

SAMSUNG

GSM TELEPHONE

SGH-E610/SGH-E610S

SERVICE *Manual*

GSM TELEPHONE



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1. SGH-E610 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	-

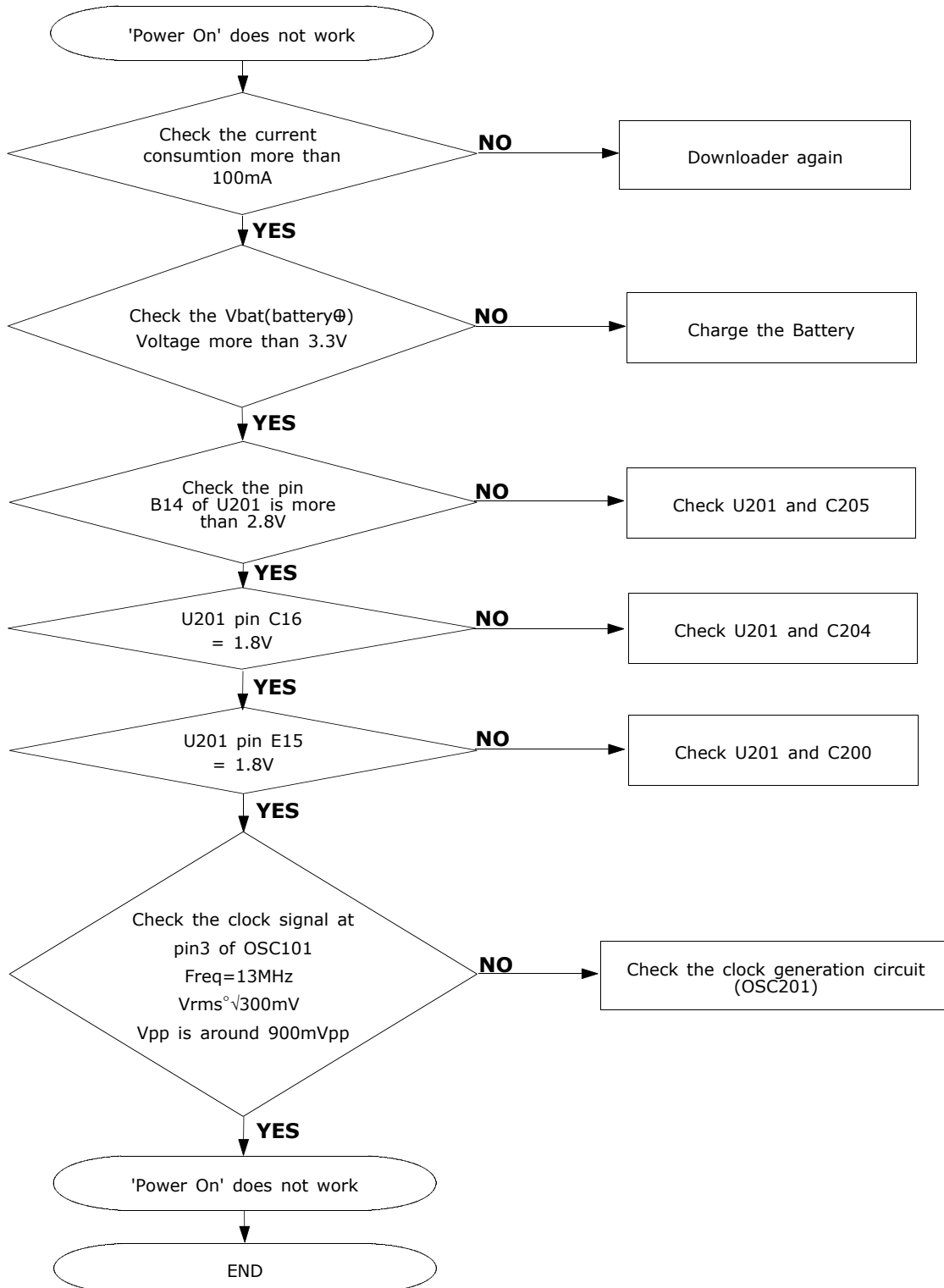
2. GSM Tx Power Class

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

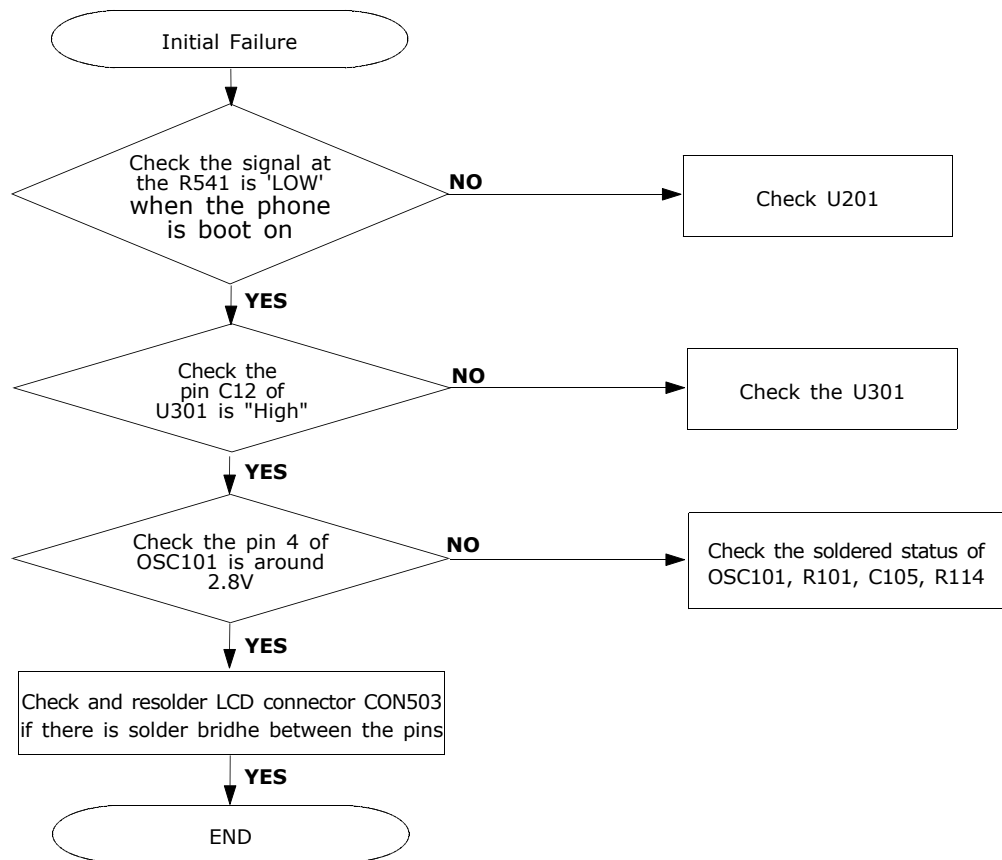
2. SGH-E610 Flow Chart of Troubleshooting and Circuit Diagrams

