

**SAMSUNG**

# GSM TELEPHONE SGH-C110

# ***SERVICE*** *Manual*

## GSM TELEPHONE



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# 1. SGH-C110 Specification

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## 1. GSM General Specification

	GSM900 Phase 1	EGSM 900 Phase 2	DCS1800 Phase 1
Freq. Band[MHz] Uplink/Downlink	890~915 935~960	880~915 925~960	1710~1785 1805~1880
ARFCN range	1~124	0~124 & 975~1023	512~885
Tx/Rx spacing	45MHz	45MHz	95MHz
Mod. Bit rate/ Bit Period	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us
Time Slot Period/Frame Period	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms
Modulation	0.3GMSK	0.3GMSK	0.3GMSK
MS Power	33dBm~13dBm	33dBm~5dBm	30dBm~0dBm
Power Class	5pcl ~ 15pcl	5pcl ~ 19pcl	0pcl ~ 15pcl
Sensitivity	-102dBm	-102dBm	-100dBm
TDMA Mux	8	8	8
Cell Radius	35Km	35Km	2Km

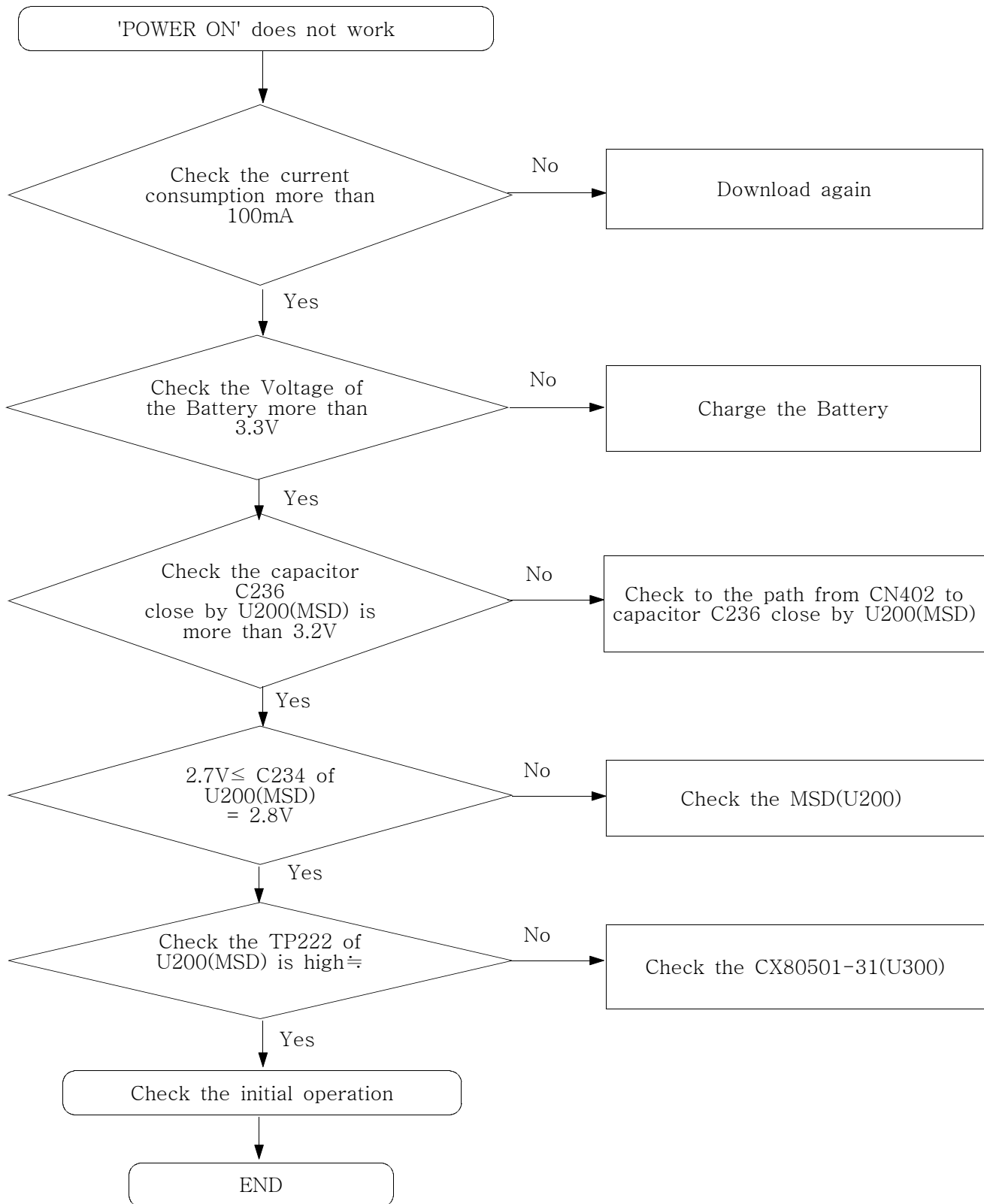
## 2. GSM TX power class

TX Power control level	GSM900
5	33±2 dBm
6	31±2 dBm
7	29±2 dBm
8	27±2 dBm
9	25±2 dBm
10	23±2 dBm
11	21±2 dBm
12	19±2 dBm
13	17±2 dBm
14	15±2 dBm
15	13±2 dBm
16	11±3 dBm
17	9±3dBm
18	7±3 dBm
19	5±3 dBm

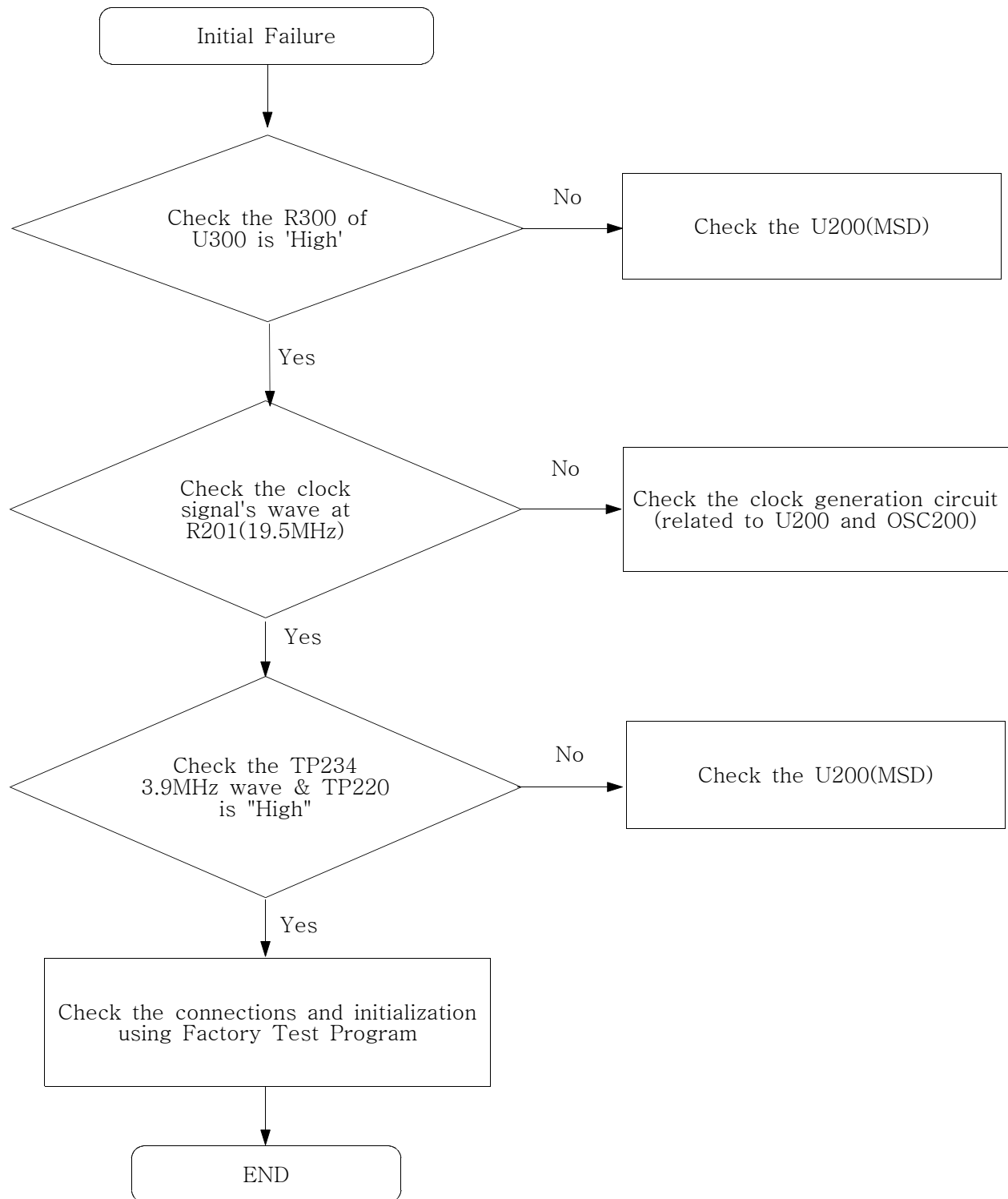
TX Power control level	DCS1800
0	30±3 dBm
1	28±3 dBm
2	26±3 dBm
3	24±3 dBm
4	22±3 dBm
5	20±3 dBm
6	18±3 dBm
7	16±3 dBm
8	14±3 dBm
9	12±4 dBm
10	10±4 dBm
11	8±4dBm
12	6±4 dBm
13	4±4 dBm
14	2±5 dBm
15	0±5 dBm

