

SAMSUNG

GSM TELEPHONE

Samsung M7600

SERVICE *Manual*

GSM TELEPHONE



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**SAMSUNG
ELECTRONICS**



GSPN (Global Service Partner Network)

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

2. Specification

2-1. GSM850&900/DCS1800/PCS1900 General Specification

	GSM 850	EGSM 900 Phase 2	DCS1800 Phase 1	PCS 1900	WCDMA 2100	WCDMA 900
Freq. Band(MHZ) Uplink/Downlink	824~849 869~894	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990	1920 ~ 1980 2110 ~ 2170	880 ~ 915 925 ~ 960
ARFCN range	128~251	0~124 & 975~1023	512~885	512~810	UL : 9612 ~ 9888 DL : 10562 ~ 10838	UL : 2712 ~ 2863 DL : 2937 ~ 3088
Tx/Rx spacing	45MHz	45MHz	95 MHz	80 MHz	190MHz	45MHz
Mod. Bit rate/ Bit Period	270.833 kbps 3.692 us	270.833 kbps 3.692 us	270.833 kbps 3.692 us	270.833 kbps 3.692 us	3.84Mcps	3.84Mcps
Time slot Period/Frame Period	576.9 us 4.615 ms	576.9 us 4.615 ms	576.9 us 4.615 ms	576.9 us 4.615 ms	10 ms	10 ms
Modulation	0.3 GMSK	0.3 GMSK	0.3 GMSK	0.3 GMSK	UL : BPSK DL : QPSK	UL : BPSK DL : QPSK
MS Power	33 dBm ~ 5dBm	33 dBm ~ 5dBm	30dBm~0dBm	30dBm~0dBm	Max : 24dBm Min : -50dBm	Max : 24dBm Min : -50dBm
Power Class	Class 4	Class 4	Class 1	Class 1	Class 3	Class 3
Sensitivity	-102 dBm	-102 dBm	-102 dBm	-102 dBm	-106.7 dBm	-103.7 dBm
TDMA Mux	8	8	8	8	-	-
Cell Radius	35Km	35 Km	2Km	-	-	-

2-2. GSM TX power class

TX POWER LEVEL CONTOL	EGSM 850/900	TX POWER LEVEL CONTOL	DCS 1800	TX POWER LEVEL CONTOL	PCS 1900
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±3 dBm	9	12±3 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

- *Slim & Sleek Design*
- *Full Touch Bar Design*
- *New PUI : Full Touch + Half Touch*
- Accelerometer (Auto Rotate Display)
- 3 Mega Pixel AF Camera & CIF VT Camera
- 2.8 inch 240 by 400 16M WQVGA AMOLED
- New Music UI – Disk Music UI
- DivX, XviD Mobile Player
- Micro USB Connectivity
- Worldwide Global Roaming (3G dual, 2.5G quad)
- GPS – Find my location
- SMS/MMS(OMA v 1.2), Video Messaging(H.263+AMR), Unified inbox (SMS/MMS)
- E-mail (POP3/IMAP4/SMTP, SSL)
- WAP 2.0 Full HTML Browser (NF3.5), HTTP, OTA provisioning supported
- MP3/AAC/AAC+/eAAC+/WMA/AMR/MIDI/SP-MIDI/i-melody/WAV/MMF
- MPEG4/H.263/H.264/WMV
- JPEG/GIF/A-GIF/PNG/WBMP/Flash/SVG-T/TIFF
- GSM Phase 2+/ Class 12, EDGE, 3GPP Rel. 6 / Cat.6 HSDPA 7.2Mbps
- Quad Band (EGSM850/900/DCS/PCS), UMTS 900/2100MHz + GPS 1.575GHz
- MicroSD Card Support
- USB v2.0 High Speed, Bluetooth v2.1
- FM Radio with RDS
- SyncML DS v.1.1 Local/Net. Sync. MS Outlook (Express) Exchangeable
- Mobile Printing BPP, OPP, PictBridge (USB printing)

4. Array course control

4-1. Software Adjustments



Test Jig (GH99-36900A)



Test Cable (GH39-01338A)



RF Test Cable (GH39-00985A)



Adapter (GH99-38251A)

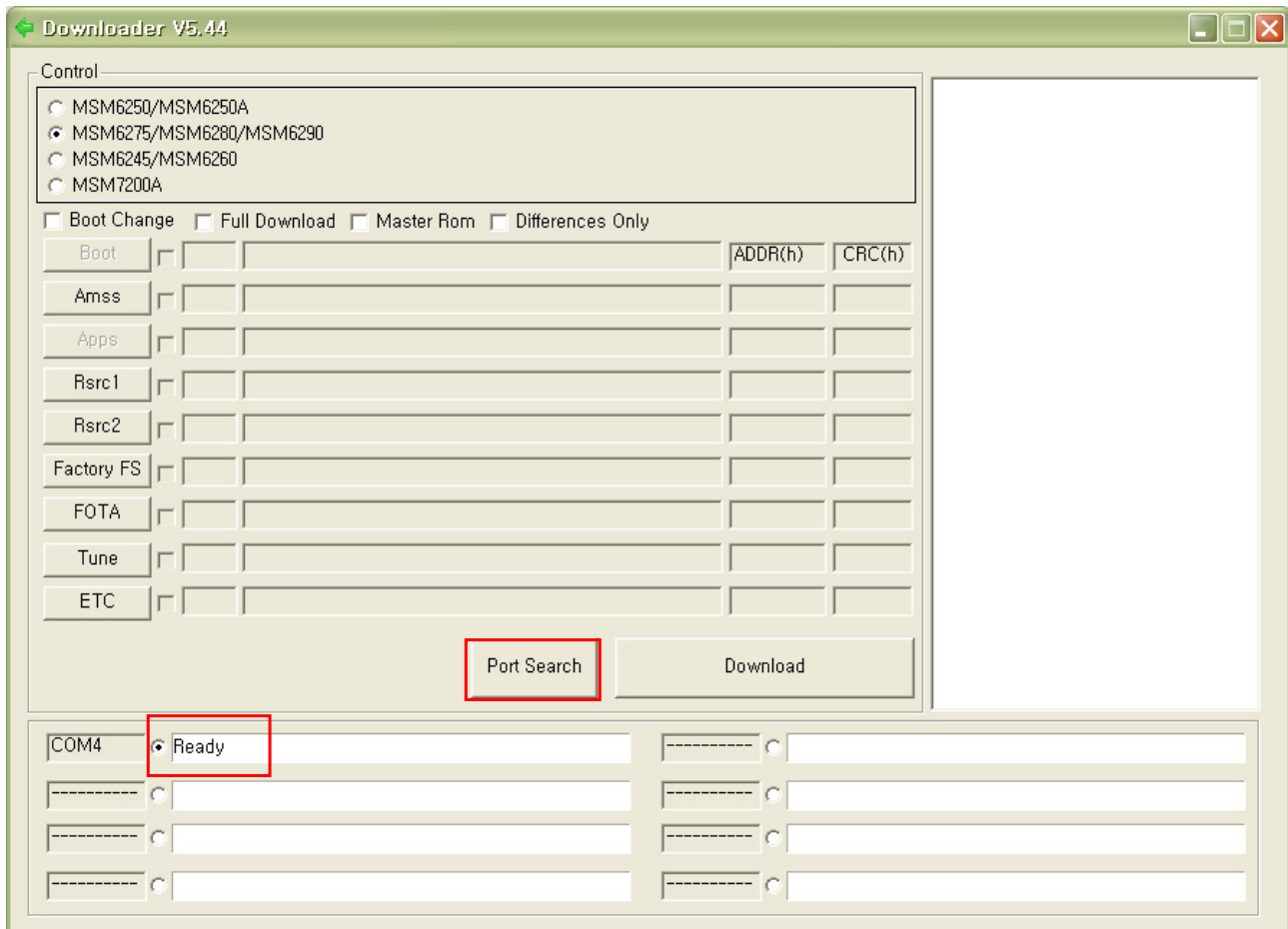
4-2. Software Downloading

4-2-1. Pre-requisite for Download

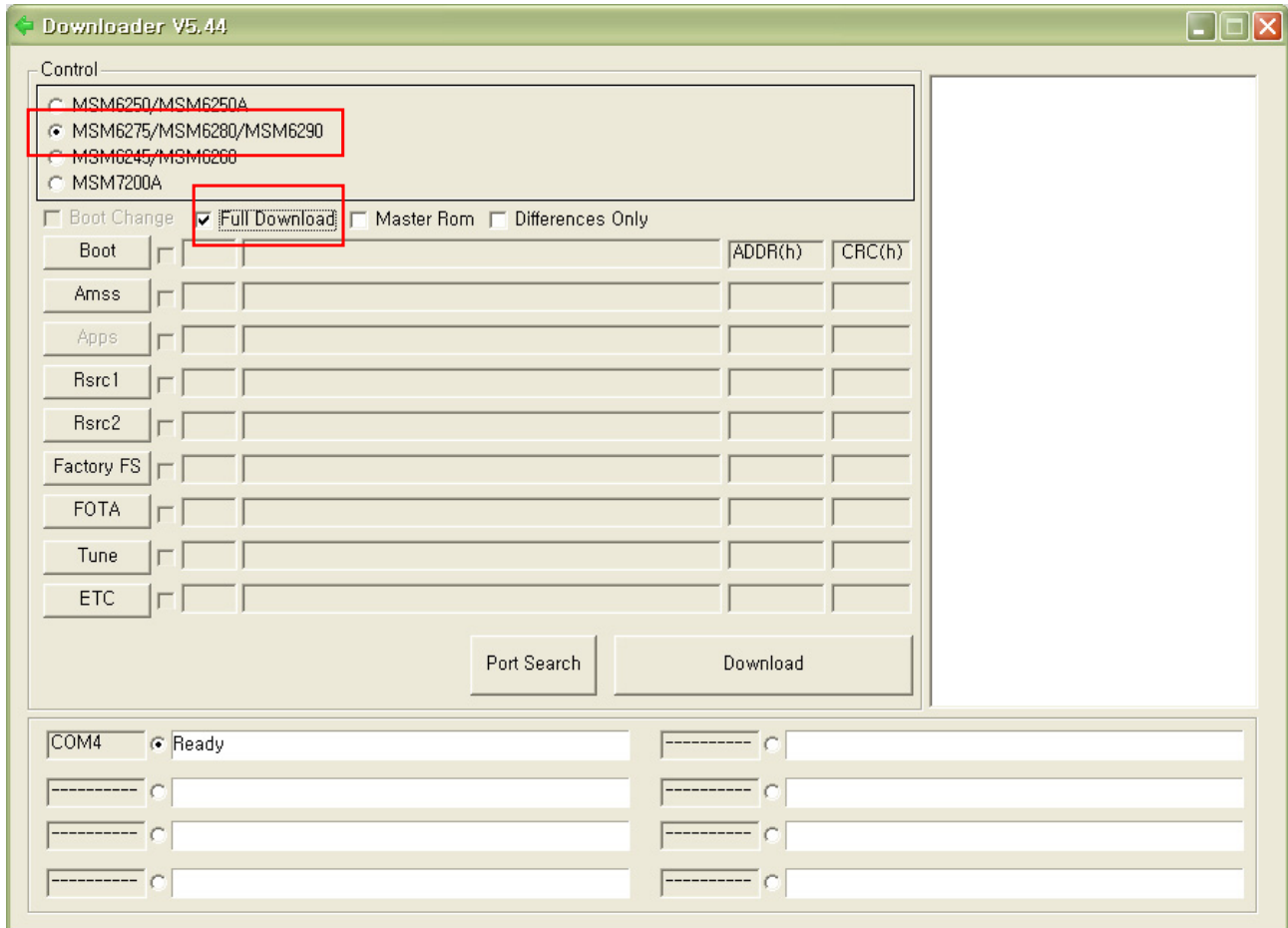
- Downloader Program([Multiloader V5.44.exe](#))
- GT-S8300 Mobile Phone
- Micro USB Data Link Cable
- Binary files

4-2-2. S/W Download Process

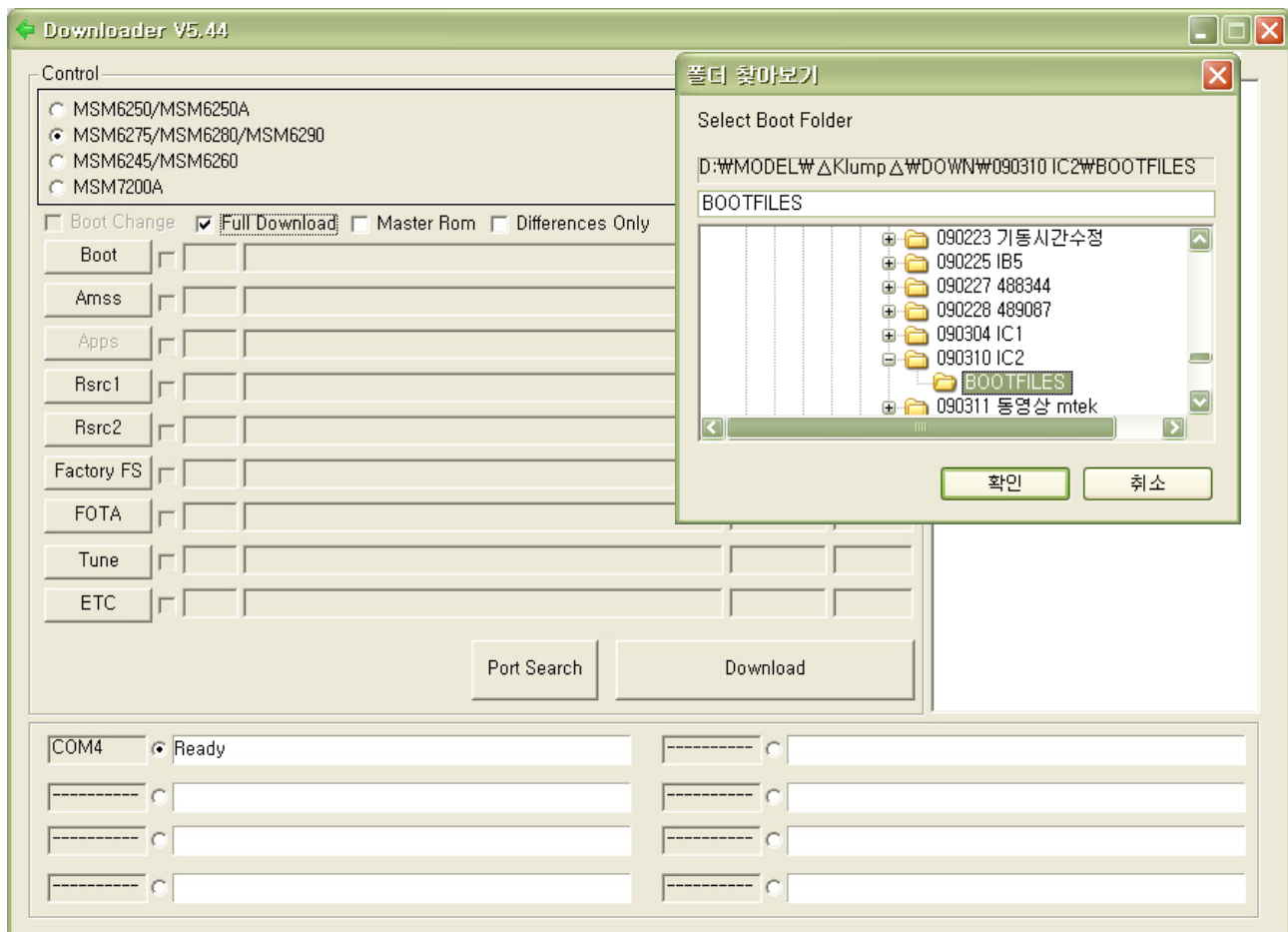
- Load the binary download program by executing the "[Multiloader V5.44.exe](#)"
1. Execute the download SW, Multiloader.exe.
 2. Boot the S8300 by pressing 'Volume down'+**'Power ON Key'** at the same time.
 - if you do properly, you can see the 'DOWMLOAD' in the middle of the screen.
 3. Connect the Micro USB data cable to the M7600.
 4. Press 'Port Search', then 'Port' is activated.



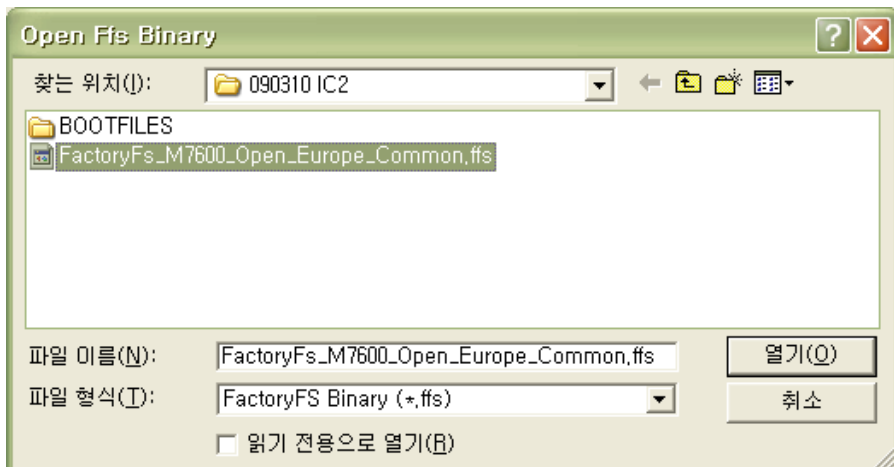
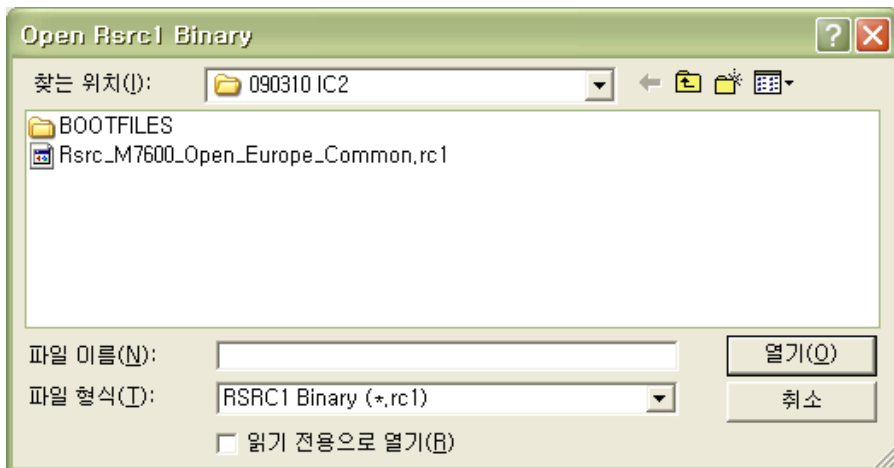
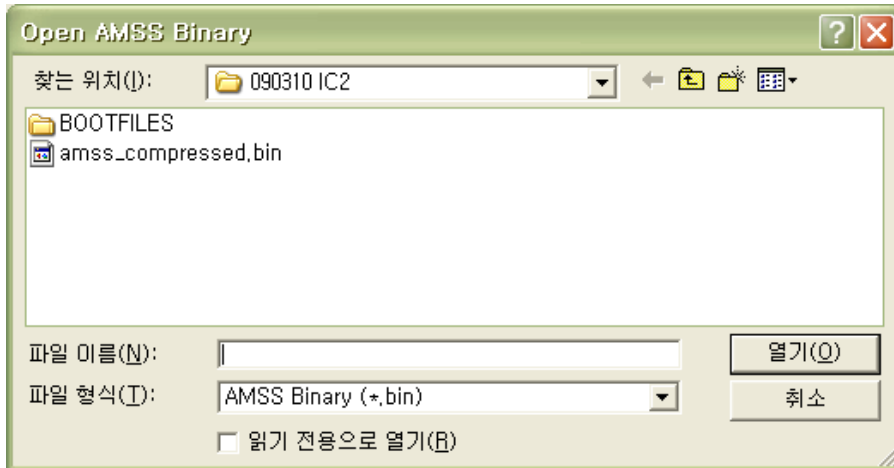
5. Choose MSM6275/MSM6280 and check 'Full Download'



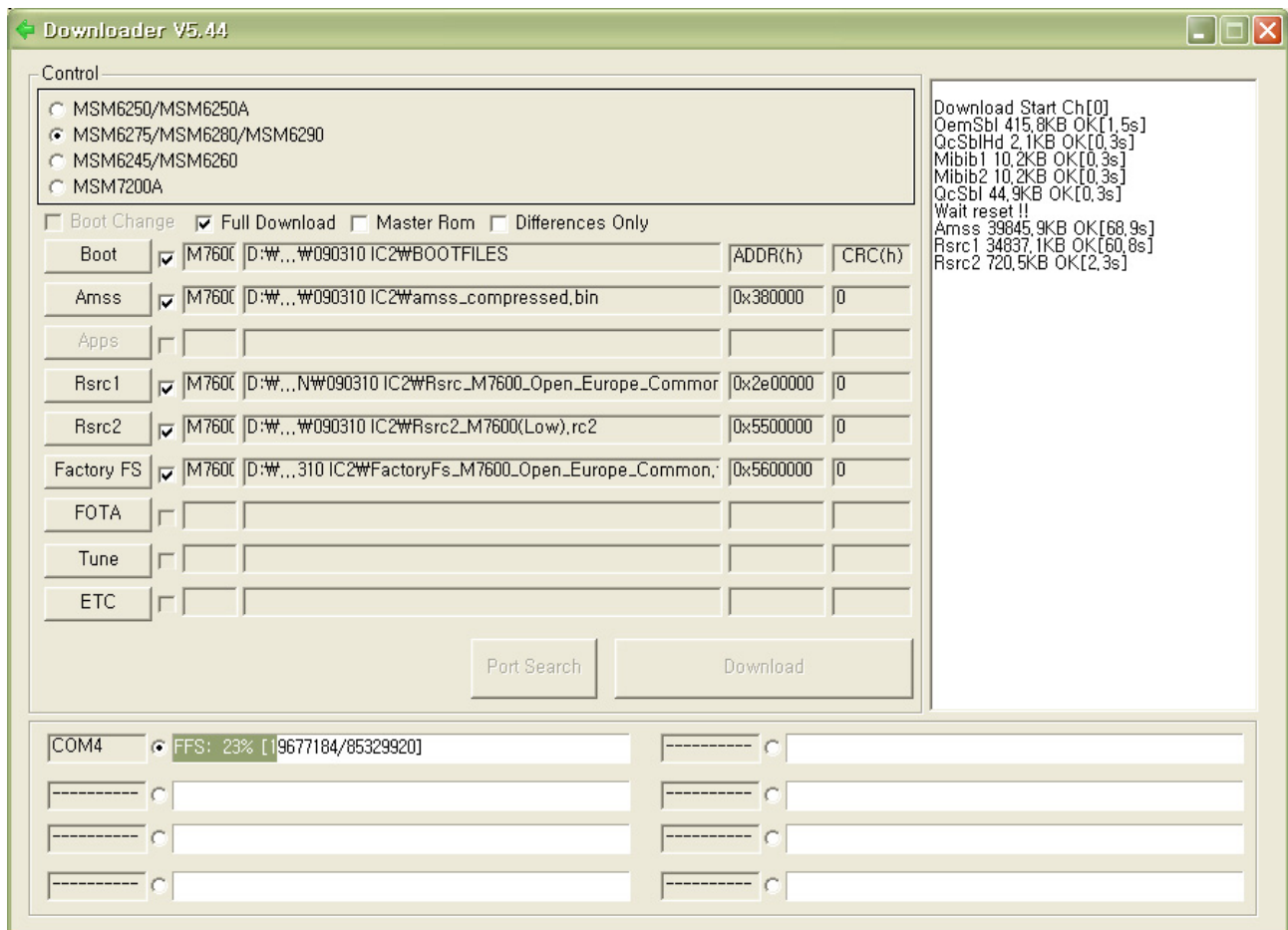
- Click the 'Boot', then the dialogue box is opened. Select the wanted directory, and press 'OK'.



7. Click 'Amss', 'Rsrc1', 'Rsrc2', 'Factory FS' each, and select wanted files.



8. Click 'Download', then downloading is executed successively. If the download is completed, S/W downloading is finished. (Download time : **about 5 minutes**)



10. Reference data

Reference Abbreviate

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

1. Safety Precautions

1-1. Repair Precaution

- Repair in Shield Box, during detailed tuning.
Take specially care of tuning or test,
because specipicty of cellular phone is sensitive for surrounding interference(RF noise).
- Be careful to use a kind of magnetic object or tool,
because performance of parts is damaged by the influence of manetic force.
- Surely use a standard screwdriver when you disassemble this product,
otherwise screw will be worn away.
- Use a thicken twisted wire when you measure level.
A thicken twisted wire has low resistance, therefore error of measurement is few.
- Repair after separate Test Pack and Set because for short danger (for example an
overcurrent and furious flames of parts etc) when you repair board in condition of
connecting Test Pack and tuning on.
- Take specially care of soldering, because Land of PCB is small and weak in heat.
- Surely tune on/off while using AC power plug, because a repair of battery charger is
dangerous when tuning ON/OFF PBA and Connector after disassembling charger.
- Don't use as you pleases after change other material than replacement registered on SEC
System.
Otherwise engineer in charge isn't charged with problem that you don't keep this rules.

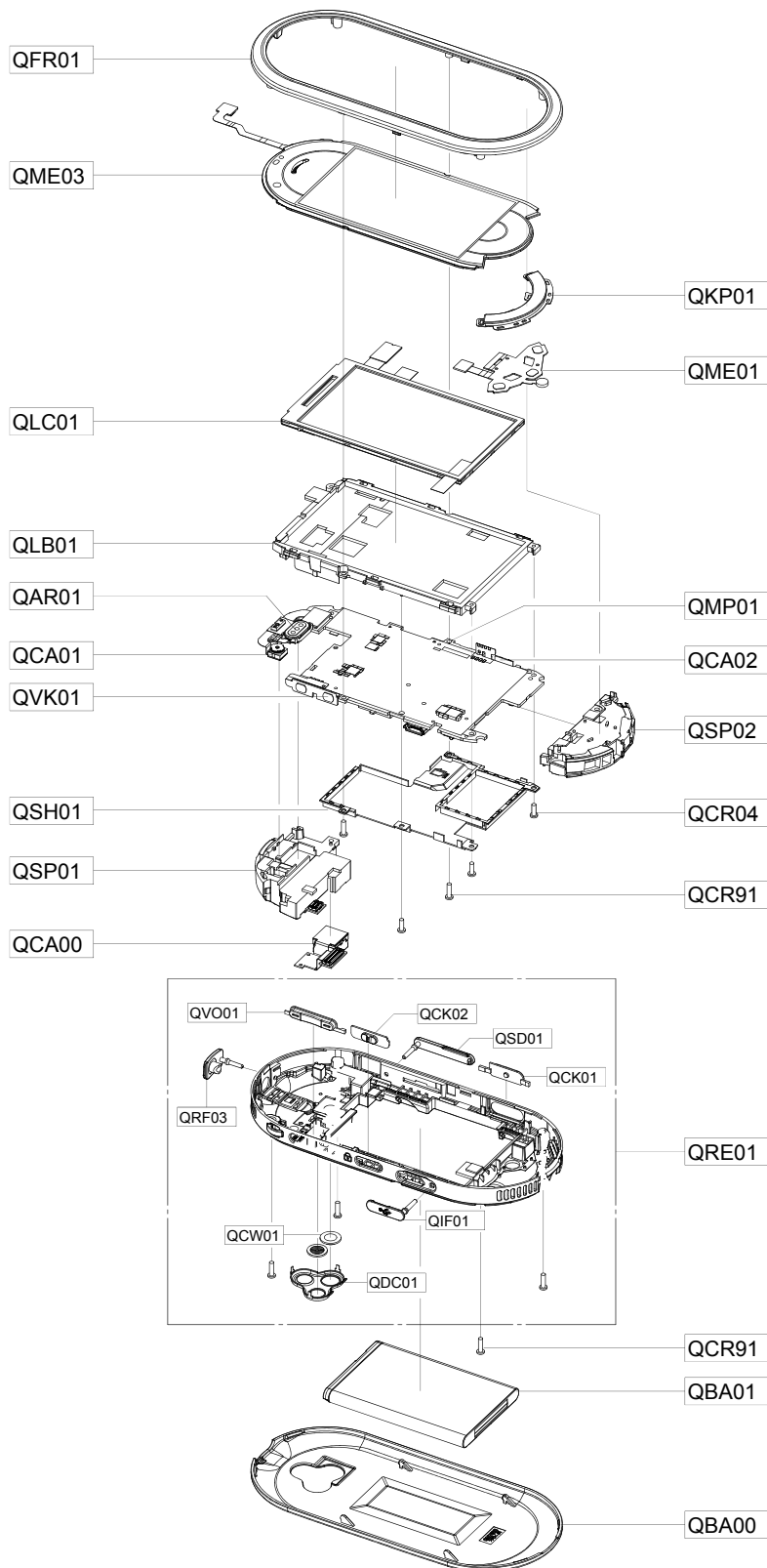
1-2. ESD(Electrostatically Sensitive Devices) Precaution

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

- Remove static electricity remained your body before you touch semiconductor or parts with semiconductor. There are ways that you touch an earthed place or wear static electricity prevention string on wrist.
- Use earthed soldering steel when you connect or disconnect ESD.
- Use soldering removing tool to break static electricity. , otherwise ESD will be damaged by static electricity.
- Don't unpack until you set up ESD on product. Because most of ESD are packed by box and aluminum plate to have conductive power,they are prevented from static electricity.
- You must maintain electric contact between ESD and place due to be set up until ESD is connected completely to the proper place or a circuit board.

