

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

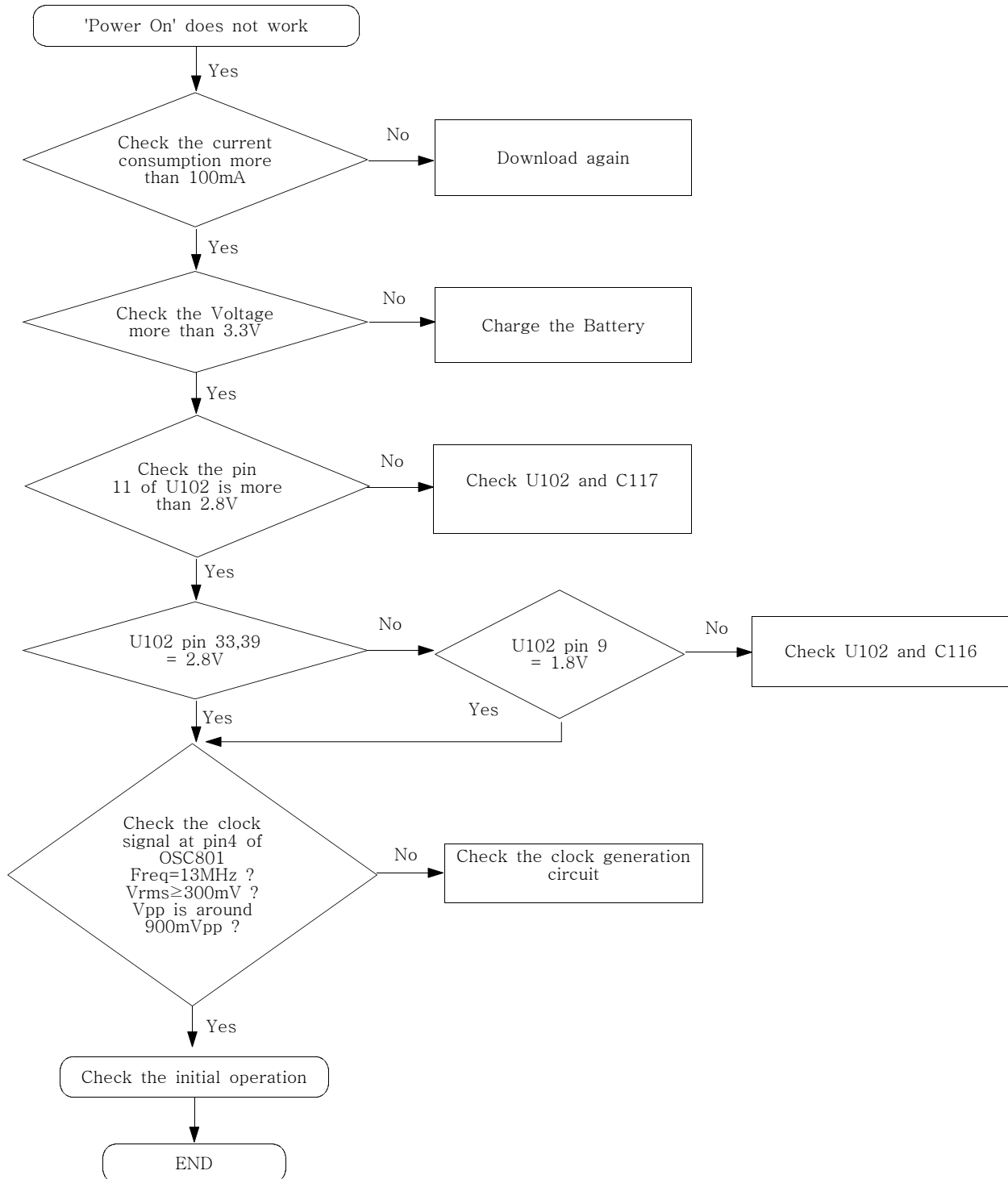
TX Power control level	GSM900
5	33±2 dBm
6	31±2 dBm
7	29±2 dBm
8	27±2 dBm
9	25±2 dBm
10	23±2 dBm
11	21±2 dBm
12	19±2 dBm
13	17±2 dBm
14	15±2 dBm
15	13±2 dBm
16	11±3 dBm
17	9±3dBm
18	7±3 dBm
19	5±3 dBm

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

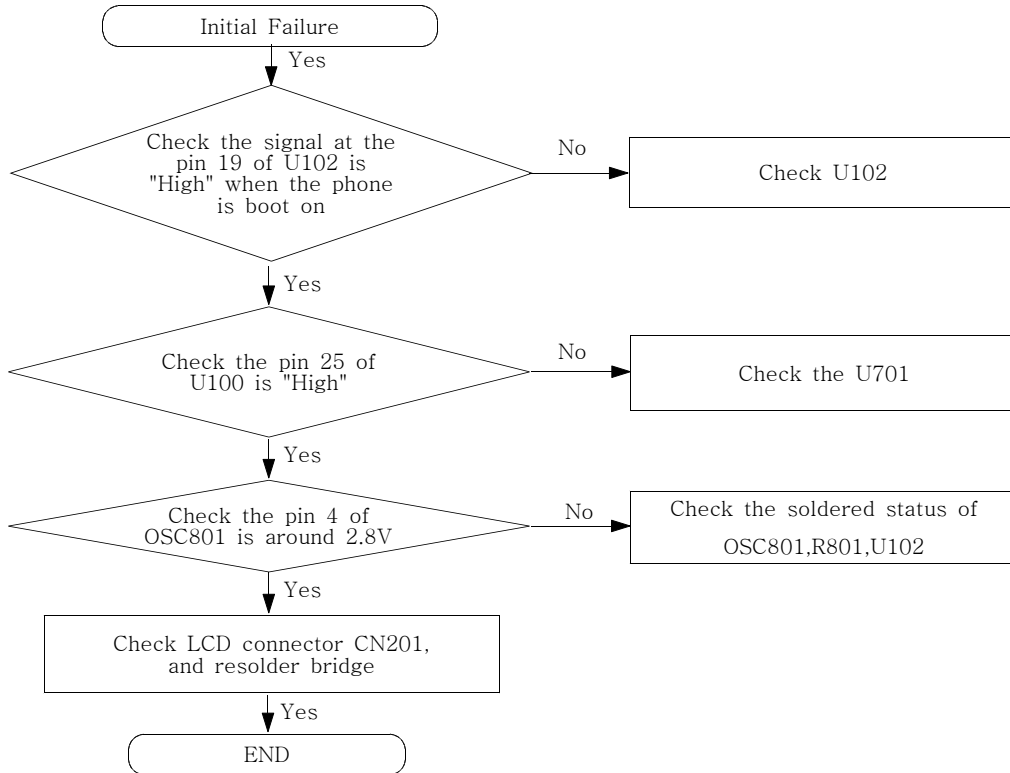
2. SGH-E300 Flow Chart of Troubleshooting

