

**SAMSUNG**

# UMTS TELEPHONE SGH-L760

# ***SERVICE*** *Manual*

## UMTS TELEPHONE



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**SAMSUNG  
ELECTRONICS**



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# 1. Safety Precautions

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## 1-1. Repair Precaution

- Repair in Shield Box, during detailed tuning.

Take specially care of tuning or test, because 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 errors of measurement are 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

		<b>EGSM 900</b>	<b>DCS1800</b>	<b>PCS1900</b>	<b>WCDMA</b>
Freq. Band[MHz] Uplink/Downlink		880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990	1920~1980 2110~2170
ARFCN range		0~124 & 975~1023	512~885	512~810	UL:9612~9888 DL:10562~10838
Tx/Rx spacing		45MHz	95MHz	80MHz	190MHz
Mod. Bit rate/ Bit Period		270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	3.84Mcps
Time Slot Period/Frame Period		576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	Frame length : 10ms Slot length : 0.667ms
Modulation	GSM/ GPRS	0.3GMSK	0.3GMSK	0.3GMSK	QPSK HQPSK
	EDGE	8PSK	8PSK	8PSK	
MS Power		33dBm~5dBm	30dBm~0dBm	30dBm~0dBm	24dBm ~ - 50dBm
Power Class		4 (max +33dBm)	1 (max +30dBm)	1 (max +30dBm)	3 (max +24dBm)
Sensitivity		-102dBm	-100dBm	-100dBm	-106.7dBm
TDMA Mux		8	8	8	
Cell Radius		35Km	2Km	2Km	2Km

## 2-2. GSM TX power class

<b>TX Power control level</b>	<b>GSM900</b>	<b>TX Power control level</b>	<b>DCS1800</b>	<b>TX Power control level</b>	<b>PCS1900</b>
5	33±2 dBm	0	30±2 dBm	0	30±2 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

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## 3. Product Function

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### Main Function

- 2 MEGA PIXEL CMOS
- MP3 / 72 Poly Melody
- BT 2.0
- Video Telephony / Streaming
- USB 1.1
- WAP2.0, JAVA2.0, MPEG4
- FM Radio
- MIDP 2.0 / CLDC 1.1
- SOS Message, Auto Time Setting,
- GPRS/EDGE : class 12
- MMS / EMS
- BT/FM : Braodcom BCM2045
- Battery: 900mAh(553443)
- Weight: 92.8 g
- Memory:1G SB +512Mb
- Camera: - 2.0M FF (LSI)
  - VGA (Magnachip)
- LCD : 2.0" QCIF TFT(AMLCD)
- Size: 99.5x47x15mm
- Band: 900/1800/1900/2100
- BB: Qualcomm MSM6245
- RF: Qualcomm RTR6275





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## 4. Array course control

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### 4-1. Software Adjustments

Test Jig (GH80-03308A)



RF Test Cable (GH39-00468A)



Test Cable (GH39-00886A)



Serial Cable



Power Supply Cable



DATA CABLE(GH39-00859A)



## 4-2. Software Downloading

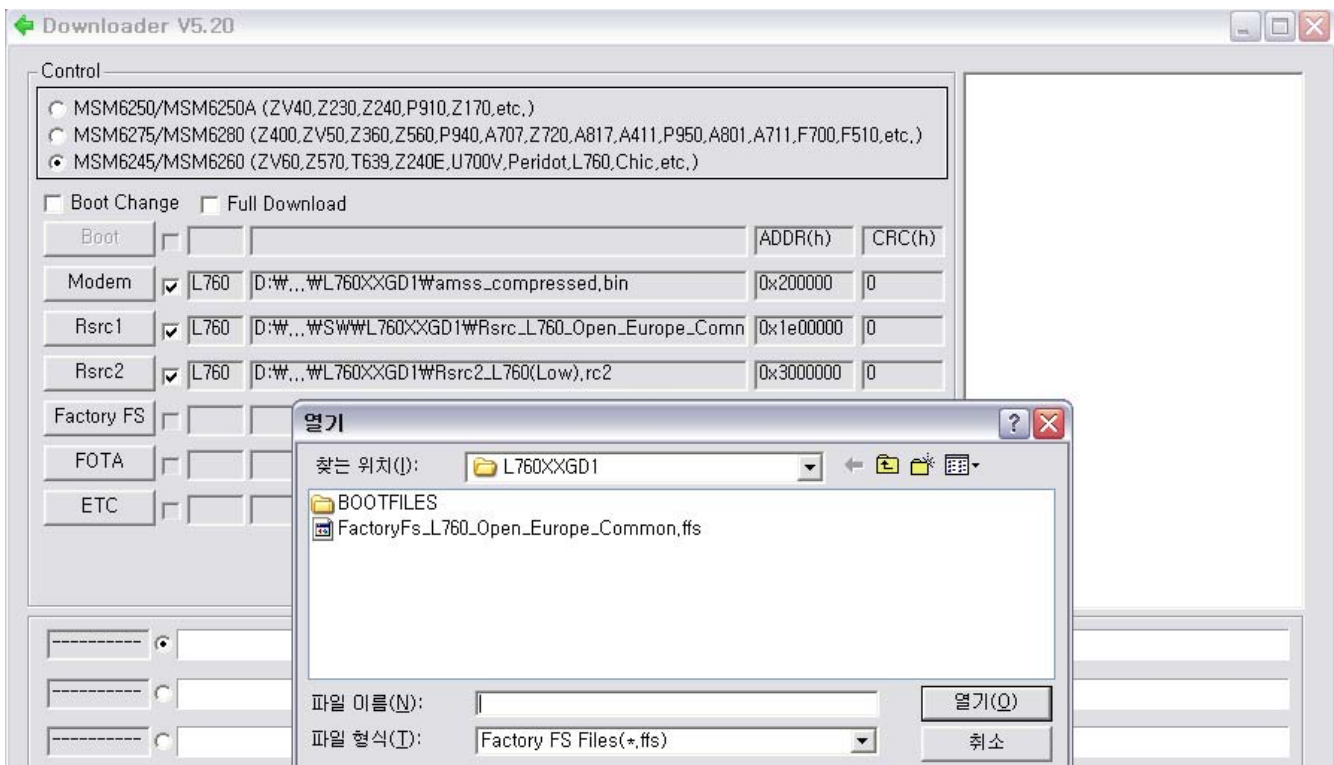
### 4-2-1. Pre-requisite for Downloading

- Downloader Program
- SGH-L760 Mobile Phone
- Data Cable
- Binary file,

### 4-2-2. S/W Downloader Program

■ Load the binary download program by executing the “[downloader V5.20](#)”

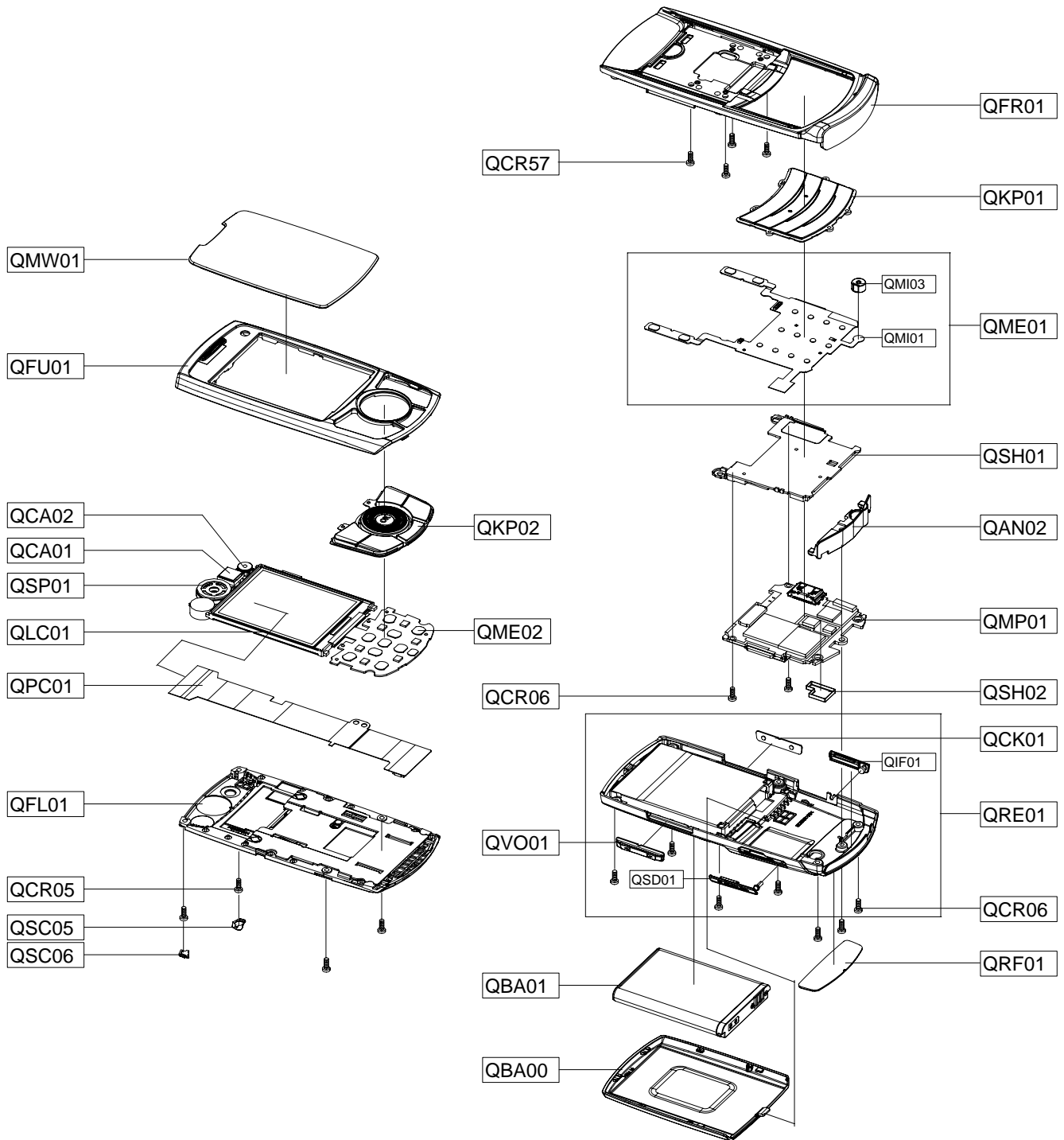
1. Select the connected serial port and the rate of speed
2. Select the check box, the mode you want to download.
  - if the boot file wanted, check 'boot change'
  - if the binary file wanted, check only 'modem, Rsrc1 , Rsrc2, Factory FS , FOTA'
3. Select the file(s) what you want to download





# 5. Exploded View and Parts List

## 5-1. Cellular phone Exploded View



## 5-2. Cellular phone Parts List

Design LOC		Description	SEC CODE
QAN02		INTENNA-SGHL760	GH42-01259A
QBA00		PMO COVER-BATTERY	GH72-39371B
QBA01		INNER BATTERY PACK-900MAH,BLK,	GH43-02547A
QCA01		CAMERA MODULE	GH59-04453A
QCA02		CAMERA MODULE-VGA	GH59-04605A
QCK01		PMO KEY-CAMERA	GH72-39375B
QCR05		SCREW-MACHINE	6001-001478
QCR06		SCREW-MACHINE	6001-001155
QCR06		SCREW-MACHINE	6001-001155
QCR57		SCREW-MACHINE	6001-002001
QFL01		ASSY CASE-SLIDE LOWER	GH98-04522B
QFR01		ASSY CASE-FRONT	GH98-04523B
QFU01		ASSY CASE-SLIDE UPPER	GH98-04521B
QKP01		ASSY KEYPAD-MAIN(EU/BLU)	GH98-04520B
QKP02		ASSY KEYPAD-SUB(EU/BLU)	GH98-04519B
QLC01		MEA-LCD KIT	GH97-07961A
QME02		KEY FPCB-NAVI KEY FPCB 10 KEY	GH59-04497A
QMP01		PBA MAIN-SGHJ620	GH92-03720A
QMW01		ASSY DECO-WINDOW MAIN(XEC)	GH98-05336B
QPC01		MEA-SLIDE FPCB KIT	GH97-07960A
QRF01		PMO COVER-RF	GH72-39372B
QSC05		PMO-LOWER SCREW CAP L	GH72-39378B
QSC06		PMO-LOWER SCREW CAP R	GH72-39470B
QSH01		ASSY BRACKET-SHIELD CAN	GH98-04565A
QSH02		ICT SHIELD-COVER PBA B	GH70-02615A
QSP01		ASSY ETC-SPK MOTOR FPC ASSY	GH59-04477A
QVO01		PMO KEY-VOLUME	GH72-39376B
QRE01		ASSY CASE-REAR(XEC)	GH98-05415B
	QIF01	PMO COVER-IF	GH72-39373B
	QSD01	PMO COVER-SD	GH72-39374B
QME01		KEY FPCB-MAIN KEY FPCB 12KEY	GH59-04476A
	QMI03	AS-MIC RUBBER	GH81-06806A
	QMI01	AS-MIC SVC	GH81-06075A

<b>Description</b>	<b>SEC CODE</b>
BAG PE	6902-000634
CBF INTERFACE-DATA LINK CABLE( ADAPTOR-ATADS10EBE,BLK,EU	GH39-00859B
S/W CD-SGHL760 SAMSUNG PC STUD	GH44-01702A
EARPHONE-EU, BLK, A-TYPE	GH46-00473A
LABEL(P)-UNIT SEAL	GH59-04940B
LABEL(R)-WATER SOAK	GH68-00518B
LABEL(R)-MAIN(EU)	GH68-09361A
MANUAL USERS-TELEFONICA SPANIS	GH68-15153A
MANUAL USERS-TELEFONICA QSG CA	GH68-15315A
MANUAL USERS-TELEFONICA SMS LE	GH68-15915A
MANUAL USERS-TELEFONICA SMS LE	GH68-15916A
BOX-UNIT(TELE)	GH69-05601B
CUSHION-CASE(NEW)	GH69-05780A
TAPE INSU	GH74-32313A
TAPE GASK-FRONT GND	GH74-33449A
VINYL-BOHO UPPER	GH74-33933A
TAPE-SIM	GH74-33938A
TAPE ELEC-LCD	GH74-34495A



## 6. MAIN Electrical Parts List

Design LOC	Description	SEC Code	STATUS
ANT102	ANTENNA-CHIP	4202-001328	SA
BAT400	BATTERY-LI(2ND)	4302-001180	SA
BTC700	HEADER-BATTERY	3711-006108	SA
C100	C-CER,CHIP	2203-005806	SNA
C101	C-CER,CHIP	2203-006194	SA
C102	C-CER,CHIP	2203-000812	SA
C104	C-CER,CHIP	2203-005682	SA
C105	C-CER,CHIP	2203-006423	SA
C106	C-CER,CHIP	2203-005682	SA
C107	C-CER,CHIP	2203-006305	SA
C108	C-CER,CHIP	2203-005682	SA
C110	C-CER,CHIP	2203-006305	SA
C111	C-CER,CHIP	2203-006399	SA
C112	C-CER,CHIP	2203-005806	SNA
C113	C-CER,CHIP	2203-005726	SA
C114	C-CER,CHIP	2203-005727	SA
C115	C-CER,CHIP	2203-002709	SA
C116	C-CER,CHIP	2203-005682	SA
C117	C-CER,CHIP	2203-005726	SA
C118	C-CER,CHIP	2203-006423	SA
C119	C-CER,CHIP	2203-005806	SNA
C120	C-CER,CHIP	2203-005682	SA
C121	C-CER,CHIP	2203-006423	SA
C122	C-CER,CHIP	2203-006423	SA
C123	C-CER,CHIP	2203-000854	SA
C124	C-CER,CHIP	2203-006399	SA
C125	C-CER,CHIP	2203-006423	SA
C126	C-CER,CHIP	2203-006194	SA
C127	C-CER,CHIP	2203-006399	SA
C129	C-CER,CHIP	2203-006423	SA
C135	INDUCTOR-SMD	2703-002198	SA
C136	R-CHIP	2007-000171	SA
C172	C-CER,CHIP	2203-006305	SA
C173	C-CER,CHIP	2203-005682	SA
C174	C-CER,CHIP	2203-002668	SA
C175	C-CER,CHIP	2203-005789	SA
C176	C-CER,CHIP	2203-005789	SA
C178	INDUCTOR-SMD	2703-002919	SA
C179	C-CER,CHIP	2203-000330	SA
C200	C-CER,CHIP	2203-006194	SA
C201	C-CER,CHIP	2203-000854	SA
C202	C-CER,CHIP	2203-006838	SA
C203	C-CER,CHIP	2203-006123	SA
C204	C-CER,CHIP	2203-005727	SA
C205	C-CER,CHIP	2203-006187	SA
C206	C-CER,CHIP	2203-005552	SA
C207	C-CER,CHIP	2203-002668	SA
C208	C-CER,CHIP	2203-002668	SA
C210	C-CER,CHIP	2203-006979	SA
C211	C-CER,CHIP	2203-005736	SA
C212	C-CER,CHIP	2203-005725	SA
C213	C-CER,CHIP	2203-005725	SA
C214	C-CER,CHIP	2203-005659	SA



<b>Design LOC</b>	<b>Description</b>	<b>SEC Code</b>	<b>STATUS</b>
C215	C-CER,CHIP	2203-005659	SA
C216	C-CER,CHIP	2203-005659	SA
C217	C-CER,CHIP	2203-005659	SA
C218	C-CER,CHIP	2203-000330	SA
C219	C-CER,CHIP	2203-005739	SA
C220	C-CER,CHIP	2203-006194	SA
C222	C-CER,CHIP	2203-005725	SA
C223	C-CER,CHIP	2203-005725	SA
C224	C-CER,CHIP	2203-005736	SA
C225	C-CER,CHIP	2203-006423	SA
C226	C-CER,CHIP	2203-005739	SA
C227	C-CER,CHIP	2203-006423	SA
C228	C-CER,CHIP	2203-005725	SA
C229	C-CER,CHIP	2203-006423	SA
C230	C-CER,CHIP	2203-000714	SA
C231	C-CER,CHIP	2203-005725	SA
C232	C-CER,CHIP	2203-006439	SNA
C233	C-CER,CHIP	2203-005725	SA
C234	C-CER,CHIP	2203-006423	SA
C235	C-CER,CHIP	2203-006423	SA
C236	C-CER,CHIP	2203-005725	SA
C237	C-CER,CHIP	2203-005682	SA
C239	C-CER,CHIP	2203-006439	SNA
C240	C-CER,CHIP	2203-000836	SA
C241	C-CER,CHIP	2203-000438	SA
C242	C-CER,CHIP	2203-000438	SA
C243	C-CER,CHIP	2203-005725	SA
C244	C-CER,CHIP	2203-005725	SA
C245	C-CER,CHIP	2203-005736	SA
C246	C-CER,CHIP	2203-006423	SA
C247	C-CER,CHIP	2203-006423	SA
C248	C-CER,CHIP	2203-006839	SA
C249	C-CER,CHIP	2203-006423	SA
C250	C-CER,CHIP	2203-006423	SA
C251	C-CER,CHIP	2203-005729	SA
C252	C-CER,CHIP	2203-000233	SA
C253	C-CER,CHIP	2203-006194	SA
C254	C-CER,CHIP	2203-005725	SA
C255	C-CER,CHIP	2203-005736	SA
C256	C-CER,CHIP	2203-006194	SA
C302	C-CER,CHIP	2203-006668	SA
C309	C-CER,CHIP	2203-006462	SA
C311	C-CER,CHIP	2203-006423	SA
C312	C-CER,CHIP	2203-006681	SA
C313	C-CER,CHIP	2203-006681	SA
C314	C-CER,CHIP	2203-006681	SA
C315	C-CER,CHIP	2203-006681	SA
C316	C-CER,CHIP	2203-006423	SA
C317	C-CER,CHIP	2203-006681	SA
C318	C-CER,CHIP	2203-006681	SA
C319	C-CER,CHIP	2203-006399	SA
C320	C-CER,CHIP	2203-006681	SA
C321	C-CER,CHIP	2203-006423	SA

<b>Design LOC</b>	<b>Description</b>	<b>SEC Code</b>	<b>STATUS</b>
C322	C-CER,CHIP	2203-005482	SA
C323	C-CER,CHIP	2203-006423	SA
C325	C-CER,CHIP	2203-000438	SA
C326	C-CER,CHIP	2203-000438	SA
C327	C-CER,CHIP	2203-006194	SA
C328	C-CER,CHIP	2203-006423	SA
C329	C-CER,CHIP	2203-006194	SA
C330	C-CER,CHIP	2203-006423	SA
C331	C-CER,CHIP	2203-000254	SA
C332	C-CER,CHIP	2203-006423	SA
C333	C-CER,CHIP	2203-006399	SA
C334	C-CER,CHIP	2203-000438	SA
C335	C-CER,CHIP	2203-006194	SA
C336	C-CER,CHIP	2203-006423	SA
C341	C-CER,CHIP	2203-006194	SA
C342	C-CER,CHIP	2203-006423	SA
C344	C-CER,CHIP	2203-006423	SA
C345	C-CER,CHIP	2203-006423	SA
C346	C-CER,CHIP	2203-006194	SA
C347	C-CER,CHIP	2203-006194	SA
C348	C-CER,CHIP	2203-006423	SA
C349	C-CER,CHIP	2203-006423	SA
C350	C-CER,CHIP	2203-006194	SA
C351	C-CER,CHIP	2203-006194	SA
C352	C-CER,CHIP	2203-006423	SA
C353	C-CER,CHIP	2203-006194	SA
C356	C-CER,CHIP	2203-006423	SA
C357	C-CER,CHIP	2203-006423	SA
C358	C-CER,CHIP	2203-006423	SA
C359	C-CER,CHIP	2203-006423	SA
C367	C-CER,CHIP	2203-006423	SA
C368	C-CER,CHIP	2203-006399	SA
C370	C-CER,CHIP	2203-006423	SA
C371	C-CER,CHIP	2203-006423	SA
C372	C-CER,CHIP	2203-006194	SA
C373	C-CER,CHIP	2203-006423	SA
C374	C-CER,CHIP	2203-006556	SA
C375	C-CER,CHIP	2203-006423	SA
C376	C-CER,CHIP	2203-006423	SA
C377	C-CER,CHIP	2203-006423	SA
C378	C-CER,CHIP	2203-006423	SA
C379	C-CER,CHIP	2203-006194	SA
C380	C-CER,CHIP	2203-006194	SA
C381	C-CER,CHIP	2203-000438	SA
C400	C-CER,CHIP	2203-006841	SA
C401	C-CER,CHIP	2203-006841	SA
C402	C-CER,CHIP	2203-006824	SA
C403	C-CER,CHIP	2203-006872	SA
C404	C-CER,CHIP	2203-006474	SA
C405	C-CER,CHIP	2203-006423	SA
C406	C-CER,CHIP	2203-006681	SA
C407	C-CER,CHIP	2203-006423	SA
C408	C-CER,CHIP	2203-005736	SA

<b>Design LOC</b>	<b>Description</b>	<b>SEC Code</b>	<b>STATUS</b>
C409	C-CER,CHIP	2203-005736	SA
C410	C-CER,CHIP	2203-006423	SA
C412	C-CER,CHIP	2203-006872	SA
C413	C-CER,CHIP	2203-006305	SA
C414	C-CER,CHIP	2203-006872	SA
C415	C-CER,CHIP	2203-006305	SA
C416	C-CER,CHIP	2203-006872	SA
C417	C-CER,CHIP	2203-006872	SA
C419	C-CER,CHIP	2203-006305	SA
C420	C-CER,CHIP	2203-006824	SA
C421	C-CER,CHIP	2203-006872	SA
C422	C-CER,CHIP	2203-006872	SA
C423	C-CER,CHIP	2203-006824	SA
C424	C-CER,CHIP	2203-006712	SA
C425	C-CER,CHIP	2203-006824	SA
C426	C-CER,CHIP	2203-006712	SA
C427	C-CER,CHIP	2203-005725	SA
C428	C-CER,CHIP	2203-005725	SA
C429	C-CER,CHIP	2203-000438	SA
C431	C-CER,CHIP	2203-006048	SA
C432	C-CER,CHIP	2203-006048	SA
C433	C-CER,CHIP	2203-006048	SA
C434	C-CER,CHIP	2203-006048	SA
C440	C-CER,CHIP	2203-006423	SA
C441	C-CER,CHIP	2203-005682	SA
C442	C-CER,CHIP	2203-005682	SA
C443	C-CER,CHIP	2203-006399	SA
C444	C-CER,CHIP	2203-006841	SA
C446	C-CER,CHIP	2203-006474	SA
C450	C-CER,CHIP	2203-005682	SA
C456	C-CER,CHIP	2203-006305	SA
C457	C-CER,CHIP	2203-006824	SA
C458	C-CER,CHIP	2203-006824	SA
C459	C-CER,CHIP	2203-005682	SA
C460	C-CER,CHIP	2203-005682	SA
C461	C-CER,CHIP	2203-005682	SA
C462	C-CER,CHIP	2203-005682	SA
C500	C-CER,CHIP	2203-006841	SA
C501	C-CER,CHIP	2203-006841	SA
C502	C-CER,CHIP	2203-005682	SA
C503	C-CER,CHIP	2203-006423	SA
C504	C-CER,CHIP	2203-005682	SA
C506	C-CER,CHIP	2203-005682	SA
C509	C-CER,CHIP	2203-005682	SA
C510	C-CER,CHIP	2203-006423	SA
C511	C-CER,CHIP	2203-006872	SA
C512	C-CER,CHIP	2203-006423	SA
C513	C-CER,CHIP	2203-005682	SA
C514	C-CER,CHIP	2203-005683	SA
C515	C-CER,CHIP	2203-005682	SA
C516	C-CER,CHIP	2203-006257	SA
C517	C-CER,CHIP	2203-005682	SA
C518	C-CER,CHIP	2203-005682	SA

<b>Design LOC</b>	<b>Description</b>	<b>SEC Code</b>	<b>STATUS</b>
C519	C-CER,CHIP	2203-005683	SA
C520	C-CER,CHIP	2203-005683	SA
C521	C-CER,CHIP	2203-000812	SA
C522	C-CER,CHIP	2203-003054	SA
C523	C-CER,CHIP	2203-003054	SA
C524	C-CER,CHIP	2203-000812	SA
C525	C-CER,CHIP	2203-005682	SA
C526	C-CER,CHIP	2203-005683	SA
C527	C-CER,CHIP	2203-005682	SA
C528	C-CER,CHIP	2203-005683	SA
C544	C-CER,CHIP	2203-006462	SA
C545	C-CER,CHIP	2203-006462	SA
C555	C-CER,CHIP	2203-006841	SA
C601	C-CER,CHIP	2203-006841	SA
C602	C-CER,CHIP	2203-006399	SA
C609	C-CER,CHIP	2203-006399	SA
C621	C-CER,CHIP	2203-006307	SA
C624	C-CER,CHIP	2203-006048	SA
C631	C-CER,CHIP	2203-006423	SA
C632	C-CER,CHIP	2203-006838	SA
C633	C-CER,CHIP	2203-005682	SA
C634	C-CER,CHIP	2203-006838	SA
C635	C-CER,CHIP	2203-006423	SA
C700	C-CER,CHIP	2203-006399	SA
C701	C-CER,CHIP	2203-006841	SA
C703	C-CER,CHIP	2203-005682	SA
C704	C-CER,CHIP	2203-006123	SA
C705	C-CER,CHIP	2203-005682	SA
C707	C-CER,CHIP	2203-005682	SA
C709	C-CER,CHIP	2203-005682	SA
C711	C-CER,CHIP	2203-006841	SA
C712	C-CER,CHIP	2203-005482	SA
C714	C-CER,CHIP	2203-000812	SA
C716	C-CER,CHIP	2203-005682	SA
CPL200	COUPLER-DIRECTION	4709-001399	SA
D400	DIODE-SCHOTTKY	0404-001153	SA
D401	DIODE-SCHOTTKY	0404-001153	SA
D402	DIODE-ARRAY	0407-001002	SA
DUF100	FILTER-LC	2909-001279	SA
DUF200	DUPLEXER-SAW	2910-000024	SA
F100	FILTER-SAW	2904-001628	SA
F101	FILTER-SAW	2904-001716	SA
F200	FILTER-SAW	2904-001658	SA
F201	FILTER-SAW	2904-001702	SA
F300	FILTER-EMI SMD	2901-001283	SA
F700	FILTER-EMI/ESD	2901-001351	SA
F701	FILTER-EMI/ESD	2901-001351	SA
F702	FILTER-EMI/ESD	2901-001348	SA
F703	FILTER-EMI/ESD	2901-001348	SA
FPC102	ICT-ON-BOARD CLIP	GH70-02367A	SA
FPC104	ICT-ON-BOARD CLIP	GH70-02367A	SA
HDC700	HEADER-BOARD TO BOARD	3711-006010	SA
HDC701	HEADER-BOARD TO BOARD	3711-005345	SA

<b>Design LOC</b>	<b>Description</b>	<b>SEC Code</b>	<b>STATUS</b>
IFC600	SOCKET-INTERFACE	3710-002523	SA
L100	INDUCTOR-SMD	2703-002314	SA
L101	INDUCTOR-SMD	2703-002795	SNA
L103	INDUCTOR-SMD	2703-002795	SNA
L104	INDUCTOR-SMD	2703-002901	SNA
L105	INDUCTOR-SMD	2703-002793	SA
L107	INDUCTOR-SMD	2703-002313	SA
L109	INDUCTOR-SMD	2703-002793	SA
L111	INDUCTOR-SMD	2703-003249	SA
L112	INDUCTOR-SMD	2703-003127	SA
L114	INDUCTOR-SMD	2703-003127	SA
L115	BEAD-SMD	3301-001659	SA
L201	INDUCTOR-SMD	2703-002906	SA
L202	INDUCTOR-SMD	2703-002793	SA
L203	INDUCTOR-SMD	2703-002906	SA
L204	INDUCTOR-SMD	2703-002917	SA
L206	INDUCTOR-SMD	2703-002958	SA
L400	INDUCTOR-SMD	2703-002840	SA
L401	INDUCTOR-SMD	2703-002840	SA
L402	INDUCTOR-SMD	2703-002840	SA
L600	INDUCTOR-SMD	2703-000175	SA
OSC400	CRYSTAL-SMD	2801-004373	SA
PAM100	IC-POWER AMP	1201-002570	SA
PAM200	IC-POWER AMP	1201-002548	SA
R100	R-CHIP	2007-008045	SA
R102	R-CHIP	2007-008542	SA
R104	R-CHIP	2007-000171	SA
R106	R-CHIP	2007-008806	SA
R108	R-CHIP	2007-009158	SA
R109	R-CHIP	2007-008055	SA
R110	R-CHIP	2007-007001	SA
R111	R-CHIP	2007-008806	SA
R112	R-CHIP	2007-008806	SA
R113	R-CHIP	2007-008046	SA
R114	R-CHIP	2007-008046	SA
R115	R-CHIP	2007-008046	SA
R116	R-CHIP	2007-008046	SA
R118	R-CHIP	2007-008516	SA
R120	R-CHIP	2007-008542	SA
R200	R-CHIP	2007-008806	SA
R203	R-CHIP	2007-008047	SA
R204	R-CHIP	2007-008046	SA
R205	R-CHIP	2007-008046	SA
R206	R-CHIP	2007-007309	SA
R207	R-CHIP	2007-001119	SA
R208	R-CHIP	2007-008531	SA
R209	R-CHIP	2007-008045	SA
R302	R-CHIP	2007-007741	SA
R305	R-CHIP	2007-008049	SA
R306	R-CHIP	2007-008542	SA
R310	R-CHIP	2007-007741	SA
R311	R-CHIP	2007-000148	SA
R317	R-CHIP	2007-007741	SA

<b>Design LOC</b>	<b>Description</b>	<b>SEC Code</b>	<b>STATUS</b>
R323	R-CHIP	2007-009171	SA
R324	R-CHIP	2007-009171	SA
R325	R-CHIP	2007-009171	SA
R326	R-CHIP	2007-009171	SA
R327	R-CHIP	2007-009171	SA
R328	R-CHIP	2007-008055	SA
R330	R-CHIP	2007-008055	SA
R331	R-CHIP	2007-000148	SA
R333	R-CHIP	2007-007741	SA
R336	R-CHIP	2007-000171	SA
R337	R-CHIP	2007-009084	SA
R338	R-CHIP	2007-009111	SA
R339	R-CHIP	2007-008806	SA
R400	R-CHIP	2007-008809	SNA
R402	R-CHIP	2007-008483	SA
R405	R-CHIP	2007-008531	SA
R406	R-CHIP	2007-008516	SA
R408	R-CHIP	2007-008806	SA
R409	R-CHIP	2007-007468	SA
R410	R-CHIP	2007-008486	SA
R411	R-CHIP	2007-009171	SA
R412	R-CHIP	2007-009171	SA
R413	R-CHIP	2007-008486	SA
R414	R-CHIP	2007-008055	SA
R415	R-CHIP	2007-008055	SA
R416	R-CHIP	2007-008516	SA
R417	R-CHIP	2007-008516	SA
R418	R-CHIP	2007-008516	SA
R419	R-CHIP	2007-008516	SA
R420	R-CHIP	2007-008516	SA
R421	R-CHIP	2007-008516	SA
R422	R-CHIP	2007-008053	SA
R423	R-CHIP	2007-008647	SA
R424	R-CHIP	2007-008055	SA
R426	R-CHIP	2007-008055	SA
R427	R-CHIP	2007-009169	SA
R430	R-CHIP	2007-008648	SA
R501	R-CHIP	2007-008548	SA
R502	R-CHIP	2007-009154	SNA
R503	R-CHIP	2007-008419	SA
R504	R-CHIP	2007-009410	SA
R505	R-CHIP	2007-009154	SNA
R506	R-CHIP	2007-008419	SA
R507	R-CHIP	2007-009410	SA
R508	R-CHIP	2007-008483	SA
R509	R-CHIP	2007-009168	SA
R510	R-CHIP	2007-009168	SA
R511	R-CHIP	2007-009408	SA
R512	R-CHIP	2007-009208	SA
R513	R-CHIP	2007-009208	SA
R515	R-CHIP	2007-008548	SA
R517	R-CHIP	2007-009408	SA
R520	R-CHIP	2007-008054	SA

