

SAMSUNG

MITs TELEPHONE

SGH-D730

SERVICE *Manual*

MITs TELEPHONE



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1. SGH-D730 Specification

1-1. GSM General Specification

	GSM900 Phase 1	EGSM 900 Phase 2	DCS1800 Phase 1	PCS1900
Freq. Band[MHz] Uplink/Downlink	890~915 935~960	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990
ARFCN range	1~124	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	0.3GMSK	0.3GMSK	0.3GMSK	0.3GMSK
MS Power	33dBm~13dBm	33dBm~5dBm	30dBm~0dBm	30dBm~0dBm
Power Class	5pcl ~ 15pcl	5pcl ~ 19pcl	0pcl ~ 15pcl	0pcl ~ 15pcl
Sensitivity	-102dBm	-102dBm	-100dBm	-100dBm
TDMA Mux	8	8	8	8
Cell Radius	35Km	35Km	2Km	-

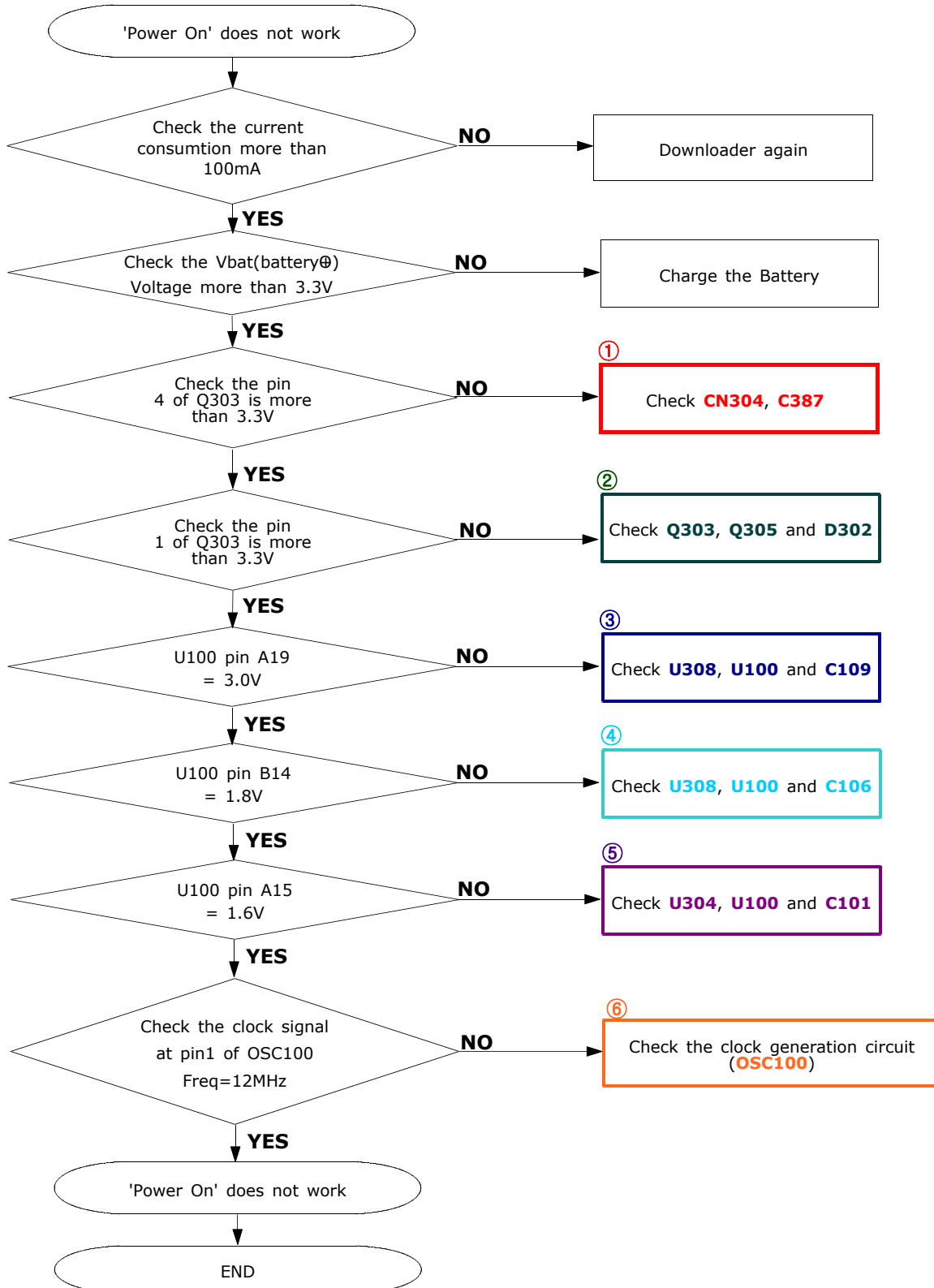
1-2. GSM Tx Power Class

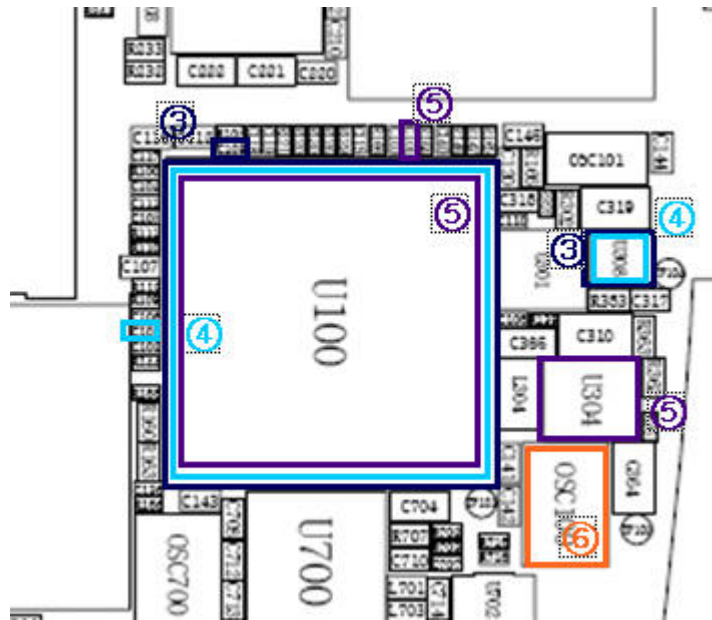
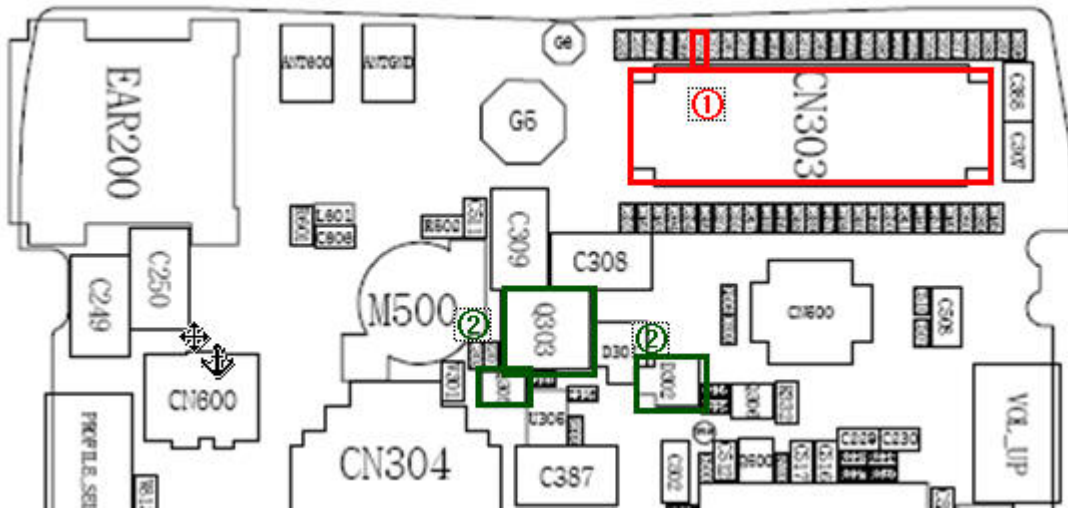
TX Power control level	GSM900	TX Power control level	DCS1800	TX Power control level	PCS1900
5	33±2 dBm	0	30±3 dBm	0	30±3 dBm
6	31±2 dBm	1	28±3 dBm	1	28±3 dBm
7	29±2 dBm	2	26±3 dBm	2	26±3 dBm
8	27±2 dBm	3	24±3 dBm	3	24±3 dBm
9	25±2 dBm	4	22±3 dBm	4	22±3 dBm
10	23±2 dBm	5	20±3 dBm	5	20±3 dBm
11	21±2 dBm	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±4dBm	11	8±4dBm
17	9±3dBm	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

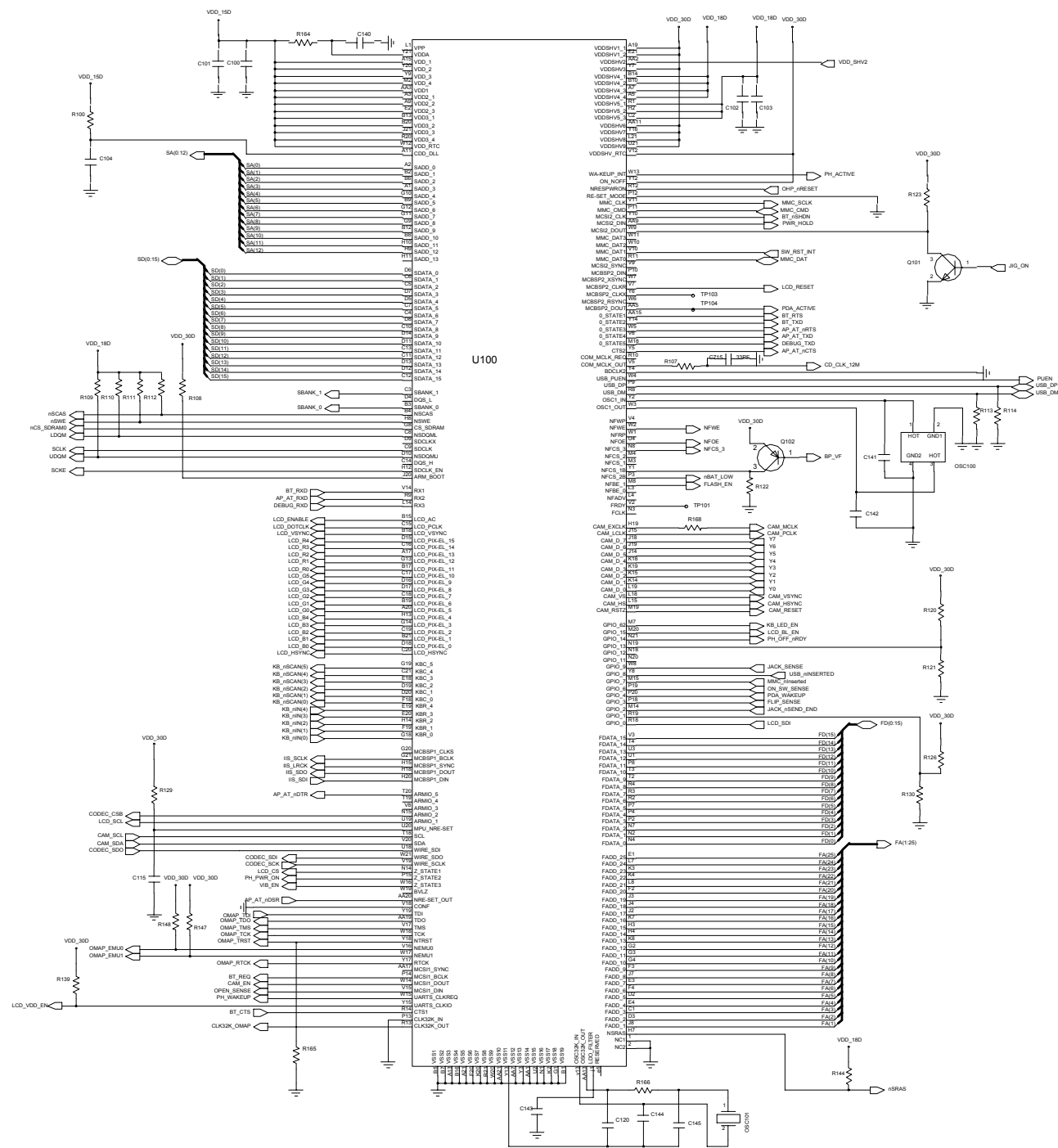
2. SGH-D730 Flow Chart of Troubleshooting and Circuit Diagrams

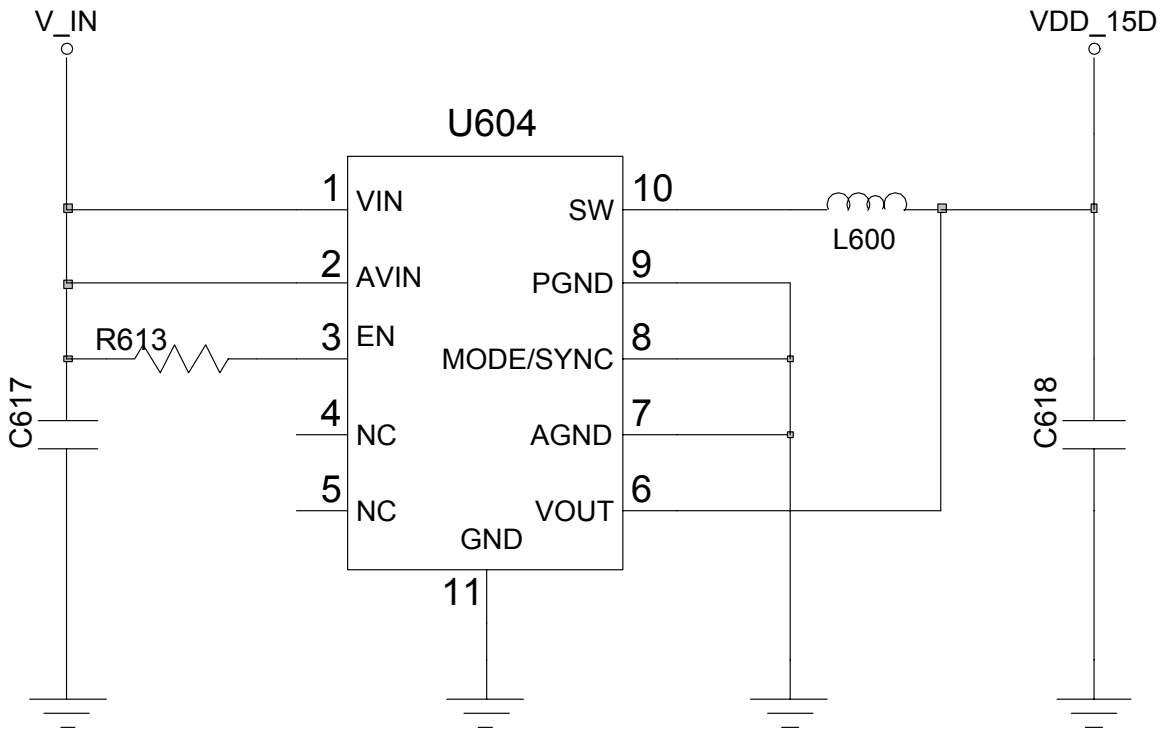
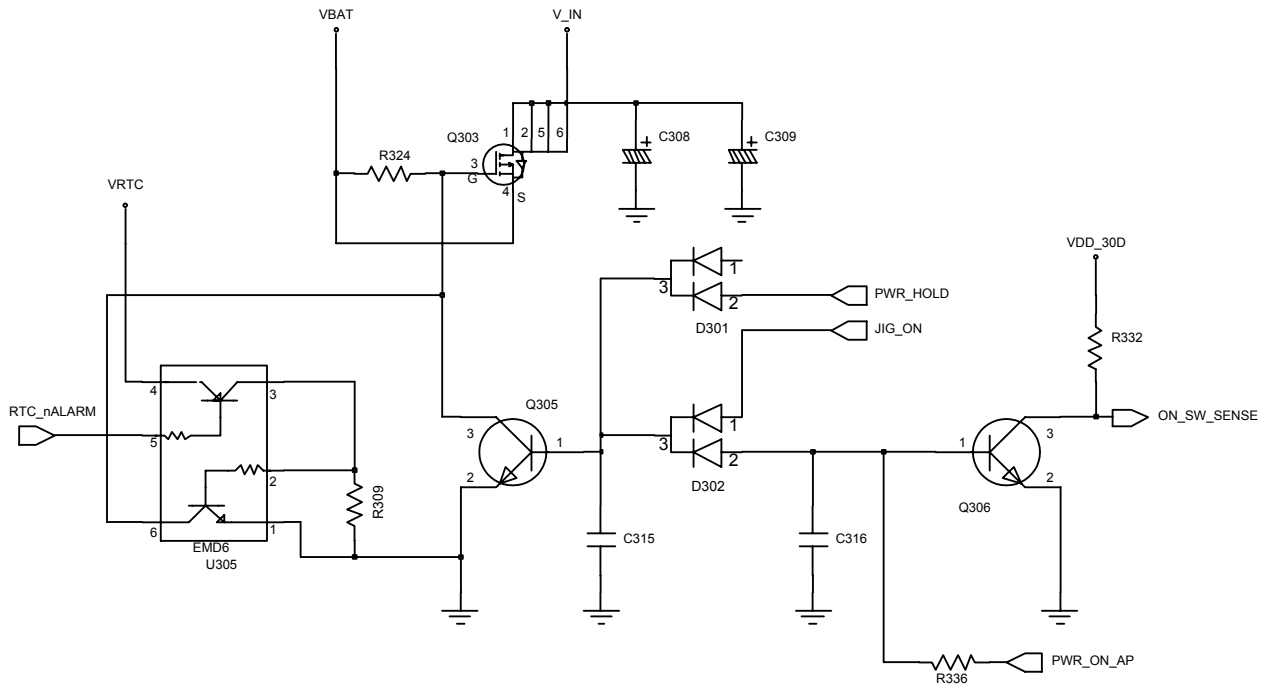
2-1.Baseband

