

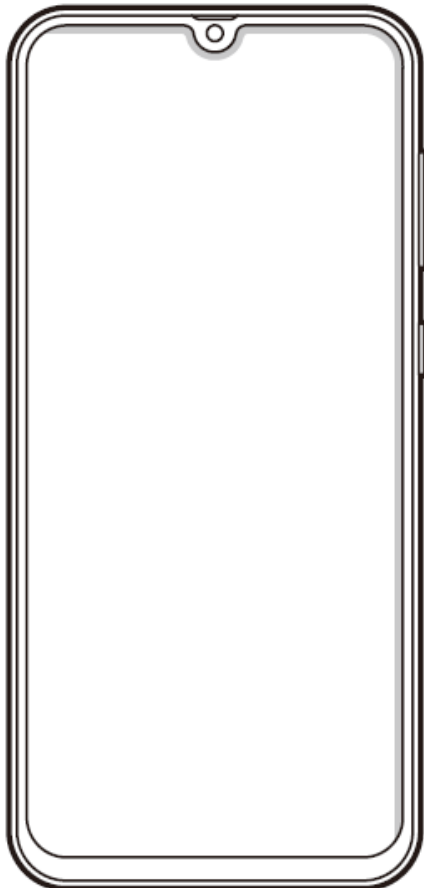
# SAMSUNG

## Mobile Device SM-A707F/A7070 Common

# SERVICE *Manual*

Mobile Device

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# 1. Safety Precautions

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## 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

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## 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		EGSM 900	DCS1800	PCS1900
Freq. Band[MHz]		880~915	1710~1785	1850~1910
Uplink/Downlink		925~960	1805~1880	1930~1990
ARFCN range		0~124 & 975~1023	512~885	512~810
Tx/Rx spacing		45MHz	95MHz	80MHz
Mod. Bit rate/ Bit Period		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
Modulation	GSM/ EGPRS	GMSK/ 8PSK	GMSK/ 8PSK	GMSK/ 8PSK
MS Power		33dBm~5dBm	30dBm~0dBm	30dBm~0dBm
Power Class		4(GMSK) E2(8PSK)	1(GMSK) E2(8PSK)	1(GMSK) E2(8PSK)
Sensitivity		-102dBm	-100dBm	-100dBm
TDMA Mux		8	8	8



## 2. Specification

### 2-2. GSM Tx Power Class

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

### 2-4-1. LTE General Specification [SM-A707F]

Item	LTE Band1	LTE Band3	LTE Band5	LTE Band7
Freq. Band[MHz] Uplink/Downlink	1920~1980 2110~2170	1710~1785 1805~1880	824~849 869~894	2500~2570 2620~2690
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
Tx/Rx spacing (MHz)	190	95	45	120
Channel Bandwidth (MHz)	5/10/15/20	1.4/3/5/10/15/20	1.4/3/5/10	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)
MS Power (dBm)	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

Item	LTE Band8	LTE Band20	LTE Band38	LTE Band40	LTE Band41
Freq. Band[MHz] Uplink/Downlink	880~915 925~960	832~862 791~821	2570~2620	2300~2400	2555~2655
ARFCN range	UL:21450-21799 DL:3450-3799	UL:24150~24449 DL:6150~6449	UL/DL: 37750 ~ 38249	UL/DL: 38650 ~ 39649	UL/DL: 40240~41140
Tx/Rx spacing (MHz)	45	-41	0	0	0
Channel Bandwidth (MHz)	1.4/3/5/10	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	-93.3	-96.3	-96.3	-96.3

## 2. Specification

### 2-4-2. LTE General Specification [SM-A7070]

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 Band34	LTE Band38	LTE Band39	LTE Band40	LTE Band41
Freq. Band[MHz] Uplink/Downlink	2010 ~ 2025	2570~2620	1880~1920	2300~2400	2555~2655
ARFCN range	UL/DL: 36200~36349	UL/DL :37750 ~ 38249	UL/DL: 38250~38649	UL/DL: 38650 ~ 39649	UL/DL: 40240~41140
Tx/Rx spacing (MHz)	0	0	0	0	0
Channel Bandwidth (MHz)	5/10/15/20	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)	-96.3	-96.3	-96.3	-96.3	-96.3

## 2. Specification

### 2-5. TDSCDMA General Specification [SM-A7070]

Item	TDSCDMA2010(B34)	TDSCDMA1880(B39)
Chip rate	1.28 Mcps	1.28 Mcps
OBW	1.6 MHz	1.6 MHz
Freq. Band[MHz] Uplink/Downlink	2010~2025	1880~1920
ARFCN range	10054~10121	9404~9596
Tx/Rx spacing (MHz)	-	-
MS Power (dBm)	24 ~ -48(↓)	24 ~ -48(↓)
Power Class	2(max+24dBm)	2(max+24dBm)
Sensitivity (dBm /1.28 MHz)	-110	-110

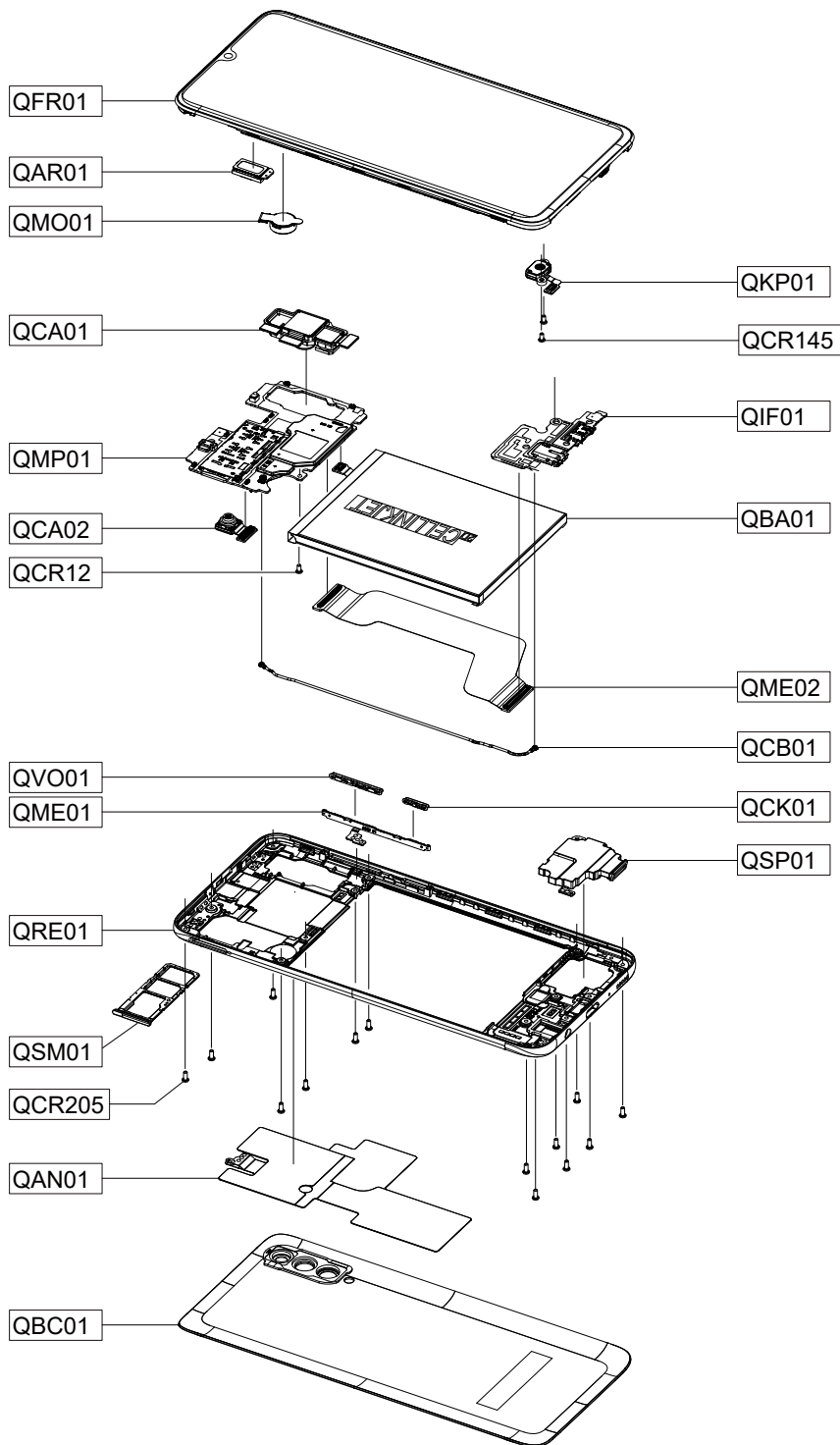
### 3. Product Function

#### Main Function

Item	Description
OS	Android P OS V9.0
<b>SM-A707F</b>	[2G] GSM : 900, 1800, 1900 [3G] WCDMA: B1, 2, 5, 8 [4G] LTE FDD : B1, 3, 5, 7, 8, 20 LTE TDD : 38, 40, 41
<b>SM-A7070</b>	
	2.0Ghz + 1.7GHz
Other RF	GPS, Glonass, Beidou, Galileo / BT5.0 / USB 2.0 / WIFI 802.11 a/b/g/n/ac / NFC /
Camera	Triple Camera ( 64MP(F1.8) + 5MP(F2.2) + 8MP(F2.2)) with LED Flash / Front Camera 32MP(F2.0)
LCD	6.7", FHD+, 2400x1080
<b>SM-A707F</b> RAM	6 GB / 8 GB
<b>SM-A7070</b> RAM	8 GB
Storage	128 GB
Sensor	Accelerometer, Fingerprint Sensor, Gyro Sensor, Geomagnetic Sensor, Hall Sensor, Proximity Sensor, RGB Light Sensor,
Accessory	Charger: 9V/2.77A and 5V/3.0A DC charging Data cable: 3.05pi, 1.0m(USB-C2C) 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-A707F]

Parts Code	Design LOC	Description
0401-001110	D8000	DIODE-SWITCHING
0404-001250	D6000	DIODE-SCHOTTKY
0406-001561	ZD3002,ZD4001,ZD6003	DIODE-TVS
0406-001561	ZD6005,ZD6021,ZD8000	DIODE-TVS
0406-001561	ZD8001	DIODE-TVS
0406-001728	ZD1000,ZD5000	DIODE-TVS
0406-001808	D6001	DIODE-TVS
0406-001809	ZD6017,ZD6018	DIODE-TVS
0505-003234	TR5001,TR5002	FET-SILICON
0601-003768	LED5000	LED
1001-001755	U5006	IC
1001-001911	U1008,U2005	IC
1001-001970	U1006,U2001,U2006	IC
1001-002062	U3002	IC
1001-002063	U1001	IC
1009-001076	U3006	IC
1201-003869	U3005	IC
1201-004029	U1000,U2011	IC
1201-004109	PAM2000	IC
1201-004200	U8000	IC
1201-004209	U1004	IC
1203-008251	U6001	IC
1203-008859	U7002	IC
1203-008865	U6000,U7001	IC
1203-008867	U3016,U7010	IC
1203-008872	U6004,U7009	IC
1203-009054	U6002	IC
1203-009220	U7000	IC
1203-009221	U7016	IC
1203-009240	U2000	IC
1203-009246	U5003	IC
1203-009247	U5004	IC
1203-009248	U5002	IC
1205-005106	U6003	IC
1205-005217	U7003	IC
1205-005731	U3021	IC
1205-005833	U2009	IC



## 5. MAIN Electrical Parts List

1205-005881	U3004	IC
1205-006106	U8001	IC
1205-006111	UCP400	IC
1209-002450	U3003	IC
1209-002513	U3009	IC
1209-002628	U3000	IC
1209-002629	U3001	IC
1404-001724	TH2000,TH4000	THERMISTOR
1404-001724	THM3000	THERMISTOR
1405-001404	VR6000	VARISTOR
2007-003015	ZD6015,ZD6016	R-CHIP
2007-007099	R5004	R-CHIP
2007-007142	R7003	R-CHIP
2007-007313	R5001	R-CHIP
2007-007741	R3002,R3006,R3007	R-CHIP
2007-007741	R4007,R4010,R5008	R-CHIP
2007-007741	R5016,R5025,R5030	R-CHIP
2007-007741	R6009	R-CHIP
2007-008056	R1006,R1007	R-CHIP
2007-008167	R5000	R-CHIP
2007-008263	R4006	R-CHIP
2007-008420	R5019,R7001	R-CHIP
2007-008483	R5023	R-CHIP
2007-008516	C6037	R-CHIP
2007-008531	R7000,R7004	R-CHIP
2007-008587	R8040	R-CHIP
2007-008588	R3012,R3013	R-CHIP
2007-008766	R4016	R-CHIP
2007-008785	R1005	R-CHIP
2007-008788	R7005	R-CHIP
2007-008798	R8000,R8001	R-CHIP
2007-008808	R7006	R-CHIP
2007-009111	R3001,R5006	R-CHIP
2007-009157	R5027,R6004,R6005	R-CHIP
2007-009171	R3008	R-CHIP
2007-009212	R3005,R4021,R4022	R-CHIP
2007-009212	R4042,R5021,R5022	R-CHIP
2007-009212	R6018	R-CHIP
2007-009314	R6001	R-CHIP

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## 5. MAIN Electrical Parts List

2007-009315	R6007	R-CHIP
2007-009352	R6017	R-CHIP
2007-009408	R4008,R4009,R4013	R-CHIP
2007-009408	R4014,R4025,R4026	R-CHIP
2007-009408	R4027,R4028,R4031	R-CHIP
2007-009408	R4032,R4033,R4034	R-CHIP
2007-009408	R4037,R4038,R4040	R-CHIP
2007-009408	R4041,R6016,R8008	R-CHIP
2007-009408	R8011	R-CHIP
2007-009766	R7002	R-CHIP
2007-009801	R4015	R-CHIP
2007-009805	R1000,R1001,R1002	R-CHIP
2007-009805	R1004,R2000	R-CHIP
2007-009807	R6006	R-CHIP
2007-009920	R4002,R6002,R6003	R-CHIP
2007-009954	R6008	R-CHIP
2007-009969	R3016,R3021,R4001	R-CHIP
2007-010202	R5002	R-CHIP
2007-010233	C4094	R-CHIP
2007-011043	R4000	R-CHIP
2203-000386	C8153	C-CERAMIC,CHIP
2203-001153	C8045	C-CERAMIC,CHIP
2203-001239	C3082,C3086,C3089	C-CERAMIC,CHIP
2203-005446	C3087	C-CERAMIC,CHIP
2203-005682	C1006,C1007,C1016	C-CERAMIC,CHIP
2203-005682	C2031,C2063,C2073	C-CERAMIC,CHIP
2203-005682	C2075,C2081,C2082	C-CERAMIC,CHIP
2203-005682	C2087,C2115,C2122	C-CERAMIC,CHIP
2203-005682	C3061,C3062,C3063	C-CERAMIC,CHIP
2203-005682	C7004,L1001,L1003	C-CERAMIC,CHIP
2203-005682	L1017,L2043	C-CERAMIC,CHIP
2203-005725	C7040,L1032	C-CERAMIC,CHIP
2203-005729	C8013,C8022,C8039	C-CERAMIC,CHIP
2203-005729	L3001	C-CERAMIC,CHIP
2203-005731	C3001,C3007,C3008	C-CERAMIC,CHIP
2203-005731	C8028,C8029,C8031	C-CERAMIC,CHIP
2203-005732	C8038	C-CERAMIC,CHIP
2203-005736	C1010,C1023,C1035	C-CERAMIC,CHIP
2203-005736	C1054,C1055,C1124	C-CERAMIC,CHIP

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## 5. MAIN Electrical Parts List

2203-005736	C1125,C1126,C1129	C-CERAMIC,CHIP
2203-005736	C1134,C1135,C2001	C-CERAMIC,CHIP
2203-005736	C2024,C2038,C2043	C-CERAMIC,CHIP
2203-005736	C2045,C2058,C2067	C-CERAMIC,CHIP
2203-005736	C2068,C2084,C2092	C-CERAMIC,CHIP
2203-005736	C2094,C2123,C2124	C-CERAMIC,CHIP
2203-005736	C3006,C3024,C3039	C-CERAMIC,CHIP
2203-005736	C3044,C3045,C3047	C-CERAMIC,CHIP
2203-005736	C3048,C3058,L1023	C-CERAMIC,CHIP
2203-005736	L1030,L1080,L2000	C-CERAMIC,CHIP
2203-005736	L2003,L2006,L2018	C-CERAMIC,CHIP
2203-005736	L2020,L2023,L2031	C-CERAMIC,CHIP
2203-005736	L2039,L2040,L2046	C-CERAMIC,CHIP
2203-005736	L2048,L2050,L2062	C-CERAMIC,CHIP
2203-005736	L2067,L3003	C-CERAMIC,CHIP
2203-005740	C8027,C8030	C-CERAMIC,CHIP
2203-005777	C1051,C1052,C1069	C-CERAMIC,CHIP
2203-005777	C2046,C2090,C2100	C-CERAMIC,CHIP
2203-005777	C3055	C-CERAMIC,CHIP
2203-005789	C1036,C1062,C1066	C-CERAMIC,CHIP
2203-005789	C2028,C2033,C2069	C-CERAMIC,CHIP
2203-005789	C2091,C2099,C2109	C-CERAMIC,CHIP
2203-005789	C2110	C-CERAMIC,CHIP
2203-005792	C1046	C-CERAMIC,CHIP
2203-005806	C2083	C-CERAMIC,CHIP
2203-006120	C6047,C6048	C-CERAMIC,CHIP
2203-006123	C1020	C-CERAMIC,CHIP
2203-006194	C6019	C-CERAMIC,CHIP
2203-006305	C2066,C3009,C3040	C-CERAMIC,CHIP
2203-006305	C7009,C7010,C7024	C-CERAMIC,CHIP
2203-006318	L1035	C-CERAMIC,CHIP
2203-006400	C3083,C3085,C5095	C-CERAMIC,CHIP
2203-006400	C6065	C-CERAMIC,CHIP
2203-006410	C1050	C-CERAMIC,CHIP
2203-006423	C1004,C1043,C2003	C-CERAMIC,CHIP
2203-006423	C2004,C2006,C2007	C-CERAMIC,CHIP
2203-006423	C2008,C2009,C2010	C-CERAMIC,CHIP
2203-006423	C2011,C2012,C2013	C-CERAMIC,CHIP
2203-006423	C2015,C2016,C2017	C-CERAMIC,CHIP

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## 5. MAIN Electrical Parts List

2203-006423	C2019,C2020,C2021	C-CERAMIC,CHIP
2203-006423	C2022,C2061,C3059	C-CERAMIC,CHIP
2203-006423	C3060,C5115,C6033	C-CERAMIC,CHIP
2203-006423	C7025,C8000,C8007	C-CERAMIC,CHIP
2203-006423	C8009,C8023,C8024	C-CERAMIC,CHIP
2203-006423	C8025,C8034,C8044	C-CERAMIC,CHIP
2203-006556	C1039,C1042,C1045	C-CERAMIC,CHIP
2203-006556	C2074	C-CERAMIC,CHIP
2203-006604	C3020,C3041	C-CERAMIC,CHIP
2203-006611	C1136,C3010	C-CERAMIC,CHIP
2203-006665	L1027,L1051	C-CERAMIC,CHIP
2203-006674	C2088	C-CERAMIC,CHIP
2203-006839	C1000,C1005,C1114	C-CERAMIC,CHIP
2203-006839	C1123,C2044,C2060	C-CERAMIC,CHIP
2203-006839	C3074,C3081,C4020	C-CERAMIC,CHIP
2203-006839	C4021,C4086,C4095	C-CERAMIC,CHIP
2203-006839	C4096,C5022,C5054	C-CERAMIC,CHIP
2203-006839	C5100,C8006,C8050	C-CERAMIC,CHIP
2203-006844	C3038,C6077	C-CERAMIC,CHIP
2203-006846	C1076	C-CERAMIC,CHIP
2203-006979	C3019,C3023,C3025	C-CERAMIC,CHIP
2203-006979	C3026,C3027,C3033	C-CERAMIC,CHIP
2203-006979	C3034	C-CERAMIC,CHIP
2203-007143	C6043	C-CERAMIC,CHIP
2203-007210	C4029,C4030,C4058	C-CERAMIC,CHIP
2203-007210	C6003,C6004,C6005	C-CERAMIC,CHIP
2203-007210	C6016,C6017,C8004	C-CERAMIC,CHIP
2203-007317	C2002,C3002,C3014	C-CERAMIC,CHIP
2203-007317	C3015,C3056,C6011	C-CERAMIC,CHIP
2203-007317	C6012,C7012	C-CERAMIC,CHIP
2203-007391	C3036,C3076,C6036	C-CERAMIC,CHIP
2203-007391	C6039,C8011,C8012	C-CERAMIC,CHIP
2203-007391	C8019	C-CERAMIC,CHIP
2203-007393	C2005,C2014,C2018	C-CERAMIC,CHIP
2203-007393	C2023,C2059,C3017	C-CERAMIC,CHIP
2203-007393	C3028,C3031,C3037	C-CERAMIC,CHIP
2203-007393	C5074,C5076,C5077	C-CERAMIC,CHIP
2203-007393	C5078,C5105,C5106	C-CERAMIC,CHIP
2203-007393	C5120,C5124,C5126	C-CERAMIC,CHIP

## 5. MAIN Electrical Parts List

2203-007393	C6013,C6015,C6032	C-CERAMIC,CHIP
2203-007393	C6073,C6074,C7016	C-CERAMIC,CHIP
2203-007393	C7017,C7020,C7021	C-CERAMIC,CHIP
2203-007393	C7022,C7029,C8001	C-CERAMIC,CHIP
2203-007456	C2056,C5083	C-CERAMIC,CHIP
2203-007474	C5110,C5111,C5129	C-CERAMIC,CHIP
2203-007474	C7026	C-CERAMIC,CHIP
2203-007544	C3042,C3043	C-CERAMIC,CHIP
2203-007781	C8005	C-CERAMIC,CHIP
2203-007796	C3013,C3018,C3021	C-CERAMIC,CHIP
2203-007796	C3022,C3030,C3032	C-CERAMIC,CHIP
2203-007796	C3070,C3071,C4000	C-CERAMIC,CHIP
2203-007796	C4001,C4002,C4003	C-CERAMIC,CHIP
2203-007796	C4004,C4006,C4007	C-CERAMIC,CHIP
2203-007796	C4008,C4009,C4010	C-CERAMIC,CHIP
2203-007796	C4011,C4012,C4013	C-CERAMIC,CHIP
2203-007796	C4014,C4016,C4017	C-CERAMIC,CHIP
2203-007796	C4018,C4022,C4024	C-CERAMIC,CHIP
2203-007796	C4025,C4026,C4027	C-CERAMIC,CHIP
2203-007796	C4028,C4032,C4036	C-CERAMIC,CHIP
2203-007796	C4038,C4039,C4042	C-CERAMIC,CHIP
2203-007796	C4043,C4044,C4045	C-CERAMIC,CHIP
2203-007796	C4047,C4049,C4050	C-CERAMIC,CHIP
2203-007796	C4051,C4052,C4054	C-CERAMIC,CHIP
2203-007796	C4055,C4056,C4057	C-CERAMIC,CHIP
2203-007796	C4059,C4060,C4061	C-CERAMIC,CHIP
2203-007796	C4062,C4068,C4069	C-CERAMIC,CHIP
2203-007796	C4070,C4071,C4072	C-CERAMIC,CHIP
2203-007796	C4076,C4097,C4098	C-CERAMIC,CHIP
2203-007796	C5068,C5069,C5070	C-CERAMIC,CHIP
2203-007796	C5071,C5072,C5073	C-CERAMIC,CHIP
2203-007796	C5075,C5079,C5092	C-CERAMIC,CHIP
2203-007796	C5104,C5107,C5108	C-CERAMIC,CHIP
2203-007796	C5109,C5112,C5113	C-CERAMIC,CHIP
2203-007796	C5114,C5116,C5122	C-CERAMIC,CHIP
2203-007796	C5123,C5125,C5128	C-CERAMIC,CHIP
2203-007796	C6000,C6001,C6006	C-CERAMIC,CHIP
2203-007796	C6007,C6008,C6009	C-CERAMIC,CHIP
2203-007796	C6014,C6020,C6021	C-CERAMIC,CHIP

## 5. MAIN Electrical Parts List

2203-007796	C6025,C6026,C6028	C-CERAMIC,CHIP
2203-007796	C6029,C6030,C6031	C-CERAMIC,CHIP
2203-007796	C6049,C6050,C6076	C-CERAMIC,CHIP
2203-007796	C7001,C7002,C7003	C-CERAMIC,CHIP
2203-007796	C7007,C7013,C7014	C-CERAMIC,CHIP
2203-007796	C7018,C7019,C7027	C-CERAMIC,CHIP
2203-007796	C7036,C8008,C8015	C-CERAMIC,CHIP
2203-008095	C3069,C4063,C4064	C-CERAMIC,CHIP
2203-008097	C1044,C5019	C-CERAMIC,CHIP
2203-008126	C3077,C3080	C-CERAMIC,CHIP
2203-008177	C6072	C-CERAMIC,CHIP
2203-008242	C3035,C6035,C6041	C-CERAMIC,CHIP
2203-008242	C6060,C7005	C-CERAMIC,CHIP
2203-008572	C5132,C5133	C-CERAMIC,CHIP
2203-008654	C6045,C6068,L5005	C-CERAMIC,CHIP
2203-008749	C5055	C-CERAMIC,CHIP
2203-008860	C2080,C3072,C4015	C-CERAMIC,CHIP
2203-008860	C4019,C4023,C5002	C-CERAMIC,CHIP
2203-008860	C5004,C5021,C5023	C-CERAMIC,CHIP
2203-008860	C5025,C5027,C5035	C-CERAMIC,CHIP
2203-008860	C5040,C5042,C5044	C-CERAMIC,CHIP
2203-008860	C5045,C5046,C5047	C-CERAMIC,CHIP
2203-008860	C5050,C5053,C5081	C-CERAMIC,CHIP
2203-008860	C5084,C5086,C5088	C-CERAMIC,CHIP
2203-008860	C5097,C5098,C5101	C-CERAMIC,CHIP
2203-008860	C6051,C6056,C6057	C-CERAMIC,CHIP
2203-008860	C6075,C6078,C7038	C-CERAMIC,CHIP
2203-008860	C7058,C7059,C8016	C-CERAMIC,CHIP
2203-008860	C8021,C8026	C-CERAMIC,CHIP
2203-008876	C1041,C2076,C3073	C-CERAMIC,CHIP
2203-008876	C3075,C3078,C3079	C-CERAMIC,CHIP
2203-008876	C6042,C6044,C6058	C-CERAMIC,CHIP
2203-008876	C6067,C7028,C7030	C-CERAMIC,CHIP
2203-008876	C7031,C7033,C7055	C-CERAMIC,CHIP
2203-008876	C7056,C8003,C8035	C-CERAMIC,CHIP
2203-008916	C4033,C4034,C4040	C-CERAMIC,CHIP
2203-008916	C4041,C4066,C4067	C-CERAMIC,CHIP
2203-008916	C6022	C-CERAMIC,CHIP
2203-009167	C3084,C3088	C-CERAMIC,CHIP

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2203-009444	C8041	C-CERAMIC,CHIP
2203-009618	C5030,C5031,C5034	C-CERAMIC,CHIP
2203-009618	C5037,C7061,C8042	C-CERAMIC,CHIP
2203-009618	C8052	C-CERAMIC,CHIP
2203-009733	C1047,C2057,C3029	C-CERAMIC,CHIP
2203-009733	C5000,C5026,C5028	C-CERAMIC,CHIP
2203-009733	C5032,C5033,C5036	C-CERAMIC,CHIP
2203-009733	C5038,C5043,C5049	C-CERAMIC,CHIP
2203-009733	C5052,C5056,C5064	C-CERAMIC,CHIP
2203-009733	C5065,C5066,C5085	C-CERAMIC,CHIP
2203-009733	C5090,C5096,C5103	C-CERAMIC,CHIP
2203-009733	C7000,C7006,C7008	C-CERAMIC,CHIP
2203-009733	C7011,C7015,C7035	C-CERAMIC,CHIP
2203-009733	C7042,C7062,C7063	C-CERAMIC,CHIP
2203-009733	C7064,C7065,C7066	C-CERAMIC,CHIP
2203-009733	C7067,C7068,C7071	C-CERAMIC,CHIP
2203-009733	C7072,C7073,C7074	C-CERAMIC,CHIP
2203-009733	C7075,C7076	C-CERAMIC,CHIP
2203-009735	C4073,C4074	C-CERAMIC,CHIP
2203-009787	C5039,C5067	C-CERAMIC,CHIP
2203-009859	C7032	C-CERAMIC,CHIP
2203-010085	C4075,C5087,C5094	C-CERAMIC,CHIP
2703-002309	L8017,L8018	INDUCTOR-SMD
2703-002649	C2089,L1002,L2019	INDUCTOR-SMD
2703-002901	C1032,C3053,L1015	INDUCTOR-SMD
2703-002903	L1012,L1018,L3006	INDUCTOR-SMD
2703-002903	L3013	INDUCTOR-SMD
2703-002951	C1028,C2098,L1050	INDUCTOR-SMD
2703-002953	C3049	INDUCTOR-SMD
2703-002959	L3009,L3016,L8016	INDUCTOR-SMD
2703-002961	L8010	INDUCTOR-SMD
2703-002999	C2049	INDUCTOR-SMD
2703-004000	L1022,L1041	INDUCTOR-SMD
2703-004012	C2032,C2095,L1039	INDUCTOR-SMD
2703-004012	L2010,L2034,L2064	INDUCTOR-SMD
2703-004013	L1008,L2045,L2054	INDUCTOR-SMD
2703-004014	L1009	INDUCTOR-SMD
2703-004018	L2053,L2057	INDUCTOR-SMD
2703-004034	L1028	INDUCTOR-SMD

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## 5. MAIN Electrical Parts List

2703-004036	L2002,L2009	INDUCTOR-SMD
2703-004038	L1007,L2001,L2004	INDUCTOR-SMD
2703-004038	L2021,L2024	INDUCTOR-SMD
2703-004286	C3046,C3050,L1037	INDUCTOR-SMD
2703-004286	L1058,L2028,L2029	INDUCTOR-SMD
2703-004286	L2035,L2042,L3014	INDUCTOR-SMD
2703-004286	L2051	INDUCTOR-SMD
2703-004287	C1033,C1137,L1005	INDUCTOR-SMD
2703-004287	L1042,L1043,L1045	INDUCTOR-SMD
2703-004287	L1053,L2032,L2038	INDUCTOR-SMD
2703-004287	L3007,L3008	INDUCTOR-SMD
2703-004288	C3051,L2005,L2026	INDUCTOR-SMD
2703-004288	L2049,L2061	INDUCTOR-SMD
2703-004289	L2047	INDUCTOR-SMD
2703-004295	L1036	INDUCTOR-SMD
2703-004300	L1044	INDUCTOR-SMD
2703-004302	C2085,L1040,L3015	INDUCTOR-SMD
2703-004317	C3052,L3000	INDUCTOR-SMD
2703-004328	C3000	INDUCTOR-SMD
2703-004362	L2016	INDUCTOR-SMD
2703-004703	L2007,L2014,L6001	INDUCTOR-SMD
2703-004763	L2065	INDUCTOR-SMD
2703-004853	L3010	INDUCTOR-SMD
2703-004862	L1038,L2058,L2063	INDUCTOR-SMD
2703-004862	L3002	INDUCTOR-SMD
2703-005058	L2017	INDUCTOR-SMD
2703-005066	L2025	INDUCTOR-SMD
2703-005088	L2030	INDUCTOR-SMD
2703-005295	L2013	INDUCTOR-SMD
2703-005418	L7006	INDUCTOR-SMD
2703-005419	L7007	INDUCTOR-SMD
2703-005505	L8000	INDUCTOR-SMD
2703-005555	L3017,L3018	INDUCTOR-SMD
2703-005581	L5007	INDUCTOR-SMD
2703-005660	L5000,L5002,L5003	INDUCTOR-SMD
2703-005660	L5006,L5008,L5009	INDUCTOR-SMD
2703-005660	L5010,L5011,L5016	INDUCTOR-SMD
2703-005660	L5020,L5022,L5023	INDUCTOR-SMD
2703-005731	L7009	INDUCTOR-SMD

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## 5. MAIN Electrical Parts List

2703-005738	L5019	INDUCTOR-SMD
2801-005506	OSC5000	CRYSTAL-UNIT
2901-001690	C4091	FILTER-EMI SMD
2903-001576	F3000	FILTER-CERAMIC
2904-002134	F1000	FILTER-SAW
2904-002198	F2006	FILTER-SAW
2904-002339	F2002	FILTER-SAW
2904-002350	F2003	FILTER-SAW
2904-002355	F3002,F3003	FILTER-SAW
2904-002381	F3009	FILTER-SAW
2904-002397	F2004,F2005	FILTER-SAW
2910-000390	F2008	FILTER-SAW
2911-000435	U2002	FILTER-SAW
2911-000452	U1009	FILTER-SAW
3003-001237	MIC8000	MIC-CONDENSOR
3301-001534	L8002,L8003	CORE-FERRITE BEAD
3301-001885	L8019	CORE-FERRITE BEAD
3301-002078	L3810,L3811	CORE-FERRITE BEAD
3301-002085	L8001,L8005	CORE-FERRITE BEAD
3301-002223	L7000,L7001,L7002	CORE-FERRITE BEAD
3301-002223	L7003	CORE-FERRITE BEAD
3301-002235	L8012	CORE-FERRITE BEAD
3301-002237	L1000,L8004	CORE-FERRITE BEAD
3301-002238	L3011,L3012,L5001	CORE-FERRITE BEAD
3301-002312	L7005,L7008,L7010	CORE-FERRITE BEAD
3301-002356	L8007,L8008	CORE-FERRITE BEAD
3705-001708	RFS1001	CONNECTOR-COAXIAL
3705-001937	RFS1000	CONNECTOR-COAXIAL
3709-001932	SIM4UP	CONNECTOR-CARD EDGE
3709-001933	SIM1	CONNECTOR-CARD EDGE
3709-001934	SIM2,SIM3	CONNECTOR-CARD EDGE
3710-004285	HDC6000	CONNECTOR-SOCKET
3711-007107	HDC7003	CONNECTOR-HEADER
3711-008508	HDC7000	CONNECTOR-HEADER
3711-008511	HDC7001	CONNECTOR-HEADER
3711-008847	HDC5000	CONNECTOR-HEADER
3711-008931	HDC7002	CONNECTOR-HEADER
3712-001604	ANT1005,ANT2000	CONNECTOR
3712-001604	ANT2001,ANT2002	CONNECTOR

## 5. MAIN Electrical Parts List

3712-001604	ANT3002,ANT3011	CONNECTOR
3712-001621	ANT3003,ANT3004	CONNECTOR
3712-001621	ANT3006,ANT3007	CONNECTOR
3712-001626	ANT1000,ANT1001	CONNECTOR
3712-001626	ANT1002,ANT1003	CONNECTOR
3712-001626	ANT1004,ANT3000	CONNECTOR
3712-001626	ANT3010	CONNECTOR
3712-001633	ANT8100,ANT8101	CONNECTOR
3712-001666	ANT8000,ANT8001	CONNECTOR
4709-002196	F2001	RF-MODULE
4709-002226	F1004	RF-MODULE
4709-002285	F3001	RF-MODULE
4709-002484	F2000	RF-MODULE
4709-002589	F1002,F1005	RF-MODULE
GH62-00042A	GAS6000	SHIELDCAN
GH63-17097A	SC6000	SHIELDCAN
GH63-17098A	SC6006	SHIELDCAN
GH63-17099A	SC6001	SHIELDCAN
GH63-17100A	SC6002	SHIELDCAN
GH63-17106A	SC6005	SHIELDCAN
GH81-16836A	SC6000SP	TAPE-SHIELDCAN
GH81-16835A	SC6006SP	ATAPE-SHIELDCAN
1108-000660	UME6000	MEMORY

