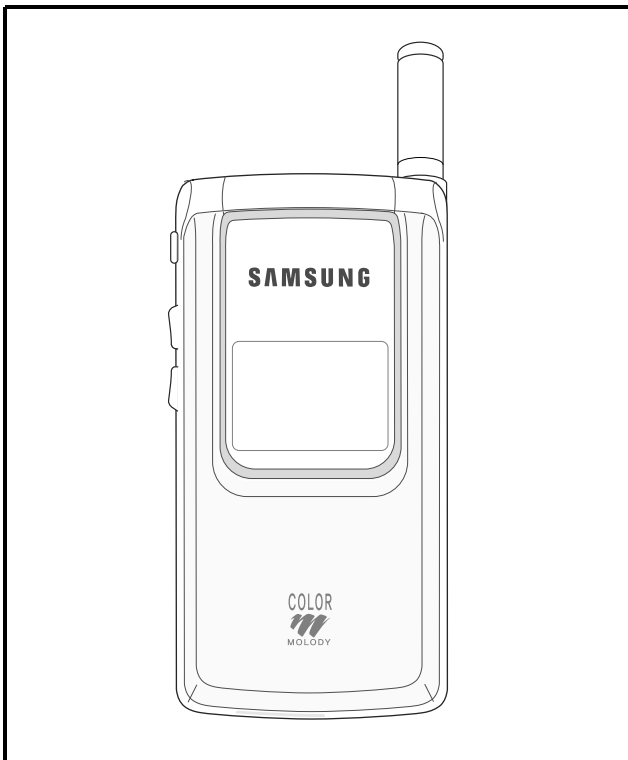


SAMSUNG

**GSM TELEPHONE
SGH-S200**

***SERVICE* Manual**

GSM TELEPHONE



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1. Specification
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1. SGH-S200 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

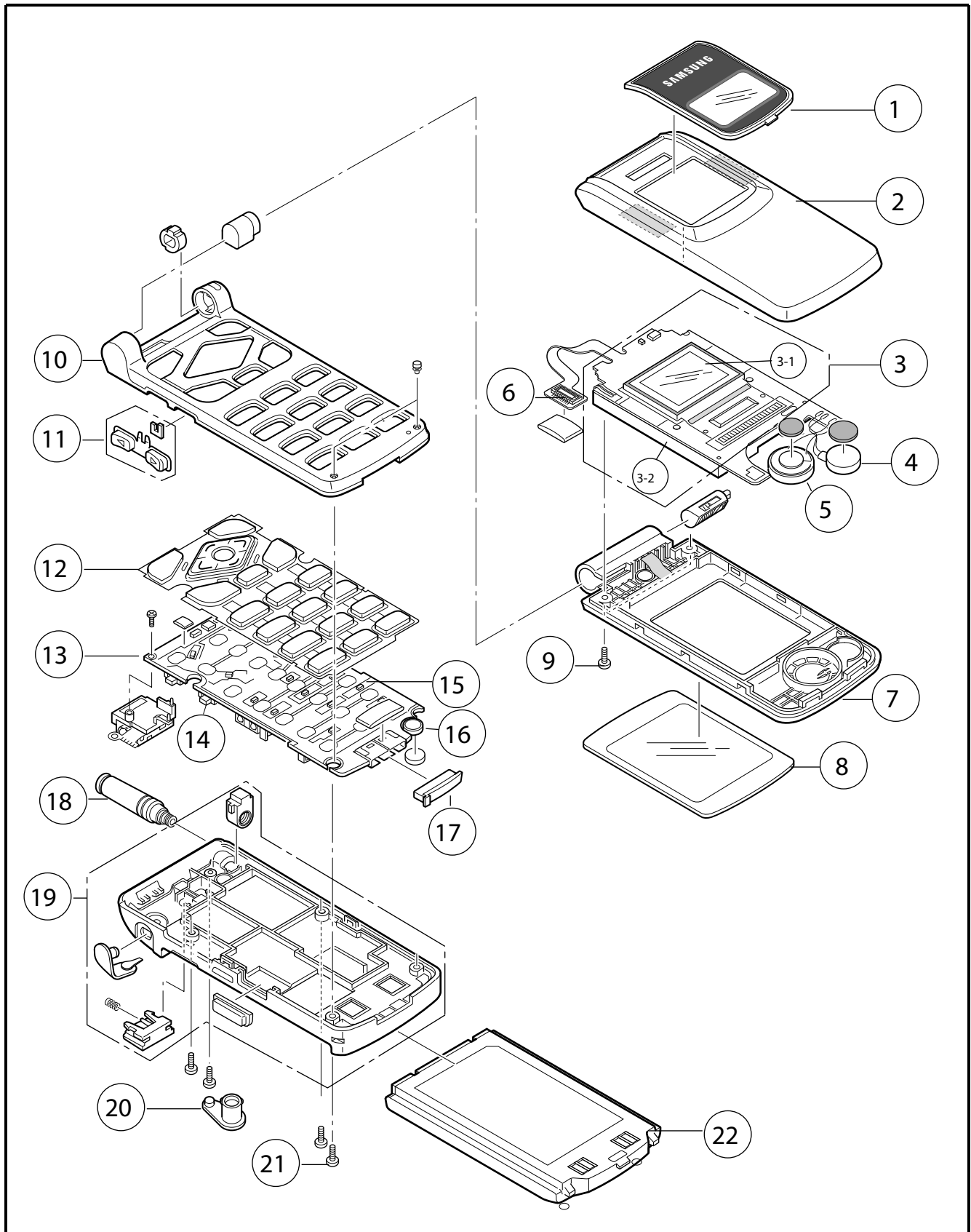
TX Power control level	GSM900
5	33 ±2 dBm
6	31 ±2 dBm
7	29 ±2 dBm
8	27 ±2 dBm
9	25 ±2 dBm
10	23 ±2 dBm
11	21 ±2 dBm
12	19 ±2 dBm
13	17 ±2 dBm
14	15 ±2 dBm
15	13 ±2 dBm
16	11 ±3 dBm
17	9 ±3dBm
18	7 ±3 dBm
19	5 ±3 dBm

TX Power control level	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

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-S200 Exploded View and its Parts list

1. Cellular phone Exploded View



2. Cellular phone Parts list

NO		Description	SEC.CODE	REMARK
1		DUAL WINDOW LCD	GH72-05057A	
2		FOLDER UPPER	GH75-02207A	
3		LCD	GH07-00295A	
	3-1	MAIN LCD	GH07-00296A	
	3-2	SUB LCD	GH07-00296B	
4		MOTOR	3101-001331	
5		SPEAKER	3001-001297	
6		FPCB	GH59-00759A	
7		FOLDER LOWER	GH75-02208A	
8		WINDOW LCD	GH72-05058A	
9		SCREW	6001-001155	
10		FRONT COVER	GH75-02205A	
11		SIDE KEY	GH75-02729A	
12		KEYPAD	GH75-02209A	
13		MAIN PBA	GH92-01307A	
14		EAR FPCB	GH59-00508A	
15		DOMESHEET	GH59-00643A	
16		MIC	GH59-00627A	
17		CONNECTOR COVER	GH73-00873A	
18		ANTENNA	GH42-00246C	
19		REAR COVER	GH75-02206A	
20		RF JACK COVER	GH73-01345A	
21		SCREW	6001-001155	
22		BATTERY	GH43-00714B	
			GH43-00715B	

3. Test Jig (GH80-00865A)



3-1. RF Test Cable
(GH39-00105A)



3-2. Test Cable
(GH39-00122A)



3-3. Serial Cable



3-4. Power Supply Cable



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



3-6.TA
(GH44-00184A)



3. SGH-S200 MAIN Electrical Parts List

SEC Code	Design LOC
GH71-00566A	ANT1
1405-001082	AZD310
2203-000995	C1000
2703-001752	C1001
2203-005234	C1002
2203-000812	C1003
2203-002677	C1004
2404-001151	C1005
2203-000278	C1006
2203-002677	C1007
2203-002677	C1008
2203-000812	C1009
2203-006053	C101
2203-002677	C1011
2203-000438	C1012
2203-000812	C1013
2203-002677	C1014
2203-002677	C1017
2404-001151	C1022
2404-001151	C1023
2203-000812	C1024
2203-000812	C1025
2203-000812	C103
2203-005061	C104
2203-006053	C105
2203-000812	C106
2203-000812	C107
2203-005061	C108
2203-005483	C109
2203-005796	C112
2203-005796	C113

SEC Code	Design LOC
2203-005796	C114
2203-005796	C115
2203-005796	C116
2203-005796	C117
2203-000233	C118
2203-000254	C119
2203-001598	C120
2203-001598	C123
2203-005061	C124
2404-001105	C125
2404-001268	C126
2203-005482	C203
2203-005065	C204
2203-000233	C242
2203-000233	C243
2203-000233	C244
2203-000233	C245
2203-000233	C246
2203-000233	C247
2203-000233	C249
2203-006113	C256
2203-006113	C257
2203-006113	C258
2203-006113	C259
2203-006113	C260
2203-006113	C261
2203-006113	C262
2203-006113	C263
2203-005061	C300
2203-005065	C400
2203-000654	C401