Design LOC	Description	SEC Code	STATUS
R601	R-CHIP	2007-008055	SA
R602	R-CHIP	2007-008548	SA
R603	R-CHIP	2007-008419	SA
R604	R-CHIP	2007-008419	SA
R605	R-CHIP	2007-008055	SA
R608	R-CHIP	2007-008486	SA
R613	R-CHIP	2007-008542	SA
R615	R-CHIP	2007-008419	SA
R616	R-CHIP	2007-008419	SA
R617	R-CHIP	2007-008055	SA
R618	R-CHIP	2007-009111	SA
R700	R-CHIP	2007-008542	SA
R703	R-CHIP	2007-000168	SA
R706	R-CHIP	2007-008483	SA
R707	R-CHIP	2007-008516	SA
R708	R-CHIP	2007-009402	SA
R709	R-CHIP	2007-008055	SA
R710	R-CHIP	2007-008477	SNA
RFS100	CONNECTOR-COAXIAL	3705-001358	SA
SIM400	CONNECTOR-CARD EDGE	3709-001465	SA
TA100	C-TA,CHIP	2404-001411	SA
TA603	C-TA,CHIP	2404-001381	SA
TA701	C-TA,CHIP	2404-001506	SA
TCX100	OSCILLATOR-VCTCXO	2809-001280	SA
TH1	THERMISTOR-NTC	1404-001224	SA
TR400	TR-DIGITAL	0504-000168	SA
TR401	TR-DIGITAL	0504-000168	SA
U100	IC-CMOS LOGIC	0801-003140	SA
U101	IC-CMOS LOGIC	0801-003022	SA
U105	IC-TRANSCEIVER	1205-003216	SA
U200	INDUCTOR-SMD	2703-002365	SA
U201	IC-TRANSCEIVER	1205-003285	SA
U302	IC-ANALOG MULTIPLEX	1001-001447	SA
U402	IC-POWER SUPERVISOR	1203-004101	SA
U403	IC-BATTERY	1203-004518	SA
U501	IC-AUDIO AMP	1201-002007	SA
U502	IC-ANALOG MULTIPLEX	1001-001428	SA
U600	IC-SWITCH	1205-002784	SA
U601	IC-POSI.FIXED REG.	1203-003787	SA
U602	IC-POSI.FIXED REG.	1203-003737	SA
U603	IC-ANALOG SWITCH	1001-001336	SA
U604	IC-POSI.FIXED REG.	1203-004728	SA
U606	C-CER,CHIP	2203-006872	SA
U607	C-CER,CHIP	2203-006423	SA
U608	IC-ANALOG MULTIPLEX	1001-001405	SA
U610	R-CHIP	2007-000171	SA
U611	R-CHIP	2007-000171	SA
UCP300	IC-MODEM	1205-003206	SA
UME300	IC-MCP	1108-000105	SA
V700	VARISTOR	1405-001177	SA
V701	VARISTOR	1405-001177	SA
V702	VARISTOR	1405-001177	SA
V703	VARISTOR	1405-001177	SA

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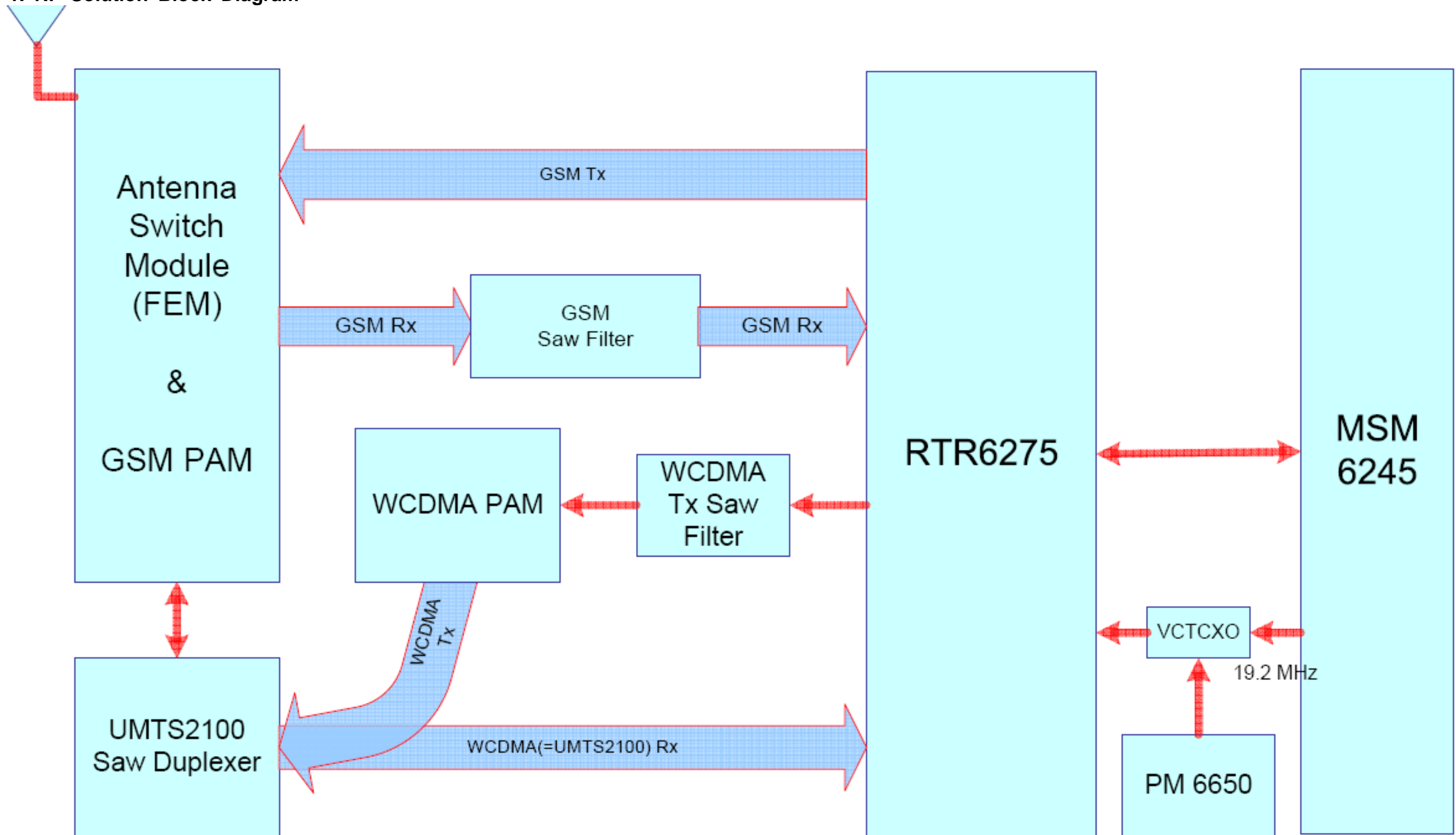
<b>Design LOC</b>	<b>Description</b>	<b>SEC Code</b>	<b>STATUS</b>
V704	VARISTOR	1405-001177	SA
V705	VARISTOR	1405-001177	SA
V706	VARISTOR	1405-001177	SA
V707	VARISTOR	1405-001177	SA
V708	VARISTOR	1405-001177	SA
V709	VARISTOR	1405-001177	SA
ZD600	DIODE-TVS	0406-001254	SA
ZD601	DIODE-SCHOTTKY	0404-001153	SA
ZD602	DIODE-TVS	0406-001208	SA
ZD603	DIODE-TVS	0406-001208	SA
ZD604	DIODE-TVS	0406-001254	SA
ZD701	DIODE-TVS	0406-001254	SA
ZD702	DIODE-TVS	0406-001201	SA
ZD703	DIODE-ZENER	0403-001547	SA
ZD705	DIODE-TVS	0406-001254	SA
ZD706	DIODE-TVS	0406-001254	SA



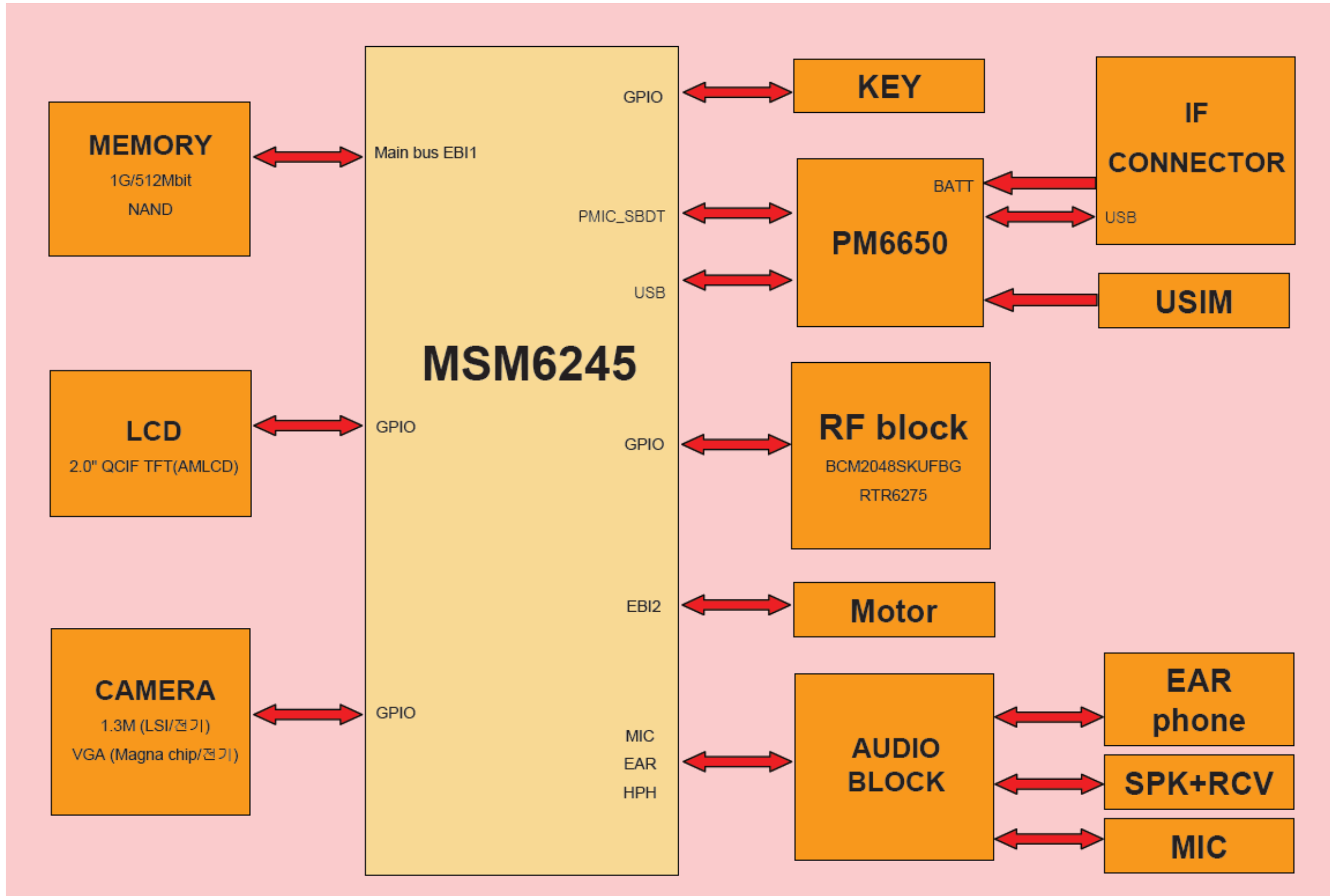


## 7. Block Diagrams

### 7-1. RF Solution Block Diagram



7-2. Base Band Solution Block Diagram

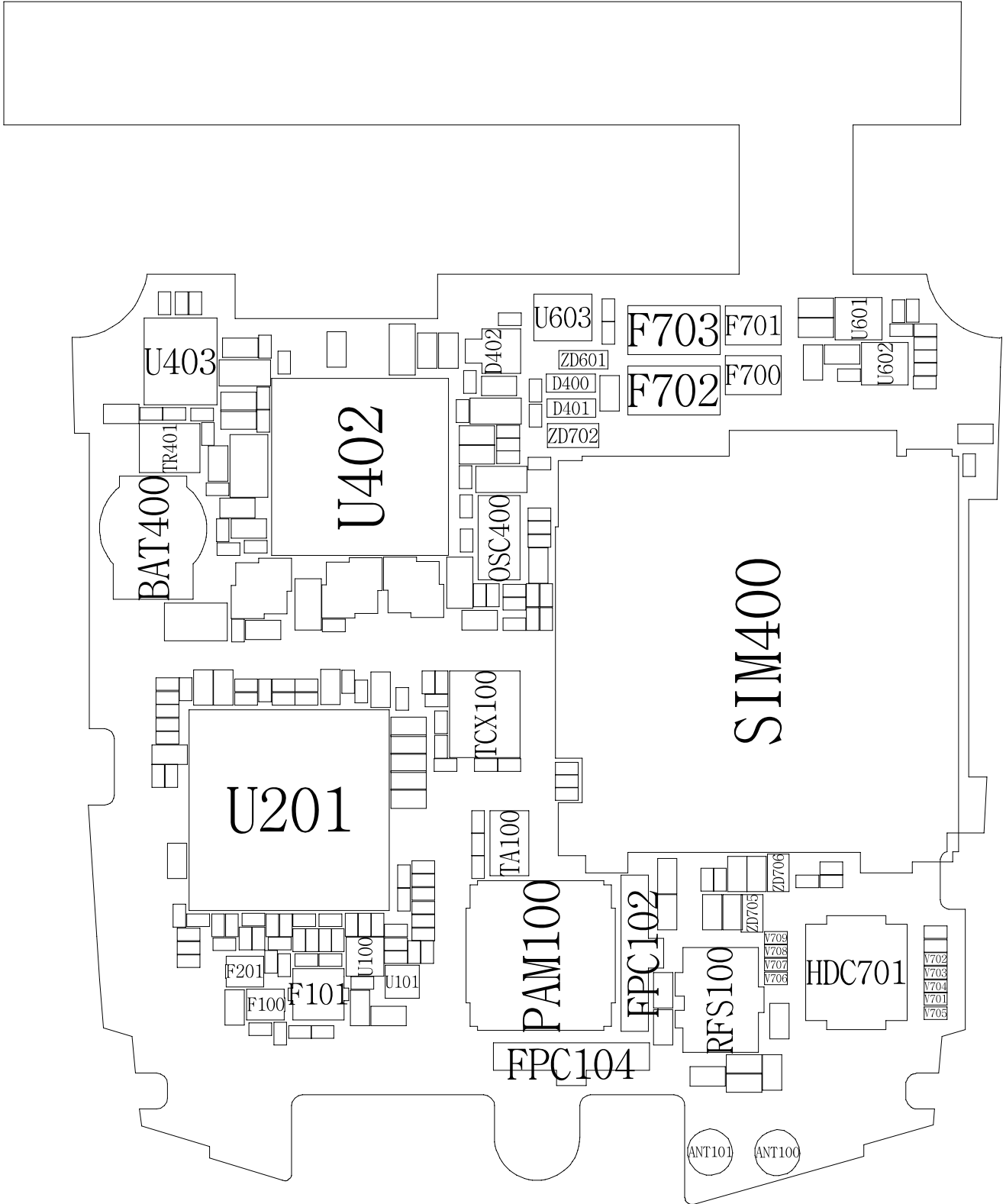


## 7-3. Power Block Diagram

EXT_5V	VBATT 900 mAh	Phone	PM6650	VREG_MSMC_1,2V	500 mA
				VREG_MSME_1,8V	500 mA
				VREG_MSMP_2,6V	300 mA
				VREG_MSMA_2,6V	300 mA
				VREG_SMPS_2,65V	400 mA
				VREG_SYNT_2,65V	50 mA
				VREG_TCXO_2,8V	50 mA
				VREG_BT_2,6V	150 mA
				VREG_USB_3,3V	50 mA
				VREG_SD_2,8V	150 mA
				VREG_USIM_3,0V	150 mA
		key	KEY_BACKLIGHT LDO (R1114D331D-TR-F)	VDD_SUB_KEY_3,3V	200 mA
		LCD	LCD IO_VDD LDO (R1114D281D-TR)	LCD_2,8V	150 mA
USB_5V		CAMERA	LDO S-1711A2833-I6T1G	VDD_CAM_2,8V	
				MOTOR_3,3V	
		MOTOR	LDO S-1711A1815-I6T1G	VDD_CAM_1,8V	
				VDD_CAM_1,5V	

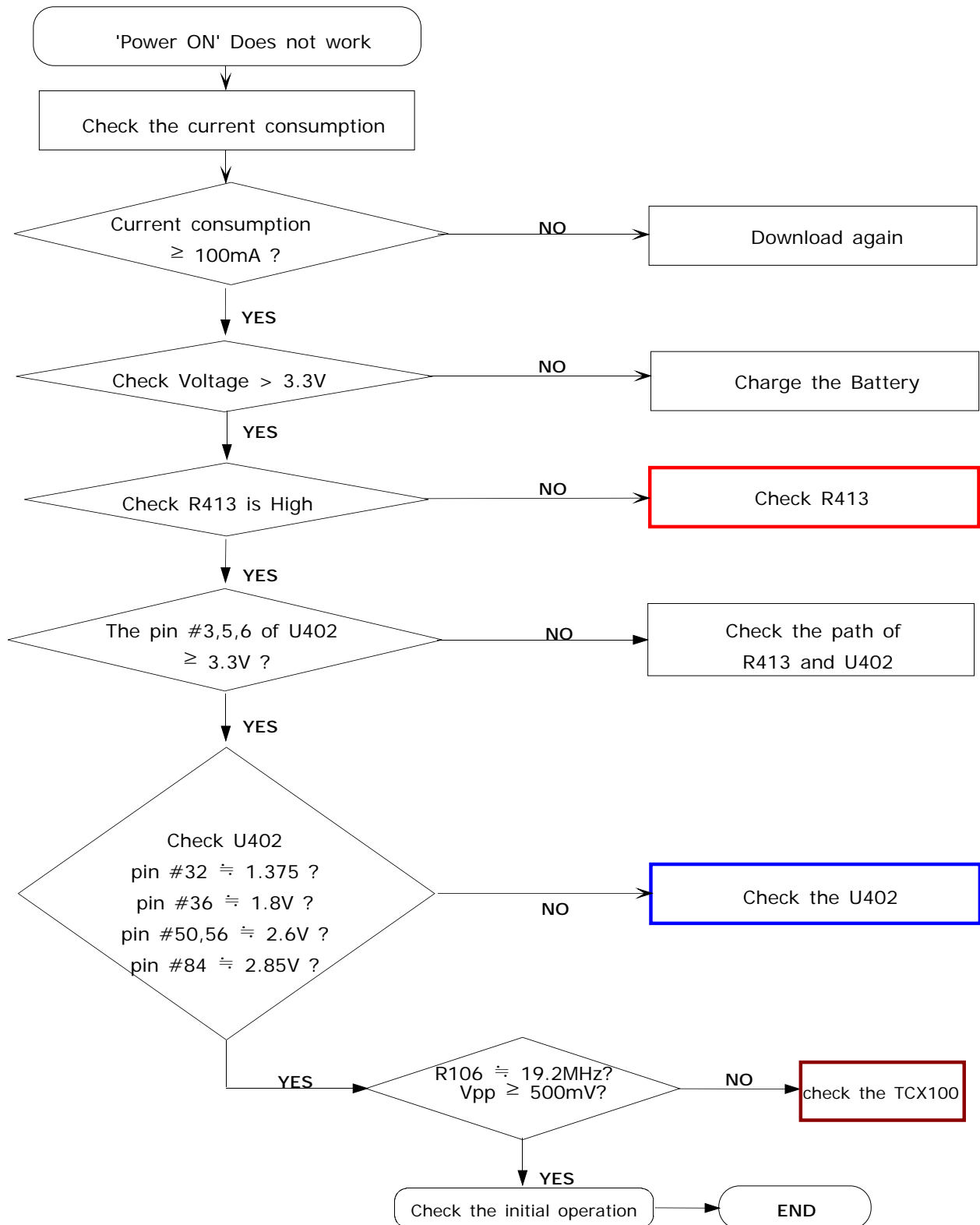


Bottom

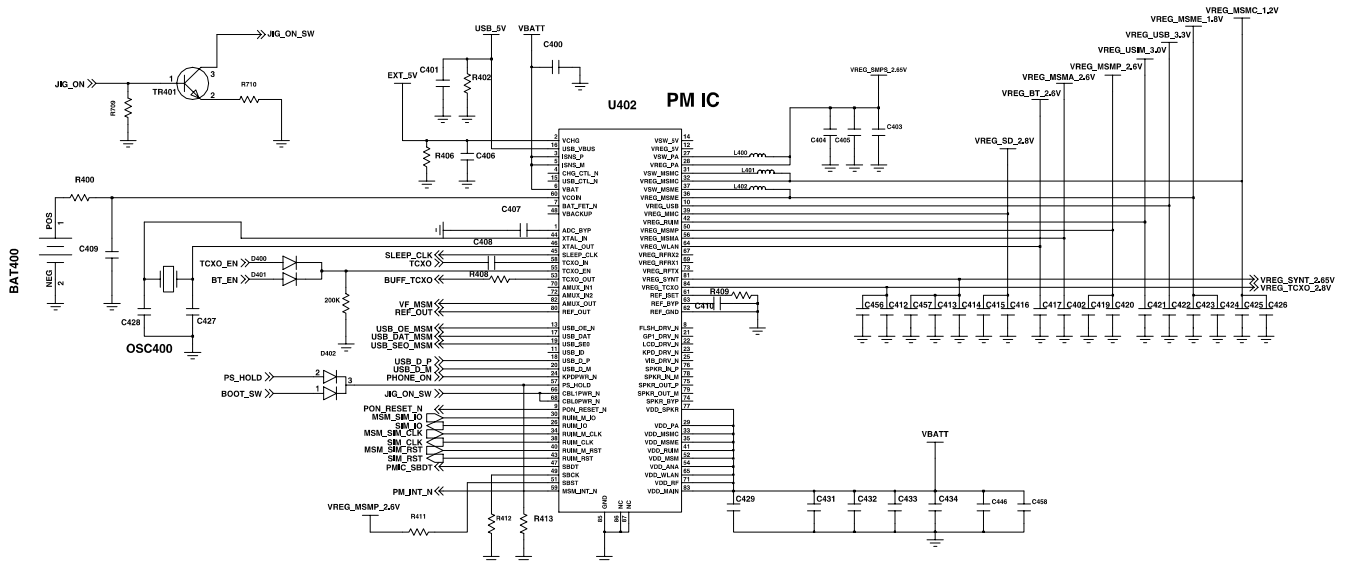


# 9. Flow Chart of Troubleshooting

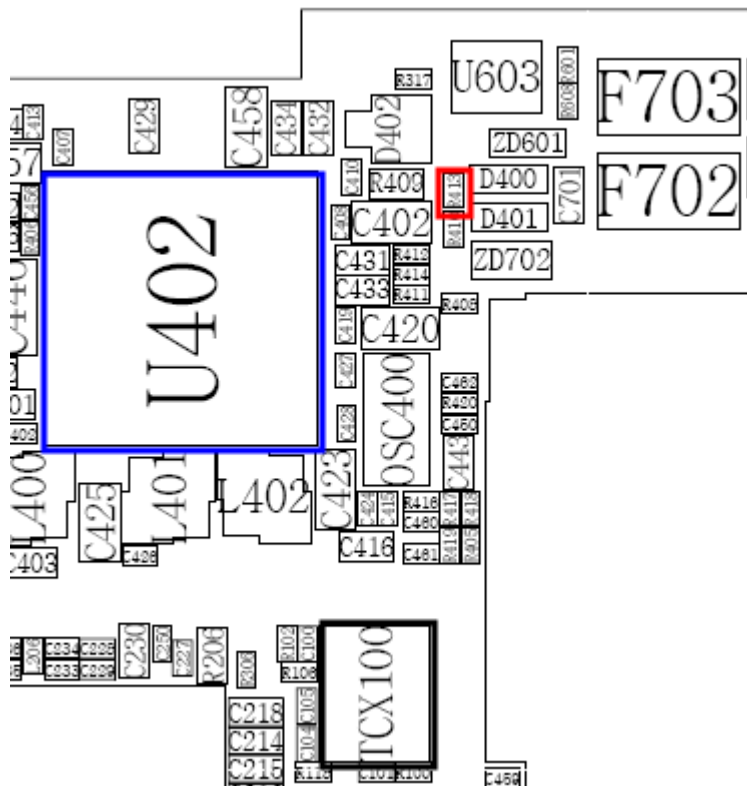
## 9-1.Baseband 9-1-1. Power ON



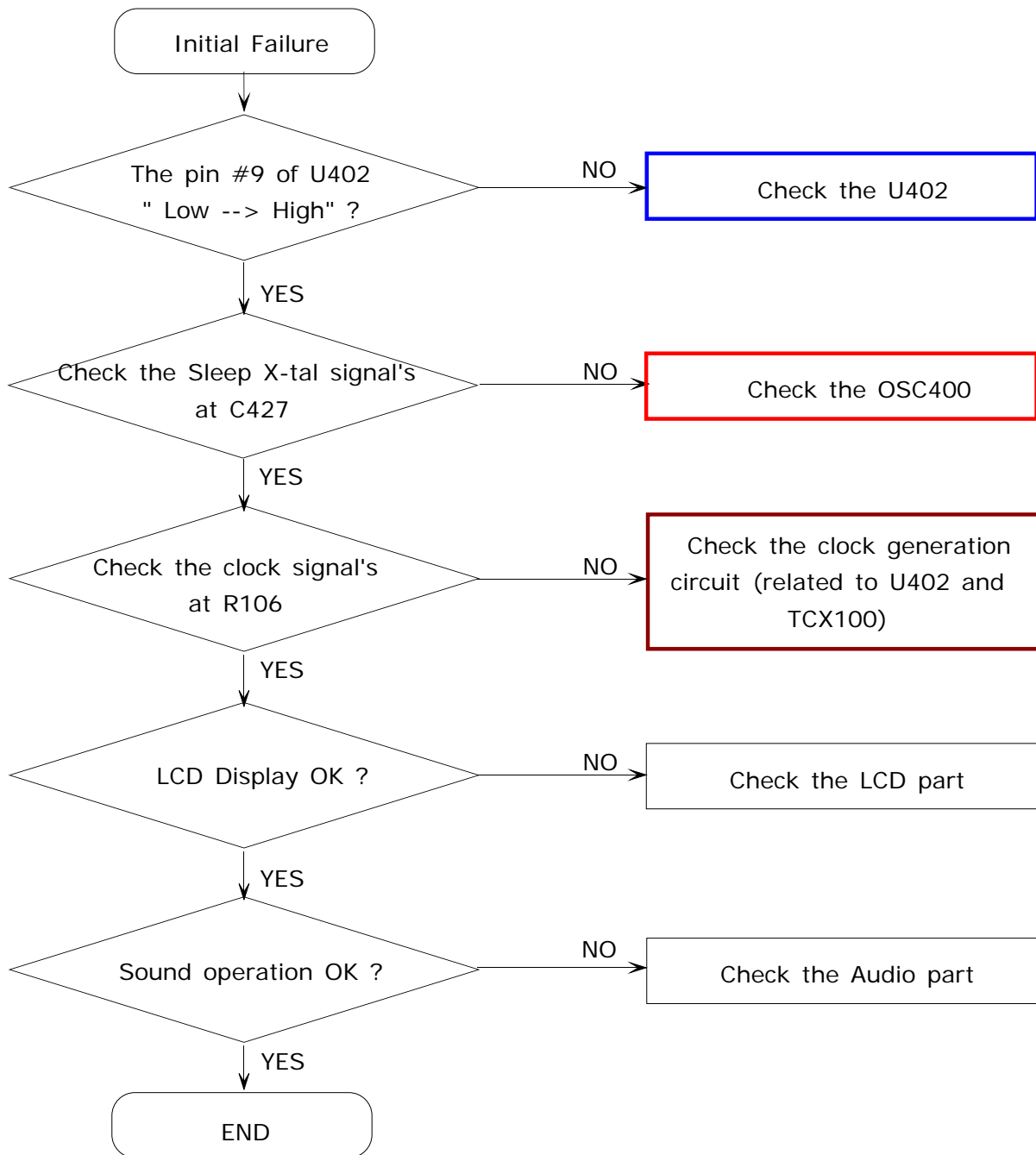
- Schematic for Power on

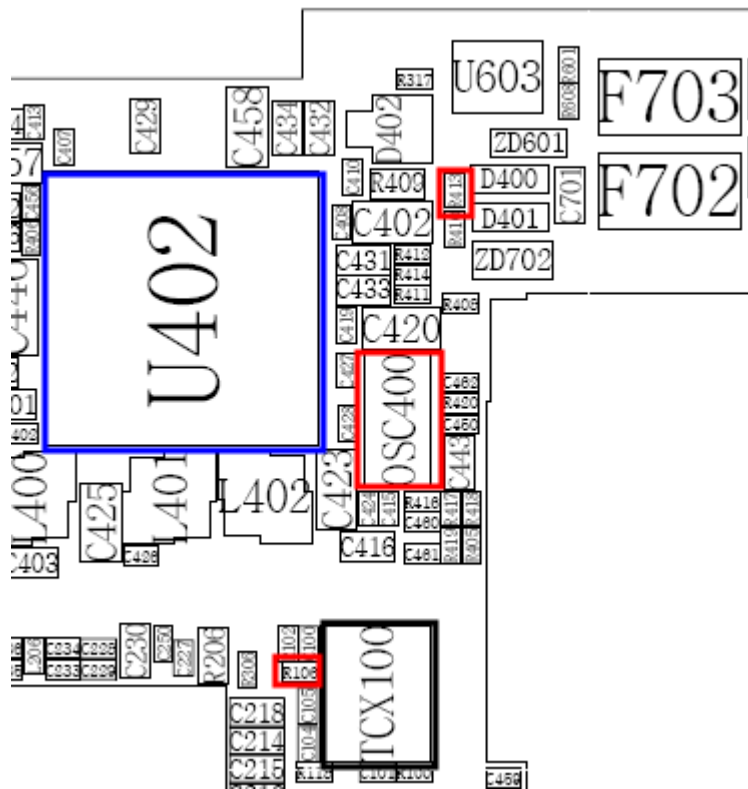
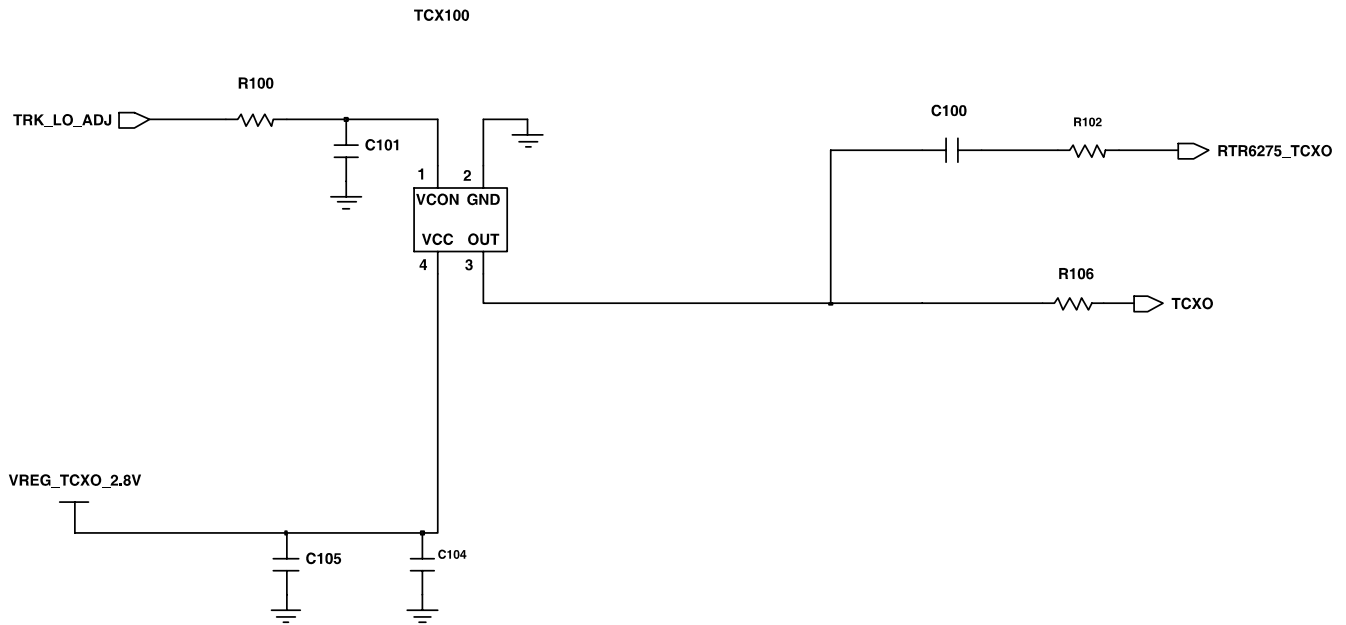


