

SAMSUNG

**GSM TELEPHONE
SGH-E600/E608**

SERVICE *Manual*

GSM TELEPHONE



CONTENTS

1. Specification
2. Flow Chart of Troubleshooting
3. Exploded Views and Parts List
4. Electrical Parts List
5. Block Diagrams
6. PCB Diagrams

1. SGH-E600/E608 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	-

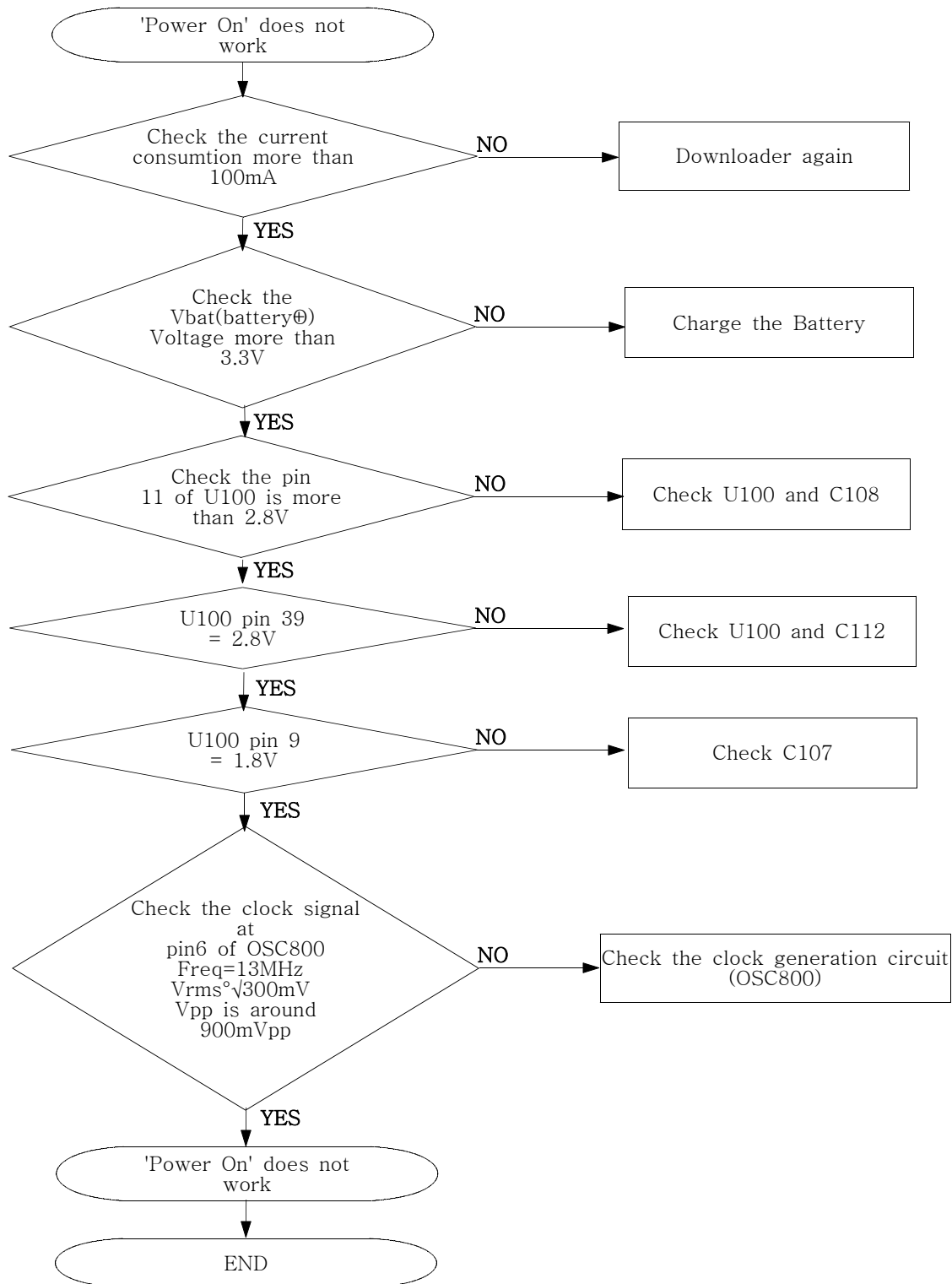
2. GSM TX power class

TX Power control level	GSM900	TX Power control level	DCS1800	TX Power control level	PCS1900
5	33±2 dBm	0	30±3 dBm	0	30±3 dBm
6	31±2 dBm	1	28±3 dBm	1	28±3 dBm
7	29±2 dBm	2	26±3 dBm	2	26±3 dBm
8	27±2 dBm	3	24±3 dBm	3	24±3 dBm
9	25±2 dBm	4	22±3 dBm	4	22±3 dBm
10	23±2 dBm	5	20±3 dBm	5	20±3 dBm
11	21±2 dBm	6	18±3 dBm	6	18±3 dBm
12	19±2 dBm	7	16±3 dBm	7	16±3 dBm
13	17±2 dBm	8	14±3 dBm	8	14±3 dBm
14	15±2 dBm	9	12±4 dBm	9	12±4 dBm
15	13±2 dBm	10	10±4 dBm	10	10±4 dBm
16	11±3 dBm	11	8±4dBm	11	8±4dBm
17	9±3dBm	12	6±4 dBm	12	6±4 dBm
18	7±3 dBm	13	4±4 dBm	13	4±4 dBm
19	5±3 dBm	14	2±5 dBm	14	2±5 dBm
		15	0±5 dBm	15	0±5 dBm

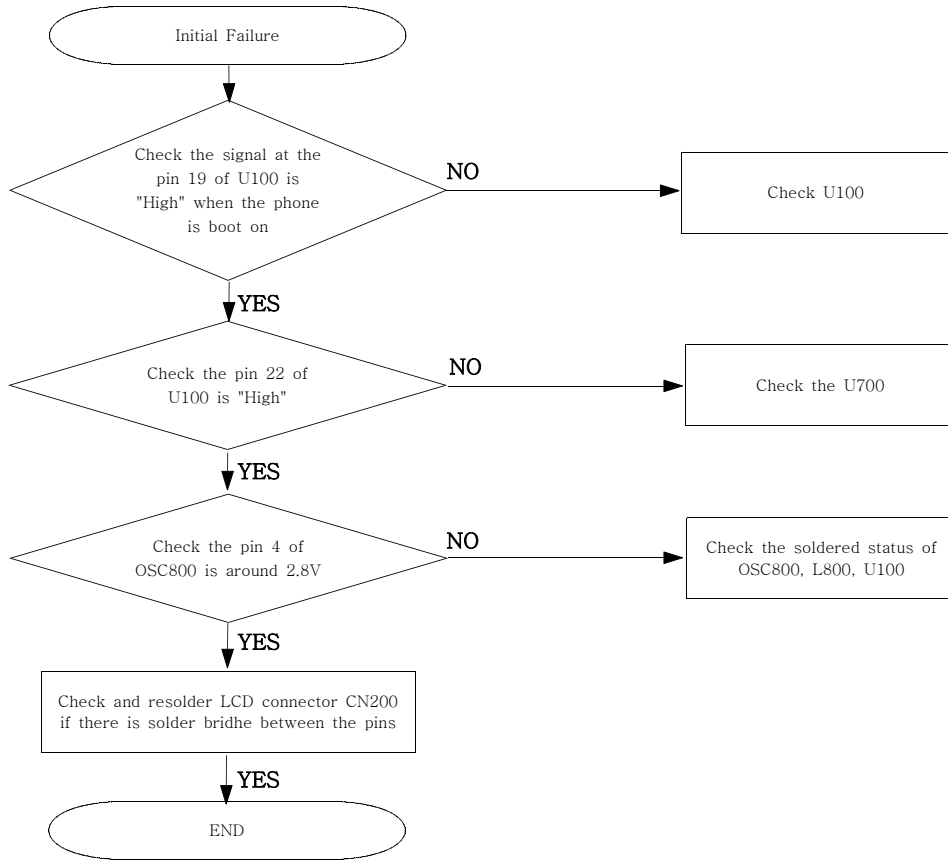
2. SGH-E600/E608 Flow Chart of Troubleshooting and Circuit Diagrams