## 5. MAIN Electrical Parts List

### [SM-A7070]

Parts Code	Design LOC	Description
0202-002125	R2001,R2002,R2004	SOLDER-SHORT
0202-002125	R2005,R2006,R5007	SOLDER-SHORT
0202-002125	R5017,R5018,R5029	SOLDER-SHORT
0202-002125	R6013,R6035,R8002	SOLDER-SHORT
0202-002125	R8003,R8009,R8012	SOLDER-SHORT
0401-001110	D8000	DIODE-SWITCHING
0404-001250	D6000	DIODE-SCHOTTKY
0406-001561	ZD3002,ZD3003,ZD3004	DIODE-TVS
0406-001561	ZD4001,ZD8000,ZD8001	DIODE-TVS
0406-001728	ZD1000,ZD5000	DIODE-TVS
0406-001808	D6001	DIODE-TVS
0406-001809	ZD6017,ZD6018	DIODE-TVS
0505-003234	TR5001,TR5002	FET-SILICON
0601-003768	LED5000	LED
1001-001755	U5006	IC
1001-001911	U1008,U2005	IC
1001-001970	U1006,U2001,U2006	IC
1001-002062	U3002	IC
1001-002063	U1001	IC
1108-000662	UME6000	MEMORY
1201-003869	U3005	IC
1201-004029	U1000,U2011	IC
1201-004109	PAM2000	IC
1201-004200	U8000	IC
1201-004209	U1004	IC
1203-008251	U6001	IC
1203-008859	U7002	IC
1203-008865	U6000,U7001	IC
1203-008867	U3016,U7010	IC
1203-008872	U6004,U7009	IC
1203-009054	U6002	IC
1203-009220	U7000	IC
1203-009221	U7016	IC
1203-009240	U2000	IC
1203-009246	U5003	IC
1203-009247	U5004	IC
1203-009248	U5002	IC

## 5. MAIN Electrical Parts List

1205-005106	U6003	IC
1205-005217	U7003	IC
1205-005731	U3021	IC
1205-005833	U2009	IC
1205-005881	U3004	IC
1205-006106	U8001	IC
1205-006111	UCP400	AP
1209-002450	U3003	IC
1209-002513	U3009	IC
1209-002628	U3000	IC
1209-002629	U3001	IC
1404-001724	TH2000,TH4000	THERMISTOR
1404-001724	THM3000	THERMISTOR
1405-001458	VR6000	VARISTOR
2007-003015	ZD6015,ZD6016	R-CHIP
2007-007099	R5004	R-CHIP
2007-007142	R7003	R-CHIP
2007-007309	R5000	R-CHIP
2007-007313	R5001	R-CHIP
2007-008055	R5027,R6004,R6005	R-CHIP
2007-008056	R1006,R1007	R-CHIP
2007-008263	R4006	R-CHIP
2007-008419	R3005,R4021,R4022	R-CHIP
2007-008419	R4042,R6018	R-CHIP
2007-008420	R5019,U18199	R-CHIP
2007-008483	R5023	R-CHIP
2007-008516	C6037,R3002,R3006	R-CHIP
2007-008516	R3007,R4007,R4010	R-CHIP
2007-008516	R5008,R5016,R5025	R-CHIP
2007-008516	R5030,R6009	R-CHIP
2007-008531	R4011,R7000,R7004	R-CHIP
2007-008587	R8040	R-CHIP
2007-008588	R3012,R3013,R4008	R-CHIP
2007-008588	R4009,R4013,R4014	R-CHIP
2007-008588	R4025,R4026,R4027	R-CHIP
2007-008588	R4028,R4031,R4032	R-CHIP
2007-008588	R4033,R4034,R4037	R-CHIP
2007-008588	R4038,R4040,R4041	R-CHIP
2007-008588	R6016	R-CHIP

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2007-008766	R4016	R-CHIP
2007-008785	R1005	R-CHIP
2007-008788	R7005	R-CHIP
2007-008798	R8000,R8001	R-CHIP
2007-008806	R1000,R1001,R1002	R-CHIP
2007-008806	R1004	R-CHIP
2007-009111	R3001,R5006	R-CHIP
2007-009171	R3008	R-CHIP
2007-009212	R5021,R5022	R-CHIP
2007-009314	R6001	R-CHIP
2007-009315	R6007	R-CHIP
2007-009352	R6017	R-CHIP
2007-009408	R8008,R8011	R-CHIP
2007-009766	R8042	R-CHIP
2007-009801	R4015	R-CHIP
2007-009805	R2000	R-CHIP
2007-009807	R6006	R-CHIP
2007-009920	R4002,R6002,R6003	R-CHIP
2007-009954	R6008	R-CHIP
2007-009969	R3016,R3021,R4001	R-CHIP
2007-010202	R5002	R-CHIP
2007-010233	C4094	R-CHIP
2007-011043	R4000	R-CHIP
2203-000386	C8153	C-CERAMIC,CHIP
2203-001153	C8045	C-CERAMIC,CHIP
2203-001239	C3082,C3086,C3089	C-CERAMIC,CHIP
2203-005682	C1006,C1007,C1016	C-CERAMIC,CHIP
2203-005682	C2031,C2063,C2073	C-CERAMIC,CHIP
2203-005682	C2075,C2081,C2082	C-CERAMIC,CHIP
2203-005682	C2087,C2115,C2122	C-CERAMIC,CHIP
2203-005682	C3061,C3062,C3063	C-CERAMIC,CHIP
2203-005682	C7004,L1001,L1003	C-CERAMIC,CHIP
2203-005682	L1017,L2043	C-CERAMIC,CHIP
2203-005725	C7040,L1032	C-CERAMIC,CHIP
2203-005729	C24055,C8013,C8022	C-CERAMIC,CHIP
2203-005729	C8039	C-CERAMIC,CHIP
2203-005731	C3001,C3007	C-CERAMIC,CHIP
2203-005732	C8038	C-CERAMIC,CHIP
2203-005736	C1010,C1023,C1035	C-CERAMIC,CHIP

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## 5. MAIN Electrical Parts List

2203-005736	C1054,C1055,C1081	C-CERAMIC,CHIP
2203-005736	C1124,C1125,C1126	C-CERAMIC,CHIP
2203-005736	C1129,C1134,C1135	C-CERAMIC,CHIP
2203-005736	C2001,C2024,C2038	C-CERAMIC,CHIP
2203-005736	C2039,C2043,C2045	C-CERAMIC,CHIP
2203-005736	C2058,C2067,C2092	C-CERAMIC,CHIP
2203-005736	C2094,C2123,C2124	C-CERAMIC,CHIP
2203-005736	C3006,C3024,C3044	C-CERAMIC,CHIP
2203-005736	C3045,C3047,C3048	C-CERAMIC,CHIP
2203-005736	C3058,L1023,L1028	C-CERAMIC,CHIP
2203-005736	L1030,L2000,L2003	C-CERAMIC,CHIP
2203-005736	L2006,L2020,L2023	C-CERAMIC,CHIP
2203-005736	L2031,L2039,L2040	C-CERAMIC,CHIP
2203-005736	L2046,L2048,L2050	C-CERAMIC,CHIP
2203-005736	L3003	C-CERAMIC,CHIP
2203-005777	C1051,C1052,C1069	C-CERAMIC,CHIP
2203-005777	C2046,C2090,C2100	C-CERAMIC,CHIP
2203-005777	C3055,L2018	C-CERAMIC,CHIP
2203-005789	C1036,C1062,C1066	C-CERAMIC,CHIP
2203-005789	C1128,C2028,C2033	C-CERAMIC,CHIP
2203-005789	C2091,C2099,C2109	C-CERAMIC,CHIP
2203-005789	C2110,L2008	C-CERAMIC,CHIP
2203-005792	C1046	C-CERAMIC,CHIP
2203-005806	C2083	C-CERAMIC,CHIP
2203-006120	C6047,C6048	C-CERAMIC,CHIP
2203-006123	C1020	C-CERAMIC,CHIP
2203-006187	C1136	C-CERAMIC,CHIP
2203-006194	C6019	C-CERAMIC,CHIP
2203-006305	C2066,C3008,C3009	C-CERAMIC,CHIP
2203-006305	C3040,C7024,U18196	C-CERAMIC,CHIP
2203-006318	C1110,L1035	C-CERAMIC,CHIP
2203-006400	C3083,C3085,C5095	C-CERAMIC,CHIP
2203-006400	C6065	C-CERAMIC,CHIP
2203-006410	C1050,C3039	C-CERAMIC,CHIP
2203-006423	C1004,C1043,C2003	C-CERAMIC,CHIP
2203-006423	C2004,C2006,C2007	C-CERAMIC,CHIP
2203-006423	C2008,C2009,C2010	C-CERAMIC,CHIP
2203-006423	C2011,C2012,C2013	C-CERAMIC,CHIP
2203-006423	C2015,C2016,C2017	C-CERAMIC,CHIP

## 5. MAIN Electrical Parts List

2203-006423	C2019,C2020,C2021	C-CERAMIC,CHIP
2203-006423	C2022,C2061,C3059	C-CERAMIC,CHIP
2203-006423	C6033,C7025,C8000	C-CERAMIC,CHIP
2203-006423	C8007,C8023,C8024	C-CERAMIC,CHIP
2203-006423	C8025,C8034,C8044	C-CERAMIC,CHIP
2203-006556	C1039,C1042,C1045	C-CERAMIC,CHIP
2203-006556	C2074	C-CERAMIC,CHIP
2203-006604	C3020,C3041	C-CERAMIC,CHIP
2203-006642	C8154,C8155	C-CERAMIC,CHIP
2203-006665	L1027,L1051	C-CERAMIC,CHIP
2203-006674	C2088	C-CERAMIC,CHIP
2203-006839	C1000,C1005,C1092	C-CERAMIC,CHIP
2203-006839	C1114,C1123,C2044	C-CERAMIC,CHIP
2203-006839	C2060,C3074,C3081	C-CERAMIC,CHIP
2203-006839	C4020,C4021,C4086	C-CERAMIC,CHIP
2203-006839	C4095,C4096,C5022	C-CERAMIC,CHIP
2203-006839	C5054,C5100,C8006	C-CERAMIC,CHIP
2203-006839	C8050	C-CERAMIC,CHIP
2203-006844	C3038,C6077	C-CERAMIC,CHIP
2203-006846	C1076	C-CERAMIC,CHIP
2203-006979	C3019,C3023,C3025	C-CERAMIC,CHIP
2203-006979	C3026,C3027,C3033	C-CERAMIC,CHIP
2203-006979	C3034	C-CERAMIC,CHIP
2203-007143	C6043	C-CERAMIC,CHIP
2203-007210	C4029,C4030,C4058	C-CERAMIC,CHIP
2203-007210	C6003,C6004,C6005	C-CERAMIC,CHIP
2203-007210	C6016,C6017,C8004	C-CERAMIC,CHIP
2203-007317	C2002,C24060,C3002	C-CERAMIC,CHIP
2203-007317	C3014,C3015,C3056	C-CERAMIC,CHIP
2203-007317	C6011,C6012	C-CERAMIC,CHIP
2203-007391	C3036,C3076,C6036	C-CERAMIC,CHIP
2203-007391	C6039,C8009,C8011	C-CERAMIC,CHIP
2203-007391	C8012,C8019	C-CERAMIC,CHIP
2203-007393	C2005,C2014,C2018	C-CERAMIC,CHIP
2203-007393	C2023,C2059,C3017	C-CERAMIC,CHIP
2203-007393	C3028,C3031,C3037	C-CERAMIC,CHIP
2203-007393	C3077,C3080,C5074	C-CERAMIC,CHIP
2203-007393	C5076,C5077,C5078	C-CERAMIC,CHIP
2203-007393	C5105,C5106,C5120	C-CERAMIC,CHIP

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## 5. MAIN Electrical Parts List

2203-007393	C5124,C5126,C6013	C-CERAMIC,CHIP
2203-007393	C6015,C6032,C6072	C-CERAMIC,CHIP
2203-007393	C6073,C6074,C6079	C-CERAMIC,CHIP
2203-007393	C7020,C7021,C7022	C-CERAMIC,CHIP
2203-007393	C7029,C8001	C-CERAMIC,CHIP
2203-007456	C2056,C5083	C-CERAMIC,CHIP
2203-007474	C5110,C5111,C5129	C-CERAMIC,CHIP
2203-007474	C7016,C7017,C7026	C-CERAMIC,CHIP
2203-007544	C3042,C3043	C-CERAMIC,CHIP
2203-007796	C24050,C24051,C24052	C-CERAMIC,CHIP
2203-007796	C3013,C3018,C3021	C-CERAMIC,CHIP
2203-007796	C3022,C3030,C3032	C-CERAMIC,CHIP
2203-007796	C3070,C3071,C4000	C-CERAMIC,CHIP
2203-007796	C4001,C4002,C4003	C-CERAMIC,CHIP
2203-007796	C4004,C4006,C4007	C-CERAMIC,CHIP
2203-007796	C4008,C4009,C4010	C-CERAMIC,CHIP
2203-007796	C4011,C4012,C4013	C-CERAMIC,CHIP
2203-007796	C4014,C4016,C4017	C-CERAMIC,CHIP
2203-007796	C4018,C4022,C4024	C-CERAMIC,CHIP
2203-007796	C4025,C4026,C4027	C-CERAMIC,CHIP
2203-007796	C4028,C4032,C4036	C-CERAMIC,CHIP
2203-007796	C4038,C4039,C4042	C-CERAMIC,CHIP
2203-007796	C4043,C4044,C4045	C-CERAMIC,CHIP
2203-007796	C4047,C4049,C4050	C-CERAMIC,CHIP
2203-007796	C4051,C4052,C4054	C-CERAMIC,CHIP
2203-007796	C4055,C4056,C4057	C-CERAMIC,CHIP
2203-007796	C4059,C4060,C4061	C-CERAMIC,CHIP
2203-007796	C4062,C4068,C4069	C-CERAMIC,CHIP
2203-007796	C4070,C4071,C4072	C-CERAMIC,CHIP
2203-007796	C4076,C4097,C4098	C-CERAMIC,CHIP
2203-007796	C5068,C5071,C5072	C-CERAMIC,CHIP
2203-007796	C5073,C5075,C5079	C-CERAMIC,CHIP
2203-007796	C5092,C5104,C5109	C-CERAMIC,CHIP
2203-007796	C5112,C5116,C5122	C-CERAMIC,CHIP
2203-007796	C5123,C5125,C5128	C-CERAMIC,CHIP
2203-007796	C6000,C6001,C6006	C-CERAMIC,CHIP
2203-007796	C6007,C6008,C6009	C-CERAMIC,CHIP
2203-007796	C6014,C6020,C6021	C-CERAMIC,CHIP
2203-007796	C6025,C6026,C6028	C-CERAMIC,CHIP

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## 5. MAIN Electrical Parts List

2203-007796	C6029,C6030,C6031	C-CERAMIC,CHIP
2203-007796	C6049,C6050,C6076	C-CERAMIC,CHIP
2203-007796	C7001,C7006,C7014	C-CERAMIC,CHIP
2203-007796	C7019,C7027,C7036	C-CERAMIC,CHIP
2203-007796	C8008,C8015	C-CERAMIC,CHIP
2203-008095	C3069,C4063,C4064	C-CERAMIC,CHIP
2203-008097	C1044,C5019	C-CERAMIC,CHIP
2203-008242	C24049,C3035,C5069	C-CERAMIC,CHIP
2203-008242	C5070,C5107,C5108	C-CERAMIC,CHIP
2203-008242	C5113,C5114,C6035	C-CERAMIC,CHIP
2203-008242	C6041,C6060,C7005	C-CERAMIC,CHIP
2203-008572	C5132,C5133	C-CERAMIC,CHIP
2203-008654	C6045,C6068,L5005	C-CERAMIC,CHIP
2203-008749	C5055	C-CERAMIC,CHIP
2203-008860	C2080,C3072,C4015	C-CERAMIC,CHIP
2203-008860	C4019,C4023,C5002	C-CERAMIC,CHIP
2203-008860	C5004,C5021,C5023	C-CERAMIC,CHIP
2203-008860	C5025,C5027,C5035	C-CERAMIC,CHIP
2203-008860	C5040,C5042,C5044	C-CERAMIC,CHIP
2203-008860	C5045,C5046,C5047	C-CERAMIC,CHIP
2203-008860	C5050,C5053,C5081	C-CERAMIC,CHIP
2203-008860	C5084,C5086,C5088	C-CERAMIC,CHIP
2203-008860	C5097,C5098,C5101	C-CERAMIC,CHIP
2203-008860	C6051,C6056,C6057	C-CERAMIC,CHIP
2203-008860	C6075,C6078,C6080	C-CERAMIC,CHIP
2203-008860	C7038,C7058,C7059	C-CERAMIC,CHIP
2203-008860	C8016,C8021,C8026	C-CERAMIC,CHIP
2203-008876	C1041,C2076,C24053	C-CERAMIC,CHIP
2203-008876	C3073,C3075,C3078	C-CERAMIC,CHIP
2203-008876	C3079,C6042,C6044	C-CERAMIC,CHIP
2203-008876	C6058,C6067,C7018	C-CERAMIC,CHIP
2203-008876	C7028,C7030,C7031	C-CERAMIC,CHIP
2203-008876	C7033,C7055,C7056	C-CERAMIC,CHIP
2203-008876	C8003,C8035	C-CERAMIC,CHIP
2203-009064	C4033,C4034,C4040	C-CERAMIC,CHIP
2203-009064	C4041,C4066,C4067	C-CERAMIC,CHIP
2203-009064	C6022	C-CERAMIC,CHIP
2203-009167	C3084,C3088	C-CERAMIC,CHIP
2203-009328	C4075,C5087	C-CERAMIC,CHIP

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2203-009444	C8041	C-CERAMIC,CHIP
2203-009618	C5030,C5031,C5034	C-CERAMIC,CHIP
2203-009618	C5037,C7061,C8017	C-CERAMIC,CHIP
2203-009618	C8042,C8052	C-CERAMIC,CHIP
2203-009733	C1047,C2057,C24056	C-CERAMIC,CHIP
2203-009733	C24058,C24059,C3029	C-CERAMIC,CHIP
2203-009733	C5000,C5026,C5028	C-CERAMIC,CHIP
2203-009733	C5032,C5033,C5036	C-CERAMIC,CHIP
2203-009733	C5038,C5043,C5049	C-CERAMIC,CHIP
2203-009733	C5052,C5056,C5064	C-CERAMIC,CHIP
2203-009733	C5065,C5066,C5085	C-CERAMIC,CHIP
2203-009733	C5090,C5096,C5103	C-CERAMIC,CHIP
2203-009733	C7015,C7035,C7042	C-CERAMIC,CHIP
2203-009733	C7062,C7063,C7064	C-CERAMIC,CHIP
2203-009733	C7065,C7066,C7067	C-CERAMIC,CHIP
2203-009733	C7068,C7071,C7072	C-CERAMIC,CHIP
2203-009733	C7073,C7074,C7075	C-CERAMIC,CHIP
2203-009733	C7076,C8005,C8010	C-CERAMIC,CHIP
2203-009735	C4073,C4074	C-CERAMIC,CHIP
2203-009736	C5115,C5119	C-CERAMIC,CHIP
2203-009787	C5039,C5067	C-CERAMIC,CHIP
2203-009859	C7032	C-CERAMIC,CHIP
2203-010085	C5094	C-CERAMIC,CHIP
2703-002309	L8017,L8018	INDUCTOR-SMD
2703-002649	C2089,L1002,L2019	INDUCTOR-SMD
2703-002858	C1082	INDUCTOR-SMD
2703-002901	C1032,C3053,L1015	INDUCTOR-SMD
2703-002903	L1012,L1018,L3006	INDUCTOR-SMD
2703-002903	L3013	INDUCTOR-SMD
2703-002951	C1028,C2098,L1050	INDUCTOR-SMD
2703-002953	C3049,L2016	INDUCTOR-SMD
2703-002959	L3009,L3016	INDUCTOR-SMD
2703-002999	C2049	INDUCTOR-SMD
2703-004000	L1022,L1041	INDUCTOR-SMD
2703-004012	C1049,C2032,C2095	INDUCTOR-SMD
2703-004012	L1039,L2010,L2034	INDUCTOR-SMD
2703-004012	L2064	INDUCTOR-SMD
2703-004013	L1008,L2045,L2054	INDUCTOR-SMD
2703-004014	C3000,C3010,L1009	INDUCTOR-SMD

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## 5. MAIN Electrical Parts List

2703-004018	L2053,L2057	INDUCTOR-SMD
2703-004035	L3008	INDUCTOR-SMD
2703-004036	L2002,L2009	INDUCTOR-SMD
2703-004038	L1007,L2001,L2004	INDUCTOR-SMD
2703-004038	L2021,L2024	INDUCTOR-SMD
2703-004286	C3046,C3050,L1037	INDUCTOR-SMD
2703-004286	L1058,L2027,L2029	INDUCTOR-SMD
2703-004286	L2035,L2042,L2051	INDUCTOR-SMD
2703-004286	L2062,L3014	INDUCTOR-SMD
2703-004287	C1033,C1137,L1005	INDUCTOR-SMD
2703-004287	L1042,L1043,L1045	INDUCTOR-SMD
2703-004287	L1053,L2028,L2032	INDUCTOR-SMD
2703-004287	L2038	INDUCTOR-SMD
2703-004288	C3051,L2005,L2026	INDUCTOR-SMD
2703-004288	L2049,L2061	INDUCTOR-SMD
2703-004289	L2047	INDUCTOR-SMD
2703-004295	L1036	INDUCTOR-SMD
2703-004300	L1044	INDUCTOR-SMD
2703-004302	C2085,L1040,L1080	INDUCTOR-SMD
2703-004302	L3015	INDUCTOR-SMD
2703-004317	C3052,L3000,L3001	INDUCTOR-SMD
2703-004366	L3007	INDUCTOR-SMD
2703-004703	L2007,L2014,L6001	INDUCTOR-SMD
2703-004763	L2065	INDUCTOR-SMD
2703-004853	L3010	INDUCTOR-SMD
2703-004862	L1038,L2058,L2063	INDUCTOR-SMD
2703-004862	L3002	INDUCTOR-SMD
2703-004911	C1022	INDUCTOR-SMD
2703-005058	L2017,L2067	INDUCTOR-SMD
2703-005066	L2025	INDUCTOR-SMD
2703-005085	C1080	INDUCTOR-SMD
2703-005088	L2030	INDUCTOR-SMD
2703-005201	L5000,L5002,L5003	INDUCTOR-SMD
2703-005201	L5006,L5008,L5009	INDUCTOR-SMD
2703-005201	L5010,L5011,L5016	INDUCTOR-SMD
2703-005201	L5020,L5022,L5023	INDUCTOR-SMD
2703-005295	L2013	INDUCTOR-SMD
2703-005418	L7006	INDUCTOR-SMD
2703-005419	L7007	INDUCTOR-SMD

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## 5. MAIN Electrical Parts List

2703-005505	L8000	INDUCTOR-SMD
2703-005555	L3017,L3018	INDUCTOR-SMD
2703-005581	L5007	INDUCTOR-SMD
2703-005731	L7009	INDUCTOR-SMD
2703-005738	L5019	INDUCTOR-SMD
2801-005506	OSC5000	CRYSTAL-UNIT
2901-001690	C4091	FILTER-EMI SMD
2903-001576	F3000	FILTER-CERAMIC
2904-002134	F1000	FILTER-SAW
2904-002198	F2006	FILTER-SAW
2904-002253	F1009,F2002	FILTER-SAW
2904-002350	F2003	FILTER-SAW
2904-002355	F3002,F3003	FILTER-SAW
2904-002390	F3009	FILTER-SAW
2904-002397	F2004,F2005	FILTER-SAW
2910-000390	F2008	FILTER
2911-000435	U2002	FILTER
2911-000452	U1009	FILTER
3003-001237	MIC8000	MIC-CONDENSOR
3301-001534	L8002,L8003	CORE-FERRITE BEAD
3301-001885	L8019	CORE-FERRITE BEAD
3301-002085	L8001,L8005	CORE-FERRITE BEAD
3301-002122	L8020,L8021	CORE-FERRITE BEAD
3301-002223	L7000,L7002,U18194	CORE-FERRITE BEAD
3301-002223	U18195	CORE-FERRITE BEAD
3301-002235	L8012	CORE-FERRITE BEAD
3301-002237	L1000,L8004	CORE-FERRITE BEAD
3301-002238	L3011,L3012,L5001	CORE-FERRITE BEAD
3301-002312	L7005,L7008,L7010	CORE-FERRITE BEAD
3301-002356	L8007,L8008	CORE-FERRITE BEAD
3705-001708	RFS1001	CONNECTOR-COAXIAL
3705-001937	RFS1000	CONNECTOR-COAXIAL
3709-001932	SIM4UP	CONNECTOR-CARD EDGE
3709-001933	SIM1	CONNECTOR-CARD EDGE
3709-001934	SIM2,SIM3	CONNECTOR-CARD EDGE
3710-003871	SOC7004	CONNECTOR-SOCKET
3710-004027	SOC7003	CONNECTOR-SOCKET
3710-004285	HDC6000	CONNECTOR-SOCKET
3711-007107	HDC7003	CONNECTOR-HEADER

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3711-008511	HDC7001	CONNECTOR-HEADER
3711-008847	HDC5000	CONNECTOR-HEADER
3712-001604	ANT1005,ANT2000	CONNECTOR
3712-001604	ANT2001,ANT2002	CONNECTOR
3712-001604	ANT3002,ANT3011	CONNECTOR
3712-001621	ANT3003,ANT3004	CONNECTOR
3712-001621	ANT3006,ANT3007	CONNECTOR
3712-001626	ANT1000,ANT1001	CONNECTOR
3712-001626	ANT1002,ANT1003	CONNECTOR
3712-001626	ANT1004,ANT3000	CONNECTOR
3712-001626	ANT3010	CONNECTOR
3712-001633	ANT8100,ANT8101	CONNECTOR
3712-001666	ANT8000,ANT8001	CONNECTOR
4709-002196	F2001	RF-MODULE
4709-002226	F1004	RF-MODULE
4709-002285	F3001	RF-MODULE
4709-002484	F2000	RF-MODULE
4709-002589	F1002,F1005	RF-MODULE
GH62-00042A	GAS6000	PAD GAP-SMD GASKET
GH63-17099A	SC6001	SHIELDCAN
GH63-17100A	SC6002	SHIELDCAN
GH63-17866A	SC6003	SHIELDCAN
GH63-17867A	SC6004	SHIELDCAN
GH63-17868A	SC6005	SHIELDCAN
GH61-15034A	SUS6000	SUS PLATE
GH61-15043A	SUS6001	SUS PLATE
GH02-19707A	SC6003SP	TAPE-SHIELDCAN-AP
GH02-19708A	SC6004SP	TAPE-SHIELDCAN-PMIC

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

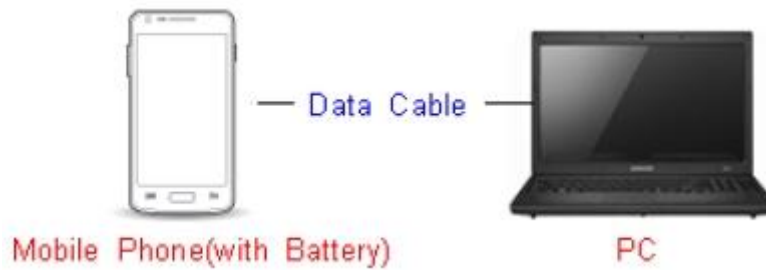
## 6. Level 1 Repair

### 6-1. S/W Update

#### 6-1-1. Preparation

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

#### ※ Settings



**Data Cable : [GH39-02026A](#)**

## 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



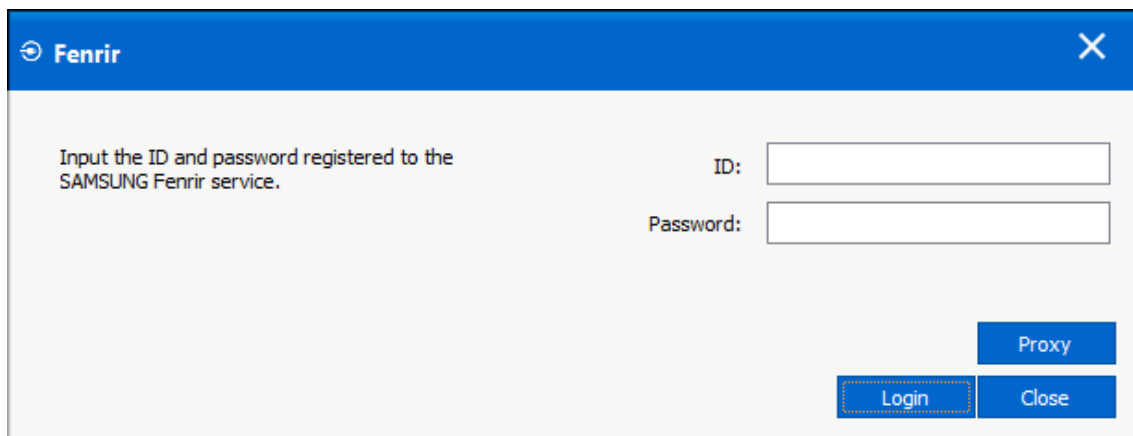
- SVH (Fenrir\_Home) : It uses Home binary which does not have user data area in the memory when flashed to a device. (Keep user data)

- 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

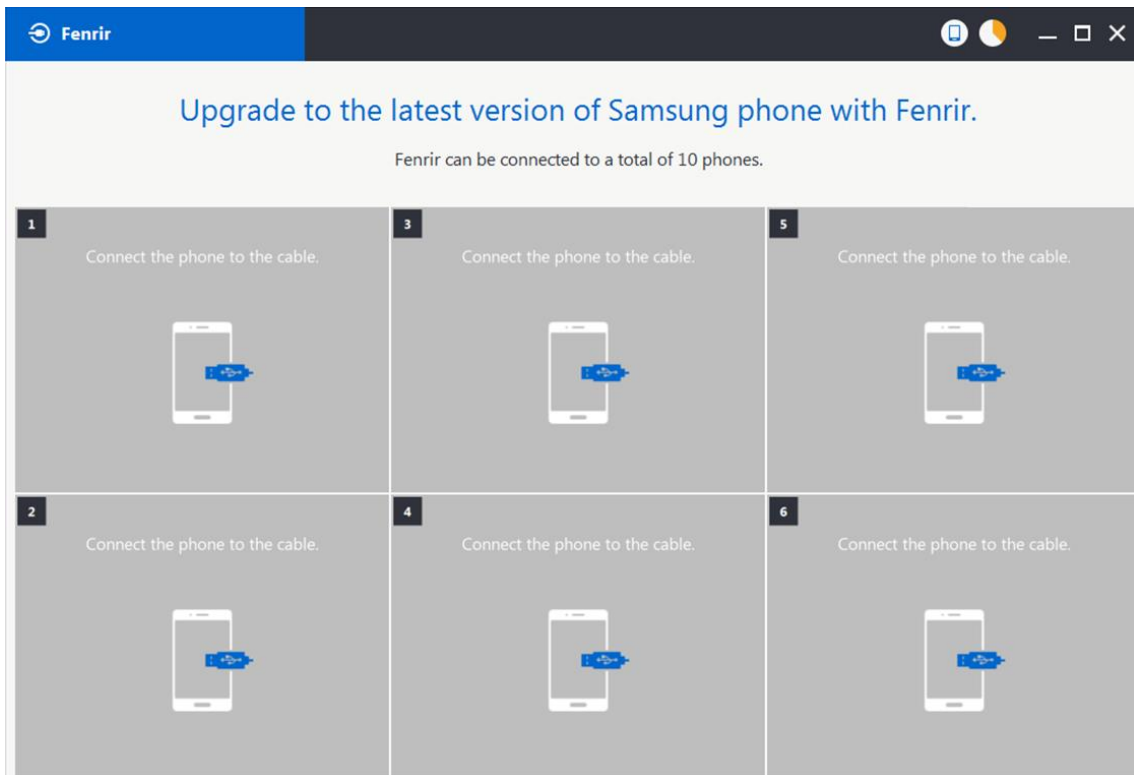
※ You need to reset the ID information in case of PC change and format and repair, hard disk change



The screenshot shows the Fenrir software interface. At the top, there is a blue header with the Fenrir logo and a close button (X). Below the header, the text reads: "Input the ID and password registered to the SAMSUNG Fenrir service." To the right of this text, there are two input fields: "ID:" and "Password:". Below the input fields, there are three buttons: "Proxy", "Login", and "Close". The "Login" button is highlighted with a dashed border.

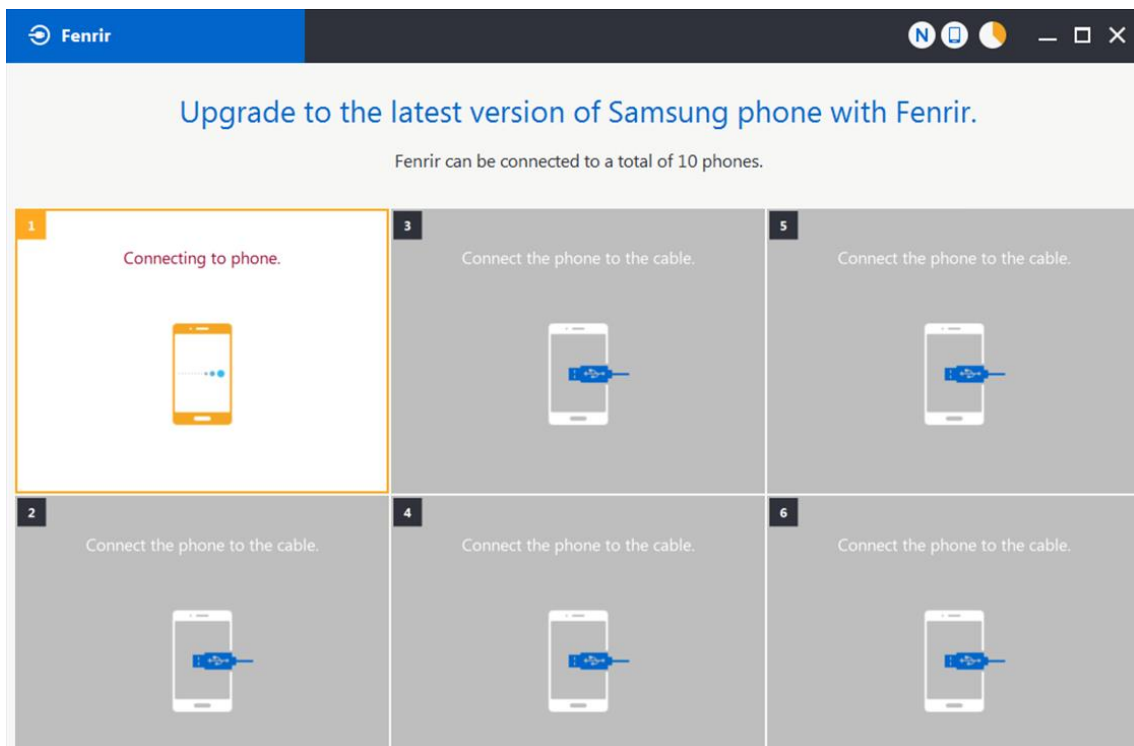
## 6. Level 1 Repair

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



4) Connect the device to PC via data cable.