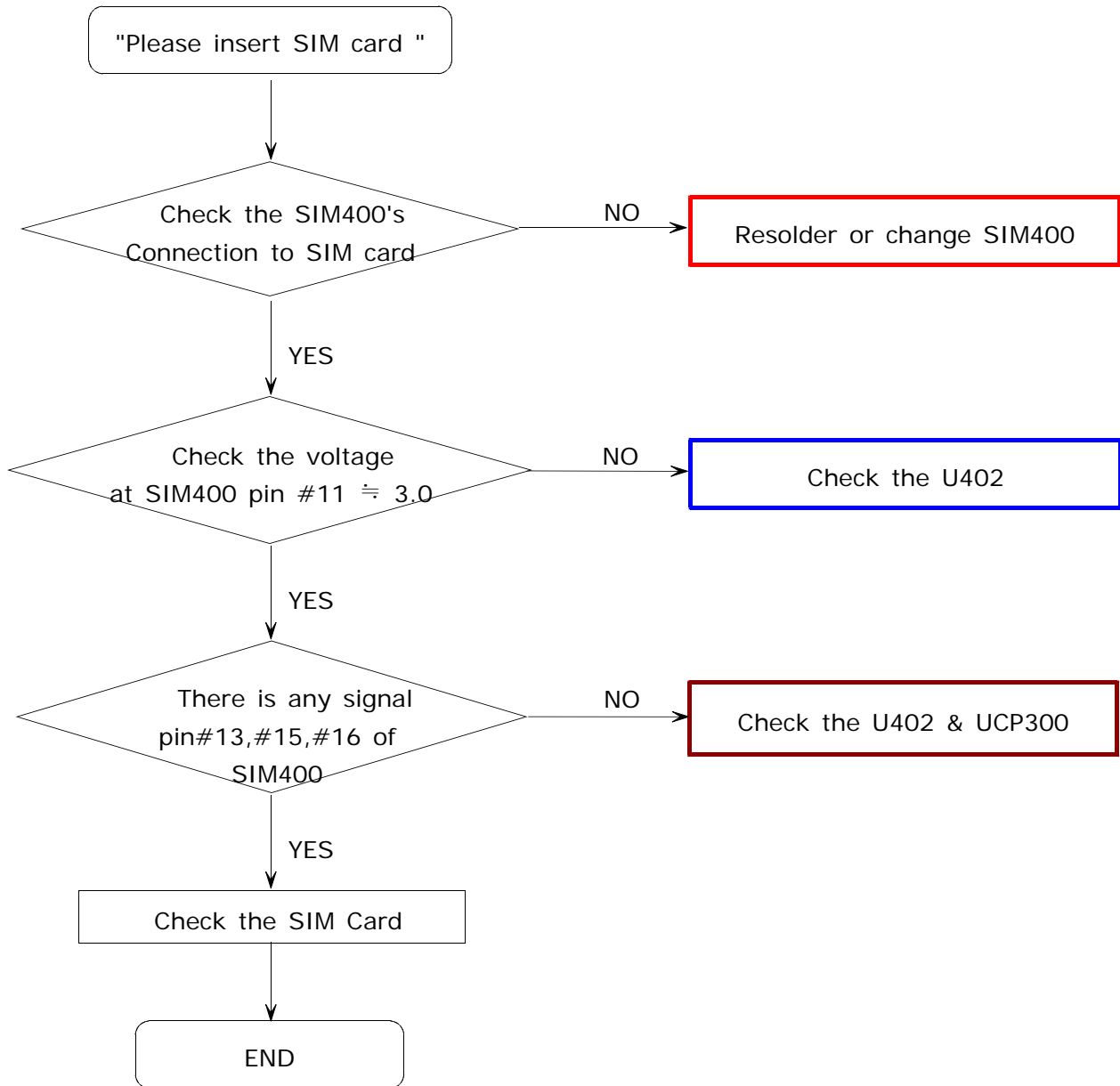
- Layout for Power on





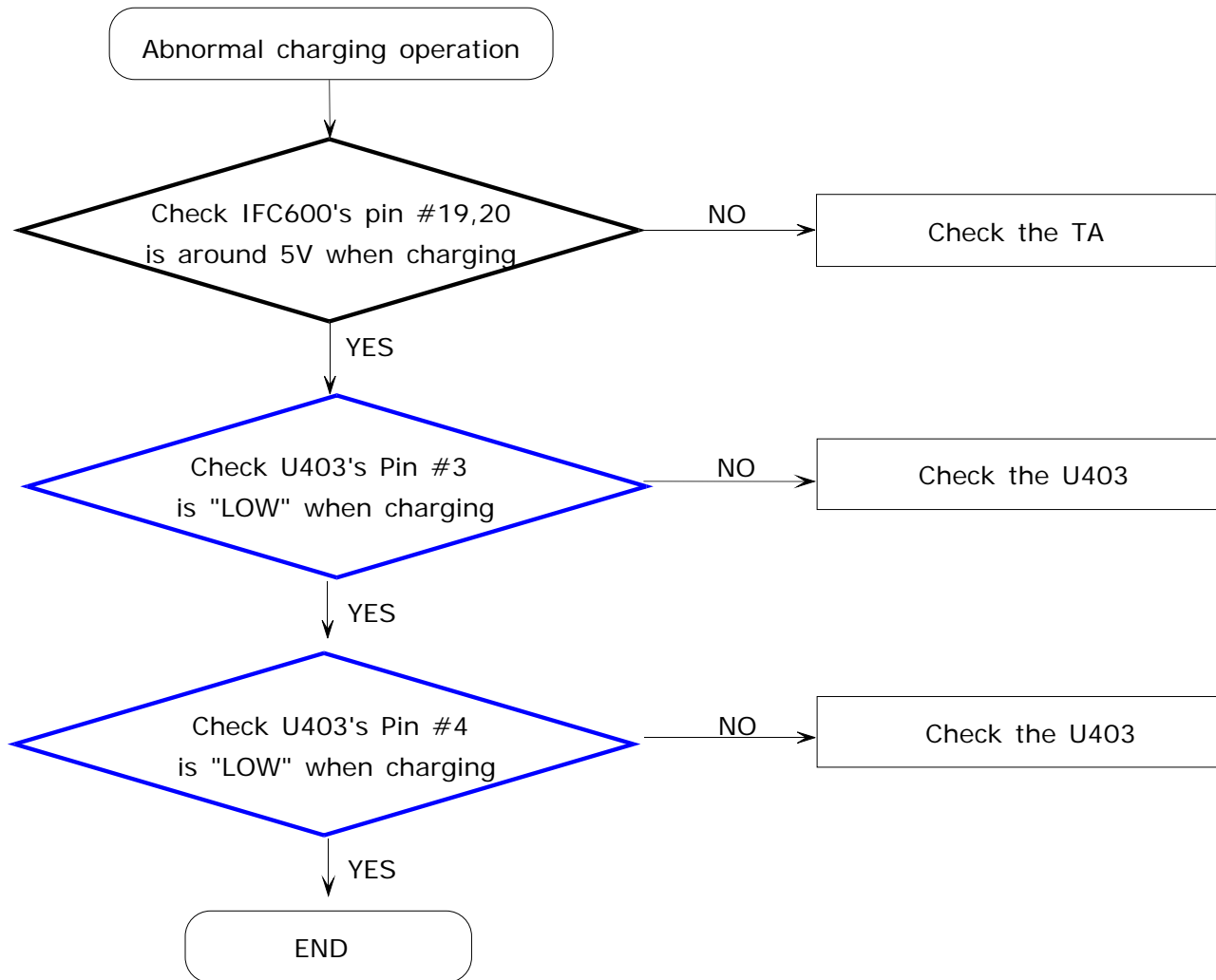
**9-1-2. System Initial**



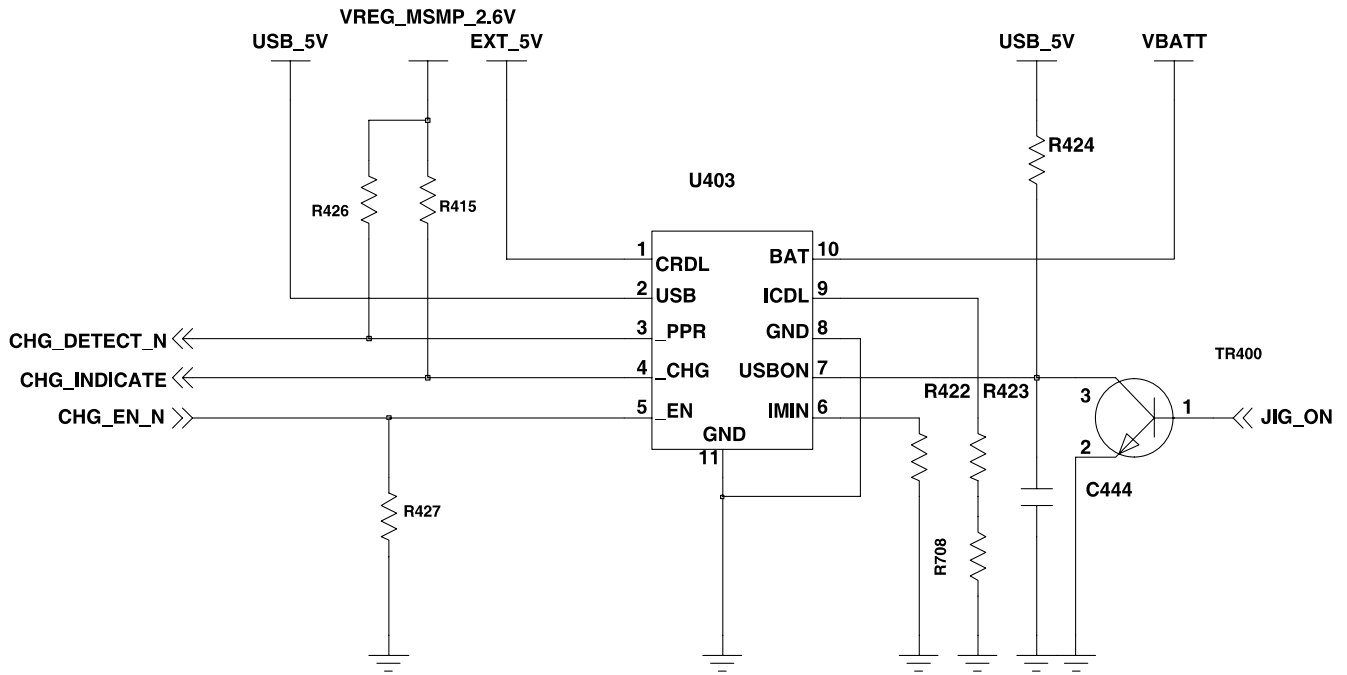
**9-1-3. SIM Part**

\*\* Check SIM's signal  
when you see SIM checking display



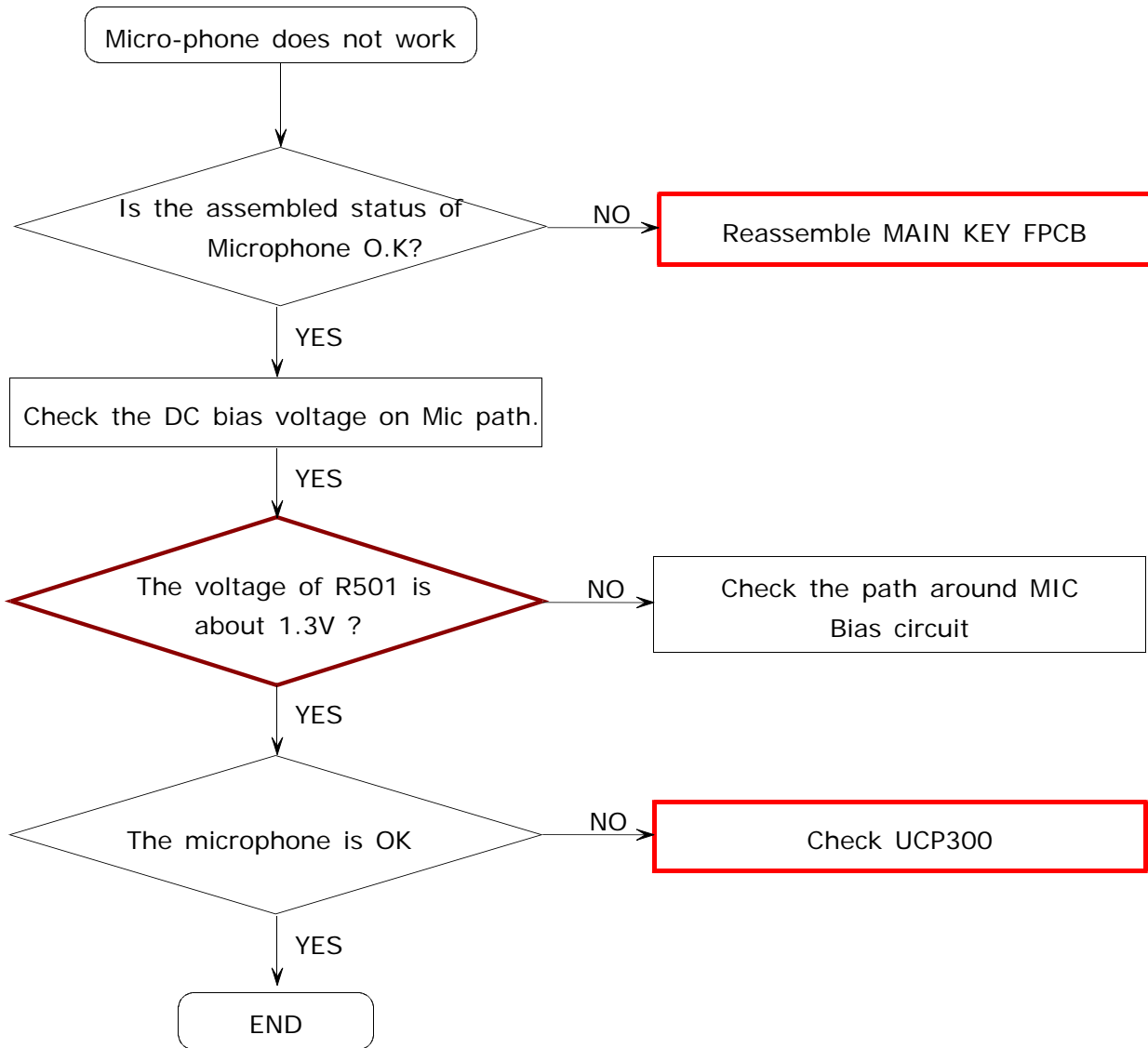
**9-1-4. Charging Part**

- Schematic for Charging

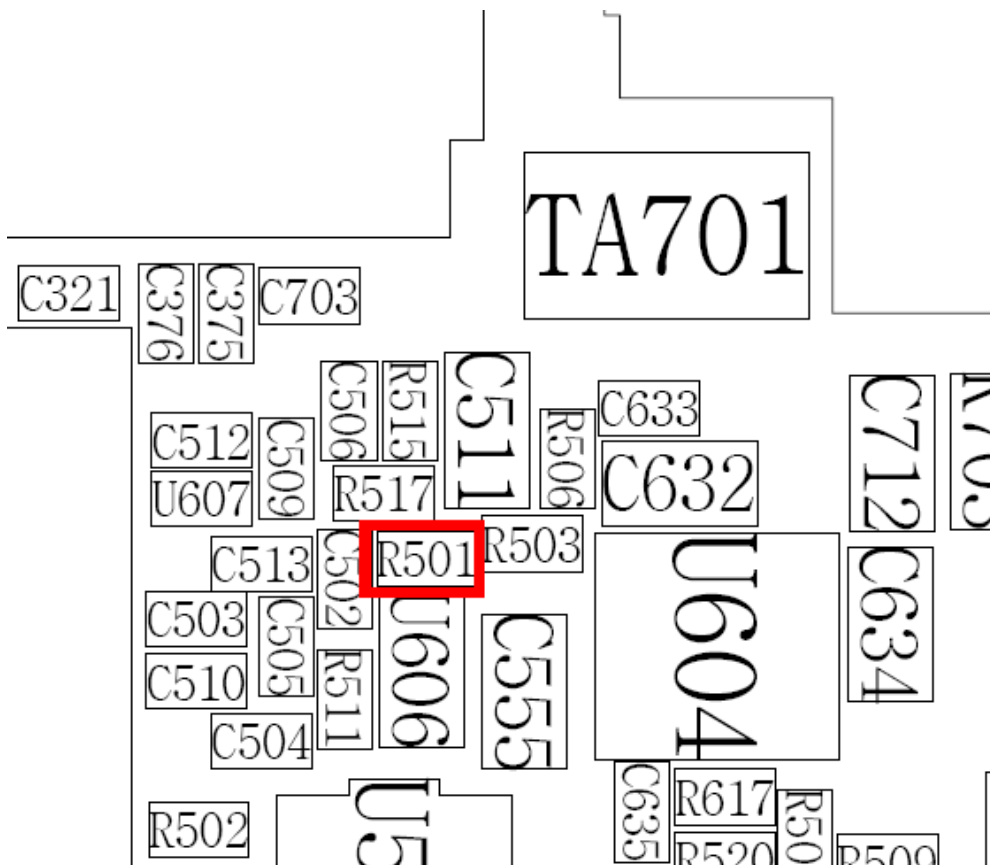
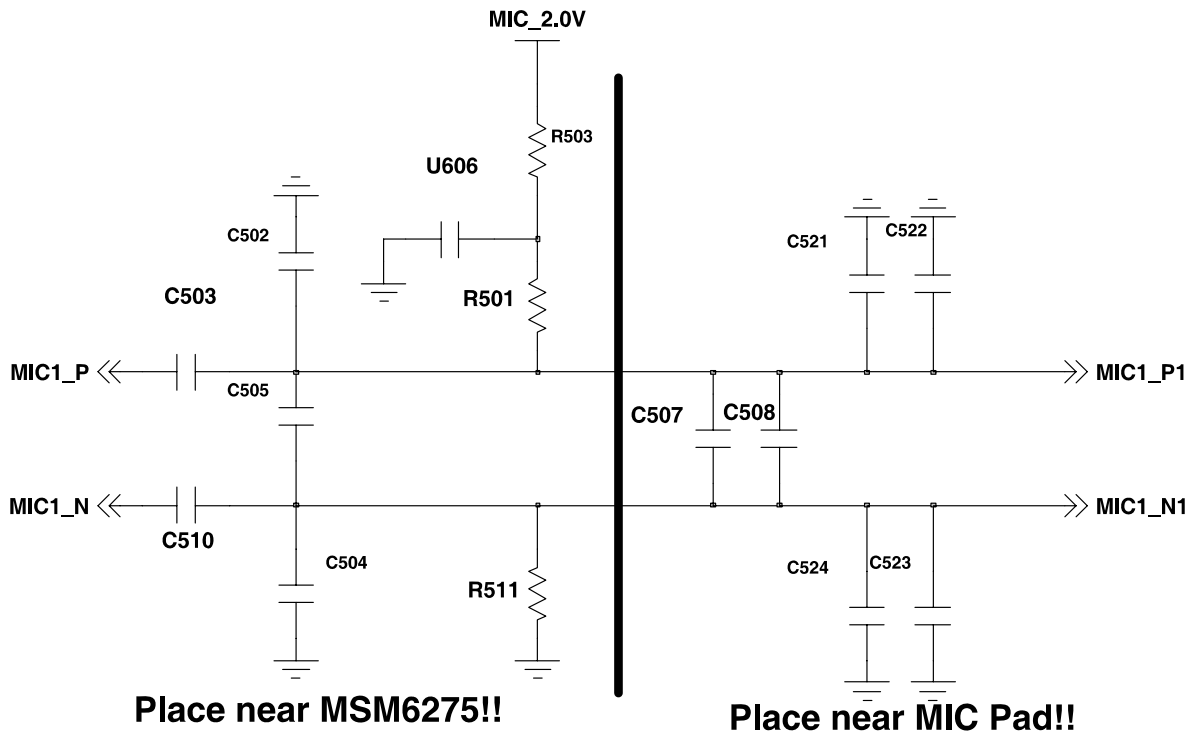


- Layout for charging IC

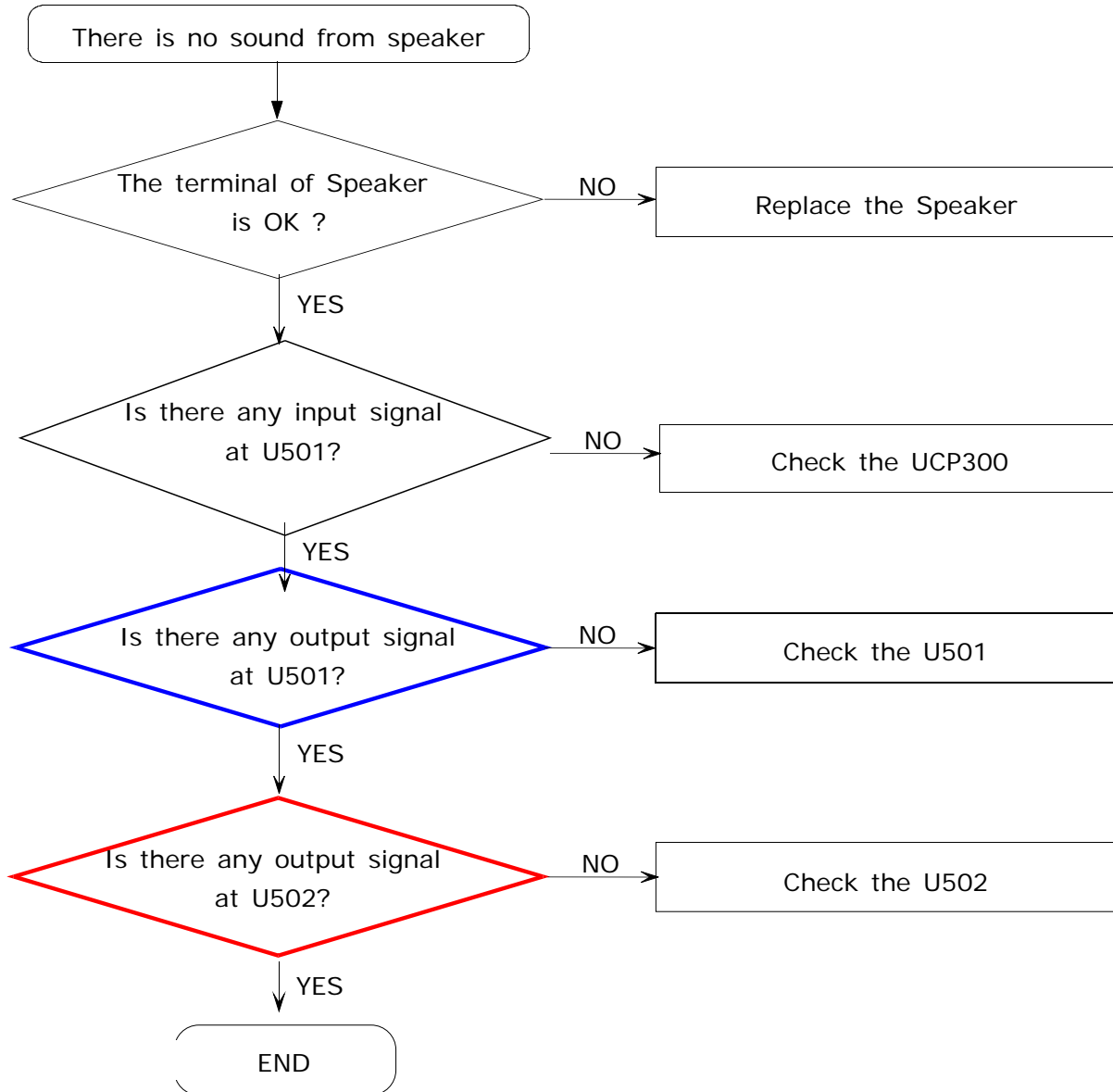


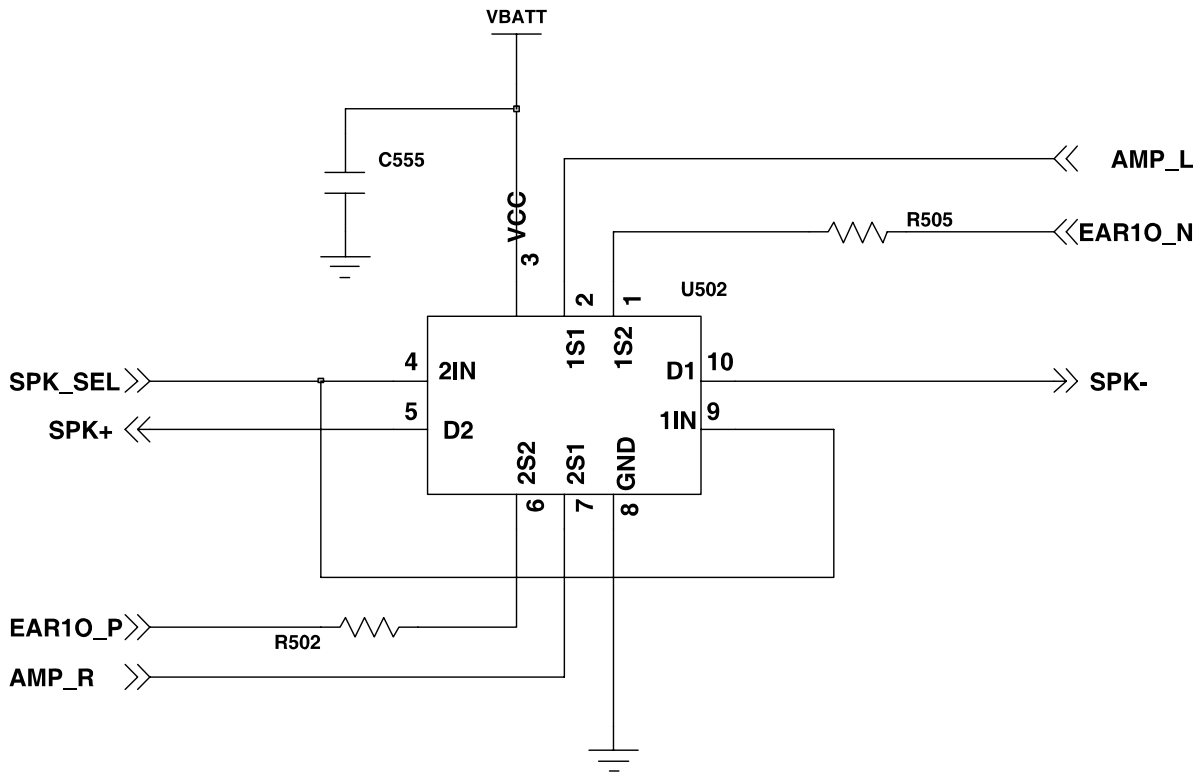
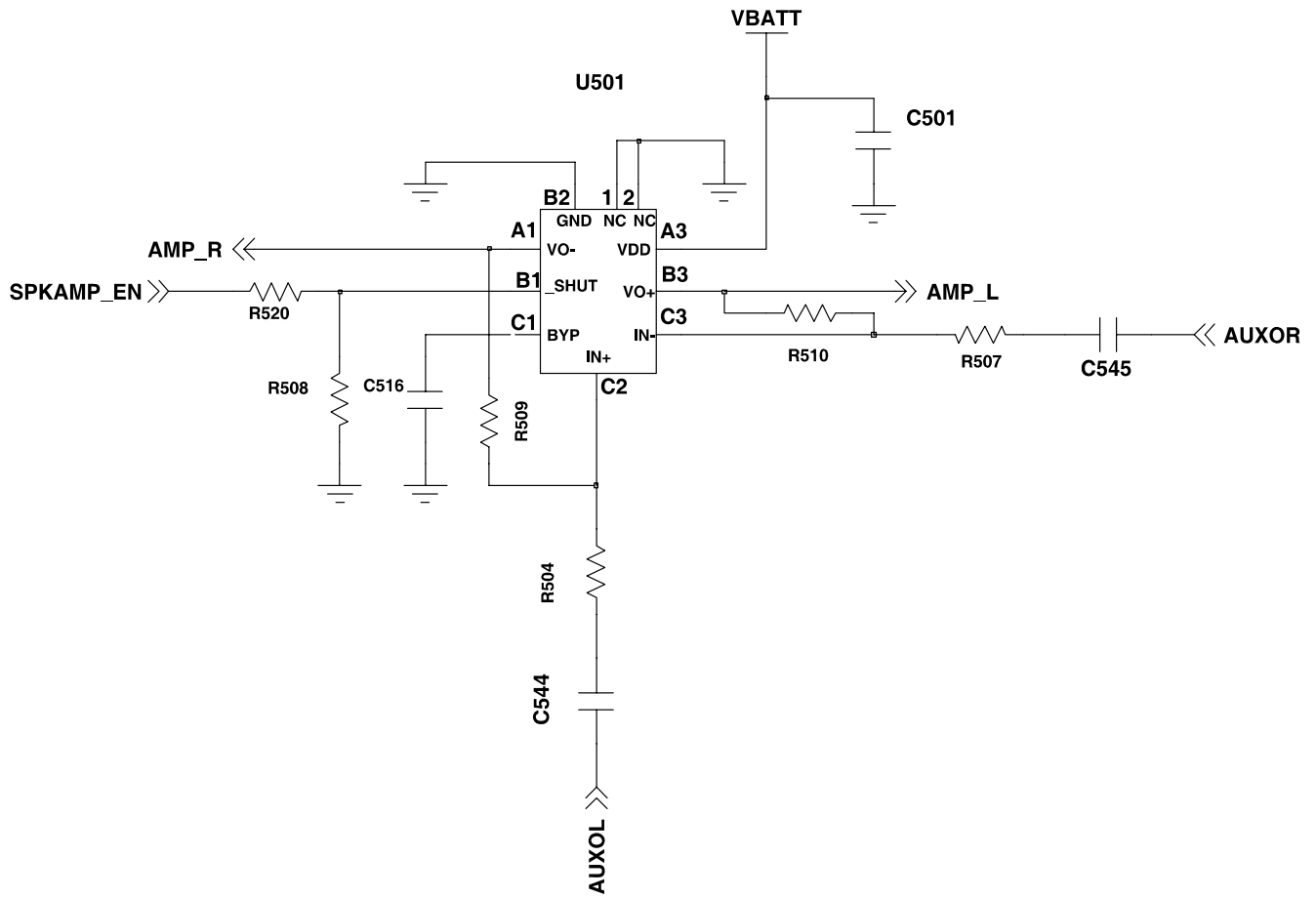
**9-1-5. Microphone Part**

