

SAMSUNG

UMTS TELEPHONE

SGH-A737

SERVICE *Manual*

UMTS TELEPHONE



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**SAMSUNG
ELECTRONICS**



GSPN (Global Service Partner Network)

Country	Web Site
North America	service.samsungportal.com
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1. Safety Precautions

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

	GSM 850	EGSM 900	DCS1800	PCS1900	W-CDMA 850	W-CDMA 1900
Freq. Band[MHz] Uplink/Downlink	824~849 869~894	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990	824~849 869~894	1850~1910 1930~1990
ARFCN range	128~25	0~124 & 975~1023	512~885	512~810	UL:4132~4233 DL:4357~4458	UL:9262~9538 DL:9662~9938
Tx/Rx spacing	45MHz	45MHz	95MHz	80MHz	45MHz	80MHz
Mod. Bit rate/ Bit Period	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	3.84Mcps	3.84Mcps
Time Slot Period/Frame Period	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	Frame length : 10ms Slot length : 0.667ms	Frame length : 10ms Slot length : 0.667ms
Modulation	0.3GMSK	0.3GMSK	0.3GMSK	0.3GMSK	QPSK HQPSK	QPSK HQPSK
MS Power	33dBm~5dBm	33dBm~5dBm	30dBm~0dBm	30dBm~0dBm	24dBm ~ -50dBm	24dBm ~ -50dBm
Power Class	4 (max +33dBm)	4 (max +33dBm)	1 (max +30dBm)	1 (max +30dBm)	3 (max +24dBm)	3 (max +24dBm)
Sensitivity	-102dBm	-102dBm	-100dBm	-100dBm	-106.7dBm	-106.7dBm
TDMA Mux	8	8	8	8		
Cell Radius	35Km	35Km	2Km	2Km	2Km	2Km

2. Specification

2-2. GSM TX power class

TX Power control level	GSM850 GSM900	TX Power control level	DCS1800	TX Power control level	PCS1900
5	33±2 dBm	0	30±3 dBm	0	30±3 dBm
6	31±2 dBm	1	28±3 dBm	1	28±3 dBm
7	29±2 dBm	2	26±3 dBm	2	26±3 dBm
8	27±2 dBm	3	24±3 dBm	3	24±3 dBm
9	25±2 dBm	4	22±3 dBm	4	22±3 dBm
10	23±2 dBm	5	20±3 dBm	5	20±3 dBm
11	21±2 dBm	6	18±3 dBm	6	18±3 dBm
12	19±2 dBm	7	16±3 dBm	7	16±3 dBm
13	17±2 dBm	8	14±3 dBm	8	14±3 dBm
14	15±2 dBm	9	12±4 dBm	9	12±4 dBm
15	13±2 dBm	10	10±4 dBm	10	10±4 dBm
16	11±3 dBm	11	8±4 dBm	11	8±4 dBm
17	9±3 dBm	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

3. Operation Instruction and Installation

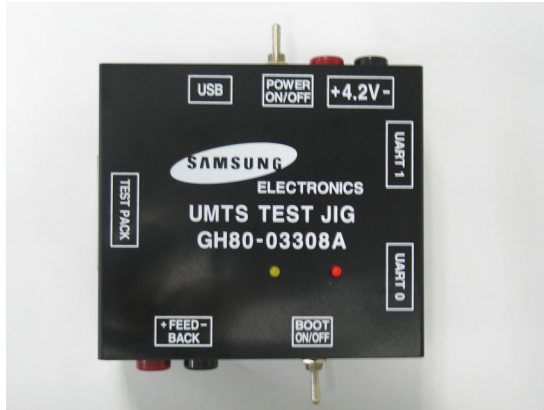
Main Function

- MP3 / 72 Poly Melody
- BT 2.0
- Video Telephony / Streaming
- USB 2.0
- WAP2.0, JAVA2.0, MPEG4
- MIDP 2.0 / CLDC 1.1
- SOS Message, Auto Time Setting,
- GPRS/EDGE : class 10
- MMS / EMS
- BT : Braodcom BCM2045
- Battery: 900mAH(553443)
- Weight: 92.8 g
- Memory: 1Gb NAND + 512Mb SDRAM
- Camera: - 1.3M (LSI)
- LCD : 2.0" QCIF TFT(AMLCD)
- Size: 99.5x47x14.8mm
- Band: GSM850/900/1800/1900, W850/1900
- BB: Qualcomm MSM6260, PM6650
- RF: Qualcomm RTR6275, RFR6275

4. Array course control

4-1. Software Adjustments

Test Jig (GH80-03308A)



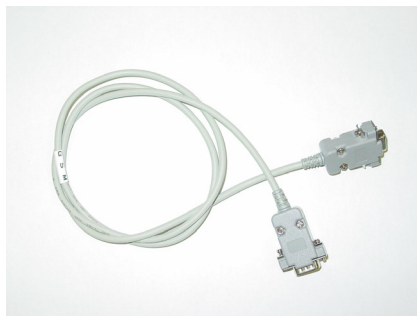
RF Test Cable (GH39-00468A)



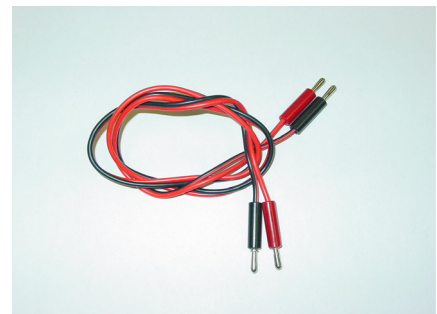
Test Cable (GH39-00886A)



Serial Cable



Power Supply Cable



DATA CABLE(GH39-00859B)



4-2. Software Downloading

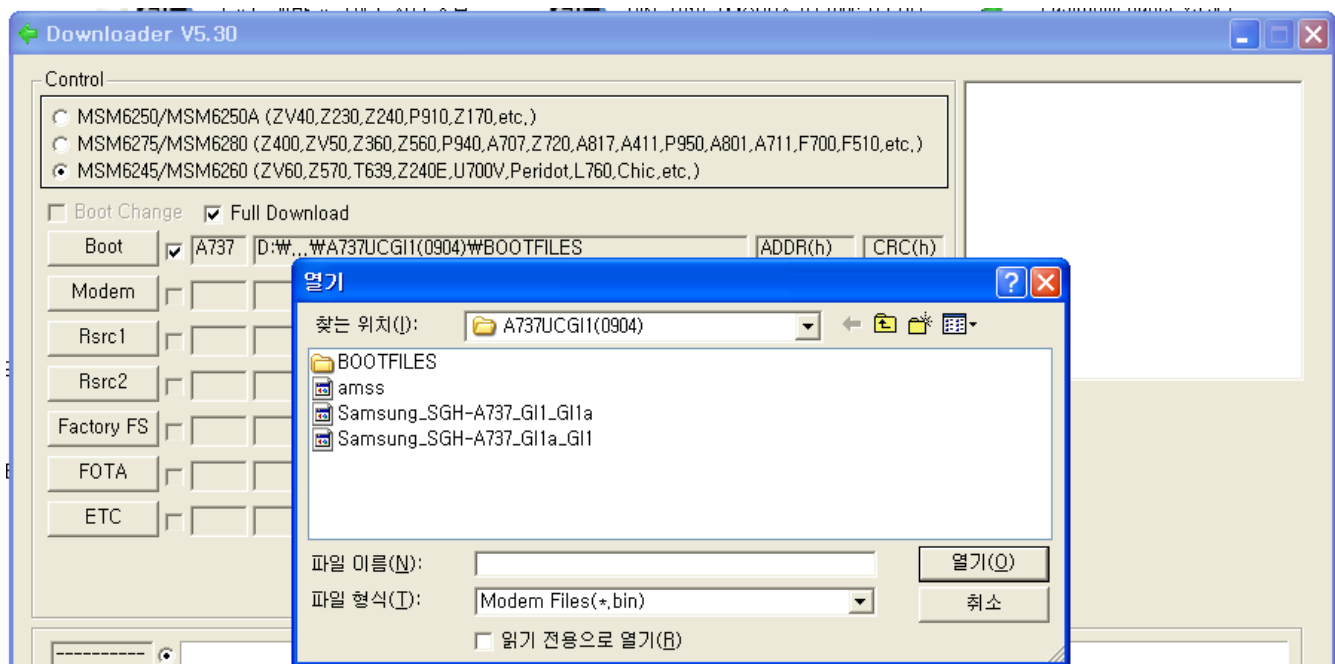
4-2-1. Pre-requisite for Downloading

- Downloader Program
- SGH-L737 Mobile Phone
- Data Cable
- Binary file,

4-2-2. S/W Downloader Program

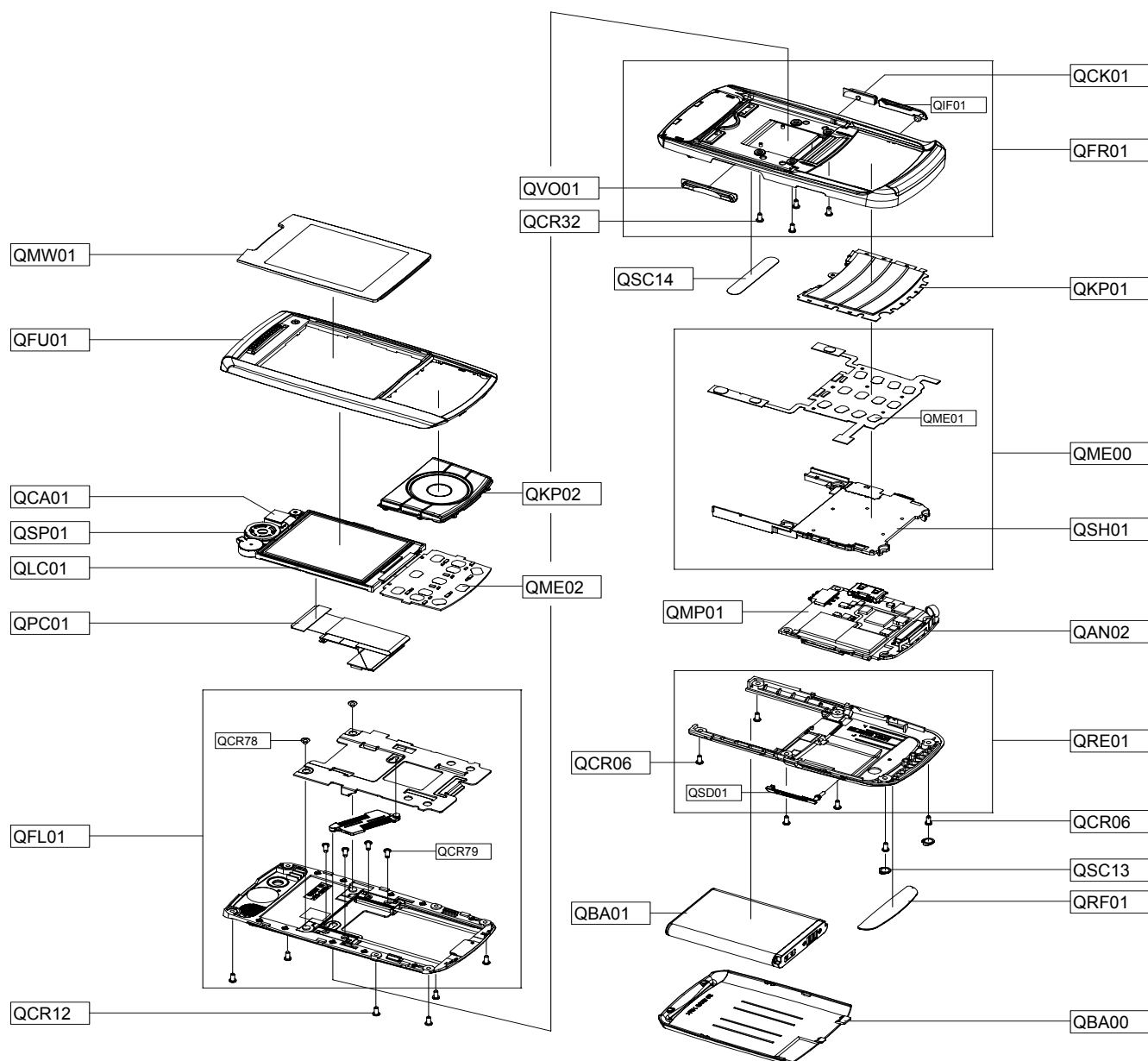
■ Load the binary download program by executing the
“[downloader V5.30](#)”

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-SGH A737	GH42-01355A
QBA00		PMO COVER-BATTERY V3	GH72-43985A
QBA01		INNER BATTERY PACK-900MAH,BLK,	GH43-02547A
QCA01		CAMERA MODULE	GH59-04500A
QCK01		PMO KEY-CAMERA V3	GH72-43998A
QCR06		SCREW-MACHINE	6001-001155
QCR06		SCREW-MACHINE	6001-001155
QCR12		SCREW-MACHINE	6001-001530
QCR32		SCREW-MACHINE	6001-001700
QFU01		ASSY CASE-SLIDE UPPER	GH98-04701A
QKP01		ASSY KEYPAD-MAIN(BLU/CIN) V2	GH98-06429A
QKP02		ASSY KEYPAD-SUB(BLU/CIN) V2	GH98-06430A
QLC01		LCD-SGH A737 MODULE	GH07-01129A
QME02		KEY FPCB-SUB KEY FPCB	GH59-04517A
QMP01		PBA MAIN-SGH A737	GH92-03748A
QMW01		ASSY COVER-MAIN WINDOW	GH98-04772A
QPC01		MEA-FPCBKIT	GH97-08157A
QRF01		ASSY COVER-RF	GH98-06646A
QSC13		RMO RUBBER-SCREW CAP REAR L	GH73-10815A
QSC14		TAPE-FRONT SHEET	GH74-35980A
QSH01		ICT SHIELD-CAN	GH70-02941A
QSP01		ASSY ETC-SPK MOTOR FPC ASSY	GH59-04640A
QVO01		PMO KEY-VOLUME V3	GH72-43999A
QFR01		ASSY CASE-FRONT	GH98-04700A
	QIF01	PMO COVER-IF V3	GH72-43988A
QFL01		ASSY CASE-SLIDE LOWER	GH98-04702A
	QCR78	SCREW-MACHINE	6001-002116
	QCR79	SCREW-SPECIAL	6009-001534
QRE01		ASSY CASE-REAR	GH98-04698A
	QSD01	PMO COVER-SD V3	GH72-43987A
QME00		KEY FPCB-SGHA737 ASSY KEY FPCB	GH59-05211A
	QME01	KEY FPCB-MAIN KEY FPCB	GH59-04516A

Description	SEC Code
BAG PE	6902-000634
CBF INTERFACE-CONVERSION PLUG,	GH39-00958A
ADAPTOR-SGH_T419 BLK	GH44-01700A
LABEL(R)-WATERSOAK(NEW)	GH68-14285A
LABEL(R)-MAIN(ATT)	GH68-15187A
MANUAL USERS-PARENTAL CONTROL	GH68-15816A
MANUAL USERS-NAPSTER QSG	GH68-15817A
MANUAL USERS-QSG ENGLISH	GH68-15818A
MANUAL USERS-ATT ENGLISH	GH68-15819A
MANUAL USERS-ATT SPANISH	GH68-15820A
BOX-SPACE AT&T	GH69-05279A
BOX-UNIT(ATT)	GH69-05553A
CUSHION-CASE(NEW)	GH69-06002A
PMO LOCKER-ANTENNA	GH72-43452A
TAPE-MAIN WINDOW	GH74-34303A
TAPE-INSU FRONT EMI	GH74-34304A
VINYL-BOHO UPPER OUT	GH74-35226A
SPONGE-SHIELD CAN	GH74-35482A
VINYL-LOWER FIX TAPE	GH74-35657A
VINYL-BOHO OUT	GH74-35938A
PAA ETC-MANUAL(ATT)	GH99-23670A

6. MAIN Electrical Parts List

Design LOC	Description	SEC Code	STATUS
ANT102	ANTENNA-CHIP	4202-001377	SA
BAT400	BATTERY-LI(2ND)	4302-001180	SA
BTC700	HEADER-BATTERY	3711-006217	SA
C101	C-CER,CHIP	2203-000812	SA
C102	C-CER,CHIP	2203-000995	SA
C103	C-CER,CHIP	2203-006839	SA
C104	C-TA,CHIP	2404-001474	SA
C105	C-CER,CHIP	2203-005736	SA
C106	C-CER,CHIP	2203-005736	SA
C107	C-CER,CHIP	2203-005736	SA
C108	C-CER,CHIP	2203-000233	SA
C109	C-CER,CHIP	2203-000233	SA
C110	C-CER,CHIP	2203-005682	SA
C111	C-CER,CHIP	2203-005682	SA
C112	C-CER,CHIP	2203-000854	SA
C118	C-CER,CHIP	2203-005725	SA
C119	C-CER,CHIP	2203-005682	SA
C120	C-CER,CHIP	2203-005777	SA
C121	C-CER,CHIP	2203-005777	SA
C122	C-CER,CHIP	2203-005682	SA
C123	C-CER,CHIP	2203-006423	SA
C124	C-CER,CHIP	2203-006194	SA
C131	C-CER,CHIP	2203-005659	SA
C132	C-CER,CHIP	2203-005659	SA
C133	C-CER,CHIP	2203-005659	SA
C134	C-CER,CHIP	2203-005659	SA
C135	C-CER,CHIP	2203-005727	SA
C136	C-CER,CHIP	2203-006208	SA
C137	C-CER,CHIP	2203-006423	SA
C138	C-CER,CHIP	2203-006423	SA
C139	C-CER,CHIP	2203-000489	SA
C140	C-CER,CHIP	2203-006423	SA
C141	C-CER,CHIP	2203-006399	SA
C142	C-CER,CHIP	2203-006423	SA
C143	C-CER,CHIP	2203-005736	SA

Design LOC	Description	SEC Code	STATUS
C144	C-CER,CHIP	2203-005725	SA
C145	C-CER,CHIP	2203-006423	SA
C146	C-CER,CHIP	2203-006423	SA
C147	C-CER,CHIP	2203-006423	SA
C148	C-CER,CHIP	2203-006423	SA
C149	C-CER,CHIP	2203-000438	SA
C150	C-CER,CHIP	2203-006194	SA
C151	C-CER,CHIP	2203-005725	SA
C152	C-CER,CHIP	2203-000438	SA
C153	C-CER,CHIP	2203-005725	SA
C154	C-CER,CHIP	2203-005736	SA
C156	C-CER,CHIP	2203-005727	SA
C157	C-CER,CHIP	2203-006123	SA
C158	C-CER,CHIP	2203-006123	SA
C160	C-CER,CHIP	2203-005739	SA
C161	C-CER,CHIP	2203-005736	SA
C162	C-CER,CHIP	2203-005725	SA
C163	C-CER,CHIP	2203-005725	SA
C164	C-CER,CHIP	2203-005725	SA
C165	C-CER,CHIP	2203-000438	SA
C166	C-CER,CHIP	2203-006423	SA
C171	C-CER,CHIP	2203-006194	SA
C172	C-CER,CHIP	2203-006194	SA
C173	C-CER,CHIP	2203-005682	SA
C174	C-CER,CHIP	2203-005806	SNA
C175	C-CER,CHIP	2203-005806	SNA
C181	C-CER,CHIP	2203-006838	SA
C182	C-CER,CHIP	2203-006838	SA
C183	C-CER,CHIP	2203-006423	SA
C184	C-CER,CHIP	2203-006399	SA
C185	C-CER,CHIP	2203-006305	SA
C187	C-CER,CHIP	2203-006896	SA
C188	C-CER,CHIP	2203-005806	SNA
C189	C-CER,CHIP	2203-000233	SA
C190	C-CER,CHIP	2203-006121	SA

Design LOC	Description	SEC Code	STATUS
C191	C-CER,CHIP	2203-000696	SA
C192	C-CER,CHIP	2203-006707	SA
C193	C-CER,CHIP	2203-002677	SA
C194	C-CER,CHIP	2203-000696	SA
C195	C-CER,CHIP	2203-002677	SA
C196	C-CER,CHIP	2203-005288	SA
C202	C-CER,CHIP	2203-005682	SA
C204	C-CER,CHIP	2203-000138	SA
C205	C-CER,CHIP	2203-006824	SA
C206	C-CER,CHIP	2203-005736	SA
C207	C-CER,CHIP	2203-005725	SA
C209	C-CER,CHIP	2203-005736	SA
C211	C-CER,CHIP	2203-005729	SA
C213	C-CER,CHIP	2203-002677	SA
C214	C-CER,CHIP	2203-005552	SA
C215	C-CER,CHIP	2203-005444	SA
C216	INDUCTOR-SMD	2703-001751	SA
C218	C-CER,CHIP	2203-005446	SA
C220	C-CER,CHIP	2203-000386	SA
C221	INDUCTOR-SMD	2703-001752	SA
C222	C-CER,CHIP	2203-001239	SA
C223	C-CER,CHIP	2203-005682	SA
C231	C-CER,CHIP	2203-006123	SA
C232	C-CER,CHIP	2203-006123	SA
C233	C-CER,CHIP	2203-005683	SA
C234	C-CER,CHIP	2203-006665	SA
C235	C-CER,CHIP	2203-005683	SA
C236	C-CER,CHIP	2203-006665	SA
C237	C-CER,CHIP	2203-005734	SA
C239	C-CER,CHIP	2203-006423	SA
C240	C-CER,CHIP	2203-005734	SA
C241	C-CER,CHIP	2203-005682	SA
C243	C-CER,CHIP	2203-005736	SA
C244	C-CER,CHIP	2203-005682	SA
C245	C-CER,CHIP	2203-006423	SA

Design LOC	Description	SEC Code	STATUS
C246	C-CER,CHIP	2203-005682	SA
C247	C-CER,CHIP	2203-005736	SA
C248	C-CER,CHIP	2203-006423	SA
C249	C-CER,CHIP	2203-006423	SA
C250	C-CER,CHIP	2203-005682	SA
C251	C-CER,CHIP	2203-006423	SA
C252	C-CER,CHIP	2203-005682	SA
C253	C-CER,CHIP	2203-006423	SA
C254	C-CER,CHIP	2203-005682	SA
C256	C-CER,CHIP	2203-006194	SA
C257	C-CER,CHIP	2203-006668	SA
C258	C-CER,CHIP	2203-006620	SNA
C259	C-CER,CHIP	2203-005993	SA
C260	C-CER,CHIP	2203-006423	SA
C261	C-CER,CHIP	2203-005682	SA
C262	C-CER,CHIP	2203-006399	SA
C263	C-CER,CHIP	2203-005682	SA
C264	C-CER,CHIP	2203-006399	SA
C265	C-CER,CHIP	2203-005682	SA
C266	C-CER,CHIP	2203-005732	SA
C267	C-CER,CHIP	2203-005732	SA
C268	C-CER,CHIP	2203-000438	SA
C300	C-CER,CHIP	2203-006668	SA
C303	C-CER,CHIP	2203-006462	SA
C305	C-CER,CHIP	2203-006423	SA
C306	C-CER,CHIP	2203-006423	SA
C307	C-CER,CHIP	2203-006423	SA
C308	C-CER,CHIP	2203-006423	SA
C309	C-CER,CHIP	2203-006423	SA
C310	C-CER,CHIP	2203-006423	SA
C311	C-CER,CHIP	2203-006423	SA
C312	C-CER,CHIP	2203-006423	SA
C313	C-CER,CHIP	2203-006423	SA
C314	C-CER,CHIP	2203-006399	SA
C315	C-CER,CHIP	2203-006423	SA

Design LOC	Description	SEC Code	STATUS
C316	C-CER,CHIP	2203-006423	SA
C317	C-CER,CHIP	2203-006423	SA
C318	C-CER,CHIP	2203-000438	SA
C319	C-CER,CHIP	2203-000438	SA
C320	C-CER,CHIP	2203-006194	SA
C321	C-CER,CHIP	2203-006423	SA
C322	C-CER,CHIP	2203-006194	SA
C323	C-CER,CHIP	2203-006423	SA
C324	C-CER,CHIP	2203-006194	SA
C325	C-CER,CHIP	2203-006423	SA
C326	C-CER,CHIP	2203-006399	SA
C327	C-CER,CHIP	2203-006399	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	2203-006423	SA
C332	C-CER,CHIP	2203-006194	SA
C333	C-CER,CHIP	2203-006423	SA
C334	C-CER,CHIP	2203-006194	SA
C335	C-CER,CHIP	2203-006423	SA
C336	C-CER,CHIP	2203-006423	SA
C337	C-CER,CHIP	2203-006194	SA
C338	C-CER,CHIP	2203-006194	SA
C339	C-CER,CHIP	2203-006423	SA
C340	C-CER,CHIP	2203-006423	SA
C341	C-CER,CHIP	2203-006194	SA
C342	C-CER,CHIP	2203-006194	SA
C343	C-CER,CHIP	2203-006423	SA
C344	C-CER,CHIP	2203-006194	SA
C345	C-CER,CHIP	2203-006423	SA
C346	C-CER,CHIP	2203-006423	SA
C347	C-CER,CHIP	2203-006423	SA
C348	C-CER,CHIP	2203-006423	SA
C349	C-CER,CHIP	2203-006423	SA
C350	C-CER,CHIP	2203-006838	SA

Design LOC	Description	SEC Code	STATUS
C351	C-CER,CHIP	2203-006423	SA
C352	C-CER,CHIP	2203-006556	SA
C353	C-CER,CHIP	2203-006648	SA
C400	C-CER,CHIP	2203-006824	SA
C401	C-CER,CHIP	2203-006562	SA
C402	C-CER,CHIP	2203-006474	SA
C403	C-CER,CHIP	2203-006423	SA
C404	C-CER,CHIP	2203-006348	SA
C405	C-CER,CHIP	2203-006423	SA
C406	C-CER,CHIP	2203-005736	SA
C407	C-CER,CHIP	2203-005736	SA
C408	C-CER,CHIP	2203-006423	SA
C409	C-CER,CHIP	2203-006305	SA
C410	C-CER,CHIP	2203-006399	SA
C411	C-CER,CHIP	2203-006305	SA
C412	C-CER,CHIP	2203-006399	SA
C413	C-CER,CHIP	2203-006305	SA
C414	C-CER,CHIP	2203-006399	SA
C415	C-CER,CHIP	2203-006399	SA
C416	C-CER,CHIP	2203-006824	SA
C417	C-CER,CHIP	2203-006305	SA
C418	C-CER,CHIP	2203-006824	SA
C419	C-CER,CHIP	2203-006399	SA
C420	C-CER,CHIP	2203-006399	SA
C421	C-CER,CHIP	2203-006824	SA
C422	C-CER,CHIP	2203-006712	SA
C423	C-CER,CHIP	2203-006824	SA
C424	C-CER,CHIP	2203-006712	SA
C425	C-CER,CHIP	2203-005731	SA
C426	C-CER,CHIP	2203-005731	SA
C427	C-CER,CHIP	2203-000438	SA
C428	C-CER,CHIP	2203-006824	SA
C429	C-CER,CHIP	2203-006048	SA
C430	C-CER,CHIP	2203-006048	SA
C431	C-CER,CHIP	2203-006048	SA

