

# Service Manual

## LG-D855

---

# Table Of Contents

<b>1. INTRODUCTION.....</b>	<b>3</b>	<b>4. DOWNLOAD.....</b>	<b>194</b>
1.1 Purpose .....	3	<b>5. BLOCK DIAGRAM.....</b>	<b>211</b>
1.2 Regulatory Information .....	3	<b>6. CIRCUIT DIAGRAM .....</b>	<b>220</b>
1.3 Specifications.....	5	<b>7. BGA PIN MAP .....</b>	<b>244</b>
<b>2. PERFORMANCE.....</b>	<b>10</b>	<b>8. PCB LAYOUT .....</b>	<b>263</b>
2.1 Product Name.....	10	<b>9. CALIBRATION.....</b>	<b>268</b>
2.2 Supporting Standard.....	10	<b>10. HIDDEN MENU.....</b>	<b>287</b>
2.3 Main Parts & Solution .....	11	<b>11. DISASSEMBLE GUIDE.....</b>	<b>309</b>
2.4 HW Features .....	12	<b>12. EXPLODED VIEW &amp; REPLACEMENT PART LIST .....</b>	<b>315</b>
2.5 SW Features .....	16		
2.6 H/W SPEC.....	19		
<b>3. TROUBLE SHOOTING .....</b>	<b>41</b>		
3.1 Checking XO Block.....	42		
3.2 Checking Transceiver DC Power Supply Circuit Block.....	43		
3.3 Checking DC-DC Block.....	45		
3.4 ASM(Antenna Switch Module) Block .....	47		
3.5 GSM RF Part .....	51		
3.6 WCDMA RF Part.....	65		
3.7 LTE RF Part .....	83		
3.8 BT&WIFI&FM PART .....	128		
3.9 GPS Part.....	134		
3.10 NFC Part.....	140		
3.11 Power .....	143		
3.12 Charger .....	147		
3.13 Audio .....	149		
3.14 LCD .....	169		
3.15 Touch .....	172		
3.16 Sensor.....	175		
3.17 Remote Sensor (IRRC Sensor) .....	183		
3.18 USB/Slimport.....	185		
3.19 CAMERA.....	187		



# 1. INTRODUCTION

## 1.1 Purpose

This manual provides the information necessary to repair, calibration, description and download the features of this model.

## 1.2 Regulatory Information

### A. Security

Toll fraud, the unauthorized use of telecommunications system by an unauthorized part (for example, persons other than your company's employees, agents, subcontractors, or person working on your company's behalf) can result in substantial additional charges for your telecommunications services.

System users are responsible for the security of own system. There are may be risks of toll fraud associated with your telecommunications system. System users are responsible for programming and configuring the equipment to prevent unauthorized use. The manufacturer does not warrant that this product is immune from the above case but will prevent unauthorized use of common carrier telecommunication service of facilities accessed through or connected to it. The manufacturer will not be responsible for any charges that result from such unauthorized use.

### B. Incidence of Harm

If a telephone company determines that the equipment provided to customer is faulty and possibly causing harm or interruption in service to the telephone network, it should disconnect telephone service until repair can be done. A telephone company may temporarily disconnect service as long as repair is not done.

### C. Changes in Service

A local telephone company may make changes in its communications facilities or procedure. If these changes could reasonably be expected to affect the use of the phones or compatibility with the net work, the telephone company is required to give advanced written notice to the user, allowing the user to take appropriate steps to maintain telephone service.

### D. Maintenance Limitations

Maintenance limitations on the phones must be performed only by the manufacturer or its authorized agent. The user may not make any changes and/or repairs expect as specifically noted in this manual. Therefore, note that unauthorized alternations or repair may affect the regulatory status of the system and may void any remaining warranty.

### E. Notice of Radiated Emissions

This model complies with rules regarding radiation and radio frequency emission as defined by local regulatory agencies. In accordance with these agencies, you may be required to provide information such as the following to the end user.

### F. Pictures

The pictures in this manual are for illustrative purposes only; your actual hardware may look slightly different.

### G. Interference and Attenuation

A phone may interfere with sensitive laboratory equipment, medical equipment, etc. Interference from unsuppressed engines or electric motors may cause problems.

### H. Electrostatic Sensitive Devices

## ATTENTION

**Boards, which contain Electrostatic Sensitive Device (ESD), are indicated by the  sign.**

**Following information is ESD handling:**

- Service personnel should ground themselves by using a wrist strap when exchange system boards.
- When repairs are made to a system board, they should spread the floor with anti-static mat which is also grounded.
- Use a suitable, grounded soldering iron.
- Keep sensitive parts in these protective packages until these are used.
- When returning system boards or parts like EEPROM to the factory, use the protective package as described.

### 1.3 Specifications

#### KEY FEATURES

- Android 4.4.2 - Powered Smartphone
- Up to 7 Customizable Home Screens
- 5.46" Touch Screen
- 13MP AF with dual flash, 2.1M VT Image sensor
- 4G Mobile Hotspot
- DivX® H.264, H.263 Capable

#### ENHANCED USER EXPERIENCE

- Android 4.4.2
- Home Screens – customize 5 or 7 screens with shortcuts to apps, favorites, and widgets
- QWERTY Keyboard with Skype® – use one continuous finger motion to input text when composing a message
- Exchange Support – improved security, remote wipe capability for Exchange administrators, support for Exchange calendars in the Calendar application, auto-discovery for easy setup and syncing of an Exchange account,\* and Global Address Lists lookup in the Email application
- Proximity Sensor – locks the touch screen and buttons while talking on the phone
- Motion Sensor – Digital compass , Accelerometer
- USB Charging via Computer
- Airplane Mode (RF Off)

\*Available for Exchange 2007 and higher.

#### DESIGN

- Sleek and Stylish Design
- 5.46" Display
- Capacitive Touch Screen – Glass with fast and accurate response
- Touch Vibration for Tactile Feedback\*
- Micro USB Charging Port

\*Only available on certain interactions with the touch screen.

#### MOBILE MEDIA

- Android Market™ – browse and download thousands of free and paid apps from around the world†
- Live Wallpaper – dynamic, animated backgrounds

- Full Web Browsing
- Connect to Social Networks – send quick updates to Twitter™, Facebook®, MySpace™,\* or added social networks†
- Mobile Instant Messaging – Google Talk™, AIM®,\* Yahoo!® Messenger,\* Windows Live™\*†
- Gmail™ and Email – mobile personal and corporate email†
- Visual Voice Mail†
- Text, Picture, Video, and Voice Messaging†
- Flash 10.1 for Mobile Devices
- Java Support

\*Applications downloaded from Android Market.

### CAMERA/VIDEO

- 13MP AF/OIS with dual flash, 2.1M VT Image sensor and Camcorder\*
- Camera Resolutions: 13M(4160x3120(4:3)), W10M(4160x2340(16:9)), 9M(3120x3120(1:1)), 3M(2048 x 1536(4:3))
- Camera and Video Zoom: up to 8x
- Image Editor: Zoom, Exposure, Artistic Effect, Color, Adjustment
- Brightness, ISO, White Balance,\* Color Effects, Scene Mode, Timer
- Burst Shot – take 20 shots in quick succession
- Video Resolutions: UHD(3840 x 2160), FHD(1920 x 1080), HD(1280 x 720), 120-HD(Slow motion)
- Front-facing camera Resolutions: W2M(1920 x 1080), 1M(1280 x 960)
- \*Available in both video and camera modes.

### MULTIMEDIA

- Video Player for WMV, MP4, MKV, 3GP, and 3G2 Formats
- Music Player for MP3, WMA, and Unprotected AAC
- Stereo Sound via Headset or *Bluetooth*
- Multitask While Playing Music in the Background
- Music Library – Organized by Artists, Albums, Songs, Genres, Folders and Playlists
- Repeat and Shuffle Music Playback Modes

- microSD Memory Slot with Support for up to 32GB Storage
- USB Mass Storage – transfer files between microSD™ card and PC\*

### BLUETOOTH®

- Version: 4.0
- Save up to 100 *Bluetooth* Pairings\*
- Supported Profiles: headset, hands-free, object push, advanced audio distribution (stereo), audio/video remote control, file transfer, phone book access, message access, serial port
- Listen to Music with Optional Stereo *Bluetooth* Headset\*\*
- Send User-Generated Pictures (JPEG) and Videos via *Bluetooth* Wireless Technology

\*Depends on available memory.

\*\*Accessories sold separately.

### VOICE/AUDIO

- One-Touch Speakerphone\*
- Voice Clarity\*
- Voice Commands
- Voice-Activated Dialing
- Text to Speech
- MP3 Music Ringer Support (clips from hit songs)†
- Voice Memo Recording
- More 20 Unique Ringtones + Vibrate and Silent Modes
- TTY Support

### TOOLS & DATA

- Android Apps: Browser, Calculator, Calendar (Corporate or Google), Camera, Clock, Contacts, Email, Gallery, Gmail, Market, Messaging, Music, Phone, Settings, Voice Dialer, Voice Recorder, Voice Search
- Metro Navigator® – spoken turn-by-turn directions showing real-time traffic
- Wi-Fi Connectivity – IEEE 802.11 a/b/g/n, ac

## 1. INTRODUCTION

- Phone Book – unlimited fields\* for numbers, emails, physical addresses, IM screen names, notes, nickname, web addresses, special dates, and a picture ID\*\*
- FOTA Capable – upgrade firmware over the air†
- S-GPS and A-GPS Support for Enhanced Location Accuracy

\*Depends on available memory.

\*\*Dependent on photos stored in your gallery.

### SPECIFICATIONS

- Technology: GSM/ WCDMA /LTE/GPS/ WiFi/ BT /NFC
- Frequencies:

Support Band	TX Freq (MHz)	RX Freq (MHz)
GSM850	824-849	869-894
GSM900	880-915	925-960
DCS1800	1710-1785	1805-1880
PCS1900	1850-1910	1930-1990
W2100(B1)	1920-1980	2110-2170
W1900(B2)	1850-1910	1930-1990
W850(B5)	824-849	869-894
W900(B8)	880-915	925-960
LTE B1	1920-1980	2110-2170
LTE B3	1710-1785	1805-1880
LTE B7	2500-2570	2620-2690
LTE B8	880-915	925-960
LTE B20	832-862	791-821
LTE B28A	718-748	773-803
LTE B28B	703-733	758-788
LTE B40	2300-2400	
BT/WiFi	2400 MHz ~ 2483.5 MHz & 5150 MHz ~ 5825 MHz	
GPS	1574.42 MHz ~ 1576.42 MHz, 1597.55MHz ~ 1605.86MHz	
NFC	13.56MHz	

- Data Transmission: EDGE, GPRS (Class 12) , HSPA+(Cat. 24) HSUPA(Cat. 6), LTE(Cat 3)
- Dimensions: 146.3(H) x 74.6(W) x 8.95(D) (mm)
- Weight: 149g ( with Battery)
- Display: 5.46", TFT
- Standard Battery: min. 2940[mAh], typ. 3000[mAh]
- Internal Memory Size: 16Gb(SDRAM DDR3) + 16GB eMMC

### ACCESSORIES

- Standard Battery\*
- Travel Adapter and USB Data Cable\*
- Bluetooth Headset (Optional)
- Bluetooth Hands-free kit (Optional)
- Stereo Headset\*
- Vehicle Power Charger (VPC) (Optional)

## 2. PERFORMANCE

### 2.1 Product Name

LG-D855 : LTE B1/3/7/8/20/28A/28B/40+WCDMA850/900/1900/2100+GSM850/EGSM/DCS/PCS (HSPA+ 42Mbps(cat24)/ HSUPA 5.8Mbps(cat6) / GPRS Class12/EDGE Class12)

### 2.2 Supporting Standard

Item	Feature	Comment
Supporting Standard	LTE (FDD B1/3/7/8/20/28(A/B)/40) WCDMA (FDD1,2,5,8) EGSM/GSM850/DCS1800/PCS1900 with seamless handover	
Frequency Range	LTE(FDD1) Tx : 1920 – 1980 MHz LTE(FDD1) Rx : 2110 – 2170 MHz LTE(FDD3) Tx : 1710 – 1785 MHz LTE(FDD3) Rx : 1805 – 1880 MHz LTE(FDD7) Tx : 2500 – 2570 MHz LTE(FDD7) Rx : 2620 – 2690 MHz LTE(FDD8) Tx : 880 – 915 MHz LTE(FDD8) Rx : 925 – 960 MHz LTE(FDD20) Tx : 832 – 862 MHz LTE(FDD20) Rx : 791 – 821 MHz LTE(FDD28A) Tx : 718 – 748 MHz LTE(FDD28A) Rx : 773 – 803 MHz LTE(FDD28B) Tx : 703 – 733 MHz LTE(FDD28B) Rx : 758 – 788 MHz LTE(TDD40) 2300 – 2400 MHz WCDMA(FDD1) TX : 1920 – 1980 MHz WCDMA(FDD1) RX : 2110 – 2170 MHz WCDMA(FDD2) TX : 1850 – 1910 MHz WCDMA(FDD2) RX : 1930 – 1990 MHz WCDMA(FDD5) TX : 824 – 849 MHz	



## 2. PERFORMANCE

	WCDMA(FDD5) RX : 869 – 894 MHz WCDMA(FDD8) TX : 880 – 915 MHz WCDMA(FDD8) RX : 925 – 960 MHz EGSM TX : 880 – 915 MHz EGSM RX : 925 – 960 MHz GSM850 TX : 824 – 849 MHz GSM850 RX : 869 – 894 MHz GSM900 TX : 880 – 915 MHz GSM900 RX : 925 – 960 MHz DCS1800 TX : 1710 – 1785 MHz DCS1800 RX : 1805 – 1880 MHz PCS1900 TX : 1850 – 1910 MHz PCS1900 RX : 1930 – 1990 MHz	
Application Standard	WAP 2.0	

### 2.3 Main Parts & Solution

Item	Part Name	Comment
Digital Baseband	MSM8974AC : Qualcomm	
Analog Baseband	MSM8974AC : Qualcomm	
RF Chip	WTR1625L : Qualcomm	

### 2.4 HW Features

Item		Feature	Comment
Form Factor		DOP type	
Battery		1) Capacity Standard : Li-Ion polymer, 3000mAh	
		2) Packing Type : <u>Soft Pack</u>	
Size		Standard : 146.3 x 74.6 x 8.95	
Weight		About 149g	With Battery
RX sensitivity		WCDMA(FDD1) : -109 dBm WCDMA(FDD2) : -108 dBm WCDMA(FDD5) : -109 dBm WCDMA(FDD8) : -109 dBm EGSM : -109 dBm GSM850 : -109 dBm DCS 1800 : -108 dBm PCS 1900 : -107 dBm LTE : - 97dBm	
TX output power		WCDMA/ GSM/ LTE/ GPRS	WCDMA B1,2,5,8 : 23dBm/3.84MHz,+1/-3dBm EGSM : 33dBm GSM850 : 33dBm DCS1800 : 30dBm PCS 1900: 30dBm LTE B1/B3/B7/B8/B20/B28A/B28 B/B40 : 23dBm
EDGE compatibility		GPRS Class 12	
SIM card type	EDGE Class 12		Class3(WCDMA) Class4 (EGSM) Class4 (GSM850) Class1 (PCS) Class1 (DCS) Class3(LTE)

## 2. PERFORMANCE

	Plug-In SIM 3V /1.8V		E2 (GSM900) E2 (PCS) E2 (DCS)
Display	Main LCD TFT Main LCD (5.46", 2560 X 1440 Pixels)		
Built-in Camera	13M AF + 2.1M VT		
Status Indicator	Yes		
Keypad	Full Touch Screen Back Key : 3	Back Key : Power On Volume up/down	
ANT	Main : Internal Fixed Type		
System connector	5 Pin u-USB		
Ear Phone Jack	3.5 pi type		
PC synchronization	Yes		
Memory	2GB(SDRAM LPDDR3) + 16GB eMMC		
Speech coding	FR, EFR, HR,AMR		
Vibrator	Built in Vibrator		
Blue Tooth	Bluetooth 4.0+BLE		
MIDI(for Buzzer Function)	SW Decoded 72Poly		
Music Player	MP3/WMA/AAC/MIDI/EAAC+/HE AAC/OGG		
Video Player	MPEG4, H.264		
Camcorder	MPEG4 or H.263		
Voice Recording	Yes		
Speaker Phone mode Support	Yes		
Travel Adapter	Yes		
CDROM	No		
Stereo Headset	Yes		
Data Cable	Yes		
T-Flash (External Memory)	No		

### 1) RSSI Display

	Specification			
	LTE	WCDMA	GSM	
BAR 5->4	-86 dBm $\pm$ 4dB	-87 dBm $\pm$ 4dB	-90 dBm $\pm$ 2dB	Antenna BAR
BAR 4->3	-96 dBm $\pm$ 4dB	-92 dBm $\pm$ 4dB	-96 dBm $\pm$ 2dB	
BAR 3->2	-106 dBm $\pm$ 4dB	-98 dBm $\pm$ 4dB	-98 dBm $\pm$ 2dB	
BAR 2->1	-116 dBm $\pm$ 4dB	-102 dBm $\pm$ 4dB	-102 dBm $\pm$ 2dB	
BAR 1->0	-128 dBm $\pm$ 4dB	-108 dBm $\pm$ 4dB	-104 dBm $\pm$ 2dB	
BAR 1-> No service	No service	No service	No service	

**Measure RSSI after 10 seconds if you change power.**

### 2) Charging Time

3.5 hour under (3000mAh battery, 1.8A T/A)

### 3) Travel Charger

Input : 100 ~ 240 V, 50/60 Hz

Output : 5.0V, 1800 mA

### 4) Battery Type

Li-ion polymer Battery Pack, 3000 mAh

Standard Voltage : 3.8 V, Battery Full Charge Voltage : 4.35V

### 5) Current Consumption

Item	WCDMA Only	GSM Only	LTE	Comment
Standby	8.5mA ↓ (DRX 7)	8.5mA(PP=5) ↓	15mA (DRX 2.56)	GPS & Wifi Off Neighborhood Cell Off, LCD Off
Talk Mode	- Max Pwr : 650mA ↓ @ Avg - Tx 10dBm : 400mA ↓ @ Avg	400mA(Tx Lvl: 5) ↓	450mA (10dBm)	GPS & Wifi Off Neighborhood Cell Off, LCD Off
Power Off	300uA ↓	300uA ↓	300uA ↓	

### 6) Battery Bar

Battery Bar	Specification	Battery Bar	Specification
Bar 20(Full)	98%	Bar 9 -> Bar 8	43% -> 42%
Bar 20 -> Bar 19	98% -> 97%	Bar 8 -> Bar 7	38% -> 37%
Bar 19 -> Bar 18	93% -> 92%	Bar 7 -> Bar 6	33% -> 32%
Bar 18 -> Bar 17	88% -> 87%	Bar 6 -> Bar 5	28% -> 27%
Bar 17 -> Bar 16	83% -> 82%	Bar 5 -> Bar 4	23% -> 22%
Bar 16 -> Bar 15	78% -> 77%	Bar 4 -> Bar 3	16% -> 15%
Bar 15 -> Bar 14	73% -> 72%	Bar 3 -> Bar 2	13% -> 12%
Bar 14 -> Bar 13	68% -> 67%	Bar 2 -> Bar 1	8% -> 7%
Bar 13 -> Bar 12	63% -> 62%	Bar 1 -> Bar 0	3% -> 2%
Bar 12 -> Bar 11	58% -> 57%	Power off	1%
Bar 11 -> Bar 10	53% -> 52%	Low battery pop-up	15% , 5%, 0%
Bar 10 -> Bar 9	48% -> 47%		

### 2.5 SW Features

Item	Feature	Comment
RSSI	0 ~ 5 Levels	
Battery Charging	0 ~ 20 Levels	Using Fuel Gauging (%)
Key Volume	0 ~ 7 Level	
Audio Volume	0 ~ 15 Level	
Time / Date Display	Yes	
Multi-Language	Yes	English, Espanol, Franch, Korea, Chinese, etc
Quick Access Mode	Phone / Messaging / Apps / Web / Contact	
PC Sync	Yes	
Speed Dial	Yes	Voice mail center -> 1 key
Profile	Yes	not same with feature phone setting
CLIP / CLIR	Yes	
Phone Book	Name / Number / Email / Website / Postal addresses / Organizations / Groups / Birthday Notes / Ringtone	There is no limitation on the number of items. It depends on available memory amount.
Last Received Number	Yes	There is no limitation on the number of items. It depends on available memory amount.
Last Missed Number	Yes	There is no limitation on the number of items. It depends on available memory amount.
Search by Number / Name	Name / Number	
Group	Yes	There is no limitation on the number of items. It depends on available memory

## 2. PERFORMANCE

		amount.
Fixed Dial Number	Yes	
Service Dial Number	No	
Own Number	Yes	Read / Write
Voice Memo	Yes	Support voice recorder
Call Reminder	No	Missed call popup
Network Selection	Automatic	
Mute	Yes	
Call Divert	Yes	Support call forwarding
Call Barring	Yes	
Call Charge (AoC)	No	
Call Duration	Yes	
SMS (EMS)	There is no limitation on the number of items. It depends on available memory amount.	EMS does not support.
SMS Over GPRS	No	No
EMS Melody / Picture Send / Receive / Save	No No	
MMS MPEG4 Send / Receive / Save	Yes Yes	
Long Message	depends on SIM	
Cell Broadcast	Yes	
Download	Yes	
Game	TBD	
Calendar	Yes	
Memo	No	integrated to QMemo+
World Clock	Yes	
Unit Convert	No	
Stop Watch	Yes	
Wall Paper	Yes	
WAP Browser	No	WAP stack and wml are not supported.

## 2. PERFORMANCE

Download Melody / Wallpaper	Yes	Over web browser
SIM Lock	Yes	Operator Dependent
SIM Toolkit	Class 1, 2, 3, C, E	
MMS	Yes	
EONS	Yes	
CPHS	Yes	V4.2
ENS	No	
Camera	Yes	13M AF VT : 2.1M
JAVA	No	Android do not support JAVA
Voice Dial	Yes	
IrDa	No	
Bluetooth	Yes	Ver. 3.0
FM radio	Yes	
GPRS	Yes	Class 12
EDGE	Yes	Class 12
Hold / Retrieve	Yes	
Conference Call	Yes	Max. 7
DTMF	Yes	
Memo pad	No	integrated to QMemo+
TTY	No	
AMR	Yes	
SyncML	No	
IM	Yes	Gtalk
Email	Yes	



### 2.6 H/W SPEC.

#### 1) GSM transceiver specification

Item	Specification
Phase Error	Rms : 5° Peak : 20°
Frequency Error	GSM : 0.1 ppm DCS / PCS : 0.1 ppm
EMC (Radiated Spurious Emission Disturbance)	GSM/DCS : < -28dBm
Transmitter Output power	GSM850, EGSM : 5dBm ~ 33dBm ± 3dB DCS/PCS : 0dBm ~ 30dBm ± 3dB
Burst Timing	< 3.69us
Spectrum due to modulation out to less than 1800kHz offset	200kHz : -36dBm 600kHz : -51dBm/-56dBm
Spectrum due to modulation out to larger than 1800kHz offset to the edge of the transmit band	GSM850, EGSM : 1800-3000kHz : < -63dBc(-46dBm) 3000kHz-6000kHz : < -65dBc(-46dBm) 6000kHz < : < -71dBc(-46dBm) DCS, PCS : 1800-3000kHz : < -65dBc(-51dBm) 6000kHz < : < -73dBc(-51dBm)
Spectrum due to switching transient	400kHz : -19dBm/-22dBm(5/0), -23dBm 600kHz : -21dBm/-24dBm(5/0), -26dBm
Reference Sensitivity – TCH/FS	Class II(RBER) : -105dBm(2.439%)
Usable receiver input level range	0.012(-15 - -40dBm)
Intermodulation rejection – Speech channels	± 800kHz, ± 1600kHz : -98dBm / -96dBm (2.439%)
AM Suppression – GSM : -31dBm – DCS : -29dBm	-98dBm/-96dBm (2.439%)

### 2) WCDMA transmitter specification

Item	Specification
Transmit Frequency	BD1: 1920MHz ~ 1980 MHz BD2: 1850~1910 MHz BD5: 824 MHz ~849 MHz BD8: 880 MHz ~960 MHz
Maximum Output Power	+24 dBm / 3.84 MHz, +1 / -3 dB
Frequency Error	within $\pm 0.1$ PPM
Open Loop Power Control	Normal Conditions : within $\pm 9$ dB, Extreme Conditions : within $\pm 12$ dB
Minimum Transmit Power	< -50 dBm / 3.84 MHz
Occupied Bandwidth	< 5 MHz at 3.84 Mcps (99% of power)
Adjacent Channel Leakage Power Ratio (ACLR)	> 33 dB @ $\pm 5$ MHz, > 43 dB @ $\pm 10$ MHz
Spurious Emissions $ f-f_c  > 12.5$ MHz	< -36 dBm / 1 kHz RW @ $9 \text{ kHz} \leq f < 150 \text{ kHz}$ < -36 dBm / 10 kHz RW @ $150 \text{ kHz} \leq f < 30 \text{ MHz}$ < -36 dBm / 100 kHz RW @ $30 \text{ MHz} \leq f < 1 \text{ GHz}$ < -30 dBm / 1 MHz RW @ $1 \text{ GHz} \leq f < 12.75 \text{ GHz}$ < -60 dBm / 3.84 MHz RW @ $869 \text{ MHz} \leq f \leq 894 \text{ MHz}$ < -60 dBm / 3.84 MHz RW @ $1930 \text{ MHz} \leq f \leq 1900 \text{ MHz}$ < -60 dBm / 3.84 MHz RW @ $2110 \text{ MHz} \leq f \leq 2155 \text{ MHz}$ < -67 dBm / 100 kHz RW @ $925 \text{ MHz} \leq f \leq 935 \text{ MHz}$ < -79 dBm / 100 kHz RW @ $935 \text{ MHz} < f \leq 960 \text{ GHz}$ < -71 dBm / 100 kHz RW @ $1805 \text{ MHz} \leq f \leq 1880 \text{ MHz}$ < -41 dBm / 300 kHz RW @ $1884.5 \text{ MHz} < f < 1919.6 \text{ MHz}$
Transmit Intermodulation	< -31 dBc @ 5 MHz & < -41 dBc @ 10 MHz when Interference CW Signal Level = -40 dBc
Error Vector Magnitude	< 17.5 %, when Pout $\geq$ -20 dBm
Peak Code Domain Error	< -15 dB at Pout $\geq$ -20 dBm

### 3) WCDMA receiver specification

Item	Specification																			
Receive Frequency	BD1: 2110 MHz ~2170 MHz BD2: 1850~1910 MHz BD5: 869 MHz ~ 894 MHz BD8: 880 MHz ~960 MHz																			
Reference Sensitivity Level	Band1 : BER < 0.001 when $\hat{I}_{or}$ = -106.7 dBm / 3.84 MHz Band2 : BER < 0.001 when $\hat{I}_{or}$ = -106.7 dBm / 3.84 MHz Band5 : BER < 0.001 when $\hat{I}_{or}$ = -106.7 dBm / 3.84 MHz Band8 : BER < 0.001 when $\hat{I}_{or}$ = -106.7 dBm / 3.84 MHz																			
Maximum Input Level	BER < 0.001 when $\hat{I}_{or}$ = -25 dBm / 3.84 MHz																			
Adjacent Channel Selectivity (ACS)	ACS > 33 dB where BER < 0.001 when $\hat{I}_{or}$ = -92.7 dBm / 3.84 MHz & $I_{oac}$ = -52 dBm / 3.84 MHz @ $\pm 5$ MHz																			
Blocking Characteristic	BER < 0.001 when $\hat{I}_{or}$ = -103.7 dBm / 3.84 MHz & $I_{blocking}$ = -56 dBm / 3.84 MHz @ $F_{uw}(\text{offset}) = \pm 10$ MHz or $I_{blocking}$ = -44 dBm / 3.84 MHz @ $F_{uw}(\text{offset}) = \pm 15$ MHz																			
Spurious Response	BER < 0.001 when $\hat{I}_{or}$ = -103.7 dBm / 3.84 MHz & $I_{blocking}$ = -44 dBm																			
Intermodulation	BER < 0.001 when $\hat{I}_{or}$ = -103.7 dBm / 3.84 MHz & $I_{ouw1}$ = -46 dBm @ $F_{uw1}(\text{offset}) = \pm 10$ MHz & $I_{ouw2}$ = -46 dBm / 3.84 MHz @ $F_{uw2}(\text{offset}) = \pm 20$ MHz																			
Spurious Emissions	< -57 dBm / 100 kHz BW @ $9 \text{ kHz} \leq f < 1 \text{ GHz}$ < -47 dBm / 1 MHz BW @ $1 \text{ GHz} \leq f \leq 12.75 \text{ GHz}$																			
Inner Loop Power Control In Uplink	Adjust output(TPC command) <table><tr><td>cmd</td><td>1dB</td><td>2dB</td><td>3dB</td></tr><tr><td>+1</td><td>+0.5 / 1.5</td><td>+1 / 3</td><td>+1.5 / 4</td></tr><tr><td>0</td><td>-0.5 / +0.5</td><td>-0.5 / +0.5</td><td>-0.5 / +0.5</td></tr><tr><td>-1</td><td>-0.5 / -1.5</td><td>-1 / -3</td><td>-1.5 / -4</td></tr></table> group(10equal command group) <table><tr><td>+1</td><td>+8 / +12</td><td>+16 / +24</td></tr></table>	cmd	1dB	2dB	3dB	+1	+0.5 / 1.5	+1 / 3	+1.5 / 4	0	-0.5 / +0.5	-0.5 / +0.5	-0.5 / +0.5	-1	-0.5 / -1.5	-1 / -3	-1.5 / -4	+1	+8 / +12	+16 / +24
cmd	1dB	2dB	3dB																	
+1	+0.5 / 1.5	+1 / 3	+1.5 / 4																	
0	-0.5 / +0.5	-0.5 / +0.5	-0.5 / +0.5																	
-1	-0.5 / -1.5	-1 / -3	-1.5 / -4																	
+1	+8 / +12	+16 / +24																		

### 4) HSDPA transmitter specification

Item	Specification															
Transmit Frequency	BD1: 1920MHz ~ 1980 MHz BD2: 1850~1910 MHz BD5: 880 MHz ~ 915 MHz BD8: 824 MHz ~ 849 MHz															
Maximum Output Power	Sub-Test 1=2/15            25.7~20.3dBm / 3.84 MHz 2=12/15          25.7~20.3dBm / 3.84 MHz 3=15/8           25.7~19.8dBm / 3.84 MHz 4=15/4           25.7~19.8dBm / 3.84 MHz															
Spectrum Emission Mask	Sub-Test : 1=2/15, 2=12/15, 3=15/8, 4=15/4 <table><tr><td>Frequency offset from carrier <math>\Delta f</math></td><td>Minimum requirement</td><td>Measurement Bandwidth</td></tr><tr><td>2.5 ~ 3.5 MHz</td><td>-35-15<math>\times(\Delta f-2.5)</math>dBc</td><td>30 kHz</td></tr><tr><td>3.5 ~ 7.5 MHz</td><td>-35-1<math>\times(\Delta f-3.5)</math>dBc</td><td>1 MHz</td></tr><tr><td>7.5 ~ 8.5 MHz</td><td>-35-10<math>\times(\Delta f-7.5)</math>dBc</td><td>1 MHz</td></tr><tr><td>8.5 ~ 12.5 MHz</td><td>-49dBc</td><td>1 MHz</td></tr></table>	Frequency offset from carrier $\Delta f$	Minimum requirement	Measurement Bandwidth	2.5 ~ 3.5 MHz	-35-15 $\times(\Delta f-2.5)$ dBc	30 kHz	3.5 ~ 7.5 MHz	-35-1 $\times(\Delta f-3.5)$ dBc	1 MHz	7.5 ~ 8.5 MHz	-35-10 $\times(\Delta f-7.5)$ dBc	1 MHz	8.5 ~ 12.5 MHz	-49dBc	1 MHz
Frequency offset from carrier $\Delta f$	Minimum requirement	Measurement Bandwidth														
2.5 ~ 3.5 MHz	-35-15 $\times(\Delta f-2.5)$ dBc	30 kHz														
3.5 ~ 7.5 MHz	-35-1 $\times(\Delta f-3.5)$ dBc	1 MHz														
7.5 ~ 8.5 MHz	-35-10 $\times(\Delta f-7.5)$ dBc	1 MHz														
8.5 ~ 12.5 MHz	-49dBc	1 MHz														
Adjacent Channel Leakage Power Ratio (ACLR)	Sub-Test : 1=2/15, 2=12/15, 3=15/8, 4=15/4 > 33 dB @ $\pm 5$ MHz > 43 dB @ $\pm 10$ MHz															
Error Vector Magnitude	< 17.5 %, when Pout $\geq$ -20 dBm															

### 5) HSDPA receiver specification

Item	Specification
Receive Frequency	BD1: 2110 MHz ~2170 MHz BD2: 1850~1910 MHz BD5: 869MHz ~ 894 MHz BD8: 925MHz ~ 960 MHz
Maximum Input Level (BLER or R), 16QAM Only	Sub-Test : 1=2/15, 2=12/15, 3=15/8, 4=15/4 BLER < 10% or R >= 700kbps

### 6) LTE transmitter specification

Item	Spec.	Min	Typ.	Max	
Maximum Output Power(Class III)	Power class 3 (Environmental Test)	20.3 (20.3)	23.0 (23.0)	25.7 (25.7)	dBm 10MHz
Frequency Error	QPSK	-0.1PPM -15hz	-	+0.1PPM -15hz	
EVM	QPSK 16 QAM			17.5 12.5	%
IQ-component	QPSK, 12RB			-24.2	dBc
In-band emissions for non allocated RB	QPSK, 12RB			-24.2	dB
Spectrum Flatness	QPSK, 50RB	-2		+3.4	dBpp
Occupied Bandwidth	QPSK, 50RB			10	MHz
ACLR (Adjacent Channel Leakage Power Ratio)	E-UTRA ACLR1			-29.2	dB
	UTRA ACLR1			-32.2	dB
	UTRA ACLR2			-35.2	dB
Transmitter Spurious emissions	9 kHz < f < 150 kHz			-36	dBm 1kHz
	150 kHz < f < 30 kHz			-36	dBm 10kHz
	30 kHz < f < 1 GHz			-36	dBm 100kHz
	1GHz < f < 12.75 GHz			-30	dBm 1MHz

### 7) LTE receiver specification

Item	Spec.	Min	Typ.	Max	
Sensitivity Level (DL : QPSK, 50RB UL : QPSK, 25RB)	Dual Receiver			B2: -95 B4 : -97 B17: -94	dBm /10MHz
	Single Receiver (exception in 3GPP)			B2 : -92 B4 : -94.0 B17: -91.0	dBm /10MHz
Maximum input Level	Dual Receiver (DL : 64QAM, 50RB UL : QPSK, 12RB)			-25.7	dBm /10MHz
ACS (Adjacent Channel Selectivity)	Dual Receiver (DL : QPSK, 50RB UL : QPSK, 12RB) $\Delta f \pm 7.5\text{MHz}$ , LTE BW 5MHz			33	dB
In-band Blocking (DL : QPSK, 50RB UL : QPSK, 20RB)	Dual Receiver $\Delta f \pm 7.5\text{MHz}$ , LTE BW 5MHz $\Delta f \pm 12.5\text{MHz}$ , LTE BW 5MHz			-88.3	dBm /10MHz
Out-of band Blocking (DL : QPSK, 50RB UL : QPSK, 20RB)	Dual Receiver $\Delta f \pm 15\text{MHz}$ , ~85MHz, CW	-		-88.3	dBm /10MHz
Narrow Band Blocking (DL : QPSK, 50RB UL : QPSK, 20RB)	Dual Receiver $\Delta f \pm 5.2125\text{MHz}$ , CW			-81.3	dBm /10MHz
Intermodulation (DL : QPSK, 50RB UL : QPSK, 20RB)	Dual Receiver $\Delta f \pm 12.5\text{MHz}$ , CW $\Delta f \pm 25\text{MHz}$ , LTE BW 5MHz			-88.3	dBm /10MHz
Spurious Emission (DL : QPSK, 0RB UL : QPSK, 0RB)	Dual Receiver $30\text{MHz} < f < 1\text{GHz}$			-57	dBm /100MHz
	$1\text{GHz} < f < 12.75\text{GHz}$			-47	dBm /1MHz

### 8) GPS receiver specification

Item	Specification
Receive Frequency	1574.42 MHz ~ 1576.42 MHz
Minimum Sensitivity	1 satellite $\geq -142\text{dBm}$ , 7 satellites $\geq -147\text{dBm}$ at coarse time aiding