## 2. SGH-C110 Flow Chart of Troubleshooting

### 1. Power ON



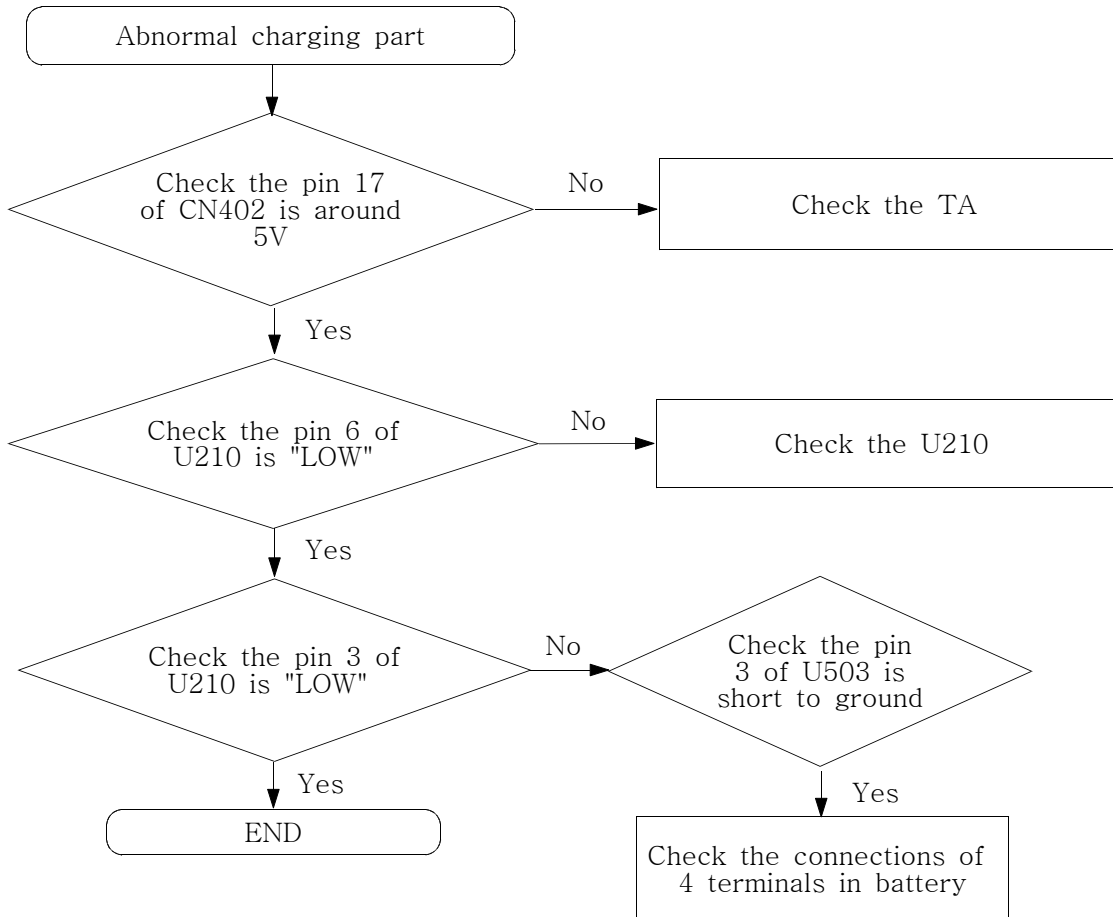
## 2. Initial



### 3. Charging

\* Test after connecting with Battery

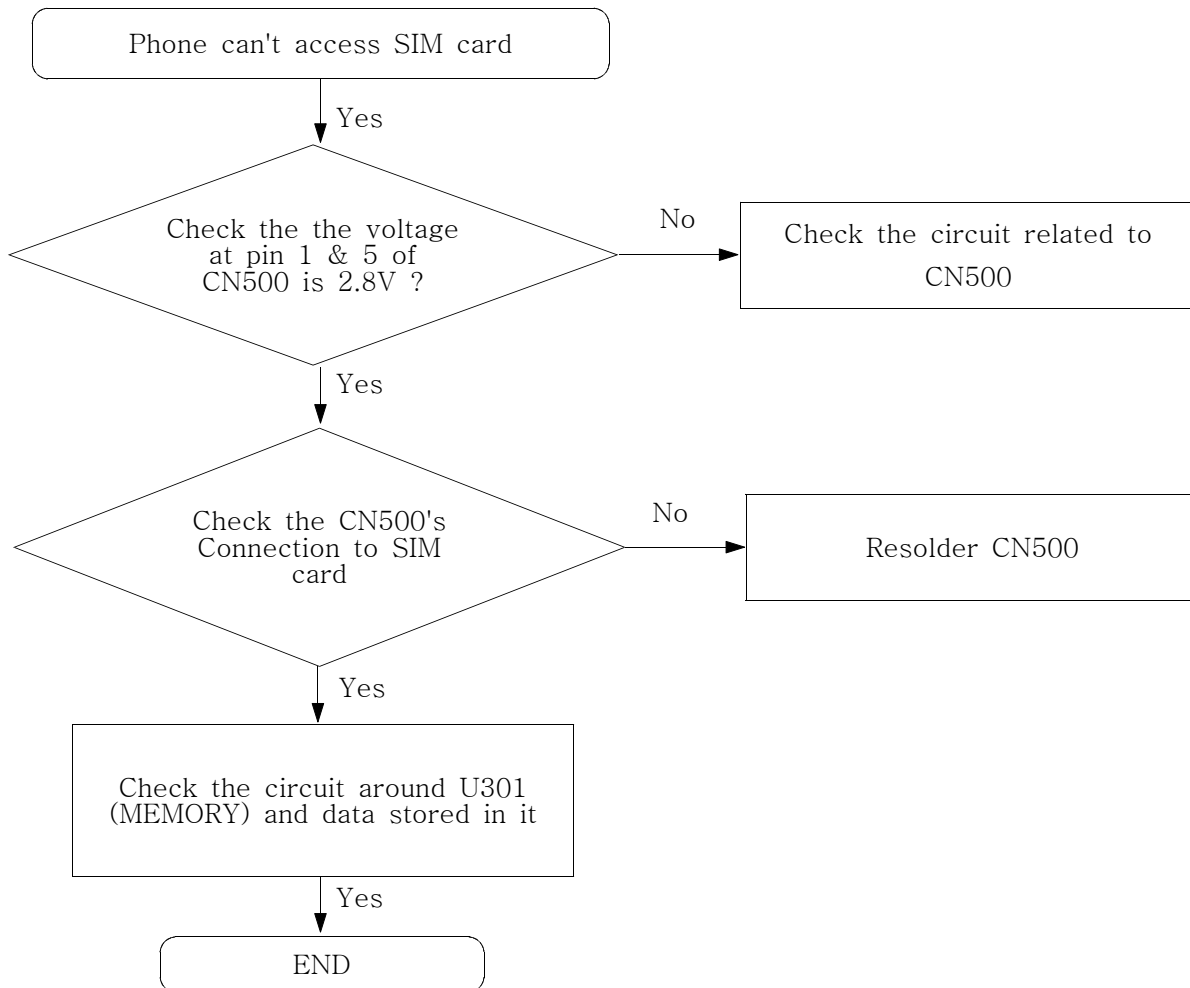
: All 4 terminals in battery should be connected to the phone by using jump-wires.



