

SAMSUNG

GSM TELEPHONE SGH-C100

SERVICE *Manual*

GSM TELEPHONE



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1. SGH-C100 Specification

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

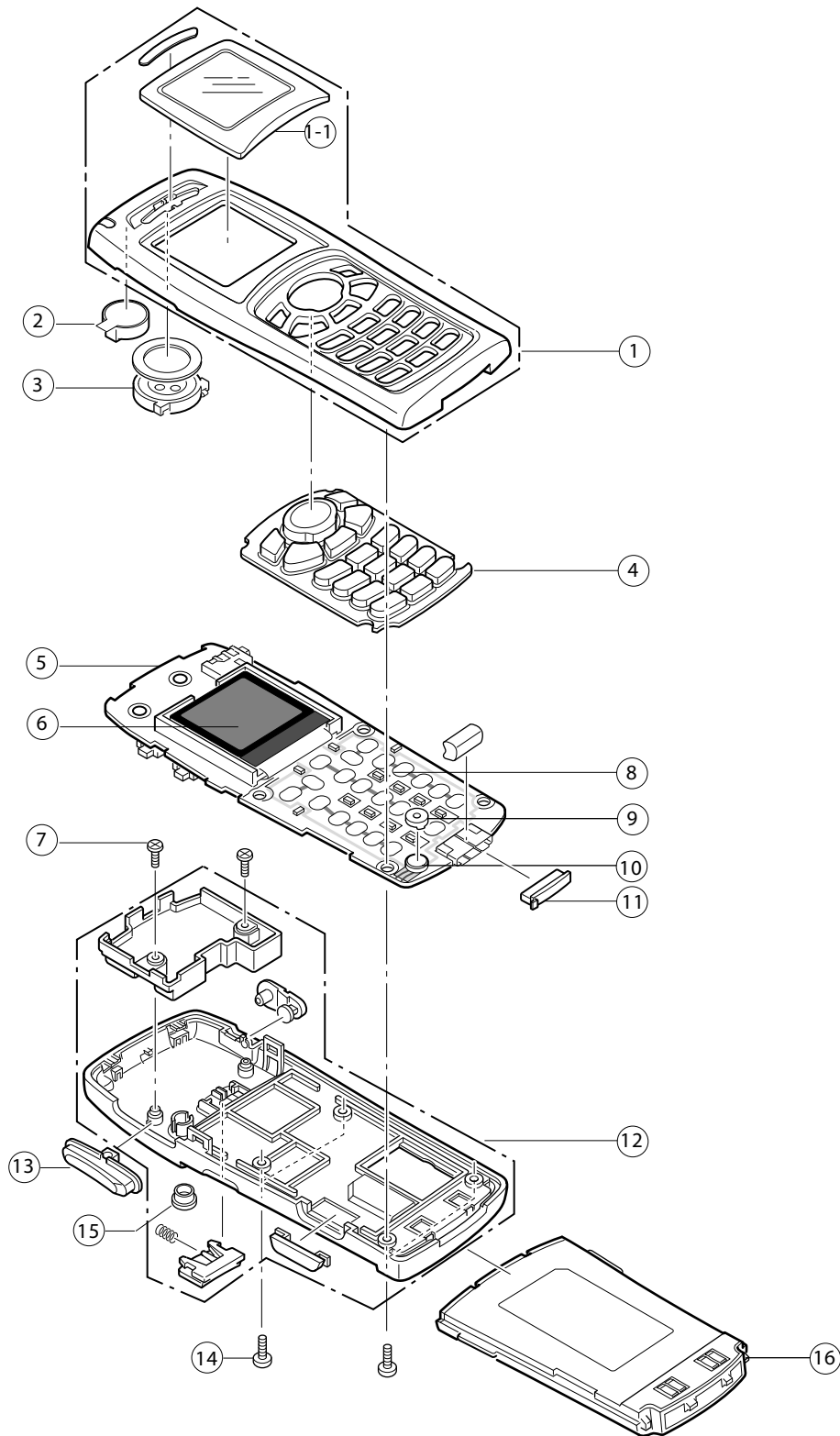
2. GSM TX power class

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-C100 Exploded View and its Parts list

1. Cellular phone Exploded View



2. Cellular phone Parts list

NO		Description	SEC.CODE	REMARK
1		FRONT COVER	GH75 -02873A	
	1 - 1	WINDOW LCD	GH72 -07226A	
2		MOTOR	GH31 -00055A	
3		SPEAKER	3001 -001408	
4		KEYPAD	GH72 -02933A	
5		MAIN PBA	GH92 -01375A	
6		LCD	GH07 -00315A	
7		SCREW	6001 -001645	
8		METAL DOME	GH59 -00695A	
9		MIC HOLDER	GH73 -01867A	
10		MIC	GH30 -00020A	
11		CONNECTOR COVER	GH73 -01868A	
12		REAR COVER	GH75 -02874A	
13		VOLUME KEY	GH75 -02934A	
14		SCREW	6001 -001654	
15		RF COVER	GH73 -01869A	
16		BATTERY	GH4300184A	

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
(GH44-00184A)



3. SGH-C100 MAIN Electrical Parts List

SEC Code	Design LOC
GH41-00413A	
GH07-00315A	
GH30-00020A	
GH31-00055A	
2203-005482	C101
2203-000386	C102
2203-000812	C103
2203-005482	C105
2203-005065	C106
2203-005482	C107
2203-000812	C108
2203-000311	C109
2203-000359	C110
2203-005482	C111
2203-001124	C112
2203-002443	C113
2203-005446	C114
2203-006195	C115
2203-001383	C116
2203-005571	C117
2203-000812	C118
2203-000386	C119
2203-000386	C120
2203-001383	C121
2203-000233	C122
2203-005482	C123
2203-000233	C124
2203-005482	C125
2203-000679	C126
2203-000679	C127
2203-005482	C128
2203-006306	C129
2203-000330	C130
2203-000940	C131

SEC Code	Design LOC
2203-000940	C132
2203-000812	C133
2203-000330	C134
2203-005482	C135
2203-000812	C138
2203-000812	C139
2203-002677	C140
2203-001385	C141
2203-000438	C144
2203-005061	C201
2203-005482	C202
2203-000812	C203
2203-000812	C204
2203-005061	C205
2203-001383	C207
2203-000812	C209
2203-000278	C210
2203-000812	C212
2203-000278	C213
2404-001151	C214
2203-000654	C215
2203-001239	C216
2203-005061	C217
2203-005065	C218
2203-005061	C219
2203-005061	C220
2203-005061	C221
2203-006090	C223
2203-005482	C224
2203-005483	C225
2203-005061	C226
2503-001042	C227
2503-001042	C228
2503-001042	C231

SEC Code	Design LOC
2203-005065	C232
2203-005065	C233
2203-005664	C234
2203-006090	C236
2203-005061	C237
2203-005065	C238
2203-000278	C240
2203-005061	C301
2203-005061	C303
2203-000359	C304
2203-005061	C305
2203-005482	C306
2203-005061	C307
2203-005061	C308
2203-000679	C310
2203-000679	C311
2203-005061	C312
2203-005065	C316
2203-006053	C400
2203-001412	C401
2203-001412	C402
2203-006183	C403
2203-000812	C404
2203-000812	C405
2203-000812	C406
2203-000812	C407
2203-000812	C408
2203-006053	C409
2203-006053	C410
2203-006053	C411
2203-000812	C412
2203-000812	C413
2203-000812	C414
2203-000812	C415

SEC Code	Design LOC
2203-006105	C416
2203-000438	C417
2203-005061	C418
2203-000812	C419
2203-000812	C420
2203-000812	C421
2203-000812	C422
2203-000812	C423
2203-000812	C424
2203-000812	C425
2203-000812	C426
2203-000812	C427
2203-000812	C428
2203-000254	C430
2404-001306	C431
2203-001598	C432
2203-006183	C433
2203-000278	C500
2203-005061	C501
2203-000233	C502
2203-000233	C503
2203-001405	C504
2203-000654	C505
2203-001405	C506
2203-005061	C507
2203-005061	C508
2203-000438	C509
2203-005061	C510
2203-000812	C512
2203-005148	C514
2203-006090	C516
2203-000812	C517
2203-005509	C520
2203-000233	C521

SEC Code	Design LOC
2203-000233	C522
2404-001151	C523
2203-006208	C524
2203-006208	C525
3705-001287	CN100
3710-001673	CN402
3709-001187	CN500
3722-002026	CN502
0404-001189	D101
0401-001033	D301
0407-000115	D500
2703-002268	L100
2703-002313	L101
2703-002313	L102
2703-002497	L104
2703-002372	L105
2703-002269	L106
2703-001229	L200
3301-001208	L201
2703-002339	L400
2703-001881	L501
0604-001146	LED300
0601-001602	LED400
0601-001602	LED401
0601-001602	LED405
0601-001602	LED406
0601-001602	LED407
0601-001602	LED408
0601-001602	LED409
0601-001602	LED410
0601-001602	LED411
0601-001602	LED412
0601-001602	LED413
0601-001602	LED414

SEC Code	Design LOC
0601-001654	LED500
2801-004191	OSC200
2801-003856	OSC300
0505-001325	Q400
0504-001012	Q500
0504-001012	Q501
2007-007142	R100
2007-007142	R102
2007-000172	R103
2007-000172	R104
2007-001156	R105
2007-008117	R106
2007-008275	R107
2007-000171	R108
2007-007142	R109
2007-000172	R110
2007-007132	R111
2007-007318	R112
2007-007142	R113
2007-000982	R114
2007-000137	R115
2007-000172	R116
2007-000172	R117
2007-000171	R118
2007-000172	R120
2007-007319	R121
2007-001298	R122
2007-007564	R123
2007-001298	R124
2007-007008	R125
2007-000172	R126
2007-001156	R127
2007-007134	R128
2007-000172	R129

