

SAMSUNG

**GSM TELEPHONE
SGH-E810**

***SERVICE* Manual**

GSM TELEPHONE



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1. SGH-E810 Specification

1. GSM General Specification

	GSM900 Phase 1	EGSM900 Phase 2	DCS1800 Phase 1
Freq. Band[MHz]	890~915	880~915	1710~1785
Uplink/Downlink	935~960	925~960	1805~1880
ARFCN Range	1~124	0~124 & 975~1023	512~885
Tx/Rx Spacing	45MHz	45MHz	95MHz
Mod. Bit Rate/ Bit Period	270.833KHz 3.692us	270.833KHz 3.692us	270.833KHz 3.692us
Time Slot Period /Frame Period	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms
Modulation	0.3GMSK	0.3GMSK	0.3GMSK
MS Power	33dBm~13dBm	33dBm~13dBm	33dBm~13dBm
Power Class	5pcl~15pcl	5pcl~19pcl	0pcl~15pcl
Sensitivity	-102dBm	-102dBm	-100dBm
TDMA Mux	8	8	8
Cell Radius	35Km	35Km	2Km

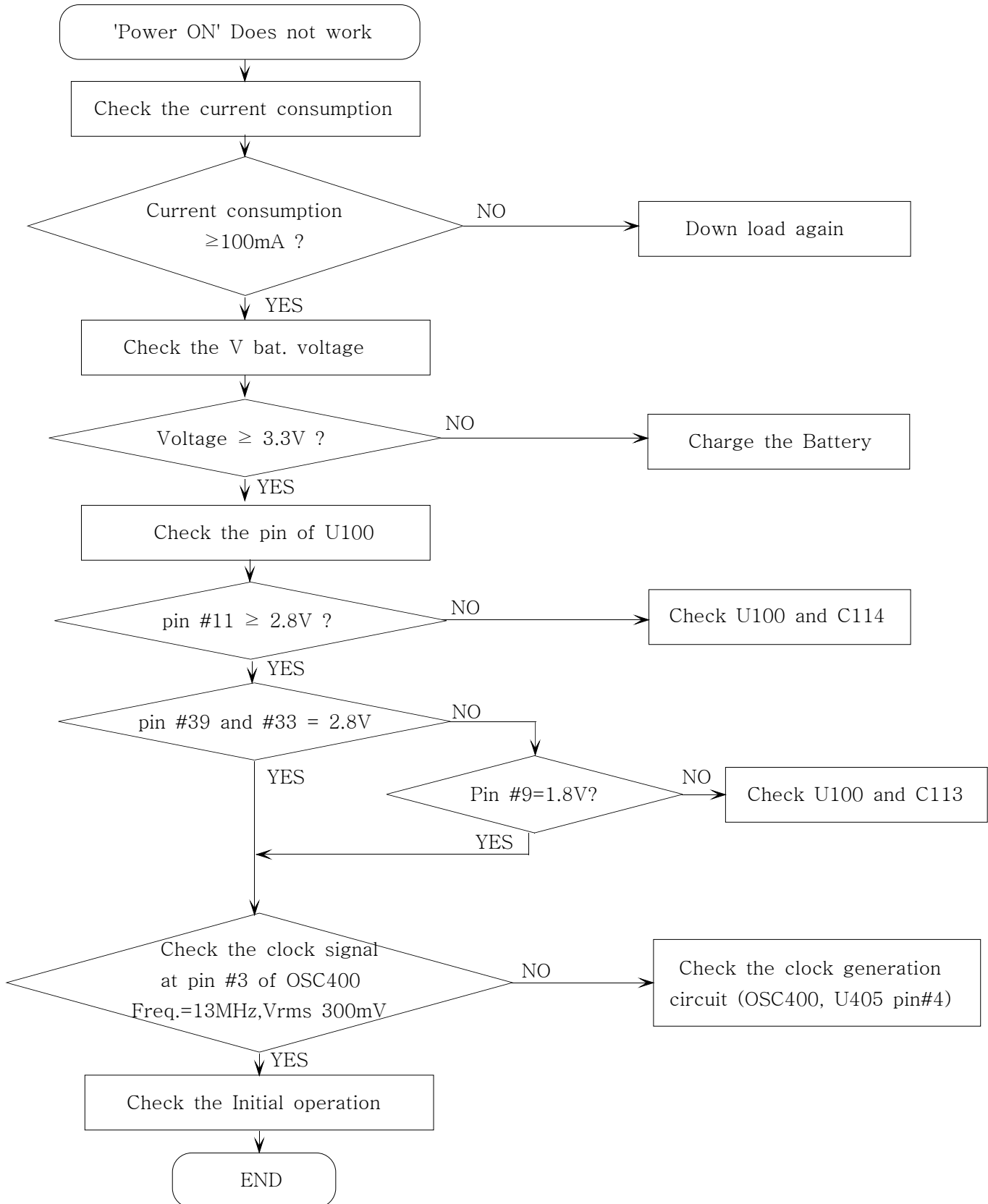
2. GSM TX power class

TX Power Control Level	GSM900
5	33±2dBm
6	29±2dBm
7	27±2dBm
8	25±2dBm
9	23±2dBm
10	21±2dBm
11	19±2dBm
12	17±2dBm
13	15±2dBm
14	13±2dBm
15	11±2dBm
16	9±3dBm
17	7±3dBm
18	5±3dBm
19	3±3dBm

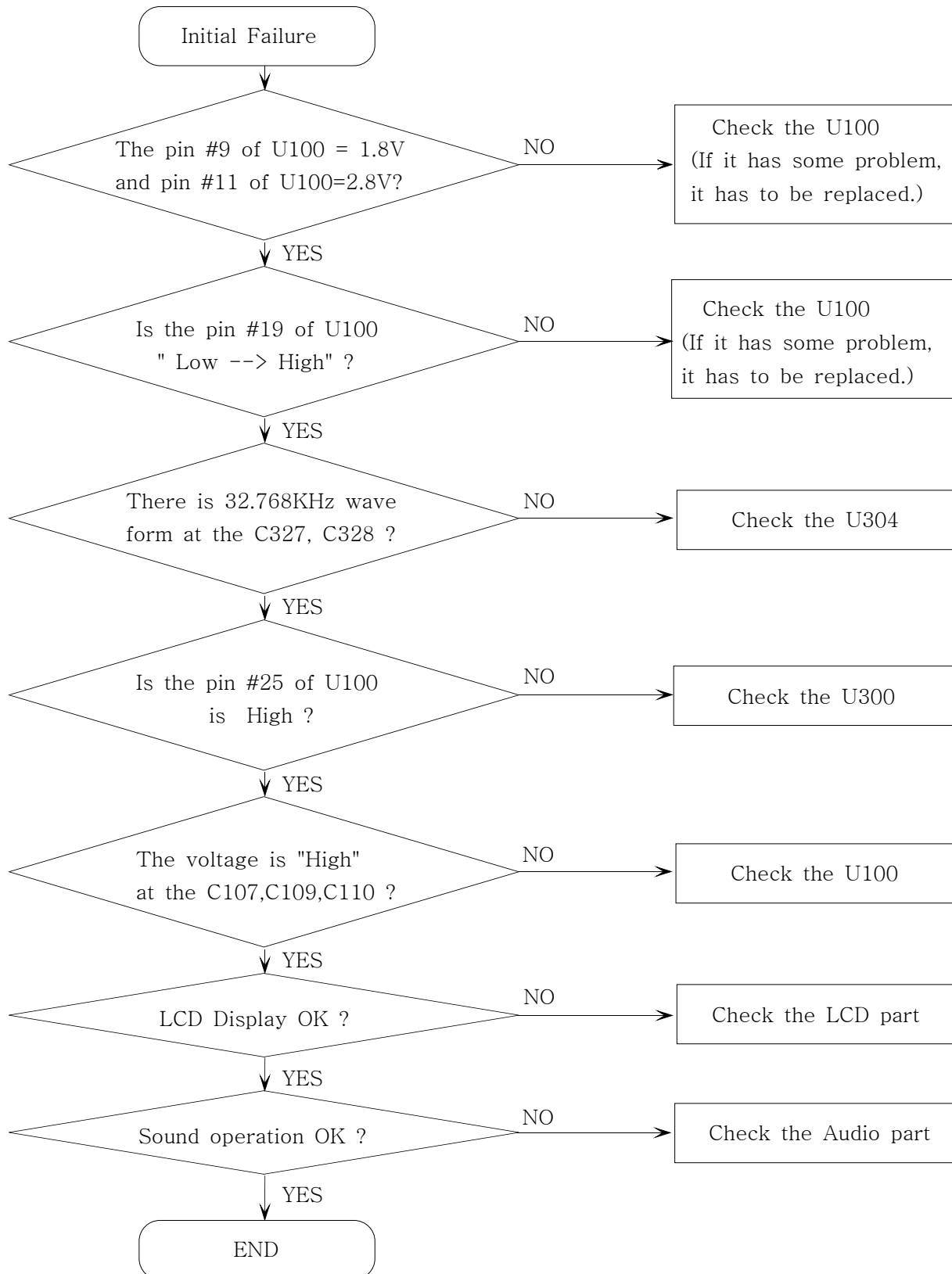
TX Power Control Level	DCS1800
0	30±3dBm
1	28±3dBm
2	26±3dBm
3	24±3dBm
4	22±3dBm
5	20±3dBm
6	18±3dBm
7	16±3dBm
8	14±3dBm
9	12±4dBm
10	10±4dBm
11	8±4dBm
12	6±4dBm
13	4±4dBm
14	2±5dBm
15	0±5dBm

