SAMSUNG

GSM TELEPHONE
SGH-D410

SERVICE Manual

GSM TELEPHONE

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2. Flow Chart of Troubleshooting
3. Exploded Views and Parts List
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1. SGH-D410 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	-

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2. GSM TX power class

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

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

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

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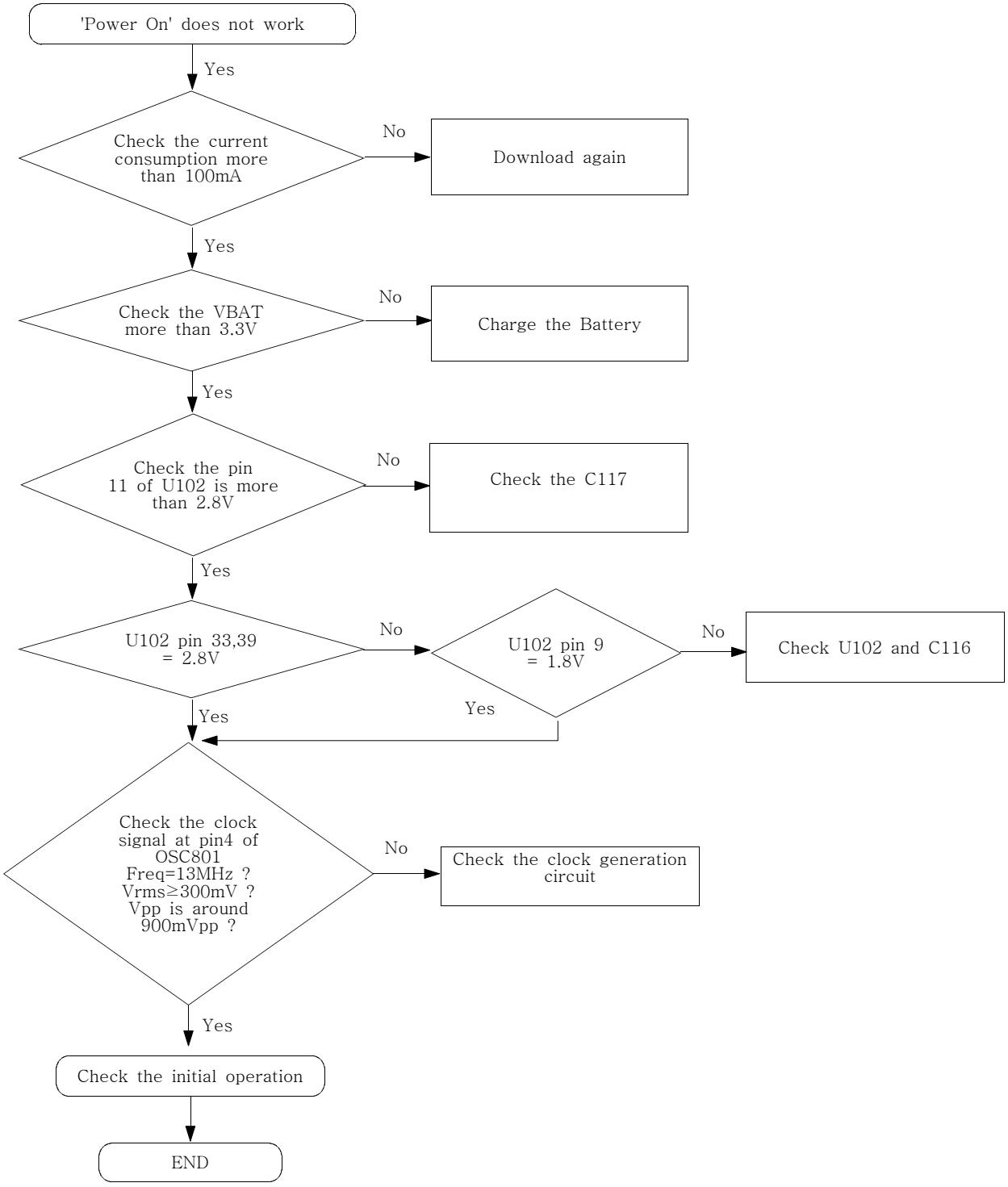
2. SGH-D410 Flow Chart of Troubleshooting

1.Baseband

1. Power ON



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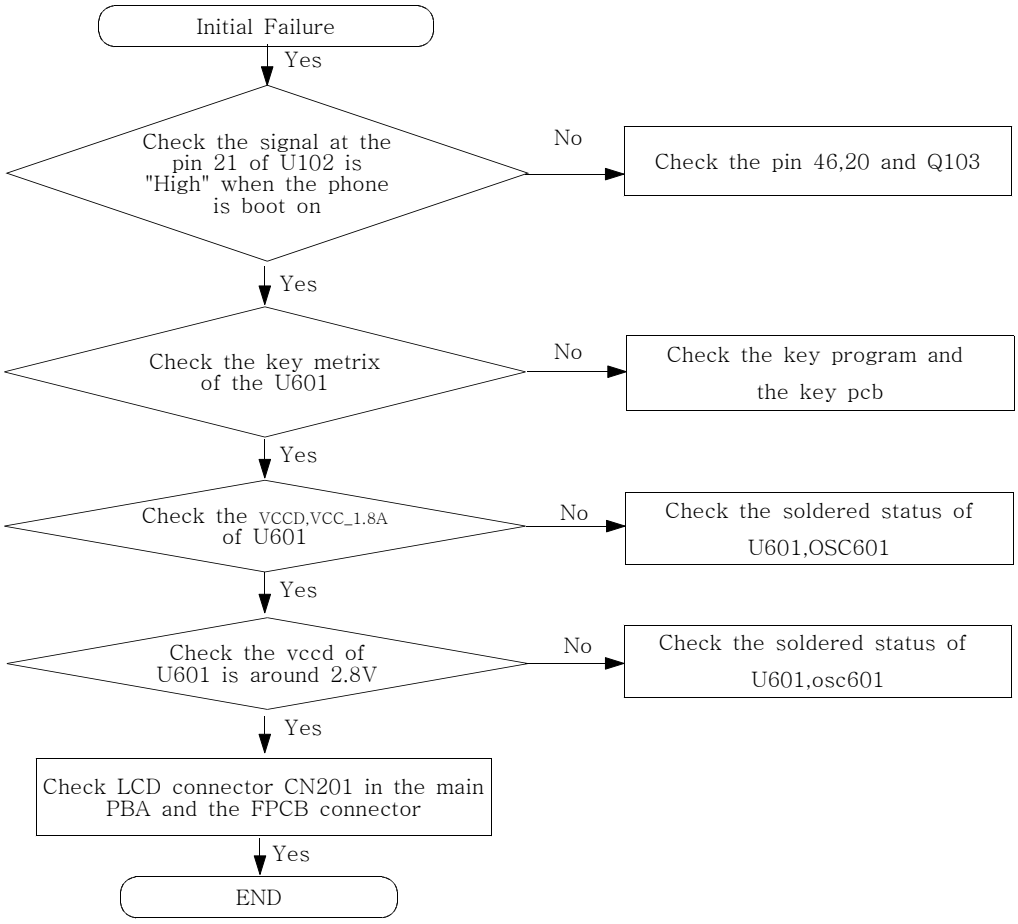
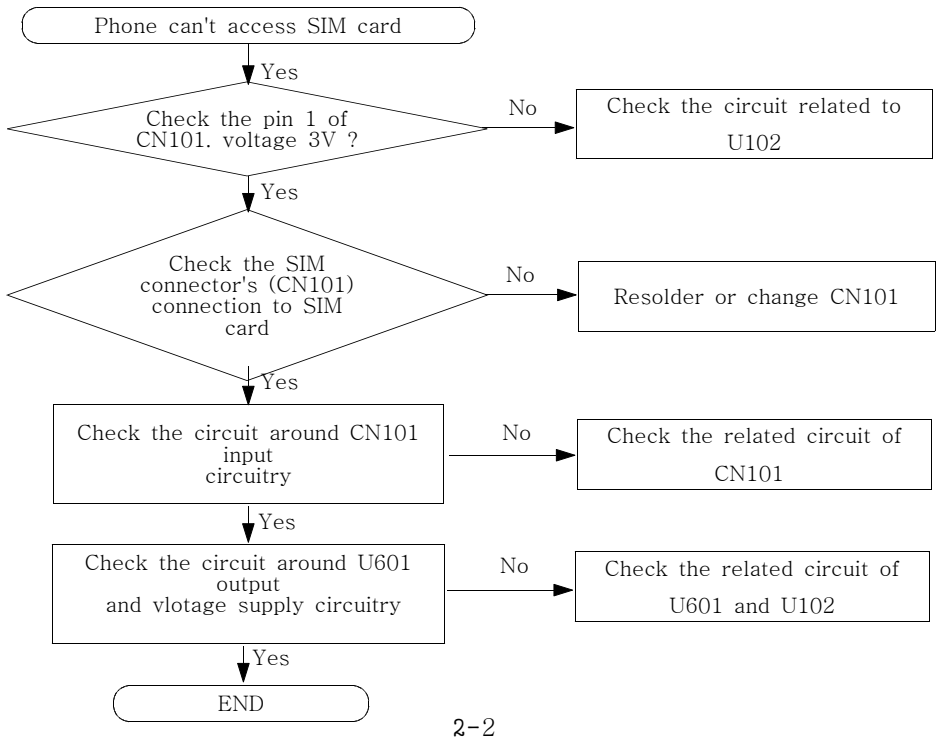
2. Initial



