

SAMSUNG

GSM TELEPHONE
SGH-X105

SERVICE *Manual*

GSM TELEPHONE



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1. SGH-X105 Specification

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	-

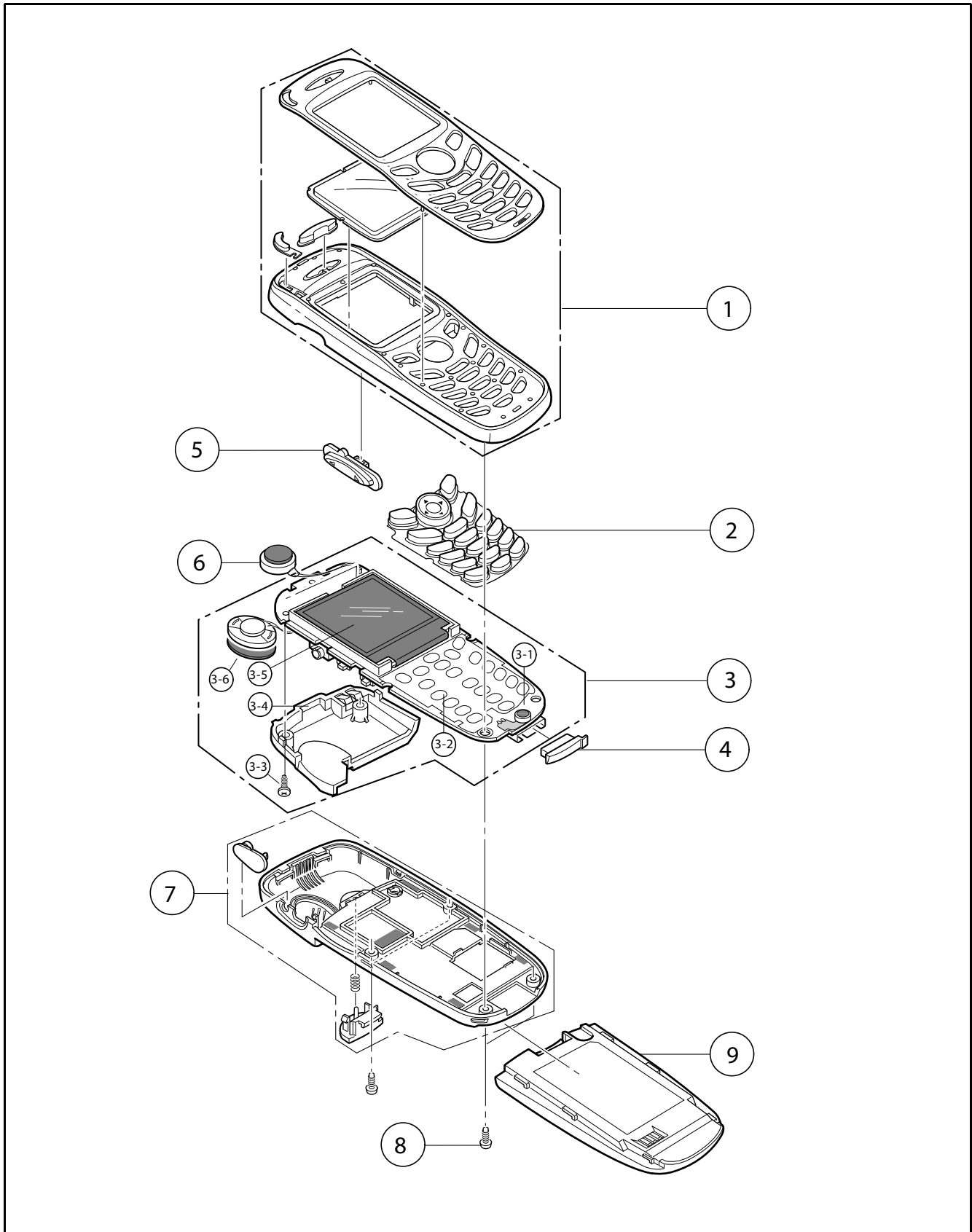
2. GSM TX power class

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	PCS1900
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-X105 Exploded View and its Parts list

1. Cellular phone Exploded View



2. Cellular phone Parts list

Location No.	Description	SEC CODE	Remark
1	FRONT COVER	GH75-03140A	
2	KEYPAD	GH75-03142A	
3	MAIN PBA	GH92-01510A	
3-1	MIC	GH30-00041A	
3-2	DOME SHEET	GH59-00942A	
3-3	SCREW	6001-001479	
3-4	INTENNA	GH42-00314A	
3-5	LCD	GH07-00385A	
3-6	SPEAKER	3001-001442	
4	CONNECTOR COVER	GH73-02097A	
5	VOLUME KEY	GH75-03143A	
6	MOTOR	GH31-00062A	
7	REAR COVER	GH75-03141A	
8	SCREW	6001-001479	
9	BATTERY	GH43-00980A	

3. Test Jig (GH80-00865A)



3-1. RF Test Cable
(GH39-00090A)



3-2. Test Cable
(GH00-00127A)



3-3. Serial Cable



3-4. Power Supply Cable



3-5. DATA CABLE
(GH39-00159A)



3-6. TA
(GH44-00184A)



3. SGH-X105 MAIN Electrical Parts List

SEC Code	Design LOC
2203-000812	C101,C103,C104,C216
2203-005061	C102,C106,C107,C113
2203-001598	C105
2203-006053	C108,C109,C110,C111
2203-006053	C112,C115,C117,C118
2203-006201	C114
2203-000233	C116,C125,C126,C127
2404-001268	C119,C120,C122
2203-000995	C121,C405
2203-005061	C123,C130,C207,C214
2203-000233	C128,C129,C205,C213
2203-006307	C131
2404-001164	C132
2203-005682	C133,C134,C135,C136
2203-005682	C137,C138,C139,C140
2203-005682	C141,C142,C143,C144
2203-005682	C145,C146,C147,C148
2203-005682	C149,C150,C151,C152
2203-001153	C153,C154,C155,C156
2203-001153	C157,C158,C159,C160
2203-001153	C161,C162,C241
2203-000679	C202,C203,C255,C311
2203-000654	C206,C426
2203-001405	C208,C310,C401,C403
2404-001086	C209,C218
2203-000812	C217,C226,C406,C427
2203-000438	C219,C430,C432,C434
2203-005061	C220,C224,C262,C309
2203-000233	C221,C236,C319,C321
2203-005065	C222,C225,C252
2203-005496	C223,C301,C302
2203-000359	C228
2203-000278	C229,C246,C257,C258
2203-000254	C230,C231,C232,C233
2203-000854	C235,C253,C261
2203-000254	C237,C238,C239,C240
2203-005052	C242

SEC Code	Design LOC
2404-001105	C245,C250
2404-001282	C247
2203-001072	C248,C251
2203-000386	C254
2203-005056	C259
2203-005503	C260
2203-000254	C303,C304,C305,C306
2203-000254	C307,C308,C312,C329
2203-005061	C315,C316,C324,C330
2203-000628	C320,C322
2203-002525	C326
2203-000233	C327,C328,C333,C402
2203-005061	C331
2203-005480	C332
2203-001405	C404,C407,C411,C424
2203-002677	C408,C410
2203-000233	C414,C419,C440
2203-005234	C415,C416
2203-000278	C417,C425,C433
2404-001134	C420,C421
2203-000254	C423,C435,C437,C438
2203-002668	C429
2203-001405	C431
2203-000438	C436
2203-000254	C439
3709-001250	CN100
3710-001105	CN101,CN205
3710-001611	CN201
3710-001853	CN202
3705-001287	CN400
3722-001880	CN401
0407-000115	D100
2901-001260	F105,F106,F107,F108
2901-001260	F109
2909-001191	F400
2904-001410	F401
2703-002112	L100

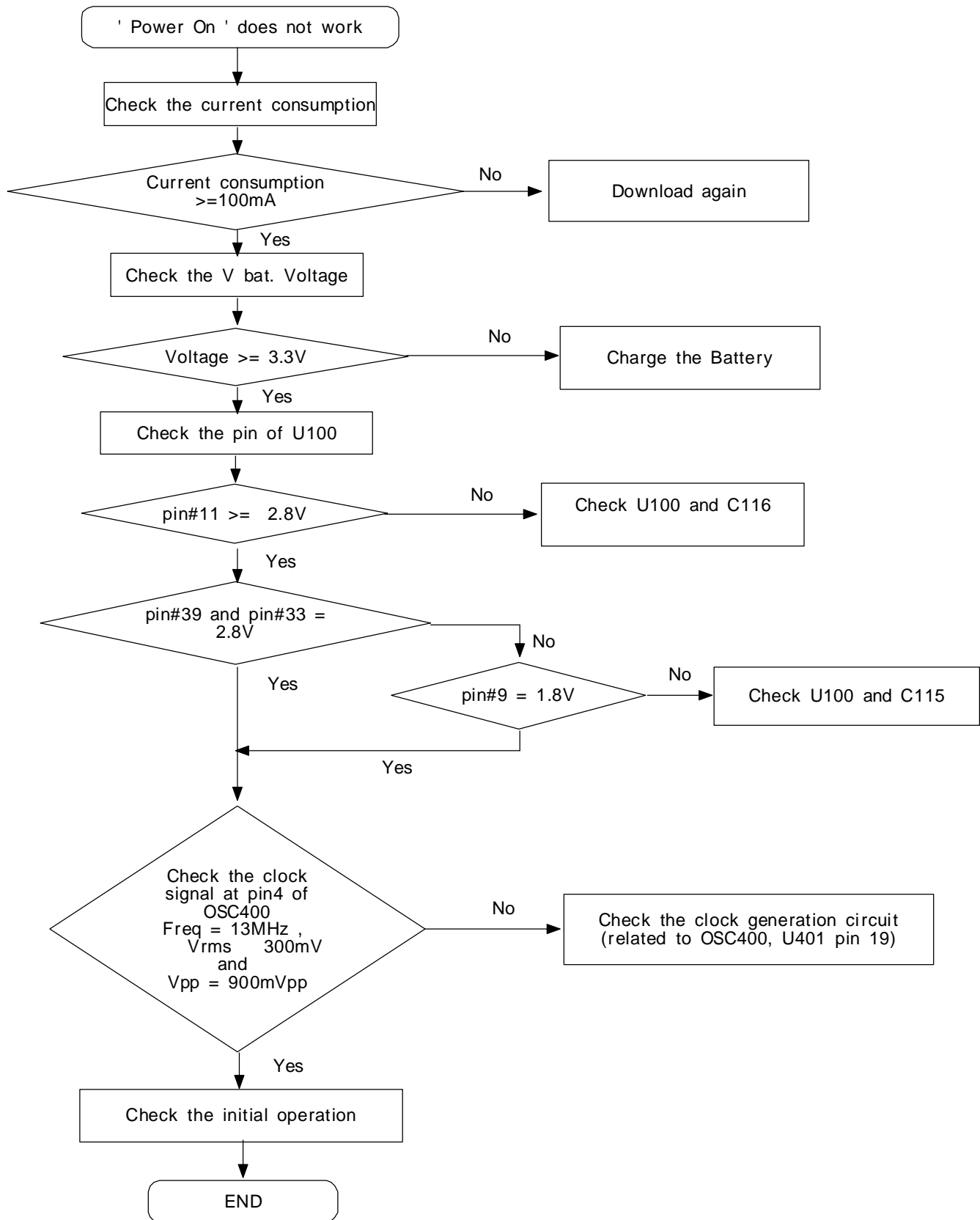
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2703-002313	L301
2703-001907	L402
2703-001207	L404
2703-001751	L405
2703-001543	L406
2703-001737	L407
0601-001647	LED100,LED101,LED102
0601-001647	LED103,LED106,LED107
0601-001647	LED108,LED109,LED110
0601-001647	LED111,LED112,LED113
0601-001402	LED200
4302-001130	M1
2801-003856	OSC300
2809-001260	OSC400
0504-001113	Q100
0502-001201	Q101
0504-000168	Q102,Q400
0504-000167	Q200,Q201
0504-001042	Q203,Q204,Q205
2007-000174	R101,R102,R103,R104
2007-000174	R105,R106,R107,R108
2007-000174	R109,R111
2007-000171	R112,R115,R209,R217
2007-000758	R113,R242
2007-007137	R114
2007-003010	R117,R118,R119,R120
2007-003010	R121,R122,R123,R124
2007-003010	R125,R126,R127,R128
2007-007142	R129,R130,R306
2007-007139	R131
2007-001323	R132
2007-002965	R133,R135
2007-000151	R134,R204,R205,R208
2007-000162	R202,R212,R218,R234
2007-007014	R203
2007-000775	R206
2007-001325	R210,R211