1. Baseband

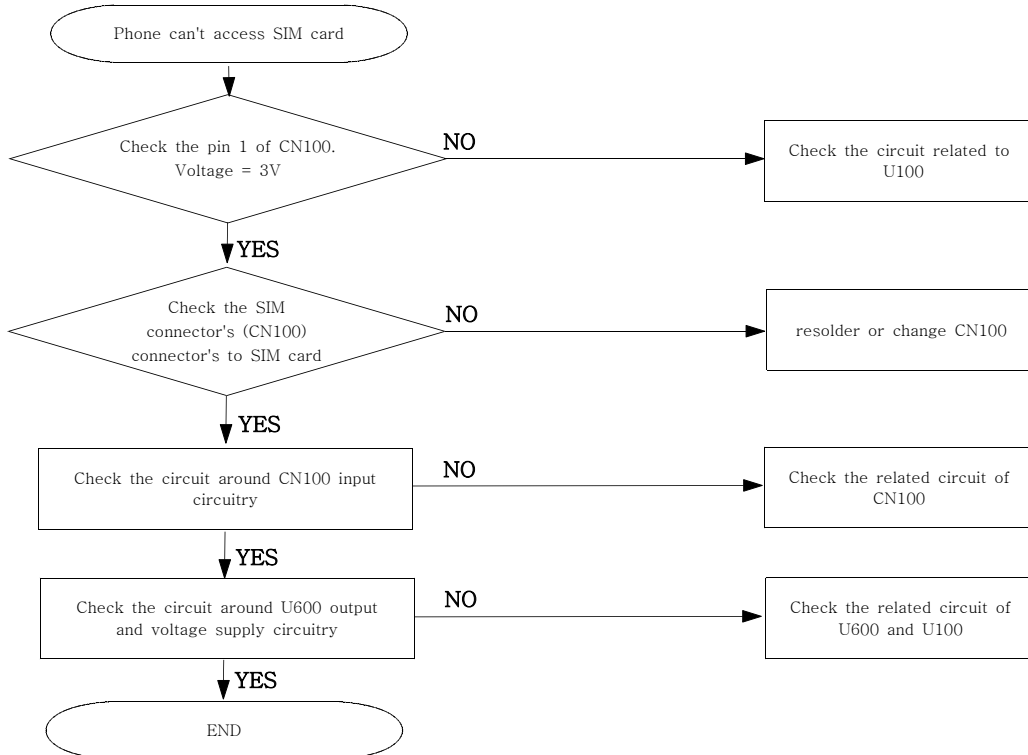
1. Power ON

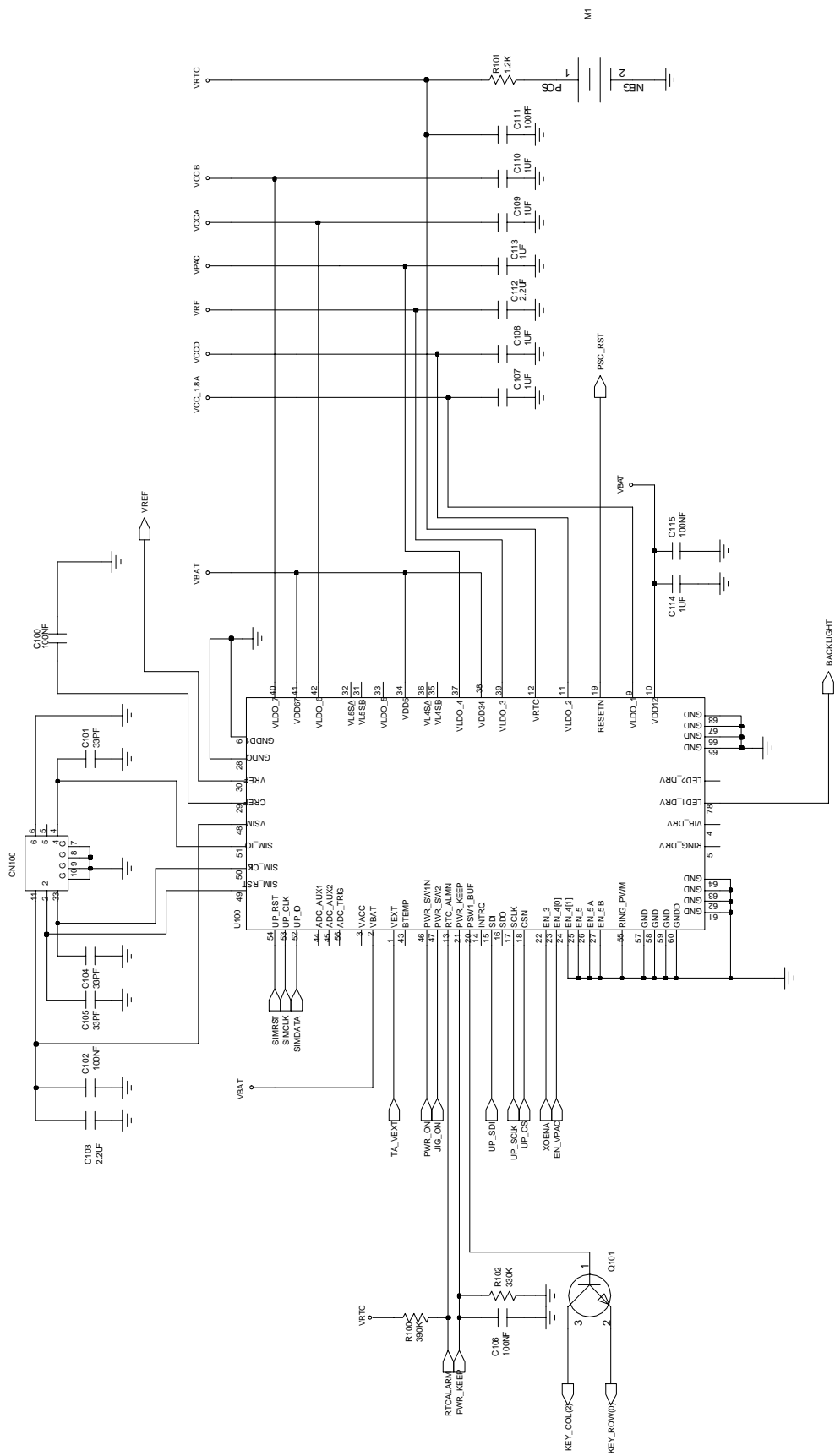


2. Initial

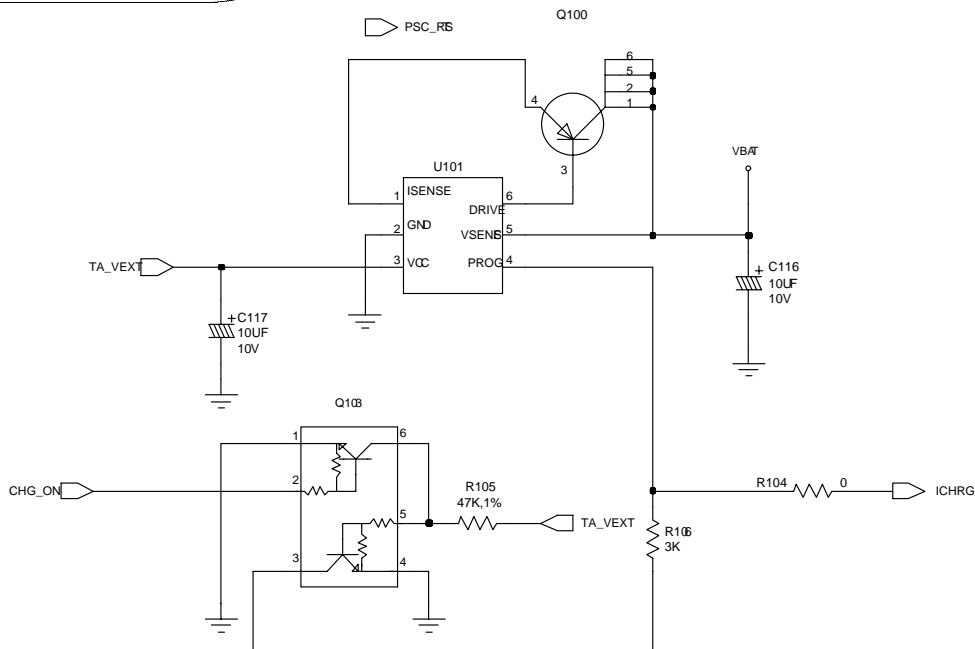
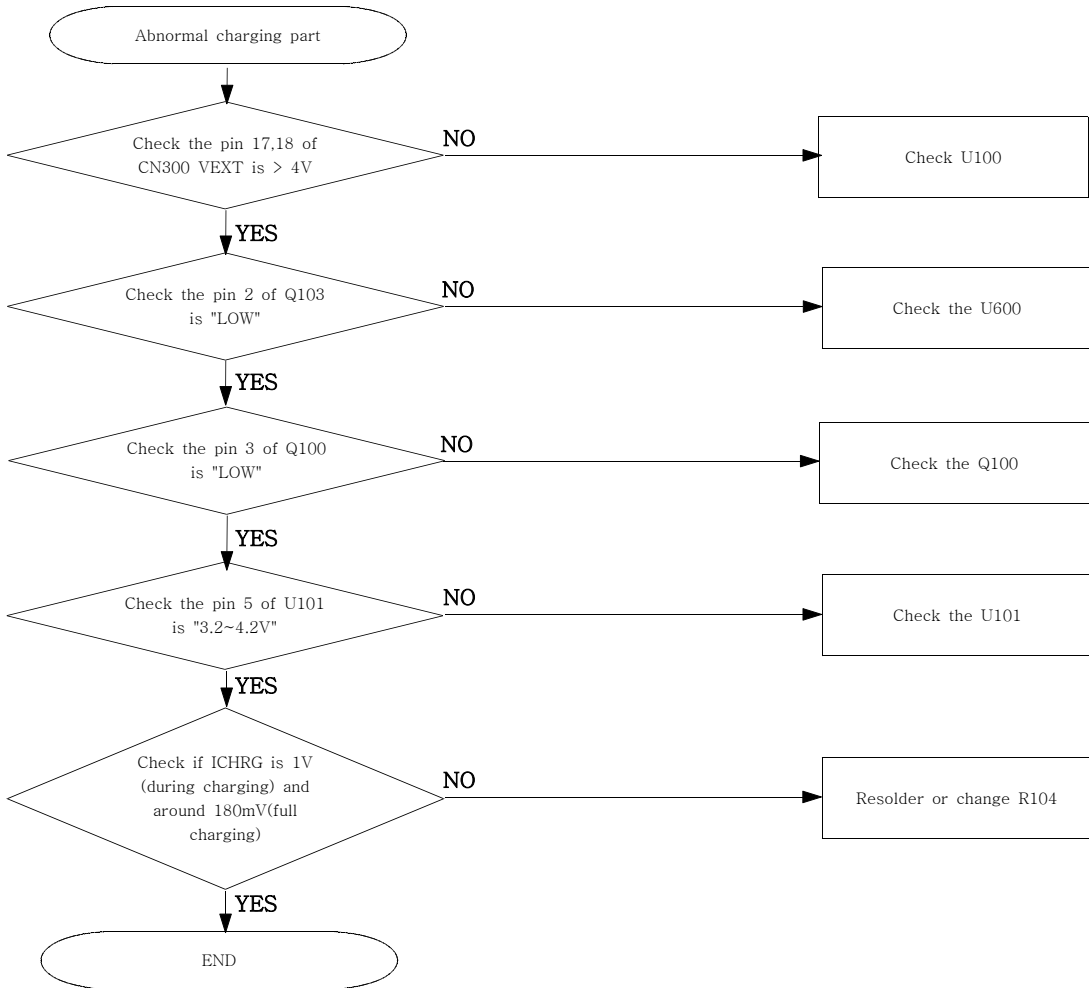