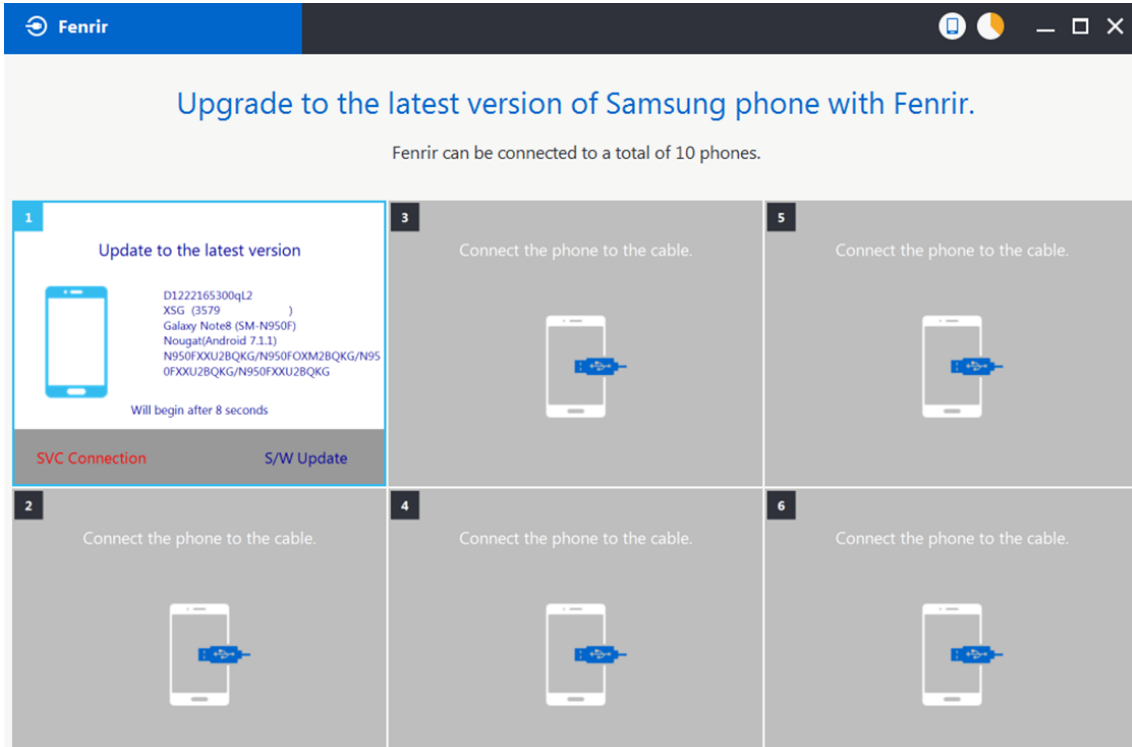
5) Upon USB connection, you will be presented with below screen.



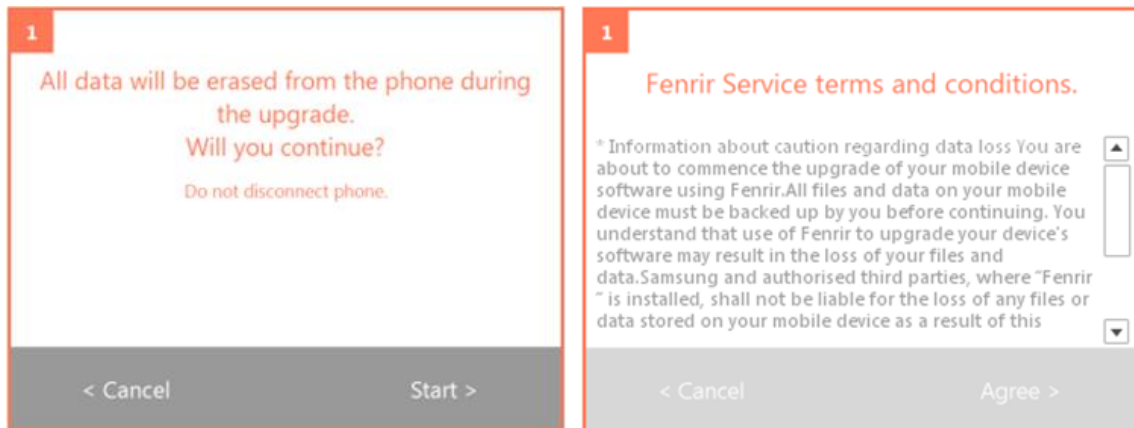


## 6. Level 1 Repair

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)

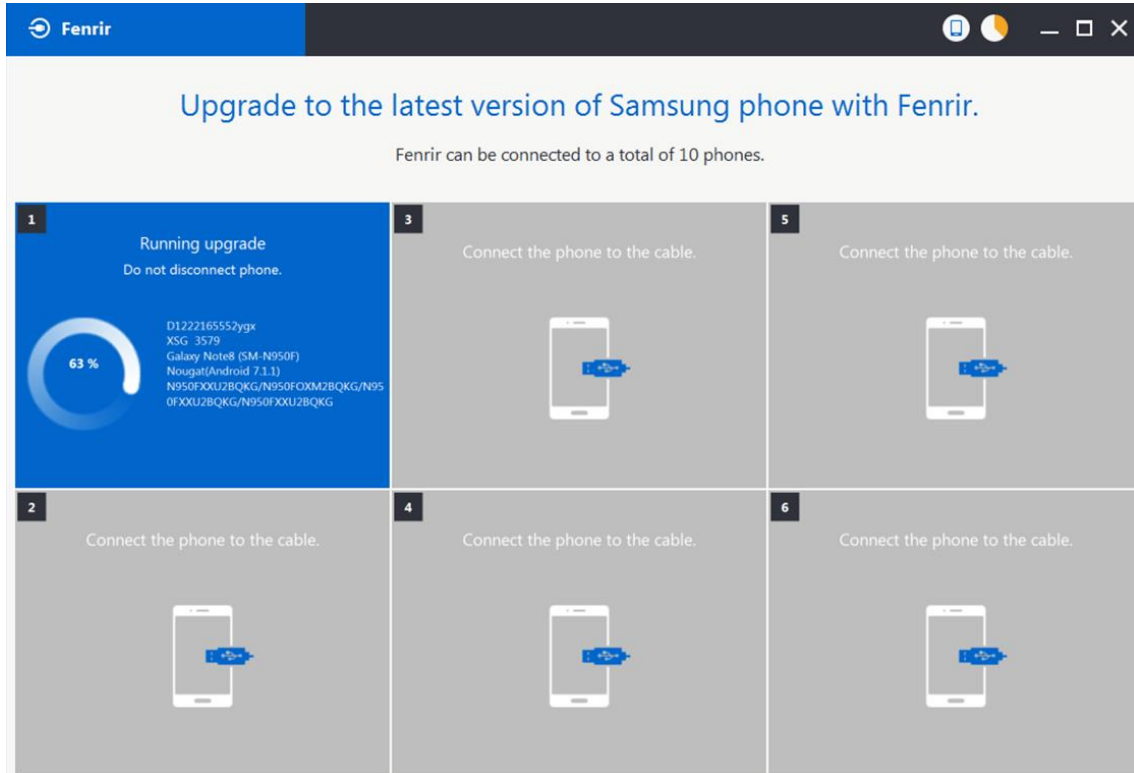


7) Once Fenrir starts, application will display the below screen. And select the Start button & Agree button.

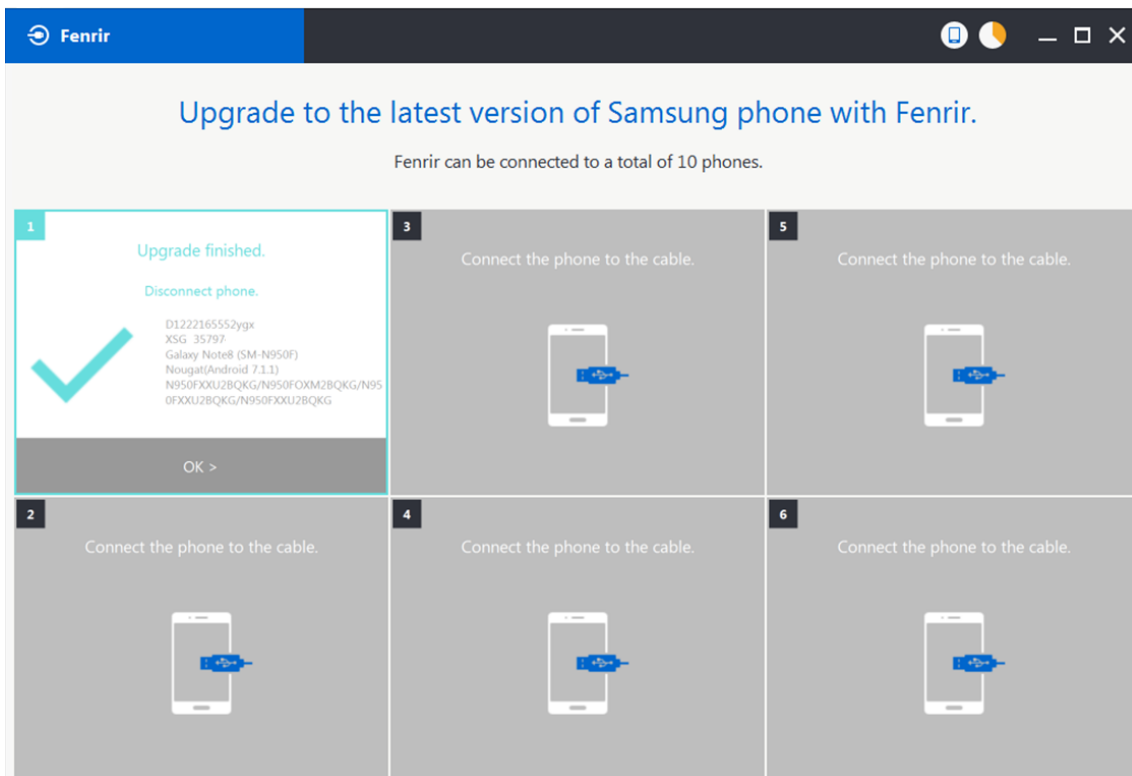


## 6. Level 1 Repair

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

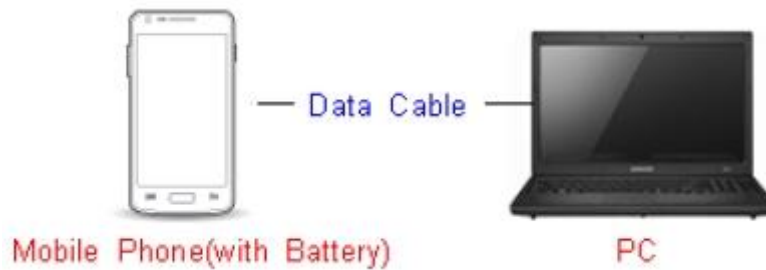
※ S/W Update via Fenrir is mandatory.

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

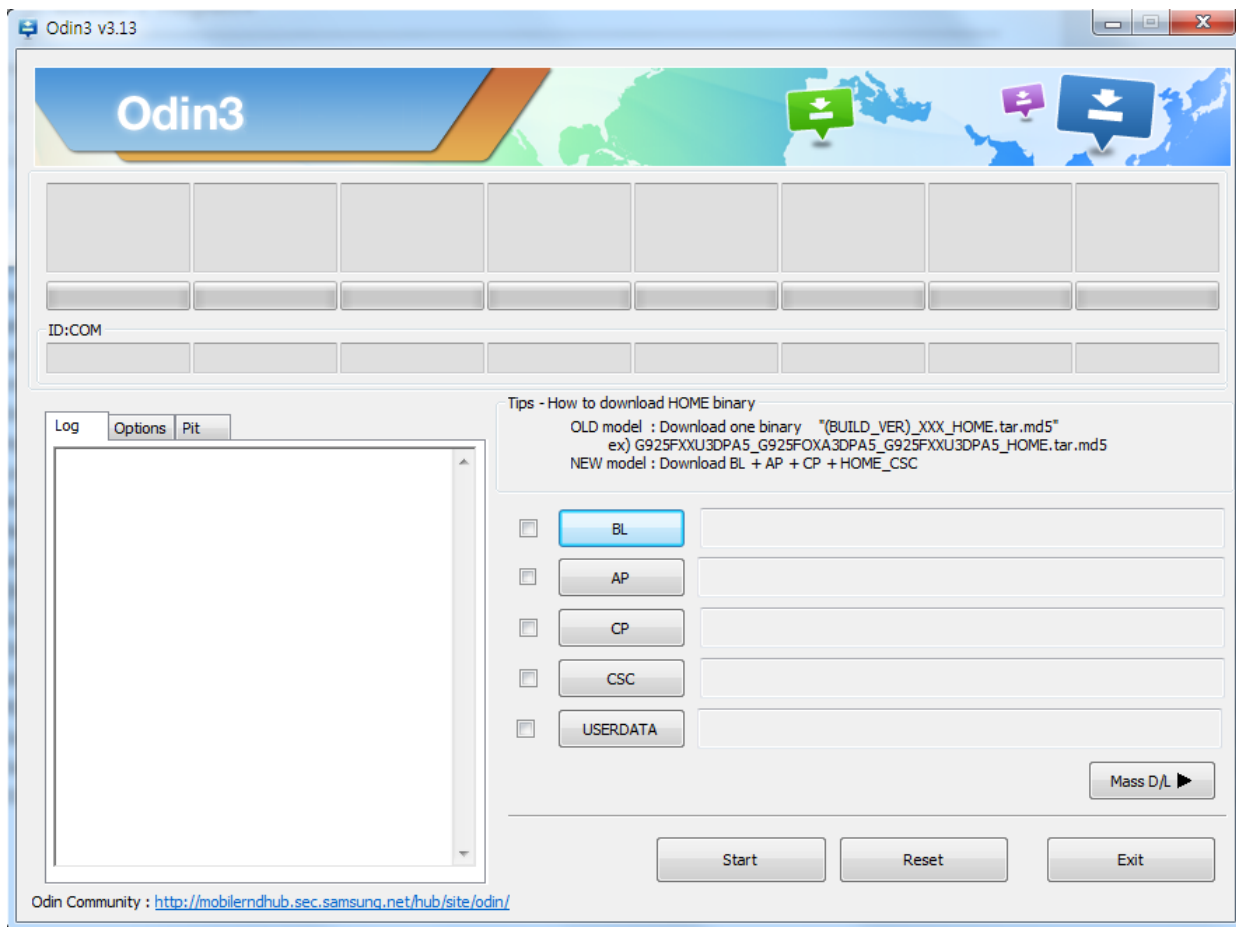


Data Cable : [GH39-02026A](#)

## 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**"

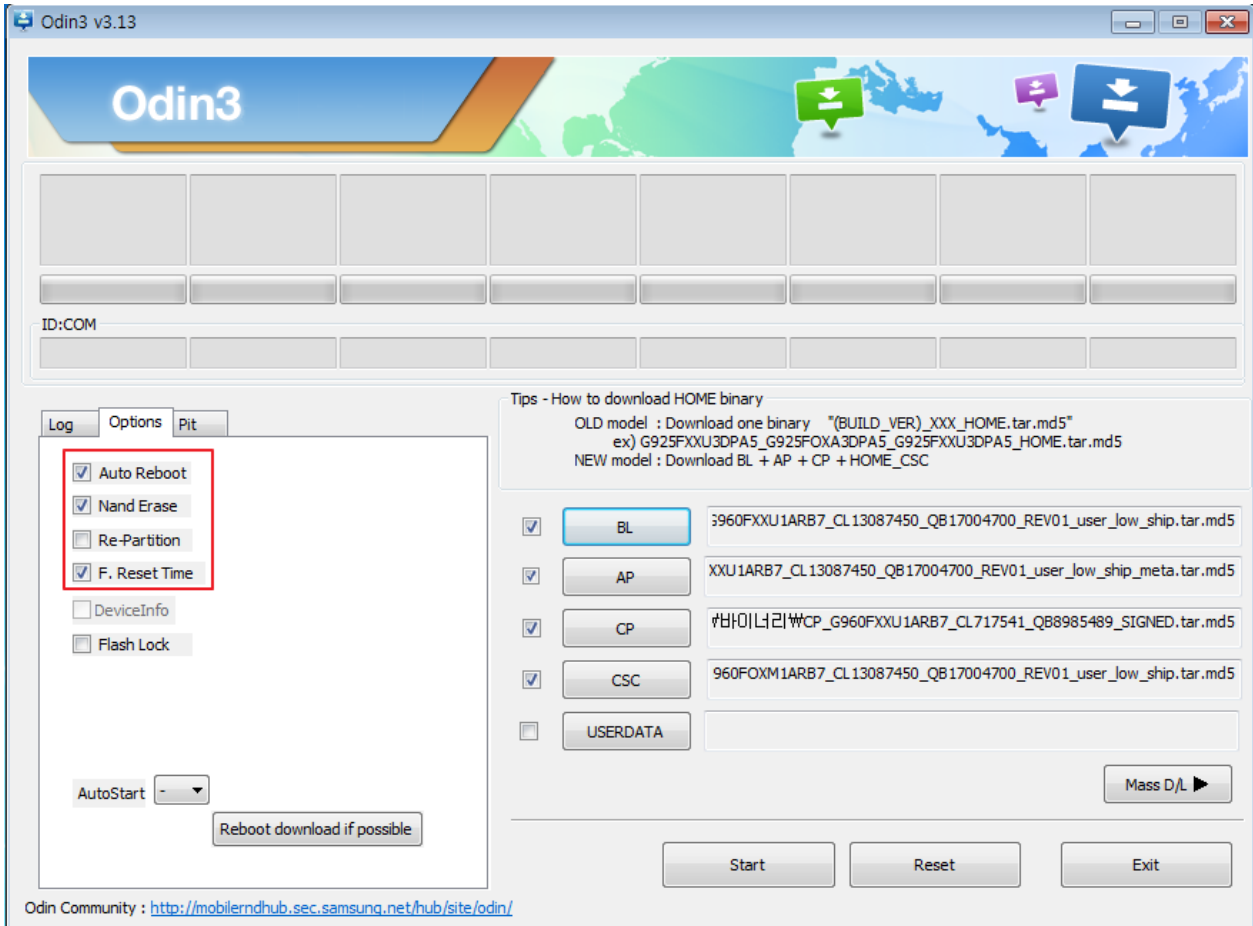


## 6. Level 1 Repair

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

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### 2. Enter into Download Mode

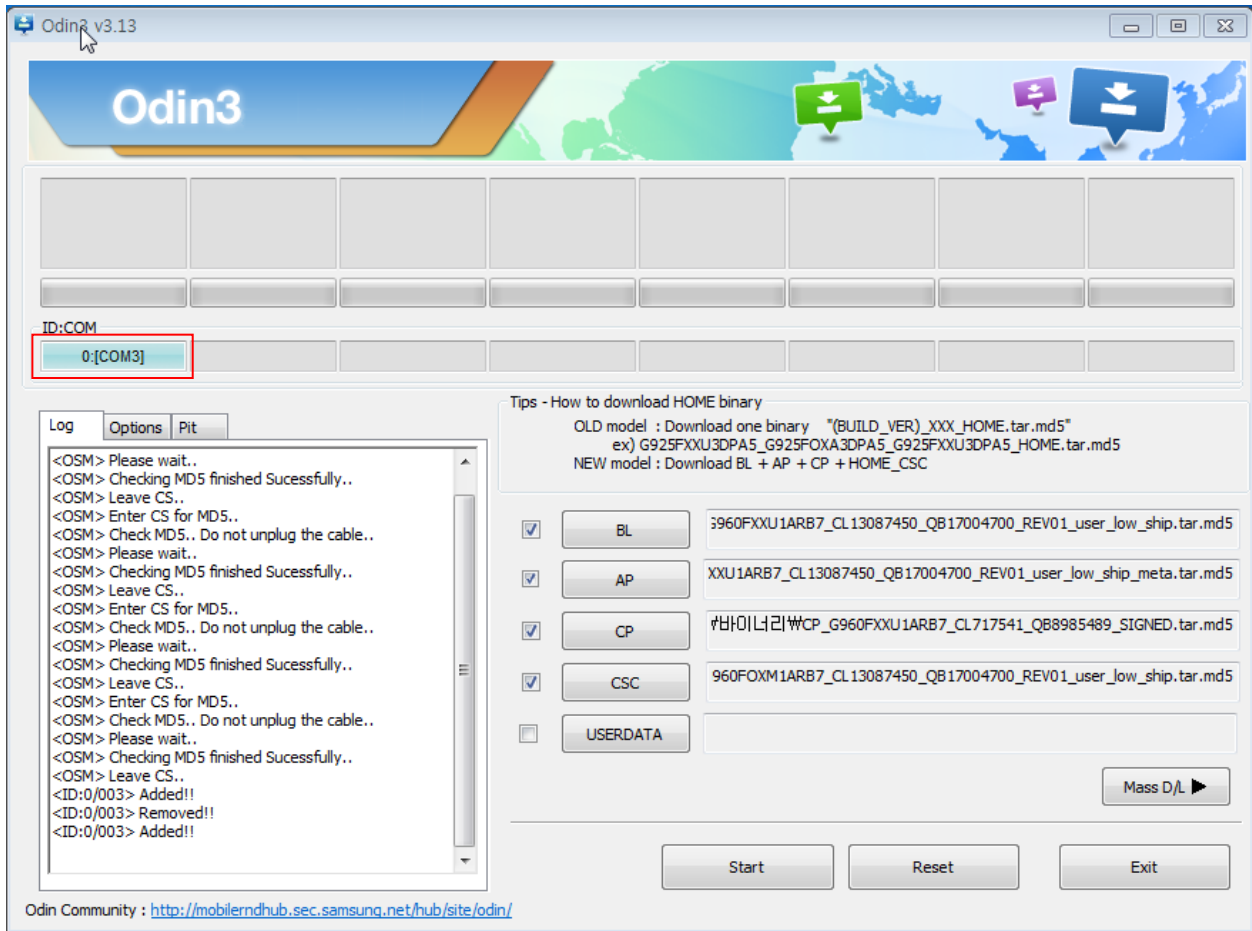
- Enter into Download Mode by pressing Volume Down button, Intelligence button and ON/OFF Button simultaneously followed by pressing Volume up button as a direction of the phone.



## 6. Level 1 Repair

3. Connect the device to PC via Data Cable.

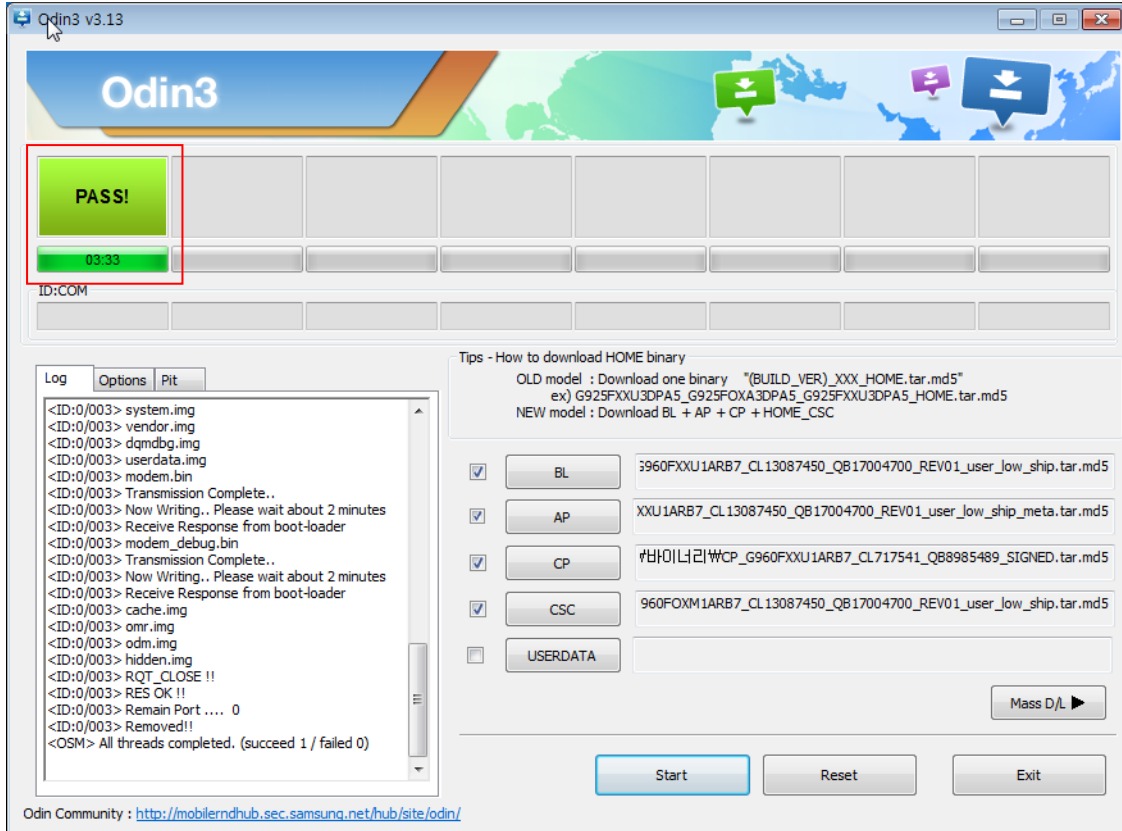
Make sure that the one of communication ports [ID:COM] box is highlighted in sky blue. The device is now connected with the PC and ready to download the binary files in it.



## 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.**



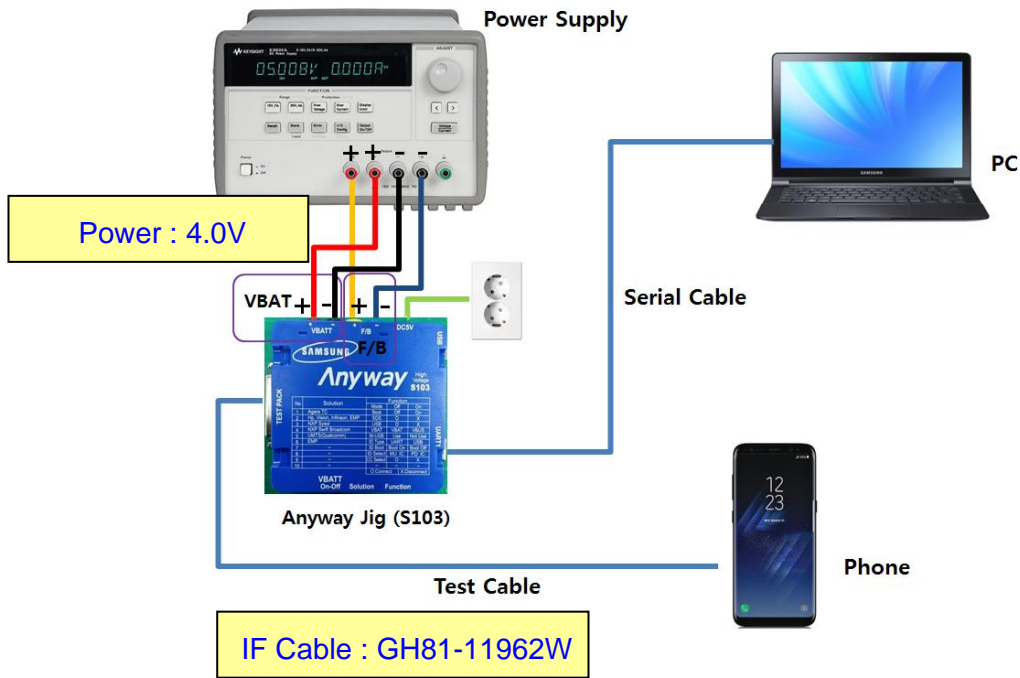
## 6. Level 1 Repair

### 6-3. IMEI writing

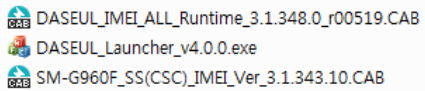
#### 6-3-1. Preparation

- 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



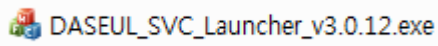
#### - S/W

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	<b>DASEUL_SVC_Launcher_v3.0.12</b> or higher -Uploaded on HHPsvc Notice
③ Runtime File	1. <b>DASEUL_IMEI_ALL_Runtime_3.1.348.0_r00519.CAB</b> or higher -Uploaded on HHPsvc Notice 2. Make 'SM-A205F' folder at the same position with launcher & Runtime file. 
④ Model File	Copy Model File under the 'SM-A205F' folder

## 6. Level 1 Repair

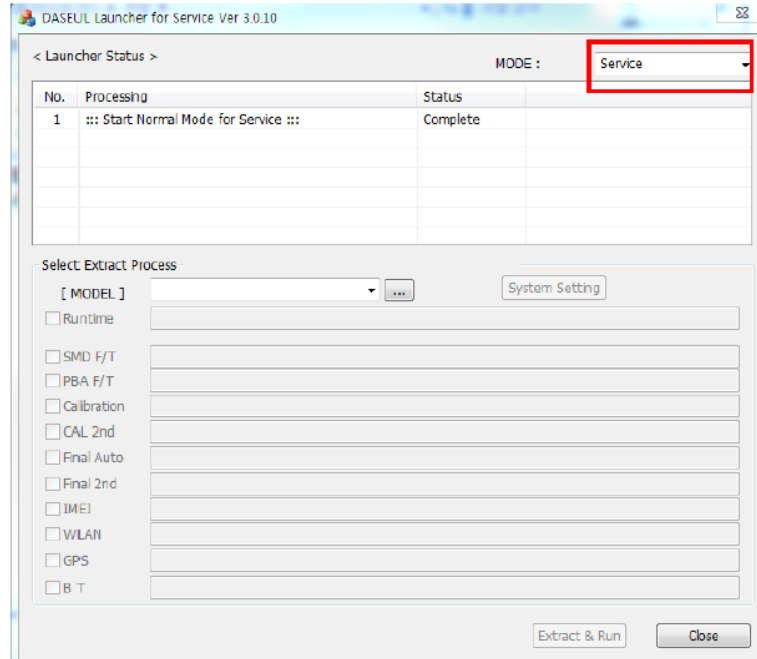
### 6-3-2. IMEI writing Process


1. Run DASEUL\_SVC\_Launcher\_v3.0.12.exe

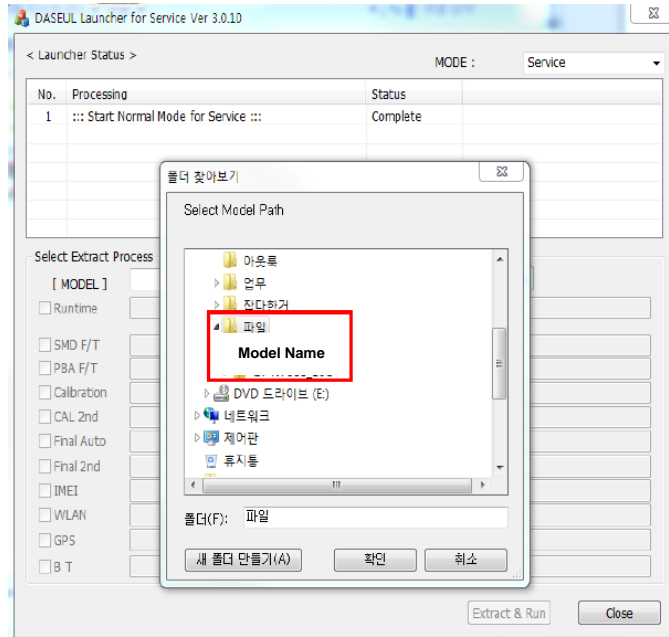


DASEUL\_SVC\_Launcher\_v3.0.12.exe

2. Select Service Mode

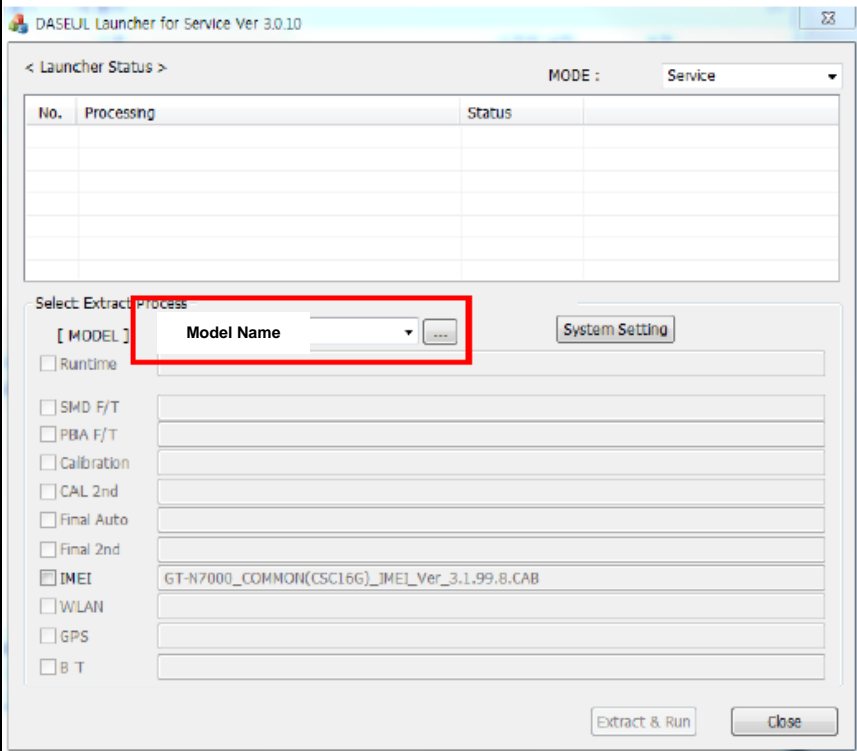


3. Click  and Select folder where the Launcher exists



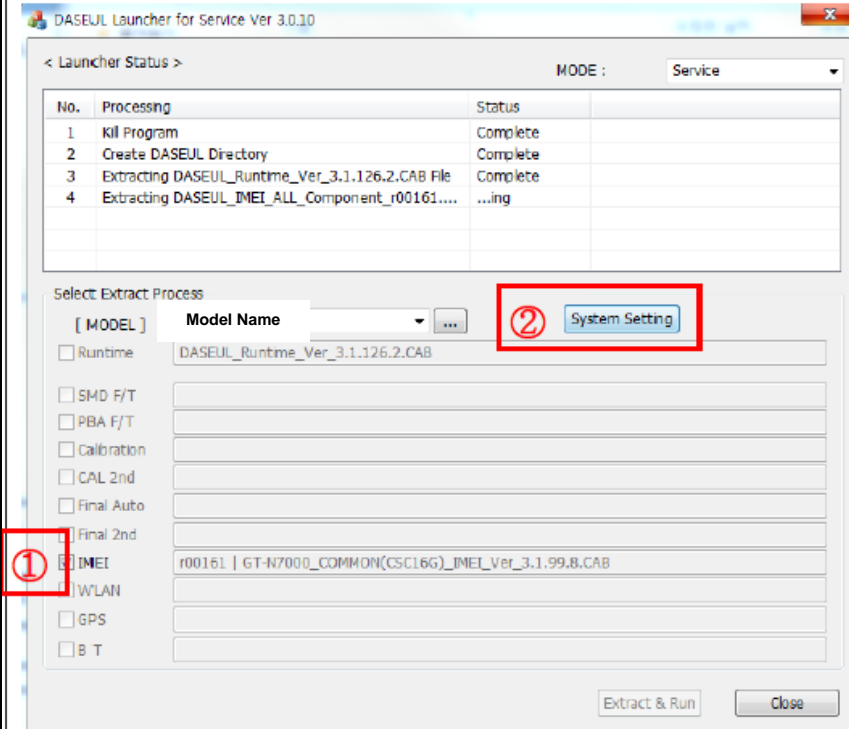
## 6. Level 1 Repair

### 4. Select Model



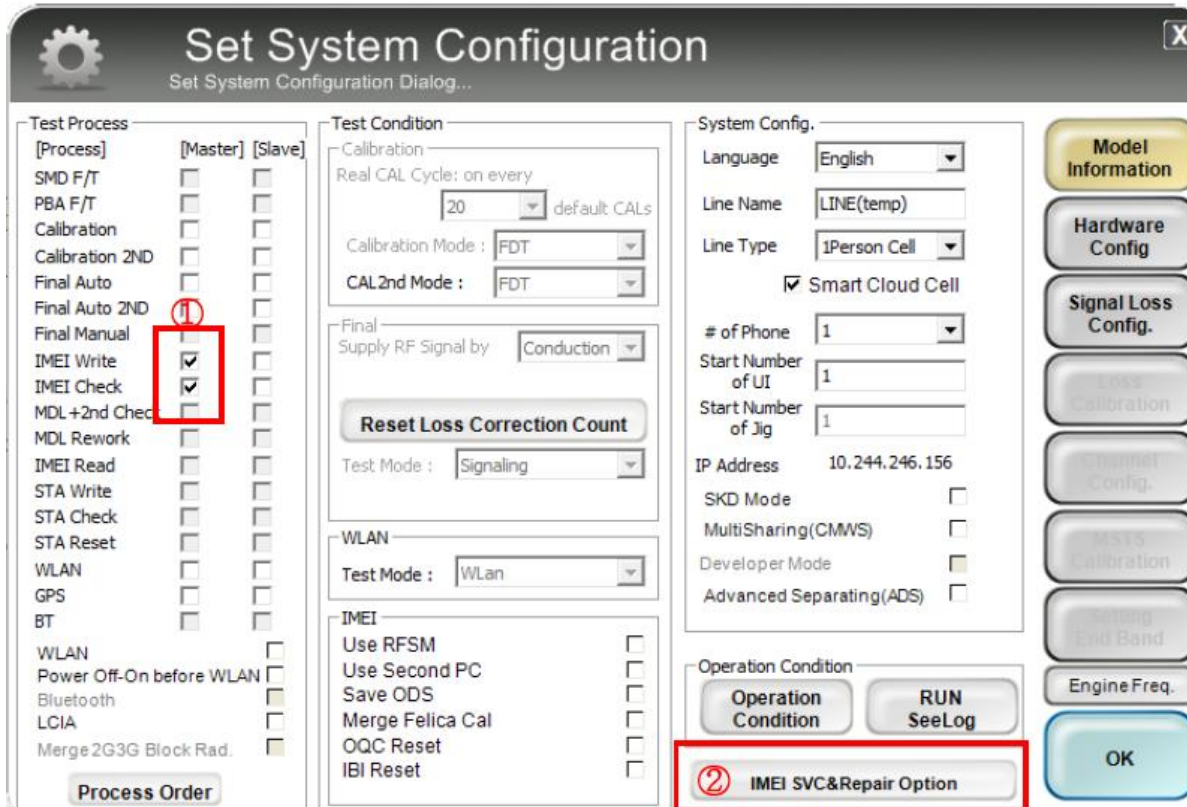
### 5. Check IMEI and click System Setting

※ 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.