Design LOC	Description	SEC Code	STATUS
C432	C-CER,CHIP	2203-006048	SA
C433	C-CER,CHIP	2203-006562	SA
C434	C-CER,CHIP	2203-006348	SA
C435	C-CER,CHIP	2203-006562	SA
C437	C-CER,CHIP	2203-005682	SA
C438	C-CER,CHIP	2203-005682	SA
C439	C-CER,CHIP	2203-005682	SA
C440	C-CER,CHIP	2203-005682	SA
C441	C-CER,CHIP	2203-005682	SA
C442	C-CER,CHIP	2203-005682	SA
C443	C-CER,CHIP	2203-006423	SA
C444	C-CER,CHIP	2203-005682	SA
C445	C-CER,CHIP	2203-005682	SA
C446	C-CER,CHIP	2203-006399	SA
C447	C-CER,CHIP	2203-006423	SA
C448	C-CER,CHIP	2203-006474	SA
C449	C-CER,CHIP	2203-006305	SA
C450	C-CER,CHIP	2203-006824	SA
C451	C-CER,CHIP	2203-006562	SA
C500	C-CER,CHIP	2203-006562	SA
C501	C-CER,CHIP	2203-006399	SA
C502	C-CER,CHIP	2203-006562	SA
C503	C-CER,CHIP	2203-006423	SA
C504	C-CER,CHIP	2203-005682	SA
C505	C-CER,CHIP	2203-005683	SA
C506	C-CER,CHIP	2203-001259	SA
C507	C-CER,CHIP	2203-005682	SA
C508	C-CER,CHIP	2203-005779	SA
C509	C-CER,CHIP	2203-006260	SA
C510	C-CER,CHIP	2203-006423	SA
C511	C-CER,CHIP	2203-006399	SA
C512	C-CER,CHIP	2203-005682	SA
C513	C-CER,CHIP	2203-005682	SA
C514	C-CER,CHIP	2203-006423	SA
C515	C-CER,CHIP	2203-001259	SA

Design LOC	Description	SEC Code	STATUS
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C517	C-CER,CHIP	2203-000812	SA
C518	C-CER,CHIP	2203-006423	SA
C519	C-CER,CHIP	2203-006137	SA
C520	C-CER,CHIP	2203-006137	SA
C521	C-CER,CHIP	2203-000812	SA
C522	C-CER,CHIP	2203-000812	SA
C523	C-CER,CHIP	2203-000812	SA
C524	C-CER,CHIP	2203-000812	SA
C525	C-CER,CHIP	2203-000386	SA
C526	C-CER,CHIP	2203-000386	SA
C600	C-CER,CHIP	2203-006562	SA
C601	C-CER,CHIP	2203-006348	SA
C602	C-CER,CHIP	2203-006399	SA
C604	C-CER,CHIP	2203-006562	SA
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C607	C-CER,CHIP	2203-006423	SA
C608	C-CER,CHIP	2203-002709	SA
C609	C-CER,CHIP	2203-006423	SA
C700	C-CER,CHIP	2203-006423	SA
C701	C-CER,CHIP	2203-006562	SA
C702	C-CER,CHIP	2203-006423	SA
C703	C-CER,CHIP	2203-005682	SA
C704	C-CER,CHIP	2203-005682	SA
C706	C-CER,CHIP	2203-005682	SA
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C709	C-CER,CHIP	2203-005682	SA
C712	C-CER,CHIP	2203-005682	SA
C713	C-CER,CHIP	2203-002709	SA
C714	C-CER,CHIP	2203-006423	SA
C715	C-CER,CHIP	2203-000812	SA
CD400	CONNECTOR-CARD EDGE	3709-001465	SA
D400	DIODE-SCHOTTKY	0404-001153	SA
D401	DIODE-SCHOTTKY	0404-001153	SA
D403	DIODE-SCHOTTKY	0404-001153	SA

Design LOC	Description	SEC Code	STATUS
D404	DIODE-SCHOTTKY	0404-001153	SA
D405	DIODE-ZENER	0403-001547	SA
F101	DUPLEXER-FEM	2911-000085	SA
F102	FILTER-SAW	2904-001716	SA
F103	FILTER-SAW	2904-001783	SA
F201	FILTER-SAW	2904-001668	SA
F202	FILTER-SAW	2904-001531	SNA
F203	DUPLEXER-SAW	2910-000014	SA
F204	DUPLEXER-FBAR	2910-000009	SA
F205	FILTER-SAW	2904-001782	SA
F300	FILTER-EMI SMD	2901-001283	SA
F700	FILTER-EMI/ESD	2901-001348	SA
F701	FILTER-EMI/ESD	2901-001348	SA
HDC700	HEADER-BOARD TO BOARD	3711-005367	SA
HDC701	HEADER-BOARD TO BOARD	3711-005296	SA
IFC600	SOCKET-INTERFACE	3710-002523	SA
L101	INDUCTOR-SMD	2703-002314	SA
L102	INDUCTOR-SMD	2703-002207	SA
L103	INDUCTOR-SMD	2703-002858	SA
L110	INDUCTOR-SMD	2703-002901	SNA
L111	INDUCTOR-SMD	2703-002901	SNA
L112	INDUCTOR-SMD	2703-002794	SA
L113	INDUCTOR-SMD	2703-002794	SA
L114	INDUCTOR-SMD	2703-002794	SA
L115	INDUCTOR-SMD	2703-002907	SNA
L116	INDUCTOR-SMD	2703-002907	SNA
L117	INDUCTOR-SMD	2703-002858	SA
L121	BEAD-SMD	3301-001659	SA
L125	INDUCTOR-SMD	2703-002793	SA
L126	INDUCTOR-SMD	2703-002958	SA
L127	INDUCTOR-SMD	2703-002958	SA
L128	INDUCTOR-SMD	2703-002793	SA
L129	INDUCTOR-SMD	2703-002267	SA
L130	INDUCTOR-SMD	2703-002208	SA
L202	INDUCTOR-SMD	2703-002204	SA

Design LOC	Description	SEC Code	STATUS
L203	INDUCTOR-SMD	2703-001180	SA
L204	INDUCTOR-SMD	2703-002367	SA
L205	INDUCTOR-SMD	2703-001734	SA
L211	INDUCTOR-SMD	2703-002901	SNA
L212	INDUCTOR-SMD	2703-003125	SA
L213	INDUCTOR-SMD	2703-002901	SNA
L214	INDUCTOR-SMD	2703-003125	SA
L215	INDUCTOR-SMD	2703-002910	SA
L216	INDUCTOR-SMD	2703-002910	SA
L218	INDUCTOR-SMD	2703-002793	SA
L219	INDUCTOR-SMD	2703-002858	SA
L220	INDUCTOR-SMD	2703-002314	SA
L221	INDUCTOR-SMD	2703-002955	SA
L222	INDUCTOR-SMD	2703-002903	SA
L223	INDUCTOR-SMD	2703-003103	SA
L400	INDUCTOR-SMD	2703-003254	SA
L401	INDUCTOR-SMD	2703-002840	SA
L402	INDUCTOR-SMD	2703-002840	SA
L500	BEAD-SMD	3301-001762	SA
L501	BEAD-SMD	3301-001762	SA
L502	BEAD-SMD	3301-001762	SA
L503	BEAD-SMD	3301-001762	SA
L504	BEAD-SMD	3301-001789	SA
L505	BEAD-SMD	3301-001789	SA
MIS101	FILTER-LC	2909-001279	SA
OSC400	CRYSTAL-SMD	2801-004373	SA
PAM101	IC-POWER AMP	1201-002570	SA
PAM201	IC-POWER AMP	1201-002571	SA
PM401	IC-POWER SUPERVISOR	1203-004101	SA
R107	R-CHIP	2007-008806	SA
R108	R-CHIP	2007-008046	SA
R109	R-CHIP	2007-008046	SA
R110	R-CHIP	2007-008806	SA
R111	R-CHIP	2007-008046	SA
R112	R-CHIP	2007-008046	SA

Design LOC	Description	SEC Code	STATUS
R113	R-CHIP	2007-007315	SA
R114	R-CHIP	2007-008048	SA
R115	R-CHIP	2007-008516	SA
R121	R-CHIP	2007-008542	SA
R122	R-CHIP	2007-008542	SA
R123	R-CHIP	2007-008542	SA
R124	R-CHIP	2007-008542	SA
R128	R-CHIP	2007-009410	SA
R131	R-CHIP	2007-008544	SA
R132	R-CHIP	2007-008531	SA
R133	R-CHIP	2007-008542	SA
R141	R-CHIP	2007-008045	SA
R142	R-CHIP	2007-008542	SA
R151	R-CHIP	2007-008542	SA
R152	R-CHIP	2007-007489	SA
R158	R-CHIP	2007-008542	SA
R159	R-CHIP	2007-008542	SA
R160	R-CHIP	2007-000171	SA
R161	R-CHIP	2007-008542	SA
R201	R-CHIP	2007-008542	SA
R202	R-CHIP	2007-008806	SA
R203	R-CHIP	2007-008043	SA
R204	R-CHIP	2007-008045	SA
R205	R-CHIP	2007-008045	SA
R211	R-CHIP	2007-008547	SNA
R212	R-CHIP	2007-008478	SA
R213	R-CHIP	2007-008053	SA
R214	R-CHIP	2007-008806	SA
R215	R-CHIP	2007-001284	SA
R216	R-CHIP	2007-008531	SA
R217	R-CHIP	2007-007741	SA
R218	R-CHIP	2007-008211	SNA
R219	R-CHIP	2007-009420	SA
R300	R-CHIP	2007-007741	SA
R301	R-CHIP	2007-007741	SA

Design LOC	Description	SEC Code	STATUS
R302	R-CHIP	2007-008049	SA
R303	R-CHIP	2007-008542	SA
R305	R-CHIP	2007-008477	SNA
R306	R-CHIP	2007-009111	SA
R307	R-CHIP	2007-008516	SA
R308	R-CHIP	2007-009171	SA
R309	R-CHIP	2007-009171	SA
R310	R-CHIP	2007-009171	SA
R311	R-CHIP	2007-007014	SA
R312	R-CHIP	2007-007014	SA
R315	R-CHIP	2007-008806	SA
R316	R-CHIP	2007-008055	SA
R317	R-CHIP	2007-007741	SA
R318	R-CHIP	2007-000171	SA
R400	R-CHIP	2007-008483	SA
R401	R-CHIP	2007-008477	SNA
R402	R-CHIP	2007-008055	SA
R403	R-CHIP	2007-008516	SA
R404	R-CHIP	2007-008809	SNA
R405	R-CHIP	2007-008806	SA
R406	R-CHIP	2007-007468	SA
R407	R-CHIP	2007-008486	SA
R409	R-CHIP	2007-009171	SA
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R411	R-CHIP	2007-008486	SA
R412	R-CHIP	2007-008055	SA
R413	R-CHIP	2007-008055	SA
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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

Design LOC	Description	SEC Code	STATUS
R422	R-CHIP	2007-008052	SA
R423	R-CHIP	2007-009410	SA
R424	R-CHIP	2007-008648	SA
R425	R-CHIP	2007-009169	SA
R500	R-CHIP	2007-008419	SA
R501	R-CHIP	2007-008548	SA
R502	R-CHIP	2007-003001	SA
R504	R-CHIP	2007-007312	SA
R505	R-CHIP	2007-003001	SA
R506	R-CHIP	2007-007312	SA
R507	R-CHIP	2007-008055	SA
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R510	R-CHIP	2007-007538	SA
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R517	R-CHIP	2007-008542	SA
R518	R-CHIP	2007-008542	SA
R519	R-CHIP	2007-008542	SA
R522	R-CHIP	2007-009111	SA
R523	R-CHIP	2007-009111	SA
R601	R-CHIP	2007-008548	SA
R602	R-CHIP	2007-008419	SA
R603	R-CHIP	2007-008419	SA
R604	R-CHIP	2007-008055	SA
R605	R-CHIP	2007-008486	SA
R606	R-CHIP	2007-008542	SA
R607	R-CHIP	2007-008055	SA
R610	R-CHIP	2007-008419	SA
R611	R-CHIP	2007-008419	SA
R613	R-CHIP	2007-009170	SA
R616	R-CHIP	2007-000171	SA
R702	R-CHIP	2007-000171	SA
R703	R-CHIP	2007-000168	SA

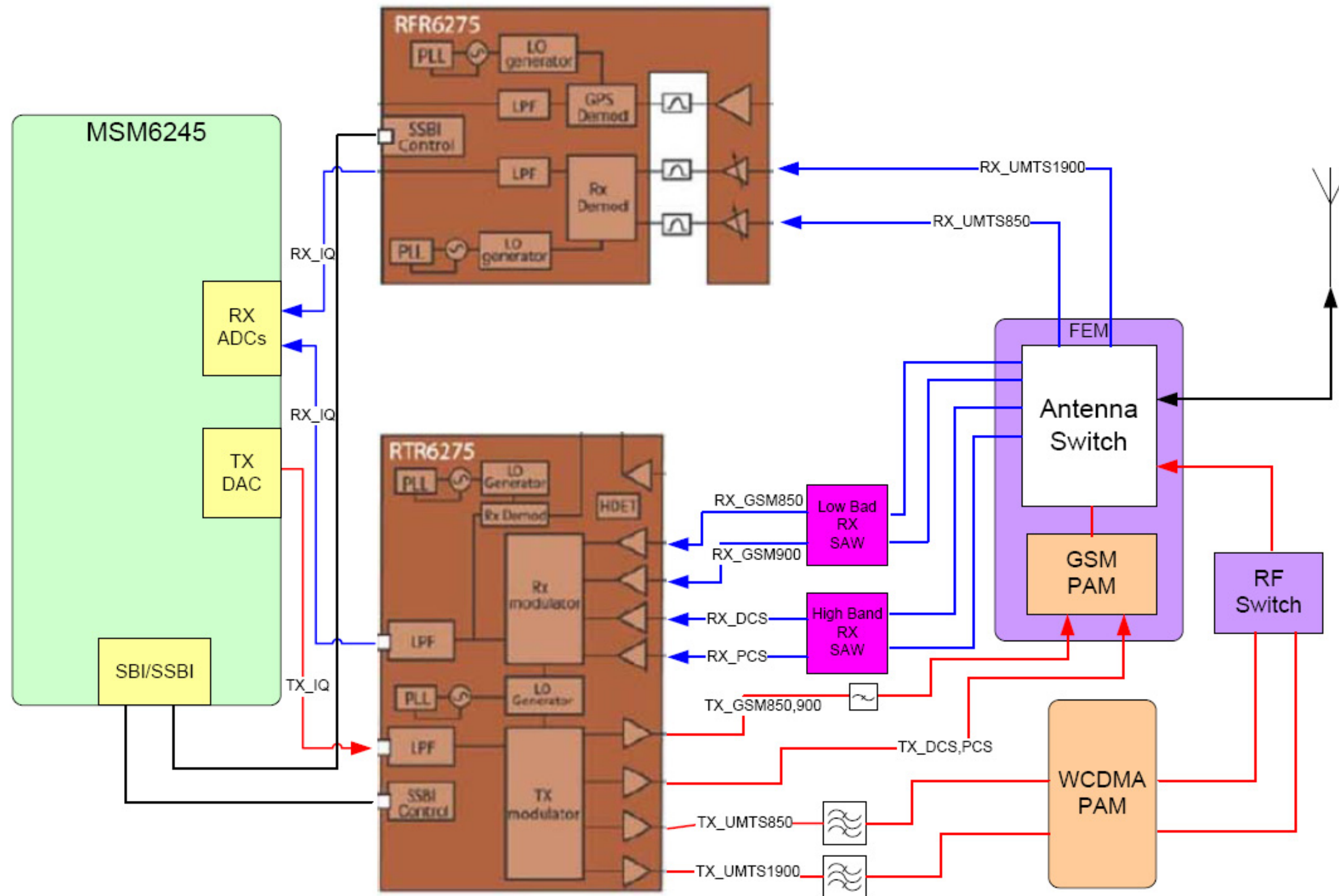
Design LOC	Description	SEC Code	STATUS
RFS100	CONNECTOR-COAXIAL	3705-001358	SA
SC401	ICT-ON-BOARD CLIP	GH70-02367A	SA
SC402	ICT-ON-BOARD CLIP	GH70-02367A	SA
SC403	ICT-ON-BOARD CLIP	GH70-02367A	SA
SC404	ICT-ON-BOARD CLIP	GH70-02367A	SA
SC405	ICT-ON-BOARD CLIP	GH70-02367A	SA
SC406	ICT-ON-BOARD CLIP	GH70-02367A	SA
SC407	ICT-ON-BOARD CLIP	GH70-02367A	SA
TA601	C-TA,CHIP	2404-001381	SA
TA606	C-TA,CHIP	2404-001474	SA
TA716	C-TA,CHIP	2404-001474	SA
TCX100	OSCILLATOR-VCTCXO	2809-001280	SA
TR400	TR-DIGITAL	0504-000168	SA
U100	IC-CMOS LOGIC	0801-003022	SA
U101	IC-SWITCH	1205-003277	SA
U102	IC-CMOS LOGIC	0801-003140	SA
U103	IC-CMOS LOGIC	0801-003022	SA
U104	IC-TRANSCEIVER	1205-003285	SA
U105	IC-TRANSCEIVER	1205-002942	SA
U201	COUPLER-DIRECTION	4709-001405	SA
U202	COUPLER-DIRECTION	4709-001406	SNA
U203	IC-RECEIVER	1205-003286	SA
U301	IC-SENSOR	1209-001712	SA
U402	IC-BATTERY	1203-004518	SA
U500	IC-AUDIO AMP	1201-002007	SA
U501	IC-ANALOG SWITCH	1001-001410	SA
U600	IC-SWITCH	1205-002784	SA
U601	IC-POSI.FIXED REG.	1203-003787	SA
U602	IC-ANALOG SWITCH	1001-001408	SA
U603	IC-POSI.FIXED REG.	1203-003737	SA
U604	IC-ANALOG SWITCH	1001-001336	SA
U605	DIODE-TVS	0406-001254	SA
U608	IC-ANALOG MULTIPLEX	1001-001405	SA
U609	C-CER,CHIP	2203-006423	SA
UCP300	IC-MODEM	1205-003215	SA

Design LOC	Description	SEC Code	STATUS
UME302	IC-MCP	1108-000105	SA
V704	VARISTOR	1405-001177	SA
V705	VARISTOR	1405-001177	SA
V707	VARISTOR	1405-001177	SA
ZD601	DIODE-SCHOTTKY	0404-001153	SA
ZD603	DIODE-TVS	0406-001208	SA
ZD604	DIODE-TVS	0406-001208	SA
ZD606	DIODE-TVS	0406-001254	SA
ZD700	DIODE-TVS	0406-001201	SA
ZD702	DIODE-TVS	0406-001190	SA
ZD703	DIODE-TVS	0406-001190	SA
ZD704	DIODE-TVS	0406-001254	SA

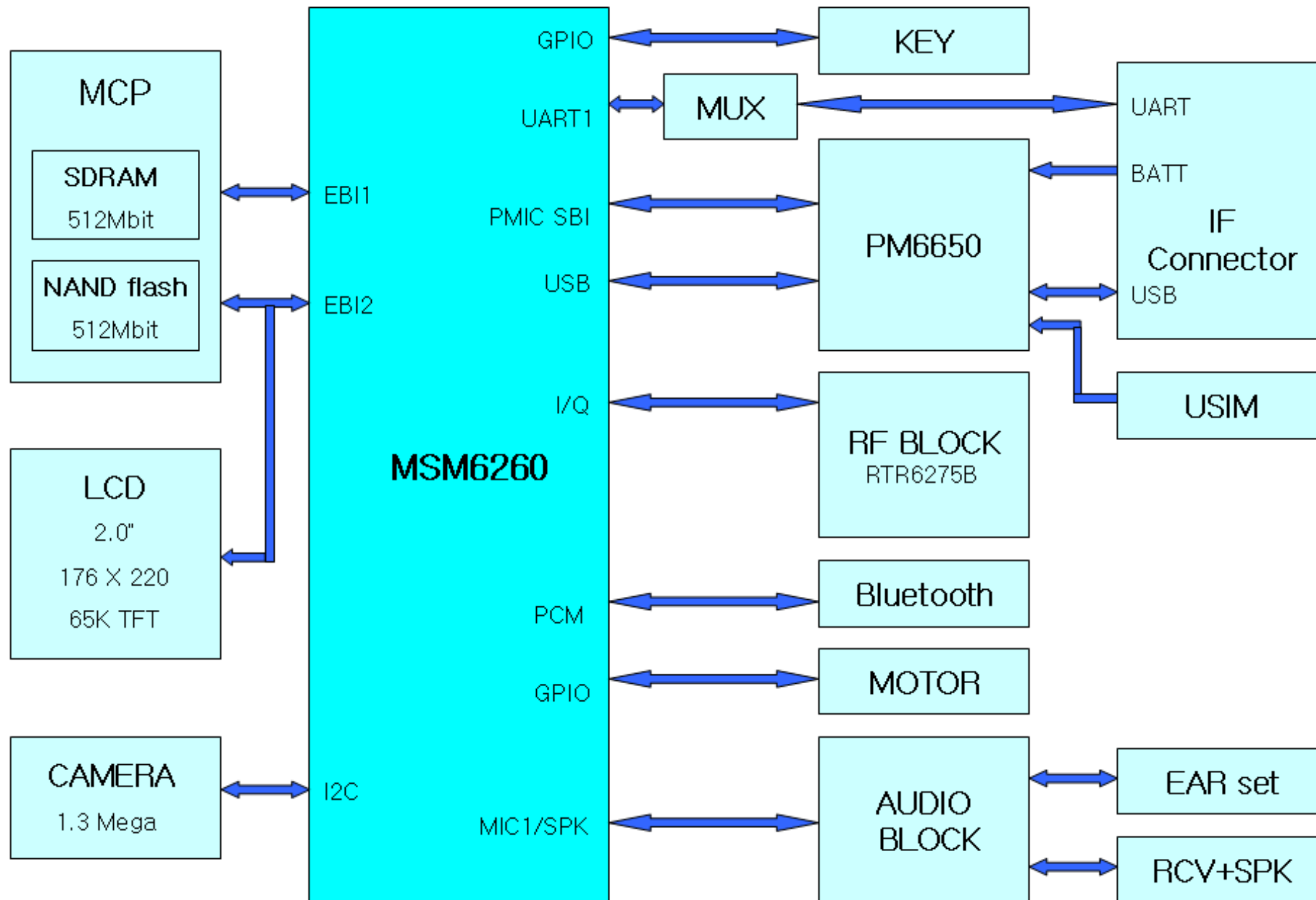
Please consult the GSPN website (Samsung Portal) for the most recent version of the product's part list.

