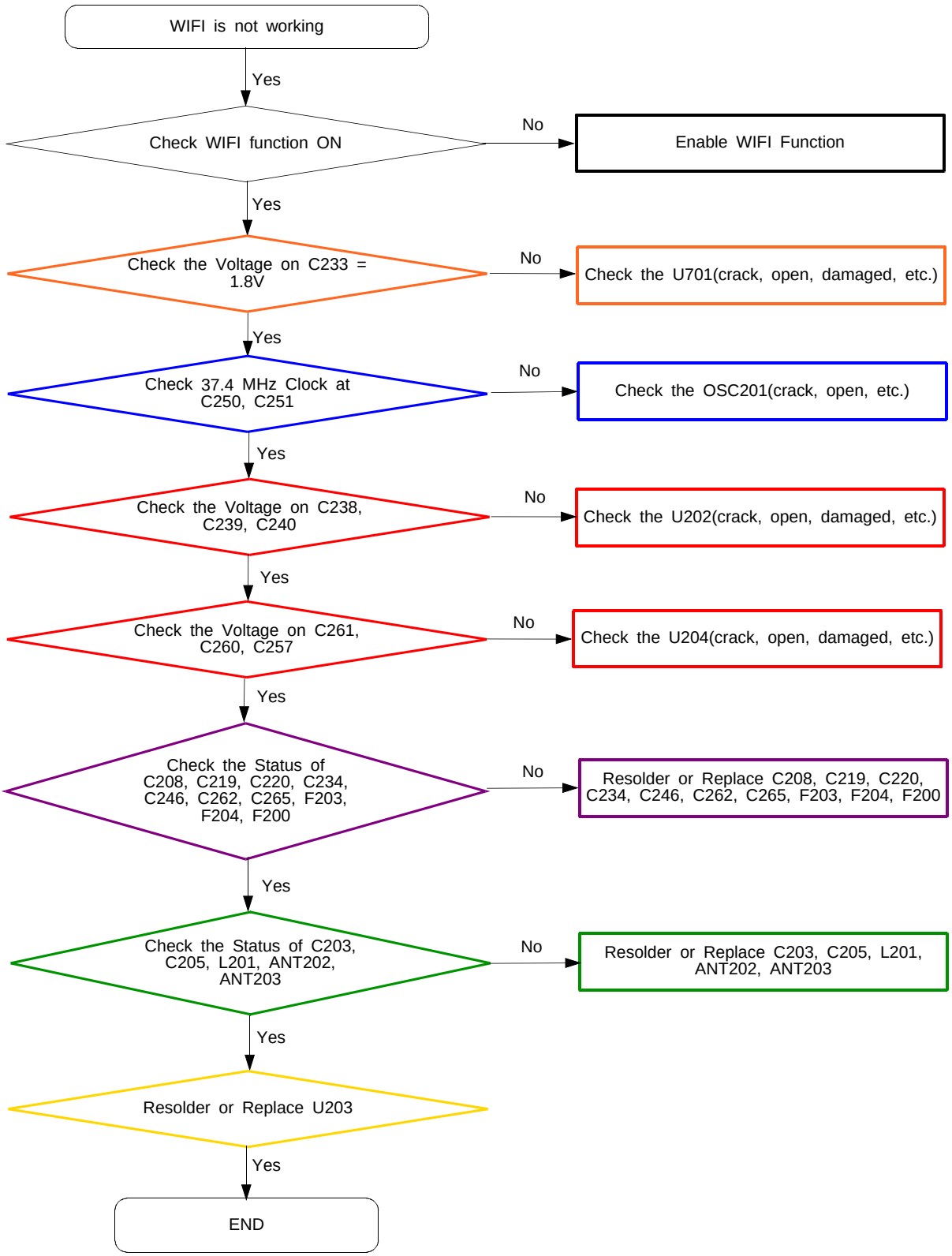
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



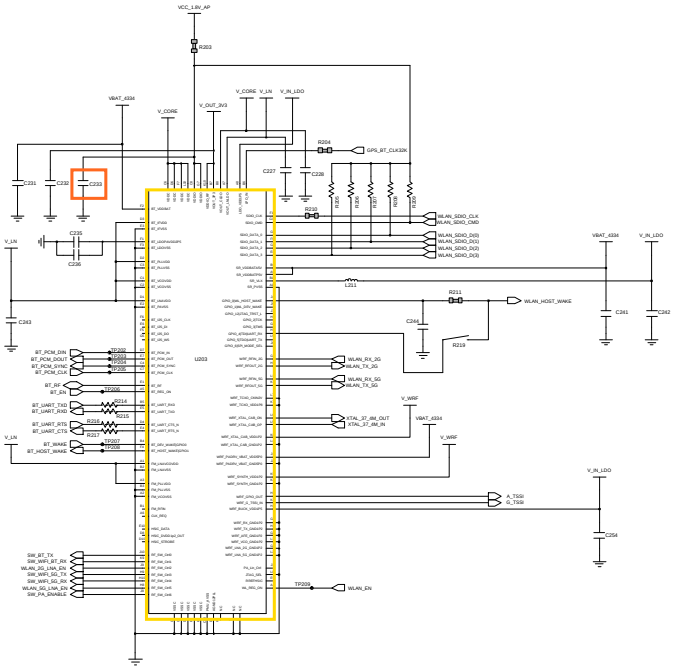


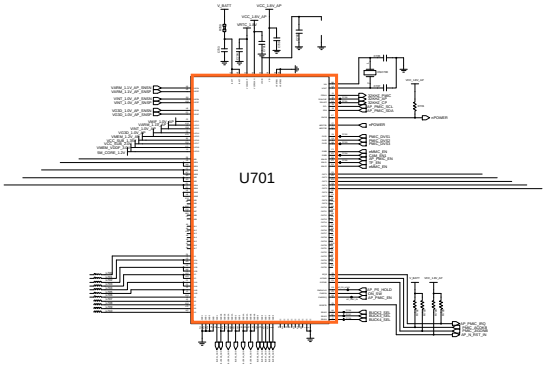
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

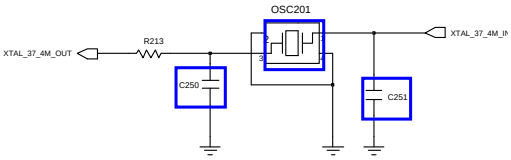
8-3-7. WIFI Part

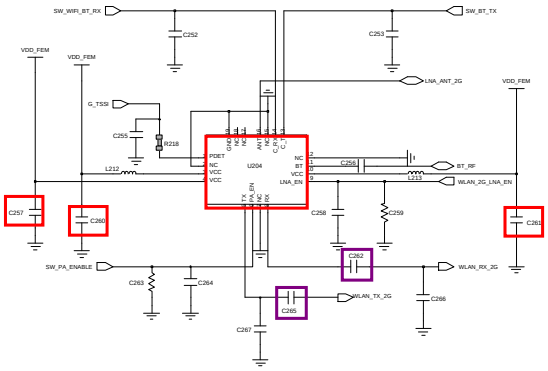


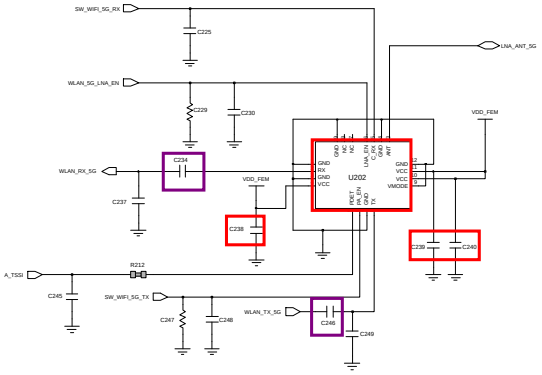
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

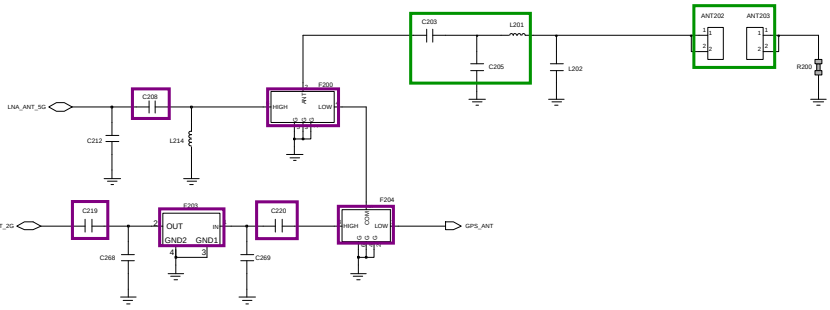




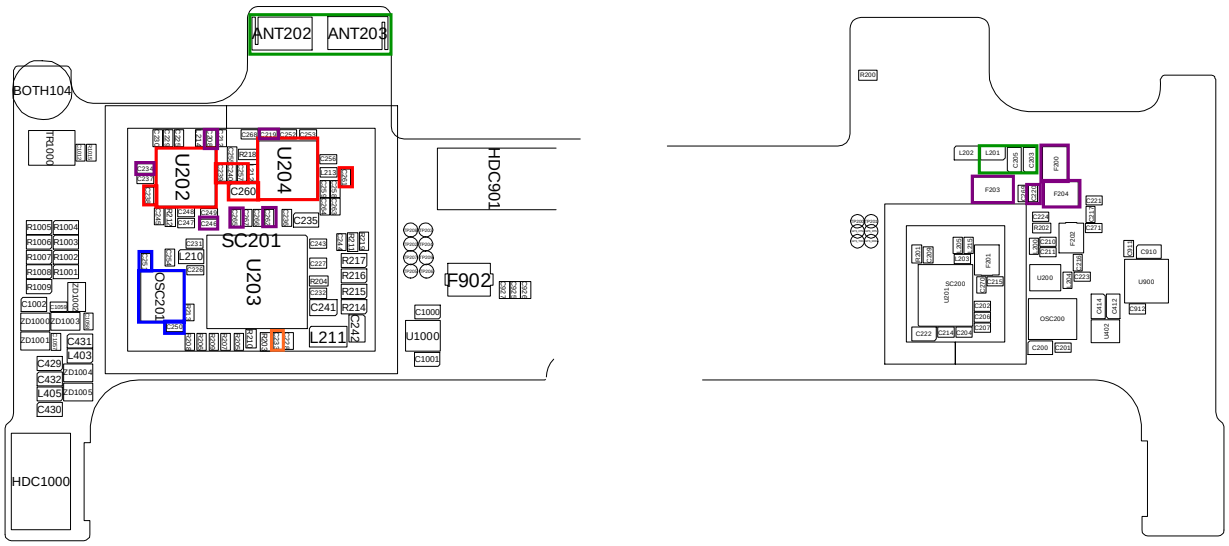






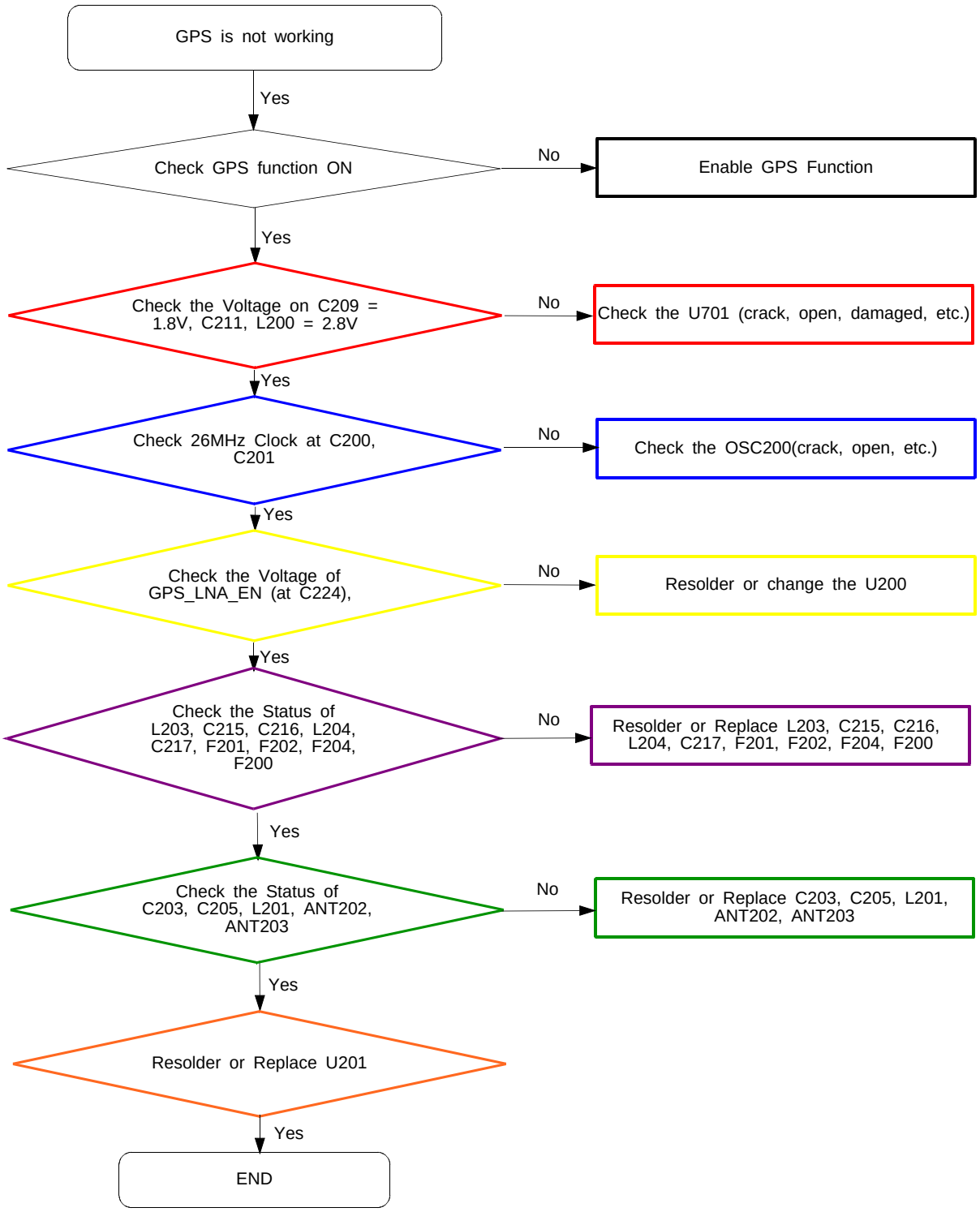


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

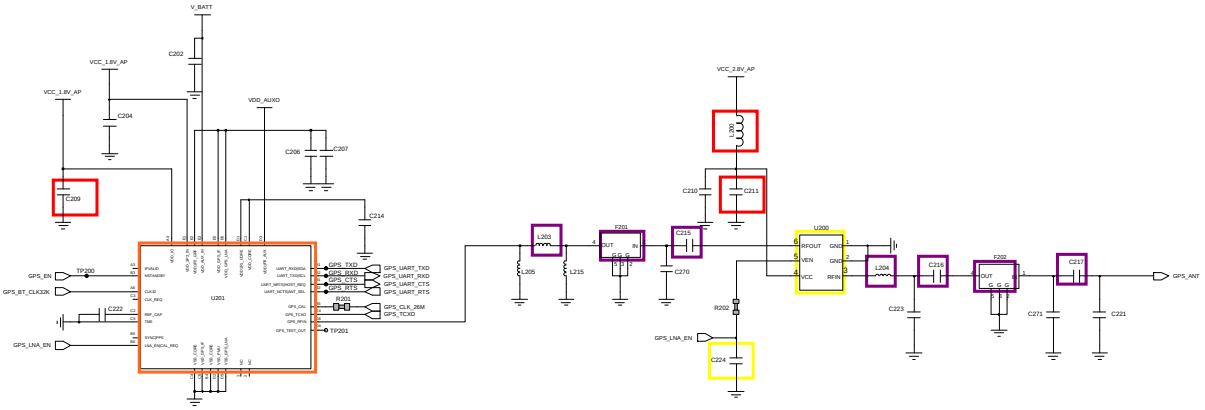


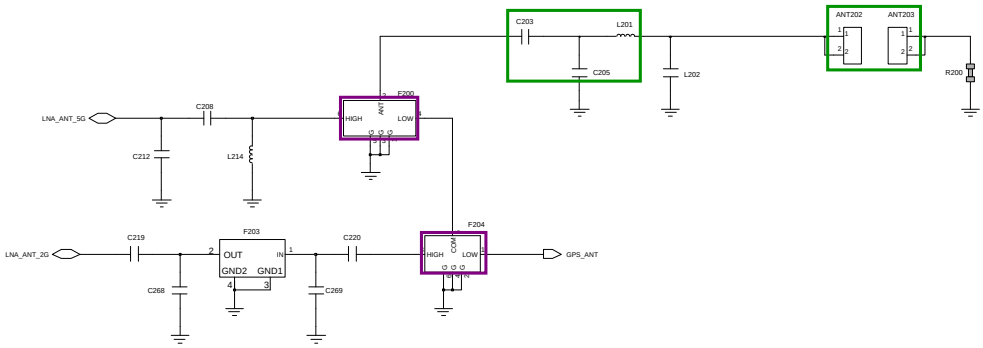
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

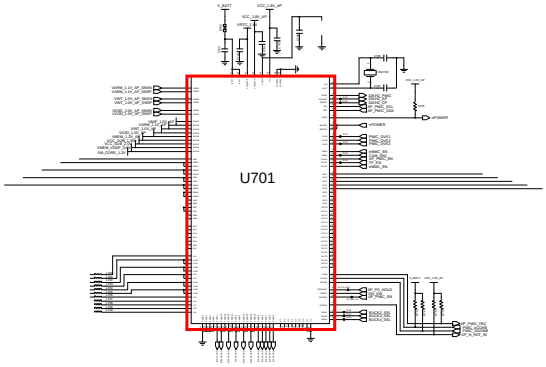
8-3-8. GPS Part

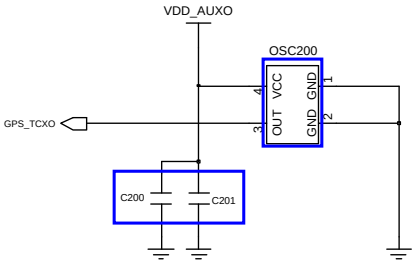


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.





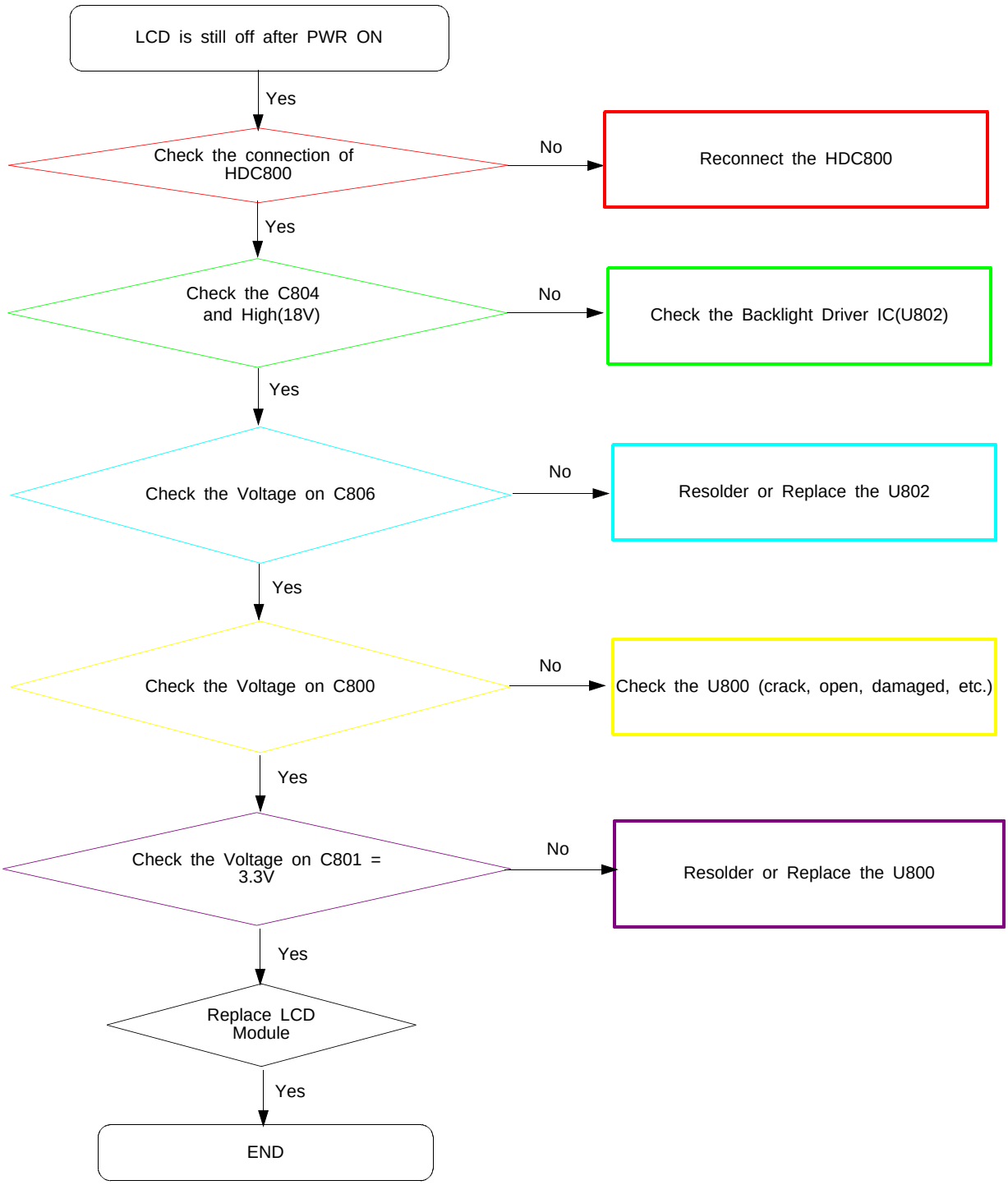




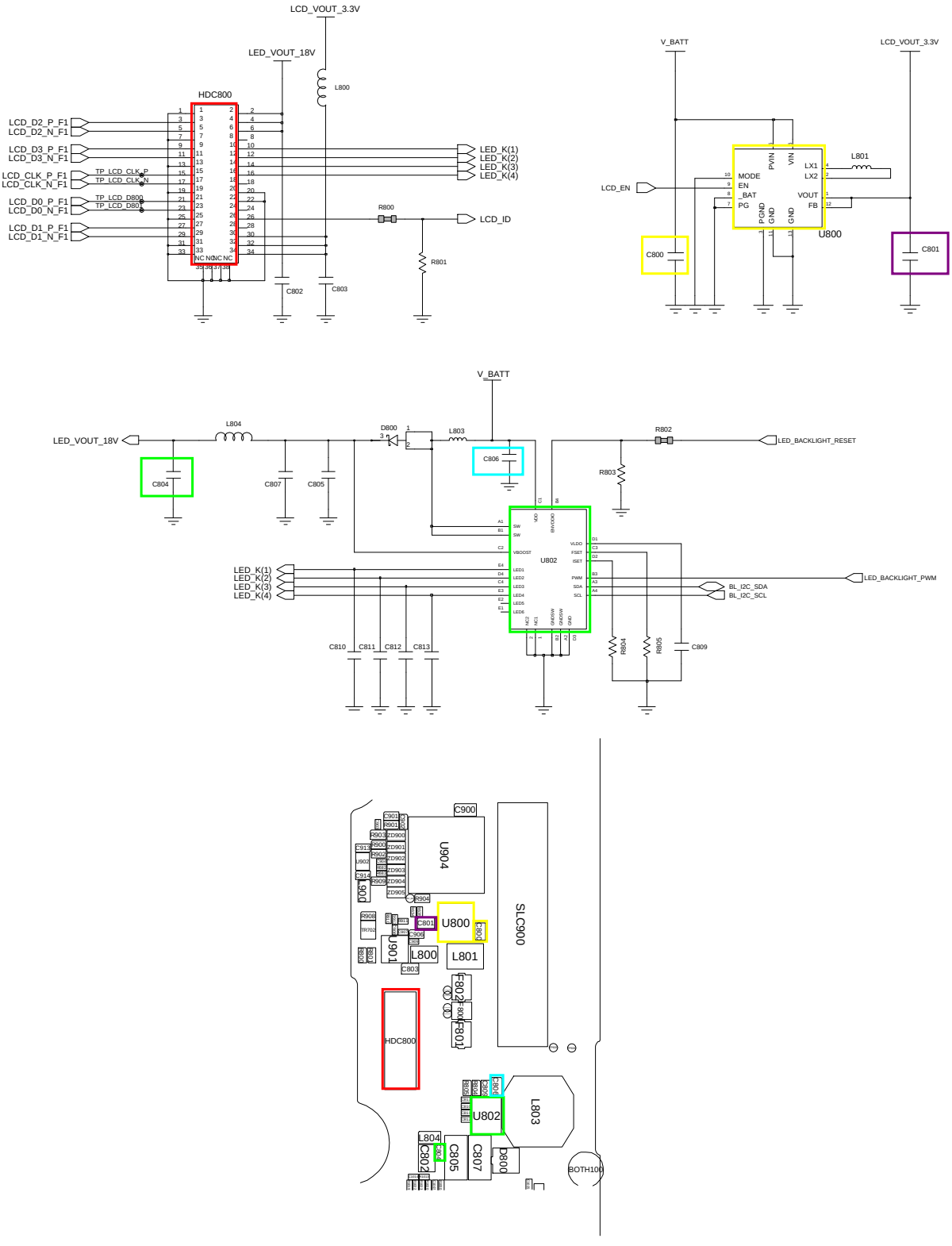
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3-9. LCD