- Schematic for Microphone

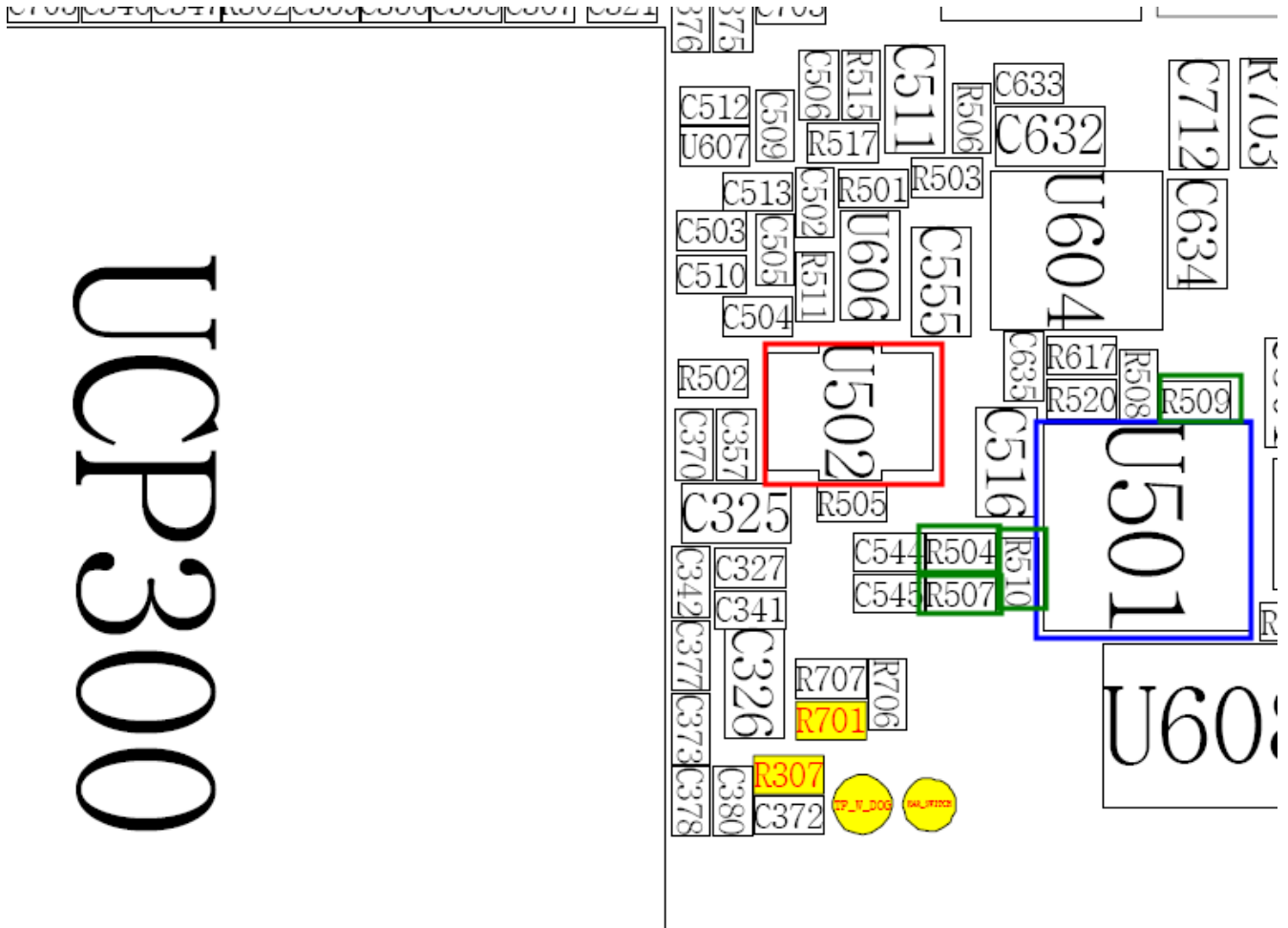




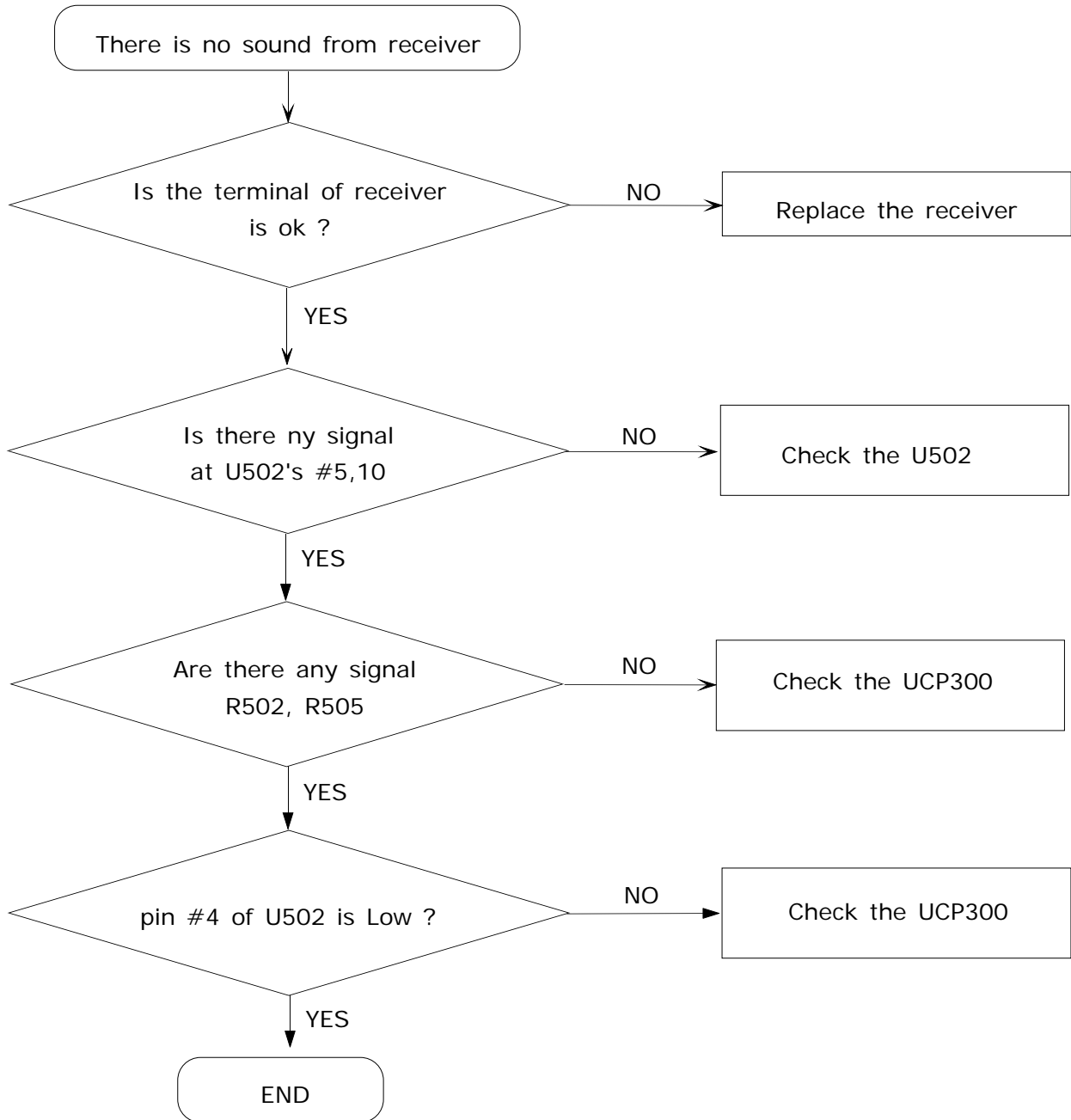
**9-1-6. Speaker Part**

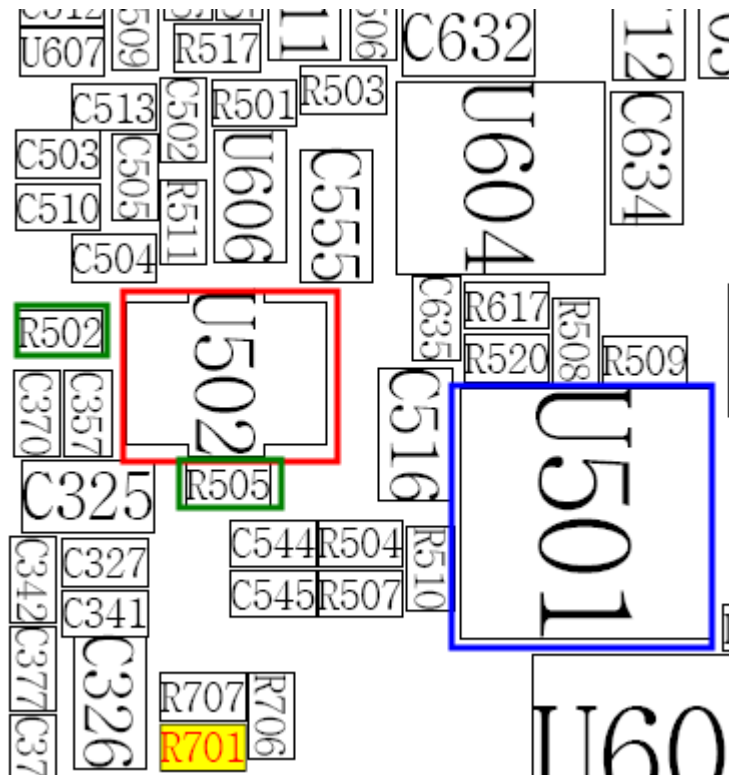
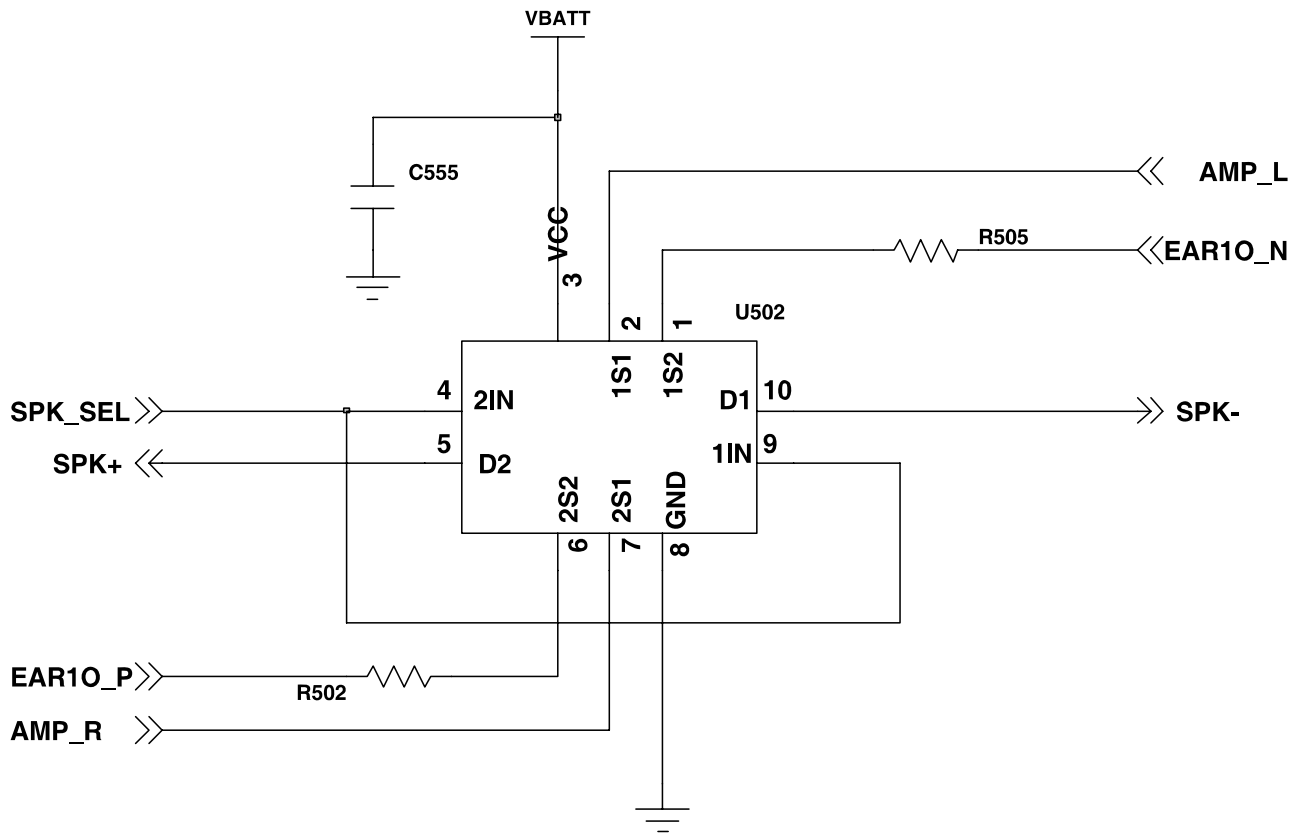


# UCP300

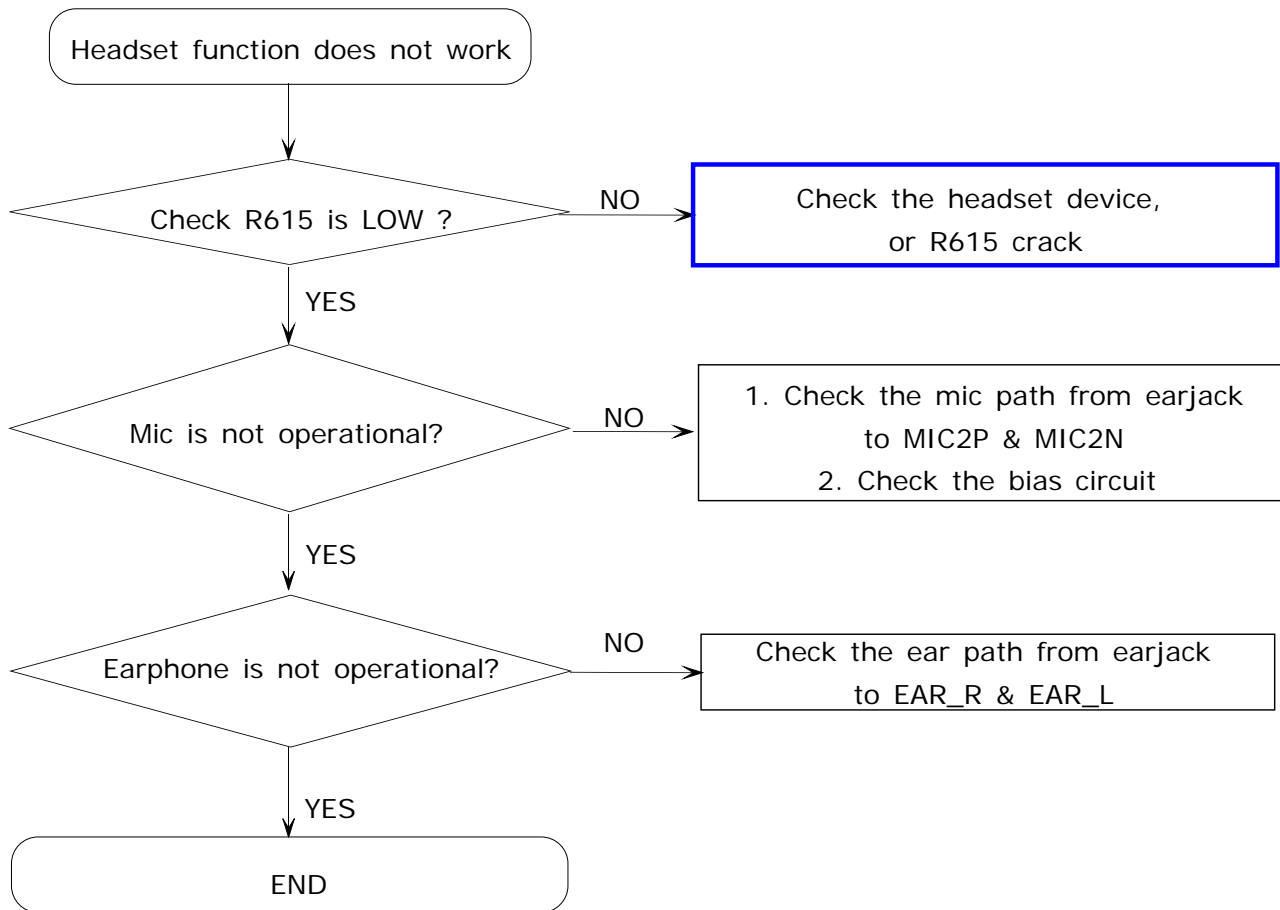


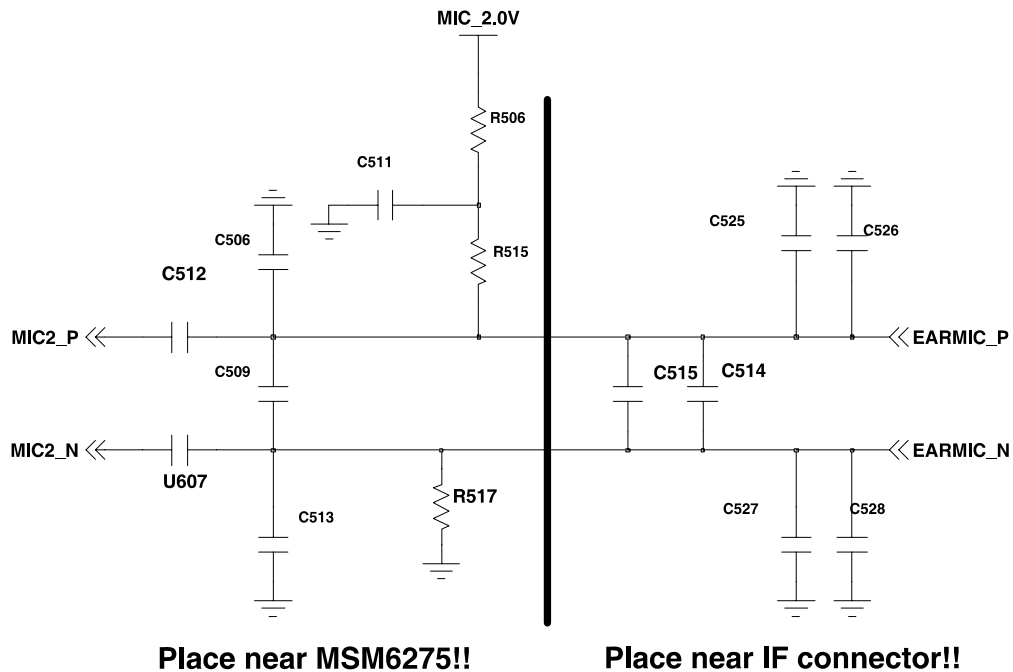
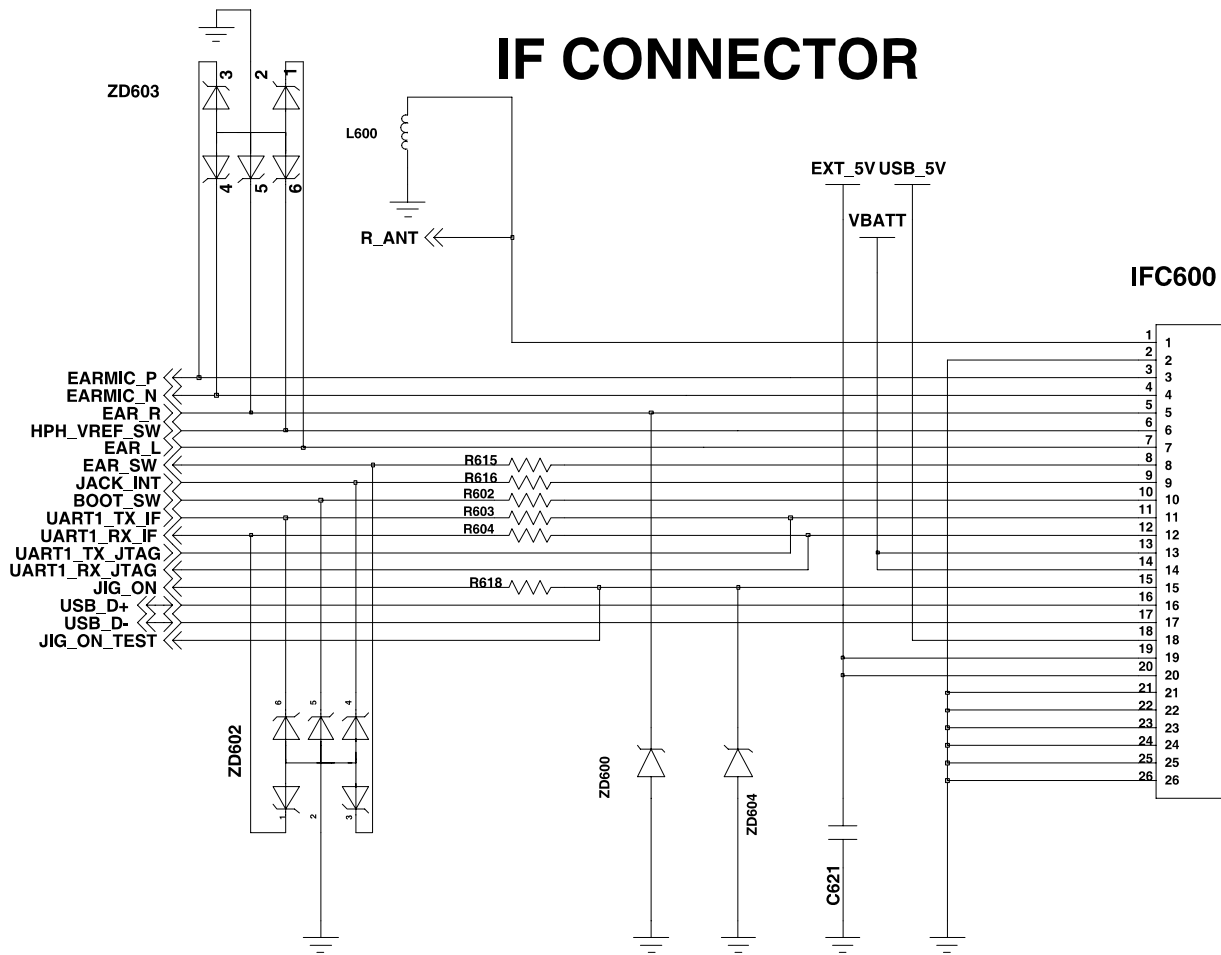
### 9-1-7. Receiver Part

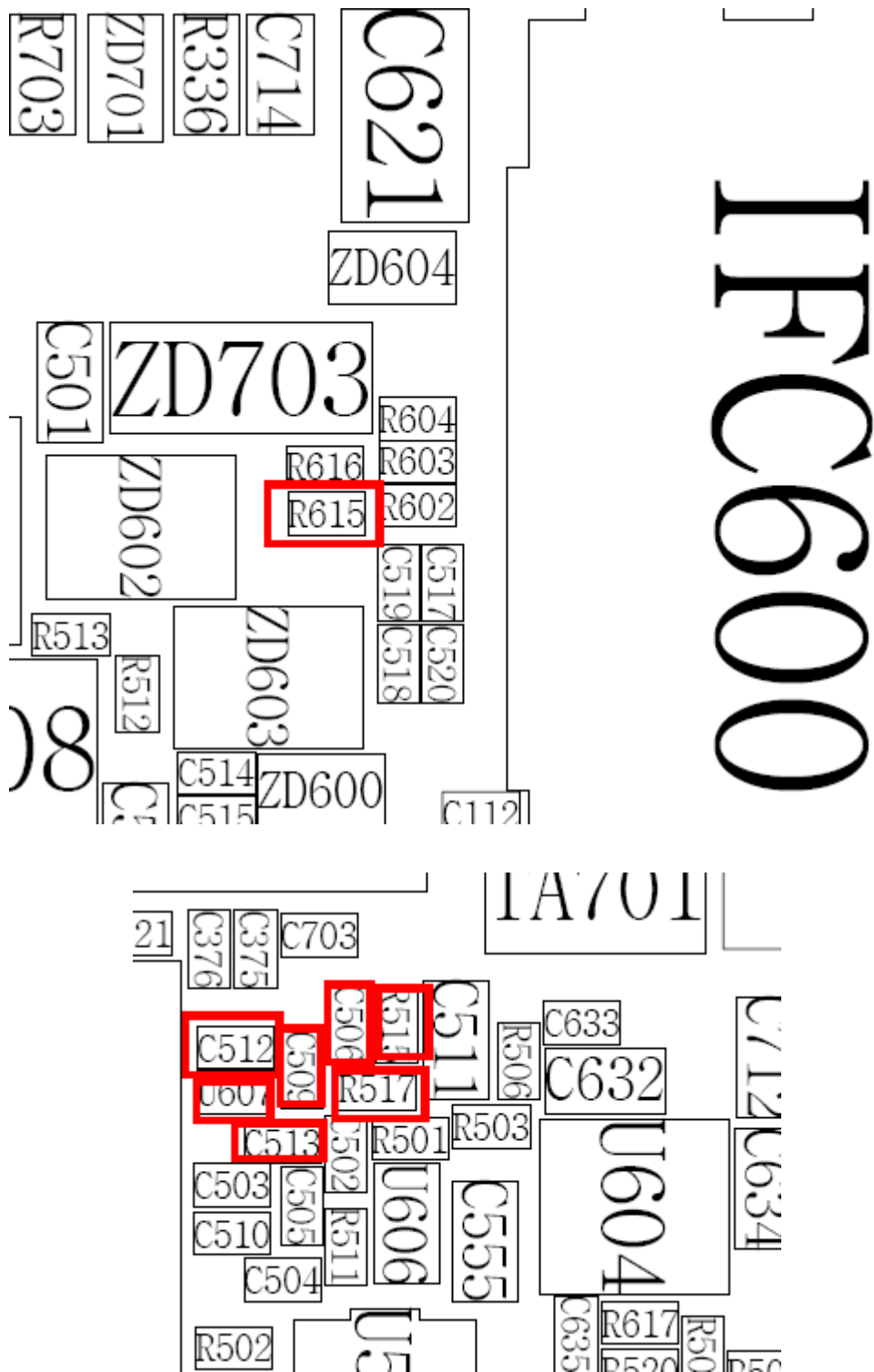




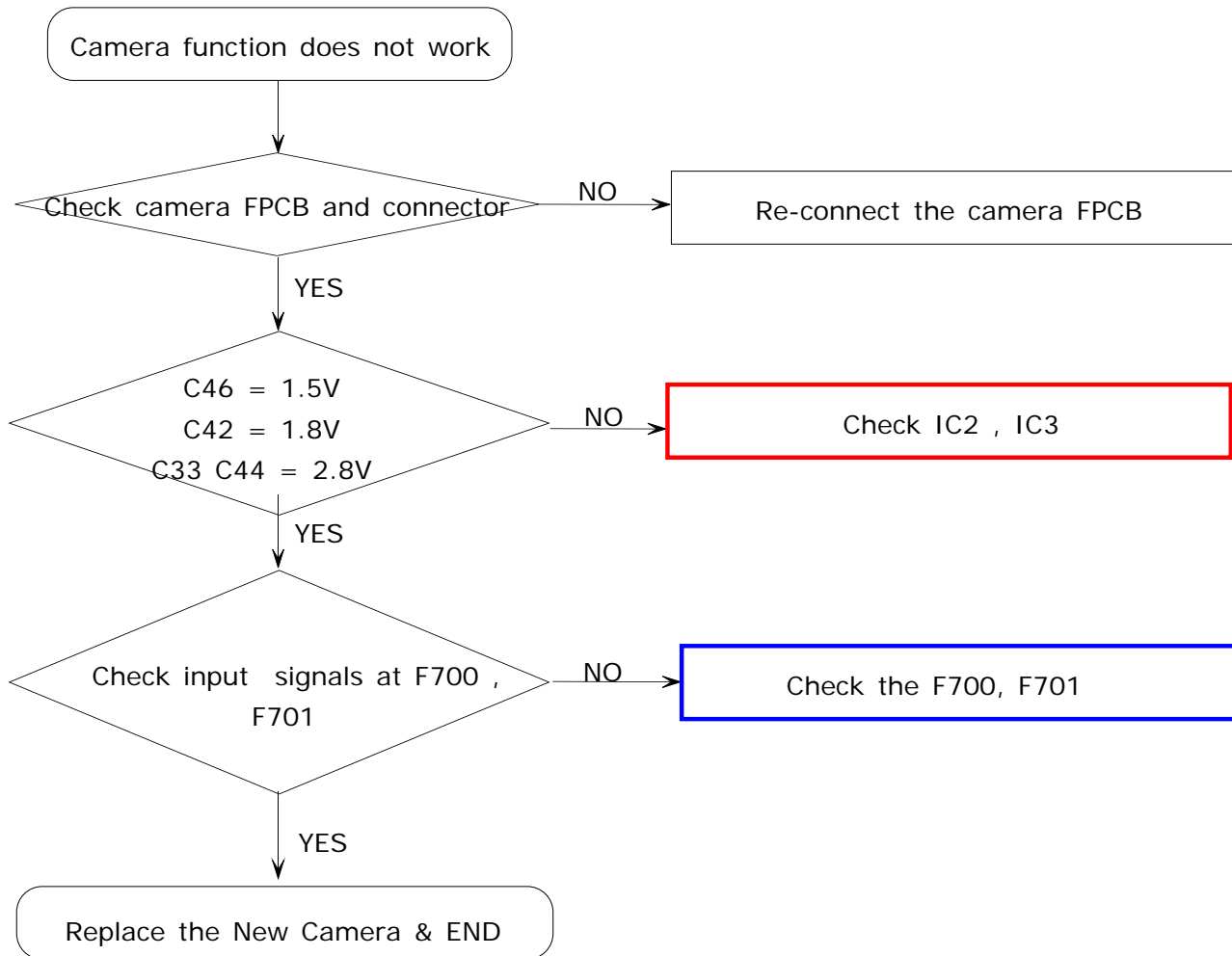
### 9-1-8. Headset Part

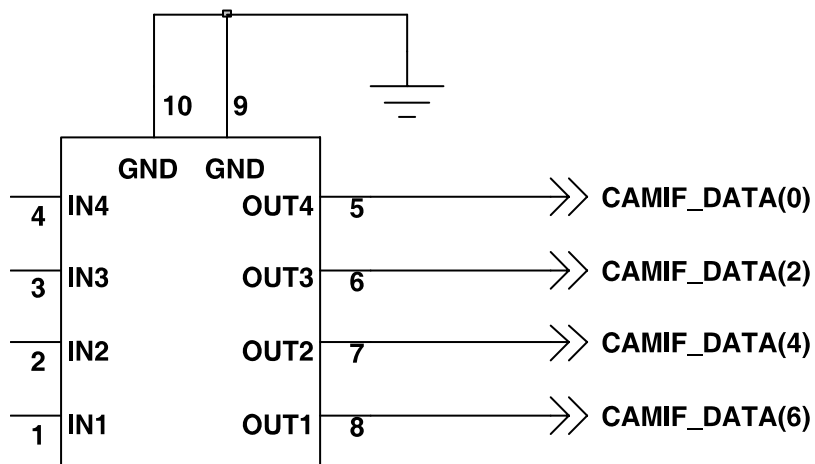
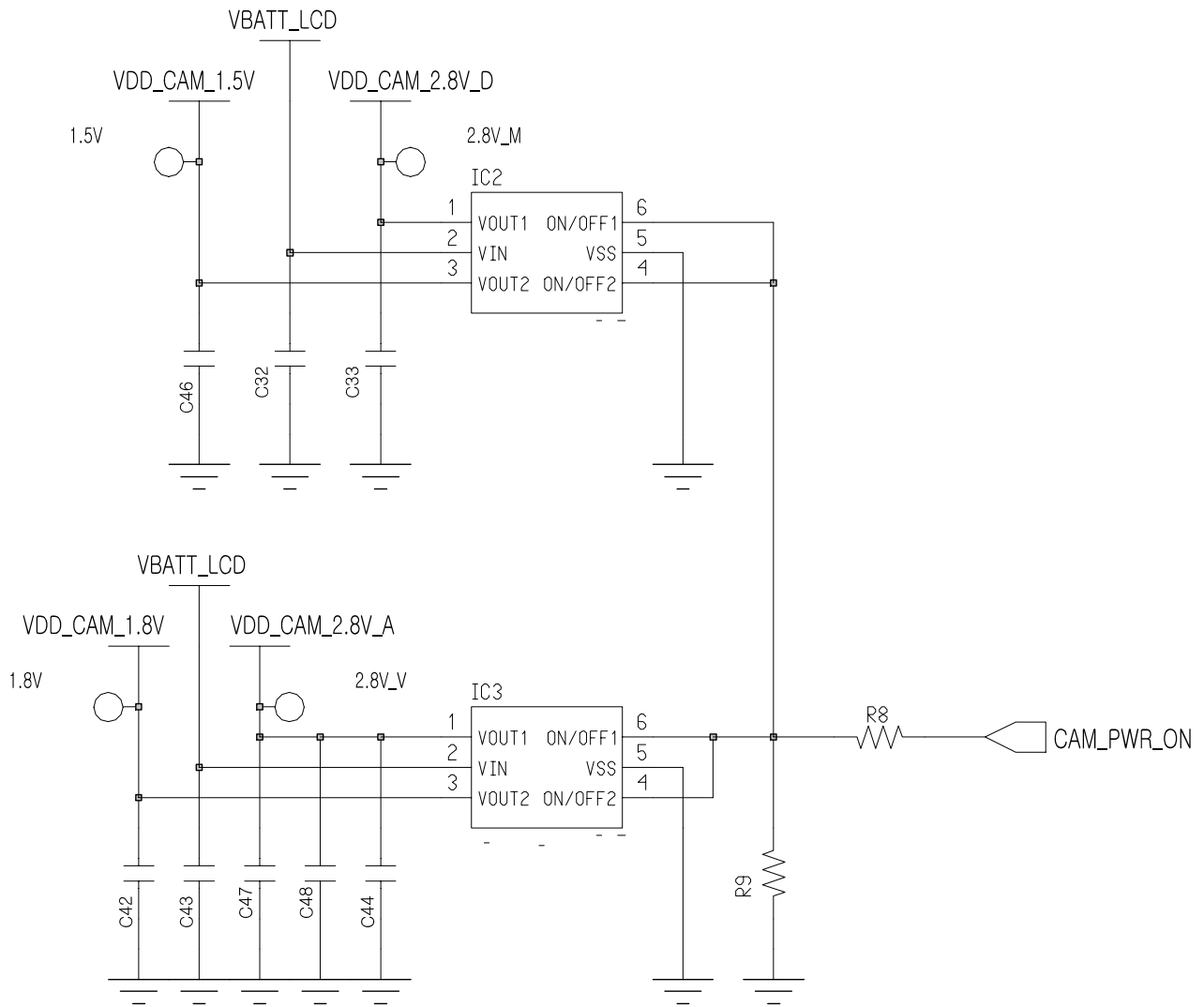