1. Baseband

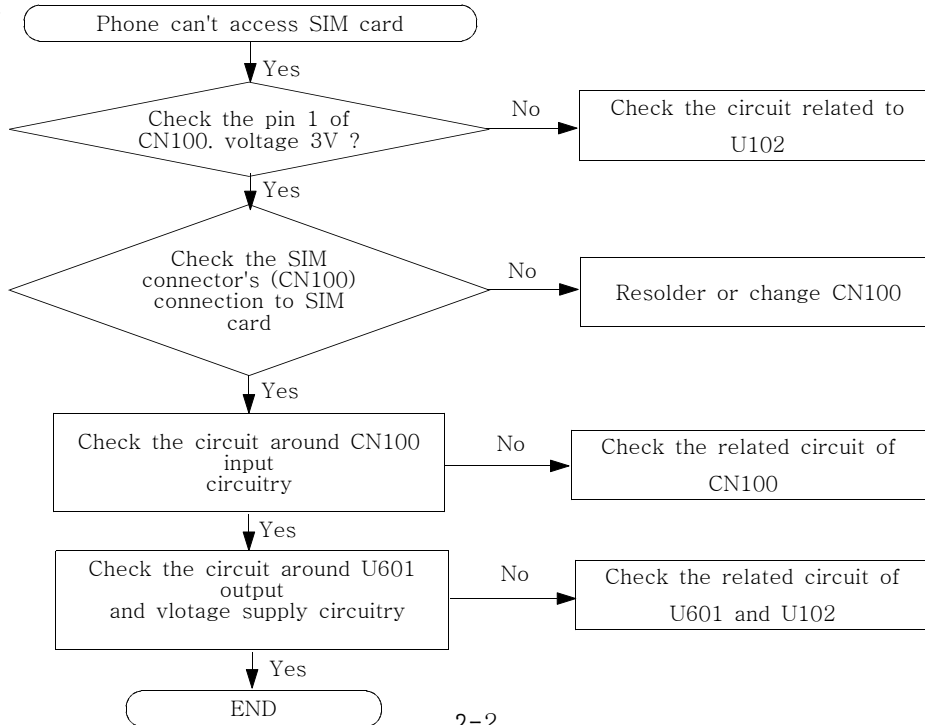
1. Power ON



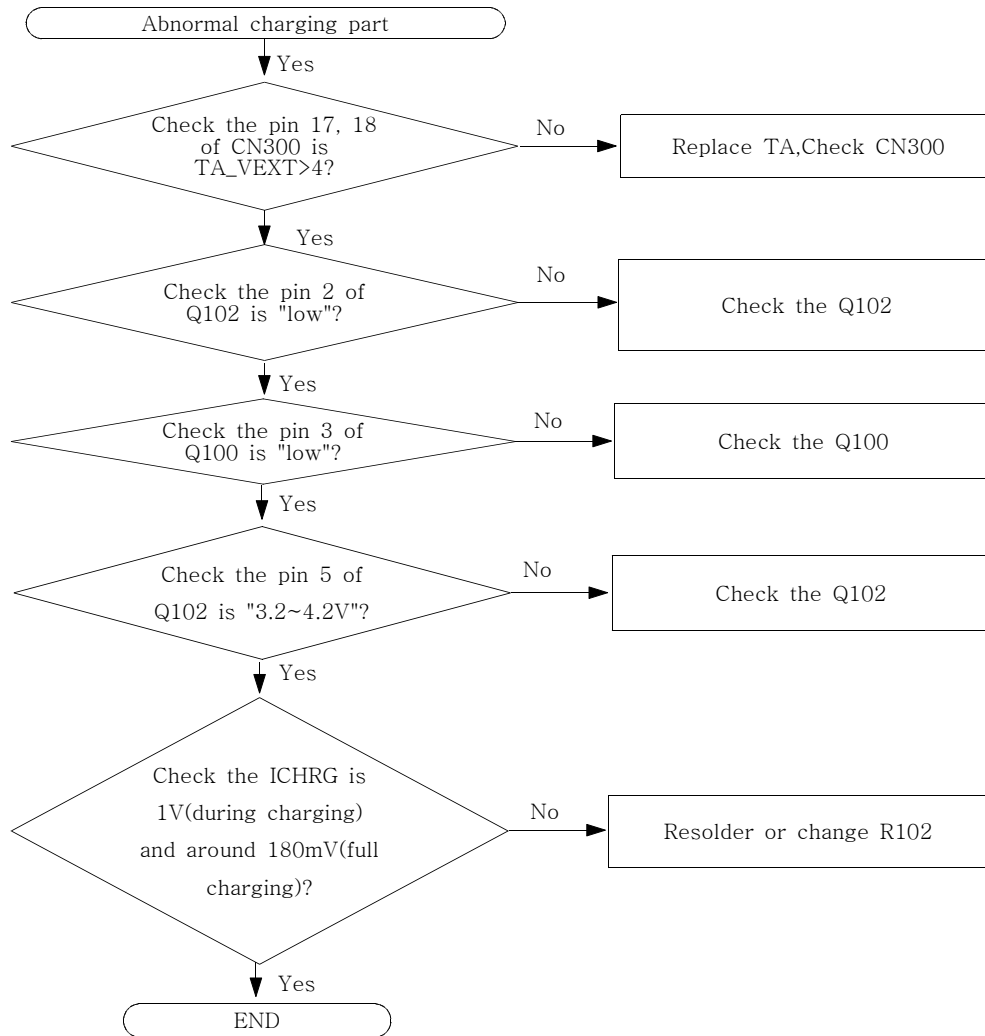
2. Initial



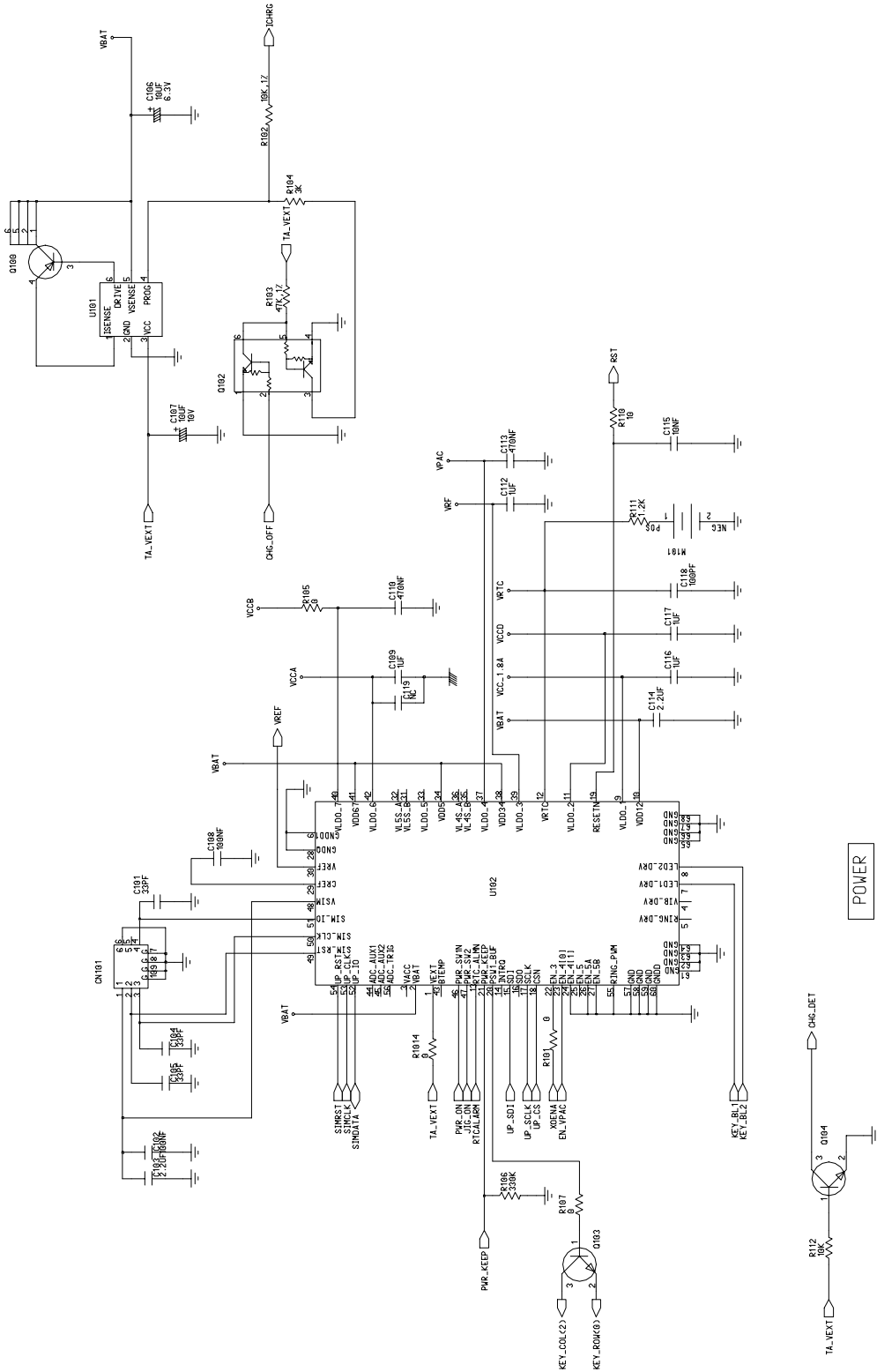
3. Sim Part



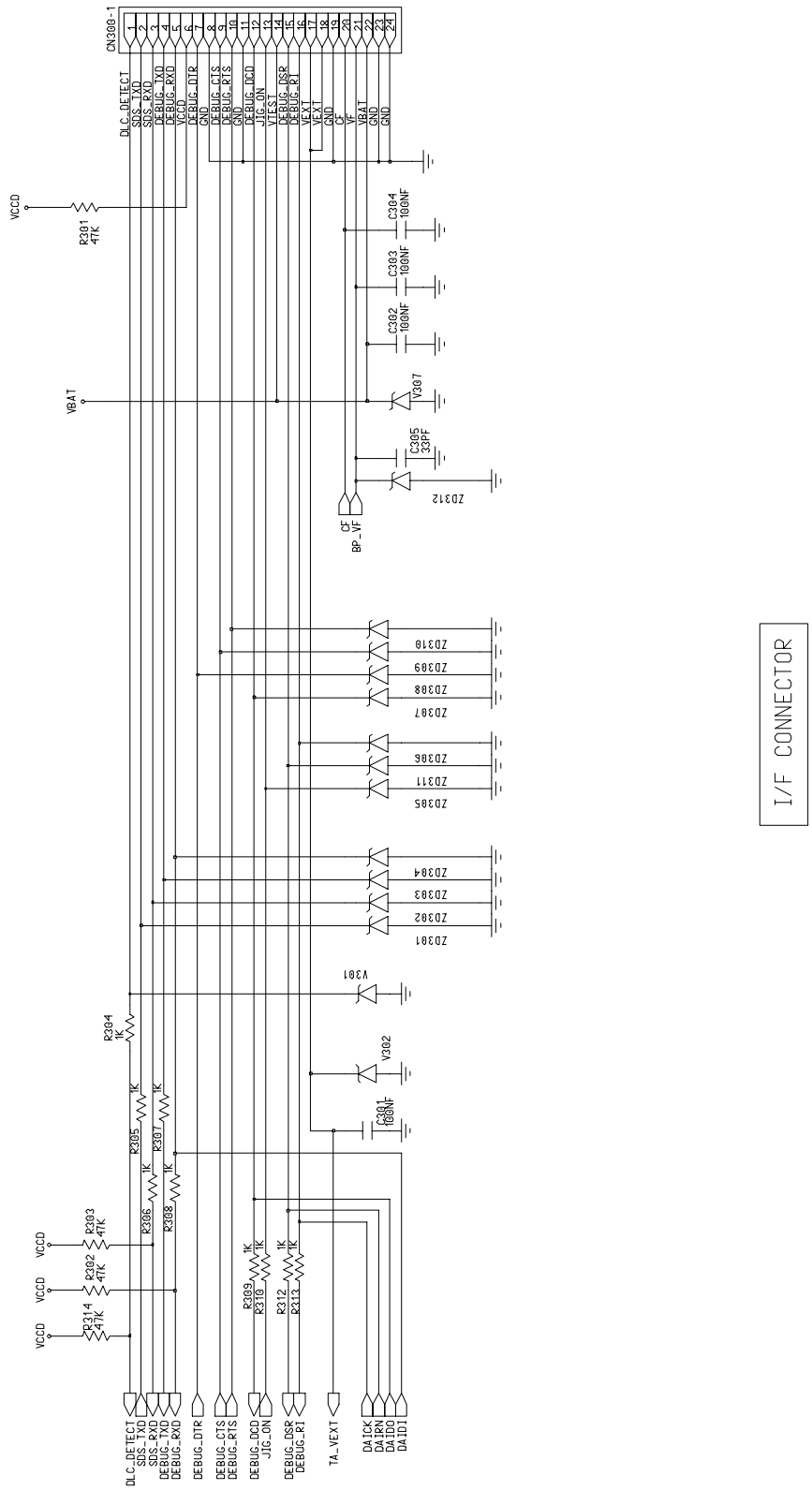
4. Charging Part