3. Sim Part



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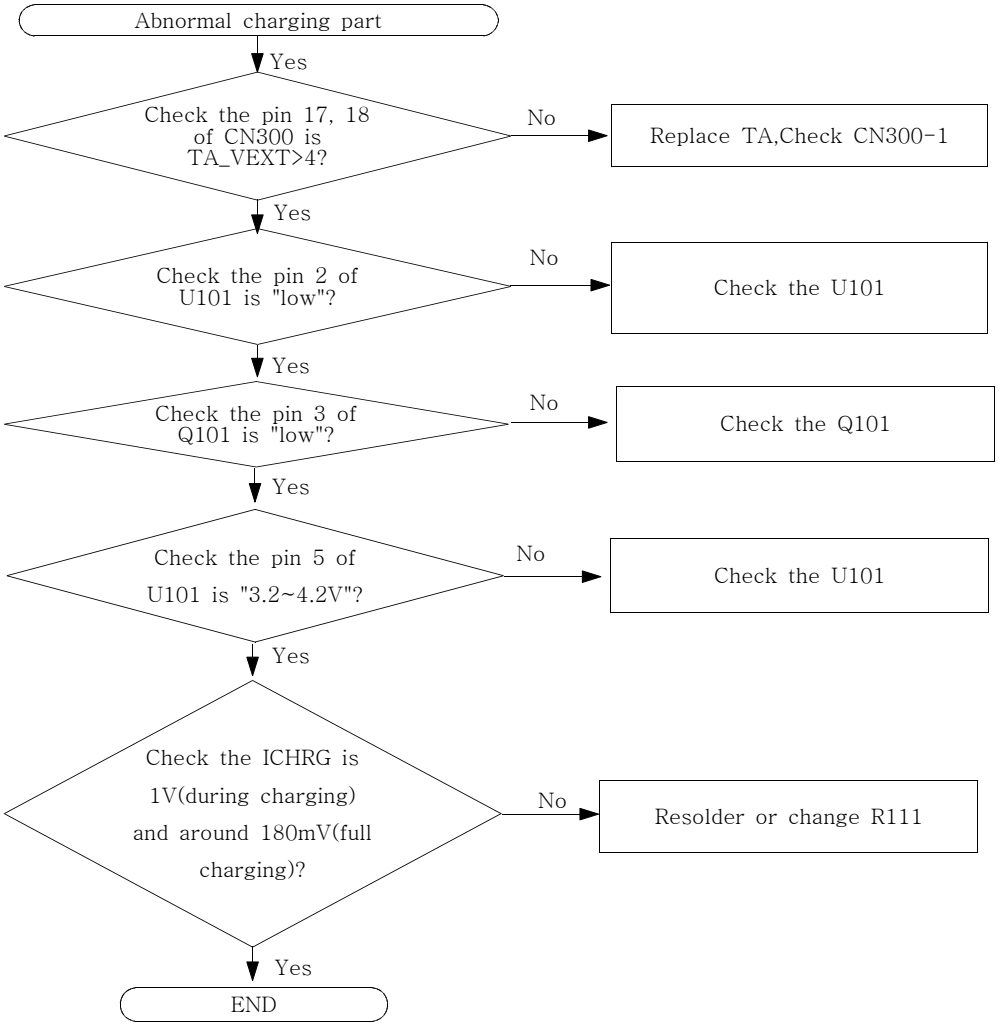
4. Charging Part



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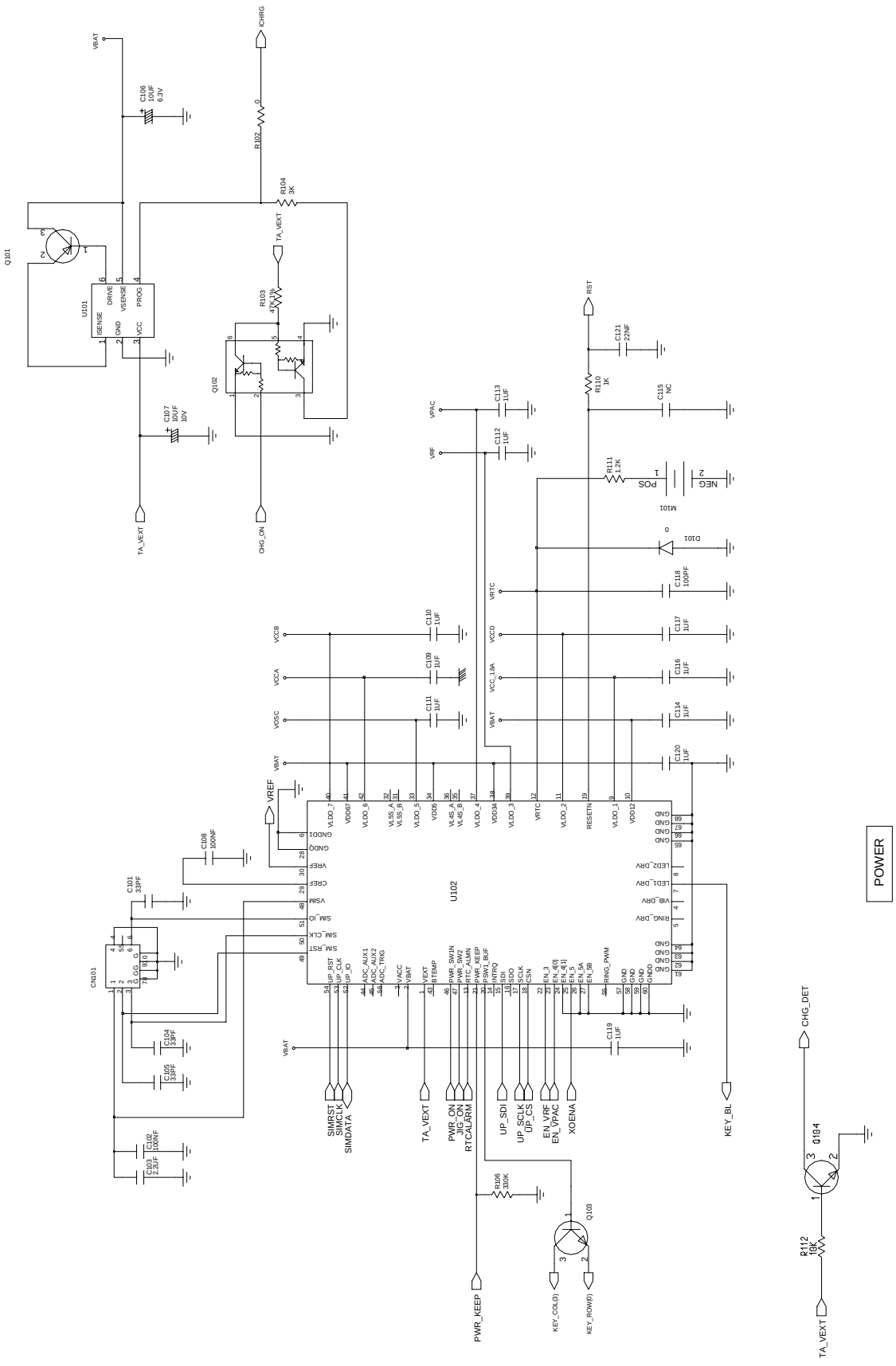

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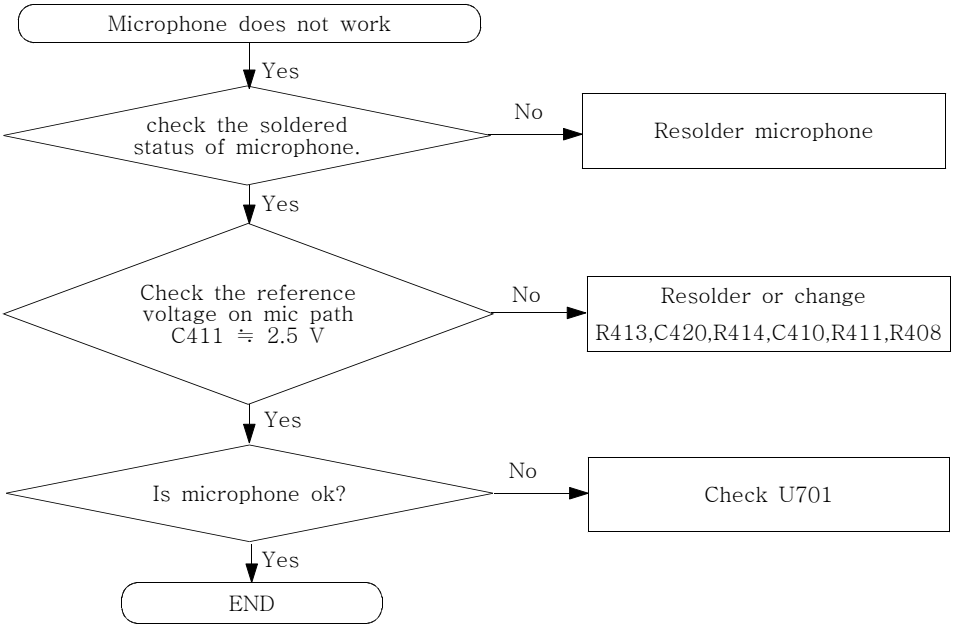
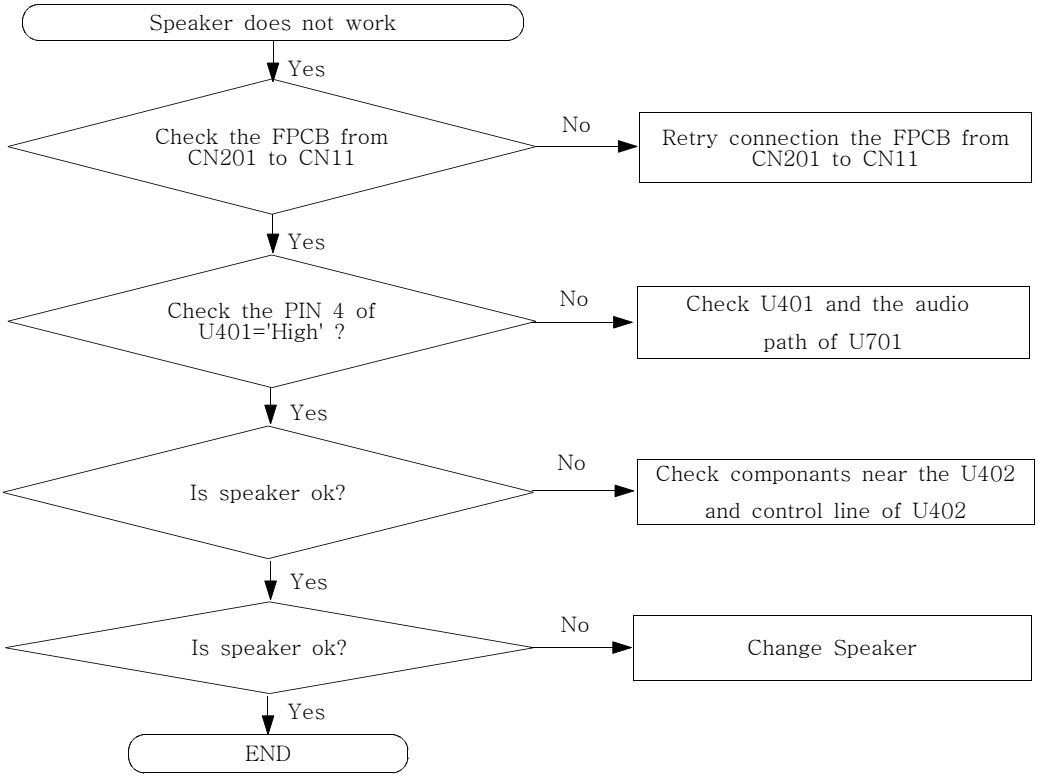
5. Microphone Part