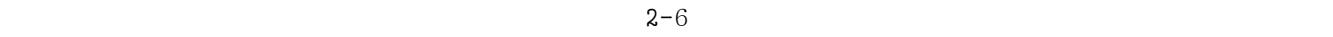


#### 4. Sim

\* Test with Sim

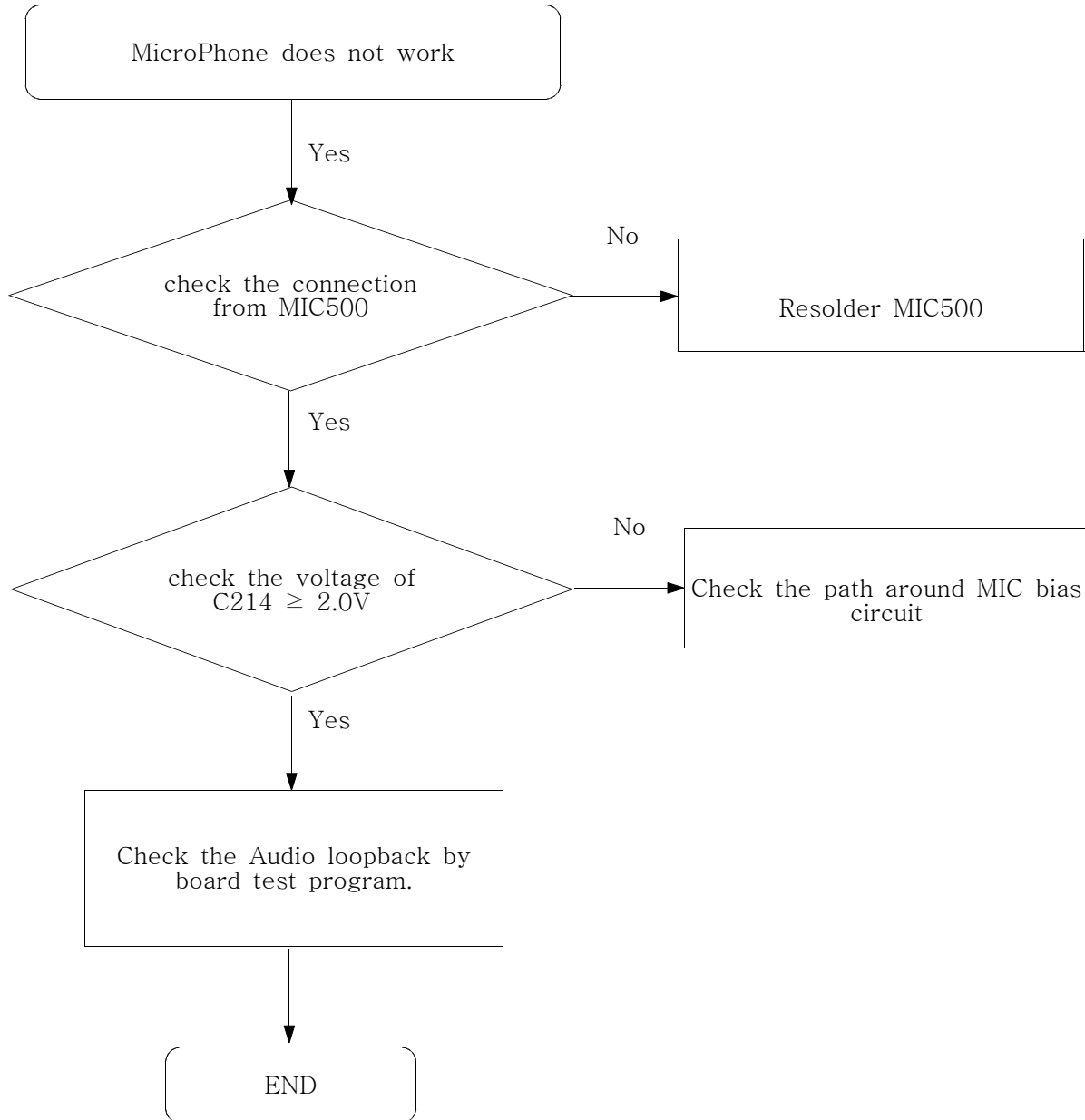


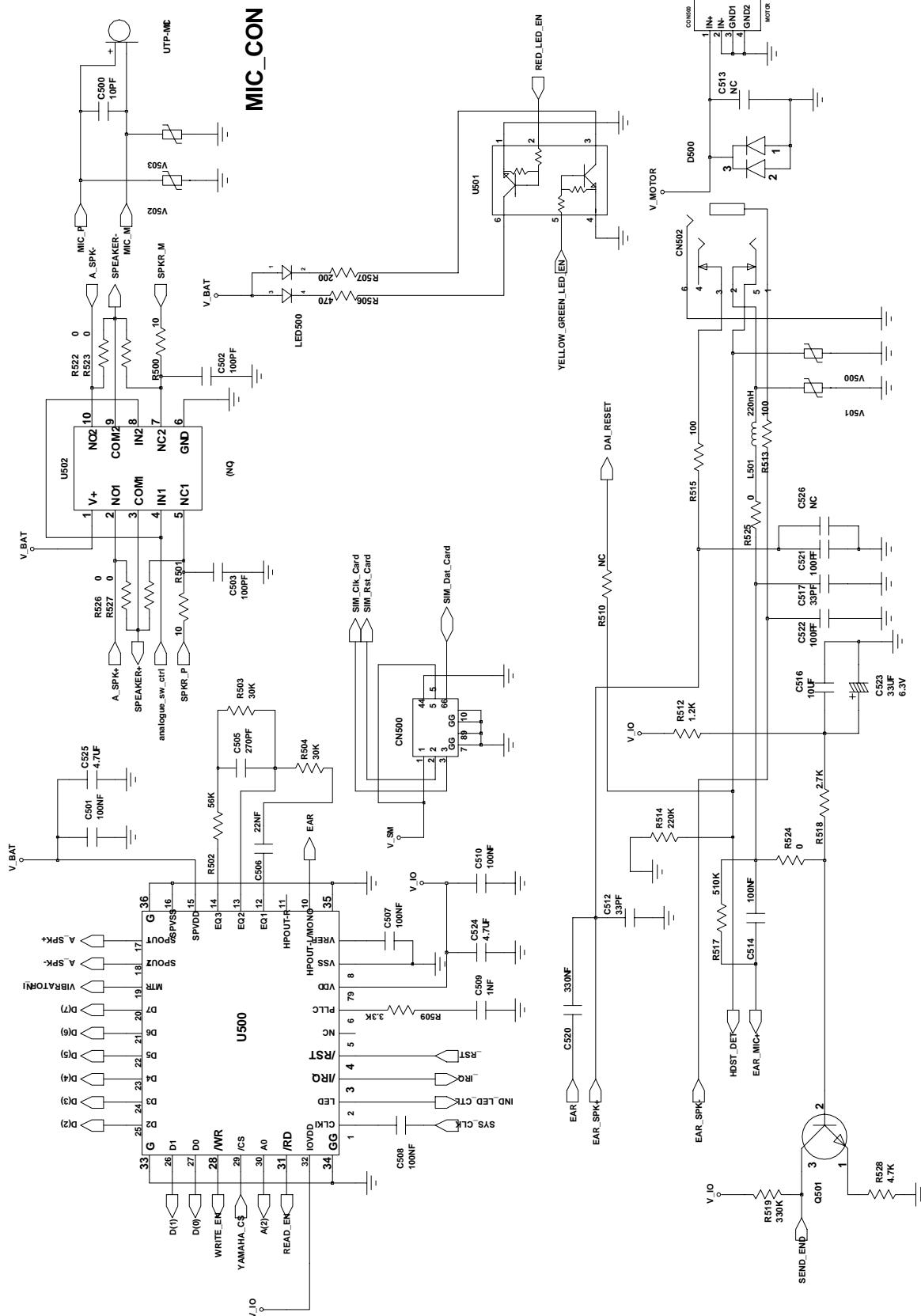




## 5. Microphone Part

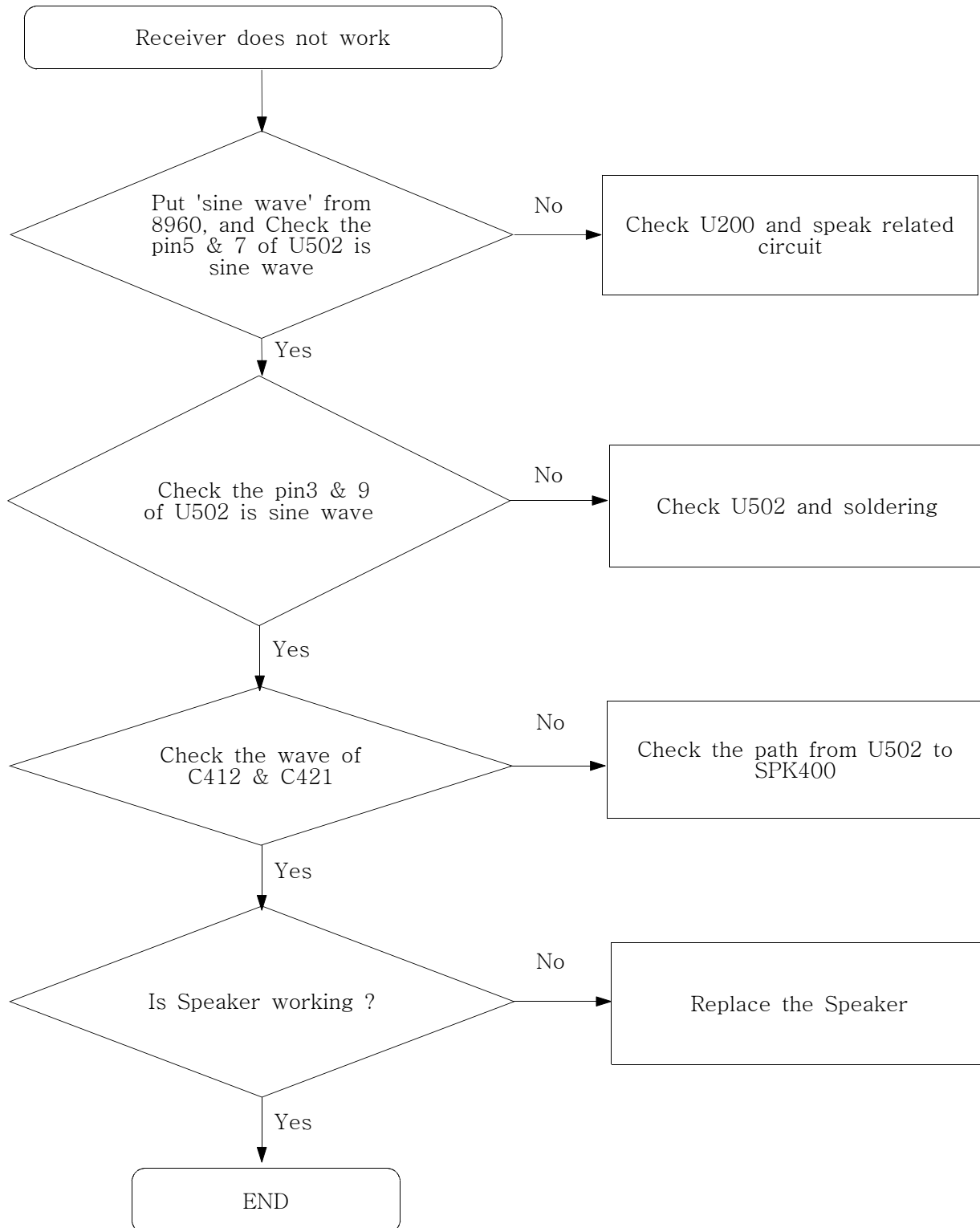
\* Call with Sim before testing.