**Set System Configuration**  
Set System Configuration Dialog...

**Test Process**

[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"/>

**Test Condition**

Calibration  
Real CAL Cycle: on every  default CALs

Calibration Mode :

CAL2nd Mode :

Final  
Supply RF Signal by :

**Reset Loss Correction Count**

Test Mode :

WLAN  
Test Mode :

IMEI  
Use RFSM   
Use Second PC   
Save ODS   
Merge Felica Cal   
OQC Reset   
IBI Reset

**System Config.**

Language :

Line Name :

Line Type :

Smart Cloud Cell

# of Phone :

Start Number of UI :

Start Number of Jig :

IP Address : 10.244.246.156

SKD Mode

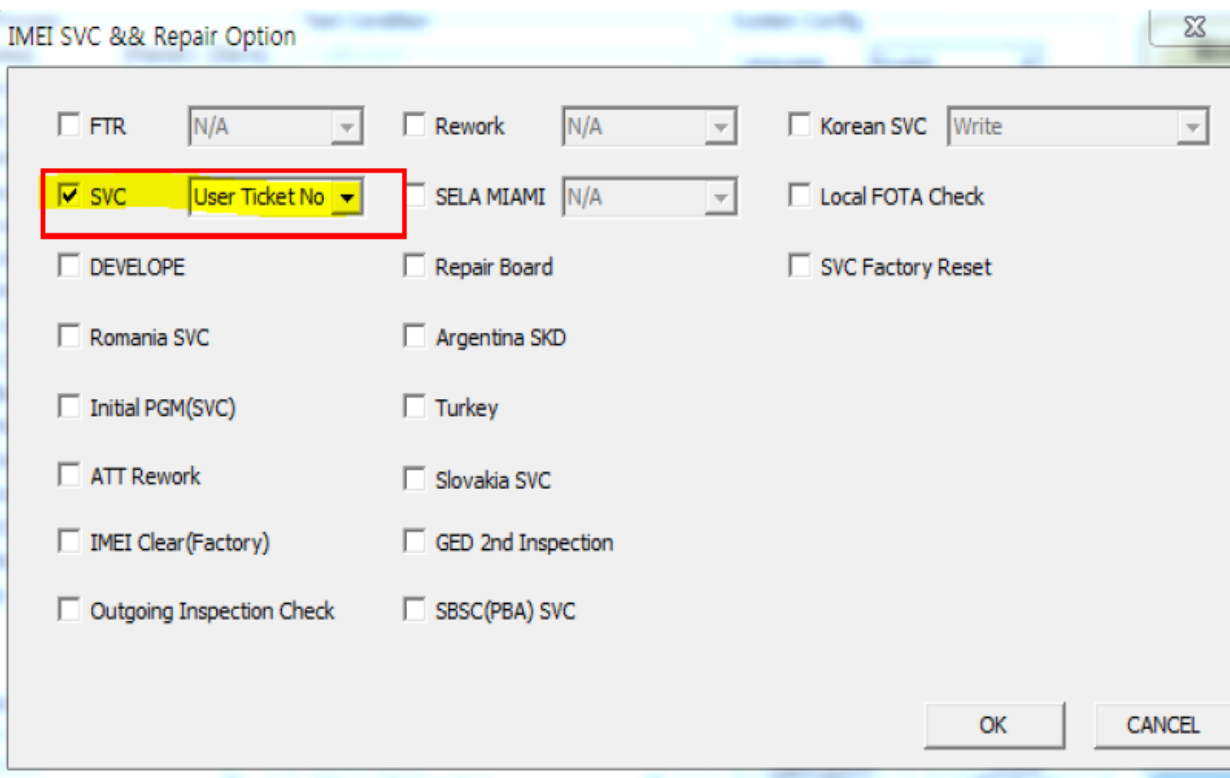
MultiSharing(CMWS)

Developer Mode

Advanced Separating(ADS)

**Operation Condition**

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



**IMEI SVC && Repair Option**

FTR   Rework   Korean SVC

SVC   SELA MIAMI   Local FOTA Check

DEVELOPE  Repair Board  SVC Factory Reset

Romania SVC  Argentina SKD

Initial PGM(SVC)  Turkey

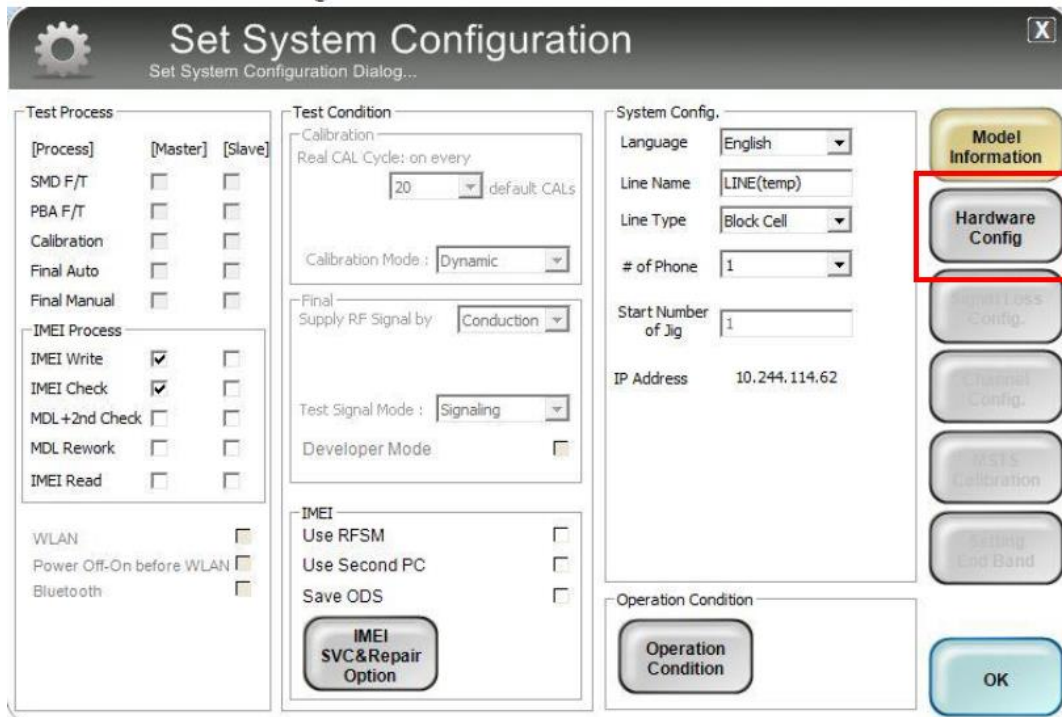
ATT Rework  Slovakia SVC

IMEI Clear(Factory)  GED 2nd Inspection

Outgoing Inspection Check  SBSC(PBA) SVC

## 6. Level 1 Repair

### 8. Click 'Hardware Config'



**Set System Configuration**  
Set System Configuration Dialog...

**Test Process**

[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"/>
Final Auto	<input type="checkbox"/>	<input type="checkbox"/>
Final Manual	<input type="checkbox"/>	<input type="checkbox"/>

**IMEI Process**

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"/>

WLAN   
Power Off-On before WLAN   
Bluetooth

**Test Condition**

Calibration  
Real CAL Cycle: on every  
20 default CALs

Calibration Mode:

Final  
Supply RF Signal by:

Test Signal Mode:

Developer Mode

IMEI  
Use RFSM   
Use Second PC   
Save ODS

**IMEI SVC & Repair Option**

**System Config.**

Language:   
Line Name:   
Line Type:   
# of Phone:   
Start Number of Jig:   
IP Address: 10.244.114.62

**Operation Condition**

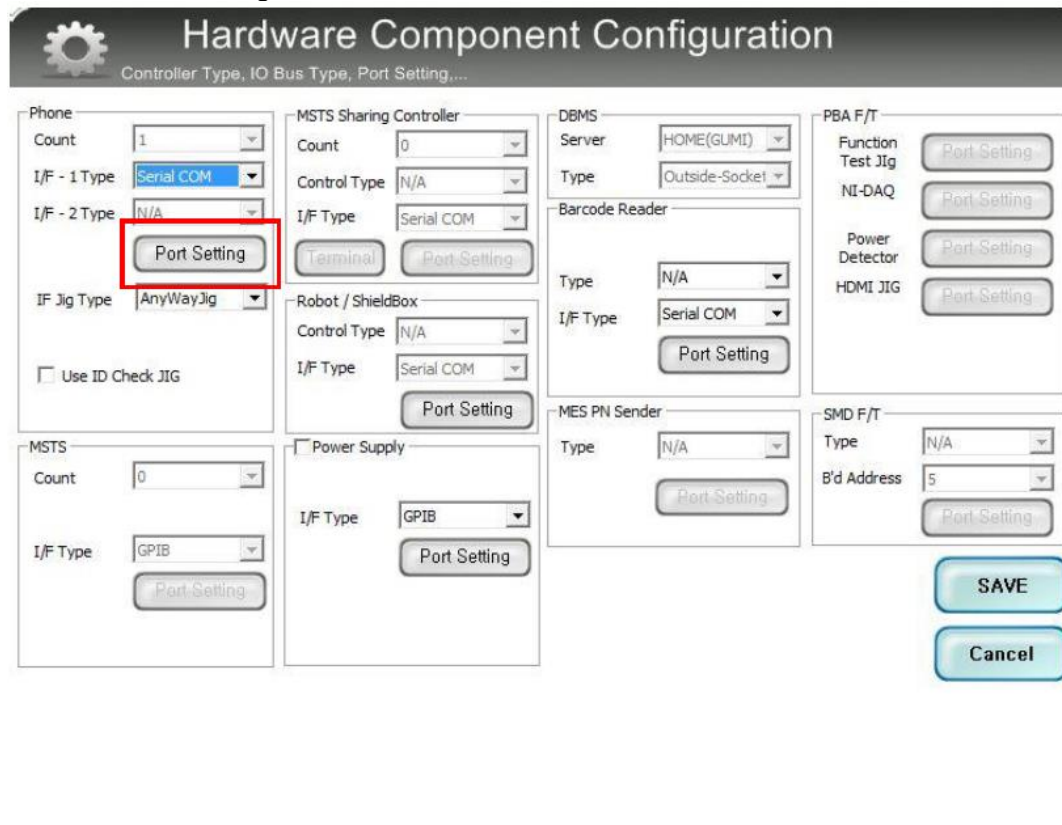
**Model Information**

**Hardware Config**

Signal Loss Config.  
Channel Config.  
MSTS Calibration  
Setting End Band

**OK**

### 9. Click 'Port Setting'



**Hardware Component Configuration**  
Controller Type, IO Bus Type, Port Setting,...

**Phone**

Count:   
I/F - 1 Type:   
I/F - 2 Type:   
IF Jig Type:   
 Use ID Check JIG

**MSTS Sharing Controller**

Count:   
Control Type:   
I/F Type:

**Robot / ShieldBox**

Control Type:   
I/F Type:

Power Supply

I/F Type:

**DBMS**

Server:   
Type:

**Barcode Reader**

Type:   
I/F Type:

**MES PN Sender**

Type:

**PBA F/T**

Function Test Jig   
NI-DAQ   
Power Detector   
HDMI JIG

**SMD F/T**

Type:   
B'd Address:

**MSTS**

Count:   
I/F Type:

**SAVE**

**Cancel**

## 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

Power Lines Config

Network Config

WLAN Calibration

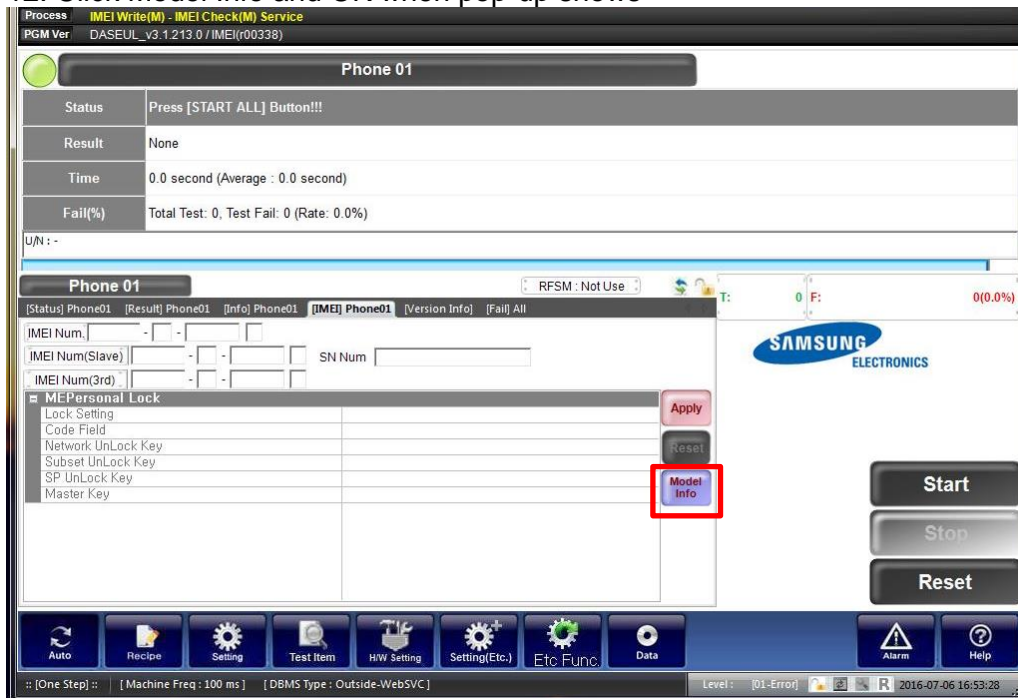
Setting Band

OK



## 6. Level 1 Repair

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



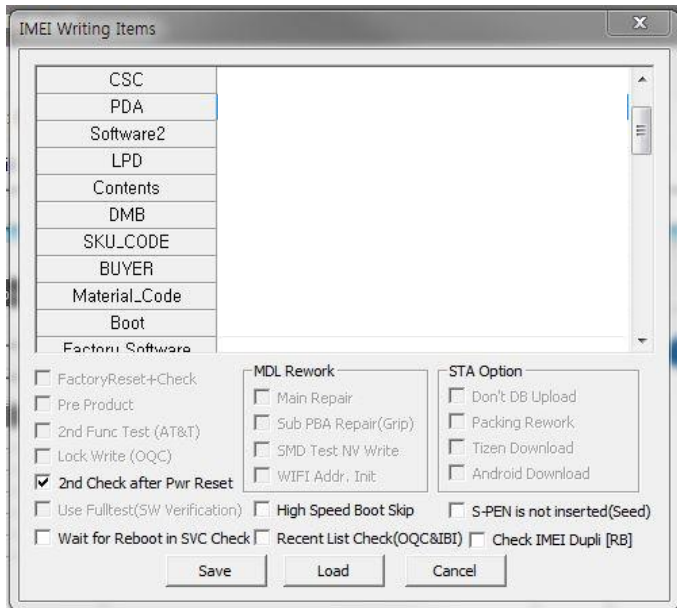
### 13. Click OK



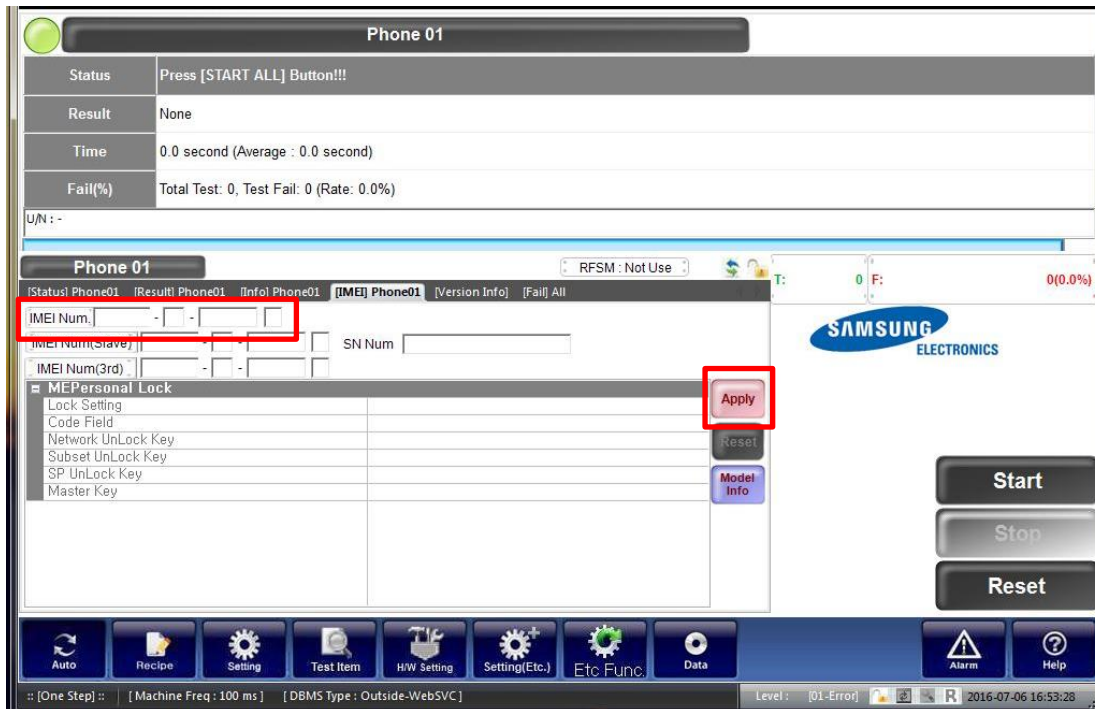
## 6. Level 1 Repair

14. Input SKU\_CODE and BUYER, then click Save button.

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



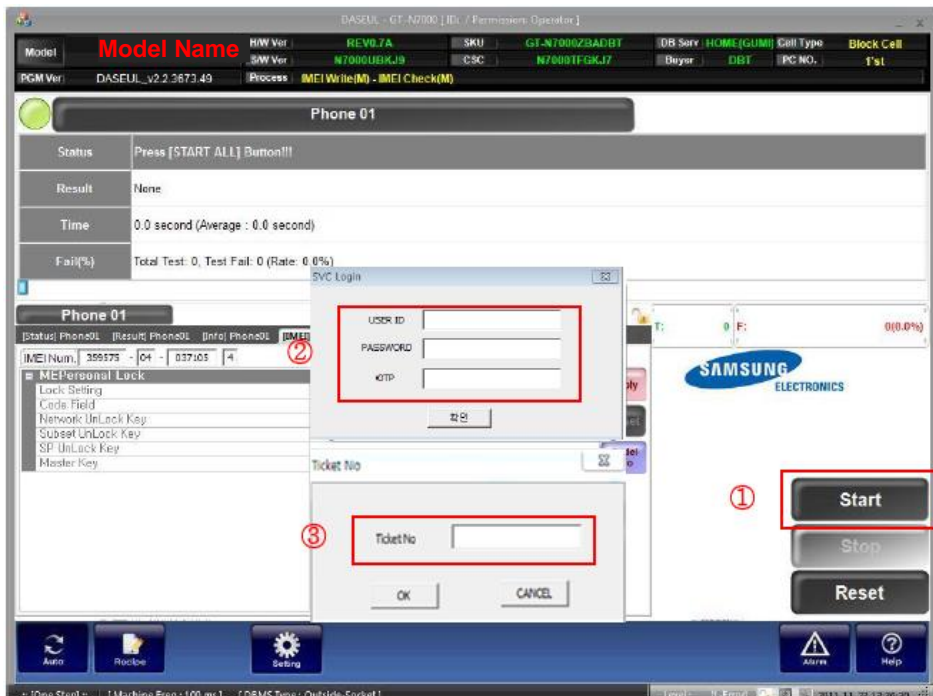
15. Input IMEI Number and click Apply





## 6. Level 1 Repair

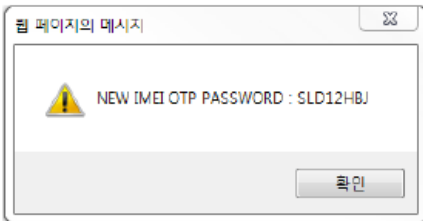
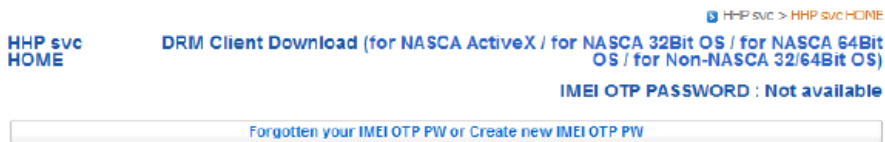
16. ① Click Start → ② Input IMEI writing ID and Password & OTP → ③ Input Ticket No



※ 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

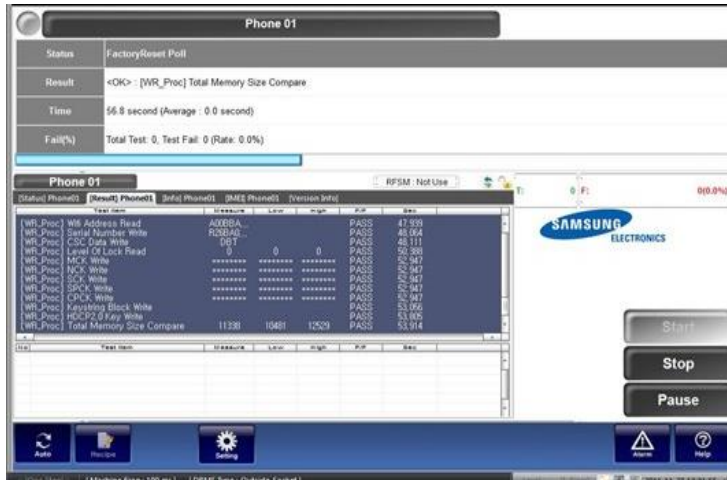


## 6. Level 1 Repair

### 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



Phone 01

Status: FactoryReset Poll

Result: <OK> - [WR\_Proc] Total Memory Size Compare

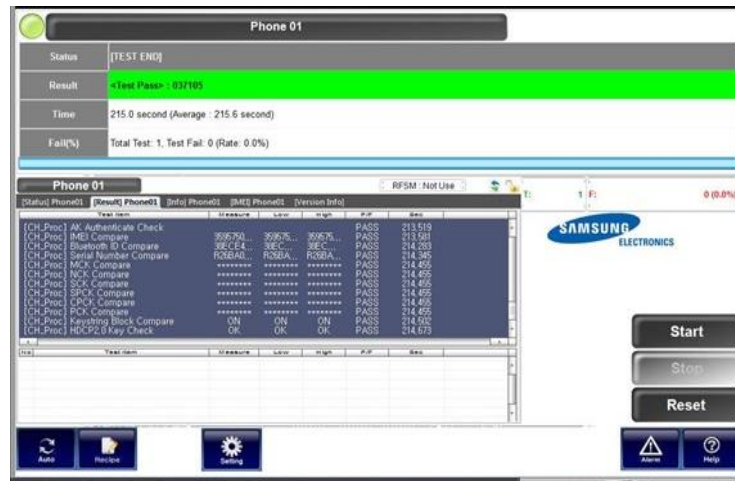
Time: 56.8 second (Average : 0.0 second)

Fail(%): Total Test: 0, Test Fail: 0 (Rate: 0.0%)

Test Item	Measure	Low	High	Pass	Fail
[WR_Proc] MR Address Read	ADDRESS			PASS	47,939
[WR_Proc] Serial Number Write	ROBIA0			PASS	48,964
[WR_Proc] CSC Data Write	DET	0	0	PASS	48,111
[WR_Proc] Level 0 Lock Read				PASS	58,389
[WR_Proc] MCK Write	*****	*****	*****	PASS	50,947
[WR_Proc] MCK Compare	*****	*****	*****	PASS	52,947
[WR_Proc] SCK Write	*****	*****	*****	PASS	52,947
[WR_Proc] SCK Compare	*****	*****	*****	PASS	52,947
[WR_Proc] CPCK Write	*****	*****	*****	PASS	50,947
[WR_Proc] Keystrng Block Write				PASS	53,096
[WR_Proc] HDCP2 ID Key Write				PASS	53,105
[WR_Proc] Total Memory Size Compare	11381	10481	12509	PASS	53,914

Buttons: Start, Stop, Pause

### 19. IMEI Writing Success



Phone 01

Status: [TEST END]

Result: <Test Pass> - 037105

Time: 215.0 second (Average : 215.6 second)

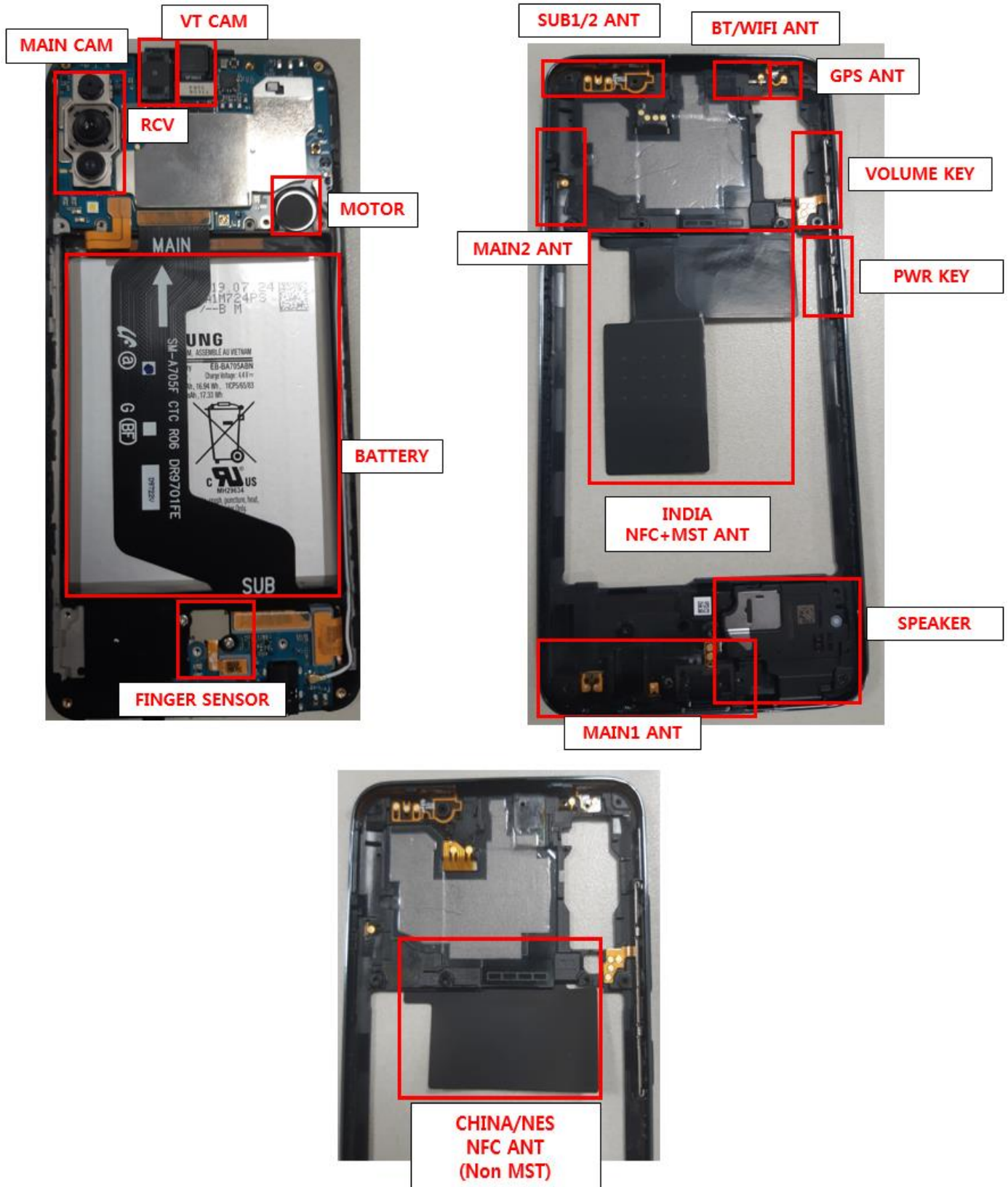
Fail(%): Total Test: 1, Test Fail: 0 (Rate: 0.0%)

Test Item	Measure	Low	High	Pass	Fail
[CH_Proc] AK Authenticate Check	309F70	309F70	309F70	PASS	213,519
[CH_Proc] IMEI Compare	30E1E4	30E1E4	30E1E4	PASS	213,581
[CH_Proc] Bluetooth ID Compare	30E1E4	30E1E4	30E1E4	PASS	214,263
[CH_Proc] Serial Number Compare	ROBIA0	ROBIA	ROBIA	PASS	214,365
[CH_Proc] MCK Compare	*****	*****	*****	PASS	214,455
[CH_Proc] NCK Compare	*****	*****	*****	PASS	214,455
[CH_Proc] SCK Compare	*****	*****	*****	PASS	214,455
[CH_Proc] CPCK Compare	*****	*****	*****	PASS	214,455
[CH_Proc] NCK Compare	*****	*****	*****	PASS	214,455
[CH_Proc] Keystrng Block Compare	ON	ON	ON	PASS	214,502
[CH_Proc] HDCP2 ID Key Check	OK	OK	OK	PASS	214,673

Buttons: Start, Stop, Reset

## 7. Level 2 Repair

### 7-1. Components on the Rear Case



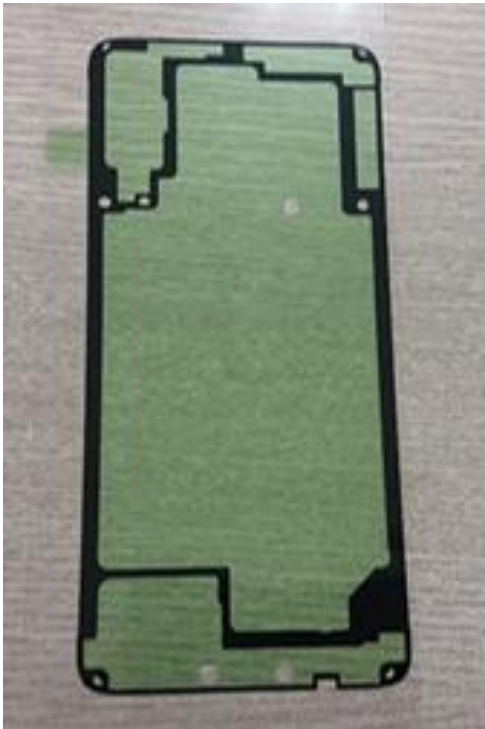
## 7. Level 2 Repair

### 7-2. Pre-requisite

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

## 7. Level 2 Repair

### 7-3. Parts which must be changed after repair

BOM description & part code	Image	Remarks
<p>Backglass Outside tape [GH81-16831A]</p>		<p>Left items must be changed to the new one in case of disassemble the Back glass</p>



## 7. Level 2 Repair

### 7-4. Disassembly

1

- 1) Put the device in the AOD jig.  
Set the AOD condition.
  - SOC 68%↓: Upper 70°C/ Lower 60°C 5min
  - SOC 68%↑: Upper 60°C/ Lower 60°C 5min
- 2) Disassemble the OCTA using the AOD.



2

- Disassemble SIM Tray from device.  
Unscrew 14Points.



※ Caution

Be careful not to damage set and OCTA.

※ Caution

Be care of scratch and molding damage.

3

- Disassemble the REAR from Front Assy.



※ Caution

Be care of damage to components.

4

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



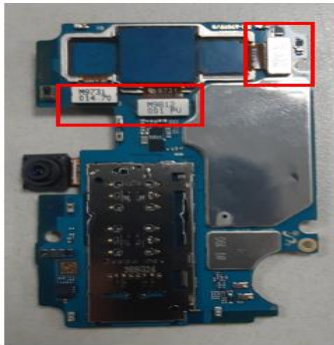
※ Caution

Be care of not to damage PBA.

## 7. Level 2 Repair

5

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



6

- Detach RCV from Front Ass'y.



※ Caution

Be careful not to damage the PBA.

※ Caution

Be careful not to damage the RCV.

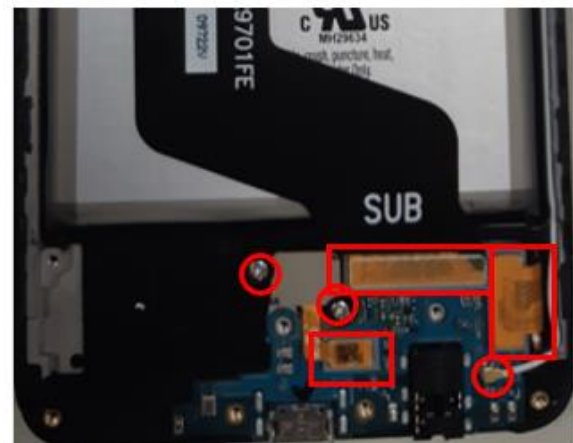
7

- Detach Motor from Front Ass'y.



8

- Remove FPCB 3ea and fix screw 2ea+ RF Cable 1ea.



※ Caution

Be careful not to damage the Motor.

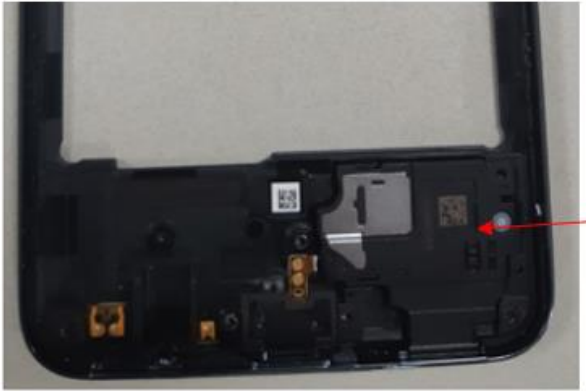
※ Caution

Be careful not to damage the Sub PBA and connector.