### 9) WLAN 802.11a transceiver specification

Item	Specification
Transmit Frequency	5150 MHz ~ 5725 MHz ( CH36~CH140 )
Tx Power Level	$\leq 23\text{dBm}(5150 \sim 5350 \text{ MHz}), \leq 30\text{dBm}(5470 \sim 5725 \text{ MHz})$
Frequency Tolerance	within $\pm 20$ PPM
Chip clock Frequency Tolerance	within $\pm 20$ PPM
Spectrum Mask	$\leq -20$ @ $\pm 11\text{MHz}$ offset (9MHz ~ 11MHz) $\leq -28$ @ $\pm 20\text{MHz}$ offset (11MHz ~ 20MHz) $\leq -40$ @ $\pm 30\text{MHz}$ offset (20MHz ~ 30MHz)
Transmitter constellation error (rms EVM)	$\leq -5\text{dB}@6\text{Mbps}, \leq -8\text{dB}@9\text{Mbps}, \leq -10\text{dB}@12\text{Mbps},$ $\leq -13\text{dB}@18\text{Mbps}, \leq -16\text{dB}@24\text{Mbps}, \leq -19\text{dB}@36\text{Mbps},$ $\leq -22\text{dB}@48\text{Mbps}, \leq -25\text{dB}@54\text{Mbps}$
Spurious Emissions	$< -36 \text{ dBm @ } 30 \text{ MHz to } 47 \text{ MHz}$ $< -54 \text{ dBm @ } 47 \text{ MHz to } 74 \text{ MHz}$ $< -36 \text{ dBm @ } 74 \text{ MHz to } 87,5 \text{ MHz}$ $< -54 \text{ dBm @ } 87,5 \text{ MHz to } 118 \text{ MHz}$ $< -36 \text{ dBm @ } 118 \text{ MHz to } 174 \text{ MHz}$ $< -54 \text{ dBm @ } 174 \text{ MHz to } 230 \text{ MHz}$ $< -36 \text{ dBm @ } 230 \text{ MHz to } 470 \text{ MHz}$ $< -54 \text{ dBm @ } 470 \text{ MHz to } 862 \text{ MHz}$ $< -36 \text{ dBm @ } 862 \text{ MHz to } 1 \text{ GHz}$ $< -30 \text{ dBm @ } 1 \text{ GHz to } 5.15 \text{ GHz}$ $< -30 \text{ dBm @ } 5.35 \text{ GHz to } 5.47 \text{ GHz}$ $< -30 \text{ dBm @ } 5.725 \text{ GHz to } 26.5 \text{ GHz}$
Rx Min input Sensitivity	PER $\leq 10\%$ $-82\text{dBm}@6\text{Mbps}, -81\text{dBm}@9\text{Mbps}, -79\text{dBm}@12\text{Mbps}$ $-77\text{dBm}@18\text{Mbps}, -74\text{dBm}@24\text{Mbps}, -70\text{dBm}@36\text{Mbps}$ $-66\text{dBm}@48\text{Mbps}, -65\text{dBm}@54\text{Mbps}$
Rx Max input Sensitivity	$\geq -30\text{dBm}(6,9,12,18,24,36,48,54\text{Mbps})$ @ PER $\leq 10\%$

## 2. PERFORMANCE

Rx Adjacent Channel Rejection	<p>PER <math>\leq</math> 10%,            ACR <math>\geq</math> 16dB@6Mbps, ACR <math>\geq</math> 15dB@9Mbps,            ACR <math>\geq</math> 13dB@12Mbps, ACR <math>\geq</math> 11dB@18Mbps,            ACR <math>\geq</math> 8dB@24Mbps, ACR <math>\geq</math> 4dB@36Mbps            ACR <math>\geq</math> 0dB@48Mbps, ACR <math>\geq</math> -1dB@54Mbps            ※ACR shall be measured by setting the desired signal's strength 3 dB above the rate-dependent sensitivity specified in min input sensitivity</p>
-------------------------------	--

### 10) WLAN 802.11b transceiver specification

Item	Specification
Transmit Frequency	2400 MHz ~ 2483.5 MHz ( CH1~CH13 )
Tx Power Level	$\leq$ 20dBm
Frequency Tolerance	within $\pm 25$ PPM
Chip clock Frequency Tolerance	within $\pm 25$ PPM
Spectrum Mask	$\leq -30$ @ $f_c - 22\text{MHz} < f < f_c - 11\text{MHz}$ and $f_c + 11\text{MHz} < f < f_c + 22\text{MHz}$ $\leq -50$ @ $f < f_c - 22\text{MHz}$ and $f > f_c + 22\text{MHz}$
Power ramp on/off time	$\leq 2\mu\text{s}$
Carrier Suppression	$\leq -15\text{dB}$
Modulation Accuracy(Peak EVM)	$\leq 35\%$
Spurious Emissions	$< -36$ dBm @ 30MHz ~ 1GHz $< -30$ dBm above @ 1GHz ~ 12.75GHz $< -47$ dBm @ 1.8GHz ~ 1.9GHz $< -47$ dBm @ 5.15GHz ~ 5.3GHz
Rx Min input Sensitivity	$\leq -76\text{dBm}$ (1Mbps,2Mbps,5.5Mbps,11Mbps) @ FER $\leq 8\%$
Rx Max input Sensitivity	$\geq -10\text{dBm}$ (1Mbps,2Mbps,5.5Mbps,11Mbps) @ FER $\leq 8\%$
Rx Adjacent Channel Rejection	$\geq 35\text{dB}$ @FER $\leq 8\%$ , interference input signal -70dBm@ $f_c \pm 25\text{MHz}$ (11Mbps)



### 11) WLAN 802.11g transceiver specification

Item	Specification
Transmit Frequency	2400 MHz ~ 2483.5 MHz ( CH1~CH13 )
Tx Power Level	≤ 20dBm
Frequency Tolerance	within ±25 PPM
Chip clock Frequency Tolerance	within ±25 PPM
Spectrum Mask	≤ -20 @ ±11MHz offset (9MHz ~ 11MHz) ≤ -28 @ ±20MHz offset (11MHz ~ 20MHz) ≤ -40 @ ±30MHz offset (20MHz ~ 30MHz)
Transmitter constellation error (rms EVM)	≤ -5dB@6Mbps, ≤ -8dB@9Mbps, ≤ -10dB@12Mbps, ≤ -13dB@18Mbps, ≤ -16dB@24Mbps, ≤ -19dB@36Mbps, ≤ -22dB@48Mbps, ≤ -25dB@54Mbps
Spurious Emissions	< -36 dBm @ 30MHz ~ 1GHz < -30 dBm above @ 1GHz ~ 12.75GHz < -47 dBm @ 1.8GHz ~ 1.9GHz < -47 dBm @ 5.15GHz ~ 5.3GHz
Rx Min input Sensitivity	PER ≤ 10% -82dBm@6Mbps, -81dBm@9Mbps, -79dBm@12Mbps -77dBm@18Mbps, -74dBm@24Mbps, -70dBm@36Mbps -66dBm@48Mbps, -65dBm@54Mbps
Rx Max input Sensitivity	≥ -20dBm(6,9,12,18,24,36,48,54Mbps) @ PER ≤ 10%
Rx Adjacent Channel Rejection	PER ≤ 10%, ACR ≥ 16dB@6Mbps, ACR ≥ 15dB@9Mbps, ACR ≥ 13dB@12Mbps, ACR ≥ 11dB@18Mbps, ACR ≥ 8dB@24Mbps, ACR ≥ 4dB@36Mbps ACR ≥ 0dB@48Mbps, ACR ≥ -1dB@54Mbps ※ACR shall be measured by setting the desired signal's strength 3 dB above the rate-dependent sensitivity specified in min input sensitivity

### 12) WLAN 802.11n transceiver specification

Item	Specification
Transmit Frequency	2400.0 MHz ~ 2483.5 MHz ( CH1~CH13 ) 5150.0 MHz ~ 5725.0 MHz ( CH36~CH140 )
Tx Power Level	$\leq 20\text{dBm}$ (2400 ~ 2483.5 MHz) $\leq 23\text{dBm}$ (5150 ~ 5350.0 MHz), $\leq 30\text{dBm}$ (5470 ~ 5725.0 MHz)
Frequency Tolerance	within $\pm 25$ PPM(2400 ~ 2483.5 MHz) within $\pm 20$ PPM(5150 ~ 5725.0 MHz)
Chip clock Frequency Tolerance	within $\pm 25$ PPM(2400 ~ 2483.5 MHz) within $\pm 20$ PPM(5150 ~ 5725 MHz)
Spectrum Mask	$\leq -20$ @ $\pm 11\text{MHz}$ offset (09MHz ~ 11MHz) $\leq -28$ @ $\pm 20\text{MHz}$ offset (11MHz ~ 20MHz) $\leq -45$ @ $\pm 30\text{MHz}$ offset (20MHz ~ 30MHz)
Transmitter constellation error (rms EVM)	$\leq -5\text{dB}@6.5\text{Mbps}$ , $\leq -10\text{dB}@13\text{Mbps}$ , $\leq -13\text{dB}@19.5\text{Mbps}$ , $\leq -16\text{dB}@26\text{Mbps}$ , $\leq -19\text{dB}@39\text{Mbps}$ , $\leq -22\text{dB}@52\text{Mbps}$ , $\leq -25\text{dB}@58.5\text{Mbps}$ , $\leq -28\text{dB}@65\text{Mbps}$
Spurious Emissions	[ 2400 MHz ~ 2483.5 MHz ( CH1~CH13 ) ] $< -36$ dBm @ 30MHz ~ 1GHz $< -30$ dBm above @ 1GHz ~ 12.75GHz $< -47$ dBm @ 1.8GHz ~ 1.9GHz $< -47$ dBm @ 5.15GHz ~ 5.3GHz [ 5150 MHz ~ 5725 MHz ( CH36~CH140 ) ] $< -36$ dBm @ 30 MHz to 47 MHz $< -54$ dBm @ 47 MHz to 74 MHz $< -36$ dBm @ 74 MHz to 87,5 MHz $< -54$ dBm @ 87,5 MHz to 118 MHz $< -36$ dBm @ 118 MHz to 174 MHz $< -54$ dBm @ 174 MHz to 230 MHz $< -36$ dBm @ 230 MHz to 470 MHz

## 2. PERFORMANCE

	<p>&lt; -54 dBm @ 470 MHz to 862 MHz</p> <p>&lt; -36 dBm @ 862 MHz to 1 GHz</p> <p>&lt; -30 dBm @ 1 GHz to 5.15 GHz</p> <p>&lt; -30 dBm @ 5.35 GHz to 5.47 GHz</p> <p>&lt; -30 dBm @ 5.725 GHz to 26.5 GHz</p>
Rx Min input Sensitivity	<p>PER ≤ 10%</p> <p>-82dBm@6.5Mbps, -79dBm@13Mbps, -77dBm@19.5Mbps</p> <p>-74dBm@26Mbps, -70dBm@39Mbps, -66dBm@52Mbps</p> <p>-65dBm@58.5Mbps, -64dBm@65Mbps</p>
Rx Max input Sensitivity	<p>≥ -20dBm @ PER ≤ 10%(2400 ~ 2483.5 MHz)</p> <p>≥ -30dBm @ PER ≤ 10%(5150 ~ 5725.0 MHz)</p>
Rx Adjacent Channel Rejection	<p>PER ≤ 10%,</p> <p>ACR ≥ 16dB@6.5Mbps, ACR ≥ 13dB@13Mbps,</p> <p>ACR ≥ 11dB@19.5Mbps, ACR ≥ 8dB@26Mbps,</p> <p>ACR ≥ 4dB@39Mbps, ACR ≥ 0dB@52Mbps</p> <p>ACR ≥ -1dB@58.5Mbps, ACR ≥ -2dB@65Mbps</p> <p>※ACR shall be measured by setting the desired signal's strength 3 dB above the rate-dependent Sensitivity specified in min input sensitivity</p>

### 13) WLAN 802.11n(HT20) transceiver specification

Item	Specification
Transmit Frequency	2400 MHz ~ 2473.5 MHz ( CH1~CH11) (USA) 5150~5850MHz(CH36,CH40,CH44,CH48~116,CH132~165) (USA) 2400 MHz ~ 2483.5 MHz ( CH1~CH13) (Europe) 5150~5725MHz(CH36,CH40,CH44,CH48~140) (Europe)
Tx Power Level	$\leq 20\text{dBm}$ (CH1~13) (Europe), $\leq 30\text{dBm}$ (CH1~11) (USA) $< 50\text{mW}$ (CH36~48), $< 250\text{mW}$ (CH52~140), $< 1\text{W}$ (CH149~165) (USA) $\leq 20\text{dBm}$ (CH36~64), $\leq 27\text{dBm}$ (CH100~140) (Europe)
Frequency Tolerance	within $\pm 25$ PPM(2400 ~ 2483.5 MHz) within $\pm 20$ PPM(5150 ~ 5850 MHz)
Chip clock Frequency Tolerance	within $\pm 25$ PPM(2400 ~ 2483.5 MHz) within $\pm 20$ PPM(5100 ~ 5850 MHz)
Spectrum Mask	$\leq -20$ @ $\pm 11\text{MHz}$ offset (9MHz ~ 11MHz) $\leq -28$ @ $\pm 20\text{MHz}$ offset (11MHz ~ 20MHz) $\leq -45$ @ $\pm 30\text{MHz}$ offset (20MHz ~ 30MHz)
Transmitter constellation error (rms EVM)	$\leq -5\text{dB}$ @6.5Mbps, $\leq -10\text{dB}$ @13Mbps, $\leq -13\text{dB}$ @19.5Mbps, $\leq -16\text{dB}$ @26Mbps, $\leq -19\text{dB}$ @39Mbps, $\leq -22\text{dB}$ @52Mbps, $\leq -25\text{dB}$ @58.5Mbps, $\leq -28\text{dB}$ @65Mbps
Spurious Emissions	[ 2400 MHz ~ 2483.5 MHz ( CH1 ~ 13 ) ] $< -36\text{ dBm}$ @ 30MHz ~ 1GHz $< -30\text{ dBm}$ above @ 1GHz ~ 12.75GHz $< -47\text{ dBm}$ @ 1.8GHz ~ 1.9GHz $< -47\text{ dBm}$ @ 5.15GHz ~ 5.3GHz [ 5150 MHz ~ 5850 MHz ( CH36 ~ 165 ) ] $< -36\text{ dBm}$ @ 30 MHz to 47 MHz $< -54\text{ dBm}$ @ 47 MHz to 74 MHz $< -36\text{ dBm}$ @ 74 MHz to 87,5 MHz

## 2. PERFORMANCE

	<p>&lt; -54 dBm @ 87,5 MHz to 118 MHz</p> <p>&lt; -36 dBm @ 118 MHz to 174 MHz</p> <p>&lt; -54 dBm @ 174 MHz to 230 MHz</p> <p>&lt; -36 dBm @ 230 MHz to 470 MHz</p> <p>&lt; -54 dBm @ 470 MHz to 862 MHz</p> <p>&lt; -36 dBm @ 862 MHz to 1 GHz</p> <p>&lt; -30 dBm @ 1 GHz to 5.15 GHz</p> <p>&lt; -30 dBm @ 5.35 GHz to 5.47 GHz</p> <p>&lt; -30 dBm @ 5.725 GHz to 26.5 GHz</p>
Rx Min input Sensitivity	<p>PER ≤ 10%</p> <p>-82dBm@6.5Mbps, -79dBm@13Mbps, -77dBm@19.5Mbps</p> <p>-74dBm@26Mbps, -70dBm@39Mbps, -66dBm@52Mbps</p> <p>-65dBm@58.5Mbps, -64dBm@65Mbps</p>
Rx Max input Sensitivity	<p>≥ -20dBm @ PER ≤ 10%(2400 ~ 2483.5 MHz)</p> <p>≥ -30dBm @ PER ≤ 10%(5150 ~ 5850 MHz)</p>
Rx Adjacent Channel Rejection	<p>PER ≤ 10%,</p> <p>ACR ≥ 16dB@6.5Mbps, ACR ≥ 13dB@13Mbps,</p> <p>ACR ≥ 11dB@19.5Mbps, ACR ≥ 8dB@26Mbps,</p> <p>ACR ≥ 4dB@39Mbps, ACR ≥ 0dB@52Mbps</p> <p>ACR ≥ -1dB@58.5Mbps, ACR ≥ -2dB@65Mbps</p> <p>※ACR shall be measured by setting the desired signal's strength 3 dB above the rate-dependent sensitivity specified in min input sensitivity</p>

### 14) WLAN 802.11ac(VHT20)

Item	Spec.
Transmit Frequency	2400 ~ 2483.5 MHz (CH1 ~ 13) 5170 ~ 5815 MHz (CH36 ~ 64, CH100 ~ 124, CH149 ~ 161)
Tx Power Level	$\leq 10\text{mW/MHz}$ (CH1 ~ 13) $\leq 2.5\text{mW/MHz}$ (CH36 ~ 48), $\leq 10\text{mW/MHz}$ (CH52 ~ 161)
Frequency Tolerance	within $\pm 25$ PPM(2400 ~ 2483.5 MHz) within $\pm 20$ PPM(5170 ~ 5815 MHz)
Chip clock Frequency Tolerance	within $\pm 25$ PPM(2400 ~ 2483.5 MHz) within $\pm 20$ PPM(5170 ~ 5815 MHz)
Spectrum Mask	2.4G (2400 ~ 2483.5 MHz) $\leq -20$ @ $\pm 11\text{MHz}$ offset (9MHz ~ 11MHz) $\leq -28$ @ $\pm 20\text{MHz}$ offset (11MHz ~ 20MHz) $\leq -45$ @ $\pm 30\text{MHz}$ offset (20MHz ~ 30MHz) 5G (5170 ~ 5710 MHz) $\leq -20$ @ $\pm 11\text{MHz}$ offset (9MHz ~ 11MHz) $\leq -28$ @ $\pm 20\text{MHz}$ offset (11MHz ~ 20MHz) $\leq -40$ @ $\pm 30\text{MHz}$ offset (20MHz ~ 30MHz)
Transmitter constellation error (rms EVM)	$\leq -5\text{dB}@6.5\text{Mbps}$ , $\leq -10\text{dB}@13\text{Mbps}$ , $\leq -13\text{dB}@19.5\text{Mbps}$ , $\leq -16\text{dB}@26\text{Mbps}$ , $\leq -19\text{dB}@39\text{Mbps}$ , $\leq -22\text{dB}@52\text{Mbps}$ , $\leq -25\text{dB}@58.5\text{Mbps}$ , $\leq -27\text{dB}@65\text{Mbps}$ , $\leq -30\text{dB}@78\text{Mbps}$
Spurious Emissions	[ 2400 MHz ~ 2483.5 MHz ( CH1 ~ 13 ) ] $< -36$ dBm @ 30MHz ~ 1GHz $< -30$ dBm above @ 1GHz ~ 12.75GHz $< -47$ dBm @ 1.8GHz ~ 1.9GHz $< -47$ dBm @ 5.15GHz ~ 5.3GHz
Spurious Emissions	[ 5170 MHz ~ 5815 MHz ( CH36 ~ 161 ) ] $< -36$ dBm @ 30 MHz to 47 MHz $< -54$ dBm @ 47 MHz to 74 MHz $< -36$ dBm @ 74 MHz to 87,5 MHz $< -54$ dBm @ 87,5 MHz to 118 MHz $< -36$ dBm @ 118 MHz to 174 MHz $< -54$ dBm @ 174 MHz to 230 MHz $< -36$ dBm @ 230 MHz to 470 MHz

## 2. PERFORMANCE

	<p>&lt; -54 dBm @ 470 MHz to 862 MHz</p> <p>&lt; -36 dBm @ 862 MHz to 1 GHz</p> <p>&lt; -30 dBm @ 1 GHz to 5.15 GHz</p> <p>&lt; -30 dBm @ 5.35 GHz to 5.47 GHz</p> <p>&lt; -30 dBm @ 5.725 GHz to 26.5 GHz</p>
Rx Min input Sensitivity	<p>PER ≤ 10%</p> <p>-82dBm@6.5Mbps, -79dBm@13Mbps, -77dBm@19.5Mbps</p> <p>-74dBm@26Mbps, -70dBm@39Mbps, -66dBm@52Mbps</p> <p>-65dBm@58.5Mbps, -64dBm@65Mbps, -59dBm@78Mbps</p>
Rx Max input Sensitivity	<p>≥ -30dBm @ PER ≤ 10%</p>
Rx Adjacent Channel Rejection	<p>PER ≤ 10%,</p> <p>ACR ≥ 16dB@6.5Mbps, ACR ≥ 13dB@13Mbps,</p> <p>ACR ≥ 11dB@19.5Mbps, ACR ≥ 8dB@26Mbps,</p> <p>ACR ≥ 4dB@39Mbps, ACR ≥ 0dB@52Mbps</p> <p>ACR ≥ -1dB@58.5Mbps, ACR ≥ -2dB@65Mbps,</p> <p>ACR ≥ -7dB@78Mbps</p> <p>※ACR shall be measured by setting the desired signal's strength 3 dB above the rate-dependent sensitivity specified in min input sensitivity</p>

### 15) WLAN 802.11ac(VHT40)

Item	Spec.
Transmit Frequency	5170 ~ 5815 MHz (CH36 ~ 64, CH100 ~ 124, CH149 ~ 161)
Tx Power Level	$\leq 2.5\text{mW/MHz}$ (CH36 ~ 48), $\leq 10\text{mW/MHz}$ (CH52 ~ 161)
Frequency Tolerance	within $\pm 20$ PPM(5170 ~ 5815 MHz)
Chip clock Frequency Tolerance	within $\pm 20$ PPM(5170 ~ 5815 MHz)
Spectrum Mask	$\leq -20$ @ $\pm 21\text{MHz}$ offset (19Mhz ~ 21MHz) $\leq -28$ @ $\pm 40\text{MHz}$ offset (21MHz ~ 40Mhz) $\leq -40$ @ $\pm 60\text{MHz}$ offset (40MHz ~ 60Mhz)
Transmitter constellation error (rms EVM)	$\leq -5\text{dB@}13.5\text{Mbps}$ , $\leq -10\text{dB@}27\text{Mbps}$ , $\leq -13\text{dB@}40.5\text{Mbps}$ , $\leq -16\text{dB@}54\text{Mbps}$ , $\leq -19\text{dB@}81\text{Mbps}$ , $\leq -22\text{dB@}108\text{Mbps}$ , $\leq -25\text{dB@}121.5\text{Mbps}$ , $\leq -27\text{dB@}135\text{Mbps}$ , $\leq -30\text{dB@}162\text{Mbps}$ , $\leq -32\text{dB@}180\text{Mbps}$
Spurious Emissions	[ 5170 MHz ~ 5815 MHz ( CH36 ~ 161 ) ] $< -36$ dBm @ 30 MHz to 47 MHz $< -54$ dBm @ 47 MHz to 74 MHz $< -36$ dBm @ 74 MHz to 87,5 MHz $< -54$ dBm @ 87,5 MHz to 118 MHz $< -36$ dBm @ 118 MHz to 174 MHz $< -54$ dBm @ 174 MHz to 230 MHz $< -36$ dBm @ 230 MHz to 470 MHz $< -54$ dBm @ 470 MHz to 862 MHz $< -36$ dBm @ 862 MHz to 1 GHz $< -30$ dBm @ 1 GHz to 5.15 GHz $< -30$ dBm @ 5.35 GHz to 5.47 GHz $< -30$ dBm @ 5.725 GHz to 26.5 GHz
Rx Min input Sensitivity	PER $\leq 10\%$ $-79\text{dBm@}13.5\text{Mbps}$ , $-76\text{dBm@}27\text{Mbps}$ , $-74\text{dBm@}40.5\text{Mbps}$ $-71\text{dBm@}54\text{Mbps}$ , $-67\text{dBm@}81\text{Mbps}$ , $-63\text{dBm@}108\text{Mbps}$ $-62\text{dBm@}121.5\text{Mbps}$ , $-61\text{dBm@}135\text{Mbps}$ , $-56\text{dBm@}162\text{Mbps}$ , $-54\text{dBm@}180\text{Mbps}$



## 2. PERFORMANCE

Rx Max input Sensitivity	$\geq -30\text{dBm}$ @ PER $\leq 10\%$ (5170 ~ 5815 MHz)
Rx Adjacent Channel Rejection	<p>PER <math>\leq 10\%</math>,</p> <p>ACR <math>\geq 16\text{dB}@13.5\text{Mbps}</math>, ACR <math>\geq 13\text{dB}@27\text{Mbps}</math>,</p> <p>ACR <math>\geq 11\text{dB}@40.5\text{Mbps}</math>, ACR <math>\geq 8\text{dB}@54\text{Mbps}</math>,</p> <p>ACR <math>\geq 4\text{dB}@81\text{Mbps}</math>, ACR <math>\geq 0\text{dB}@108\text{Mbps}</math></p> <p>ACR <math>\geq -1\text{dB}@121.5\text{Mbps}</math>, ACR <math>\geq -2\text{dB}@135\text{Mbps}</math></p> <p>ACR <math>\geq -7\text{dB}@162\text{Mbps}</math>, ACR <math>\geq -9\text{dB}@180\text{Mbps}</math></p> <p>※ACR shall be measured by setting the desired signal's strength 3 dB above the rate-dependent sensitivity specified in min input sensitivity</p>

### 16) WLAN 802.11ac(VHT80)

Item	Spec.
Transmit Frequency	5170 ~ 5815 MHz (CH36 ~ 64, CH100 ~ 124, CH149 ~ 161)
Tx Power Level	$\leq 2.5\text{mW/MHz}$ (CH36 ~ 48), $\leq 10\text{mW/MHz}$ (CH52 ~ 161)
Frequency Tolerance	within $\pm 20$ PPM(5170 ~ 5815 MHz)
Chip clock Frequency Tolerance	within $\pm 20$ PPM(5170 ~ 5815 MHz)
Spectrum Mask	$\leq -20$ @ $\pm 41\text{MHz}$ offset (39Mhz ~ 41MHz) $\leq -28$ @ $\pm 80\text{MHz}$ offset (41MHz ~ 80Mhz) $\leq -40$ @ $\pm 120\text{MHz}$ offset (80MHz ~ 120Mhz)
Transmitter constellation error (rms EVM)	$\leq -5\text{dB@}29.3\text{Mbps}$ , $\leq -10\text{dB@}58.5\text{Mbps}$ , $\leq -13\text{dB@}87.8\text{Mbps}$ , $\leq -16\text{dB@}117\text{Mbps}$ , $\leq -19\text{dB@}175.5\text{Mbps}$ , $\leq -22\text{dB@}234\text{Mbps}$ , $\leq -25\text{dB@}263.3\text{Mbps}$ , $\leq -27\text{dB@}292.5\text{Mbps}$ , $\leq -30\text{dB@}351\text{Mbps}$ , $\leq -32\text{dB@}390\text{Mbps}$
Spurious Emissions	[ 5170 MHz ~ 5815 MHz ( CH36 ~ 161 ) ] $< -36$ dBm @ 30 MHz to 47 MHz $< -54$ dBm @ 47 MHz to 74 MHz $< -36$ dBm @ 74 MHz to 87,5 MHz $< -54$ dBm @ 87,5 MHz to 118 MHz $< -36$ dBm @ 118 MHz to 174 MHz $< -54$ dBm @ 174 MHz to 230 MHz $< -36$ dBm @ 230 MHz to 470 MHz $< -54$ dBm @ 470 MHz to 862 MHz $< -36$ dBm @ 862 MHz to 1 GHz $< -30$ dBm @ 1 GHz to 5.15 GHz $< -30$ dBm @ 5.35 GHz to 5.47 GHz $< -30$ dBm @ 5.725 GHz to 26.5 GHz
Rx Min input Sensitivity	PER $\leq 10\%$ $-76\text{dBm@}29.3\text{Mbps}$ , $-73\text{dBm@}58.5\text{Mbps}$ , $-71\text{dBm@}87.8\text{Mbps}$ $-68\text{dBm@}117\text{Mbps}$ , $-64\text{dBm@}175.5\text{Mbps}$ , $-60\text{dBm@}234\text{Mbps}$

## 2. PERFORMANCE

	-59dBm@263.3Mbps, -58dBm@292.5Mbps, -53dBm@351Mbps, -51dBm@390Mbps
Rx Max input Sensitivity	$\geq -30\text{dBm}$ @ PER $\leq 10\%$ (5170 ~ 5815 MHz)
Rx Adjacent Channel Rejection	<p>PER <math>\leq 10\%</math>,</p> <p>ACR <math>\geq 16\text{dB}@29.3\text{Mbps}</math>, ACR <math>\geq 13\text{dB}@58.5\text{Mbps}</math>,  ACR <math>\geq 11\text{dB}@87.8\text{Mbps}</math>, ACR <math>\geq 8\text{dB}@117\text{Mbps}</math>,  ACR <math>\geq 4\text{dB}@175.5\text{Mbps}</math>, ACR <math>\geq 0\text{dB}@234\text{Mbps}</math>  ACR <math>\geq -1\text{dB}@263.3\text{Mbps}</math>, ACR <math>\geq -2\text{dB}@292.5\text{Mbps}</math>  ACR <math>\geq -7\text{dB}@351\text{Mbps}</math>, ACR <math>\geq -9\text{dB}@390\text{Mbps}</math></p> <p>※ACR shall be measured by setting the desired signal's strength  3 dB above the rate-dependent sensitivity specified in min input s  ensitivity</p>

### 17) Bluetooth transmitter specification

Item	Spec.		Min	Typ.	Max	Unit
Output Power	DH5 PRBS9	Nominal Pwr	-6	-	+20	dBm
		Peak Pwr	-	-	+23	dBm
Power Density	DH5 PRBS9	@100kHz BW		-	+20	dBm
Frequency Range	DH5 PRBS9	-30dBm @100kHz BW	2400	-	2483	MHz
Tx Output Spectrum (20dB BW)	DH5 PRBS9	$\Delta f = f_H - f_L$		-	1	MHz
Tx Output Spectrum (Adjacent Output Power)	DH5 PRBS9	@M-N = 2		-	-20	dBm
		@M-N >= 3		-	-40	dBm
Modulation Index	DH5 11110000	$f1_{AVG}$	140	-	175	kHz
	DH5 10101010	$f2_{MAX}$	115	-		kHz
		$f2_{AVG}/f1_{AVG}$	0.8	-		
Initial Carrier Freq. Tolerance	DH5 PRBS9		-75	-	+75	kHz
Carrier Frequency Drift	DH1 10101010	Freq. Drift	-25	-	+25	kHz
		Drift Rate	-20	-	+20	kHz/50us
	DH3 10101010	Freq. Drift	-40	-	+40	kHz
		Drift Rate	-20	-	+20	kHz/50us
	DH5 10101010	Freq. Drift	-40	-	+40	kHz
		Drift Rate	-20	-	+20	kHz/50us
Out of Band Spurious Emission	DH1 PRBS9	@ 30MHz ~ 12.75GHz	20			dBc

### 18) Bluetooth receiver specification

Item	Spec.		Min	Typ.	Max	Unit
Sensitivity (Single Slot Packet)	DH1 PRBS9	BER @ 0.1%		-	-70	dBm
Sensitivity (Multi Slot Packet)	DH5 PRBS9	BER @ 0.1%		-	-70	dBm
C/I Performance	DH1 PRBS9	Co-Channel -60dBm@ BER0.1%		-	11	dB
		C/I @1MHz -60dBm@ BER 0.1%		-	0	
		C/I @2MHz -60dBm@ BER 0.1%		-	-30	
		C/I @≥3MHz -67dBm@ BER0.1%		-	-40	
		C/I @Image -67dBm@ BER 0.1%		-	-9	
		C/I @1MHz Image -67dBm@ BER 0.1%		-	-20	
Blocking Performance	DH1 PRBS9	-10dBm @30M ~2 GHz		-	-67	dBm
		-27dBm @2 ~ 2.4 GHz				
		-27dBm @2.5 ~ 3 GHz				
		-10dBm @3 ~ 12.75 GHz				
Intermodulation Performance	DH1 PRBS9	$\Delta f = +5\text{MHz}$ (CW) $\Delta f = +10\text{MHz}$ (BT) BER @ 0.1%		-	-64	dBm
		$\Delta f = -5\text{MHz}$ (CW) $\Delta f = -10\text{MHz}$ (BT) BER @ 0.1%		-	-64	dBm
Maximum Input Level	DH1 PRBS9	BER @ 0.1%	-20	-		dBm

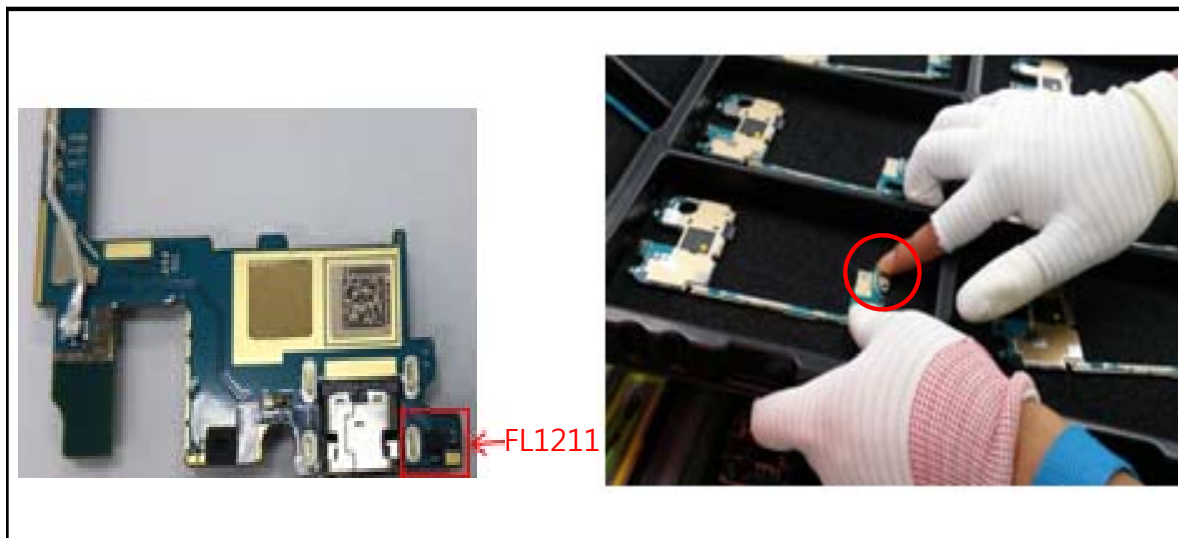
### 19) NFC

Operate below 3 mode.

- 1) Card mode : Smart Card capability for mobile device(recognition distance : over 20mm)
- 2) Reader mode : Get information from tag(recognition distance : over 20mm)
- 3) Peer-to-peer mode : Device to device communication(recognition distance : over 5mm)

## 3. TROUBLE SHOOTING

When disassemble or re-assemble of D855, it is important that Ref. No. FL 1211 should be touched for about 1 second as if the picture below.



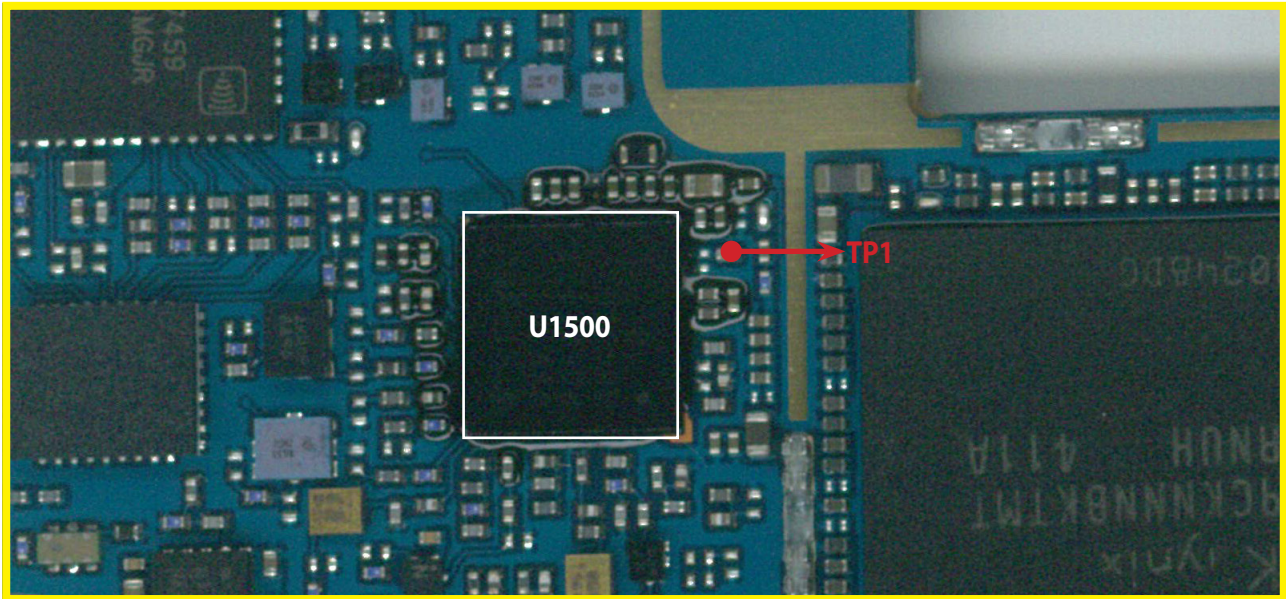
It is expected to improve induced charge effect on the surface of WLCSP, FL1211. When disassemble or re-assemble, kindly follow the instruction below.