SGH-E300 Flow Chart of Troubleshooting and Circuit Diagrams

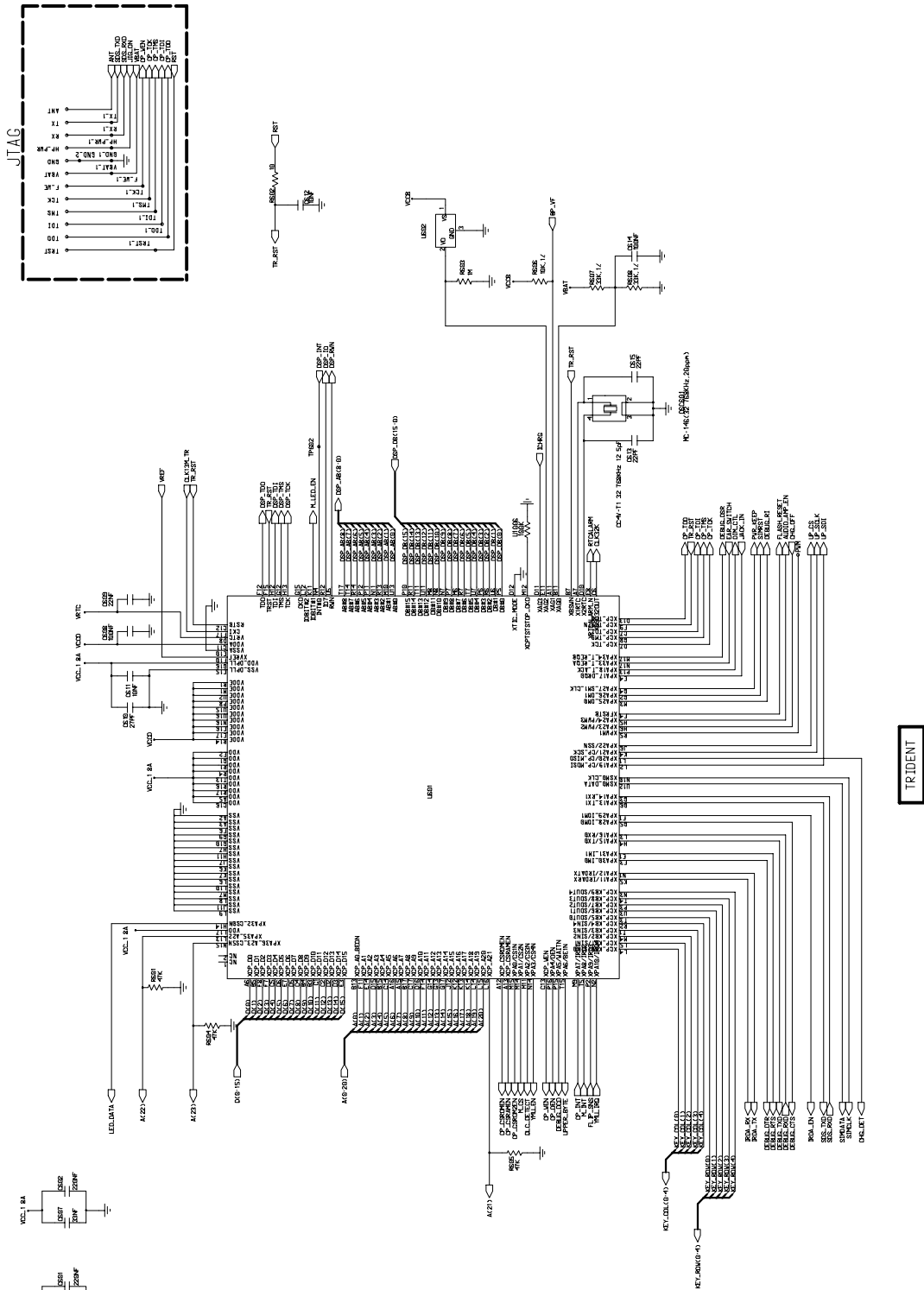


(Picture 1)



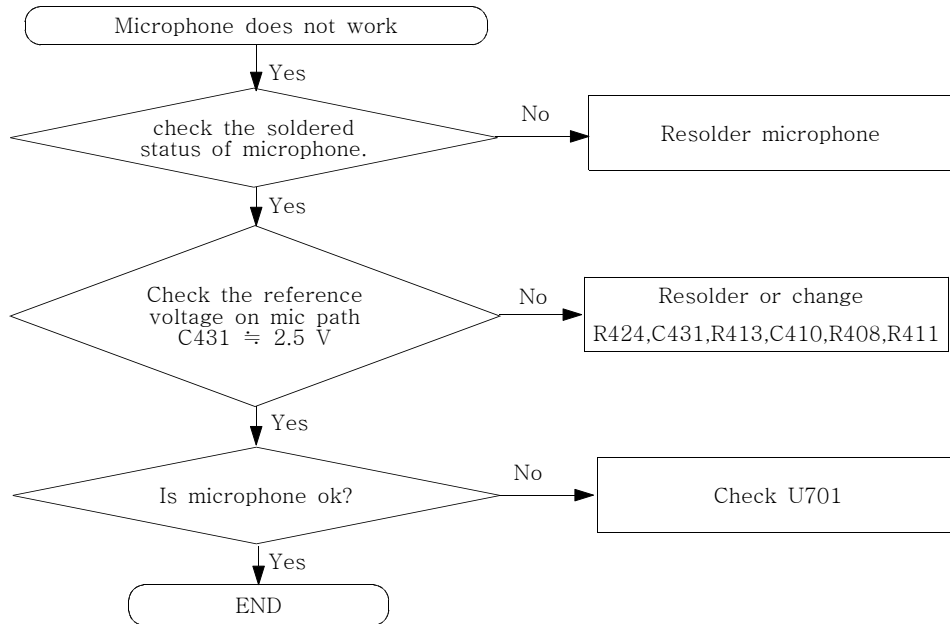
(Picture 2)

SGH-E300 Flow Chart of Troubleshooting and Circuit Diagrams

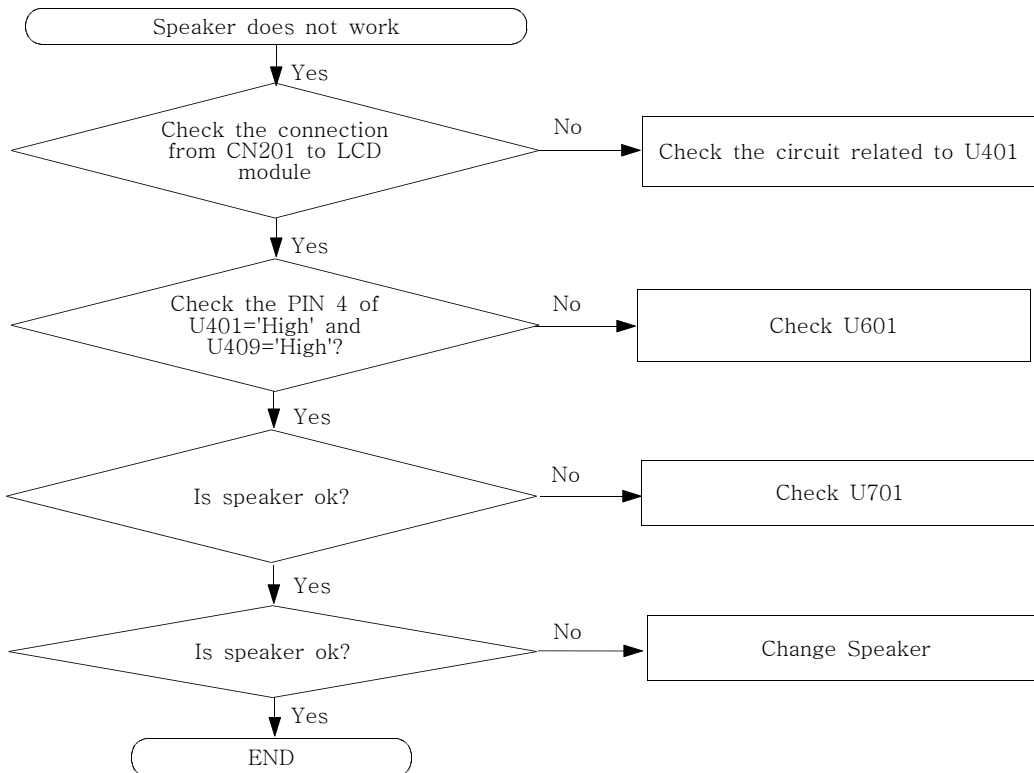


(Picture 3)