2. SGH-E810 Flow Chart of Troubleshooting

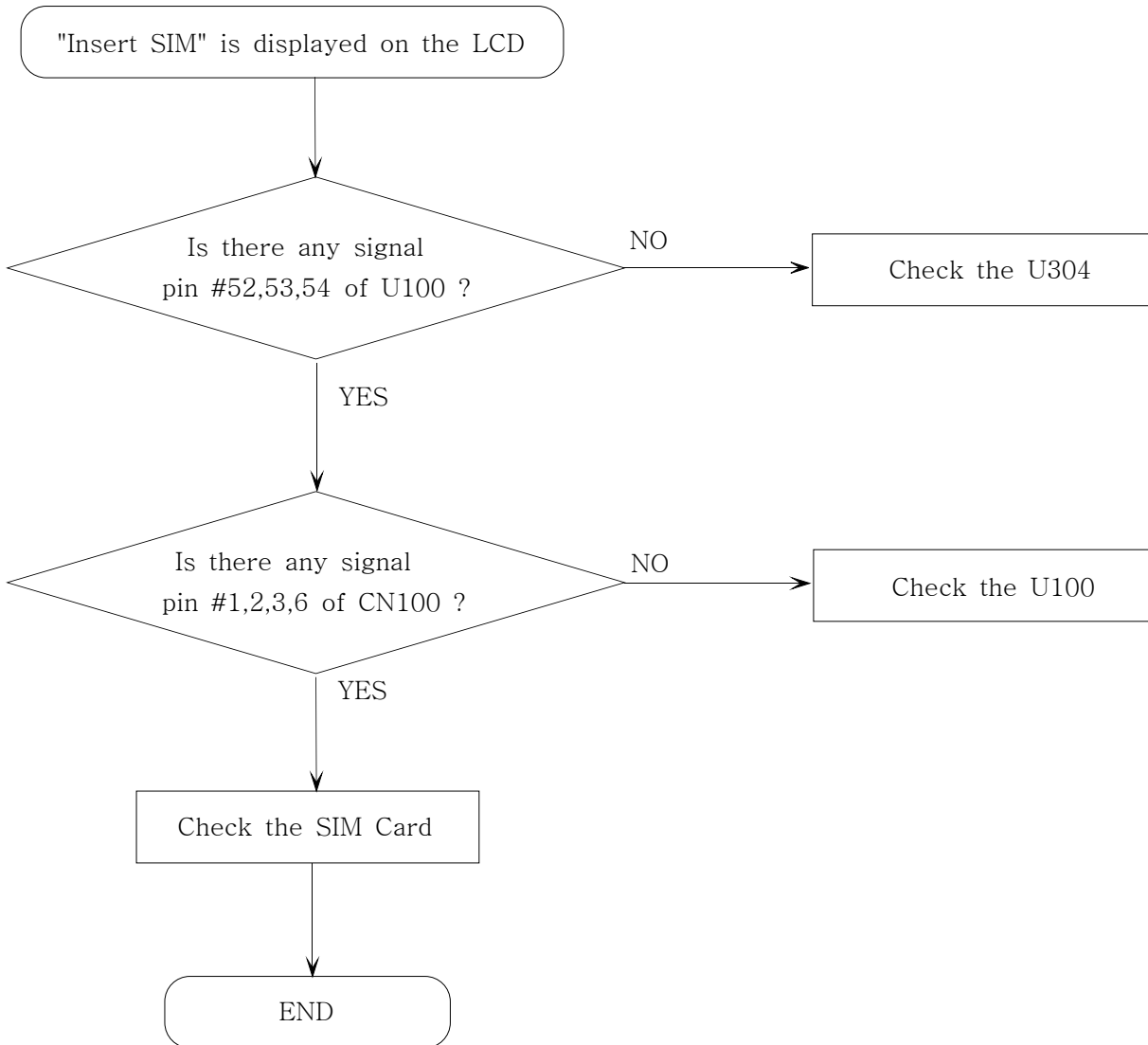
1. Power ON



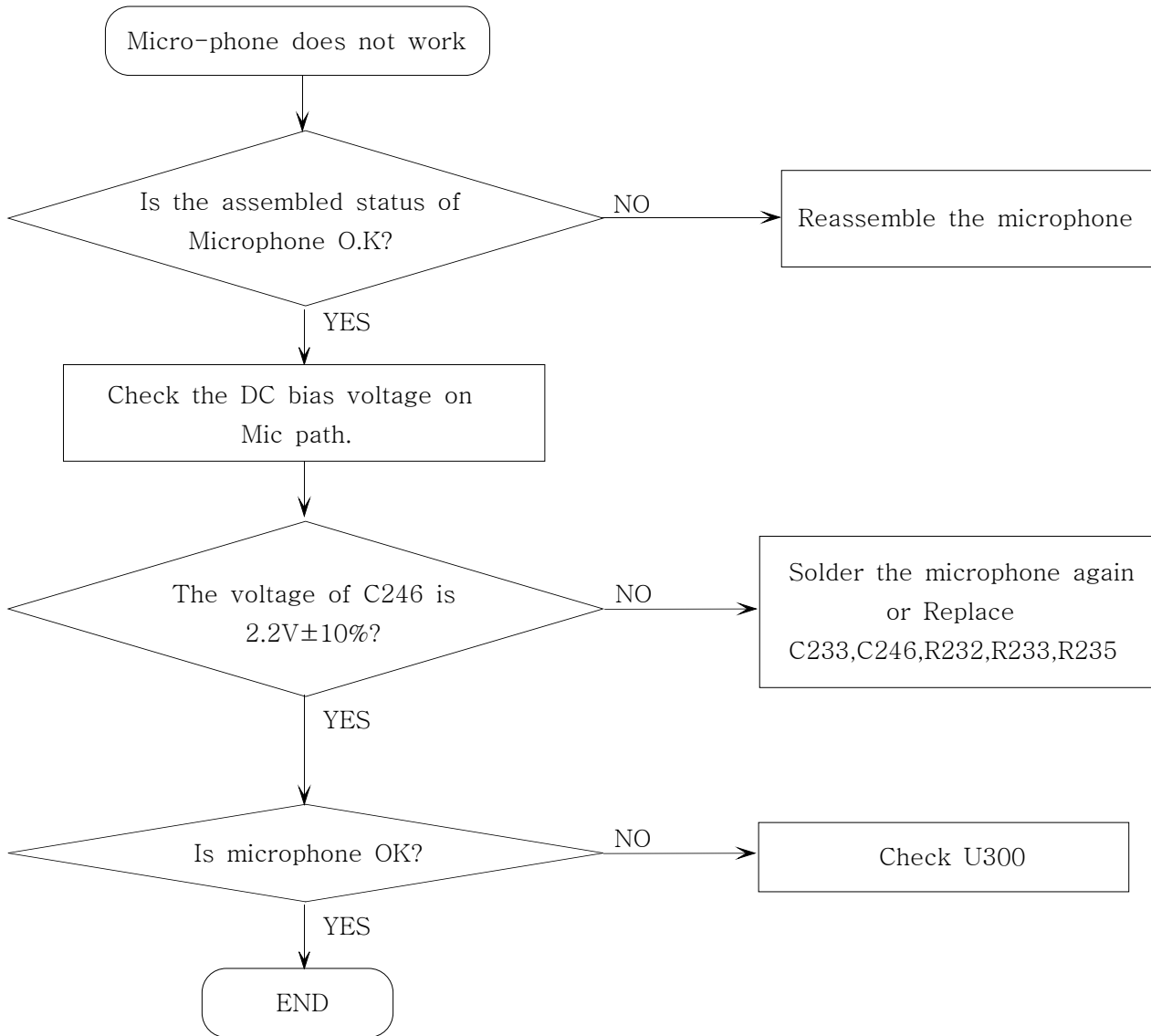
2. System Initial



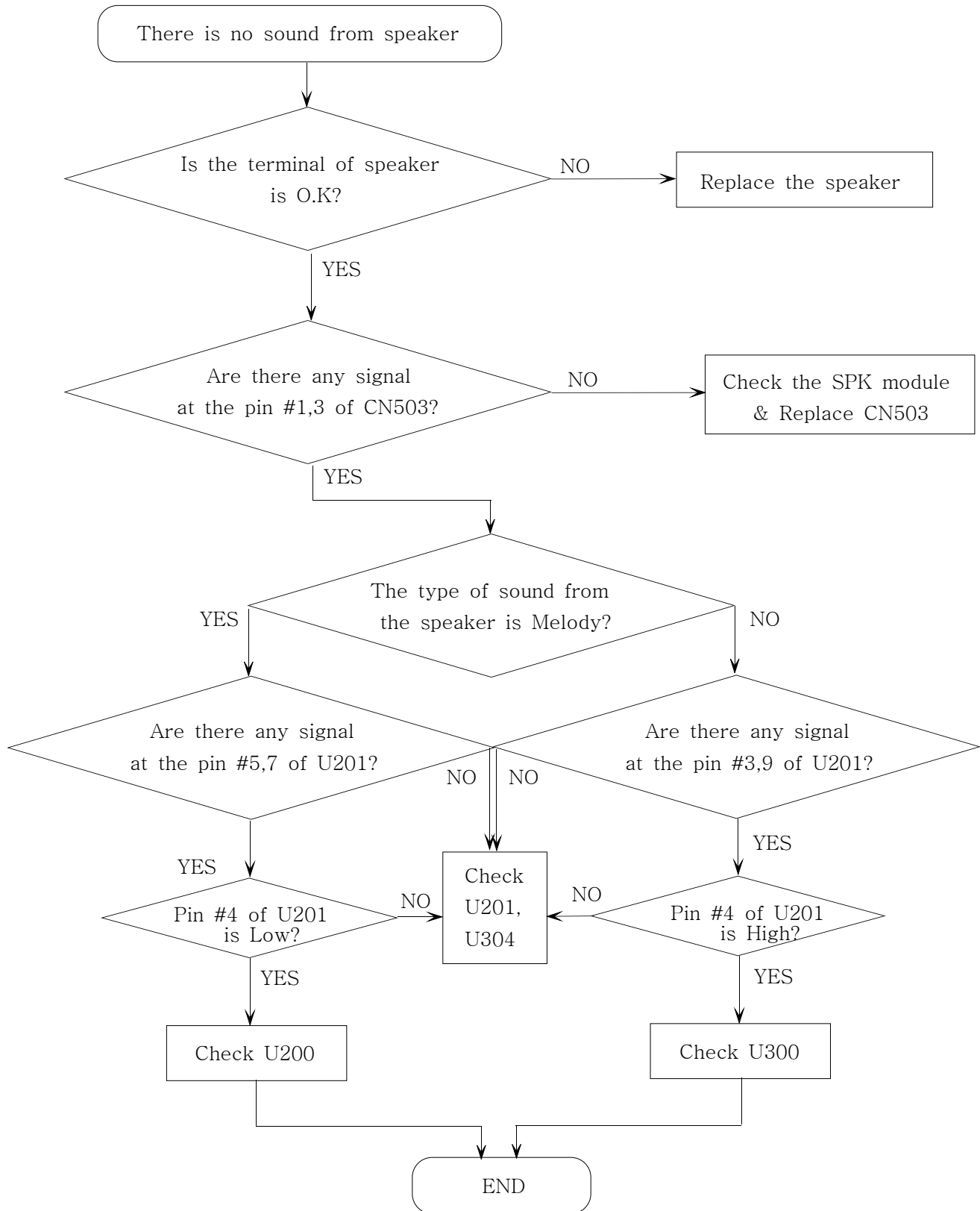
3. SIM Part



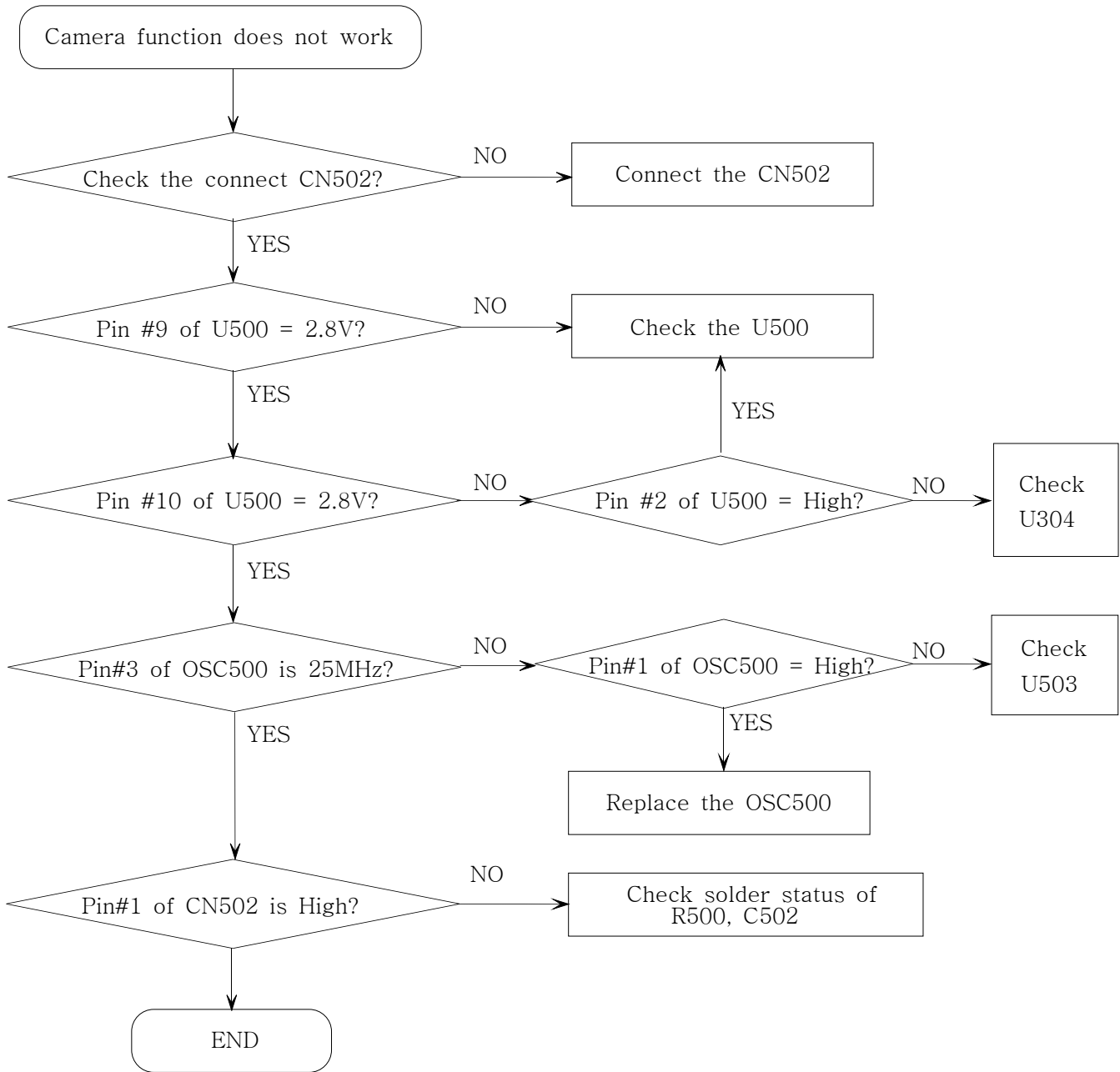
4. Microphone Part



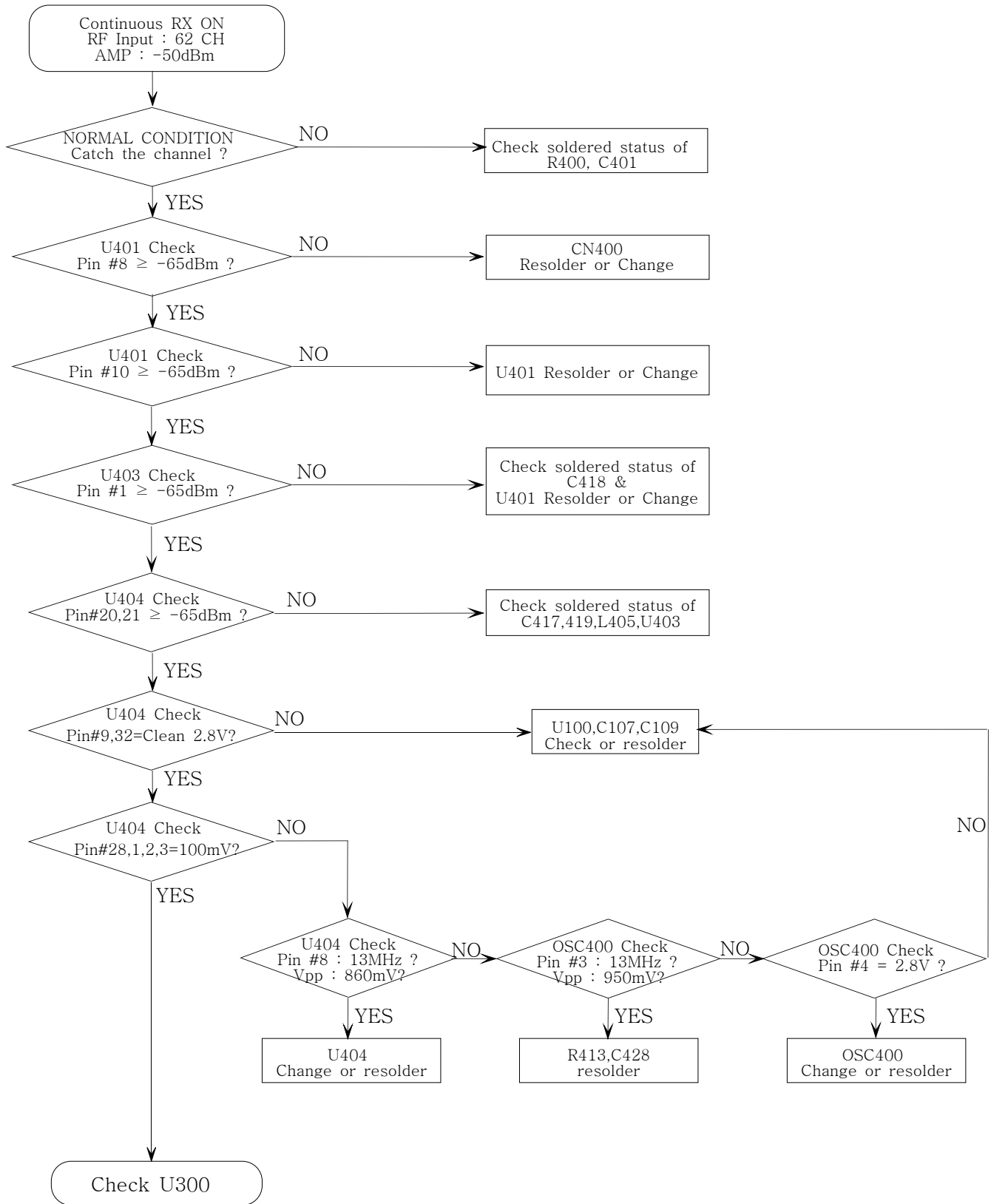
