

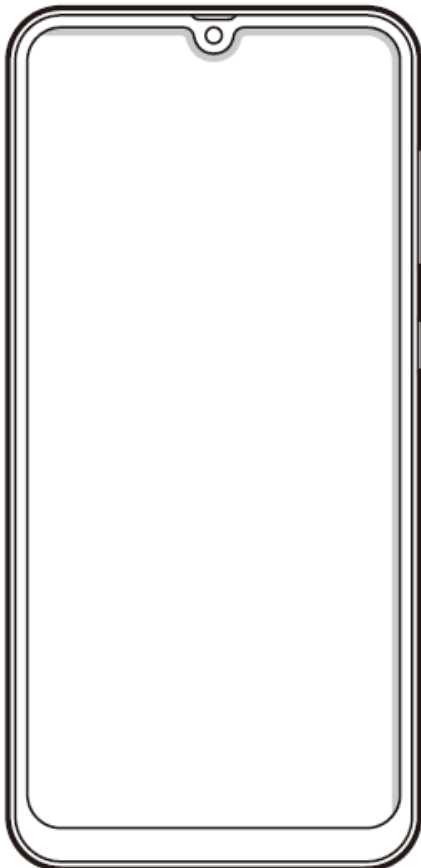
# SAMSUNG

## Mobile Device SM-A505F/FN/FM/GT/ G/GN Common

# SERVICE *Manual*

Mobile Device

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## 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

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## 2. Specification

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### 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

### 2-3-1. WCDMA General Specification[SM-A505F/FN/FM]

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

### 2-3-2. WCDMA General Specification[SM-A505G/GN/GT]

Item	WCDMA2100(B1)	WCDMA1900(B2)	WCDMA AWS(B4)	WCDMA850(B5)	WCDMA900(B8)
Freq. Band[MHz] Uplink/Downlink	1920~1980 2110~2170	1850~1910 1930~1990	1710~1755 2110~2155	824~849 869~894	880~915 925~960
ARFCN range	UL: 9612~9888 DL: 10562~10838	UL: 9262~9538 DL: 9662~9938	UL: 1312~1513 DL: 1537~1738	UL: 4132~4233 DL: 4357~4458	UL: 2712~2868 DL: 2937~3088
Tx/Rx spacing	190MHz	80MHz	400MHz	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)	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	WCDMA 10ms/0.667ms HSPA 2ms/0.667ms
Modulation	QPSK 16QAM 64QAM	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(↓)	25.7 ~ -49(↓)
Power Class	3(max+24dBm)	3(max+24dBm)	3(max+24dBm)	3(max+24dBm)	3(max+24dBm)
Sensitivity	-106dBm	-104dBm	-106dBm	-104dBm	-103dBm

## 2. Specification

### 2-4. LTE General Specification

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 Band38	LTE Band40	LTE Band41
Freq. Band[MHz] Uplink/Downlink	880~915 925~960	2570~2620	2300~2400	2496~2690
ARFCN range	UL:21450-21799 DL:3450-3799	UL/DL:37750 ~ 38249	UL/DL:38650 ~ 39649	UL/DL:39650 ~ 41589
Tx/Rx spacing (MHz)	45	0	0	0
Channel Bandwidth (MHz)	1.4/3/5/10	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)
MS Power (dBm)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)
Sensitivity(QPSK, BW 10MHz) (dBm)	-93.3	-96.3	-96.3	-94.3

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## 2. Specification

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### [SM-A505F/FN/FM]

Item	LTE Band20
Freq. Band[MHz] Uplink/Downlink	832~862 791~821
ARFCN range	UL:24150~24449 DL:6150~6449
Tx/Rx spacing (MHz)	-41
Channel Bandwidth (MHz)	5/10/15/20
Modulation	QPSK, 16/64QAM 256QAM(DL only)
MS Power (dBm)	25.7~-39(↓)
Sensitivity(QPSK, BW 10MHz) (dBm)	-93.3

## 2. Specification

### [SM-A505G/GN]

Item	LTE Band2	LTE Band4	LTE Band12	LTE Band13
Freq. Band[MHz] Uplink/Downlink	1850~1910 1930~1990	1710~1755 2110~2155	699~716 729~746	777~787 746~756
ARFCN range	UL:18600~19199 DL:600~1199	UL:19950~20399 DL:1950~2399	UL:23010~23179 DL:5010~5179	UL:23180~23279 DL:5180~5279
Tx/Rx spacing (MHz)	80	400	30	-31
Channel Bandwidth (MHz)	1.4/3/5/10/15/20	1.4/3/5/10/15/20	1.4/3/5/10	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)
MS Power (dBm)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)
Sensitivity(QPSK, BW 10MHz)(dBm)	-94.3	-96.3	-93.3	-93.3

Item	LTE Band17	LTE Band28	LTE Band66
Freq. Band[MHz] Uplink/Downlink	704~716 734~746	703~748 758~803	1710~1780 2110~2200
ARFCN range	UL:23730~23849 DL:5730~5849	UL:27210~27659 DL:9210~9659	UL:131972~132671 DL:66436~67335
Tx/Rx spacing (MHz)	30	55	400
Channel Bandwidth (MHz)	5/10	3/5/10/15/20	1.4/3/5/10/15/20
Modulation	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(↓)
Sensitivity (QPSK, BW 10MHz) (dBm)	-93.3	-94.8	-95.8



## 2. Specification

### [SM-A505GT]

Item	LTE Band2	LTE Band4	LTE Band12	LTE Band13
Freq. Band[MHz] Uplink/Downlink	1850~1910 1930~1990	1710~1755 2110~2155	699~716 729~746	777~787 746~756
ARFCN range	UL:18600~19199 DL:600~1199	UL:19950~20399 DL:1950~2399	UL:23010~23179 DL:5010~5179	UL:23180~23279 DL:5180~5279
Tx/Rx spacing (MHz)	80	400	30	-31
Channel Bandwidth (MHz)	1.4/3/5/10/15/20	1.4/3/5/10/15/20	1.4/3/5/10	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)
MS Power (dBm)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)
Sensitivity(QPSK, BW 10MHz)(dBm)	-94.3	-96.3	-93.3	-93.3

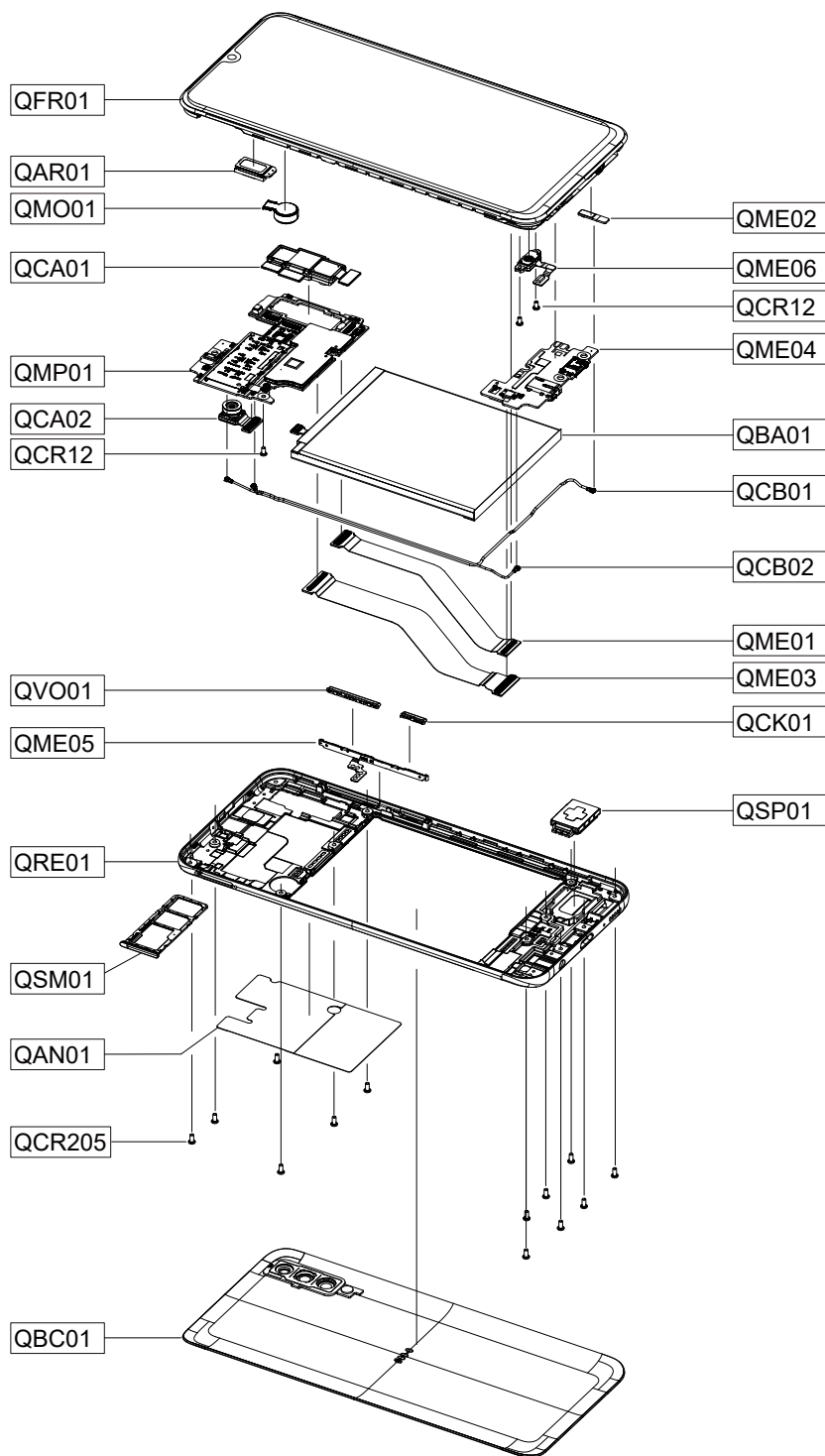
Item	LTE Band17	LTE Band20	LTE Band28	LTE Band66
Freq. Band[MHz] Uplink/Downlink	704~716 734~746	832~862 791~821	703~748 758~803	1710~1780 2110~2200
ARFCN range	UL:23730~23849 DL:5730~5849	UL:24150~24449 DL:6150~6449	UL:27210~27659 DL:9210~9659	UL:131972~132671 DL:66436~67335
Tx/Rx spacing (MHz)	30	-41	55	400
Channel Bandwidth (MHz)	5/10	5/10/15/20	3/5/10/15/20	1.4/3/5/10/15/20
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)	-93.3	-93.3	-94.8	-95.8

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## 4. Exploded View and Parts List

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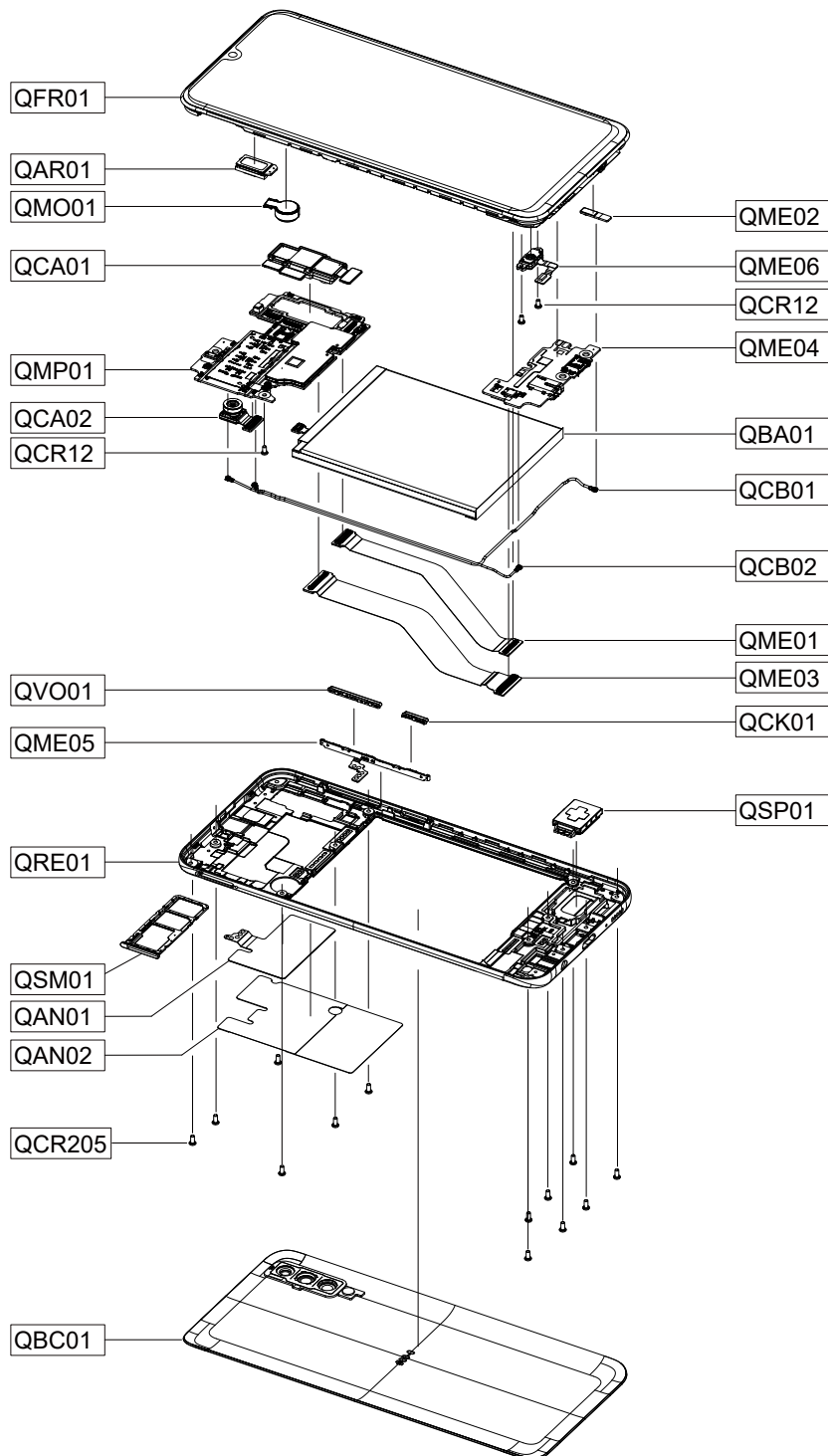
### 4-1-1. Cellular phone Exploded View [SM-A505F/GT]



※ SVC REPAIR TAPE  
QRT01

## 4. Exploded View and Parts List

### 4-1-2. Cellular phone Exploded View [SM-A505FN]



※ SVC REPAIR TAPE  
QRT01

## 4. Exploded View and Parts List

### 4-2-1. Cellular phone Parts list [SM-A505F]

Design LOC	Description	SEC CODE
QCR12	SCREW-MACHINE	6001-001530
QCR205	SCREW-MACHINE	6001-003227
QCA01	ASSY CAMERA-1/2.78" _24M_A505F	GH96-12415A
QCA02	ASSY VT CAMERA-1/2.8" _25M_A505F	GH96-12416A
QRE01	MEA REAR-SM-A505F	GH97-22993A
QSP01	SPEAKER	3001-002856
QVO01	ASSY KEY-VOLUME	GH98-43923A
QCK01	ASSY KEY-POWER	GH98-43924A
QME05	ASSY SUB PBA-SIDE KEY (SM-A505F)	GH96-12420A
QAN01	ANTENNA-NON NFC DUMMY	GH42-06315A
QAR01	AUDIO-RECEIVER	3009-001705
QCR12	SCREW-MACHINE	6001-001530
QMO01	MOTOR DC-VIBRATION (SM-J200BT)	GH31-00744A
QCB01	CBF COAXIAL CABLE-A505F,177.3MM,WHITE	GH39-01991A
QCB02	CBF COAXIAL CABLE-A505F,131MM,BLUE	GH39-01992A
QME03	CON TO CON FPCB-MAIN (SM-A505F)	GH59-15029A
QME01	CON TO CON FPCB-OCTA (SM-A505F)	GH59-15030A
QME02	ASSY SUB PBA-HB (SM-A505F)	GH96-12423A
QME04	ASSY SUB PBA-SM-A505F	GH96-12426A
QME06	ASSY MODULE-OPTICAL FINGER SCAN SENSOR	GH96-12434A
QSM01	ASSY COVER-SIM TRAY(DS)_ZK	GH98-43922A
QMP01	SVC PBA-MAIN(COMM),SM-A505F/6R6D,SVC	GH82-19205A
QFR01	SVC ASSY SMT-OCTA(E/ZK),SM-A505F,INS,SVC	GH82-19204A
QBA01	SVC BATTERY ASSY-EB-BA505ABN,30,INS,SVC	GH82-19203A
QBC01	SVC COVER ASSY-B/G	GH82-19236A
QRT01	Back Glass Rework Tape	GH81-16711A

## 4. Exploded View and Parts List

### 4-2-2. Cellular phone Parts list [SM-A505FN]

Design LOC	Description	SEC CODE
QCR12	SCREW-MACHINE	6001-001530
QCR205	SCREW-MACHINE	6001-003227
QCA01	ASSY CAMERA-1/2.78" _24M_A505F	GH96-12415A
QCA02	ASSY VT CAMERA-1/2.8" _25M_A505F	GH96-12416A
QRE01	MEA REAR-SM-A505_NFC_ZK	GH97-23109A
QSP01	SPEAKER	3001-002856
QVO01	ASSY KEY-VOLUME	GH98-43923A
QCK01	ASSY KEY-POWER	GH98-43924A
QME05	ASSY SUB PBA-SIDE KEY (SM-A505F)	GH96-12420A
QAN01	ANTENNA COIL-NFC (SM-A505FN)	GH42-06264A
QAN02	ANTENNA COIL-ONLY NFC DUMMY	GH42-06316A
QAR01	AUDIO-RECEIVER	3009-001705
QCR12	SCREW-MACHINE	6001-001530
QMO01	MOTOR DC-VIBRATION (SM-J200BT)	GH31-00744A
QCB01	CBF COAXIAL CABLE-A505F,177.3MM,WHITE	GH39-01991A
QCB02	CBF COAXIAL CABLE-A505F,131MM,BLUE	GH39-01992A
QME03	CON TO CON FPCB-MAIN (SM-A505F)	GH59-15029A
QME01	CON TO CON FPCB-OCTA (SM-A505F)	GH59-15030A
QME02	ASSY SUB PBA-HB (SM-A505F)	GH96-12423A
QME04	ASSY SUB PBA-SM-A505F	GH96-12426A
QME06	ASSY MODULE-OPTICAL FINGER SCAN SENSOR	GH96-12434A
QSM01	ASSY COVER-SIM TRAY(DS)_ZK	GH98-43922A
QMP01	SVC PBA-MAIN(COMM)	GH82-19291A
QFR01	SVC ASSY SMT-OCTA(E/ZK)	GH82-19204A
QBA01	SVC BATTERY ASSY-EB-BA505ABU,30,ZTO,SVC	GH82-19269A
QBC01	SVC COVER ASSY-B/G;COMM1_ZK_VN_DS	GH82-19229A
QRT01	A/S-TAPE BACK COVER	GH81-16711A

## 4. Exploded View and Parts List

### 4-2-3. Cellular phone Parts list [SM-A505GT]

Design LOC	Description	SEC CODE
QCR12	SCREW-MACHINE	6001-001530
QCR205	SCREW-MACHINE	6001-003227
QCA01	ASSY CAMERA-1/2.78" _24M_A505F	GH96-12415A
QCA02	ASSY VT CAMERA-1/2.8" _25M_A505F	GH96-12416A
QRE01	MEA REAR-SM-A505F	GH97-22993A
QSP01	SPEAKER	3001-002856
QVO01	ASSY KEY-VOLUME	GH98-43923A
QCK01	ASSY KEY-POWER	GH98-43924A
QME05	ASSY SUB PBA-SIDE KEY (SM-A505F)	GH96-12420A
QAN01	ANTENNA-NON NFC DUMMY	GH42-06315A
QAR01	AUDIO-RECEIVER	3009-001705
QCR12	SCREW-MACHINE	6001-001530
QMO01	MOTOR DC-VIBRATION (SM-J200BT)	GH31-00744A
QCB01	CBF COAXIAL CABLE-A505F,177.3MM,WHITE	GH39-01991A
QCB02	CBF COAXIAL CABLE-A505F,131MM,BLUE	GH39-01992A
QME03	CON TO CON FPCB-MAIN (SM-A505F)	GH59-15029A
QME01	CON TO CON FPCB-OCTA (SM-A505F)	GH59-15030A
QME02	ASSY SUB PBA-HB (SM-A505F)	GH96-12423A
QME04	ASSY SUB PBA-SM-A505GT	GH96-12460A
QME06	ASSY MODULE-OPTICAL FINGER SCAN SENSOR	GH96-12434A
QSM01	ASSY COVER-SIM TRAY(DS)_ZK	GH98-43922A
QMP01	SVC PBA-MAIN(COMM)SM-A505GT/6DL,ZTO,SVC	GH82-19292A
QFR01	SVC ASSY SMT-OCTA(E/ZK)	GH82-19204A
QBA01	SVC BATTERY ASSY-EB-BA505ABU,30,ZTO,SVC	GH82-19269A
QBC01	SVC COVER ASSY-B/G	GH82-19308A
QRT01	A/S-TAPE BACK COVER	GH81-16711A

## 5. MAIN Electrical Parts List

Parts Code	Design LOC	Description
D5100	0401-001110	DIODE-SWITCHING
D5000	0404-001250	DIODE-SCHOTTKY
ZD5002,ZD5005,ZD6017	0406-001561	DIODE-TVS
ZD5000	0406-001592	DIODE-TVS
ZD3002	0406-001715	DIODE-TVS
ZD1000,ZD5001,ZD7009	0406-001728	DIODE-TVS
ZD6016,ZD6018,ZD6020	0406-001781	DIODE-TVS
D6003,D6004	0406-001787	DIODE-TVS
D6000	0406-001808	DIODE-TVS
ZD6021,ZD6022	0406-001809	DIODE-TVS
Q6000	0505-001883	FET-SILICON
LED5000	0601-003768	LED
U1009	1001-001844	IC
U1007	1001-001970	IC
U1005	1001-001974	IC
U1000,U1001	1001-002064	IC
U3004,U6003	1001-002065	IC
U3001	1001-002077	IC
U2006	1001-002078	IC
U2011	1003-002802	IC
U3005	1003-002805	IC
U3017	1009-001076	IC
UME5000	1107-002589	IC
U3003	1201-003869	IC
PAM1000	1201-004100	IC
U1008	1201-004135	IC
U6001	1201-004156	IC
U1015	1201-004219	IC
U6000	1202-001120	IC
U3010	1203-008249	IC
U5019	1203-008251	IC
U7005	1203-008326	IC
U6002	1203-008475	IC
U2001	1203-008693	IC
U5003	1203-008729	IC
U3013	1203-008771	IC
U3006	1203-008865	IC
U3000,U7006	1203-008867	IC

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## 5. MAIN Electrical Parts List

U3002	1203-008872	IC
U3011,U6020	1203-008925	IC
U7007	1203-008926	IC
U7002	1203-008989	IC
U7003	1203-009035	IC
U7000	1203-009221	IC
U3009	1204-003748	IC
U6012	1205-005750	IC
U2010	1205-005767	IC
U3016	1205-005791	IC
U3018	1209-002513	IC
U3008	1209-002628	IC
U3014	1209-002629	IC
TH1000,TH4000,TH4001	1404-001724	THERMISTOR
TH5000	1404-001724	THERMISTOR
V7000	1405-001458	VARISTOR
R3000,R3007	2007-000141	R-CHIP
R3006	2007-000148	R-CHIP
R3001,R3031	2007-000982	R-CHIP
R6887,R6888	2007-003015	R-CHIP
R6016,R6017	2007-007142	R-CHIP
C6054,C6055	2007-007190	R-CHIP
R5002	2007-007193	R-CHIP
R2002,R2003,R4005	2007-007741	R-CHIP
R4013,R5017,R5028	2007-007741	R-CHIP
R5031,R6004,R6024	2007-007741	R-CHIP
R6025	2007-007741	R-CHIP
ZD6019	2007-007798	R-CHIP
R5022	2007-007942	R-CHIP
R5053	2007-008043	R-CHIP
R6023	2007-008296	R-CHIP
R5003,R5004,R5008	2007-008486	R-CHIP
L7003,R6008,R7000	2007-008531	R-CHIP
R7001	2007-008531	R-CHIP
R4444	2007-008816	R-CHIP
R3005	2007-009111	R-CHIP
R5007	2007-009155	R-CHIP
R1009,R4017,R4034	2007-009157	R-CHIP
R5018,R5052,R6015	2007-009157	R-CHIP

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R7004,R7007	2007-009157	R-CHIP
R5001	2007-009182	R-CHIP
R4049,R4060,R5013	2007-009212	R-CHIP
R6009	2007-009212	R-CHIP
R6001	2007-009314	R-CHIP
R5010	2007-009315	R-CHIP
R4036,R4037,R4040	2007-009352	R-CHIP
R4051,R5016,R5019	2007-009352	R-CHIP
R7002	2007-009352	R-CHIP
R3008,R4015,R4018	2007-009408	R-CHIP
R4019,R4022,R4023	2007-009408	R-CHIP
R4024,R4025,R4026	2007-009408	R-CHIP
R4029,R4030,R4031	2007-009408	R-CHIP
R4032,R4033,R4038	2007-009408	R-CHIP
R4039,R4043,R4046	2007-009408	R-CHIP
R4048,R4052,R4053	2007-009408	R-CHIP
R4054,R4055,R4056	2007-009408	R-CHIP
R4057,R4058,R4059	2007-009408	R-CHIP
R4790,R4791,R4792	2007-009408	R-CHIP
R4793	2007-009408	R-CHIP
R6013,R6036	2007-009410	R-CHIP
R6000	2007-009766	R-CHIP
R1000,R1002,R1003	2007-009805	R-CHIP
R1004,R1005,R2000	2007-009805	R-CHIP
R6222	2007-009807	R-CHIP
R6012	2007-009838	R-CHIP
R5005	2007-009866	R-CHIP
R4020,R4021,R4027	2007-009920	R-CHIP
R4028	2007-009920	R-CHIP
R6011	2007-009969	R-CHIP
R6021	2007-010031	R-CHIP
R5000,R5355	2007-010202	R-CHIP
R6022	2007-010685	R-CHIP
R4000	2007-011043	R-CHIP
R6019,R6035	2007-011648	R-CHIP
R5026,R6020	2007-012202	R-CHIP
C3027,C3099	2203-000311	C-CERAMIC
C3068	2203-000438	C-CERAMIC
C3097	2203-001153	C-CERAMIC

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C3083,C3100	2203-002443	C-CERAMIC
C5082	2203-005344	C-CERAMIC
C5087,C5099,C5113	2203-005682	C-CERAMIC
C7003,C7013	2203-005682	C-CERAMIC
C3019,C3020,C3037	2203-005725	C-CERAMIC
C3038,C7004,C7006	2203-005725	C-CERAMIC
L1041	2203-005725	C-CERAMIC
C5064,C6000,C6005	2203-005729	C-CERAMIC
C6014,C6022,C6030	2203-005729	C-CERAMIC
C7007	2203-005729	C-CERAMIC
C1003,C2040,C3025	2203-005731	C-CERAMIC
C6020,C6059	2203-005731	C-CERAMIC
C5077,C6013,C6021	2203-005732	C-CERAMIC
C6037	2203-005732	C-CERAMIC
C1007,C1081,C3054	2203-005734	C-CERAMIC
C1010,C1022,C1023	2203-005736	C-CERAMIC
C1027,C1029,C1033	2203-005736	C-CERAMIC
C1040,C1048,C1051	2203-005736	C-CERAMIC
C1057,C1069,C1074	2203-005736	C-CERAMIC
C1901,C1902,C2000	2203-005736	C-CERAMIC
C2005,C2012,C2018	2203-005736	C-CERAMIC
C2026,C2500,C2702	2203-005736	C-CERAMIC
C3005,C3032,C3036	2203-005736	C-CERAMIC
C3041,C3049,C6026	2203-005736	C-CERAMIC
C1055,C1064,C1076	2203-005777	C-CERAMIC
C1085,C1908,C2006	2203-005777	C-CERAMIC
C2007	2203-005777	C-CERAMIC
C1047,C1049,C1065	2203-005789	C-CERAMIC
C1911,C2008,C2505	2203-005789	C-CERAMIC
C1043,C1101,C1102	2203-005792	C-CERAMIC
C1013,C1096,C2002	2203-005806	C-CERAMIC
L1008	2203-006123	C-CERAMIC
C6008	2203-006194	C-CERAMIC
C1038,C1098	2203-006305	C-CERAMIC
C1004,C1056,C1106	2203-006318	C-CERAMIC
C2506	2203-006318	C-CERAMIC
C2004,C3013,C3014	2203-006400	C-CERAMIC
C3021,C3033,C3073	2203-006400	C-CERAMIC
C3078,C4013,C4014	2203-006400	C-CERAMIC

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C4026,C4028,C5089	2203-006400	C-CERAMIC
C5139,C5140,C6003	2203-006400	C-CERAMIC
C3023	2203-006410	C-CERAMIC
C2069,C3029,C3030	2203-006423	C-CERAMIC
C3071,C5810,C6016	2203-006423	C-CERAMIC
C6033,C6036,C6051	2203-006423	C-CERAMIC
C6089,C6091,C7040	2203-006423	C-CERAMIC
L6010	2203-006423	C-CERAMIC
C6050	2203-006462	C-CERAMIC
C1006,C1031,C1054	2203-006556	C-CERAMIC
C1122,C5105	2203-006556	C-CERAMIC
C3053	2203-006604	C-CERAMIC
C1035	2203-006611	C-CERAMIC
C4003	2203-006668	C-CERAMIC
C1920,C2046,L1057	2203-006674	C-CERAMIC
C1014,C1059,C1061	2203-006839	C-CERAMIC
C1062,C1067,C1116	2203-006839	C-CERAMIC
C1119,C2003,C3022	2203-006839	C-CERAMIC
C4007,C4012,C4041	2203-006839	C-CERAMIC
C5081,C5084,C5088	2203-006839	C-CERAMIC
C6045	2203-006839	C-CERAMIC
C1072	2203-006846	C-CERAMIC
C5006,C5013,C5026	2203-006872	C-CERAMIC
C5027,C5028,C5032	2203-006872	C-CERAMIC
C5044,C5051,C5062	2203-006872	C-CERAMIC
C5095	2203-006872	C-CERAMIC
C1046,C2010,C2053	2203-006979	C-CERAMIC
C2056,C2062,C2063	2203-006979	C-CERAMIC
C2067,C2076,C2077	2203-006979	C-CERAMIC
C2079,C2091	2203-006979	C-CERAMIC
C3050,C3058,C7012	2203-007194	C-CERAMIC
L1043	2203-007194	C-CERAMIC
C4148	2203-007210	C-CERAMIC
C5045	2203-007271	C-CERAMIC
C3069,C3076	2203-007295	C-CERAMIC
C3087,C5008,C5041	2203-007317	C-CERAMIC
C5073,C5074,C5100	2203-007317	C-CERAMIC
C7000,C7011,C7018	2203-007317	C-CERAMIC
C7027,C7028,C7031	2203-007317	C-CERAMIC