7. Block Diagrams

7-1. RF Solution Block Diagram

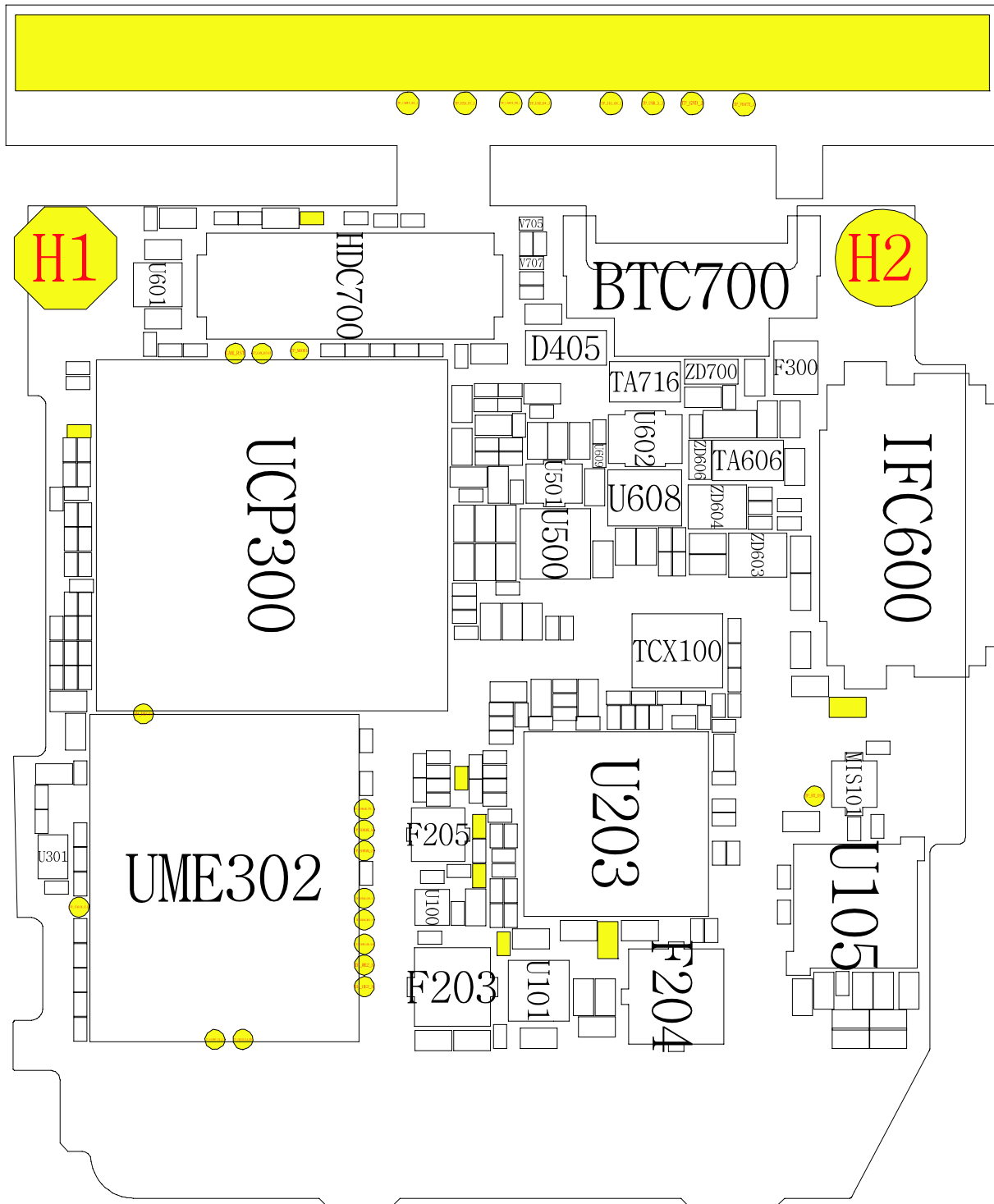


7-2. Base Band Solution Block Diagram

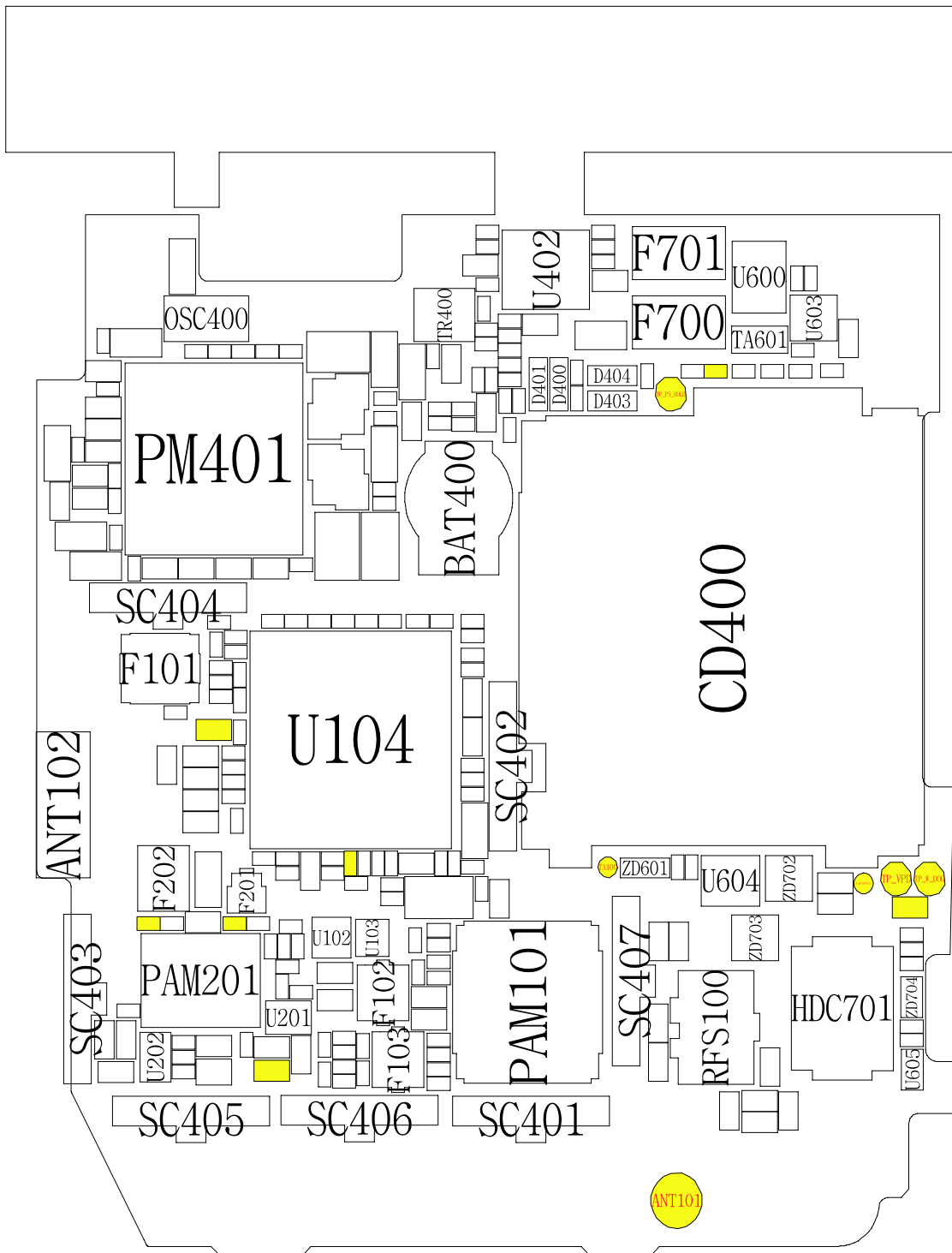


8. PCB Diagrams

Top



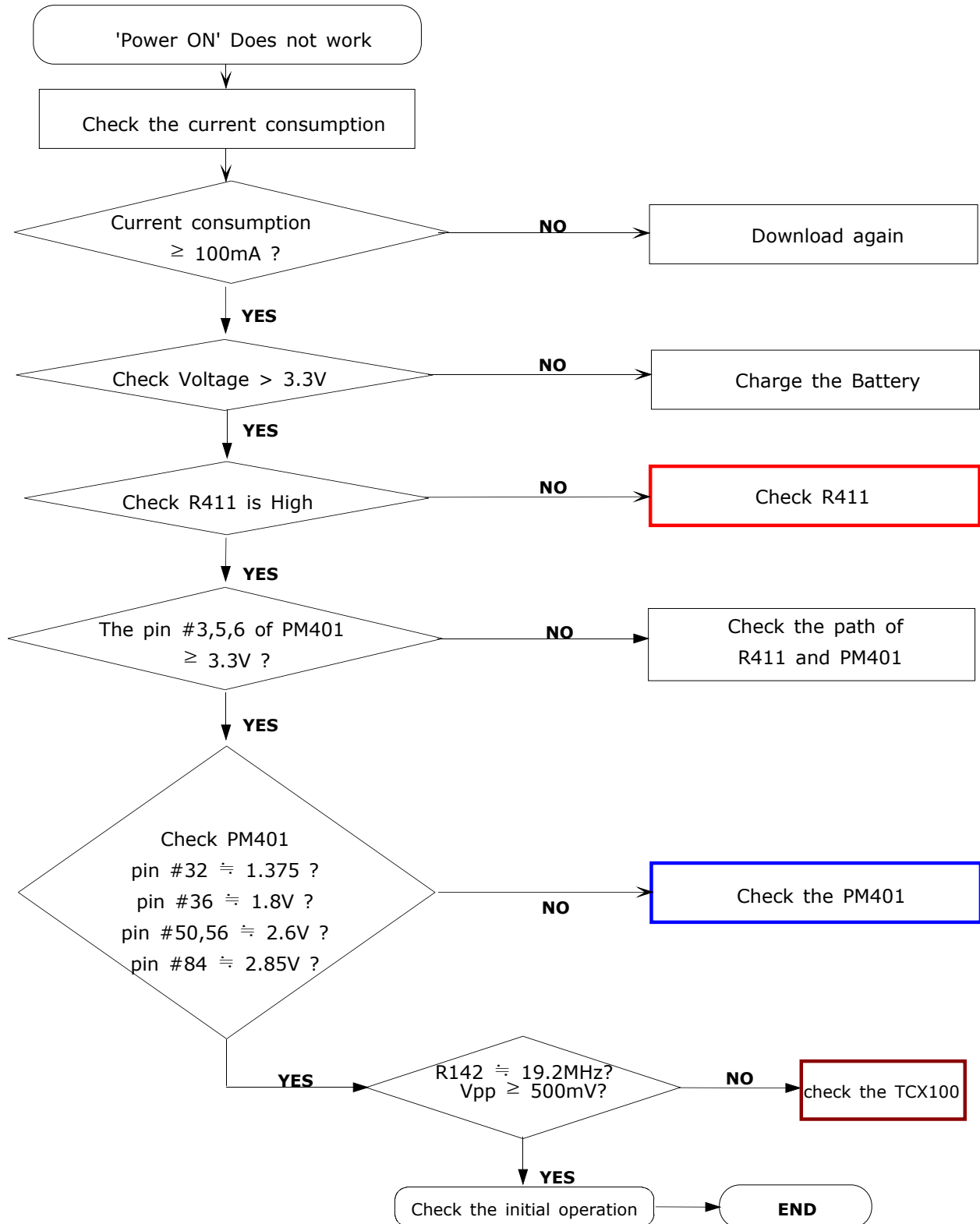
Bottom

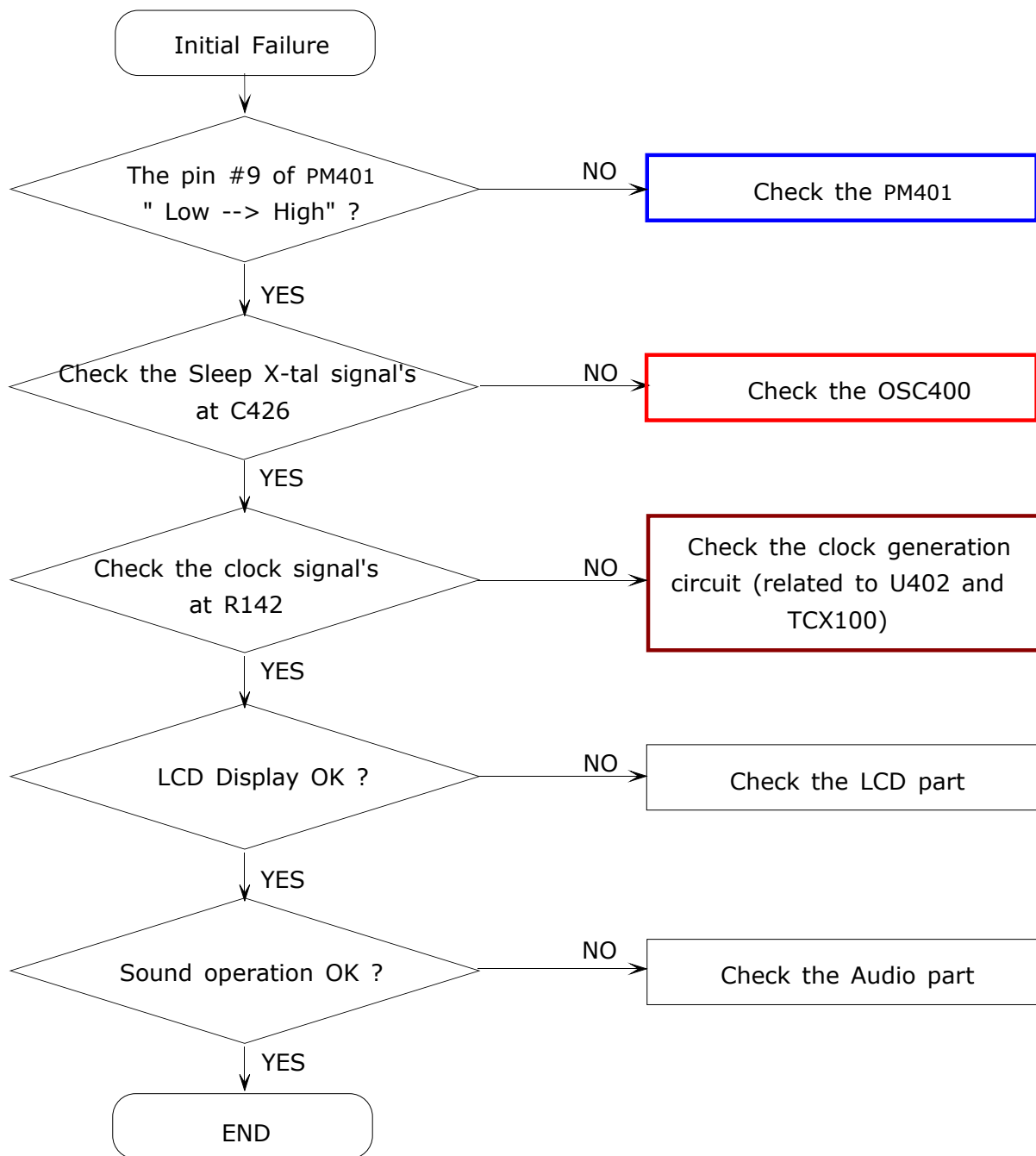


9. Flow Chart of Troubleshooting

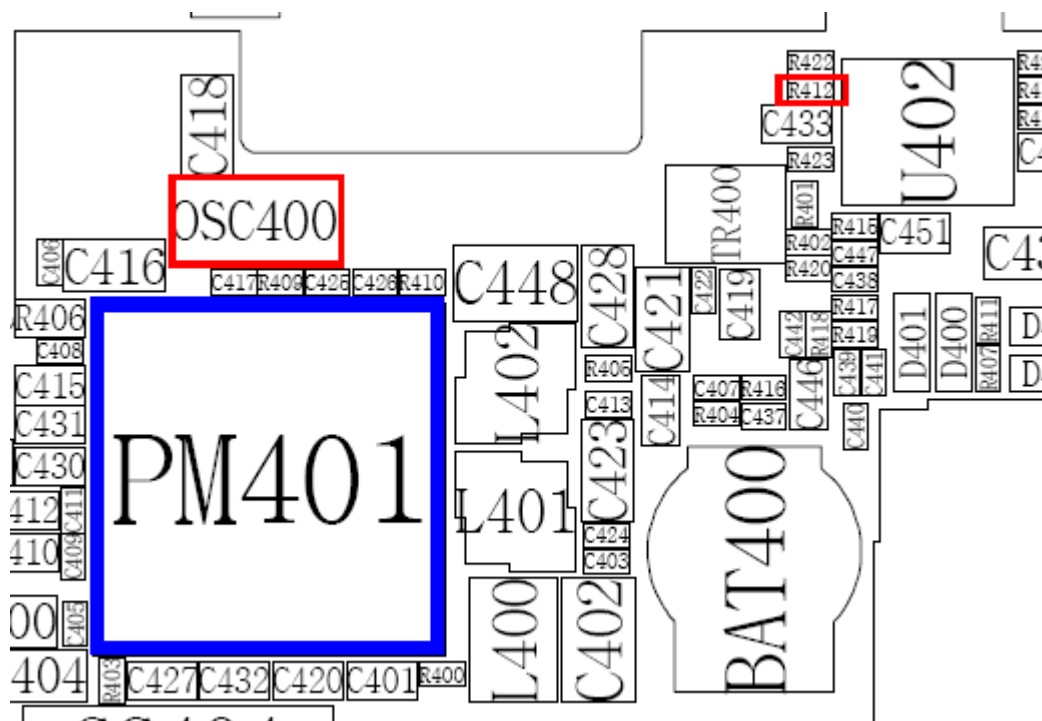
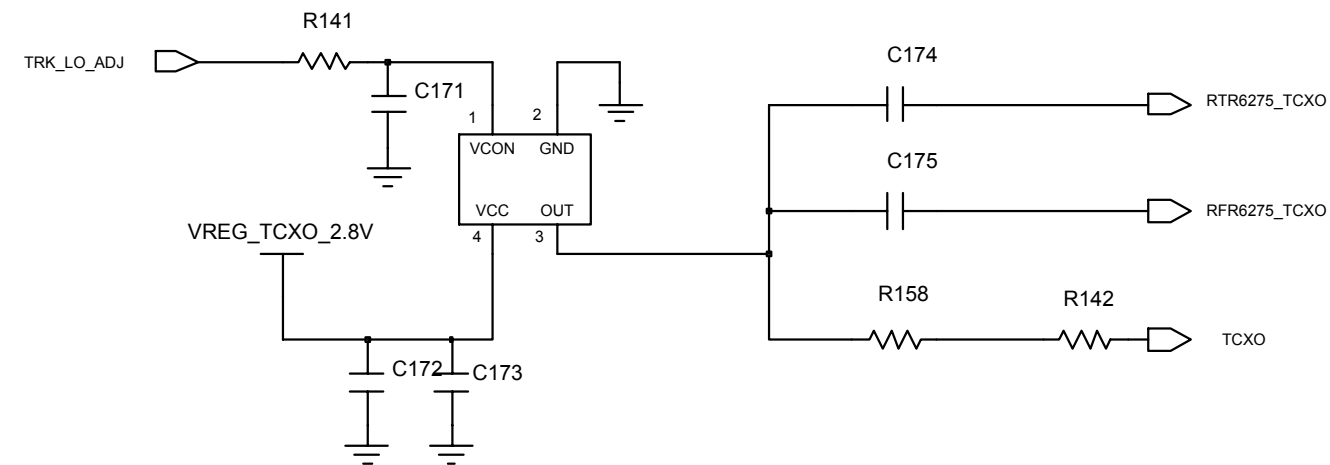
9-1.Baseband

9-1-1. Power ON

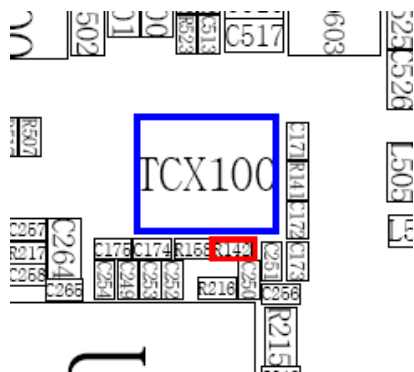


9-1-2. System Initial

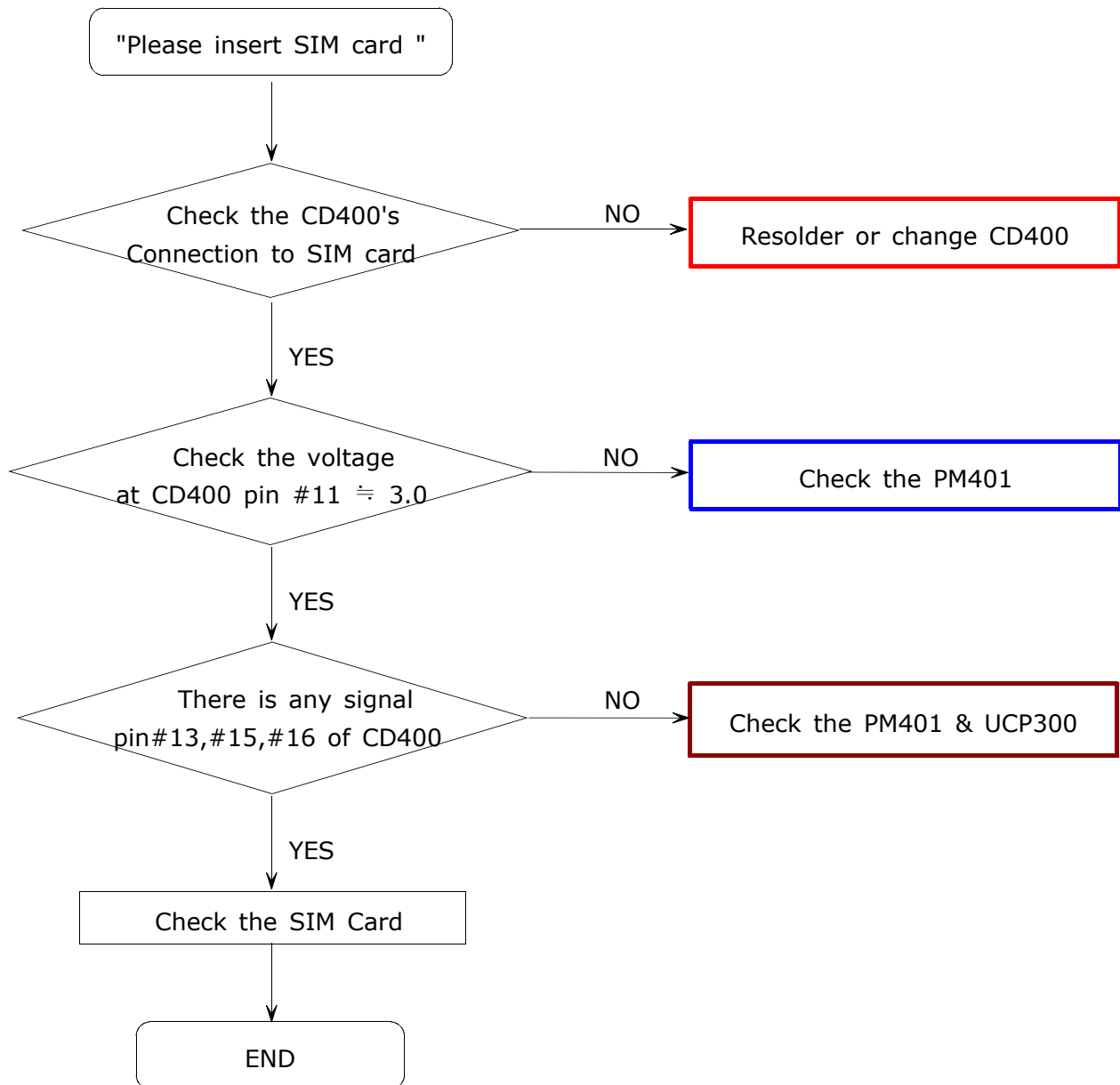
TCX100



Bottom

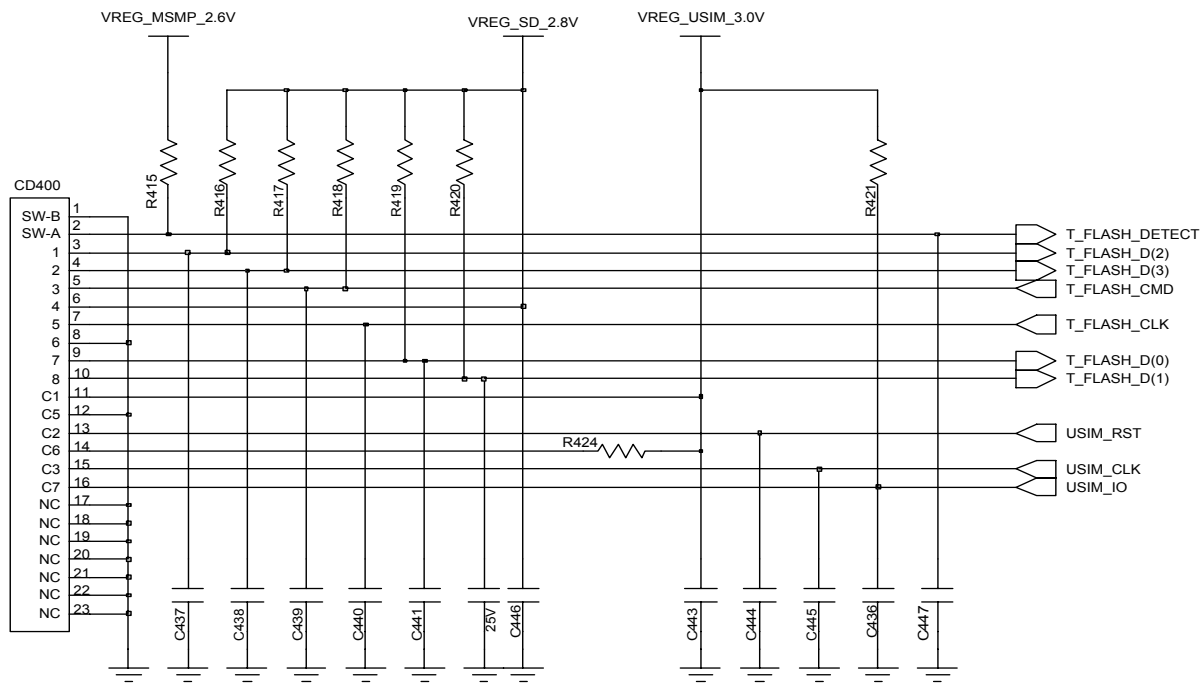


TOP

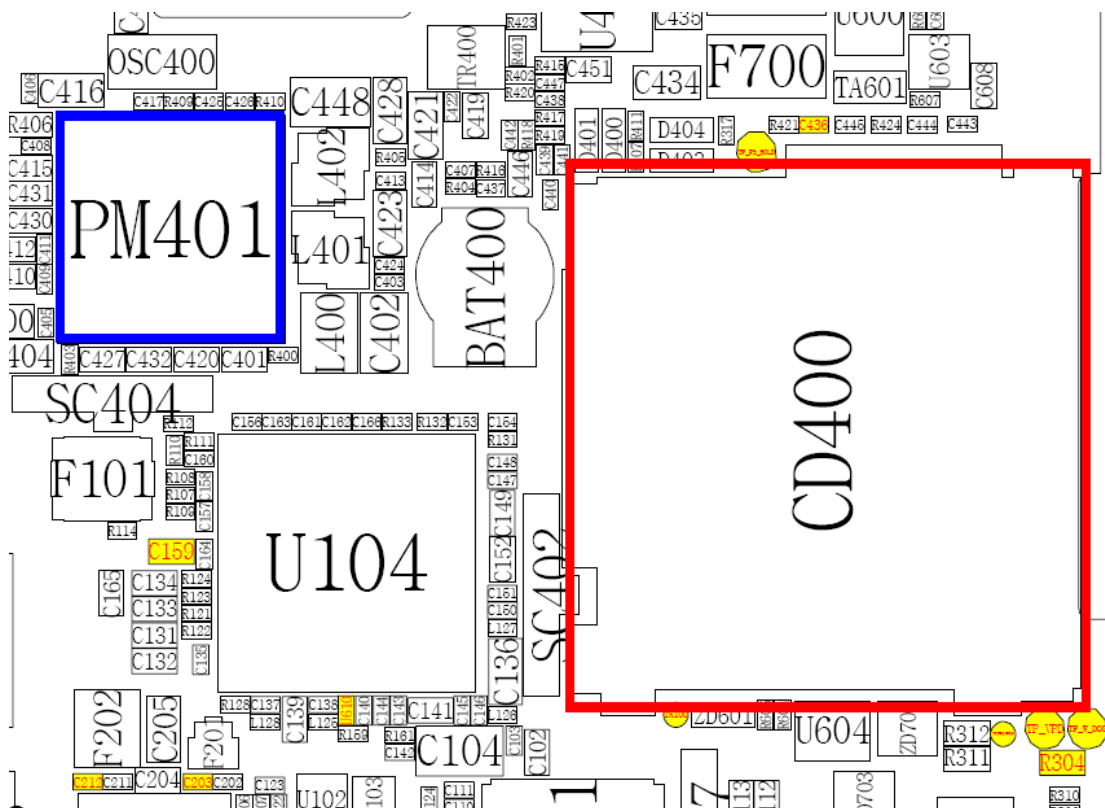
9-1-3. SIM Part

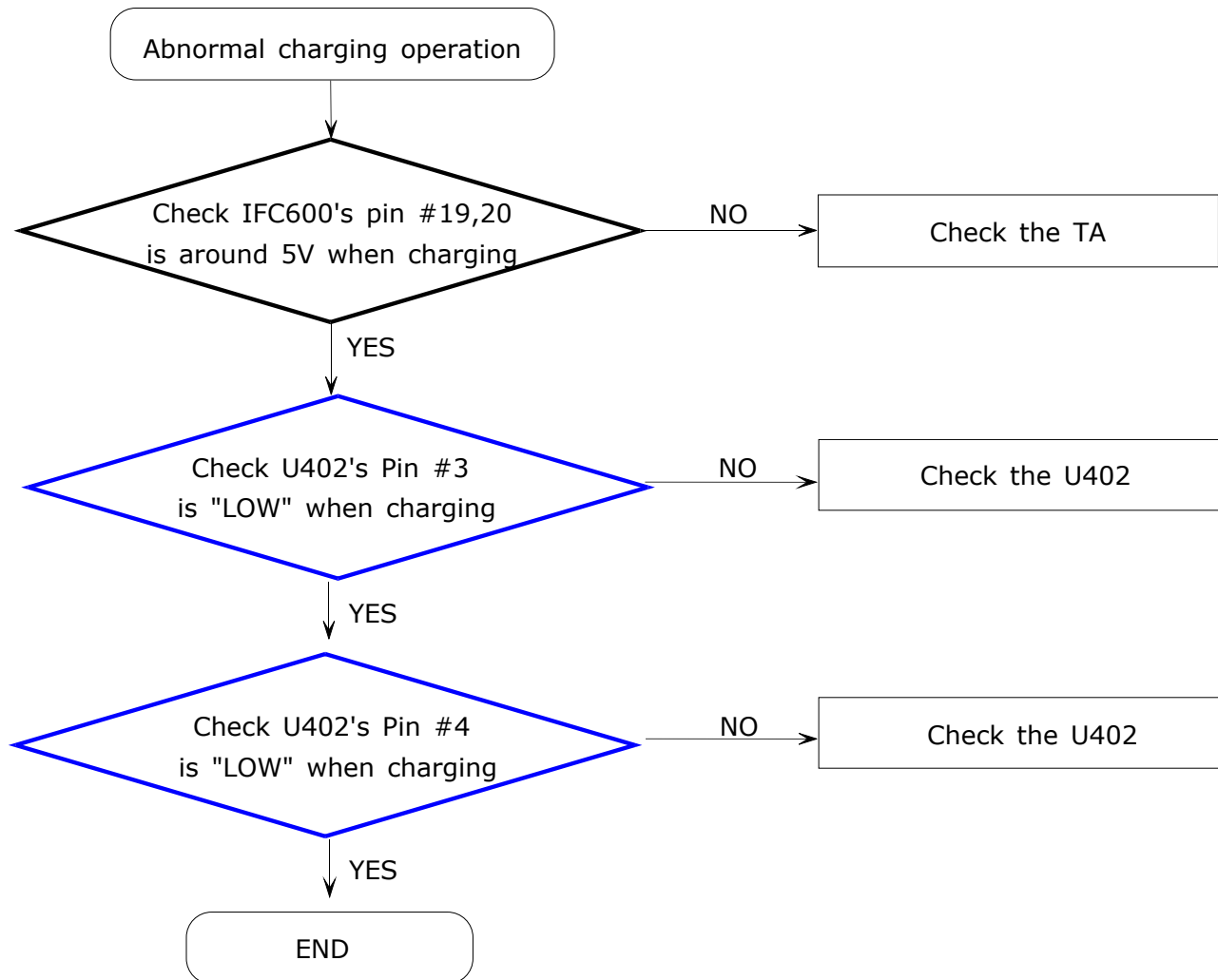
** Check SIM's signal
when you see SIM checking display