2-1-1. Power ON

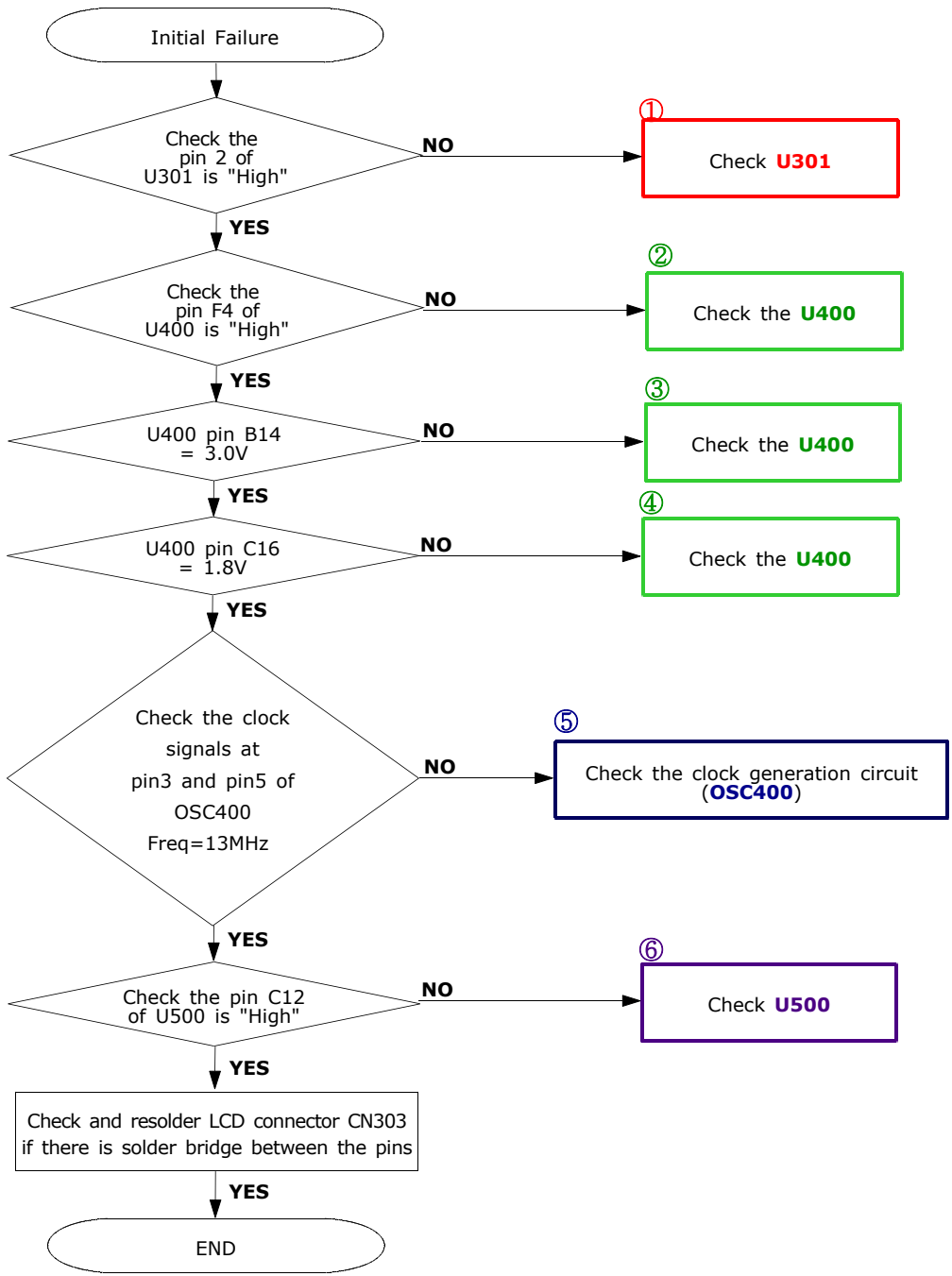


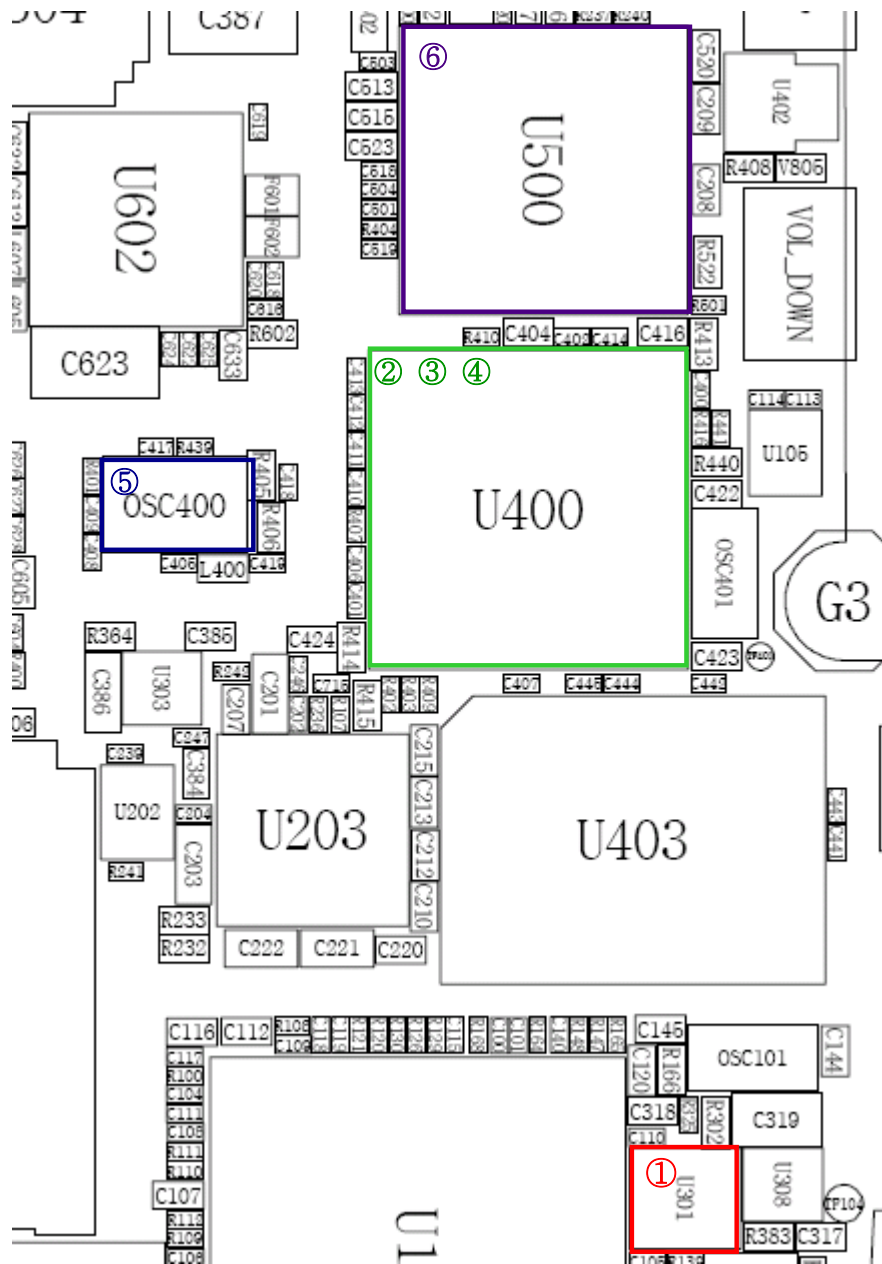


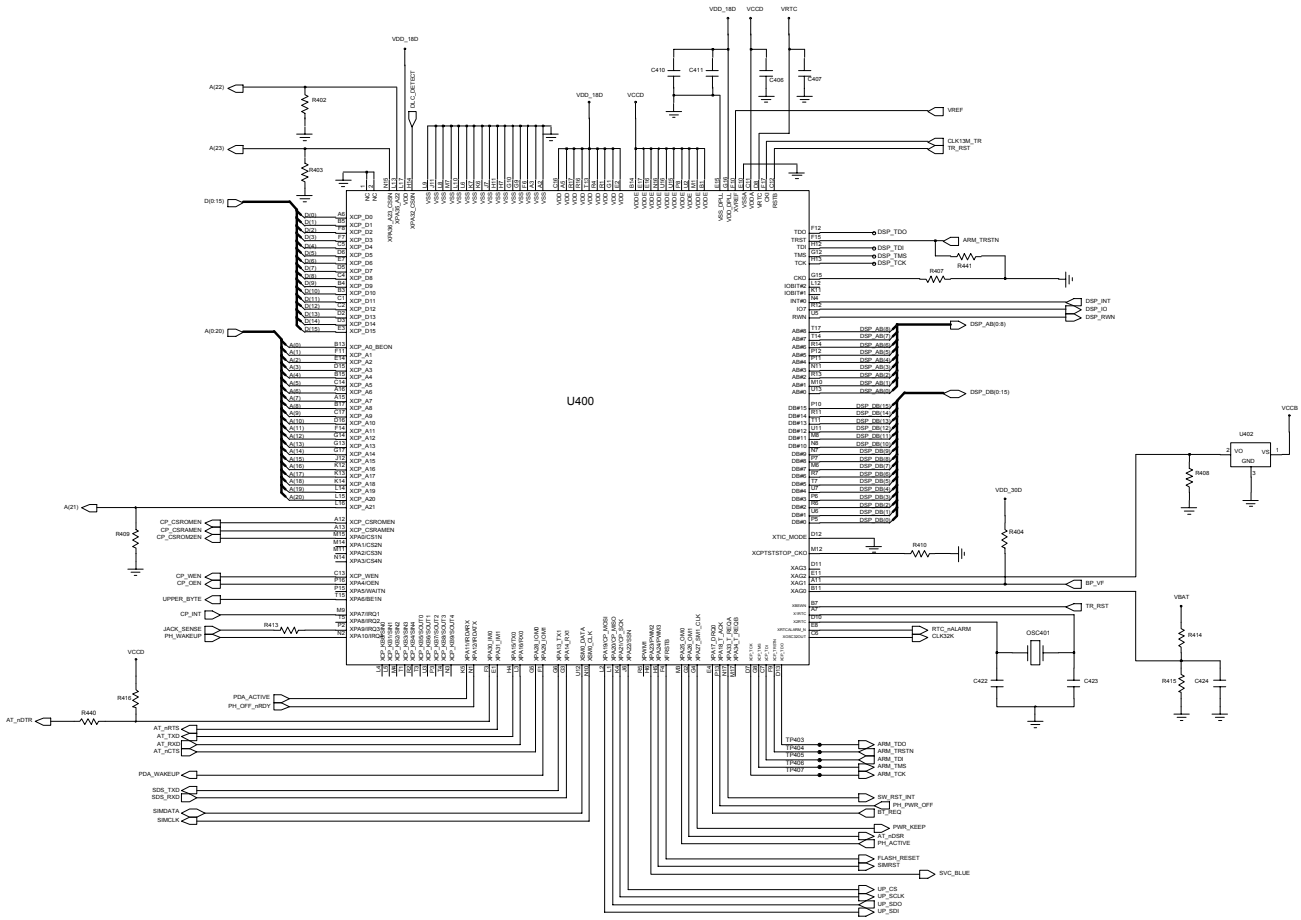


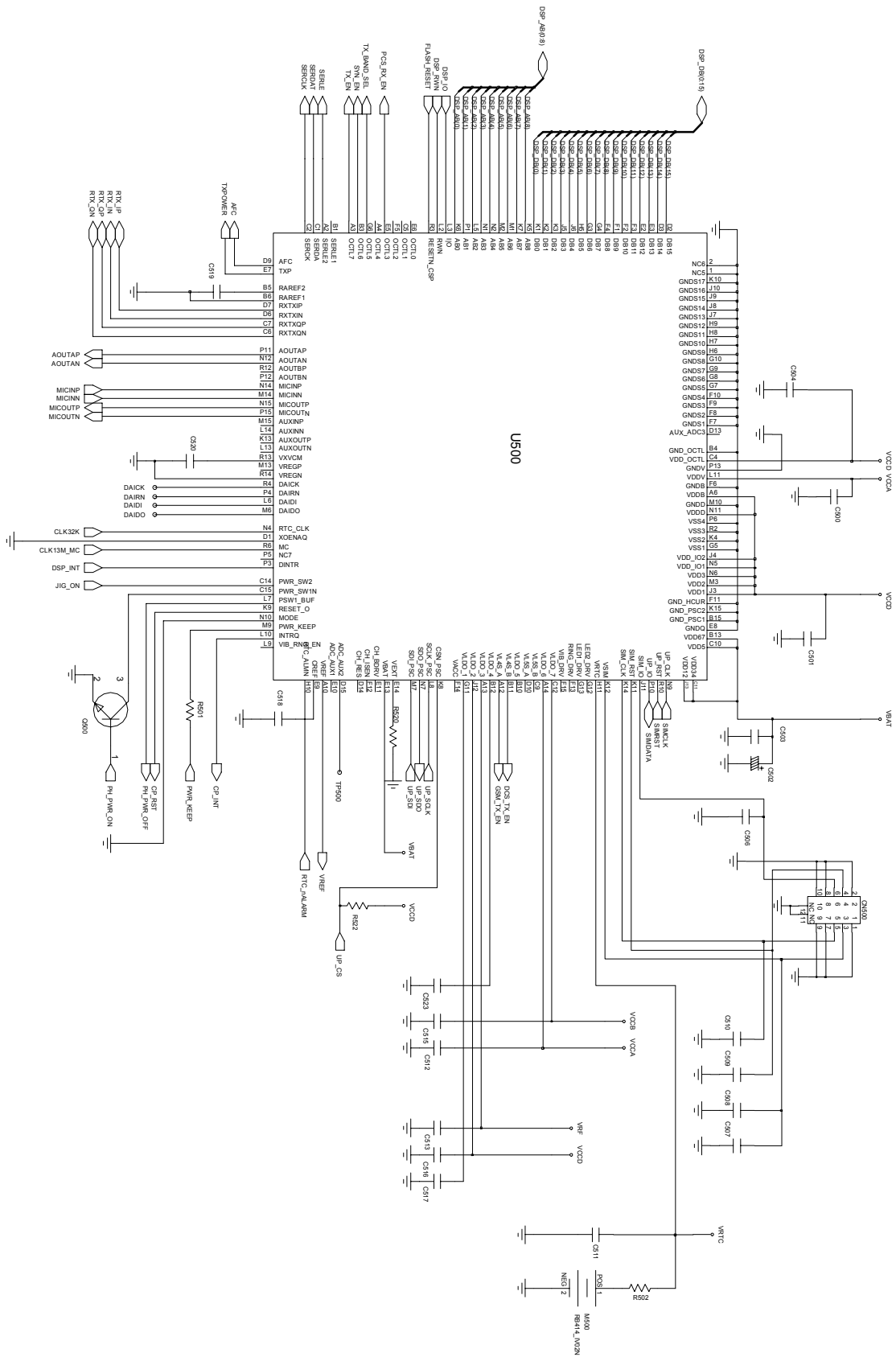


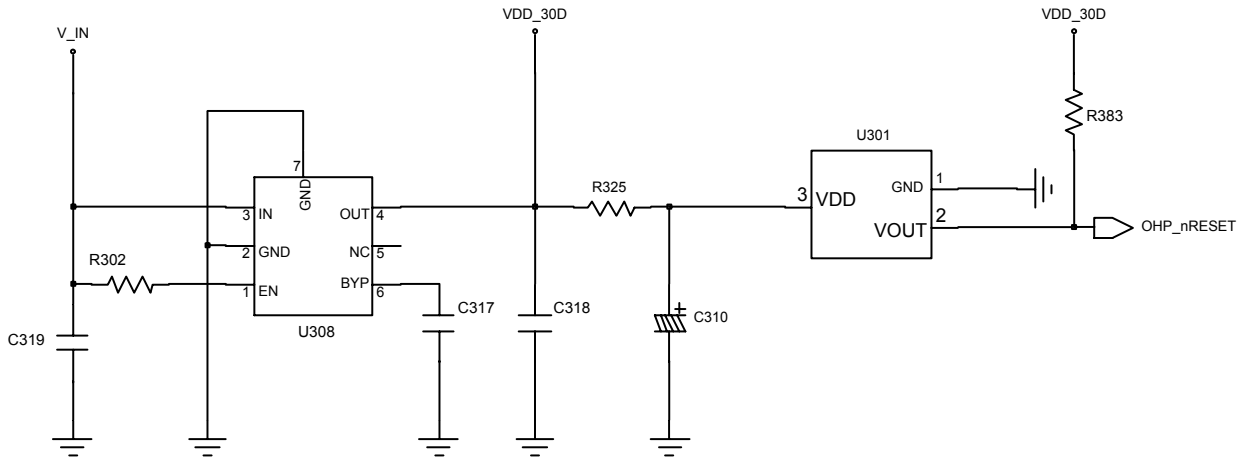
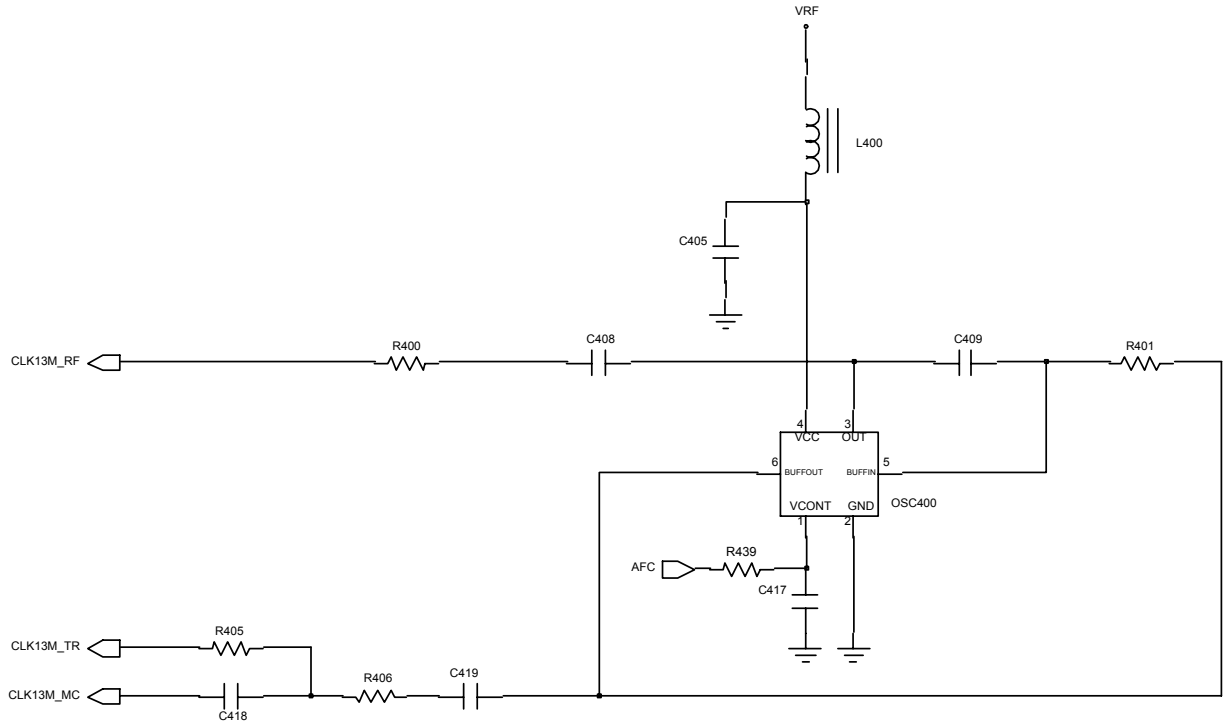
2-1-2. Initial



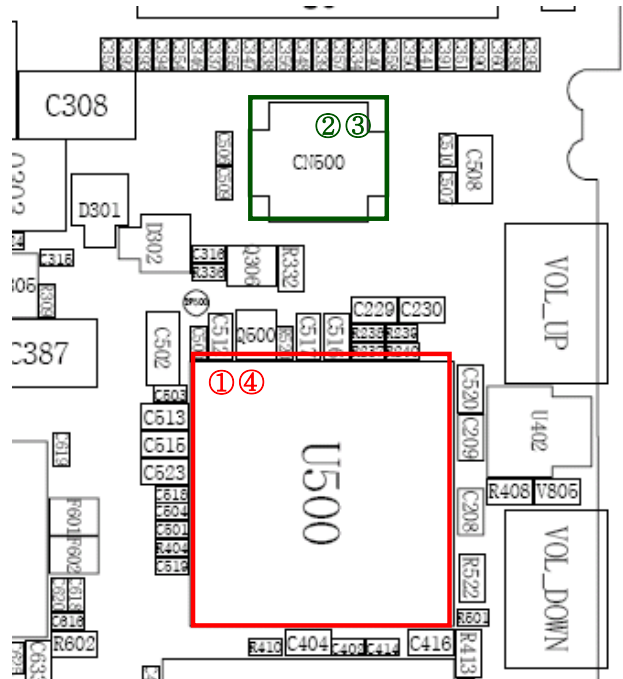
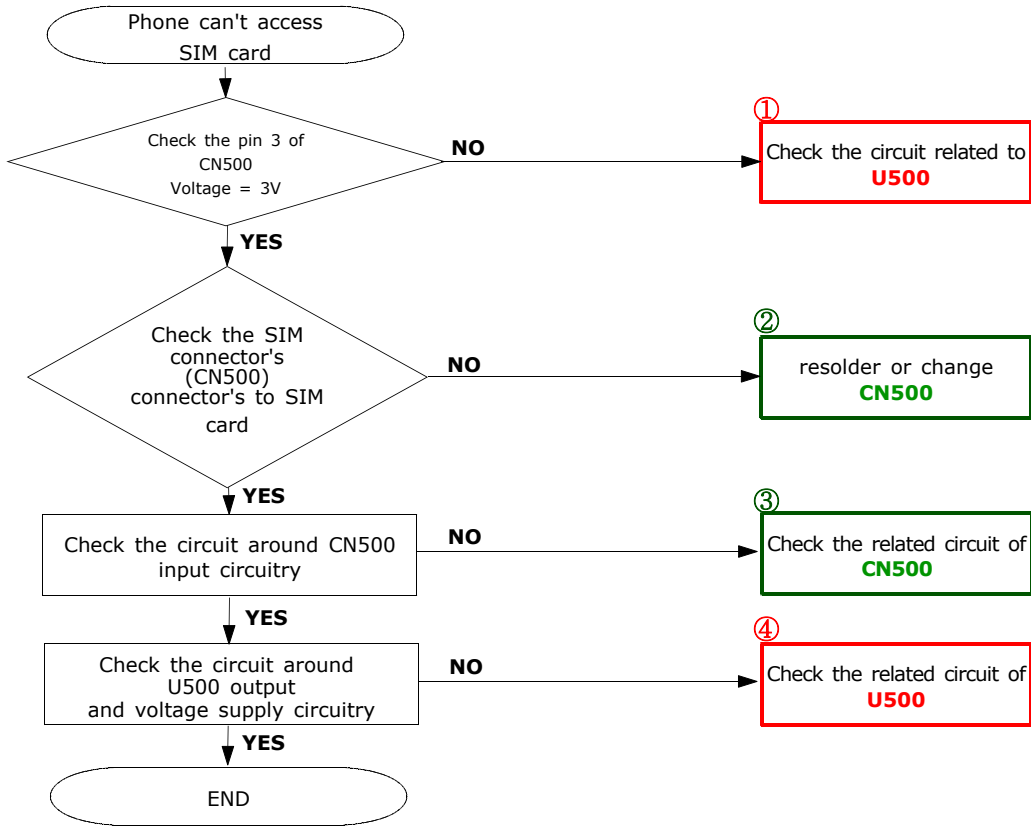