SEC Code	Design LOC
2203-005061	C402
2203-001405	C403
2404-001086	C404
2203-000885	C405
2203-000233	C407
2203-005061	C408
2404-001151	C409
2203-000438	C411
2203-005061	C412
2203-005065	C414
2203-000278	C415
2203-002443	C416
2203-005061	C417
2203-000940	C418
2203-000438	C419
2203-001239	C424
2203-000278	C434
2203-000233	C435
2203-000233	C436
2203-000233	C437
2203-001124	C438
2203-005061	C501
2203-005061	C502
2203-000254	C503
2203-005061	C550
2203-000254	C600
2203-005496	C601
2203-005496	C602
2203-000254	C603
2203-000254	C604
2203-000254	C605

SEC Code	Design LOC
2203-000254	C606
2203-000254	C607
2203-000254	C608
2203-001405	C611
2203-005061	C612
2203-000254	C613
2203-000233	C614
2203-000628	C615
2203-000628	C616
2203-000679	C617
2203-000725	C700
2203-001153	C708
2203-005496	C709
2203-005065	C710
2203-005061	C711
2203-000254	C712
2203-000254	C713
2203-000254	C714
2203-000254	C715
2203-000254	C716
2203-000254	C717
2203-000254	C718
2203-000254	C719
2203-000254	C800
2203-000386	C801
2203-000254	C805
2203-000254	C807
2203-000254	C808
2203-000254	C809
2203-005482	C810
2203-001405	C905

SEC Code	Design LOC
2203-001405	C906
2203-001405	C910
2203-000233	C911
2203-000233	C916
2203-001405	C917
2203-001405	C921
2203-000995	C922
2203-000812	C923
2203-000233	C924
3709-001187	CN100
3705-001226	CN1001
3711-005078	CN200
3710-001816	CN300
1405-001018	D300
1405-001018	D301
2904-001410	F1003
2007-000171	L1000
2703-002551	L1001
2703-002543	L1002
2703-001751	L1003
2703-002543	L1006
2703-001751	L900
0604-001146	LED200
0601-001547	LED801
0601-001547	LED802
0601-001547	LED803
0601-001547	LED804
0601-001547	LED805
0601-001547	LED806
0601-001547	LED807
0601-001547	LED808

SEC Code	Design LOC
0601-001547	LED809
0601-001547	LED810
0601-001547	LED811
0601-001547	LED812
0601-001547	LED813
0601-001547	LED814
0601-001547	LED815
0601-001547	LED816
4302-001119	M101
2801-004025	OSC601
2809-001260	OSC801
0504-000168	Q100
0502-001201	Q101
0501-000225	Q400
2007-001319	R100
2007-001307	R1000
2007-001307	R1001
2007-000171	R1002
2007-000172	R101
2007-001288	R1014
2007-007008	R1015
2007-007008	R1016
2007-000167	R102
2007-007200	R103
2007-000758	R110
2007-007142	R111
2007-007139	R112
2007-001323	R113
2007-000140	R303
2007-000157	R305
2007-000157	R306

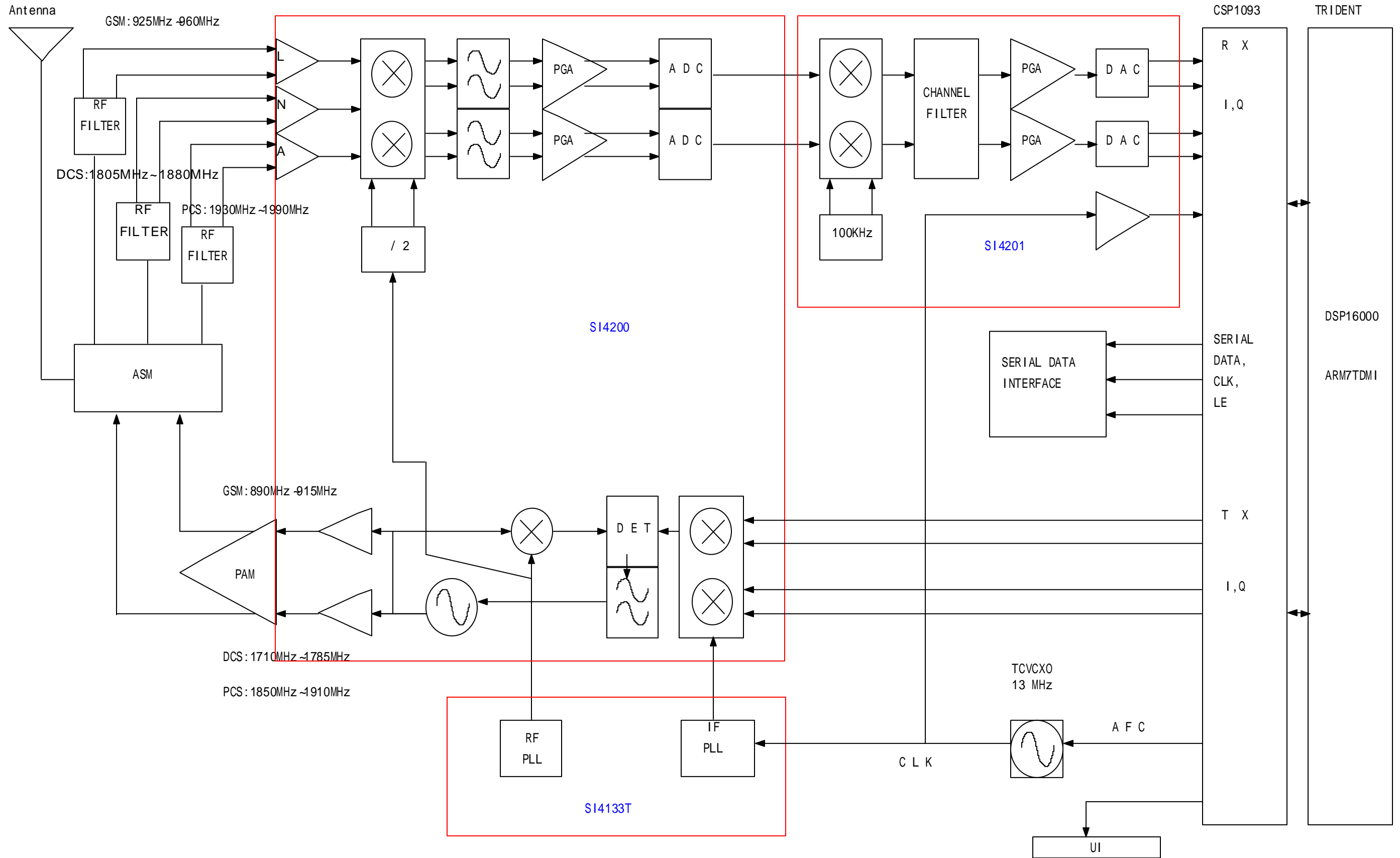
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2007-000140	R308
2007-000140	R309
2007-000140	R310
2007-000171	R312
2007-000172	R400
2007-000172	R401
2007-000164	R403
2007-000775	R404
2007-000148	R405
2007-007488	R406
2007-000775	R407
2007-000159	R408
2007-000141	R409
2007-000140	R410
2007-001325	R413
2007-000141	R414
2007-000162	R415
2007-000148	R420
2007-007488	R421
2007-001333	R422
2007-000140	R423
2007-000148	R424
2007-000171	R501
2007-000172	R502
2007-000162	R600
2007-000172	R606
2007-000148	R608
2007-000157	R609
2007-000170	R610
2007-007142	R611

SEC Code	Design LOC
2007-007308	R612
2007-007308	R613
2007-001313	R700
2007-007200	R709
2007-007200	R710
2007-000162	R713
2007-000162	R714
2007-000162	R715
2007-000172	R800
2007-000171	R801
2007-002797	R802
2007-000172	R805
2007-001308	R806
2007-001308	R807
2007-001308	R808
2007-001308	R809
2007-001308	R810
2007-001308	R811
2007-001308	R812
2007-001308	R813
2007-001308	R814
2007-001308	R815
2007-001308	R816
2007-001308	R817
2007-001308	R818
2007-001308	R819
2007-001308	R820
2007-001308	R821
1203-002568	U100
2909-001191	U1005
1201-001889	U1008