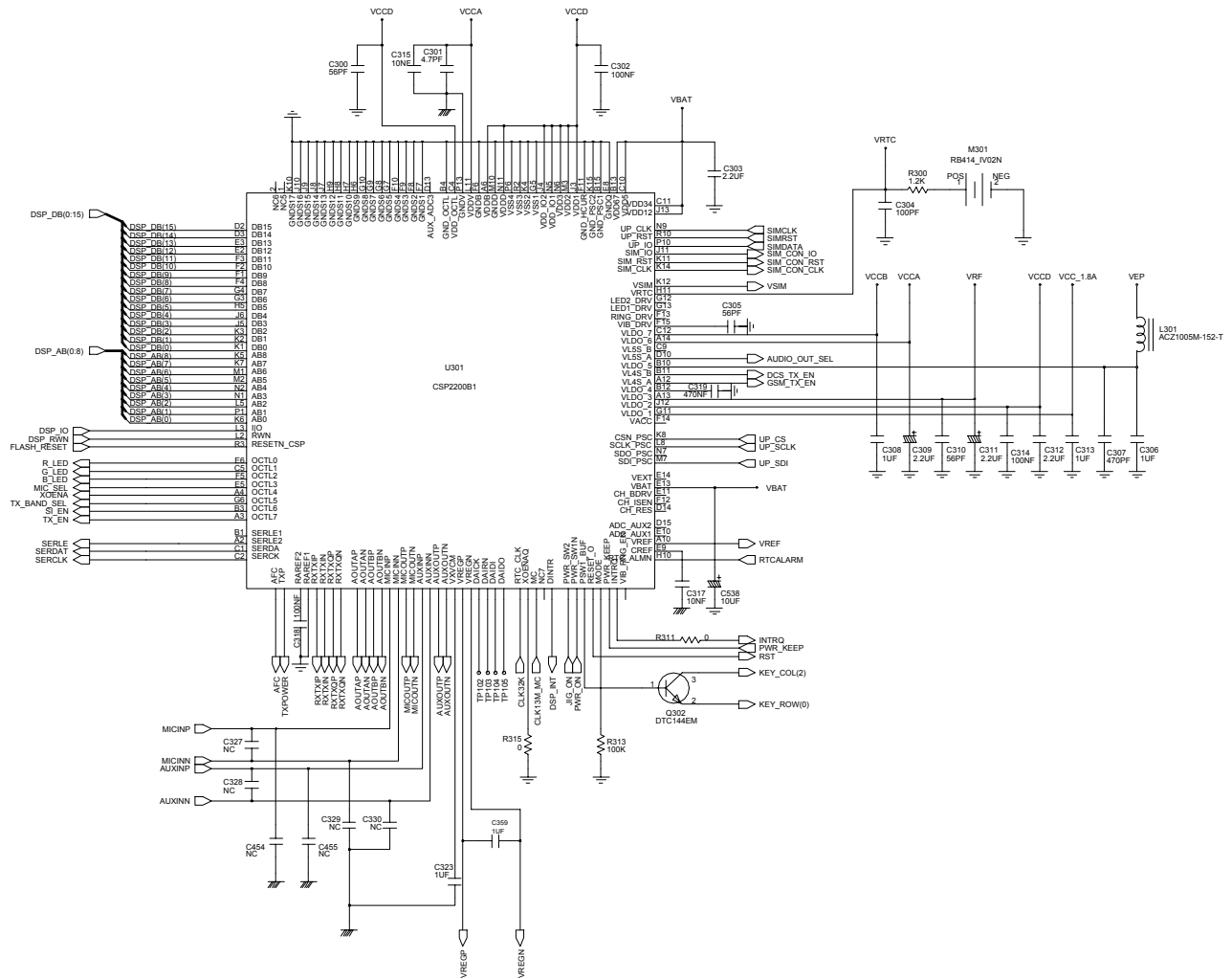
1.Baseband

1. Power ON

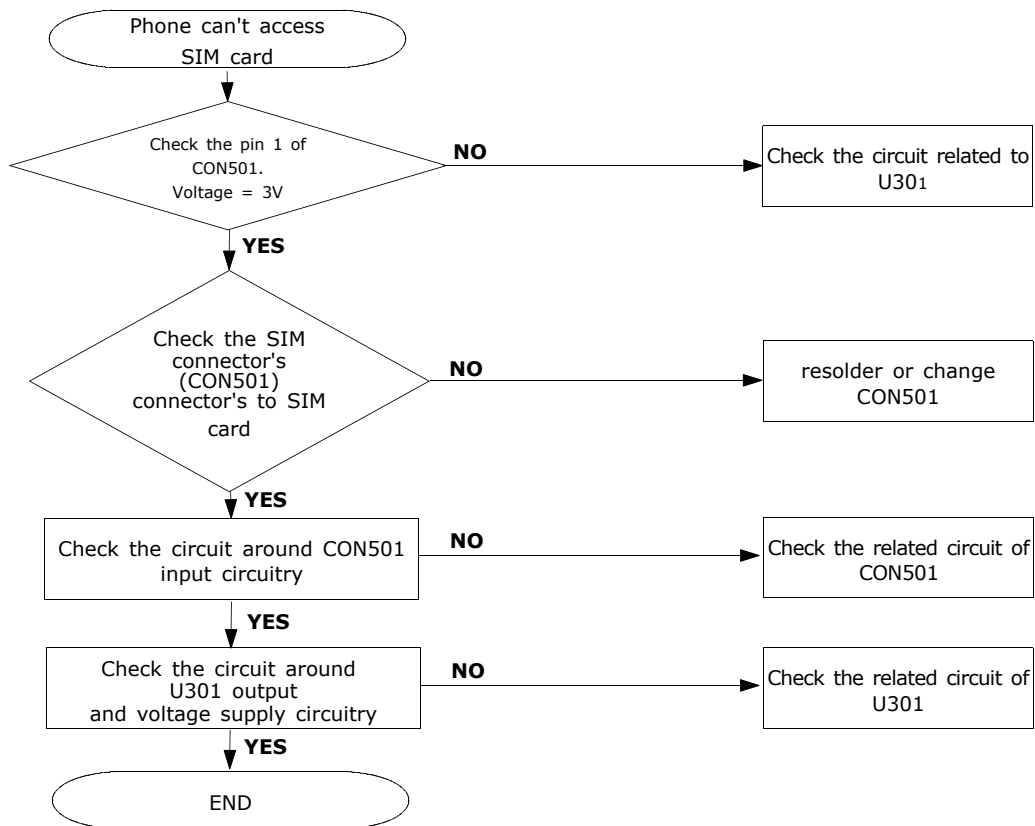


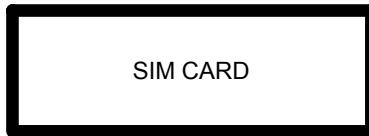
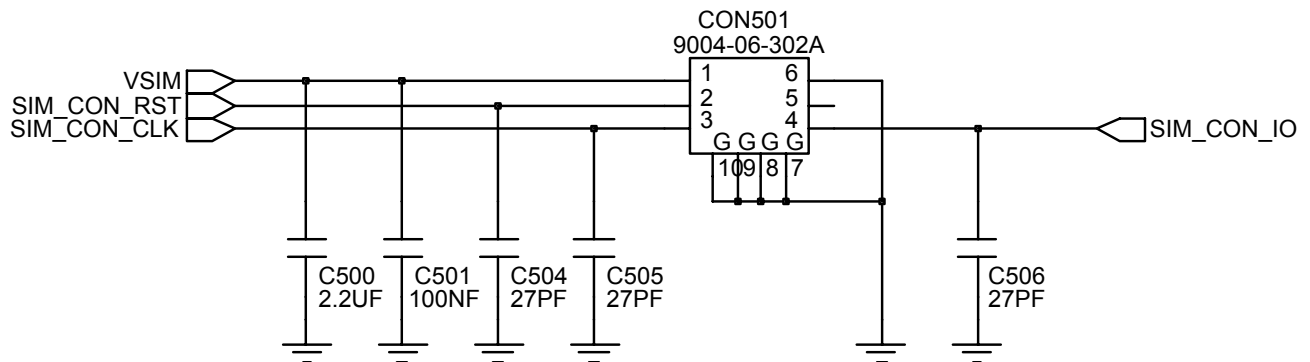
2. Initial



