

SAMSUNG

GSM TELEPHONE

SGH-E720

SERVICE *Manual*

GSM TELEPHONE



CONTENTS

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

1. SGH-E720 Specification

1-1. 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	-

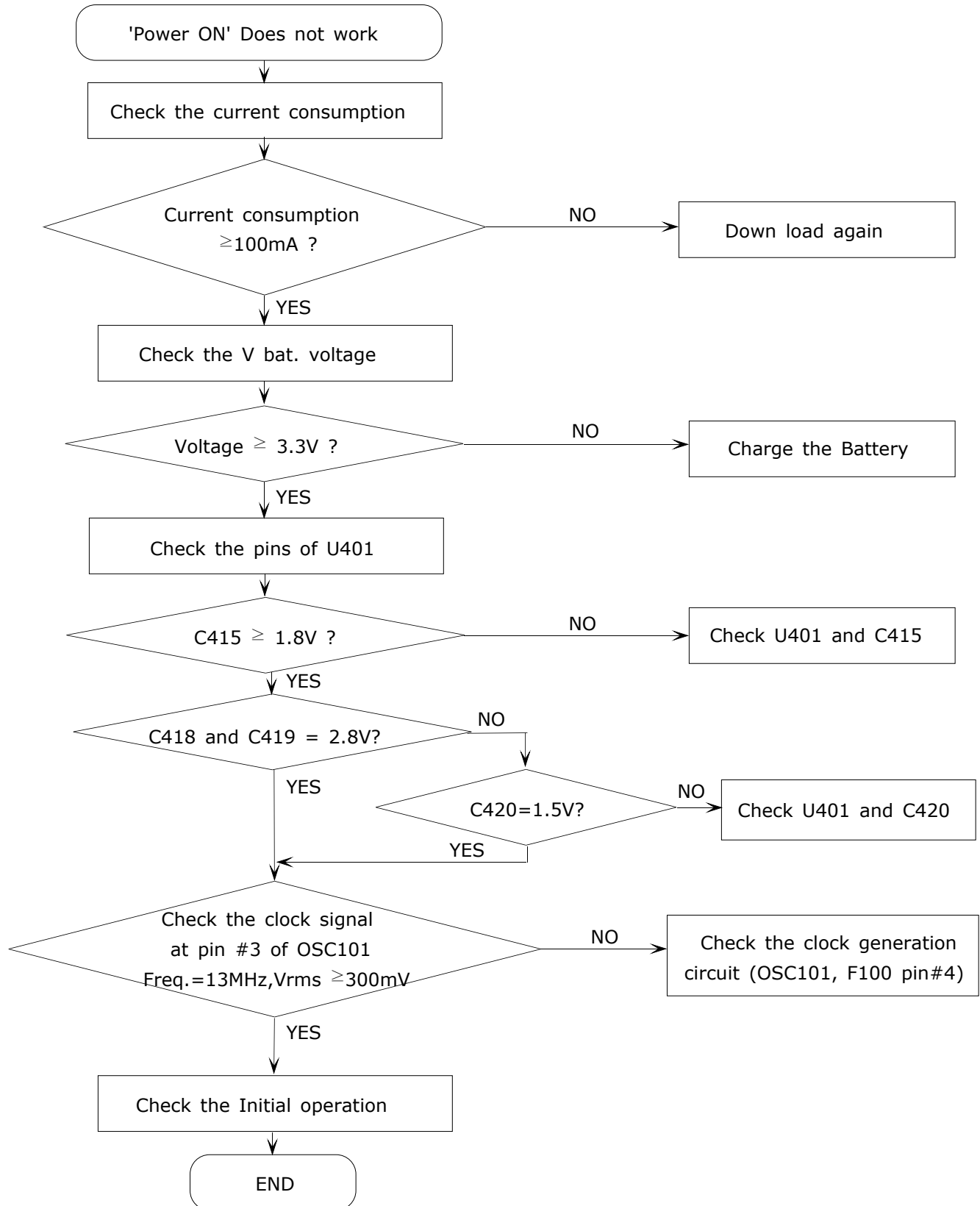
1-2. GSM TX power class

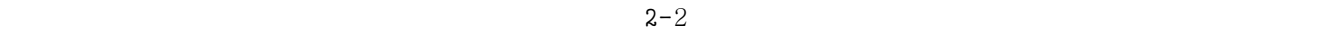
TX Power control level	GSM900	TX Power control level	DCS1800	TX Power control level	PCS1900
5	33±2 dBm	0	30±3 dBm	0	30±3 dBm
6	31±2 dBm	1	28±3 dBm	1	28±3 dBm
7	29±2 dBm	2	26±3 dBm	2	26±3 dBm
8	27±2 dBm	3	24±3 dBm	3	24±3 dBm
9	25±2 dBm	4	22±3 dBm	4	22±3 dBm
10	23±2 dBm	5	20±3 dBm	5	20±3 dBm
11	21±2 dBm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

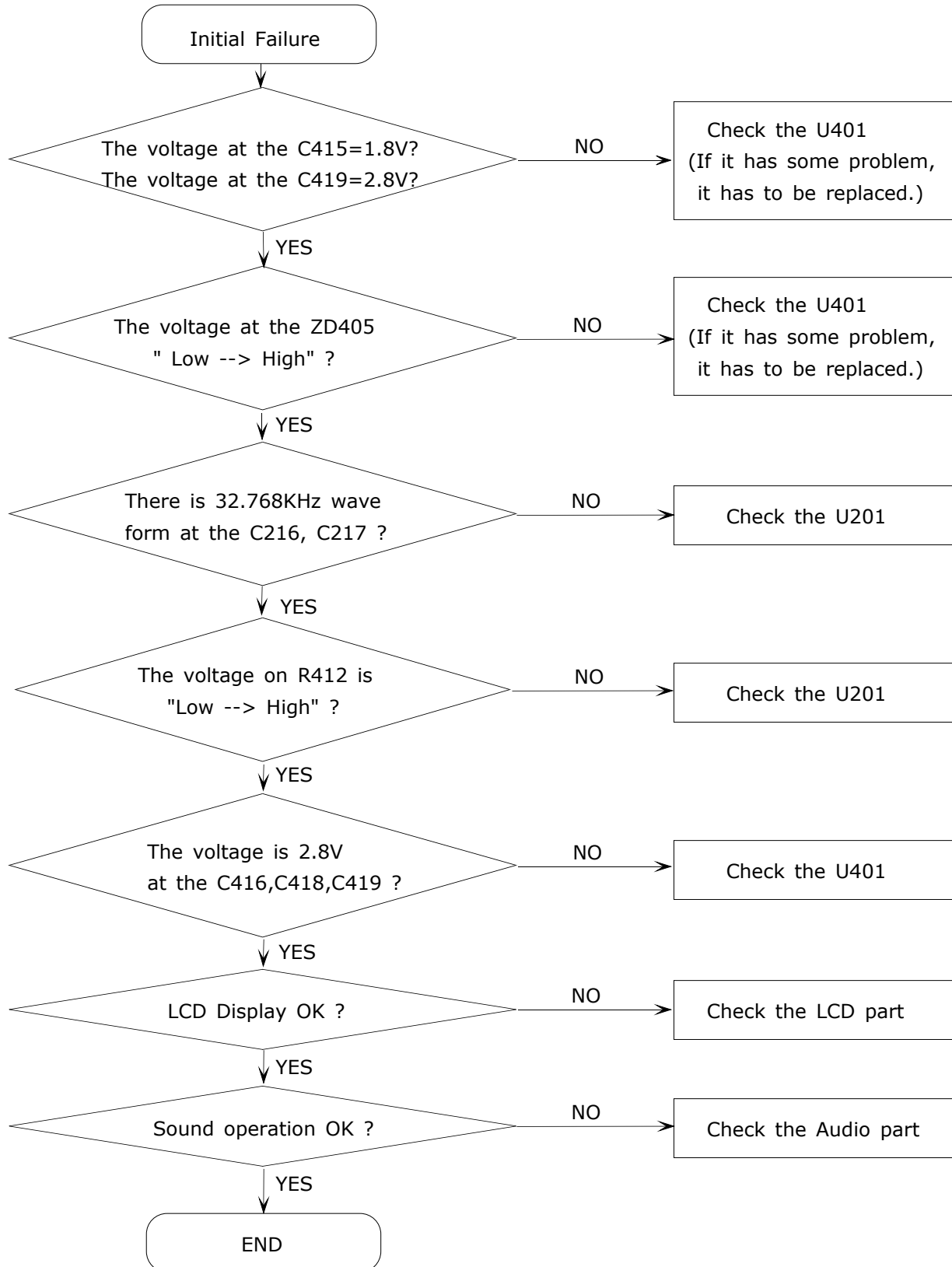
2. SGH-E720 Flow Chart of Troubleshooting