6. Speaker Part



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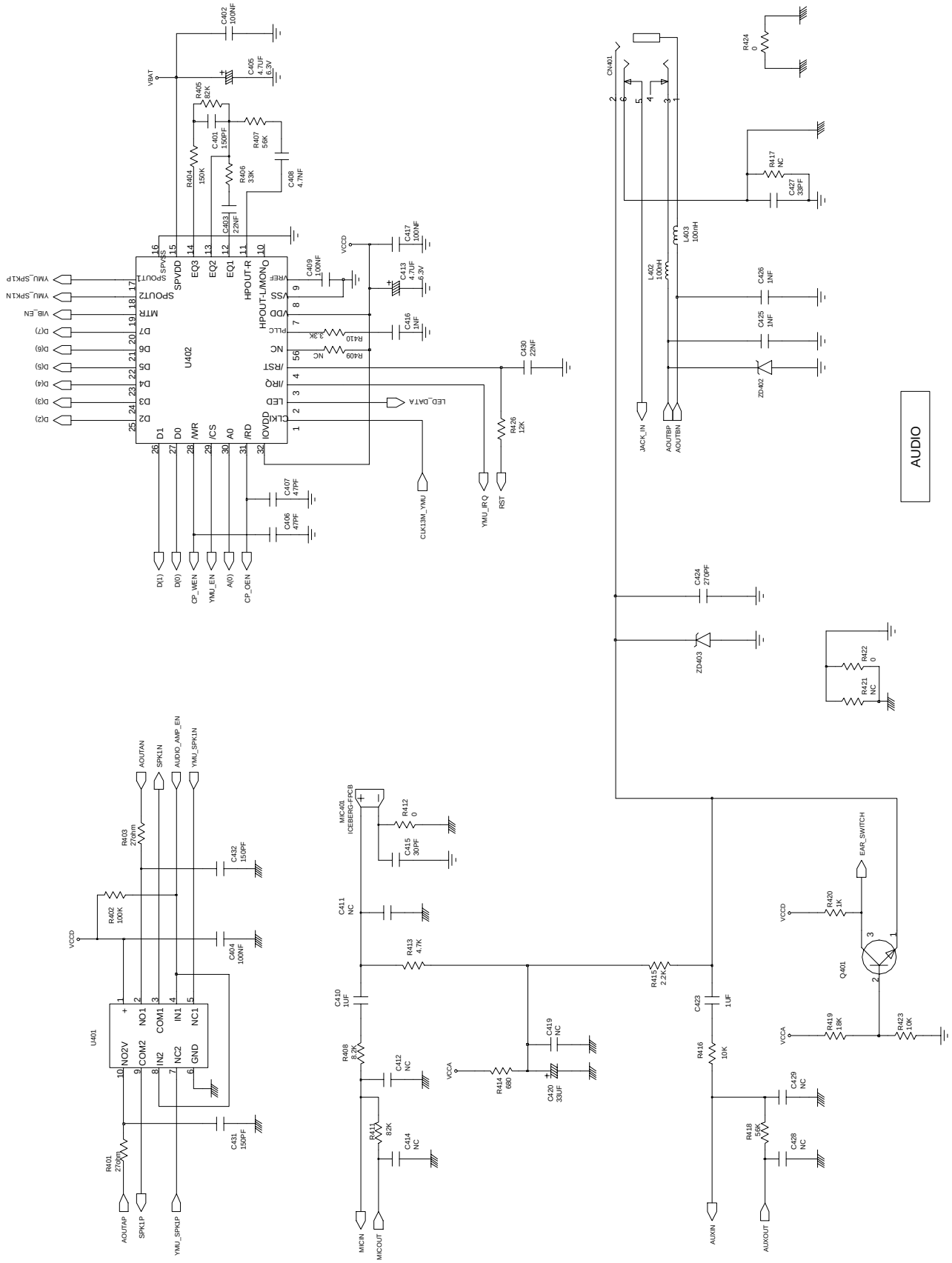

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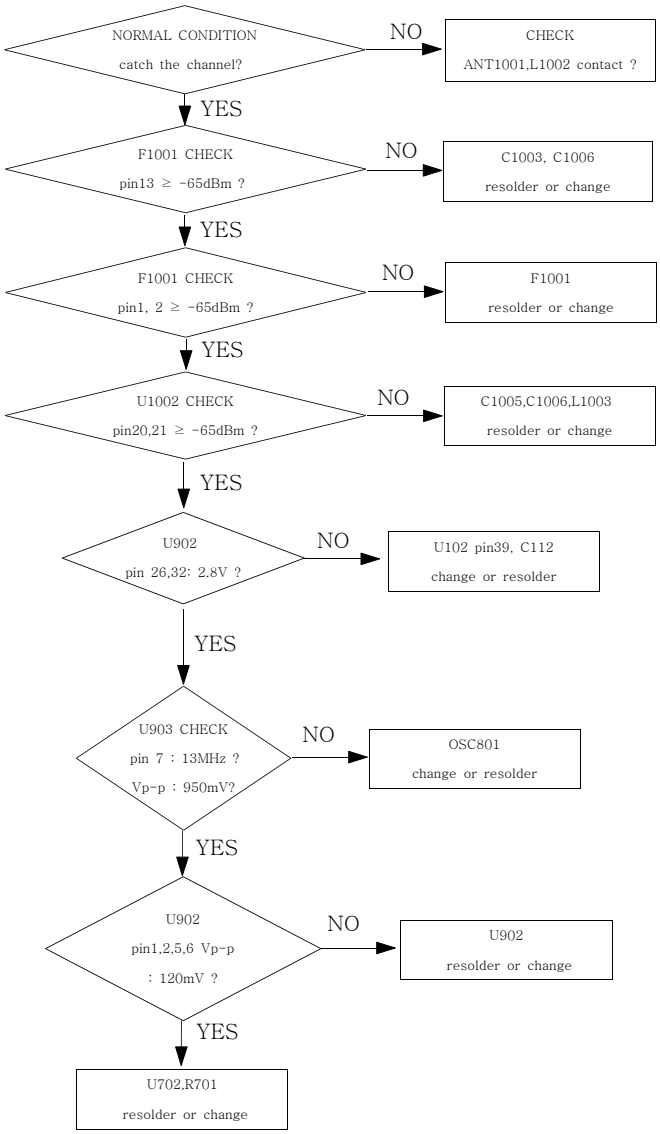
2.RF

1. EGSM RX

CONTINUOUS RX ON
RF INPUT : 62CH
AMP : -50dBm



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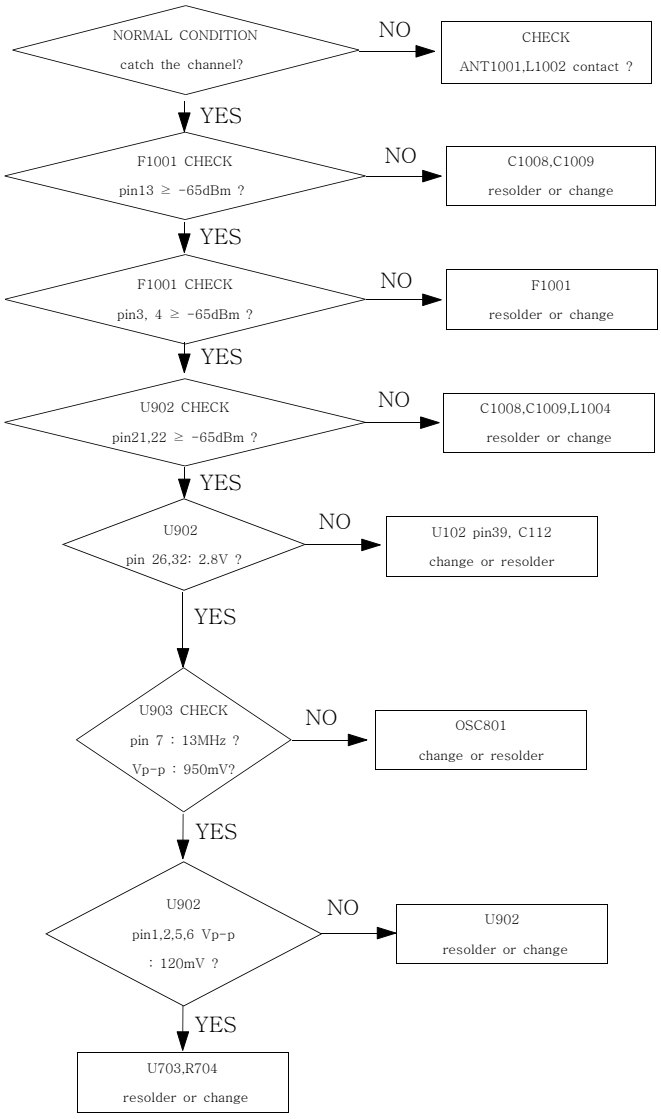
2. DCS RX

CONTINUOUS RX ON
RF INPUT : 698CH
AMP : -50dBm



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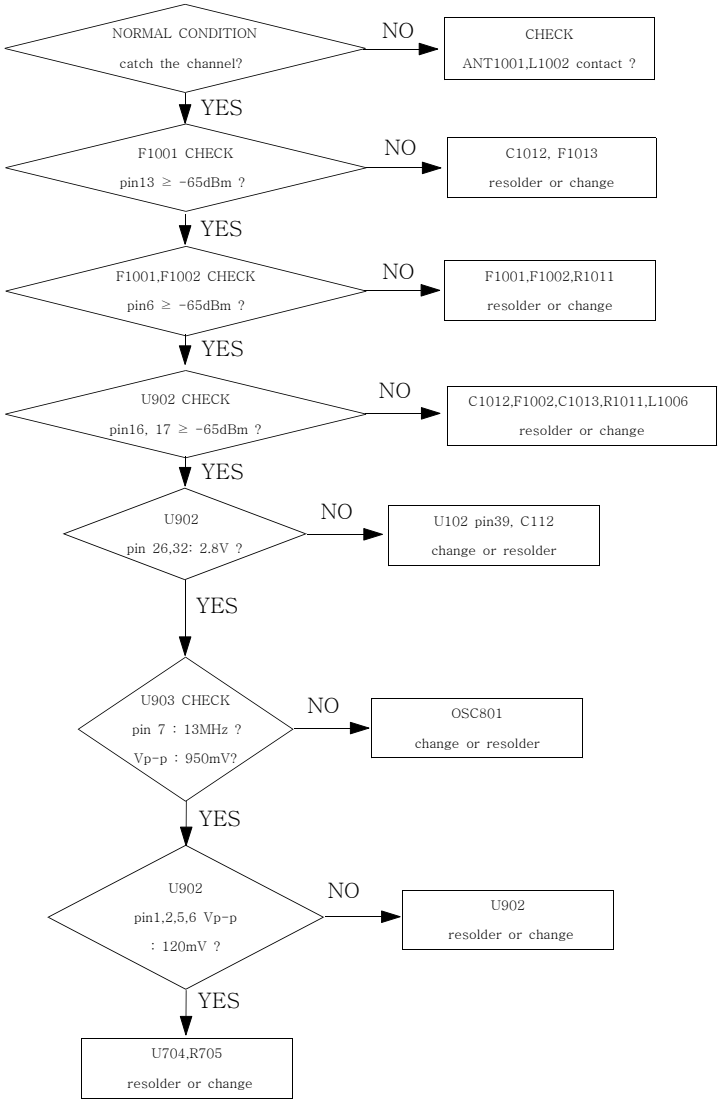
3. PCS RX