3. Sim Part

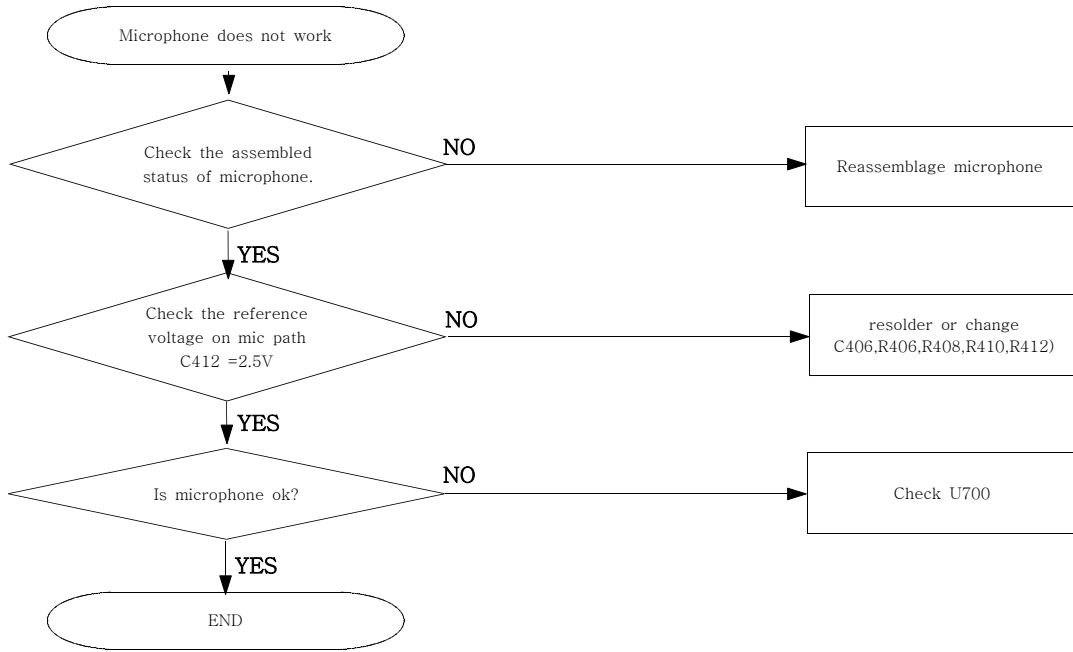


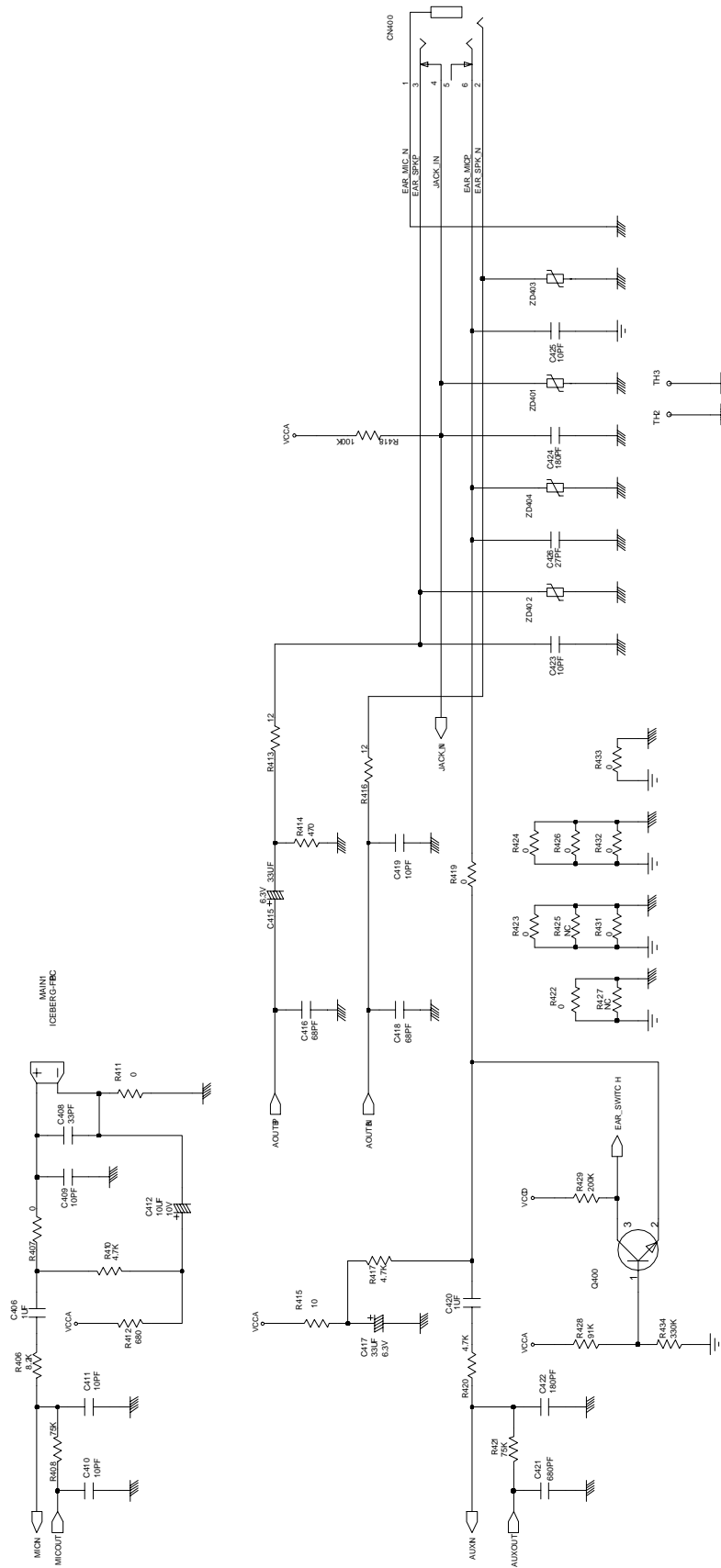


4. Charging Part

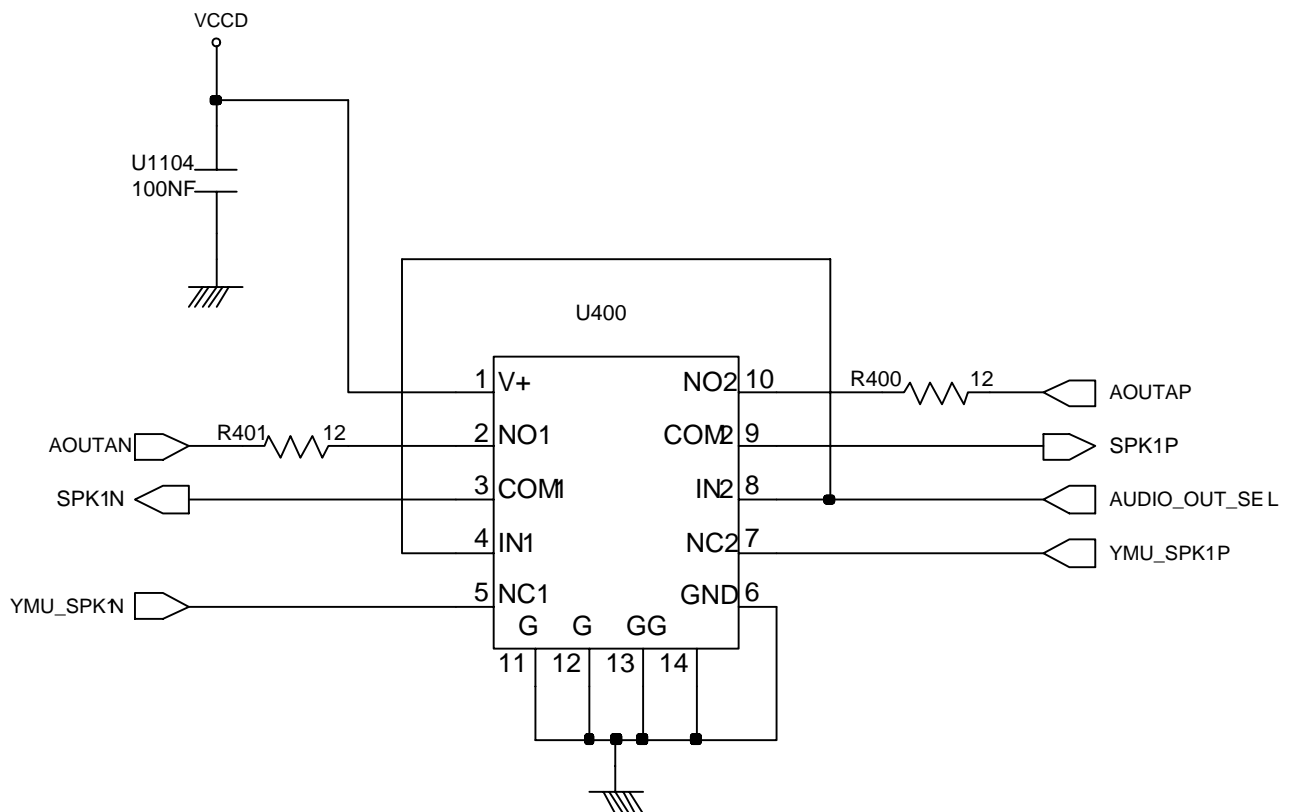
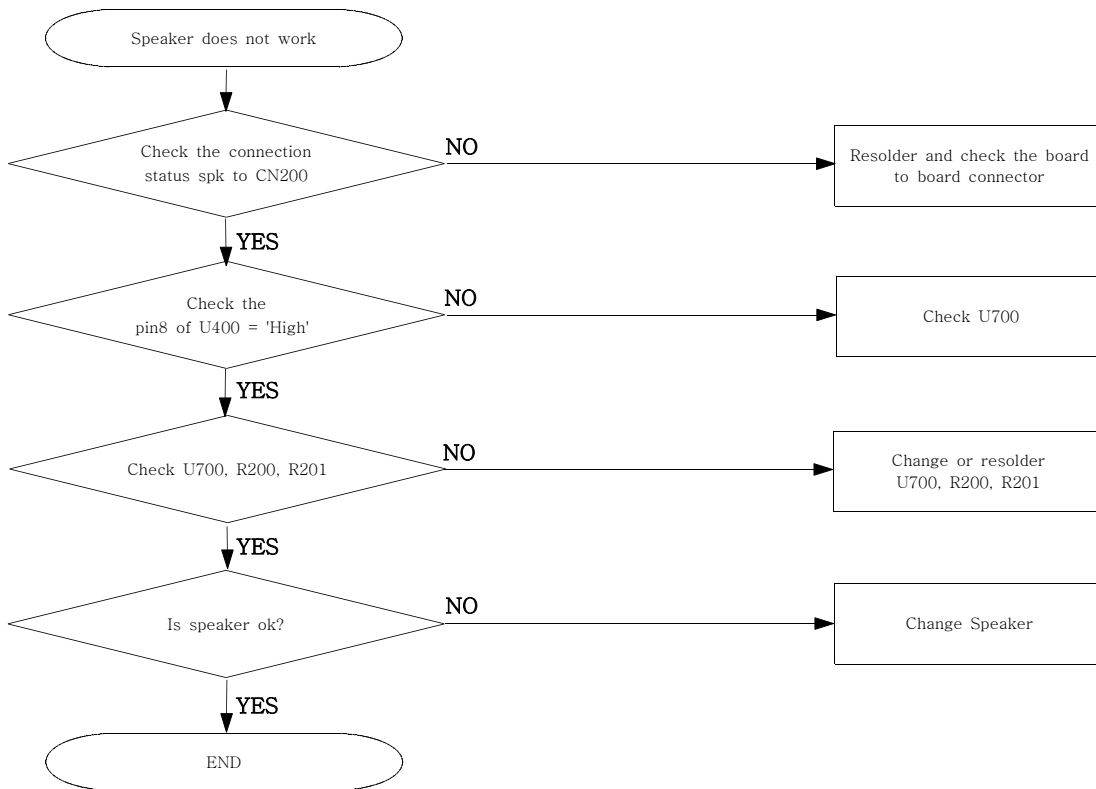


5. Microphone Part

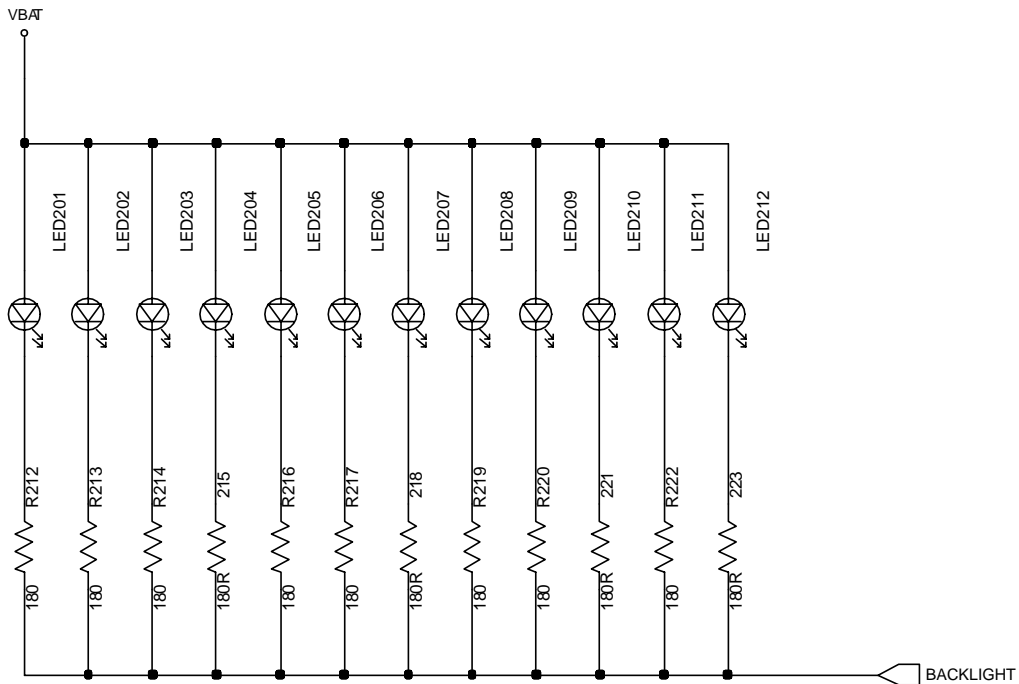
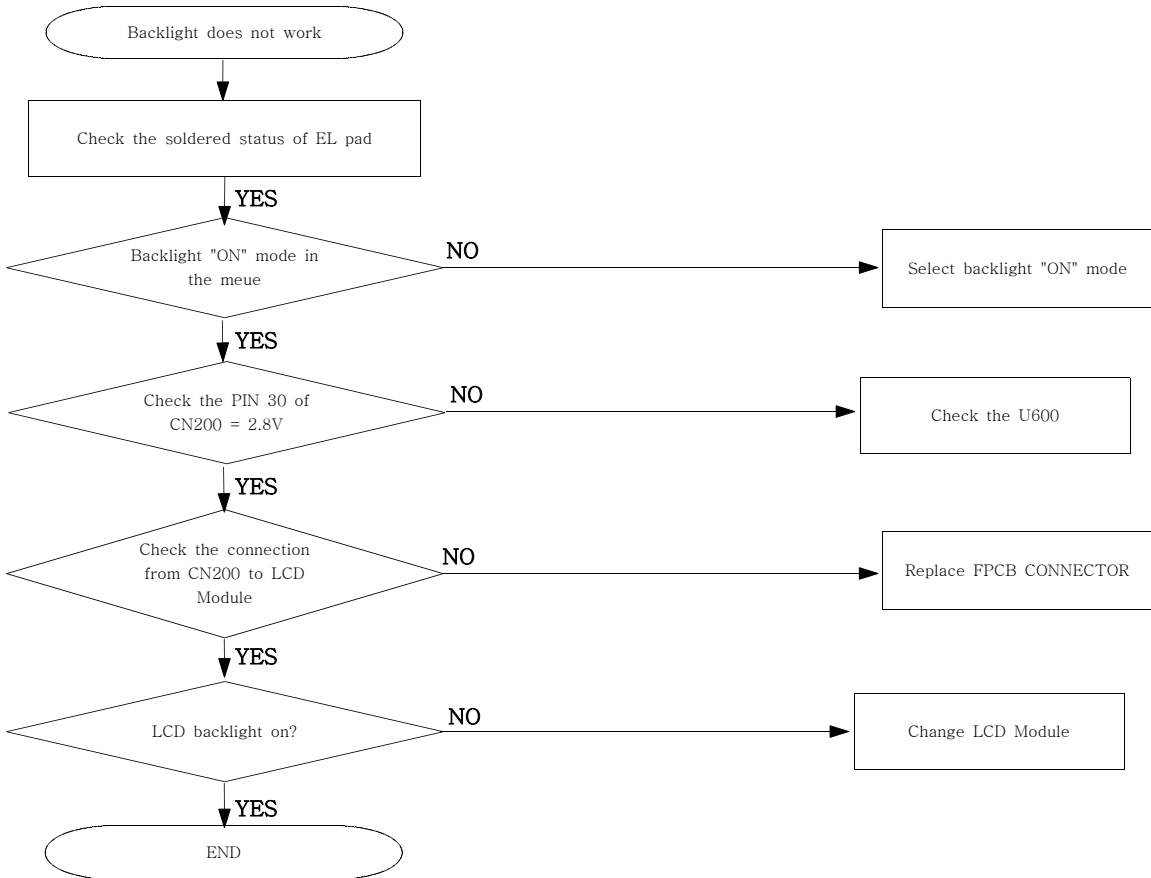




