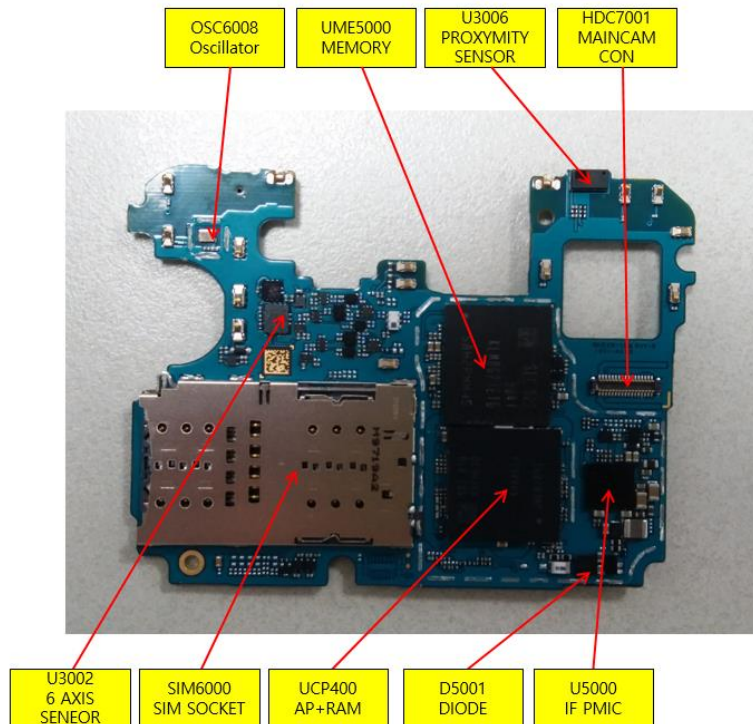


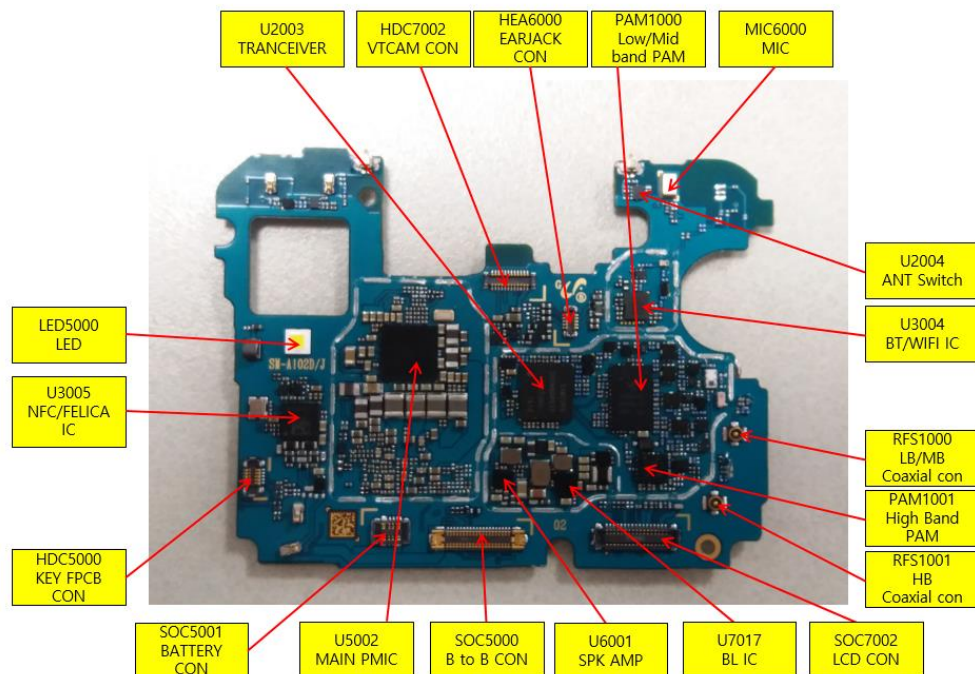
8. Level 3 Repair

8-1. Components Layout

MAIN PBA (TOP SIDE)

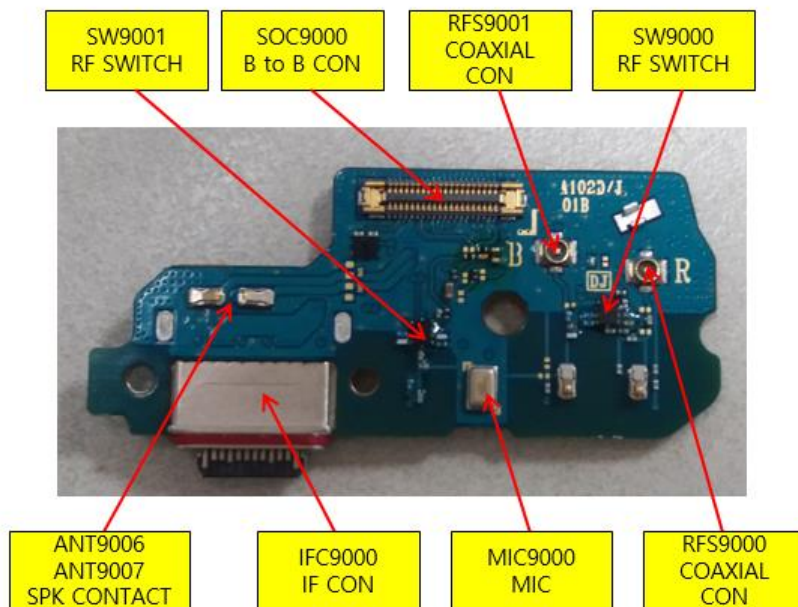


MAIN PBA (BOTOM SIDE)

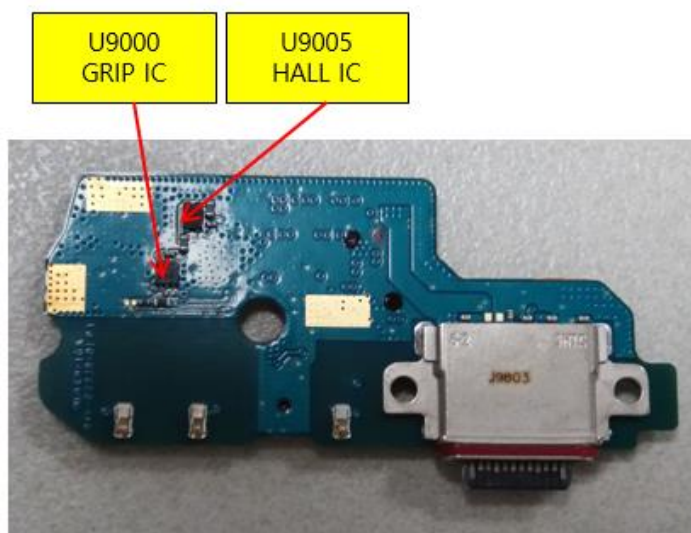


8. Level 3 Repair

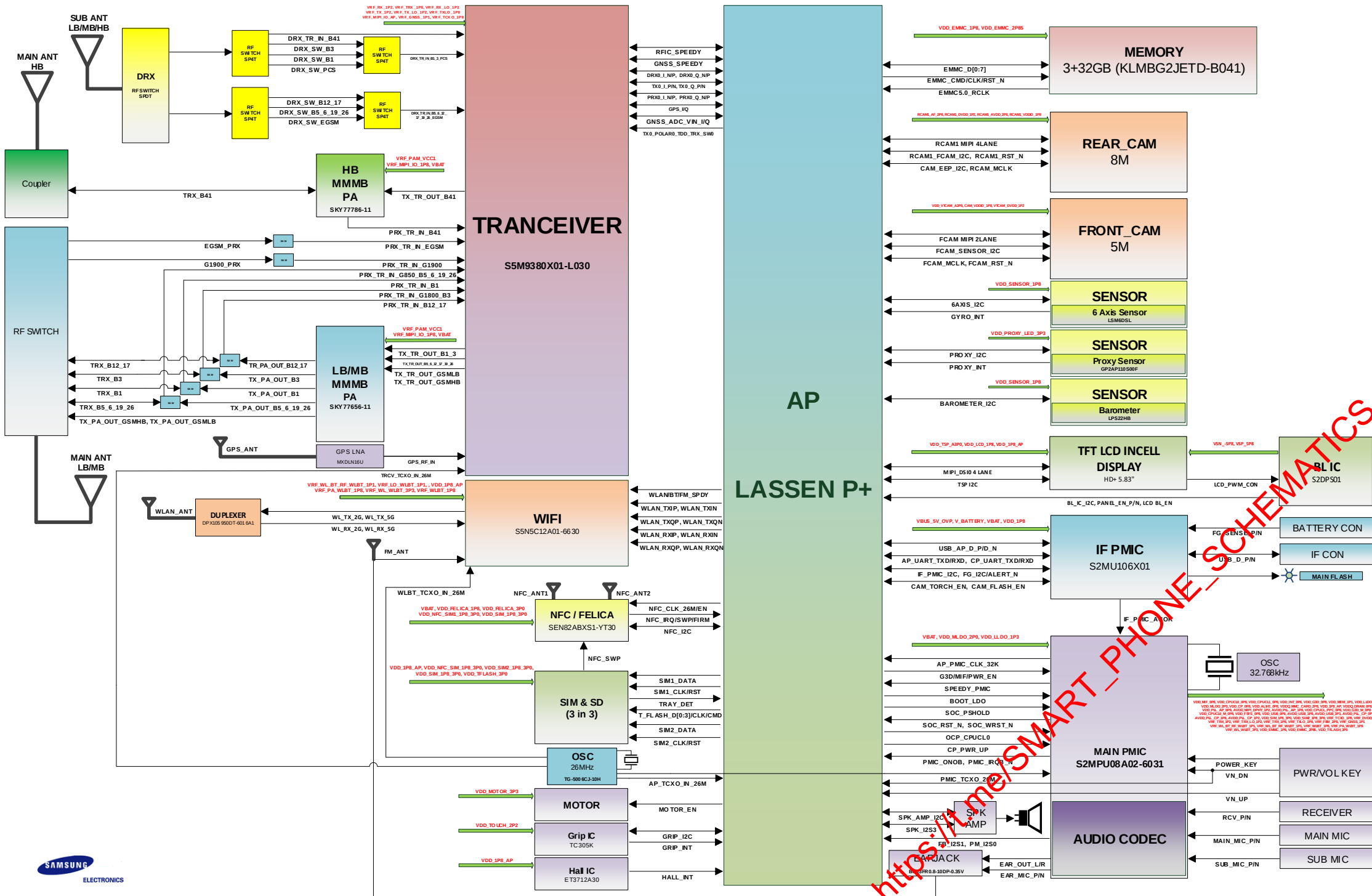
SUB PBA (TOP SIDE)

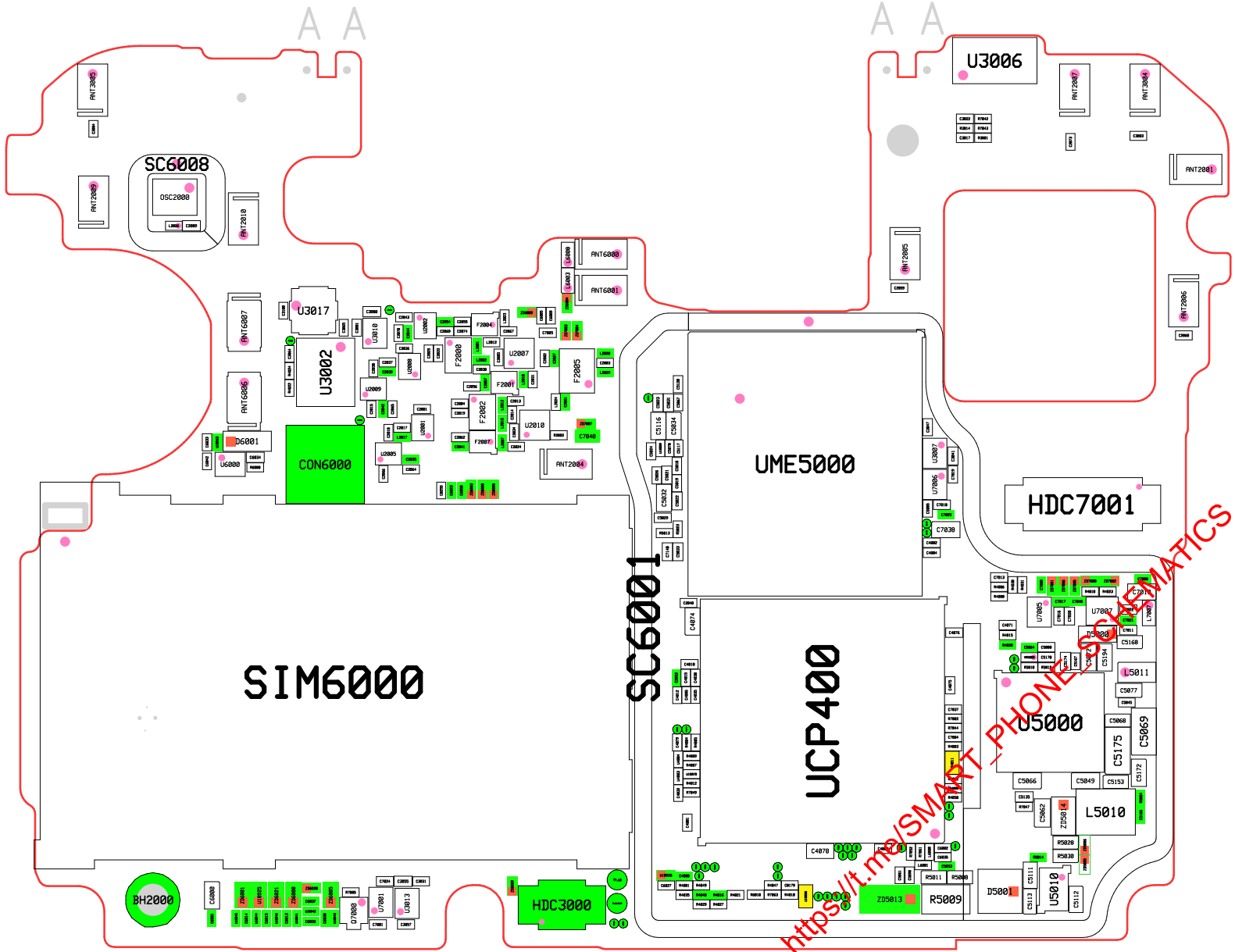


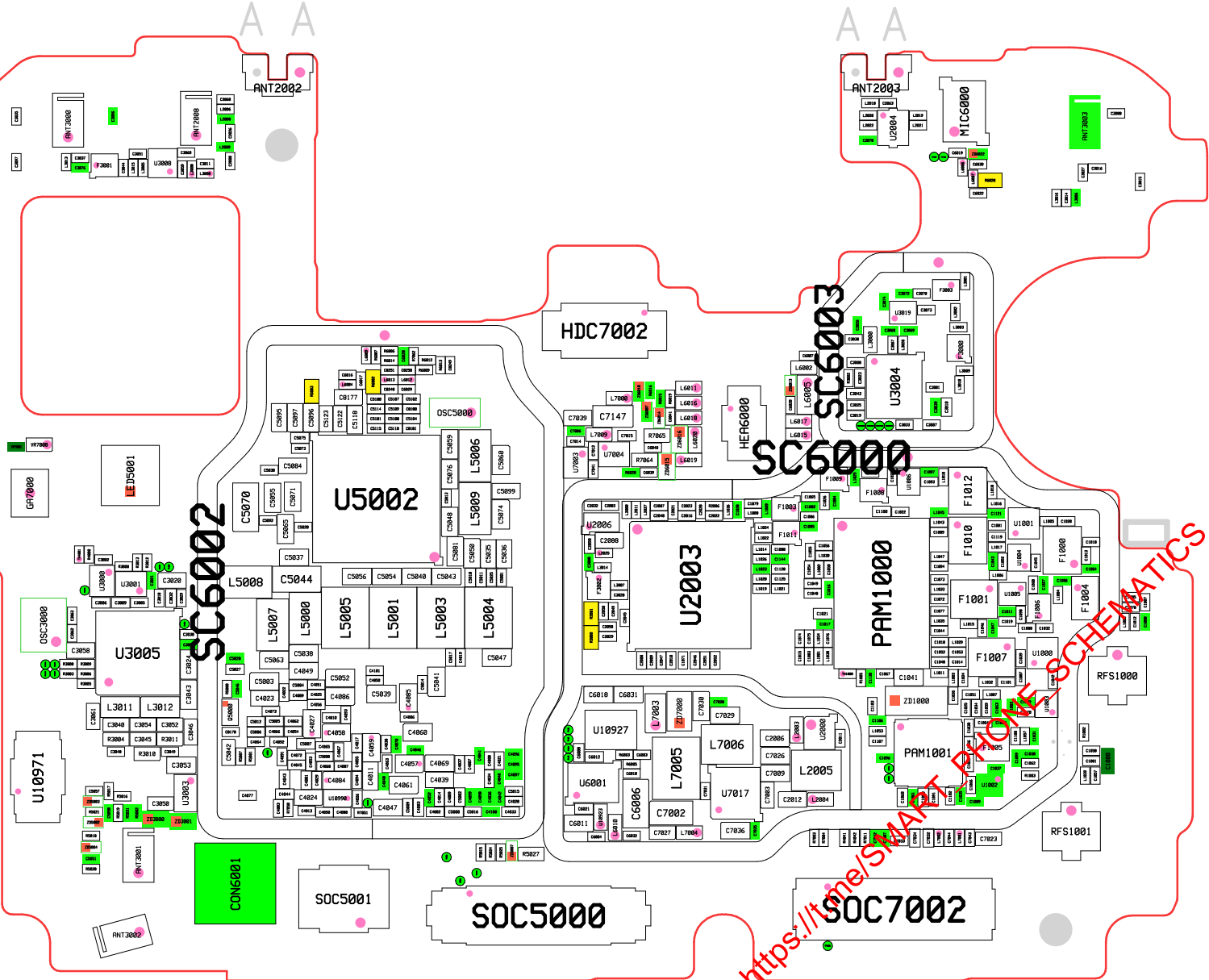
SUB PBA (BOTTOM SIDE)



A102D/J Block Diagram

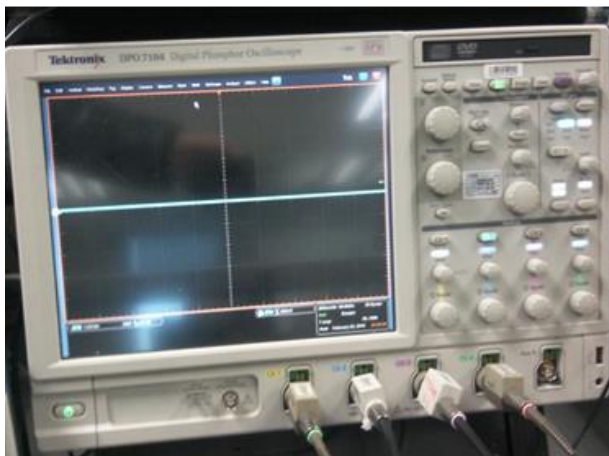






8. Level 3 Repair

8-3. Flow chart of Troubleshooting.