- Schematic for SIM connection

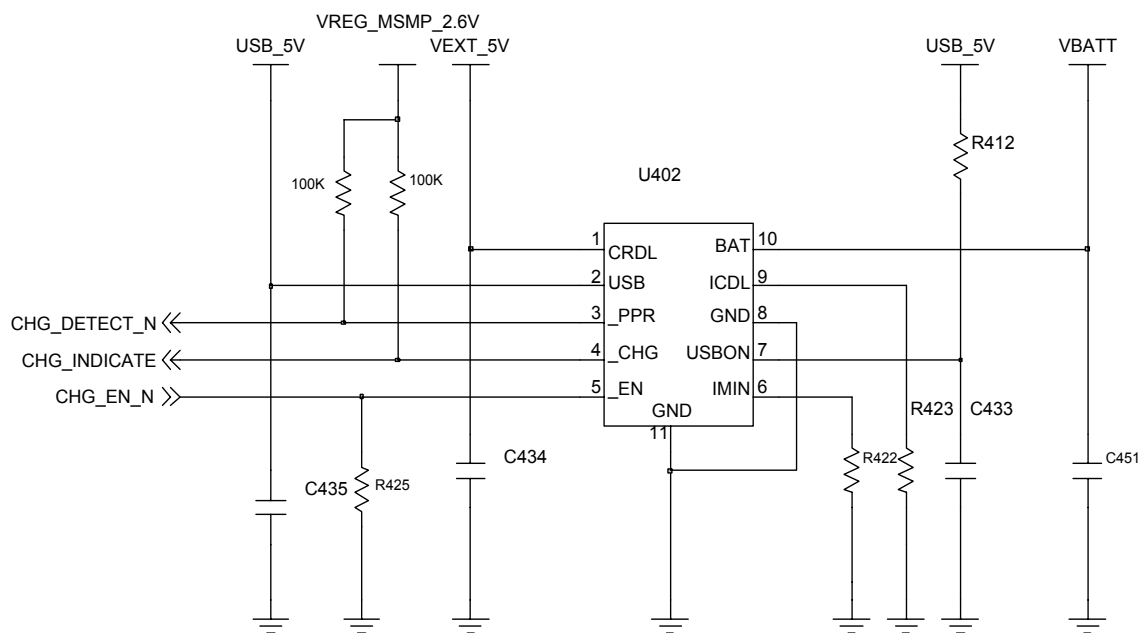


- Layout for SIM connection



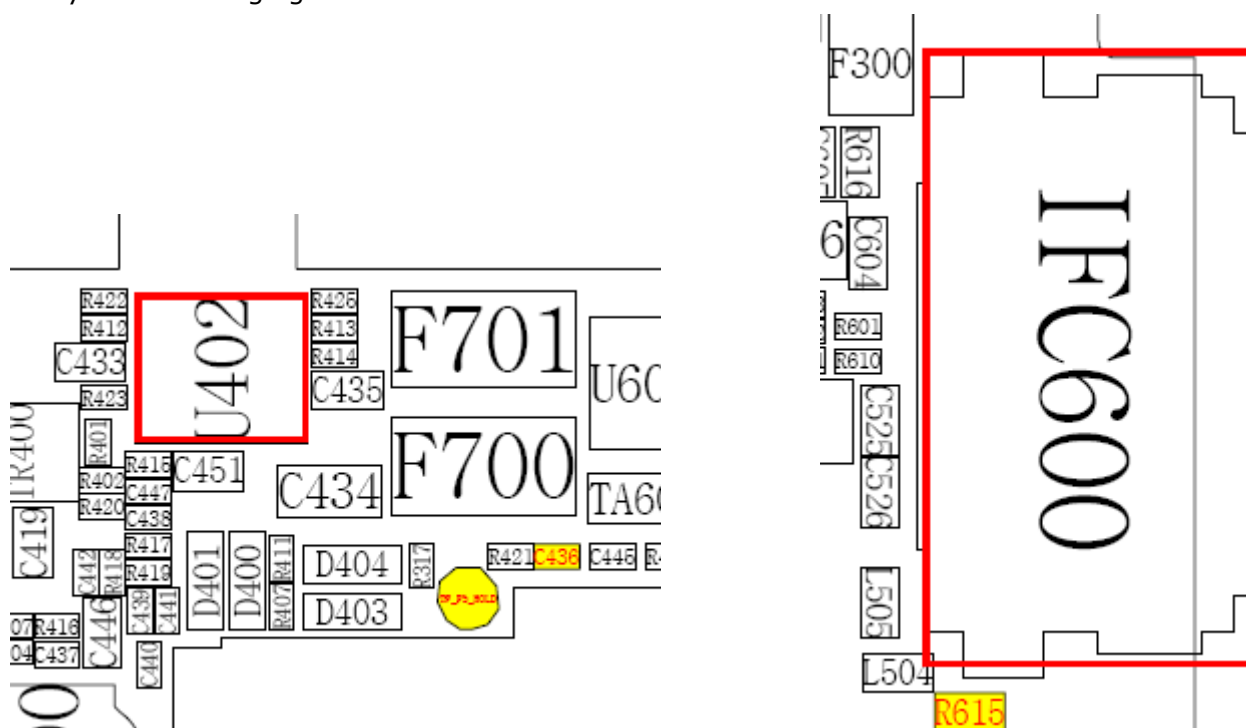
9-1-4. Charging Part

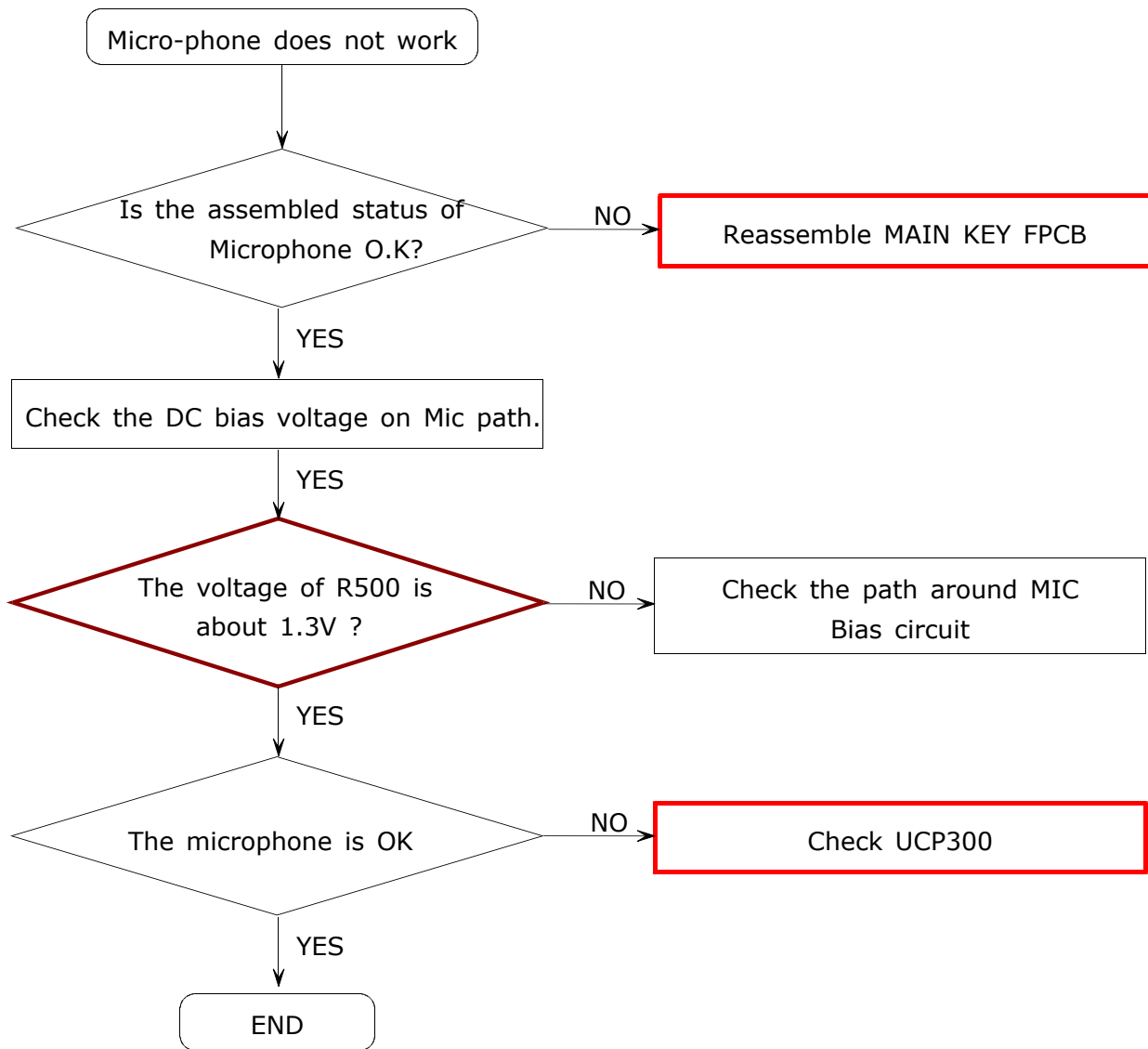
- Schematic for Charging

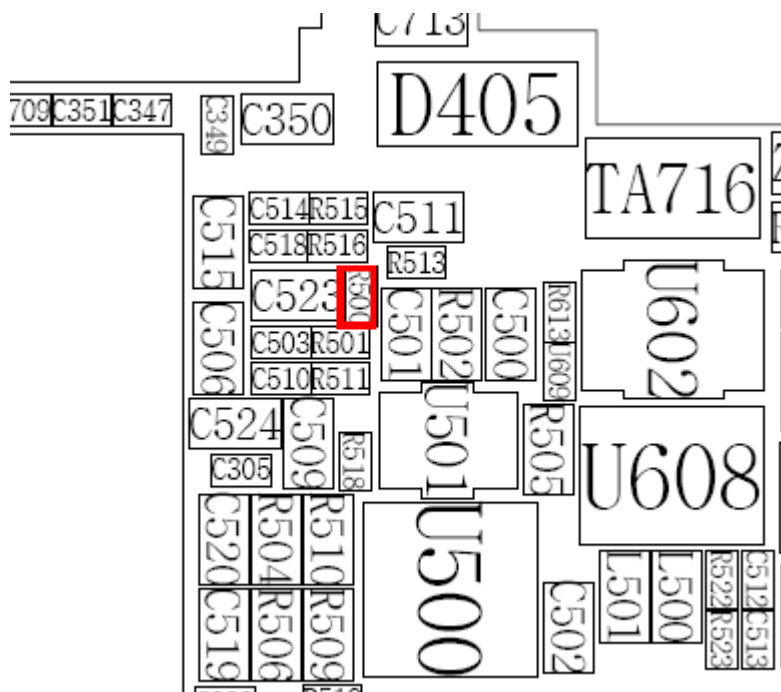


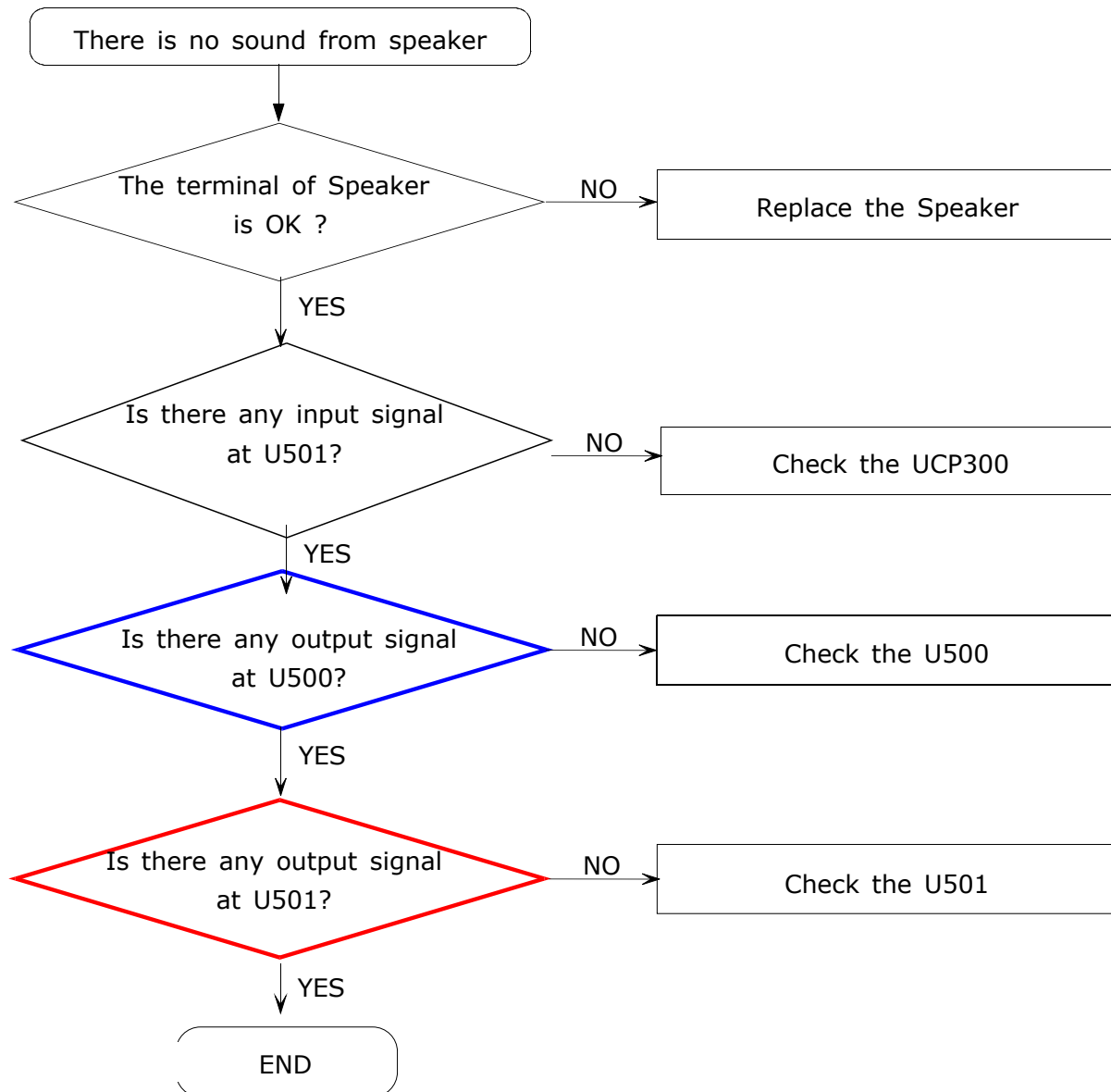
INNER CHARGER

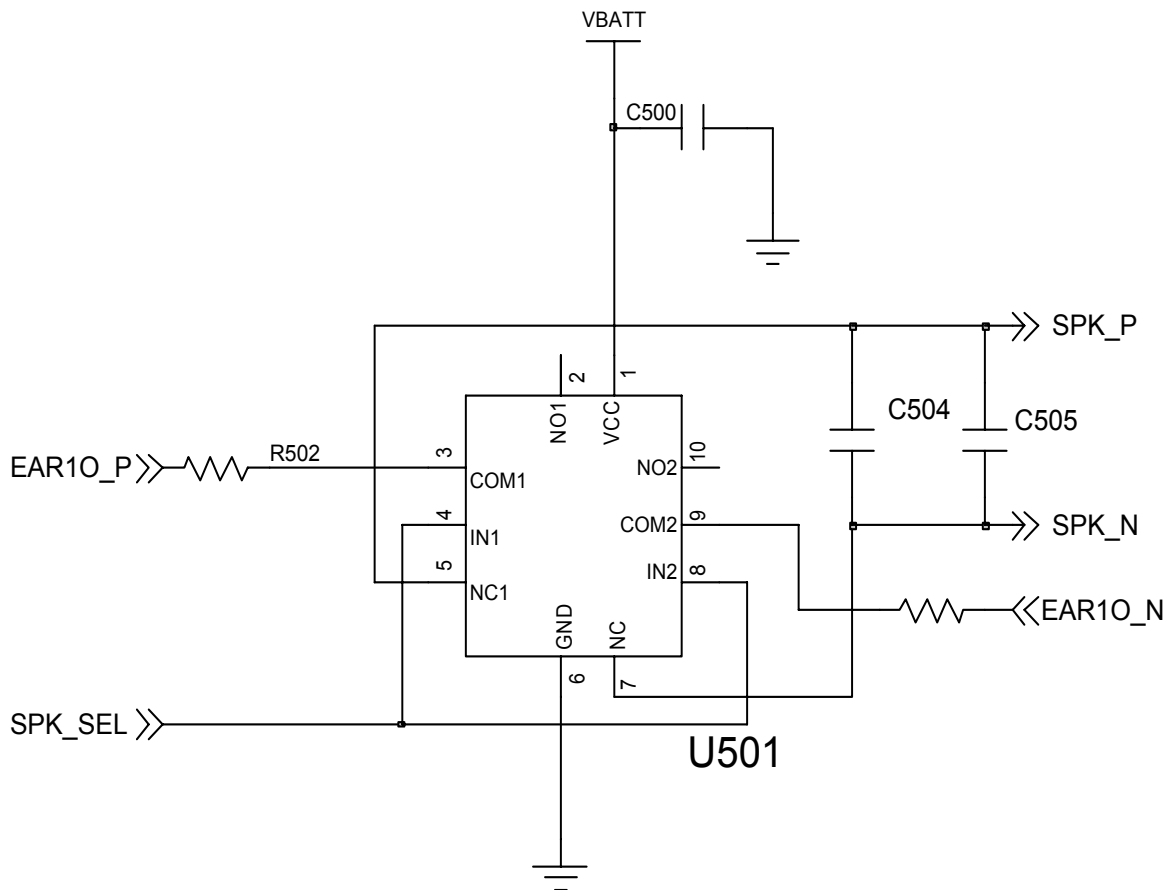
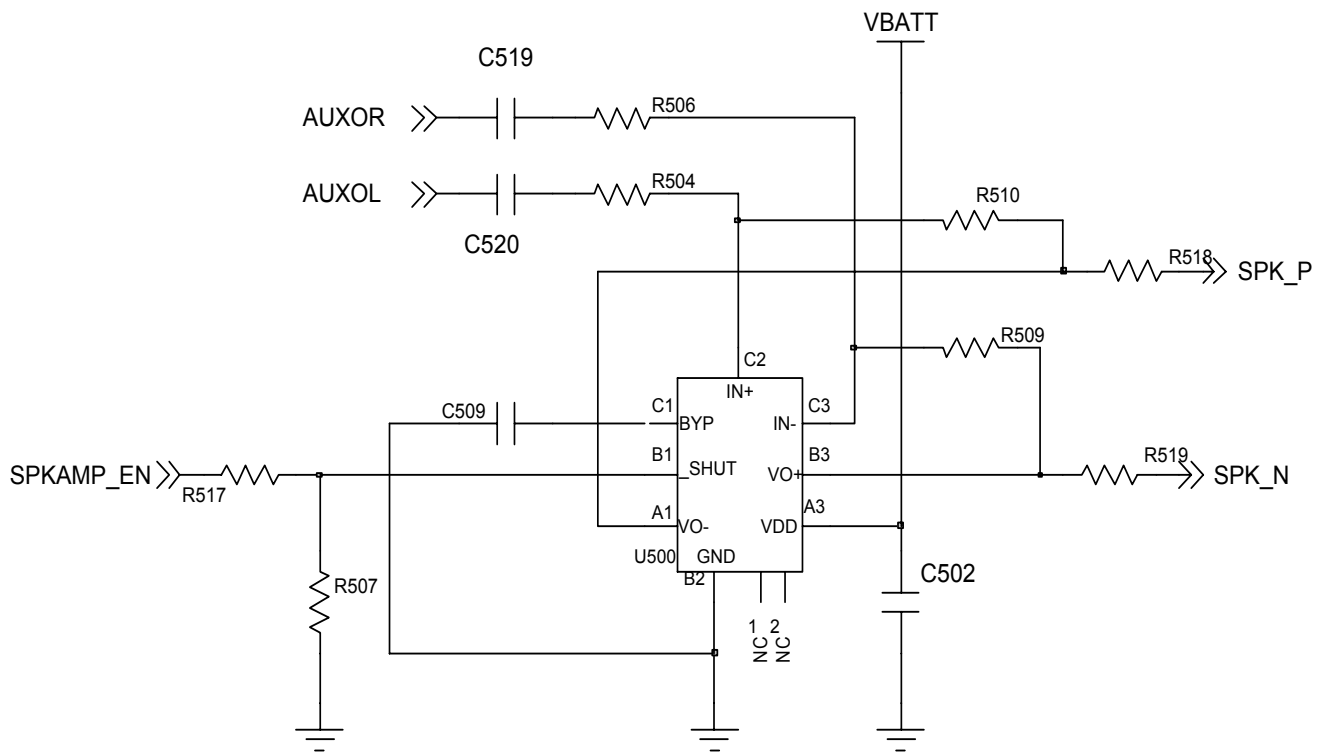
- Layout for charging IC