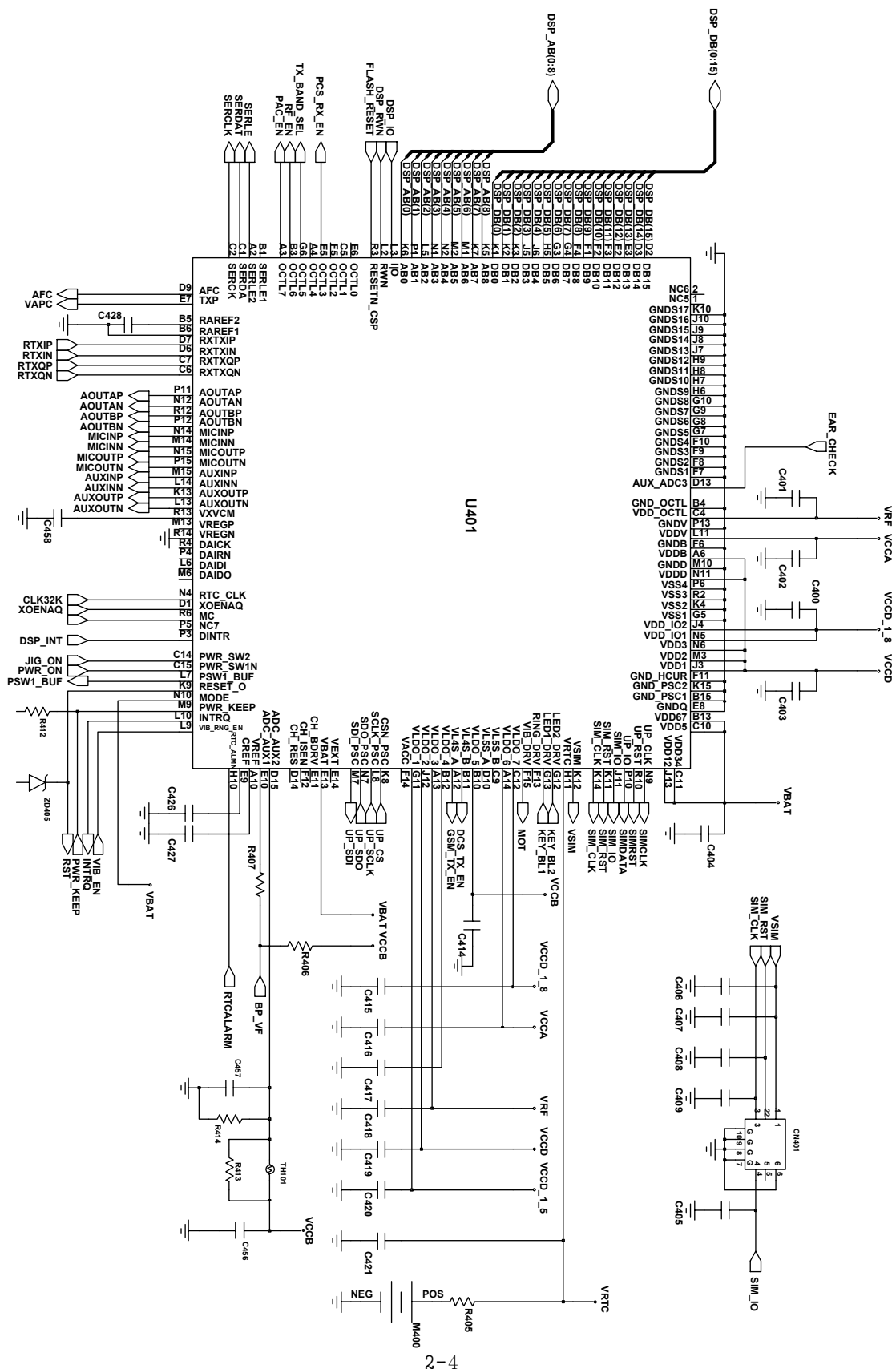
2-1.Baseband

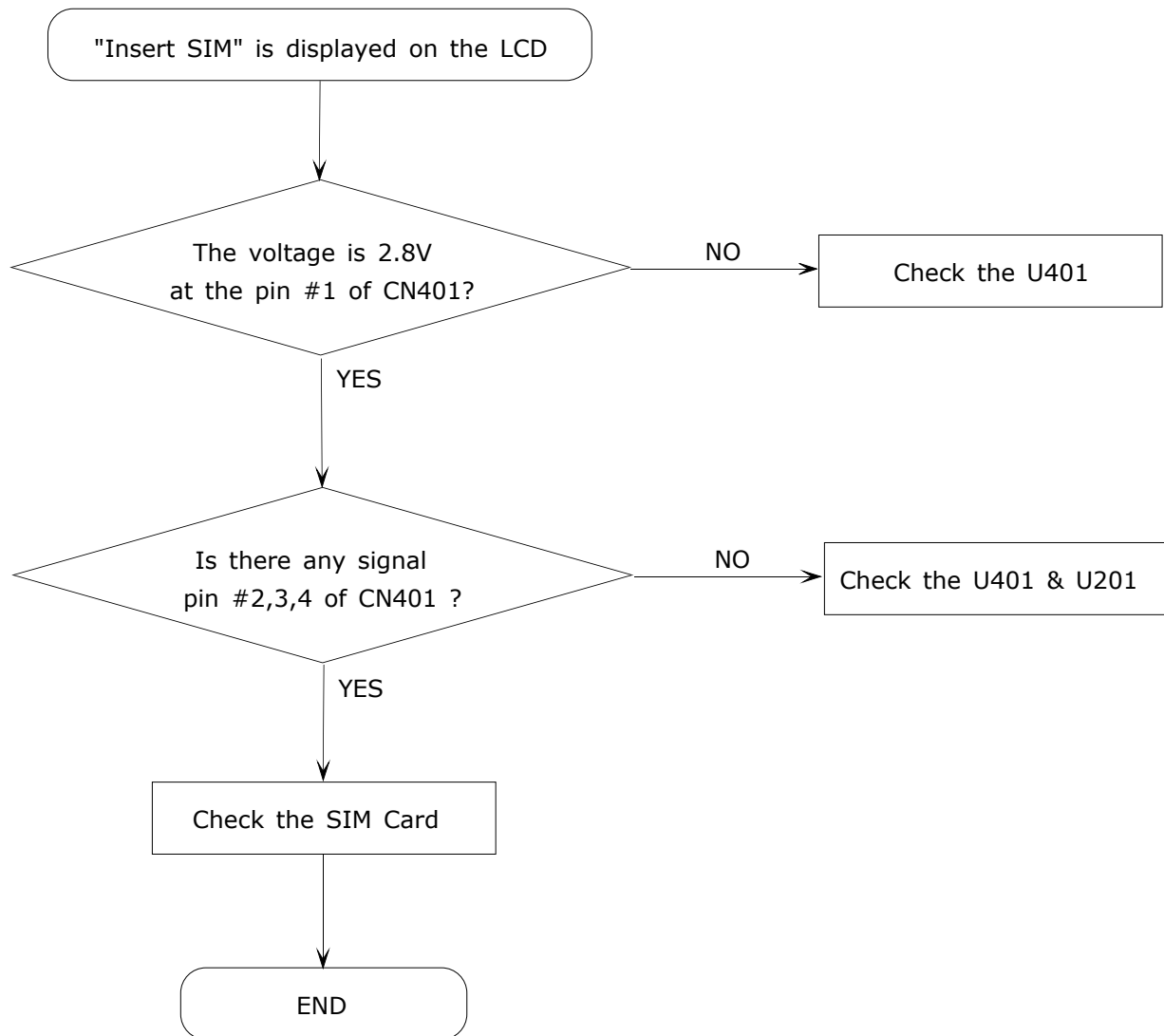
2-1-1. Power ON