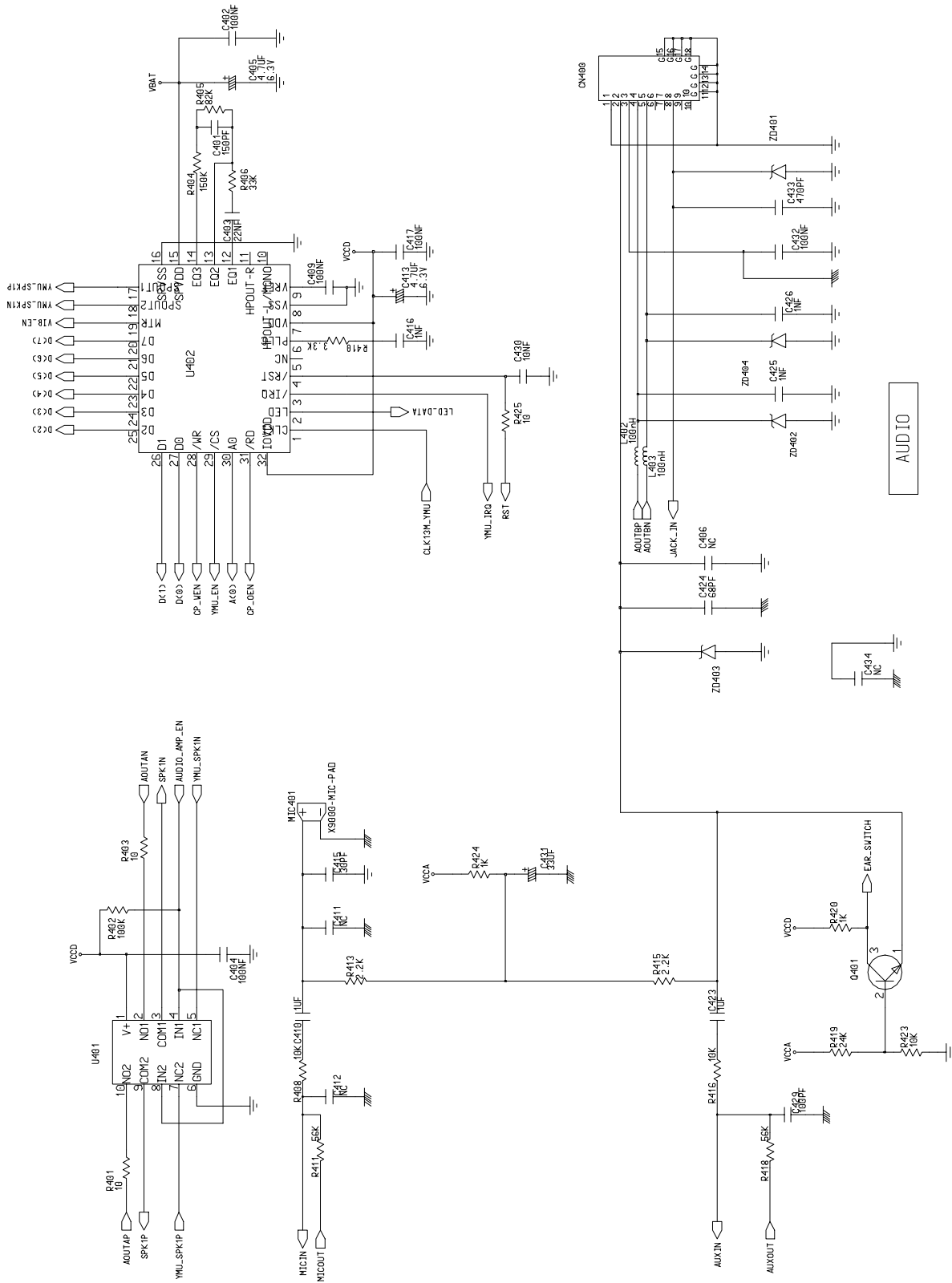
5. Microphone Part



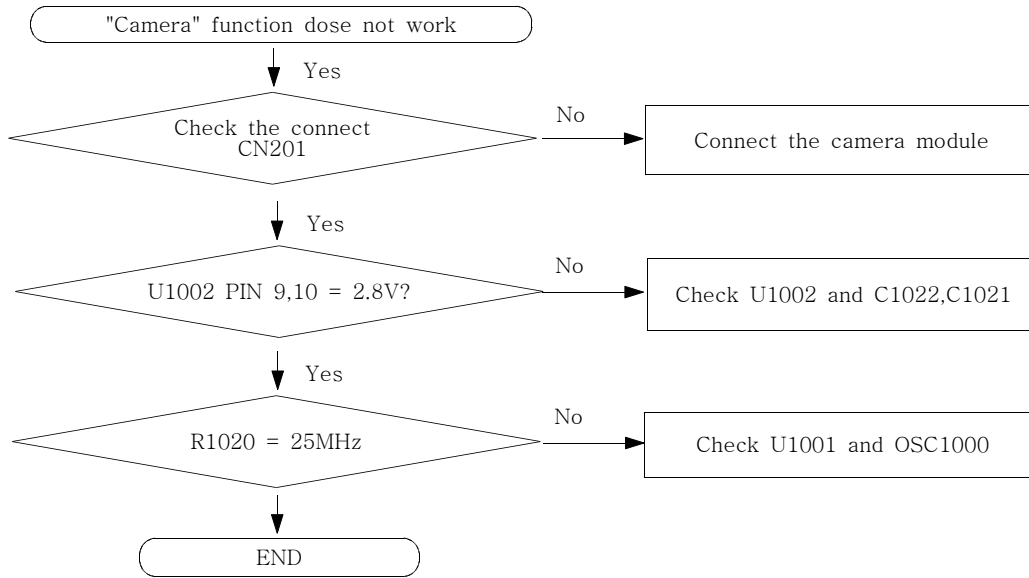
6. Speaker Part

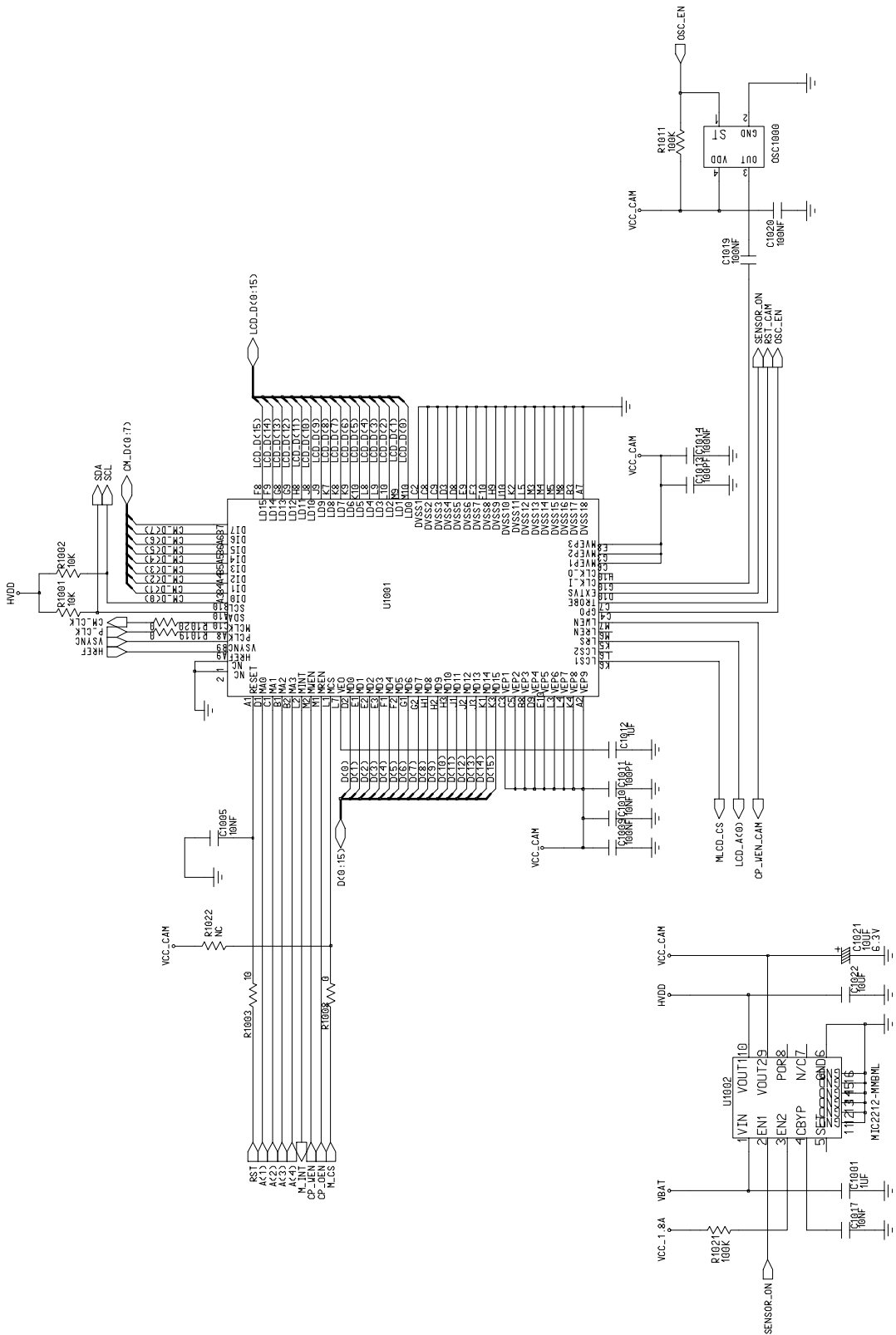


SGH-E300 Flow Chart of Troubleshooting and Circuit Diagrams



7. Camera Part

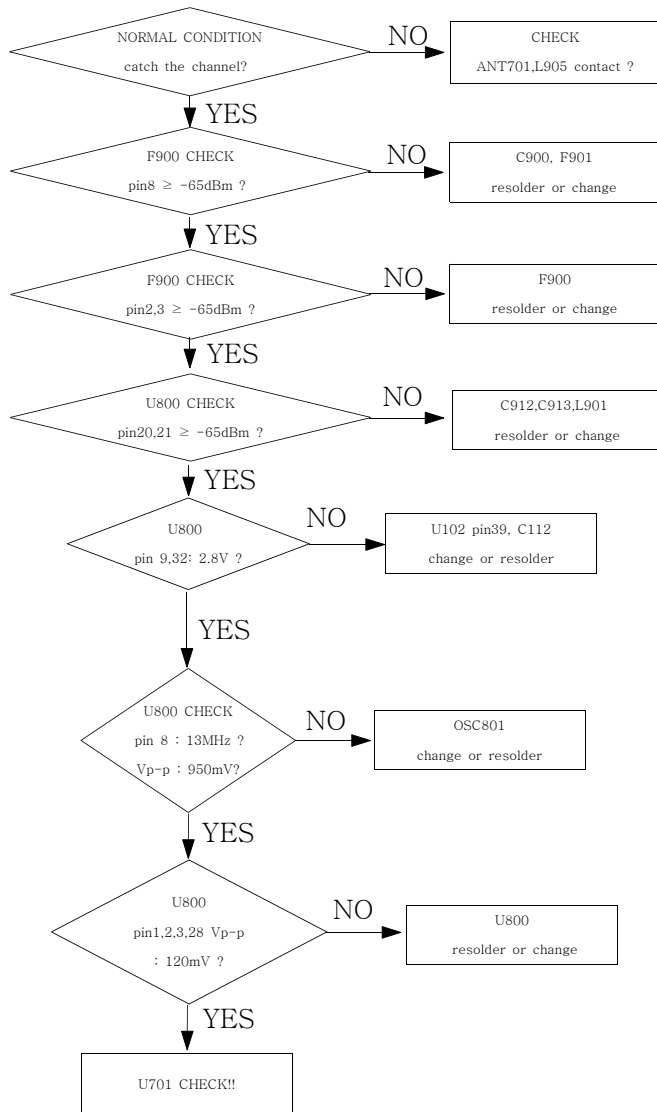




