

SAMSUNG

GSM TELEPHONE SGH-E300

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-E300 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

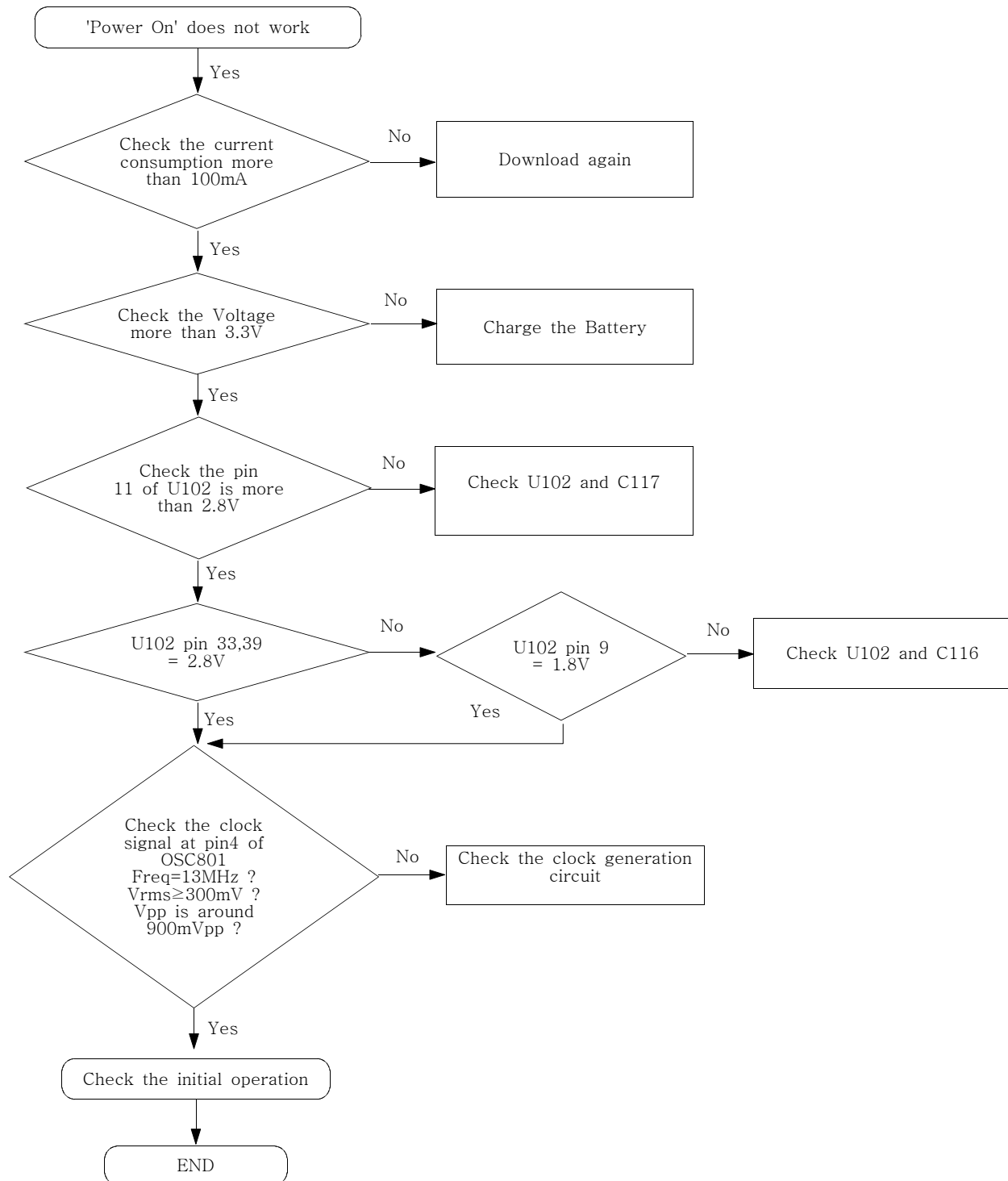
TX Power control level	GSM900
5	33±2 dBm
6	31±2 dBm
7	29±2 dBm
8	27±2 dBm
9	25±2 dBm
10	23±2 dBm
11	21±2 dBm
12	19±2 dBm
13	17±2 dBm
14	15±2 dBm
15	13±2 dBm
16	11±3 dBm
17	9±3dBm
18	7±3 dBm
19	5±3 dBm

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

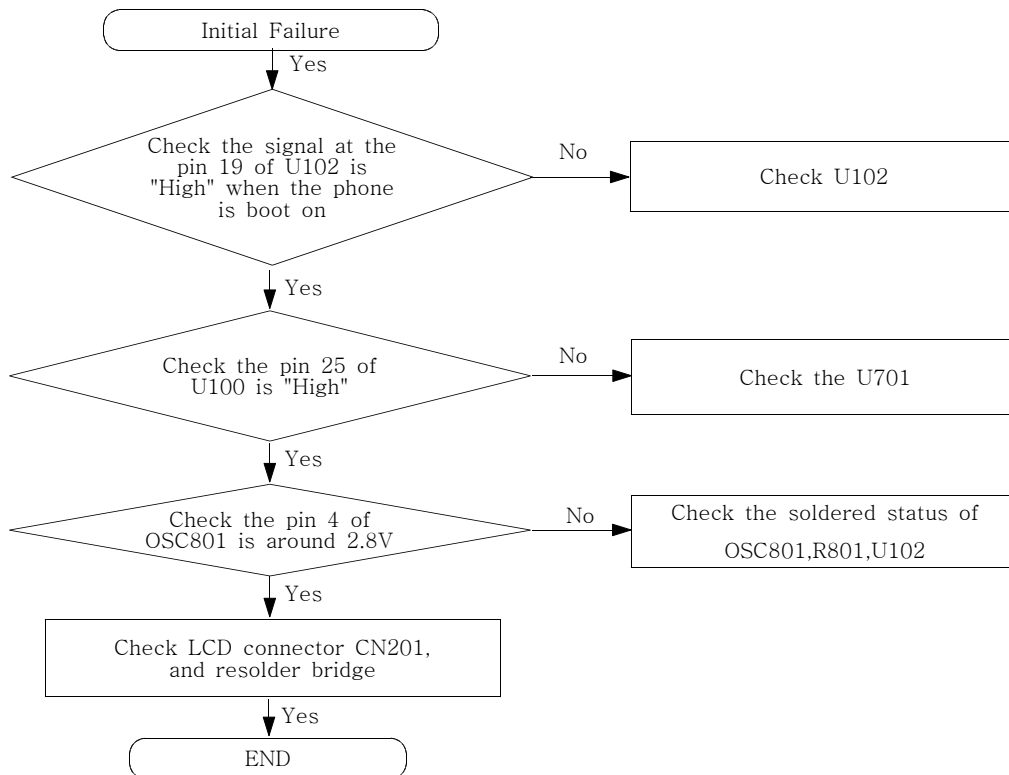
2. SGH-E300 Flow Chart of Troubleshooting