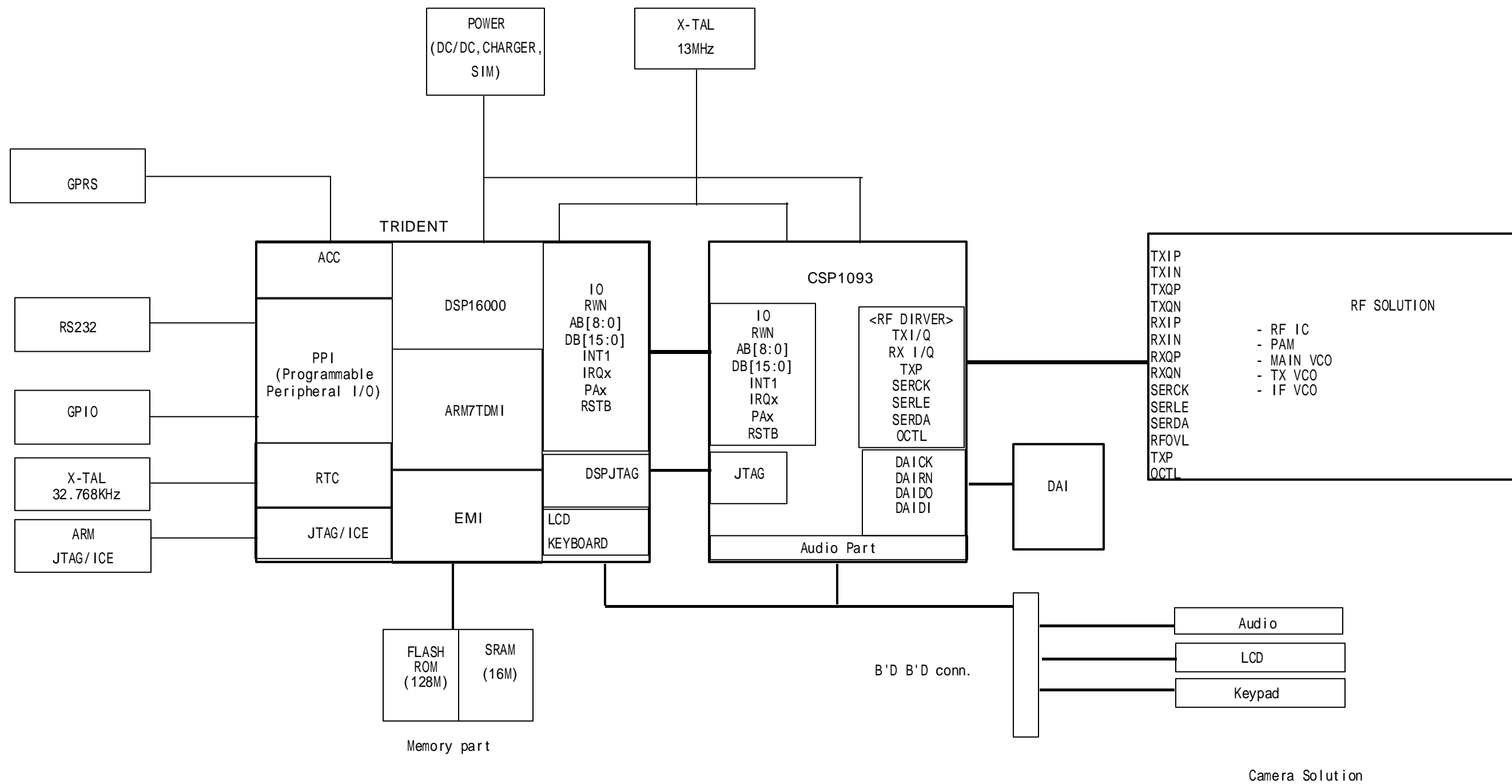
SEC Code	Design LOC
1203-002127	U101
0506-001052	U102
1001-001183	U400
1204-001960	U401
1109-001260	U500
GH09-00023A	U601
1209-001219	U602
1204-001984	U700
0504-001042	U701
0504-001042	U702
0504-001042	U703
1009-001010	U802
1205-002185	U900
1205-002268	U901
1209-001434	U902
1405-001082	V801
1405-001082	V802
3404-001152	VOL_DN
3404-001152	VOL_UP
0406-001084	ZD301
0406-001084	ZD305
1405-001082	ZD306
1405-001082	ZD307
1405-001082	ZD309
1405-001082	ZD311
BSGH-S200	