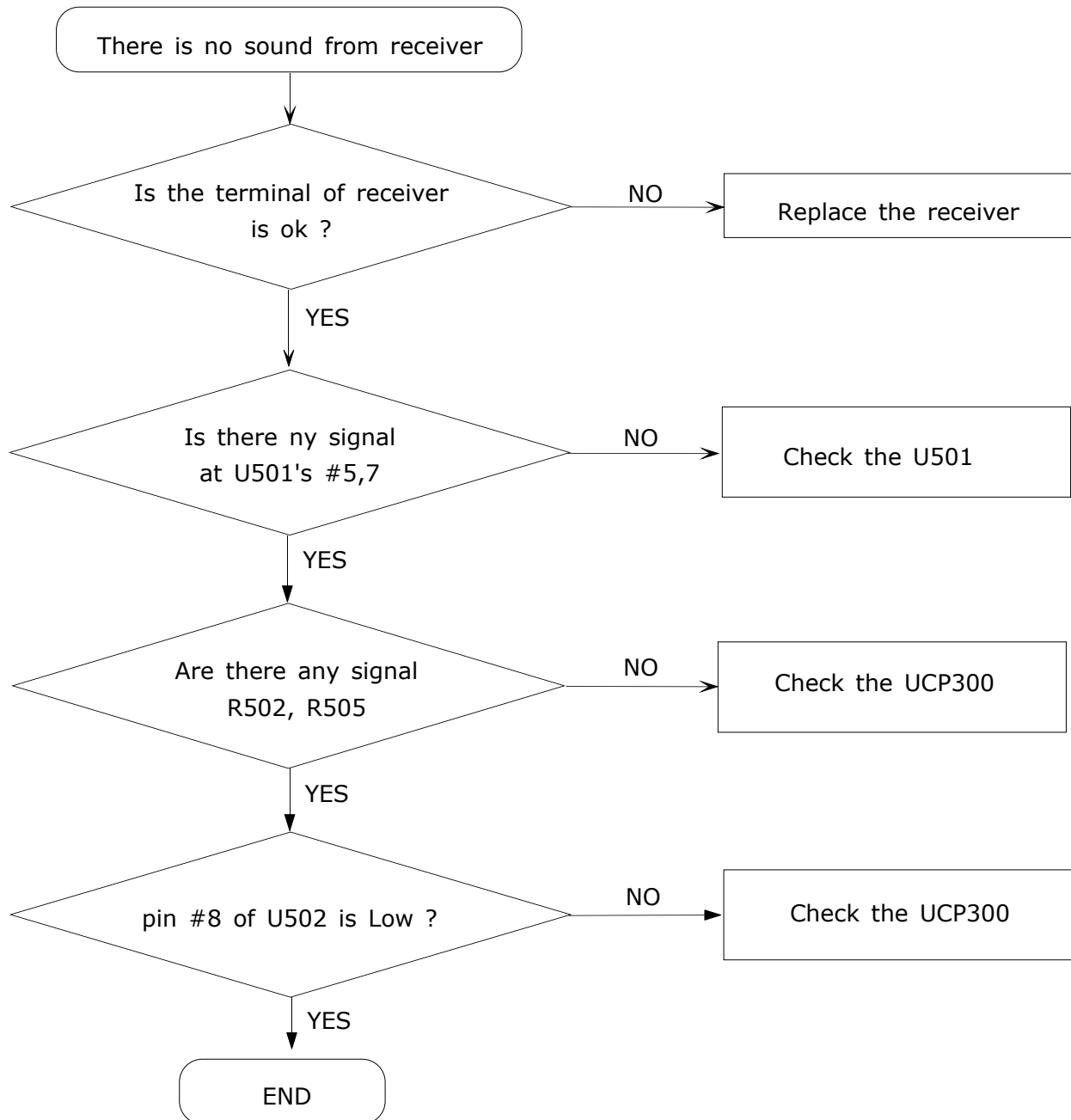
9-1-5. Microphone Part

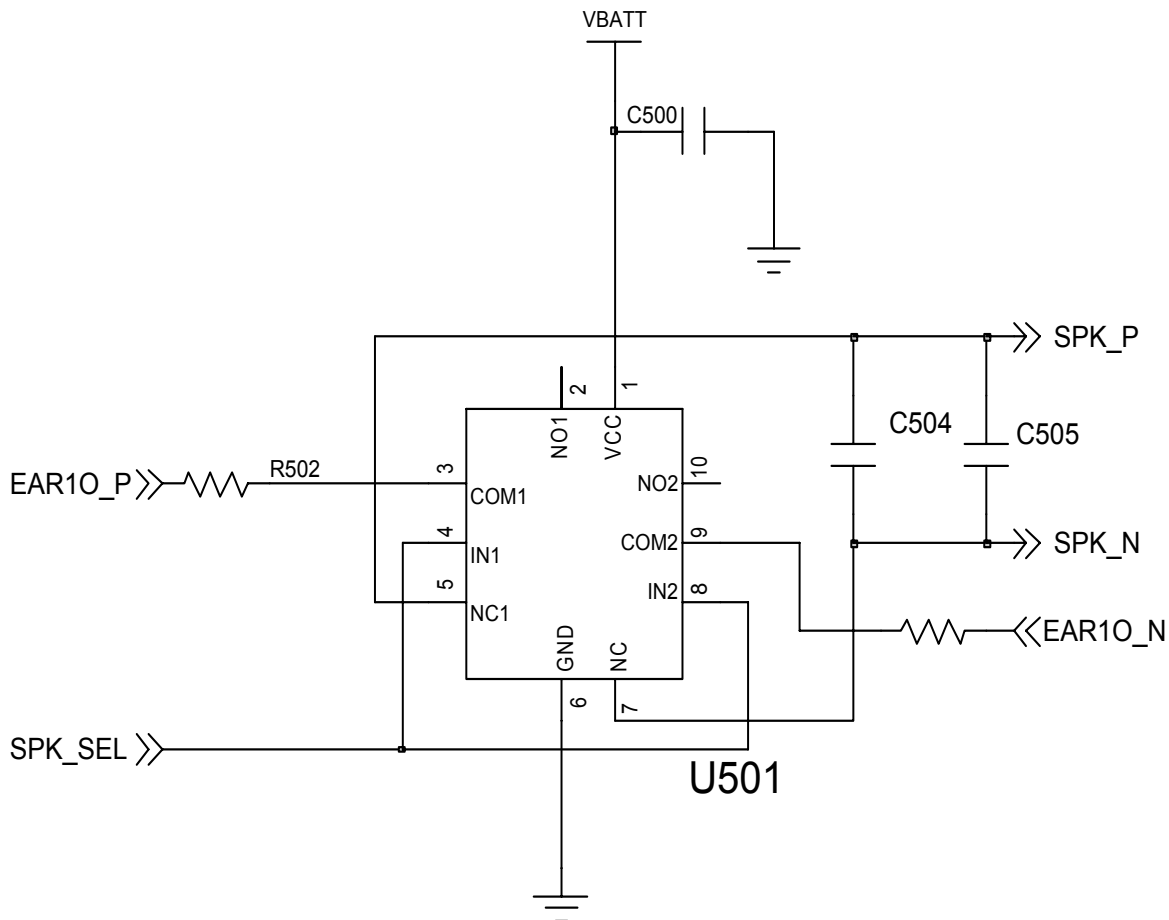


9-1-6. Speaker Part

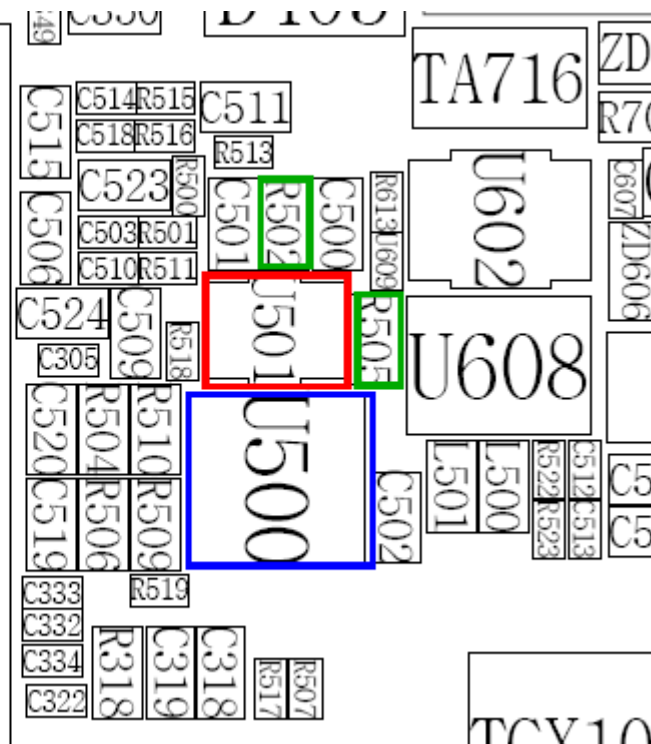


9-1-7. Receiver Part

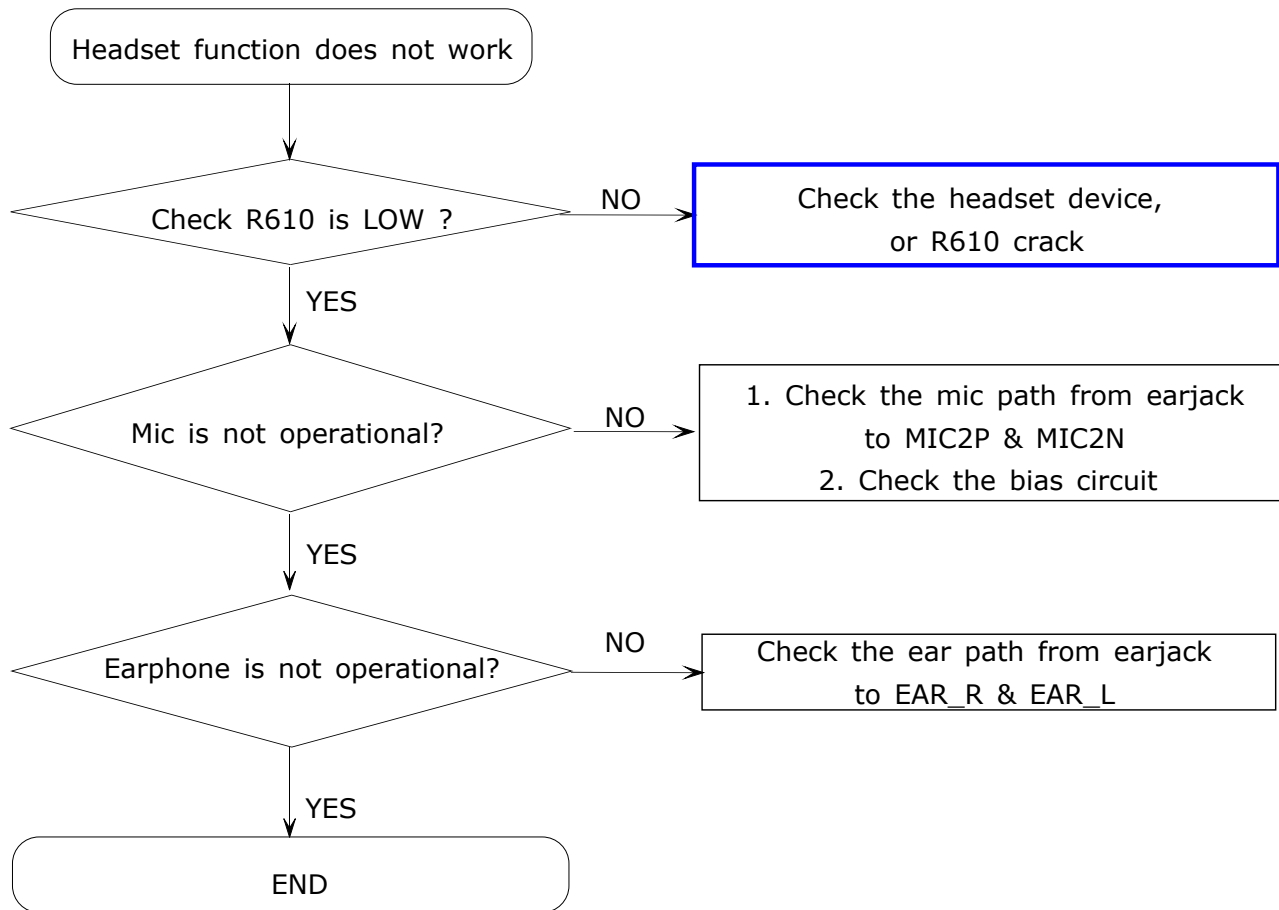




UCP300

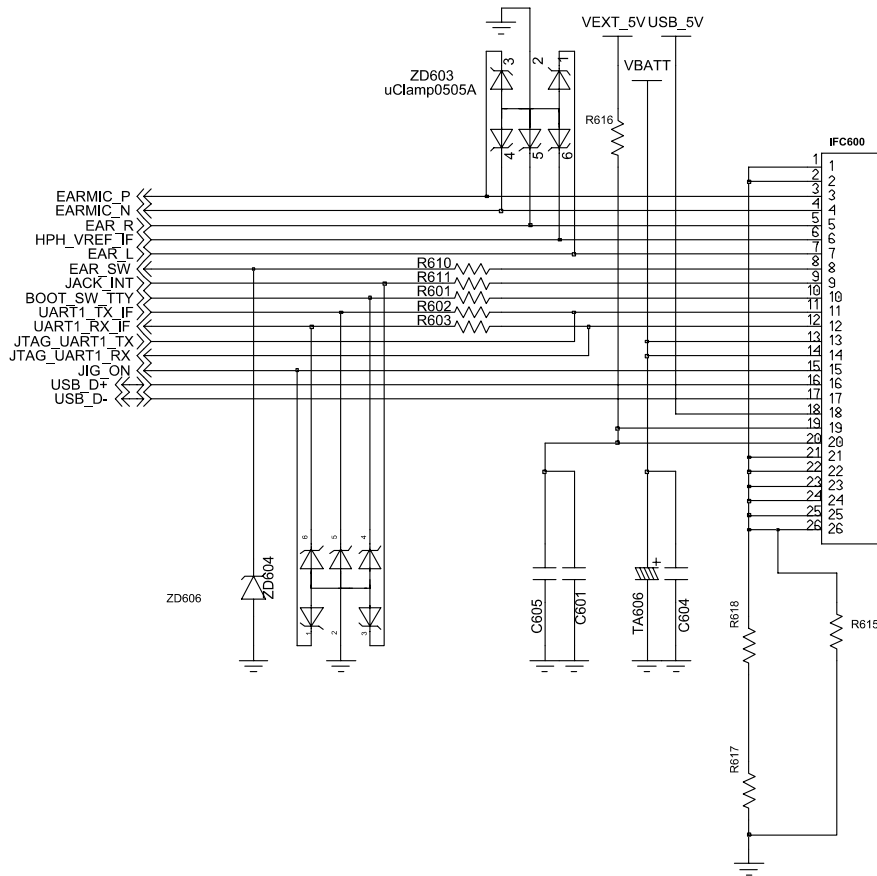


9-1-8. Headset Part

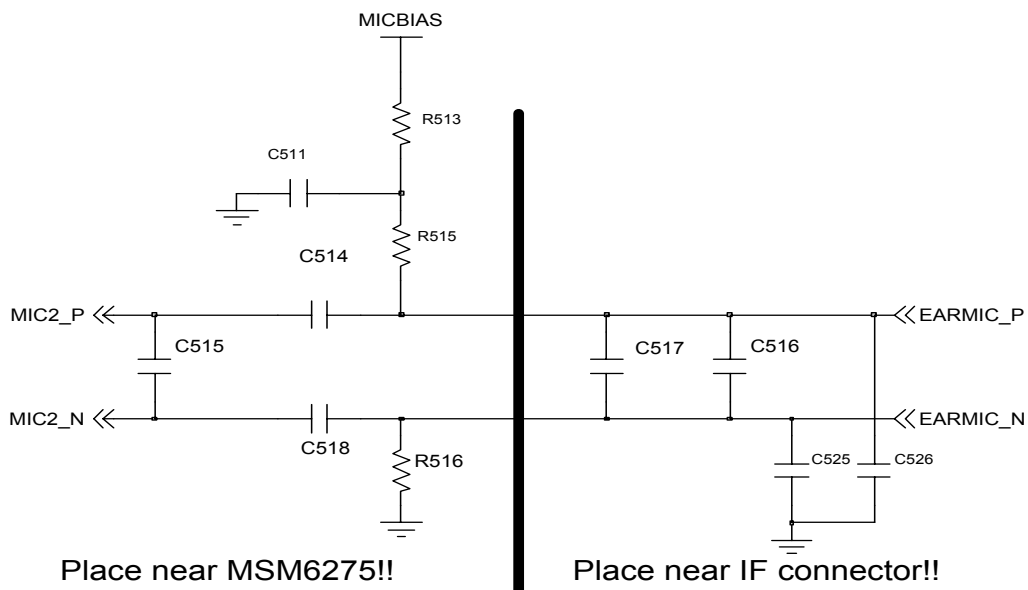


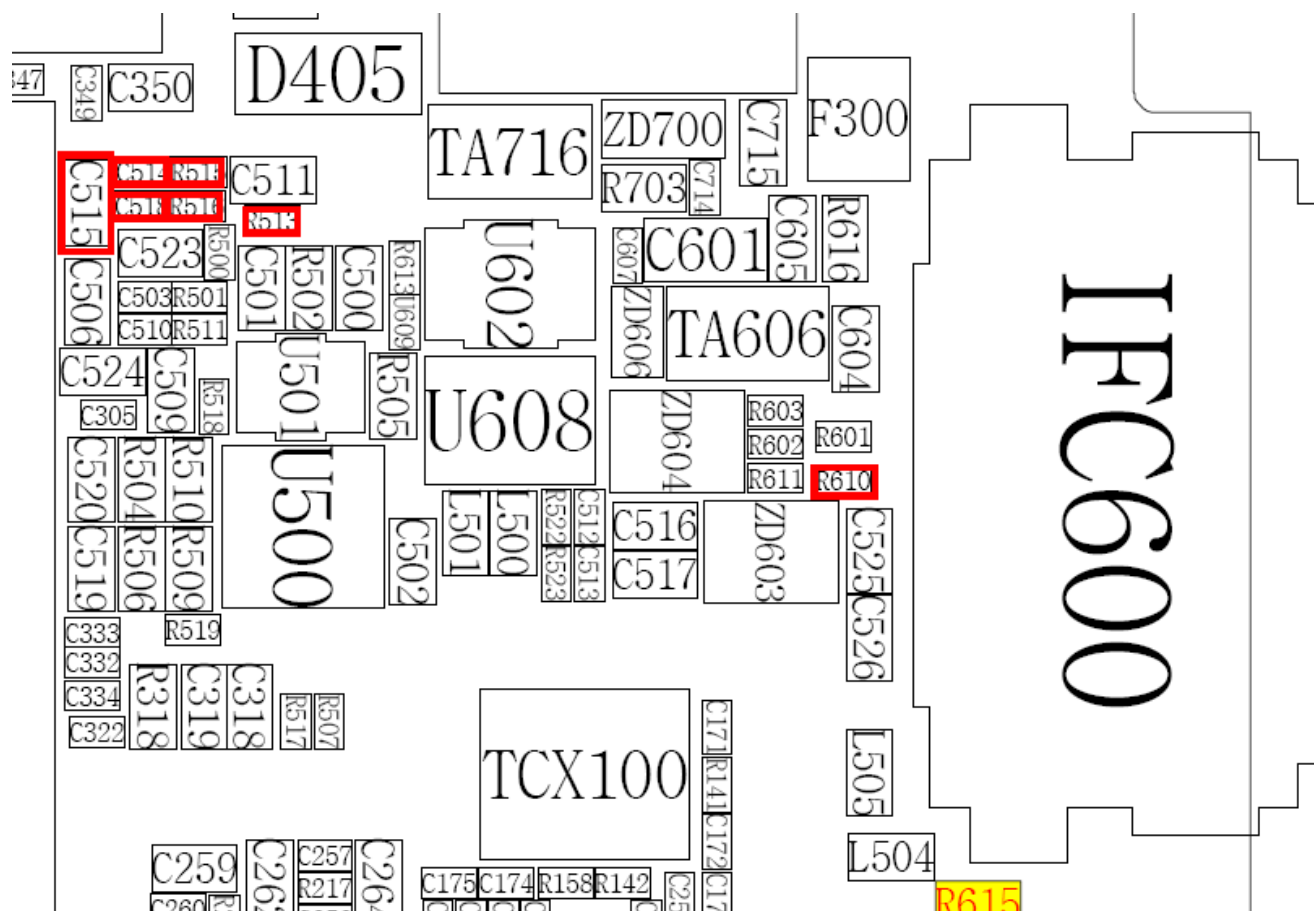
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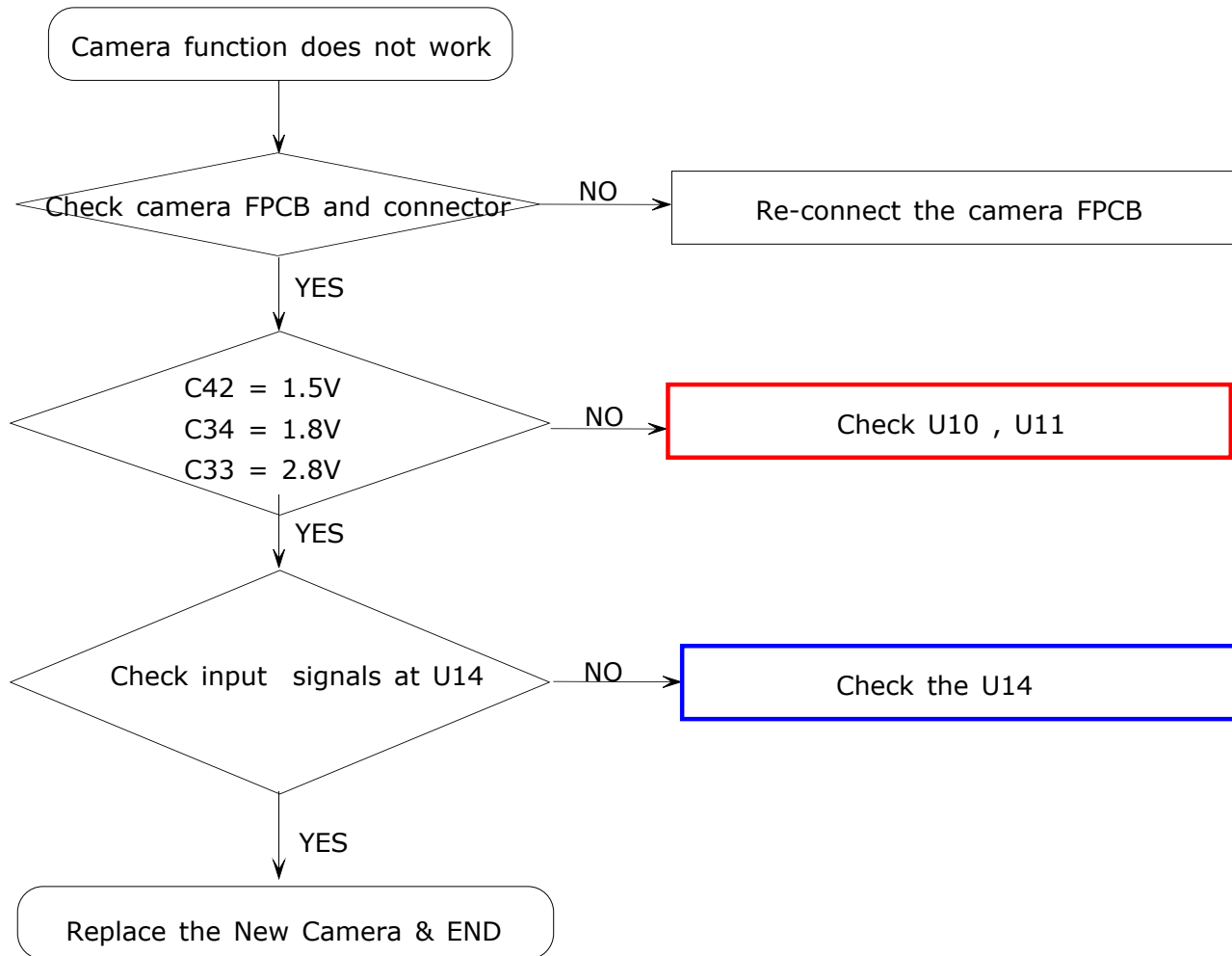
IF CONNECTOR

