GSM TELEPHONE

GT-E2550

(E2550D and E2558 Common)

SERVICE Manual

GSM TELEPHONE

CONTENTS

1. Safety Precautions

1-1. Repair Precaution

- Repair in Shield Box, during detailed tuning. Take specially care of tuning or test, because specipicty of cellular phone is sensitive for surrounding interference(RF noise).

- Be careful to use a kind of magnetic object or tool, because performance of parts is damaged by the influence of magnetic force.

- Surely use a standard screwdriver when you disassemble this product, otherwise screw will be worn away.

- Use a thicken twisted wire when you measure level.
  A thicken twisted wire has low resistance, therefore error of measurement is few.

- Repair after separate Test Pack and Set because for short danger (for example an overcurrent and furious flames of parts etc) when you repair board in condition of connecting Test Pack and tuning on.

- Take specially care of soldering, because Land of PCB is small and weak in heat.

- Surely tune on/off while using AC power plug, because a repair of battery charger is dangerous when tuning ON/OFF PBA and Connector after disassembling charger.

- Don't use as you pleases after change other material than replacement registered on SEC System. Otherwise engineer in charge isn't charged with problem that you don't keep this rules.

1-2. ESD(Electrostatically Sensitive Devices) Precaution

Several semiconductor may be damaged easily by static electricity. Such parts are called by ESD (Electrostatically Sensitive Devices), for example IC,BGA chip etc. Read Precaution below. You can prevent from ESD damage by static electricity.

- Remove static electricity remained your body before you touch semiconductor or parts with semiconductor. There are ways that you touch an earthed place or wear static electricity prevention string on wrist.

- Use earthed soldering steel when you connect or disconnect ESD.

- Use soldering removing tool to break static electricity. , otherwise ESD will be damaged by static electricity.

- Don't unpack until you set up ESD on product. Because most of ESD are packed by box and aluminum plate to have conductive power,they are prevented from static electricity.

- You must maintain electric contact between ESD and place due to be set up until ESD is connected completely to the proper place or a circuit board.

2. Specification

2-1. GSM General Specification

	EGSM900	DCS1800
Freq. Band[MHz] Uplink/Downlink	880~915 925~960	1710~1785 1805~1880
ARFCN range	0~124 & 975~1023	512~885
Tx/Rx spacing	45MHz	95MHz
Mod. Bit rate / Bit Period	270.833kbps 3.692us	270.833kbps 3.692us
Time Slot Period / Frame Period	576.9us 4.615ms	576.9us 4.615ms
Modulation	0.3GMSK	0.3GMSK
MS Power	33dBm~5dBm	30dBm~0dBm
Power Class	5~19(class4)	0~15(class1)
Sensitivity	-102dBm	-100dBm
TDMA Mux	8	8
Cell Radius	35Km	2Km

2-2. 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±3 dBm
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

3. Product Function

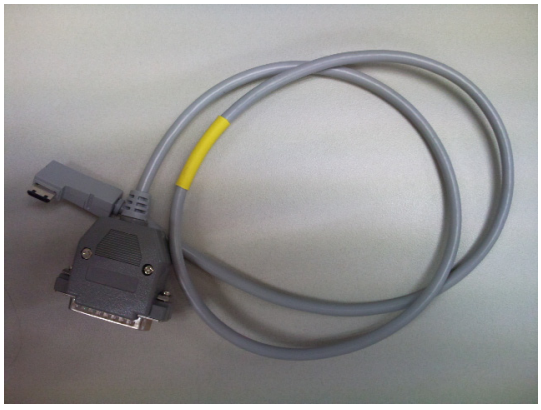
Main Function

- GSM900,DCS1800
- GSM, GPRS, EDGE(RX only)
- 2.01" 262K 128*160 TFT/QQVGA LCD
- 1.3M Camera
- Bluetooth V.2.1+EDR
- Stereo Bluetooth Headset
- Music player
- MP3, AAC, MP4, 3GPP Decoding
- SMS/MMS/E-Mail
- FM Radio & Recording
- Wap 2.0
- Java Games

4. Array course control

4-1. Software Downloading

Test Jig (GH99-36900A)



Test Cable (GH39-01211A)

RF Test Cable (GH39-00985A)

Adapter (GH99-38251A)

4-2. Software Downloading

4-2-1. Pre-requsite for S/W Downloading

- Downloder Program

(Nor Downloader v0.3 For PNX6608(TFFS&PRAM&NORSLC))

- GT-E2550 Mobile Phone
- Test jig, Test jig cable
- Binary File, TFS file, CSC file.

4-2-2. S/W Downloader Program (Nor Downloader)

■ Load the binary download program by executing the

(Nor Downloader v0.3 For PNX6608(TFFS&PRAM&NORSLC))

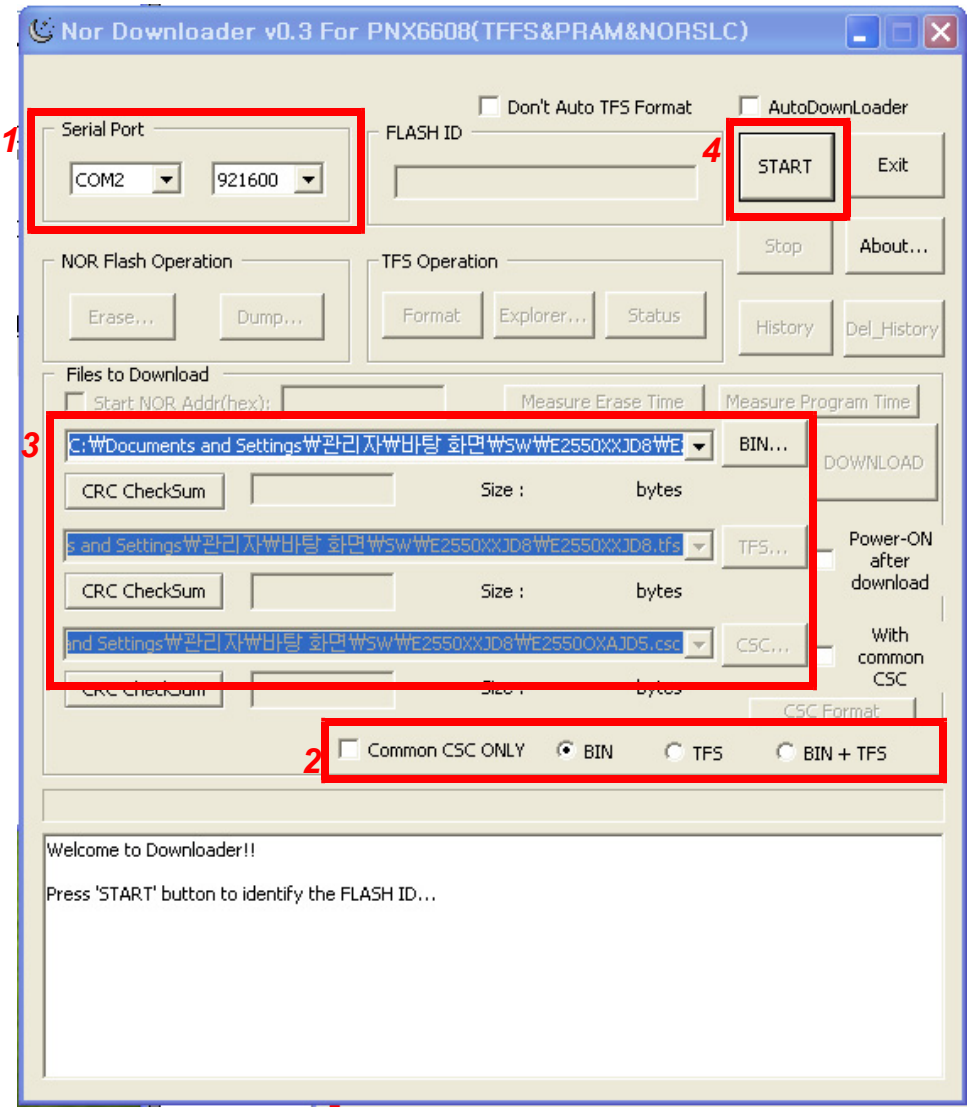
1. Select the connected serial Port and the Rate of speed

2. Select the check box, the mode you want to download.

- If the binary file wanted, check only 'BIN'
- If the tfs file wanted, check only 'TFS'
- If the csc file wanted, check only 'with common CSC'
- If all the files wanted, check 'BIN+TFS' and 'with commom CSC'

3. Select the file(s) what you want to download

4. Press START and connect GT-E2550 to the JIG BOX.

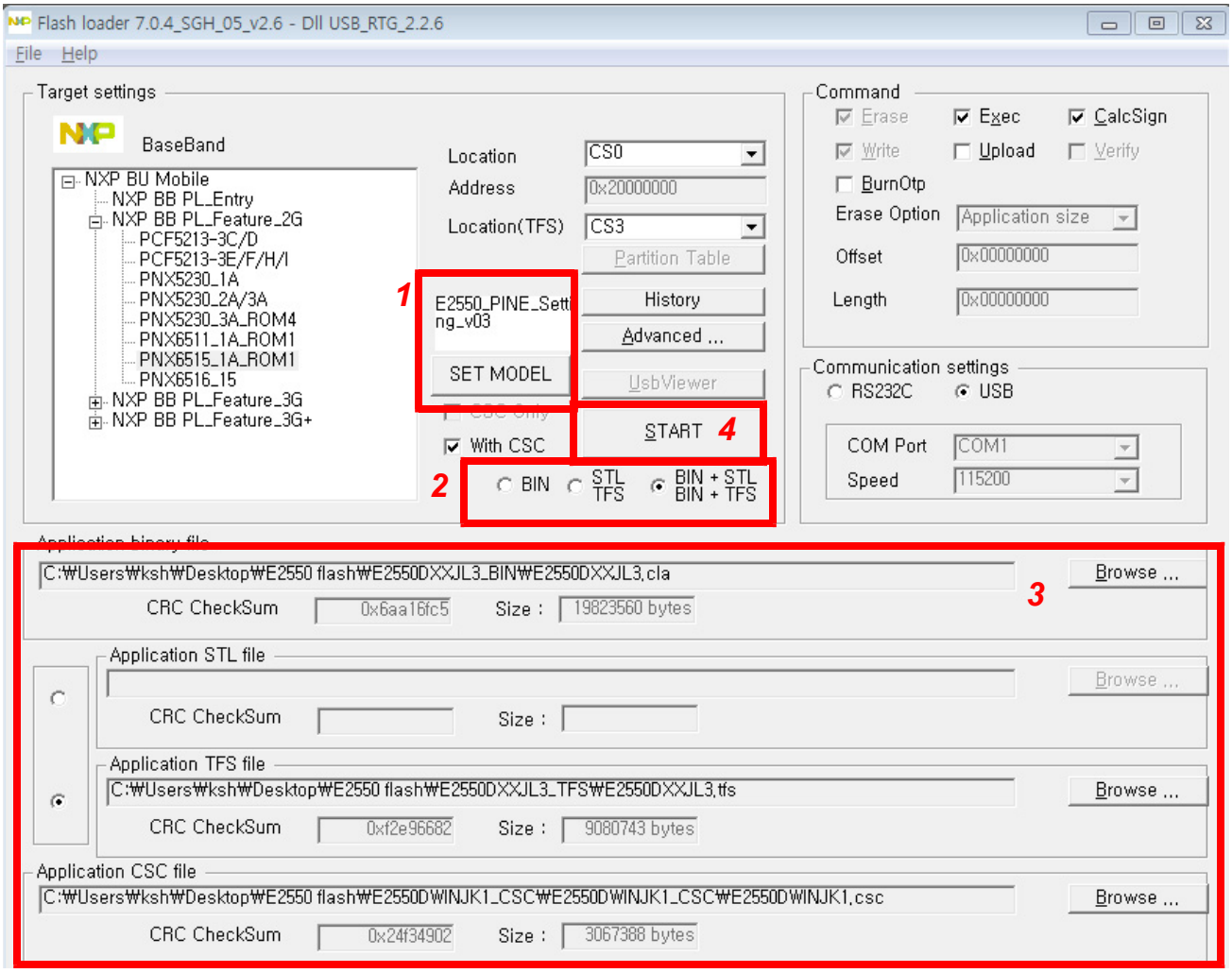


4-2-3. S/W Downloader Program (Flash loader)

■ Load the binary download program by executing the

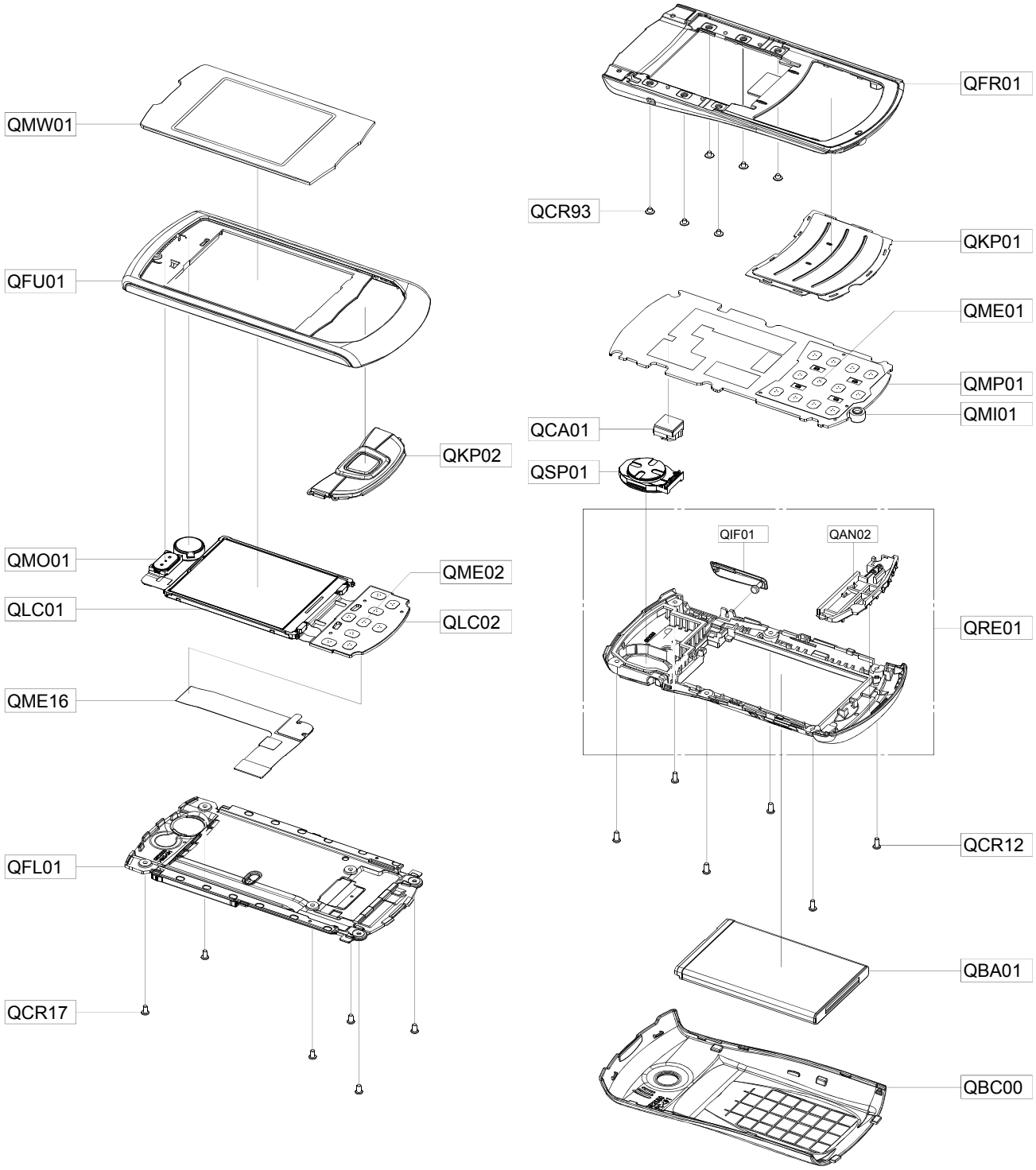
(Flash loader 7.0.4_SGH_v2.6)

1. Click "SET MODEL" and Select E2550_PINE_setting_v03 file.
2. Select the check box, the mode you want to download.
 - If the binary file wanted, check only 'BIN'
 - If the tfs or stl file wanted, check only 'TFS and STL'
 - If the csc file wanted, check only 'with CSC'
 - If all the files wanted, check 'BIN+TFS and BIN+STL' and 'with CSC'
3. Select the file(s) what you want to download
 - Click "Browse" and select files.
4. Press START and connect GT-E2550 to the JIG BOX with pressing any two keys.



5. Exploded View and Parts List

5-1. Cellular phone Exploded View



5-2. Cellular phone Parts list

Design LOC		Description	SEC CODE
QSP01		SPEAKER	3001-002587
QCR17		SCREW-MACHINE	6001-001460
QCR12		SCREW-MACHINE	6001-001530
QCR93		SCREW-MACHINE	6001-002263
QMI01		MICROPHONE-ASSY-GT-E2550	GH30-00656A
QBA01		INNER BATTERY PACK-800MAH,BLK,UNI,MAIN	GH43-03257A
QCA01		CAMERA MODULE-GT-C5010(1.3M)	GH59-09031A
QLC02		ASSY ETC-LCD SUB PBA(GT-E2550)	GH59-09170A
QME16		ASSY ETC-CON TO CON FPCB(GT-E2550)	GH59-09171A
QMO01		MODULE-MOT/RCV FPCB(GT-E2550)	GH59-09178A
QME01		DOME SHEET-GT-E2550 MAIN	GH59-09200A
QME02		DOME SHEET-GT-E2550 SUB	GH59-09201A
QMP01		A/S ASSY-GTE2550_PBA MAIN (SVC)	GH82-04897A
QLC01		ASSY LCD-2.0" QQVGA STD SLIDE LCM WINTE	GH96-04490A
QFU01		ASSY CASE-SLIDE UPPER	GH98-16574A
QKP02		ASSY KEYPAD-SUB	GH98-16579A
QKP01		ASSY KEYPAD-MAIN(3X4)	GH98-16580A
QFR01		ASSY CASE-FRONT	GH98-16838A
QMW01		ASSY COVER-MAIN WINDOW	GH98-16840A
QFL01		ASSY CASE-SLIDE LOWER	GH98-16917A
QBC00		ASSY COVER-BATTERY	GH98-17273A
QRE01		ASSY CASE-REAR	GH98-16839A
	QAN02	INTENNA-MAIN(GT-E2550)	GH42-02471A
	QIF01	PMO COVER-IF	GH72-59679A

6. MAIN Electrical Parts List

6-1. GT-E2550 Main

SEC CODE	Design LOC	Description
4202-001512	ANT101	LDA212G4410K-283
3711-007393	BTC200	KQ03SB2-3R
2703-002207	C100	CIH05T3N3SNC
2203-001385	C101	GRP1555C1H1R5CZ01E
2703-002201	C102	CIH05T33NJNC
2203-000995	C103	GRP1555C1H470J
2203-007270	C104	CL10A106KP8NNNC
2203-005552	C110	GRP1555C1H2R2BZ01E
2203-000425	C111	GRP1555C1H180J
2203-005552	C112	GRP1555C1H2R2BZ01E
2203-006048	C113	GRM155R71A104K
2203-006399	C114	GRM155R60J105KE19D
2203-006399	C115	GRM155R60J105KE19D
2703-001728	C116	HK1005-1N5S-T
2203-005446	C118	GRP1555C1H2R7BZ01E
2203-005446	C120	GRP1555C1H2R7BZ01E
2203-005281	C125	GRP1555C1H1R5BZ01E
2203-005281	C126	GRP1555C1H1R5BZ01E
2203-006137	C127	CL05B223KONC
2203-005395	C128	C1005CG1H4R7BT
2203-006399	C129	GRM155R60J105KE19D
2203-006399	C130	GRM155R60J105KE19D
2203-006137	C131	CL05B223KONC
2203-000386	C132	GRP1555C1H150J
2203-000438	C133	GRP155R71H102K
2203-000627	C134	GRM1555C1H220J
2203-006872	C135	GRM155R60J225ME15D
2203-006208	C136	CM105X5R475M06AT
2203-006399	C137	GRM155R60J105KE19D
2203-006872	C138	GRM155R60J225ME15D
2203-000233	C140	GRP1555C1H101J
2203-002677	C143	CL05CR75BBNC
2203-005288	C144	GRP1555C1H1R0BZ01E
2203-000254	C145	GRP155R71C103K
2203-006048	C148	GRM155R71A104K
2203-006048	C149	GRM155R71A104K

