

SAMSUNG

UMTS TELEPHONE

SGH-Z130

SERVICE *Manual*

UMTS 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-Z130 Specification

1-1. GSM/WCDMA General Specification

	GSM900 Phase 1	EGSM 900 Phase 2	DCS1800 Phase 1	WCDMA
Freq. Band[MHz] Uplink/Downlink	890~915 935~960	880~915 925~960	1710~1785 1805~1880	1920~1980 2110~2170
ARFCN range	1~124	0~124 & 975~1023	512~885	10562~10838
Tx/Rx spacing	45MHz	45MHz	95MHz	190MHz
Mod. Bit rate/ Bit Period	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	3.84Mcps/s
Time Slot Period/Frame Period	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	10ms
Modulation	0.3GMSK	0.3GMSK	0.3GMSK	UL:2BPSK DL:QPSK
MS Power	33dBm~13dBm	33dBm~5dBm	30dBm~0dBm	MAX:24(+1,-3) dBm MIN:<-50dBm
Power Class	5pcl ~ 15pcl	5pcl ~ 19pcl	0pcl ~ 15pcl	CLASS3
Sensitivity	-102dBm	-102dBm	-100dBm	-106.7dBm
TDMA Mux	8	8	8	-
Cell Radius	35Km	35Km	2Km	-

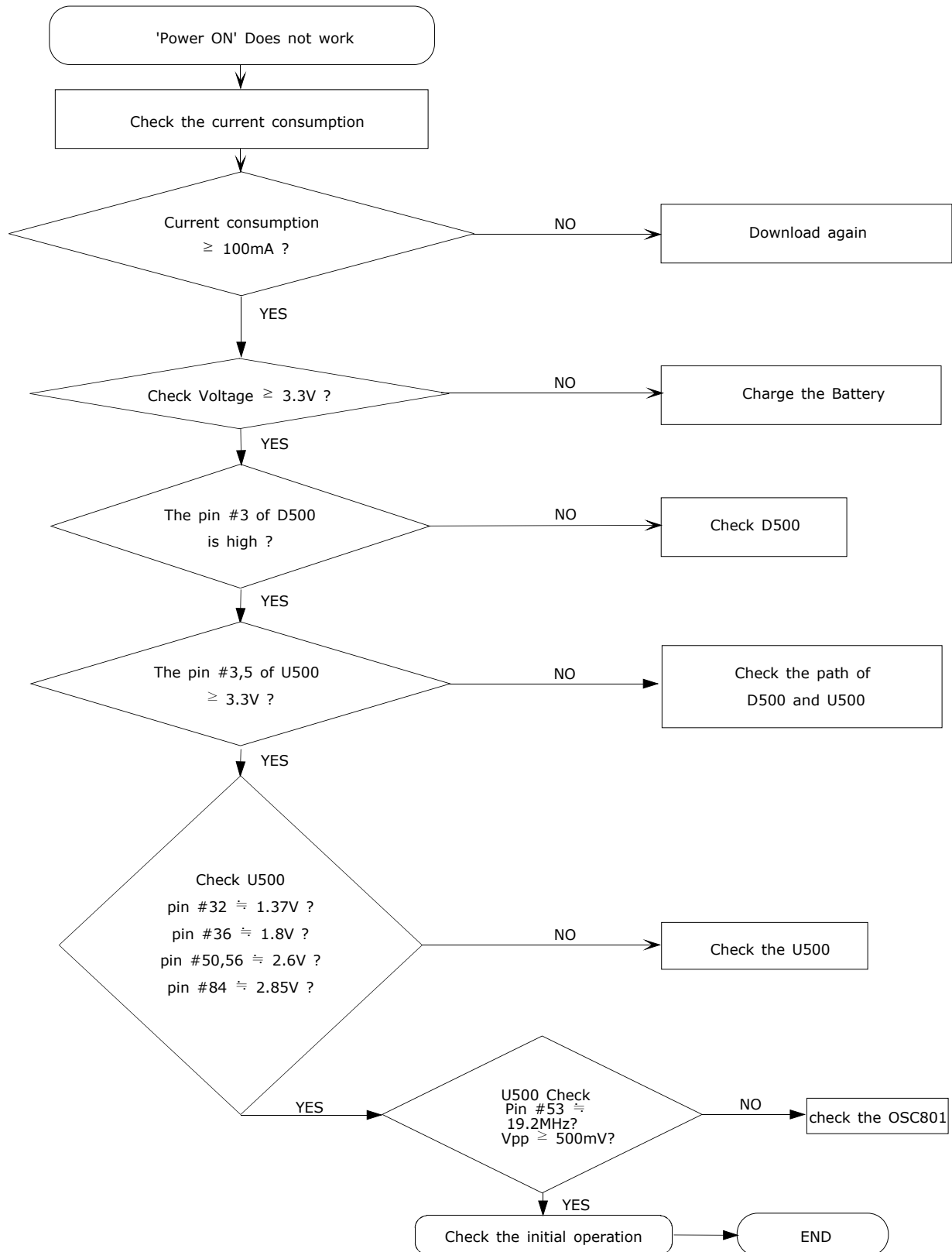
1-2. GSM TX power class

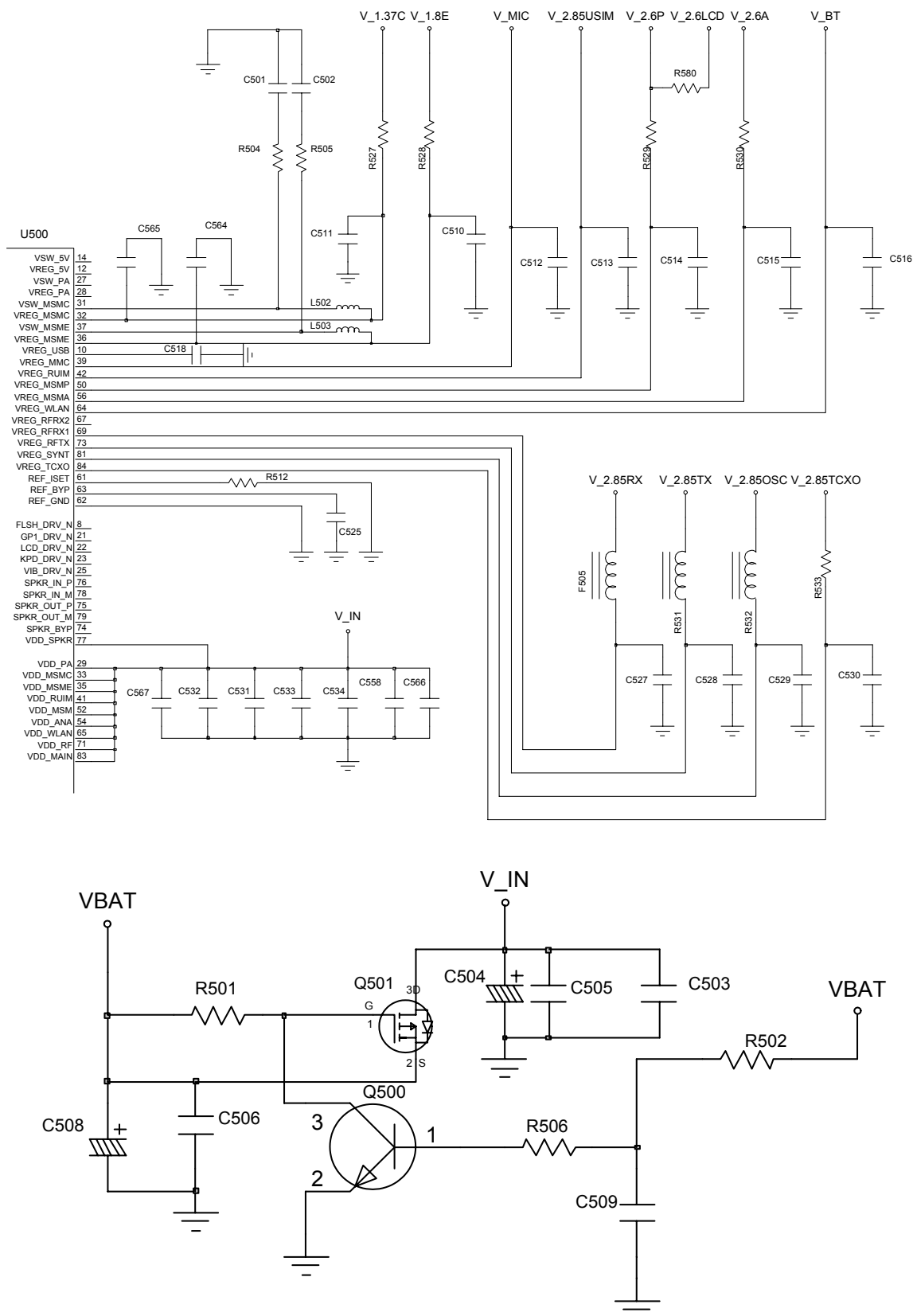
TX Power control level	EGSM900	TX Power control level	DCS1800
5	33±2 dBm	0	30±3 dBm
6	31±2 dBm	1	28±3 dBm
7	29±2 dBm	2	26±3 dBm
8	27±2 dBm	3	24±3 dBm
9	25±2 dBm	4	22±3 dBm
10	23±2 dBm	5	20±3 dBm
11	21±2 dBm	6	18±3 dBm
12	19±2 dBm	7	16±3 dBm
13	17±2 dBm	8	14±3 dBm
14	15±2 dBm	9	12±4 dBm
15	13±2 dBm	10	10±4 dBm
16	11±3 dBm	11	8±4 dBm
17	9± 3dBm	12	6±4 dBm
18	7±3 dBm	13	4±4 dBm
19	5±3 dBm	14	2±5 dBm
		15	0±5 dBm

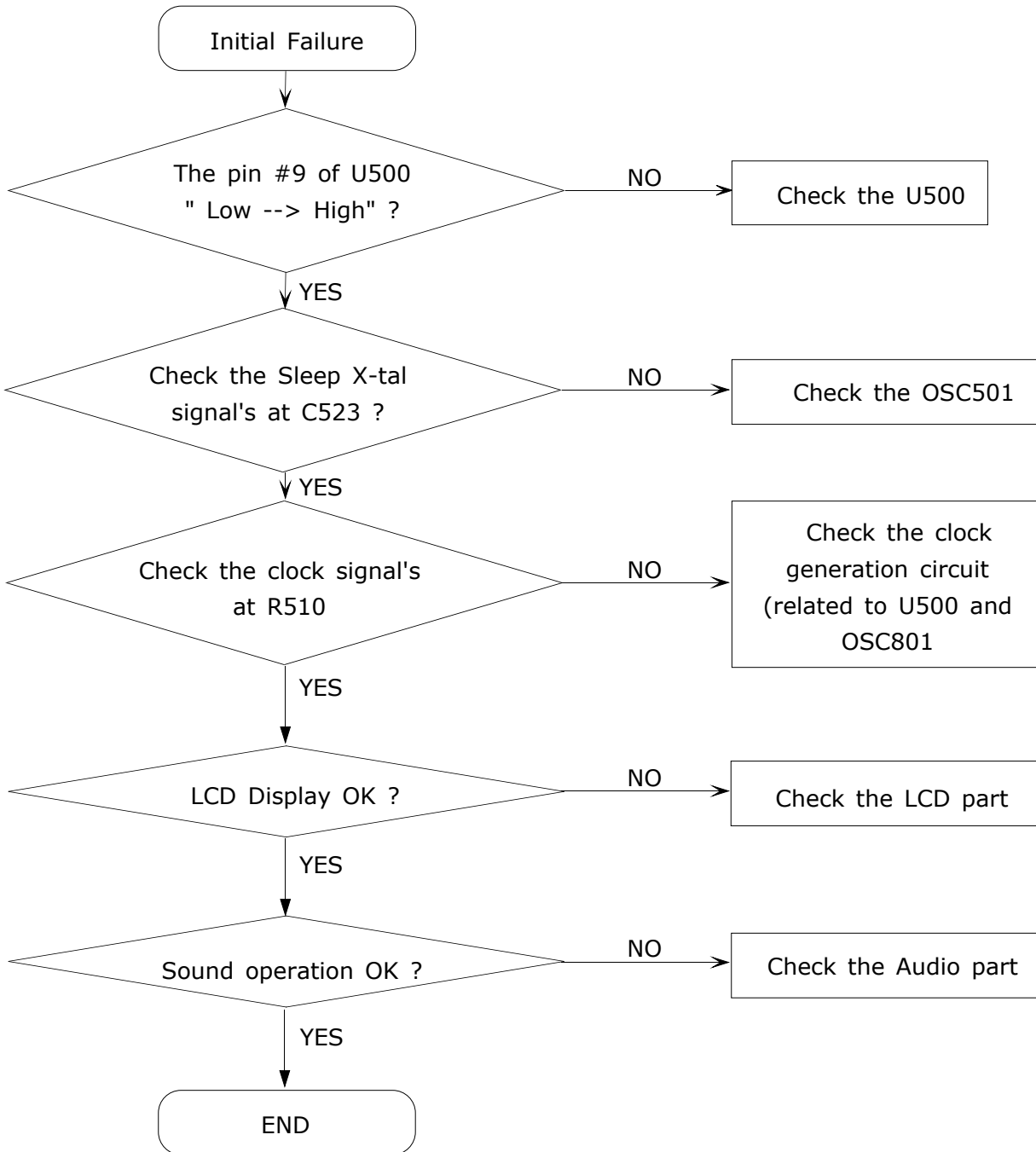
2. SGH-Z130 Flow Chart of Troubleshooting