## 7. Level 2 Repair

9

Detach SPK from Rear Ass'y



※ Caution

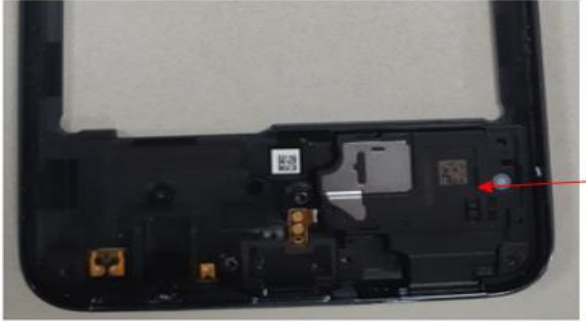


## 7. Level 2 Repair

### 7-5. Assembly

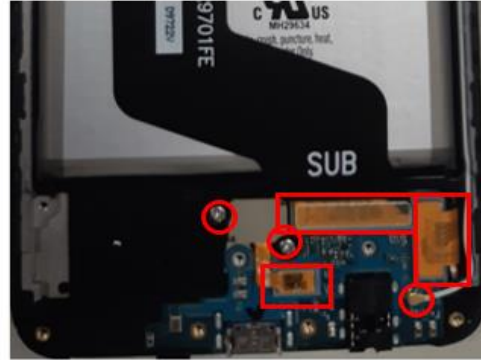
1

Attach SPK on Rear Ass'y.



2

Attach Sub PBA on Front Ass'y.  
Joint FPCB 3ea and fix screw 2ea RF Cable 1ea.



Screw insertion 2 Point.  
\* Torque Value : 0.95 ±7%

※ **Caution**  
Be care of SPK damage.

※ **Caution**  
Be care of Sub PBA damage.

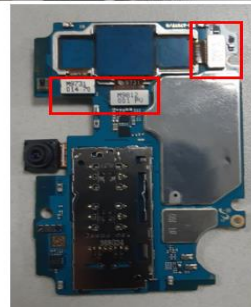
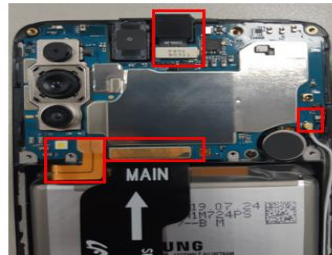
3

Attach Motor and Receiver in upper area.



4

Assemble the PBA and C to C FPCB 1ea and  
Batt Conn and COAXIAL CABLE, camera  
And VT Camera.



※ **Caution**  
1) Be care of scratch CAM lens.  
2) Be care of damage each part.

※ **Caution**  
Check for each connector connection.

## 7. Level 2 Repair

5

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



6

Assemble Rear and screw insertion 14 point.  
\* Torque Value :  $1.25 \pm 10\%$

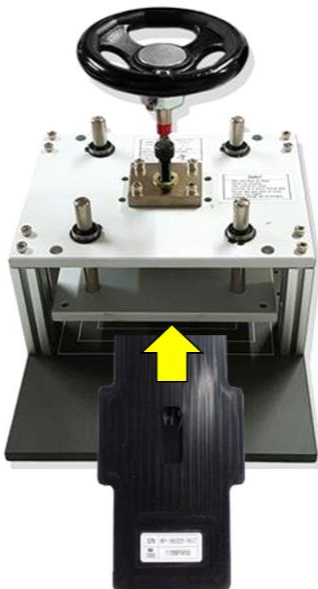


※ Caution  
Be care of PBA damage.

※ Caution  
Be care of PBA damage.

7

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

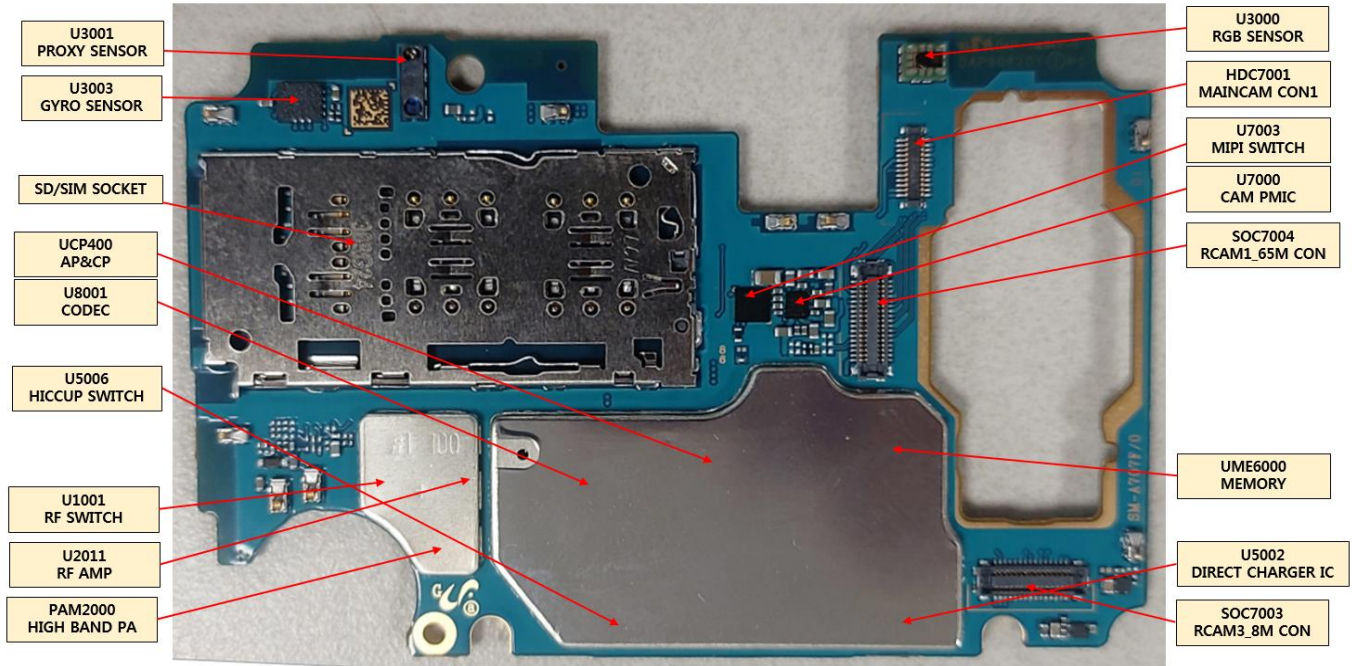


※ Caution  
Be care of scratch Rear cover.

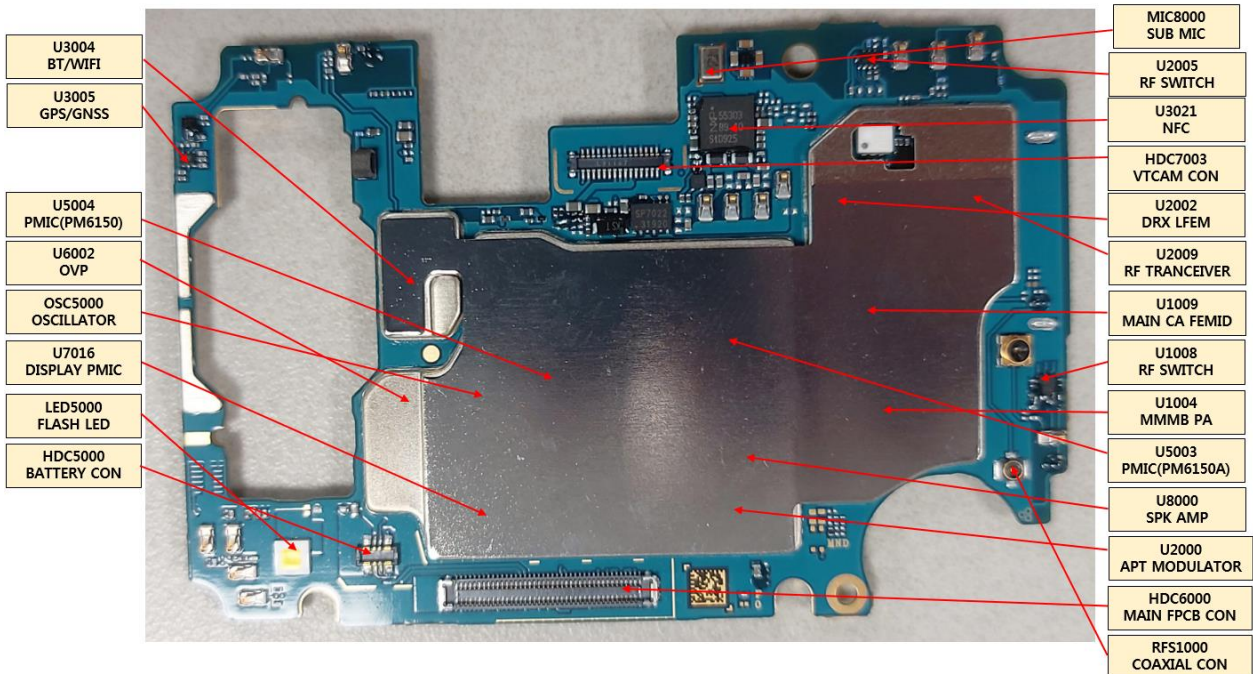
# 8. Level 3 Repair

## 8-1. Components Layout

MAIN PBA (TOP SIDE)



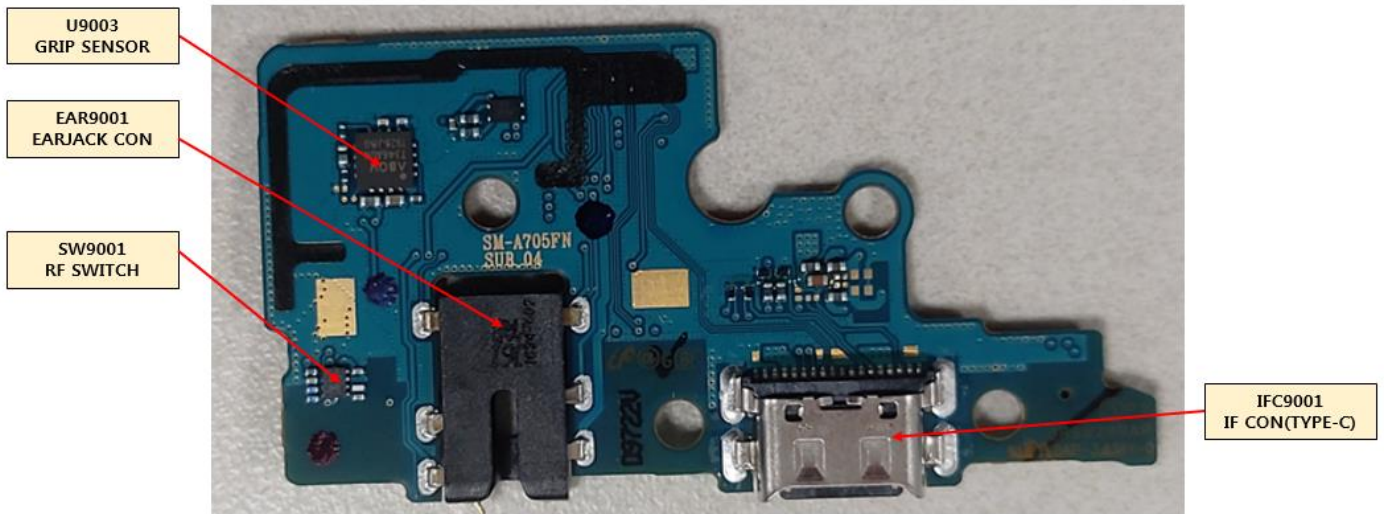
MAIN PBA (BOTTOM SIDE)



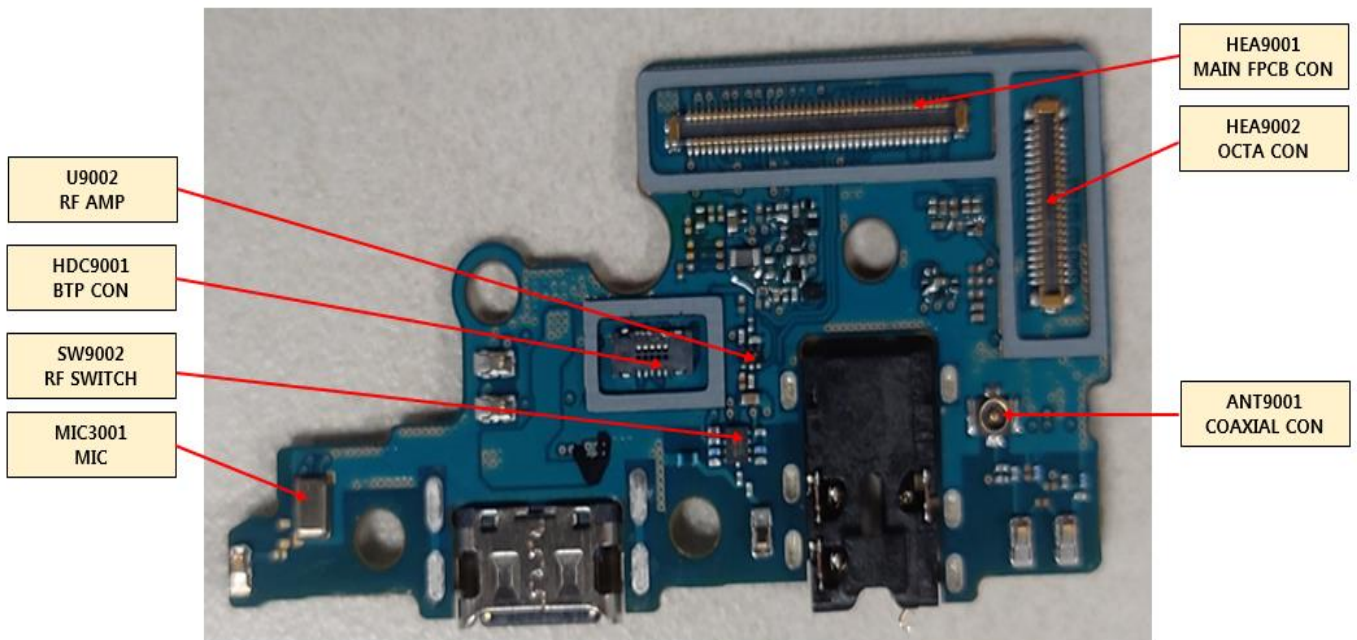


## 8. Level 3 Repair

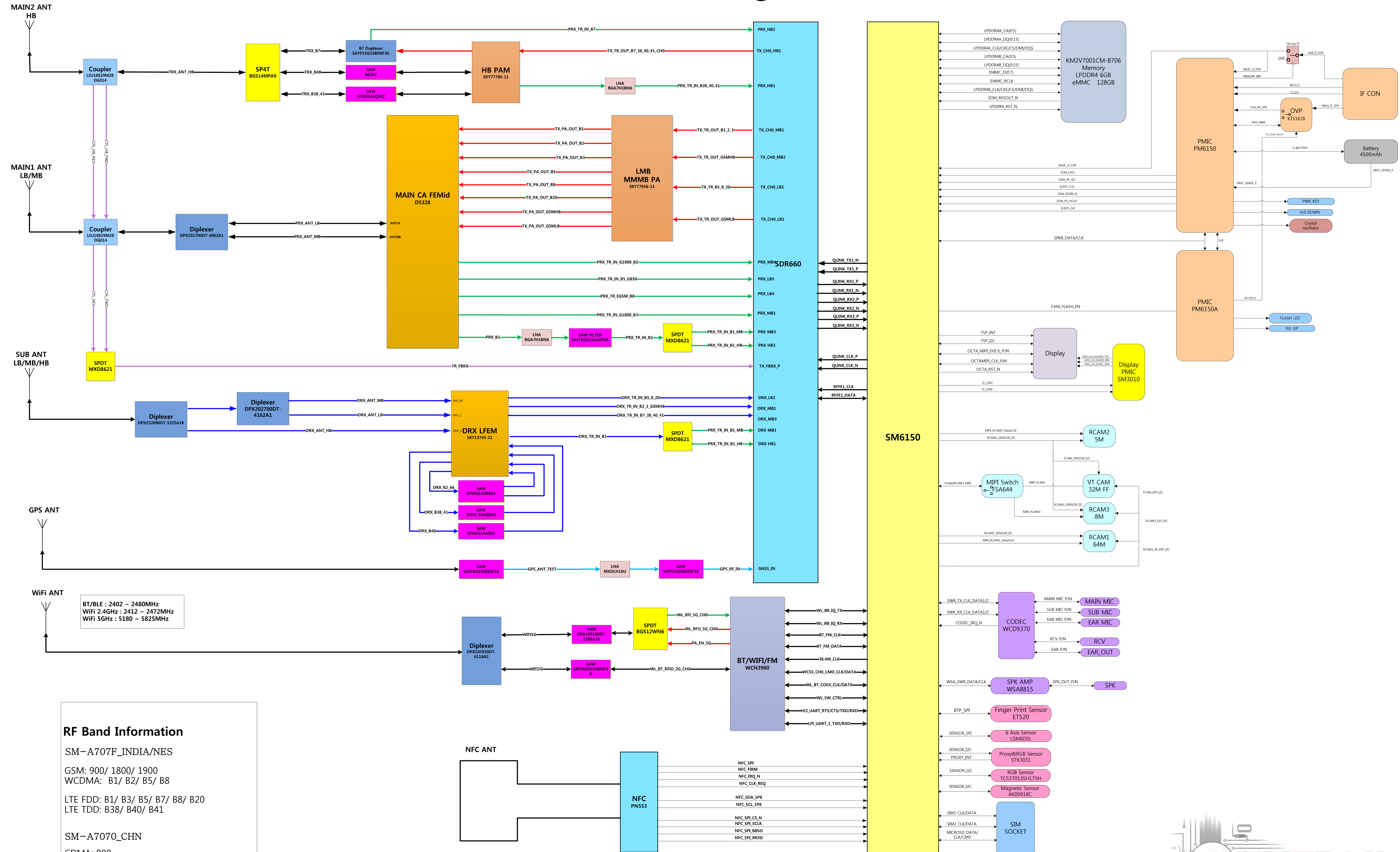
SUB PBA (TOP SIDE)



SUB PBA (BOTTOM SIDE)



# SM-A707F/A7070 Rev0.1 Block Diagram



## RF Band Information

SM-A707F\_INDIA/NES

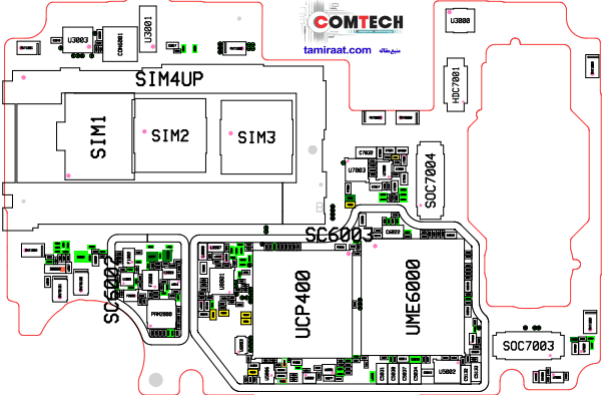
GSM: 900/ 1800/ 1900  
WCDMA: B1/ B2/ B5/ B8

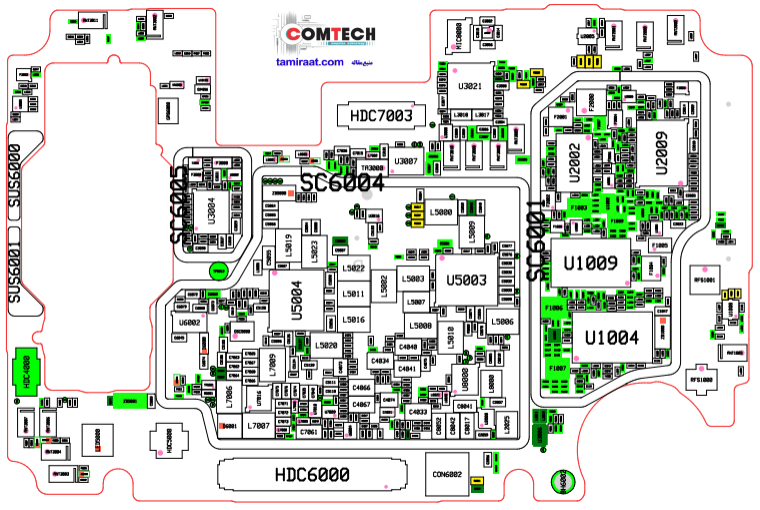
LTE FDD: B1/ B3/ B5/ B7/ B8/ B20  
LTE TDD: B38/ B40/ B41

SM-A7070\_CHN

CDMA: 800  
GSM: 900/ 1800/ 1900  
WCDMA: B1/ B2/ B5/ B8  
TD-SCDMA: B34/ B39

LTE FDD: B1/ B3/ B5/ B7/ B8  
LTE TDD: B38/ B40/ B41





HDC7003

SC6004

U1009

U1004

U2002

U2009

U5003

U3004

U3007

U3021

U6002

U5004

HDC4000

HDC5000

HDC6000

CON5882

#6000

U8000

U8001

U8002

U8003

U8004

U8005

U8006

U8007

U8008

U8009

U8010

U8011

U8012

U8013

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U8089

U8090

U8091

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U8093

U8094

U8095

U8096

U8097

U8098



U8099

U8100



## 8. Level 3 Repair

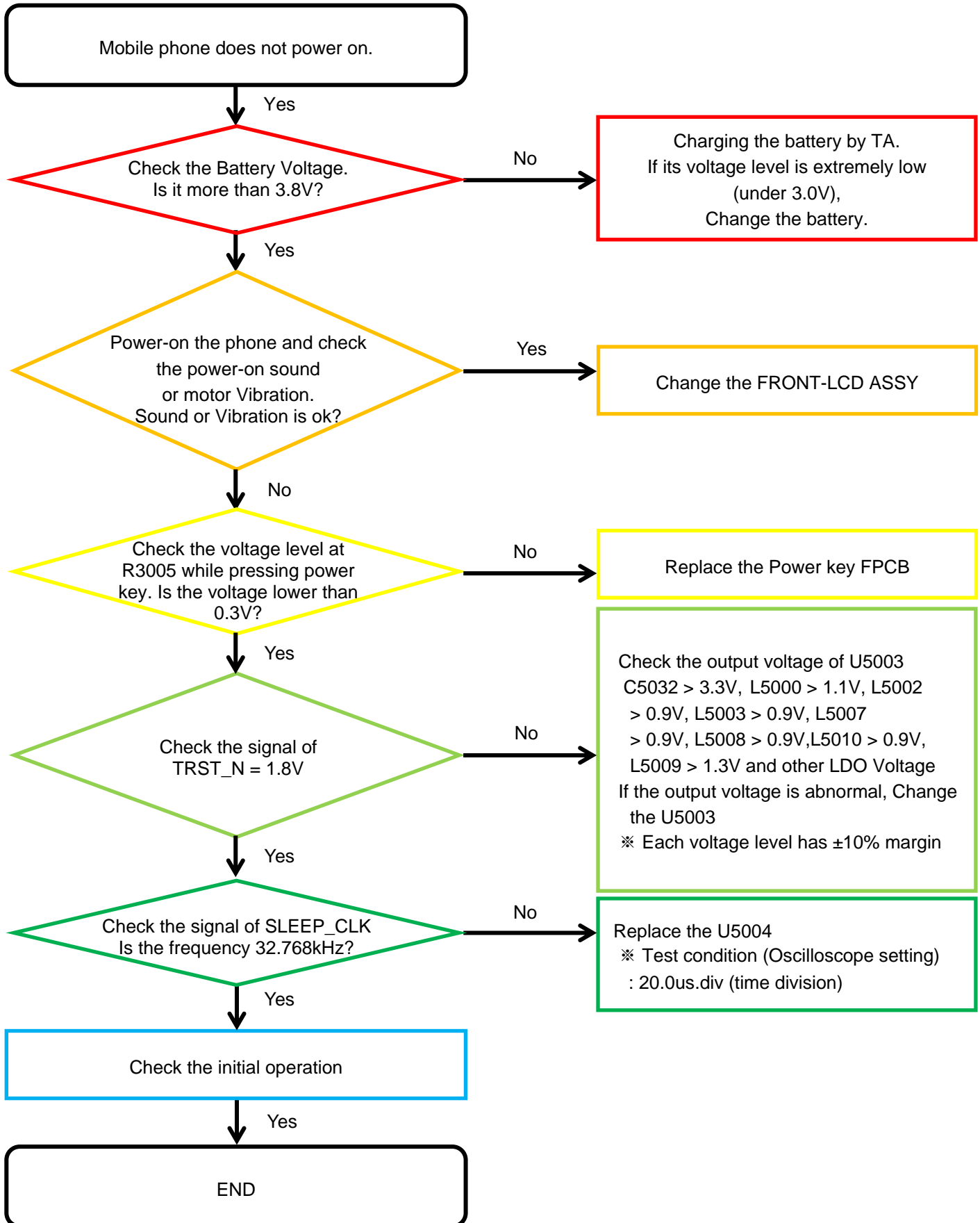
### 8-3. Flow chart of Troubleshooting.

	
<p align="center"><b>Oscilloscope</b></p>	<p align="center"><b>Digital Multimeter</b></p>
	
<p align="center"><b>Power Supply</b></p>	<p align="center"><b>+ driver, ESD Safe Tweezer</b></p>
	
<p align="center"><b>8960 &amp; Spectrum Analyzer</b></p>	<p align="center"><b>Soldering iron</b></p>