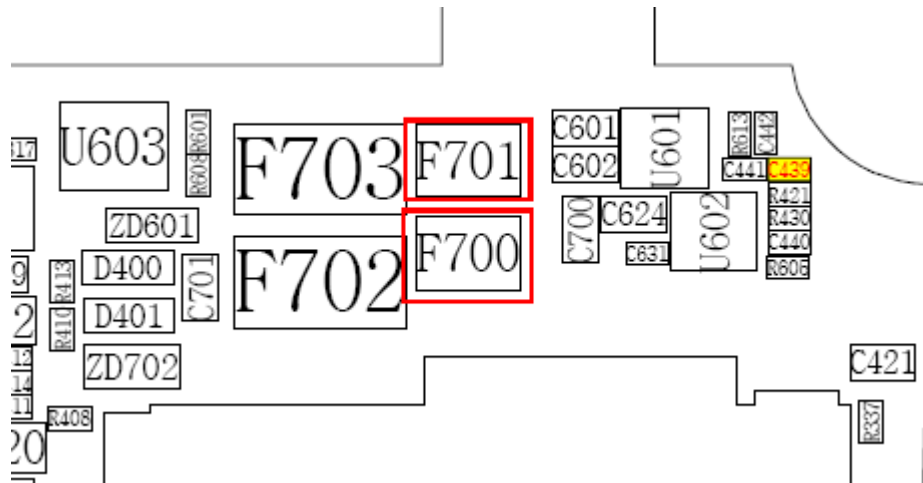
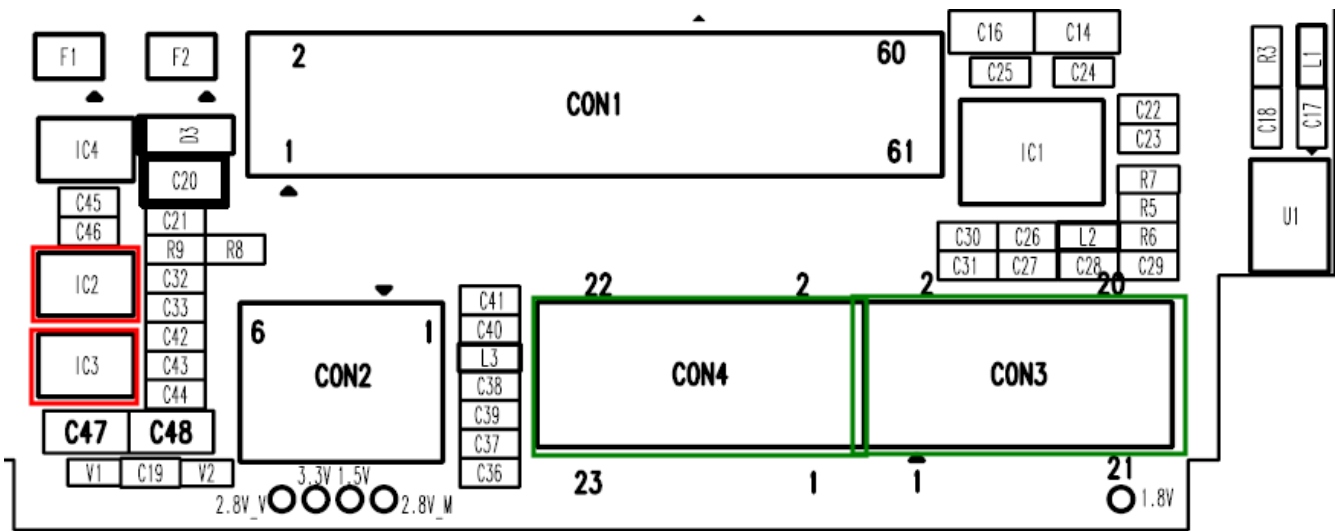




**9-1-9. Camera Part (Mega and VGA)**



F700

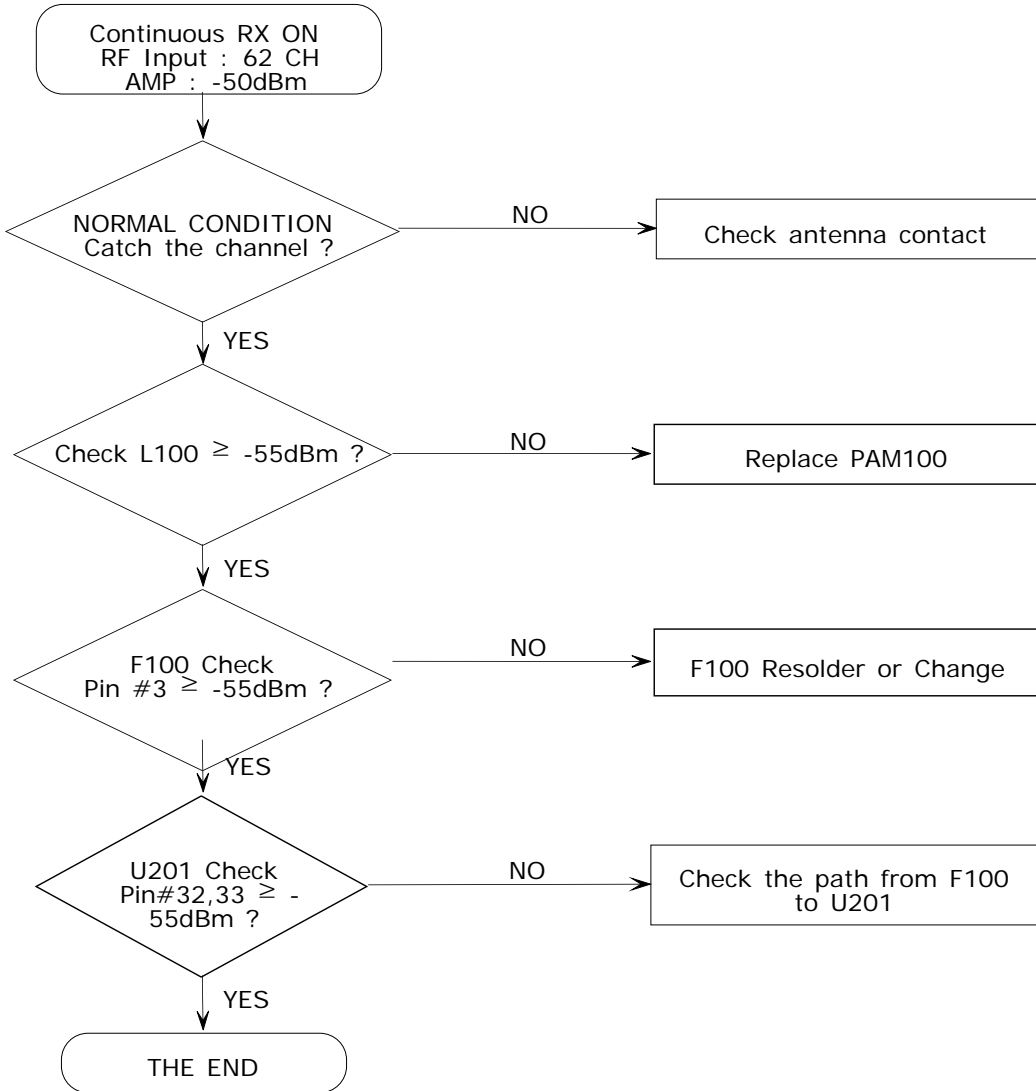


## 9-2.RF

### 9-2-1. GSM900 Receiver

\*\*If you check the tx chain,

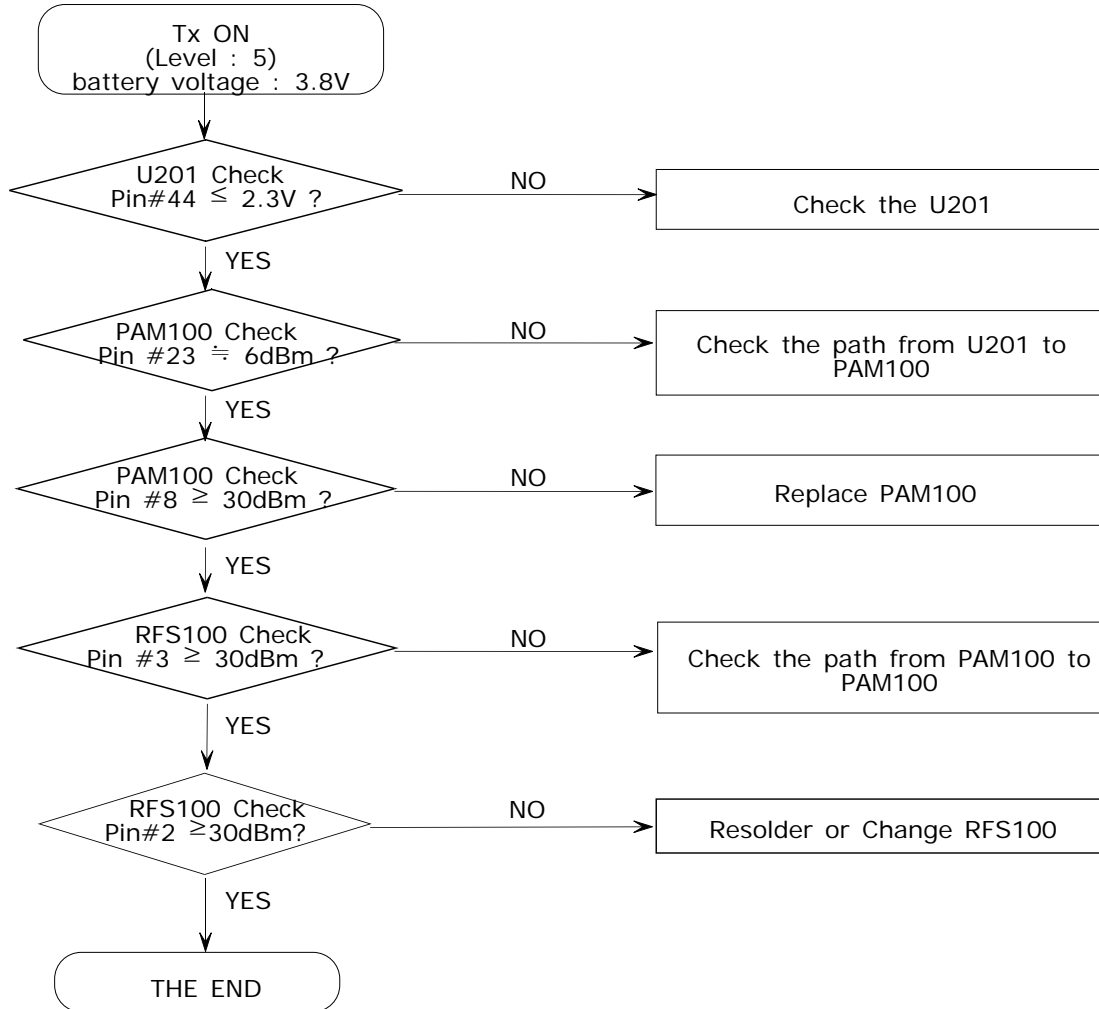
Check the not only RF Device but also resistor, inductor and capacitor.



### 9-2-2. GSM900 Transmitter

\*\*If you check the tx chain,

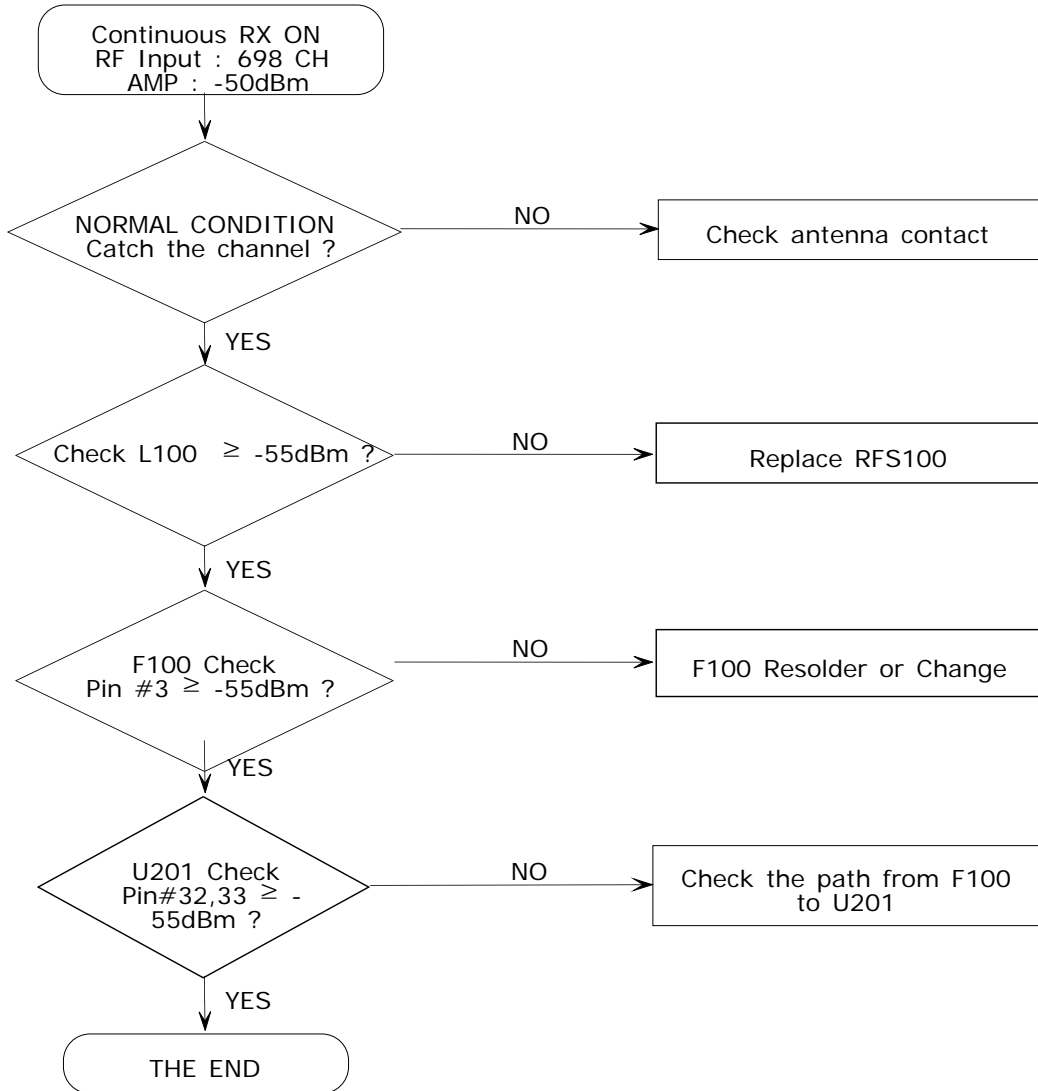
Check the not only RF Device but also resistor, inductor and capacitor.



### 9-2-3. DCS1900 Receiver

\*\*If you check the tx chain,

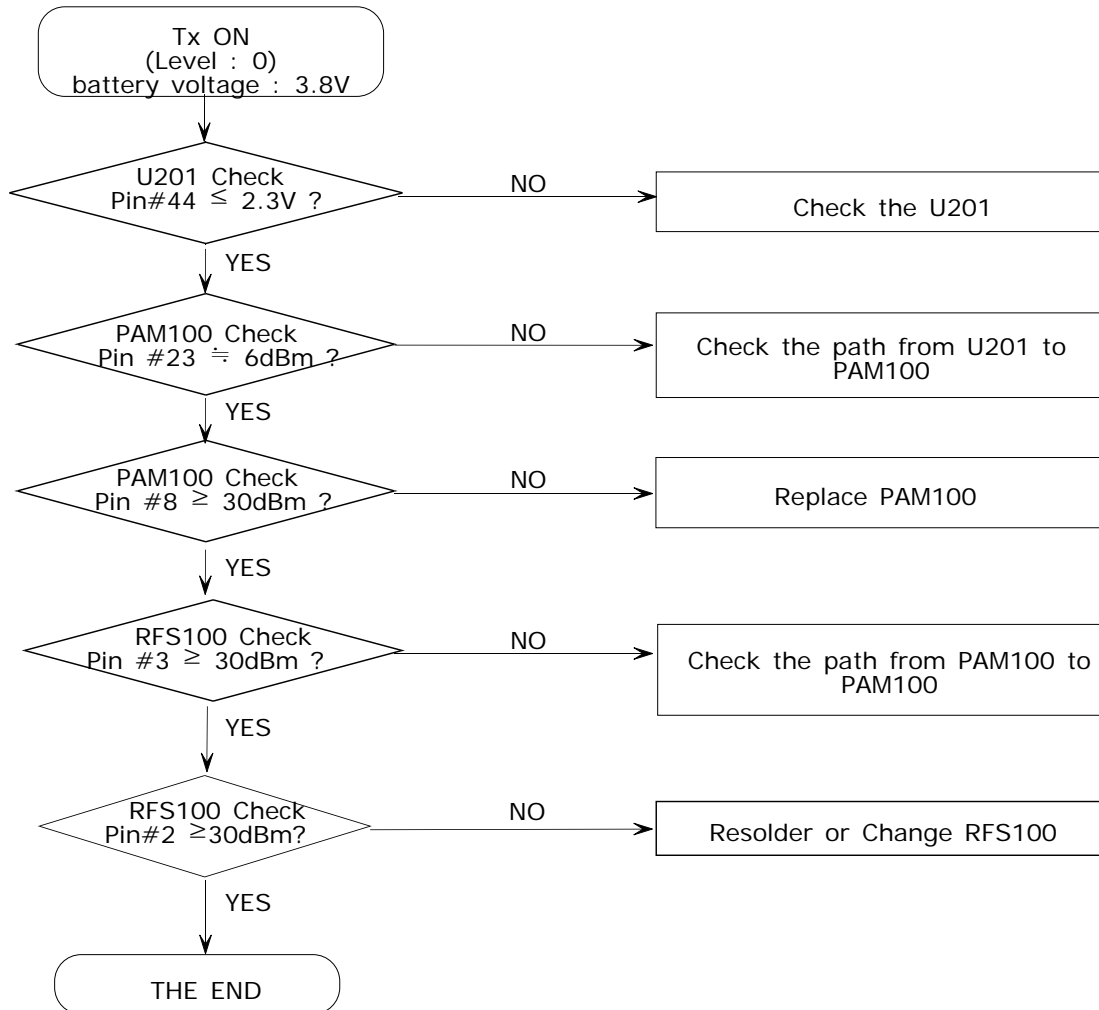
Check the not only RF Device but also resistor, inductor and capacitor.



### 9-2-4. DCS1900 Transmitter

\*\*If you check the tx chain,

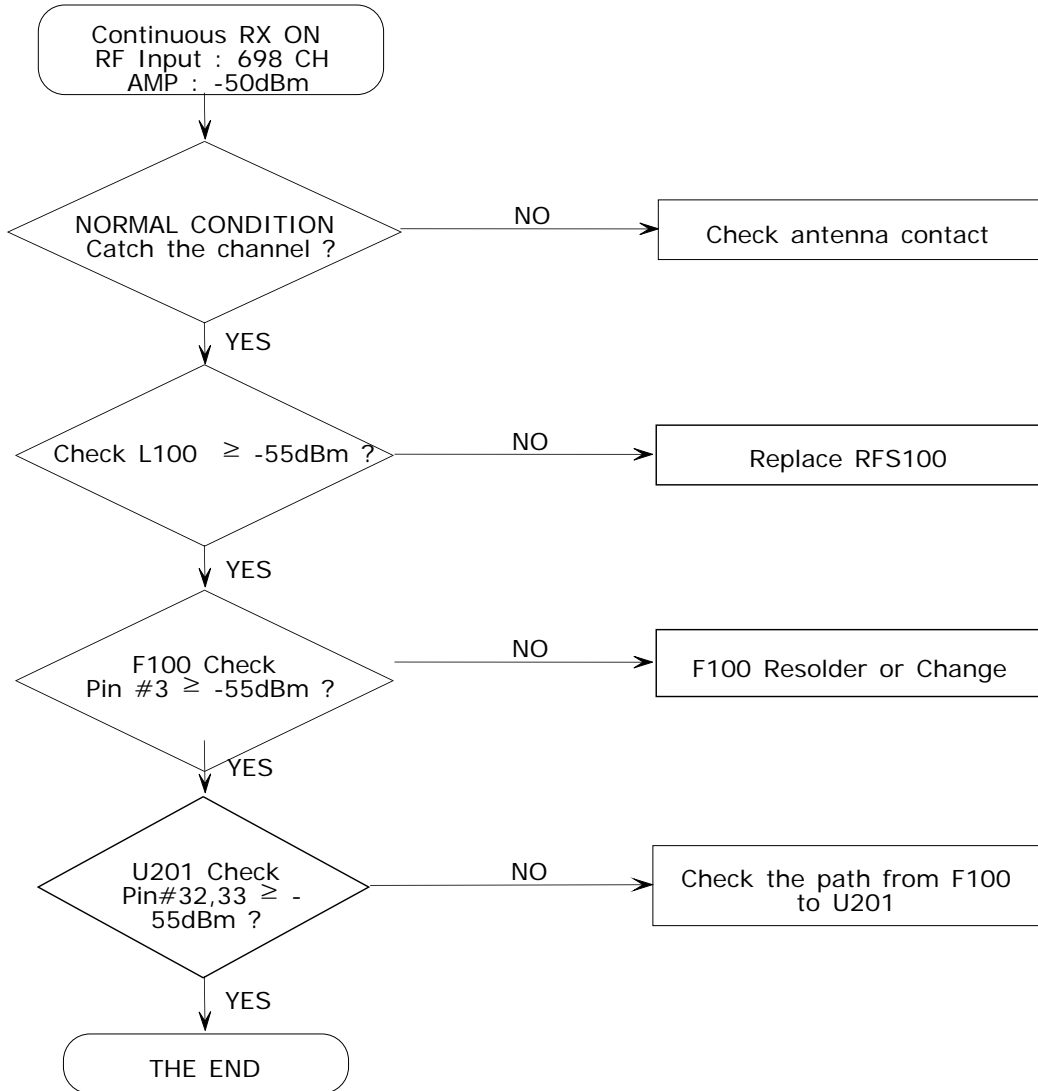
Check the not only RF Device but also resistor, inductor and capacitor.



### 9-2-5. PCS1900 Receiver

\*\*If you check the tx chain,

Check the not only RF Device but also resistor, inductor and capacitor.

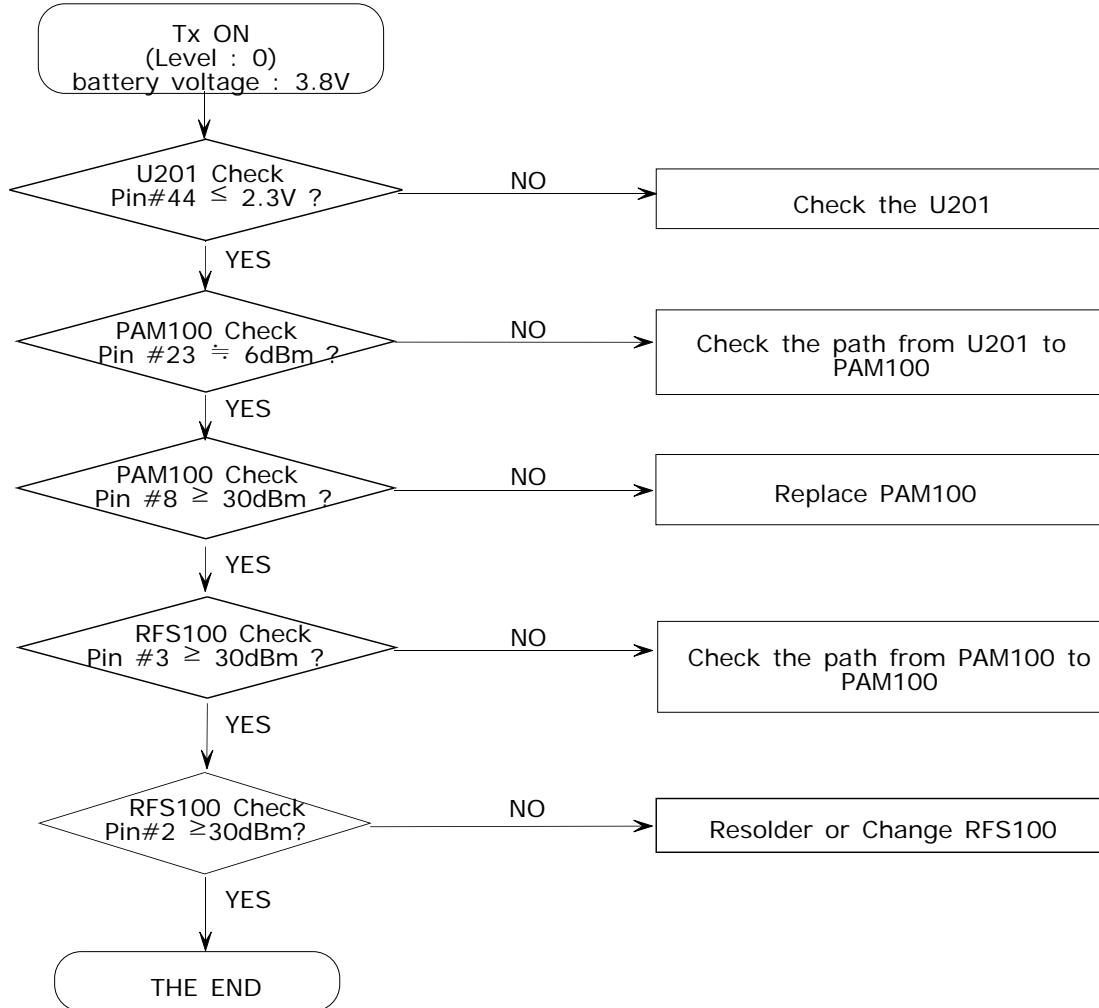




### 9-2-6. PCS1900 Transmitter

\*\*If you check the tx chain,

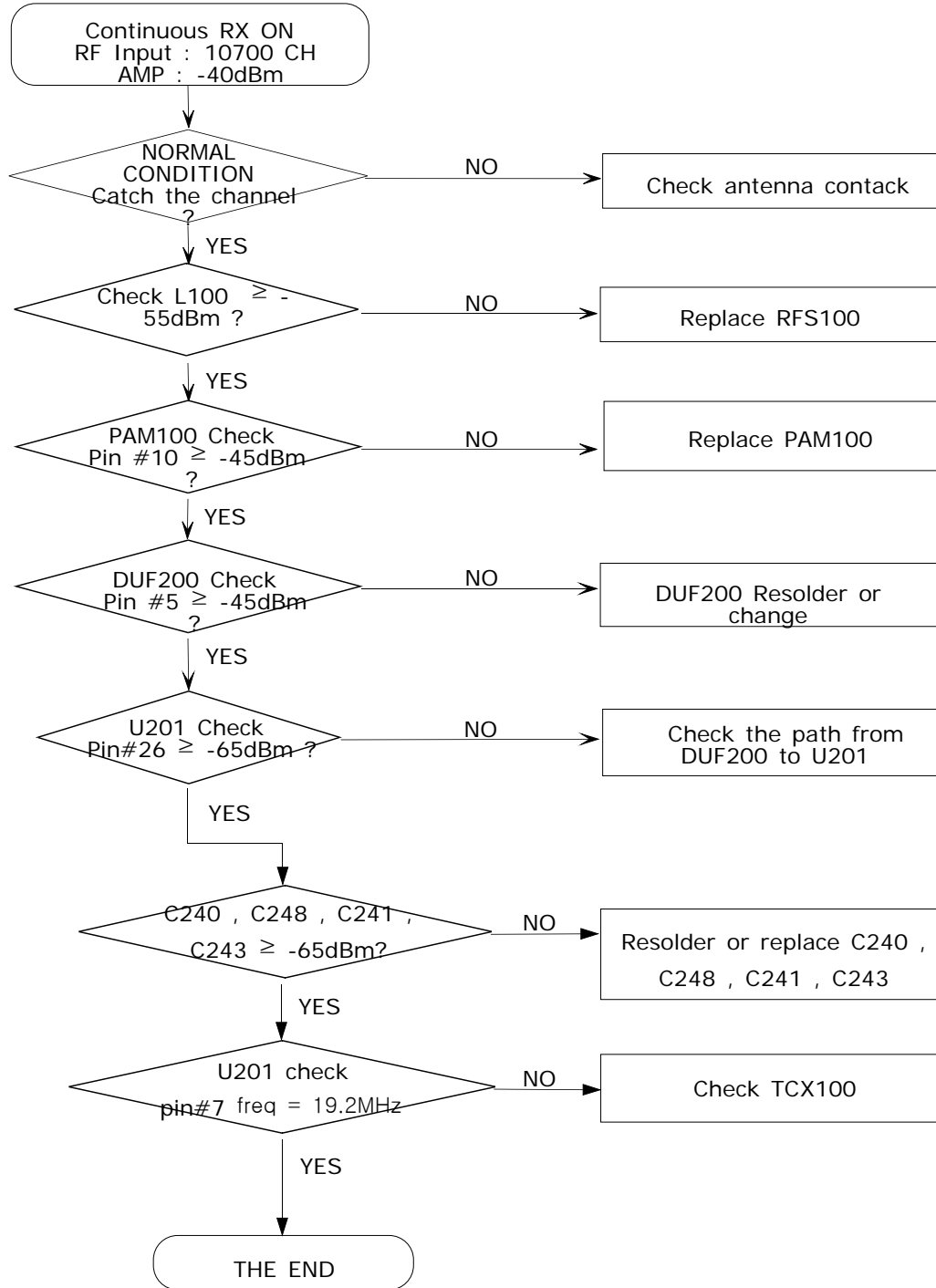
Check the not only RF Device but also resistor, inductor and capacitor.



### 9-2-7. UMTS2100 Receiver

\*\*If you check the tx chain,

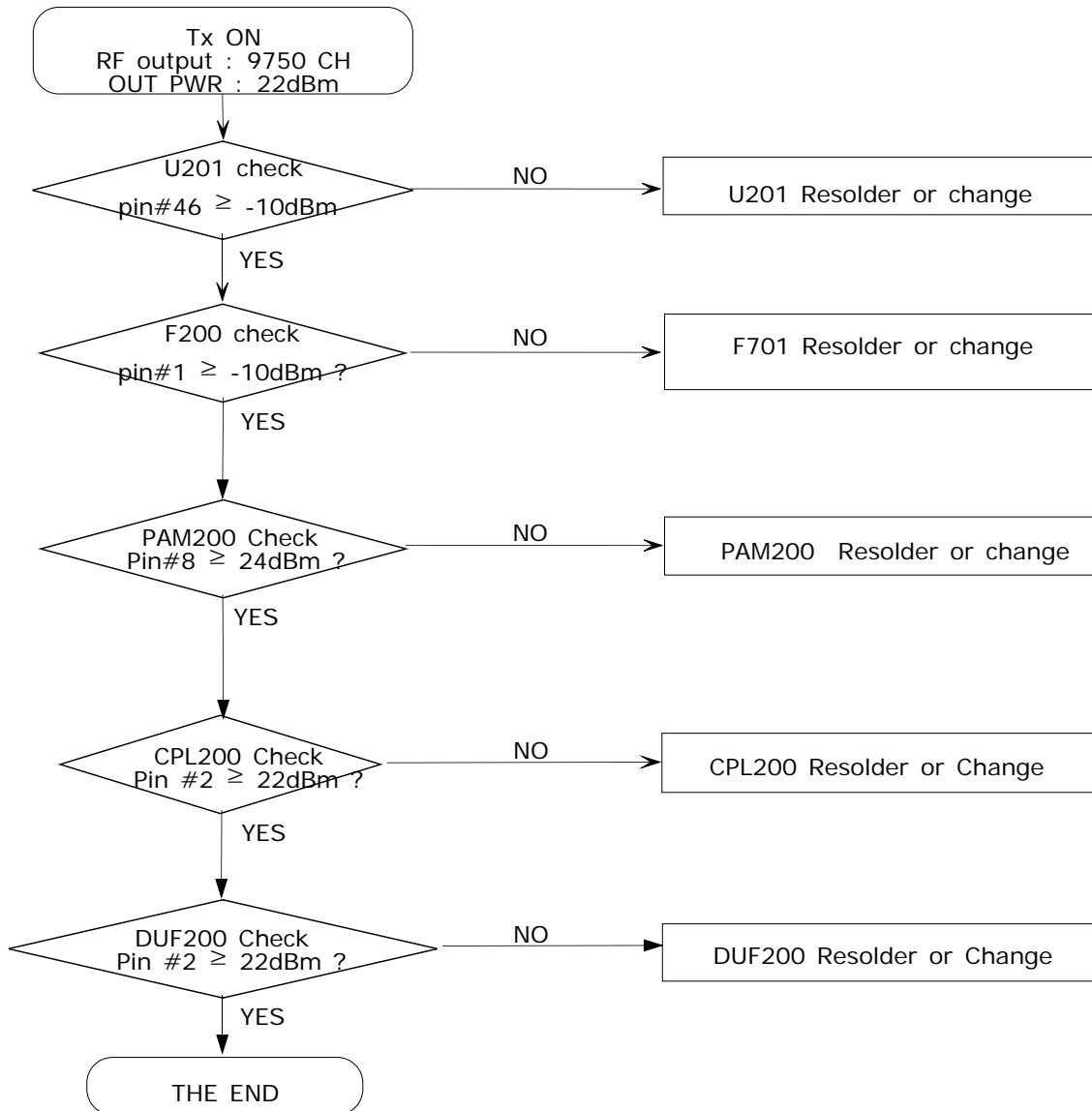
Check the not only RF Device but also resistor, inductor and capacitor.