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C7032,C7033,C7034	2203-007317	C-CERAMIC
C7035	2203-007317	C-CERAMIC
C2065	2203-007391	C-CERAMIC
C2092	2203-007392	C-CERAMIC
C1041,C1044,C2028	2203-007393	C-CERAMIC
C3080,C3081,C4033	2203-007393	C-CERAMIC
C4058,C4071,C4080	2203-007393	C-CERAMIC
C4092,C4105,C5079	2203-007393	C-CERAMIC
C5091,C5098,C5145	2203-007393	C-CERAMIC
C6025,C6032,C6039	2203-007393	C-CERAMIC
C6082,C6083,C6084	2203-007393	C-CERAMIC
C6085,C6086,C6087	2203-007393	C-CERAMIC
C6092,C7023	2203-007393	C-CERAMIC
C5068	2203-007425	C-CERAMIC
C6047	2203-007456	C-CERAMIC
C2055,C2064,C2066	2203-007474	C-CERAMIC
C2080	2203-007474	C-CERAMIC
C2027,C2054,C2061	2203-007796	C-CERAMIC
C2075,C2078,C3003	2203-007796	C-CERAMIC
C3008,C3010,C3011	2203-007796	C-CERAMIC
C3012,C3017,C3026	2203-007796	C-CERAMIC
C3031,C3034,C3074	2203-007796	C-CERAMIC
C3077,C3082,C3089	2203-007796	C-CERAMIC
C3091,C3092,C3093	2203-007796	C-CERAMIC
C3094,C4001,C4002	2203-007796	C-CERAMIC
C4004,C4005,C4006	2203-007796	C-CERAMIC
C4008,C4011,C4015	2203-007796	C-CERAMIC
C4016,C4018,C4019	2203-007796	C-CERAMIC
C4020,C4021,C4022	2203-007796	C-CERAMIC
C4023,C4024,C4025	2203-007796	C-CERAMIC
C4027,C4029,C4030	2203-007796	C-CERAMIC
C4031,C4032,C4035	2203-007796	C-CERAMIC
C4042,C4043,C4054	2203-007796	C-CERAMIC
C4055,C4056,C4057	2203-007796	C-CERAMIC
C4059,C4066,C4067	2203-007796	C-CERAMIC
C4068,C4070,C4073	2203-007796	C-CERAMIC
C4074,C4075,C4076	2203-007796	C-CERAMIC
C4078,C4079,C4084	2203-007796	C-CERAMIC
C4085,C4086,C4087	2203-007796	C-CERAMIC

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C4088,C4090,C4091	2203-007796	C-CERAMIC
C4094,C4095,C4096	2203-007796	C-CERAMIC
C4104,C4107,C4109	2203-007796	C-CERAMIC
C4115,C4116,C4117	2203-007796	C-CERAMIC
C4119,C4120,C4121	2203-007796	C-CERAMIC
C4127,C4128,C4130	2203-007796	C-CERAMIC
C4132,C4133,C4138	2203-007796	C-CERAMIC
C4140,C4141,C4142	2203-007796	C-CERAMIC
C4143,C5007,C5011	2203-007796	C-CERAMIC
C5014,C5015,C5018	2203-007796	C-CERAMIC
C5019,C5022,C5025	2203-007796	C-CERAMIC
C5031,C5038,C5039	2203-007796	C-CERAMIC
C5046,C5048,C5050	2203-007796	C-CERAMIC
C5078,C5102,C5109	2203-007796	C-CERAMIC
C5110,C5112,C5116	2203-007796	C-CERAMIC
C6002,C6019,C6040	2203-007796	C-CERAMIC
C6041,C6042,C6043	2203-007796	C-CERAMIC
C7001,C7010,C7020	2203-007796	C-CERAMIC
C7022,C7026,C7041	2203-007796	C-CERAMIC
C7042,C7048,C7049	2203-007796	C-CERAMIC
C7050,C7076,C7077	2203-007796	C-CERAMIC
C7082,C7287,C7293	2203-007796	C-CERAMIC
C3065,C5069,C5075	2203-008097	C-CERAMIC
C6006	2203-008097	C-CERAMIC
C2095,C3000,C3001	2203-008242	C-CERAMIC
C3002,C3006,C3007	2203-008242	C-CERAMIC
C3009,C3061,C3064	2203-008242	C-CERAMIC
C4000,C4052,C4053	2203-008242	C-CERAMIC
C4103,C4106,C5029	2203-008242	C-CERAMIC
C6018	2203-008242	C-CERAMIC
C3057,C6053,C6056	2203-008243	C-CERAMIC
C6057	2203-008243	C-CERAMIC
C4114,C5001,C5003	2203-008312	C-CERAMIC
C5004,C5053,C5055	2203-008312	C-CERAMIC
C5058,C5059,C5063	2203-008312	C-CERAMIC
C5066,C5071,C5101	2203-008312	C-CERAMIC
C3024	2203-008394	C-CERAMIC
C3101	2203-008529	C-CERAMIC
C5061	2203-008572	C-CERAMIC

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C6027	2203-008654	C-CERAMIC
C1091,C1097,C2093	2203-008860	C-CERAMIC
C3004,C3035,C3062	2203-008860	C-CERAMIC
C3063,C3079,C3086	2203-008860	C-CERAMIC
C3088,C3090,C5040	2203-008860	C-CERAMIC
C5056,C5060,C5090	2203-008860	C-CERAMIC
C5111,C6004,C6024	2203-008860	C-CERAMIC
C6035,C6081,C7039	2203-008860	C-CERAMIC
C7052,C7053,C7054	2203-008860	C-CERAMIC
C7078,C7079,C7080	2203-008860	C-CERAMIC
C1060,C1090,C5023	2203-008876	C-CERAMIC
C5024,C5030,C5047	2203-008876	C-CERAMIC
C5067,C5097,C5130	2203-008876	C-CERAMIC
C5811,C6009,C6052	2203-008876	C-CERAMIC
C7081	2203-008876	C-CERAMIC
C4034,C4036,C4039	2203-009064	C-CERAMIC
C3028,C3098	2203-009167	C-CERAMIC
C5009	2203-009537	C-CERAMIC
C6007,C7056	2203-009618	C-CERAMIC
C2022,C4051,C4065	2203-009733	C-CERAMIC
C4072,C4093,C4112	2203-009733	C-CERAMIC
C4113,C4122,C5000	2203-009733	C-CERAMIC
C5002,C5005,C5049	2203-009733	C-CERAMIC
C5052,C5054,C5057	2203-009733	C-CERAMIC
C5065,C5070,C5072	2203-009733	C-CERAMIC
C5076,C5080,C5083	2203-009733	C-CERAMIC
C5085,C5086,C5092	2203-009733	C-CERAMIC
C5093,C5094,C5129	2203-009733	C-CERAMIC
C5141,C5144,C6001	2203-009733	C-CERAMIC
C6015,C6023,C6046	2203-009733	C-CERAMIC
C6088,C6090,C7002	2203-009733	C-CERAMIC
C7008,C7021,C7043	2203-009733	C-CERAMIC
C7044,C7057,C7058	2203-009733	C-CERAMIC
C7059,C7060,C7061	2203-009733	C-CERAMIC
C7063,C7066,C7067	2203-009733	C-CERAMIC
C7068,C7072,C7073	2203-009733	C-CERAMIC
C7074,C7286	2203-009733	C-CERAMIC
C4037,C4038	2203-009735	C-CERAMIC
C3015,C5036,C5037	2203-009736	C-CERAMIC

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C5042,C5043,C5096	2203-009736	C-CERAMIC
R6005	2203-009969	C-CERAMIC
C5142,C5143	2203-009987	C-CERAMIC
C3039	2203-010085	C-CERAMIC
TA3000	2409-001400	CAPACITOR
L5901,L5999	2703-002309	INDUCTOR-SMD
L1001,L1010,L1018	2703-002649	INDUCTOR-SMD
L1019,L1025,L1059	2703-002649	INDUCTOR-SMD
L1072,L1094	2703-002900	INDUCTOR-SMD
C1039	2703-002901	INDUCTOR-SMD
L1017	2703-002903	INDUCTOR-SMD
L1024,L3016	2703-002907	INDUCTOR-SMD
L2025,L2802	2703-002953	INDUCTOR-SMD
L1066,L1077	2703-002955	INDUCTOR-SMD
C1087,C3056,L1079	2703-002959	INDUCTOR-SMD
L2009	2703-002959	INDUCTOR-SMD
L1007,L1045,L1097	2703-002999	INDUCTOR-SMD
L3006	2703-003476	INDUCTOR-SMD
L1054,L3017	2703-003970	INDUCTOR-SMD
L1003,L1014,L1040	2703-004012	INDUCTOR-SMD
L1046,L1071,L1082	2703-004012	INDUCTOR-SMD
L1083,L1930	2703-004012	INDUCTOR-SMD
L1004,L1015,L1021	2703-004013	INDUCTOR-SMD
L1047,L1048,L1052	2703-004013	INDUCTOR-SMD
L1090,L3015	2703-004013	INDUCTOR-SMD
C1000,L1013,L1044	2703-004014	INDUCTOR-SMD
L1049,L1062,L2006	2703-004014	INDUCTOR-SMD
L3008	2703-004014	INDUCTOR-SMD
L1030,L1034,L1038	2703-004018	INDUCTOR-SMD
L1055,L1073,L1074	2703-004018	INDUCTOR-SMD
L3004,L3005	2703-004018	INDUCTOR-SMD
L1050	2703-004032	INDUCTOR-SMD
L1058,L1064	2703-004033	INDUCTOR-SMD
C1900,L1006,L1029	2703-004034	INDUCTOR-SMD
L1036,L1039,L2003	2703-004034	INDUCTOR-SMD
L1031,L1051,L1070	2703-004035	INDUCTOR-SMD
L2002,L2500,L2502	2703-004035	INDUCTOR-SMD
C1094	2703-004036	INDUCTOR-SMD
L2004,L2017,L2501	2703-004037	INDUCTOR-SMD

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L1080,L1087,L1096	2703-004038	INDUCTOR-SMD
L1906,L2005,L2600	2703-004038	INDUCTOR-SMD
L3009,L3014	2703-004038	INDUCTOR-SMD
L1022,L1900	2703-004171	INDUCTOR-SMD
C1103,L1012,L1053	2703-004286	INDUCTOR-SMD
L1056,L1063,L1086	2703-004286	INDUCTOR-SMD
L1092,L3002	2703-004286	INDUCTOR-SMD
L3013	2703-004288	INDUCTOR-SMD
L1020,L1023	2703-004317	INDUCTOR-SMD
L1002,L1032,L1088	2703-004328	INDUCTOR-SMD
L1931,L2001,L2008	2703-004328	INDUCTOR-SMD
L2800	2703-004328	INDUCTOR-SMD
L2019	2703-004363	INDUCTOR-SMD
L1016,L1901	2703-004408	INDUCTOR-SMD
L3022	2703-004703	INDUCTOR-SMD
L1009	2703-004763	INDUCTOR-SMD
L2700,L2701	2703-004764	INDUCTOR-SMD
L3026	2703-004911	INDUCTOR-SMD
L2020	2703-004947	INDUCTOR-SMD
C1107,L1042	2703-004976	INDUCTOR-SMD
L5000,L5008,L5009	2703-005067	INDUCTOR-SMD
L5010,L5011	2703-005067	INDUCTOR-SMD
C3016,L1028,L1037	2703-005085	INDUCTOR-SMD
L1065,L1089,L1093	2703-005085	INDUCTOR-SMD
L3003	2703-005085	INDUCTOR-SMD
C1108,L1027,L1033	2703-005087	INDUCTOR-SMD
L1095	2703-005087	INDUCTOR-SMD
L1011,L1035	2703-005088	INDUCTOR-SMD
L1075,L1078	2703-005089	INDUCTOR-SMD
L5012	2703-005136	INDUCTOR-SMD
L5001,L5004,L5005	2703-005201	INDUCTOR-SMD
L5006	2703-005201	INDUCTOR-SMD
L7010	2703-005224	INDUCTOR-SMD
L5020	2703-005225	INDUCTOR-SMD
L5002	2703-005226	INDUCTOR-SMD
L1069	2703-005295	INDUCTOR-SMD
L1061	2703-005296	INDUCTOR-SMD
L7007	2703-005418	INDUCTOR-SMD
L7008	2703-005419	INDUCTOR-SMD

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## 5. MAIN Electrical Parts List

L6001	2703-005505	INDUCTOR-SMD
L5003	2703-005509	INDUCTOR-SMD
L3000,L3001	2703-005555	INDUCTOR-SMD
L1081	2703-005718	INDUCTOR-SMD
OSC5000	2801-005393	CRYSTAL-UNIT
OSC3000	2801-005476	CRYSTAL-UNIT
OSC2000	2805-001113	OSCILLATOR
F1009	2904-002143	FILTER-SAW
F2002	2904-002198	FILTER-SAW
F1004	2904-002210	FILTER-SAW
F1007	2904-002285	FILTER-SAW
F2003	2904-002326	FILTER-SAW
F3002,F3003	2904-002356	FILTER-SAW
F2001	2904-002368	FILTER-SAW
F3000	2904-002381	FILTER-SAW
F1005,F2000	2904-002397	FILTER-SAW
F1006	2910-000364	FILTER
F1008	2910-000401	FILTER
F1011	2910-000402	FILTER
F1010	2910-000404	FILTER
U2000	2911-000430	FILTER
U1003	2911-000448	FILTER
MIC6000	3003-001237	MIC-CONDENSOR
L3011	3301-001534	CORE-FERRITE BEAD
L3012,L3019	3301-002078	CORE-FERRITE BEAD
L2014,L2015	3301-002122	CORE-FERRITE BEAD
L7000,L7001,L7002	3301-002223	CORE-FERRITE BEAD
L7004,L7005	3301-002223	CORE-FERRITE BEAD
L6002	3301-002228	CORE-FERRITE BEAD
L6004,L6006,L6007	3301-002235	CORE-FERRITE BEAD
L6008,L6009,L6011	3301-002235	CORE-FERRITE BEAD
L6014,L6015,L6016	3301-002235	CORE-FERRITE BEAD
L6017	3301-002235	CORE-FERRITE BEAD
L1000,L2000,L2049	3301-002237	CORE-FERRITE BEAD
L2016,L2032,L2034	3301-002238	CORE-FERRITE BEAD
L2036,L6000,L6003	3301-002238	CORE-FERRITE BEAD
L2048	3301-002242	CORE-FERRITE BEAD
L3021	3301-002248	CORE-FERRITE BEAD
L2012,L2031,L2035	3301-002312	CORE-FERRITE BEAD

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## 5. MAIN Electrical Parts List

L7006,L7009,L7011	3301-002312	CORE-FERRITE BEAD
L5007	3301-002331	CORE-FERRITE BEAD
RFS1000,RFS1001	3705-001937	CONNECTOR-COAXIAL
SIM4UP	3709-001932	CONNECTOR-CARD EDGE
SIM1	3709-001933	CONNECTOR-CARD EDGE
SIM2,SIM3	3709-001934	CONNECTOR-CARD EDGE
HDC7002	3711-007107	CONNECTOR-HEADER
HDC7001	3711-008508	CONNECTOR-HEADER
HDC7003	3711-008511	CONNECTOR-HEADER
HDC5000	3711-008847	CONNECTOR-HEADER
HDC7000	3711-008931	CONNECTOR-HEADER
HDC7004	3711-009356	CONNECTOR-HEADER
HEA6000	3711-009408	CONNECTOR-HEADER
ANT3002,ANT3003	3712-001604	CONNECTOR
ANT3004,ANT3005	3712-001604	CONNECTOR
ANT2003,ANT2004	3712-001621	CONNECTOR
ANT2005,ANT2006	3712-001621	CONNECTOR
ANT2100,ANT2222	3712-001621	CONNECTOR
ANT5104,ANT5105	3712-001633	CONNECTOR
ANT9003,ANT9005	3712-001666	CONNECTOR
ANT5000,ANT5001	3712-001694	CONNECTOR
ANT5002,ANT5003	3712-001694	CONNECTOR
ANT5004	3712-001694	CONNECTOR
ANT2000,ANT2001	3712-001714	CONNECTOR
ANT2002,ANT3000	3712-001714	CONNECTOR
ANT3001	3712-001714	CONNECTOR
F1000	4709-002196	RF-MODULE
F3001	4709-002284	RF-MODULE
F1002	4709-002387	RF-MODULE
F2004	4709-002484	RF-MODULE
F1001,F1003	4709-002589	RF-MODULE
CON1000	GH61-08634A	CONNECTOR
GA7000	GH62-00042A	PAD GAP-SMD
SC6000	GH63-16268A	IC-TCXO
UCP400	rf-EXYNOS9610	EXYNOS9610
U3012	rf-ICM-42605-M	IC-SENSOR
U5000	rf-S2MPU09X01-6	IC-POWER
U3015	rf-S5N5C20X00-6	IC-WIFI
SC6001	rf-SC-A50EUR-AP	IC-AP

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## 5. MAIN Electrical Parts List

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SC6005	rf-SC-A50EUR-AP	IC-APT
SC6004	rf-SC-A50EUR-BT	WIFI
SC6002	rf-SC-A50EUR-PM	IC-PMIC
SC6003	rf-SC-A50EUR-RF	RF
U5001	rf-SM5713	IC-POWER
UCP400UP	rf-K4UJE3T4AM-C	IC-DDR4 SDRAM
SC6001SP	rf-TAPE	TAPE

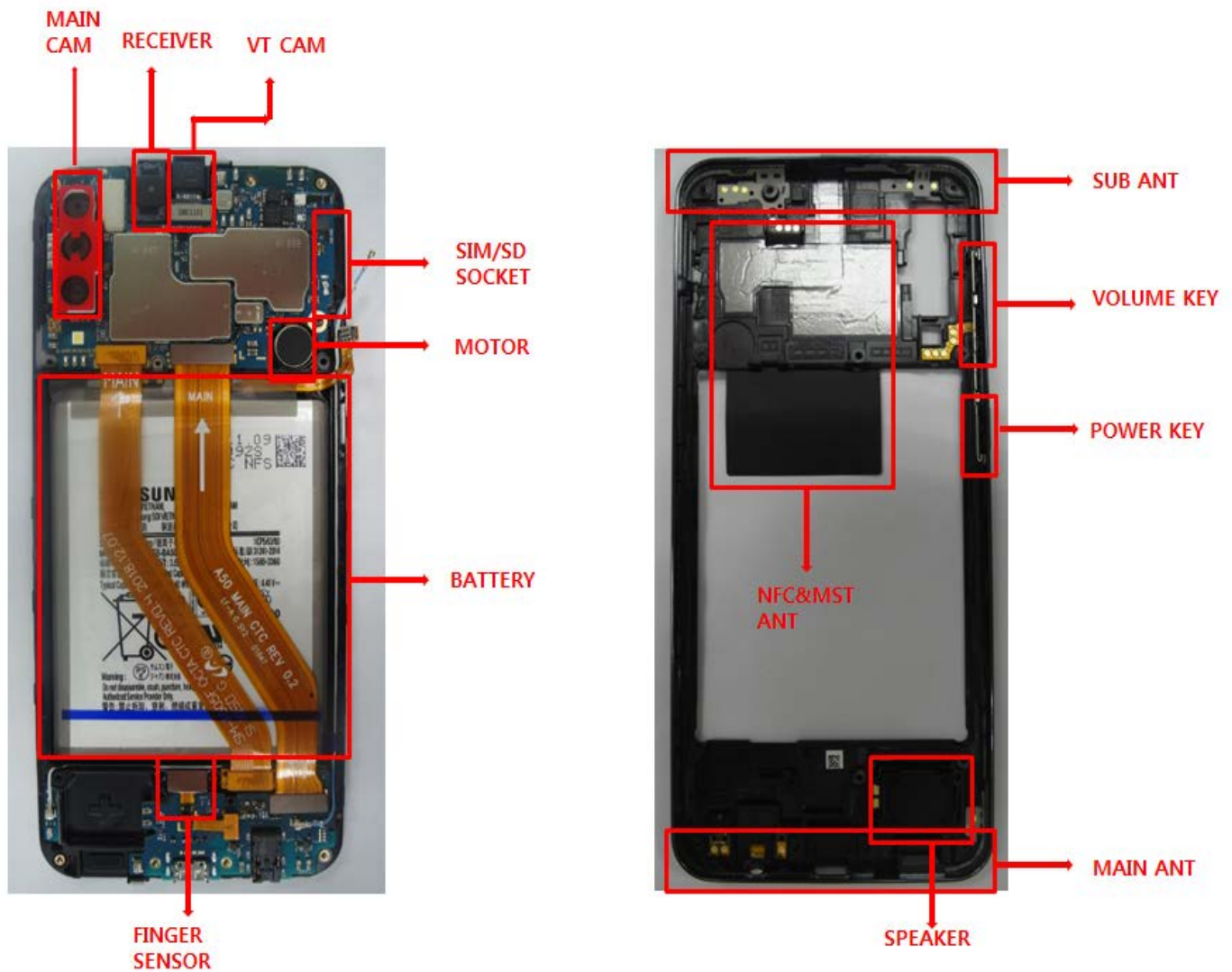
Please consult the GSPN website (Samsung Portal) for the most recent version of the product's part list.

---

## 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>Hot Plate</b>
	
<b>A OCTA Disassembly Holder</b>	<b>OCTA Disassembly Upper</b>
	
<b>Ethyl Alcohol</b>	<b>Cotton Swab</b>

---

## 7. Level 2 Repair

---

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

**N/A**

## 7. Level 2 Repair

### 7-4. Disassembly

1

1) Put the device in the chamber or Hot plate as below heating condition  
- SOC 68%↓: 70°C/10~20min  
- SOC 68%↑: Discharge until 68%↓  
※ Please confirm the heating condition released lastly, and follow it.

2) Detach the Backglass using disassembly jig.

※ 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.

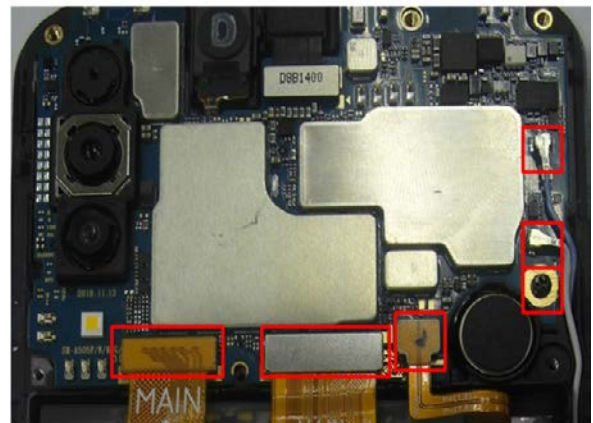


※ Caution

Be care of damage to components.

4

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



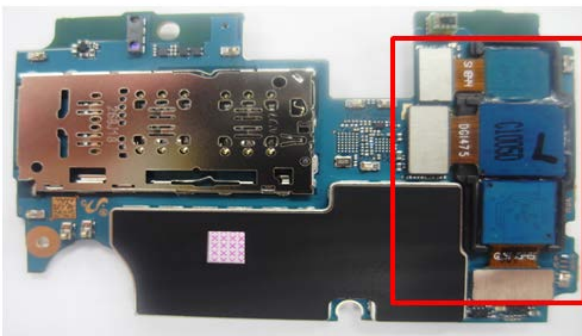
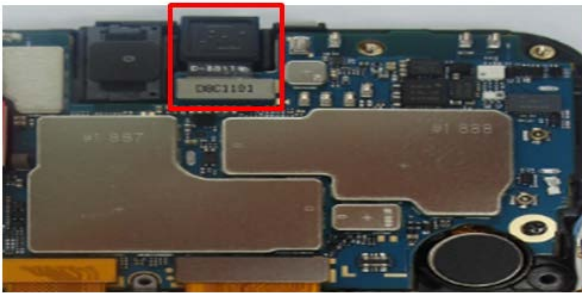
※ Caution

Be careful not to damage the PBA.

## 7. Level 2 Repair

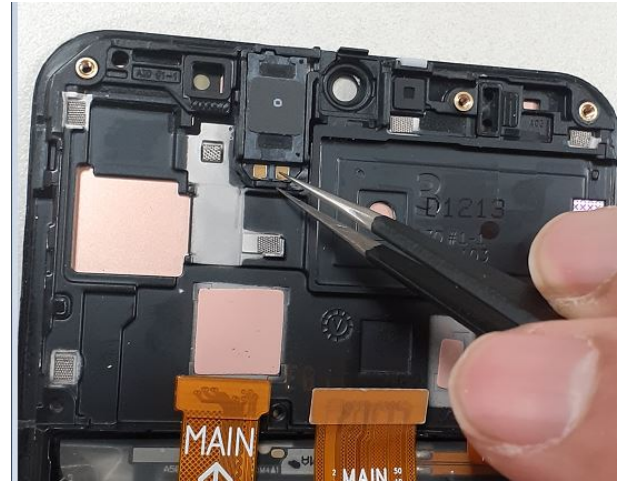
5

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.

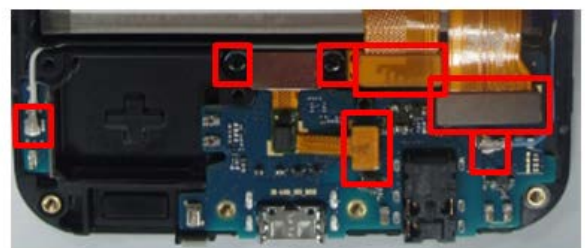


※ **Caution**

Be careful not to damage the Motor.

8

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



※ **Caution**

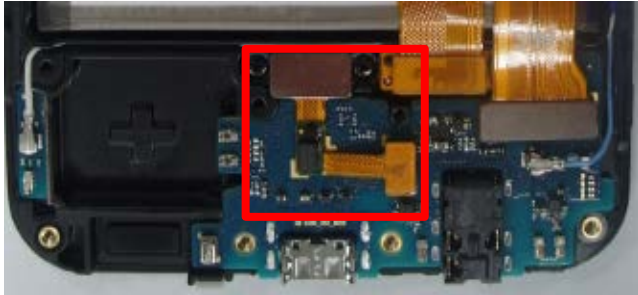
Be careful not to damage the Sub PBA and connector



## 7. Level 2 Repair

9

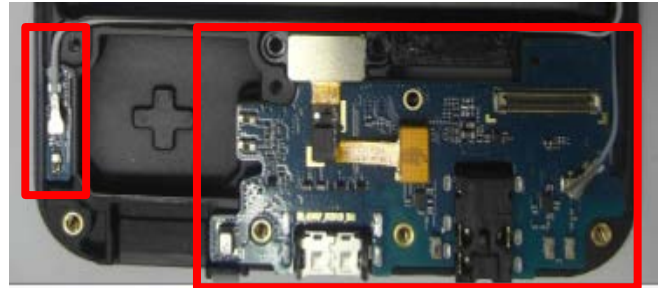
Detach Finger sensor.



※ **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

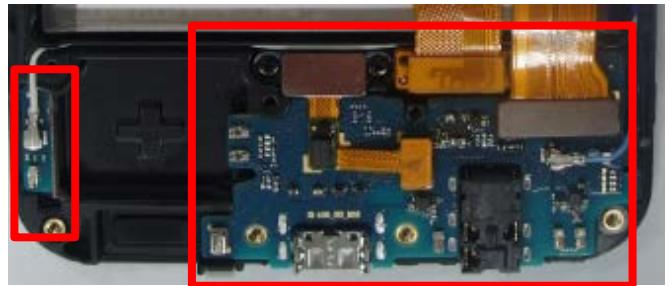
1

Attach SPK on Rear Ass'y.



2

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



**※ Caution**

Be care of SPK damage.

**※ Caution**

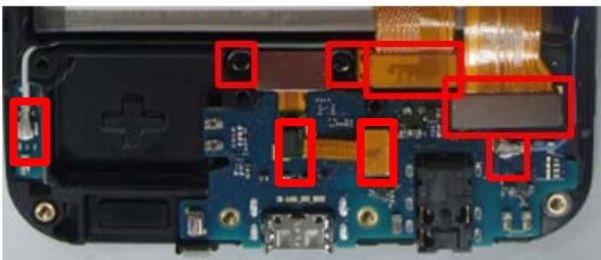
Be care of Sub PBA damage.

3

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

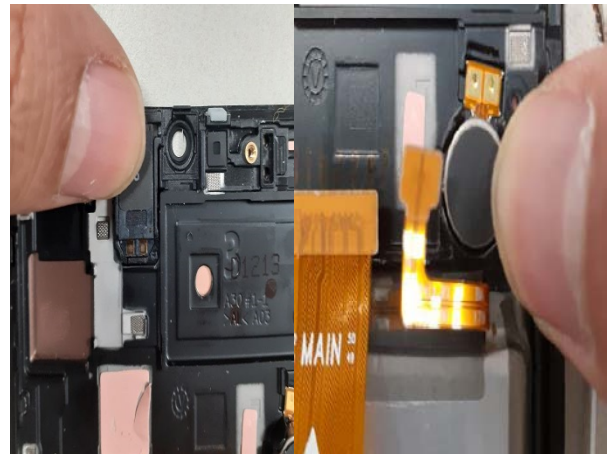
Screw insertion 2 Point.

\* 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.

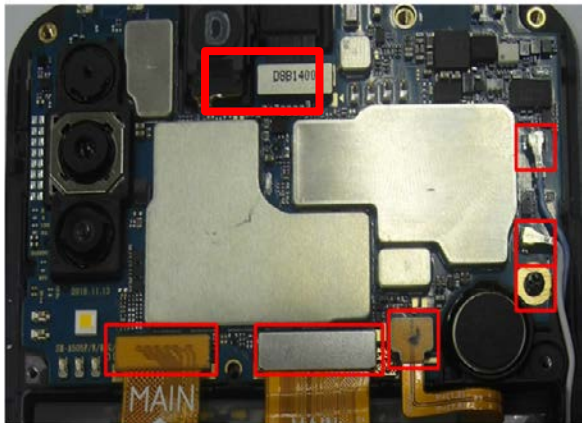
**※ Caution**

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 :  $1.25 \pm 10\%$



※ Caution

Be care of PBA damage.

8

Assemble cover rear and insert SIM/SD Tray



※ Caution

Be care of scratch Rear cover.