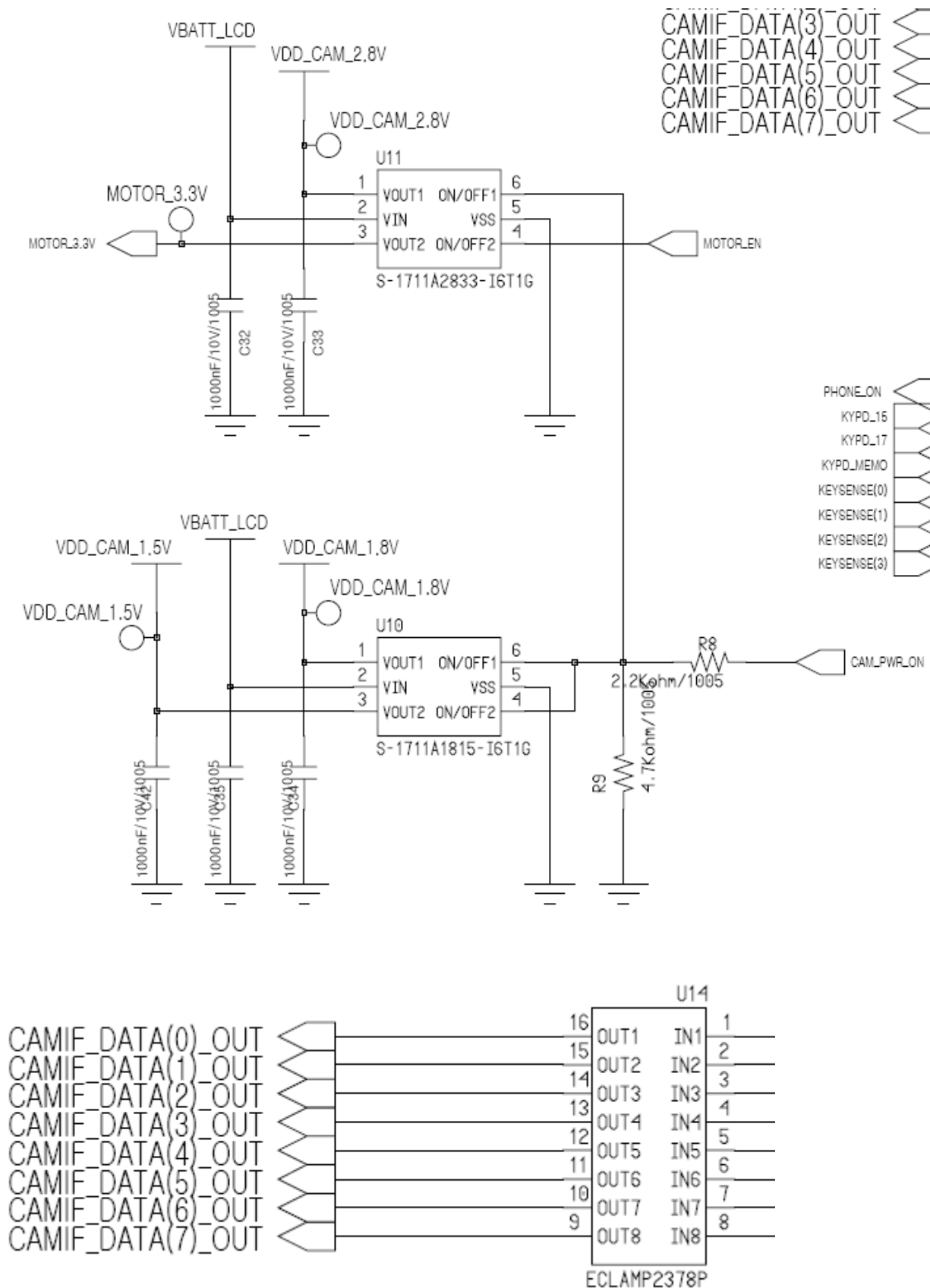


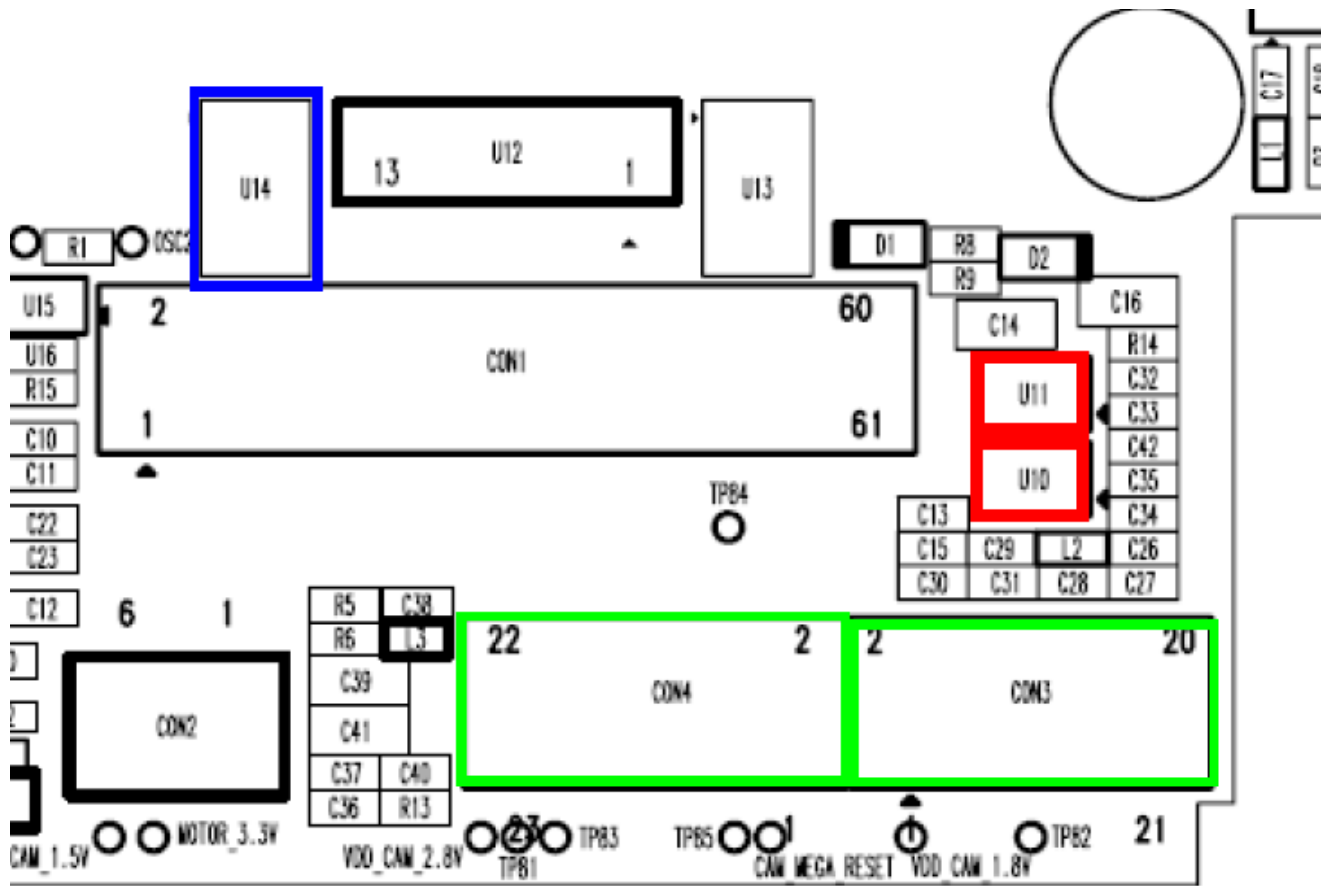
EARPHONE PATH





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

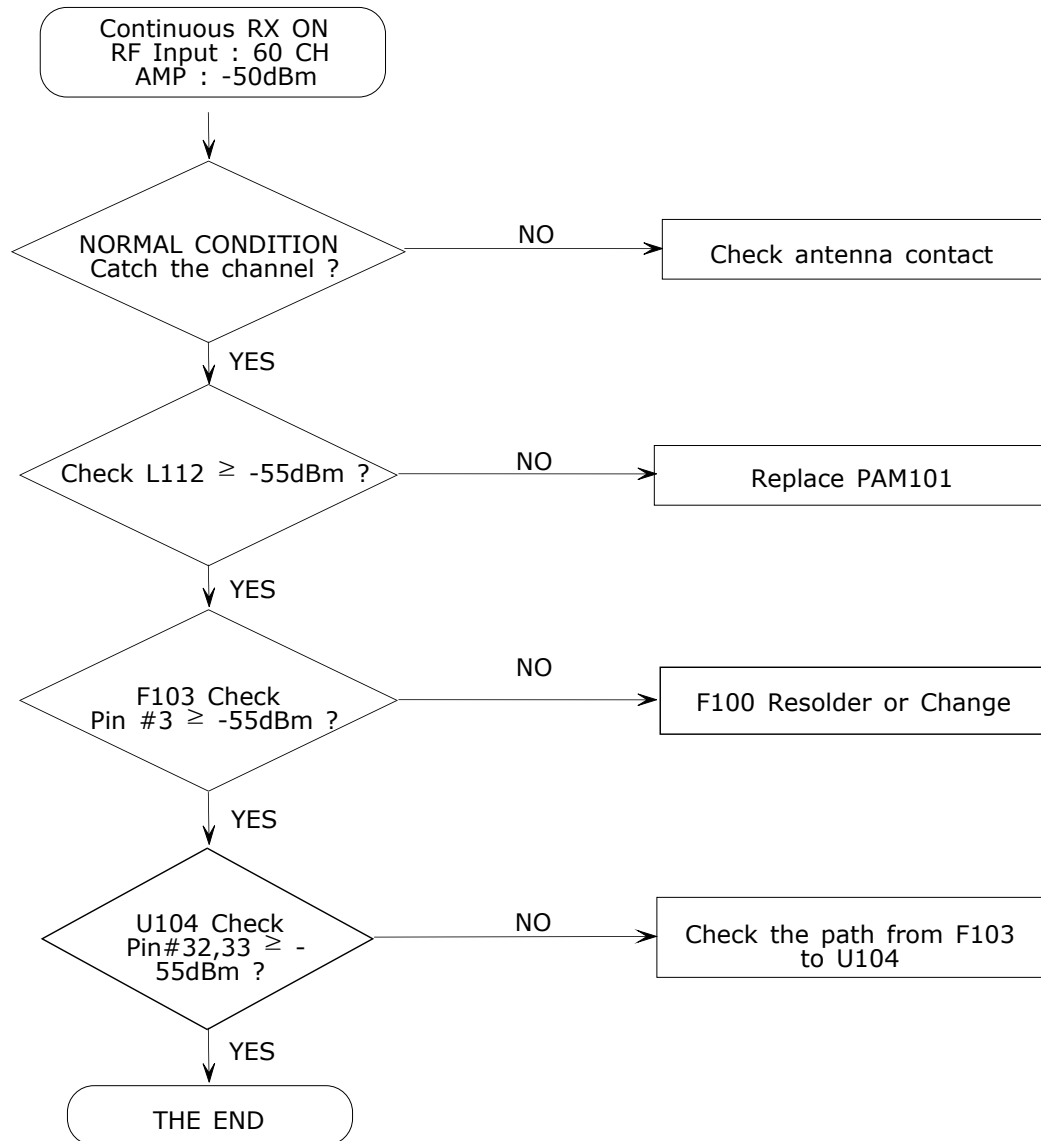




9-2.RF**9-2-1. GSM850 Receiver**

**If you check the tx chain,

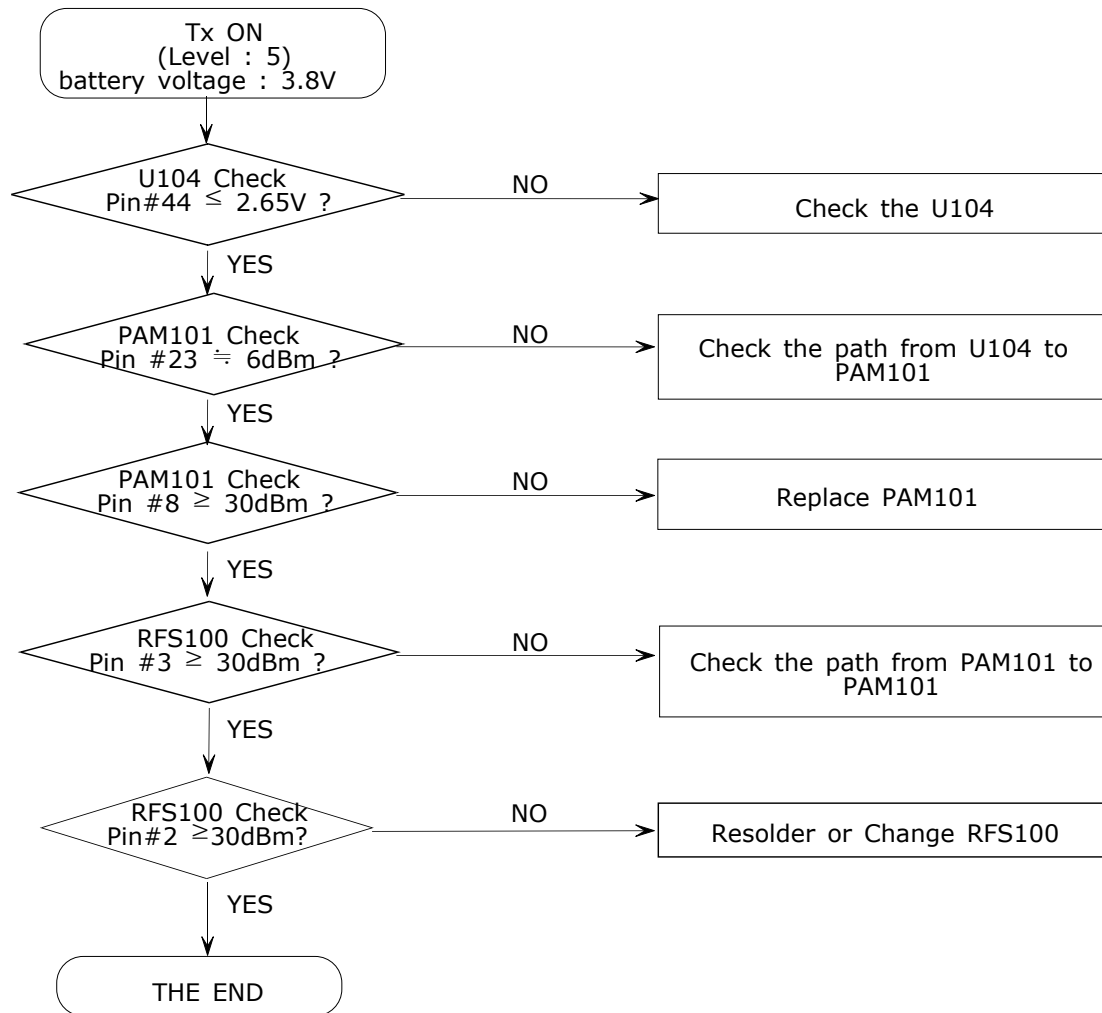
Check the not only RF Device but also resistor, inductor and capacitor.



9-2-2. GSM850 Transmitter

**If you check the tx chain,

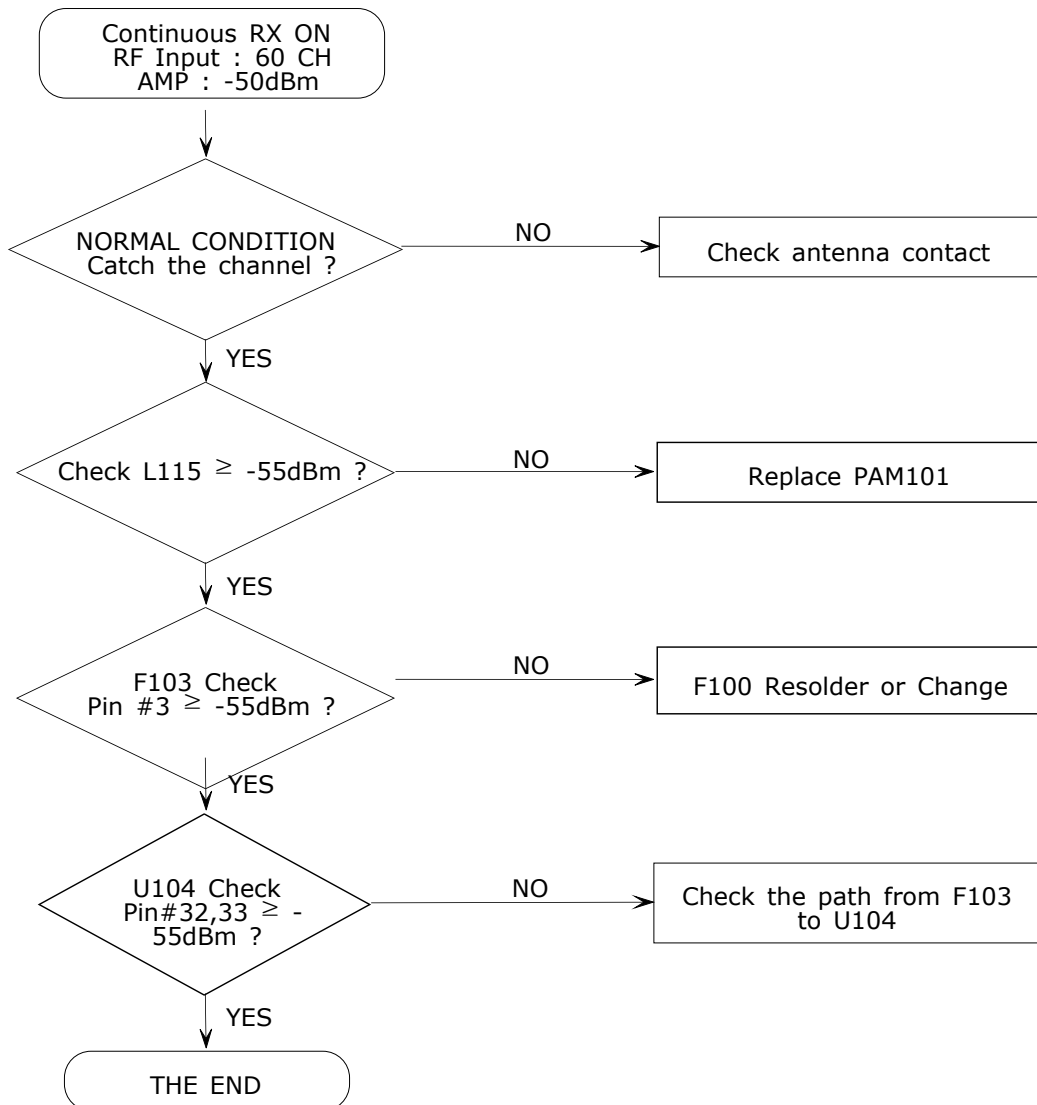
Check the not only RF Device but also resistor, inductor and capacitor.



9-2-3. GSM900 Receiver

**If you check the tx chain,

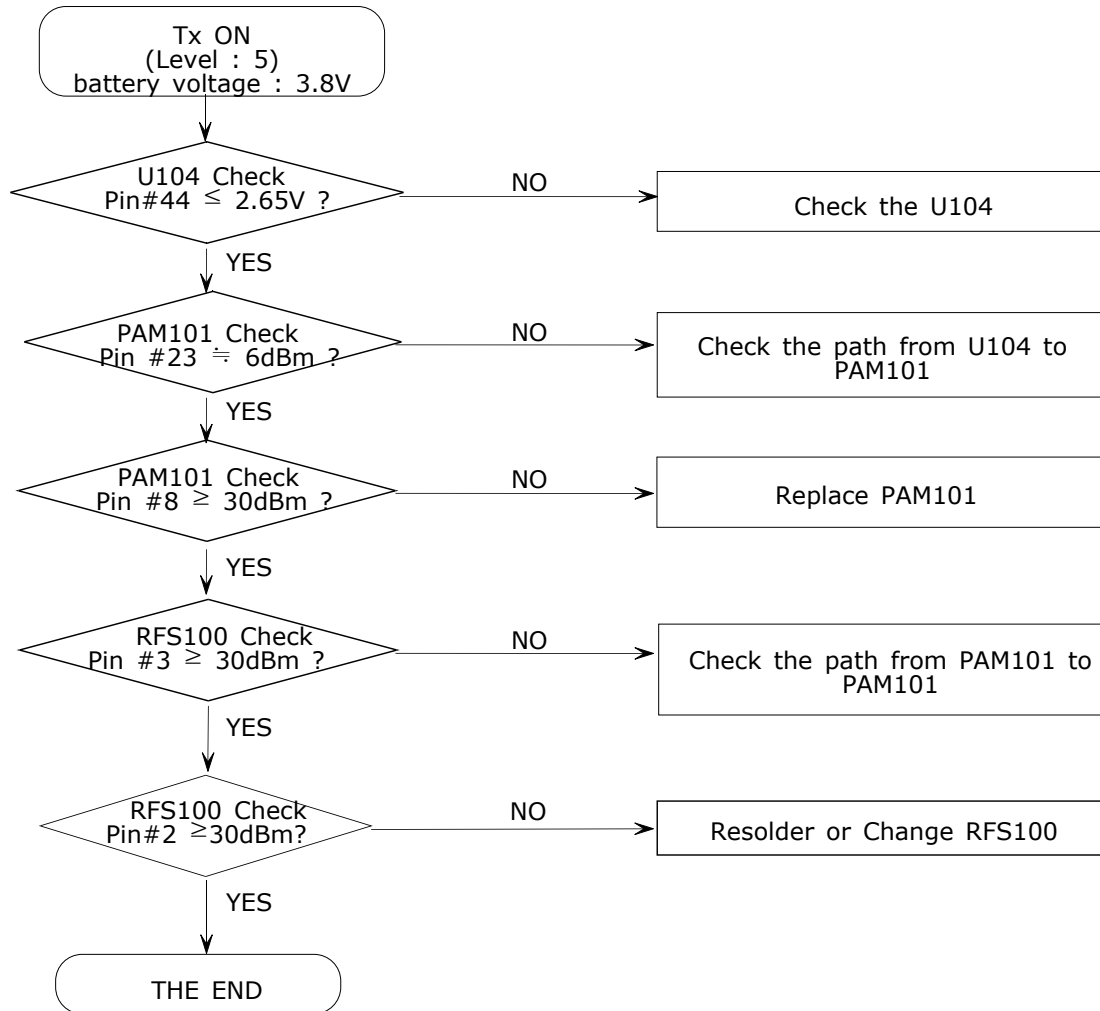
Check the not only RF Device but also resistor, inductor and capacitor.



9-2-4. GSM900 Transmitter

**If you check the tx chain,

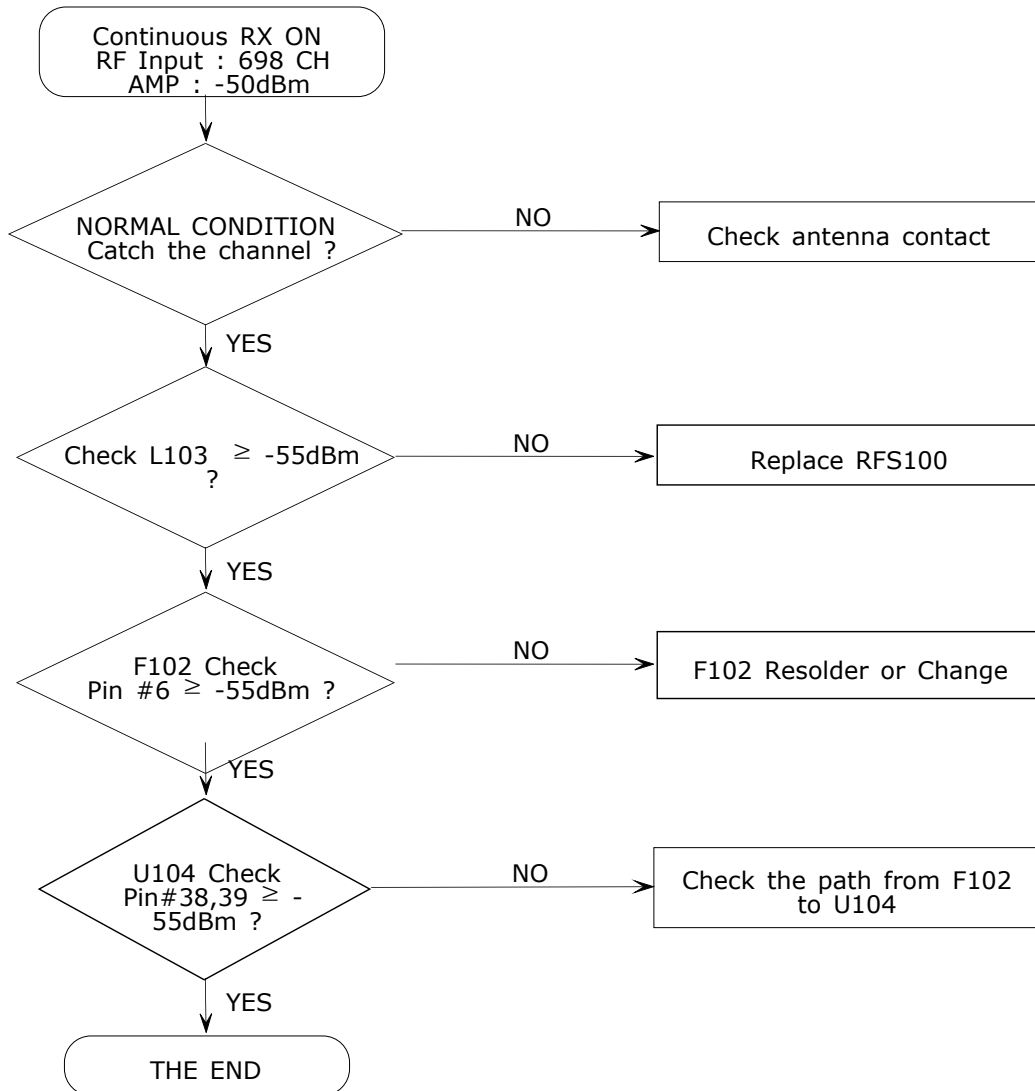
Check the not only RF Device but also resistor, inductor and capacitor.



9-2-5. DCS1800 Receiver

****If you check the tx chain,**

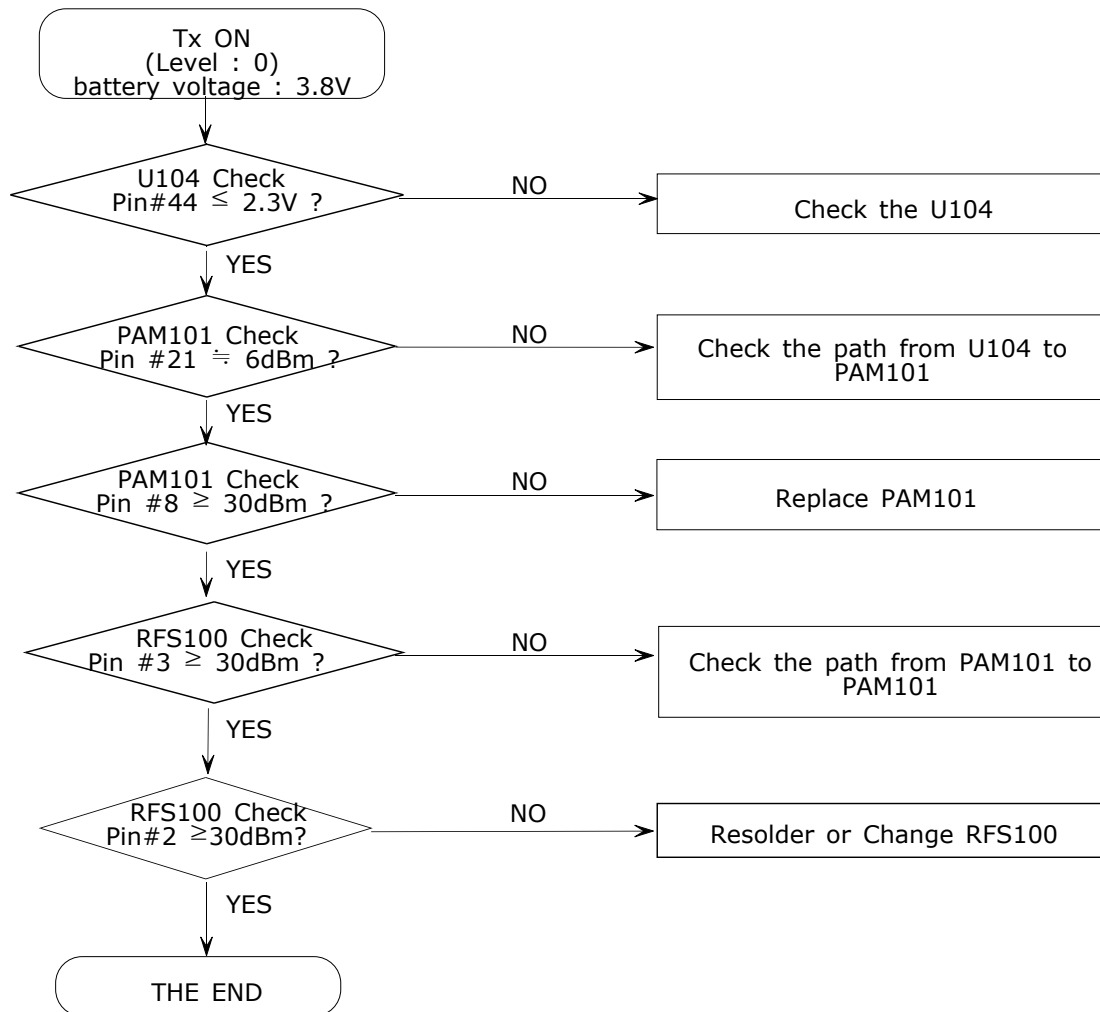
Check the not only RF Device but also resistor, inductor and capacitor.



9-2-6. DCS1800 Transmitter

**If you check the tx chain,

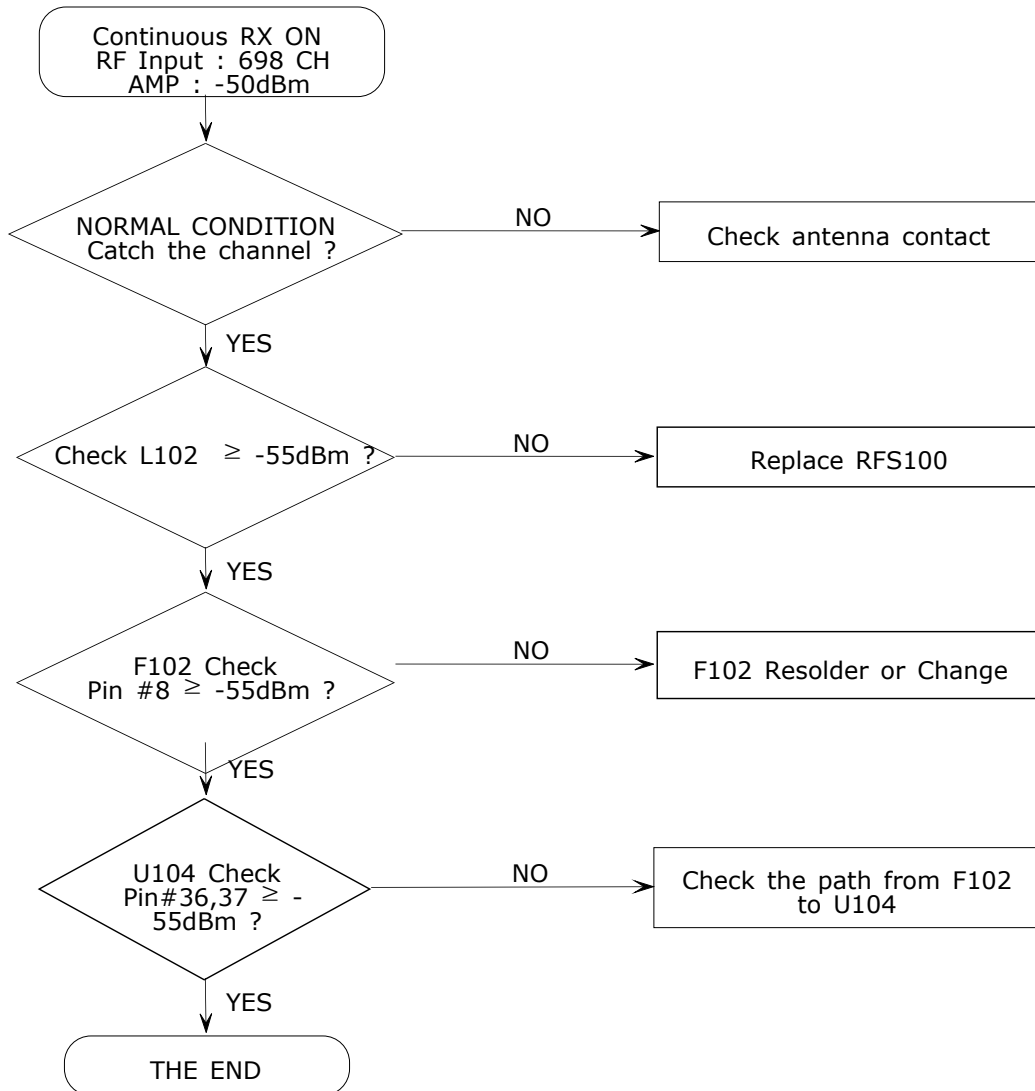
Check the not only RF Device but also resistor, inductor and capacitor.