Oscilloscope



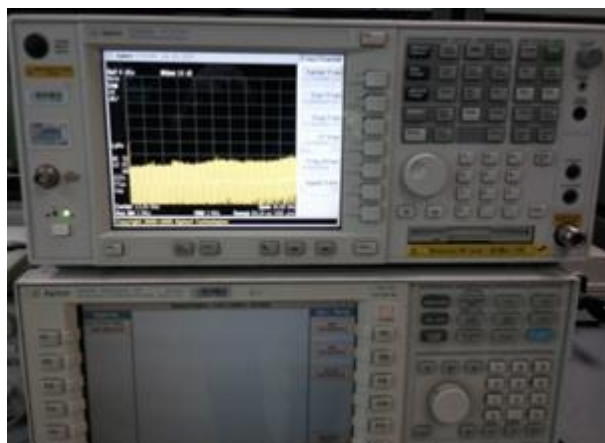
Digital Multimeter



Power Supply



+ driver, ESD Safe Tweezer



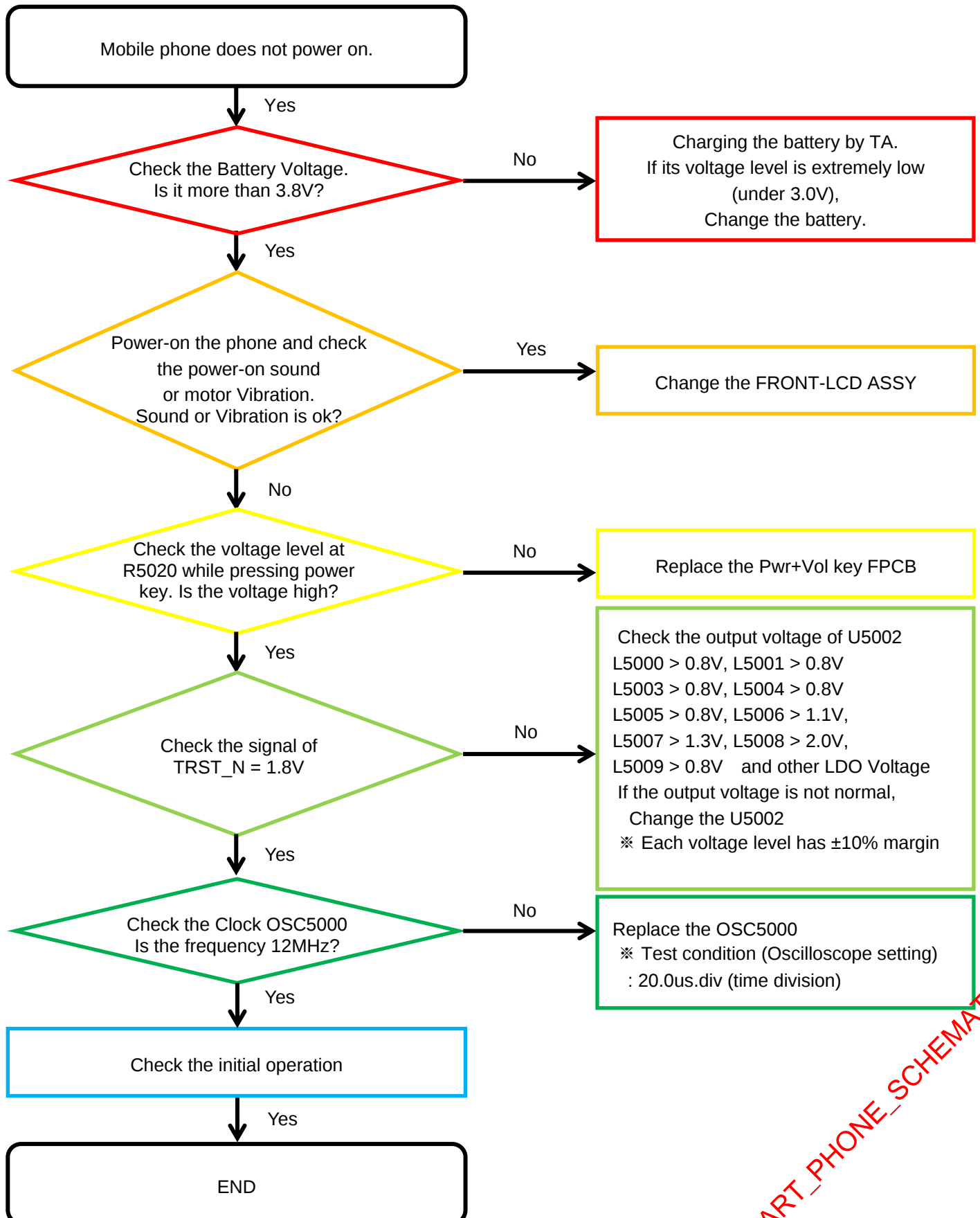
8960 & Spectrum Analyzer



Soldering iron

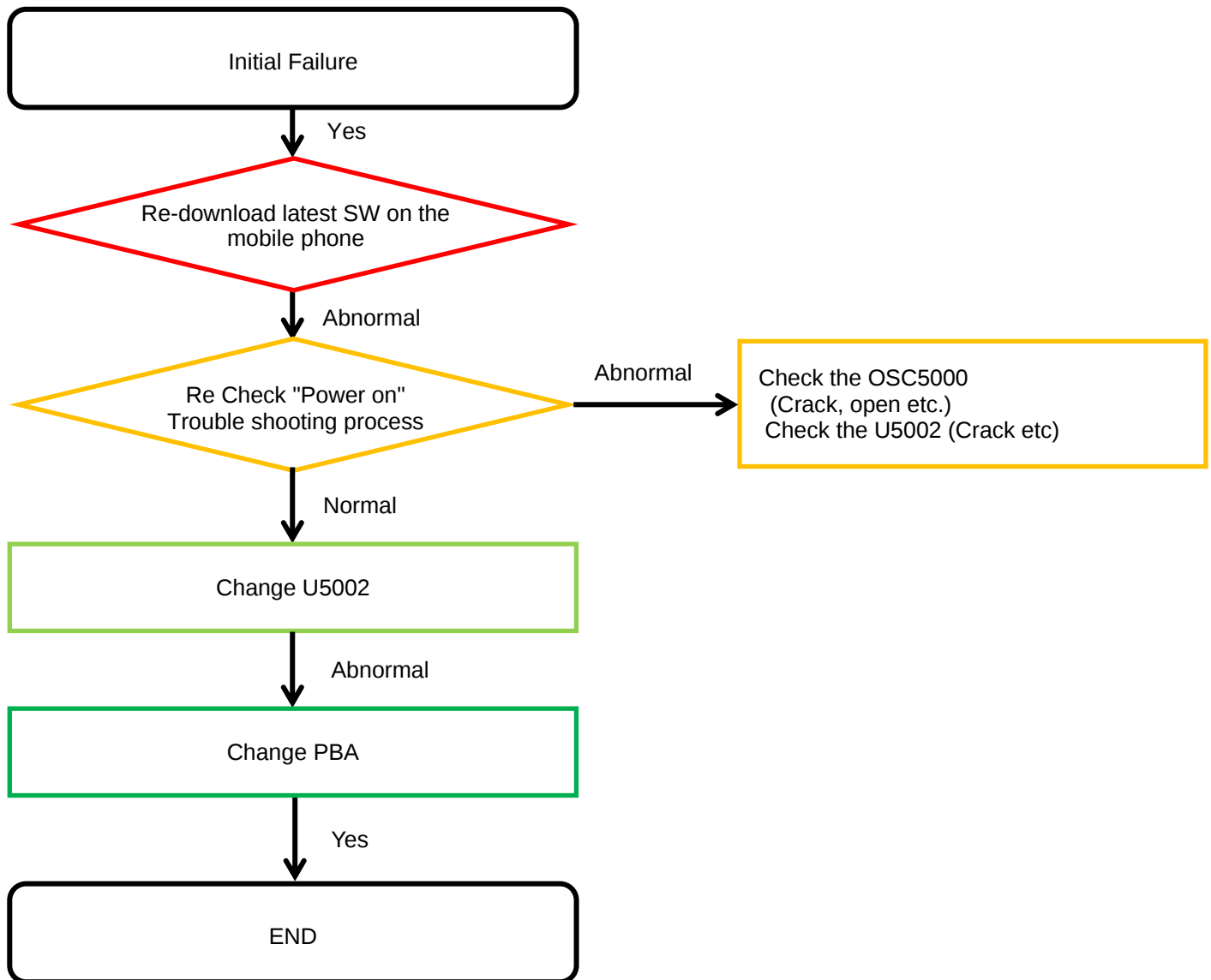
8. Level 3 Repair

8-4-1. Power On



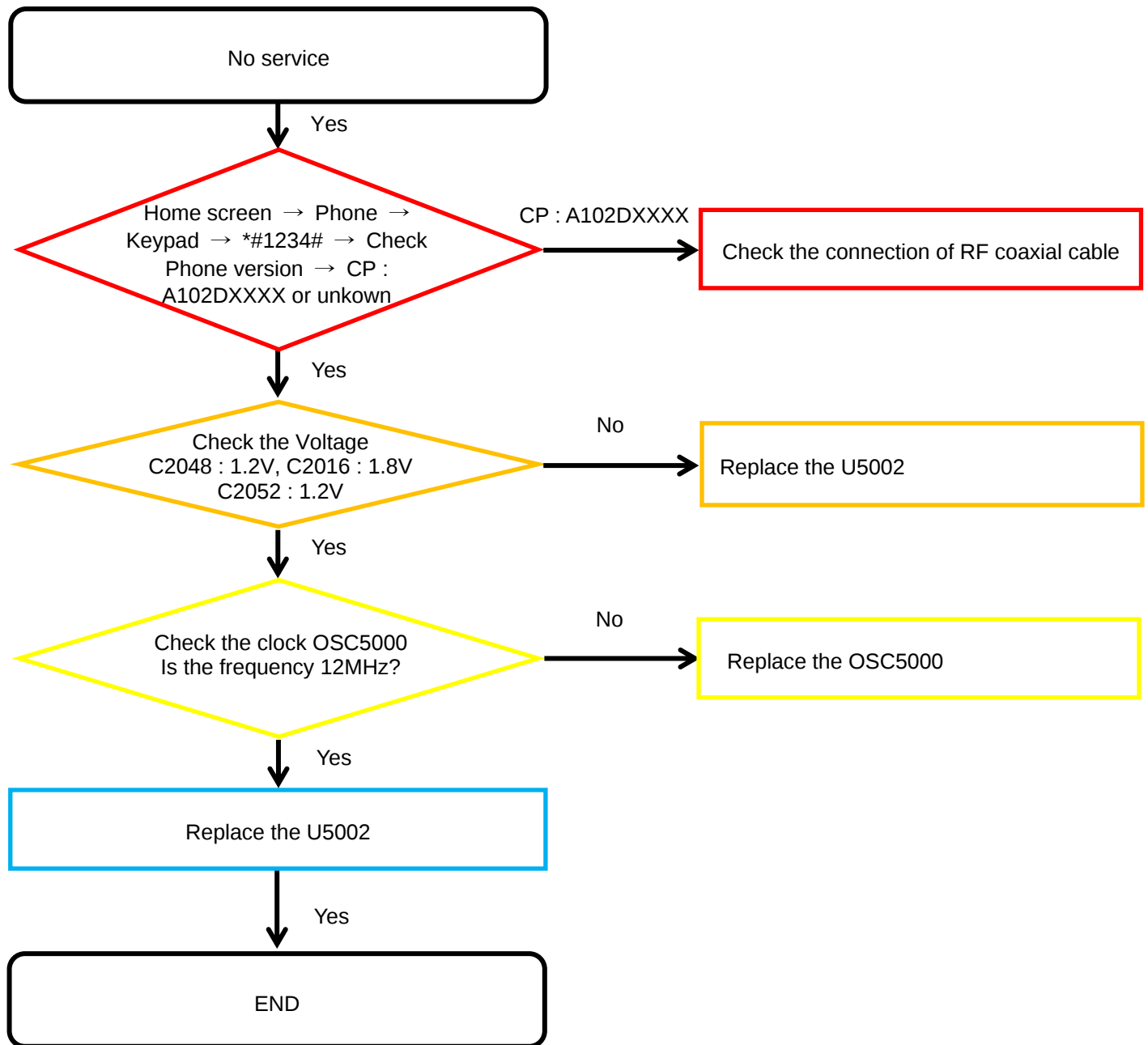
8. Level 3 Repair