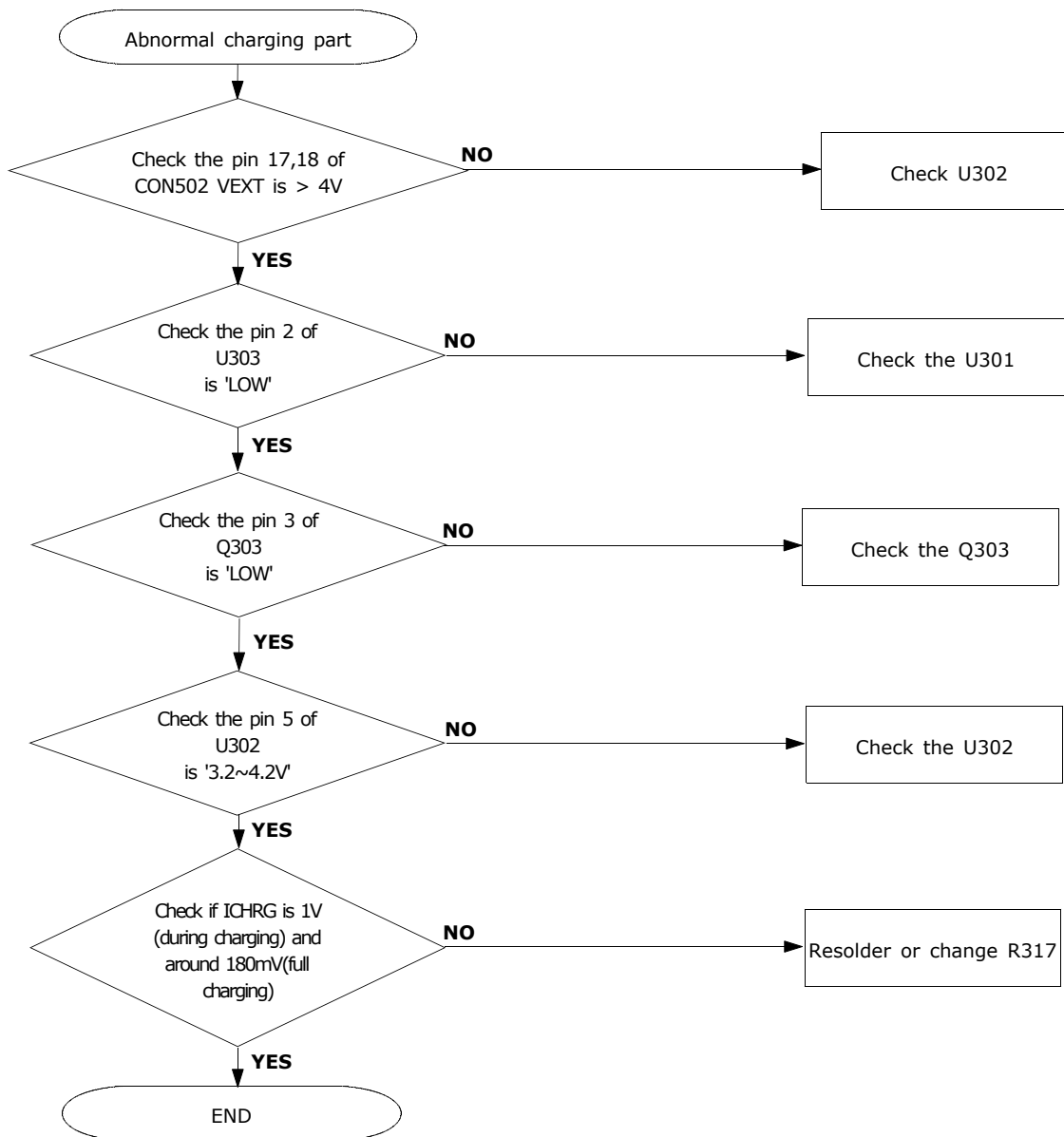


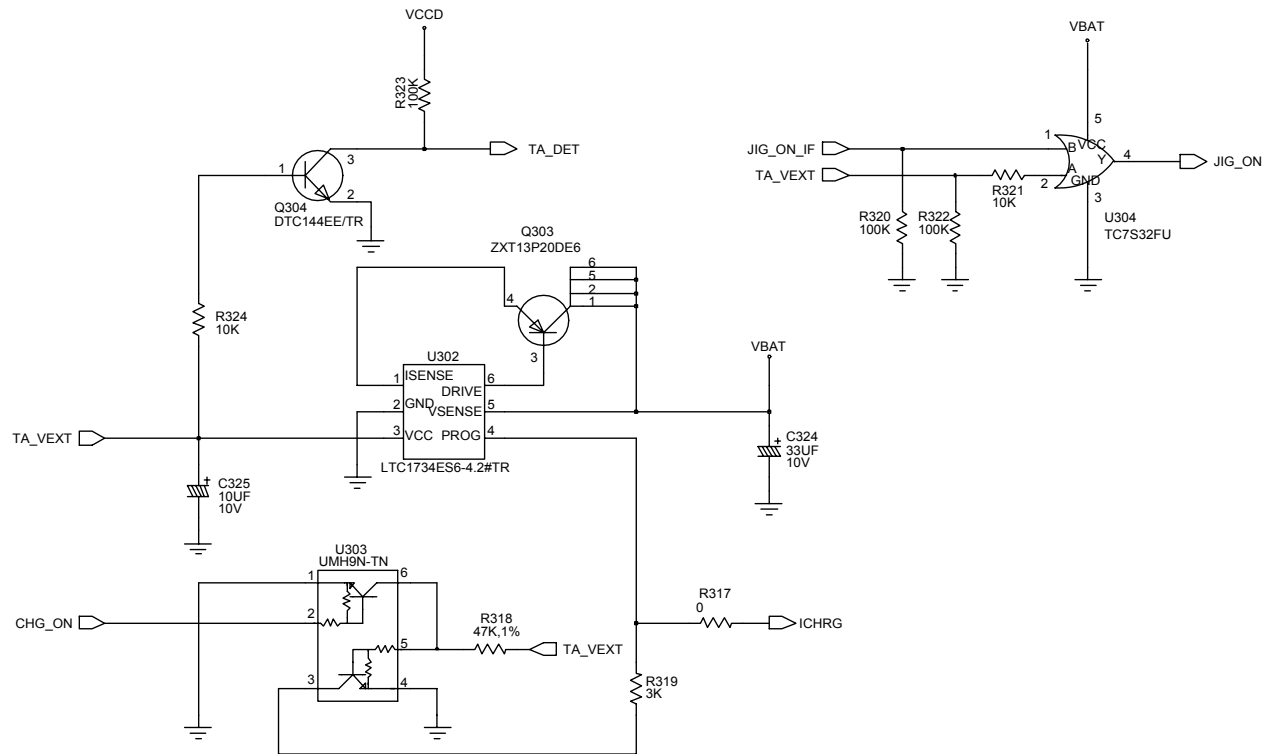
3. Sim Part



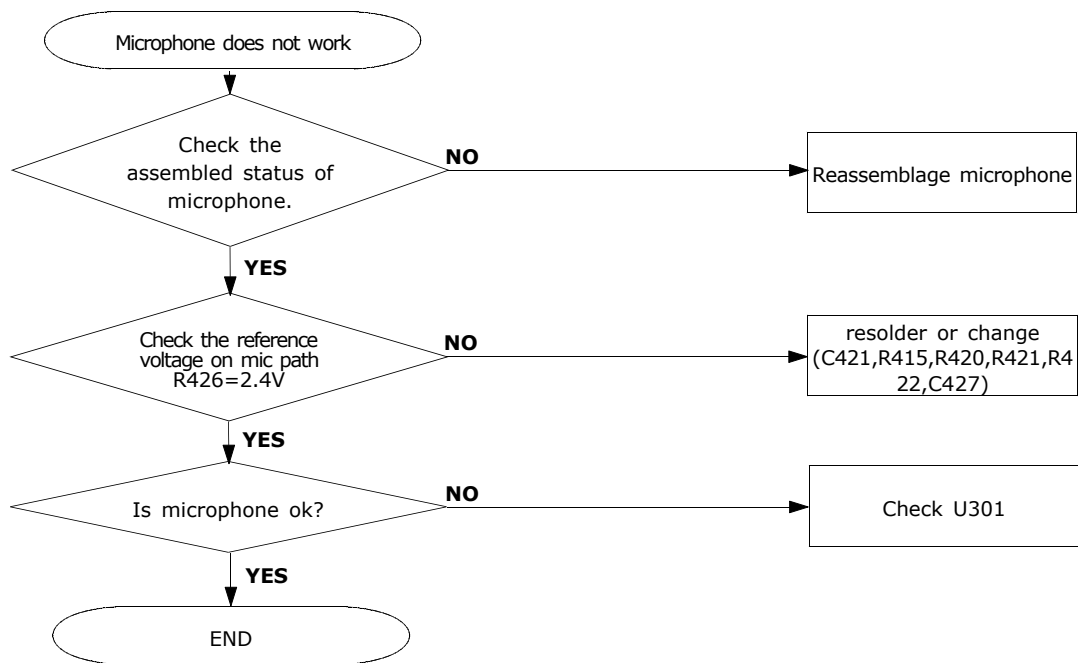


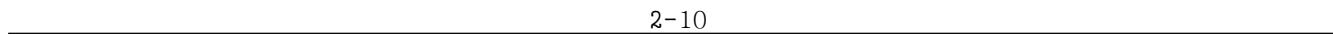
4. Charging Part



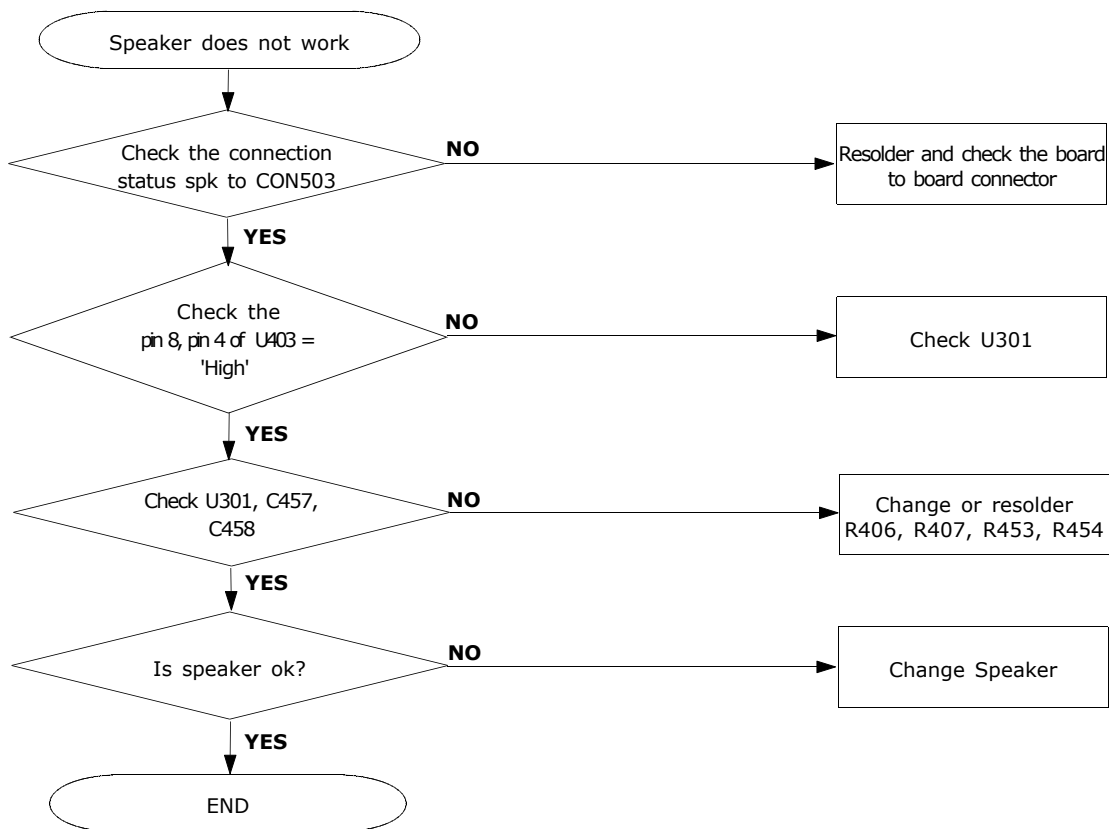