4. SGH-S200 Block Diagrams

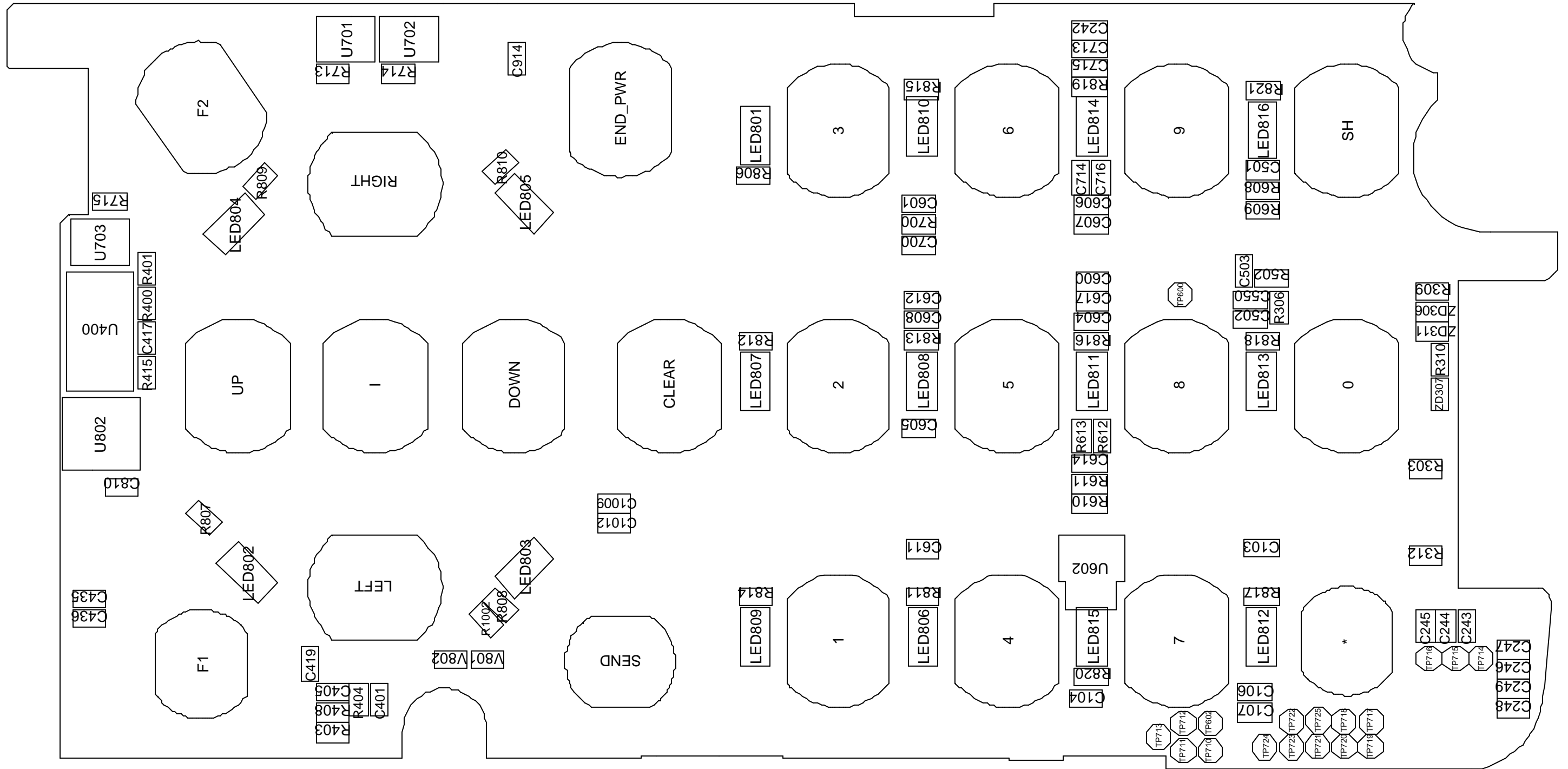
1. RF Solution Block Diagram



2. Base Band Solution Block Diagram

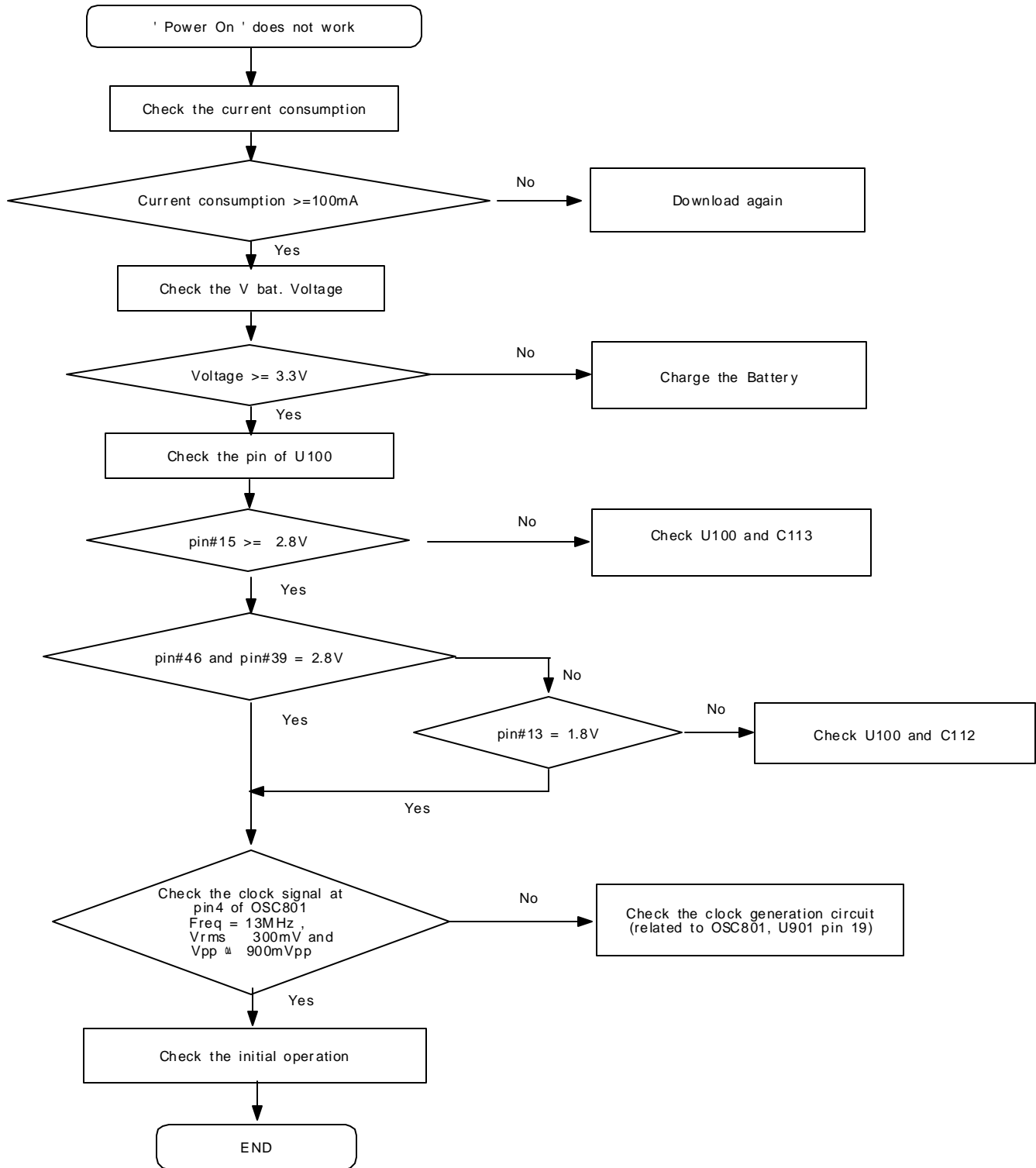


2. Main PCB Bottom Diagram