CONTINUOUS RX ON
RF INPUT : 660CH
AMP : -50dBm



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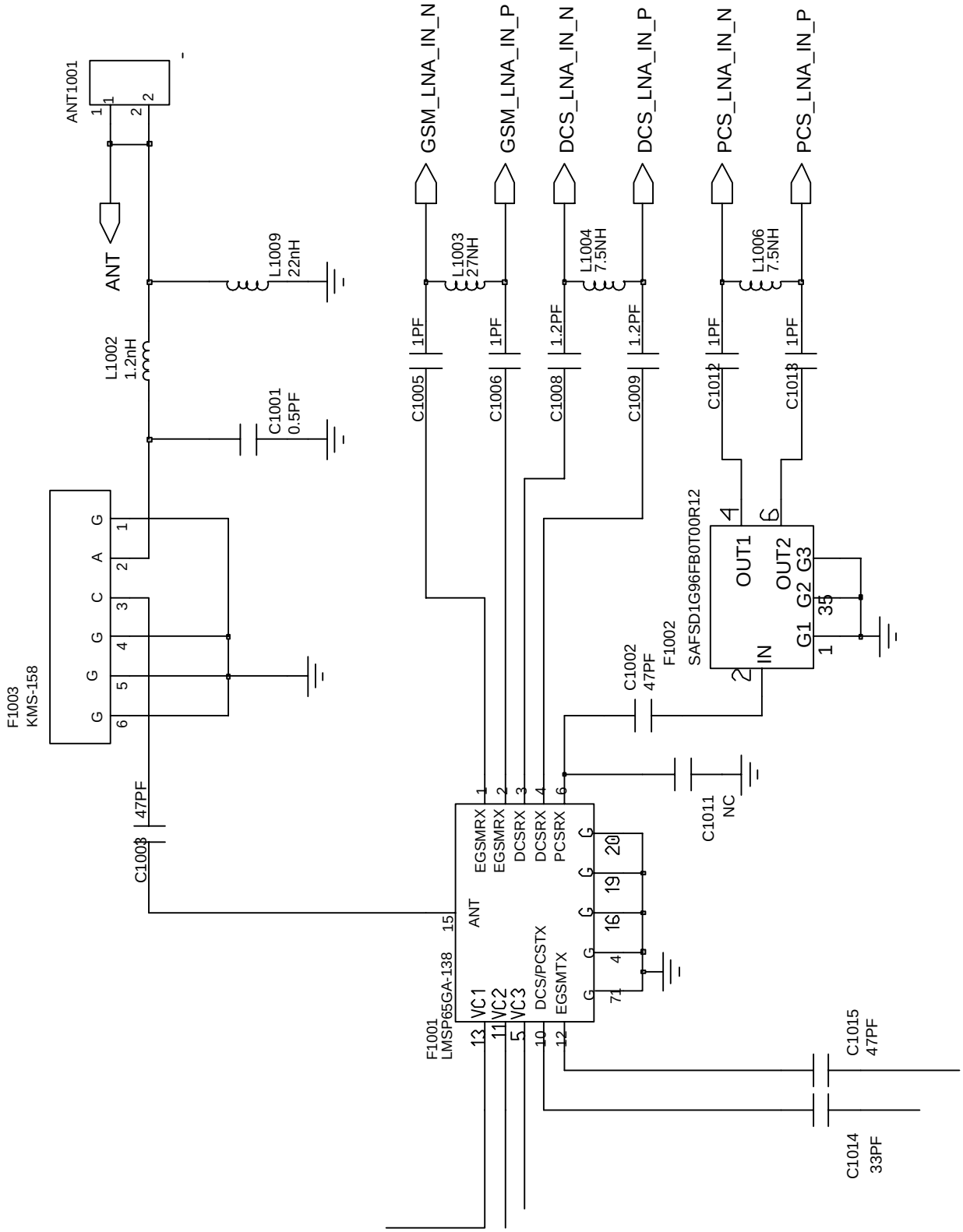

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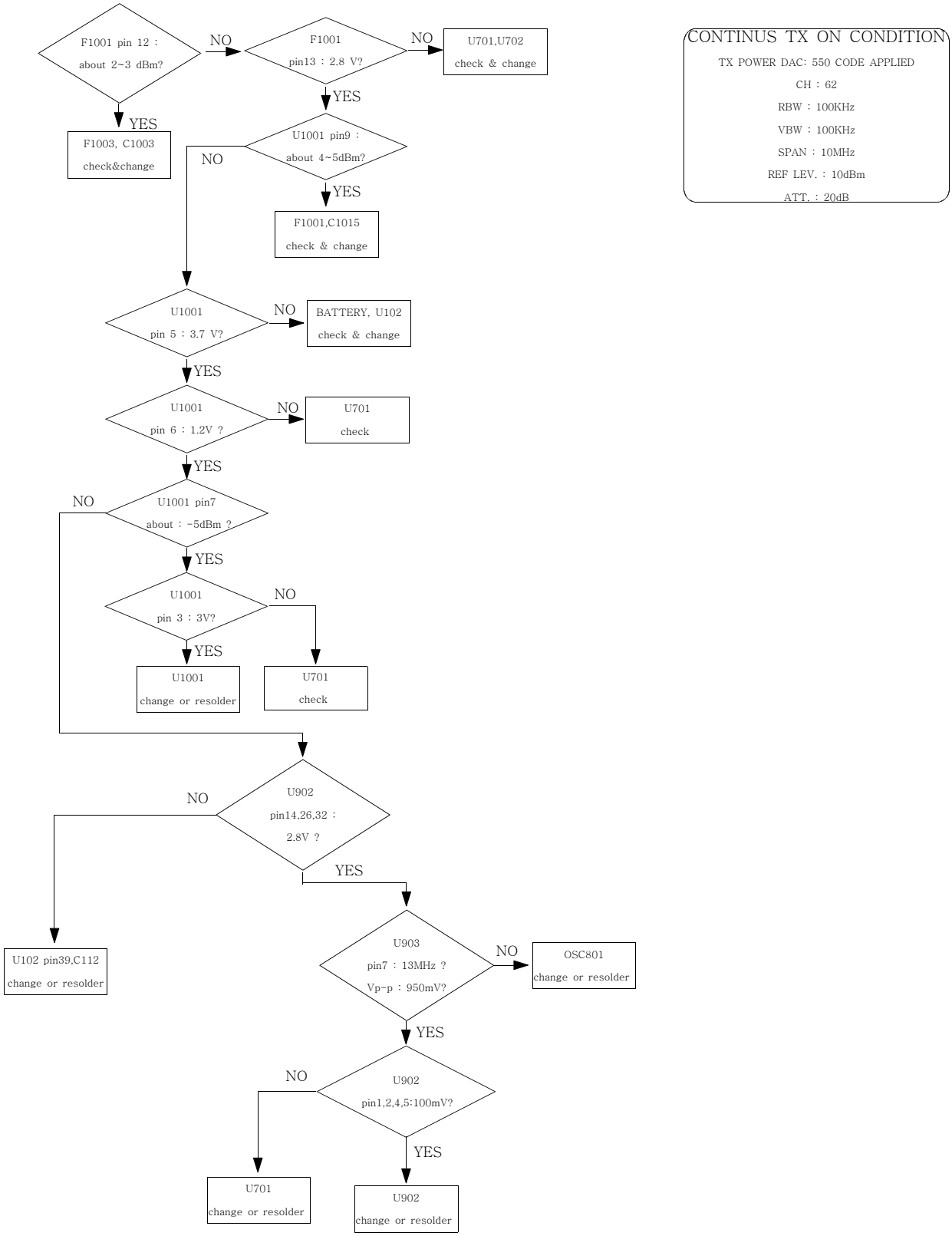
4. EGSM TX



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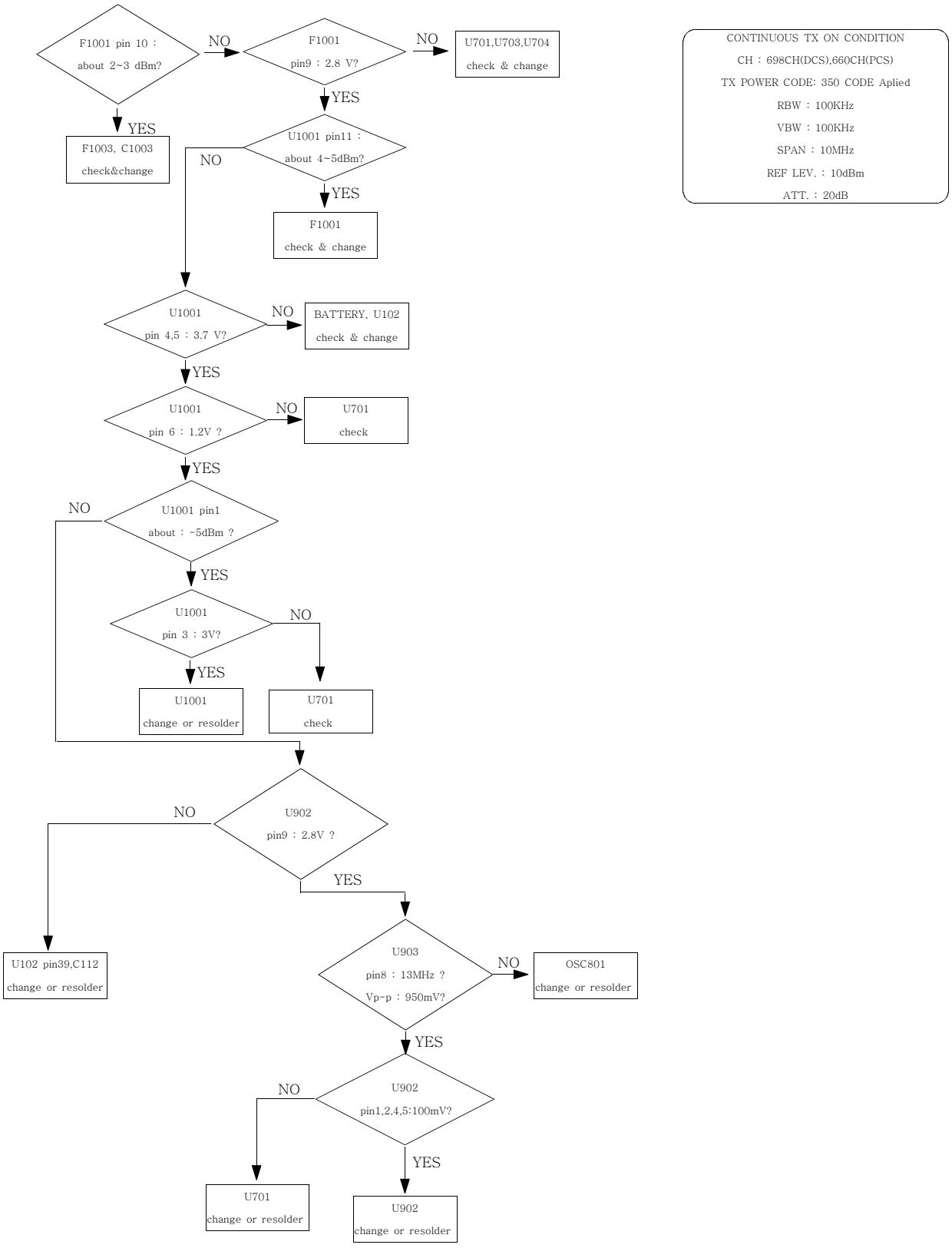
5. DCS/PCS TX