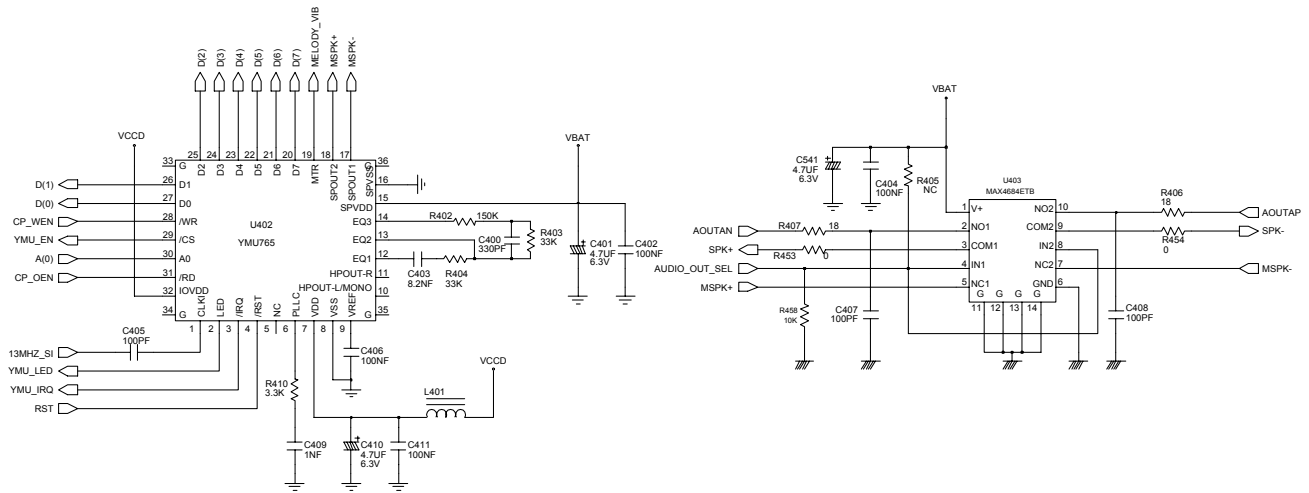
5. Microphone Part



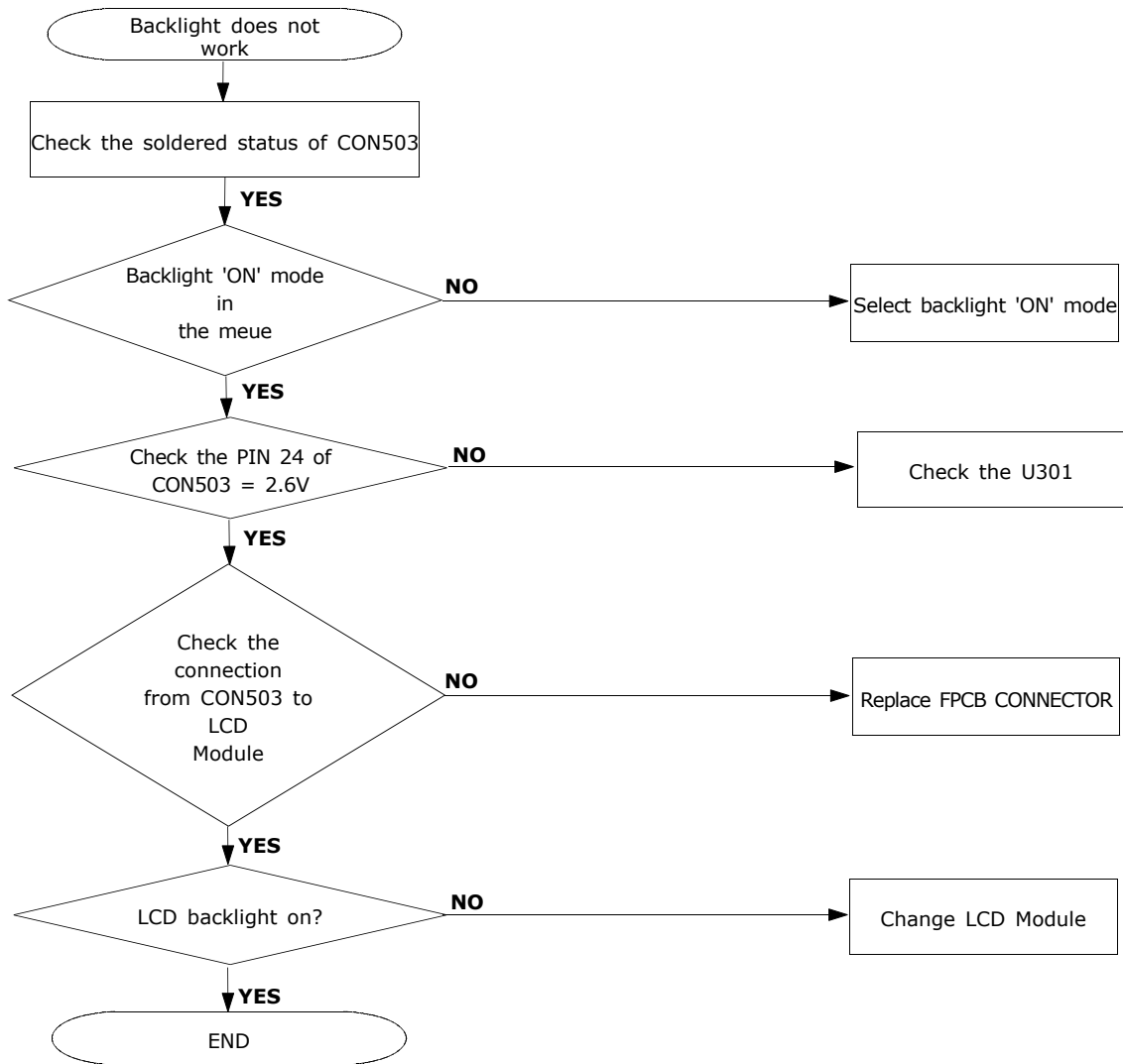


6. Speaker Part

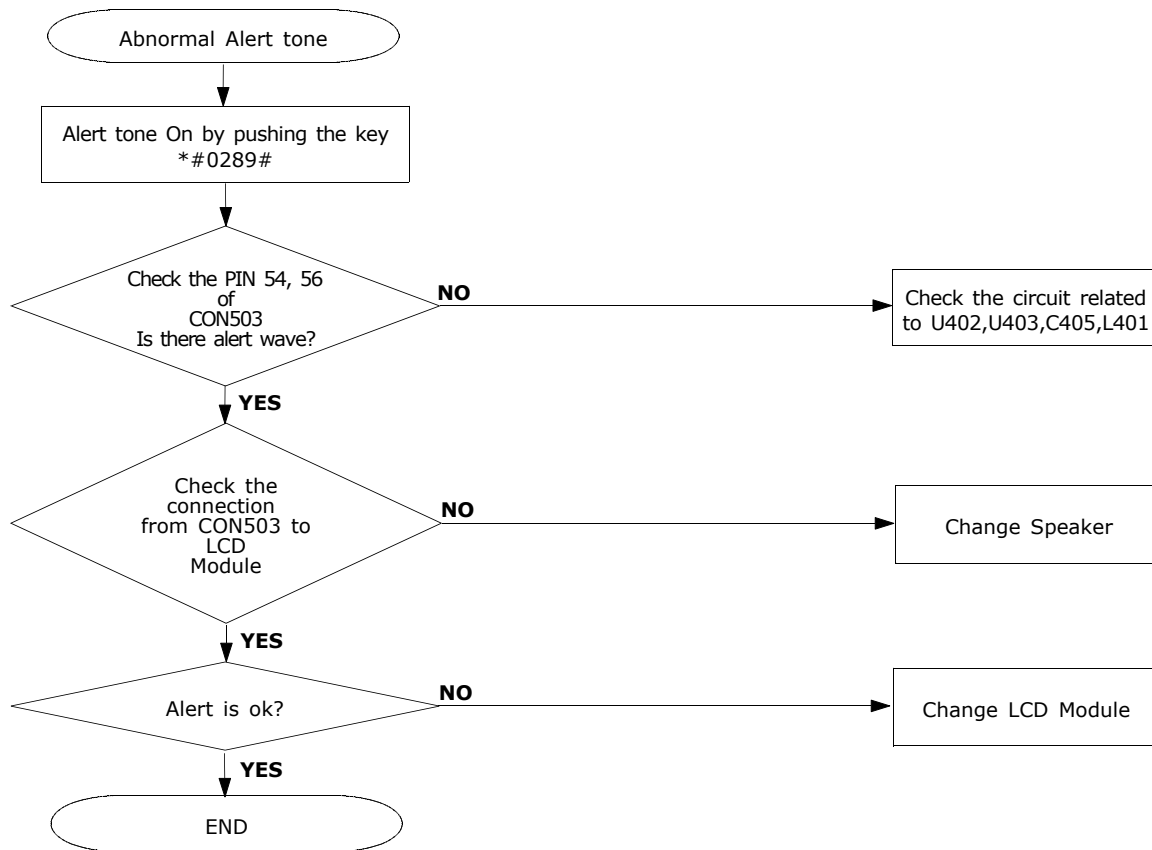


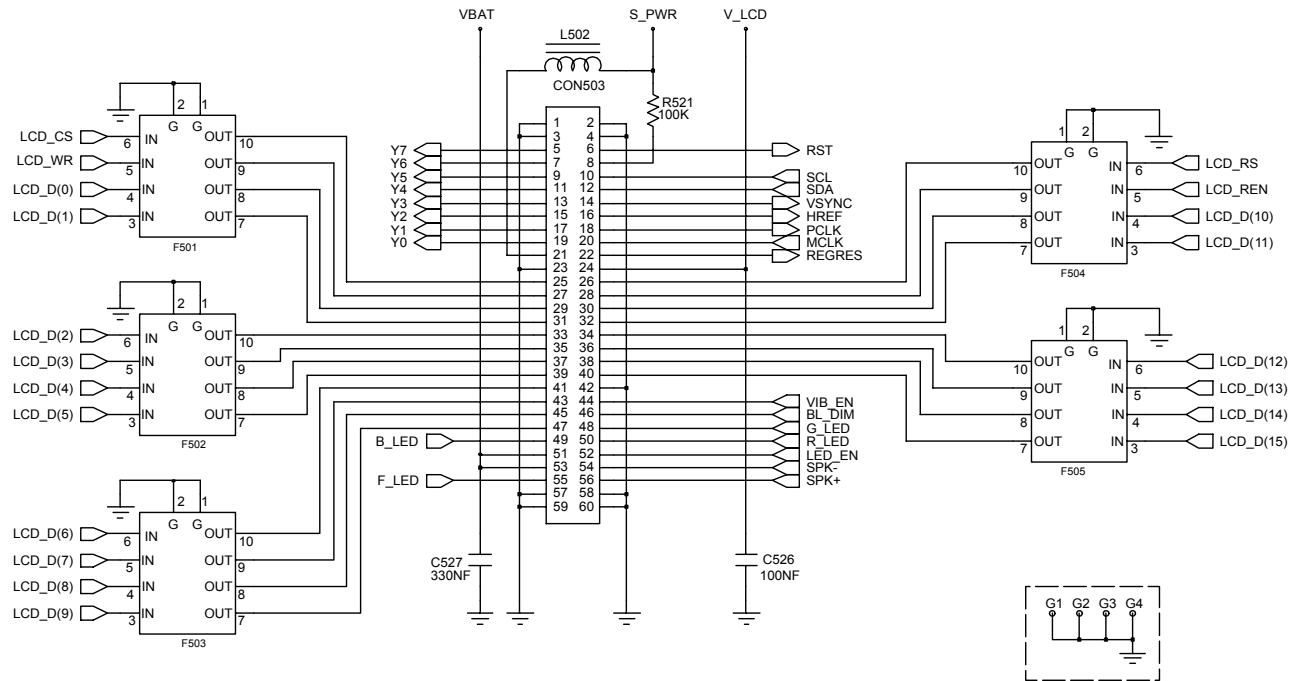