## 8. Level 3 Repair

### 8-4-1. Power On



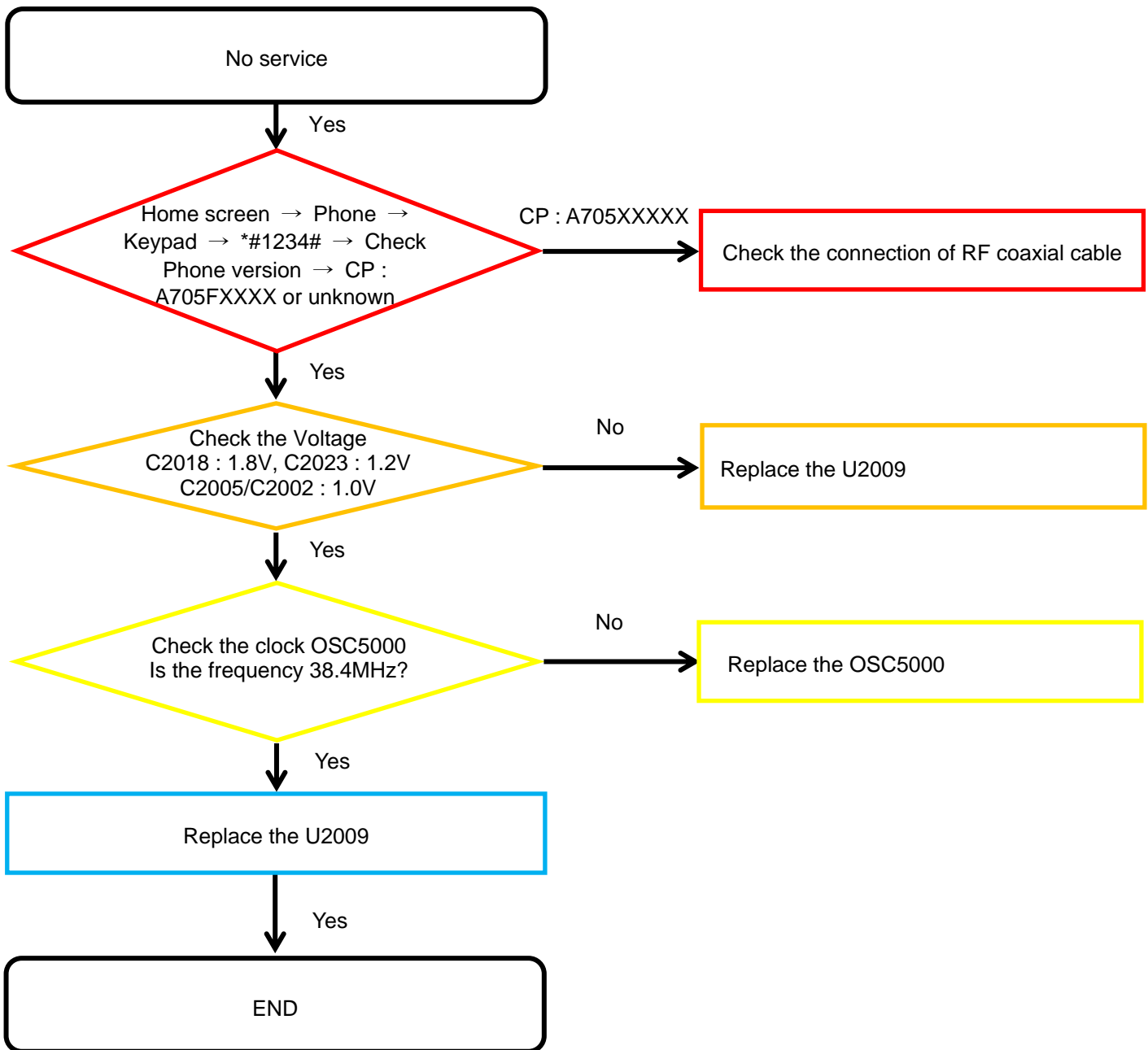
## 8. Level 3 Repair

### 8-4-2. Initial



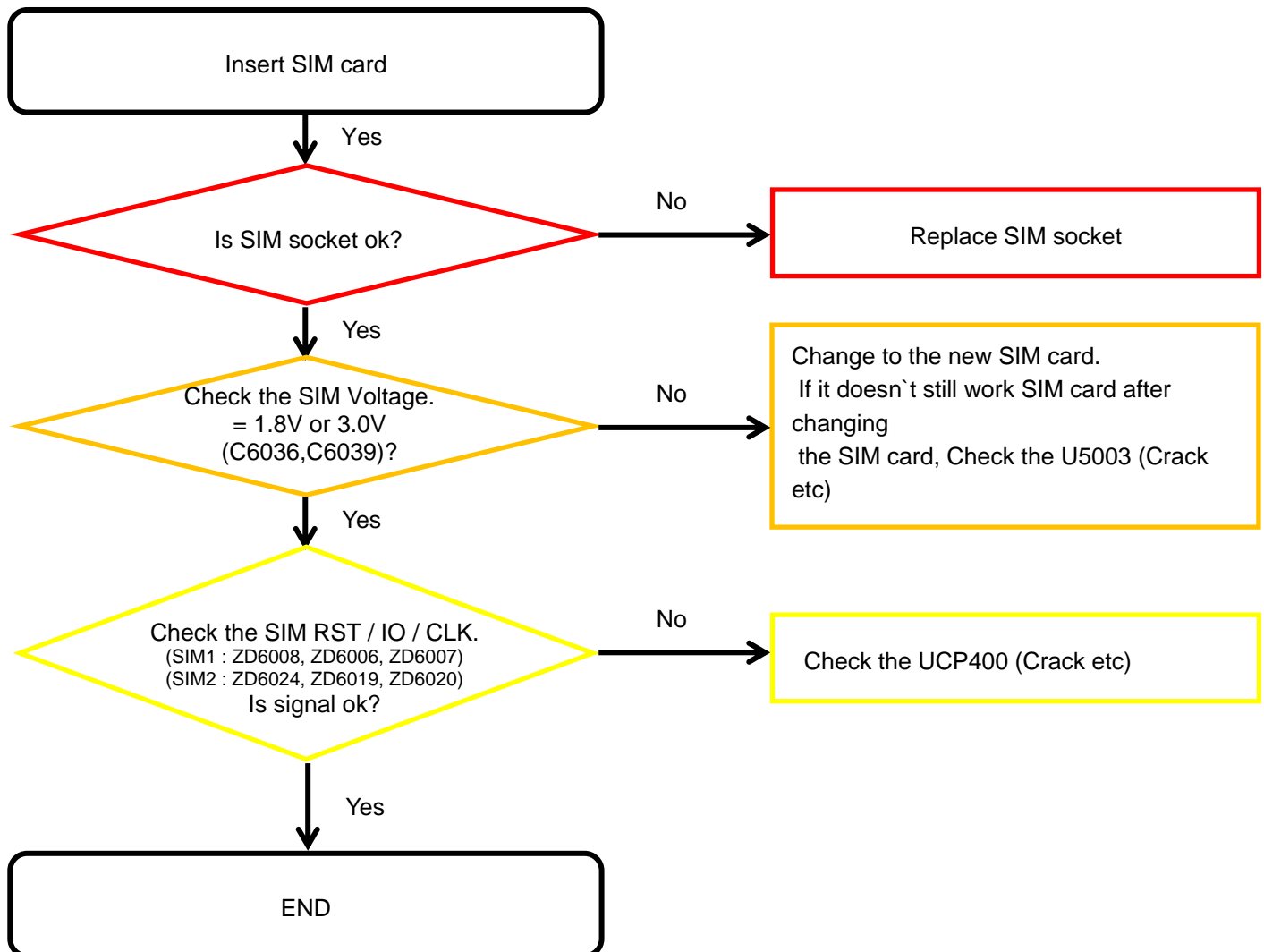
## 8. Level 3 Repair

### 8-4-3. No Service



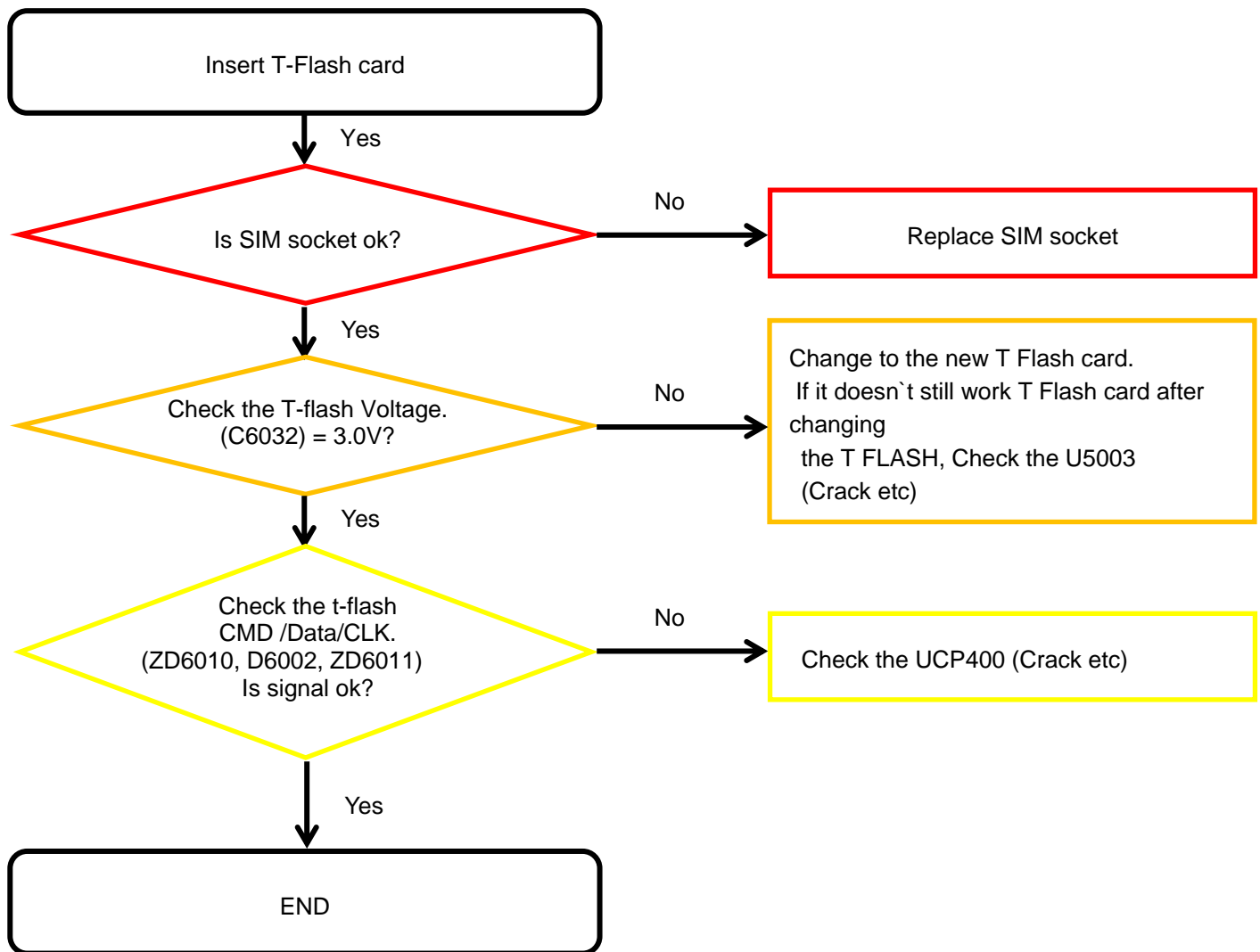
## 8. Level 3 Repair

### 8-4-4. SIM Part



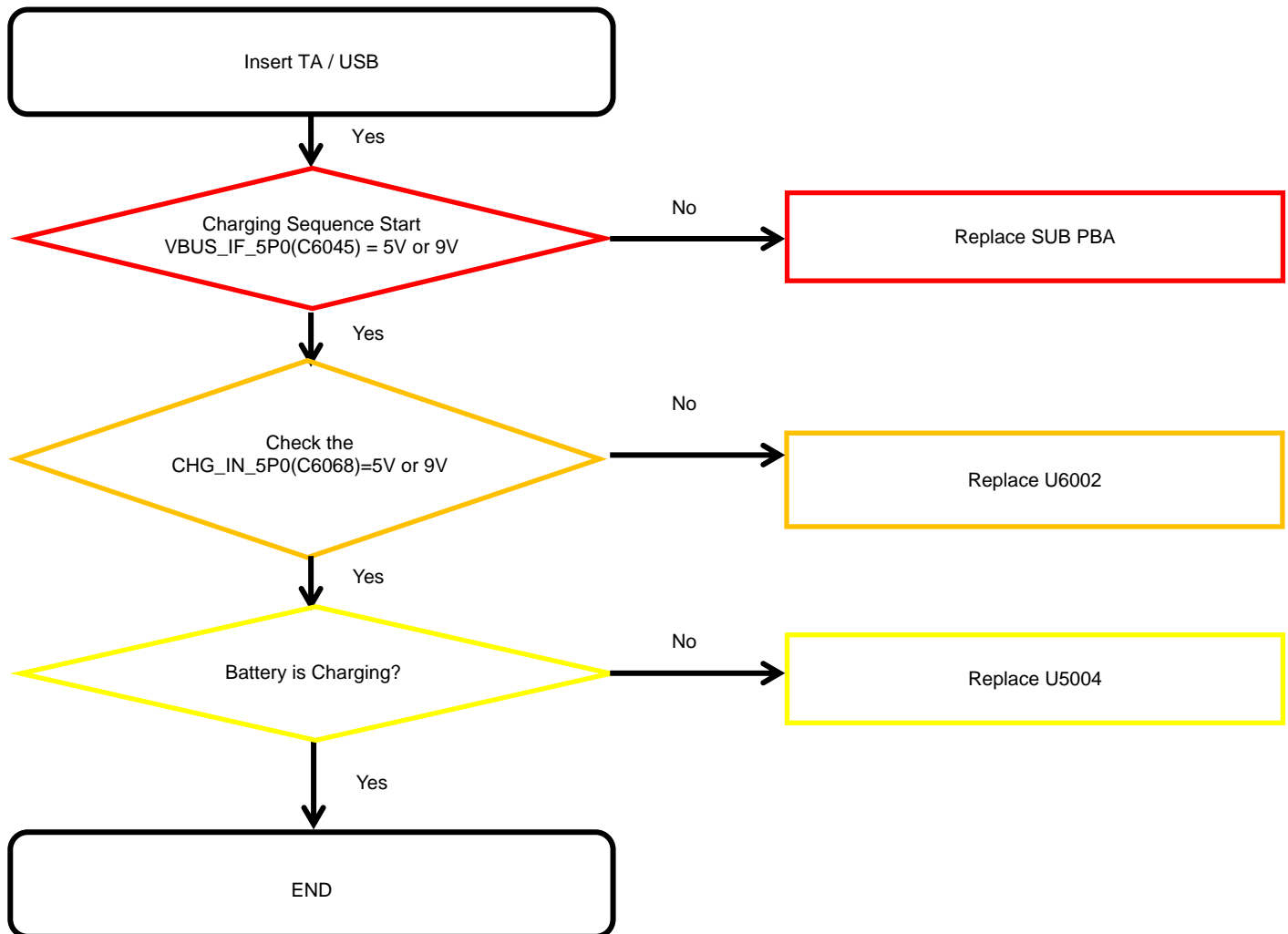
## 8. Level 3 Repair

### 8-4-5. T-Flash Part



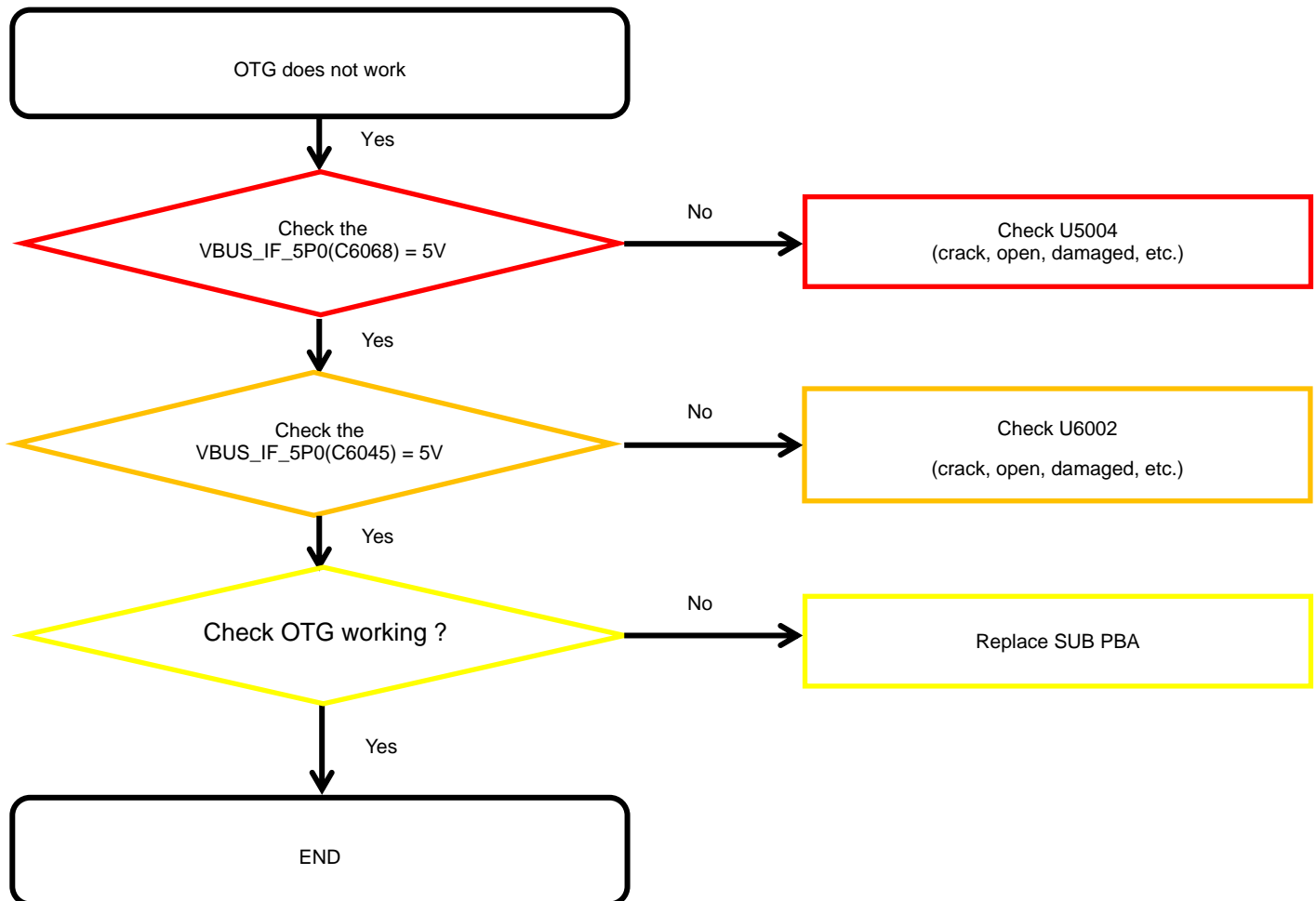
## 8. Level 3 Repair

### 8-4-6. Cable Charging Part



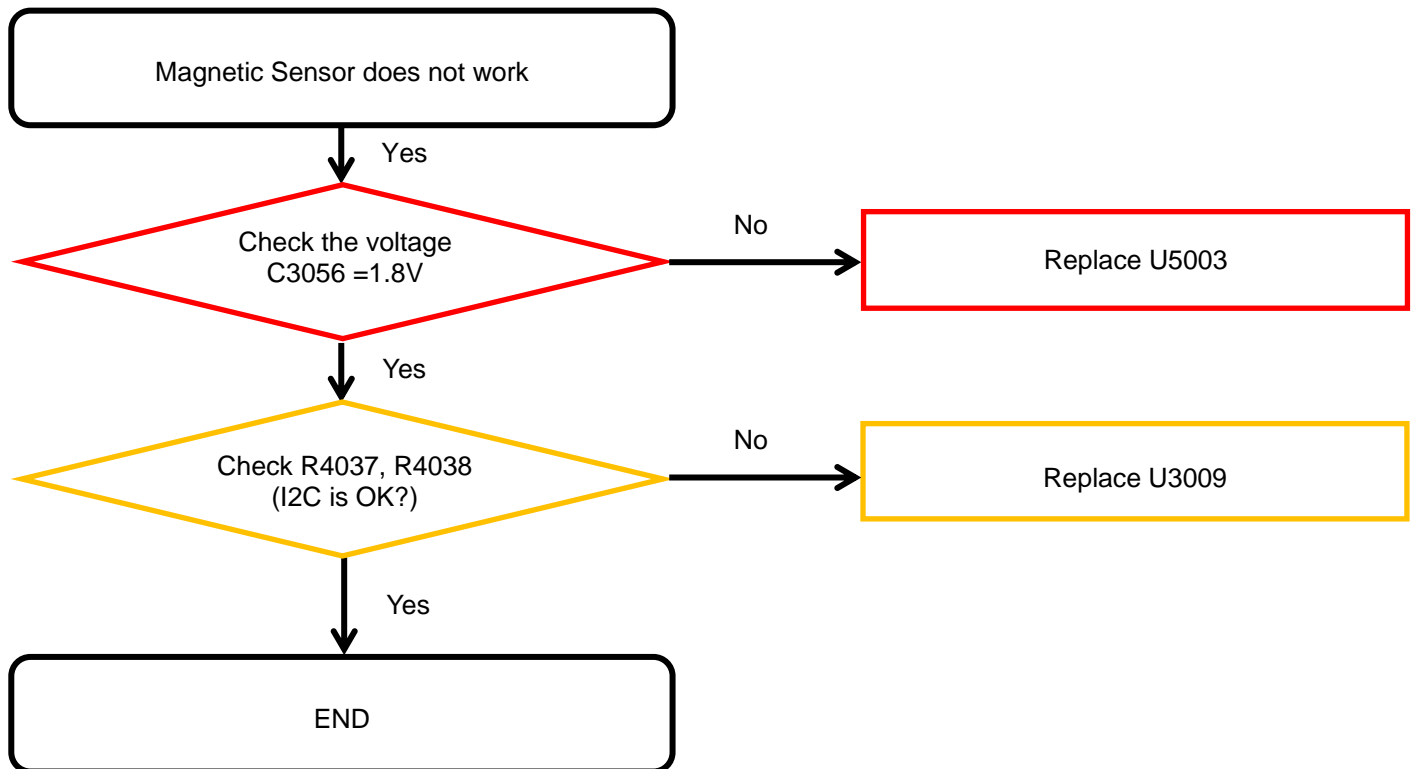
## 8. Level 3 Repair

### 8-4-7. OTG



## 8. Level 3 Repair

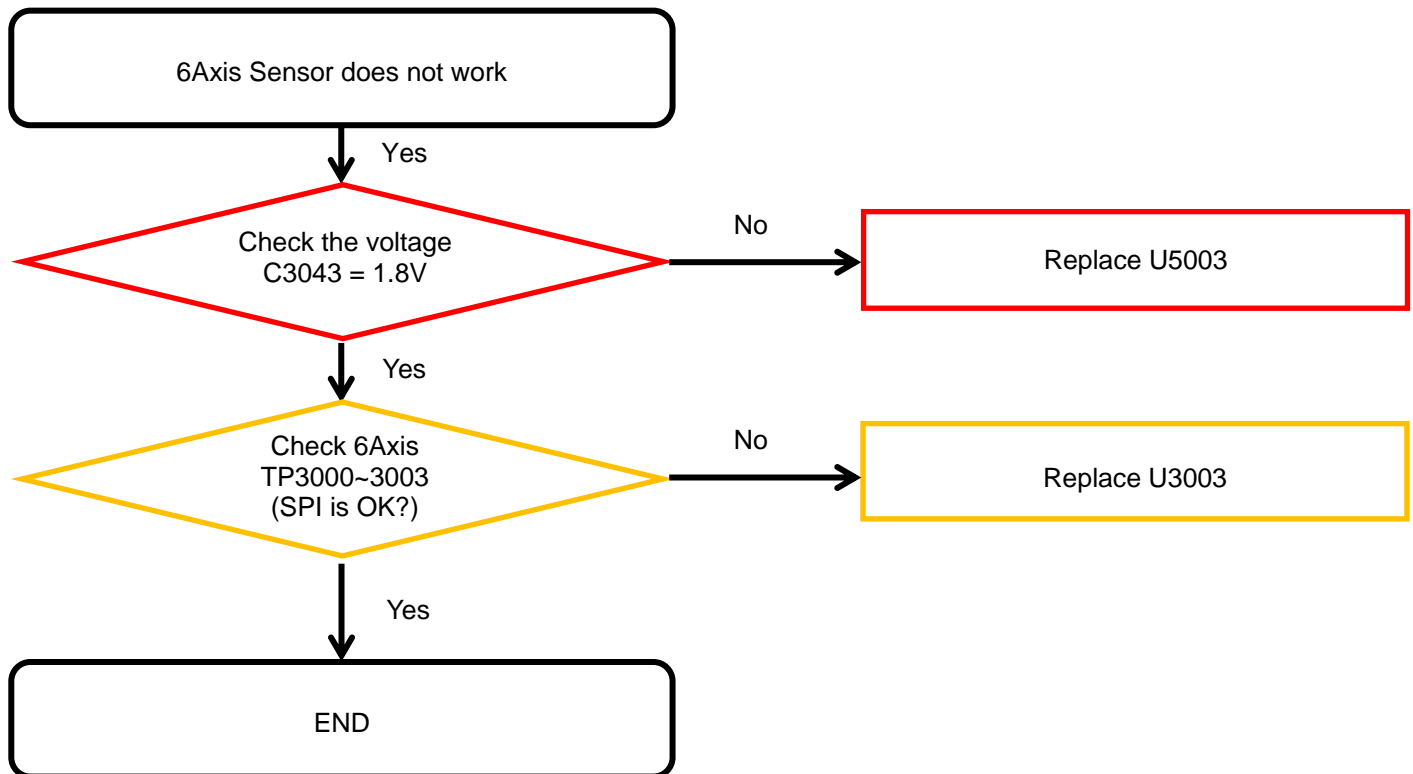
### 8-4-8-1. Magnetic Sensor





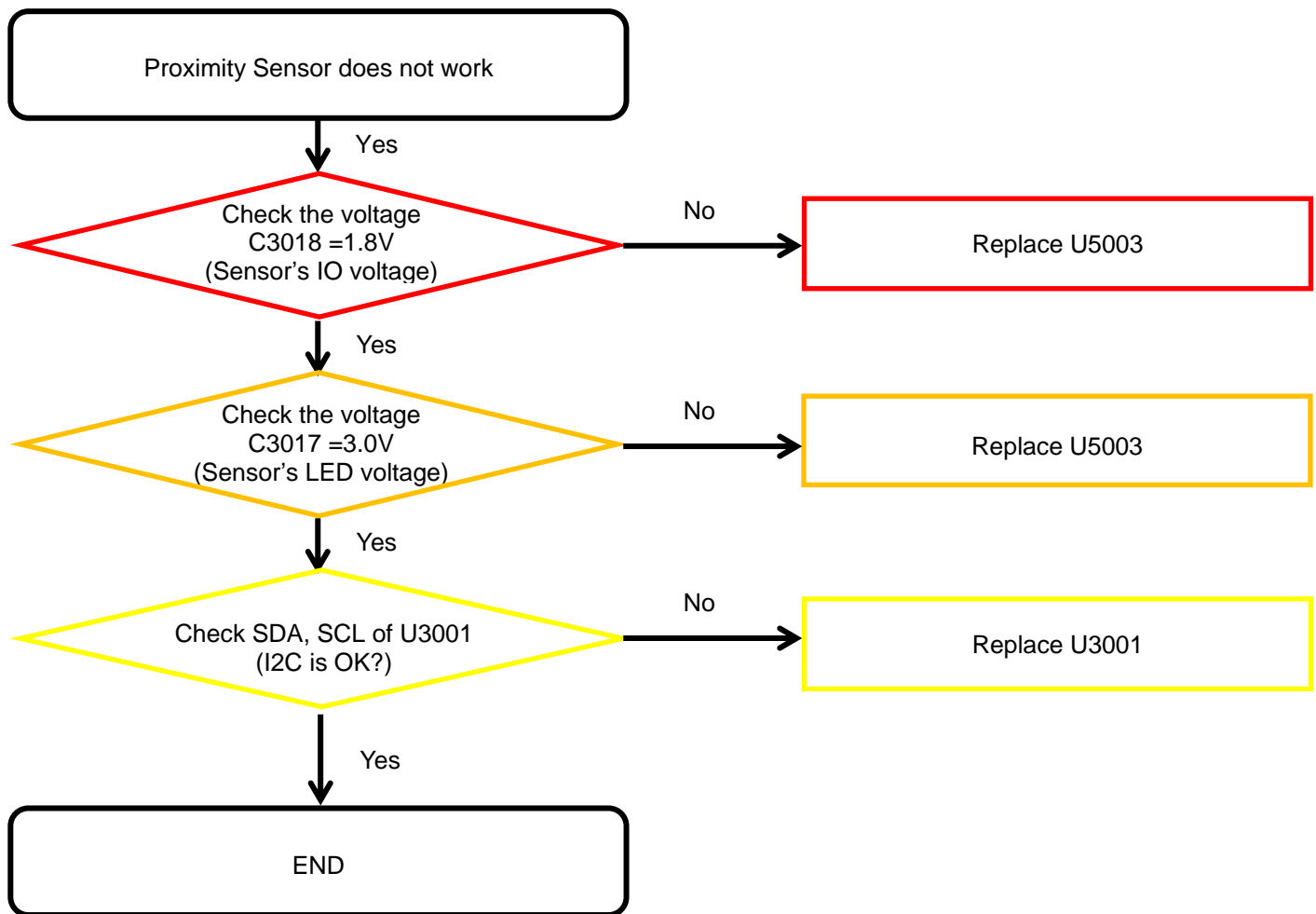
## 8. Level 3 Repair

### 8-4-8-2. 6Axis Sensor



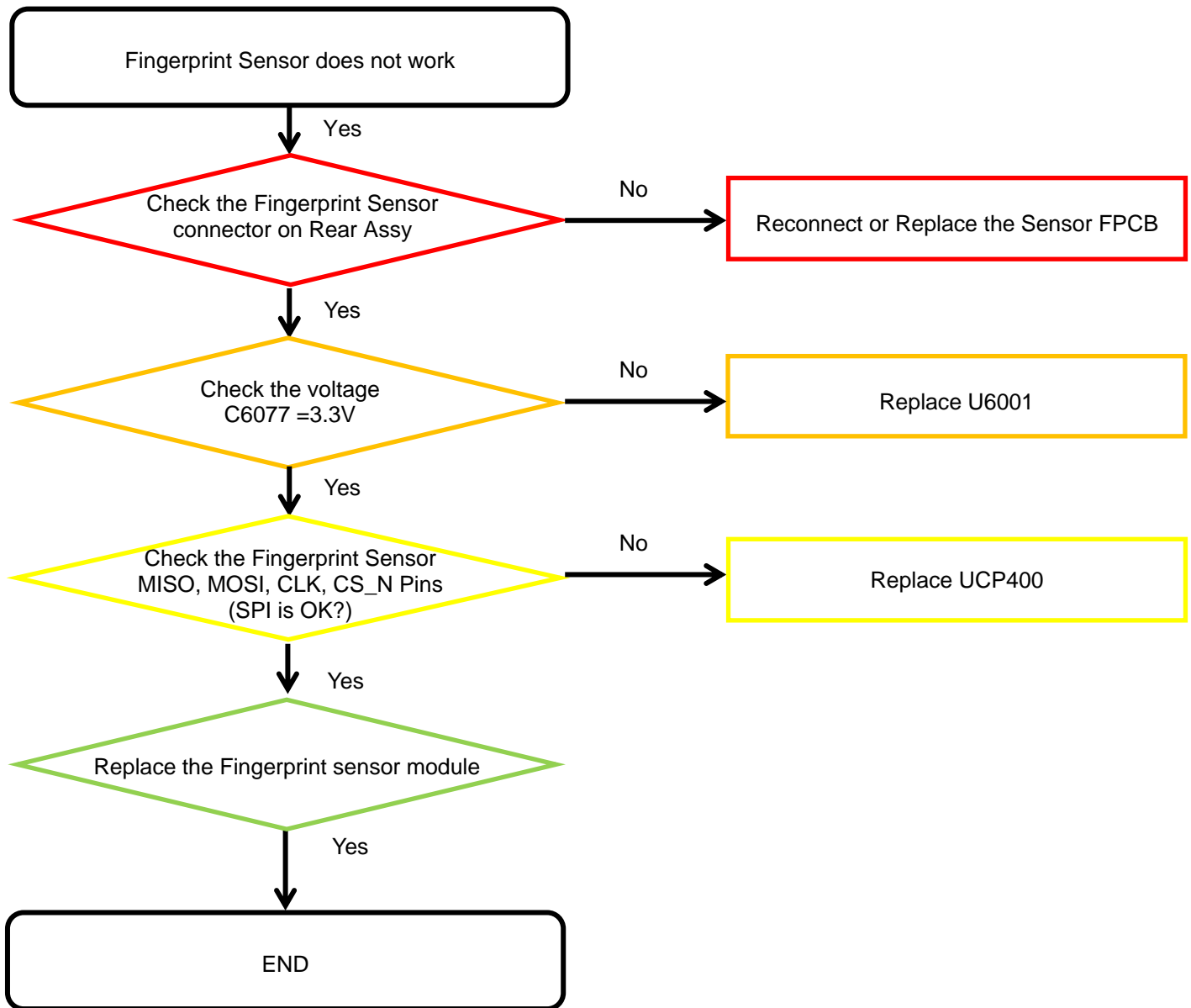
## 8. Level 3 Repair

### 8-4-8-3. Proximity



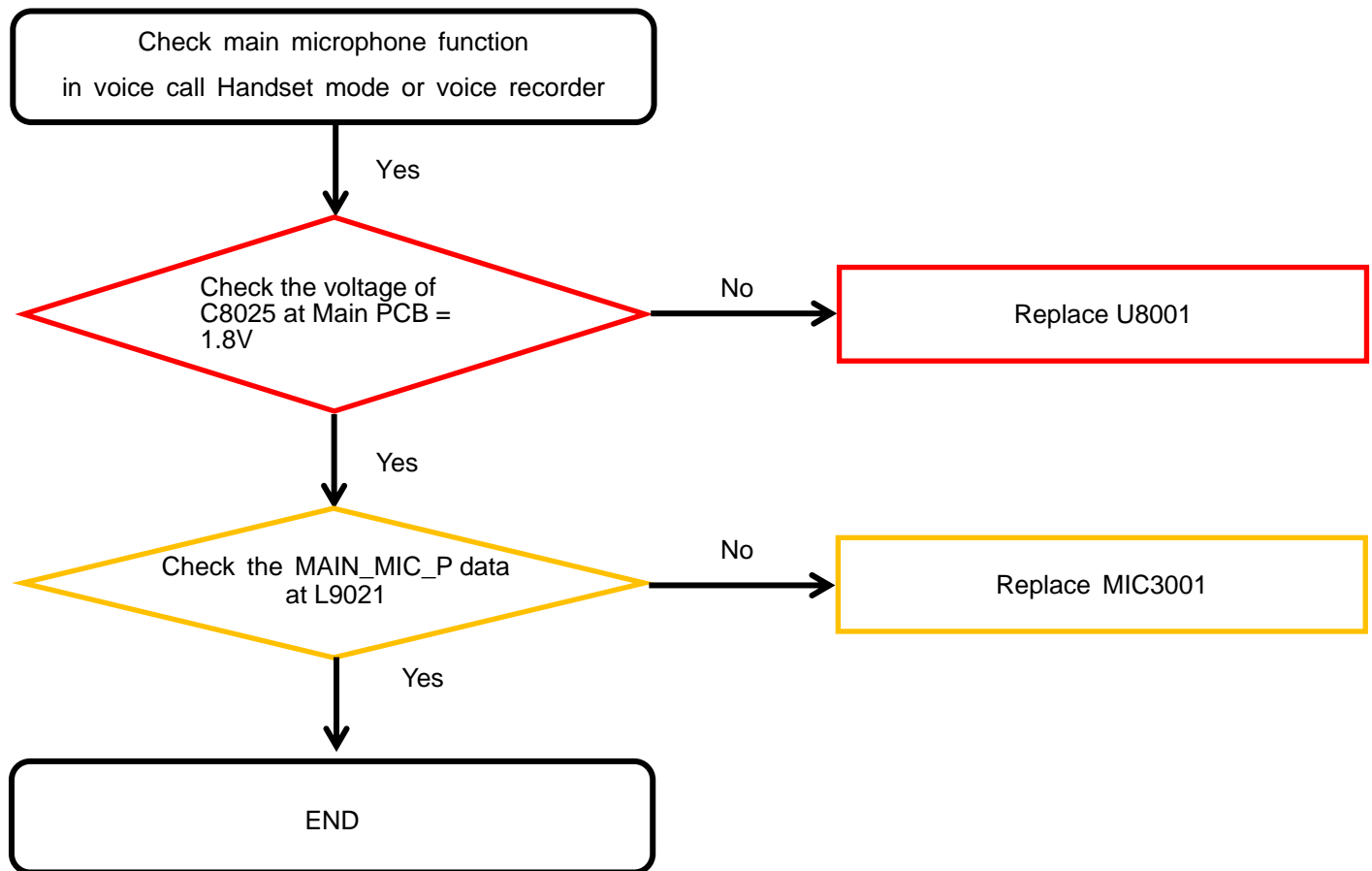
## 8. Level 3 Repair

### 8-4-8-4. Fingerprint Sensor



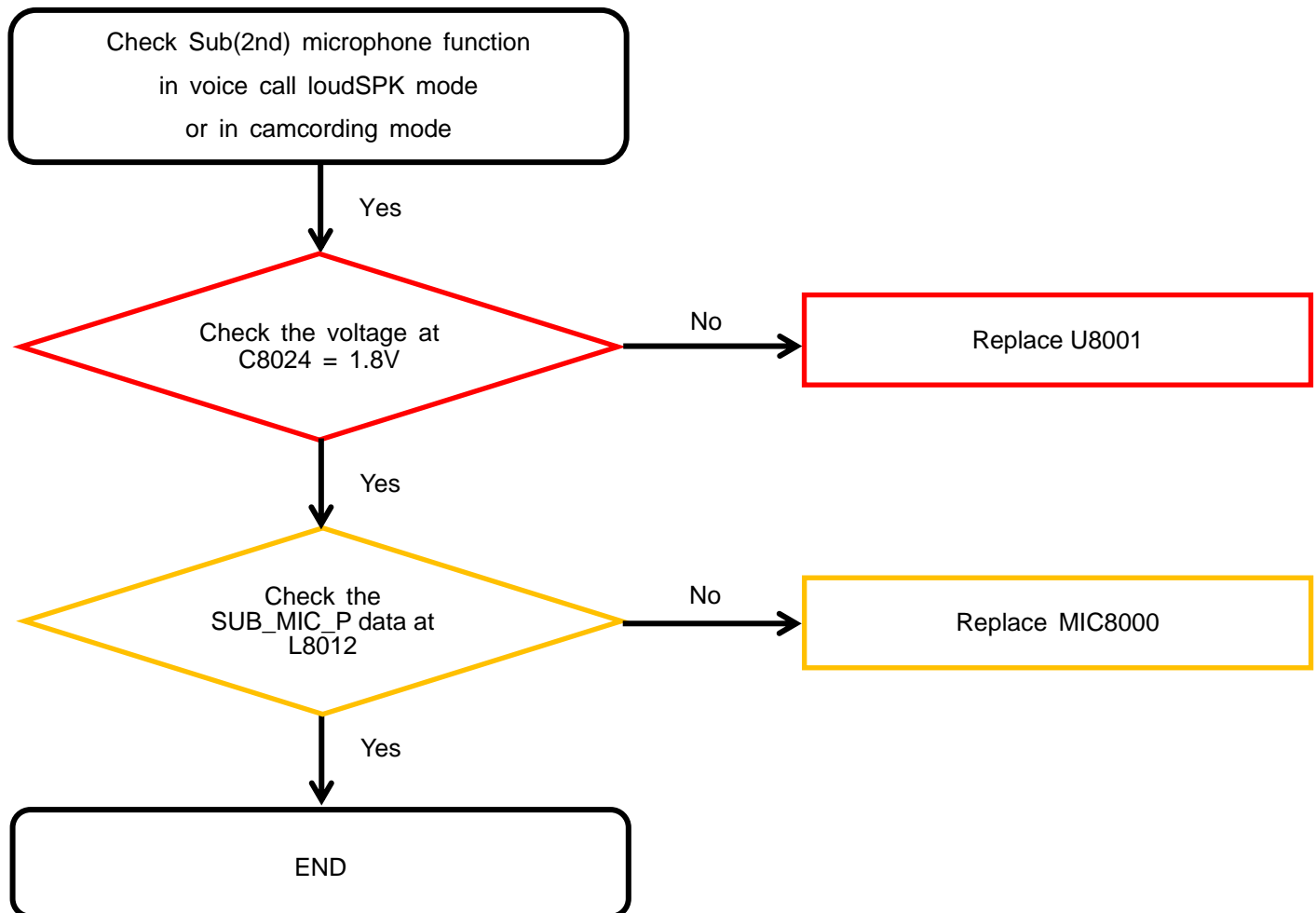
## 8. Level 3 Repair

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



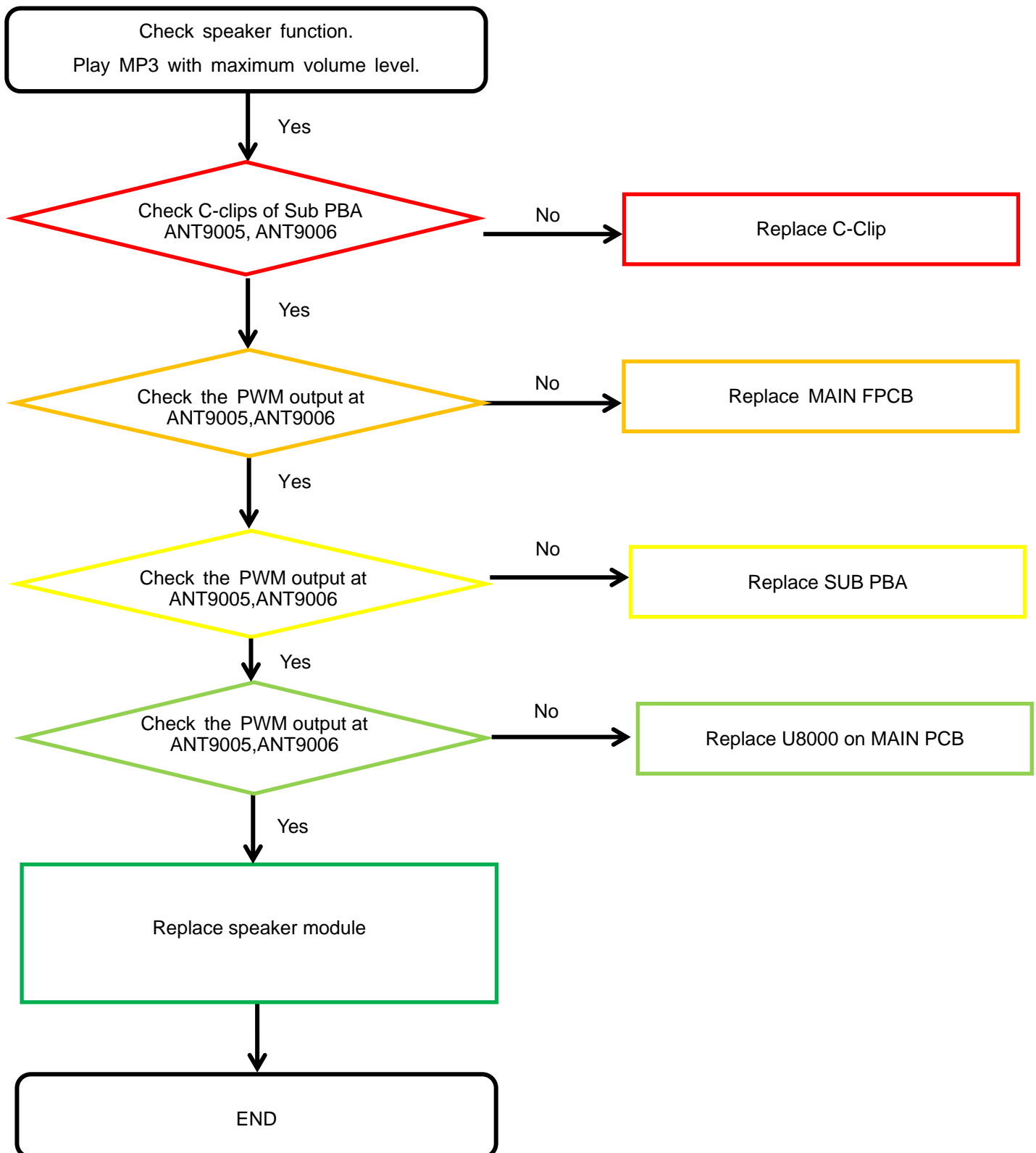
## 8. Level 3 Repair

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



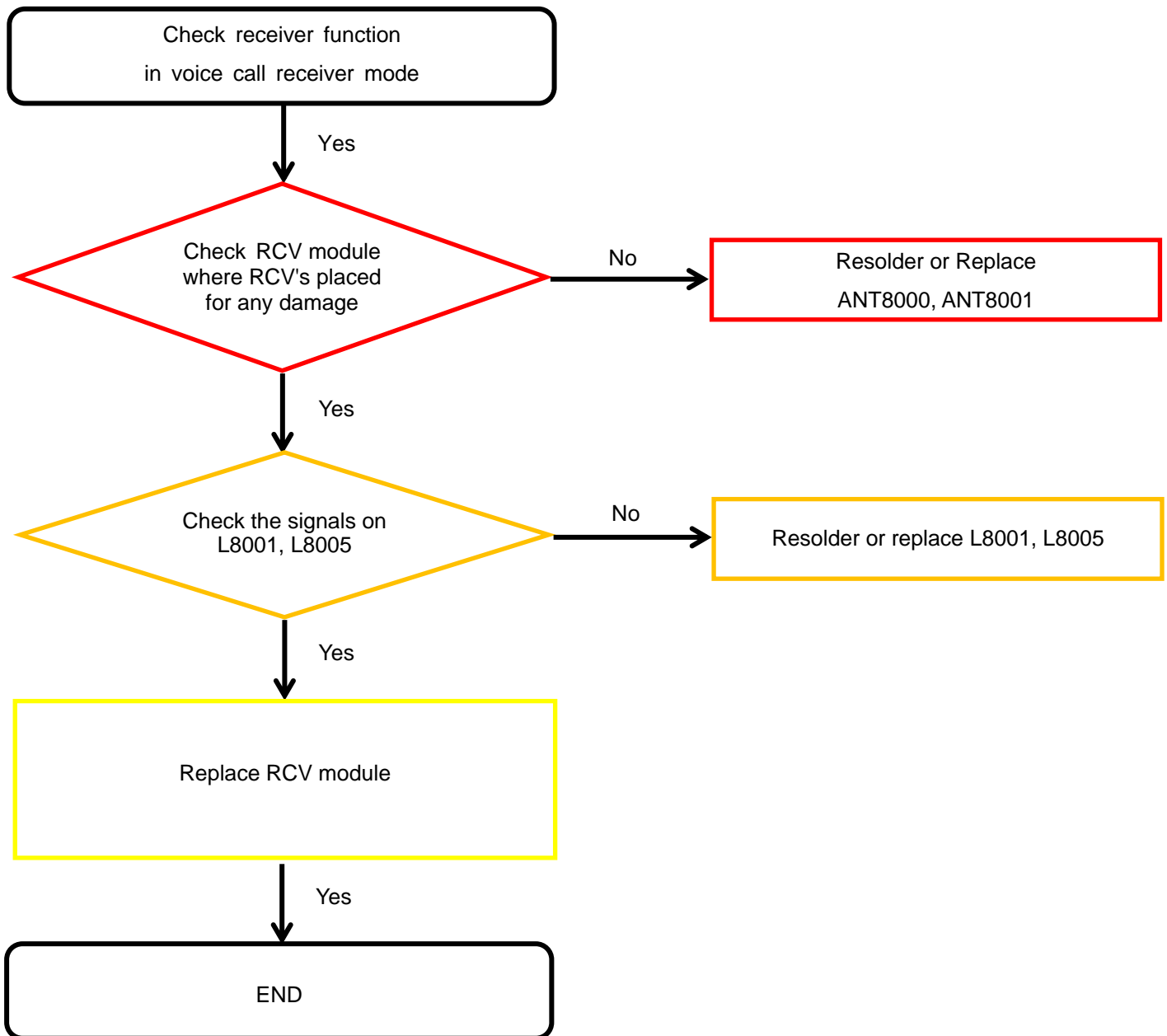