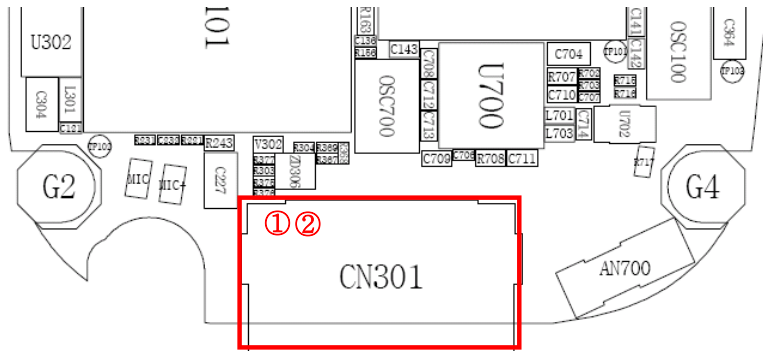
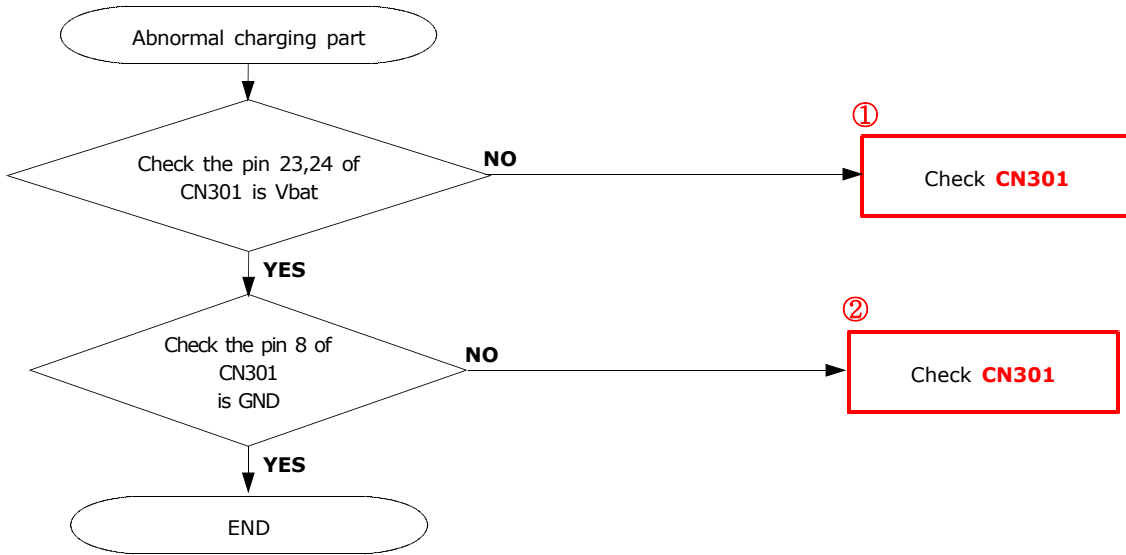




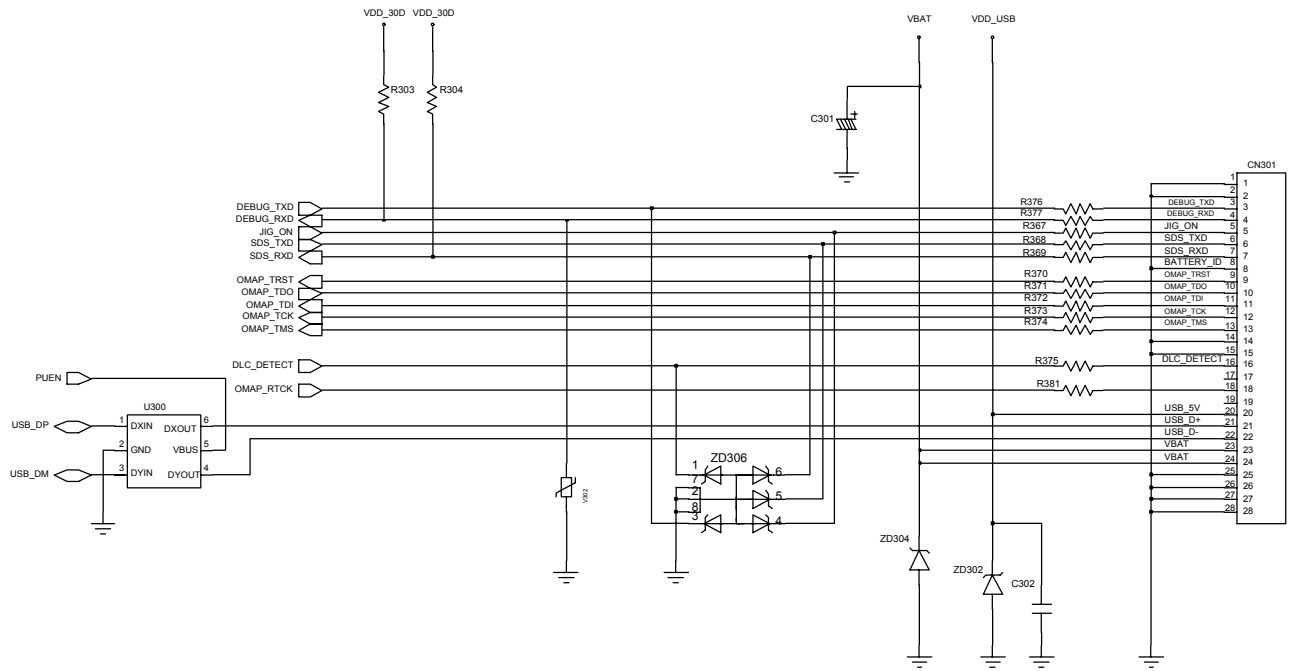
2-1-3. Sim Part



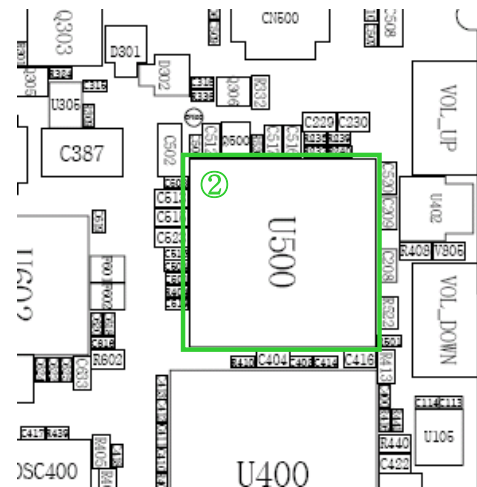
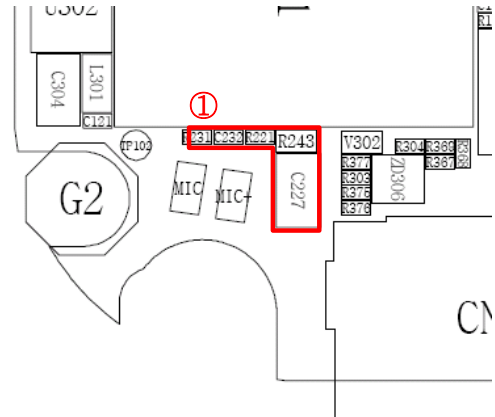
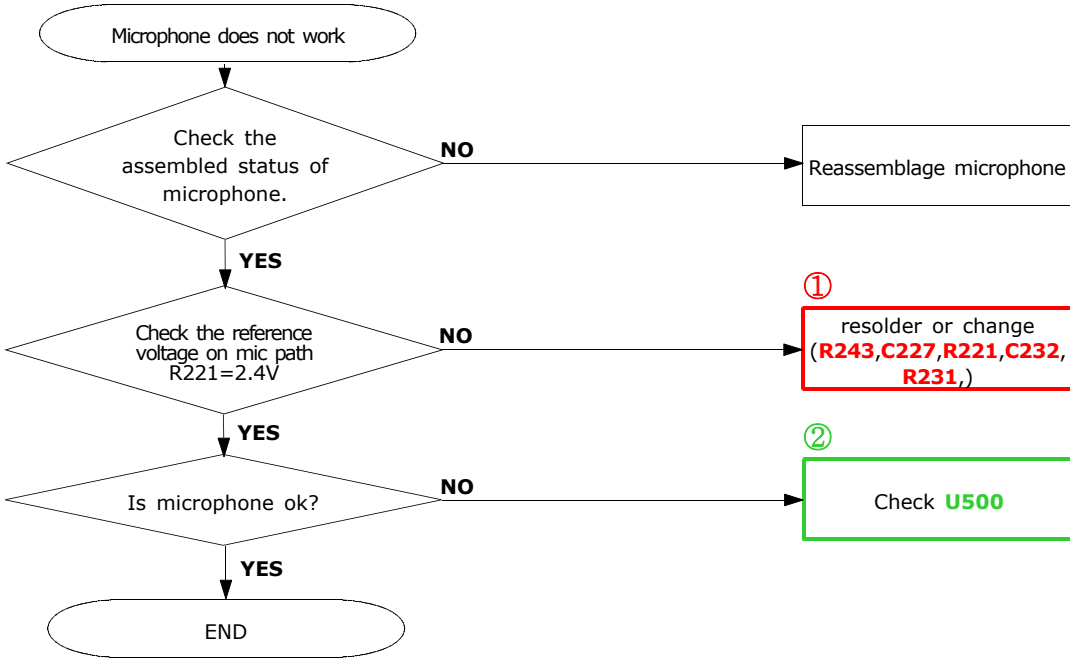
2-1-4. Charging Part

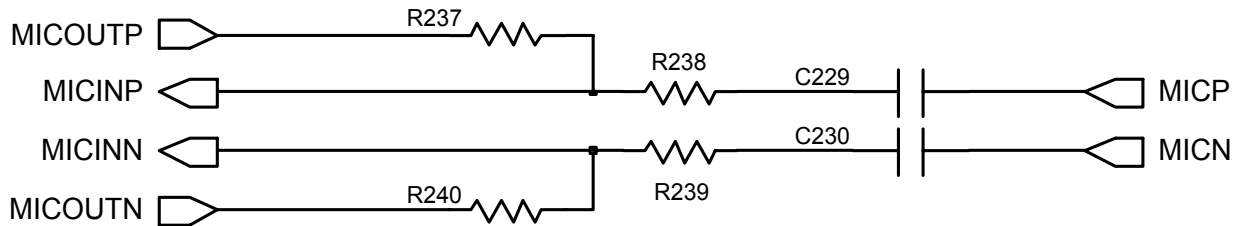
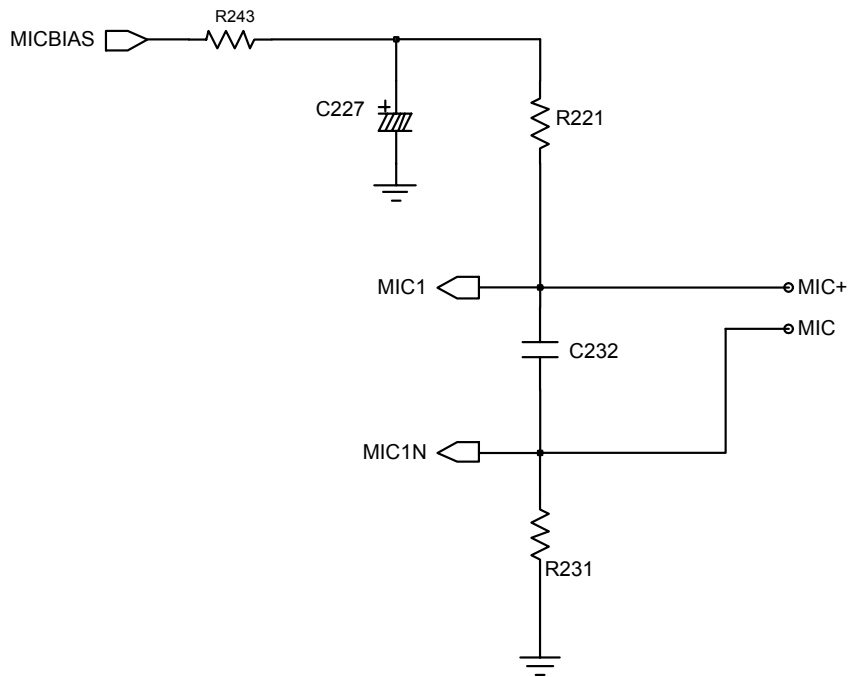


SGH-D730 Flow Chart of Troubleshooting and Circuit Diagrams

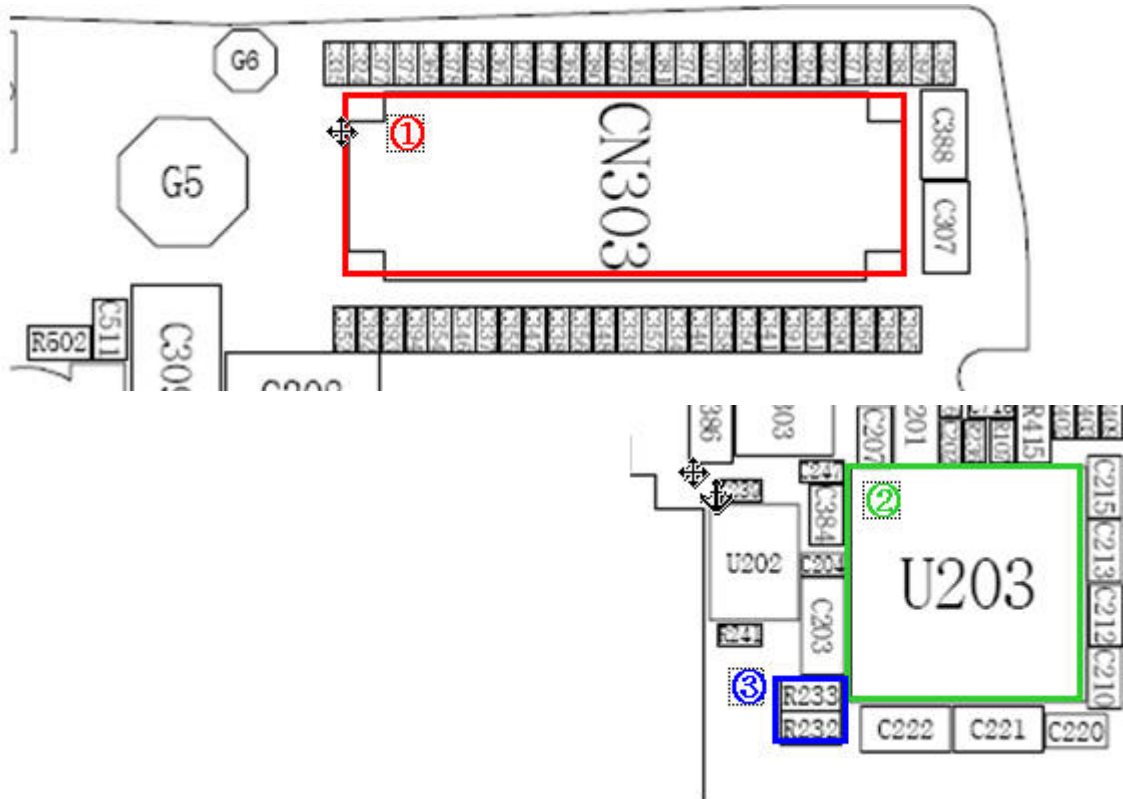
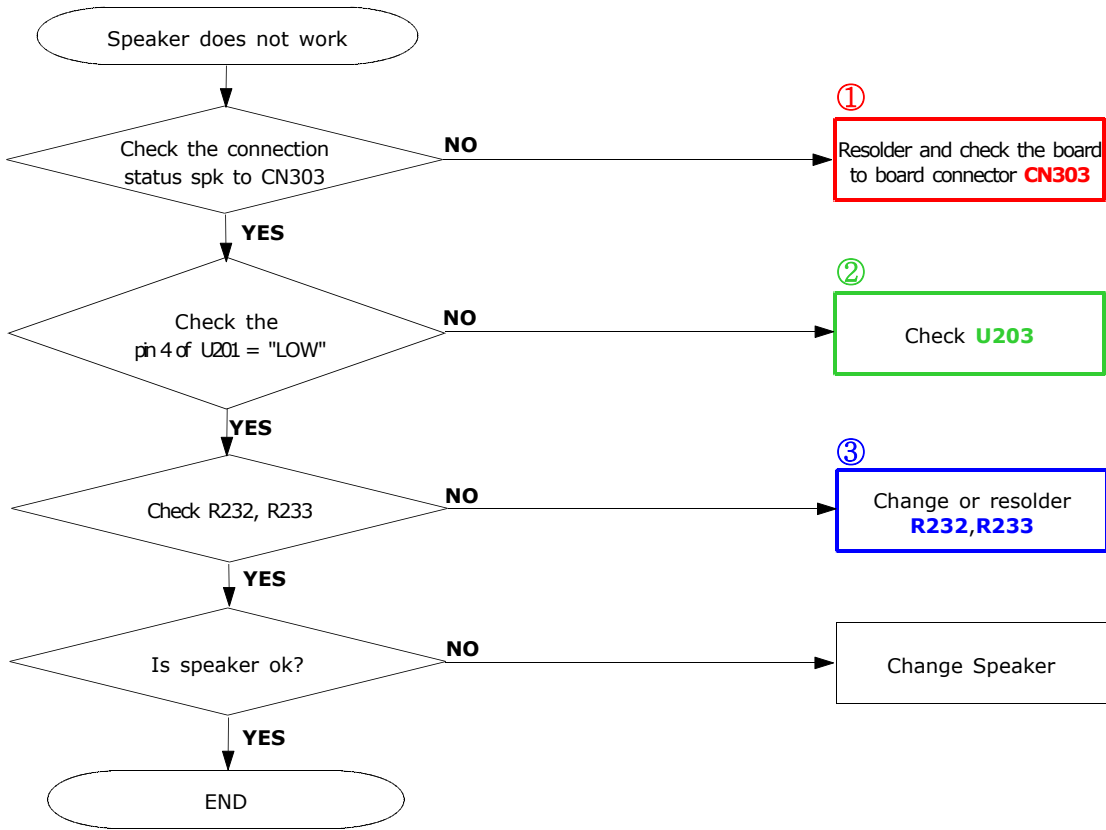