5. Speaker Part



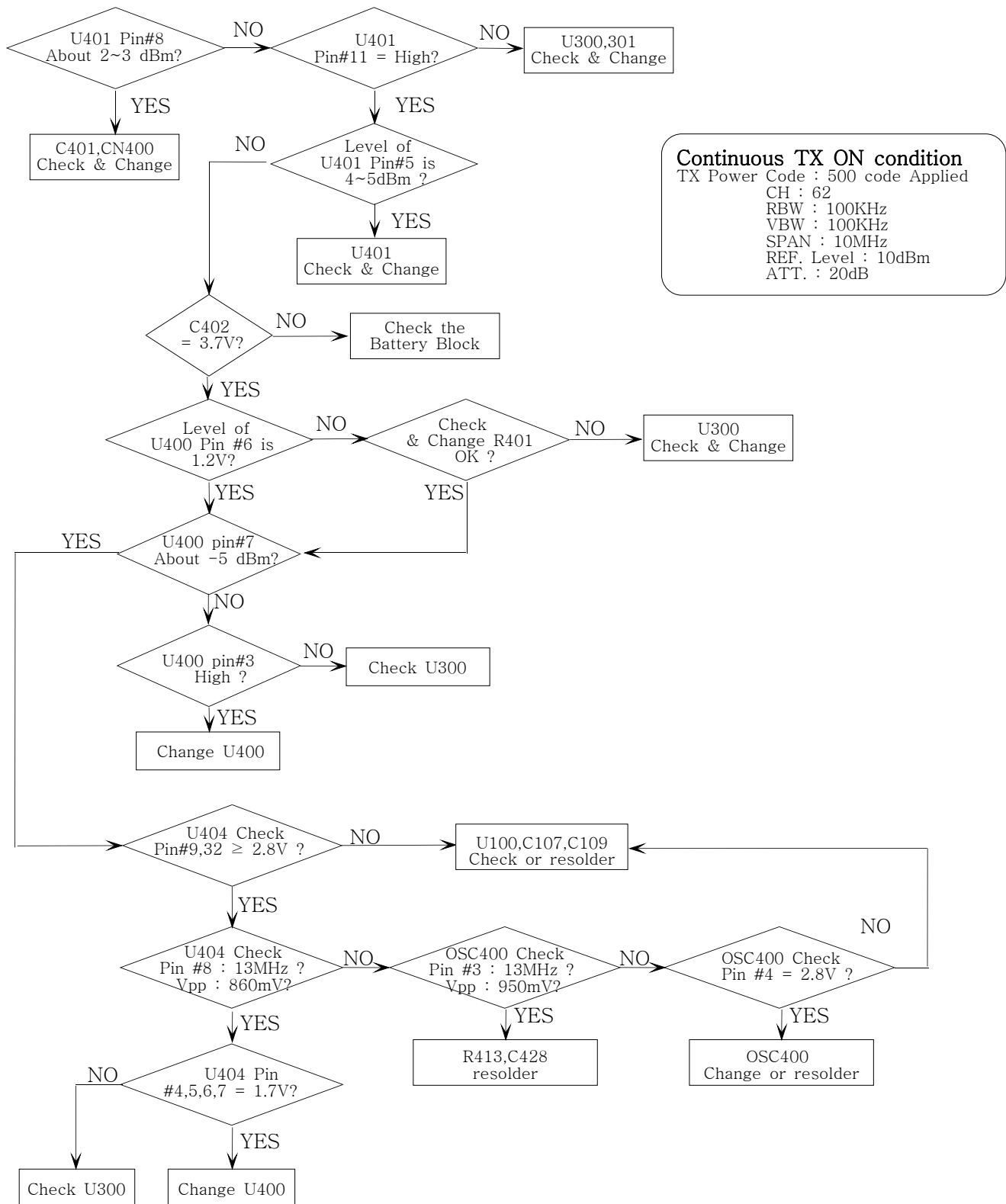
6. Camera Part



7. EGSM Receiver

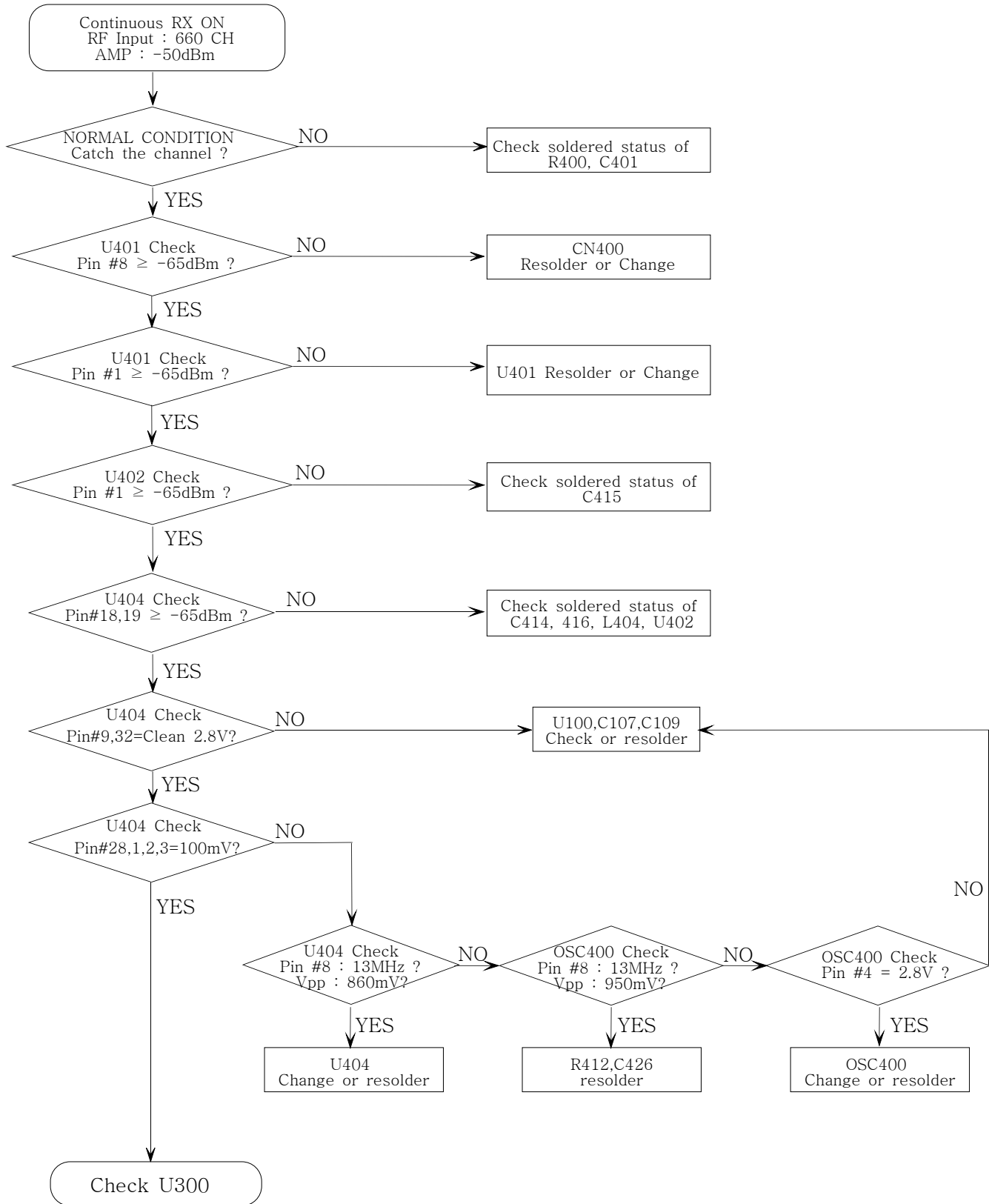


8. EGSM Transmitter

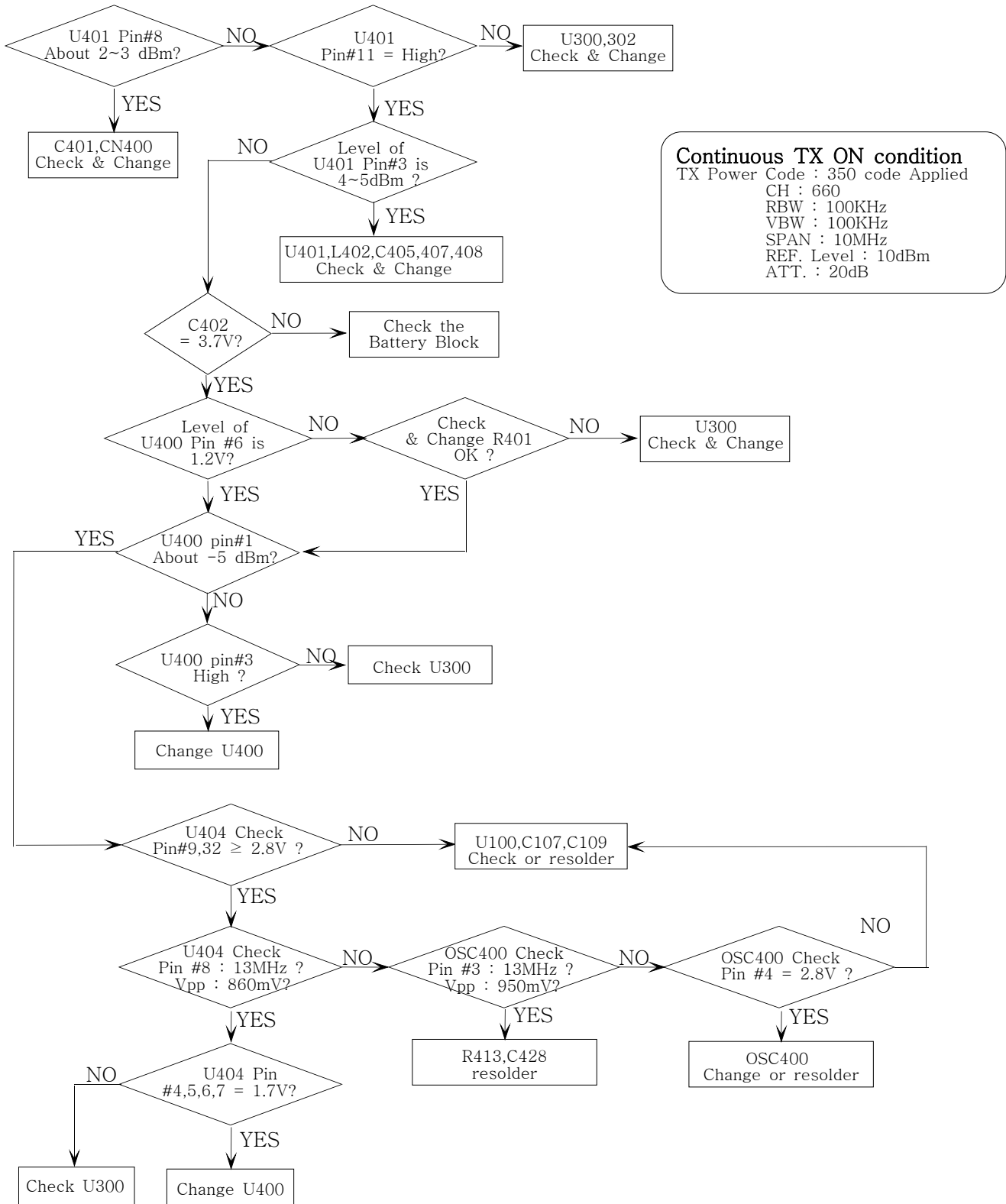


Continuous TX ON condition
 TX Power Code : 500 code Applied
 CH : 62
 RBW : 100KHz
 VBW : 100KHz