8-4-2. Initial



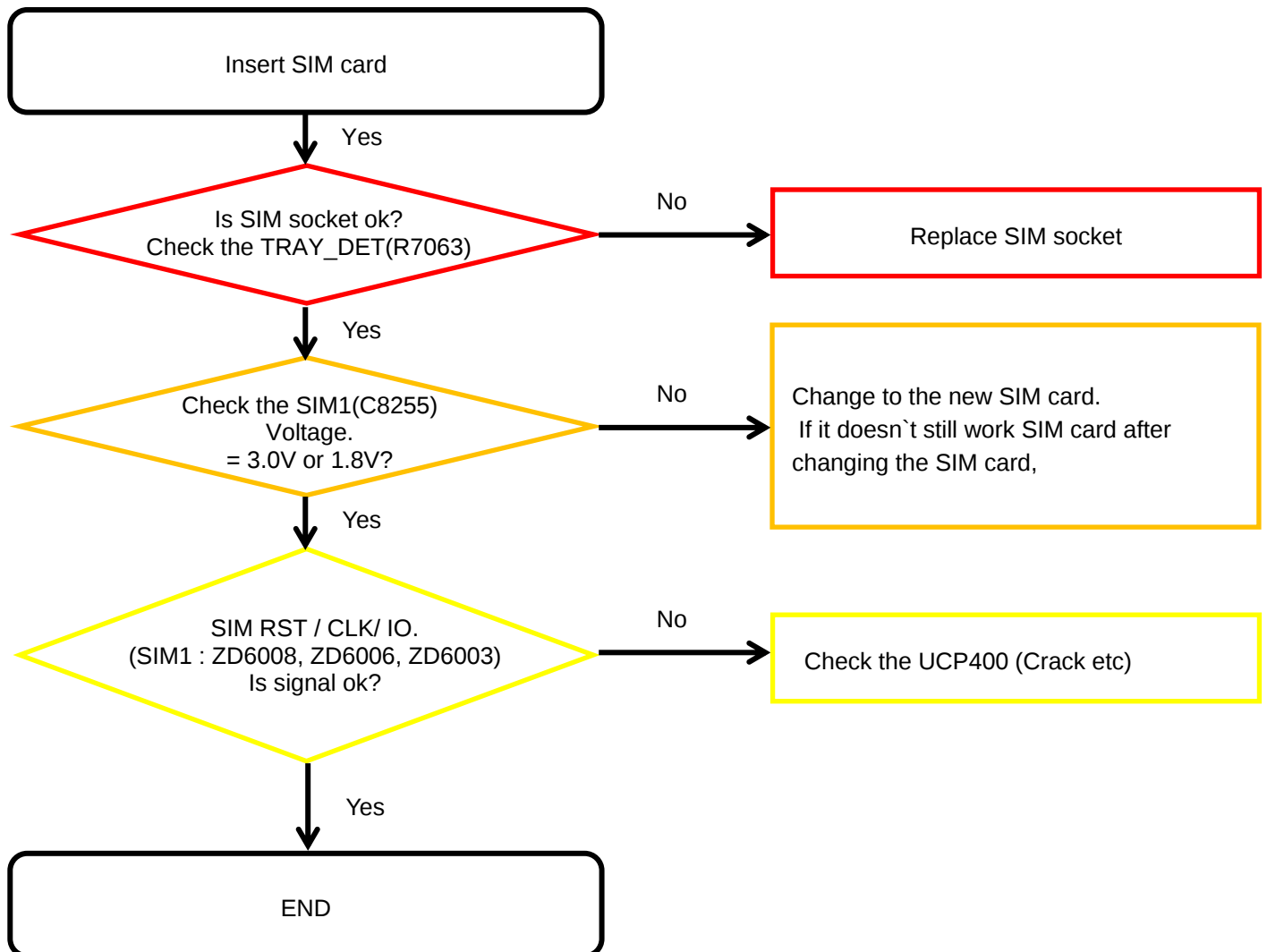
8. Level 3 Repair

8-4-3. No Service



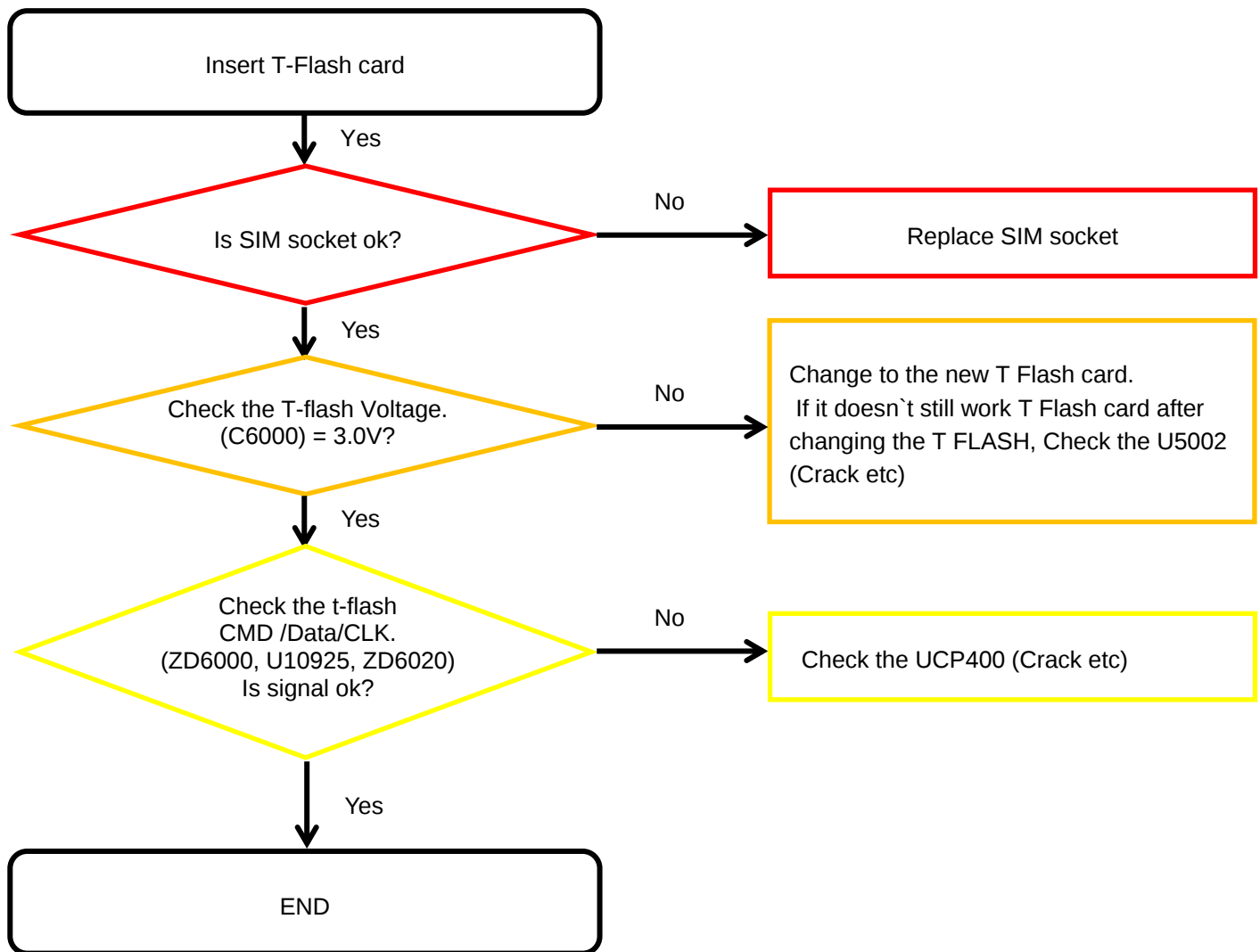
8. Level 3 Repair

8-4-4. SIM Part



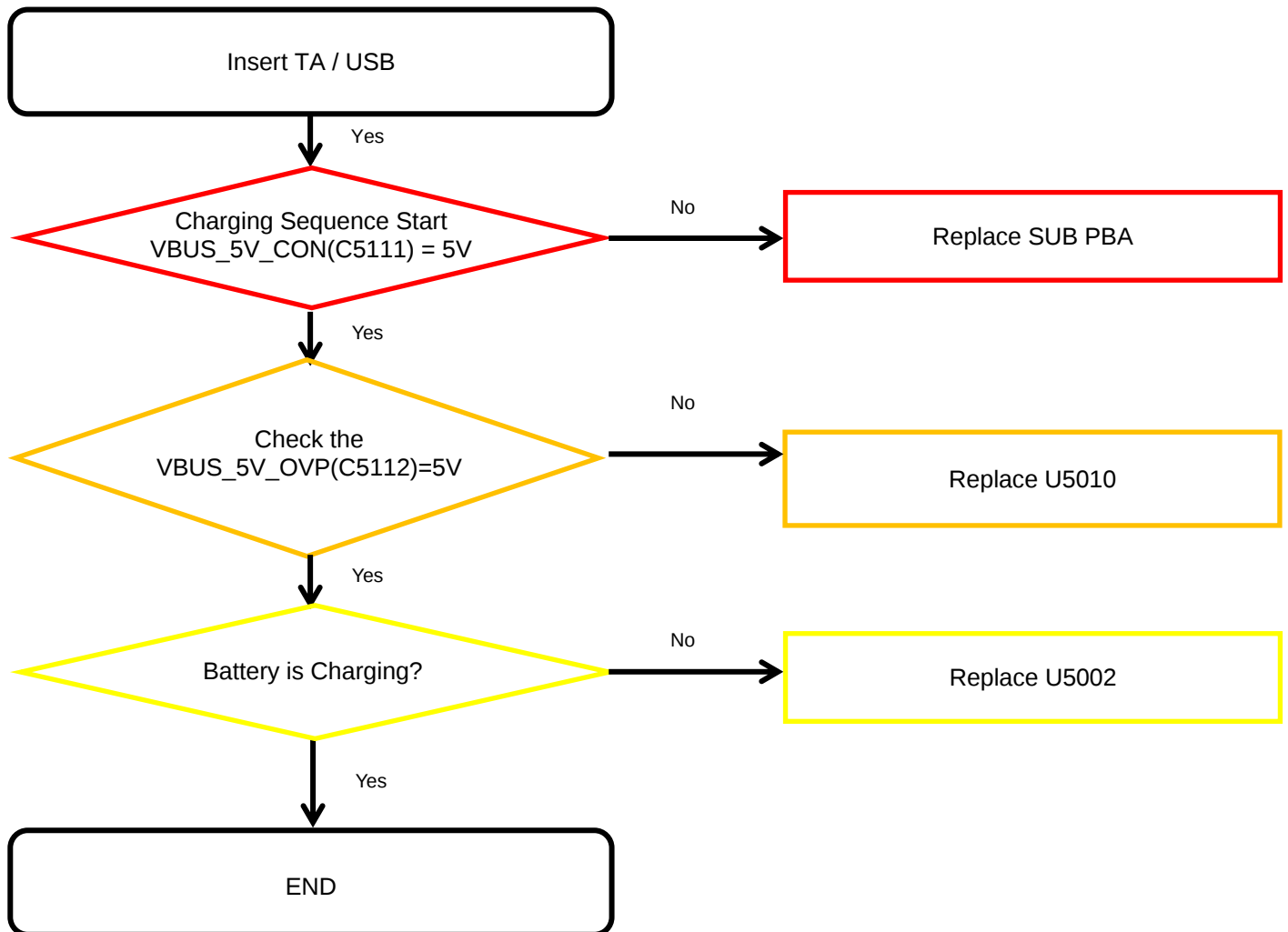
8. Level 3 Repair

8-4-5. T-Flash Part



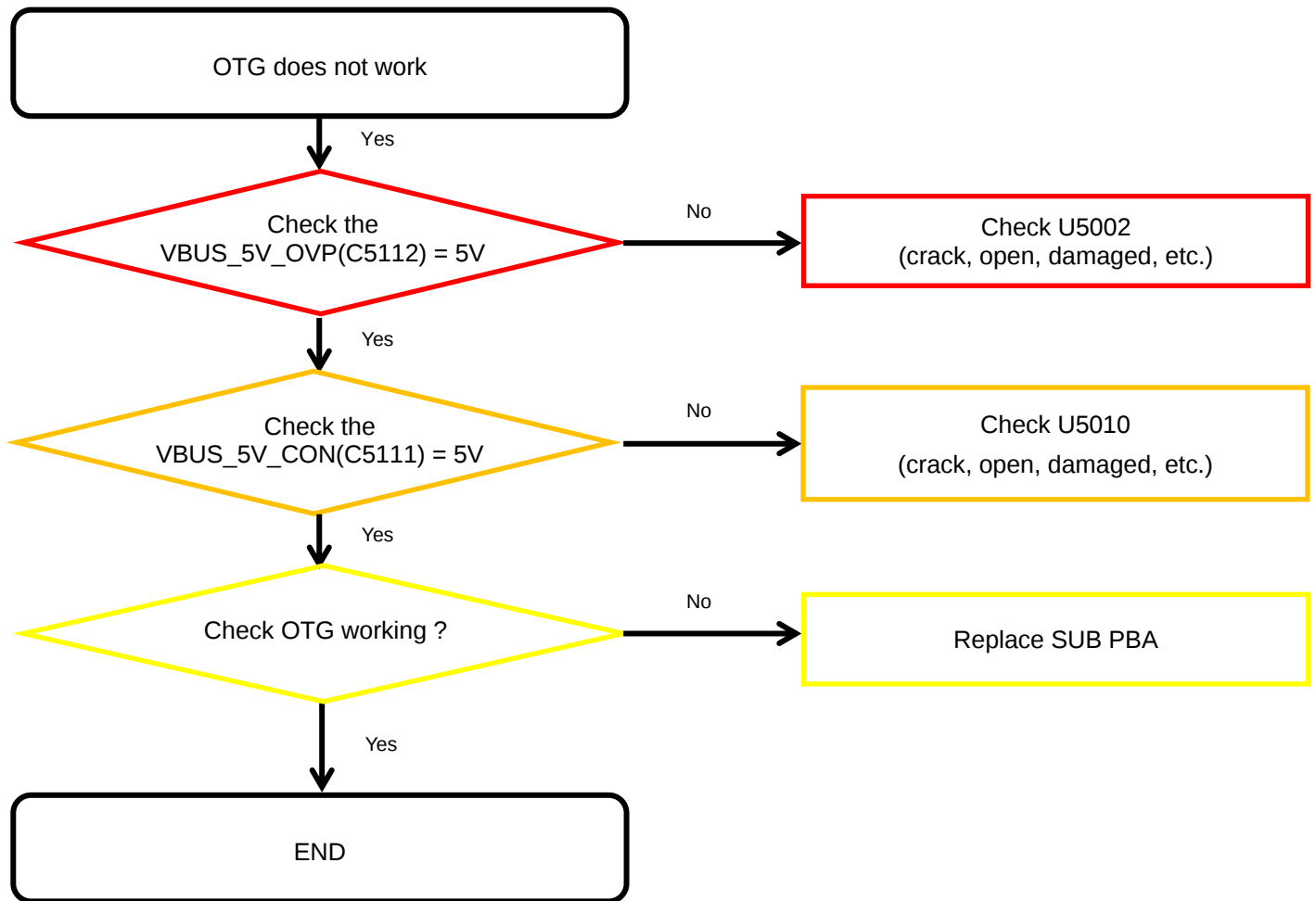
8. Level 3 Repair

8-4-6. Cable Charging Part (Normal)