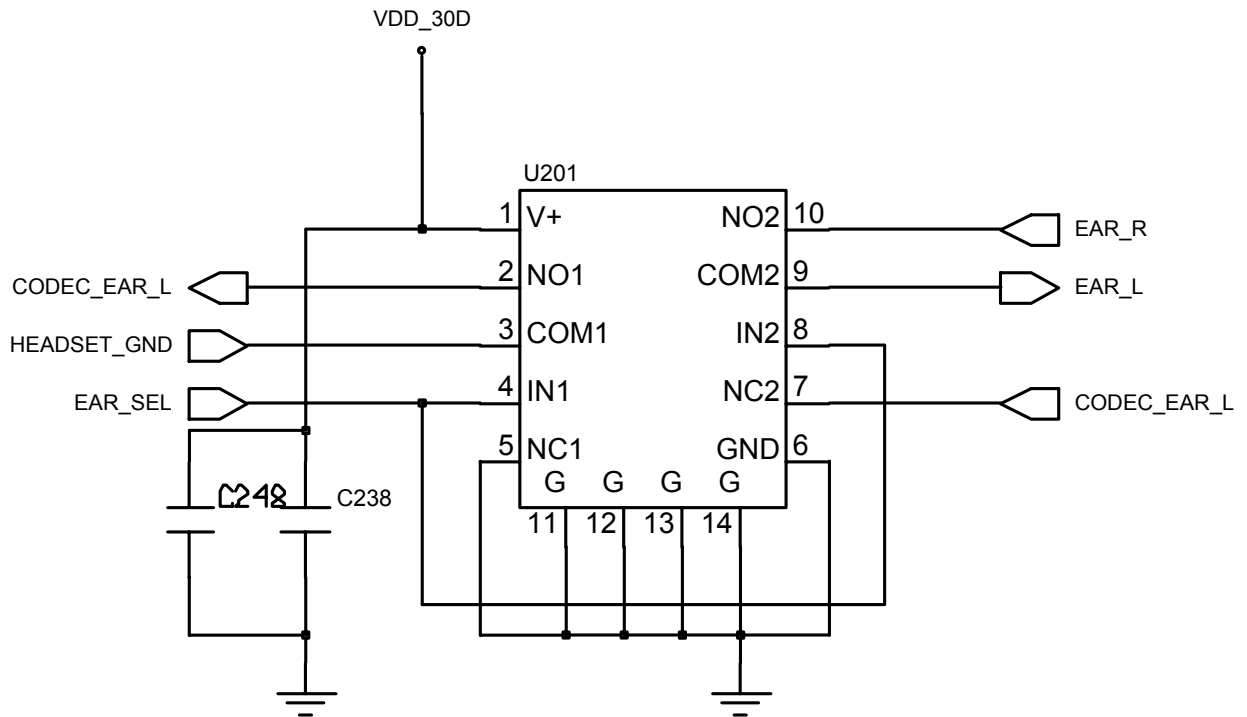
2-1-5. Microphone Part



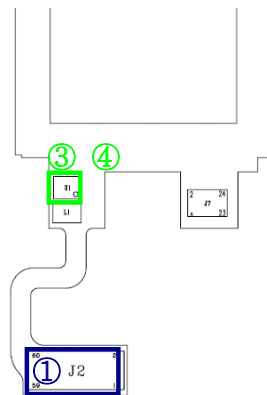
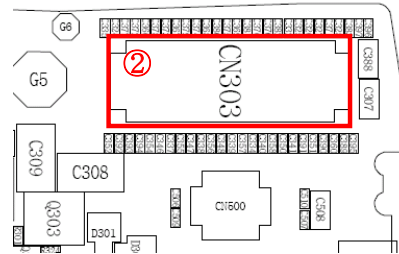
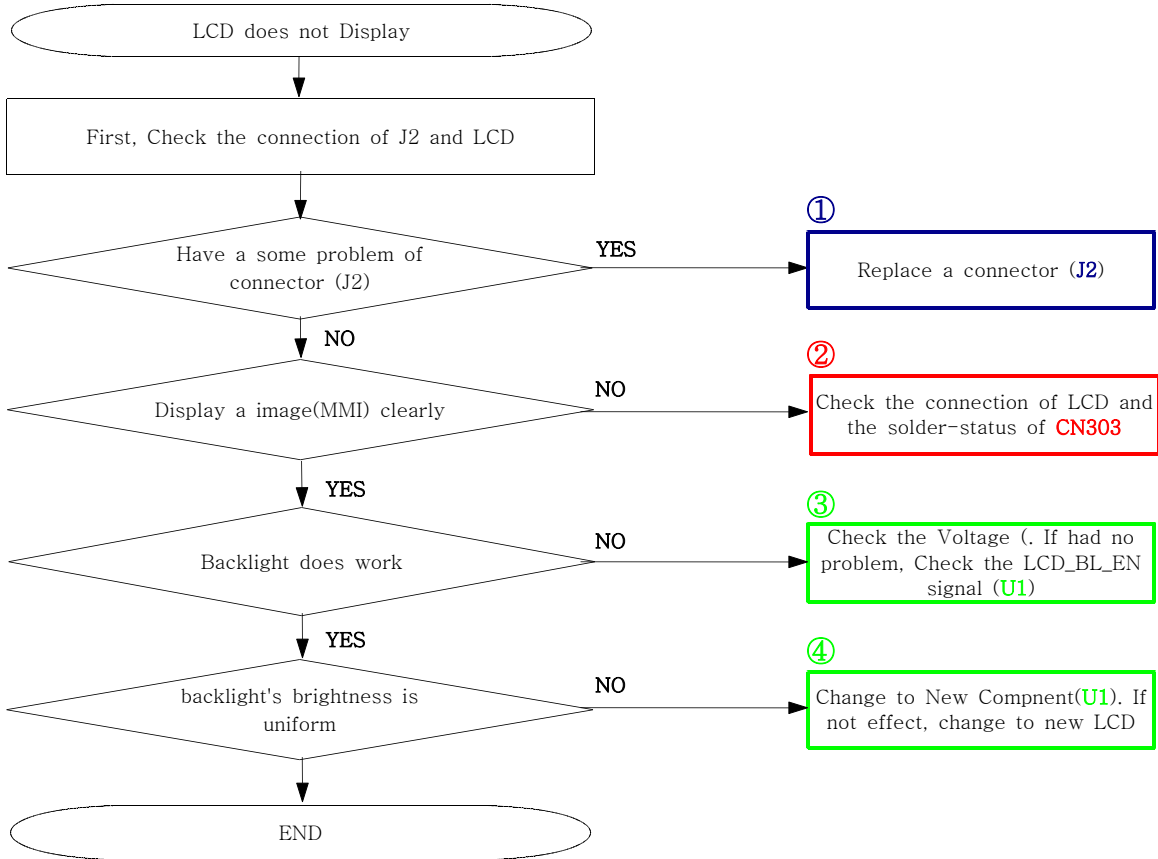


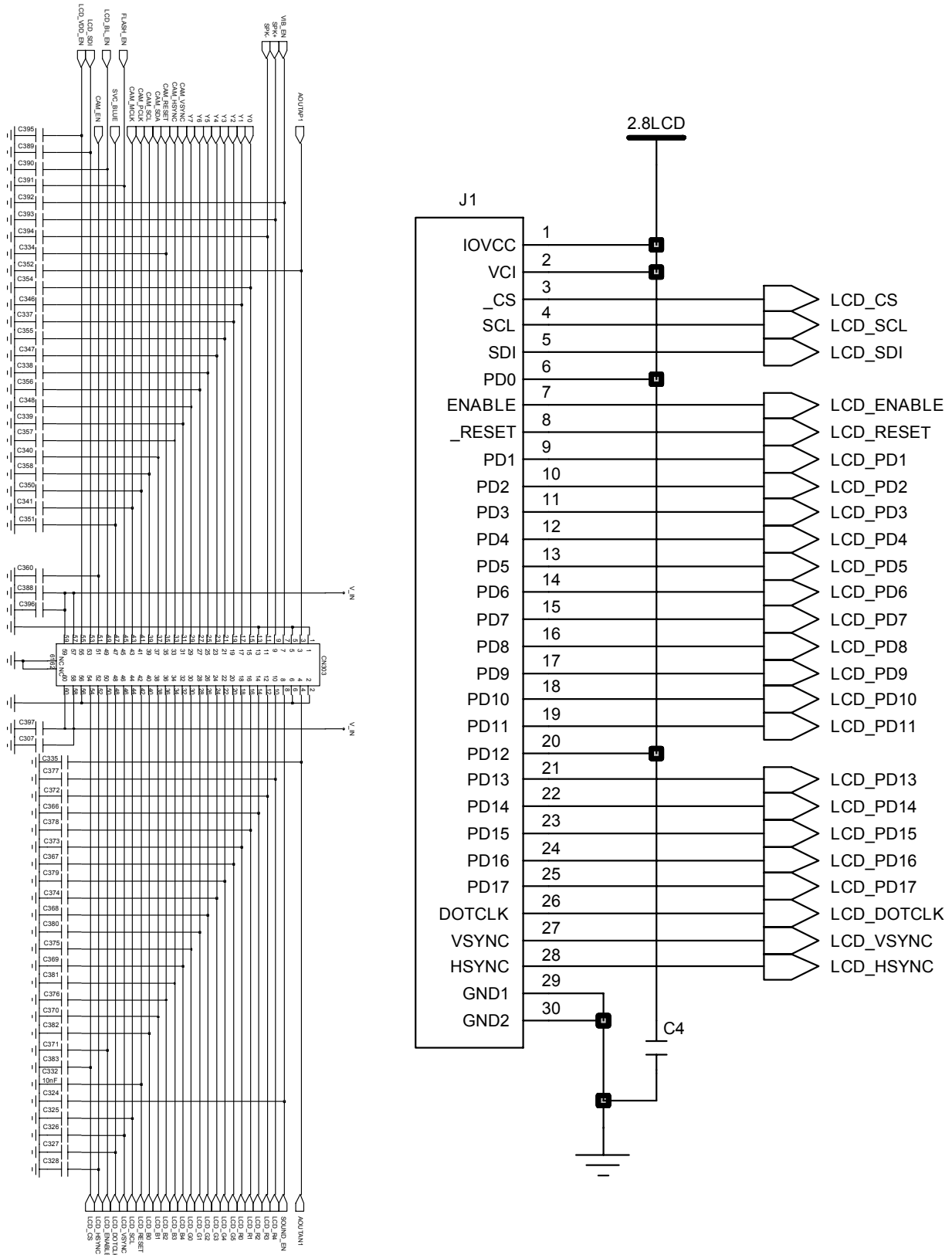
2-1-6. Speaker Part





2-1-7. LCD

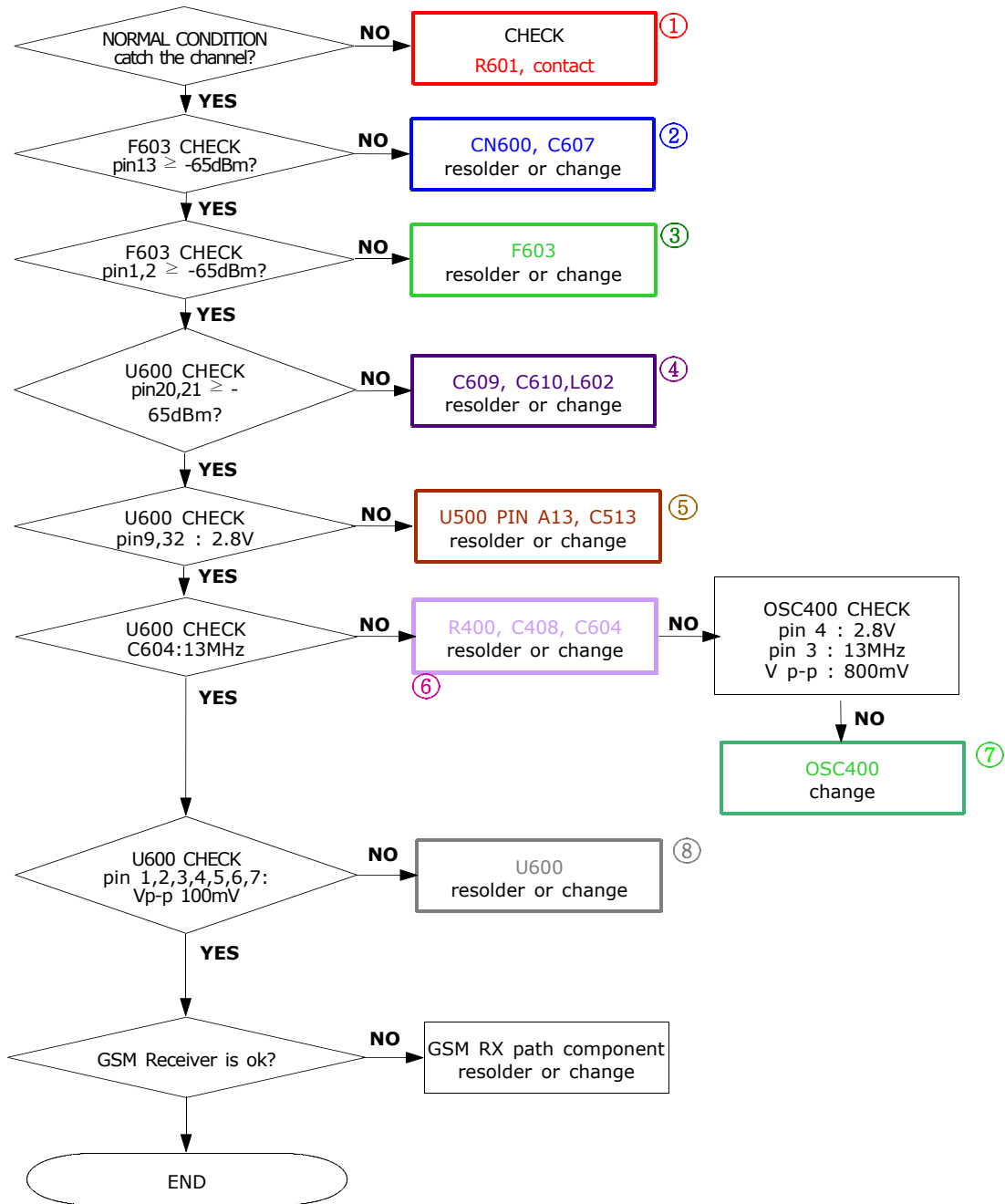


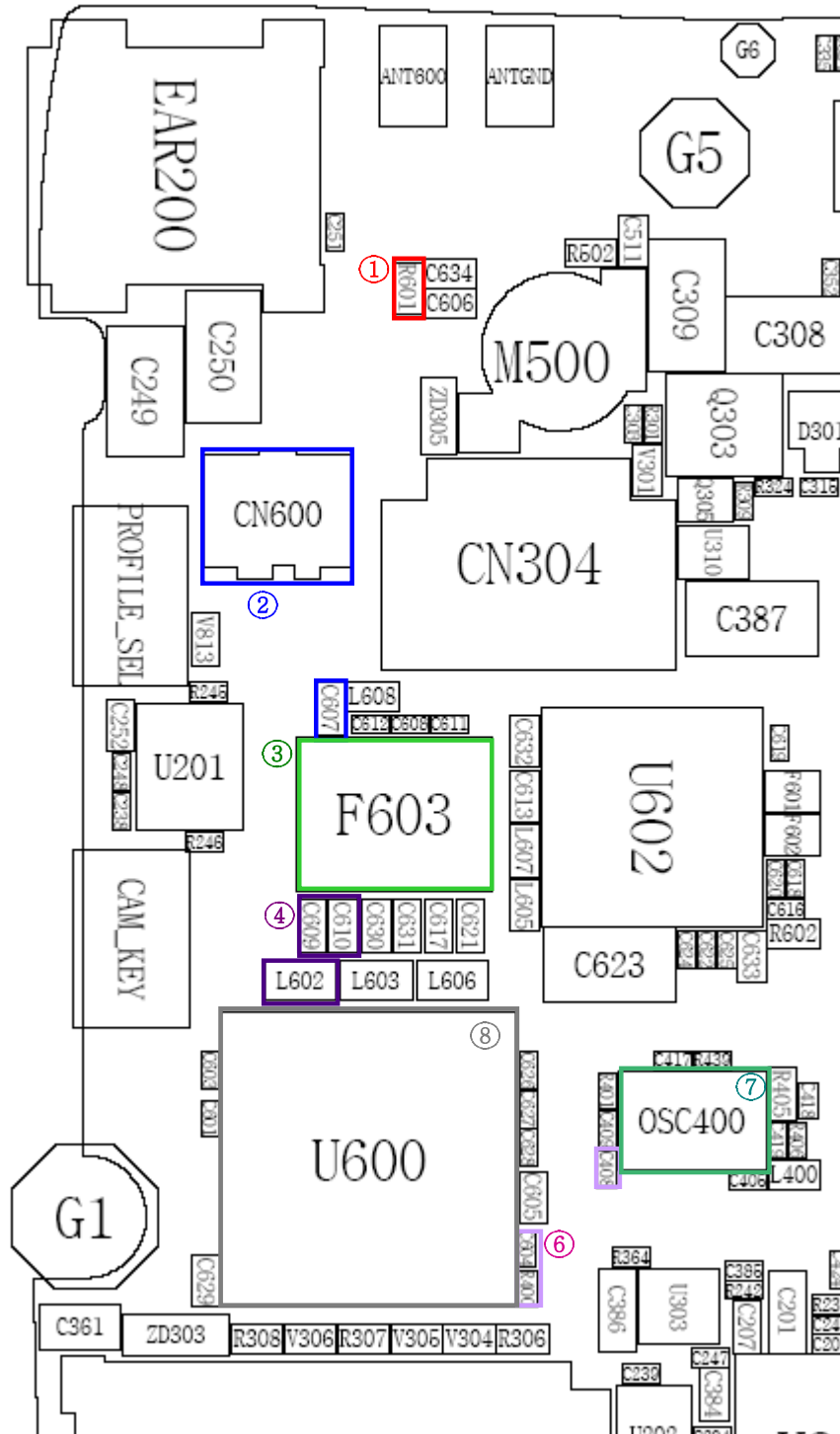


2-2.RF

2-2-1. GSM Receiver

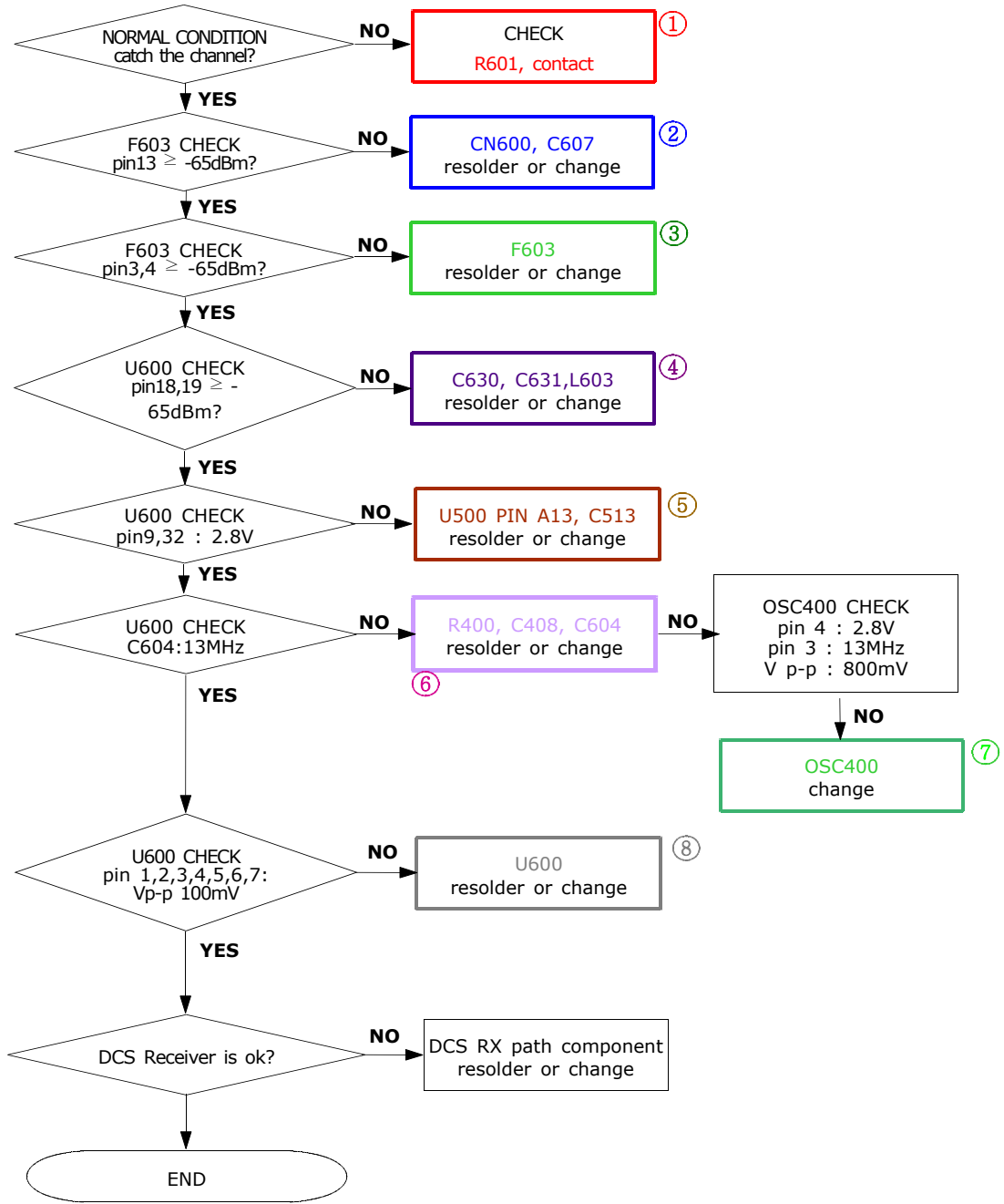
CONTINUOUS RX ON
RF INPUT : 62CH
Cell power : -50dBm