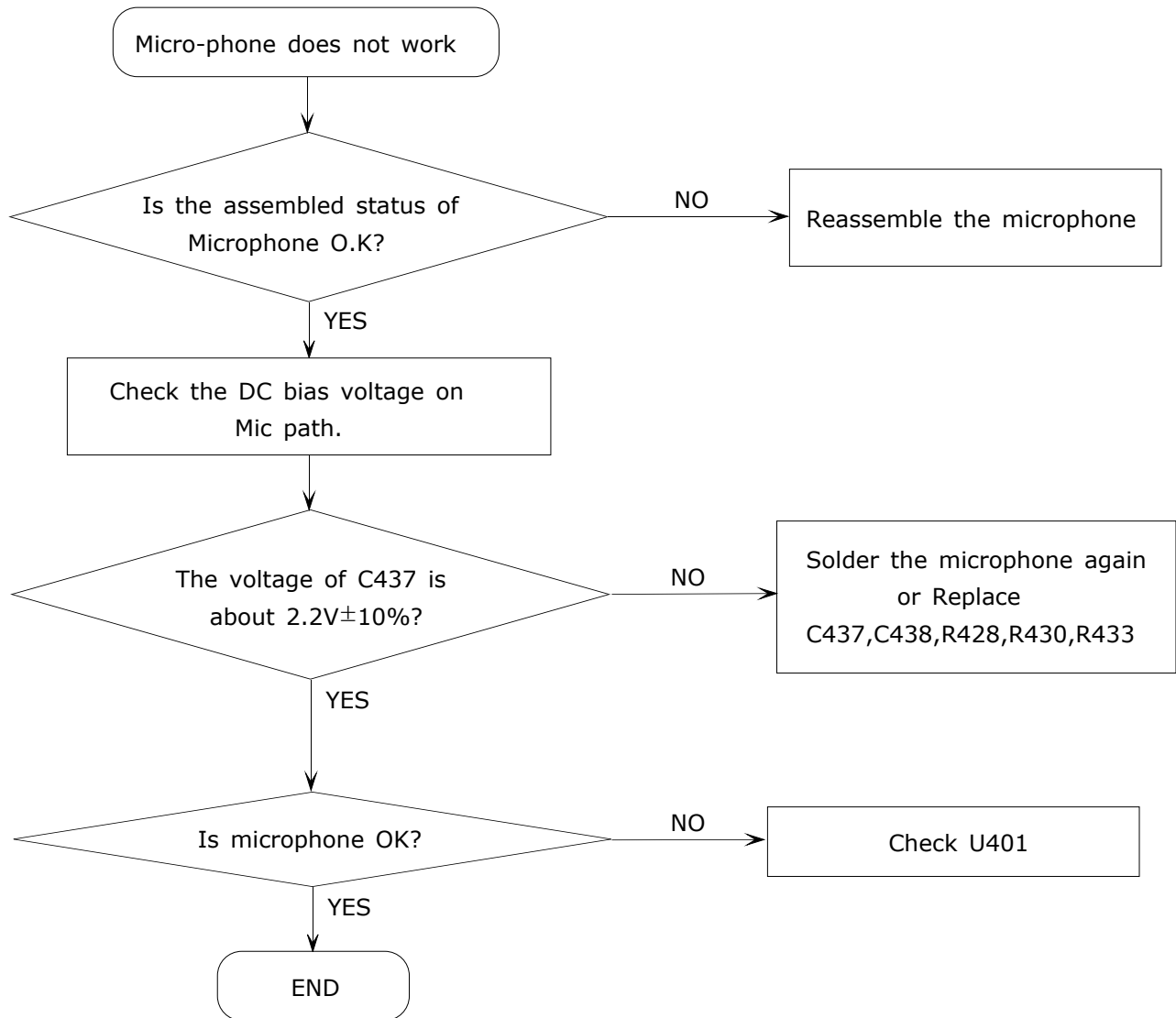


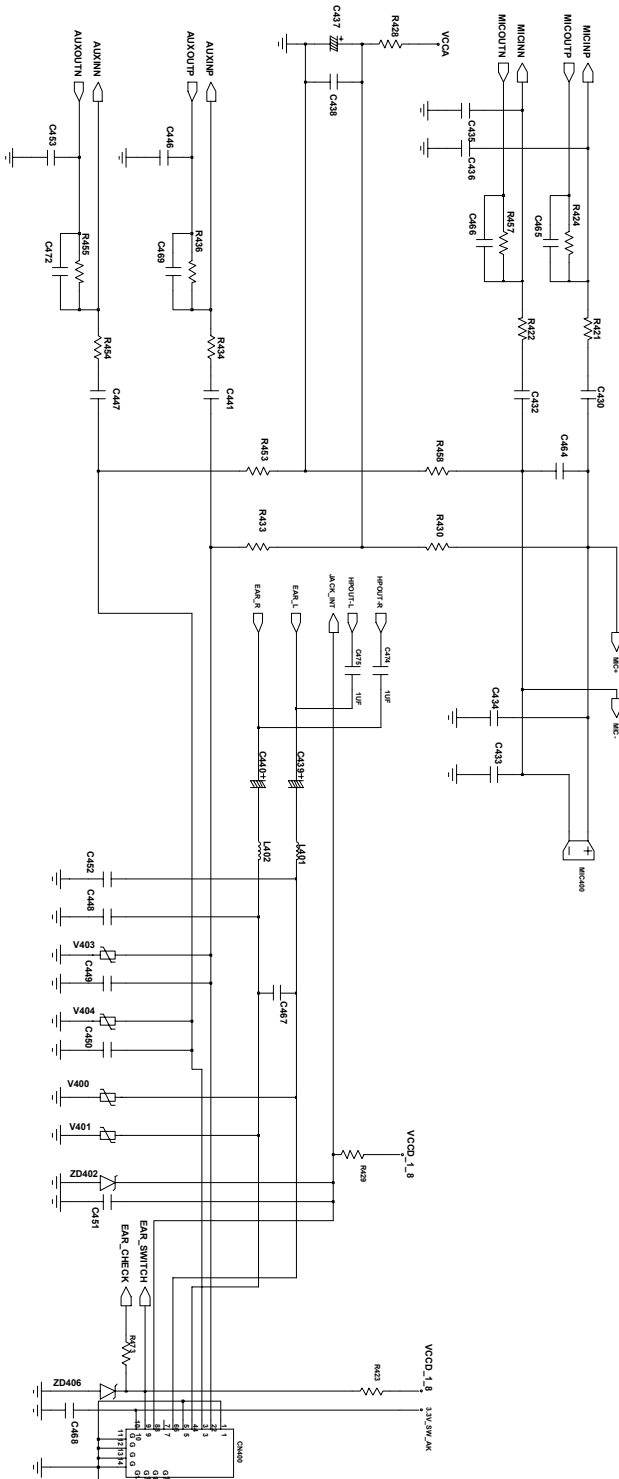
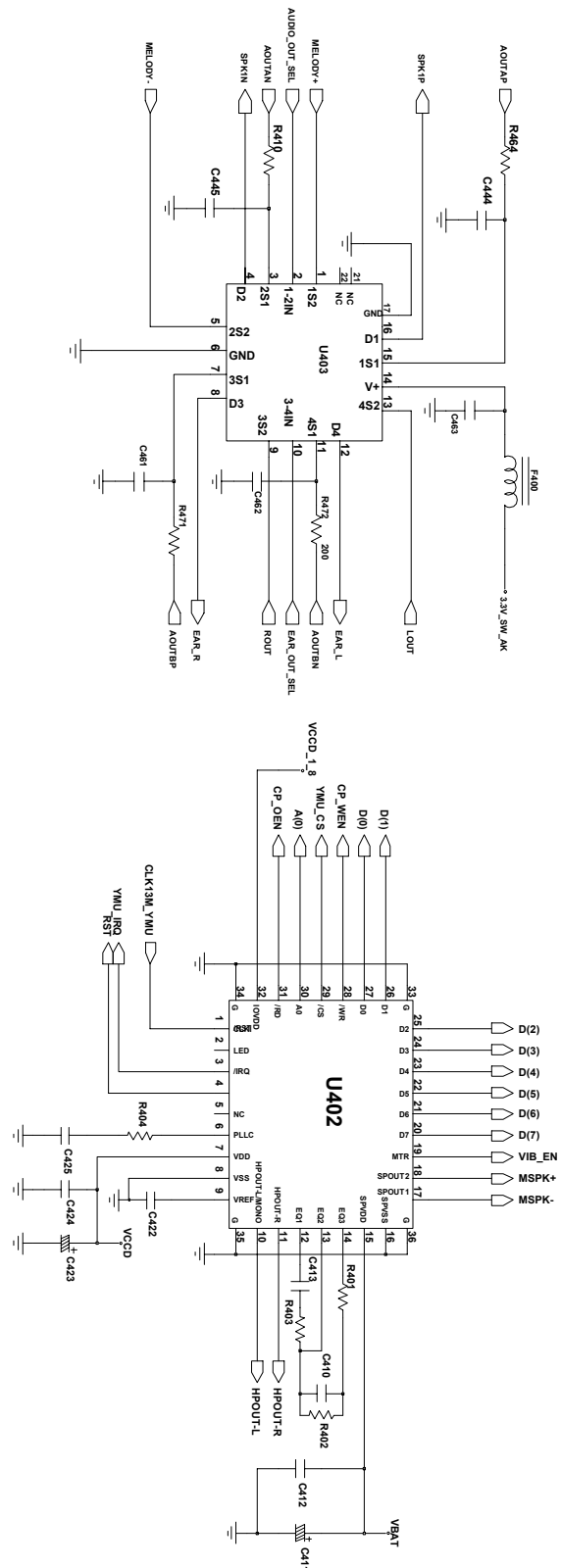
2-1-2. Initial