SEC CODE	Design LOC	Description
2203-005052	C152	GRP1555C1H3R3CZ01E
2203-005053	C153	GRP1555C1H3R9CZ01E
2203-006348	C200	CV105X5R105K25AT
2203-006324	C201	GRM188R61A225KE19D
2203-007279	C202	CV105X5R106M10AT
2203-007279	C203	CV105X5R106M10AT
2203-006048	C204	GRM155R71A104K
2203-006825	C206	JMK107BJ106KA-T
2203-005450	C207	GRP1555C1H5R6BZ01E
2203-006048	C208	GRM155R71A104K
2203-005450	C209	GRP1555C1H5R6BZ01E
2203-006048	C210	GRM155R71A104K
2203-006048	C211	GRM155R71A104K
2203-000679	C212	GRP1555C1H270J
2203-006048	C213	GRM155R71A104K
2203-005450	C214	GRP1555C1H5R6BZ01E
2203-006048	C215	GRM155R71A104K
2203-006048	C216	GRM155R71A104K
2203-006048	C217	GRM155R71A104K
2203-006890	C218	CV105X5R106M06AT
2203-006399	C219	GRM155R60J105KE19D
2203-006399	C220	GRM155R60J105KE19D
2203-006257	C221	GRM155R60J474KE19E
2203-006257	C222	GRM155R60J474KE19E
2203-006257	C223	GRM155R60J474KE19E
2203-006474	C224	GRM21BR60J226ME
2203-007317	C225	CV05X5R475M06AH
2203-006257	C226	GRM155R60J474KE19E
2203-006824	C227	CV105X5R475K10AT
2203-006257	C228	GRM155R60J474KE19E
2203-006257	C229	GRM155R60J474KE19E
2203-006257	C230	GRM155R60J474KE19E
2203-006048	C231	GRM155R71A104K, 10V
2203-007279	C232	CV105X5R106M10AT
2203-006562	C233	CV05X5R105K10AH
2203-006048	C234	GRM155R71A104K
2203-000233	C235	GRP1555C1H101J

SEC CODE	Design LOC	Description
2203-000812	C236	GRP1555C1H330J
2203-006890	C237	CV105X5R106M06AT
2203-000854	C238	GRP1555C1H390J
2203-006824	C239	CV105X5R475K10AT
2203-006048	C240	GRM155R71A104K
2203-000386	C241	GRP1555C1H150J
2203-000386	C242	GRP1555C1H150J
2203-006048	C243	GRM155R71A104K
2203-000330	C244	GRP1555C1H120J
2203-006562	C245	CV05X5R105K10AH
2203-006257	C246	GRM155R60J474KE19E
2203-005483	C247	GRP155R61A683KA01E
2203-002709	C248	C1005Y5V1C104ZT
2203-006348	C251	CV105X5R105K25AT
2203-006399	C252	GRM155R60J105KE19D
2203-006562	C253	CV05X5R105K10AH
2203-006399	C254	GRM155R60J105KE19D
2203-000278	C300	GRP1555C1H100D
2203-000812	C301	GRP1555C1H330J
2203-000585	C302	GRP155R71H221KD01E
2203-006048	C303	GRM155R71A104K
2203-000995	C304	GRP1555C1H470J
2203-006048	C305	GRM155R71A104K
2203-000812	C306	GRP1555C1H330J
2203-006260	C307	GRM155R61A224KE19E
2203-000585	C308	GRP155R71H221KD01E
2203-006562	C309	CV05X5R105K10AH
2203-006048	C314	GRM155R71A104K
2203-000812	C317	GRP1555C1H330J
2203-006048	C320	GRM155R71A104K
2203-003054	C321	GRP1555C1H9R0C
2203-003054	C322	GRP1555C1H9R0C
2203-005057	C325	GRP1555C1H8R2CZ01E
2203-005057	C326	GRP1555C1H8R2CZ01E
2203-003054	C331	GRP1555C1H9R0C
2203-002709	C332	C1005Y5V1C104ZT
2203-000812	C333	GRP1555C1H330J

SEC CODE	Design LOC	Description
2203-005482	C334	GRP155R61A104KA01E
2203-005482	C335	GRP155R61A104KA01E
2203-006562	C339	CV05X5R105K10AH
2203-000311	C340	GRP1555C1H121JD01E
2203-006399	C341	GRM155R60J105KE19D
2203-001239	C342	GRP1555C1H820JD01E
2203-001239	C343	GRP1555C1H820JD01E
2203-000995	C345	GRP1555C1H470J
3709-001575	CD200	SCHA4B0301
0401-001141	D100	1SS400G
2904-001879	F101	SFR942PY002
2903-001424	F103	TBB-2012-245-C1E
2901-001408	F300	ICVE10054E250R201FR
2901-001408	F301	ICVE10054E250R201FR
2901-001408	F302	ICVE10054E250R201FR
3711-006865	HDC301	AXT634124AW1
3710-003148	IFC300	HY20-AB0315
2703-002269	L100	CIH05T56NJNC
2703-002281	L101	CIH05T5N6SNC
2703-001613	L102	HK1005-18NK-T
2703-002267	L103	CIH05T4N7SNC
2703-001708	L104	HK1005-5N6K-T
2703-003121	L106	MLG1005SR15J
2703-003297	L200	APIS08G4R7MT
2703-003546	L201	CIG22L6R8MNE
3301-001812	L202	BLM15HD102SN1
2703-003476	L300	LQG15HSR27J02D
3301-001756	L301	BLM15HG102SN1D
3301-001756	L302	BLM15HG102SN1D
3301-001917	L306	BLM15BD182SN1
3301-001917	L307	BLM15BD182SN1
3301-001970	L308	BLM15BA330SN1
0601-002846	LED300	19-217UTD/S759/TR8
0601-002846	LED301	19-217UTD/S759/TR8
0601-002846	LED302	19-217UTD/S759/TR8
0601-002846	LED303	19-217UTD/S759/TR8
2801-004787	OSC100	CXC6X260000GHVRN00

SEC CODE	Design LOC	Description
2801-004953	OSC200	Q13MC1462000400
1201-002985	PAM100	SKY77548
2007-000162	R101	RC1005J104CS
2007-000162	R102	RC1005J104CS
2007-003015	R104	MCR01MZP5J2R2
2007-003112	R105	MCR01MZP5J270
2007-000162	R106	RC1005J104CS
2007-000162	R108	RC1005J104CS
2007-000148	R201	RC1005J103CS
2007-000152	R202	RC1005J203CS
2007-001333	R203	MCR01MZP5J183
2007-007589	R204	RK73H1ETP6802F
2007-008354	R205	ERJ2RKF224X
2007-000148	R206	RC1005J103CS
2007-000141	R207	RC1005J222CS
2007-000166	R208	RC1005J304CS
2007-000143	R209	RC1005J472CS
2007-000159	R210	RC1005J563CS
2007-000159	R211	RC1005J563CS
2007-000159	R212	RC1005J563CS
2007-000159	R213	RC1005J563CS
2007-000149	R214	RC1005J123CS
2007-007573	R215	RK73H1ETP3303F
2007-008354	R216	ERJ2RKF224X
2007-001319	R217	RC1005J122CS
2007-001319	R218	RC1005J122CS
2007-000162	R219	RC1005J104CS
2007-001319	R220	RC1005J122CS
2007-001319	R221	RC1005J122CS
2007-000140	R222	RC1005J102CS
2007-007132	R223	RC1005F153CS
2007-000148	R225	RC1005J103CS
2007-001333	R226	MCR01MZP5J183
2007-000148	R300	RC1005J103CS
2007-000170	R301	RC1005J105CS
2007-001333	R302	MCR01MZP5J183
2007-000242	R304	RC1005J152CS

SEC CODE	Design LOC	Description
2007-000242	R305	RC1005J152CS
2007-000172	R307	RC1005J100CS
2007-002796	R308	MCR01MZP5J511
2007-002796	R309	MCR01MZP5J511
2007-000172	R310	RC1005J100CS
2007-000172	R314	RC1005J100CS
2007-000242	R315	RC1005J152CS
2007-000172	R316	RC1005J100CS
2007-000148	R319	RC1005J103CS
2007-000170	R320	RC1005J105CS
2007-001333	R321	MCR01MZP5J183
2007-001292	R324	RC1005J330CS
2007-001292	R325	RC1005J330CS
2007-001292	R326	RC1005J330CS
2007-001292	R327	RC1005J330CS
2007-000155	R328	RC1005J273CS
2007-000242	R329	RC1005J152CS
2007-001333	R331	MCR01MZP5J183
3301-001762	R332	BLM15BD471SN1D
2007-000138	R333	RC1005J101CS
2007-000168	R334	RC1005J474CS
2007-000146	R335	RC1005J682CS
2007-000146	R336	RC1005J682CS
2007-000168	R337	RC1005J474CS
2007-001333	R343	MCR01MZP5J183
2007-001292	R344	RC1005J330CS
2007-001292	R345	RC1005J330CS
3705-001731	RFS100	KMS-560-002-BEF
GH70-03349A	SC100	ONBOARD-CLIP-6
GH70-03349A	SC101	ONBOARD-CLIP-6
GH70-03349A	SC102	ONBOARD-CLIP-6
GH70-03349A	SC103	ONBOARD-CLIP-6
GH70-03349A	SC104	ONBOARD-CLIP-6
GH70-03349A	SC105	ONBOARD-CLIP-6
GH70-03349A	SC106	ONBOARD-CLIP-6
GH70-03349A	SC107	ONBOARD-CLIP-6
3709-001447	SIM200	5000-6P-1.9S

SEC CODE	Design LOC	Description
3710-003235	SOC300	3D1201087-ST31-7H
2203-007279	TA200	CV105X5R106M10AT
2404-001377	TA300	F980J226MMA
1205-003682	U100	QS520-0RFI
1205-003517	U101	BC63B239A04-IYB-E4S
1204-003022	U102	TEA5996UK
1009-001050	U200	S-5711ACDL-I4T1G
1203-005907	U201	MIC5365-1.5YMT
1001-001508	U300	NLAS5213A
0406-001286	U305	PESD5V0L5UV
1201-002675	U306	G1442RD1U
1205-003934	UCP200	PNX6608
1108-000343	UME100	K571229ACM-BQ12
1404-001221	VR200	NCP15WB473J04RC
0403-001688	ZD200	USFZ5.6V-RTK/H
0406-001281	ZD300	ESDALC6V1-1M2
0406-001281	ZD301	ESDALC6V1-1M2
0406-001281	ZD302	ESDALC6V1-1M2
0406-001281	ZD303	ESDALC6V1-1M2
0406-001201	ZD304	uClamp0501H
0406-001286	ZD305	PESD5V0L5UV
0406-001201	ZD306	uClamp0501H
0403-001832	ZD307	BZX884-C5V6

6-2. GT-E2550D Main

SEC CODE	Design LOC	Description
4202-001512	ANT101	LDA212G4410K-283
3711-007393	BTC200	KQ03SB2-3R
2703-002207	C100	CIH05T3N3SNC
2203-001385	C101	GRP1555C1H1R5
2703-002201	C102	CIH05T33NJNC
2203-000995	C103	GRP1555C1H470
2203-007270	C104	CL10A106KP8NN
2203-005552	C110	GRP1555C1H2R2
2203-000425	C111	GRP1555C1H180
2203-005552	C112	GRP1555C1H2R2
2203-006048	C113	GRM155R71A104
2203-006399	C114	GRM155R60J105
2203-006399	C115	GRM155R60J105
2703-001728	C116	HK1005-1N5S-T
2203-005446	C118	GRP1555C1H2R7
2203-005446	C120	GRP1555C1H2R7
2203-005281	C125	GRP1555C1H1R5
2203-005281	C126	GRP1555C1H1R5
2203-006137	C127	CL05B223KONC
2203-005395	C128	C1005CG1H4R7B
2203-006399	C129	GRM155R60J105
2203-006399	C130	GRM155R60J105
2203-006137	C131	CL05B223KONC
2203-000386	C132	GRP1555C1H150
2203-000438	C133	GRP155R71H102
2203-000627	C134	GRM1555C1H220
2203-006872	C135	GRM155R60J225
2203-006208	C136	CM105X5R475M0
2203-006399	C137	GRM155R60J105
2203-006872	C138	GRM155R60J225
2203-000233	C140	GRP1555C1H101
2203-002677	C143	CL05CR75BBNC
2203-005288	C144	GRP1555C1H1R0
2203-000254	C145	GRP155R71C103
2203-006048	C148	GRM155R71A104
2203-006048	C149	GRM155R71A104

SEC CODE	Design LOC	Description
2203-005052	C152	GRP1555C1H3R3
2203-005053	C153	GRP1555C1H3R9
2203-006348	C200	CV105X5R105K2
2203-006324	C201	GRM188R61A225
2203-007279	C202	CV105X5R106M1
2203-007279	C203	CV105X5R106M1
2203-006048	C204	GRM155R71A104
2203-006825	C206	JMK107BJ106KA
2203-005450	C207	GRP1555C1H5R6
2203-006048	C208	GRM155R71A104
2203-005450	C209	GRP1555C1H5R6
2203-006048	C210	GRM155R71A104
2203-006048	C211	GRM155R71A104
2203-000679	C212	GRP1555C1H270
2203-006048	C213	GRM155R71A104
2203-005450	C214	GRP1555C1H5R6
2203-006048	C215	GRM155R71A104
2203-006048	C216	GRM155R71A104
2203-006048	C217	GRM155R71A104
2203-006890	C218	CV105X5R106M0
2203-006399	C219	GRM155R60J105
2203-006399	C220	GRM155R60J105
2203-006257	C221	GRM155R60J474
2203-006257	C222	GRM155R60J474
2203-006257	C223	GRM155R60J474
2203-006474	C224	GRM21BR60J226
2203-007317	C225	CV05X5R475M06
2203-006257	C226	GRM155R60J474
2203-006824	C227	CV105X5R475K1
2203-006257	C228	GRM155R60J474
2203-006257	C229	GRM155R60J474
2203-006257	C230	GRM155R60J474
2203-006048	C231	GRM155R71A104
2203-007279	C232	CV105X5R106M1
2203-006562	C233	CV05X5R105K10
2203-006048	C234	GRM155R71A104
2203-000233	C235	GRP1555C1H101

SEC CODE	Design LOC	Description
2203-000812	C236	GRP1555C1H330
2203-006890	C237	CV105X5R106M0
2203-000854	C238	GRP1555C1H390
2203-006824	C239	CV105X5R475K1
2203-006048	C240	GRM155R71A104
2203-000386	C241	GRP1555C1H150
2203-000386	C242	GRP1555C1H150
2203-006048	C243	GRM155R71A104
2203-000330	C244	GRP1555C1H120
2203-006562	C245	CV05X5R105K10
2203-006257	C246	GRM155R60J474
2203-005483	C247	GRP155R61A683
2203-002709	C248	C1005Y5V1C104
2203-006348	C251	CV105X5R105K2
2203-006399	C252	GRM155R60J105
2203-006562	C253	CV05X5R105K10
2203-006399	C254	GRM155R60J105
2203-000278	C300	GRP1555C1H100
2203-000812	C301	GRP1555C1H330
2203-000585	C302	GRP155R71H221
2203-006048	C303	GRM155R71A104
2203-000995	C304	GRP1555C1H470
2203-006048	C305	GRM155R71A104
2203-000812	C306	GRP1555C1H330
2203-006260	C307	GRM155R61A224
2203-000585	C308	GRP155R71H221
2203-006562	C309	CV05X5R105K10
2203-006048	C314	GRM155R71A104
2203-000812	C317	GRP1555C1H330
2203-006048	C320	GRM155R71A104
2203-003054	C321	GRP1555C1H9R0
2203-003054	C322	GRP1555C1H9R0
2203-005057	C325	GRP1555C1H8R2
2203-005057	C326	GRP1555C1H8R2
2203-003054	C331	GRP1555C1H9R0
2203-002709	C332	C1005Y5V1C104
2203-000812	C333	GRP1555C1H330

SEC CODE	Design LOC	Description
2203-006048	C334	GRM155R71A104
2203-006048	C335	GRM155R71A104
2203-006562	C339	CV05X5R105K10
2203-000311	C340	GRP1555C1H121
2203-006399	C341	GRM155R60J105
2203-001239	C342	GRP1555C1H820
2203-001239	C343	GRP1555C1H820
2203-000995	C345	GRP1555C1H470
3709-001575	CD200	SCHA4B0301
0401-001141	D100	1SS400G
2904-001879	F101	SFR942PY002
2903-001424	F103	TBB-2012-245-
2901-001408	F300	ICVE10054E250
2901-001408	F301	ICVE10054E250
2901-001408	F302	ICVE10054E250
3711-006865	HDC301	AXT634124AW1
3710-003148	IFC300	HY20-AB0315
2703-002269	L100	CIH05T56NJNC
2703-002281	L101	CIH05T5N6SNC
2703-001613	L102	HK1005-18NK-T
2703-002267	L103	CIH05T4N7SNC
2703-001708	L104	HK1005-5N6K-T
2703-003121	L106	MLG1005SR15J
2703-003297	L200	APIS08G4R7MT
2703-003546	L201	CIG22L6R8MNE
3301-001812	L202	BLM15HD102SN1
2703-003476	L300	LQG15HSR27J02
3301-001756	L301	BLM15HG102SN1
3301-001756	L302	BLM15HG102SN1
3301-001917	L306	BLM15BD182SN1
3301-001917	L307	BLM15BD182SN1
3301-001970	L308	BLM15BA330SN1
0601-002846	LED300	9-217UTD/S75
0601-002846	LED301	19-217UTD/S75
0601-002846	LED302	19-217UTD/S75
0601-002846	LED303	19-217UTD/S75
2801-004787	OSC100	CXC6X260000GH

SEC CODE	Design LOC	Description
2801-004953	OSC200	Q13MC14620004
1201-002985	PAM100	SKY77548
2007-000162	R101	RC1005J104CS
2007-000162	R102	RC1005J104CS
2007-003015	R104	MCR01MZP5J2R2
2007-003112	R105	MCR01MZP5J270
2007-000162	R106	RC1005J104CS
2007-000162	R108	RC1005J104CS
2007-000148	R201	RC1005J103CS
2007-000152	R202	RC1005J203CS
2007-001333	R203	MCR01MZP5J183
2007-007589	R204	RK73H1ETP6802
2007-008354	R205	ERJ2RKF224X
2007-000148	R206	RC1005J103CS
2007-000141	R207	RC1005J222CS
2007-000166	R208	RC1005J304CS
2007-000143	R209	RC1005J472CS
2007-000159	R210	RC1005J563CS
2007-000159	R211	RC1005J563CS
2007-000159	R212	RC1005J563CS
2007-000159	R213	RC1005J563CS
2007-000149	R214	RC1005J123CS
2007-007573	R215	RK73H1ETP3303
2007-008354	R216	ERJ2RKF224X
2007-001319	R217	RC1005J122CS
2007-001319	R218	RC1005J122CS
2007-000162	R219	RC1005J104CS
2007-001319	R220	RC1005J122CS
2007-001319	R221	RC1005J122CS
2007-000140	R222	RC1005J102CS
2007-007132	R223	RC1005F153CS
2007-000148	R225	RC1005J103CS
2007-001333	R226	MCR01MZP5J183
2007-000148	R300	RC1005J103CS
2007-000170	R301	RC1005J105CS
2007-001333	R302	MCR01MZP5J183
2007-000242	R304	RC1005J152CS