9-2-7. PCS1900 Receiver

****If you check the tx chain,**

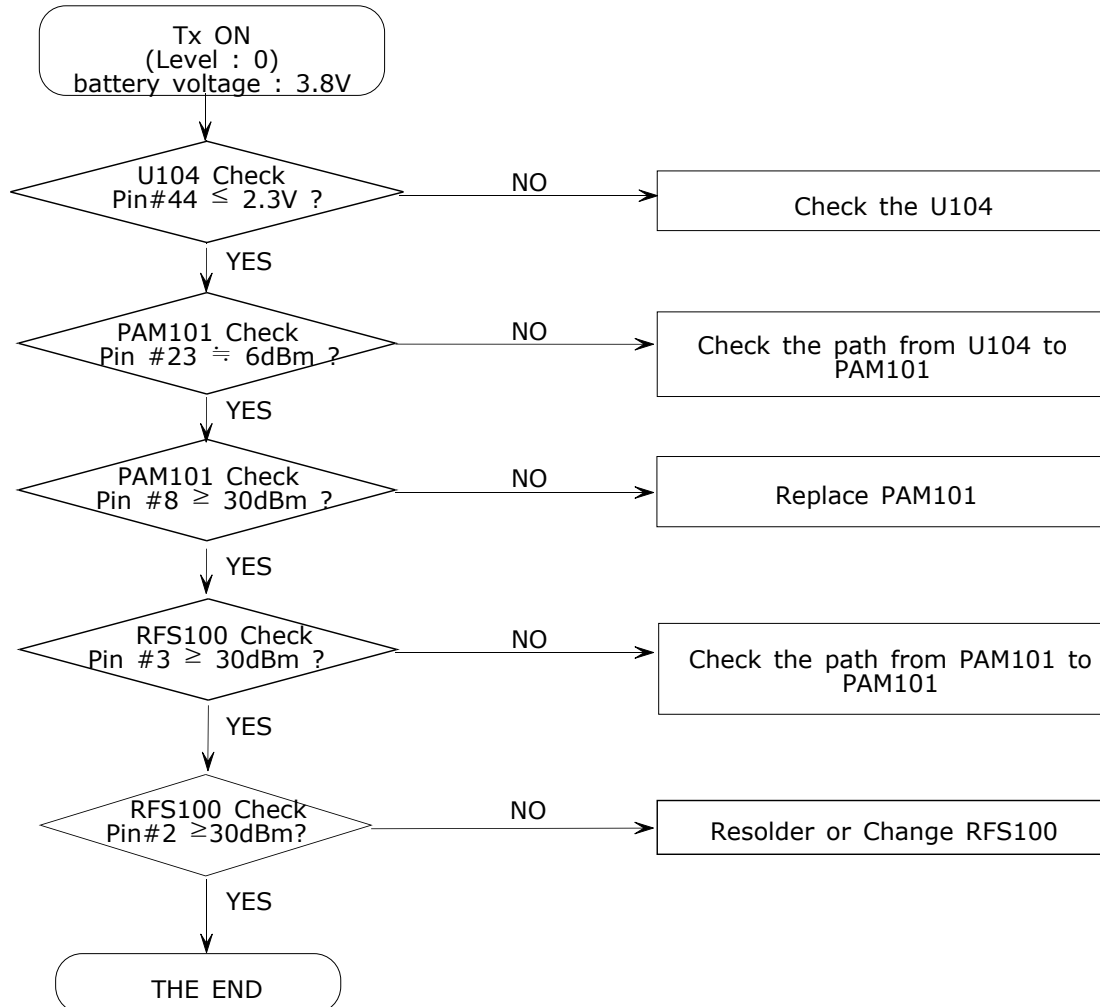
Check the not only RF Device but also resistor, inductor and capacitor.



9-2-8. PCS1900 Transmitter

**If you check the tx chain,

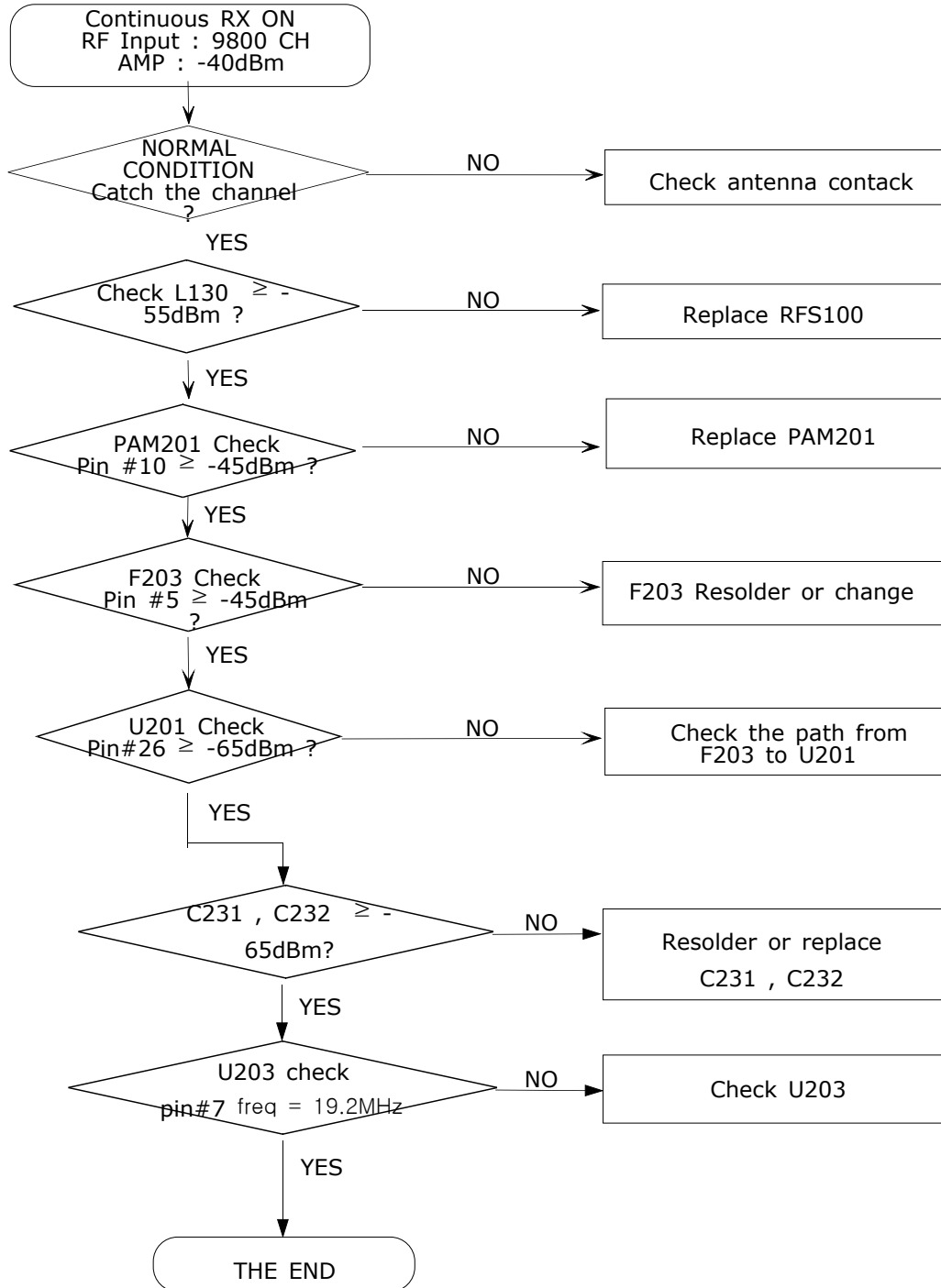
Check the not only RF Device but also resistor, inductor and capacitor.



9-2-9. UMTS850 Receiver

**If you check the tx chain,

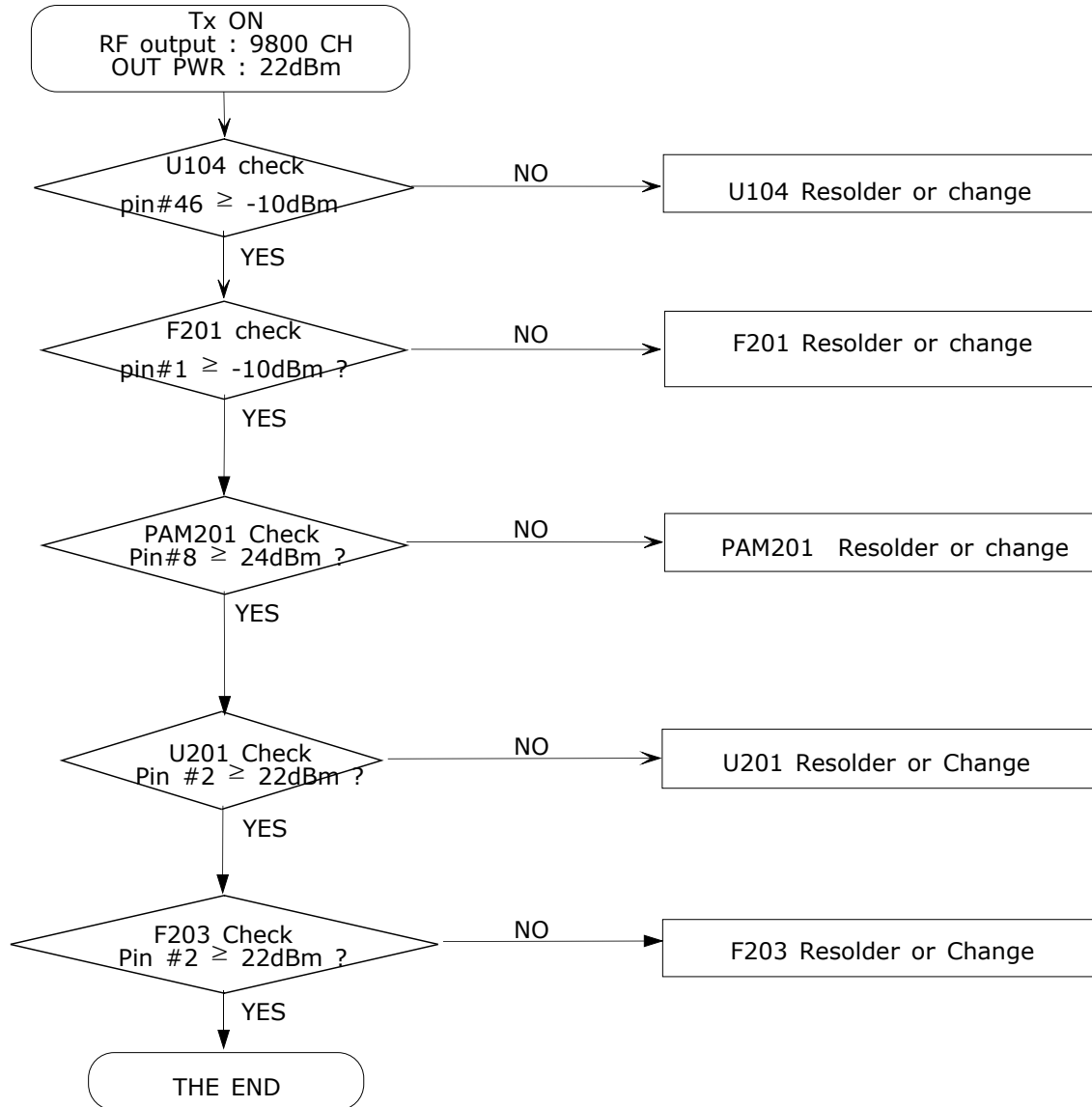
Check the not only RF Device but also resistor, inductor and capacitor.



9-2-10. UMTS850 Transmitter

**If you check the tx chain,

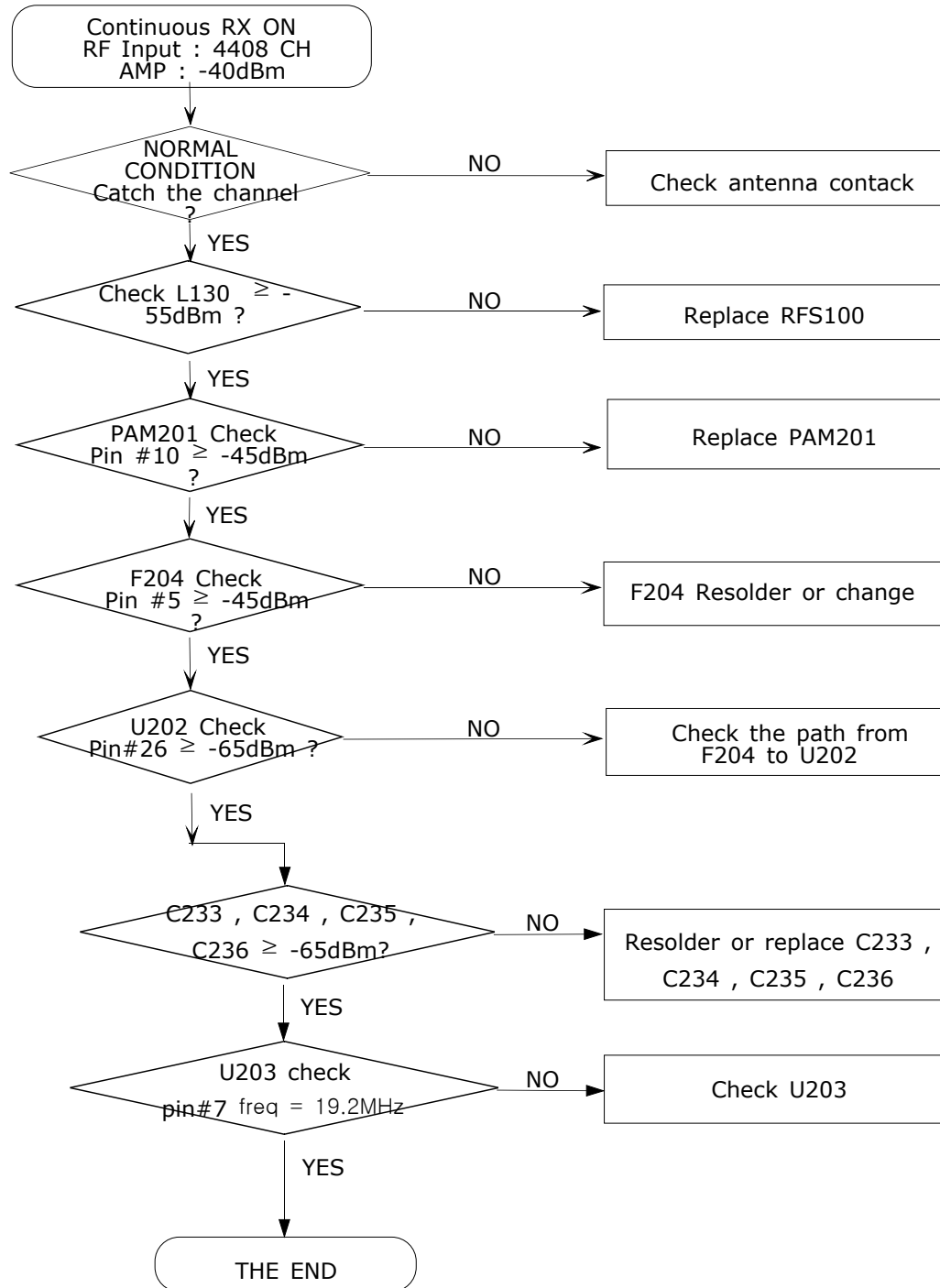
Check the not only RF Device but also resistor, inductor and capacitor.



9-2-11. UMTS1900 Receiver

**If you check the tx chain,

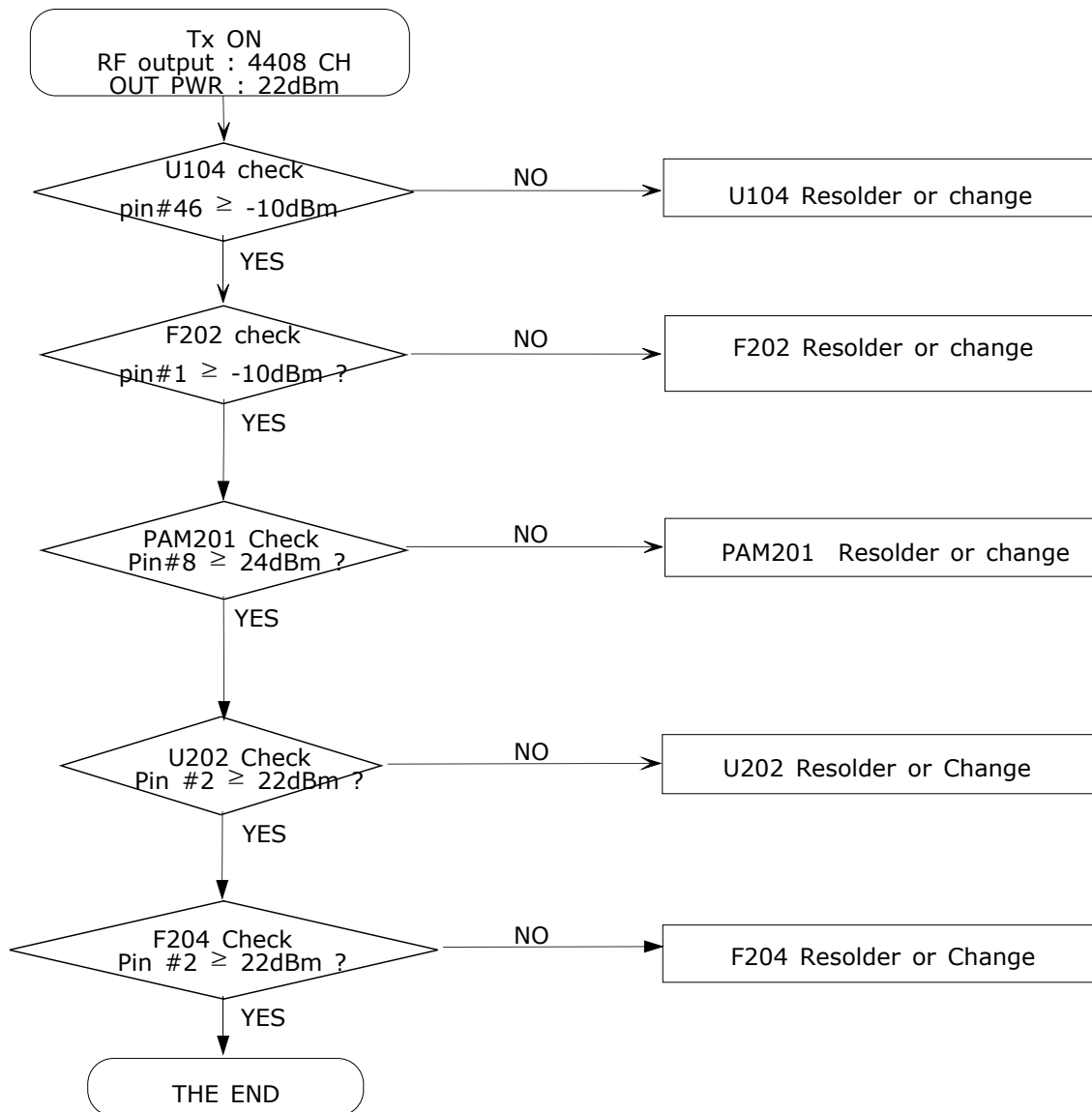
Check the not only RF Device but also resistor, inductor and capacitor.