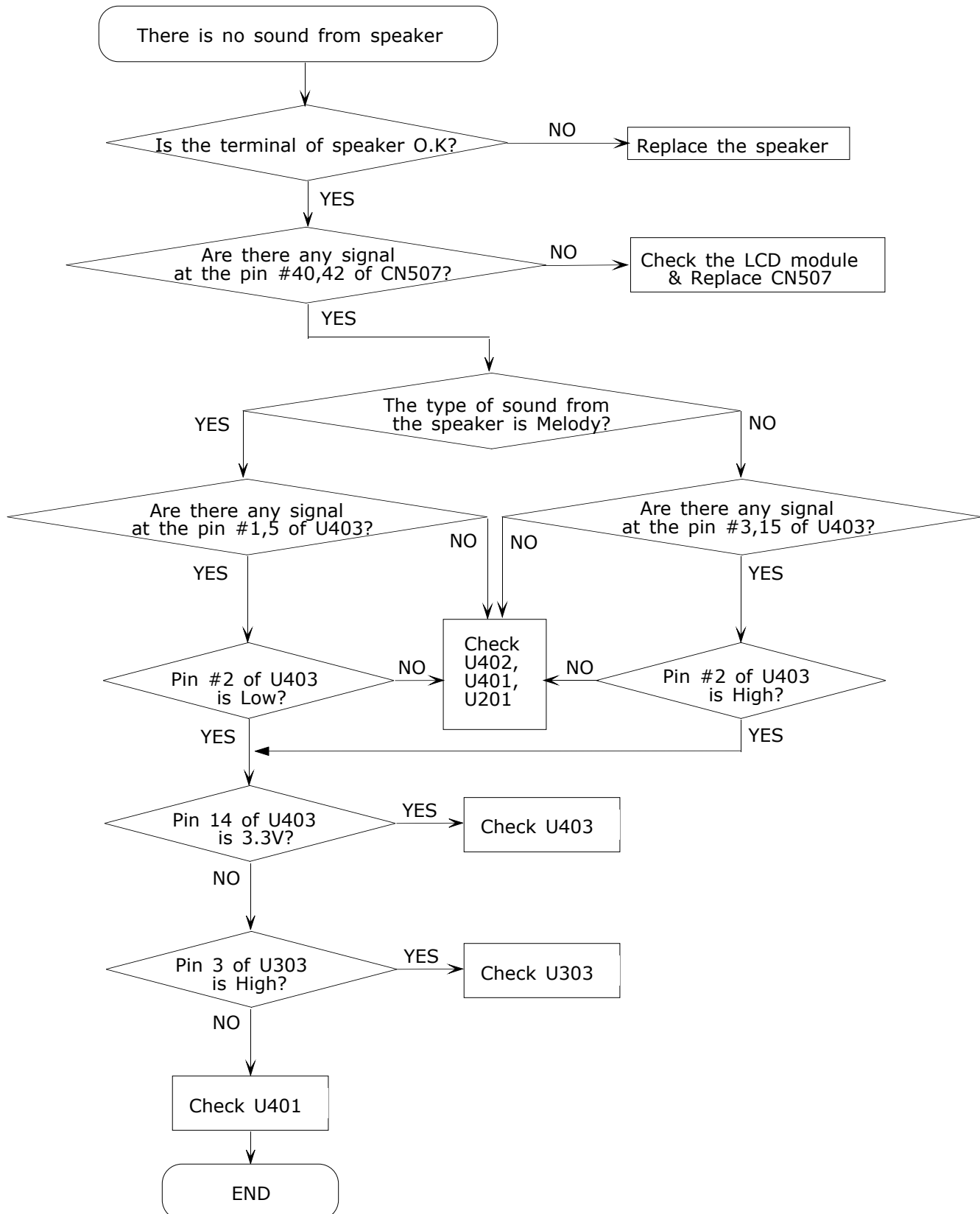


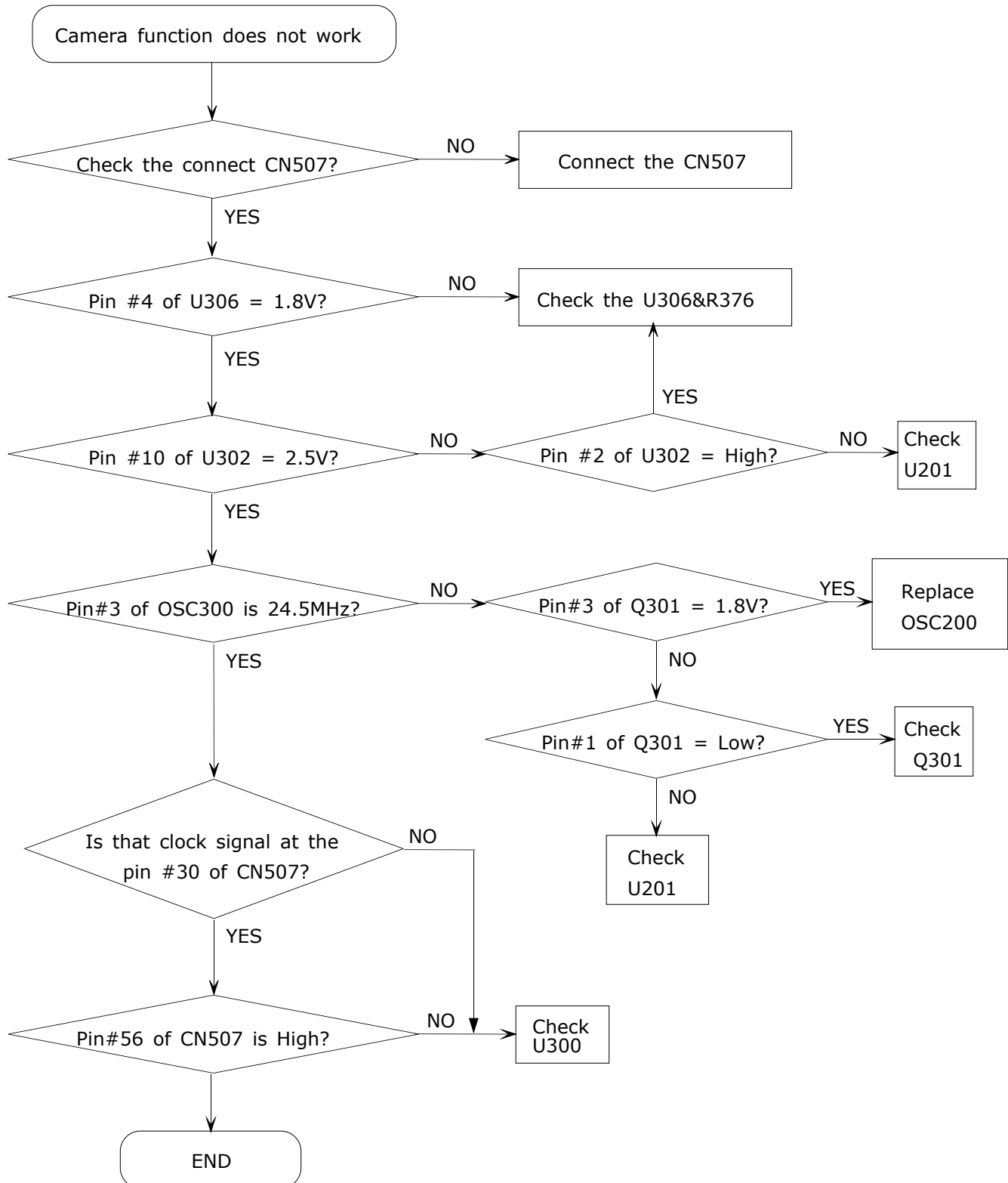
2-1-3. Sim Part

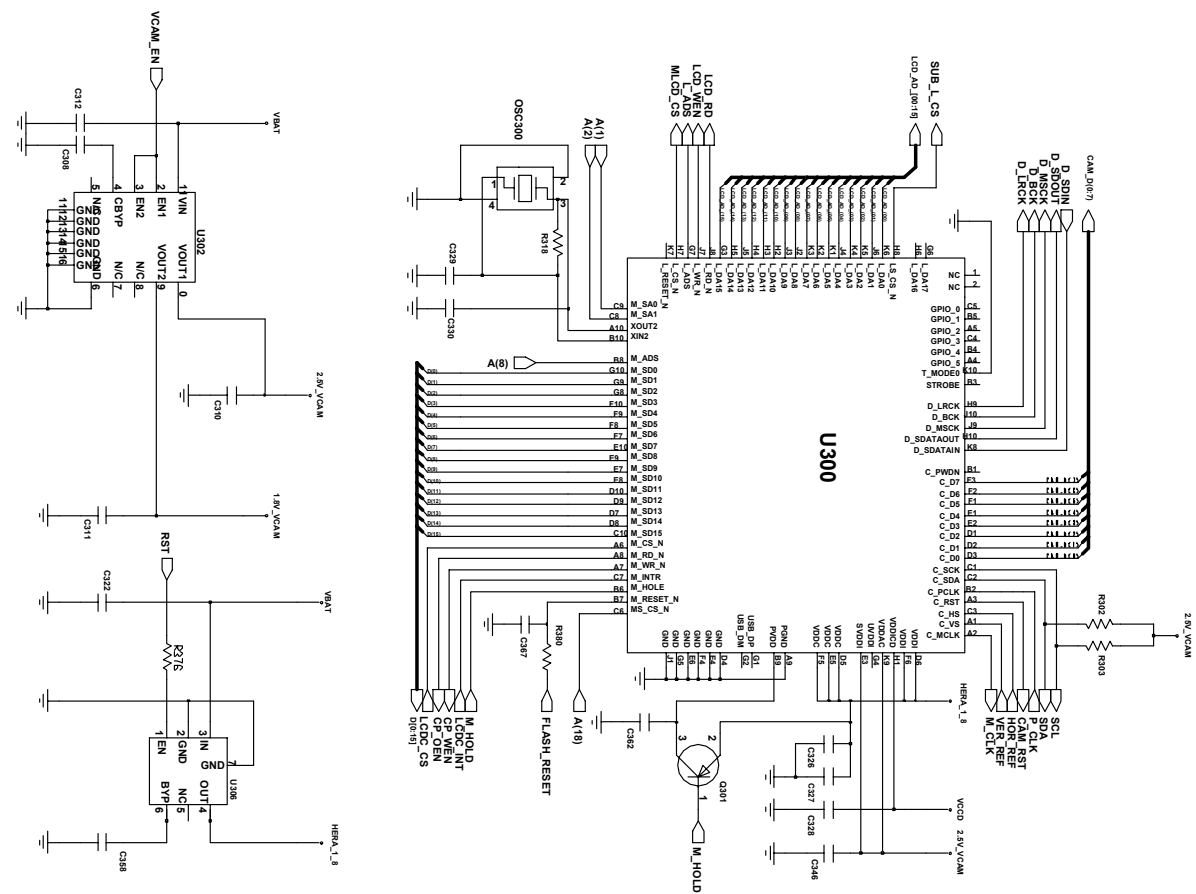
2-1-4. Microphone Part



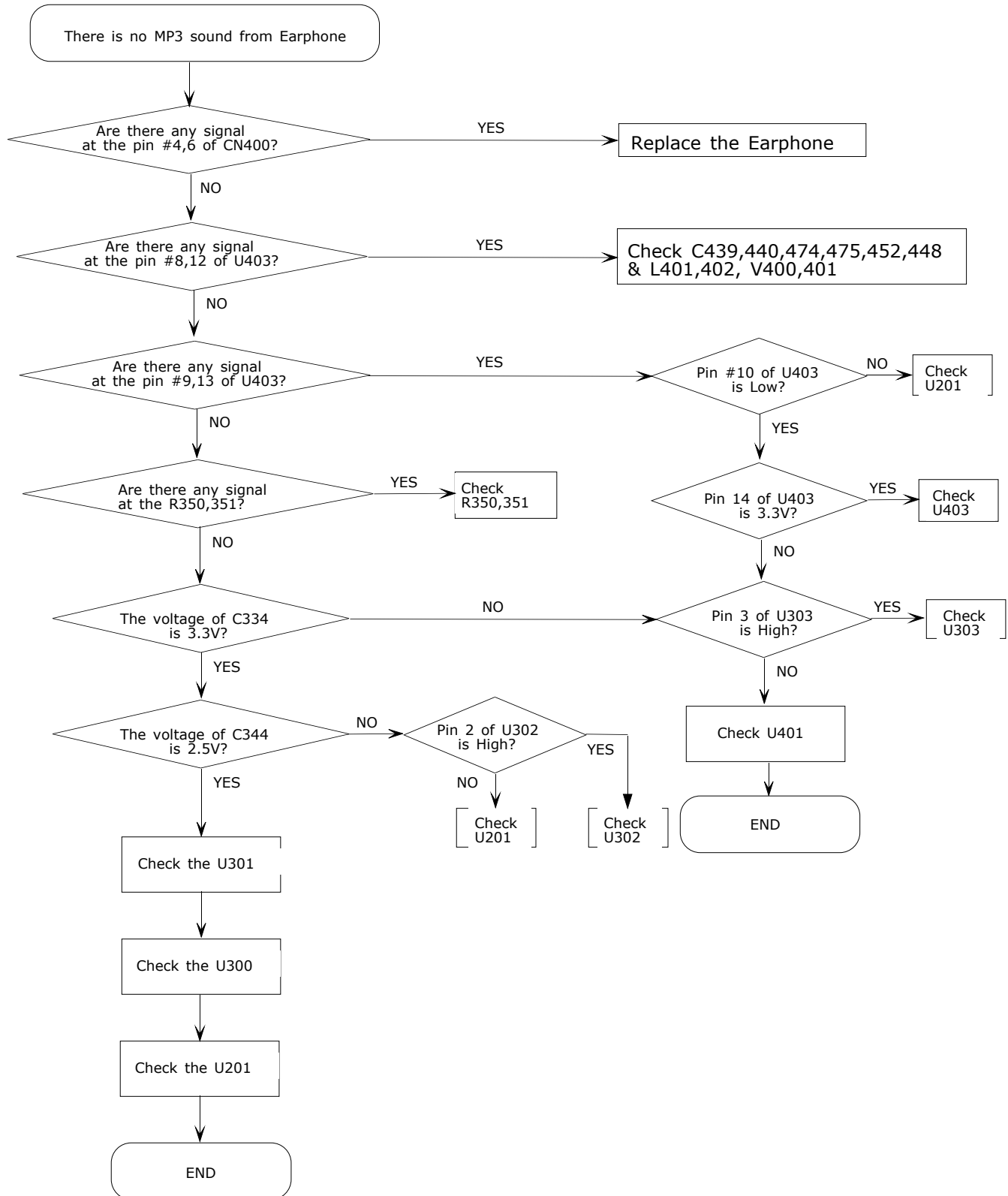


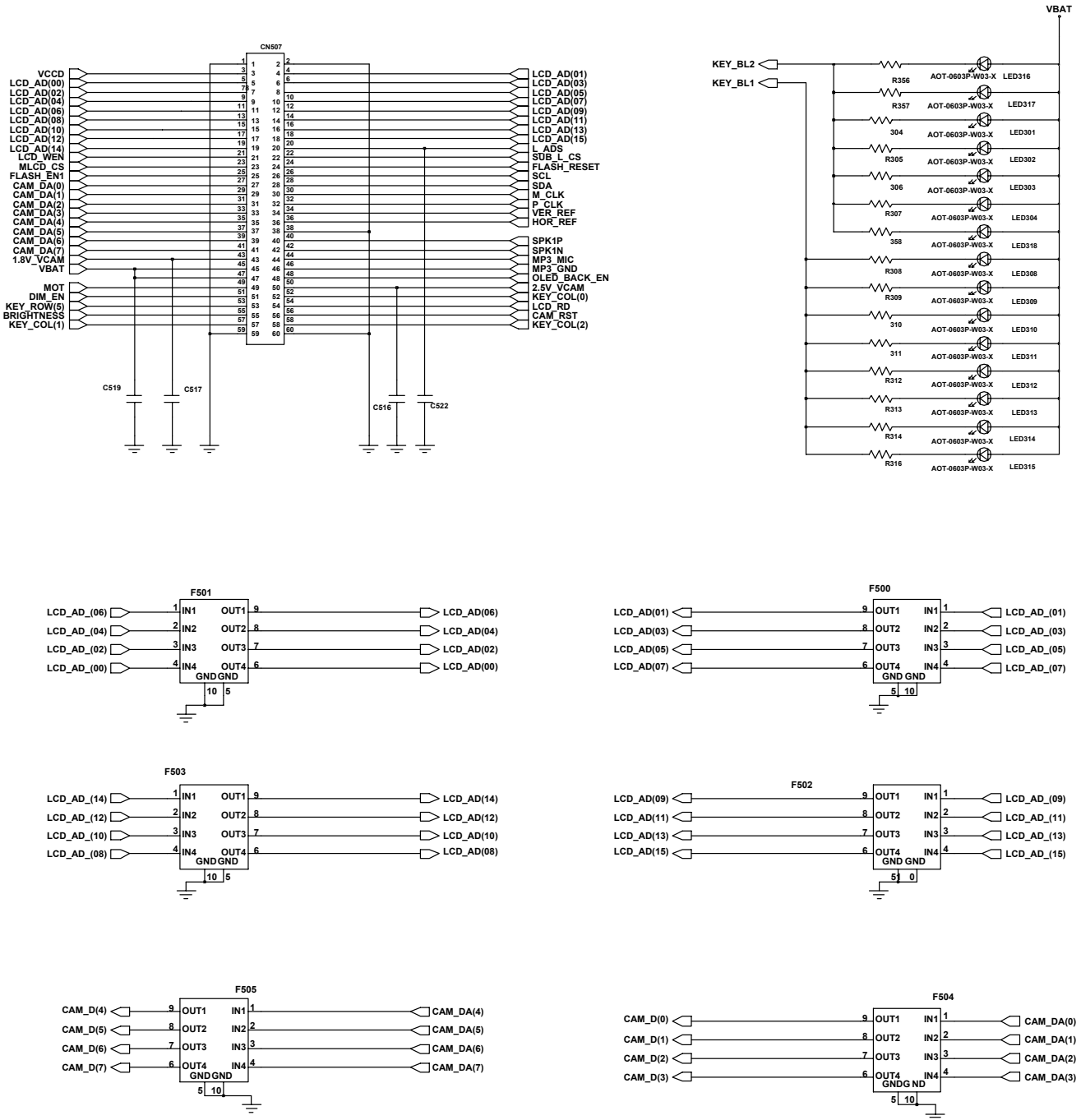
2-1-5. Speaker Part

2-1-6. Camera Part



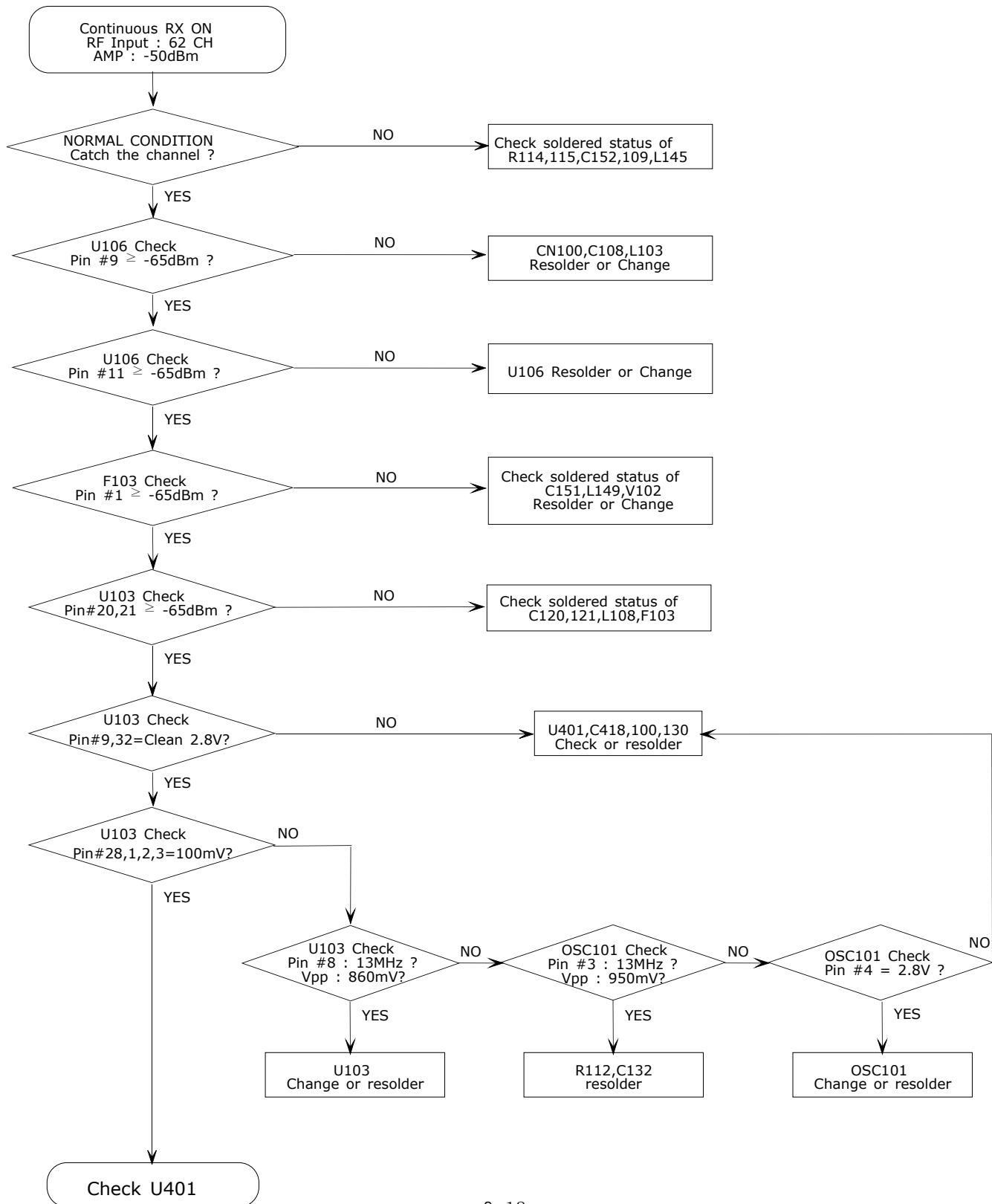
2-1-7. Mp3 Display Part

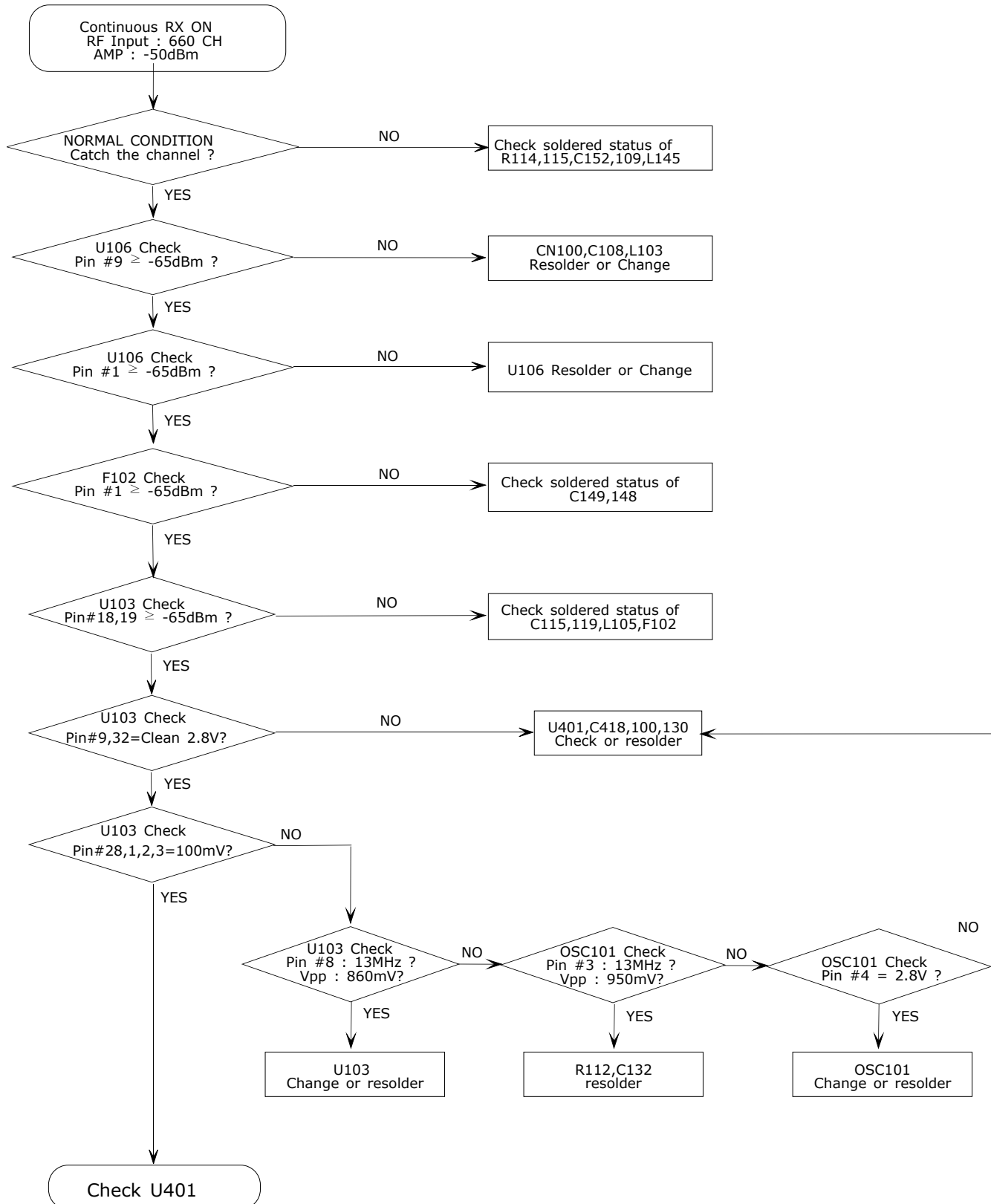


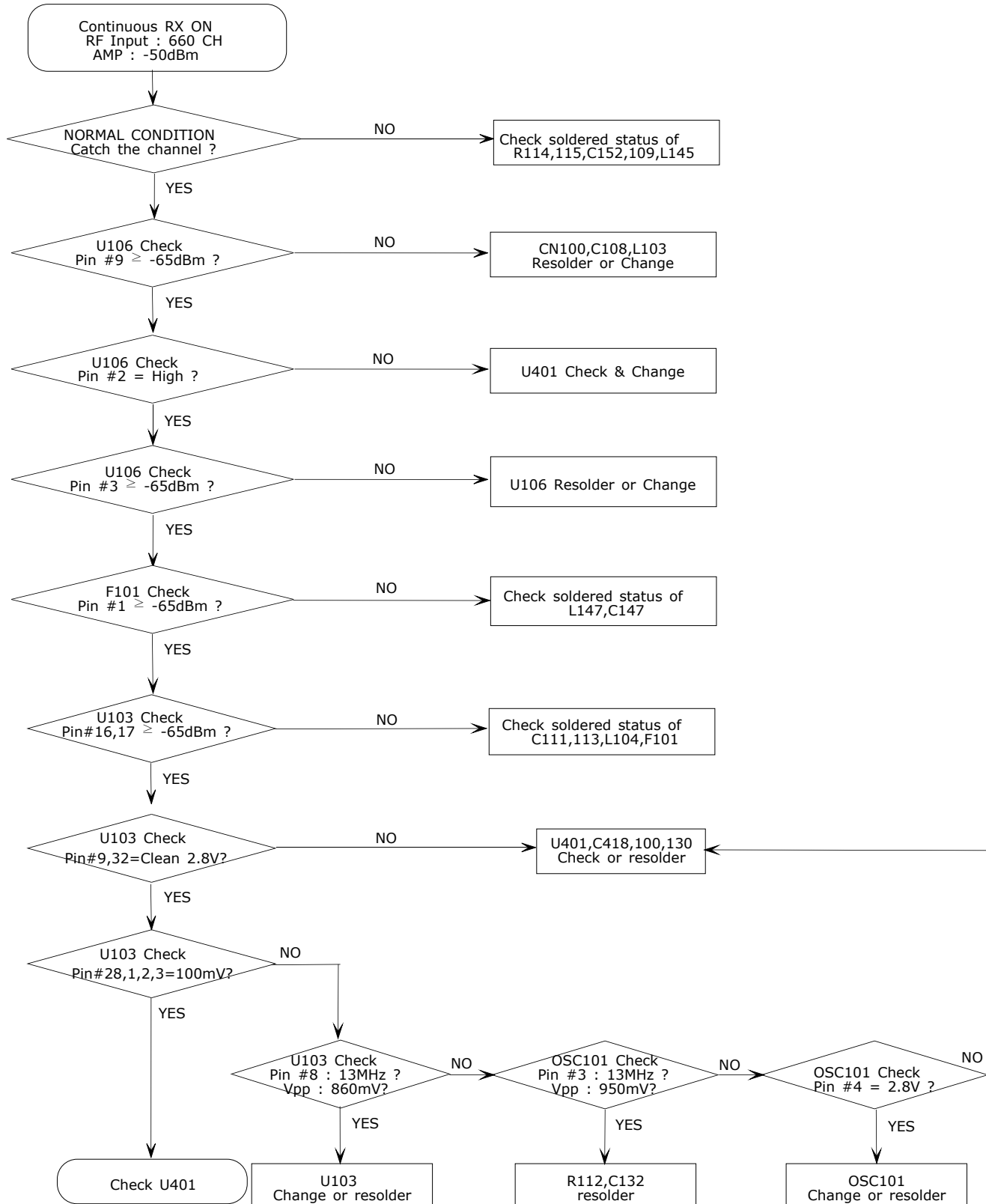


2-2.RF

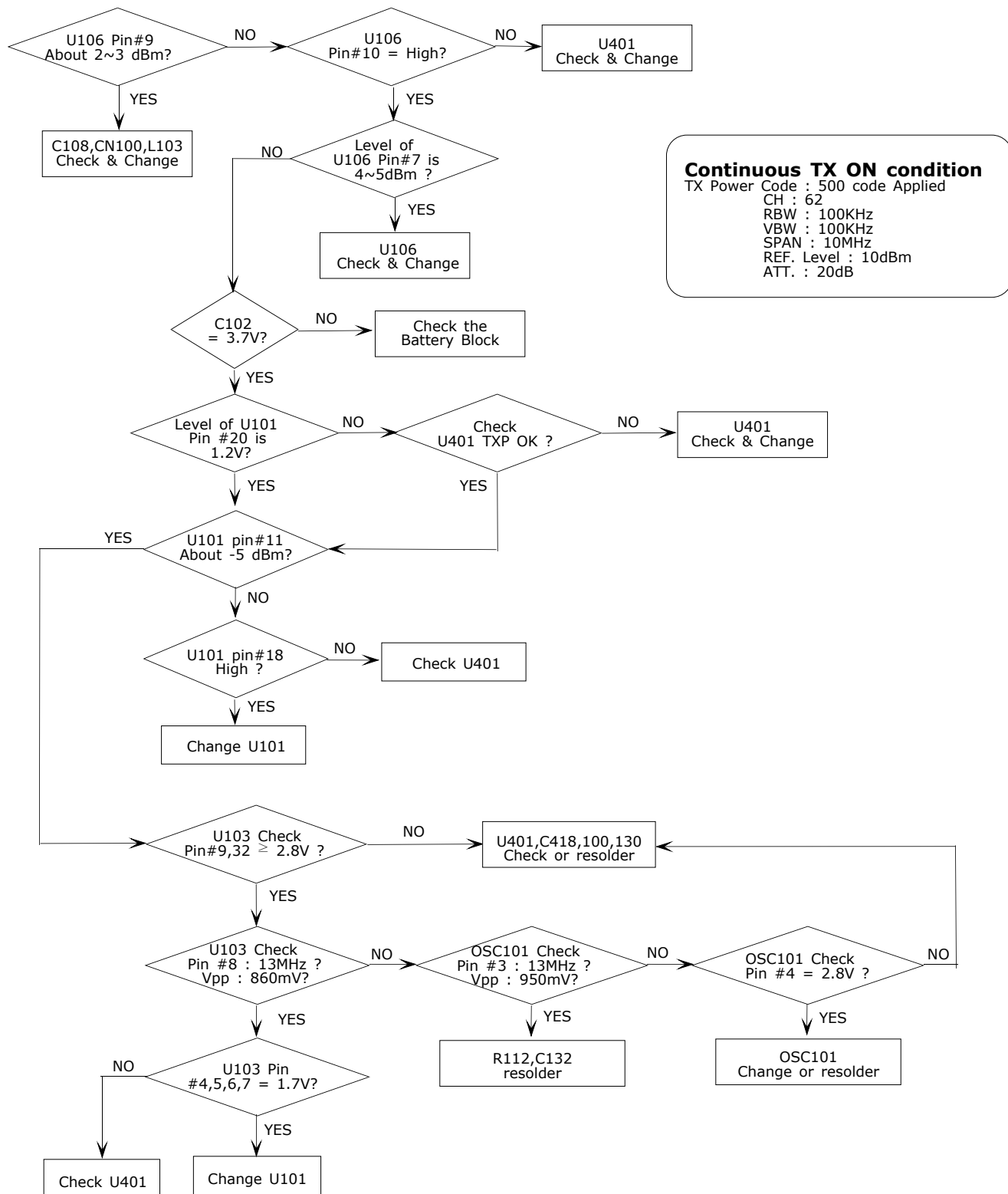
2-2-1. EGSM RX

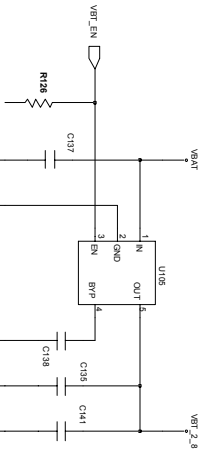


2-2-2. DCS RX

2-2-3. PCS RX

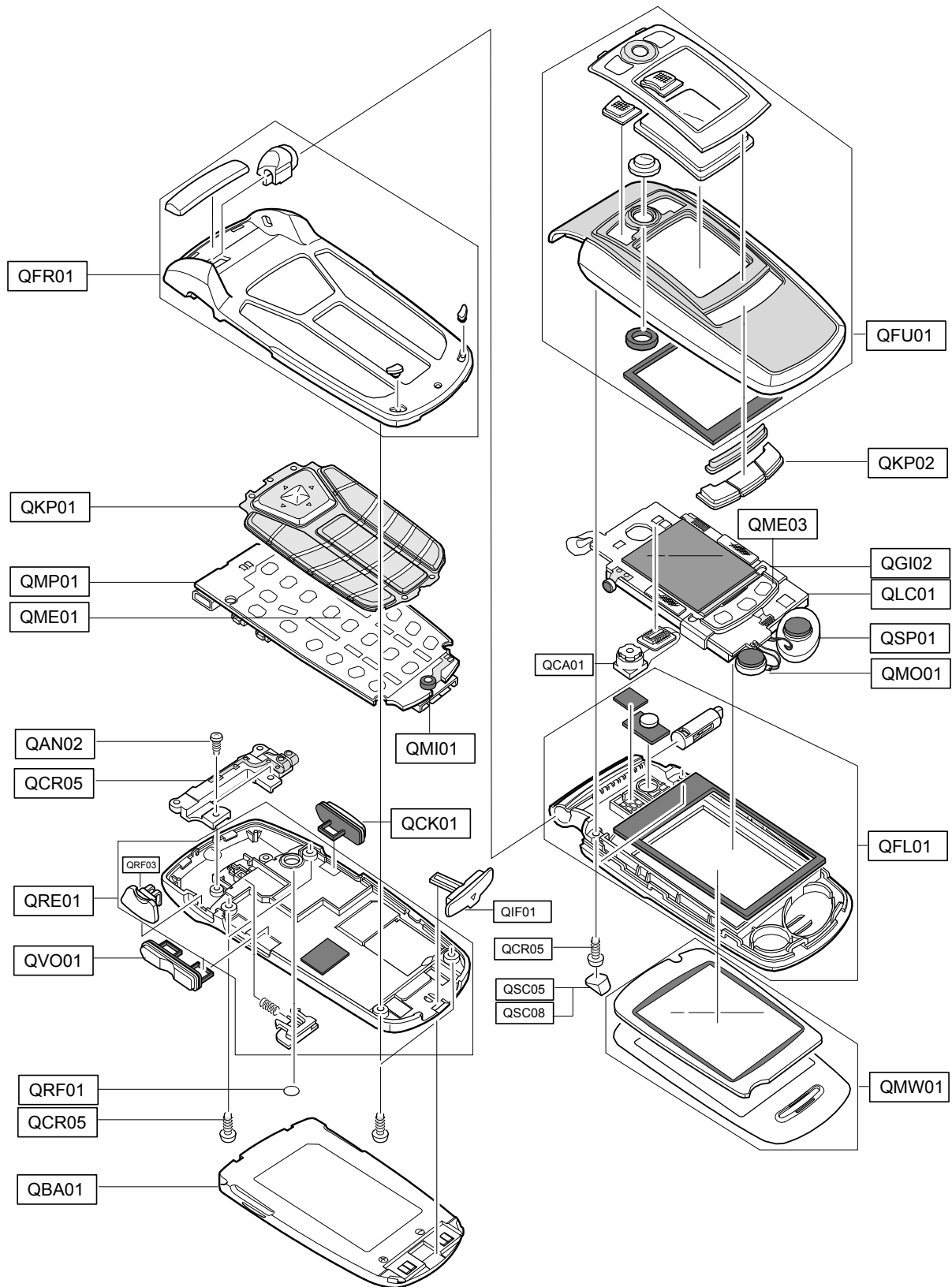
2-2-4. EGSM TX





3. SGH-E720 Exploded View and Parts List

3-1. Cellular phone Exploded View



3-2. Cellular phone Parts list

Location NO.		Description	SEC CODE	Remark
QFU01		FOLDER UPPER	GH75-05914A	
QKP02		MEC-KEYPAD MP3	GH75-05954A	
QME03		UNIT MP3 KEY	GH59-01804A	
QGI02		MP3 KEY BRACKET	GH72-20060A	
QLC01		LCD	GH07-00628A	
QSP01		SPEAKER	3001-001660	
QMO01		MOTOR DC	GH31-00136A	
QFL01		FOLDER LOWER	GH75-05915A	
QMW01		MAIN WINDOW	GH75-05916A	
QCR05		SCREW MACHINE	6001-001478	
QSC05		SCREW CAP L	GH73-03810A	
QSC08		SCREW CAP R	GH73-03811A	
QCA01		UNIT CAMERA	GH59-01769A	
QFR01		FRONT COVER	GH75-05913A	
QKP01		KEYPAD	GH75-04986A	
QMP01		MAIN PBA	GH92-01823A	
QMI01		MICROPHONE ASSY	GH30-00181A	
QME01		UNIT METAL DOME	GH59-01799A	
QAN02		INTENNA	GH42-00499A	
QCR05		SCREW MACHINE	6001-001478	
QRE01		REAR COVER	GH75-05919A	
	QRF03	EAR COVER	GH72-17957A	
QVO01		KEY VOLUME	GH75-05917A	
QCK01		KEY CAMERA	GH75-05918A	
QIF01		IF COVER	GH72-17956A	
QRF01		RF SHEET	GH74-11931A	
QCR05		SCREW MACHINE	6001-001478	
QBA01		BATTERY	GH43-01572A	

**3-3. Test Jig
(GH80-03307A)**