 SPAN : 10MHz
 REF. Level : 10dBm
 ATT. : 20dB

9. DCS Receiver

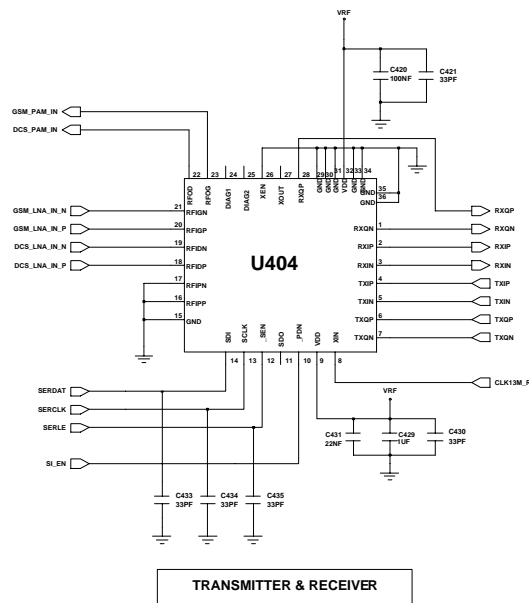
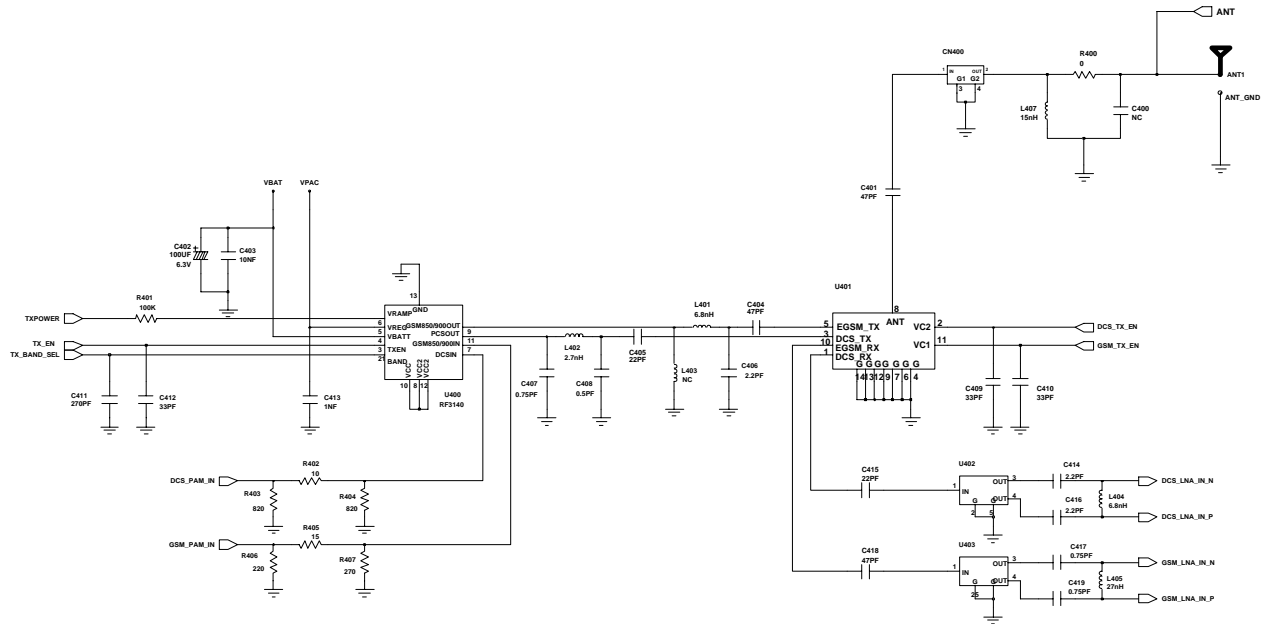


10. DCS Transmitter



Continuous TX ON condition
 TX Power Code : 350 code Applied
 CH : 660
 RBW : 100KHz
 VBW : 100KHz
 SPAN : 10MHz
 REF. Level : 10dBm
 ATT. : 20dB

