

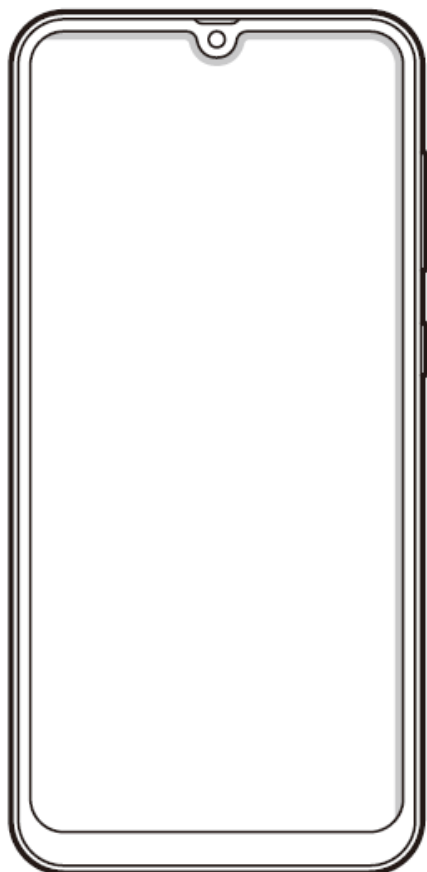
SAMSUNG

Mobile Device
SM-A507FN/A5070
Common

SERVICE ***Manual***

Mobile Device

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1. Safety Precautions

1-1. Repair Precaution

Before attempting any repair or detailed tuning, shield the device from RF noise or static electricity discharges.

Use only demagnetized tools that are specifically designed for small electronic repairs, as most electronic parts are sensitive to electromagnetic forces.

Use only high quality screwdrivers when servicing products. Low quality screwdrivers can easily damage the heads of screws.

Use only conductor wire of the properly gauge and insulation for low resistance, because of the low margin of error of most testing equipment.

We recommend 22-gauge twisted copper wire.

Hand-soldering is not recommended, because printed circuit boards (PCBs) can be easily damaged, even with relatively low heat. Never use a soldering iron with a power rating of more than 100 watts and use only lead-free solder with a melting point below 250°C (482°F).

Prior to disassembling the battery charger for repair, ensure that the AC power is disconnected.

Always use the replacement parts that are registered in the SEC system. Third-party replacement parts may not function properly.

1. Safety Precautions

1-2. ESD(Electrostatically Sensitive Devices) Precaution

Many semiconductors and ESDs in electronic devices are particularly sensitive to static discharge and can be easily damaged by it. We recommend protecting these components with conductive anti-static bags when you store or transport them.

Always use an anti-static strap or wristband and remove electrostatic buildup or dissipate static electricity from your body before repairing ESDs.

Ensure that soldering irons have AC adapter with ground wires and that the ground wires are properly connected.

Use only desoldering tools with plastic tips to prevent static discharge.

Properly shield the work environment from accidental electrostatic discharge before opening packages containing ESDs.

The potential for static electricity discharge may be increased in low humidity environments, such as air-conditioned rooms. Increase the airflow to the working area to decrease the chance of accidental static electricity discharges.

2. Specification

2-1. GSM General Specification

| Item | | GSM 850 | EGSM 900 | DCS1800 | PCS1900 |
|-----------------------------------|---------------|------------------------|------------------------|------------------------|------------------------|
| Freq. Band[MHz] | | 824~849 | 880~915 | 1710~1785 | 1850~1910 |
| Uplink/Downlink | | 869~894 | 925~960 | 1805~1880 | 1930~1990 |
| ARFCN range | | 128~251 | 0~124 & 975~1023 | 512~885 | 512~810 |
| Tx/Rx spacing | | 45MHz | 45MHz | 95MHz | 80MHz |
| Mod. Bit rate/ Bit Period | | 270.833kbps 3.692us | 270.833kbps 3.692us | 270.833kbps 3.692us | 270.833kbps 3.692us |
| Time Slot Period/ Frame Period | | 576.9us 4.615ms | 576.9us 4.615ms | 576.9us 4.615ms | 576.9us 4.615ms |
| Modulation | GSM/ EGPRS | GMSK/ 8PSK | GMSK/ 8PSK | GMSK/ 8PSK | GMSK/ 8PSK |
| MS Power | | 33dBm~5dBm | 33dBm~5dBm | 30dBm~0dBm | 30dBm~0dBm |
| Power Class | | 4(GMSK) E2(8PSK) | 4(GMSK) E2(8PSK) | 1(GMSK) E2(8PSK) | 1(GMSK) E2(8PSK) |
| Sensitivity | | -102dBm | -102dBm | -100dBm | -100dBm |
| TDMA Mux | | 8 | 8 | 8 | 8 |

2. Specification

2-2. GSM Tx Power Class

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

2. Specification

2-3. WCDMA General Specification

| Item | WCDMA2100(B1) | WCDMA1900(B2) | WCDMA850(B5) | WCDMA900(B8) |
|------------------------------------|--|--|--|--|
| Freq. Band[MHz] Uplink/Downlink | 1920~1980 2110~2170 | 1850~1910 1930~1990 | 824~849 869~894 | 880~915 925~960 |
| ARFCN range | UL: 9612~9888 DL: 10562~10838 | UL: 9262~9538 DL: 9662~9938 | UL: 4132~4233 DL: 4357~4458 | UL: 2712~2868 DL: 2937~3088 |
| Tx/Rx spacing | 190MHz | 80MHz | 45MHz | 45MHz |
| Mod. Bit rate/ Bit Period | 42.2Mbps(DL) 5.42Mbps(UL) | 42.2Mbps(DL) 5.42Mbps(UL) | 42.2Mbps(DL) 5.42Mbps(UL) | 42.2Mbps(DL) 5.42Mbps(UL) |
| Time Slot Period/ Frame Period | WCDMA 10ms/0.667ms HSPA 2ms/0.667ms | WCDMA 10ms/0.667ms HSPA 2ms/0.667ms | WCDMA 10ms/0.667ms HSPA 2ms/0.667ms | WCDMA 10ms/0.667ms HSPA 2ms/0.667ms |
| Modulation | QPSK 16QAM 64QAM | QPSK 16QAM 64QAM | QPSK 16QAM 64QAM | QPSK 16QAM 64QAM |
| MS Power (dBm) | 25.7 ~ -49(↓) | 25.7 ~ -49(↓) | 25.7 ~ -49(↓) | 25.7 ~ -49(↓) |
| Power Class | 3(max+24dBm) | 3(max+24dBm) | 3(max+24dBm) | 3(max+24dBm) |
| Sensitivity | -106dBm | -104dBm | -104dBm | -103dBm |

2. Specification

2-4. LTE General Specification

| Item | LTE Band1 | LTE Band3 | LTE Band5 | LTE Band7 | LTE Band8 |
|---------------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Freq. Band[MHz] Uplink/Downlink | 1920~1980 2110~2170 | 1710~1785 1805~1880 | 824~849 869~894 | 2500~2570 2620~2690 | 880~915 925~960 |
| ARFCN range | UL:18000~18599 DL:0~599 | UL:19200~19949 DL:1200~1949 | UL:20400~20649 DL:2400~2649 | UL:20750~21449 DL:2750~3449 | UL:21450~21799 DL:3450~3799 |
| Tx/Rx spacing (MHz) | 190 | 95 | 45 | 120 | 45 |
| Channel Bandwidth (MHz) | 5/10/15/20 | 1.4/3/5/10/15/20 | 1.4/3/5/10 | 5/10/15/20 | 1.4/3/5/10 |
| Modulation | QPSK,16/64QAM 256QAM(DL only) | QPSK,16/64QAM 256QAM(DL only) | QPSK,16/64QAM 256QAM(DL only) | QPSK,16/64QAM 256QAM(DL only) | QPSK,16/64QAM 256QAM(DL only) |
| MS Power (dBm) | 25.7~-39(↓) | 25.7~-39(↓) | 25.7~-39(↓) | 25.7~-39(↓) | 25.7~-39(↓) |
| Sensitivity (QPSK, BW 10MHz) (dBm) | -96.3 | -93.3 | -94.3 | -94.3 | -93.3 |

| Item | LTE Band20 | LTE Band28 | LTE Band38 | LTE Band40 | LTE Band41 |
|--------------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Freq. Band[MHz] Uplink/Downlink | 832~862 791~821 | 703~748 758~803 | 2570~2620 | 2300~2400 | 2496~2690 |
| ARFCN range | UL:24150~24449 DL:6150~6449 | UL:27210~27659 DL:9210~9659 | UL/DL:37750 ~ 38249 | UL/DL:38650 ~ 39649 | UL/DL:39650 ~ 41589 |
| Tx/Rx spacing (MHz) | -41 | 55 | 0 | 0 | 0 |
| Channel Bandwidth (MHz) | 5/10/15/20 | 3/5/10/15/20 | 5/10/15/20 | 5/10/15/20 | 5/10/15/20 |
| Modulation | QPSK,16/64QAM 256QAM(DL only) | QPSK,16/64QAM 256QAM(DL only) | QPSK,16/64QAM 256QAM(DL only) | QPSK,16/64QAM 256QAM(DL only) | QPSK,16/64QAM 256QAM(DL only) |
| MS Power (dBm) | 25.7~-39(↓) | 25.7~-39(↓) | 25.7~-39(↓) | 25.7~-39(↓) | 25.7~-39(↓) |
| Sensitivity(QPSK, BW 10MHz) (dBm) | -93.3 | -94.8 | -96.3 | -96.3 | -94.3 |

2. Specification

2-5. CDMA General Specification [A5070 CHN]

| Item | US-CELLULAR |
|-----------------------|-------------------|
| Tx Freq. range | 1850 ~1910MHz |
| Rx Freq. range | 1930 ~1990MHz |
| Channel Bandwidth | 1.23MHz |
| Channel Spacing | 50KHz |
| Number of Channel | 1200 |
| Duplex Separation | 80MHz |
| Type of Emission | 1M29F9W |
| In/Output Impedance | 50Ω |
| Tx Local Frequency | FTx * 0.7999 |
| Rx Local Frequency | FRx * 0.8888 |
| TCXO Frequency | 19.2MHz |
| Frequency Stability | (FRX-80MHz)±150Hz |
| Operating Temperature | -30°C ~ +60°C |

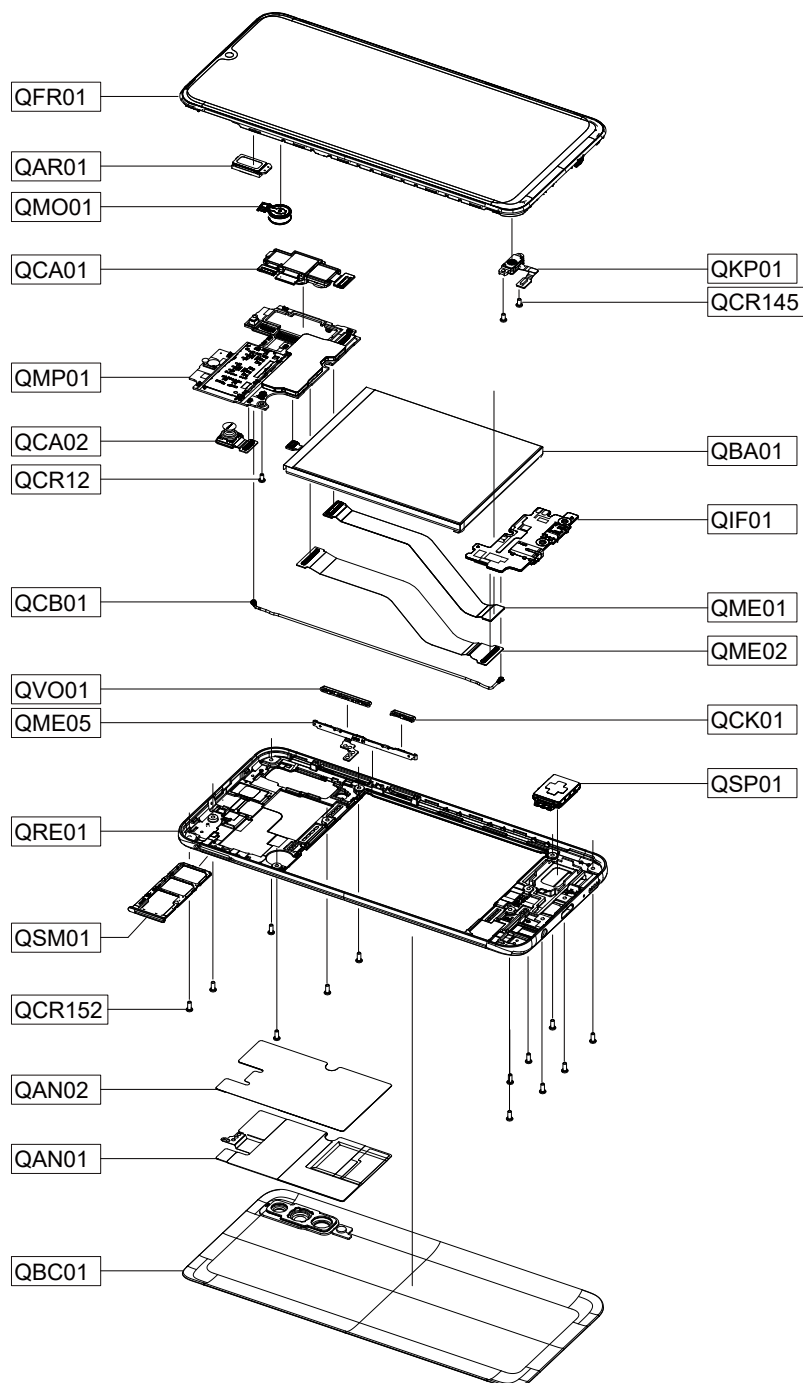
3. Product Function

Main Function

| Item | Description |
|-----------------------|---|
| OS | Android P OS V9.0 |
| SM-A507F RF | GSM850 / GSM900 / DCS1800 / PCS1900 WCDMA: B1/ B2/ B5/ B8 LTE: B1/B3/B5/B7/B8/B20/B28/B38/B40/B41 |
| SM-A5070 RF | GSM850 / GSM900 / DCS1800 / PCS1900 CDMA : BC0 WCDMA: B1/ B2/ B5/ B8 TDSCMDA : B34/39 LTE: B1/B3/B5/B7/B8/B20/B28/B34/B38/B39/B40/B41 |
| Battery | 4,000mAh |
| Base Band | 2.3Ghz Quad + 1.7GHz Quad |
| Other RF | GPS, Glonass, Beidou, Galileo / BT5.0 / USB 2.0 / WIFI 802.11 a/b/g/n/ac / NFC |
| Camera | Triple Camera (25MP(F1.7) + 5MP(F2.2) + 8MP(F2.2)) with LED Flash / Front Camera 24MP(F2.0) |
| LCD | 6.4", FHD+, 2340x1080 |
| RAM | 4GB/6GB |
| Storage | 64GB/128GB |
| Sensor | Accelerometer, Fingerprint Sensor, Gyro Sensor, Geomagnetic Sensor, Hall Sensor, Proximity Sensor, RGB Light Sensor, Grip sensor |
| Accessory | Charger: 9V/1.67A and 5V/2.0A AFC charging Data cable: 3.0pi, 0.8m(USB-C) Ear phone: 3.5pi, 4pin |

4. Exploded View and Parts List

4-1. Cellular phone Exploded View



※ SVC REPAIR TAPE
QRT01

5. MAIN Electrical Parts List

[SM-A507FN]

| Parts Code | Design LOC | Description |
|----------------------|-------------|-----------------|
| D5001 | 0401-001110 | DIODE-SWITCHING |
| D5000 | 0404-001250 | DIODE-SCHOTTKY |
| ZD1000 | 0406-001506 | DIODE-TVS |
| ZD5000,ZD5001,ZD6022 | 0406-001561 | DIODE-TVS |
| ZD5003 | 0406-001592 | DIODE-TVS |
| ZD7009 | 0406-001728 | DIODE-TVS |
| ZD6018,ZD6023,ZD6024 | 0406-001781 | DIODE-TVS |
| ZD6020,ZD6021 | 0406-001797 | DIODE-TVS |
| ZD6016 | 0406-001808 | DIODE-TVS |
| ZD1001,ZD5004 | 0406-001829 | DIODE-TVS |
| LED5000 | 0601-003768 | LED |
| U3003 | 1001-002062 | IC |
| U1001 | 1001-002063 | IC |
| U2005 | 1001-002078 | IC |
| U1002 | 1001-002082 | IC |
| U2006 | 1003-002802 | IC |
| U3007 | 1009-001078 | IC |
| UME5000 | 1107-002536 | IC-FLASH MEMORY |
| U3006 | 1201-003869 | IC |
| U1003 | 1201-004209 | IC |
| U1004,U1006 | 1201-004219 | IC |
| PAM1000 | 1201-004237 | IC |
| U6000 | 1201-004240 | IC |
| U3010,U3012 | 1203-008249 | IC |
| U5004 | 1203-008251 | IC |
| U7005 | 1203-008326 | IC |
| U2002 | 1203-008693 | IC |
| U5001 | 1203-008729 | IC |
| U7001 | 1203-008865 | IC |
| U7002,U7006 | 1203-008867 | IC |
| U3014 | 1203-008925 | IC |
| U7007 | 1203-008926 | IC |
| U5005 | 1203-009113 | IC |
| U7003 | 1203-009220 | IC |
| U7000 | 1203-009221 | IC |
| U500 | 1203-009224 | IC |
| U6002 | 1203-009233 | IC |

5. MAIN Electrical Parts List

| | | |
|----------------------|-------------|------------|
| U6001 | 1205-005750 | IC |
| U2004 | 1205-005767 | IC |
| U3000 | 1205-005979 | IC |
| U3005 | 1205-006087 | IC |
| UCP400 | 1205-006177 | IC |
| U3011 | 1209-002450 | IC |
| U3015 | 1209-002513 | IC |
| U3008 | 1209-002628 | IC |
| U3013 | 1209-002629 | IC |
| U3009 | 1209-002640 | IC |
| TH1000,TH4000,TH4001 | 1404-001724 | THERMISTOR |
| TH5000 | 1404-001724 | THERMISTOR |
| V7000 | 1405-001458 | VARISTOR |
| R3007 | 2007-000141 | R-CHIP |
| R3005 | 2007-000148 | R-CHIP |
| R5015 | 2007-000172 | R-CHIP |
| R6026,R6027 | 2007-003015 | R-CHIP |
| R1012 | 2007-007100 | R-CHIP |
| R6028,R6029 | 2007-007192 | R-CHIP |
| R2002,R2003,R5004 | 2007-007741 | R-CHIP |
| R5007 | 2007-007741 | R-CHIP |
| ZD6017 | 2007-007798 | R-CHIP |
| R5002 | 2007-007942 | R-CHIP |
| R5003 | 2007-007946 | R-CHIP |
| R5001 | 2007-008043 | R-CHIP |
| R4000 | 2007-008048 | R-CHIP |
| R4016,R4030,R4032 | 2007-008052 | R-CHIP |
| R4033,R5008,R5010 | 2007-008052 | R-CHIP |
| R7002 | 2007-008052 | R-CHIP |
| R5014,R7004 | 2007-008055 | R-CHIP |
| R1001,R1002,R1008 | 2007-008056 | R-CHIP |
| R1009 | 2007-008056 | R-CHIP |
| R1011,R4055,R5009 | 2007-008419 | R-CHIP |
| R6017 | 2007-008419 | R-CHIP |
| R5005,R5006 | 2007-008483 | R-CHIP |
| R5013,R5017,R5018 | 2007-008486 | R-CHIP |
| R5019 | 2007-008486 | R-CHIP |
| R4003,R5012,R6001 | 2007-008516 | R-CHIP |
| R6010,R7000,R7001 | 2007-008531 | R-CHIP |

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5. MAIN Electrical Parts List

| | | |
|-------------------|-------------|----------------|
| R7005 | 2007-008531 | R-CHIP |
| R3003,R3008,R4005 | 2007-008588 | R-CHIP |
| R4008,R4009,R4010 | 2007-008588 | R-CHIP |
| R4011,R4012,R4013 | 2007-008588 | R-CHIP |
| R4014,R4019,R4022 | 2007-008588 | R-CHIP |
| R4023,R4025,R4027 | 2007-008588 | R-CHIP |
| R4028,R4029,R4034 | 2007-008588 | R-CHIP |
| R4035,R4036,R4037 | 2007-008588 | R-CHIP |
| R4038,R4039,R4040 | 2007-008588 | R-CHIP |
| R4043,R4044,R4045 | 2007-008588 | R-CHIP |
| R4046,R4047,R4048 | 2007-008588 | R-CHIP |
| R4049,R4050,R4051 | 2007-008588 | R-CHIP |
| R4052,R4053,R4054 | 2007-008588 | R-CHIP |
| R6018,R6025 | 2007-008588 | R-CHIP |
| R1000,R1010 | 2007-008785 | R-CHIP |
| R1004,R1005,R1006 | 2007-008806 | R-CHIP |
| R1007,R1014,R3001 | 2007-008806 | R-CHIP |
| R4002 | 2007-008816 | R-CHIP |
| R3004 | 2007-009111 | R-CHIP |
| R5016 | 2007-009155 | R-CHIP |
| R1013,R4006,R4007 | 2007-009157 | R-CHIP |
| R5021 | 2007-009157 | R-CHIP |
| R5011 | 2007-009182 | R-CHIP |
| R6000 | 2007-009314 | R-CHIP |
| R5020 | 2007-009315 | R-CHIP |
| R1003 | 2007-009361 | R-CHIP |
| R6008,R6031,R6032 | 2007-009410 | R-CHIP |
| R2000 | 2007-009805 | R-CHIP |
| R6013 | 2007-009838 | R-CHIP |
| R4020,R4021,R4024 | 2007-009920 | R-CHIP |
| R4026 | 2007-009920 | R-CHIP |
| R3010,R3011,R6020 | 2007-009969 | R-CHIP |
| R6030 | 2007-010031 | R-CHIP |
| R6011 | 2007-011648 | R-CHIP |
| C3095,C3102 | 2203-000233 | C-CERAMIC,CHIP |
| C3098 | 2203-000311 | C-CERAMIC,CHIP |
| C5119 | 2203-005344 | C-CERAMIC,CHIP |
| C3099 | 2203-005395 | C-CERAMIC,CHIP |
| C1018,C1021,C1023 | 2203-005682 | C-CERAMIC,CHIP |

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5. MAIN Electrical Parts List

| | | |
|-------------------|-------------|----------------|
| C1025,C1066,C1067 | 2203-005682 | C-CERAMIC,CHIP |
| C5099,C5105,C5114 | 2203-005682 | C-CERAMIC,CHIP |
| C7046,C7064,C7065 | 2203-005682 | C-CERAMIC,CHIP |
| C3027,C3029,C3041 | 2203-005725 | C-CERAMIC,CHIP |
| C7006,C7007 | 2203-005725 | C-CERAMIC,CHIP |
| L2026 | 2203-005727 | C-CERAMIC,CHIP |
| C1089,C5102,C6044 | 2203-005729 | C-CERAMIC,CHIP |
| C6046,C6051,C6052 | 2203-005729 | C-CERAMIC,CHIP |
| L1089 | 2203-005729 | C-CERAMIC,CHIP |
| C2052,C6058,C6059 | 2203-005731 | C-CERAMIC,CHIP |
| L1059 | 2203-005731 | C-CERAMIC,CHIP |
| C5097,C6039,C6045 | 2203-005732 | C-CERAMIC,CHIP |
| C6050 | 2203-005732 | C-CERAMIC,CHIP |
| C1005,C3054 | 2203-005734 | C-CERAMIC,CHIP |
| C1000,C1002,C1010 | 2203-005736 | C-CERAMIC,CHIP |
| C1015,C1017,C1028 | 2203-005736 | C-CERAMIC,CHIP |
| C1033,C1052,C1054 | 2203-005736 | C-CERAMIC,CHIP |
| C1056,C1063,C1087 | 2203-005736 | C-CERAMIC,CHIP |
| C2002,C2006,C2009 | 2203-005736 | C-CERAMIC,CHIP |
| C2013,C2039,C2043 | 2203-005736 | C-CERAMIC,CHIP |
| C2044,C2050,C3009 | 2203-005736 | C-CERAMIC,CHIP |
| C3021,C3047,C3048 | 2203-005736 | C-CERAMIC,CHIP |
| L1005,L1027,L1052 | 2203-005736 | C-CERAMIC,CHIP |
| C1035 | 2203-005740 | C-CERAMIC,CHIP |
| C1029,C1072,C1076 | 2203-005777 | C-CERAMIC,CHIP |
| L1062,L1066,L1098 | 2203-005777 | C-CERAMIC,CHIP |
| C1007,C1030,C1032 | 2203-005789 | C-CERAMIC,CHIP |
| C1048,C1061,C1084 | 2203-005789 | C-CERAMIC,CHIP |
| C1090,L1024,L1035 | 2203-005789 | C-CERAMIC,CHIP |
| L1079 | 2203-005789 | C-CERAMIC,CHIP |
| C1058 | 2203-005792 | C-CERAMIC,CHIP |
| C1003,C1081,C2000 | 2203-005806 | C-CERAMIC,CHIP |
| C6042 | 2203-006121 | C-CERAMIC,CHIP |
| C1020 | 2203-006123 | C-CERAMIC,CHIP |
| C6012 | 2203-006194 | C-CERAMIC,CHIP |
| C1001,C1070 | 2203-006318 | C-CERAMIC,CHIP |
| C2049,C3002,C3003 | 2203-006400 | C-CERAMIC,CHIP |
| C3043,C3044,C3097 | 2203-006400 | C-CERAMIC,CHIP |
| C3100,C4011,C4012 | 2203-006400 | C-CERAMIC,CHIP |

5. MAIN Electrical Parts List

| | | |
|-------------------|-------------|----------------|
| C5080,C5123,C5124 | 2203-006400 | C-CERAMIC,CHIP |
| C3045,L1061 | 2203-006410 | C-CERAMIC,CHIP |
| C2031,C3057,C3059 | 2203-006423 | C-CERAMIC,CHIP |
| C3071,C3072,C5104 | 2203-006423 | C-CERAMIC,CHIP |
| C6000,C6004,C6006 | 2203-006423 | C-CERAMIC,CHIP |
| C6038,C6049,C7040 | 2203-006423 | C-CERAMIC,CHIP |
| C5096 | 2203-006556 | C-CERAMIC,CHIP |
| C1057,C3053,L1057 | 2203-006604 | C-CERAMIC,CHIP |
| C1069 | 2203-006611 | C-CERAMIC,CHIP |
| L1065 | 2203-006665 | C-CERAMIC,CHIP |
| C4003 | 2203-006668 | C-CERAMIC,CHIP |
| C1053 | 2203-006674 | C-CERAMIC,CHIP |
| C1031,C1065 | 2203-006707 | C-CERAMIC,CHIP |
| C1004,C1024,C1040 | 2203-006839 | C-CERAMIC,CHIP |
| C1042,C1043,C1045 | 2203-006839 | C-CERAMIC,CHIP |
| C1077,C1080,C1085 | 2203-006839 | C-CERAMIC,CHIP |
| C1086,C2001,C3086 | 2203-006839 | C-CERAMIC,CHIP |
| C3093,C4007,C4010 | 2203-006839 | C-CERAMIC,CHIP |
| C4034,C5076,C5077 | 2203-006839 | C-CERAMIC,CHIP |
| C5078,C6009 | 2203-006839 | C-CERAMIC,CHIP |
| C1050 | 2203-006846 | C-CERAMIC,CHIP |
| C3087,C3088,C5006 | 2203-006872 | C-CERAMIC,CHIP |
| C5013,C5026,C5027 | 2203-006872 | C-CERAMIC,CHIP |
| C5028,C5032,C5043 | 2203-006872 | C-CERAMIC,CHIP |
| C5044,C5048,C5090 | 2203-006872 | C-CERAMIC,CHIP |
| C5094,C5095 | 2203-006896 | C-CERAMIC,CHIP |
| C1027 | 2203-006968 | C-CERAMIC,CHIP |
| C1083,C2020,C2023 | 2203-006979 | C-CERAMIC,CHIP |
| C2025,C2026,C2030 | 2203-006979 | C-CERAMIC,CHIP |
| C2033,C2034,C2035 | 2203-006979 | C-CERAMIC,CHIP |
| C2037,C2051 | 2203-006979 | C-CERAMIC,CHIP |
| C3049,C3058,C7031 | 2203-007194 | C-CERAMIC,CHIP |
| L1003 | 2203-007194 | C-CERAMIC,CHIP |
| C3085 | 2203-007210 | C-CERAMIC,CHIP |
| C5109 | 2203-007271 | C-CERAMIC,CHIP |
| C3035,C3064,C3069 | 2203-007317 | C-CERAMIC,CHIP |
| C5008,C5036,C5037 | 2203-007317 | C-CERAMIC,CHIP |
| C5040,C5041,C5042 | 2203-007317 | C-CERAMIC,CHIP |
| C5065,C5068,C5074 | 2203-007317 | C-CERAMIC,CHIP |

5. MAIN Electrical Parts List

| | | |
|-------------------|-------------|----------------|
| C7000,C7010,C7014 | 2203-007317 | C-CERAMIC,CHIP |
| C7015,C7033,C7035 | 2203-007317 | C-CERAMIC,CHIP |
| C2028,C3090,C6029 | 2203-007391 | C-CERAMIC,CHIP |
| C6048 | 2203-007391 | C-CERAMIC,CHIP |
| C2053 | 2203-007392 | C-CERAMIC,CHIP |
| C1046,C1047,C2011 | 2203-007393 | C-CERAMIC,CHIP |
| C3001,C3091,C3094 | 2203-007393 | C-CERAMIC,CHIP |
| C4029,C4044,C4051 | 2203-007393 | C-CERAMIC,CHIP |
| C4059,C4067,C4074 | 2203-007393 | C-CERAMIC,CHIP |
| C5081,C5093,C5106 | 2203-007393 | C-CERAMIC,CHIP |
| C5118,C6016,C6021 | 2203-007393 | C-CERAMIC,CHIP |
| C6024,C6026,C6031 | 2203-007393 | C-CERAMIC,CHIP |
| C6032,C6033,C6034 | 2203-007393 | C-CERAMIC,CHIP |
| C6035,C6037,C7026 | 2203-007393 | C-CERAMIC,CHIP |
| C5103 | 2203-007425 | C-CERAMIC,CHIP |
| C6054 | 2203-007456 | C-CERAMIC,CHIP |
| C2022,C2029,C2038 | 2203-007474 | C-CERAMIC,CHIP |
| C2010,C2021,C2024 | 2203-007796 | C-CERAMIC,CHIP |
| C2032,C2036,C3034 | 2203-007796 | C-CERAMIC,CHIP |
| C3038,C3060,C3061 | 2203-007796 | C-CERAMIC,CHIP |
| C3063,C3066,C3068 | 2203-007796 | C-CERAMIC,CHIP |
| C3070,C4004,C4006 | 2203-007796 | C-CERAMIC,CHIP |
| C4008,C4013,C4017 | 2203-007796 | C-CERAMIC,CHIP |
| C4019,C4020,C4021 | 2203-007796 | C-CERAMIC,CHIP |
| C4022,C4026,C4027 | 2203-007796 | C-CERAMIC,CHIP |
| C4030,C4031,C4032 | 2203-007796 | C-CERAMIC,CHIP |
| C4036,C4040,C4041 | 2203-007796 | C-CERAMIC,CHIP |
| C4042,C4043,C4045 | 2203-007796 | C-CERAMIC,CHIP |
| C4047,C4048,C4049 | 2203-007796 | C-CERAMIC,CHIP |
| C4050,C4053,C4054 | 2203-007796 | C-CERAMIC,CHIP |
| C4055,C4056,C4057 | 2203-007796 | C-CERAMIC,CHIP |
| C4058,C4060,C4061 | 2203-007796 | C-CERAMIC,CHIP |
| C4062,C4063,C4064 | 2203-007796 | C-CERAMIC,CHIP |
| C4065,C4066,C4069 | 2203-007796 | C-CERAMIC,CHIP |
| C4070,C4071,C4073 | 2203-007796 | C-CERAMIC,CHIP |
| C4076,C4077,C4080 | 2203-007796 | C-CERAMIC,CHIP |
| C4087,C4088,C4090 | 2203-007796 | C-CERAMIC,CHIP |
| C4091,C4093,C4094 | 2203-007796 | C-CERAMIC,CHIP |
| C4095,C4096,C4097 | 2203-007796 | C-CERAMIC,CHIP |

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5. MAIN Electrical Parts List

| | | |
|-------------------|-------------|----------------|
| C4099,C4100,C4101 | 2203-007796 | C-CERAMIC,CHIP |
| C4102,C5011,C5014 | 2203-007796 | C-CERAMIC,CHIP |
| C5015,C5022,C5031 | 2203-007796 | C-CERAMIC,CHIP |
| C5038,C5039,C5047 | 2203-007796 | C-CERAMIC,CHIP |
| C5049,C5069,C5072 | 2203-007796 | C-CERAMIC,CHIP |
| C5073,C5111,C5116 | 2203-007796 | C-CERAMIC,CHIP |
| C6002,C6017,C6020 | 2203-007796 | C-CERAMIC,CHIP |
| C6022,C6023,C6025 | 2203-007796 | C-CERAMIC,CHIP |
| C7001,C7004,C7005 | 2203-007796 | C-CERAMIC,CHIP |
| C7008,C7009,C7013 | 2203-007796 | C-CERAMIC,CHIP |
| C7016,C7018,C7022 | 2203-007796 | C-CERAMIC,CHIP |
| C7032,C7050,C7077 | 2203-007796 | C-CERAMIC,CHIP |
| C7082 | 2203-007796 | C-CERAMIC,CHIP |
| C5112,C5115 | 2203-008097 | C-CERAMIC,CHIP |
| C2056,C3005,C3006 | 2203-008242 | C-CERAMIC,CHIP |
| C3011,C3022,C3023 | 2203-008242 | C-CERAMIC,CHIP |
| C3030,C4000,C4038 | 2203-008242 | C-CERAMIC,CHIP |
| C4039,C4072,C4075 | 2203-008242 | C-CERAMIC,CHIP |
| C5029 | 2203-008242 | C-CERAMIC,CHIP |
| C6057 | 2203-008243 | C-CERAMIC,CHIP |
| C4081,C5001,C5003 | 2203-008312 | C-CERAMIC,CHIP |
| C5004,C5052,C5054 | 2203-008312 | C-CERAMIC,CHIP |
| C5056,C5058,C5060 | 2203-008312 | C-CERAMIC,CHIP |
| C5062,C5064,C5067 | 2203-008312 | C-CERAMIC,CHIP |
| C5100 | 2203-008572 | C-CERAMIC,CHIP |
| C6053 | 2203-008654 | C-CERAMIC,CHIP |
| C1082,C2055,C3000 | 2203-008860 | C-CERAMIC,CHIP |
| C3062,C3065,C3067 | 2203-008860 | C-CERAMIC,CHIP |
| C5007,C5098,C5101 | 2203-008860 | C-CERAMIC,CHIP |
| C5110,C5113,C5122 | 2203-008860 | C-CERAMIC,CHIP |
| C6008,C6014,C6015 | 2203-008860 | C-CERAMIC,CHIP |
| C7017,C7019,C7052 | 2203-008860 | C-CERAMIC,CHIP |
| C7053,C7054,C7078 | 2203-008860 | C-CERAMIC,CHIP |
| C7079,C7080 | 2203-008860 | C-CERAMIC,CHIP |
| C1041,C1079,C3084 | 2203-008876 | C-CERAMIC,CHIP |
| C3092,C3105,C4001 | 2203-008876 | C-CERAMIC,CHIP |
| C4002,C4014,C4016 | 2203-008876 | C-CERAMIC,CHIP |
| C5023,C5024,C5025 | 2203-008876 | C-CERAMIC,CHIP |
| C5030,C5046,C5050 | 2203-008876 | C-CERAMIC,CHIP |

5. MAIN Electrical Parts List

| | | |
|-------------------|-------------|----------------|
| C5087,C5092,C5107 | 2203-008876 | C-CERAMIC,CHIP |
| C5108,C6011,C6055 | 2203-008876 | C-CERAMIC,CHIP |
| C7034,C7081 | 2203-008876 | C-CERAMIC,CHIP |
| C4084,C4085,C4086 | 2203-009064 | C-CERAMIC,CHIP |
| C3096,C3107 | 2203-009167 | C-CERAMIC,CHIP |
| C5009 | 2203-009537 | C-CERAMIC,CHIP |
| C7056 | 2203-009618 | C-CERAMIC,CHIP |
| C2008,C2027,C4037 | 2203-009733 | C-CERAMIC,CHIP |
| C4046,C4052,C4068 | 2203-009733 | C-CERAMIC,CHIP |
| C4078,C4079,C4092 | 2203-009733 | C-CERAMIC,CHIP |
| C5000,C5002,C5005 | 2203-009733 | C-CERAMIC,CHIP |
| C5051,C5053,C5055 | 2203-009733 | C-CERAMIC,CHIP |
| C5057,C5059,C5061 | 2203-009733 | C-CERAMIC,CHIP |
| C5063,C5066,C5070 | 2203-009733 | C-CERAMIC,CHIP |
| C5079,C5084,C5085 | 2203-009733 | C-CERAMIC,CHIP |
| C5086,C5088,C5089 | 2203-009733 | C-CERAMIC,CHIP |
| C5117,C5120,C5121 | 2203-009733 | C-CERAMIC,CHIP |
| C6001,C6003,C6005 | 2203-009733 | C-CERAMIC,CHIP |
| C6007,C6010,C7002 | 2203-009733 | C-CERAMIC,CHIP |
| C7003,C7011,C7012 | 2203-009733 | C-CERAMIC,CHIP |
| C7020,C7021,C7023 | 2203-009733 | C-CERAMIC,CHIP |
| C7024,C7025,C7030 | 2203-009733 | C-CERAMIC,CHIP |
| C7057,C7058,C7059 | 2203-009733 | C-CERAMIC,CHIP |
| C7060,C7061,C7063 | 2203-009733 | C-CERAMIC,CHIP |
| C7066,C7067,C7068 | 2203-009733 | C-CERAMIC,CHIP |
| C7072,C7073,C7074 | 2203-009733 | C-CERAMIC,CHIP |
| C7286,C7294 | 2203-009733 | C-CERAMIC,CHIP |
| C4082,C4083 | 2203-009735 | C-CERAMIC,CHIP |
| C5091 | 2203-009736 | C-CERAMIC,CHIP |
| C6013,R6005 | 2203-009917 | C-CERAMIC,CHIP |
| C5082,C5083 | 2203-010066 | C-CERAMIC,CHIP |
| L3013 | 2703-002907 | INDUCTOR-SMD |
| L1029 | 2703-002955 | INDUCTOR-SMD |
| L2034 | 2703-002959 | INDUCTOR-SMD |
| L1014,L1047 | 2703-002961 | INDUCTOR-SMD |
| L1048 | 2703-003064 | INDUCTOR-SMD |
| L3005 | 2703-003476 | INDUCTOR-SMD |
| L1091,L3014 | 2703-003970 | INDUCTOR-SMD |
| L1028 | 2703-004000 | INDUCTOR-SMD |

5. MAIN Electrical Parts List

| | | |
|-------------------|-------------|--------------|
| C1038,C3008,L1022 | 2703-004012 | INDUCTOR-SMD |
| L1040,L1082,L1093 | 2703-004012 | INDUCTOR-SMD |
| L2004,L3000 | 2703-004012 | INDUCTOR-SMD |
| L1009,L1013,L1018 | 2703-004013 | INDUCTOR-SMD |
| L2001,L2011,L2029 | 2703-004013 | INDUCTOR-SMD |
| L3008,L3012 | 2703-004013 | INDUCTOR-SMD |
| L1010,L1081,L1083 | 2703-004014 | INDUCTOR-SMD |
| L1096,L3009 | 2703-004018 | INDUCTOR-SMD |
| L1002,L1039,L1042 | 2703-004032 | INDUCTOR-SMD |
| L1074 | 2703-004032 | INDUCTOR-SMD |
| L1017,L1088,L2015 | 2703-004033 | INDUCTOR-SMD |
| C2017,L1001,L1054 | 2703-004034 | INDUCTOR-SMD |
| L2025,L2030,L3016 | 2703-004034 | INDUCTOR-SMD |
| L1037 | 2703-004035 | INDUCTOR-SMD |
| C1088,L2010 | 2703-004038 | INDUCTOR-SMD |
| L3010 | 2703-004171 | INDUCTOR-SMD |
| L3004 | 2703-004286 | INDUCTOR-SMD |
| C1019,L1008,L1011 | 2703-004317 | INDUCTOR-SMD |
| L1012,L2013 | 2703-004317 | INDUCTOR-SMD |
| C2005,L1085 | 2703-004366 | INDUCTOR-SMD |
| L2012 | 2703-004368 | INDUCTOR-SMD |
| L1025,L1086 | 2703-004408 | INDUCTOR-SMD |
| L1034 | 2703-004703 | INDUCTOR-SMD |
| L1046,L1053 | 2703-004763 | INDUCTOR-SMD |
| L1060,L1078,L1084 | 2703-004764 | INDUCTOR-SMD |
| L2016,L2038 | 2703-004764 | INDUCTOR-SMD |
| C2014,L1097,L2032 | 2703-004862 | INDUCTOR-SMD |
| L3001 | 2703-004911 | INDUCTOR-SMD |
| L2009 | 2703-004947 | INDUCTOR-SMD |
| L1023 | 2703-004976 | INDUCTOR-SMD |
| C1060,C1064,L1016 | 2703-005058 | INDUCTOR-SMD |
| L1077,L1090,L2002 | 2703-005058 | INDUCTOR-SMD |
| L2008 | 2703-005058 | INDUCTOR-SMD |
| L5000,L5007,L5008 | 2703-005067 | INDUCTOR-SMD |
| L5009,L5010 | 2703-005067 | INDUCTOR-SMD |
| C2004,L1004,L1092 | 2703-005085 | INDUCTOR-SMD |
| L1094 | 2703-005085 | INDUCTOR-SMD |
| C1026,C1055,L1007 | 2703-005086 | INDUCTOR-SMD |
| L1026,L1036,L1072 | 2703-005086 | INDUCTOR-SMD |