2-1. Baseband

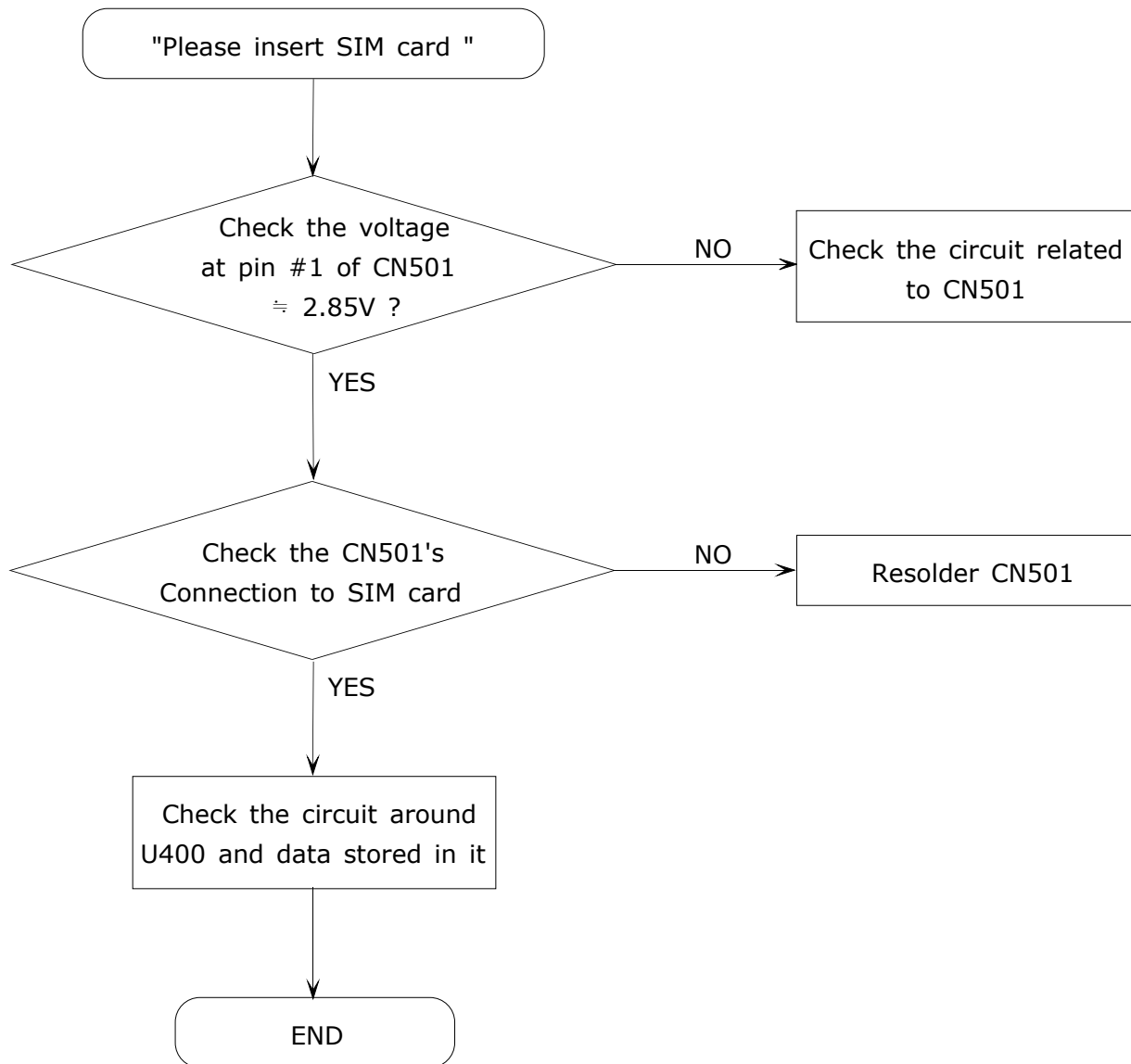
2-1-1. Power ON

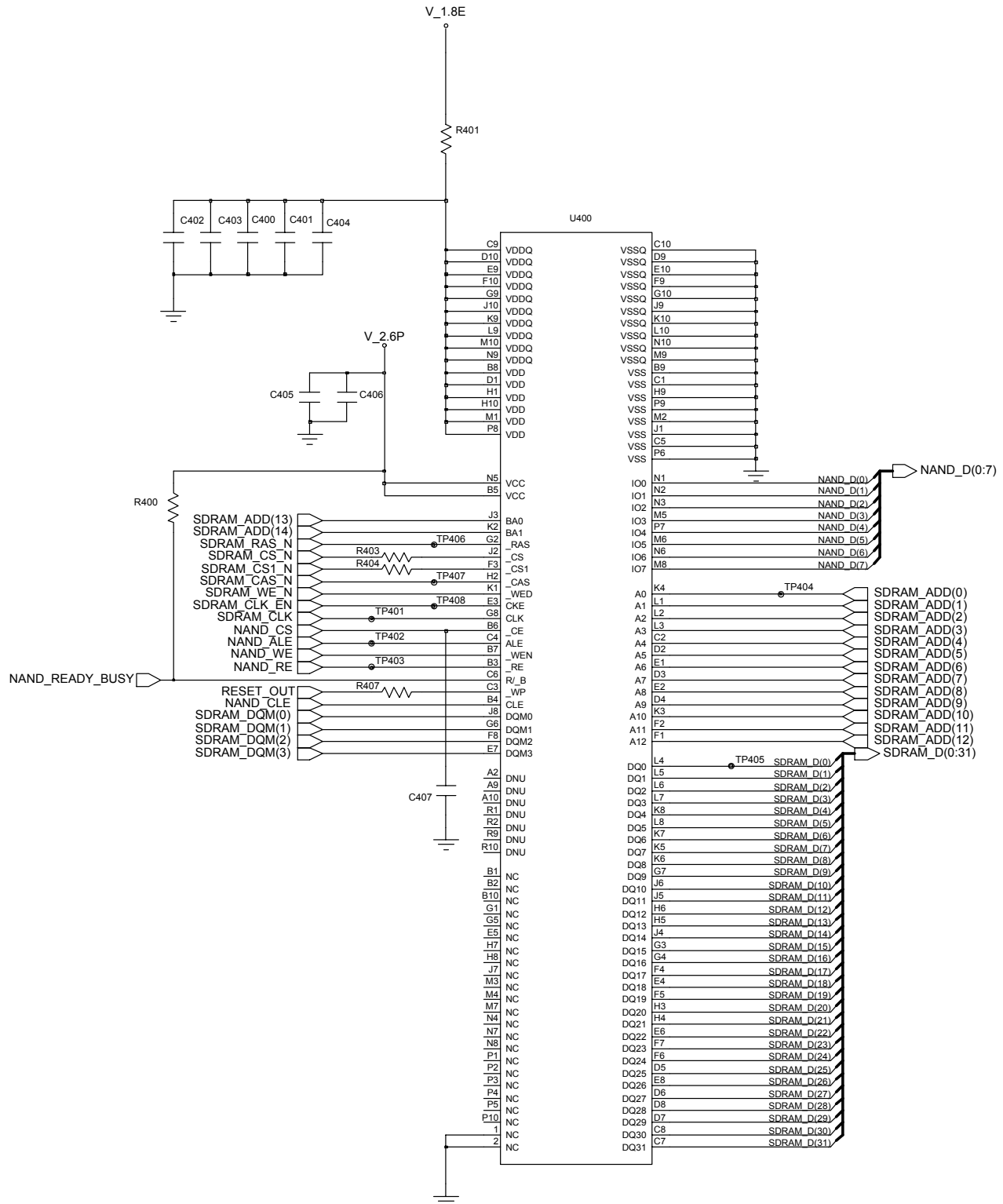


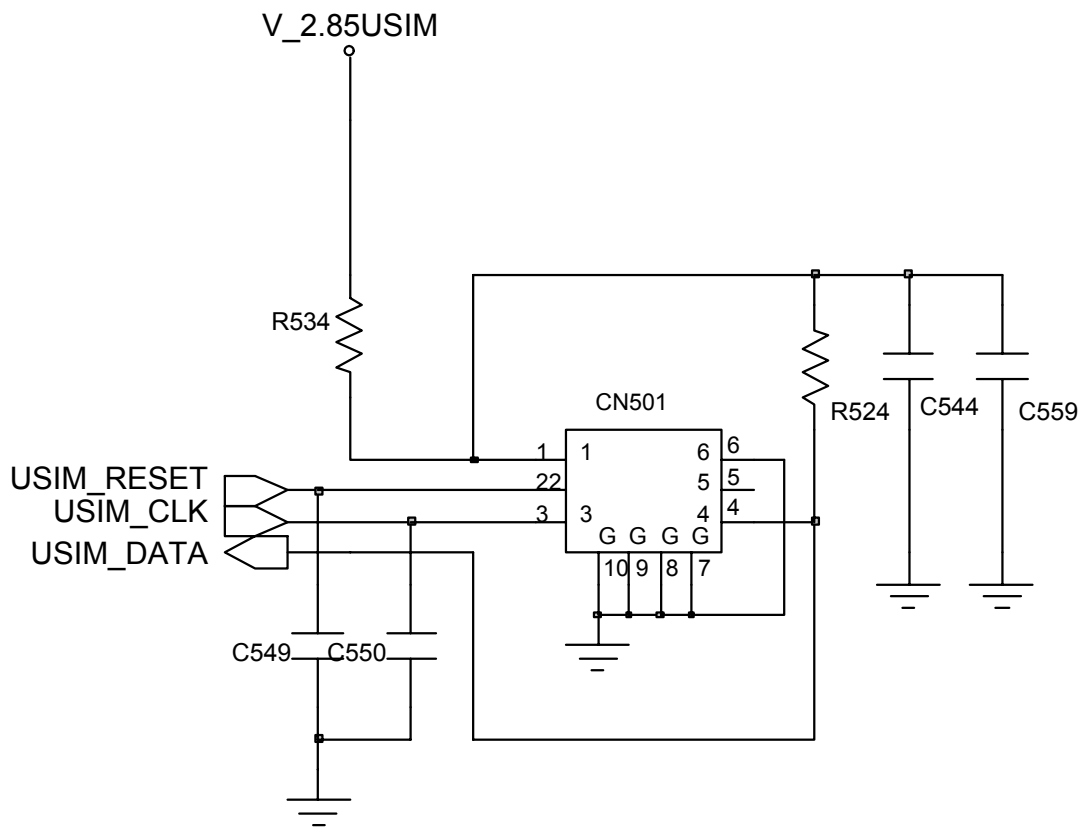


2-1-2. System Initial

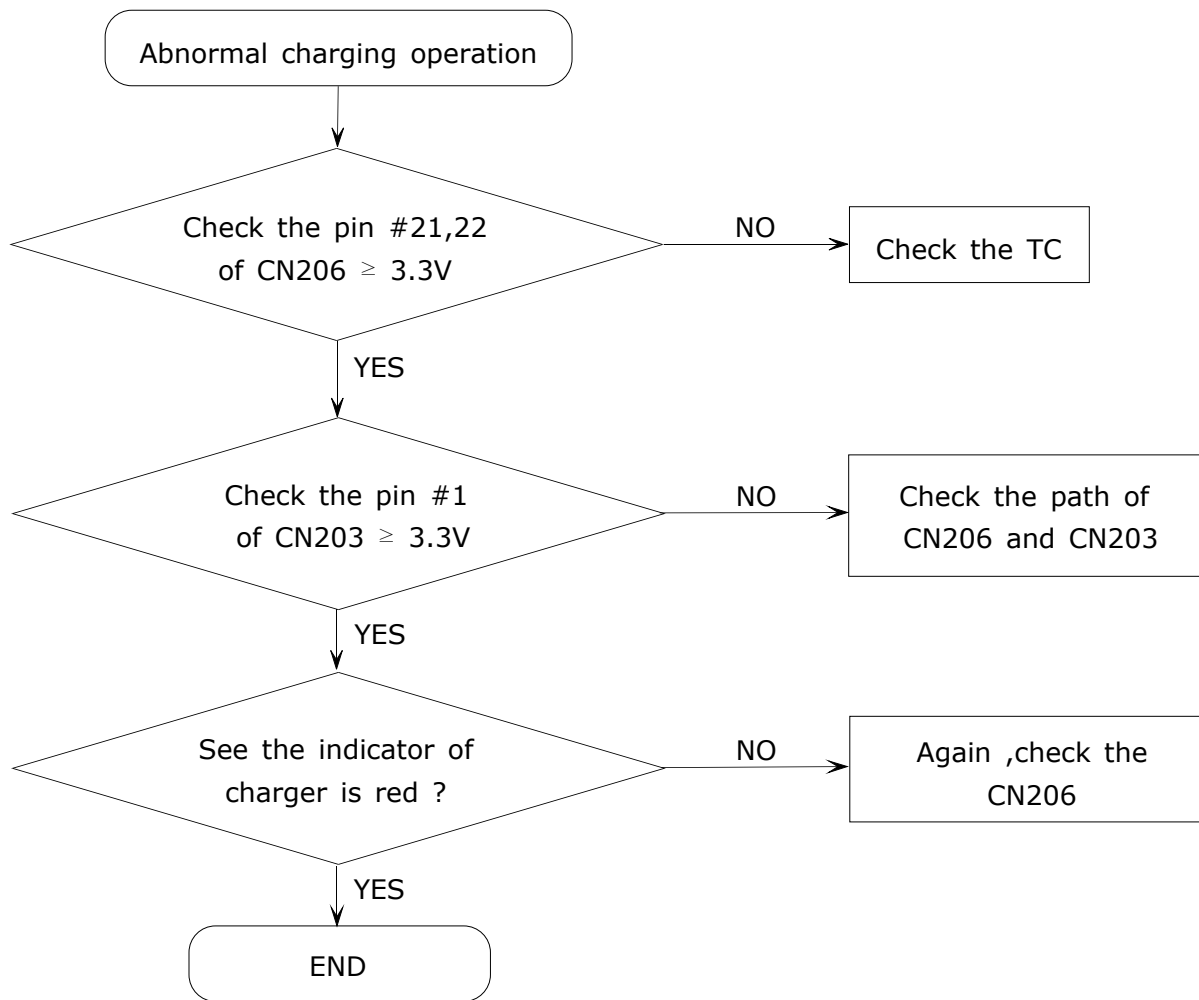
3. SIM Part