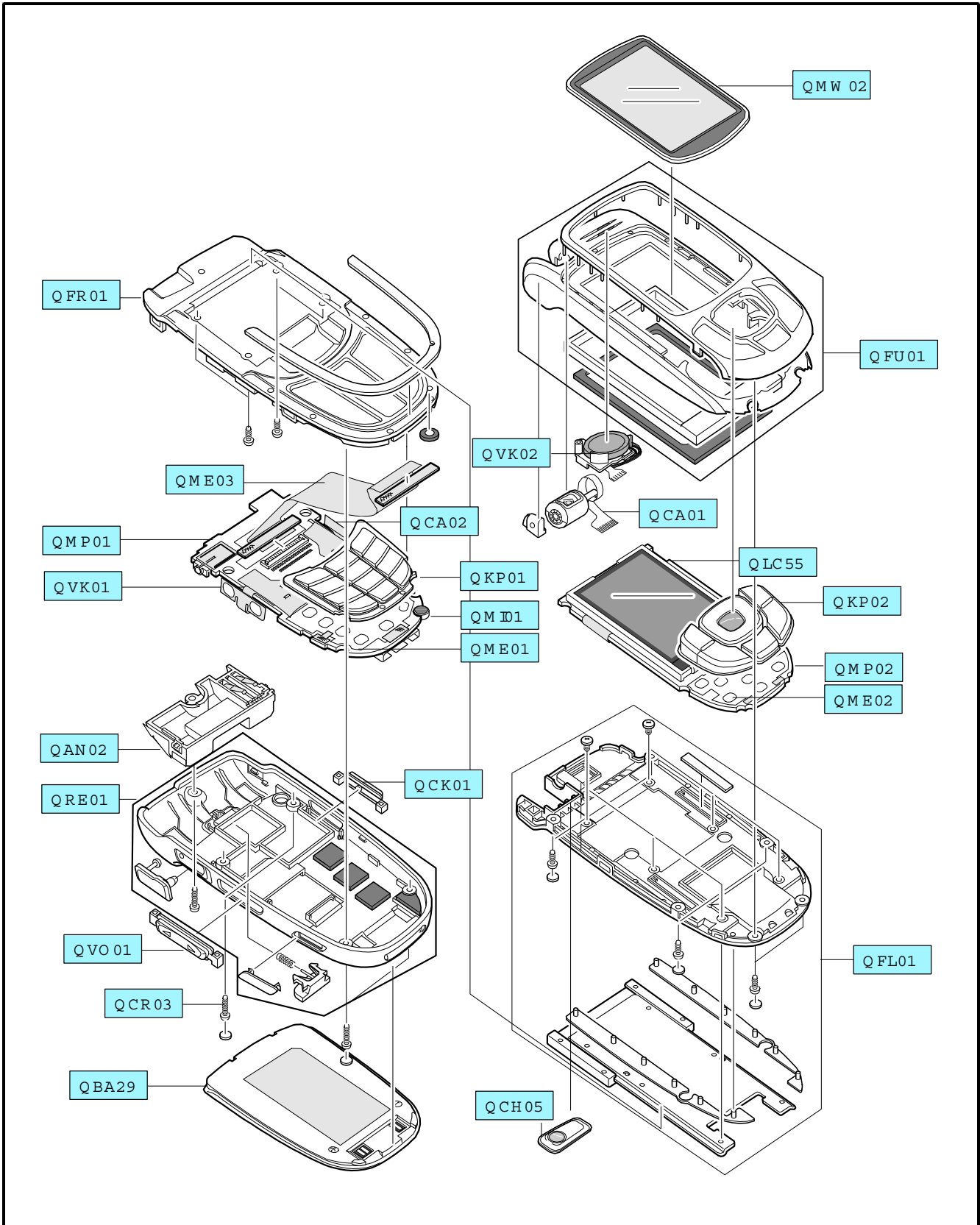
SGH-E810 Flow Chart of Troubleshooting



TRANSMITTER & RECEIVER

3. SGH-E810 Exploded View and Parts list

1. Cellular phone Exploded View



2. Cellular phone Parts list

Location NO.		Description	SEC CODE	Remark
QMW02		MAIN WINDOW	GH72-14922A	
QFU01		FOLDER UPPER	GH75-04239A	
QVK02		UNIT FLASH FPCB	GH59-01353A	
QCA01		CAMERA	GH59-01328A	
QLC55		LCD	GH07-00535A	
QKP02		FUNCTION KEY	GH75-04245A	
QMP02		MAIN PBA	GH92-01750A	
QME02		METAL DOME	GH59-01336A	
QME03		UNIT-FPCB	GH59-01408A	
QFL01		FOLDER LOWER	GH75-04743A	
QCH05		FRESH COVER	GH72-12929A	
QFR01		FRONT COVER	GH75-04238A	
QCA02		CAMERA KEY	GH59-01338A	
QKP01		KEYPAD	GH75-04244A	
QMI01		MIC	GH30-00107A	
QME01		METAL DOME	GH59-01335A	
QMP01		MAIN PBA	GH92-01747A	
QVK01		UNIT VOLUME	GH59-01337A	
QAN02		INTENNA	GH42-00415A	
QRE01		REAR COVER	GH75-04246A	
QCK01		CAMERA KEY	GH75-04247A	
QVO01		VOLUME KEY	GH75-04248A	
QCR03		SCREW	6001-001811	
QBA29		BATTERY	GH43-01319A	

3. Test Jig [GH80-03304A]



**3-1. RF Test Cable
[GH39-00182A]**



**3-2. Test Cable
[GH39-00304A]**



3-3. Serial Cable



3-4. Power Supply Cable



**3-5. DATA CABLE
[GH39-00293A]**



**3-6. TC
[GH44-00701A]**



4. SGH-E810 Electrical Parts List

1.Main Parts List

SEC Code	Design LOC
4302-001130	BAT1
2203-006257	C100,C119,C228,C248
2203-000812	C101,C102,C103,C260
2203-005061	C104,C105,C225,C227
2203-000233	C106,C116,C235,C239
2203-006201	C107,C108,C109,C113
2404-001268	C110
2404-001305	C111
2203-001652	C112
2203-006201	C114,C115,C237
2203-006208	C117
2404-001225	C118
2203-006093	C200,C201,C233,C249
2203-000643	C202,C203,C204,C205
2203-000643	C206,C207,C208,C209
2203-000643	C210,C211,C212,C213
2203-000643	C214,C215,C216,C217
2203-000643	C218,C219,C220,C221
2203-000643	C222
2203-000654	C223,C411
2404-001086	C224,C229
2203-001405	C226,C301
2203-005061	C230,C300,C310,C317
2203-000438	C231,C236,C252,C257
2404-001151	C232,C246,C250,C256
2203-000995	C240,C242,C324,C401
2203-005055	C241
2203-000585	C243,R234
2007-000171	C245,R242,R245,R316
2203-001239	C251
2203-000854	C253,C254,C262,C263
2203-005503	C255
2203-000438	C258,C413,C423,C424
1405-001082	C259,V1,V10,V11,V12
2203-000812	C261,C409,C410,C412
2203-000854	C264,ZD204

SEC Code	Design LOC
2203-000254	C302,C303,C306,C315
2203-005496	C304,C314,C334
2203-000679	C305,C308,C309
2203-000233	C307,C311,C318,C325
2203-006093	C312,C429
2203-005450	C313
2203-000254	C316,C319,C320,C321
2203-000254	C322,C330,C332,C336
2203-005052	C323
2203-005482	C326
2203-000330	C327,C328
2203-000233	C329,C425,C426
2203-005061	C331,C333,C420
2203-000940	C335
2404-001134	C402
2203-000254	C403,C422,C427,C428
2203-000995	C404,C418
2203-000628	C405,C415
2203-005552	C406,C414,C416
2203-002677	C407,C417,C419
2203-002668	C408
2203-000812	C421,C430,C433,C434
2203-006137	C431
2203-000254	C432
2203-000812	C435
3709-001187	CN100
3710-002128	CN101
3708-001853	CN200
3722-002186	CN201
3705-001287	CN400
0409-001044	D300
2901-001296	F1,F2,F3,F4,F5,F6
2703-002313	L200,L202,L203,L204
2901-001271	L201
3301-001342	L300
2703-002170	L401
2703-001737	L402

SEC Code	Design LOC
2703-002547	L404
2703-001907	L405
3301-001105	L406
2703-001180	L407
0601-001790	LED100,LED101,LED102
0601-001790	LED103,LED104,LED105
2801-003747	OSC300
2809-001264	OSC400
0504-001141	Q100
0501-000225	Q200
0504-001140	Q300
2007-000157	R100,R101,R102,R103
2007-000143	R104,R237
2007-000140	R105,R106,R107,R108
2007-000140	R109,R110,R111,R112
2007-000140	R113,R114,R115,R116
2007-000758	R117
2007-001319	R118
2007-000174	R119,R120,R121,R122
2007-000174	R123,R126,R127,R128
2007-007009	R124,R125
2007-001301	R129,R130,R131,R132
2007-001301	R133,R134
2007-000174	R200,R202,R203,R204
2007-000140	R201,R241,R243,R310
2007-000174	R205,R206,R207,R208
2007-000174	R209,R210,R211,R212
2007-000174	R213,R214,R215,R216
2007-000174	R217,R218,R219,R220
2007-000174	R221,R222,R223
2007-007489	R224
2007-000775	R225,R226
2007-001325	R227
2007-001119	R228,R235
2007-000172	R229,R230,R402,R408
2007-000142	R231,R313
2007-000148	R232,R238,R409,R412

SEC Code	Design LOC
2007-007538	R233
2007-000162	R236,R301,R305,R307
2007-000160	R239
2007-007590	R240
2007-007014	R244
2007-000144	R300
2007-007200	R302,R303
2007-000170	R304
2007-000157	R306
2007-007142	R308
2007-000162	R309,R314,R401
2007-007573	R311,R312
2007-007139	R315
2007-000171	R400
2007-001316	R403,R404
2007-002965	R405
2007-000139	R406
2007-001311	R407
2007-001320	R410
2007-002797	R411
2007-000138	R413
1203-002902	U100
0604-001261	U101
1204-002138	U200
1001-001183	U201
1204-001984	U300
0504-001042	U301,U302
1209-001219	U303
GH09-00025A	U304
1009-001018	U305
1109-001281	U306
1201-001954	U400
2909-001252	U401
2904-001514	U402
2904-001520	U403
1205-002433	U404
0801-000306	U405

SGH-E810 Electrical Parts List

SEC Code	Design LOC
1405-001082	V2,V3,V4,V5,V6,V7,V8
1405-001082	V9,ZD100,ZD101,ZD102
1405-001082	ZD103,ZD104,ZD105
1405-001082	ZD106,ZD107,ZD108
1405-001082	ZD109,ZD110,ZD111
1405-001082	ZD112,ZD113,ZD114
1405-001082	ZD115,ZD116,ZD117
1405-001082	ZD118,ZD119,ZD200
1405-001019	ZD120
0403-001387	ZD121
1405-001082	ZD201,ZD202,ZD203