5. MAIN Electrical Parts List

| | | |
|-------------------|-------------|-------------------|
| L1073,L1095,L2000 | 2703-005086 | INDUCTOR-SMD |
| L2033 | 2703-005086 | INDUCTOR-SMD |
| L2037 | 2703-005087 | INDUCTOR-SMD |
| C2015,L1055,L1056 | 2703-005088 | INDUCTOR-SMD |
| L1058,L2003 | 2703-005088 | INDUCTOR-SMD |
| L2035 | 2703-005089 | INDUCTOR-SMD |
| C2019 | 2703-005098 | INDUCTOR-SMD |
| L5013 | 2703-005136 | INDUCTOR-SMD |
| L5001,L5004,L5005 | 2703-005201 | INDUCTOR-SMD |
| L5006 | 2703-005201 | INDUCTOR-SMD |
| L7010 | 2703-005224 | INDUCTOR-SMD |
| L5011 | 2703-005225 | INDUCTOR-SMD |
| L5002 | 2703-005226 | INDUCTOR-SMD |
| C1049,L1019,L1021 | 2703-005295 | INDUCTOR-SMD |
| L1045,L1049,L1100 | 2703-005295 | INDUCTOR-SMD |
| L2014,L2017 | 2703-005295 | INDUCTOR-SMD |
| L7007 | 2703-005418 | INDUCTOR-SMD |
| L7008 | 2703-005419 | INDUCTOR-SMD |
| L6001 | 2703-005505 | INDUCTOR-SMD |
| L5003 | 2703-005509 | INDUCTOR-SMD |
| L3023,L3024 | 2703-005555 | INDUCTOR-SMD |
| C3015 | 2703-005718 | INDUCTOR-SMD |
| OSC5000 | 2801-005389 | CRYSTAL-UNIT |
| F1010 | 2904-002143 | FILTER-SAW |
| F2001 | 2904-002198 | FILTER-SAW |
| F1007 | 2904-002285 | FILTER-SAW |
| F2002 | 2904-002326 | FILTER-SAW |
| F3000,F3001 | 2904-002356 | FILTER-SAW |
| U2000 | 2904-002368 | FILTER-SAW |
| F1005 | 2904-002397 | FILTER-SAW |
| F2000 | 2904-002405 | FILTER-SAW |
| F1009 | 2910-000401 | FILTER |
| F1008 | 2910-000402 | FILTER |
| U3002 | 2911-000426 | FILTER |
| U2001 | 2911-000430 | FILTER |
| U1000 | 2911-000448 | FILTER |
| MIC6000 | 3003-001237 | MIC-CONDENSOR |
| L3011,L3015 | 3301-002078 | CORE-FERRITE BEAD |
| L2006,L2007,L6002 | 3301-002122 | CORE-FERRITE BEAD |

5. MAIN Electrical Parts List

| | | |
|-------------------|-------------|---------------------|
| L6003 | 3301-002122 | CORE-FERRITE BEAD |
| L6000 | 3301-002228 | CORE-FERRITE BEAD |
| L6004,L6005,L6008 | 3301-002235 | CORE-FERRITE BEAD |
| L6009,L6011,L6012 | 3301-002235 | CORE-FERRITE BEAD |
| L6013 | 3301-002235 | CORE-FERRITE BEAD |
| L1000,L1101,L2039 | 3301-002237 | CORE-FERRITE BEAD |
| L2041 | 3301-002237 | CORE-FERRITE BEAD |
| C3046,L2019,L2020 | 3301-002238 | CORE-FERRITE BEAD |
| L2021,L2023,L3007 | 3301-002238 | CORE-FERRITE BEAD |
| L3017,L6010,L6014 | 3301-002238 | CORE-FERRITE BEAD |
| L6016 | 3301-002238 | CORE-FERRITE BEAD |
| L2040 | 3301-002242 | CORE-FERRITE BEAD |
| L7000 | 3301-002244 | CORE-FERRITE BEAD |
| L2018,L2022,L2024 | 3301-002312 | CORE-FERRITE BEAD |
| L7006,L7009,L7011 | 3301-002312 | CORE-FERRITE BEAD |
| L5012 | 3301-002331 | CORE-FERRITE BEAD |
| L7001,L7002,L7004 | 3301-002394 | CORE-FERRITE BEAD |
| RFS1001 | 3705-001708 | CONNECTOR-COAXIAL |
| RFS1000 | 3705-001937 | CONNECTOR-COAXIAL |
| SIM600UP | 3709-001932 | CONNECTOR-CARD EDGE |
| SIM6003 | 3709-001933 | CONNECTOR-CARD EDGE |
| SIM6001,SIM6002 | 3709-001934 | CONNECTOR-CARD EDGE |
| HDC7002 | 3710-003871 | CONNECTOR-SOCKET |
| HDC7003 | 3710-004027 | CONNECTOR-SOCKET |
| SOC6000 | 3710-004367 | CONNECTOR-SOCKET |
| HDC7004 | 3711-007295 | CONNECTOR-HEADER |
| HDC7001 | 3711-008511 | CONNECTOR-HEADER |
| HDC5000 | 3711-008847 | CONNECTOR-HEADER |
| HDC7000 | 3711-008931 | CONNECTOR-HEADER |
| ANT3000,ANT3001 | 3712-001604 | CONNECTOR |
| ANT1000,ANT2000 | 3712-001621 | CONNECTOR |
| ANT2001,ANT2002 | 3712-001621 | CONNECTOR |
| ANT2003,ANT2004 | 3712-001621 | CONNECTOR |
| ANT2005 | 3712-001621 | CONNECTOR |
| ANT2006,ANT2007 | 3712-001626 | CONNECTOR |
| ANT2008 | 3712-001626 | CONNECTOR |
| ANT5003,ANT5005 | 3712-001633 | CONNECTOR |
| ANT6000,ANT6001 | 3712-001666 | CONNECTOR |
| ANT5000,ANT5001 | 3712-001694 | CONNECTOR |

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5. MAIN Electrical Parts List

| | | |
|-----------------|-------------|-----------|
| ANT5002,ANT5004 | 3712-001694 | CONNECTOR |
| ANT5006 | 3712-001694 | CONNECTOR |
| ANT3004,U3001 | 3712-001714 | CONNECTOR |
| F2003 | 4709-002196 | RF-MODULE |
| F1001 | 4709-002387 | RF-MODULE |
| F1000 | 4709-002412 | RF-MODULE |
| U2003 | 4709-002484 | RF-MODULE |

5. MAIN Electrical Parts List

[SM-A5070]

| Parts Code | Design LOC | Description |
|----------------------|-------------|-----------------|
| D5001 | 0401-001110 | DIODE-SWITCHING |
| D5000 | 0404-001250 | DIODE-SCHOTTKY |
| ZD1000 | 0406-001506 | DIODE-TVS |
| ZD5000,ZD5001,ZD6022 | 0406-001561 | DIODE-TVS |
| ZD5003 | 0406-001592 | DIODE-TVS |
| ZD7009 | 0406-001728 | DIODE-TVS |
| ZD6018,ZD6023,ZD6024 | 0406-001781 | DIODE-TVS |
| ZD6020,ZD6021 | 0406-001797 | DIODE-TVS |
| ZD6016 | 0406-001808 | DIODE-TVS |
| ZD1001,ZD5004 | 0406-001829 | DIODE-TVS |
| LED5000 | 0601-003768 | LED |
| U3003 | 1001-002062 | IC |
| U1001 | 1001-002063 | IC |
| U2005 | 1001-002078 | IC |
| U1002 | 1001-002082 | IC |
| U2006 | 1003-002802 | IC |
| U3007 | 1009-001078 | IC |
| UME5000 | 1107-002536 | IC-FLASH MEMORY |
| U3006 | 1201-003869 | IC |
| U1003 | 1201-004209 | IC |
| U1004,U1006 | 1201-004219 | IC |
| PAM1000 | 1201-004237 | IC |
| U6000 | 1201-004240 | IC |
| U3010,U3012 | 1203-008249 | IC |
| U5004 | 1203-008251 | IC |
| U7005 | 1203-008326 | IC |
| U2002 | 1203-008693 | IC |
| U5001 | 1203-008729 | IC |
| U7001 | 1203-008865 | IC |
| U7002,U7006 | 1203-008867 | IC |
| U3014 | 1203-008925 | IC |
| U7007 | 1203-008926 | IC |
| U5005 | 1203-009113 | IC |
| U7003 | 1203-009220 | IC |
| U7000 | 1203-009221 | IC |
| U500 | 1203-009224 | IC |
| U6002 | 1203-009233 | IC |

5. MAIN Electrical Parts List

| | | |
|----------------------|-------------|------------|
| U6001 | 1205-005750 | IC |
| U2004 | 1205-005767 | IC |
| U3000 | 1205-005979 | IC |
| U3005 | 1205-006087 | IC |
| UCP400 | 1205-006177 | IC |
| U3011 | 1209-002450 | IC |
| U3015 | 1209-002513 | IC |
| U3008 | 1209-002628 | IC |
| U3013 | 1209-002629 | IC |
| U3009 | 1209-002640 | IC |
| TH1000,TH4000,TH4001 | 1404-001724 | THERMISTOR |
| TH5000 | 1404-001724 | THERMISTOR |
| V7000 | 1405-001458 | VARISTOR |
| R3007 | 2007-000141 | R-CHIP |
| R3005 | 2007-000148 | R-CHIP |
| R5015 | 2007-000172 | R-CHIP |
| R6026,R6027 | 2007-003015 | R-CHIP |
| R1012 | 2007-007100 | R-CHIP |
| R6028,R6029 | 2007-007192 | R-CHIP |
| R2002,R2003,R5004 | 2007-007741 | R-CHIP |
| R5007 | 2007-007741 | R-CHIP |
| ZD6017 | 2007-007798 | R-CHIP |
| R5002 | 2007-007942 | R-CHIP |
| R5003 | 2007-007946 | R-CHIP |
| R5001 | 2007-008043 | R-CHIP |
| R4000 | 2007-008048 | R-CHIP |
| R4016,R4030,R4032 | 2007-008052 | R-CHIP |
| R4033,R5008,R5010 | 2007-008052 | R-CHIP |
| R7002 | 2007-008052 | R-CHIP |
| R5014,R7004 | 2007-008055 | R-CHIP |
| R1001,R1002,R1008 | 2007-008056 | R-CHIP |
| R1009 | 2007-008056 | R-CHIP |
| R1011,R4055,R5009 | 2007-008419 | R-CHIP |
| R6017 | 2007-008419 | R-CHIP |
| R5005,R5006 | 2007-008483 | R-CHIP |
| R5013,R5017,R5018 | 2007-008486 | R-CHIP |
| R5019 | 2007-008486 | R-CHIP |
| R4003,R5012,R6001 | 2007-008516 | R-CHIP |
| R6010,R7000,R7001 | 2007-008531 | R-CHIP |

5. MAIN Electrical Parts List

| | | |
|-------------------|-------------|----------------|
| R7005 | 2007-008531 | R-CHIP |
| R3003,R3008,R4005 | 2007-008588 | R-CHIP |
| R4008,R4009,R4010 | 2007-008588 | R-CHIP |
| R4011,R4012,R4013 | 2007-008588 | R-CHIP |
| R4014,R4019,R4022 | 2007-008588 | R-CHIP |
| R4023,R4025,R4027 | 2007-008588 | R-CHIP |
| R4028,R4029,R4034 | 2007-008588 | R-CHIP |
| R4035,R4036,R4037 | 2007-008588 | R-CHIP |
| R4038,R4039,R4040 | 2007-008588 | R-CHIP |
| R4043,R4044,R4045 | 2007-008588 | R-CHIP |
| R4046,R4047,R4048 | 2007-008588 | R-CHIP |
| R4049,R4050,R4051 | 2007-008588 | R-CHIP |
| R4052,R4053,R4054 | 2007-008588 | R-CHIP |
| R6018,R6025 | 2007-008588 | R-CHIP |
| R1000,R1010 | 2007-008785 | R-CHIP |
| R1004,R1005,R1006 | 2007-008806 | R-CHIP |
| R1007,R1014,R3001 | 2007-008806 | R-CHIP |
| R4002 | 2007-008816 | R-CHIP |
| R3004 | 2007-009111 | R-CHIP |
| R5016 | 2007-009155 | R-CHIP |
| R1013,R4006,R4007 | 2007-009157 | R-CHIP |
| R5021 | 2007-009157 | R-CHIP |
| R5011 | 2007-009182 | R-CHIP |
| R6000 | 2007-009314 | R-CHIP |
| R5020 | 2007-009315 | R-CHIP |
| R1003 | 2007-009361 | R-CHIP |
| R6008,R6031,R6032 | 2007-009410 | R-CHIP |
| R2000 | 2007-009805 | R-CHIP |
| R6013 | 2007-009838 | R-CHIP |
| R4020,R4021,R4024 | 2007-009920 | R-CHIP |
| R4026 | 2007-009920 | R-CHIP |
| R3010,R3011,R6020 | 2007-009969 | R-CHIP |
| R6030 | 2007-010031 | R-CHIP |
| R6011 | 2007-011648 | R-CHIP |
| C3095,C3102 | 2203-000233 | C-CERAMIC,CHIP |
| C3098 | 2203-000311 | C-CERAMIC,CHIP |
| C5119 | 2203-005344 | C-CERAMIC,CHIP |
| C3099 | 2203-005395 | C-CERAMIC,CHIP |
| C1018,C1021,C1023 | 2203-005682 | C-CERAMIC,CHIP |

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5. MAIN Electrical Parts List

| | | |
|-------------------|-------------|----------------|
| C1025,C1066,C1067 | 2203-005682 | C-CERAMIC,CHIP |
| C5099,C5105,C5114 | 2203-005682 | C-CERAMIC,CHIP |
| C7046,C7064,C7065 | 2203-005682 | C-CERAMIC,CHIP |
| C3027,C3029,C3041 | 2203-005725 | C-CERAMIC,CHIP |
| C7006,C7007 | 2203-005725 | C-CERAMIC,CHIP |
| L2026 | 2203-005727 | C-CERAMIC,CHIP |
| C1089,C5102,C6044 | 2203-005729 | C-CERAMIC,CHIP |
| C6046,C6051,C6052 | 2203-005729 | C-CERAMIC,CHIP |
| L1089 | 2203-005729 | C-CERAMIC,CHIP |
| C2052,C6058,C6059 | 2203-005731 | C-CERAMIC,CHIP |
| L1059 | 2203-005731 | C-CERAMIC,CHIP |
| C5097,C6039,C6045 | 2203-005732 | C-CERAMIC,CHIP |
| C6050 | 2203-005732 | C-CERAMIC,CHIP |
| C1005,C3054 | 2203-005734 | C-CERAMIC,CHIP |
| C1000,C1002,C1010 | 2203-005736 | C-CERAMIC,CHIP |
| C1015,C1017,C1028 | 2203-005736 | C-CERAMIC,CHIP |
| C1033,C1052,C1054 | 2203-005736 | C-CERAMIC,CHIP |
| C1056,C1063,C1087 | 2203-005736 | C-CERAMIC,CHIP |
| C2002,C2006,C2009 | 2203-005736 | C-CERAMIC,CHIP |
| C2013,C2039,C2043 | 2203-005736 | C-CERAMIC,CHIP |
| C2044,C2050,C3009 | 2203-005736 | C-CERAMIC,CHIP |
| C3021,C3047,C3048 | 2203-005736 | C-CERAMIC,CHIP |
| L1005,L1027,L1052 | 2203-005736 | C-CERAMIC,CHIP |
| C1035 | 2203-005740 | C-CERAMIC,CHIP |
| C1029,C1072,C1076 | 2203-005777 | C-CERAMIC,CHIP |
| L1062,L1066,L1098 | 2203-005777 | C-CERAMIC,CHIP |
| C1007,C1030,C1032 | 2203-005789 | C-CERAMIC,CHIP |
| C1048,C1061,C1084 | 2203-005789 | C-CERAMIC,CHIP |
| C1090,L1024,L1035 | 2203-005789 | C-CERAMIC,CHIP |
| L1079 | 2203-005789 | C-CERAMIC,CHIP |
| C1058 | 2203-005792 | C-CERAMIC,CHIP |
| C1003,C1081,C2000 | 2203-005806 | C-CERAMIC,CHIP |
| C6042 | 2203-006121 | C-CERAMIC,CHIP |
| C1020 | 2203-006123 | C-CERAMIC,CHIP |
| C6012 | 2203-006194 | C-CERAMIC,CHIP |
| C1001,C1070 | 2203-006318 | C-CERAMIC,CHIP |
| C2049,C3002,C3003 | 2203-006400 | C-CERAMIC,CHIP |
| C3043,C3044,C3097 | 2203-006400 | C-CERAMIC,CHIP |
| C3100,C4011,C4012 | 2203-006400 | C-CERAMIC,CHIP |

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5. MAIN Electrical Parts List

| | | |
|-------------------|-------------|----------------|
| C5080,C5123,C5124 | 2203-006400 | C-CERAMIC,CHIP |
| C3045,L1061 | 2203-006410 | C-CERAMIC,CHIP |
| C2031,C3057,C3059 | 2203-006423 | C-CERAMIC,CHIP |
| C3071,C3072,C5104 | 2203-006423 | C-CERAMIC,CHIP |
| C6000,C6004,C6006 | 2203-006423 | C-CERAMIC,CHIP |
| C6038,C6049,C7040 | 2203-006423 | C-CERAMIC,CHIP |
| C5096 | 2203-006556 | C-CERAMIC,CHIP |
| C1057,C3053,L1057 | 2203-006604 | C-CERAMIC,CHIP |
| C1069 | 2203-006611 | C-CERAMIC,CHIP |
| L1065 | 2203-006665 | C-CERAMIC,CHIP |
| C4003 | 2203-006668 | C-CERAMIC,CHIP |
| C1053 | 2203-006674 | C-CERAMIC,CHIP |
| C1031,C1065 | 2203-006707 | C-CERAMIC,CHIP |
| C1004,C1024,C1040 | 2203-006839 | C-CERAMIC,CHIP |
| C1042,C1043,C1045 | 2203-006839 | C-CERAMIC,CHIP |
| C1077,C1080,C1085 | 2203-006839 | C-CERAMIC,CHIP |
| C1086,C2001,C3086 | 2203-006839 | C-CERAMIC,CHIP |
| C3093,C4007,C4010 | 2203-006839 | C-CERAMIC,CHIP |
| C4034,C5076,C5077 | 2203-006839 | C-CERAMIC,CHIP |
| C5078,C6009 | 2203-006839 | C-CERAMIC,CHIP |
| C1050 | 2203-006846 | C-CERAMIC,CHIP |
| C3087,C3088,C5006 | 2203-006872 | C-CERAMIC,CHIP |
| C5013,C5026,C5027 | 2203-006872 | C-CERAMIC,CHIP |
| C5028,C5032,C5043 | 2203-006872 | C-CERAMIC,CHIP |
| C5044,C5048,C5090 | 2203-006872 | C-CERAMIC,CHIP |
| C5094,C5095 | 2203-006896 | C-CERAMIC,CHIP |
| C1027 | 2203-006968 | C-CERAMIC,CHIP |
| C1083,C2020,C2023 | 2203-006979 | C-CERAMIC,CHIP |
| C2025,C2026,C2030 | 2203-006979 | C-CERAMIC,CHIP |
| C2033,C2034,C2035 | 2203-006979 | C-CERAMIC,CHIP |
| C2037,C2051 | 2203-006979 | C-CERAMIC,CHIP |
| C3049,C3058,C7031 | 2203-007194 | C-CERAMIC,CHIP |
| L1003 | 2203-007194 | C-CERAMIC,CHIP |
| C3085 | 2203-007210 | C-CERAMIC,CHIP |
| C5109 | 2203-007271 | C-CERAMIC,CHIP |
| C3035,C3064,C3069 | 2203-007317 | C-CERAMIC,CHIP |
| C5008,C5036,C5037 | 2203-007317 | C-CERAMIC,CHIP |
| C5040,C5041,C5042 | 2203-007317 | C-CERAMIC,CHIP |
| C5065,C5068,C5074 | 2203-007317 | C-CERAMIC,CHIP |

5. MAIN Electrical Parts List

| | | |
|-------------------|-------------|----------------|
| C7000,C7010,C7014 | 2203-007317 | C-CERAMIC,CHIP |
| C7015,C7033,C7035 | 2203-007317 | C-CERAMIC,CHIP |
| C2028,C3090,C6029 | 2203-007391 | C-CERAMIC,CHIP |
| C6048 | 2203-007391 | C-CERAMIC,CHIP |
| C2053 | 2203-007392 | C-CERAMIC,CHIP |
| C1046,C1047,C2011 | 2203-007393 | C-CERAMIC,CHIP |
| C3001,C3091,C3094 | 2203-007393 | C-CERAMIC,CHIP |
| C4029,C4044,C4051 | 2203-007393 | C-CERAMIC,CHIP |
| C4059,C4067,C4074 | 2203-007393 | C-CERAMIC,CHIP |
| C5081,C5093,C5106 | 2203-007393 | C-CERAMIC,CHIP |
| C5118,C6016,C6021 | 2203-007393 | C-CERAMIC,CHIP |
| C6024,C6026,C6031 | 2203-007393 | C-CERAMIC,CHIP |
| C6032,C6033,C6034 | 2203-007393 | C-CERAMIC,CHIP |
| C6035,C6037,C7026 | 2203-007393 | C-CERAMIC,CHIP |
| C5103 | 2203-007425 | C-CERAMIC,CHIP |
| C6054 | 2203-007456 | C-CERAMIC,CHIP |
| C2022,C2029,C2038 | 2203-007474 | C-CERAMIC,CHIP |
| C2010,C2021,C2024 | 2203-007796 | C-CERAMIC,CHIP |
| C2032,C2036,C3034 | 2203-007796 | C-CERAMIC,CHIP |
| C3038,C3060,C3061 | 2203-007796 | C-CERAMIC,CHIP |
| C3063,C3066,C3068 | 2203-007796 | C-CERAMIC,CHIP |
| C3070,C4004,C4006 | 2203-007796 | C-CERAMIC,CHIP |
| C4008,C4013,C4017 | 2203-007796 | C-CERAMIC,CHIP |
| C4019,C4020,C4021 | 2203-007796 | C-CERAMIC,CHIP |
| C4022,C4026,C4027 | 2203-007796 | C-CERAMIC,CHIP |
| C4030,C4031,C4032 | 2203-007796 | C-CERAMIC,CHIP |
| C4036,C4040,C4041 | 2203-007796 | C-CERAMIC,CHIP |
| C4042,C4043,C4045 | 2203-007796 | C-CERAMIC,CHIP |
| C4047,C4048,C4049 | 2203-007796 | C-CERAMIC,CHIP |
| C4050,C4053,C4054 | 2203-007796 | C-CERAMIC,CHIP |
| C4055,C4056,C4057 | 2203-007796 | C-CERAMIC,CHIP |
| C4058,C4060,C4061 | 2203-007796 | C-CERAMIC,CHIP |
| C4062,C4063,C4064 | 2203-007796 | C-CERAMIC,CHIP |
| C4065,C4066,C4069 | 2203-007796 | C-CERAMIC,CHIP |
| C4070,C4071,C4073 | 2203-007796 | C-CERAMIC,CHIP |
| C4076,C4077,C4080 | 2203-007796 | C-CERAMIC,CHIP |
| C4087,C4088,C4090 | 2203-007796 | C-CERAMIC,CHIP |
| C4091,C4093,C4094 | 2203-007796 | C-CERAMIC,CHIP |
| C4095,C4096,C4097 | 2203-007796 | C-CERAMIC,CHIP |

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5. MAIN Electrical Parts List

| | | |
|-------------------|-------------|----------------|
| C4099,C4100,C4101 | 2203-007796 | C-CERAMIC,CHIP |
| C4102,C5011,C5014 | 2203-007796 | C-CERAMIC,CHIP |
| C5015,C5022,C5031 | 2203-007796 | C-CERAMIC,CHIP |
| C5038,C5039,C5047 | 2203-007796 | C-CERAMIC,CHIP |
| C5049,C5069,C5072 | 2203-007796 | C-CERAMIC,CHIP |
| C5073,C5111,C5116 | 2203-007796 | C-CERAMIC,CHIP |
| C6002,C6017,C6020 | 2203-007796 | C-CERAMIC,CHIP |
| C6022,C6023,C6025 | 2203-007796 | C-CERAMIC,CHIP |
| C7001,C7004,C7005 | 2203-007796 | C-CERAMIC,CHIP |
| C7008,C7009,C7013 | 2203-007796 | C-CERAMIC,CHIP |
| C7016,C7018,C7022 | 2203-007796 | C-CERAMIC,CHIP |
| C7032,C7050,C7077 | 2203-007796 | C-CERAMIC,CHIP |
| C7082 | 2203-007796 | C-CERAMIC,CHIP |
| C5112,C5115 | 2203-008097 | C-CERAMIC,CHIP |
| C2056,C3005,C3006 | 2203-008242 | C-CERAMIC,CHIP |
| C3011,C3022,C3023 | 2203-008242 | C-CERAMIC,CHIP |
| C3030,C4000,C4038 | 2203-008242 | C-CERAMIC,CHIP |
| C4039,C4072,C4075 | 2203-008242 | C-CERAMIC,CHIP |
| C5029 | 2203-008242 | C-CERAMIC,CHIP |
| C6057 | 2203-008243 | C-CERAMIC,CHIP |
| C4081,C5001,C5003 | 2203-008312 | C-CERAMIC,CHIP |
| C5004,C5052,C5054 | 2203-008312 | C-CERAMIC,CHIP |
| C5056,C5058,C5060 | 2203-008312 | C-CERAMIC,CHIP |
| C5062,C5064,C5067 | 2203-008312 | C-CERAMIC,CHIP |
| C5100 | 2203-008572 | C-CERAMIC,CHIP |
| C6053 | 2203-008654 | C-CERAMIC,CHIP |
| C1082,C2055,C3000 | 2203-008860 | C-CERAMIC,CHIP |
| C3062,C3065,C3067 | 2203-008860 | C-CERAMIC,CHIP |
| C5007,C5098,C5101 | 2203-008860 | C-CERAMIC,CHIP |
| C5110,C5113,C5122 | 2203-008860 | C-CERAMIC,CHIP |
| C6008,C6014,C6015 | 2203-008860 | C-CERAMIC,CHIP |
| C7017,C7019,C7052 | 2203-008860 | C-CERAMIC,CHIP |
| C7053,C7054,C7078 | 2203-008860 | C-CERAMIC,CHIP |
| C7079,C7080 | 2203-008860 | C-CERAMIC,CHIP |
| C1041,C1079,C3084 | 2203-008876 | C-CERAMIC,CHIP |
| C3092,C3105,C4001 | 2203-008876 | C-CERAMIC,CHIP |
| C4002,C4014,C4016 | 2203-008876 | C-CERAMIC,CHIP |
| C5023,C5024,C5025 | 2203-008876 | C-CERAMIC,CHIP |
| C5030,C5046,C5050 | 2203-008876 | C-CERAMIC,CHIP |

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| | | |
|-------------------|-------------|----------------|
| C5087,C5092,C5107 | 2203-008876 | C-CERAMIC,CHIP |
| C5108,C6011,C6055 | 2203-008876 | C-CERAMIC,CHIP |
| C7034,C7081 | 2203-008876 | C-CERAMIC,CHIP |
| C4084,C4085,C4086 | 2203-009064 | C-CERAMIC,CHIP |
| C3096,C3107 | 2203-009167 | C-CERAMIC,CHIP |
| C5009 | 2203-009537 | C-CERAMIC,CHIP |
| C7056 | 2203-009618 | C-CERAMIC,CHIP |
| C2008,C2027,C4037 | 2203-009733 | C-CERAMIC,CHIP |
| C4046,C4052,C4068 | 2203-009733 | C-CERAMIC,CHIP |
| C4078,C4079,C4092 | 2203-009733 | C-CERAMIC,CHIP |
| C5000,C5002,C5005 | 2203-009733 | C-CERAMIC,CHIP |
| C5051,C5053,C5055 | 2203-009733 | C-CERAMIC,CHIP |
| C5057,C5059,C5061 | 2203-009733 | C-CERAMIC,CHIP |
| C5063,C5066,C5070 | 2203-009733 | C-CERAMIC,CHIP |
| C5079,C5084,C5085 | 2203-009733 | C-CERAMIC,CHIP |
| C5086,C5088,C5089 | 2203-009733 | C-CERAMIC,CHIP |
| C5117,C5120,C5121 | 2203-009733 | C-CERAMIC,CHIP |
| C6001,C6003,C6005 | 2203-009733 | C-CERAMIC,CHIP |
| C6007,C6010,C7002 | 2203-009733 | C-CERAMIC,CHIP |
| C7003,C7011,C7012 | 2203-009733 | C-CERAMIC,CHIP |
| C7020,C7021,C7023 | 2203-009733 | C-CERAMIC,CHIP |
| C7024,C7025,C7030 | 2203-009733 | C-CERAMIC,CHIP |
| C7057,C7058,C7059 | 2203-009733 | C-CERAMIC,CHIP |
| C7060,C7061,C7063 | 2203-009733 | C-CERAMIC,CHIP |
| C7066,C7067,C7068 | 2203-009733 | C-CERAMIC,CHIP |
| C7072,C7073,C7074 | 2203-009733 | C-CERAMIC,CHIP |
| C7286,C7294 | 2203-009733 | C-CERAMIC,CHIP |
| C4082,C4083 | 2203-009735 | C-CERAMIC,CHIP |
| C5091 | 2203-009736 | C-CERAMIC,CHIP |
| C6013,R6005 | 2203-009917 | C-CERAMIC,CHIP |
| C5082,C5083 | 2203-010066 | C-CERAMIC,CHIP |
| L3013 | 2703-002907 | INDUCTOR-SMD |
| L1029 | 2703-002955 | INDUCTOR-SMD |
| L2034 | 2703-002959 | INDUCTOR-SMD |
| L1014,L1047 | 2703-002961 | INDUCTOR-SMD |
| L1048 | 2703-003064 | INDUCTOR-SMD |
| L3005 | 2703-003476 | INDUCTOR-SMD |
| L1091,L3014 | 2703-003970 | INDUCTOR-SMD |
| L1028 | 2703-004000 | INDUCTOR-SMD |

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5. MAIN Electrical Parts List

| | | |
|-------------------|-------------|--------------|
| C1038,C3008,L1022 | 2703-004012 | INDUCTOR-SMD |
| L1040,L1082,L1093 | 2703-004012 | INDUCTOR-SMD |
| L2004,L3000 | 2703-004012 | INDUCTOR-SMD |
| L1009,L1013,L1018 | 2703-004013 | INDUCTOR-SMD |
| L2001,L2011,L2029 | 2703-004013 | INDUCTOR-SMD |
| L3008,L3012 | 2703-004013 | INDUCTOR-SMD |
| L1010,L1081,L1083 | 2703-004014 | INDUCTOR-SMD |
| L1096,L3009 | 2703-004018 | INDUCTOR-SMD |
| L1002,L1039,L1042 | 2703-004032 | INDUCTOR-SMD |
| L1074 | 2703-004032 | INDUCTOR-SMD |
| L1017,L1088,L2015 | 2703-004033 | INDUCTOR-SMD |
| C2017,L1001,L1054 | 2703-004034 | INDUCTOR-SMD |
| L2025,L2030,L3016 | 2703-004034 | INDUCTOR-SMD |
| L1037 | 2703-004035 | INDUCTOR-SMD |
| C1088,L2010 | 2703-004038 | INDUCTOR-SMD |
| L3010 | 2703-004171 | INDUCTOR-SMD |
| L3004 | 2703-004286 | INDUCTOR-SMD |
| C1019,L1008,L1011 | 2703-004317 | INDUCTOR-SMD |
| L1012,L2013 | 2703-004317 | INDUCTOR-SMD |
| C2005,L1085 | 2703-004366 | INDUCTOR-SMD |
| L2012 | 2703-004368 | INDUCTOR-SMD |
| L1025,L1086 | 2703-004408 | INDUCTOR-SMD |
| L1034 | 2703-004703 | INDUCTOR-SMD |
| L1046,L1053 | 2703-004763 | INDUCTOR-SMD |
| L1060,L1078,L1084 | 2703-004764 | INDUCTOR-SMD |
| L2016,L2038 | 2703-004764 | INDUCTOR-SMD |
| C2014,L1097,L2032 | 2703-004862 | INDUCTOR-SMD |
| L3001 | 2703-004911 | INDUCTOR-SMD |
| L2009 | 2703-004947 | INDUCTOR-SMD |
| L1023 | 2703-004976 | INDUCTOR-SMD |
| C1060,C1064,L1016 | 2703-005058 | INDUCTOR-SMD |
| L1077,L1090,L2002 | 2703-005058 | INDUCTOR-SMD |
| L2008 | 2703-005058 | INDUCTOR-SMD |
| L5000,L5007,L5008 | 2703-005067 | INDUCTOR-SMD |
| L5009,L5010 | 2703-005067 | INDUCTOR-SMD |
| C2004,L1004,L1092 | 2703-005085 | INDUCTOR-SMD |
| L1094 | 2703-005085 | INDUCTOR-SMD |
| C1026,C1055,L1007 | 2703-005086 | INDUCTOR-SMD |
| L1026,L1036,L1072 | 2703-005086 | INDUCTOR-SMD |

5. MAIN Electrical Parts List

| | | |
|-------------------|-------------|-------------------|
| L1073,L1095,L2000 | 2703-005086 | INDUCTOR-SMD |
| L2033 | 2703-005086 | INDUCTOR-SMD |
| L2037 | 2703-005087 | INDUCTOR-SMD |
| C2015,L1055,L1056 | 2703-005088 | INDUCTOR-SMD |
| L1058,L2003 | 2703-005088 | INDUCTOR-SMD |
| L2035 | 2703-005089 | INDUCTOR-SMD |
| C2019 | 2703-005098 | INDUCTOR-SMD |
| L5013 | 2703-005136 | INDUCTOR-SMD |
| L5001,L5004,L5005 | 2703-005201 | INDUCTOR-SMD |
| L5006 | 2703-005201 | INDUCTOR-SMD |
| L7010 | 2703-005224 | INDUCTOR-SMD |
| L5011 | 2703-005225 | INDUCTOR-SMD |
| L5002 | 2703-005226 | INDUCTOR-SMD |
| C1049,L1019,L1021 | 2703-005295 | INDUCTOR-SMD |
| L1045,L1049,L1100 | 2703-005295 | INDUCTOR-SMD |
| L2014,L2017 | 2703-005295 | INDUCTOR-SMD |
| L7007 | 2703-005418 | INDUCTOR-SMD |
| L7008 | 2703-005419 | INDUCTOR-SMD |
| L6001 | 2703-005505 | INDUCTOR-SMD |
| L5003 | 2703-005509 | INDUCTOR-SMD |
| L3023,L3024 | 2703-005555 | INDUCTOR-SMD |
| C3015 | 2703-005718 | INDUCTOR-SMD |
| OSC5000 | 2801-005389 | CRYSTAL-UNIT |
| F1010 | 2904-002143 | FILTER-SAW |
| F2001 | 2904-002198 | FILTER-SAW |
| F1007 | 2904-002285 | FILTER-SAW |
| F2002 | 2904-002326 | FILTER-SAW |
| F3000,F3001 | 2904-002356 | FILTER-SAW |
| U2000 | 2904-002368 | FILTER-SAW |
| F1005 | 2904-002397 | FILTER-SAW |
| F2000 | 2904-002405 | FILTER-SAW |
| F1009 | 2910-000401 | FILTER |
| F1008 | 2910-000402 | FILTER |
| U3002 | 2911-000426 | FILTER |
| U2001 | 2911-000430 | FILTER |
| U1000 | 2911-000448 | FILTER |
| MIC6000 | 3003-001237 | MIC-CONDENSOR |
| L3011,L3015 | 3301-002078 | CORE-FERRITE BEAD |
| L2006,L2007,L6002 | 3301-002122 | CORE-FERRITE BEAD |

5. MAIN Electrical Parts List

| | | |
|-------------------|-------------|---------------------|
| L6003 | 3301-002122 | CORE-FERRITE BEAD |
| L6000 | 3301-002228 | CORE-FERRITE BEAD |
| L6004,L6005,L6008 | 3301-002235 | CORE-FERRITE BEAD |
| L6009,L6011,L6012 | 3301-002235 | CORE-FERRITE BEAD |
| L6013 | 3301-002235 | CORE-FERRITE BEAD |
| L1000,L1101,L2039 | 3301-002237 | CORE-FERRITE BEAD |
| L2041 | 3301-002237 | CORE-FERRITE BEAD |
| C3046,L2019,L2020 | 3301-002238 | CORE-FERRITE BEAD |
| L2021,L2023,L3007 | 3301-002238 | CORE-FERRITE BEAD |
| L3017,L6010,L6014 | 3301-002238 | CORE-FERRITE BEAD |
| L6016 | 3301-002238 | CORE-FERRITE BEAD |
| L2040 | 3301-002242 | CORE-FERRITE BEAD |
| L7000 | 3301-002244 | CORE-FERRITE BEAD |
| L2018,L2022,L2024 | 3301-002312 | CORE-FERRITE BEAD |
| L7006,L7009,L7011 | 3301-002312 | CORE-FERRITE BEAD |
| L5012 | 3301-002331 | CORE-FERRITE BEAD |
| L7001,L7002,L7004 | 3301-002394 | CORE-FERRITE BEAD |
| RFS1001 | 3705-001708 | CONNECTOR-COAXIAL |
| RFS1000 | 3705-001937 | CONNECTOR-COAXIAL |
| SIM600UP | 3709-001932 | CONNECTOR-CARD EDGE |
| SIM6003 | 3709-001933 | CONNECTOR-CARD EDGE |
| SIM6001,SIM6002 | 3709-001934 | CONNECTOR-CARD EDGE |
| HDC7002 | 3710-003871 | CONNECTOR-SOCKET |
| HDC7003 | 3710-004027 | CONNECTOR-SOCKET |
| SOC6000 | 3710-004367 | CONNECTOR-SOCKET |
| HDC7004 | 3711-007295 | CONNECTOR-HEADER |
| HDC7001 | 3711-008511 | CONNECTOR-HEADER |
| HDC5000 | 3711-008847 | CONNECTOR-HEADER |
| HDC7000 | 3711-008931 | CONNECTOR-HEADER |
| ANT3000,ANT3001 | 3712-001604 | CONNECTOR |
| ANT1000,ANT2000 | 3712-001621 | CONNECTOR |
| ANT2001,ANT2002 | 3712-001621 | CONNECTOR |
| ANT2003,ANT2004 | 3712-001621 | CONNECTOR |
| ANT2005 | 3712-001621 | CONNECTOR |
| ANT2006,ANT2007 | 3712-001626 | CONNECTOR |
| ANT2008 | 3712-001626 | CONNECTOR |
| ANT5003,ANT5005 | 3712-001633 | CONNECTOR |
| ANT6000,ANT6001 | 3712-001666 | CONNECTOR |
| ANT5000,ANT5001 | 3712-001694 | CONNECTOR |

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5. MAIN Electrical Parts List

| | | |
|-----------------|-------------|-----------|
| ANT5002,ANT5004 | 3712-001694 | CONNECTOR |
| ANT5006 | 3712-001694 | CONNECTOR |
| ANT3004,U3001 | 3712-001714 | CONNECTOR |
| F2003 | 4709-002196 | RF-MODULE |
| F1001 | 4709-002387 | RF-MODULE |
| F1000 | 4709-002412 | RF-MODULE |
| U2003 | 4709-002484 | RF-MODULE |

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

6. Level 1 Repair

6-1. S/W Update

6-1-1. Preparation

- S/W Update program : [Fenrir 5.17.xxxx](#)
- Mobile Phone
- Data Cable

※ Settings



Data Cable : [GH39-02003A](#)

6. Level 1 Repair

6-1-2. How to use 'Fenrir' S/W update program.