SEC Code	Design LOC
2007-000148	R213,R230,R415
2007-000636	R214
2007-007200	R215,R216
2007-000141	R219,R225
2007-001119	R220
2007-000171	R221,R222,R224,R236
2007-000140	R223,R231,R232,R233
2007-000157	R228,R229,R301,R304
2007-000140	R235,R239,R246,R247
2007-000171	R237,R238,R243,R248
2007-007590	R240
2007-000165	R241
2007-000139	R244
2007-000138	R245,R416
2007-000172	R249,R251,R313,R314
2007-000171	R250,R312,R317,R320
2007-000170	R302
2007-007107	R305
2007-007573	R308,R310
2007-000172	R315
2007-000157	R316
2007-000171	R401,R406
2007-000029	R402
2007-003010	R403
2007-001311	R404,R405
2007-001291	R407
2007-001307	R408,R409
2007-000162	R410
2007-001306	R412,R417
2007-000242	R413
2007-002797	R414
3404-001152	SW201,SW202
1203-002902	U100
1203-002127	U101
0506-001052	U102
1203-001518	U103
1203-002633	U105

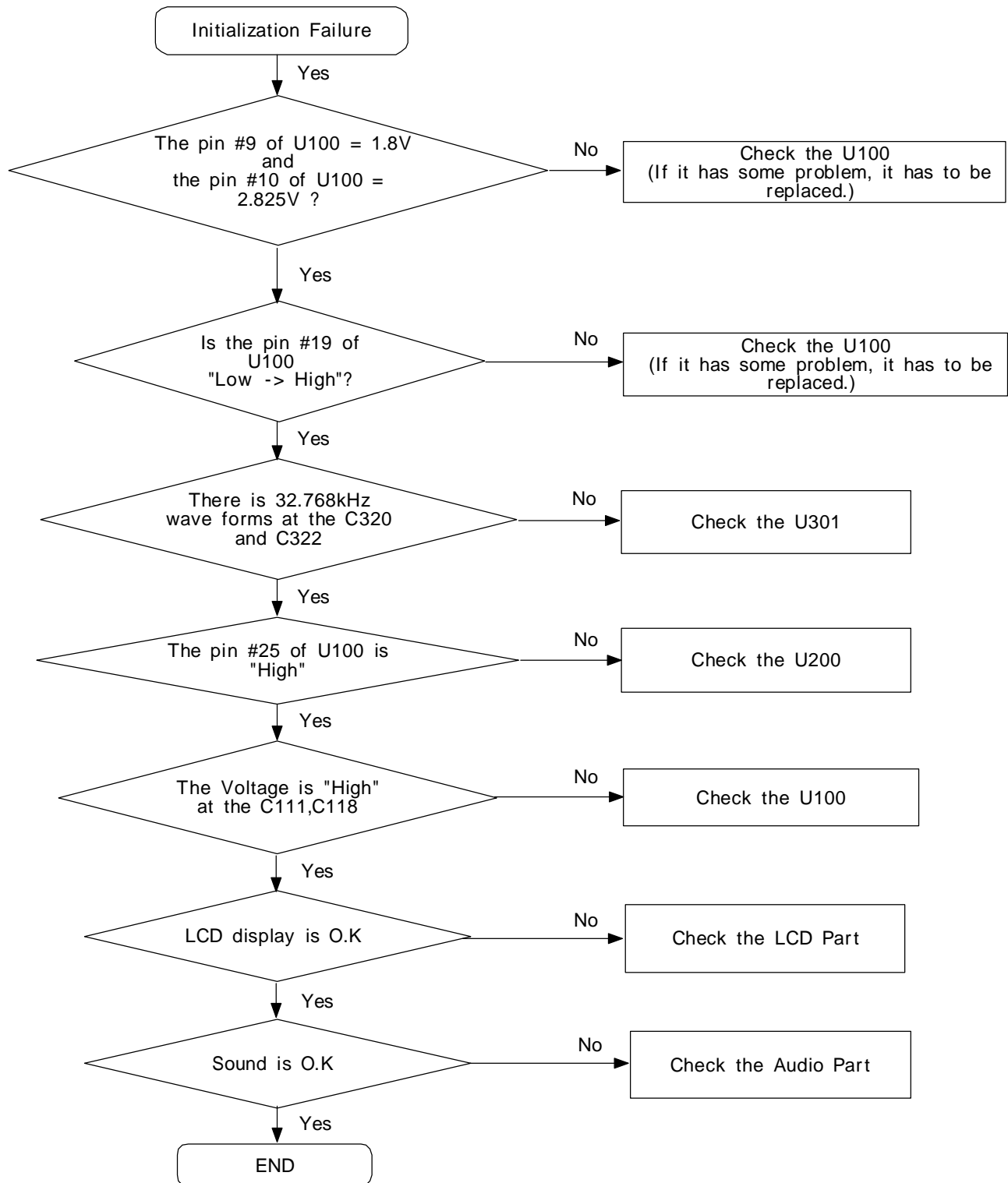
SEC Code	Design LOC
1204-001984	U200
1204-001261	U201
GH09-00024A	U301
1209-001219	U302
1109-001278	U304
1205-002185	U400
1205-002268	U401
1201-001954	U402
1209-001434	U403
0801-002345	U404
1405-001112	ZD101,ZD113
0404-001172	ZD111
0406-001167	ZD112
0403-001446	ZD114
0403-001427	ZD205
1405-001082	ZD206,ZD207,ZD208
1405-001018	ZD209,ZD219
1405-001082	ZD218,ZD404,ZD409
1405-001082	ZD410,ZD411
0406-001083	ZD412,ZD413,ZD414