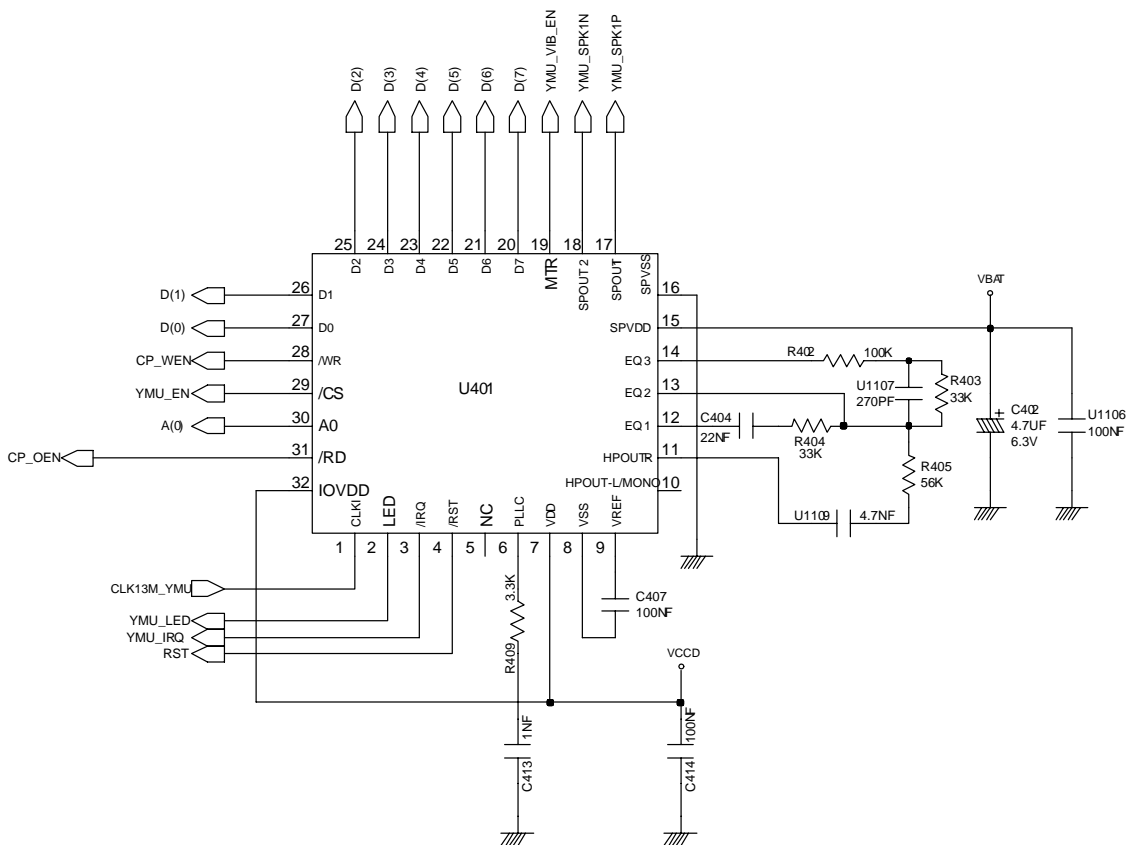
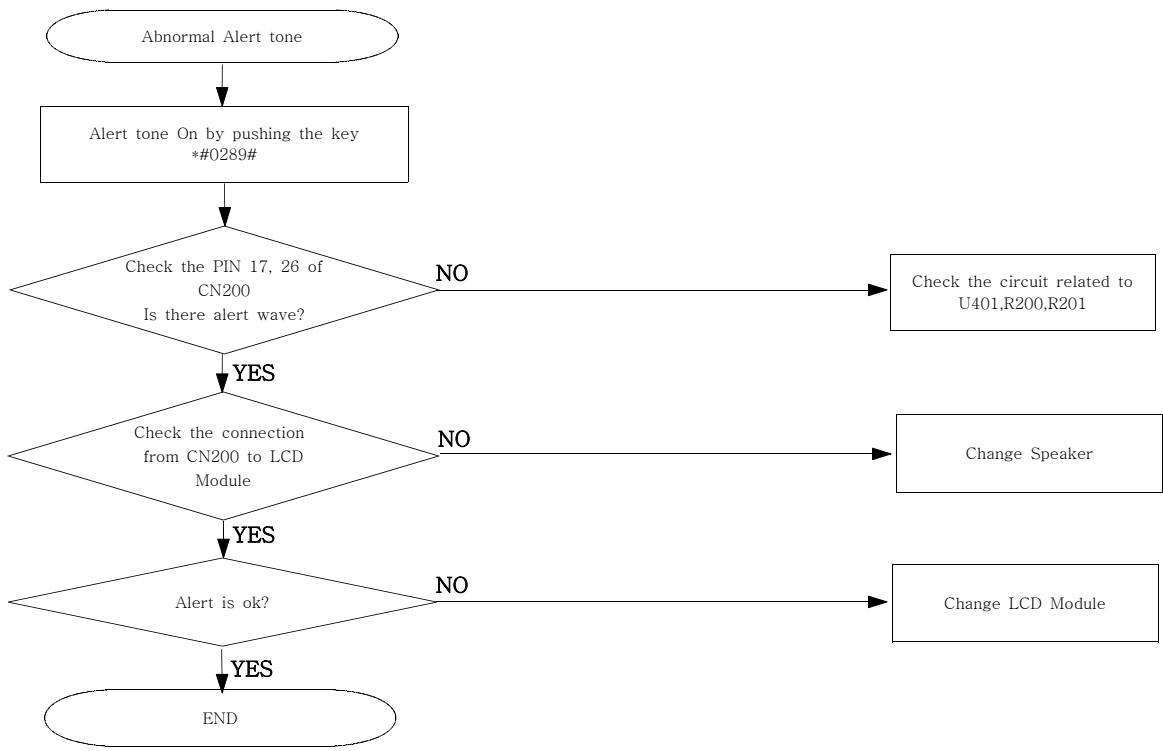
6. Speaker Part