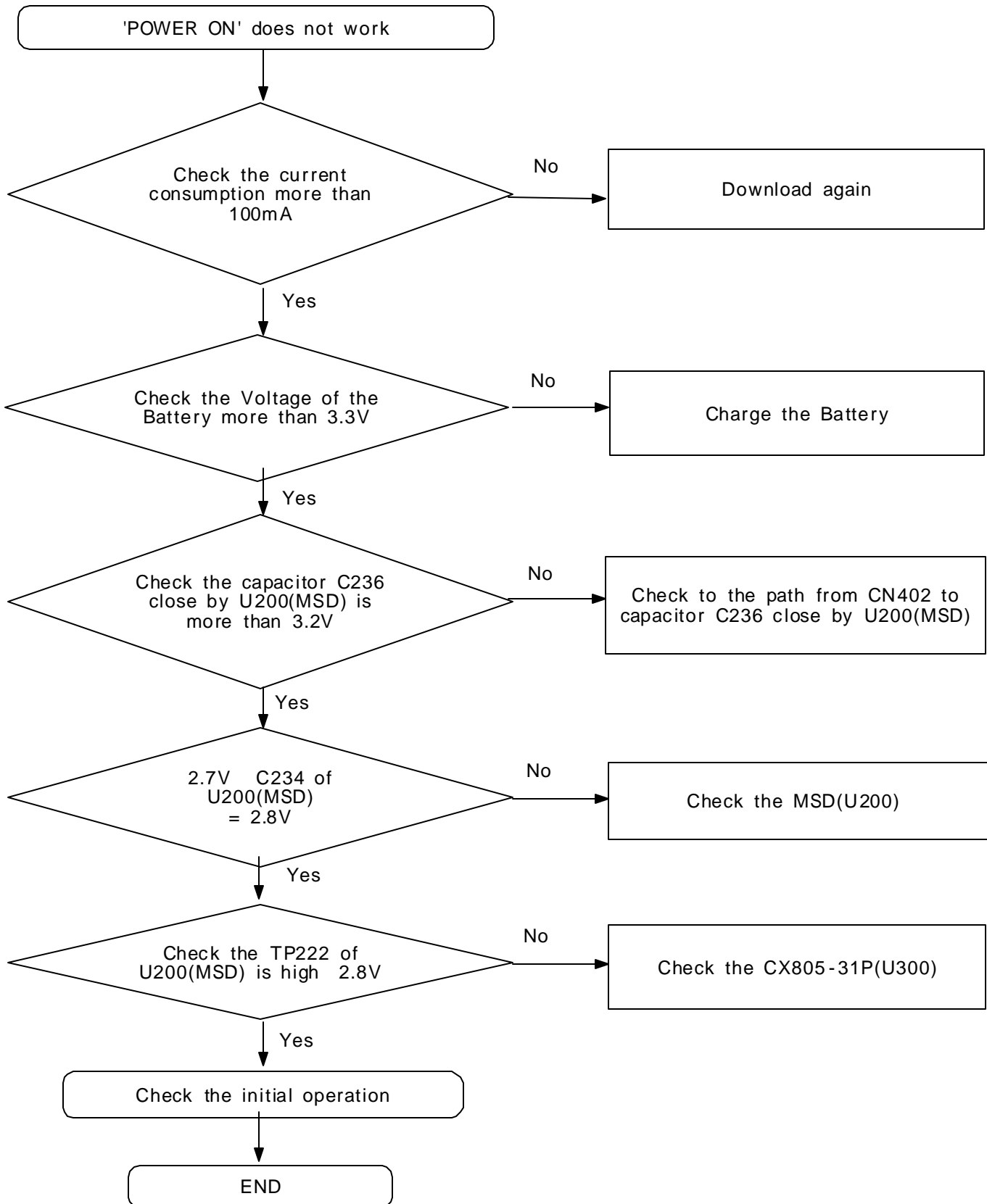
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2007-000070	R131
2007-008275	R200
2007-000775	R201
2007-007092	R202
2007-000242	R203
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2007-007092	R205
2007-001335	R206
2007-000141	R207
2007-000171	R208
2007-000171	R209
2007-000137	R211
2007-000162	R212
2007-000171	R233
2007-001325	R300
2007-000170	R304
2007-000171	R305
2007-000173	R306
2007-000138	R310
2007-000138	R400
2011-001344	R401
2007-001295	R402
2007-007200	R403
2007-000138	R405
2007-000138	R406
2007-001308	R408
2007-001308	R409
2007-001308	R413
2007-001308	R414
2007-001308	R415
2007-001308	R416
2007-001308	R417
2007-001308	R418

SEC Code	Design LOC
2007-001308	R419
2007-001308	R420
2007-001308	R421
2007-001308	R422
2007-007200	R430
2007-000162	R431
2007-000172	R500
2007-000172	R501
2007-000159	R502
2007-000156	R503
2007-000156	R504
2007-000932	R506
2007-007096	R507
2007-001313	R508
2007-001325	R509
2007-001319	R512
2007-000138	R513
2007-000566	R514
2007-000138	R515
2007-000171	R516
2007-000169	R517
2007-008117	R518
2007-000758	R519
2007-000148	R520
2007-000162	R521
1205-002218	U100
1201-002009	U101
1201-002017	U102
4709-001144	U103
2909-001200	U104
1204-002158	U200
1209-001497	U202
0504-001162	U210
1205-002365	U300

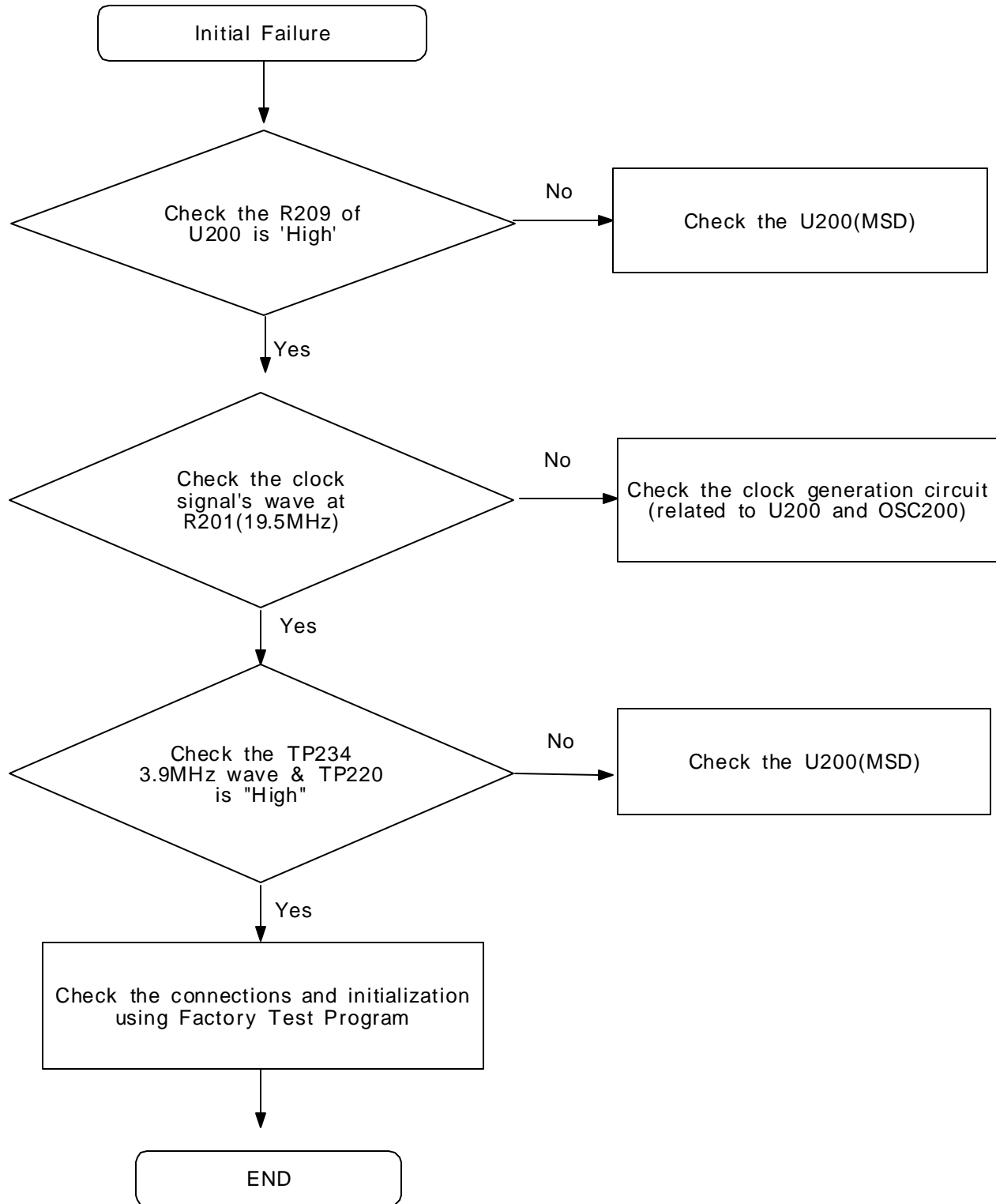
SEC Code	Design LOC
1109-001274	U301
1203-002689	U308
1203-002860	U401
1203-002633	U402
1204-001960	U500
0504-001162	U501
1001-001183	U502
0504-001162	U503
2203-000278	U504
4302-001130	V200
1405-001093	V400
1405-001093	V401
1405-001082	V402
1405-001082	V403
1405-001082	V404
1405-001082	V406
1405-001082	V407
1405-001082	V409
1405-001082	V410
1405-001082	V411
1405-001082	V500
1405-001082	V501
3404-001152	VOL_DN
3404-001152	VOL_UP
0406-001167	ZD400
0406-001167	ZD401
0406-001169	ZD402
0404-001172	ZD403
0403-001446	ZD412
0406-001169	ZD501
GH42-00280A	
3001-001408	