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



3-3-2. Test Cable
(GH39-00304A)



3-3-3. Serial Cable



3-3-4. Power Supply Cable



3-3-5. DATA CABLE
(GH39-00279A)



3-3-6. TC
(GH44-00701A)



4. SGH-E720 MAIN Electrical Parts List

SEC Code	Design LOC
GH92-01823A	PBA MAIN-SGHE720
0403-001233	ZD500
0406-001150	ZD402
0406-001150	ZD405
0406-001150	ZD406
0504-000168	Q305
0504-001140	Q200
0504-001140	Q301
0601-001819	LED301
0601-001819	LED302
0601-001819	LED303
0601-001819	LED304
0601-001819	LED308
0601-001819	LED309
0601-001819	LED310
0601-001819	LED311
0601-001819	LED312
0601-001819	LED313
0601-001819	LED314
0601-001819	LED315
0601-001819	LED316
0601-001819	LED317
0601-001819	LED318
0801-000306	F100
0801-002529	U204
1001-001306	U403
1006-001313	U304
1009-001010	U203
1108-000003	U202
1201-002007	U305
1201-002218	U101
1203-002099	U105
1203-002965	U303
1203-003322	U302
1203-003472	U401

SEC Code	Design LOC
2203-000254	C358
2203-000254	C401
2203-000254	C402
2203-000254	C426
2203-000278	C125
2203-000278	C135
2203-000278	C329
2203-000278	C330
2203-000311	C150
2203-000330	C216
2203-000330	C217
2203-000330	C461
2203-000330	C462
2203-000386	C114
2203-000438	C126
2203-000438	C127
2203-000438	C425
2203-000628	C149
2203-000643	C147
2203-000654	C410
2203-000812	C117
2203-000812	C123
2203-000812	C405
2203-000812	C408
2203-000812	C409
2203-000812	C433
2203-000812	C434
2203-000812	C522
2203-000836	C448
2203-000836	C452
2203-000836	C465
2203-000836	C466
2203-000836	C469
2203-000836	C472
2203-000854	C435

SEC Code	Design LOC
1203-003611	U306
1204-002138	U402
1205-002433	U103
1205-002612	U300
1205-002613	U301
1404-001165	TH101
1405-001082	V201
1405-001082	V301
1405-001082	V302
1405-001082	V303
1405-001082	V304
1405-001082	V305