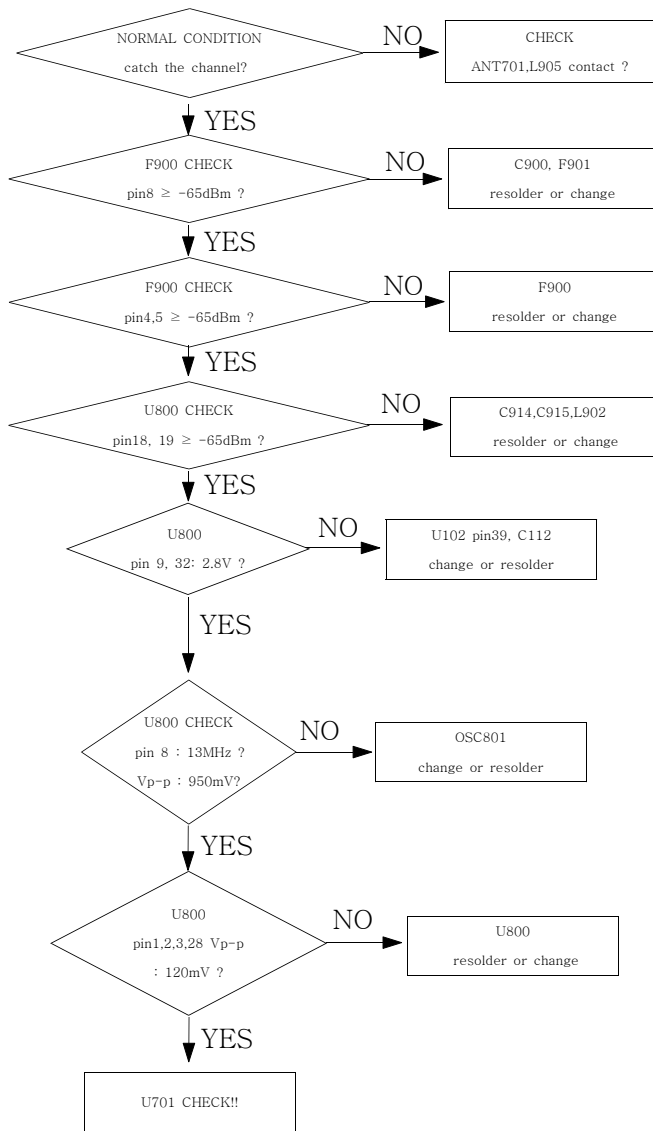
2.RF

1. EGSM RX

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

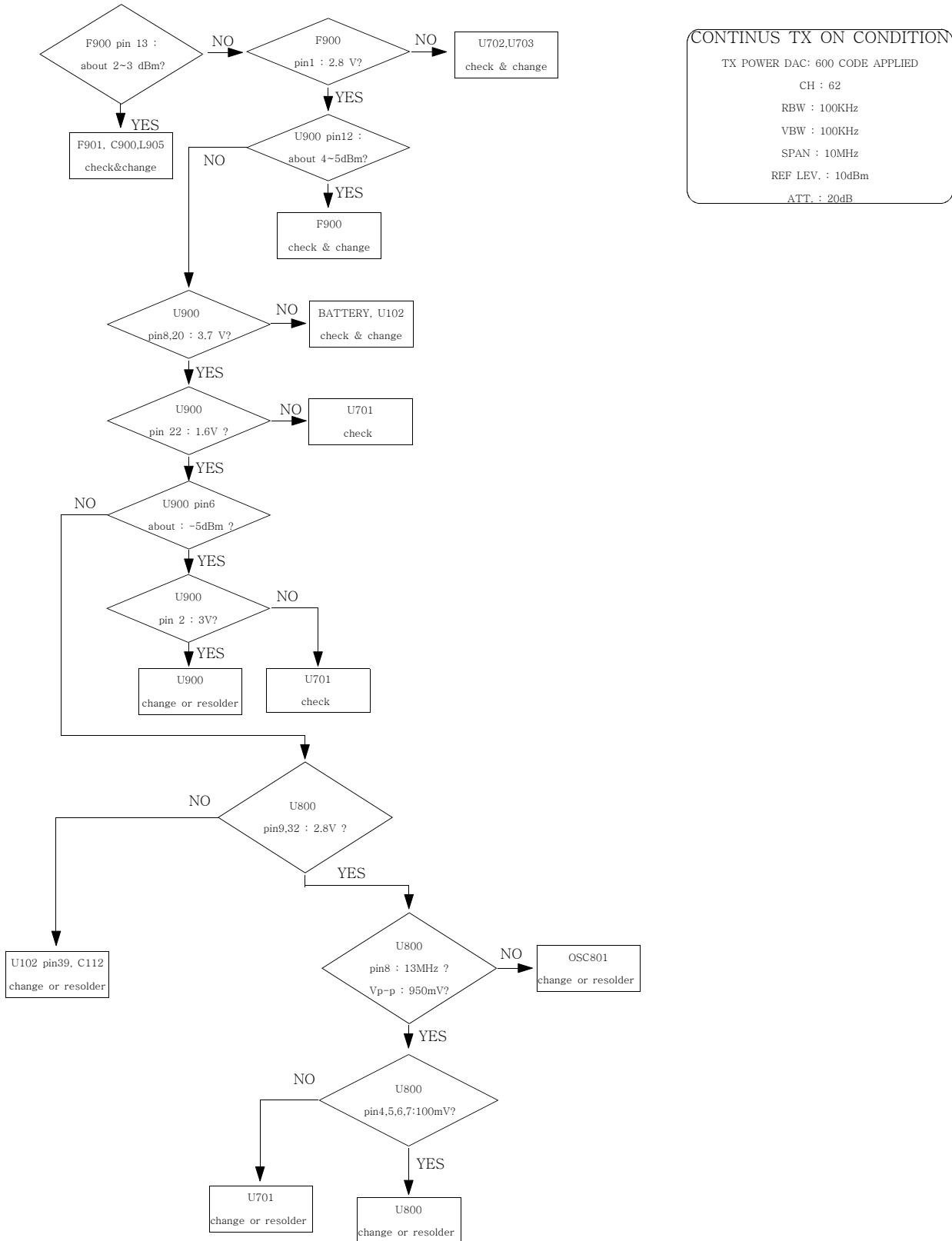


2. DCS RX

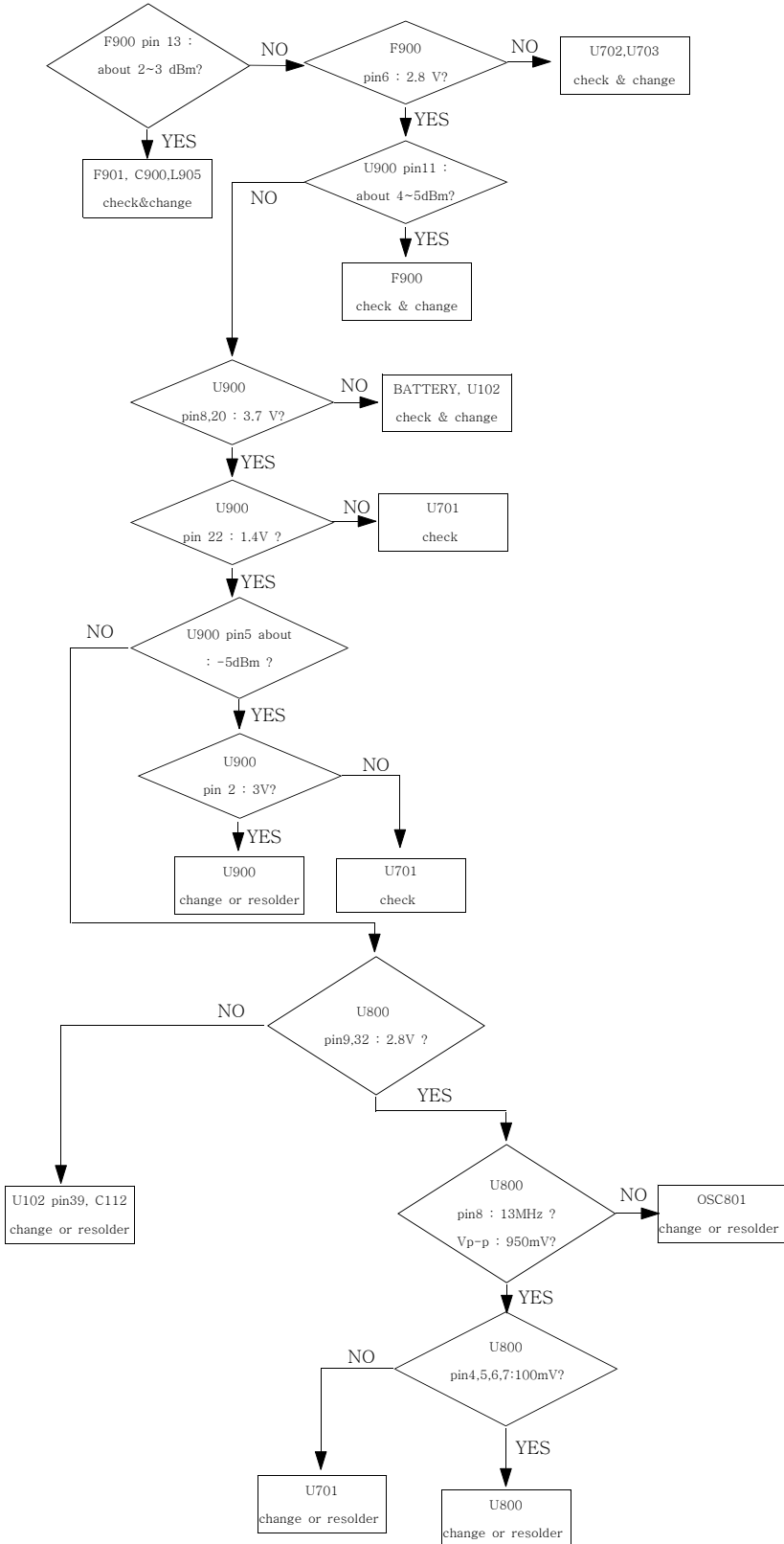


CONTINUOUS RX ON
RF INPUT : 698CH