4. SGH-X105 Flow Chart of Troubleshooting

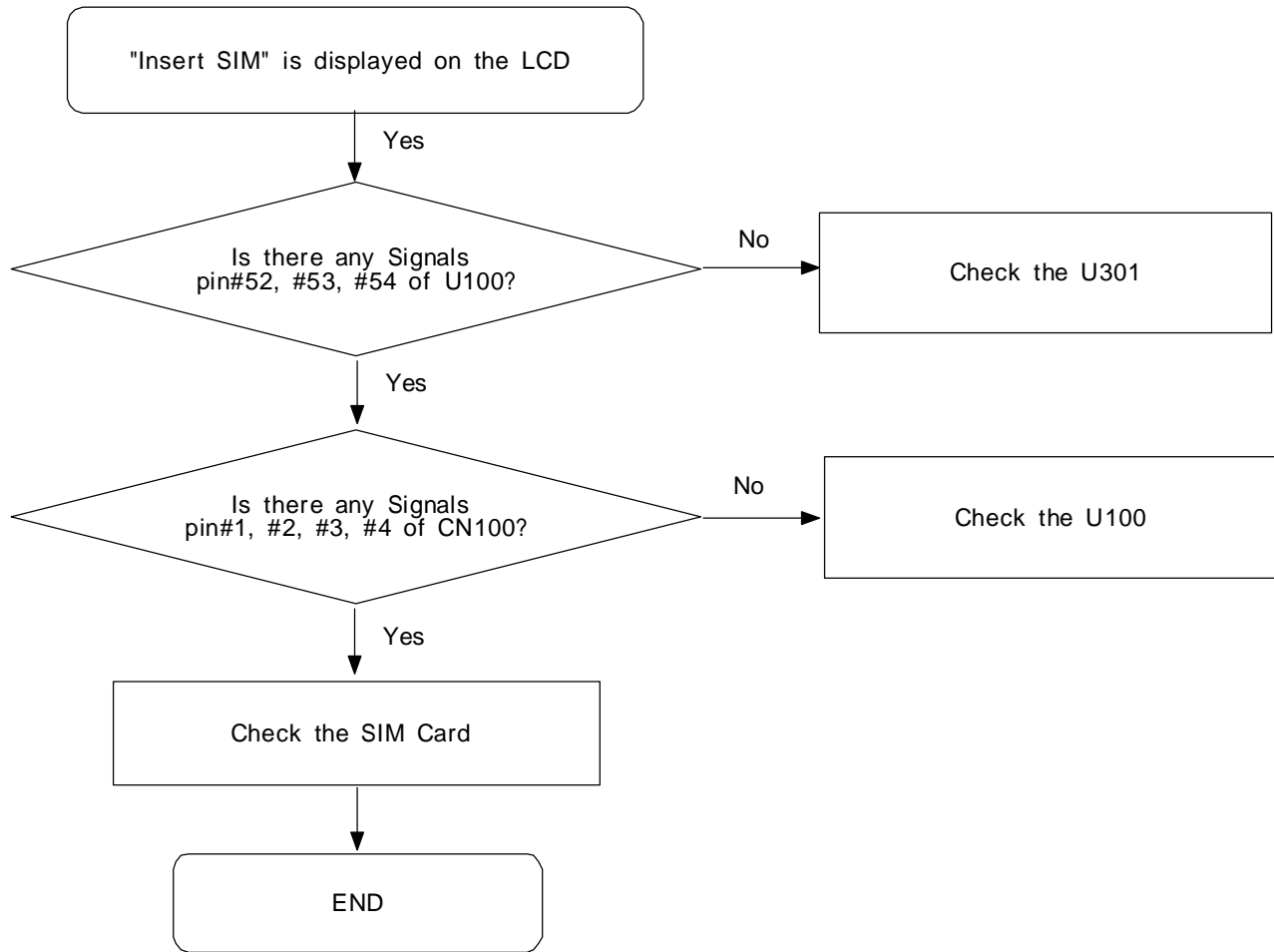
1. Power On

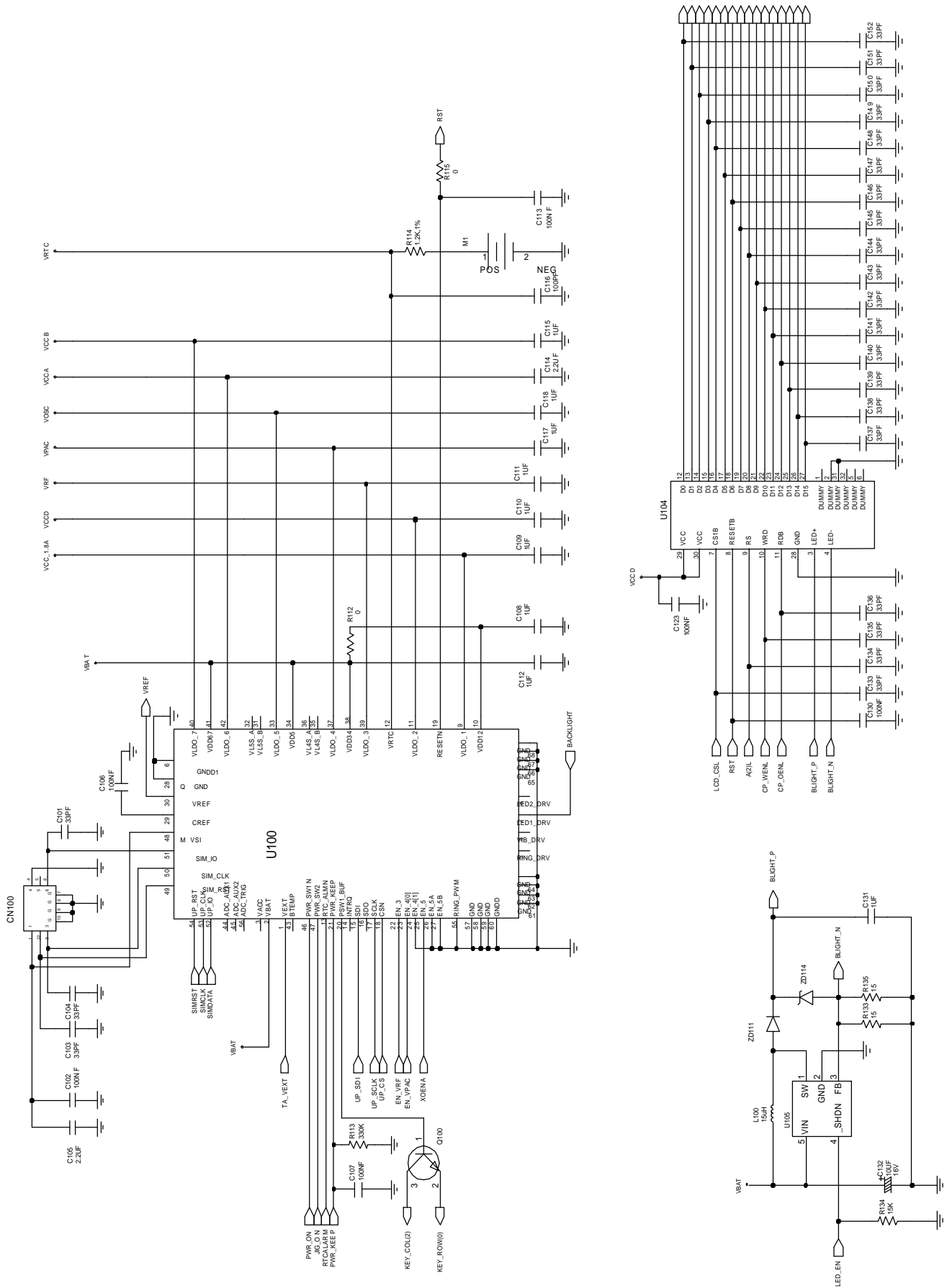


2. Initial

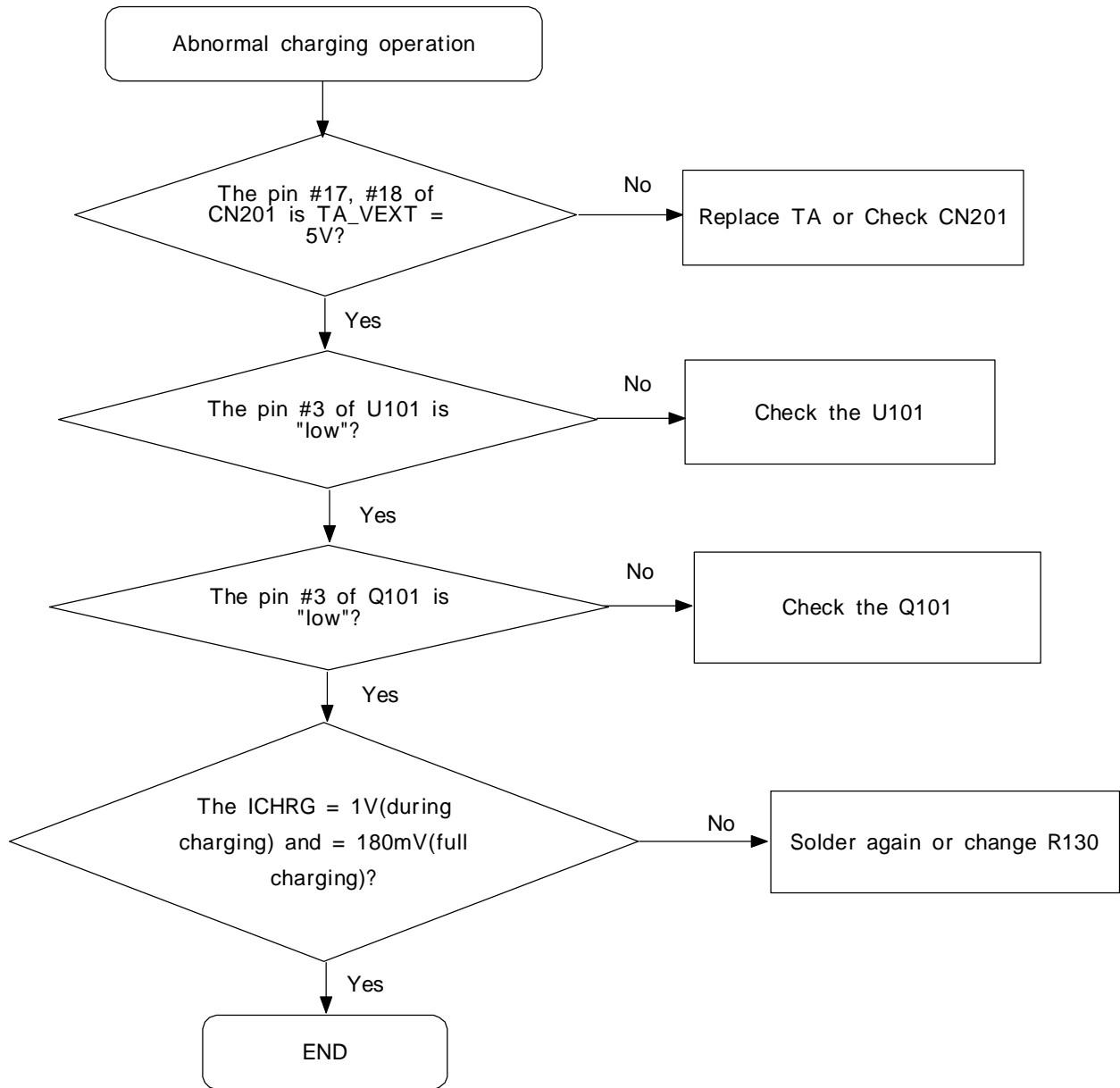


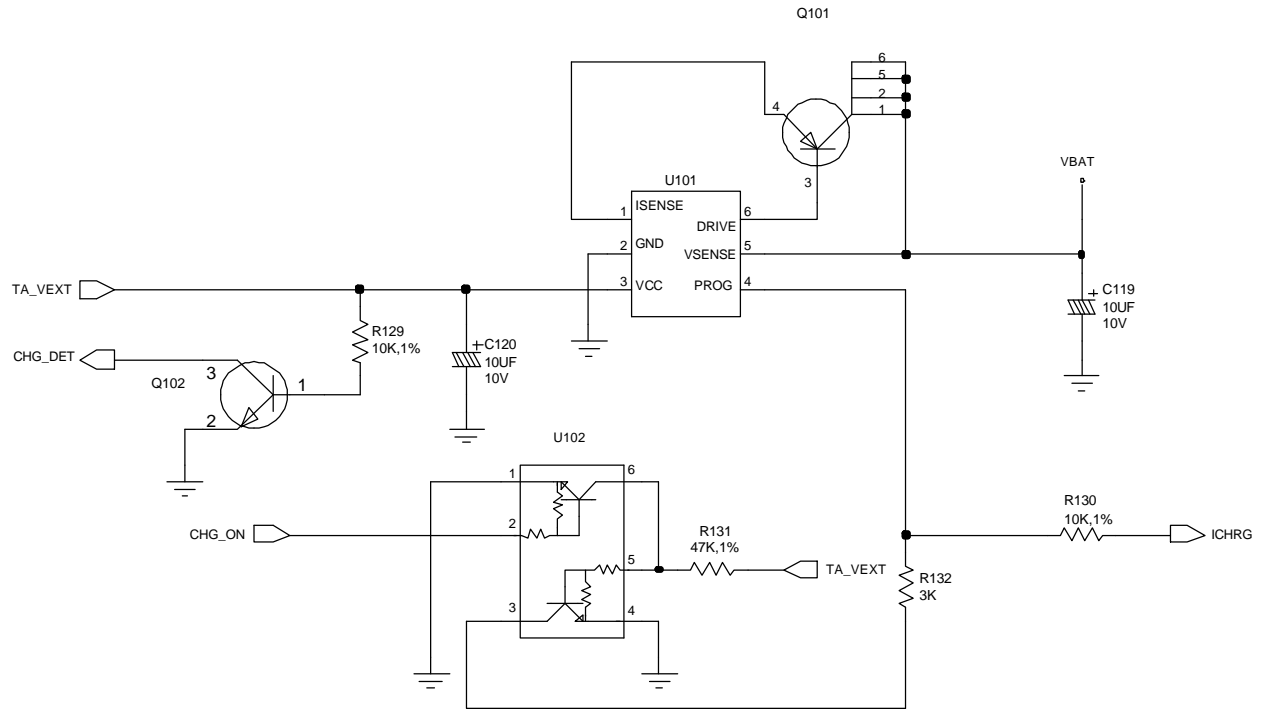