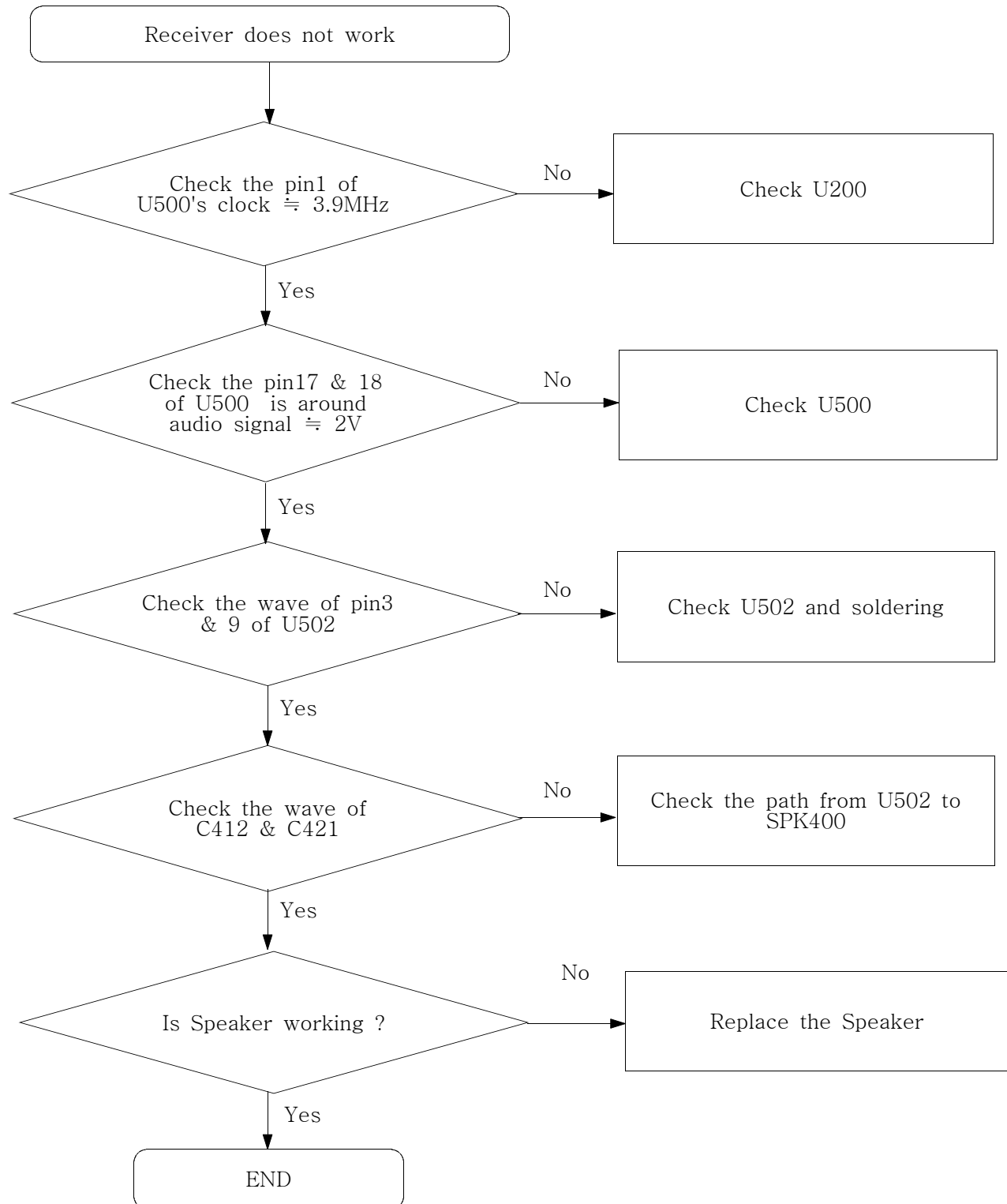
## 6. Receiver

\* Call before testing.

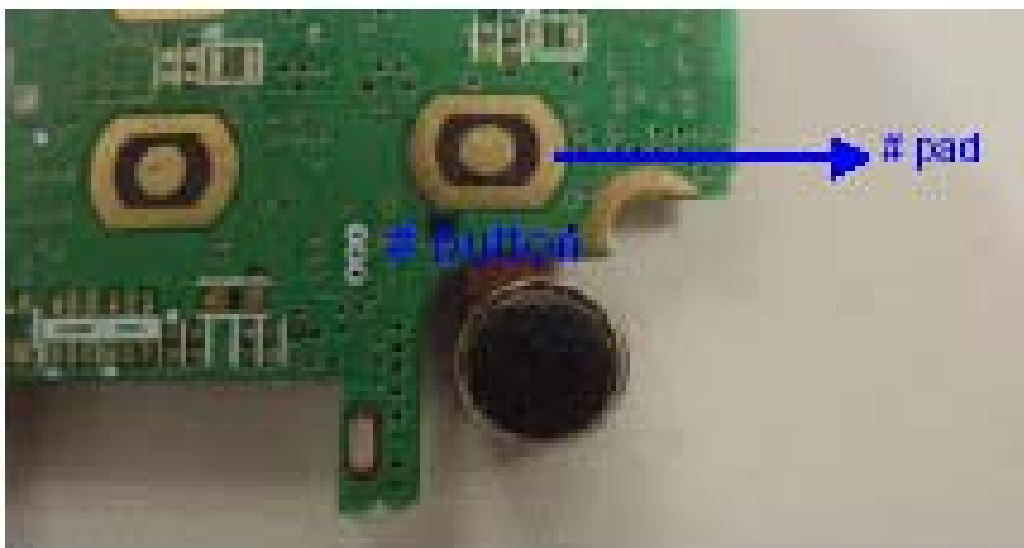
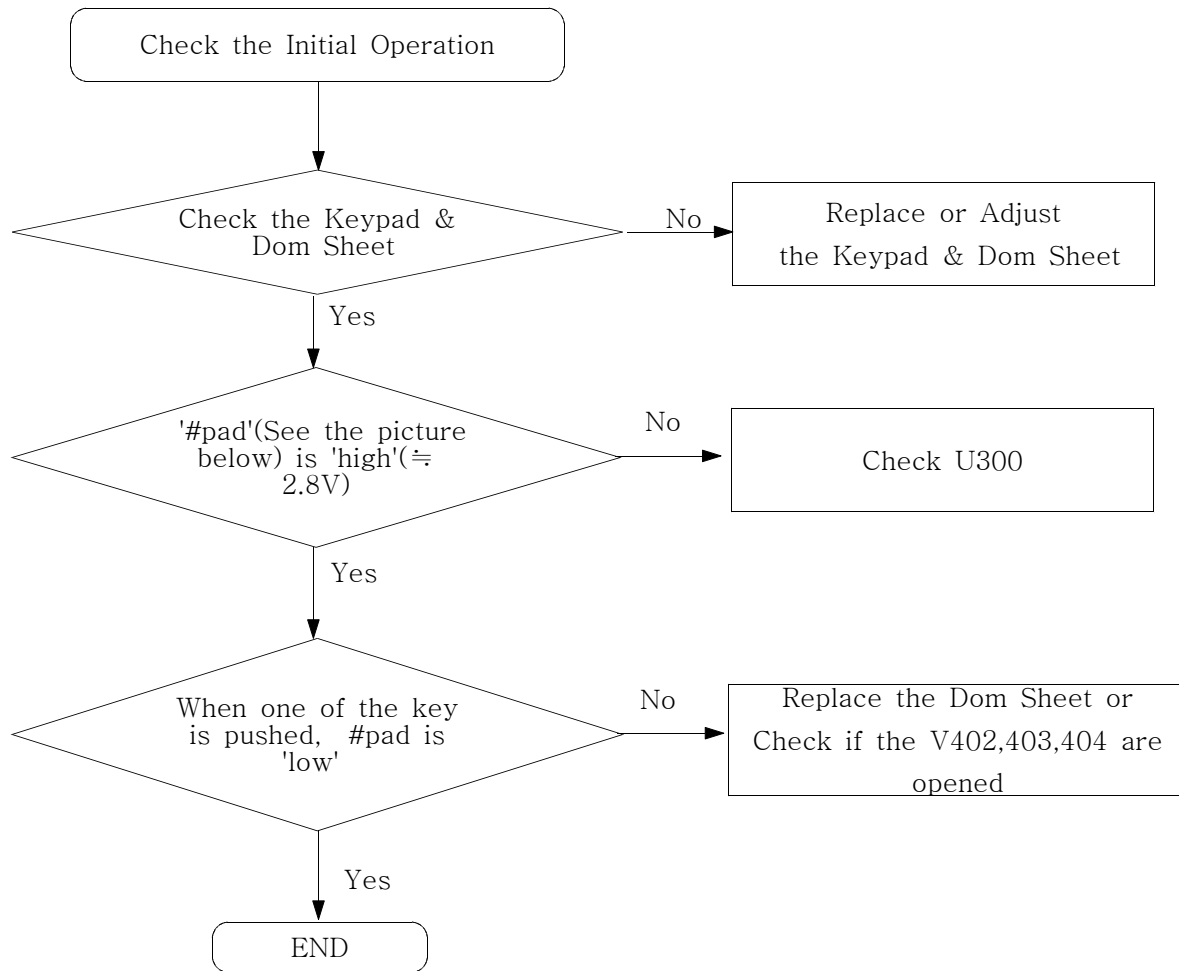