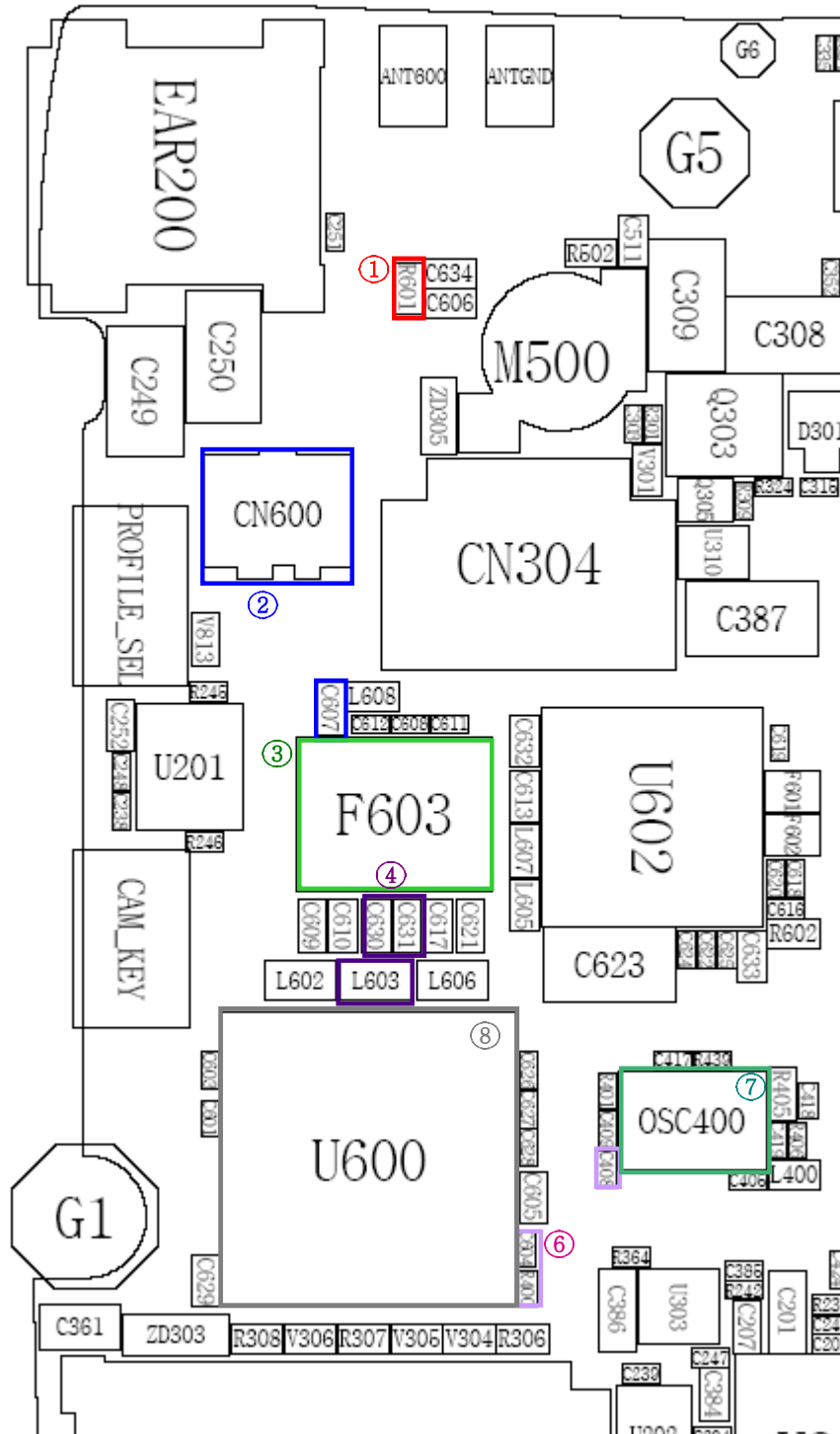




2-2-2. DCS Receiver

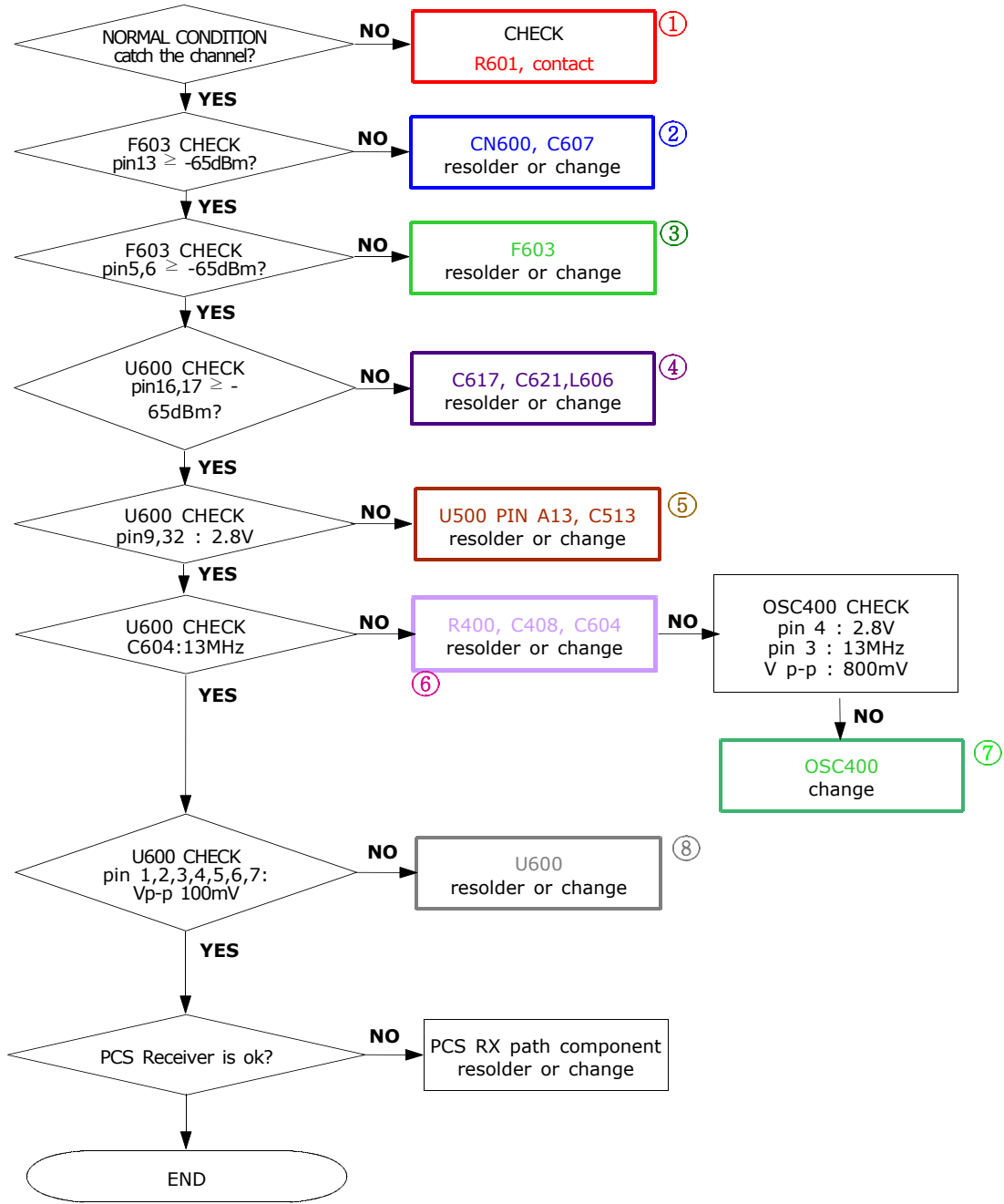
CONTINUOUS RX ON
 RF INPUT : 698CH
 Cell power : -50dBm