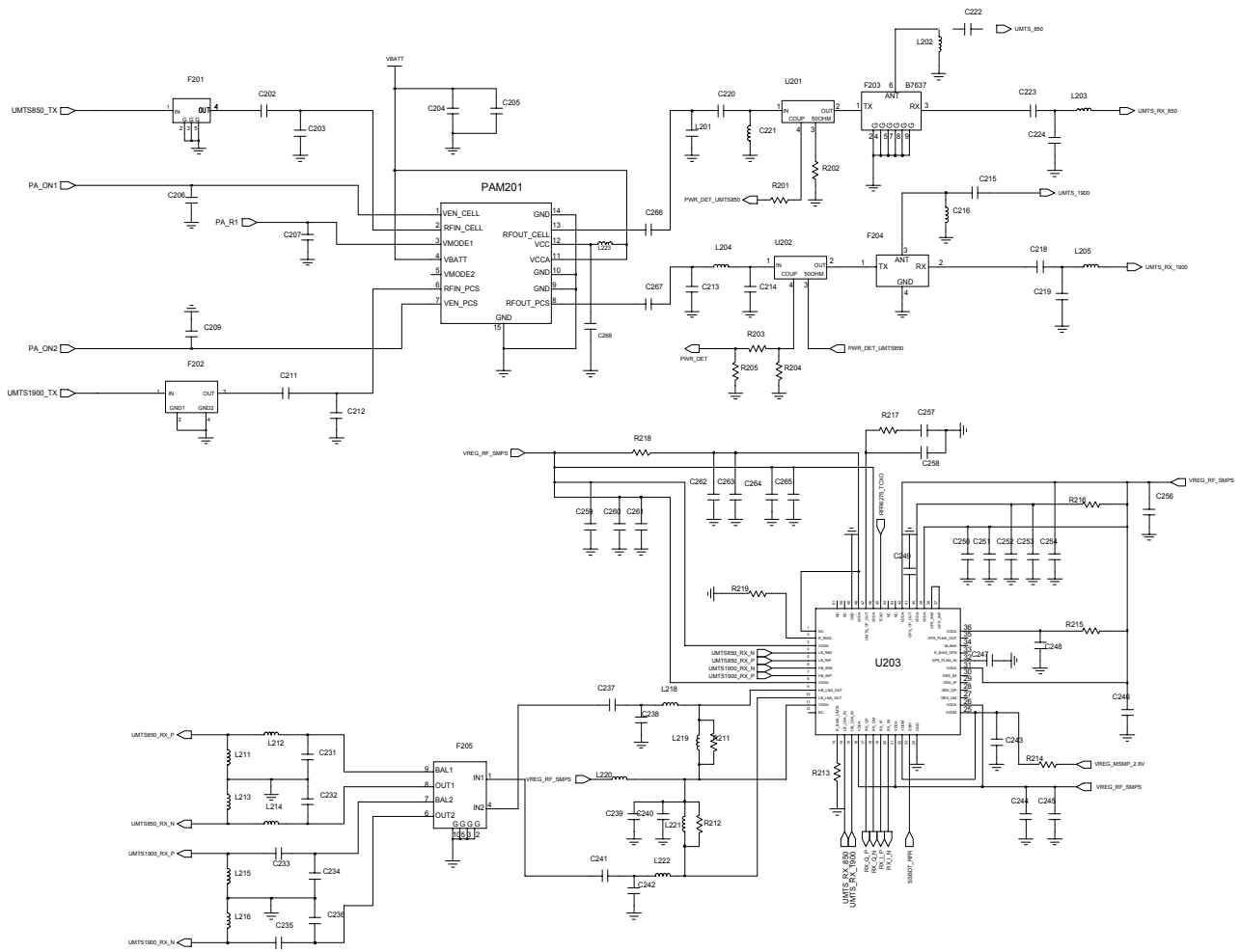


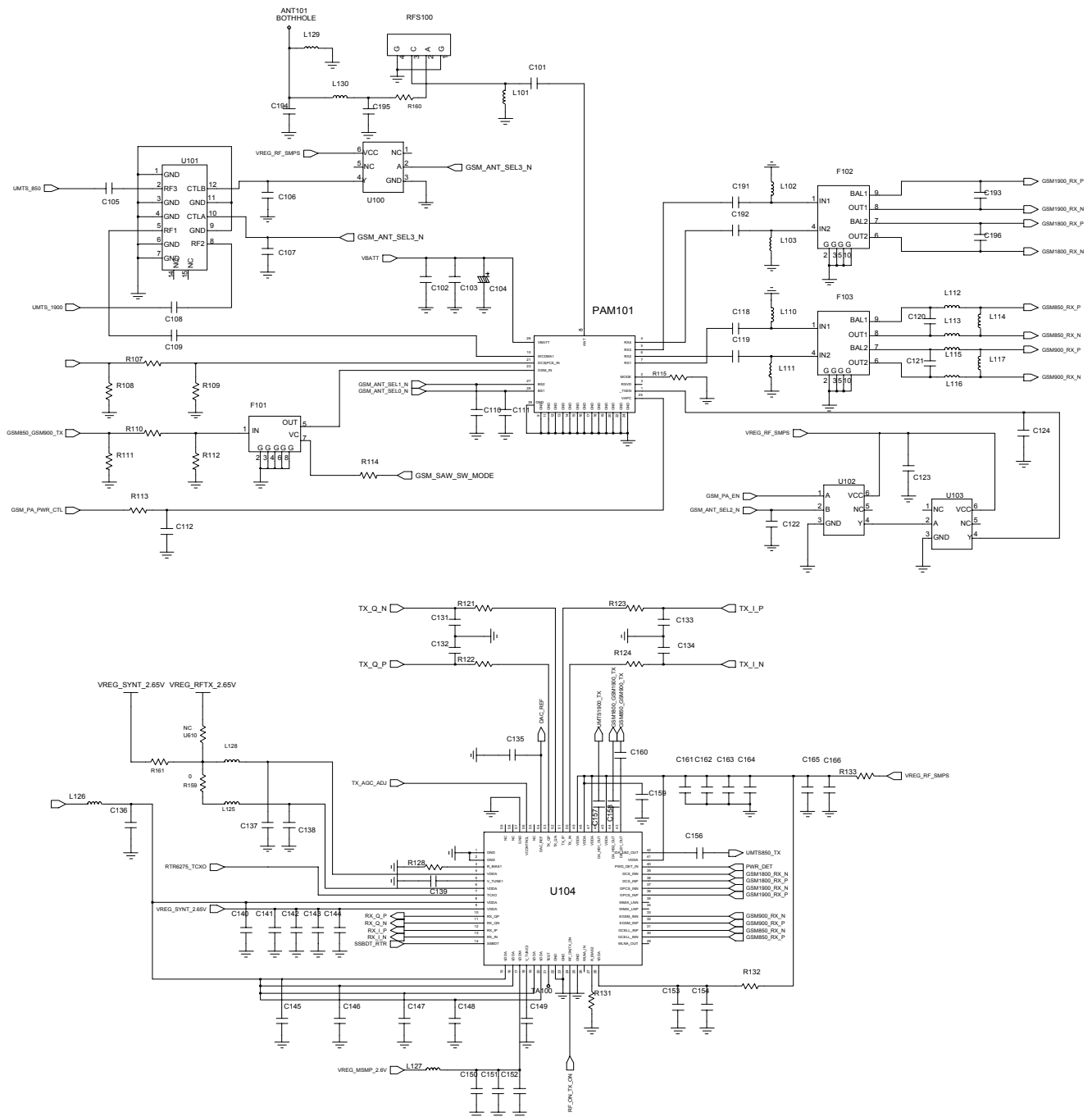
9-2-12. UMTS1900 Transmitter

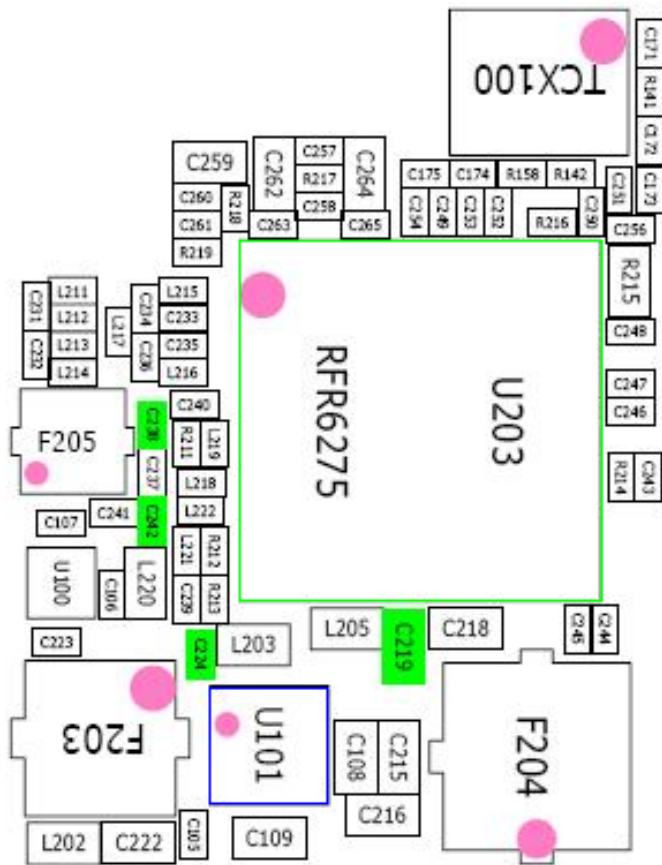
**If you check the tx chain,

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

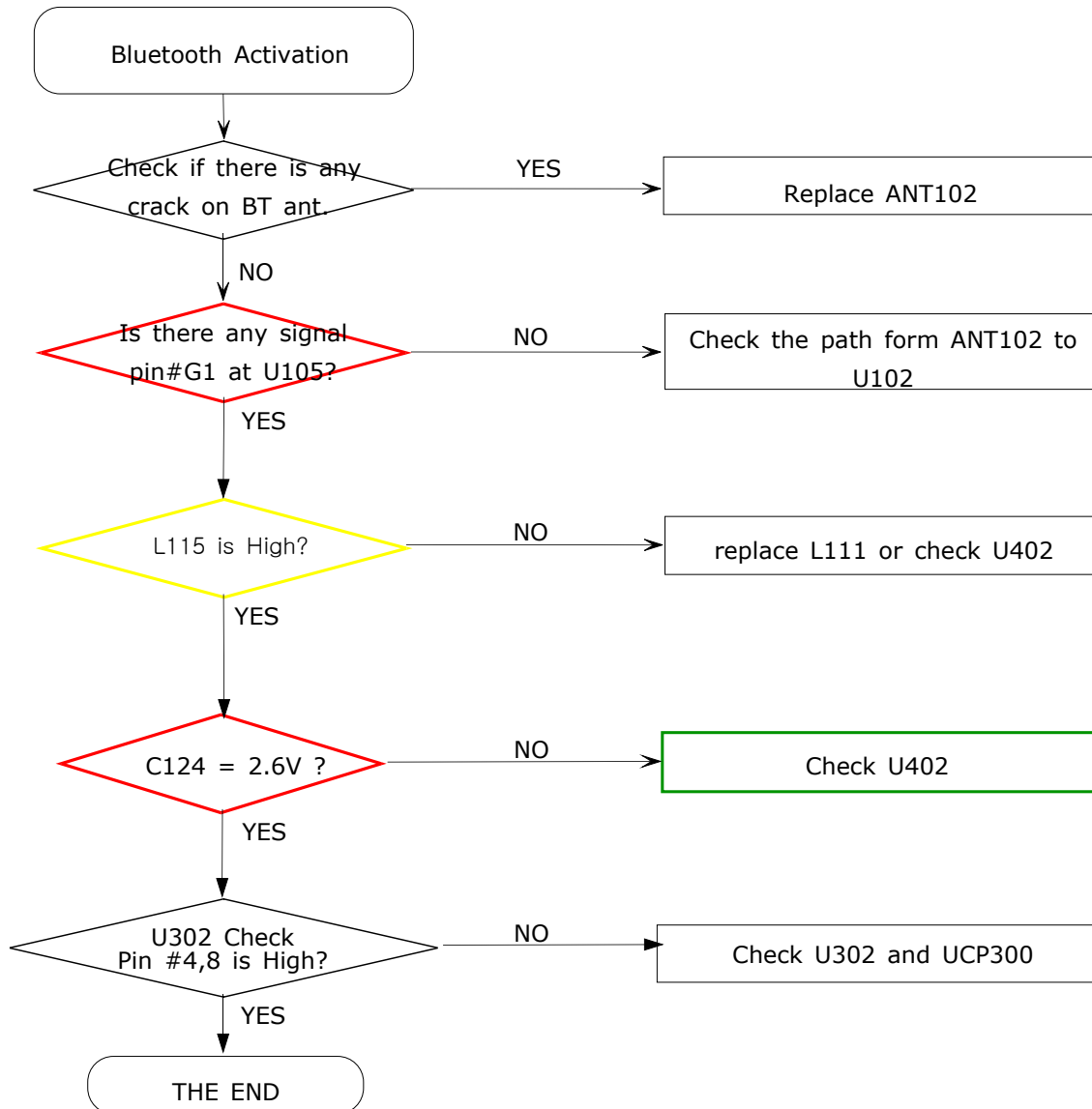




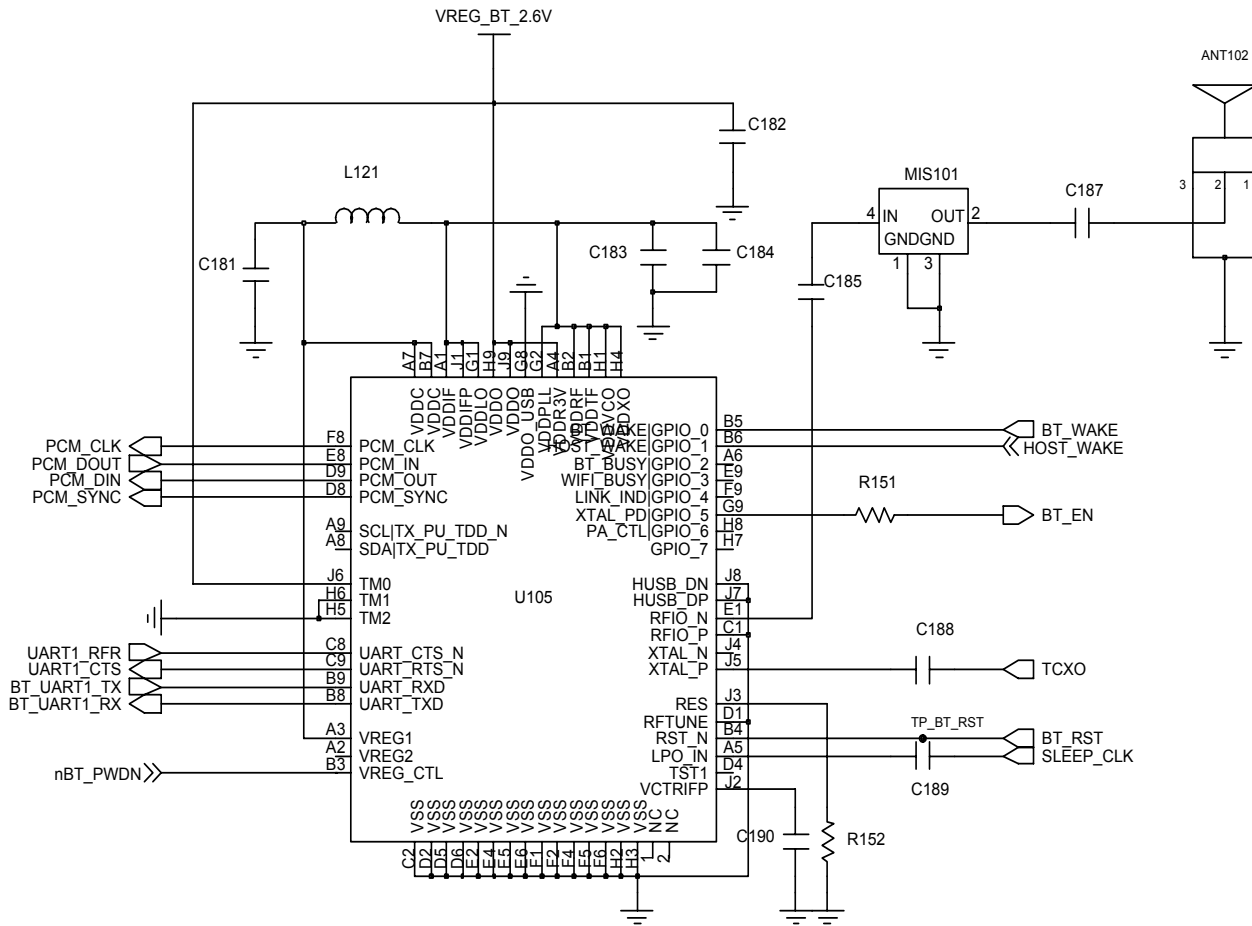




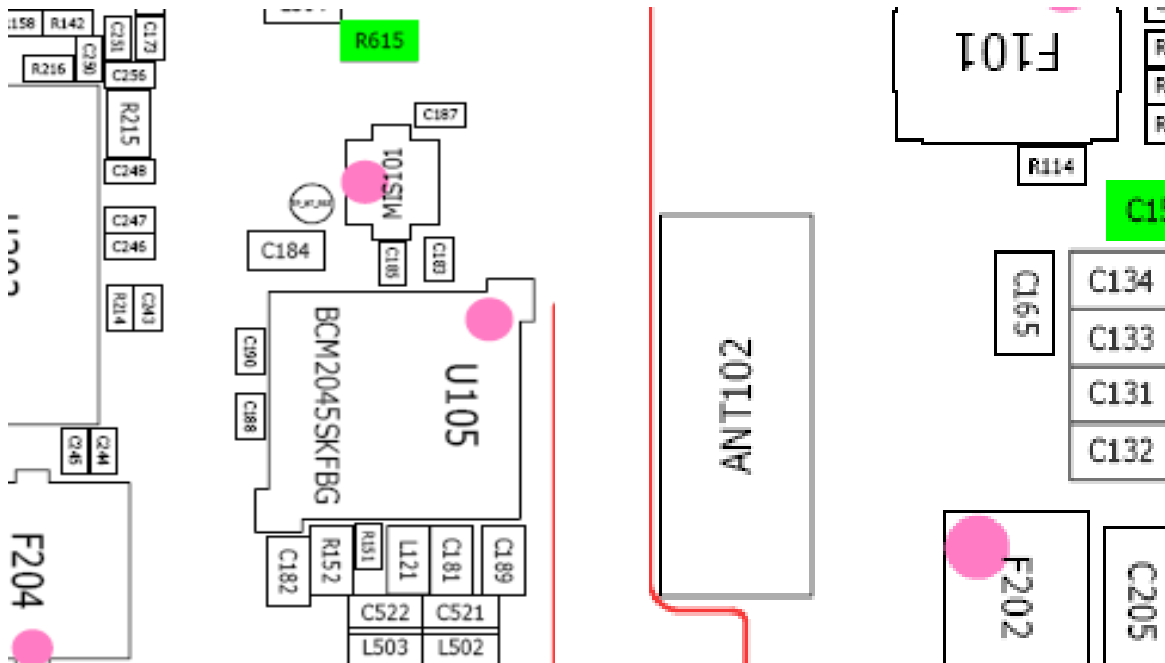
9-2-13. BLUETOOTH



- Schematic of bluetooth



- Layout of bluetooth



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
- **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

The work guide to disjoint SET – Disjoint REAR

1



Remove the screw caps.

2



Remove the RF sheet.

3



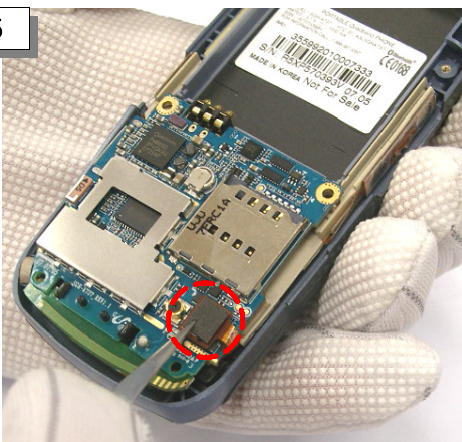
Remove the screws.

4



Disjoint the Rear and remove the side keys.

5



Take the key connector apart.

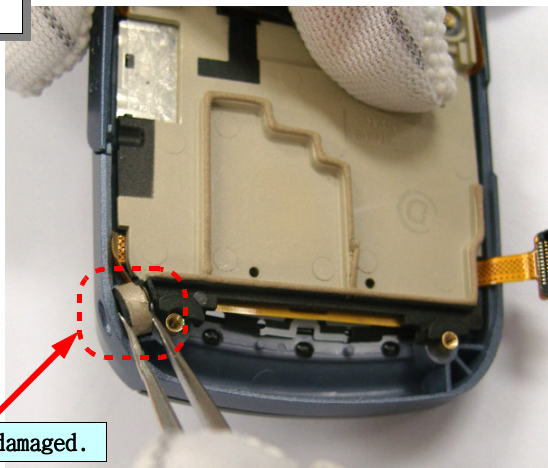
6



Take the PBA apart.

The work guide to disjoint SET - Disjoint Front

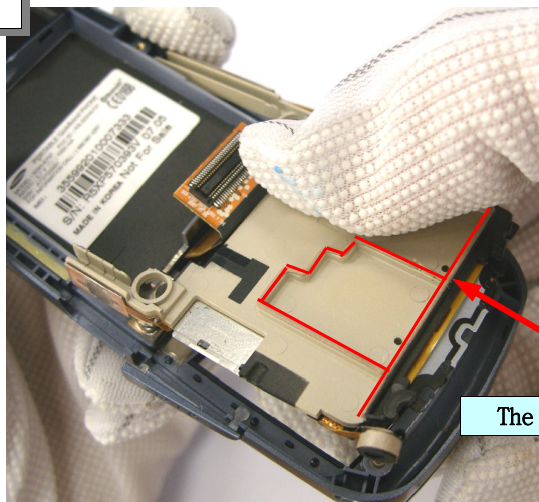
7



The MIC must not be damaged.

Take the Mic apart from the rib.

8



The Gasket must not be damaged.

Take the Key Bracket and Keypad apart from the SET.

9



Remove the screws.

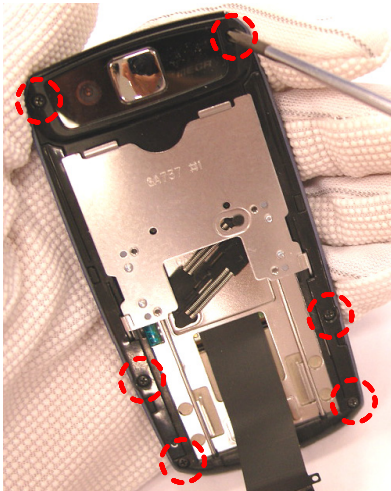
10



Detach the MAIN FPCB from the front.

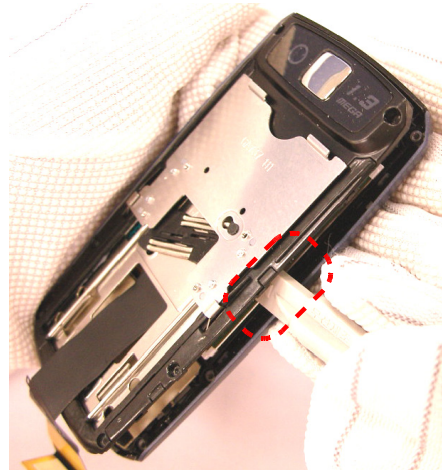
The work guide to disjoint SET – Disjoint Upper

11



Remove the screws.

12



Open the Upper/Lower with a knife.

13



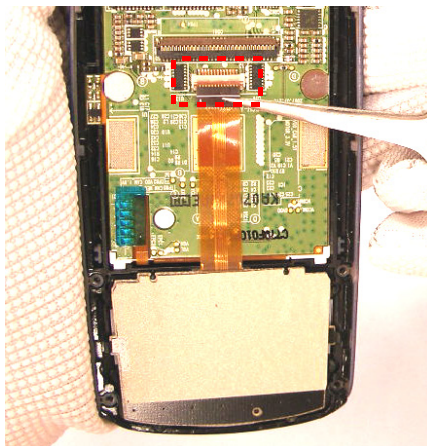
Detach the Tape from the Lcd.

14



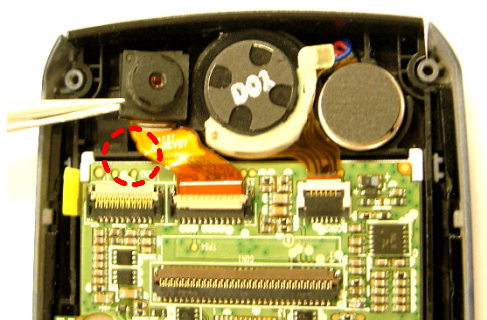
Open the main connector and pull the FPCB out.

15



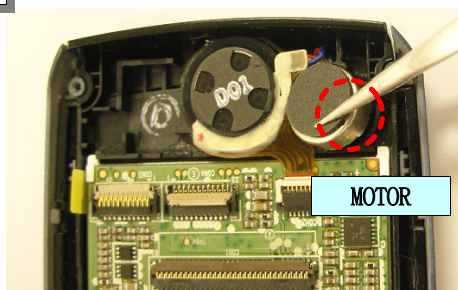
Open the Subkey connector and pull the Subkey FPCB out.

16



Open the camera connector and separate the camera from the Upper.

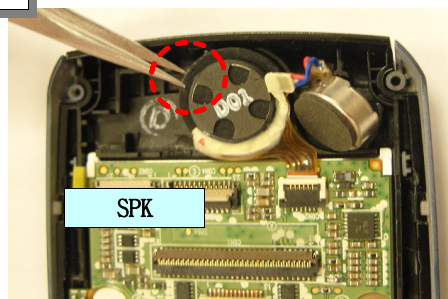
17



MOTOR

Open the Motor connector.
Separate the Motor from the upper.

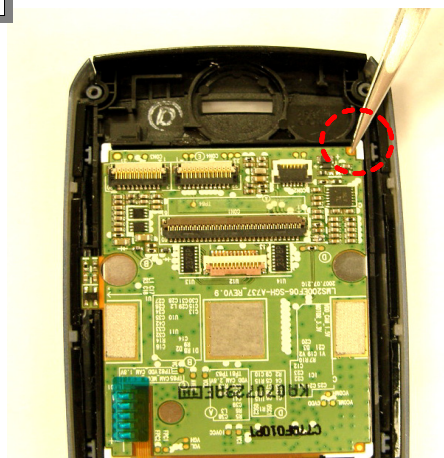
18



SPK

Open the SPK connector.
Separate the Camera from the upper.

19

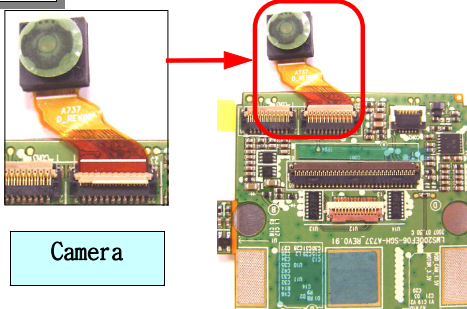


Take the LCD apart from the Upper.

11-2. Assembly

The work guide to joint SET - LCD

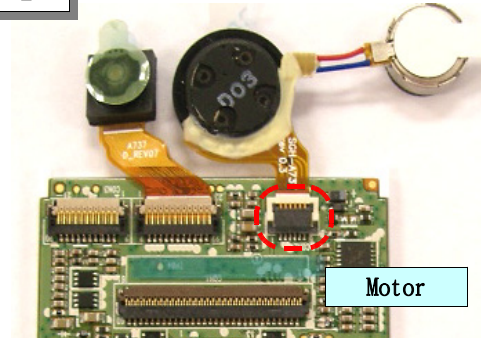
1



Camera

Insert the Camera and SPK/MOTOR.
Follow the guide line.

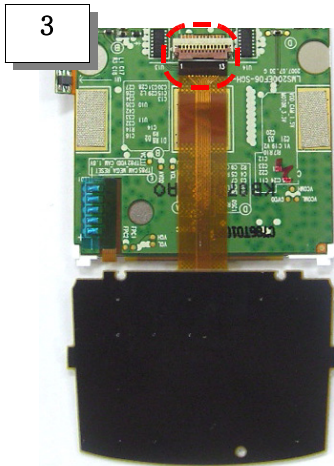
2



Motor

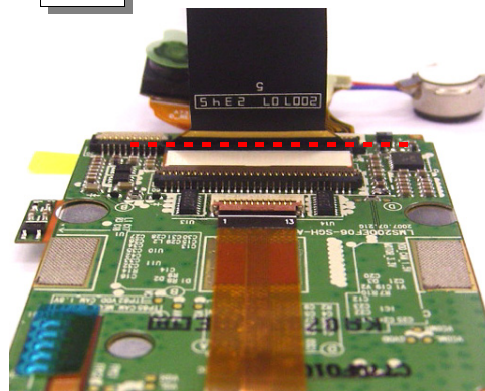
Insert the Camera and SPK/MOTOR.
Follow the guide line.

3



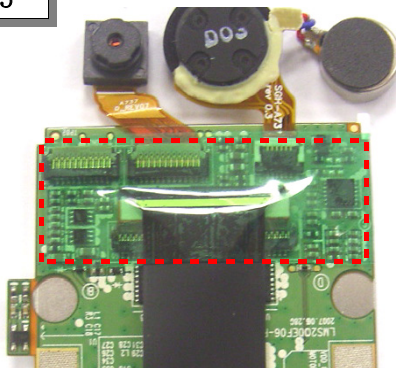
Insert the SUB KEY FPCB.
Follow the guide line.

4



Insert the Con to Con and Fold it.
Follow the guide line.

5



Attach the insulation tape.
Let the tape be end of the connector.

6



Joint the Sub Keypad to the Upper.

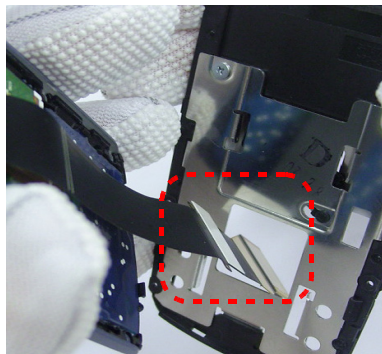
The work guide to joint SET - Upper

7



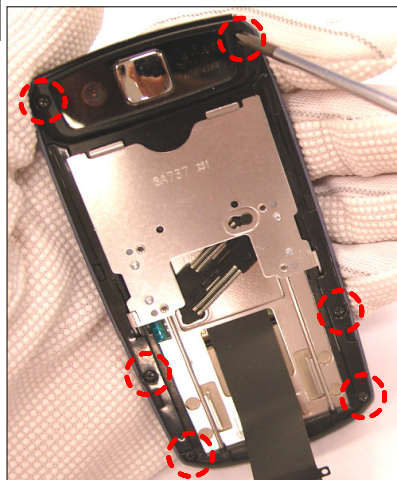
Joint the LCD Ass'y to the Upper.

8



Put the Con to Con FPCB into the Lower.
Joint the Lower to the Upper Ass'y.

9



Joint the Screws.

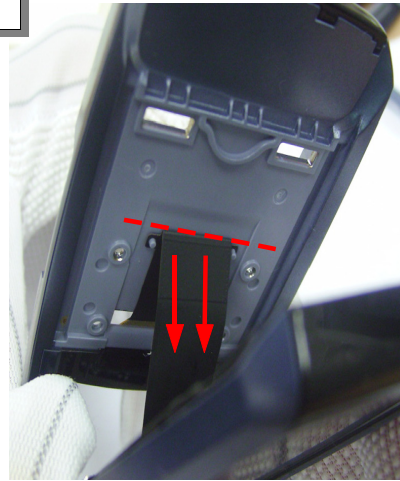
The work guide to joint SET - Front

10



Put the Guide Rib to the FPCB Guide Hole.
Attach the FPCB to the Front

11



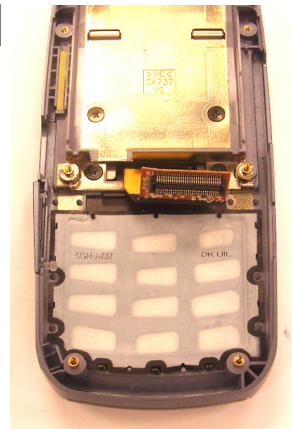
Fold down the FPCB.
Follow the guide line.
Hook the Lower hooker to the Front.

12



Joint the screws.

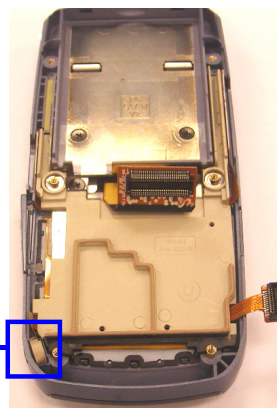
13



Joint the Keypad.

13

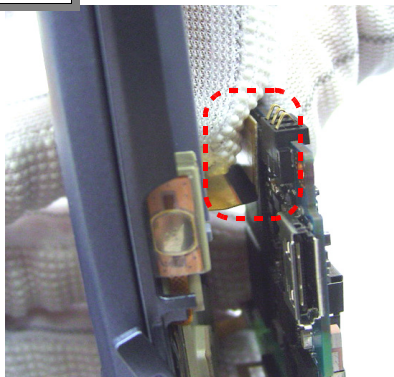
Match the mic and
front hole.



Joint the Key Bracket.

The work guide to joint SET – SET

14



Joint the FPCB connector to the PBA.

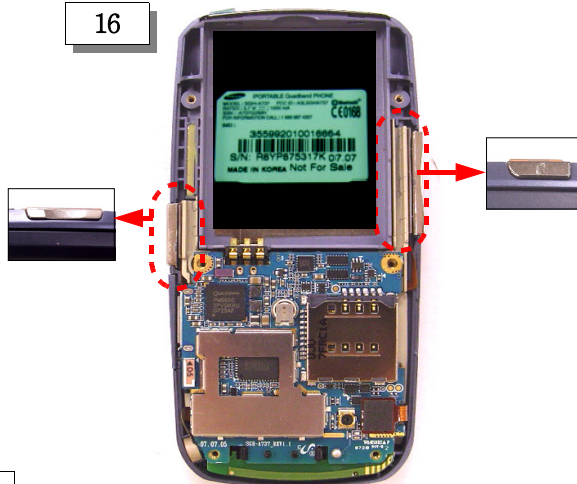


15



Joint the Key connector to the PBA.

16



Joint the Side Keys.

17



Assemble the Rear and joint the screws.

18



Attach the RF sheet.