5. Exploded View and Parts List

5-1. Cellular phone Exploded View



5-2. Cellular phone Parts list

Design LOC		Description	SEC CODE
QAR01		AUDIO-RECEIVER	3009-001358
QBA00		PMO COVER-BATTERY	GH72-52371A
QBA01		INNER BATTERY PACK-960MAH,BLK,UNI,MAIN	GH43-03216A
QCA01		ASSY CAMERA-GT_M7600 CIF	GH96-03607A
QCA02		KEY FPCB-GT_M7600 CAM KEY	GH59-06916A
QCA00		ASSY CAMERA-GT_M7600 3M	GH96-03626A
QCR04		SCREW-MACHINE	6001-001479
QCR91		SCREW-MACHINE	6001-002260
QFR01		ASSY CASE-FRONT	GH98-11796A
QKP01		ASSY KEYPAD-(BLACK/OPEN)	GH98-12018A
QLB01		ASSY BRACKET-LCD	GH98-11801A
QLC01		ASSY LCD-GT_M7600	GH96-03635A
QME01		KEY FPCB-GT_M7600 KEY PBA	GH59-06914A
QME03		TOUCH/PANEL-GT_M7600 BB	GH59-06964A
QMP01		ASSY PBA MAIN-GT_M7600	GH92-05222A
QSH01		ASSY COVER-SHIELD CAN	GH98-11800A
QSP01		MODULE-GT-M7600 SPK DOWN	GH59-06946A
QSP02		MODULE-GT-M7600 SPK UP	GH59-06963A
QVK01		KEY FPCB-GT_M7600 VOLUME KEY	GH59-06927A
QRE01		ASSY CASE-REAR	GH98-11797A
	QDC01	NPR DECO-CAMERA	GH71-08786A
	QIF01	PMO COVER-MICRO USB IF	GH72-52368A
	QRF03	PMO COVER-EARPHONE	GH72-52369A
	QSD01	PMO COVER-SD	GH72-52370A
	QCK02	PMO KEY-HOLD	GH72-52373A
	QCK01	PMO KEY-CAMERA	GH72-52374A
	QVO01	PMO KEY-VOLUME	GH72-52375A
	QCW01	PMO WINDOW-CAMERA	GH72-52381A

6. MAIN Electrical Parts List

SEC CODE	Design LOC	Description
0403-001688	D600	DIODE-ZENER
0406-001267	ZD100	DIODE-TVS
0406-001267	ZD503	DIODE-TVS
0406-001267	ZD700	DIODE-TVS
0406-001267	ZD701	DIODE-TVS
0406-001267	ZD702	DIODE-TVS
0406-001267	ZD703	DIODE-TVS
0406-001267	ZD704	DIODE-TVS
0406-001286	ZD500	DIODE-TVS
0406-001286	ZD709	DIODE-TVS
0406-001330	U602	DIODE-TVS
0504-001151	U200	TR-DIGITAL
0504-001151	U201	TR-DIGITAL
0801-003013	U300	IC
0801-003065	U401	IC
1001-001394	U610	IC
1001-001394	U611	IC
1001-001394	U612	IC
1001-001481	U605	IC
1001-001494	U501	IC
1001-001586	U603	IC
1003-002047	U607	IC
1201-002470	U500	IC
1201-002581	F102	IC
1201-002775	PAM201	IC
1201-002821	PAM200	IC
1201-002830	PAM100	IC
1202-001068	U704	IC
1203-004570	U600	IC
1203-005250	U601	IC
1203-005367	U604	IC
1203-005396	U703	IC
1203-005448	U400	IC
1203-005503	U606	IC
1203-005522	U700	IC

SEC CODE	Design LOC	Description
1203-005690	U402	IC
1204-002924	U100	IC
1205-003297	U202	IC
1205-003498	UCD300	IC
1205-003517	U102	IC
1205-003611	U608	IC
1209-001831	U609	IC
1404-001224	VR300	THERMISTOR
1405-001196	V702	VARISTOR
1405-001196	V703	VARISTOR
1405-001196	V705	VARISTOR
1405-001196	V706	VARISTOR
2007-000138	R503	R-CHIP
2007-000138	R509	R-CHIP
2007-000138	R510	R-CHIP
2007-000144	R412	R-CHIP
2007-000145	R506	R-CHIP
2007-000148	R502	R-CHIP
2007-000162	R518	R-CHIP
2007-000168	R524	R-CHIP
2007-000170	R313	R-CHIP
2007-000173	R514	R-CHIP
2007-001285	R211	R-CHIP
2007-001285	R213	R-CHIP
2007-003015	R112	R-CHIP
2007-007310	R520	R-CHIP
2007-007488	R409	R-CHIP
2007-007741	R308	R-CHIP
2007-007943	R751	R-CHIP
2007-008043	R215	R-CHIP
2007-008045	R210	R-CHIP
2007-008045	R317	R-CHIP
2007-008045	R444	R-CHIP
2007-008045	R516	R-CHIP
2007-008045	R621	R-CHIP
2007-008045	R622	R-CHIP

SEC CODE	Design LOC	Description
2007-008045	R731	R-CHIP
2007-008045	R738	R-CHIP
2007-008045	R750	R-CHIP
2007-008046	R131	R-CHIP
2007-008046	R133	R-CHIP
2007-008046	R139	R-CHIP
2007-008047	R127	R-CHIP
2007-008047	R129	R-CHIP
2007-008047	R201	R-CHIP
2007-008047	R202	R-CHIP
2007-008049	R100	R-CHIP
2007-008049	R103	R-CHIP
2007-008049	R304	R-CHIP
2007-008052	R106	R-CHIP
2007-008052	R107	R-CHIP
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2007-008052	R602	R-CHIP
2007-008052	R603	R-CHIP
2007-008055	R421	R-CHIP
2007-008055	R513	R-CHIP
2007-008055	R525	R-CHIP
2007-008055	R613	R-CHIP
2007-008055	R640	R-CHIP
2007-008135	R408	R-CHIP
2007-008403	R617	R-CHIP
2007-008419	R108	R-CHIP
2007-008419	R109	R-CHIP
2007-008419	R110	R-CHIP
2007-008419	R111	R-CHIP
2007-008419	R212	R-CHIP
2007-008419	R734	R-CHIP
2007-008419	R735	R-CHIP
2007-008419	R736	R-CHIP
2007-008419	R737	R-CHIP
2007-008420	R128	R-CHIP

SEC CODE	Design LOC	Description
2007-008420	R200	R-CHIP
2007-008478	R406	R-CHIP
2007-008478	R407	R-CHIP
2007-008478	R528	R-CHIP
2007-008478	R529	R-CHIP
2007-008483	R116	R-CHIP
2007-008483	R405	R-CHIP
2007-008483	R612	R-CHIP
2007-008483	R620	R-CHIP
2007-008483	R726	R-CHIP
2007-008483	R743	R-CHIP
2007-008486	R410	R-CHIP
2007-008486	R422	R-CHIP
2007-008486	R433	R-CHIP
2007-008516	R126	R-CHIP
2007-008516	R301	R-CHIP
2007-008516	R302	R-CHIP
2007-008516	R305	R-CHIP
2007-008516	R417	R-CHIP
2007-008516	R423	R-CHIP
2007-008516	R425	R-CHIP
2007-008516	R426	R-CHIP
2007-008516	R427	R-CHIP
2007-008516	R523	R-CHIP
2007-008516	R614	R-CHIP
2007-008516	R615	R-CHIP
2007-008516	R639	R-CHIP
2007-008516	R728	R-CHIP
2007-008516	R739	R-CHIP
2007-008531	R208	R-CHIP
2007-008531	R755	R-CHIP
2007-008544	R526	R-CHIP
2007-008544	R527	R-CHIP
2007-008548	R729	R-CHIP
2007-008548	R730	R-CHIP
2007-008582	R740	R-CHIP

SEC CODE	Design LOC	Description
2007-008587	R104	R-CHIP
2007-008588	R124	R-CHIP
2007-008588	R626	R-CHIP
2007-008588	R627	R-CHIP
2007-008588	R700	R-CHIP
2007-008588	R701	R-CHIP
2007-008588	R727	R-CHIP
2007-008806	R132	R-CHIP
2007-008806	R314	R-CHIP
2007-008806	R429	R-CHIP
2007-008808	R752	R-CHIP
2007-009084	R530	R-CHIP
2007-009084	R748	R-CHIP
2007-009084	R754	R-CHIP
2007-009111	R536	R-CHIP
2007-009115	R401	R-CHIP
2007-009115	R402	R-CHIP
2007-009115	R531	R-CHIP
2007-009115	R718	R-CHIP
2007-009115	R719	R-CHIP
2007-009155	R625	R-CHIP
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2007-009155	R749	R-CHIP
2007-009157	R413	R-CHIP
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2007-009157	R415	R-CHIP
2007-009157	R416	R-CHIP
2007-009201	R306	R-CHIP
2007-009233	R753	R-CHIP
2007-009361	R437	R-CHIP
2007-009420	R206	R-CHIP
2007-009793	R704	R-CHIP
2007-009793	R747	R-CHIP
2007-009838	R411	R-CHIP
2007-009879	R505	R-CHIP
2203-000233	C434	C-CERAMIC,CHIP

SEC CODE	Design LOC	Description
2203-000254	C118	C-CERAMIC,CHIP
2203-000254	C127	C-CERAMIC,CHIP
2203-000386	C115	C-CERAMIC,CHIP
2203-000438	C100	C-CERAMIC,CHIP
2203-000696	C200	C-CERAMIC,CHIP
2203-000725	C610	C-CERAMIC,CHIP
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2203-000854	C542	C-CERAMIC,CHIP
2203-002487	C616	C-CERAMIC,CHIP
2203-002668	C124	C-CERAMIC,CHIP
2203-002677	C101	C-CERAMIC,CHIP
2203-002709	C552	C-CERAMIC,CHIP
2203-003019	C524	C-CERAMIC,CHIP
2203-005288	C119	C-CERAMIC,CHIP
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2203-005682	C288	C-CERAMIC,CHIP
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2203-005682	C411	C-CERAMIC,CHIP
2203-005682	C445	C-CERAMIC,CHIP
2203-005682	C455	C-CERAMIC,CHIP
2203-005682	C618	C-CERAMIC,CHIP
2203-005682	C725	C-CERAMIC,CHIP
2203-005682	C726	C-CERAMIC,CHIP
2203-005682	C732	C-CERAMIC,CHIP
2203-005682	C733	C-CERAMIC,CHIP
2203-005717	C294	C-CERAMIC,CHIP
2203-005717	C704	C-CERAMIC,CHIP

SEC CODE	Design LOC	Description
2203-005719	C130	C-CERAMIC,CHIP
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2203-005719	C298	C-CERAMIC,CHIP
2203-005719	C459	C-CERAMIC,CHIP
2203-005725	C236	C-CERAMIC,CHIP
2203-005725	C250	C-CERAMIC,CHIP
2203-005725	C258	C-CERAMIC,CHIP
2203-005725	C259	C-CERAMIC,CHIP
2203-005725	C261	C-CERAMIC,CHIP
2203-005725	C262	C-CERAMIC,CHIP
2203-005725	C264	C-CERAMIC,CHIP
2203-005725	C265	C-CERAMIC,CHIP
2203-005725	C267	C-CERAMIC,CHIP
2203-005725	C270	C-CERAMIC,CHIP
2203-005725	C281	C-CERAMIC,CHIP
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2203-005725	C292	C-CERAMIC,CHIP
2203-005727	C139	C-CERAMIC,CHIP
2203-005727	C296	C-CERAMIC,CHIP
2203-005729	C148	C-CERAMIC,CHIP
2203-005729	C218	C-CERAMIC,CHIP
2203-005729	C408	C-CERAMIC,CHIP
2203-005729	C409	C-CERAMIC,CHIP
2203-005732	C221	C-CERAMIC,CHIP
2203-005732	C222	C-CERAMIC,CHIP
2203-005736	C227	C-CERAMIC,CHIP
2203-005736	C231	C-CERAMIC,CHIP
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2203-005736	C249	C-CERAMIC,CHIP
2203-005736	C257	C-CERAMIC,CHIP
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2203-005792	C126	C-CERAMIC,CHIP
2203-005806	C215	C-CERAMIC,CHIP
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2203-005806	C342	C-CERAMIC,CHIP
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2203-006090	C246	C-CERAMIC,CHIP
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2203-006120	C228	C-CERAMIC,CHIP
2203-006123	C147	C-CERAMIC,CHIP
2203-006194	C251	C-CERAMIC,CHIP
2203-006194	C266	C-CERAMIC,CHIP
2203-006194	C279	C-CERAMIC,CHIP
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2203-006194	C303	C-CERAMIC,CHIP
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2203-006194	C344	C-CERAMIC,CHIP
2203-006194	C345	C-CERAMIC,CHIP
2203-006194	C350	C-CERAMIC,CHIP
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2203-006348	C462	C-CERAMIC,CHIP
2203-006399	C460	C-CERAMIC,CHIP
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2203-006890	C509	C-CERAMIC,CHIP
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2203-007210	C423	C-CERAMIC,CHIP
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2404-001465	TA502	C-TA,CHIP
2404-001465	TA503	C-TA,CHIP
2404-001474	TA601	C-TA,CHIP
2404-001496	TA100	C-TA,CHIP
2703-001990	L118	INDUCTOR-SMD
2703-002176	L125	INDUCTOR-SMD
2703-002176	L201	INDUCTOR-SMD
2703-002199	L200	INDUCTOR-SMD
2703-002203	L127	INDUCTOR-SMD
2703-002204	L208	INDUCTOR-SMD
2703-002205	L202	INDUCTOR-SMD
2703-002205	L204	INDUCTOR-SMD
2703-002208	L116	INDUCTOR-SMD
2703-002268	L115	INDUCTOR-SMD
2703-002365	L123	INDUCTOR-SMD
2703-002649	L214	INDUCTOR-SMD
2703-002714	L502	INDUCTOR-SMD
2703-002714	L503	INDUCTOR-SMD
2703-002793	L112	INDUCTOR-SMD
2703-002793	L114	INDUCTOR-SMD
2703-002793	L120	INDUCTOR-SMD
2703-002798	L124	INDUCTOR-SMD
2703-002798	L205	INDUCTOR-SMD
2703-002798	L210	INDUCTOR-SMD
2703-002858	L119	INDUCTOR-SMD
2703-002900	L103	INDUCTOR-SMD
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2703-002903	L209	INDUCTOR-SMD
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2703-002917	L216	INDUCTOR-SMD
2703-002918	L222	INDUCTOR-SMD

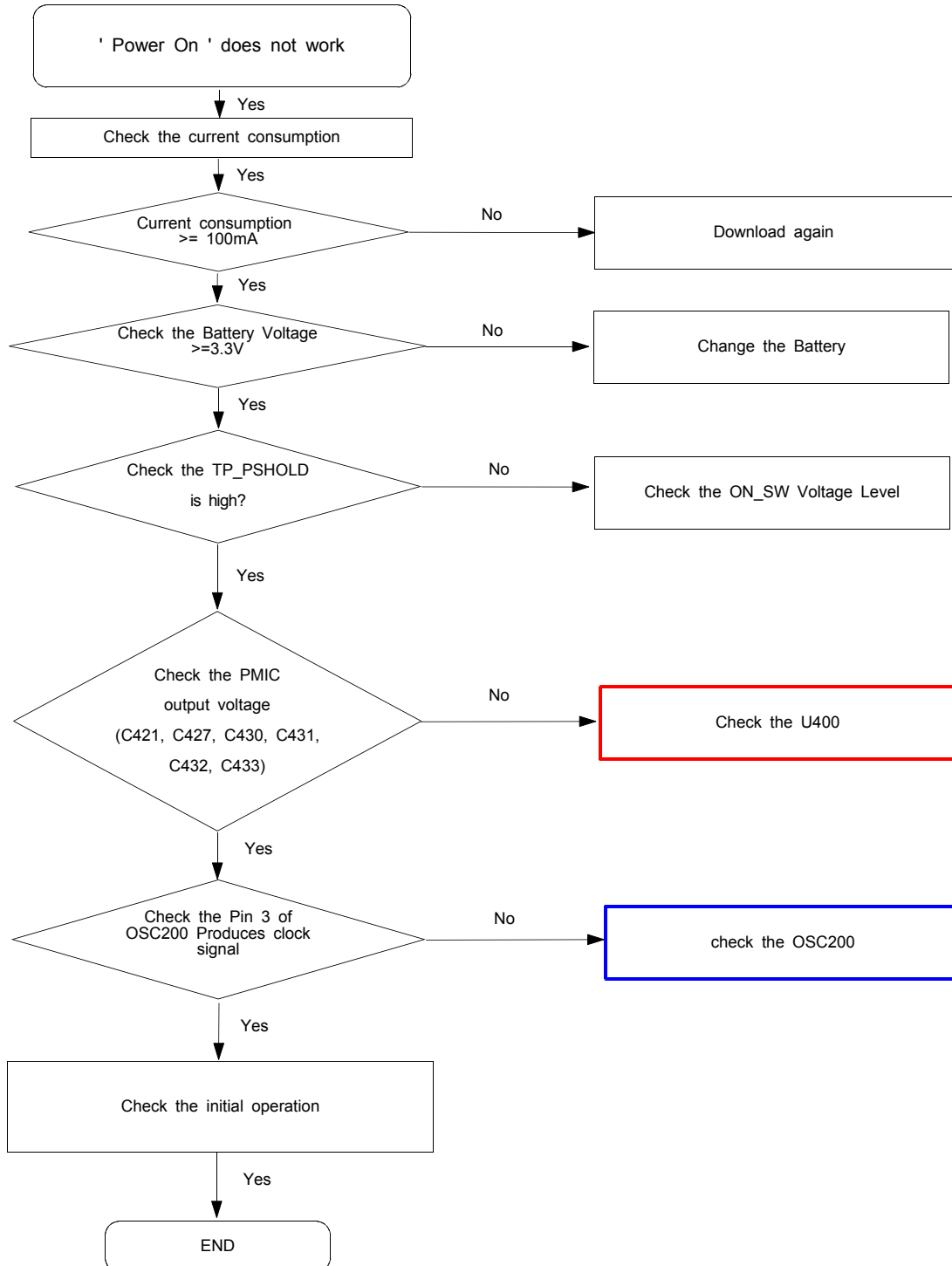
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2703-002953	L224	INDUCTOR-SMD
2703-002958	L110	INDUCTOR-SMD
2703-003001	L404	INDUCTOR-SMD
2703-003003	L223	INDUCTOR-SMD
2703-003004	L102	INDUCTOR-SMD
2703-003260	L401	INDUCTOR-SMD
2703-003260	L402	INDUCTOR-SMD
2703-003347	L601	INDUCTOR-SMD
2703-003476	L509	INDUCTOR-SMD
2703-003502	L400	INDUCTOR-SMD
2801-004339	OSC400	CRYSTAL-UNIT
2801-004573	OSC500	CRYSTAL-UNIT
2801-004589	OSC100	CRYSTAL-UNIT
2809-001277	OSC200	OSCILLATOR-VCTCXO
2901-001409	F700	FILTER-EMI SMD
2901-001409	F701	FILTER-EMI SMD
2901-001409	F702	FILTER-EMI SMD
2901-001409	F703	FILTER-EMI SMD
2901-001409	F704	FILTER-EMI SMD
2901-001469	F705	FILTER-EMI SMD
2901-001469	F706	FILTER-EMI SMD
2904-001759	F101	FILTER-SAW
2904-001785	F202	FILTER-SAW
2904-001789	F204	FILTER-SAW
2904-001864	F205	FILTER-SAW
2909-001283	F100	FILTER-DUPLEXER
2910-000034	F203	FILTER
2910-000058	F201	FILTER
2911-000128	U101	FILTER
3301-001534	L500	CORE-FERRITE BEAD
3301-001534	L501	CORE-FERRITE BEAD
3301-001534	L504	CORE-FERRITE BEAD
3301-001534	L505	CORE-FERRITE BEAD
3301-001912	L100	CORE-FERRITE BEAD

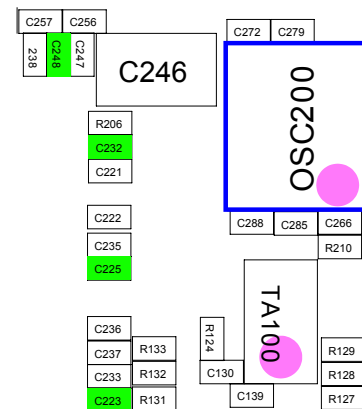
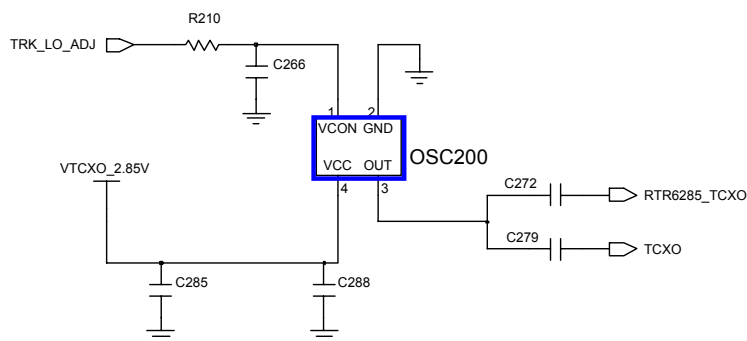
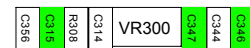
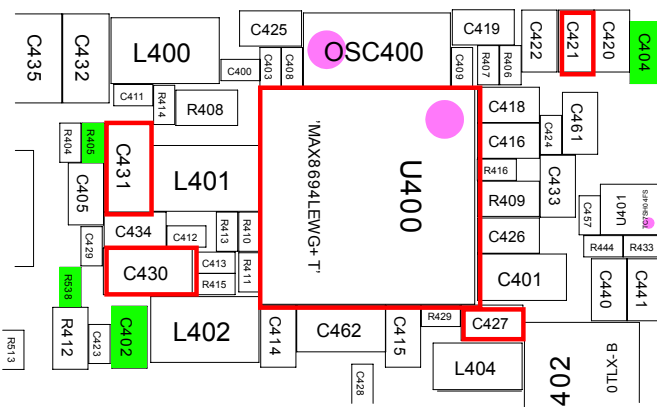
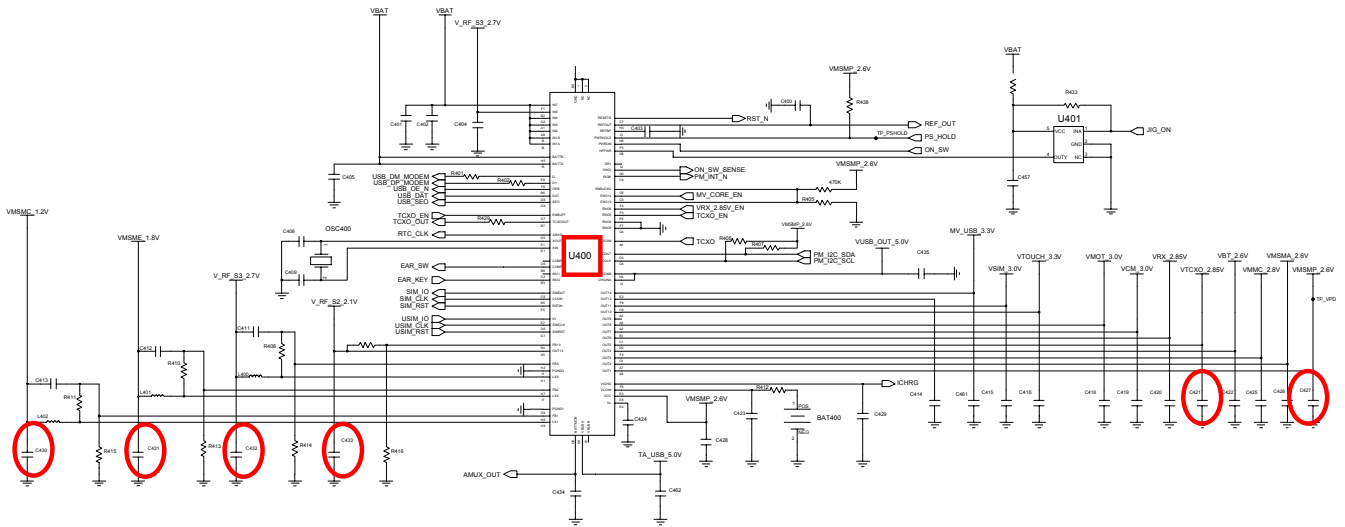
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3301-001917	L508	CORE-FERRITE BEAD
3301-001917	L510	CORE-FERRITE BEAD
3301-001971	L706	CORE-FERRITE BEAD
3301-001971	L707	CORE-FERRITE BEAD
3408-001109	SLIDE_KEY	SWITCH
3705-001503	RFS100	CONNECTOR-COAXIAL
3709-001465	SIM400	CONNECTOR-CARD EDGE
3711-005981	CN702	CONNECTOR-HEADER
3711-006084	BTC400	CONNECTOR-HEADER
3711-006615	CN703	CONNECTOR-HEADER
3711-006615	CN704	CONNECTOR-HEADER
3711-006615	CN705	CONNECTOR-HEADER
3711-006865	CN701	CONNECTOR-HEADER
3711-006865	HDC700	CONNECTOR-HEADER
4302-001180	BAT400	BATTERY CONTACT
4709-001721	F200	RF-MODULE
GH13-00066A	U502	RF-MODULE
GH71-08426A	ANT100	NPR-CONTACT ANT
GH71-08426A	ANT101	NPR-CONTACT ANT
GH71-08426A	ANT103	NPR-CONTACT ANT
3722-002840	IFC600	CONNECTOR-HEADER
2703-003679	L700	INDUCTOR-SMD
2703-003679	L701	INDUCTOR-SMD
1108-000237	UME301	MEMORY

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

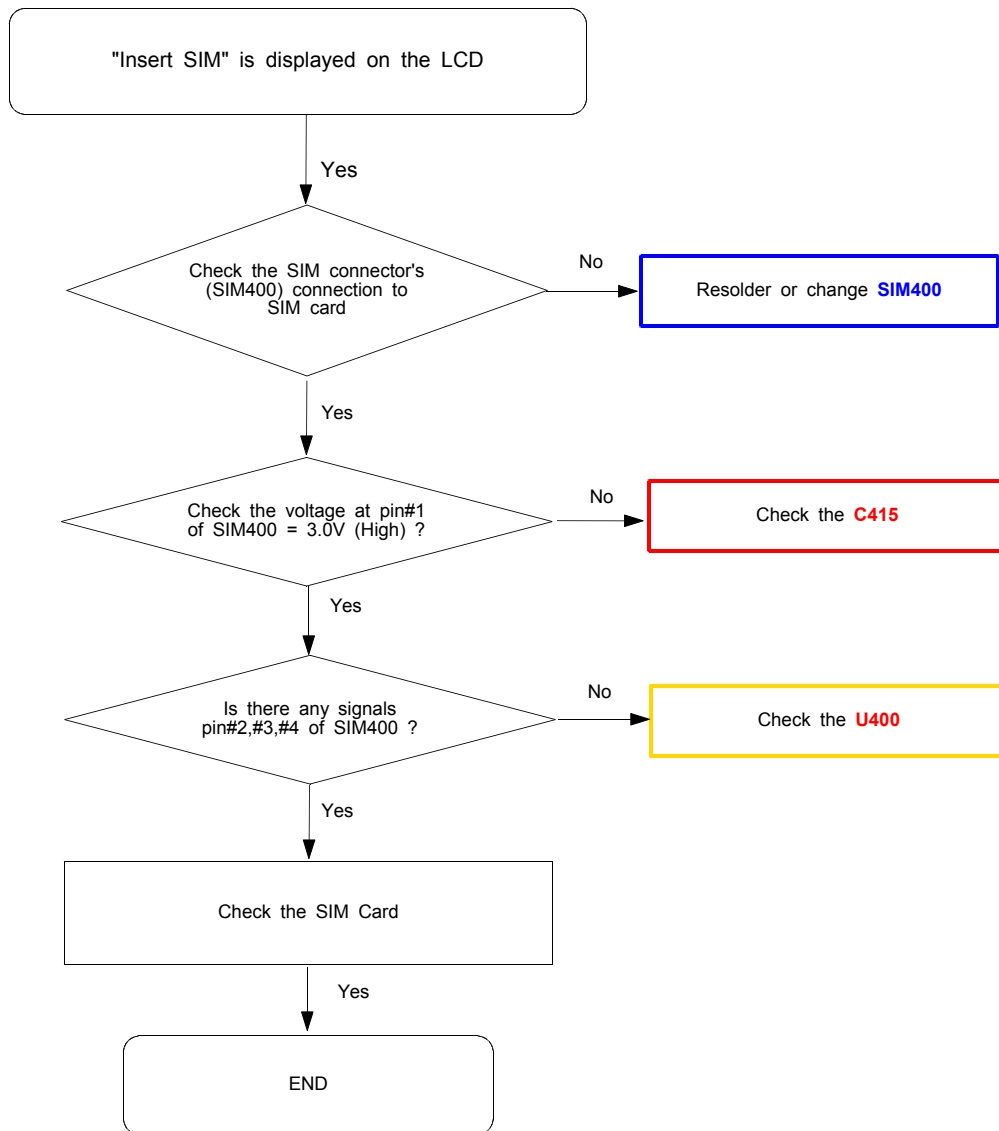
9. Flow Chart of Troubleshooting

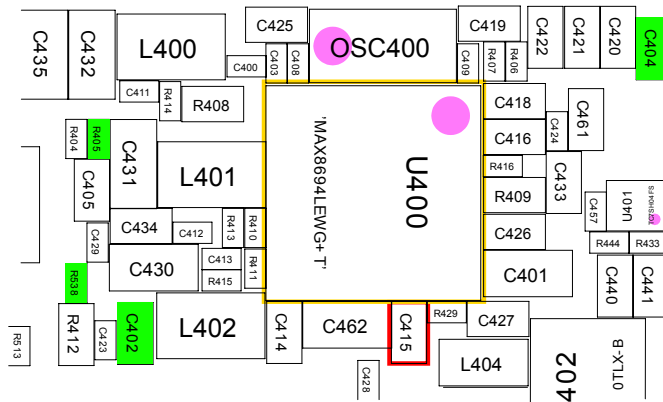
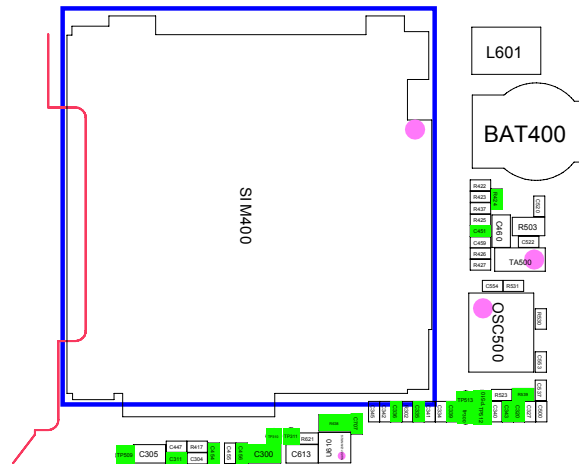
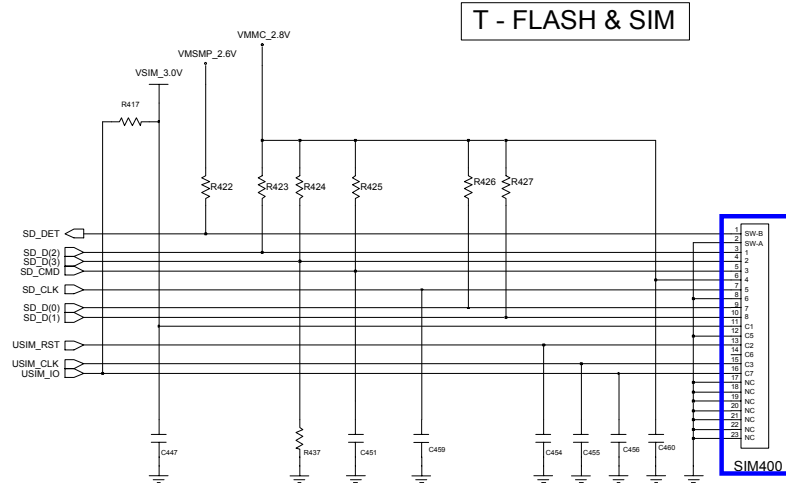
9-1. Power On