1.Baseband

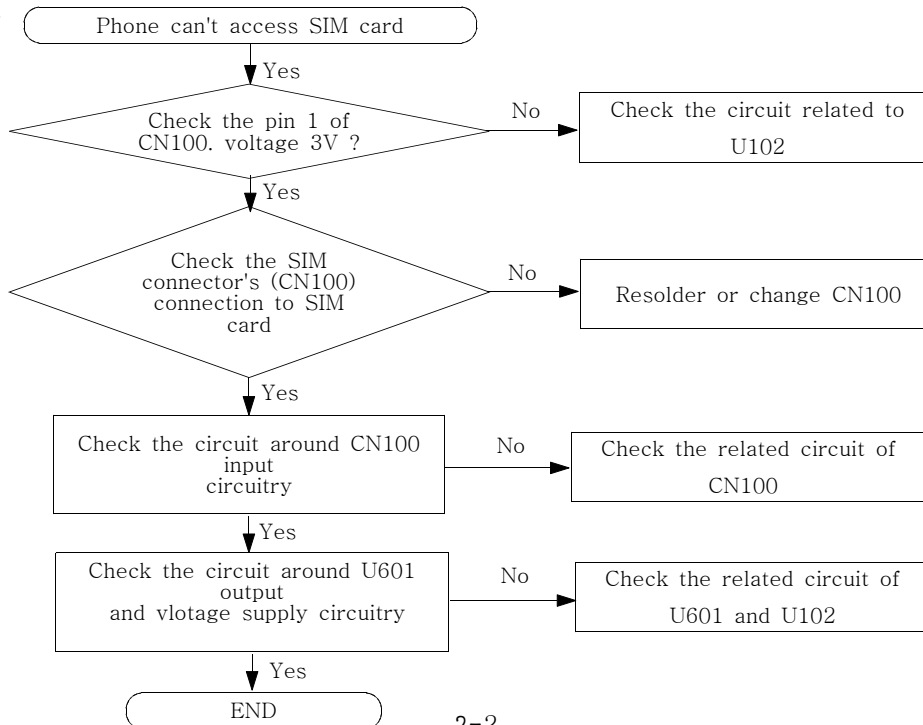
1. Power ON



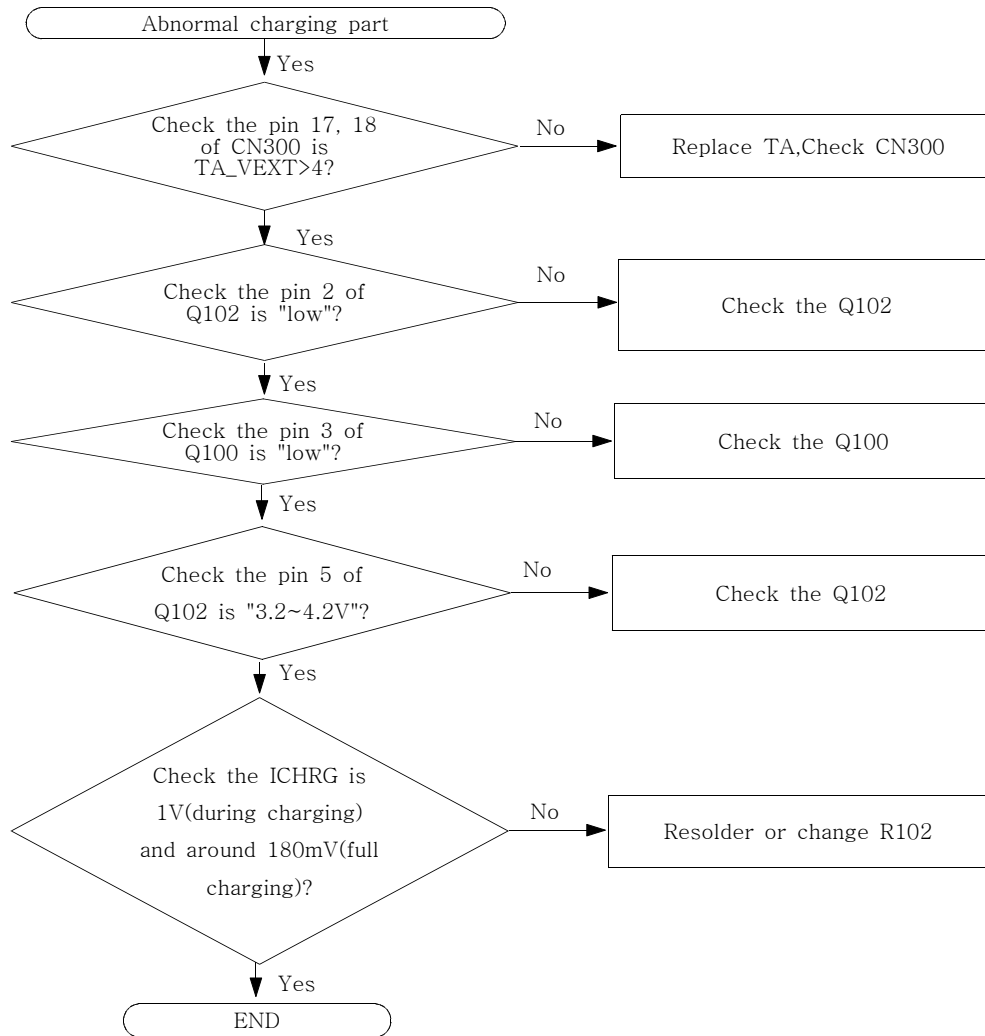
2. Initial

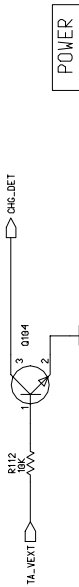


3. Sim Part

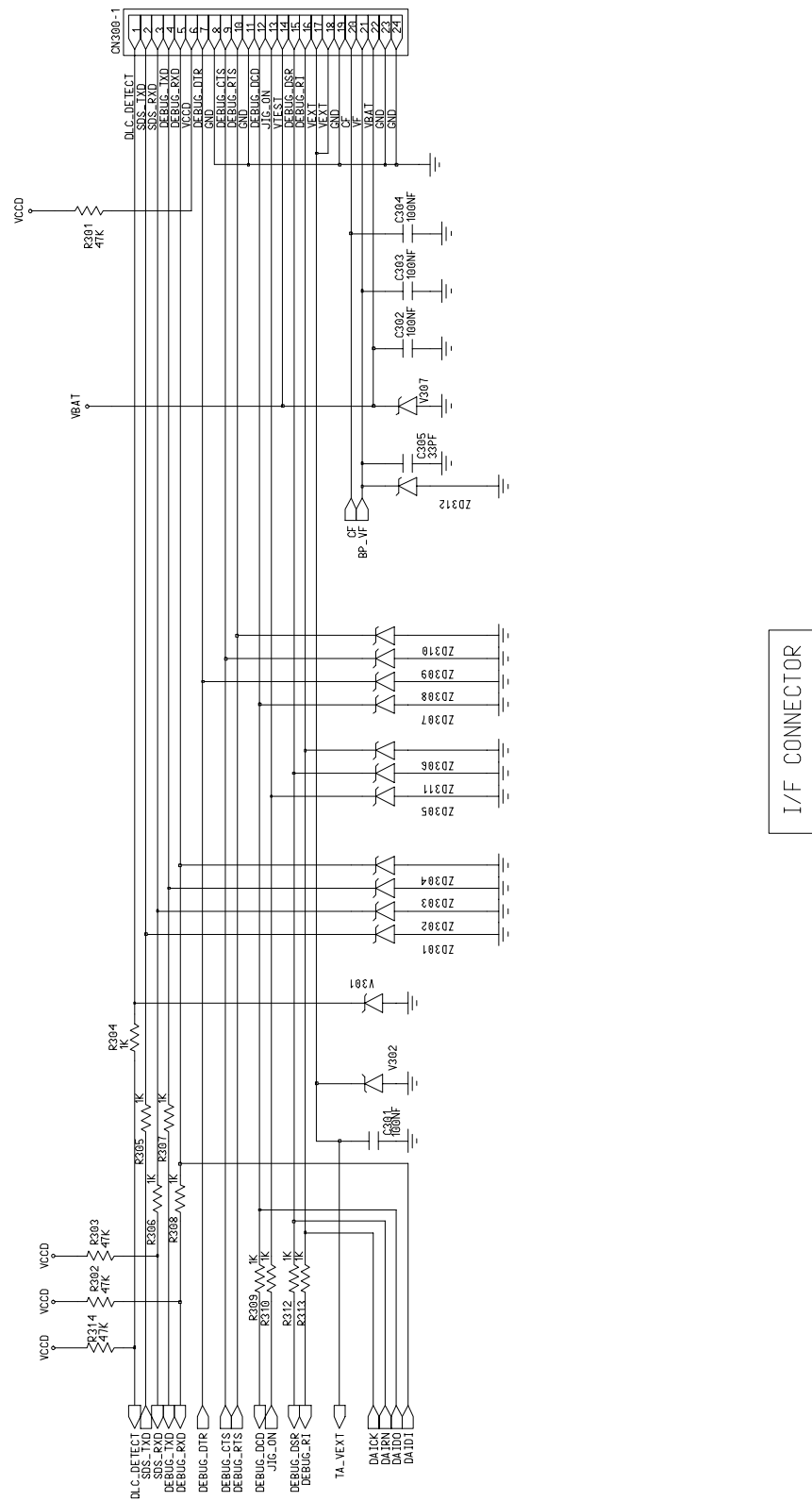


4. Charging Part

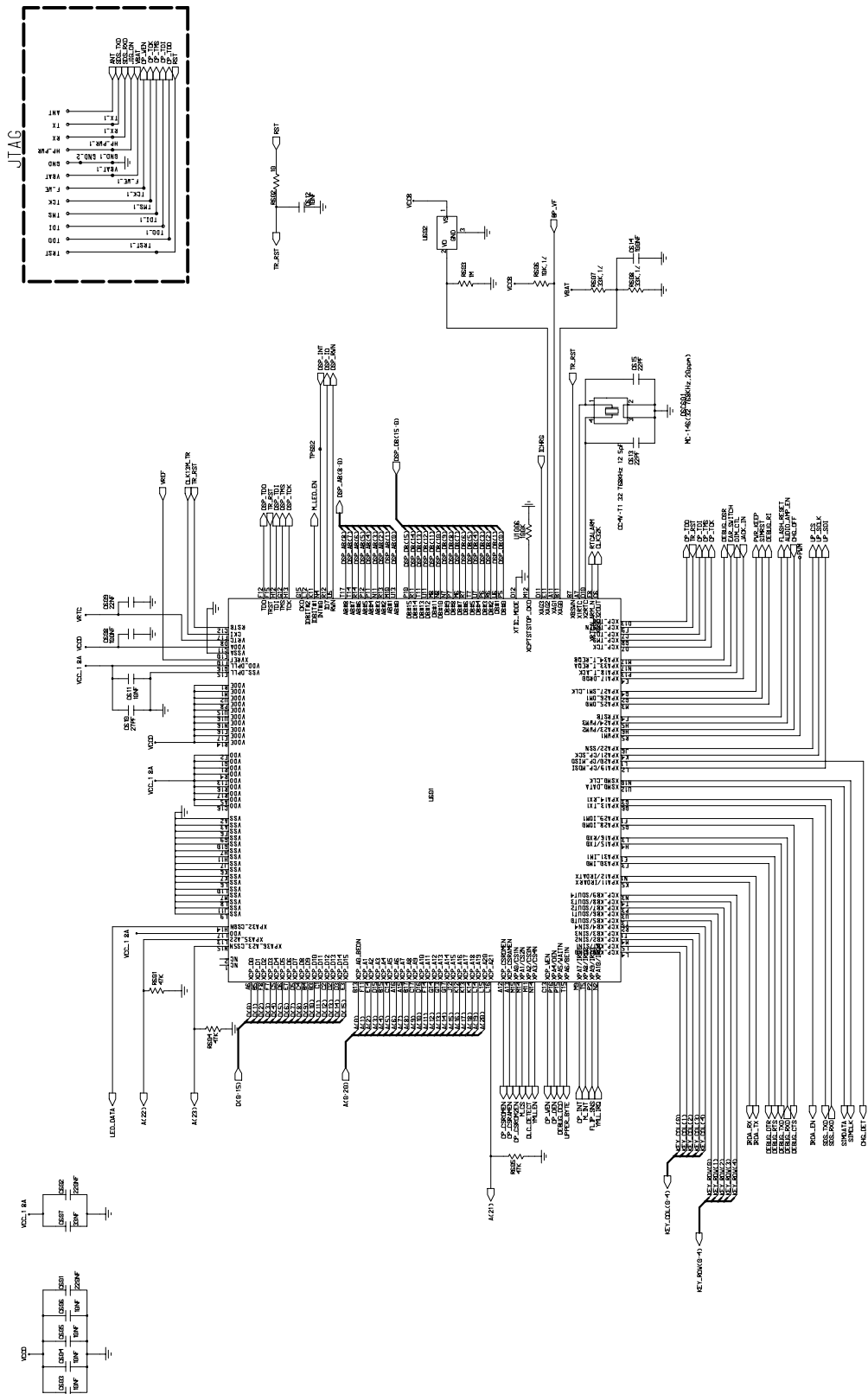




2-4

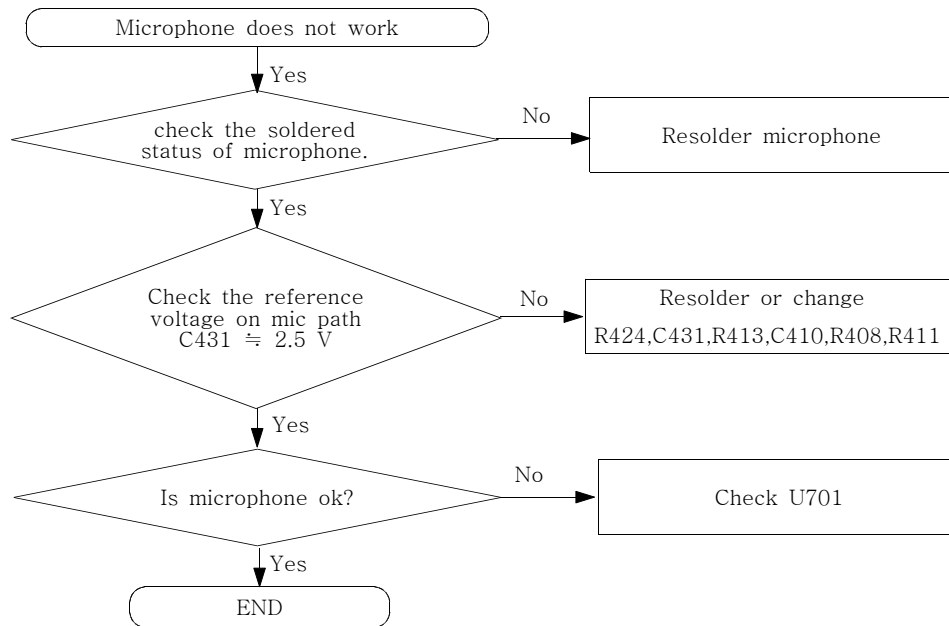


(Picture 2)