*If the instruction is not followed, LTE 20 band performance could be lower in state.*

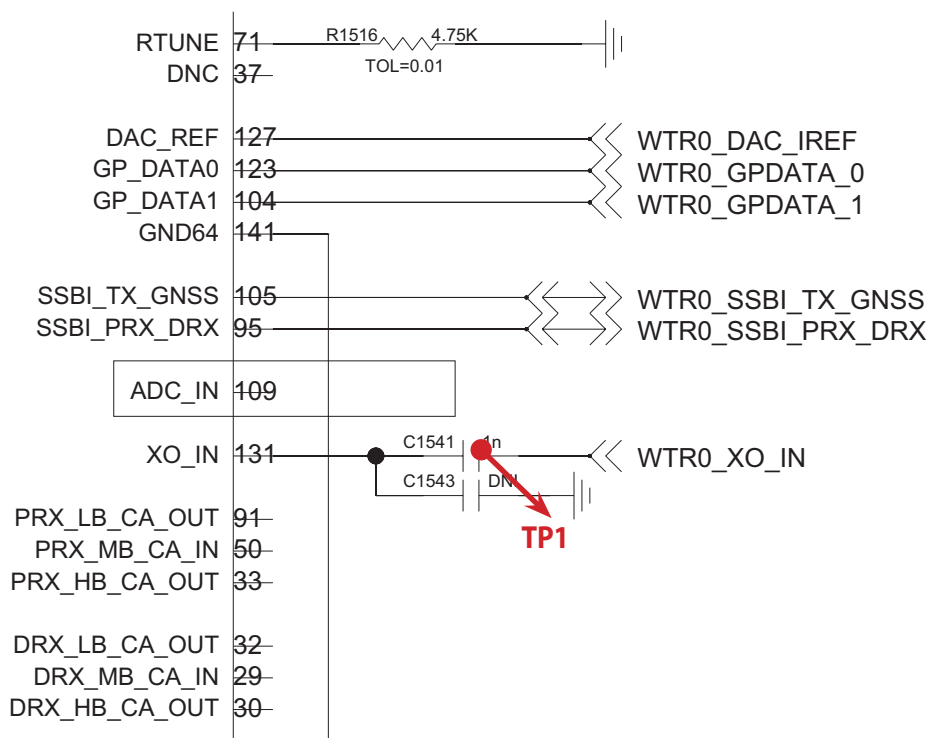
1. Wears earth ring on your wrist
2. Touch with your finger on the FL1211
3. It should last at least 3 second.

### 3.1 Checking XO Block

The output frequency(19.2MHz) of XO(X4100) is used as the reference one of WTR1605L and PM8941 internal VCO



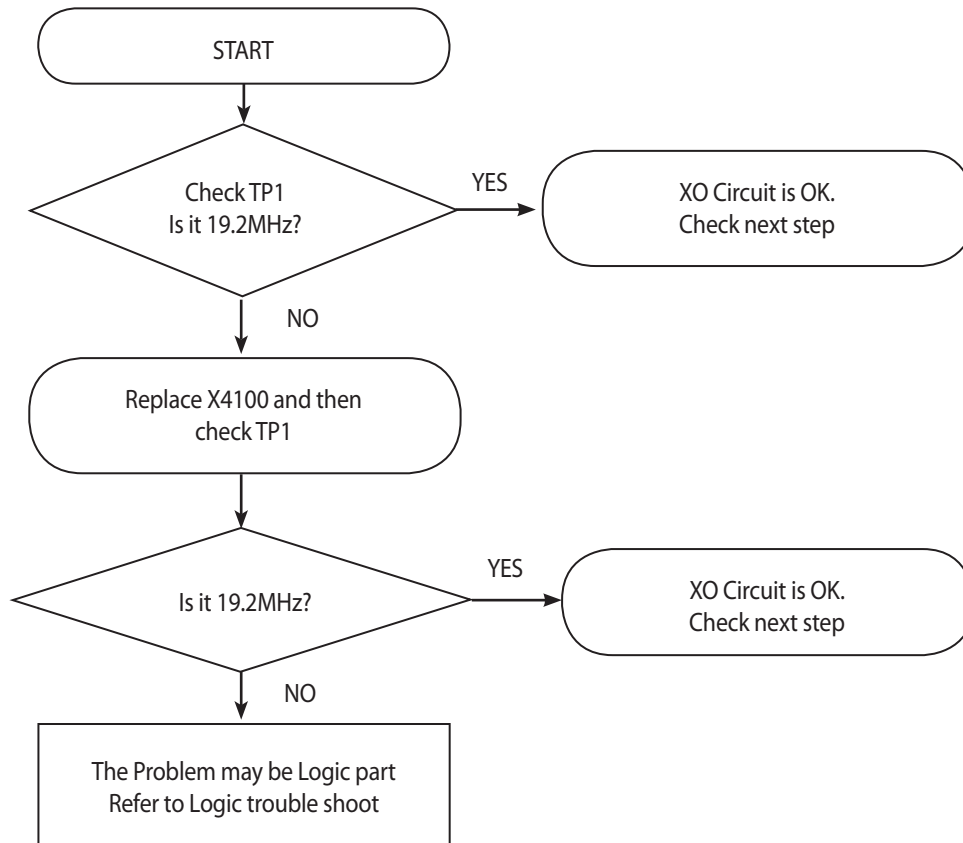
<Main Top>





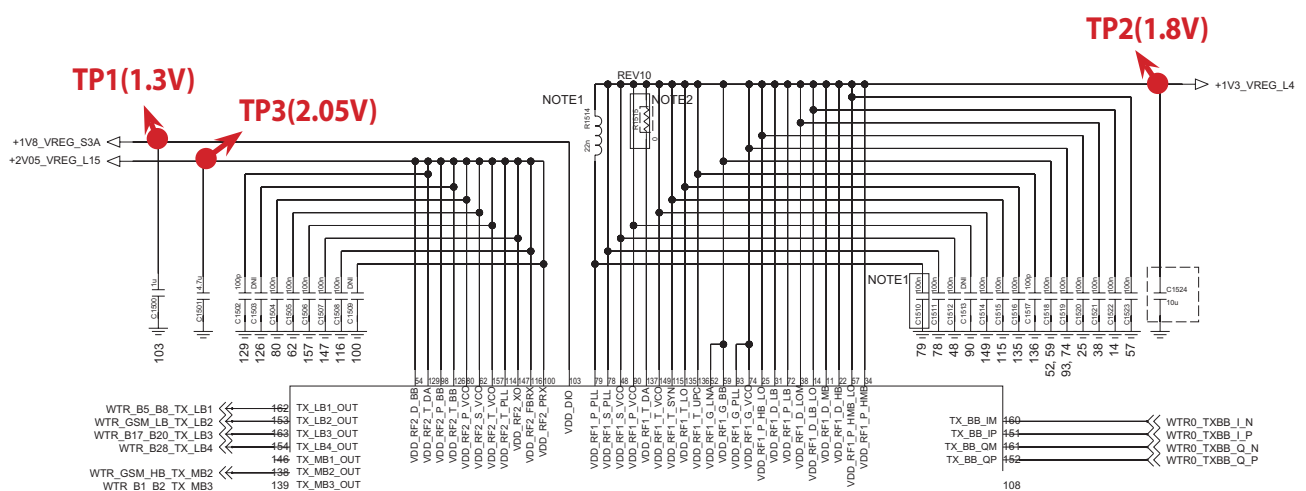
### 3. TROUBLE SHOOTING

---

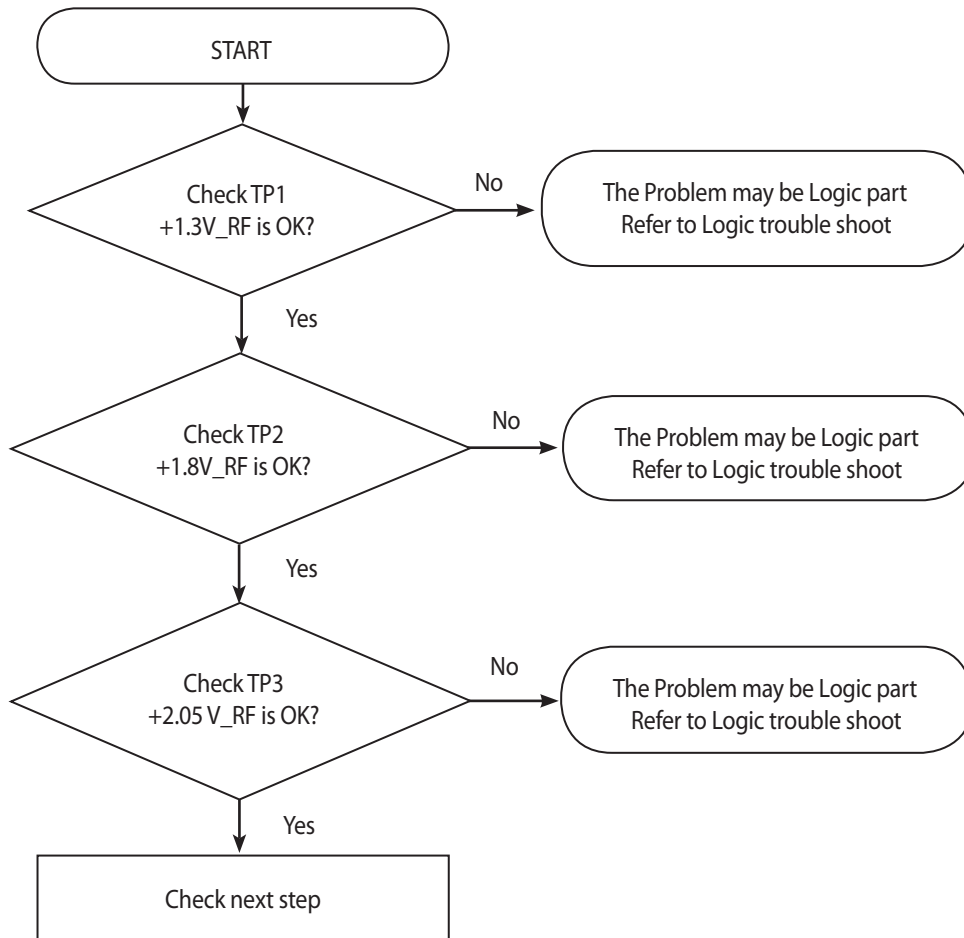


Micrograph of the U1500 chip on a blue PCB. Three test points are marked with red dots and labeled: TP3(2.05V) at the top, TP2(1.8V) in the middle, and TP1(1.3V) at the bottom. The chip is labeled U1500.

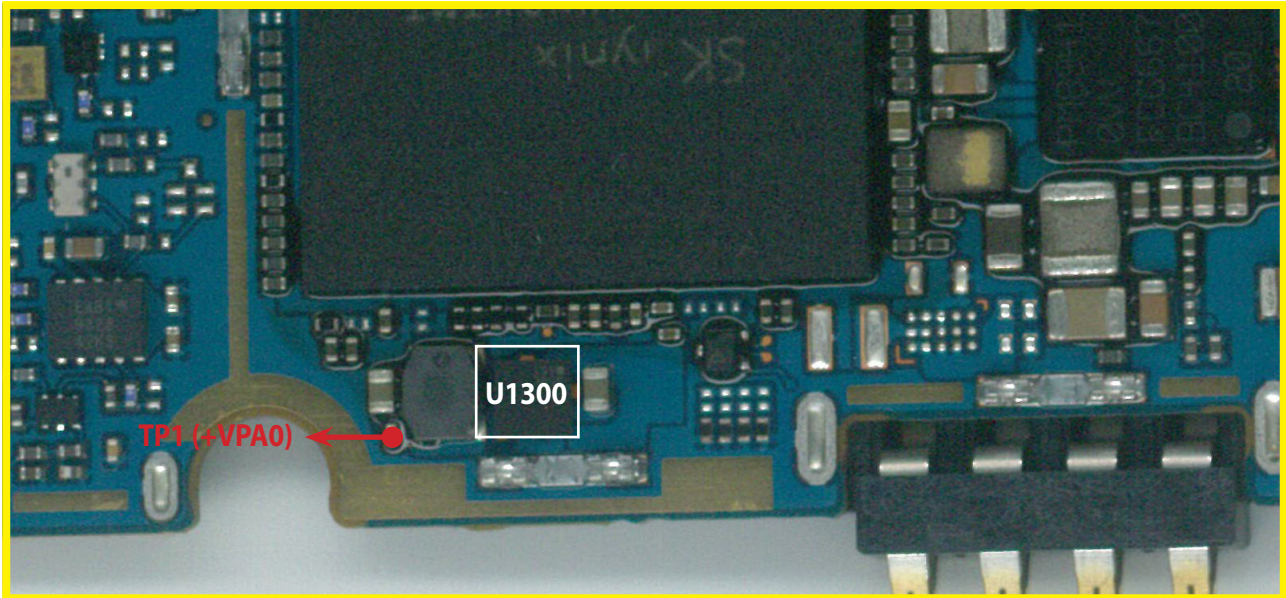
**<Main Top>**



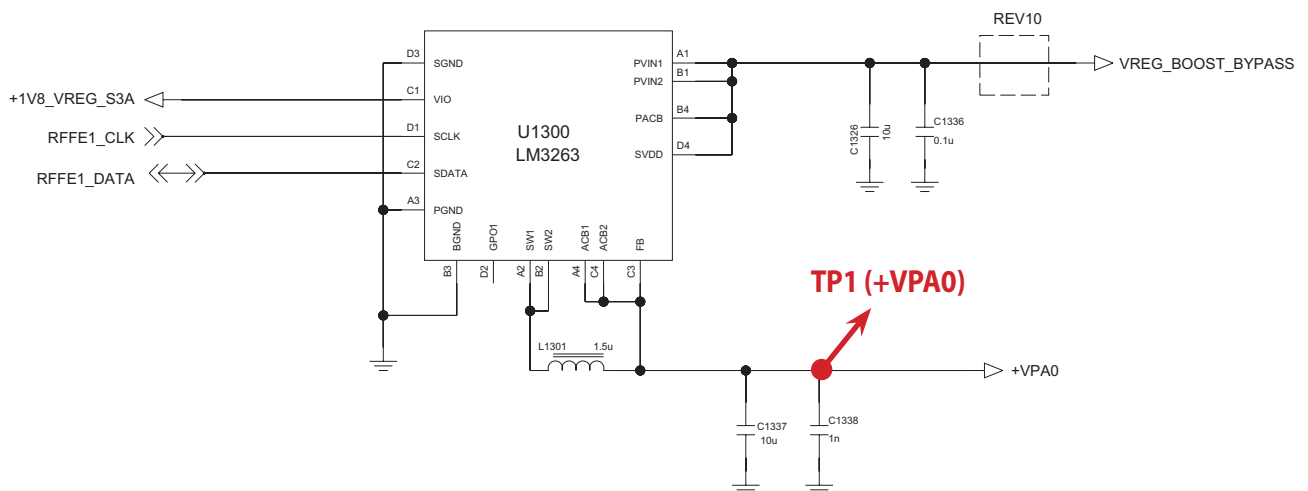
### 3. TROUBLE SHOOTING



### 3.3 Checking DC-DC Block

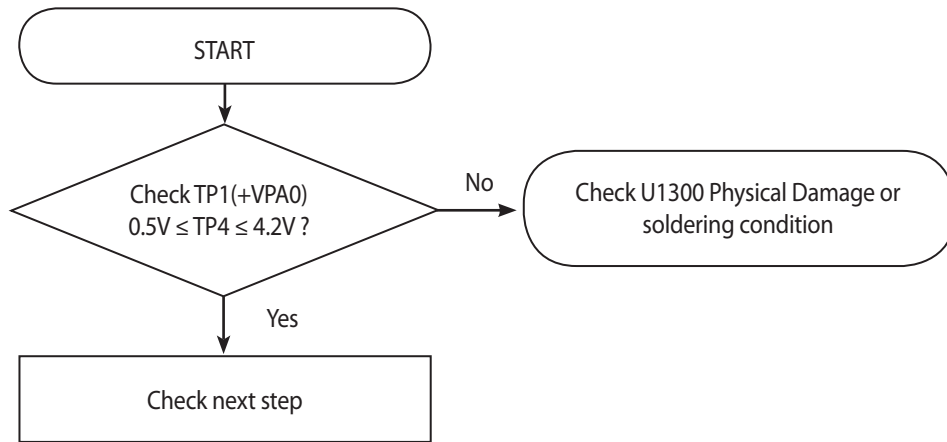


<Main Top>



### 3. TROUBLE SHOOTING

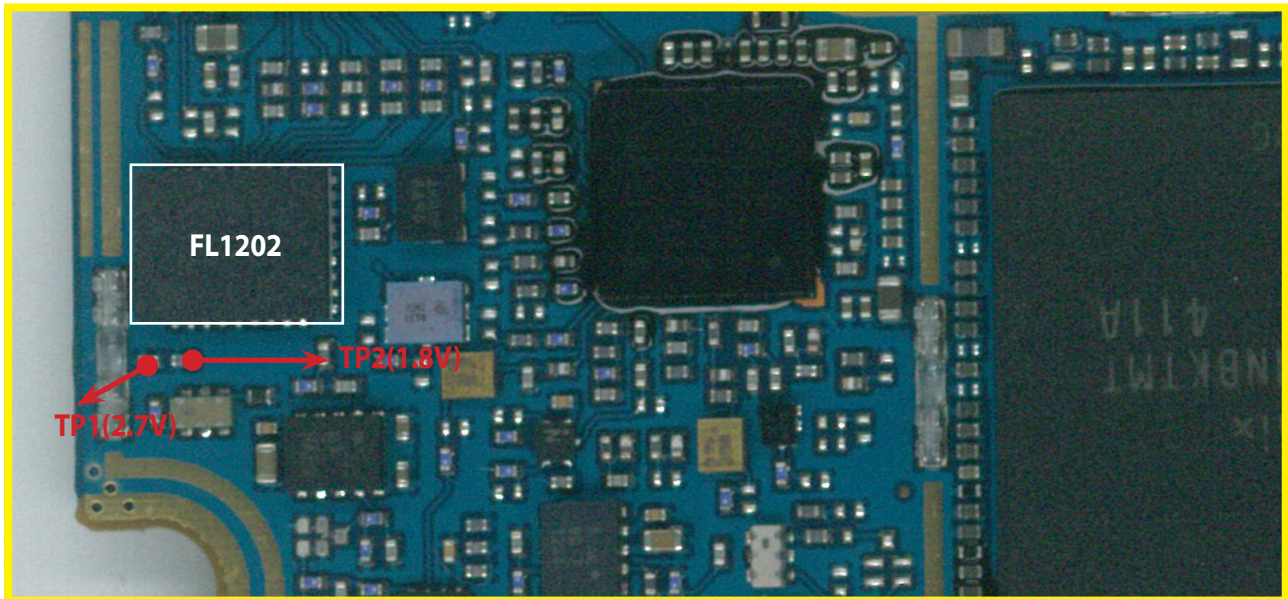
---



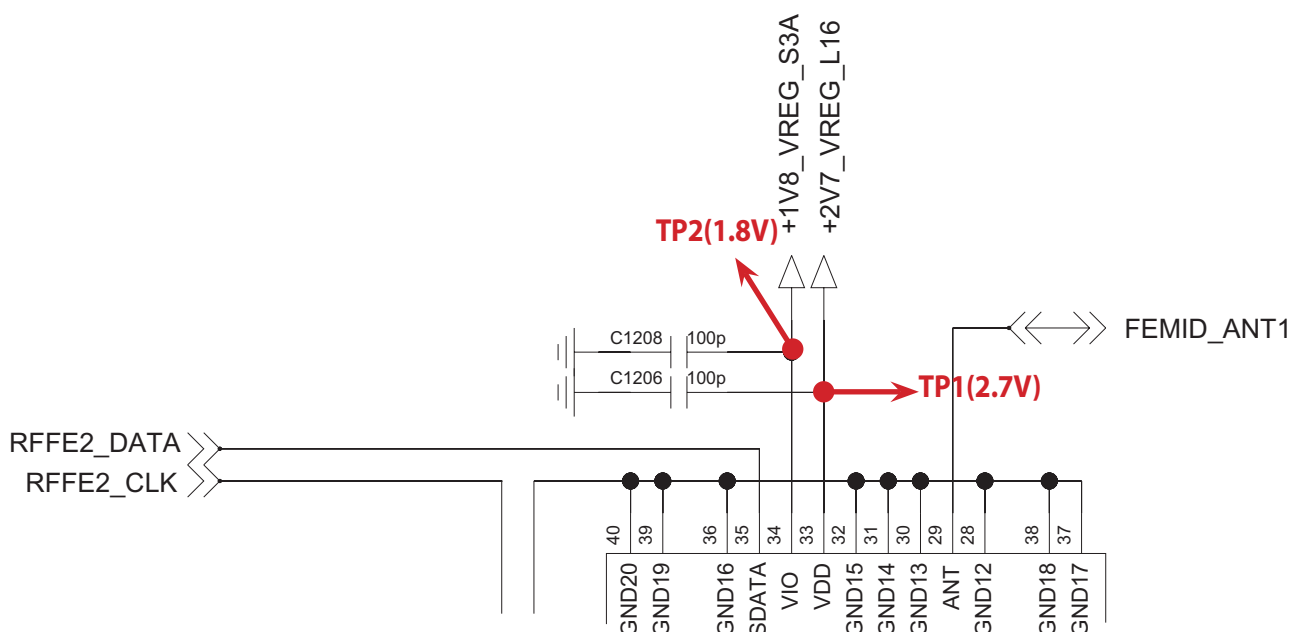


### 3.4 ASM(Antenna Switch Module) Block

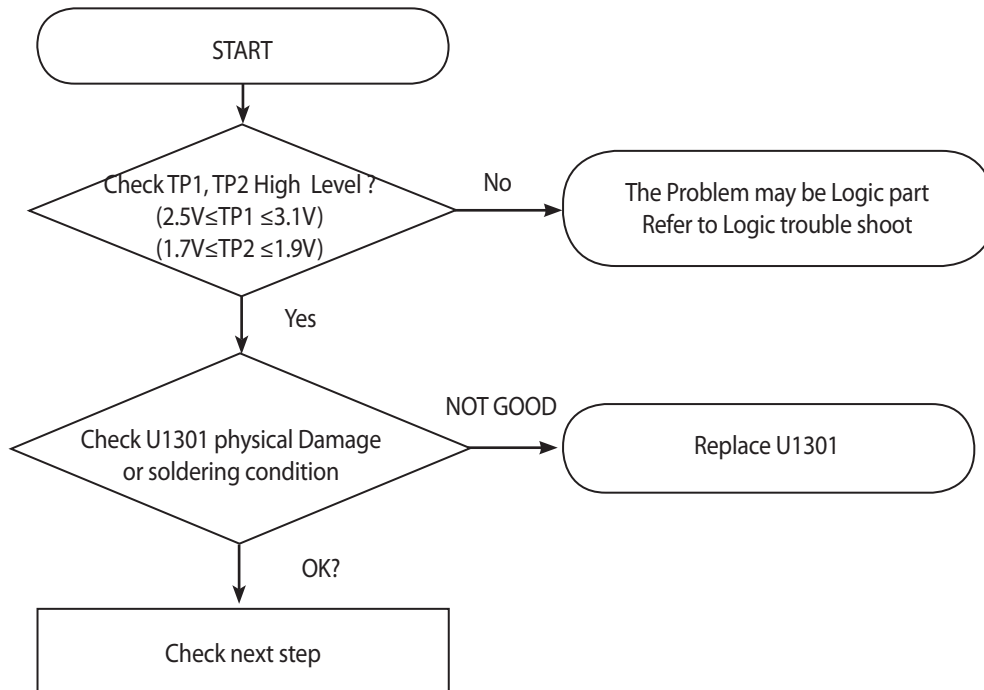
#### 3.4.1 Checking FEMiD (GSM, W B1/2/5/8, LTE B1/B3/B8/B20) Block



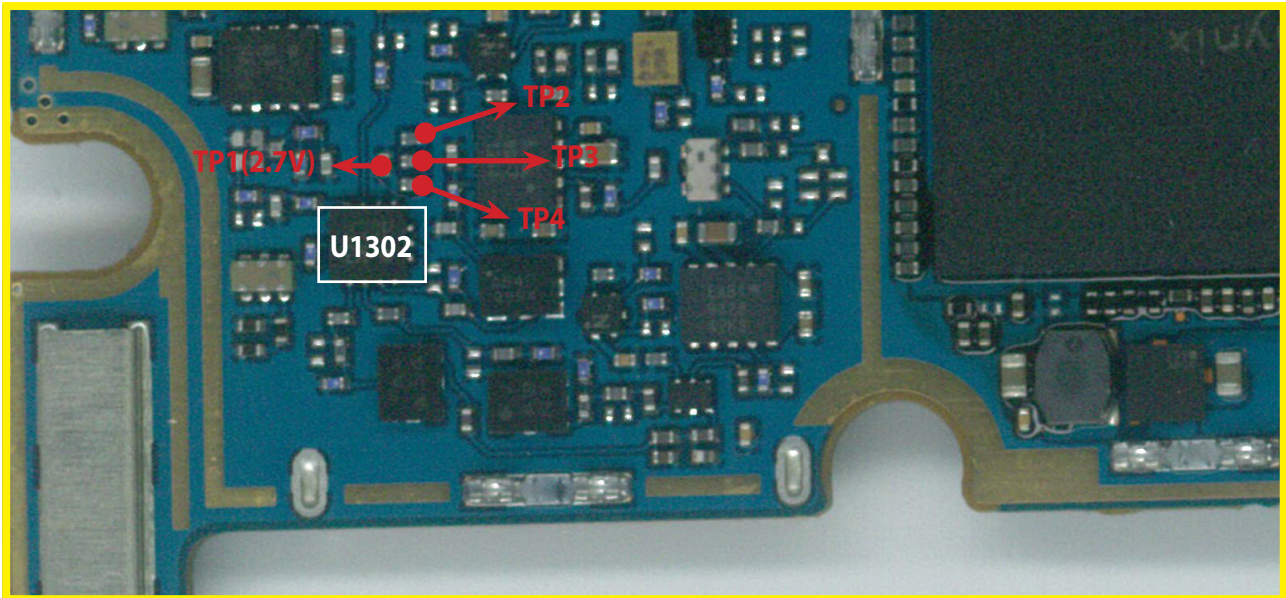
<Main Top>



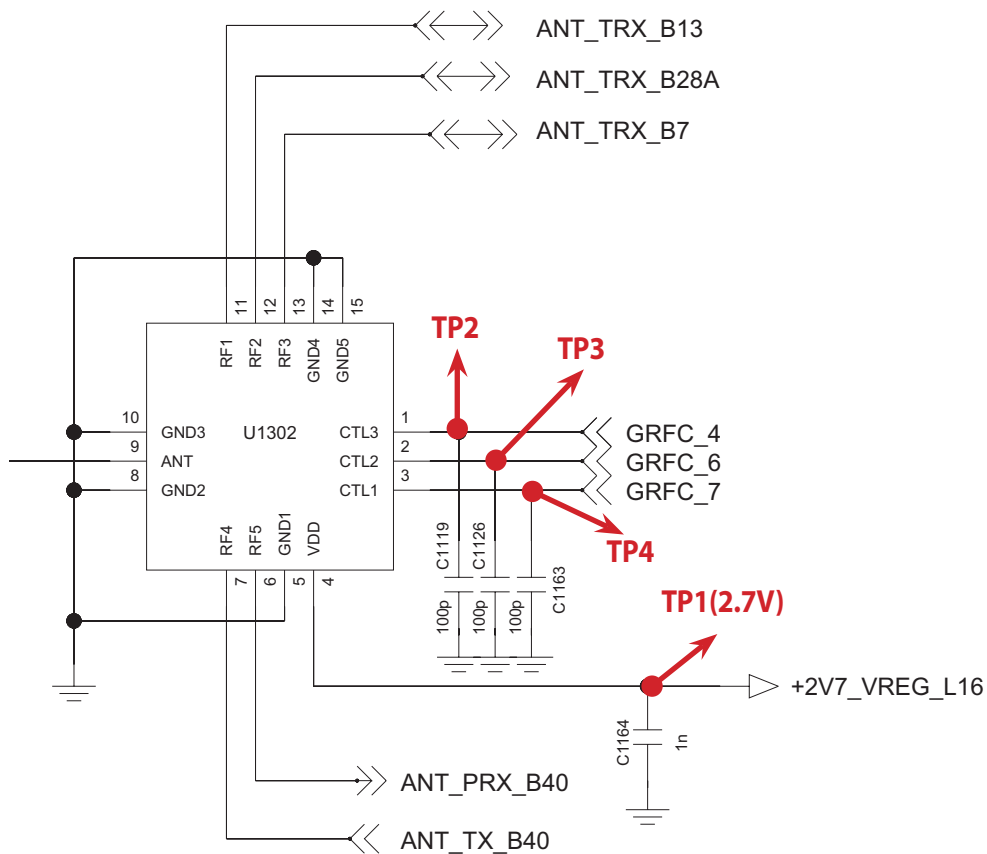
### 3. TROUBLE SHOOTING



### 3.4.2 Checking SP4T (LTE B7/B28/B40) Block

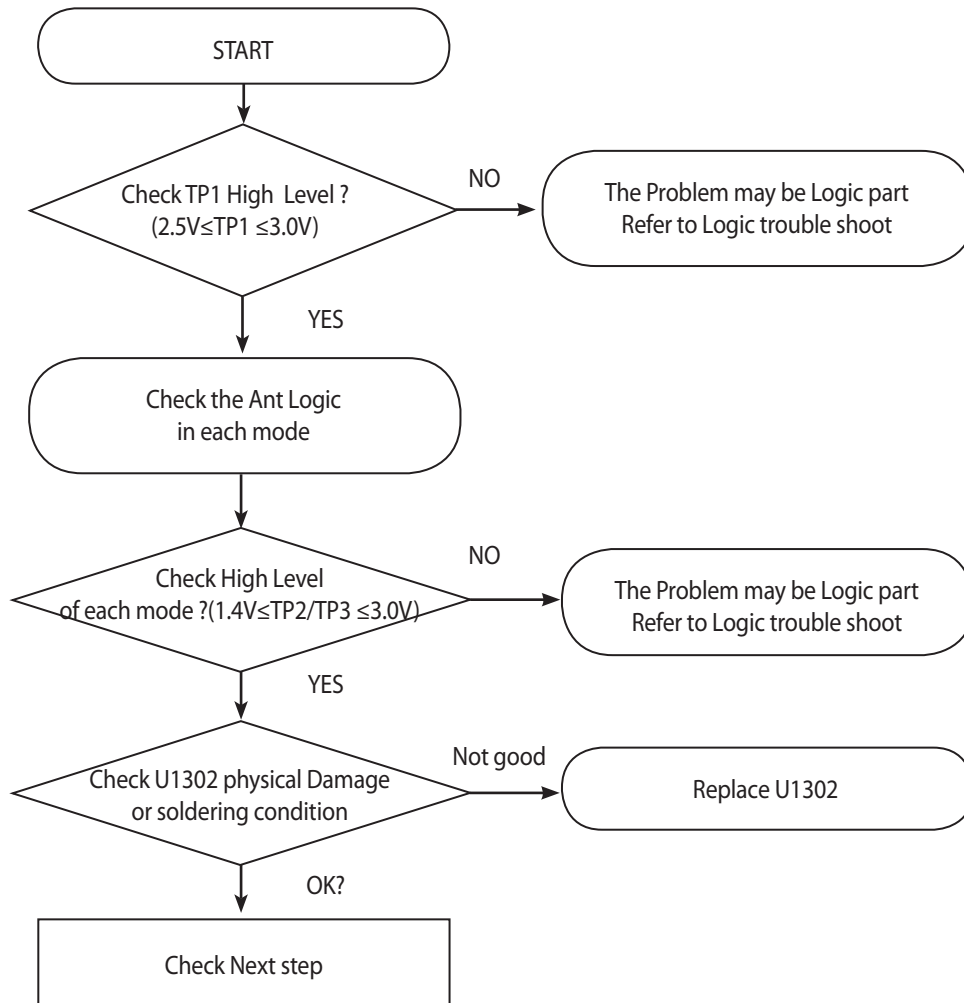


<Main Top>

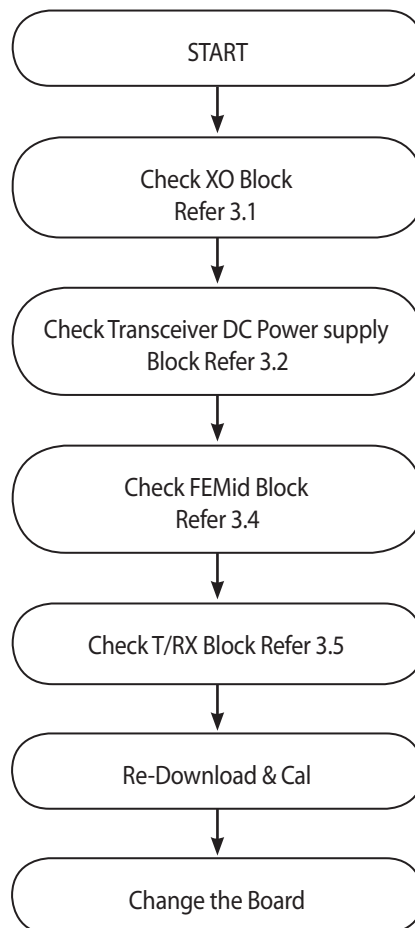




### 3. TROUBLE SHOOTING

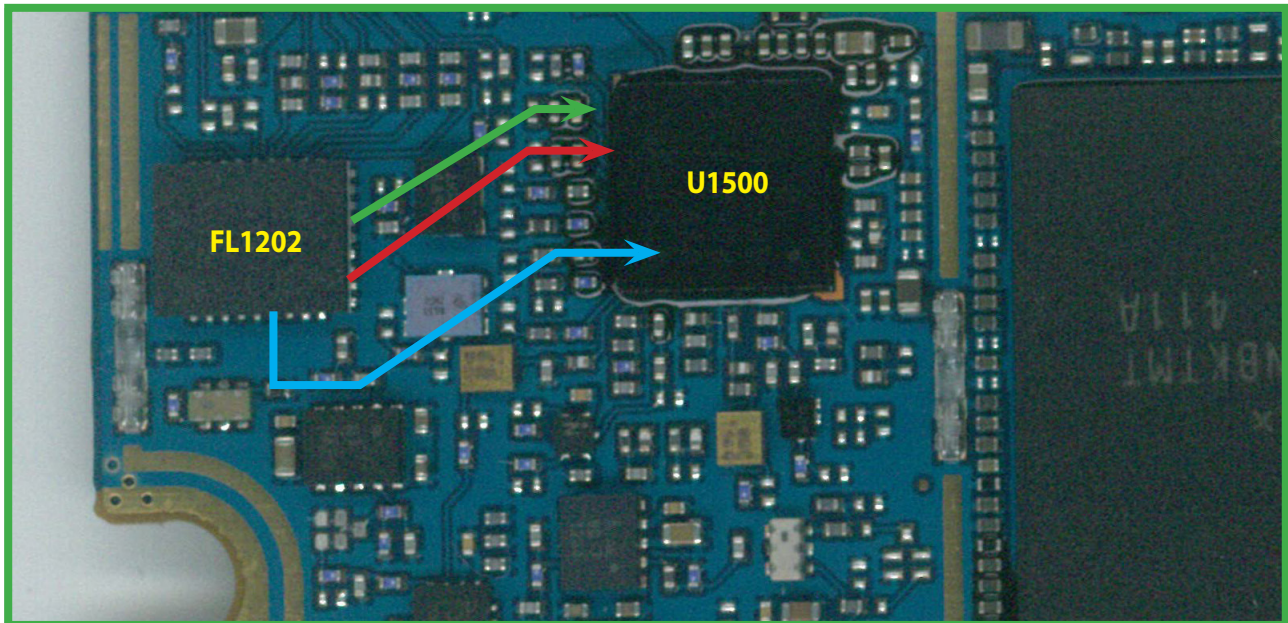


### 3.5 GSM RF Part



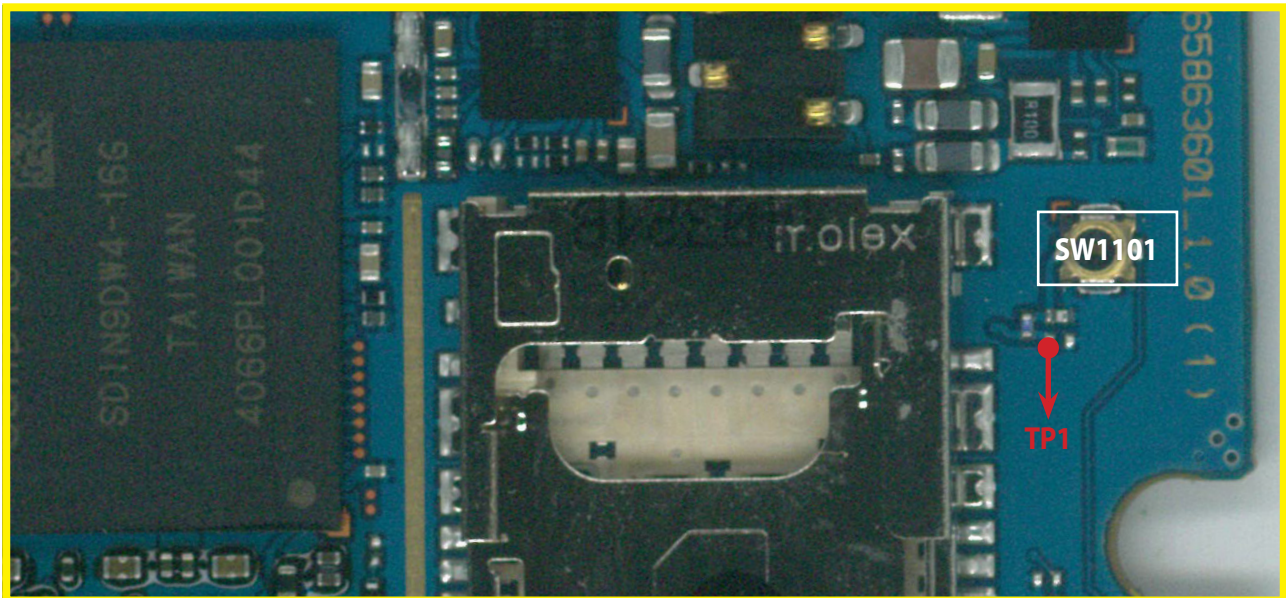
### 3.5.1 GSM850/900/1800/1900 Rx

*GSM850/900/1800/1900 RX RF PATH*

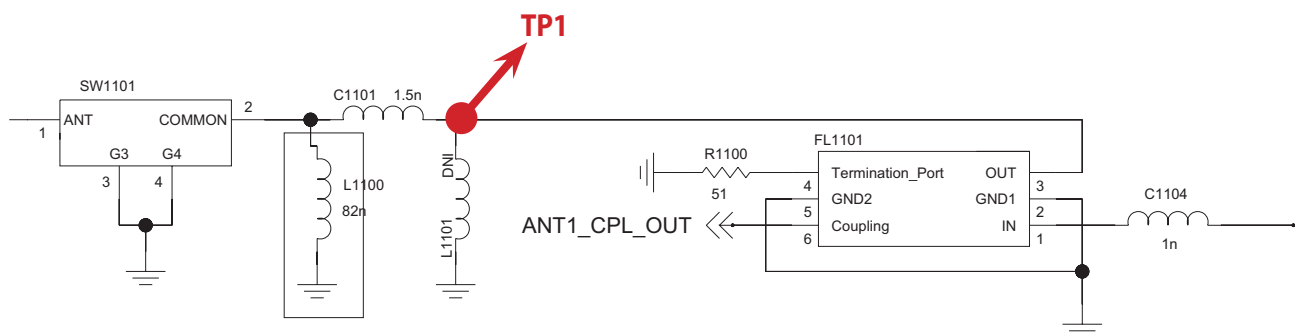


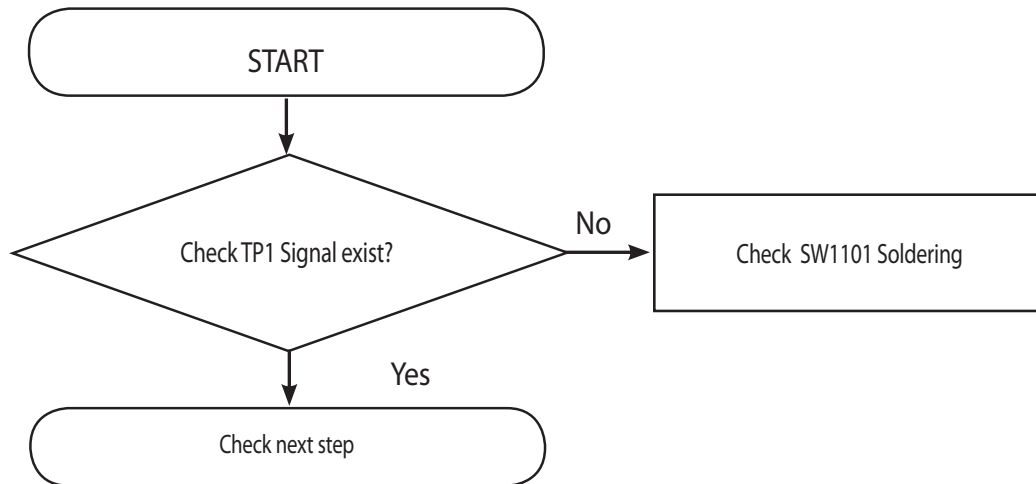
1. *GSM850 RX PATH*
2. *GSM900 RX PATH*
3. *GSM1800/1900 RX PATH*