4. SGH-C100 Flow Chart of Troubleshooting

1. Power ON



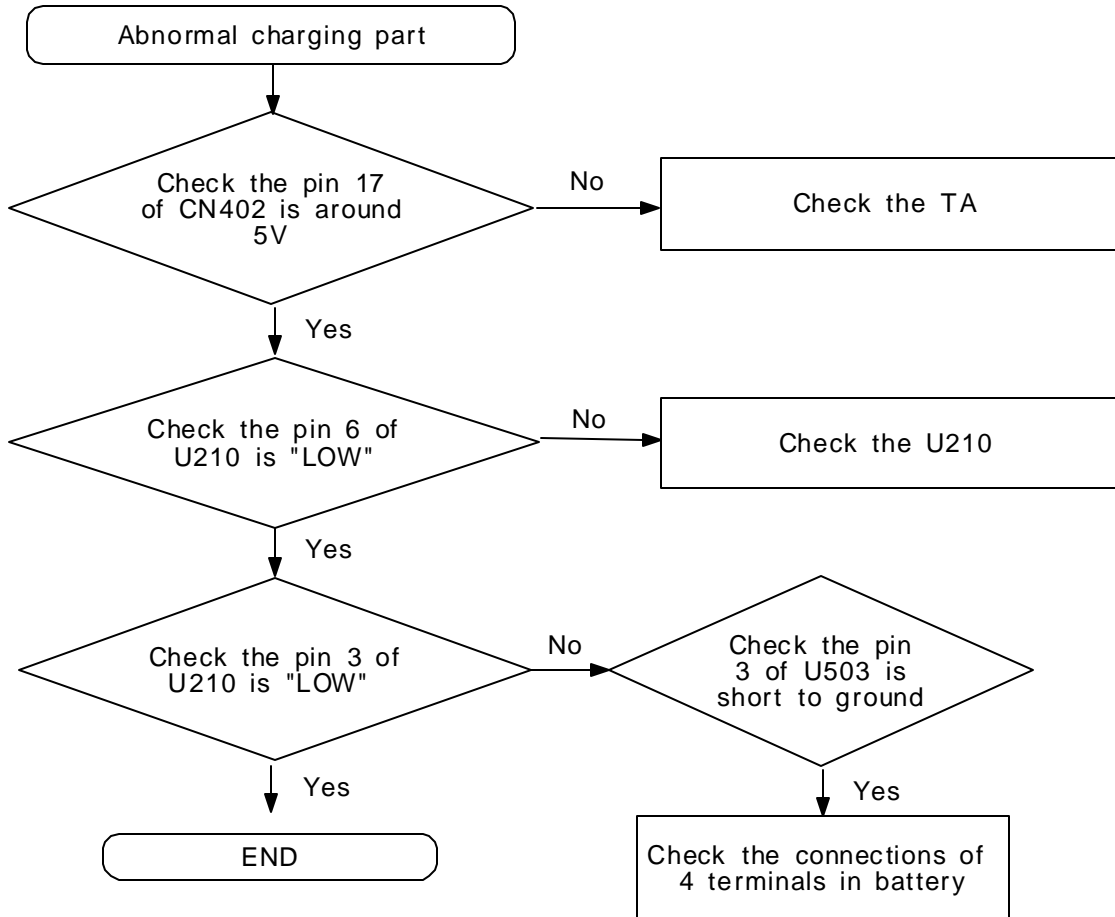
2. Initial

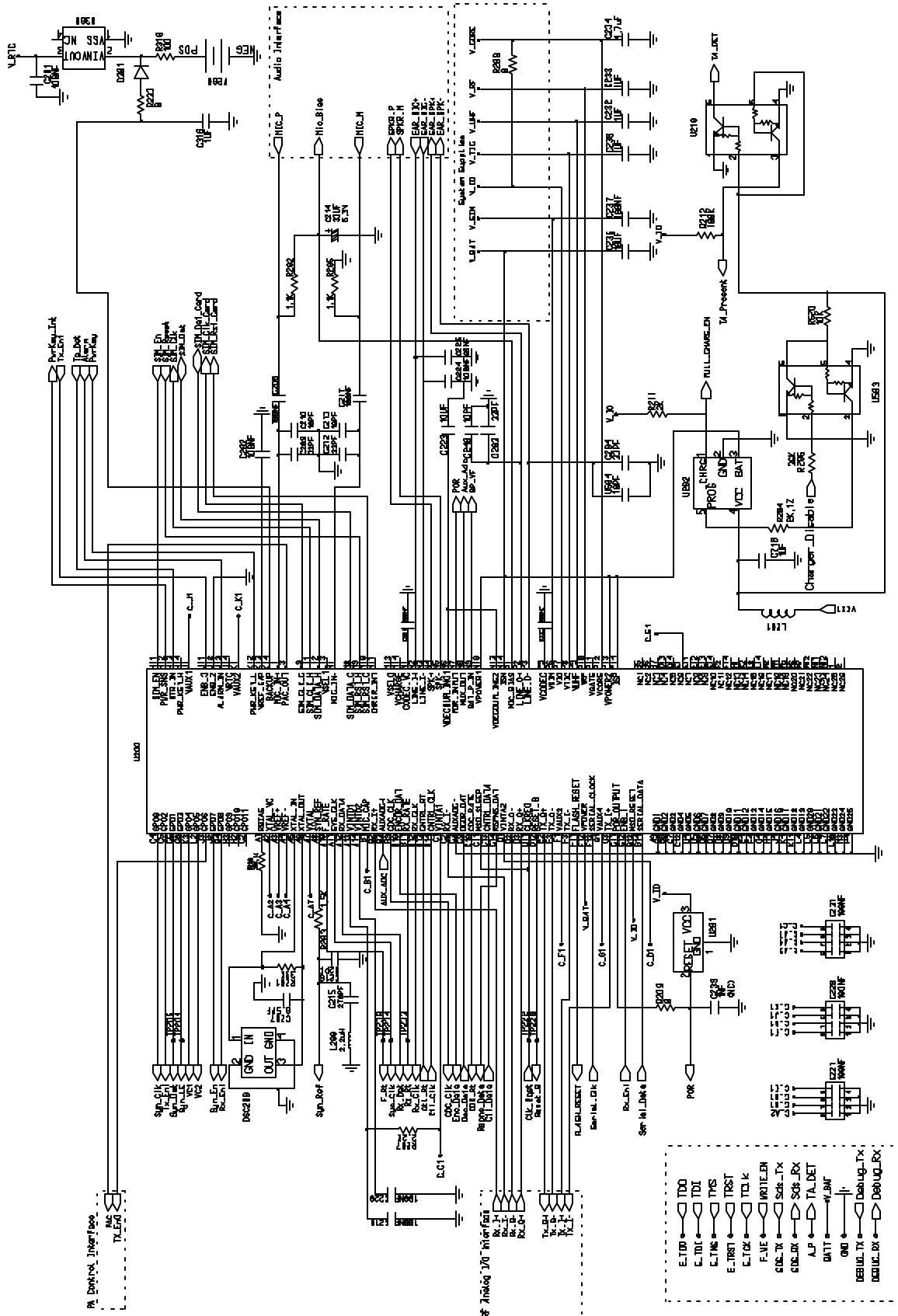


3. Charging

* Test after connecting with Battery

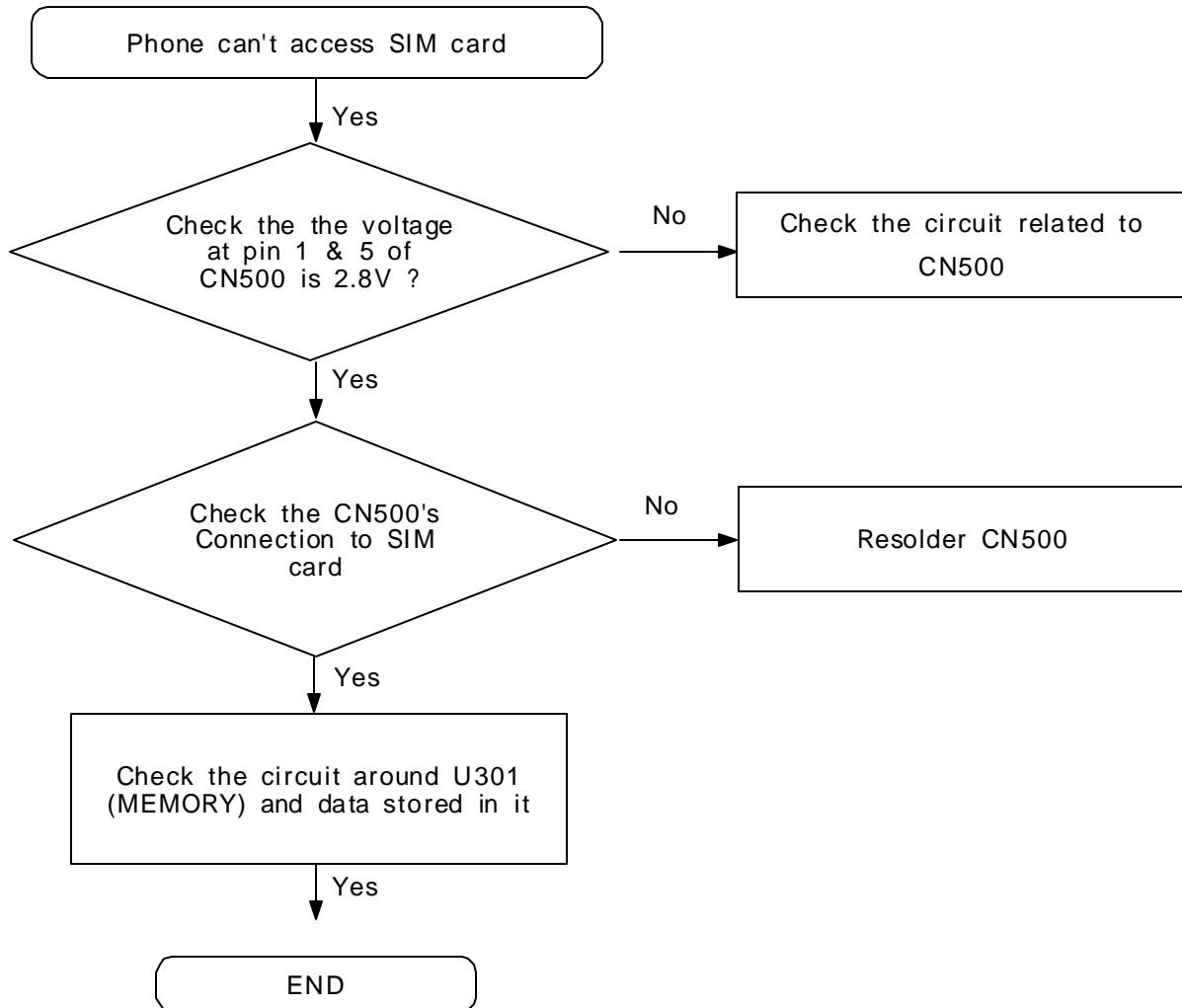
: All 4 terminals in battery should be connected to the phone by using jump-wires.