1) Launch Fenrir by clicking on the icon on the desktop



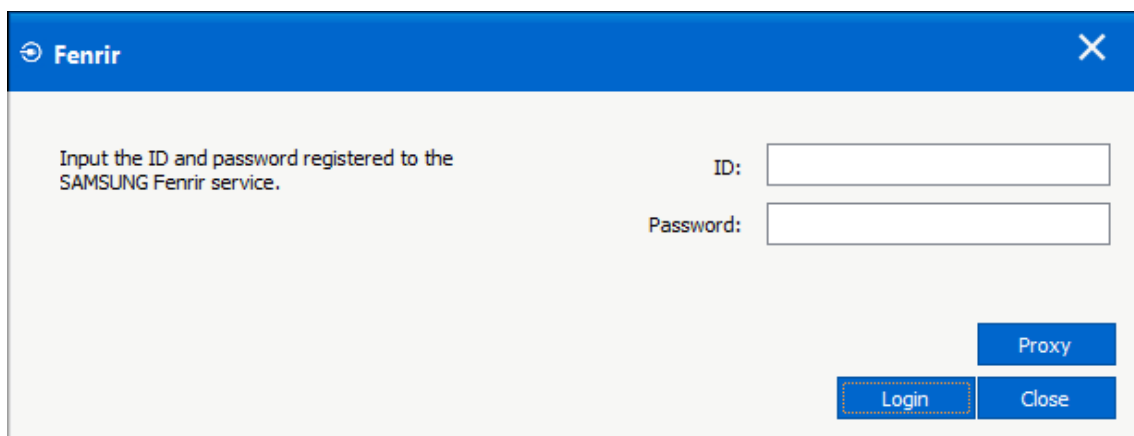
- SVH (Fenrir_Home) : It uses Home binary which does not have user data area in the memory when flashed to a device. (Keep user data)

- SVC (Fenrir_Factory) : It uses Factory binary which erases all user data in the memory when flashed to a device. (Clear user data)

- SVA (Fenrir_All) : It uses Factory and Home binaries. you can download Home and Factory binary in a PC(but requires double HDD storage and NW traffic)

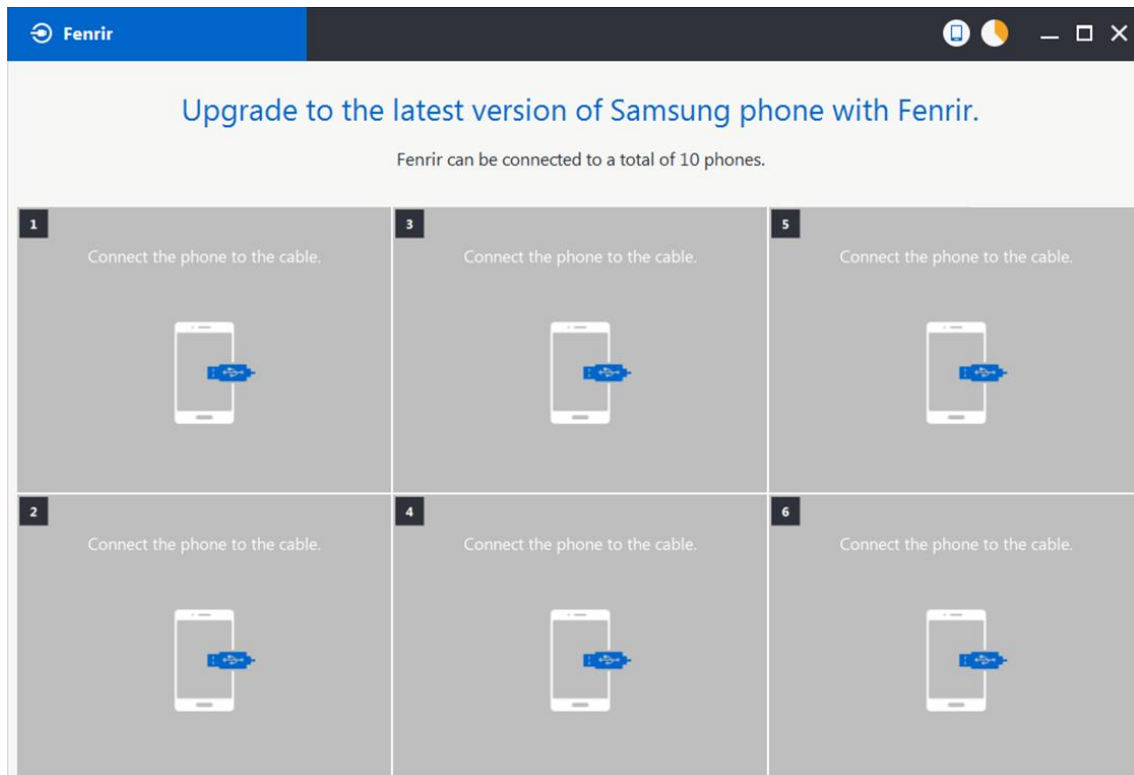
2) Input ID & password

※ You need to reset the ID information in case of PC change and format and repair, hard disk change

A screenshot of the Fenrir software login window. The window has a blue title bar with the 'Fenrir' logo and a close button. The main area is light gray. On the left, it says 'Input the ID and password registered to the SAMSUNG Fenrir service.' On the right, there are two input fields: 'ID:' and 'Password:'. Below the 'Password:' field, there are three buttons: 'Proxy' (blue), 'Login' (blue with a dashed border), and 'Close' (blue).

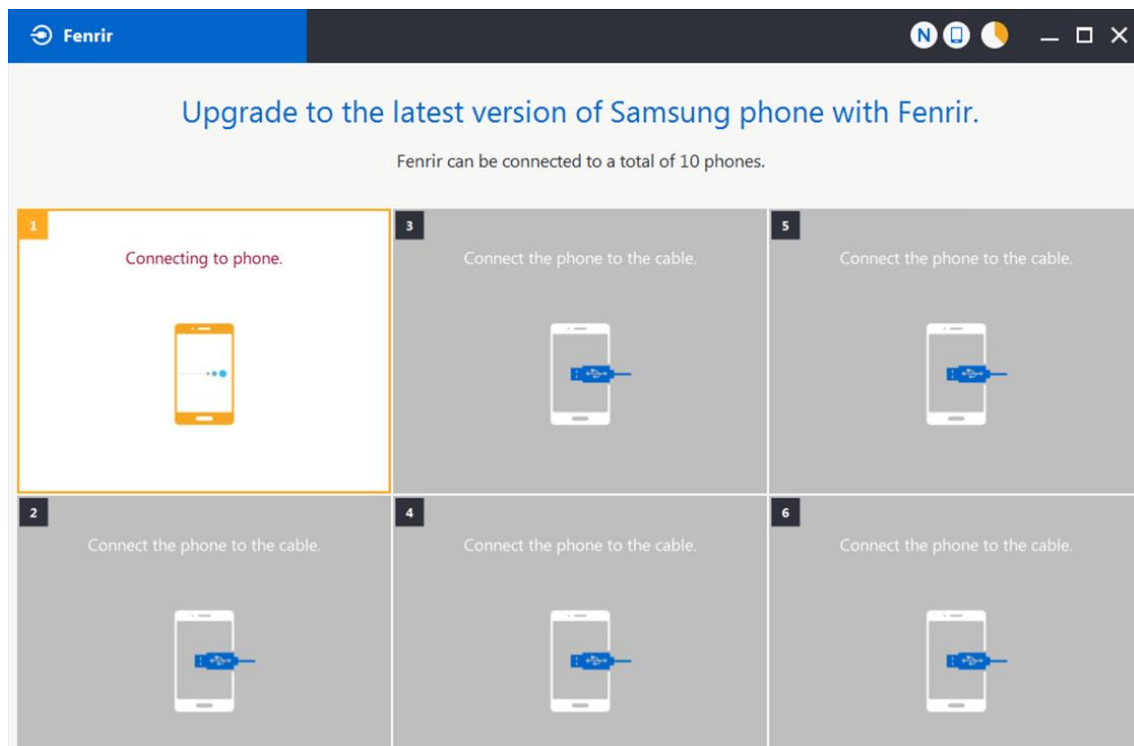
6. Level 1 Repair

3) Ensure device has sufficient charge (at least 20%) to start firmware update.



4) Connect the device to PC via data cable.

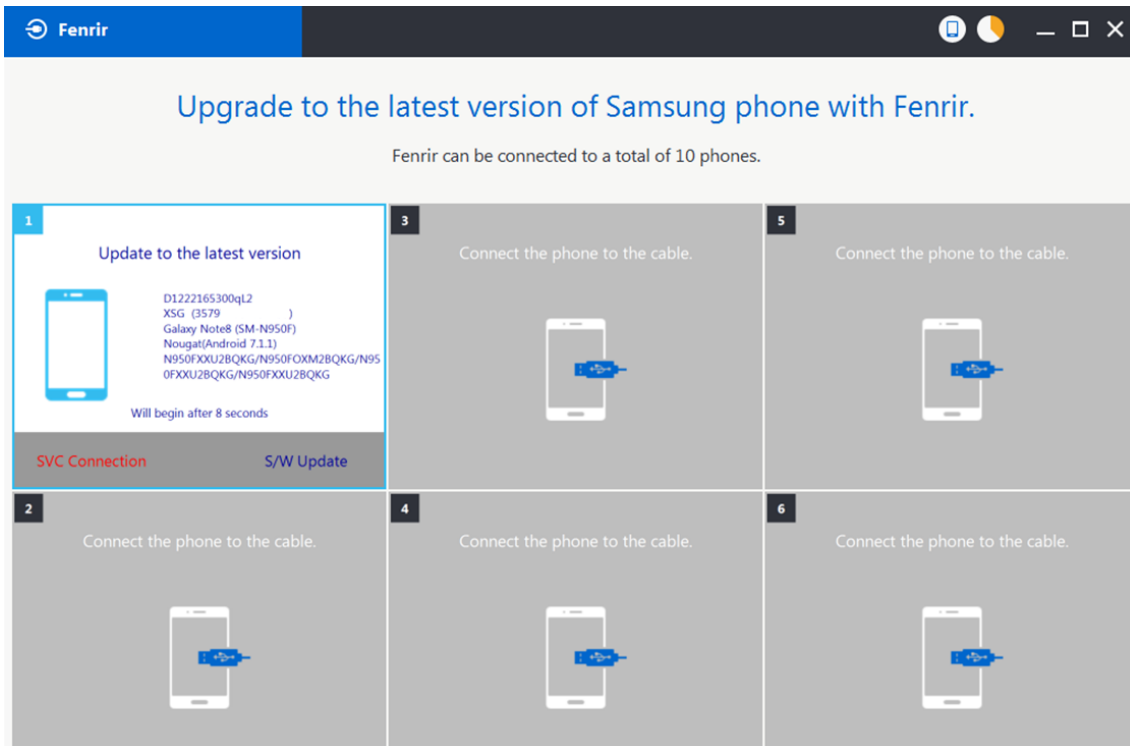
5) Upon USB connection, you will be presented with below screen.



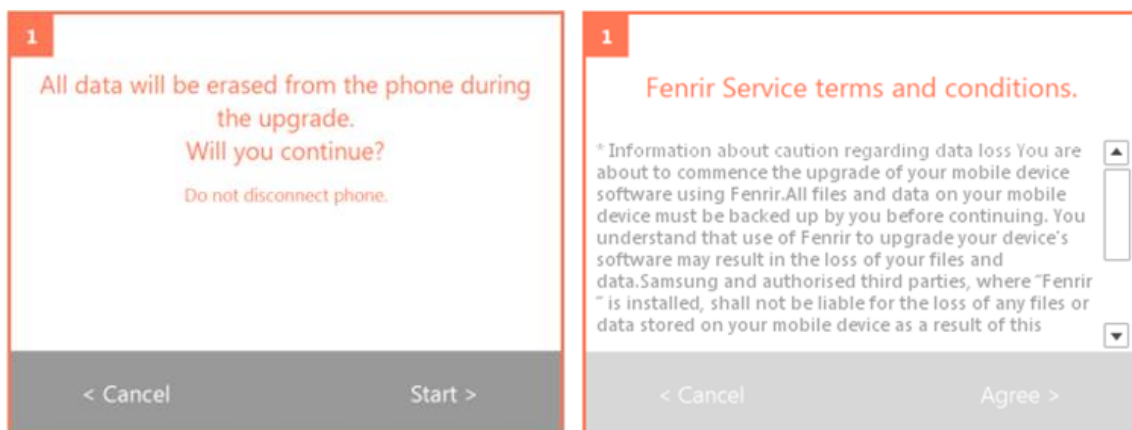
6. Level 1 Repair

=C

6) Once device is detected, you will be presented with below screen. To update S/W, select “S/W Update” or to exit select “SVC Connection”. If you select “SVC Connection”, only Fenrir connection history (record) will be stored in the FUS server to support warranty validation. (This is known as “Service Connection” history)

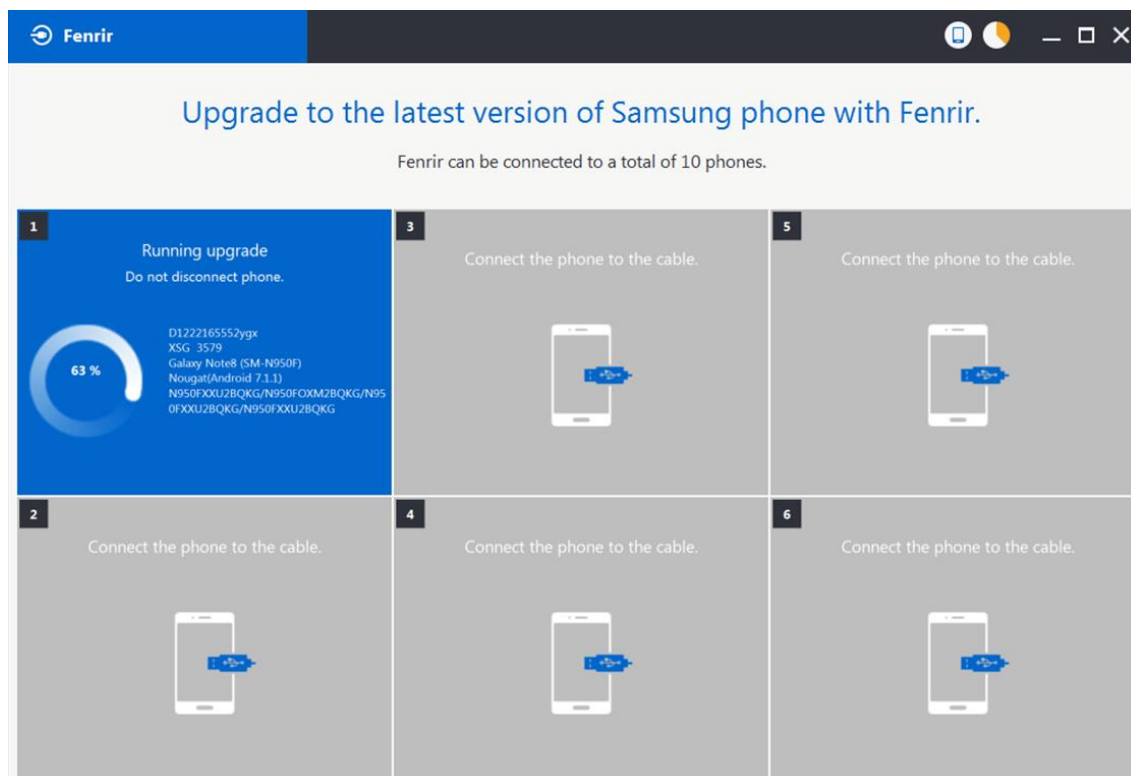


7) Once Fenrir starts, application will display the below screen. And select the Start button & Agree button.

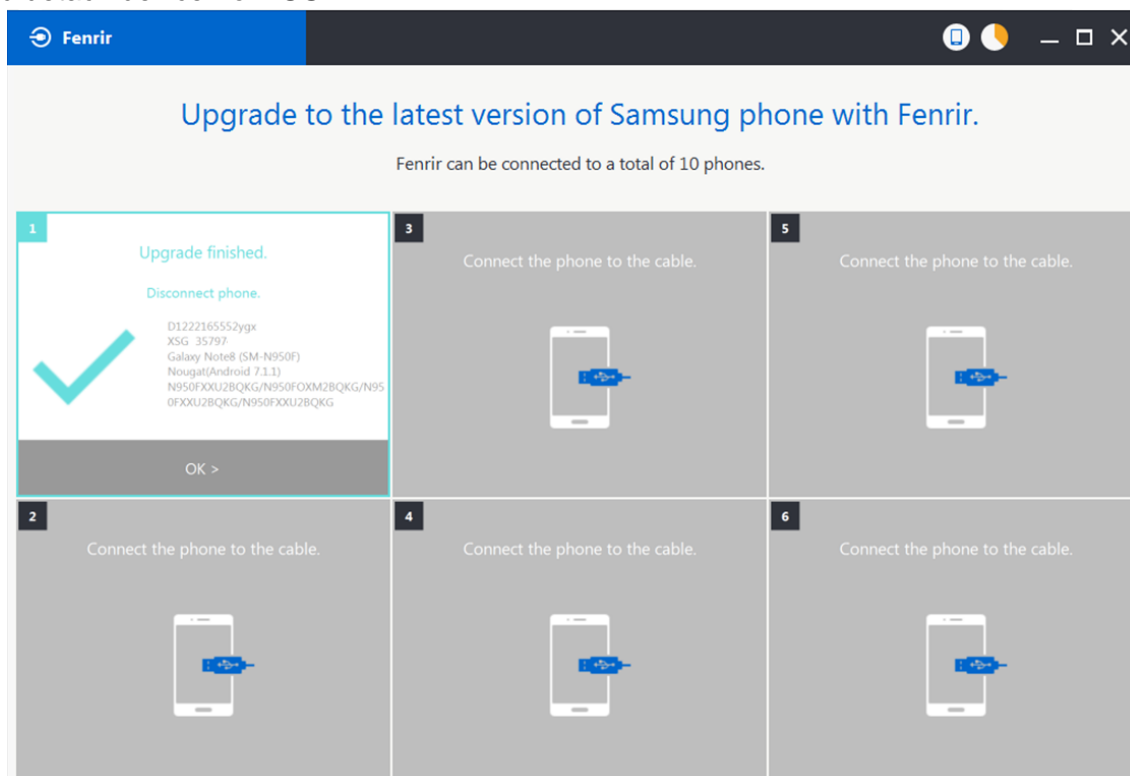


6. Level 1 Repair

8) The status circle increases as the update installs. The update process takes approximately 5-10 minutes to complete. Do not disconnect the device from USB during processing.



9) Once complete, application will present the below screen indicating update complete. Click Ok and detach device from USB.



6. Level 1 Repair

6-2. How to use 'Odin' program

※ S/W Update via Fenrir is mandatory.

Below is the method to use 'Odin' program in any specific case.

6-2-1. Preparation

- Installation program : **Odin3 v3.13.2.exe or above**
- Mobile Phone
- Data Cable
- S/W Binary files (downloaded from GSPN)

※ Settings

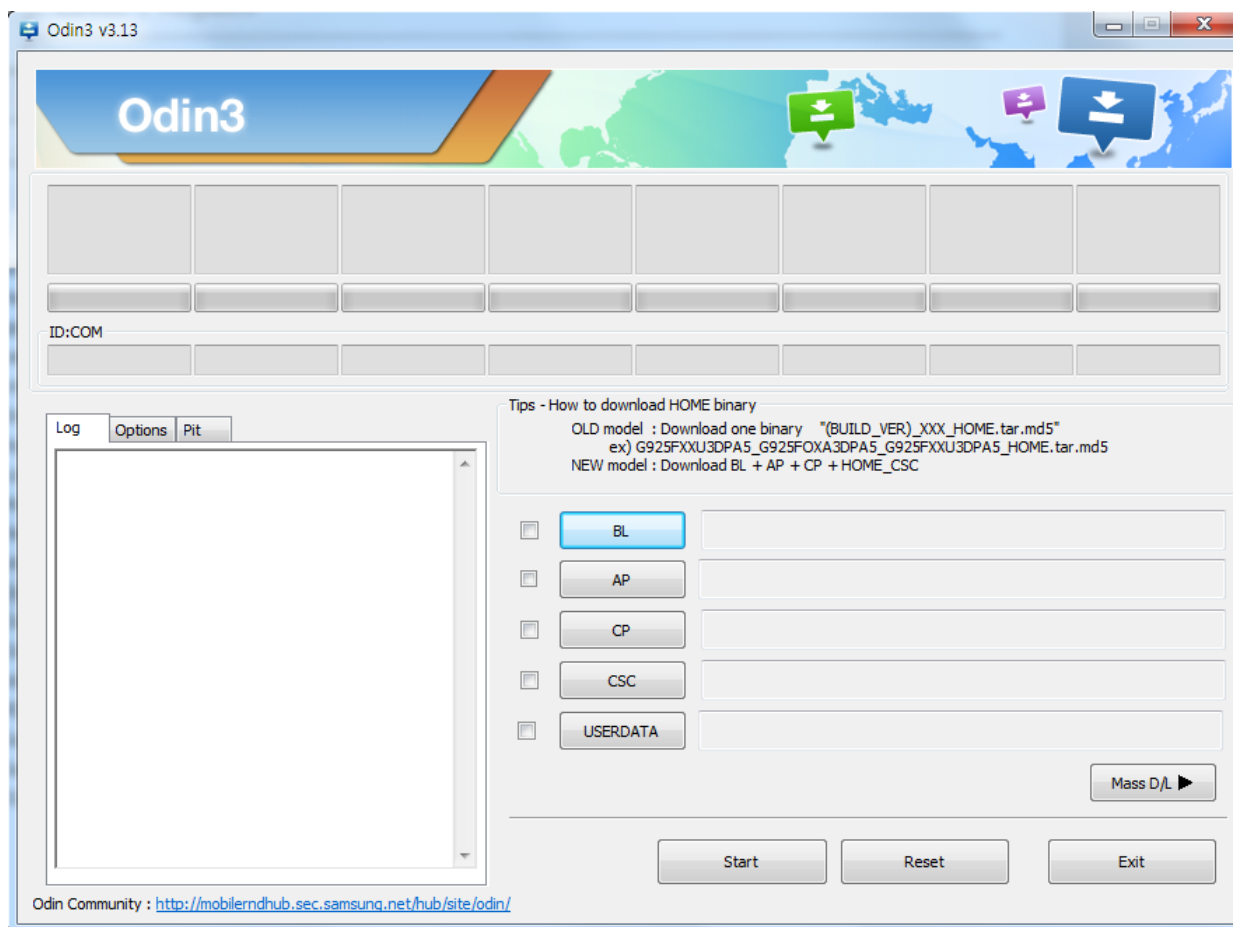


Data Cable : GH39-02003A

6. Level 1 Repair

6-2-2. S/W Installation Program (Downloader program)

Open up the S/W Installation Program by executing the "**Odin3 v3.13.2.exe**"

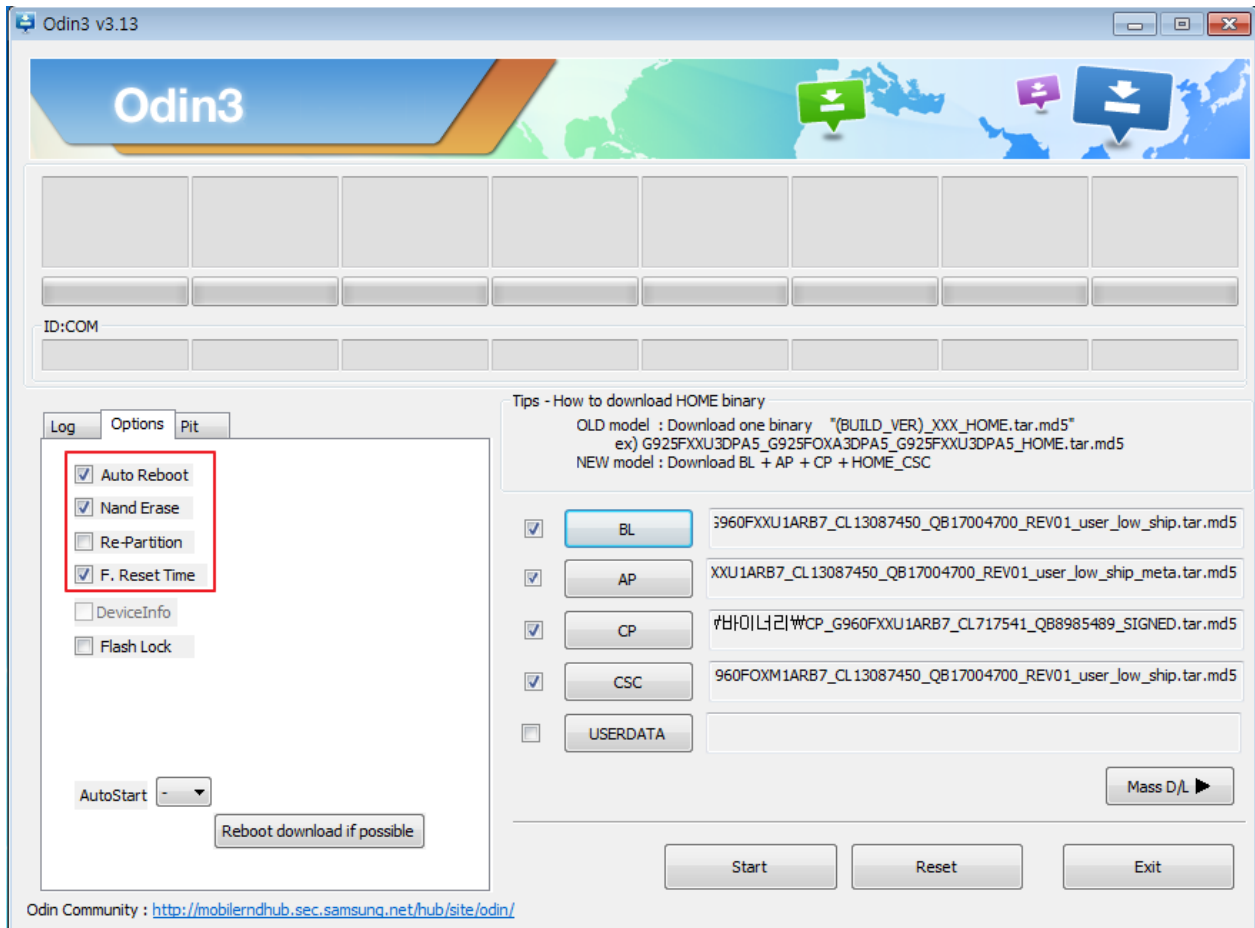


6. Level 1 Repair

1. Enable the check mark by click on the following options

- Check Auto Reboot, F. Reset Time, Nand Erase
- Check BL, AP, CP, CSC Files

* Note : "Odin v3.13.2 or above" checks MD5 checksum just after file selection.



6. Level 1 Repair

2. Enter into Download Mode

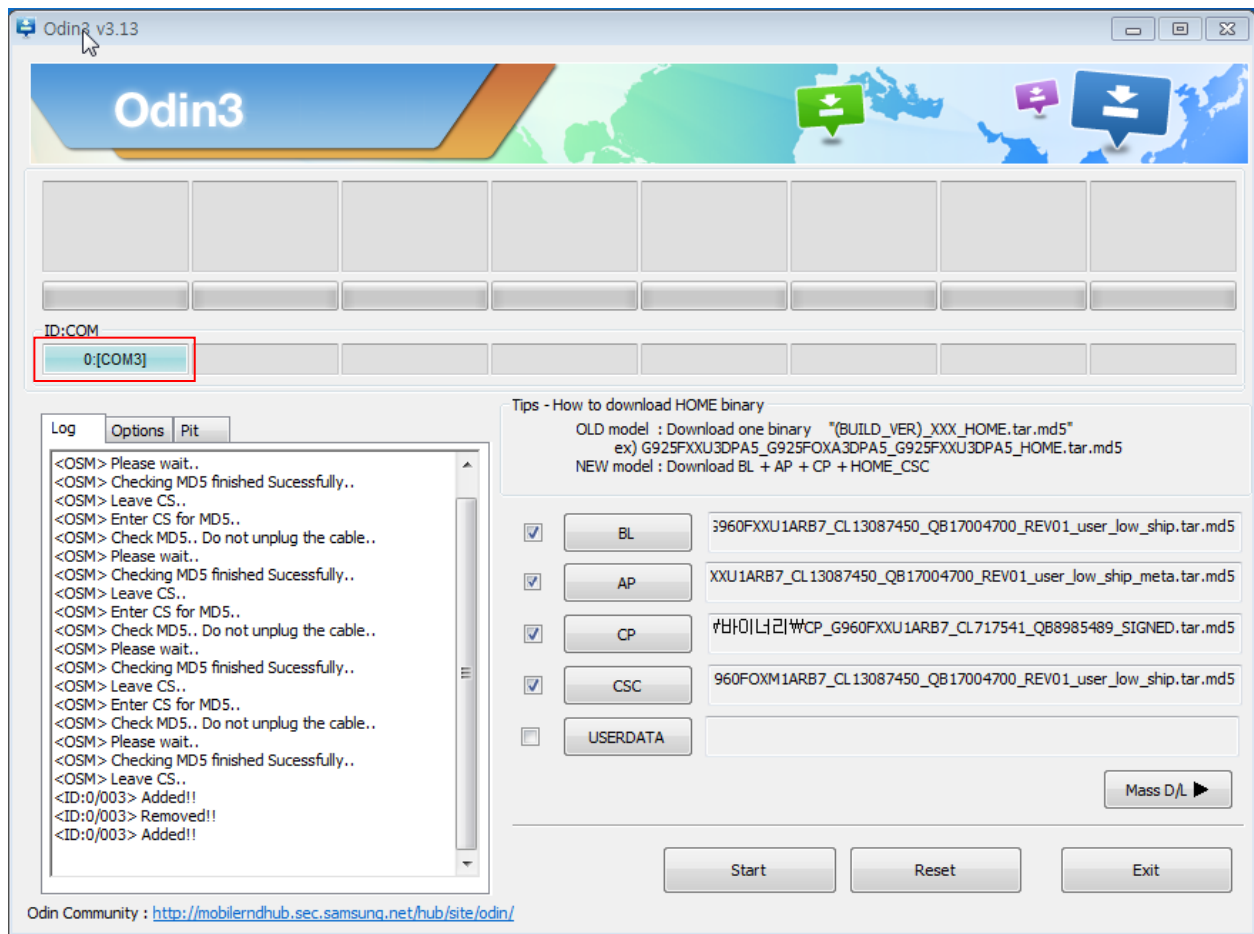
- Enter into Download Mode by pressing Volume Down button, Intelligence button and ON/OFF Button simultaneously followed by pressing Volume up button as a direction of the phone.



6. Level 1 Repair

3. Connect the device to PC via Data Cable.

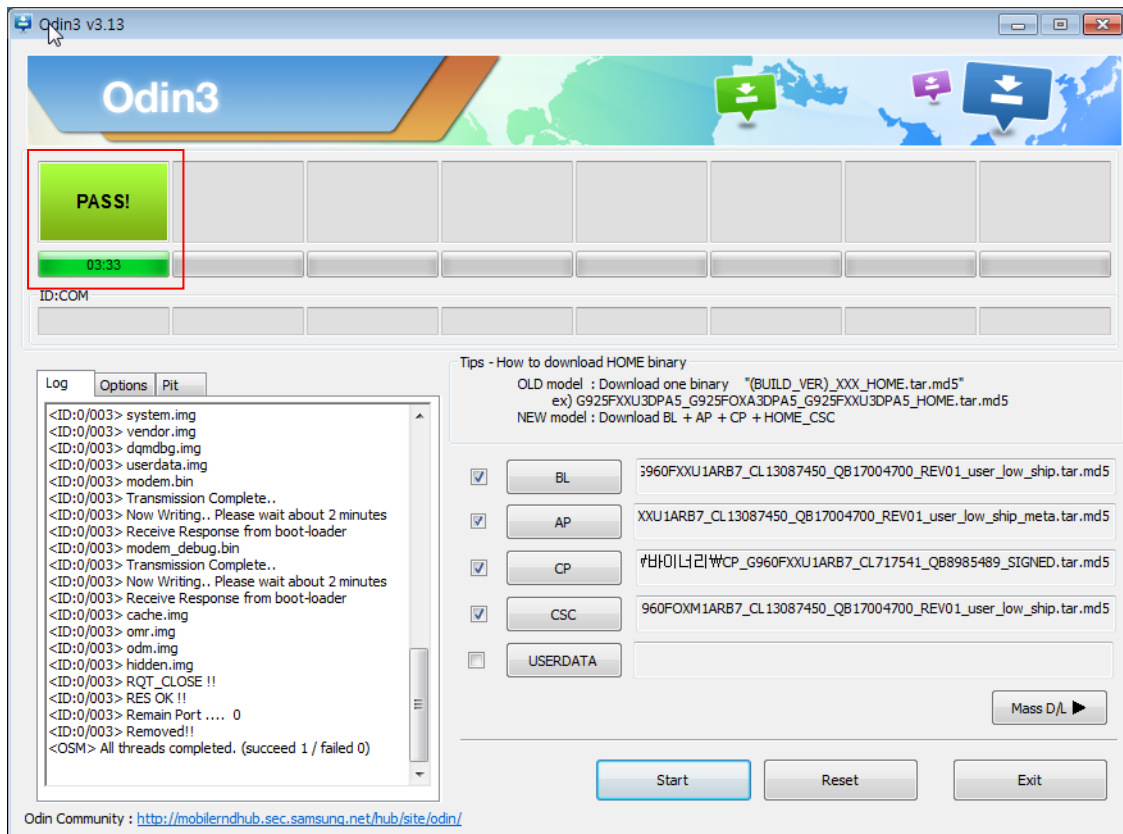
Make sure that the one of communication ports [ID:COM] box is highlighted in sky blue.
The device is now connected with the PC and ready to download the binary files in it.



6. Level 1 Repair

4. Start downloading the binary files into the device by clicking Start button on the screen.

The green colored "PASS!" sign will appear on the upper-left box if the binary files have been successfully downloaded into the device.



5. Disconnect the device from the Data cable.

6. Once the device boots up, you can check the version of the binary file or name by pressing the following code in sequence; ***#1234#**

You can perform Factory data Reset by Settings → General Management → Reset

※ Caution. Never disconnect during the S/W downloading.

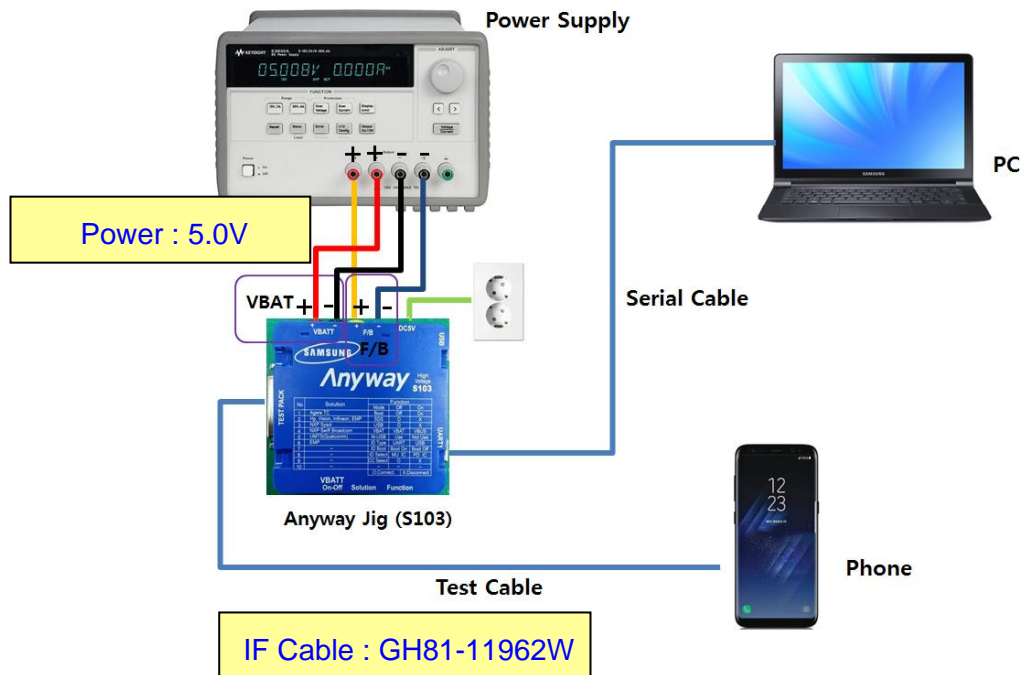
6. Level 1 Repair

6-3. IMEI writing

6-3-1. Preparation

- New IMEI writing Program has been released.
- Supported Model : Models which CAB files are uploaded on HHPsvc INI File category, instead of ini file.
- Refer to below IMEI writing procedure.