## 7. Speaker

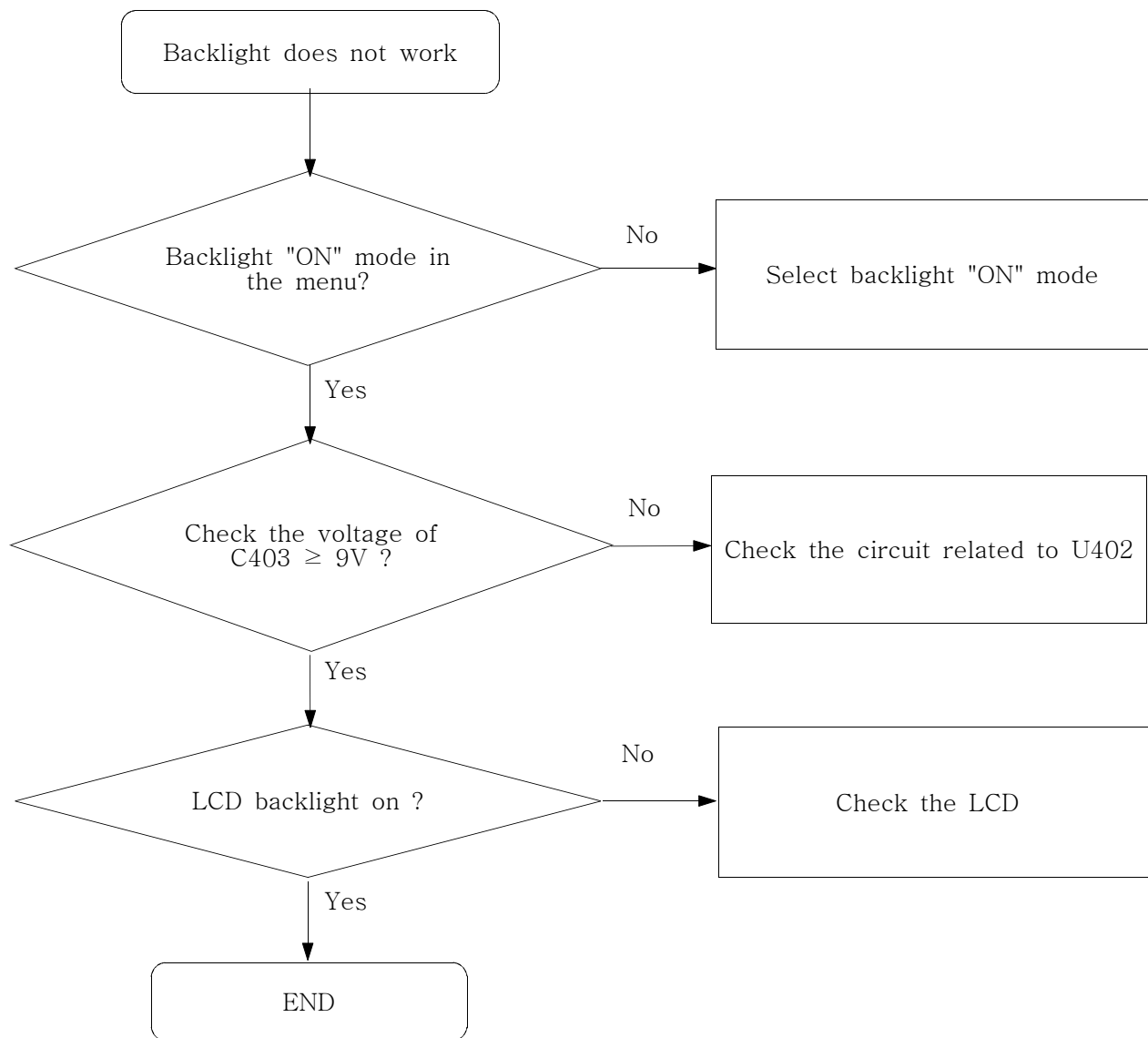
\* Play on 16-poly melody before testing.