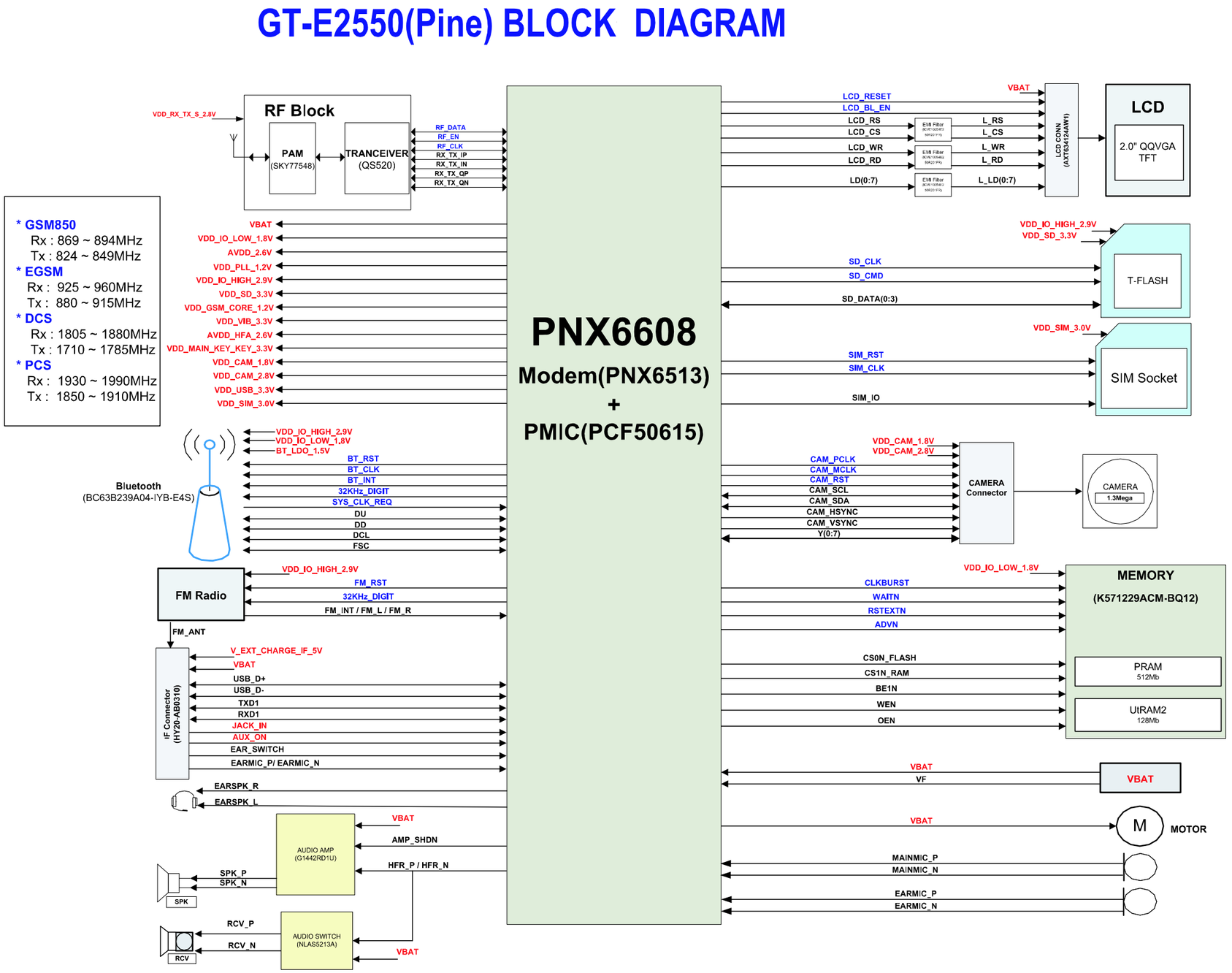
SEC CODE	Design LOC	Description
2007-000242	R305	RC1005J152CS
2007-000172	R307	RC1005J100CS
2007-002796	R308	MCR01MZP5J511
2007-002796	R309	MCR01MZP5J511
2007-000172	R310	RC1005J100CS
2007-000172	R314	RC1005J100CS
2007-000242	R315	RC1005J152CS
2007-000172	R316	RC1005J100CS
2007-000148	R319	RC1005J103CS
2007-000170	R320	RC1005J105CS
2007-001333	R321	MCR01MZP5J183
2007-001292	R324	RC1005J330CS
2007-001292	R325	RC1005J330CS
2007-001292	R326	RC1005J330CS
2007-001292	R327	RC1005J330CS
2007-000155	R328	RC1005J273CS
2007-000242	R329	RC1005J152CS
2007-001333	R331	MCR01MZP5J183
3301-001762	R332	BLM15BD471SN1
2007-000138	R333	RC1005J101CS
2007-000168	R334	RC1005J474CS
2007-000146	R335	RC1005J682CS
2007-000146	R336	RC1005J682CS
2007-000168	R337	RC1005J474CS
2007-001333	R343	MCR01MZP5J183
2007-001292	R344	RC1005J330CS
2007-001292	R345	RC1005J330CS
3705-001731	RFS100	KMS-560-002-B
GH70-03349A	SC100	ONBOARD-CLIP-
GH70-03349A	SC101	ONBOARD-CLIP-
GH70-03349A	SC102	ONBOARD-CLIP-
GH70-03349A	SC103	ONBOARD-CLIP-
GH70-03349A	SC104	ONBOARD-CLIP-
GH70-03349A	SC105	ONBOARD-CLIP-
GH70-03349A	SC106	ONBOARD-CLIP-
GH70-03349A	SC107	ONBOARD-CLIP-
3709-001627	SIM200	5000-6P-1.9SB

SEC CODE	Design LOC	Description
3710-003235	SOC300	3D1201087-ST3
2203-007279	TA200	CV105X5R106M1
2404-001377	TA300	F980J226MMA
1205-003682	U100	QS520-0RFI
1205-003517	U101	BC63B239A04-I
1204-003022	U102	TEA5996UK
1009-001050	U200	S-5711ACDL-I4
1203-005907	U201	MIC5365-1.5YM
1001-001508	U300	NLAS5213A
2203-006348	U303	CV105X5R105K2
0406-001286	U305	PESD5V0L5UV
1201-002675	U306	G1442RD1U
1205-003934	UCP200	PNX6608
1108-000377	UME100	K5N1229ACD-BQ12
1404-001221	VR200	NCP15WB473J04
0403-001688	ZD200	USFZ5.6V-RTK/
0406-001281	ZD300	ESDALC6V1-1M2
0406-001281	ZD301	ESDALC6V1-1M2
0406-001281	ZD302	ESDALC6V1-1M2
0406-001281	ZD303	ESDALC6V1-1M2
0406-001201	ZD304	uClamp0501H
0406-001286	ZD305	PESD5V0L5UV
0406-001201	ZD306	uClamp0501H
0403-001832	ZD307	BZX884-C5V6

Please consult the GSPN website (Samsung Portal) for the most recent version of the product's part list.

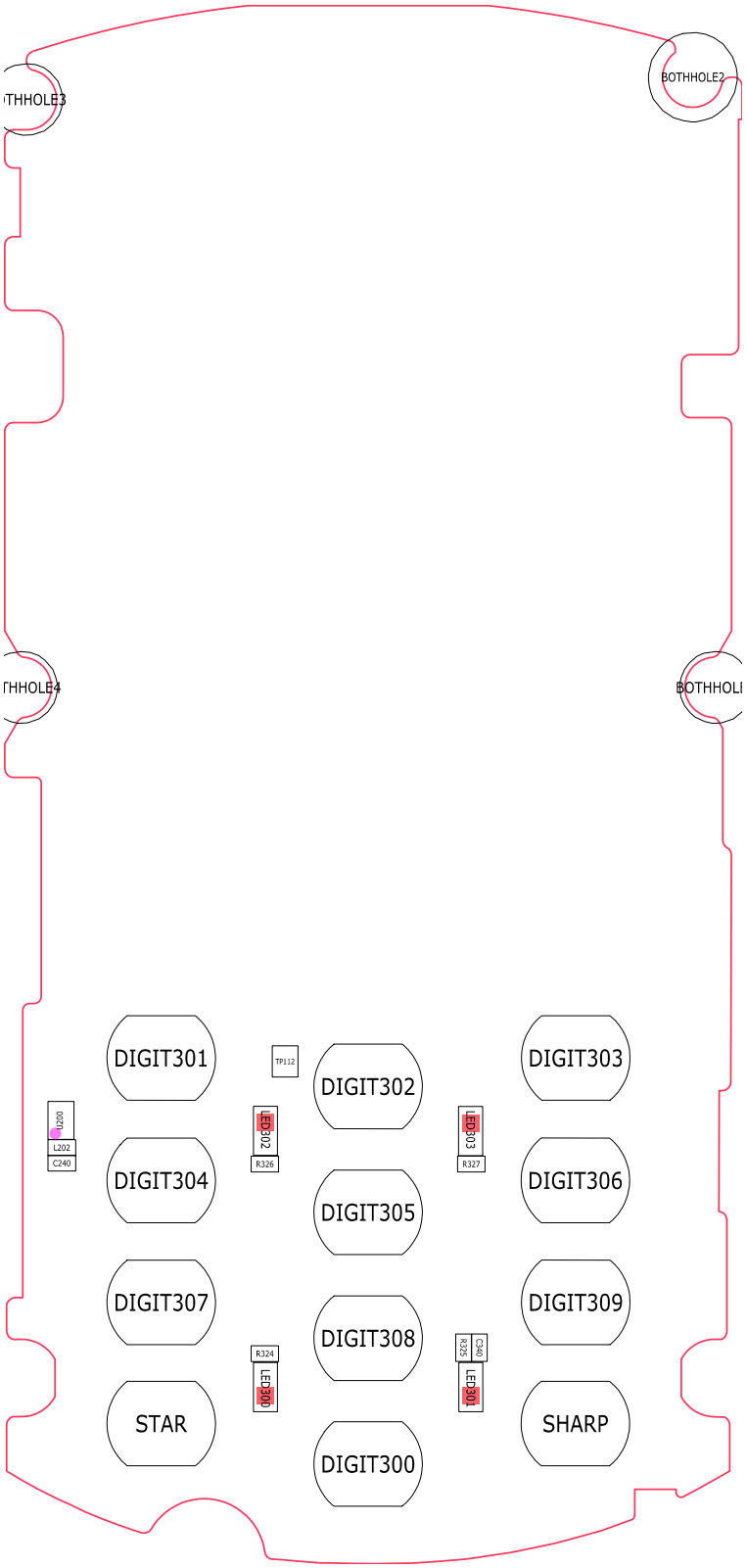
7. Block Diagrams

7-1. Functional Block Diagram

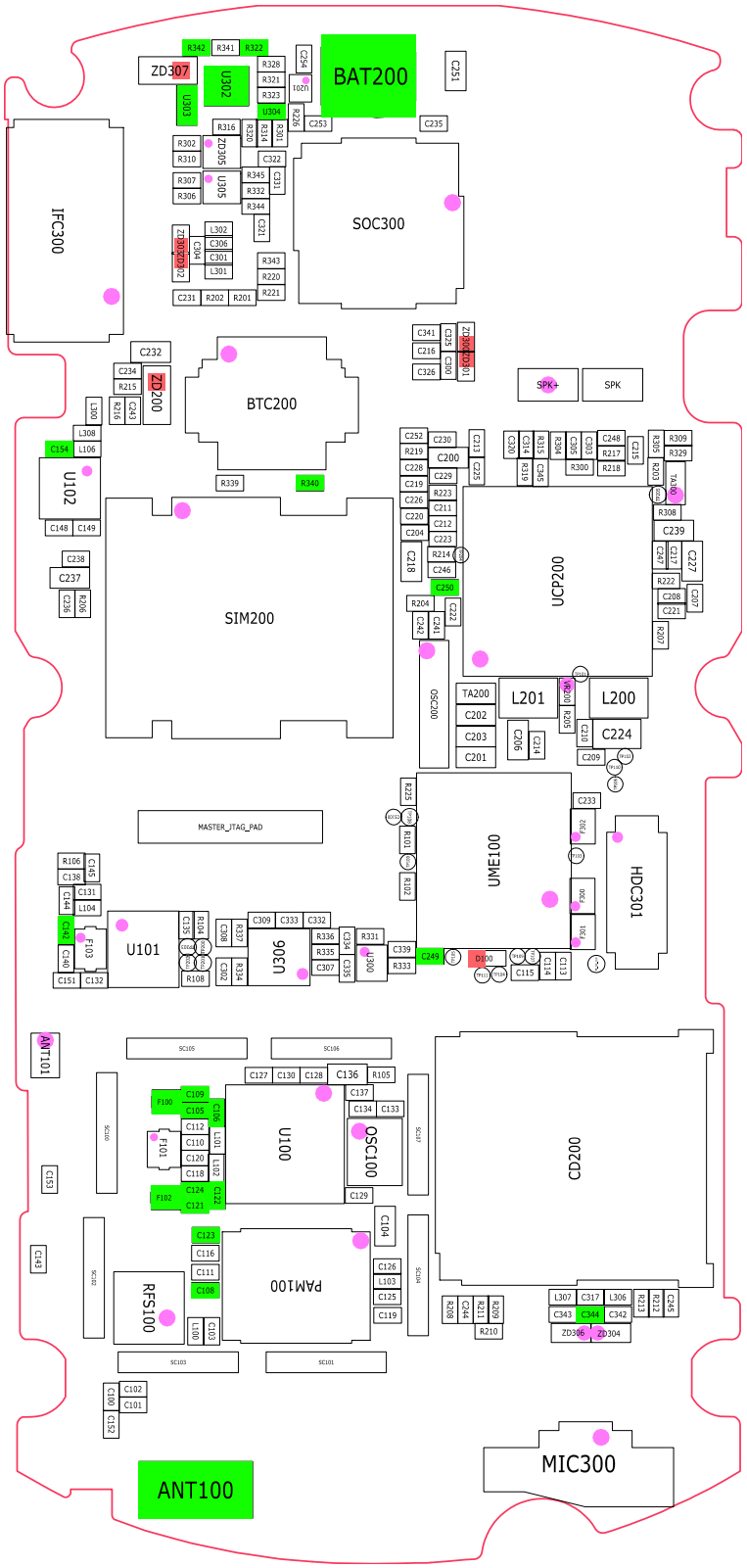


8. PCB Diagrams

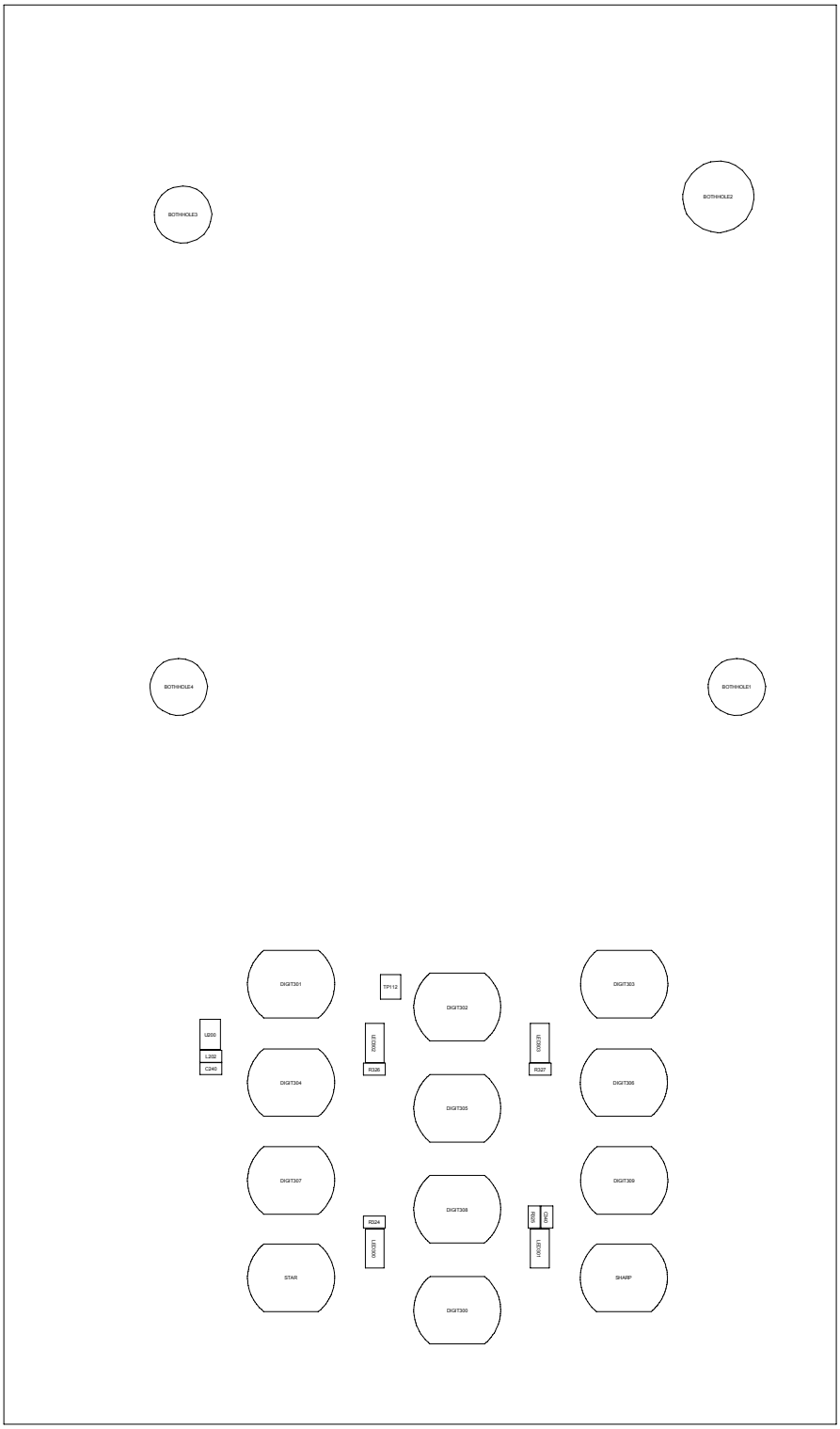
8-1. Main top view (E2550)



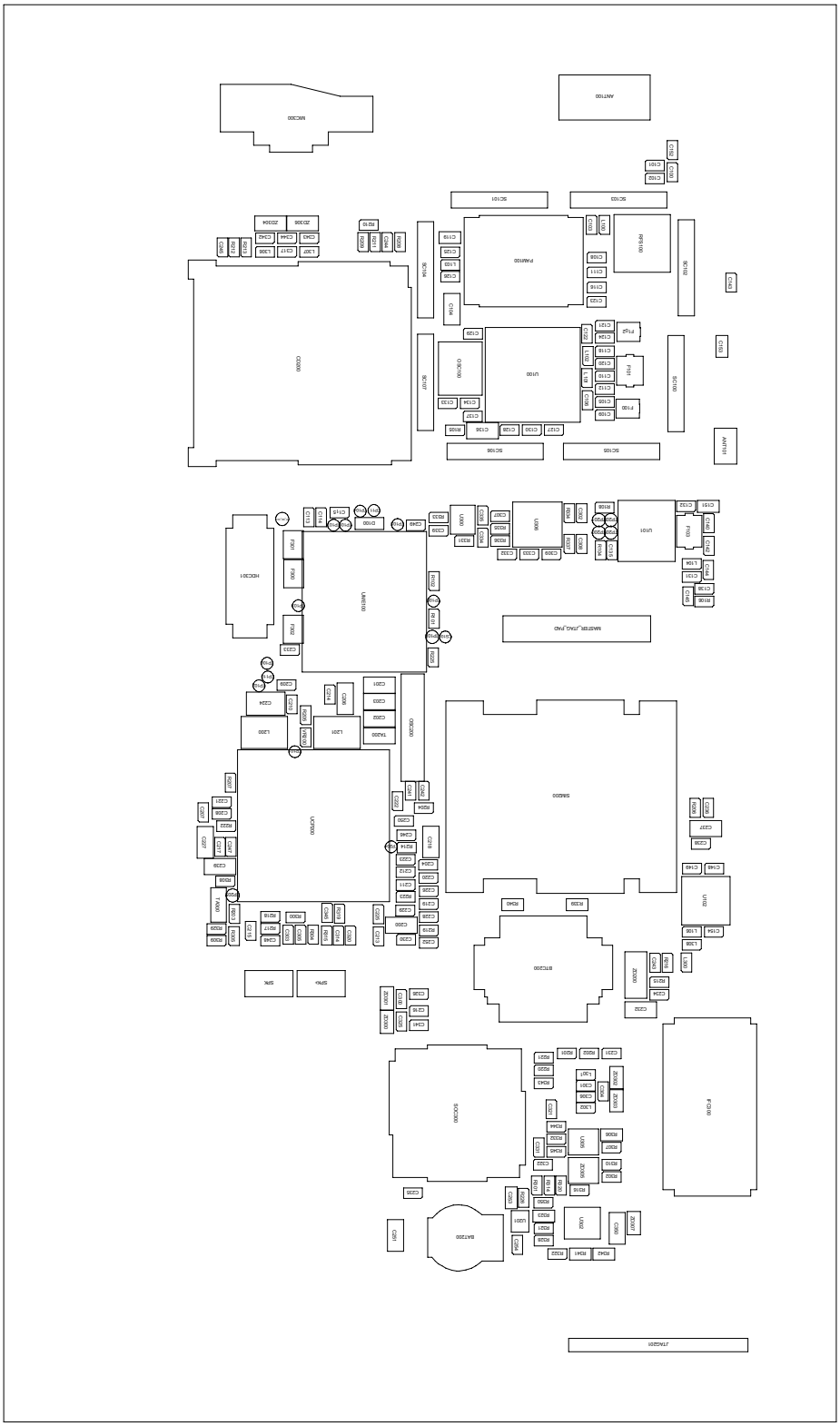
8-2. Main Bottom view (E2550)



8-3. Main top view (E2558)



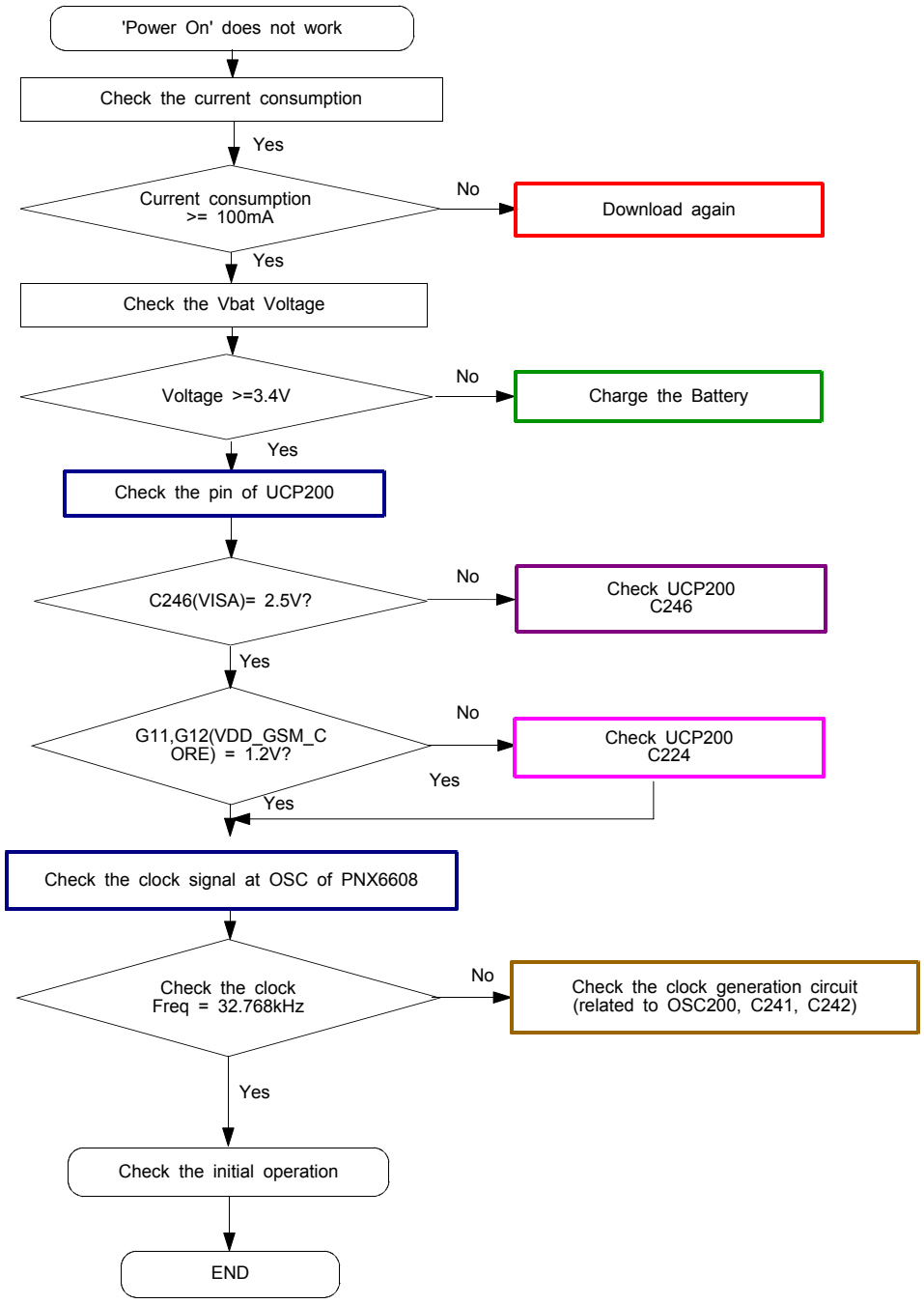
8-4. Main Bottom view (E2558)