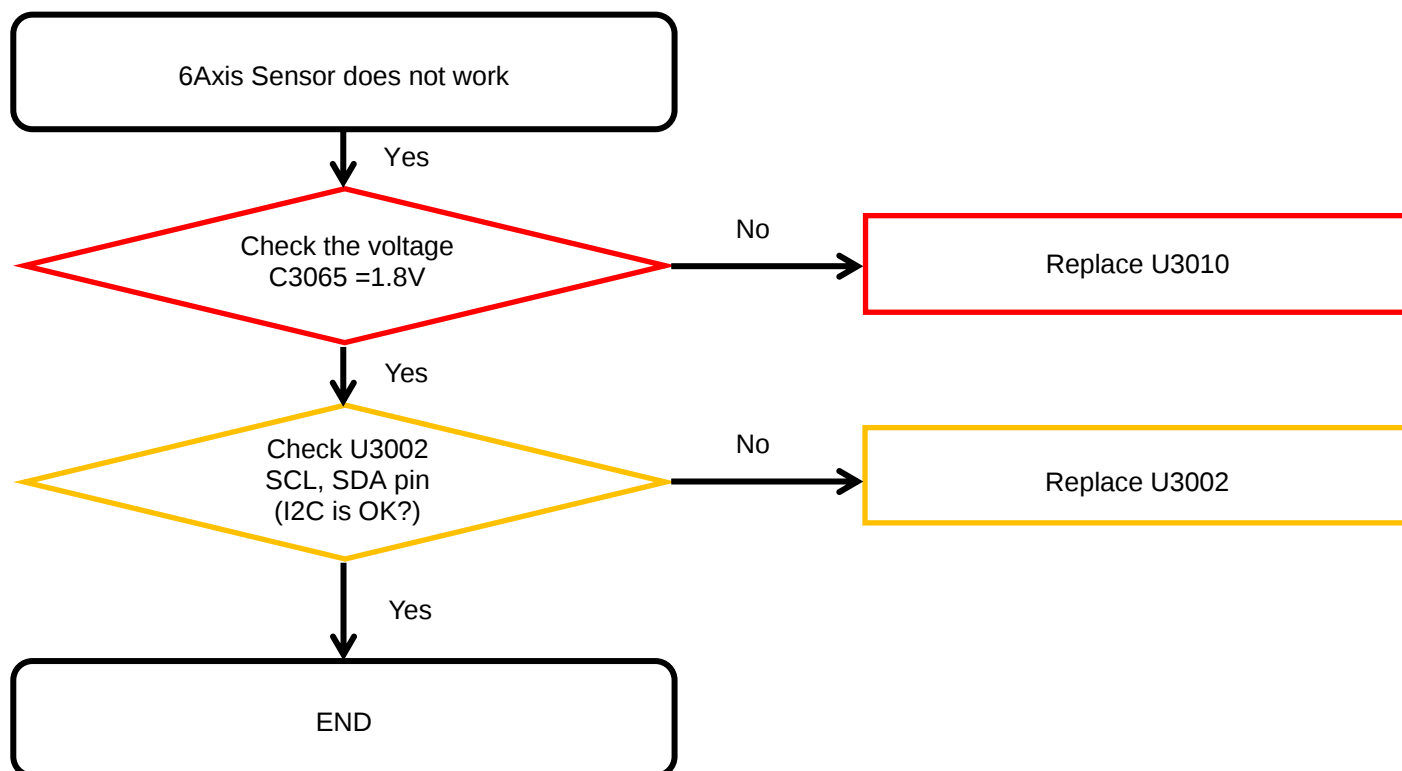
8. Level 3 Repair

8-4-7. OTG



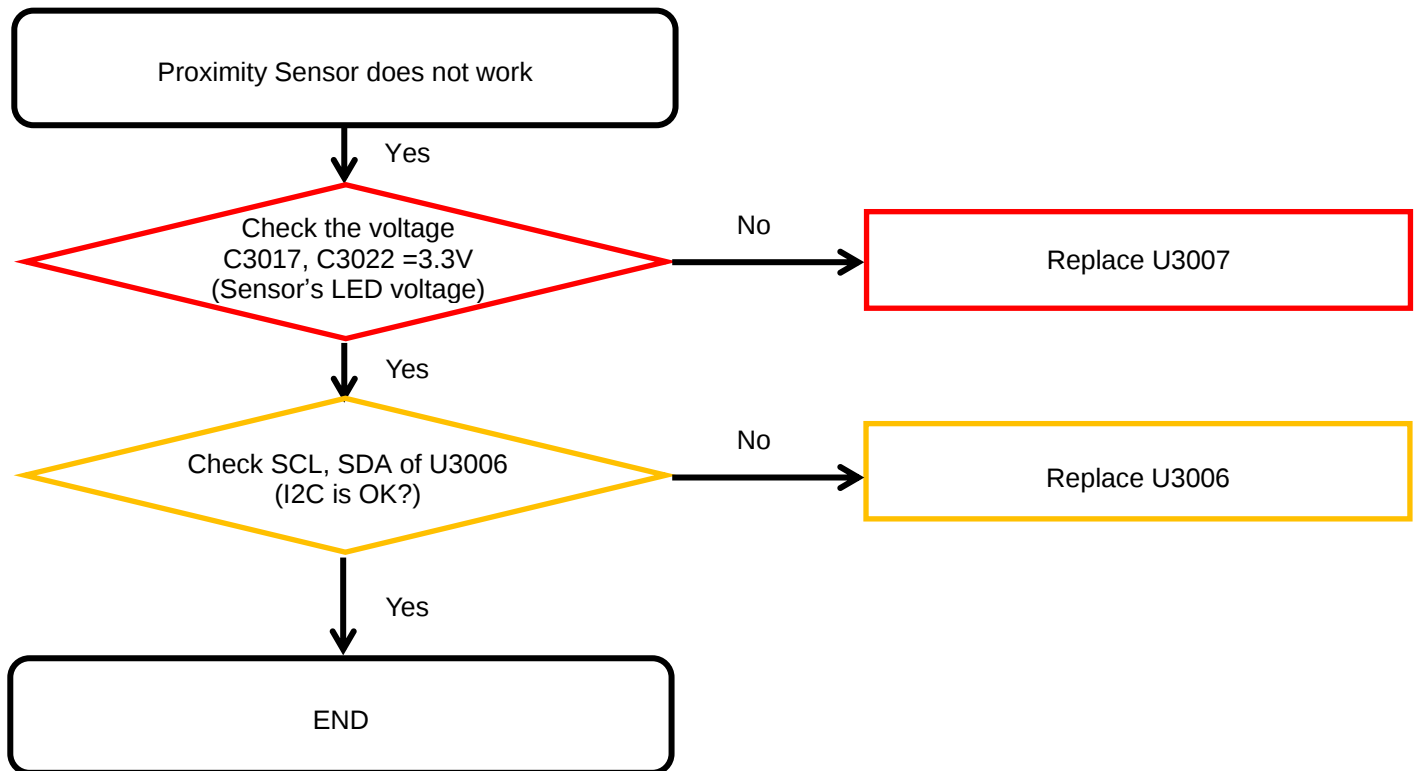
8. Level 3 Repair

8-4-8-1. 6Axis Sensor



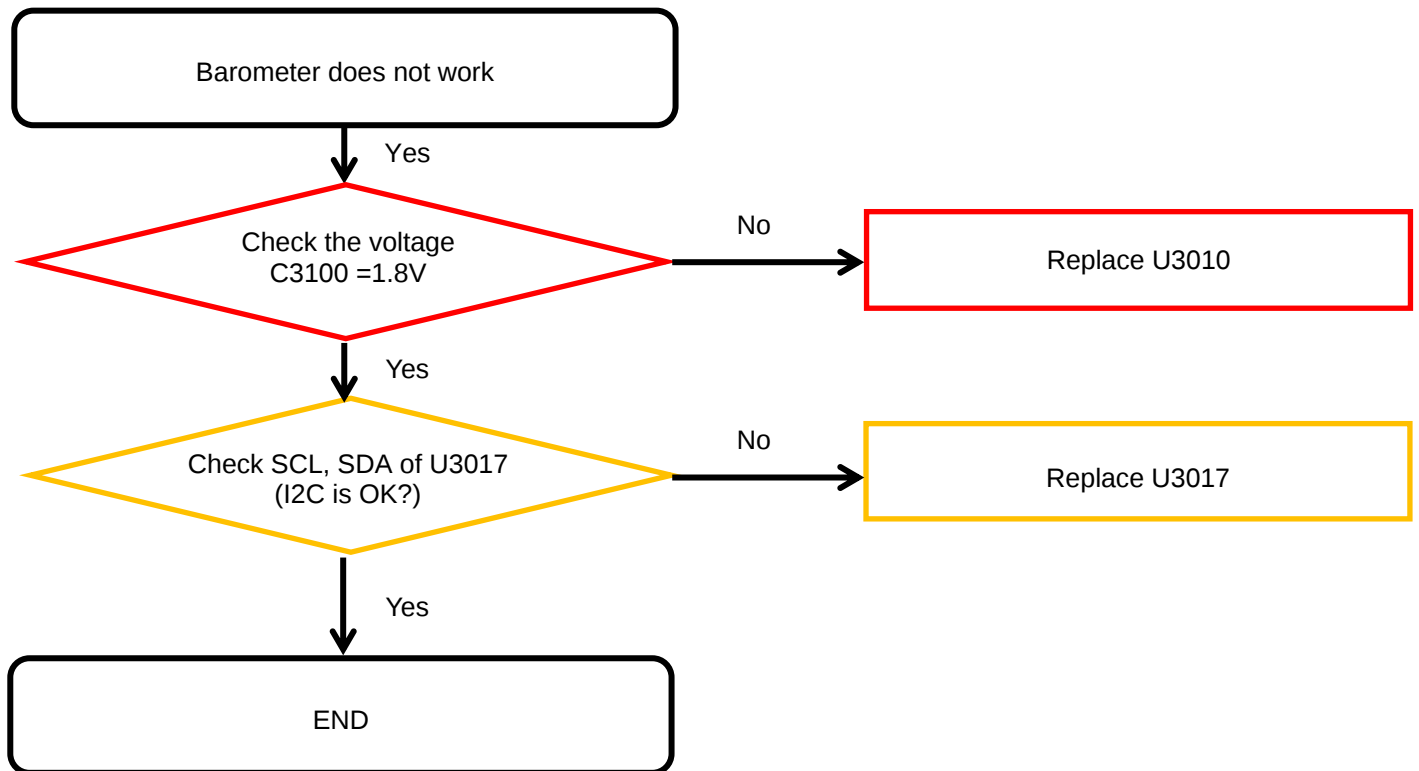
8. Level 3 Repair

8-4-8-2. Proximity sensor



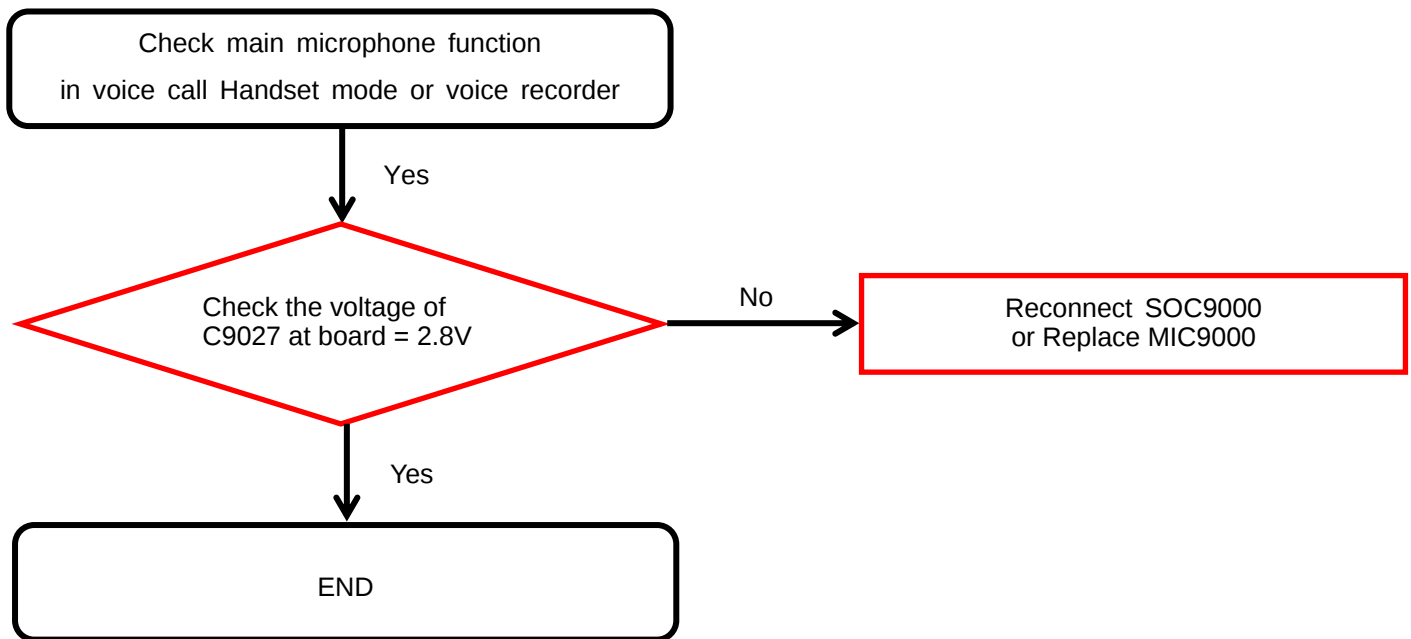
8. Level 3 Repair

8-4-8-3. Barometer



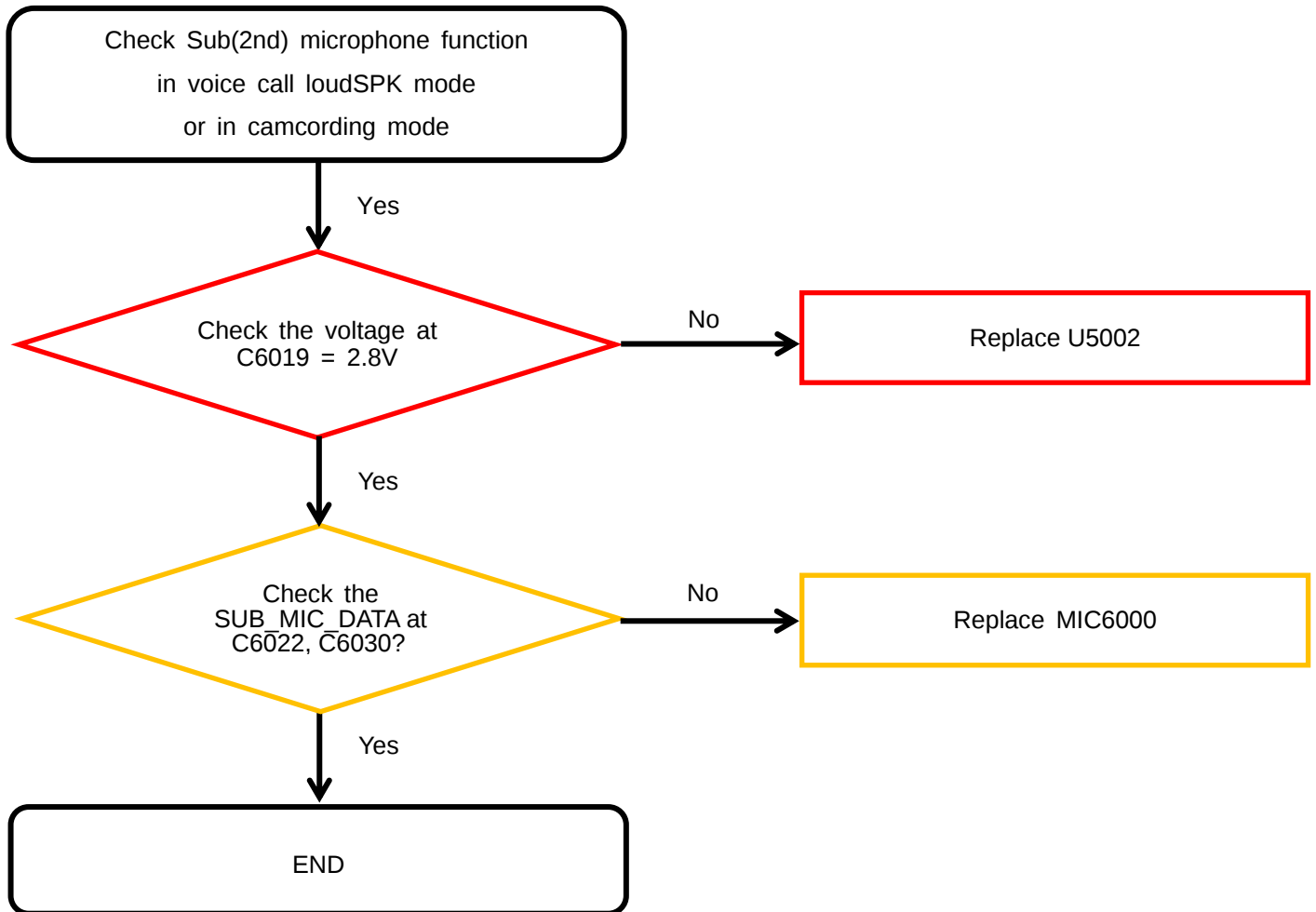
8. Level 3 Repair

8-4-9-1. Microphone Part - Main MIC



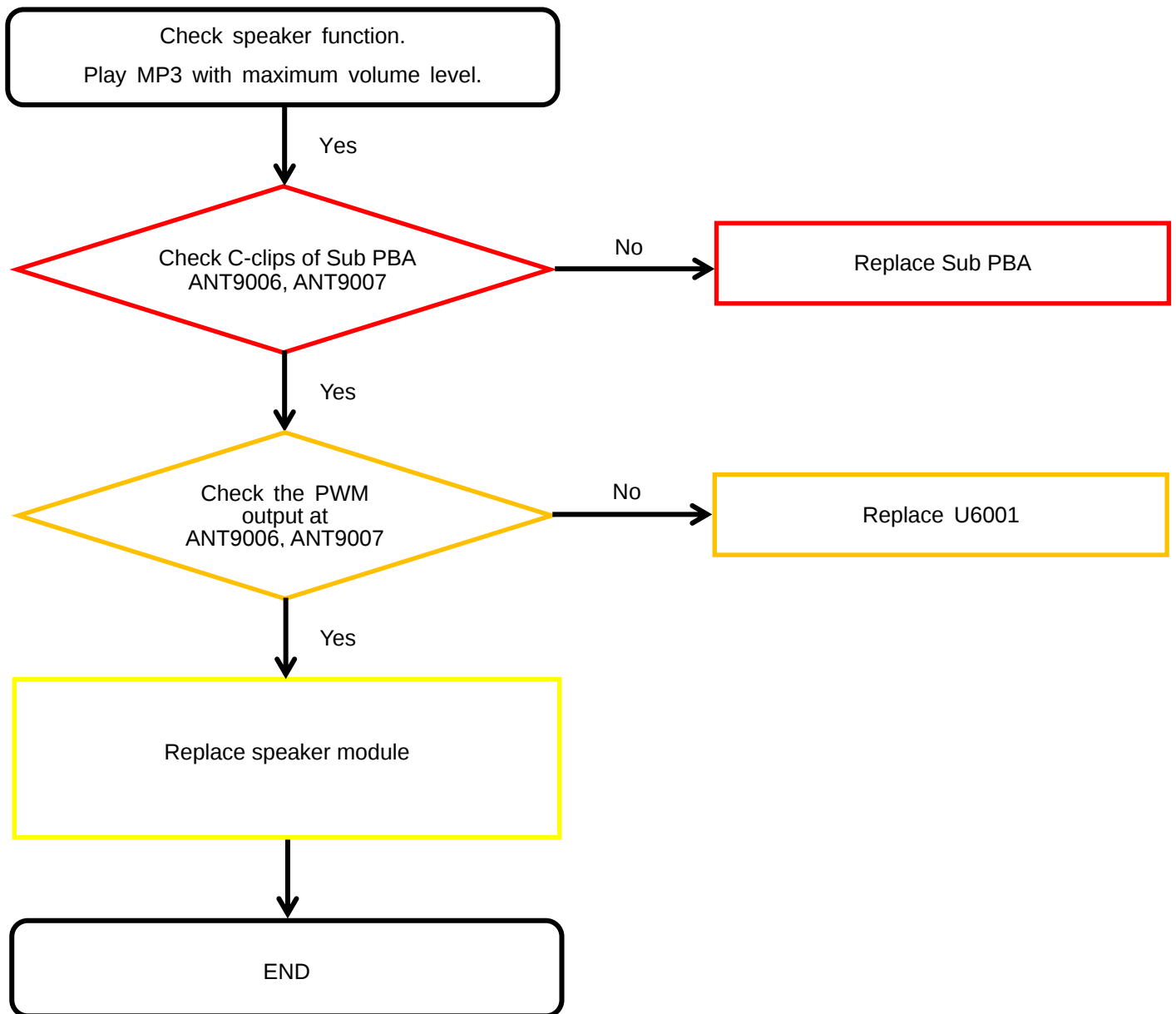
8. Level 3 Repair

8-4-9-2. Microphone Part - Sub(2nd) MIC



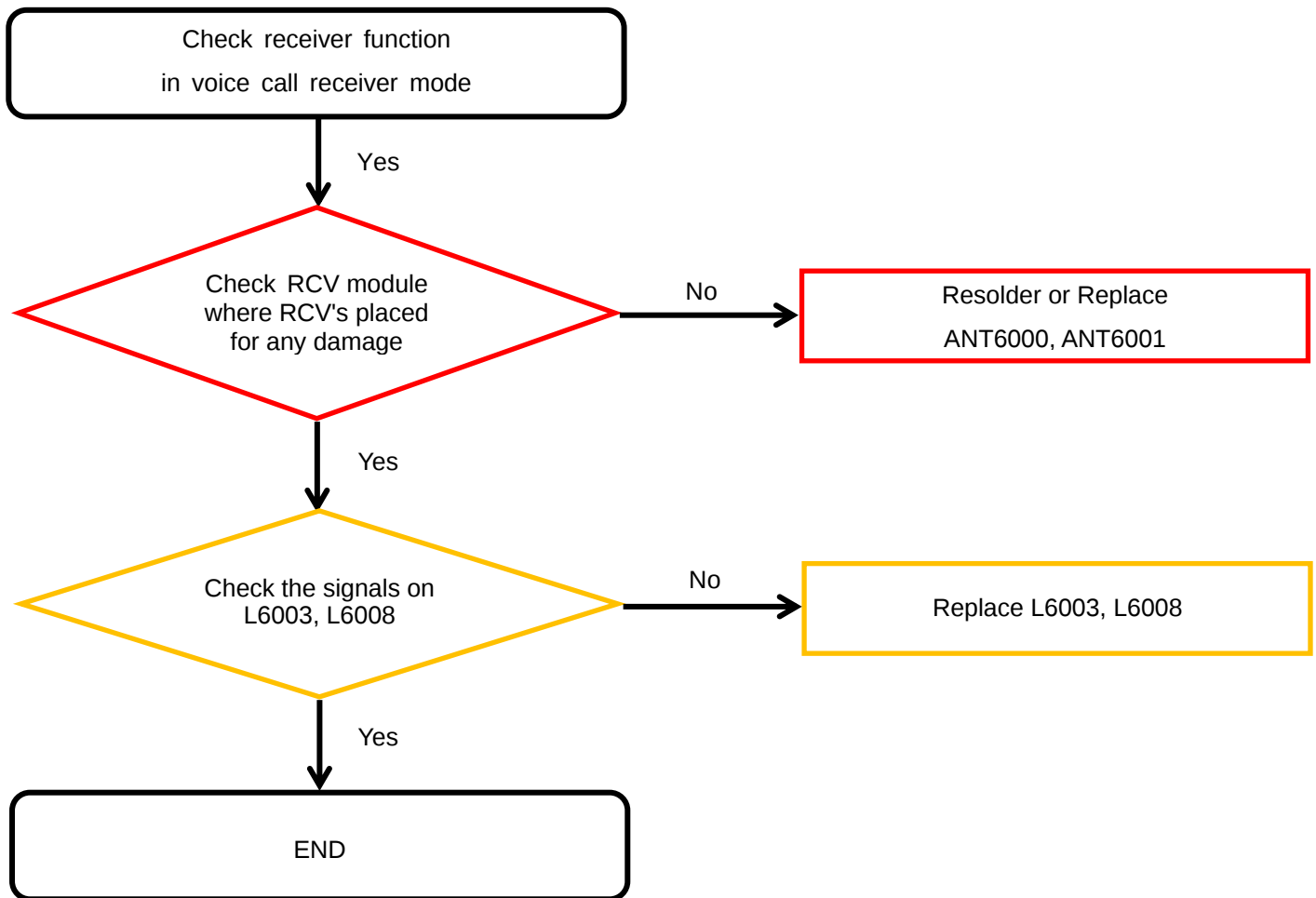
8. Level 3 Repair

8-4-10. Speaker Part



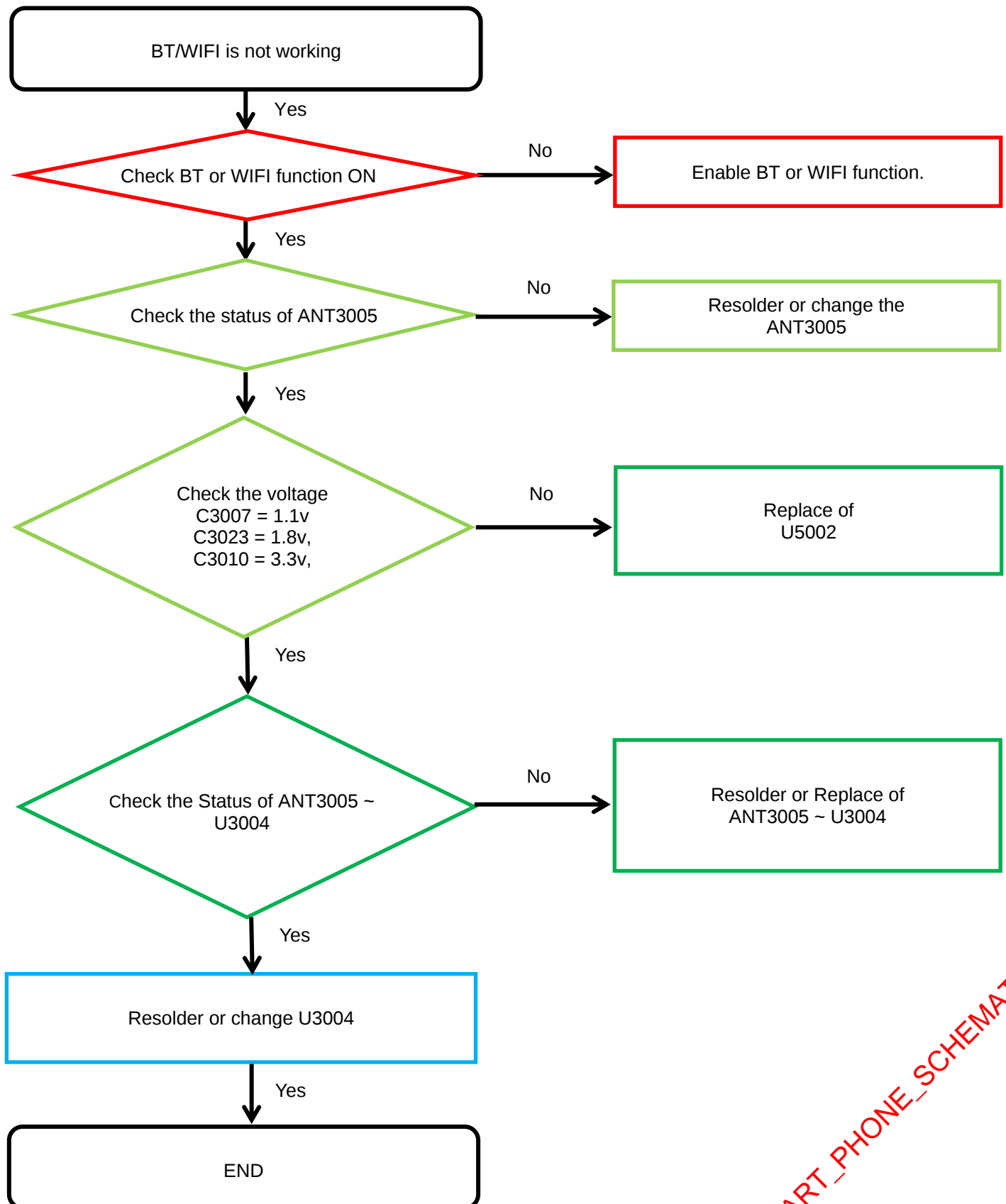
8. Level 3 Repair

8-4-11. Receiver Part



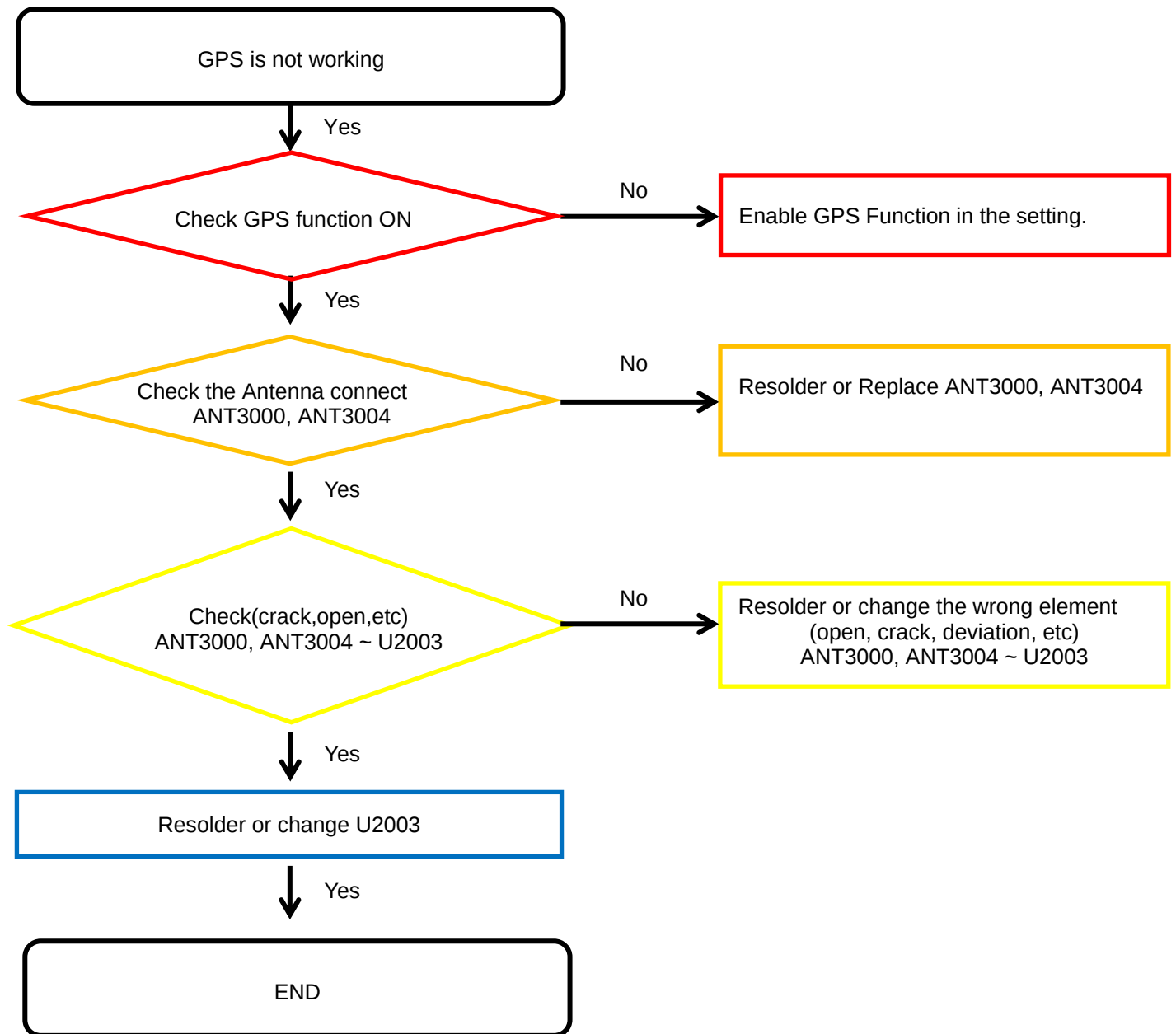
8. Level 3 Repair

8-4-12. BT/WIFI



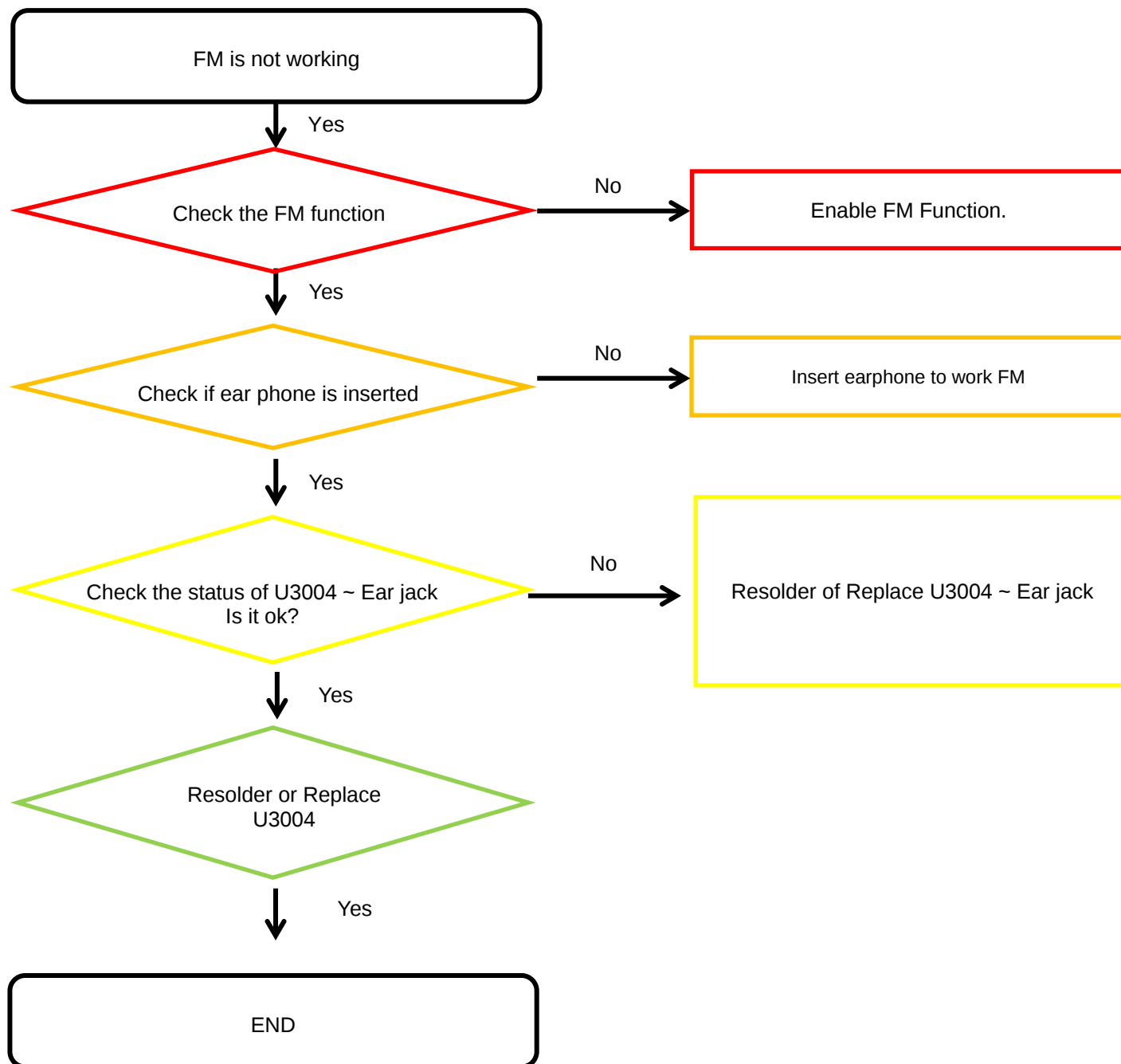
8. Level 3 Repair

8-4-13. GPS



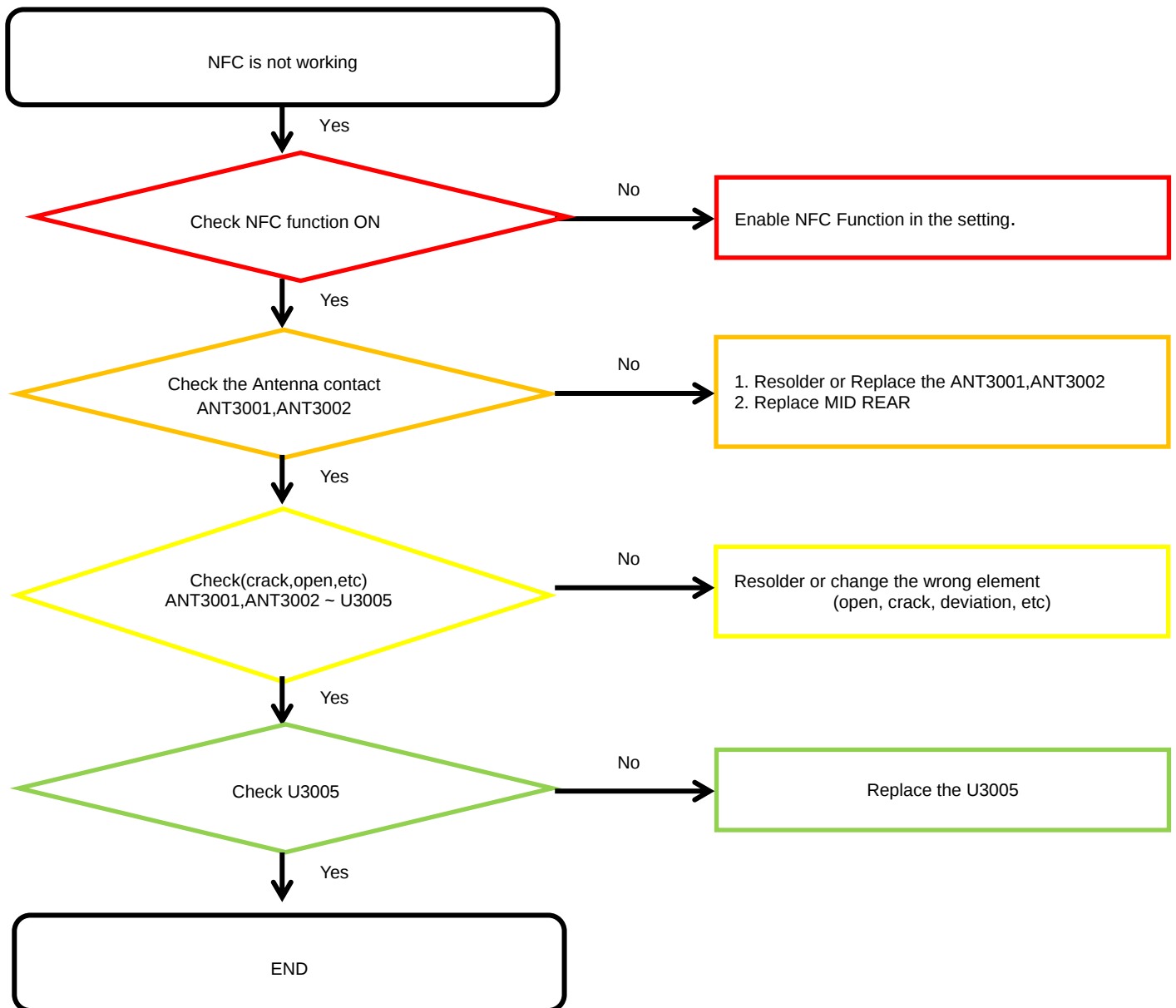
8. Level 3 Repair

8-4-14. FM radio part



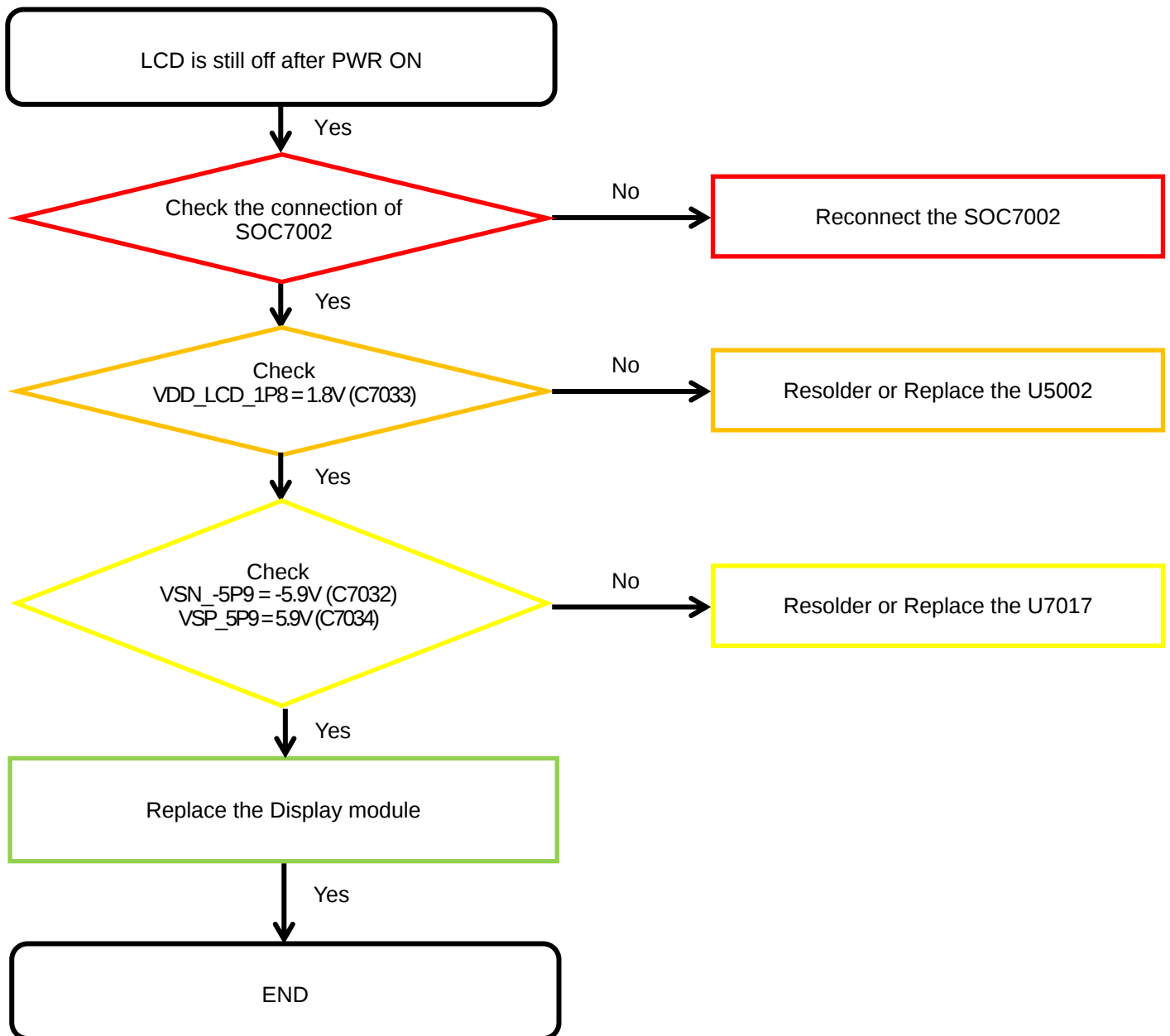
8. Level 3 Repair

8-4-15. NFC



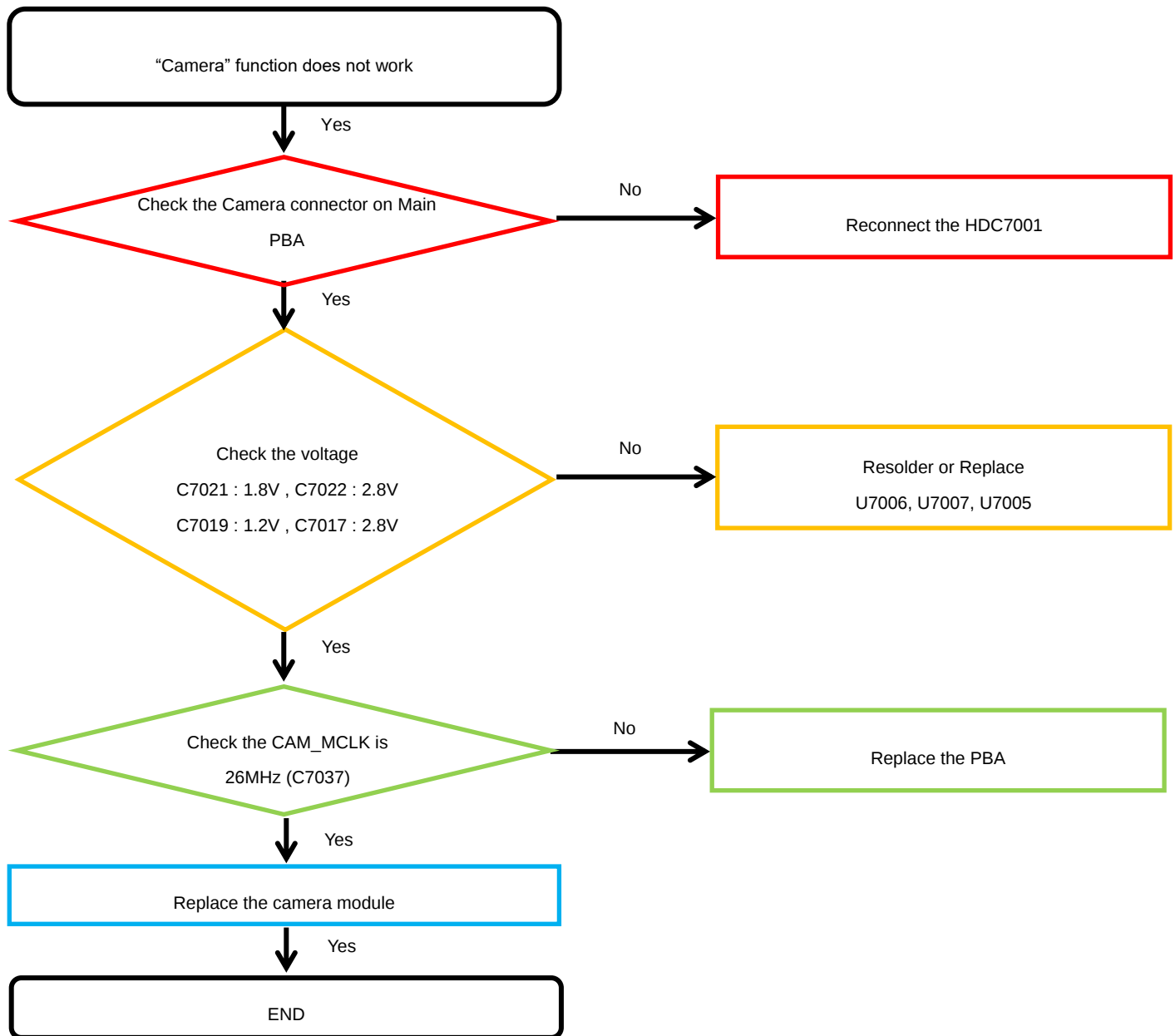
8. Level 3 Repair

8-4-16. Display



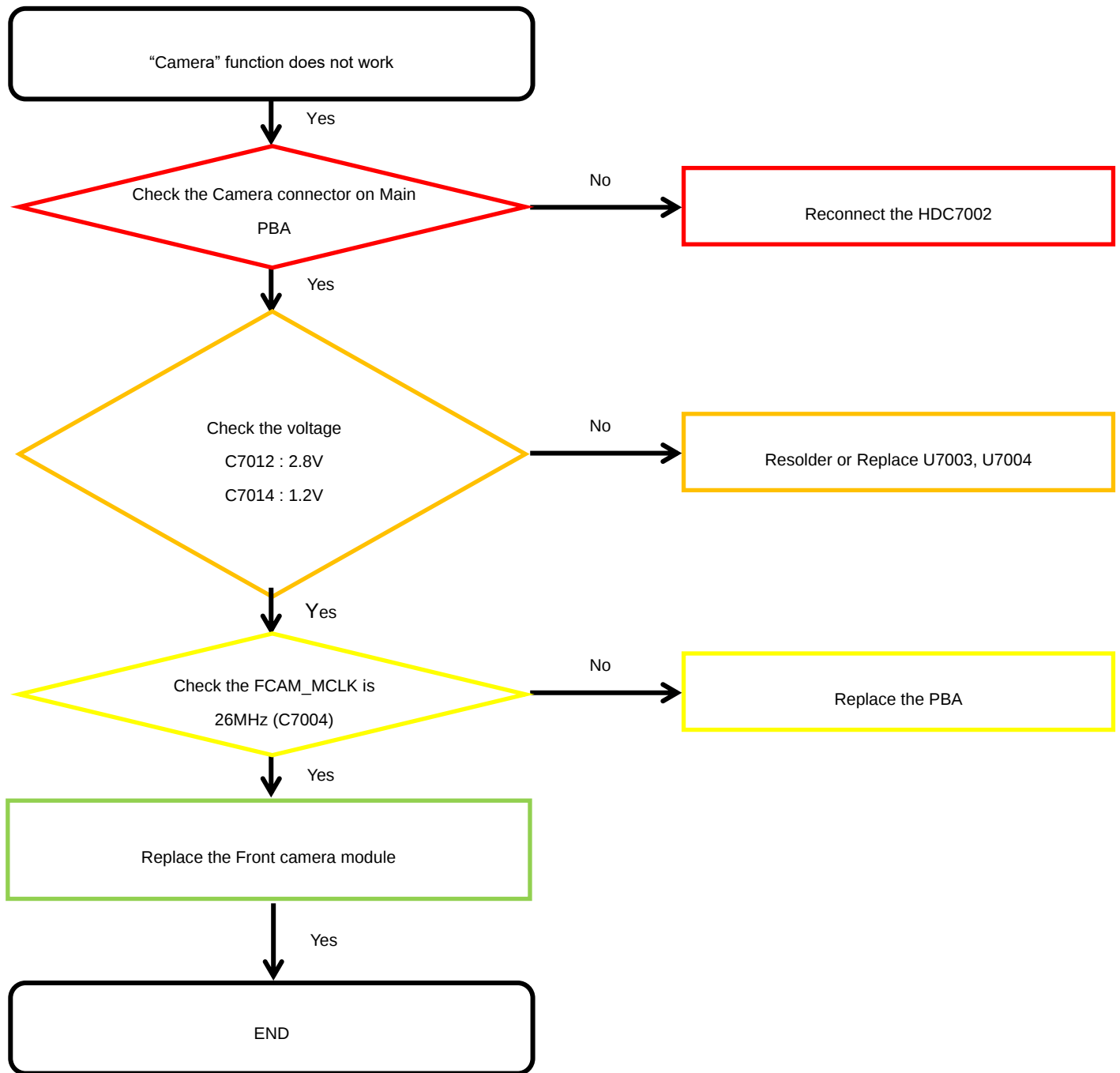
8. Level 3 Repair

8-4-17. 8M REAR CAMERA



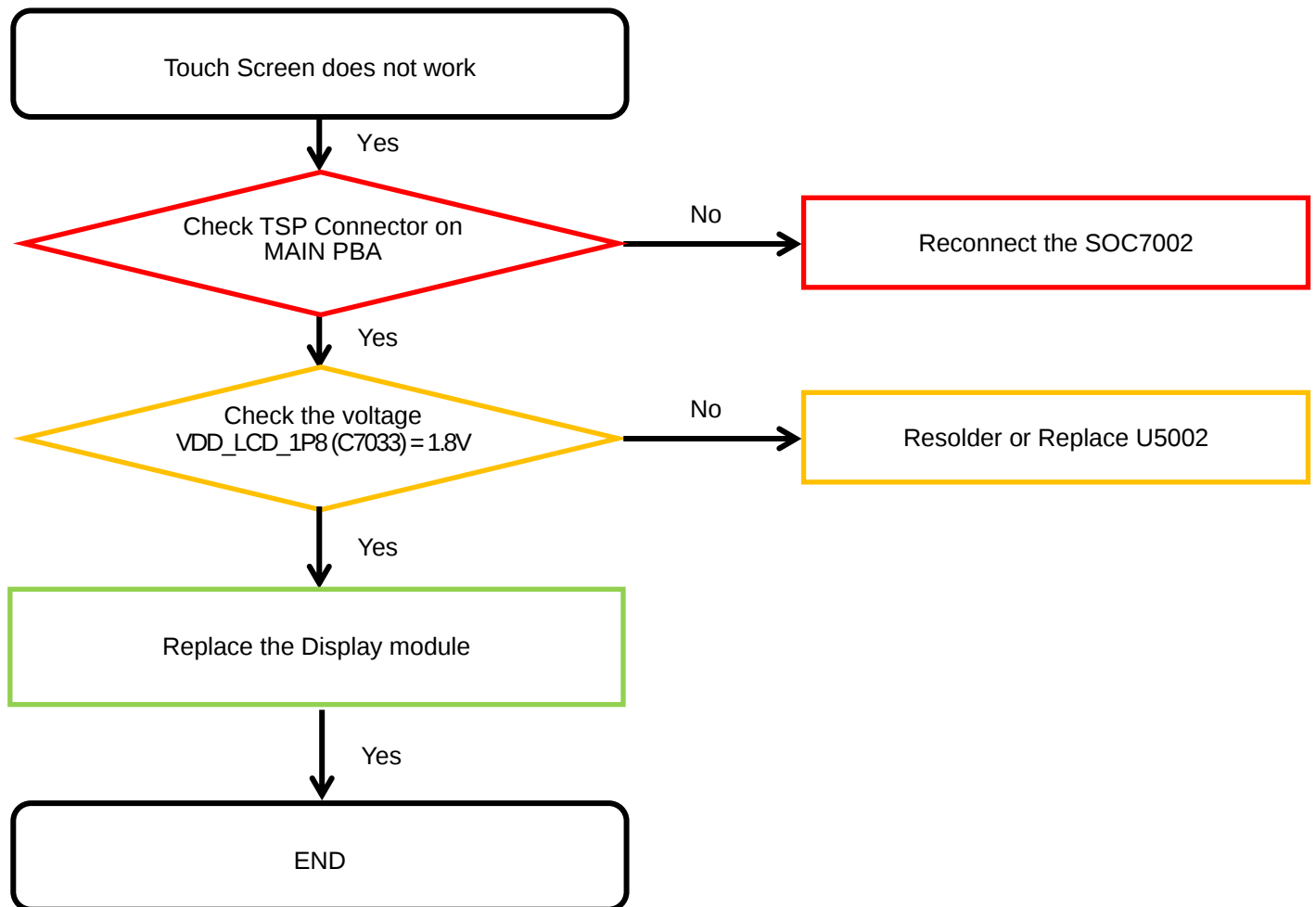
8. Level 3 Repair

8-4-18. 5M FRONT CAMERA



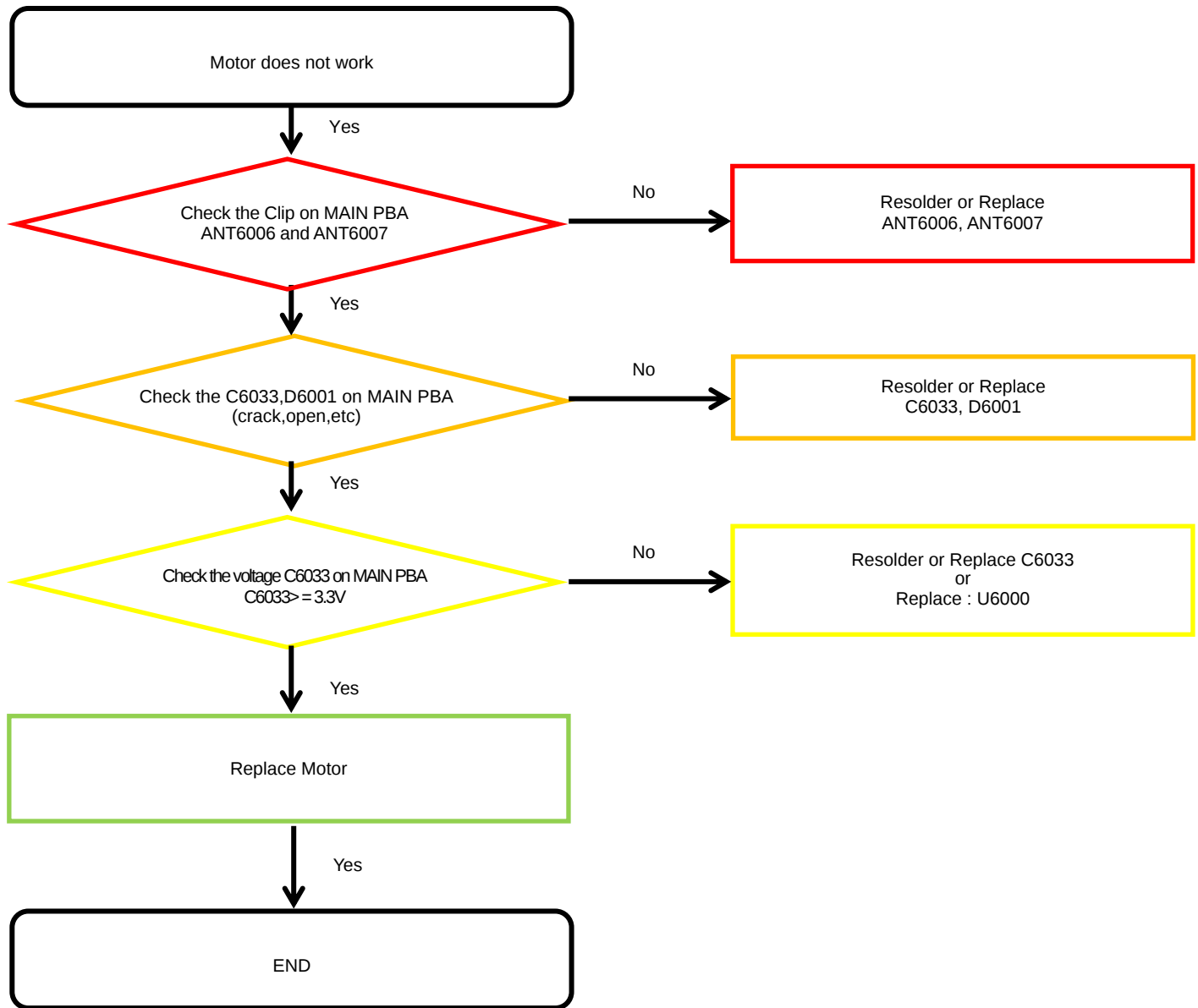
8. Level 3 Repair

8-4-19. TSP



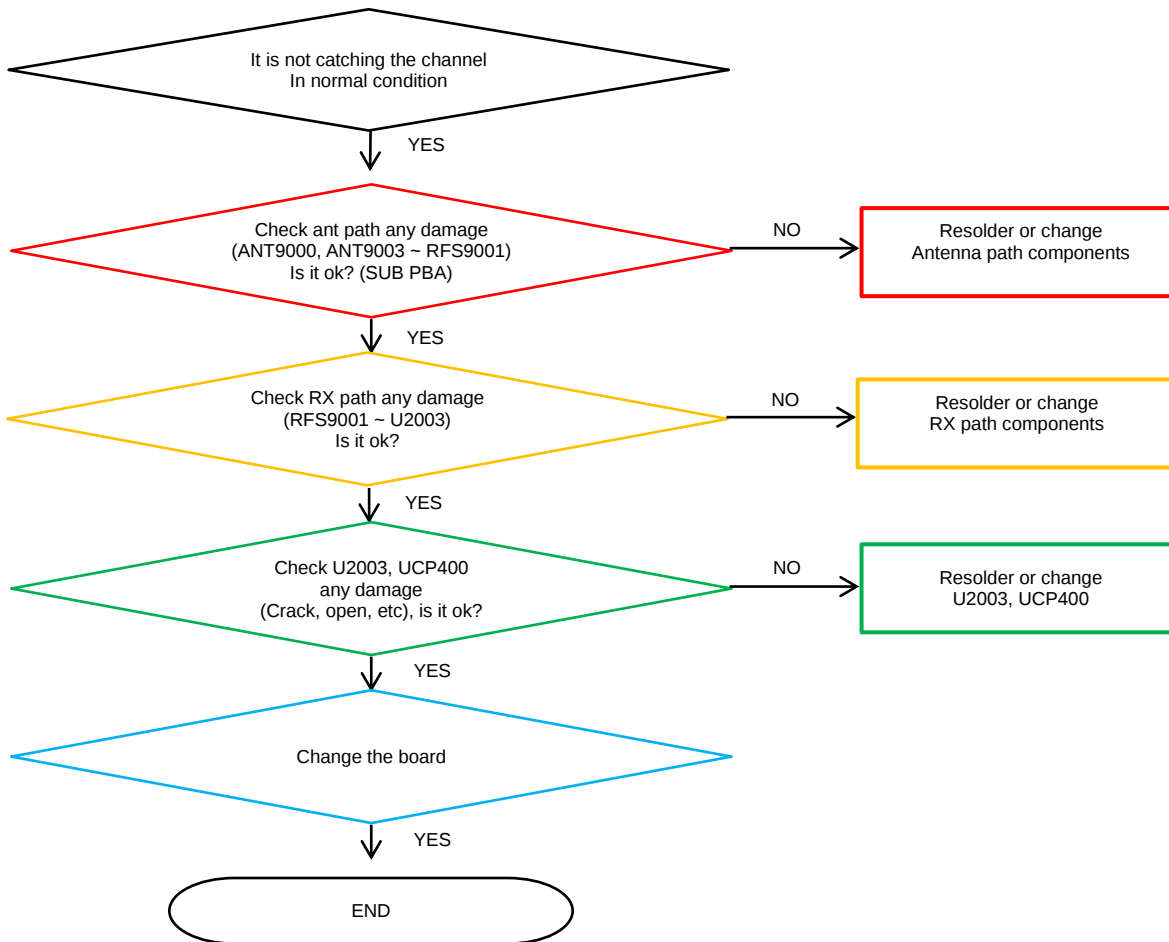
8. Level 3 Repair

8-4-20. Motor



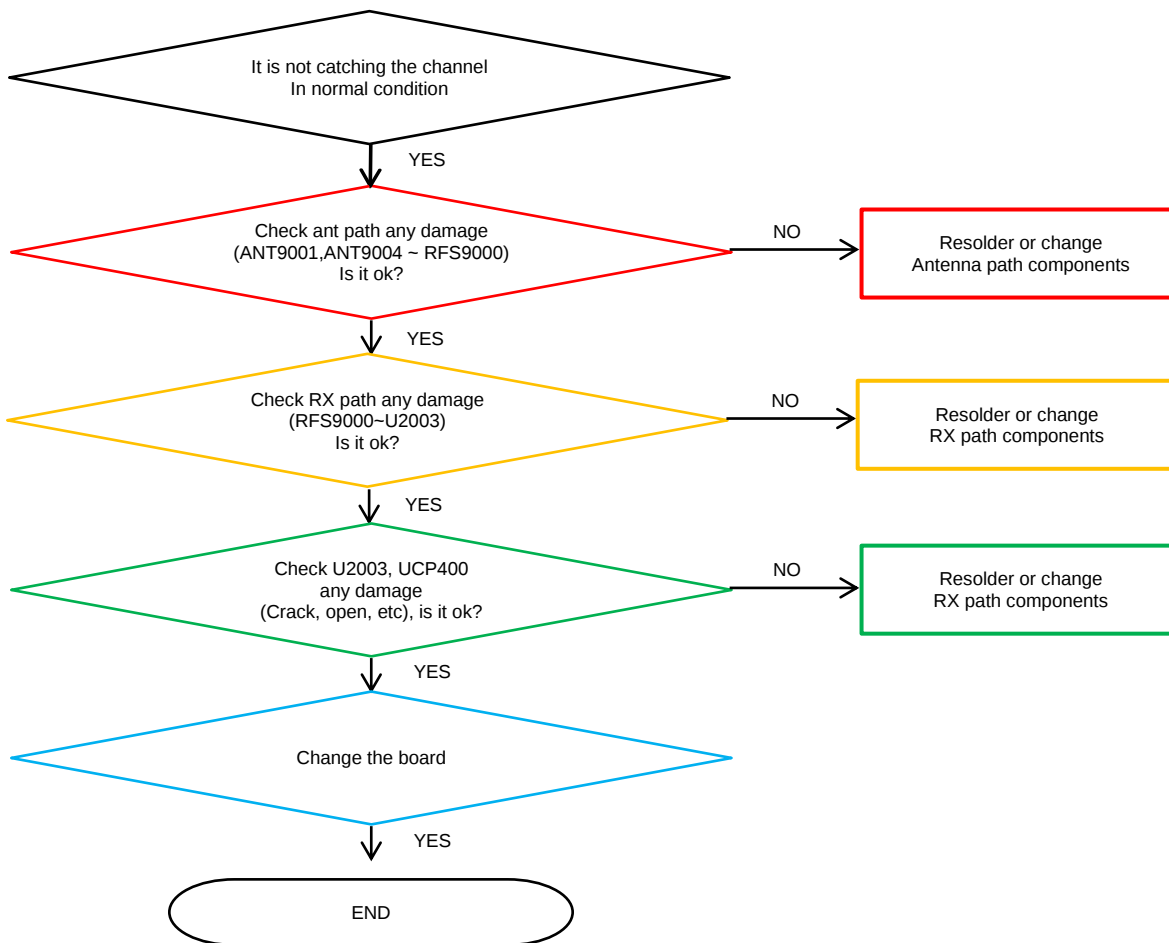