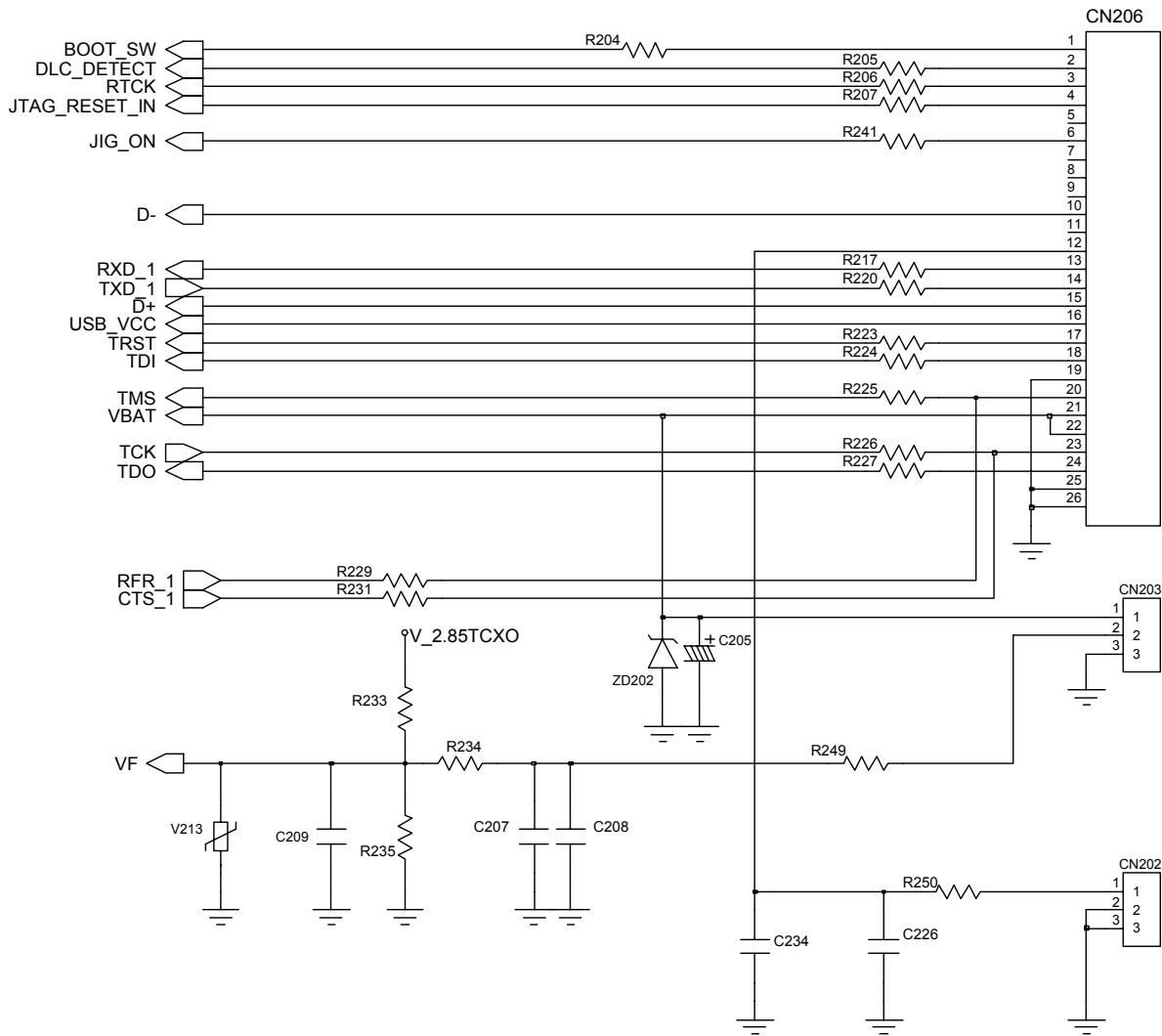




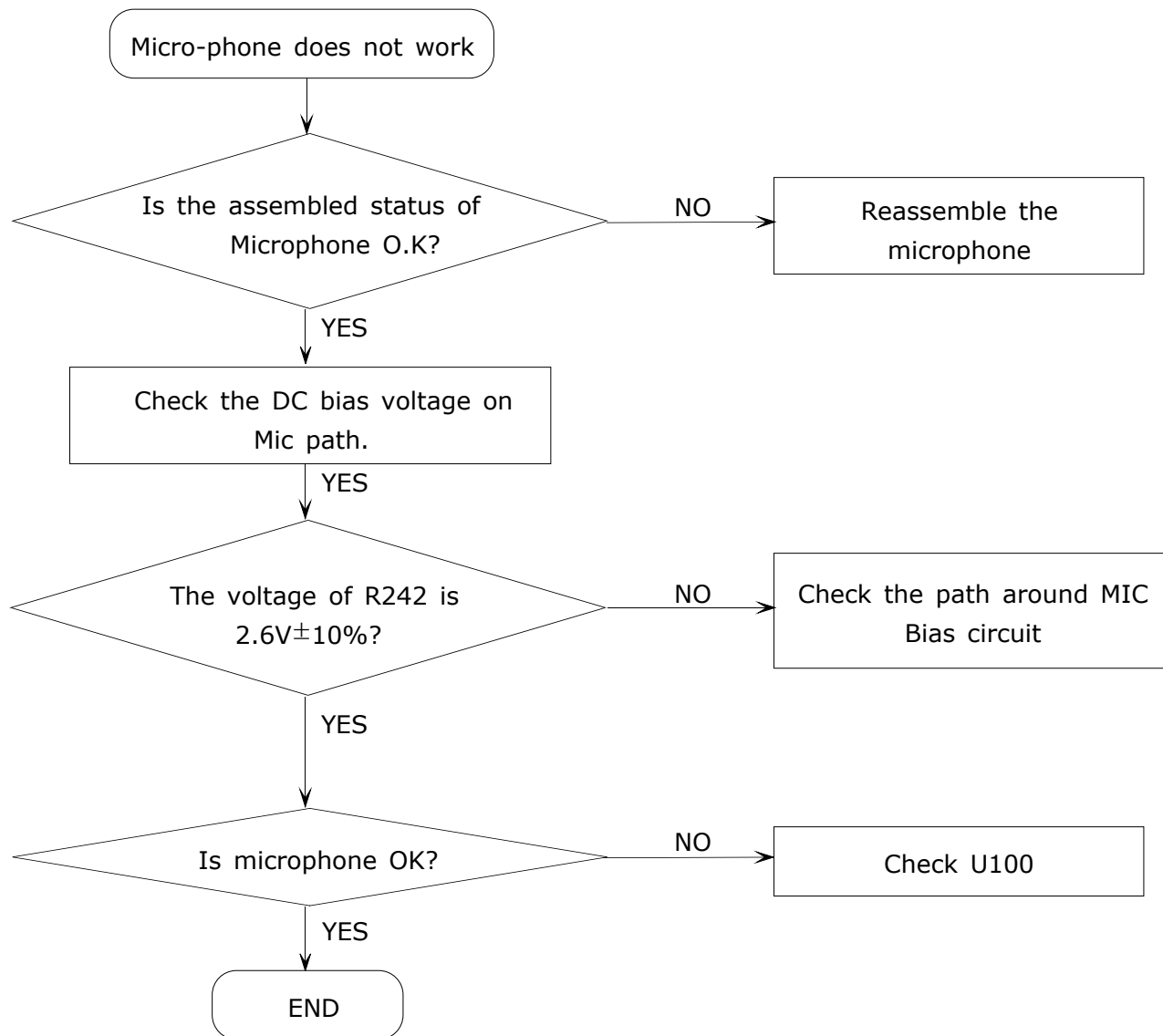


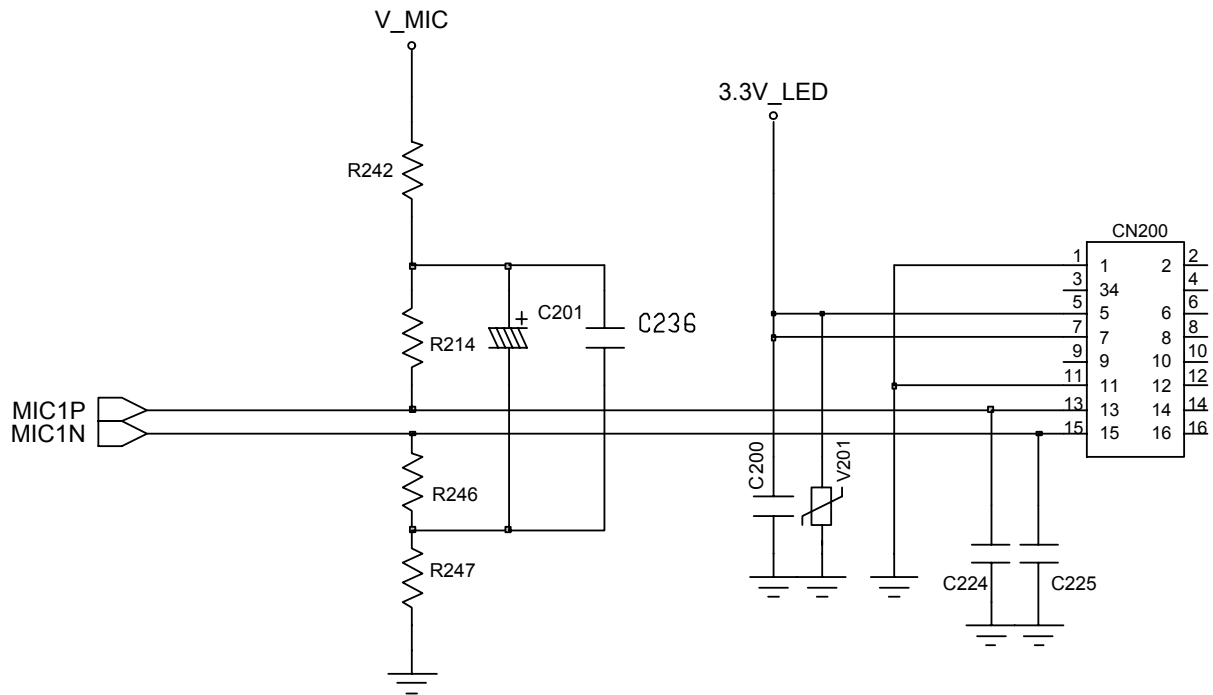
2-1-4. Charging Part

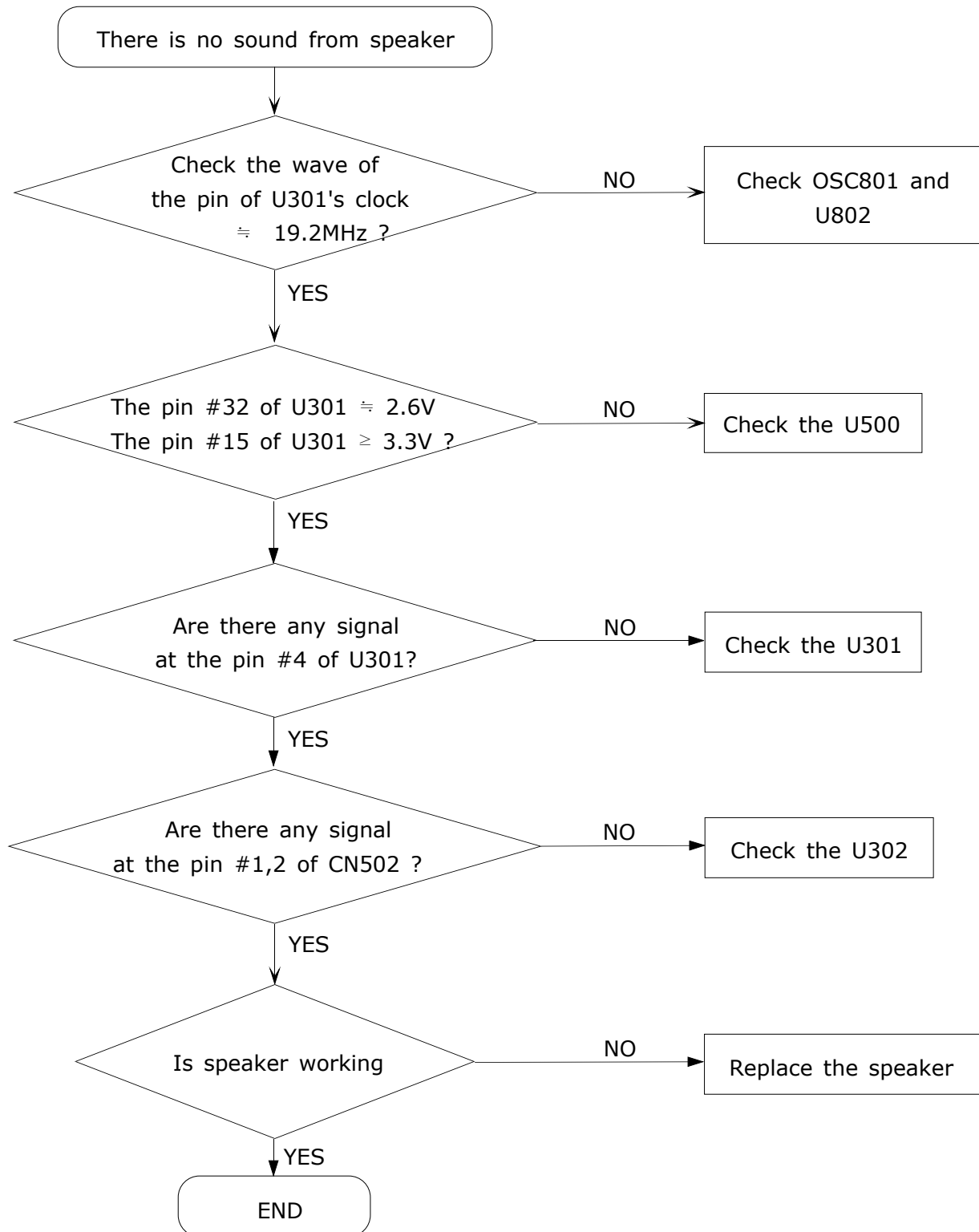


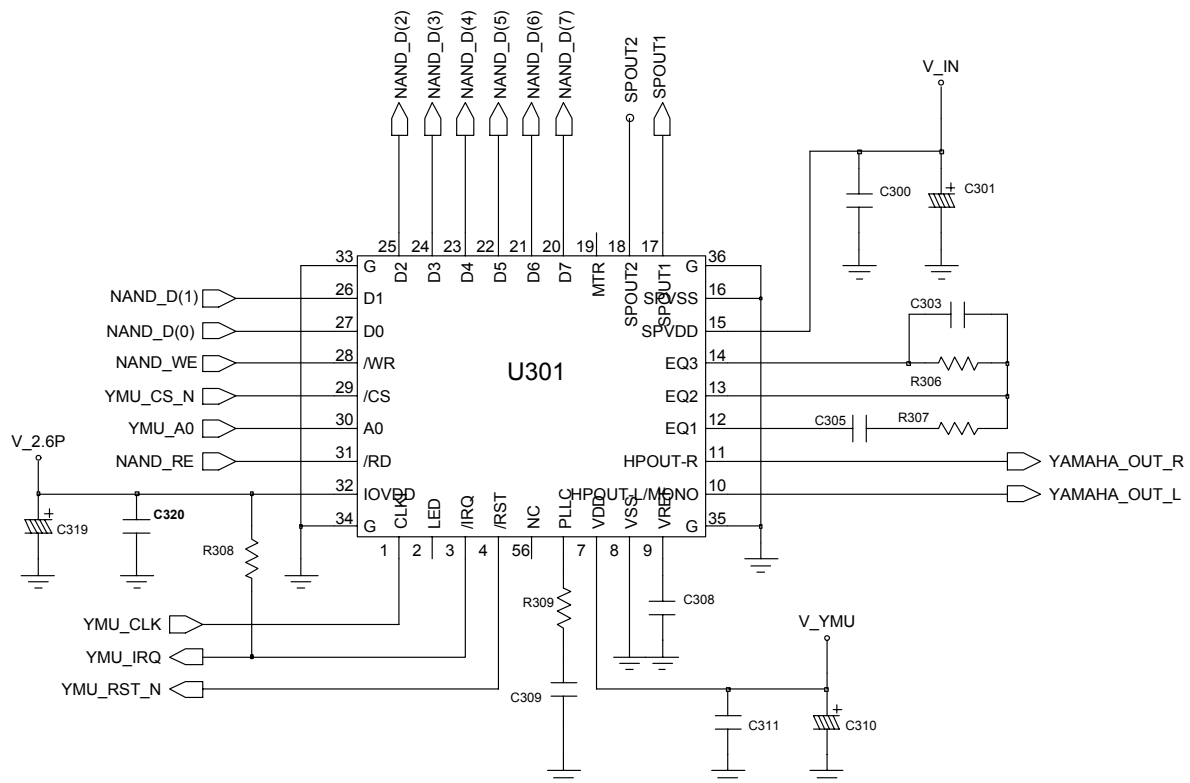


2-1-5. Microphone Part