3. Sim Part



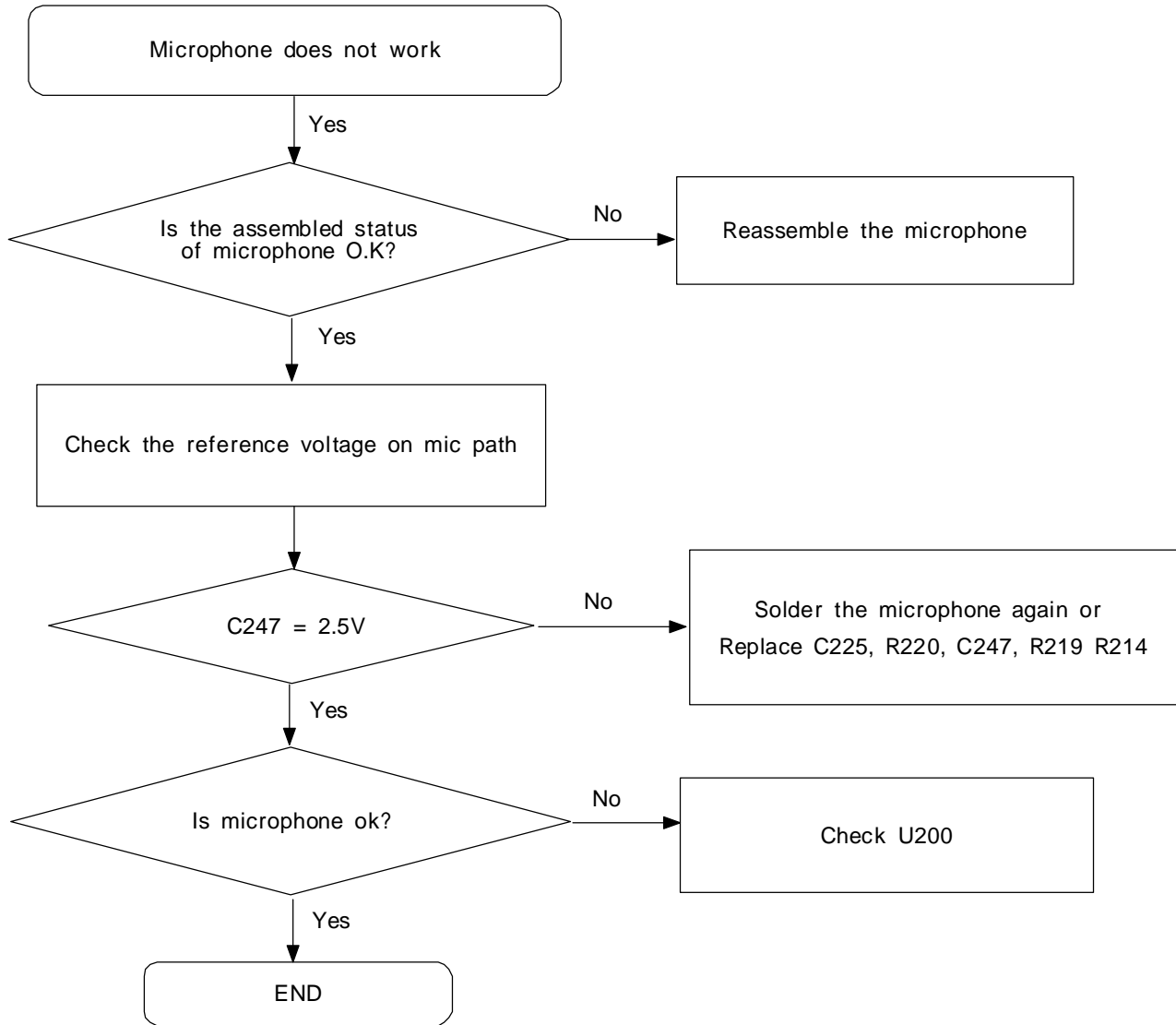


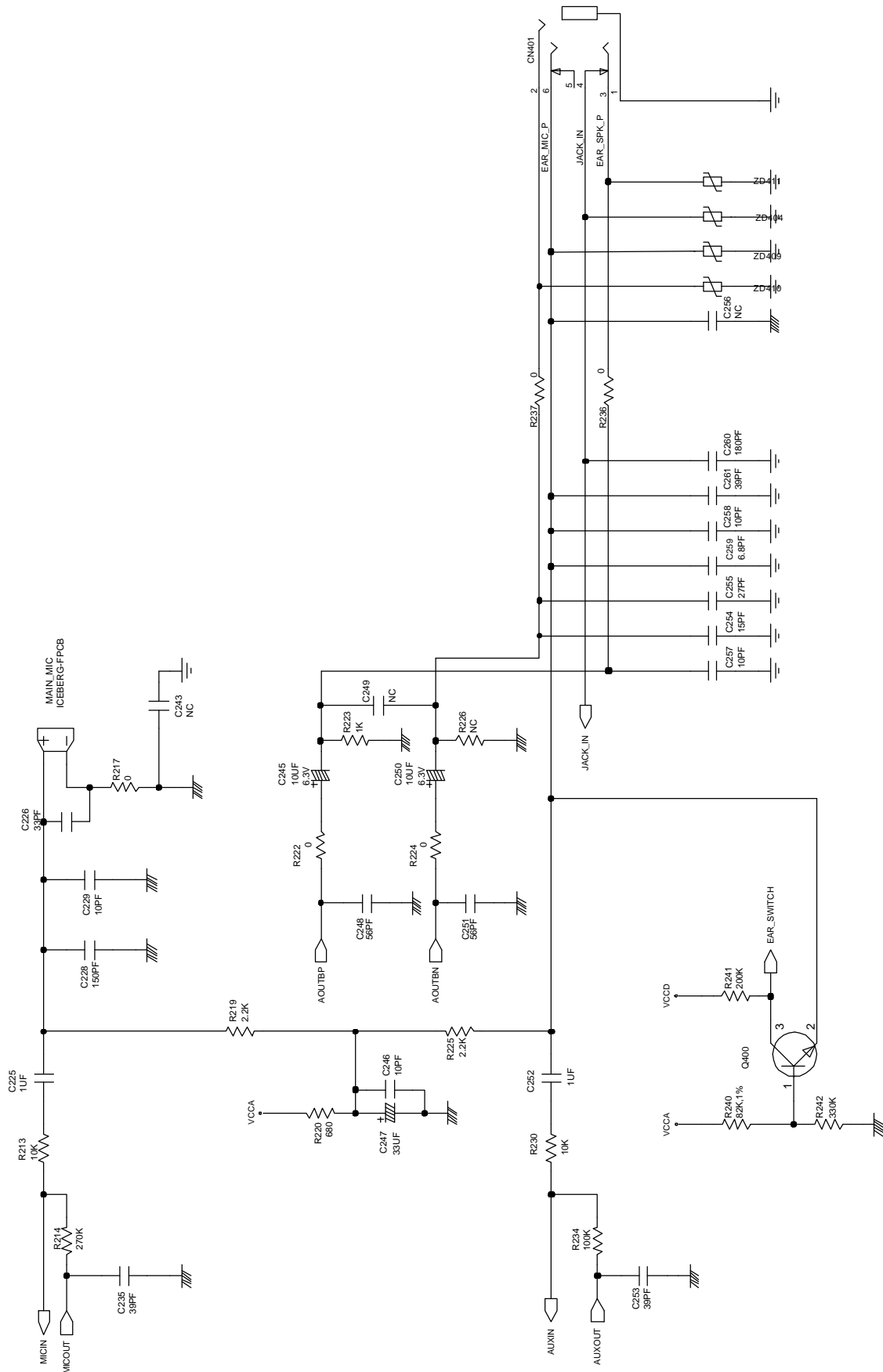
4. Charging Part





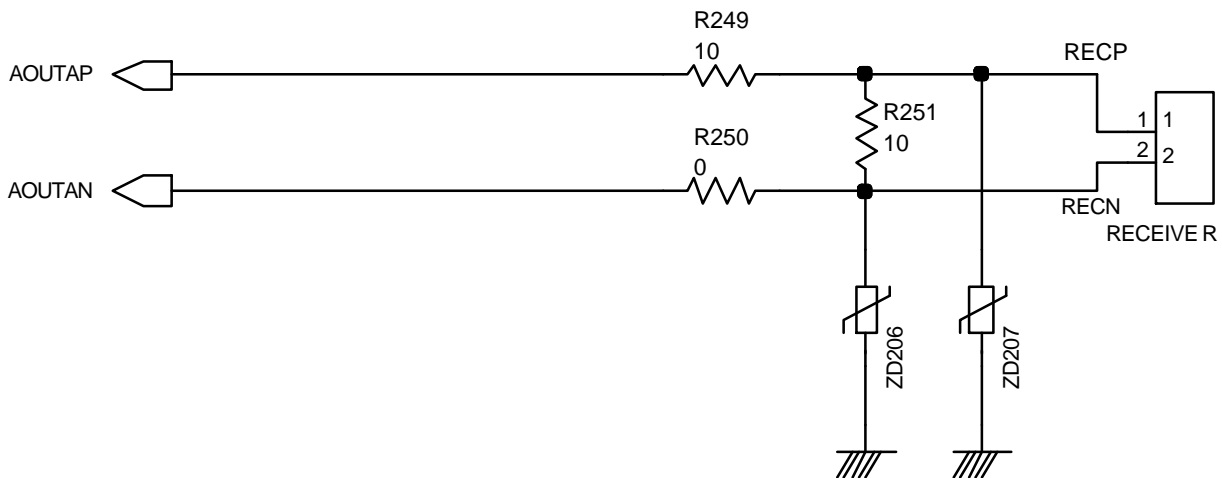
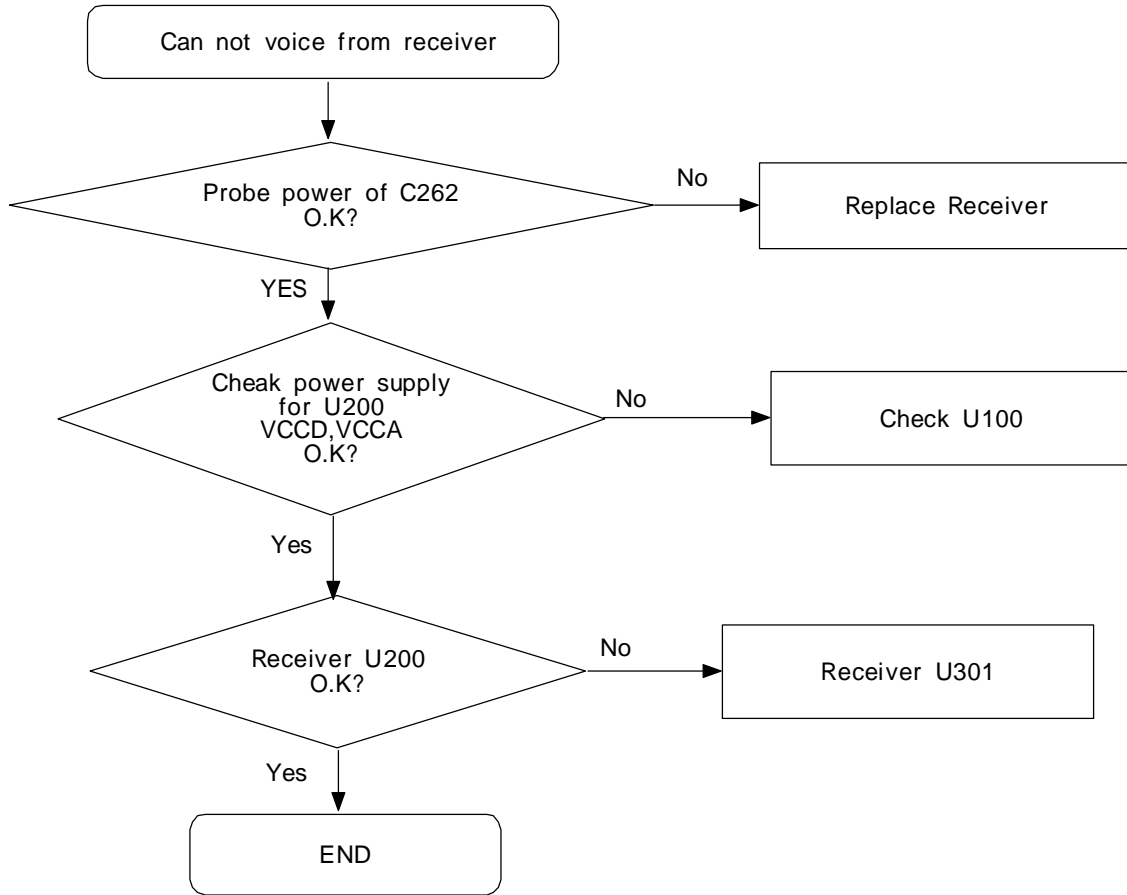
5. Microphone Part