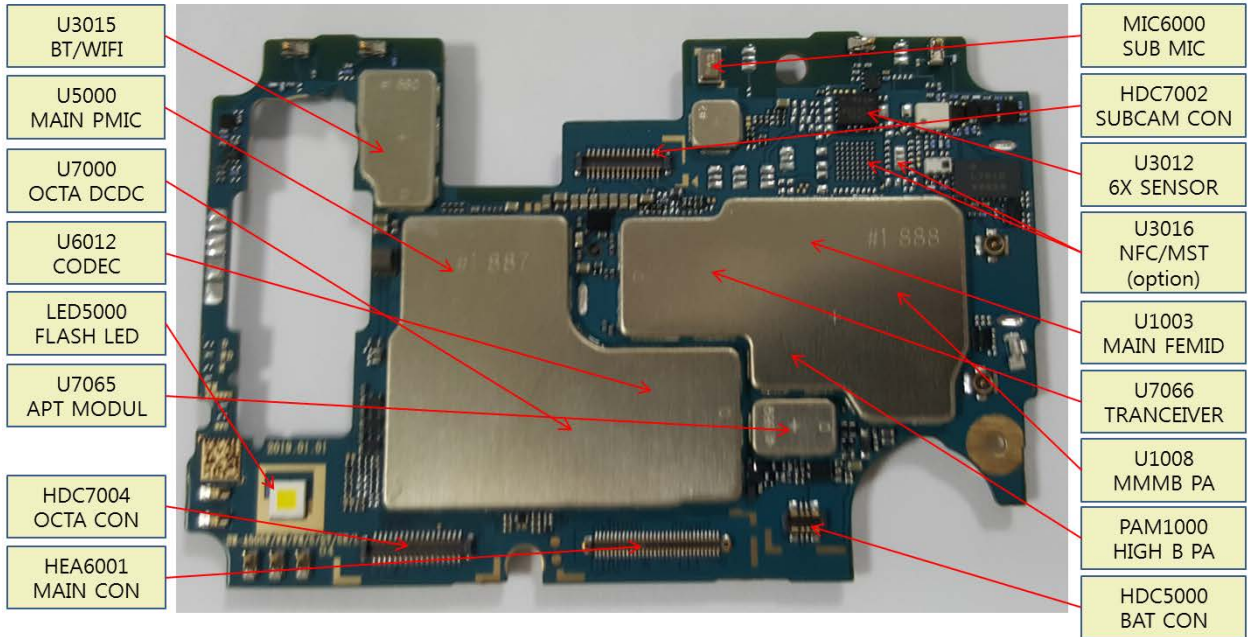
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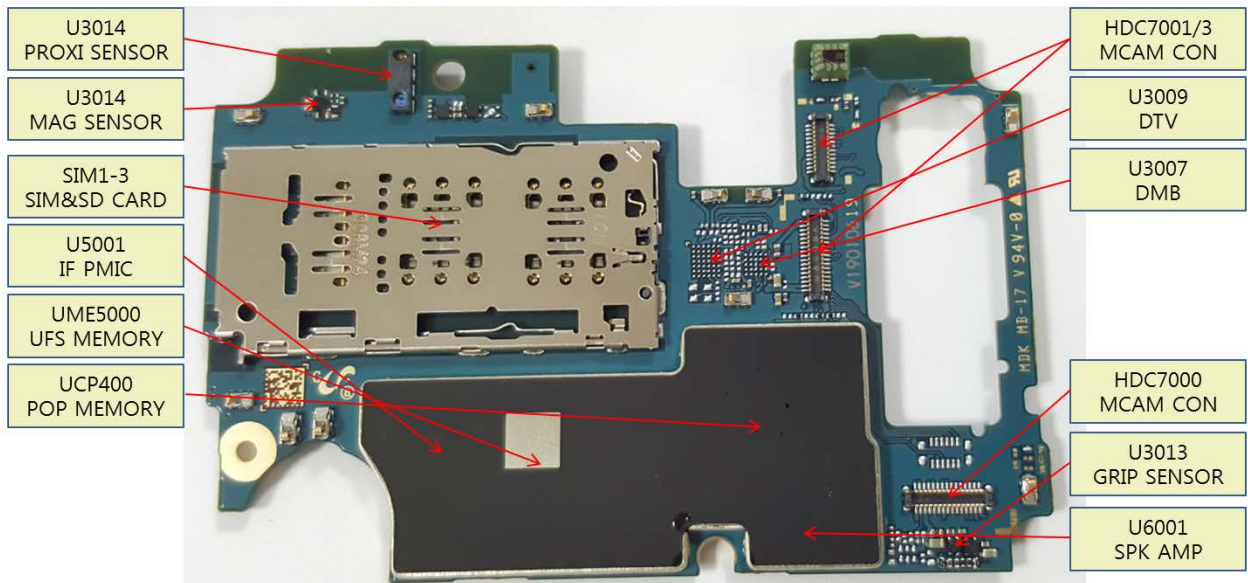
# 8. Level 3 Repair

## 8-1. Components Layout

MAIN PBA (TOP SIDE)

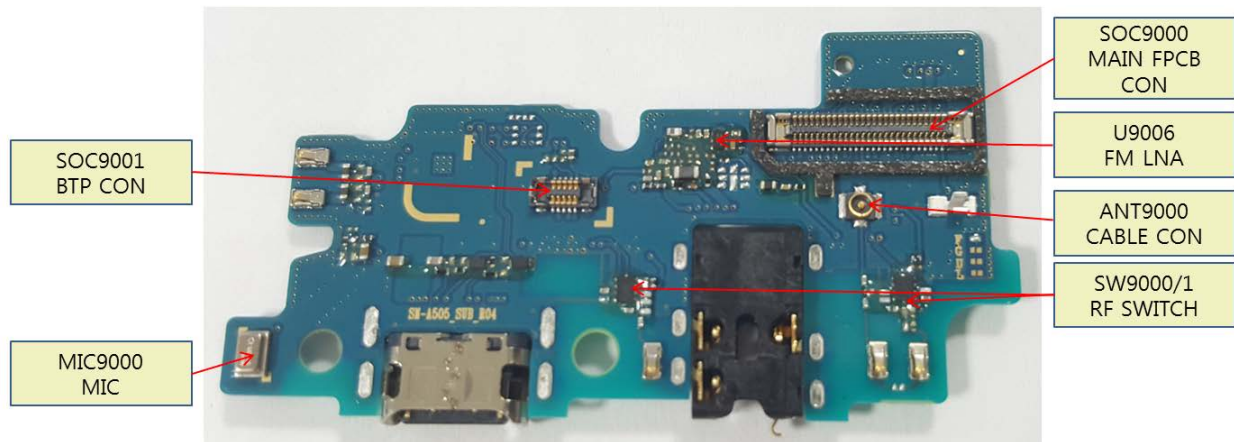


MAIN PBA (BOTTOM SIDE)



## 8. Level 3 Repair

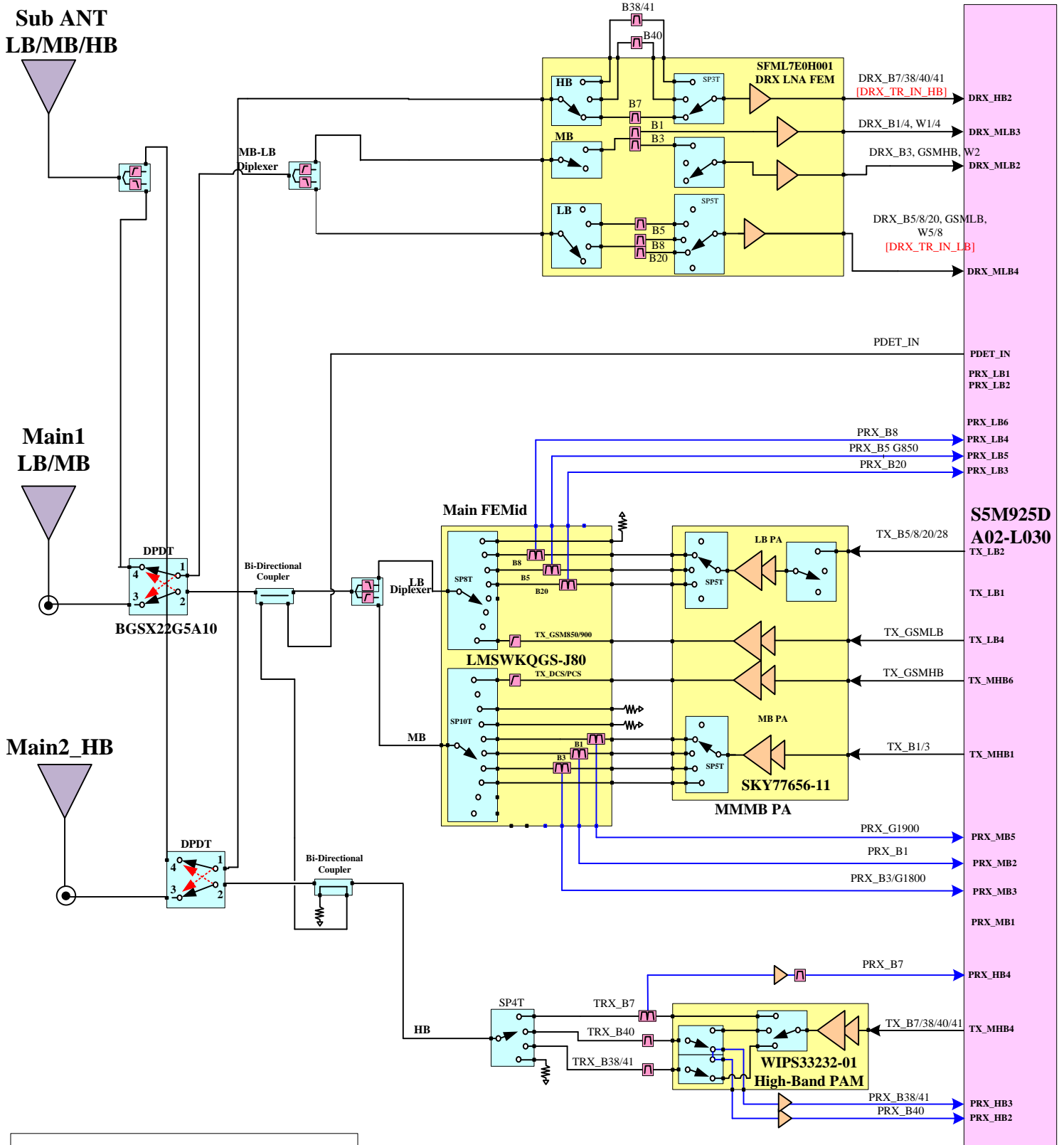
SUB PBA (TOP SIDE)



SUB PBA (BOTTOM SIDE)



# SM-A505F/DS RF Block Diagram

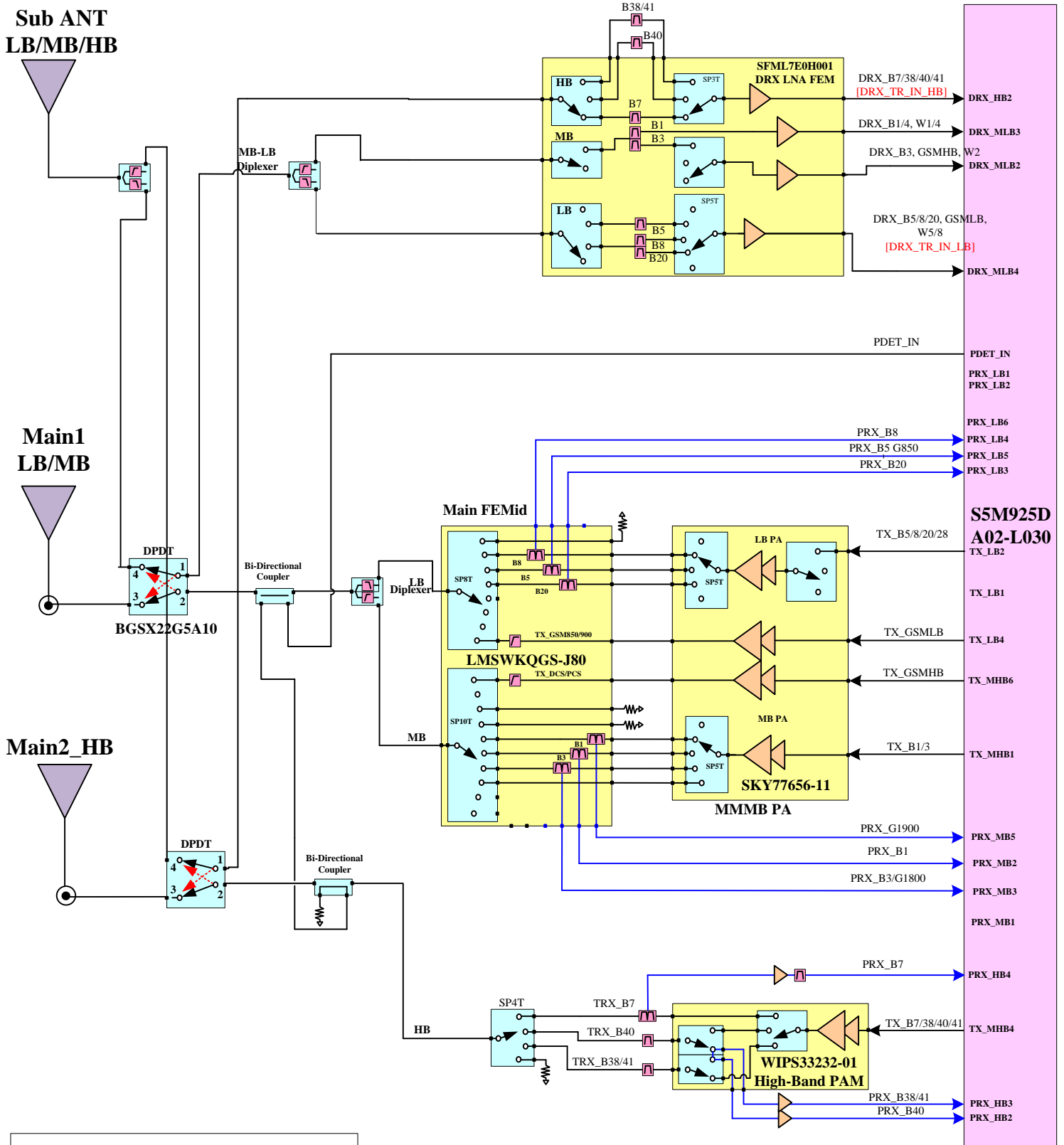


**[SM-A505F/DS RF Band]**  
**2G : Quad**  
**3G : W1,W2,W5,W8**  
**LTE FDD : B1/3/5/7/8/20**  
**LTE TDD : B38/40/41**

GSM/GPRS/EDGE 850 - Tx 824.2 - 848.8MHz / Rx 869.2 - 893.8MHz  
 GSM/GPRS/EDGE 1900 - Tx 1850.2 - 1909.8MHz / Rx 1930.2 - 1989.8MHz  
 UMTS Band 2 - Tx 1850 - 1910MHz / Rx 1930 - 1990MHz  
 UMTS Band 5 - Tx 824 - 849 / Rx 869 - 894MHz  
 LTE Band 5 - Tx 824 - 849MHz / Rx 869 - 894MHz  
 LTE Band 41 - TRx 2496 - 2690MHz

WLAN 2.4G - TRx 2412 - 2462MHz within USA  
 WLAN 2.4G - TRx 2412 - 2472MHz Non USA  
 WLAN 5G - TRx 5180 - 5240MHz  
 WLAN 5G - TRx 5260 - 5320MHz  
 WLAN 5G - TRx 5500 - 5720MHz  
 WLAN 5G - TRx 5745 - 5825MHz  
 Bluetooth/EDR/LE - TRx 2402 - 2480MHz  
 NFC - TRx 13.56MHz  
 GNSS - Rx 1592 - 1606MHz

# SM-A505FN/DS RF Block Diagram



## [SM-A505FN/DS RF Band]

2G : Quad

3G : W1,W2,W5,W8

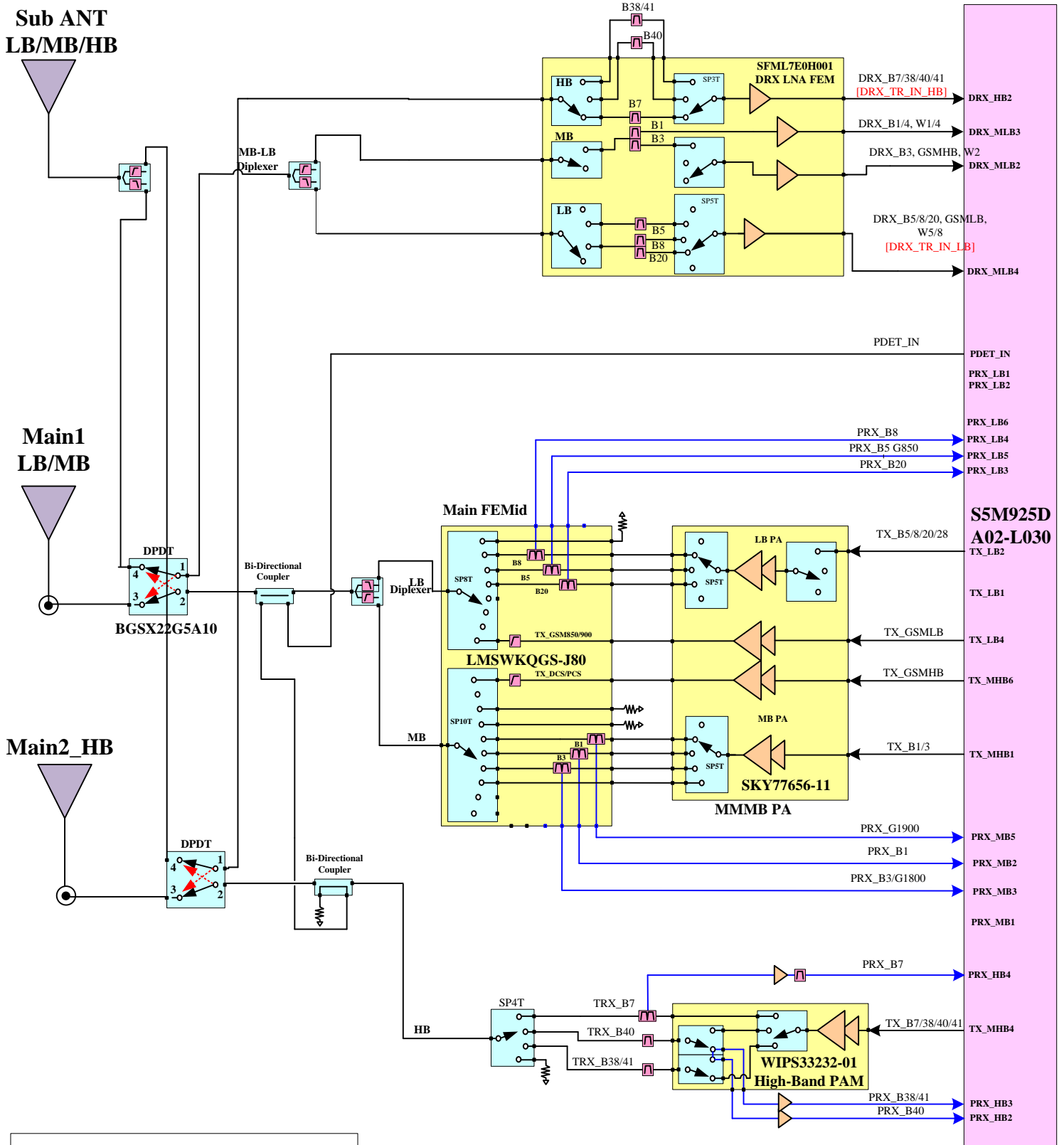
LTE FDD : B1/3/5/7/8/20

LTE TDD : B38/40/41

GSM/GPRS/EDGE 850 - Tx 824.2 - 848.8MHz / Rx 869.2 - 893.8MHz  
 GSM/GPRS/EDGE 1900 - Tx 1850.2 - 1909.8MHz / Rx 1930.2 - 1989.8MHz  
 UMTS Band 2 - Tx 1850 - 1910MHz / Rx 1930 - 1990MHz  
 UMTS Band 5 - Tx 824 - 849 / Rx 869 - 894MHz  
 LTE Band 5 - Tx 824 - 849MHz / Rx 869 - 894MHz  
 LTE Band 41 - TRx 2496 - 2690MHz

WLAN 2.4G - TRx 2412 - 2462MHz within USA  
 WLAN 2.4G - TRx 2412 - 2472MHz Non USA  
 WLAN 5G - TRx 5180 - 5240MHz  
 WLAN 5G - TRx 5260 - 5320MHz  
 WLAN 5G - TRx 5500 - 5720MHz  
 WLAN 5G - TRx 5745 - 5825MHz  
 Bluetooth/EDR/LE - TRx 2402 - 2480MHz  
 NFC - TRx 13.56MHz  
 GNSS - Rx 1592 - 1606MHz

# SM-A505FN/DS RF Block Diagram



## [SM-A505FN/DS RF Band]

**2G : Quad**

**3G : W1,W2,W5,W8**

**LTE FDD : B1/3/5/7/8/20**

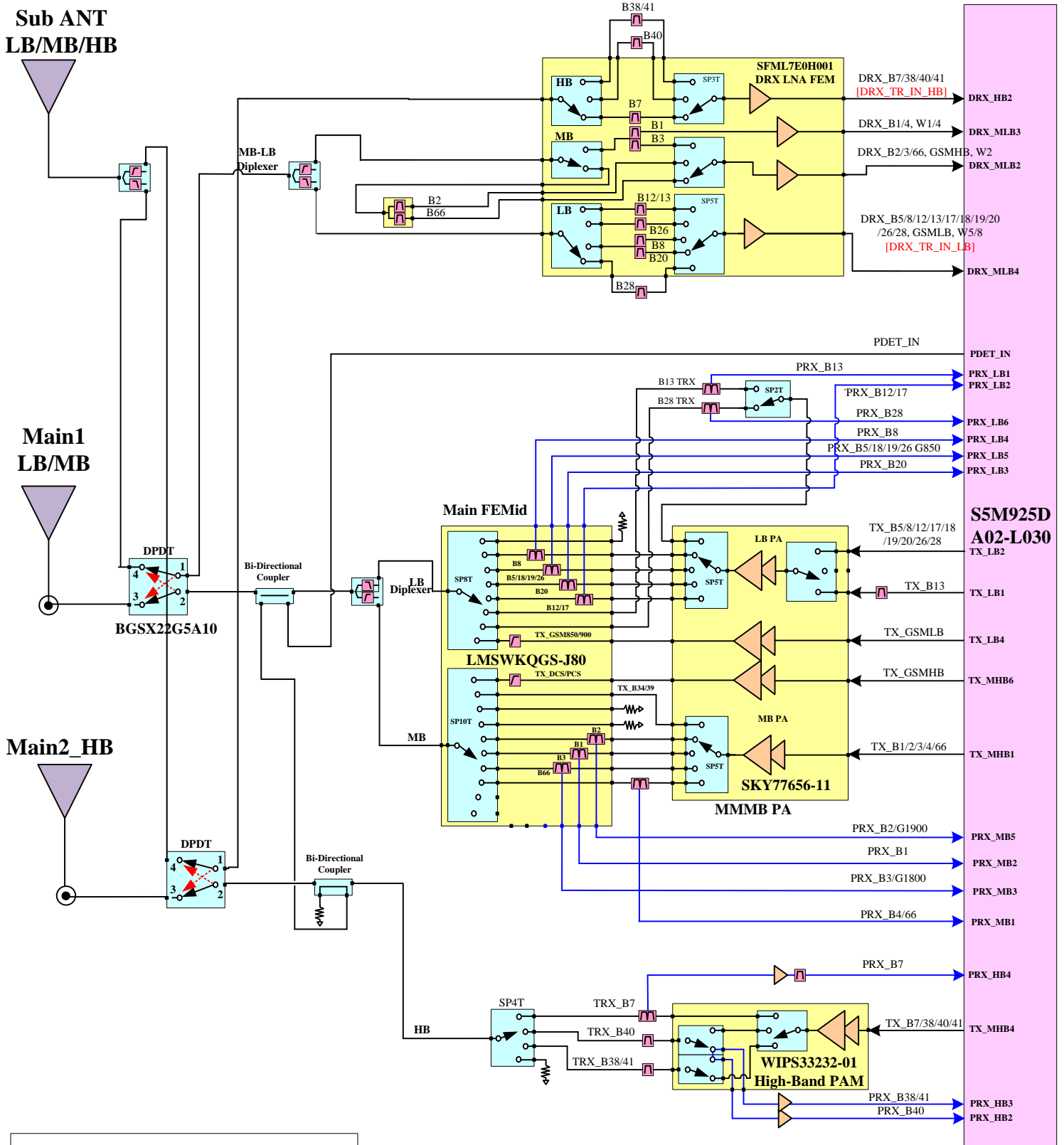
**LTE TDD : B38/40/41**

GSM/GPRS/EDGE 850 - Tx 824.2 - 848.8MHz / Rx 869.2 - 893.8MHz  
 GSM/GPRS/EDGE 1900 - Tx 1850.2 - 1909.8MHz / Rx 1930.2 - 1989.8MHz  
 UMTS Band 2 - Tx 1850 - 1910MHz / Rx 1930 - 1990MHz  
 UMTS Band 5 - Tx 824 - 849 / Rx 869 - 894MHz  
 LTE Band 5 - Tx 824 - 849MHz / Rx 869 - 894MHz  
 LTE Band 41 - TRx 2496 - 2690MHz

WLAN 2.4G - TRx 2412 - 2462MHz within USA  
 WLAN 2.4G - TRx 2412 - 2472MHz Non USA  
 WLAN 5G - TRx 5180 - 5240MHz  
 WLAN 5G - TRx 5260 - 5320MHz  
 WLAN 5G - TRx 5500 - 5720MHz  
 WLAN 5G - TRx 5745 - 5825MHz  
 Bluetooth/EDR/LE - TRx 2402 - 2480MHz  
 NFC - TRx 13.56MHz  
 GNSS - Rx 1592 - 1606MHz



# SM-A505G/DS RF Block Diagram



## [SM-A505G/DS RF Band]

2G : Quad

3G : W1,W2,W4,W5,W8

LTE FDD :

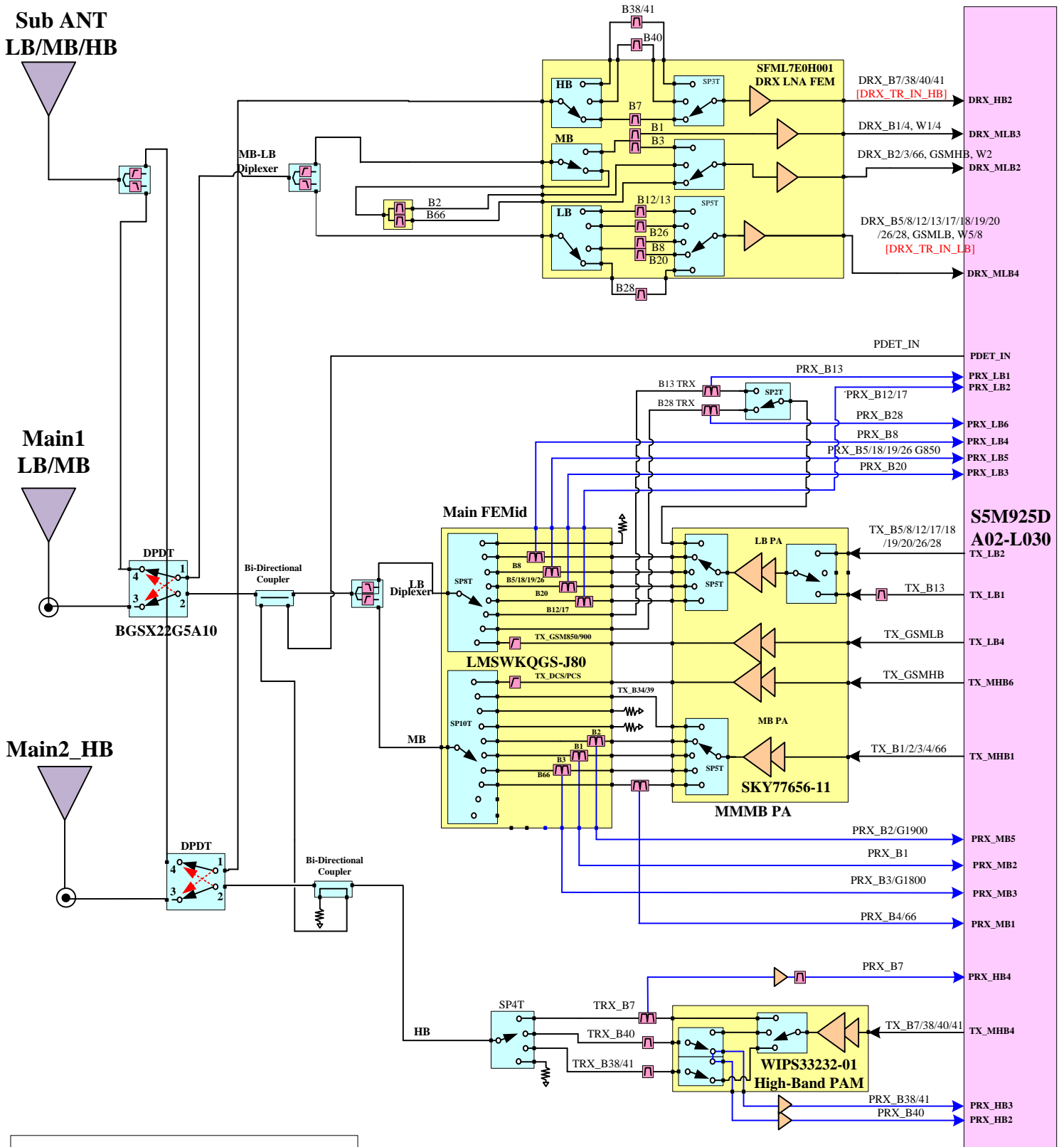
B1/2/3/4/7/8/12(17)/13/20/26(5/18/19)/28

LTE TDD : B38/40/41

GSM/GPRS/EDGE 850 - Tx 824.2 - 848.8MHz / Rx 869.2 - 893.8MHz  
 GSM/GPRS/EDGE 1900 - Tx 1850.2 - 1909.8MHz / Rx 1930.2 - 1989.8MHz  
 UMTS Band 2 - Tx 1850 - 1910MHz / Rx 1930 - 1990MHz  
 UMTS Band 4 - Tx 1710 - 1755 / Rx 2110 - 2155MHz  
 UMTS Band 5 - Tx 824 - 849 / Rx 869 - 894MHz  
 LTE Band 2 - Tx 1850 - 1910MHz / Rx 1930 - 1990MHz  
 LTE Band 4 - Tx 1710 - 1755MHz / Rx 2110 - 2155MHz  
 LTE Band 5 - Tx 824 - 849MHz / Rx 869 - 894MHz  
 LTE Band 12 - Tx 699 - 716MHz / Rx 729 - 746MHz  
 LTE Band 13 - Tx 777 - 787MHz / Rx 746 - 756MHz  
 LTE Band 17 - Tx 704 - 716MHz / Rx 734 - 746MHz  
 LTE Band 25 - Tx 1850 - 1915MHz / Rx 1930 - 1995MHz  
 LTE Band 41 - TRx 2496 - 2690MHz  
 LTE Band 66 - Tx 1710 - 1780MHz / Rx 2110 - 2200MHz

WLAN 2.4G - TRx 2412 - 2462MHz within USA  
 WLAN 2.4G - TRx 2412 - 2472MHz Non USA  
 WLAN 5G - TRx 5180 - 5240MHz  
 WLAN 5G - TRx 5260 - 5320MHz  
 WLAN 5G - TRx 5500 - 5720MHz  
 WLAN 5G - TRx 5745 - 5825MHz  
 Bluetooth/EDR/LE - TRx 2402 - 2480MHz  
 GNSS - Rx 1592 - 1606MHz

# SM-A505GT/DS RF Block Diagram



## [SM-A505GT/DS RF Band]

2G : Quad

3G : W1,W2,W4,W5,W8

LTE FDD :