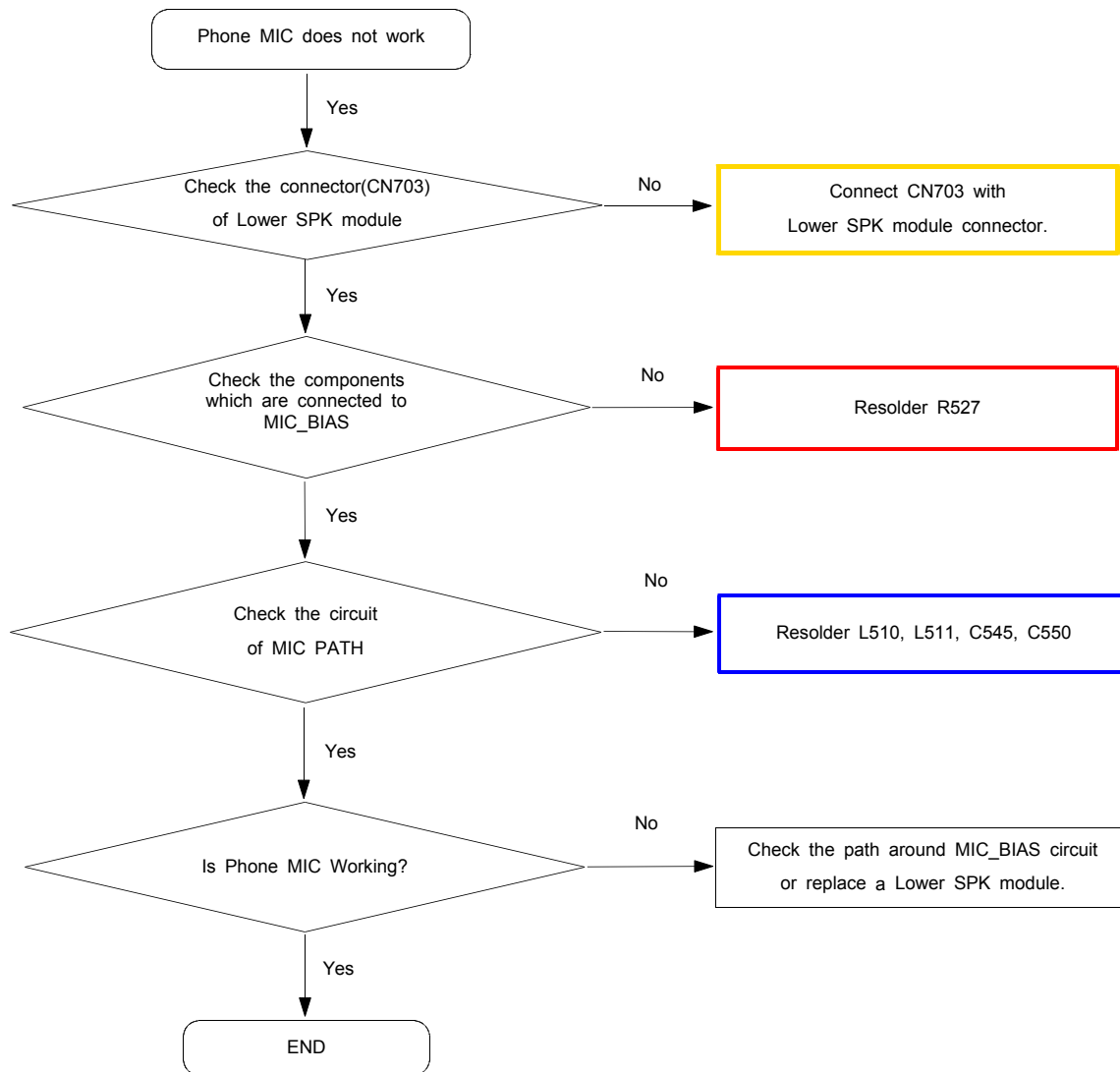


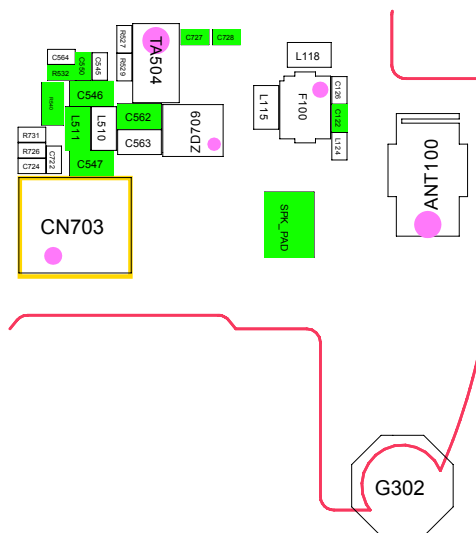
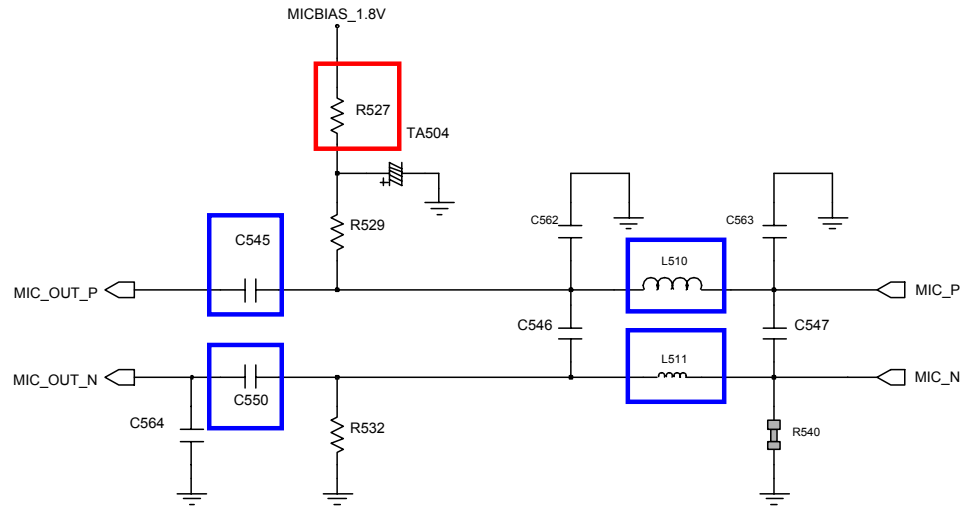
9-2. Sim Part



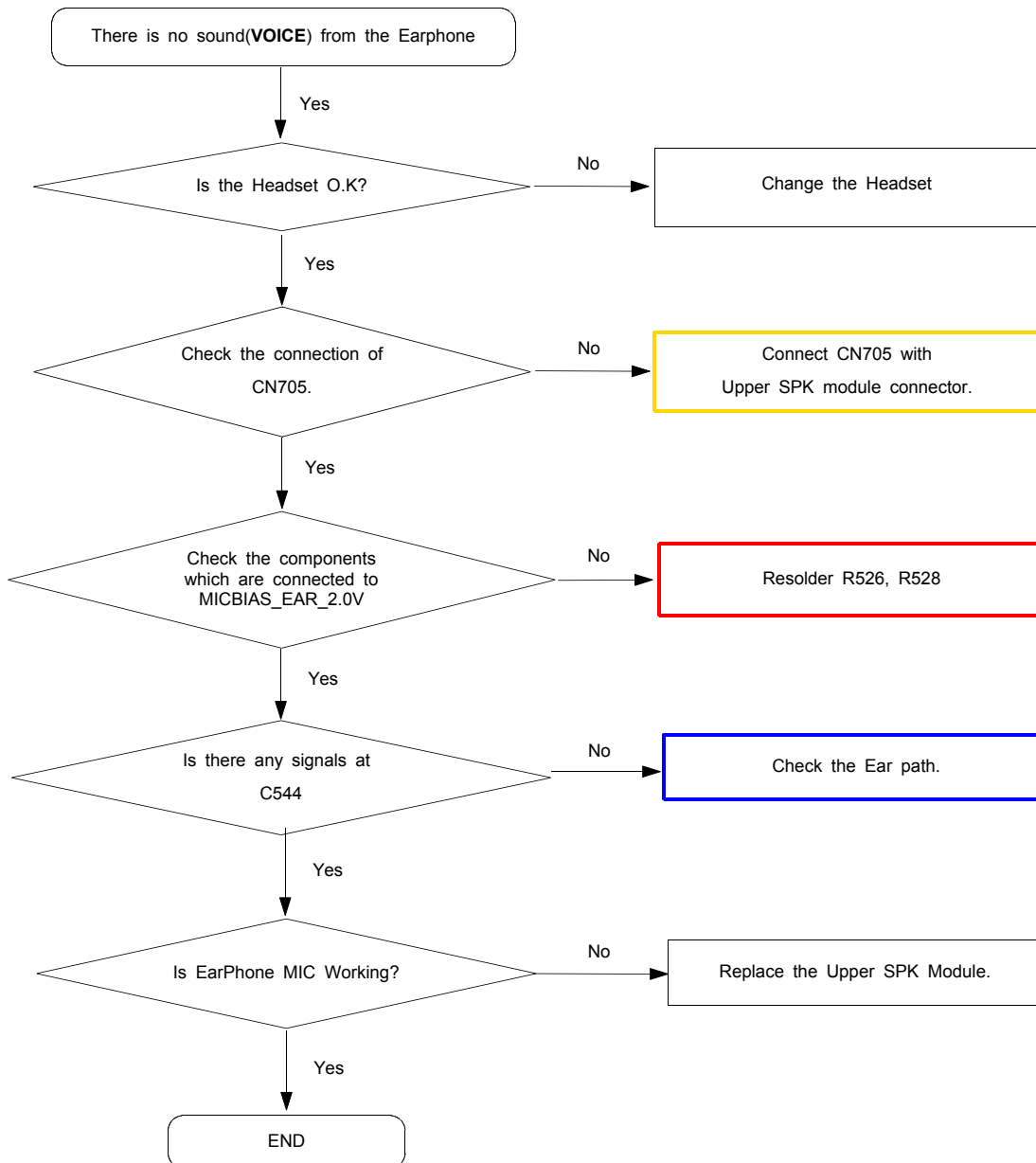


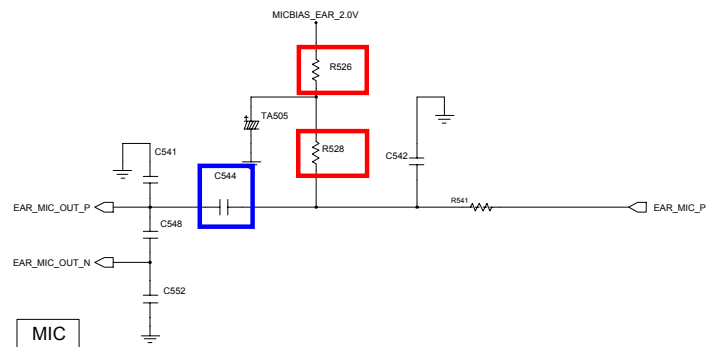
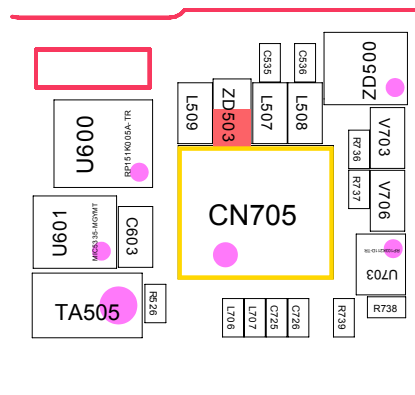
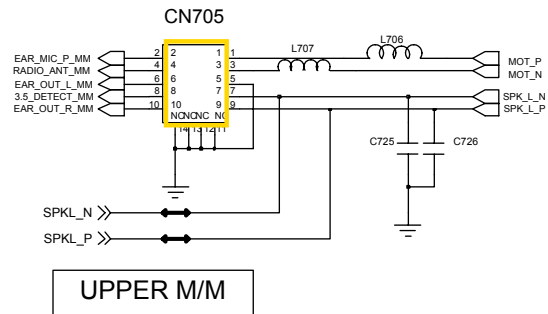
9-3. Microphone Part - Phone MIC



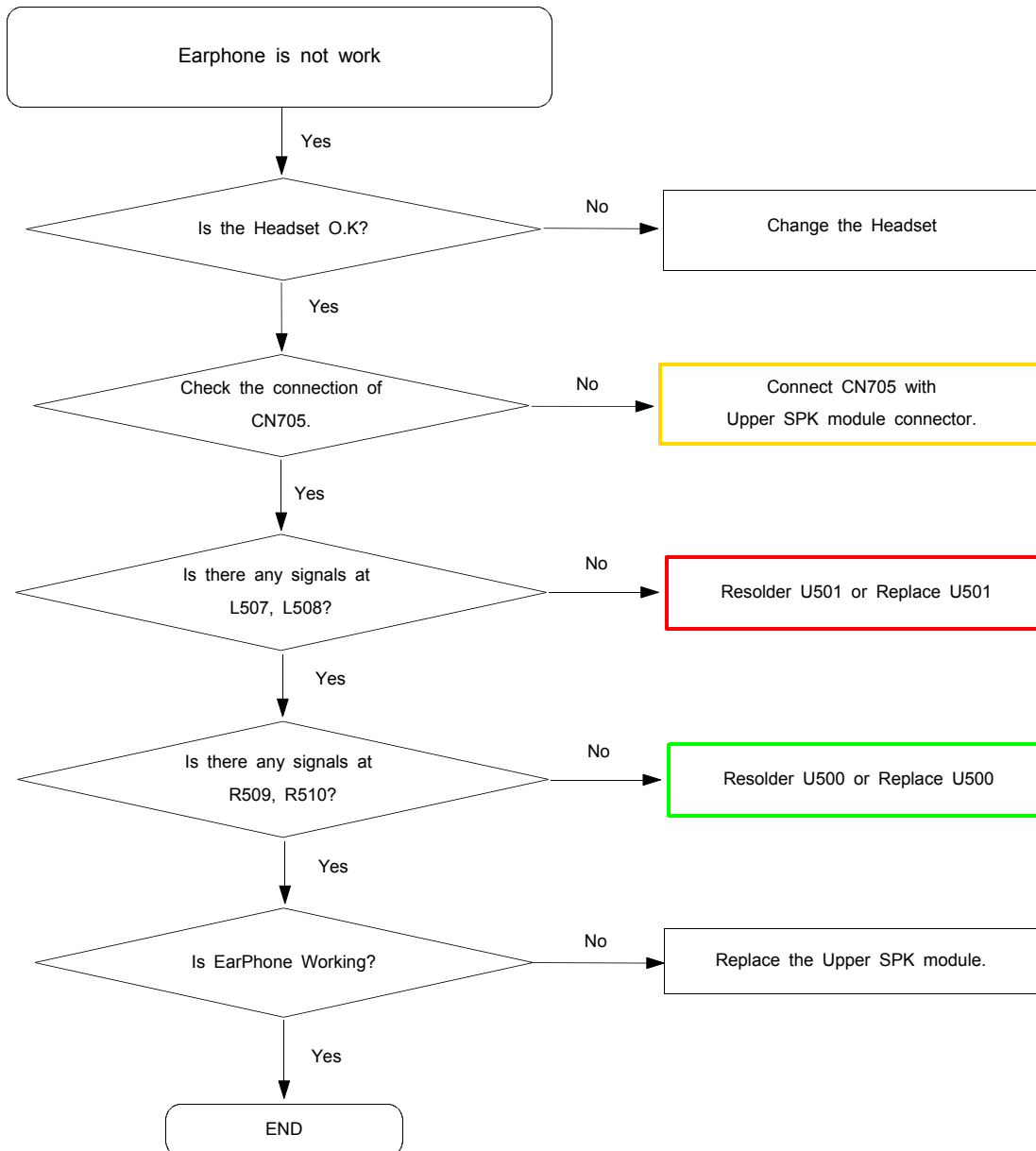


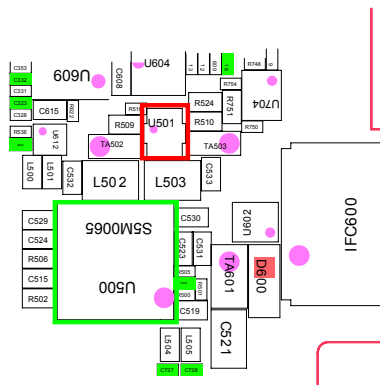
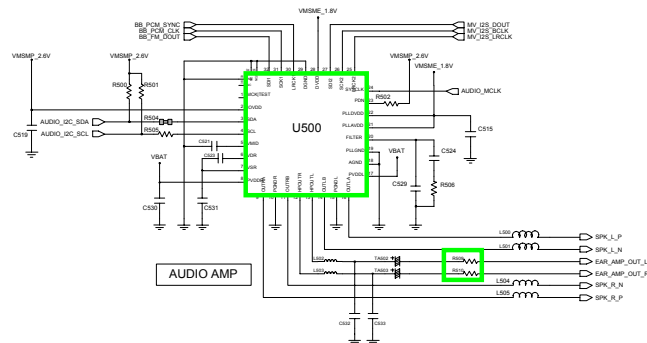
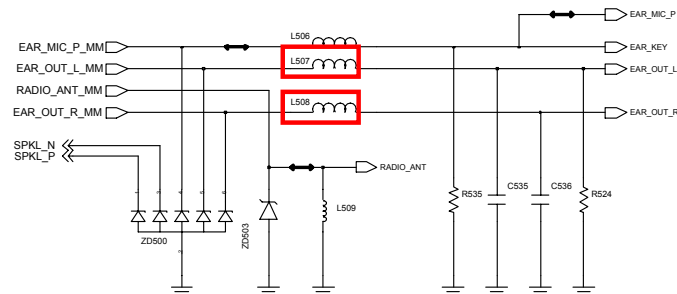
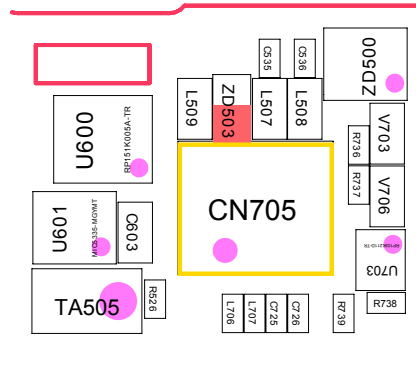
9-4. Microphone Part - Earphone MIC



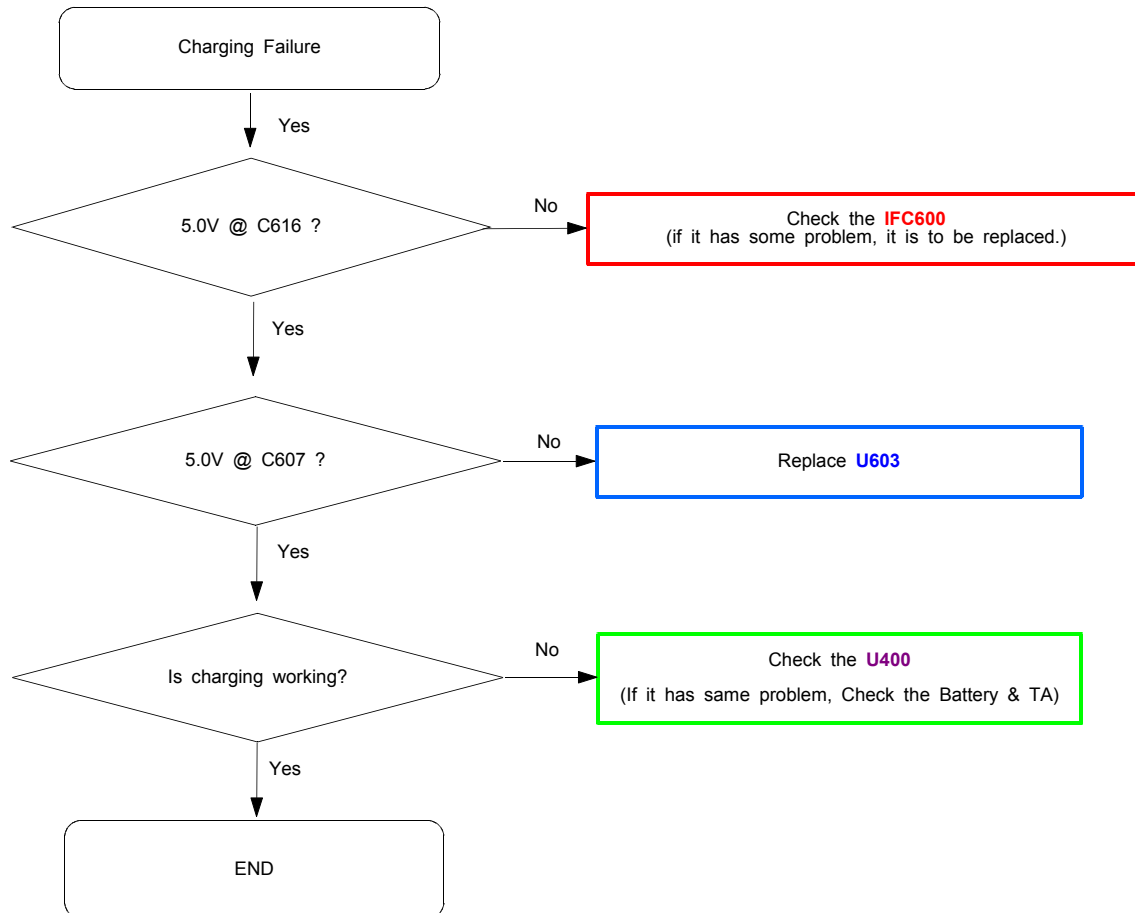


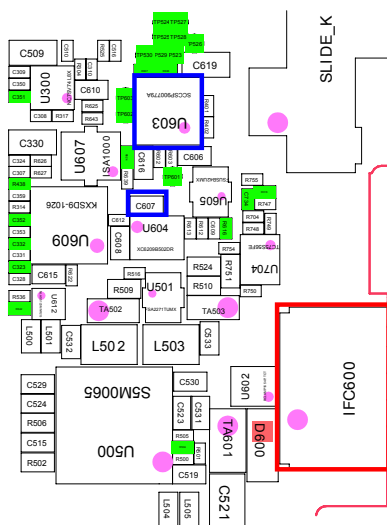
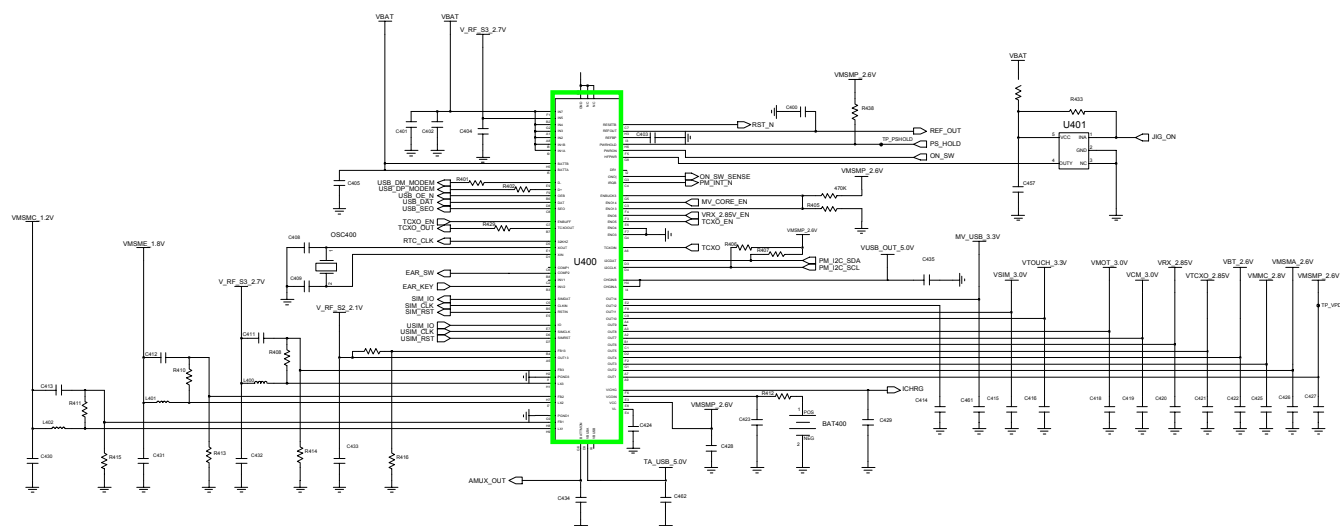
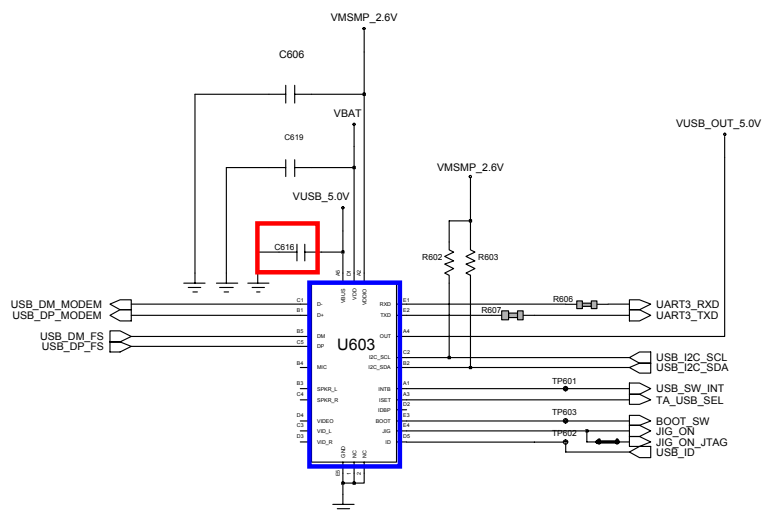
9-5. Earphone Part



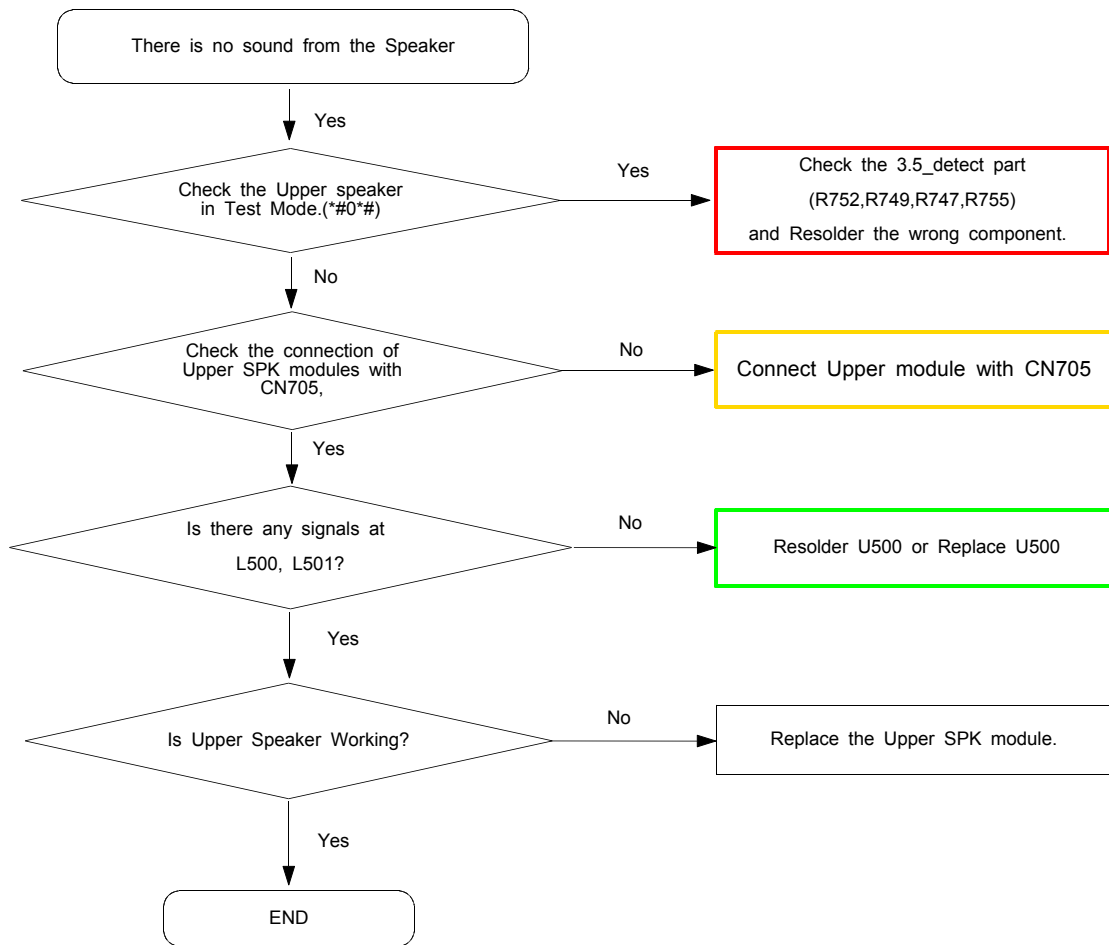


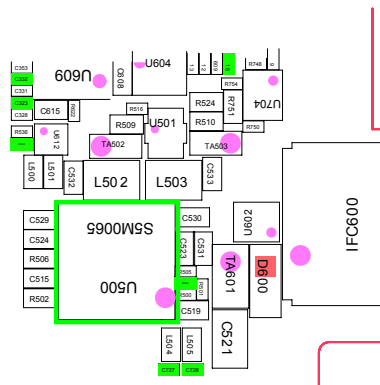
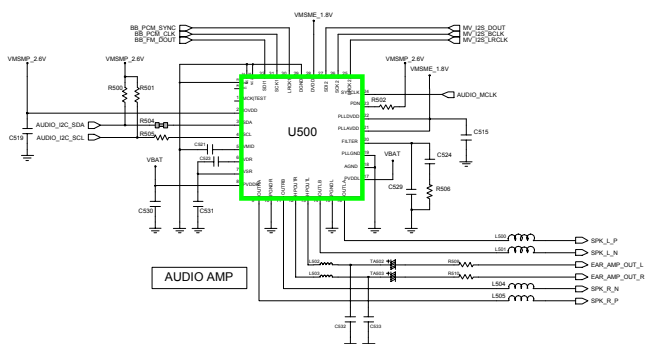
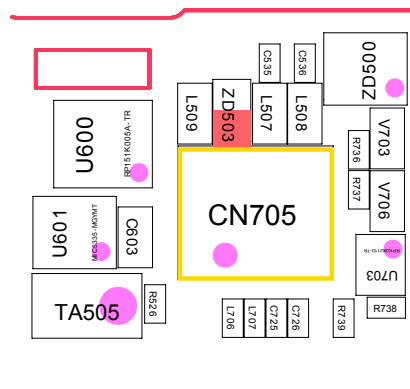
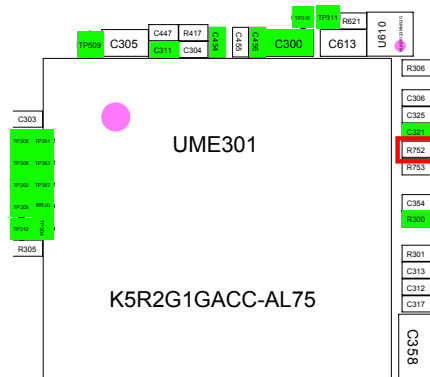
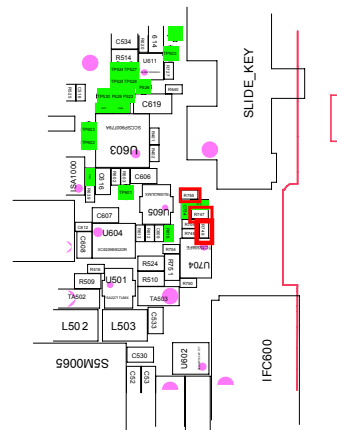
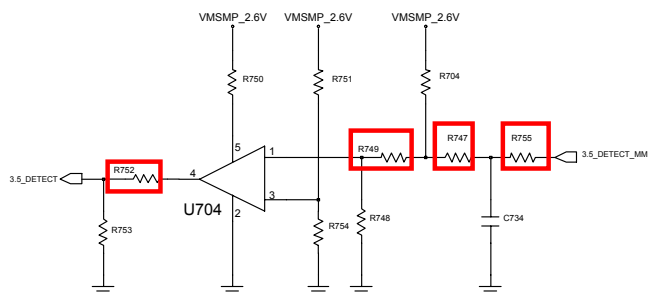
9-6. Charging Part