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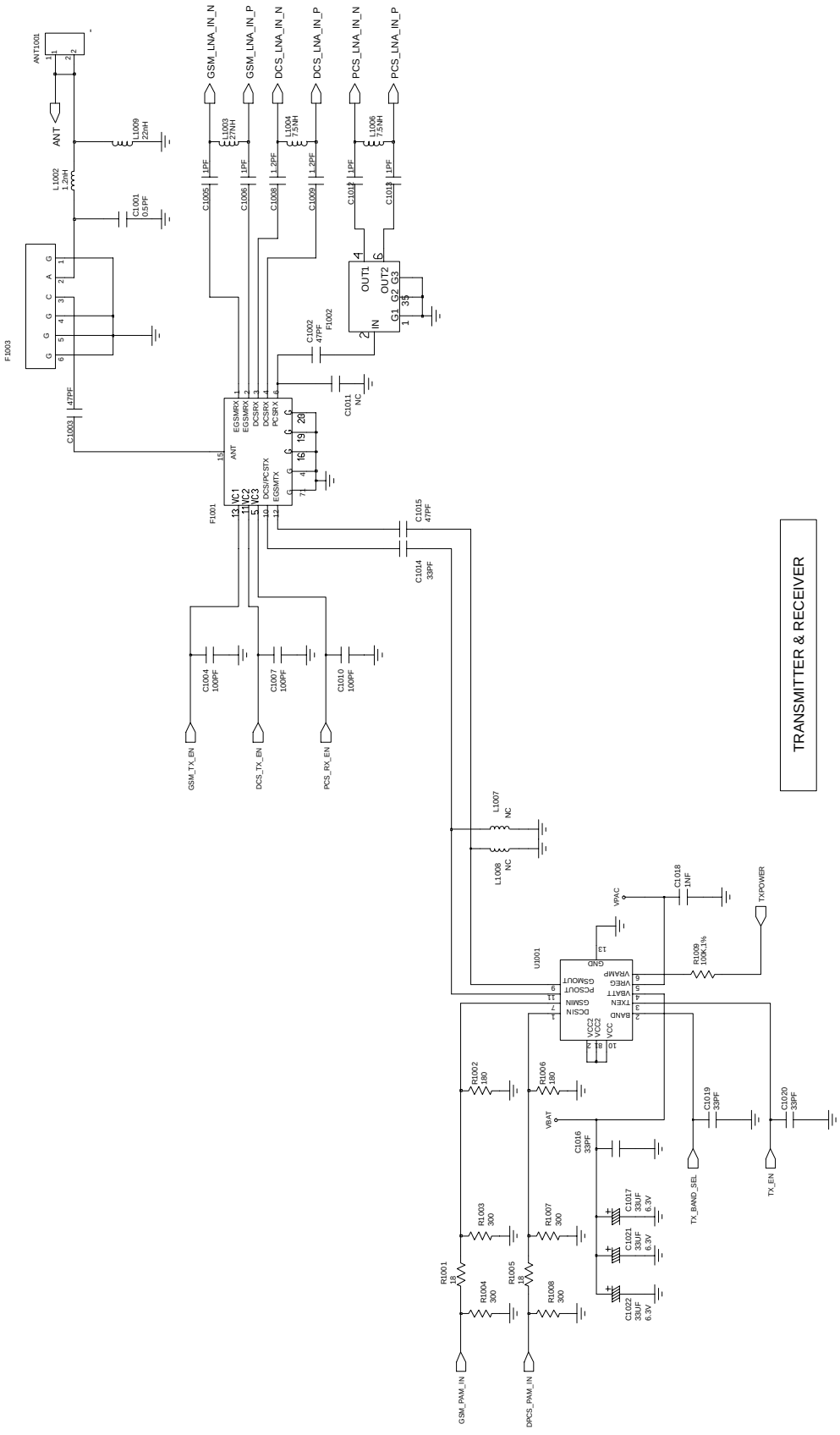

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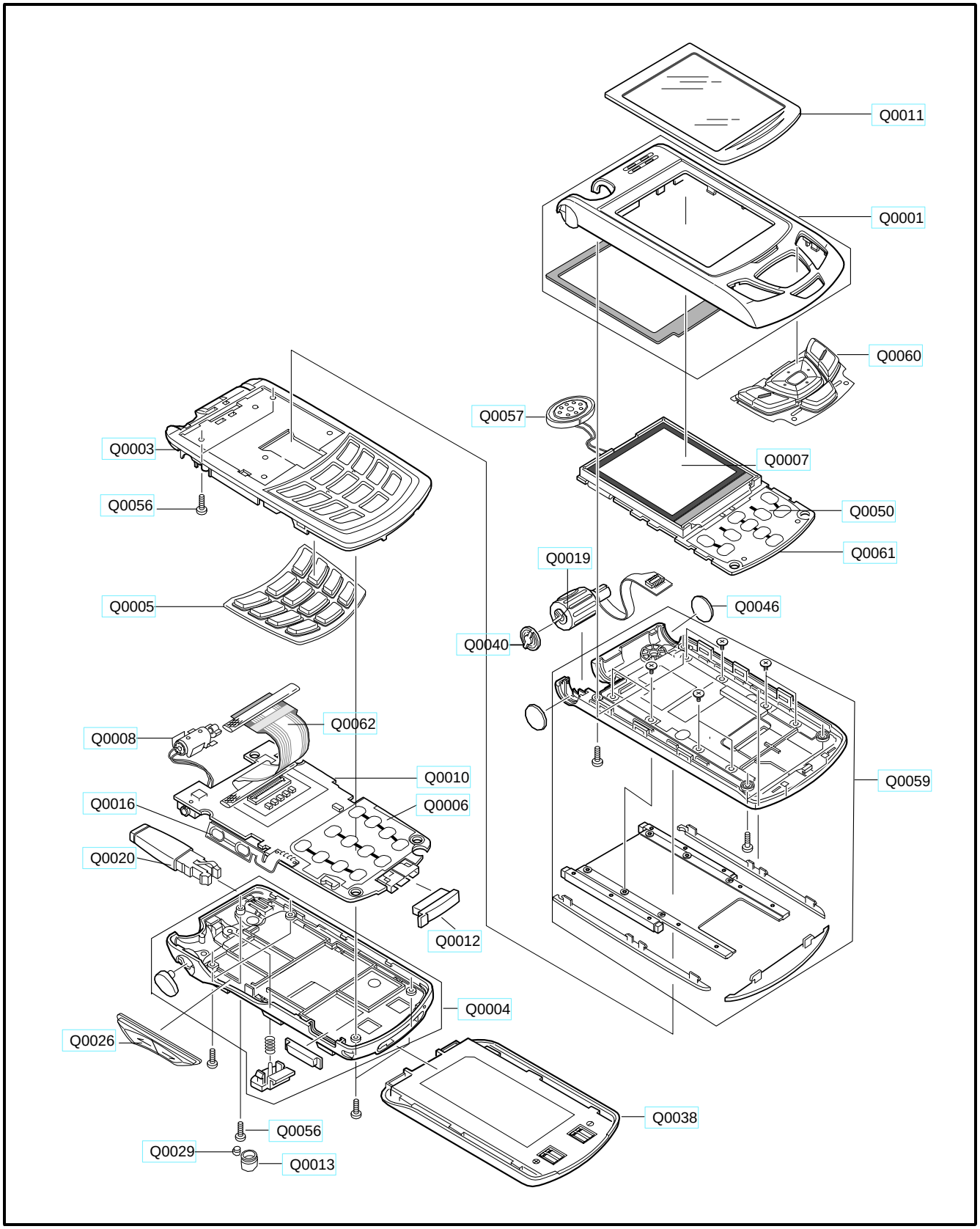
3. SGH-D410 Exploded View and its Parts list

1. Cellular phone Exploded View



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2. Cellular phone Parts list

Location NO.		Description	SEC CODE	Remark
Q0001		MEC-SLIDER UPPER ASS'Y	GH75-03167A	
Q0059		MEC-HINGE ASS'Y	GH75-04143A	
Q0003		MEC-FRONT COVER	GH75-03028A	
Q0004		MEC-REAR COVER	GH75-03029A	
Q0005		MEC 3X4 KEYPAD	GH75-03033A	
Q0006		UNIT-METAL DOME	GH59-00950A	
Q0007		LCD	GH07-00416A	
Q0008		MOTOR DC	GH31-00052A	
Q0010		PBA MAIN	GH92-01550A	
Q0011		MEC MAIN WINDOW ASS'Y	GH75-03616A	
Q0012		RMO IF COVER	GH73-02707A	
Q0013		PMO-RF COVER	GH72-11089A	
Q0014		MICROPHONE-ASSY	GH30-00078A	
Q0016		UNIT SIDE KEY FPCB	GH59-00948A	
Q0019		UNIT CAMERA	GH59-00870A	
Q0020		ANTENNA	GH42-00338A	
Q0026		MEC VOLUME KEY	GH75-03035A	
Q0029		RMO SCREW HOLE CAP	GH73-02780A	
Q0038		BATTERY	GH43-00967A	
Q0040		MEC CAMERA HINGE	GH75-03936A	
Q0046		NPR SIDE COVER	GH71-01814A	
Q0050		UNIT LCD METAL DOME	GH59-00949A	
Q0056		SCREW-MACHINE	6001-001478	
Q0057		SPEAKER;0.5W,8ohm	3001-001482	
Q0060		MEC FUNCTION KEY ASS'Y	GH75-03955A	
Q0061		PBA MAIN LCD	GH92-01549A	
Q0062		UNIT F PCB	GH41-00539A	

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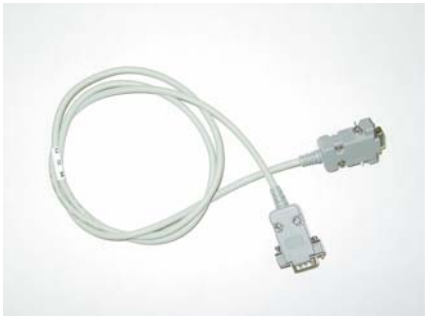
3. Test Jig (GH80-00865A)