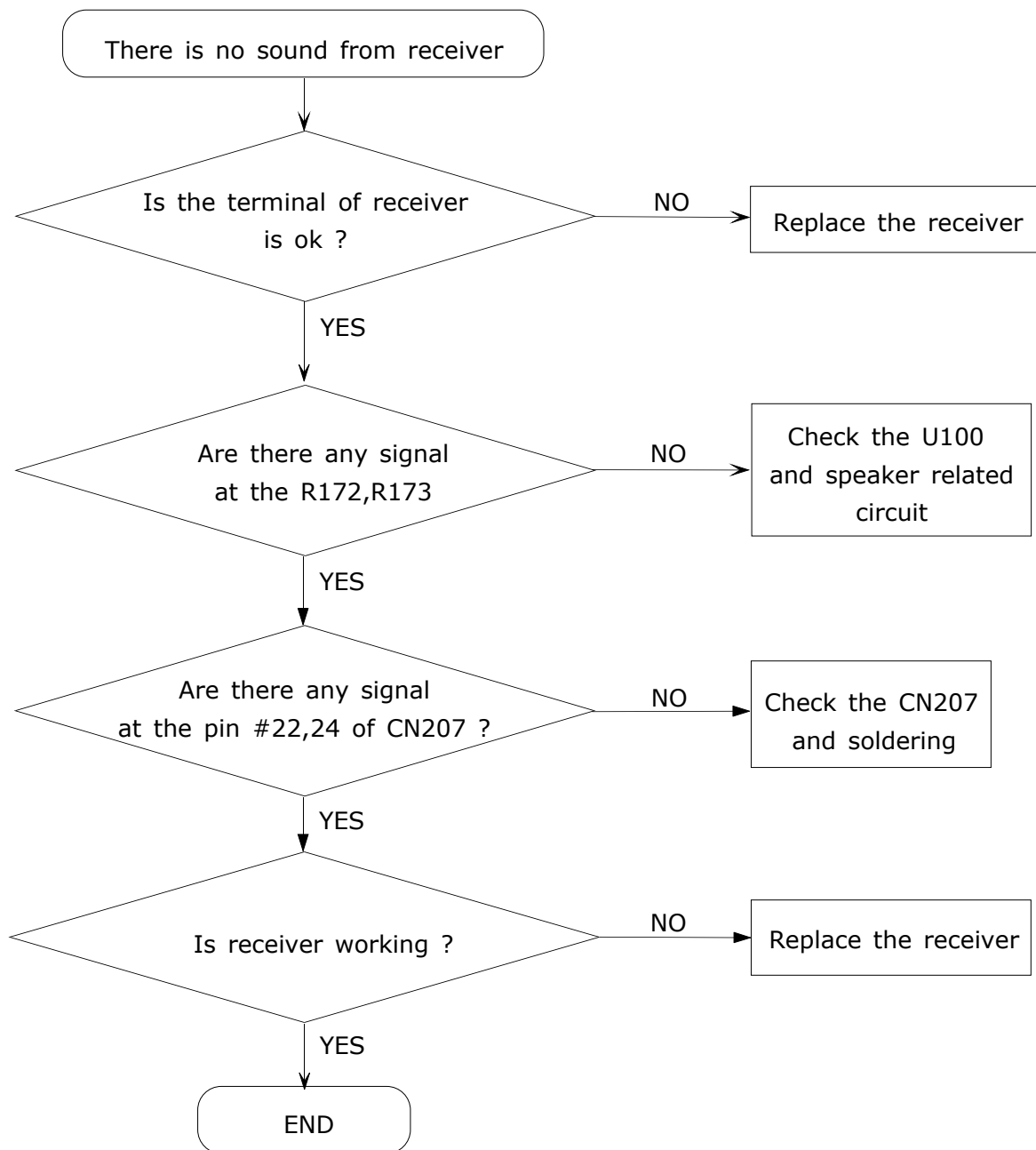


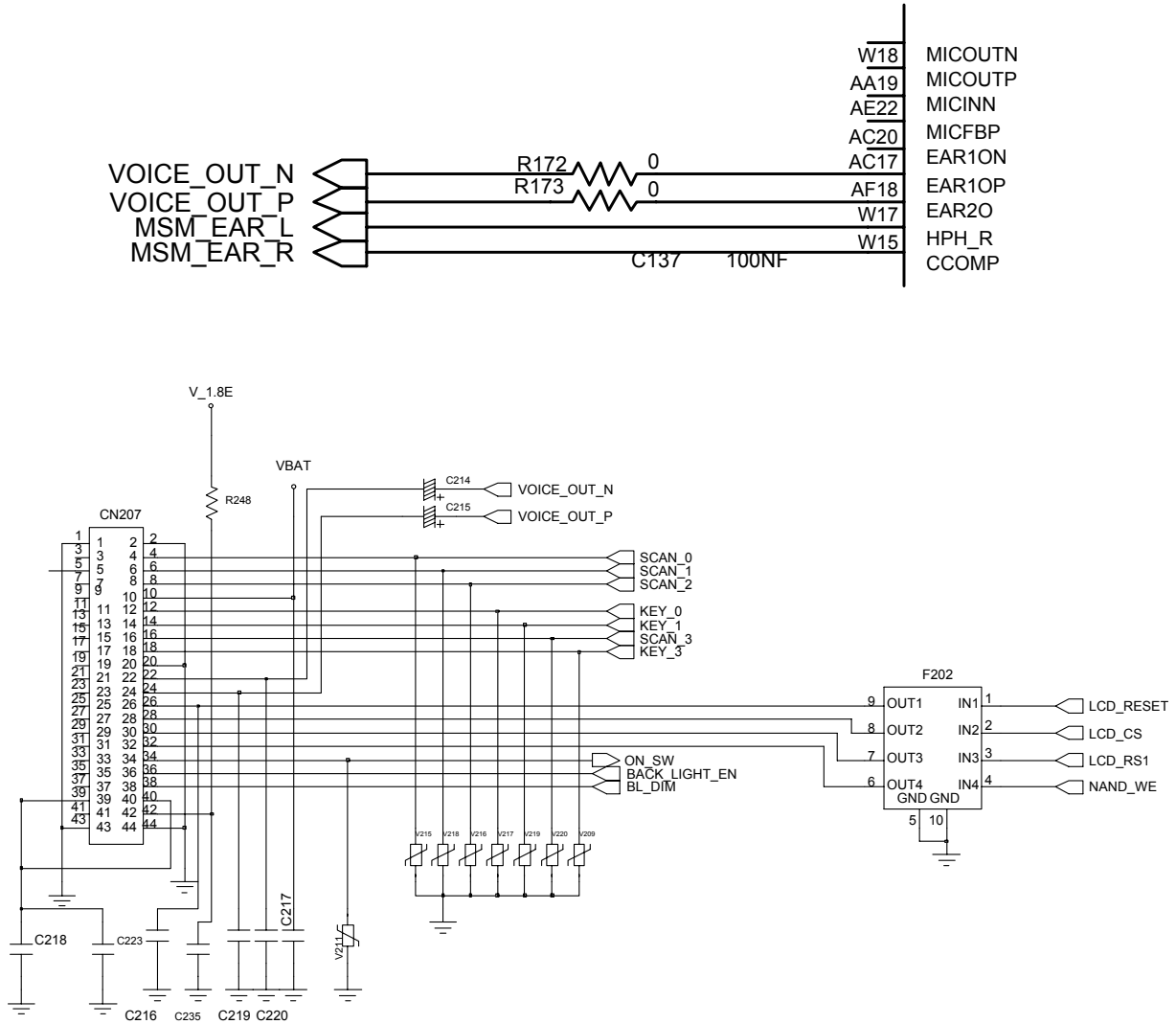


2-1-6. Speaker Part

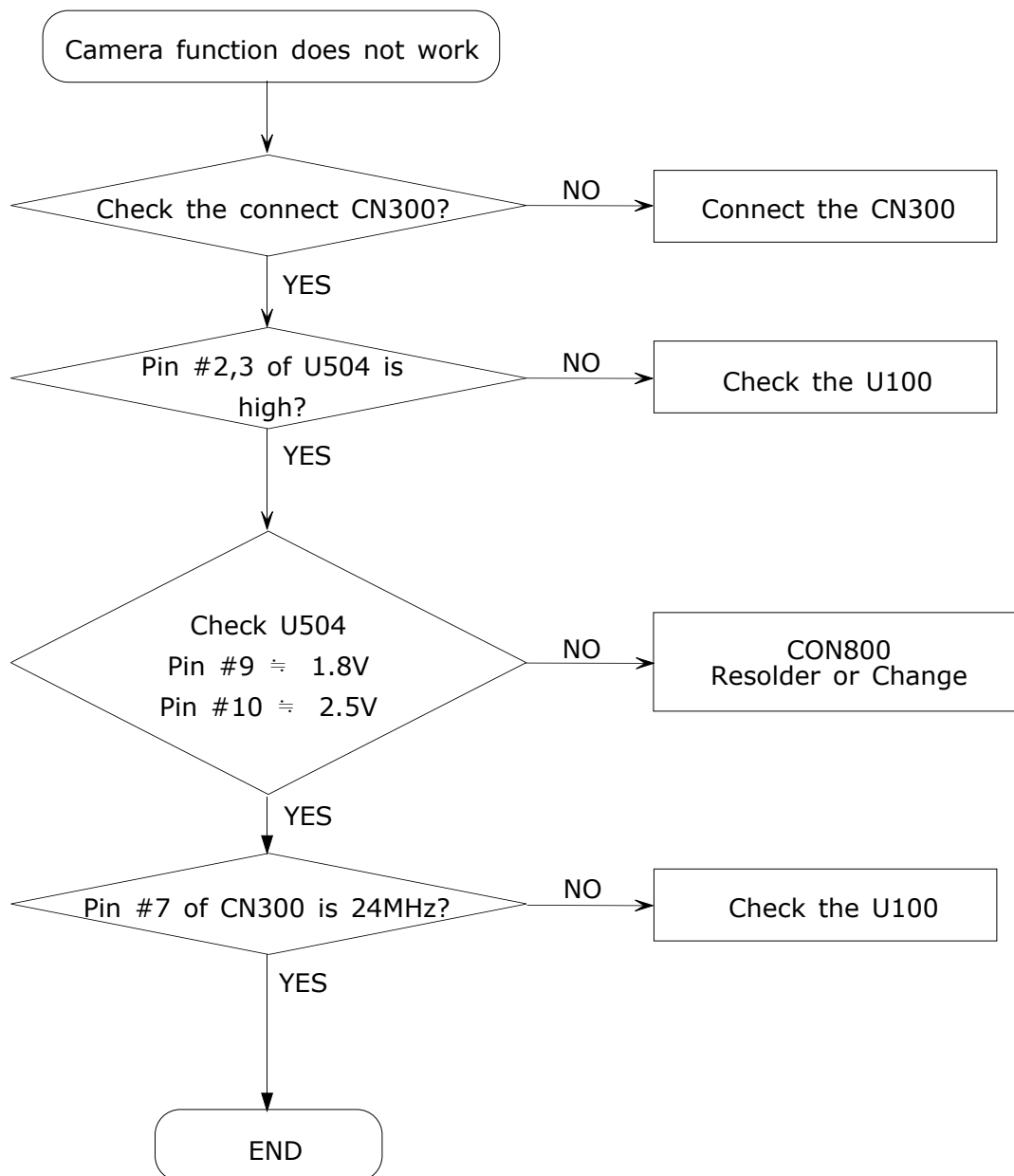


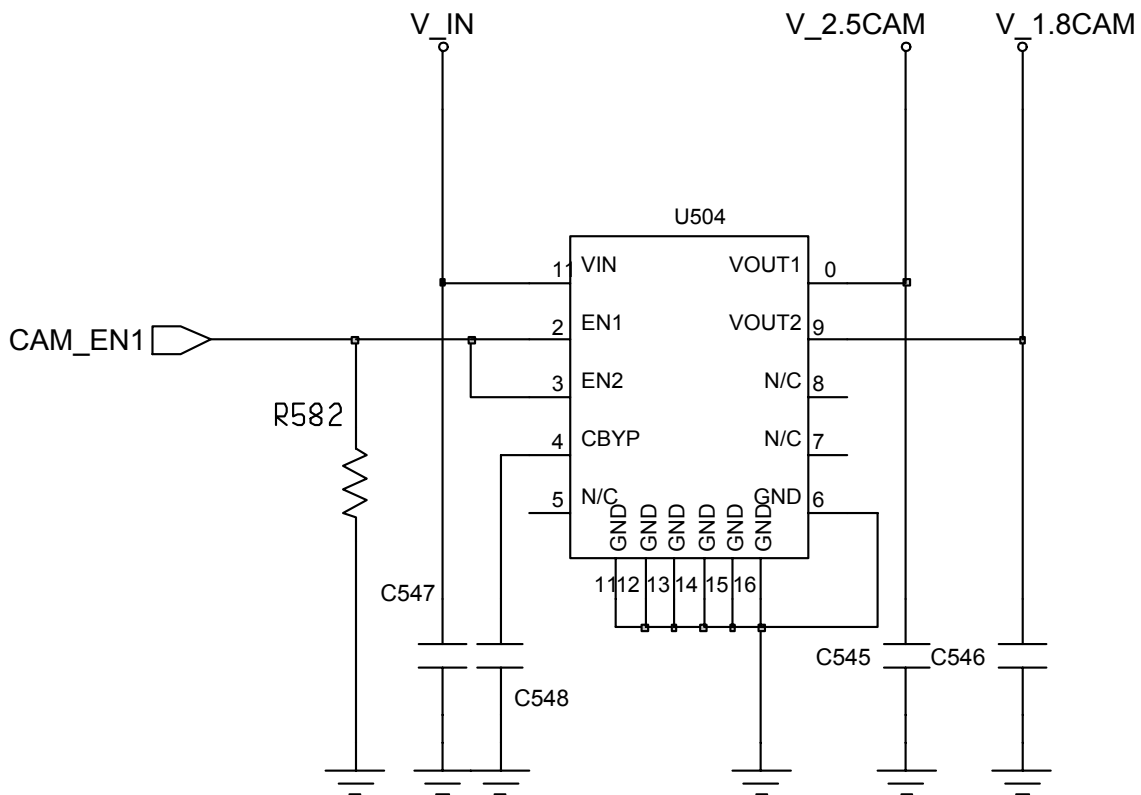
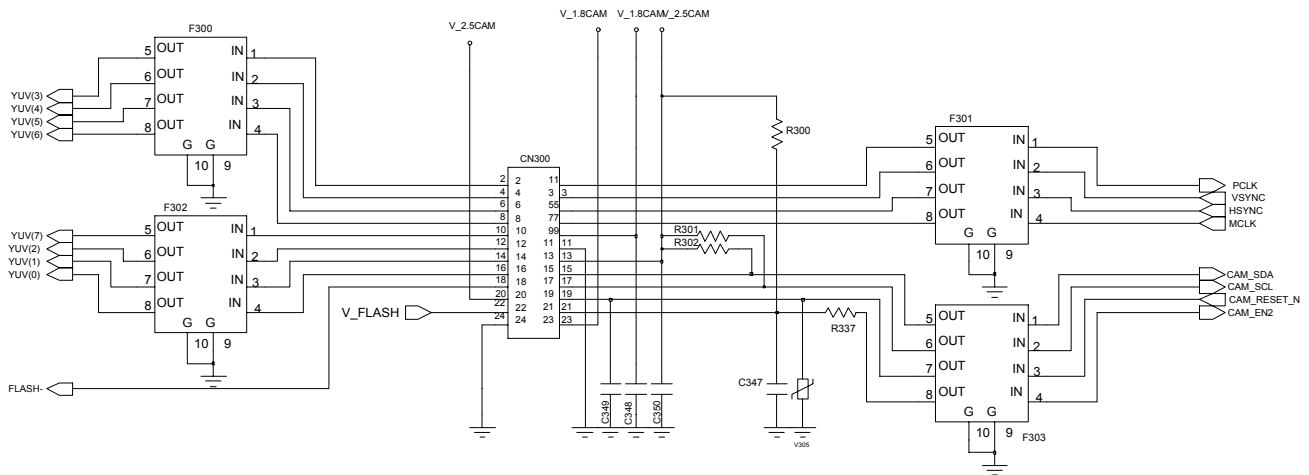
2-1-7. Receiver Part