7. Back Light

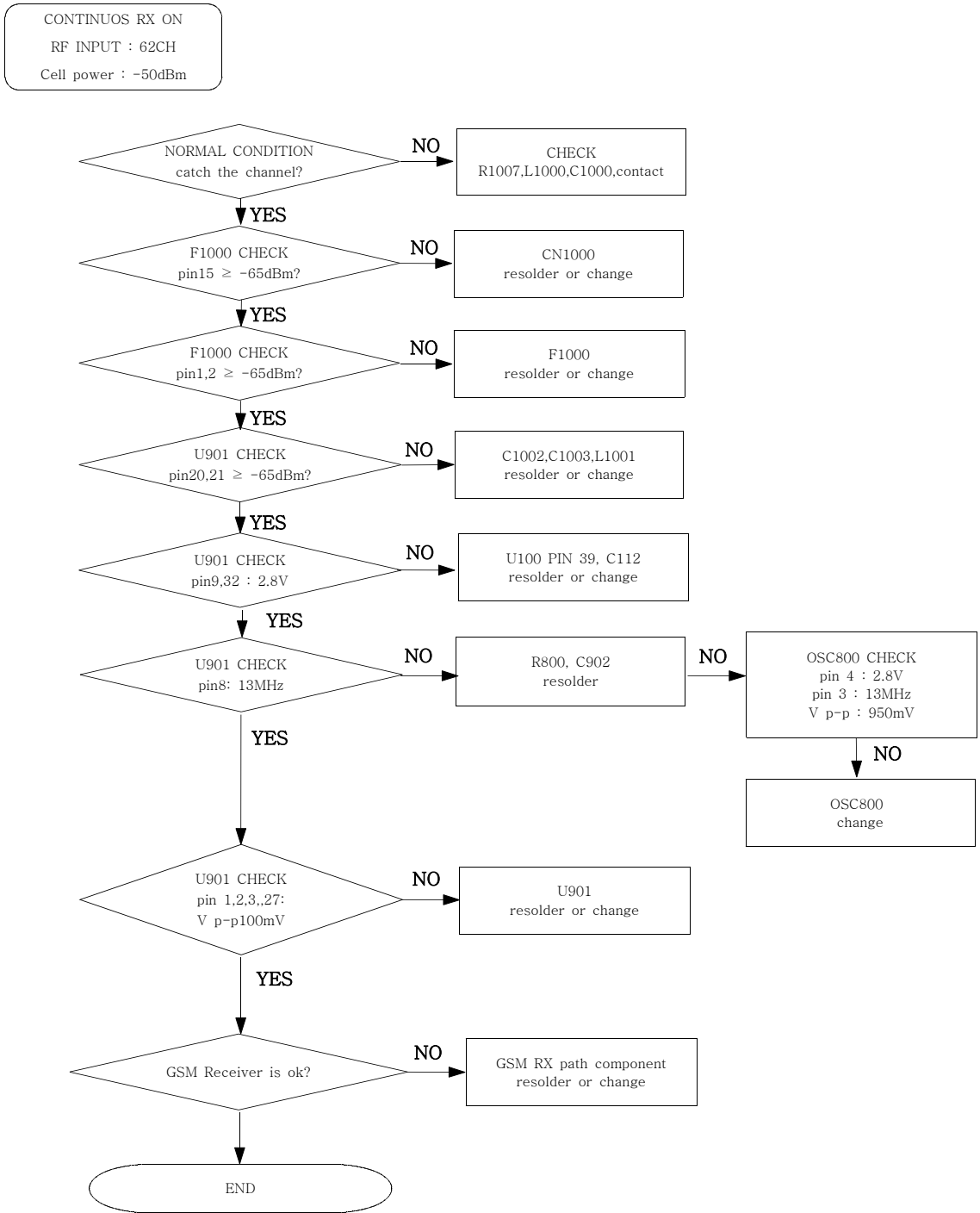


8.Alert Tone



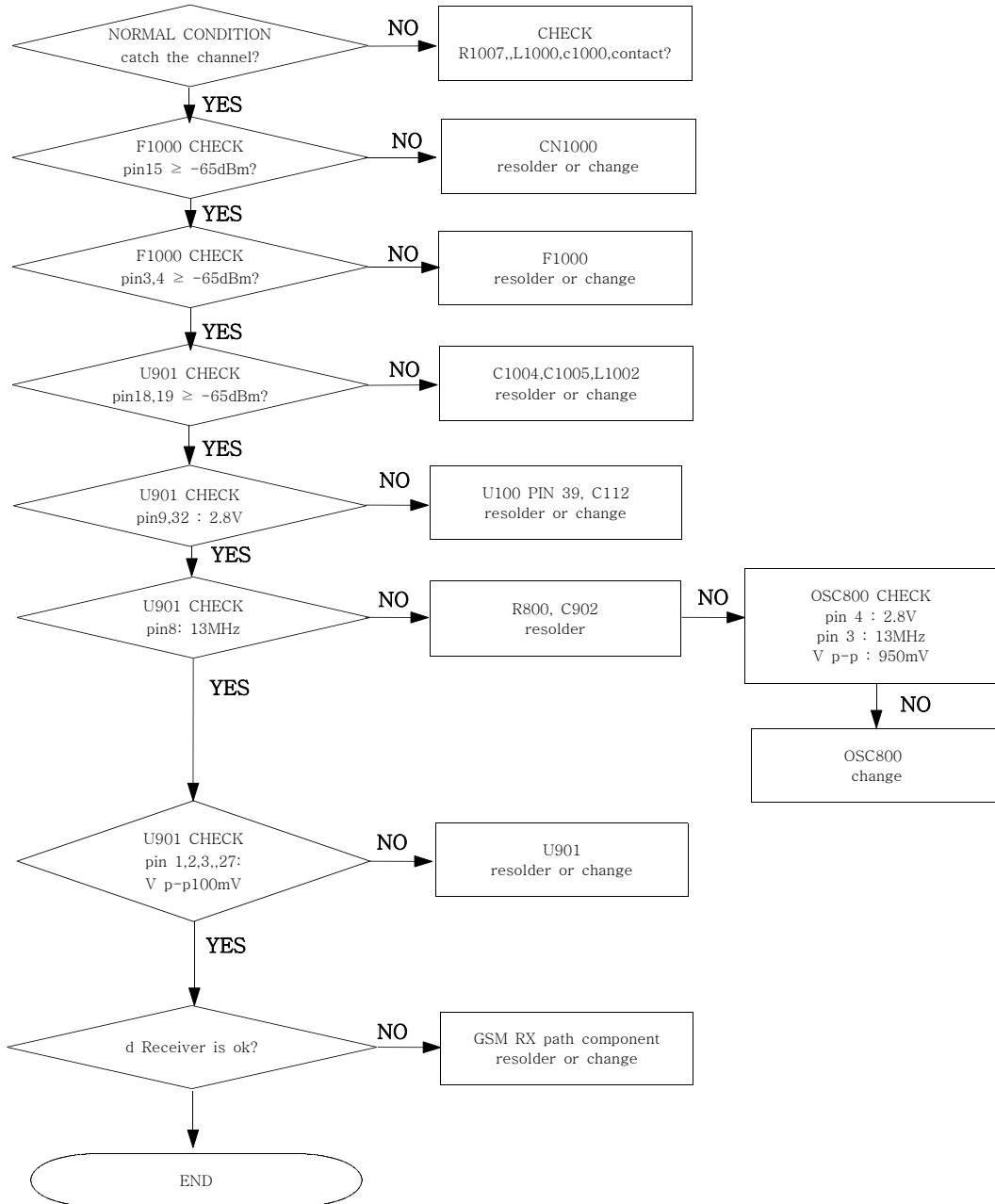
2.RF

1. GSM Receiver



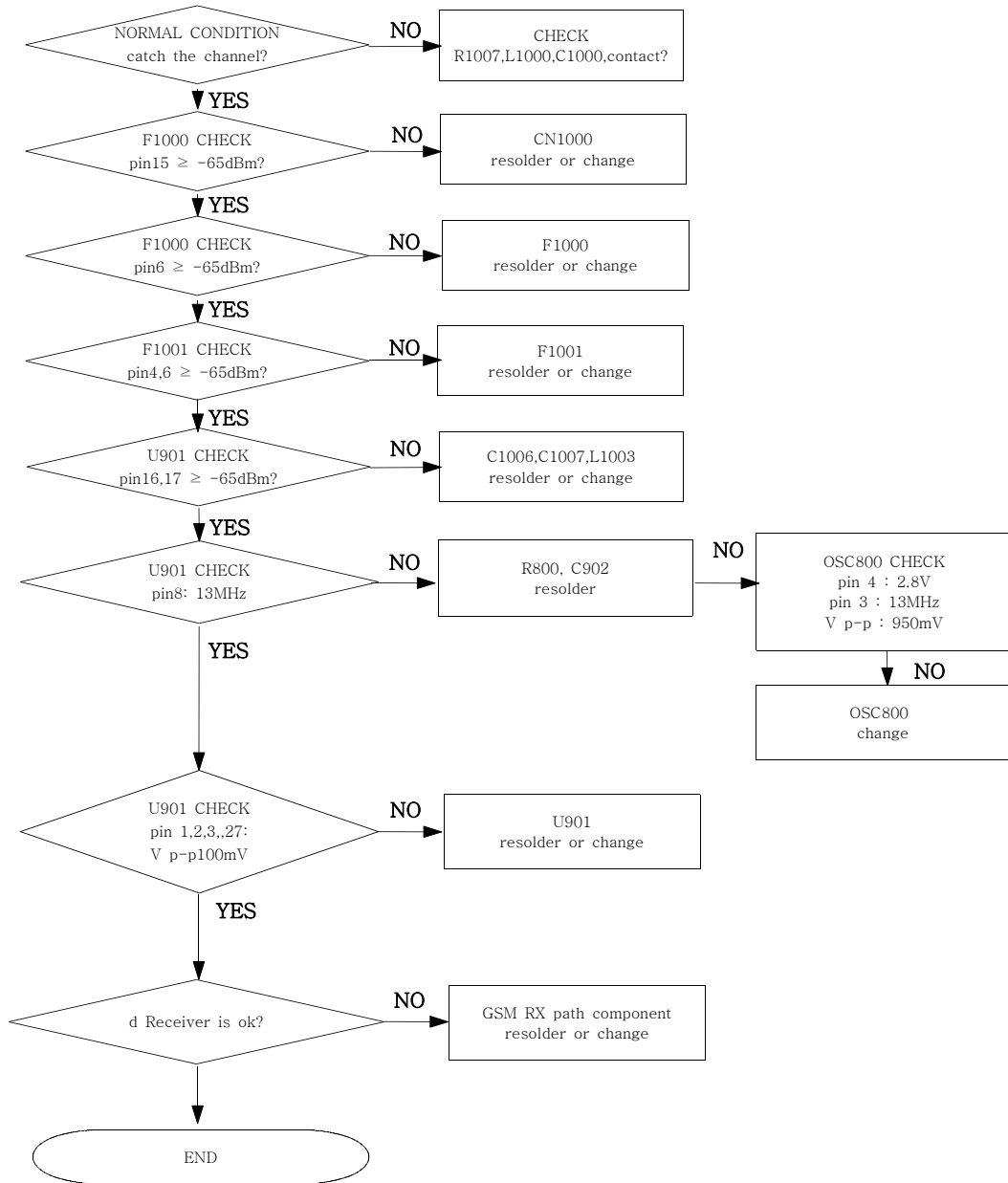
2. DCS Receiver

CONTINUOUS RX ON
 RF INPUT : 698CH
 Cell power : -50dBm

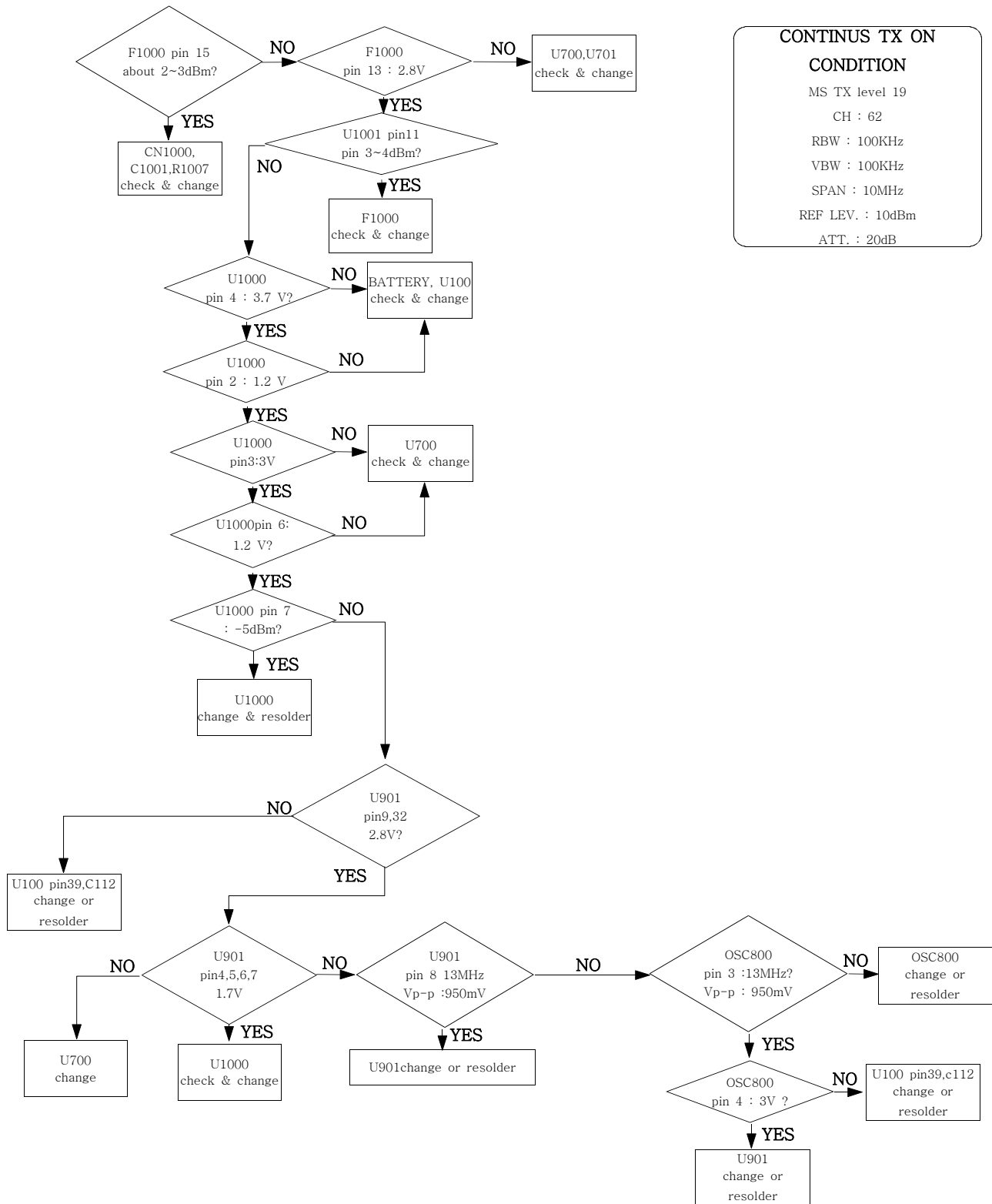


3. PCS Receiver

CONTINUOUS RX ON
 RF INPUT : 698CH
 Cell power : -50dBm

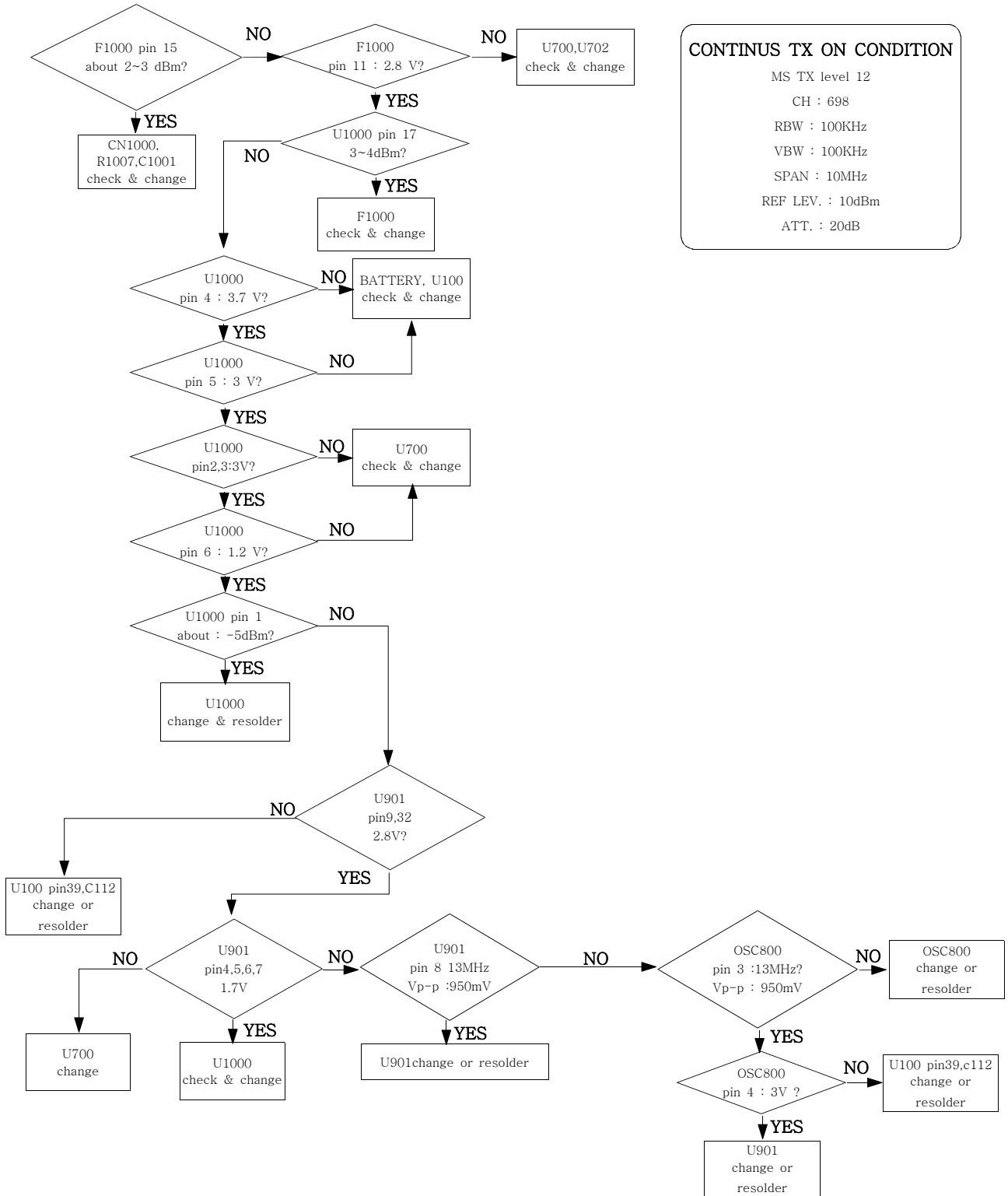


4. GSM Transmitter



CONTINUS TX ON
CONDITION
 MS TX level 19
 CH : 62
 RBW : 100KHz
 VBW : 100KHz
 SPAN : 10MHz
 REF LEV. : 10dBm
 ATT. : 20dB