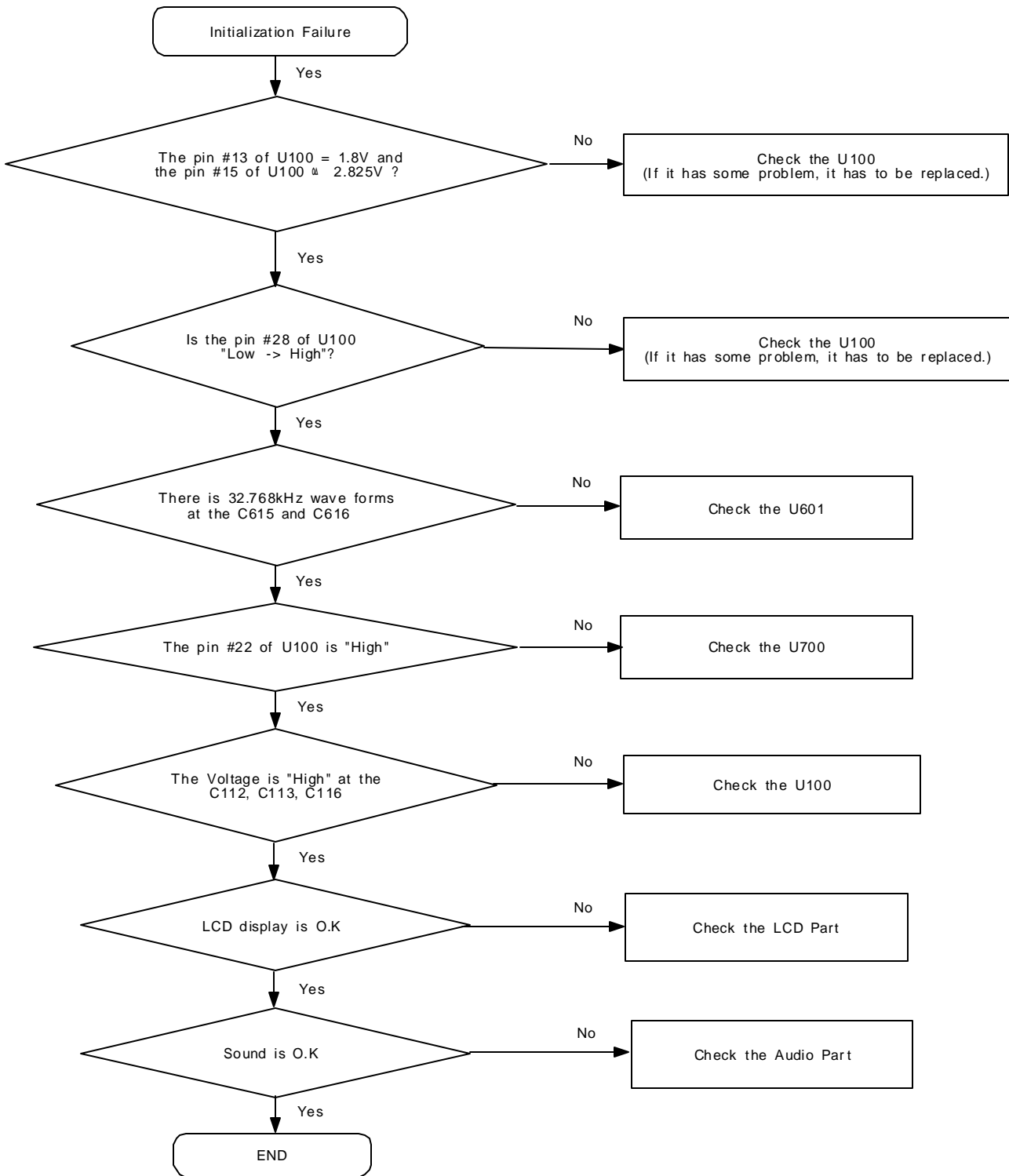


6. SGH-S200 Flow Chart of Troubleshooting

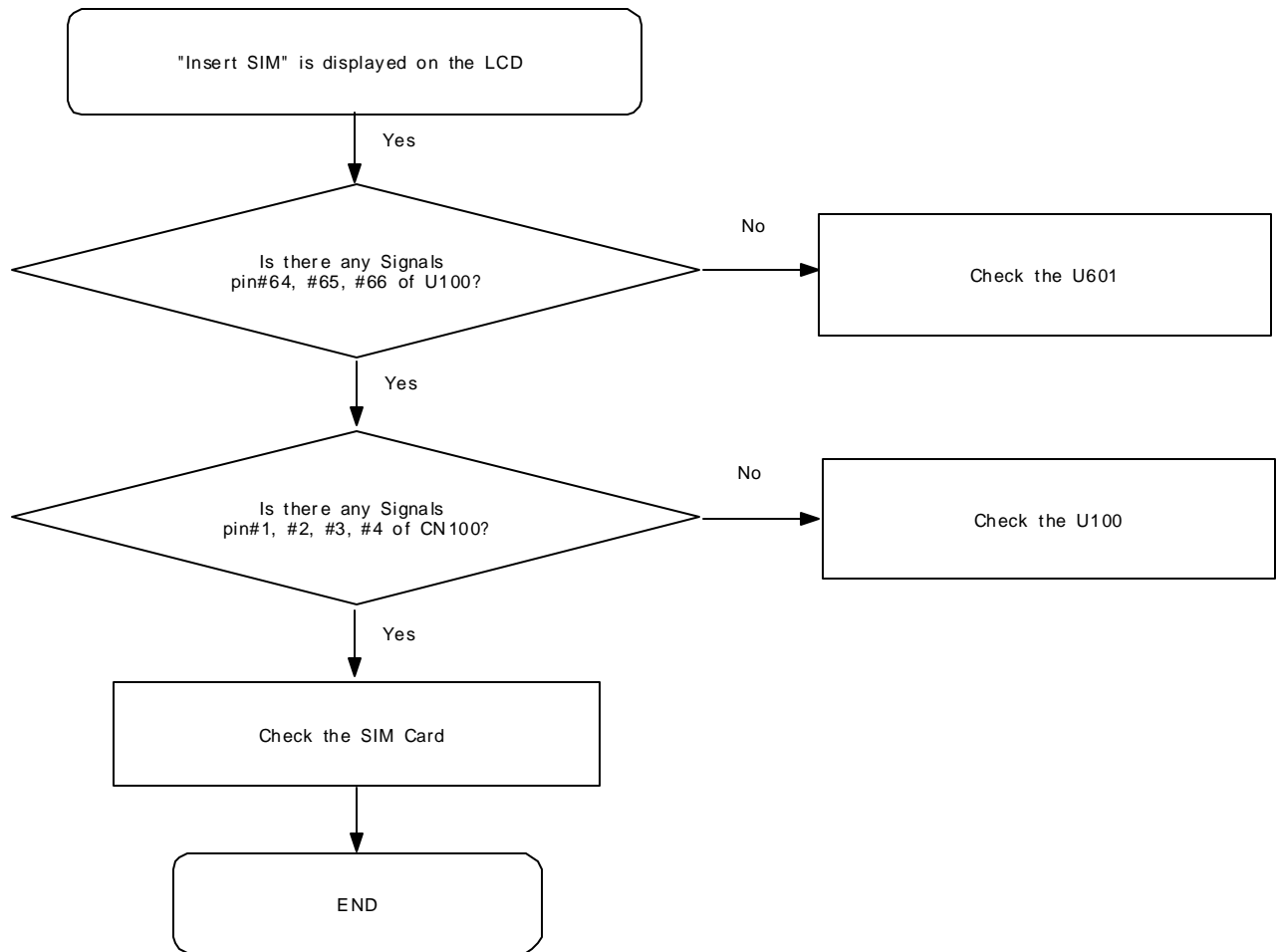
1. Power On



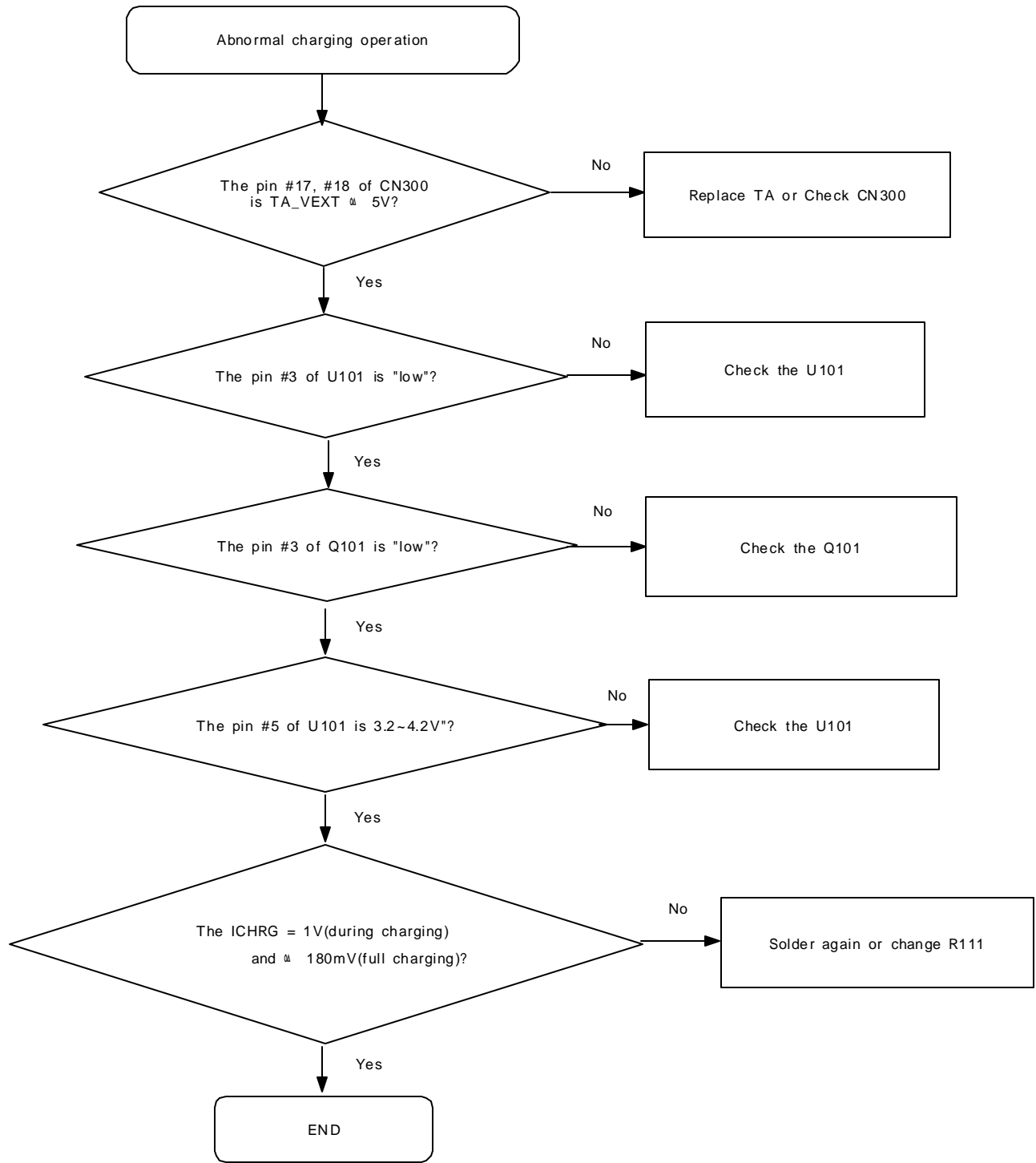
2. Initial



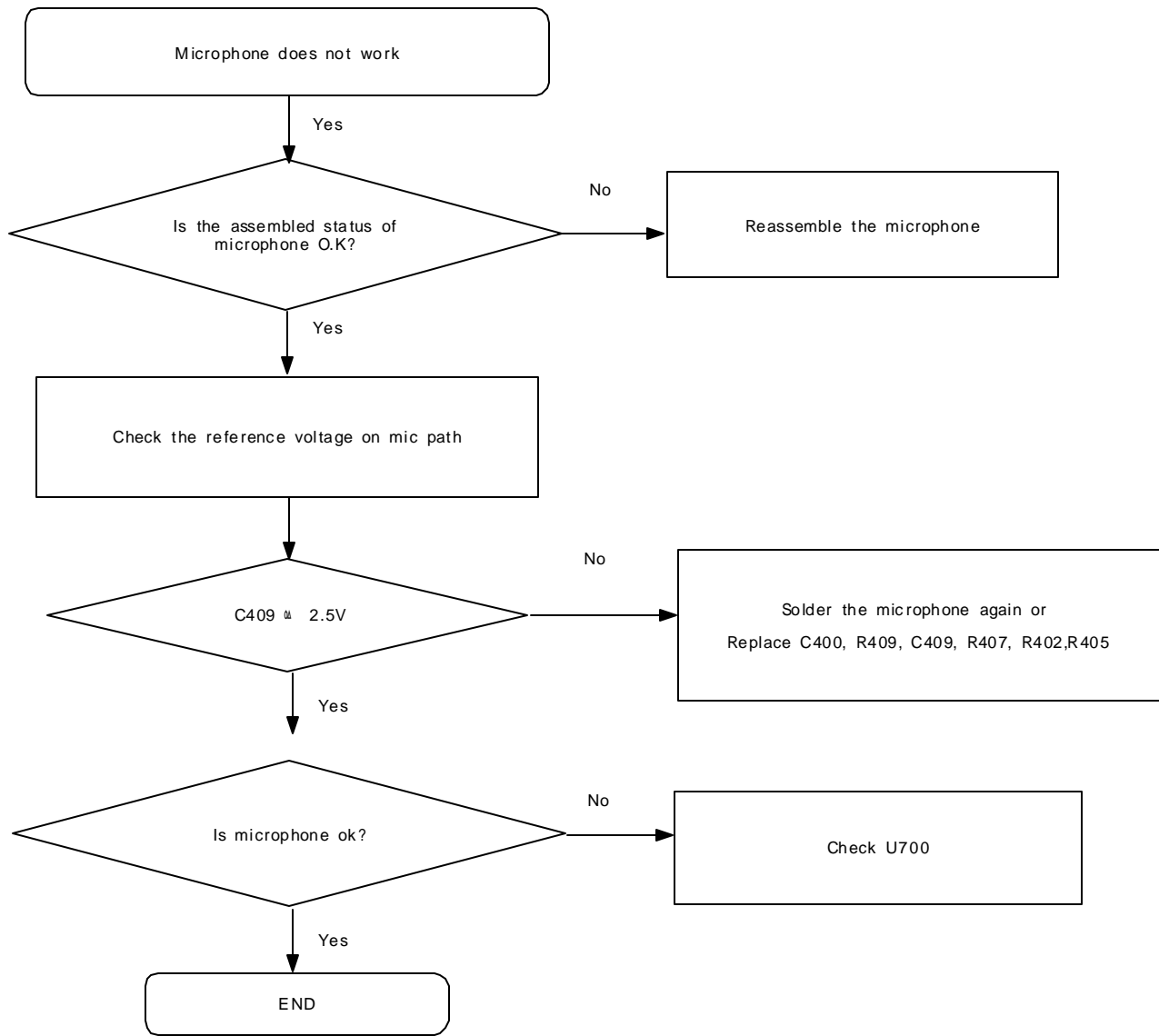
3. Sim Part