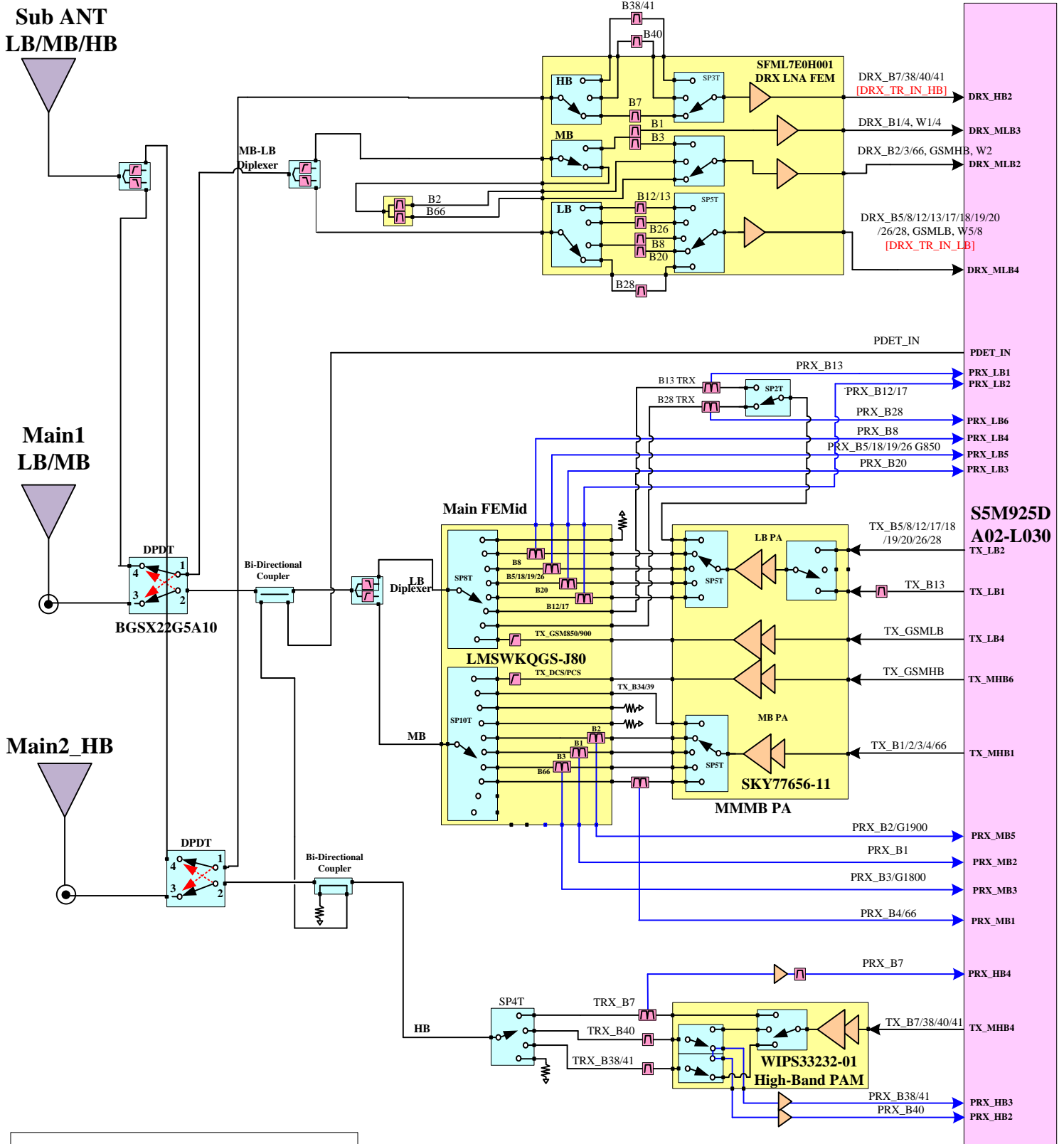
B1/2/3/4/7/8/12(17)/13/20/26(5/18/19)/28

LTE TDD : B38/40/41

GSM/GPRS/EDGE 850 - Tx 824.2 - 848.8MHz / Rx 869.2 - 893.8MHz  
 GSM/GPRS/EDGE 1900 - Tx 1850.2 - 1909.8MHz / Rx 1930.2 - 1989.8MHz  
 UMTS Band 2 - Tx 1850 - 1910MHz / Rx 1930 - 1990MHz  
 UMTS Band 4 - Tx 1710 - 1755 / Rx 2110 - 2155MHz  
 UMTS Band 5 - Tx 824 - 849 / Rx 869 - 894MHz  
 LTE Band 2 - Tx 1850 - 1910MHz / Rx 1930 - 1990MHz  
 LTE Band 4 - Tx 1710 - 1755MHz / Rx 2110 - 2155MHz  
 LTE Band 5 - Tx 824 - 849MHz / Rx 869 - 894MHz  
 LTE Band 12 - Tx 699 - 716MHz / Rx 729 - 746MHz  
 LTE Band 13 - Tx 777 - 787MHz / Rx 746 - 756MHz  
 LTE Band 17 - Tx 704 - 716MHz / Rx 734 - 746MHz  
 LTE Band 26 - Tx 814 - 849MHz / Rx 859 - 894MHz  
 LTE Band 41 - TRx 2496 - 2690MHz  
 LTE Band 66 - Tx 1710 - 1780MHz / Rx 2110 - 2200MHz

WLAN 2.4G - TRx 2412 - 2462MHz within USA  
 WLAN 2.4G - TRx 2412 - 2472MHz Non USA  
 WLAN 5G - TRx 5180 - 5240MHz  
 WLAN 5G - TRx 5260 - 5320MHz  
 WLAN 5G - TRx 5500 - 5720MHz  
 WLAN 5G - TRx 5745 - 5825MHz  
 Bluetooth/EDR/LE - TRx 2402 - 2480MHz  
 GNSS - Rx 1592 - 1606MHz

# SM-A505GN/DS RF Block Diagram



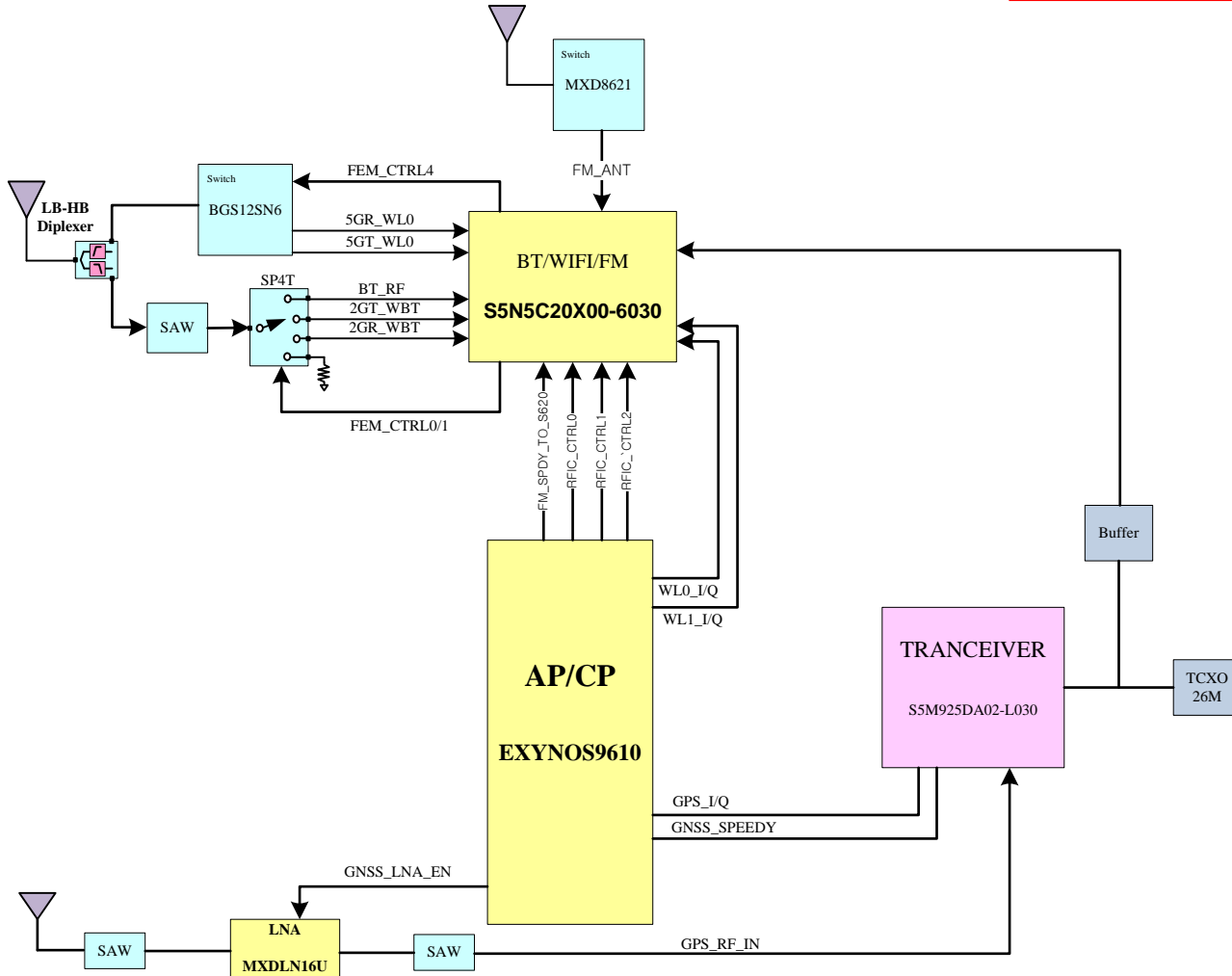
[SM-A505GN/DS RF Band]  
**2G : Quad**  
**3G : W1,W2,W4,W5,W8**  
**LTE FDD :**  
**B1/2/3/4/7/8/12(17)/13/20/26(5/28)**  
**LTE TDD : B38/40/41**

GSM/GPRS/EDGE 850 - Tx 824.2 - 848.8MHz / Rx 869.2 - 893.8MHz  
 GSM/GPRS/EDGE 1900 - Tx 1850.2 - 1909.8MHz / Rx 1930.2 - 1989.8MHz  
 UMTS Band 2 - Tx 1850 - 1910MHz / Rx 1930 - 1990MHz  
 UMTS Band 4 - Tx 1710 - 1755 / Rx 2110 - 2155MHz  
 UMTS Band 5 - Tx 824 - 849 / Rx 869 - 894MHz  
 LTE Band 2 - Tx 1850 - 1910MHz / Rx 1930 - 1990MHz  
 LTE Band 4 - Tx 1710 - 1755MHz / Rx 2110 - 2155MHz  
 LTE Band 5 - Tx 824 - 849MHz / Rx 869 - 894MHz  
 LTE Band 12 - Tx 699 - 716MHz / Rx 729 - 746MHz  
 LTE Band 13 - Tx 777 - 787MHz / Rx 746 - 756MHz  
 LTE Band 17 - Tx 704 - 716MHz / Rx 734 - 746MHz  
 LTE Band 26 - Tx 814 - 849MHz / Rx 859 - 894MHz  
 LTE Band 41 - TRx 2496 - 2690MHz  
 LTE Band 66 - Tx 1710 - 1780MHz / Rx 2110 - 2200MHz

WLAN 2.4G - TRx 2412 - 2462MHz within USA  
 WLAN 2.4G - TRx 2412 - 2472MHz Non USA  
 WLAN 5G - TRx 5180 - 5240MHz  
 WLAN 5G - TRx 5260 - 5320MHz  
 WLAN 5G - TRx 5500 - 5720MHz  
 WLAN 5G - TRx 5745 - 5825MHz  
 Bluetooth/EDR/LE - TRx 2402 - 2480MHz  
 NFC - TRx 13.56MHz  
 GNSS - Rx 1592 - 1606MHz