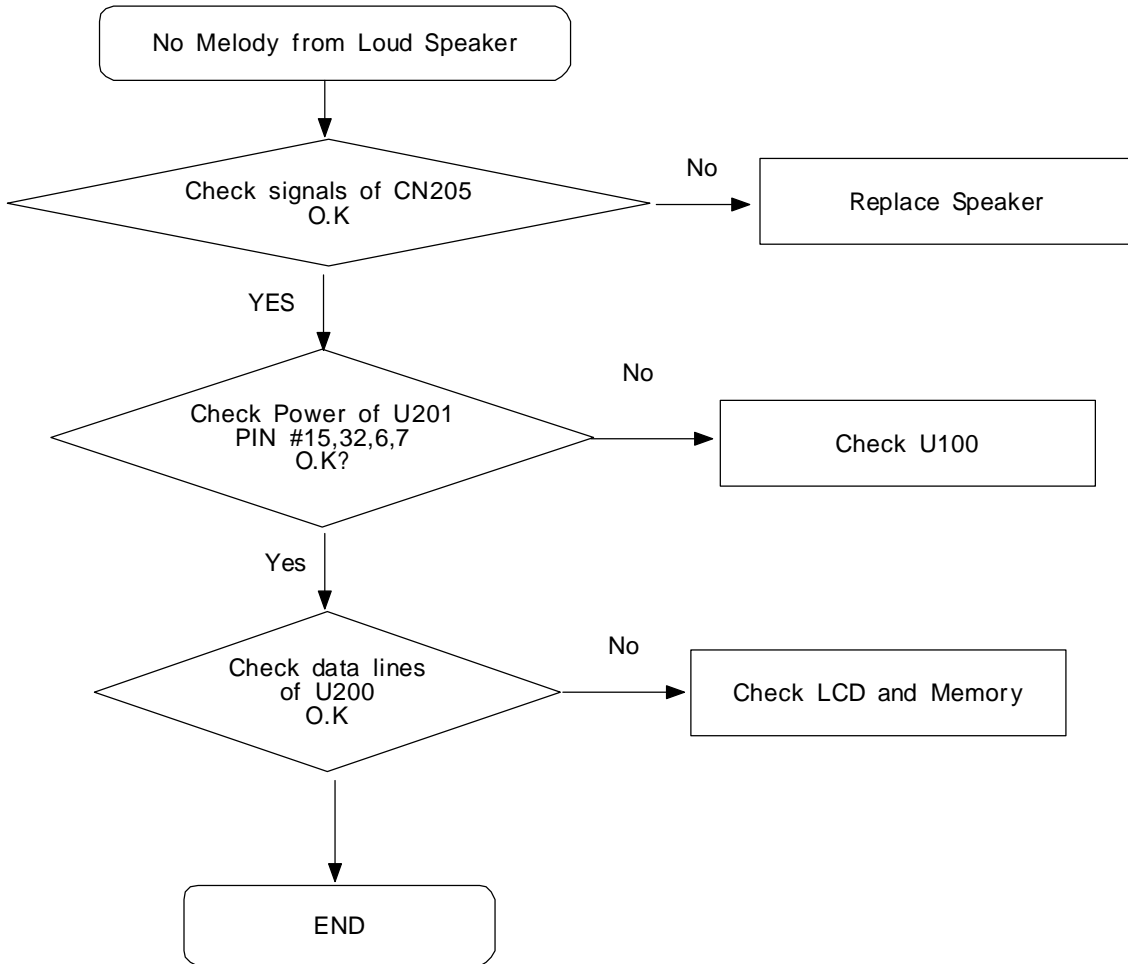
6. Speaker Part

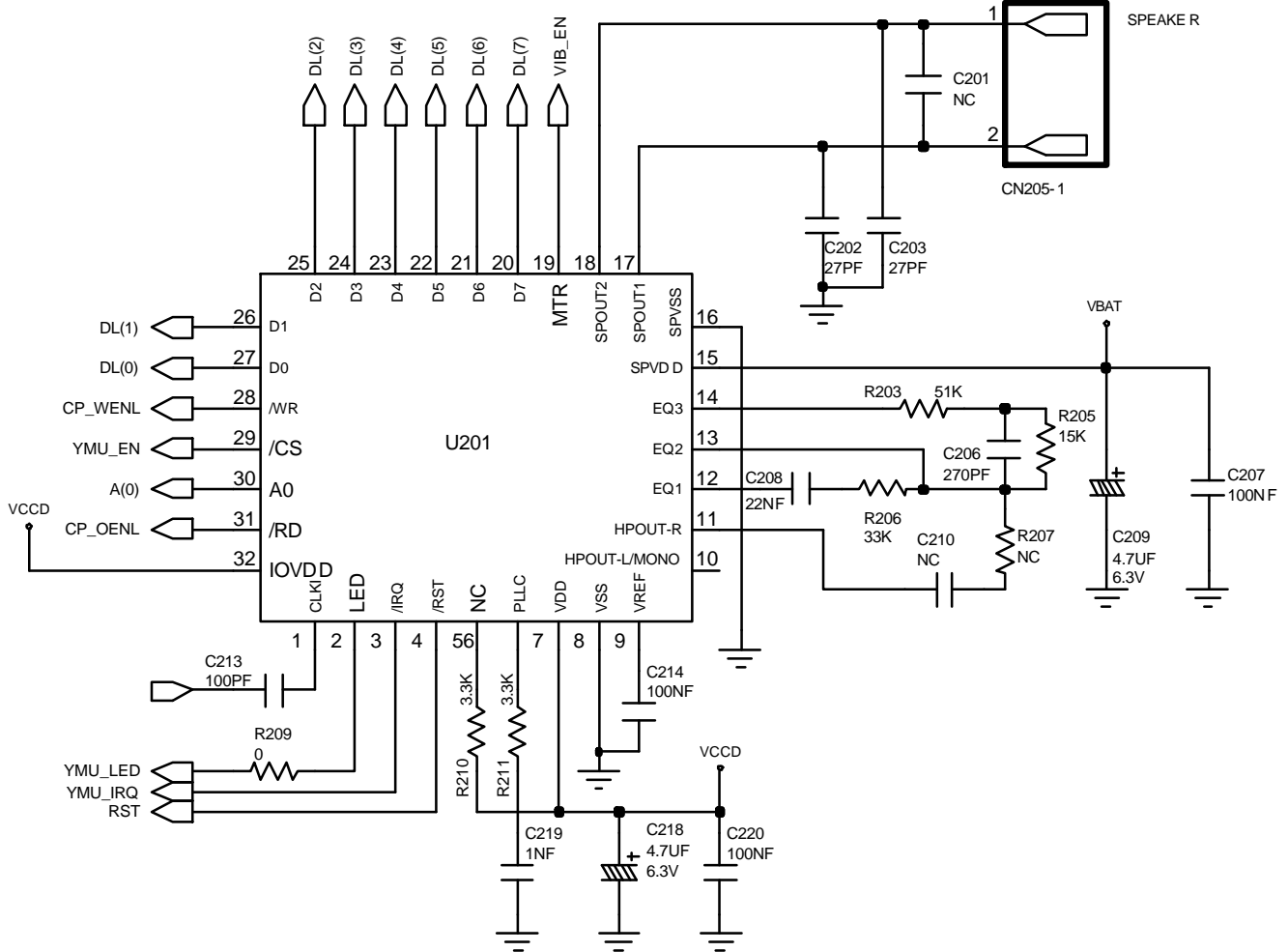
Receiver



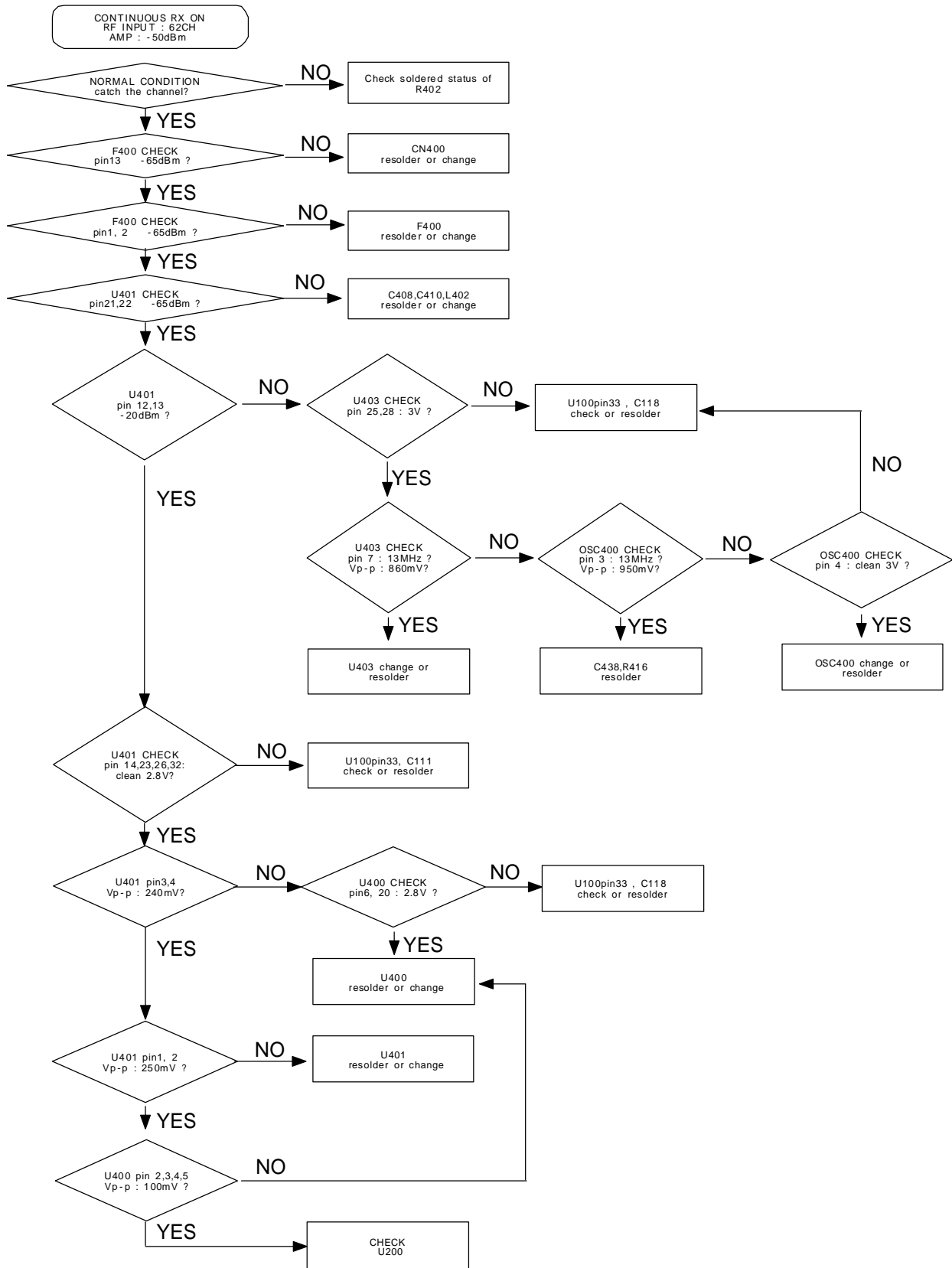
7. Speaker Part

Loud speaker

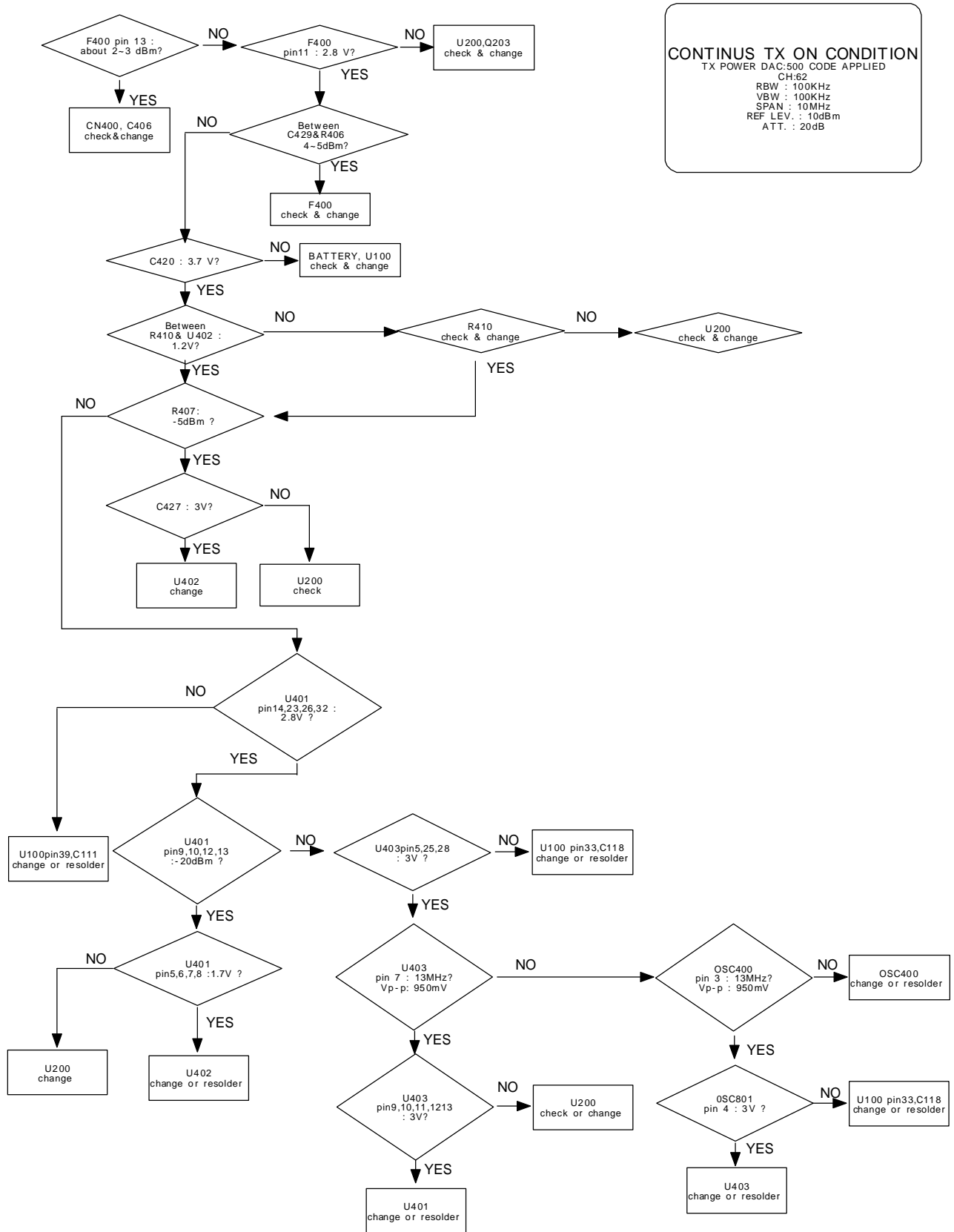