## 8. Level 3 Repair

### 8-4-10. Speaker Part



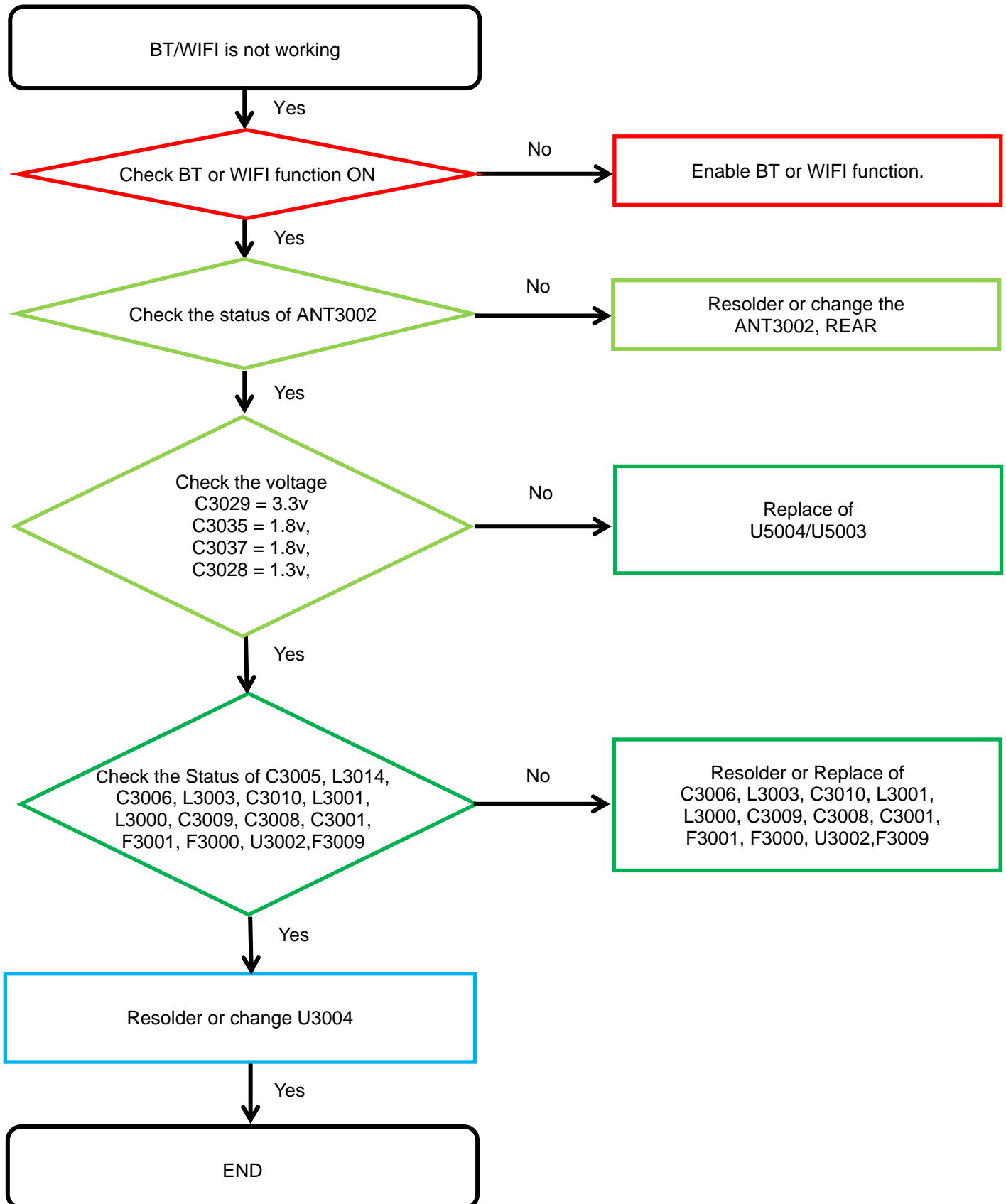
## 8. Level 3 Repair

### 8-4-11. Receiver Part



## 8. Level 3 Repair

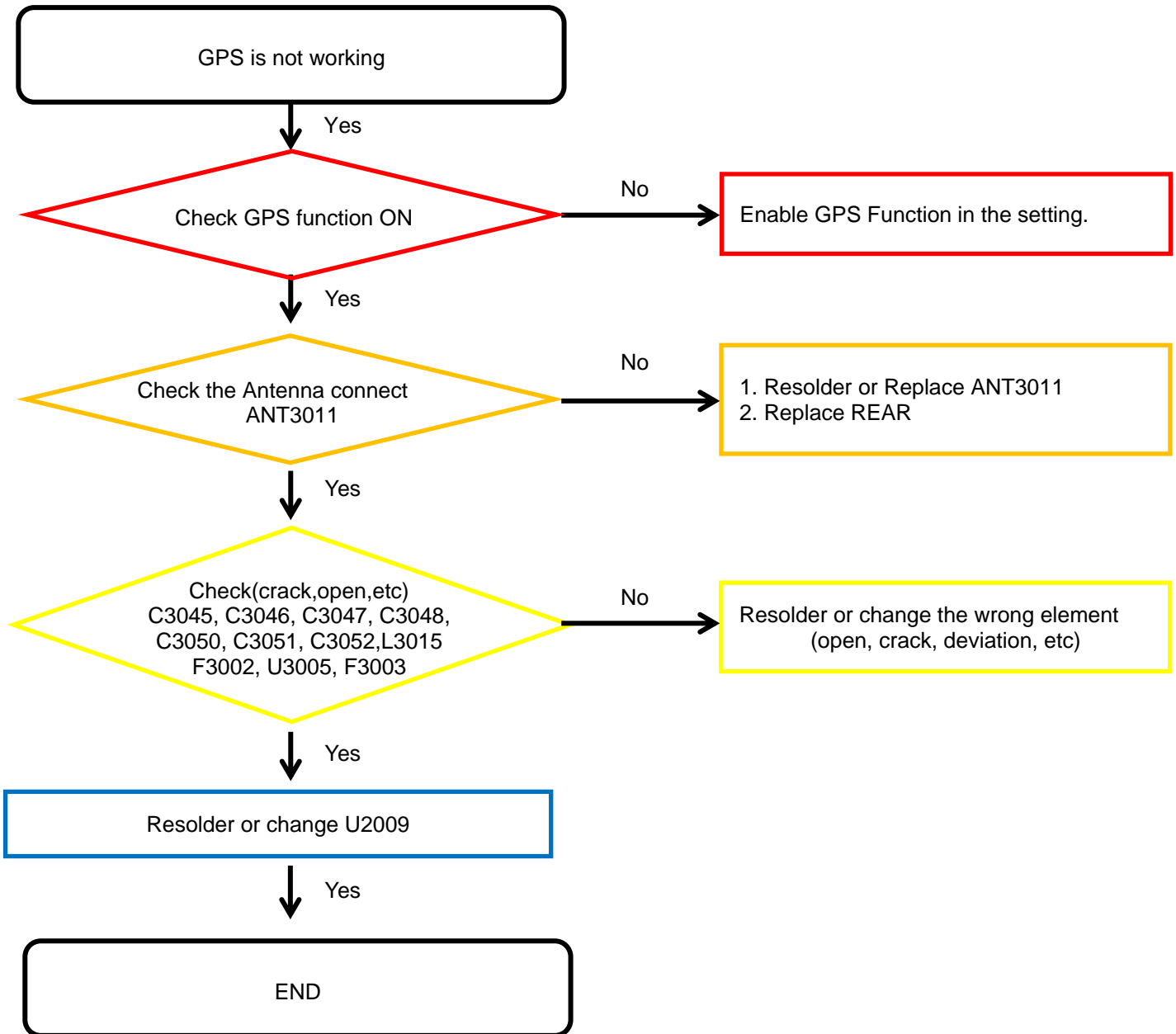
### 8-4-12. BT/WIFI





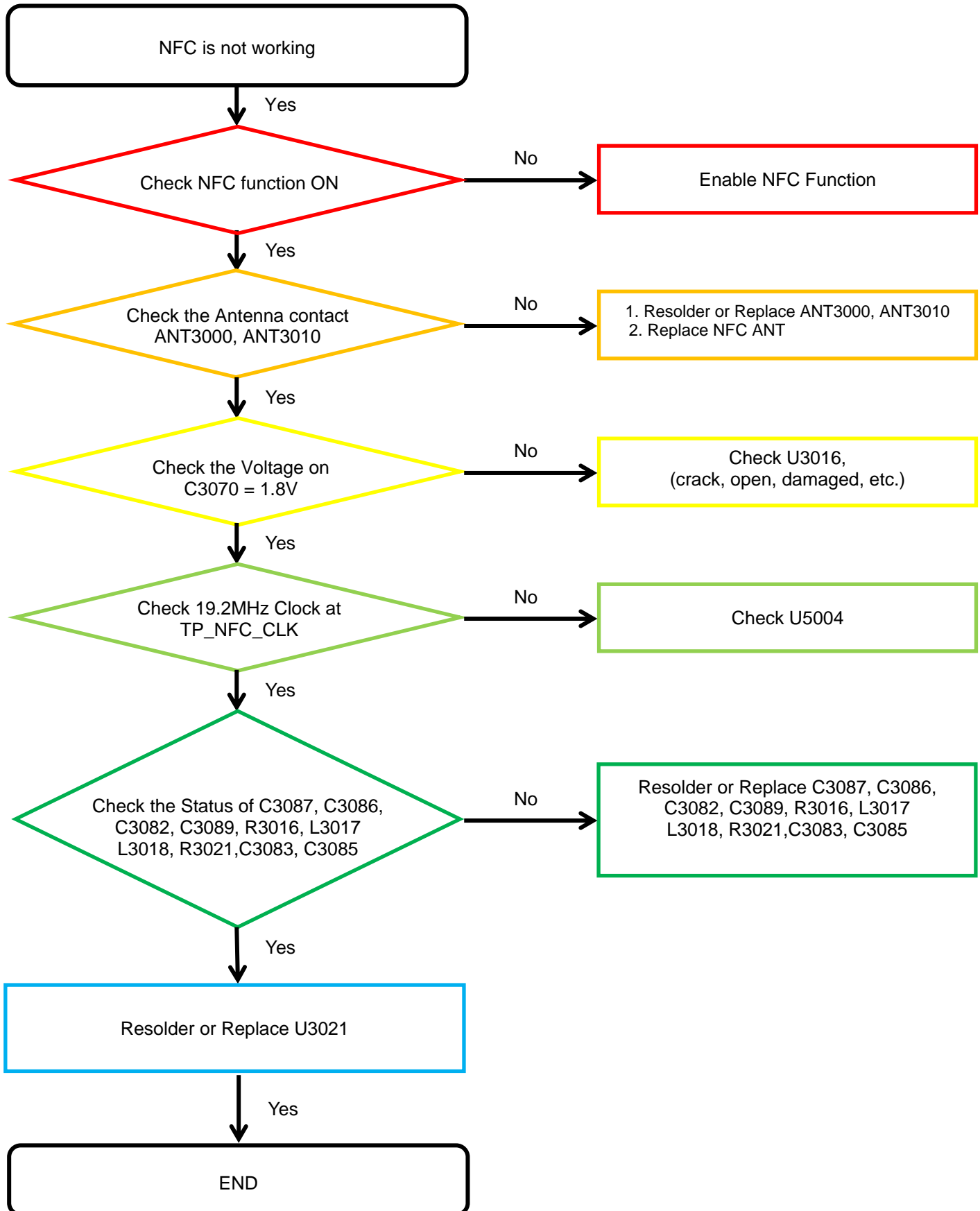
## 8. Level 3 Repair

### 8-4-13. GPS



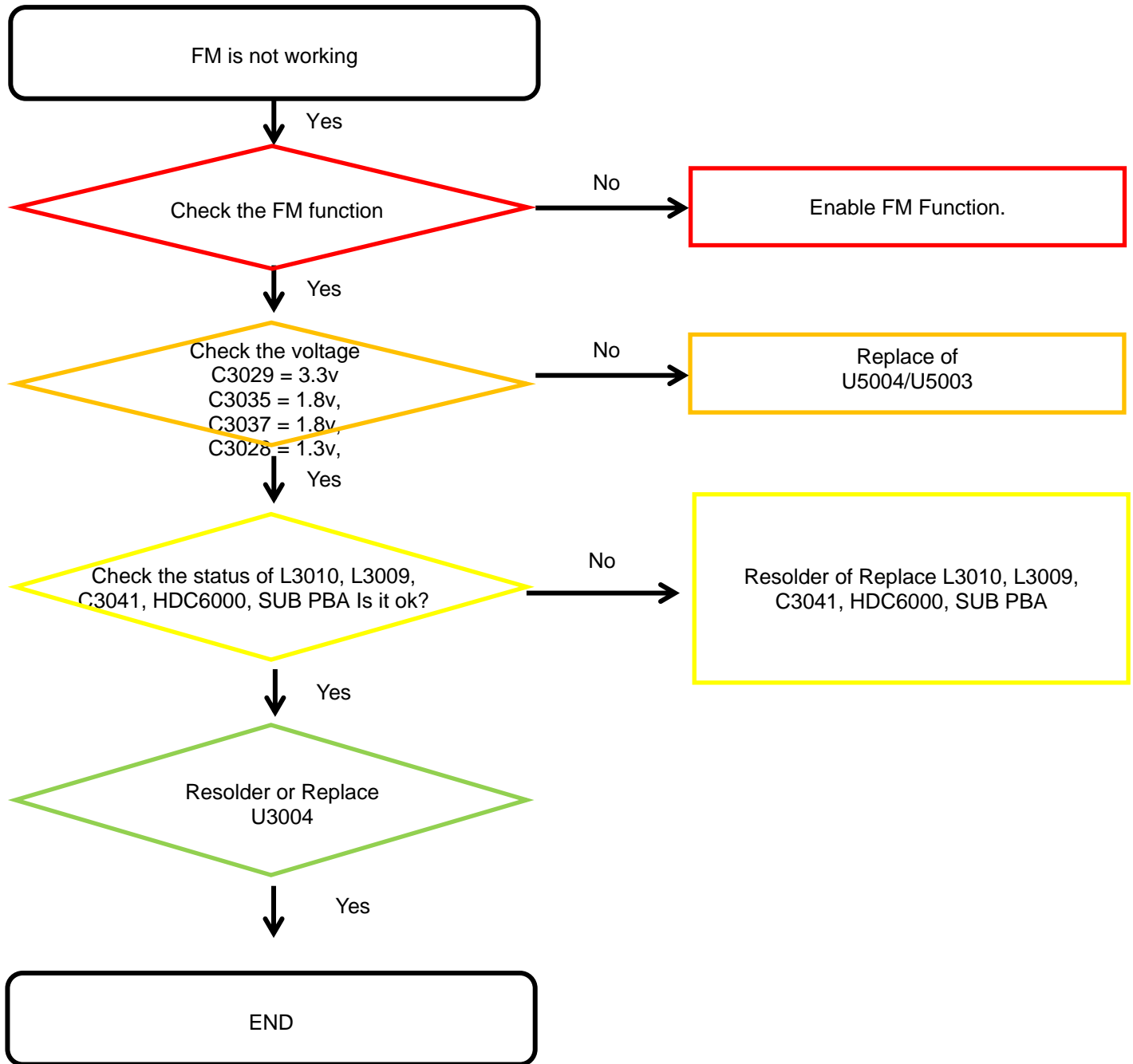
## 8. Level 3 Repair

### 8-4-14. NFC



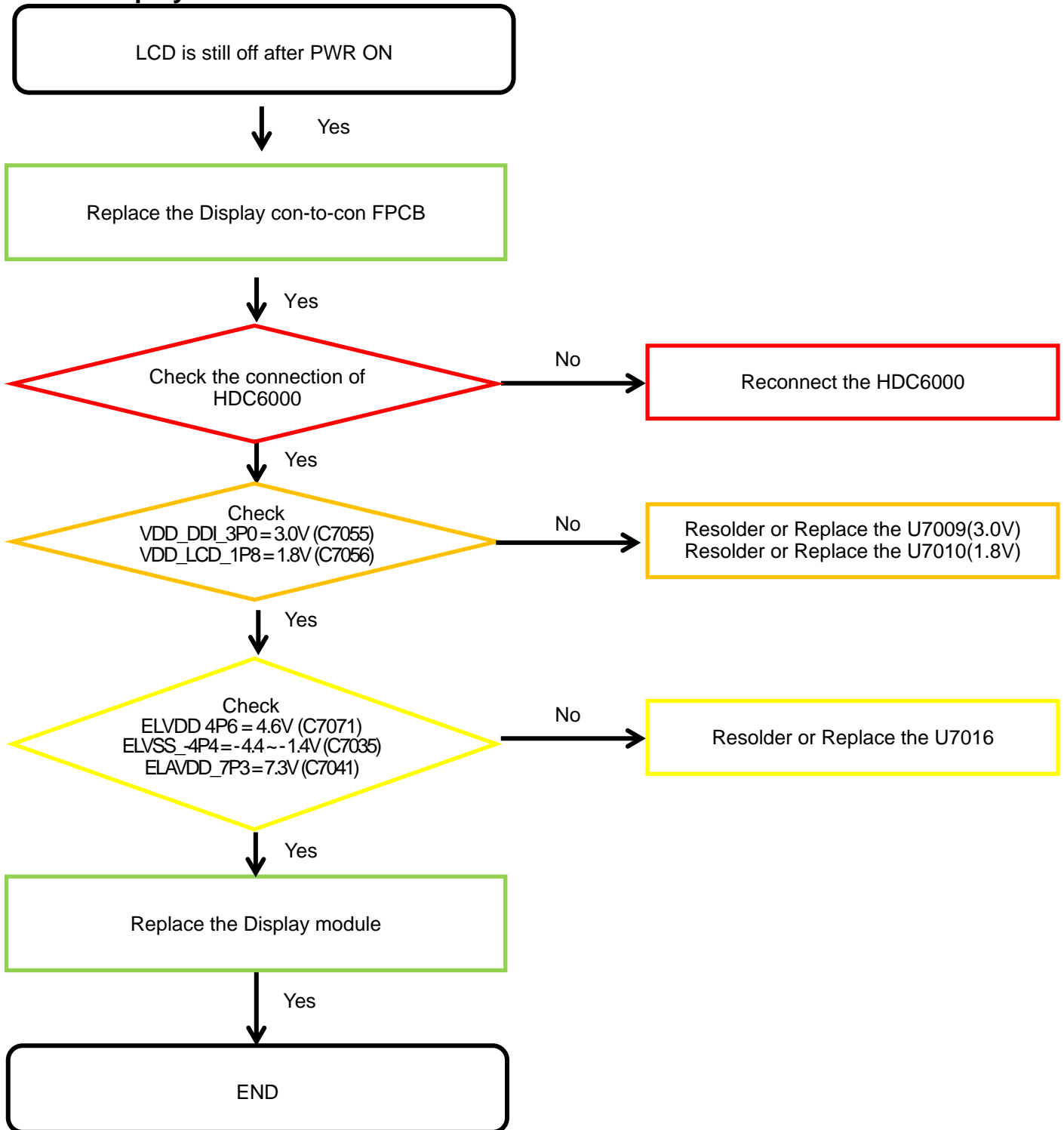
## 8. Level 3 Repair

### 8-4-15. FM radio part



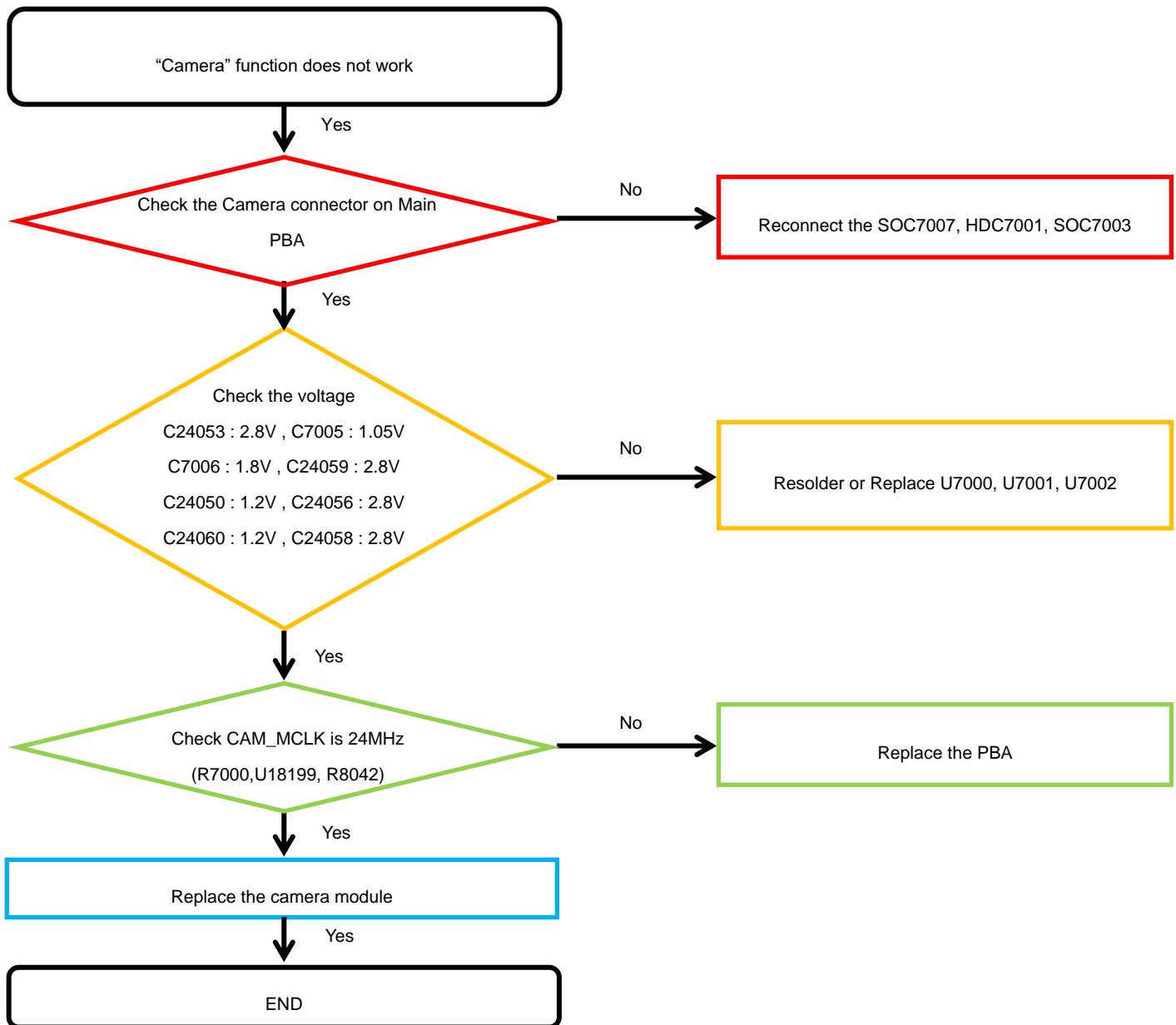
## 8. Level 3 Repair

### 8-4-16. Display



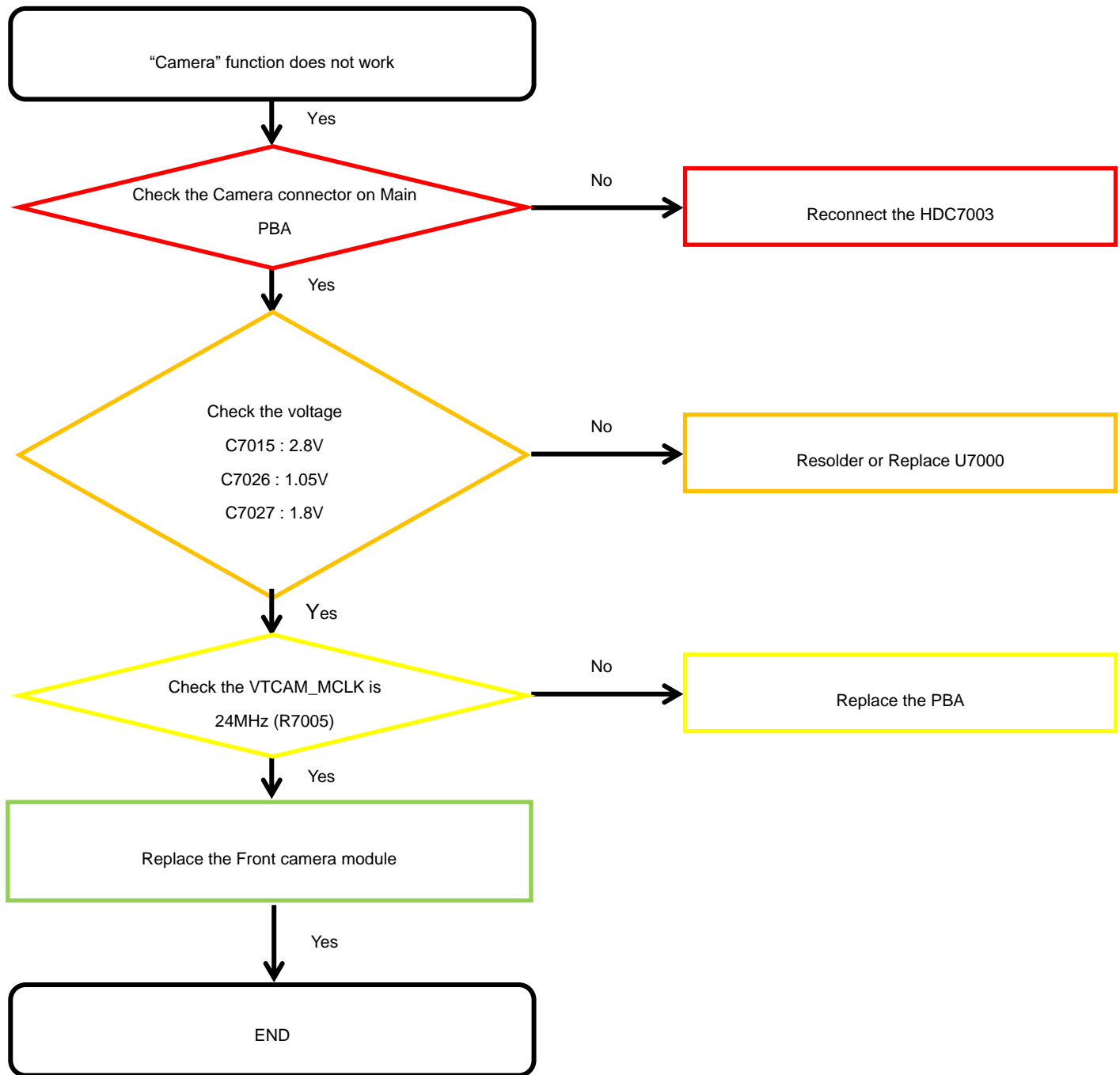
## 8. Level 3 Repair

### 8-4-17. Triple Camera



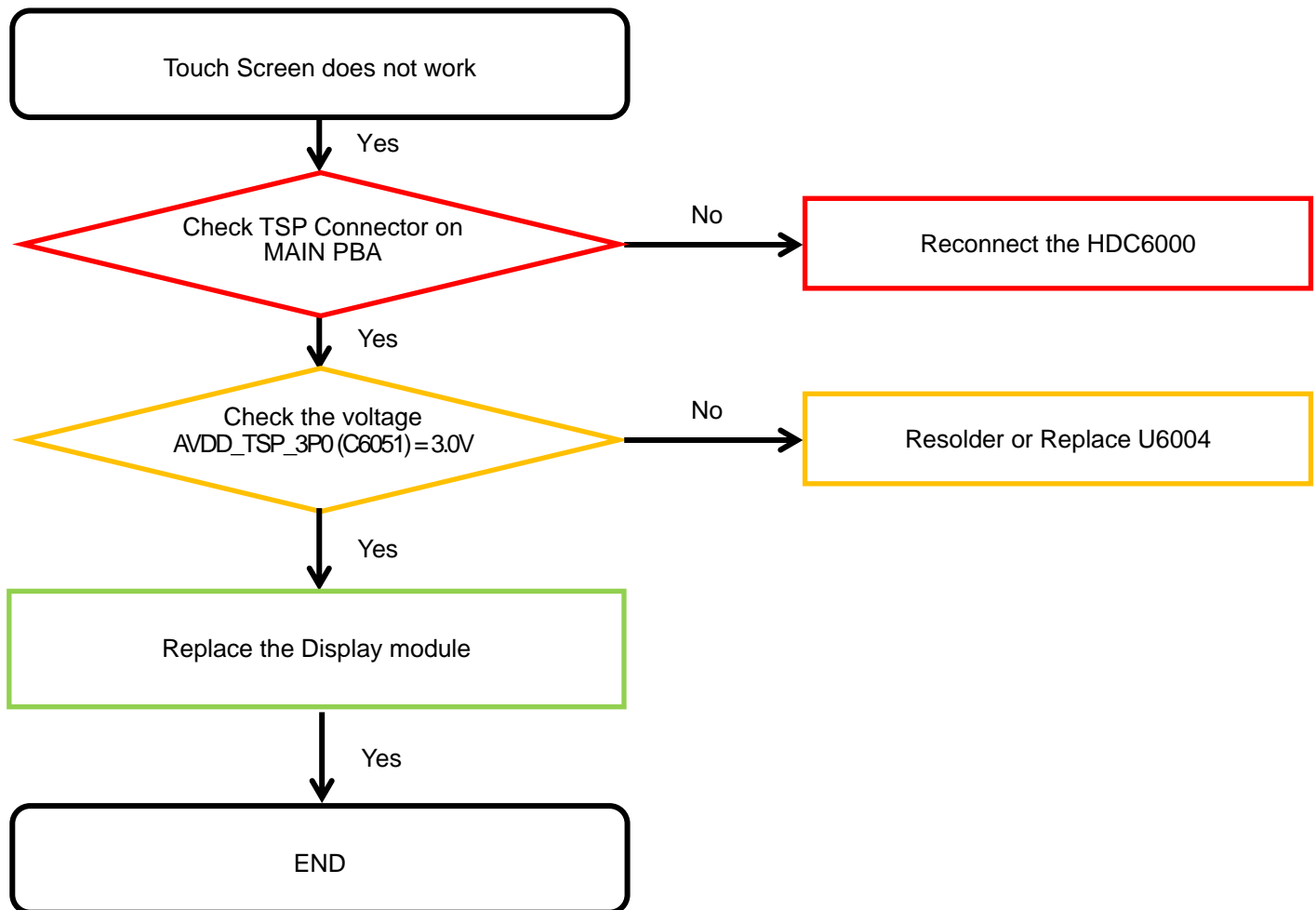
## 8. Level 3 Repair

### 8-4-18. VT CAMERA



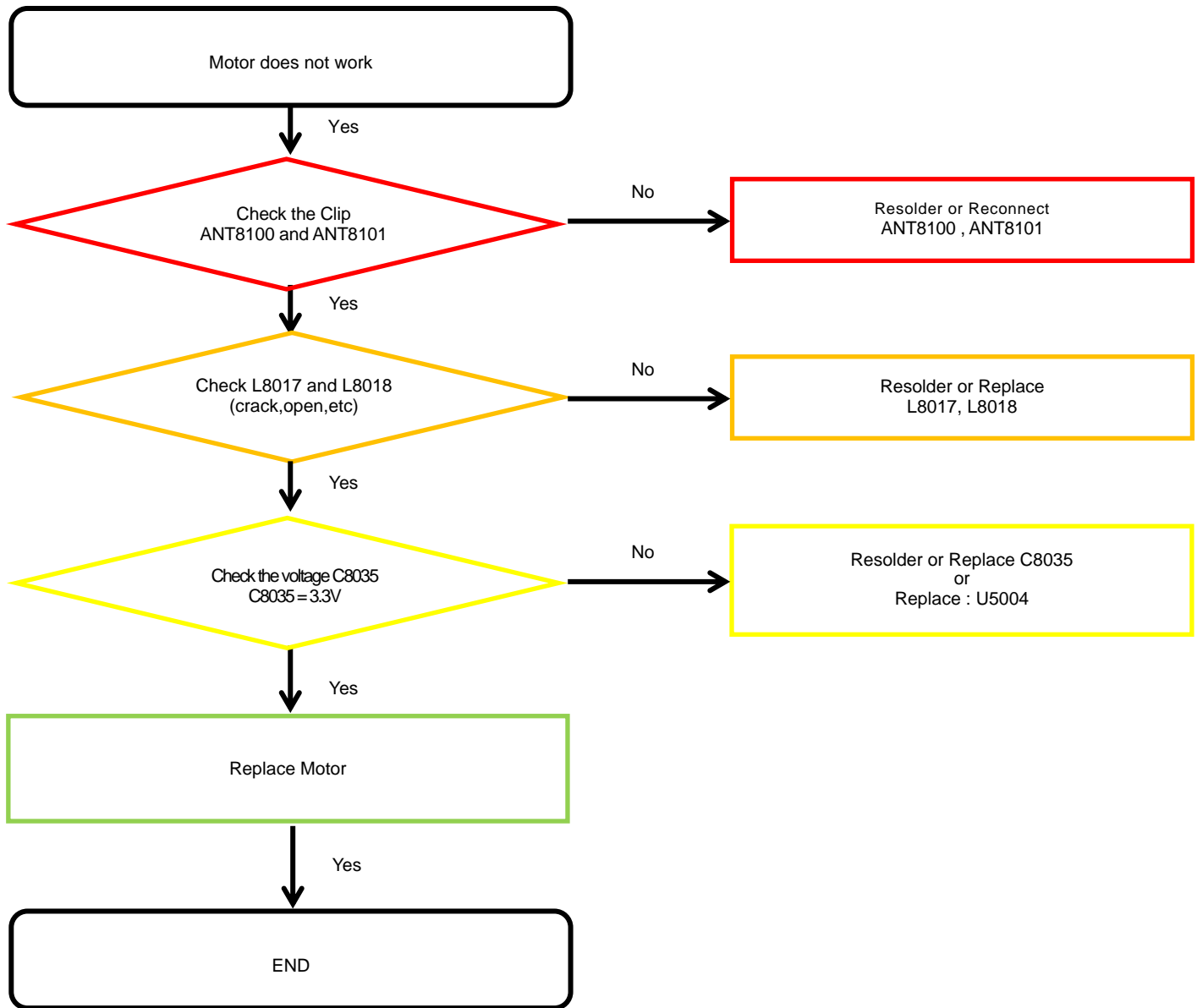
## 8. Level 3 Repair

### 8-4-19. TSP



## 8. Level 3 Repair

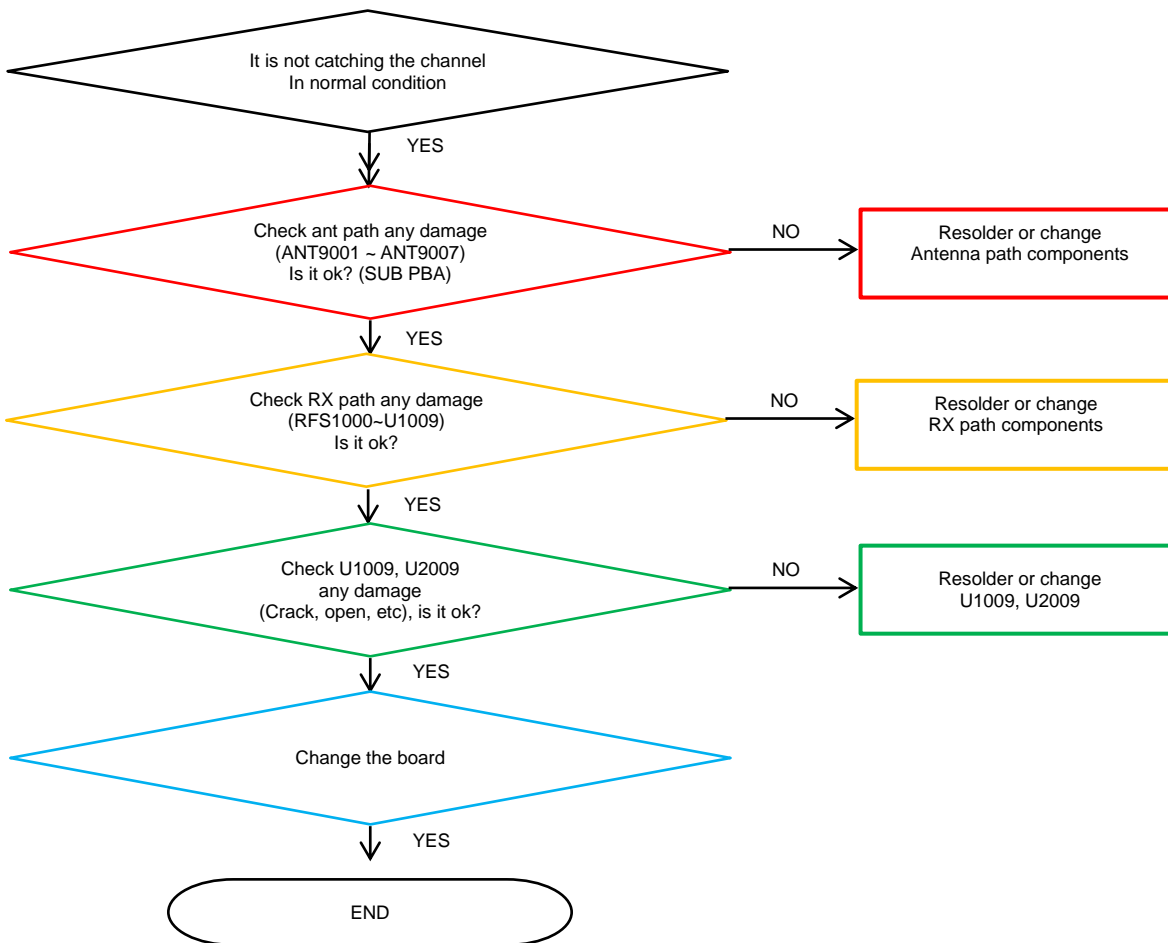
### 8-4-20. Motor





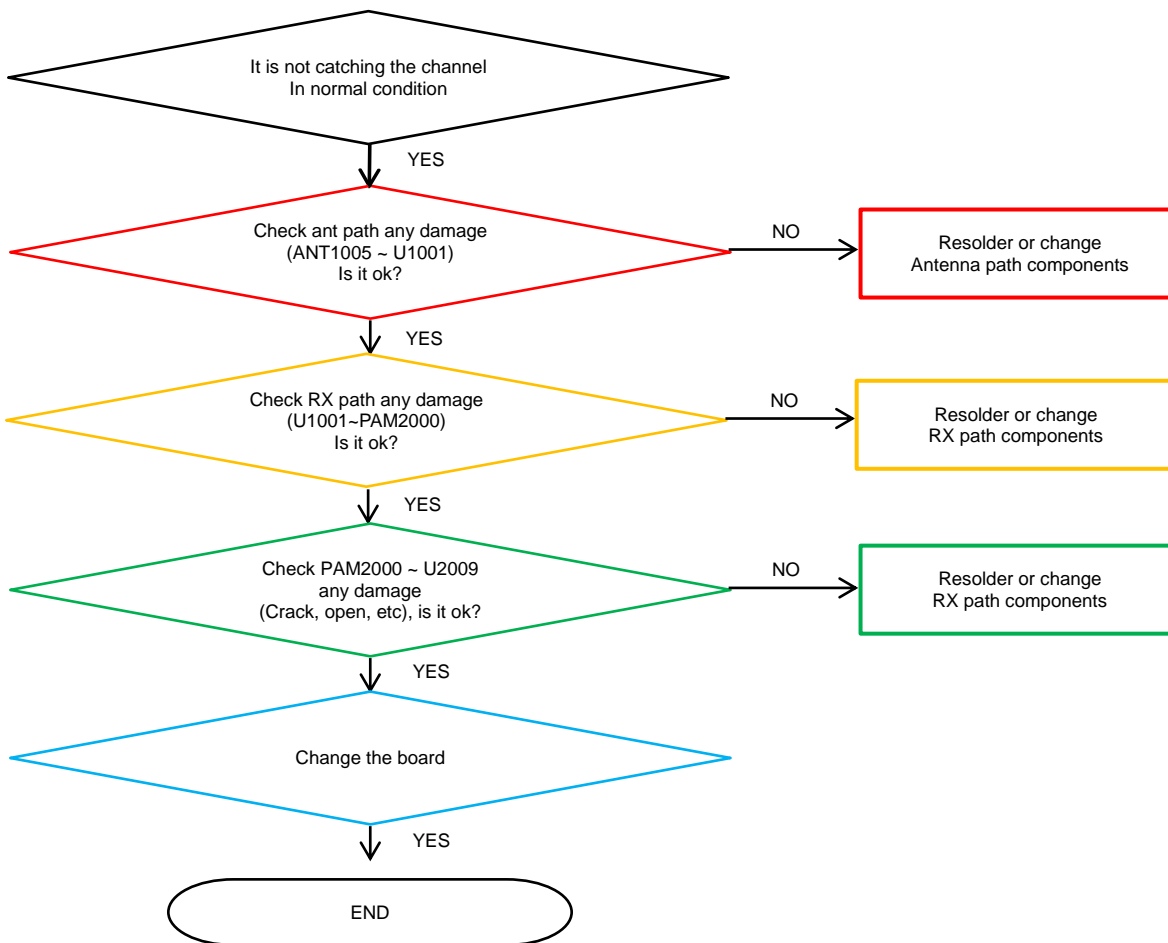
## 8. Level 3 Repair

### 8-4-21. GSM900, WCDMA B5/8, LTE B5/8/20 PRx\_SM-A707F\_IND/NES CDMA BC0, GSM900, WCDMA B5/8, LTE B5/8 PRx\_A7070\_CHN



## 8. Level 3 Repair

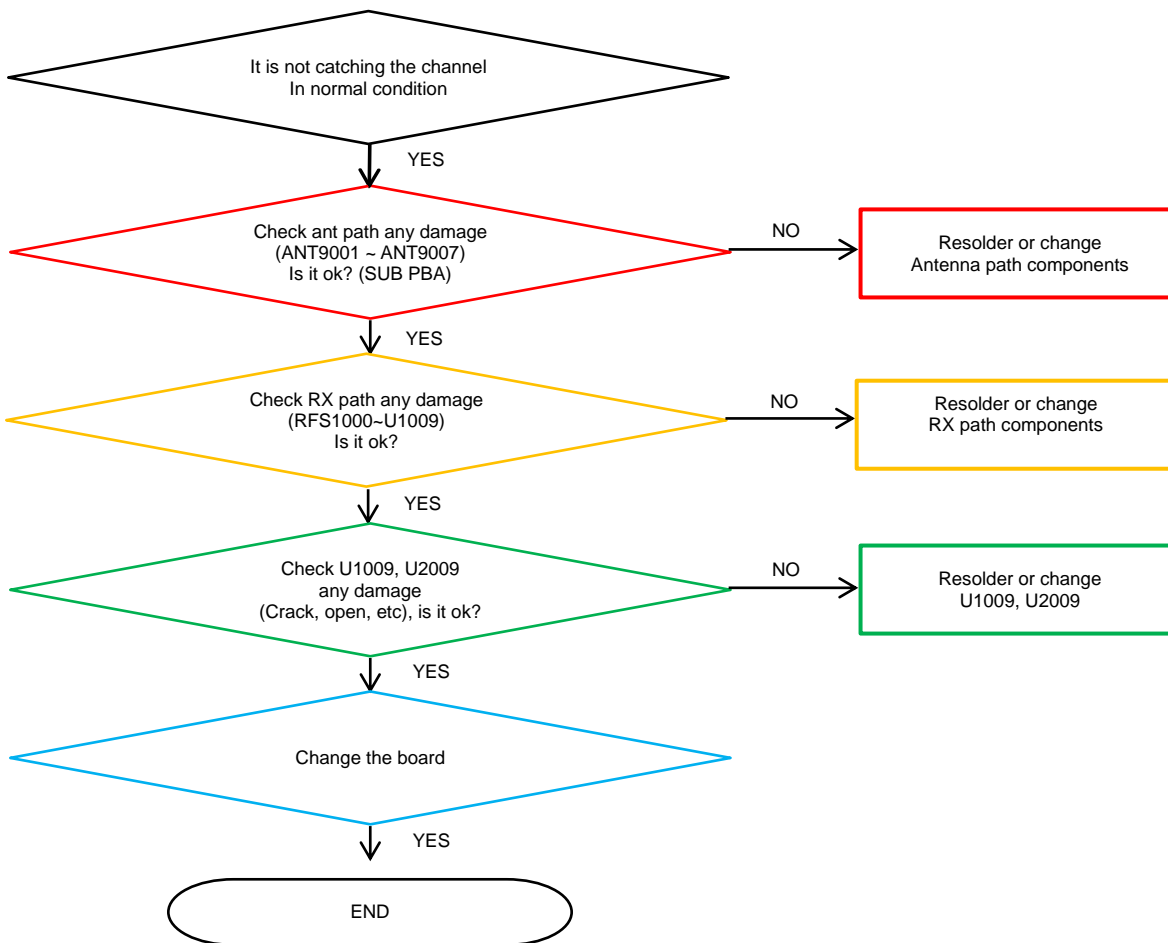
### 8-4-22. LTE B7/38/40/41 PRx



## 8. Level 3 Repair

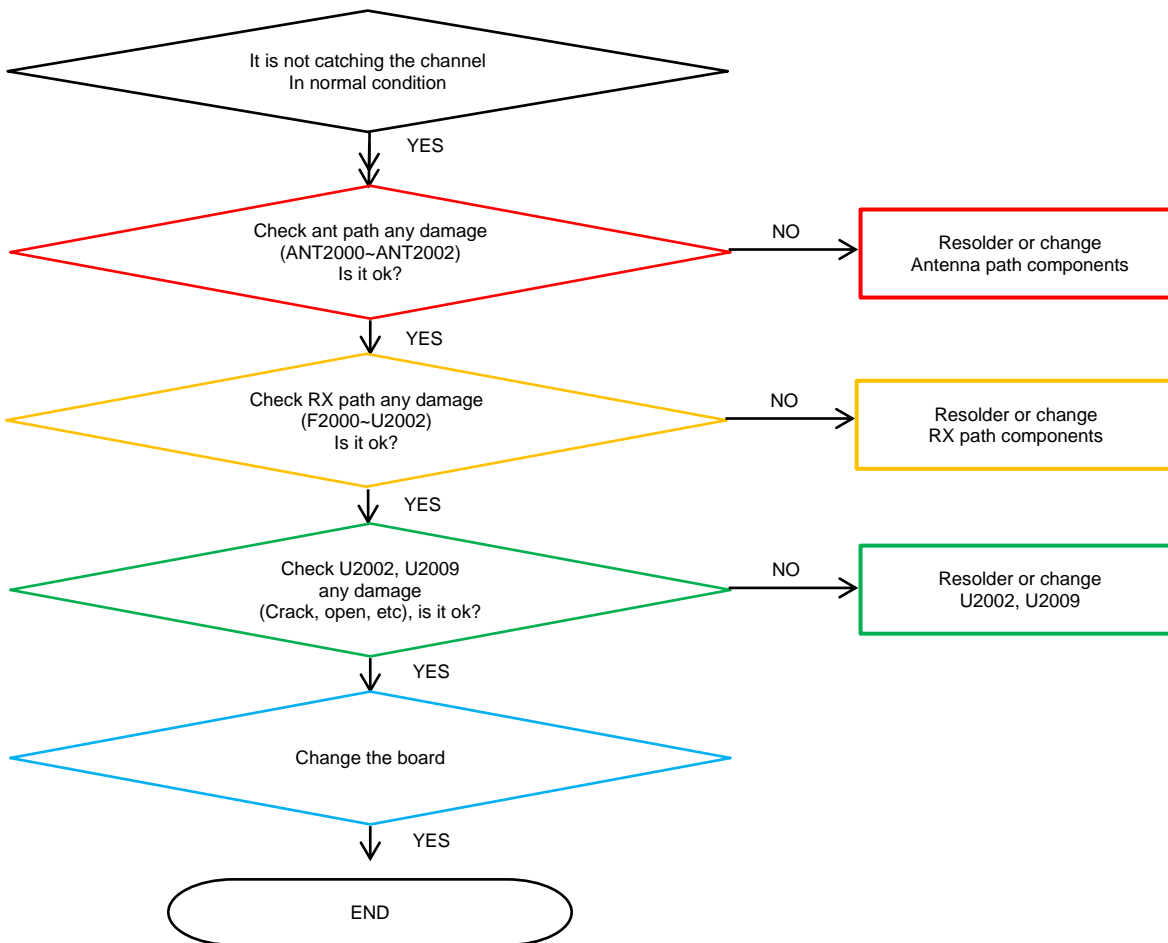