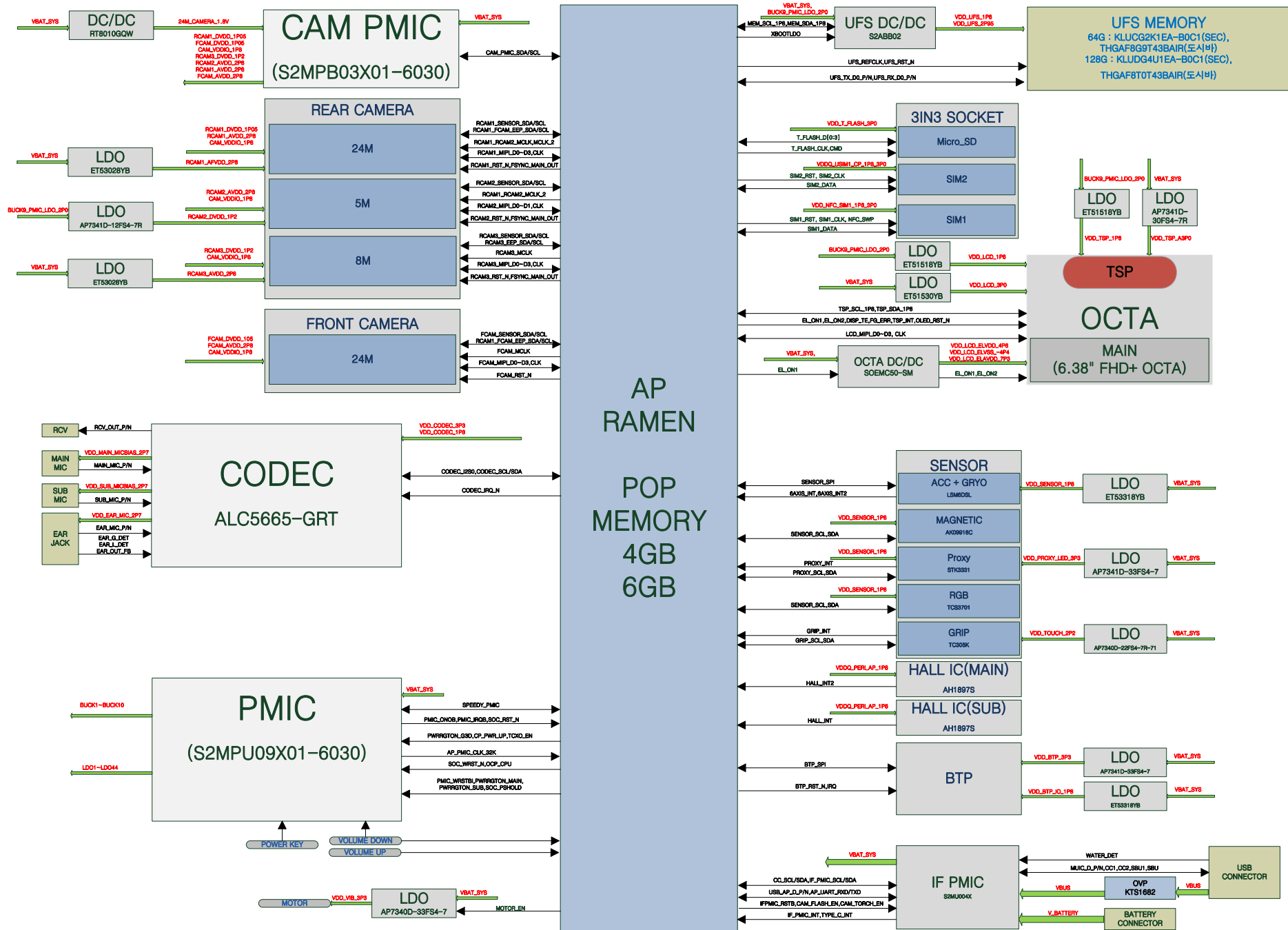
# A50 Connectivity Block Diagram

SM-A505F/GT/G/GN/FN/FM  
Common

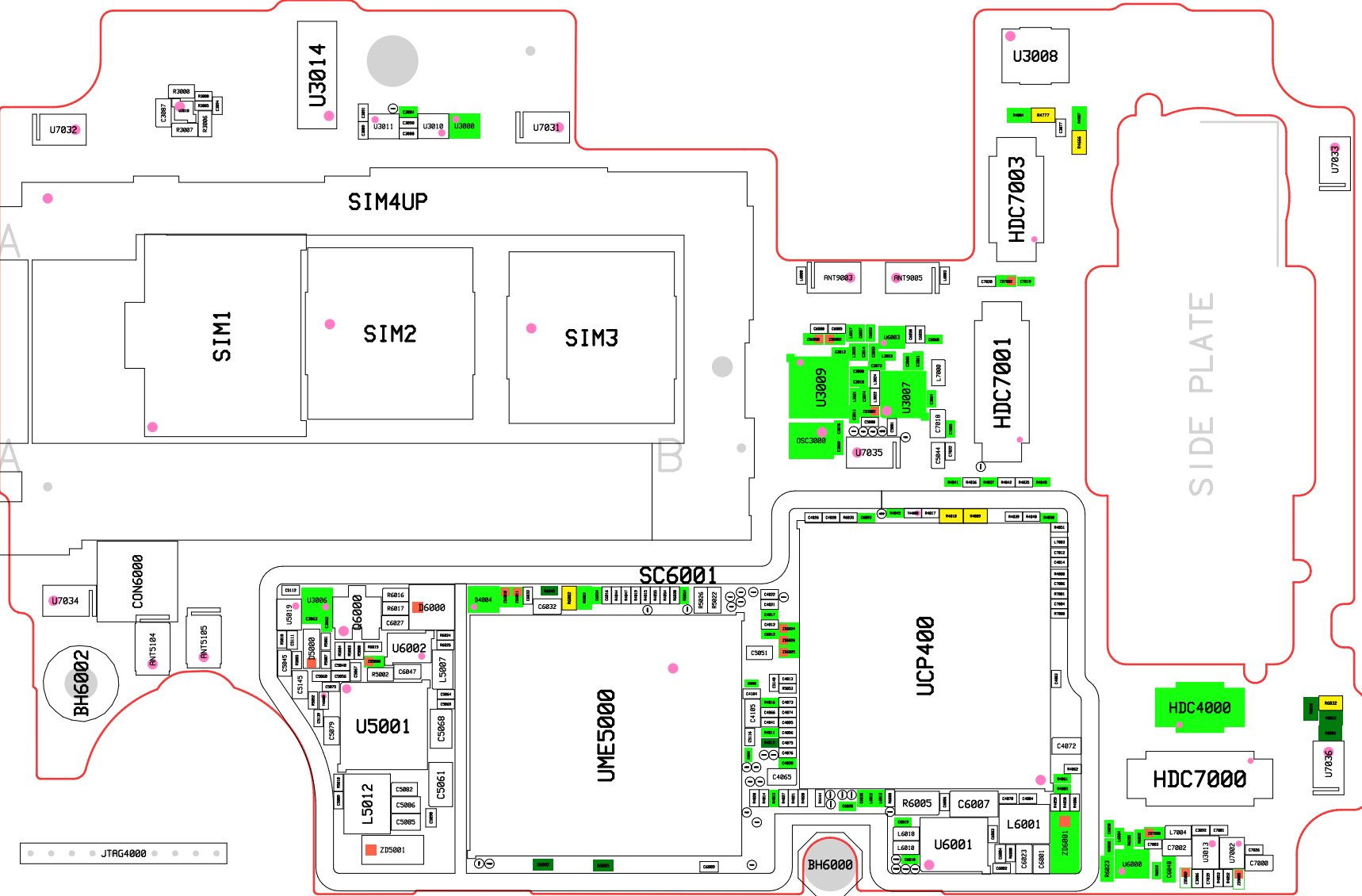


# A50 BB Block Diagram

SM-A505F/GT/G/GN/FN/FM  
Common



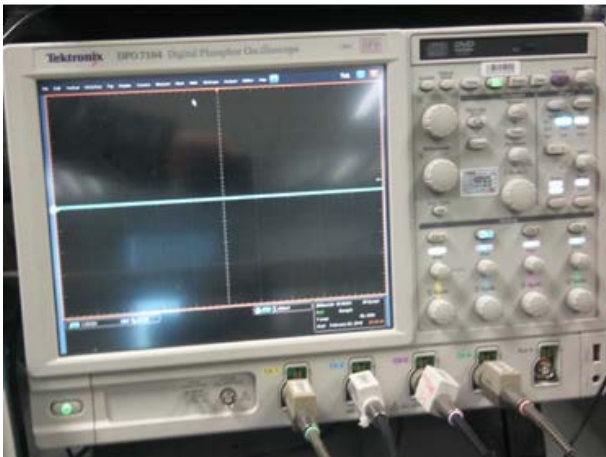
SM-A505F/GT/G/GN/FN/FM  
Common





## 8. Level 3 Repair

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



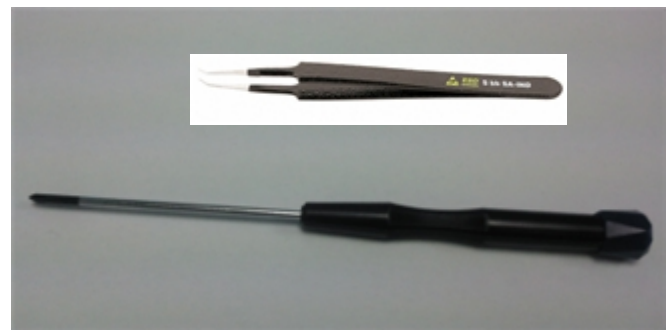
Oscilloscope



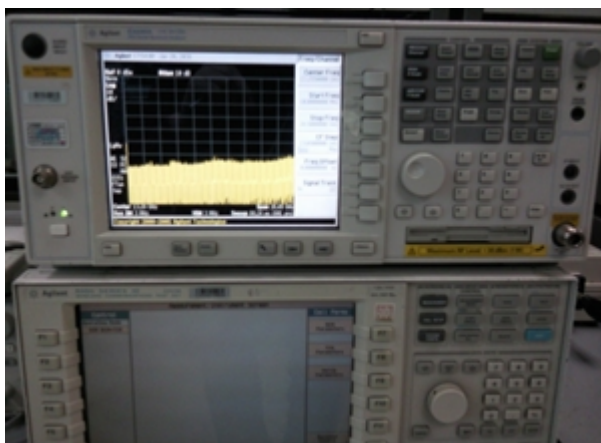
Digital Multimeter



Power Supply



+ driver, ESD Safe Tweezer



8960 & Spectrum Analyzer

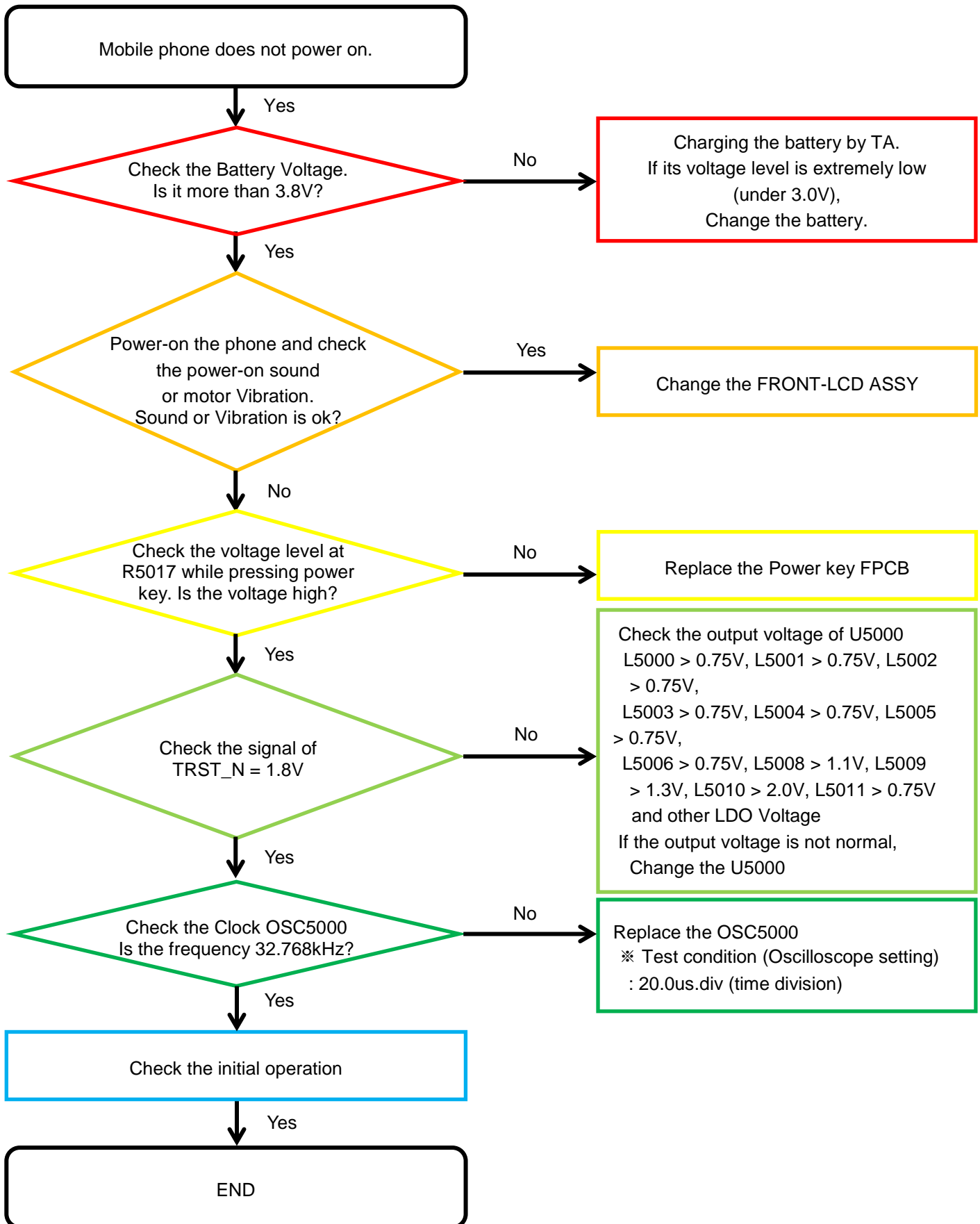


Soldering iron



## 8. Level 3 Repair

### 8-4-1. Power On

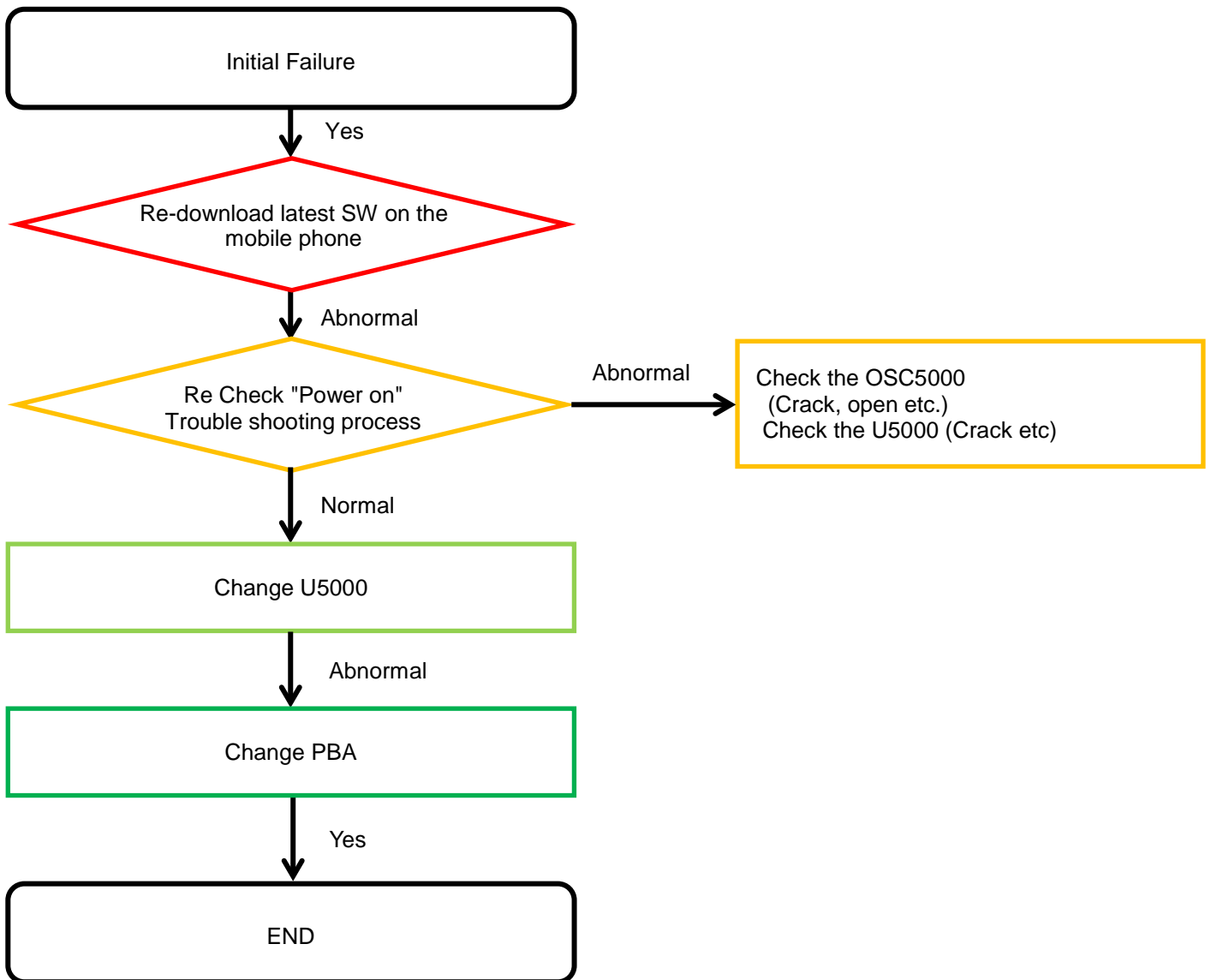


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## 8. Level 3 Repair

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### 8-4-2. Initial

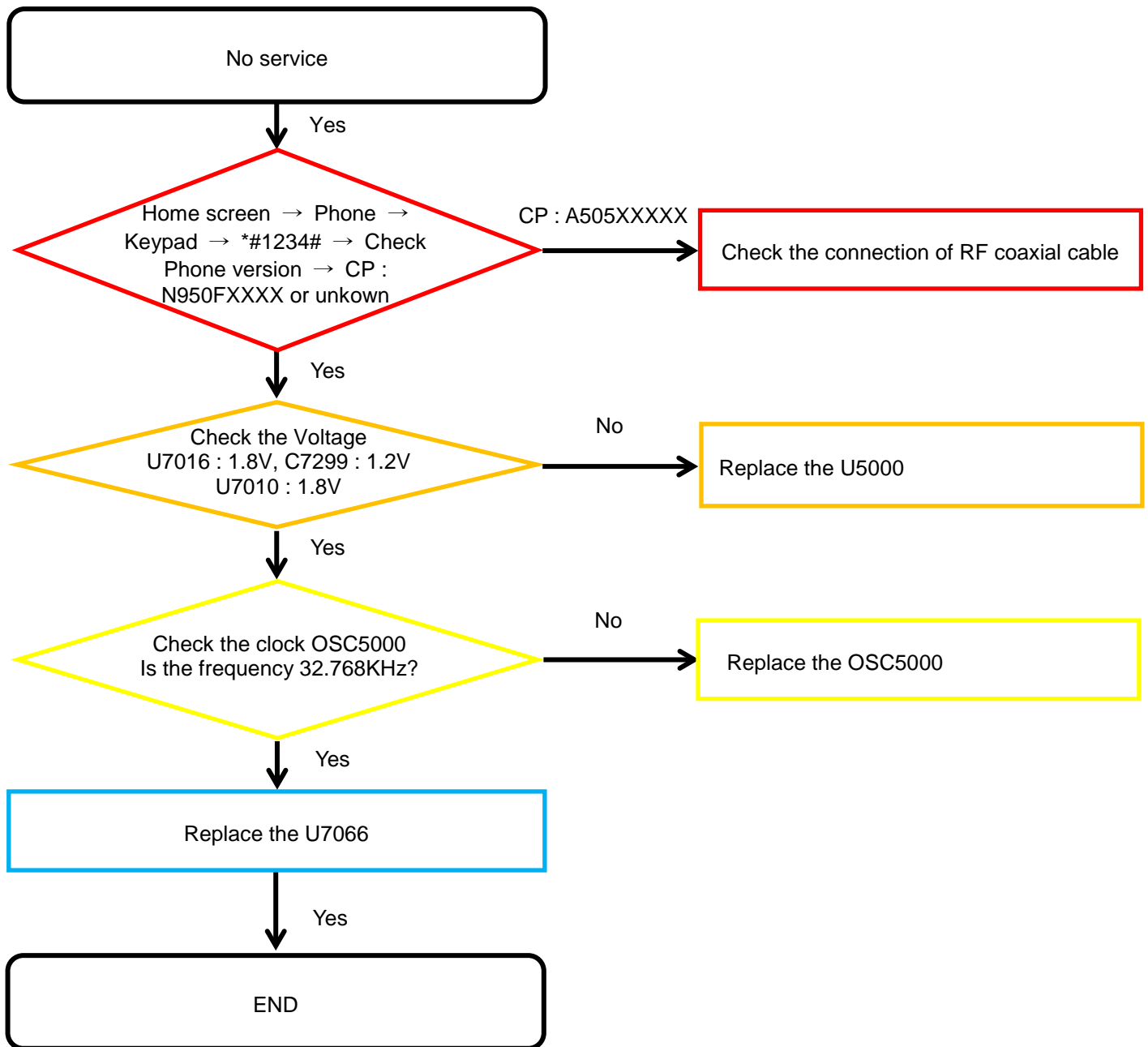


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## 8. Level 3 Repair

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### 8-4-3. No Service

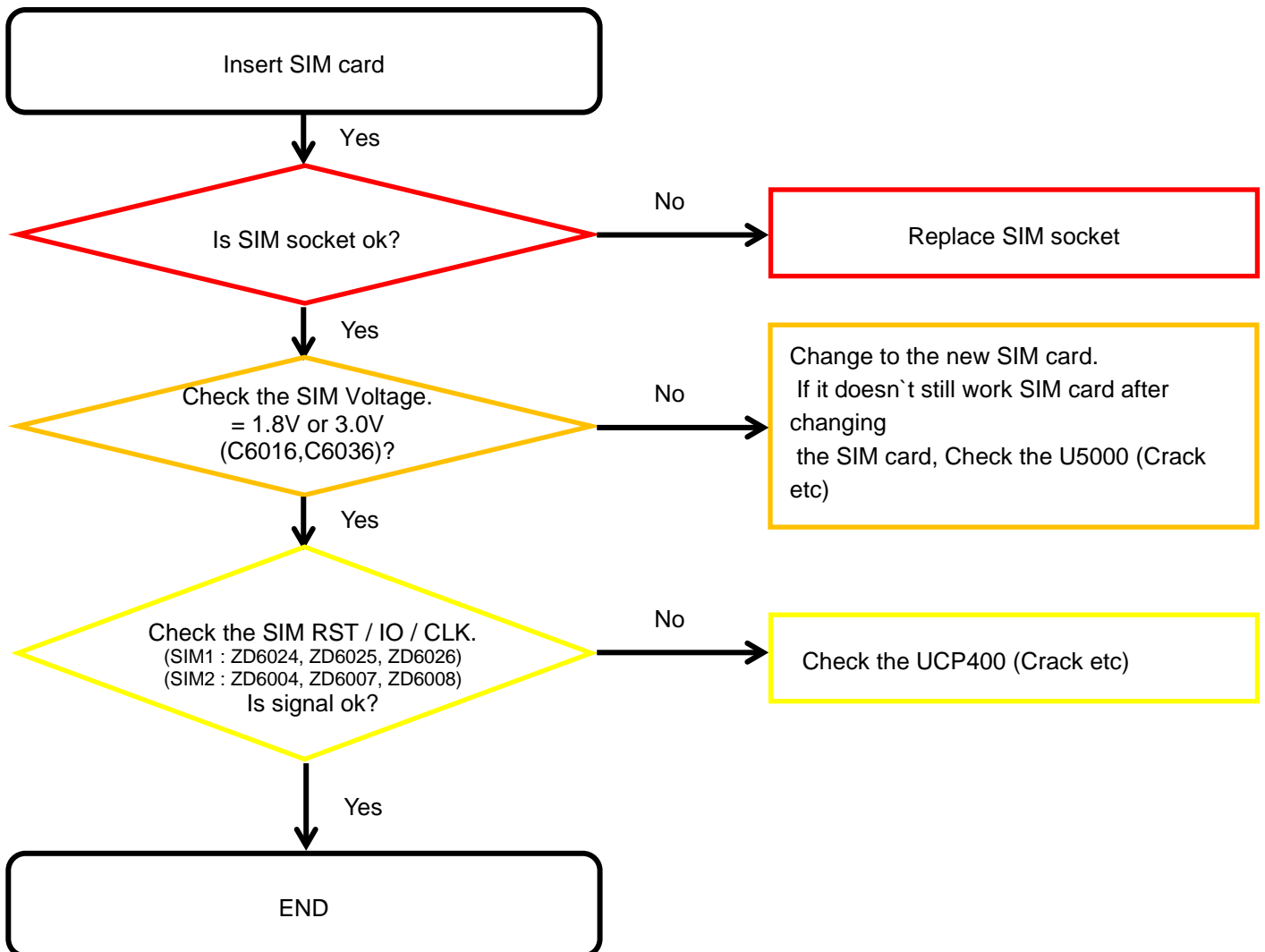


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## 8. Level 3 Repair

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### 8-4-4. SIM Part

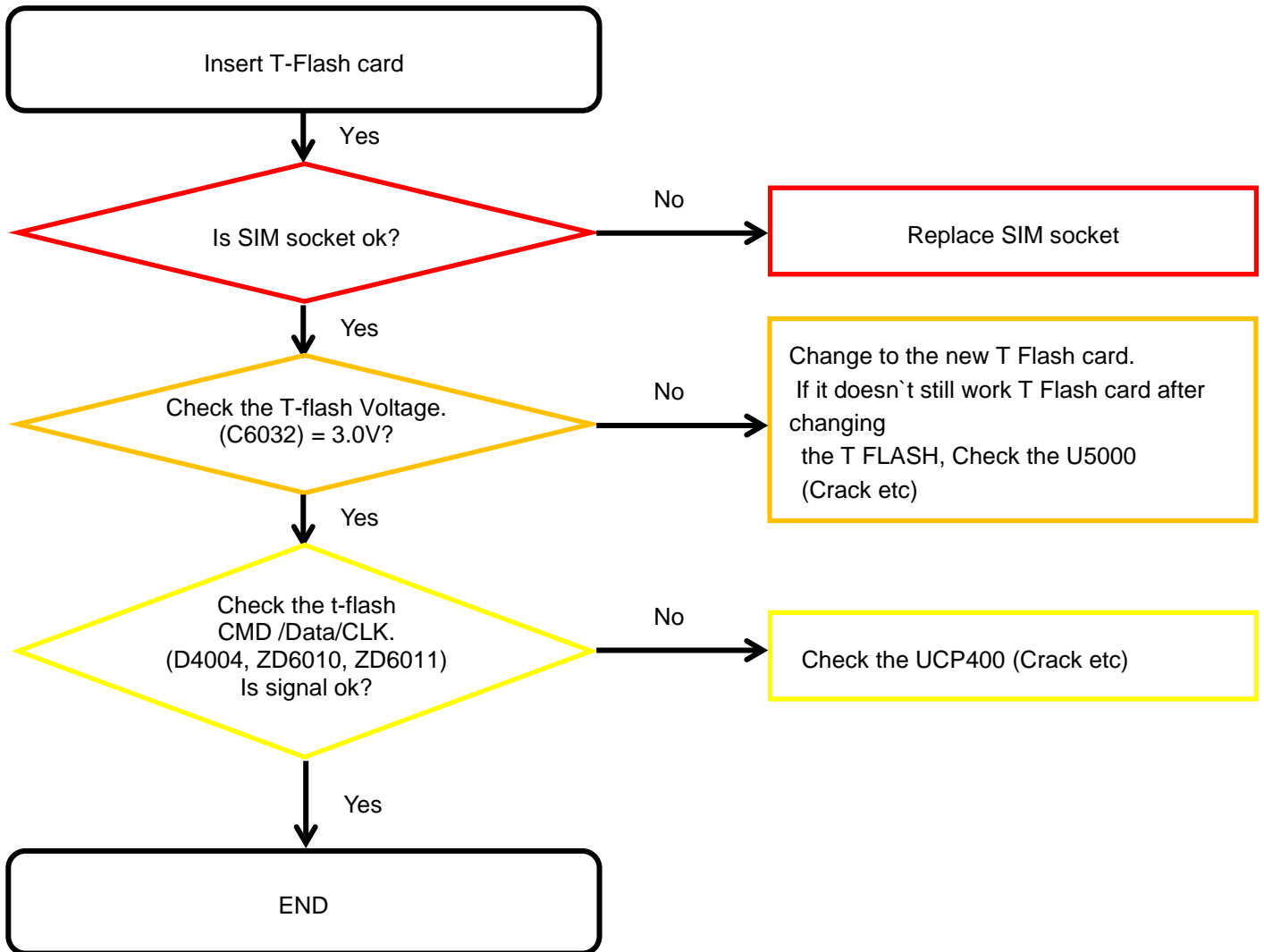


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## 8. Level 3 Repair

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

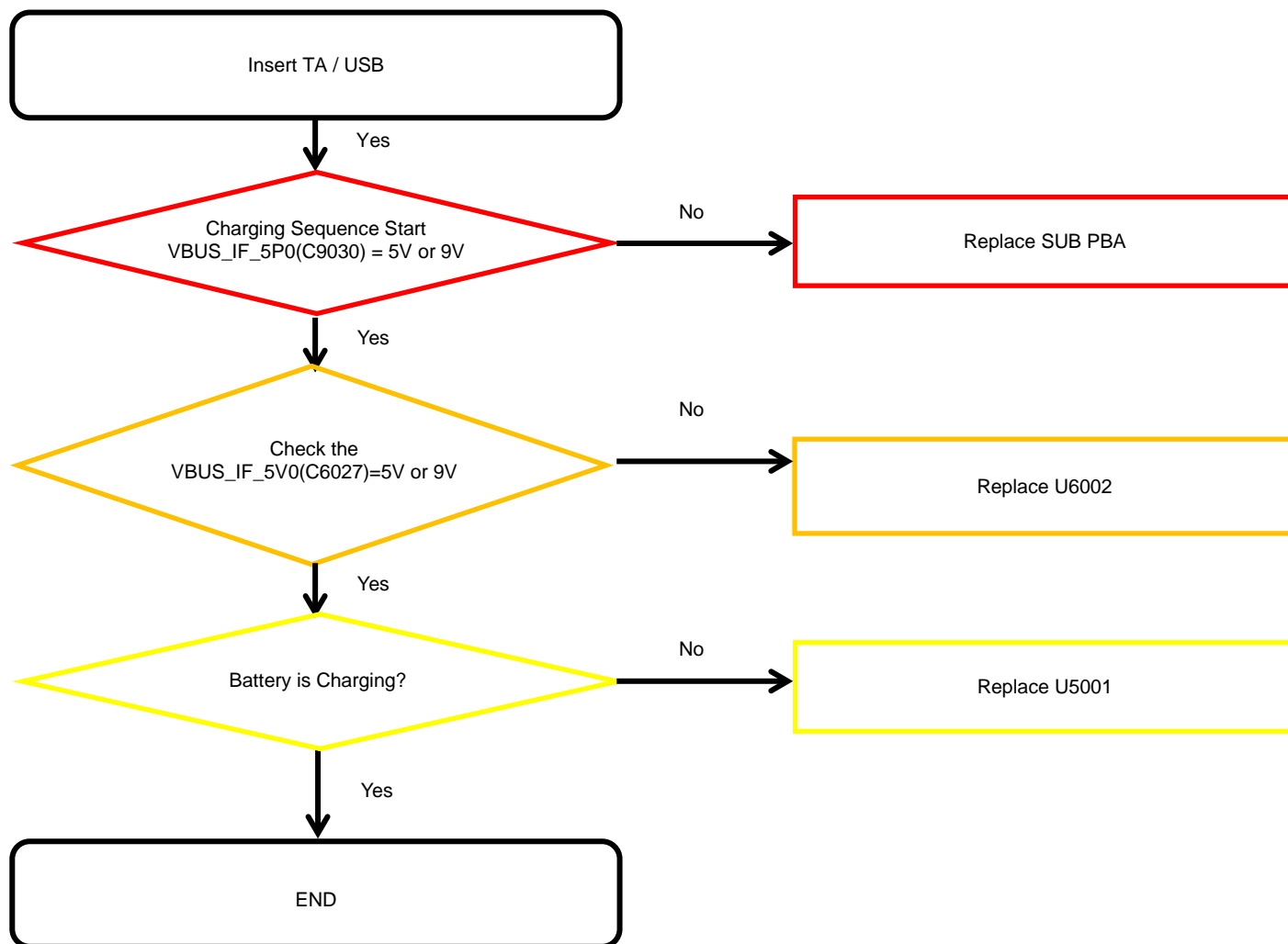


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## 8. Level 3 Repair

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

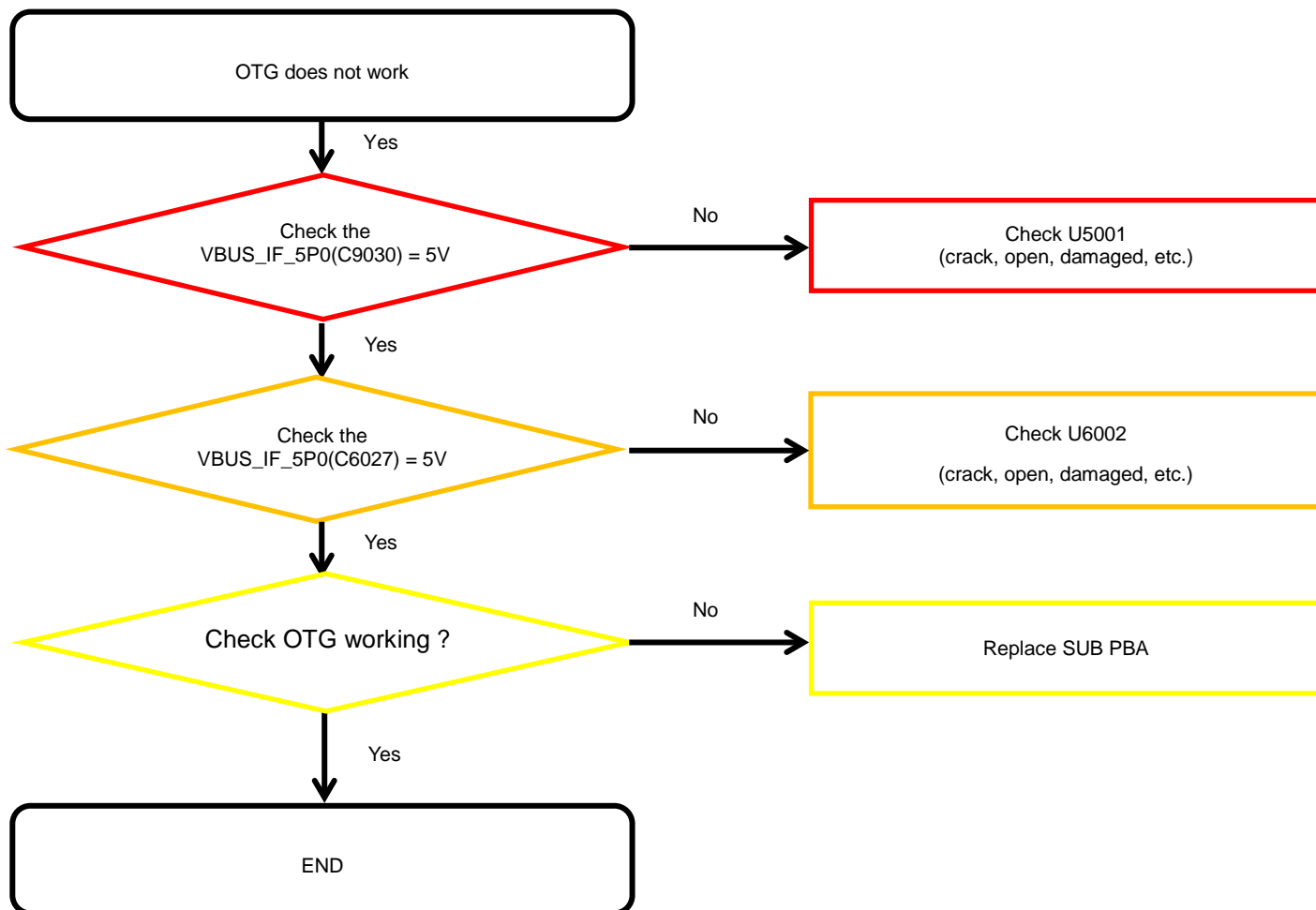


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## 8. Level 3 Repair

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### 8-4-7. OTG

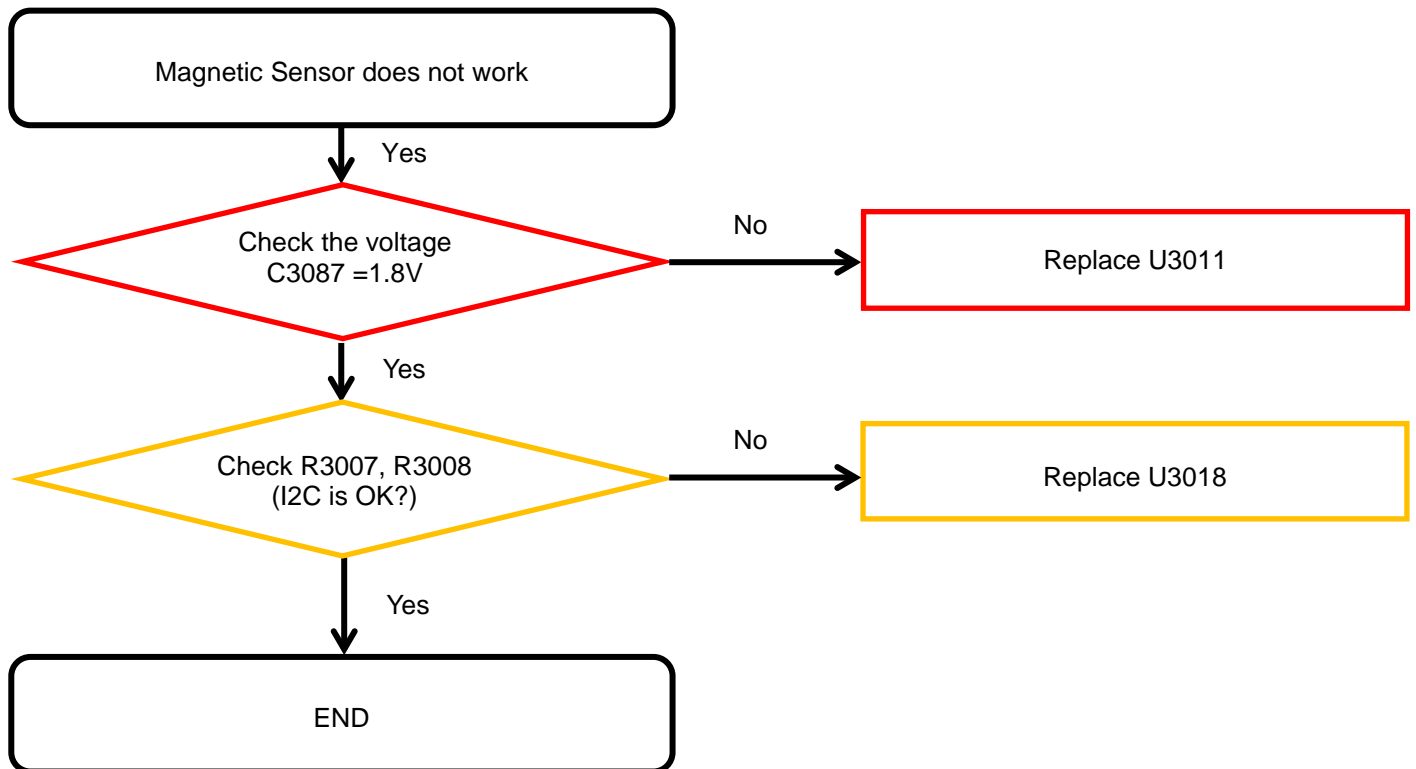


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## 8. Level 3 Repair

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



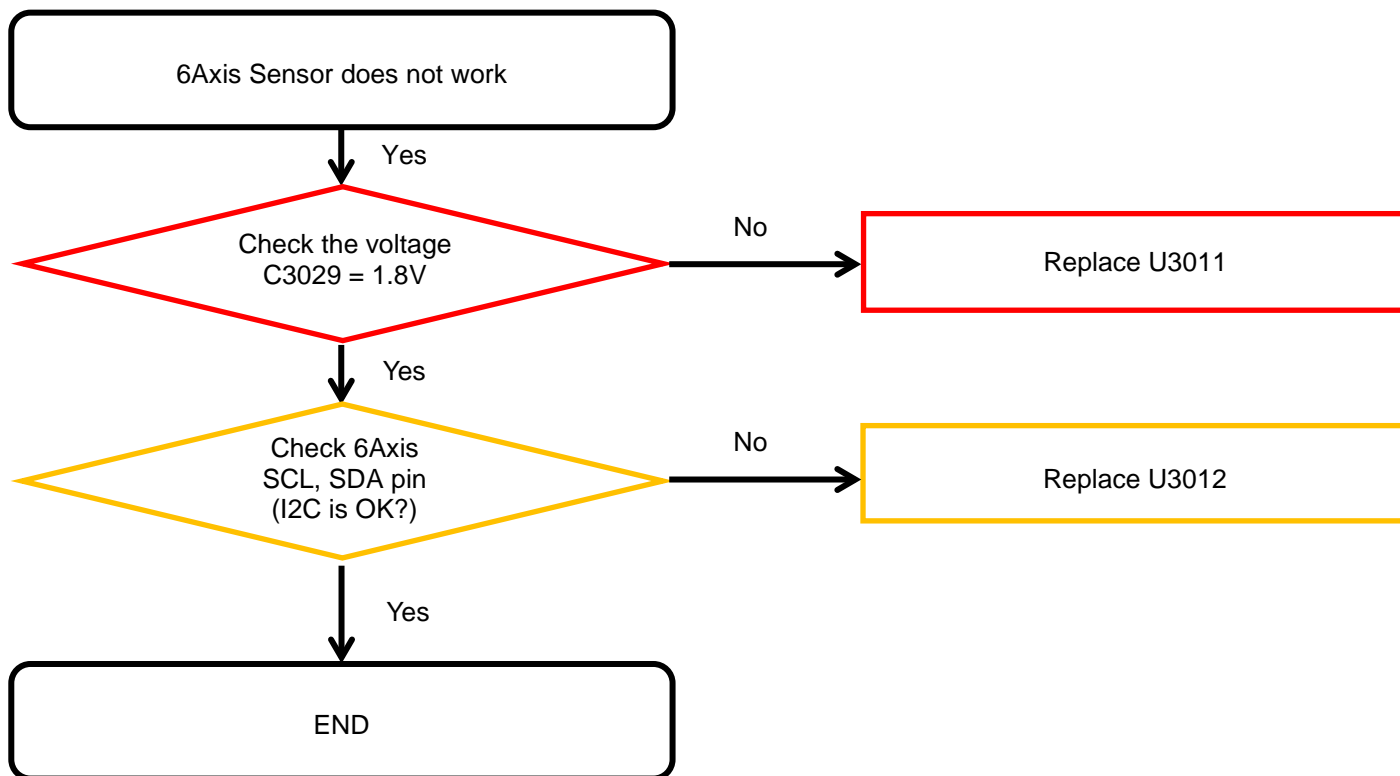


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## 8. Level 3 Repair

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

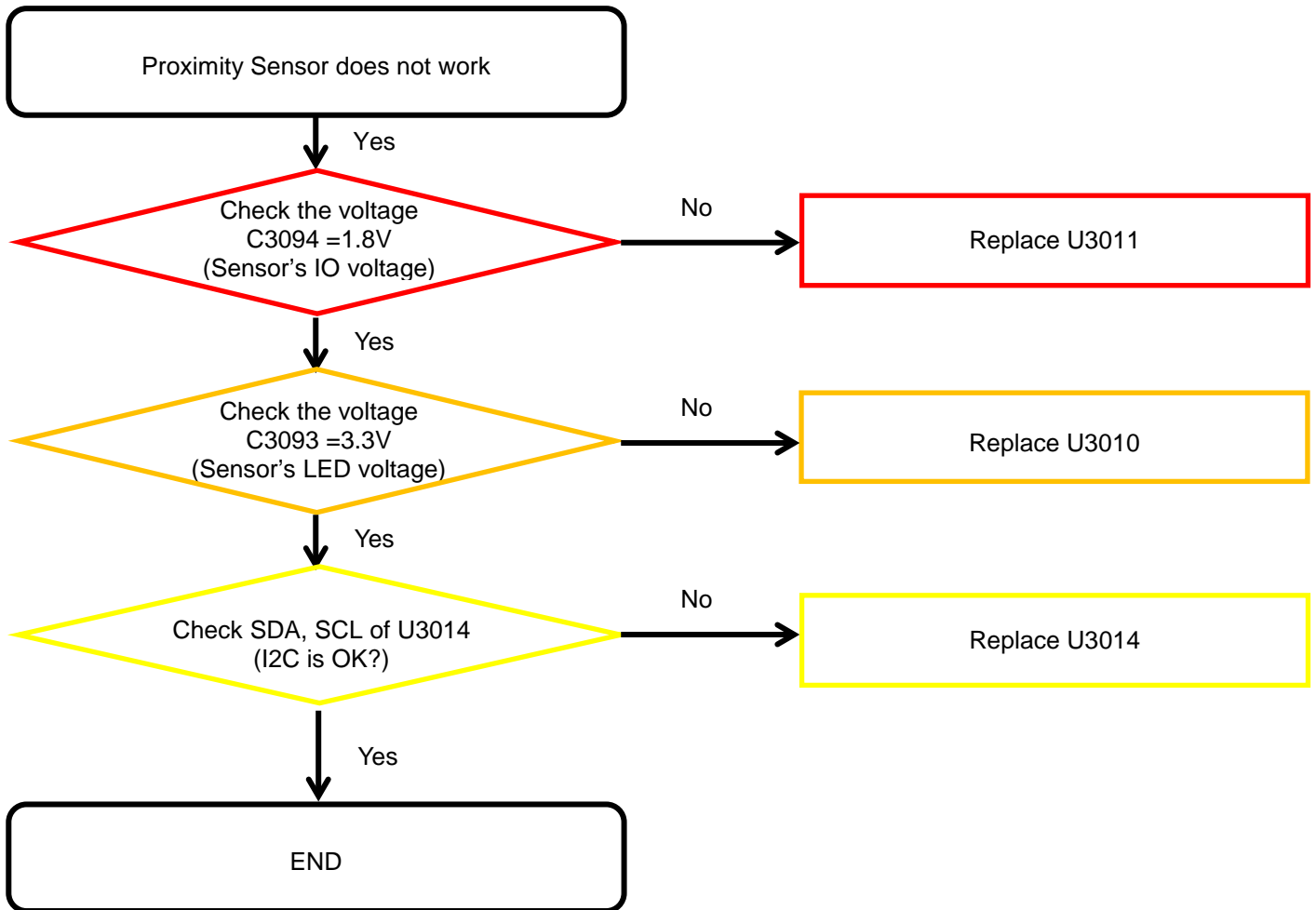


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## 8. Level 3 Repair

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

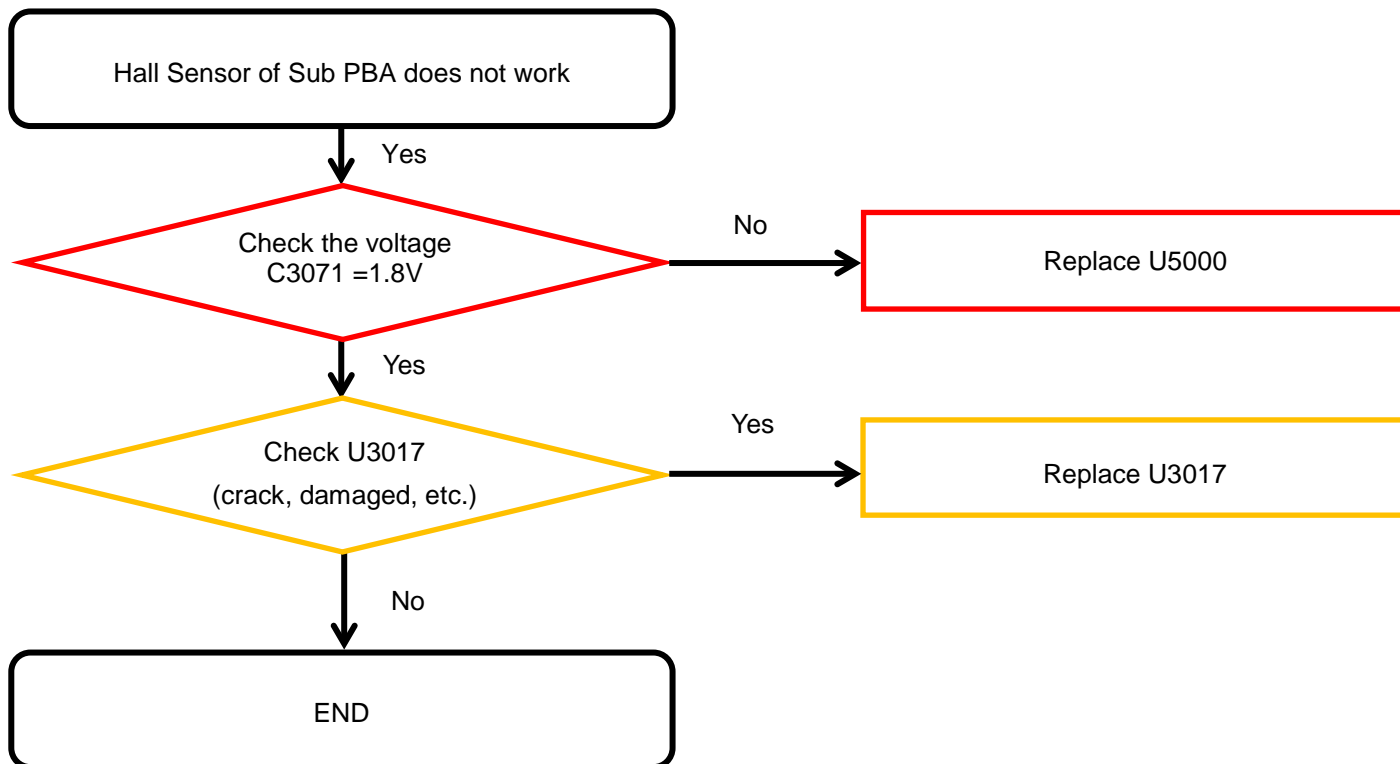


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## 8. Level 3 Repair

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### 8-4-8-4. Hall Sensor

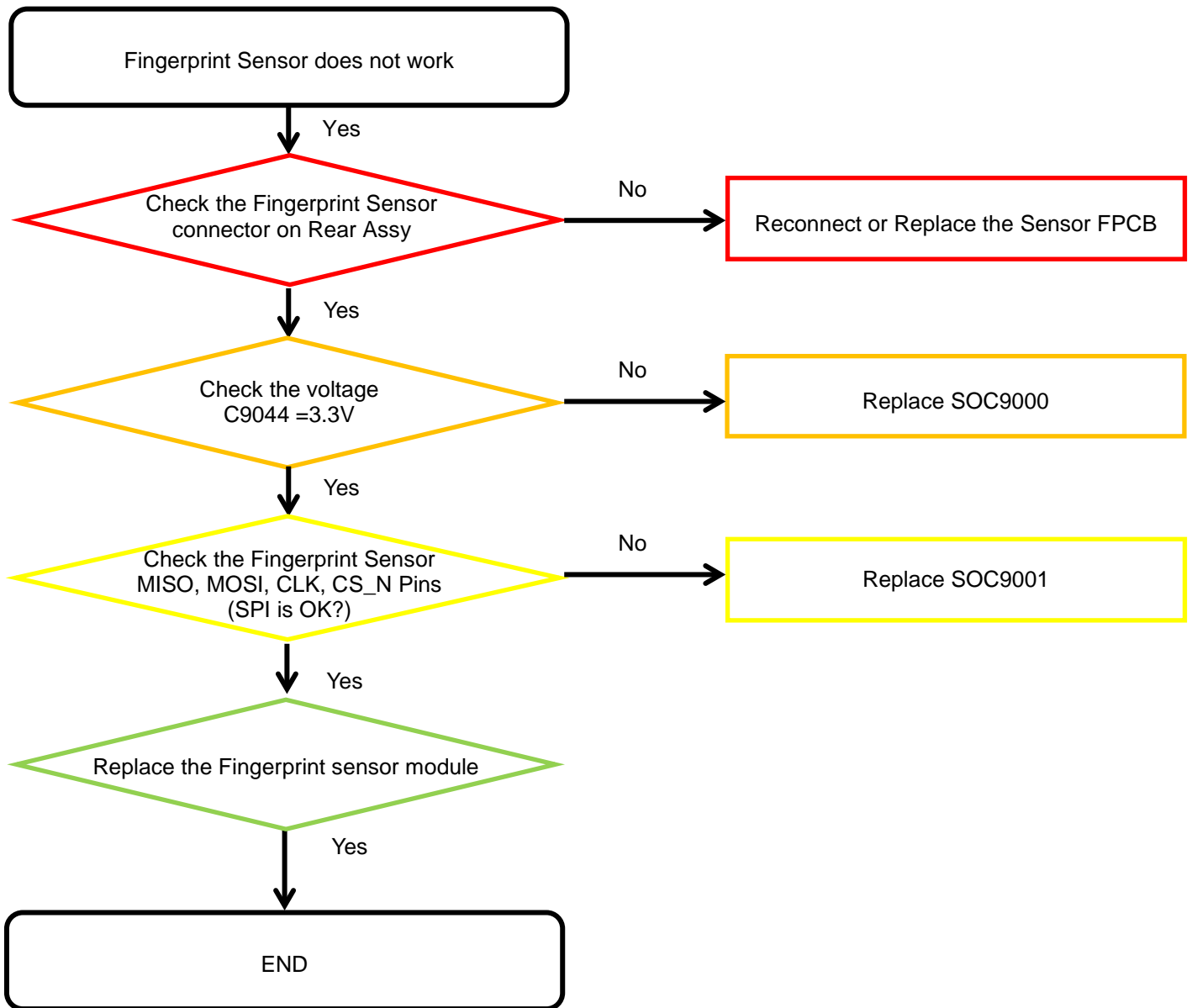


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## 8. Level 3 Repair

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### 8-4-8-5. Fingerprint Sensor