8. Level 3 Repair

8-4-21. GSM 850/900, WCDMA B5/6/19, LTE B5/12/17/18/19/26 PRx



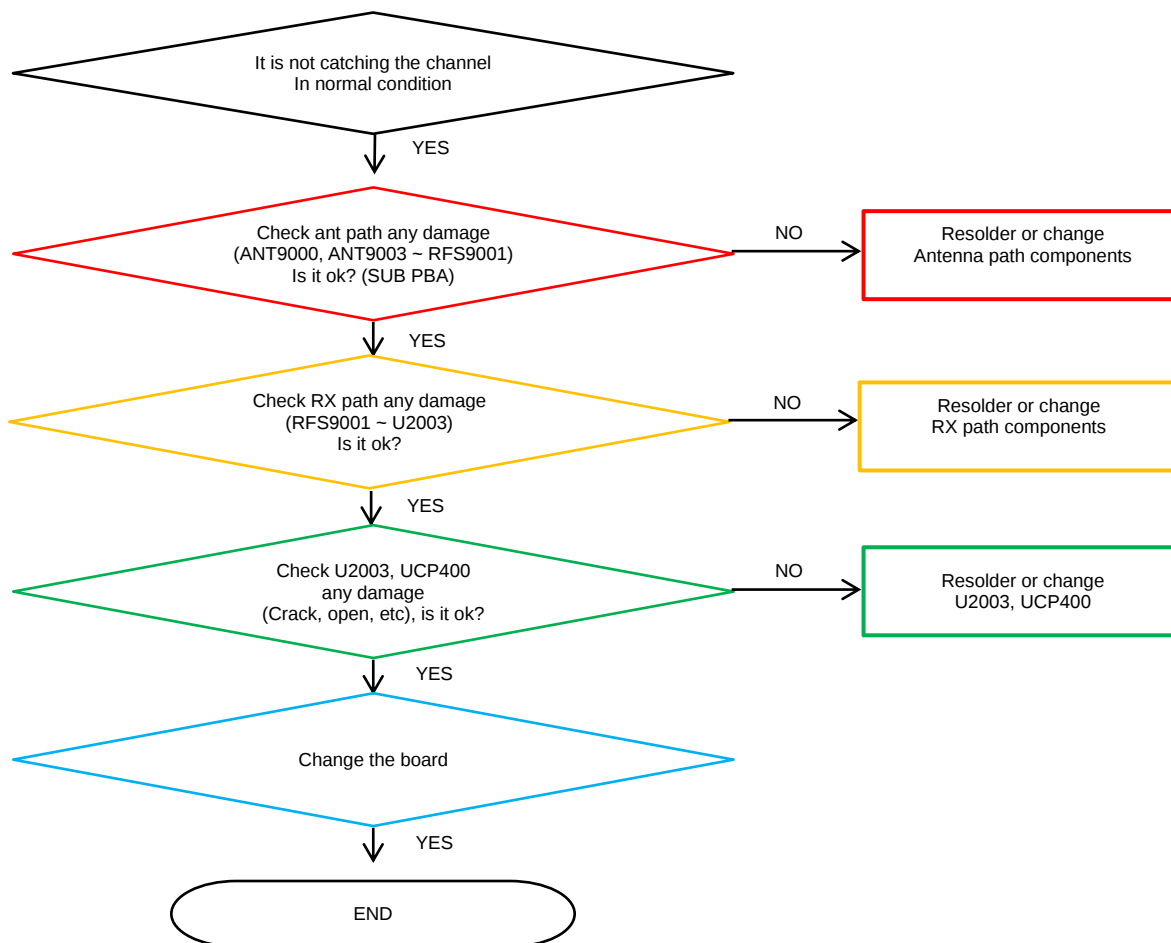
8. Level 3 Repair

8-4-22. LTE B38/41 PRx



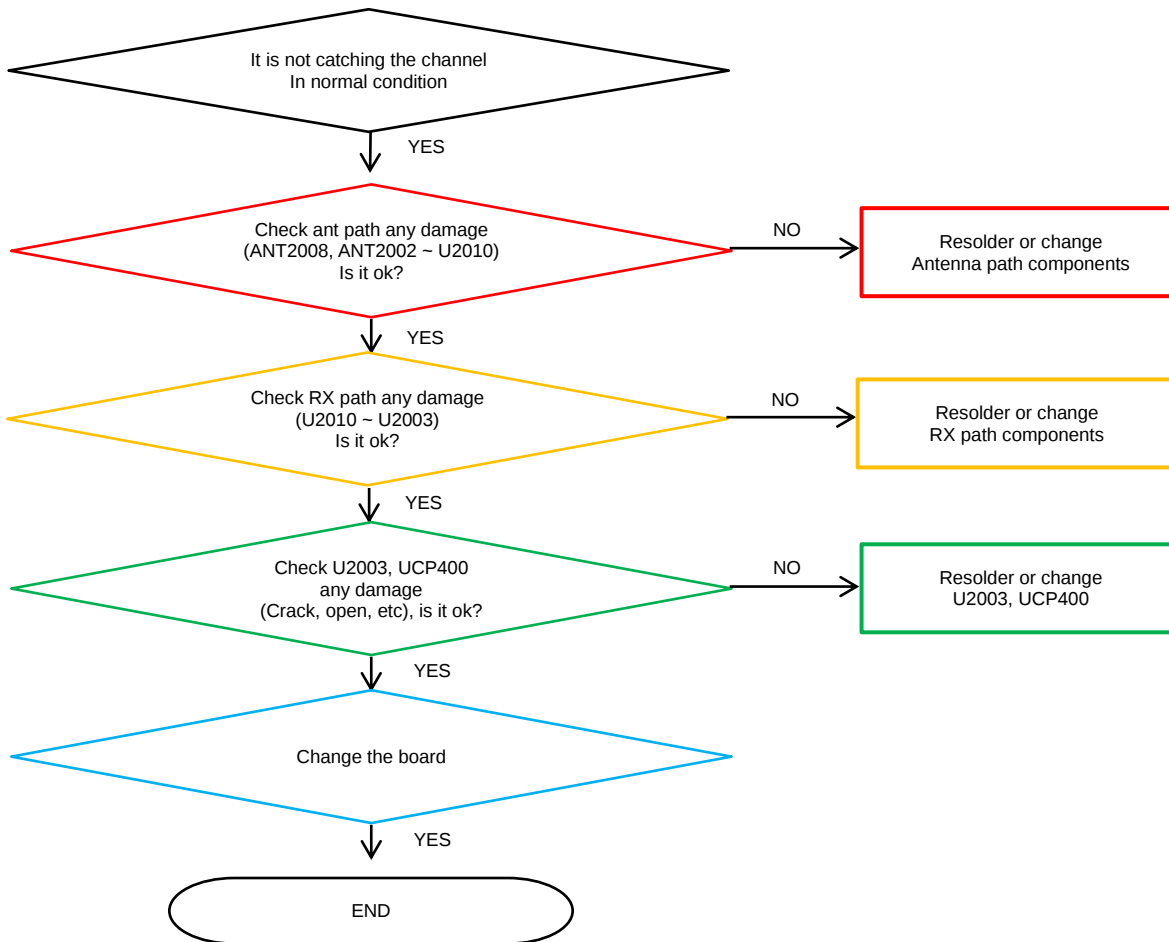
8. Level 3 Repair

8-4-23. GSM DCS/PCS, WCDMA B1, LTE B1/3 PRx



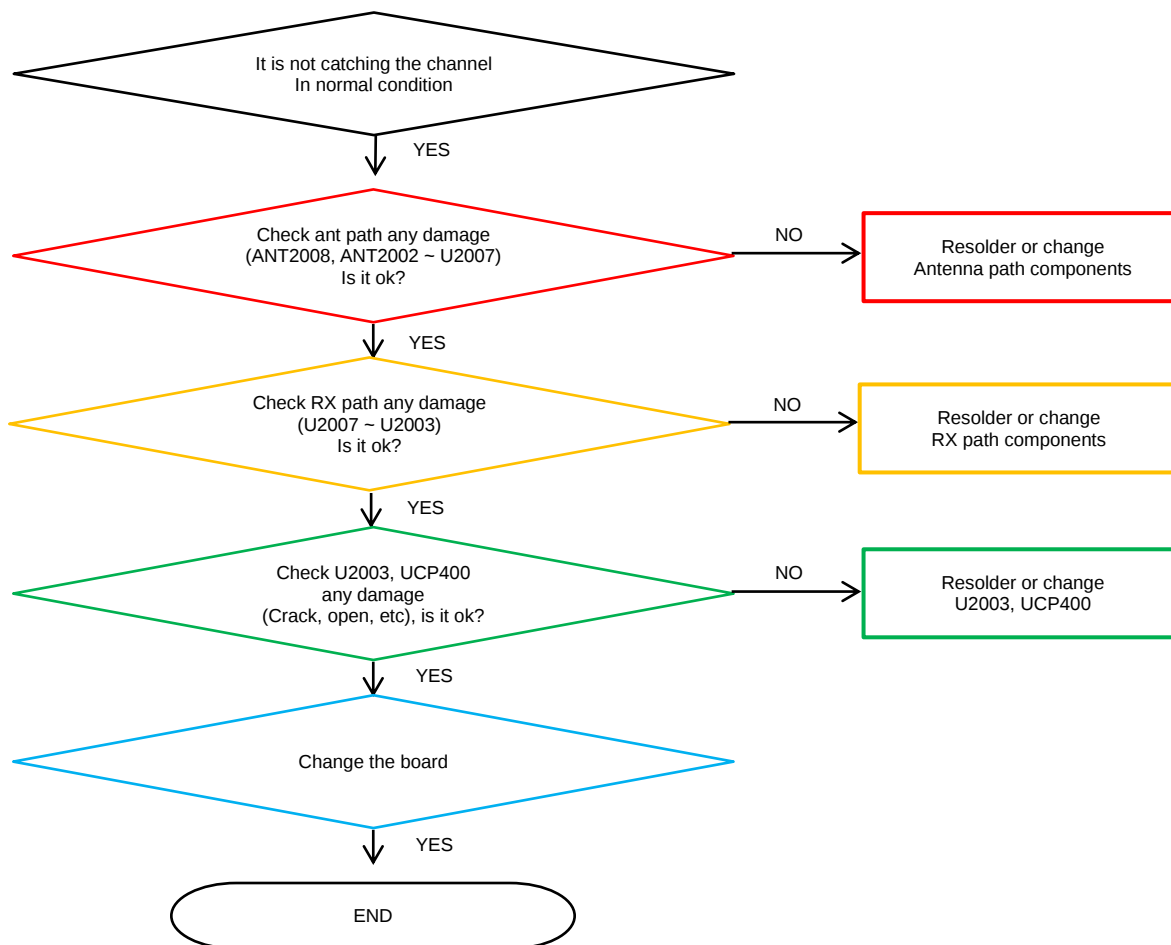
8. Level 3 Repair

8-4-24. GSM 850/900, WCDMA B5/6/19, LTE B5/12/17/18/19/26 DRx



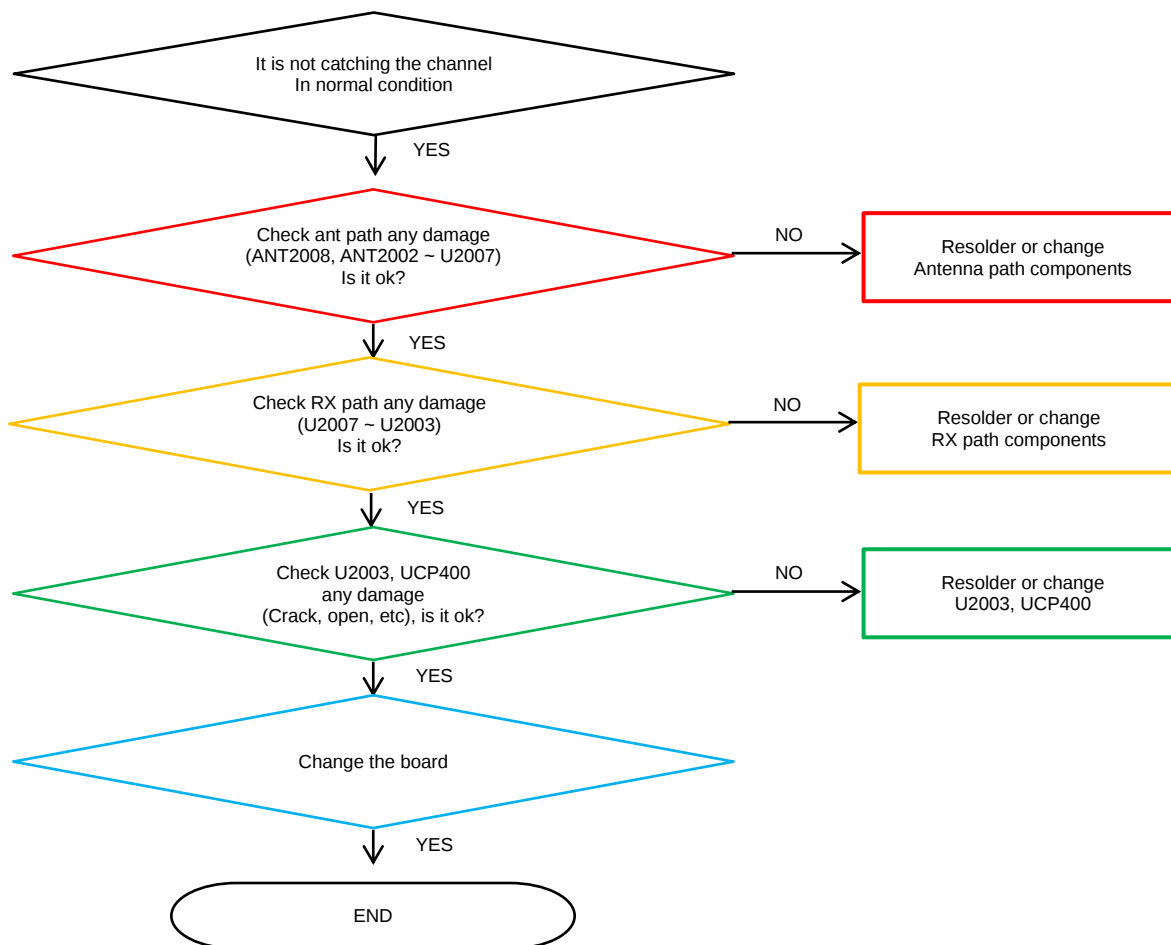
8. Level 3 Repair

8-4-25. LTE B38/41 DRx



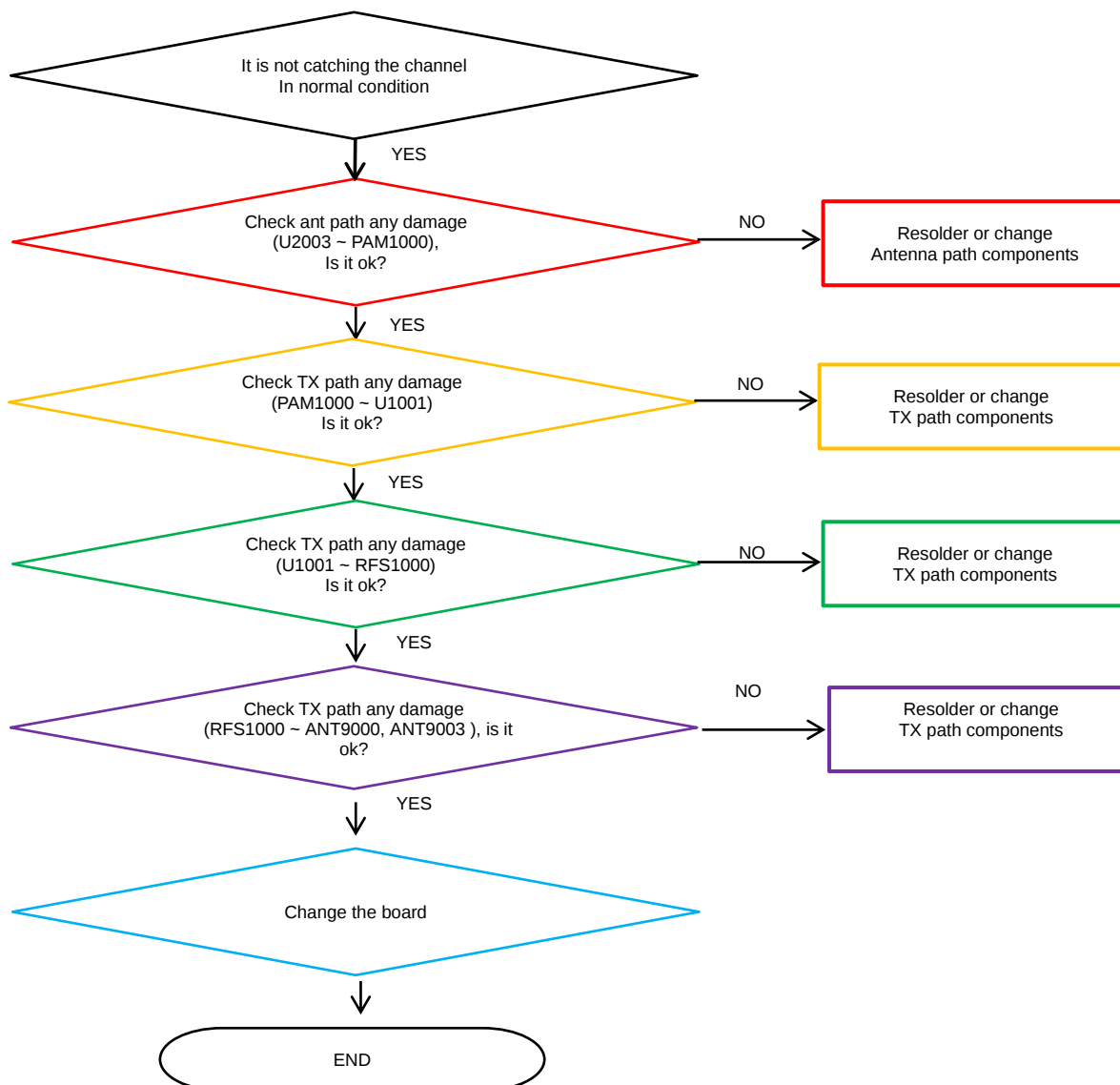
8. Level 3 Repair

8-4-26. GSM DCS/PCS, WCDMA B1, LTE B1/3 DRx



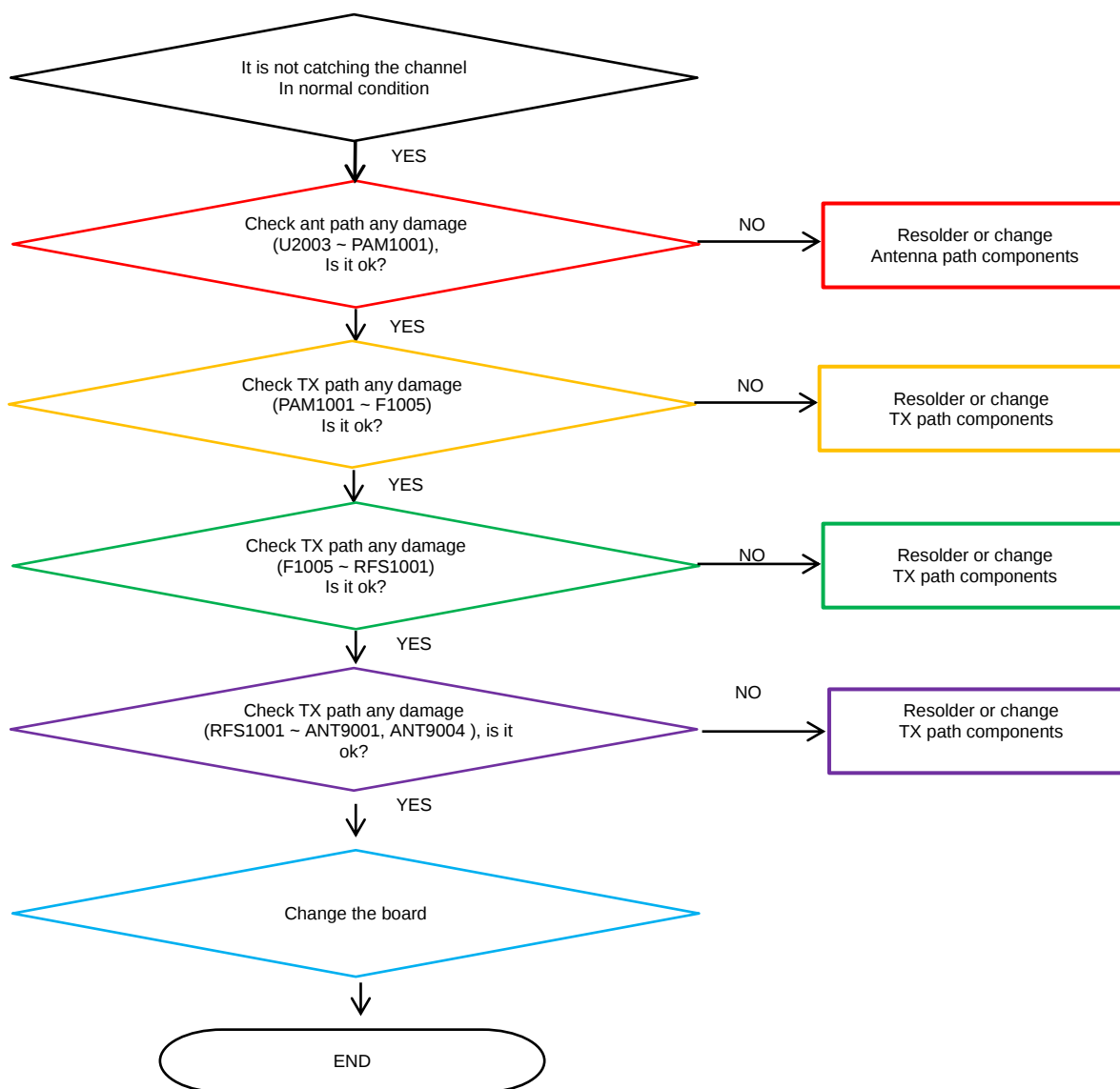
8. Level 3 Repair

8-4-27. GSM 850/900, WCDMA B5/6/19, LTE B5/12/17/18/19/26 Tx



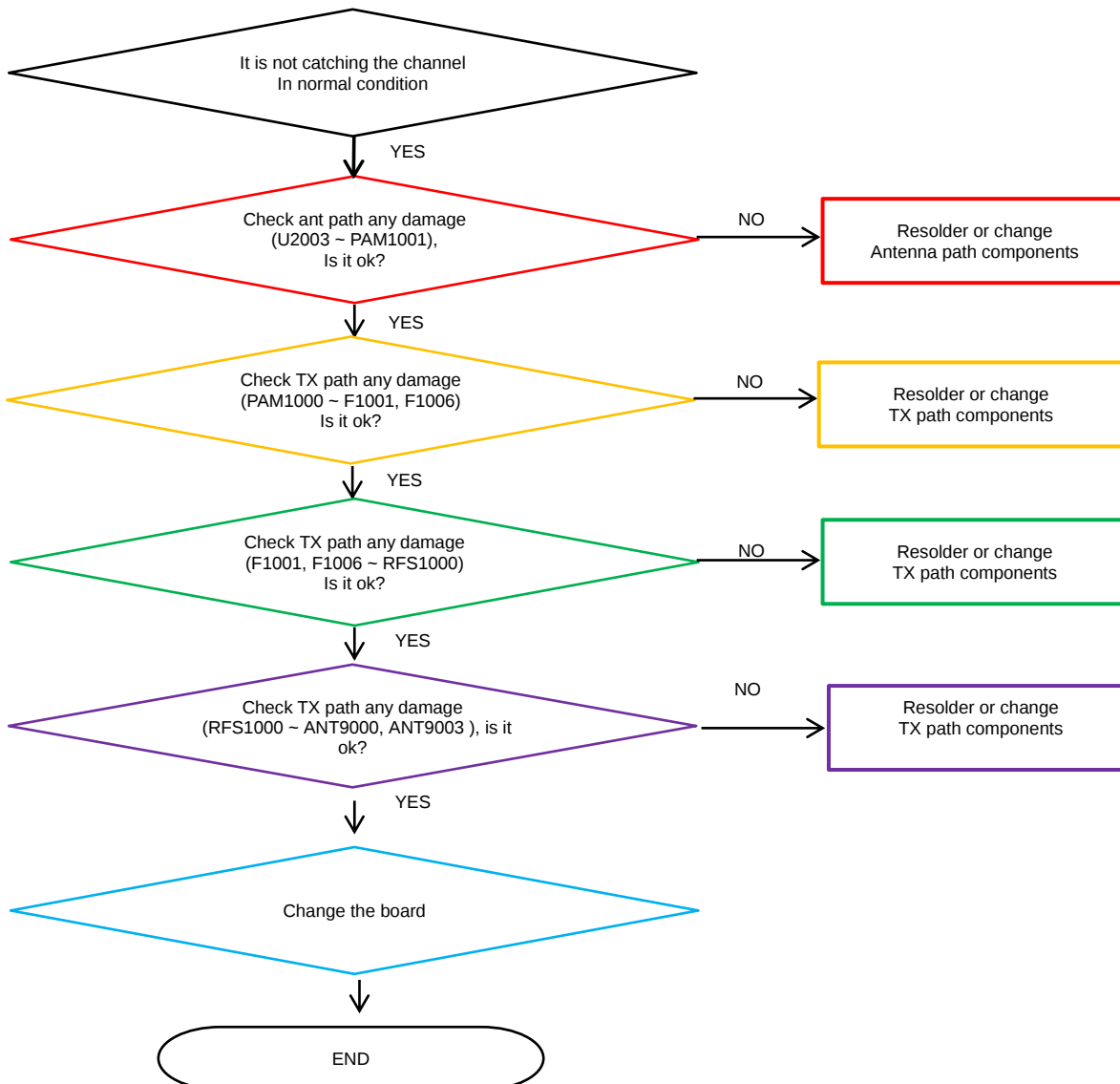
8. Level 3 Repair

8-4-28. LTE B38/41 Tx



8. Level 3 Repair

8-4-29. GSM DCS/PCS, WCDMA B1, LTE B1/3 Tx



8. Level 3 Repair

8-5. Service Schematics

- NC Point(Top View)

	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	29	
A	VSS	VSS	VSS	XMMC_E MRO, CLK	XMMC_E MRO, RD QS	VSS	VDDQ_M EM	VDD2_M EM	VSS	XEINT_19	XEINT_15	XEINT_16	VSS	VDD2_M EM	XEINT_1	VDDQ_M EM	VSS	XUTDO	XDBGSE L	VDD1_M EM	XGPIO21	VDD2_M EM	VDDQ_M EM	XDC5SCL	XGPIO27	XGPIO25	VSS	VSS	VSS	
B	VSS	VSS	XMMC_C ARD, CLK	VSS	XMMC_E MRO, CM D	XMMC_E MRO, HW RESET	XMMC_E MRO, D5	XMMC_E MRO, D7	VDD1_M EM	XNWRSE T	XEINT_9	XEINT_10	XEINT_17	XEINT_18	XEINT_19	XEINT_2	XEINT_0	XUTSTN	XUTDI	XGPIO18	XGPIO23	XGPIO6	VSS	XDC4SCL	XGPIO25	XPWMTO UT_1	VSS	VSS	VSS	