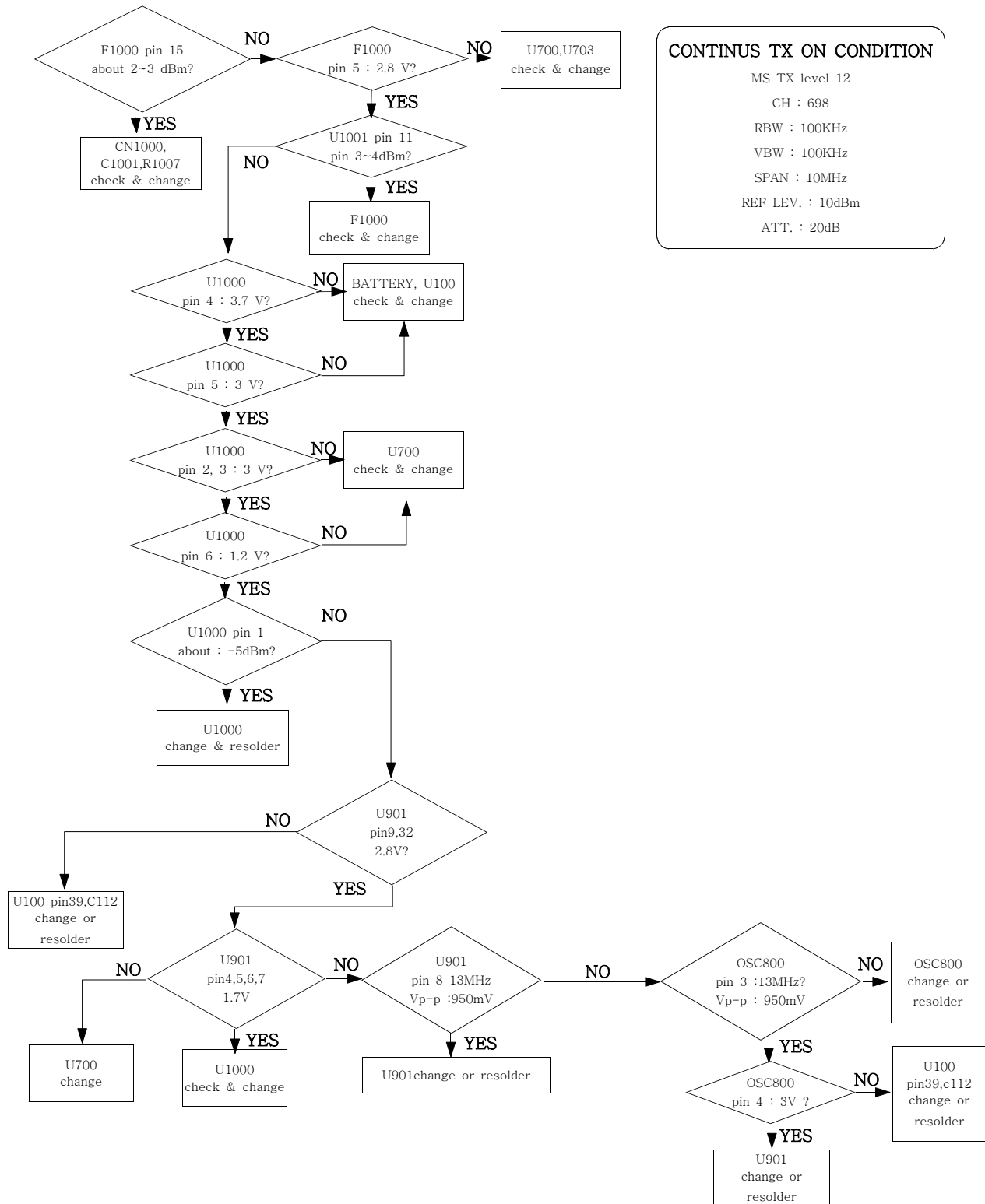
5. DCS Transmitter

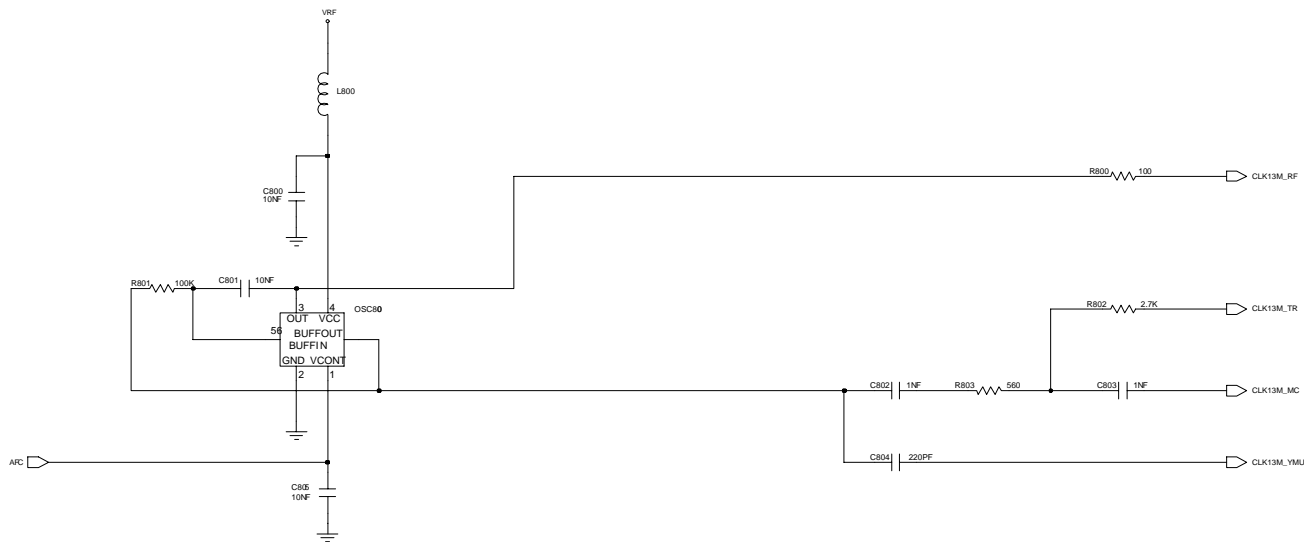


CONTINUS TX ON CONDITION

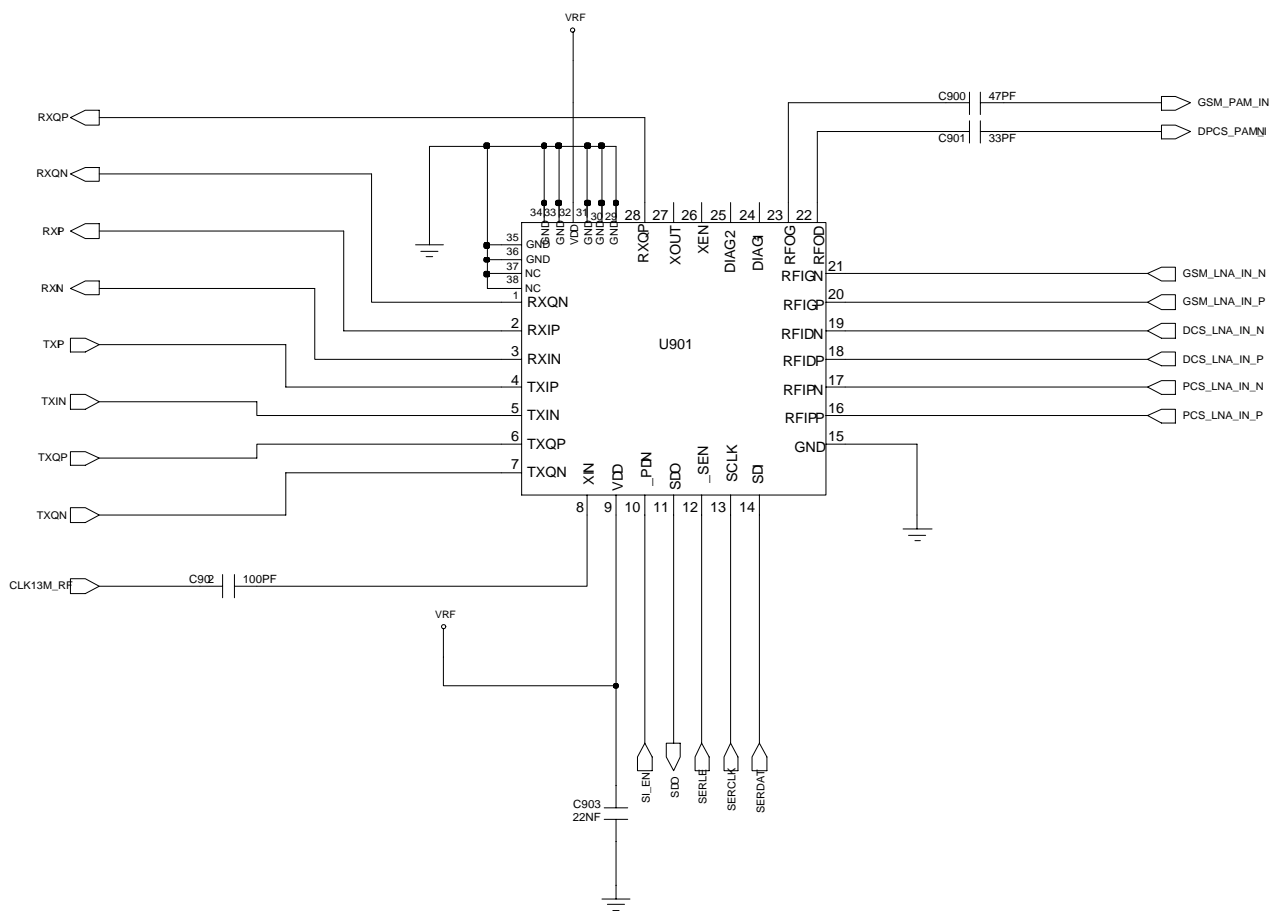
MS TX level 12
 CH : 698
 RBW : 100KHz
 VBW : 100KHz
 SPAN : 10MHz
 REF LEV. : 10dBm
 ATT. : 20dB