- H/W



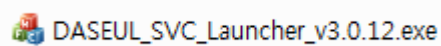
- S/W

| | |
|-------------------|--|
| ① Library Install | To use Daseul, library files should be installed. Refer to SVC Bulletin “(11-82) Daseul (New IMEI writing Program) Library Install guide_rev1.0” |
| ② Launcher | DASEUL_SVC_Launcher_v3.0.12 or higher -Uploaded on HHPsvc Notice |
| ③ Runtime File | 1. DASEUL_IMEI_ALL_Runtime_3.1.348.0_r00519.CAB or higher -Uploaded on HHPsvc Notice 2. Make ‘SM-M205F’ folder at the same position with launcher & Runtime file. DASEUL_IMEI_ALL_Runtime_3.1.348.0_r00519.CAB DASEUL_Launcher_v4.0.0.exe SM-G960F_SS(CSC)_IMEI_Ver_3.1.343.10.CAB |
| ④ Model File | Copy Model File under the ‘SM-M205F’ folder |

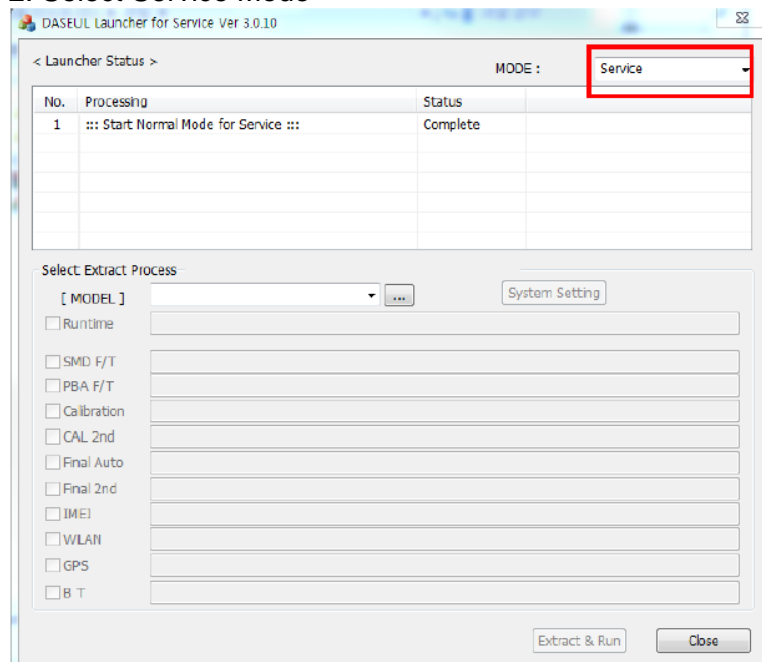
6. Level 1 Repair

6-3-2. IMEI writing Process

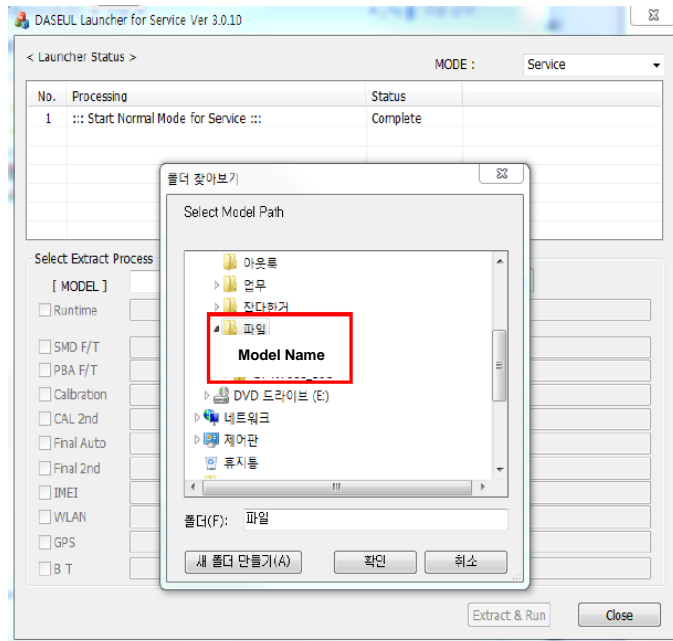
1. Run DASEUL_SVC_Launcher_v3.0.12.exe



2. Select Service Mode

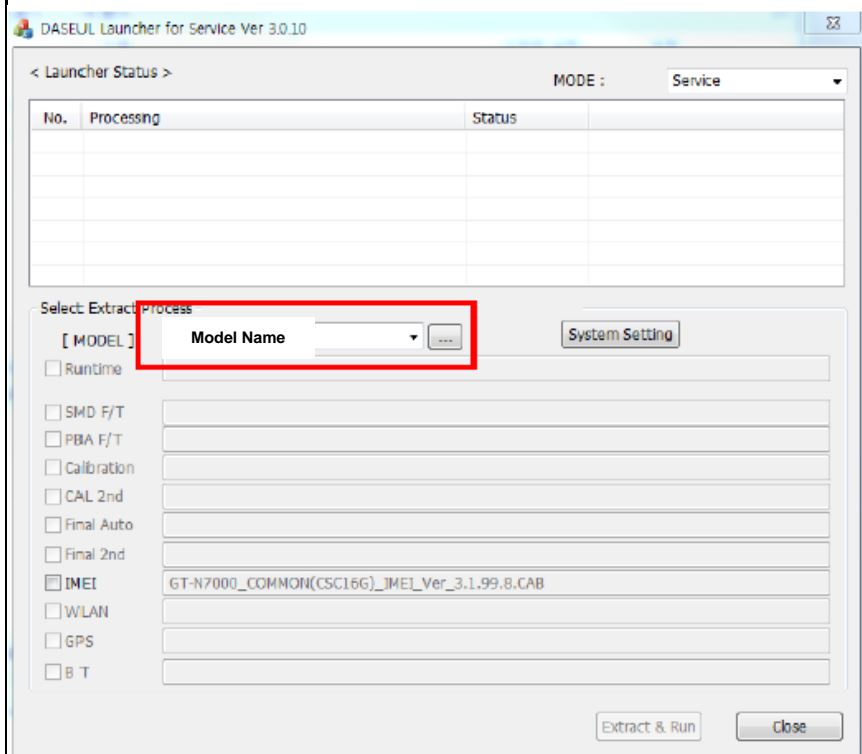


3. Click  and Select folder where the Launcher exists



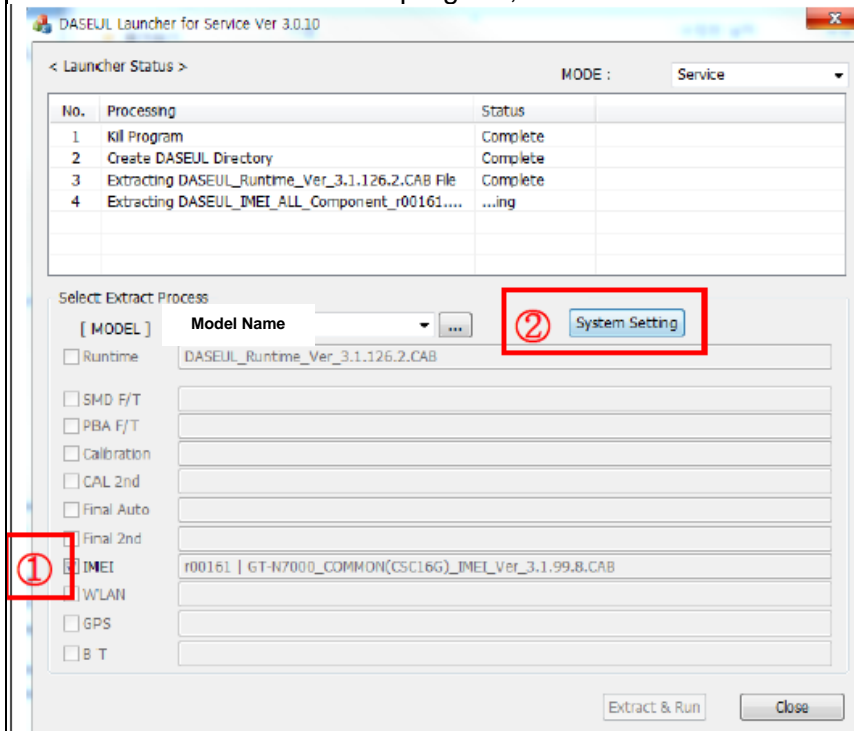
6. Level 1 Repair

4. Select Model



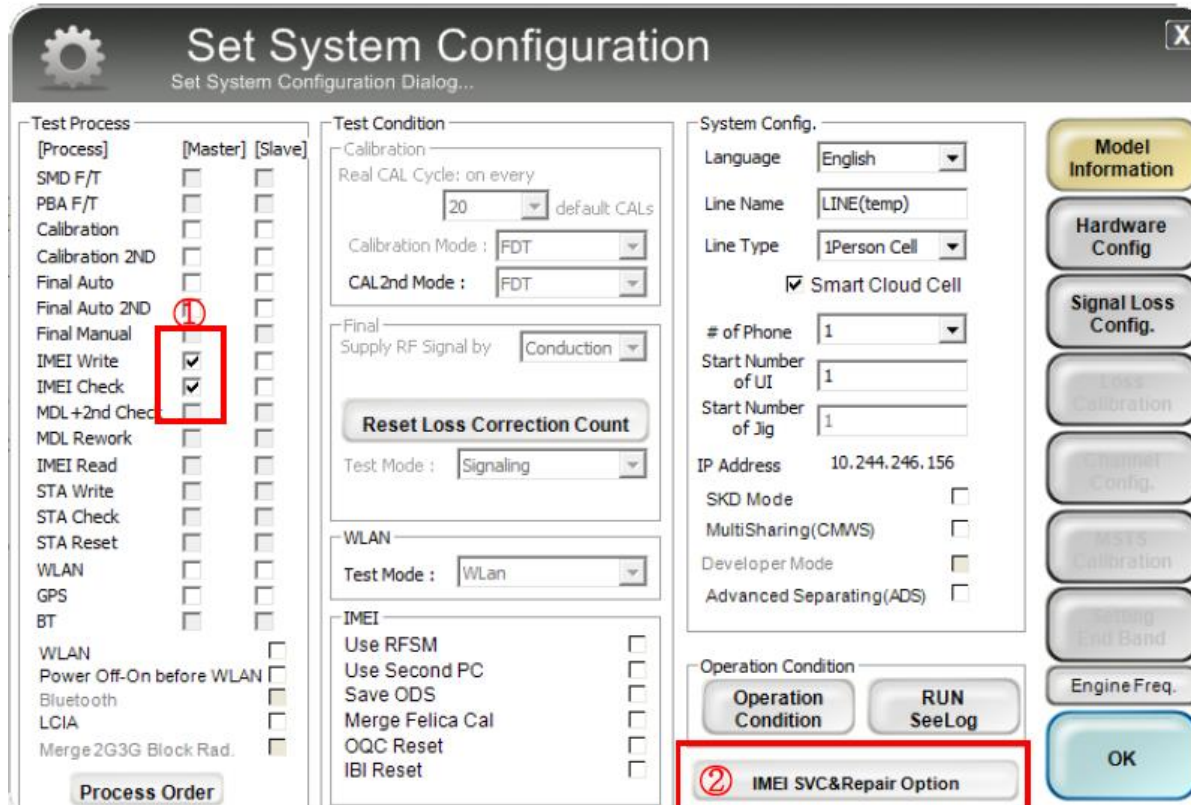
5. Check IMEI and click System Setting

※ Once you setup the setting, you don't have to do it again, unless there is change.
From second run of the IMEI program, check IMEI and click Extract & Run.



6. Level 1 Repair

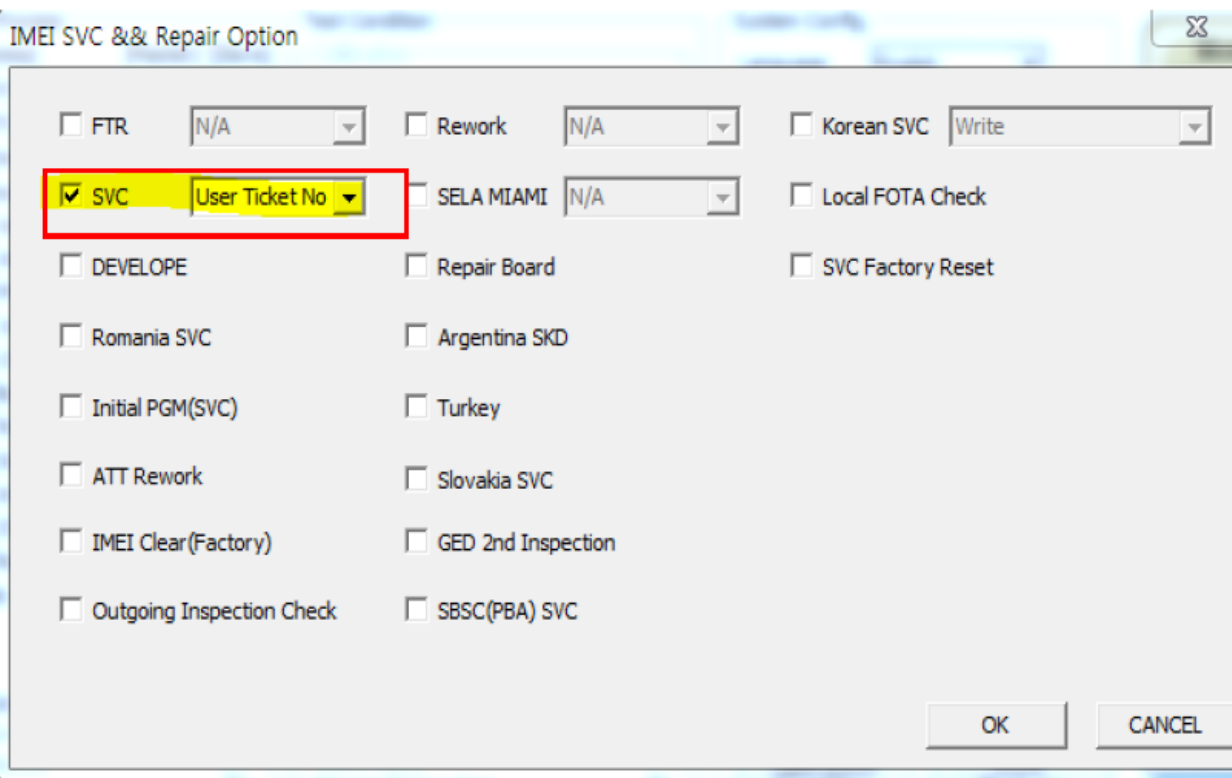
6. Check IMEI Write / IMEI Check and click IMEI SVC & Repair Option.



The 'Set System Configuration' dialog box is shown. It has a title bar with a gear icon and a close button. The main area is divided into several sections: 'Test Process' with a table of checkboxes for various tests; 'Test Condition' with settings for calibration and RF signal; 'System Config.' with settings for language, line name, and network; and a right-hand sidebar with buttons for 'Model Information', 'Hardware Config', 'Signal Loss Config.', 'Loss Calibration', 'Channel Config.', 'MMS Calibration', 'Setting End Band', and 'Engine Freq.'. At the bottom, there are buttons for 'Operation Condition', 'RUN SeeLog', and 'IMEI SVC&Repair Option' (which is circled in red and labeled with a red '2'). The 'Test Process' table has 'IMEI Write' and 'IMEI Check' checked (labeled with a red '1').

| [Process] | [Master] | [Slave] |
|--------------------------|-------------------------------------|--------------------------|
| SMD F/T | <input type="checkbox"/> | <input type="checkbox"/> |
| PBA F/T | <input type="checkbox"/> | <input type="checkbox"/> |
| Calibration | <input type="checkbox"/> | <input type="checkbox"/> |
| Calibration 2ND | <input type="checkbox"/> | <input type="checkbox"/> |
| Final Auto | <input type="checkbox"/> | <input type="checkbox"/> |
| Final Auto 2ND | <input type="checkbox"/> | <input type="checkbox"/> |
| Final Manual | <input type="checkbox"/> | <input type="checkbox"/> |
| IMEI Write | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| IMEI Check | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| MDL+2nd Check | <input type="checkbox"/> | <input type="checkbox"/> |
| MDL Rework | <input type="checkbox"/> | <input type="checkbox"/> |
| IMEI Read | <input type="checkbox"/> | <input type="checkbox"/> |
| STA Write | <input type="checkbox"/> | <input type="checkbox"/> |
| STA Check | <input type="checkbox"/> | <input type="checkbox"/> |
| STA Reset | <input type="checkbox"/> | <input type="checkbox"/> |
| WLAN | <input type="checkbox"/> | <input type="checkbox"/> |
| GPS | <input type="checkbox"/> | <input type="checkbox"/> |
| BT | <input type="checkbox"/> | <input type="checkbox"/> |
| WLAN | <input type="checkbox"/> | <input type="checkbox"/> |
| Power Off-On before WLAN | <input type="checkbox"/> | <input type="checkbox"/> |
| Bluetooth | <input type="checkbox"/> | <input type="checkbox"/> |
| LCIA | <input type="checkbox"/> | <input type="checkbox"/> |
| Merge 2G3G Block Rad. | <input type="checkbox"/> | <input type="checkbox"/> |

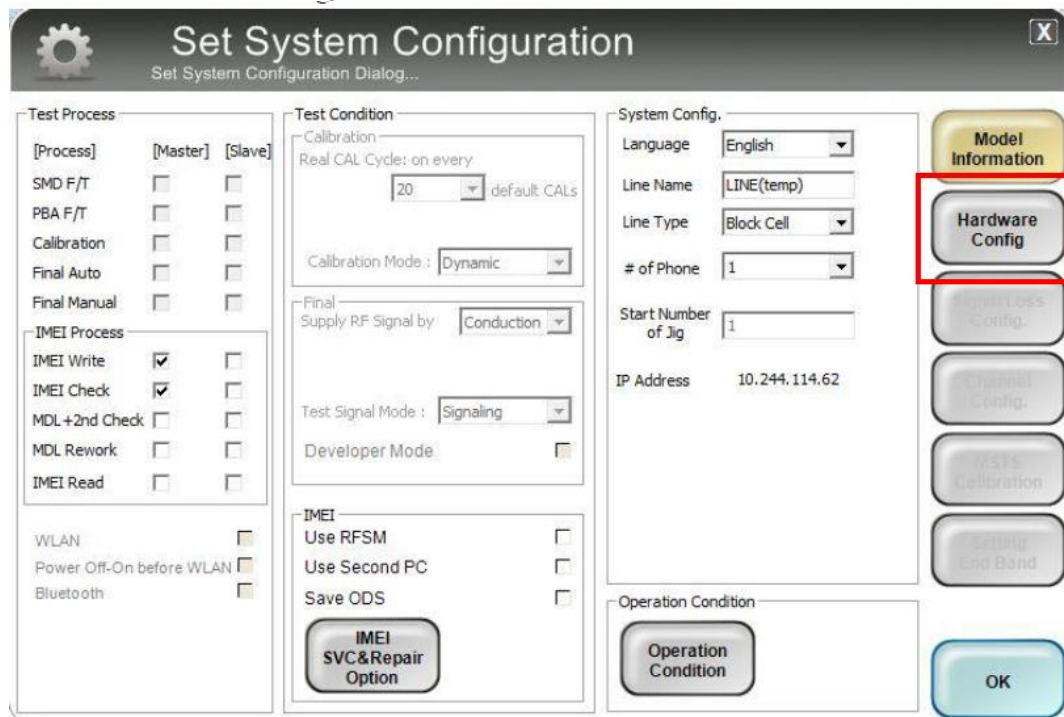
7. Check 'SVC , User Ticket No' and click OK



The 'IMEI SVC && Repair Option' dialog box is shown. It has a title bar with a close button. The main area contains a grid of checkboxes and dropdown menus for various service options. The 'SVC' checkbox is checked, and the 'User Ticket No' dropdown is selected (both are highlighted with a red box). Other options include 'FTR', 'Rework', 'Korean SVC', 'SELA MIAMI', 'Local FOTA Check', 'DEVELOPE', 'Repair Board', 'SVC Factory Reset', 'Romania SVC', 'Argentina SKD', 'Initial PGM(SVC)', 'Turkey', 'ATT Rework', 'Slovakia SVC', 'IMEI Clear(Factory)', 'GED 2nd Inspection', 'Outgoing Inspection Check', and 'SBSC(PBA) SVC'. At the bottom, there are 'OK' and 'CANCEL' buttons.

6. Level 1 Repair

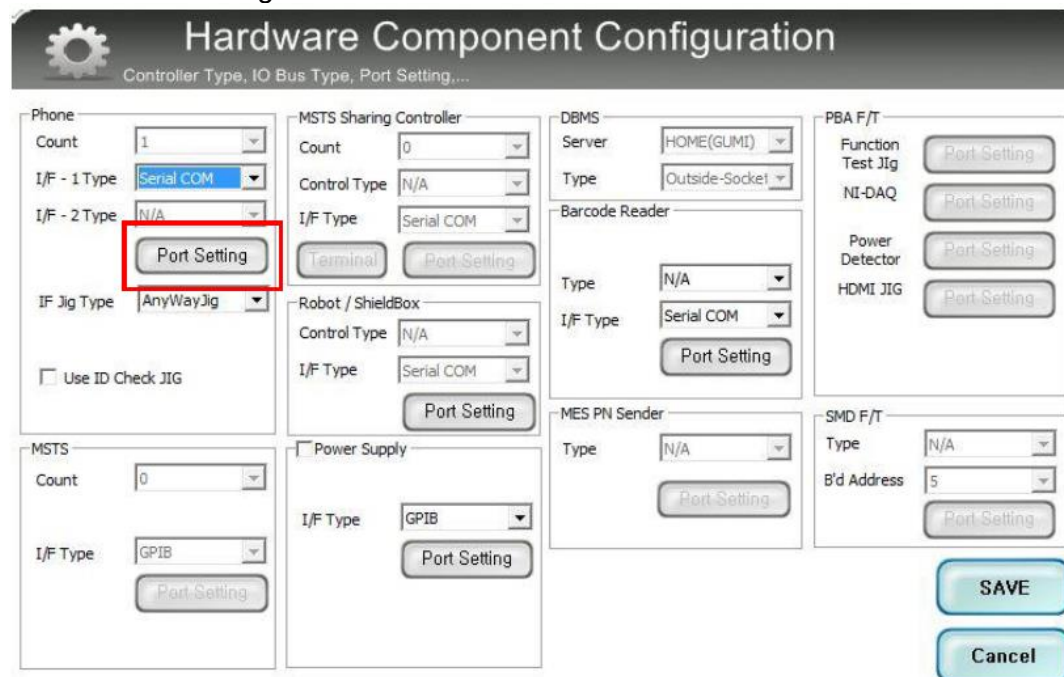
8. Click 'Hardware Config'



The 'Set System Configuration' dialog box is shown. It has a title bar with a gear icon and the text 'Set System Configuration Dialog...'. The dialog is divided into several sections:

- Test Process:** Includes checkboxes for [Process], [Master], and [Slave] for SMD F/T, PBA F/T, Calibration, Final Auto, and Final Manual. It also has checkboxes for IMEI Write, IMEI Check, MDL +2nd Check, MDL Rework, and IMEI Read.
- Test Condition:** Includes a 'Calibration' section with a 'Real CAL Cycle: on every' dropdown set to 20 and a 'default CALs' label. Below it is a 'Calibration Mode' dropdown set to 'Dynamic'. There is also a 'Final' section with a 'Supply RF Signal by' dropdown set to 'Conduction' and a 'Test Signal Mode' dropdown set to 'Signaling'. A 'Developer Mode' checkbox is also present.
- System Config.:** Includes a 'Language' dropdown set to 'English', a 'Line Name' text field with 'LINE(temp)', a 'Line Type' dropdown set to 'Block Cell', a '# of Phone' dropdown set to 1, a 'Start Number of Jig' text field with '1', and an 'IP Address' text field with '10.244.114.62'.
- Model Information:** A vertical stack of buttons on the right side, including 'Model Information' (highlighted with a red box), 'Signal Loss Config.', 'Channel Config.', 'MSTS Calibration', and 'Setting End Band'.
- IMEI:** Includes checkboxes for 'Use RFSM', 'Use Second PC', and 'Save ODS'. Below these is a button labeled 'IMEI SVC&Repair Option'.
- Operation Condition:** Includes a button labeled 'Operation Condition'.
- WLAN:** Includes checkboxes for 'WLAN', 'Power Off-On before WLAN', and 'Bluetooth'.
- Buttons:** At the bottom right are 'OK' and 'Cancel' buttons.

9. Click 'Port Setting'



The 'Hardware Component Configuration' dialog box is shown. It has a title bar with a gear icon and the text 'Hardware Component Configuration'. Below the title bar is a subtitle 'Controller Type, IO Bus Type, Port Setting,...'. The dialog is divided into several sections:

- Phone:** Includes a 'Count' dropdown set to 1, an 'I/F - 1 Type' dropdown set to 'Serial COM', an 'I/F - 2 Type' dropdown set to 'N/A' (highlighted with a red box), and an 'IF Jig Type' dropdown set to 'AnyWayJig'. There is also a checkbox for 'Use ID Check JIG'.
- MSTS Sharing Controller:** Includes a 'Count' dropdown set to 0, a 'Control Type' dropdown set to 'N/A', an 'I/F Type' dropdown set to 'Serial COM', and a 'Port Setting' button.
- Robot / ShieldBox:** Includes a 'Control Type' dropdown set to 'N/A', an 'I/F Type' dropdown set to 'Serial COM', and a 'Port Setting' button.
- Power Supply:** Includes a checkbox for 'Power Supply', an 'I/F Type' dropdown set to 'GPIOB', and a 'Port Setting' button.
- DBMS:** Includes a 'Server' dropdown set to 'HOME(GUMI)', a 'Type' dropdown set to 'Outside-Socket', and a 'Port Setting' button.
- Barcode Reader:** Includes a 'Type' dropdown set to 'N/A', an 'I/F Type' dropdown set to 'Serial COM', and a 'Port Setting' button.
- MES PN Sender:** Includes a 'Type' dropdown set to 'N/A' and a 'Port Setting' button.
- PBA F/T:** Includes a 'Function Test Jig' dropdown set to 'N/A', an 'NI-DAQ' dropdown set to 'N/A', a 'Power Detector' dropdown set to 'N/A', and an 'HDMI JIG' dropdown set to 'N/A'. Each of these has a 'Port Setting' button.
- SMD F/T:** Includes a 'Type' dropdown set to 'N/A', a 'B'd Address' dropdown set to 5, and a 'Port Setting' button.
- Buttons:** At the bottom right are 'SAVE' and 'Cancel' buttons.

6. Level 1 Repair

10. Select Port Number and SAVE

Set IO BUS Configuration

Phone IO Bus Setting

Common

BaudRate: 115200
Data Bit: 8
Parity: No
Stop Bit: 1

| No. | Port #1 |
|-----|---------|
| 1 | 1 |

SAVE

Cancel

11. Click OK to proceed

Set System Configuration

Set System Configuration Dialog...

Test Process

[Process] [Master] [Slave]

SMD F/T ☐ ☐

PBA F/T ☐ ☐

Calibration ☐ ☐

Final Auto ☐ ☐

Final Manual ☐ ☐

IMEI Process

IMEI Write ☒ ☐

IMEI Check ☒ ☐

MDL+2nd Check ☐ ☐

MDL Rework ☐ ☐

IMEI Read ☐ ☐

WLAN ☐

Power Off-On before WLAN ☐

Bluetooth ☐

Test Condition

Calibration

Real CAL Cycle: on every 20 default: CALs

Calibration Mode: Dynamic

Final Supply RF Signal by: Conduction

Test Signal Mode: Signaling

Developer Mode ☐

IMEI

Use RFSM ☐

Use Second PC ☐

Save ODS ☐

IMEI SVC&Repair Option

System Config.

Language: English

Line Name: LINE(temp)

Line Type: Block Cell

of Phone: 1

Start Number of Jig: 1

IP Address: 10.244.114.62

Operation Condition

Operation Condition

Model Information

Hardware Config

Signal Loss Config.

Channel Config.

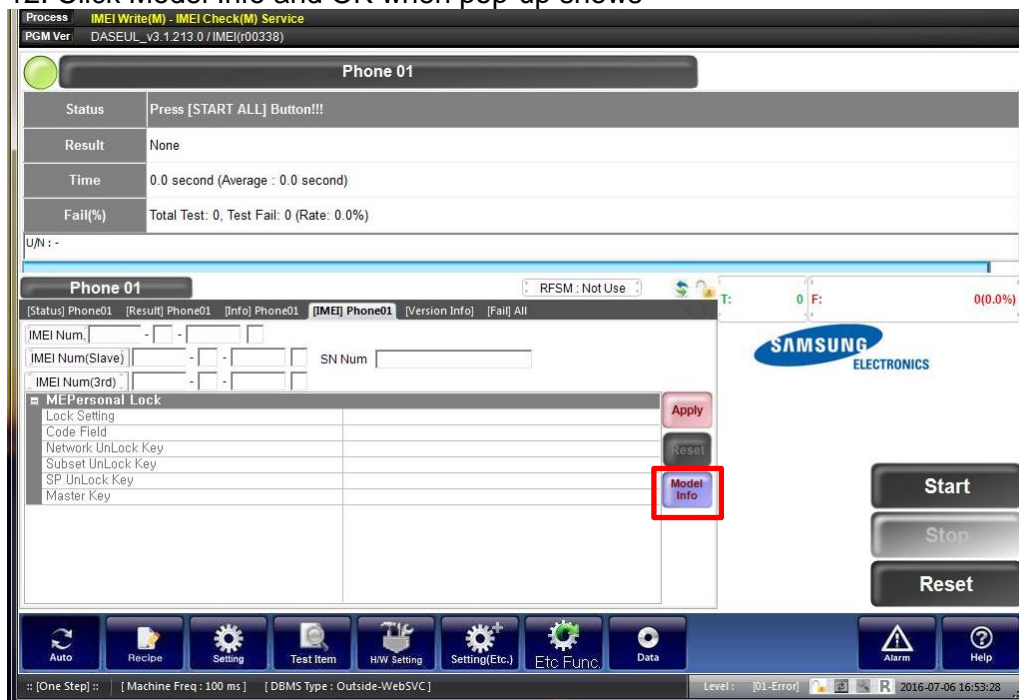
WPS Calibration

Setting End Band

OK

6. Level 1 Repair

12. Click Model Info and OK when pop-up shows



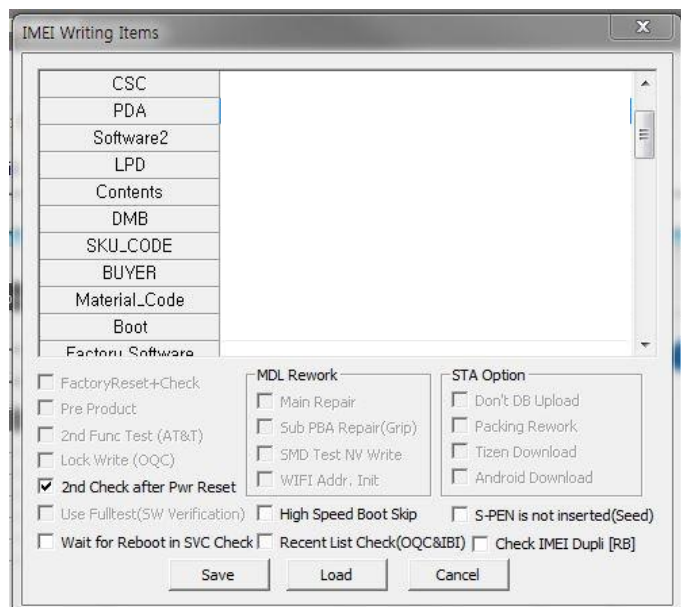
13. Click OK



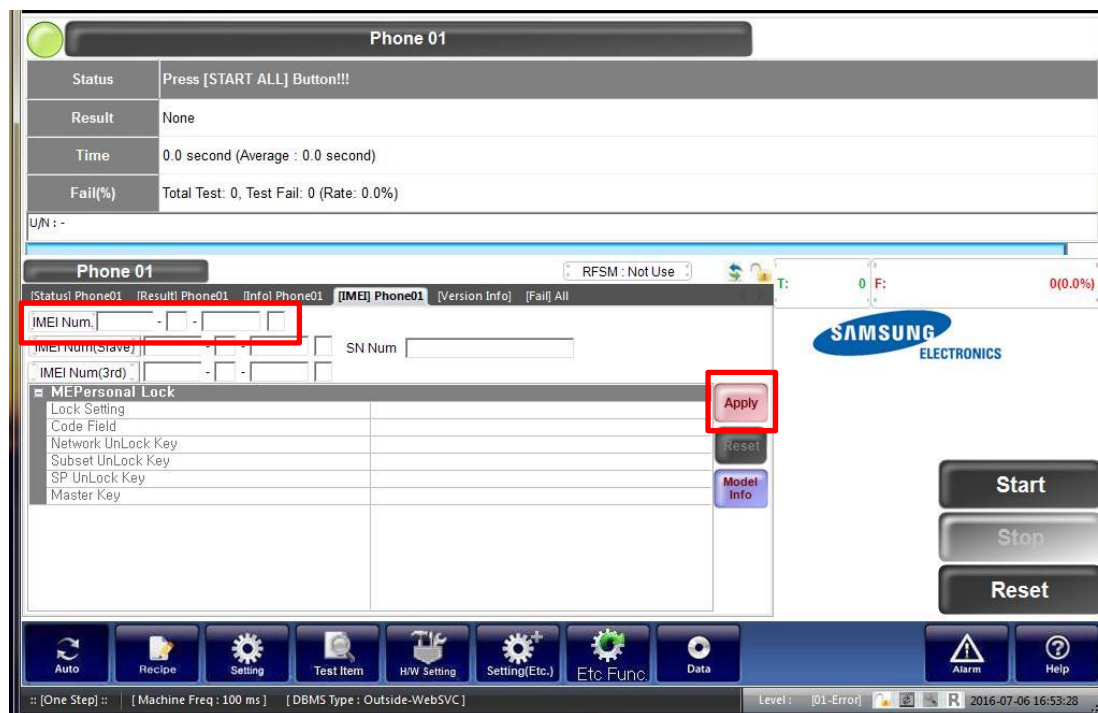
6. Level 1 Repair

14. Input SKU_CODE and BUYER, then click Save button.

※ Refer to HHPsvc→IMEI Review to check SKU Code and buyer

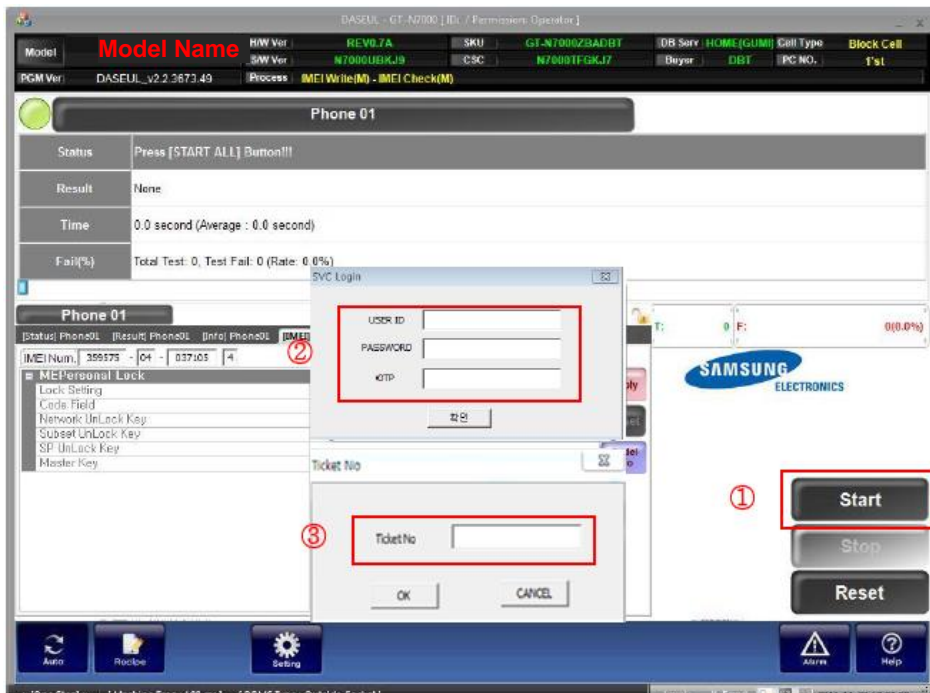


15. Input IMEI Number and click Apply



6. Level 1 Repair

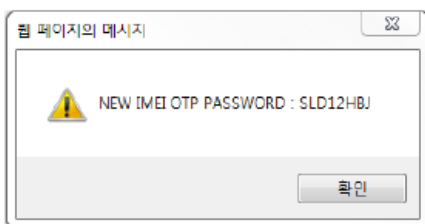
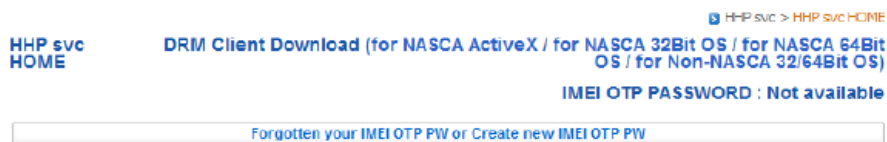
16. ① Click Start → ② Input IMEI writing ID and Password & OTP → ③ Input Ticket No



※ OTP(One time Password) : OTP is valid for 6 hours.

After that, you can get new OTP by click the “Forgotten your IMEI OTP PW or Create new IMEI OTP PW” button.

🔗 OTP Location : GSPN → Knowledge → HHP svc → Home

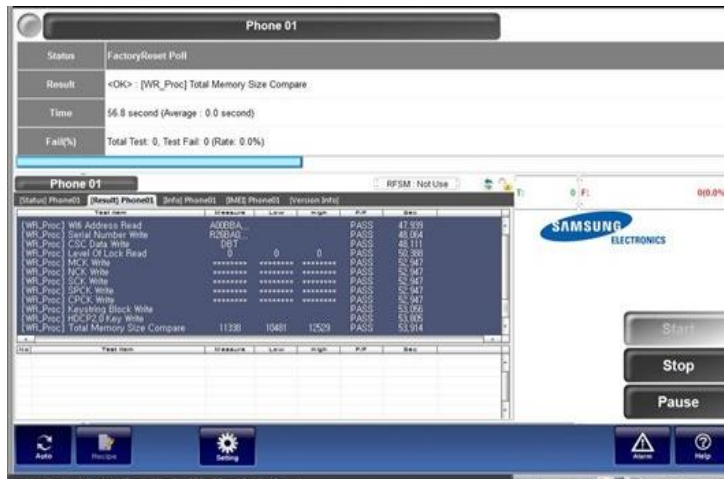


6. Level 1 Repair

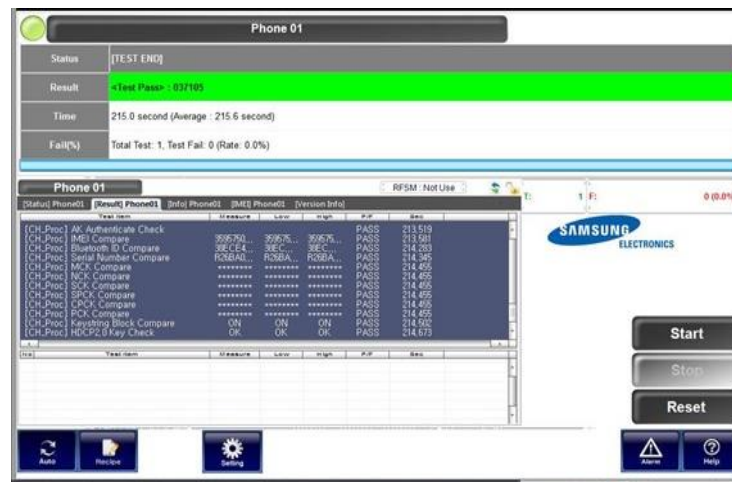
17. Connect the phone to Anyway JIG

- ※ When you connect the phone, the phone should be turned off.
After connecting the phone, the phone will be booted automatically.

18. IMEI Writing Proceeding

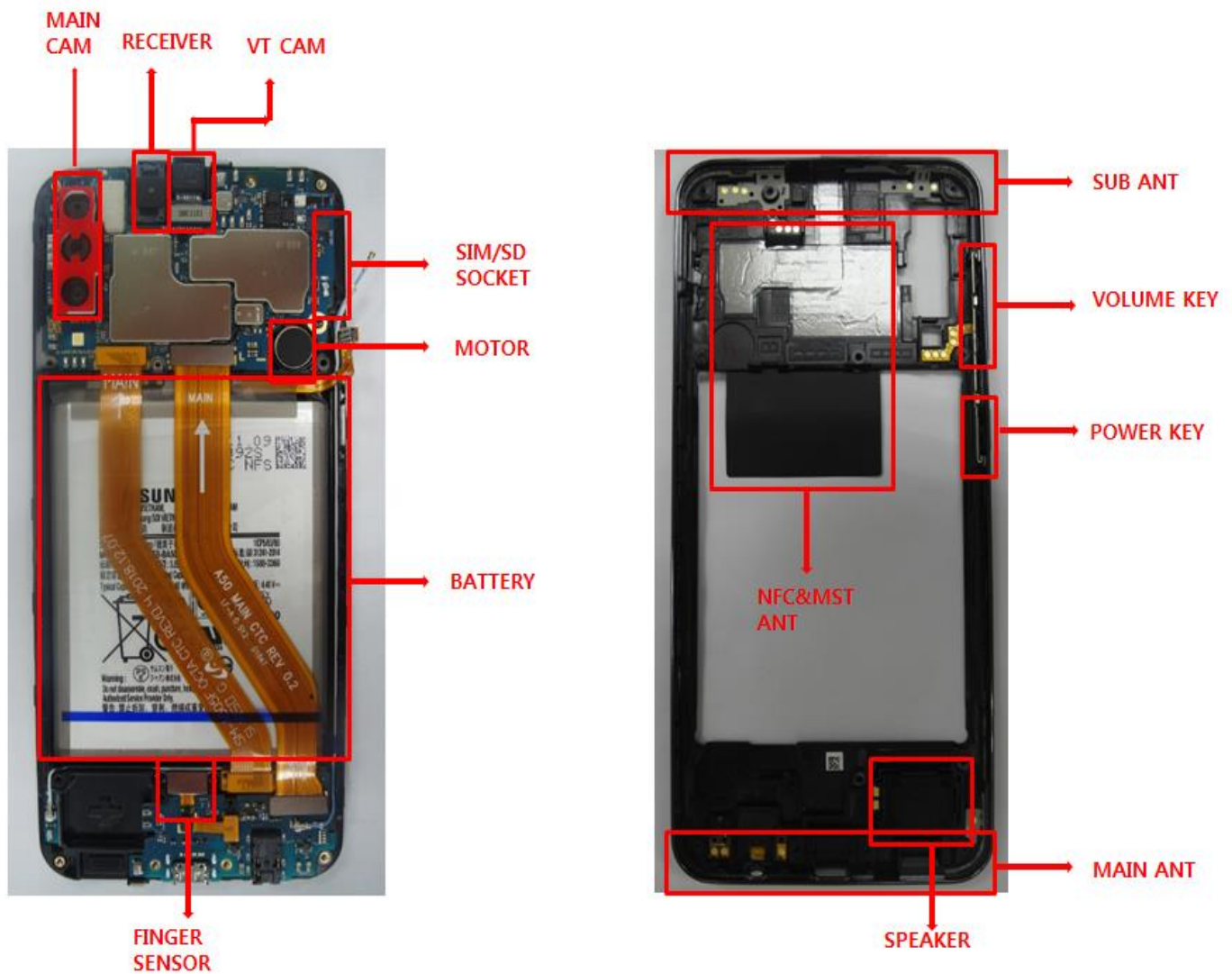


19. IMEI Writing Success



7. Level 2 Repair

7-1. Components on the Rear Case




7. Level 2 Repair

7-2. Pre-requisite

| | |
|---|---|
|  |  |
| Tweezers / Disass'y Stick / Screw Driver | Anti-static Gloves |
|  |  |
| Anti-static Mat | AOD for Tablet |
|  |  |
| Ethyl Alcohol | Cotton Swab |

7. Level 2 Repair

7-3. Parts which must be changed after repair

| BOM Description & part code | Image | Remarks |
|---|--|--|
| Backglass Outside tape [GH02-19324A] |  | Left items must be changed to the new one in case of disassemble the Back glass |

7. Level 2 Repair

7-4. Disassembly

1

- 1) Put the device in the AOD jig.
Set the AOD condition
 - SOC 68%↓: Upper 70℃/ Lower 60℃ 5min
 - SOC 68%↑: Upper 60℃/ Lower 60℃ 5min
- 2) Disassemble the OCTA using the AOD.
※ Below picture shows how to detach Back Glass using service jig, however you can use manufactural jig if possible.