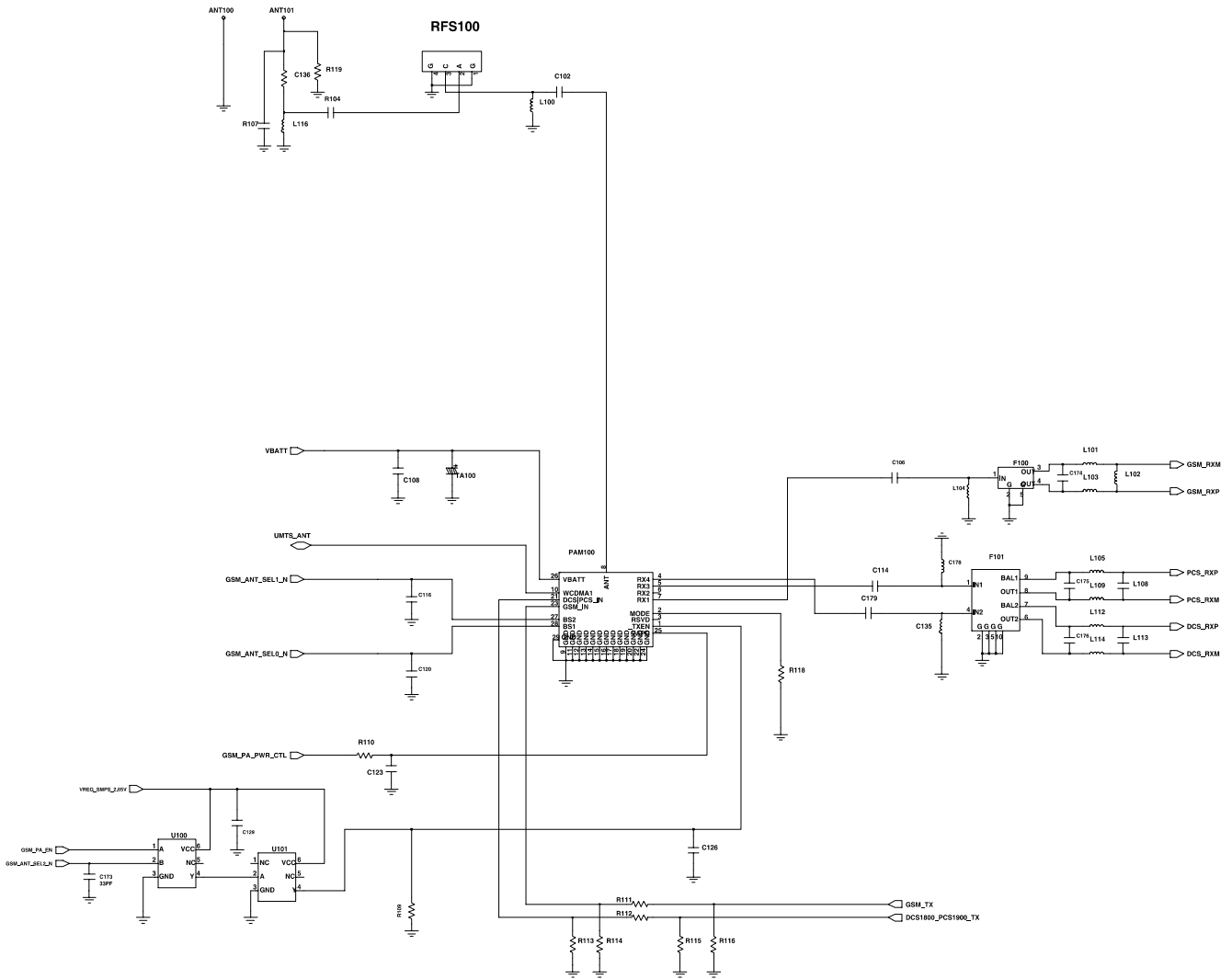


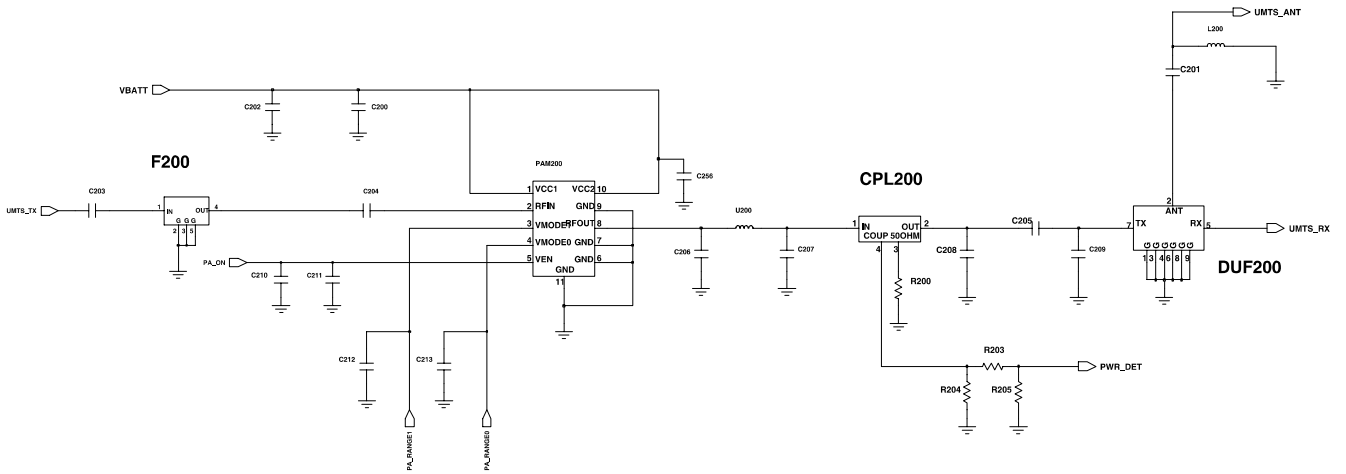
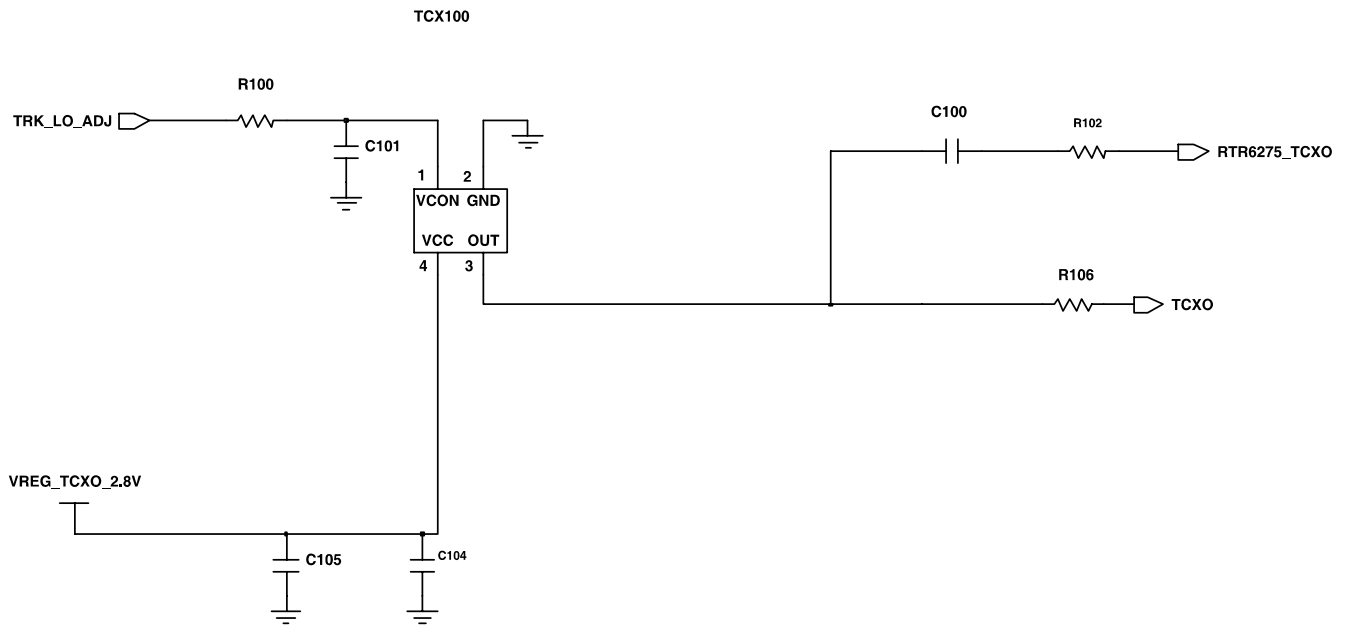
**9-2-8. UMTS2100 Transmitter**

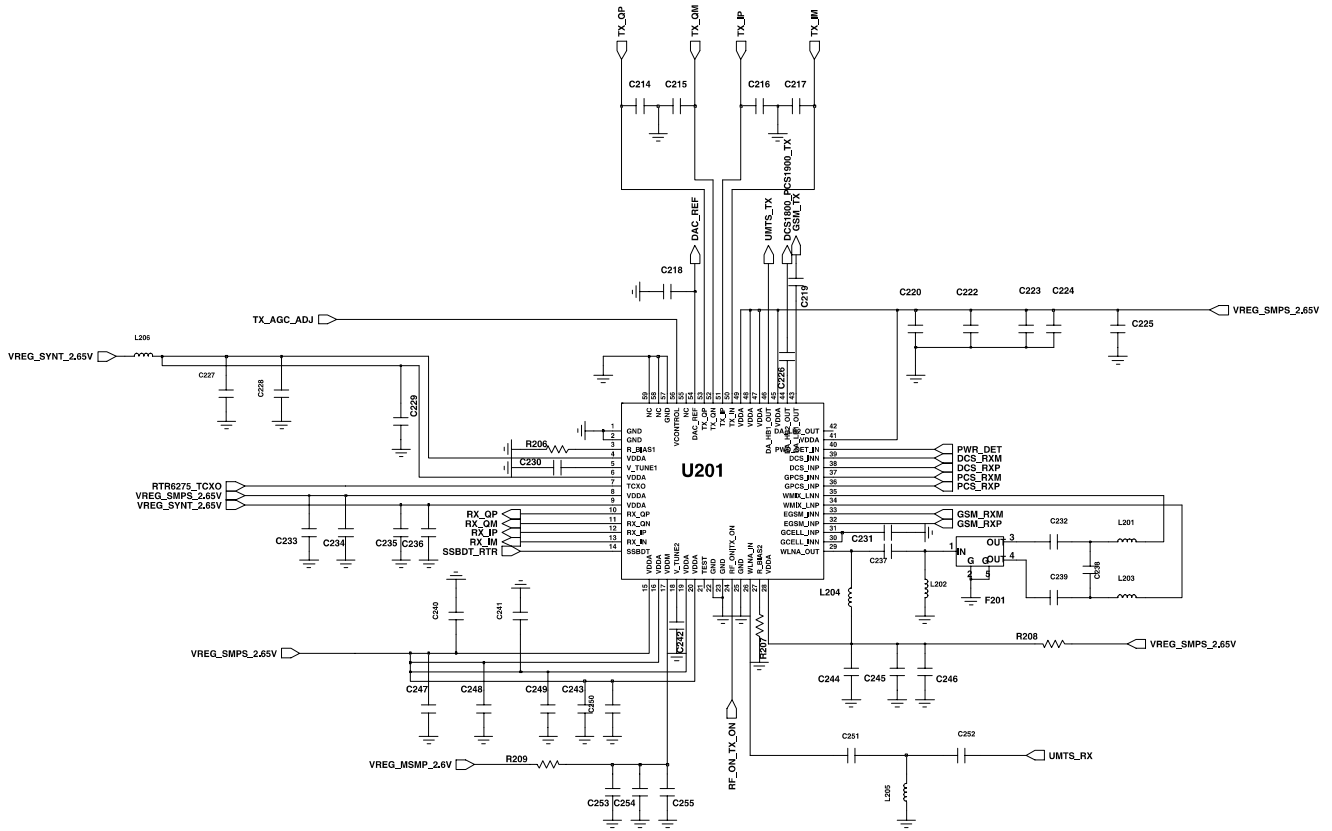
\*\*If you check the tx chain,

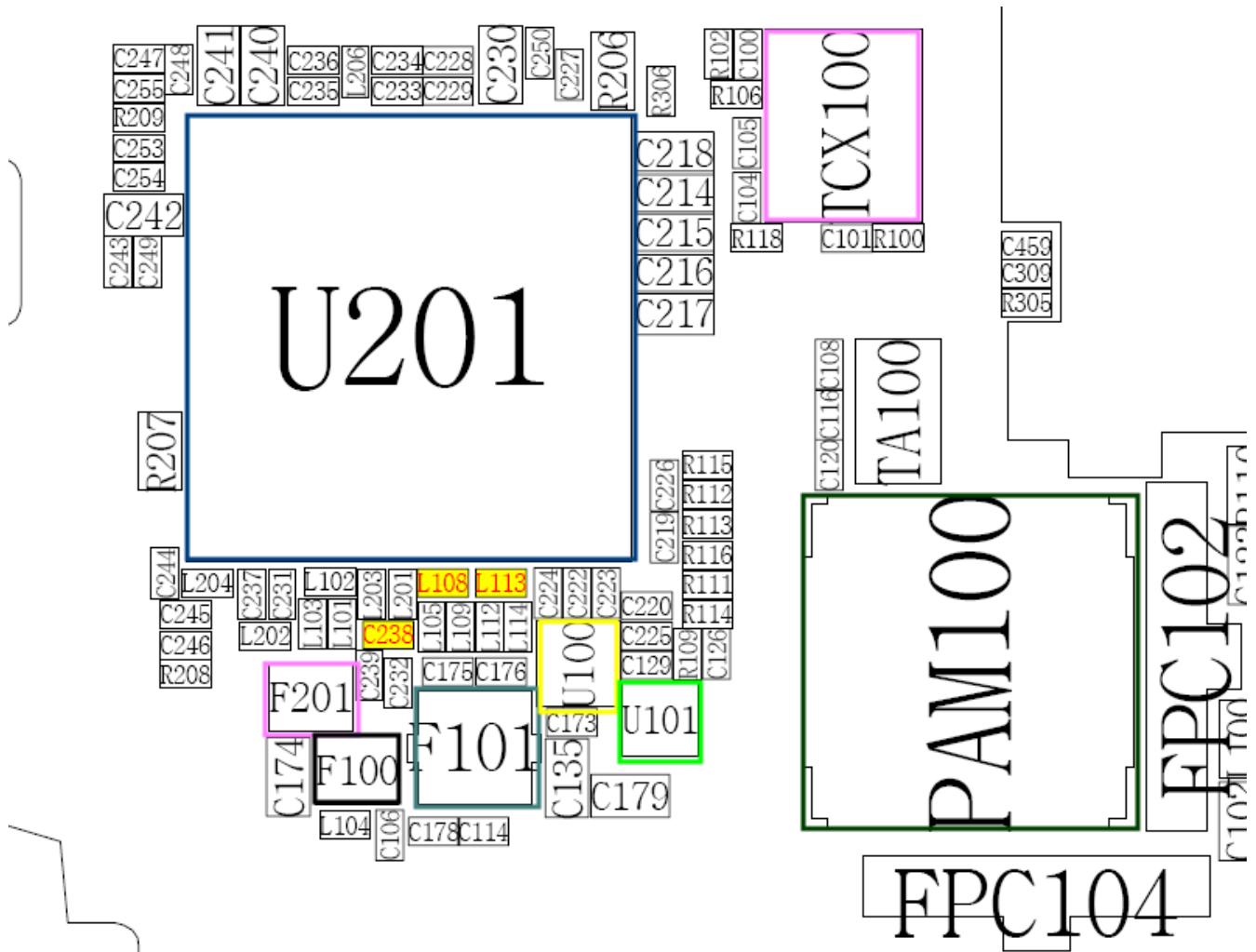
Check the not only RF Device but also resistor, inductor and capacitor.

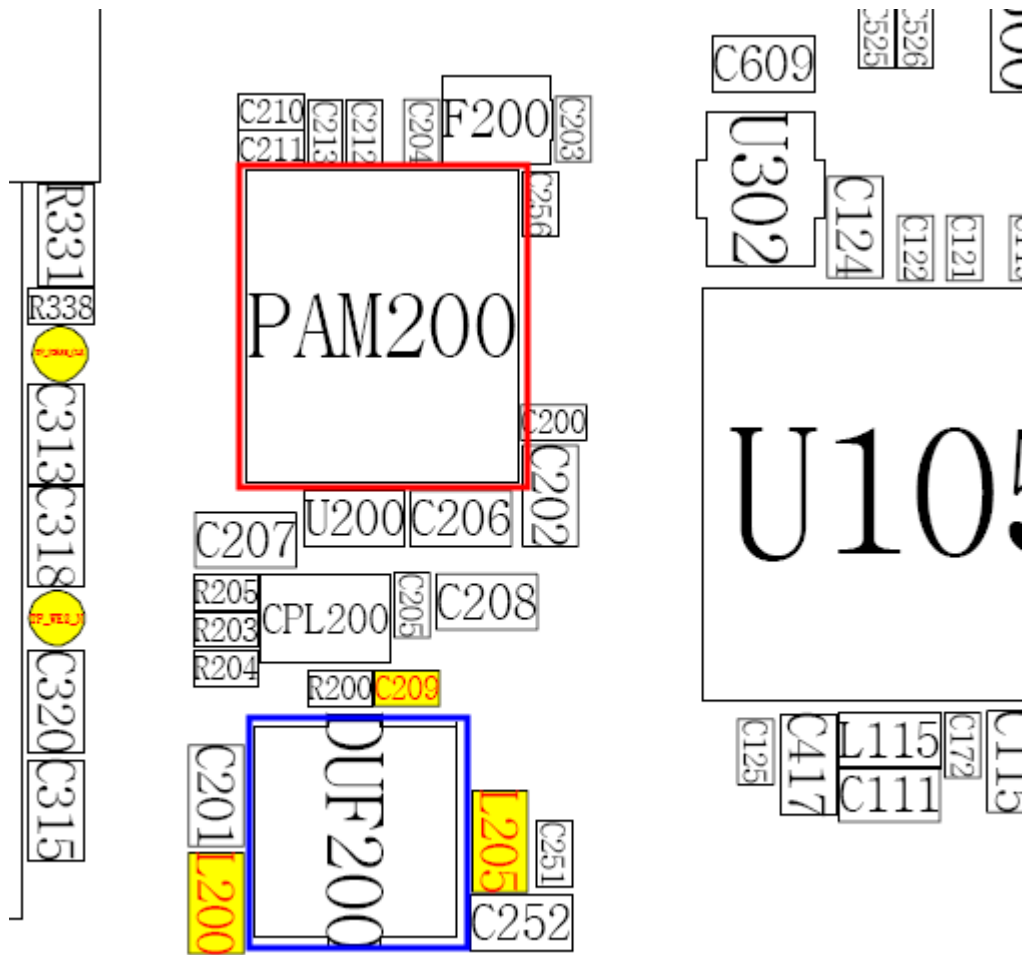




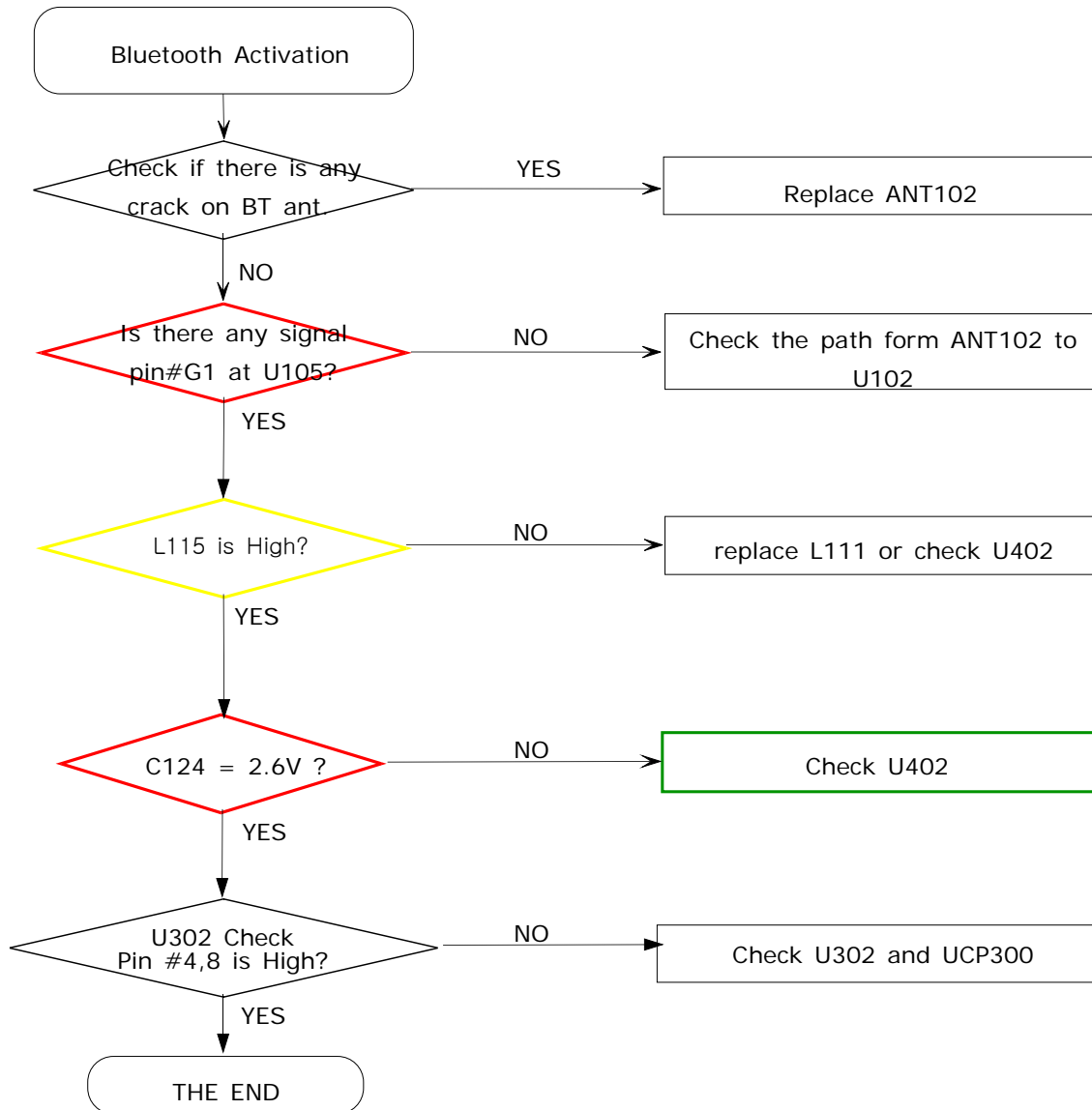


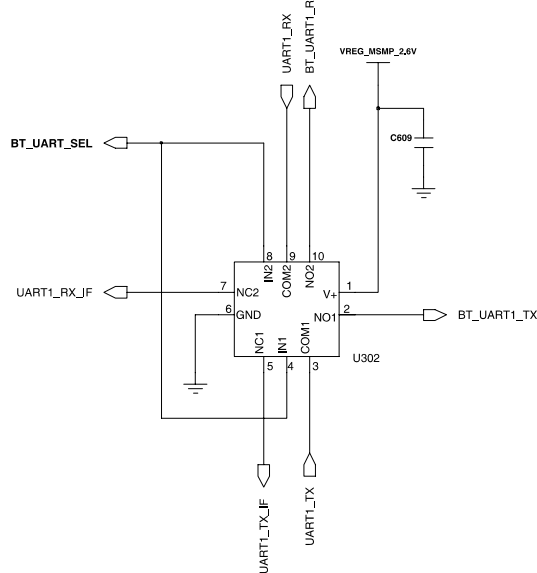
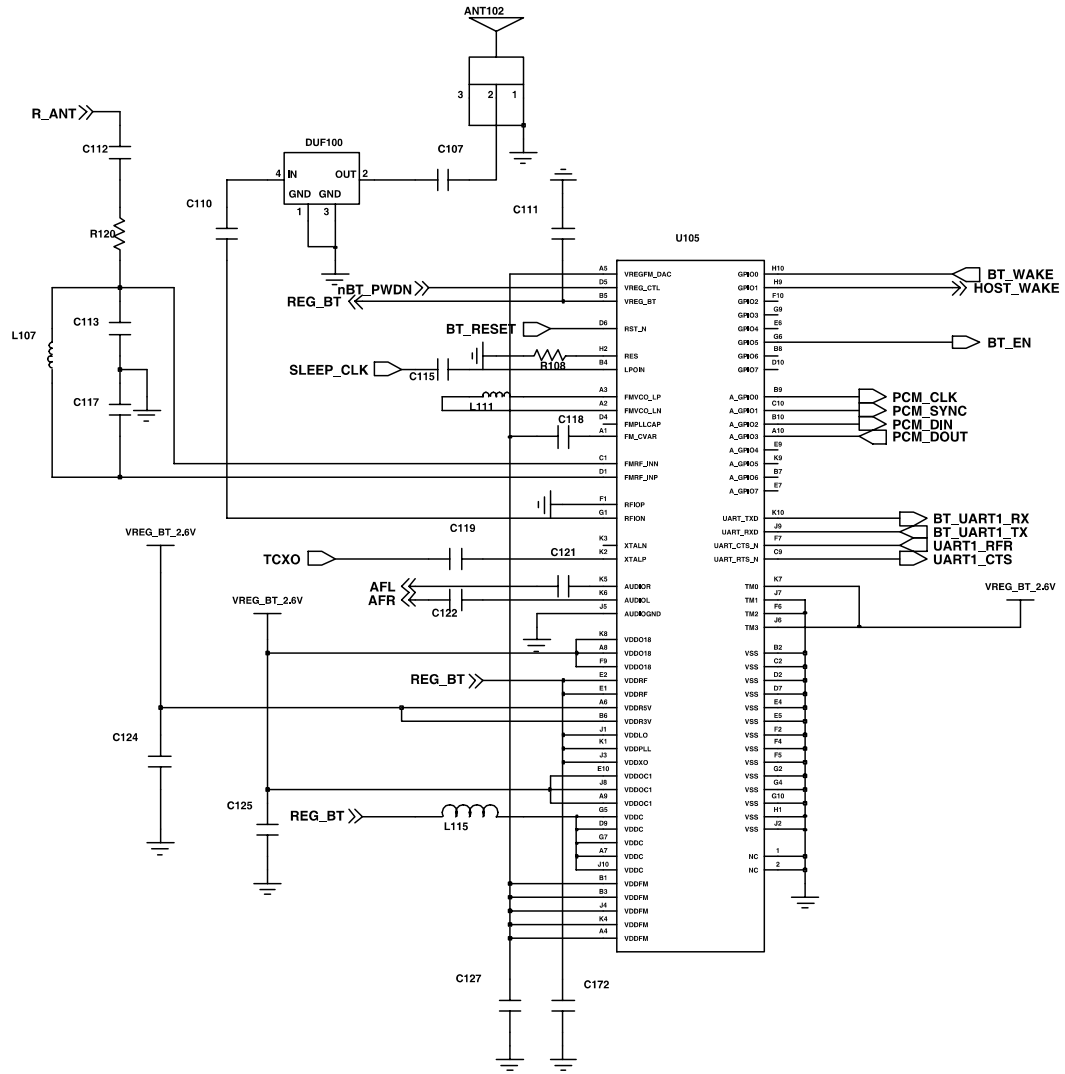




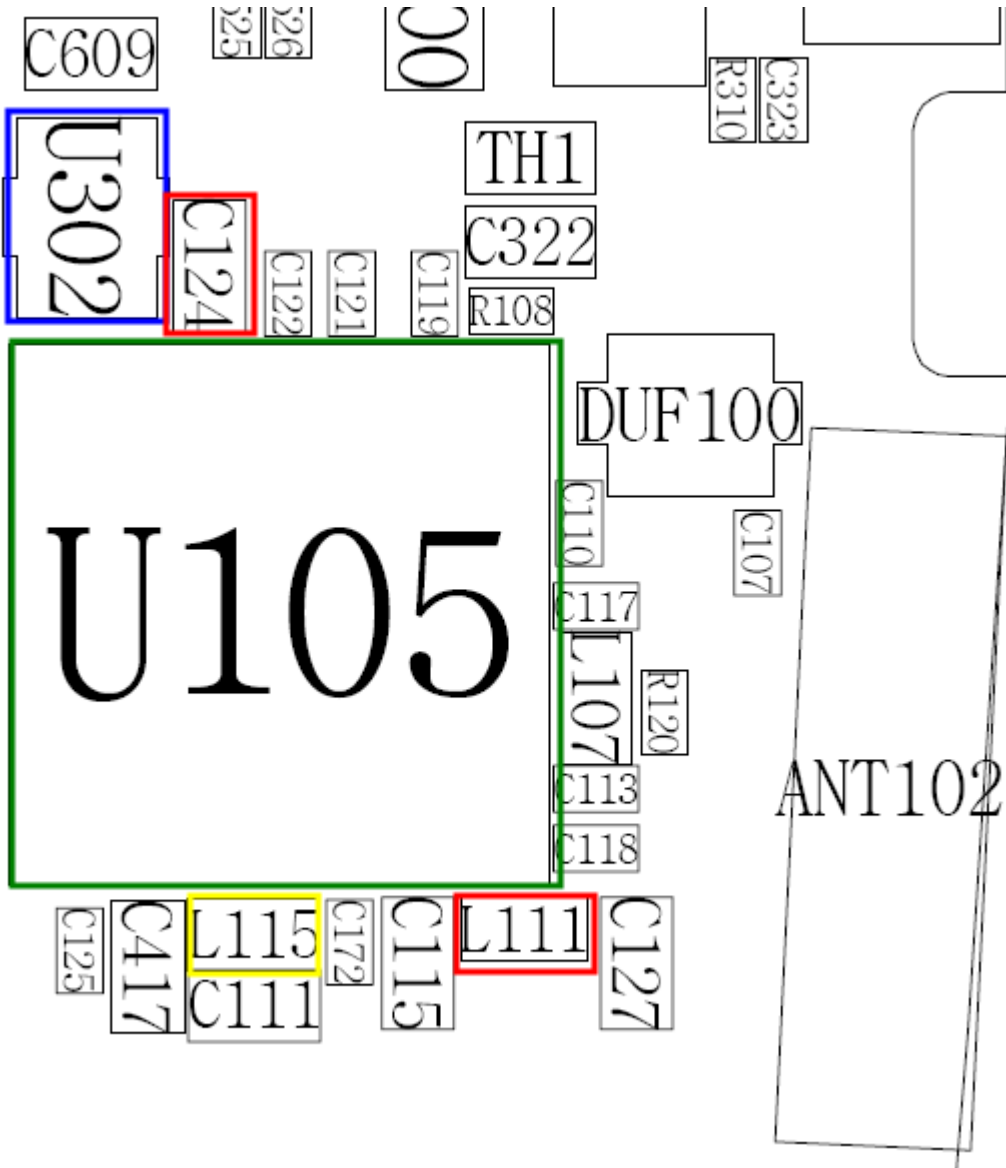




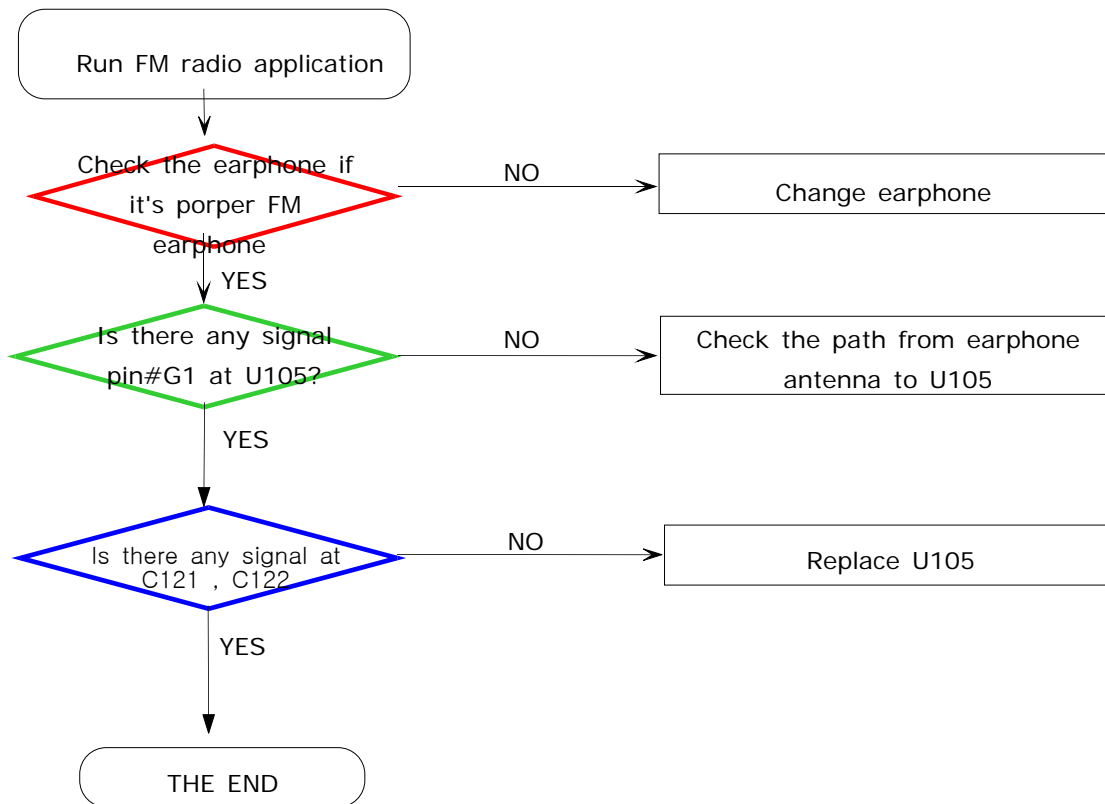
**9-2-9. BLUETOOTH**



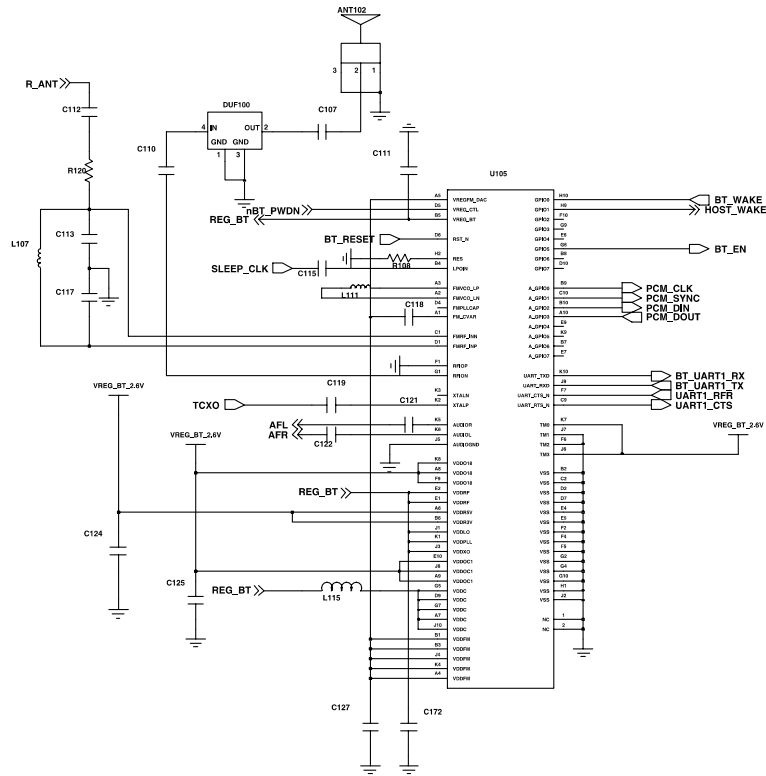
**BT\_UART SW**



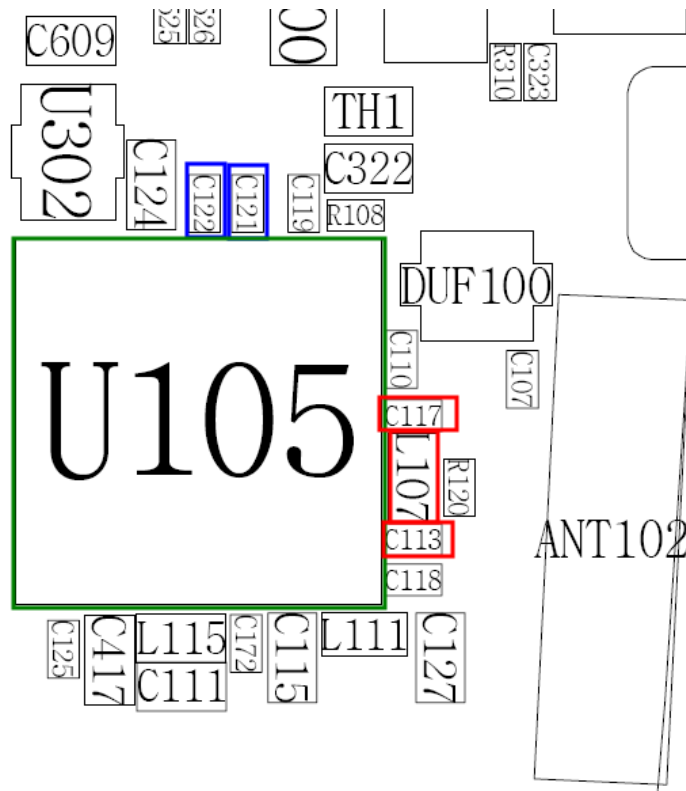
### 9-2-10. FM radio



- Schematic of bluetooth



- Layout of bluetooth





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## 10. Reference data

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### 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
- **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