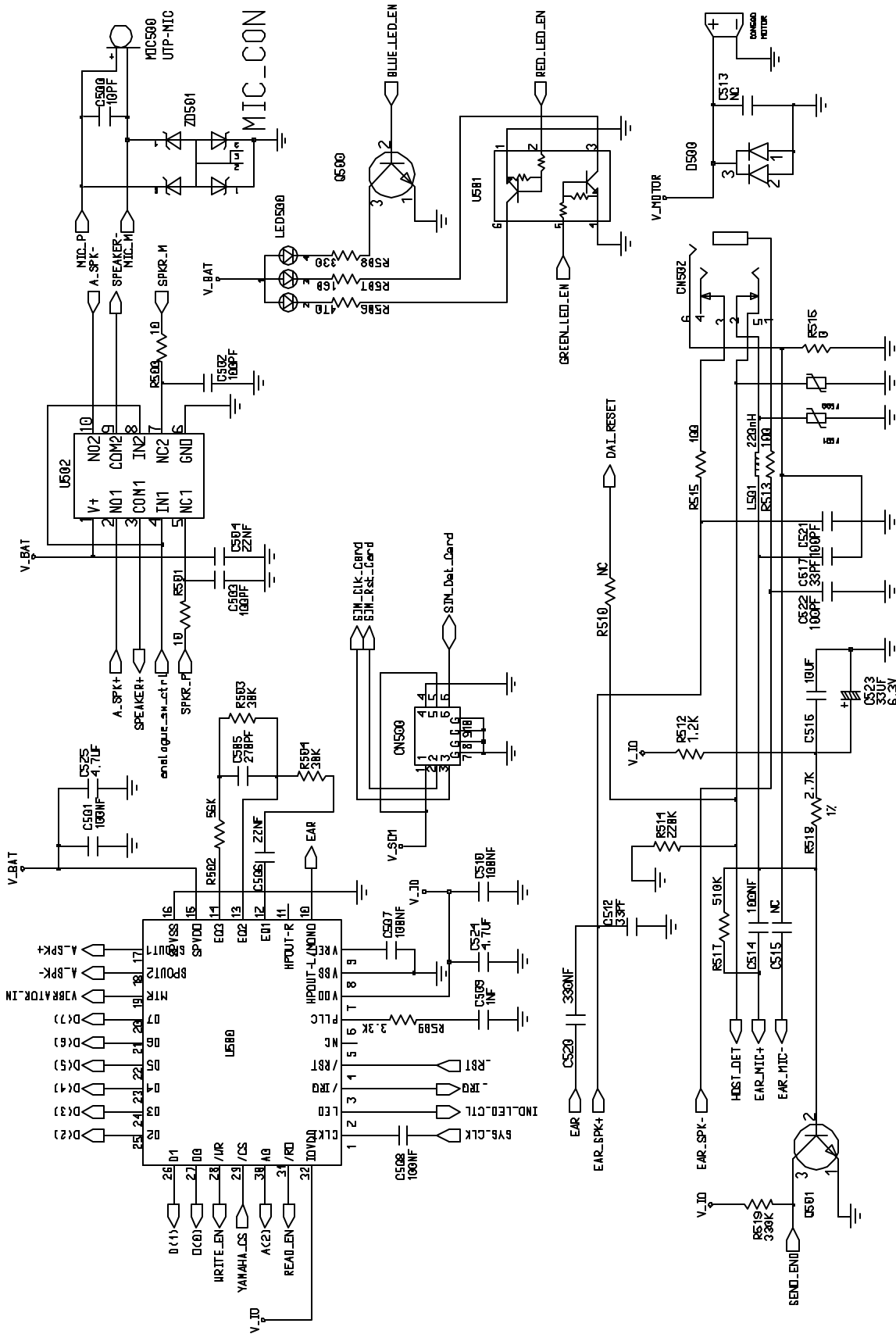




4. Sim

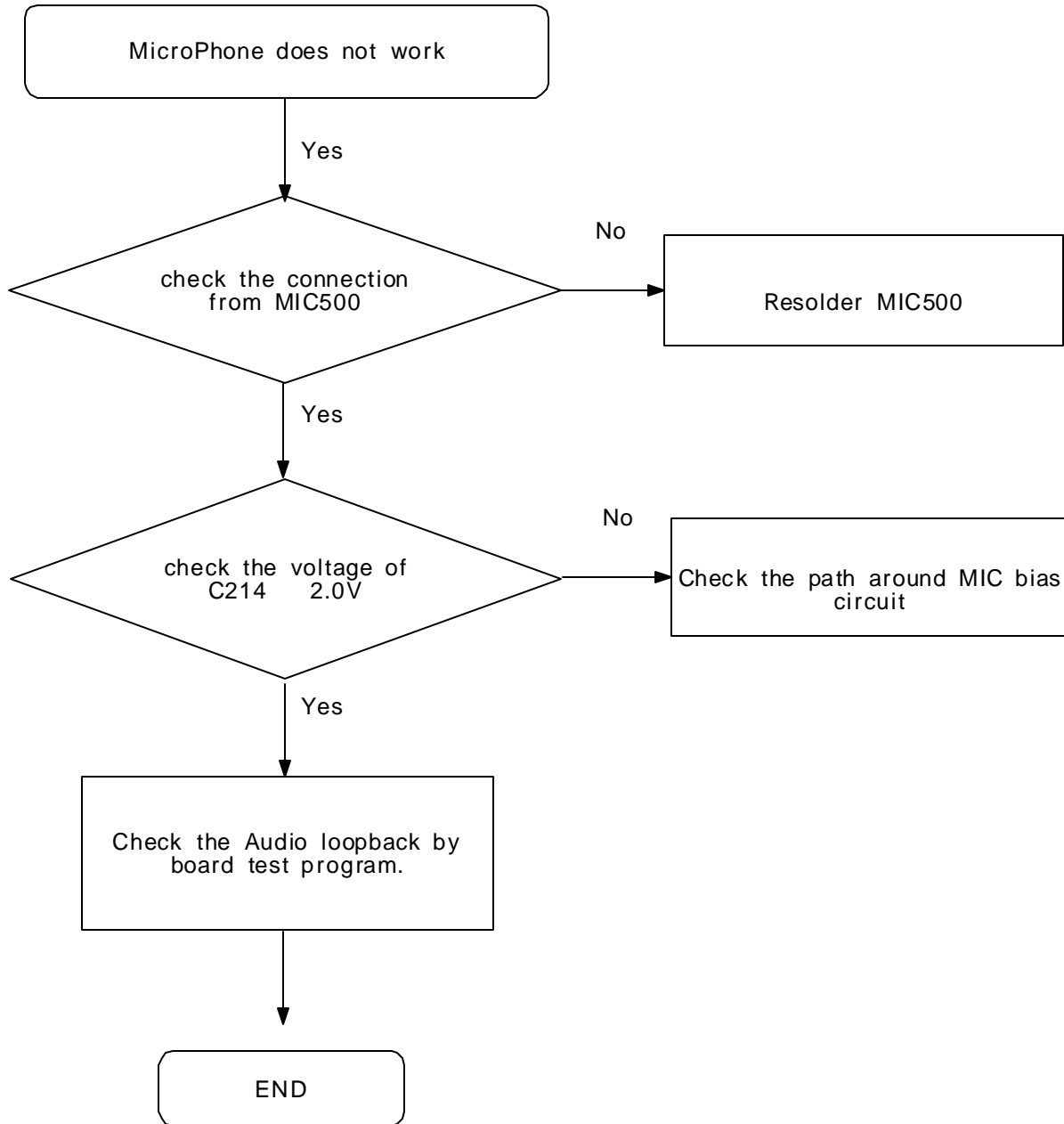
* Test with Sim

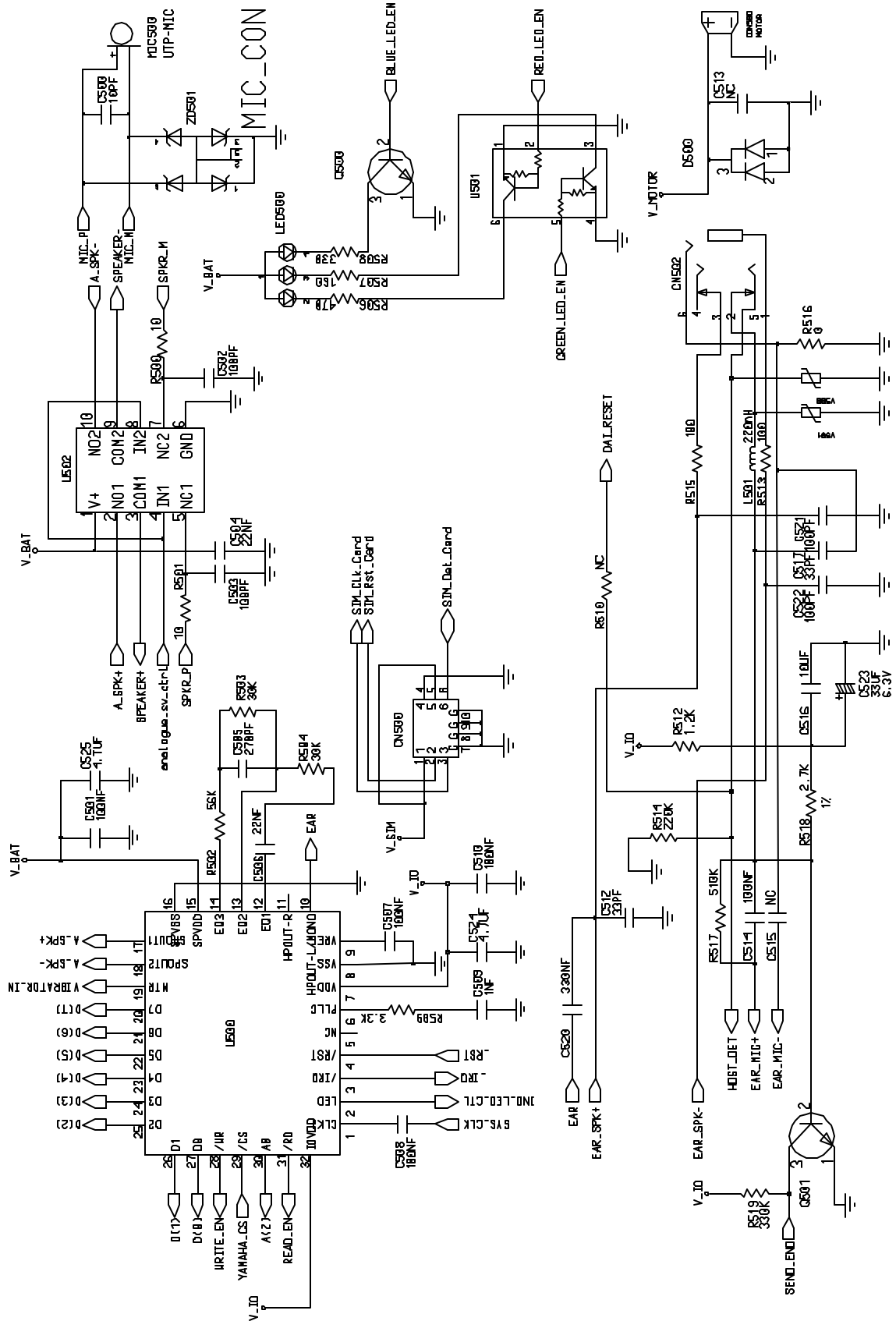




5. Microphone Part

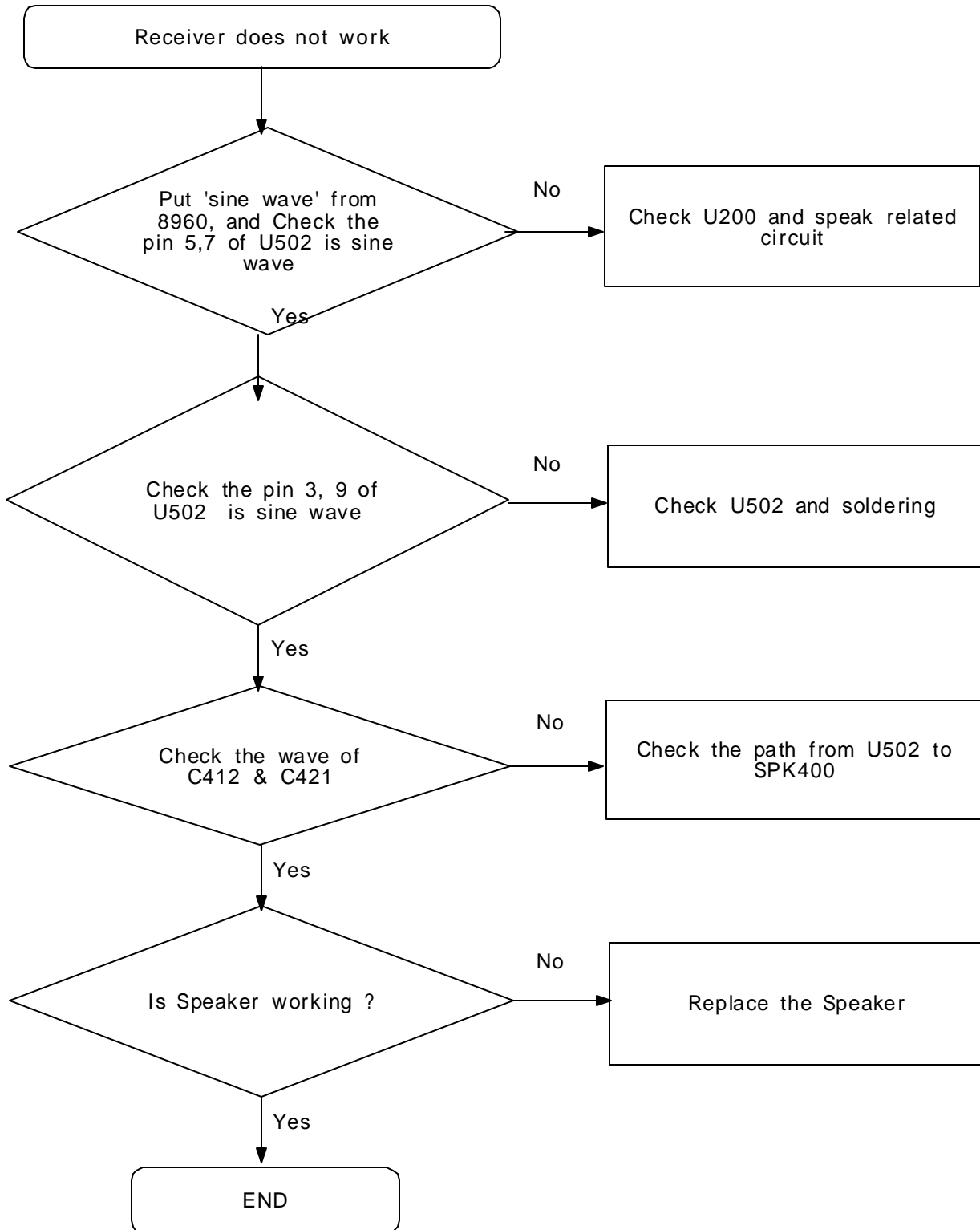
* Call with Sim before testing.