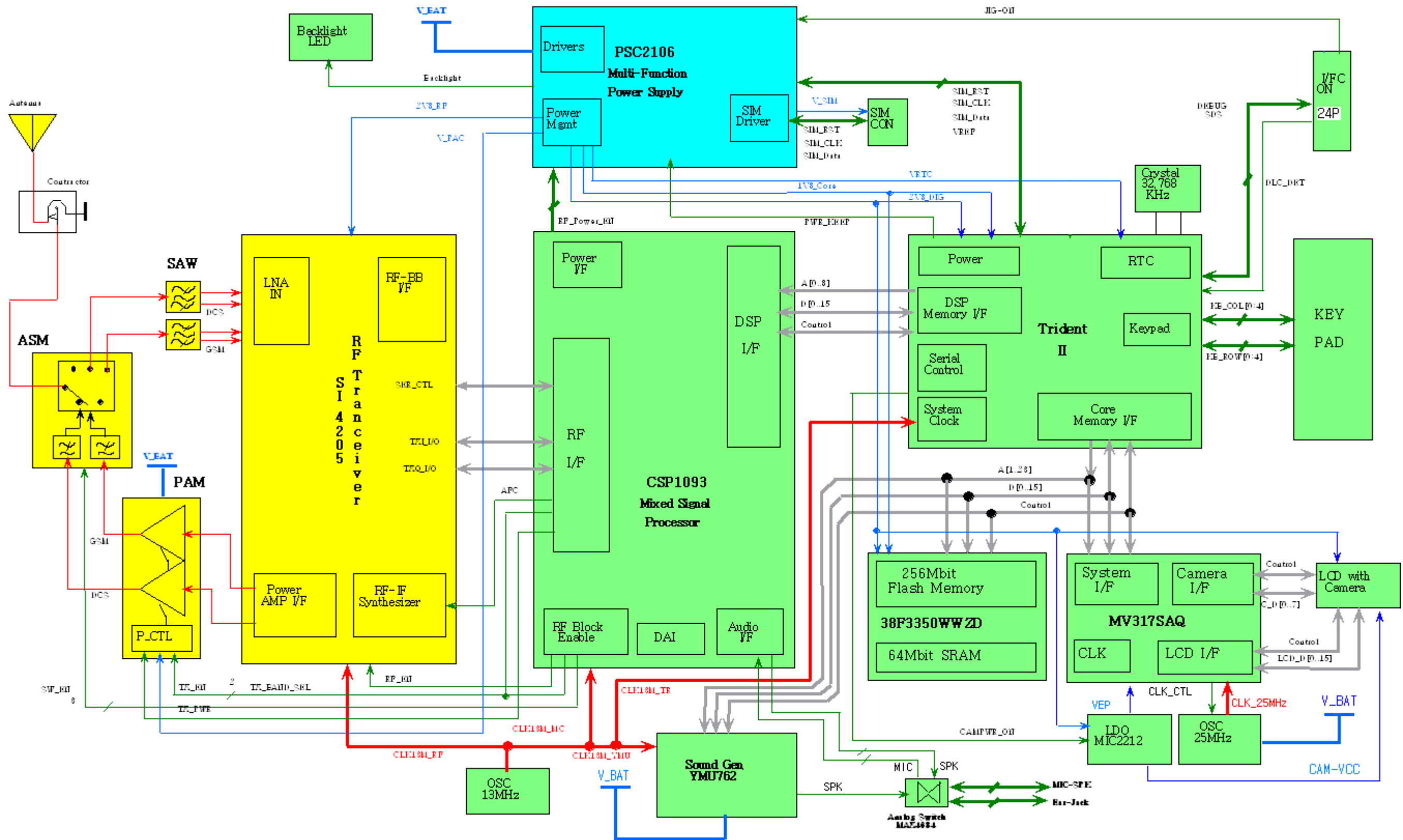
2.LCD Parts List

SEC Code	Design LOC
2203-000438	C500
2203-005482	C501,C516
2203-005496	C502
2203-000995	C503
2203-000278	C504
2203-006093	C505,C506,C510,C511
2203-006093	C512,C513,C528
2203-006208	C514,C515,C520,C521
2404-001225	C517,C519,C526
2203-000254	C518,C522,C530,C532
2203-005065	C523
2203-006208	C524
2203-000233	C527,C531
2203-005061	C529,C533,C538
2203-000812	C535,C537
1405-001157	C539,C540
3708-001853	CN500
3708-001890	CN501
3708-001852	CN502
3708-002003	CN503
0404-001172	D500,D502
0403-001446	D501
0402-001617	D503,D504
3301-001342	L500
2703-002736	L501
3301-001105	L502
0601-001654	LED500,LED502,LED503
0601-001654	LED505
2804-001577	OSC500
0504-001141	Q500,Q501,Q502
0505-001518	Q503,Q504
2007-000157	R500
2007-000143	R501
2007-000162	R502,R503,R536
2007-000593	R504
2007-001254	R505,R506

SEC Code	Design LOC
2007-001306	R507,R510,R513,R516
2007-000138	R508,R511,R514,R517
2007-003010	R509,R512,R515,R518
2007-001306	R519,R522
2007-000138	R520,R523
2007-003010	R521,R524
2007-000148	R525,R526
2007-007190	R527
2007-000171	R528,R530,R531,R532
2007-002970	R529
2007-000171	R533,R534,R535
2007-003112	R537
0406-001104	SD500,SD501,SD502
1203-002861	U500
1203-003046	U501
1203-002633	U502
GH13-00020A	U503
1203-002860	U504
1405-001082	ZD500,ZD501,ZD502
1405-001082	ZD503,ZD504,ZD505
1405-001082	ZD506,ZD507,ZD508
1405-001082	ZD509,ZD510,ZD511
1405-001082	ZD512,ZD513,ZD514
1405-001082	ZD515,ZD516,ZD517
1405-001082	ZD518,ZD519,ZD520
1405-001082	ZD521,ZD522