1405-001082	V306
1405-001082	V307
1405-001082	V308
1405-001082	V309
1405-001082	V310
1405-001082	V311
1405-001082	V400
1405-001082	V401
1405-001082	V403
1405-001082	V404
1405-001082	V502
1405-001082	V503
1405-001082	V504
1405-001082	V505
1405-001082	V506
1405-001082	V507
1405-001082	V510
1405-001082	V511
1405-001082	V512
1405-001082	V514
1405-001132	V101
1405-001132	V102
2007-000138	R112

SEC Code	Design LOC
2203-000854	C436
2203-000854	C444
2203-000854	C445
2203-000854	C446
2203-000854	C453
2203-000885	C342
2203-000995	C122
2203-000995	C151
2203-000995	C211
2203-001239	C449
2203-001239	C450
2203-001385	C115
2203-001385	C119
2203-001405	C130
2203-001405	C413
2203-001405	C456
2203-002668	C145
2203-002677	C120
2203-002677	C121
2203-002987	C108
2203-005050	C152
2203-005061	C100
2203-005061	C220
2203-005061	C221
2203-005061	C313
2203-005061	C316
2203-005061	C367
2203-005061	C407
2203-005061	C412
2203-005061	C422
2203-005061	C424
2203-005061	C428
2203-005288	C111
2203-005288	C113
2203-005482	C137

SEC Code	Design LOC
2007-000138	R322
2007-000138	R407
2007-000139	R102
2007-000139	R103
2007-000140	R511
2007-000140	R513
2007-000140	R514
2007-000140	R515
2007-000141	R320
2007-000141	R516
2007-000142	R453
2007-000143	R302
2007-000143	R303
2007-000143	R369
2007-000143	R517
2007-000144	R127
2007-000148	R108
2007-000148	R111
2007-000148	R243
2007-000148	R380
2007-000151	R126
2007-000151	R241
2007-000155	R208
2007-000155	R365
2007-000155	R366
2007-000157	R203
2007-000159	R207
2007-000159	R209
2007-000159	R424
2007-000159	R457
2007-000162	R201
2007-000162	R202
2007-000162	R204
2007-000162	R242
2007-000162	R319

SEC Code	Design LOC
2203-005482	C138
2203-005482	C141
2203-005482	C142
2203-005482	C146
2203-005482	C201
2203-005482	C204