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 (GH44-001844A)

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4. SGH-D410 MAIN Electrical Parts List

1.Main Parts List

SEC Code	Design LOC
GH92-01550A	
0403-001387	ZD305
0403-001427	ZD304
0404-001172	D101
0404-001172	D201
0406-001084	ZD301
0406-001084	ZD302
0406-001084	ZD303
0406-001150	ZD402
0406-001150	ZD403
0406-001190	ZD201
0406-001190	ZD202
0501-000225	Q401
0501-000729	Q201
0501-002427	Q101
0504-000168	Q103
0504-000168	Q104
0504-001042	U702
0504-001042	U703
0504-001042	U704
0506-001052	Q102
0601-001790	LED201
0601-001790	LED202
0601-001790	LED203
0601-001790	LED204
0601-001790	LED206
0601-001790	LED207
0601-001790	LED208
0601-001790	LED209
0601-001790	LED211
0601-001790	LED212
0604-001261	LED217
0904-001784	U502
1001-001183	U401
1009-001010	U202
1109-001281	U500
1201-001889	U1001
1203-002127	U101
1203-002236	U501
1203-002542	U203
1203-002902	U102
1204-001984	U701
1204-002138	U402
1205-002185	U901
1205-002268	U902
1209-001219	U602
1209-001434	U903
1405-001019	V301
1405-001082	V201
1405-001082	V202
2007-000138	R804
2007-000140	R110
2007-000140	R213
2007-000140	R304
2007-000140	R305
2007-000140	R306
2007-000140	R307
2007-000140	R308
2007-000140	R309
2007-000140	R310
2007-000140	R312
2007-000140	R313
2007-000140	R420
2007-000141	R415
2007-000143	R413
2007-000147	R408
2007-000148	R112
2007-000148	R416
2007-000148	R423
2007-000148	R520
2007-000148	R602
2007-000149	R426
2007-000157	R216
2007-000157	R217
2007-000157	R301
2007-000157	R302
2007-000157	R303
2007-000157	R504
2007-000157	R601
2007-000157	R605
2007-000157	R610
2007-000159	R407
2007-000159	R418
2007-000161	R405
2007-000161	R411
2007-000162	R402
2007-000162	R511
2007-000162	R512
2007-000162	R609
2007-000162	R701
2007-000162	R704
2007-000162	R705
2007-000164	R404
2007-000170	R603
2007-000171	R102
2007-000171	R412
2007-000171	R422
2007-000171	R424
2007-000171	R506
2007-000171	R507
2007-000171	R508
2007-000171	R510
2007-000171	R514
2007-000171	R516
2007-000171	R518
2007-000171	R519
2007-000171	R799
2007-000172	R503
2007-000172	R801
2007-000758	R106

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SEC Code	Design LOC
2007-000775	R406
2007-001119	R414
2007-001288	R1001
2007-001288	R1005
2007-001291	R214
2007-001307	R1002
2007-001307	R1006
2007-001319	R111
2007-001319	R803
2007-001320	R802
2007-001323	R104
2007-001325	R410
2007-001333	R419
2007-003010	R201
2007-003010	R202
2007-003010	R203
2007-003010	R204
2007-003010	R206
2007-003010	R207
2007-003010	R208
2007-003010	R209
2007-003010	R211
2007-003010	R212
2007-003112	R401
2007-003112	R403
2007-007008	R1003
2007-007008	R1004
2007-007008	R1007
2007-007008	R1008
2007-007107	R1009
2007-007139	R103
2007-007142	R606
2007-007200	R702
2007-007200	R703
2007-007308	R607
2007-007308	R608
2203-000233	C1004

SEC Code	Design LOC
2203-000233	C1007
2203-000233	C1010
2203-000233	C118
2203-000233	C908
2203-000233	C910
2203-000254	C504
2203-000254	C505
2203-000254	C603
2203-000254	C604
2203-000254	C605
2203-000254	C606
2203-000254	C611
2203-000254	C707
2203-000254	C710
2203-000254	C711
2203-000254	C712
2203-000254	C801
2203-000254	C803
2203-000254	C804
2203-000254	C805
2203-000254	C806
2203-000254	C807
2203-000359	C401
2203-000359	C431
2203-000359	C432
2203-000438	C1018
2203-000438	C416
2203-000438	C425
2203-000438	C426
2203-000438	C802
2203-000550	C511
2203-000628	C613
2203-000628	C615
2203-000654	C424
2203-000679	C610
2203-000812	C101
2203-000812	C1014

SEC Code	Design LOC
2203-000812	C1016
2203-000812	C1019
2203-000812	C1020
2203-000812	C104
2203-000812	C105
2203-000812	C305
2203-000812	C427
2203-000812	C906
2203-000885	C408
2203-000995	C1002
2203-000995	C1003
2203-000995	C1015
2203-000995	C406
2203-000995	C407
2203-000995	C904
2203-001405	C121
2203-001405	C403
2203-001405	C609
2203-001405	C905
2203-001405	C907
2203-001405	C909
2203-001405	C911
2203-001405	C912
2203-001405	C913
2203-001405	C914
2203-001405	C915
2203-001412	C415
2203-001598	C103
2203-002668	C1001
2203-005061	C102
2203-005061	C239
2203-005061	C240
2203-005061	C301
2203-005061	C302
2203-005061	C303
2203-005061	C304
2203-005061	C402

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SEC Code	Design LOC
2203-005061	C404
2203-005061	C409
2203-005061	C417
2203-005061	C501
2203-005061	C502
2203-005061	C503
2203-005061	C507
2203-005061	C509
2203-005061	C510
2203-005061	C512
2203-005061	C513
2203-005061	C514
2203-005061	C608
2203-005061	C706
2203-005065	C410
2203-005065	C423
2203-005065	C705
2203-005234	C1008
2203-005234	C1009
2203-005288	C1005
2203-005288	C1006
2203-005288	C1012
2203-005288	C1013
2203-005480	C607
2203-005480	C708
2203-005480	C709
2203-005482	C108
2203-005496	C601
2203-005496	C602
2203-005496	C704
2203-005509	C237
2203-005509	C238
2203-005509	C614
2203-005509	C716
2203-005509	C717
2203-005509	C718
2203-005509	C799

SEC Code	Design LOC
2203-006053	C109
2203-006053	C110
2203-006053	C111
2203-006053	C112
2203-006053	C113
2203-006053	C114
2203-006053	C116
2203-006053	C117
2203-006053	C119
2203-006053	C120
2203-006137	C430
2404-001086	C405
2404-001086	C413
2404-001105	C106
2404-001105	C202
2404-001105	C203
2404-001151	C1017
2404-001151	C1021
2404-001151	C1022
2404-001151	C420
2404-001151	C508
2404-001268	C107
2703-001513	L402
2703-001513	L403
2703-001724	L1002
2703-001751	L901
2703-001990	L1009
2703-002484	L1004
2703-002484	L1006
2703-002485	L1003
2801-003747	OSC601
2809-001260	OSC801
2901-001260	F201
2901-001260	F202
2901-001260	F203
2901-001260	F204
2901-001260	F205

SEC Code	Design LOC
2901-001260	F207
2904-001410	F1002
2909-001191	F1001
3705-001255	F1003
3708-001853	CN201
3709-001187	CN101
3710-001105	CN205
3710-001673	CN300
3722-001880	CN401
4302-001130	M101
GH09-00025A	U601
GH41-00471A	
GH71-01052A	ANT1001
GH96-01373A	
GH30-00078A	
GH59-00948A	
GH59-00950A	
GH68-02026A	
GH74-06351A	
GH74-06948A	

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2.LCD Parts List

SEC Code	Design LOC
GH92-01549A	
0403-001446	ZD32
0404-001172	ZD31
0406-001150	ZD59
0406-001150	ZD60
0406-001190	U32
0406-001190	ZD51
0406-001190	ZD52
0406-001190	ZD53
0406-001190	ZD54
0406-001190	ZD55
0406-001190	ZD57
0406-001190	ZD58
0504-001016	Q64
0504-001113	Q61
0504-001113	Q62
0504-001113	Q63
0505-001518	Q1
0601-001654	LED61
0601-001654	LED62
0601-001790	LED51
0601-001790	LED52
0601-001790	LED53
0601-001790	LED54
1203-002633	U31
1203-002690	U33
2007-000138	R62
2007-000138	R68
2007-000140	R70
2007-000148	R35
2007-000148	R78
2007-000151	R64
2007-000151	R65
2007-000151	R66
2007-000157	R34
2007-000162	R79
2007-001284	R51
2007-001284	R52
2007-001284	R53
2007-001284	R54
2007-001306	R61
2007-001306	R71
2007-003010	R63
2007-003010	R69
2007-003025	R31
2007-008672	R32
2203-000550	C38
2203-000995	C61
2203-000995	C62
2203-000995	C63
2203-001598	C33
2203-002443	C34
2203-005482	C74
2203-005496	C37
2203-006053	C73
2703-002339	L31
2901-001260	F88
3708-001852	CN13
3708-001853	CN11
3708-001938	CN12
GH41-00472A	