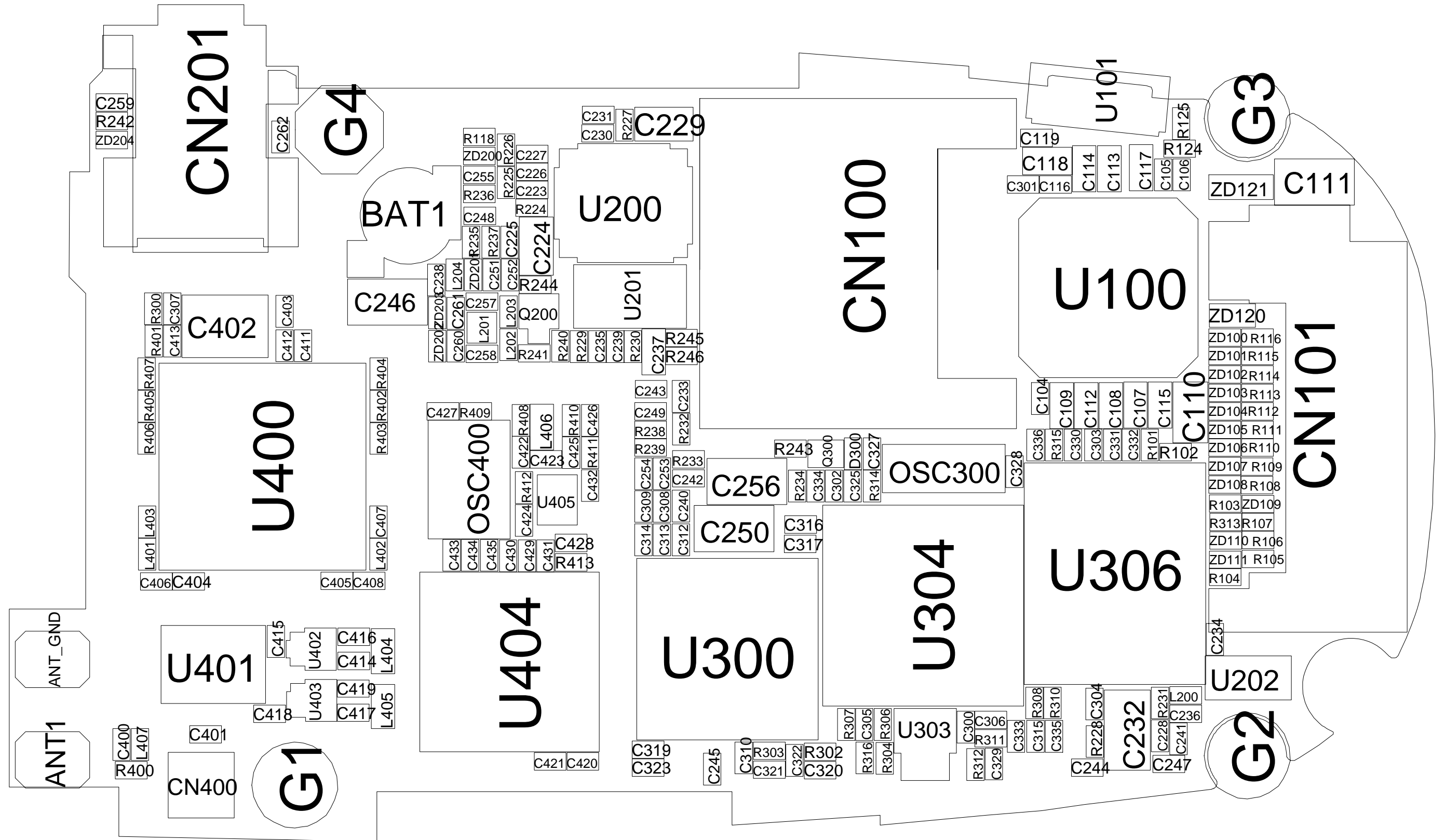
5. SGH-E810 Block Diagrams

1. RF Solution Block Diagram

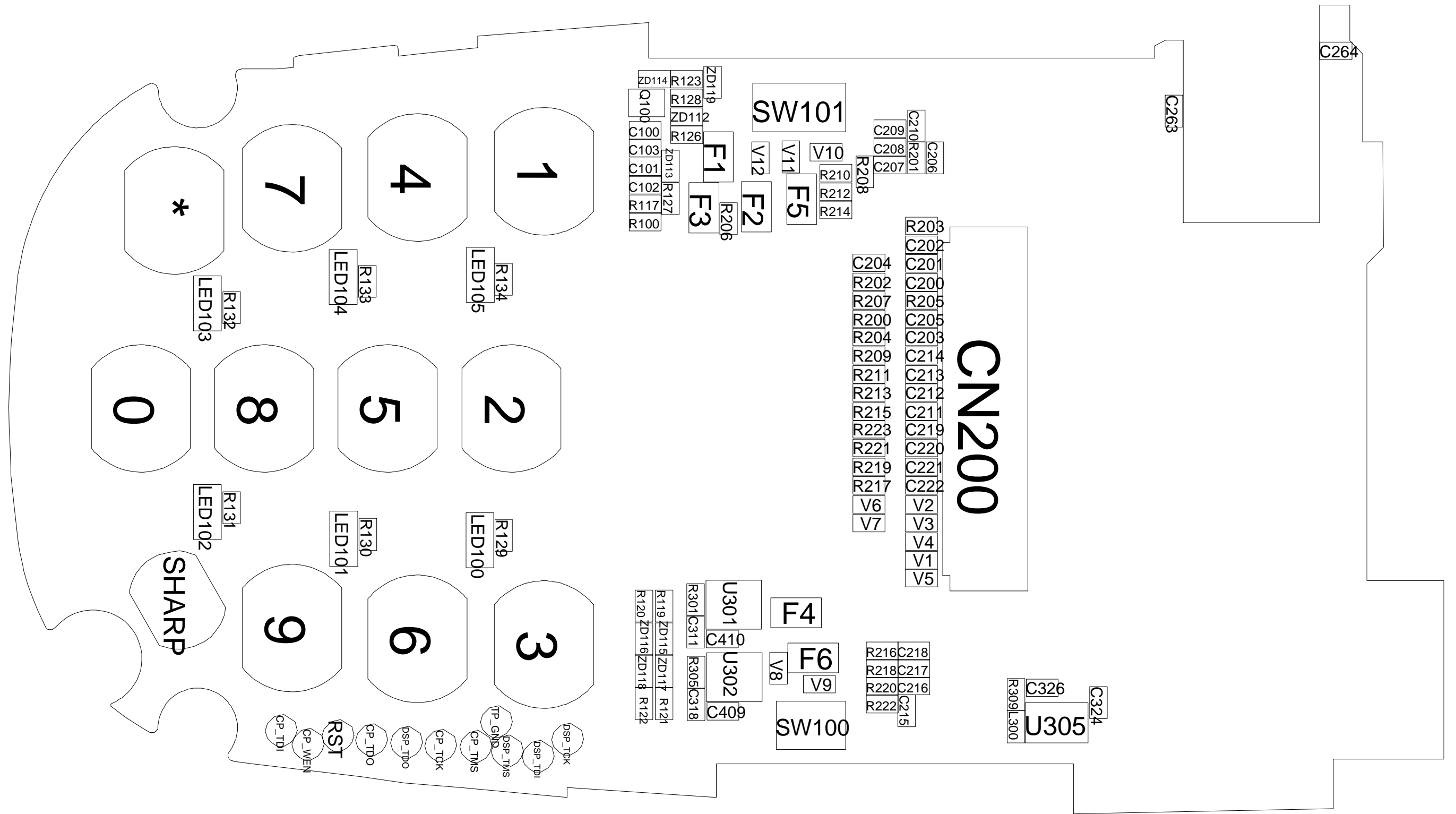


6. SGH-E810 PCB Diagrams

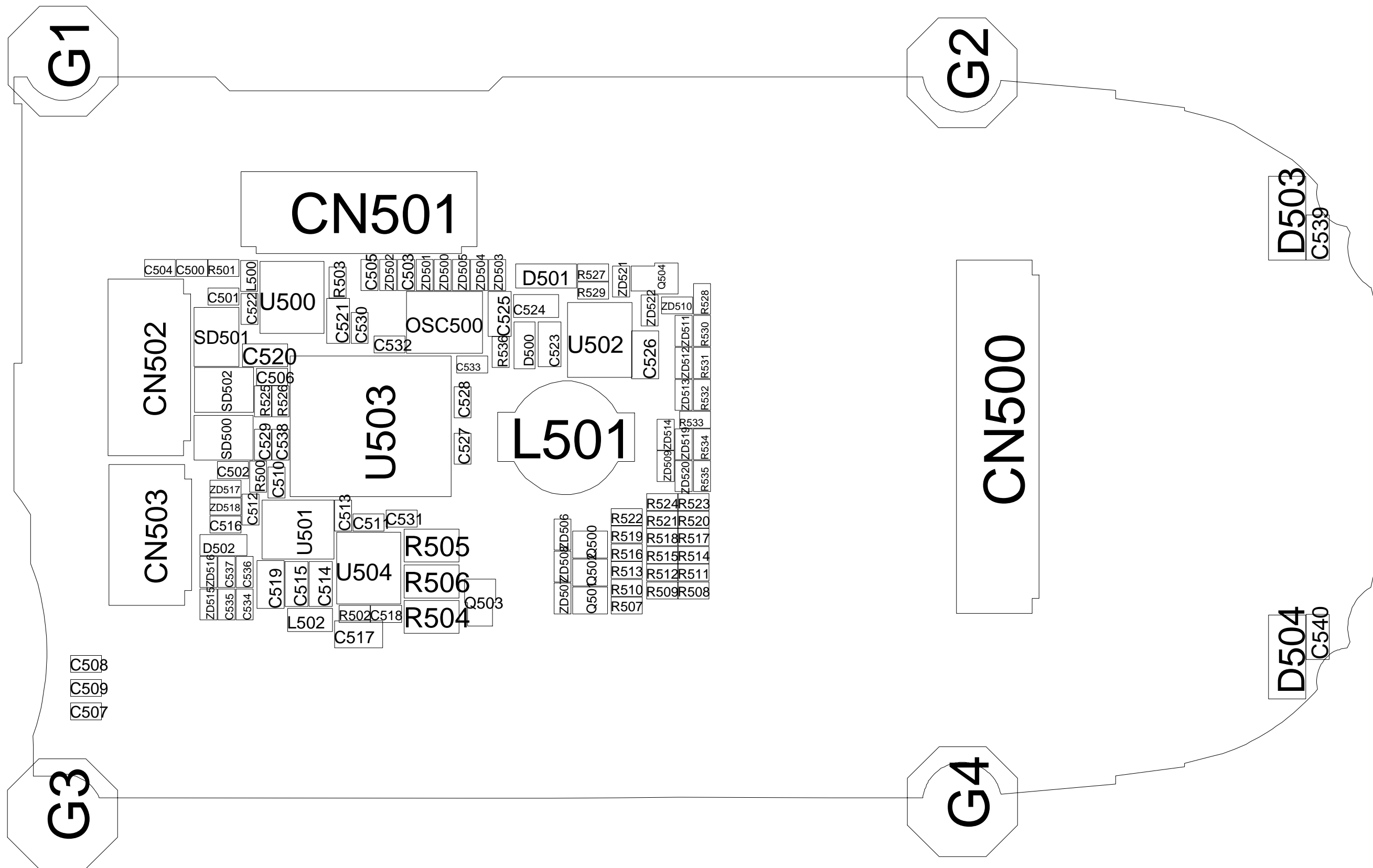
1.Main TOP Diagram



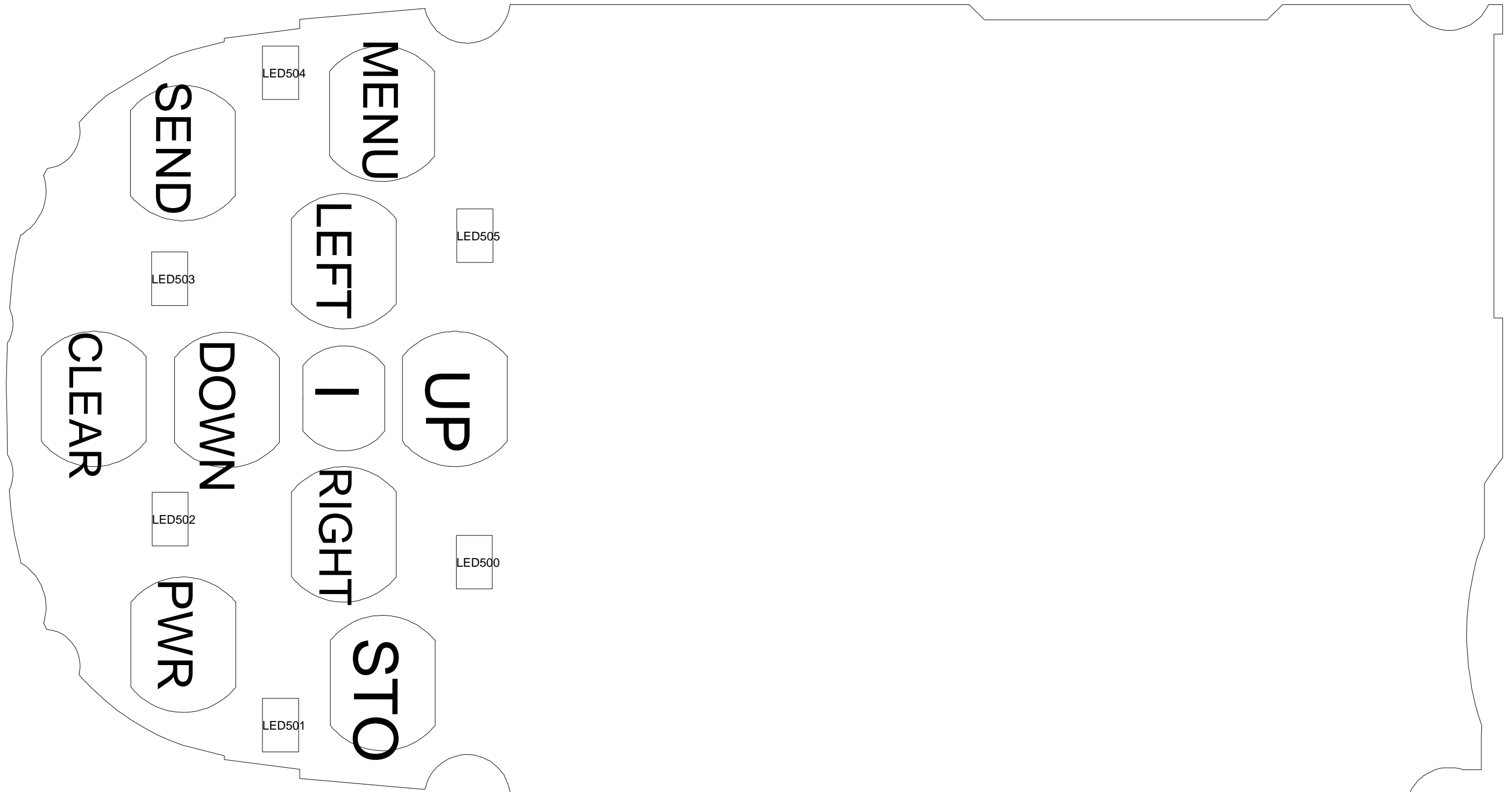
2. Main Bottom Diagram

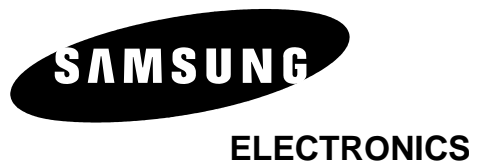


3.LCD TOP Diagram



4.LCD TOP Diagram





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Code No.: GH68-05709A
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