C	VSS	VDD2_M EM	XMMC_C ARD, CM D	XMMC_S DIO, CLK	XMMC_S DIO, CM D	XMMC_S DIO, D3	XMMC_E MRO, D6	XMMC_E MRO, D0	XNWRSE T	XPWRRG TON, CO N	VSS	XEINT_8	XEINT_7	VSS	XEINT_21	XEINT_20	XEINT_5	VSS	XUTCK	XUTMS	XGPIO19	XGPIO20	XDC4SD A	XGPIO7	XGPIO24	XUOKTSN	XUORTSN	VDD2_M EM	VSS	
D	XUSB200 M	VDDQ_M EM	XMMC_C ARD, D0	XMMC_S DIO, D0	XMMC_S DIO, D1	XMMC_S DIO, D2	XMMC_E MRO, D0	XMMC_E MRO, D1	XPWRRG TON, SUB	XPSHOLD	XEINT_12	XEINT_11	XEINT_14	XEINT_6	XEINT_4	XEINT_3	XOM_2	XOM_0	XOM_1	XGPIO16	XGPIO15	XGPIO22	XGPIO5	XDC6SD A	XDC6SCL	XUOTAO	XUORAD	VDDQ_M EM	XWLBST_W LDA, THQ P	
E	XUSB200 P	VSS	XMMC_C ARD, D3	XMMC_C ARD, D2																						XPWMTO UT_0	XWLBST_W LDA, THQ Y	VSS	XWLBST_W LDA, THQ P	
F	XUSB200 RD, REXT 1	XUSB200 RD, SS, RX 2, N	VSS	XUSB200 RD, SS, TX 2, P	XMMC_C ARD, D1	VDDQ18 S830, PHY	XMMC_E MRO, D4	XMMC_E MRO, D5	VSS	XPWRRG TON, G3D	XSPEDY PMIC	XPWRRG TON, MA0	VSS	XRTXCT	XRTXCTO	XUART_D EBUG, TX D	XCLKREQ	XCLKOUT 2	XDC2SD A	XDC2SCL	XGPIO0	XGPIO2	XDC3SD A	XDC1SD A	XDC1SCL	XWLBST_W LDA, THQ Y	VSS	XWLBST_W LDA, THQ P	XWLBST_W LDA, THQ N	
G	XUSB200 RD, SS, RX 3, N	XUSB200 RD, SS, TX 3, P	XUSB200 RD, SS, RX 2, P	XUSB200 RD, SS, TX 2, N	VDDQ18 S830, PHY	VDDQ18 S830, PHY	VDDQ18 S830, PHY	VDDQ18 S830, PHY	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
H	XUSB200 RD, SS, TX 2, N	XUSB200 RD, SS, TX 2, P	XUSB200 RD, SS, TX 1, N	XUSB200 RD, SS, TX 1, P	VDDQ18 S830, PHY	VDDQ18 S830, PHY	VDDQ18 S830, PHY	VDDQ18 S830, PHY	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