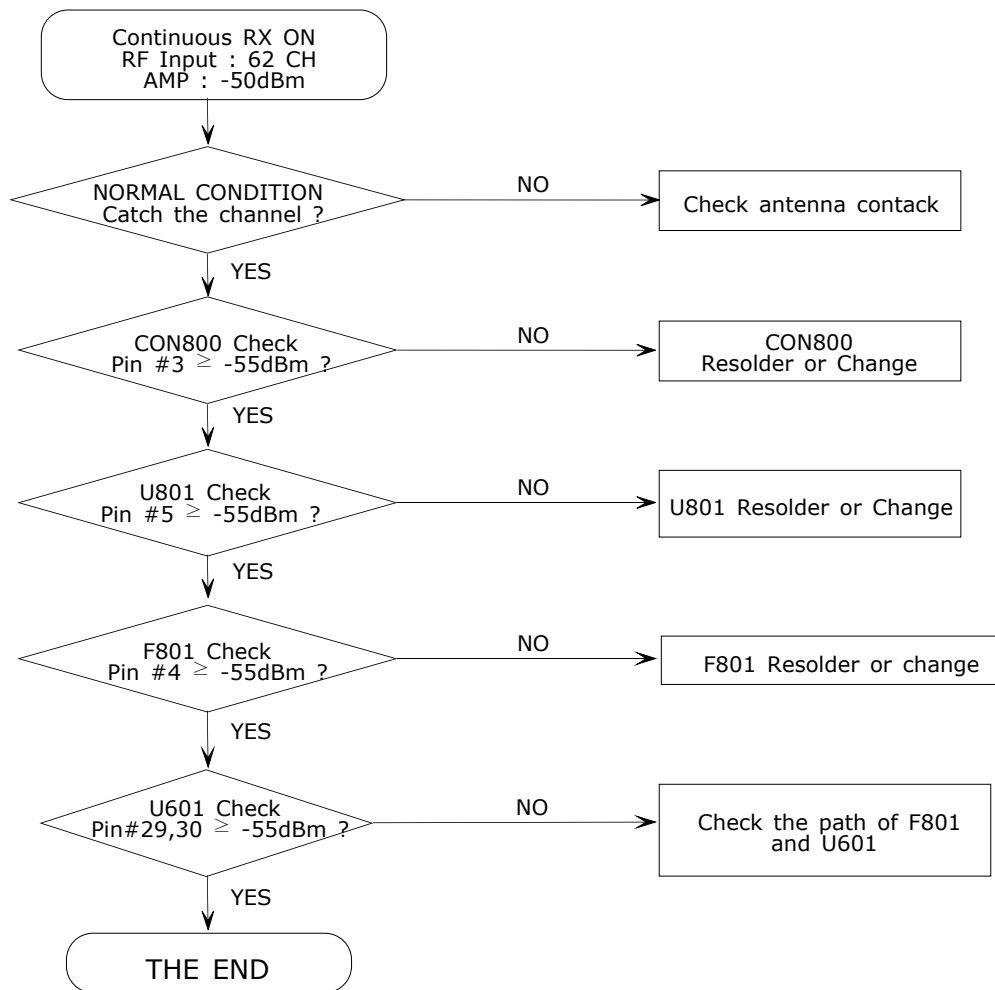
2-1-8. Camera Part



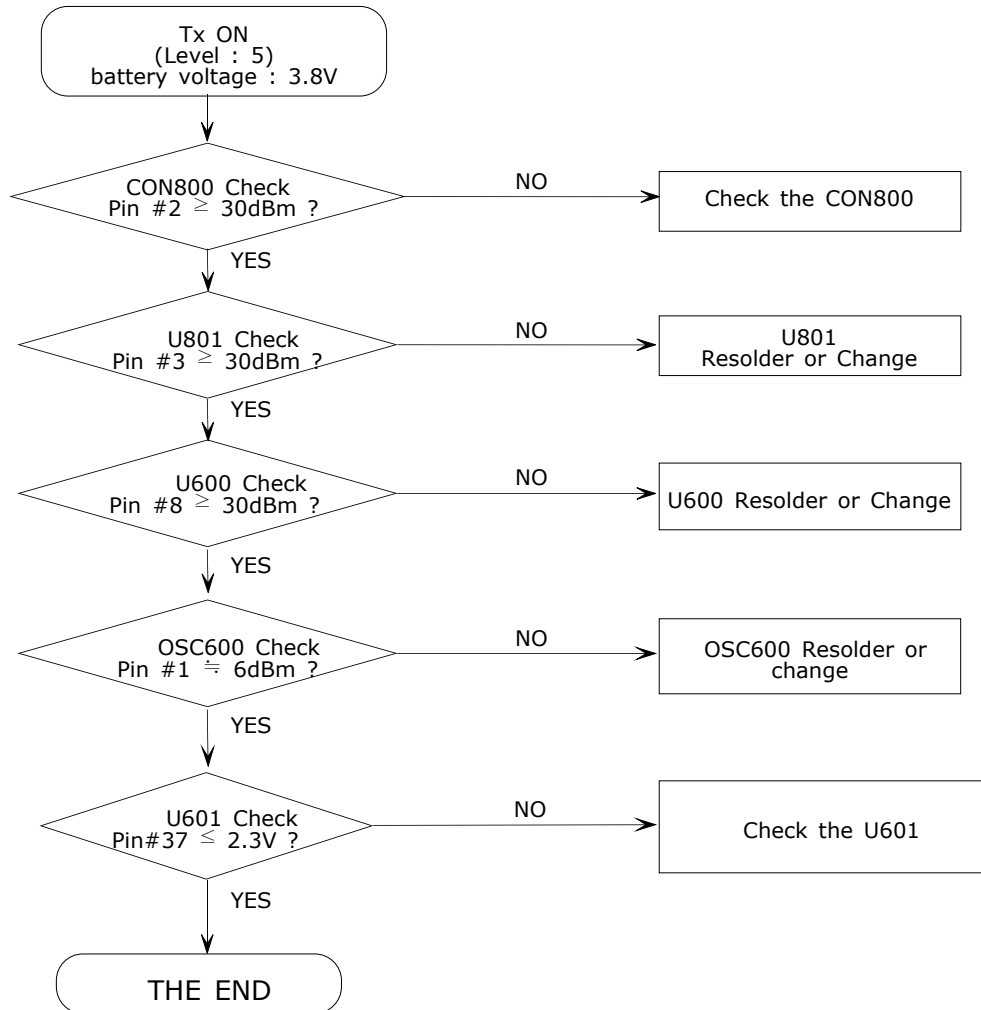


2-2.RF

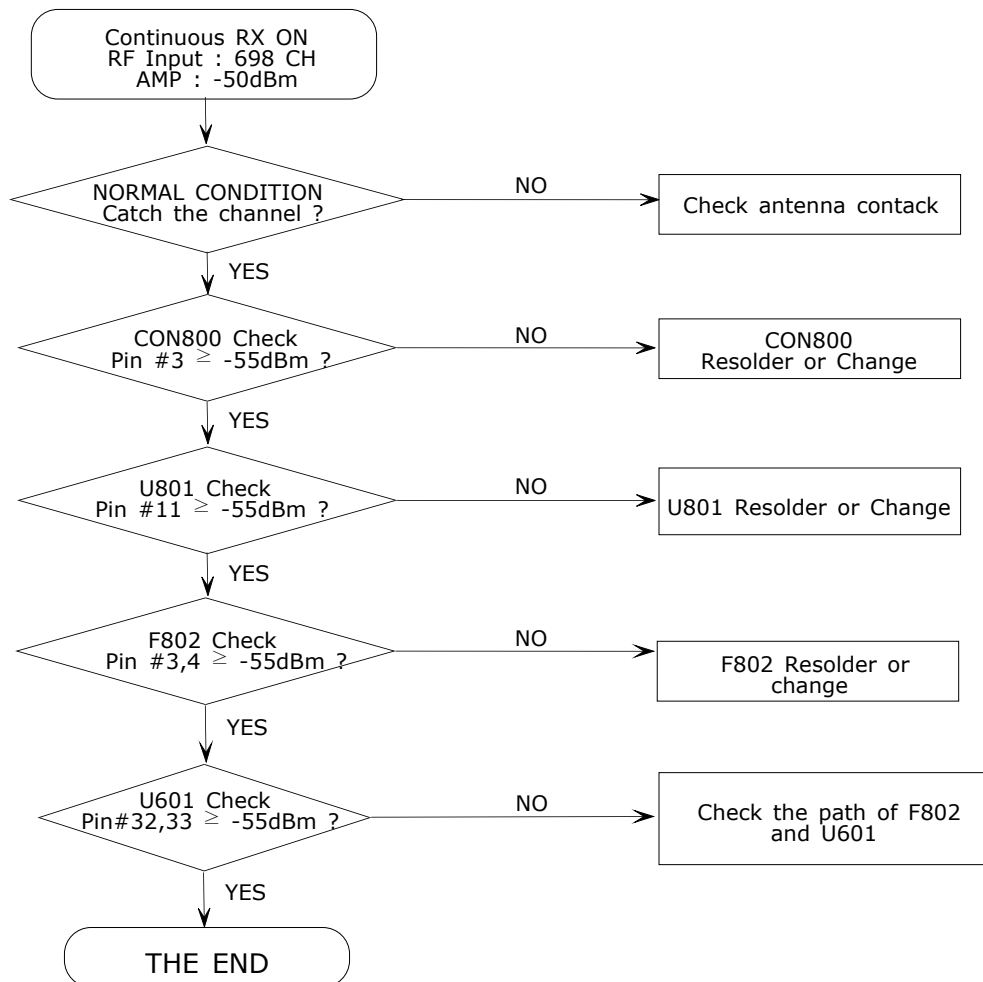
2-2-1. EGSM Receiver

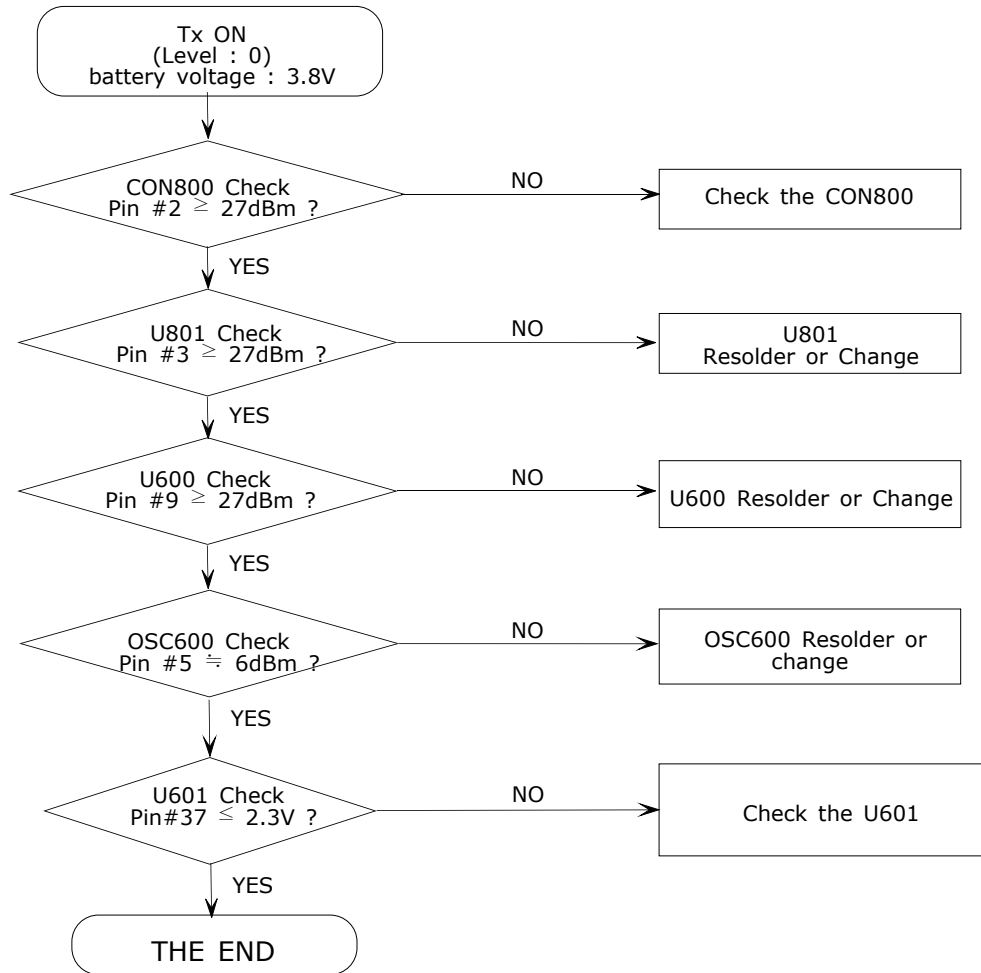


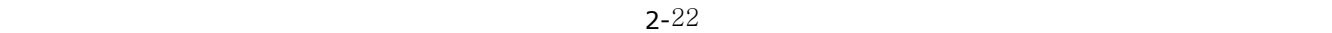
2-2-2. EGSM Transmitter

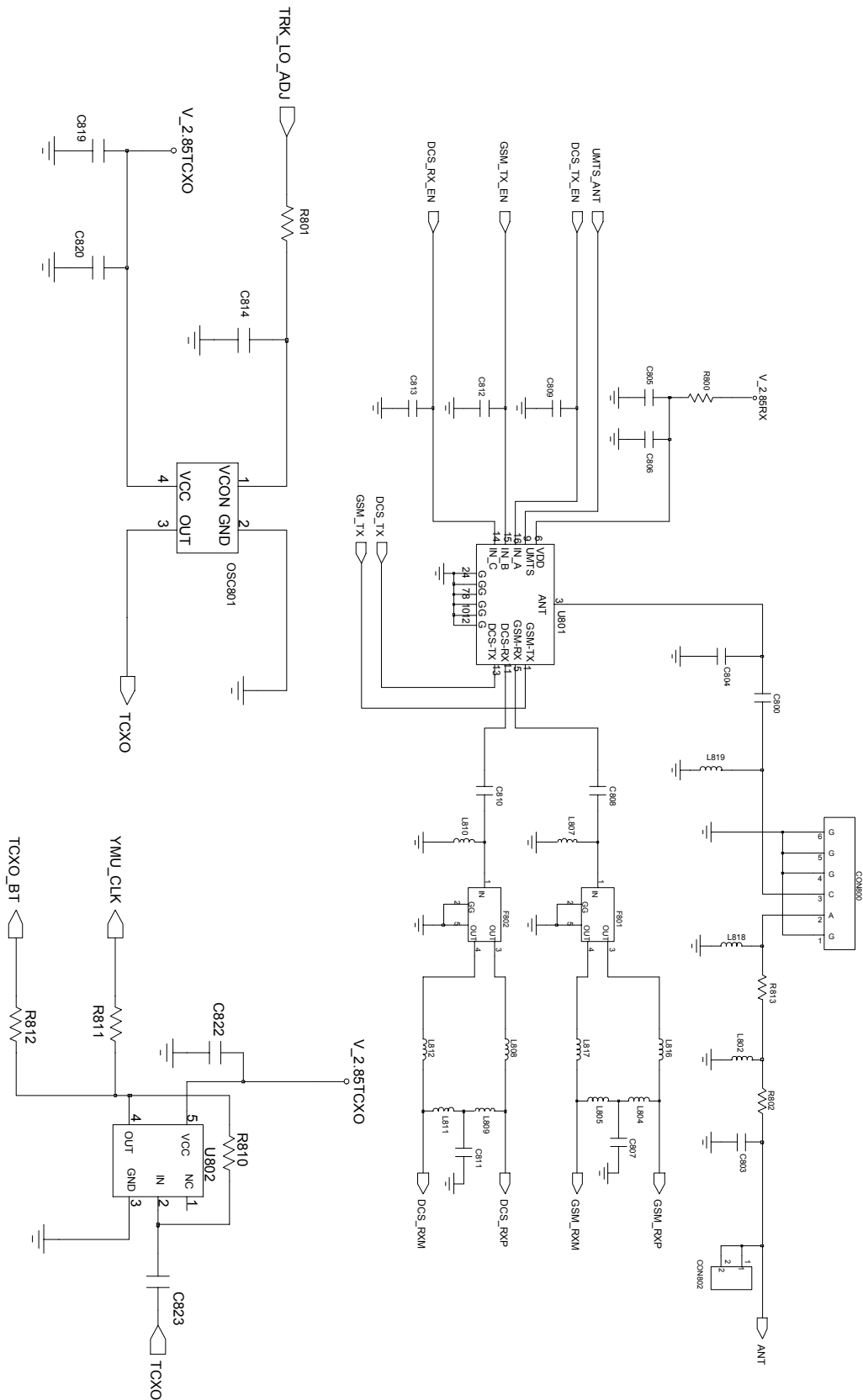


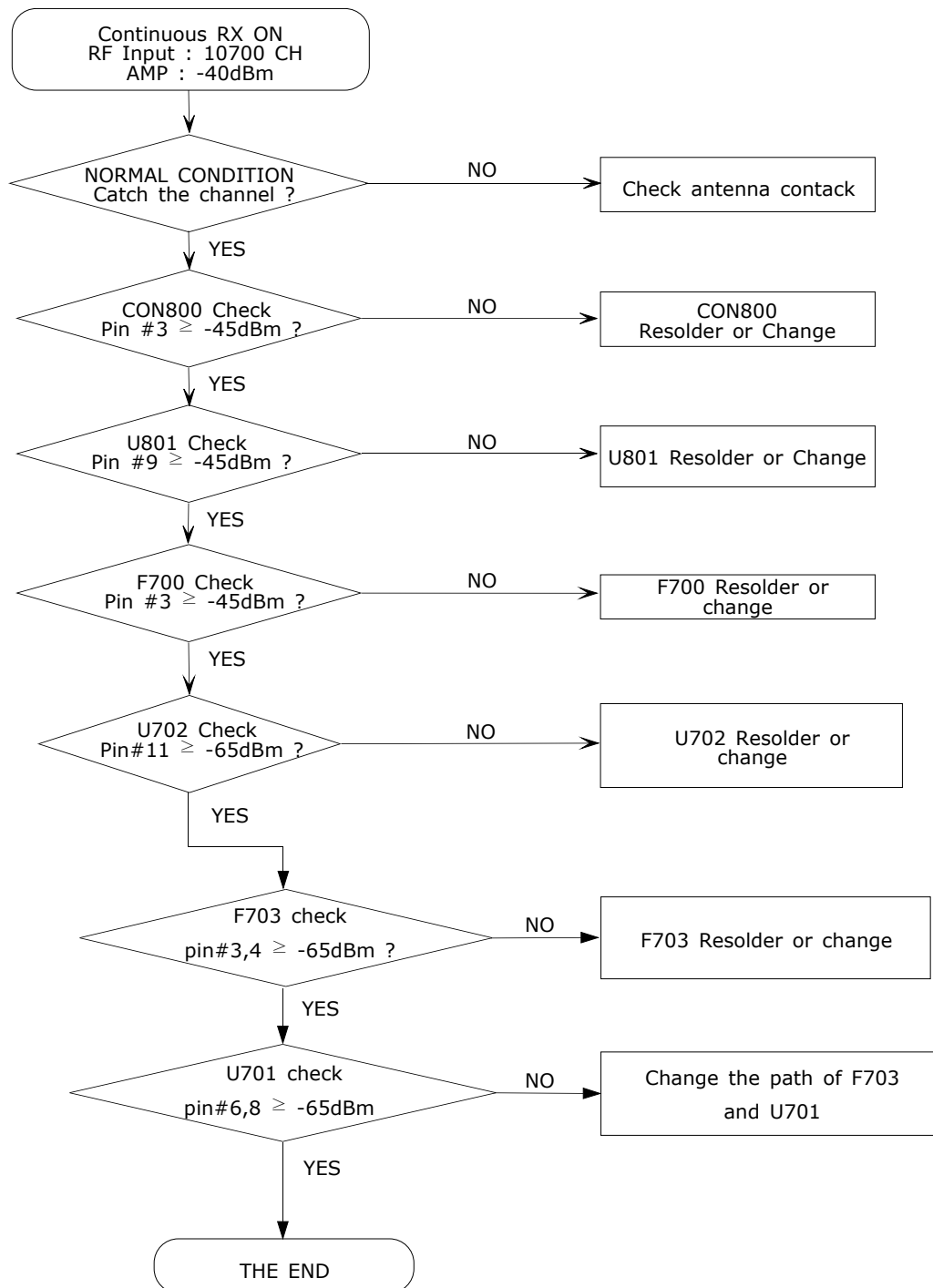
2-2-3. DCS Receiver



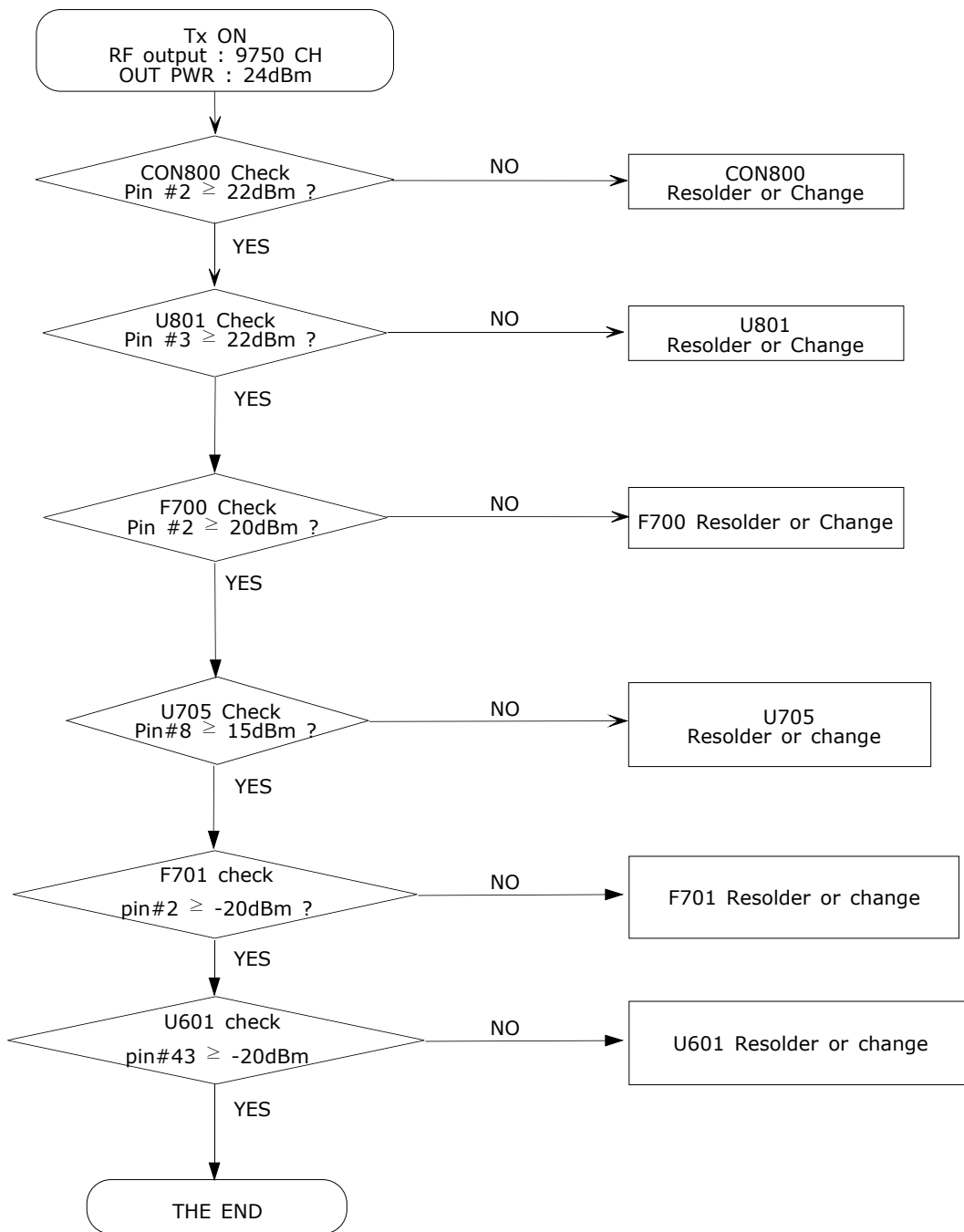
2-2-4. DCS Transmitter

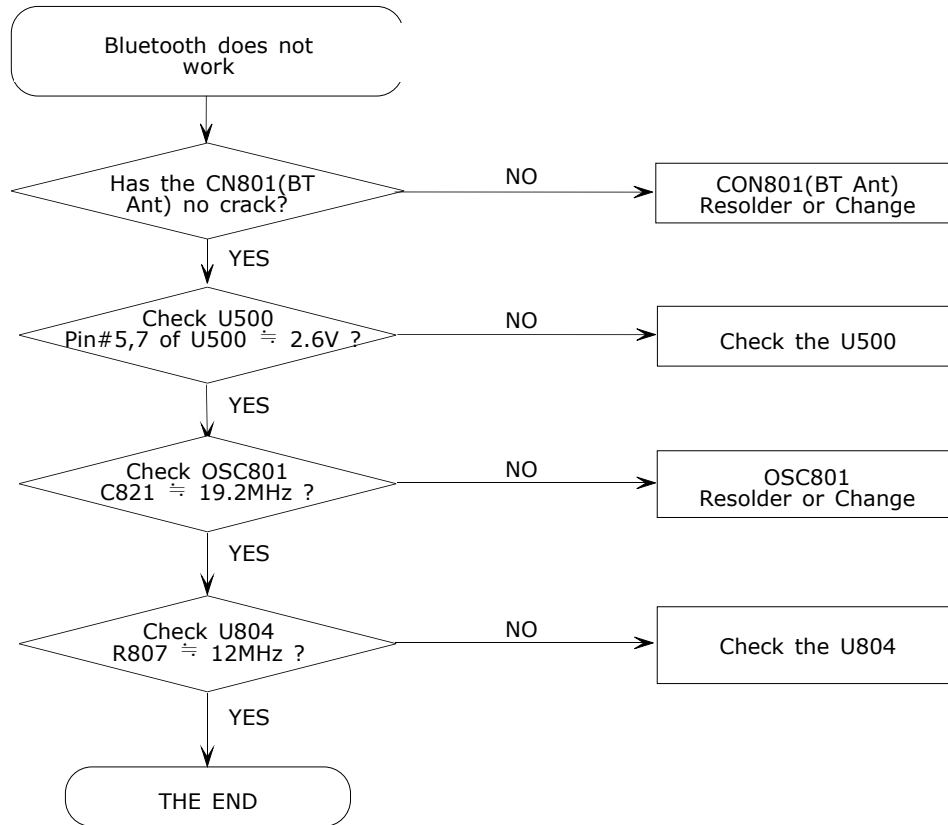


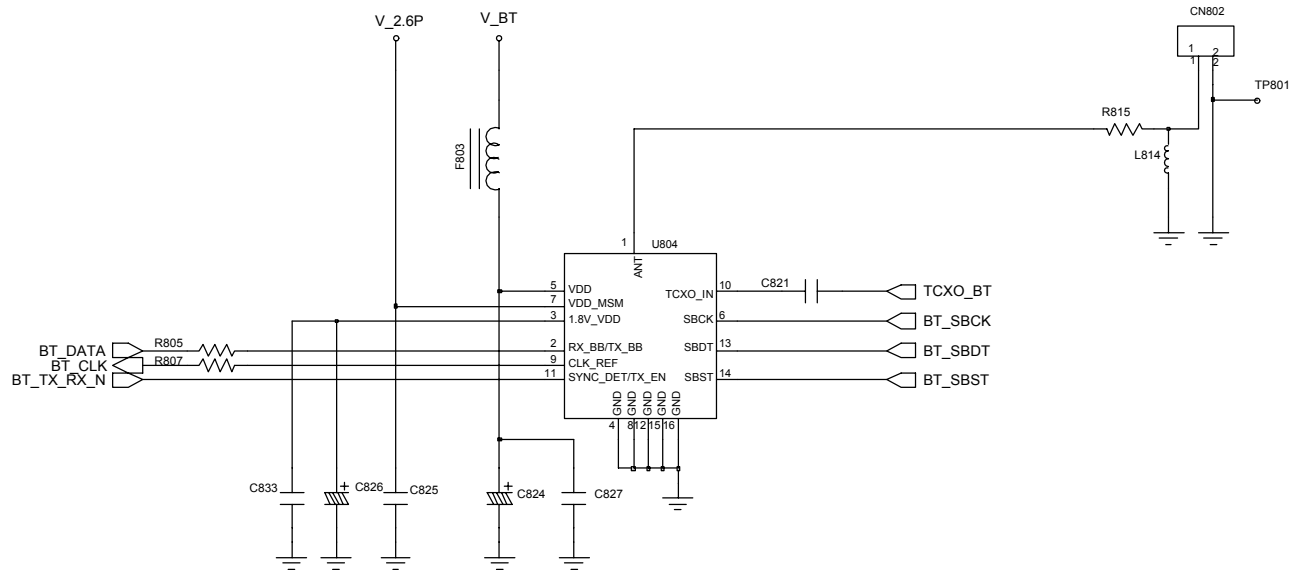


2-2-5. UMTS Receiver

2-2-6. UMTS Transmitter

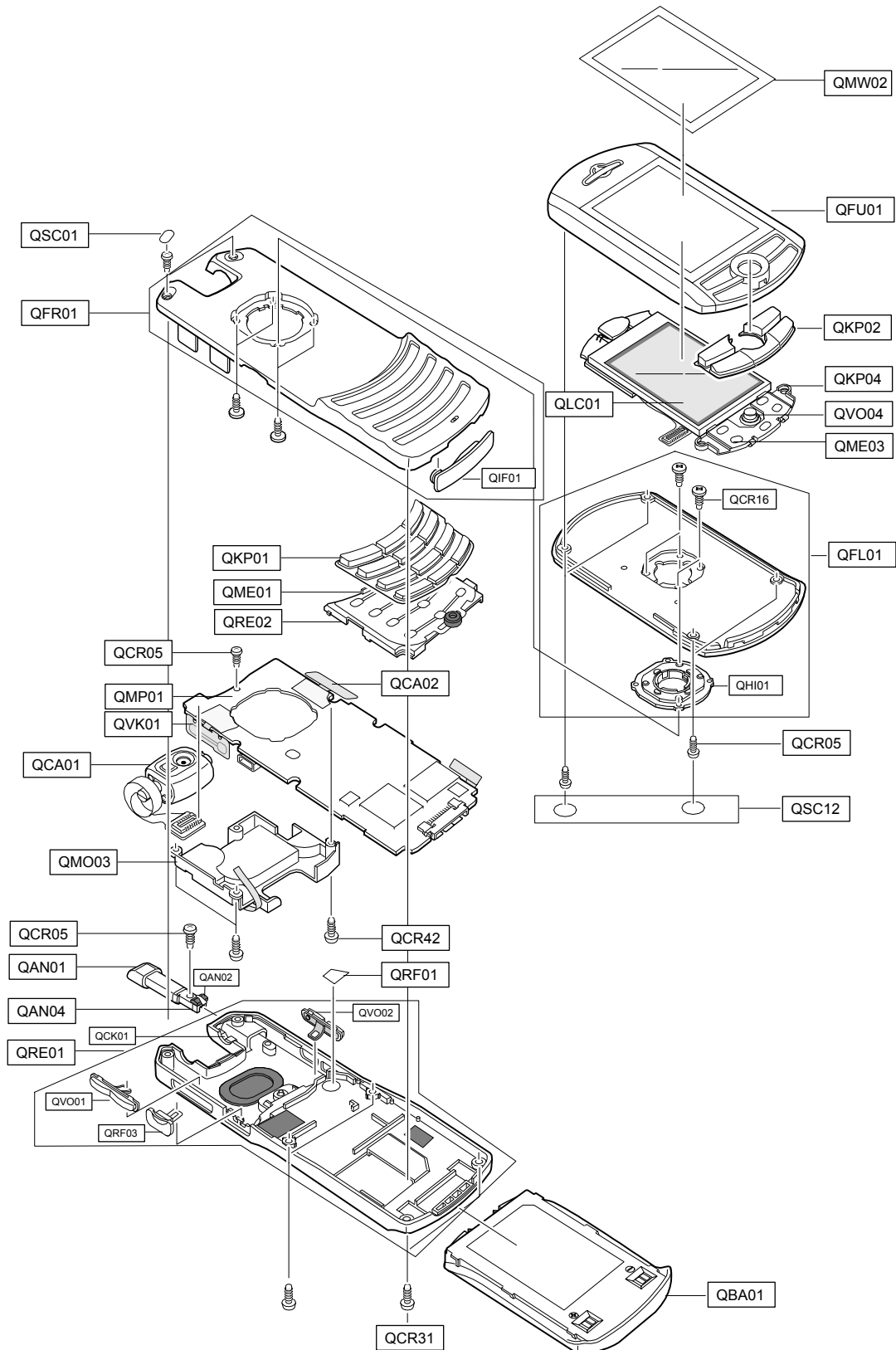


2-2-7. BLUETOOTH



3. SGH-Z130 Exploded View and Parts List

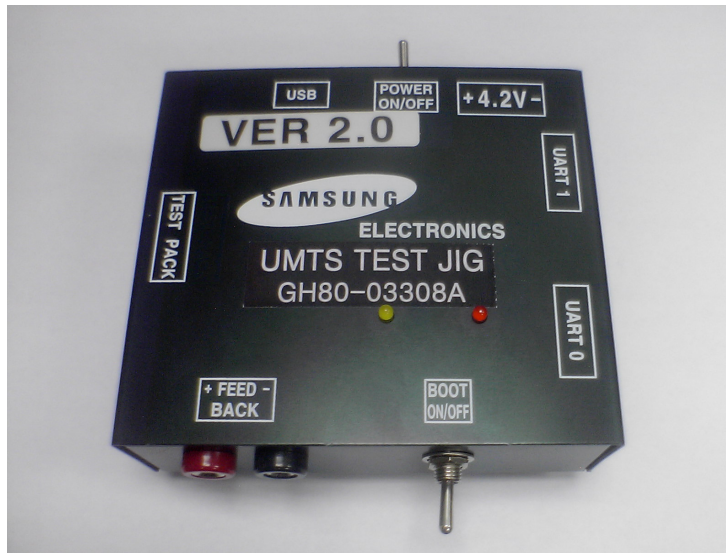
3-1. Cellular phone Exploded View



3-2. Cellular phone Parts list

Location NO.		Description	SEC CODE	Remark
QMW02		MAIN WINDOW	GH72-18341B	T-Mobile
QMW02		MAIN WINDOW	GH72-18341A	Open
QFU01		FOLDER UPPER	GH75-05882B	
QKP02		KEYPAD SUB	GH75-05911A	
QME03		UNIT LCD KEY	GH59-01830A	
QLC01		LCD	GH07-00637A	T-Mobile
QLC01		LCD	GH07-00674A	Open
QVO04		JOG KEY	GH75-06239A	
QKP04		KEY FUN BRACKET	GH72-18747A	
QFL01		FOLDER LOWER	GH75-05881B	T-Mobile
QFL01		FOLDER LOWER	GH75-06615A	Open
	QCR16	SCREW MACHINE	6001-001823	
	QHI01	HINGE	GH75-05883A	
QSC12		FOLDER SCREW CAP	GH74-12092B	
QSC01		PC SHEET A	GH74-11804B	
QFR01		FRONT COVER	GH75-05876B	
	QIF01	IF COVER	GH72-18270A	
QKP01		KEYPAD MAIN	GH75-05912B	
QME01		UNIT KEYPAD	GH59-01857A	
QRE02		REAR SHIELD	GH71-04454A	
QCA02		UNIT SIDE KEY	GH59-01846A	
QMP01		MAIN PBA	GH92-01967A	
QVK01		UNIT VOLUME KEY	GH59-01845A	
QCA01		UNIT CAMERA	GH59-01816A	
QMO03		UNIT SPK_MOT FPC	GH59-01862A	
QCR05		SCREW MACHINE	6001-001478	
QAN01		ANTENNA	GH42-00514A	
QAN02		ANTENNA RUBBER	GH73-03950A	
QAN04		ANTENNA CONTACT	GH71-04702A	
QRE01		REAR COVER	GH75-05878B	
	QVO02	KEY SIDE	GH75-05885A	
	QVO01	KEY VOL	GH75-05884A	
	QRF03	EAR JACK COVER	GH72-18276A	
	QCK01	CAM TILT BRK	GH75-05935A	
QBA01		BATTERY	GH43-01581B	
QRF01		RF COVER	GH74-11802B	
QCR42		SCREW MACHINE	6001-001300	
QCR31		SCREW MACHINE	6001-001795	

3-3. Test Jig GH80-03308A



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



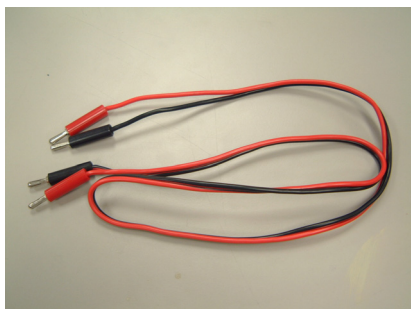
3-3-2. Test Cable
GH39-00337E