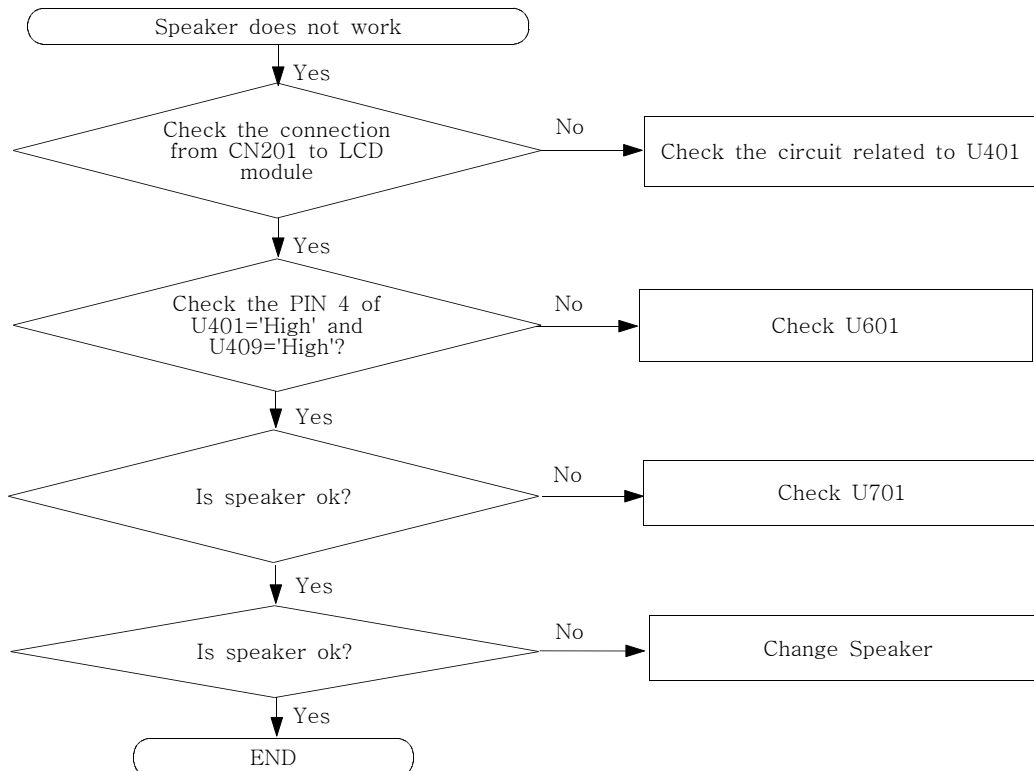


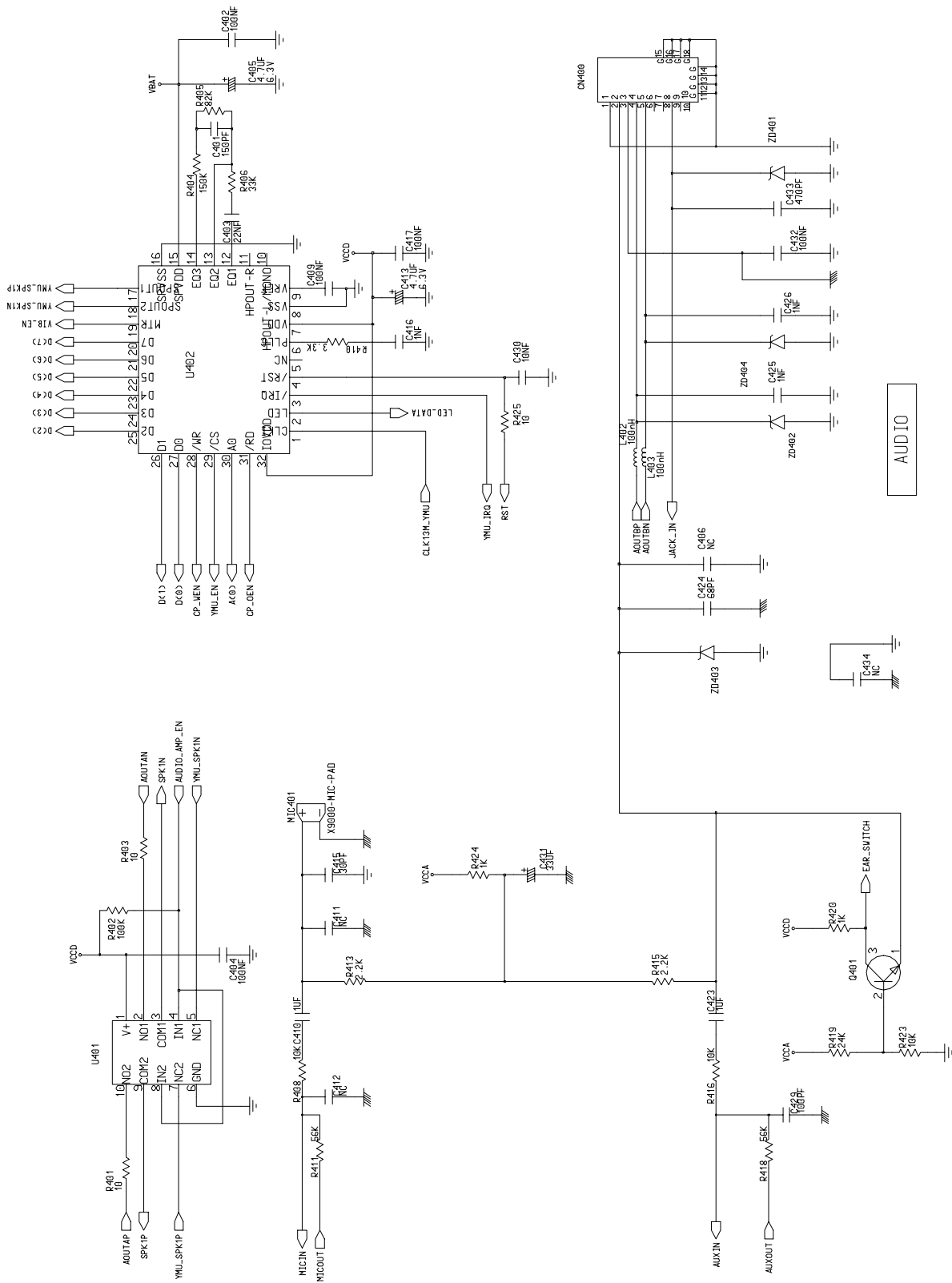
(Picture 3)