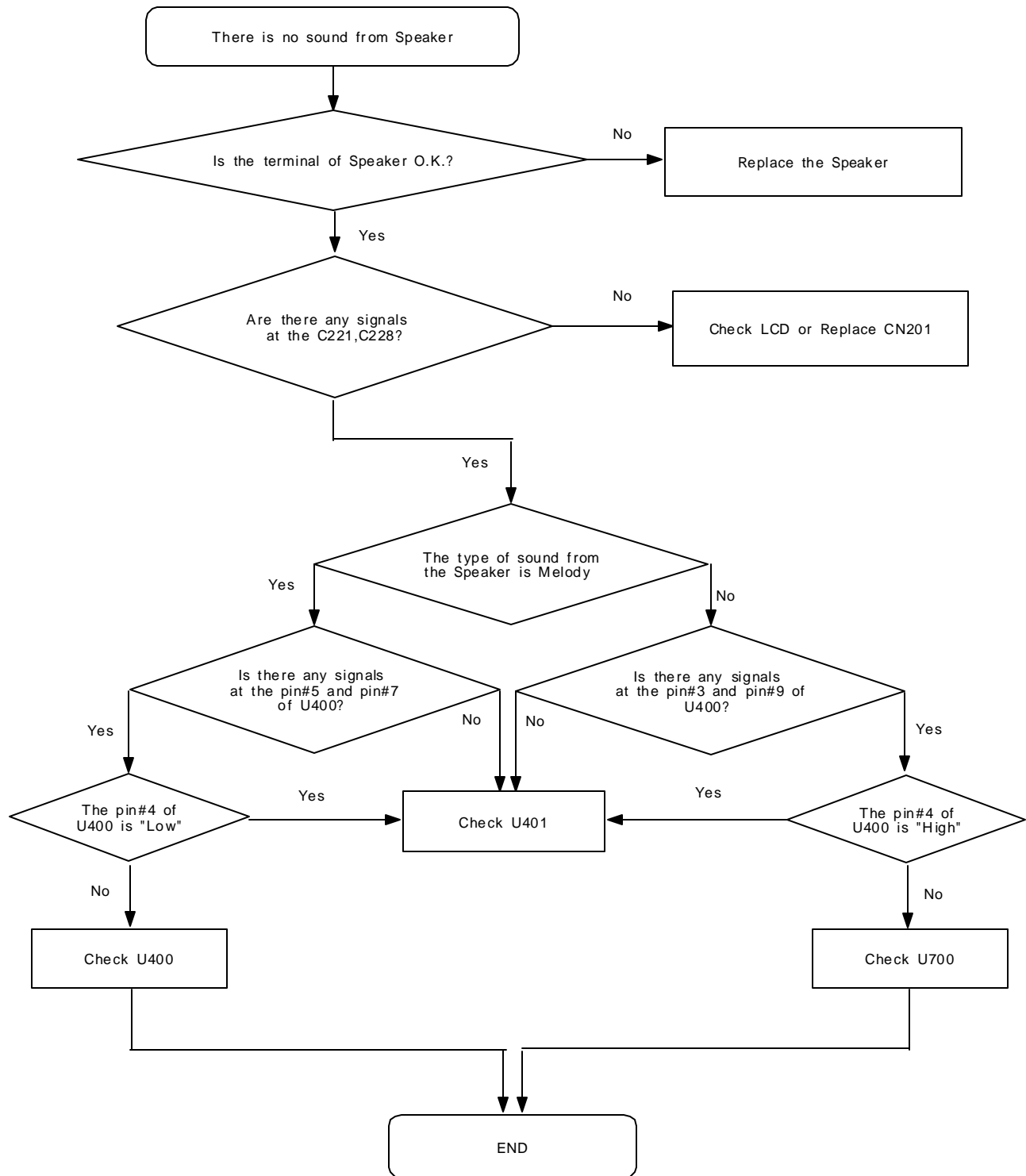
4. Charging Part

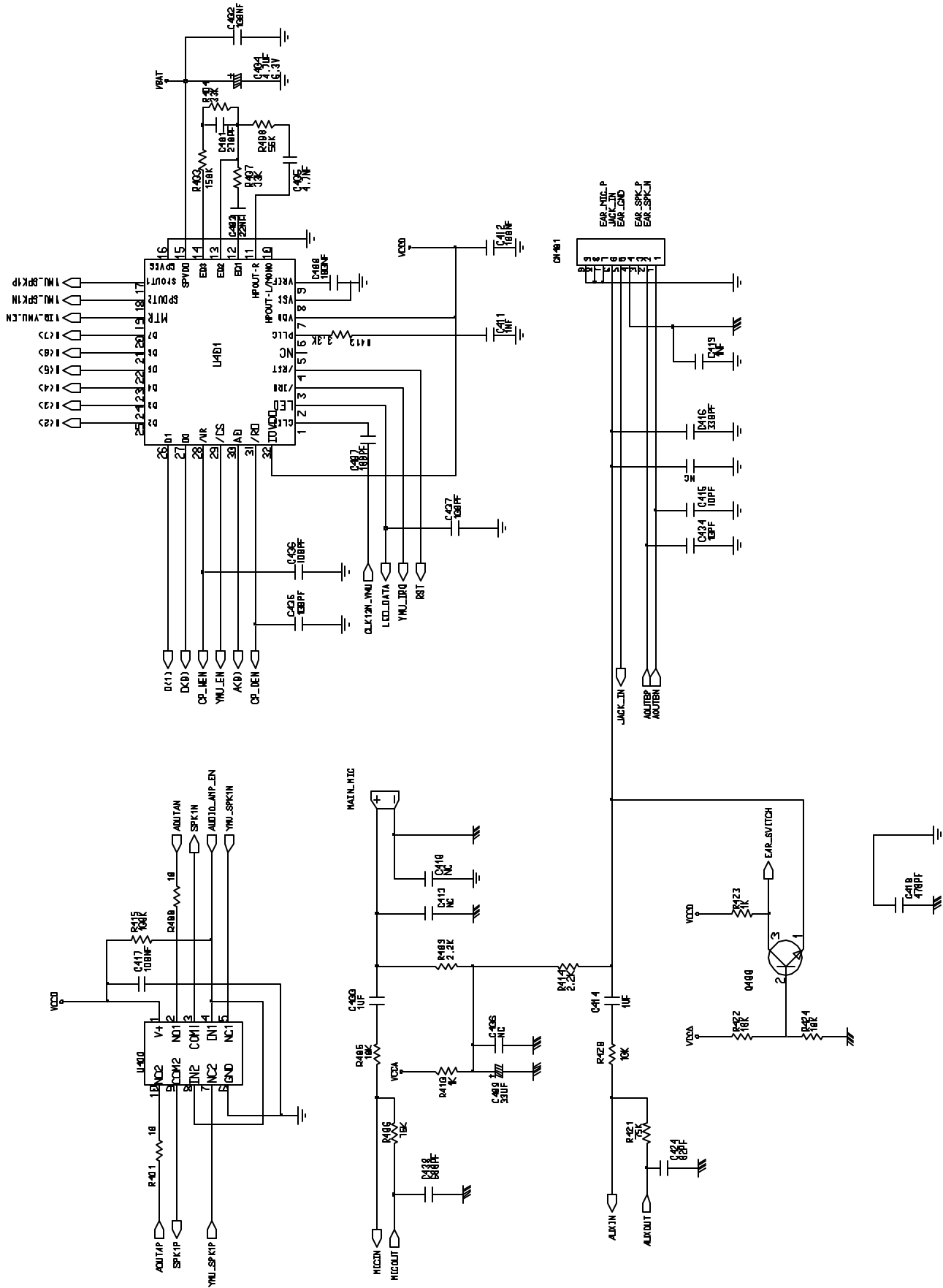


5. Microphone Part

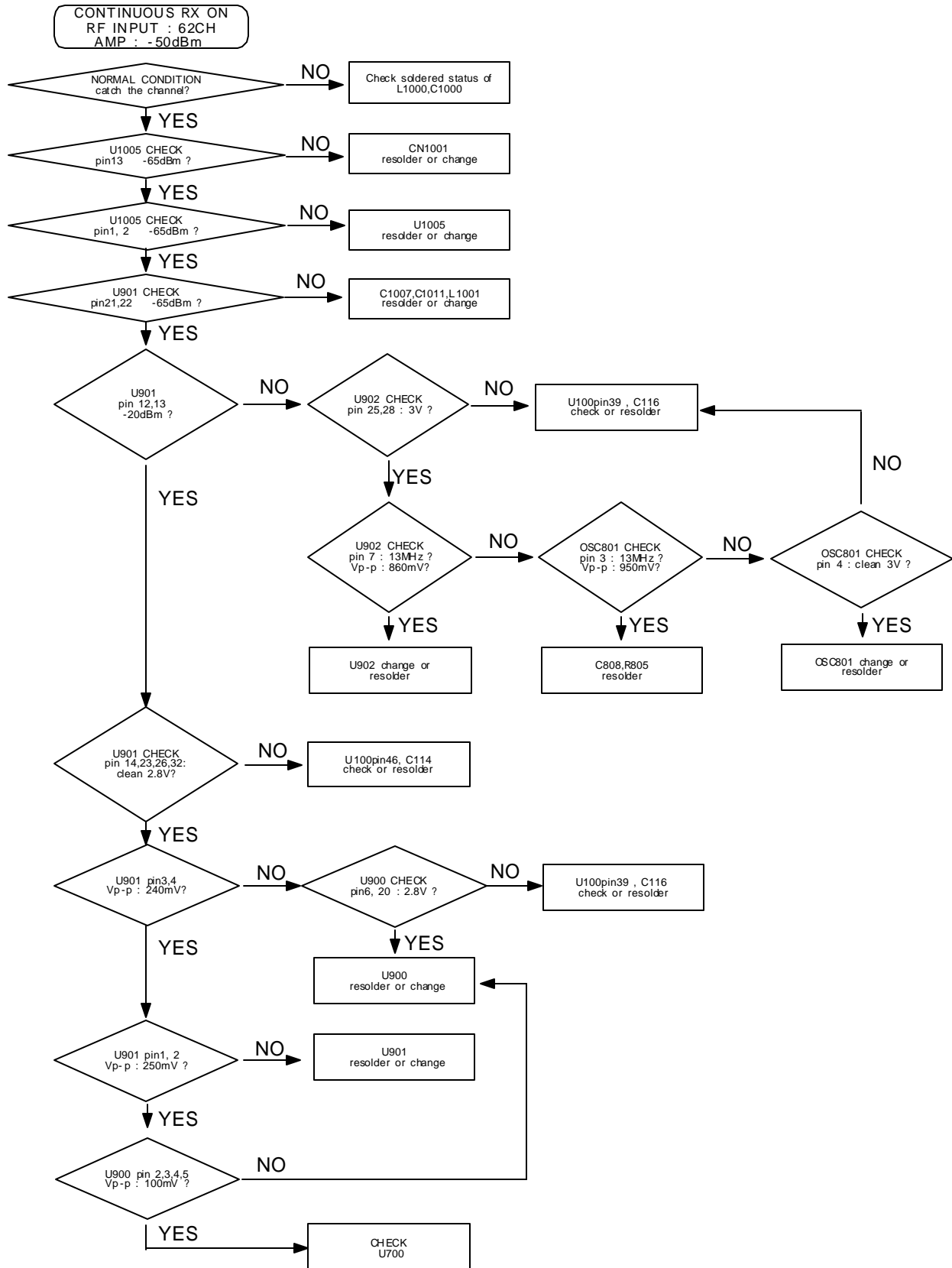


6. Speaker Part

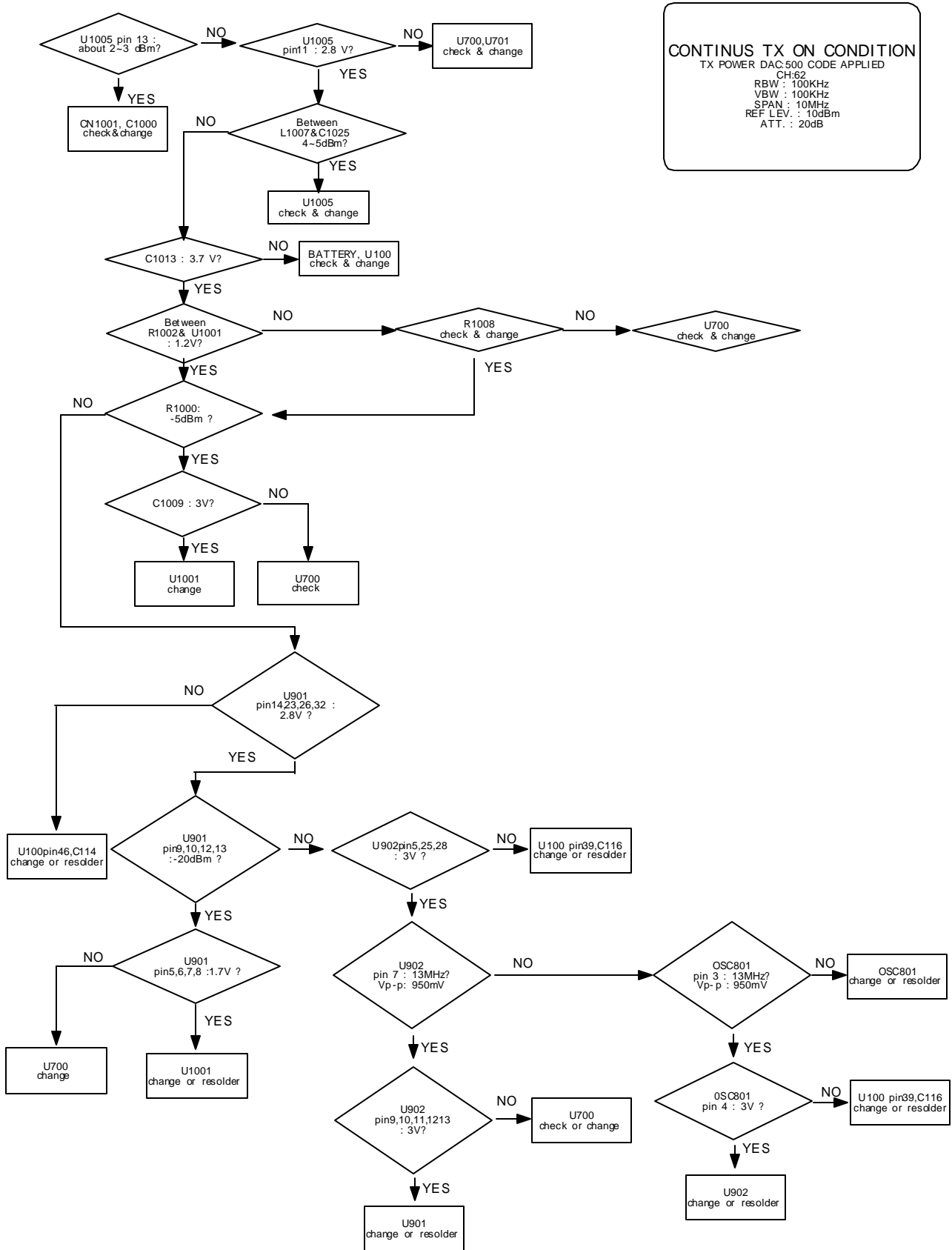