7. Back Light



8.Alert Tone

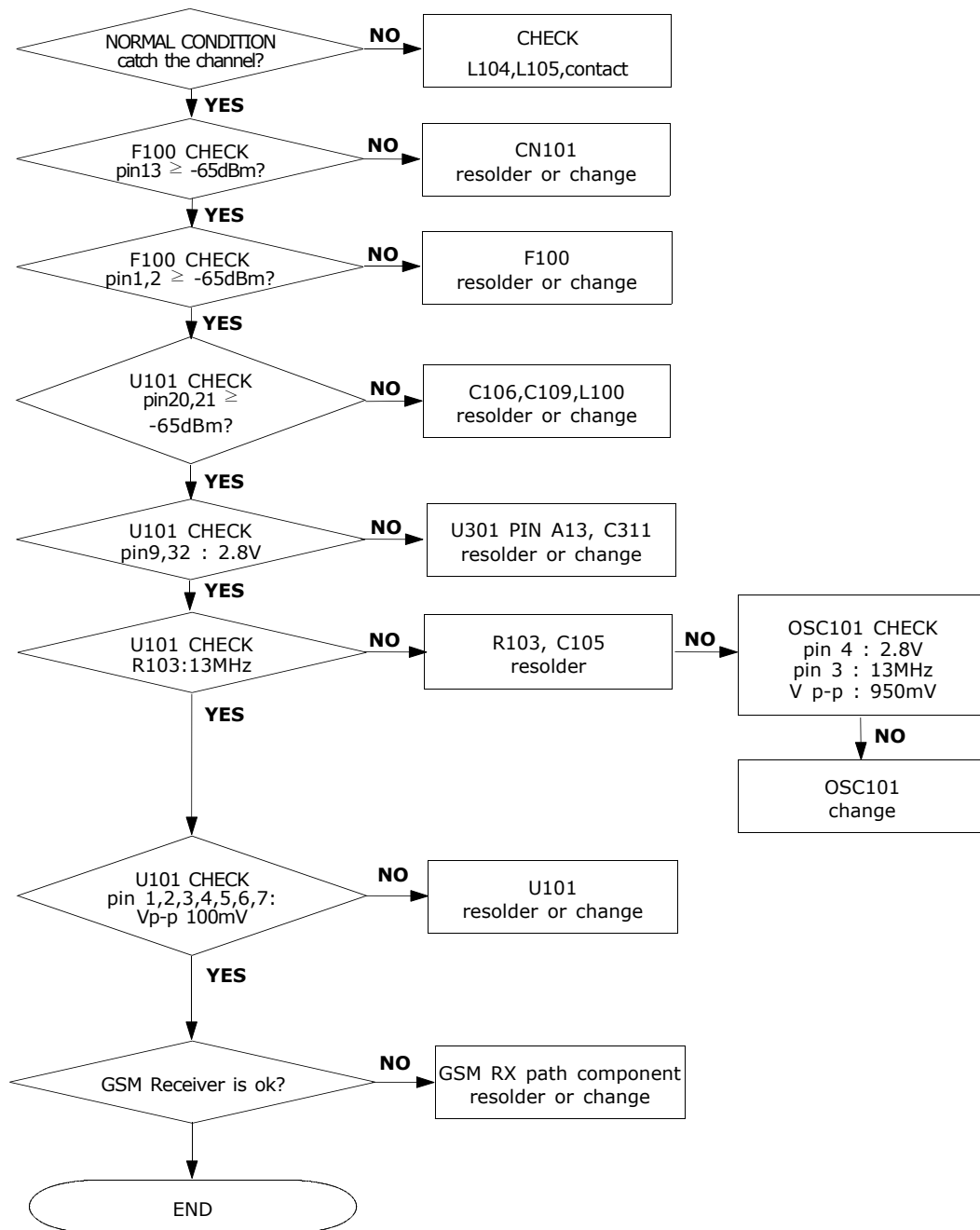




2.RF

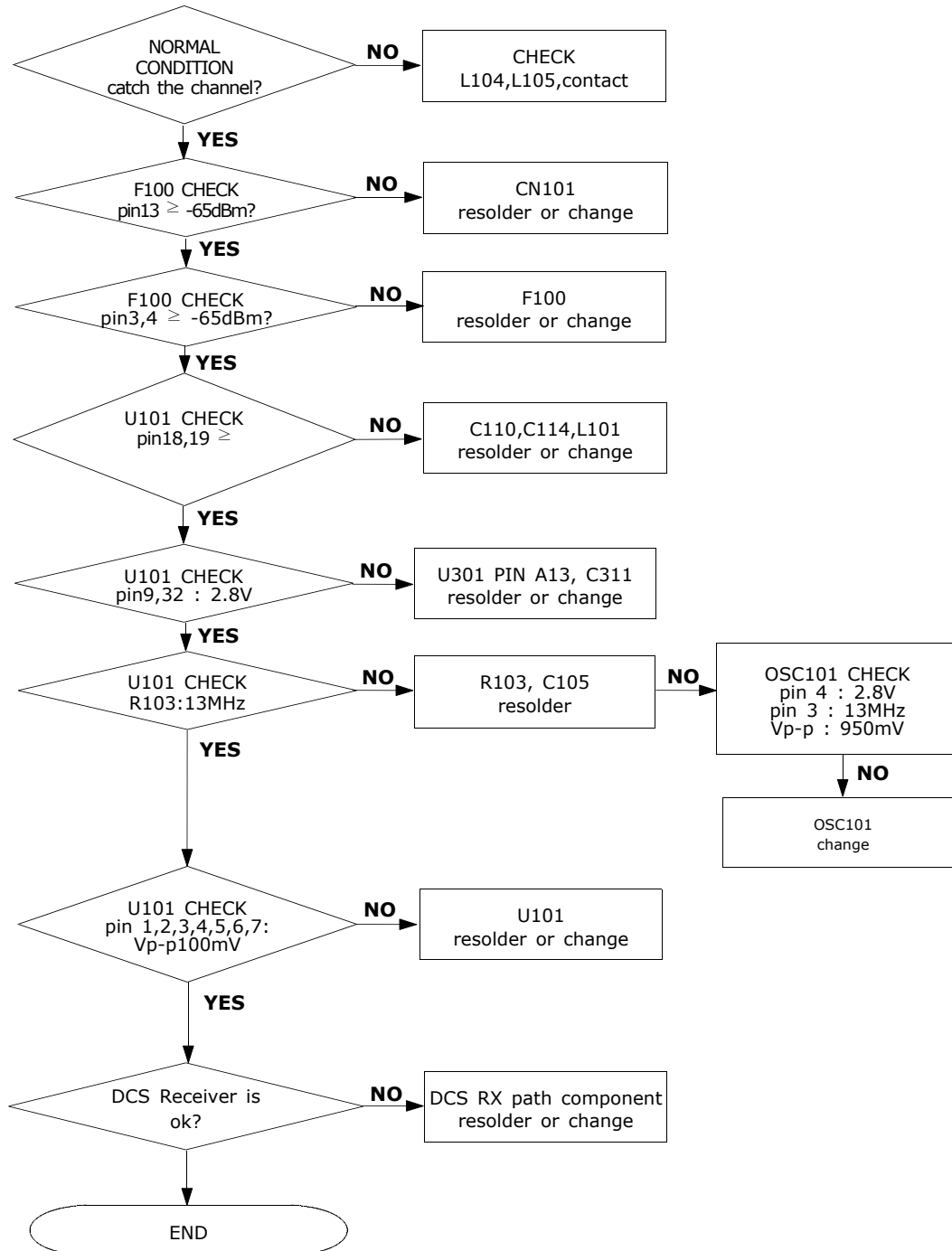
1. GSM Receiver

CONTINUOUS RX ON
RF INPUT : 62CH
Cell power : -50dBm



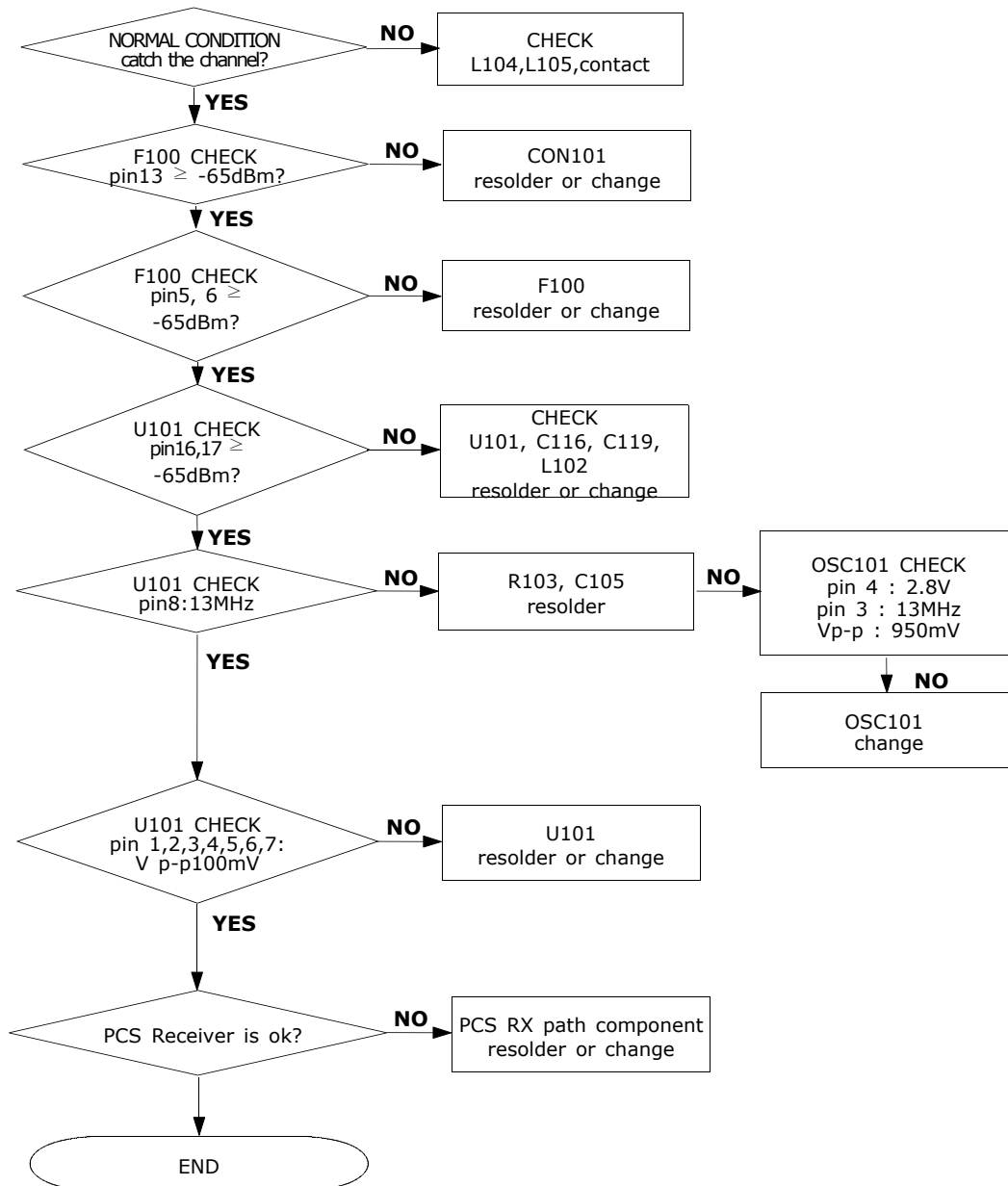