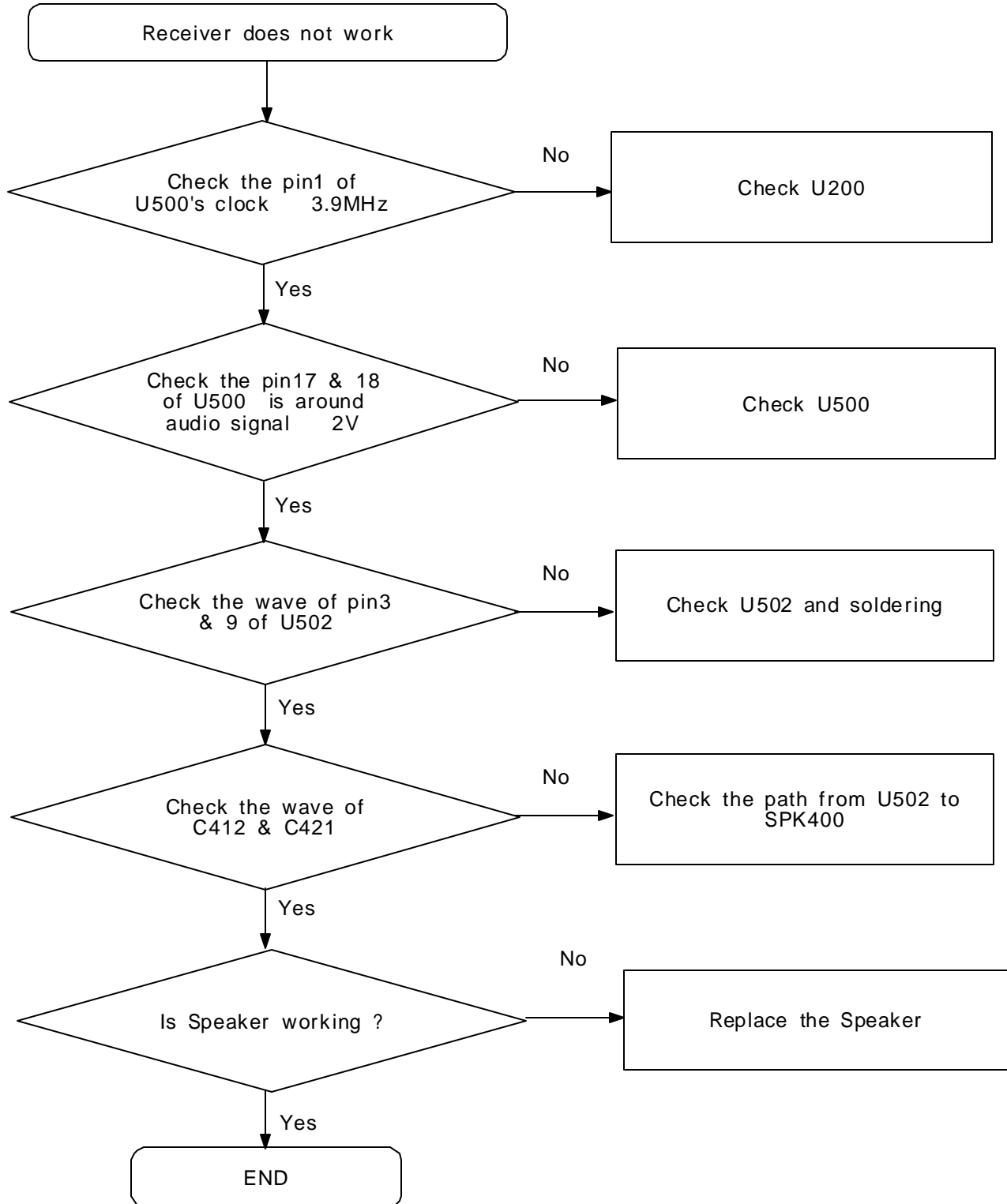
6. Receiver

* Call before testing.

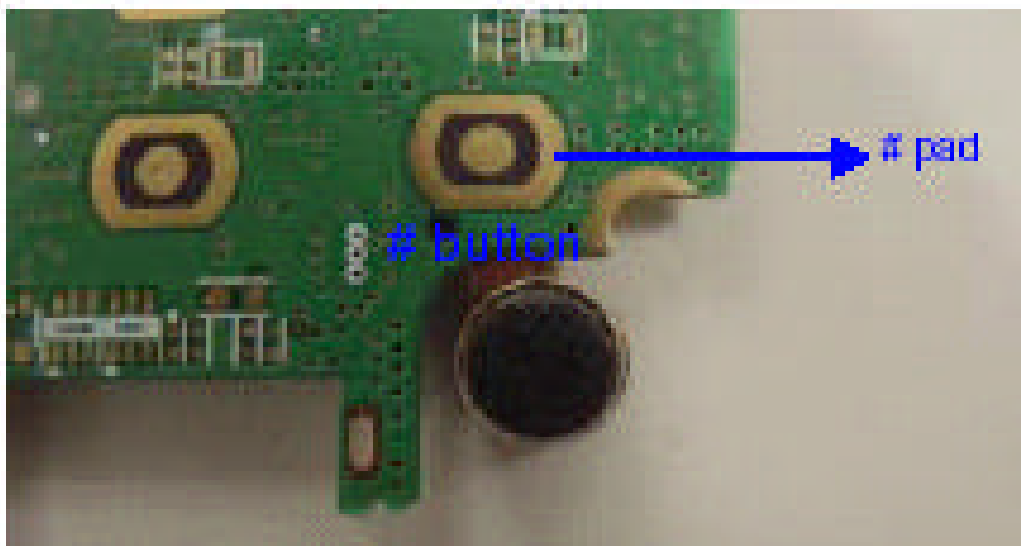
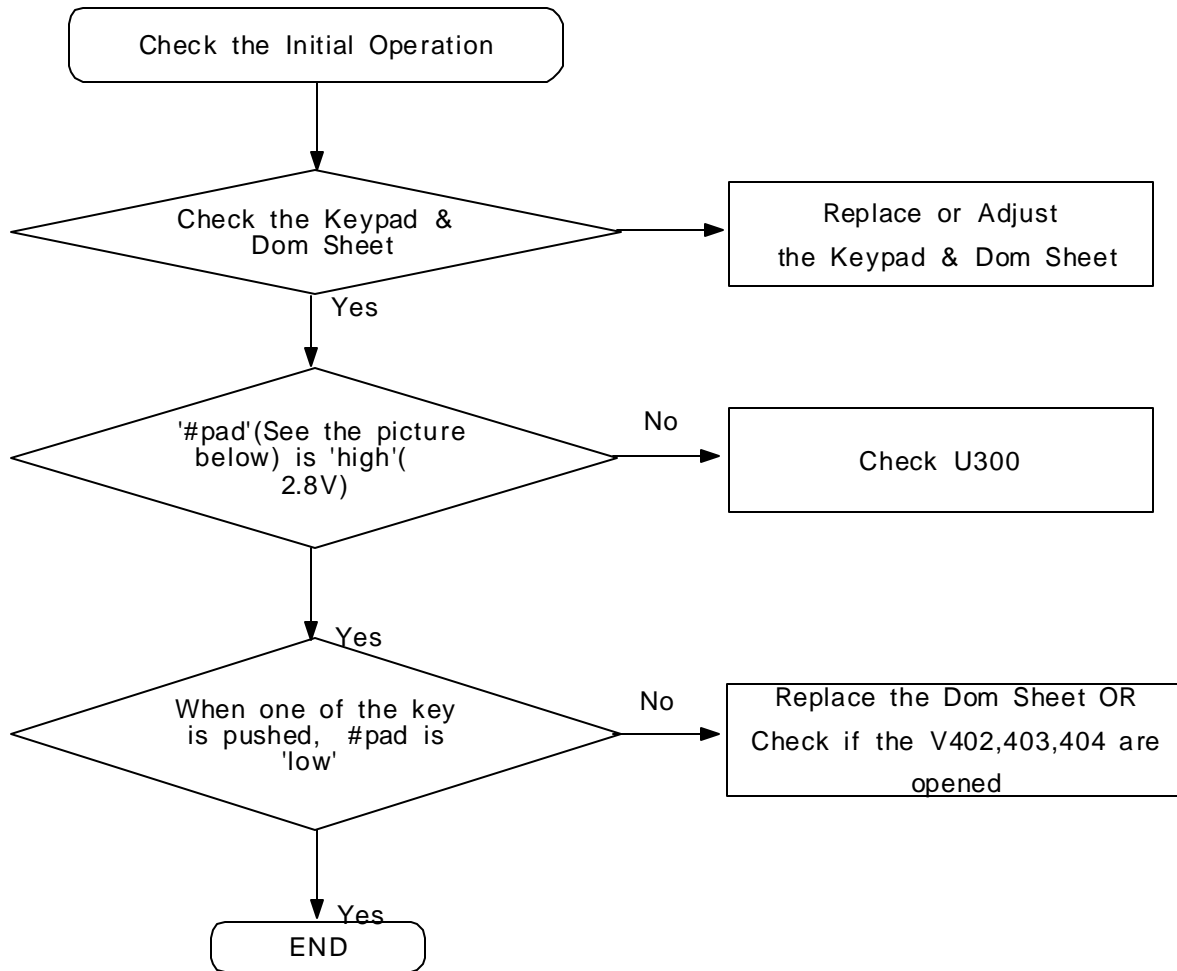