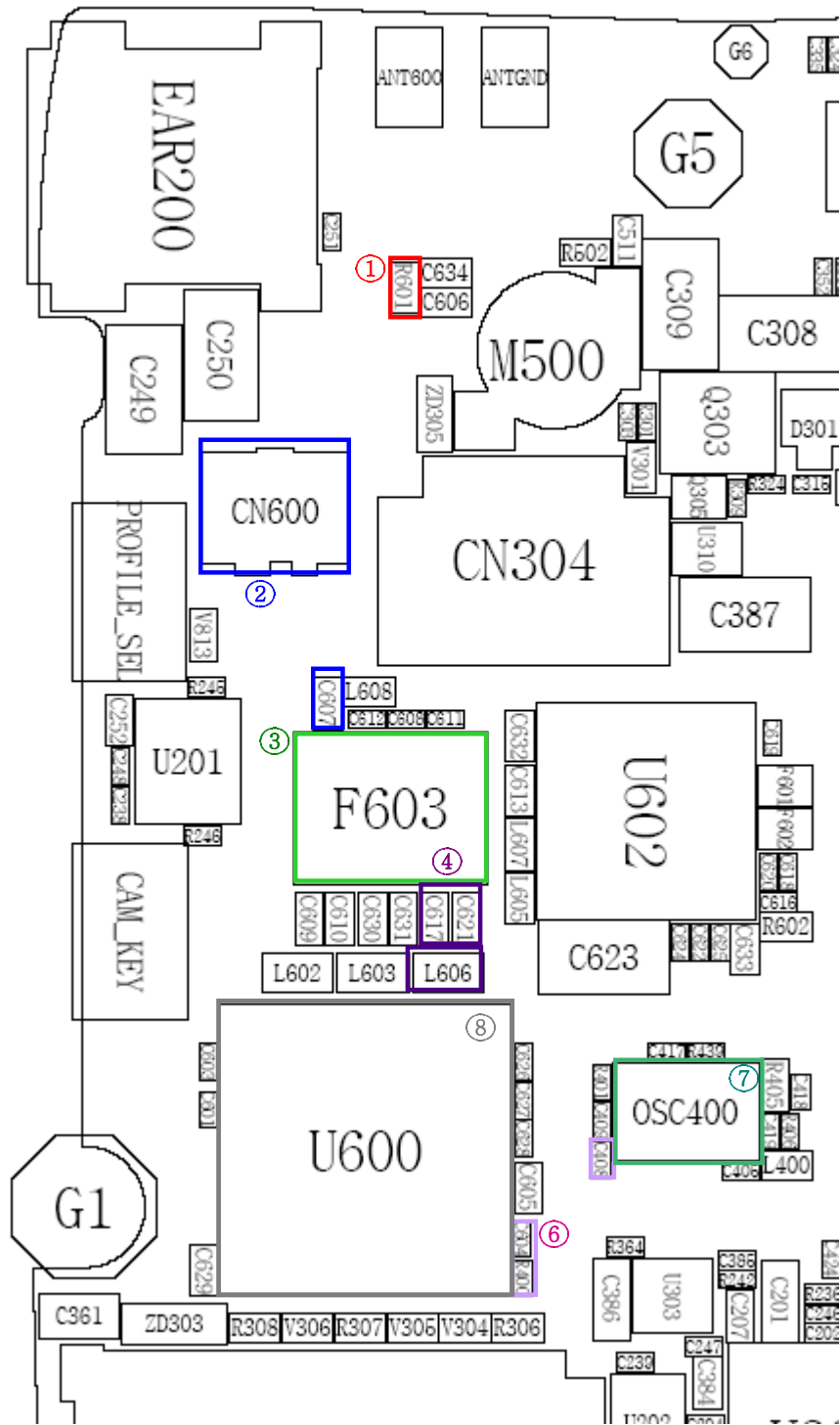




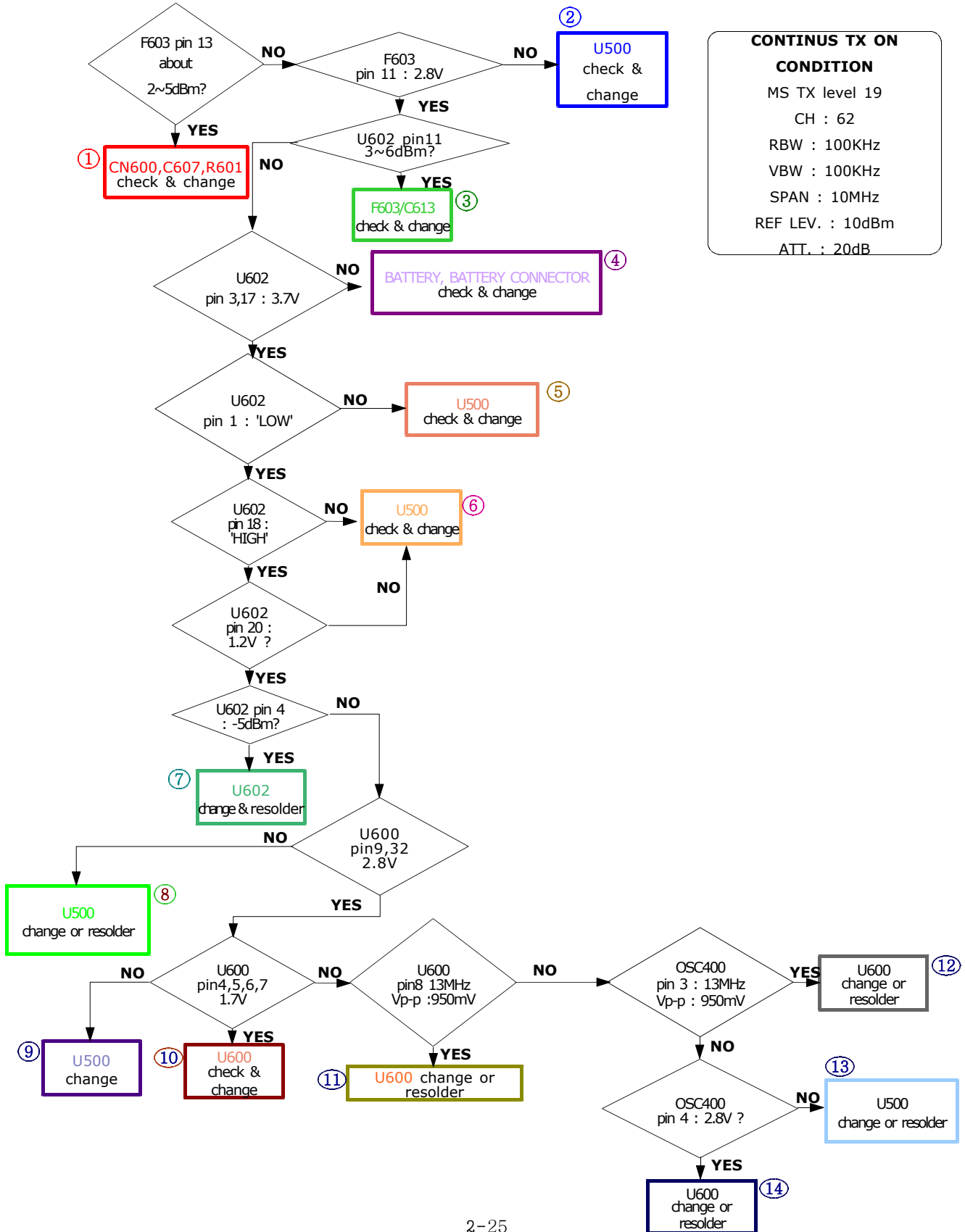
2-2-3. PCS Receiver

CONTINUOUS RX ON
 RF INPUT : 698CH
 Cell power : -50dBm

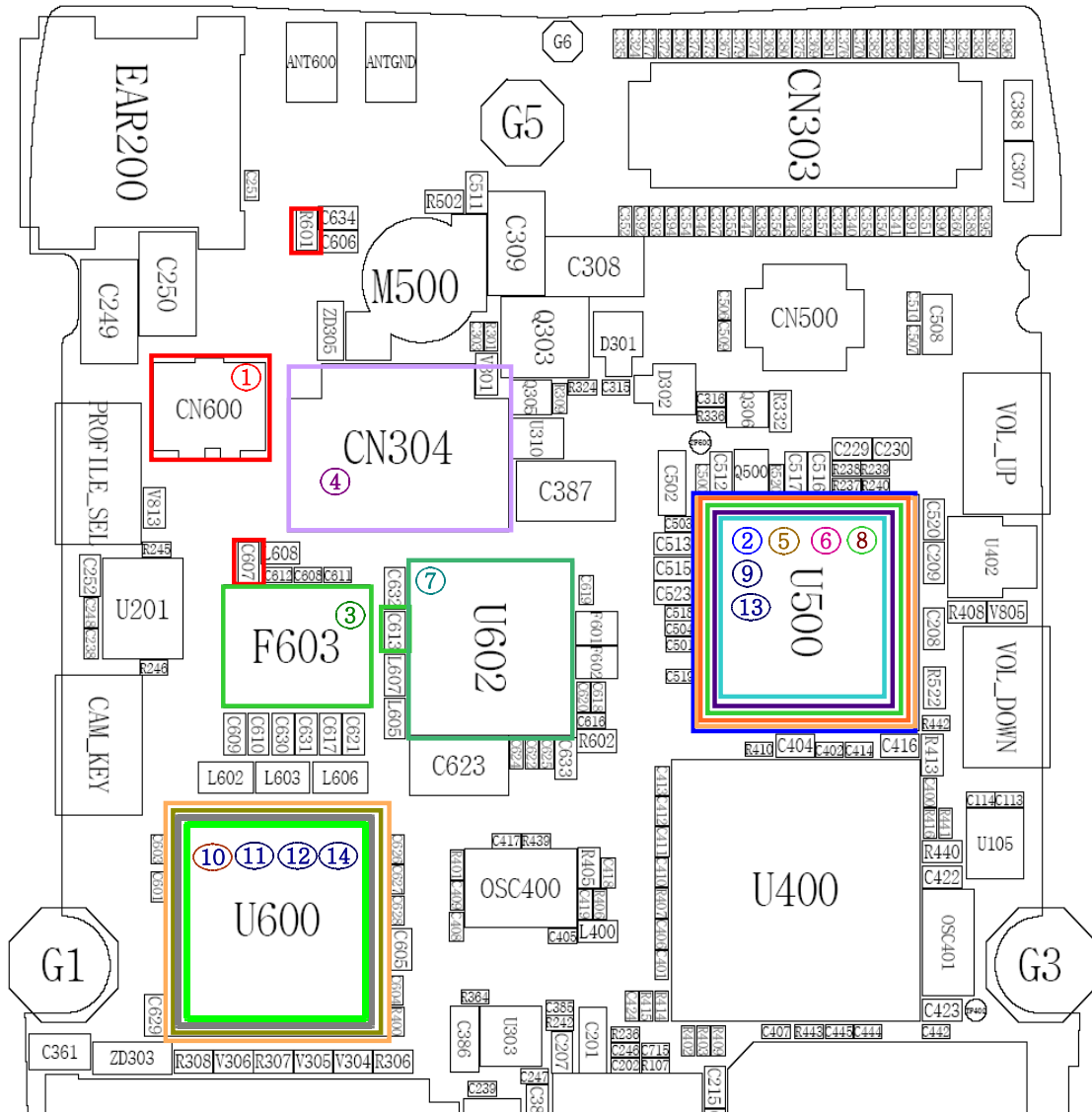




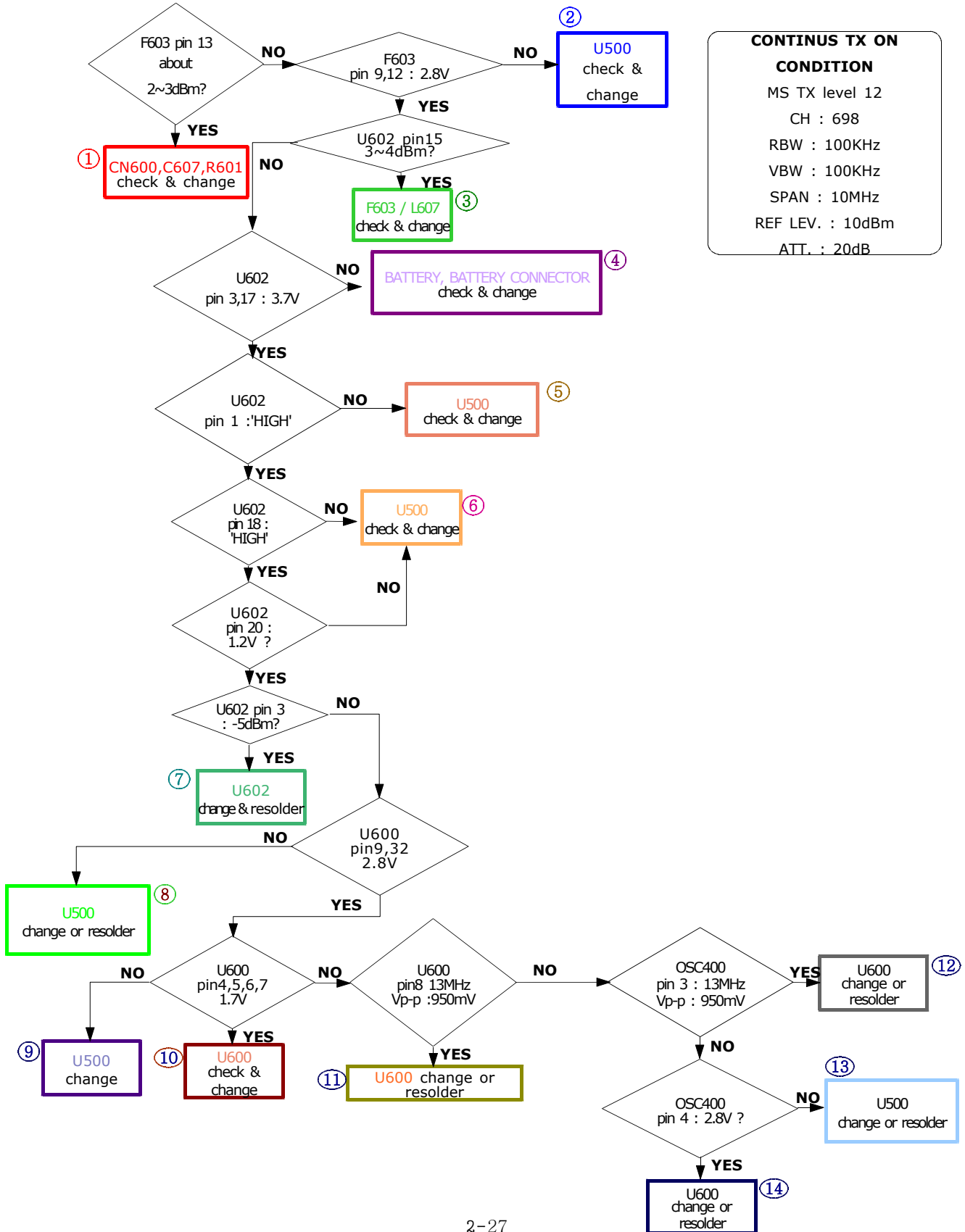
2-2-4. GSM Transmitter



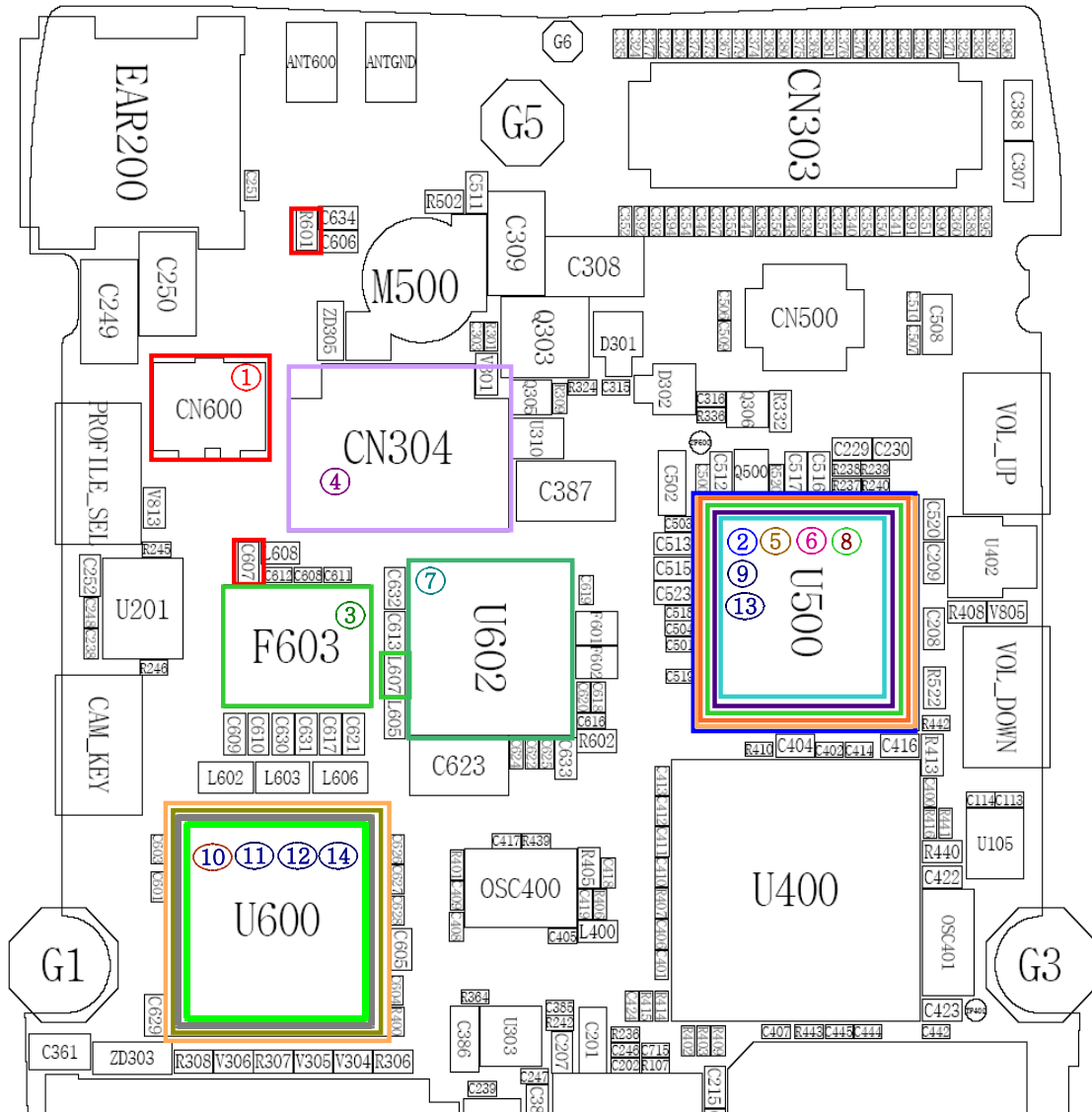
CONTINUS TX ON
CONDITION
 MS TX level 19
 CH : 62
 RBW : 100KHz
 VBW : 100KHz
 SPAN : 10MHz
 REF LEV. : 10dBm
 ATT. : 20dB



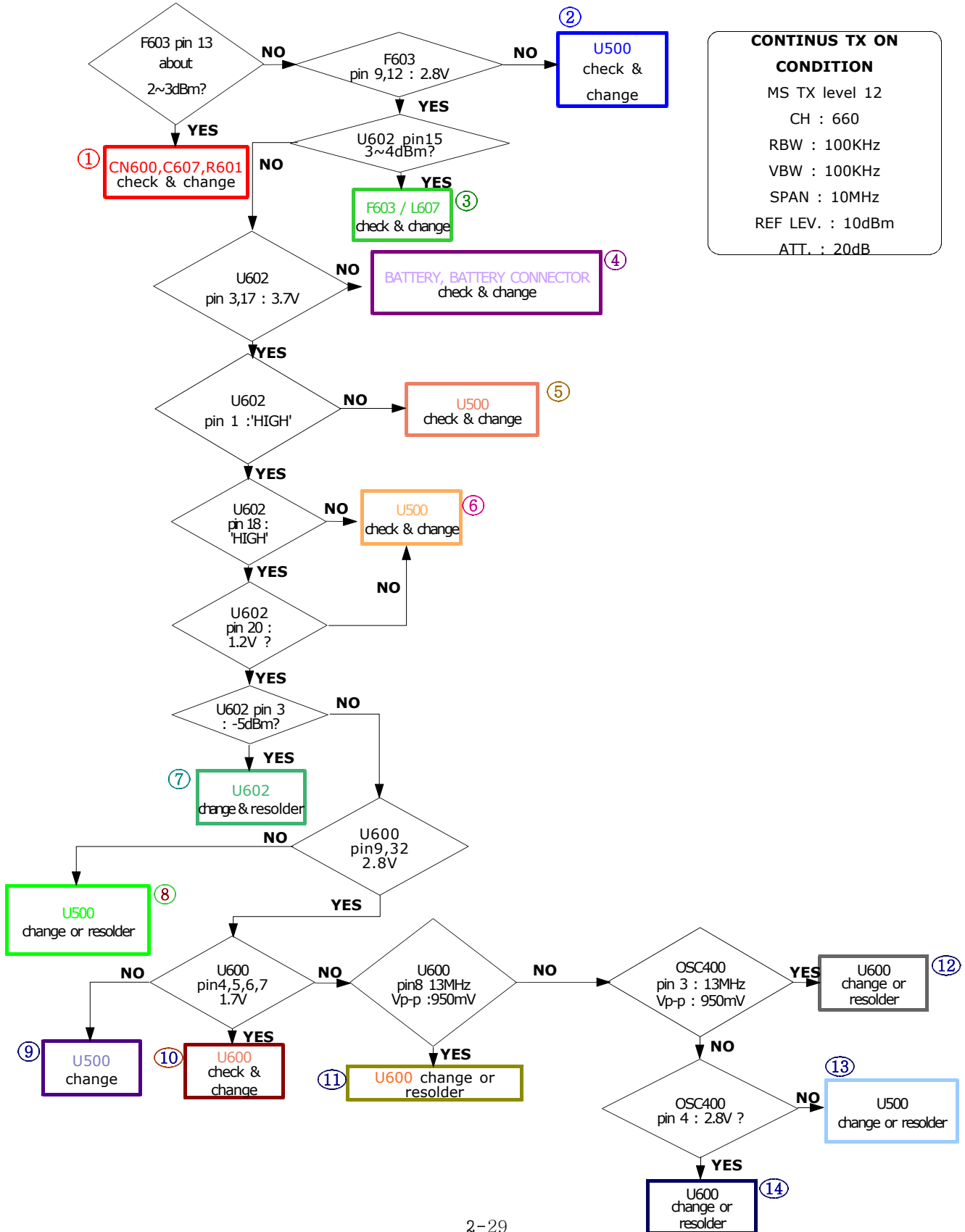
2-2-5. DCS Transmitter



CONTINUS TX ON
CONDITION
 MS TX level 12
 CH : 698
 RBW : 100KHz
 VBW : 100KHz
 SPAN : 10MHz
 REF LEV. : 10dBm
 ATT. : 20dB

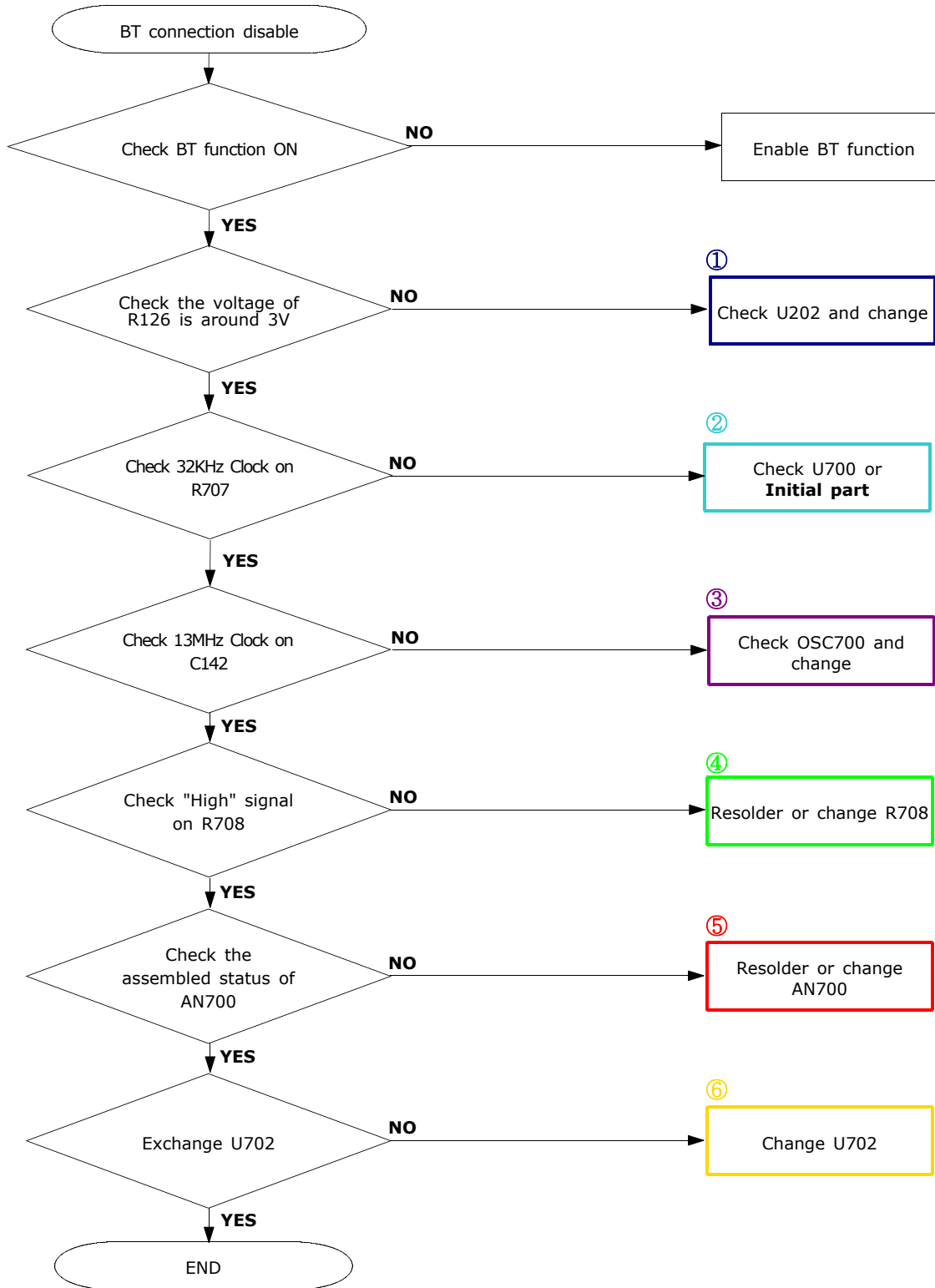


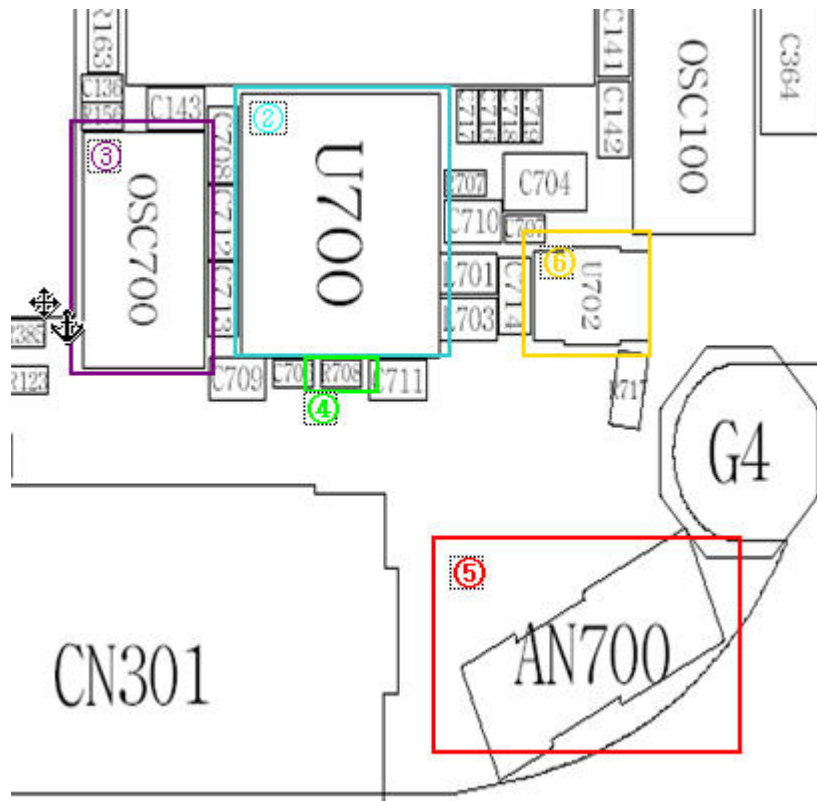
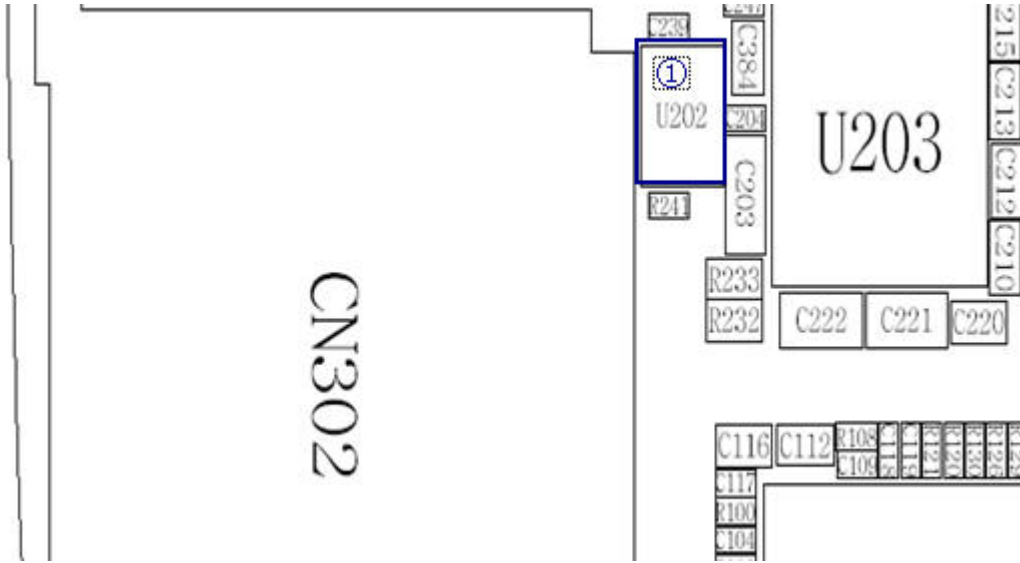
2-2-6. PCS Transmitter