2

- Disassemble SIM Tray from device.
Unscrew 13Points.



※ Caution

Be careful not to damage set and OCTA.

※ Caution

Be care of scratch and molding damage.

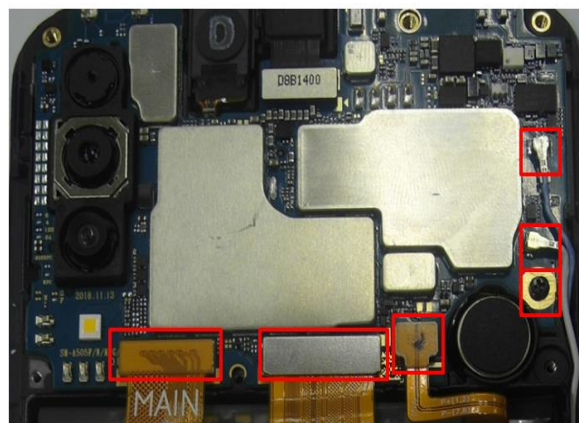
3

- Disassemble the REAR from Front Assy.



4

1. Disassemble Connector 3ea from PBA.
2. Unscrew 1 Points from PBA.
3. Disassemble Coaxial Cable 2ea from PBA.



※ Caution

Be care of damage to components.

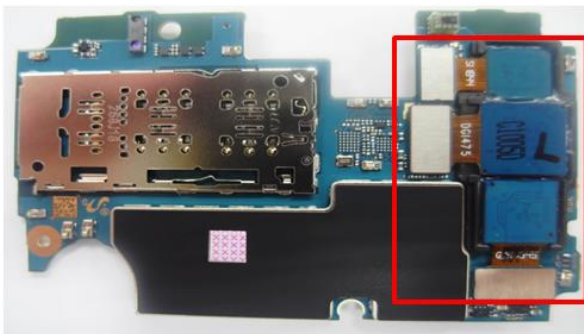
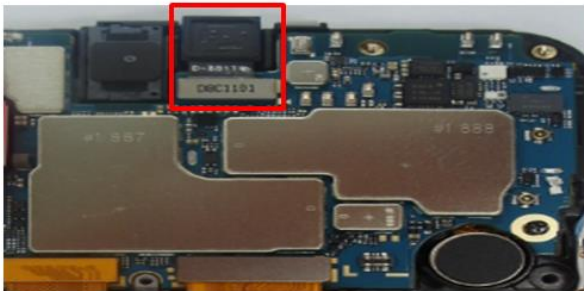
※ Caution

Be careful not to damage the PBA.

7. Level 2 Repair

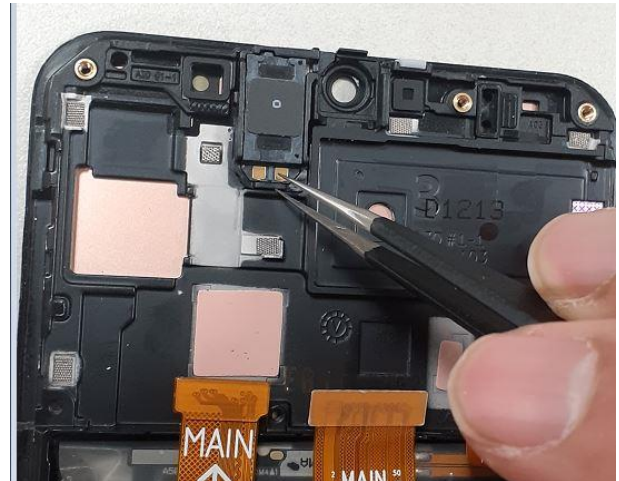
5

Disassemble PBA Assy from Front Assy.
Disassemble Front /Rear Camera from PBA.



6

Detach RCV from Front Ass'y.



※ Caution

1) Be careful not to damage the PBA.

※ Caution

Be careful not to damage the RCV.

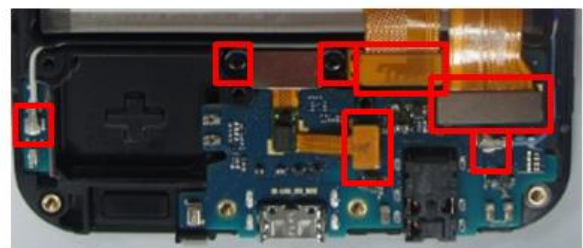
7

Detach Motor from Front Ass'y.



8

Remove FPCB 2ea and Fingersensor fix
screw 2ea+Fingersensor FPCB and RF
Cable 2ea.



※ Caution

Be careful not to damage the Motor.

※ Caution

Be careful not to damage the Sub PBA and connector

7. Level 2 Repair

9

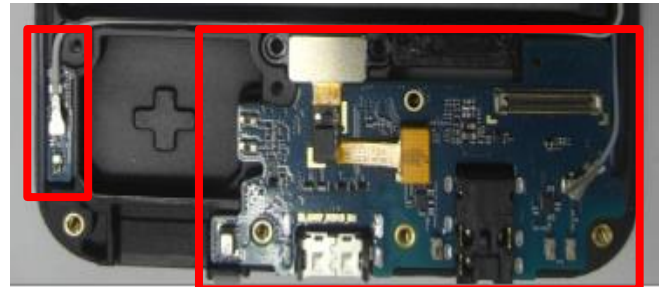
Detach Finger sensor.



※ Caution
Be careful not to damage fingersensor and the Sub PBA

10

Detach HB PBA and the Sub PBA.



※ Caution
Be careful not to damage HB PBA and the Sub PBA

11

Detach SPK from Rear Ass'y.



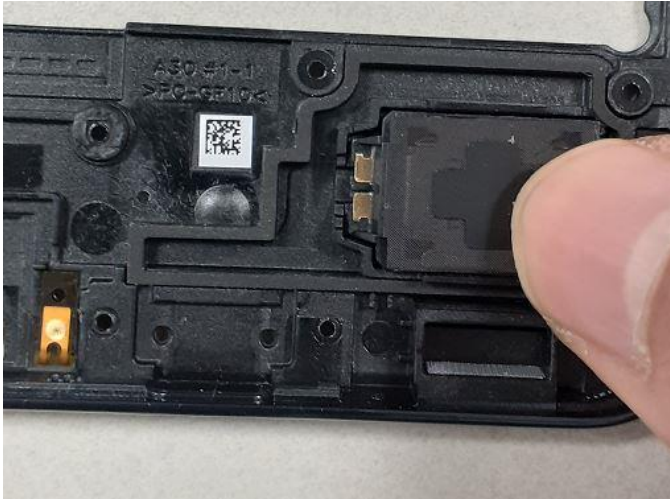
※ Caution
Be careful not to damage the SPK

7. Level 2 Repair

7-5. Assembly

1

Attach SPK on Rear Ass'y.



2

Attach Sub PBA and HB PBA on Front Ass'y.



※ Caution

Be care of SPK damage.

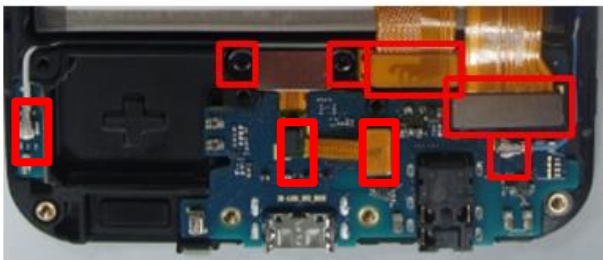
※ Caution

Be care of Sub PBA damage.

3

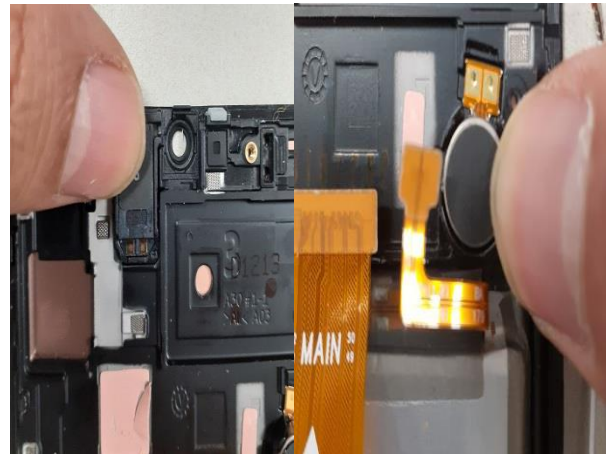
Attach RF Cable 2ea and FPCB 2ea,
fingersensor Screw 2ea & FPCB.

Screw insertion 2 Point.
* Torque Value : 0.95



4

Attach Motor and Receiver in upper area.



※ Caution

Please keep the guide line for C to C FPCB and BLACK,
WHITE COAXIAL CABLE.

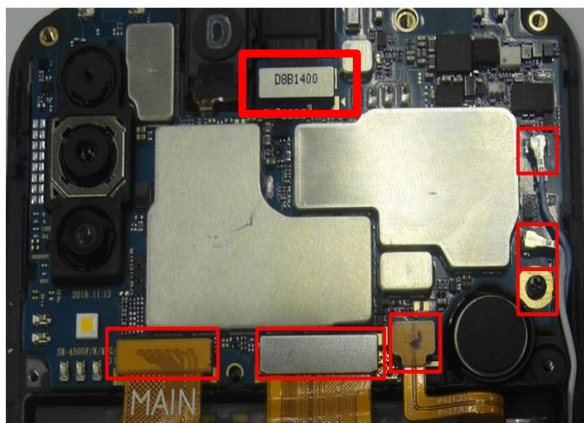
※ Caution

- 1) Be care of scratch CAM lens
- 2) Be care of damage each part.

7. Level 2 Repair

5

Assemble the PBA and C to C FPCB 2ea and Batt Conn and BLUE , WHITE COAXIAL CABLE. and VT Camera,



6

Screw insertion 1 Point.
* Torque Value : $0.95 \pm 7\%$



※ Caution

Check for each connector connection

※ Caution

Be care of PBA damage.

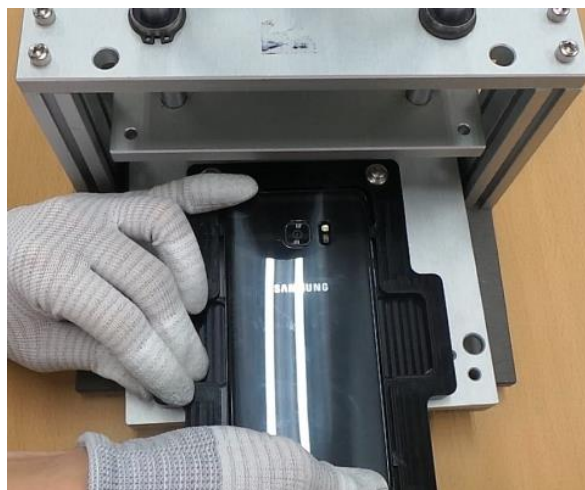
7

Assemble Rear and screw insertion 13 point
* Torque Value : $1.25 \pm 10\%$



8

Press Back Glass.
- Pressing force : 1 N
- Pressing time : 1 minute



※ Caution

Be care of PBA damage.

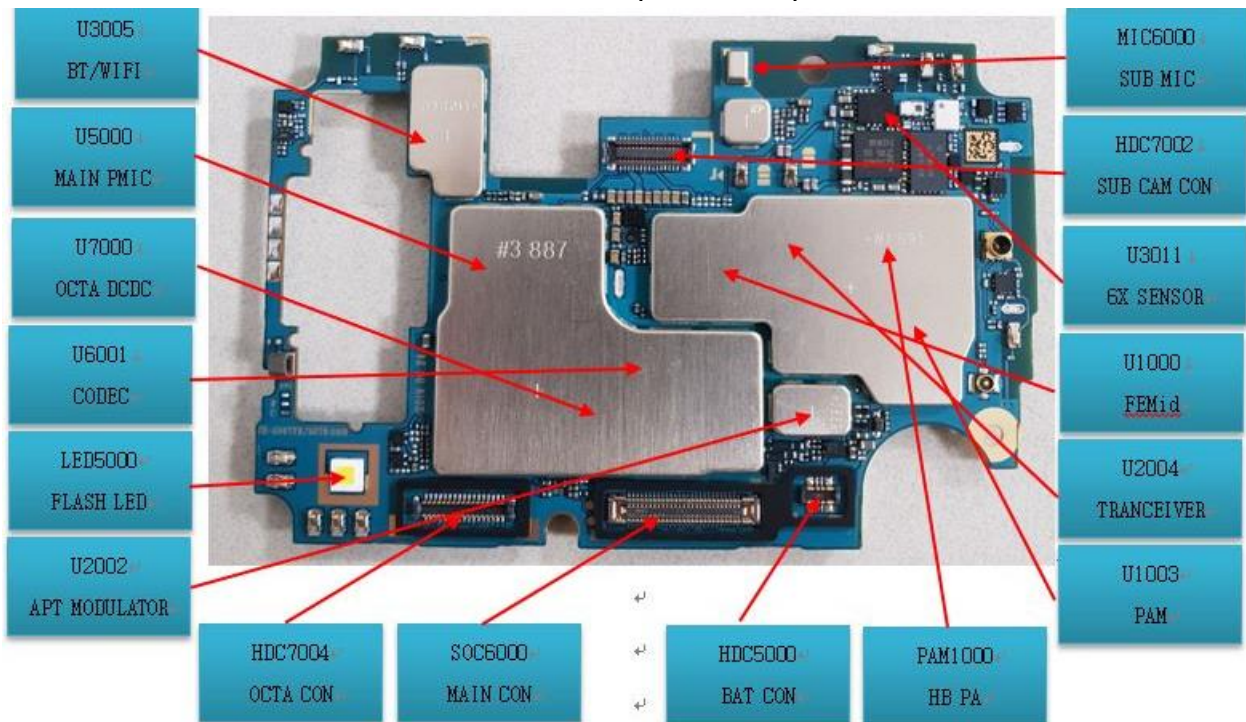
※ Caution

Be care of scratch Rear cover.

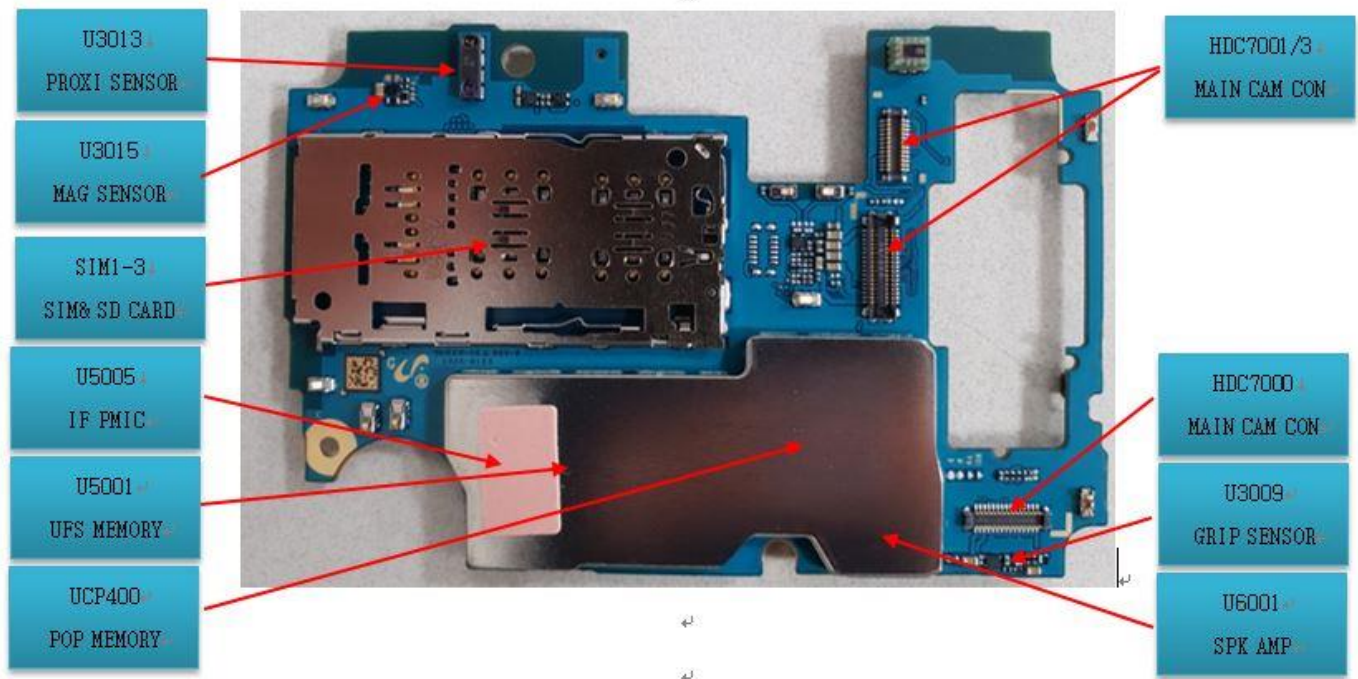
8. Level 3 Repair

8-1. Components Layout

MAIN PBA (TOP SIDE)

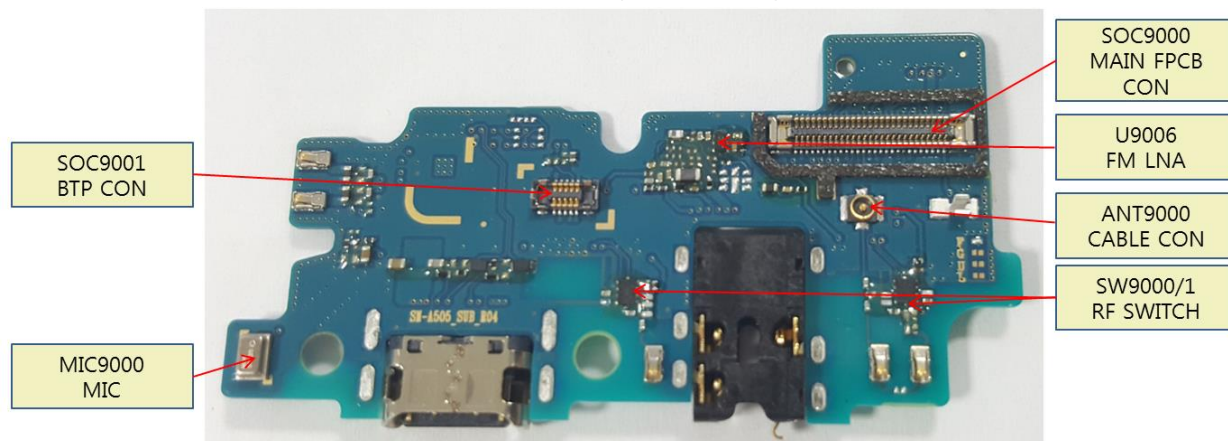


MAIN PBA (BOTTOM SIDE)

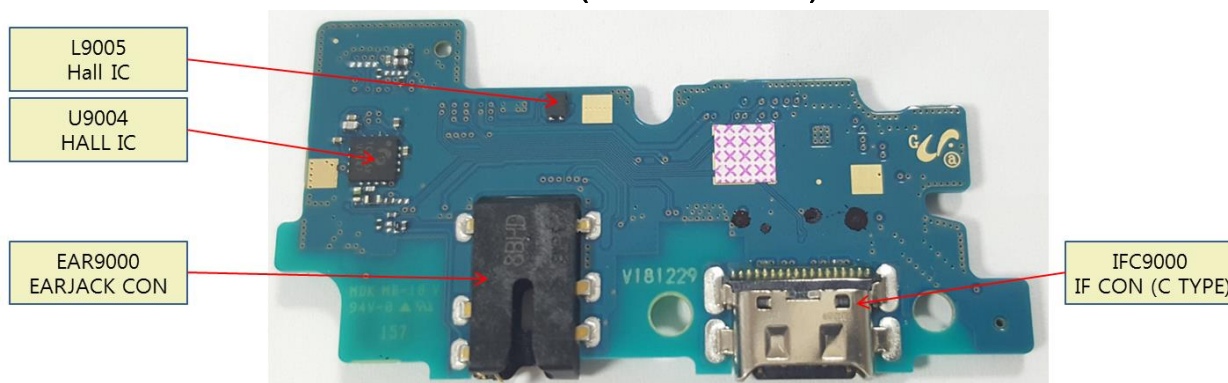


8. Level 3 Repair

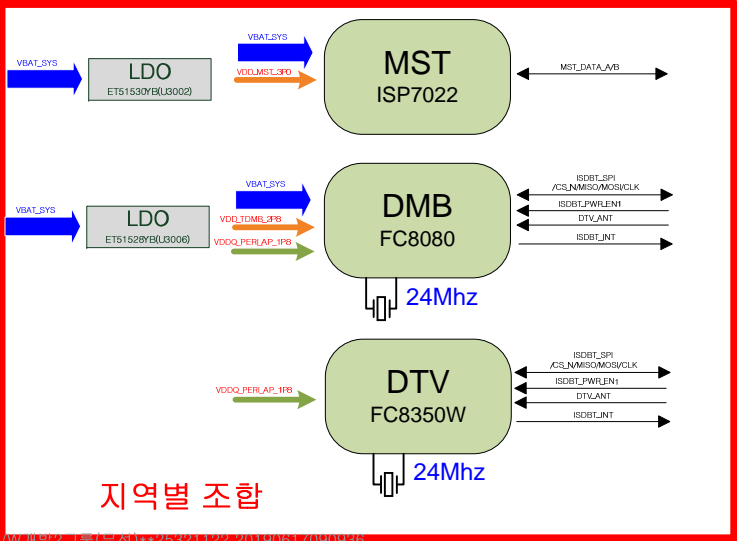
SUB PBA (TOP SIDE)



SUB PBA (BOTTOM SIDE)



A50s BB Block Diagram REV0.0A

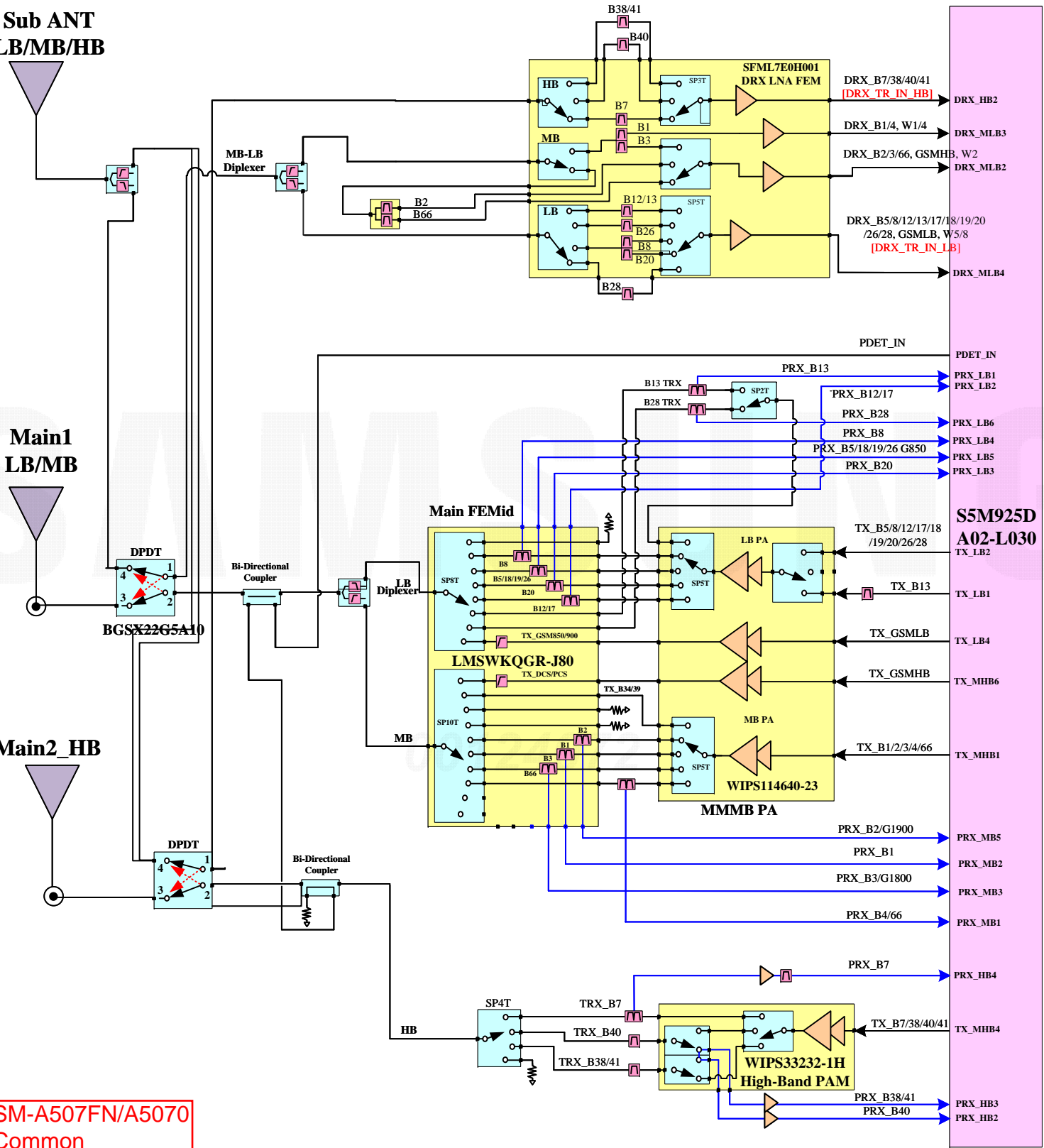


Sub ANT
LB/MB/HB

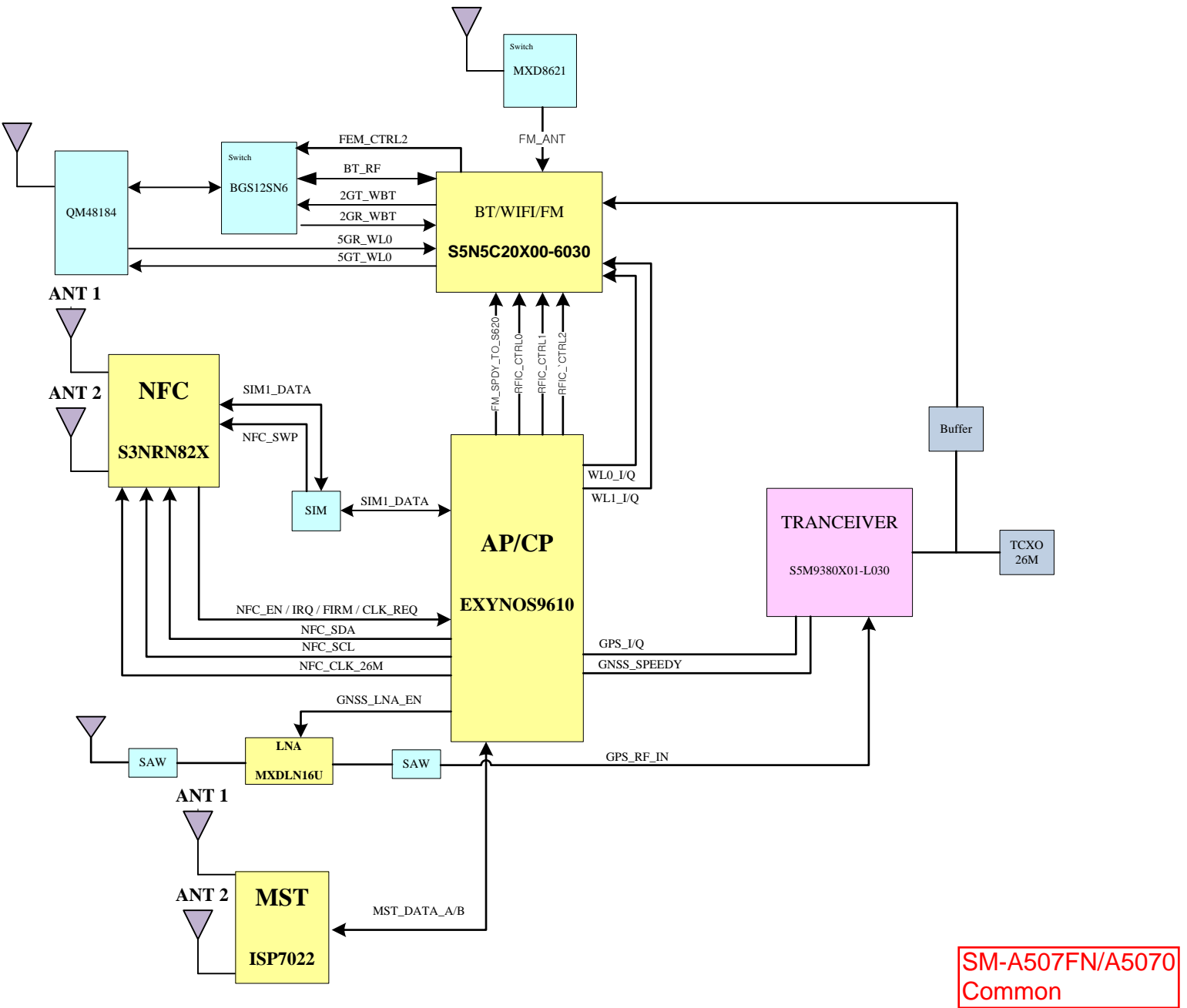
Main1
LB/MB

Main2_HB

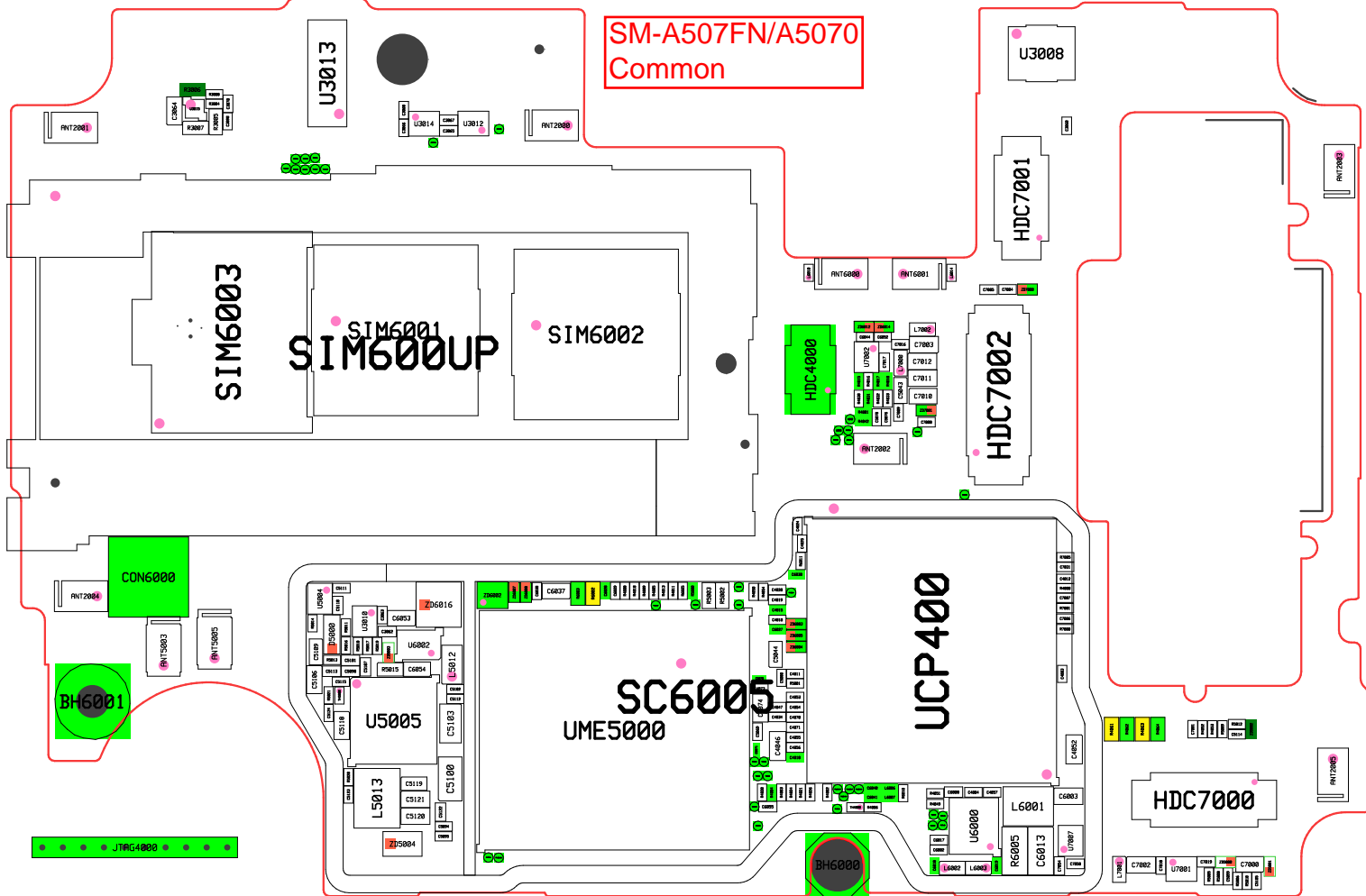
SM-A507FN/A5070
Common



A50s Connectivity Block Diagram



SM-A507FN/A5070
Common



SM-A507FN/A5070
Common

HDC7003

U3002
SC6000

SUS6000

U500

SC6004

U2004

SC6003

U1003

U1003

HDC7004

SOC6000

HDC5000

CON6001

U2001

RFS1001

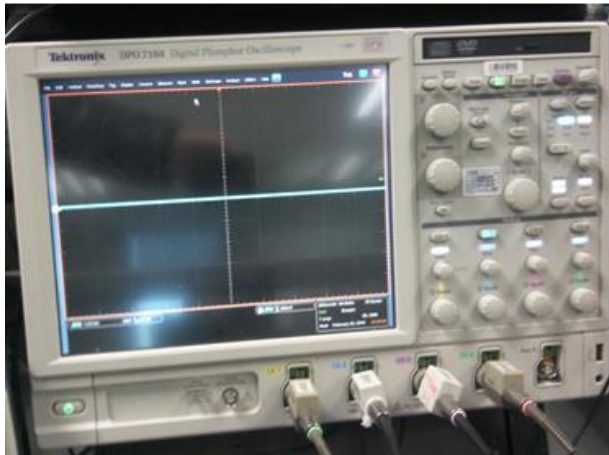
U1002

RFS1000

.....

8. Level 3 Repair

8-3. Flow chart of Troubleshooting.