3-3-3. Serial Cable



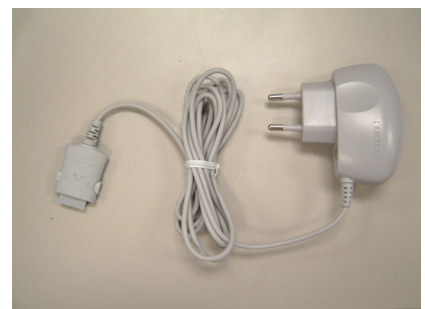
3-3-4. Power Supply Cable



3-3-5. PC Data Link Cable
GH39-00326A



3-3-6. TC
GH44-00701A



4. SGH-Z130 MAIN Electrical Parts List

SEC Code	Design LOC
GH92-01967A	Main PBA
0403-001387	ZD202
0404-001172	D100
0404-001172	D101
0406-001150	ZD400
0406-001150	ZD401
0406-001150	ZD402
0406-001150	ZD403
0406-001150	ZD404
0406-001150	ZD405
0406-001200	ZD203
0406-001208	ZD204
0406-001208	ZD206
1405-001108	V502
0407-000115	D501
0407-001002	ZD501
0504-000168	Q500
0504-000168	Q502
0504-000168	Q504
0504-000168	Q505
0504-001113	Q702
0505-001131	Q701
0505-001217	Q501
0801-002345	U802
1001-001261	U304
1001-001288	U801
1009-001018	U104
1009-001018	U106
1108-000005	U400
1201-001984	U702
1201-002219	U705
1201-002223	U600
1201-002233	U302
1203-002860	U501
1203-003046	U200

SEC Code	Design LOC
1203-003169	U502
1203-003322	U504
1203-003335	U500
1204-002138	U301
1205-002297	U701
1205-002300	U601
1205-002527	U100
1404-001224	U102
1405-001108	V101
1405-001108	V201
1405-001108	V202
1405-001108	V205
1405-001108	V206
1405-001108	V207
1405-001108	V208
1405-001108	V209
1405-001108	V211
1405-001108	V212
1405-001108	V213
1405-001108	V214
1405-001108	V215
1405-001108	V216
1405-001108	V217
1405-001108	V218
1405-001108	V219
1405-001108	V220
1405-001108	V300
1405-001108	V301
1405-001108	V302
1405-001108	V303
1405-001108	V304
1405-001108	V305
1405-001108	V501
2007-000137	R122
2007-000138	R514

SEC Code	Design LOC
2007-000138	R607
2007-000138	R618
2007-000138	R621
2007-000138	R622
2007-000138	R706
2007-000138	R710
2007-000140	R204
2007-000140	R205
2007-000140	R217
2007-000140	R220
2007-000140	R241
2007-000140	R338
2007-000140	R581
2007-000140	R714
2007-000140	R717
2007-000143	R181
2007-000143	R182
2007-000143	R300
2007-000148	R101
2007-000148	R102
2007-000148	R126
2007-000148	R128
2007-000148	R140
2007-000148	R400
2007-000147	R237
2007-000151	R524
2007-000157	R582
2007-000157	R114
2007-000157	R115
2007-000157	R500
2007-000157	R502
2007-000157	R525
2007-000157	R709
2007-000159	R579
2007-000162	R153

SEC Code	Design LOC
2007-000162	R179
2007-000162	R312
2007-000162	R503
2007-000162	R578
2007-000162	R810
2007-000163	R306
2007-000151	R339
2007-000151	R524
2007-000171	R100
2007-000171	R111
2007-000171	R112