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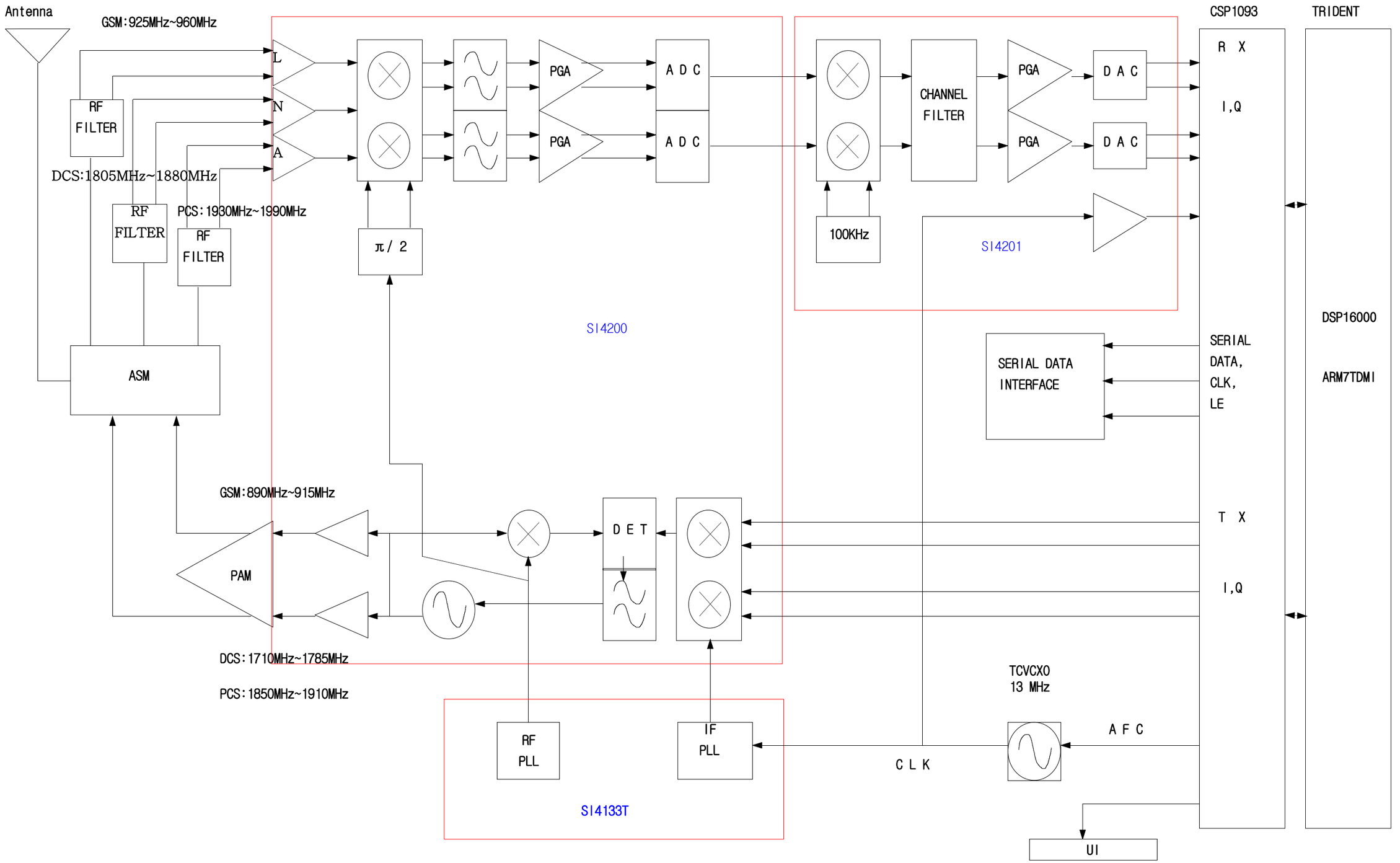
5. SGH-D410 Block Diagrams

1. RF Solution Block Diagram



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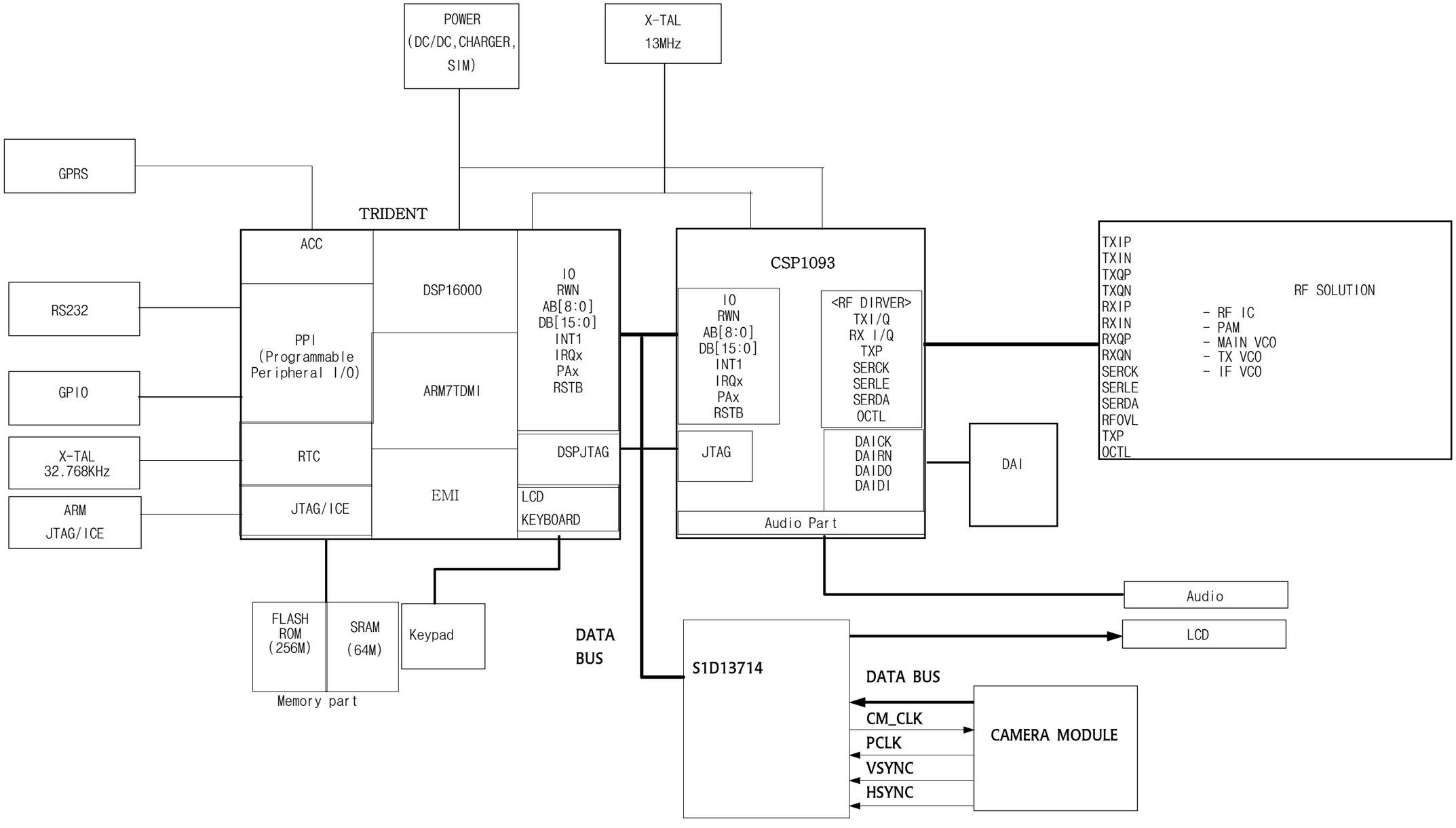
2. Base Band Solution Block Diagram



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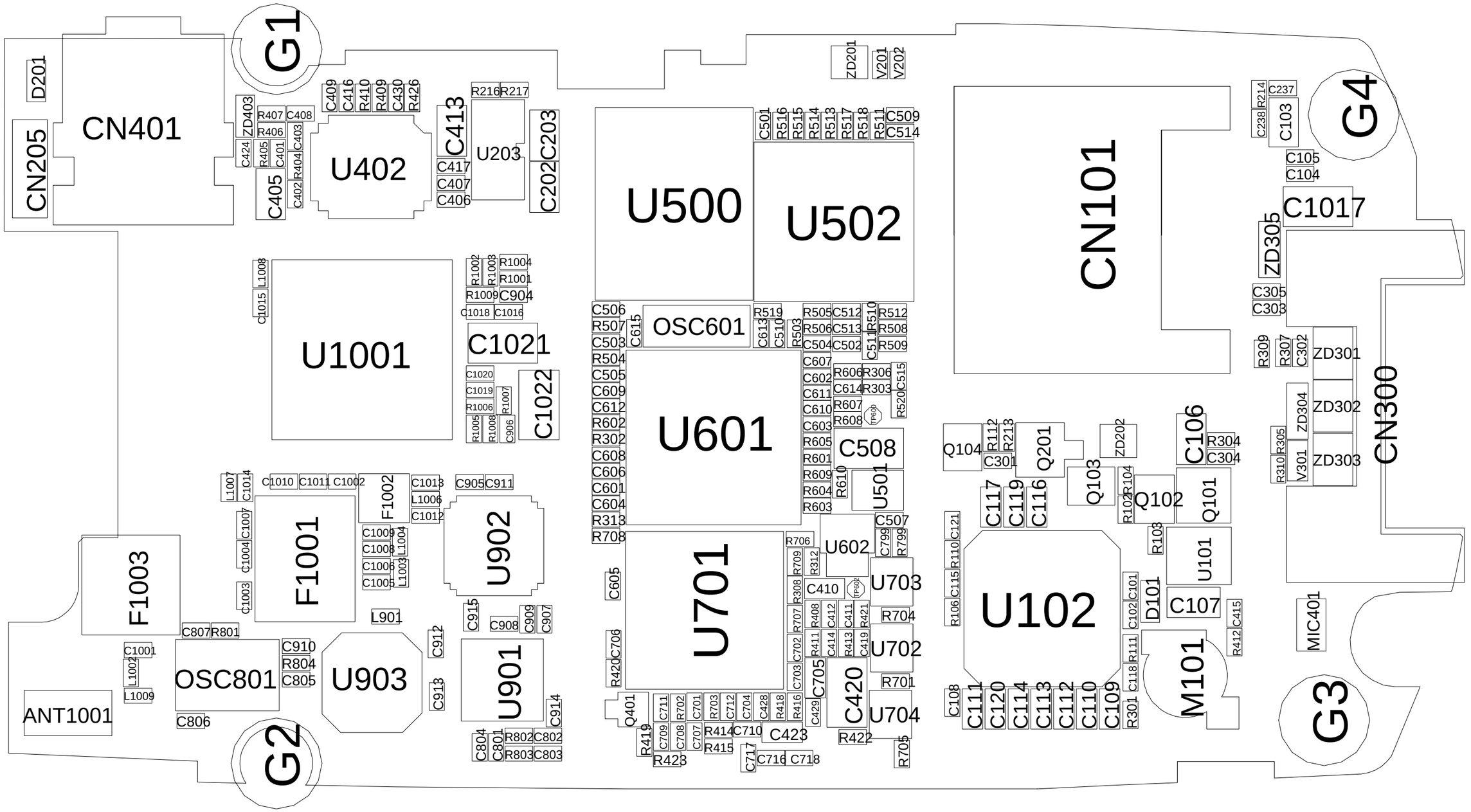
6. SGH-D410 PCB Diagrams