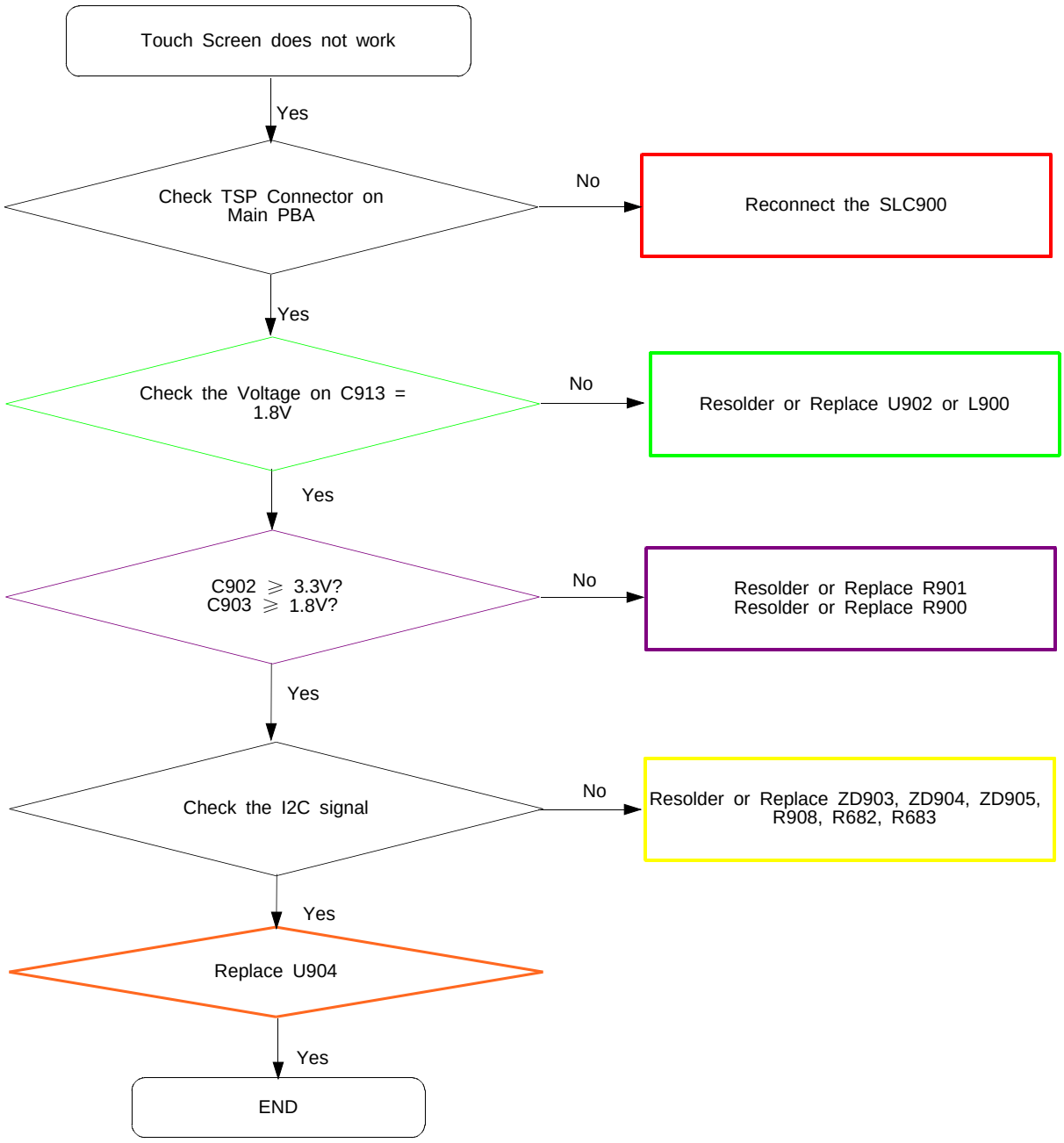


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

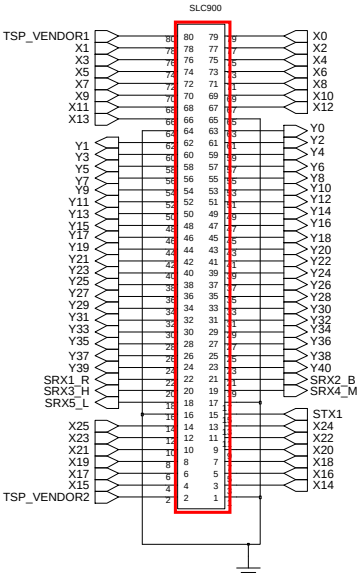


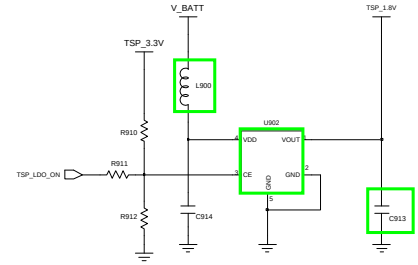
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

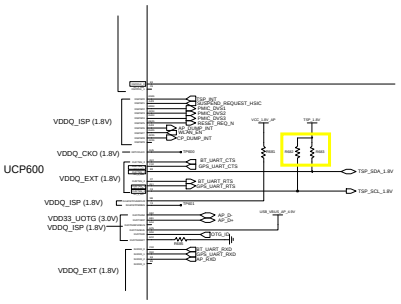
8-3-10. TSP

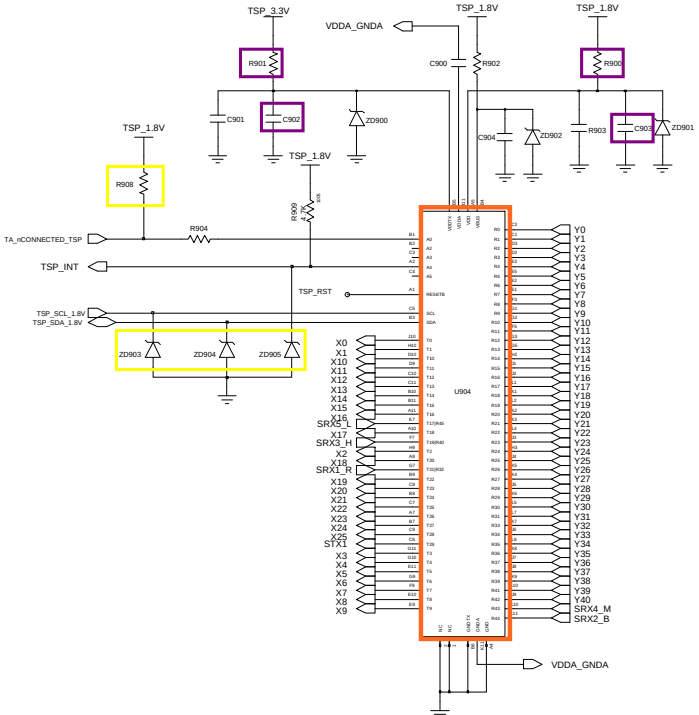


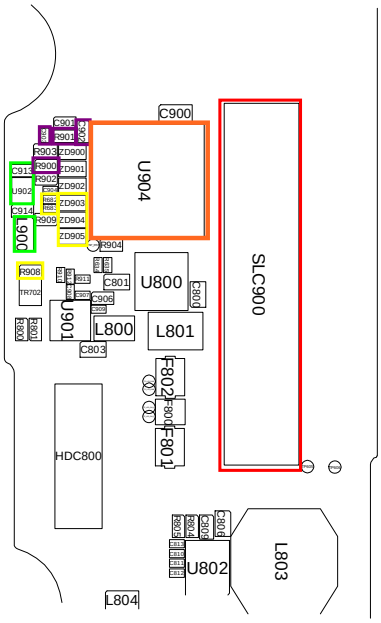
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.





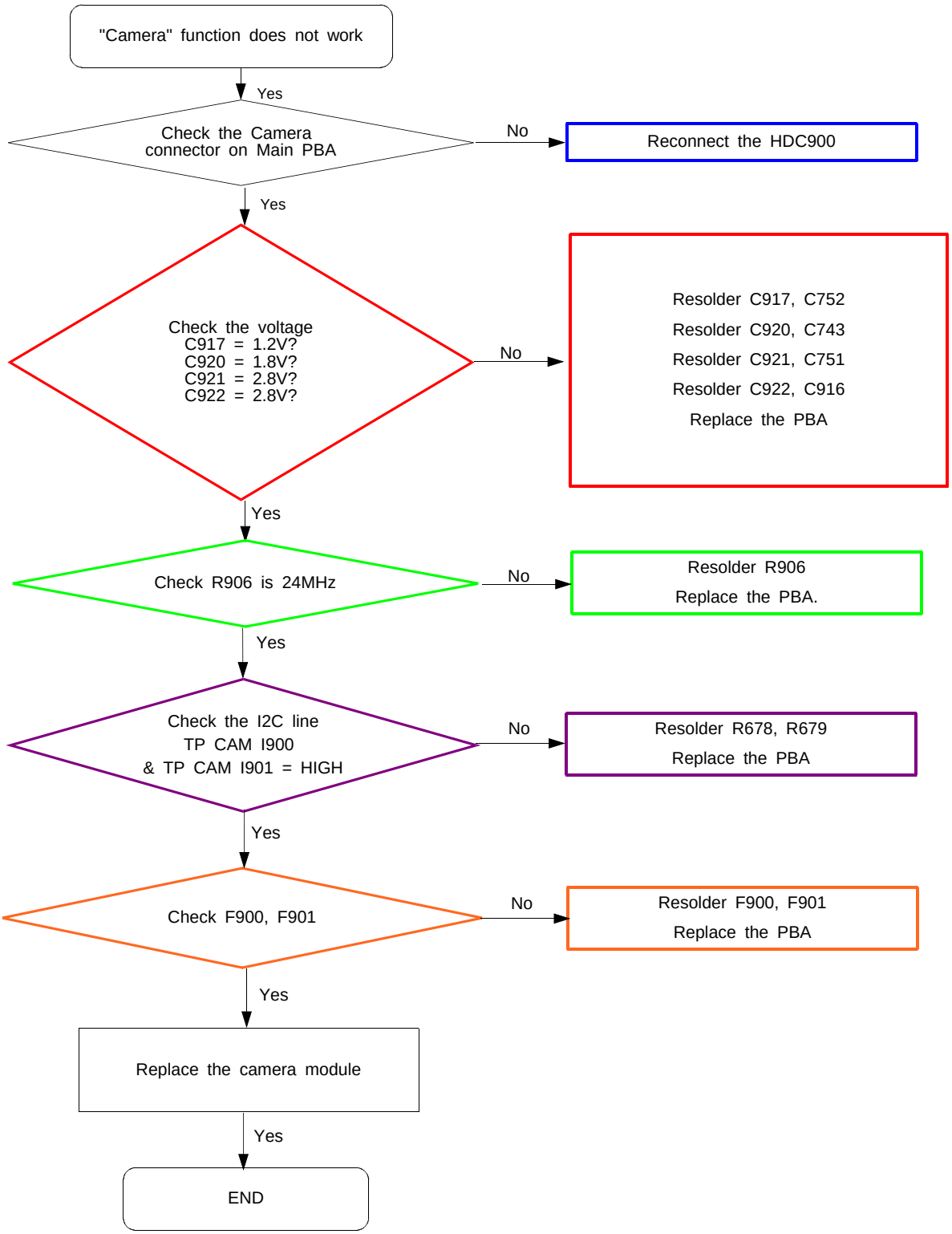




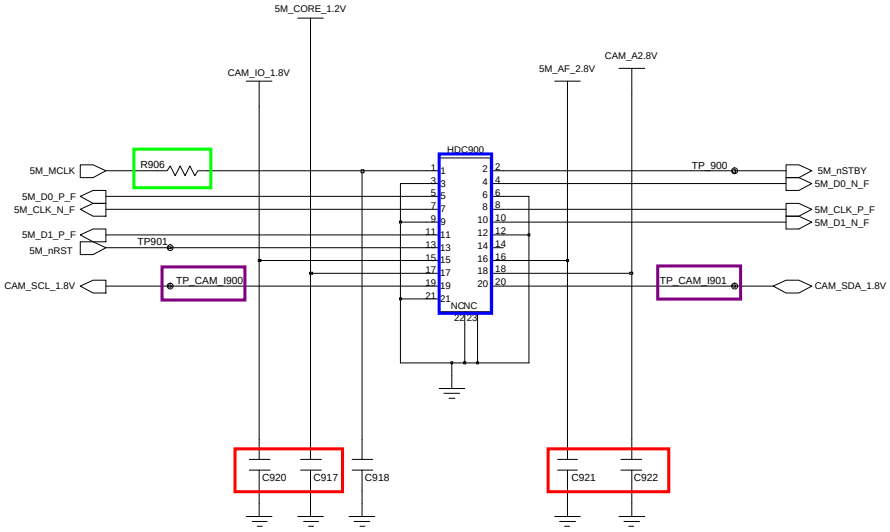


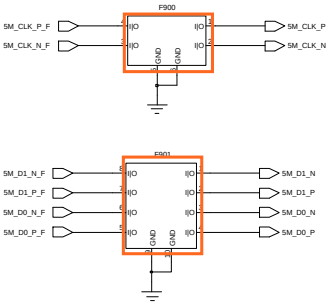
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

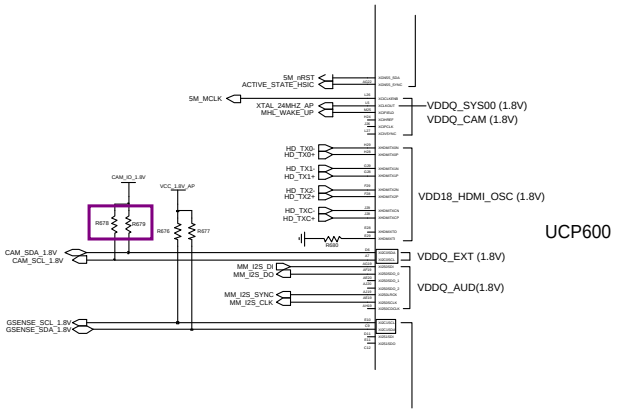
8-3-11. 3M CAM



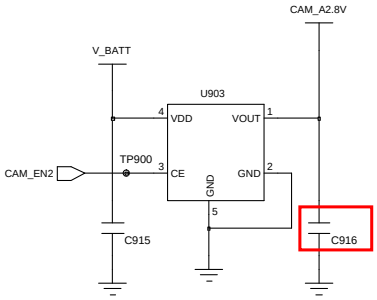
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

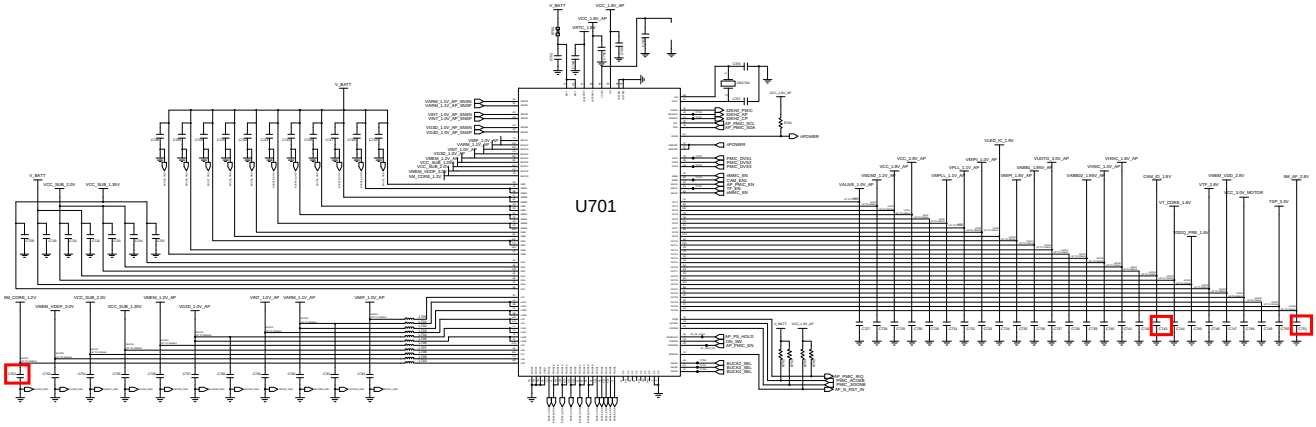




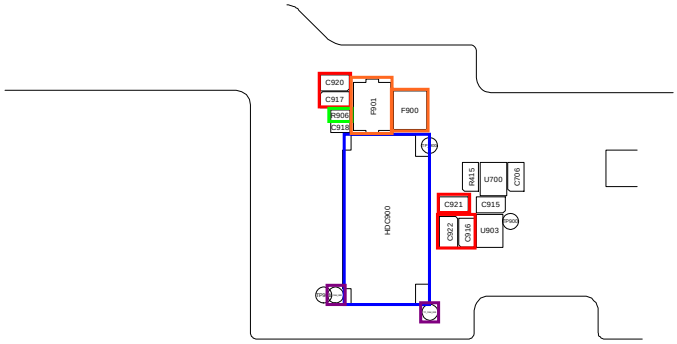


UCP600



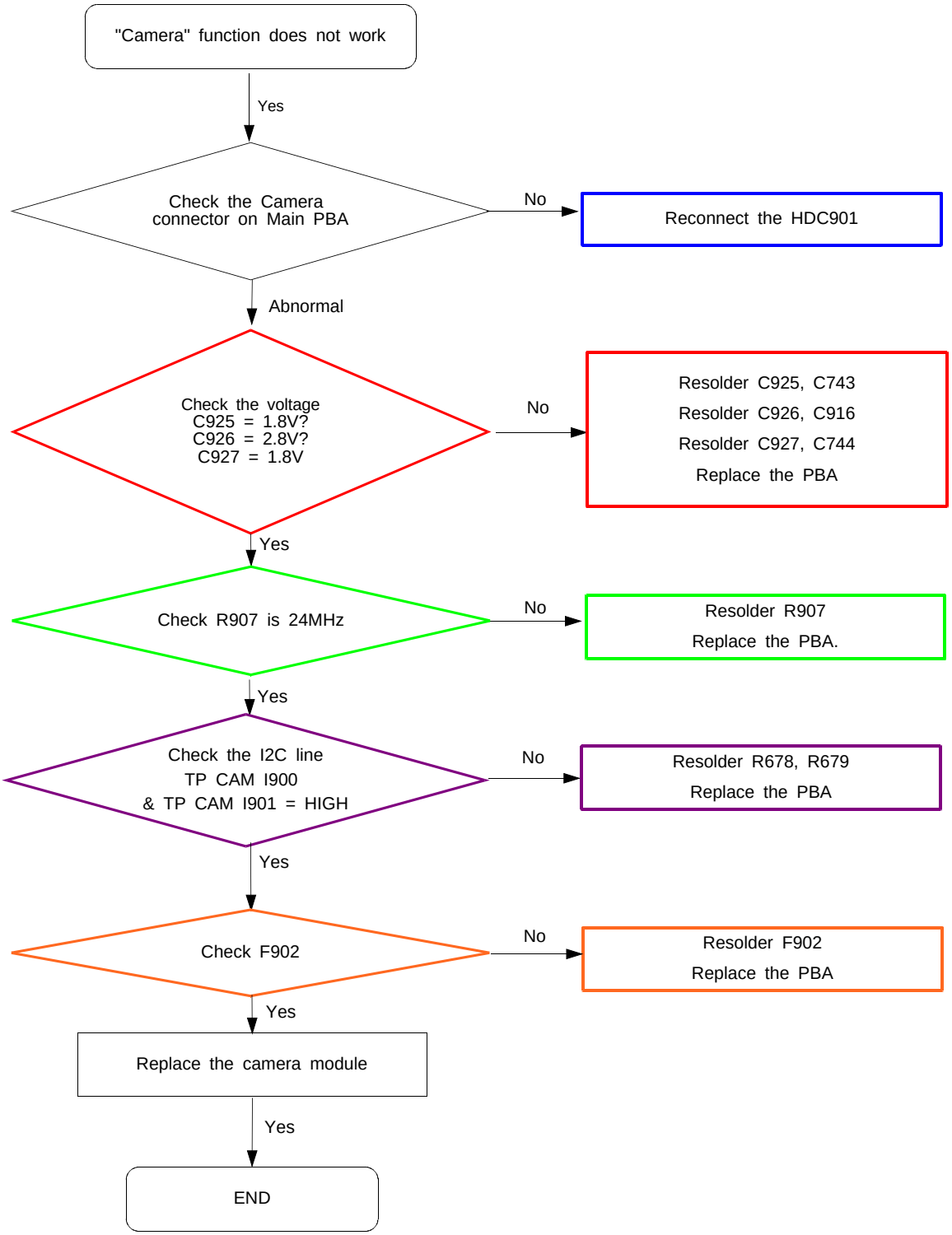


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

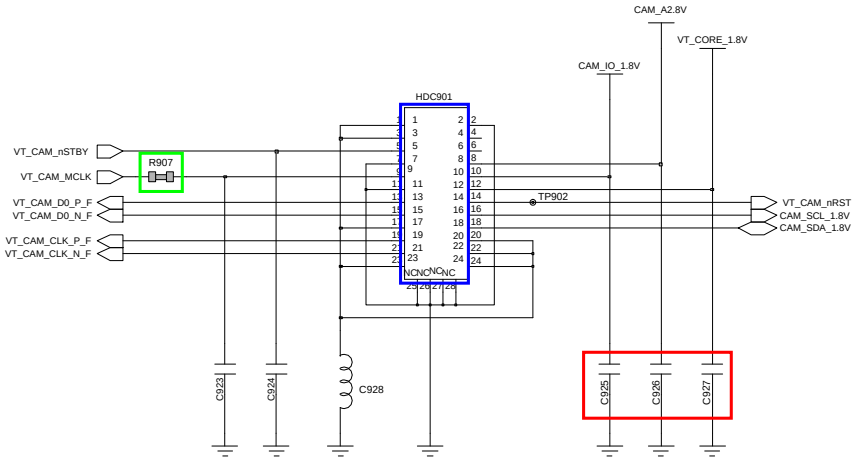


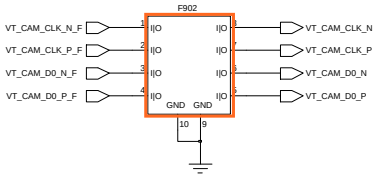
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