6. PCS Transmitter

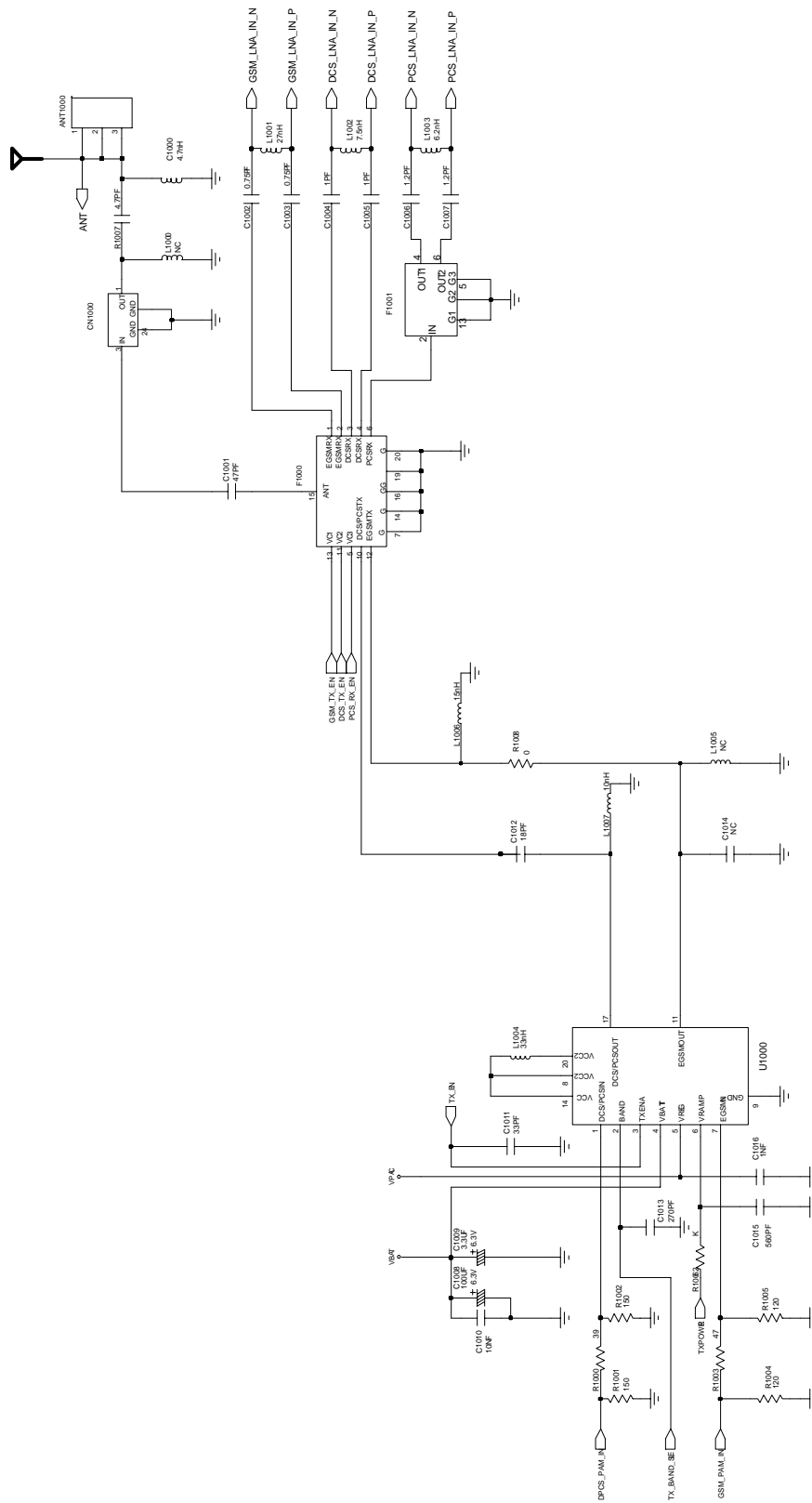




(Picture 1)



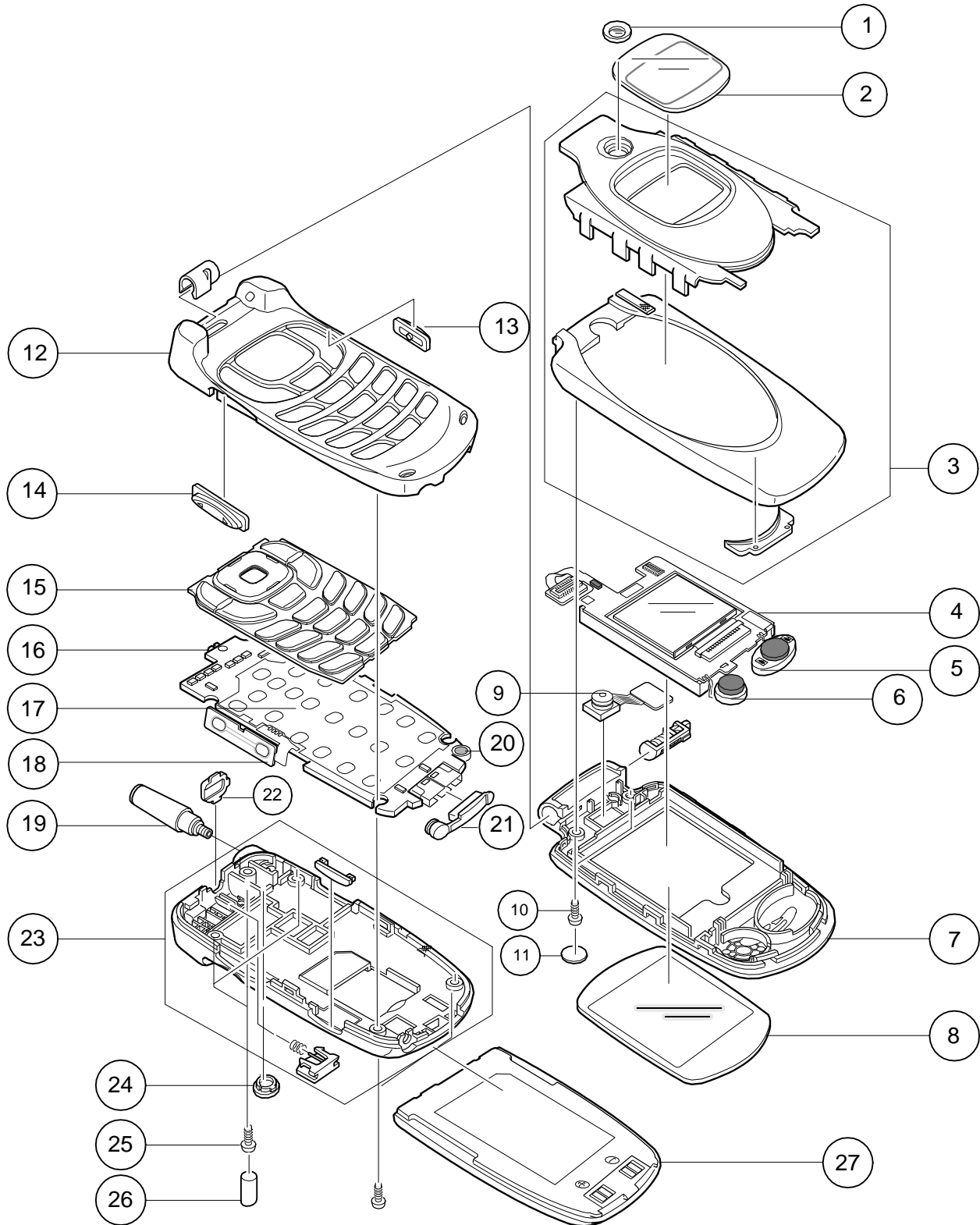
(Picture 2)



(Picture 3)

3. SGH-E600/E608 Exploded View and its Part list

1. Cellular phone Exploded View



2. Cellular phone Parts list

Location NO.	Description	SEC CODE (SGH-E600)	SEC CODE (SGH-E608)	Remark
1	MEC CAMERA RING ASS'Y	GH75-03822A		
2	PMO DUAL WINDOW	GH72-10580A	GH72-10580B	
3	MEC F/UPPER	GH75-03801A		
4	LCD	GH07-00471A		
5	MICRO SPEAKER	3001-001481		
6	MOTOR	GH31-00075A		
7	MEC F/LOWER	GH75-03817A		
8	MEC MAIN WINDOW	GH75-03820A		
9	UNIT CAMERA	GH59-01175A		
10	SCREW	6001-001479		
11	LABEL SCREW HOLE COVER	GH68-02948A		
12	MEC FRONT COVER	GH75-03800A		
13	MEC CAMERA KEY ASS'Y	GH75-03825A		
14	MEC VOL KEY ASS'Y	GH75-03824A		
15	MEC KEYPAD ASS'Y	GH75-03821A	GH75-03821B	
16	MAIN PBA	GH92-01608A	GH92-01714A	
17	UNIT METAL DOME	GH59-01145A		
18	UNIT VOL KEY	GH59-01147A		
19	ANTENNA	GH42-00365A		
20	MICROPHONE ASS'Y	GH30-00075A		
21	IF COVER	GH72-10589A		
22	EAR JACK COVER	GH72-10587A		
23	MEC REAR COVER	GH75-03823A	GH75-04277A	
24	R/F COVER	GH72-11998A		
25	SCREW	6001-001478		
26	REAR SCREW CAP	GH72-11991A		
27	BATTERY	GH43-01138A	GH43-01238A	700MAH
		GH43-01139A	GH43-01239A	900MAH

3. Test Jig (GH80-00865A)



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



**3-2. Test Cable
(GH39-00127A)**



3-3. Serial Cable



3-4. Power Supply Cable



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



**3-6. TA (GH44-00482A)-E600
(GH44-00483A)-E608**



4. SGH-E600/E608 MAIN Electrical Parts List

SEC Code	Design LOC
GH71-00734A	ANT1000
2203-005061	C100
2703-002267	C1000
2203-000995	C1001
2203-002677	C1002
2203-002677	C1003
2203-005288	C1004
2203-005288	C1005
2203-005234	C1006
2203-005234	C1007
2404-001134	C1008
2404-001087	C1009
2203-000812	C101
2203-000254	C1010
2203-000812	C1011
2203-000425	C1012
2203-000654	C1013
2203-002525	C1015
2203-000438	C1016
2203-005061	C102
2203-001598	C103
2203-000812	C104
2203-000812	C105
2203-005061	C106
2203-005171	C107
2203-005171	C108
2203-005171	C109
2203-005171	C110
2203-005061	C1101
2203-005061	C1102
2203-000233	C1103
2203-005061	C1105
2404-001268	C1106
2203-000254	C1107
2203-000940	C1108
2203-000233	C111
2404-001268	C1111

SEC Code	Design LOC
2203-005061	C1112
2404-001268	C1113
2203-000940	C1114
2203-001598	C112
2203-005171	C113
2203-005171	C114
2203-005061	C115
2404-001268	C116
2404-001268	C117
2203-000995	C118
2404-001268	C119
2203-005509	C200
2203-005482	C201
2203-000359	C202
2203-000359	C203
2203-001652	C204
2404-001086	C205
2203-005061	C300
2203-005061	C400
2203-005061	C401
2404-001086	C402
2203-005061	C403
2203-001405	C404
2203-000254	C405
2203-006093	C406
2203-005061	C407
2203-000812	C408
2203-000278	C409
2203-000278	C410
2203-000278	C411
2404-001268	C412
2203-000438	C413
2203-005061	C414
2404-001100	C415
2404-001100	C417
2203-000278	C419
2203-006093	C420

SEC Code	Design LOC
2203-000438	C421
2203-002443	C422
2203-000278	C423
2203-005503	C424
2203-000278	C425
2203-000679	C426
2203-005496	C600
2203-005496	C601
2203-000254	C602
2203-000254	C603
2203-000254	C604
2203-000254	C605
2203-000254	C606
2203-005061	C607
2203-001405	C608
2203-000679	C609
2203-000254	C610
2203-005482	C611
2203-000995	C612
2203-000233	C613
2203-000628	C614
2203-005480	C615
2203-000628	C616
2203-000628	C700
2203-002443	C701
2203-000233	C702
2203-005496	C703
2203-005450	C704
2203-005065	C705
2203-005061	C706
2203-000233	C707
2203-000254	C708
2203-000254	C709
2203-000254	C710
2203-000254	C711
2203-000254	C712
2203-000254	C713

SGH-E600/E608 Electrical Parts List

SEC Code	Design LOC
2203-005052	C714
2203-000233	C715
2203-000254	C800
2203-000254	C801
2203-000438	C802
2203-000438	C803
2203-000585	C804
2203-000254	C805
2203-000995	C900
2203-000812	C901
2203-000233	C902
2203-006137	C903
3404-001152	CAM
3705-001226	CN1000
3711-005159	CN200
3722-001880	CN400
2909-001191	F1000
2904-001410	F1001
2901-001260	F200
2901-001260	F201
2901-001260	F202
2901-001260	F203
2901-001260	F204
2901-001260	F205
2901-001260	F206
2703-001907	L1001
2703-002165	L1002
2703-001543	L1004
2703-001180	L1006
2703-001943	L1007
3301-001105	L800
0604-001261	LED200
0601-001790	LED201
0601-001790	LED202
0601-001790	LED203
0601-001790	LED204
0601-001790	LED205