2. DCS Receiver

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

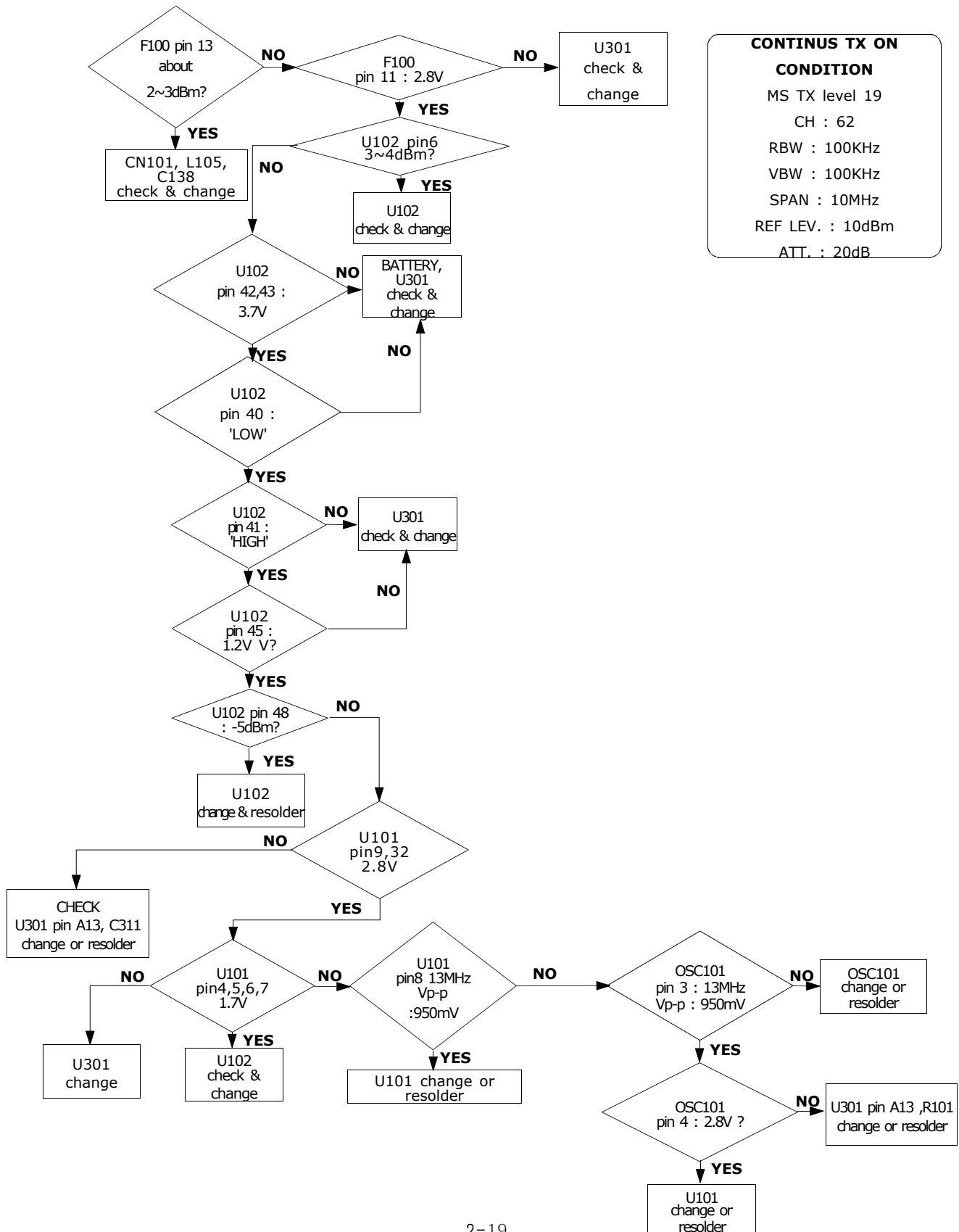


3. PCS Receiver

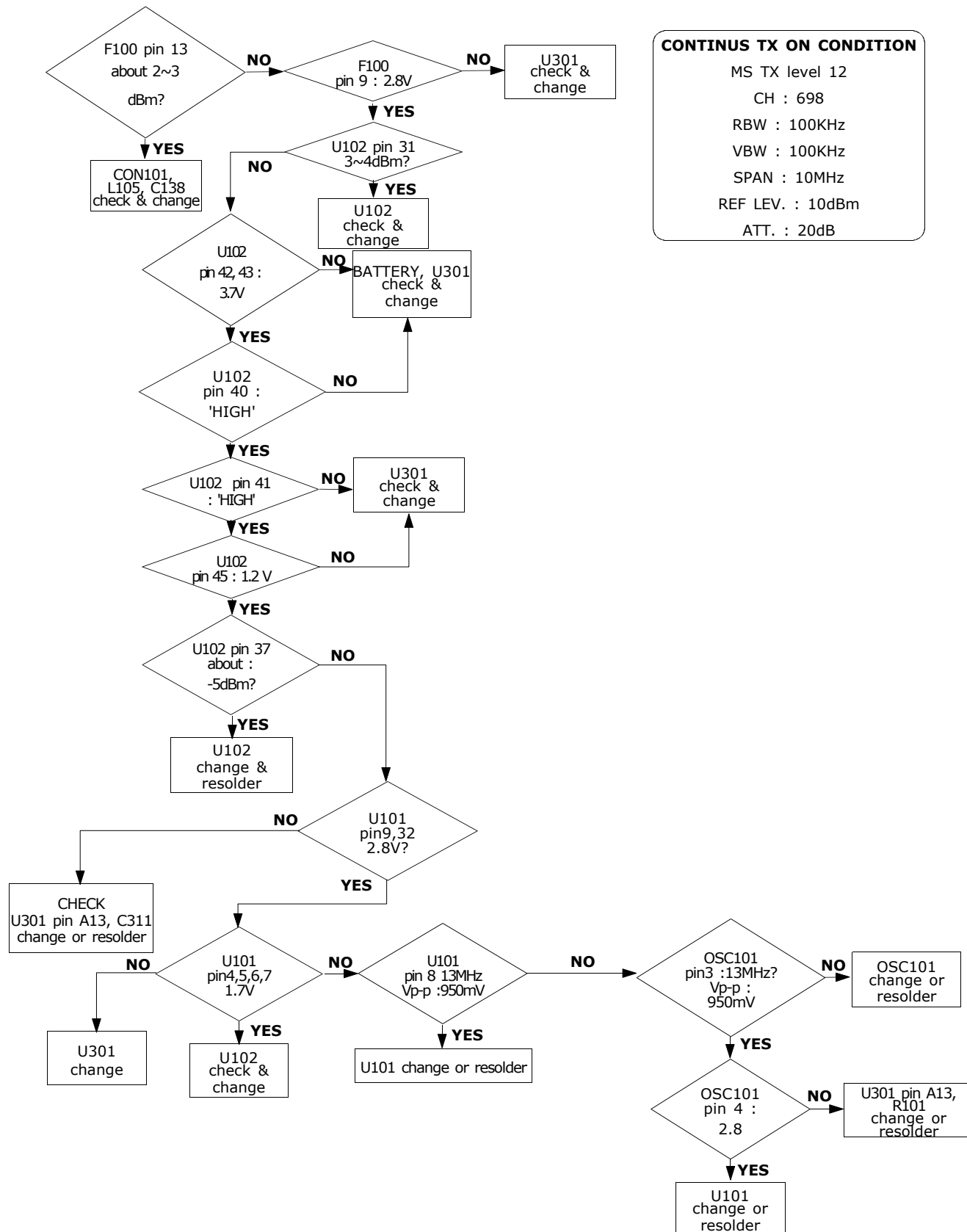
CONTINUOUS RX ON
RF INPUT : 698CH
Cell power : -50dBm