### 3.5.1.1 Checking RF signal path (SW)



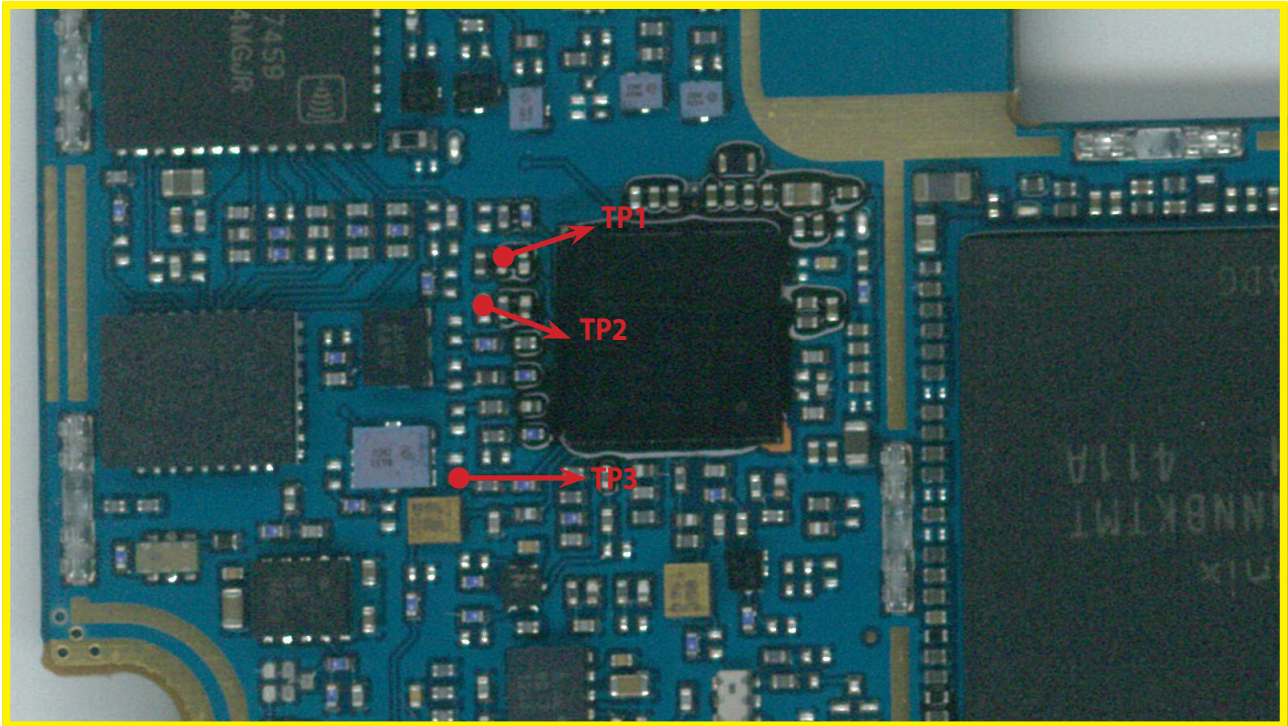
<Main Bot>





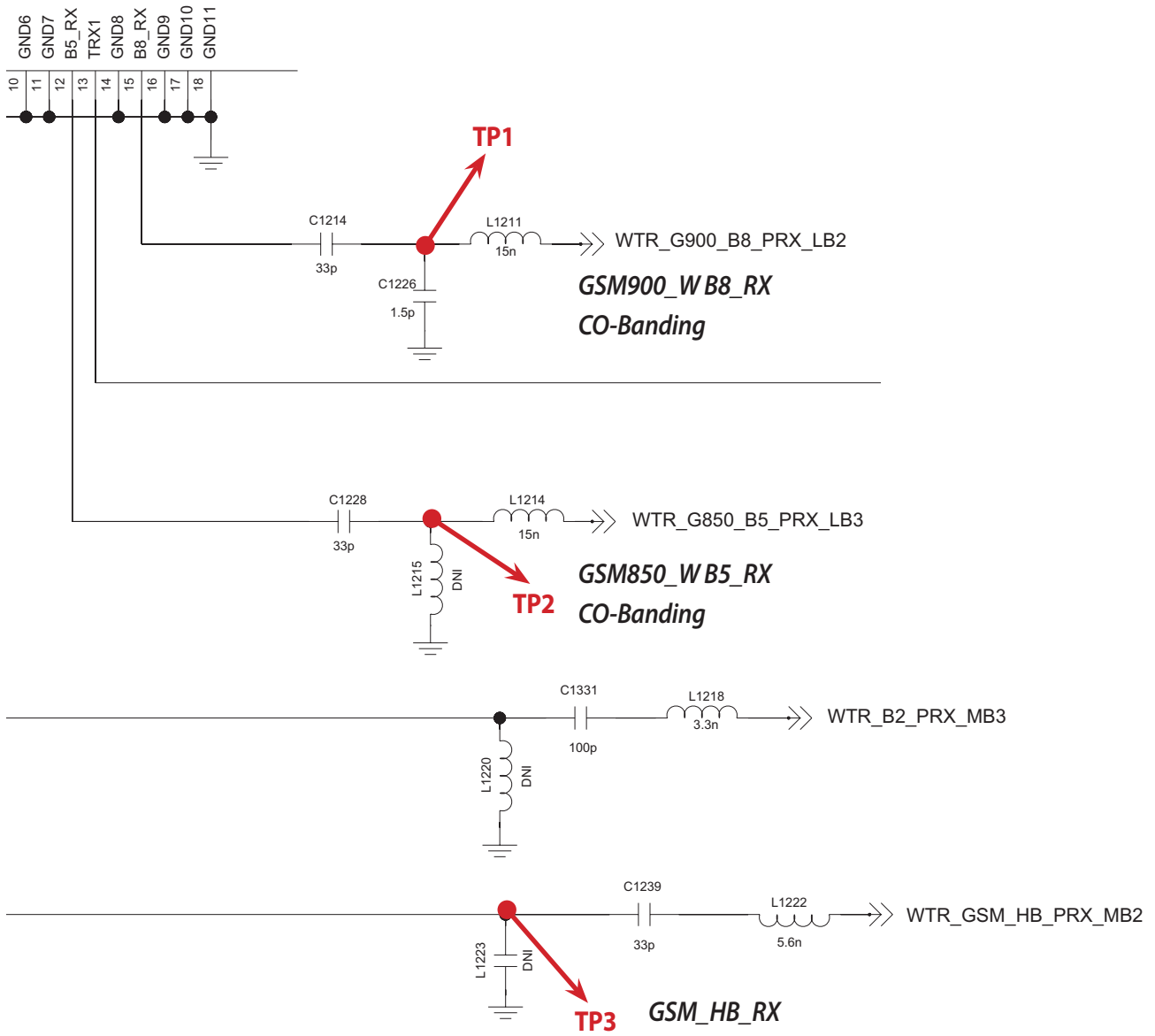


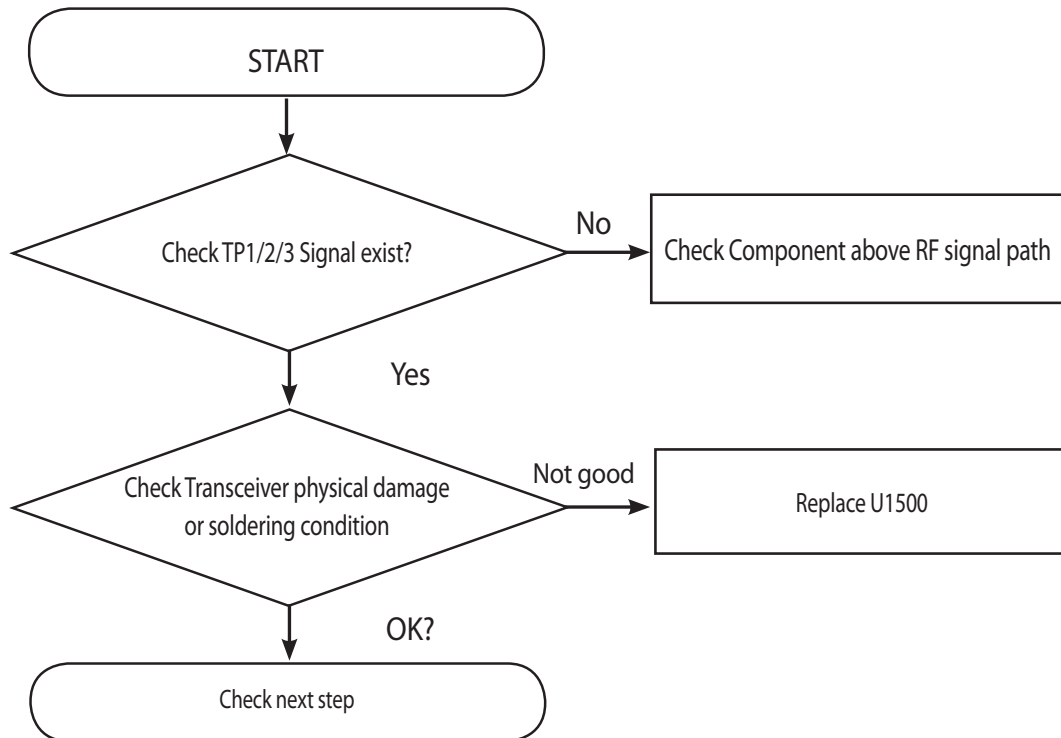
#### 3.5.1.2 Checking RF signal path



<Main Top>

### 3. TROUBLE SHOOTING

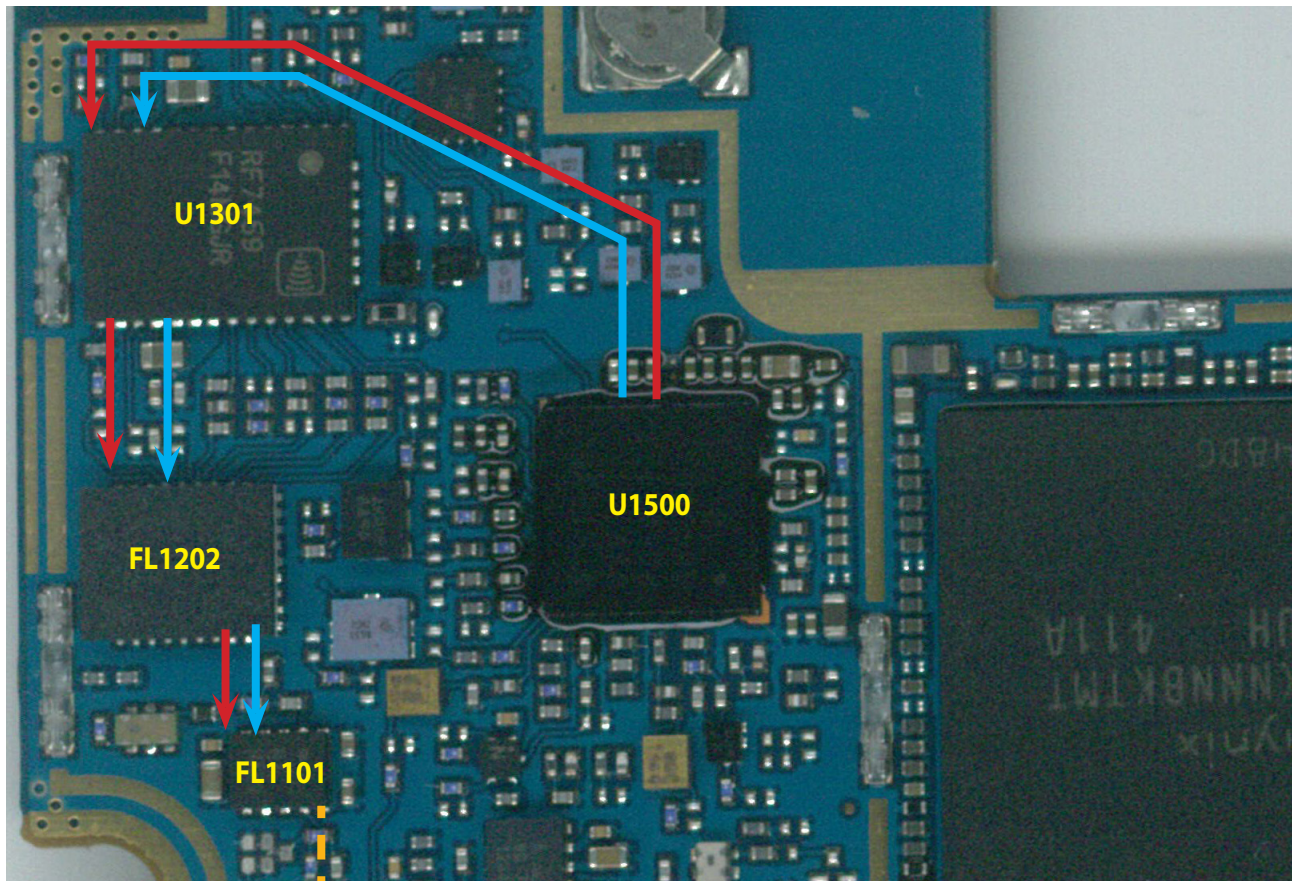




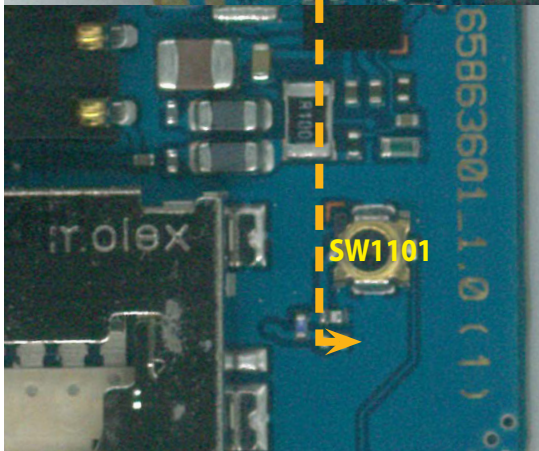


#### 3.5.2 GSM850/900/1800/1900 Tx

GSM850/900/1800/1900 TX RF PATH



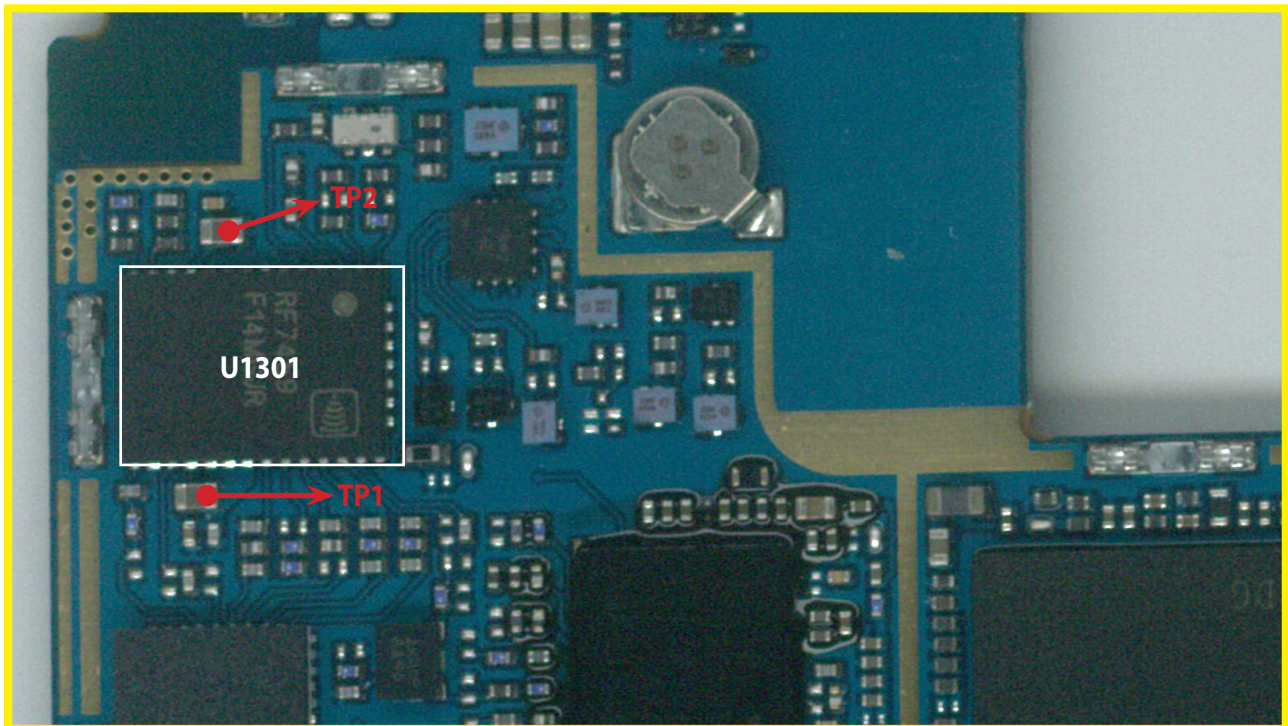
<Main Top>



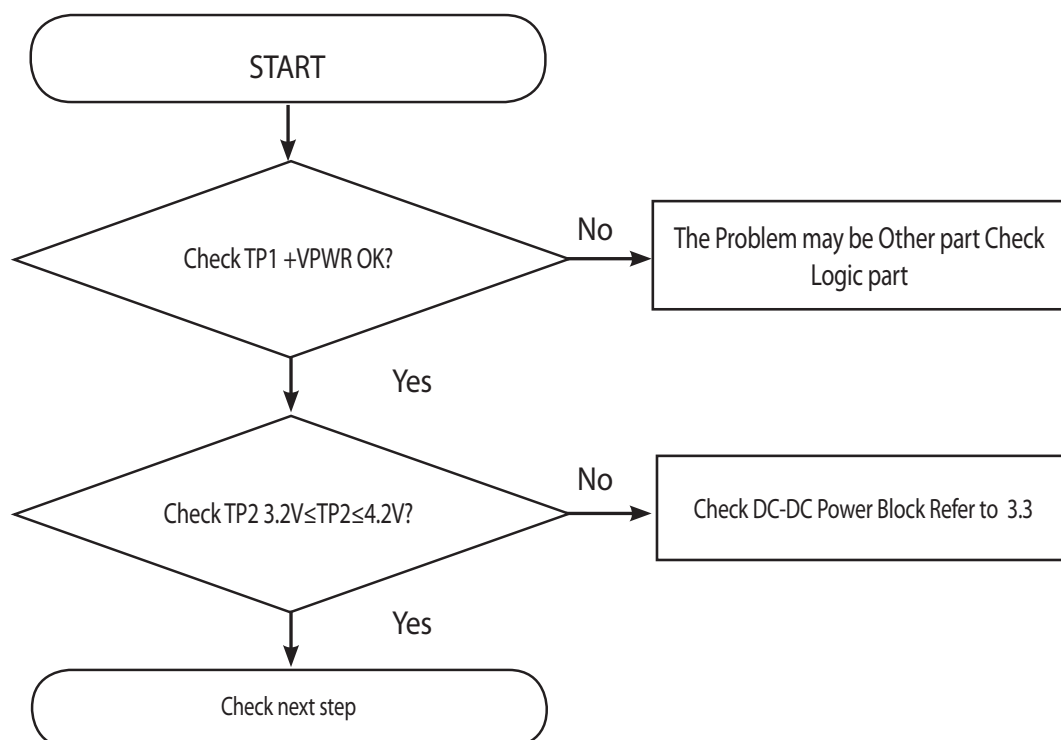
<Main Bot>

1. GSM850/900 TX PATH
2. GSM1800/1900 TX PATH
3. COMMON T/RX PATH

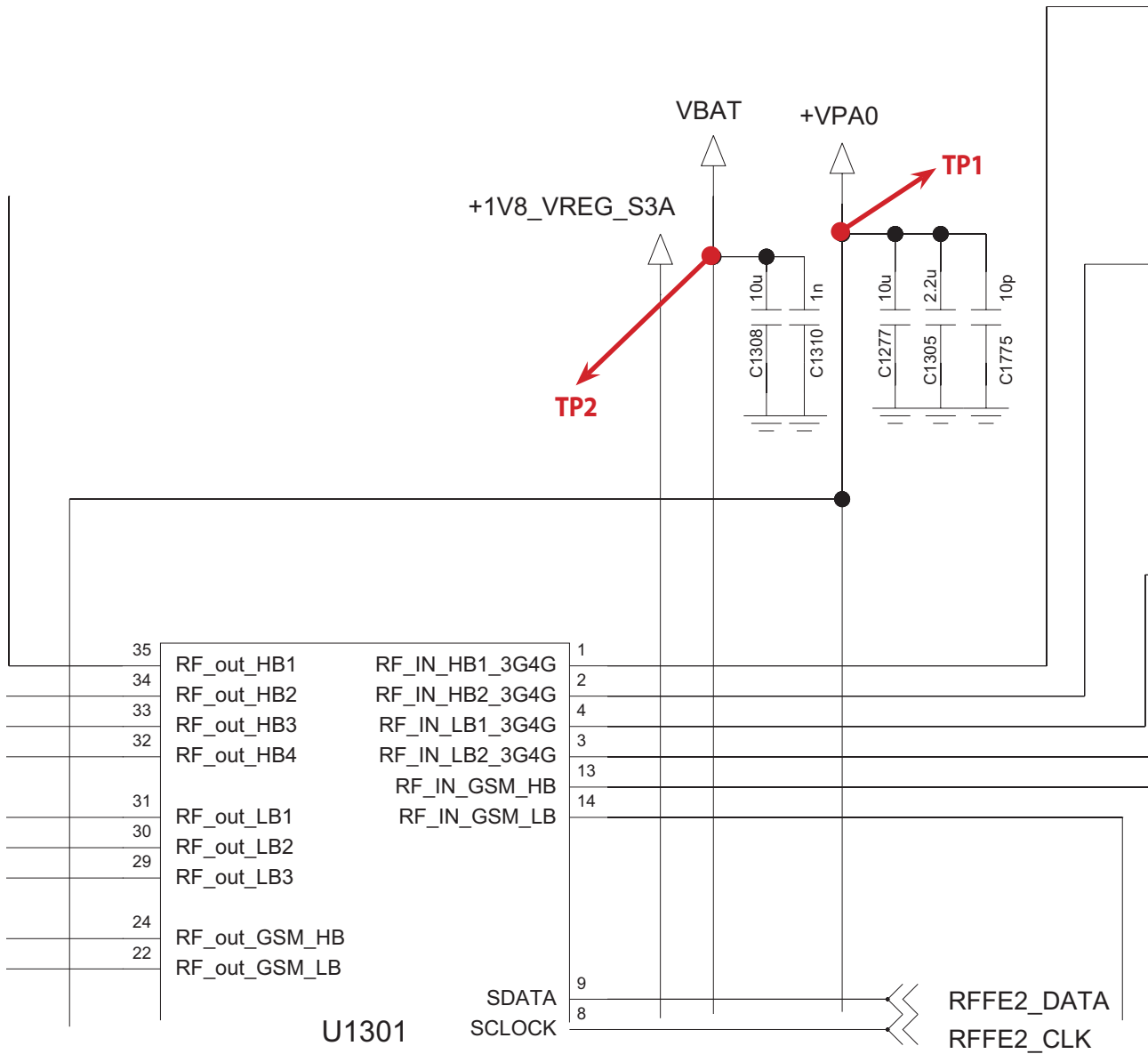
#### 3.5.2.1 Checking GSM PAM DC Power Circuit



<Main Top>

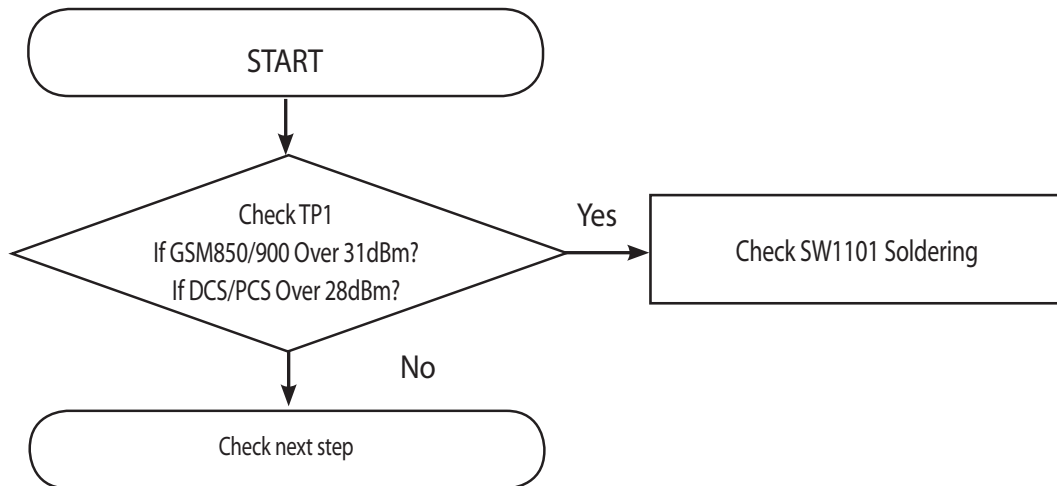


### 3. TROUBLE SHOOTING



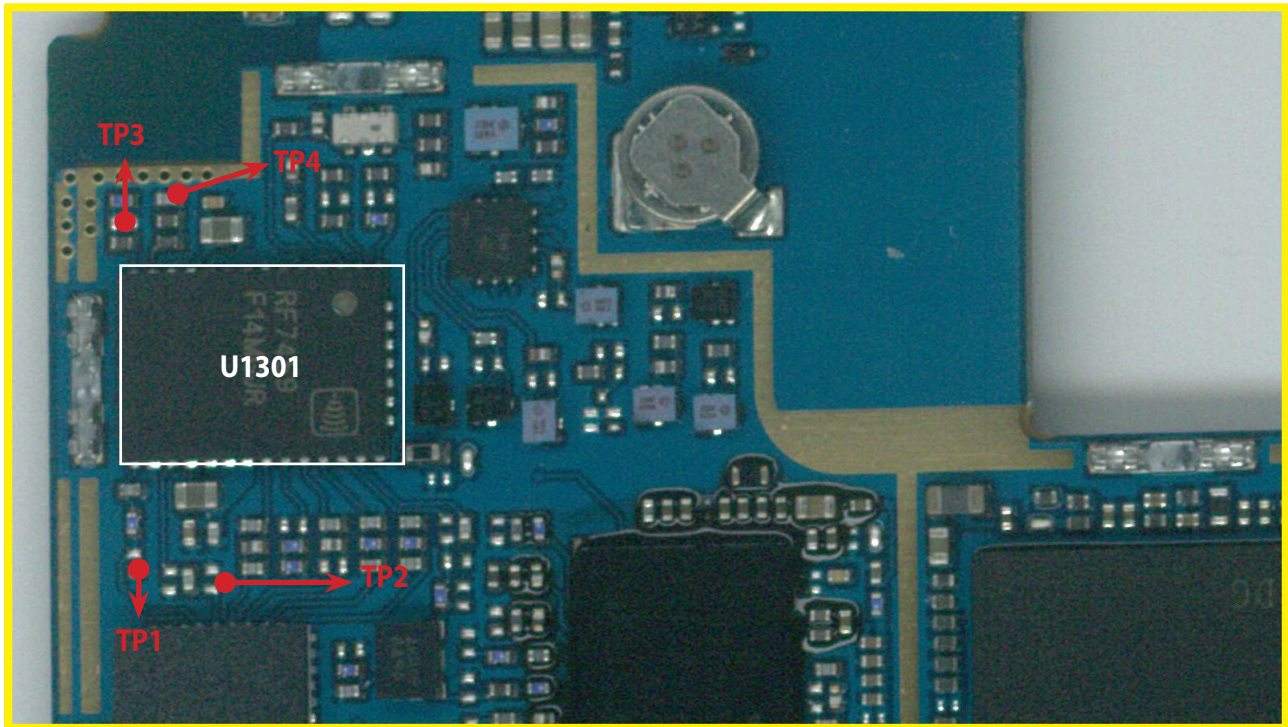
### 3.5.2.2 Checking RF signal path(SW)

Refer to 3.5.1.1



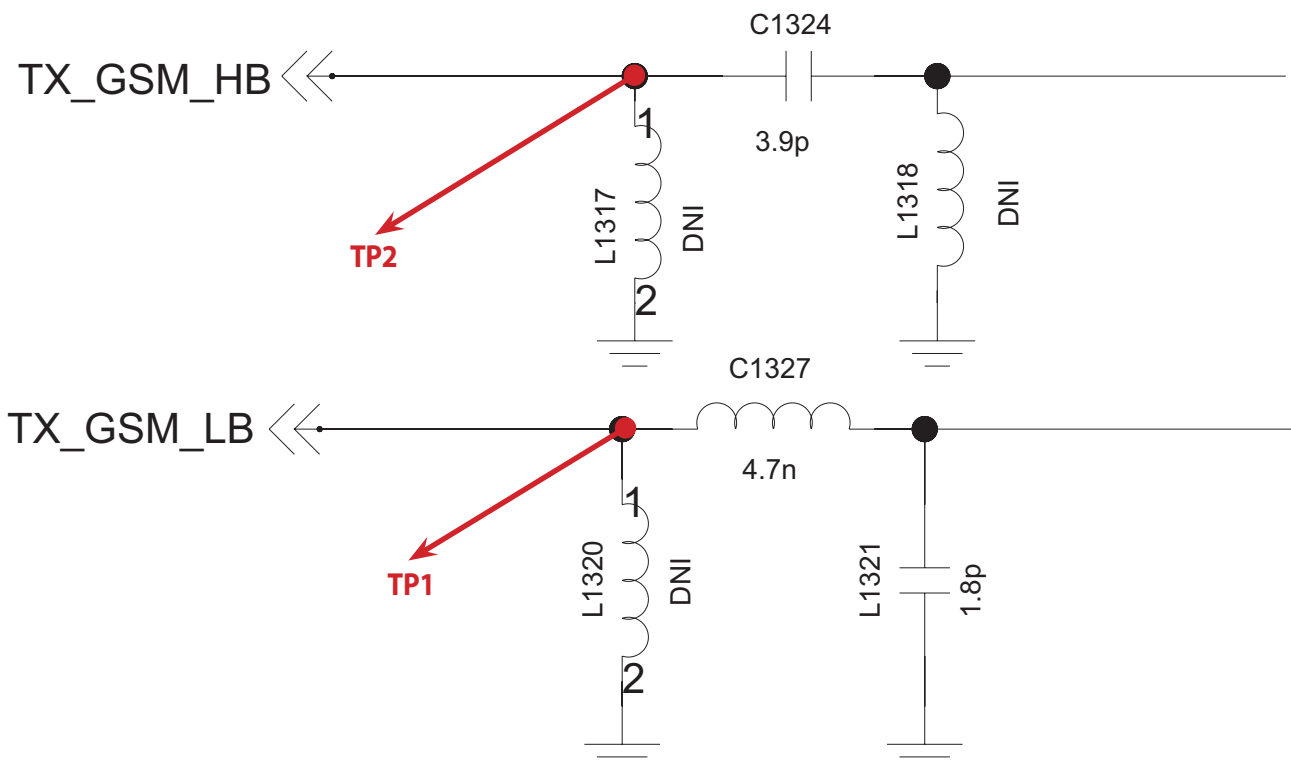
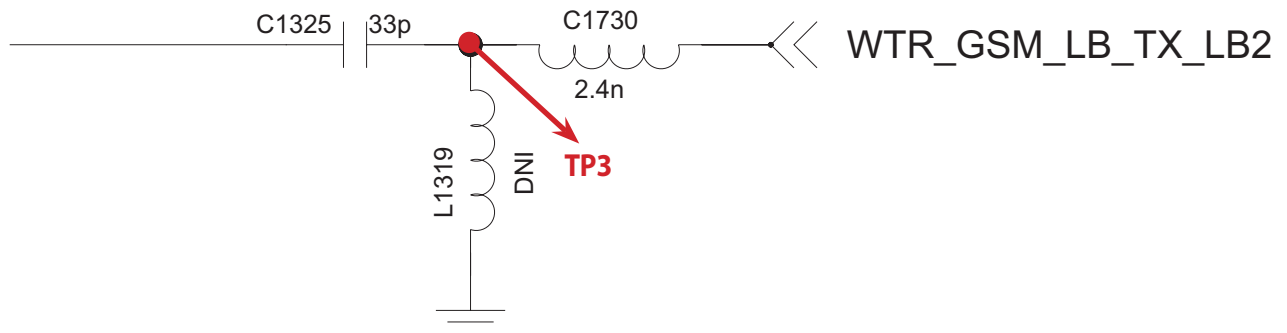
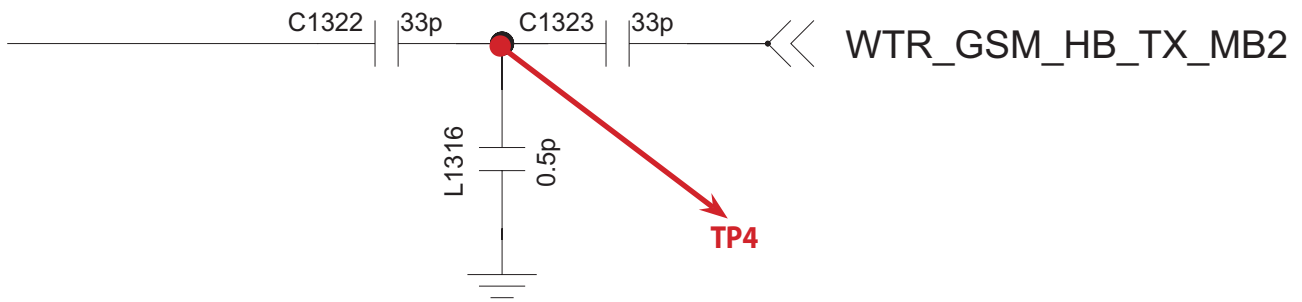