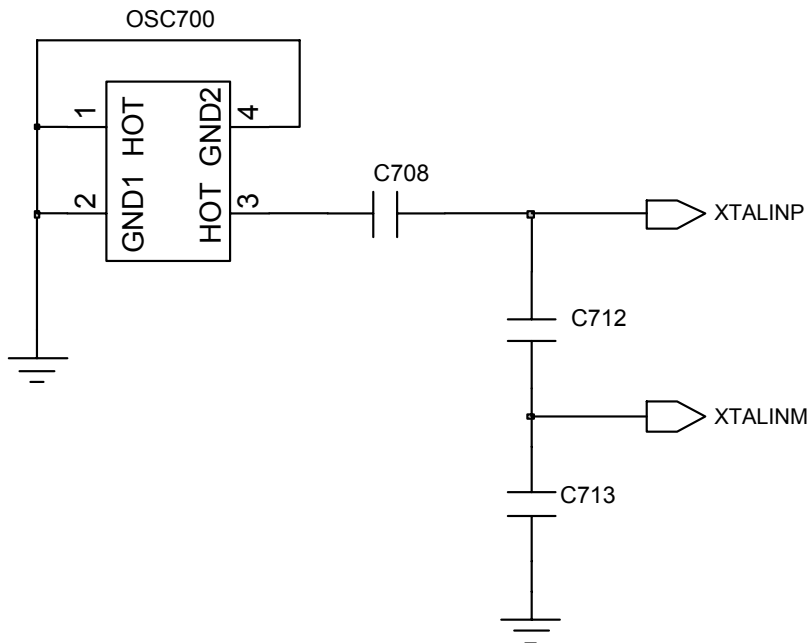
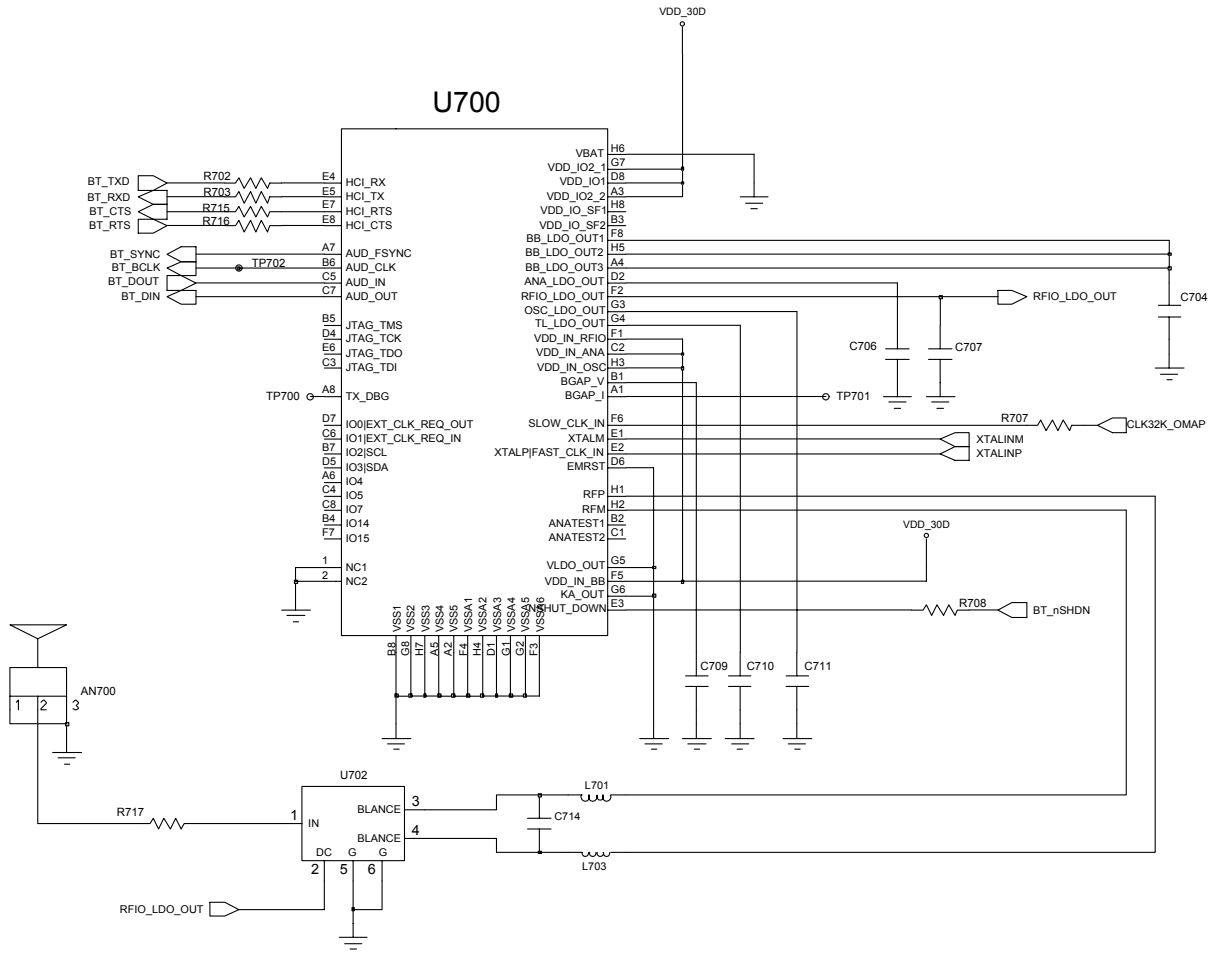


CONTINUS TX ON
CONDITION
 MS TX level 12
 CH : 660
 RBW : 100KHz
 VBW : 100KHz
 SPAN : 10MHz
 REF LEV. : 10dBm
 ATT. : 20dB

2-3-1. Bluetooth Part

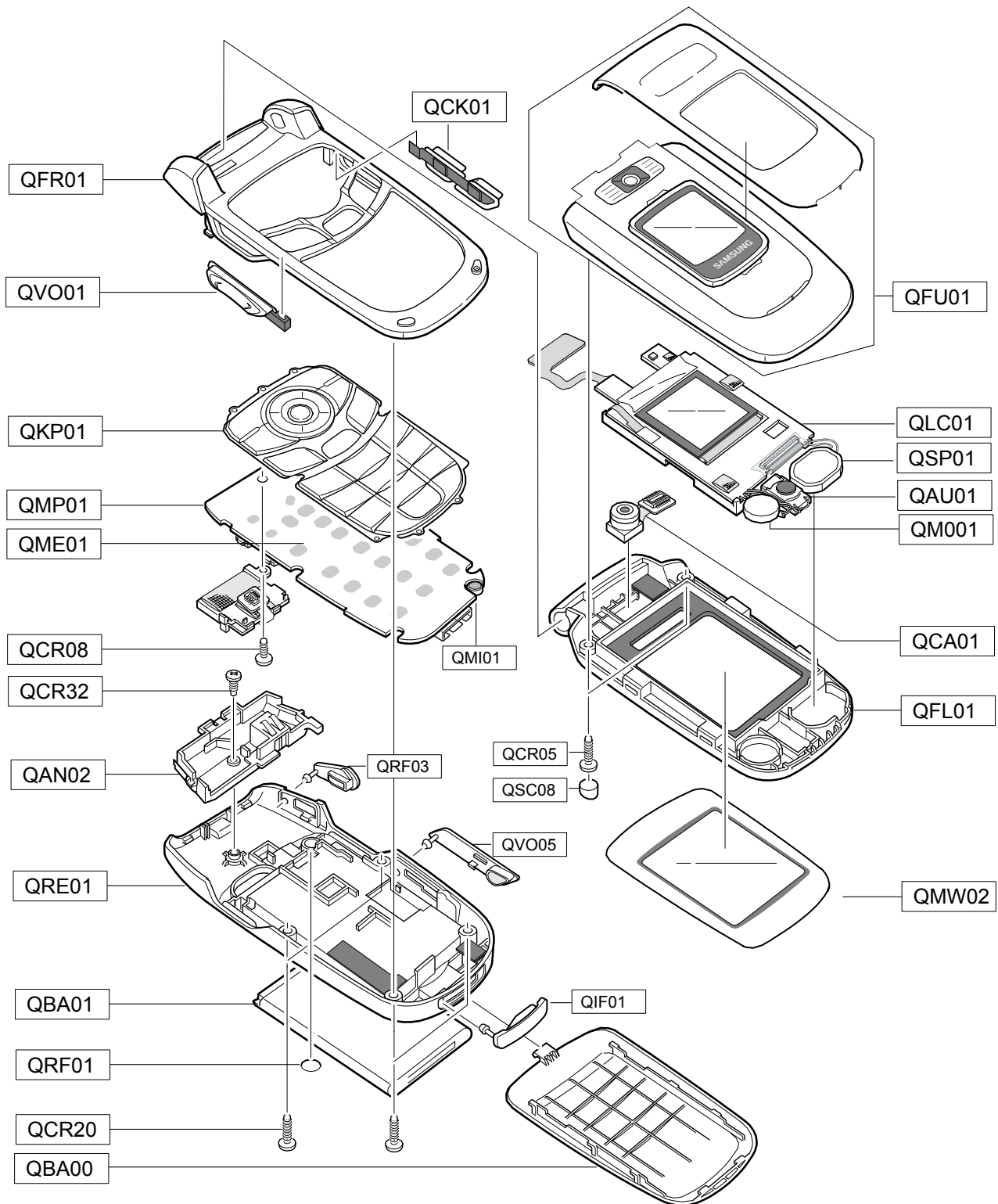






3. SGH-D730 Exploded View and Parts List

3-1. Cellular phone Exploded View



3-2. Cellular phone Parts list

Location No		Description	SEC CODE
QAN02		ANTENNA-SGHD730;IAPT0CSP4020SAB,SGH-	GH42-00606A
QAU01		AUDIO-RECEIVER;32ohm,109dB,12X7.0MM	3009-001086
QBA00		PMO-BATTERY COVER;SGH-D730,PC,ING/BL	GH72-20993A
QBA01		BATTERY-1000MAH,BLACK,ENG,M;BEX310AB	GH43-02018A
QCA01		UNIT-CAMERA;SGH-D730,IC03056AA,-,ITA	GH59-02167A
QCK01		MEC-KEY CAM PRO;SGH-D730,EU,PC,-,-,-	GH75-06706A
QCR05		SCREW-MACHINE;PH,+,M1.4,L3,ZPC(BLK),	6001-001478
QCR08		SCREW-MACHINE;CH,+,M1.4,L3,BLK,SWRCH	6001-001456
QCR20		SCREW-MACHINE;BH,+,M1.7,L3.5,NYLOCK,	6001-001429
QCR32		SCREW-MACHINE;CH,+,M1.4,L2,ZPC(BLK),	6001-001700
QFL01		MEC-F/LOWER;SGH-D730,OPEN,-,-,ING/BL	GH75-06698A
QFR01		MEC-FRONT COVER;SGH-D730,OPEN,-,-,IN	GH75-06699A
QFU01		MEC-SUB F/UPPER CASE;SGH-D730,OPEN,P	GH75-06697A
QKP01		MEC-KEYPAD;SGH-D730,OPEN,-,-,D/GRY,-	GH75-06707A
QLC01		LCD-SGHD730 MODULE;LTD190QC-F0E,SGH-	GH07-00724A
QME01		UNIT-METAL DOME;SGH-D730,SGH-D730 F/	GH59-02217A
QMI01		MICROPHONE-ASSY;2,500uA,-38dB,2.2,SG	GH30-00197A
QMO01		MOTOR DC-SGHD730;DMJBRK30C,SGH-D730,	GH31-00173A
QMP01		PBA MAIN-SGHD730;SGH-D730,XEG,GERM,P	GH92-02082A
QMW02		PMO-MAIN WINDOW V2;SGH-D730,ACRYL,-,	GH72-23768A
QRF01		MPR-TAPE RF COVER;SGH-D730,PC SHEET,	GH74-13888A
QSC08		RMO-SCREW CAP;SGH-D730,URETHAN,-,-,-	GH73-04720A
QSP01		SPEAKER;0.5W,8ohm,89dB,800Hz,17X13mm	3001-001774
QVO01		MEC-KEY VOLUME;SGH-D730,EU,PC,-,-,-,	GH75-06705A
QRE01		MEC-REAR COVER;SGH-D730,OPEN,-,-,SIL	GH75-06700A
	QRF03	PMO-EAR JACK COVER;SGH-D730,PC+URETH	GH72-21001A
	QIF01	PMO-IF JACK COVER;SGH-D730,PC+URETHA	GH72-21002A
	QVO05	MEC-MMC COVER;SGH-D730,OPEN,-,-,SIL,	GH75-06702A

Description	SEC CODE
BAG PE;LDPE,T0.05,W80,L180,TRP,-,-	6902-000634
CBF INTERFACE-PC DATA CABLE;SGH-E530	GH39-00404A
CHARGER-SGHE880 TC;TCH237ESE,SGH-E88	GH44-00861A
S/W UTILITY-SGHD730 MASTER CD;SGH-D7	GH46-00160A
S/W CD-USER MANUAL GUIDE;SGH-D730,SG	GH46-00165A
UNIT-EARPHONE;SGH-i270,EM-SS550E-ST,	GH59-01543A
UNIT-SIM SOCKET ASSY;SGH-D730,YWGD73	GH59-02230A
LABEL(P)-WATER SOAK;COMM,NORGE,100G,	GH68-02026A
MANUAL-WEEE CARD;COMM,SEC,ENGLISH,UN	GH68-07013A
LABEL(R)-MAIN (EU);SGH-D730,XET,MAT,	GH68-07443A
MANUAL-QRG;SGH-D730,XEG,GERMAN,GERM,	GH68-07766A
BOX(P)-UNIT (EU);SGH-D730,SC300+F(KO	GH69-03078A
CUSHION-CASE (EU);SGH-D730,HIPS,T1.0	GH69-03127A
MPR-BOHO FPCB FIX;SGH-E610,ST-5543,8	GH74-11231A
MPR-LCD SHIELD TAPE A;SGH-D730,SHIEL	GH74-13893A
MPR-LCD SHIELD SPONGE 2;SGH-D730,SHI	GH74-13979A
MPR-TAPE LCD INSULATION;SGH-D730,3M	GH74-14571A
MPR-TAPE FRONT FPCB;SGH-D730,3M 1352	GH74-14849A
MPR-BOHO VINYL UPPER B;SGH-D730,ST 5	GH74-14851A
MPR-BOHO VINYL LOWER A;SGH-D730,ST 5	GH74-14852A
MPR-BOHO VINYL MA WIN B;SGH-D730,ST	GH74-14855A
MPR-LCD SHIELD SPONGE 3;SGH-D730,SHI	GH74-15223A
MPR-TAPE PCB INSULATION;SGH-D730,3M	GH74-15779A
MPR-LUGHT MASK SPONGE A;SGH-D730,SRS	GH74-17170A
MPR-LUGHT MASK SPONGE B;SGH-D730,SRS	GH74-17171A
MPR-BOHO VINYL MAIN WIN;SGH-D730,PVC	GH74-17514A
MPR-BOHO VINYL DUAL WIN;SGH-D730,PVC	GH74-17515A

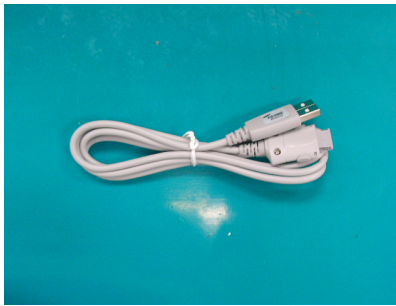
3-3. Test Jig (GH80-03309A)



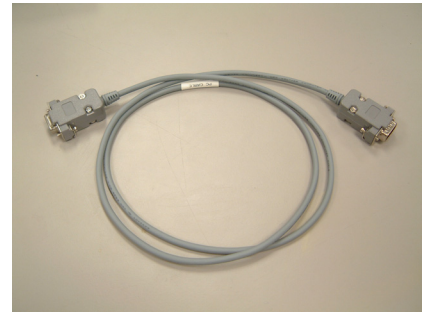
3-3-1. RF Test Cable
(GH39-00283A)



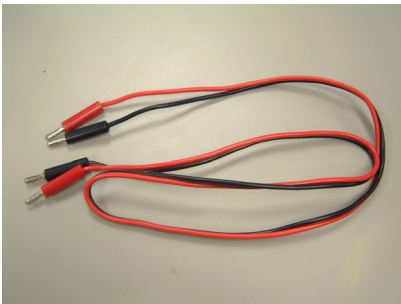
3-3-2. DATA CABLE
(GH39-00404A)



3-3-3. Serial Cable



3-3-4. Power Supply Cable



3-3-5. Test Cable
(GH39-00382A)



3-3-6. TC
(GH44-00861A)



4. SGH-D730 MAIN Electrical Parts List

SEC Code	Design LOC	Design LOC
ZD303,ZD304	0403-001387	DIODE-ZENER
ZD302	0403-001427	DIODE-ZENER
ZD306	0406-001197	DIODE-TVS
D301,D302	0407-001002	DIODE-ARRAY
U300	0407-001038	DIODE-ARRAY
Q801	0501-002202	TR-SMALL SIGNAL
Q101,Q305,Q306,Q307	0504-001113	TR-DIGITAL
Q500	0504-001113	TR-DIGITAL
Q102	0504-001140	TR-DIGITAL
U305	0504-001176	TR-DIGITAL
Q303	0505-001165	FET-SILICON
Q308	0505-001217	FET-SILICON
LED802,LED803,LED804	0601-001819	LED
LED805,LED806,LED807	0601-001819	LED
LED808,LED809,LED810	0601-001819	LED
LED811,LED812,LED813	0601-001819	LED
LED814,LED815,LED816	0601-001819	LED
LED817,LED818,LED819	0601-001819	LED
LED820	0601-001819	LED
U103	0801-002882	IC
U100	0904-001916	IC
U202	1001-001193	IC
U201	1001-001261	IC
U306	1009-001018	IC
U602	1201-002218	IC
U105	1203-002976	IC
U500	1203-003304	IC
U600	1205-002433	IC
U402	1209-001219	IC
U309	1209-001585	IC
VR203,VR204	1405-001082	VARISTOR
V801	1405-001108	VARISTOR

SEC Code	Design LOC	Design LOC
U703,V301,V302,V802	1405-001082	VARISTOR
V803,V804,V805,V806	1405-001082	VARISTOR
V807,V808,V809,V810	1405-001082	VARISTOR
V811,V812,V813,VR200	1405-001082	VARISTOR
V303,V304,V305,V306	1405-001138	VARISTOR
R707	2007-000138	R-CHIP
R405	2007-000142	R-CHIP
R308,R383,R708	2007-000148	R-CHIP
R223,R302,R332,R364	2007-000162	R-CHIP
R522	2007-000162	R-CHIP
R166	2007-000167	R-CHIP
R113,R114,R408	2007-000170	R-CHIP
R226,R227,R232,R233	2007-000171	R-CHIP
R440,R601,R717	2007-000171	R-CHIP
R243,R244	2007-001119	R-CHIP
R502	2007-001319	R-CHIP
R222	2007-001339	R-CHIP
R406	2007-002797	R-CHIP
R602	2007-007014	R-CHIP
R306,R307	2007-007021	R-CHIP
R414,R415	2007-007573	R-CHIP
R160	2007-007590	R-CHIP
R168,R400,R823,R824	2007-008045	R-CHIP
R825,R826,R827,R828	2007-008045	R-CHIP
R829,R830,R831,R832	2007-008045	R-CHIP
R833,R834,R835,R838	2007-008045	R-CHIP
R839,R840,R841,R842	2007-008045	R-CHIP

SEC Code	Design LOC	Design LOC
R843	2007-008045	R-CHIP
R241,R242	2007-008048	R-CHIP
R147,R148,R165	2007-008052	R-CHIP
R108,R122,R123, R156	2007-008055	R-CHIP
R309,R324,R339, R380	2007-008055	R-CHIP
R382,R401,R407, R410	2007-008055	R-CHIP
R362	2007-008401	R-CHIP
R129,R367,R368, R369	2007-008419	R-CHIP
R375,R376,R377, R836	2007-008419	R-CHIP
R325	2007-008478	R-CHIP
R236,R303,R304, R361	2007-008483	R-CHIP
R378,R402,R403, R409	2007-008483	R-CHIP
R109,R110,R111, R112	2007-008516	R-CHIP
R139,R144,R154, R238	2007-008516	R-CHIP
R239,R301,R336, R337	2007-008516	R-CHIP
R341,R404,R416, R439	2007-008516	R-CHIP
R441,R520	2007-008516	R-CHIP
R100,R164	2007-008531	R-CHIP
R107,R121,R130, R155	2007-008542	R-CHIP
R370,R371,R372, R373	2007-008542	R-CHIP
R374,R381,R501, R702	2007-008542	R-CHIP
R703,R715,R716	2007-008542	R-CHIP
R220,R221,R230, R231	2007-008588	R-CHIP
R342	2007-008648	R-CHIP
R163	2007-008812	R-CHIP

SEC Code	Design LOC	Design LOC
F601,F602	2011-001363	R-NETWORK
C511	2203-000233	C-CERAMIC,CHIP
C120,C629	2203-000278	C-CERAMIC,CHIP
C633	2203-000311	C-CERAMIC,CHIP
C144,C145,C712	2203-000386	C-CERAMIC,CHIP
C713	2203-000425	C-CERAMIC,CHIP
C235,C236,C240, C708	2203-000438	C-CERAMIC,CHIP
C613	2203-000550	C-CERAMIC,CHIP
C422,C423	2203-000628	C-CERAMIC,CHIP
C141,C142	2203-000643	C-CERAMIC,CHIP
C607	2203-000995	C-CERAMIC,CHIP
C233	2203-001239	C-CERAMIC,CHIP
C630,C631	2203-001385	C-CERAMIC,CHIP
C605	2203-001405	C-CERAMIC,CHIP
C617,C621	2203-005050	C-CERAMIC,CHIP
C609,C610	2203-005288	C-CERAMIC,CHIP
C424	2203-005480	C-CERAMIC,CHIP
C302,C317,C385	2203-005482	C-CERAMIC,CHIP
C714	2203-005552	C-CERAMIC,CHIP
C231,C232,C234, C241	2203-005682	C-CERAMIC,CHIP
C246,C247,C248, C324	2203-005682	C-CERAMIC,CHIP
C325,C326,C327, C328	2203-005682	C-CERAMIC,CHIP
C335,C337,C338, C339	2203-005682	C-CERAMIC,CHIP
C340,C341,C346, C347	2203-005682	C-CERAMIC,CHIP
C348,C350,C351, C352	2203-005682	C-CERAMIC,CHIP
C354,C355,C356, C357	2203-005682	C-CERAMIC,CHIP
C358,C360,C366, C367	2203-005682	C-CERAMIC,CHIP
C368,C369,C370, C371	2203-005682	C-CERAMIC,CHIP
C372,C373,C374, C375	2203-005682	C-CERAMIC,CHIP