I	VDDQ_M EM	VDD1_M EM	VSS	XADCDA1 N,0	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
J	XADCDA1 N,5	XADCDA1 N,3	XADCDA1 N,1	XADCDA1 N,2	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
K	XADCDA1 N,7	VDD2_M EM	XADCDA1 N,6	XADCDA1 N,4					VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
L	XADCDA1 N,7	VDD2_M EM	XADCDA1 N,6	XADCDA1 N,4					VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
M	VSS	XGPIO9	XGPIO14	XGPIO13	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
N	XCL1_M LK	XCL1_M LK	XCL1_M LK	XGPIO13	VDDQ18 S830, PHY	VDDQ18 S830, PHY	VDDQ18 S830, PHY	VDDQ18 S830, PHY	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
P	XSPH22 CSCL	XSPH22 CSCL	XSPH22 CSCL	XGPIO18	XGPIO12	XGPIO11	VDDQ18 S830, PHY	VDDQ18 S830, PHY	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
R	XSPH22 CSCL	XSPH22 CSCL	XSPH22 CSCL	XGPIO18	XGPIO12	XGPIO11	VDDQ18 S830, PHY	VDDQ18 S830, PHY	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
S	XSPH22 CSCL	XSPH22 CSCL	XSPH22 CSCL	XGPIO18	XGPIO12	XGPIO11	VDDQ18 S830, PHY	VDDQ18 S830, PHY	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
T	VSS	XSPH22 CSCL	XSPH22 CSCL	XSPH22 CSCL	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
U	VSS	XSPH22 CSCL	XSPH22 CSCL	XSPH22 CSCL	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