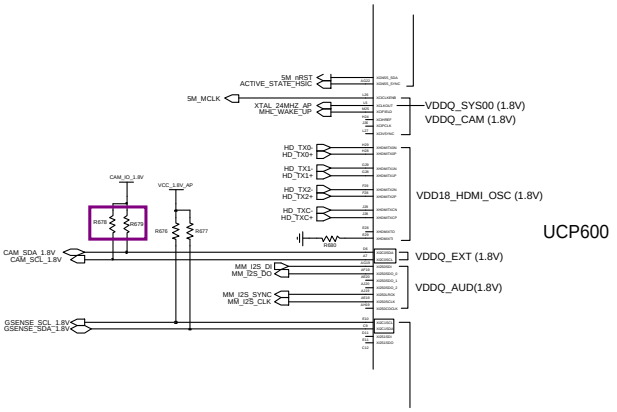
8-3-12. 1.3M CAM

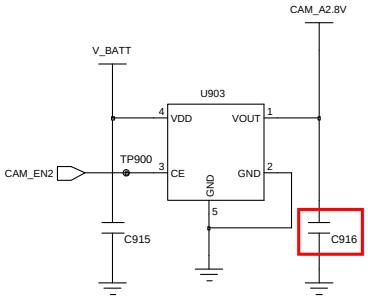


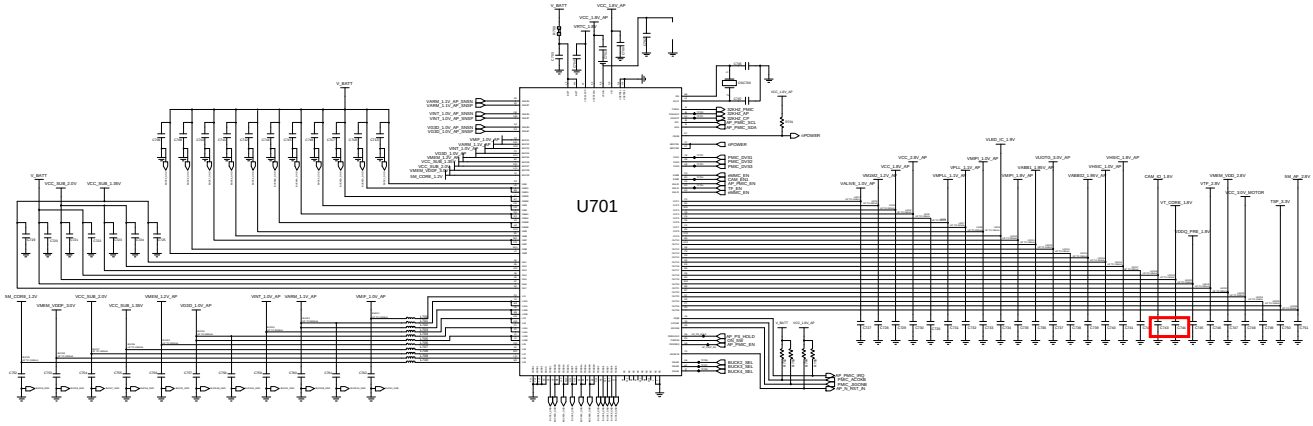
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



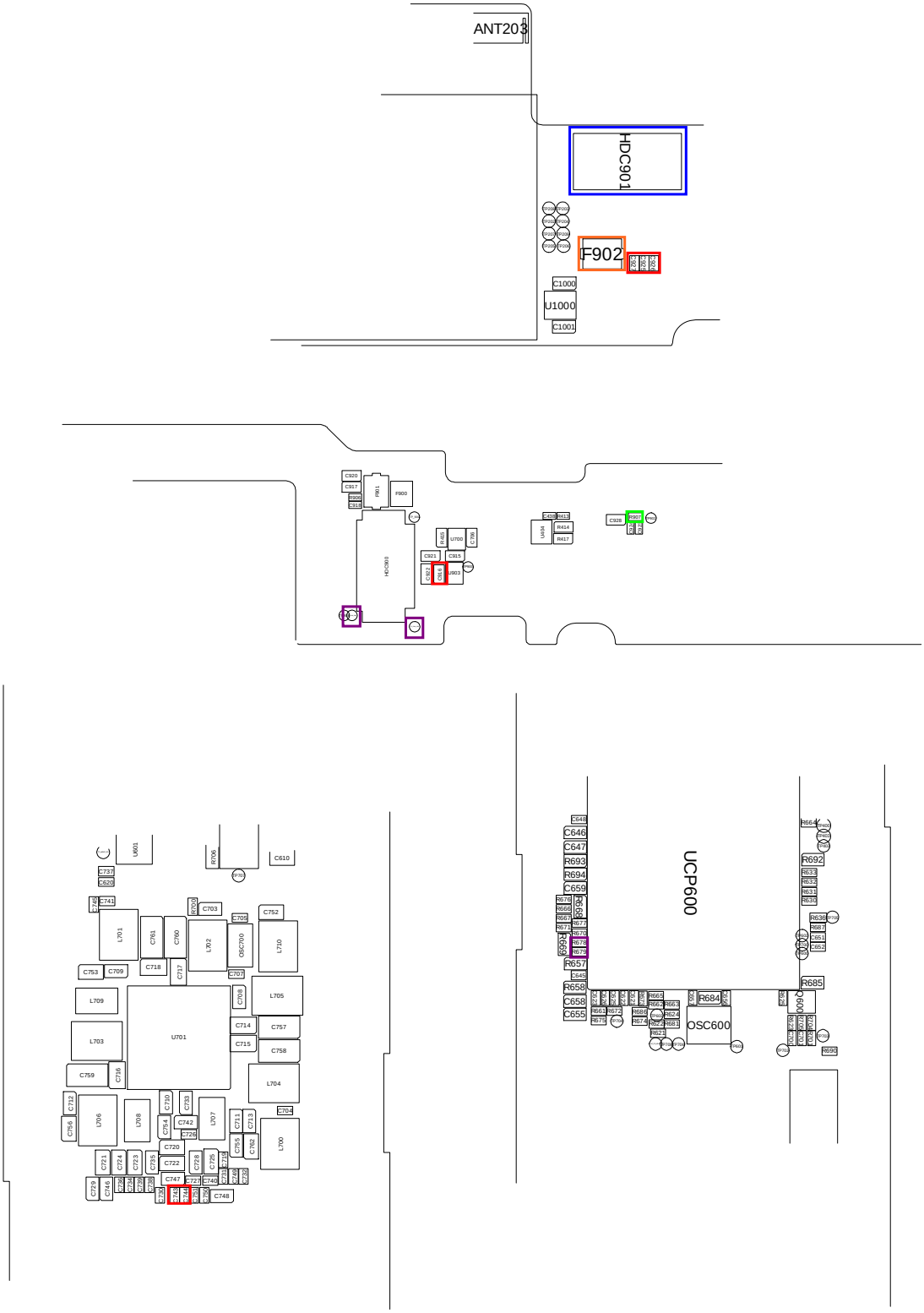






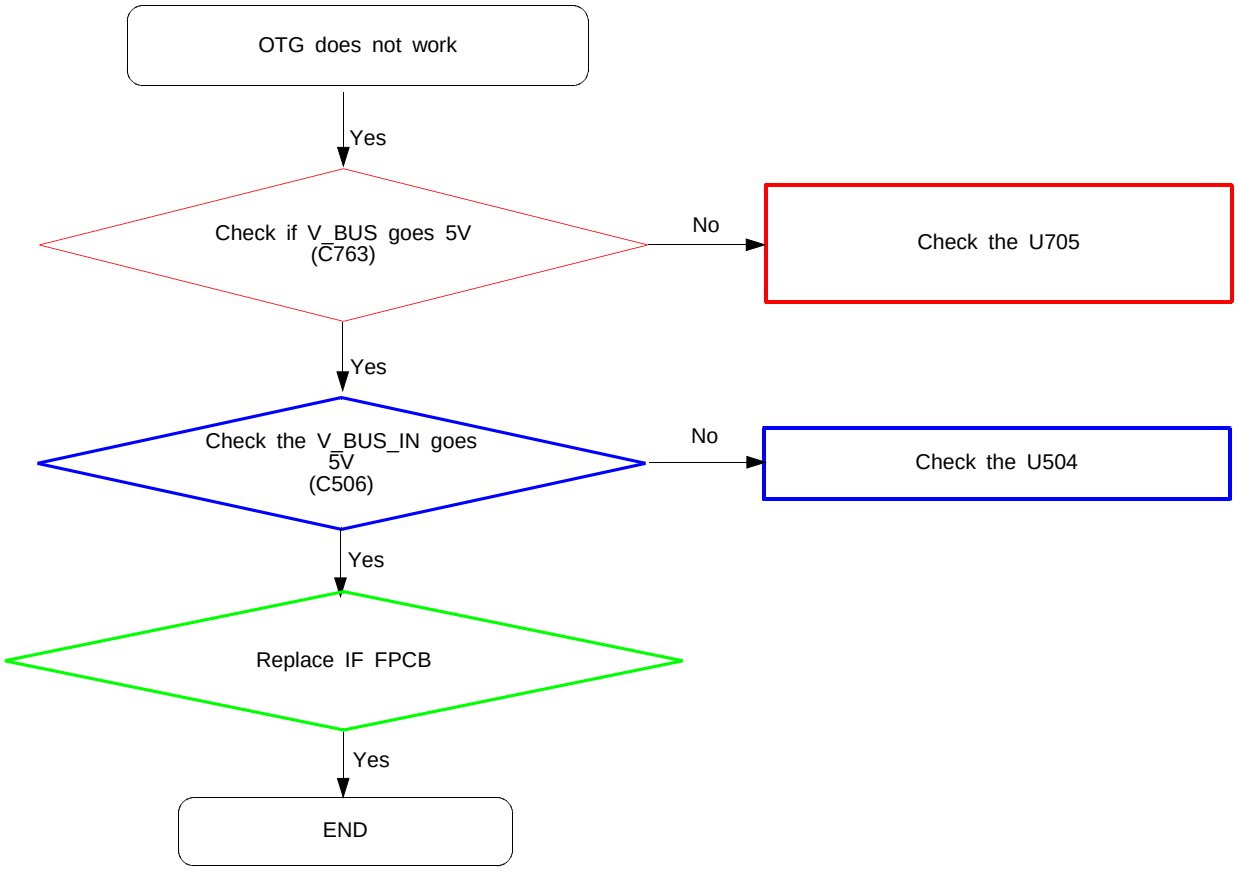


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

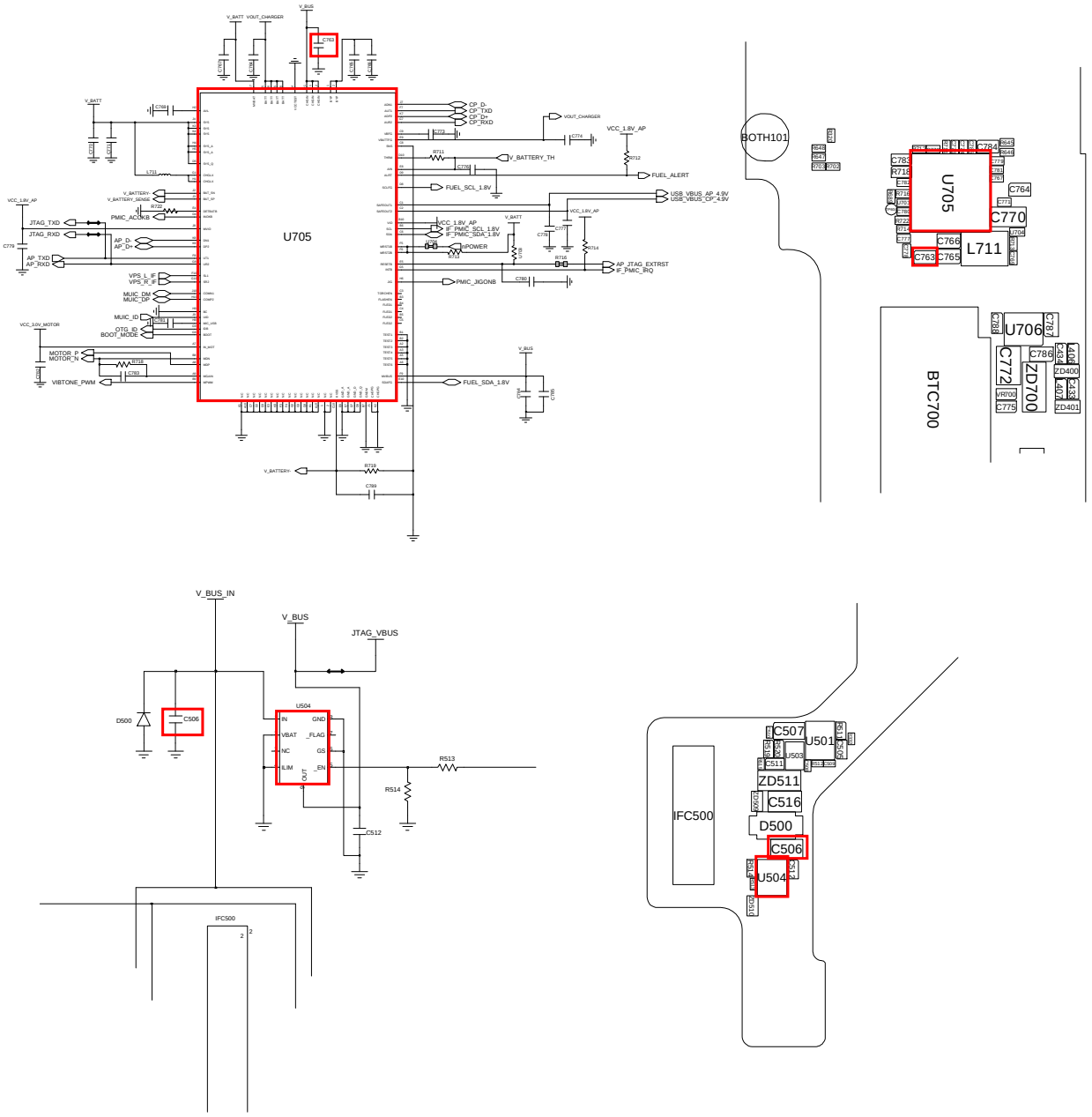


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3-13. OTG

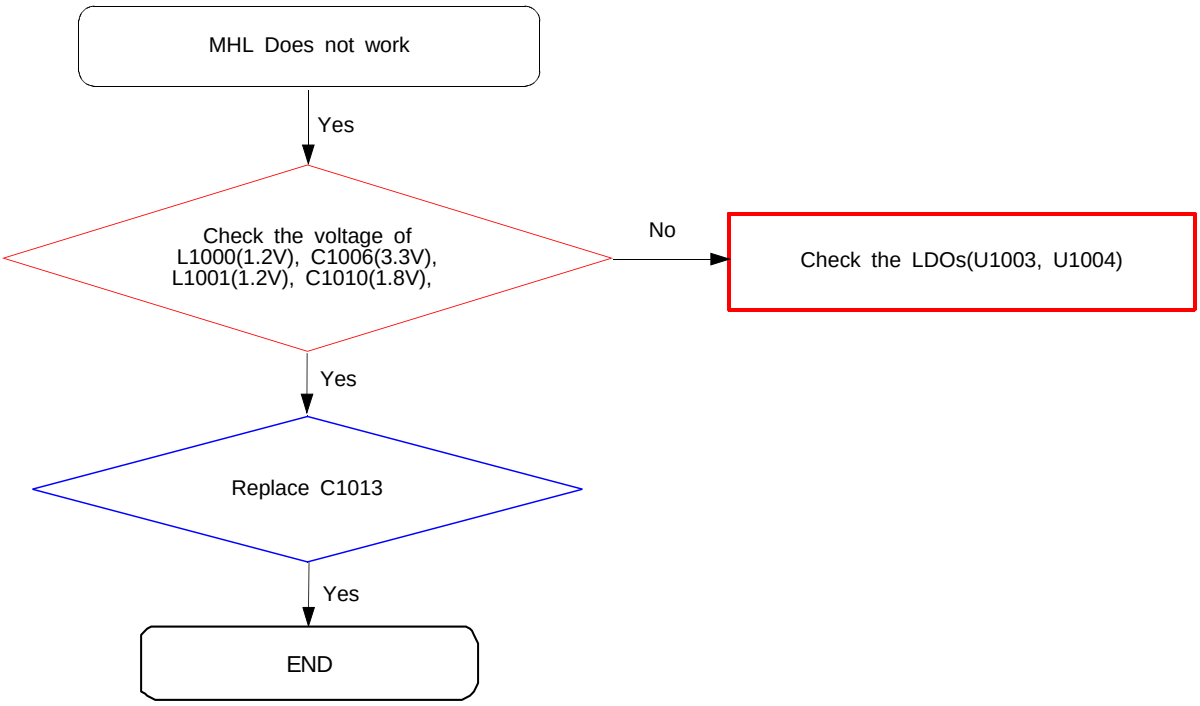


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

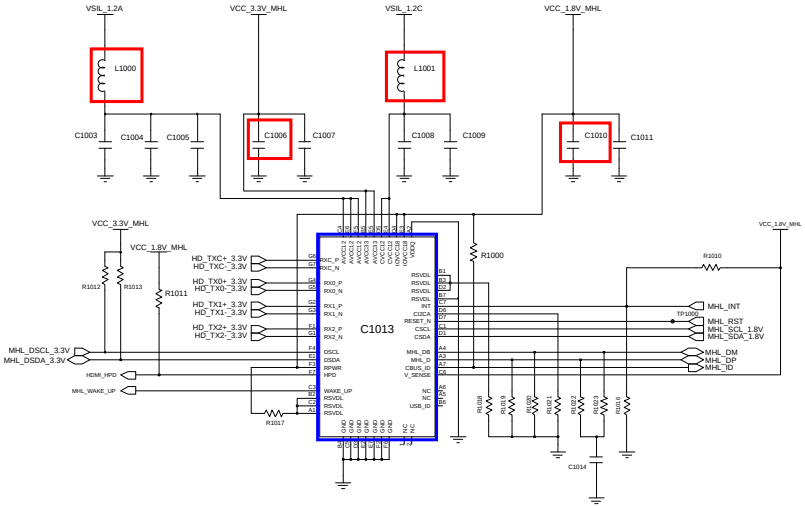


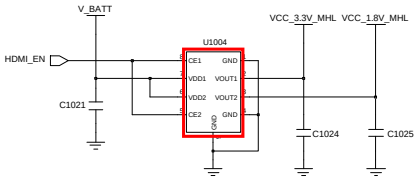
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

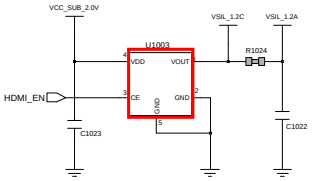
8-3-14. MHL

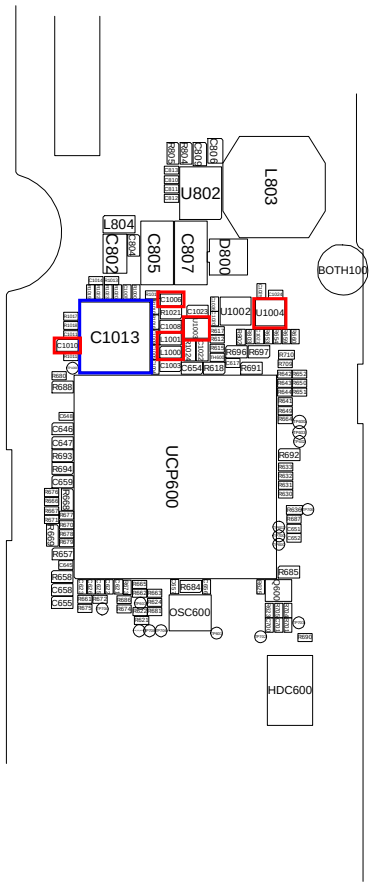


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



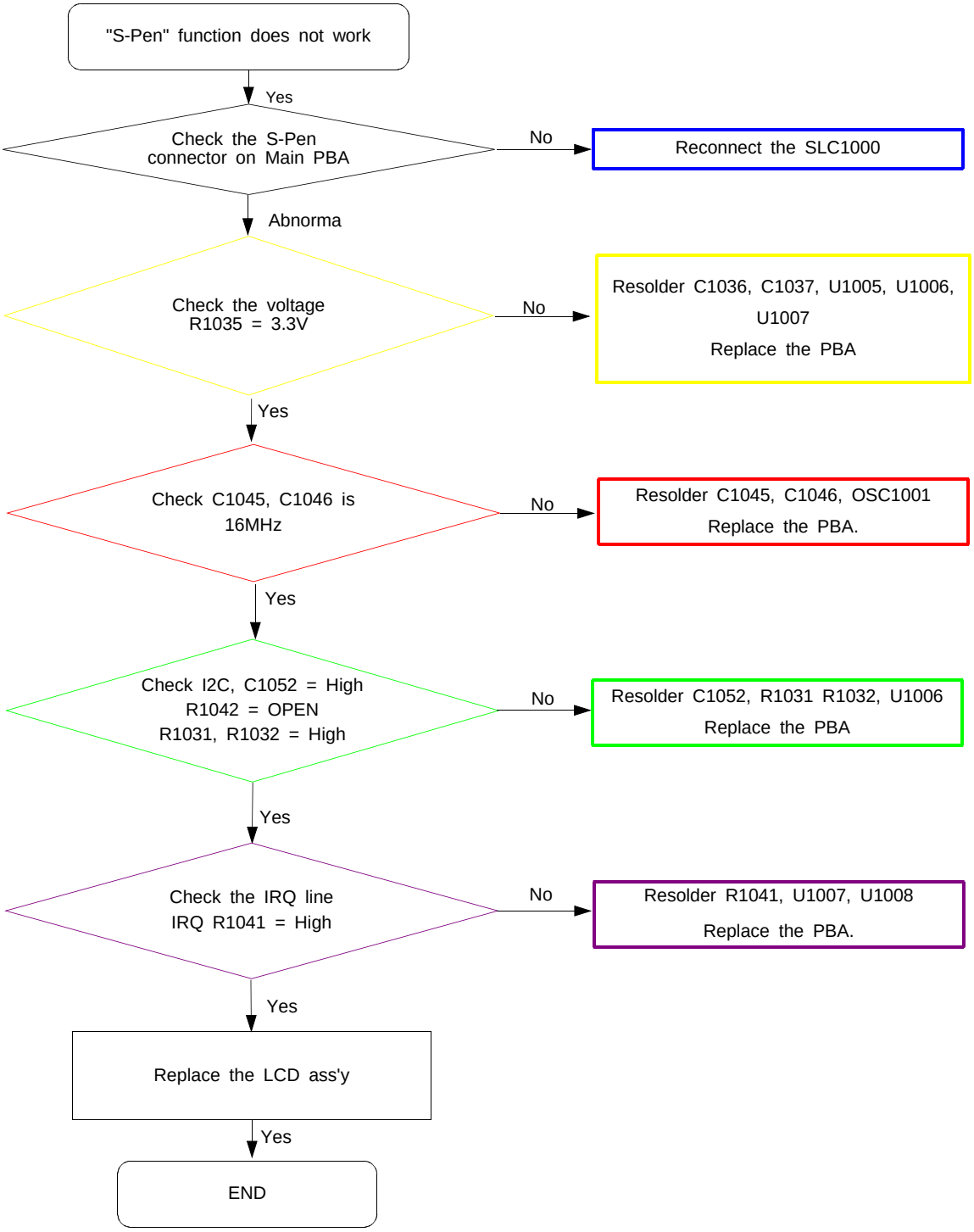




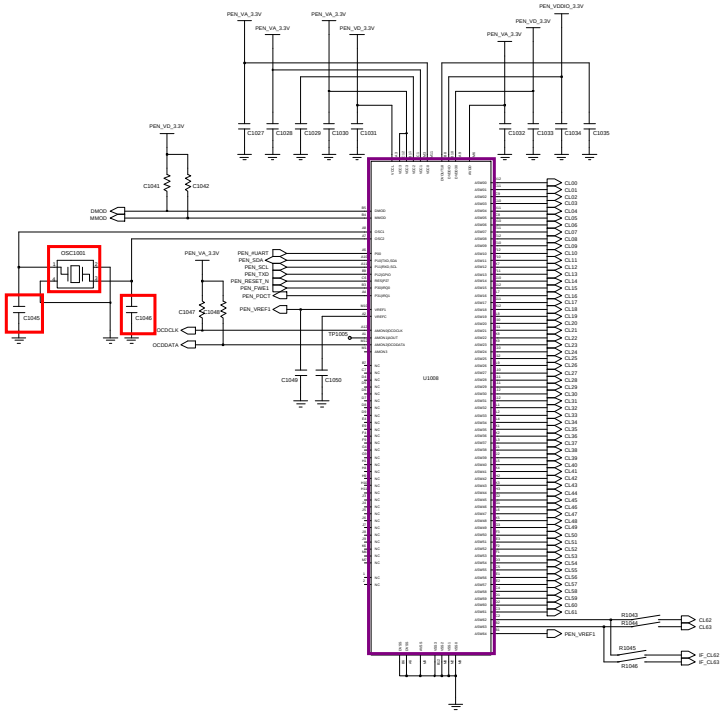


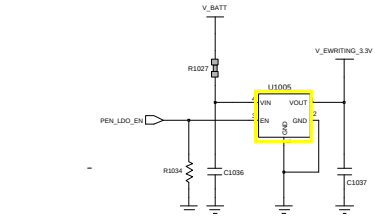
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