AMP : -50dBm

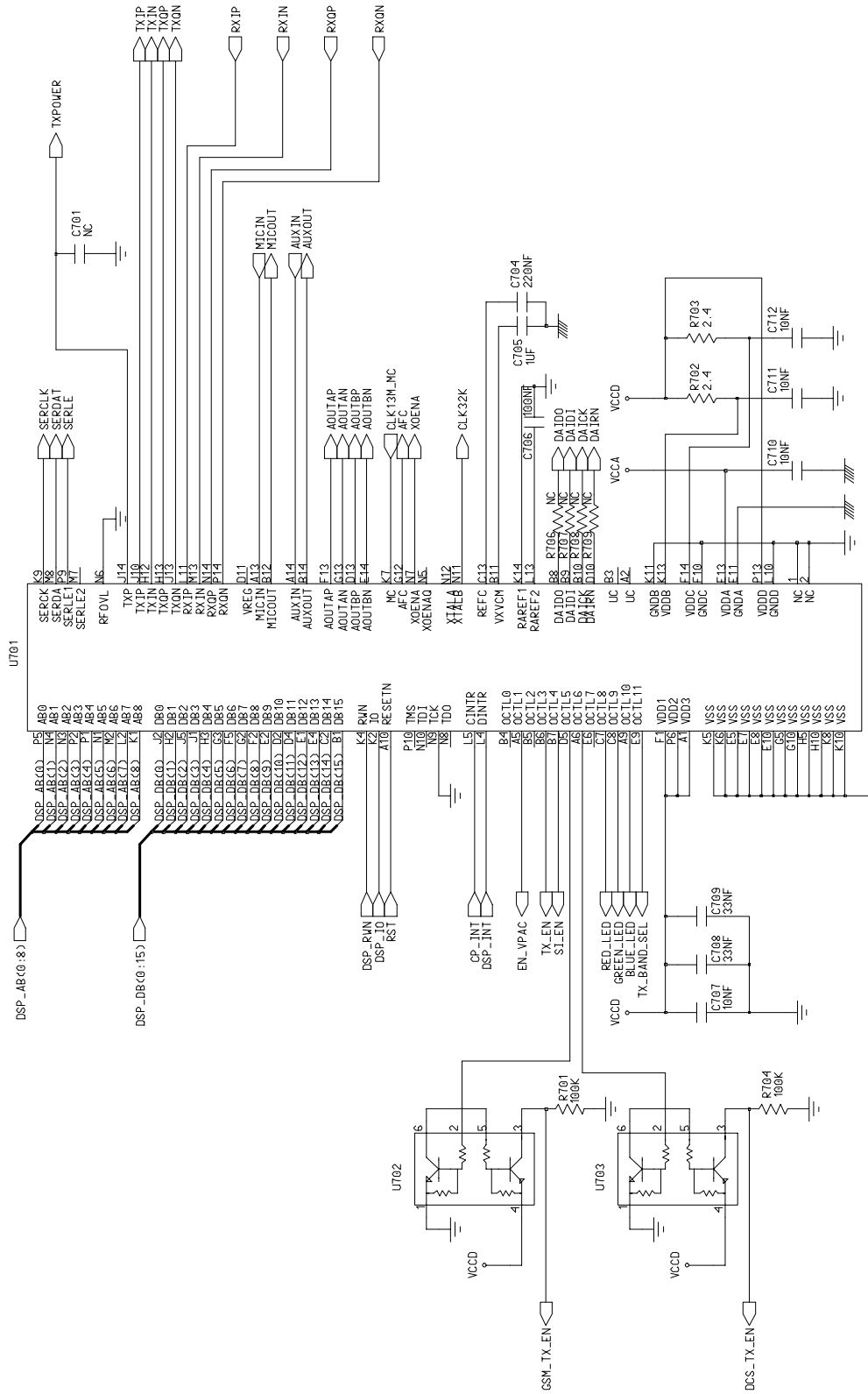
3. EGSM TX



5. DCS TX



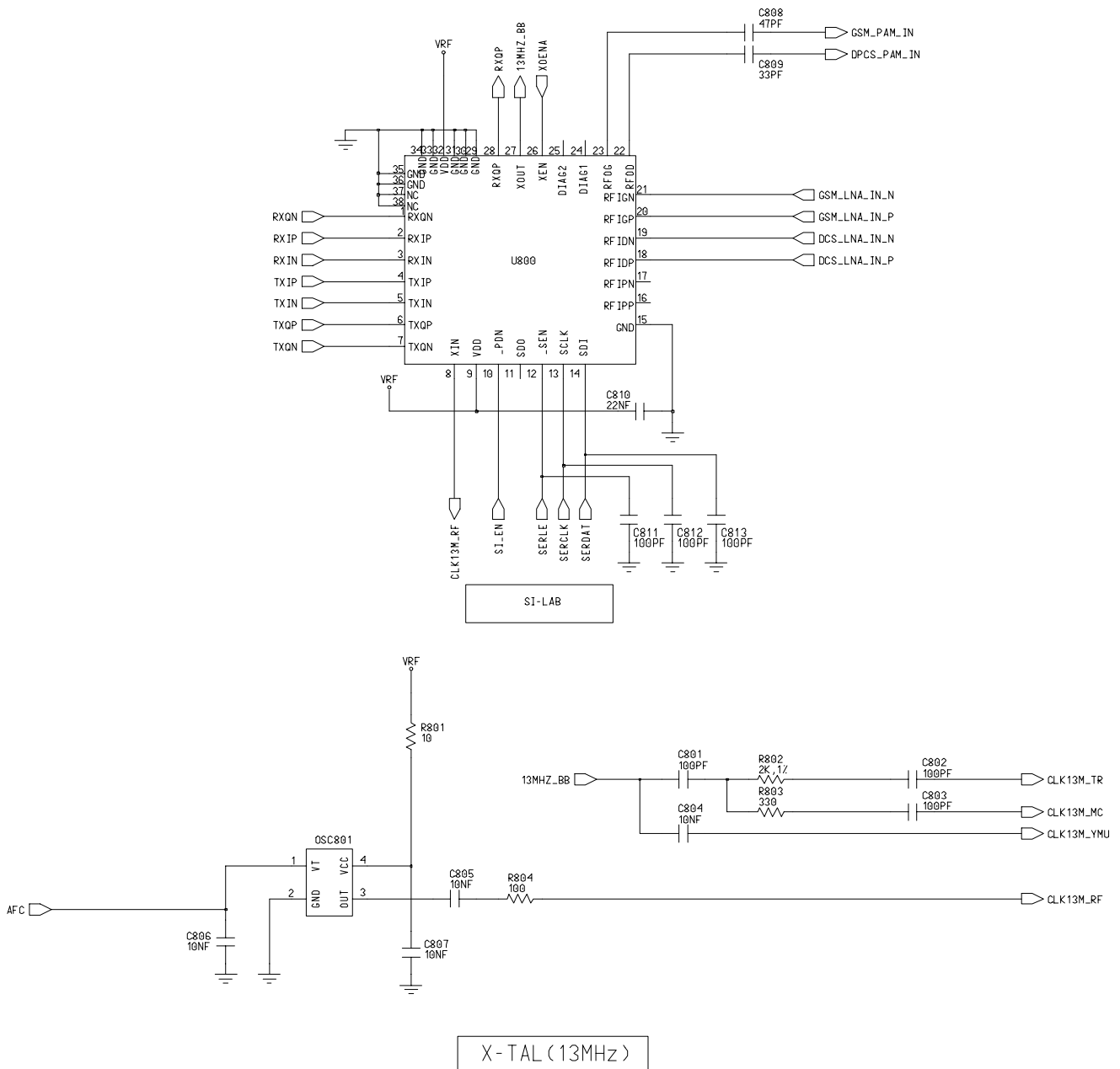
CONTINUOUS TX ON CONDITION
 CH : 698CH(DCS)
 TX POWER CODE: 520 CODE Applied
 RBW : 100KHz
 VBW : 100KHz
 SPAN : 10MHz
 REF LEV. : 10dBm
 ATT. : 20dB