#### 3.5.2.3 Checking RF signal path

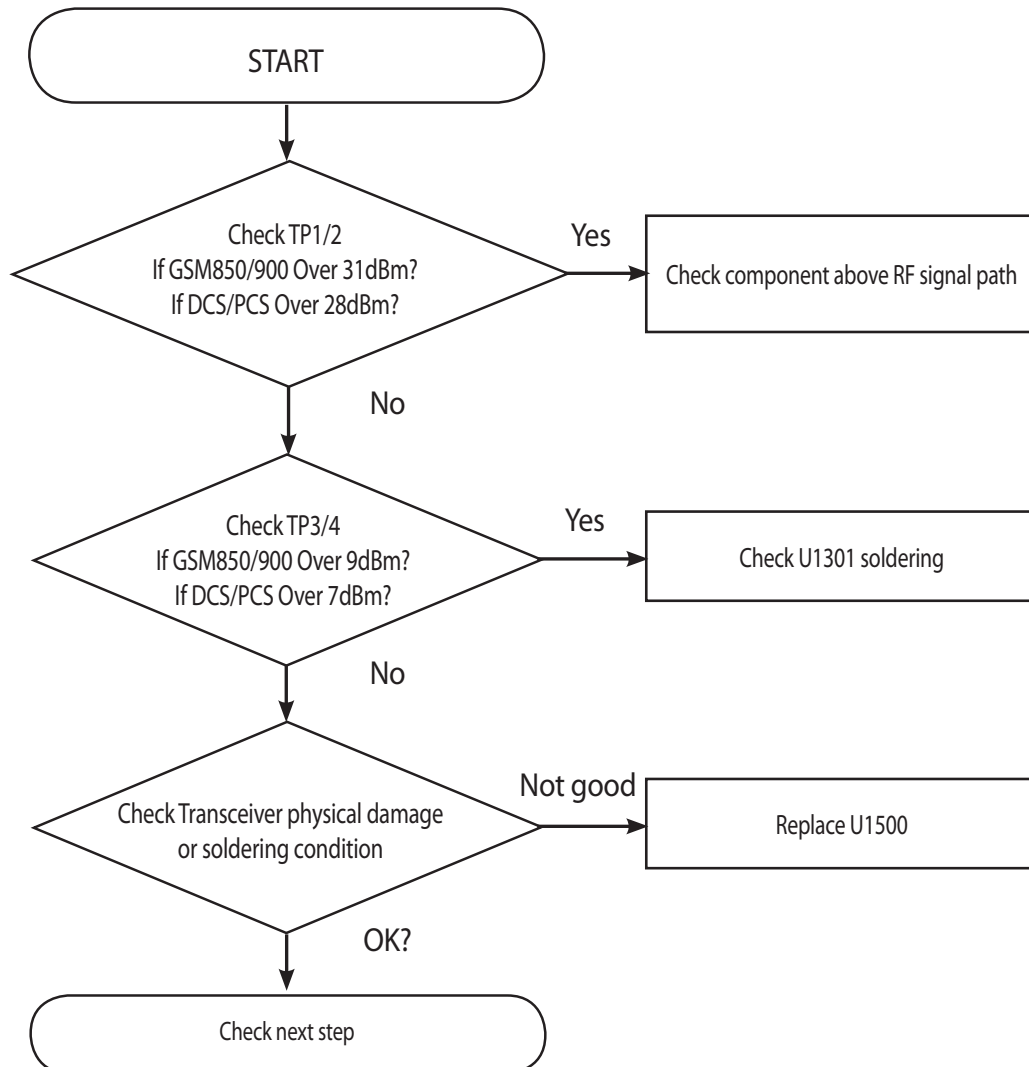


<Main Top>

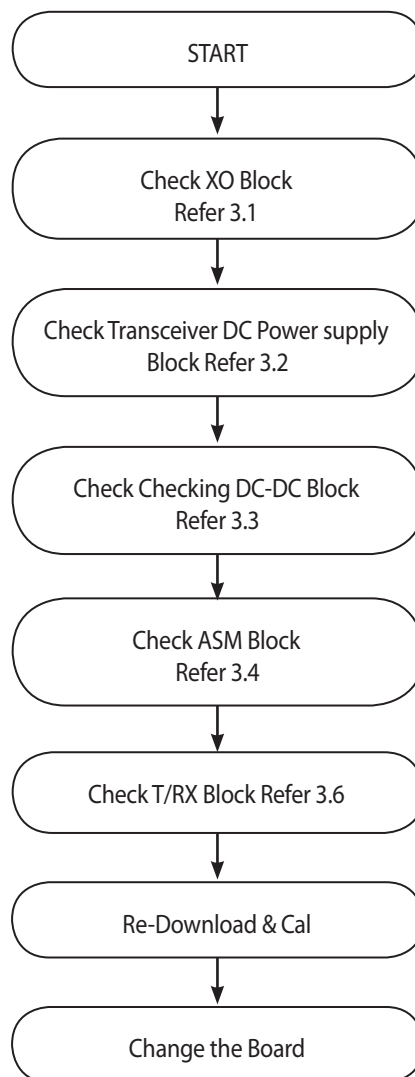
### 3. TROUBLE SHOOTING



### 3. TROUBLE SHOOTING



### 3.6 WCDMA RF Part

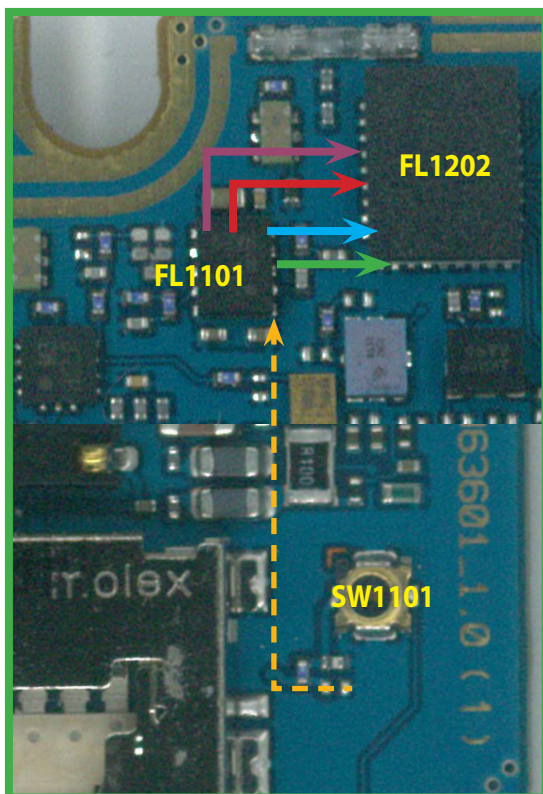




### 3.6.1 WCDMA B1/2/5/8 Rx

#### WCDMA B1/2/5/8 RX RF PATH

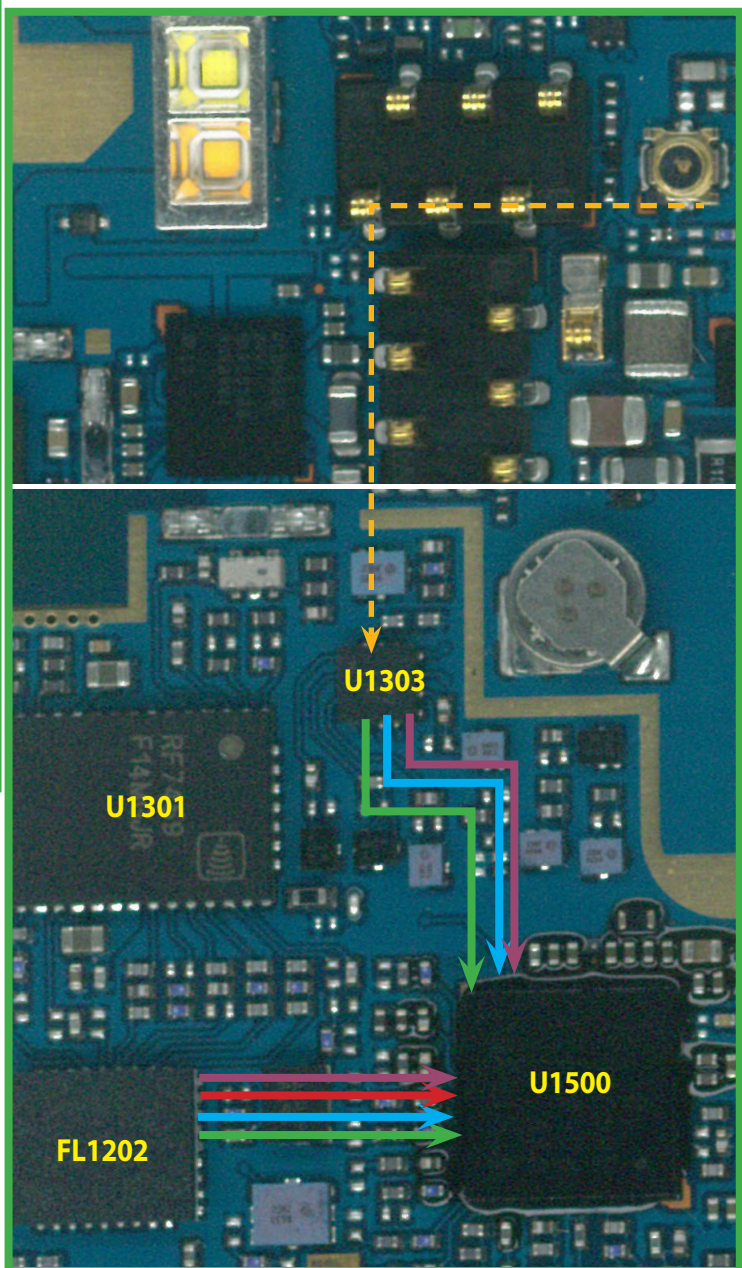
<Main Top>



<Main Bot>

1. WCDMA B1 RX PATH
2. WCDMA B2 RX PATH
3. WCDMA B5 RX PATH
4. WCDMA B8 RX PATH
5. COMMON T/RX PATH
6. WCDMA B1 DRX PATH
7. WCDMA B5 DRX PATH
8. WCDMA B8 DRX PATH
9. COMMON DRX PATH

<Main Bot>

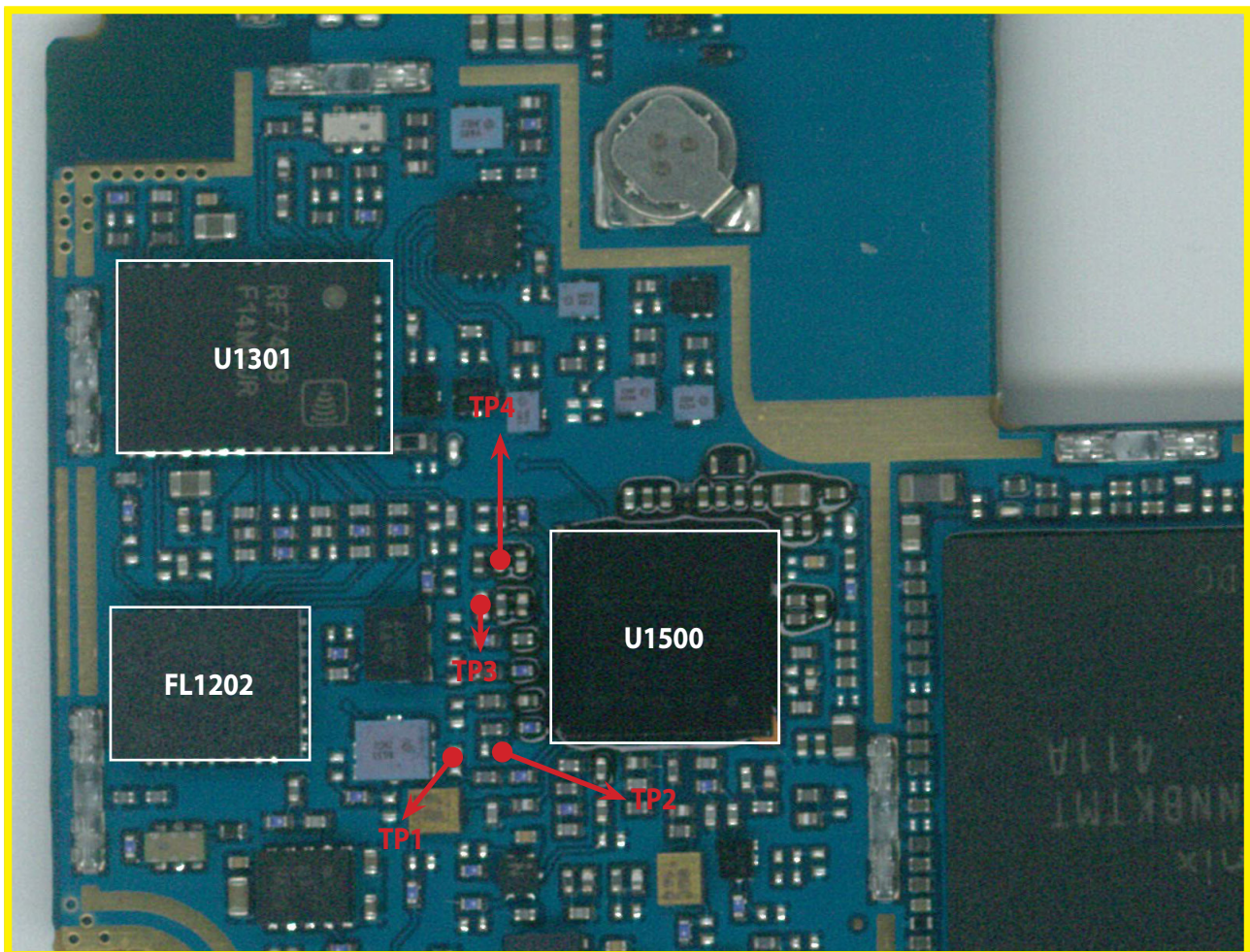


<Main Top>

### 3.6.1.1 Checking RF signal path (SW)

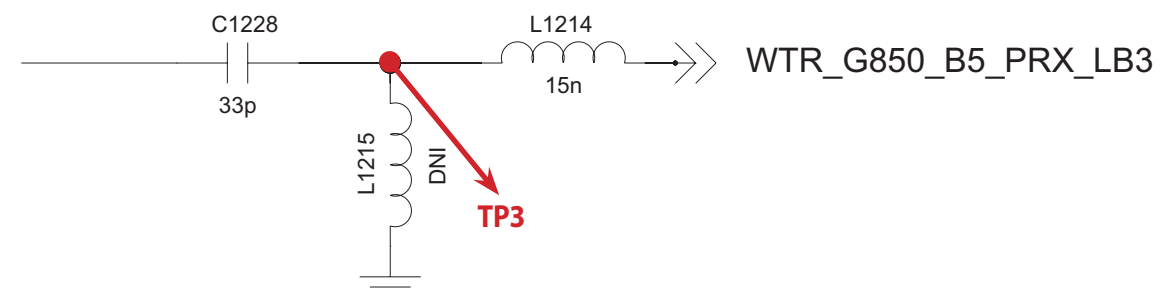
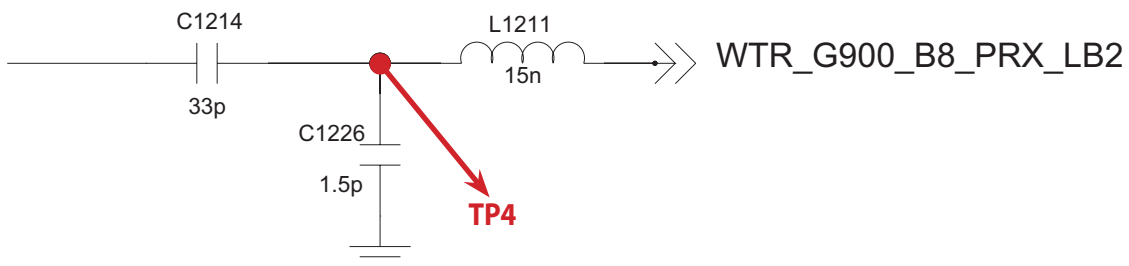
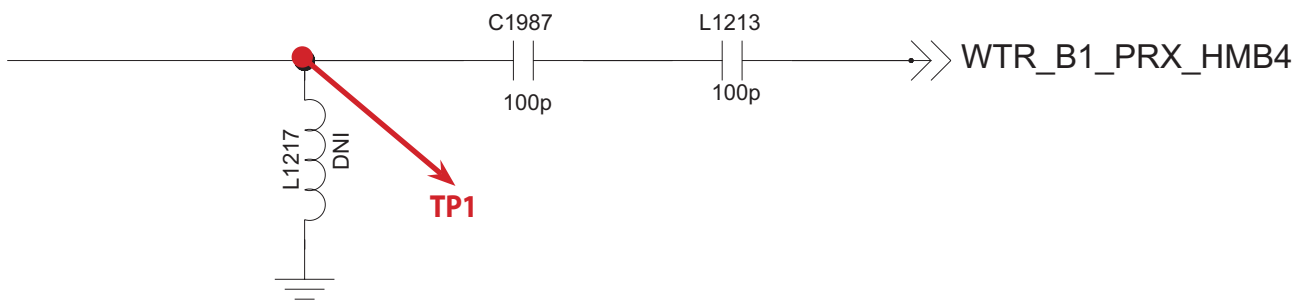
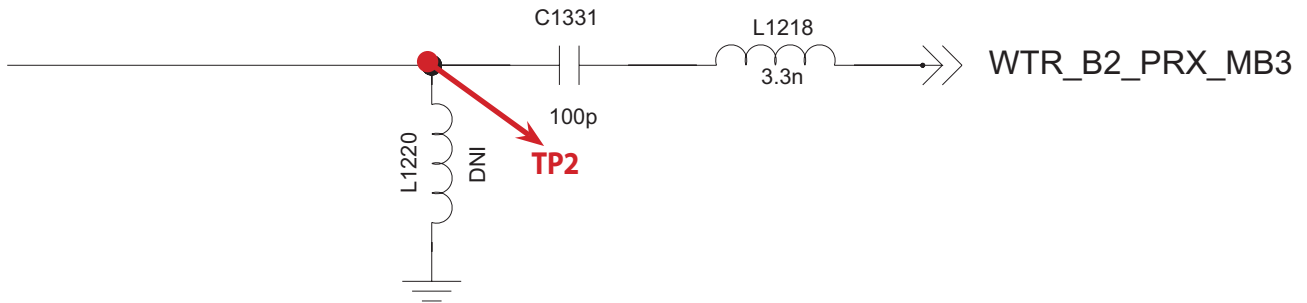
Refer to 3.5.1.1

### 3.6.1.2 Checking RF signal path(B1/B2/B5/B8)



<Main Top>

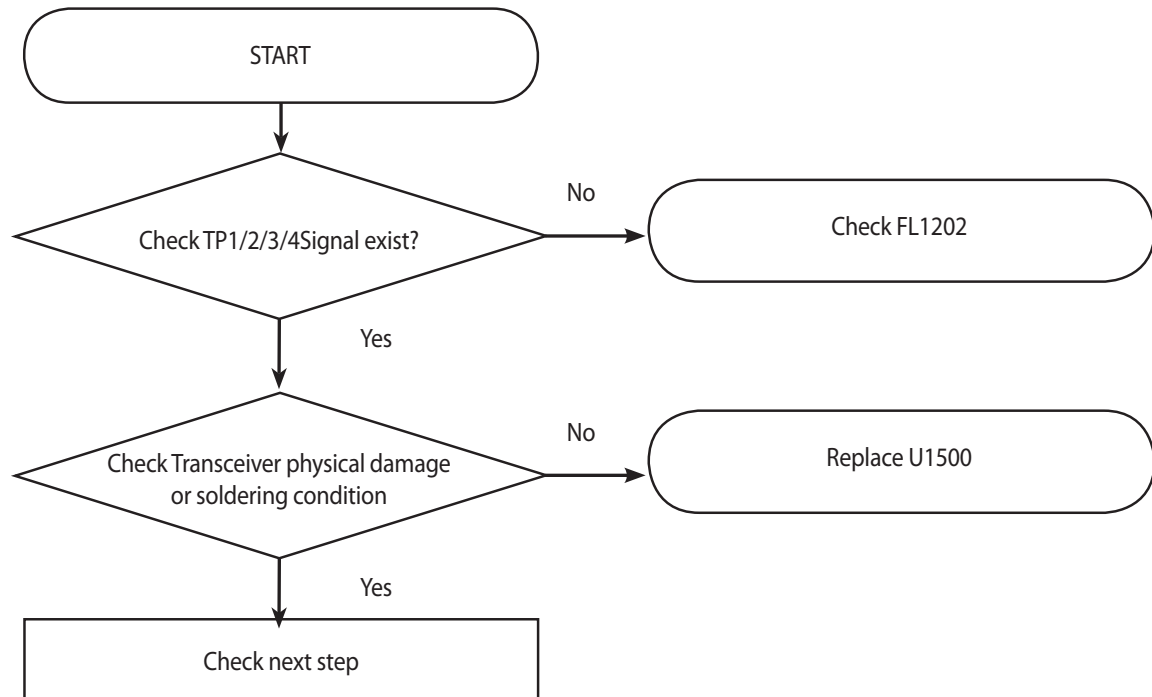
### 3. TROUBLE SHOOTING



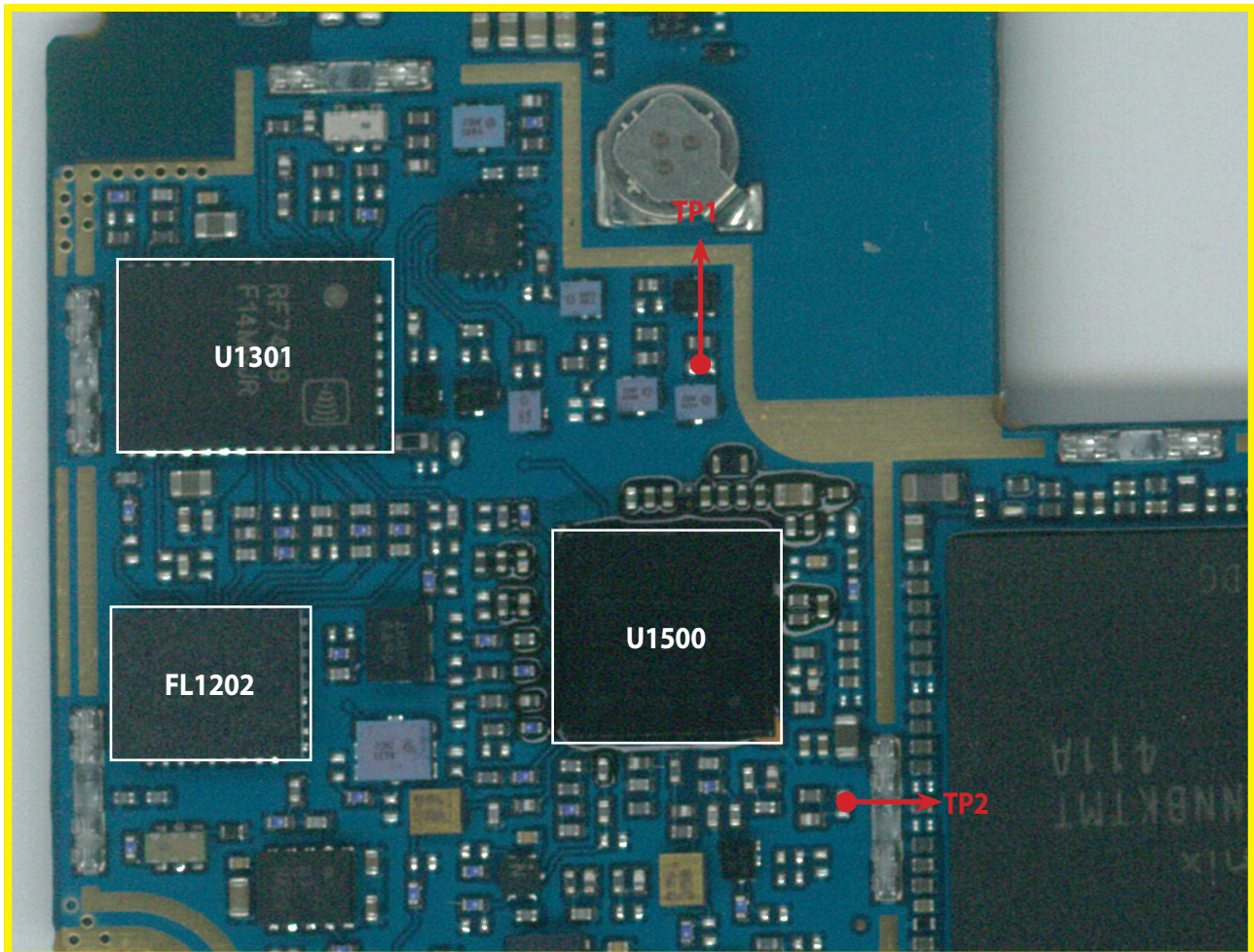


### 3. TROUBLE SHOOTING

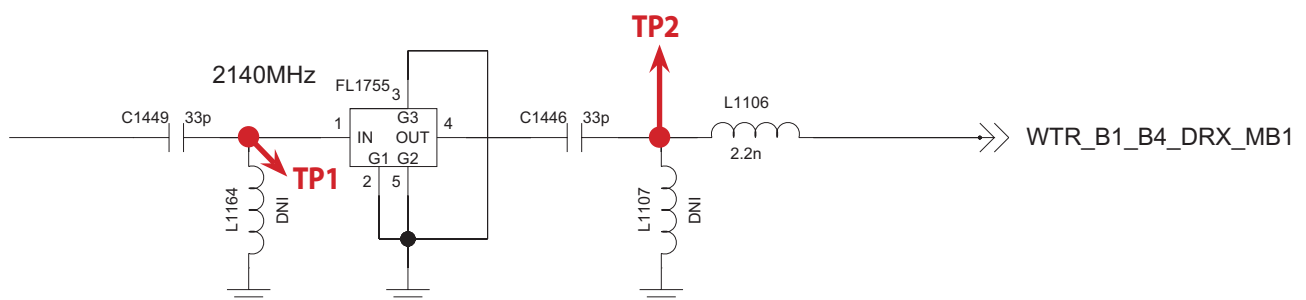
---



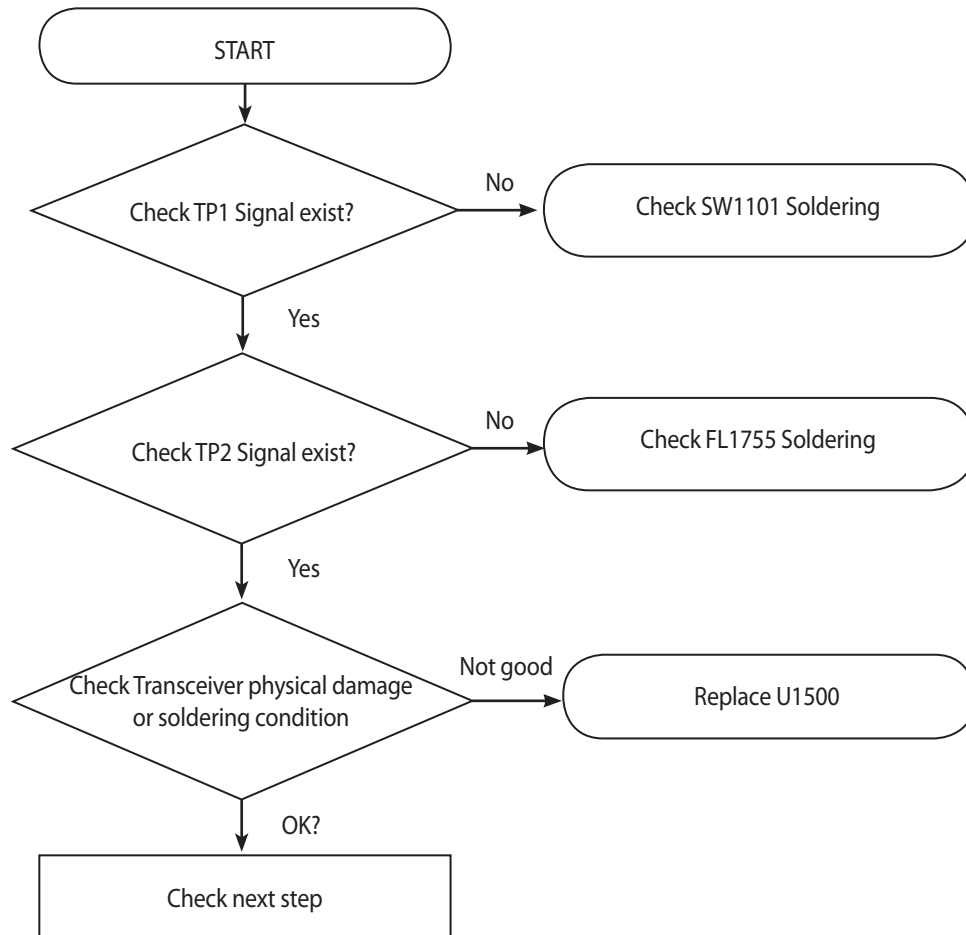
### 3.6.1.3 Checking DRX RF signal path (B1)