5. Microphone Part

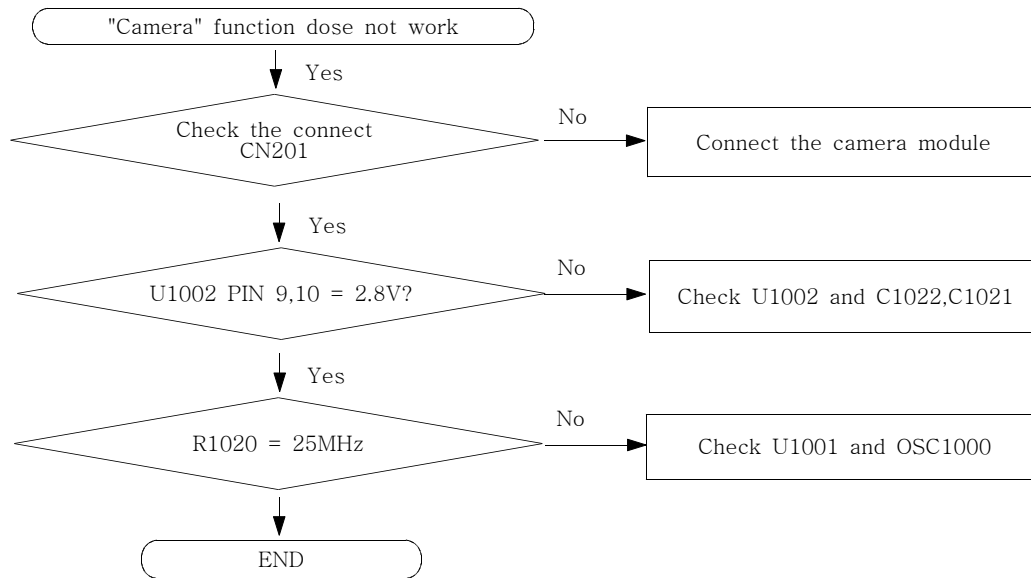


6. Speaker Part





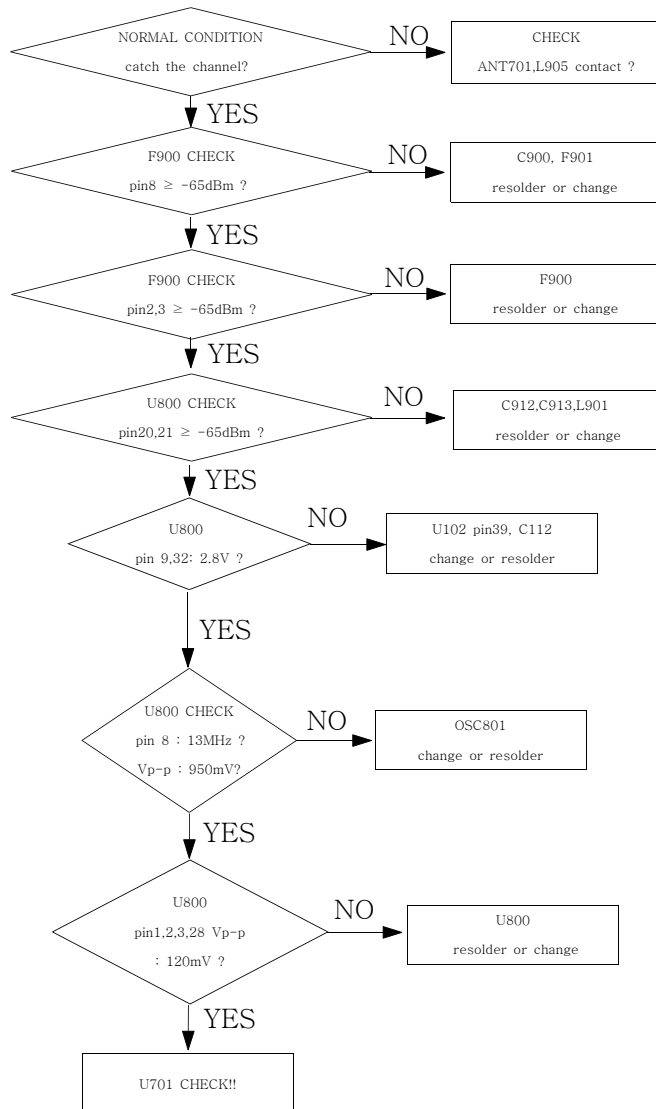
7. Camera Part





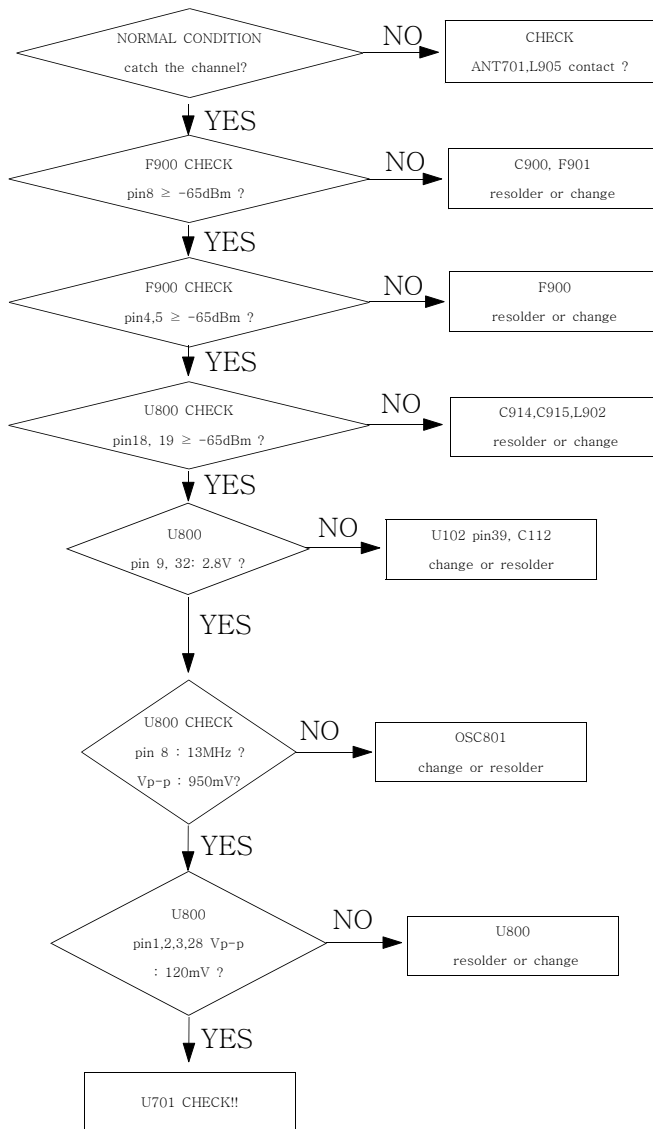
2.RF

1. EGSM RX



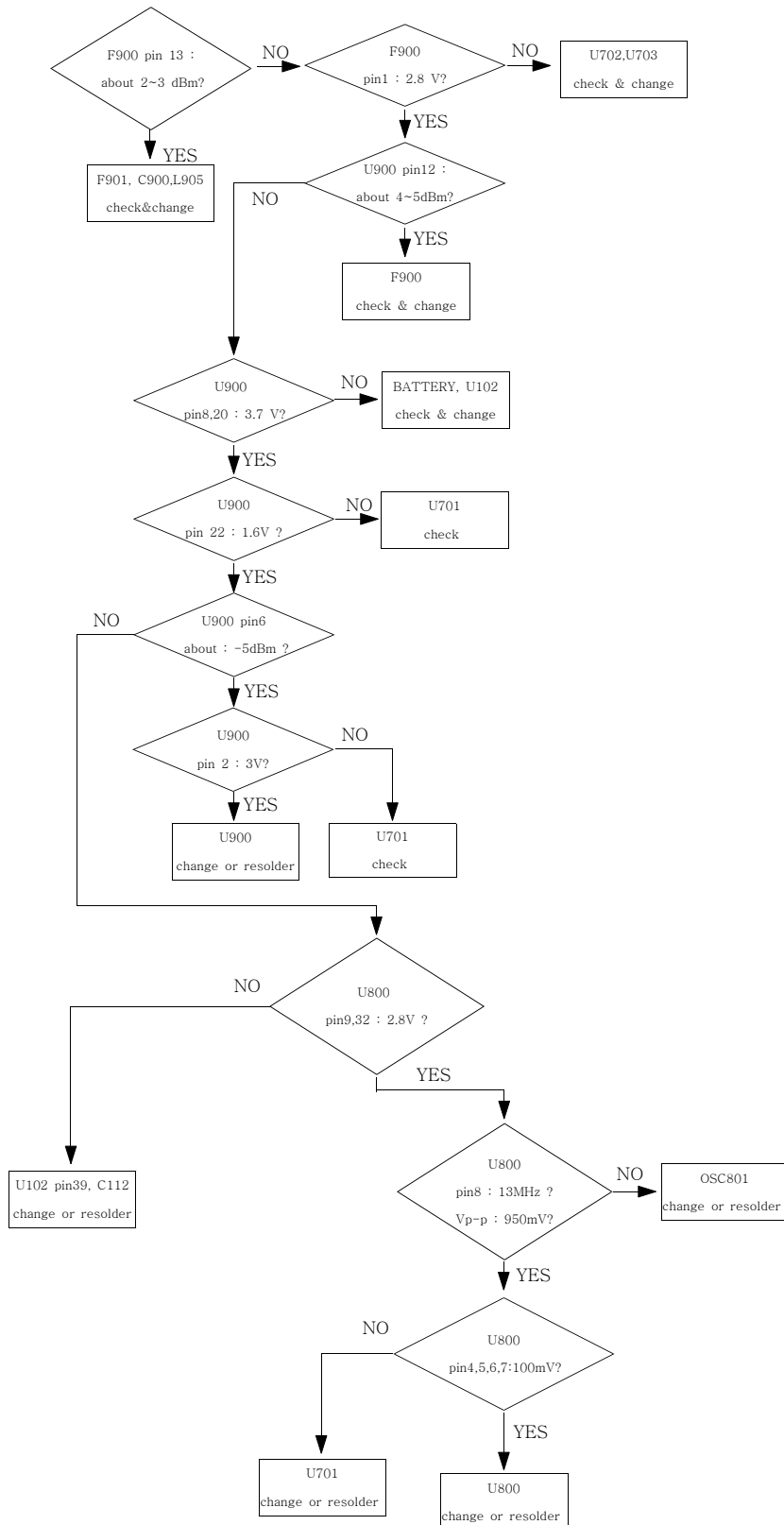
CONTINUOUS RX ON
RF INPUT : 62CH
AMP : -50dBm