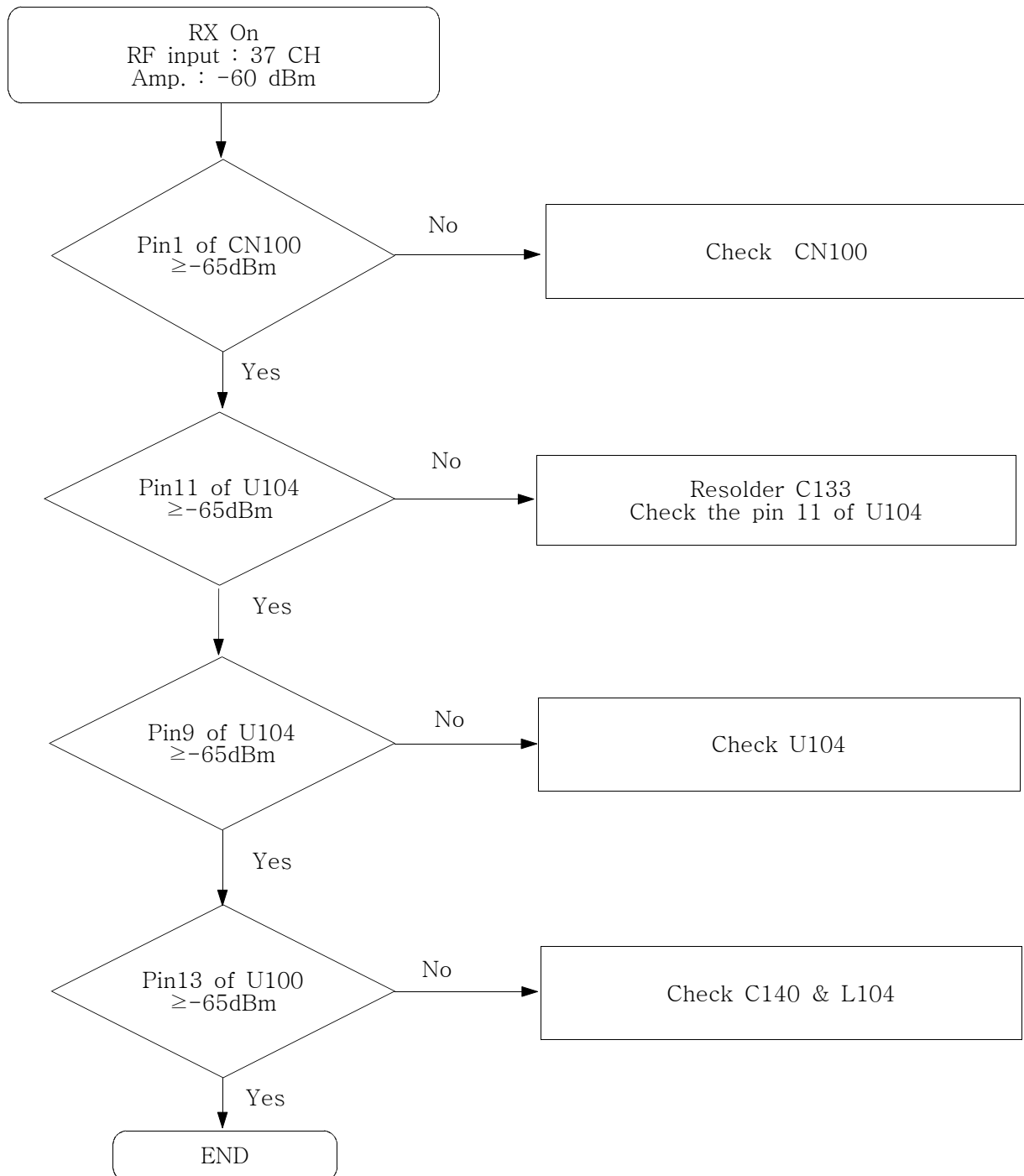
## 8. Key Data Input



## 9. Light

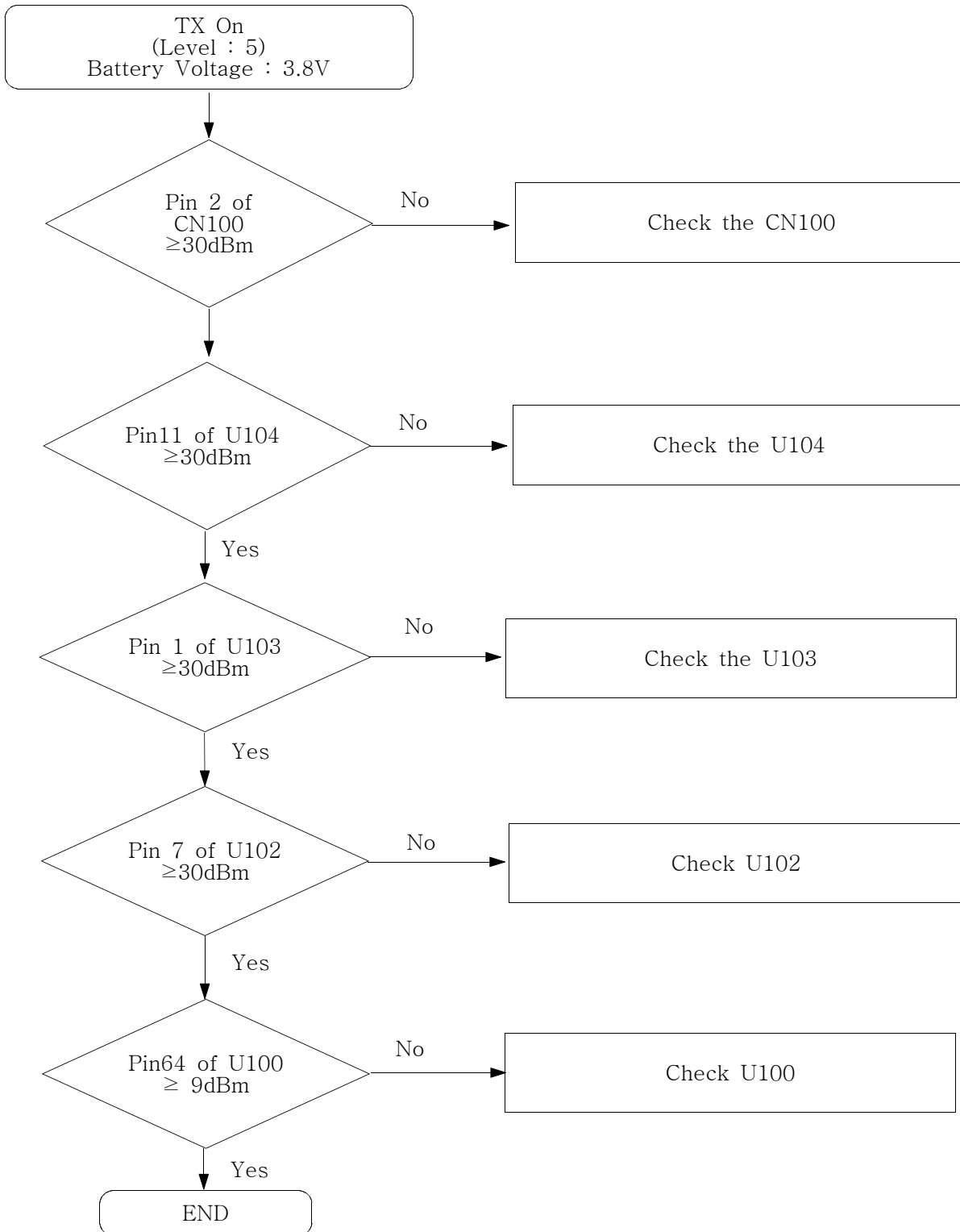


## 10. GSM Receiver

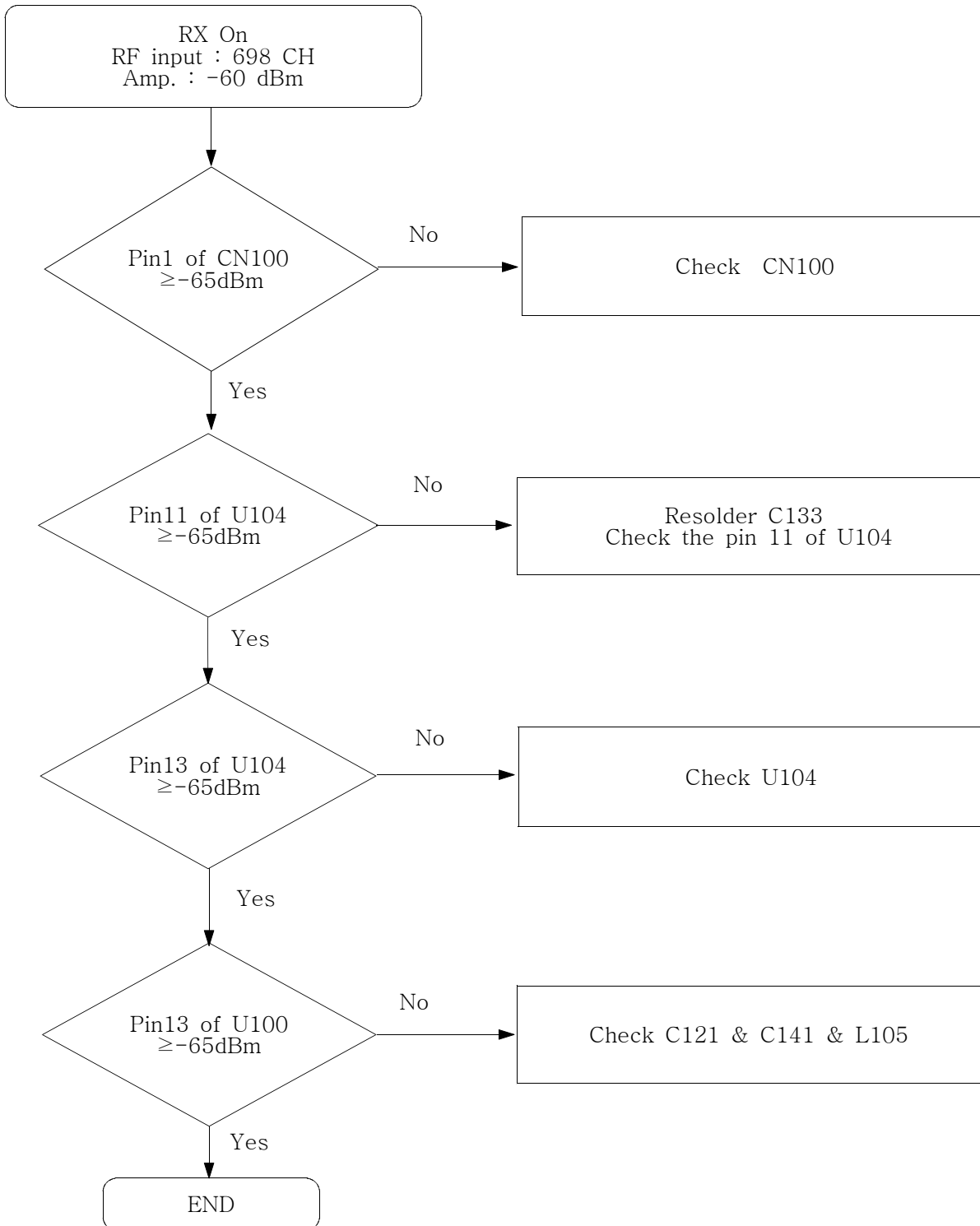




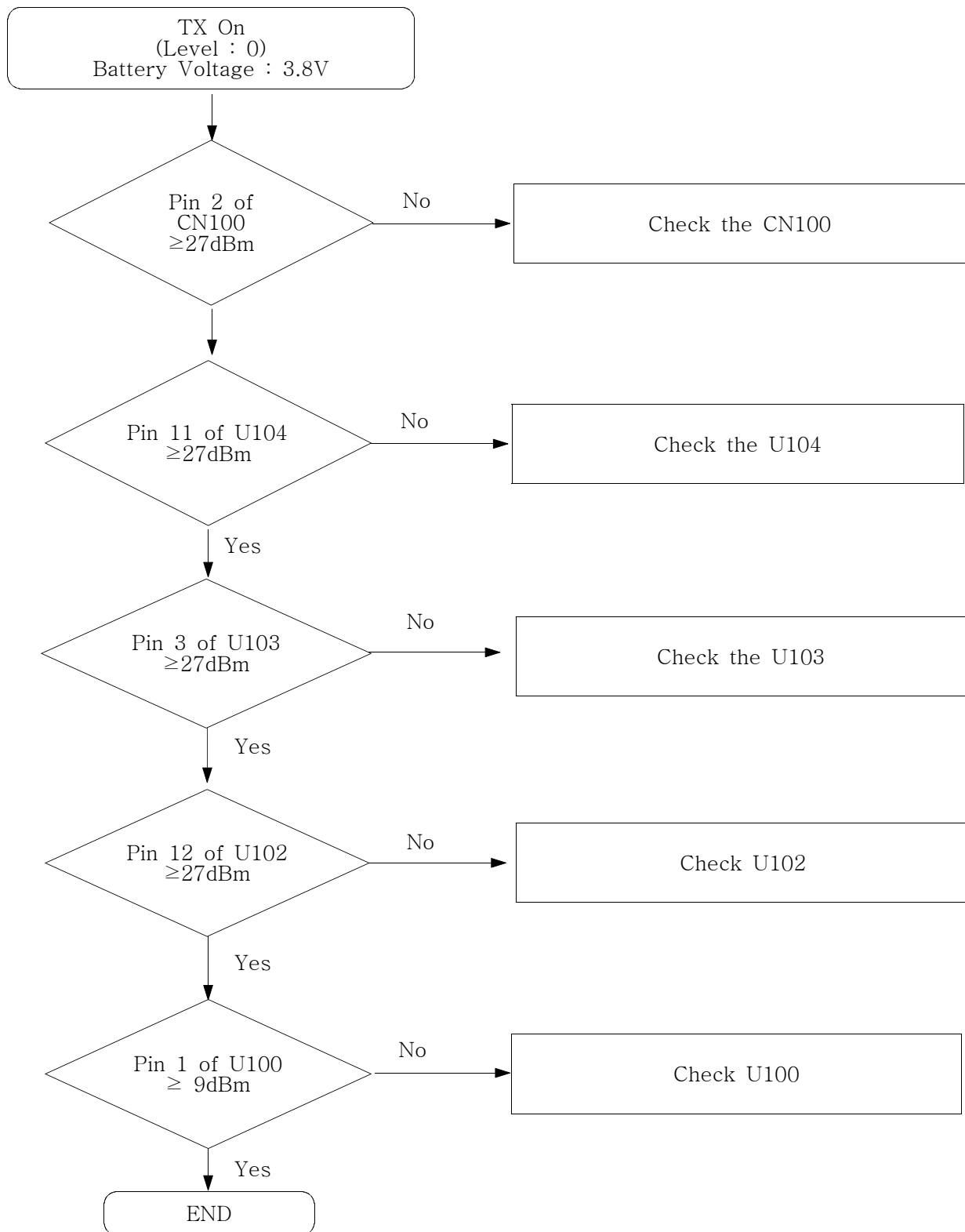
## 11. GSM Transmitter

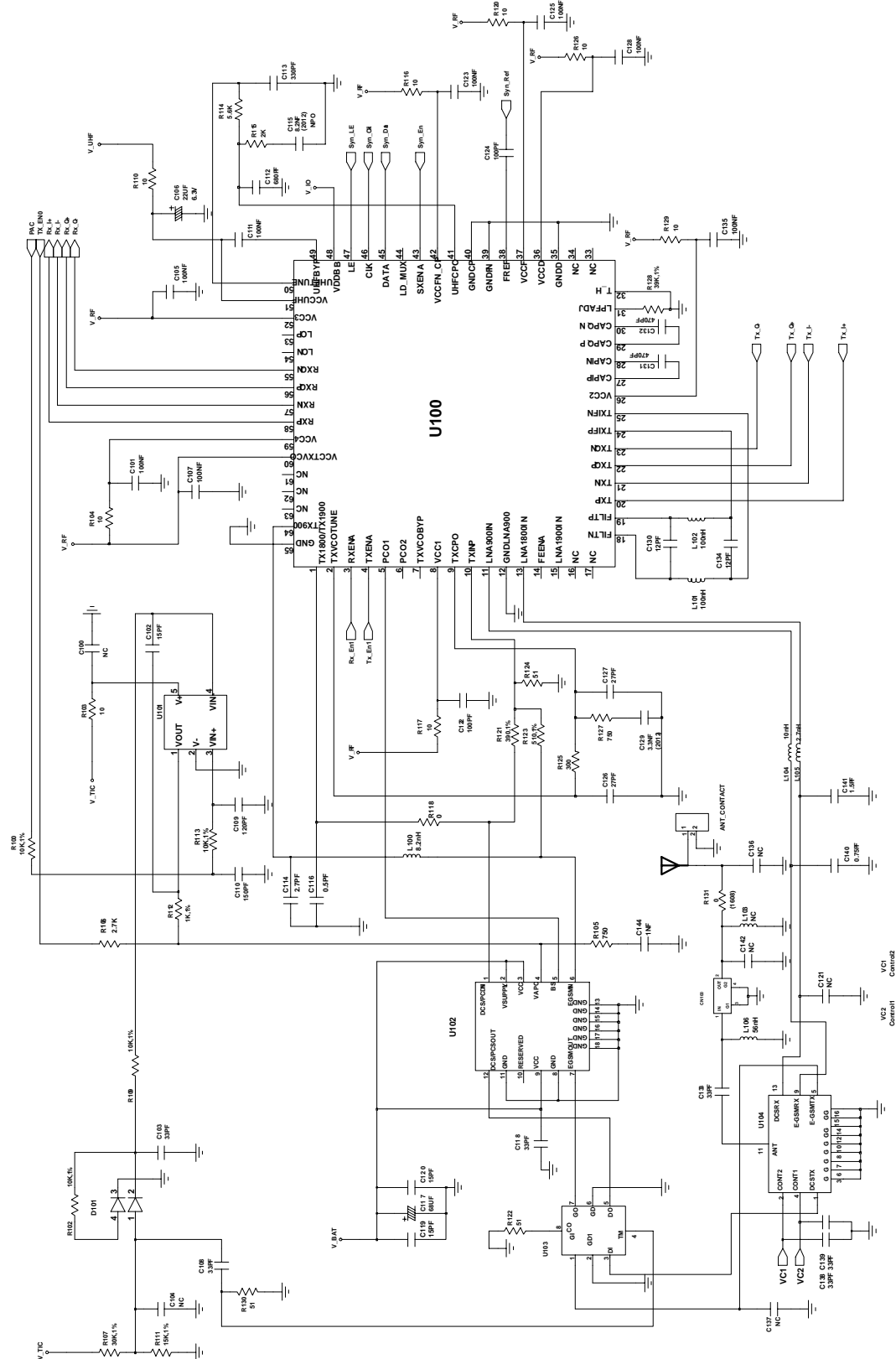


## 12. DCS Receiver



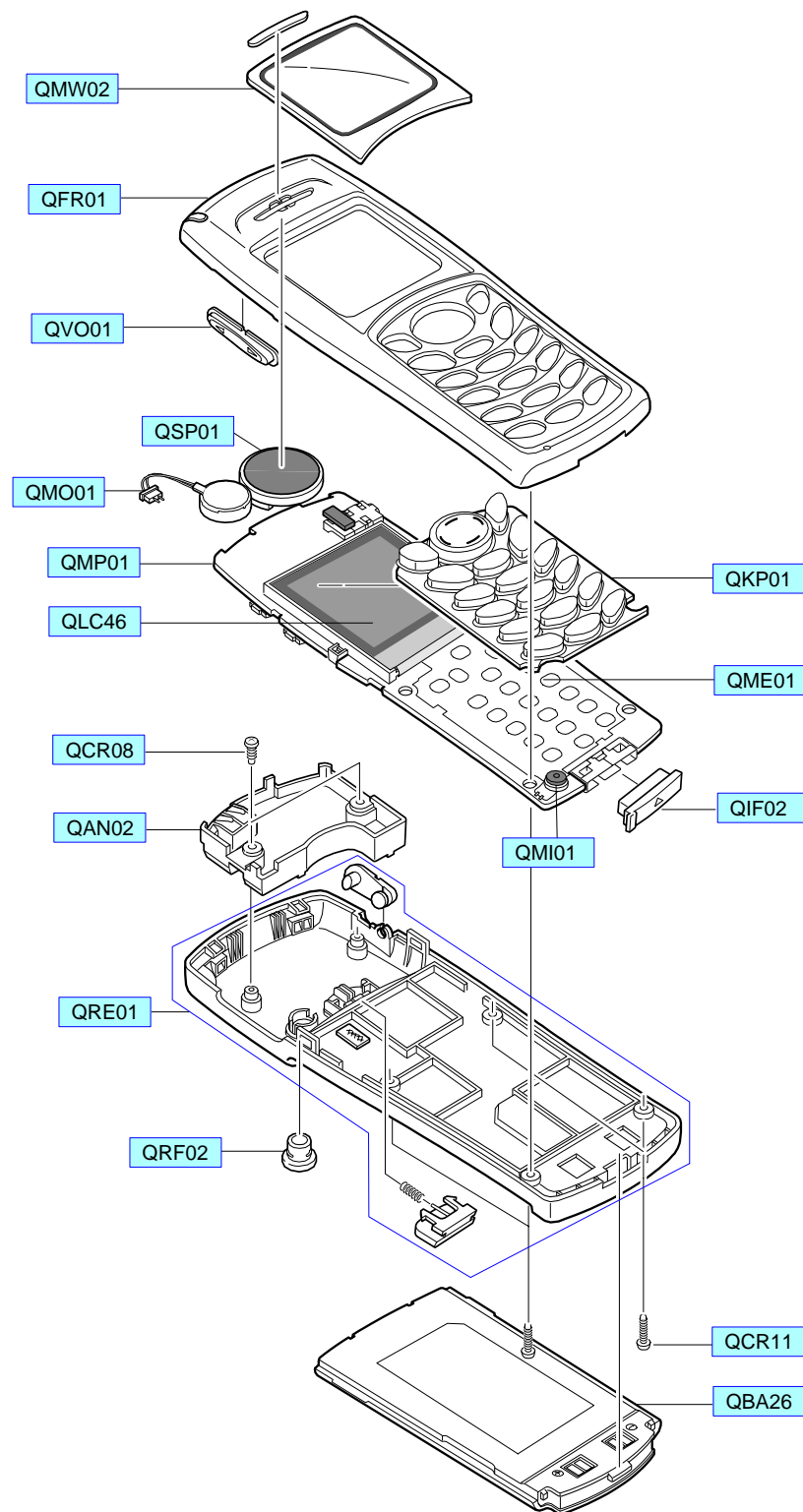
### 13. DCS Transmitter





### 3. SGH-C110 Exploded View and Parts List

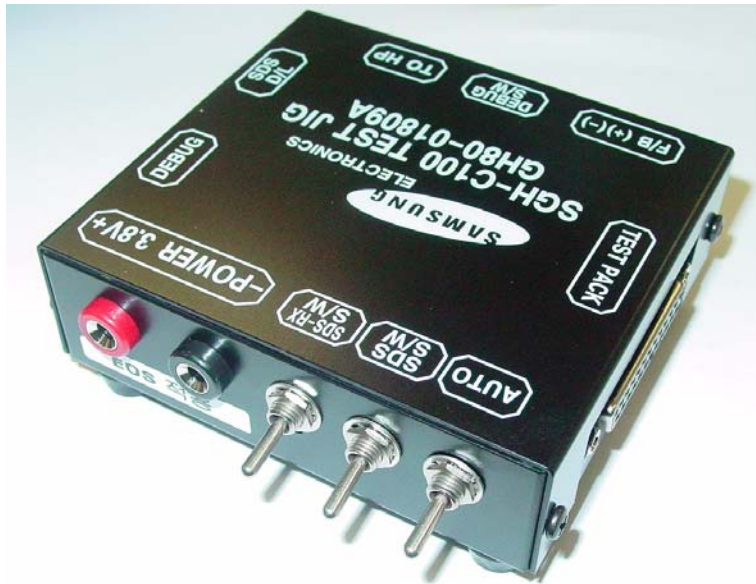
#### 1. Cellular phone Exploded View



## 2. Cellular phone Parts list

Location NO.		Description	SEC CODE	Remark
QMW02		WINDOW LCD	GH72-13027A	
QFR01		FRONT COVER	GH75-04167A	
QVO01		VOLUME KEY	GH75-02934A	
QMO01		MOTOR	GH31-00063A	
QSP01		SPEAKER	3001-001408	
QMP01		MAIN PBA	GH92-01731A	
QLC46		LCD	GH07-00506A	
QKP01		KEYPAD	GH75-04169A	
QME01		UNIT DOME	GH59-01254A	
QMI01		MICROPHONE	GH30-00110A	
QIF02		IF COVER	GH73-03018A	
QCR08		SCREW	6001-000464	
QAN02		ANTENNA	GH42-00384A	
QRE01		REAR COVER	GH75-04168A	
QRF02		RF COVER	GH73-03073A	
QCR11		SCREW	6001-001654	
QBA26		BATTERY	GH43-01268A	

### 3. Test Jig (GH80-01809A)



3-1. RF Test Cable  
(GH39-00182A)



3-2. Test Cable  
(GH39-00206A)



3-3. Serial Cable



3-4. Power Supply Cable



3-5. DATA CABLE  
(GH39-00203A)



3-6. TA  
(GH44-00482A)



## 4. SGH-C110 MAIN Electrical Parts List

SEC Code	Design LOC