2007-000171	R113
2007-000171	R116
2007-000171	R127
2007-000171	R172
2007-000171	R173
2007-000171	R184
2007-000171	R248
2007-000171	R249
2007-000171	R250
2007-000171	R310
2007-000171	R332
2007-000171	R334
2007-000171	R337
2007-000171	R401
2007-000171	R403
2007-000171	R404
2007-000171	R407
2007-000171	R517
2007-000171	R527
2007-000171	R528
2007-000171	R529
2007-000171	R530
2007-000171	R533
2007-000171	R534

SEC Code	Design LOC
2007-000171	R580
2007-000171	R106
2007-000171	R107
2007-000171	R108
2007-000171	R109
2007-000171	R110
2007-000171	R338
2007-000171	R629
2007-000171	R715
2007-000171	R802
2007-000171	R805
2007-000171	R807
2007-000171	R813
2007-000171	R815
2007-001284	R606
2007-001292	R326
2007-001292	R326
2007-007014	R241
2007-008297	R149
2203-000138	C354
2203-000138	C355
2007-000172	R125
2007-000172	R178
2007-000172	R314
2007-000172	R315
2007-000172	R610
2007-000172	R612
2007-000172	R800
2007-000162	R185
2007-000173	R705
2007-000174	R613
2007-000242	R214
2007-000242	R246
2007-000758	R501
2007-000775	R307

SEC Code	Design LOC
2007-001119	R242
2007-001217	R608
2007-001217	R619
2007-001217	R623
2007-001291	R712
2007-001298	R510
2007-001298	R708
2007-001301	R615
2007-001306	R614
2007-001313	R811
2007-001313	R812
2007-001320	R631
2007-001325	R309
2007-001329	R313
2007-001339	R124
2007-001339	R130
2007-001339	R311
2007-002796	R511
2007-002970	R244
2007-002970	R245
2007-003015	R504
2007-003015	R505
2007-003019	R604
2007-003019	R605
2007-003019	R625
2007-003019	R626
2007-003025	R707
2007-003030	R247
2007-007014	R133
2007-007014	R134
2007-007014	R135
2007-007014	R136
2007-007014	R137
2007-007014	R308
2007-007107	R235

SEC Code	Design LOC
2007-007132	R601
2007-007137	R234
2007-007142	R507
2007-007142	R616
2007-007197	R304
2007-007306	R801
2007-008300	R716
2007-007309	R233
2007-007309	R335
2007-007309	R336
2007-007313	R148
2007-007314	R117
2007-007314	R118
2007-007314	R704
2007-007315	R711
2007-007316	R611
2007-007318	R121
2007-007318	R147
2007-007318	R600
2007-007468	R512
2007-007491	R609
2007-007491	R702
2007-008117	R713
2203-002668	C719
2203-000233	C503
2203-000233	C629
2203-000233	C725
2203-000233	C727
2203-000233	C729
2203-000233	C730
2203-000233	C736
2203-000233	C739
2203-000233	C750
2203-000254	C126
2203-000254	C143