2203-005482	C205
2203-005482	C208
2203-005482	C210
2203-005482	C308
2203-005482	C310
2203-005482	C311
2203-005482	C314
2203-005482	C324
2203-005482	C327
2203-005482	C338
2203-005482	C344
2203-005482	C346
2203-005482	C361
2203-005482	C362
2203-005482	C365
2203-005482	C400
2203-005482	C403
2203-005482	C516
2203-005482	C517
2203-005496	C351
2203-005496	C352
2203-005496	C468
2203-005503	C451
2203-005509	C519
2203-005736	C101
2203-005736	C110
2203-005736	C112
2203-006053	C326
2203-006053	C328

SEC Code	Design LOC
2007-000164	R423
2007-000164	R429
2007-000170	R318
2007-000170	R377
2007-000170	R378
2007-000171	R114
2007-000171	R115
2007-000171	R376
2007-000171	R473
2007-000172	R124
2007-000242	R109
2007-000242	R326
2007-000775	R402
2007-000775	R403
2007-001119	R428
2007-001290	R101
2007-001290	R410
2007-001290	R464
2007-001291	R104
2007-001307	R105
2007-001307	R106
2007-001307	R304
2007-001307	R305
2007-001307	R306
2007-001307	R307
2007-001307	R308
2007-001307	R309
2007-001307	R310
2007-001307	R311
2007-001307	R312
2007-001307	R313
2007-001307	R314
2007-001307	R316
2007-001307	R356
2007-001307	R357

SEC Code	Design LOC
2203-006053	C357
2203-006053	C406
2203-006053	C414
2203-006053	C415
2203-006053	C416
2203-006053	C417
2203-006053	C418
2203-006053	C419
2203-006053	C420
2203-006053	C430
2203-006053	C432
2203-006053	C441
2203-006053	C447
2203-006053	C463
2203-006093	C139
2203-006093	C312
2203-006093	C315
2203-006093	C322
2203-006093	C323
2203-006093	C332
2203-006093	C333
2203-006093	C343
2203-006093	C355
2203-006093	C458
2203-006093	C474
2203-006093	C475
2203-006137	C206
2203-006190	C356
2203-006190	C359
2203-006190	C360
2203-006190	C363
2203-006190	C364
2203-006194	C457
2203-006201	C404
2203-006257	C438