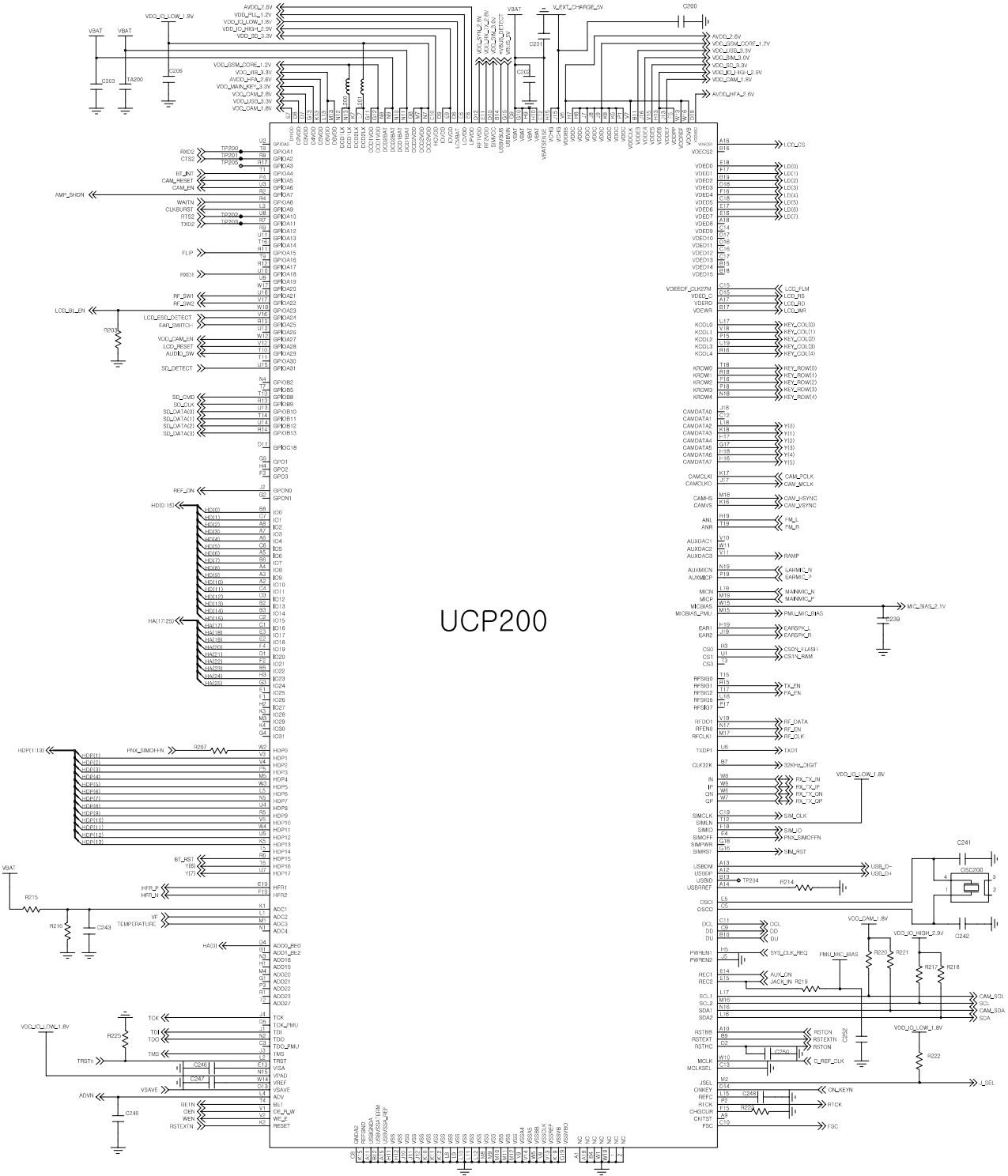


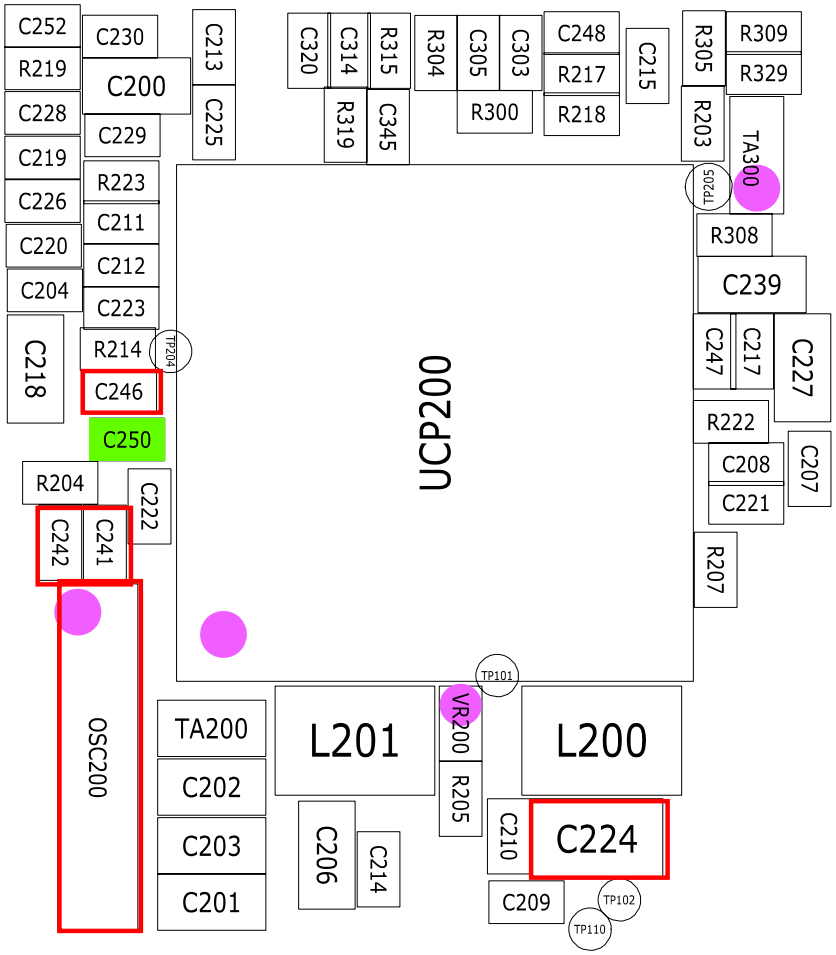
9. Flow Chart of Troubleshooting

9-1.Baseband

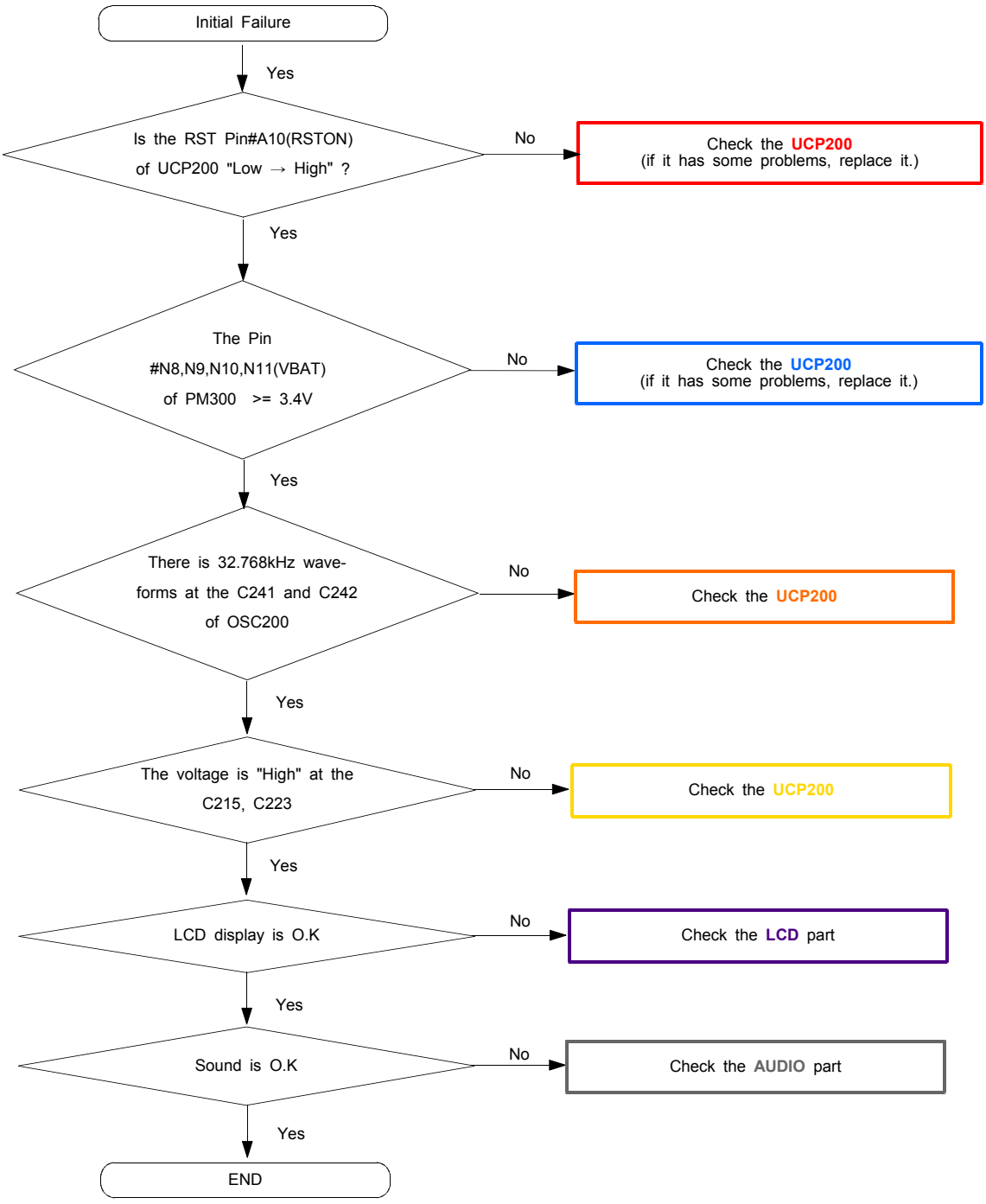
9-1-1. Power ON

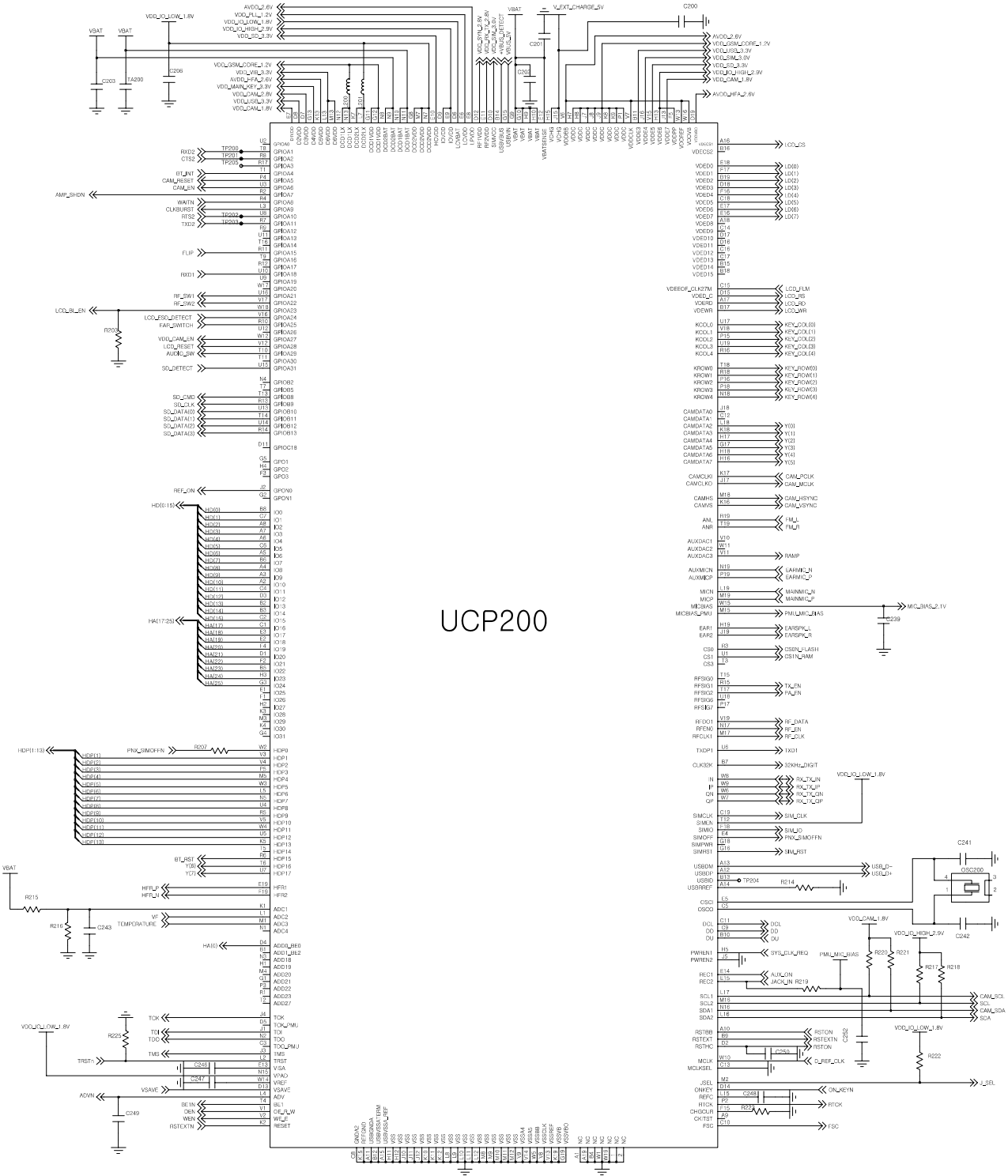


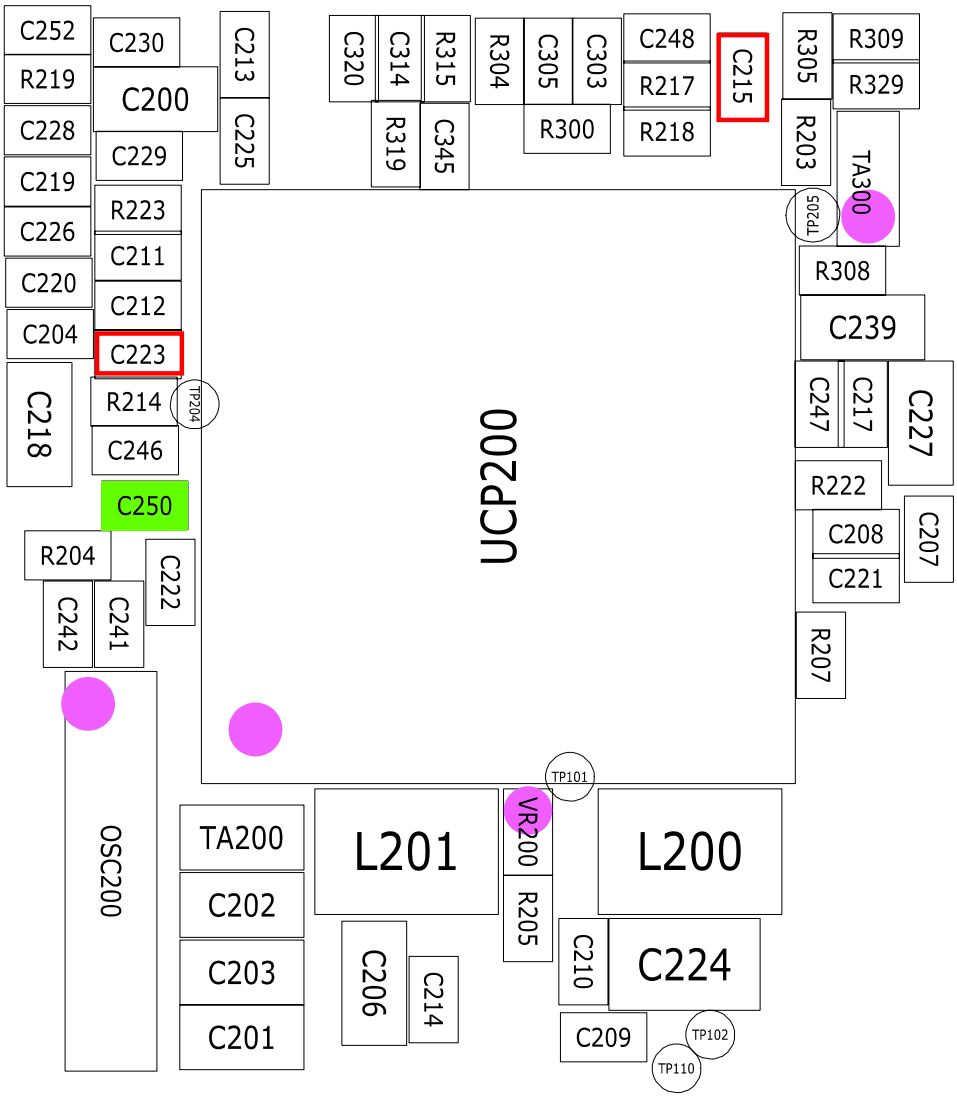




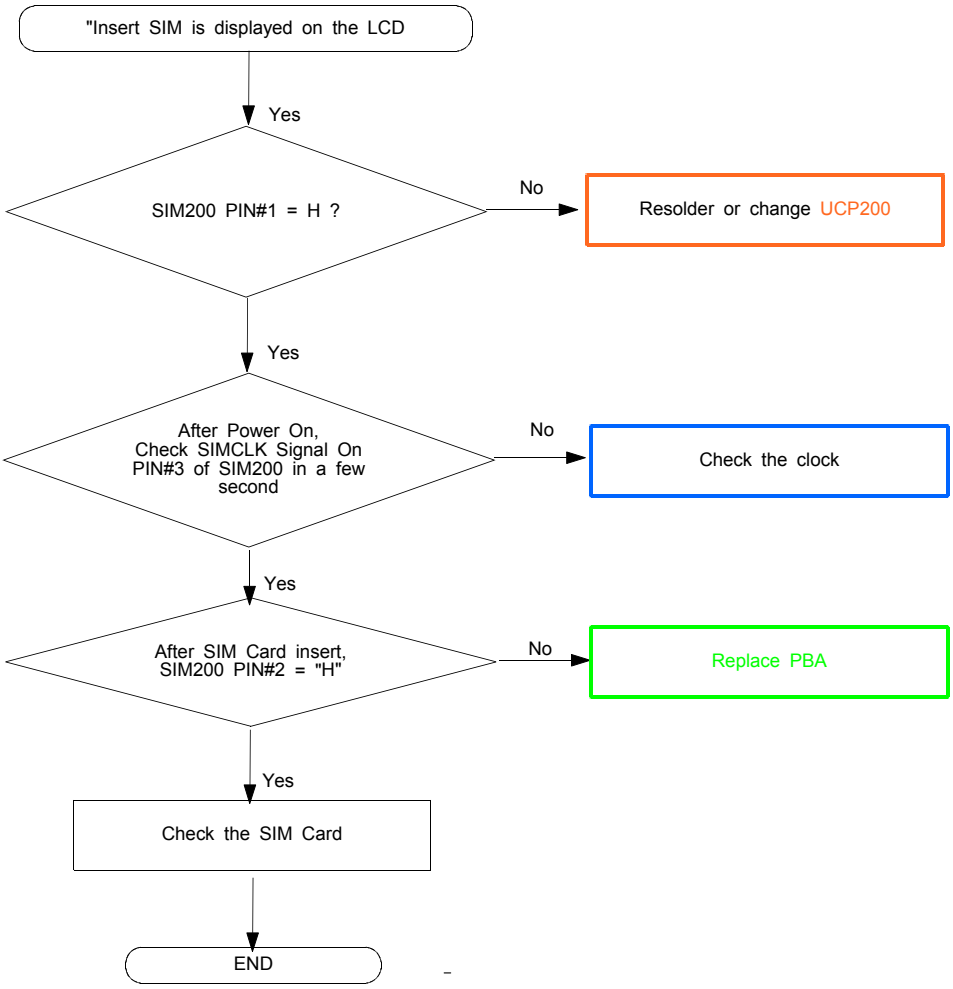
9-1-2. Initial

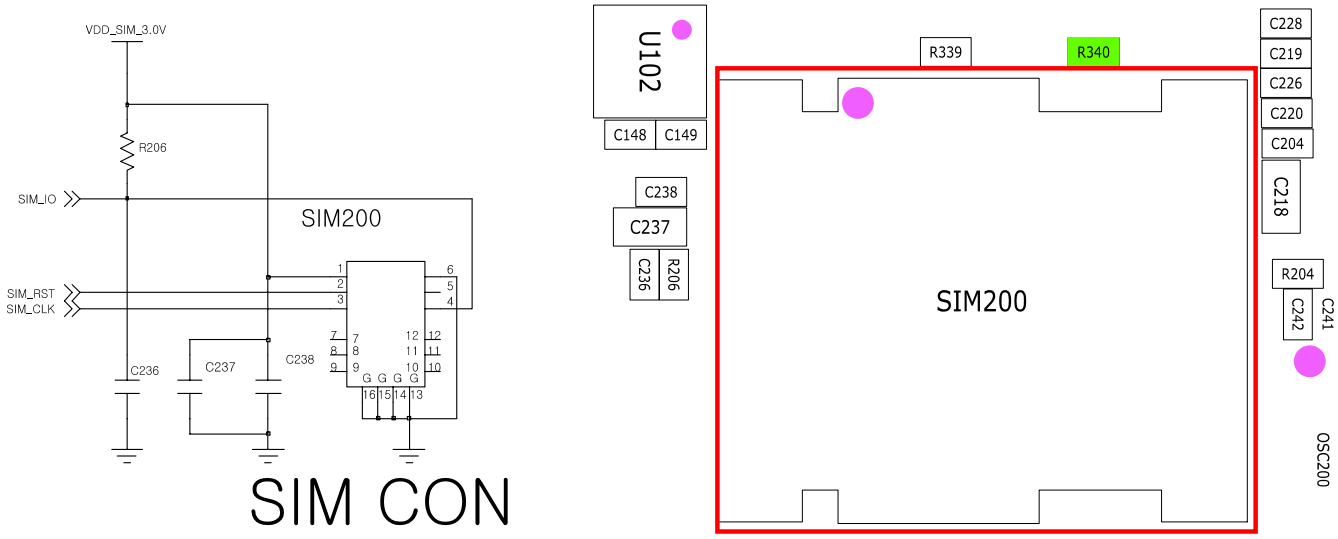




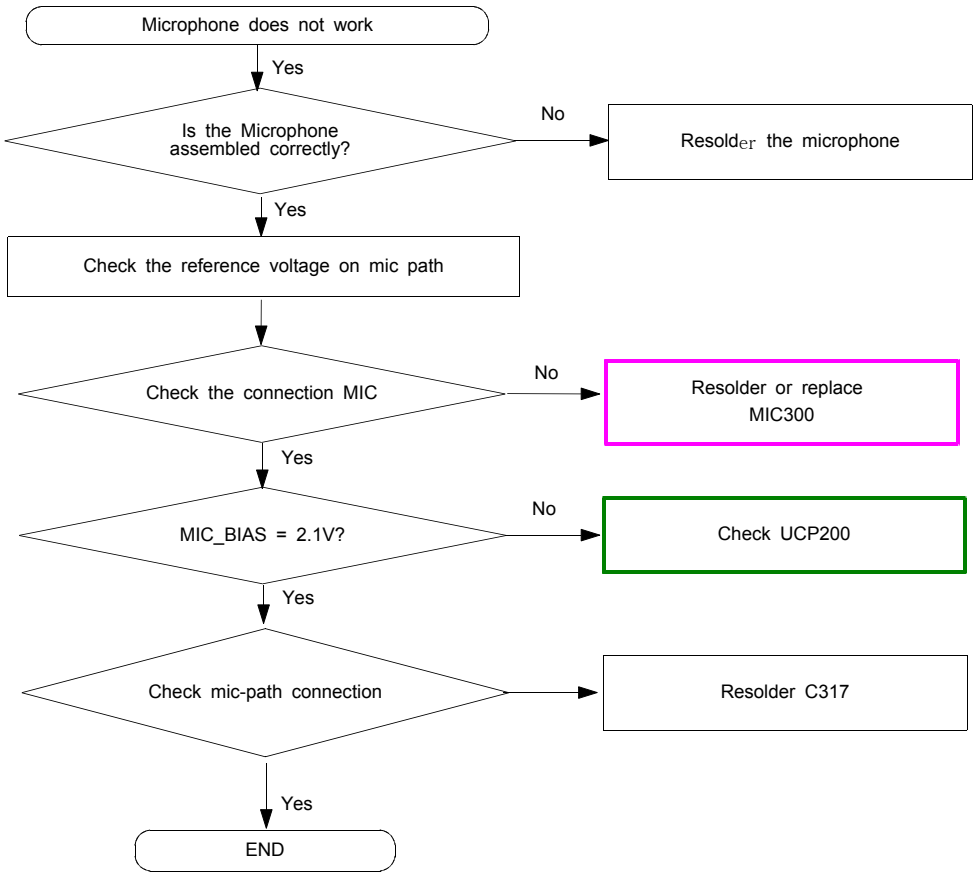


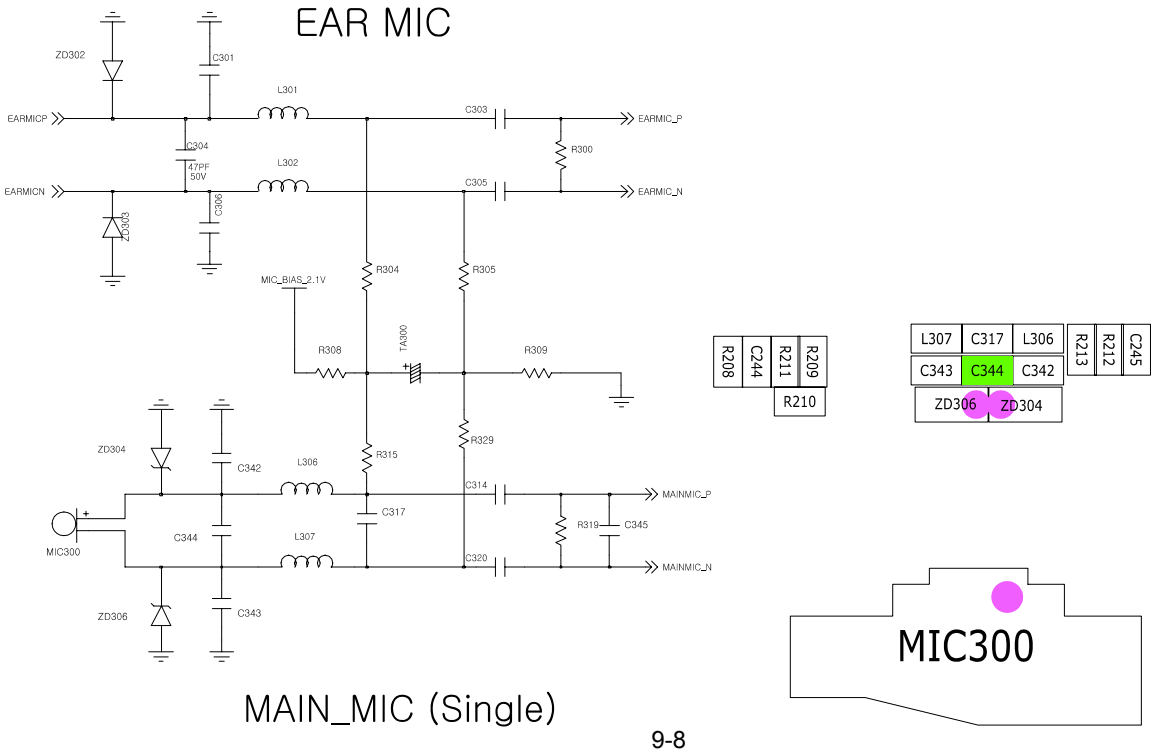