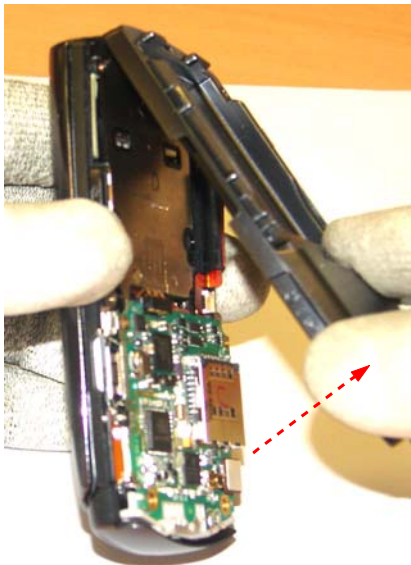
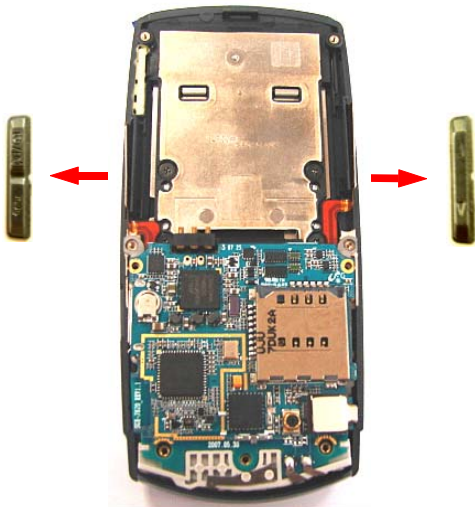


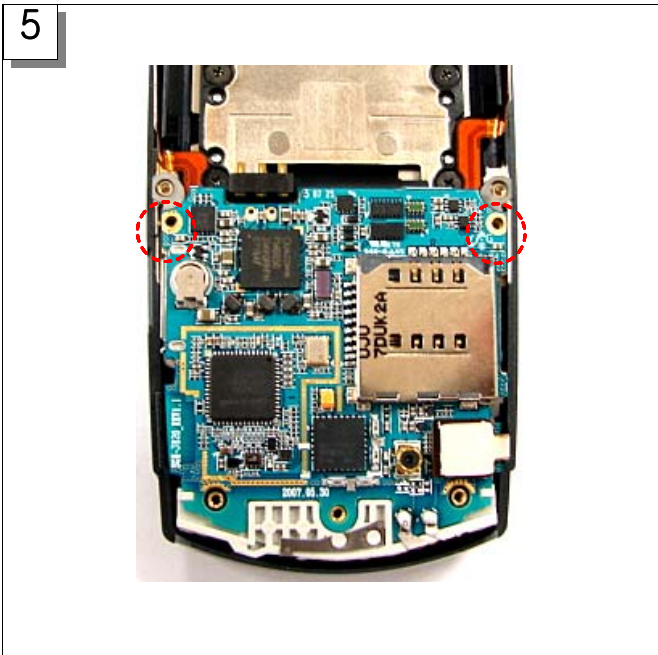


# 11. Disassembly and Assembly Instructions

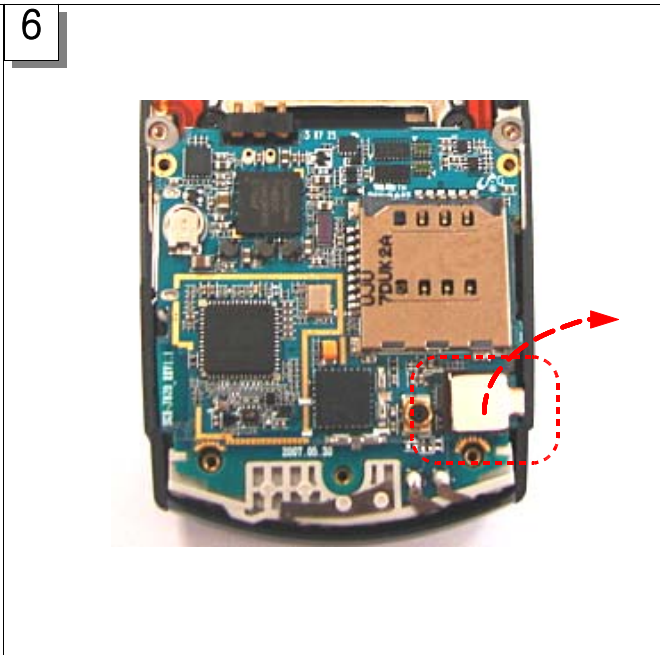
## 11-1. Disassembly Instructions

<p>1</p> 	<p>2</p> 
<p>Remove the RF COVER Separate RF COVER of REAR backside using groove for exclusion.</p>	<p>Remove the SCREW Remove SET's SCREW 7 POINTs.</p>

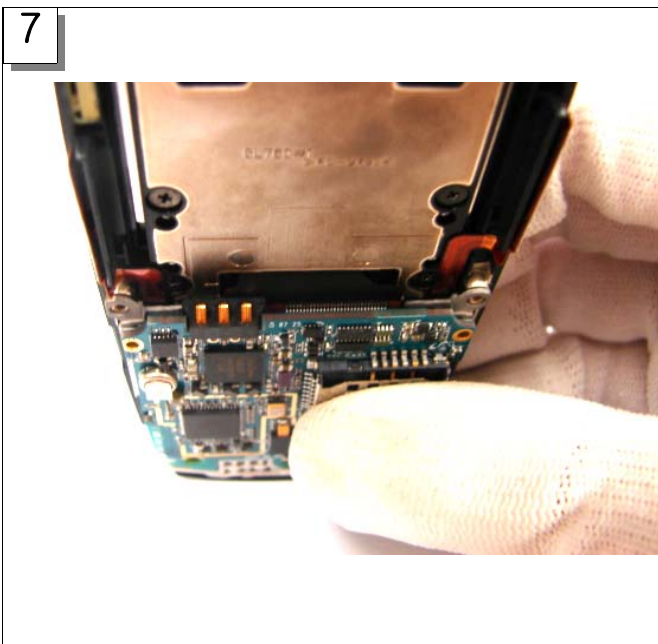
<p>3</p> 	<p>4</p> 
<p>Separate REAR ASS'Y Separate REAR ASS'Y in SET.</p>	<p>Remove the Side key Separate VOLUME KEY, CAMERA KEY in SET.</p>



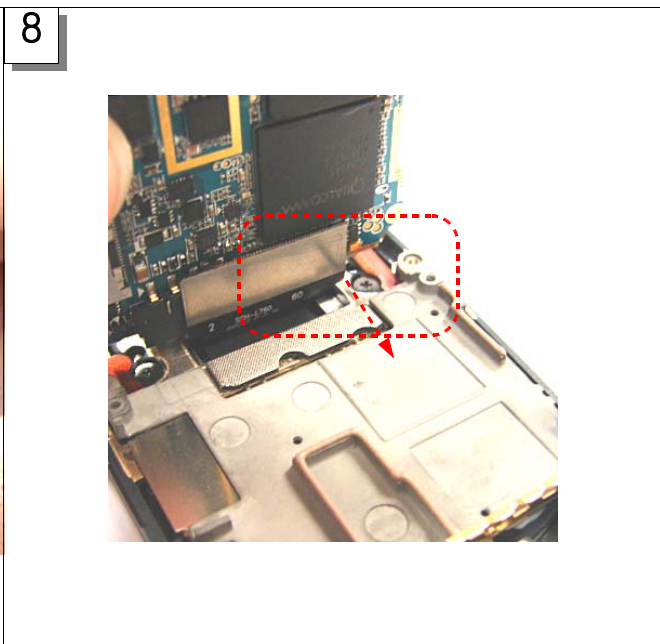
Remove the PBA SCREW  
Remove SCREW 2 POINTs of PBA top side.



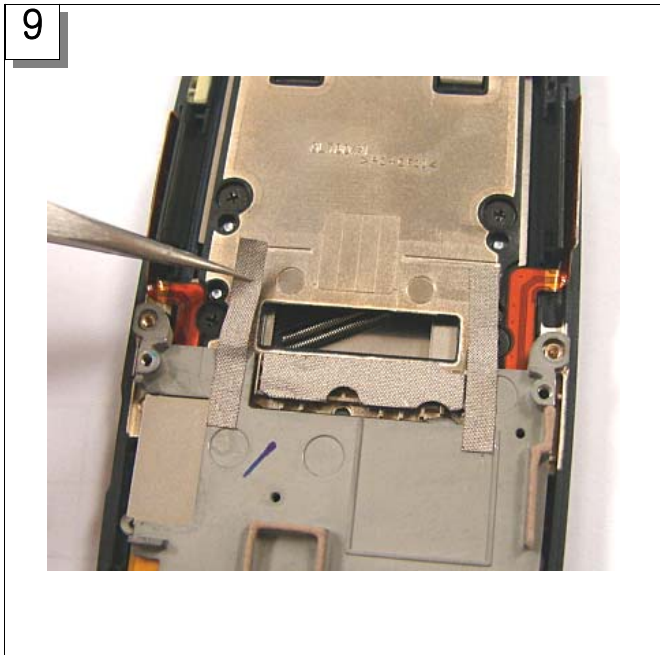
Separate 3\*4 KEY PCB CONNECTOR  
Separate KEY PCB CONNECTOR that is to PBA's right side in B'D.



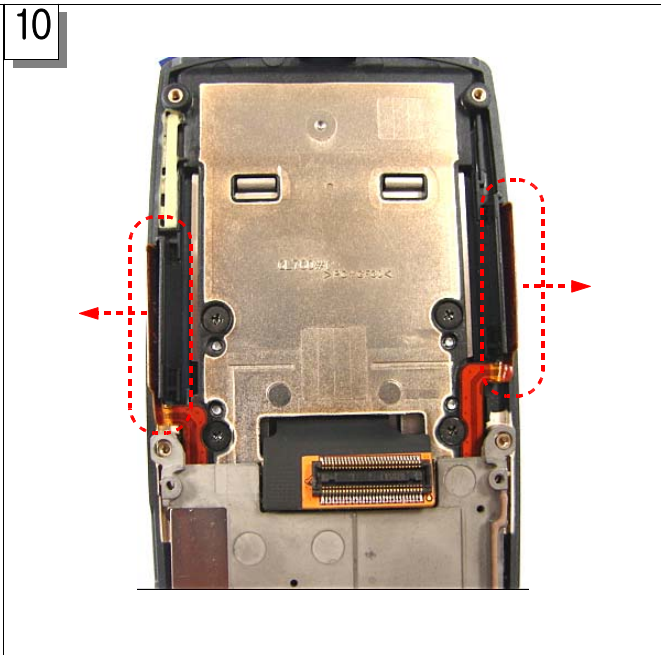
Separate the PBA 1  
Lift PBA that is placed to FRONT upward.



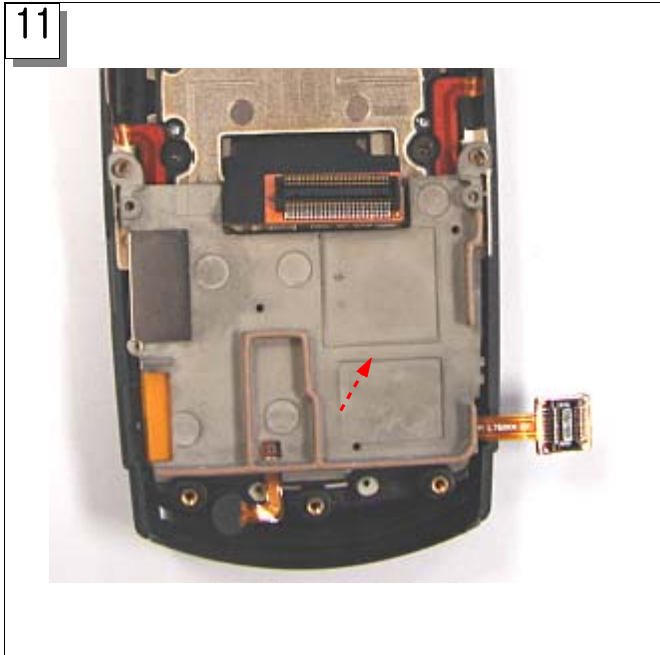
Separate the PBA 1  
Separate PBA and had linked SLIDE F-PCB.



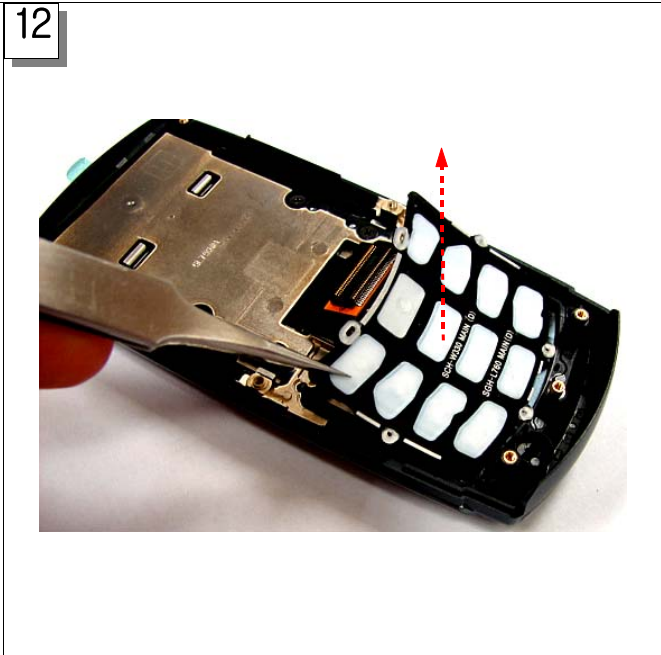
**9**  
Remove conductive tape  
Remove conductive tape had attached between KEY BRACKET and FRONT.



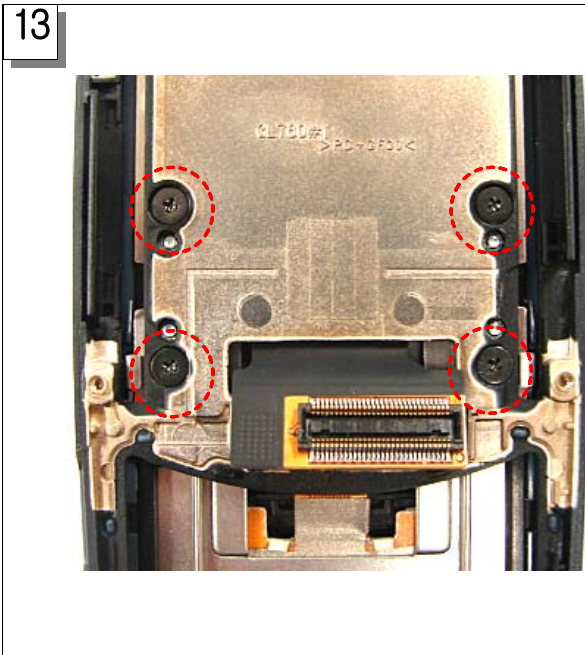
**10**  
Separate SIDE KEY F-PCB  
Separate VOLUME KEY, CAMERA KEY F-PCB in front ass'y.



**11**  
Separate KEY BRACKET  
Separate KEY BRACKET that is placed to FRONT.

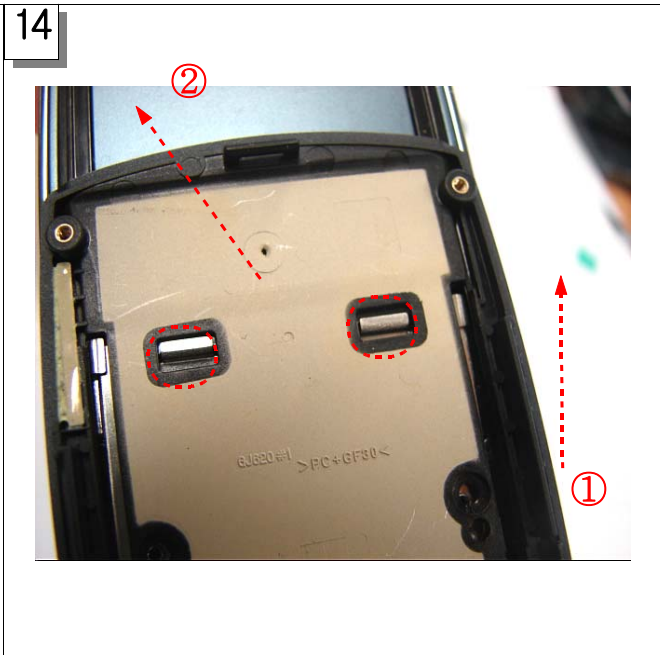


**12**  
Separate KEY PAD  
Separate 3\*4 KEY PAD that is placed to FRONT.



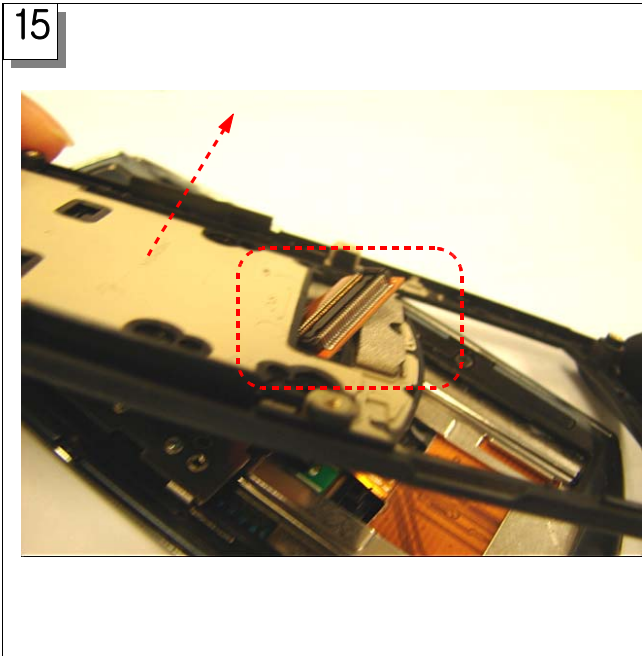
**13**

Remove FRONT SCREW  
Remove SCREW 4 POINTs in FRONT COVER.



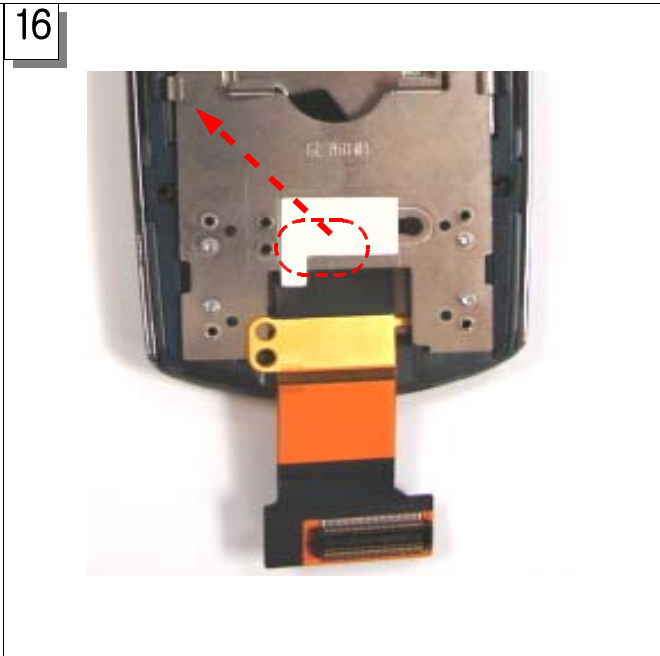
**14**

Separate FRONT COVER 1  
1.Lift FRONT COVER lower slightly  
2.Separate with HOOK pushing FRONT COVER to top



**15**

Separate FRONT COVER  
Separate SLIDE F-PCB through FRONT HOLE.  
※ Be careful of F-PCB when moving FRONT HOLE



**16**

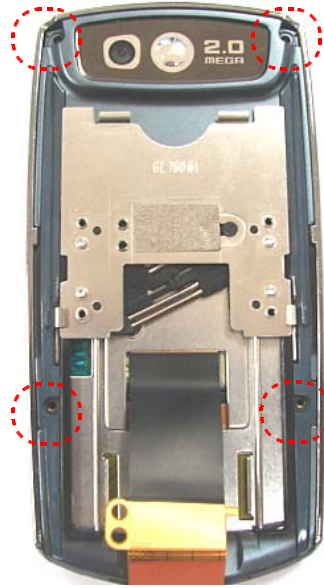
Separate SLIDE F-PCB  
Separate SLIDE F-PCB from double sides TAPE that stick to SLIDE LOWER.

17



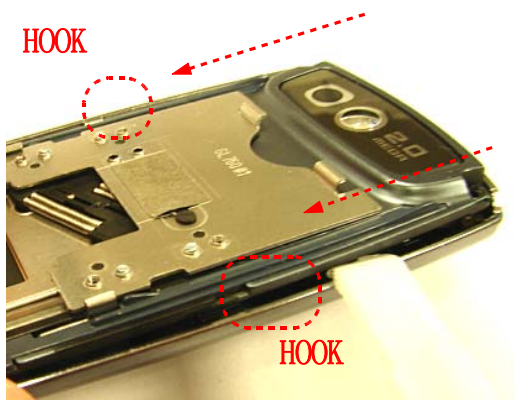
Remove SCREW CAP  
Remove SCREW CAP in SLIDE LOWER.

18



Remove SLIDE LOWER SCREW  
Remove SCREW 4 POINTs in SLIDE LOWER.

19



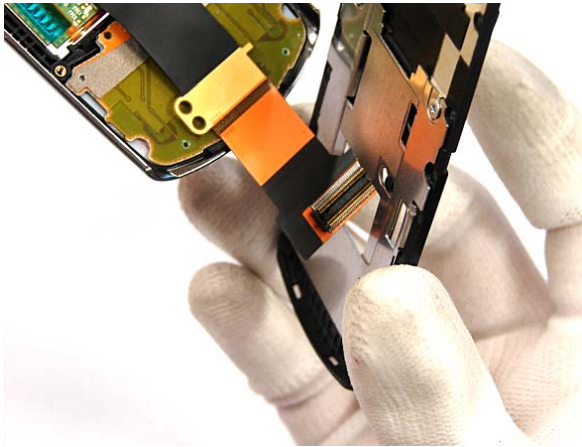
Disassemble SLIDE ASS'Y  
Separate SLIDE UPPER from HOOK using a decomposition tool from SLIDE ASS'Y top.

20



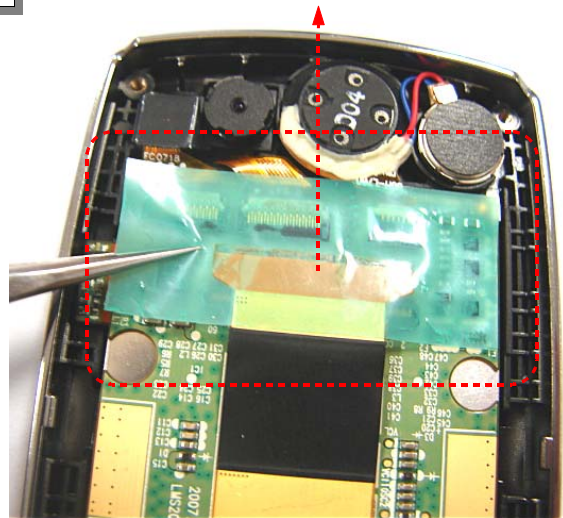
Separate SLIDE LOWER 1  
Separate SLIDE LOWER from SLIDE UPPER.

21



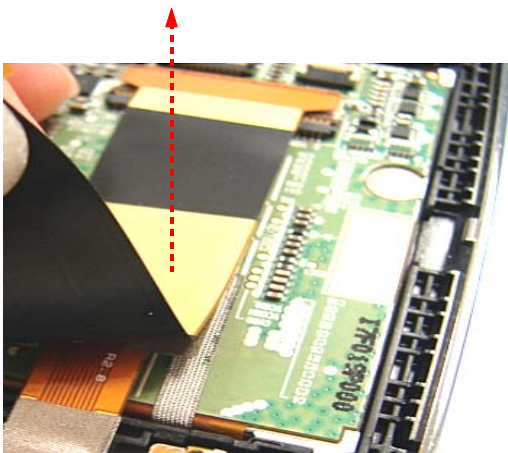
Separate SLIDE LOWER 2  
 Separate SLIDE LOWER from SLIDE UPPER.  
 ※ Be careful of SLIDE F-PCB when separating

22



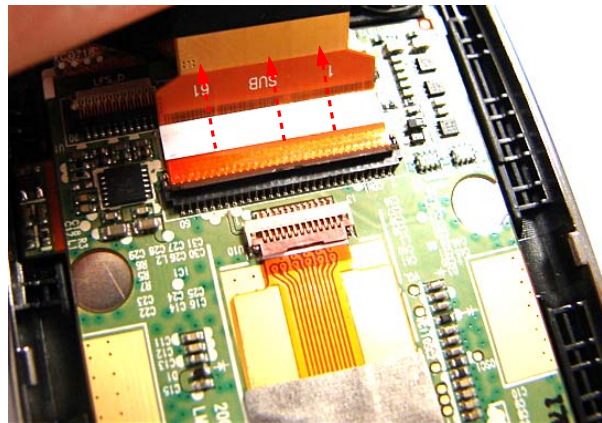
Remove insulation TAPE  
 Remove insulation TAPE had attached on CONNECTOR.

23



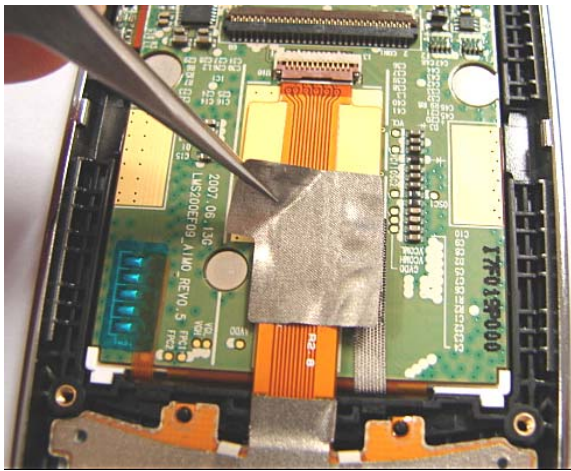
Separate SLIDE F-PCB 1  
 Separate SLIDE F-PCB from below double sides TAPE.

24



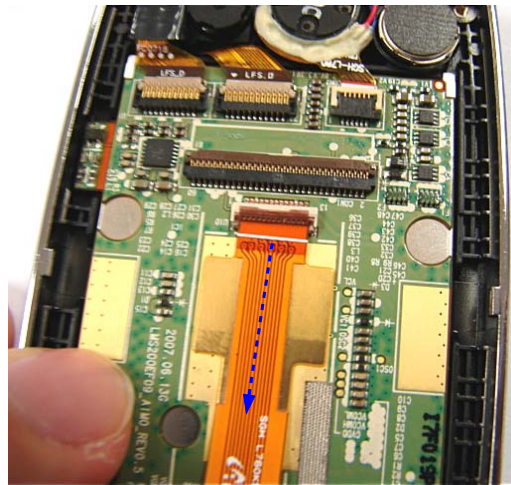
Separate SLIDE F-PCB 2  
 1.Lifts ZIP CONNECTOR to upper and cancels LOCK.  
 2.Separate SLIDE F-PCB from LCD.

25



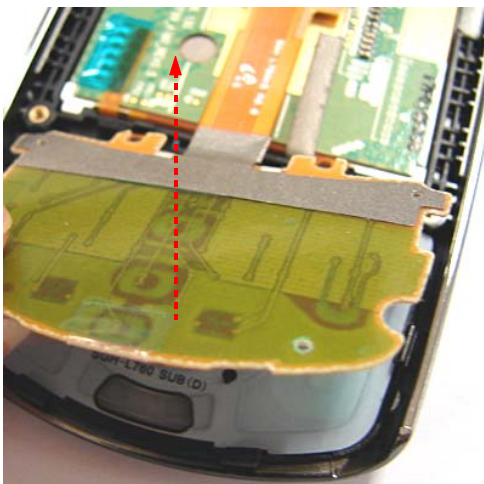
Remove conductive tape  
Remove conductive tape with NAVI KEY F-PCB to the top.

26



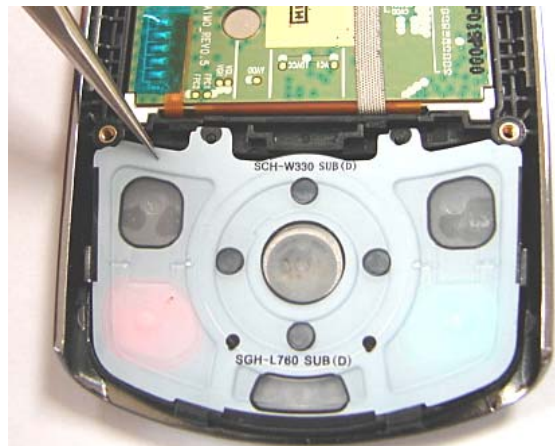
Remove NAVI KEY F-PCB  
Remove NAVI KEY F-PCB from LCD CONNECTOR.

27



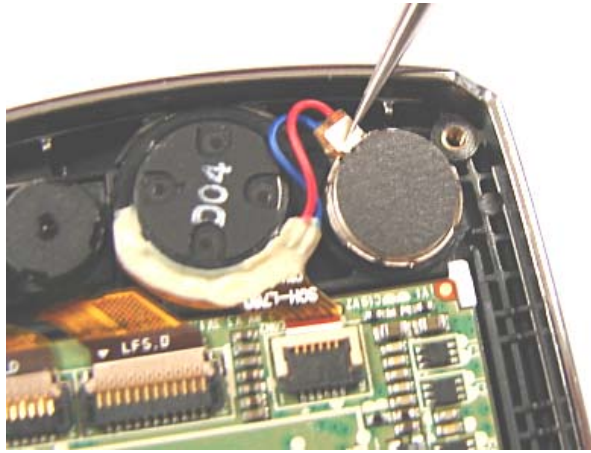
Separate NAVI KEY PCB  
Separate NAVI KEY PCB from SLIDE UPPER.