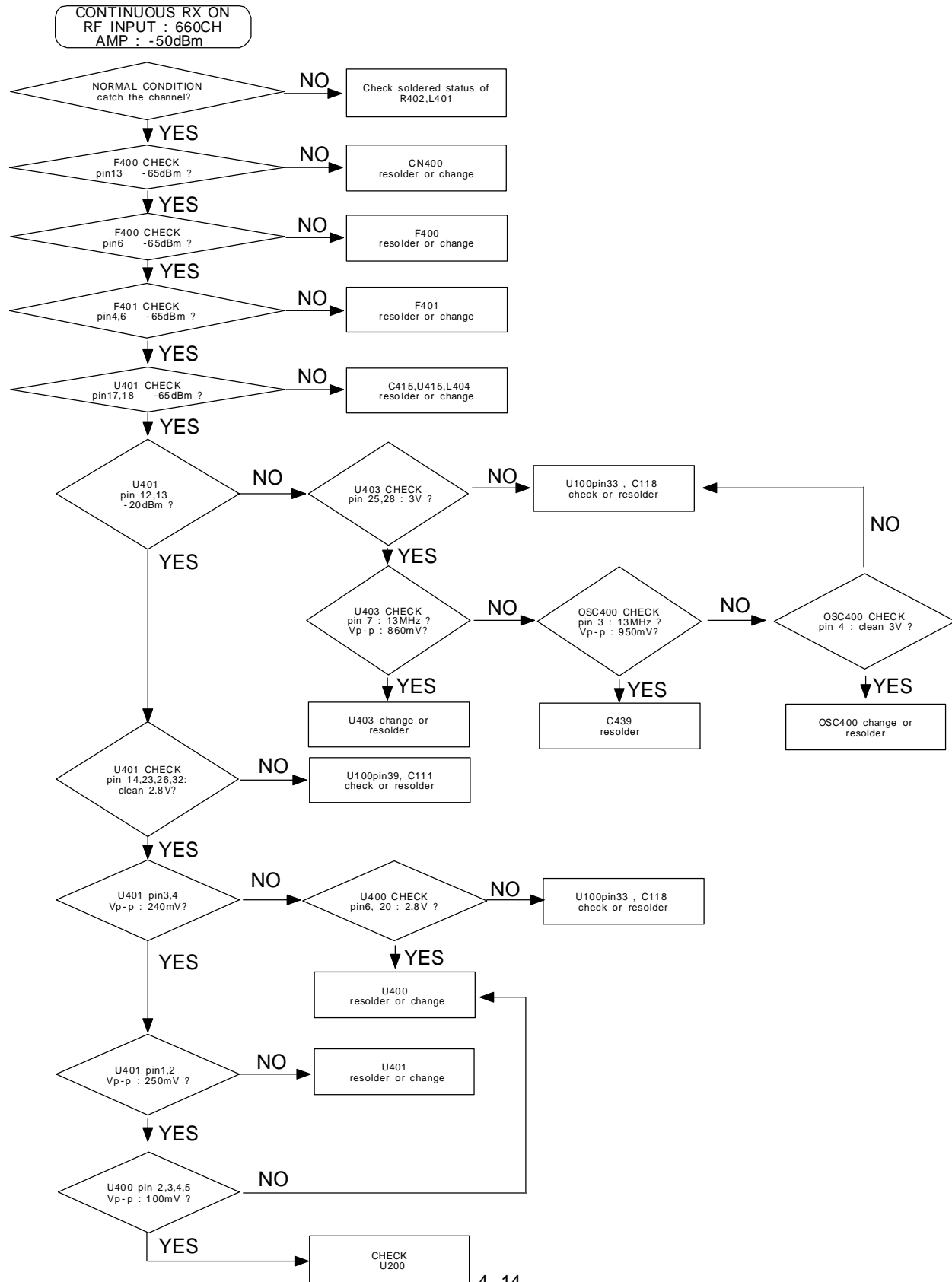
8. EGSM Reciever



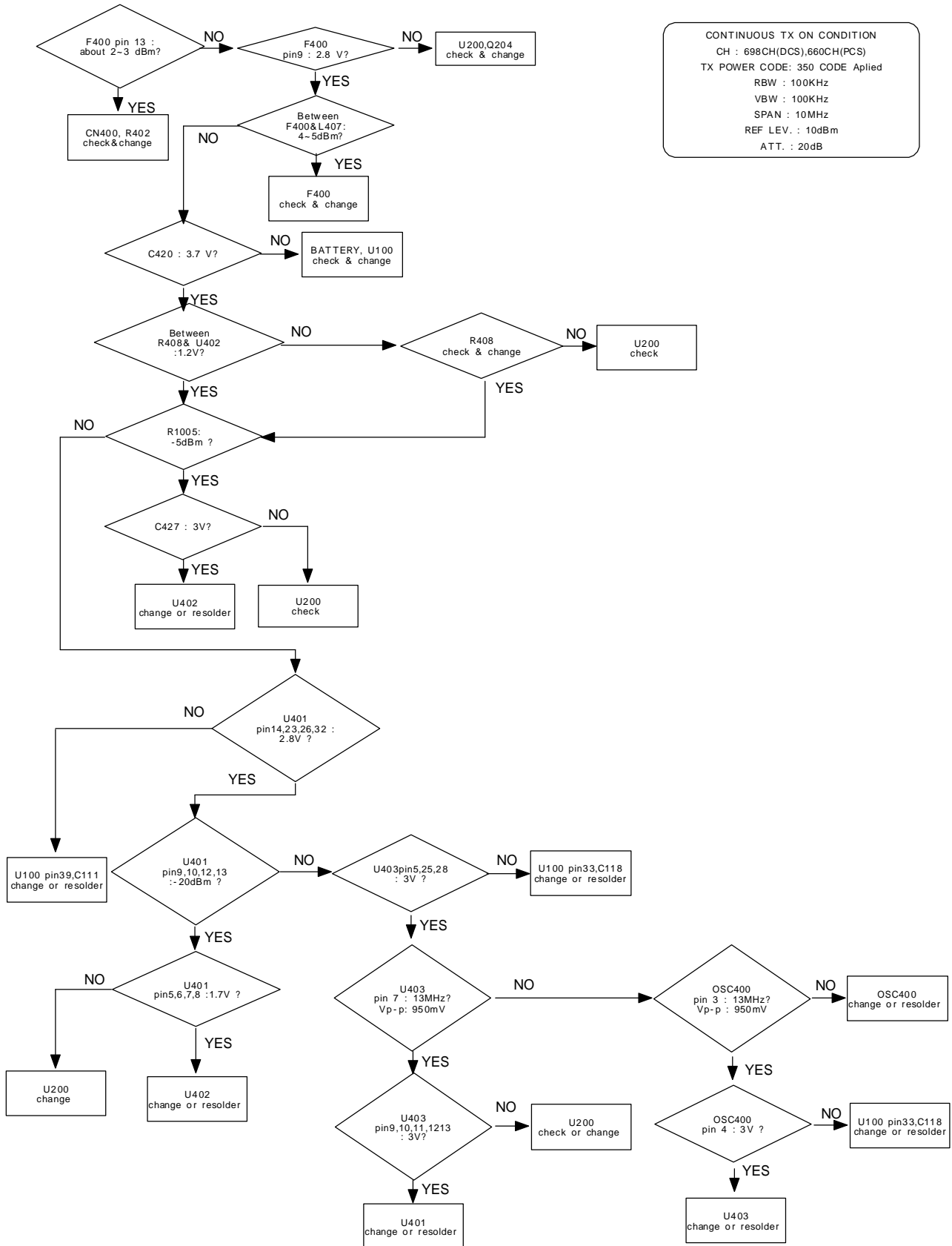
9. EGSM transmitter



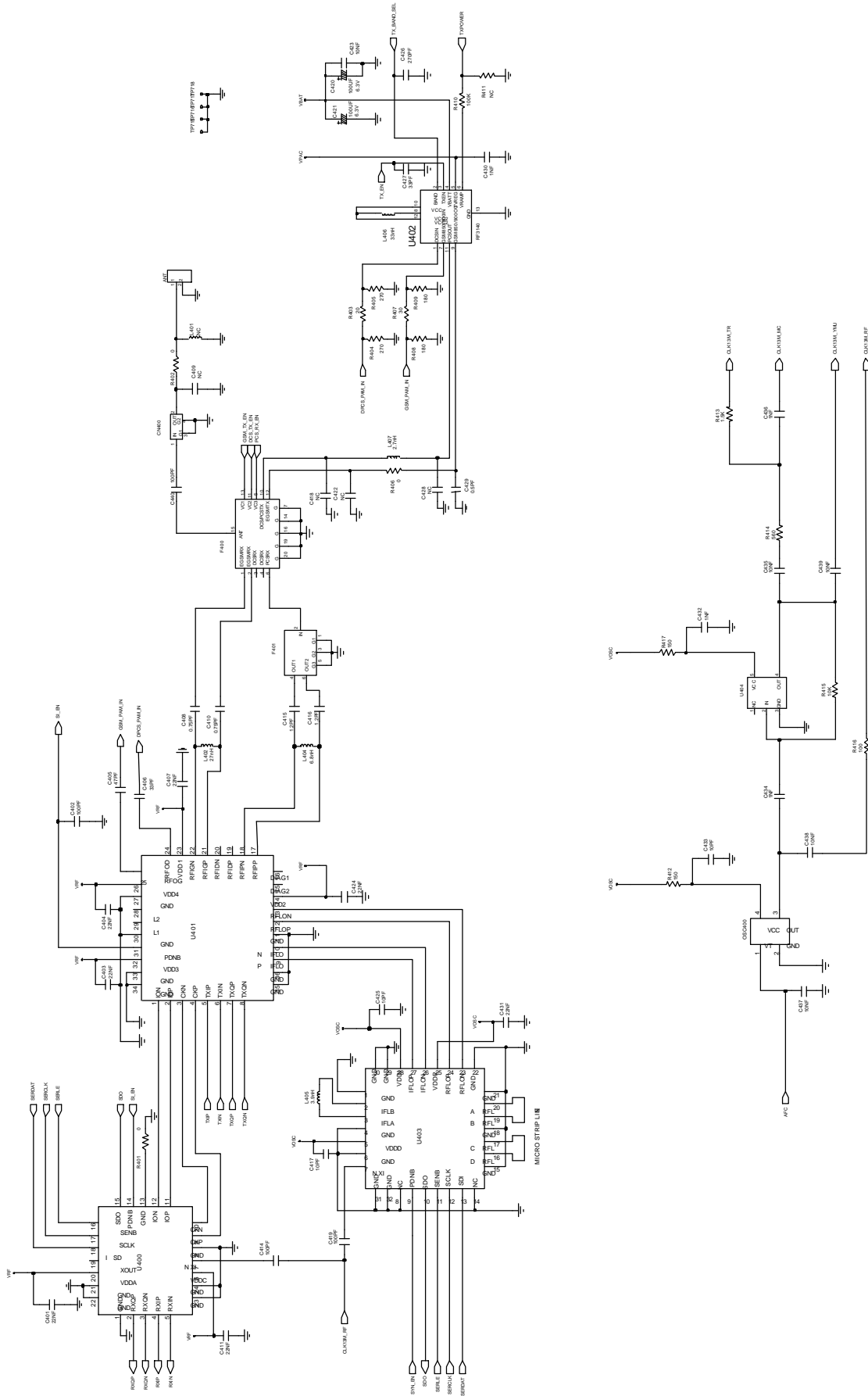
10. PCS Reciever



11. PCS transmitter