9-1-3. Sim Part



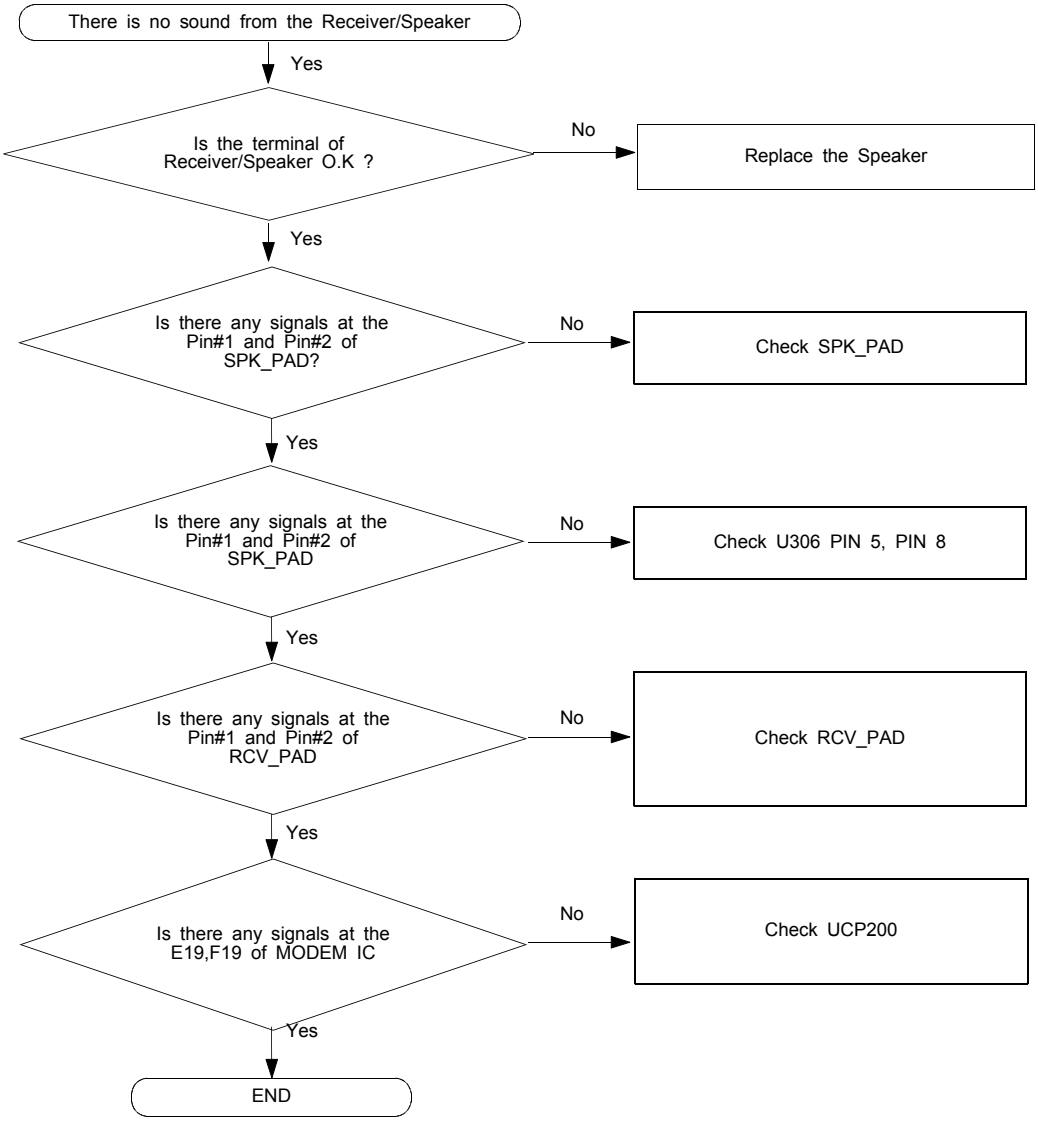


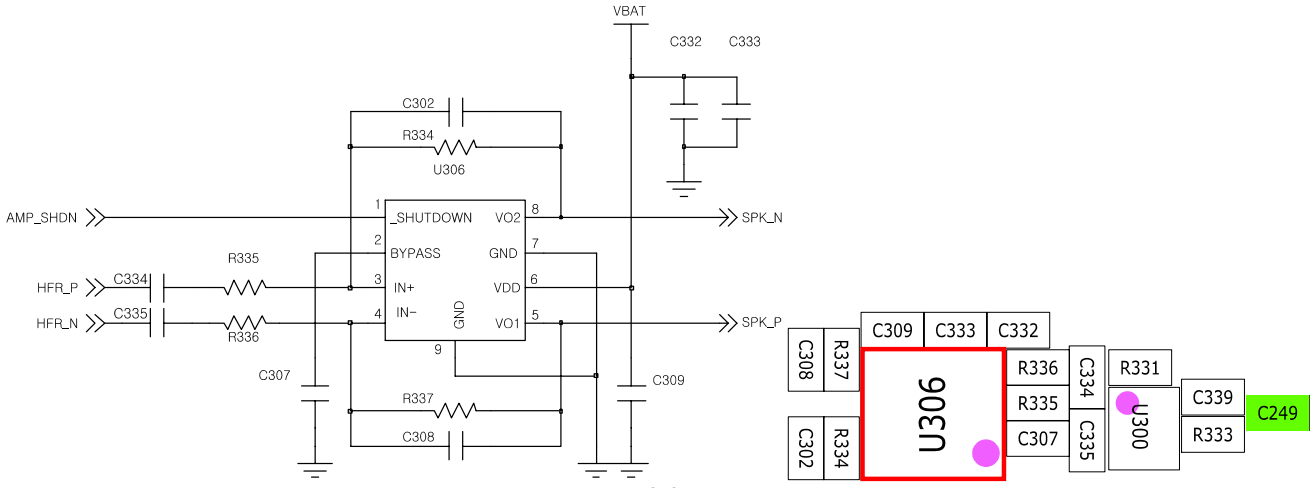
9-1-4. Microphone Part



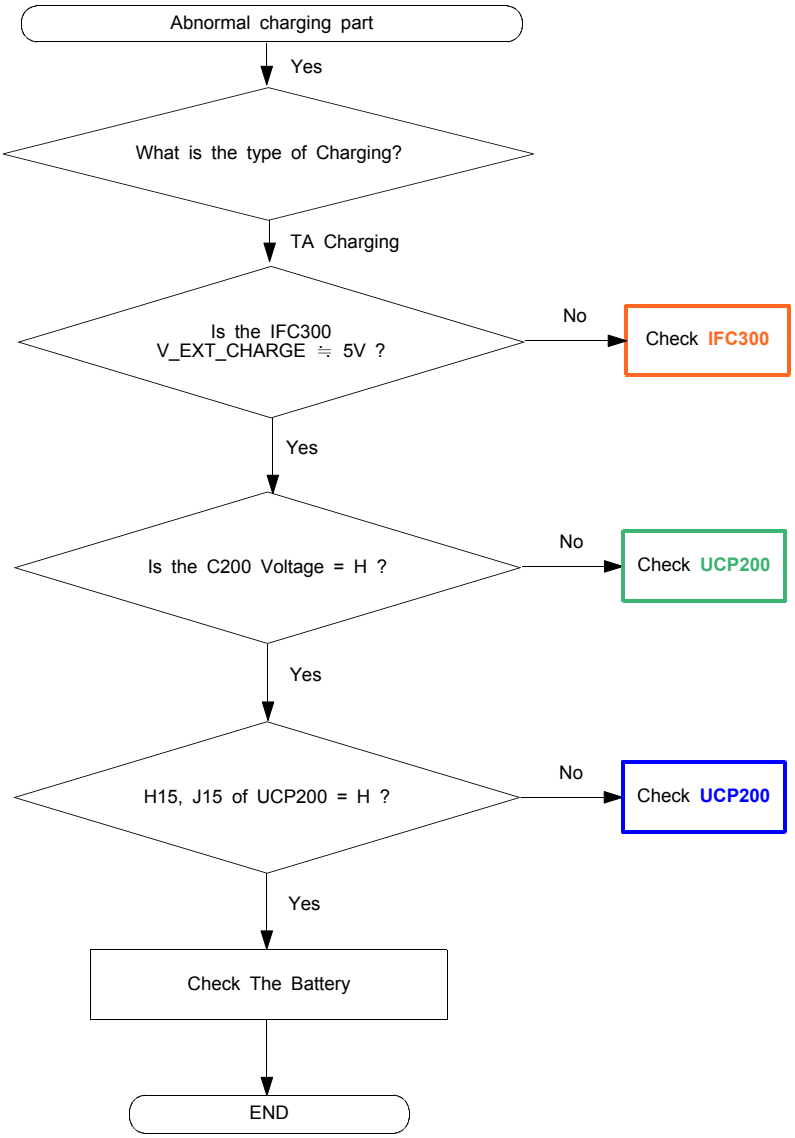


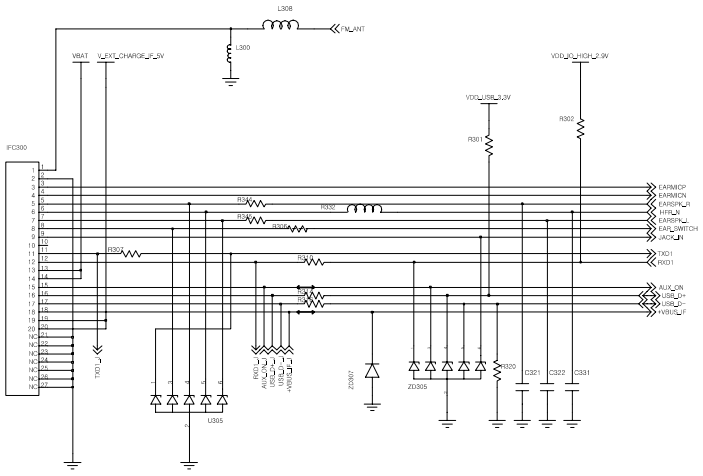
9-1-5. Receiver/Speaker Part

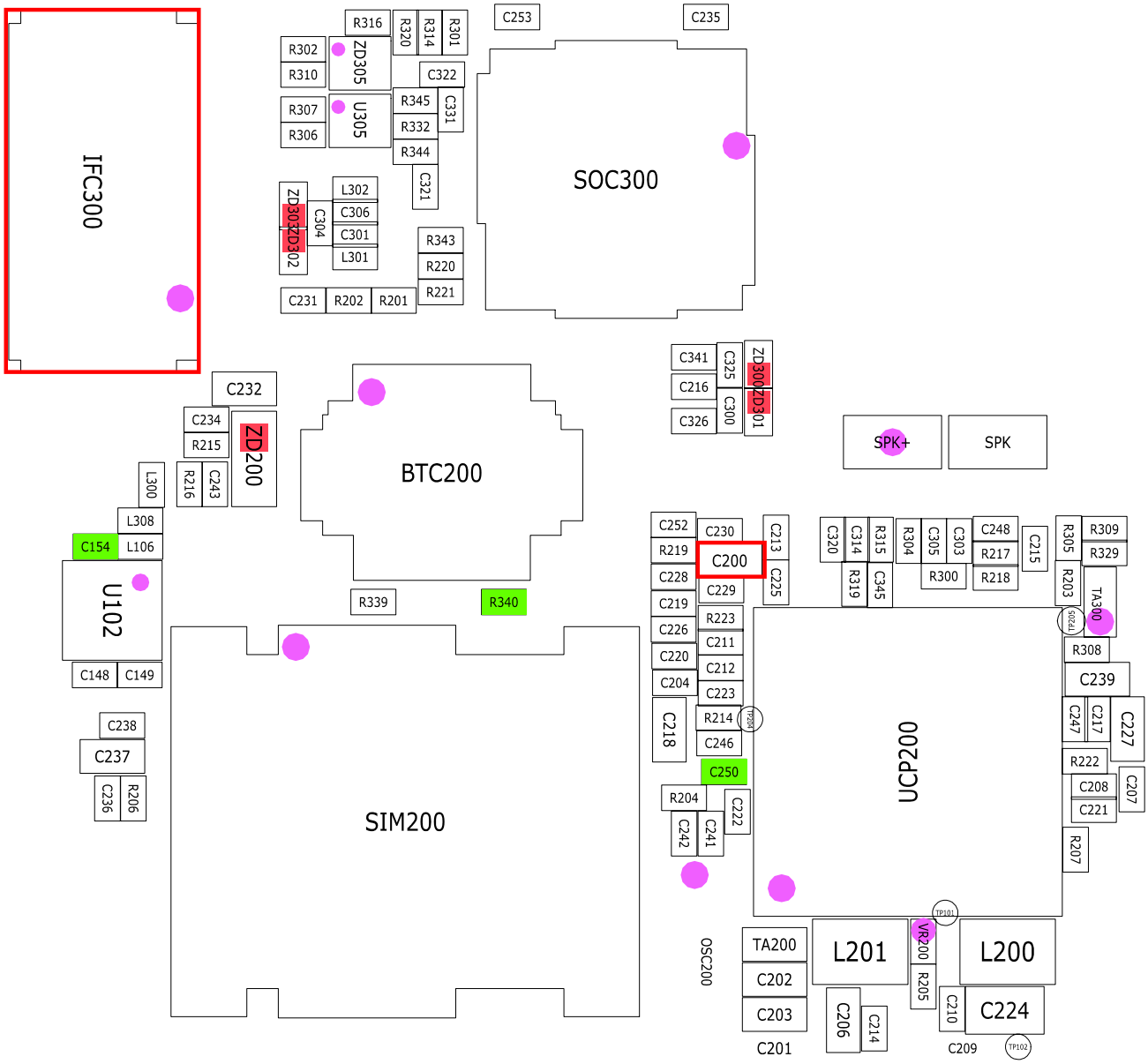




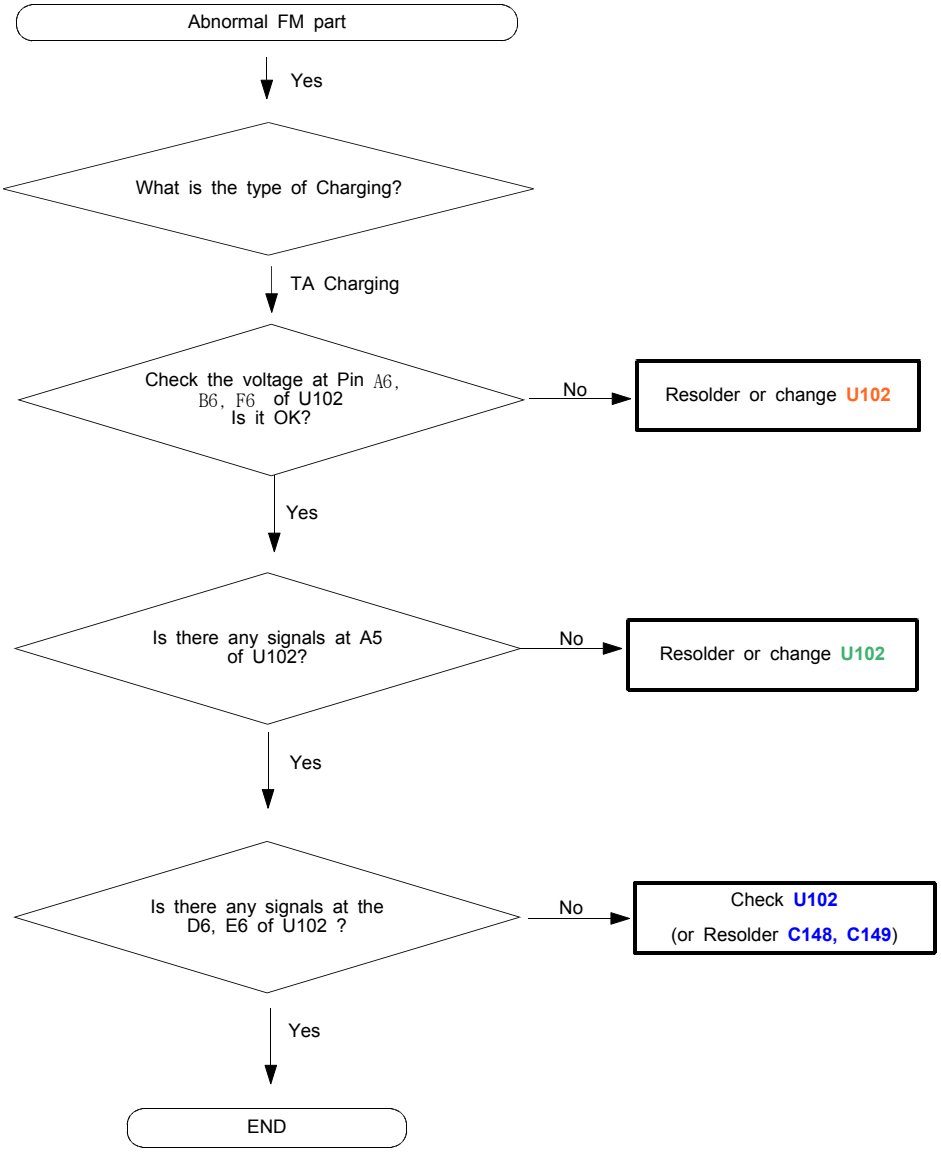
9-1-6. Charging Part

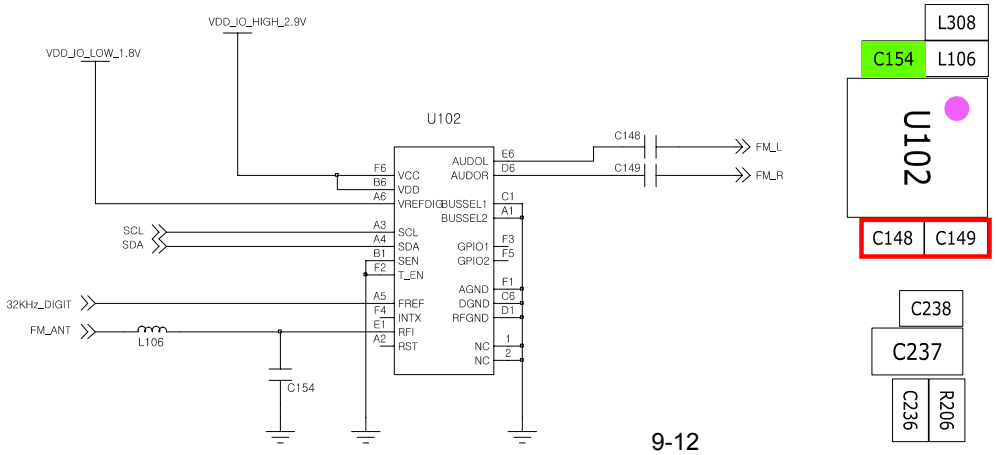






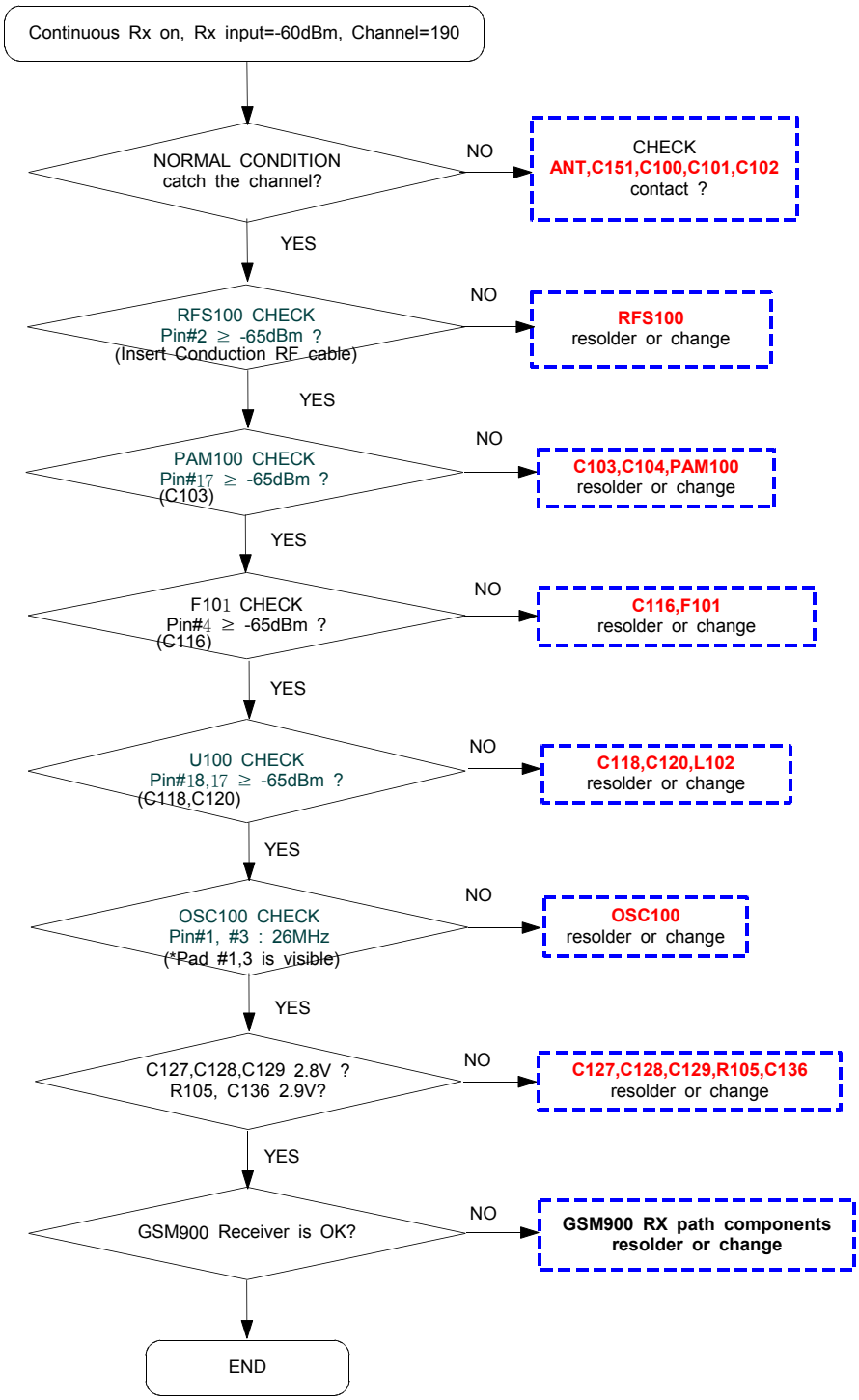