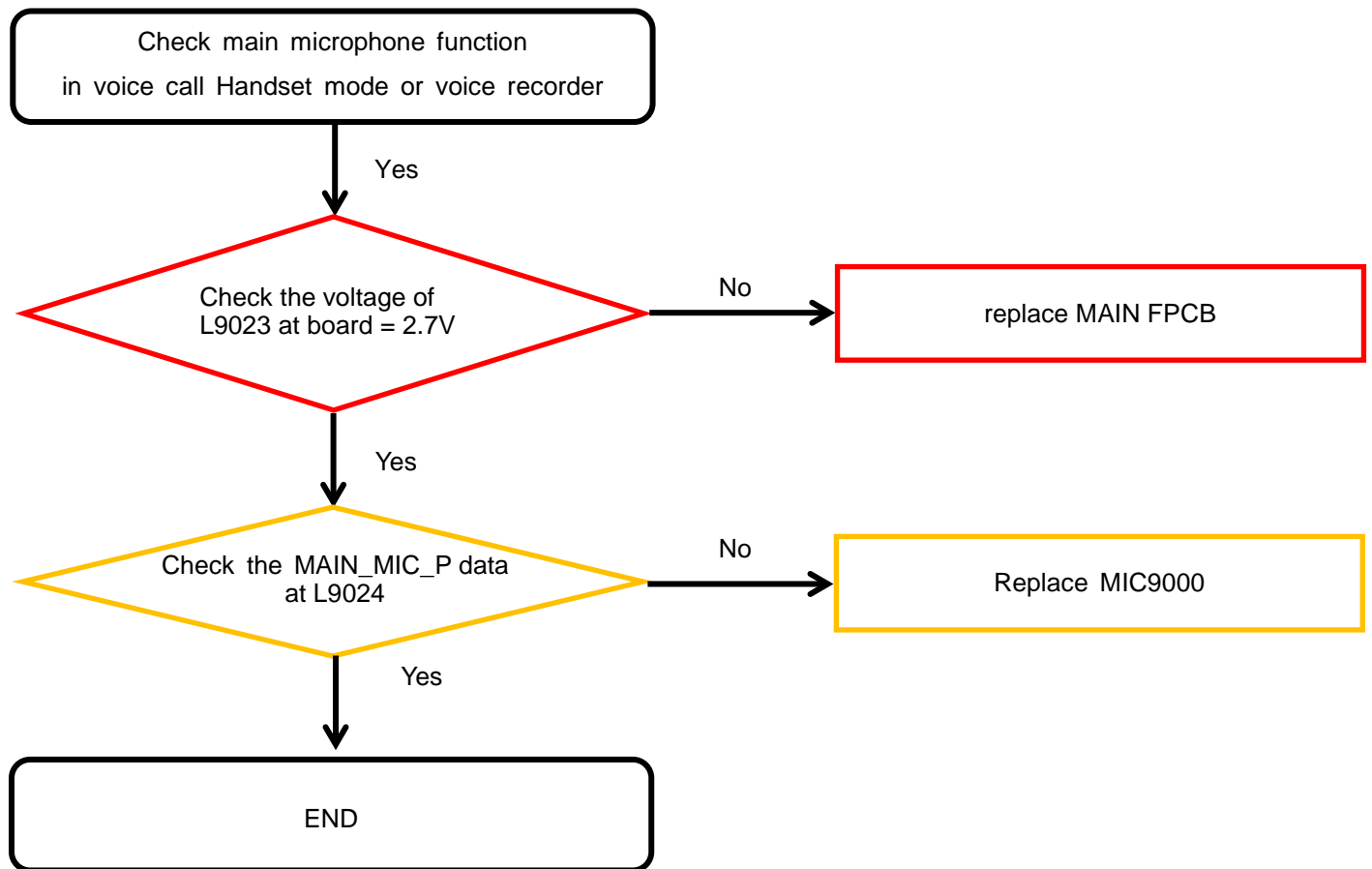


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## 8. Level 3 Repair

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

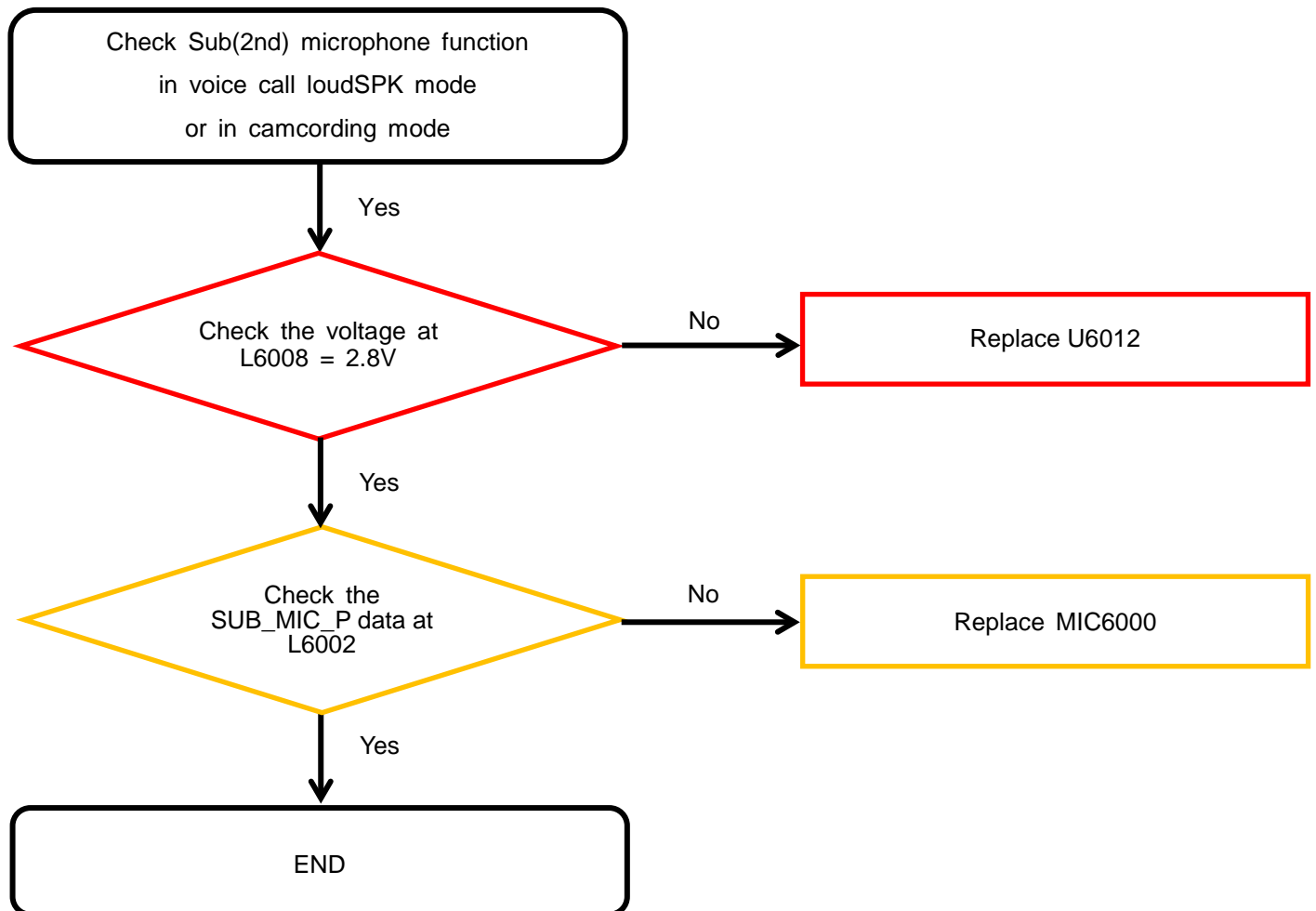


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## 8. Level 3 Repair

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

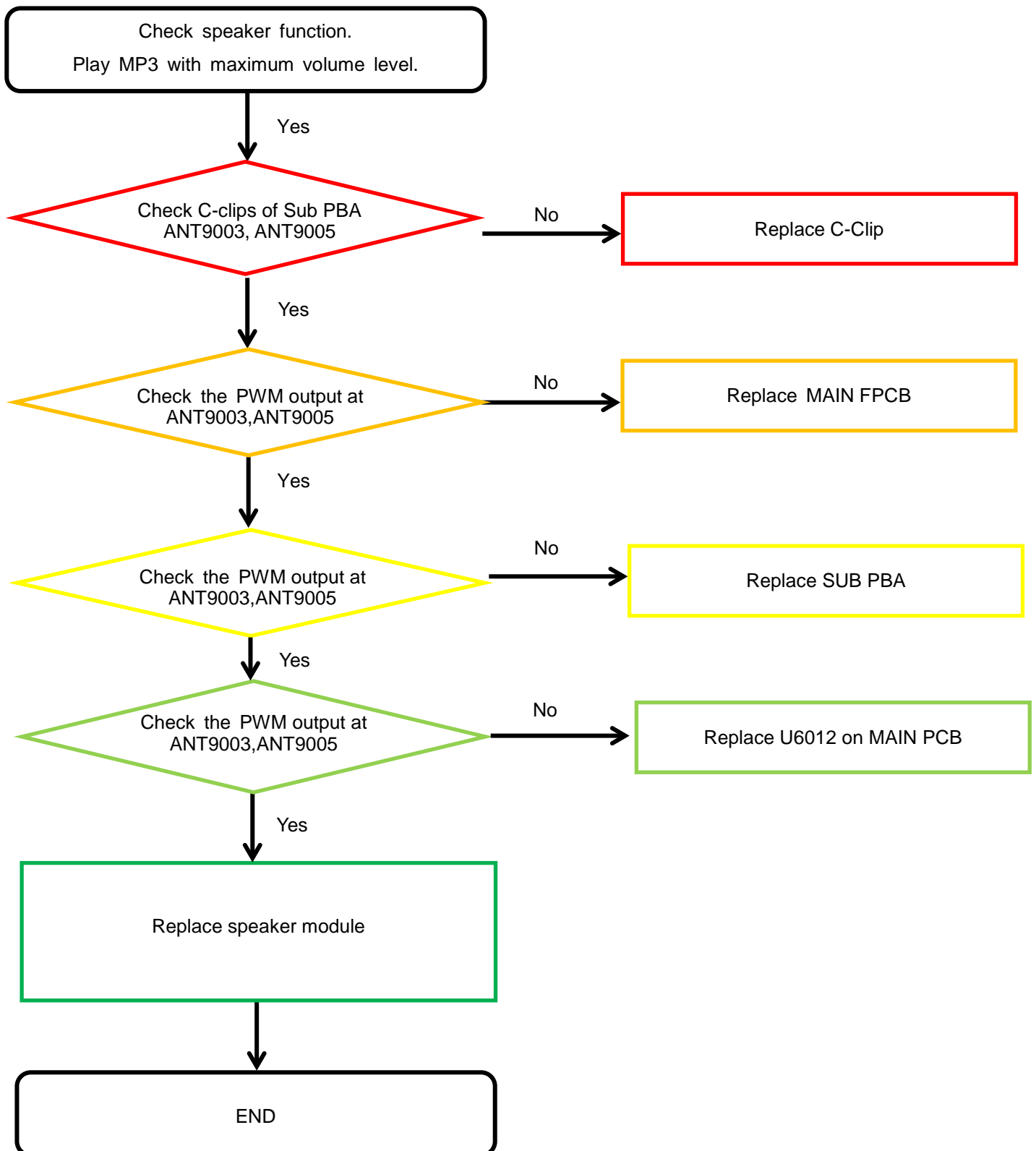


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## 8. Level 3 Repair

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### 8-4-10. Speaker Part

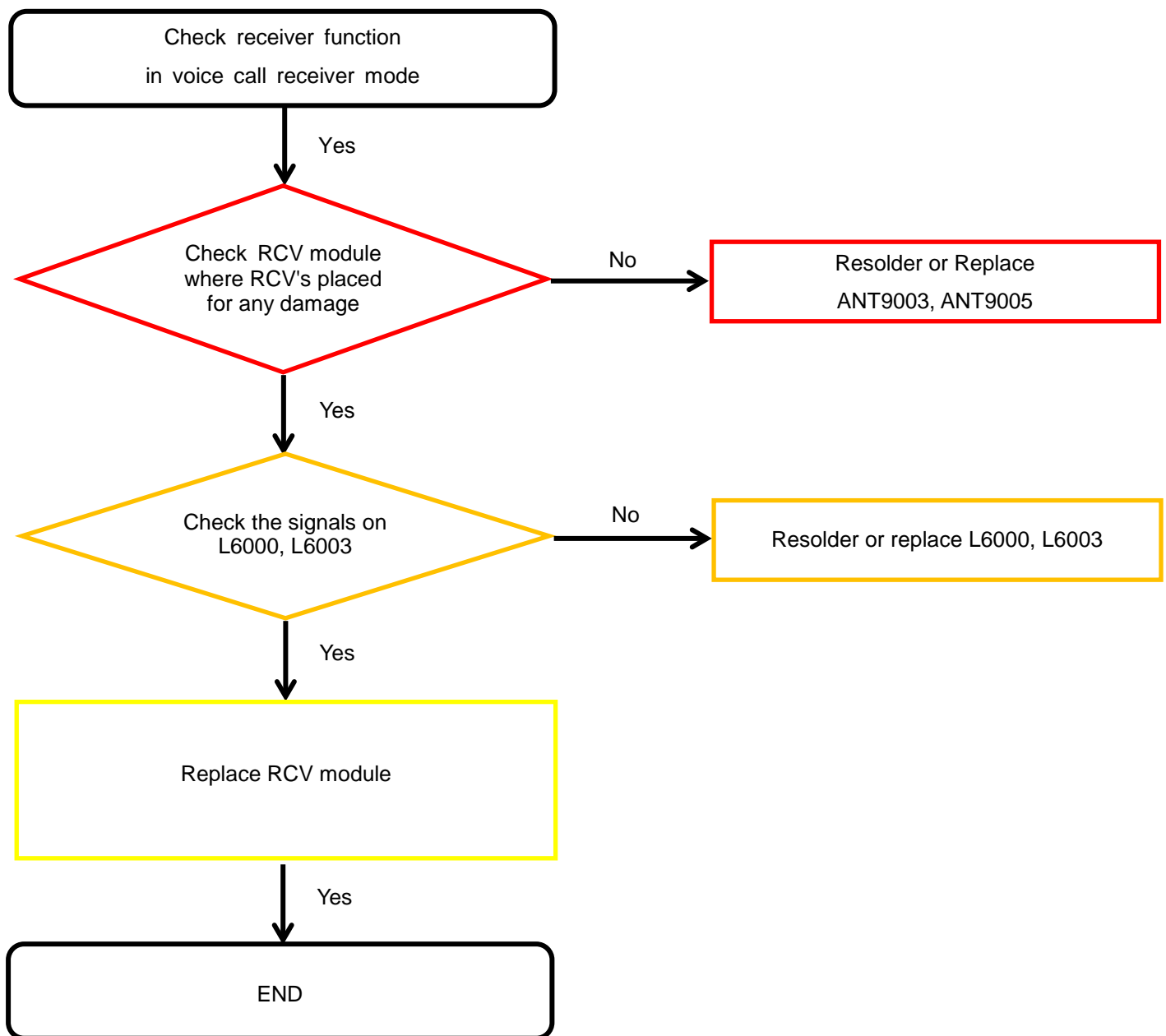


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## 8. Level 3 Repair

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### 8-4-11. Receiver Part



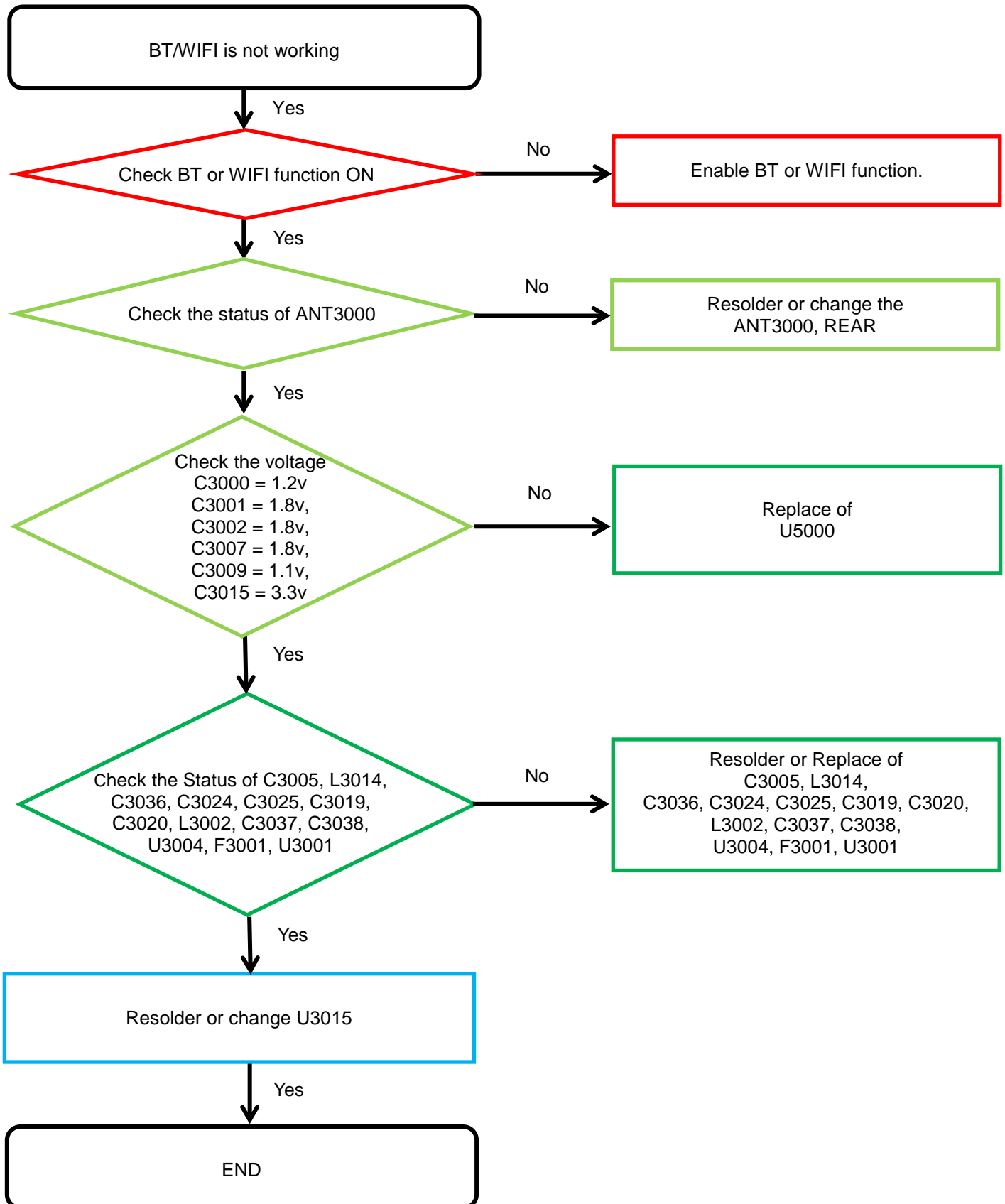


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## 8. Level 3 Repair

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

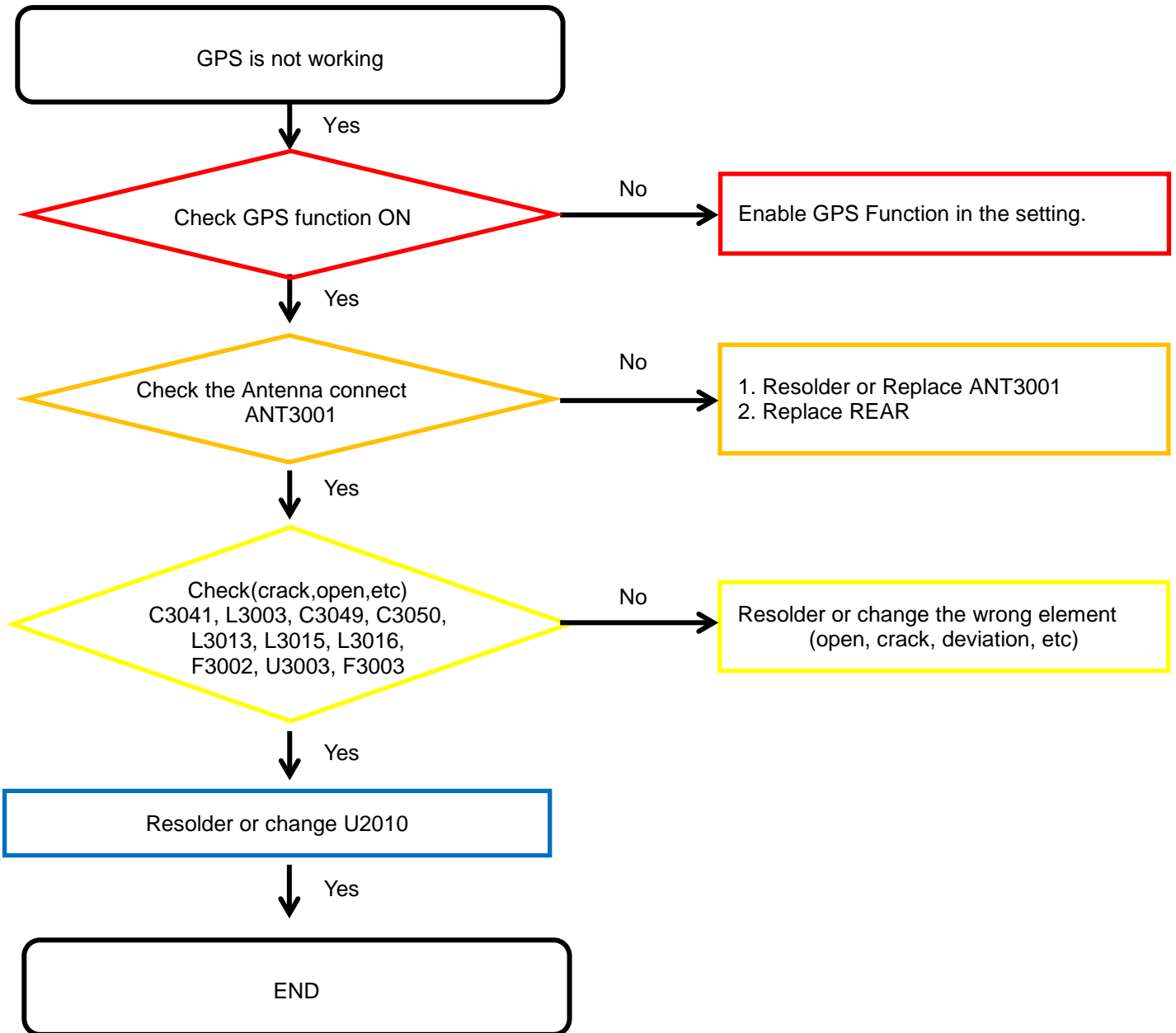


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## 8. Level 3 Repair

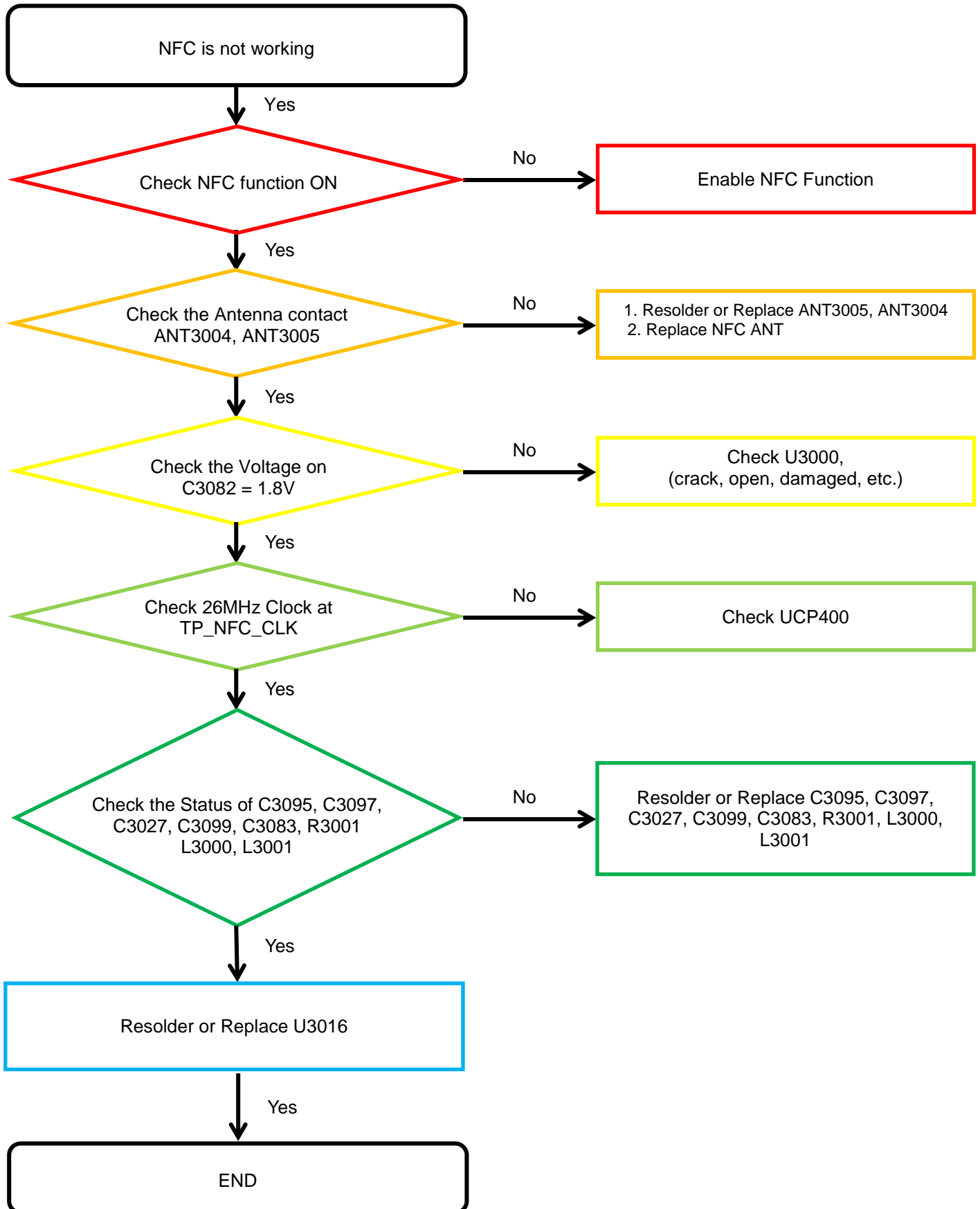
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### 8-4-13. GPS