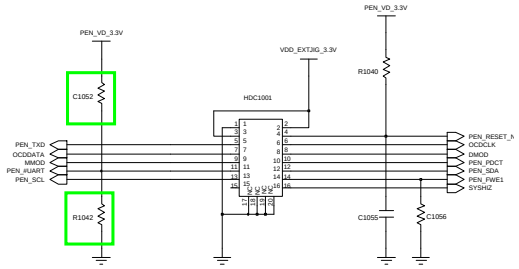
8-3-15. S-pen

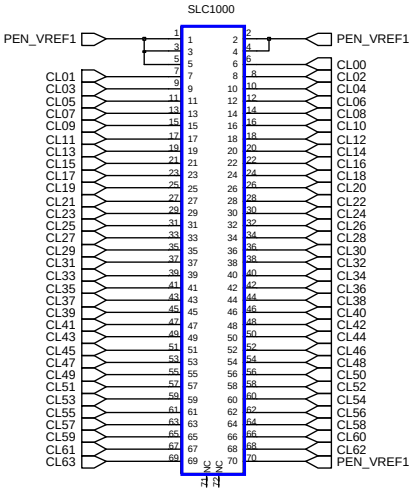


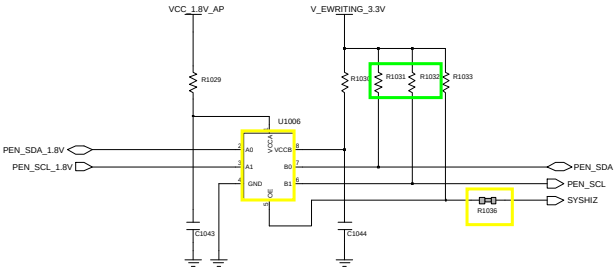
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

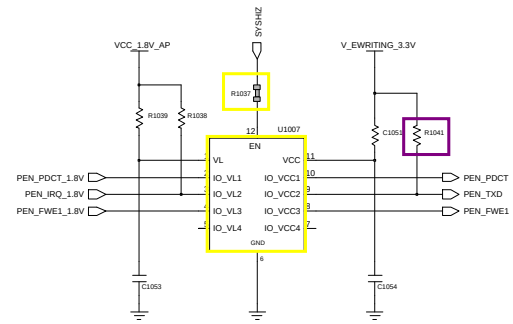


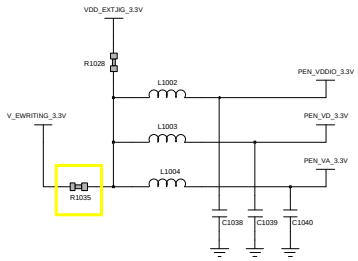




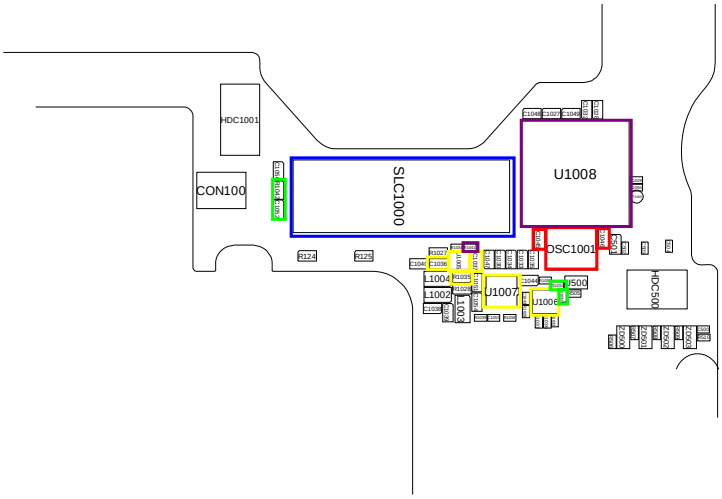






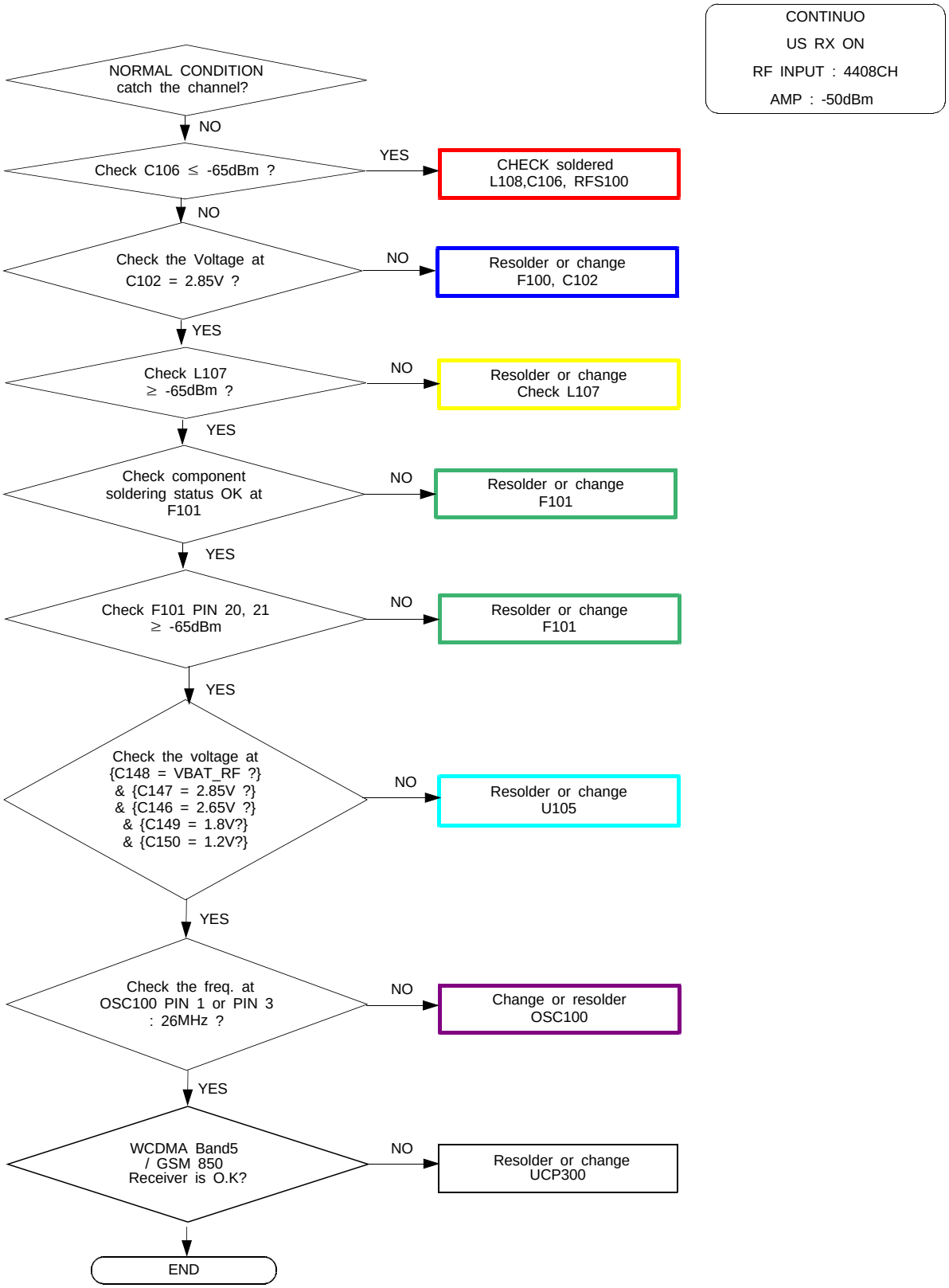


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

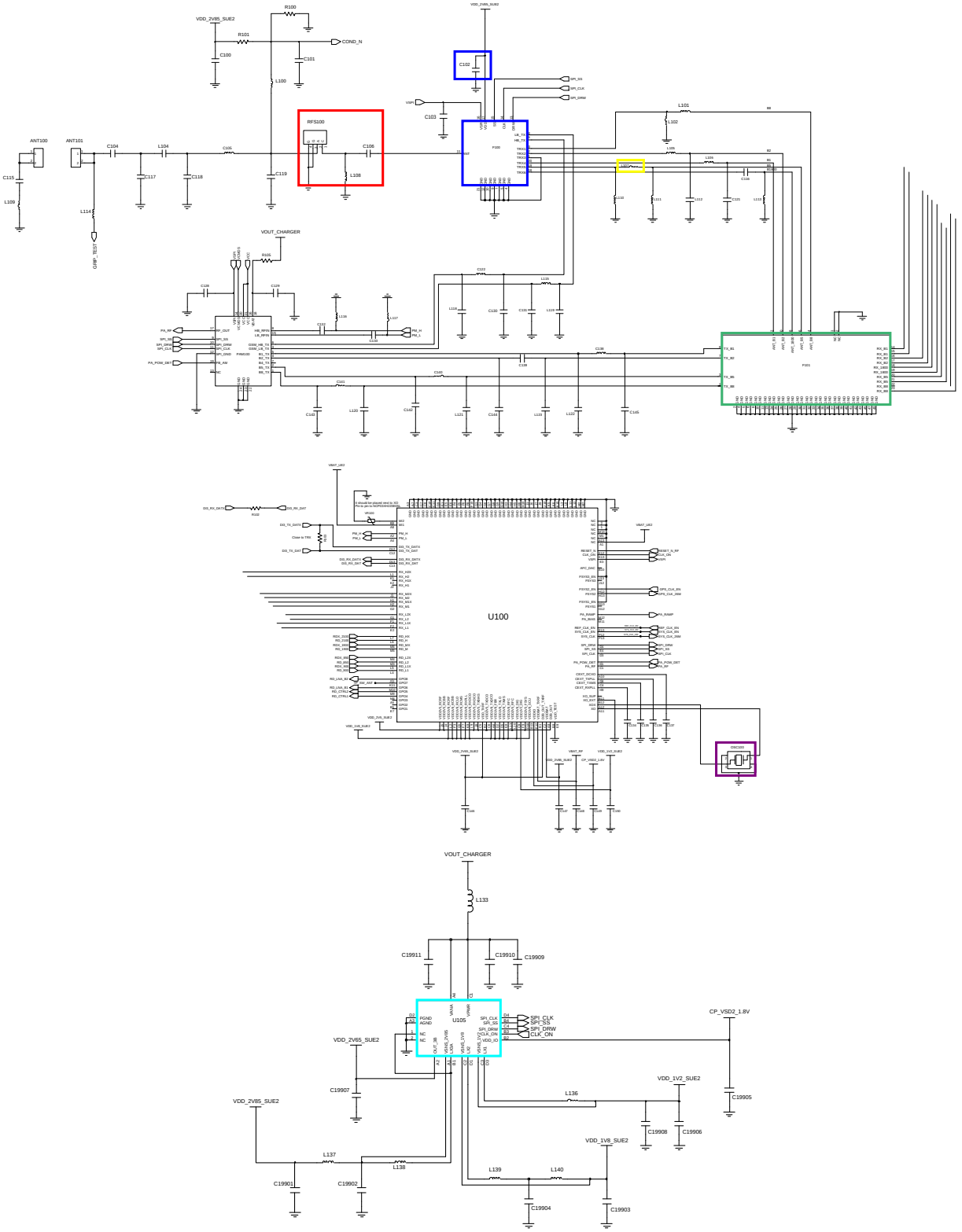


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

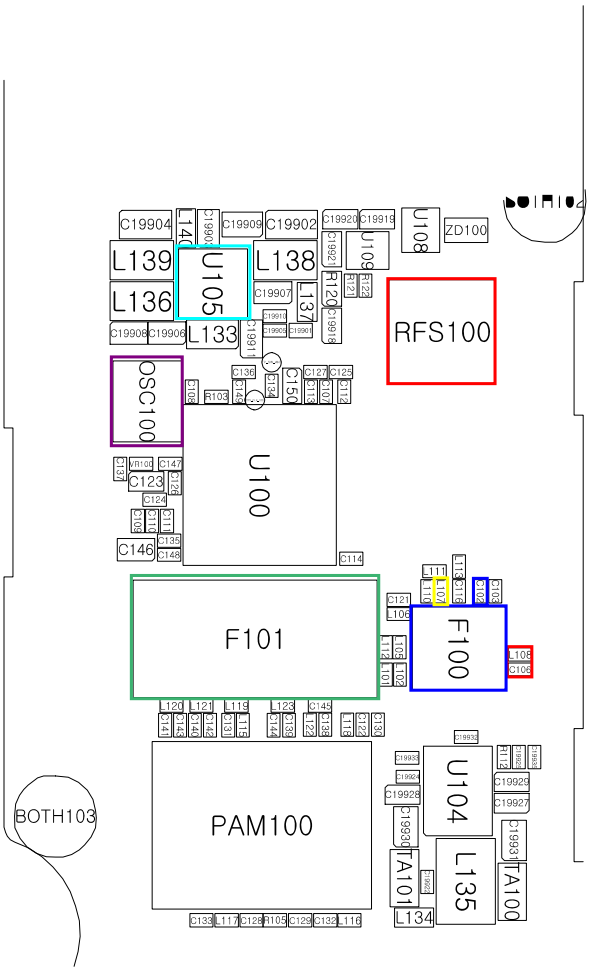
8-3-16. GSM850/ WCDMA Band5 RX



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



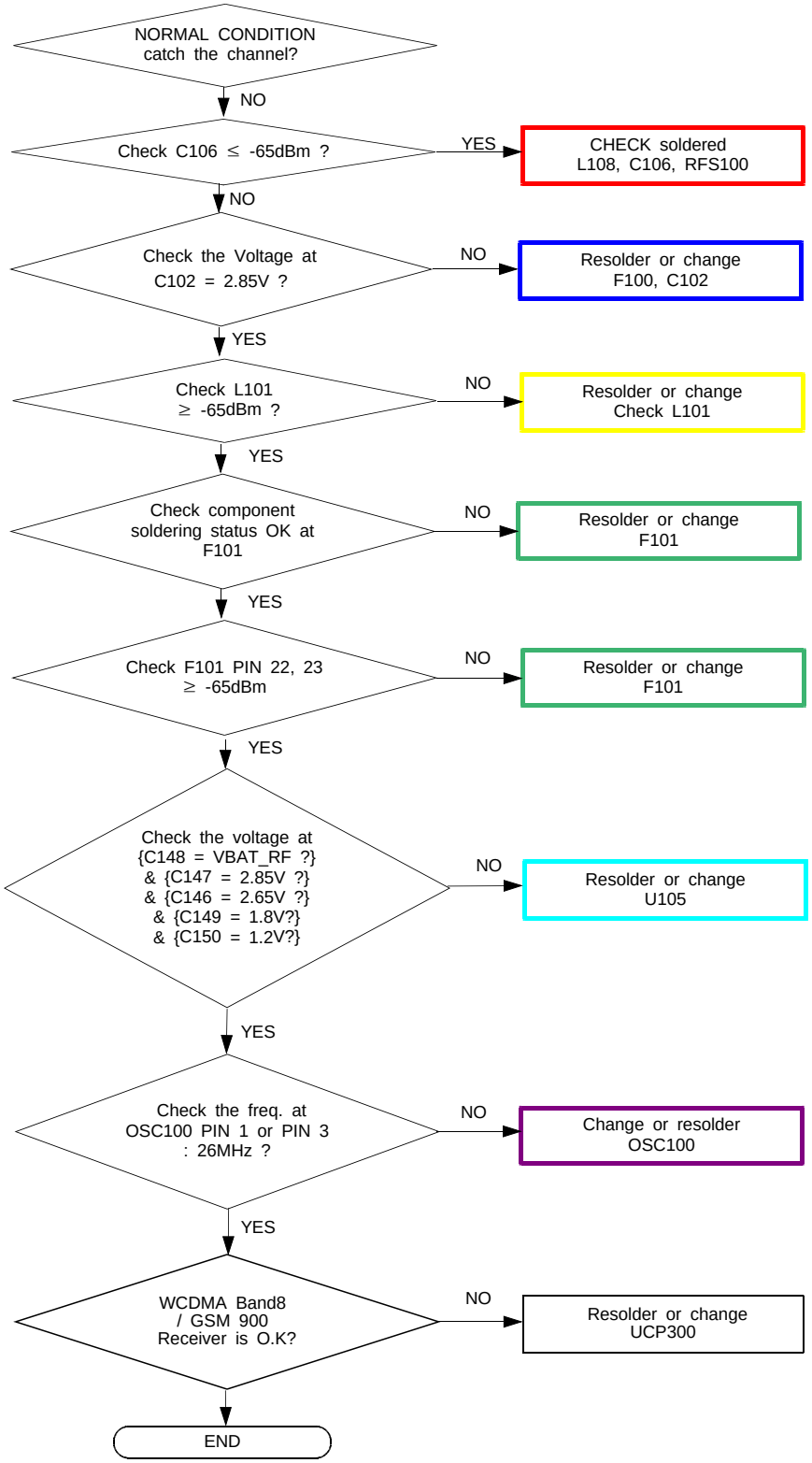
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



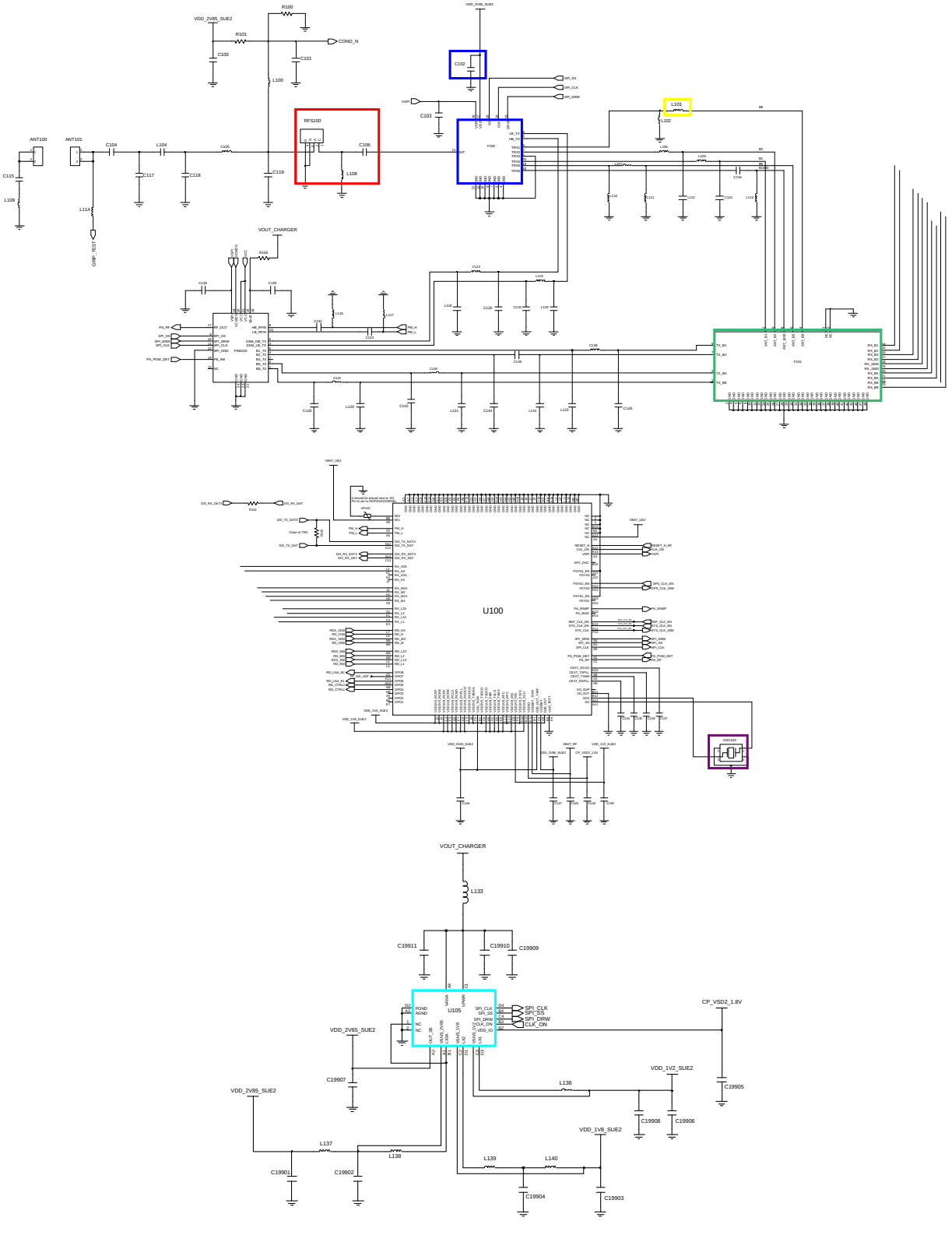
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3-17. GSM900/ WCDMA Band8 RX