SEC Code	Design LOC
2203-000254	C209
2203-000254	C349
2203-000254	C400
2203-000254	C401
2203-000254	C405
2203-000254	C526
2203-000254	C543
2203-000254	C561
2203-000254	C612
2203-000254	C619
2203-000254	C620
2203-000254	C628
2203-000254	C633
2203-000254	C749
2203-000254	C814
2203-000254	C823
2203-000278	C162
2203-000278	C630
2203-005234	C710
2203-000311	C637
2203-000330	C731
2203-000330	C737
2203-000386	C119
2203-000386	C120
2203-000386	C163
2203-000386	C207
2203-000386	C234
2203-000386	C523
2203-000386	C524
2203-000386	C648
2203-000386	C649
2203-000386	C650
2203-000386	C743
2203-000438	C101
2203-000438	C102

SEC Code	Design LOC
2203-000438	C106
2203-000438	C107
2203-000438	C111
2203-000438	C112
2203-000438	C115
2203-000438	C116
2203-000438	C144
2203-000438	C151
2203-000438	C161
2203-000438	C309
2203-000438	C341
2203-000438	C343
2203-000438	C347
2203-000438	C402
2203-000438	C403
2203-000438	C519
2203-000438	C564
2203-000438	C565
2203-000438	C624
2203-000438	C636
2203-000438	C644
2203-000438	C720
2203-000438	C821
2203-000489	C121
2203-000585	C744
2203-000654	C643
2203-000679	C625
2203-000679	C627
2203-000679	C741
2203-000812	C123
2203-000812	C153
2203-000812	C157
2203-000812	C219
2203-000812	C220
2203-000812	C224

SEC Code	Design LOC
2203-000812	C225
2203-000812	C325
2203-000812	C326
2203-000812	C327
2203-000812	C334
2203-000812	C335
2203-000812	C339
2203-000812	C536
2203-000812	C549
2203-000812	C550
2203-000812	C556
2203-000812	C557
2203-000812	C608
2203-000812	C706
2203-000812	C712
2203-000812	C800
2203-000812	C806
2203-000812	C809
2203-000812	C812
2203-000812	C813
2203-000836	C559
2203-000885	C606
2203-000885	C701
2203-000995	C148
2203-000995	C149
2203-000995	C159
2203-000995	C160
2203-000995	C208
2203-000995	C226
2203-000995	C651
2203-000995	C652
2203-000995	C705
2203-001072	C704
2203-001124	C548
2203-001153	C604

SEC Code	Design LOC
2203-005482	C647
2203-001239	C645
2203-001405	C305
2203-001441	C303
2203-002668	C804
2203-002677	C721
2203-002677	C726
2203-005061	C147
2203-005061	C150
2203-005061	C158
2203-005061	C218
2203-006093	C236
2203-006093	C351
2203-006093	C352
2203-005065	C513
2203-005105	C746
2203-005138	C501
2203-005138	C502
2203-005281	C747
2203-005281	C748
2203-005383	C808
2203-005383	C810
2203-005450	C703
2203-005480	C125
2203-005482	C103
2203-005482	C104
2203-005482	C108
2203-005482	C109
2203-005482	C110
2203-005482	C113
2203-005482	C117
2203-005482	C118
2203-005482	C128
2203-005482	C133
2203-005482	C134

SEC Code	Design LOC
2203-005482	C136
2203-005482	C137
2203-005482	C142
2203-005482	C152
2203-005482	C216
2203-005482	C217
2203-005482	C235
2203-005482	C300
2203-005482	C308
2203-005482	C311
2203-005482	C314
2203-005482	C316
2203-005482	C320
2203-005482	C346
2203-005482	C348
2203-005482	C505
2203-005482	C506
2203-006093	C568
2203-005482	C520
2203-005482	C525
2203-005482	C532
2203-005482	C533
2203-005482	C538
2203-005482	C605
2203-005482	C607
2203-005482	C616
2203-005482	C623
2203-005482	C631
2203-005482	C634
2203-005482	C640
2203-005482	C641
2203-005482	C713
2203-005482	C718
2203-005482	C722
2203-005482	C723

SEC Code	Design LOC
2203-005482	C724
2203-005482	C728
2203-005482	C733
2203-005482	C738
2203-005482	C740
2203-005482	C742
2203-005482	C805
2203-005482	C820
2203-005482	C822
2203-005482	C825
2203-005482	C833
2203-005496	C321
2203-005496	C322
2203-005496	C324
2203-005496	C345
2203-006585	C342
2203-006585	C344
2203-005496	C544
2203-005552	C603
2203-005736	C408
2203-005736	C409
2203-005736	C410
2203-005736	C411
2203-005736	C412
2203-005736	C413
2203-006053	C100
2203-006053	C105
2203-006053	C114
2203-006053	C200
2203-006053	C406
2203-006053	C530
2203-006091	C132
2203-006091	C135
2203-006093	C206
2203-006093	C210

SEC Code	Design LOC
2203-006093	C211
2203-006093	C223
2203-006093	C518
2203-006093	C521
2203-006093	C531
2203-006093	C534
2203-006093	C562
2203-006093	C563
2203-006093	C566
2203-006093	C632
2203-006137	C127
2203-006137	C129
2203-006137	C130
2203-006137	C131
2203-006137	C138
2203-006137	C156
2203-006190	C165
2203-006201	C350
2203-006201	C404
2203-006201	C819
2203-006208	C510
2203-006208	C511
2203-006208	C514
2203-006208	C515
2203-006208	C529
2203-006208	C558
2203-006324	C213
2203-006324	C221
2203-006324	C512
2203-006324	C516
2203-006324	C527
2203-006324	C528
2203-006324	C545
2203-006324	C546
2203-006324	C547

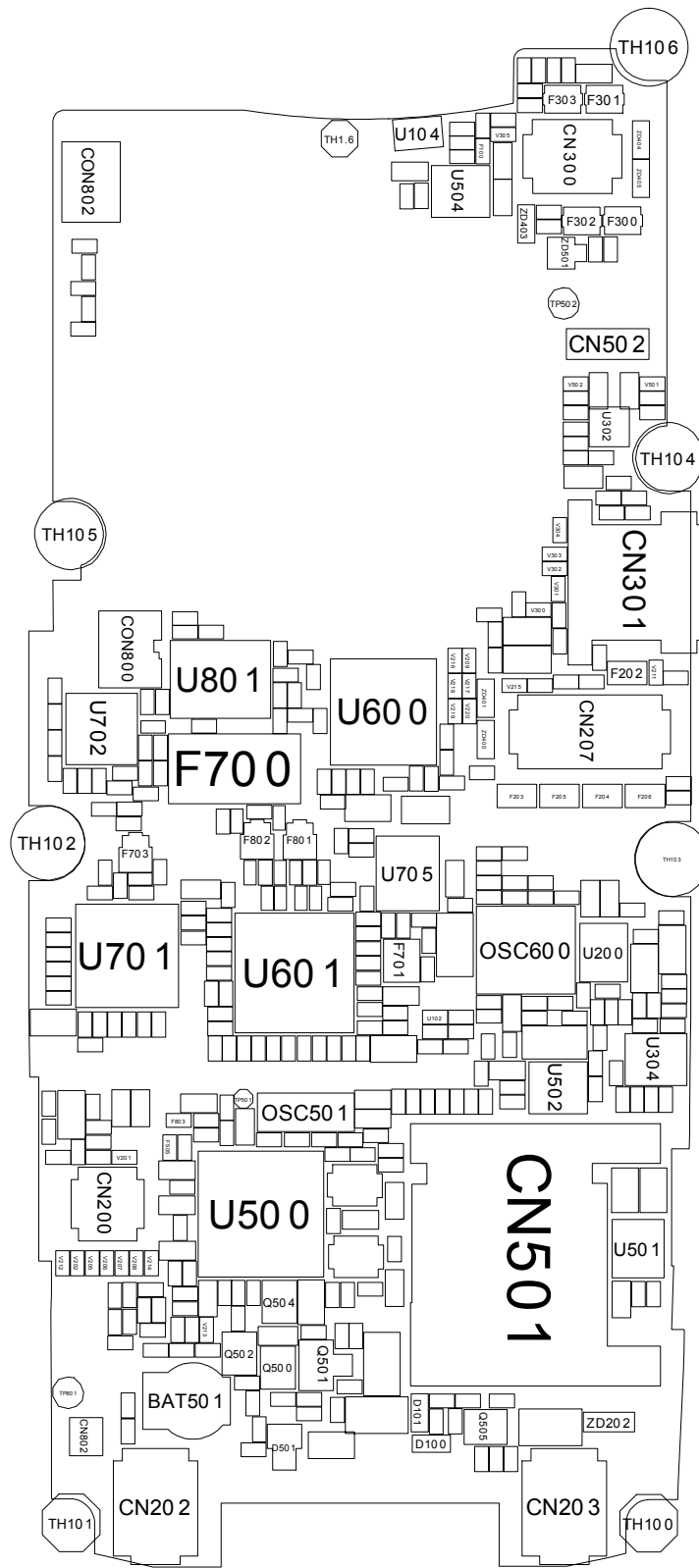
SEC Code	Design LOC
2203-006324	C553
2203-006324	C560
2203-006324	C702
2203-006324	C827
2203-006351	C745
2203-006646	C537
2203-006646	C551
2203-006646	C567
2203-006669	C642
2203-006677	C639
2203-006678	C638
2404-001086	C735
2404-001105	C535
2404-001105	C611
2404-001105	C646
2404-001225	C315
2404-001225	C734
2404-001274	C205
2404-001274	C504
2404-001274	C508
2404-001274	C700
2404-001281	C610
2404-001281	C824
2404-001281	C826
2404-001339	C301
2404-001339	C310
2404-001339	C319
2404-001339	C500
2404-001339	C715
2404-001352	C201
2404-001352	C214
2404-001352	C215
2404-001352	C317
2404-001352	C318
2404-001394	C340

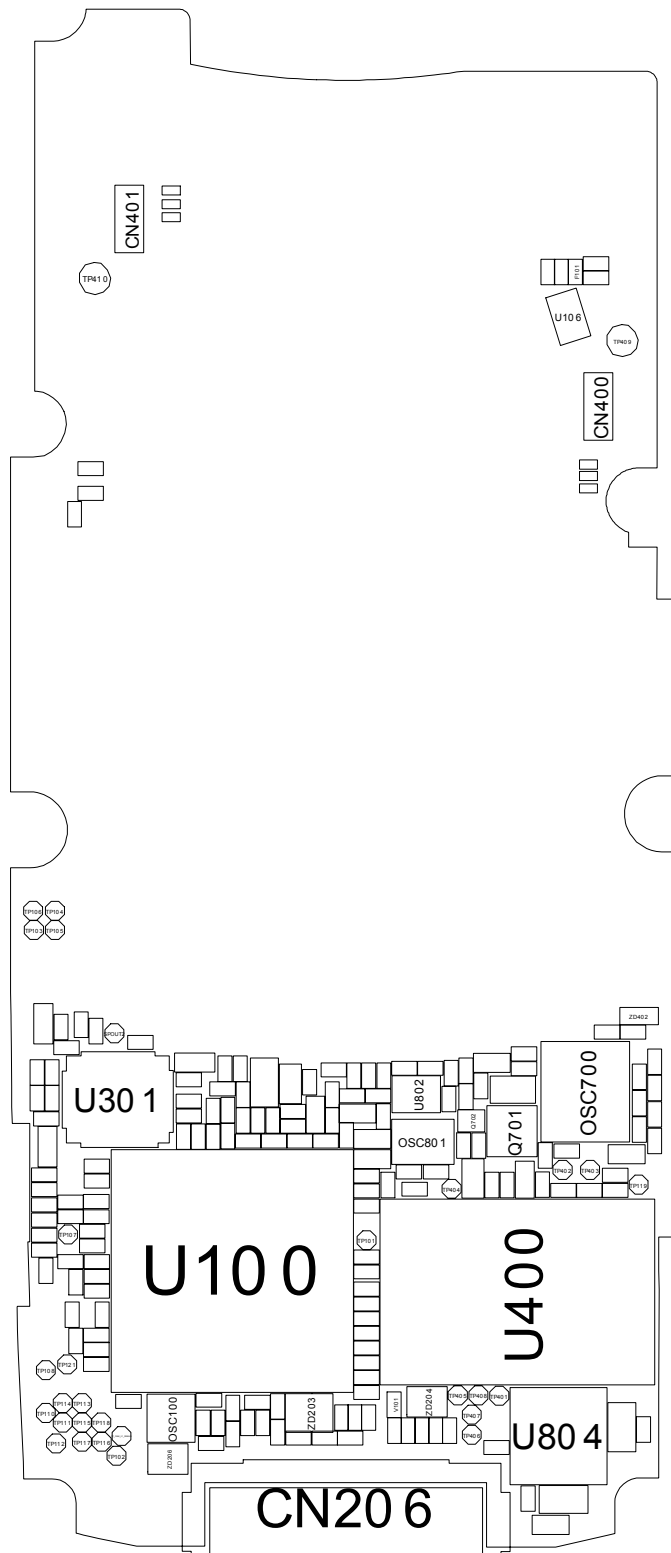
SEC Code	Design LOC
2703-001751	L702
2703-001751	L704
2703-001751	L706
2703-001751	L708
2703-001786	L705
2703-002155	L819
2703-002176	L600
2703-002313	L101
2703-002370	L703
2703-002370	L816
2703-002370	L817
2703-002484	L810
2703-002514	L804
2703-002514	L805
2703-002544	L707
2703-002603	L809
2703-002603	L811
2703-002606	L807
2703-002700	L808
2703-002700	L812
2703-002782	L502
2703-002782	L503
2703-002819	L601
2703-002819	L602
2703-002819	L603
2703-002819	L604
2801-003747	OSC501
2802-001182	OSC100
2806-001315	OSC700
2806-001358	OSC600
2809-001280	OSC801
2901-001308	F202
2901-001308	F203
2901-001308	F204
2901-001308	F205

SEC Code	Design LOC
2901-001308	F206
2901-001311	F300
2901-001311	F301
2901-001311	F302
2901-001311	F303
2904-001438	F701
2904-001549	F802
2904-001550	F801
2904-001556	F703
2910-000002	F700
3301-001158	L300
3301-001158	L301
3301-001342	F100
3301-001342	F101
2404-001281	C356
2703-002155	R630
3301-001534	R531
3301-001534	R532
3301-001534	F505
3301-001534	F803
3301-001659	L701
3709-001229	CN501
3710-002120	CN206
3711-005519	CN300
3711-005539	CN207
3711-005602	CN202
3711-005602	CN203
3711-005789	CN200
3722-002010	CN301
4302-001180	BAT501
4709-001352	U804
GH71-02208A	CON802
3705-001347	CON800
GH59-01862A	SPK_MOT ASS'Y

SEC Code	Design LOC
GH59-01845A	VOLUME KEY
GH59-01846A	SIDE KEY

5. SGH-Z130 PCB Diagrams





6. SGH-Z130 Block Diagrams