CSP1093

(Picture 1)

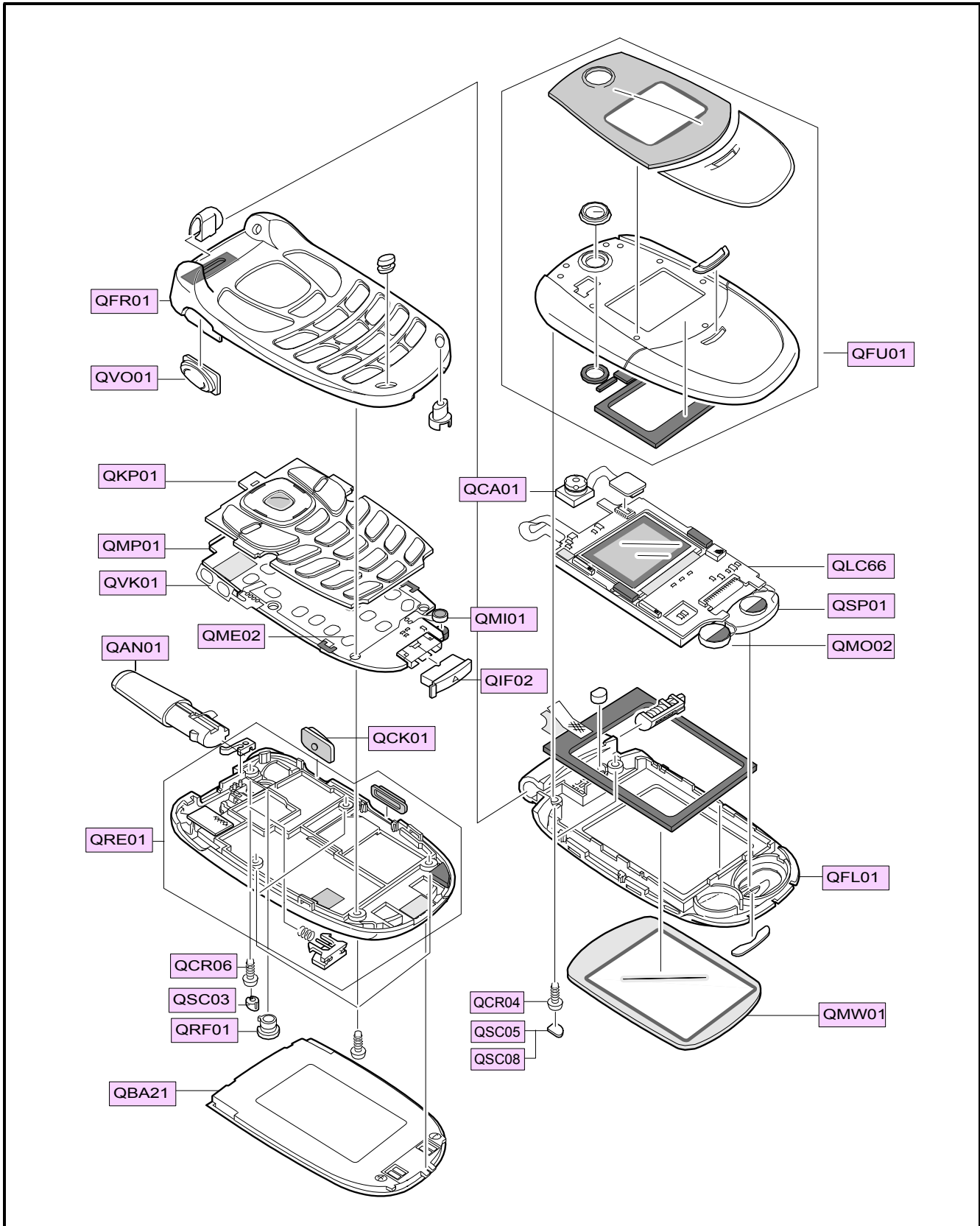
SGH-E300 Flow Chart of Troubleshooting and Circuit Diagrams



(Picture 2)

3. SGH-E300 Exploded View and its Parts list

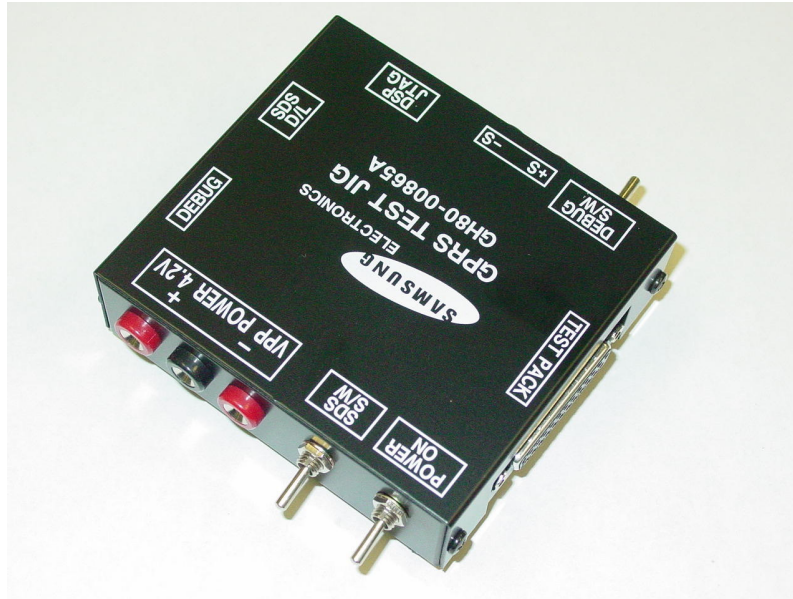
1. Cellular phone Exploded View



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)



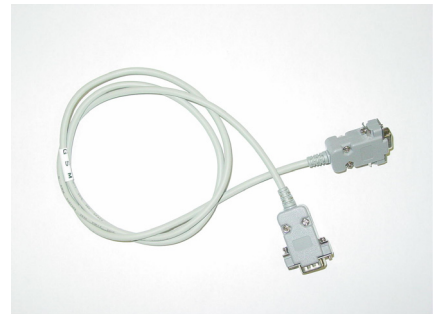
**3-1. RF Test Cable
(GH39-00090A)**



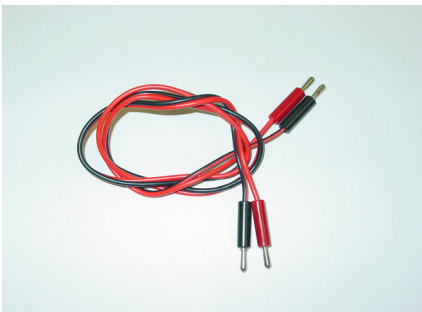
**3-2. Test Cable
(GH39-00127A)**



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

SGH-E300 Electrical Parts List

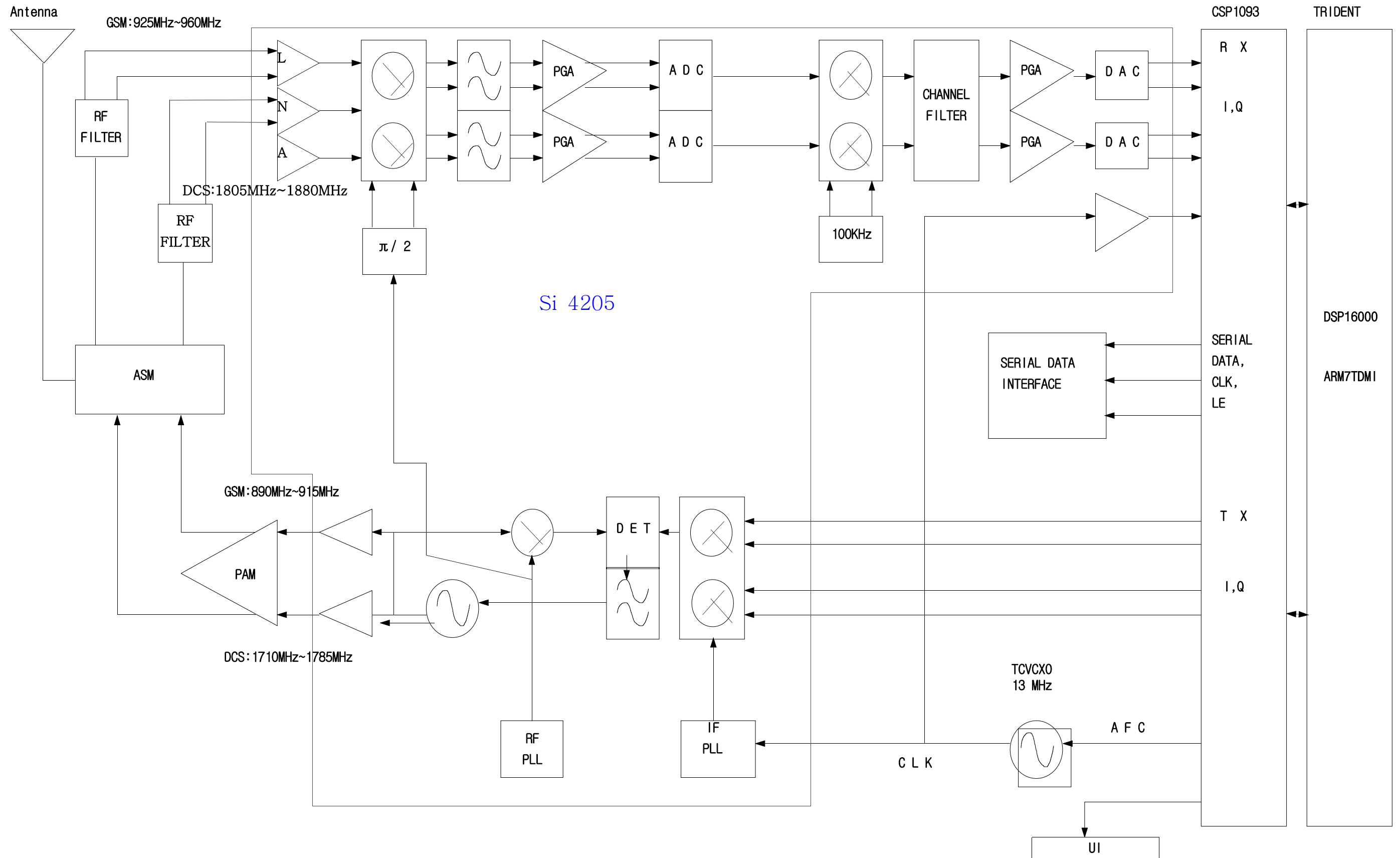
SEC Code	Design LOC
2203-000233	C803,C811,C812,C813
2203-000233	C916
2203-000254	C1017
2203-000254	C1005,C1010,C115
2203-000254	C201,C202,C430,C502
2203-000254	C603,C604,C605,C606
2203-000254	C611,C612,C707,C710
2203-000254	C711,C712,C804,C805
2203-000254	C806,C807,C905,C907
2203-000359	C401
2203-000438	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