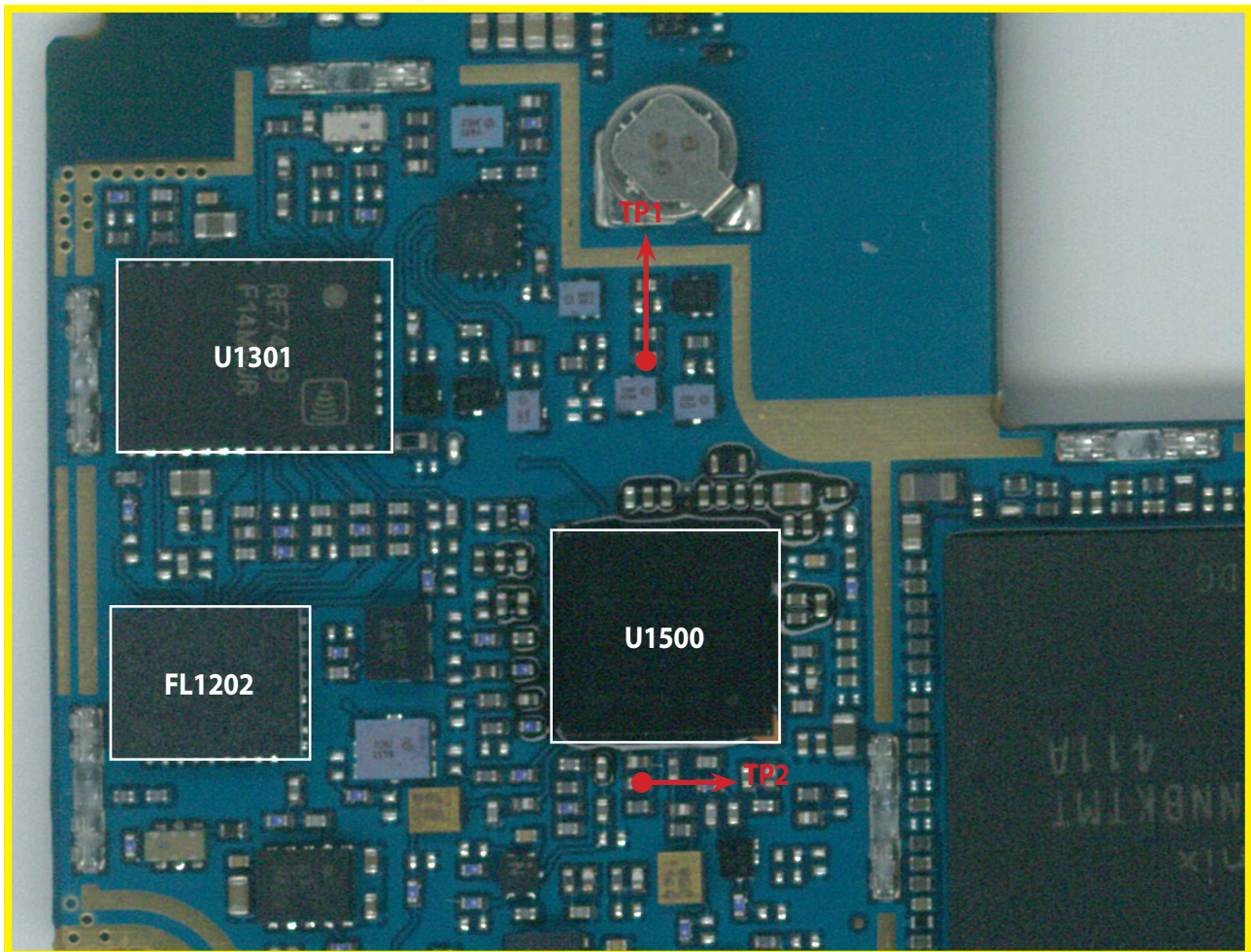
<Main Top>



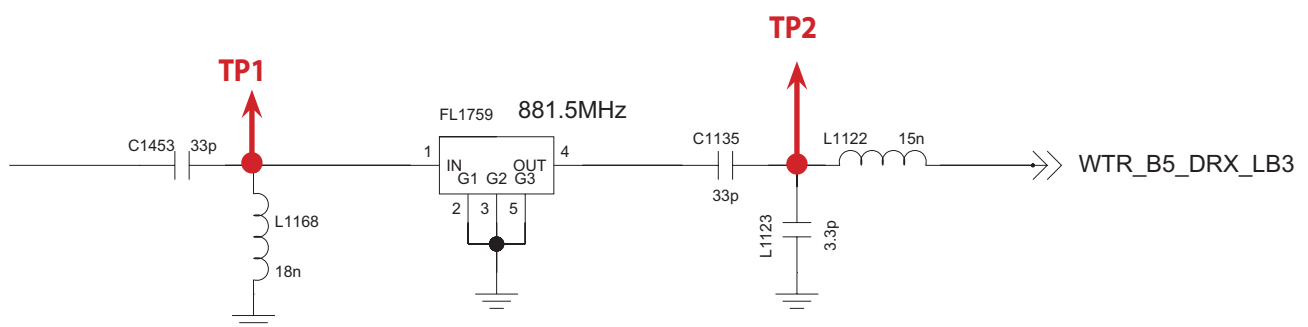
### 3. TROUBLE SHOOTING



### 3.6.1.4 Checking DRX RF signal path (B5)

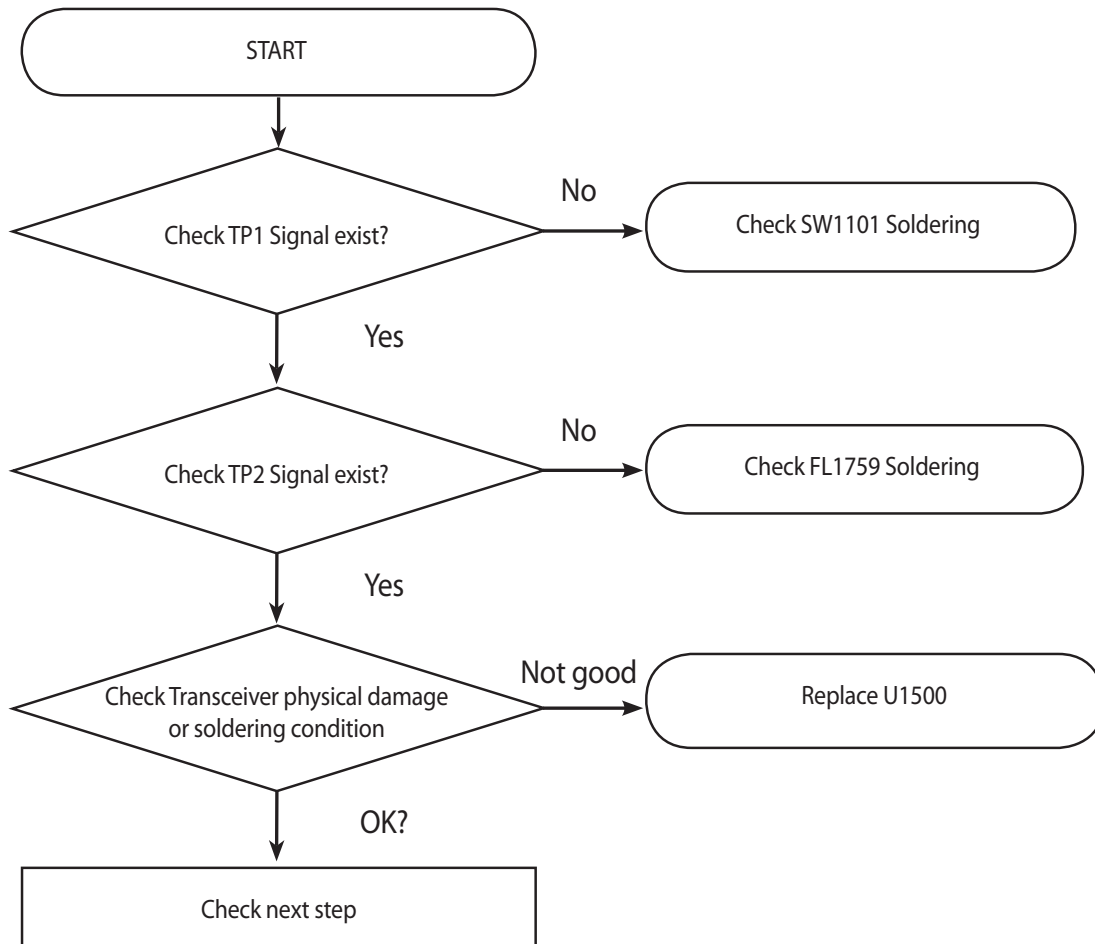


<Main Top>



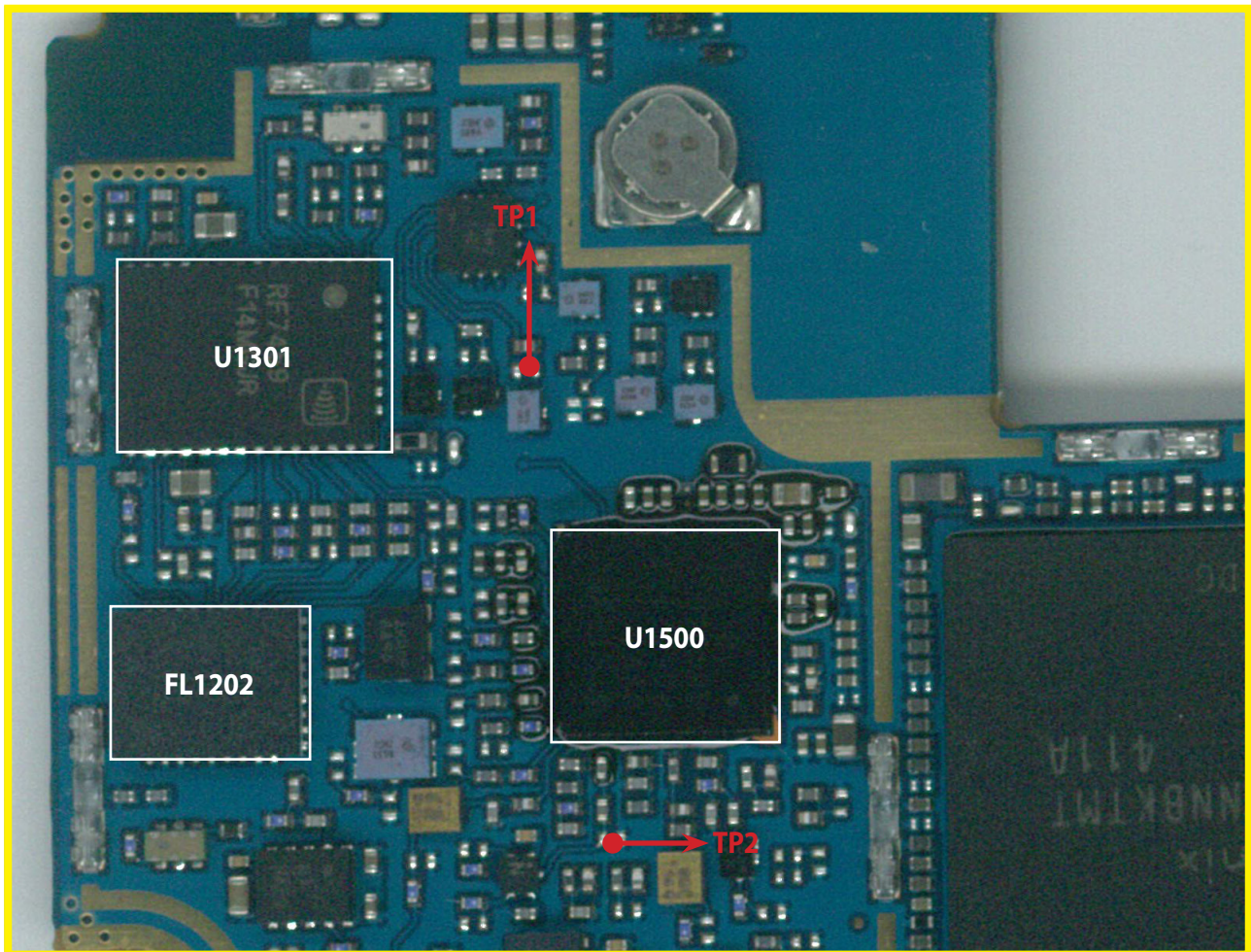


### 3. TROUBLE SHOOTING

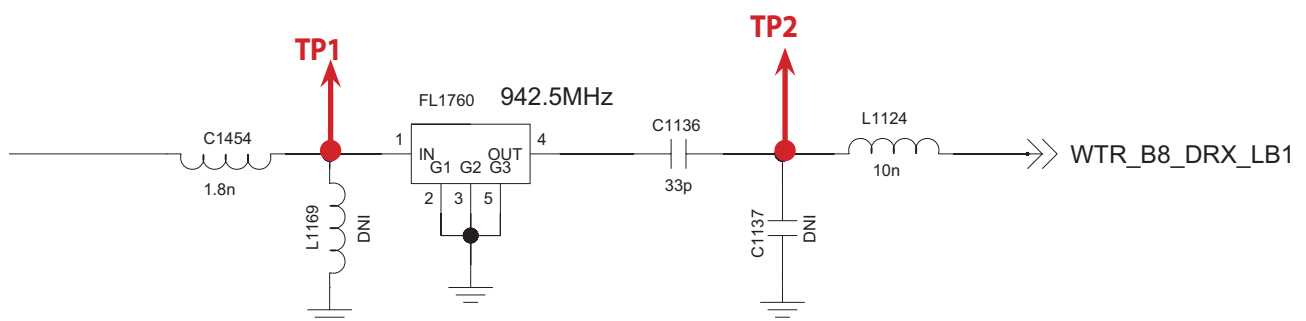




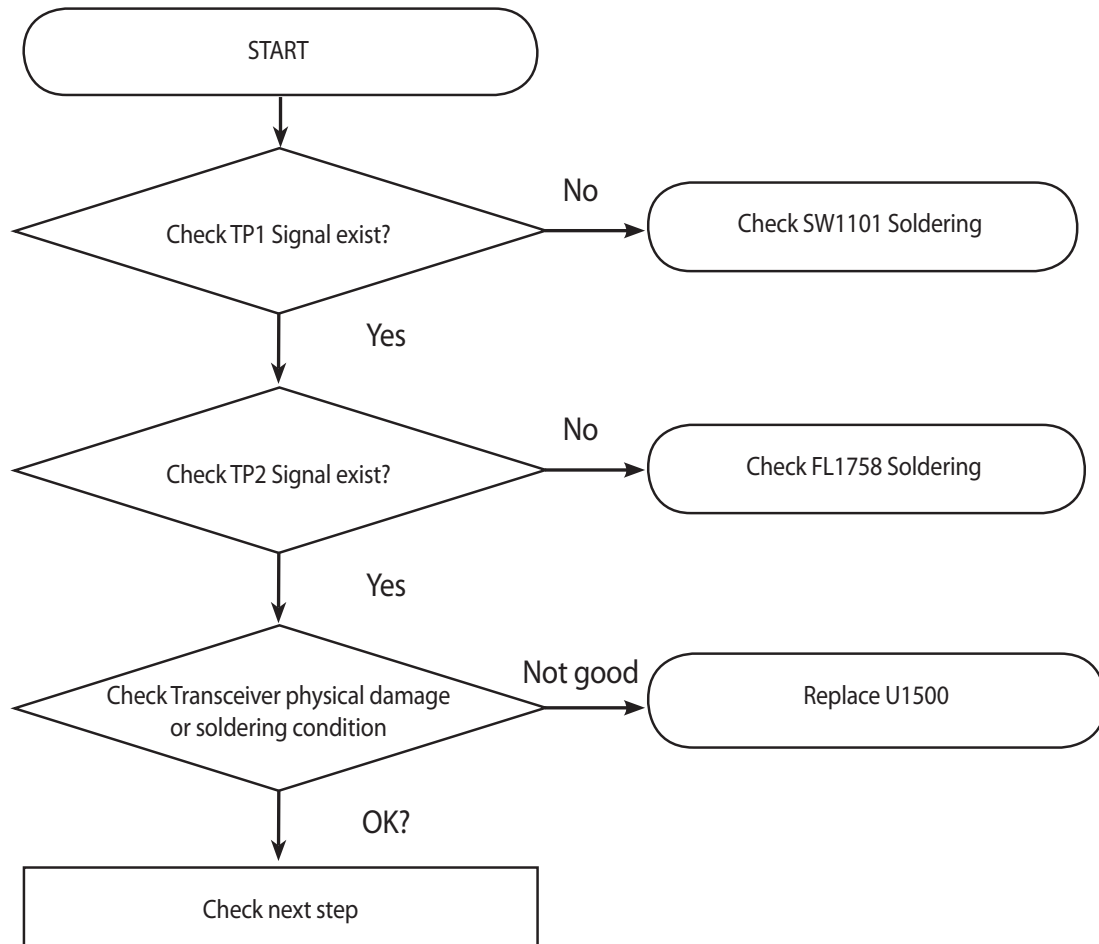
### 3.6.1.5 Checking DRX RF signal path (B8)



<Main Top>



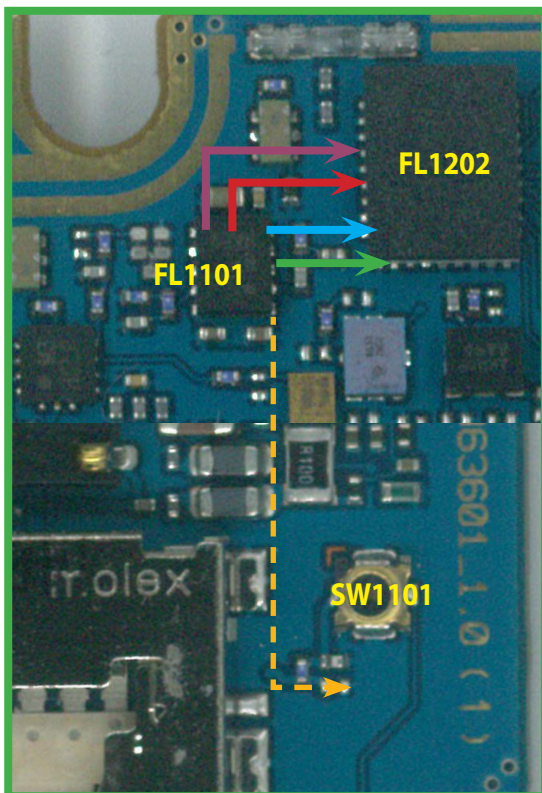
### 3. TROUBLE SHOOTING



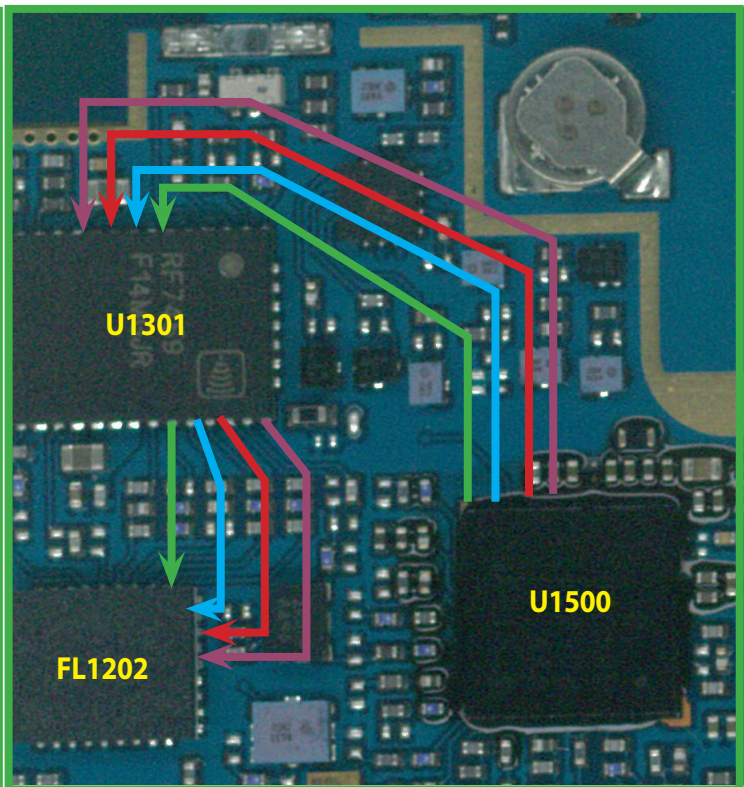
### 3.6.2 WCDMA B1/2/5/8 Tx

#### WCDMA B1/2/5/8 TX RF PATH

<Main Top>



<Main Bot>

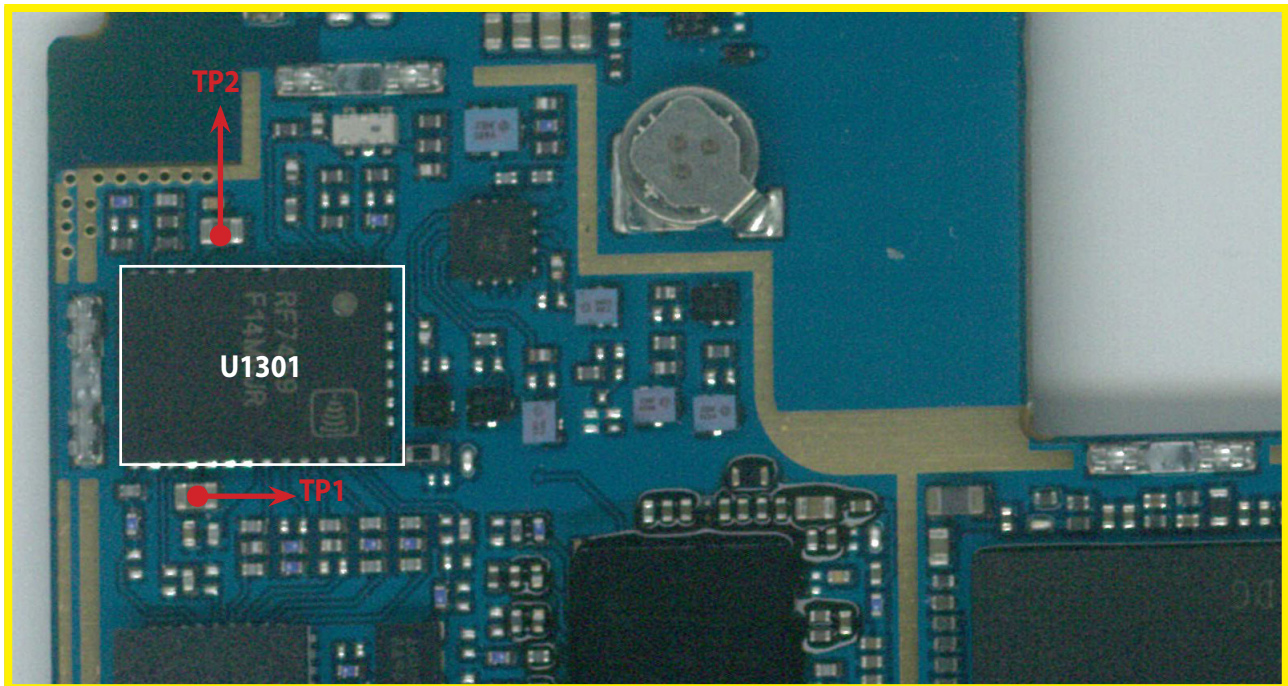


<Main Top>

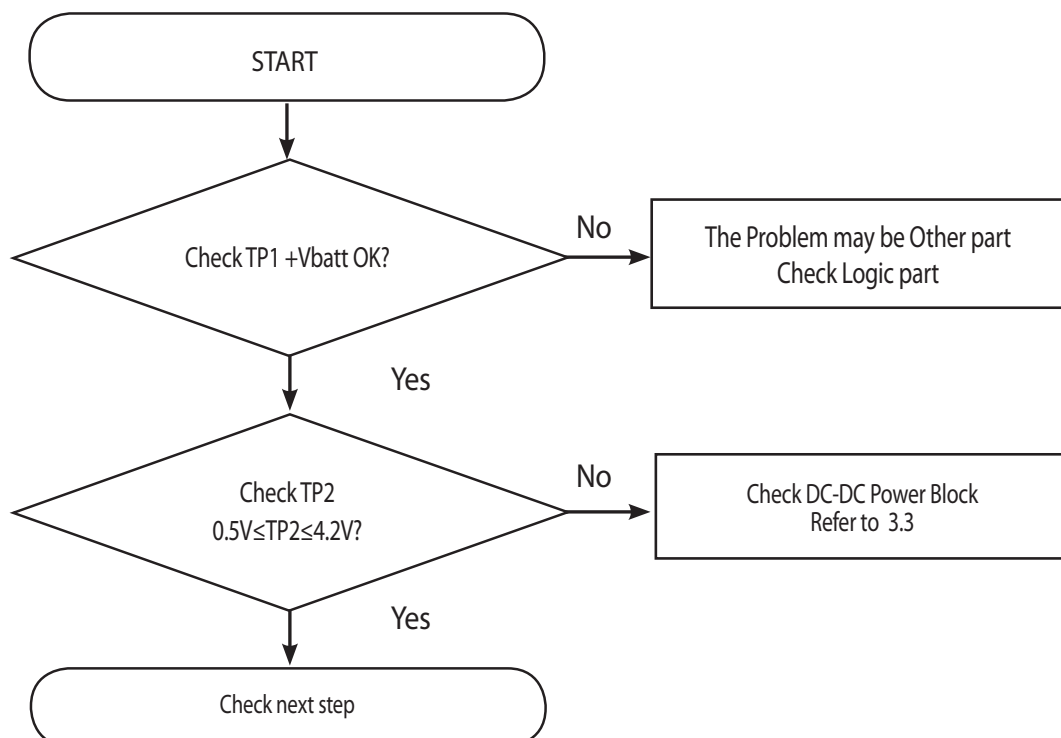
1. WCDMA B1 TX PATH
2. WCDMA B2 TX PATH
3. WCDMA B5 TX PATH
4. WCDMA B8 TX PATH
5. COMMON T/RX PATH



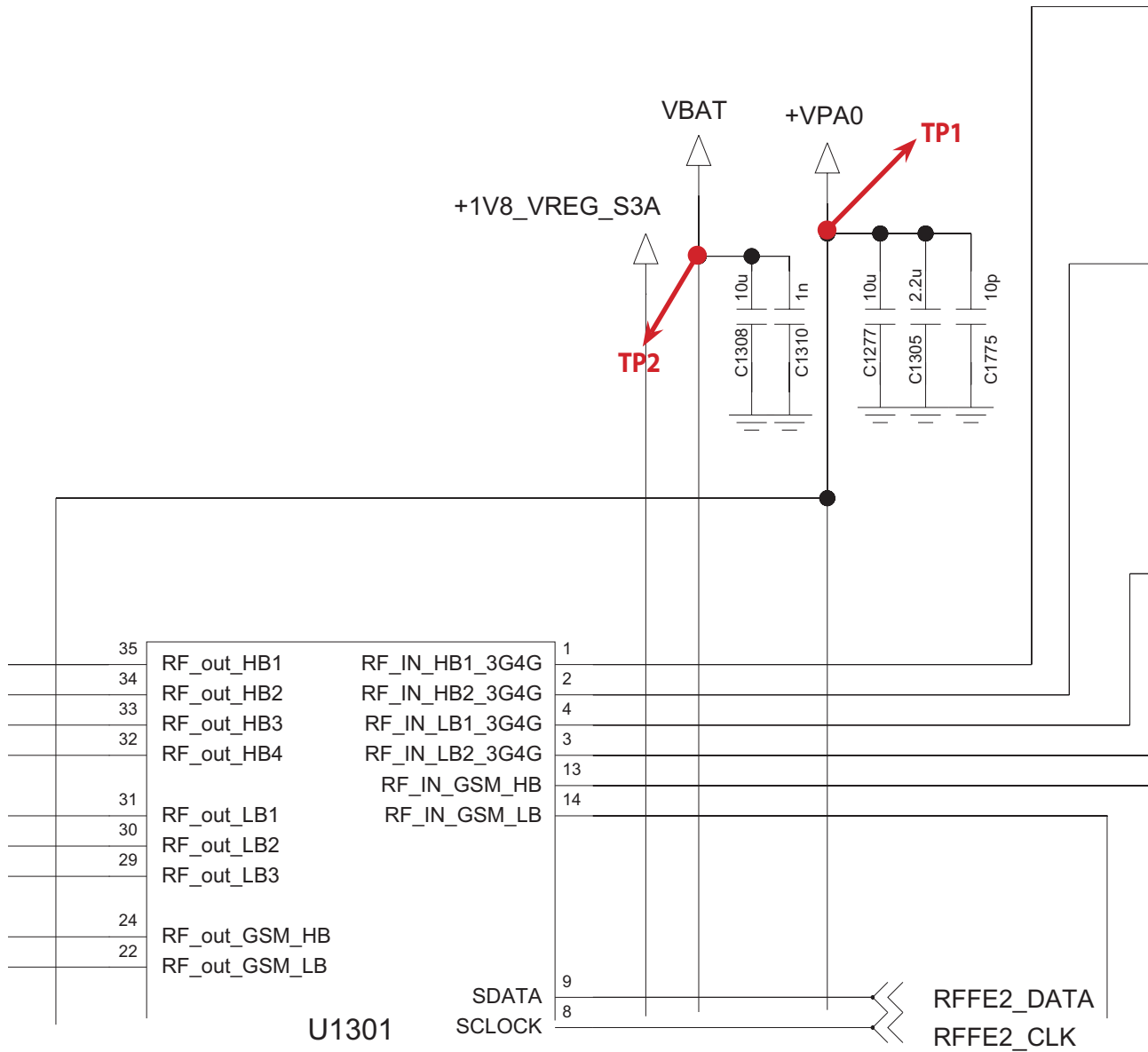
### 3.6.2.1 Checking WCDMA PAM DC Power&Control Circuit



<Main Top>

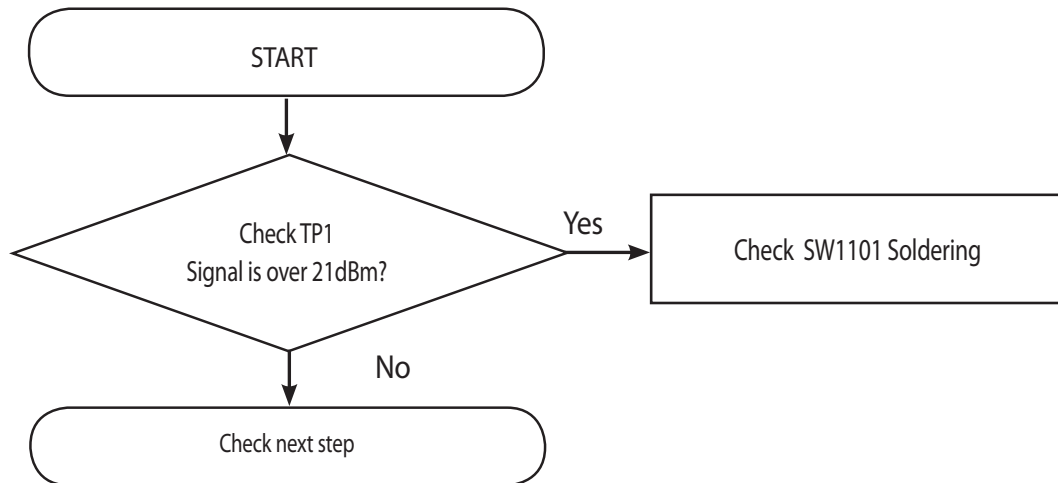


### 3. TROUBLE SHOOTING

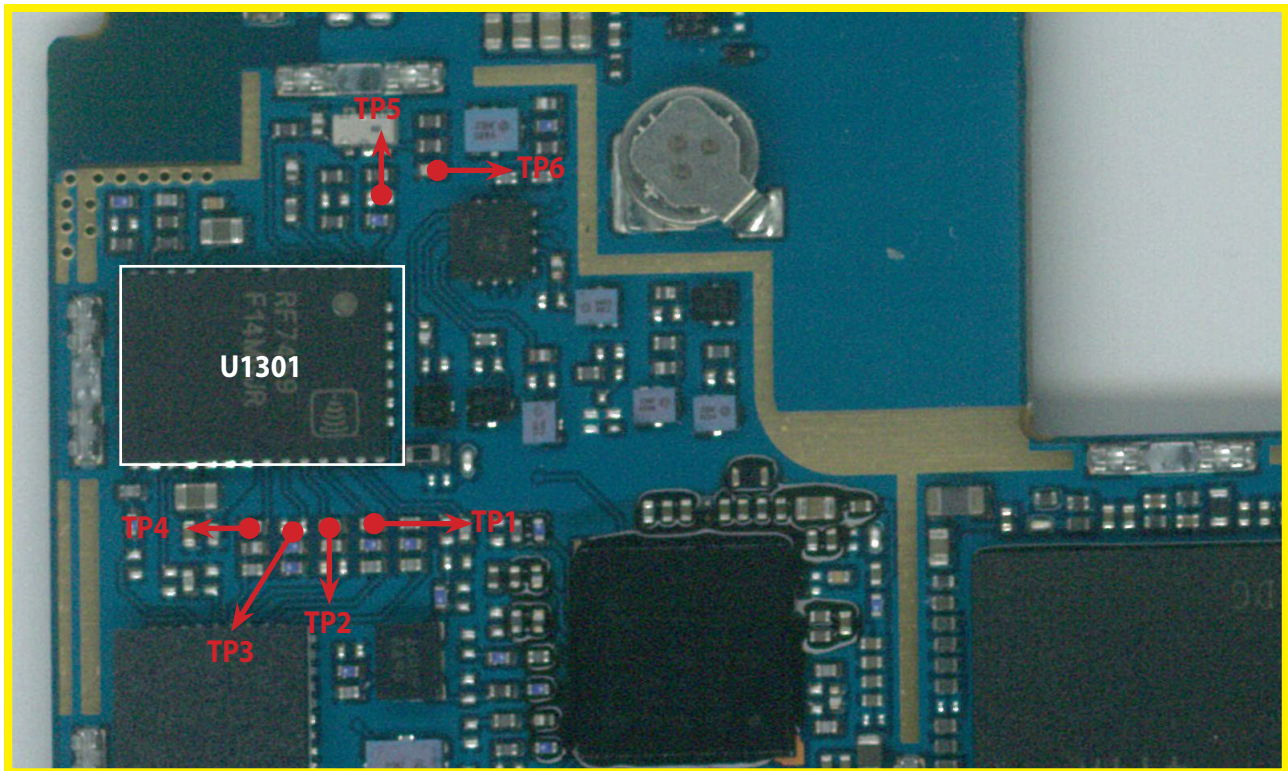


### 3.6.2.2 Checking RF signal path(SW\_B1/2/5/8)

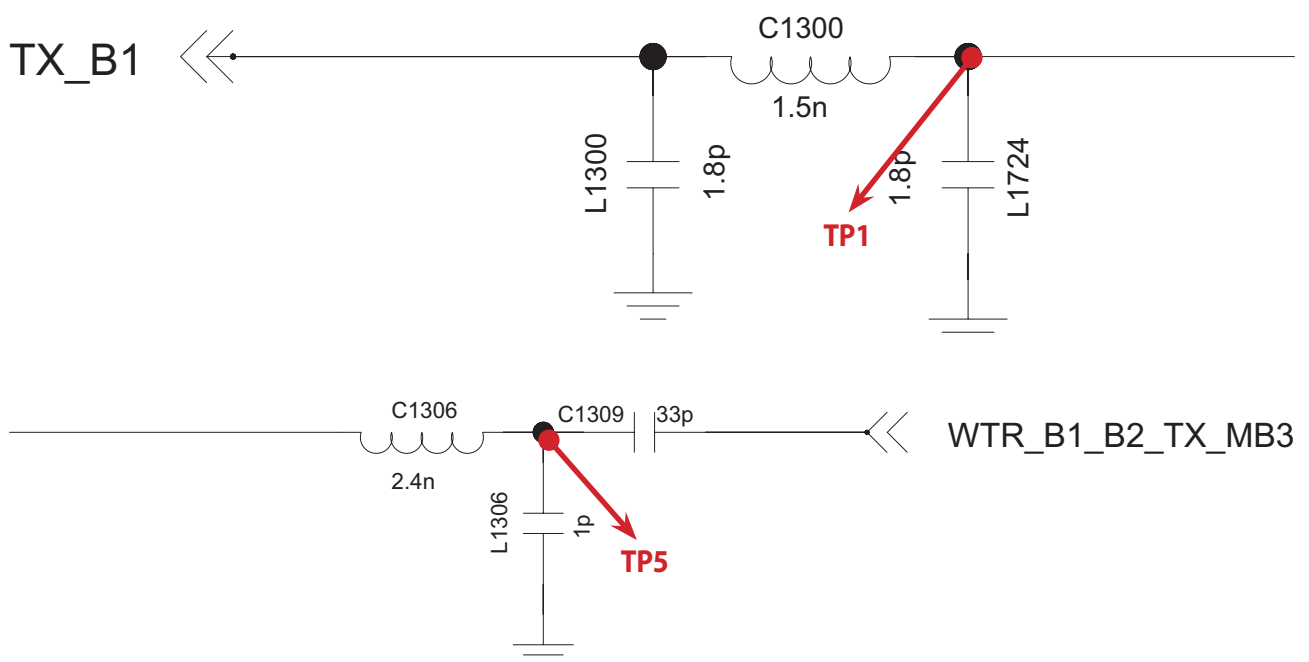
Refer to 3.5.1.1



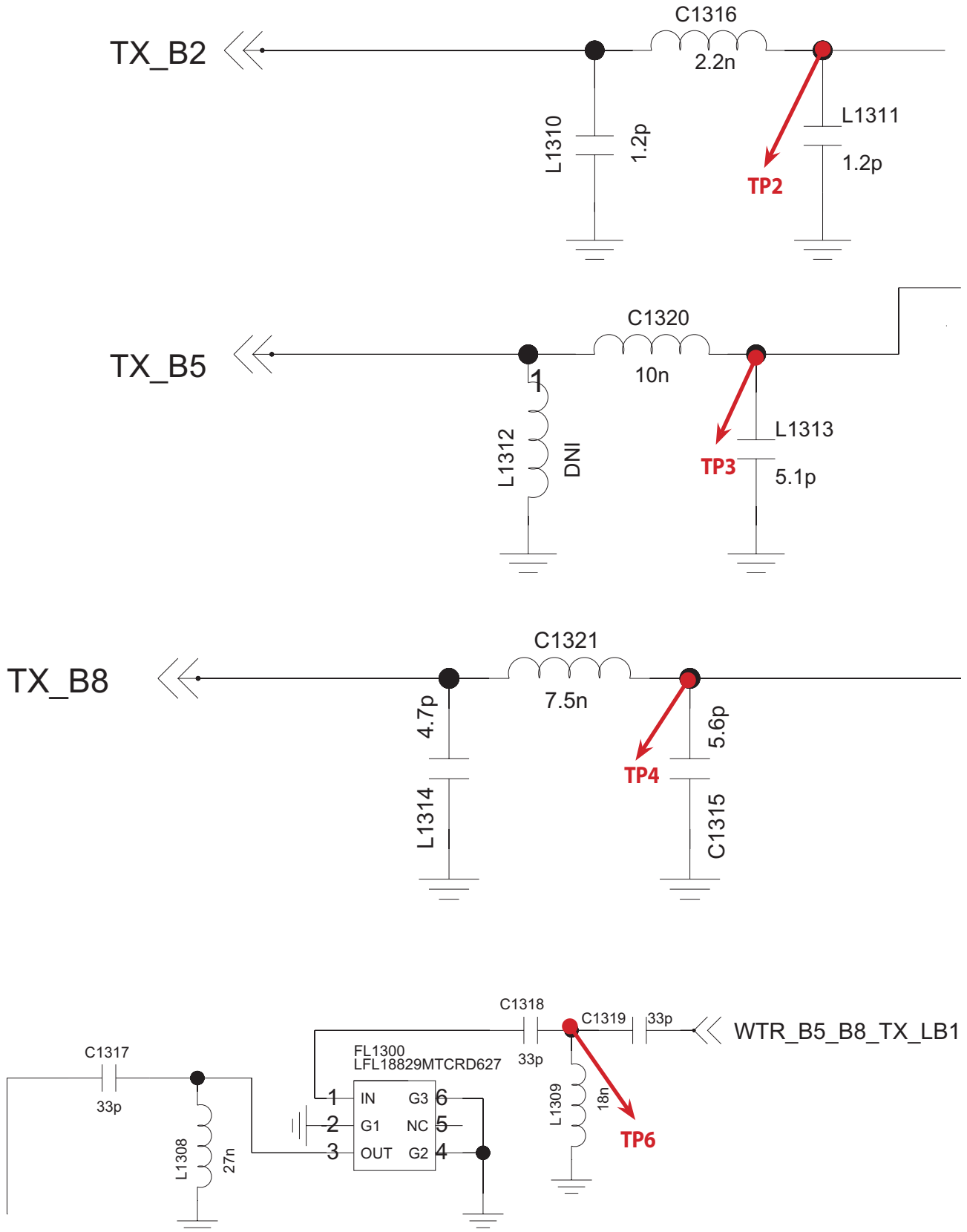
#### 3.6.2.3 Checking RF signal path(B1/B2/B5/B8)