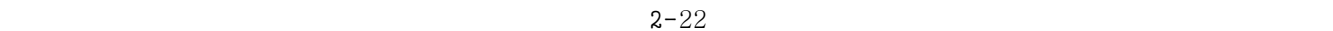


4. GSM Transmitter



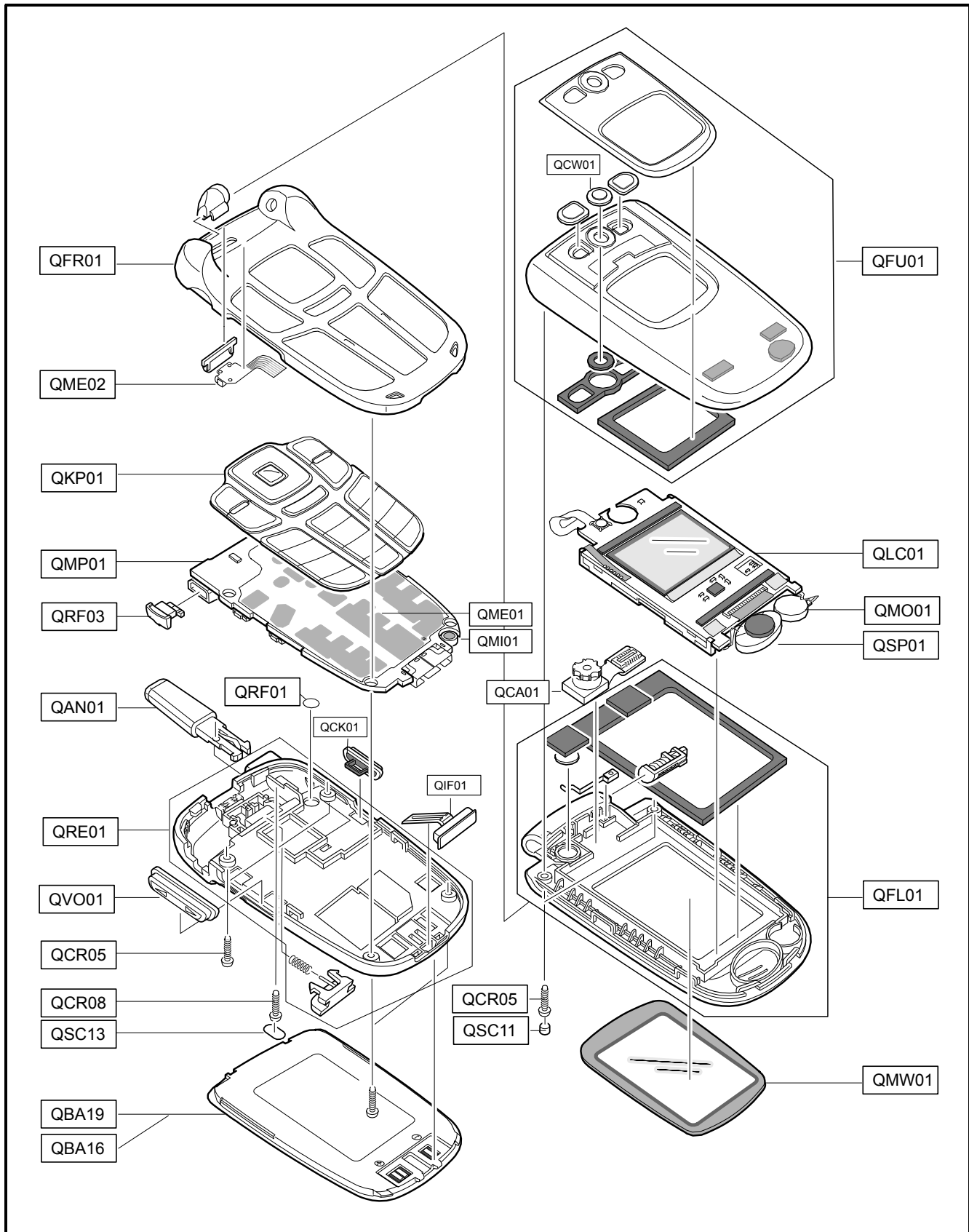
6. PCS Transmitter





3. SGH-E610 Exploded View and its Parts list

1. Cellular phone Exploded View



2. Cellular phone Parts list

Location NO.		Description	SEC CODE	Remark
QFU01		SUB F/UPPER	GH75-04262D	
	QCW01	CAMERA WINDOW	GH75-05475A	
QLC01		LCD	GH07-00538A	
QMO01		MOTOR DC	GH31-00079A	
QSP01		SPEAKER	3001-001625	
QCA01		CAMERA	GH59-01294A	
QFL01		F/LOWER ASSY	GH75-04261A	
QCR05		SCREW	6001-001478	
QSC11		F/L SCREW CAP	GH73-02767A	
QMW01		WINDOW DUMMY ASSY	GH75-04260A	
QFR01		FRONT COVER ASSY	GH75-04257A	
QKP01		KEYPAD	GH75-04259A	
QMP01		PBA MAIN	GH92-01706A	
QME01		UNIT EL DOME SWITCH	GH59-01620A	
QMI01		MICROPHONE ASSY	GH30-00095A	
QME02		UNIT IRDA FPCB	GH59-01393A	
QAN01		ANTENNA	GH42-00466A	
QCK01		CAMKEY	GH75-04086A	
QIF01		IF COVER	GH72-12309A	
QRE01		REAR COVER	GH75-04258A	
QVO01		KEYVOL	GH75-05525A	
QCR05		SCREW	6001-001478	
QCR08		SCREW	6001-001611	
QSC13		RE SCREW BOHO SHEET	GH74-07279A	
QBA19		BATTERY 800MAH	GH43-01462A	
QBA16		BATTERY 720MAH	GH43-01463A	
QRF03		EAR JACK COVER	GH72-11645A	
QRF01		RF COVER	GH73-03378A	

3. Test Jig (GH80-00865A)



3-1. RF Test Cable (GH39-00283A)



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)



4. SGH-E618 MAIN Electrical Parts List

SEC Code	Design LOC
0403-001427	ZD512
0403-001511	ZD517
0406-001084	ZD514,ZD515,ZD516
0406-001152	ZD513
0501-000481	Q501
0502-001201	Q303
0504-000168	Q304
0504-001113	Q302
0506-001052	U303
0801-000796	U304
1001-001261	U403
1003-001395	U518
1009-001010	U503
1109-001281	U203
1201-002075	U102
1203-001518	U502
1203-002127	U302
1203-002861	U407
1203-003046	U406
1203-003130	U405
1203-003304	U301
1204-002138	U402
1205-002433	U101
1209-001219	U202
1405-001019	V500
1405-001082	U516,U517,ZD401
1405-001082	ZD402,ZD403,ZD404
1405-001082	ZD405,ZD406,ZD407
1405-001082	ZD408,ZD409,ZD410
1405-001082	ZD411,ZD412,ZD503
1405-001082	ZD504,ZD505,ZD506
1405-001082	ZD507,ZD508,ZD509
1405-001082	ZD510,ZD511
2007-000137	R423,R424,R426,R433
2007-000137	R446
2007-000138	R103
2007-000140	R526,R527,R528,R529