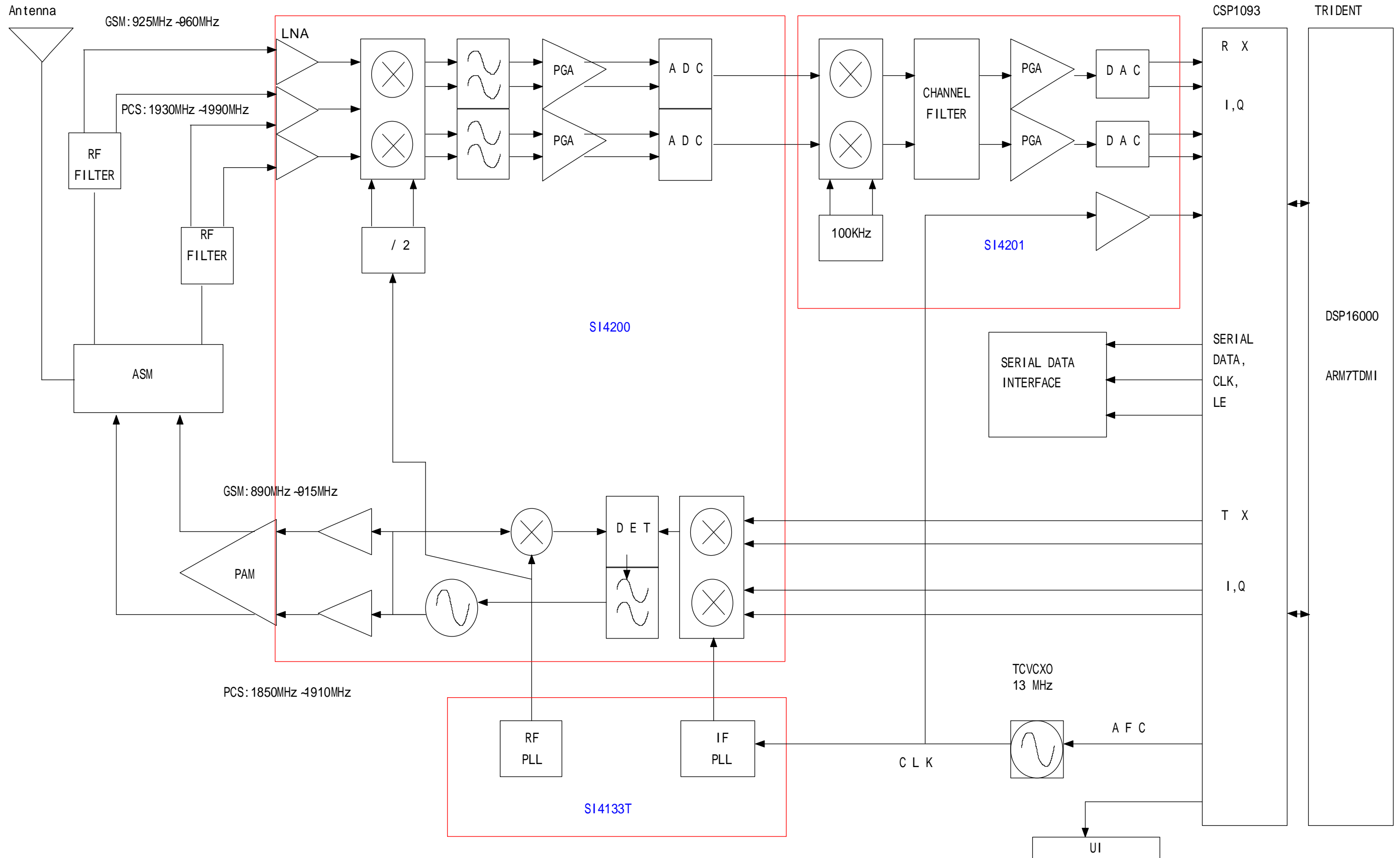


CONTINUOUS TX ON CONDITION
 CH : 698CH(DCS),660CH(PCS)
 TX POWER CODE: 350 CODE Applied
 RBW : 100KHz
 VBW : 100KHz
 SPAN : 10MHz
 REF LEV. : 10dBm
 ATT. : 20dB

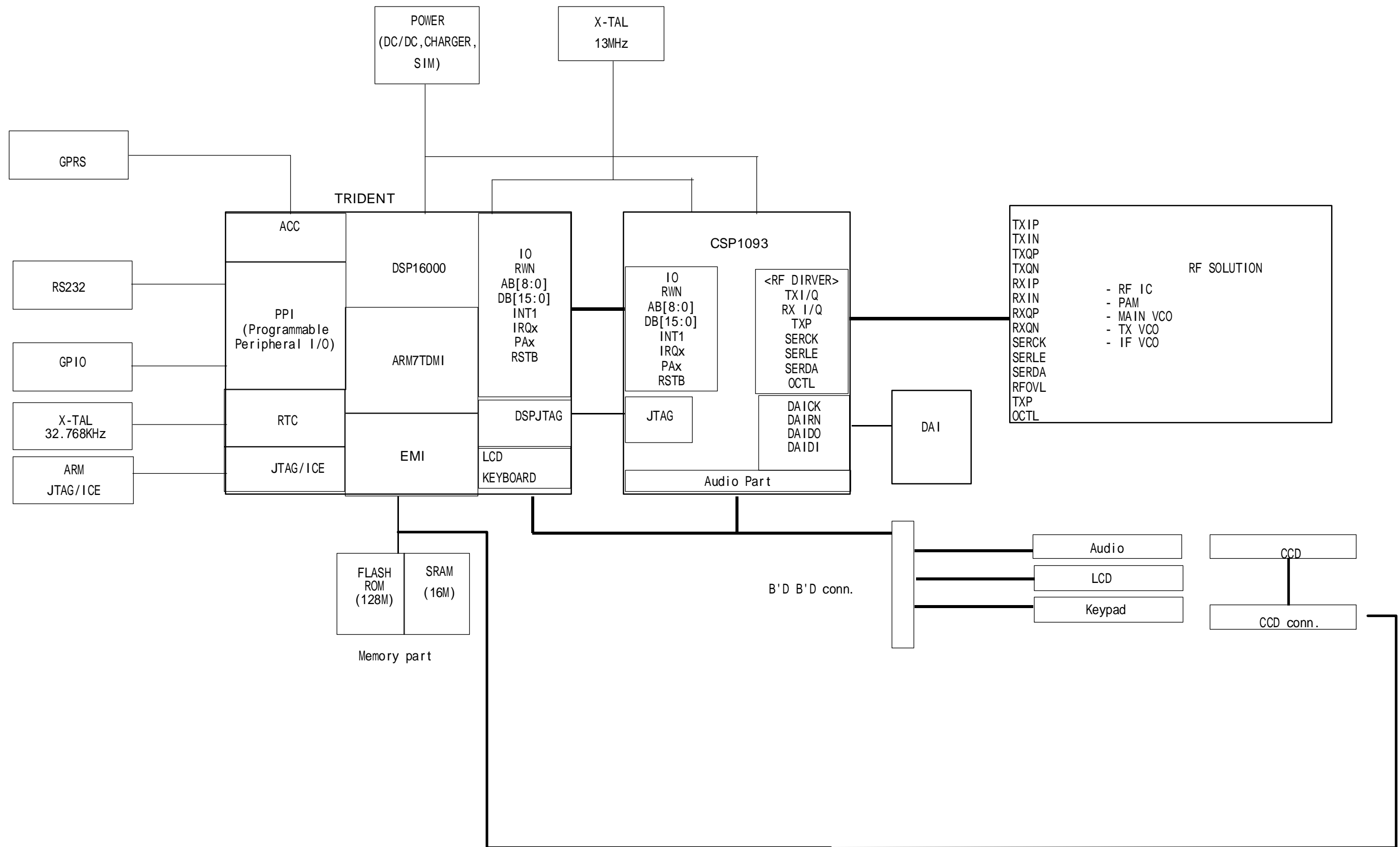