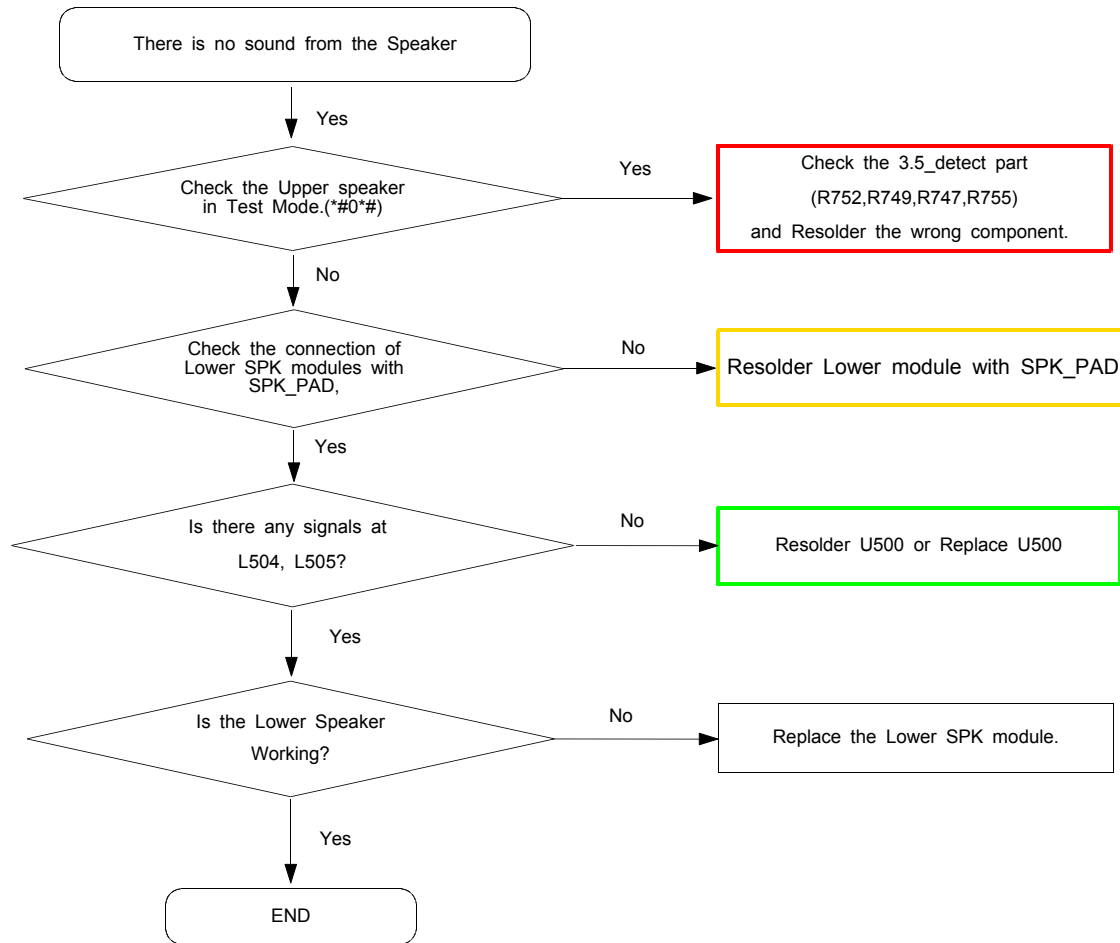


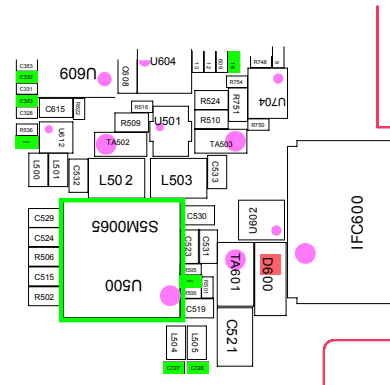
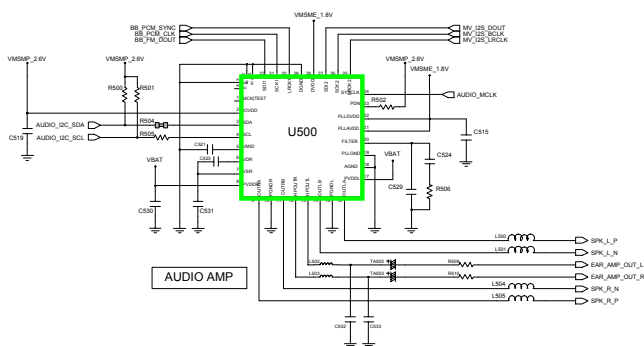
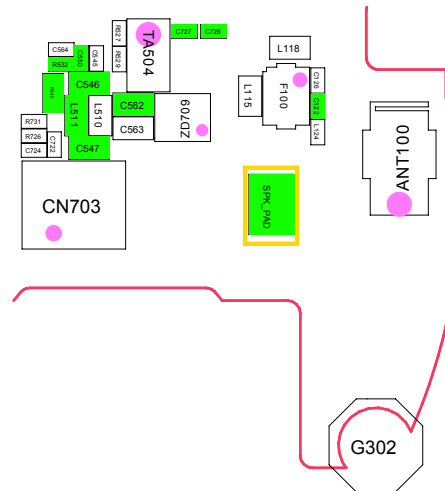
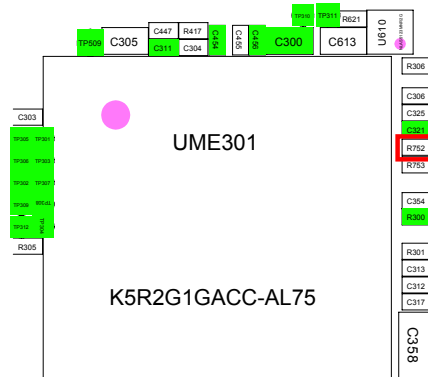
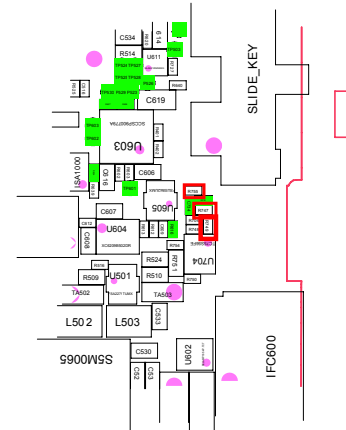
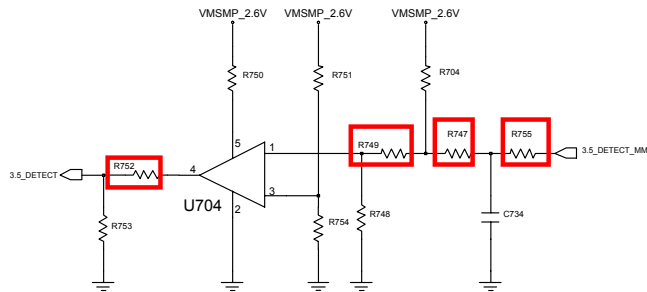
9-7-1. Speaker Part (Upper Speaker)



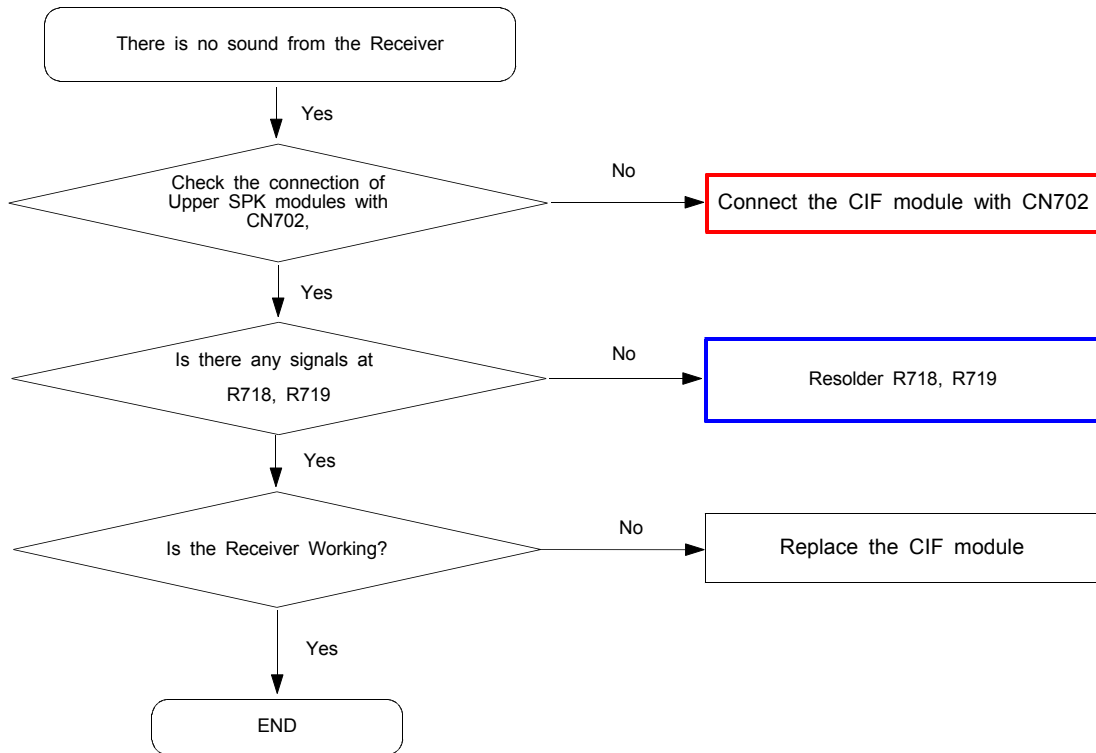


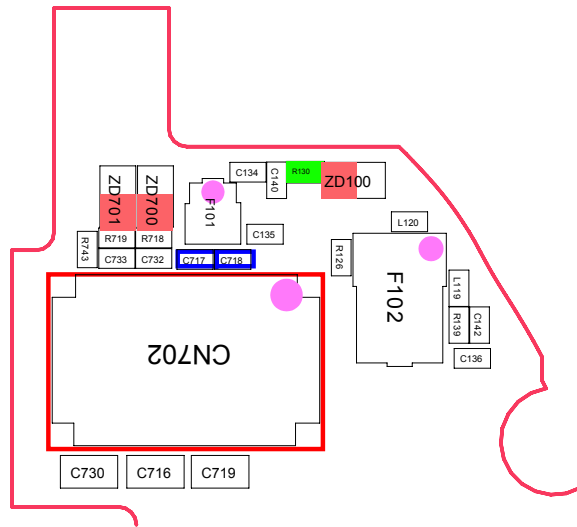
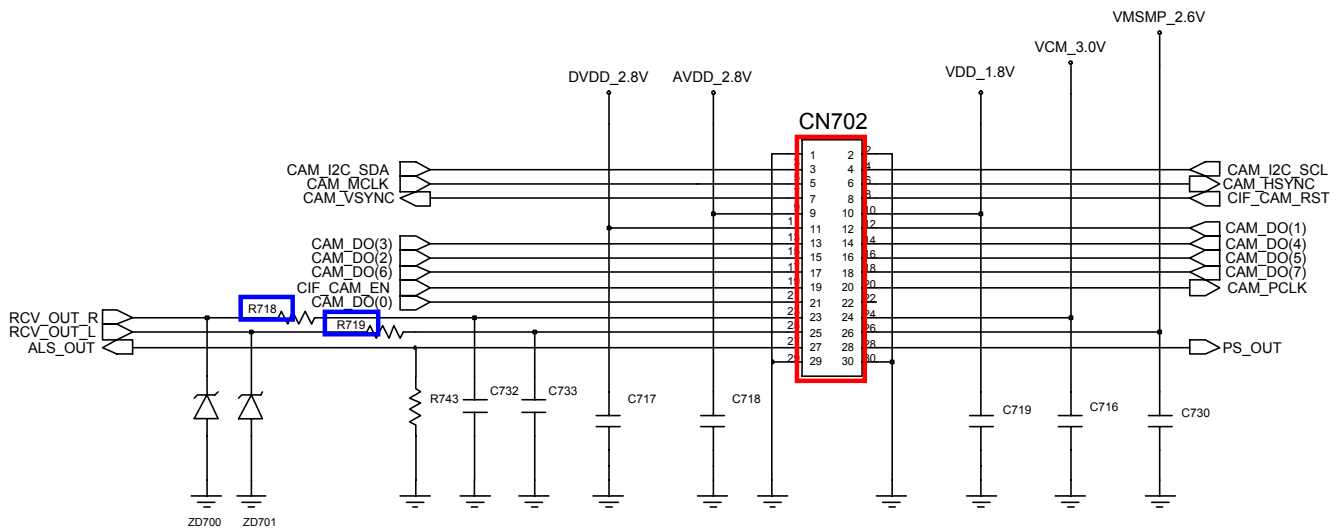
9-7-2. Speaker Part (Lower Speaker)



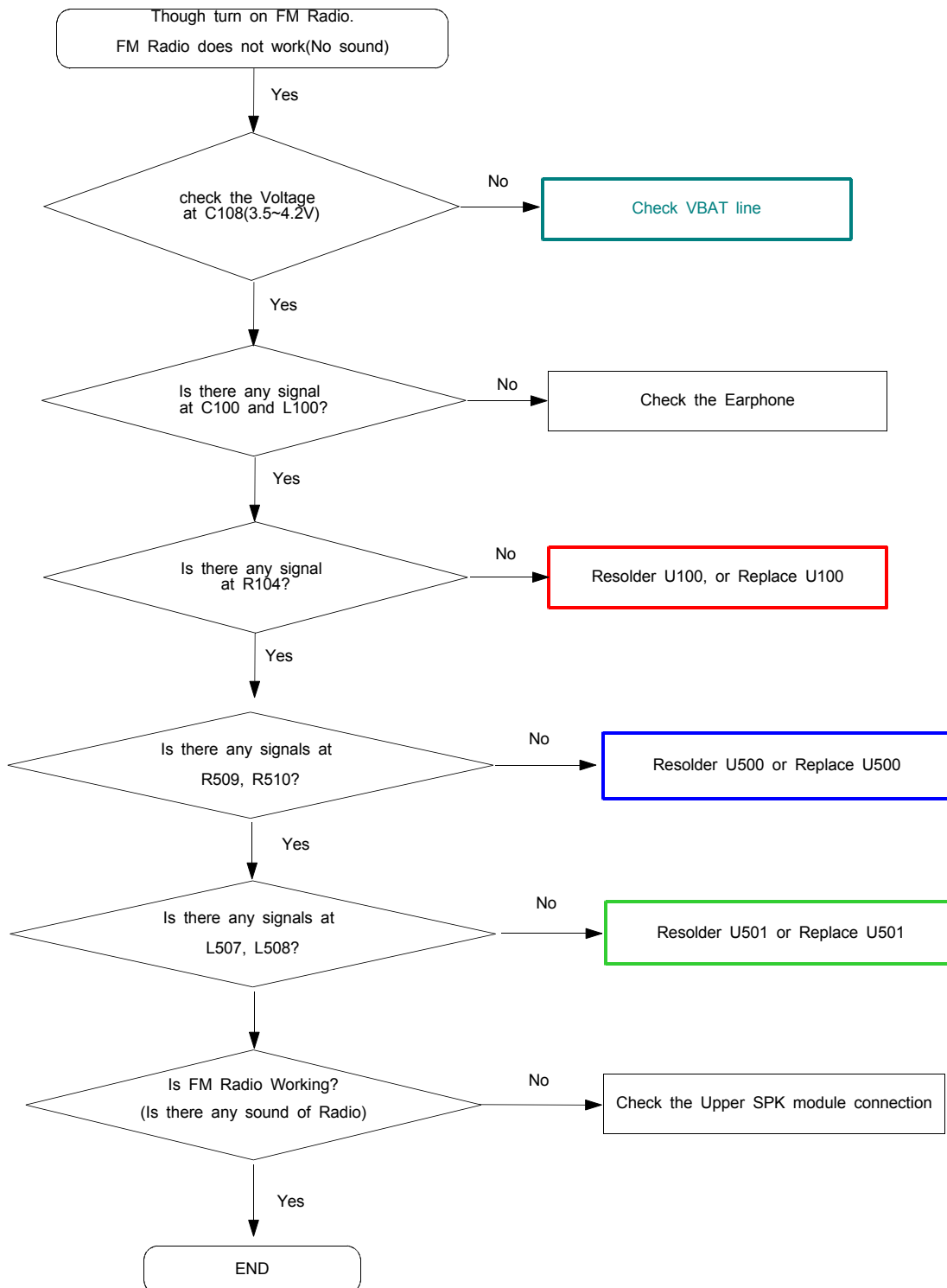


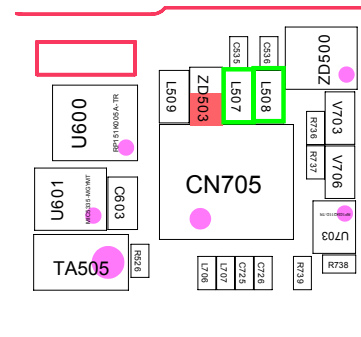
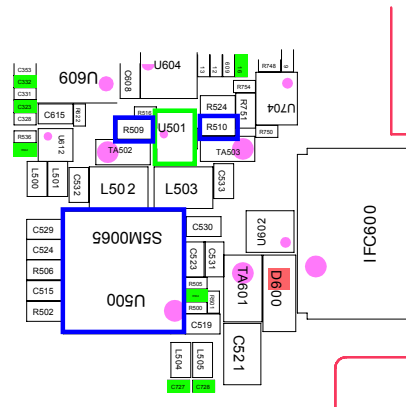
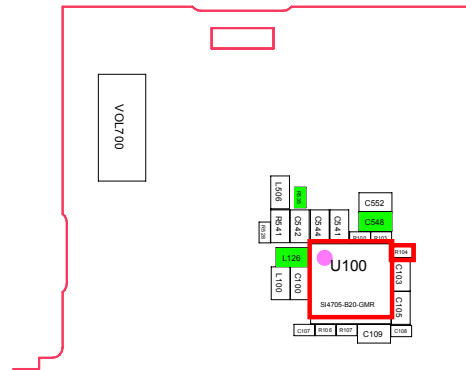
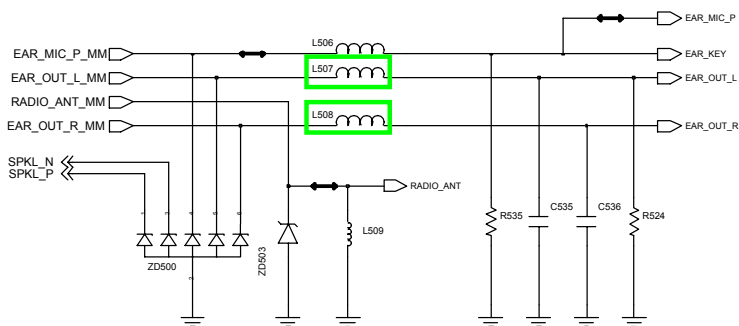
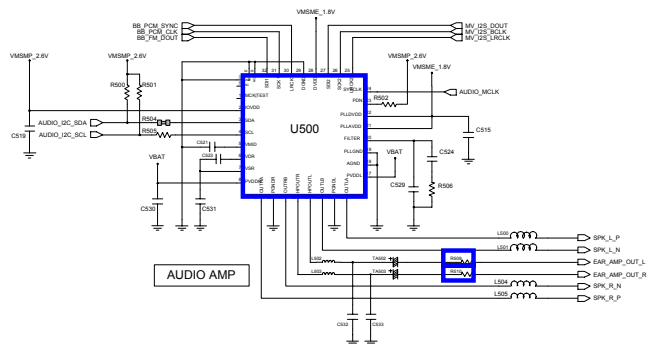
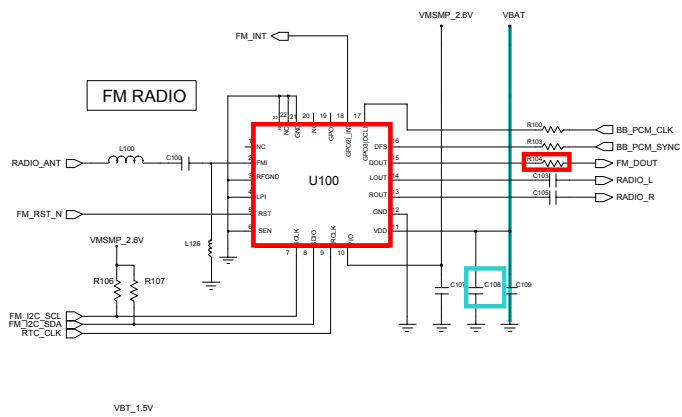
9-8. Receiver Part



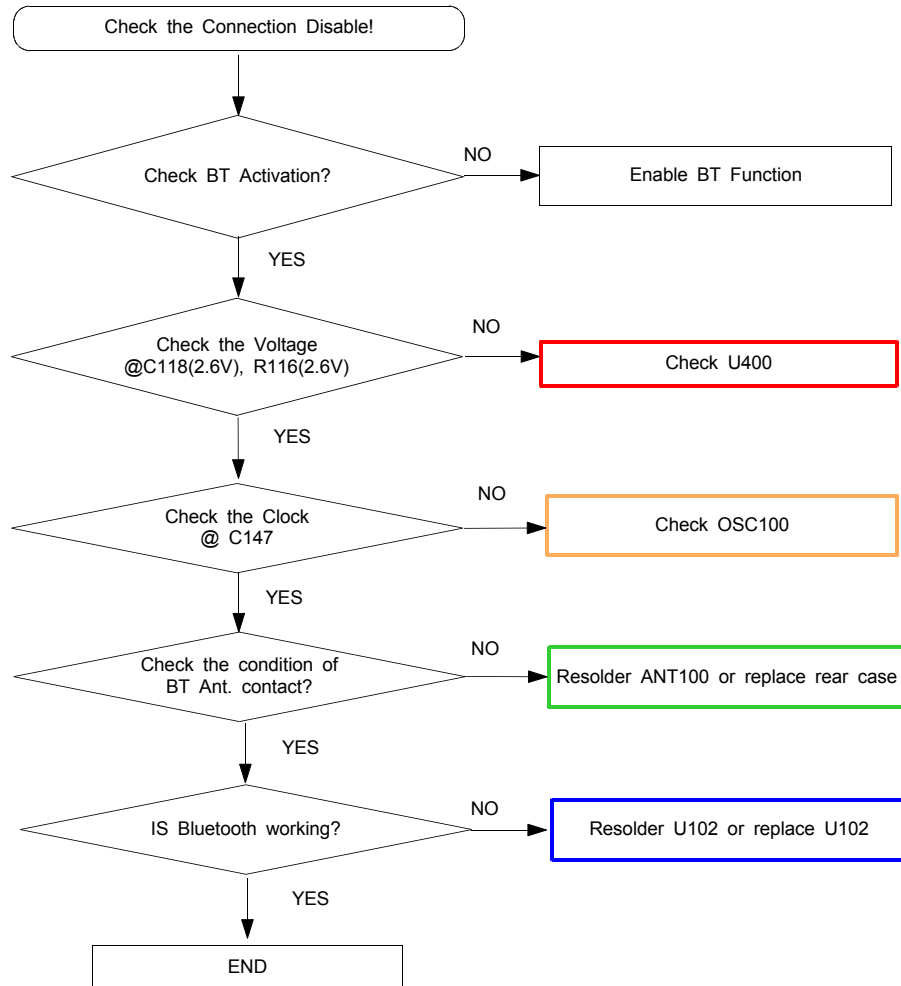


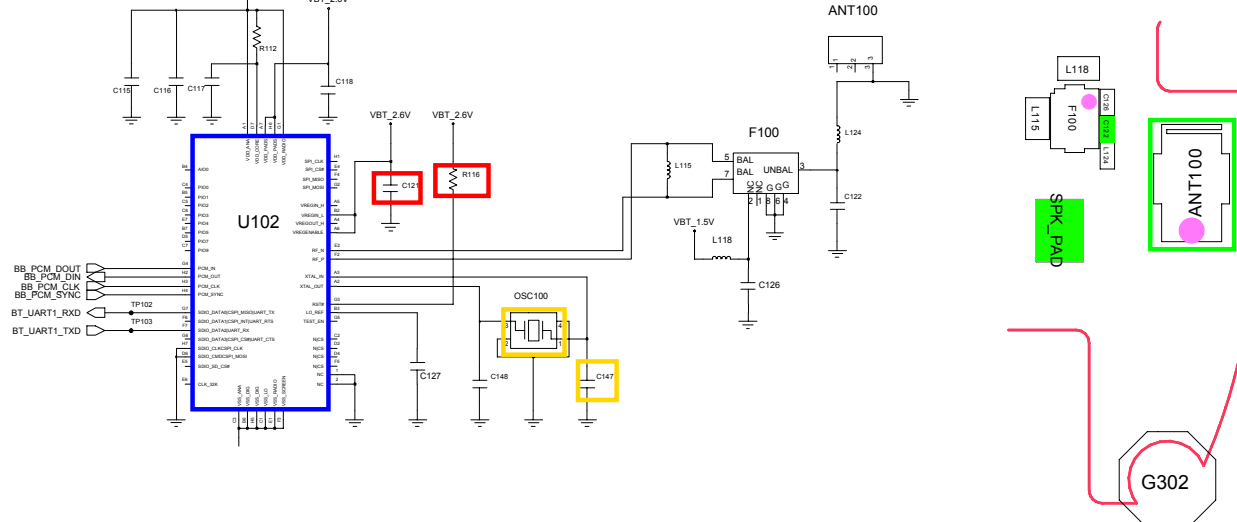
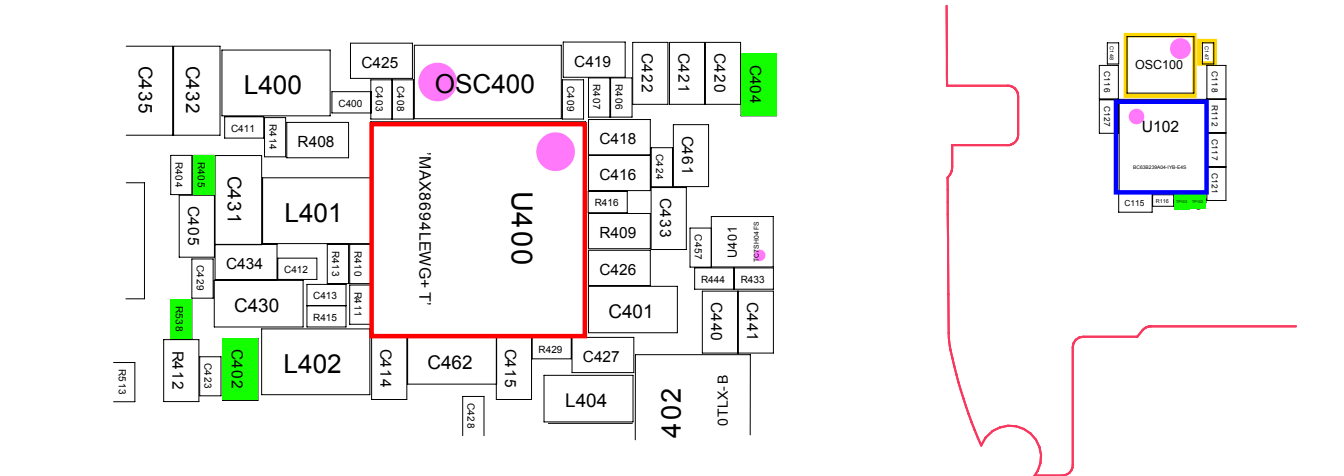
9-9. FM Radio Part



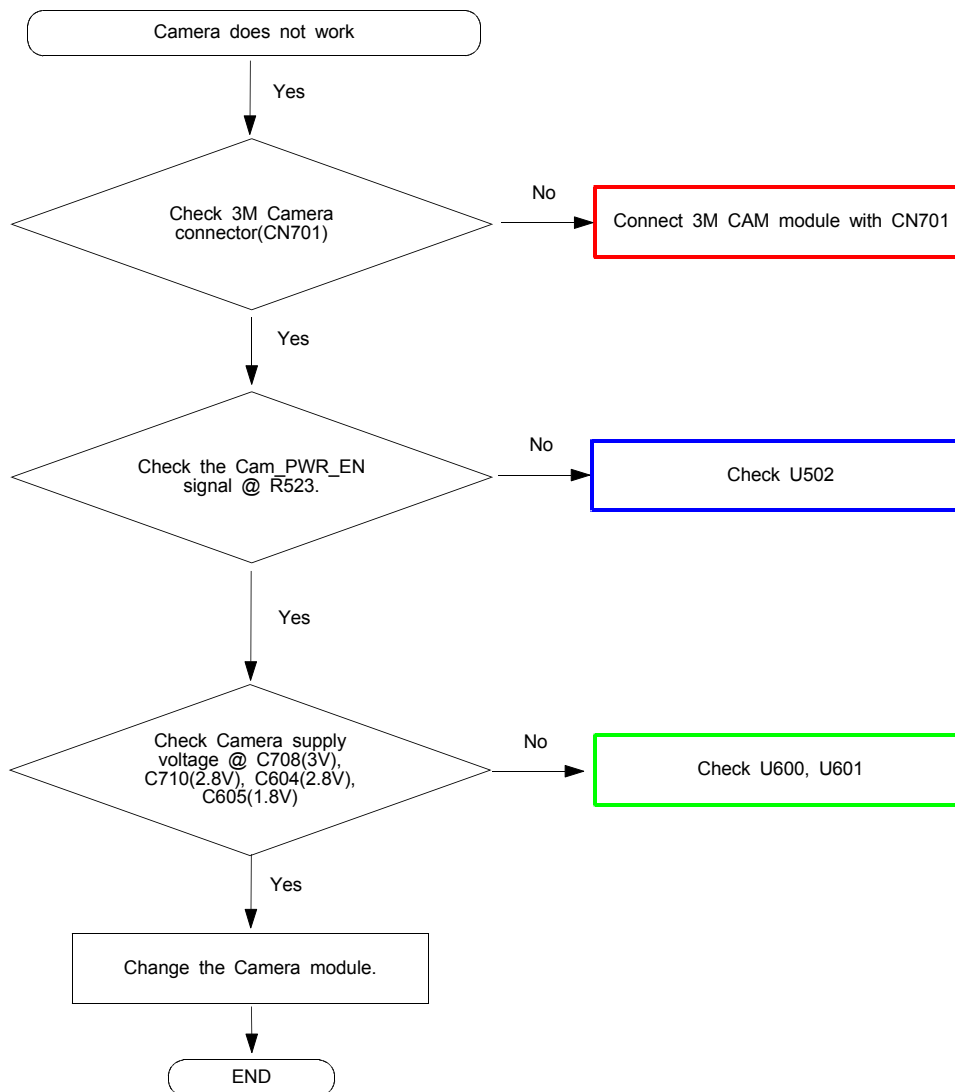


9-10. Bluetooth Part



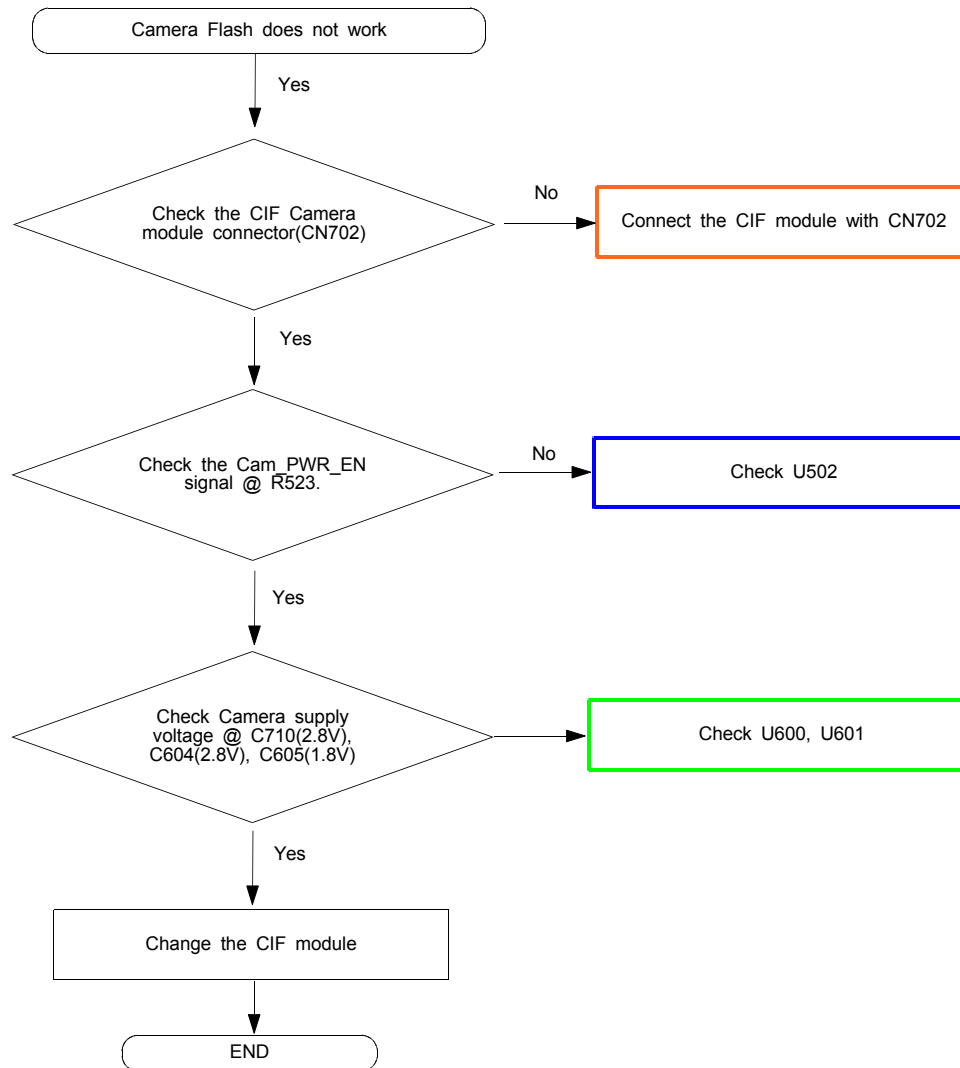


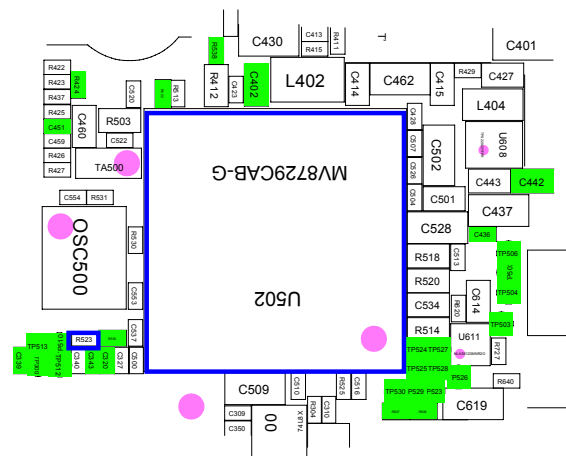
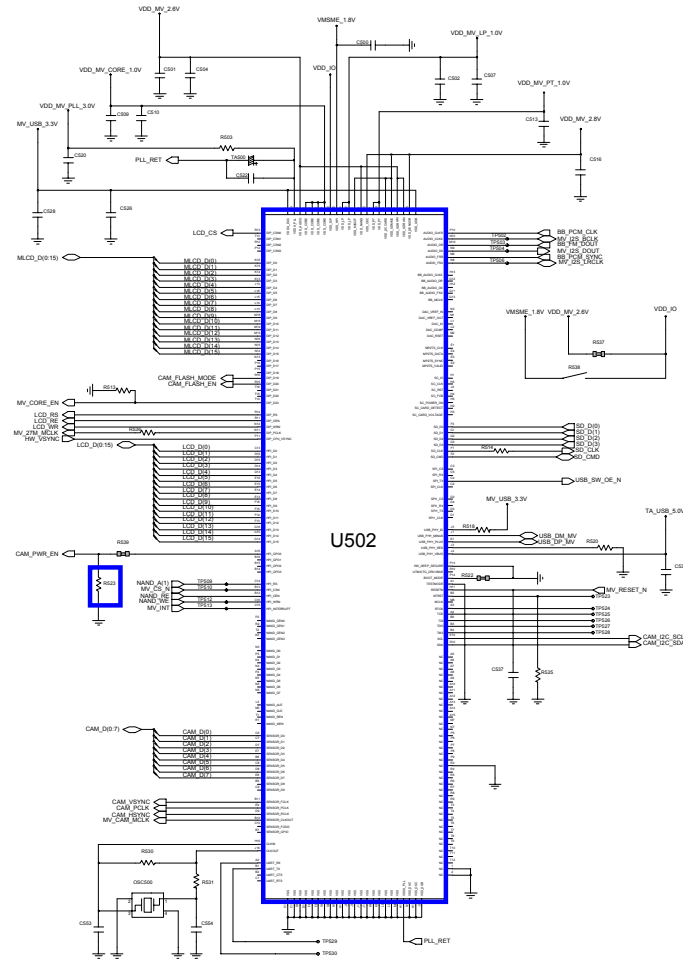
9-11-1. 3M Camera