7. EGSM Reciever

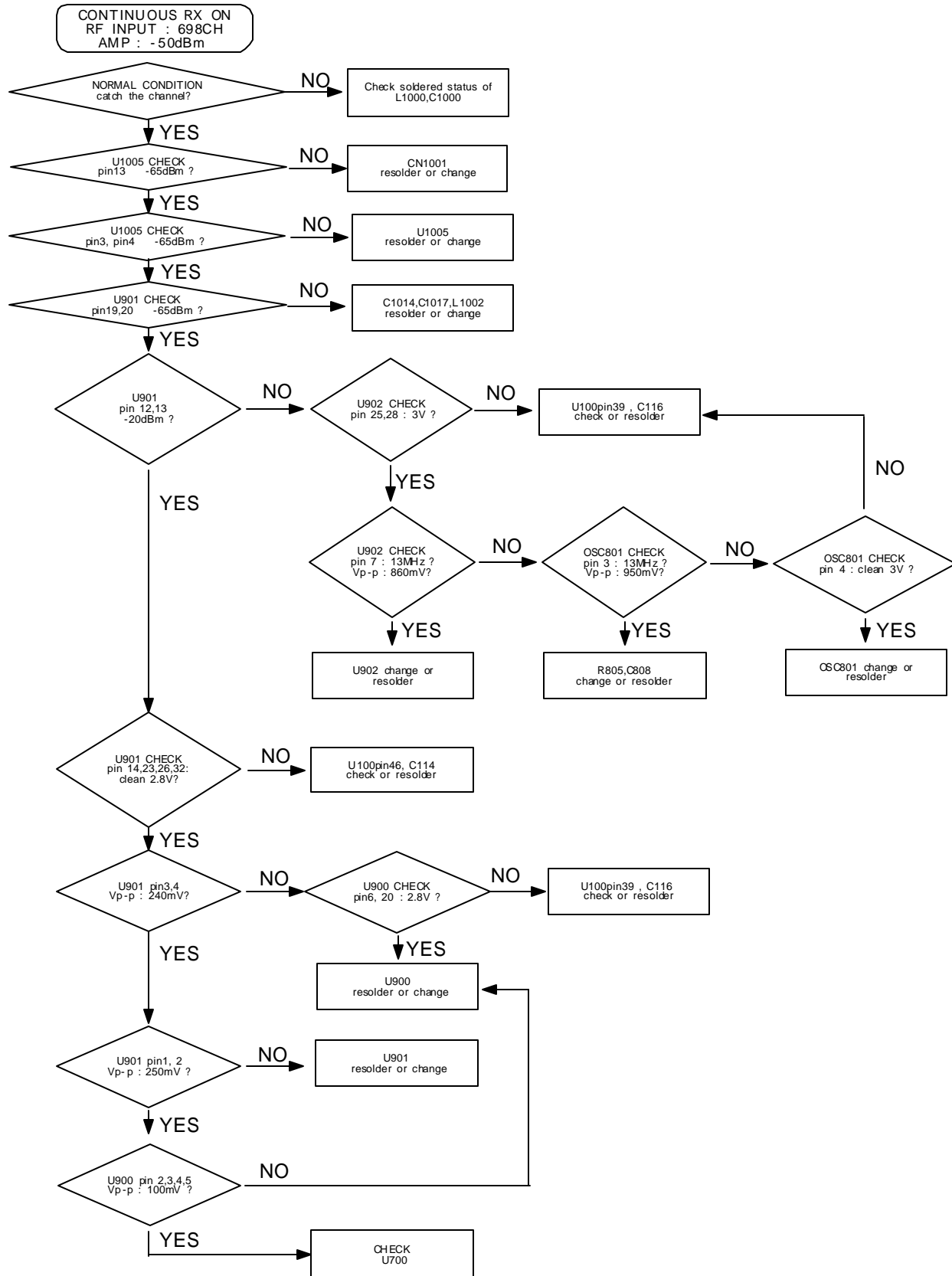


8. EGSM transmitter

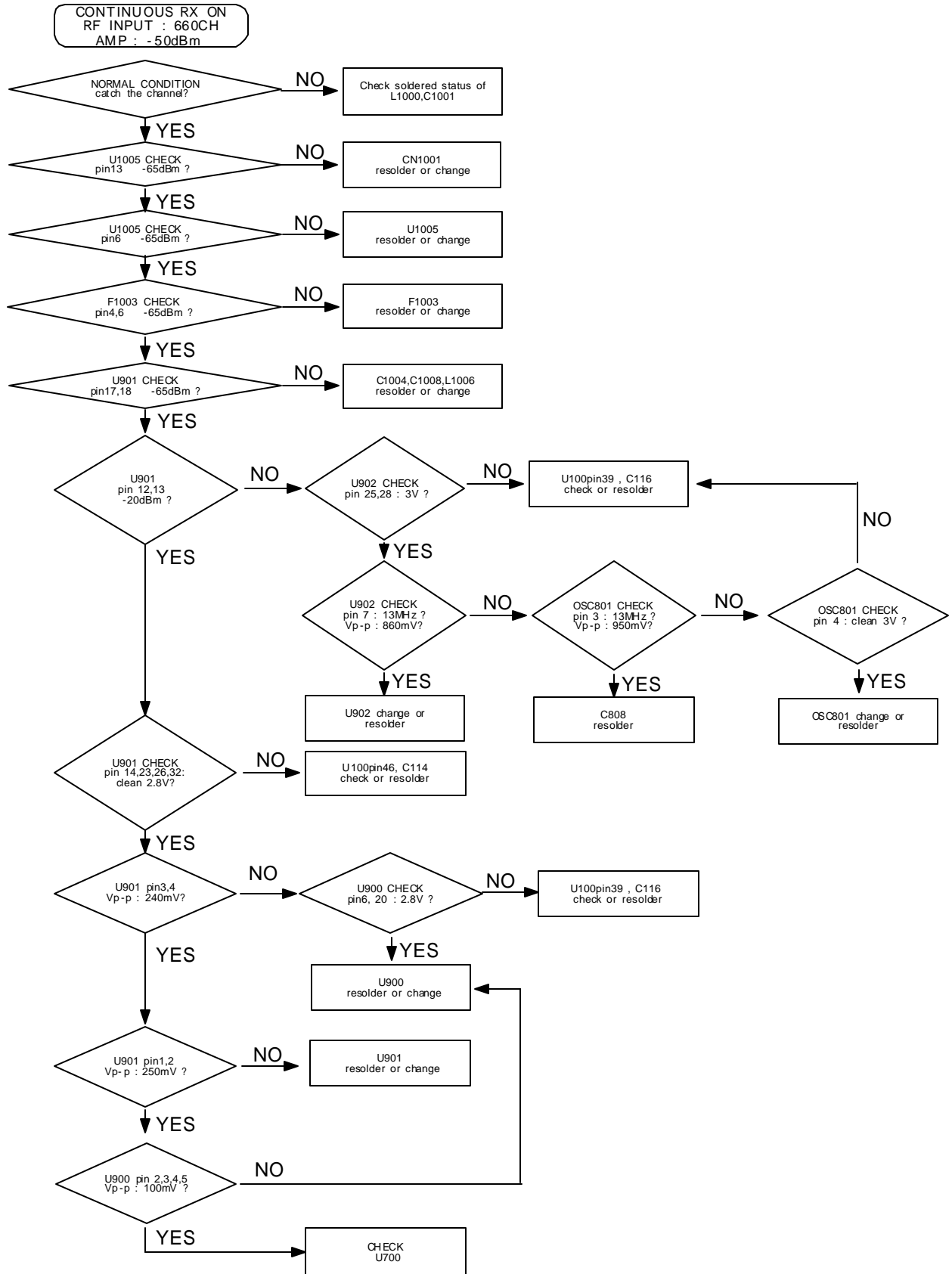


CONTINUS TX ON CONDITION
 TX POWER DAC:500 CODE APPLIED
 CH:62
 RBW : 100KHz
 VBW : 100KHz
 SPAN : 10MHz