9-1-7. FM Receiver part



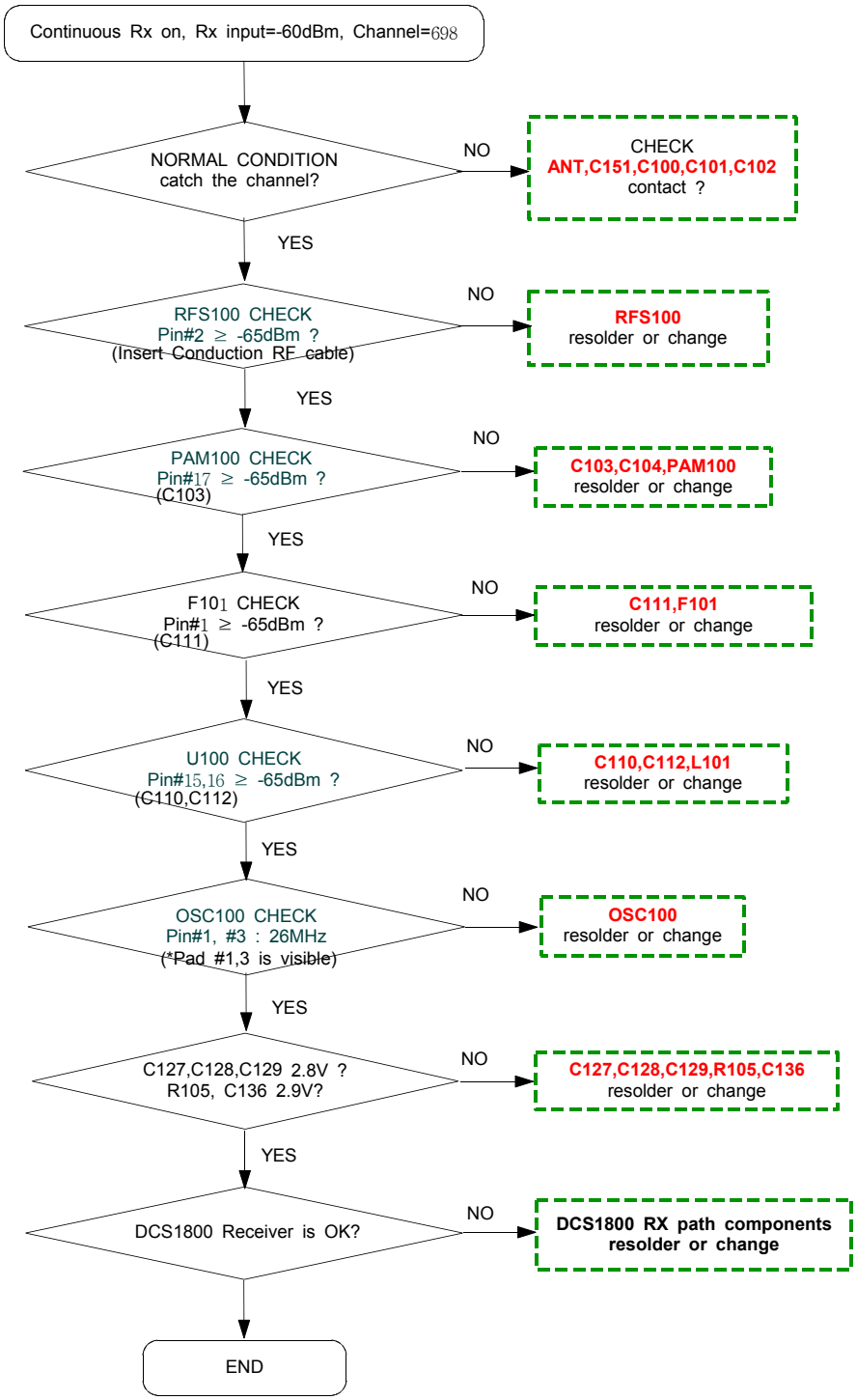


9-2. RF

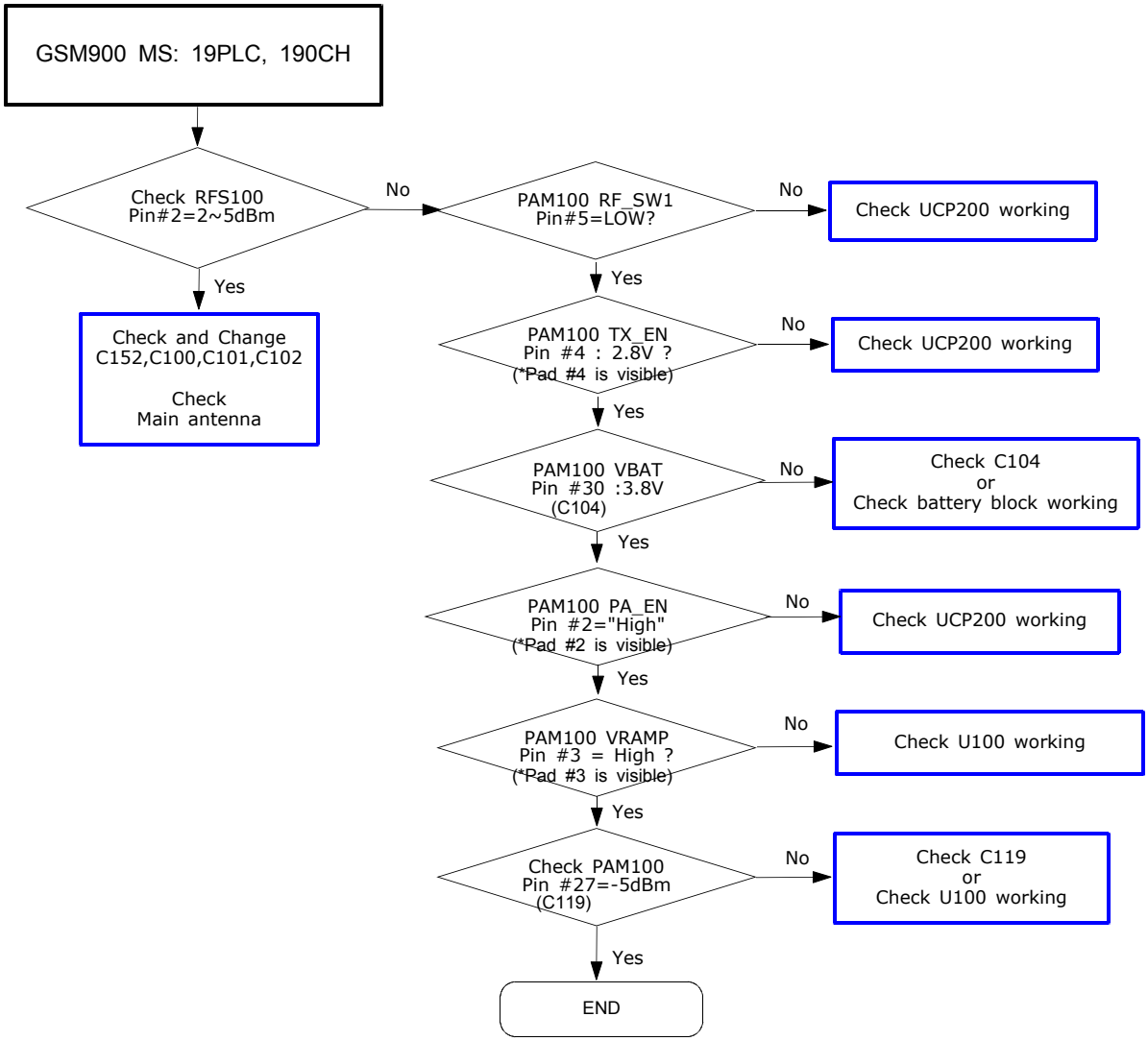
9-2-1. GSM900 RX *Refer to the - - - - - Line(GSM900 Rx path) in service schematic page1



9-2-2. DCS1800 RX *Refer to the - - - - - Line(DCS1800 Rx path) in service schematic page1

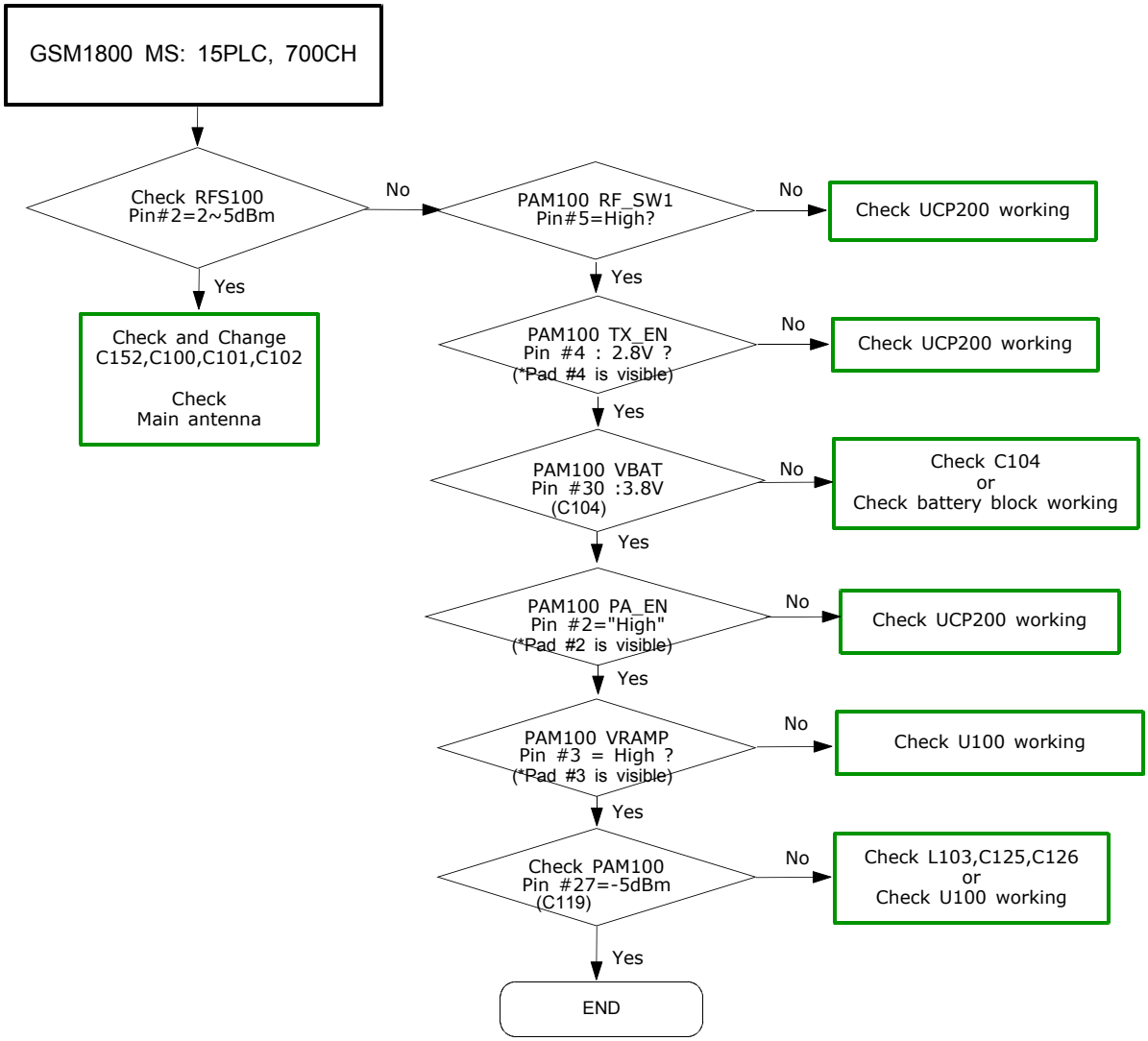


9-2-3. GSM900 TX *Refer to the ——— Line(Low band Tx path) in service schematic page1