### 8-4-23. GSM DCS/PCS, WCDMA B1/2, LTE B1/3 PRx\_SM-A707F\_IND/NES

#### GSM DCS/PCS, WCDMA B1/2, TD-SCDMA B34/39, LTE B1/3/34/39 PRx\_SM-A7070\_CHN



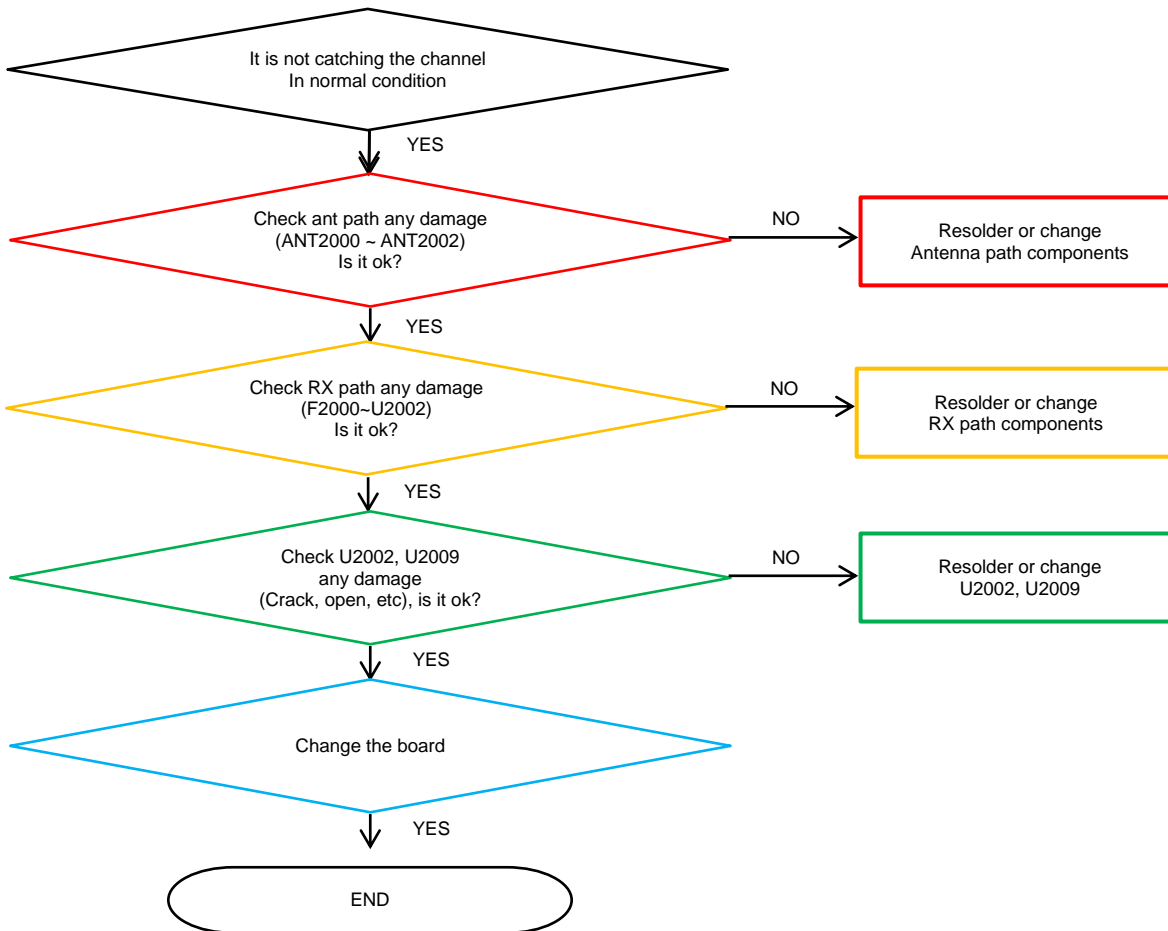
## 8. Level 3 Repair

### 8-4-24. GSM900, WCDMA B5/8, LTE B5/8/20 DRx \_SM-A707F\_IND/NES CDMA BC0, GSM900, WCDMA B5/8, LTE B5/8 DRx \_A7070\_CHN



## 8. Level 3 Repair

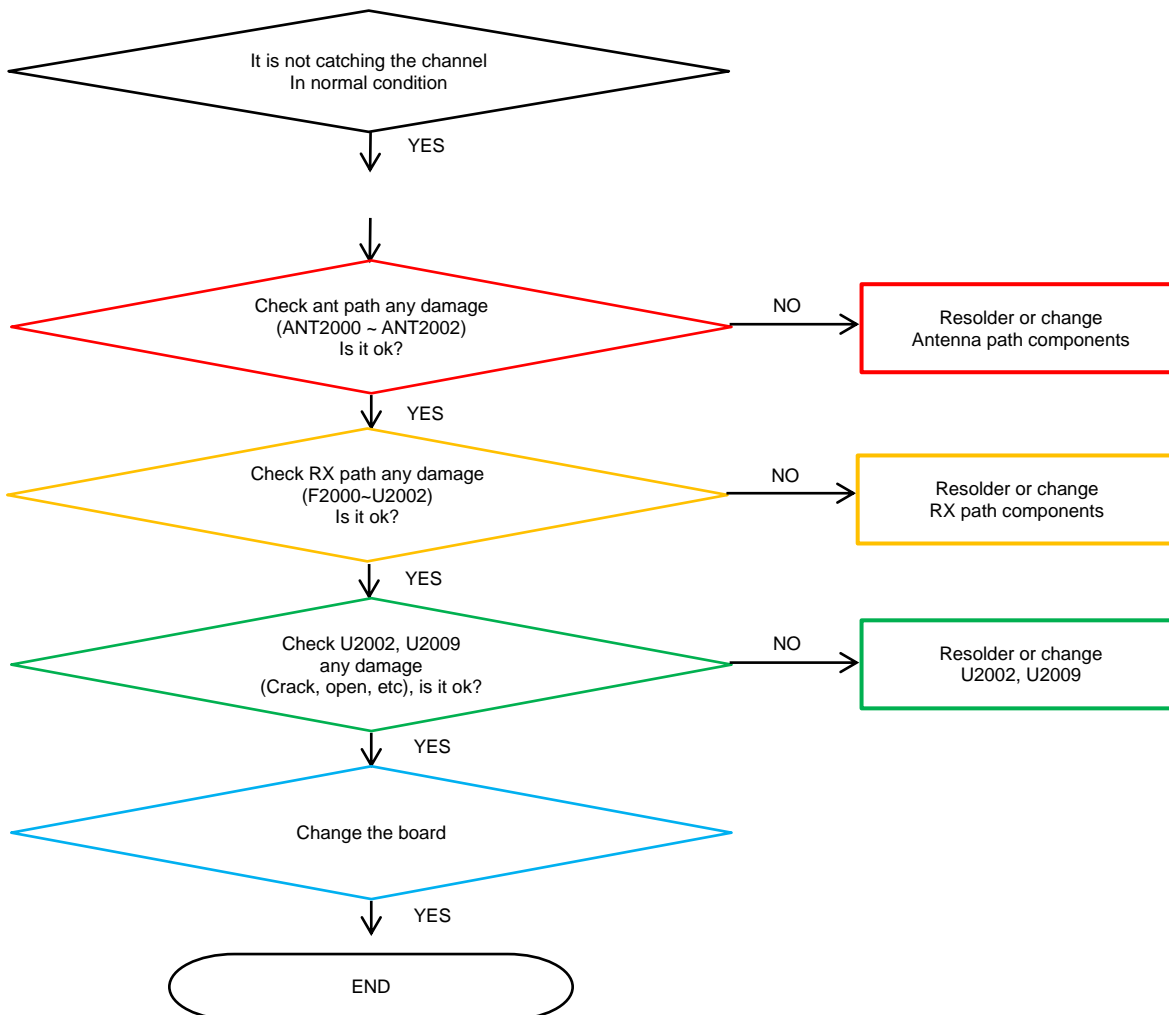
### 8-4-25. LTE B7/38/40/41 DRx



## 8. Level 3 Repair

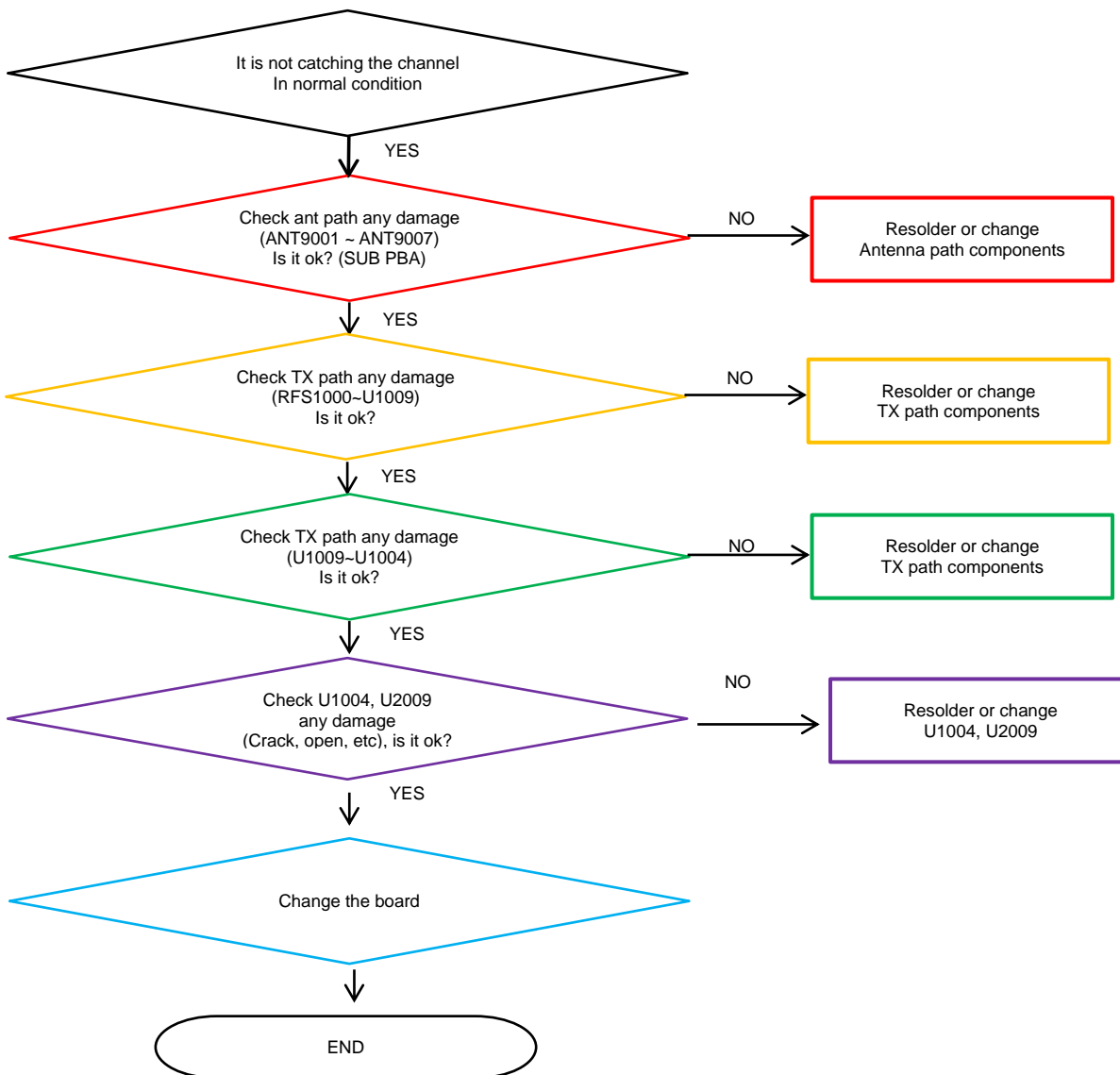
### 8-4-26. GSM DCS/PCS, WCDMA B1/2, LTE B1/3 DRx\_SM-A707F\_IND/NES

#### GSM DCS/PCS, WCDMA B1/2, TD-SCDMA B34/39, LTE B1/3/34/39 DRx\_SM-A7070\_CHN



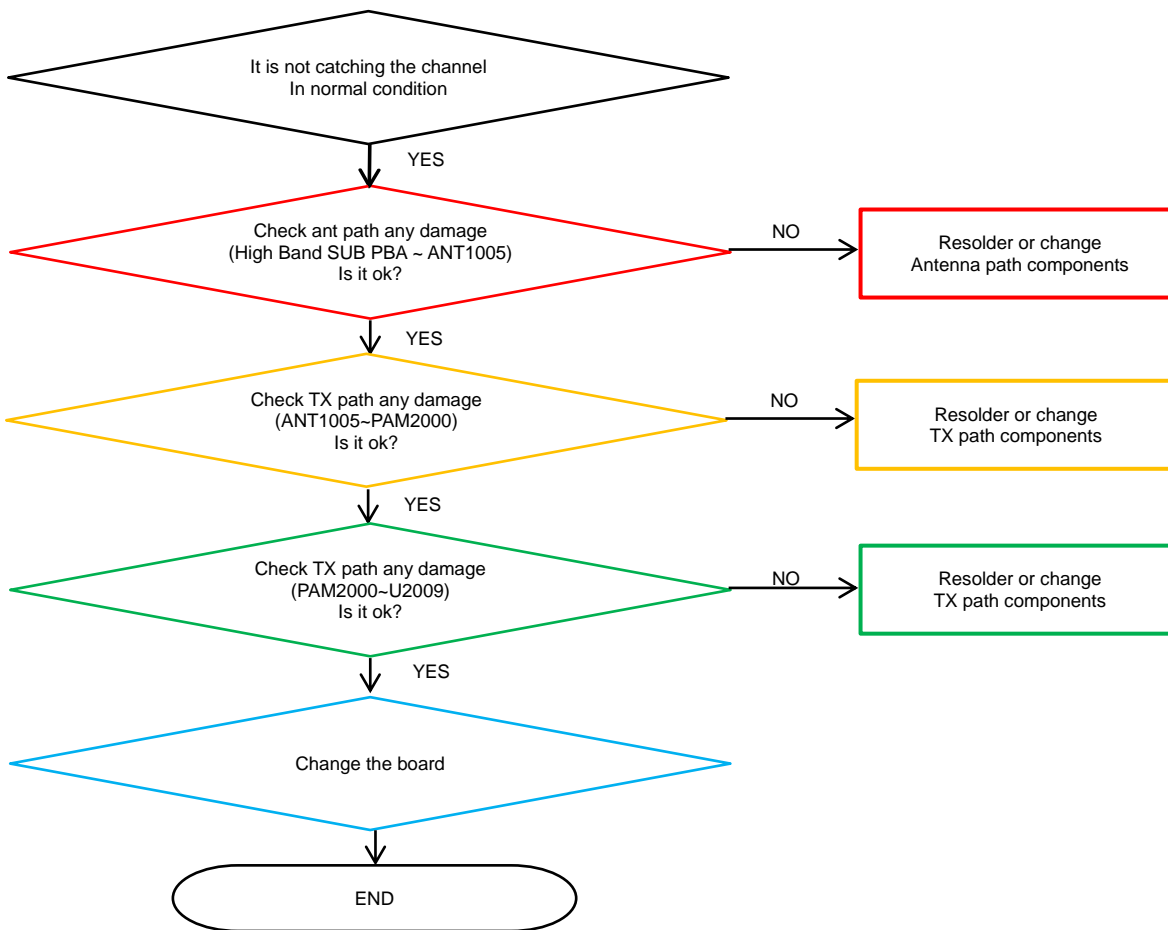
## 8. Level 3 Repair

### 8-4-27. GSM900, WCDMA B5/8, LTE B5/8/20 Tx \_SM-A707F\_IND/NES CDMA BC0, GSM900, WCDMA B5/8, LTE B5/8 Tx \_A7070\_CHN



## 8. Level 3 Repair

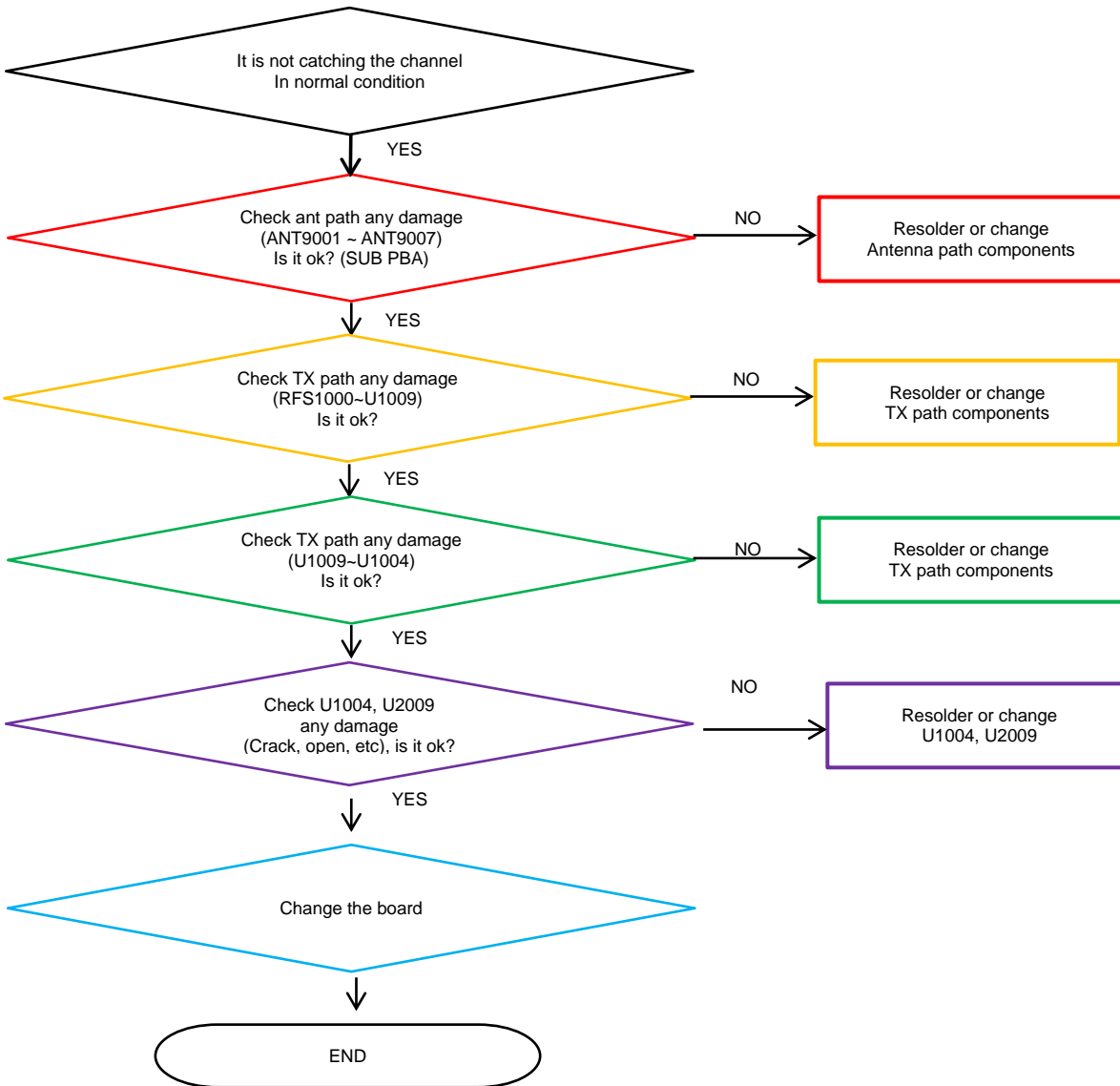
### 8-4-28. LTE B7/38/40/41 Tx





## 8. Level 3 Repair

### 8-4-29. GSM DCS/PCS, WCDMA B1/2, LTE B1/3 Tx\_SM-A707F\_IND/NES GSM DCS/PCS, WCDMA B1/2, TD-SCDMA B34/39, LTE B1/3/34/39 Tx\_SM-A7070\_CHN



## 9. Reference Abbreviation

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### 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