## 8. Level 3 Repair

### 8-4-14. NFC

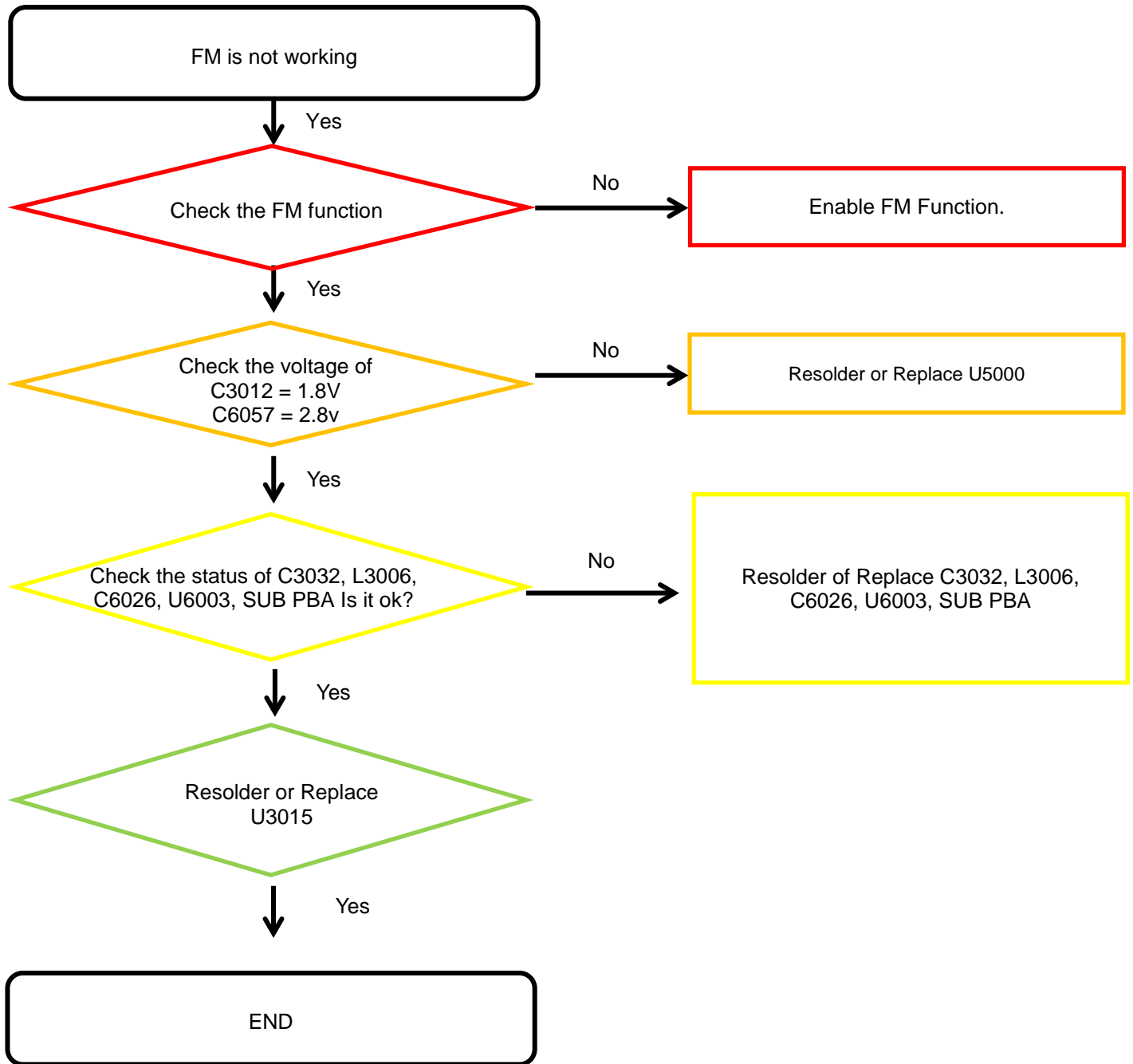


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## 8. Level 3 Repair

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

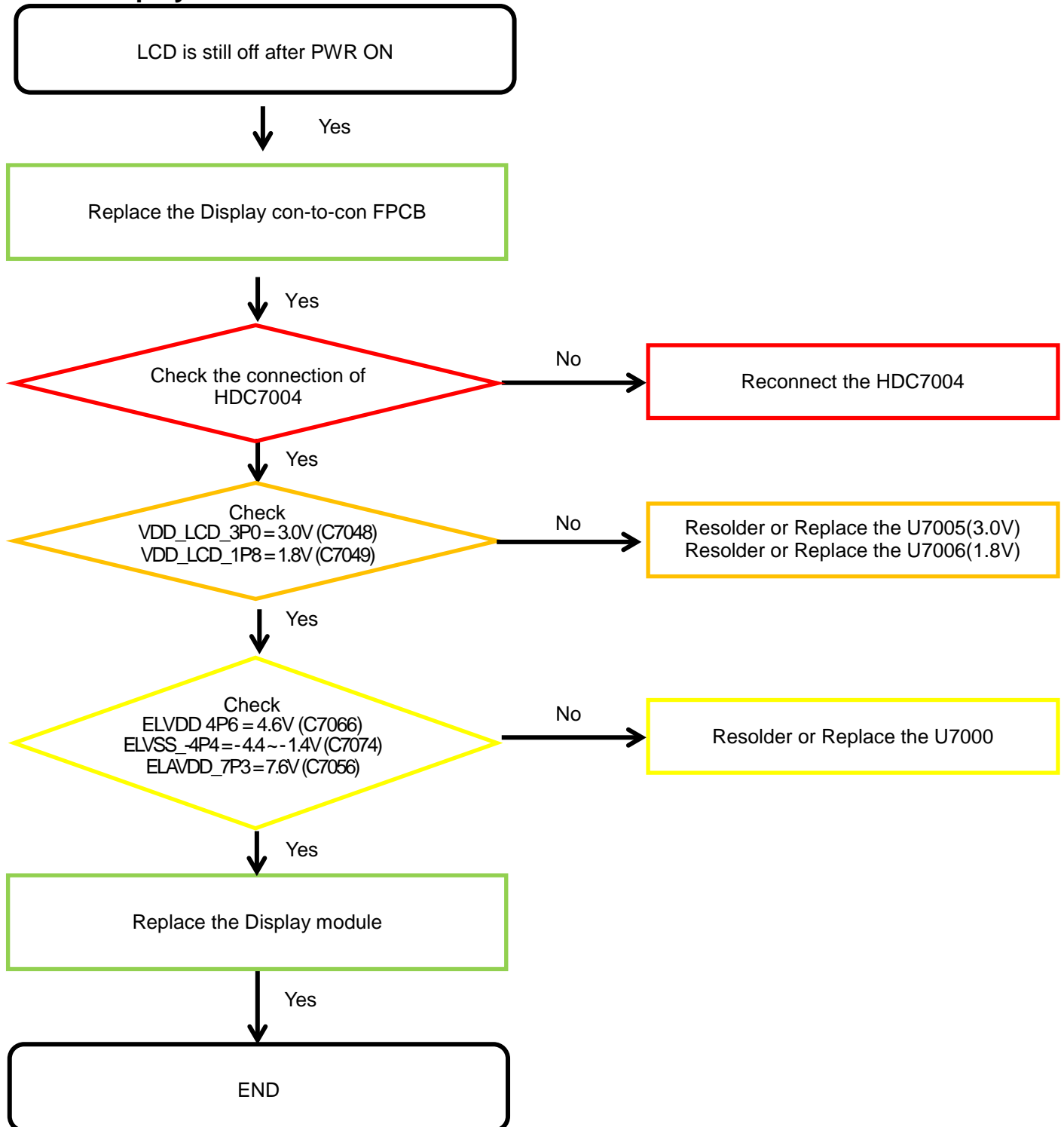


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## 8. Level 3 Repair

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### 8-4-16. Display

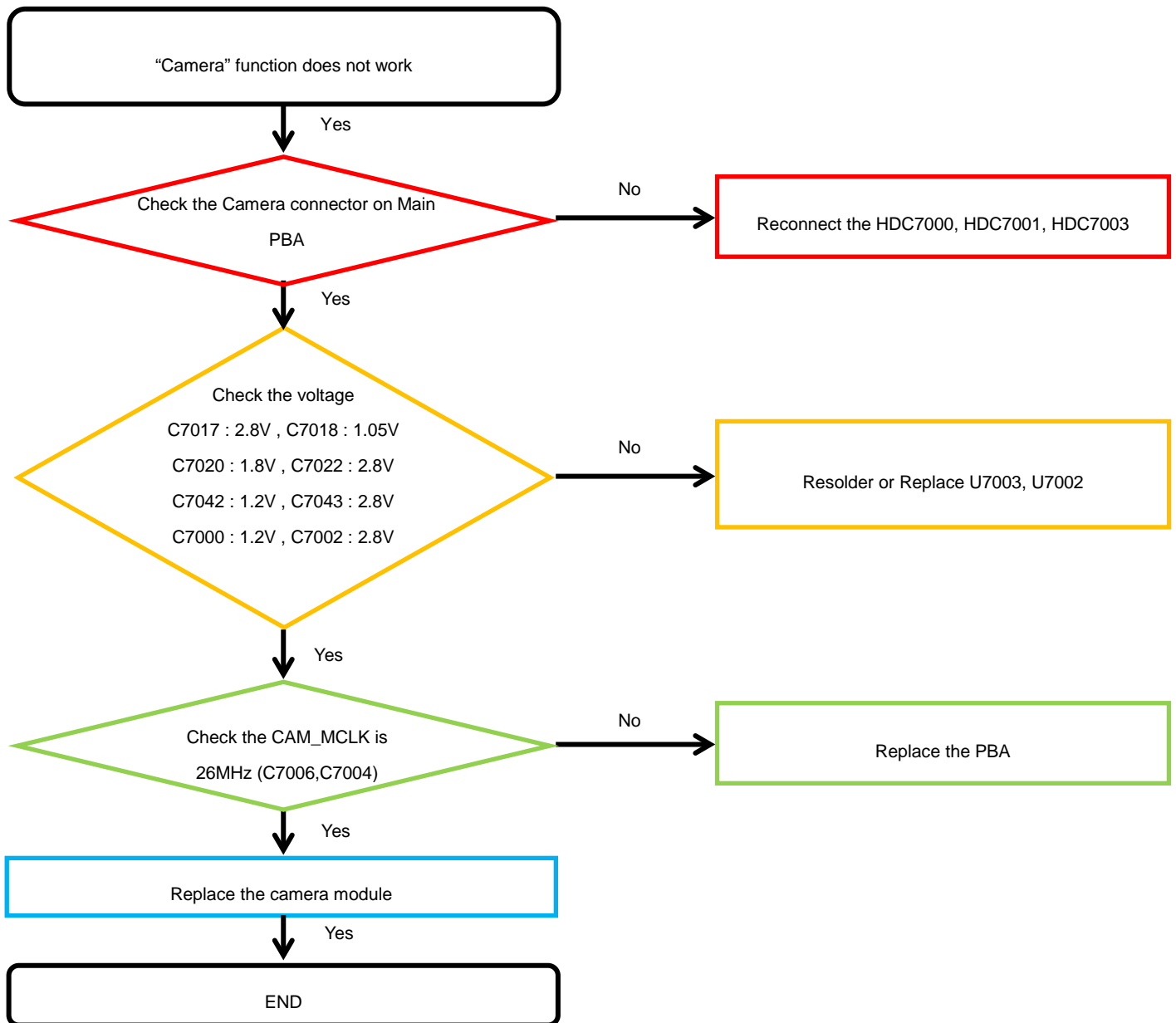


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## 8. Level 3 Repair

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### 8-4-17. Triple Camera

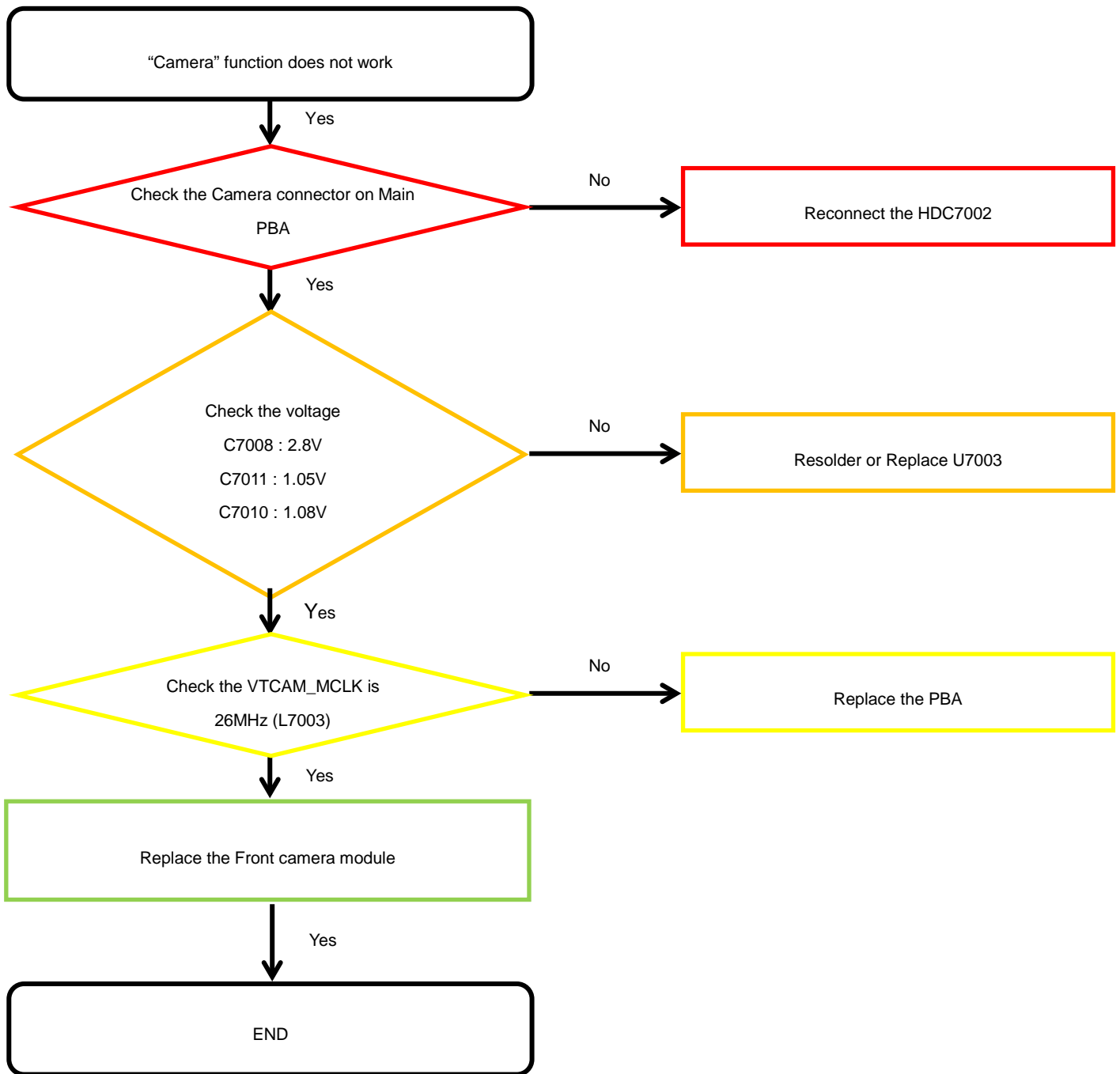


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## 8. Level 3 Repair

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### 8-4-18. VT CAMERA

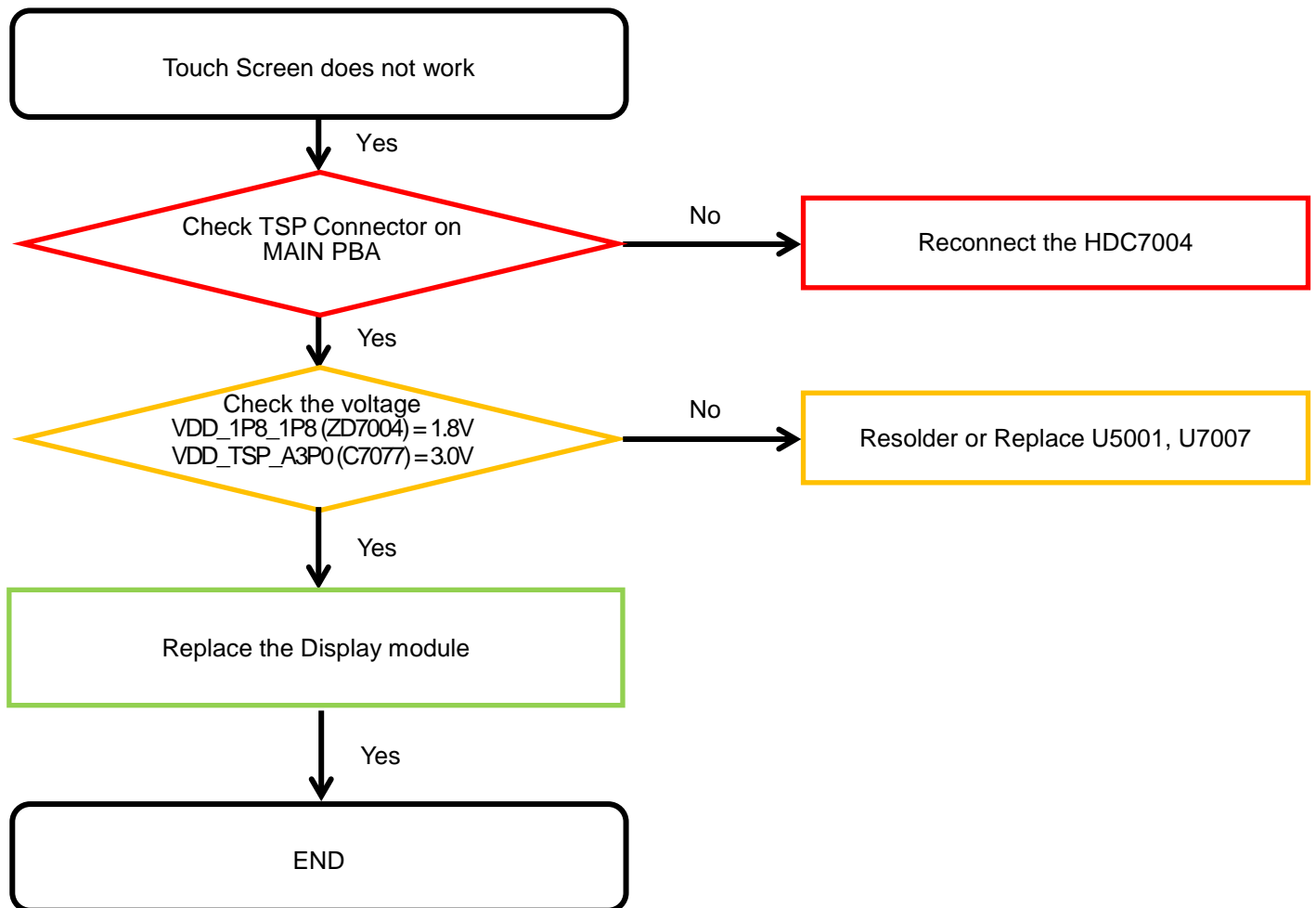


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## 8. Level 3 Repair

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### 8-4-19. TSP



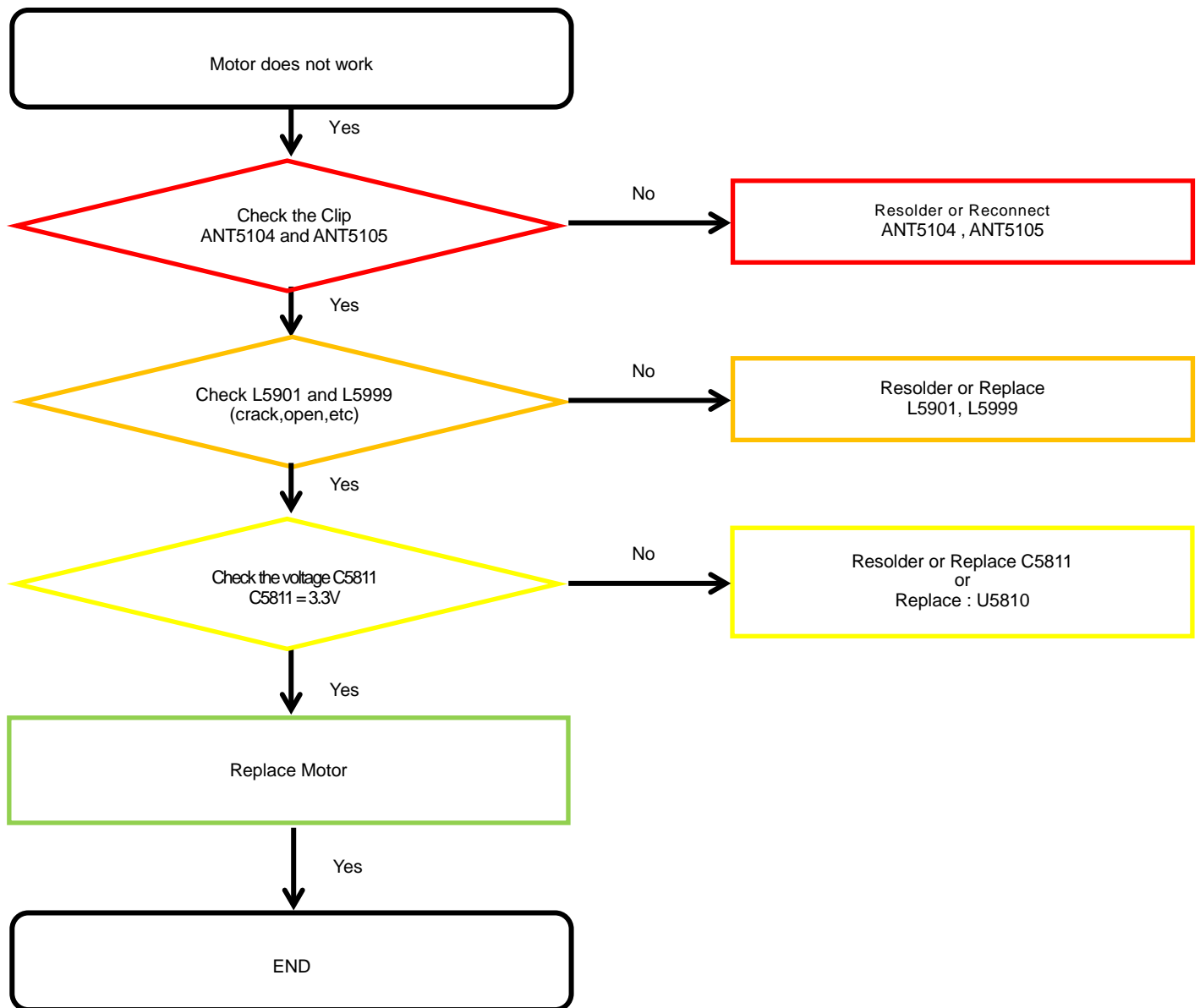


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## 8. Level 3 Repair

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### 8-4-20. Motor

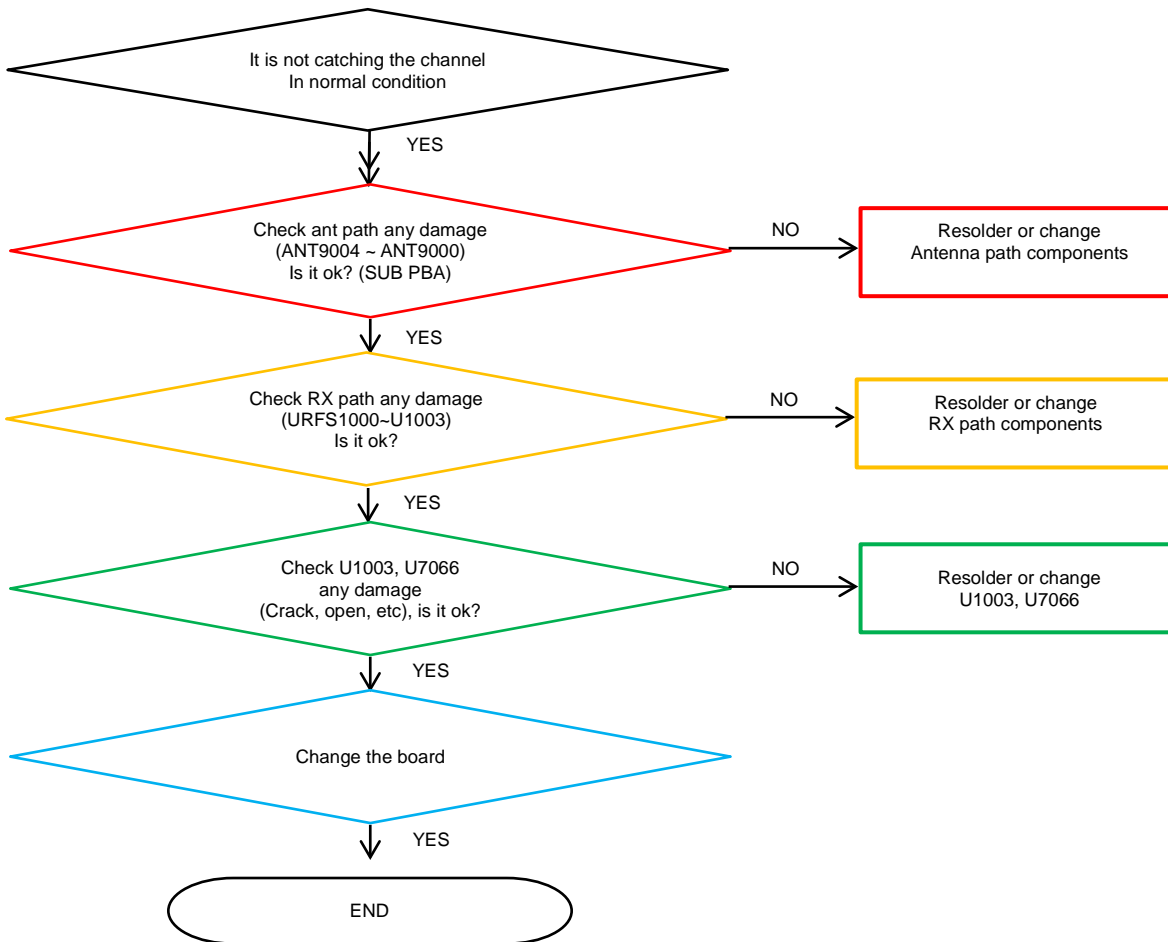


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## 8. Level 3 Repair

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### 8-4-21. GSM 850/900, WCDMA B5/8, LTE B5/8/12/13/17/20/28 PRx

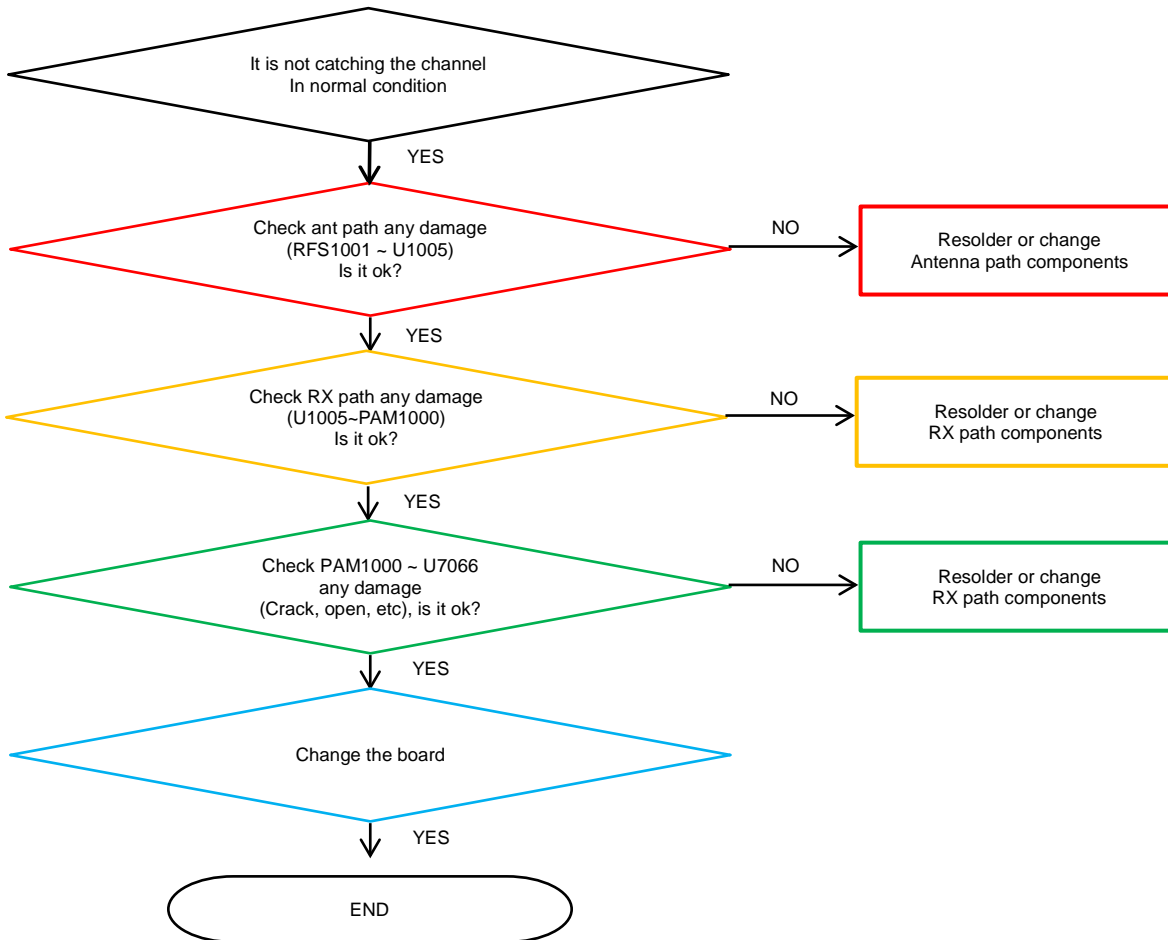


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## 8. Level 3 Repair

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

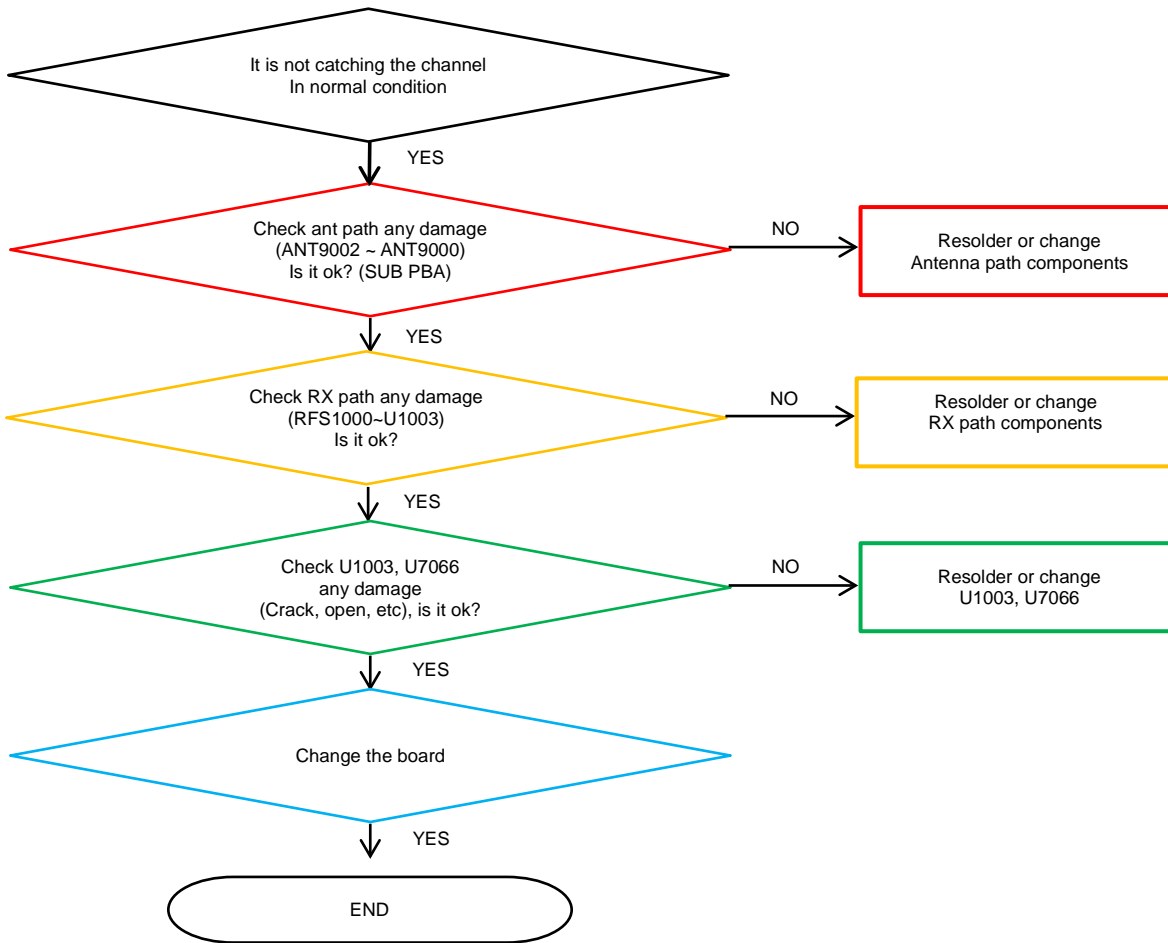


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## 8. Level 3 Repair

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### 8-4-23. GSM DCS/PCS, WCDMA B1/2/4, LTE B1/2/3/4/66 PRx