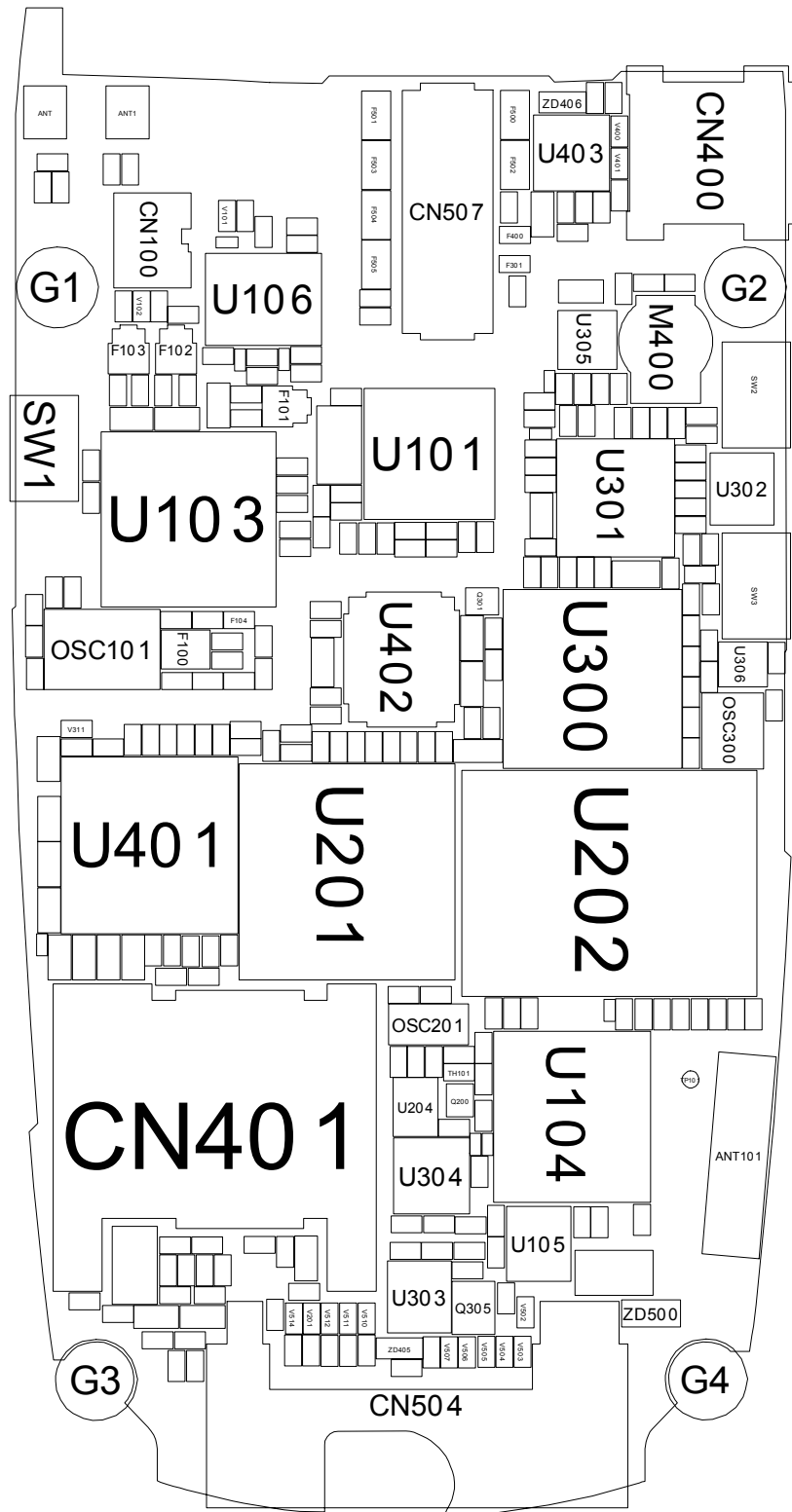
SEC Code	Design LOC
2007-001307	R358
2007-001308	R471
2007-001308	R472
2007-001319	R405
2007-001323	R123
2007-001325	R404
2007-002797	R110
2007-003019	R374
2007-003019	R375
2007-003025	R350
2007-003025	R351
2007-007142	R352
2007-007142	R367
2007-007142	R368
2007-007142	R406
2007-007142	R421
2007-007142	R422
2007-007142	R434
2007-007142	R454
2007-007308	R413
2007-007314	R414
2007-007334	R401
2007-007488	R436
2007-007488	R455
2007-008117	R458
2007-008263	R430
2007-008263	R433
2007-008483	R325
2007-008531	R354
2007-008531	R355
2007-008542	R205
2007-009124	R330
2007-009124	R331
2203-000233	C105
2203-000233	C128

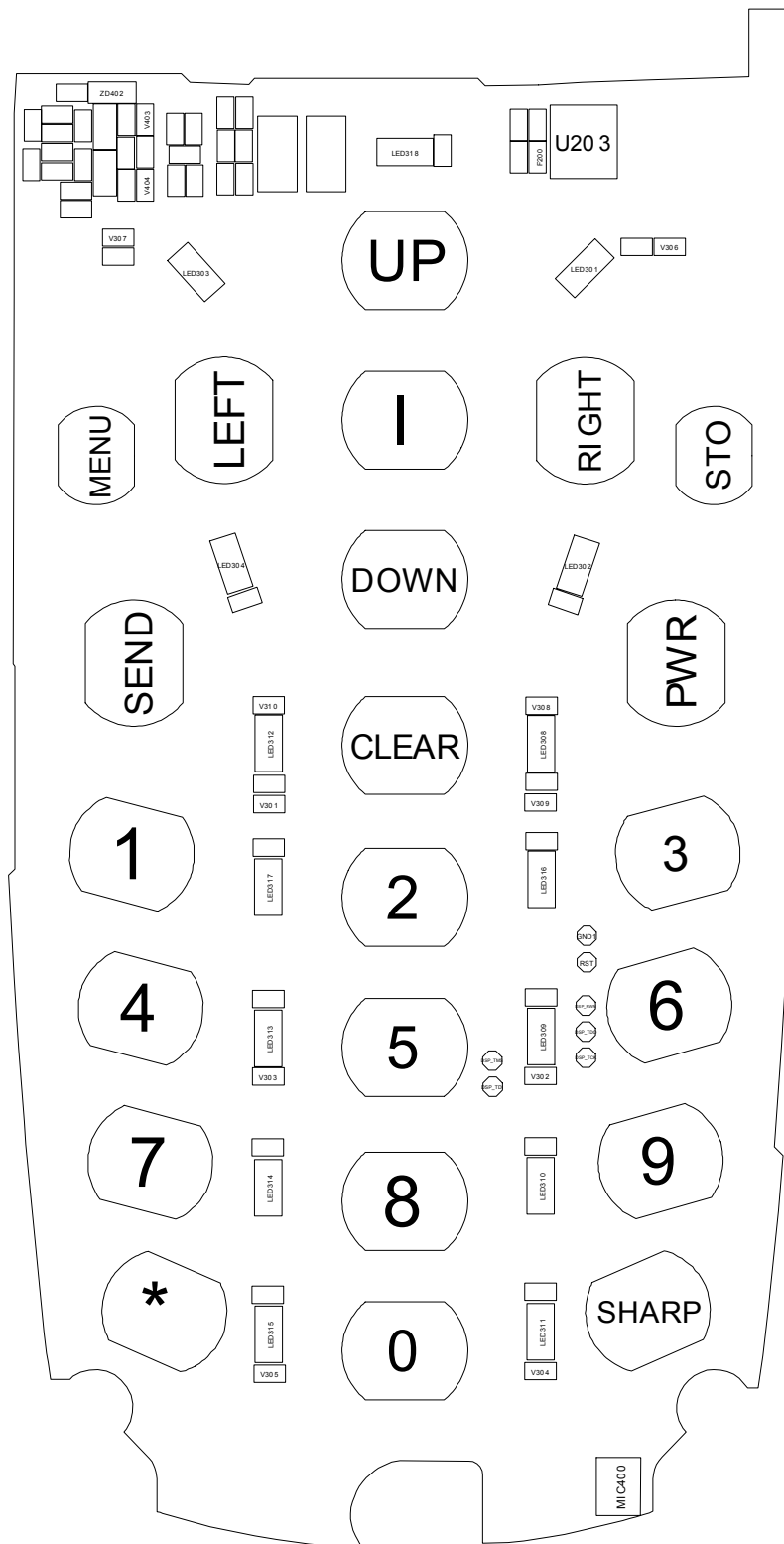
SEC Code	Design LOC
2203-006324	C341
2404-001151	C102
2404-001151	C437
2404-001225	C334
2404-001306	C520
2404-001339	C411
2404-001339	C423
2404-001348	C439
2404-001348	C440
2703-001207	L105
2703-001284	L104
2703-001512	L108
2703-001748	L145
2703-001750	L117
2703-001752	L103
2703-001752	L149
2703-001786	L147
2703-002308	L106
2703-002313	L401
2703-002313	L402
2801-004225	OSC300
2801-004339	OSC201
2809-001264	OSC101
2901-001296	F500
2901-001296	F501
2901-001296	F502
2901-001296	F503
2901-001296	F504
2901-001296	F505
2904-001417	F103
2904-001419	F102
2904-001450	F101
2909-001213	U106
3301-001342	F104
3301-001342	F200

SEC Code	Design LOC
2203-000233	C129
2203-000233	C134
2203-000233	C136
2203-000233	C144
2203-000233	C421
2203-000254	C103
2203-000254	C104
2203-000254	C106
2203-000254	C131
2203-000254	C132
2203-000254	C133
2203-000254	C140
2203-000254	C202
2203-000254	C203
2203-000254	C207
2203-000254	C209
2203-000254	C222
2203-000254	C223

SEC Code	Design LOC
3301-001342	F400
3301-001729	F301
3404-001152	SW1
3404-001152	SW2
3404-001152	SW3
3705-001347	CN100
3709-001298	CN401
3710-002194	CN504
3711-005817	CN507
3722-002082	CN400
4202-001037	ANT101
4302-001184	M400
4709-001350	U104
GH09-00033A	U201
GH41-00757A	PCB-SGHE720 MAIN
GH30-00181A	MICROPHONE-ASSY
GH59-01799A	UNIT-METAL DOME

5. SGH-E720 PCB Diagrams





6. SGH-E720 Block Diagrams