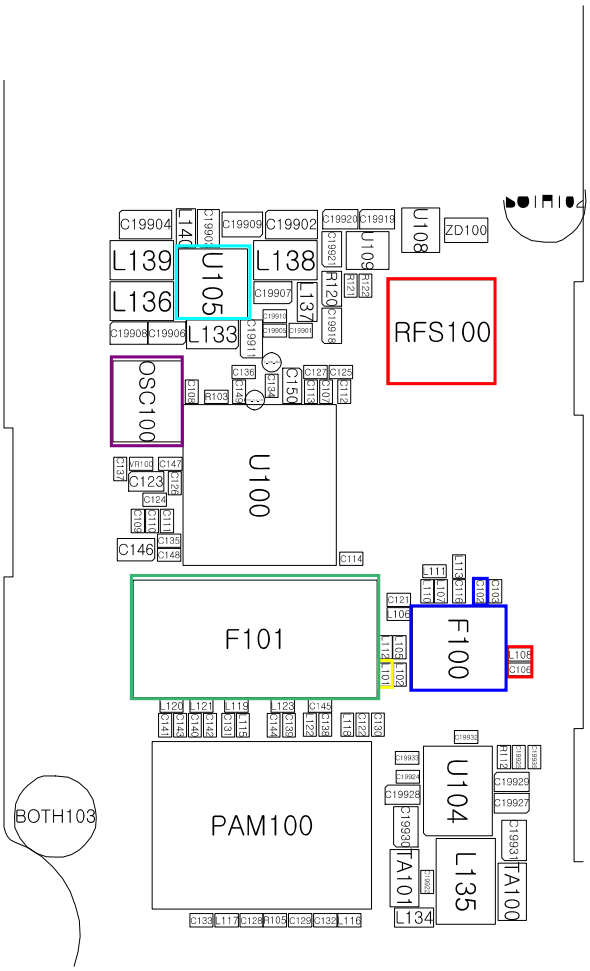
CONTINUOUS RX ON
RF INPUT : 3013CH
AMP : -50dBm