SEC Code	Design LOC	Design LOC
C376,C377,C378, C379	2203-005682	C-CERAMIC,CHIP
C380,C381,C382, C383	2203-005682	C-CERAMIC,CHIP
C389,C390,C391, C392	2203-005682	C-CERAMIC,CHIP
C393,C394,C395, C396	2203-005682	C-CERAMIC,CHIP
C397,C410,C506, C509	2203-005682	C-CERAMIC,CHIP
C510,C603,C616, C625	2203-005682	C-CERAMIC,CHIP
C715	2203-005682	C-CERAMIC,CHIP
C303,C604,C608, C611	2203-005736	C-CERAMIC,CHIP
C612,C618,C624, C626	2203-005736	C-CERAMIC,CHIP
C627,C628	2203-005736	C-CERAMIC,CHIP
C101,C102,C105, C111	2203-005806	C-CERAMIC,CHIP
C119,C315,C316, C418	2203-005806	C-CERAMIC,CHIP
C304	2203-006090	C-CERAMIC,CHIP
C107,C112,C116, C143	2203-006093	C-CERAMIC,CHIP
C207,C208,C209, C210	2203-006093	C-CERAMIC,CHIP
C212,C213,C215, C220	2203-006093	C-CERAMIC,CHIP
C318,C384,C512, C513	2203-006093	C-CERAMIC,CHIP
C515,C516,C517, C520	2203-006093	C-CERAMIC,CHIP
C523,C711	2203-006093	C-CERAMIC,CHIP
C245	2203-006137	C-CERAMIC,CHIP
C229,C230,C404, C416	2203-006190	C-CERAMIC,CHIP
C113,C238,C239, C332	2203-006194	C-CERAMIC,CHIP
C619,C622	2203-006194	C-CERAMIC,CHIP

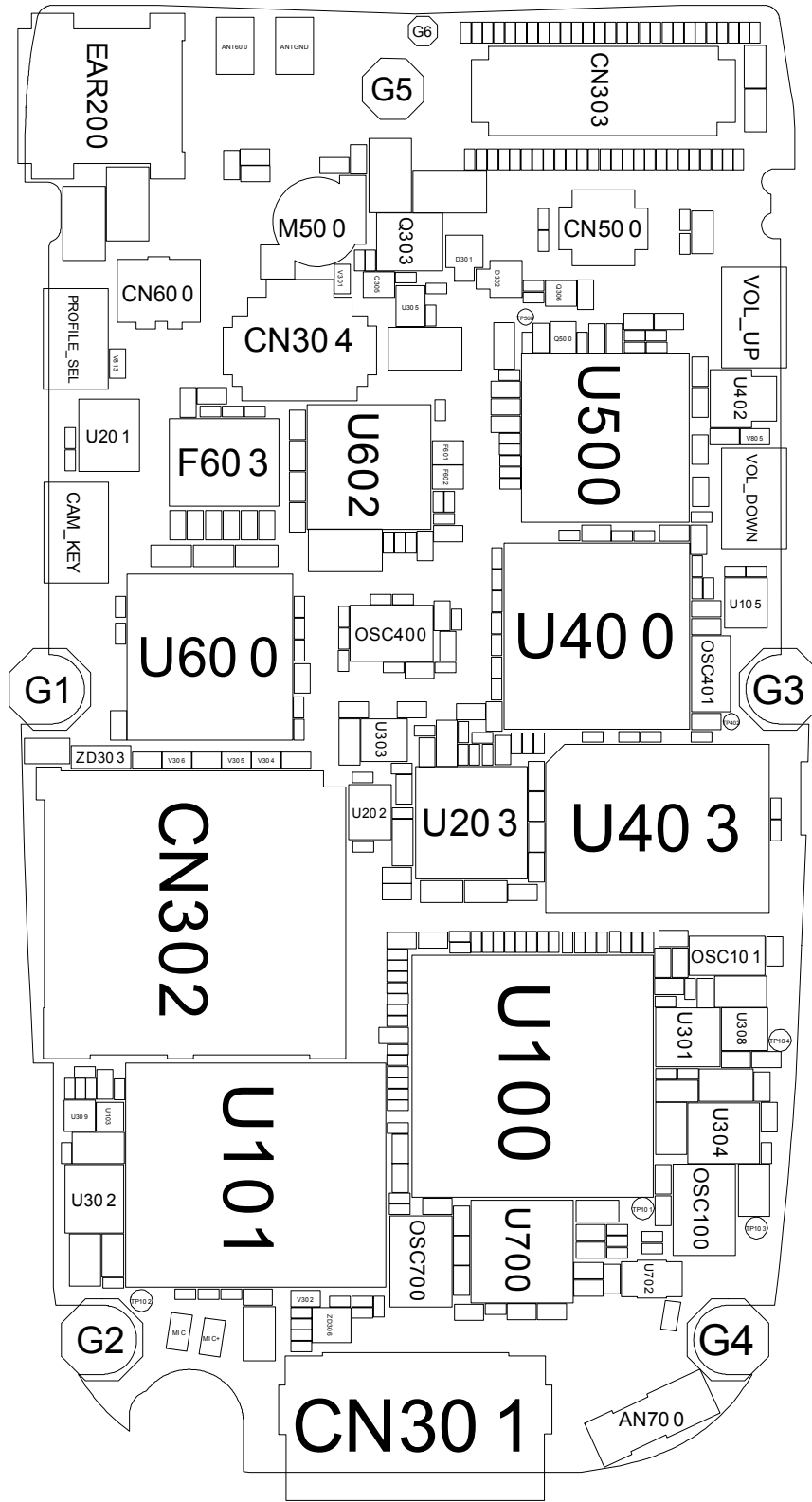
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C334,C400,C401, C402	2203-006194	C-CERAMIC,CHIP
C405,C408,C409, C411	2203-006194	C-CERAMIC,CHIP
C412,C413,C414, C417	2203-006194	C-CERAMIC,CHIP
C419,C445,C500, C504	2203-006194	C-CERAMIC,CHIP
C221,C222,C365, C704	2203-006208	C-CERAMIC,CHIP
C709,C710	2203-006257	C-CERAMIC,CHIP
C307,C388,C508	2203-006324	C-CERAMIC,CHIP
C242	2203-006344	C-CERAMIC,CHIP
C100,C103,C104, C106	2203-006423	C-CERAMIC,CHIP
C108,C109,C110, C114	2203-006423	C-CERAMIC,CHIP
C115,C117,C118, C121	2203-006423	C-CERAMIC,CHIP
C136,C137,C140, C202	2203-006423	C-CERAMIC,CHIP
C204,C305,C322, C323	2203-006423	C-CERAMIC,CHIP
C398,C399,C406, C441	2203-006423	C-CERAMIC,CHIP
C442,C443,C444, C501	2203-006423	C-CERAMIC,CHIP
C503,C507,C518, C519	2203-006423	C-CERAMIC,CHIP
C620,C706,C707	2203-006423	C-CERAMIC,CHIP
C319,C320,C364	2203-006427	C-CERAMIC,CHIP
C601	2203-006556	C-CERAMIC,CHIP
C407	2203-006648	C-CERAMIC,CHIP
C308,C309,C387, C623	2404-001274	C-TA,CHIP
C249,C250	2404-001306	C-TA,CHIP
C226,C227	2404-001333	C-TA,CHIP
C201,C203,C386, C502	2404-001381	C-TA,CHIP
C310	2404-001392	C-TA,CHIP

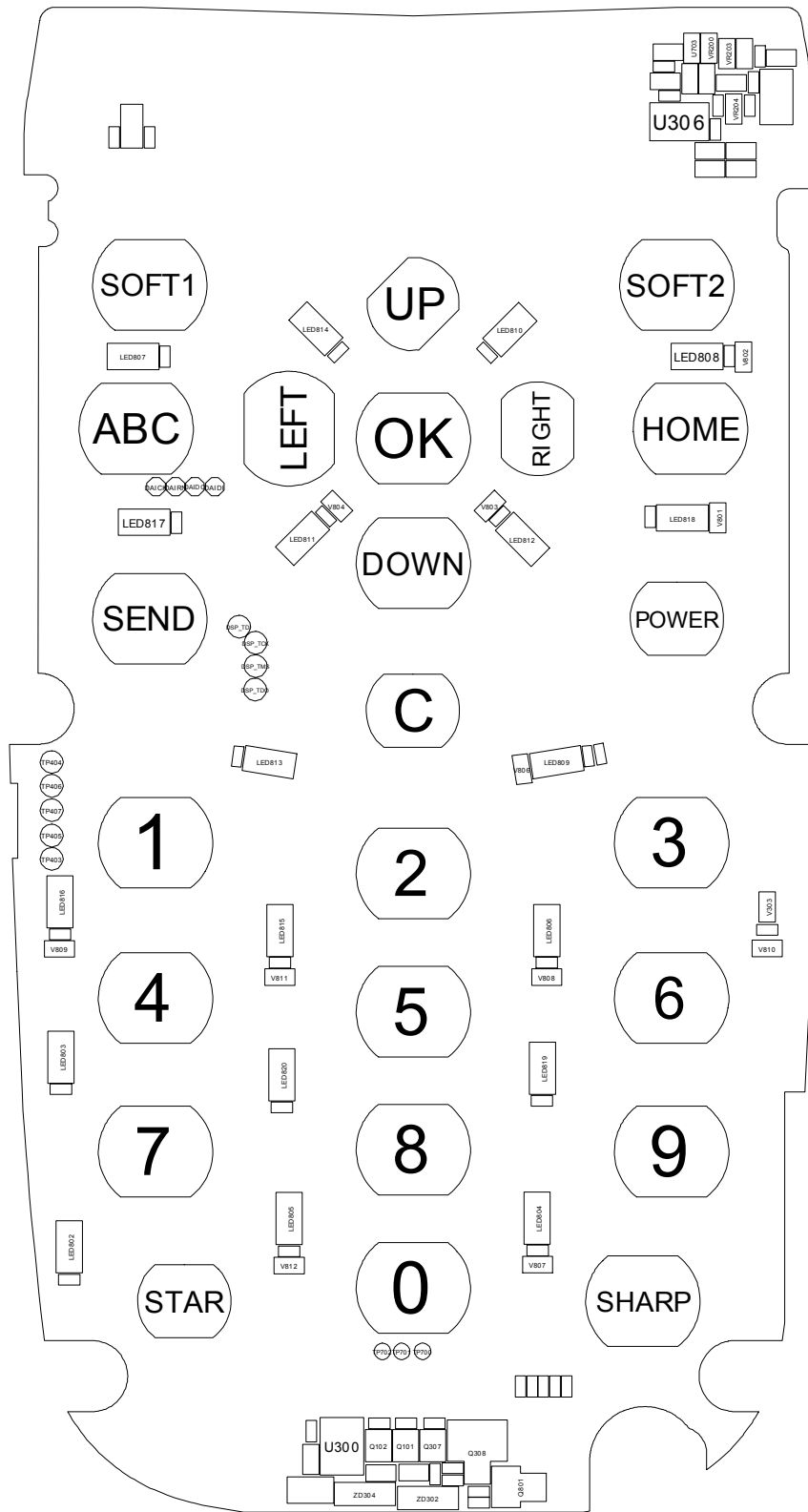
SGH-D730 Main Electrical Parts List

SEC Code	Design LOC	Design LOC
C301,C361	2404-001394	C-TA,CHIP
L301	2703-001231	INDUCTOR-SMD
L606	2703-002665	INDUCTOR-SMD
L701,L703	2703-001724	INDUCTOR-SMD
L607	2703-001749	INDUCTOR-SMD
L602	2703-001907	INDUCTOR-SMD
L608	2703-002308	INDUCTOR-SMD
L304	2703-002734	INDUCTOR-SMD
L603	2703-002759	INDUCTOR-SMD
OSC700	2801-004189	CRYSTAL-UNIT
OSC100	2801-004318	CRYSTAL-UNIT
OSC400	2809-001284	OSCILLATOR-VCTCXO
L303,L305,L400	3301-001534	CORE-FERRITE BEAD
CAM_KEY,PROFILE_SEL	3404-001152	SWITCH-TACT
VOL_DOWN,VOL_UP	3404-001152	SWITCH-TACT
CN600	3705-001358	CONNECTOR-COAXIAL
CN304	3711-005571	CONNECTOR-HEADER
CN500	3711-005550	CONNECTOR-HEADER
EAR200	3722-002082	JACK-PHONE
M500	4302-001130	BATTERY
U400	GH09-00036A	TR09WQTKE15IN 3B-DT
U700	new item1	BRF6150
OSC101,OSC401	new item2	CC7V-T1A-32.76 8K
U702	new item3	DBF71B001
CN301	new item4	HF24-AD0100
F603	new item5	LMSP54HA-348TEMP
U403	new item6	LRS18C8A
R837	new item7	MCR006MZP5F56 01
R363	new item9	MCR01F4303

SEC Code	Design LOC	Design LOC
R237,R240	new item8	MCR006YZPF 3302
U303,U308	new item10	MIC5255-3.0BML
AN700	new item11	PARTRON-D500
CN302	new item12	PGS010-20A103194
U301	new item13	PST425A160NR
U101	new item14	PF38F4470 LLYFHQ
U302	new item15	TPS62222
U304	new item16	TPS62300DRC
U203	new item17	WM8753-BGA
CN303	new item18	AXK8L60125S

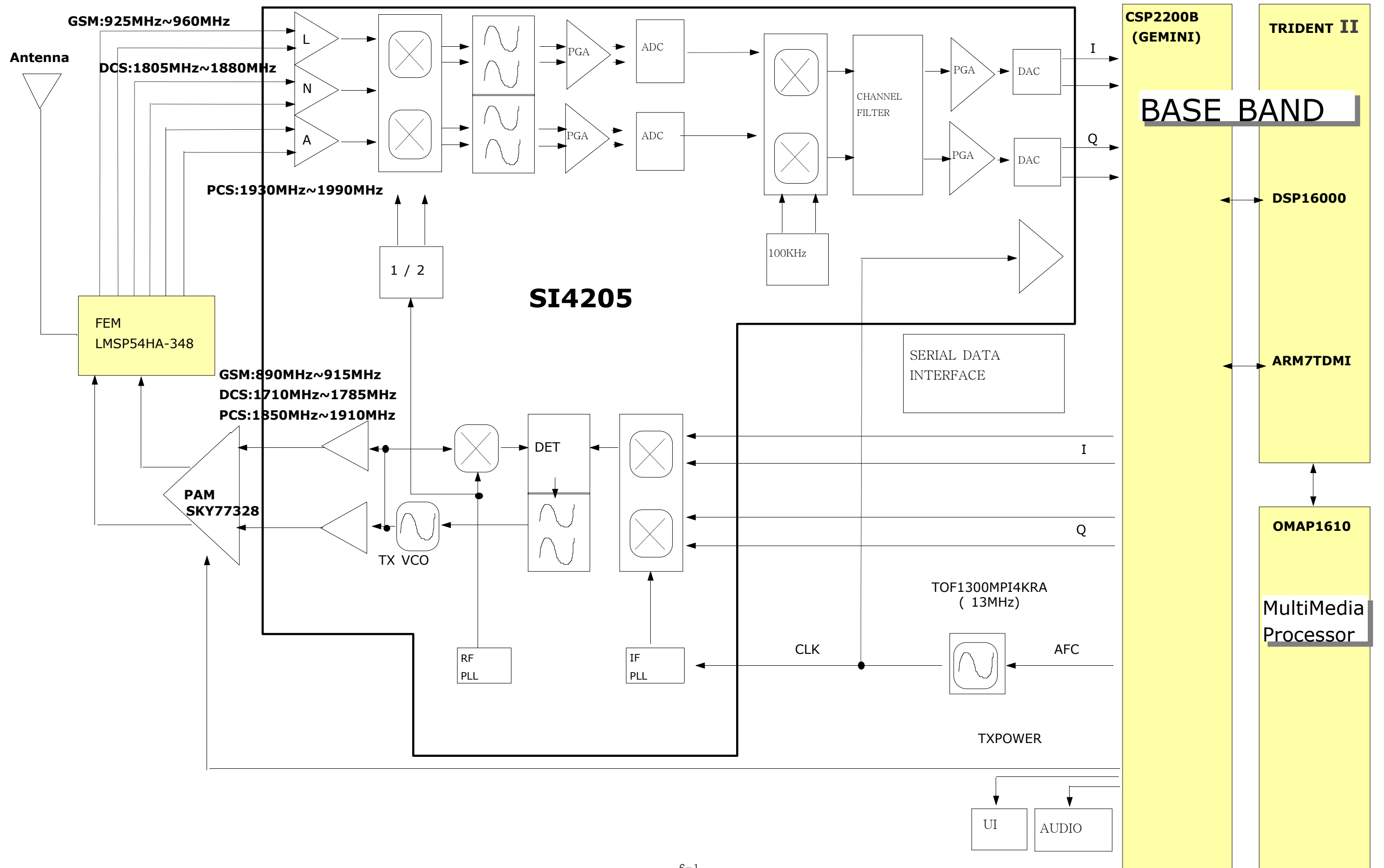
5. SGH-D730 PCB Diagrams



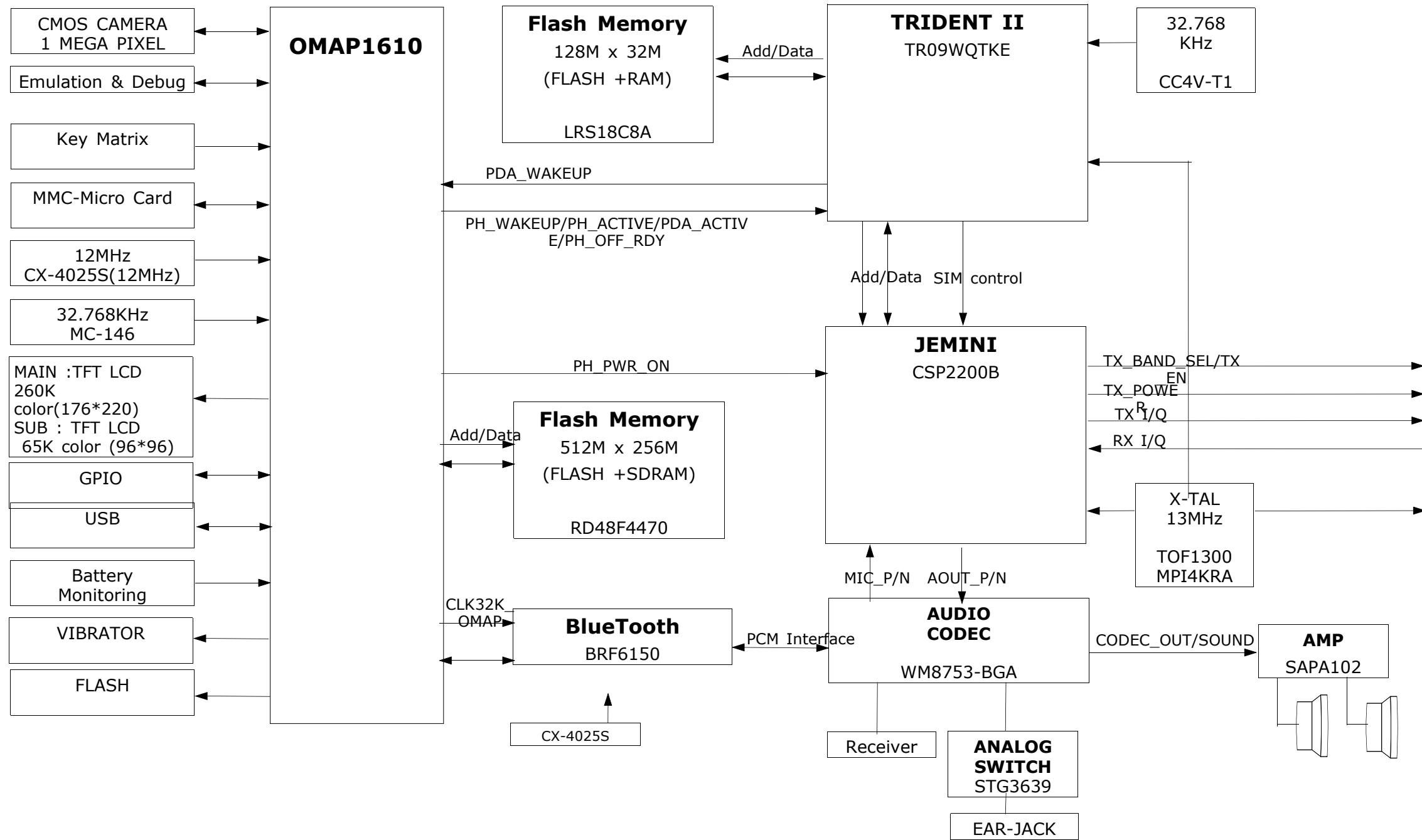


6. SGH-D730 Block Diagrams

RF PART



**BB
PART**



RF Block

**SAMSUNG
ELECTRONICS**