SEC Code	Design LOC
0601-001790	LED206
0601-001790	LED207
0601-001790	LED208
0601-001790	LED209
0601-001790	LED210
0601-001790	LED211
0601-001790	LED212
4302-001130	M1
2801-003747	OSC600
0502-001201	Q100
0504-001113	Q101
0504-001113	Q102
0506-001052	Q103
0504-000168	Q400
0504-000167	Q701
0504-000167	Q702
0504-000167	Q703
2007-000167	R100
2007-001295	R1000
2007-001306	R1001
2007-001306	R1002
2007-000174	R1003
2007-001305	R1004
2007-001305	R1005
2007-000137	R1006
2203-005395	R1007
2007-000171	R1008
2007-001319	R101
2007-000758	R102
2007-000148	R103
2007-000171	R104
2007-007139	R105
2007-001323	R106
2007-000157	R1100
2007-000171	R1101
2007-000143	R1102
2007-000143	R1103

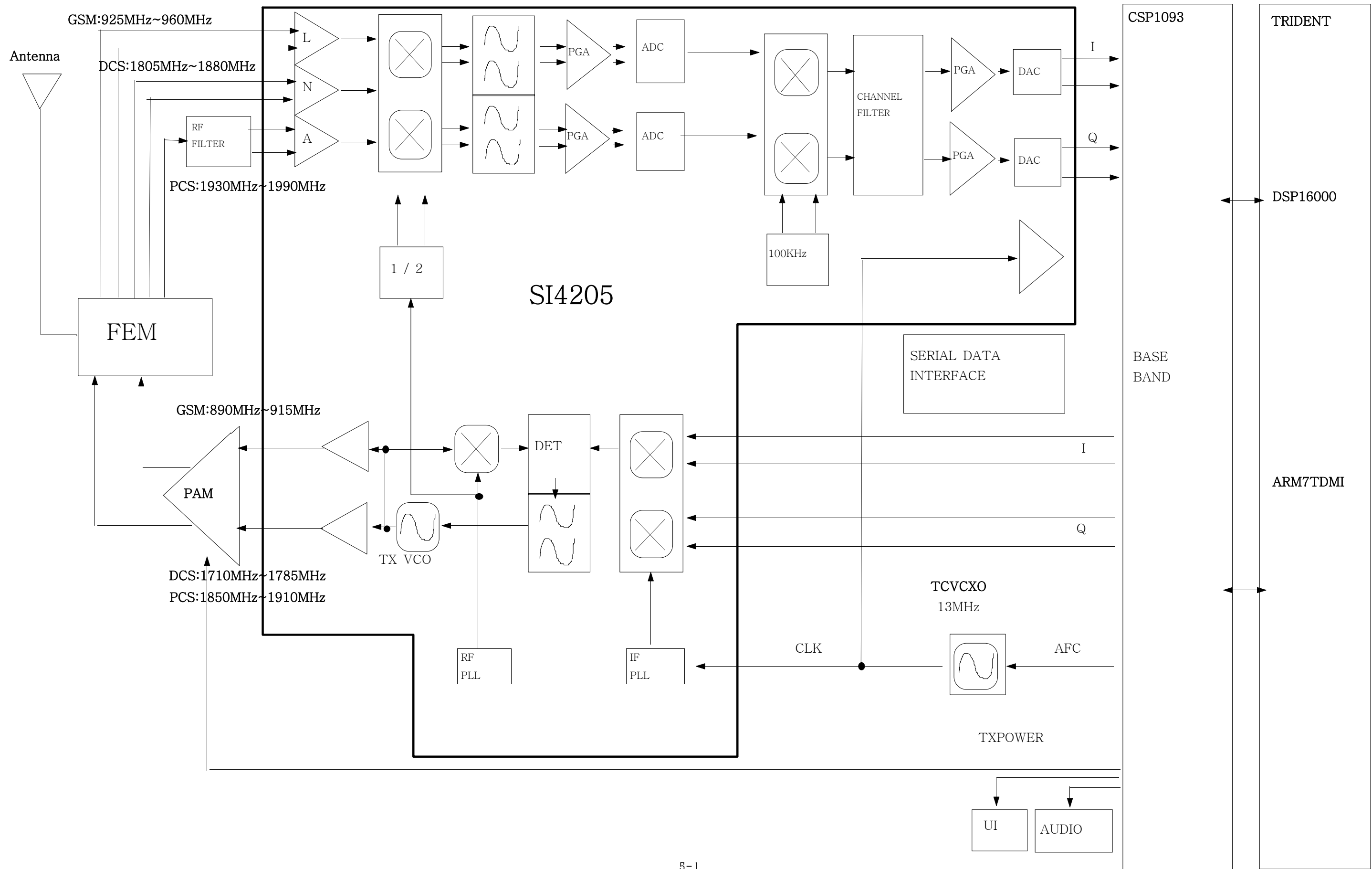
SEC Code	Design LOC
2007-000148	R1104
2007-007021	R1105
2007-000171	R1107
2007-000171	R200
2007-000171	R201
2007-002970	R202
2007-002970	R203
2007-000174	R204
2007-000174	R205
2007-000174	R206
2007-000174	R207
2007-000174	R208
2007-000174	R209
2007-000174	R210
2007-000174	R211
2007-001307	R212
2007-001307	R213
2007-001307	R214
2007-001307	R215
2007-001307	R216
2007-001307	R217
2007-001307	R218
2007-001307	R219
2007-001307	R220
2007-001307	R221
2007-001307	R222
2007-001307	R223
2007-000174	R224
2007-000174	R225
2007-000157	R300
2007-000157	R301
2007-000157	R302
2007-000140	R303
2007-000140	R304
2007-000140	R305
2007-000140	R306
2007-000140	R307

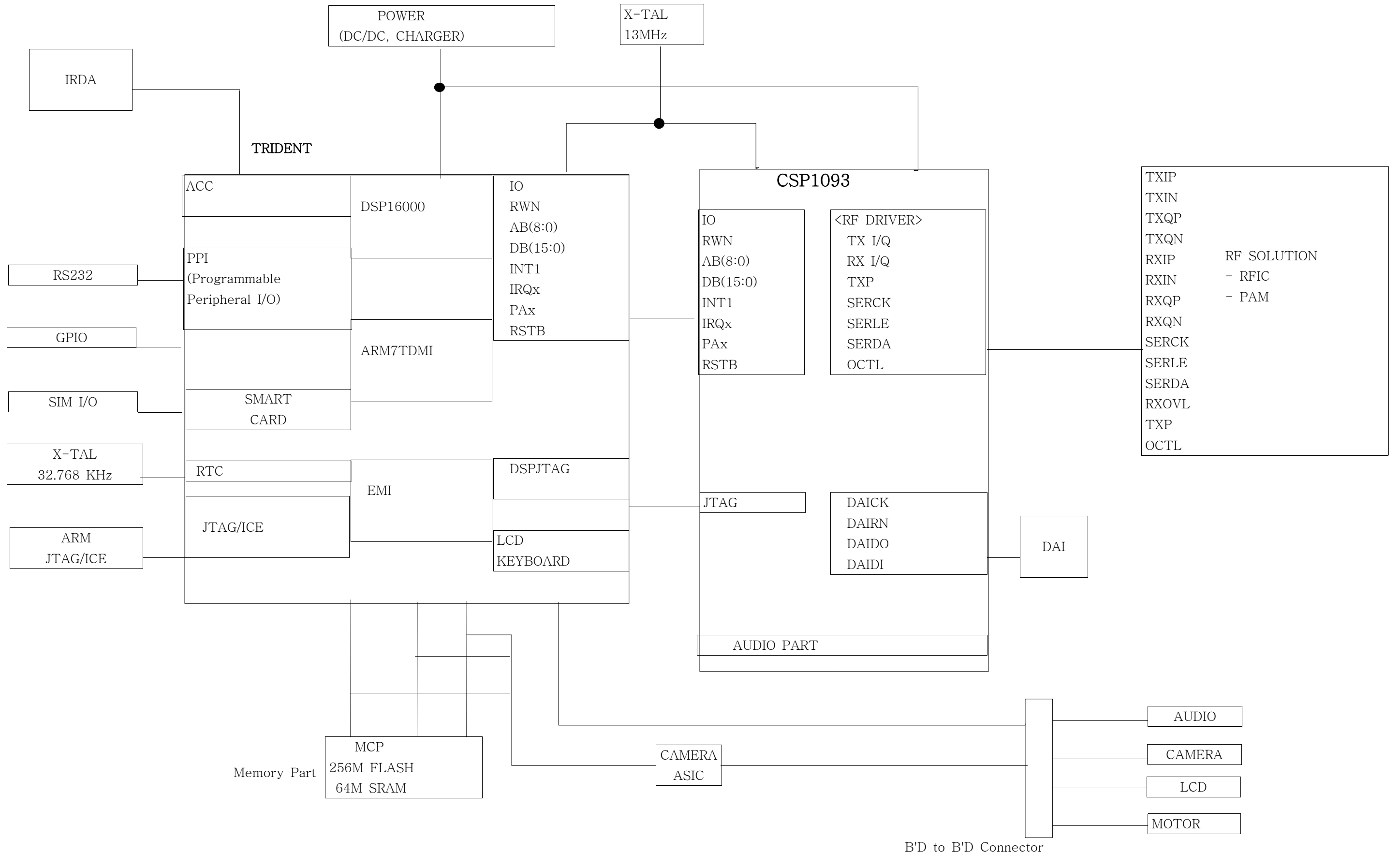
SEC Code	Design LOC
2007-000140	R308
2007-000140	R309
2007-000140	R310
2007-000148	R311
2007-000148	R312
2007-003001	R400
2007-003001	R401
2007-000162	R402
2007-000775	R403
2007-000775	R404
2007-000159	R405
2007-000147	R406
2007-000172	R407
2007-007021	R408
2007-001325	R409
2007-000143	R410
2007-000171	R411
2007-001119	R412
2007-003001	R413
2007-000932	R414
2007-000172	R415
2007-003001	R416
2007-000143	R417
2007-000162	R418
2007-001284	R419
2007-000144	R420
2007-000162	R421
2007-000171	R422
2007-000171	R423
2007-000171	R424
2007-000171	R426
2007-001244	R428
2007-000165	R429
2007-000171	R431
2007-000171	R432
2007-000171	R433
2007-000758	R434

SEC Code	Design LOC
2007-000157	R500
2007-000171	R501
2007-000157	R600
2007-000157	R601
2007-000170	R602
2007-000157	R603
2007-000162	R604
2007-000162	R605
2007-007142	R606
2007-007573	R607
2007-007573	R609
2007-001305	R700
2007-000932	R701
2007-001305	R702
2007-007200	R703
2007-007200	R704
2007-000138	R800
2007-000162	R801
2007-000142	R802
2007-002797	R803
1203-002902	U100
1203-002127	U101
1203-001720	U102
1203-002113	U1101
1203-002099	U1102
2804-001492	U1103
2203-005061	U1104
2203-005061	U1105
2203-005061	U1106
2203-000654	U1107
2203-000940	U1108
2203-000885	U1109
0801-002294	U300
1204-002138	U401
1109-001281	U500
GH09-00023A	U600
1009-001010	U601

SEC Code	Design LOC
1209-001219	U602
1204-001984	U700
0504-001042	U701
0504-001042	U702
0504-001042	U703
1405-001018	V201
1405-001018	V202
1405-001082	ZD201
1405-001082	ZD202
1405-001082	ZD203
1405-001082	ZD204
1405-001082	ZD205
1405-001082	ZD206
1405-001082	ZD207
1405-001082	ZD208
1405-001082	ZD209
1405-001082	ZD210
1405-001082	ZD211
1405-001082	ZD300
1405-001082	ZD301
1405-001082	ZD302
1405-001082	ZD303
1405-001082	ZD304
1405-001082	ZD305
1405-001082	ZD306
1405-001082	ZD307
1405-001082	ZD308
1405-001082	ZD309
1405-001082	ZD310
1405-001082	ZD311
1405-001082	ZD312
1405-001082	ZD313
1405-001018	ZD314
1405-001082	ZD401
1405-001082	ZD402
1405-001082	ZD403
1405-001082	ZD404

5. SGH-E600/E608 Block Diagrams







ELECTRONICS

This Service Manual is a property of Samsung Electronics Co.,Ltd.
Any unauthorized use of Manual can be punished under applicable
International and/or domestic law.

© Samsung Electronics Co.,Ltd. MAY. 2004
Printed in Korea.

Code No.: GH68-04565A
BASIC.