 REF LEV. : 10dBm
 ATT. : 20dB

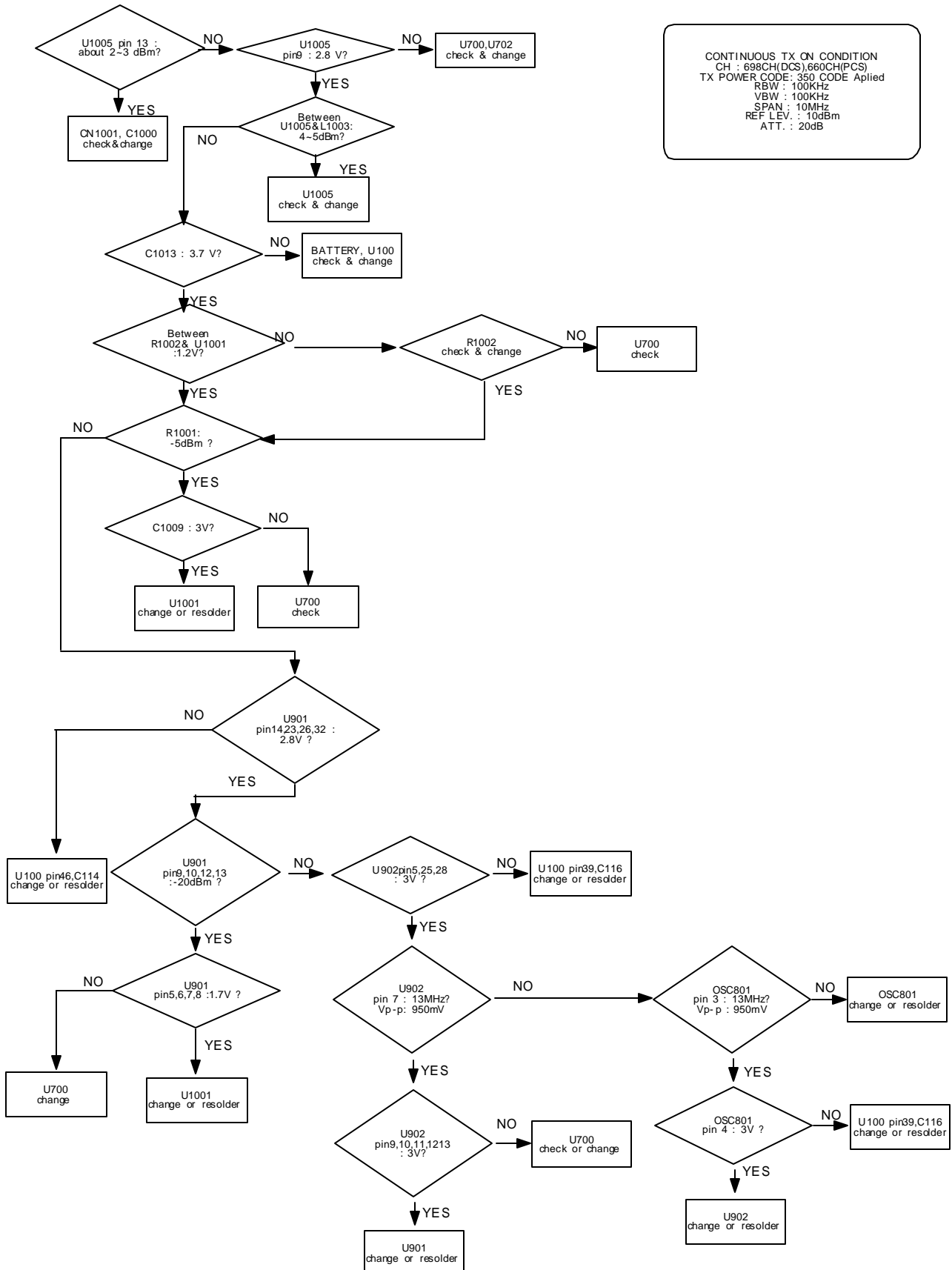
9. DCS Reciever



10. PCS Reciever



11. DPCS 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



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