V	VSS	XSPH22 CSCL	XSPH22 CSCL	XSPH22 CSCL	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
W	VSS	XSPH22 CSCL	XSPH22 CSCL	XSPH22 CSCL	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
X	VSS	XSPH22 CSCL	XSPH22 CSCL	XSPH22 CSCL	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
Y	VSS	XSPH22 CSCL	XSPH22 CSCL	XSPH22 CSCL	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
AA	VSS	XSPH22 CSCL	XSPH22 CSCL	XSPH22 CSCL	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
AB	VSS	XSPH22 CSCL	XSPH22 CSCL	XSPH22 CSCL	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
AC	VSS	XSPH22 CSCL	XSPH22 CSCL	XSPH22 CSCL	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
AD	VSS	XSPH22 CSCL	XSPH22 CSCL	XSPH22 CSCL	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
AE	VSS	XSPH22 CSCL	XSPH22 CSCL	XSPH22 CSCL	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
AF	VSS	XSPH22 CSCL	XSPH22 CSCL	XSPH22 CSCL	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
AG	VSS	XSPH22 CSCL	XSPH22 CSCL	XSPH22 CSCL	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
AH	VSS	XSPH22 CSCL	XSPH22 CSCL	XSPH22 CSCL	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
AI	VSS	XSPH22 CSCL	XSPH22 CSCL	XSPH22 CSCL	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
AJ	VSS	XSPH22 CSCL	XSPH22 CSCL	XSPH22 CSCL	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	AVDD18 S830, PHY	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS

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