2203-005482	C101,C105,C107,C111
2203-000386	C102,C119,C120
2203-000812	C103,C108,C118,C133
2404-001281	C106
2203-000311	C109
2203-000359	C110,C304
2203-001124	C112
2203-002443	C113
2203-005446	C114
2301-001419	C115
2203-001383	C116
2404-001306	C117
2203-000233	C122,C124,C241,C502
2203-005482	C123,C125,C128,C135
2203-000679	C126,C127,C310,C311
2301-001512	C129
2203-000330	C130,C134
2203-000940	C131,C132
2203-000812	C138,C139,C203,C204
2203-002677	C140
2203-001385	C141
2203-000438	C144,C417,C509
2203-005061	C201,C205,C217,C219
2203-005482	C202,C224,C306,C450
2203-000812	C209,C212,C404,C405
2203-000278	C210,C213,C240,C500
2404-001151	C214,C523
2203-000654	C215,C505
2203-001239	C216
2203-005065	C218,C232,C233,C316
2203-005061	C220,C221,C226,C237
2203-006090	C223,C516
2203-005483	C225
2503-001042	C227,C228,C231
2203-005664	C234
2404-001268	C236,C400
2404-001240	C238
2203-005061	C301,C303,C305,C307
2203-005061	C312,C418,C501,C507
2203-001412	C401,C402
2203-001598	C403,C433
2203-000812	C406,C407,C408,C412
2203-006053	C409,C410,C411
2203-000812	C413,C414,C415,C419
2203-006105	C416
2203-000812	C420,C421,C422,C423
2203-000812	C424,C425,C426,C427
2203-000812	C428,C512,C517
2203-000254	C430
2203-000233	C503,C521,C522
2203-001405	C506
2203-005061	C508,C510
2203-005148	C514
2203-005509	C520
2203-006208	C524,C525
3705-001287	CN100
3710-001673	CN402
3709-001187	CN500