7. Speaker

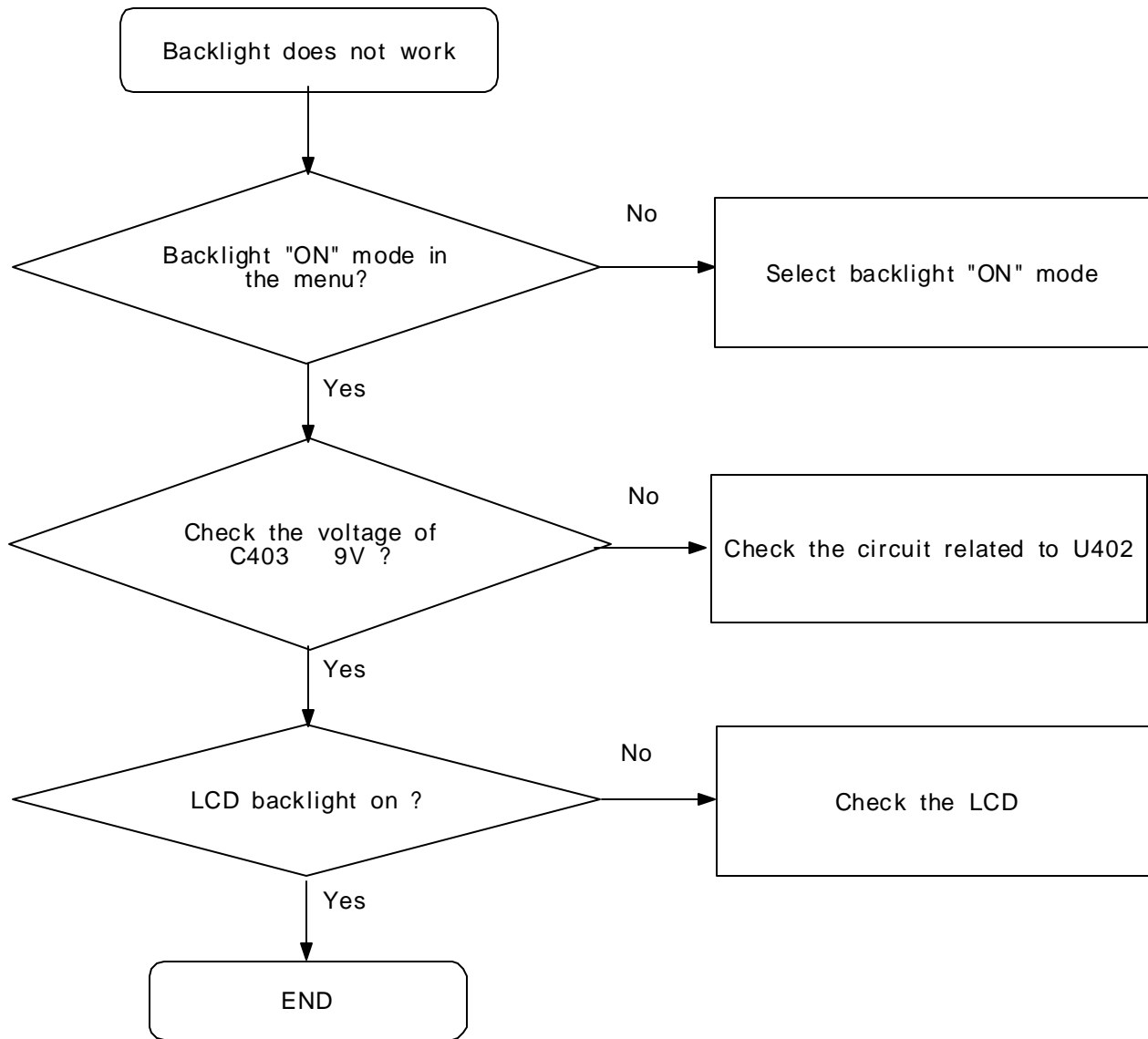
* Play on 16-poly melody before testing.