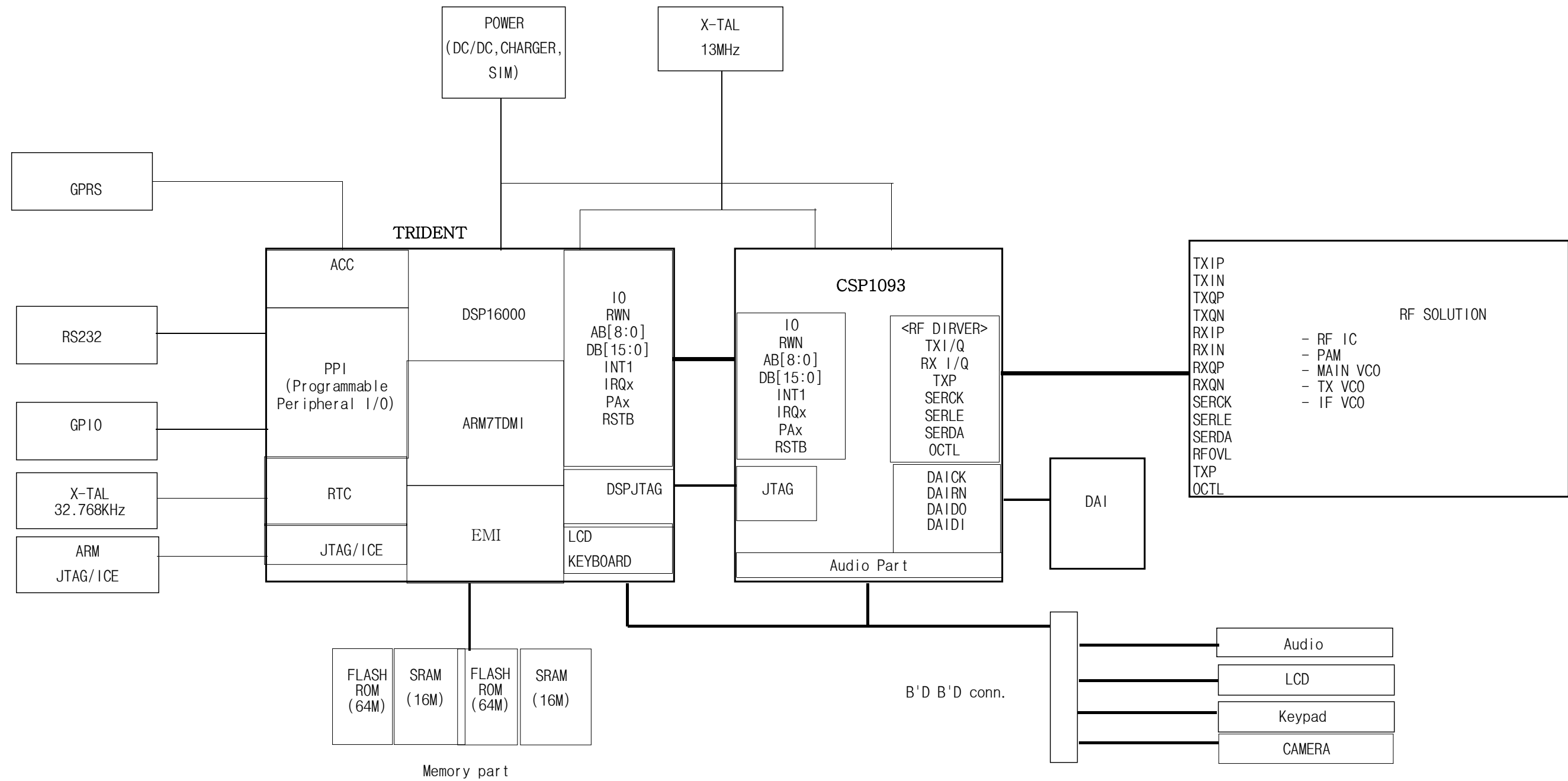
SEC Code	Design LOC
GH09-00025A	U601
GH13-00020A	U1001
NEW-F000001	F900

5. SGH-E300 Block Diagrams

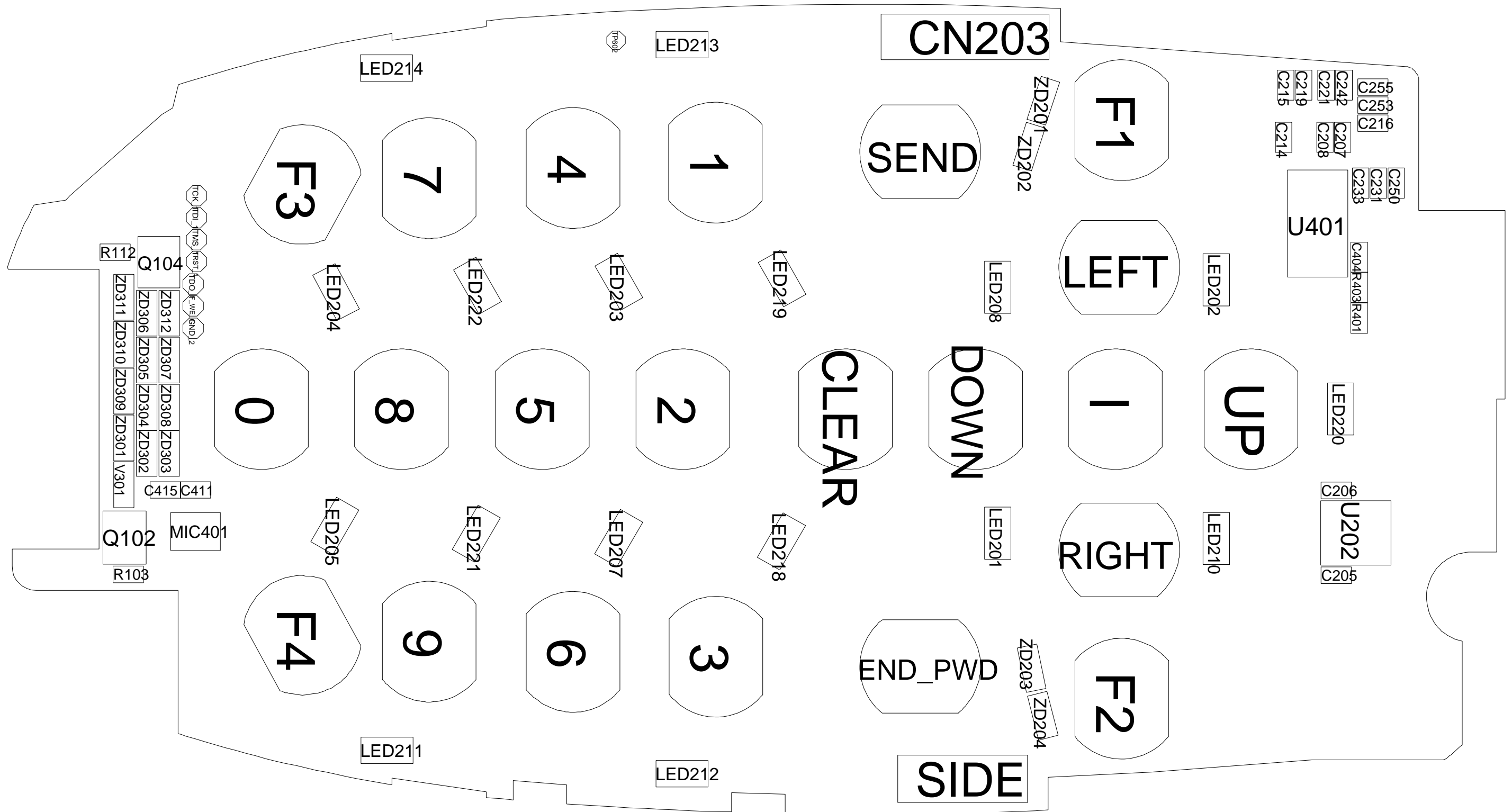
1. RF Solution Block Diagram

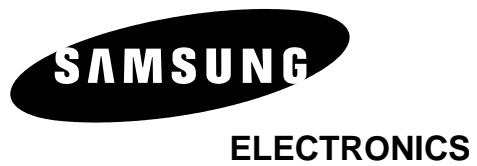


2. Base Band Solution Block Diagram



2. Main Bottom Diagram





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. AUG..2004
Printed in Korea.

Code No.: GH68-05427A
BASIC.