28



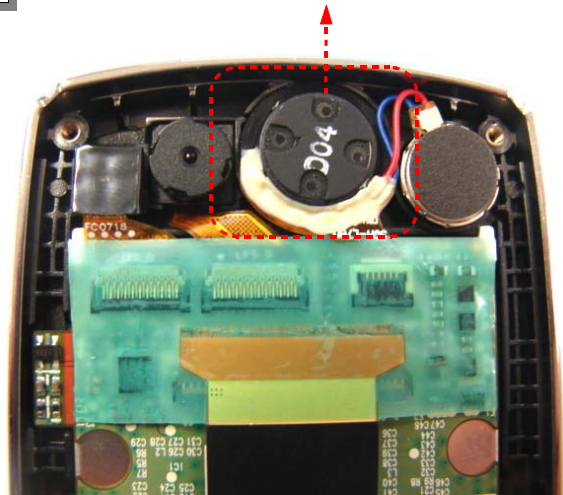
Separate NAVI KEY PAD  
Separate NAVI KEY PAD from SLIDE UPPER.

29



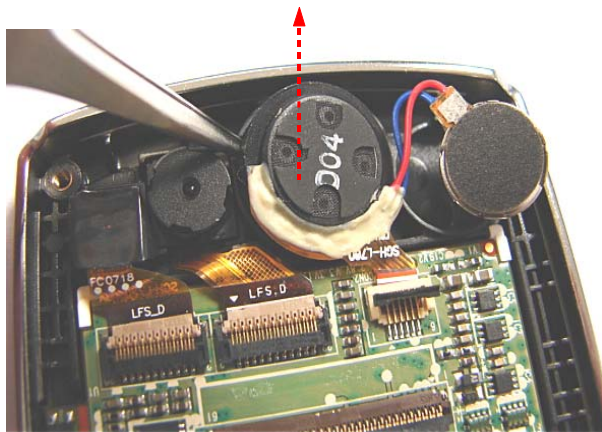
Separate MOTOR  
Separate MOTOR had attached to SLIDE UPPER

29



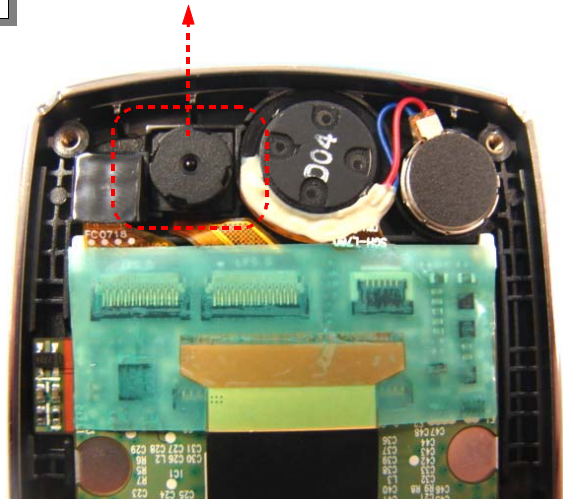
Separate SPEAKER ASS'Y F-PCB  
Lift CONNECTOR upward to separate SPEAKER ASS'Y F-PCB.

30



Separate SPEAKER ASS'Y  
Separate SPEAKER ASS'Y from SLIDE UPPER.

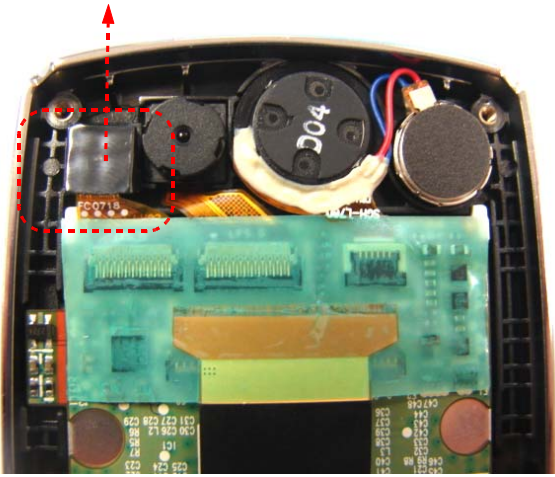
31



Separate 2MEGA CAMERA  
Separate 2MEGA CAMERA from LCD.

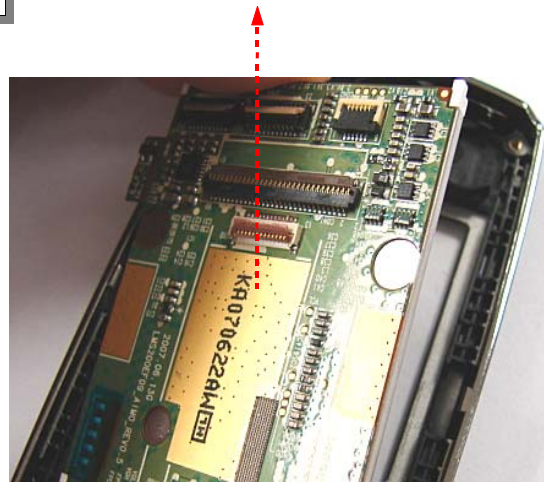


32



Separate VGA CAMERA  
Separate VGA CAMERA from LCD.

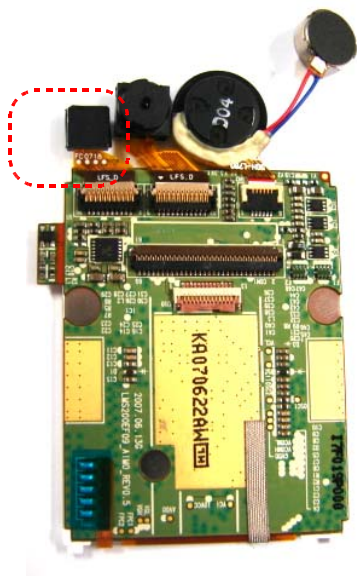
33



Separate LCD MODULE  
Separate LCD MODULE from SLIDE UPPER.

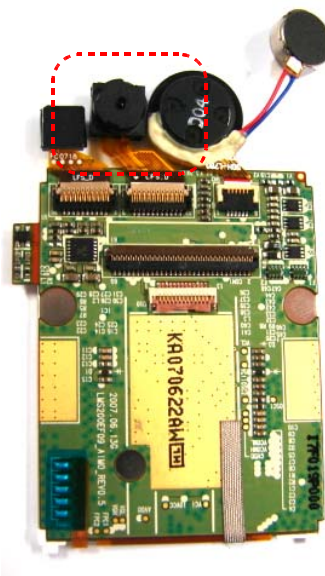
## 11-2. Assembly Instructions

1



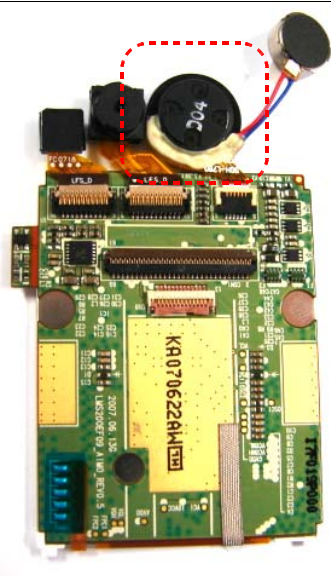
Combine VGA CAMERA  
Combine VGA CAMERA to CONNECTOR.

2



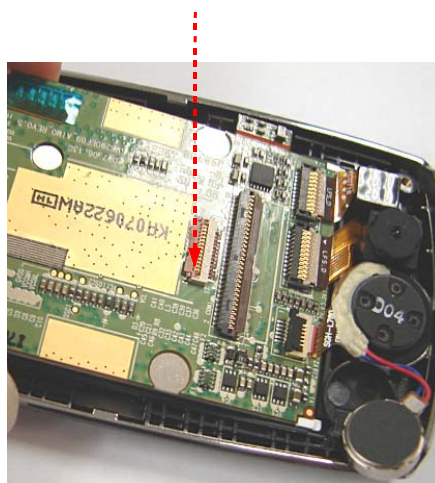
Combine 2MEGA CAMERA  
Combine 2MEGA CAMERA to CONNECTOR.

3

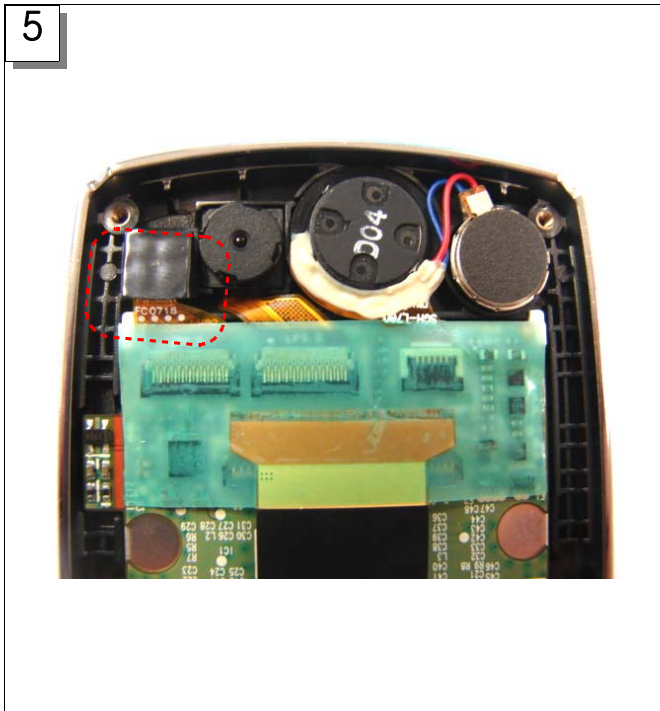


Combine SPEAKER ASS'Y  
Combine SPEAKER ASS'Y to CONNECTOR.

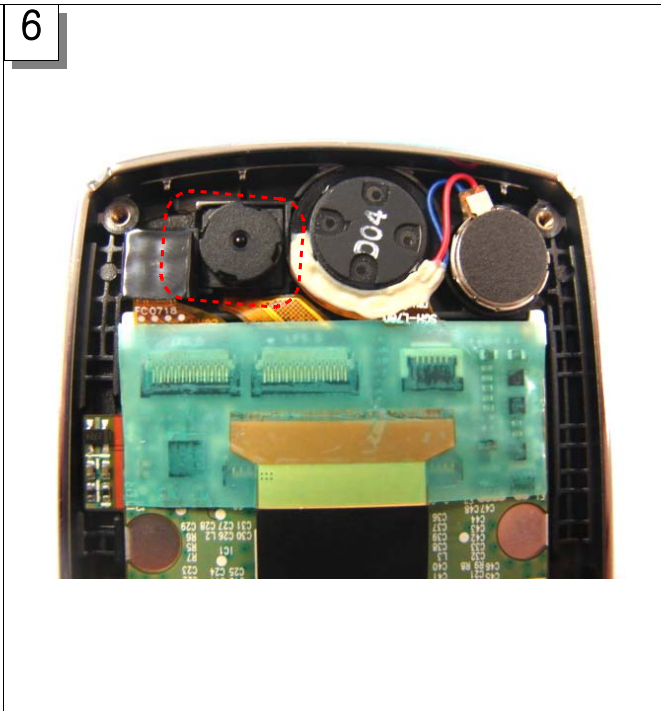
4



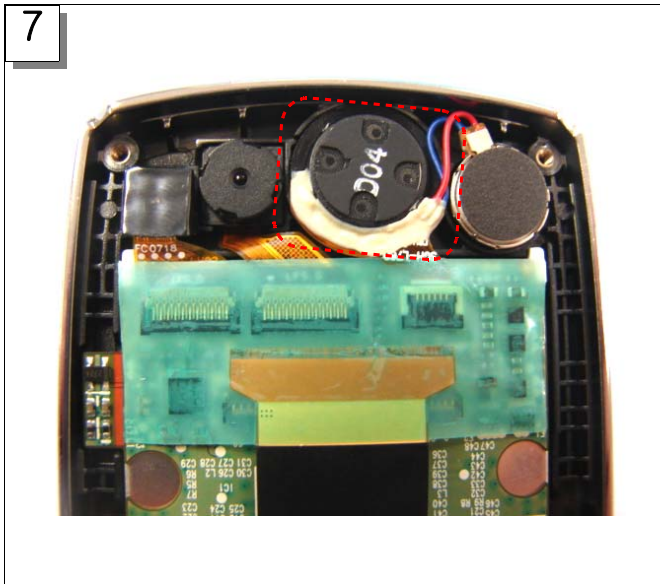
Place LCD MODULE  
Place LCD MODULE on SLIDE UPPER



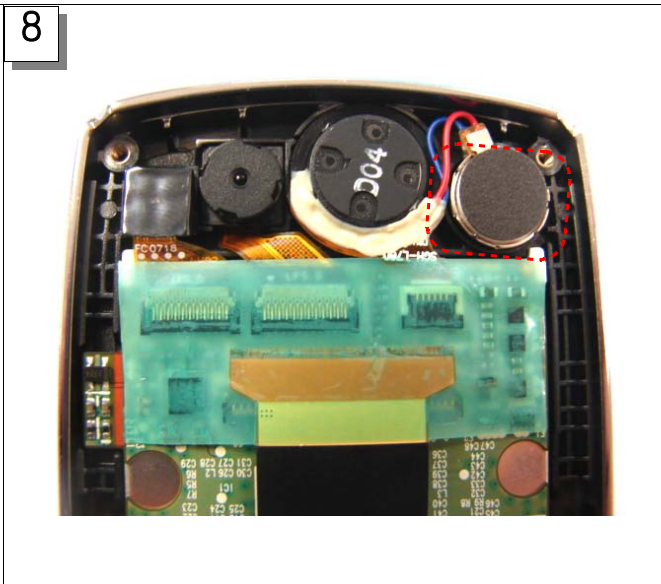
Place VGA CAMERA  
Place VGA CAMERA on SLIDE UPPER.



Place 2MEGA CAMERA  
Place 2MEGA CAMERA on SLIDE UPPER.



Assemble SPEAKER ASS'Y 1  
Place SPEAKER part on SLIDE UPPER in SPEAKER ASS'Y



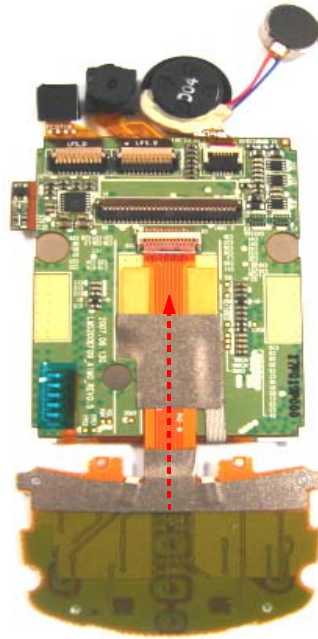
Assemble SPEAKER ASS'Y 2  
Assemble MOTOR part to SLIDE UPPER in SPEAKER ASS'Y

9



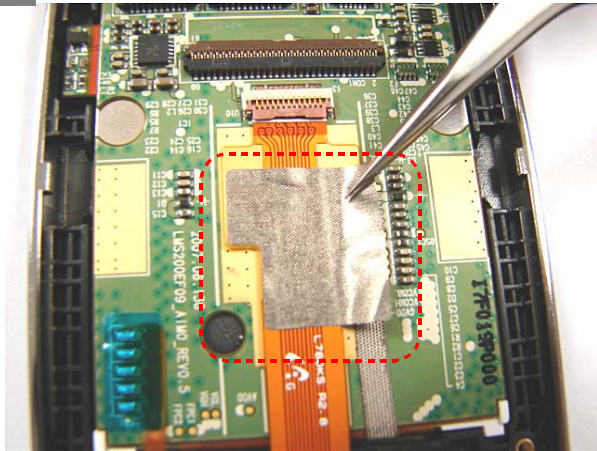
Place MENU KEY PAD  
Place MENU KEY PAD on SLIDE UPPER.

10



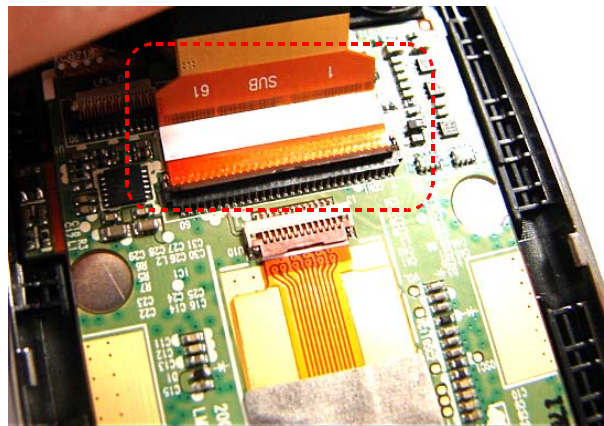
Combine MENU KEY PCB  
Combine MENU KEY PCB to CONNECTOR.

11

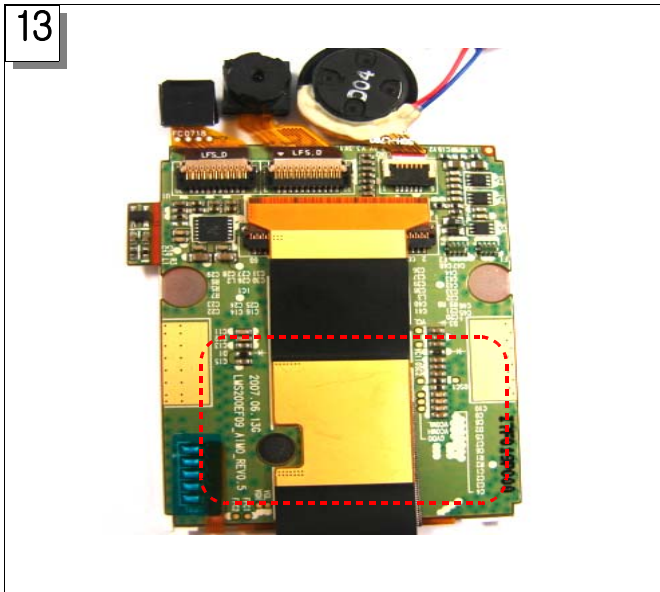


Attach conductive tape  
Attach conductive tape on LCD GROUND and MENU  
KEY F-PCB.

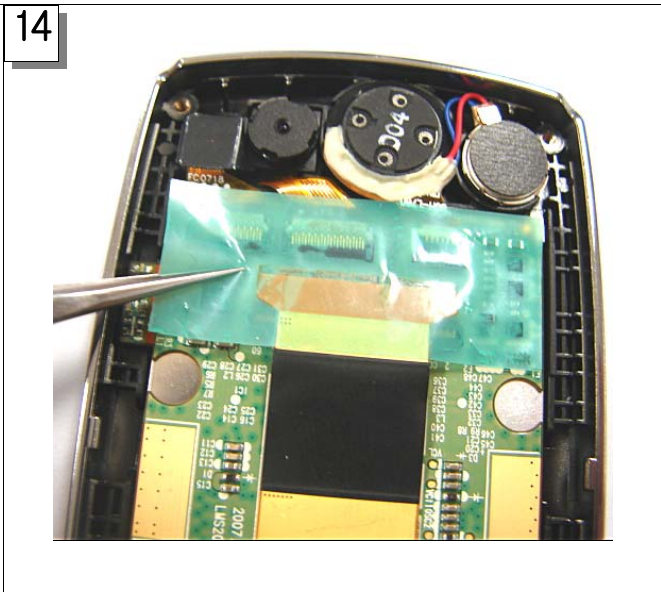
12



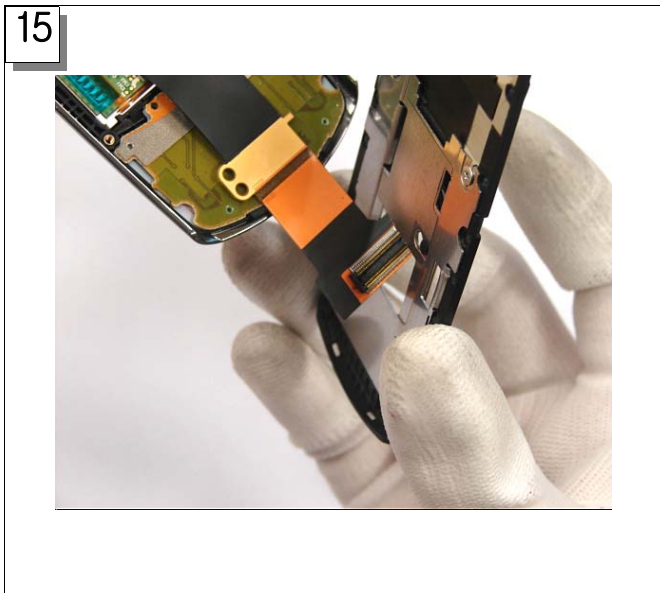
Combine SLIDE F-PCB  
Combine SLIDE F-PCB to LCD MODULE's CONNECTOR.



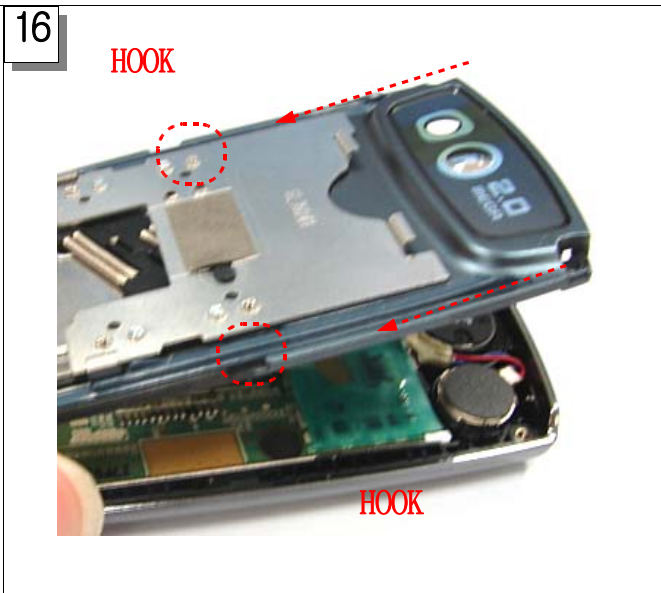
**13**  
Attach SLIDE F-PCB  
Do so as to attach each other conductive tape and SLIDE F-PCB that attached in process 11



**14**  
Attach anti-loose TAPE  
Attach anti-loose TAPE on CONNECTOR of LCD top.



**15**  
SLIDE LOWER assembly 1  
Push SLIDE F-PCB through SLIDE LOWER's HOLE.



**16**  
SLIDE LOWER assembly 2  
Combine SLIDE UPPER and LOWER.  
※ On when combine downward combine.



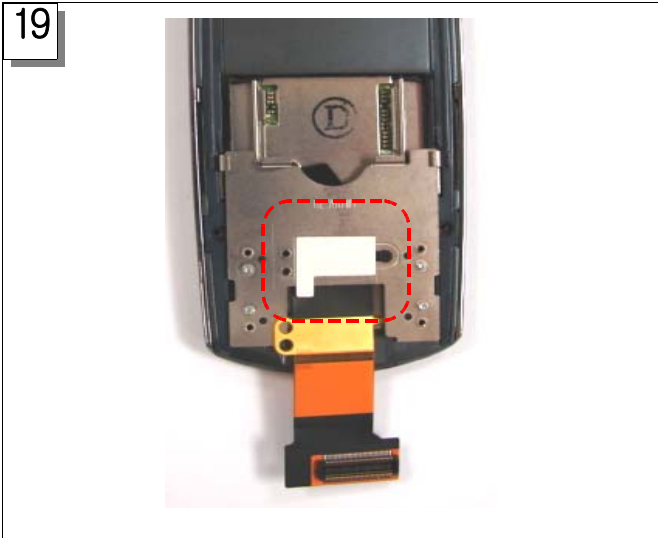
**17**

**Assemble SCREW**  
Assemble SCREW 4 POINTs to SLIDE LOWER.



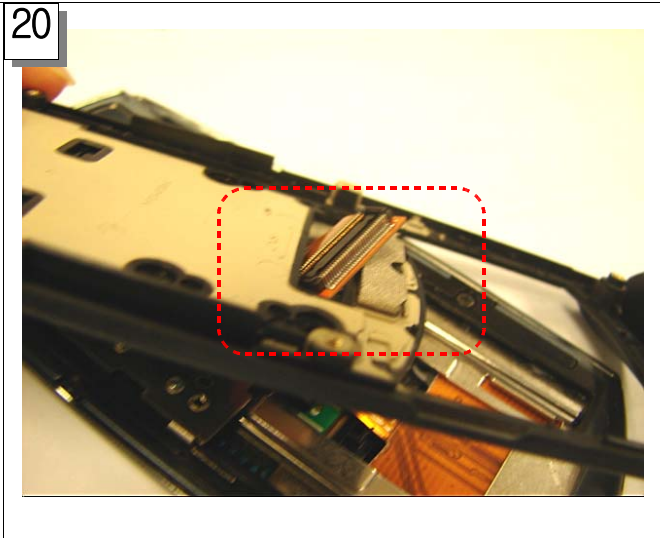
**18**

**Attach SCREW COVER**  
Attach SCREW COVER on SLIDE LOWER



**19**

**Attach SLIDE F-PCB**  
Attach SLIDE F-PCB on SLIDE LOWER.



**20**

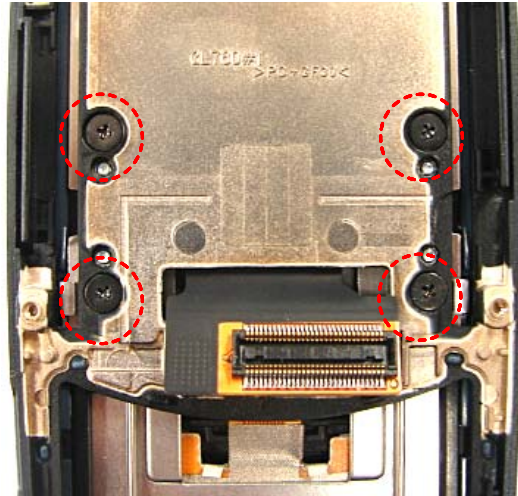
**FRONT assembly 1**  
Combine FRONT to SLIDE ASS'Y.  
※ When combining, take care so that F-PCB is disconnected or is not damaged

21



**FRONT assembly 2**  
Combine FRONT to SLIDE LOWER's HOOK.

22



**Assemble SCREW**  
Assemble 4 POINT SCREWS to FRONT.

23



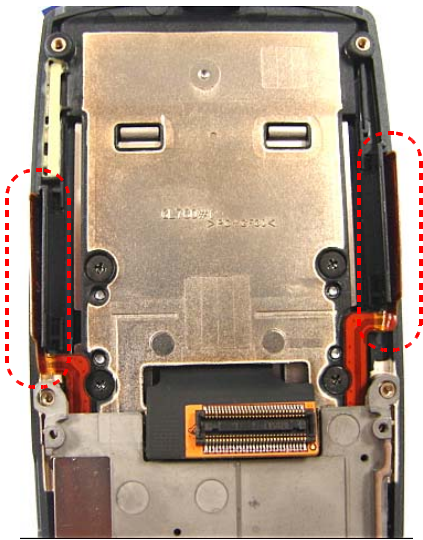
**Place 3\*4 KEY PAD**  
Do so as to place 3\*4 KEY PAD on FRONT.

24



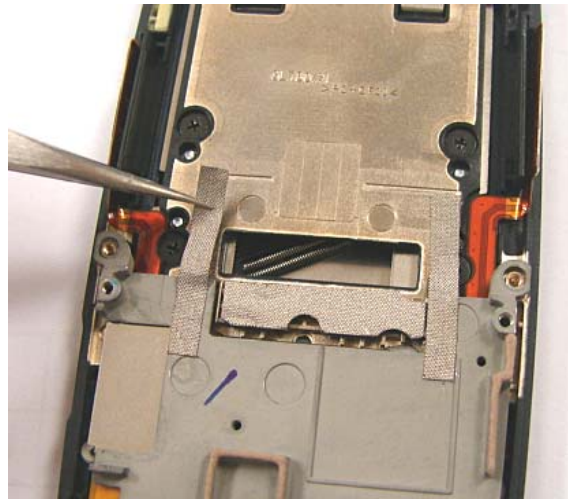
**Place SHIELD COVER**  
Place SHIELD COVER on FRONT.

25



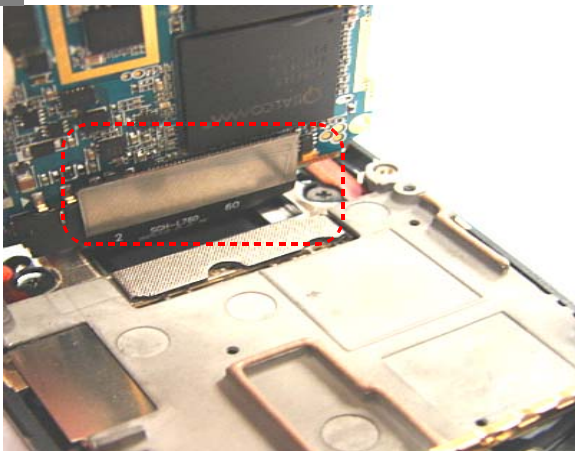
Attach SIDE KEY F-PCB  
Attach SIDE KEY F-PCB on side on FRONT COVER.

26



Attach conductive TAPE  
Attach conductive TAPE on key bracket

27



Assemble SLIDE F-PCB CONNECTOR  
Assemble SLIDE F-PCB CONNECTOR to PBA.

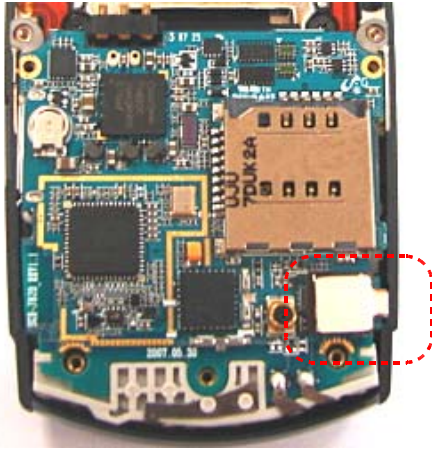
28



Assemble PBA  
Assemble PBA to SHIELD COVER.

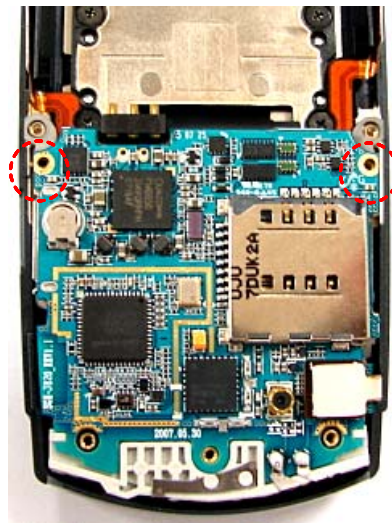


29



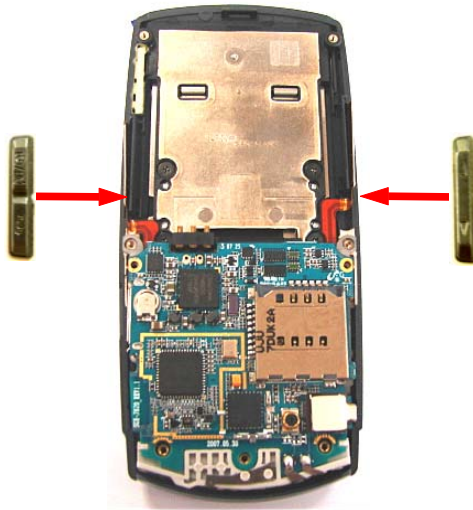
Assemble 3\*4 KEY PCB CONNECTOR  
Assemble 3\*4 KEY PCB CONNECTOR to PBA.

30



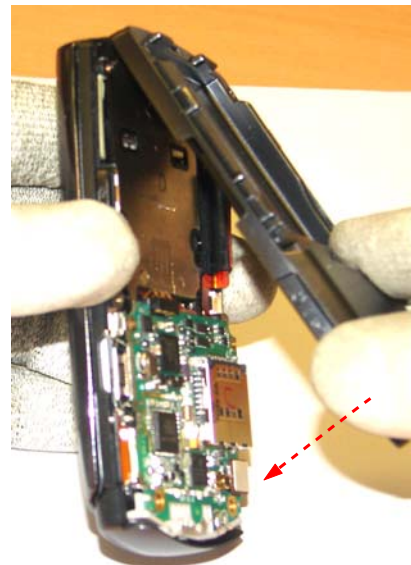
Assemble SCREW  
Assemble SCREW 2 POINTs to PBA top.

31



Place SIDE KEY  
Place VOLUME KEY, CAMERA KEY on SET side.

32



Assemble final  
Combine REAR COVER to FRONT ASS'Y.  
※ Assemble from upper when assembling REAR COVER.

33



Assemble SCREW  
Assemble SCREW 6 POINTs to SET.

34



Attach RF COVER sheet  
Attach REAR COVER to the bottom RF COVER.