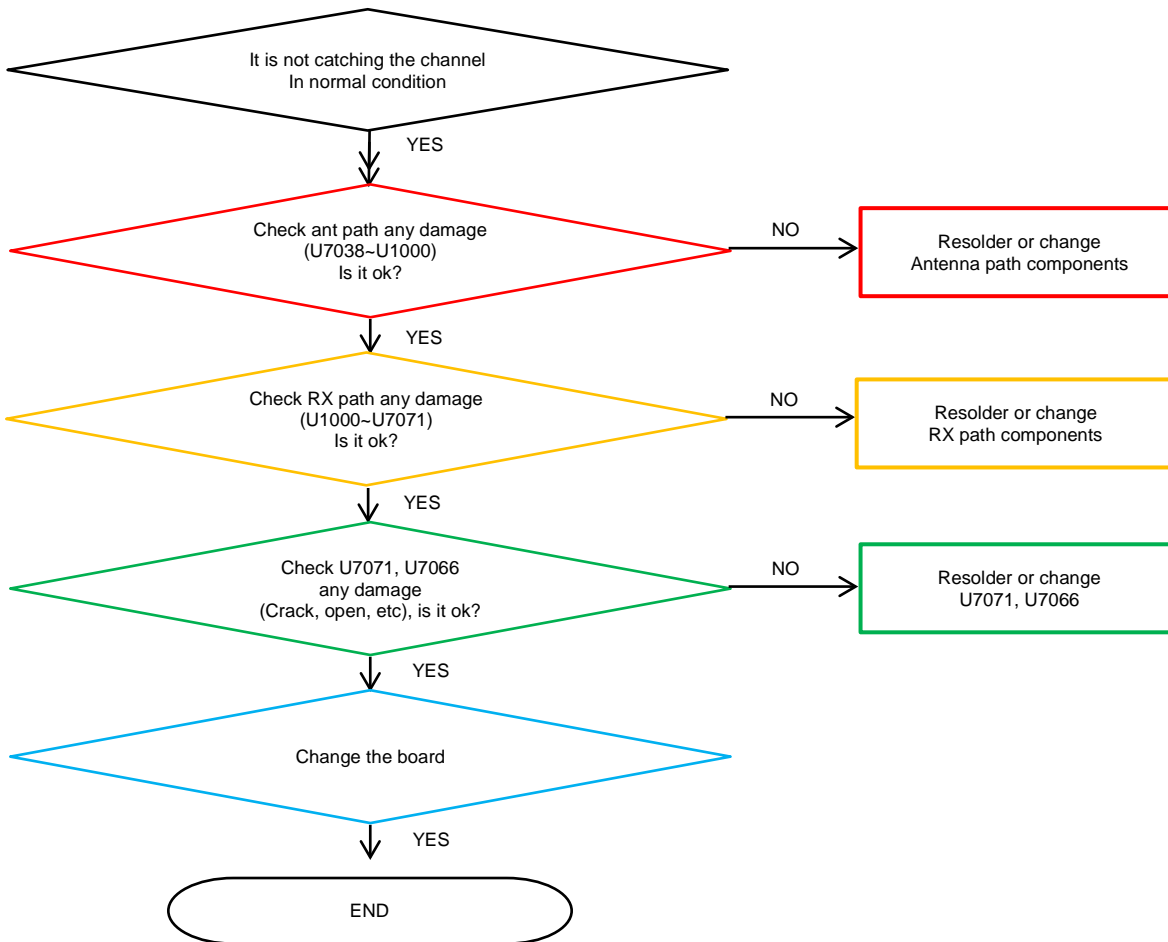


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## 8. Level 3 Repair

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### 8-4-24. GSM 850/900, WCDMA B5/8, LTE B5/8/12/13/17/20/28 DRx

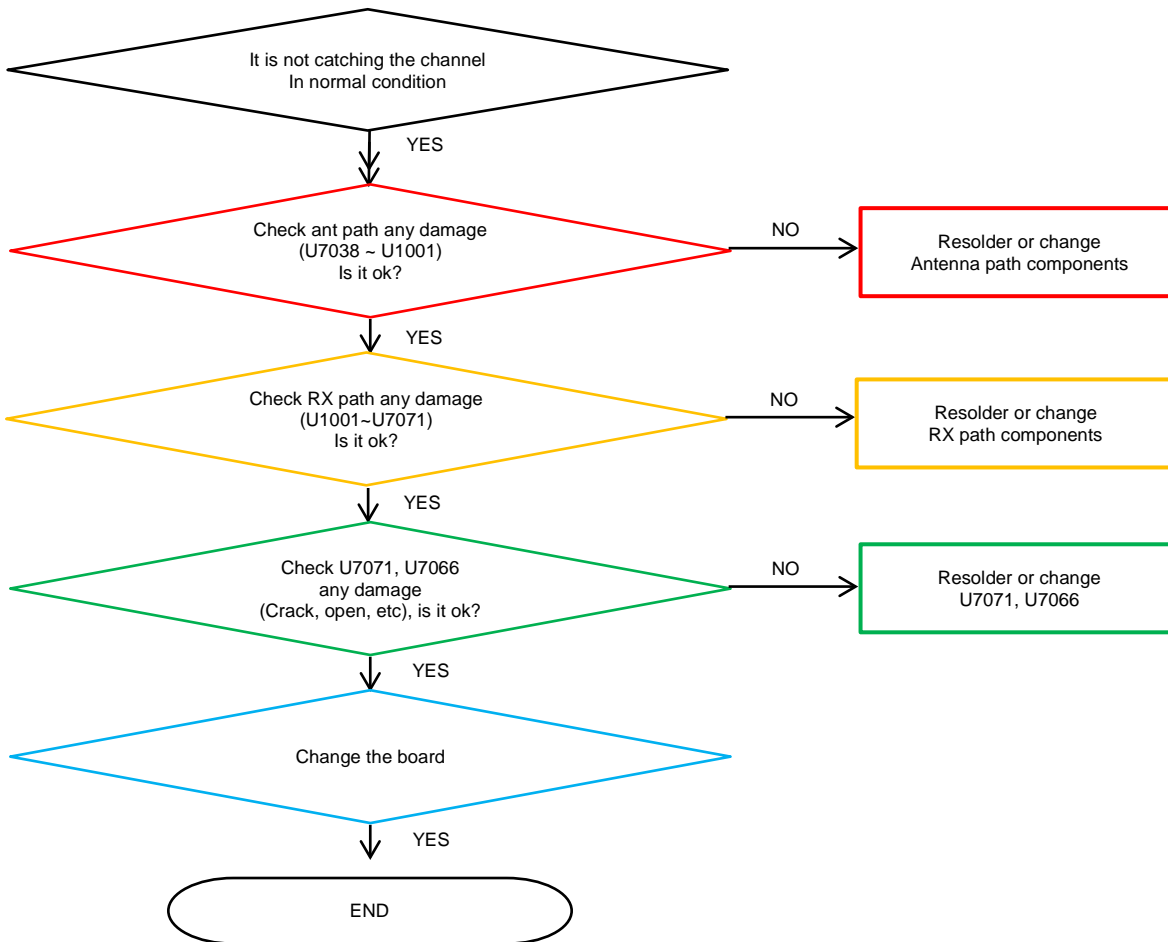


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## 8. Level 3 Repair

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

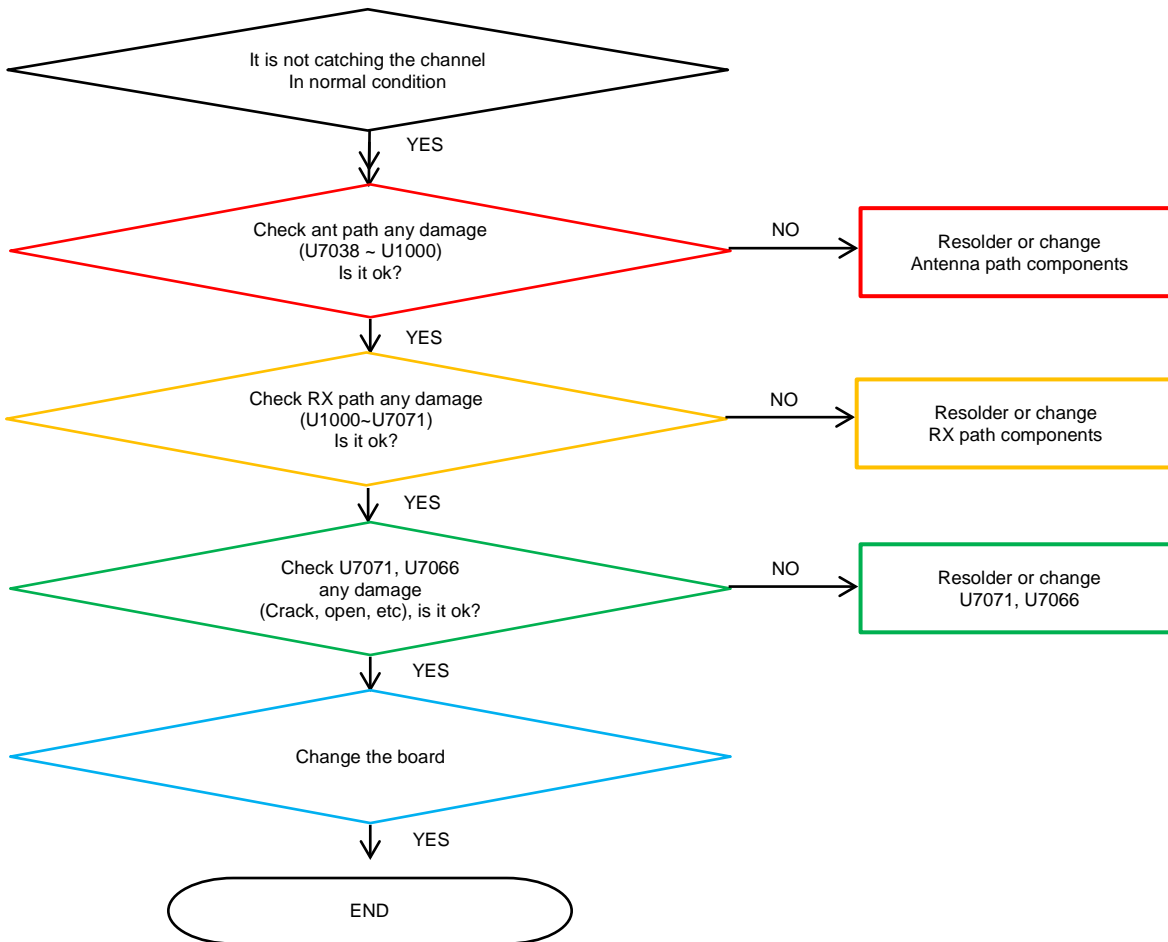


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## 8. Level 3 Repair

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### 8-4-26. GSM DCS/PCS, WCDMA B1/2/4, LTE B1/2/3/4/66 DRx

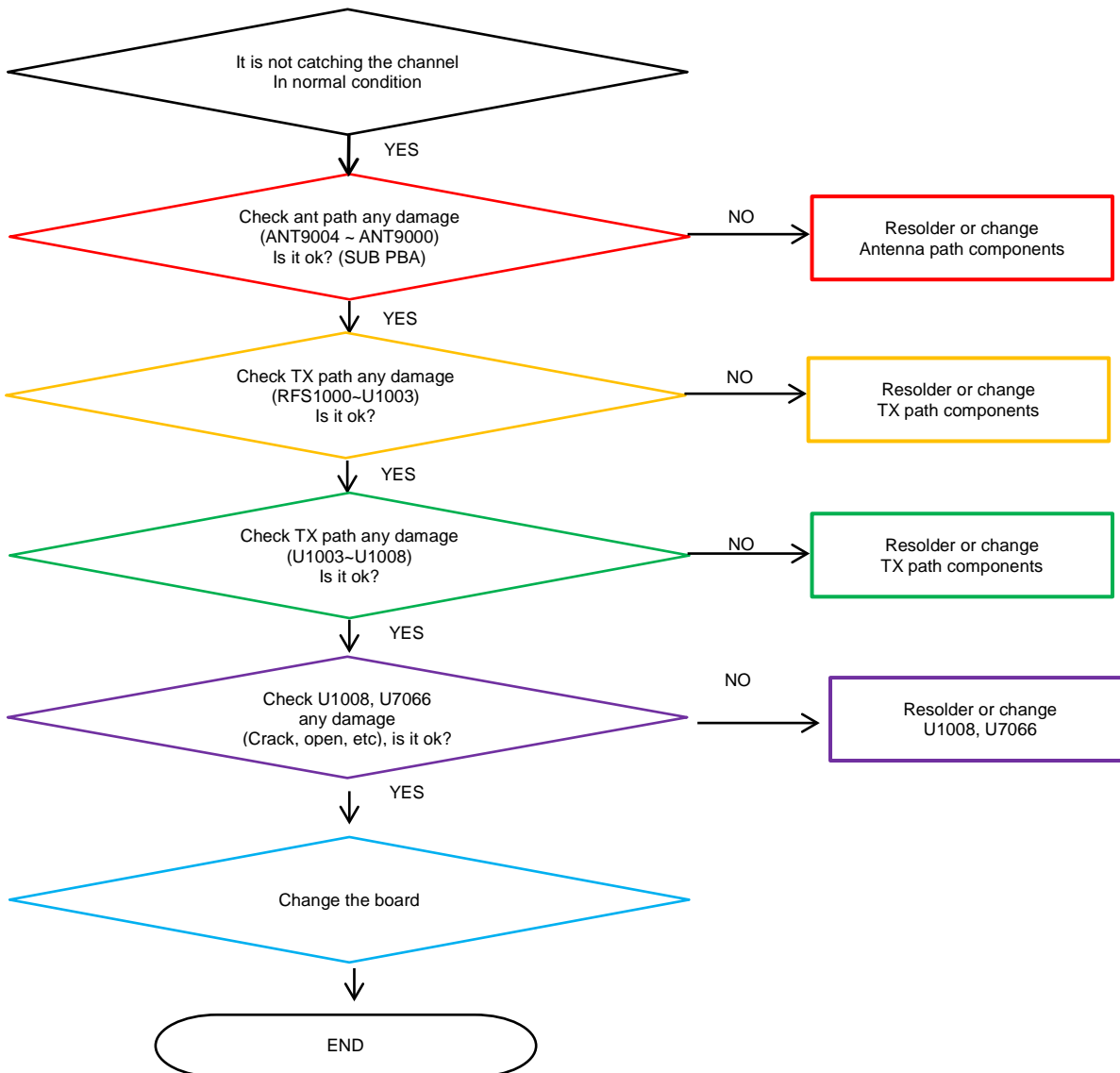


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## 8. Level 3 Repair

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### 8-4-27. GSM 850/900, WCDMA B5/8, LTE B5/8/12/13/17/20/28 TX



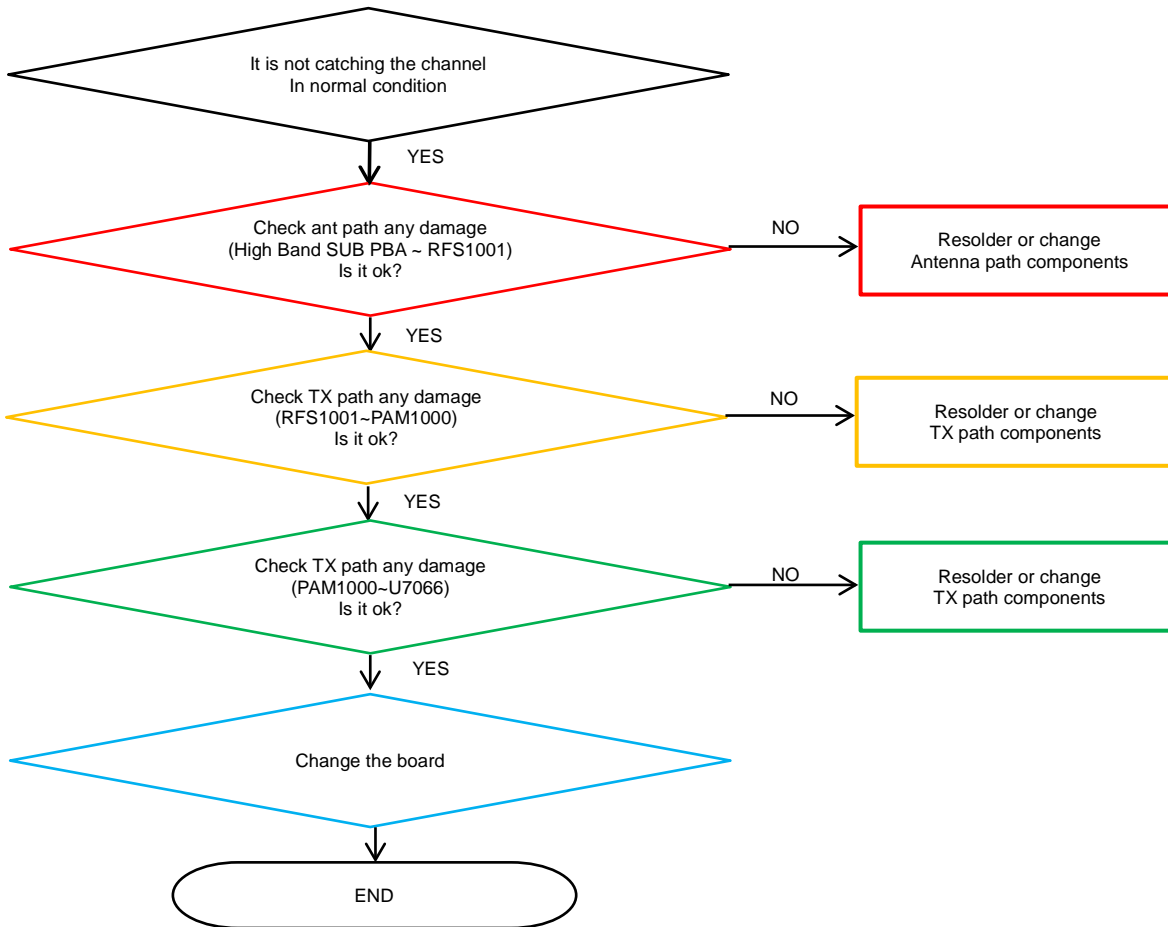


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## 8. Level 3 Repair

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

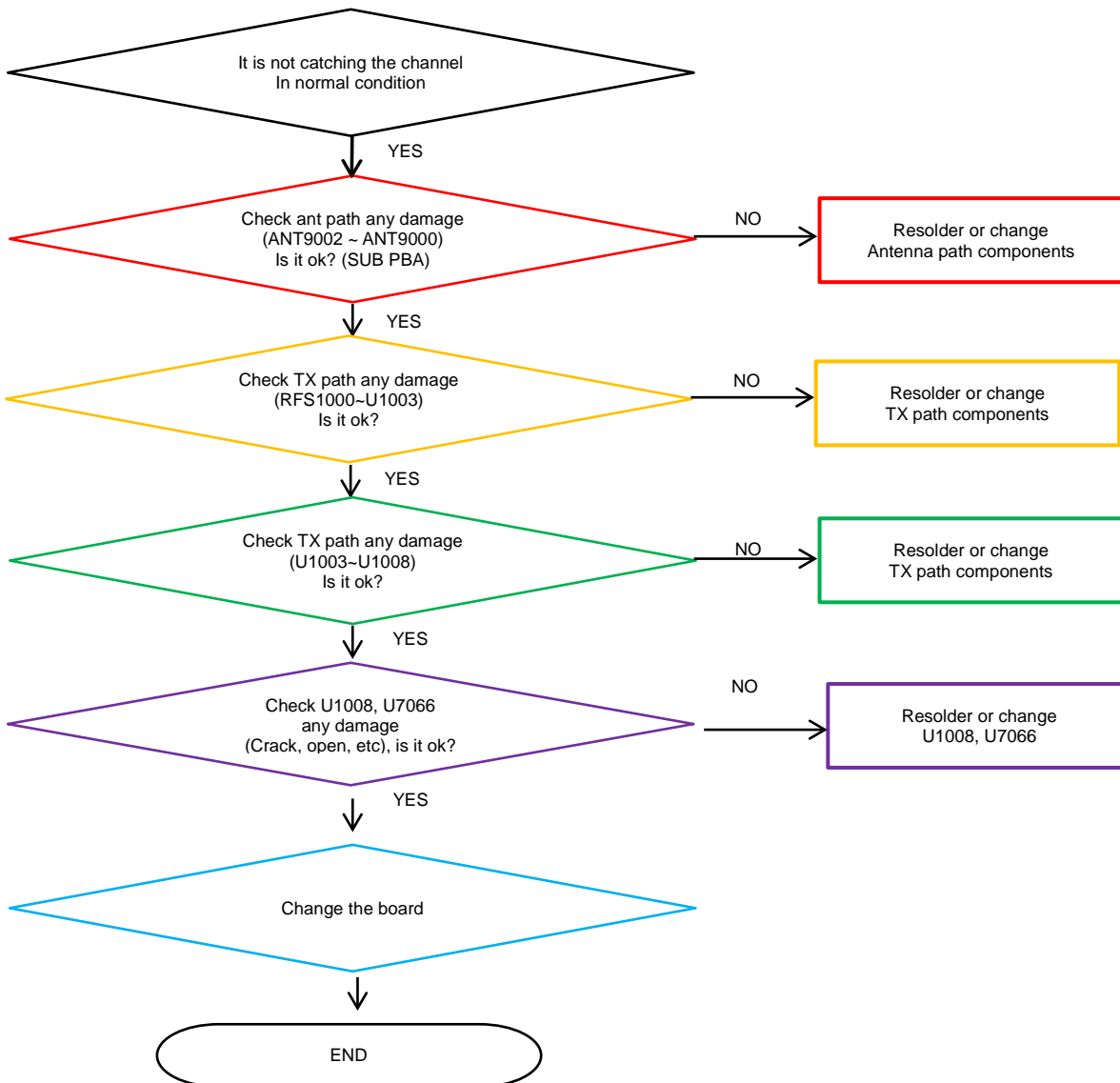


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## 8. Level 3 Repair

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### 8-4-29. GSM DCS/PCS, WCDMA B1/2/4, LTE B1/2/3/4/66 Tx



# 8. Level 3 Repair

## 8-5. Service Schematics - NC Point(Top View)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29		
A	VSS	VSS	VSS	XMMC_E MRD_CLK	XMMC_E MRD_OS	VDDQ_M EM	VDDQ_M EM	VSS	XEINT_19	XEINT_15	XEINT_16	VSS	VDDQ_M EM	XEINT_1	VDDQ_M EM	VSS	XUTDO	XIDGSE L	VDD1_M EM	XGPI021	VDD2_M EM	VDDQ_M EM	XDC35CL	XGPI027	XGPI025	VSS	VSS	VSS	VSS		
B	VSS	VSS	XMMC_C MRD_CM D	VSS	XMMC_E MRD_CM D	XMMC_E MRD_D5	XMMC_E MRD_D7	VDD1_M EM	XNWRITE	XEINT_9	XEINT_10	XEINT_17	XEINT_18	XEINT_13	XEINT_2	XEINT_0	XTRSTN	XUT0	XGPI018	XGPI023	XGPI06	VSS	XDC45CL	XDC35D A	XGPI026	XPWMTO UT_1	VSS	VSS	VSS		
C	VSS	VDDQ_M EM	XMMC_C MRD_CM D	XMMC_C MRD_CM D	XMMC_C MRD_D1	XMMC_C MRD_D2	XMMC_C MRD_D3	XNRESET	XPWRRT ON_CO N	VSS	XEINT_8	XEINT_7	VSS	XEINT_21	XEINT_20	XEINT_5	VSS	XUTCK	XUTMS	XGPI019	XGPI020	XDC45D A	XGPI07	XGPI024	XUOXT3N	XUORT3N	VDDQ_M EM	VSS	VSS		
D	XUSR200 M	VDDQ_M EM	XMMC_C MRD_D0	XMMC_C MRD_D2	XMMC_C MRD_D1	XMMC_C MRD_D2	XMMC_C MRD_D1	XPWRRT ON_SLB	XPSHOLD	XEINT_11	XEINT_11	XEINT_14	XEINT_6	XEINT_4	XEINT_3	XOM_2	XOM_0	XOM_1	XGPI016	XGPI015	XGPI022	XGPI05	XDC65D A	XDC65CL	XUOT4	XUOR4	VDDQ_M EM	XWLBT_W LDA_TK0 P	VSS		
E	XUSR200 P	VSS	XMMC_C MRD_D1	XMMC_C MRD_D2																						XPWMTO UT_1	XWLBT_W LDA_TK0 Y	VSS	XWLBT_W LDA_TK0 Z	VSS	
F	XUSR300 RD_REXT 1	XUSR300 RD_SS_RX 2,N	VSS	XUSR300 YRTUNE	XMMC_C MRD_D1	VDDQ18 MRD_D4	XMMC_E MRD_D1	VSS	XPWRRT ON_G3D	XSPEDY_PMC	XPWRRT ON_MAI N	VSS	XRTXCT	XRTXCT0	XUART_D EBUG_TX D	XCLKREQ	XCLKOUT 2	XDC25D A	XDC25CL	XGPI00	XGPI02	XDC35D A	XDC15D A	XDC15CL	XWLBT_W LDA_TK0 Y	VSS	XWLBT_W LDA_TK0 Z	XWLBT_W LDA_TK0 N	VSS	VSS	
G	XUSR300 RD_SS_RX 1,N	XUSR300 RD_SS_RX 2,P	XUSR300 RD_SS_TX 1,N	XUSR300 RD_REXT 2,P	VDDQ18 MRD_D4	VDDQ18 MRD_D5	VDDQ18 MRD_D7	VSS	VSS	VSS	VDDQ8_P LL_DRP_HYD	AVDD18_P LL_DRP_HYD	VSS	XDRAMI_ZQ	XUART_D EBUG_RX D	XEINT_22	XCLKOUT	XGPI01	XGPI017	XDC35CL	XDC05D A	XBOOTL_DO	XWLBT_B TMR_SPD Y	XWLBT_B TMR_SPD Y	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	
H	XUSR300 RD_SS_TX 2,N	XUSR300 RD_SS_TX 1,N	XUSR300 RD_REXT 2,P	AVDD03_HY	VDDQ9_U SR30_PHY	VSS	VDDQ_FY S	VDDQ06 DRAM0	VDDQ06 DRAM0	VDDQ06 DRAM0	VDDQ06 DRAM0	VDDQ06 DRAM0	VDDQ06 DRAM0	VDDQ06 DRAM0	VDDQ06 DRAM0	VDDQ06 DRAM0	VDDQ06 DRAM0	VDDQ06 DRAM0	VDDQ06 DRAM0	VDDQ06 DRAM0	VDDQ06 DRAM0	VDDQ06 DRAM0	VDDQ06 DRAM0	VDDQ06 DRAM0	VDDQ06 DRAM0	VDDQ06 DRAM0	VDDQ06 DRAM0	VDDQ06 DRAM0	VDDQ06 DRAM0	VDDQ06 DRAM0	VDDQ06 DRAM0
J	VDDQ_M EM	VDDQ_M EM	VSS	XAD03A N_0	AVDD18_USR30_P HY	AVDD18_USR30_P HY	VDDQ_FY S	VDDQ_G3 D	VSS	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM
K	XAD03A N_5	XAD03A N_3	XAD03A N_1	XAD03A N_2	AVDD18_USR30_P HY	AVDD18_USR30_P HY	VDDQ_FY S	VDDQ_G3 D	VSS	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM
L	XAD03A N_7	VDDQ_M EM	XAD03A N_6	XAD03A N_4	VDDQ9_U SR30_PHY	VSS	VDDQ_FY S	VDDQ_G3 D	VSS	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM
M	VSS	XGPI09	XGPI04	XGPI03	AVDD18_USR30_P HY	AVDD18_USR30_P HY	VDDQ9_U SR30_PHY	VDDQ9_U SR30_PHY	VDDQ9_U SR30_PHY	VDDQ9_U SR30_PHY	VDDQ9_U SR30_PHY	VDDQ9_U SR30_PHY	VDDQ9_U SR30_PHY	VDDQ9_U SR30_PHY	VDDQ9_U SR30_PHY	VDDQ9_U SR30_PHY	VDDQ9_U SR30_PHY	VDDQ9_U SR30_PHY	VDDQ9_U SR30_PHY	VDDQ9_U SR30_PHY	VDDQ9_U SR30_PHY	VDDQ9_U SR30_PHY	VDDQ9_U SR30_PHY	VDDQ9_U SR30_PHY	VDDQ9_U SR30_PHY	VDDQ9_U SR30_PHY	VDDQ9_U SR30_PHY	VDDQ9_U SR30_PHY	VDDQ9_U SR30_PHY	VDDQ9_U SR30_PHY	VDDQ9_U SR30_PHY
N	XCI2_MC LK	XCI2_MC LK	XCI2_MC LK	XGPI013	VDDQ9_G PADC	AVDD18_GPADC	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM
P	XSPH22_CSCL	XSPH22_CSCL	XGPI08	XGPI010	XGPI012	XGPI011	VSS	VDDQ_M EM	VSS	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM
R	XSPH22_CS2DA	XSPH22_CS2DA	XSPH22_CS3DA	XGPI026	VDDQ18_EX1	XGPI028	VDDQ_M EM	VSS	VDDQ_M EM	VSS	VDDQ_M EM	VSS	VDDQ_M EM	VSS	VDDQ_M EM	VSS	VDDQ_M EM	VSS	VDDQ_M EM	VSS	VDDQ_M EM	VSS	VDDQ_M EM	VSS	VDDQ_M EM	VSS	VDDQ_M EM	VSS	VDDQ_M EM	VSS	VDDQ_M EM
T	VSS	XSPH22_CS2CL	XSPH22_CS1DA	XSPH22_CS1CL	AVDD18_MPL_DP HY	AVDD18_MPL_DP HY	AVDD18_MPL_DP HY	VDDQ_M EM	VDDQ_M EM	VSS	VDDQ_M EM	VSS	VDDQ_M EM	VSS	VDDQ_M EM	VSS	VDDQ_M EM	VSS	VDDQ_M EM	VSS	VDDQ_M EM	VSS	VDDQ_M EM	VSS	VDDQ_M EM	VSS	VDDQ_M EM	VSS	VDDQ_M EM	VSS	VDDQ_M EM
U	XMP1_DS 3AL_D0,N	XMP1_DS 3AL_D0,N	XMP1_DS 3AL_D0,N	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
V	XMP1_DS 3AL_D1,N	XMP1_DS 3AL_D1,N	XMP1_DS 3AL_D1,N	XMP1_DS 3AL_D1,N	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
W	XMP1_DS 3AL_D2,N	XMP1_DS 3AL_D2,N	XMP1_DS 3AL_D2,N	XMP1_DS 3AL_D2,N	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
Y	VDDQ_M EM	VDDQ_M EM	VSS	VSS	XMP1_CS 3AL_D0,N	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
AA	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
AB	VDD1_M EM	XMP1_CS 3AL_D1,N	VSS	XMP1_CS 3AL_D1,N	VDDQ_M EM	VDDQ18_AUD	VSS	VDDQ06_DRAM1	VDDQ06_DRAM1	VDDQ06_DRAM1	VDDQ06_DRAM1	VDDQ06_DRAM1	VDDQ06_DRAM1	VDDQ06_DRAM1	VDDQ06_DRAM1	VDDQ06_DRAM1	VDDQ06_DRAM1	VDDQ06_DRAM1	VDDQ06_DRAM1	VDDQ06_DRAM1	VDDQ06_DRAM1	VDDQ06_DRAM1	VDDQ06_DRAM1	VDDQ06_DRAM1	VDDQ06_DRAM1	VDDQ06_DRAM1	VDDQ06_DRAM1	VDDQ06_DRAM1	VDDQ06_DRAM1	VDDQ06_DRAM1	VDDQ06_DRAM1
AC	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
AD	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
AE	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS
AF	VDDQ_M EM	VSS	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N
AG	VSS	VDDQ_M EM	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N
AH	VSS	VSS	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N
AJ	VSS	VSS	VSS	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	XMP1_CS 3AL_D1,N	VDDQ_M EM	VDDQ_M EM	VSS	VDD1_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM	VDDQ_M EM

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