<Main Top>

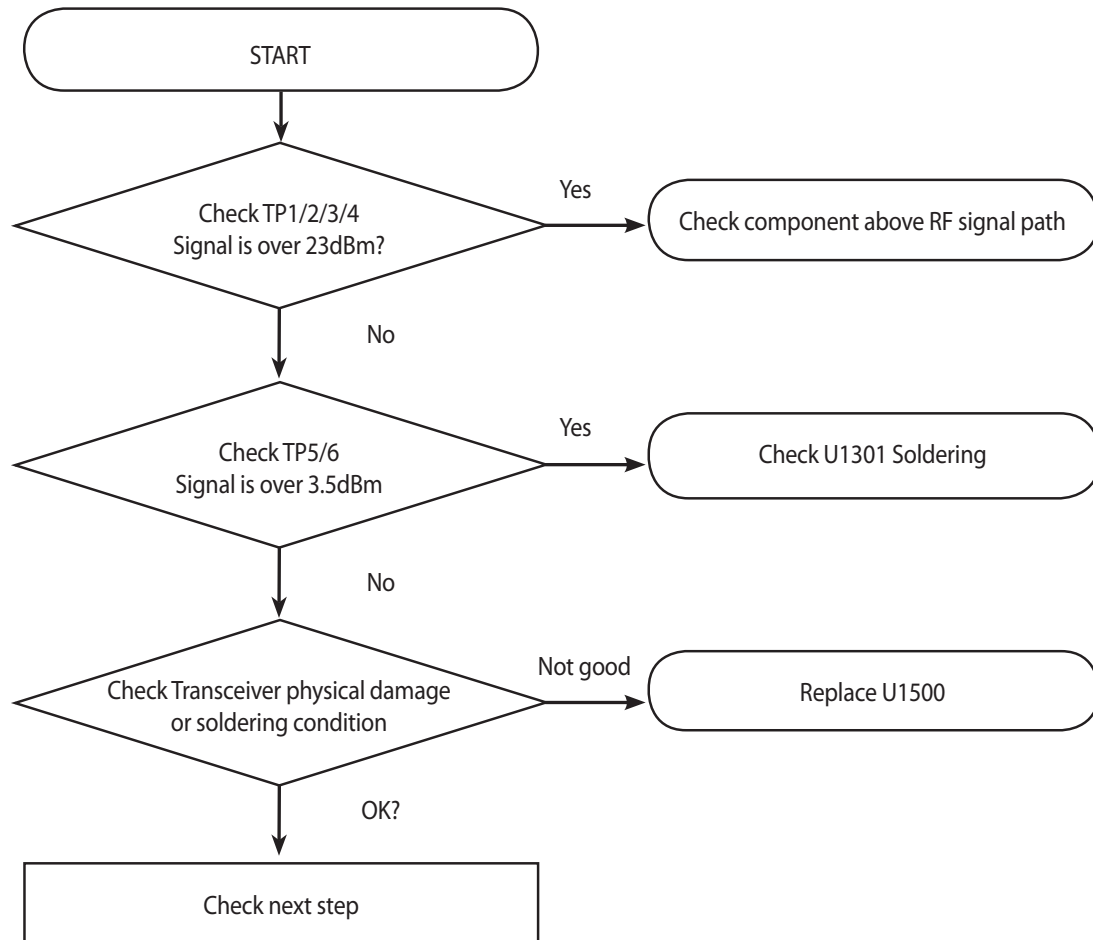


### 3. TROUBLE SHOOTING

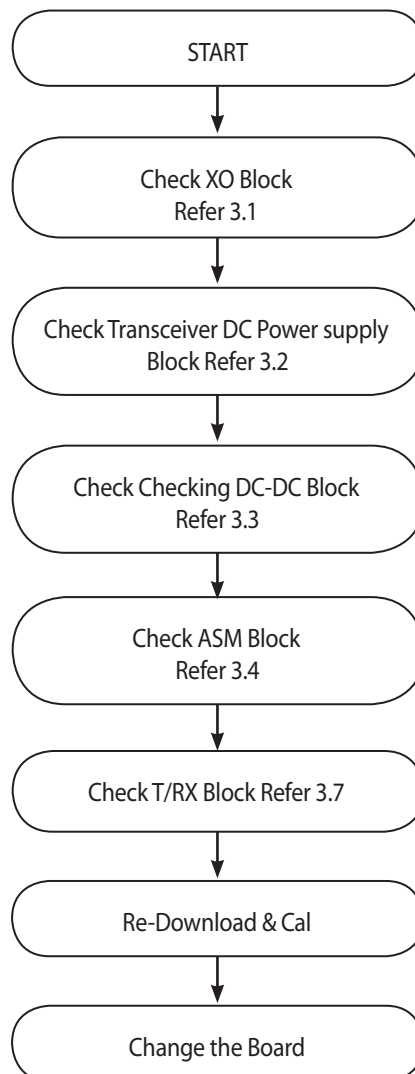




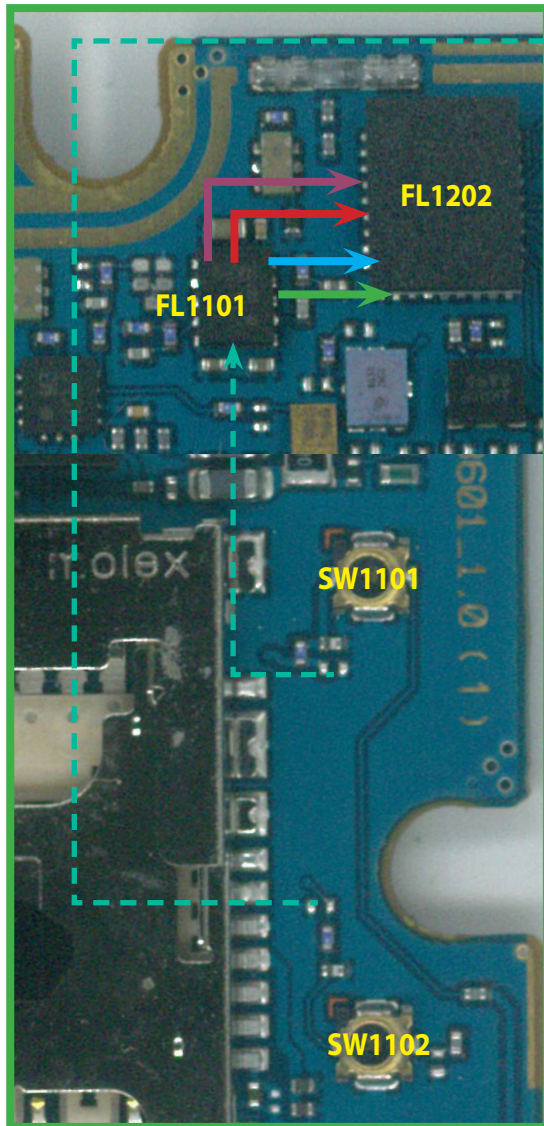
### 3. TROUBLE SHOOTING



### 3.7 LTE RF Part

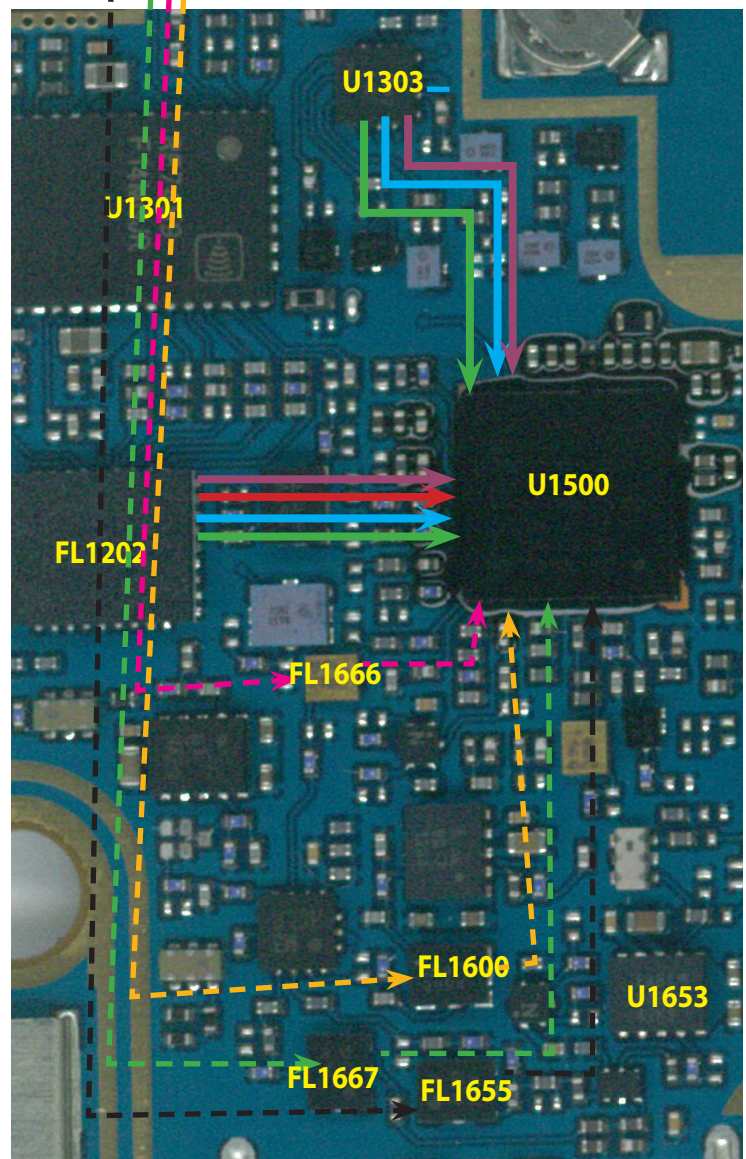
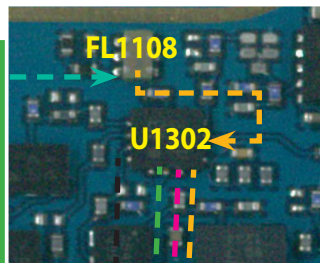


### 3.7.1 LTE B1/B3/B7/B8/B20/B28A/B28B/B40 PRX



<Main Bot>

1. LTE B1 PRX PATH
2. LTE B3 PRX PATH
3. LTE B8 PRX PATH
4. LTE B20 PRX PATH
5. LTE B7 PRX PATH
6. LTE B28 A PRX PATH
7. LTE B28 B PRX PATH
8. LTE B40 PRX PATH
9. Common PATH



<Main Top>

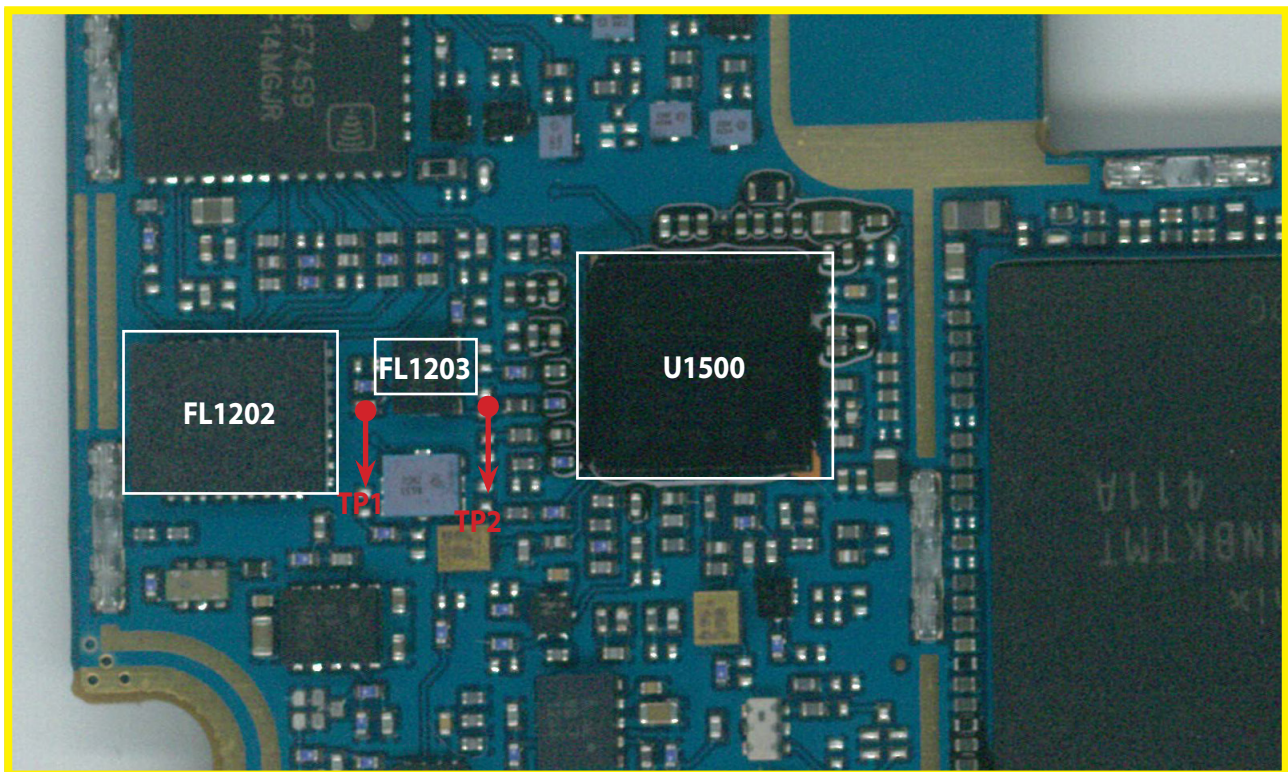
LTE B1/B3/B7/B8/B20/28A/28B/40 PRX RF PATH



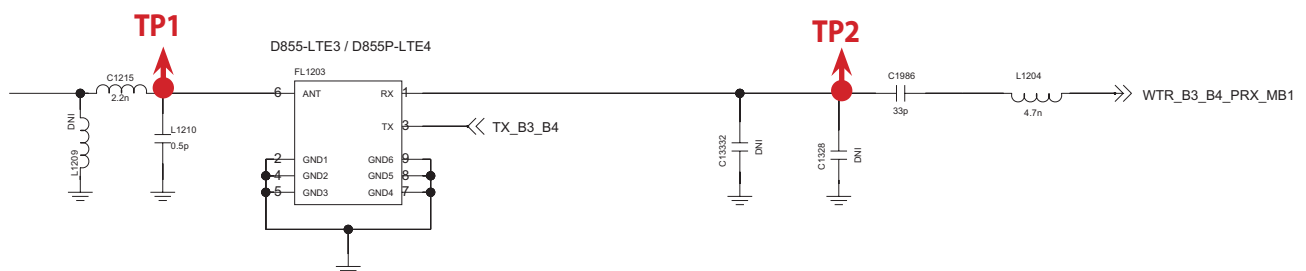
### 3.7.1.1 Checking LTE Switch (B3)

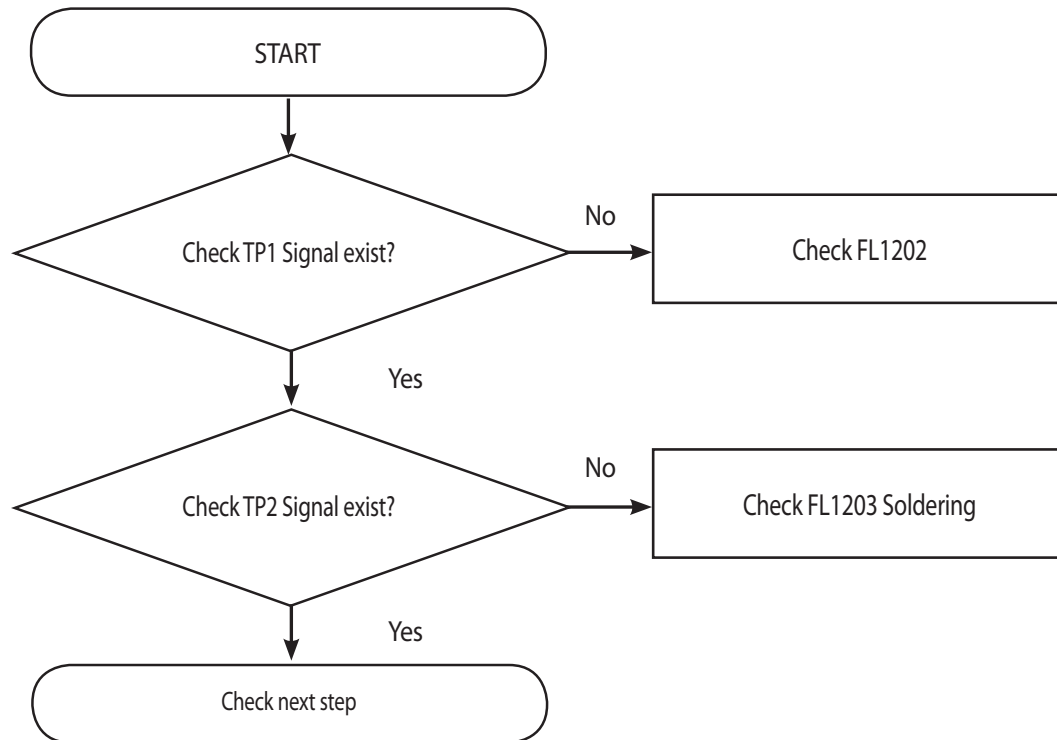
Refer to 3.6.1.1

### 3.7.1.2 Checking RF signal path (B3)

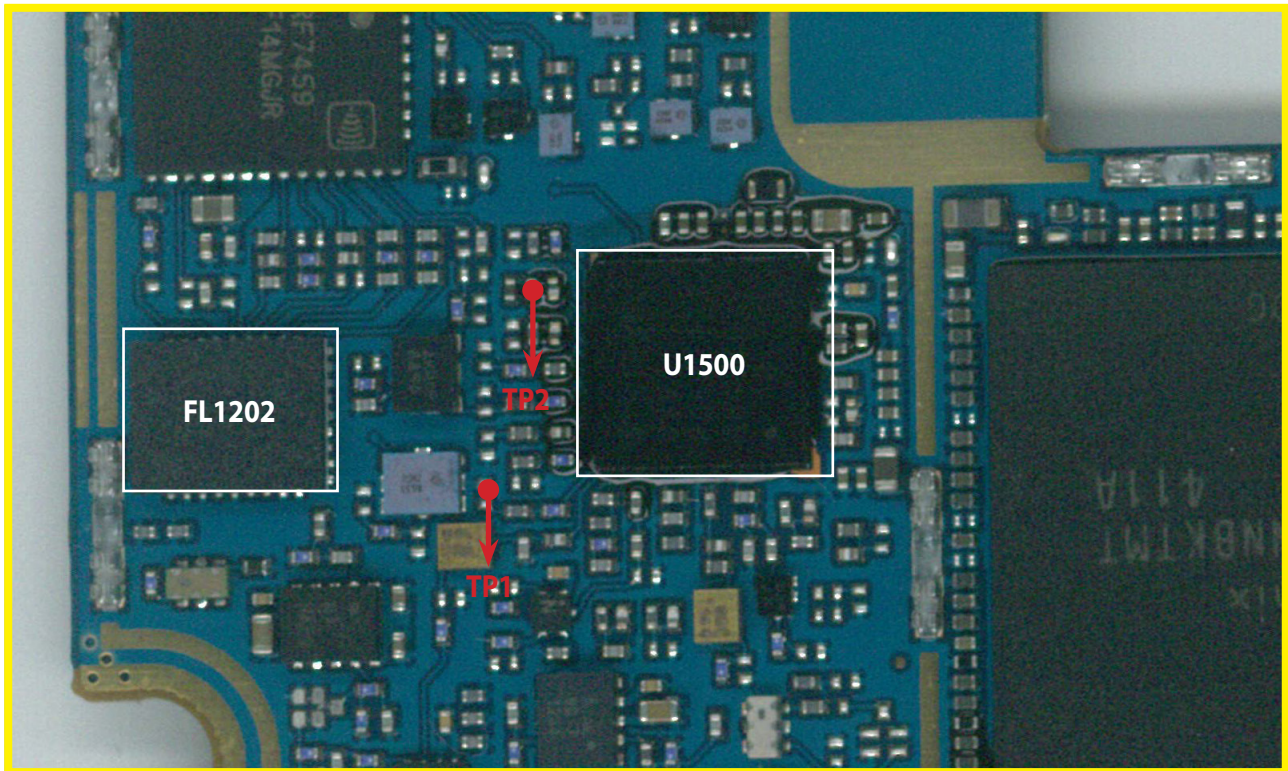


<Main Top>





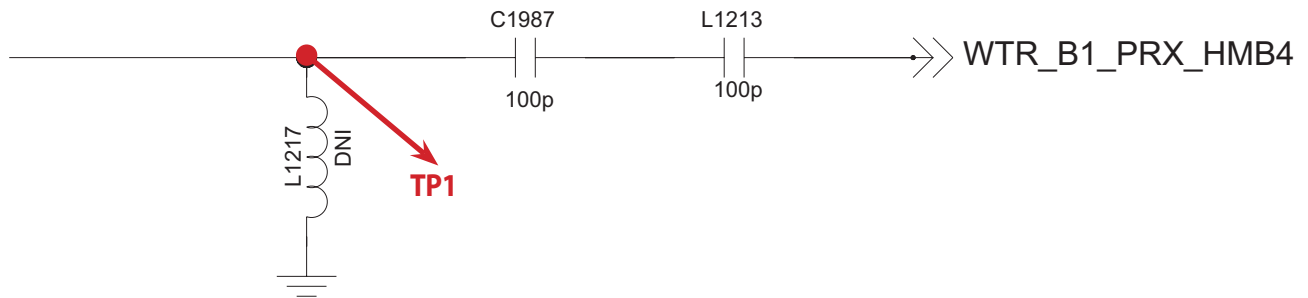
#### 3.7.1.3 Checking RF signal path (B1/B8)



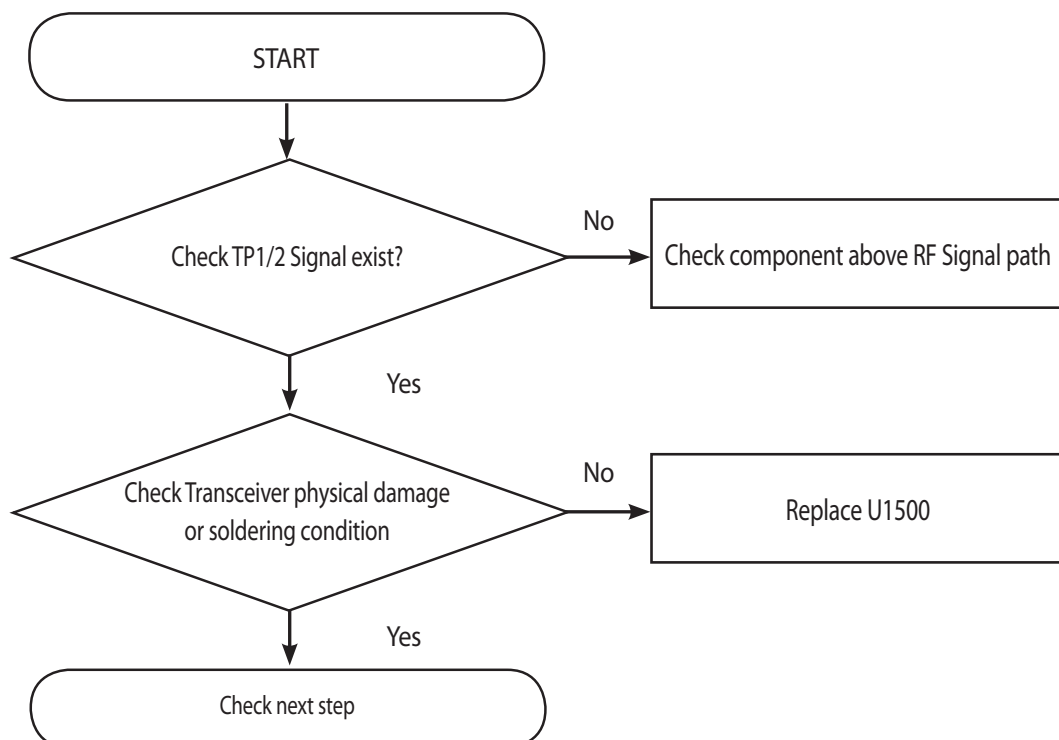
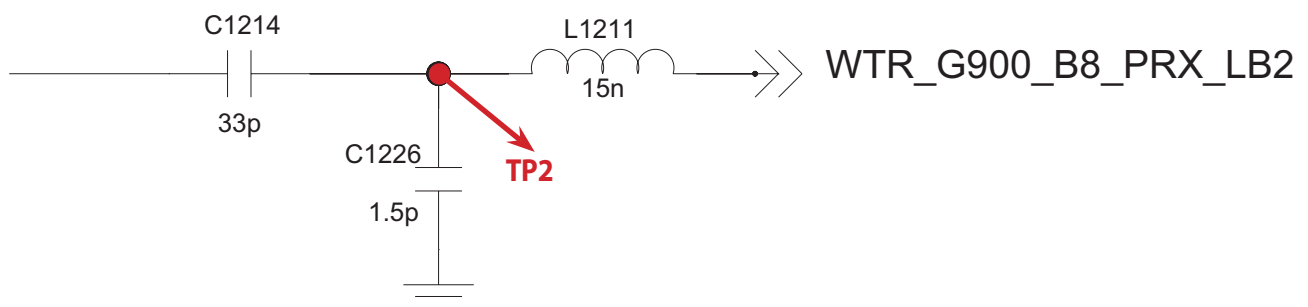
<Main Top>

### 3. TROUBLE SHOOTING

#### LTE B1\_W B1\_PRXCo-Banding



#### LTE B8\_W B8\_GSM900\_RX CO-Banding

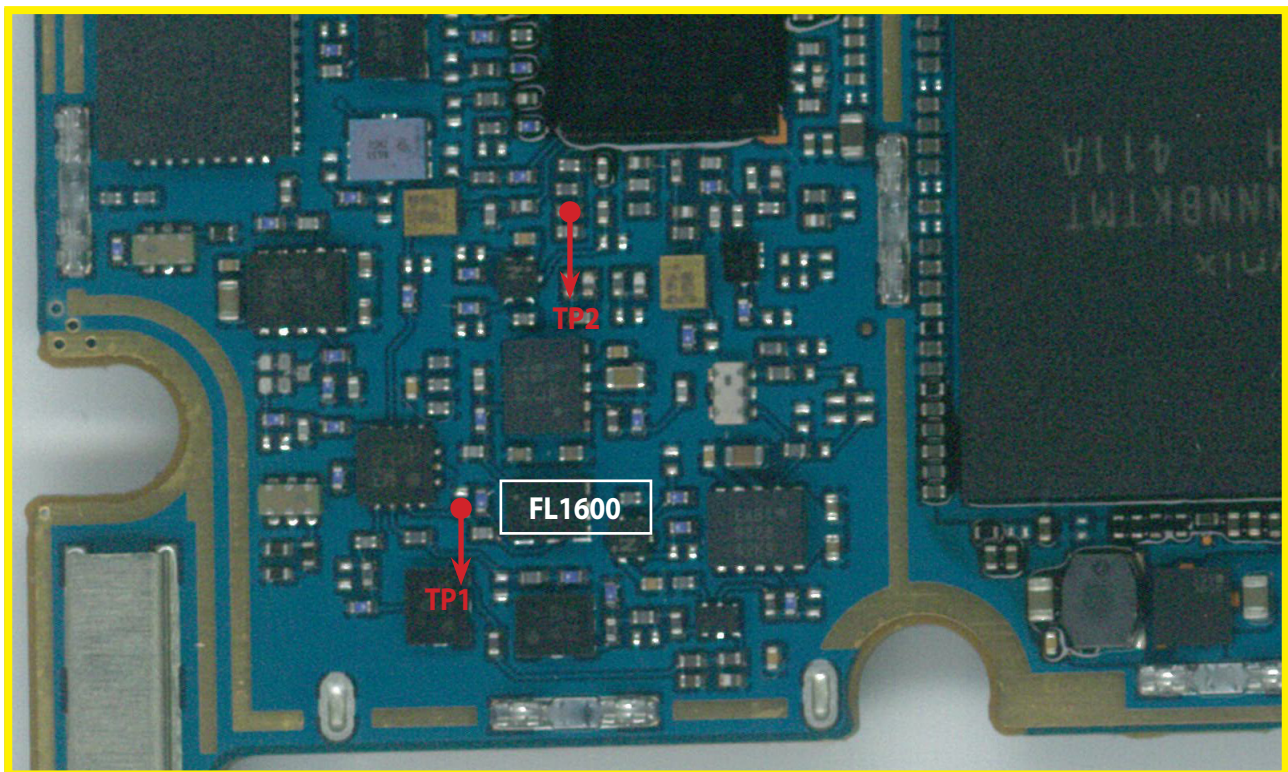




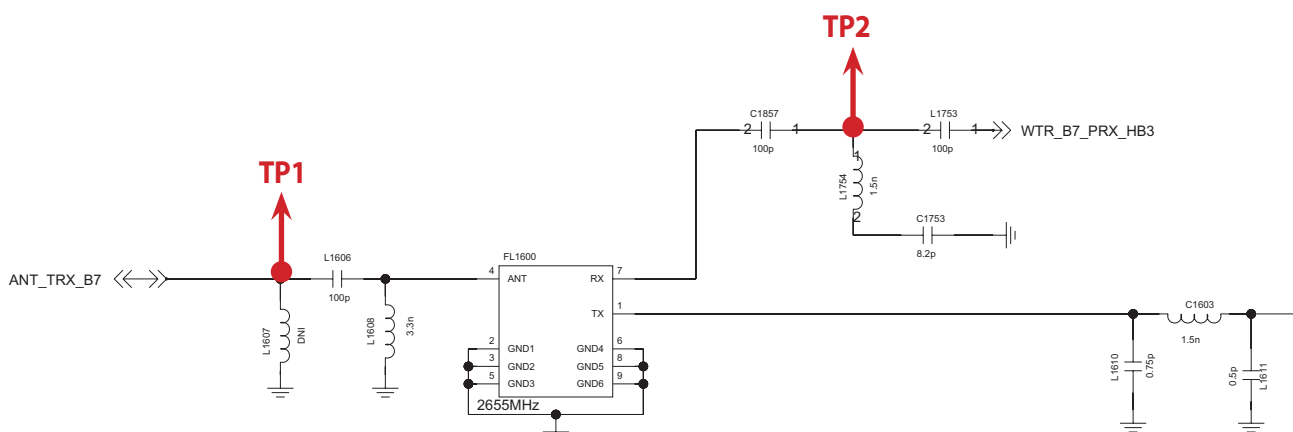
### 3.7.1.4 Checking RF LTE SP4T switch (B7)

Refer to 3.4.2

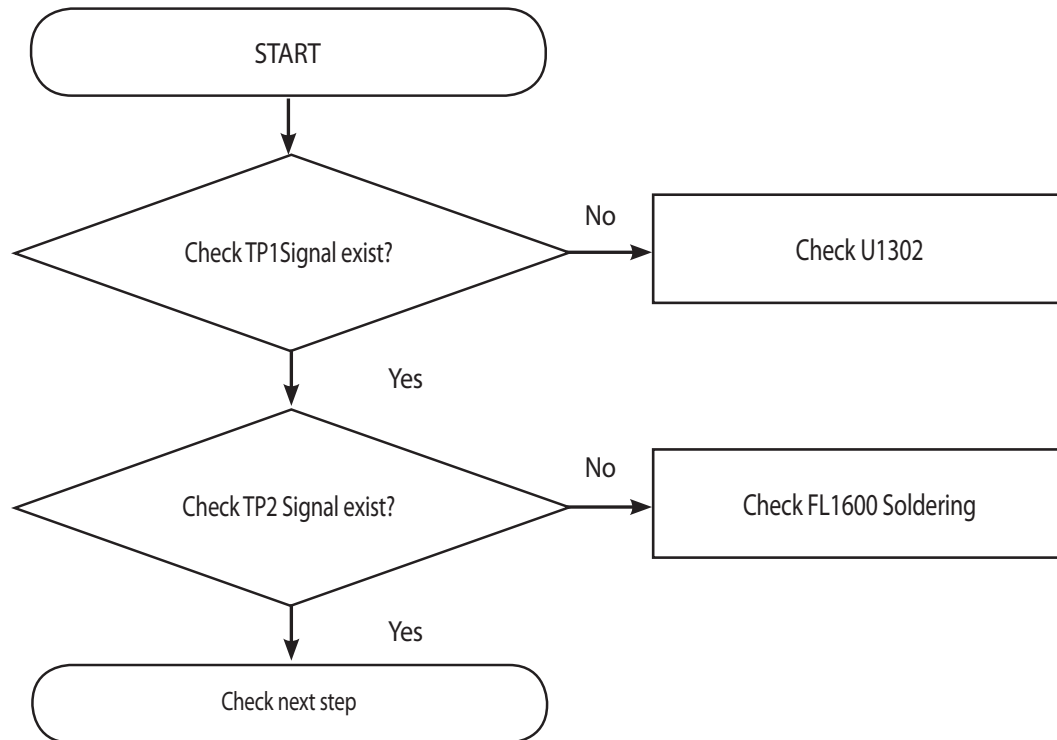
### 3.7.1.5 Checking RF signal path (B7)