2. DCS RX



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

3. EGSM TX



CONTINUS TX ON CONDITION

TX POWER DAC: 600 CODE APPLIED

CH : 62

RBW : 100KHz

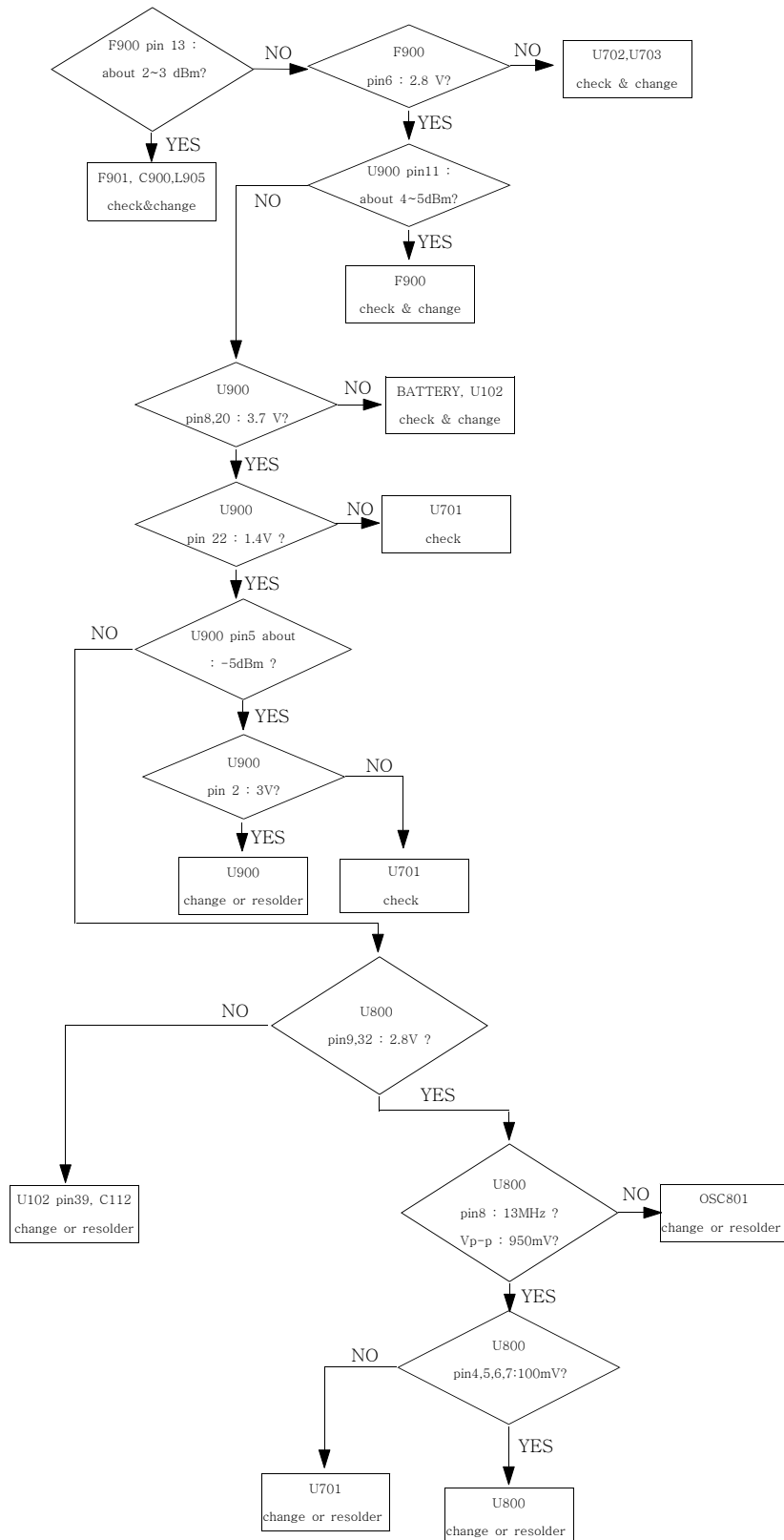
VBW : 100KHz

SPAN : 10MHz

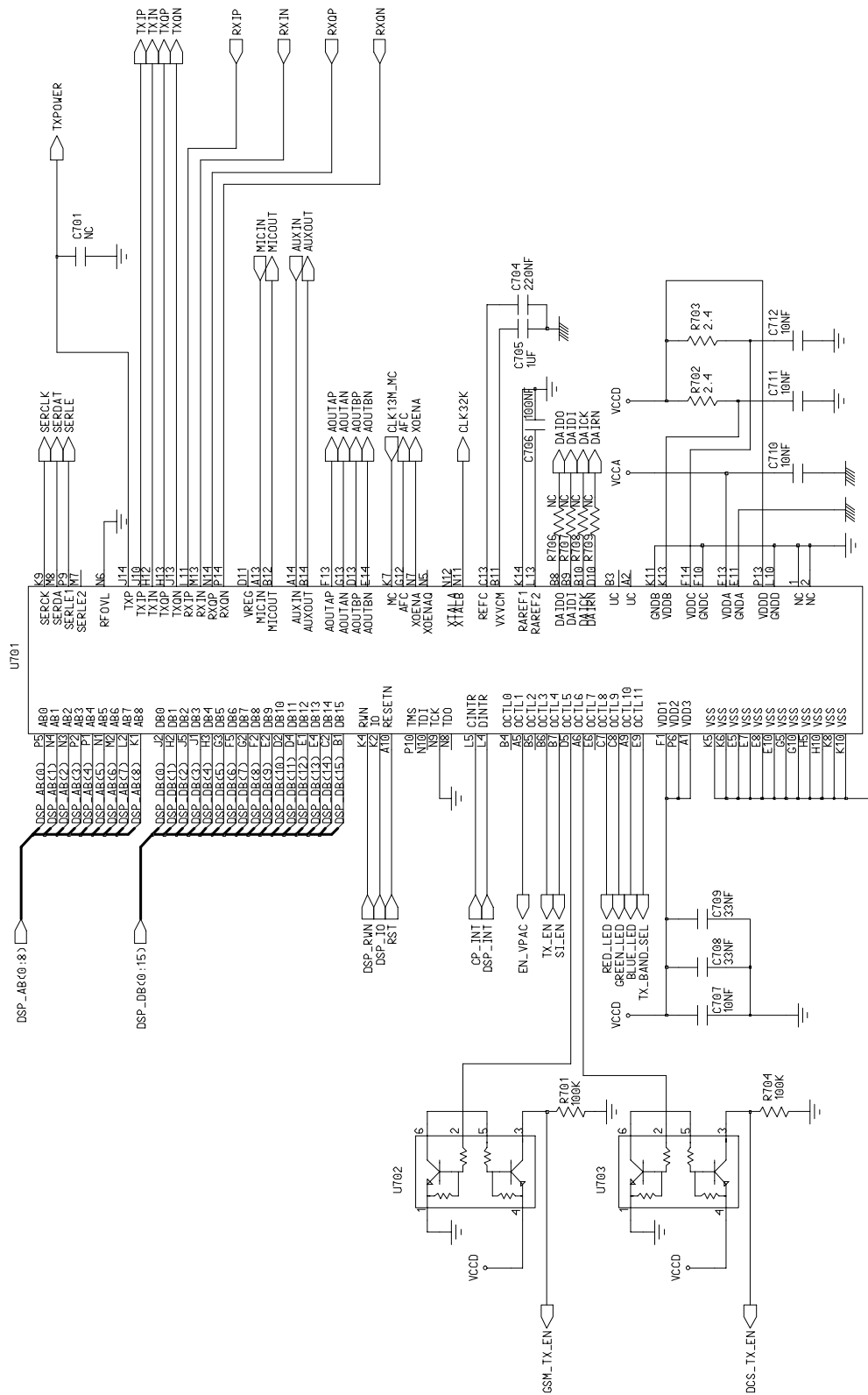
REF LEV. : 10dBm

ATT. : 20dB

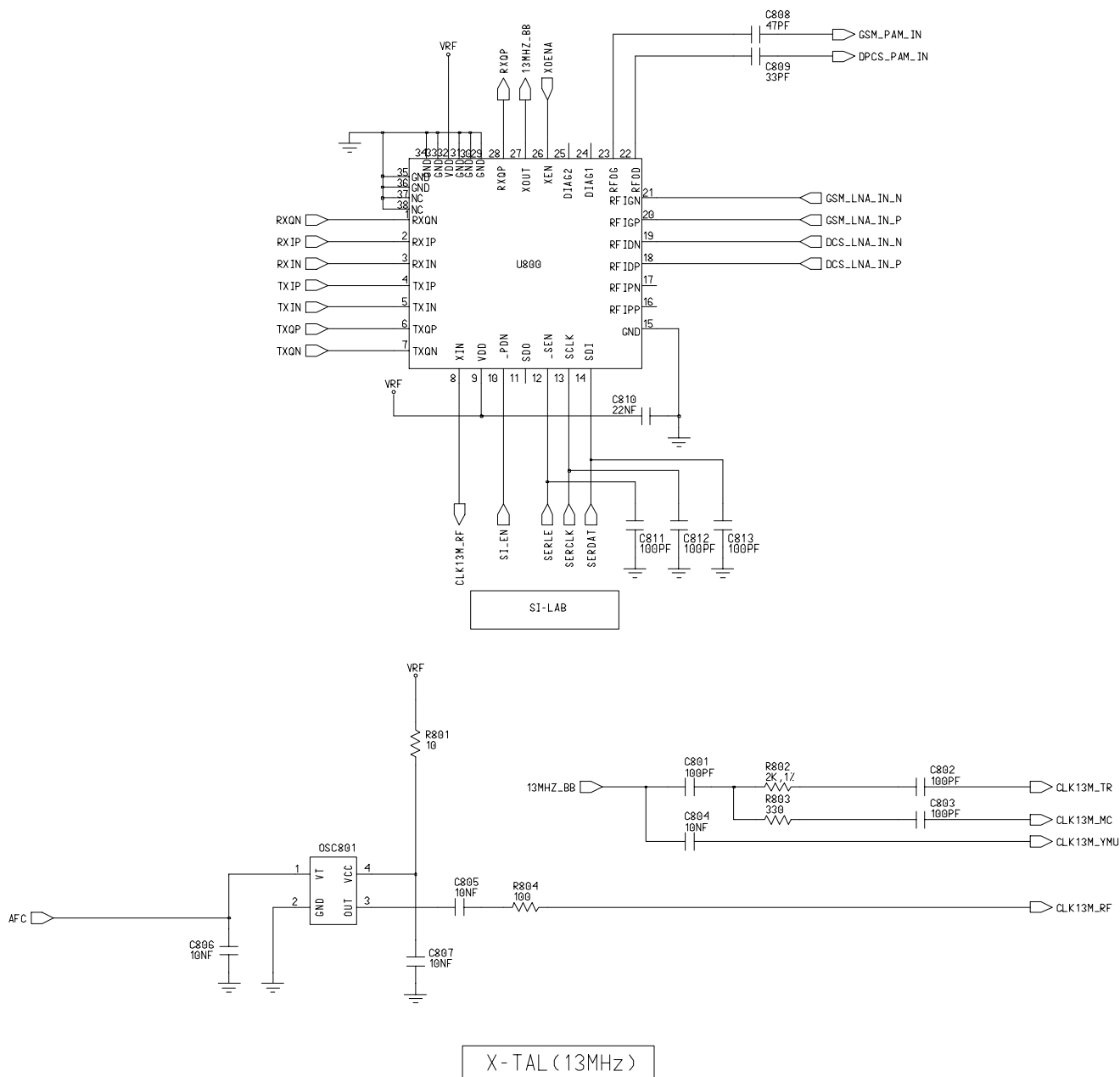
5. DCS TX



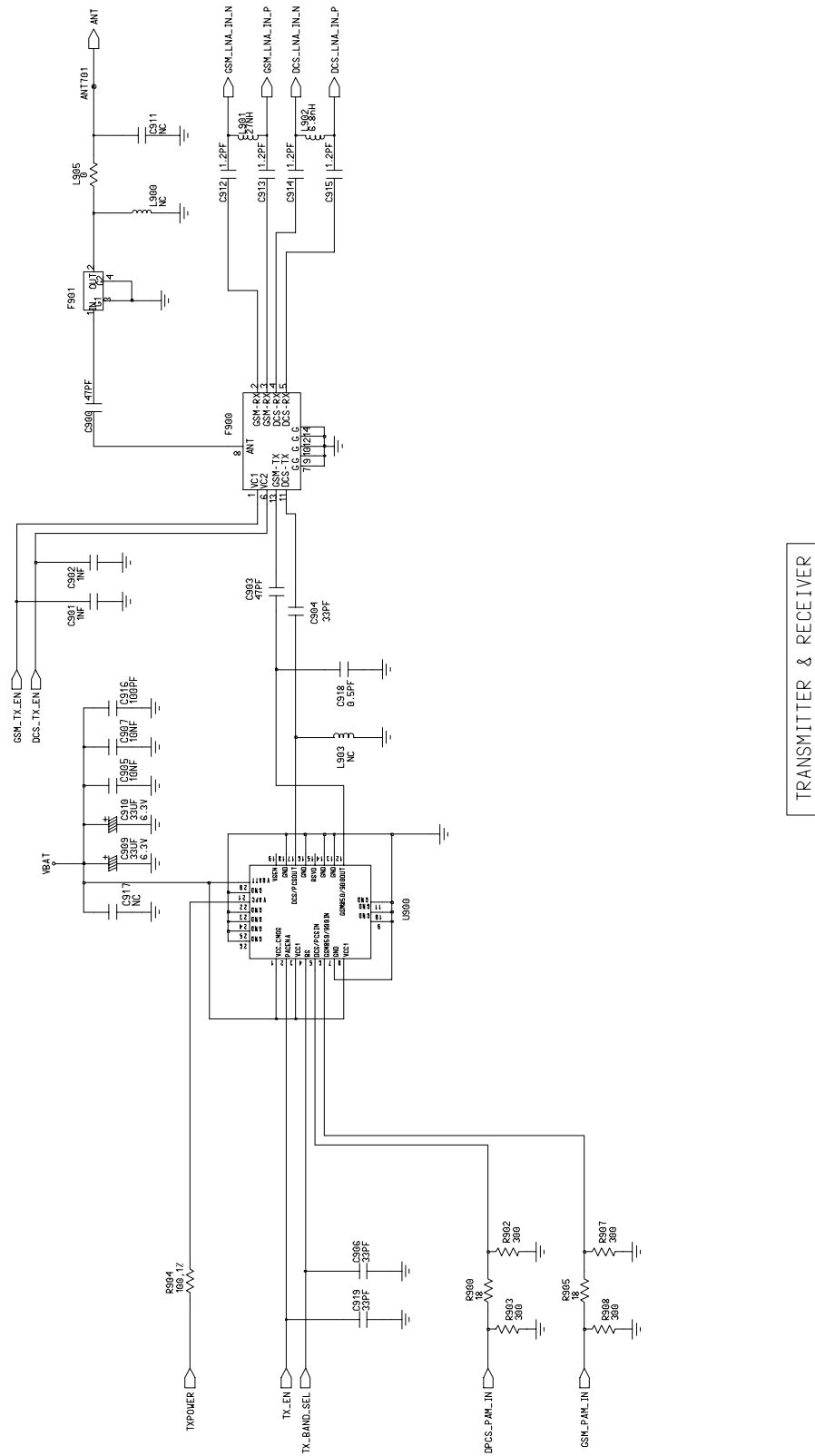
CONTINUOUS TX ON CONDITION
 CH : 698CH(DCS)
 TX POWER CODE: 520 CODE Applied
 RBW : 100KHz
 VBW : 100KHz
 SPAN : 10MHz
 REF LEV. : 10dBm
 ATT. : 20dB



(Picture 1)



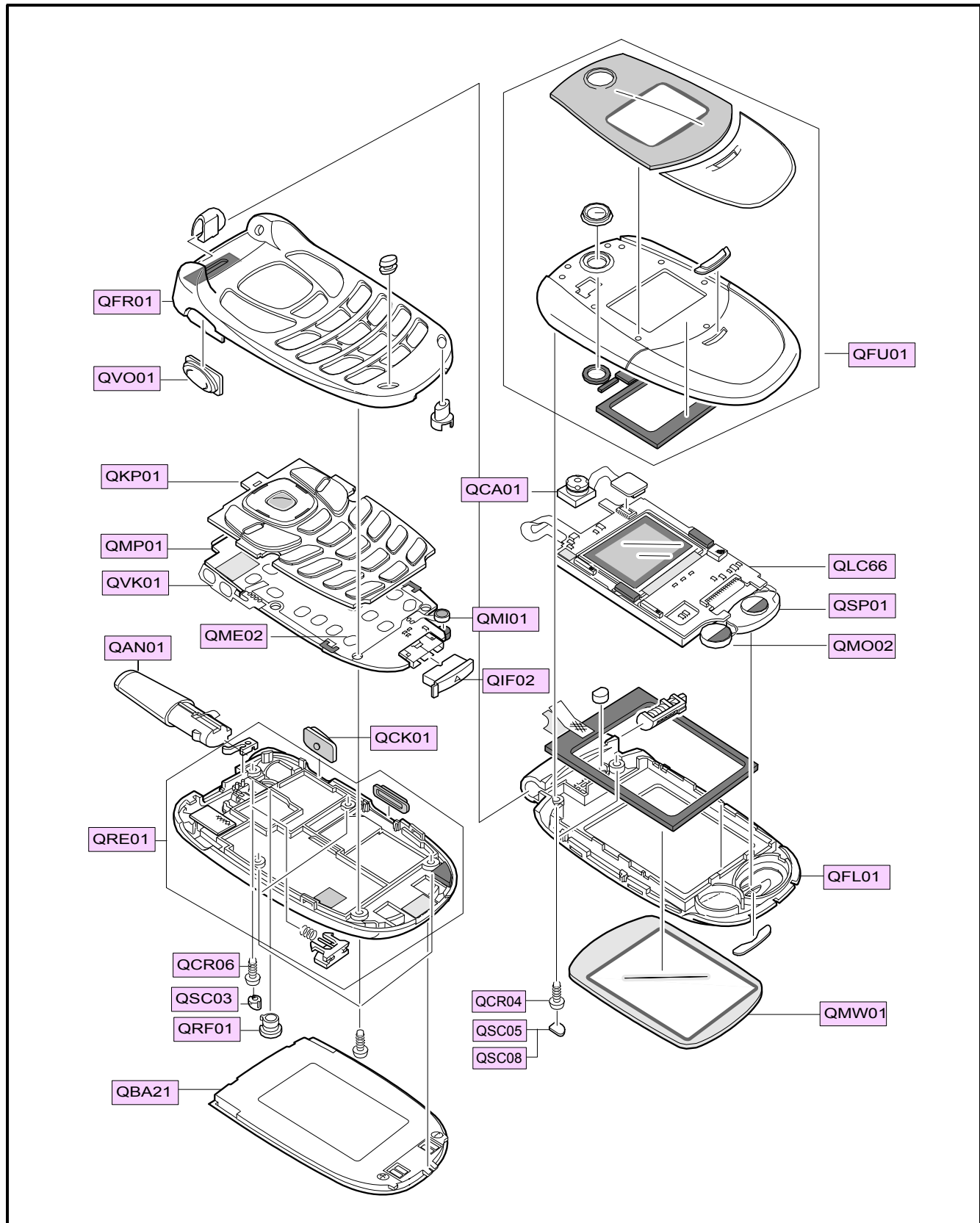
(Picture 2)



(Picture 3)

3. SGH-E300 Exploded View and its Parts list

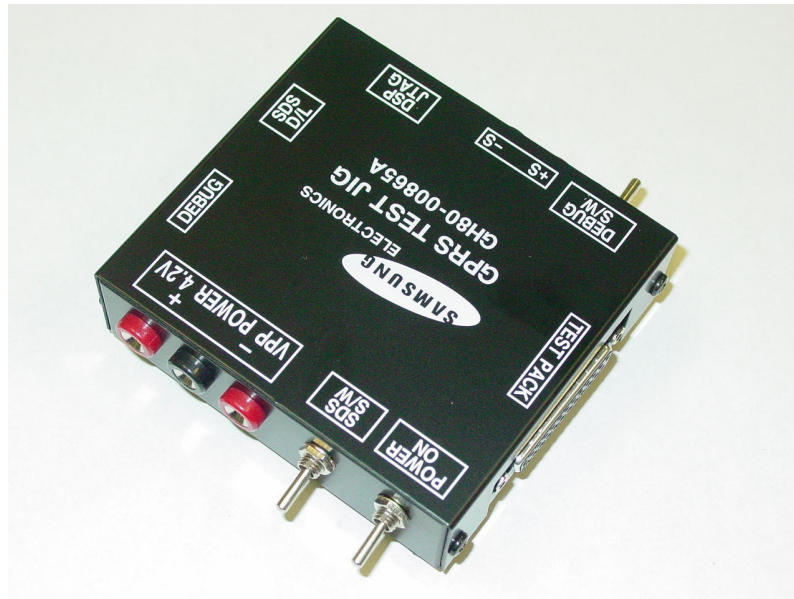
1. Cellular phone Exploded View



2. Cellular phone Parts list

Location NO.		Description	SEC CODE	Remark
QFU01		F/UPPER ASSY	GH75-04391A	