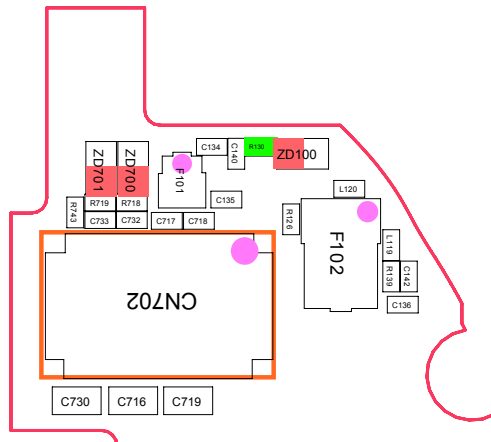
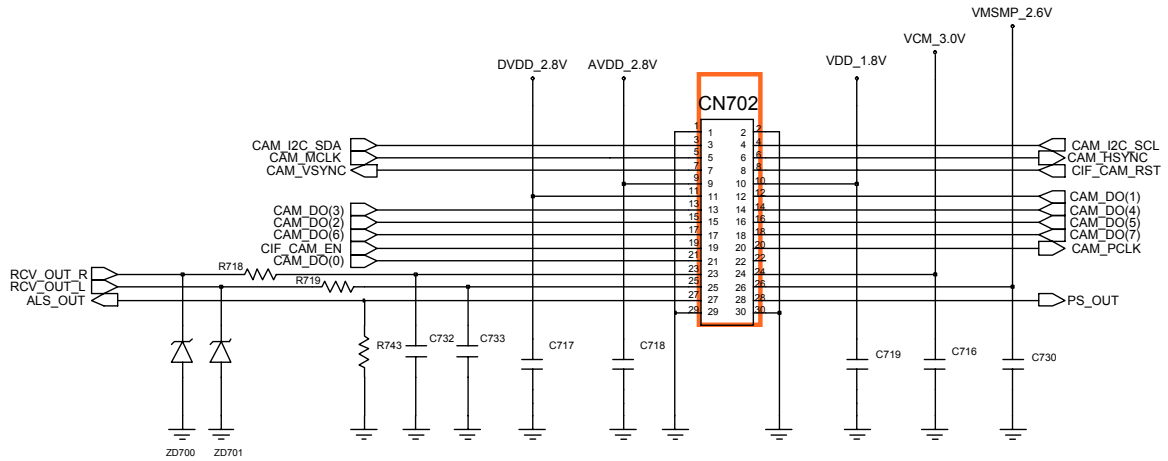
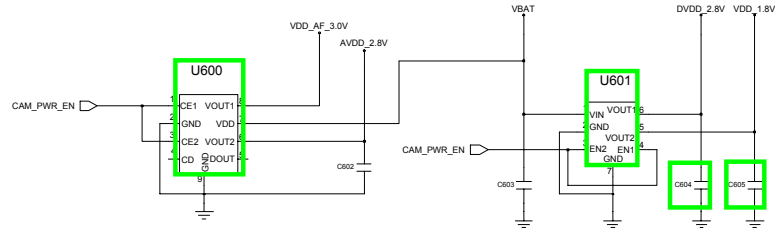




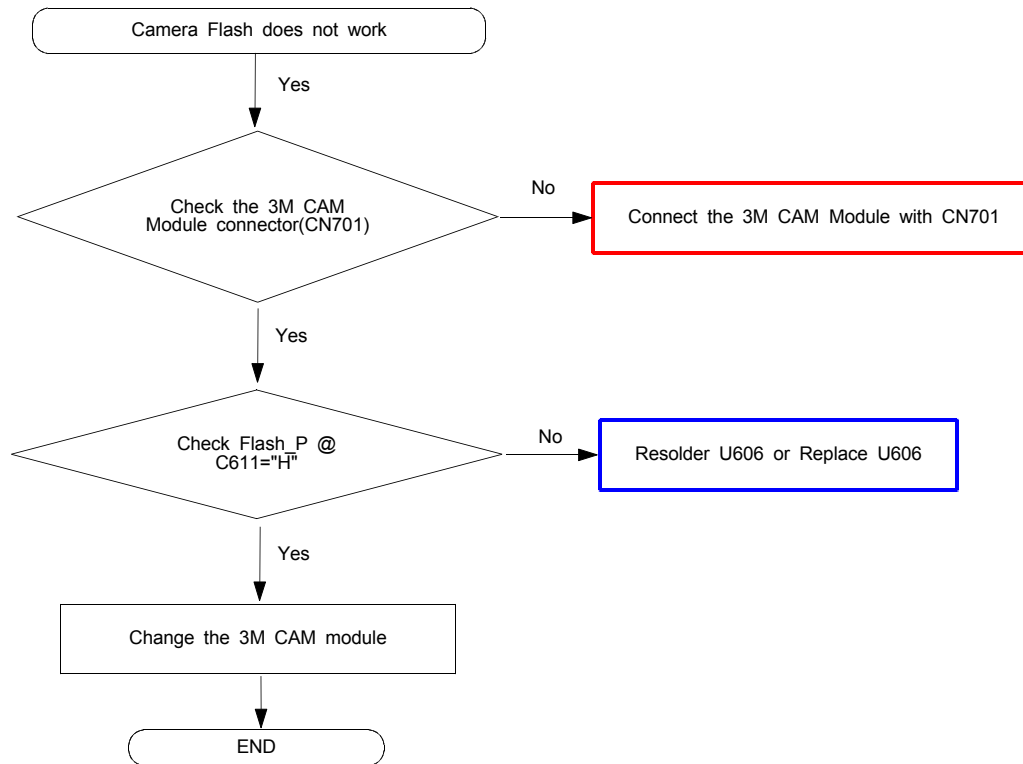
9-11-2. CIF Camera

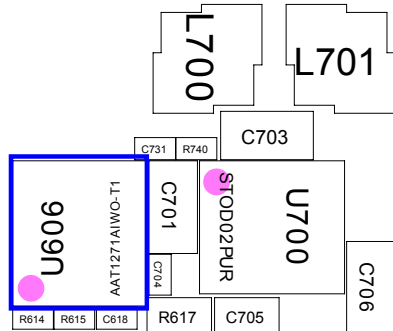
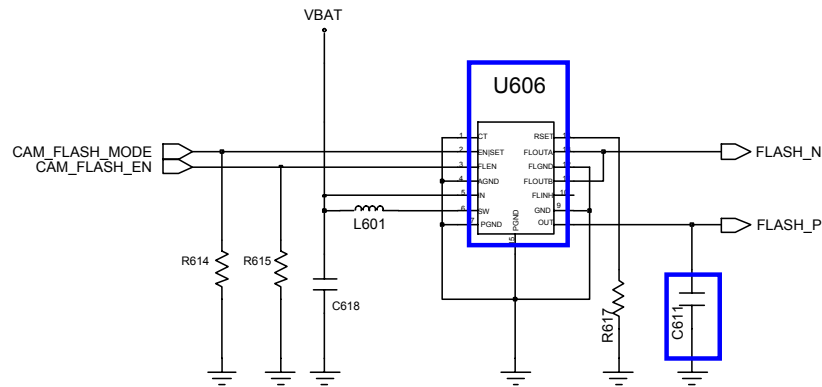
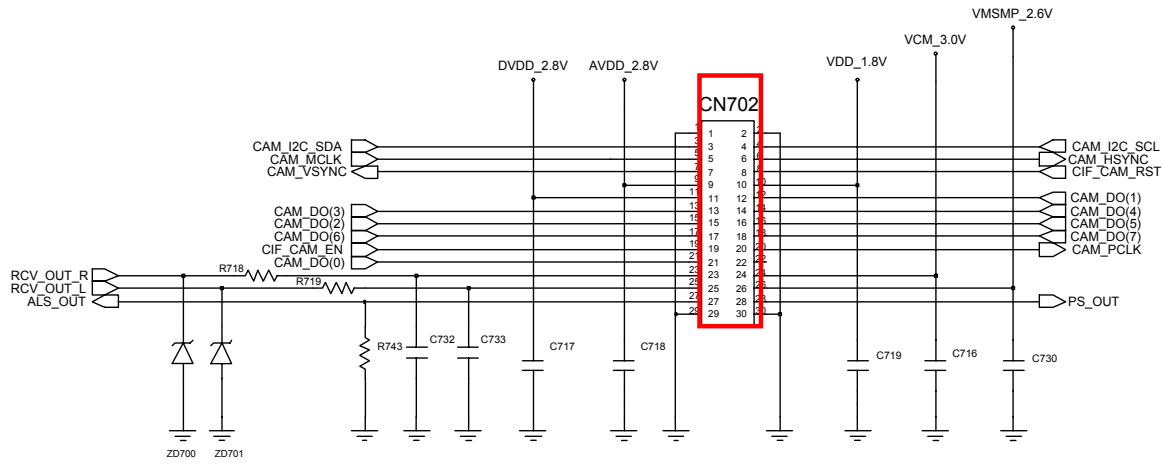




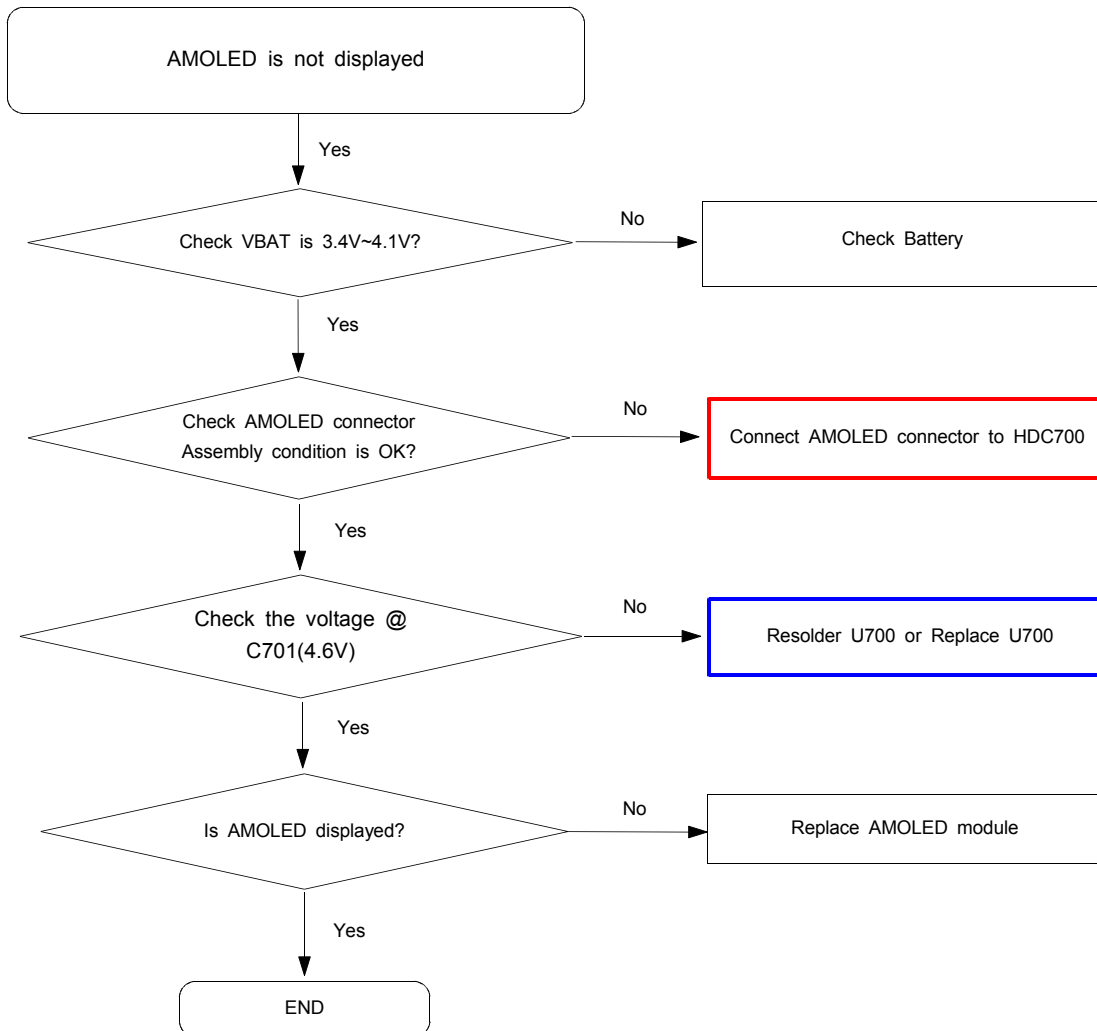


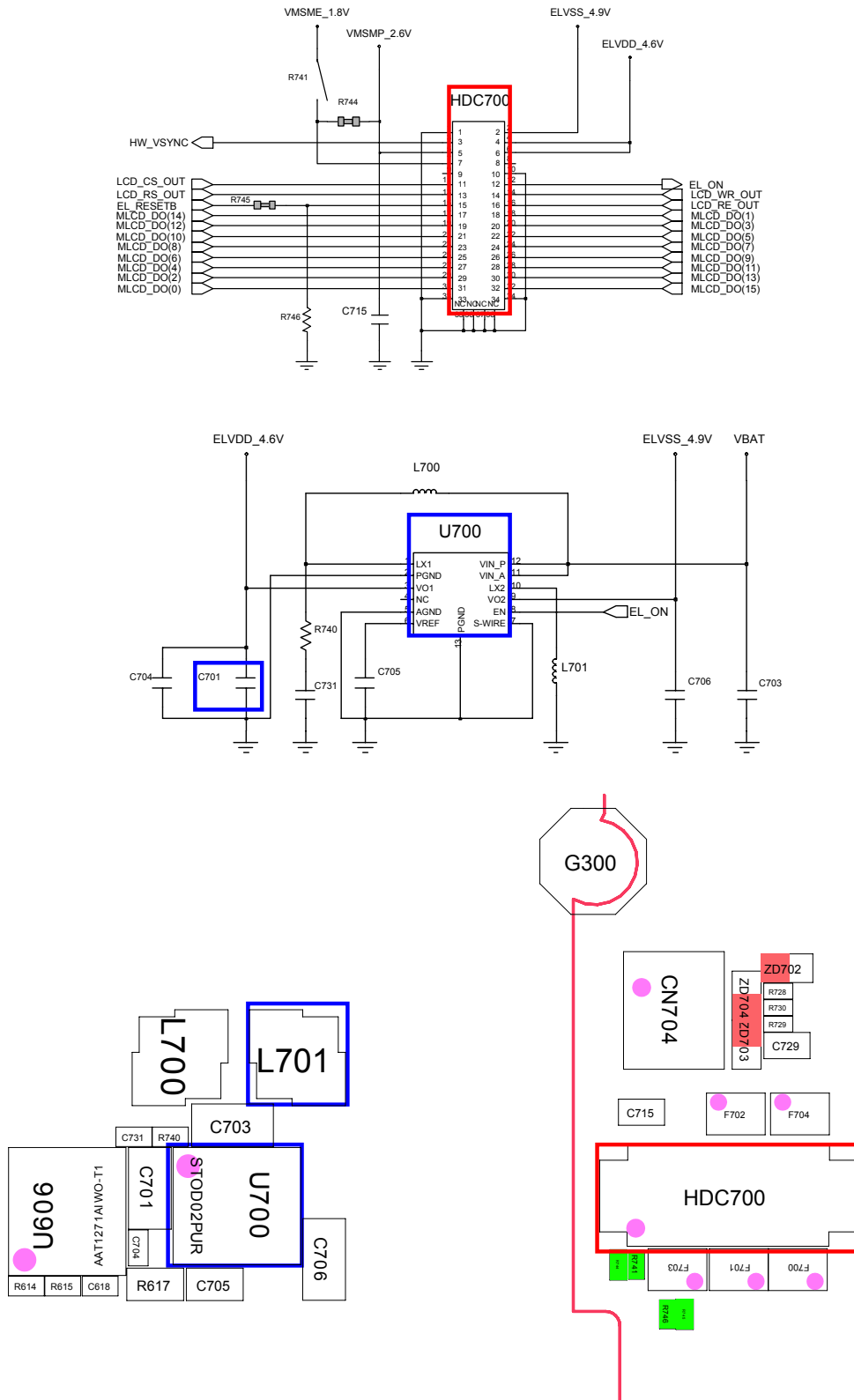
9-11-3. Camera Flash



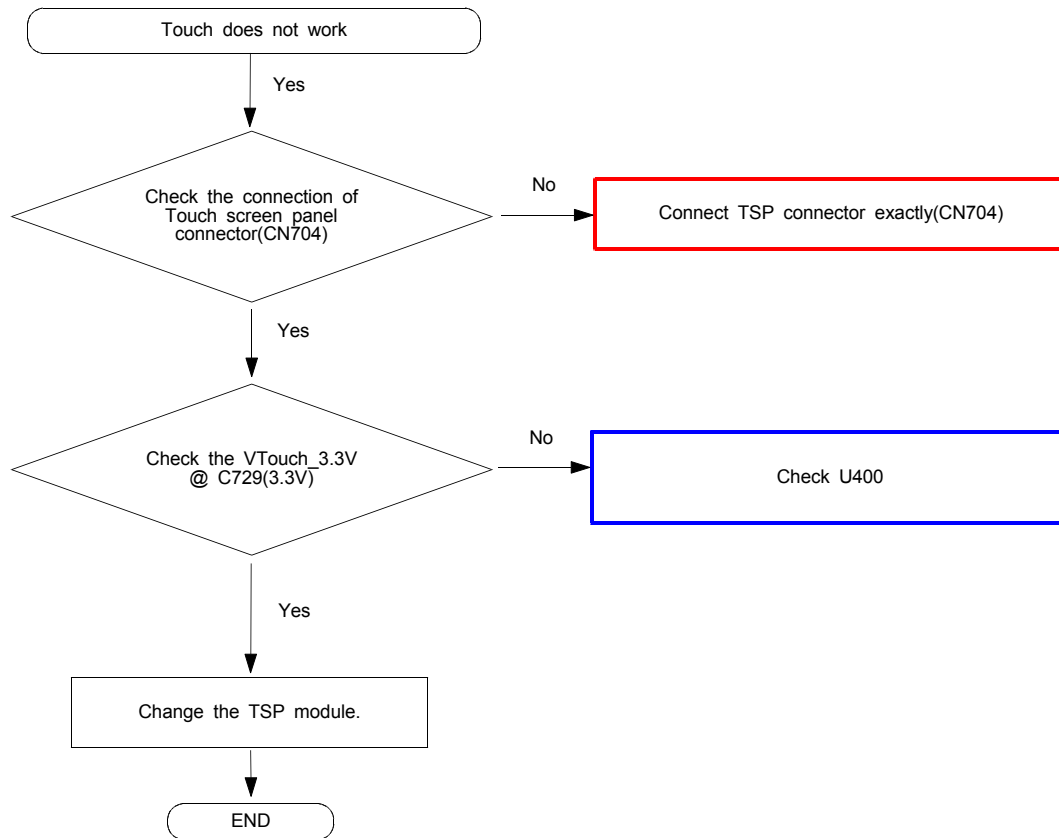


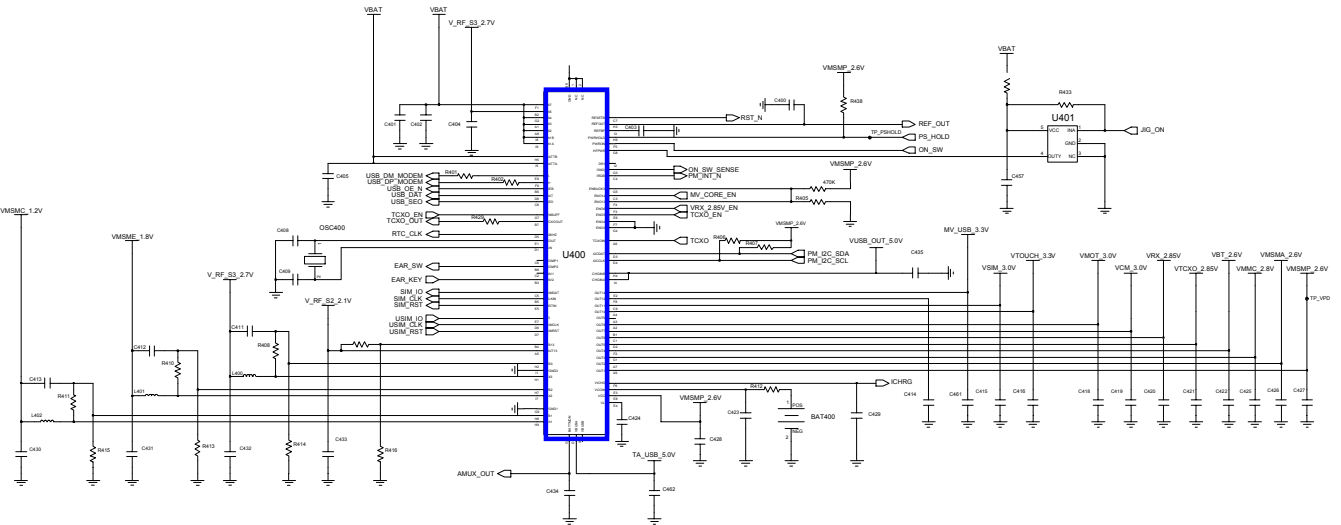
9-12. AMOLED Part





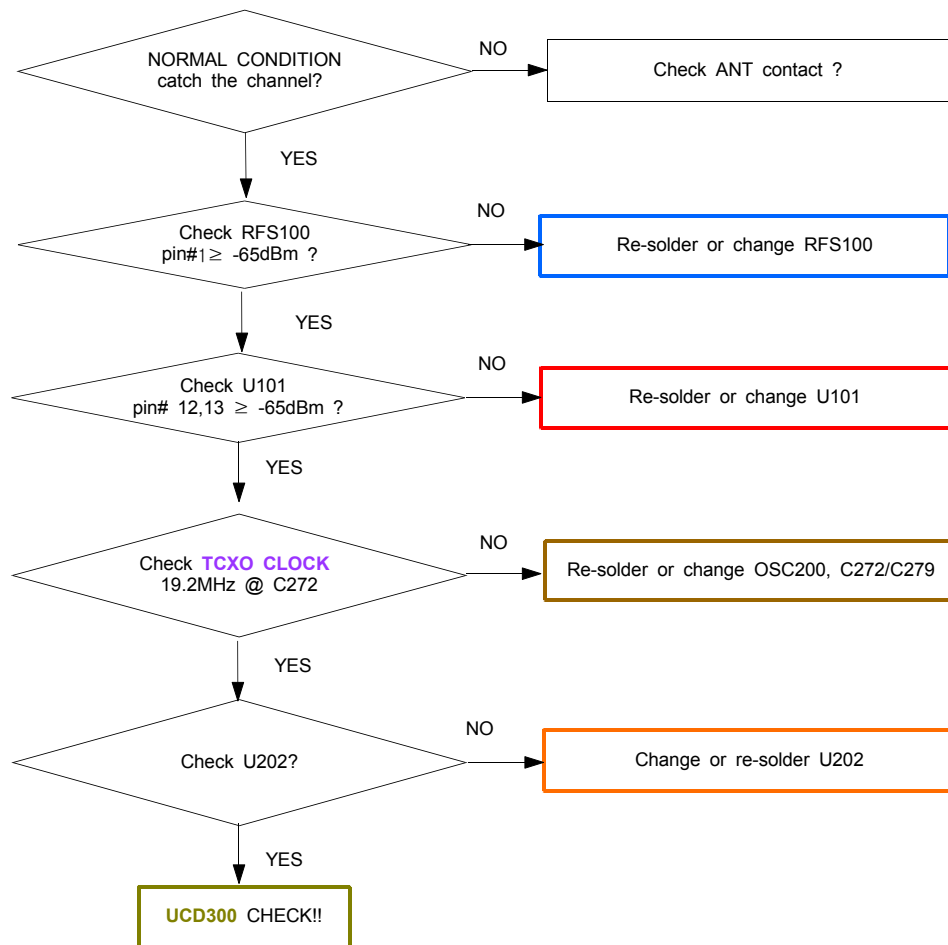
10.13 Touch Screen Panel (TSP)