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

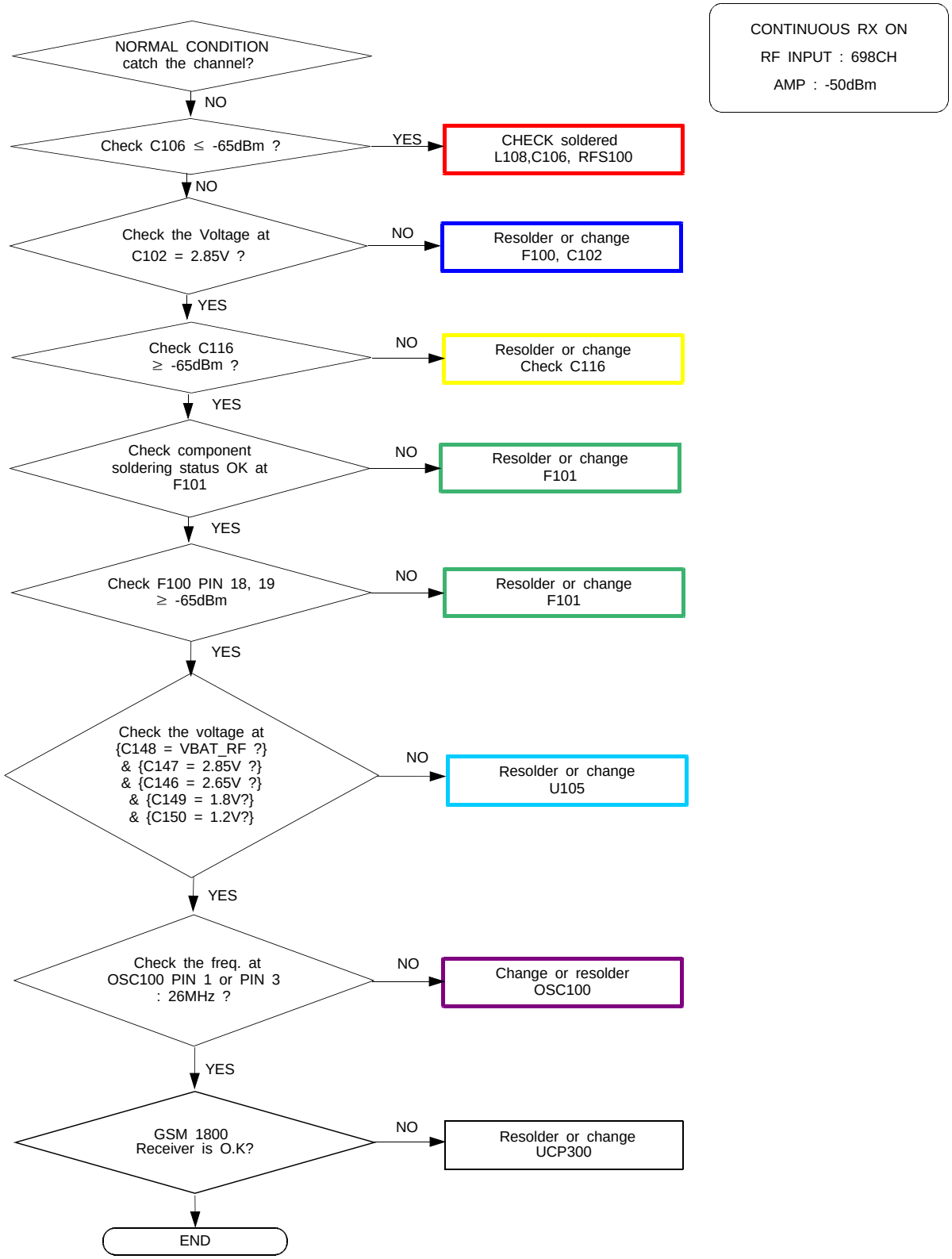


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

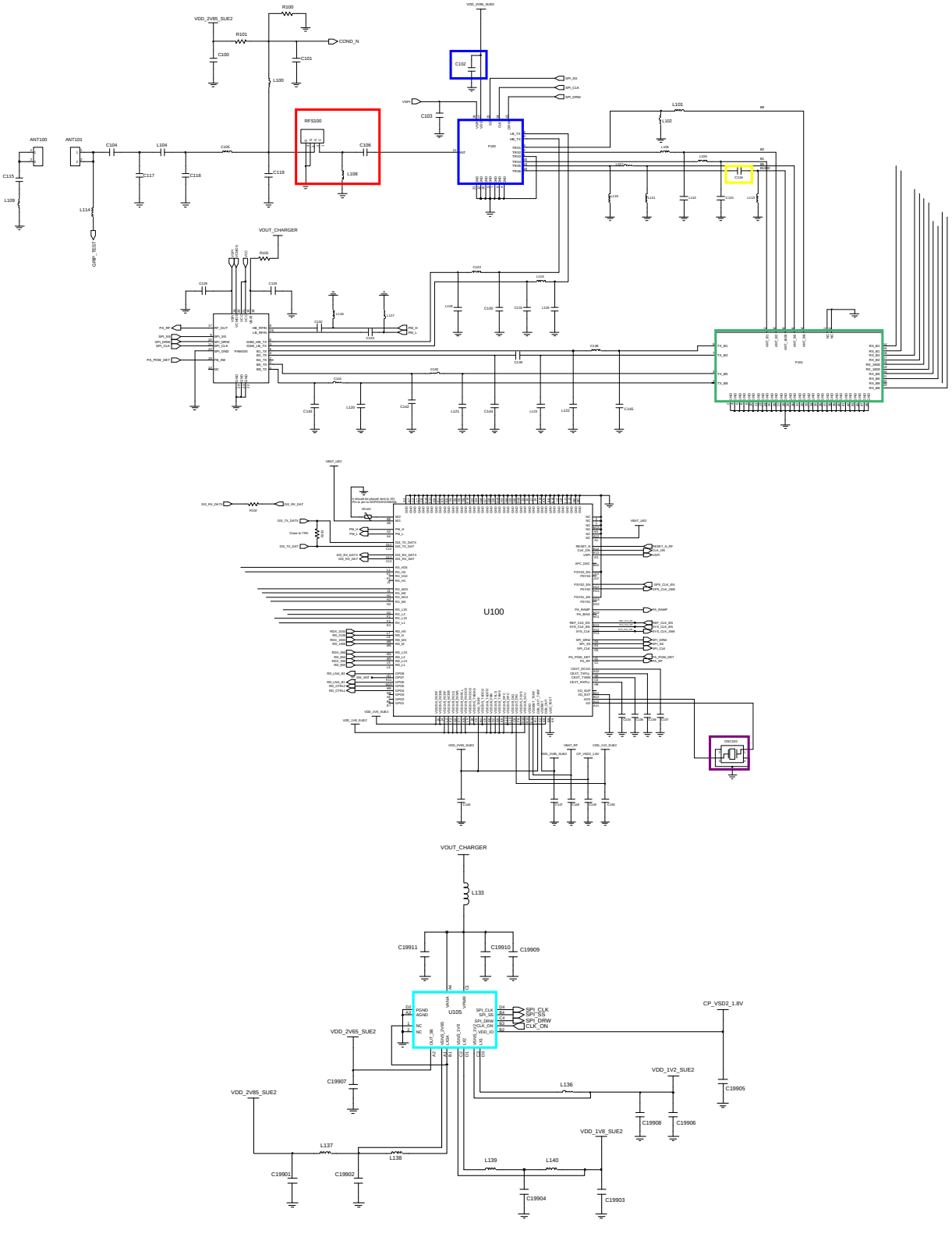


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

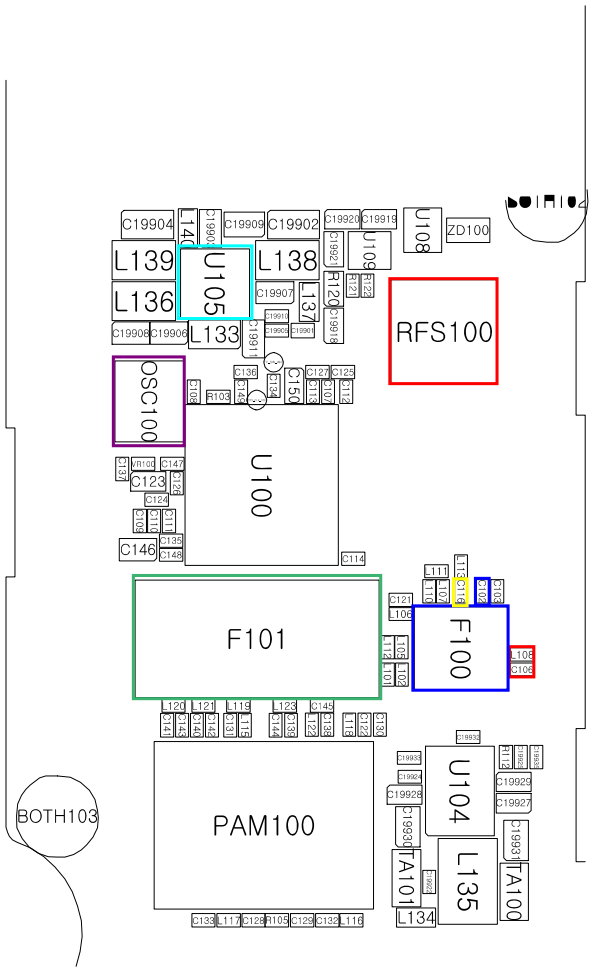
8-3-18. GSM1800 RX



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

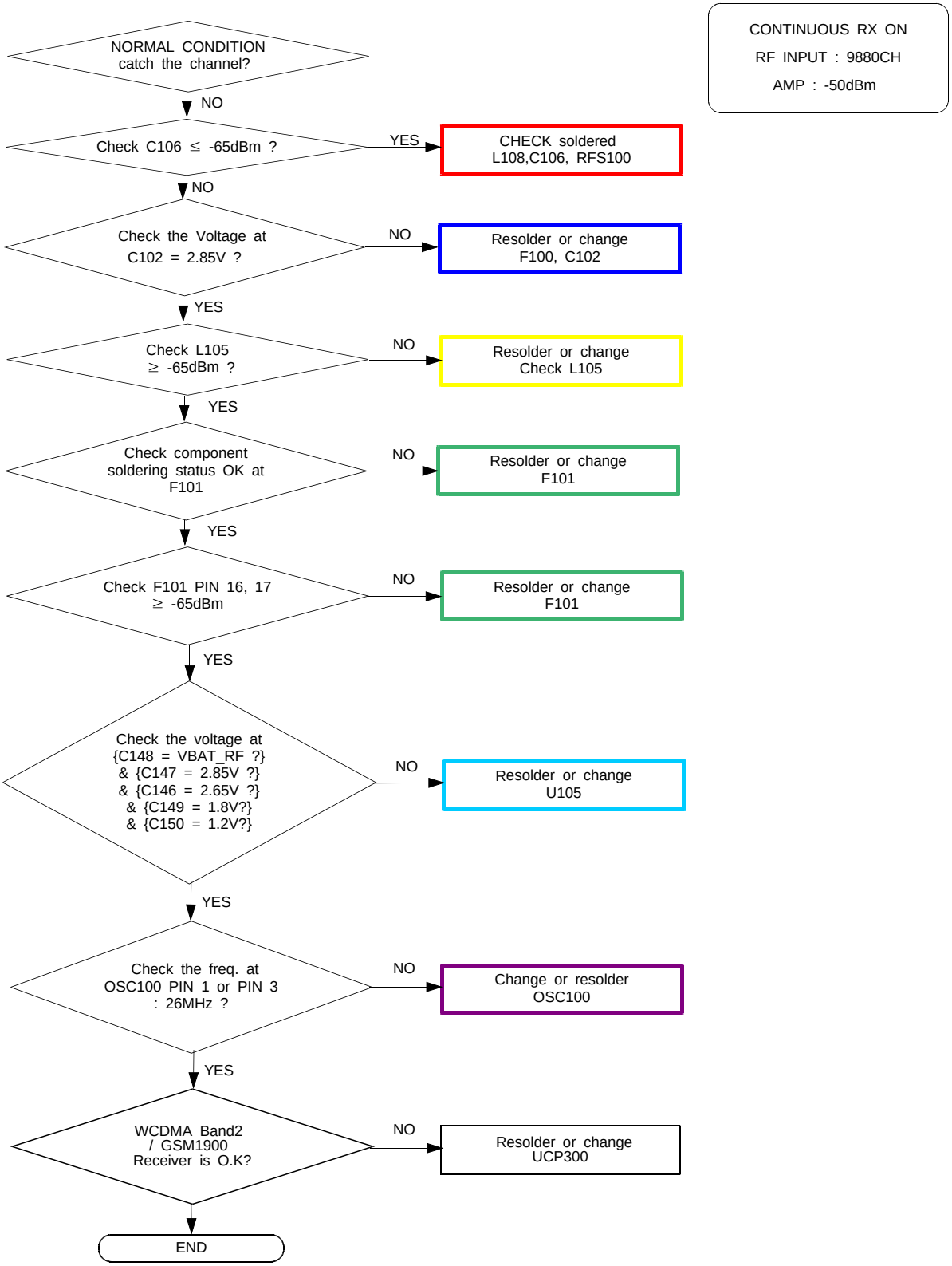


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

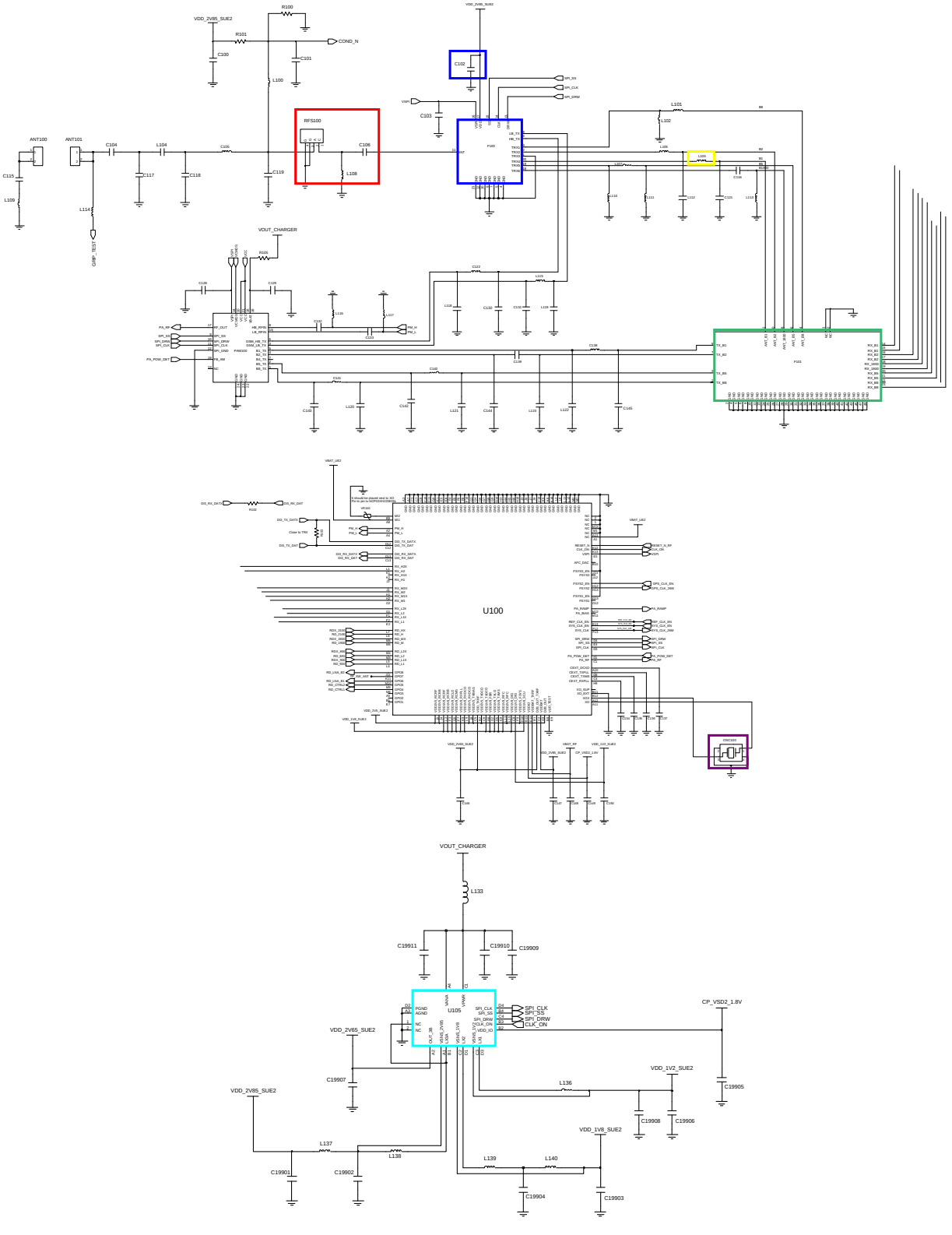


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

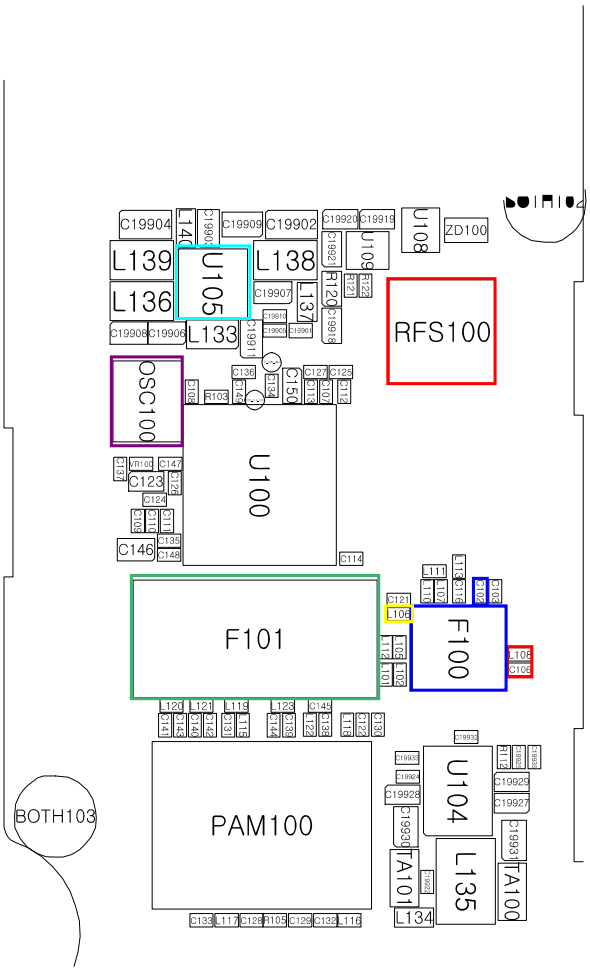
8-3-19. GSM1900/ WCDMA Band2 RX



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

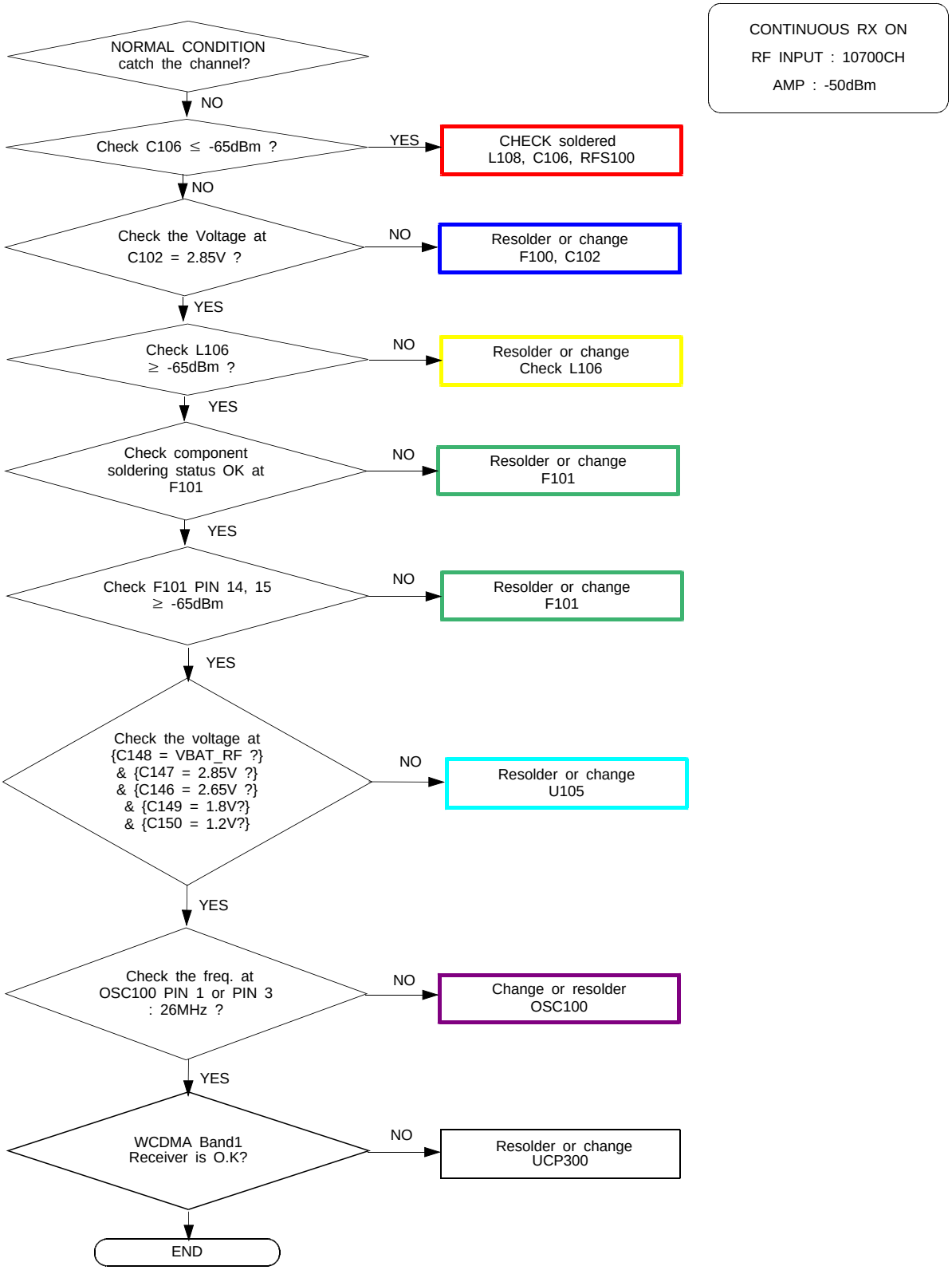


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

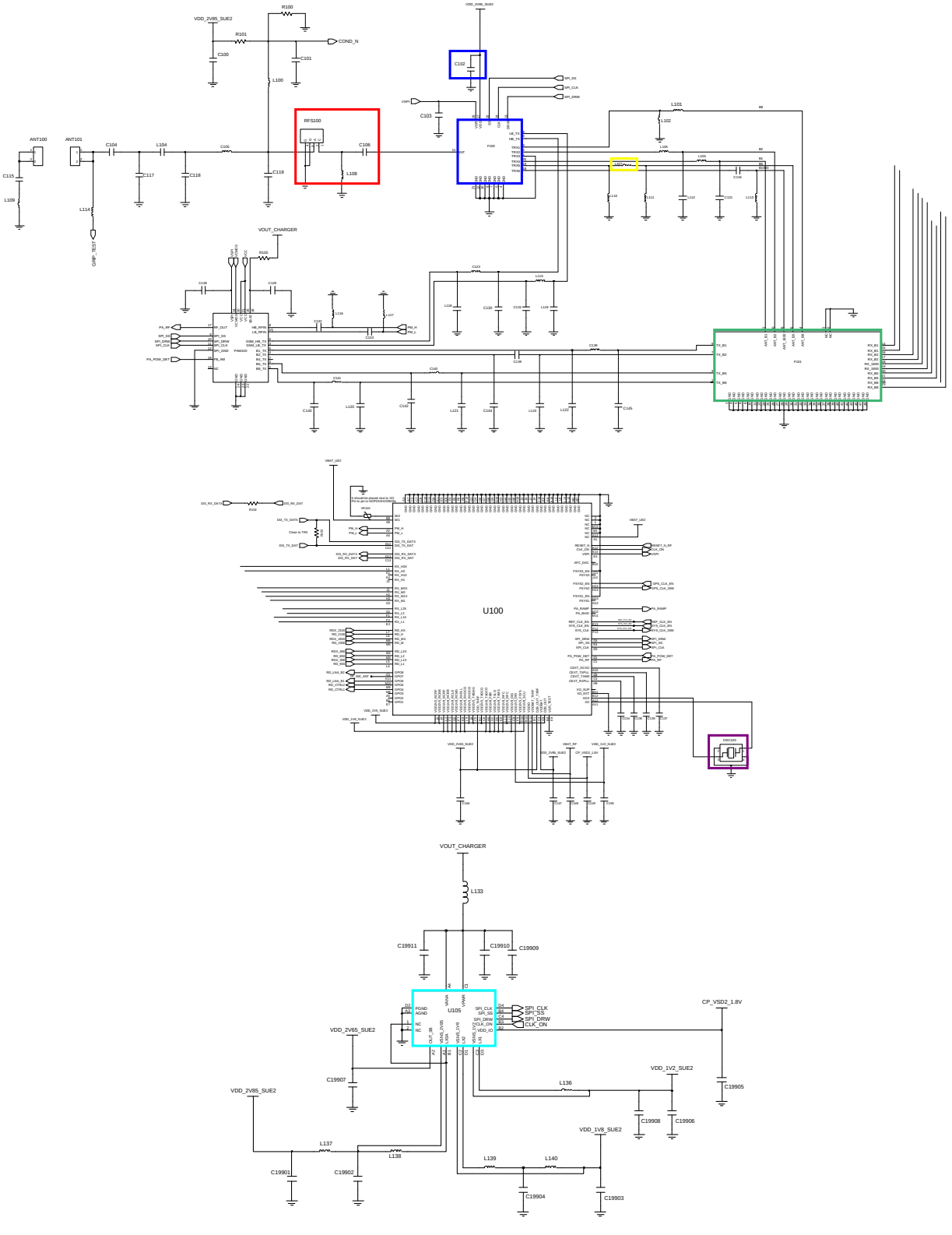


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

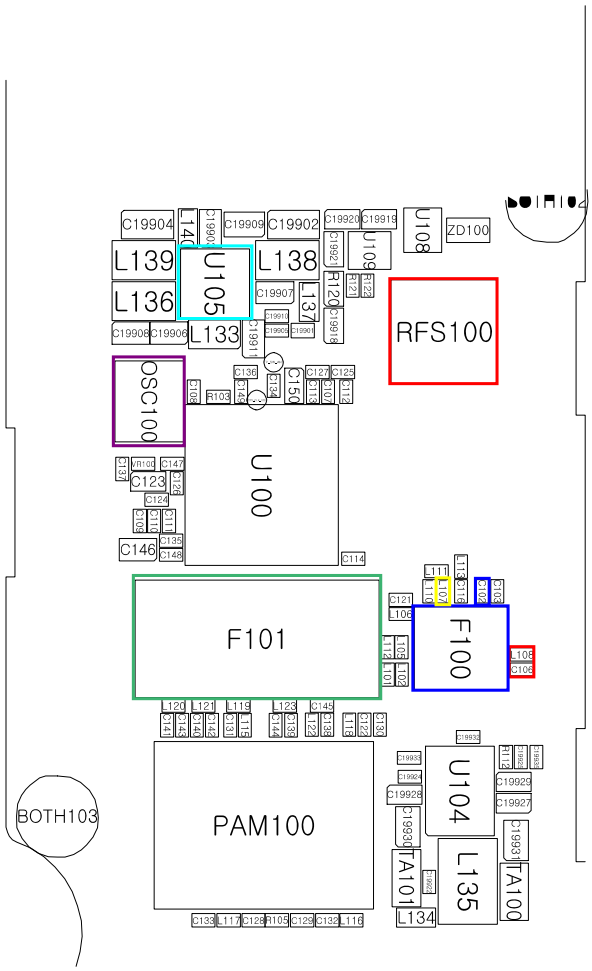
8-3-20. WCDMA Band1 RX



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



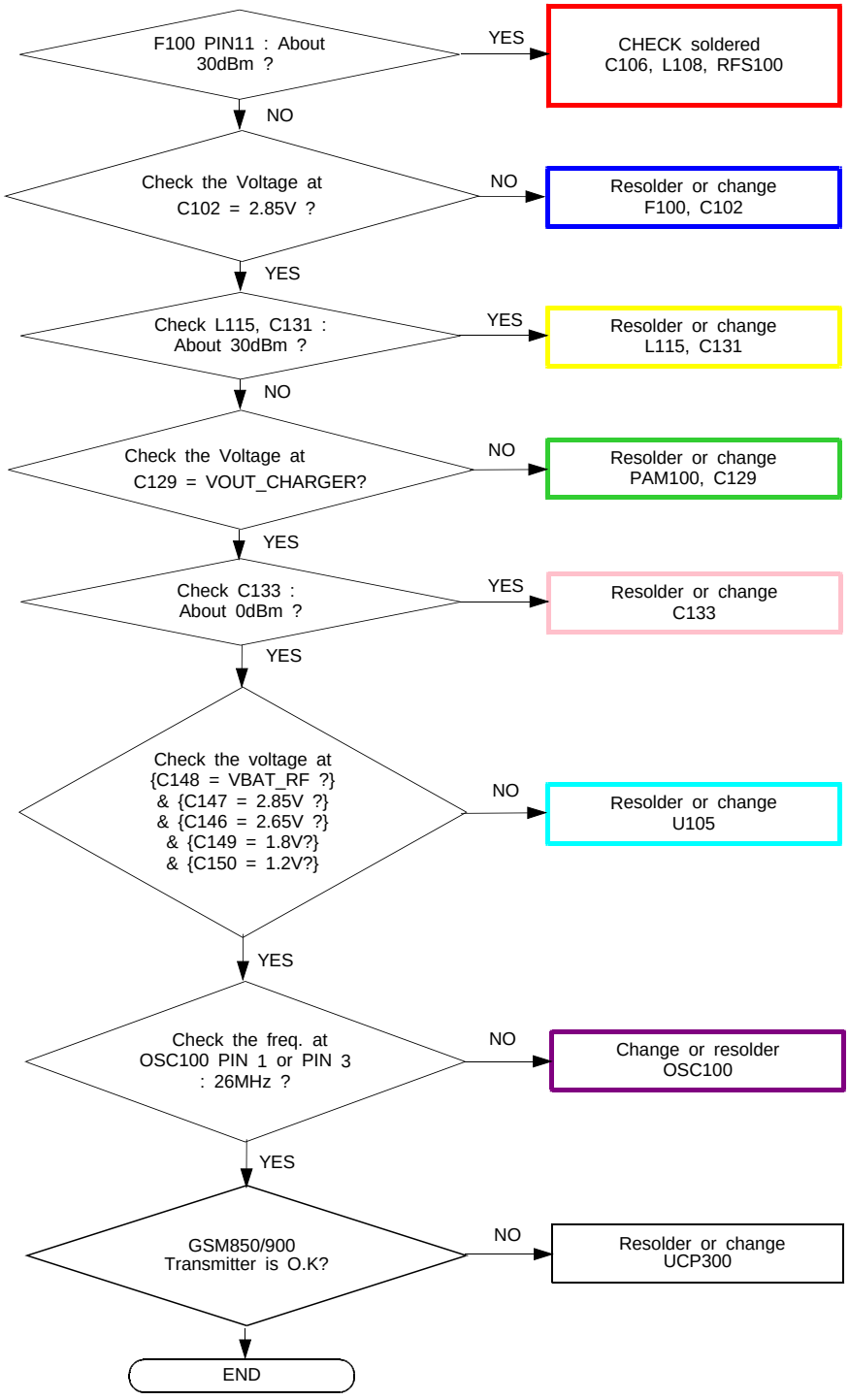
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



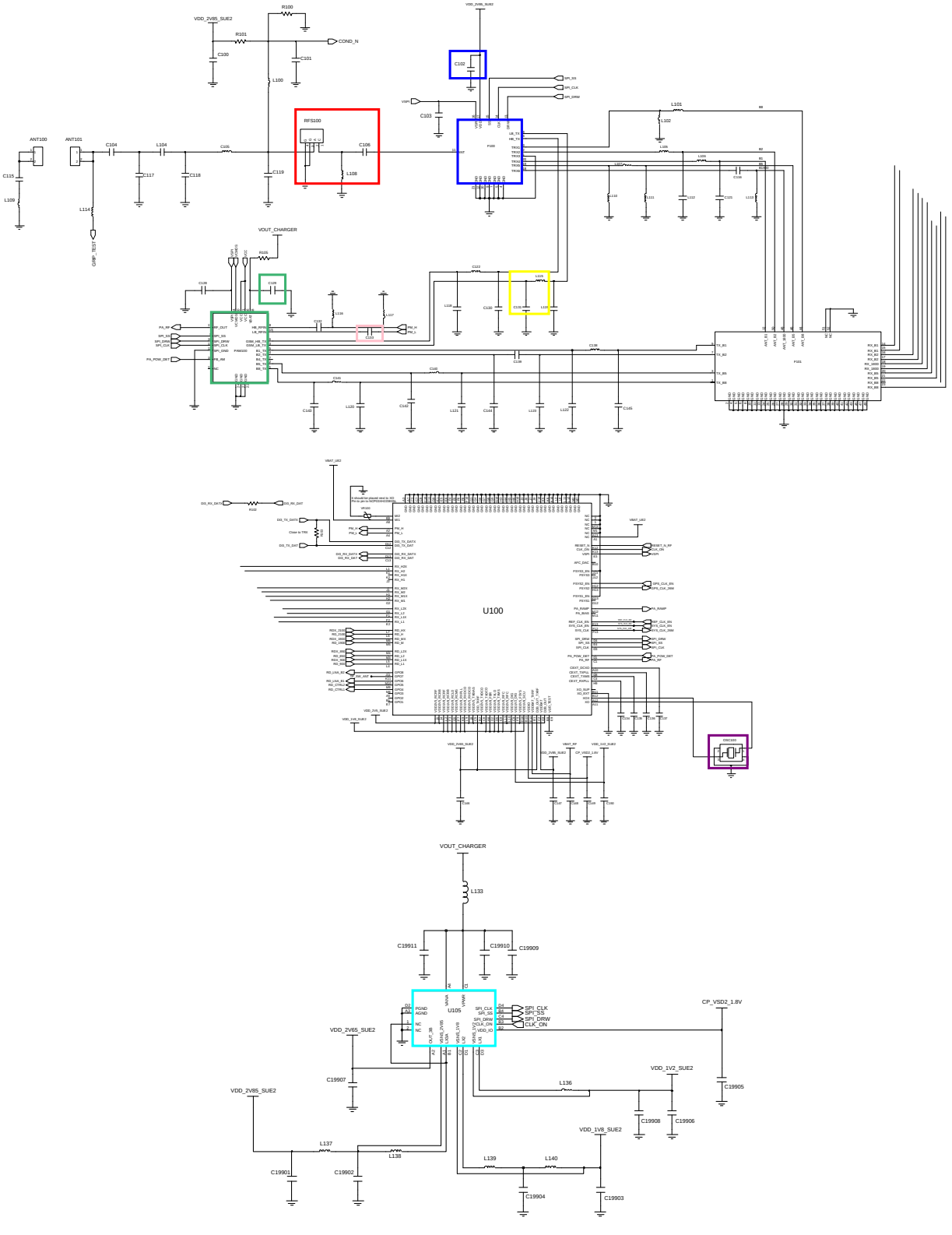
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3-21. GSM850/ GSM900 TX

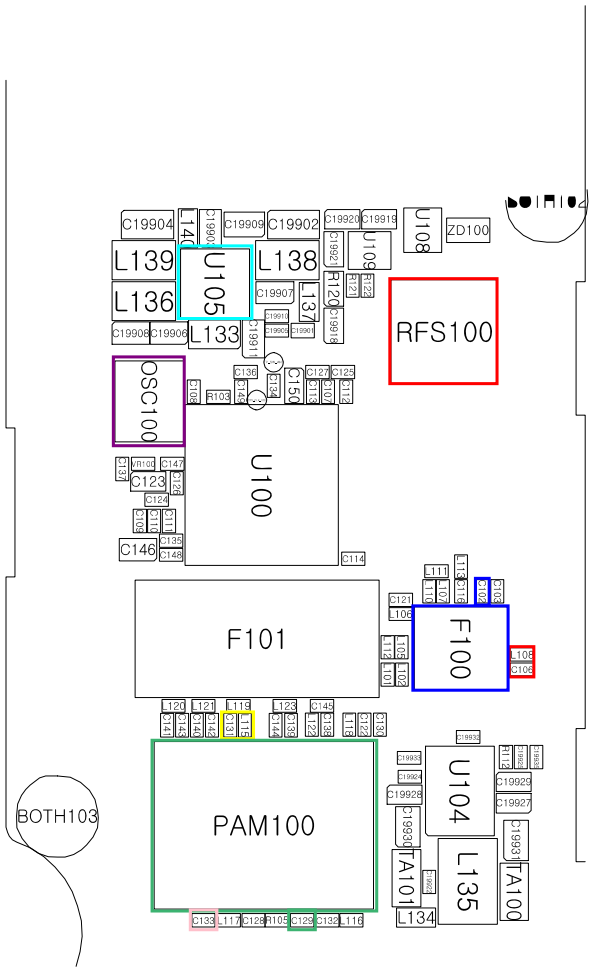
CONTINOUS TX ON CONDITION
TX POWER DAC:14500 CODE APPLIED
GSM850 CH : 190
GSM900 CH : 62
RBW : 100KHz
VBW : 100KHz
SPAN : 10MHz
REF LEV. : 10dBm
ATT. : 20dB



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



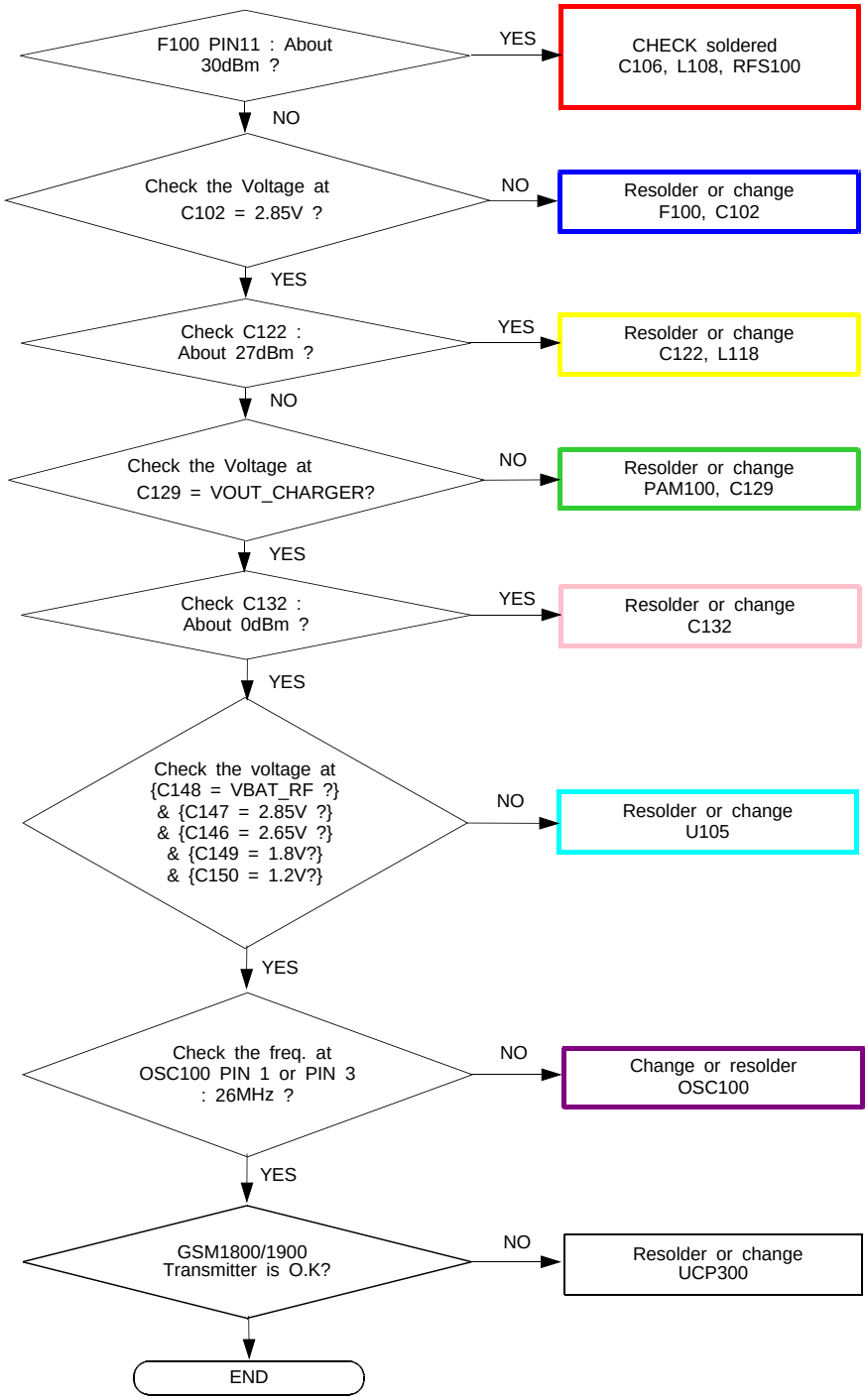
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



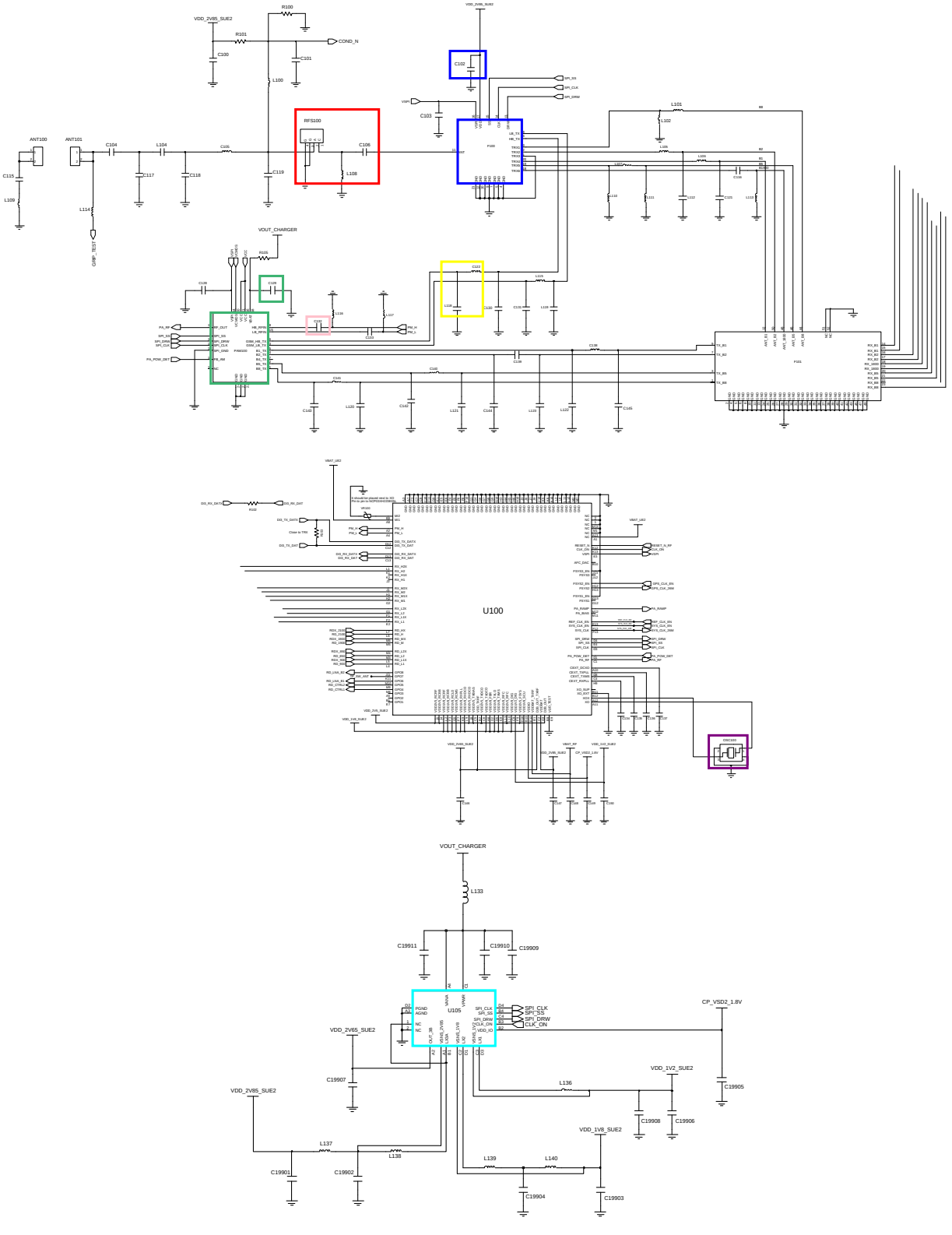
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3-22. GSM1800/ GSM1900 TX