QLC66		LCD	GH07-00552A	
QSP01		SPEAKER	3001-001484	
QMO02		MOTOR	3101-001328	
QCA01		CAMERA	GH59-01102A	
QCR04		SCREW	6001-001479	
QSC05		SCREW SHEET-L	GH74-06866A	
QSC08		SCREW SHEET-R	GH74-06867A	
QFL01		F/LOWER ASSY	GH75-04392A	
QMW01		LCD WINDOW ASSY	GH75-03874A	
QFR01		FRONT ASSY	GH75-03867A	
QVO01		VOLKEY	GH75-04736A	
QKP01		KEYPAD ASSY	GH75-03939A	
QMP01		PBA MAIN	GH92-01581A	
QVK01		UNIT VOLKEY	GH59-01016A	
QME02		UNIT METAL DOME	GH59-01097A	
QMI01		MICROPHONE ASSY	GH30-00062A	
QIF02		IF COER	GH73-01394A	
QCK01		CAMKEY	GH75-04735A	
QAN01		ANTENNA	GH42-00362A	
QRE01		REAR COVER	GH75-03868A	
QRF01		RF COVER	GH72-14790A	
QCR06		SCREW	6001-001155	
QBA21		BATTERY	GH43-01234A	

3. Test Jig [GH80-00865A]



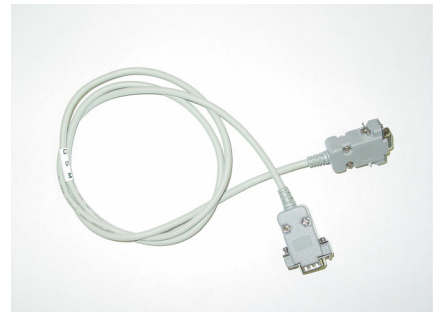
3-1. RF Test Cable
[GH39-00090A]



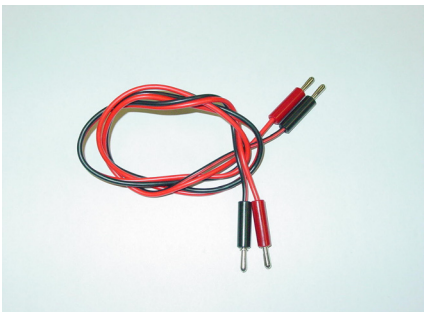
3-2. Test Cable
[GH39-00127A]