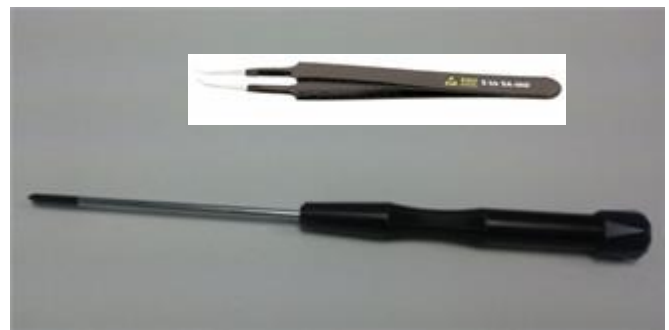
Oscilloscope



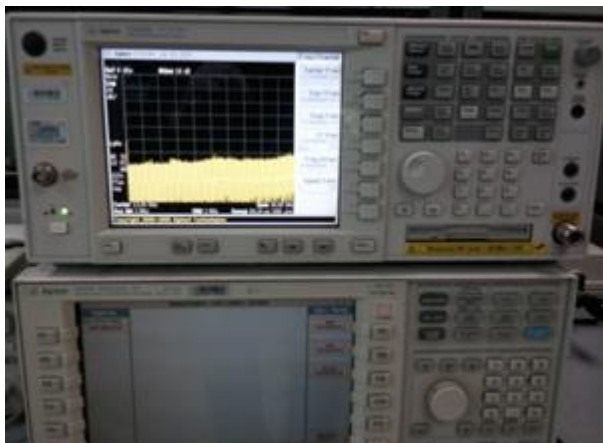
Digital Multimeter



Power Supply



+ driver, ESD Safe Tweezer



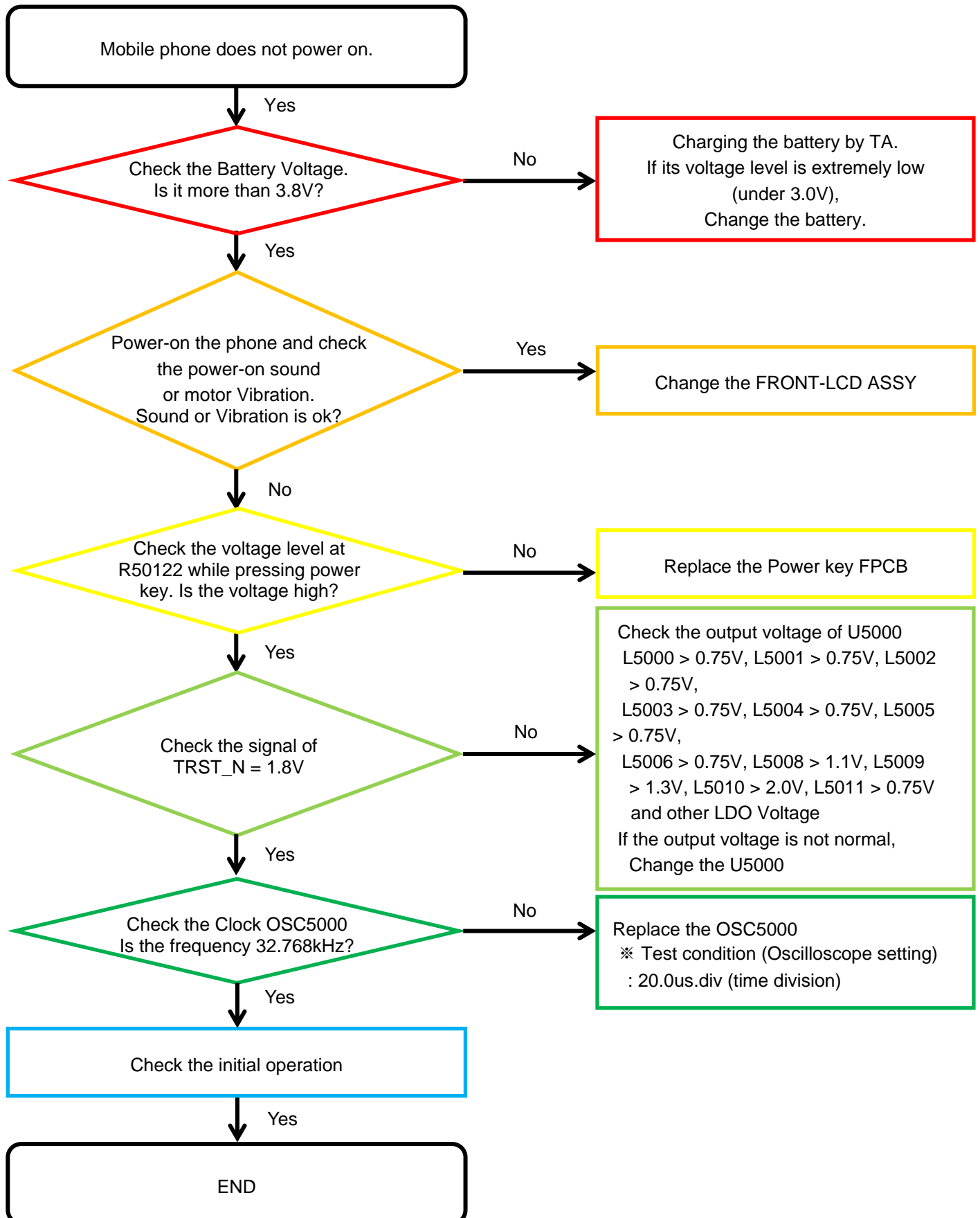
8960 & Spectrum Analyzer



Soldering iron

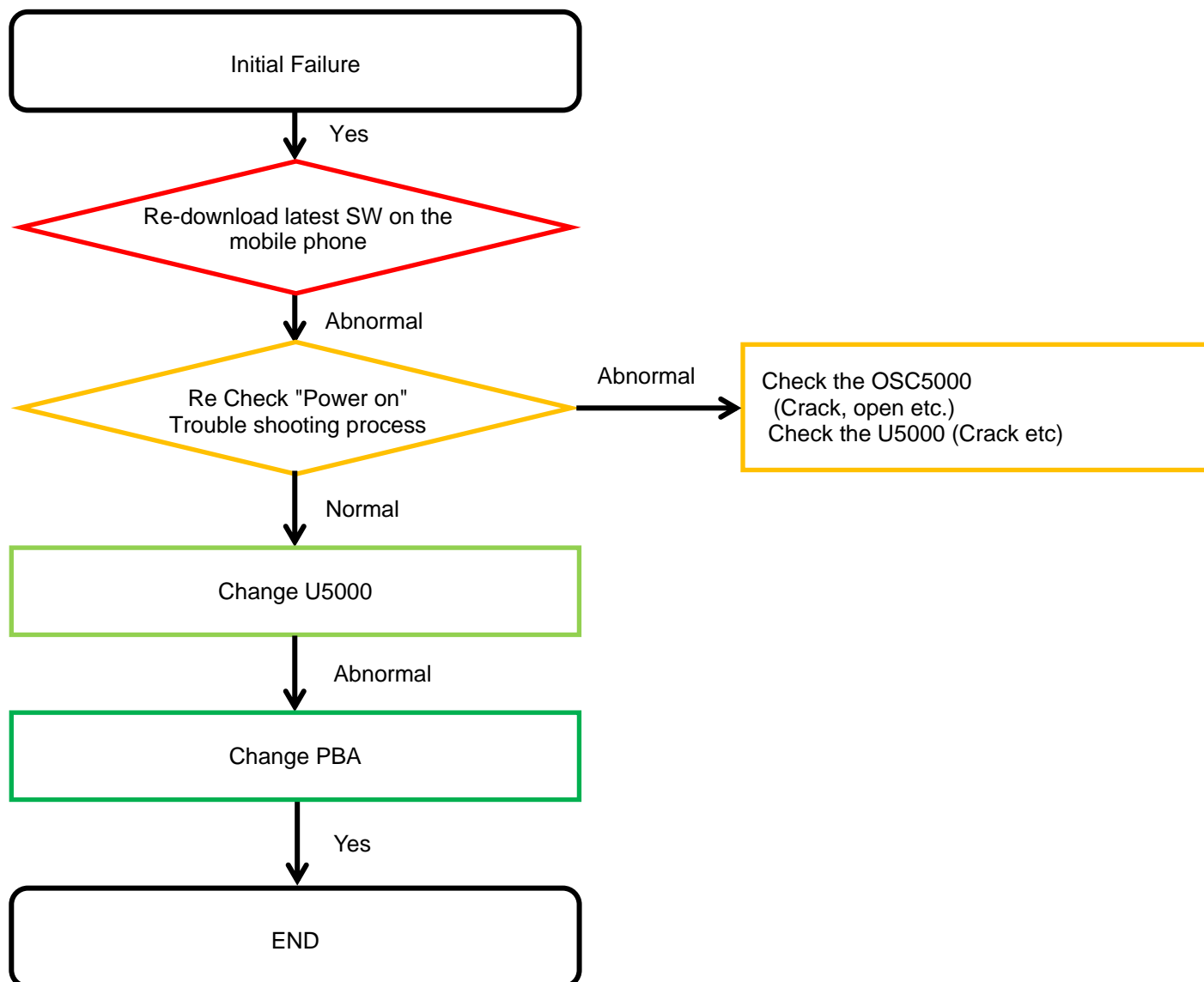
8. Level 3 Repair

8-4-1. Power On



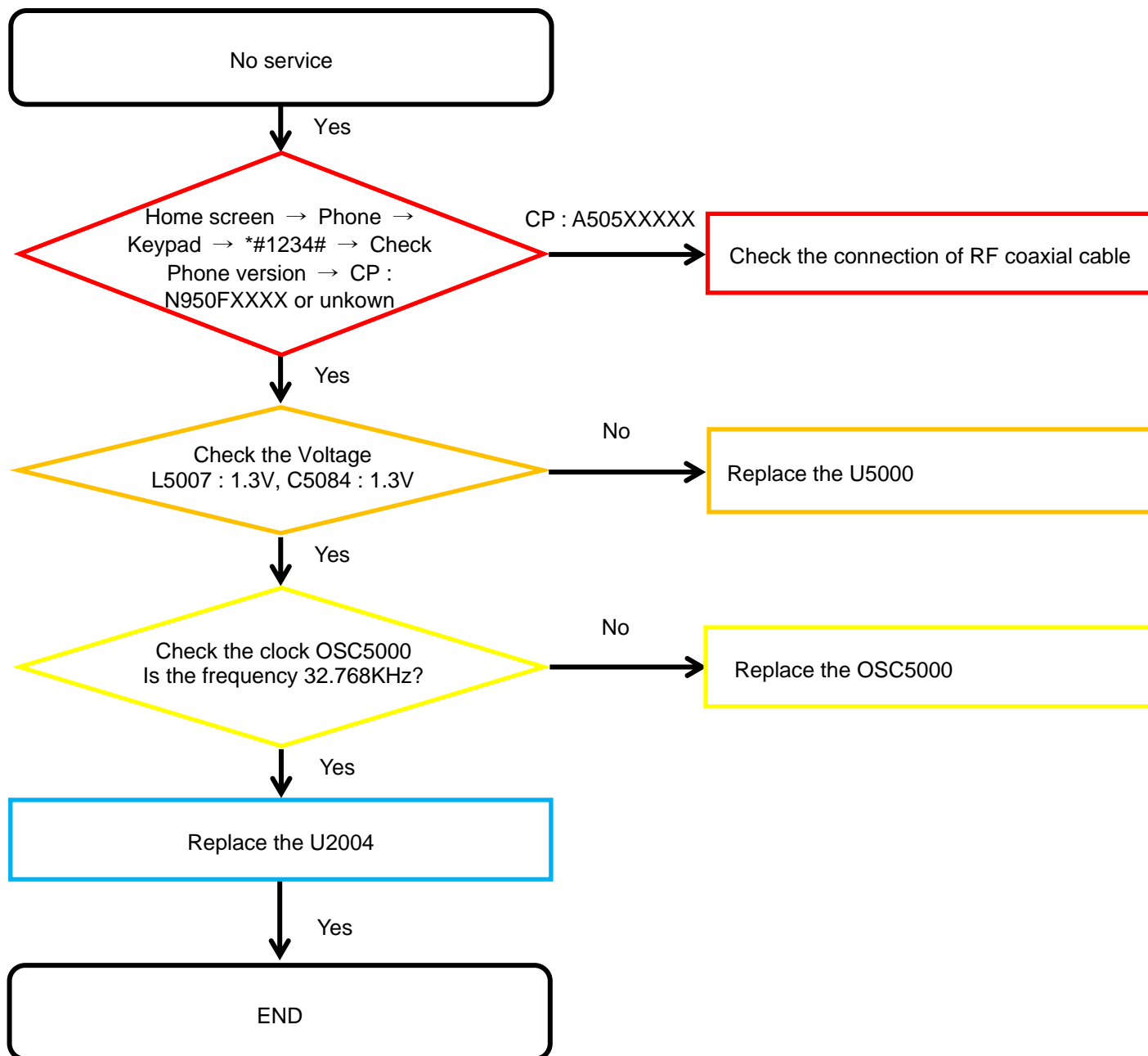
8. Level 3 Repair

8-4-2. Initial



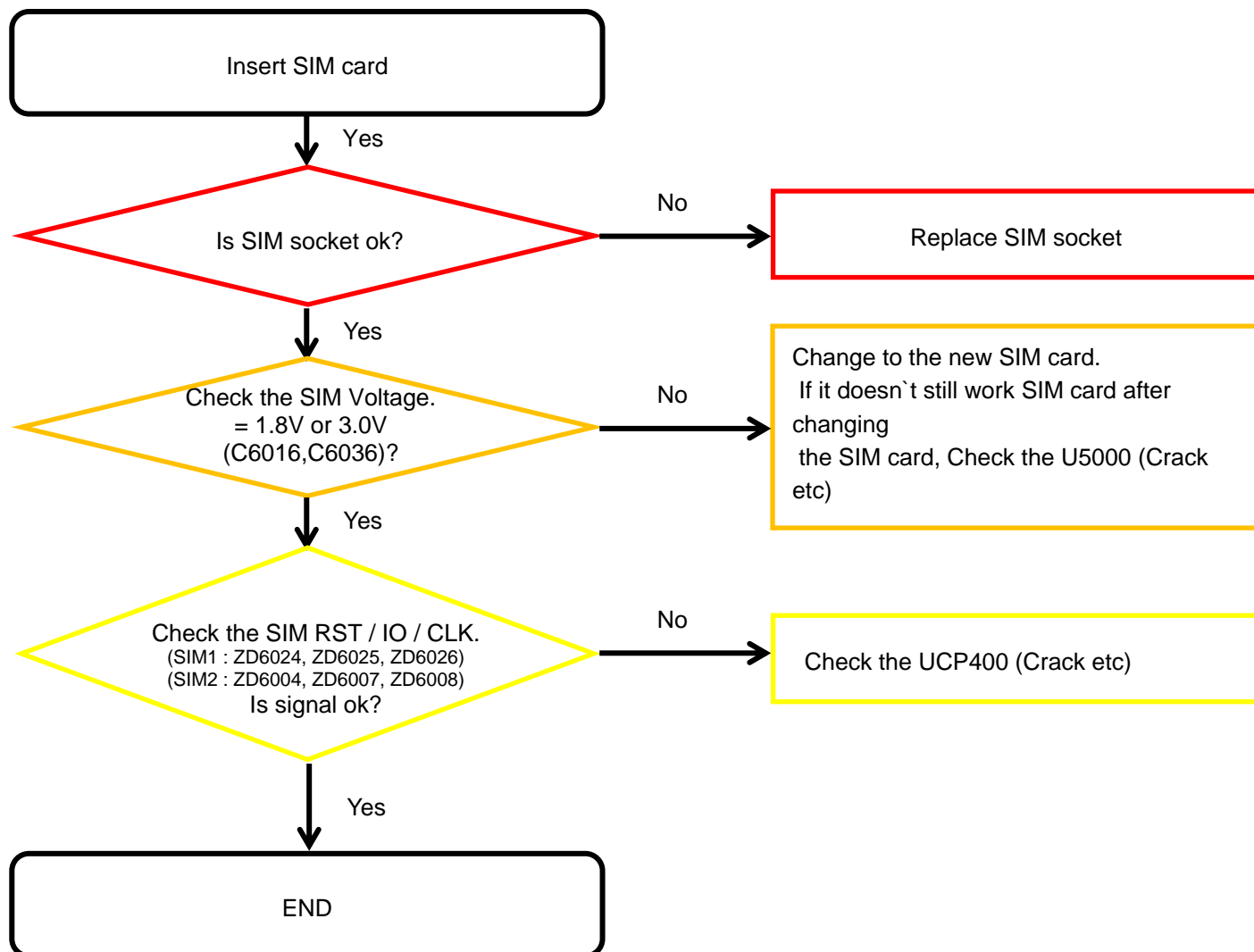
8. Level 3 Repair

8-4-3. No Service



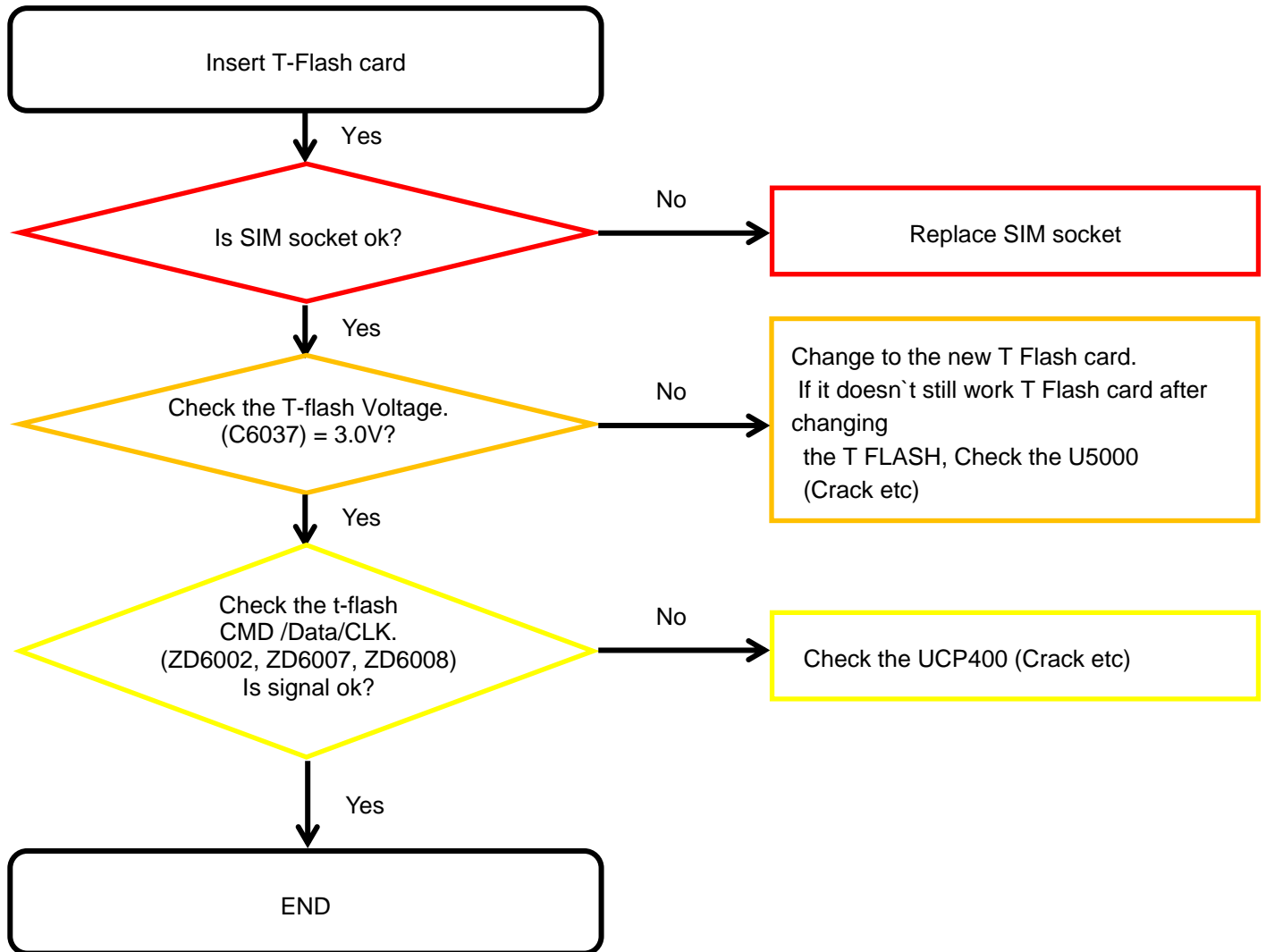
8. Level 3 Repair

8-4-4. SIM Part



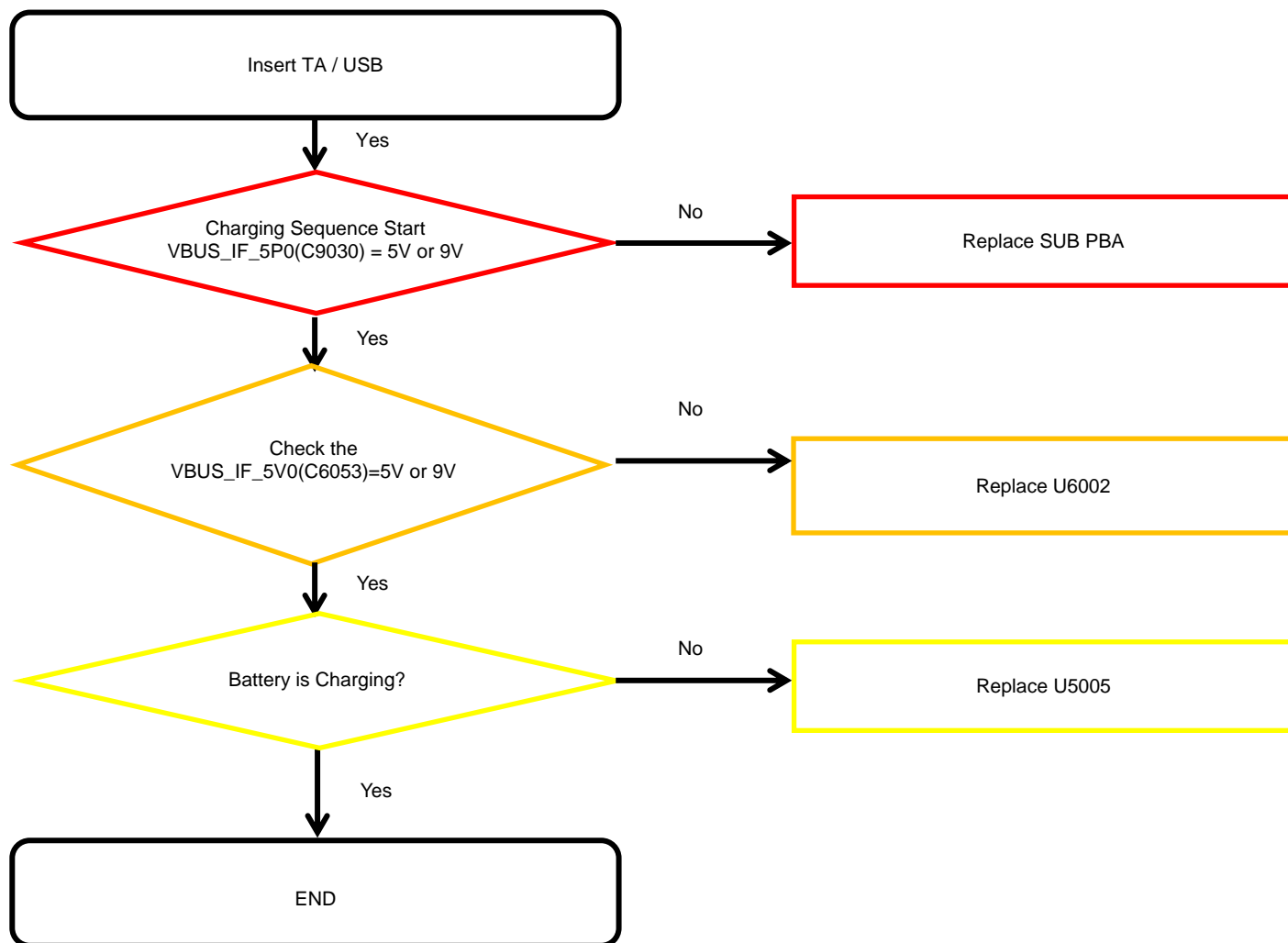
8. Level 3 Repair

8-4-5. T-Flash Part



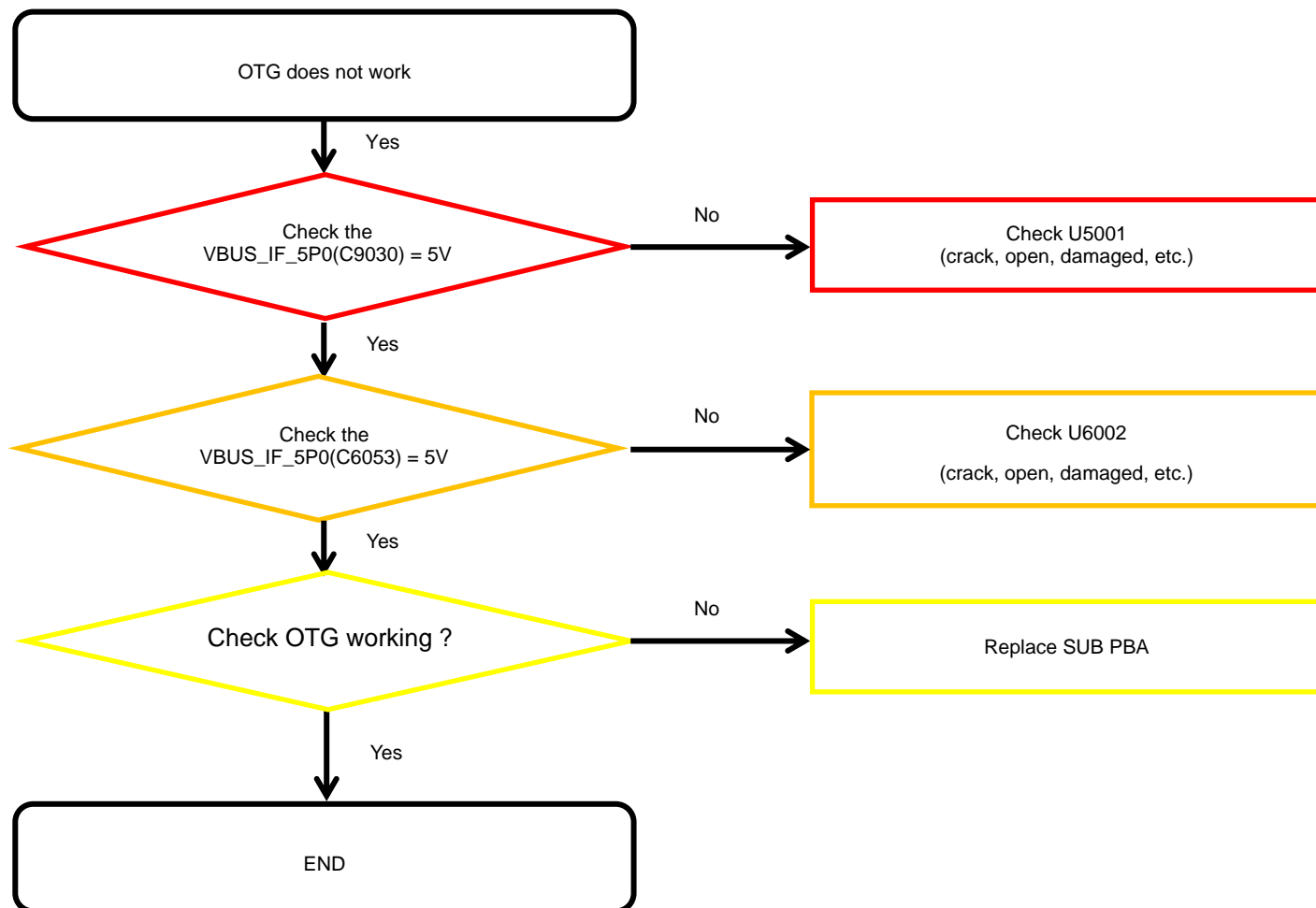
8. Level 3 Repair

8-4-6. Cable Charging Part



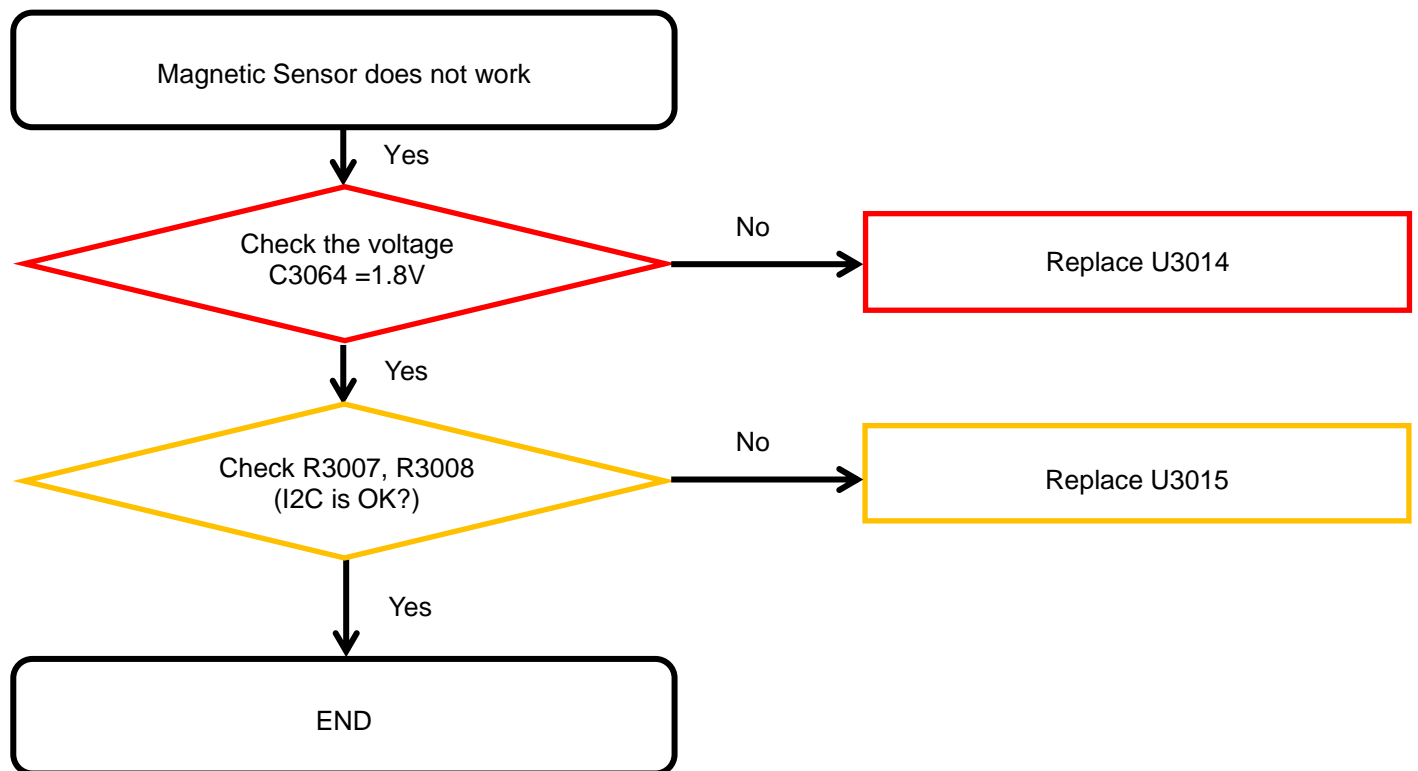
8. Level 3 Repair

8-4-7. OTG



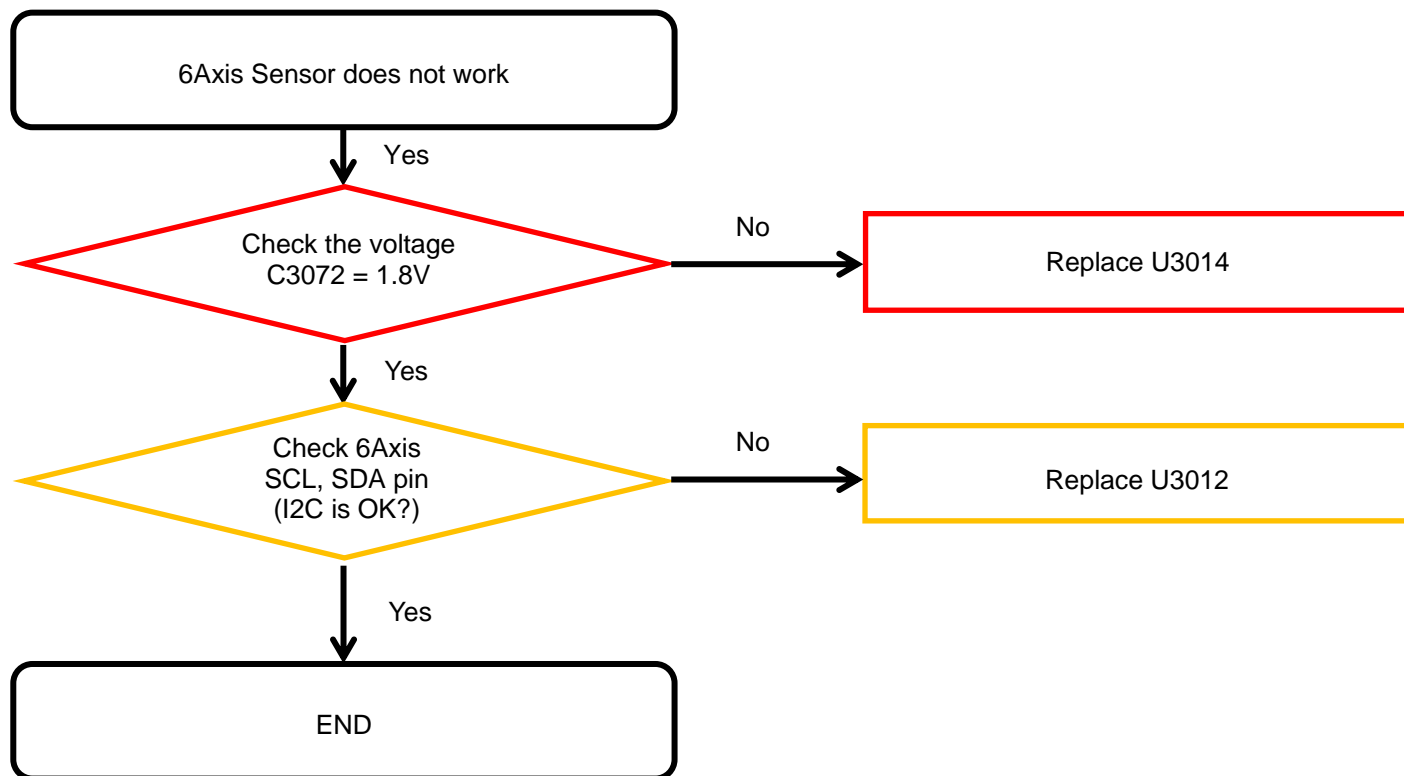
8. Level 3 Repair

8-4-8-1. Magnetic Sensor



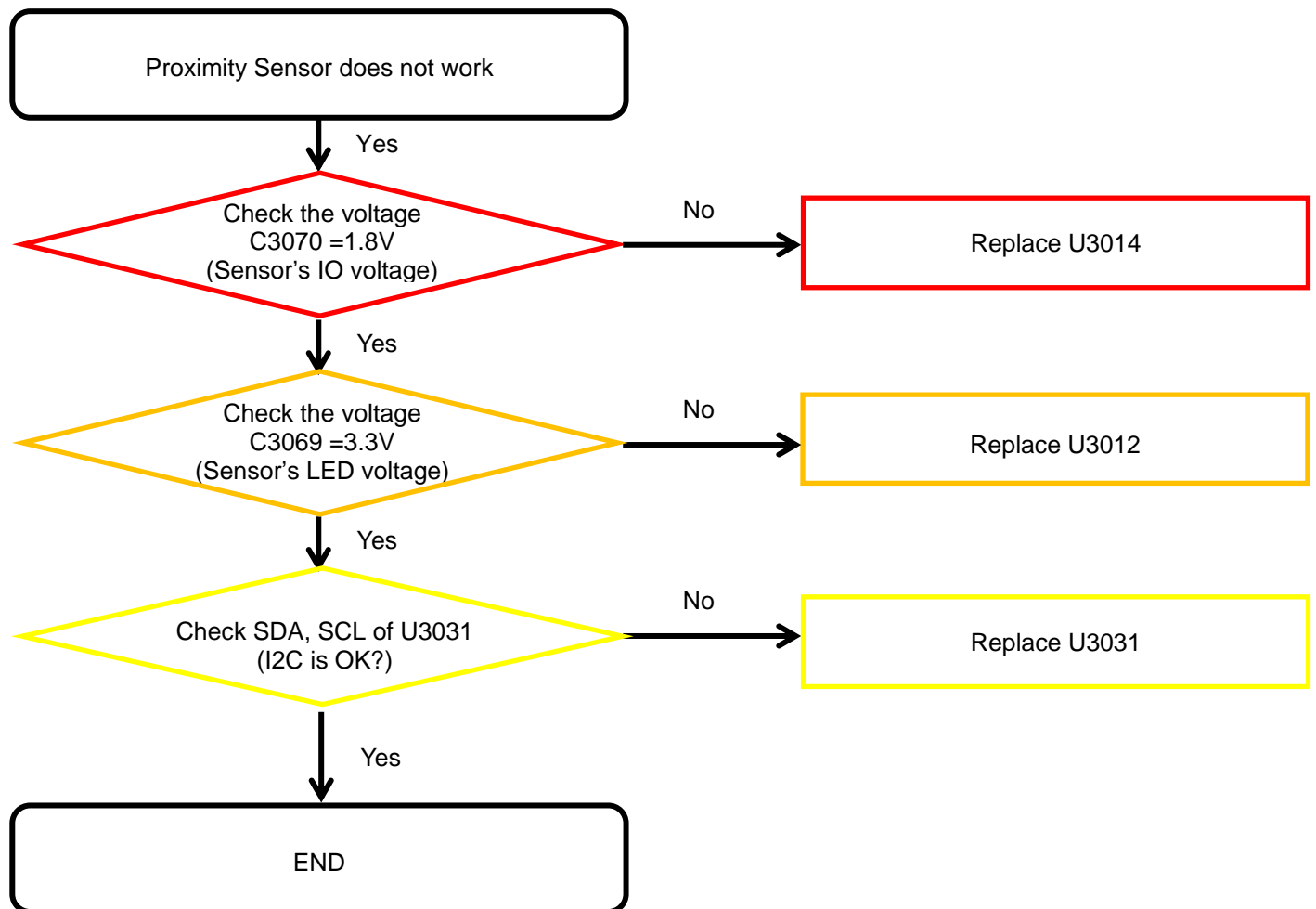
8. Level 3 Repair

8-4-8-2. 6Axis Sensor



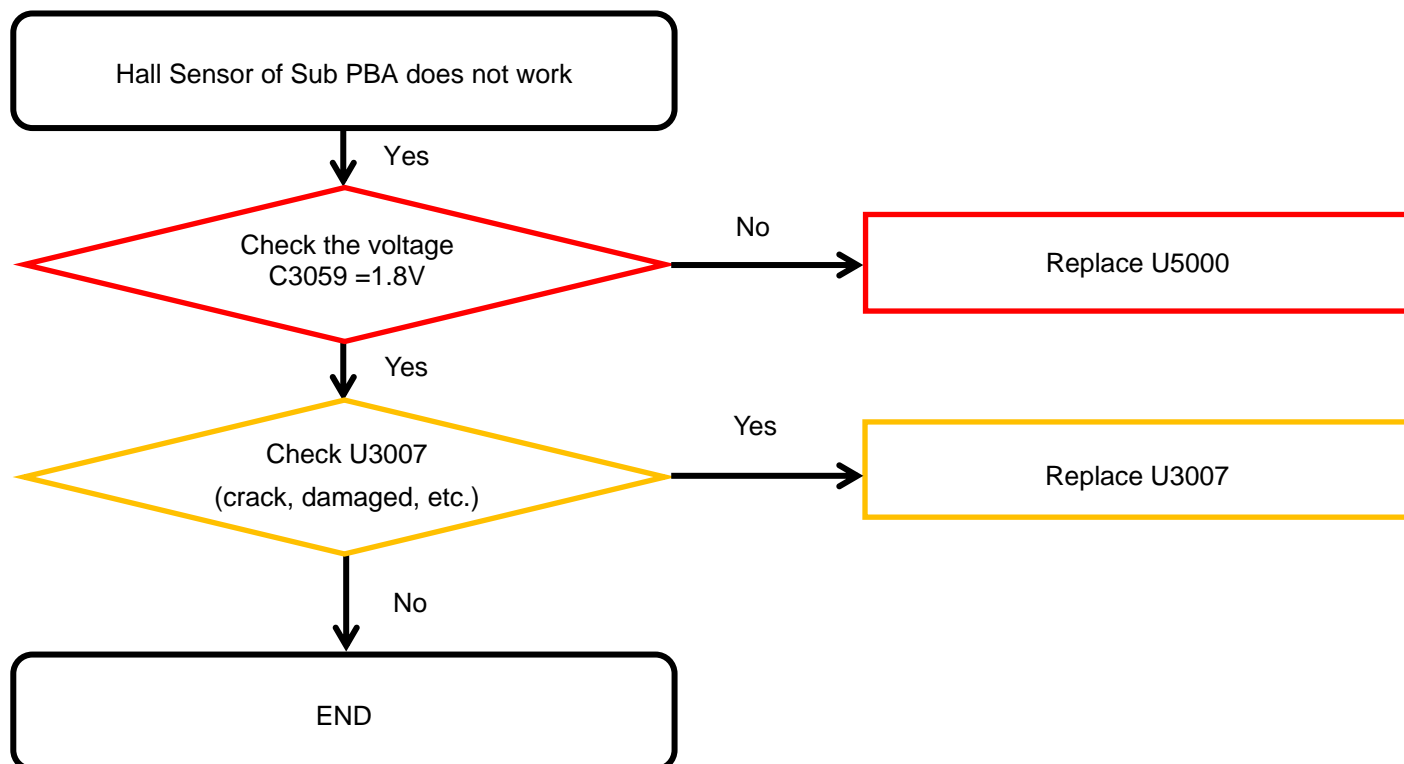
8. Level 3 Repair

8-4-8-3. Proximity



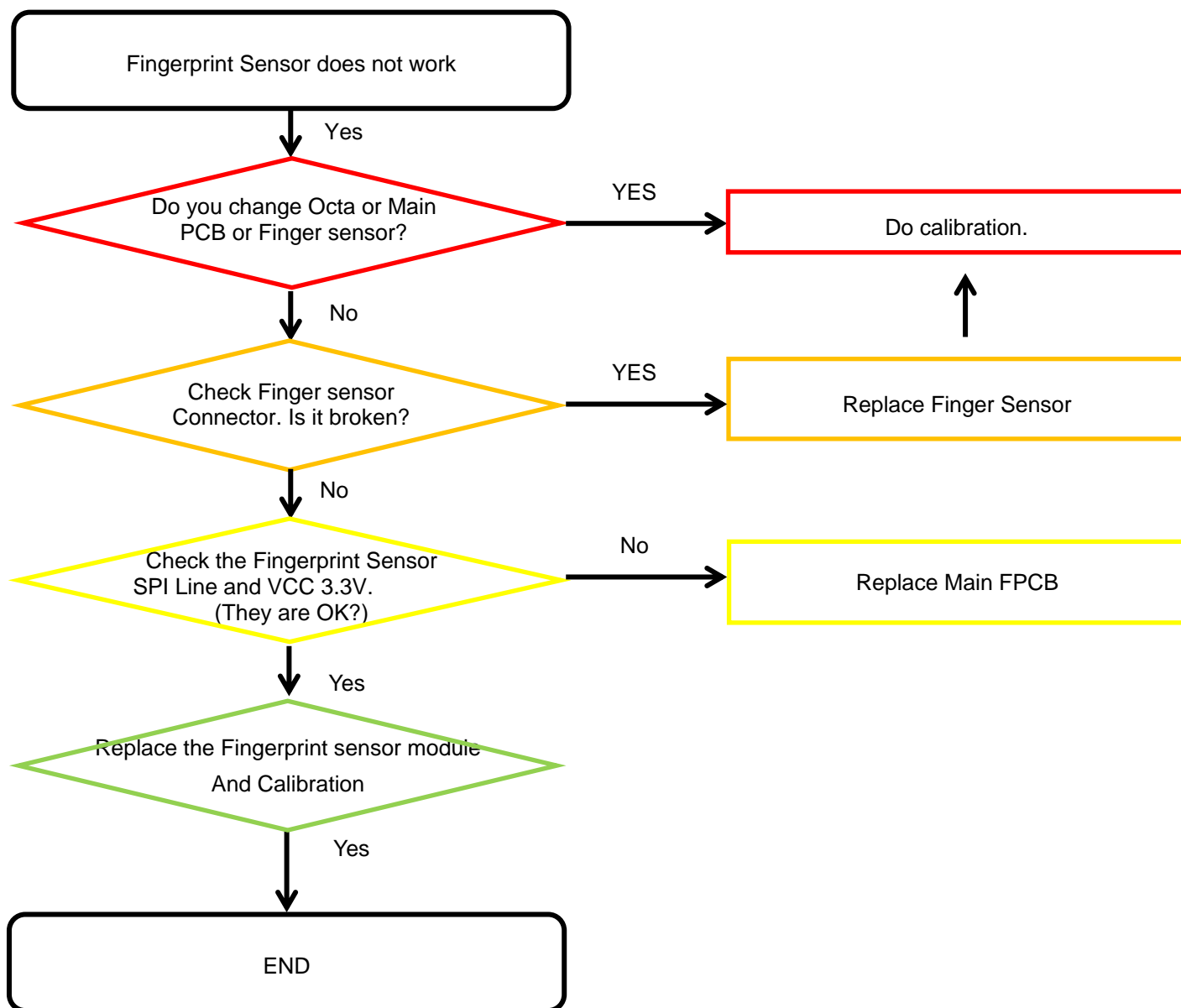
8. Level 3 Repair

8-4-8-4. Hall Sensor



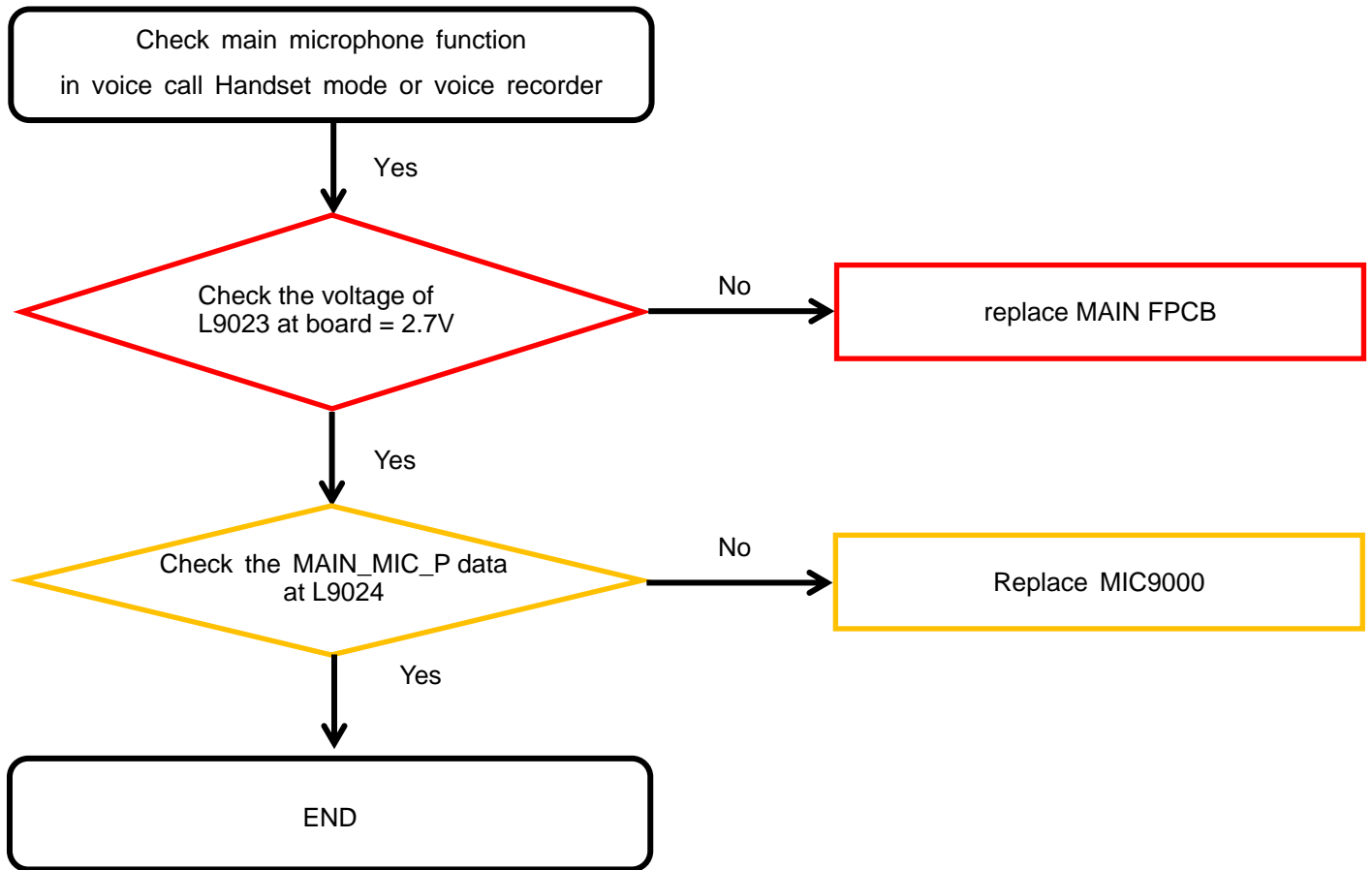
8. Level 3 Repair

8-4-8-5. Fingerprint Sensor



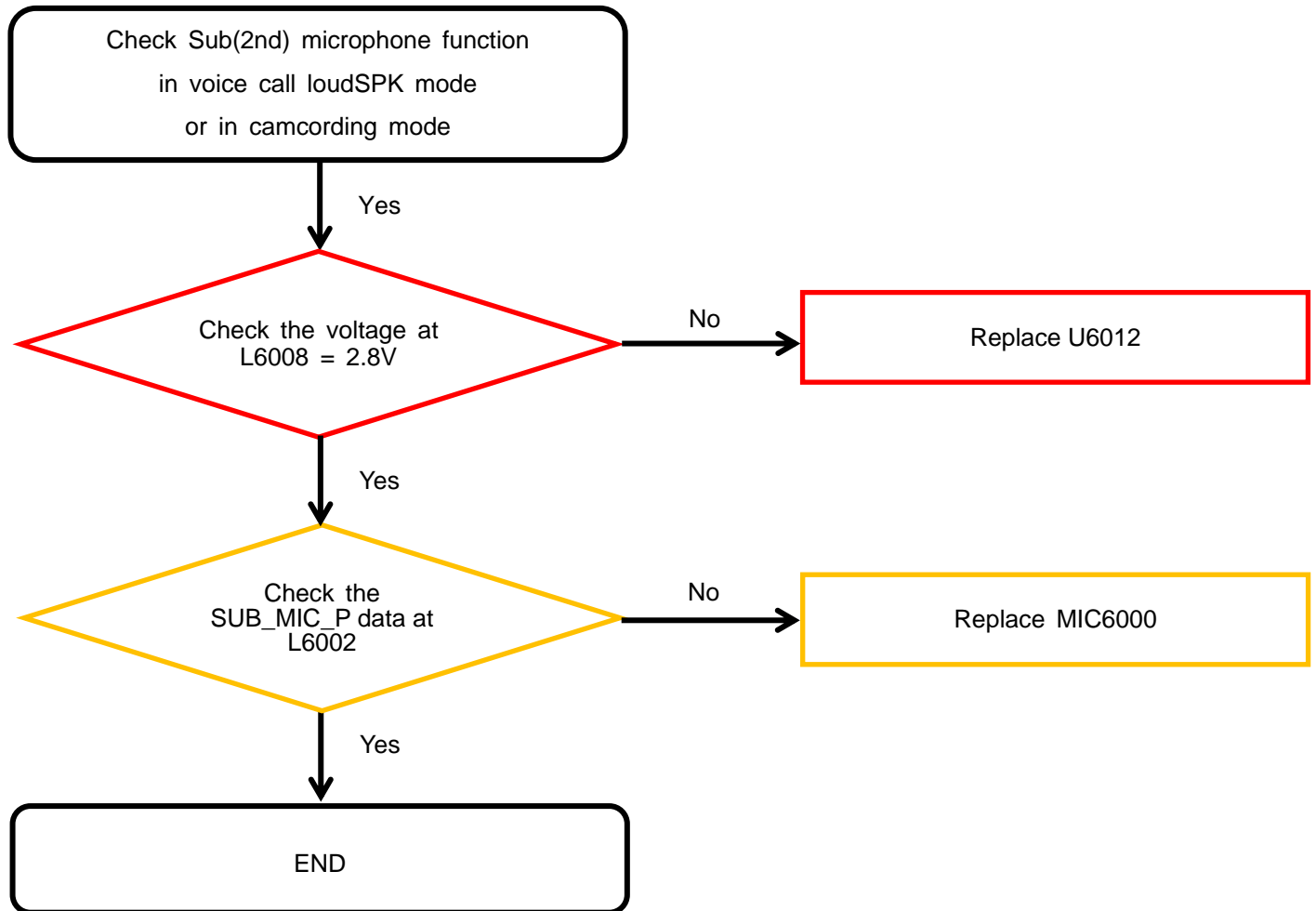
8. Level 3 Repair