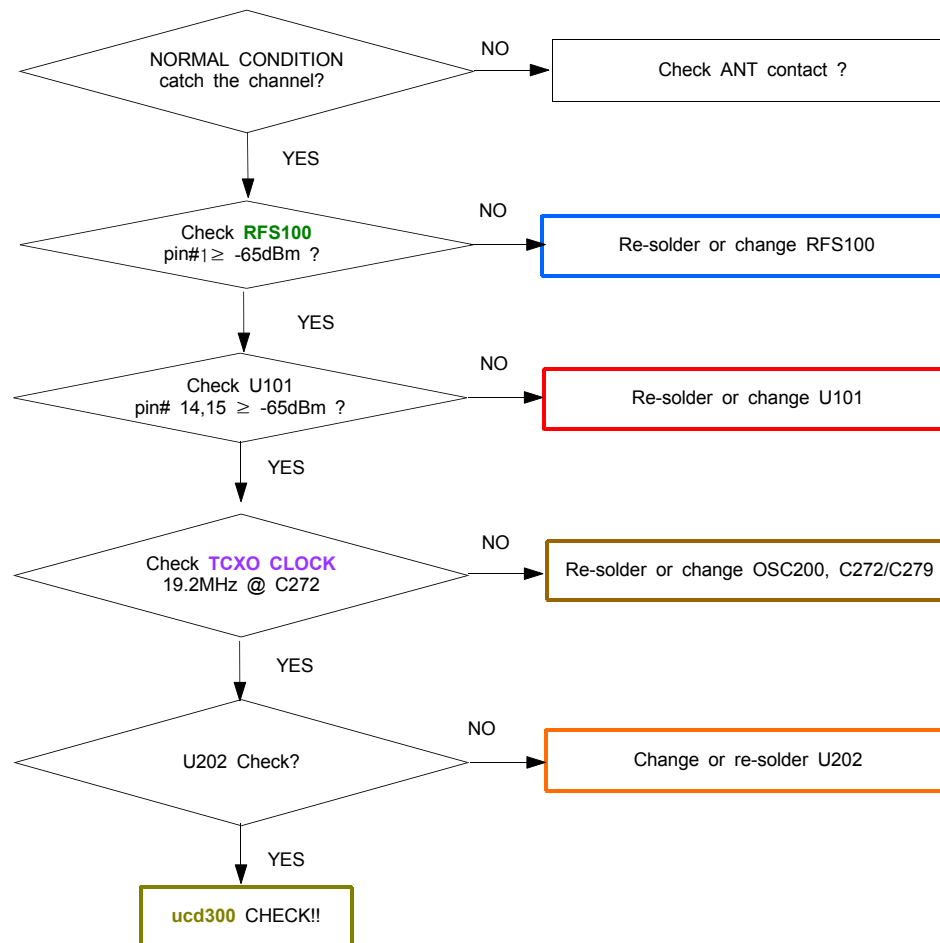
9-14-1. GSM850 Receiver

Band : GSM
CELL POWER : -50dBm
Channel : 190Ch



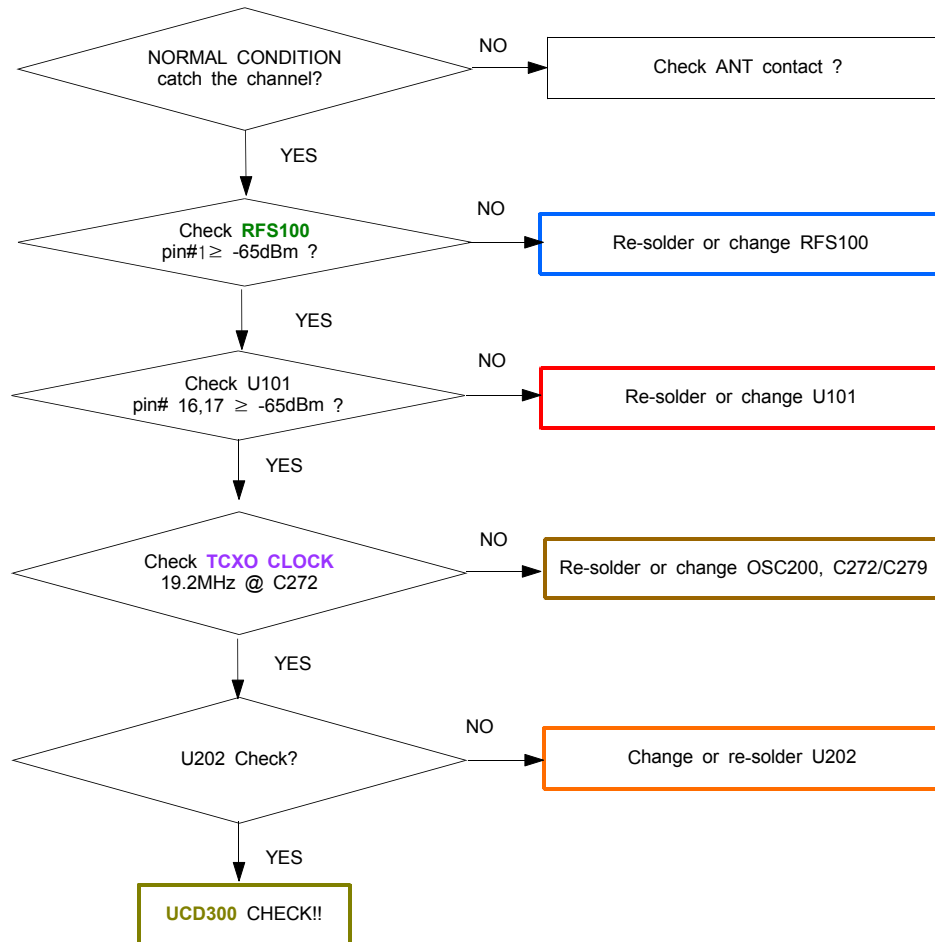
9-14-2. EGSM Receiver

Band : GSM
CELL POWER : -50dBm
Channel : 37Ch



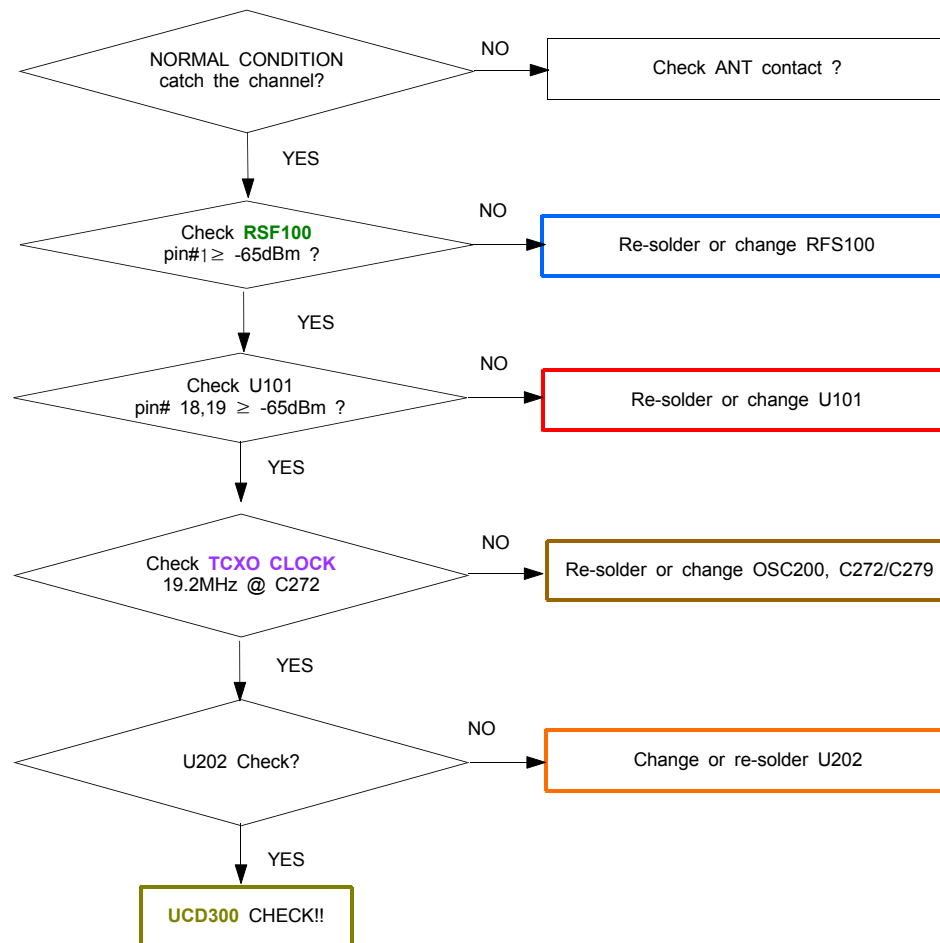
9-14-3. DCS Receiver

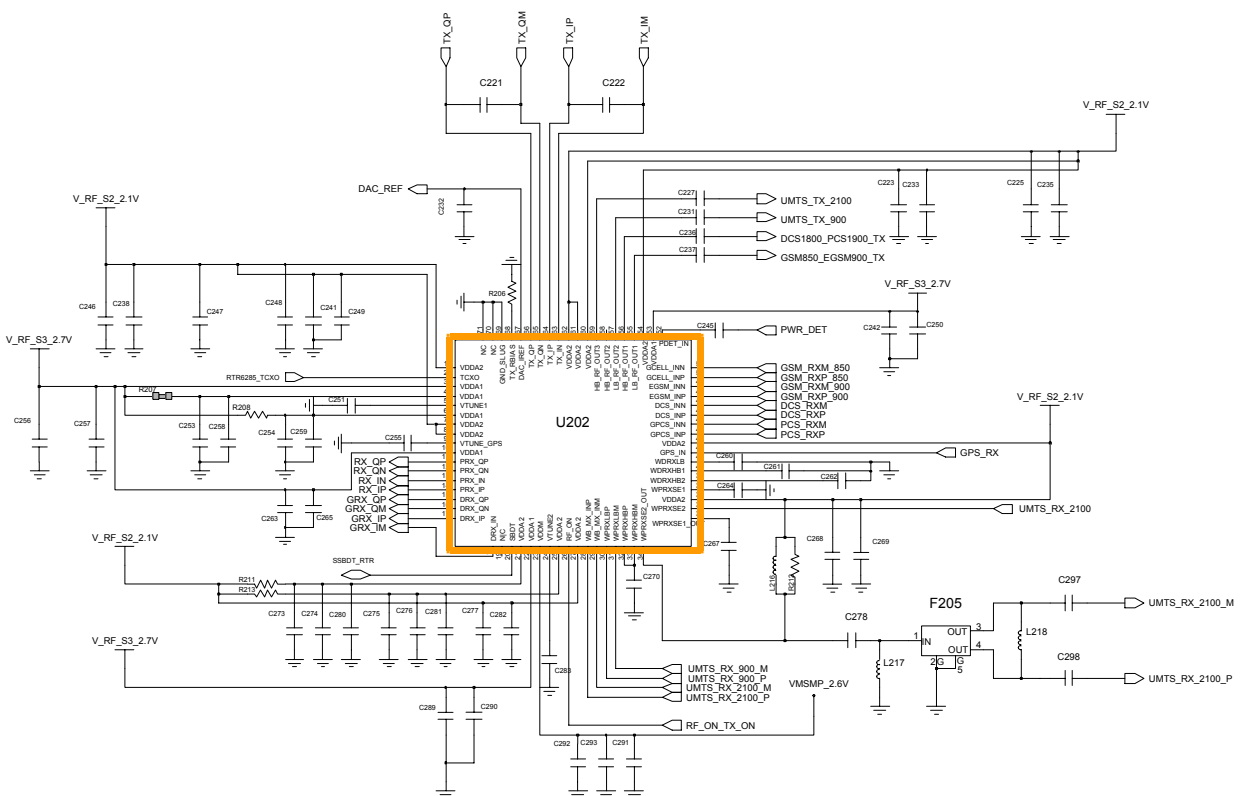
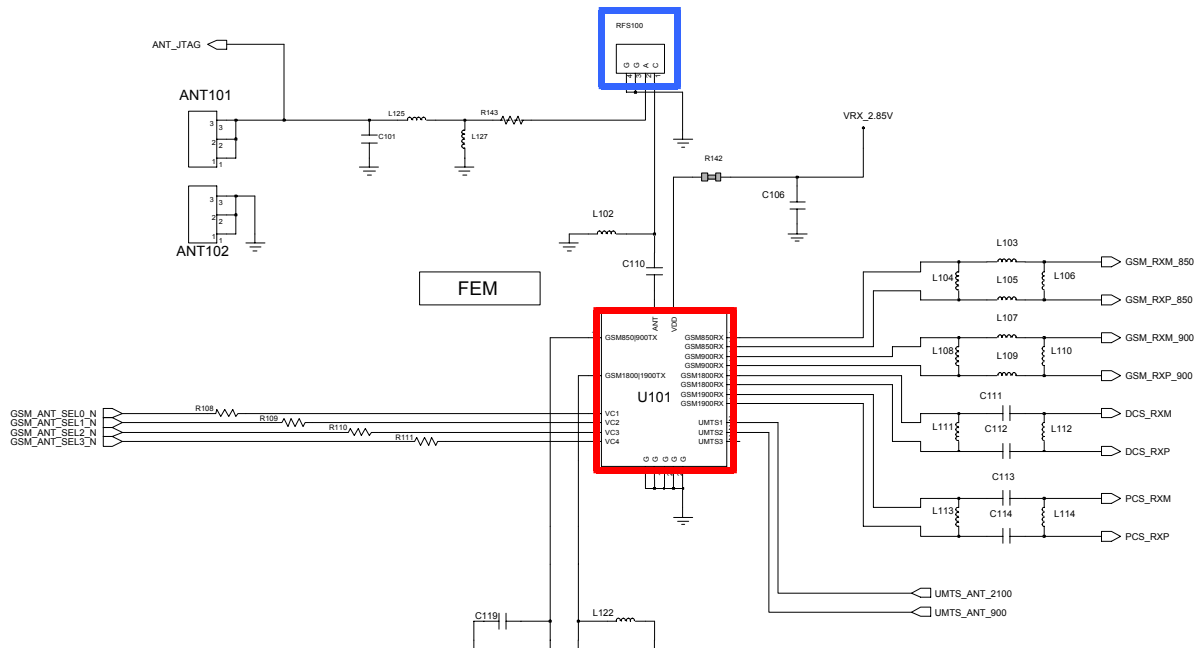
Band : DCS
CELL POWER : -50dBm
Channel : 698Ch



9-14-4. PCS Receiver

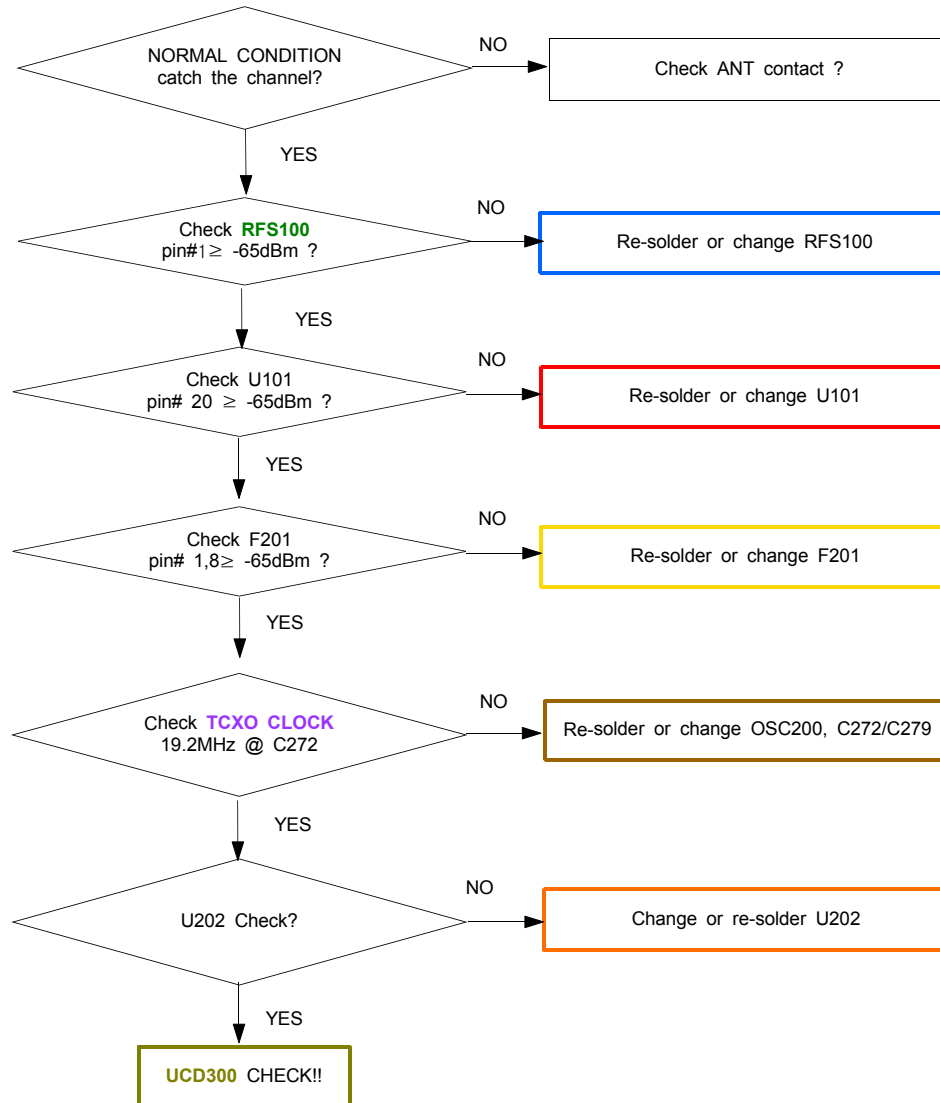
Band : PCS
CELL POWER : -50dBm
Channel : 661Ch





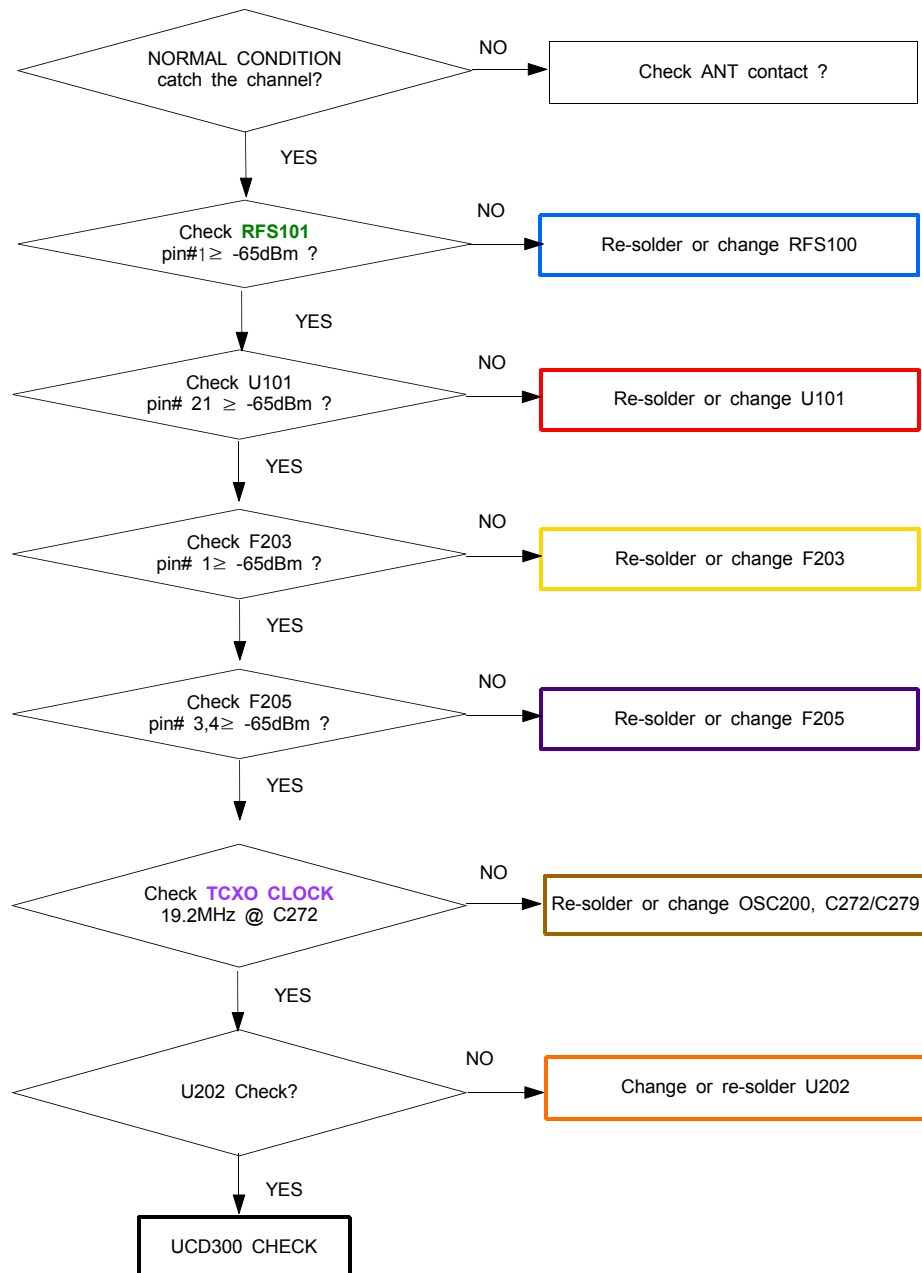
9-14-5. WCDMA 900 Receiver

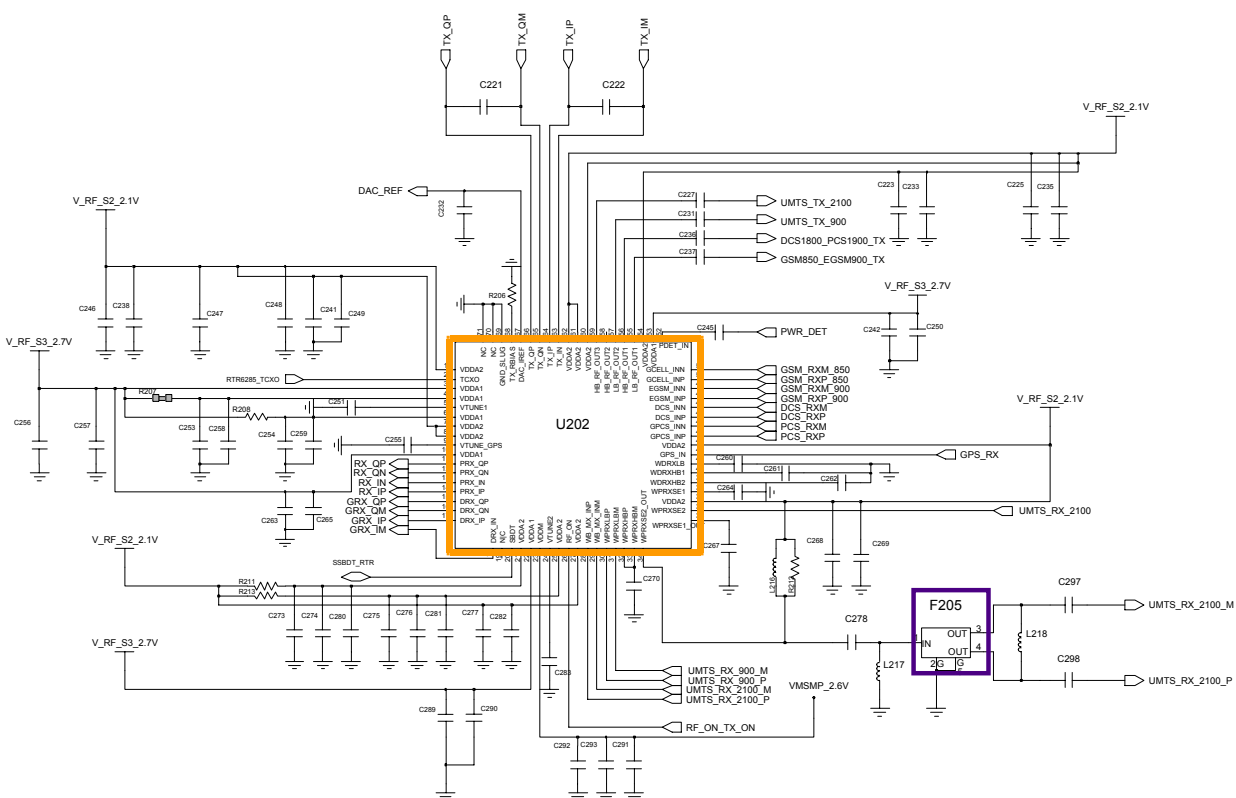
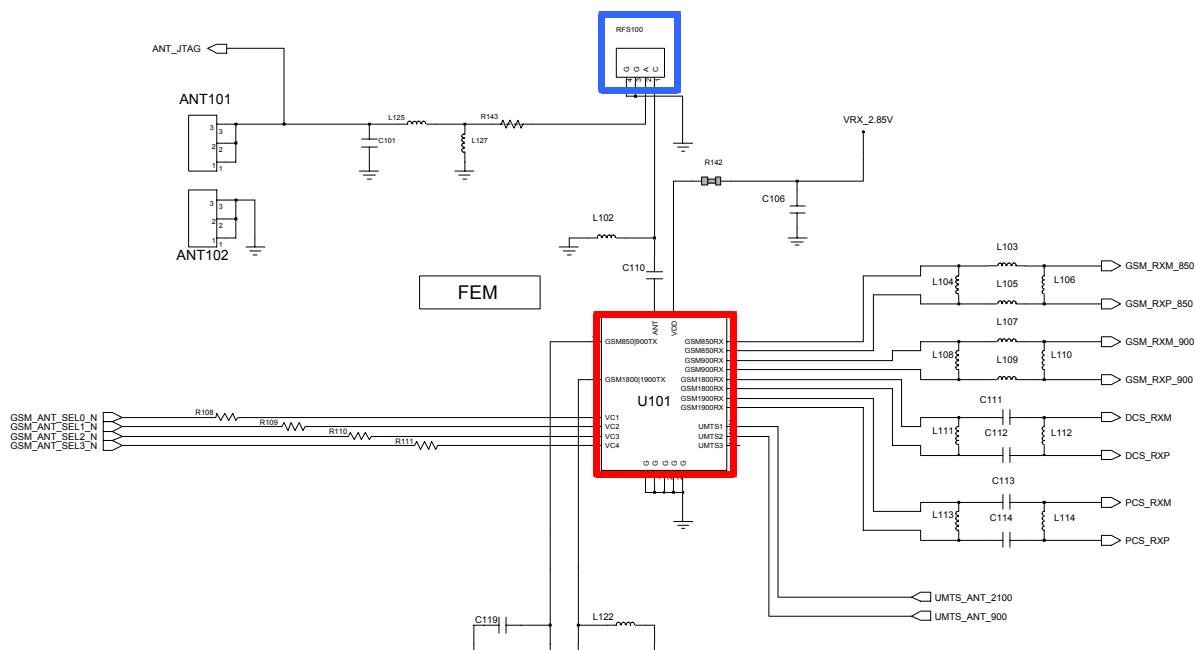
Band : WCDMA
CELL POWER : -50dBm
Channel : 3013Ch

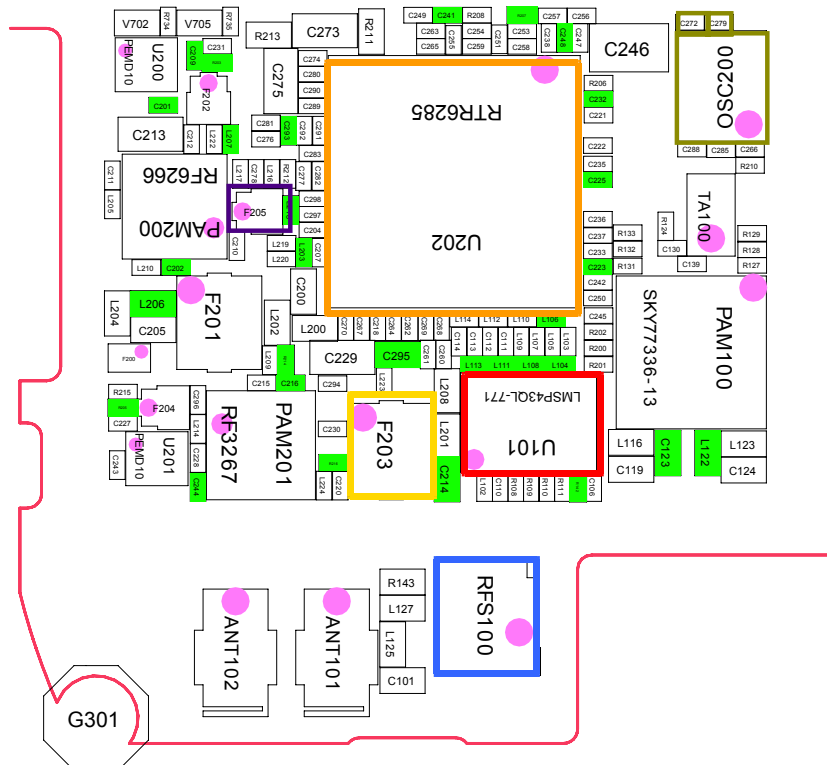
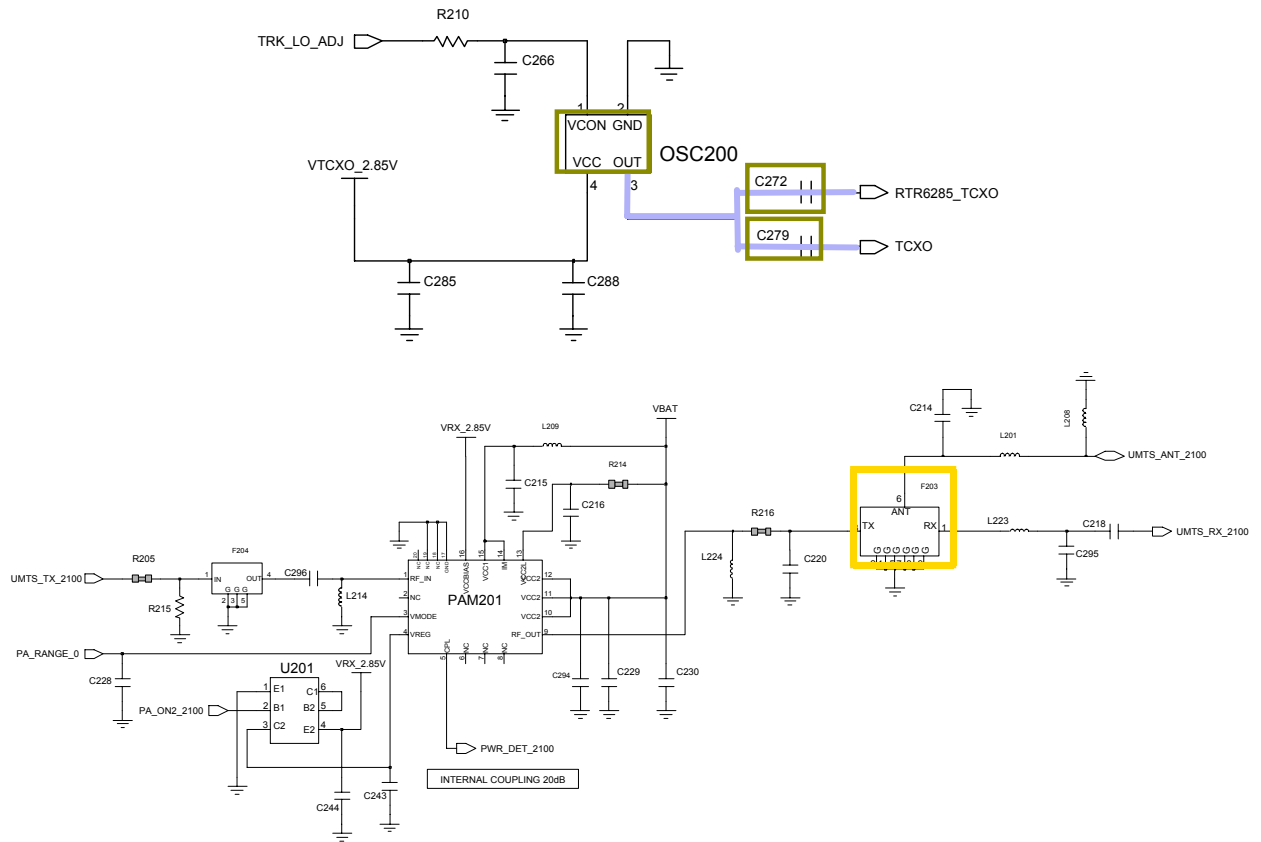