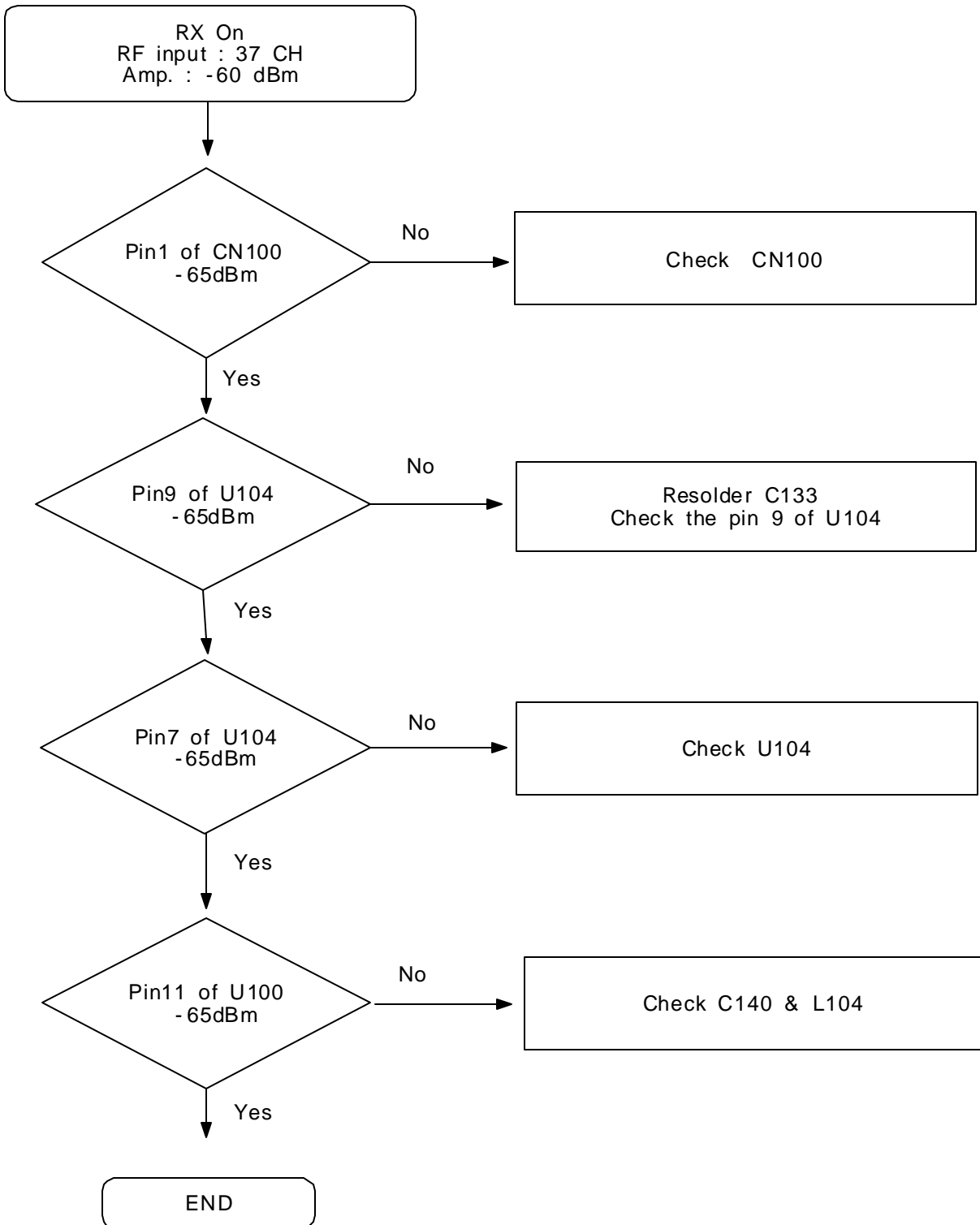
8. Key Data Input



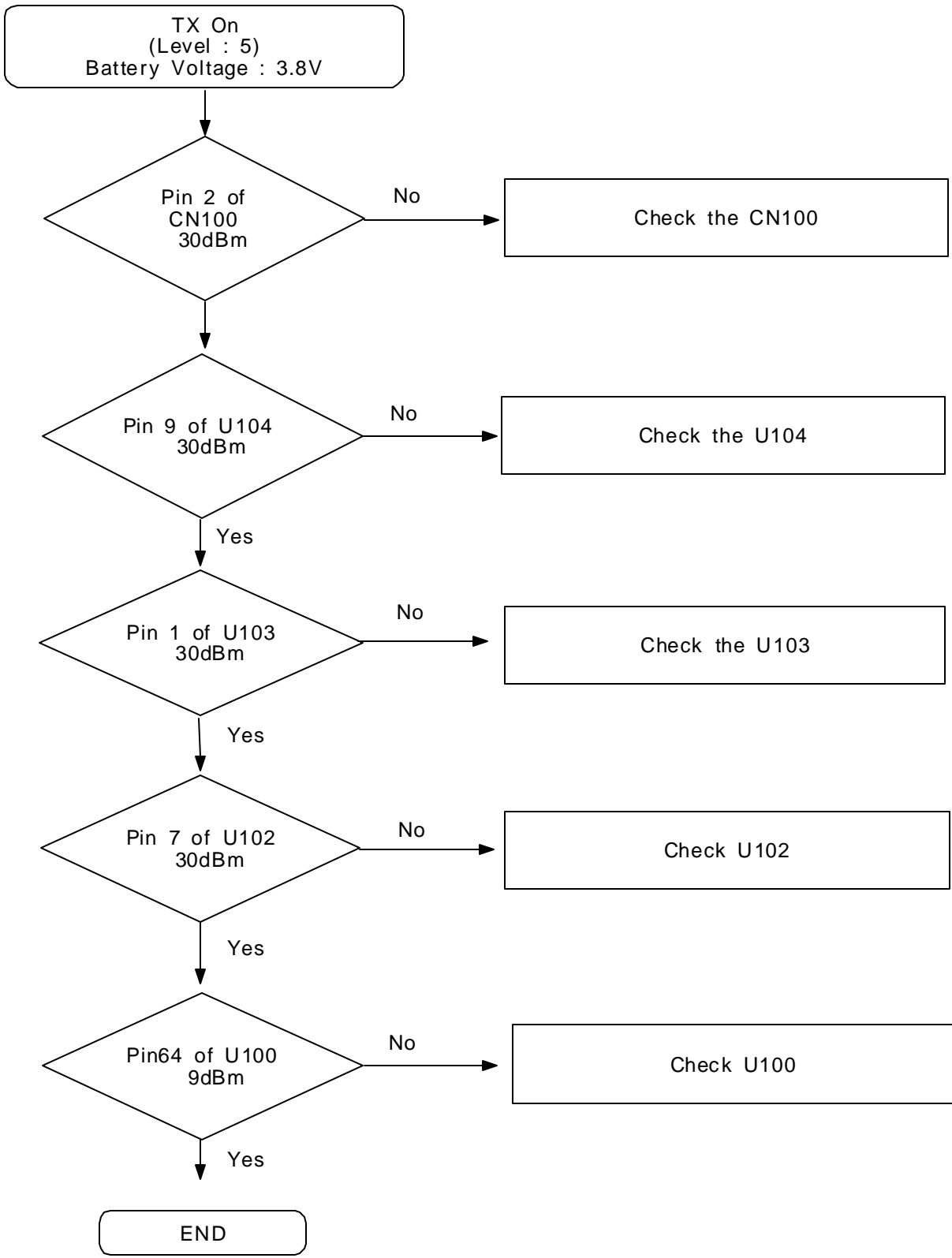
9. Light



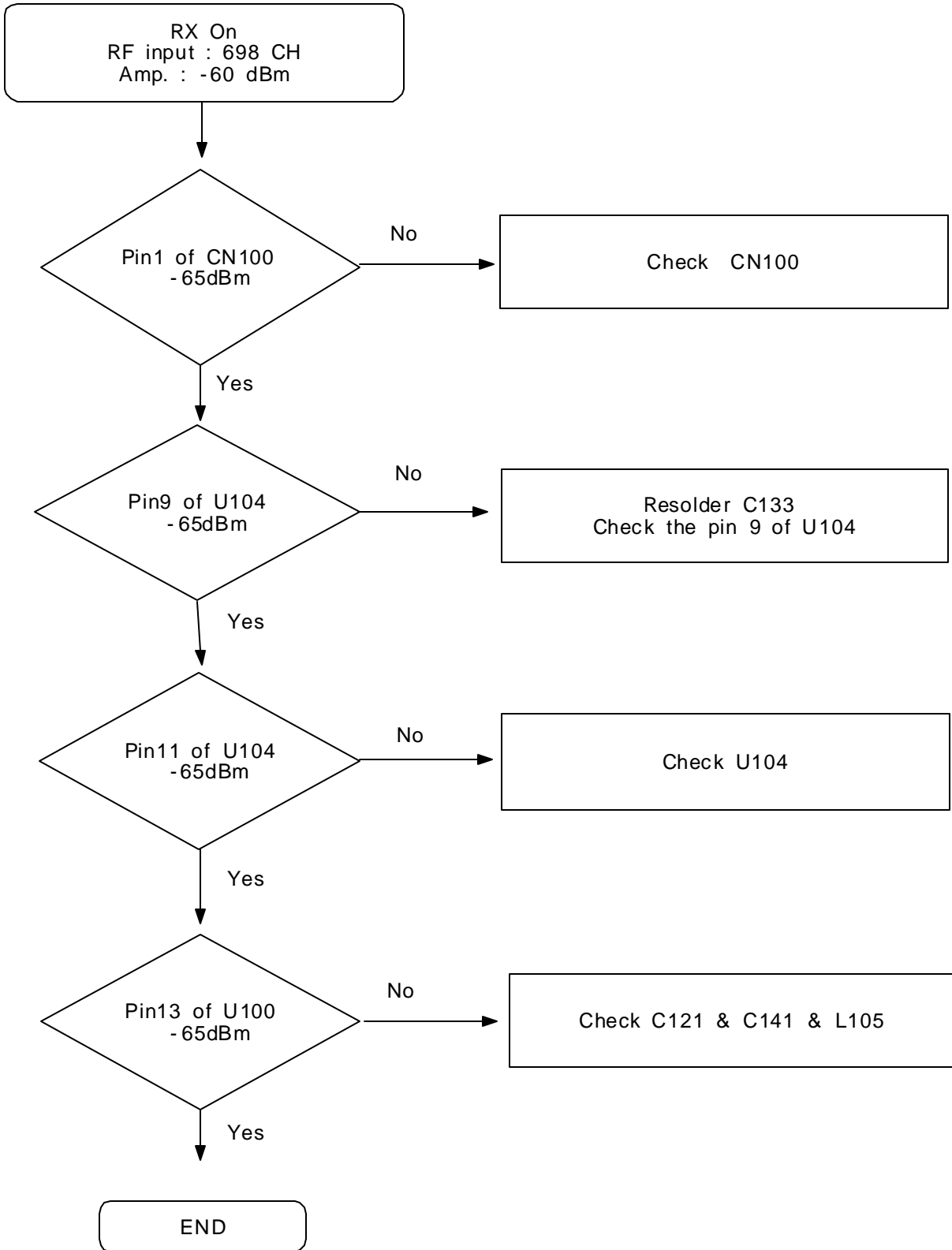
10. GSM Receiver



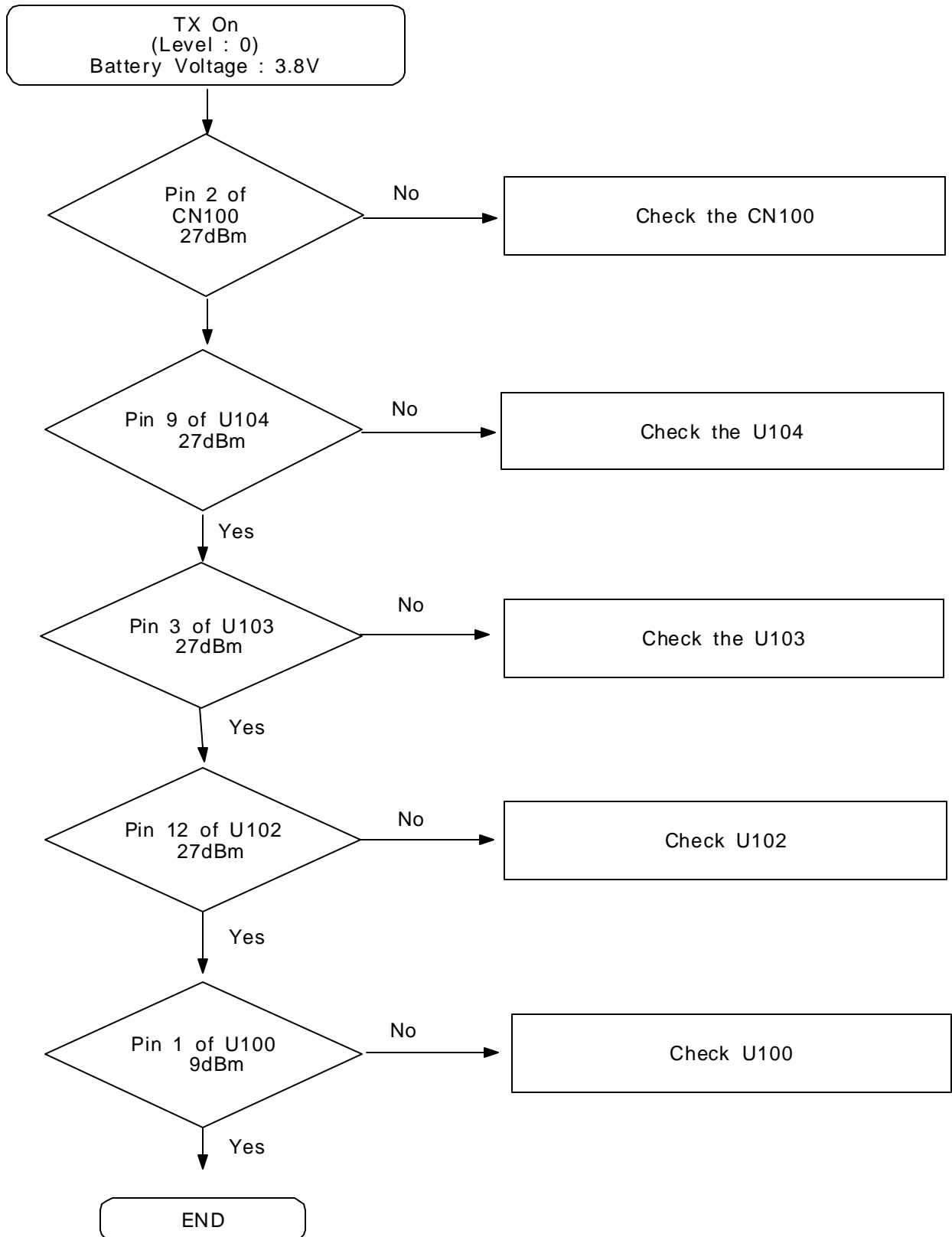
11. GSM Transmitter

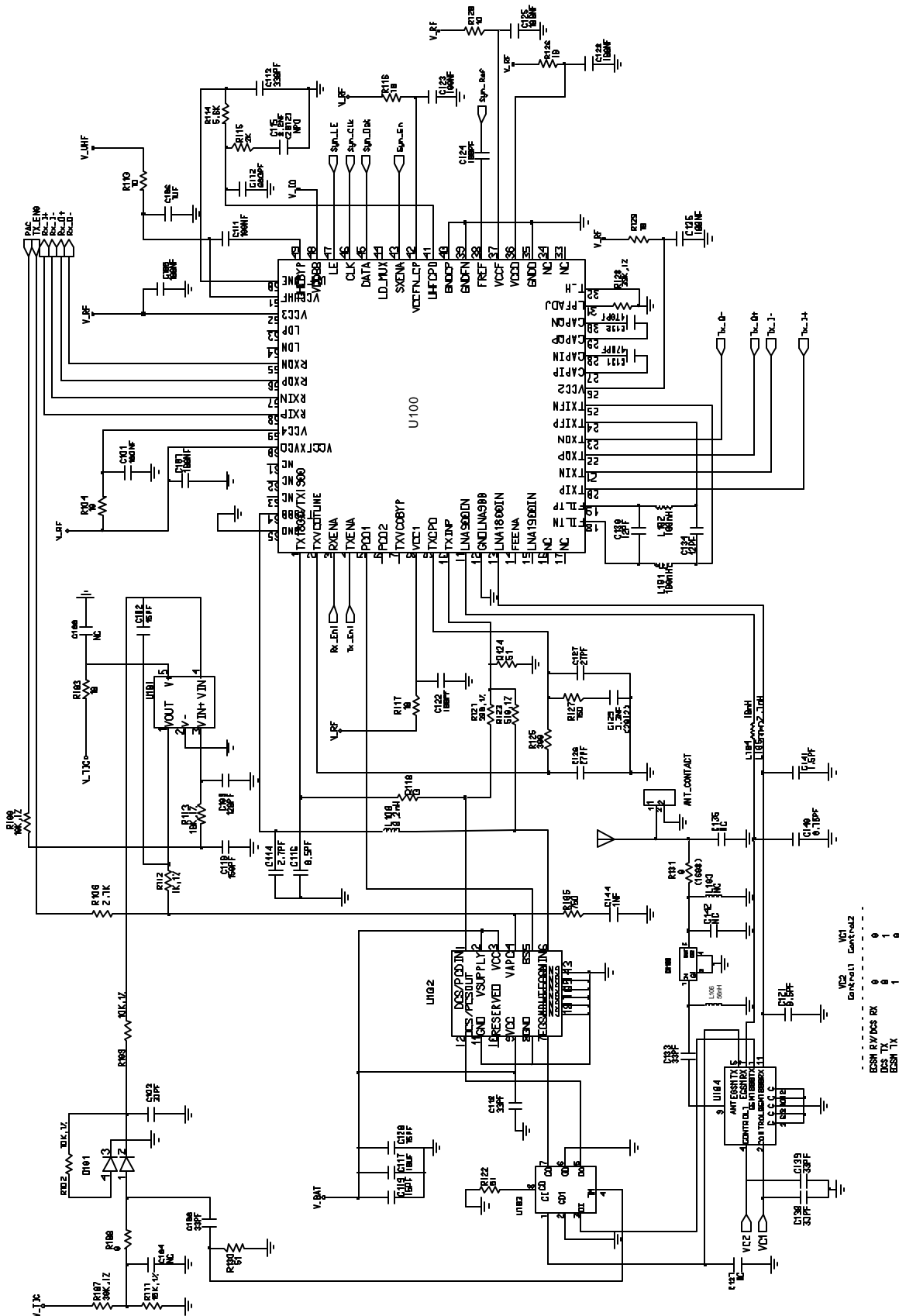


12. DCS Receiver