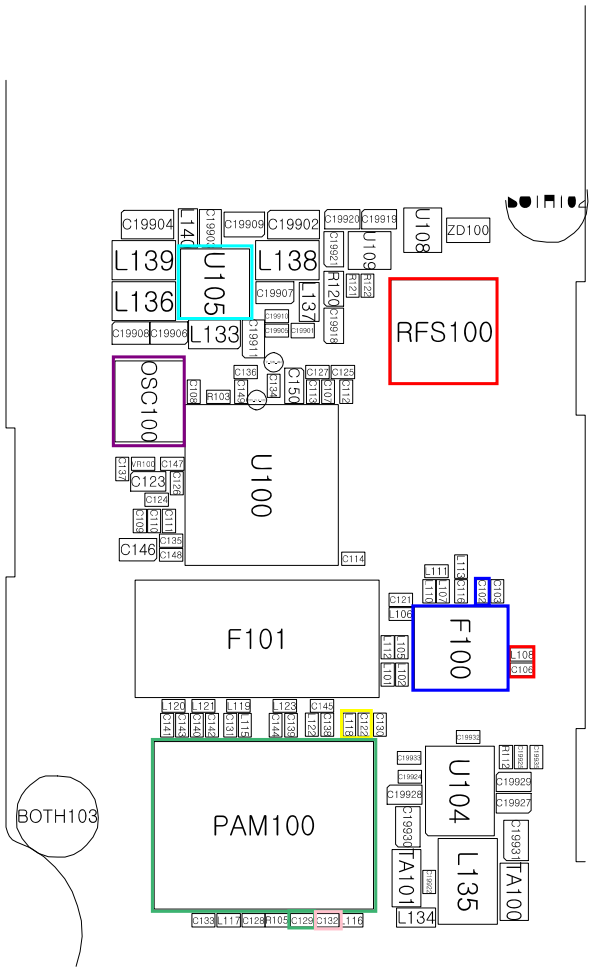
CONTINOUS TX ON CONDITION
TX POWER DAC:14500 CODE APPLIED
DCS CH : 685
PCS CH : 661
RBW : 100KHz
VBW : 100KHz
SPAN : 10MHz
REF LEV. : 10dBm
ATT. : 20dB



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



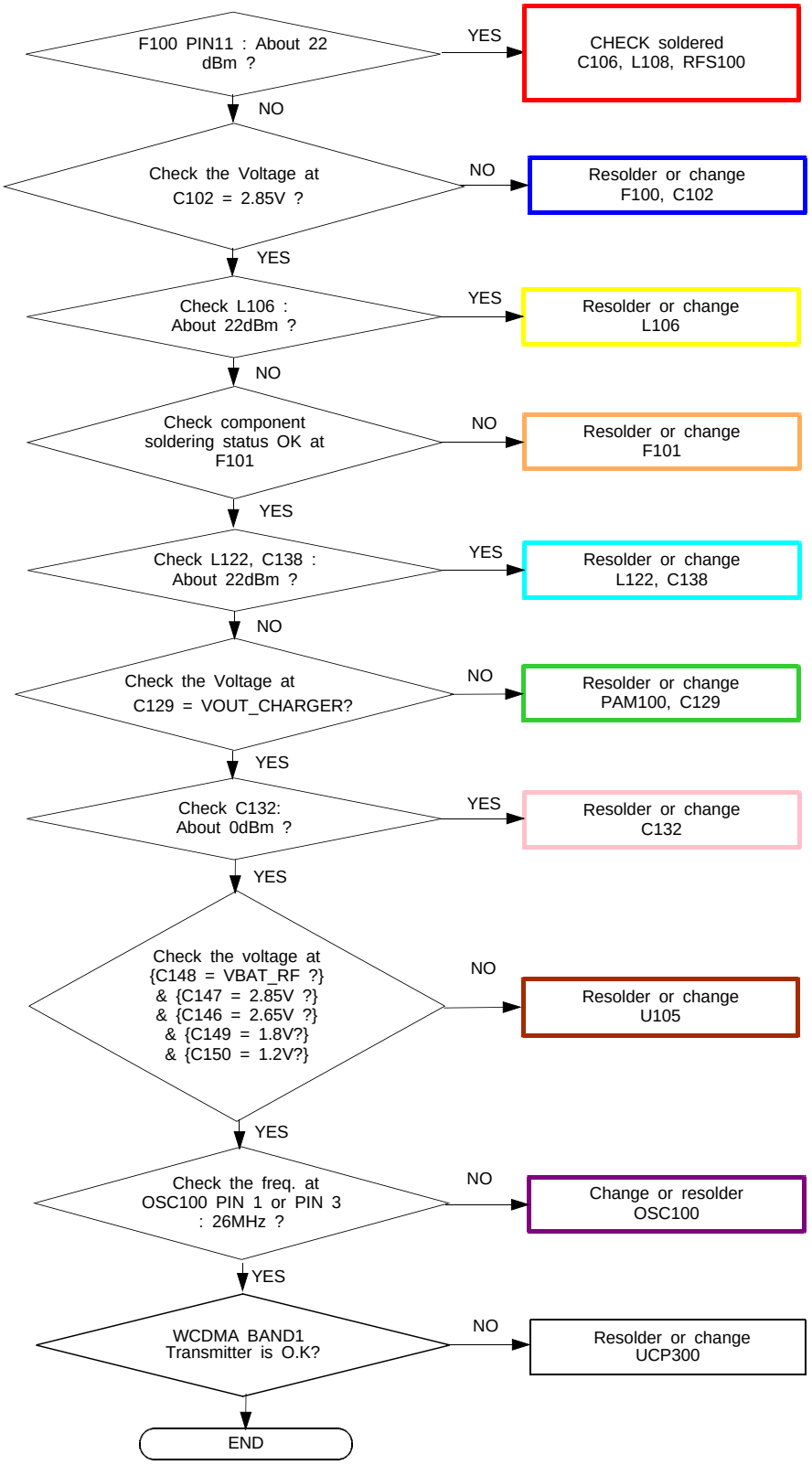
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



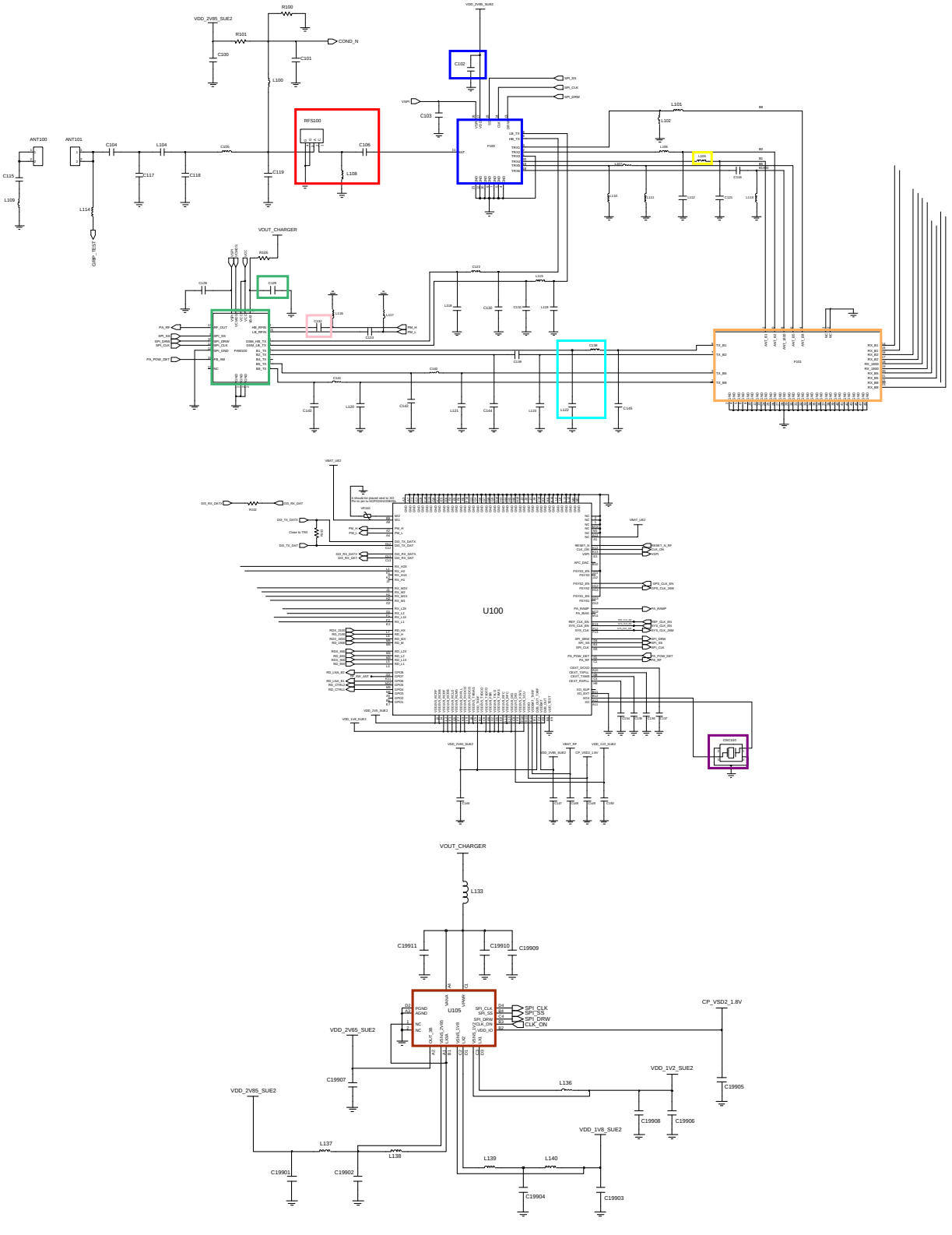
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3-23. WCDMA BAND1 TX

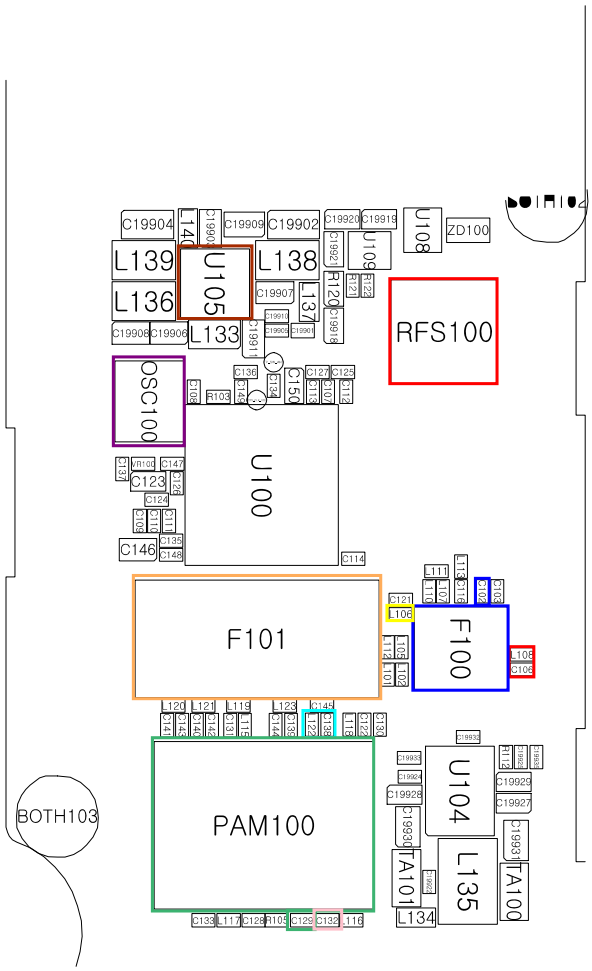
CONTINOUS TX ON CONDITION
TX POWER DAC:14500 CODE APPLIED
WCDMA Band1 CH : 10700
RBW : 100KHz
VBW : 100KHz
SPAN : 10MHz
REF LEV. : 10dBm
ATT. : 20dB



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



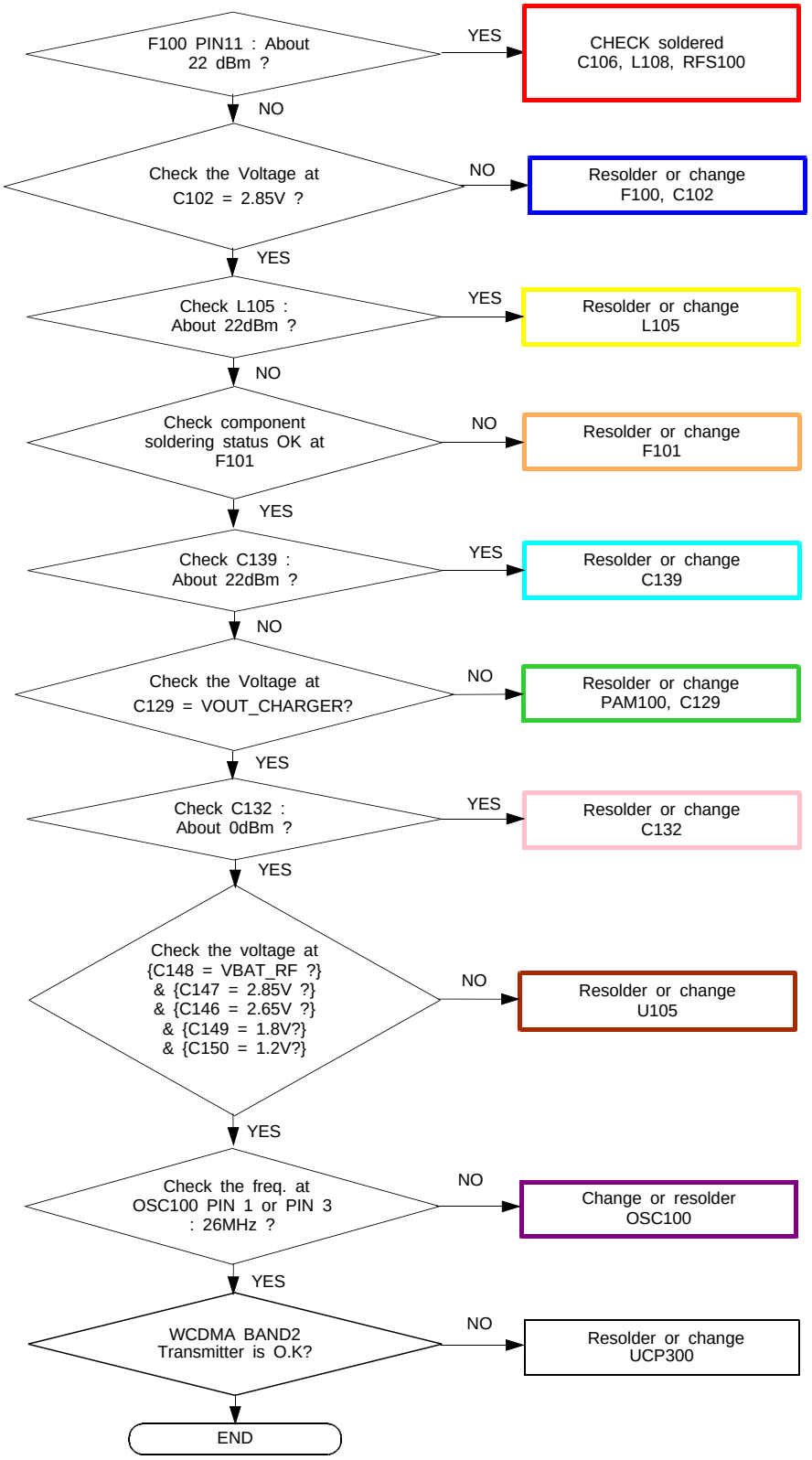
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



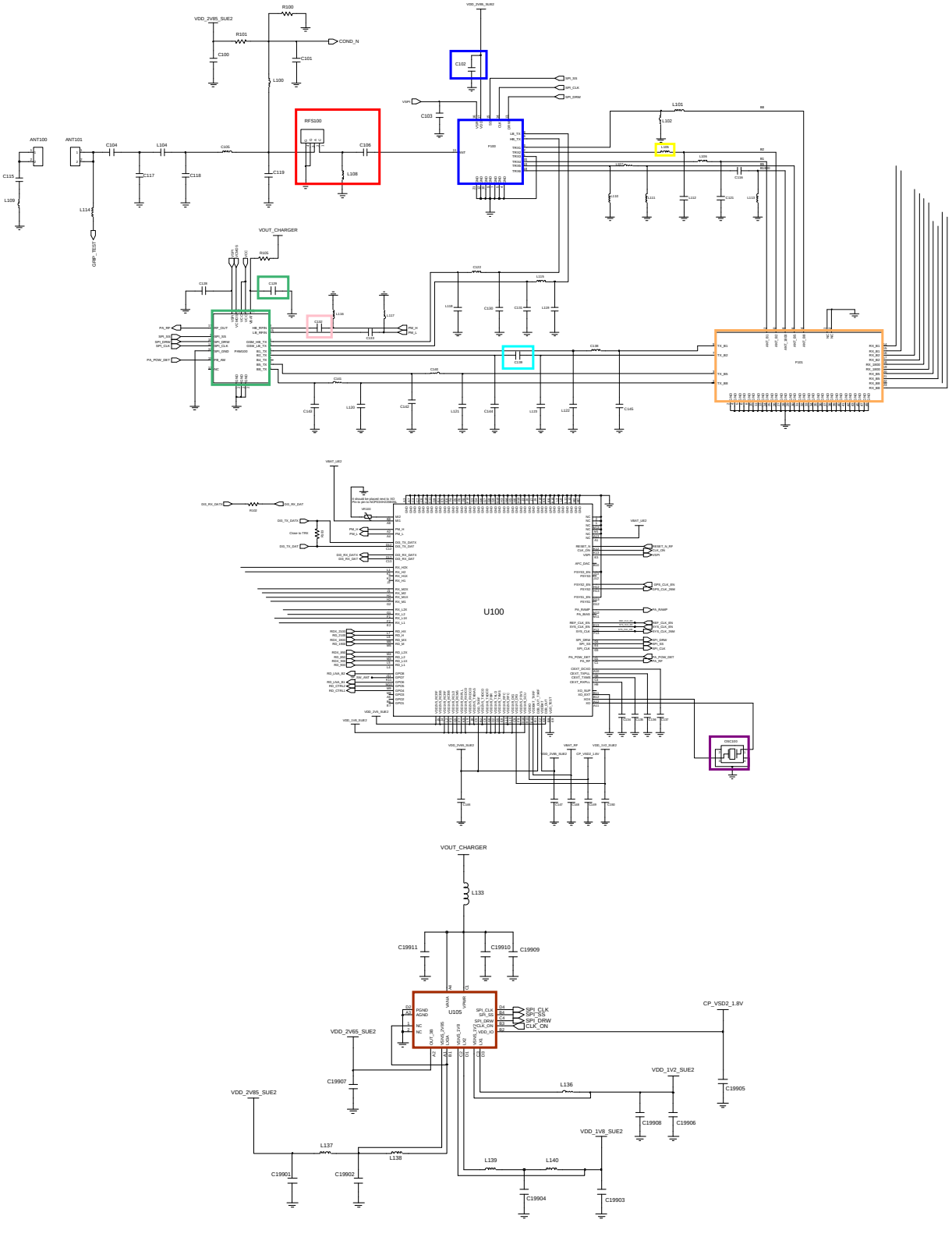
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3-24. WCDMA BAND2 TX

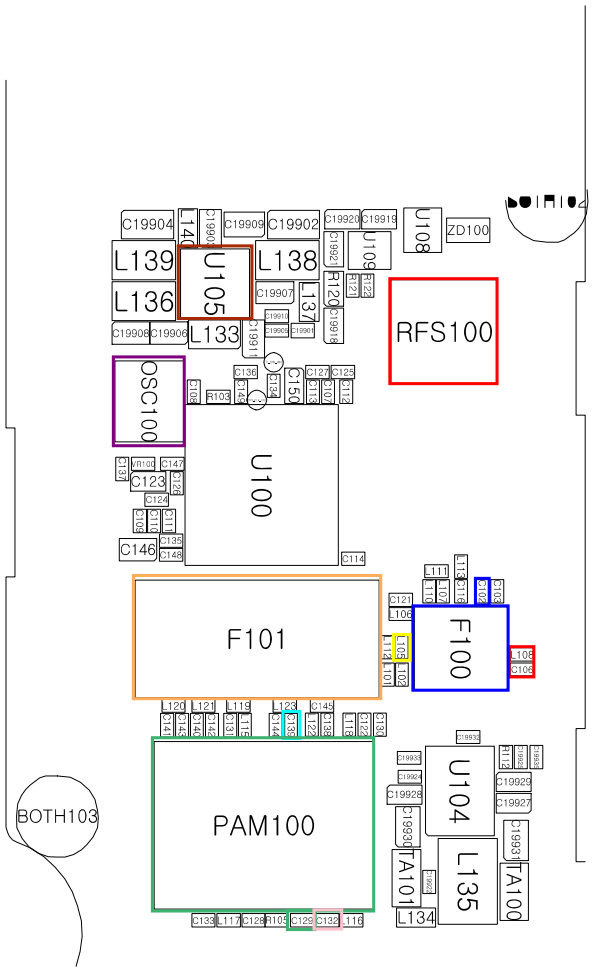
CONTINOUS TX ON CONDITION
TX POWER DAC:14500 CODE APPLIED
WCDMA Band2 CH : 9880
RBW : 100KHz
VBW : 100KHz
SPAN : 10MHz
REF LEV. : 10dBm
ATT. : 20dB