9-14-6. WCDMA 2100 Receiver

Band : WCDMA
CELL POWER : -50dBm
Channel : 10700Ch

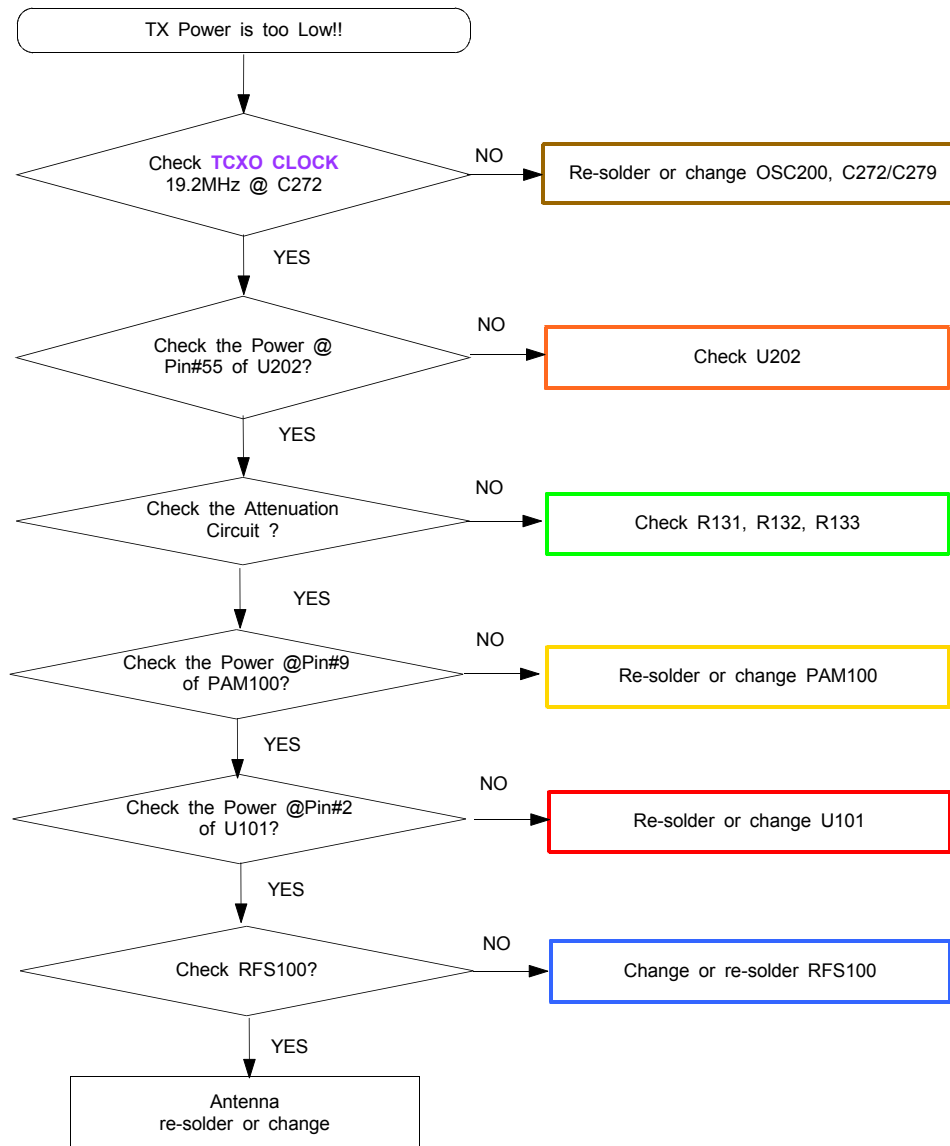






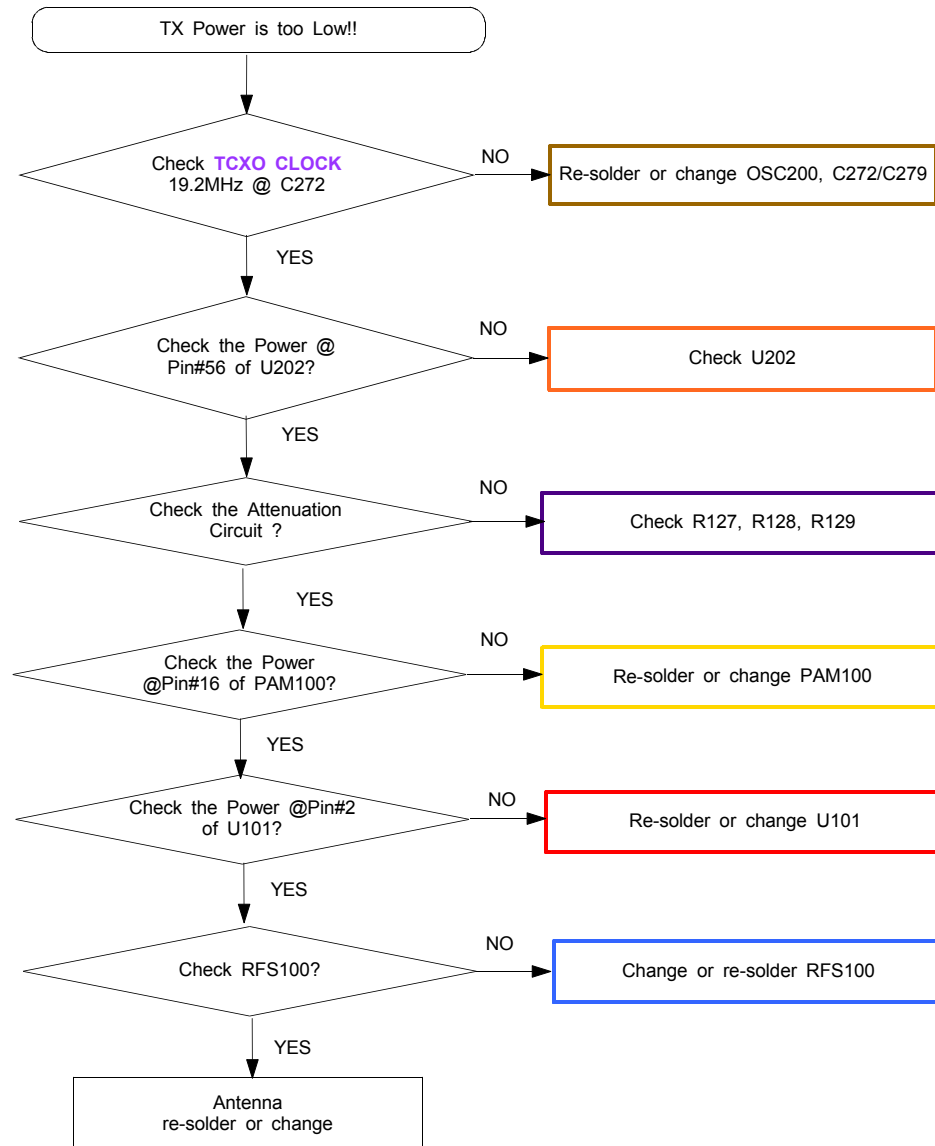
9-15-1. GSM850/EGSM transmitter

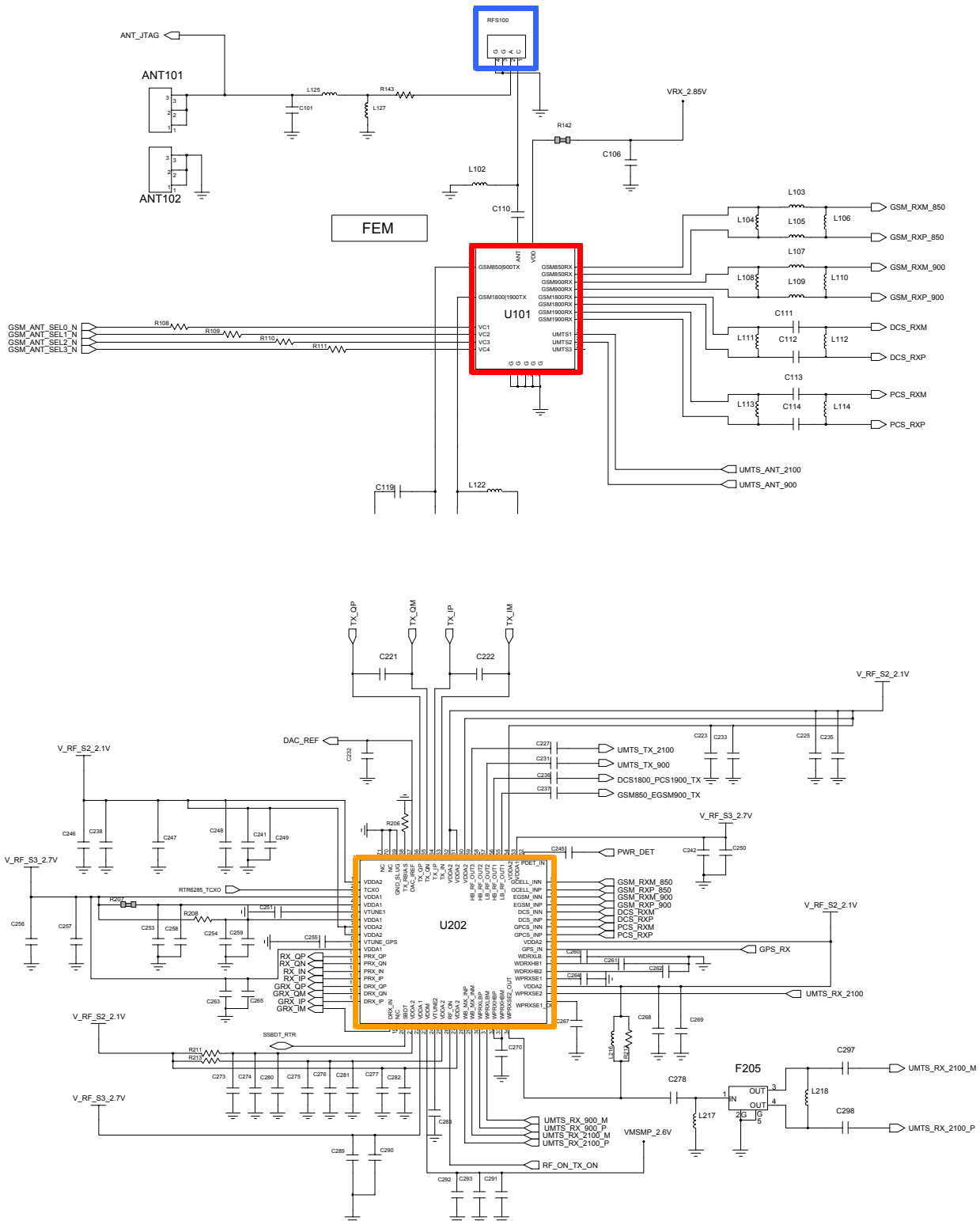
Band : GSM850 /EGSM
CELL POWER : -50dBm
TX LEVEL : 5
Channel : 190 Ch / 37 Ch

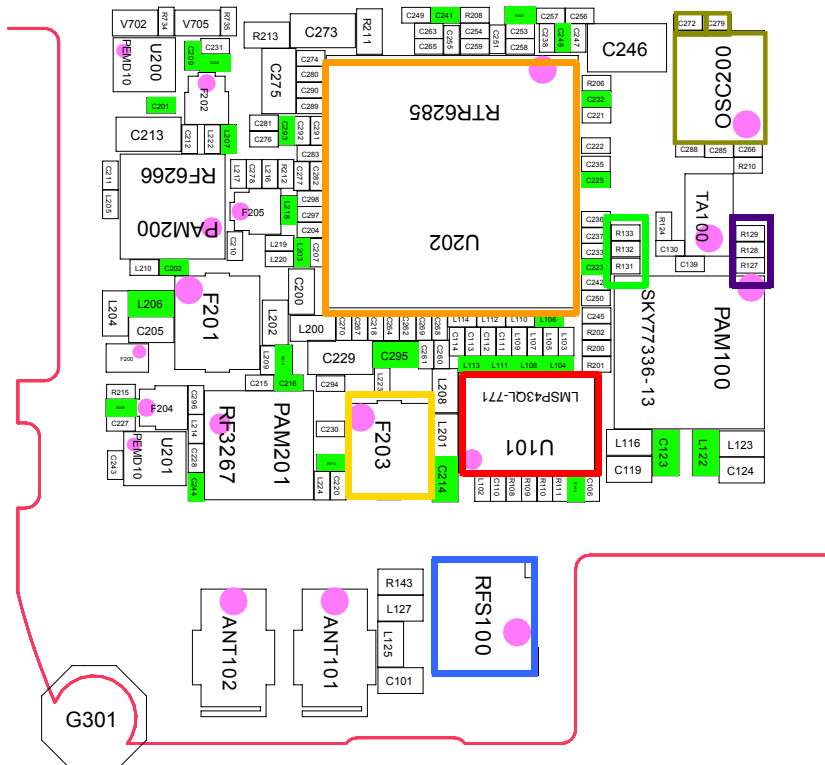
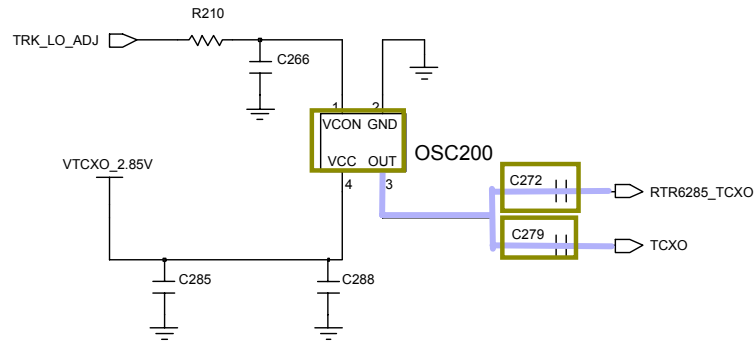
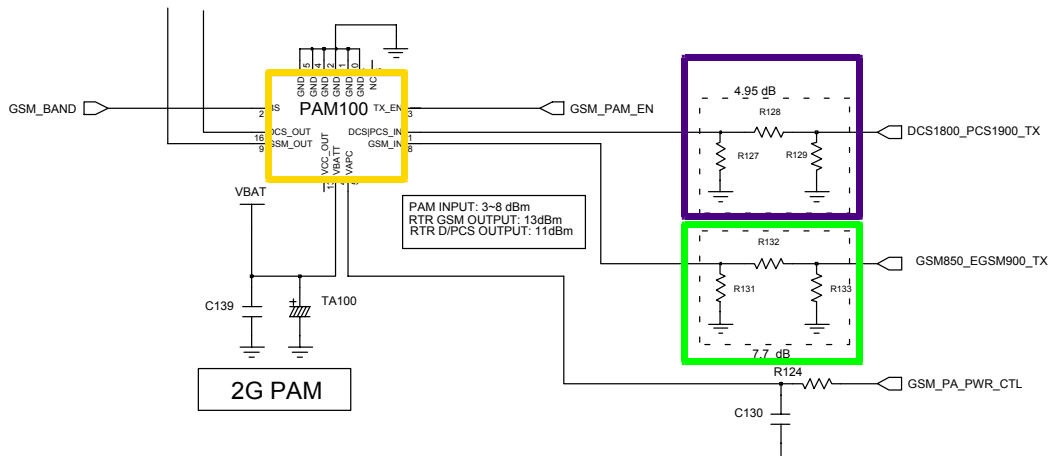


9-15-2. DCS/PCS transmitter

Band : DCS /PCS
CELL POWER : -50dBm
TX LEVEL : 0
Channel : 698 Ch / 661 Ch

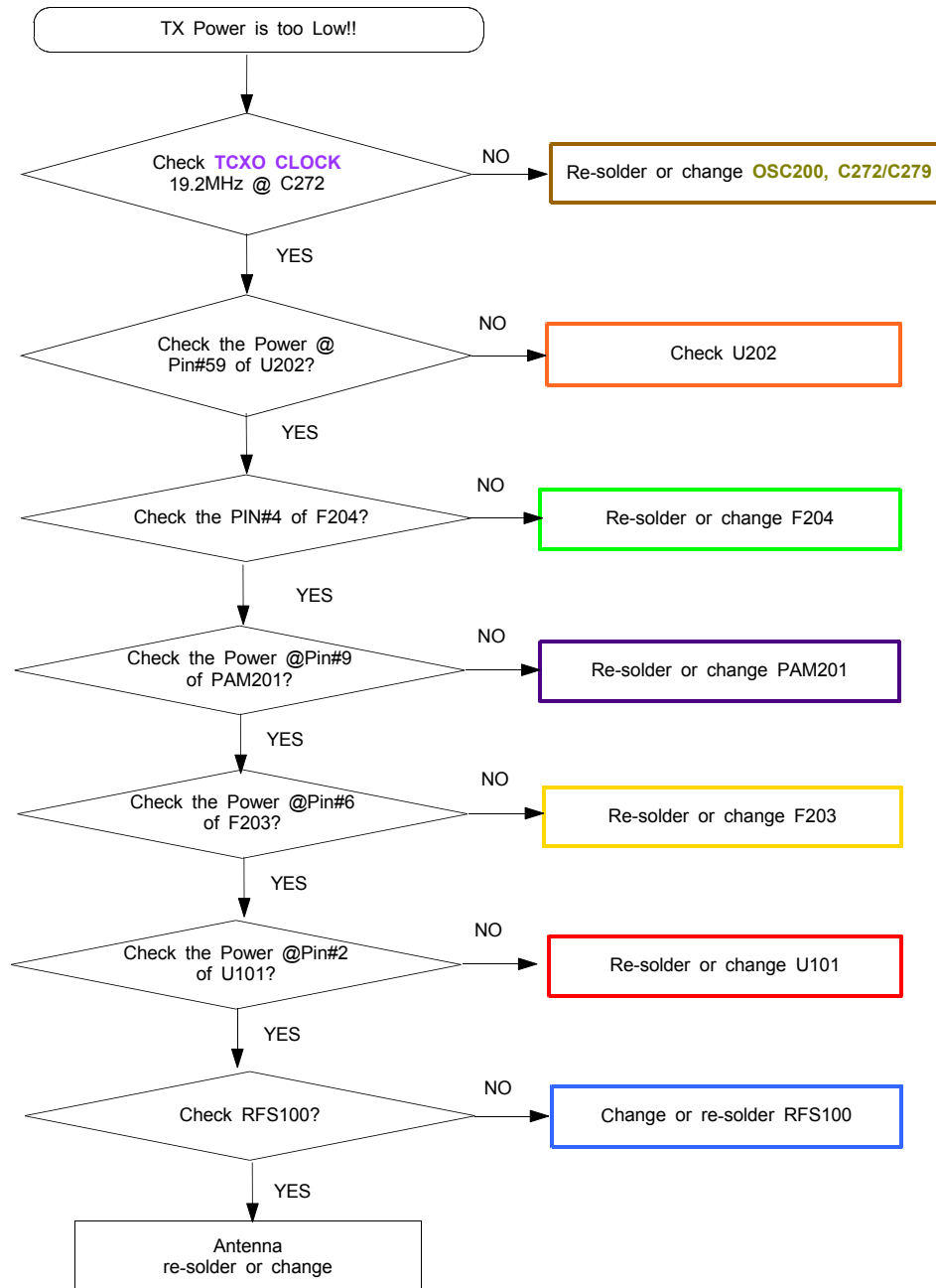


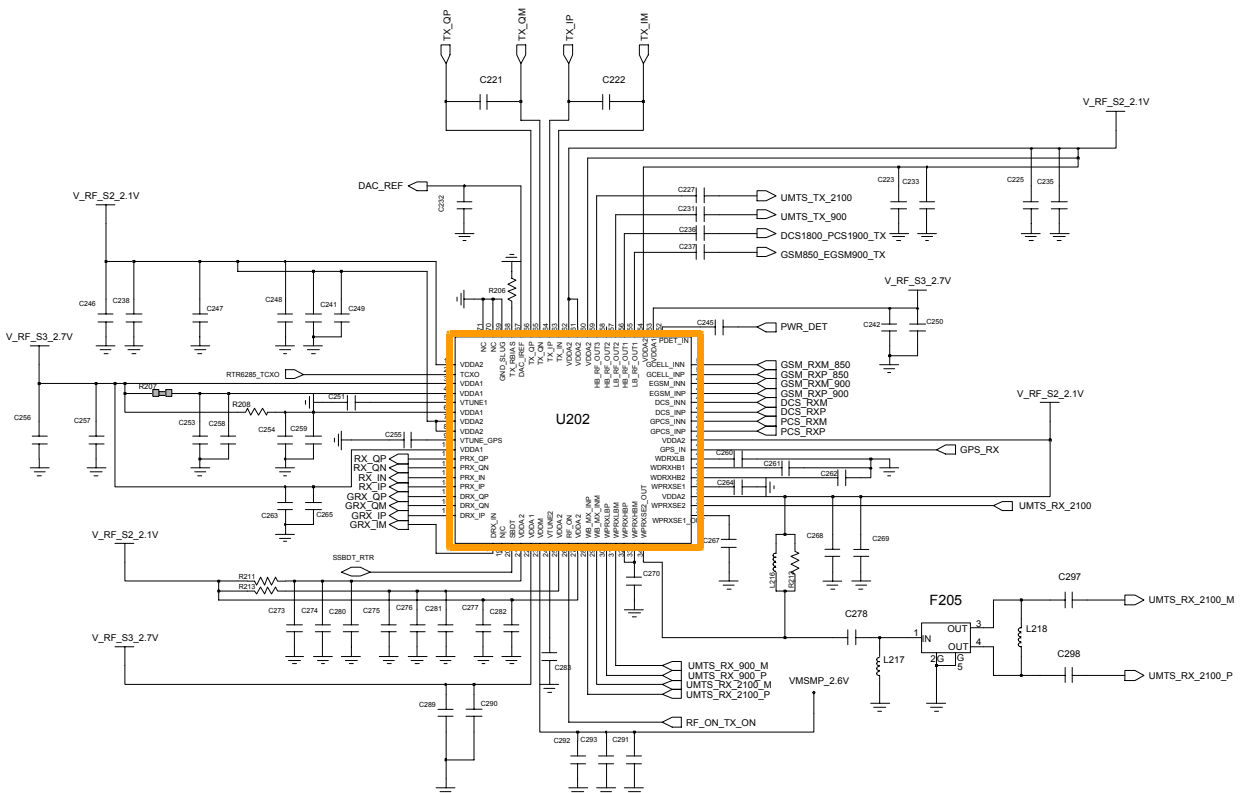
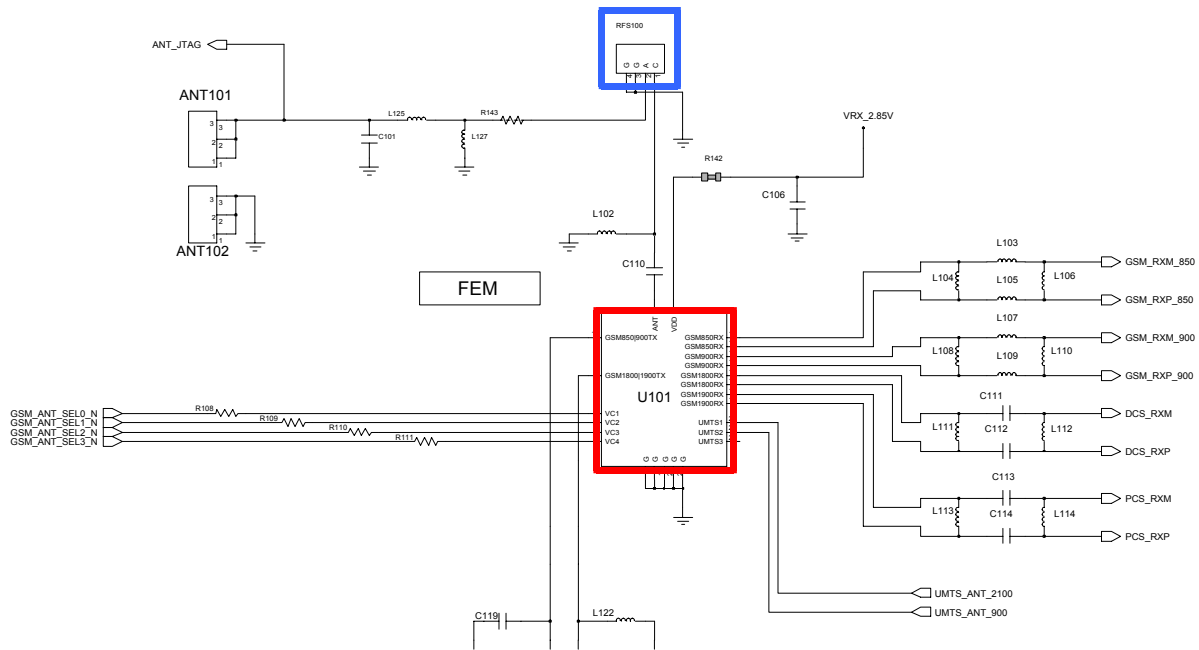


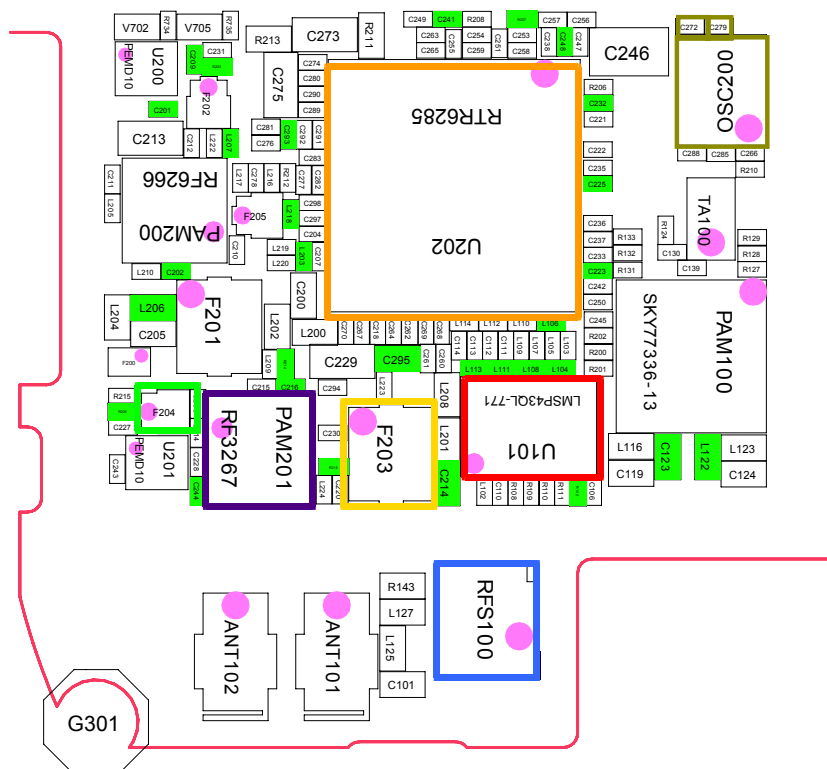
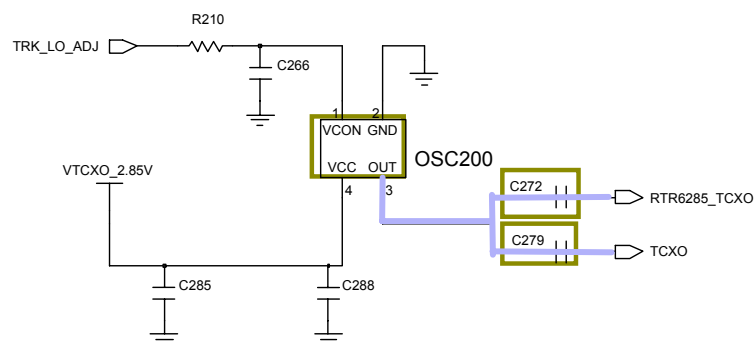
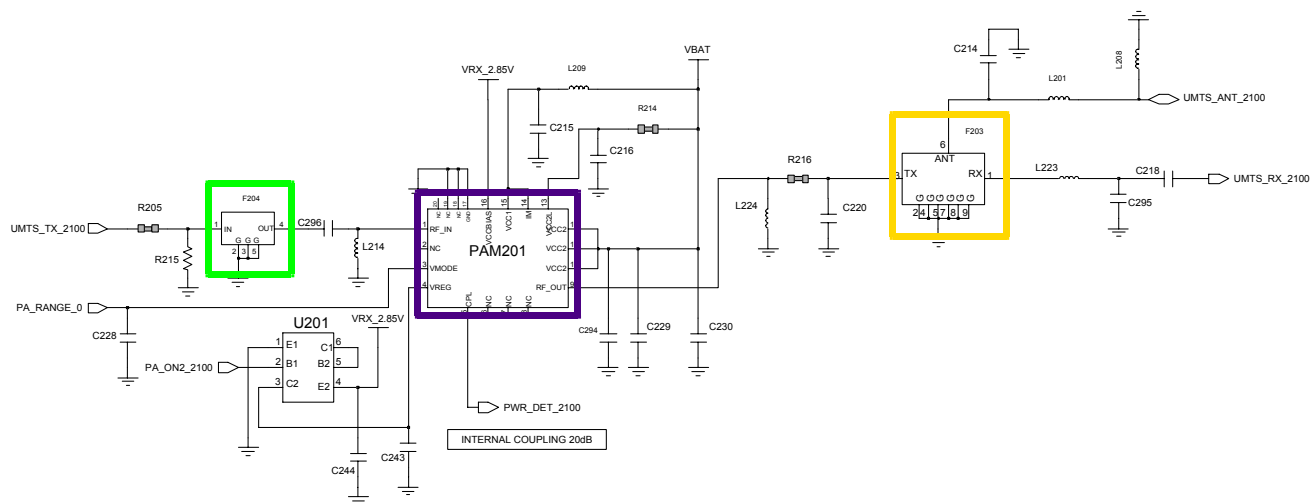