SEC Code	Design LOC
3722-002026	CN502
3710-001436	CON500
0404-001189	D101
0401-001033	D301
0407-000115	D500
2703-002268	L100
2703-002313	L101,L102
2703-002497	L104
2703-002372	L105
2703-002269	L106
2703-001229	L200
3301-001208	L201
2703-002339	L400
2703-001913	L501
0601-001856	LED400,LED401,LED405
0601-001856	LED406,LED407,LED408
0601-001856	LED409,LED410,LED411
0601-001856	LED412,LED413,LED414
0601-001863	LED500
2801-004191	OSC200
2801-003856	OSC300
0505-001518	Q400
0501-000225	Q501
2007-007142	R100,R102,R109,R113
2007-000172	R103,R104,R110,R116
2007-001156	R105,R127
2007-008117	R106,R518
2007-008275	R107,R200
2007-007132	R111
2007-007318	R112
2007-000982	R114
2007-000137	R115,R211
2007-000172	R117,R120,R126,R129
2007-000171	R118,R522,R523,R524
2007-007319	R121
2007-001298	R122,R124,R130
2007-007564	R123
2007-007008	R125
2007-007134	R128
2007-000070	R131
2007-000775	R201
2007-007092	R202,R205
2007-000242	R203
2007-007766	R204
2007-001335	R206
2007-000141	R207
2007-000162	R212,R461,R521
2007-001325	R300,R509
2007-000170	R304
2007-000138	R310,R400,R406,R513
2011-001344	R401
2007-001295	R402
2007-007189	R403
2007-000140	R405,R430,R431
2007-001308	R408,R409,R413,R414
2007-001308	R415,R416,R417,R418
2007-001308	R419,R420,R421,R422
2007-007200	R423

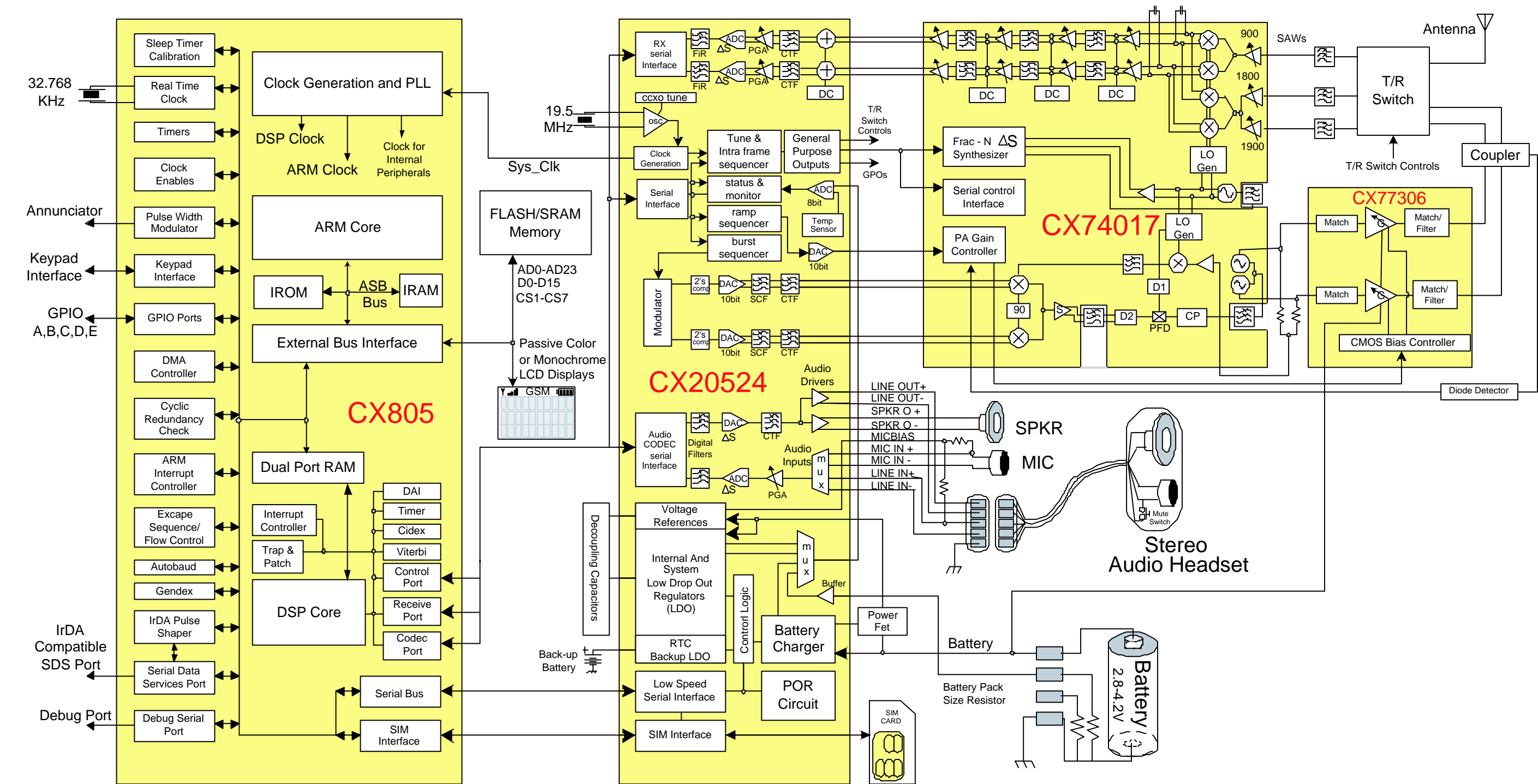


## SGH-C110 Electrical Parts List

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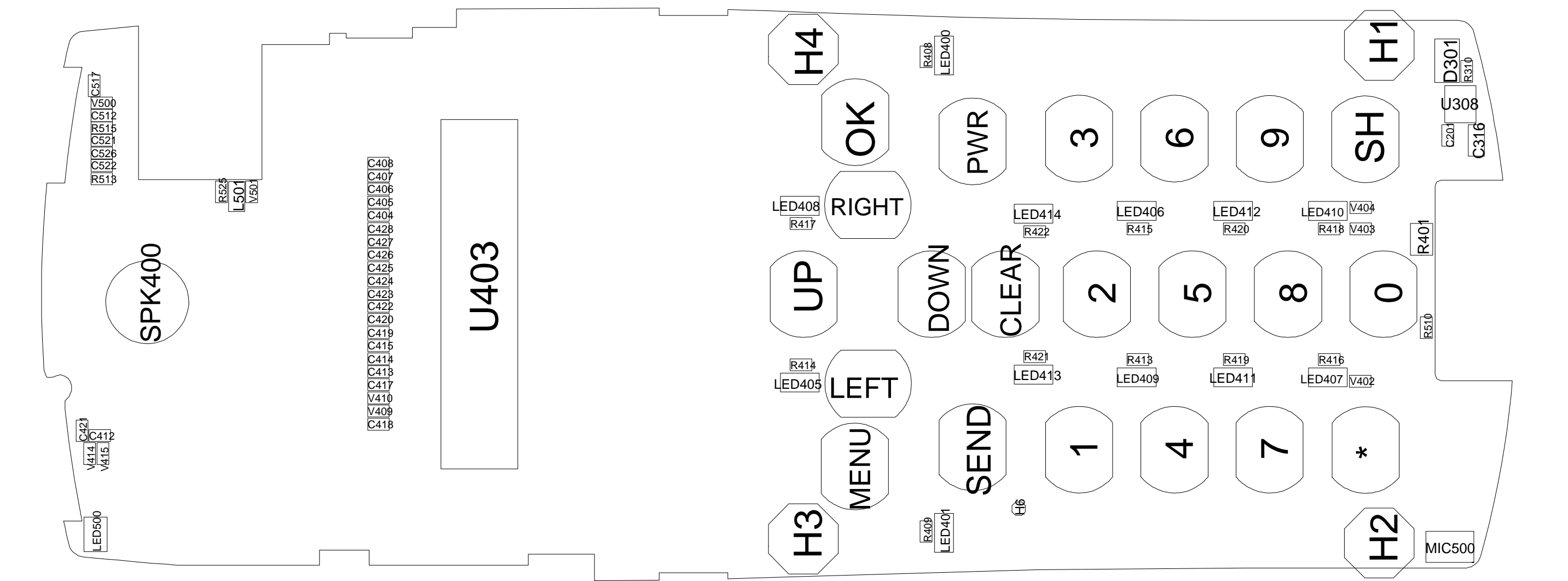
SEC Code	Design LOC
2007-008045	R462
2007-000172	R500,R501
2007-000159	R502
2007-000156	R503,R504
2007-000932	R506
2007-001308	R507
2007-001319	R512
2007-000566	R514
2007-000138	R515
2007-000169	R517
2007-000758	R519
2007-000148	R520
2007-000171	R525,R526,R527
2007-000143	R528
1205-002218	U100
1201-002009	U101
1201-002017	U102
4709-001144	U103
2909-001234	U104
1204-002158	U200
1209-001497	U202
0504-001162	U210,U501,U503
1205-002365	U300
1109-001274	U301
1203-002689	U308
1203-002860	U401
1203-002633	U402
1204-002161	U500
2203-000278	U504
4302-001130	V200
1405-001082	V402,V403,V404,V406
1405-001082	V407,V409,V410,V413
1405-001082	V414,V415,V500,V501
1405-001082	V502,V503
3404-001152	VOL_DN,VOL_UP
0406-001169	ZD400,ZD401,ZD410
0404-001153	ZD403
0403-001427	ZD411
0403-001446	ZD412
GH41-00556A	PCB
GH42-00384A	INTENNA

5. SGH-C110 Block Diagram

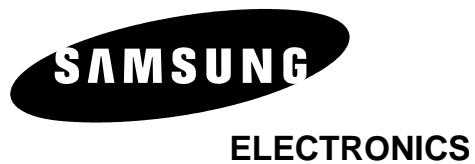


6. SGH-C110 PCB Diagrams

1. Main PCB Top Diagram







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