3-3. Serial Cable



3-4. Power Supply Cable



3-5. DATA CABLE
[GH39-00159A]



3-6. TA
[GH44-00184A]



4. SGH-E300 MAIN Electrical Parts List

SEC Code	Design LOC
GH92-01581A	–
0403-001427	V302,ZD205
0406-001150	V301,ZD201,ZD202
0406-001150	ZD203,ZD204,ZD301
0406-001150	ZD302,ZD303,ZD304
0406-001150	ZD305,ZD306,ZD307
0406-001150	ZD308,ZD309,ZD310
0406-001150	ZD311,ZD312,ZD401
0406-001150	ZD402,ZD403,ZD404
0406-001184	V307
0501-000225	Q401
0502-001201	Q100
0504-000168	Q103,Q104
0504-001042	U702,U703
0506-001052	Q102
0601-001790	LED201,LED202,LED203
0601-001790	LED204,LED205,LED207
0601-001790	LED208,LED210,LED211
0601-001790	LED212,LED213,LED214
0601-001790	LED218,LED219,LED220
0601-001790	LED221,LED222
0604-001261	LED217
1001-001183	U401
1009-001010	U202
1109-001281	U500
1201-002078	U900
1203-002127	U101
1203-002861	U1002
1203-002902	U102
1204-001984	U701
1204-002161	U402
1209-001219	U602
2007-000070	L905
2007-000138	R804
2007-000140	R304,R305,R306,R307
2007-000140	R308,R309,R310,R312
2007-000140	R313,R420,R424

SEC Code	Design LOC
2007-000141	R413,R415
2007-000148	R1001,R1002,R112
2007-000148	R408,R416,R423
2007-000154	R419
2007-000157	R301,R302,R303,R501
2007-000157	R601,R604,R605,R314
2007-000159	R411,R418
2007-000161	R405
2007-000162	R1011,R1021,R402
2007-000162	R701,R704,U1006
2007-000164	R404
2007-000170	R603
2007-000171	R1008,R101
2007-000171	R1014,R1019
2007-000171	R1020,R105,R107
2007-000171	R500
2007-000171	R502
2007-000172	R1003,R110,R201,R202
2007-000172	R401,R403,R425,R503
2007-000172	R602,R801
2007-000758	R106
2007-000775	R406
2007-001288	R900,R905
2007-001291	R203
2007-001313	R803
2007-001319	R111
2007-001323	R104
2007-001325	R410
2007-007008	R902,R903,R907,R908
2007-007139	R103
2007-007142	R102,R606
2007-007200	R702,R703
2007-007306	R904
2007-007308	R607,R608
2007-007766	R802
2203-000233	C1011,C1013,C118
2203-000233	C429,C801,C802

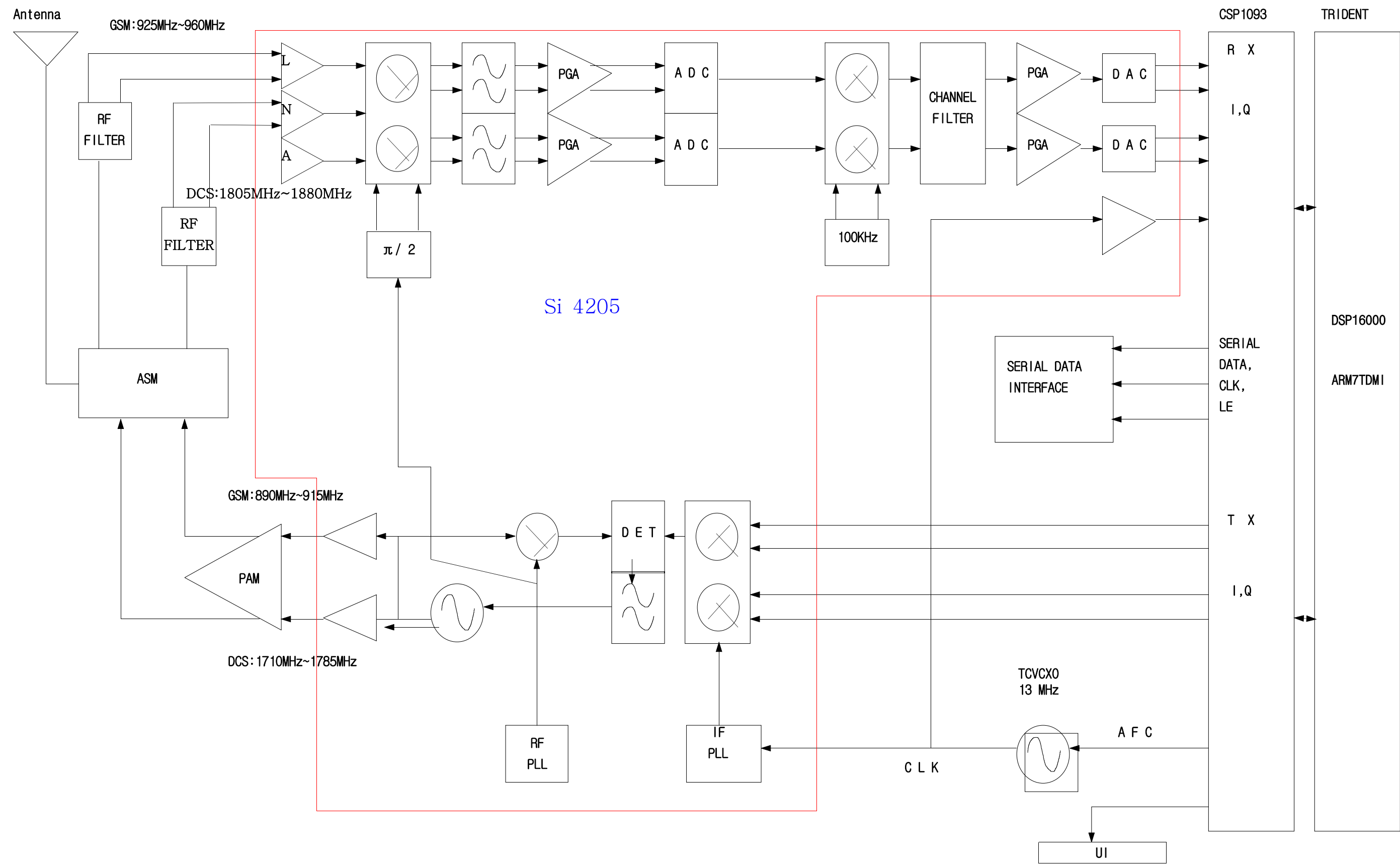
SEC Code	Design LOC
2203-000233	C803,C811,C812,C813
2203-000233	C916
2203-000254	C1017
2203-000254	C1005,C1010,C115
2203-000254	C201,C202,C430,C502
2203-000254	C603,C604,C605,C606
2203-000254	C611,C612,C707,C710
2203-000254	C711,C712,C804,C805
2203-000254	C806,C807,C905,C907
2203-000359	C401
2203-000438	C416,C425,C426,C901
2203-000438	C902
2203-000628	C613,C615
2203-000679	C610
2203-000812	C101,C104,C105
2203-000812	C207,C208,C214,C215
2203-000812	C216,C219,C221,C231
2203-000812	C242,C253
2203-000812	C255,C305,C809
2203-000812	C906,C919
2203-000940	C433
2203-000995	C808,C900,C903
2203-001153	C424
2203-001383	C918
2203-001405	C403,C609,C810
2203-001412	C415
2203-001598	C103,C114
2203-001652	C110,C113
2203-002677	L903
2203-005061	C102,C205,C206,C301
2203-005061	C302,C303,C304,C402
2203-005061	C404,C409,C417,C507
2203-005061	C608,C706,C432
2203-005065	C410,C423,C705
2203-005138	C233,C250
2203-005234	C912,C913,C914,C915
2203-005480	C607,C708,C709

SEC Code	Design LOC
2203-005482	C1009,C1014,C614
2203-005482	C1019,C1020,C108
2203-005496	C601,C602,C704
2203-005509	C203,C503,C504,C505
2203-005509	C506
2203-005571	C1022
2203-005682	C209,C211,C212,C213
2203-005682	C217,C218,C220,C222
2203-005682	C223,C225,C226,C227
2203-005682	C230,C232,C234,C235
2203-005682	C236,C237,C238,C239
2203-005682	C240,C241,C243,C244
2203-005682	C246,C247,C248,C249
2203-005682	C251,C252,C254,C256
2203-005682	U1005
2203-006053	C1012,C112,C109
2203-006053	C116,C117,C1001
2203-006257	C204
2404-001086	C405,C413
2404-001105	C106
2404-001151	C431,C909,C910
2404-001225	C1021
2404-001268	C107
2703-001513	L402,L403
2703-002485	L901
2703-002608	L902
2703-002207	C904
2801-003856	OSC601
2804-001577	OSC1000
2809-001260	OSC801
3705-001287	F901
3709-001229	CN101
3710-001816	CN300
3711-005212	CN201
3722-002082	CN400
4302-001130	M101
1205-002433	U800