9-15-3. WCDMA 2100 transmitter

Band : WCDMA
CELL POWER : -50dBm
TARGET POWER : 22 dBm
DL Channel : 9750 Ch

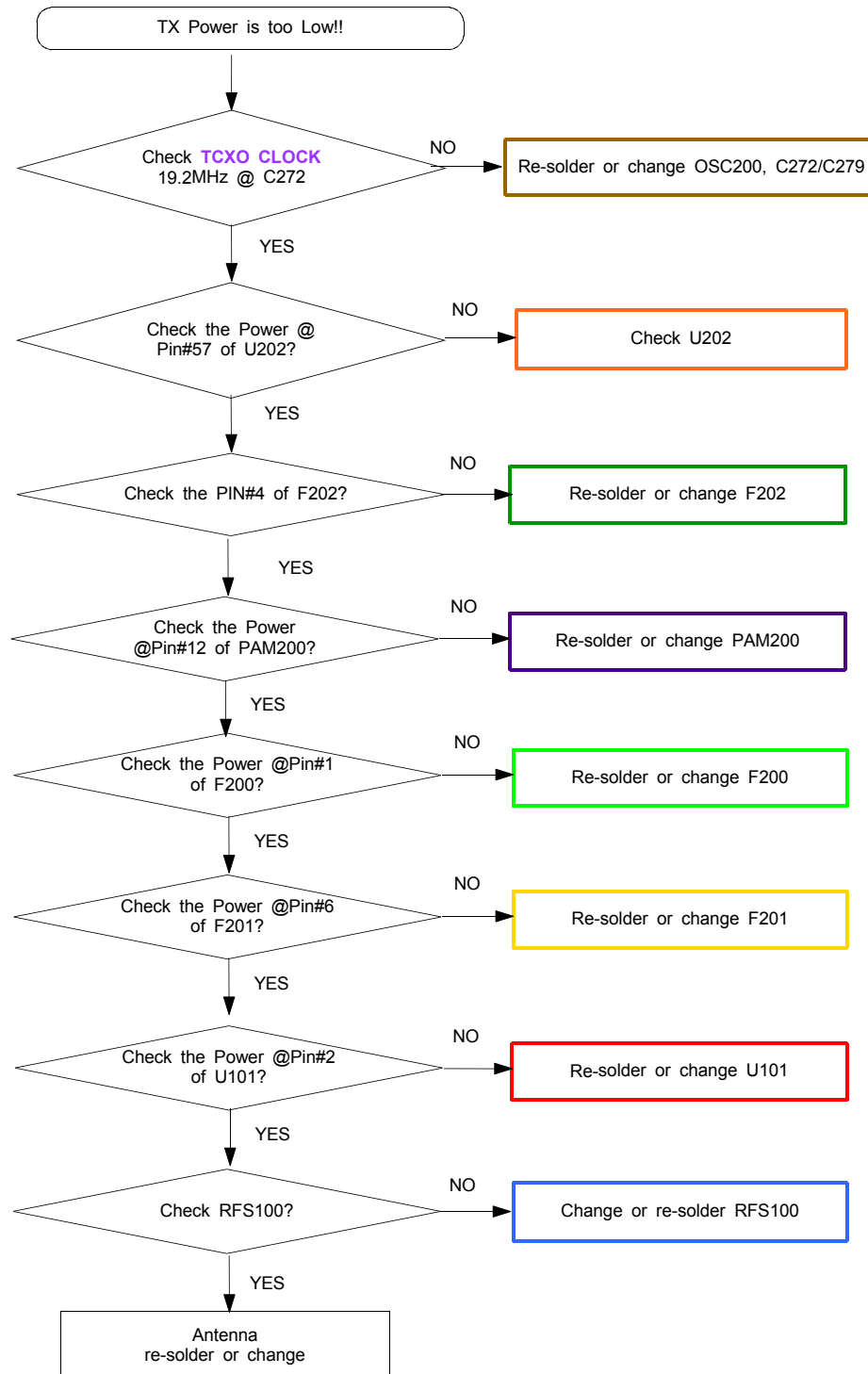


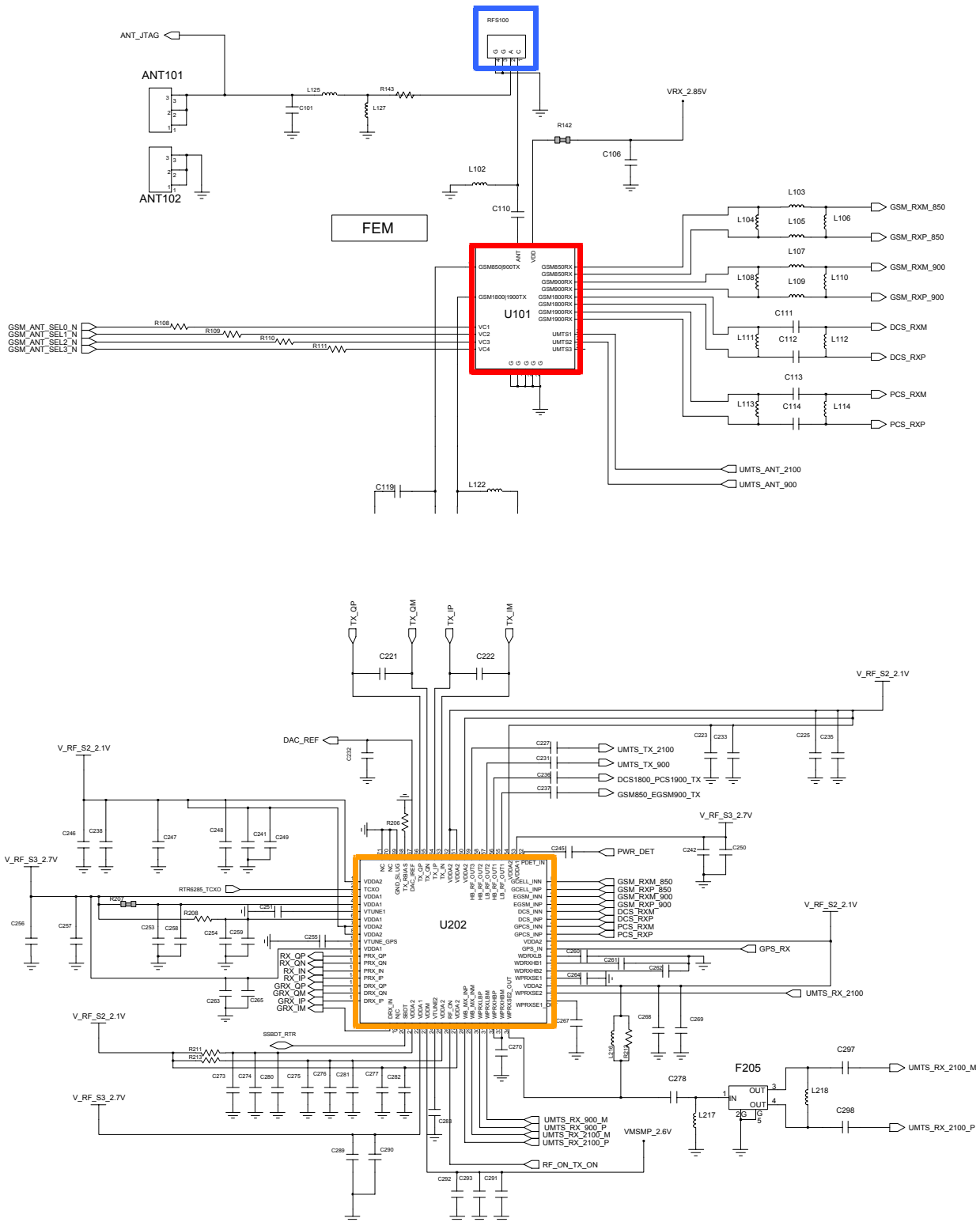


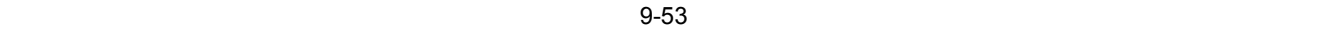


9-15-4. WCDMA 900 transmitter

Band : WCDMA
 CELL POWER : -50dBm
 TARGET POWER : 22 dBm
 DL Channel : 2788 Ch



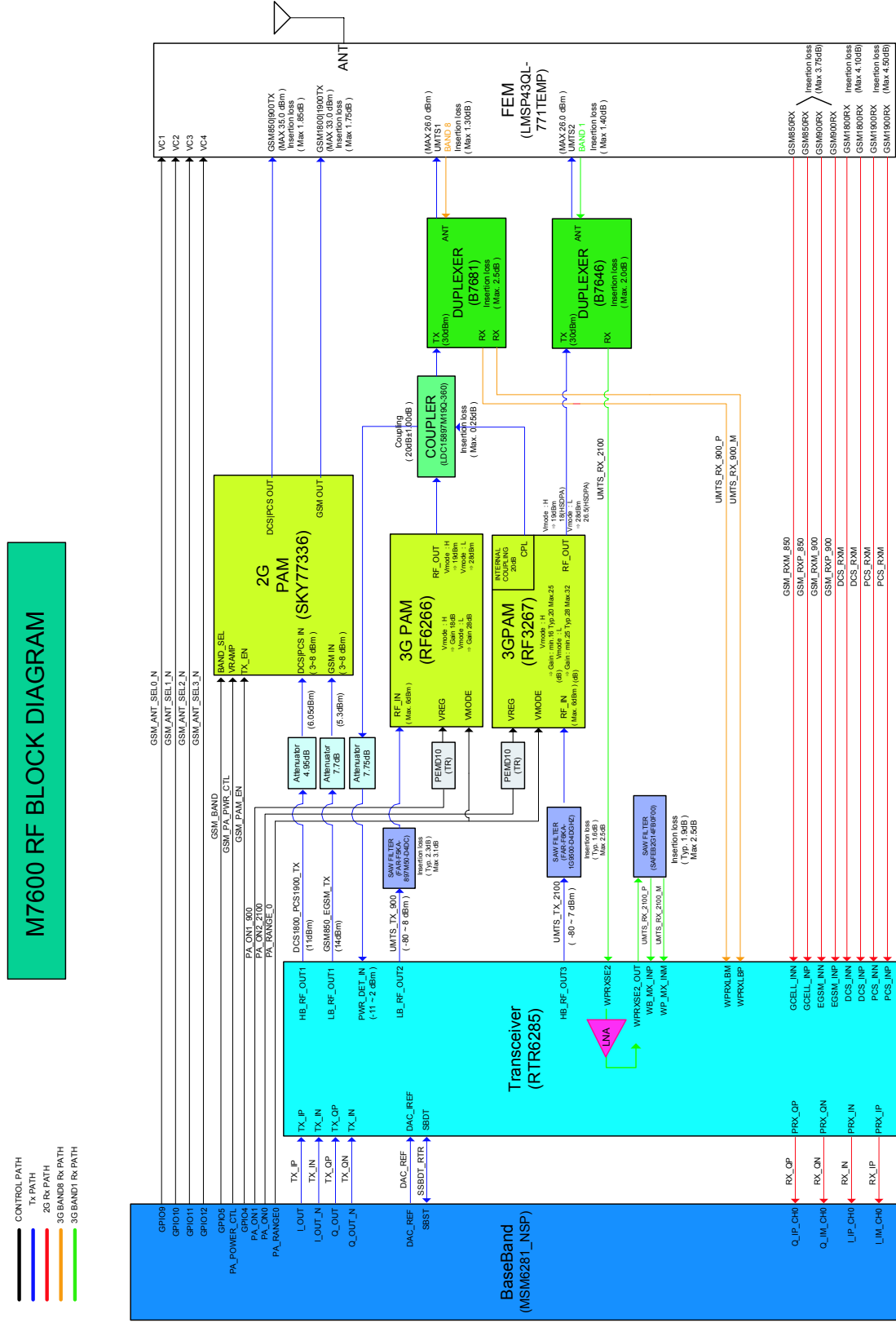




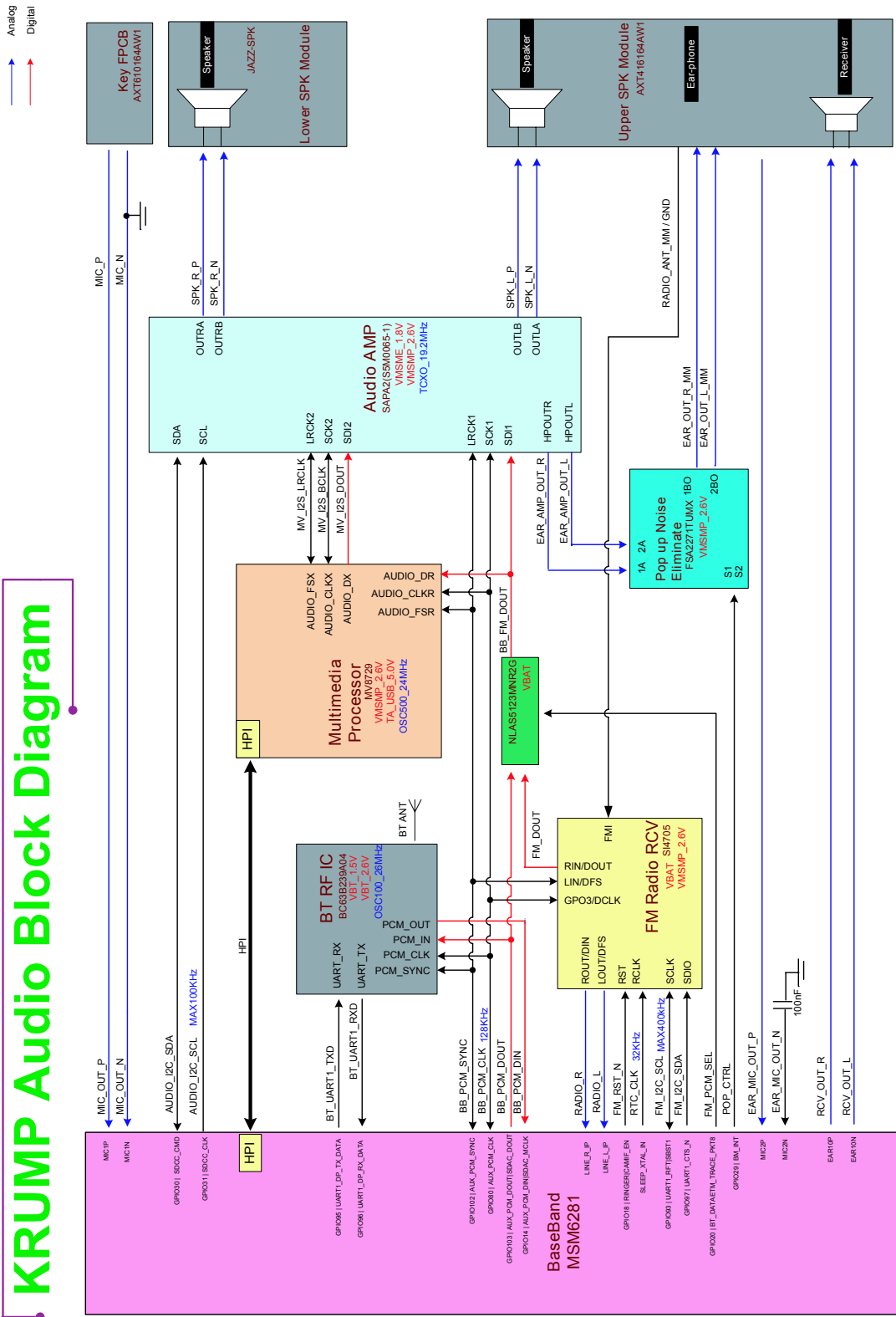
7-1. Block Diagram

[illegible]

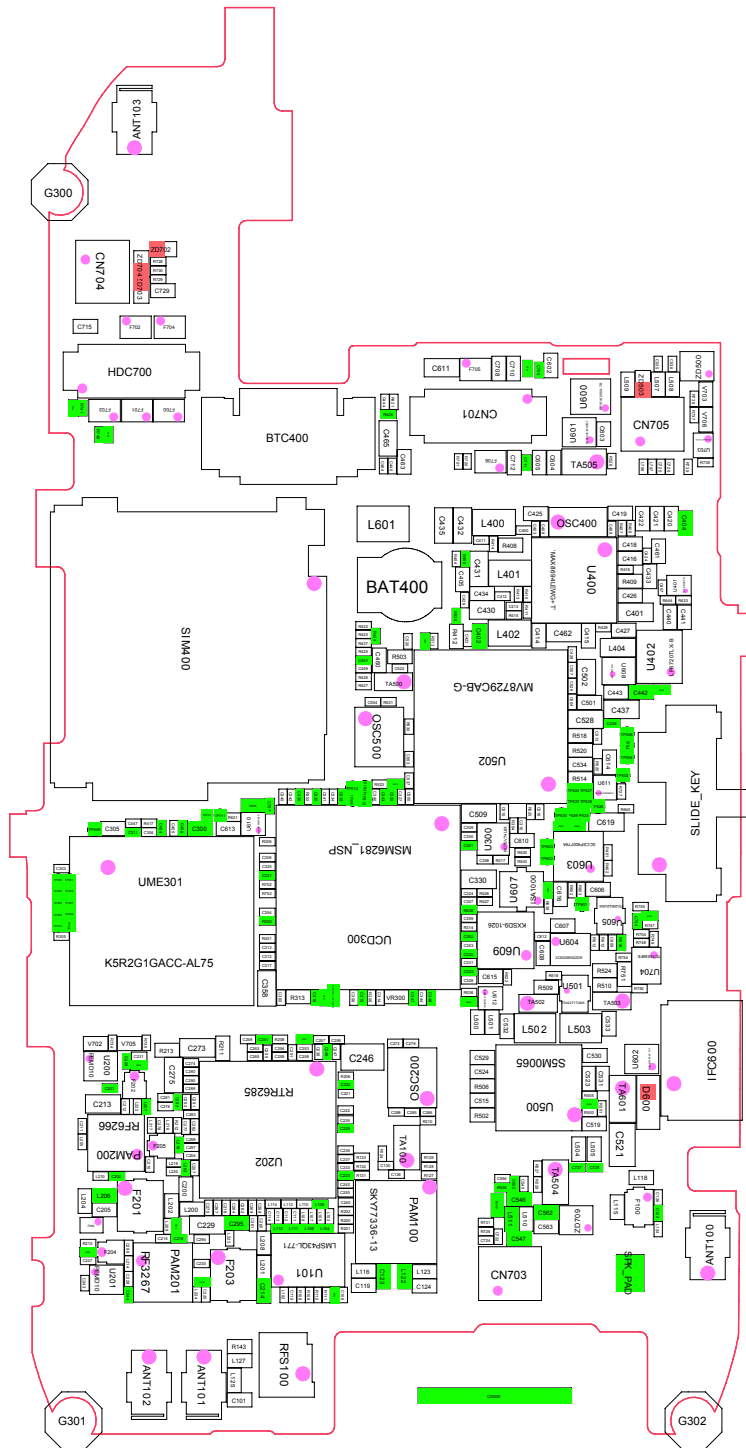
7-2. RF Blcok Diagram

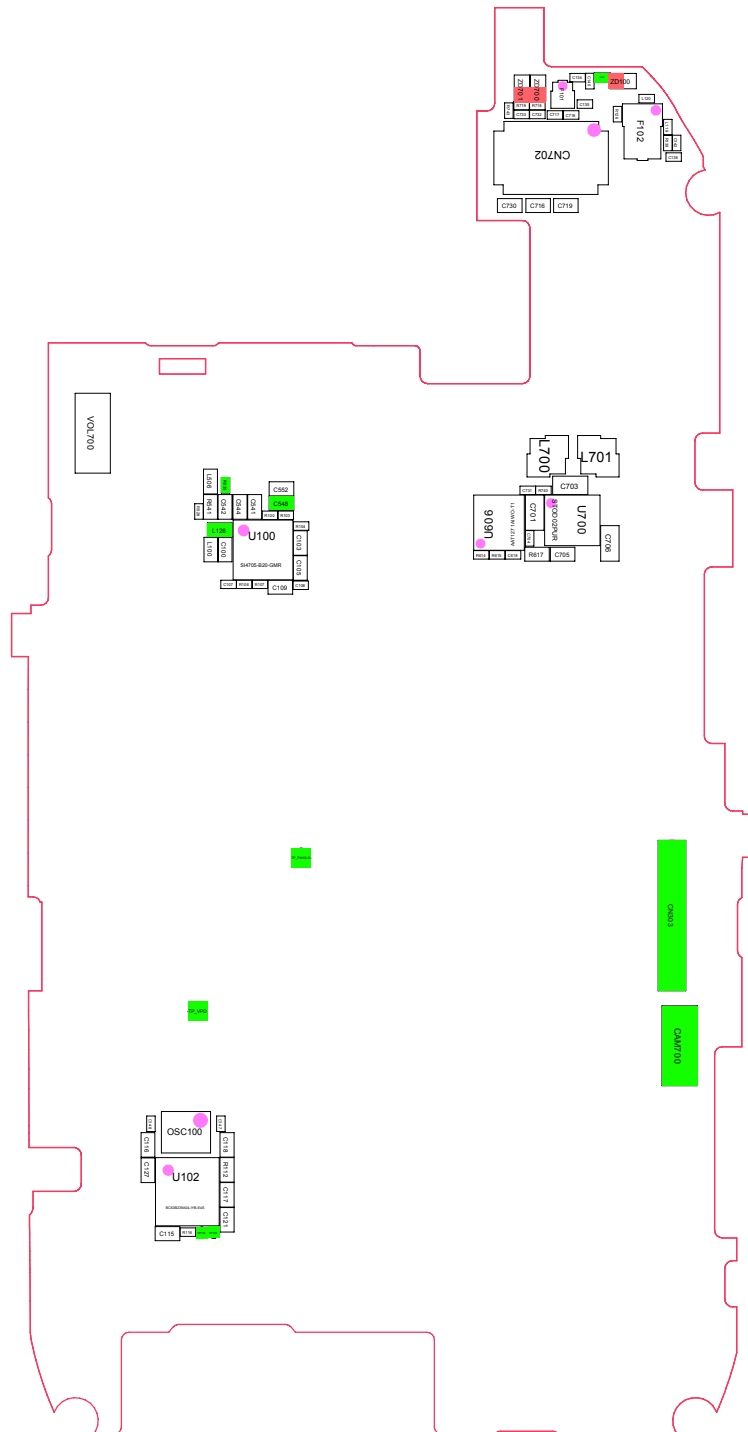


7-3. Audio Block Diagram



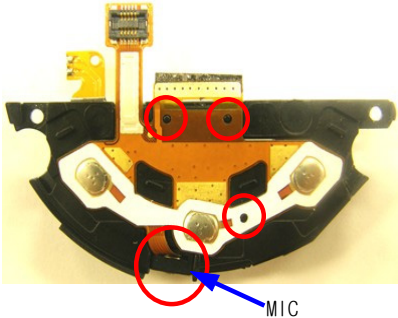
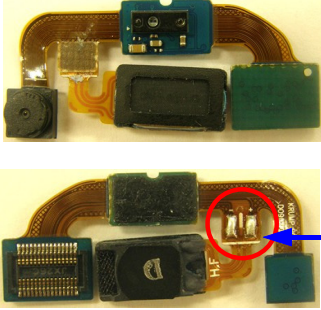
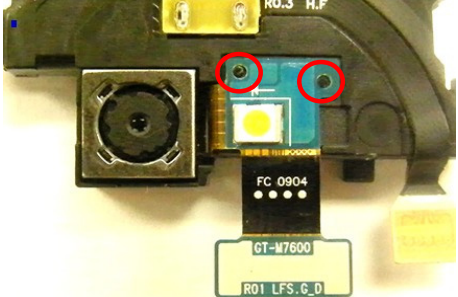
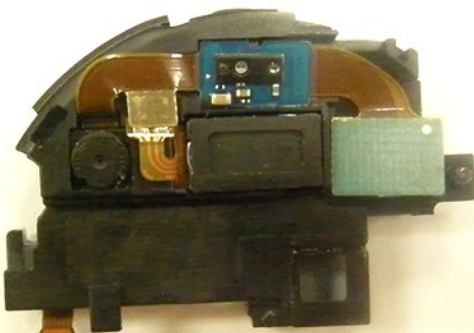
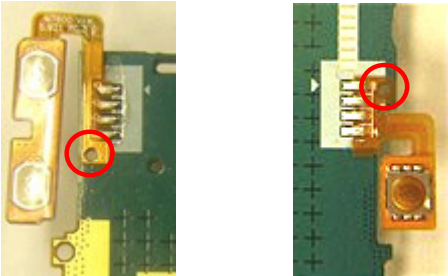
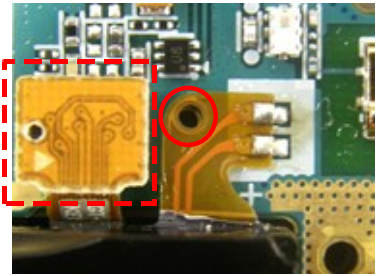
8. PCB Diagrams



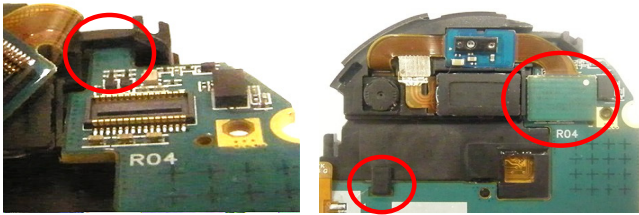


11. Disassembly and Assembly Instructions

11-1. Assembly Instructions

1 	2 
1) Assemble Lower Speaker Module and MIC, and Assemble the Key FPCB keeping attention to the guide hole.	1) Solder Receiver and Cif Camera keeping attention to the FPCB Silk line.
1) Be careful of FPCB Damage	1) Watch out for the tilting of Solder Silk line.
3 	4 
1) Remove the removal tape at the back of Camera FPCB and Assemble Camera keeping attention to the guided pole.	1) Remove the removal tape at the back of Receiver Module Assy' and Assemble Receiver Module with Upper Speaker Module.
1) Be careful of Camera Damage	1) Be careful of damage of CIF Module included CIF Camera, receiver and sensor.
5 	6 
1) Solder Camera key and Volume key keeping attention to the guided hole.	1) Assemble the FPCB of Lower Speaker Module to the PBA 2) Solder Lower Speaker Module keeping attention to the guided hole and assemble FPCB Connector to the PBA.
1) Be careful of FPCB Damage	1) Be careful of FPCB Damage

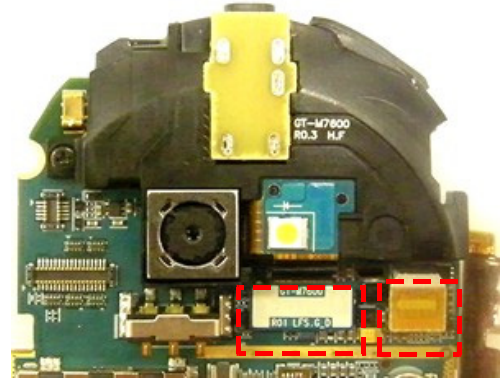
7



1) Assemble the Upper Speaker Module to the PBA and Assemble the connector.

1) Watch out while connecting FPCB.

8



1) Assemble Upper Speaker Module Connector, Camera connector to the PBA.

1) Watch out for the PBA damage while assembling.

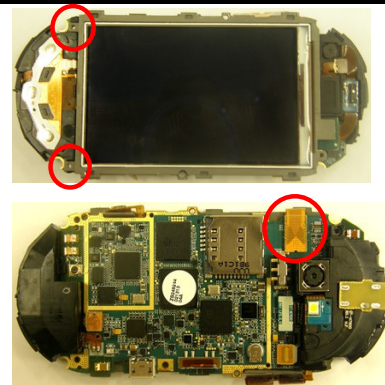
9



1) Remove LCD removal tape and assemble LCD and LCD Bracket.

1) Watch out for the LCD FPCB damage.

10

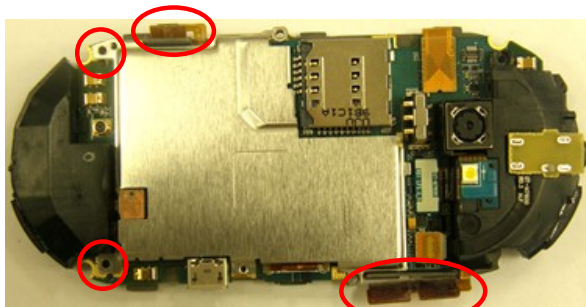


1) Assemble LCD Ass'y and PBA with aligning Lower Speaker Module.

2) Assemble LCD Connector to the PBA

1)

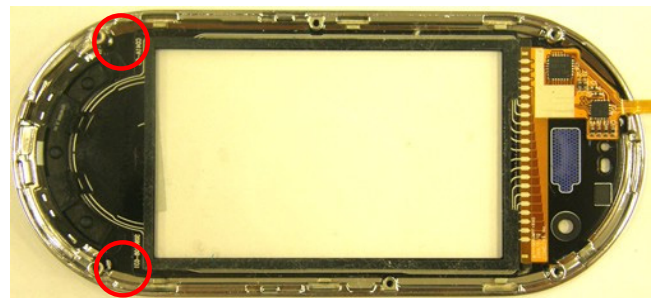
11



1) Assemble the Shield Can & Screw 2 points
2) Attach two sidekey FPCBs to the LCD Bracket.

1) Be careful of PBA damage while assembling the Shield can.

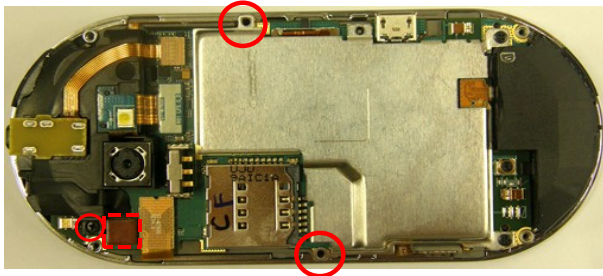
12



1) Assemble the KEYPAD to the Front
2) Remove the removal tape on the Front cover

1) Be careful of Touch Screen Damage.

13



- 1) Assemble PBA Ass'y and FRONT, then screw 3 points.
- 2) Connect Touch Screen Connector.

1) Watch out for the FPCB Damage.

14



- 1) Cover REAR COVER from upper part to lower part.

1) Be careful of scratch and damage.

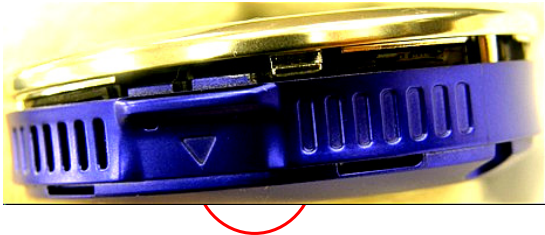
15



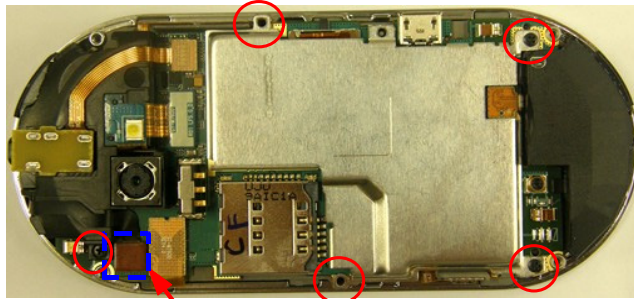
- 1) Screw 4 points on the REAR COVER.

1) Be careful of scratch and damage.

11-2. Disassembly Instructions

1  1) unscrew the 4point at the rear case 1) Be care of scratch and damage.	2  1) push side of REAR COVER and put the jig to separate the front assy from REAR COVER 1) Be care of scratch and damage.
3  1) Using disassembly jig, unlock upper hook. 1) Be care of scratch and damage.	4  1) Using disassembly jig, unlock side hook. 1) Be care of scratch and damage.
5  1) Using disassembly jig, unlock the lower hook. 1) Be care of scratch and damage.	6  1) Disassembly REAR COVER while pressing shield can gently. 1) Be care of scratch and damage.

7

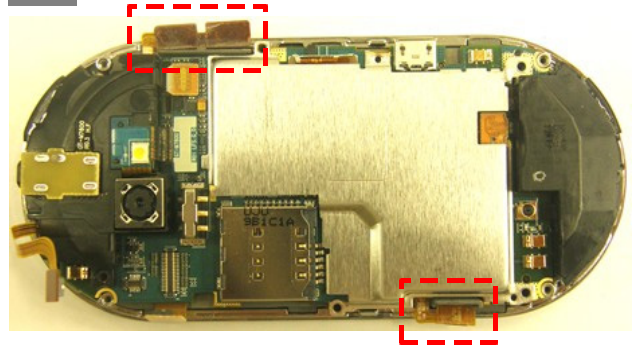


TSP 커넥터

- 1) unscrew 5 point using screw driver .
- 2) Disassemble Touch Screen connector

1) Be care of FPCB of Touch Screen.

8



- 1) Disassemble both-sided taped Side Key FPCB, and uncover shield can

1) Watch out for FPCB damage while disassembling Sidekey FPCB.

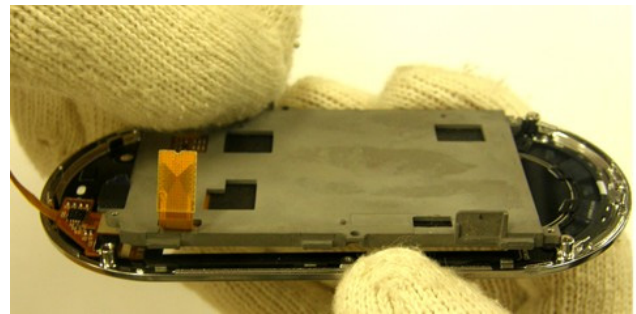
9



- 1) Life up the PBA.

1) Be care of PBA Damage.

10



- 1) Life up the both-sided taped LCD Bracket.

1) Be care of Touch Screen and Window Damage.

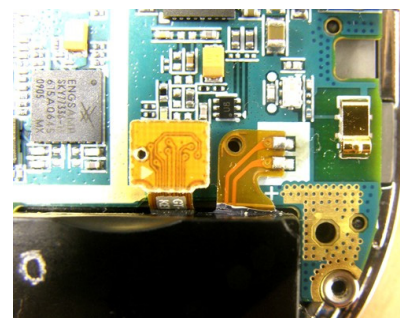
11



- 1) Push Front side of WINDOW and separate FRONT from TSP

1) Be care of Window damage.

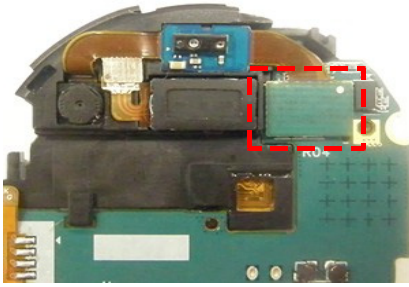
12



- 1) Remove the Solder of Lower Speaker Module.
- 2) Disassemble the FPCB of Lower Speaker Module from PBA. and separate Lower Speaker Module

1) Be care of FPCB damage.

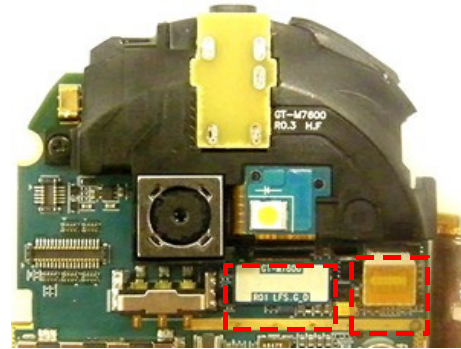
13



1) Disassemble Cif Camera Module FPCB Connector from PBA.

1) Be care of FPCB damage.

14



1) Disassemble 3M Camera FPCB Connector and Upper Speaker Module Connector from PBA.
2) Separate Upper Speaker Module from BA

1) Be care of FPCB damage.