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



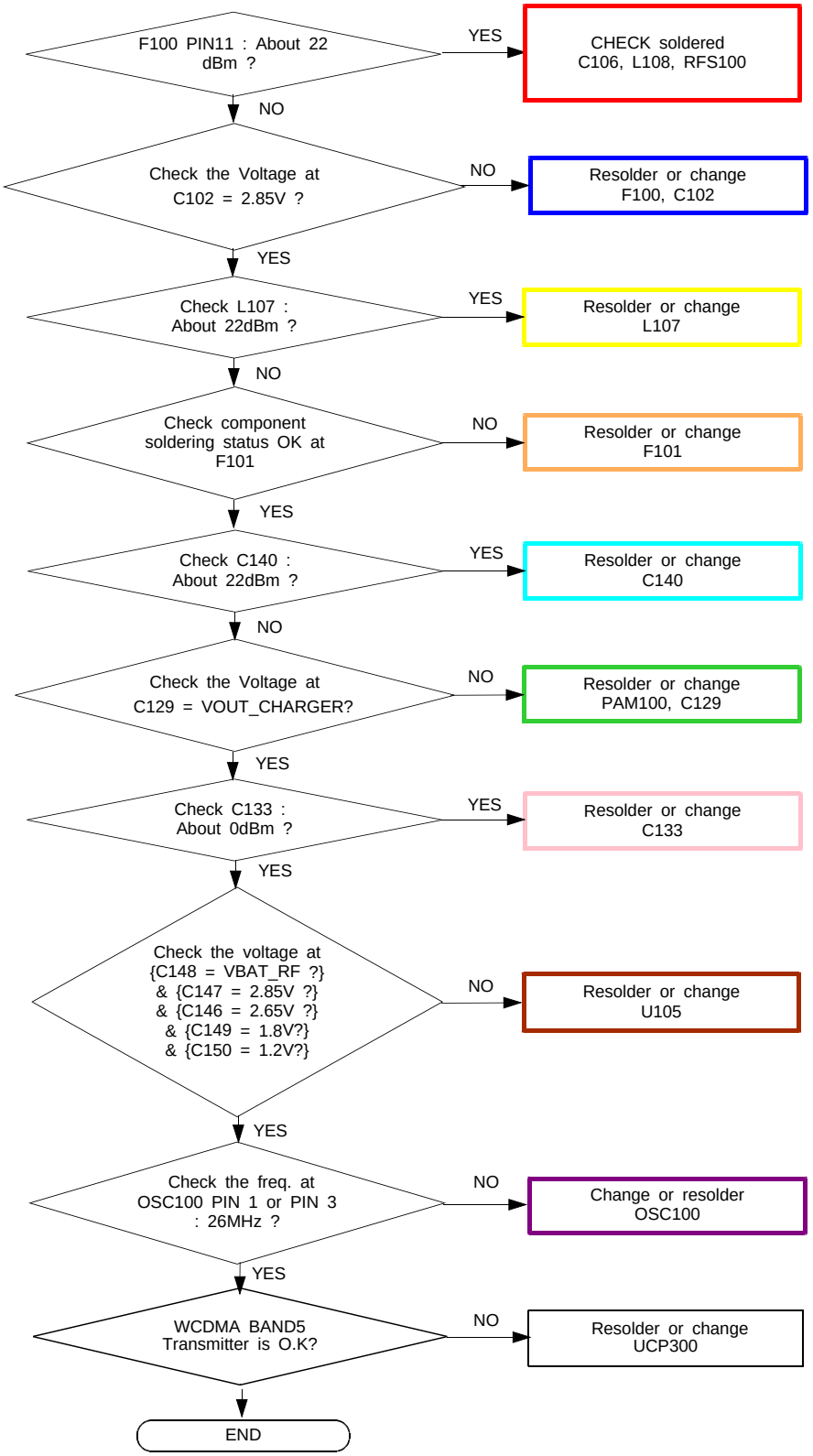
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



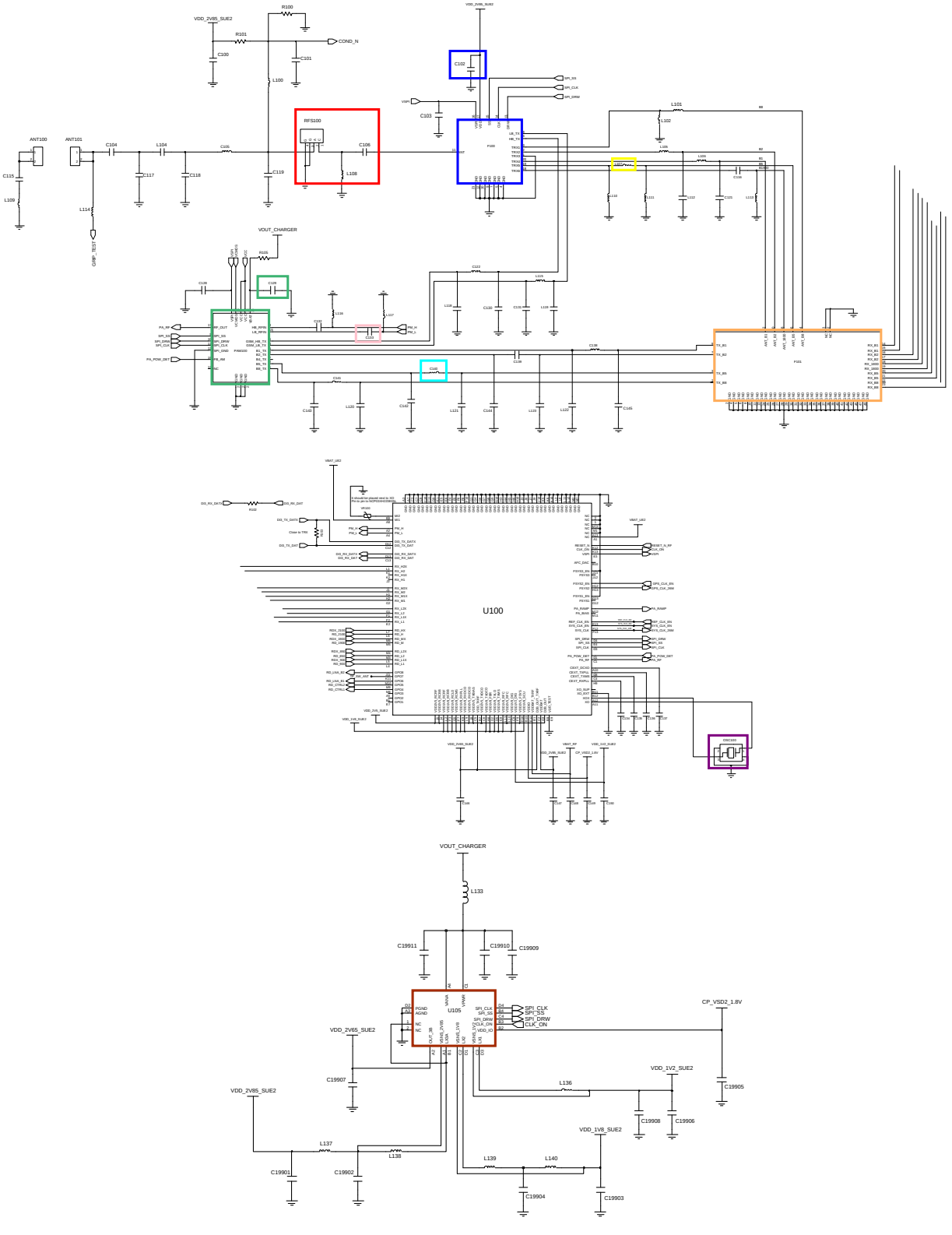
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3-25. WCDMA BAND5 TX

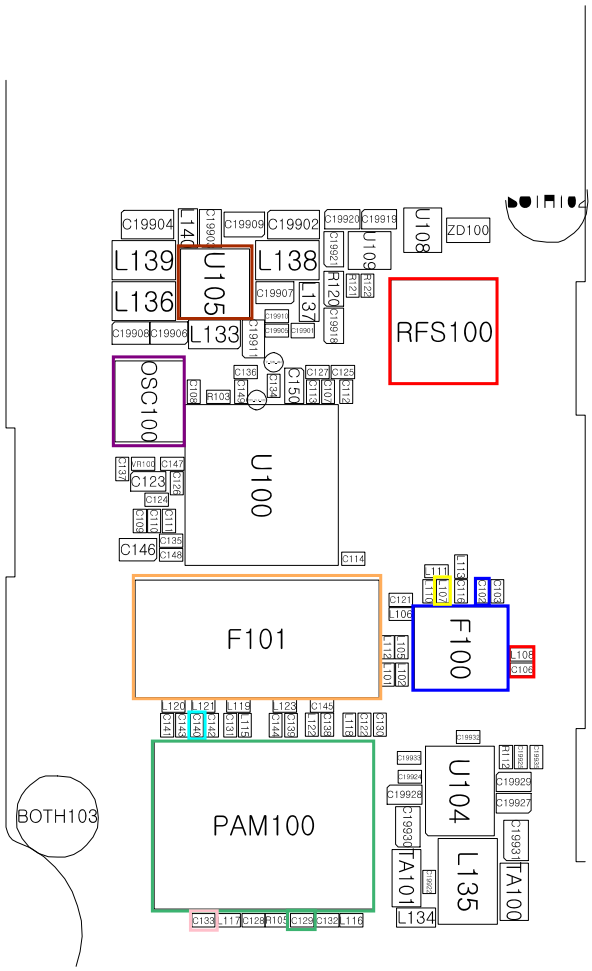
CONTINOUS TX ON CONDITION
TX POWER DAC:14500 CODE APPLIED
WCDMA Band5 CH : 4408
RBW : 100KHz
VBW : 100KHz
SPAN : 10MHz
REF LEV. : 10dBm
ATT. : 20dB



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



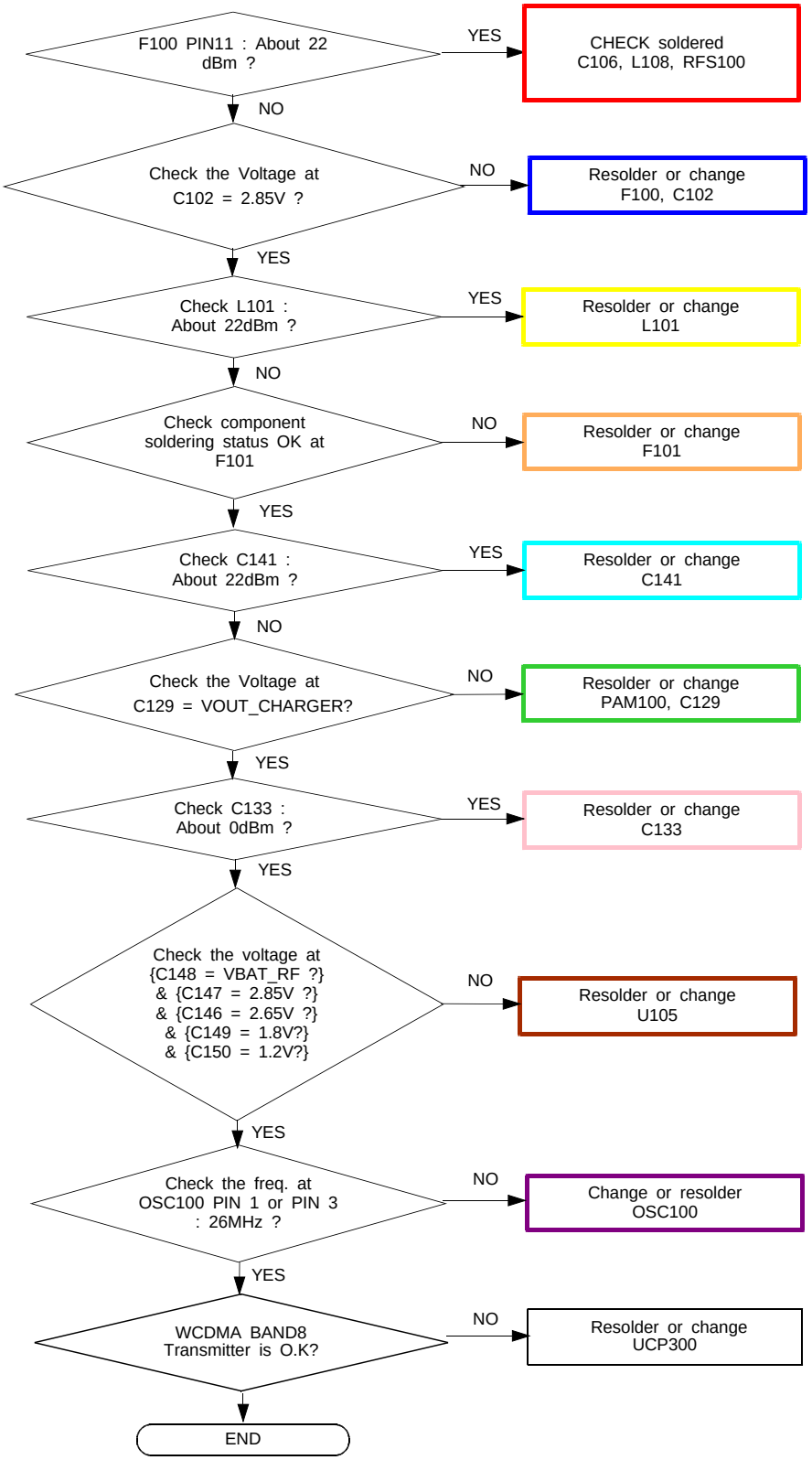
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.



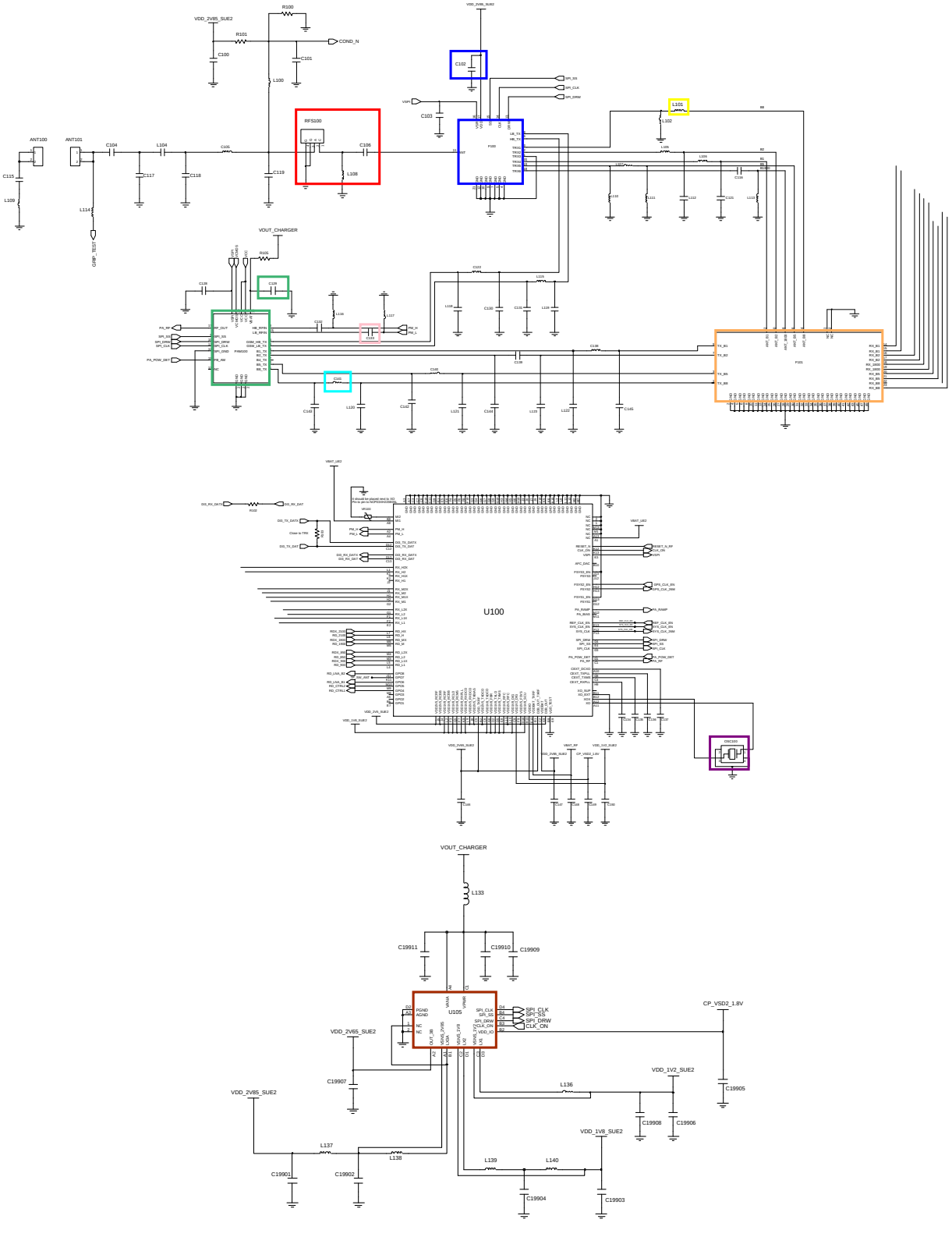
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3-26. WCDMA BAND8 TX

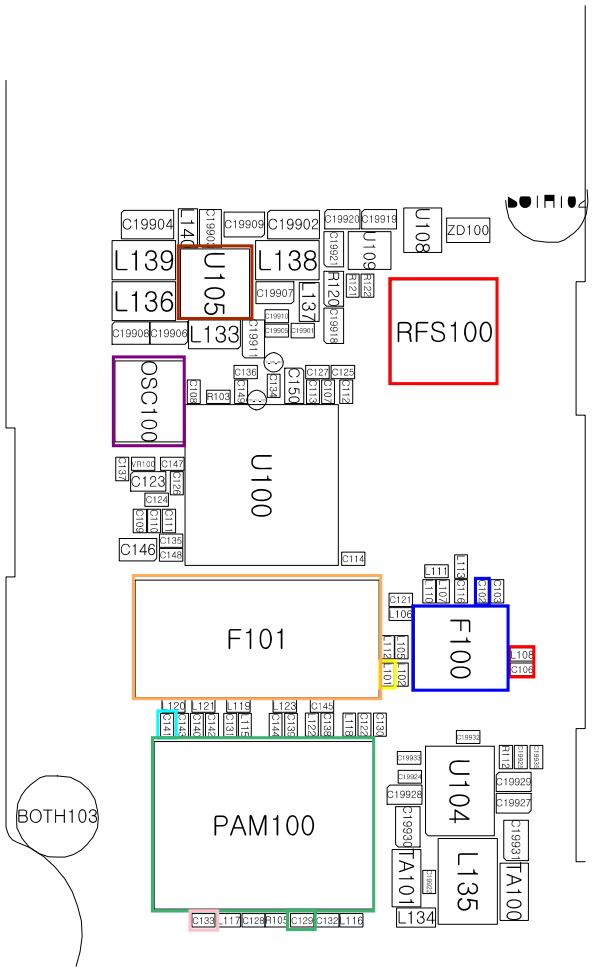
CONTINOUS TX ON CONDITION
TX POWER DAC:14500 CODE APPLIED
WCDMA Band8 CH : 3013
RBW : 100KHz
VBW : 100KHz
SPAN : 10MHz
REF LEV. : 10dBm
ATT. : 20dB



Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

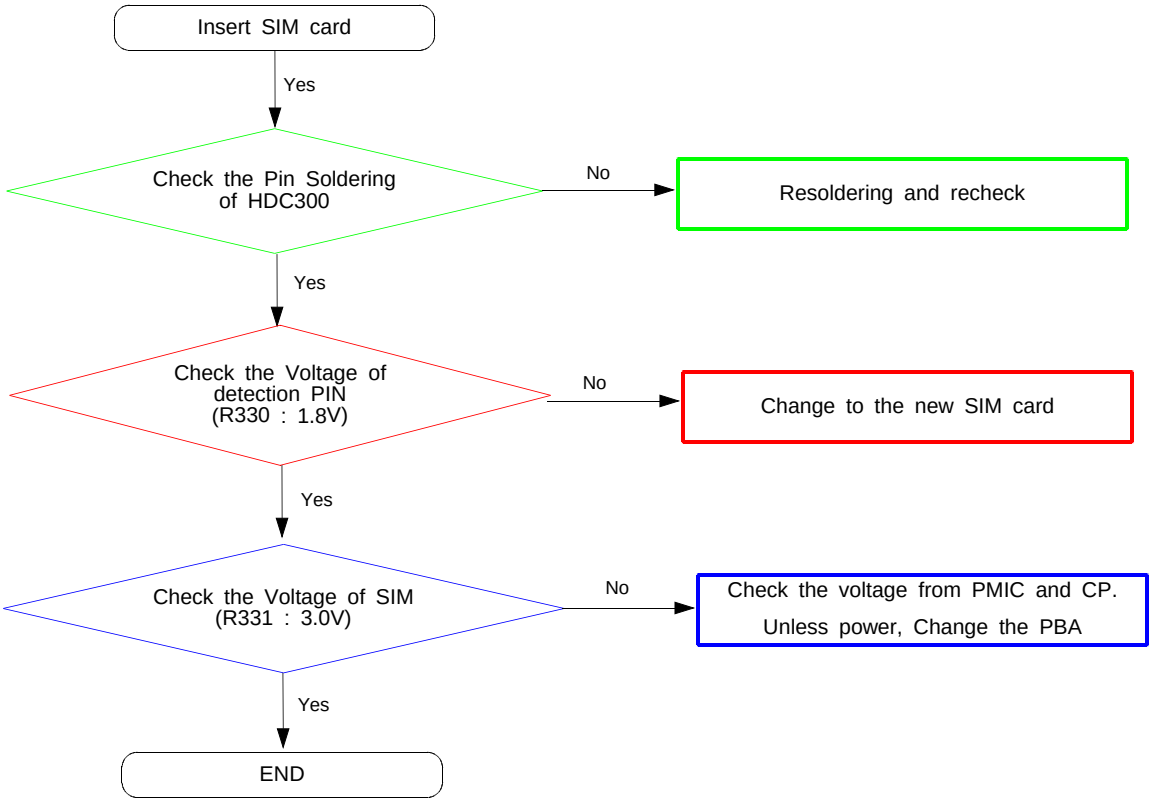


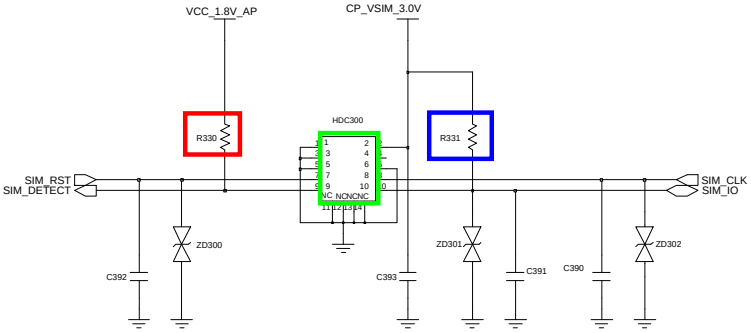
Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

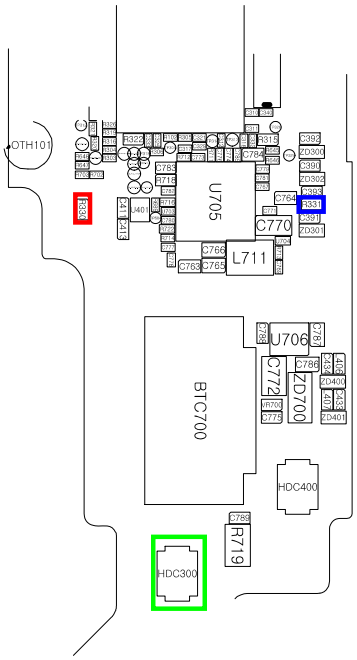


Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.

8-3-27. Sim Part







Confidential and proprietary-the contents in this service guide subject to change without prior notice.
Distribution, transmission, or infringement of any content or data from this document without Samsung's written authorization is strictly prohibited.