1.Main TOP Diagram



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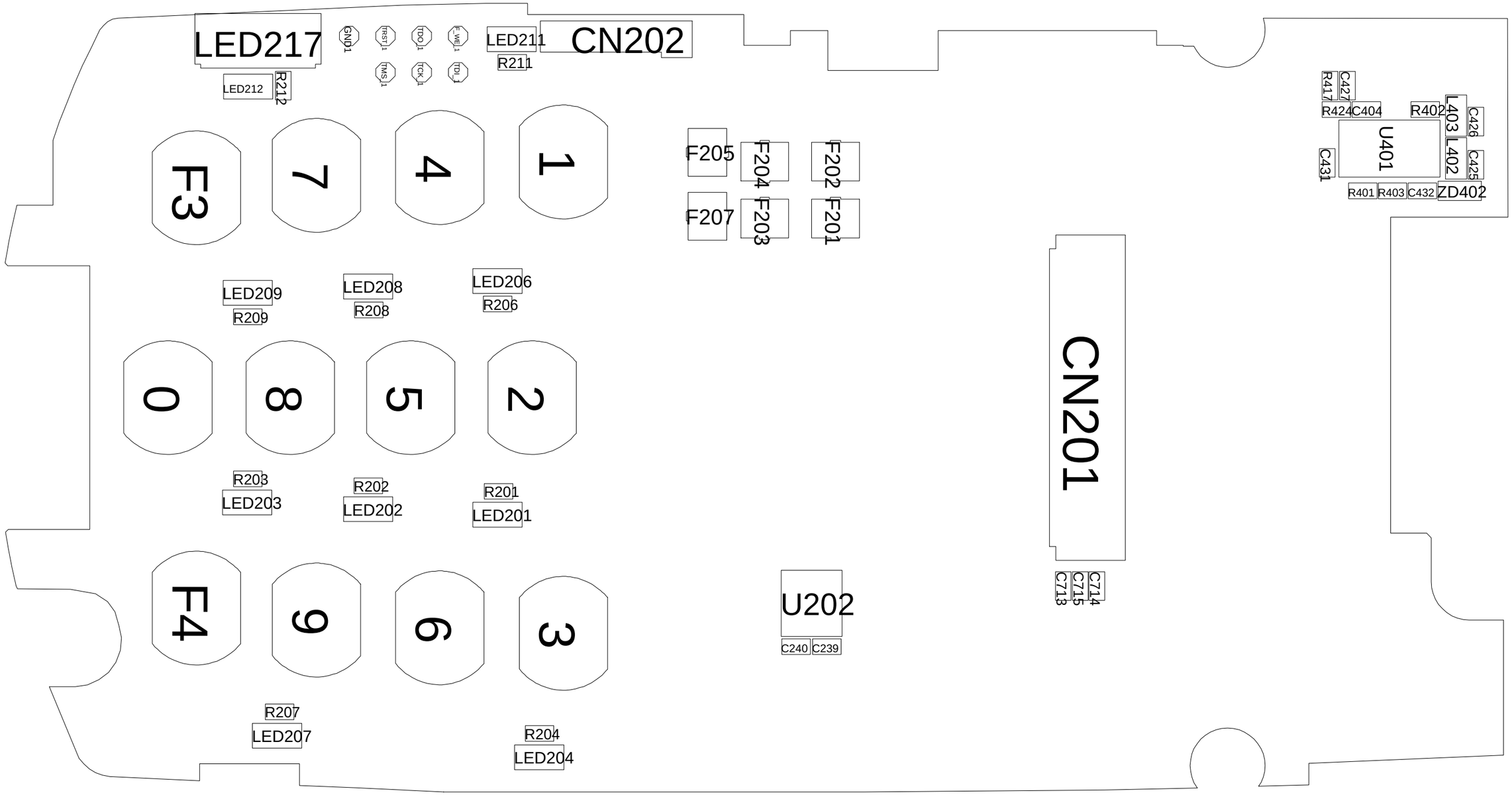
2. Main Bottom Diagram



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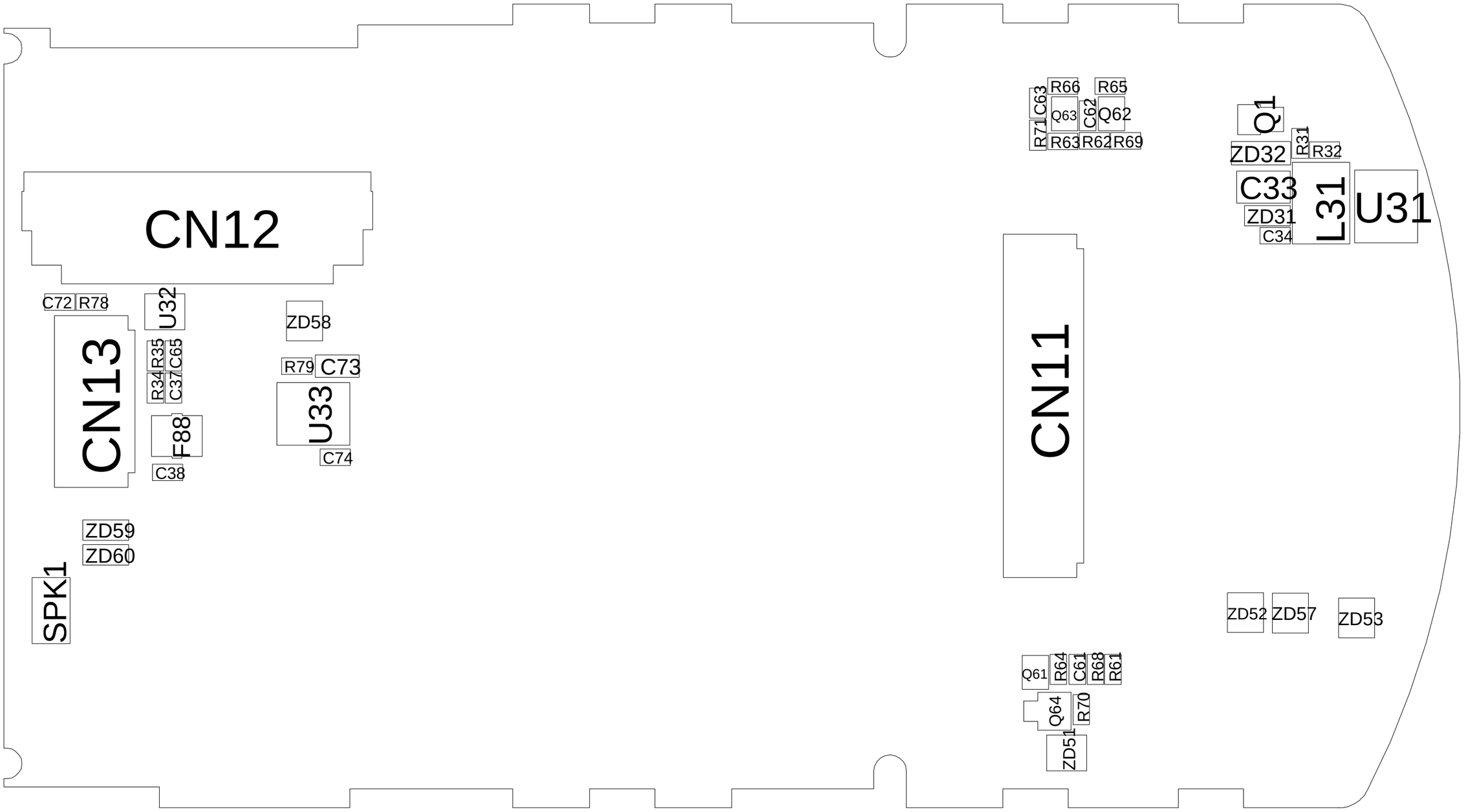
3. LCD TOP Diagram



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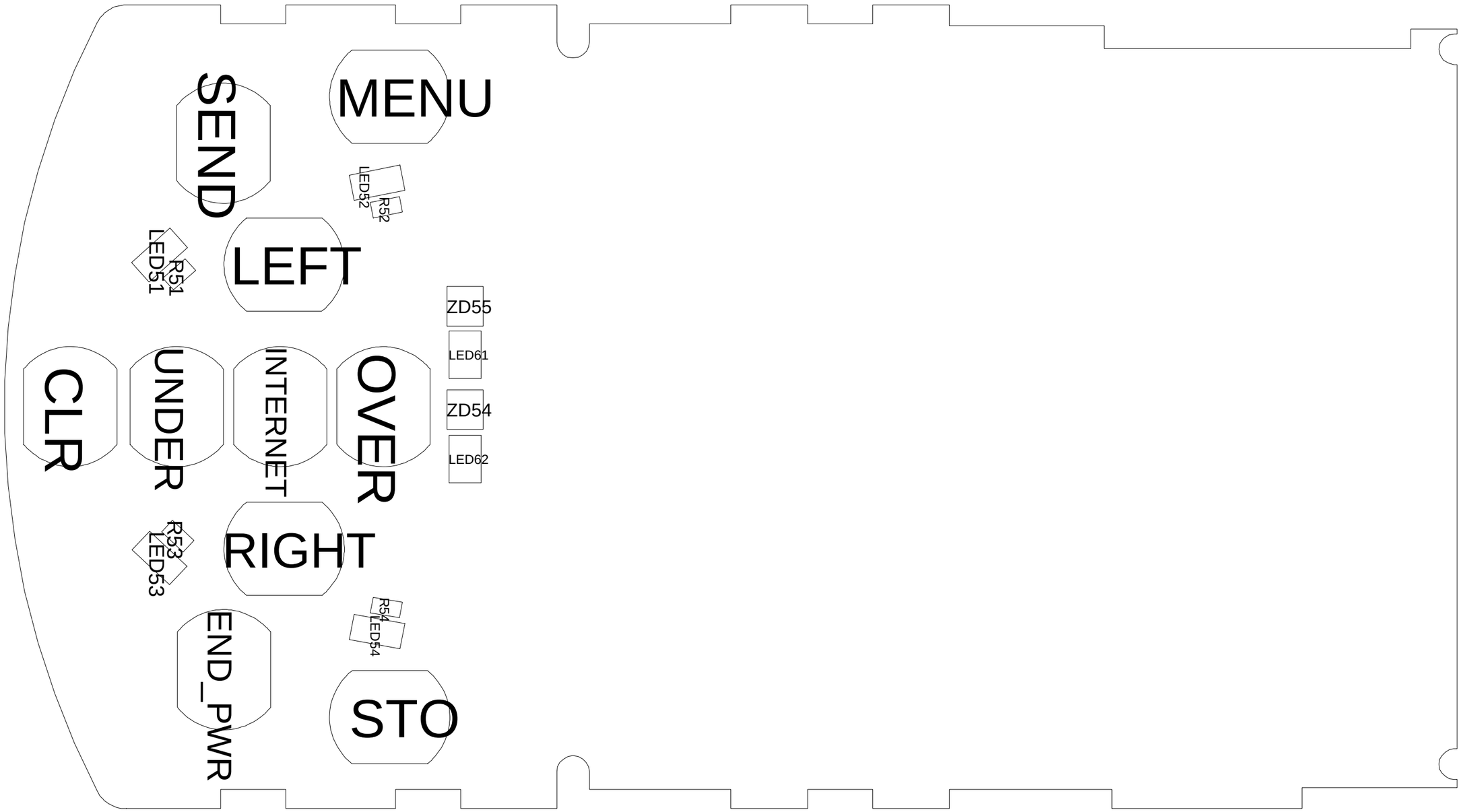
4. LCD Bottom Diagram



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