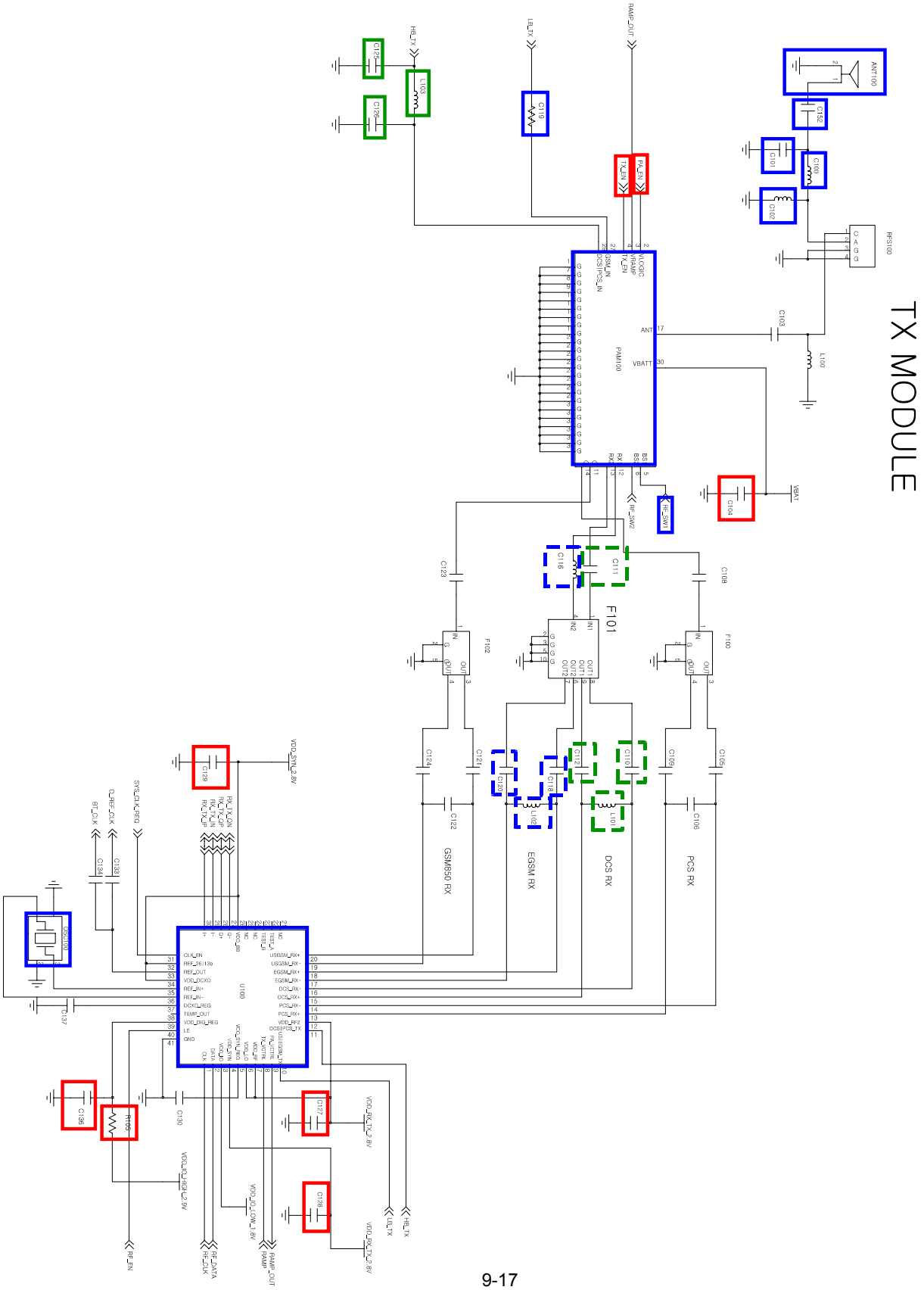


9-2-4. DCS1800 TX

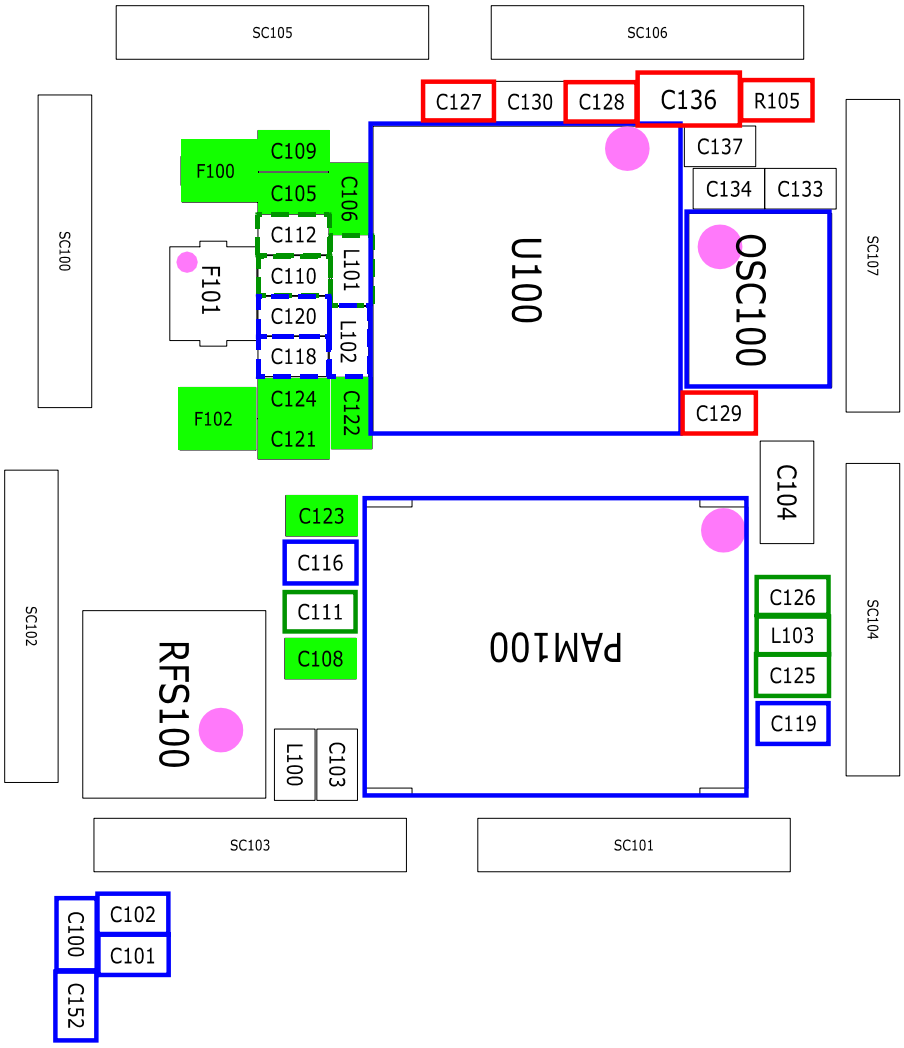
*Refer to the ——— Line(GSM900 Tx path) in service schematic page1



RF Schematic



RF Layout



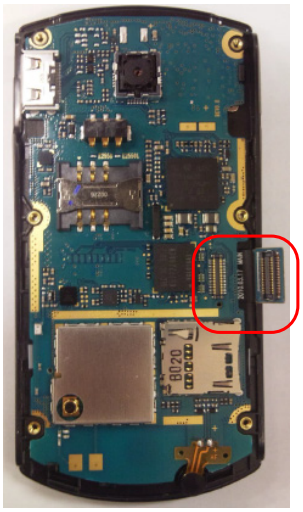
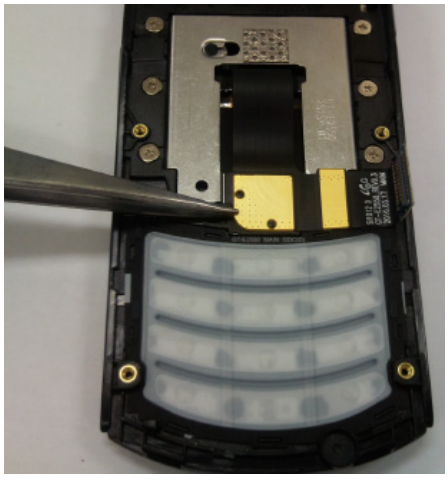
10. Reference data

Reference Abbreviate

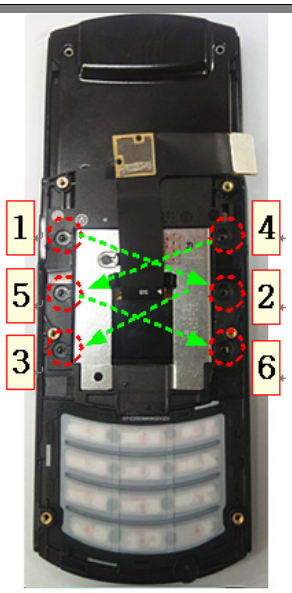
- **AAC**: Advanced Audio Coding.
- **AVC** : Advanced Video Coding.
- **BER** : Bit Error Rate
- **BPSK**: Binary Phase Shift Keying
- **CA** : Conditional Access
- **CDM** : Code Division Multiplexing
- **C/I** : Carrier to Interference
- **DMB** : Digital Multimedia Broadcasting
- **EN** : European Standard
- **ES** : Elementary Stream
- **ETSI**: European Telecommunications Standards Institute
- **MPEG**: Moving Picture Experts Group
- **PN** : Pseudo-random Noise
- **PS** : Pilot Symbol
- **QPSK**: Quadrature Phase Shift Keying
- **RS** : Reed-Solomon
- **SI** : Service Information
- **TDM** : Time Division Multiplexing
- **TS** : Transport Stream

11. Disassembly and Assembly Instructions

11-1. Disassembly

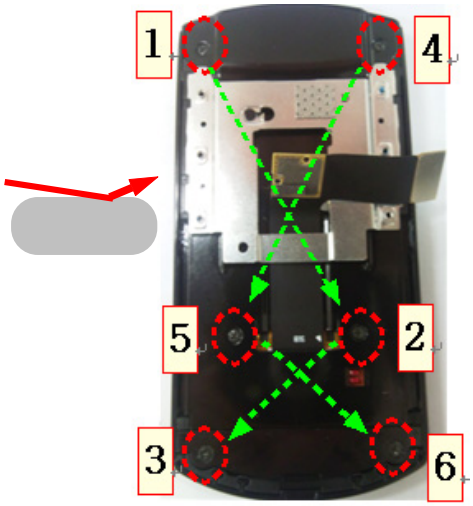
1 1) Take out Battery cover and Battery in Handset 	**2** 1) Unscrew below 6 ponts 2) Separate from Upside 
1) Beware of scratch and damage in the mechanical component	1) Beware of scratch and damage in the mechanical component 2) Caution not to damage REAR part while separate part
3 1) Detach LCD CONNECTOR from PBA 2) PBA is taken from Front Ass'y 	**4** 1) With the Tweezers, Slice FPCB take off from FRONT Ass'y. 
1) Not to damage of SLIDE FPCB	1) Beware of damage in the mechanical component 2) Caution not to damage REAR part while separate part

5 1) Unscrew below 6 points



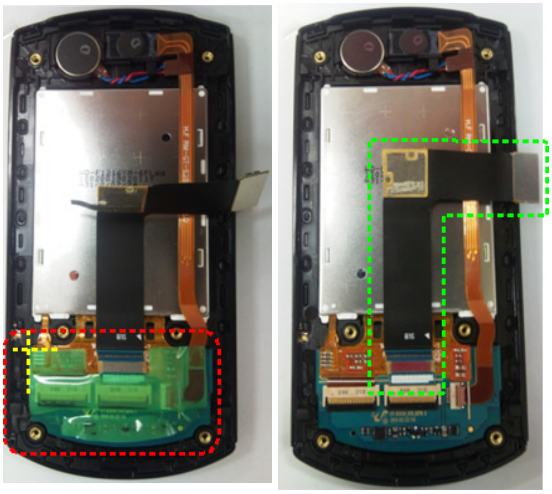
1) Beware of scratch and damage in the mechanical component.
2) Caution not to damage LOWER part and FPCB while separate part

6 1) Unscrew below 6 points
3) Separate LOWER after hinge slide down



1) Beware of scratch and damage in the mechanical component.
2) Caution not to damage LOWER part and FPCB while separate part

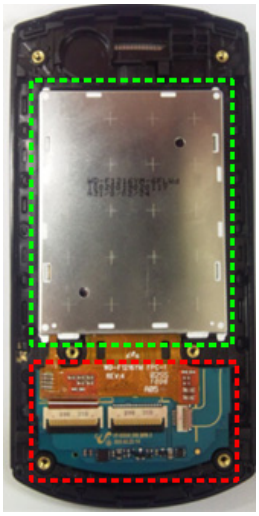
7 1) Remove the tape attached on SUBPBA Ass'y.
2) Take off Silde FPCB



1) The tape is removed with circular tweezers
2) Beware of scratch and damage of FPCB.

8 1) Take off MOTTOR/Receiver FPCB.

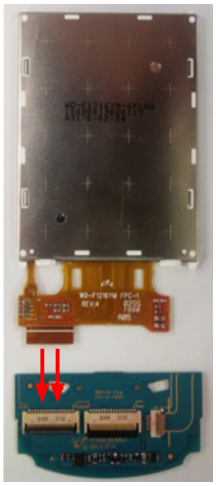
1) The tape is removed with circular tweezers
2) Beware of scratch and damage of FPCB.

9 1) Take away LCD in SUB PBA Ass'y with caution. 	**10** 1) Separate LCD and SUB PBA from UPPER 
1) Beware of scratch and damage of FPCB and Connector.	1) Beware of scratch and damage in mechanical component.

11-2 Assembly

1

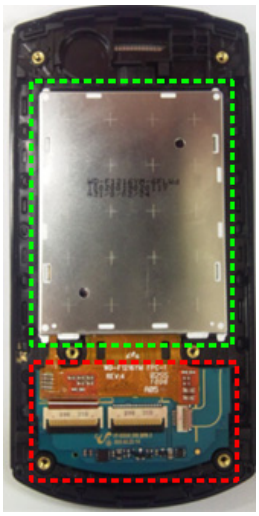
1) SUB Keypad is placed in Slide Upper
2) LCD FPCB is inserted in SUB PBA.



1) Beware of scratch and damage of FPCB and Connector.
2) Caution not to damage LCD and Sub PCB.

2

1) Slide Upper에 LCD+Sub PBA 을 안착시킨다.



1) Caution not to damage components in Sub PBA while assembled.
2) Beware of scratch and damage of mechanical parts.
3) Attached LCD in Upper on right place with caution.

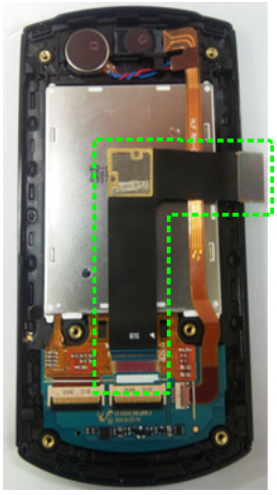
3

1) Insert Motor/Receiver FPCB on connector .
2) Placed Motor/Receiver in Upper.

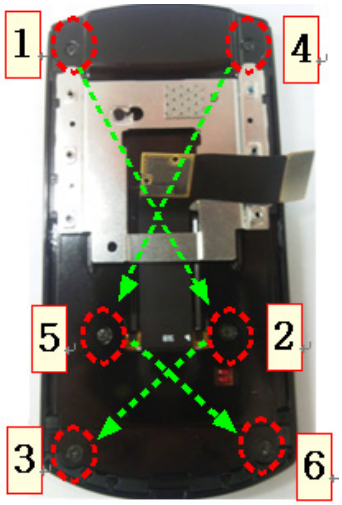
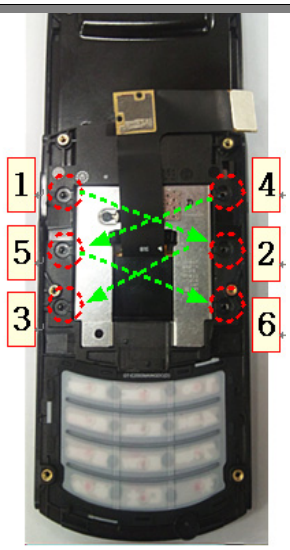
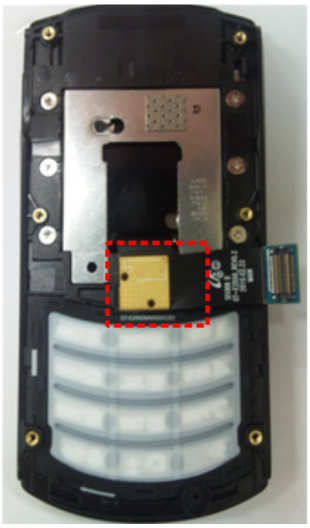
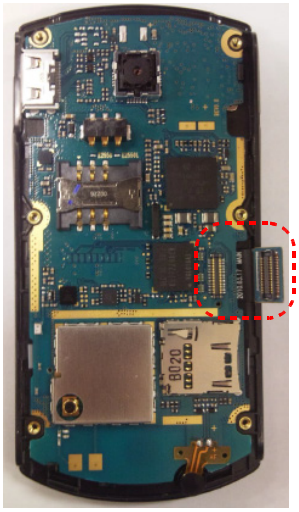
1) Beware of scratch and damage of mechanical parts.
2) Caution not to damage FPCB.

4

1) Put Main FPCB into Sub PBA.
2) Attach the tape on Sub PBA.



1) Beware of scratch and damage of mechanical parts.
2) Caution not to damage FPCB.

7 1) After HINGE PLATE slide down, FPCB goes through in Lower Assembling. 2) After HINGE PLATE slide up and screw below 6 Points 	**8** 1) When SLIDE HINGE UP, FRONT is placed on. 2) After SLIDE HINGE down, screw below 6 points. 
1) FPCB isn't damage while FPCB go through HINGE. 2) Beware that mechanical part is not damage while screw.	1) Beware of scratch and damage of mechanical parts. 2) Caution not to damage FPCB.
7 1) SLIDE FPCB is fixed in FRONT. 	**8** 1) PBA is placed on FRONT ASS'Y. 2) Slide FPCB Connector hook up with PBA. 
1) FPCB is attached right place.	1) Make sure SLIDE FPCB is inserted right.

9 1) Put REAR case. 2) SCREW 6 Points. 	**10** 1) Check exterior view and function test. 
1) Beware of scratch and damage of mechanical parts.	1) Check its exterior view.