5. SGH-X105 Block Diagrams

1. RF Solution Block Diagram

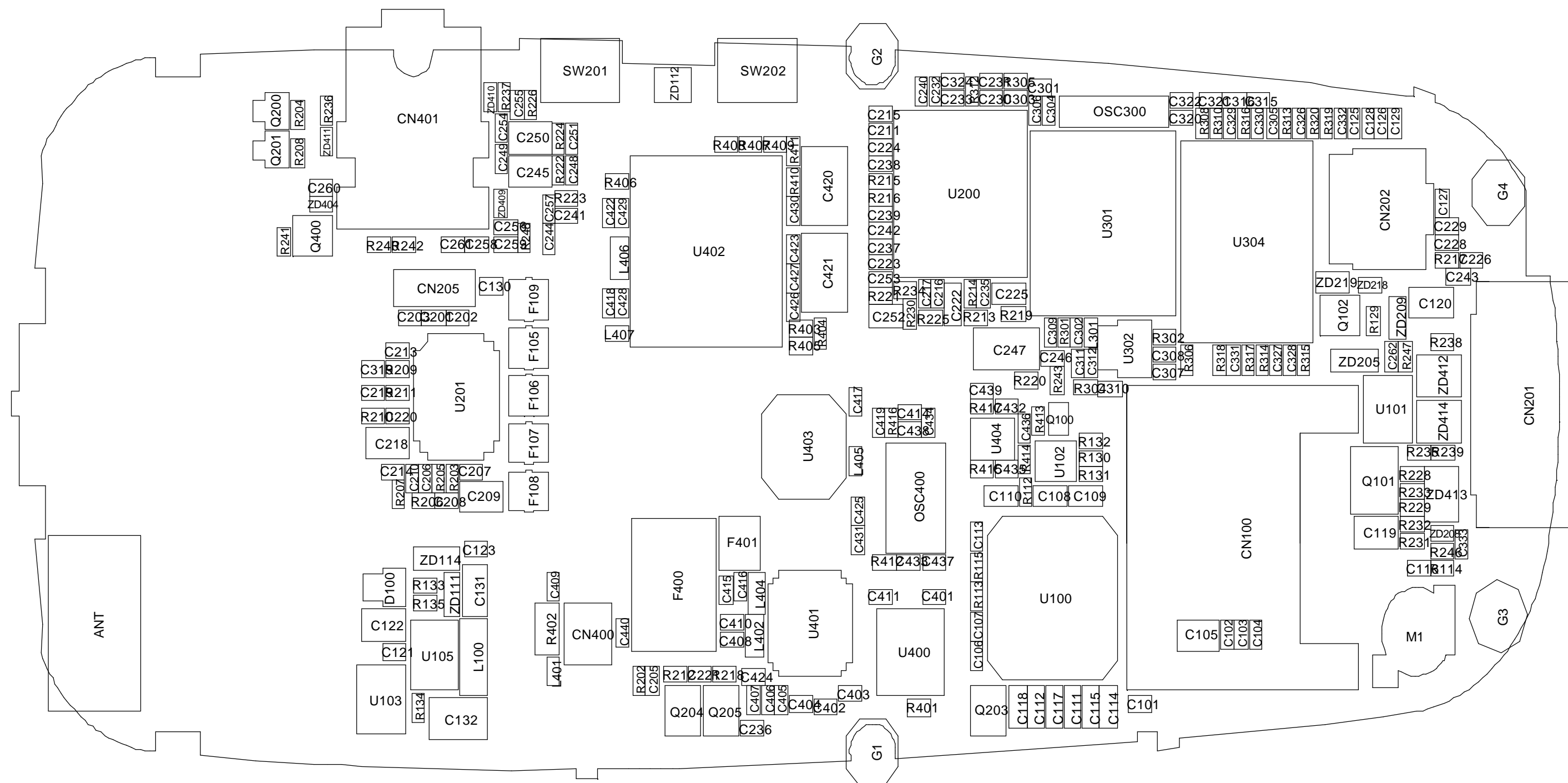


2. Base Band Solution Block Diagram



6. SGH-X105 PCB Diagrams

1. Main PCB Top Diagram



2. Main PCB Bottom Diagram