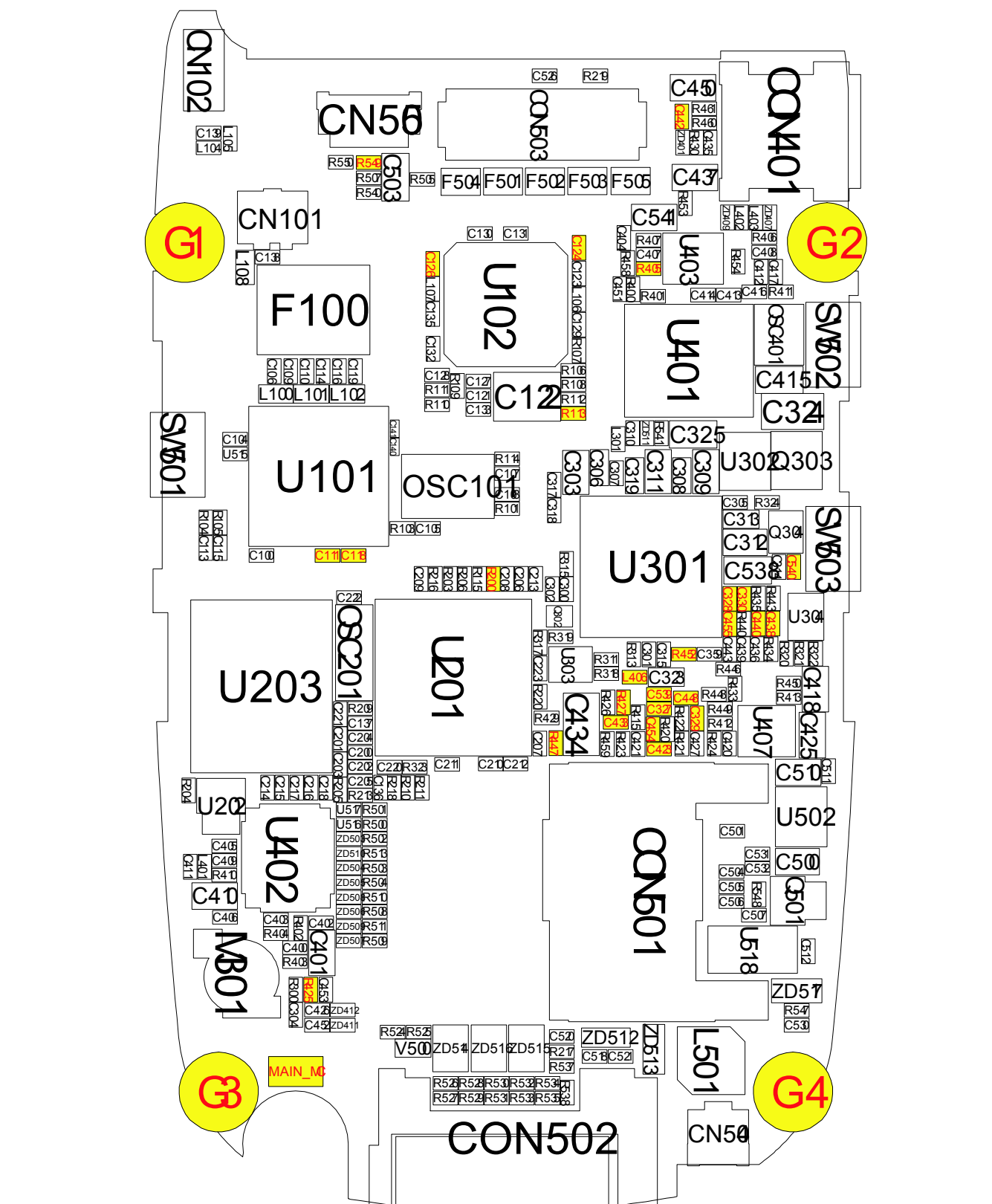
SEC Code	Design LOC
2007-000140	R530,R531,R532,R533
2007-000140	R534,R535,R537,R538
2007-000141	R104
2007-000143	R400,R401
2007-000148	R114,R218,R220,R321
2007-000148	R324,R458
2007-000157	R115,R524,R525
2007-000162	R203,R205,R206,R313
2007-000162	R320,R322,R323,R411
2007-000162	R413,R414,R417,R429
2007-000162	R450,R514,R521
2007-000164	R402
2007-000165	R216
2007-000171	R219,R311,R315,R317
2007-000171	R412,R442,R448,R449
2007-000171	R453,R454,R456,R459
2007-000171	R540,R548,R550
2007-000173	R460,R461
2007-000174	R209,R213,R500,R501
2007-000174	R502,R503,R504,R508
2007-000174	R509,R510,R511,R513
2007-000174	R541
2007-000249	R547
2007-000775	R403,R404
2007-001288	R406,R407
2007-001294	R106,R109
2007-001303	R107,R108
2007-001306	R110,R111
2007-001319	R300
2007-001323	R319
2007-001325	R410
2007-001339	R430
2007-002797	R105
2007-003001	R101
2007-003006	R505,R507
2007-007100	R204
2007-007107	R112

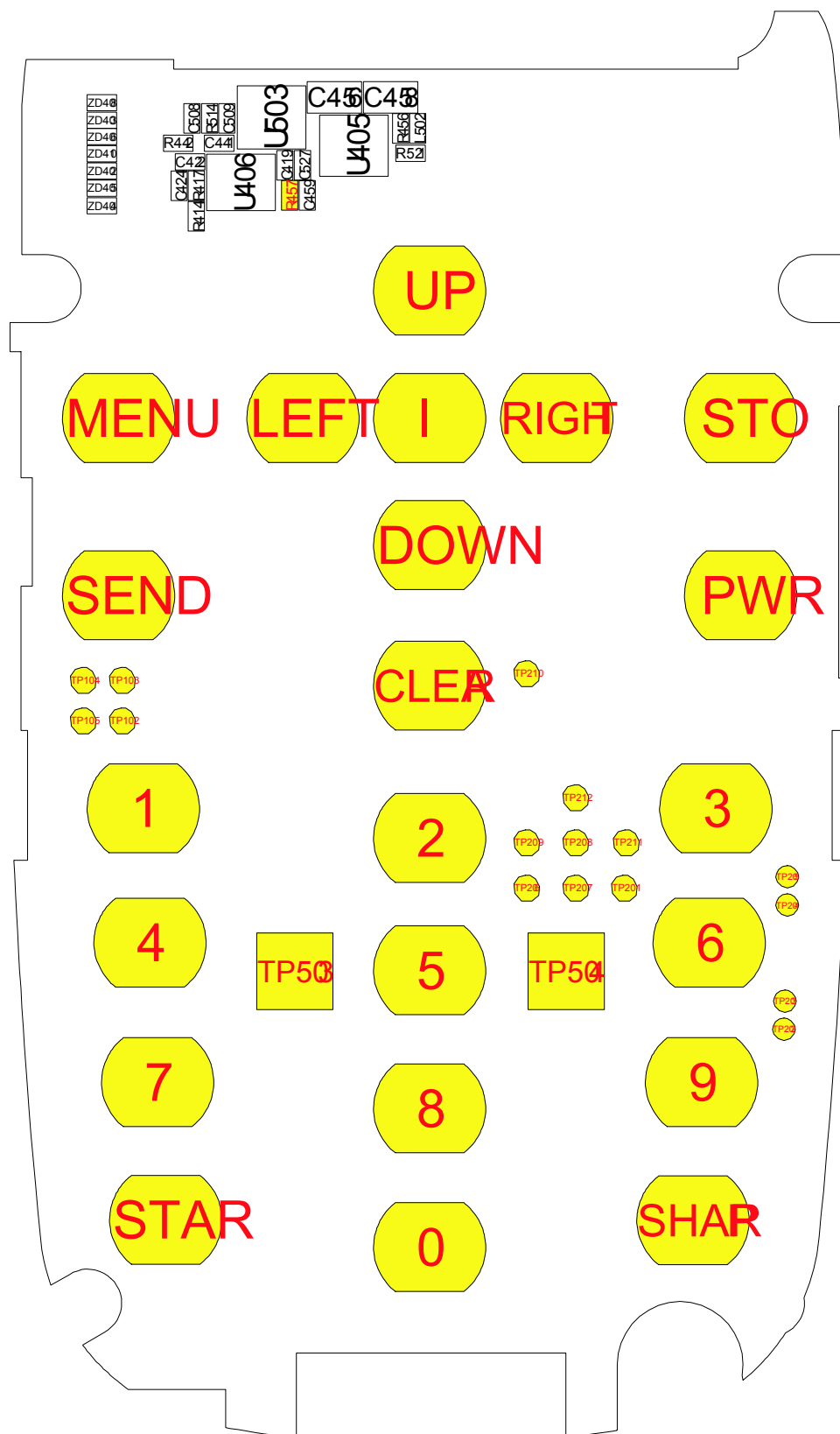
SEC Code	Design LOC
2007-007139	R318
2007-007142	R217,R415,R421,R434
2007-007142	R440
2007-007308	R435,R443
2007-007573	R210,R211
2007-007590	R420,R422
2203-000233	C115,C136,C137,C304
2203-000233	C405,C407,C408,C414
2203-000254	C105,C107,C108,C121
2203-000254	C131,C201,C206,C207
2203-000254	C208,C209,C210,C211
2203-000254	C212,C315,C317,C413
2203-000254	C416,C420,C459,C518
2203-000278	C100,C138,C451,C452
2203-000278	C453
2203-000330	C221,C222
2203-000425	C113
2203-000438	C129,C132,C133,C218
2203-000438	C409
2203-000466	C139
2203-000654	C127
2203-000679	C200,C504,C505,C506
2203-000696	C116,C119
2203-000812	C104,C128,C426,C439
2203-000940	C307,C511
2203-000995	C130,C223,C508,U515
2203-001033	C512
2203-001072	C204,C205,C300,C305
2203-001072	C310
2203-001210	C403
2203-001383	C135
2203-001385	C106,C109,C110,C114
2203-001598	C303,C312,C500
2203-001652	C319
2203-002443	C400
2203-005054	C301
2203-005057	C123,L105

SEC Code	Design LOC
2203-005061	C202,C203,C214,C215
2203-005061	C216,C217,C220,C302
2203-005061	C314,C318,C402,C404
2203-005061	C406,C411,C412,C417
2203-005061	C501,C520,C521,C526
2203-005065	C323
2203-005482	C509
2203-005496	C213
2203-005509	C527
2203-005736	C140,C141
2203-006053	C306,C308,C313
2203-006093	C359,C419,C421,C422
2203-006093	C424,C427,C436,C441
2203-006093	C443,C507,C530,C531
2203-006093	C532
2203-006257	C435
2404-001086	C401,C410,C541
2404-001088	C309,C311
2404-001105	C425,C437,C450,C456
2404-001105	C458,C510
2404-001134	C122
2404-001268	C325,C415,C503,C538
2404-001274	C324
2404-001306	C434
2404-001393	C418
2703-001189	L108
2703-001724	L107
2703-002201	L106
2703-002202	L104
2703-002320	L402,L403
2703-002547	L101
2703-002587	L100
2703-002665	L102
2703-002805	L501
2801-003747	OSC201
2804-001577	OSC401
2809-001260	OSC101

SEC Code	Design LOC
2901-001286	F501,F502,F503,F504
2901-001286	F505
2909-001249	F100
3301-001342	L301,L401,L502
3404-001152	SW501,SW502,SW503
3705-001358	CN101
3708-001912	CN505
3708-001956	CN504
3709-001321	CON501
3710-002086	CON502
3711-005462	CON503
3722-002082	CON401
4302-001130	M301
GH09-00029A	U201
GH13-00020A	U401
GH71-01810A	CN102

5. SGH-E610 PCB Diagrams





6. SGH-E610 Block Diagrams