12. Schematic Diagram

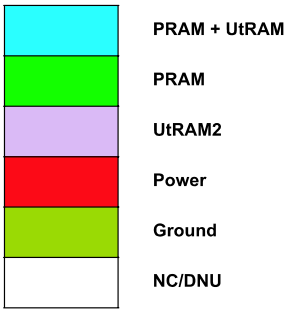
UCP200 Pin Configuration

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
A	NC	IO10	IO9	IO8	IO6	IO4	IO3	IO2	CKITST	RSTBB	USBGNDA	USBDP	USBDM	USBRREF	USBVSSAREF	VDECS1	VDERD	VDED8	NC	A
B	ADD1_BE2	IO13	IO14	NC	IO22	IO7	CLK32K	IO0	RSTEXT	DU	VDDE3	USBVSSATERM	USBID	USBVBUS	VDED14	VDECS2	VDEWR	VDED15	VDED2	B
C	IO16	IO15	TDO_PMU	IO11	OSCO	IO5	IO1	GNDA2	DD	FSC	DCL	CAMDATA1	MCLKSEL	VDED9	VDEEOF_CLK27M	VDED12	VDED13	VDED5	SIMCLK	C
D	IO20	RSTHC	IO12	ADD0_BE0	TCK_PMU	LCVBAT	D3VDD	D2VDD	IOVDD	SIMVCC	GPIOC18	RF1VDD	VSAVE	ONKEY	VDED_C	VDED11	VDED10	VDED3	VDDVBO	D
E	IO25	IO18	IO17	SIMOFF	OSCI	LCVDD	D1VDD	LPVDD	IOVDD	HCVDD	RF2VDD	VBATSENSE	VISA	REC1	REC2	VDED7	VDED6	VDED0	HFR1	E
F	IO26	IO21	GPO3	IO19	VDDPP										CHGCUR	VDED4	VDED1	SIMIO	HFR2	F
G	ADD21	GPON1	IO24	IO31	GPO1			DCD2VDD	VBAT	VBAT	DCD1VDD	DCD1VDD	D4VDD		USBVIN	SIMRST	CAMDATA5	SIMPWR	VSSVBO	G
H	ADD19	IO27	IO23	GPO2	PWREN1		VDDC	VDDC	VBAT	VBAT	VSS	VSS	VDDE6		VCHG	CAMDATA7	CAMDATA4	CAMDATA6	EAR1	H
J	TDI	GPON0	TMS	TCK	PWREN2		VDDC	VDDC	VDDC	VSS	VSS	VSS	VDDE7		VCHG	VDDE4	CAMCLKO	CAMDATA0	EAR2	J
K	ADC1	RESET	IO28	IO30	HDP13		DCD2LX	VDDC	VDDC	VSS	VSS	VSS	D5VDD		REFGND	CAMVS	CAMCLKI	CAMDATA3	VSSVB	K
L	ADC2	TRST	GPIOA9	ADV	HDP6		DCD2LX	VSS	VSS	VSS	VSS	VSS	D6VDD		REFC	SDA2	SCL1	CAMDATA2	MICN	L
M	ADC3	JSEL	IO29	ADD20	HDP4		DCD2VDD	VSS	VSS	VSS	VSS	VSS	D6VDD		MICBIAS_PMU	SCL2	RFCLK1	CAMHS	MICP	M
N	ADC4	TDO	ADD18	GPIOB2	HDP7		DCD2VDD	DCD2VBAT	DCD2VBAT	DCD1VBAT	DCD1VBAT	DCD1LX	DCD1LX		VPAD	SDA1	RFEN0	KROW4	AUXMICN	N
P	VDDC	RTCK	ADD22	GPIOA5	HDP3										KCOL2	KROW2	RFSIG7	KROW3	AUXMICP	P
R	ADD23	GPIOA7	CS0	GPIOA8	HDP9	HDP15	GPIOA11	GPIOA2	GPIOA12	GPIOA25	GPIOA15	GPIOA17	GPIOB9	GPIOB13	RFSIG1	KCOL4	GPIOA3	KROW1	ANL	R
T	GPIOA4	ADD27	CS3	BE1	HDP14	HDP16	GPIOB5	GPIOA1	GPIOA16	GPIOA29	GPIOA30	SIMEN	GPIOB8	GPIOB11	RFSIG0	GPIOA14	RFSIG2	KROW0	ANR	T
U	CS1	GPIOA0	GPIOA6	HDP8	HDP12	TXDP1	HDP17	GPIOA10	GPIOA19	GPIOA18	GPIOA13	GPIOA26	GPIOB10	GPIOB12	GPIOA31	GPIOA21	KCOL0	RFSIG6	KCOL3	U
V	OE_R_W	WE_E	HDP1	HDP2	HDP10	VDDBB	VDDCLK	VSSCLK	VSSA4	AUXDAC1	AUXDAC3	GPIOA28	VSSREF	VSSA5	VDDE5	GPIOA24	GPIOA22	KCOL1	RFDO1	V
W	NC	HDP0	HDP5	HDP11	VSSBB	QN	QP	IN	IP	MCLK	AUXDAC2	GPIOA27	VDDREF	VREF	MICBIAS	VDDVB	GPIOA20	GPIOA23	NC	W
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	

UME100 Pin Configuration

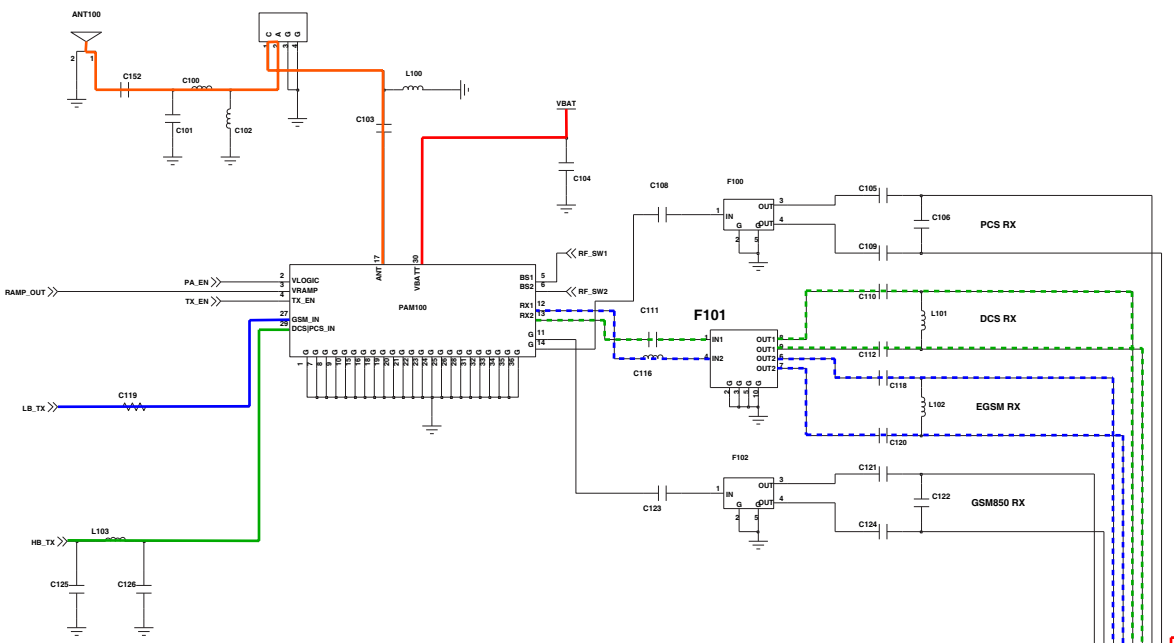
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
A	NC													NC
B														
C			NC	DNU			/LBc	/UBc			A24p	NC		
D			RDYp /WAITc	A21pc	VSSpc	CLKpc	VCCpc	/WEpc	VPPp	A19pc	A17pc	A22pc		
E			VCCQpc	A16pc	A20pc	/AVDpc	A23p	/RESETp	/WPp	A18pc	/CEp	VSSQpc		
F			VSSpc	ADQ7pc	ADQ6pc	ADQ13pc	ADQ12pc	ADQ3pc	ADQ2pc	ADQ9pc	ADQ8pc	/OEpc		
G			ADQ15pc	ADQ14pc	VSSQpc	ADQ5pc	ADQ4pc	ADQ11pc	ADQ10pc	VCCQpc	ADQ1pc	ADQ0pc		
H			NC	VCCpc			/CSc	CREc			DNU	NC		
J														
K	NC													NC

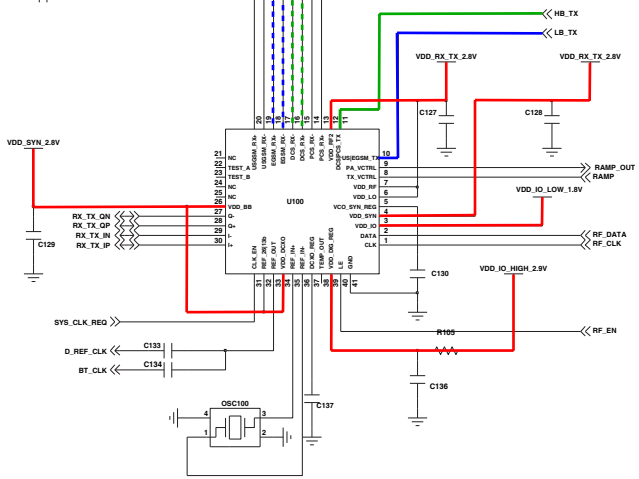
56 FBGA: Top View (Ball Down)

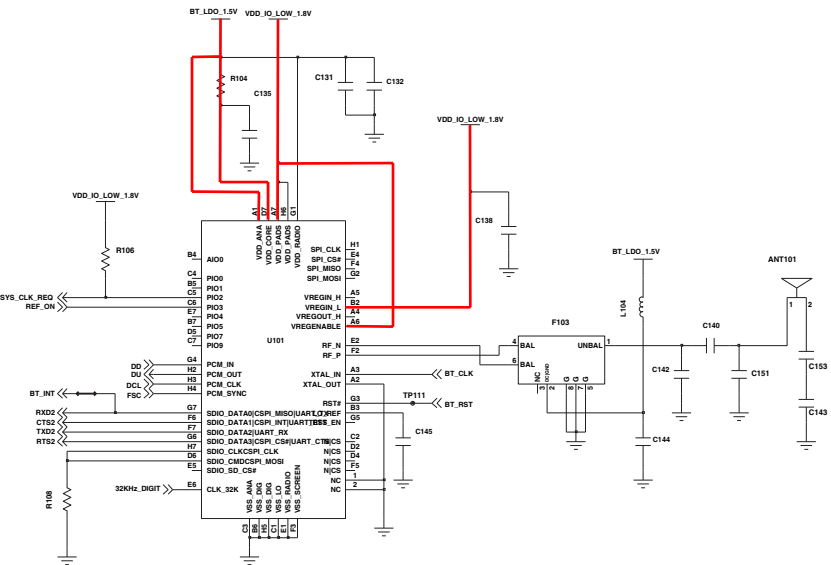


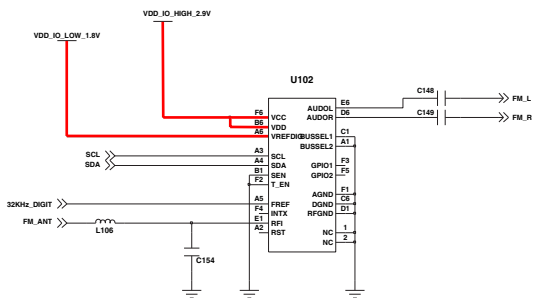
Service schematics

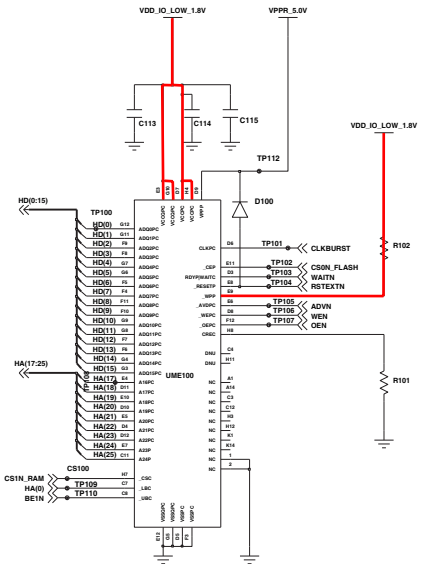
TX MODULE



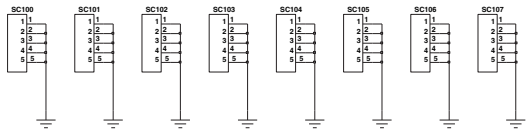








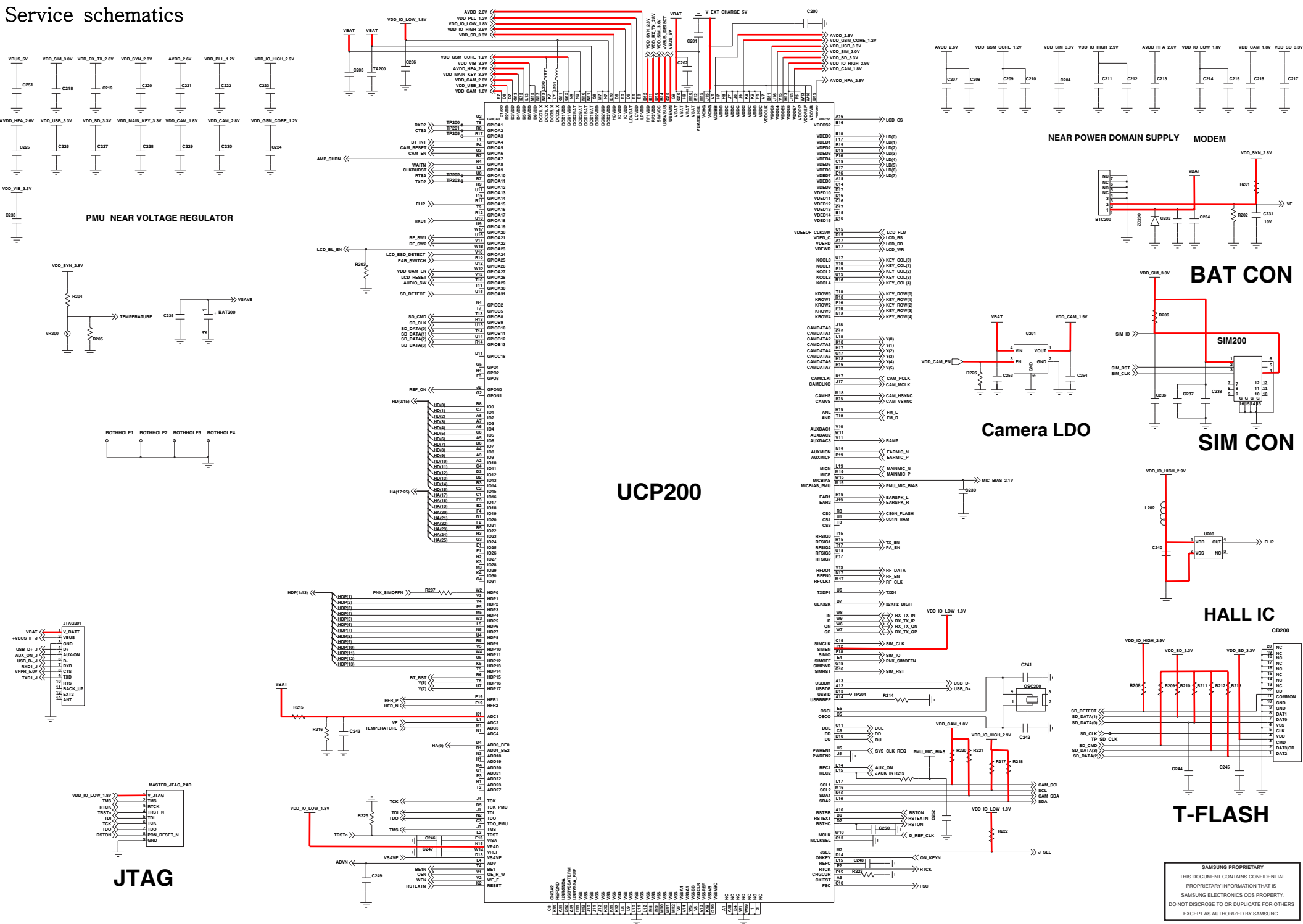
MUXED MEMORY (512MPRAM + 128MUTRAM2)



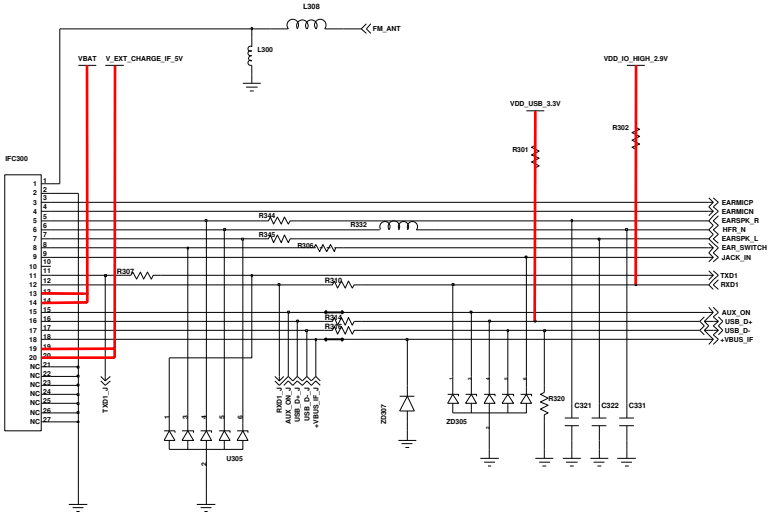
ANT:
GSM900 RX:
GSM900 TX:
DCS1800 RX:
DCS1800 TX:
POWER:

BLUE TOOTH

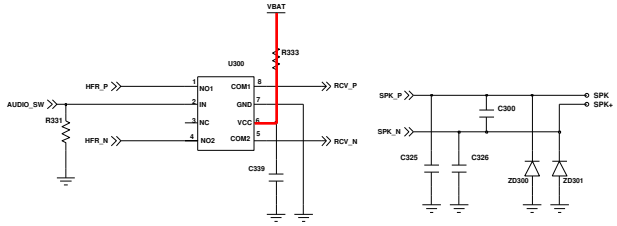
Service schematics



Service schematics

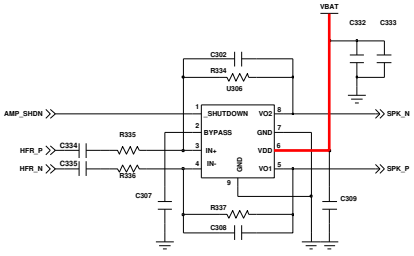


Digital External Interface- UART

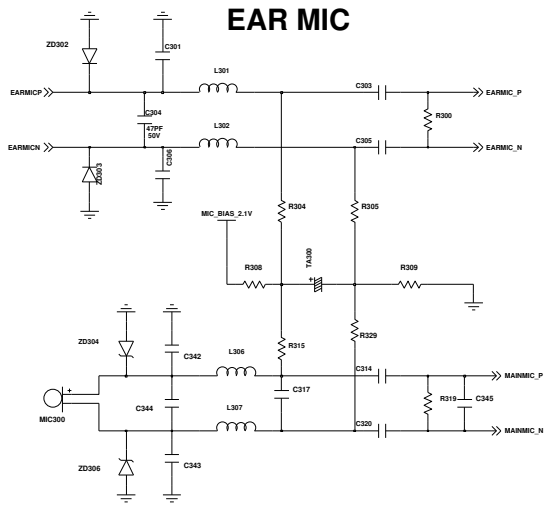


Audio Switch

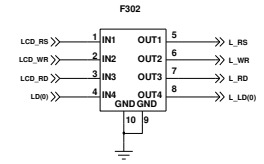
SPK

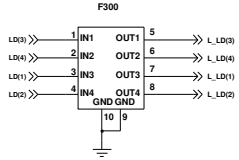


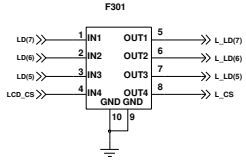
Audio AMP



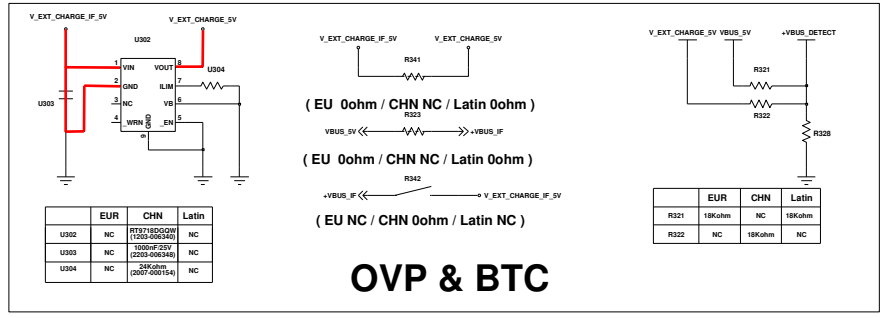
MAIN_MIC (Single)







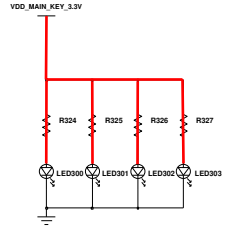
EMI FILTER



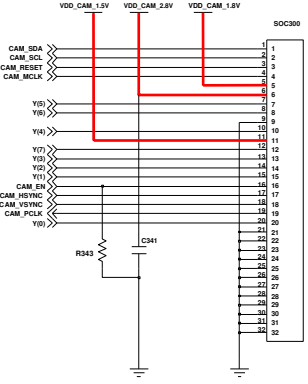
	EUR	CHN	Latin
U302	NC	RT9718DGQW (1203-006340)	NC
U303	NC	1000nF/25V (2203-006348)	NC
U304	NC	24Kohm (2007-000154)	NC

	EUR	CHN	Latin
R321	18Kohm	NC	18Kohm
R322	NC	18Kohm	NC

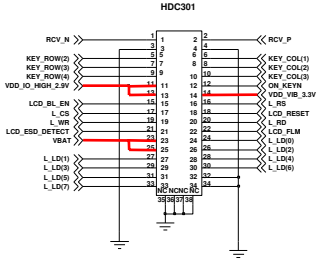
OVP & BTC



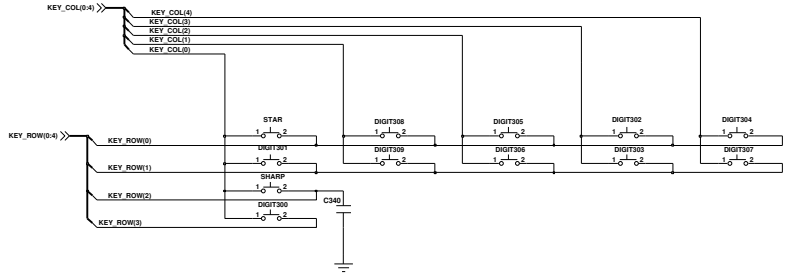
KEY LED



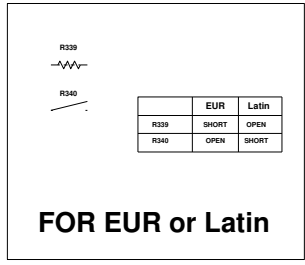
CAMERA CONNECTOR



LCD CONNECTOR



KEY MAP



	EUR	Latin
R339	SHORT	OPEN
R340	OPEN	SHORT

FOR EUR or Latin

SAMSUNG ELECTRONICS

GSPN (Global Service Partner Network)

Country	Web Site
North America	service.samsungportal.com
Latin America	latin.samsungportal.com
CIS	cis.samsungportal.com
Europe	europe.samsungportal.com
China	china.samsungportal.com
Asia	asia.samsungportal.com
Mideast & Africa	mea.samsungportal.com

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