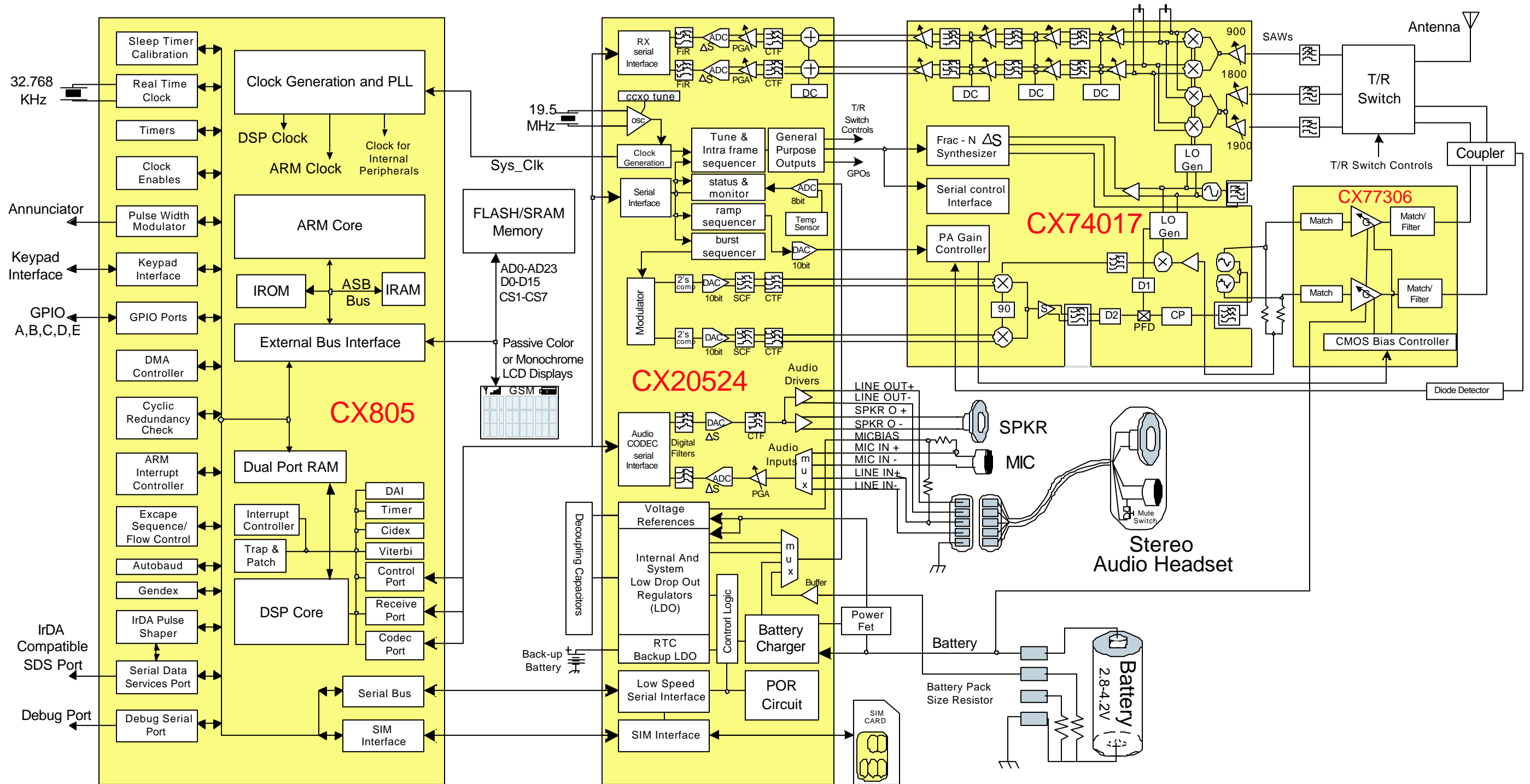


13. DCS Transmitter



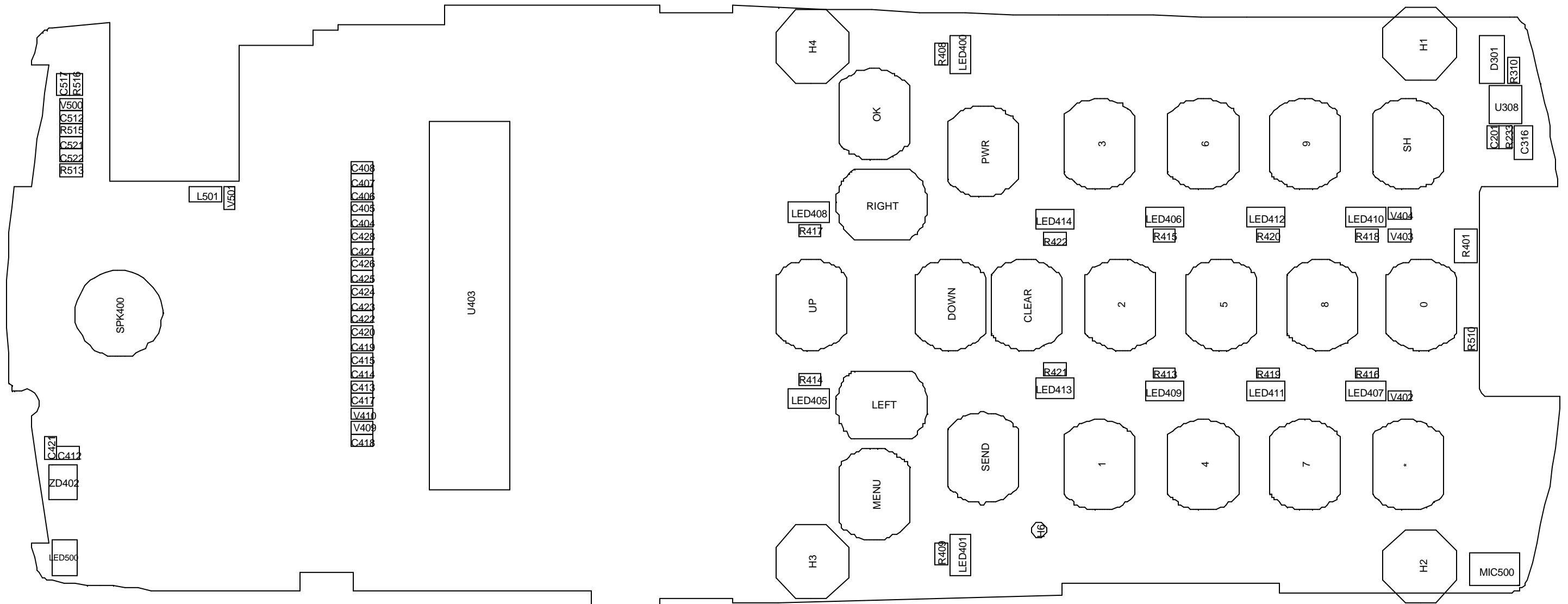


5. SGH-C100 Block Diagram

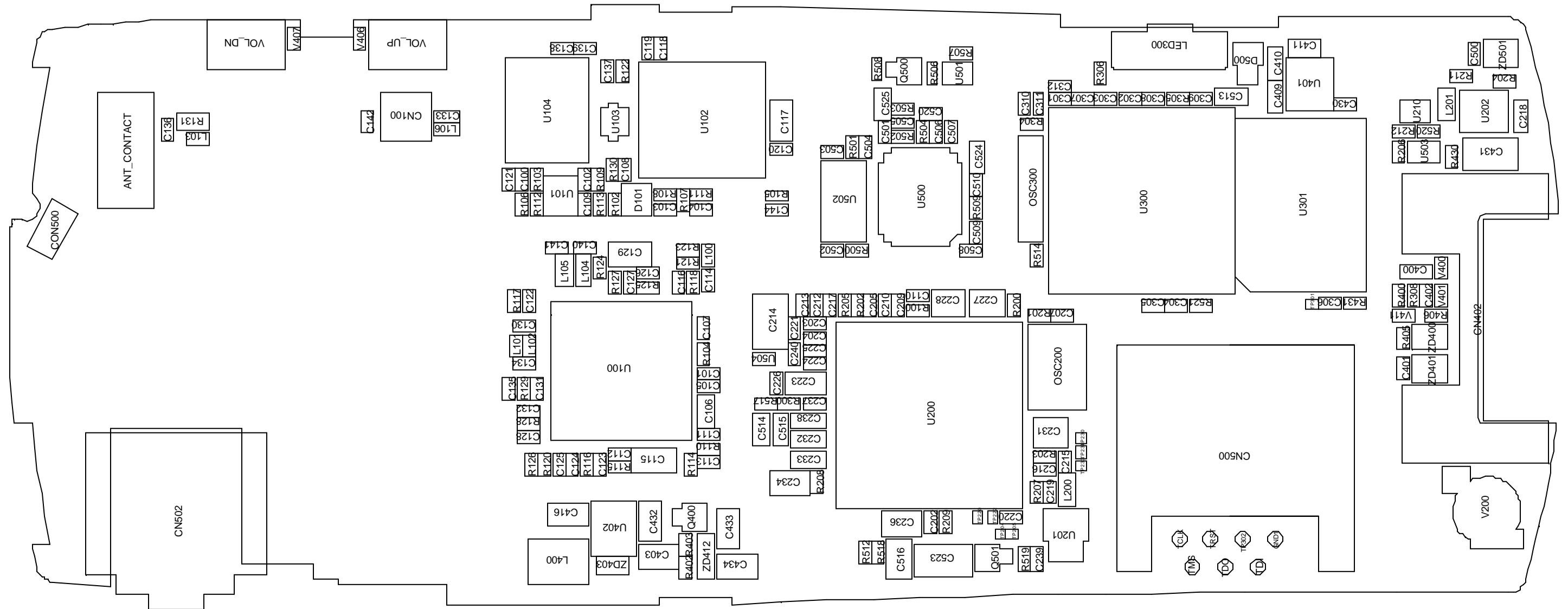


6. SGH-C100 PCB Diagrams

1. Main PCB Top Diagram



2. Main PCB Bottom Diagram





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