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



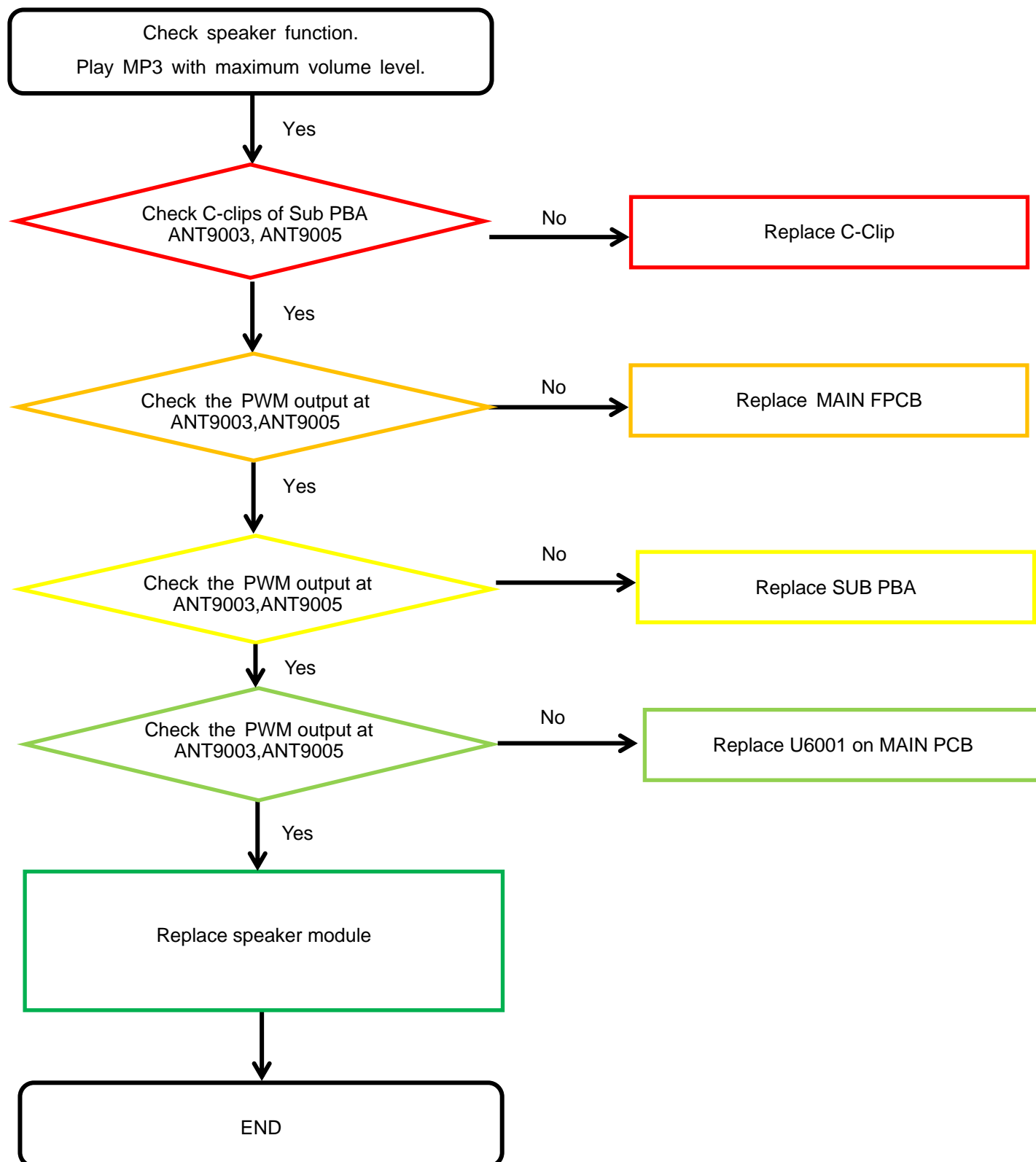
8. Level 3 Repair

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



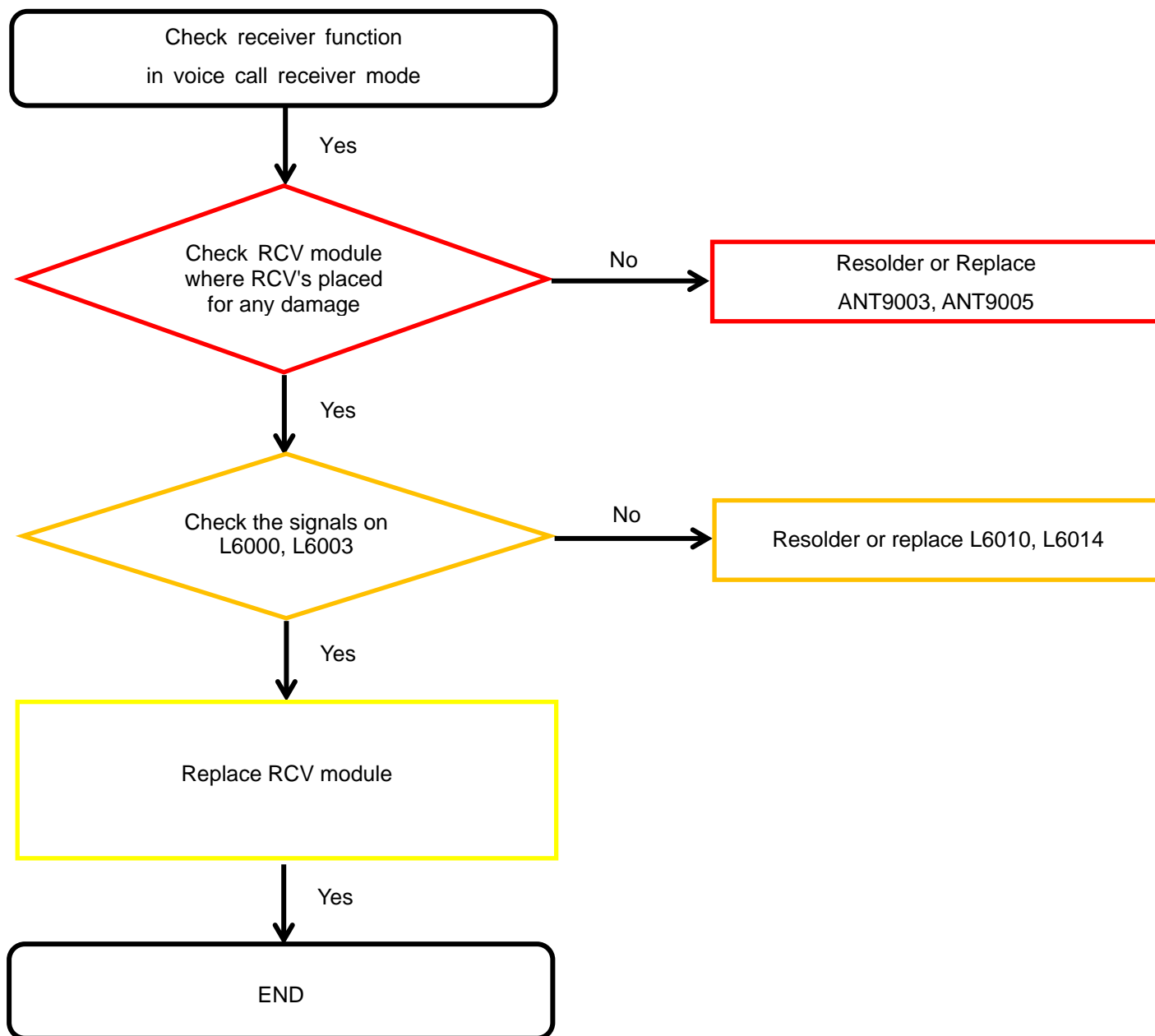
8. Level 3 Repair

8-4-10. Speaker Part



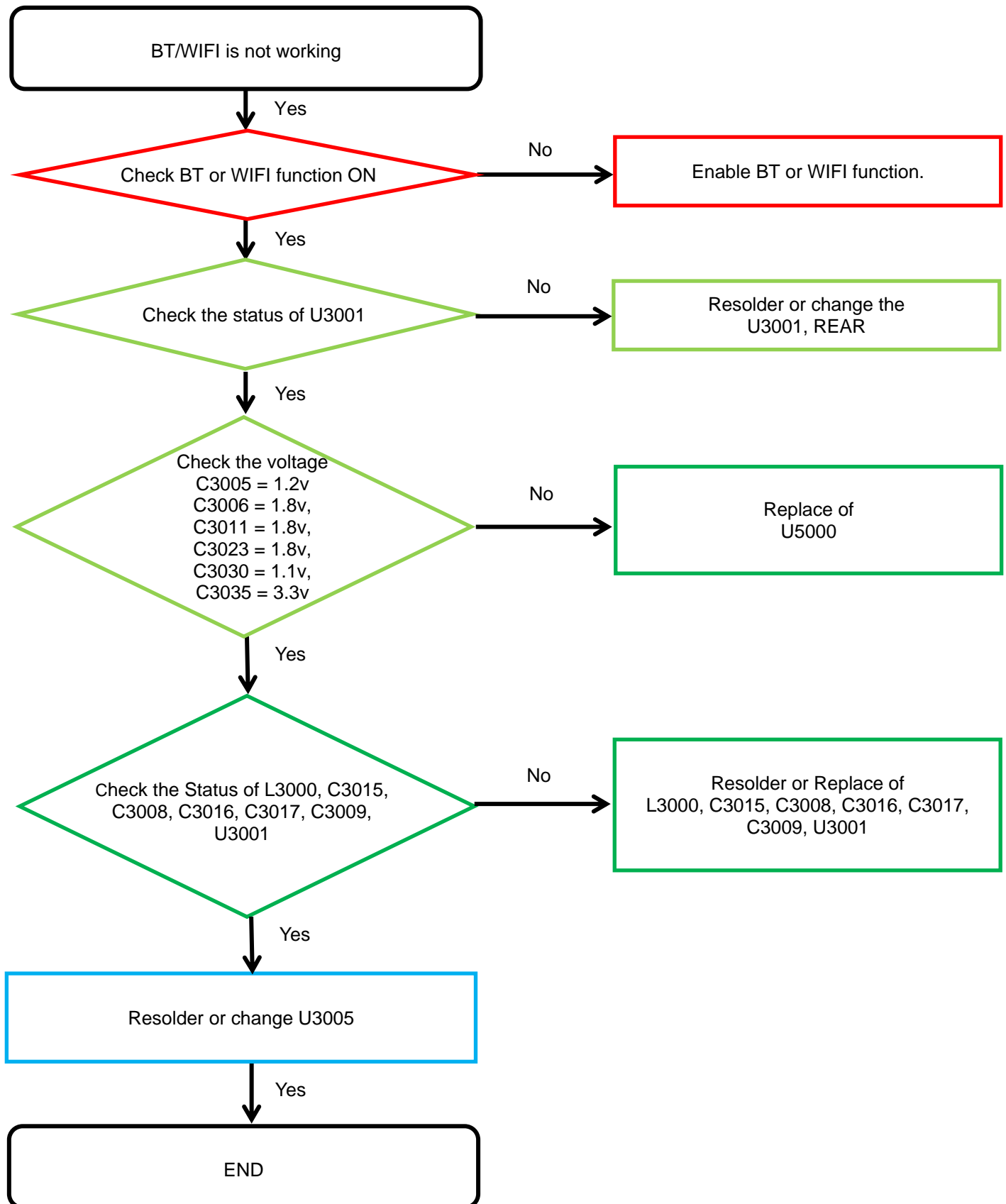
8. Level 3 Repair

8-4-11. Receiver Part



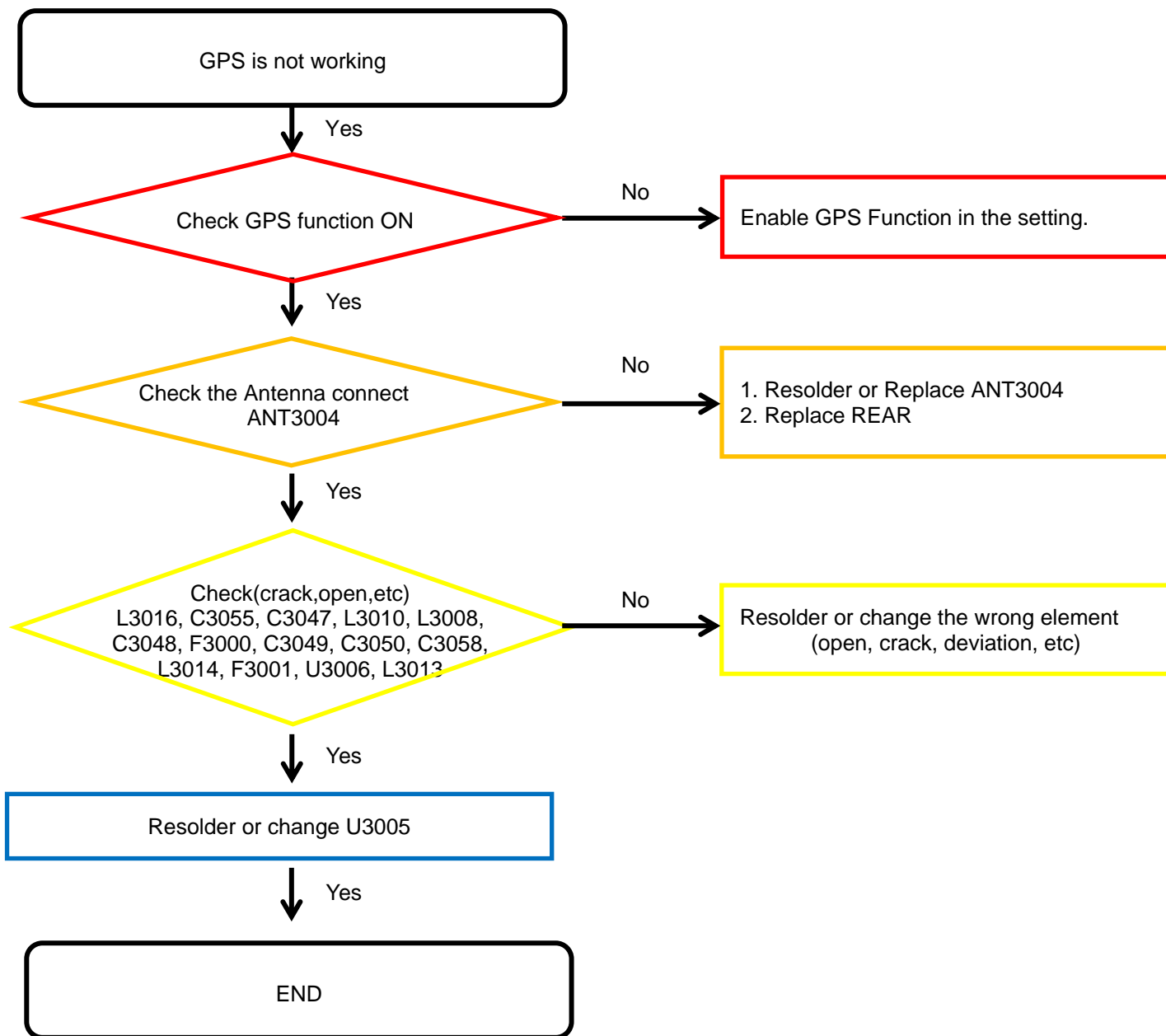
8. Level 3 Repair

8-4-12. BT/WIFI



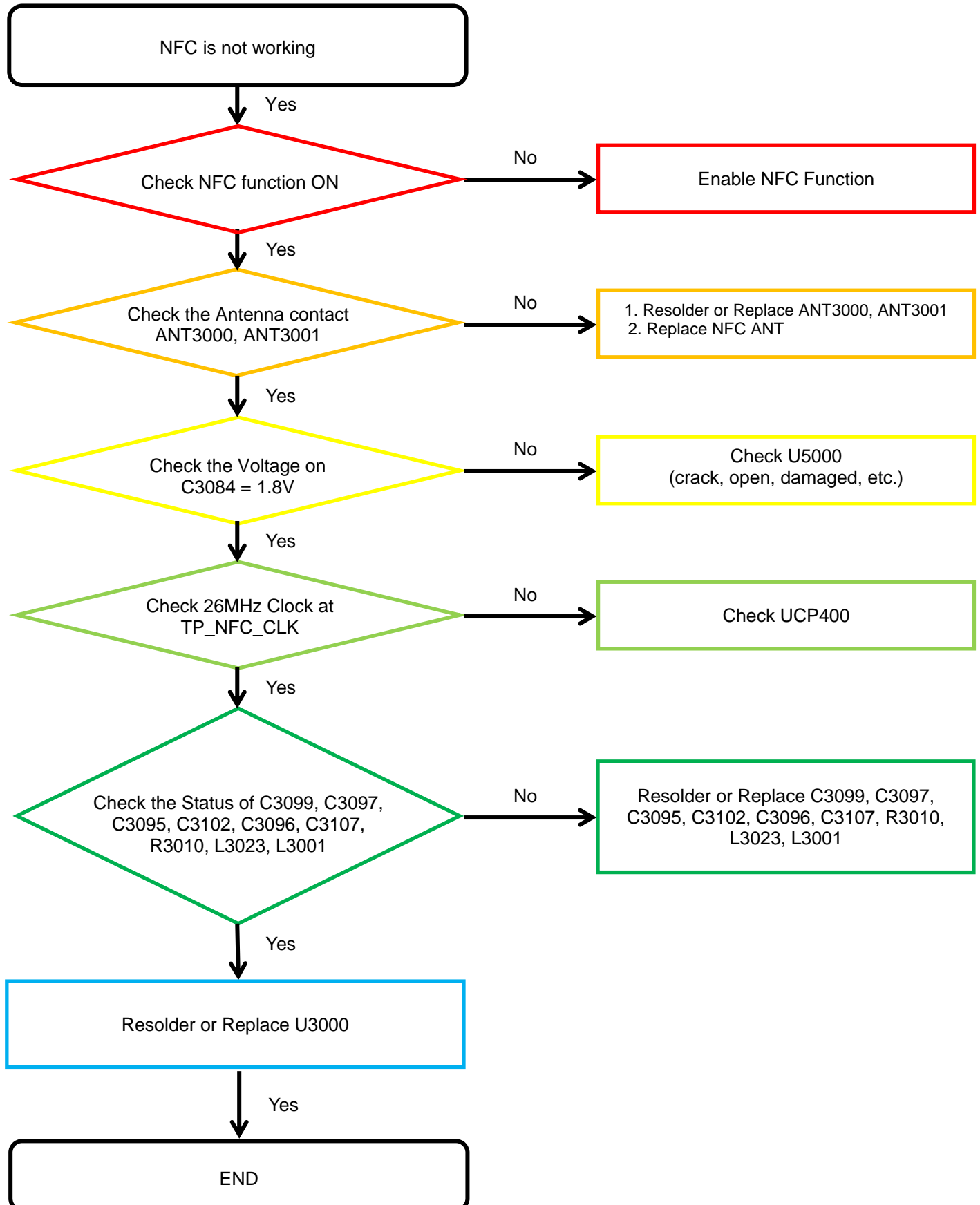
8. Level 3 Repair

8-4-13. GPS



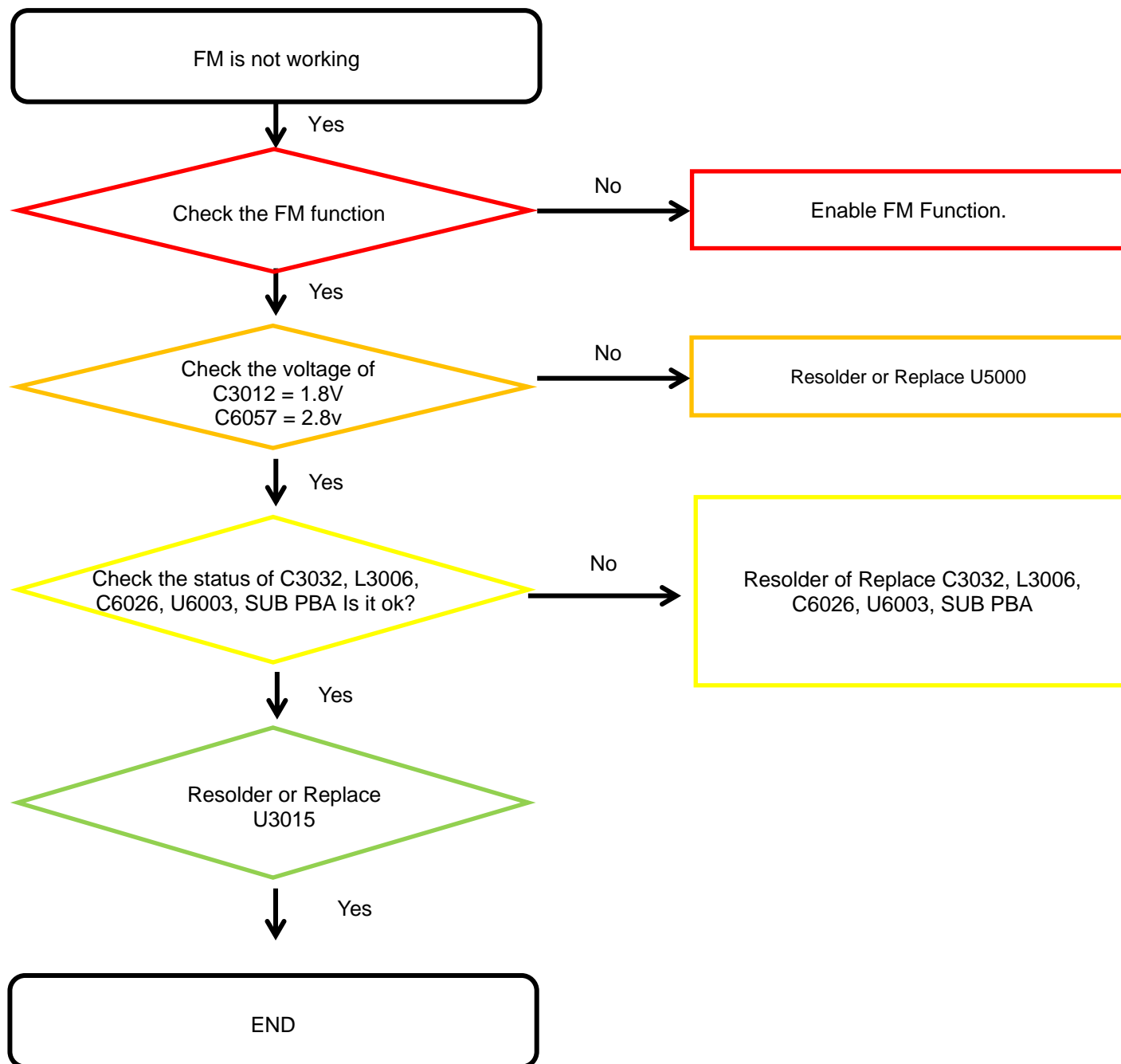
8. Level 3 Repair

8-4-14. NFC



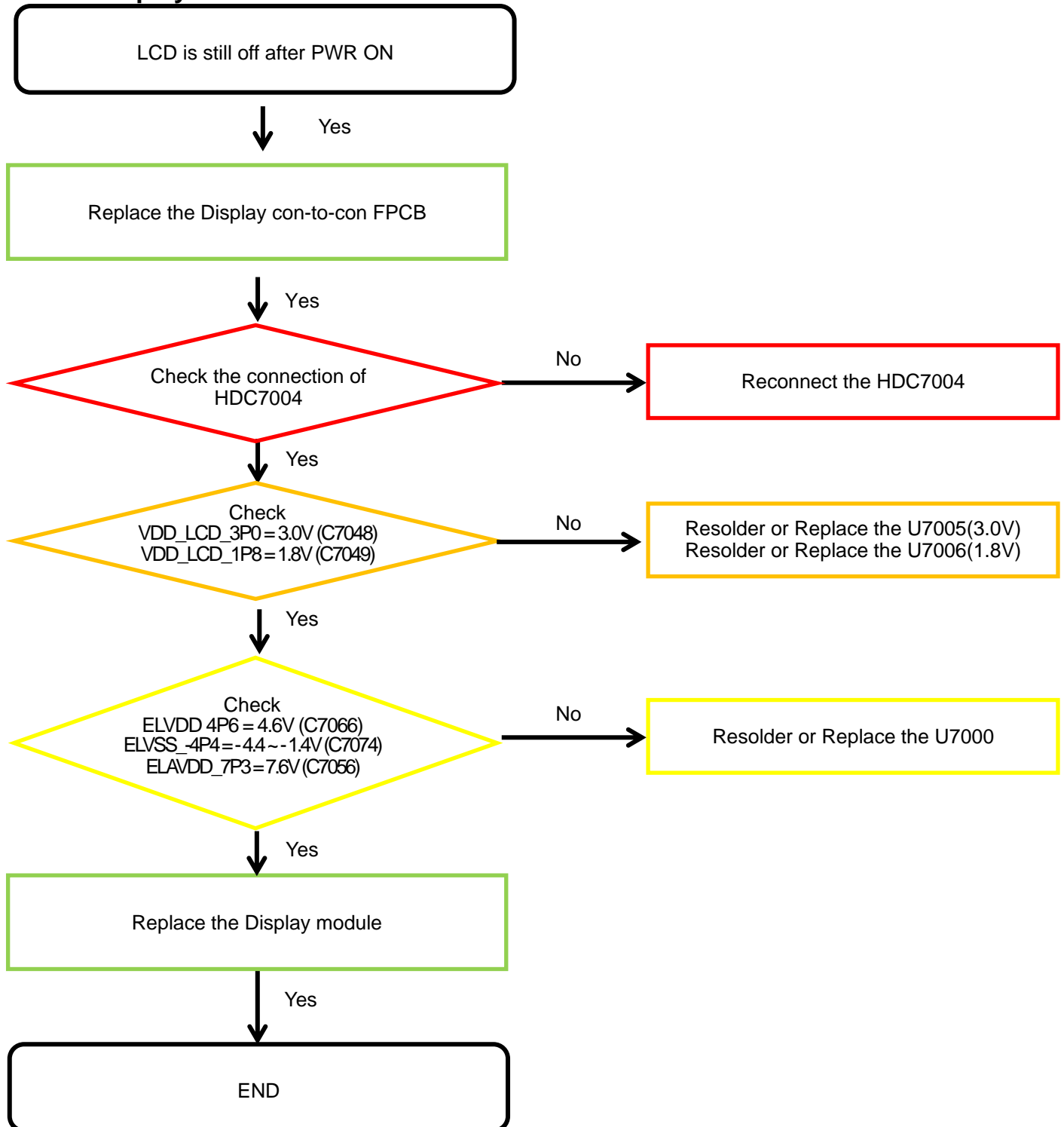
8. Level 3 Repair

8-4-15. FM radio part



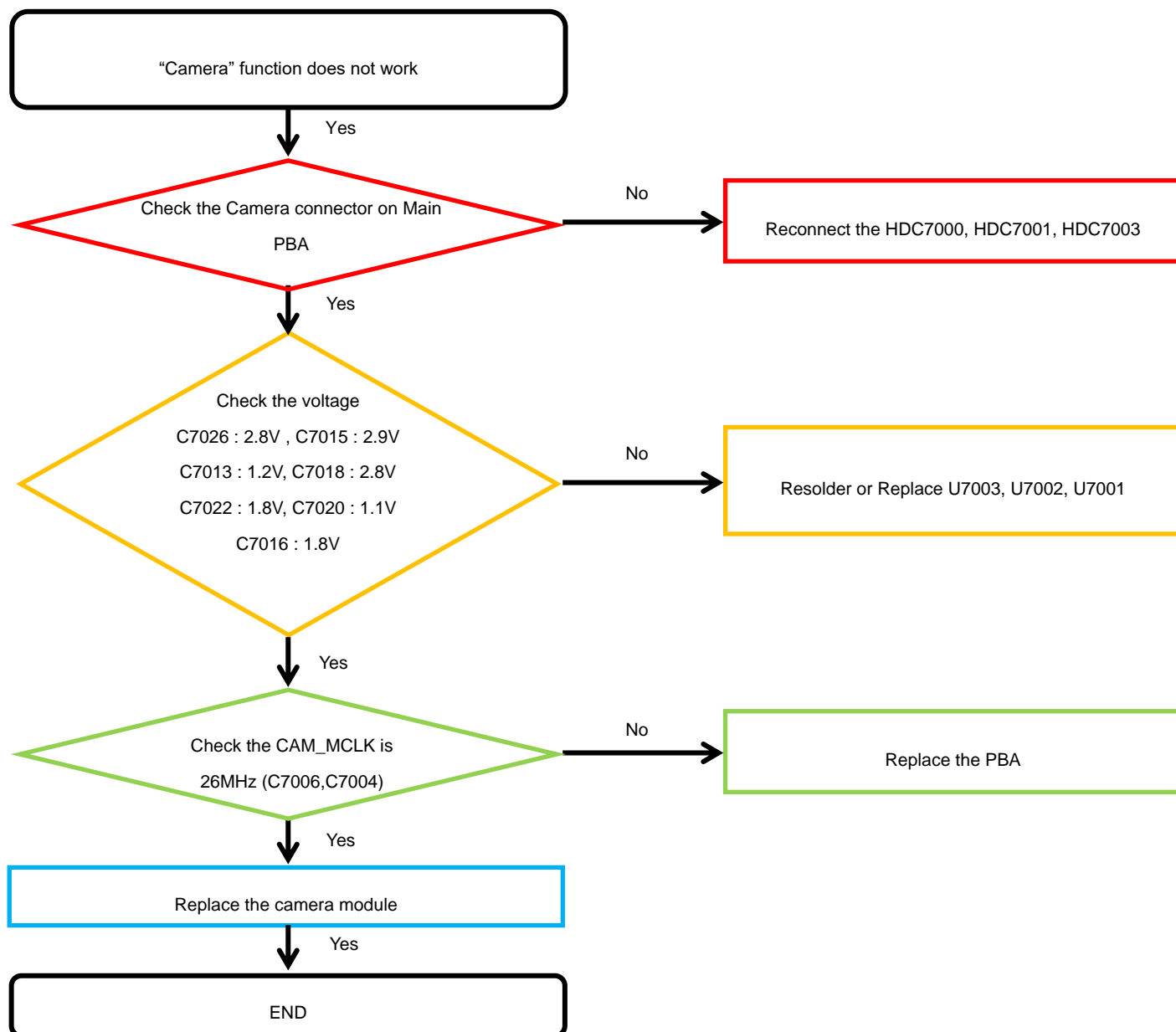
8. Level 3 Repair

8-4-16. Display



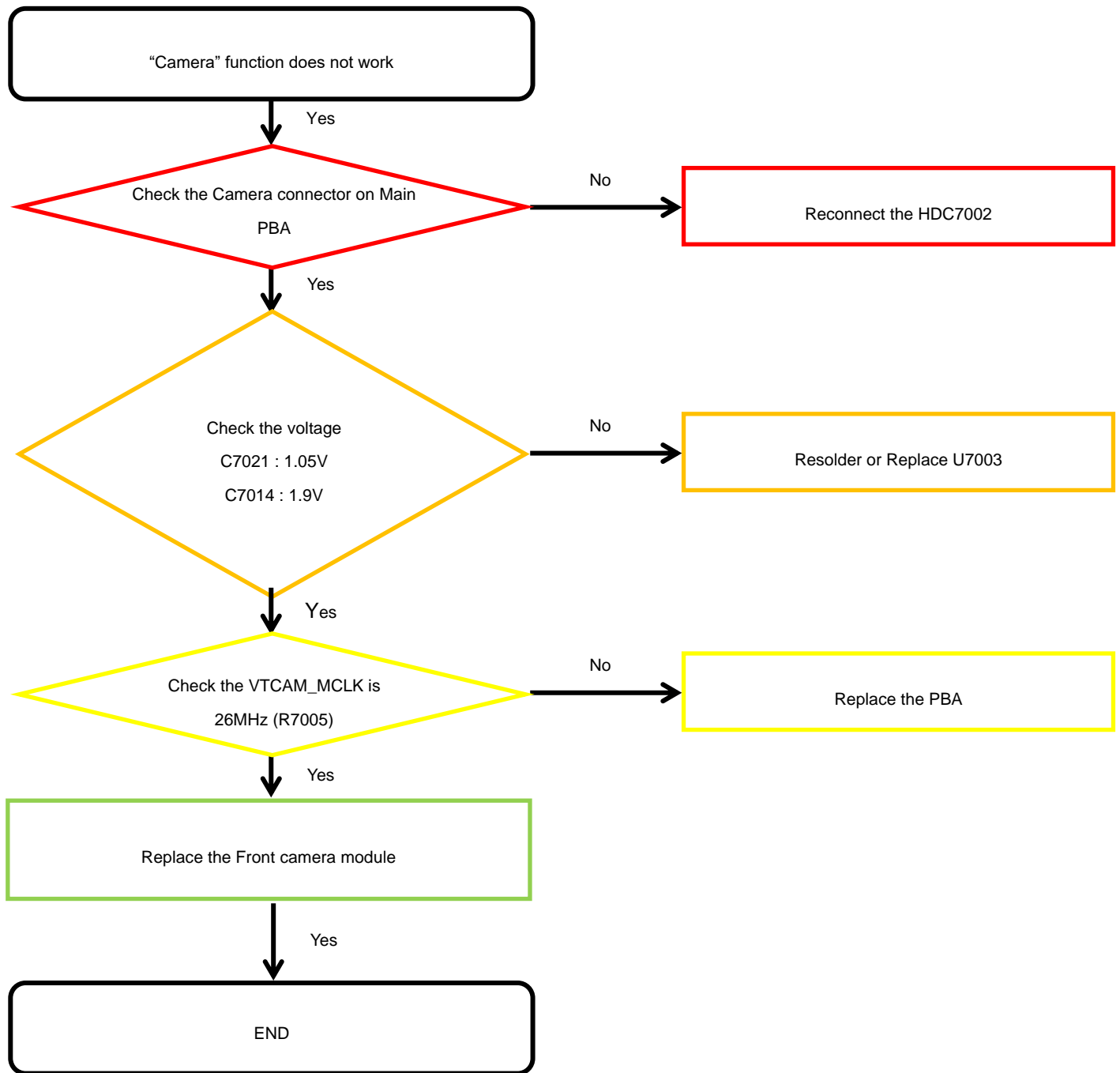
8. Level 3 Repair

8-4-17. Triple Camera



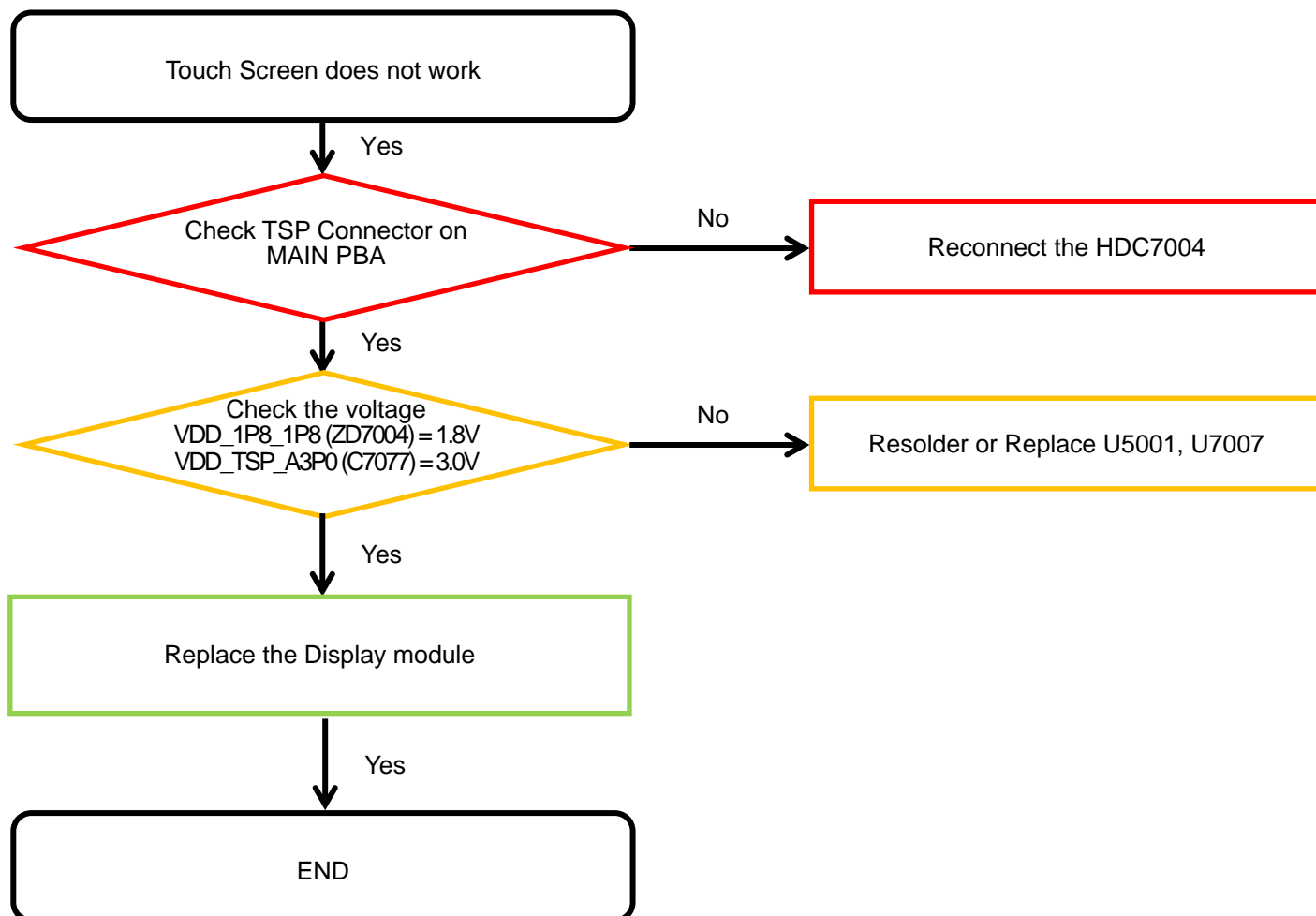
8. Level 3 Repair

8-4-18. VT CAMERA



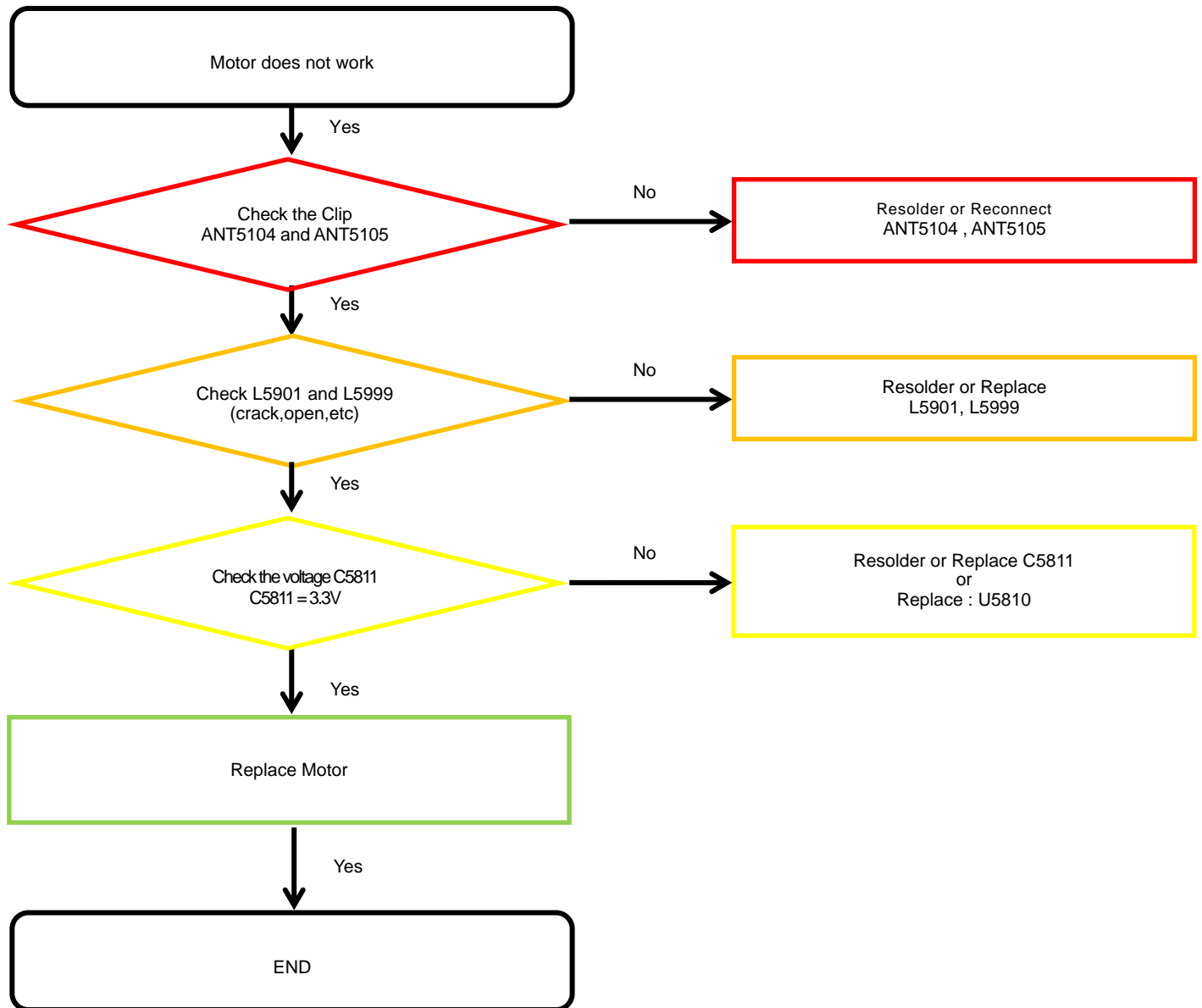
8. Level 3 Repair

8-4-19. TSP



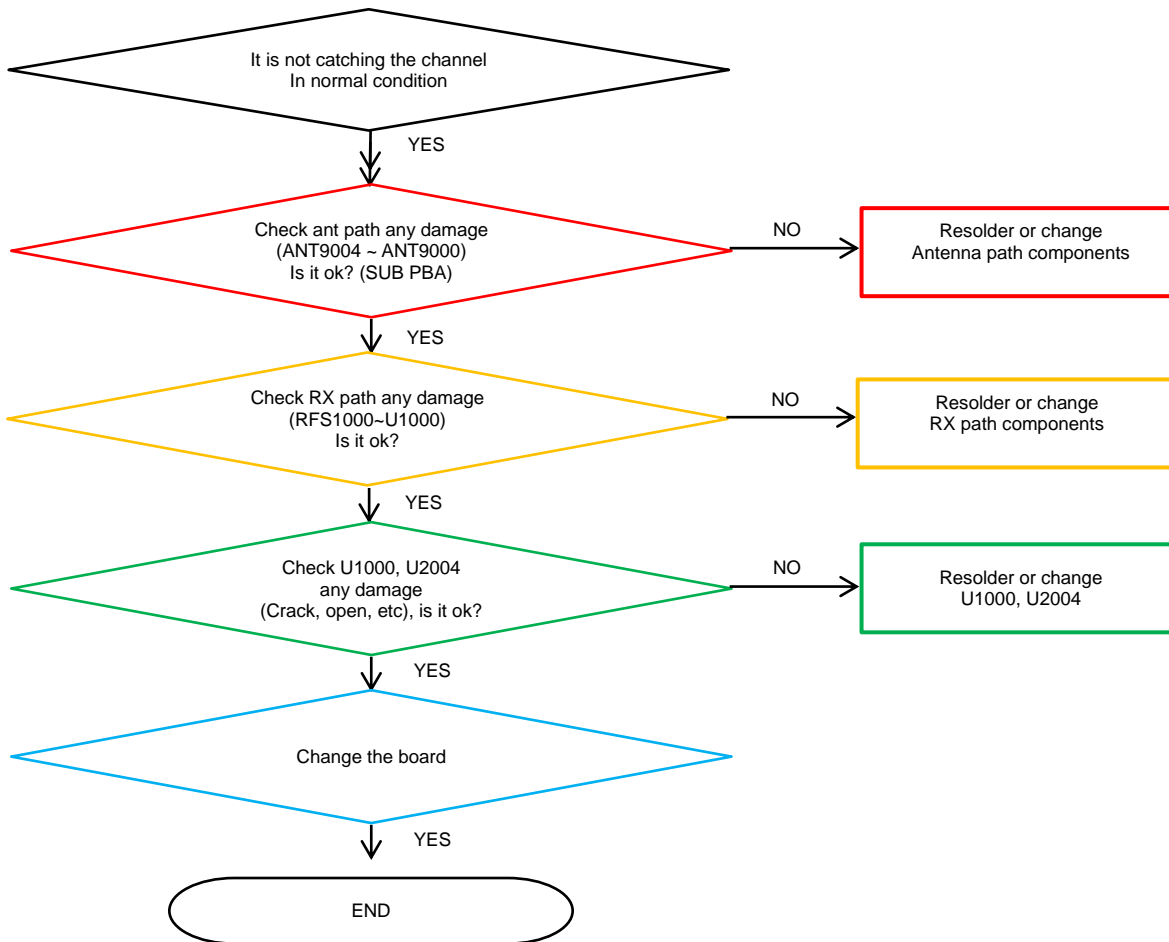
8. Level 3 Repair

8-4-20. Motor



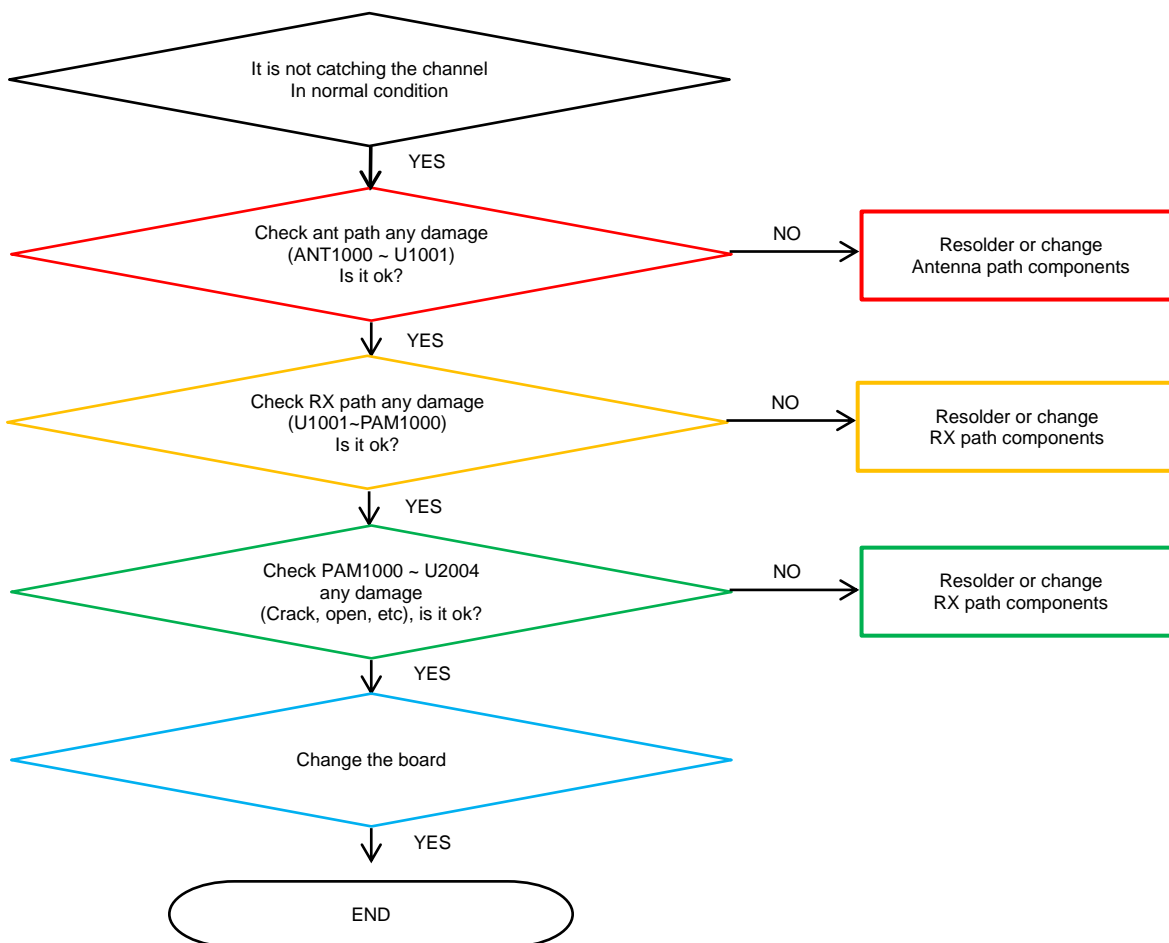
8. Level 3 Repair

8-4-21. GSM 850/900, WCDMA B5/8, LTE B5/8/20/28 PRx



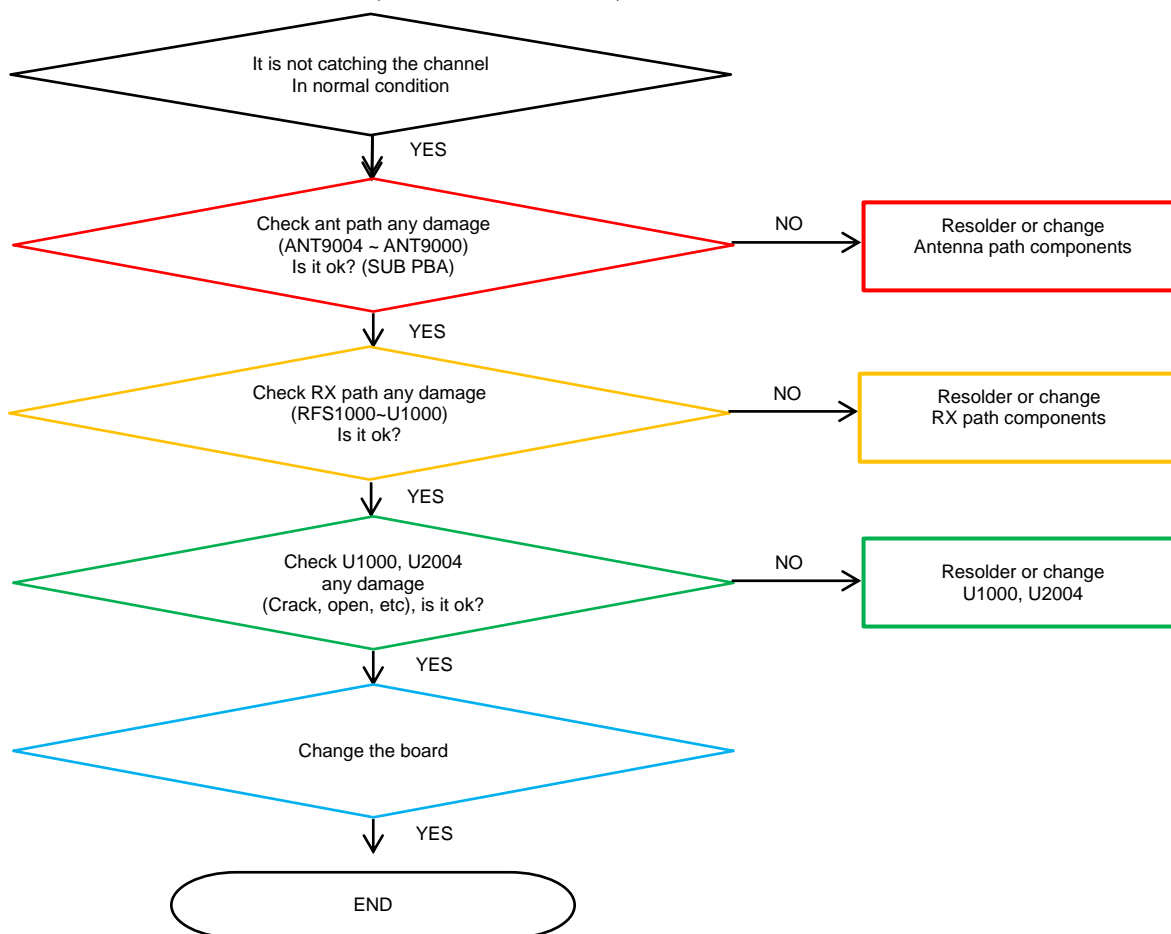
8. Level 3 Repair

8-4-22. LTE B7/38/40/41 PRx



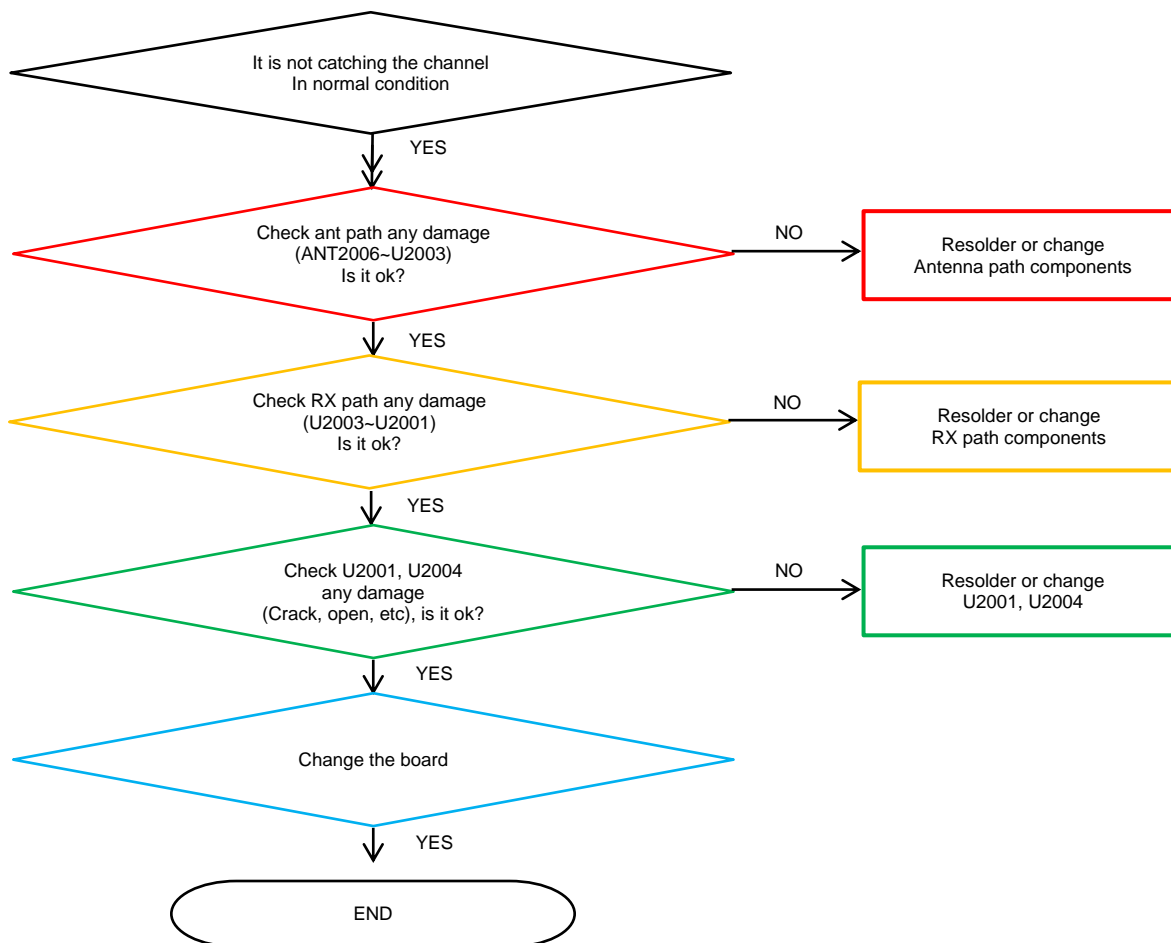
8. Level 3 Repair

8-4-23. GSM DCS/PCS, WCDMA B1/2, LTE B1/3 PRx