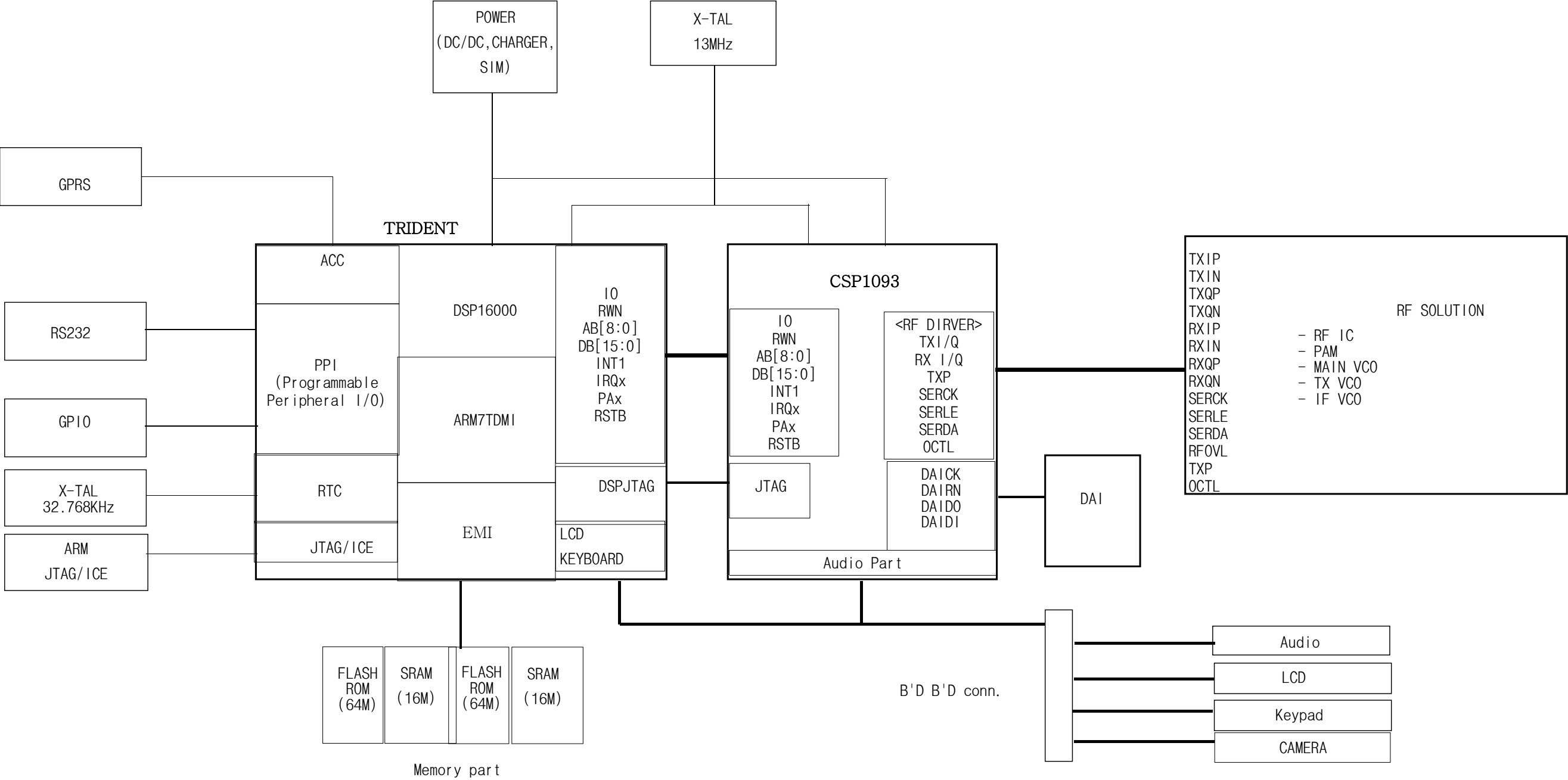
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GH09-00025A	U601
GH13-00020A	U1001
NEW-F000001	F900

5. SGH-E300 Block Diagrams

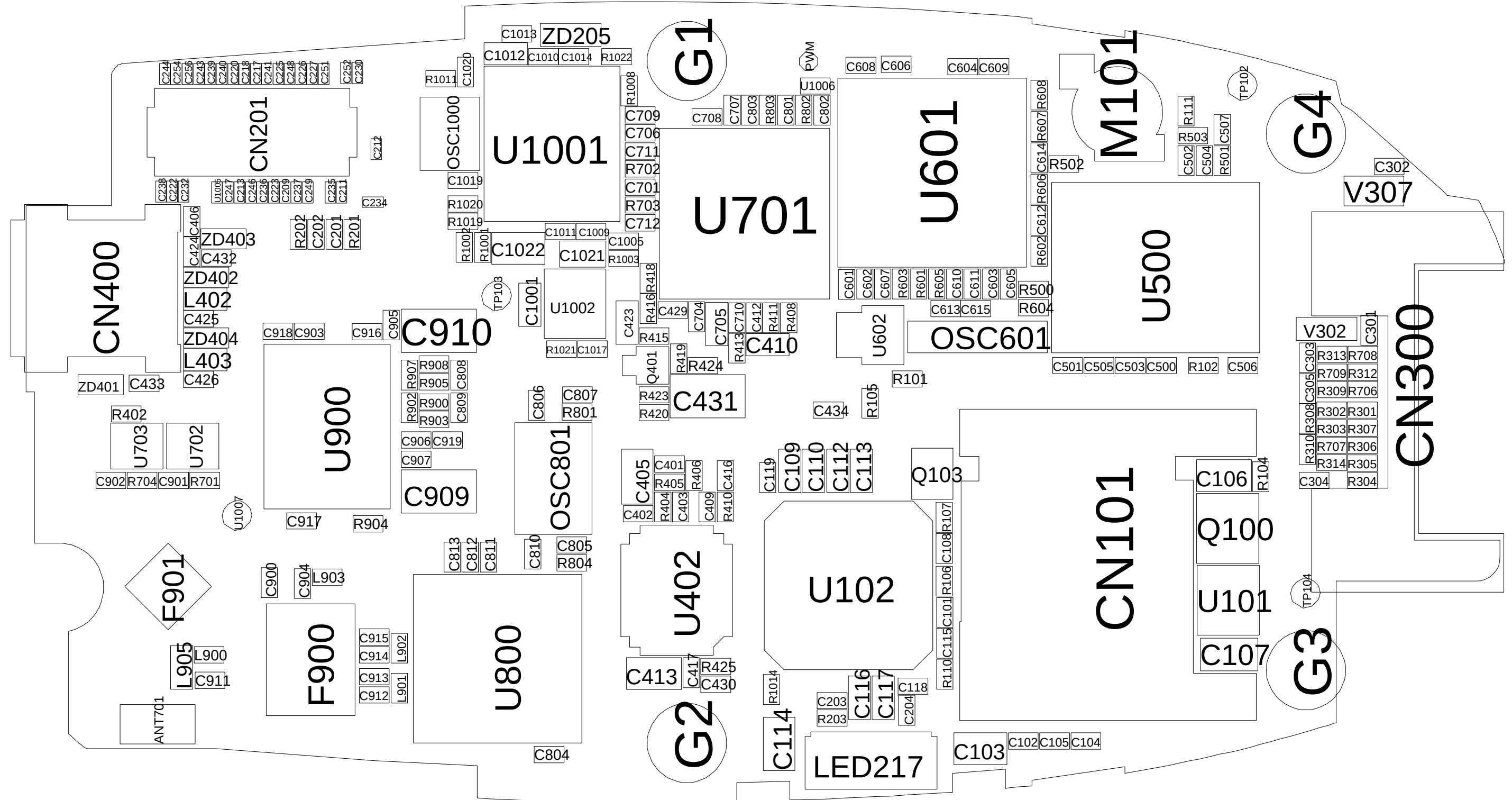
1. RF Solution Block Diagram



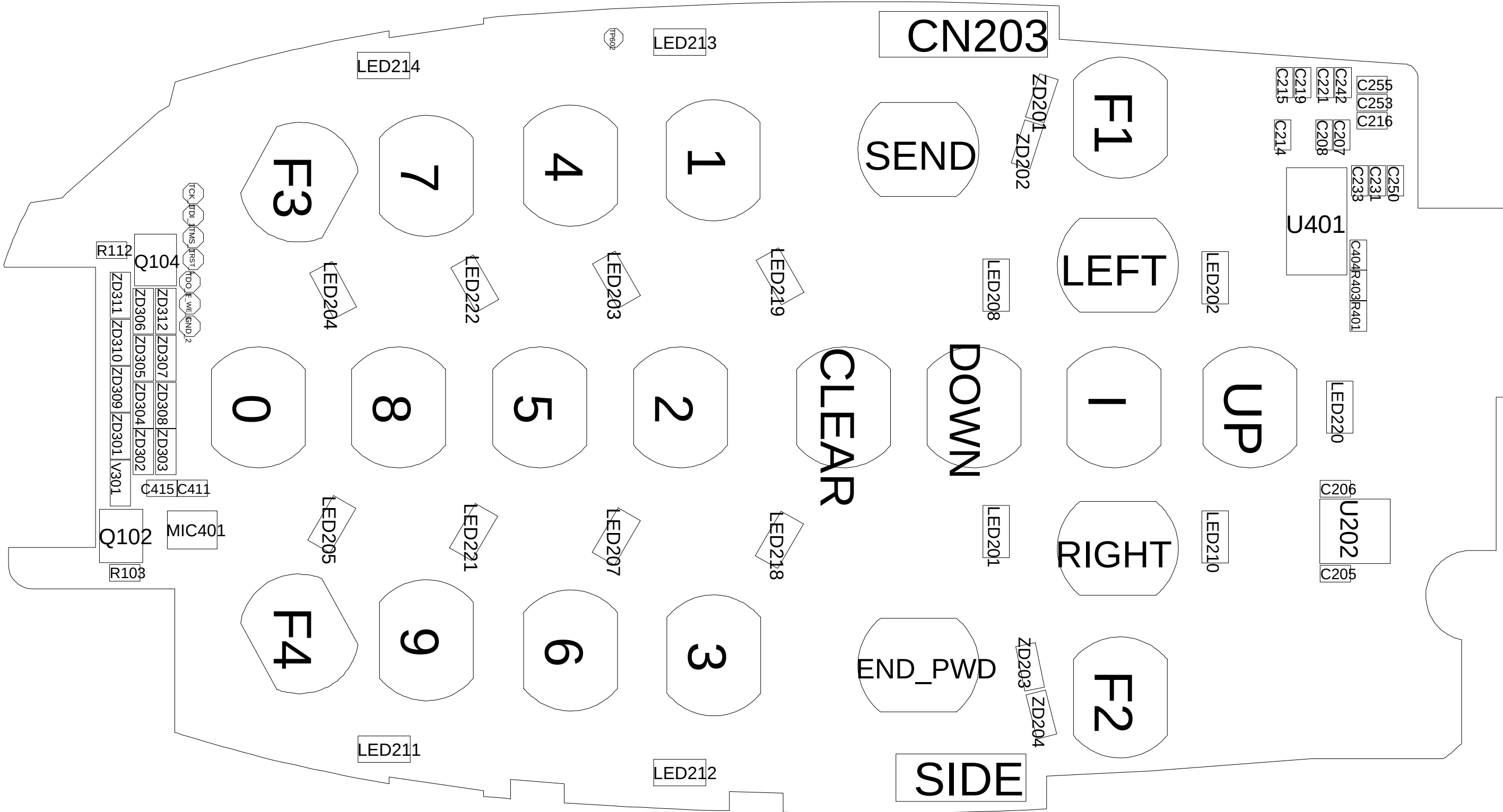
2. Base Band Solution Block Diagram

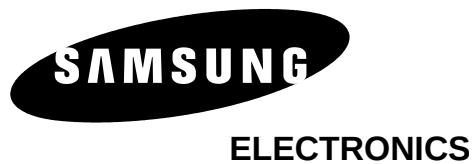


1. Main Top Diagram



2. Main Bottom Diagram





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