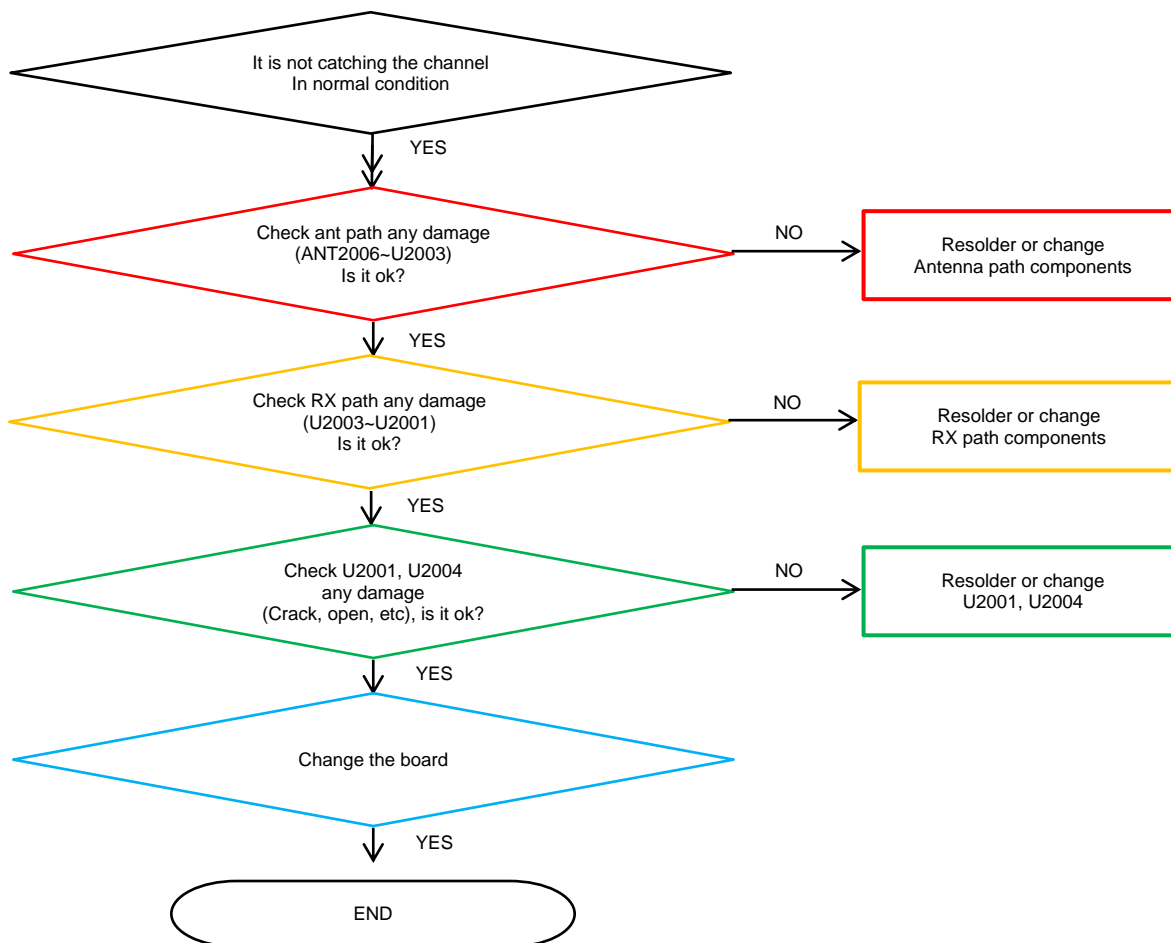
8. Level 3 Repair

8-4-24. GSM 850/900, WCDMA B5/8, LTE B5/8/20/28 DRx



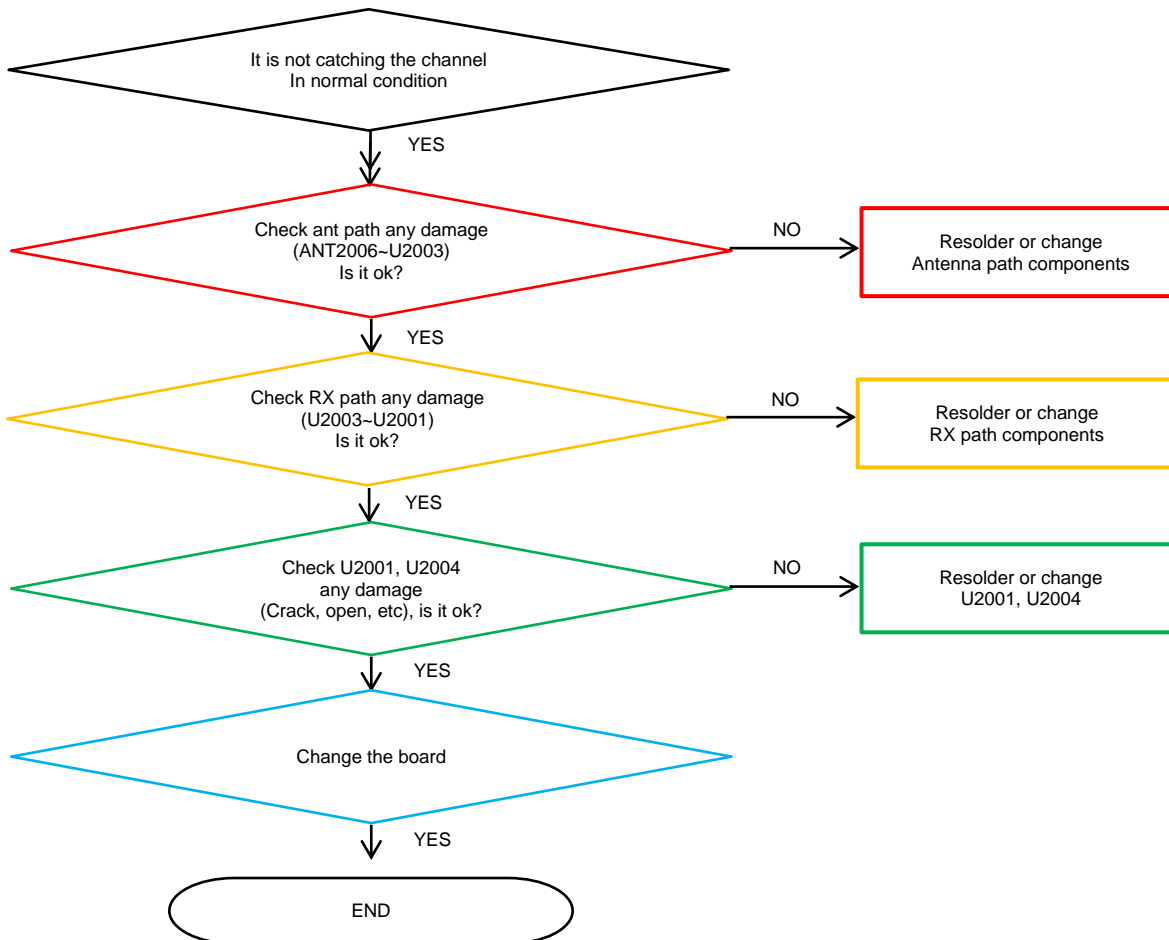
8. Level 3 Repair

8-4-25. LTE B7/38/40/41 DRx



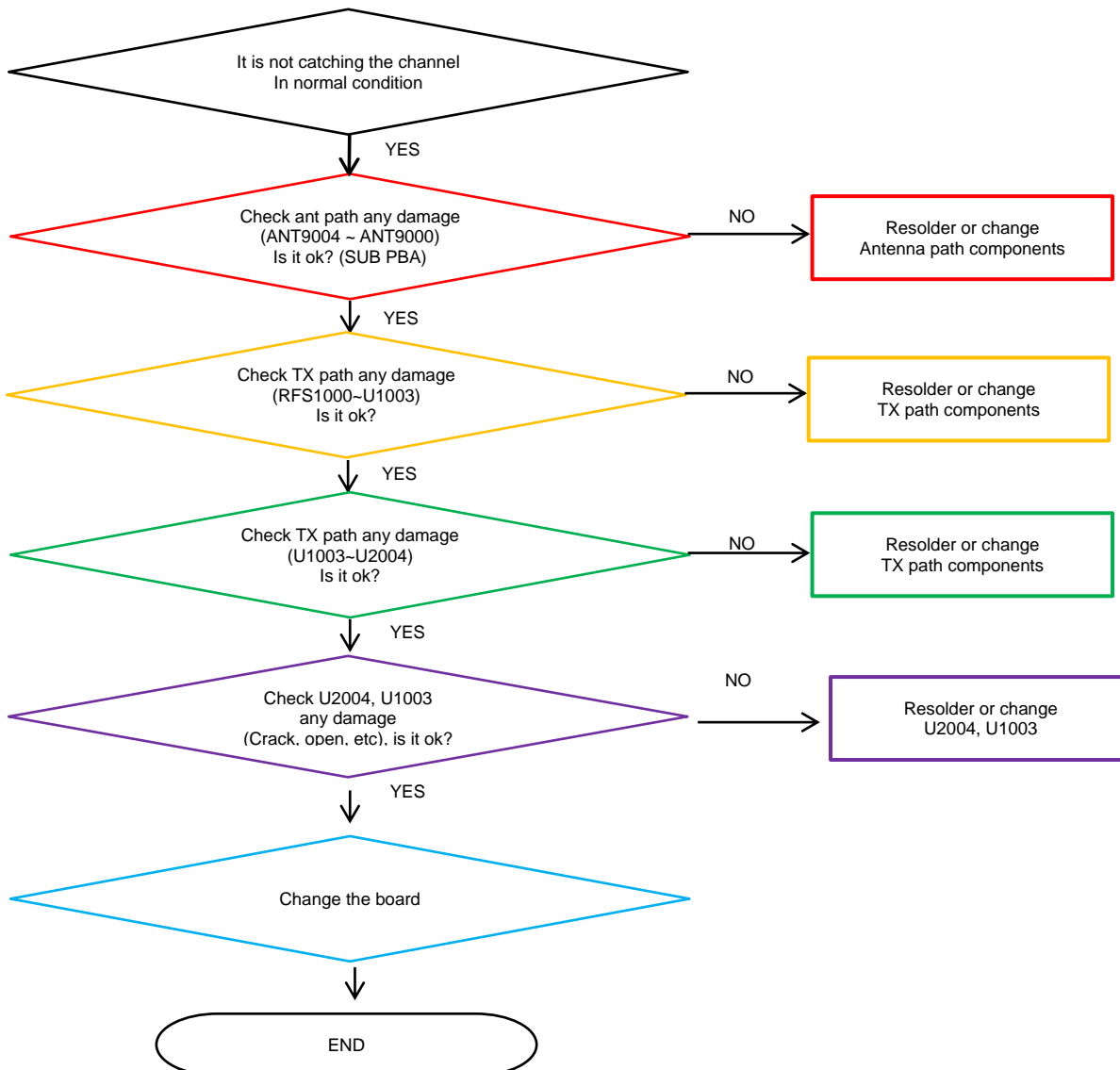
8. Level 3 Repair

8-4-26. GSM DCS/PCS, WCDMA B1/2, LTE B1/3 DRx



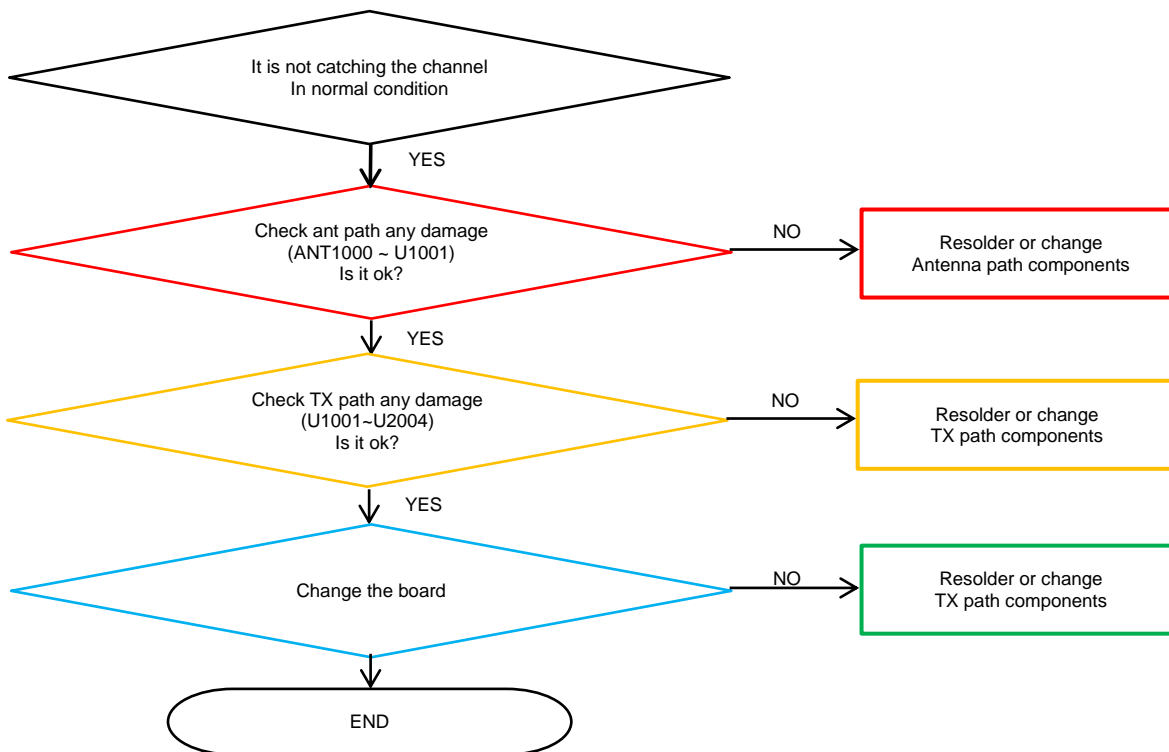
8. Level 3 Repair

8-4-27. GSM 850/900, WCDMA B5/8, LTE B5/8/20/28 Tx



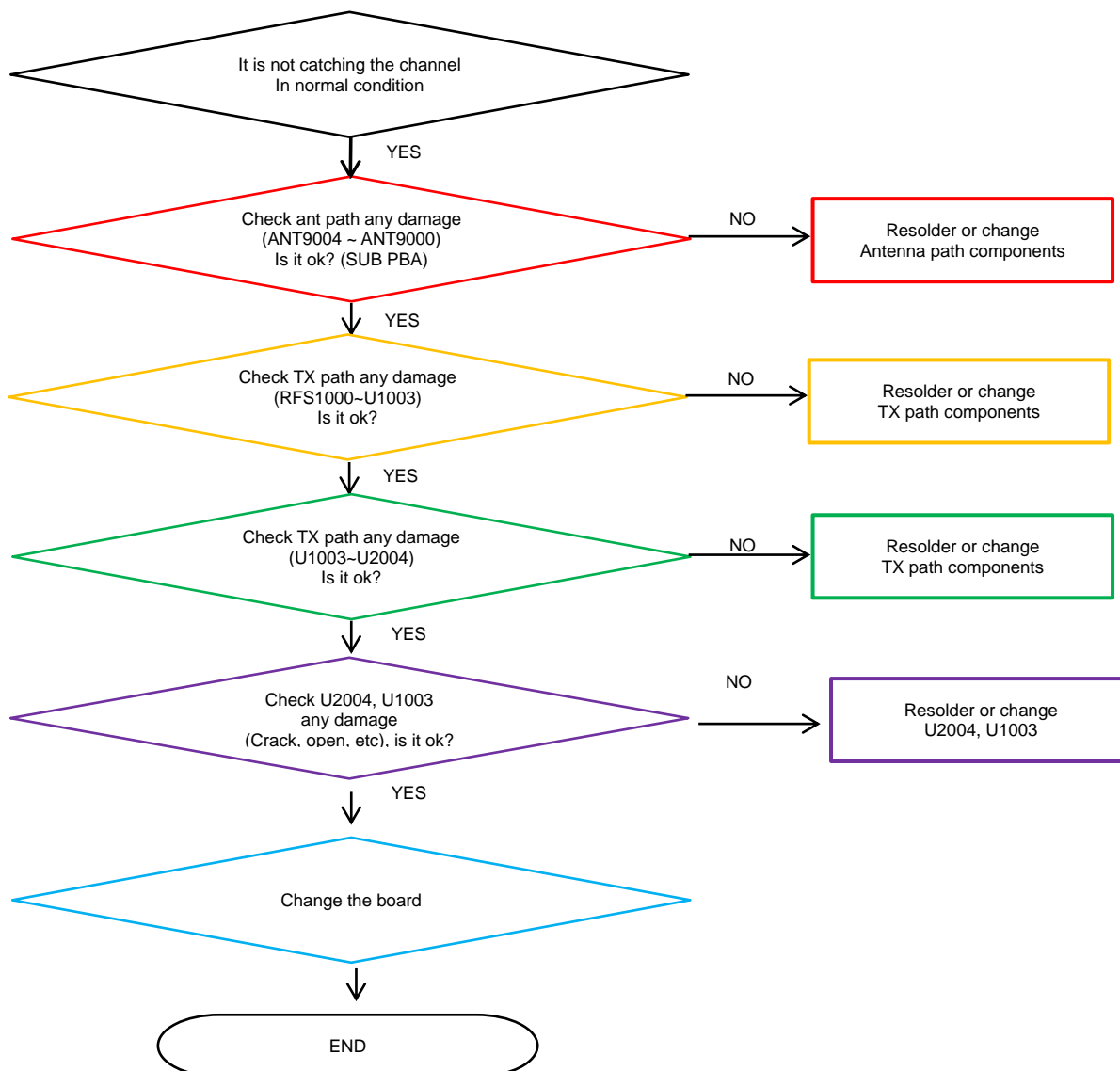
8. Level 3 Repair

8-4-28. LTE B7/38/40/41 Tx



8. Level 3 Repair

8-4-29. GSM DCS/PCS, WCDMA B1/2, LTE B1/3 Tx



9. Reference Abbreviation

Reference Abbreviation

- **AAC**: Advanced Audio Coding.
- **AVC** : Advanced Video Coding.
- **BER** : Bit Error Rate
- **BPSK**: Binary Phase Shift Keying
- **CA** : Conditional Access
- **CDM** : Code Division Multiplexing
- **C/I** : Carrier to Interference
- **DMB** : Digital Multimedia Broadcasting
- **EN** : European Standard
- **ES** : Elementary Stream
- **ETSI**: European Telecommunications Standards Institute
- **MPEG**: Moving Picture Experts Group
- **PN** : Pseudo-random Noise
- **PS** : Pilot Symbol
- **QPSK**: Quadrature Phase Shift Keying
- **RS** : Reed-Solomon
- **SI** : Service Information
- **TDM** : Time Division Multiplexing
- **TS** : Transport Stream

SAMSUNG