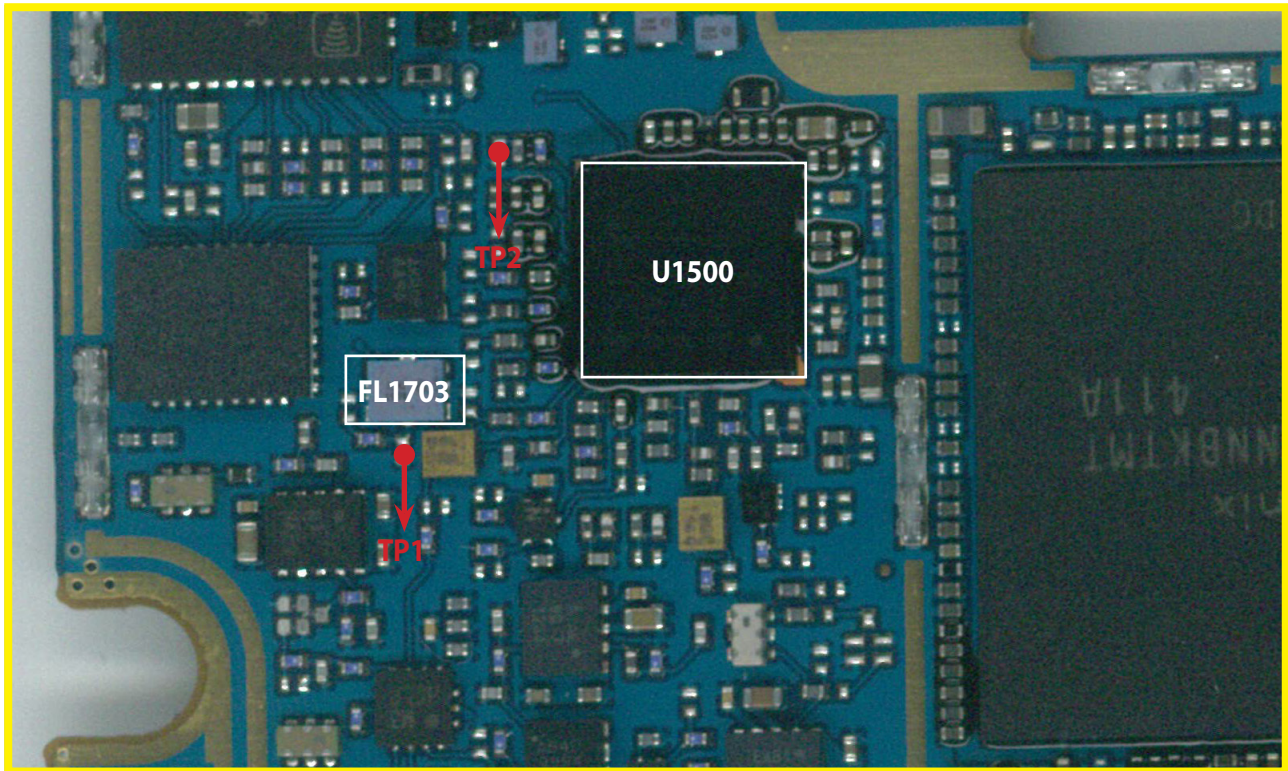
<Main Top>



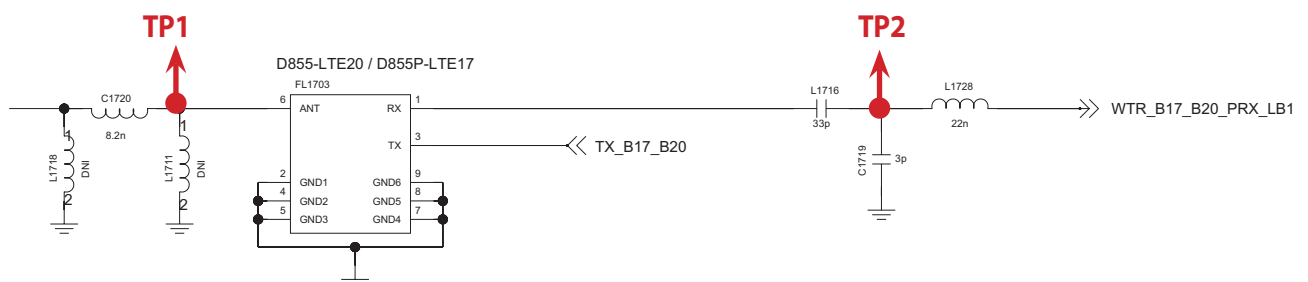


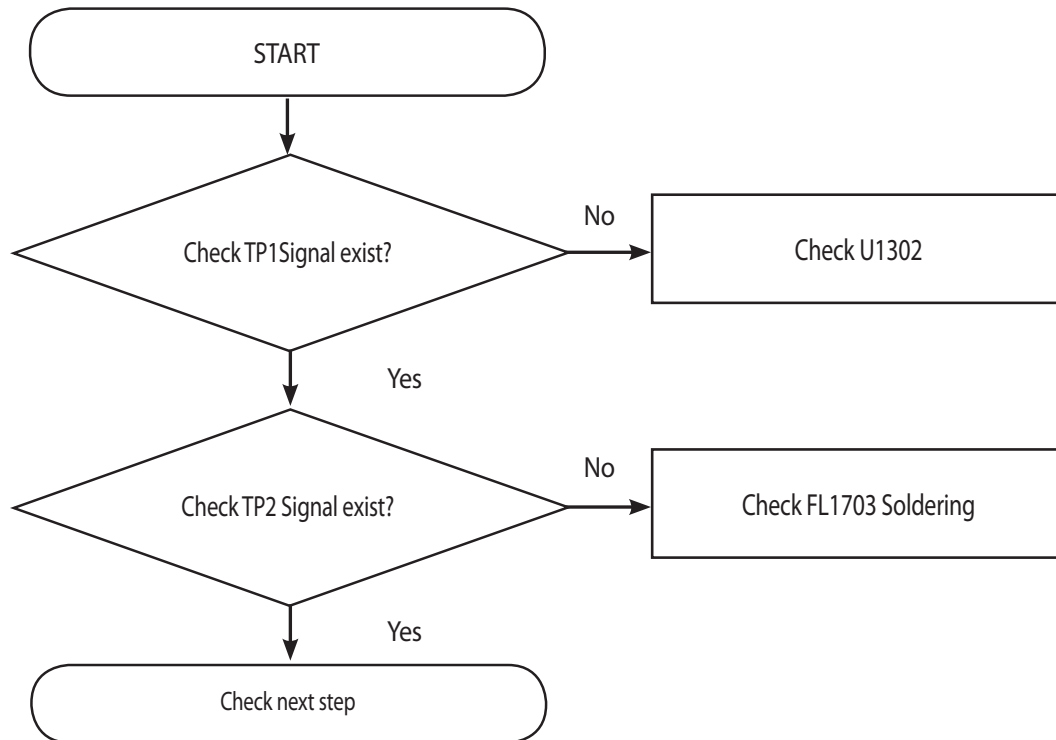


#### 3.7.1.6 . Checking RF signal path (B20)



<Main Top>

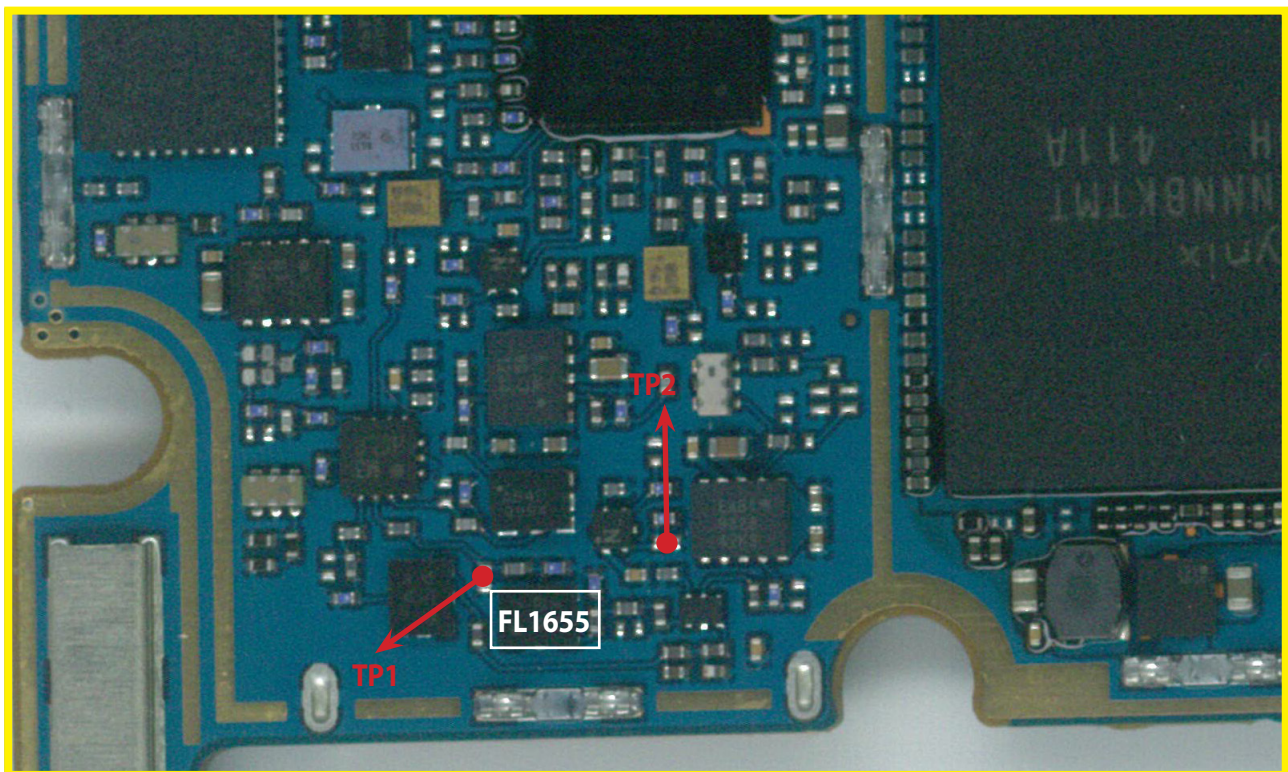




### 3.7.1.7 Checking RF LTE SP4T switch (B28 A)

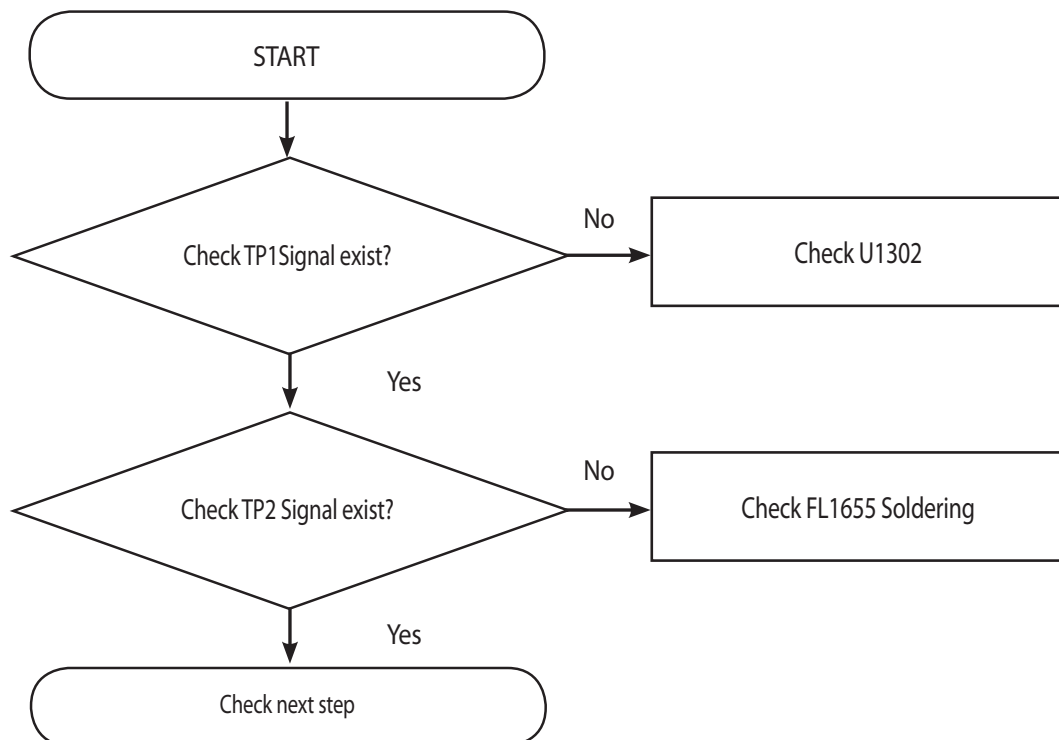
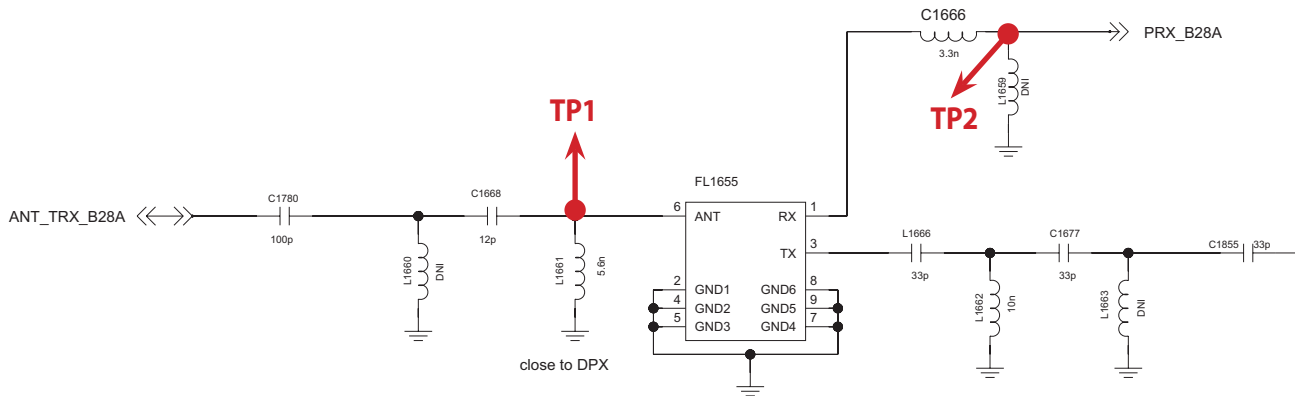
*Refer to 3.4.2*

### 3.7.1.8 Checking RF signal path (B28 A)



<Main Top>

### 3. TROUBLE SHOOTING

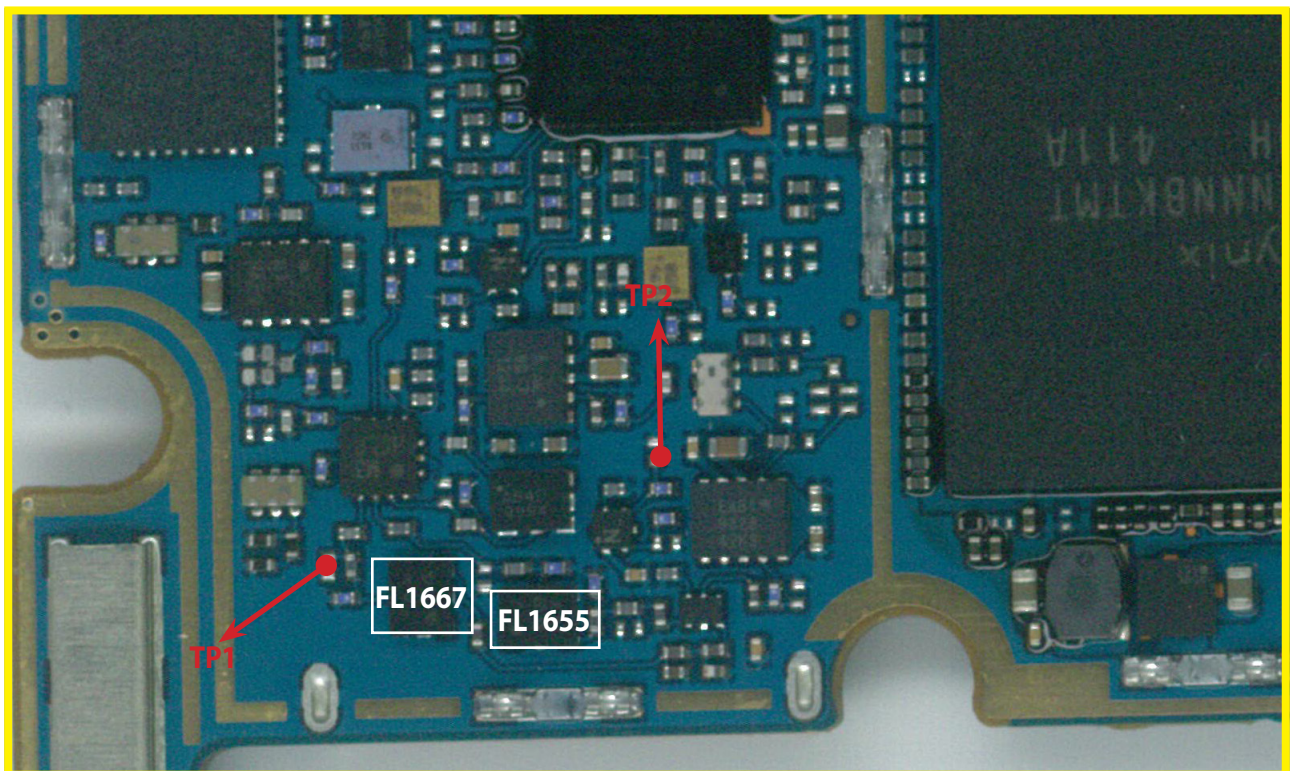




### 3.7.1.9 Checking RF LTE SP4T switch (B28 B)

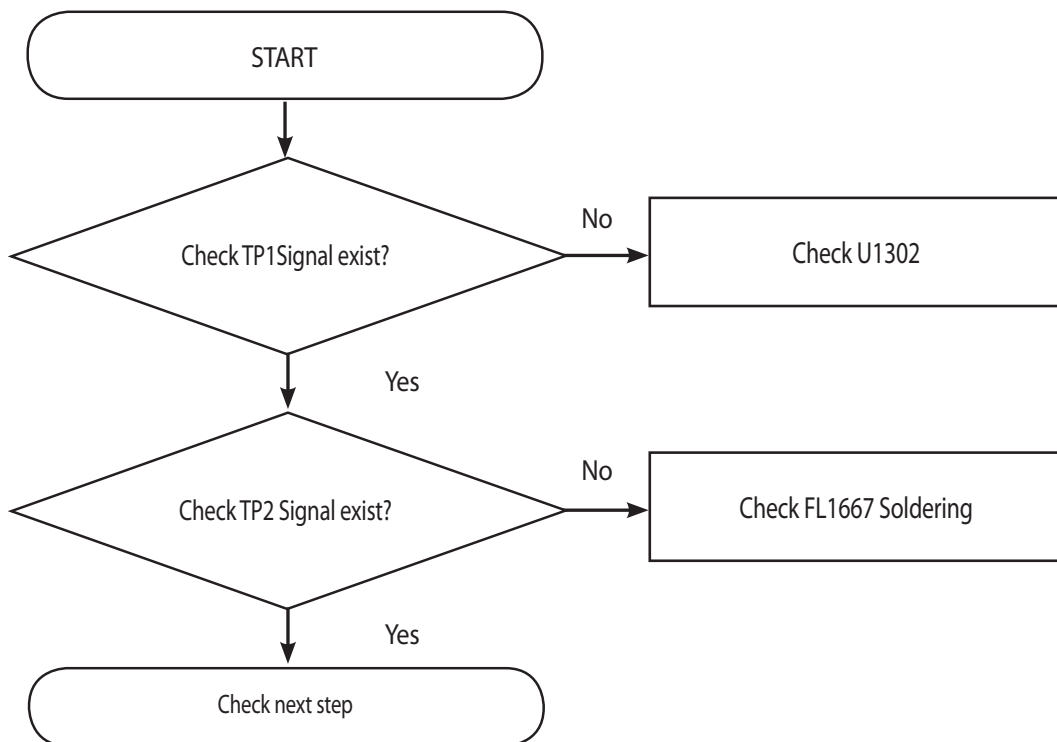
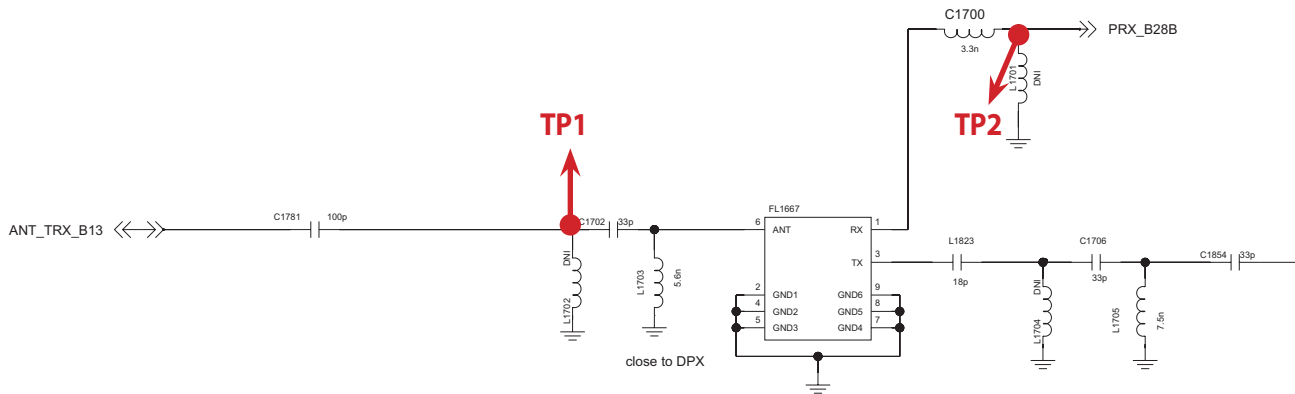
Refer to 3.4.2

### 3.7.1.10 Checking RF signal path (B28 B)

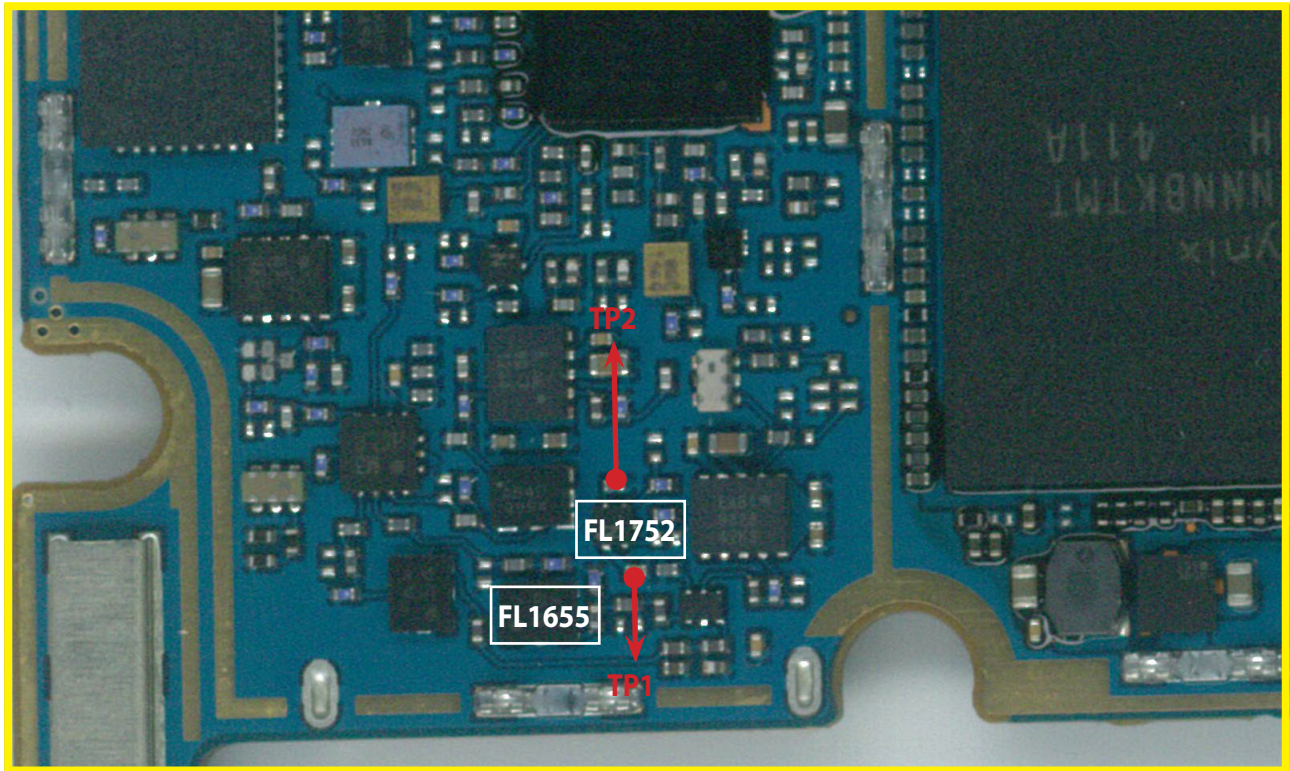


<Main Top>

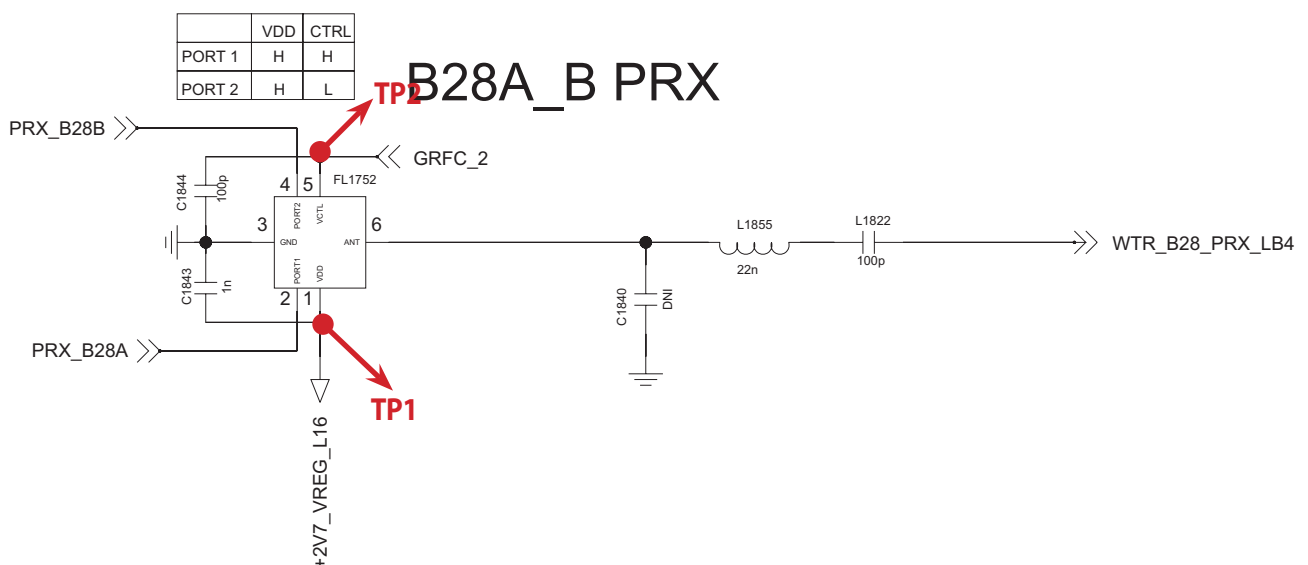
### 3. TROUBLE SHOOTING



### 3.7.1.11 Checking RF SP2T Switch (B28 A/B)

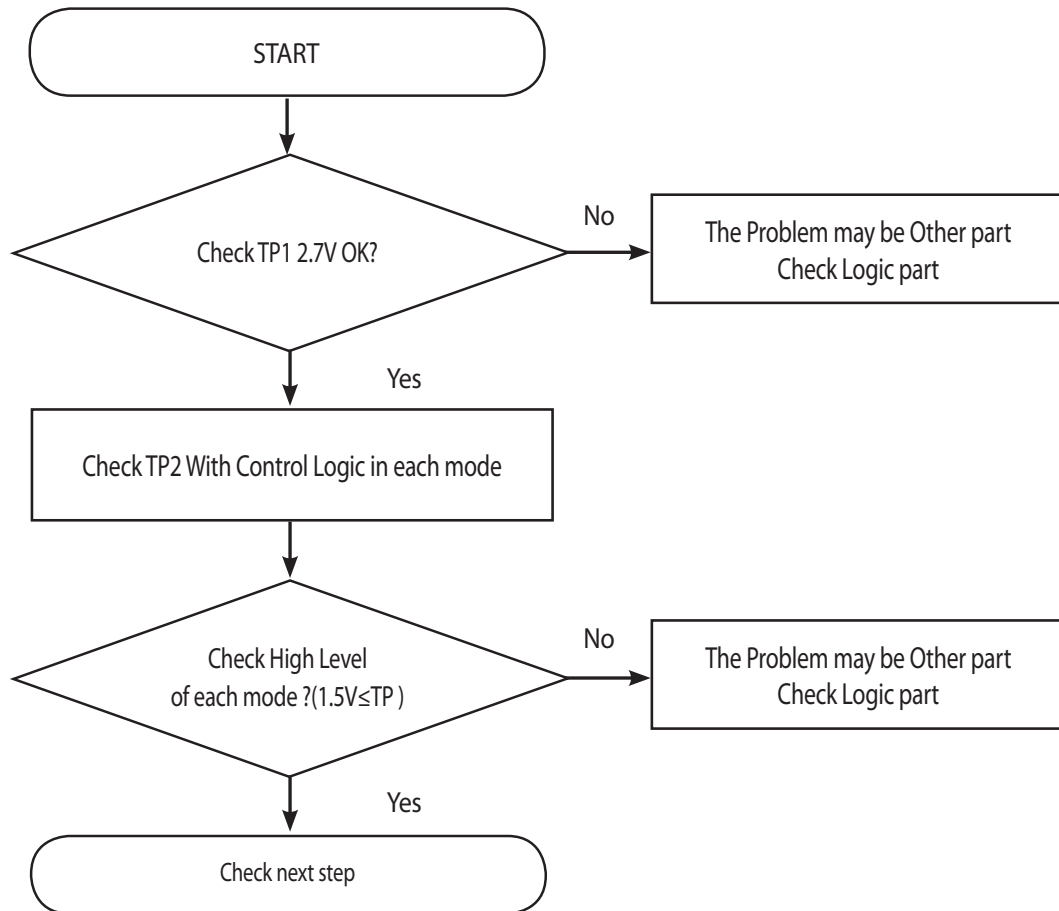


<Main Top>





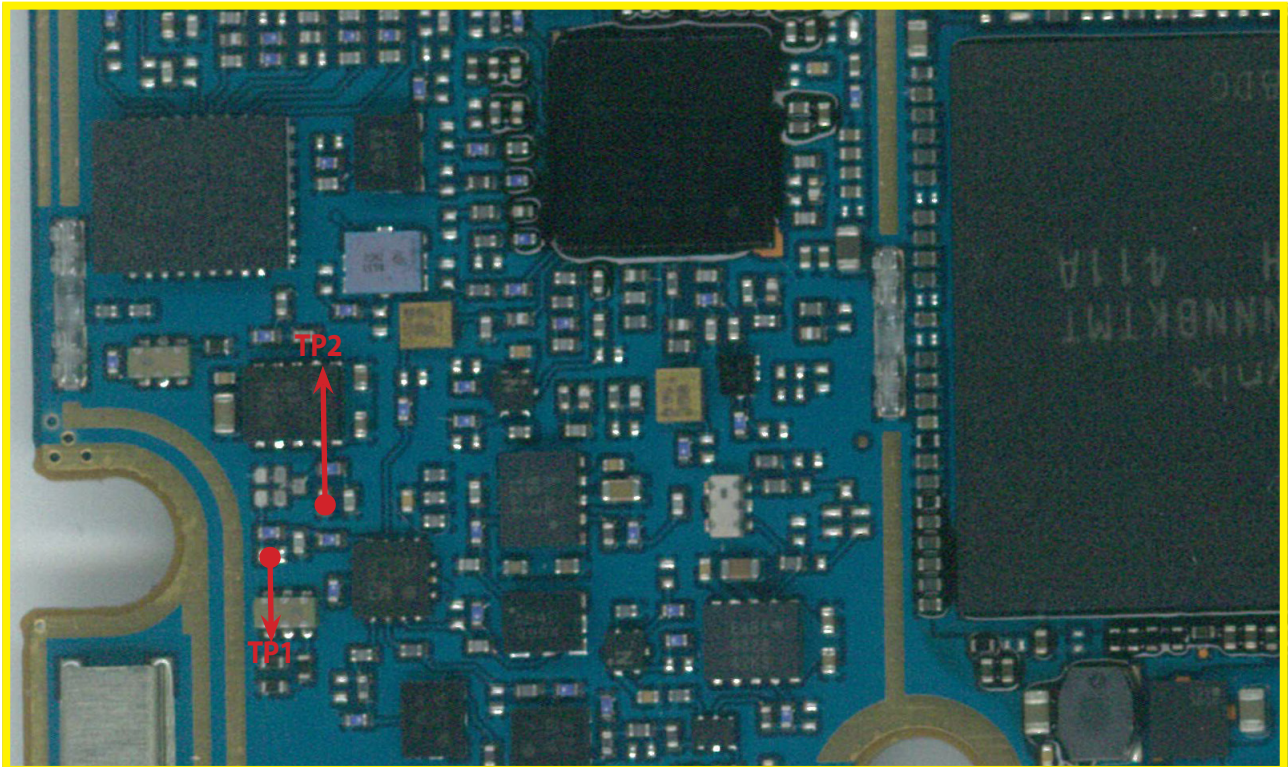
### 3. TROUBLE SHOOTING



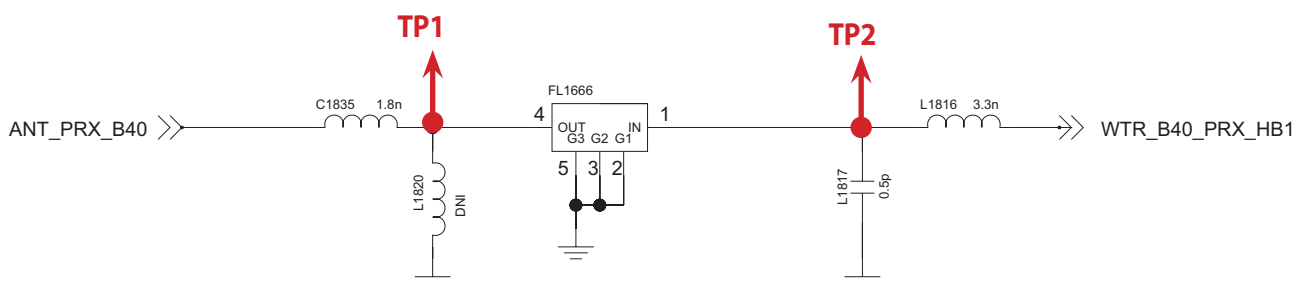
### 3.7.1.12 Checking RF LTE SP4T switch (B40)

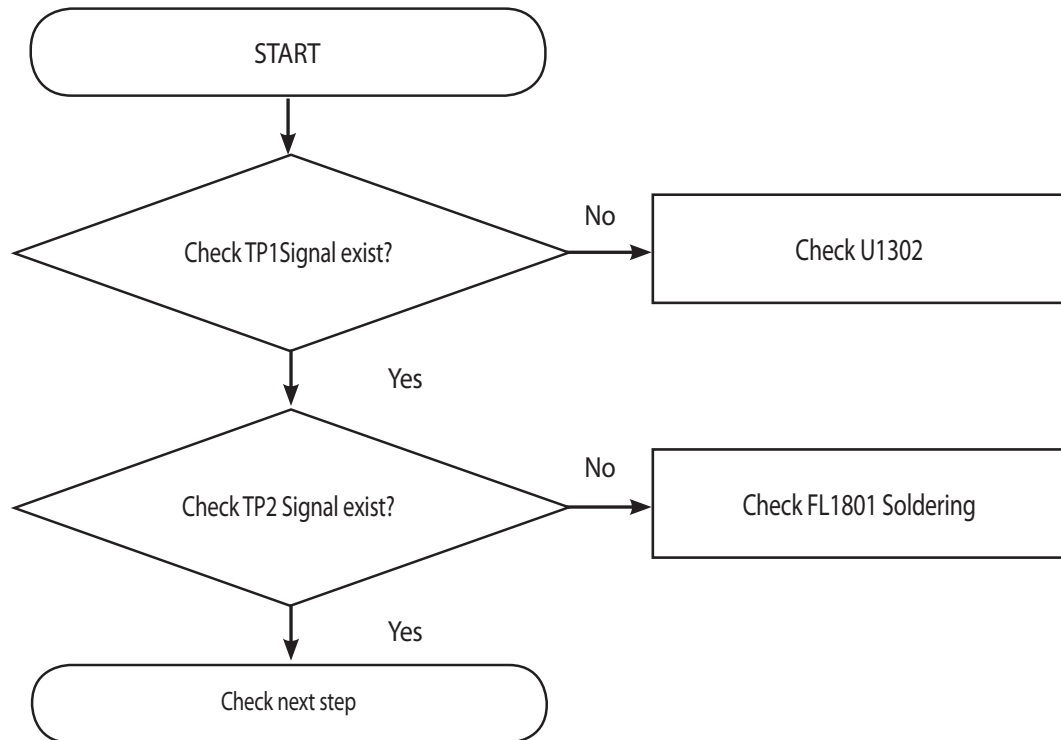
Refer to 3.4.2

### 3.7.1.13 Checking RF signal path (B40)



<Main Top>



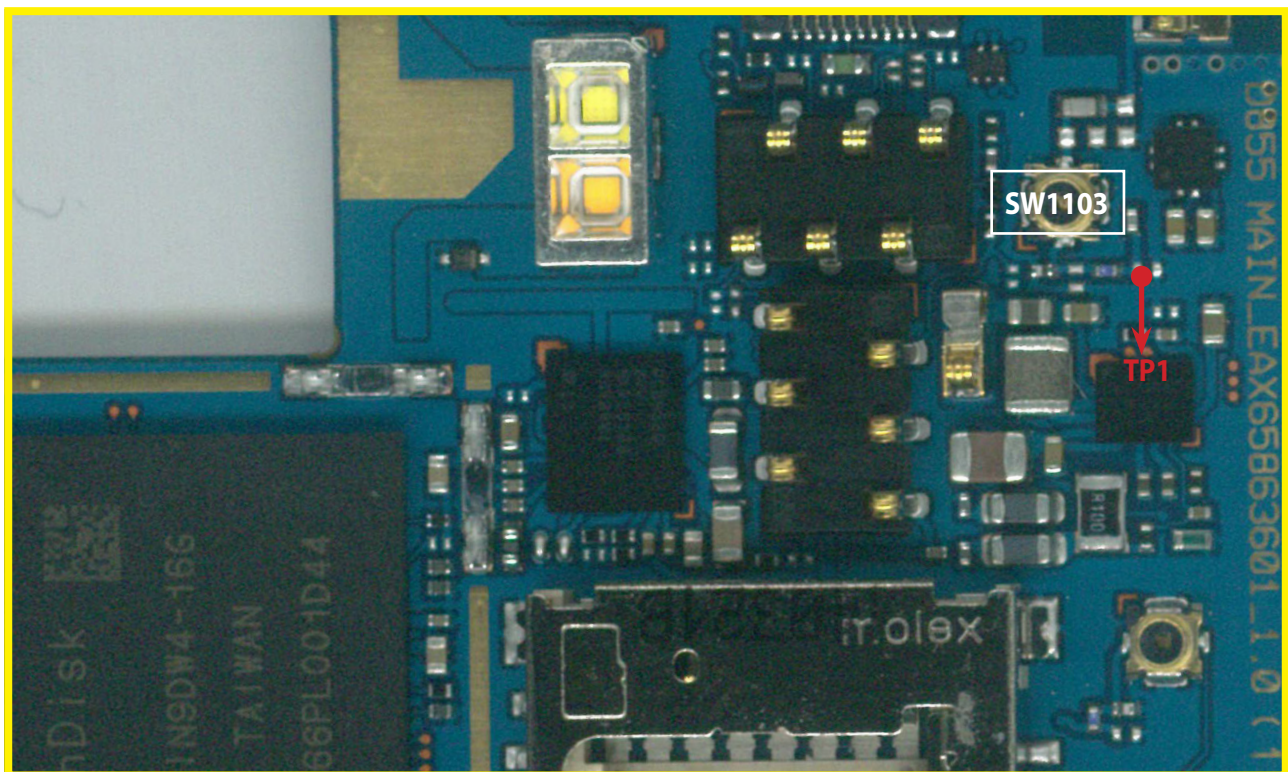


### 3.7.2 LTE B1/B3/B7/B8/B20/B28A/B28B/B40 DRX

#### 3.7.2.1 Checking DRX Antenna Switching Module (B1/3/8/20/28/40)

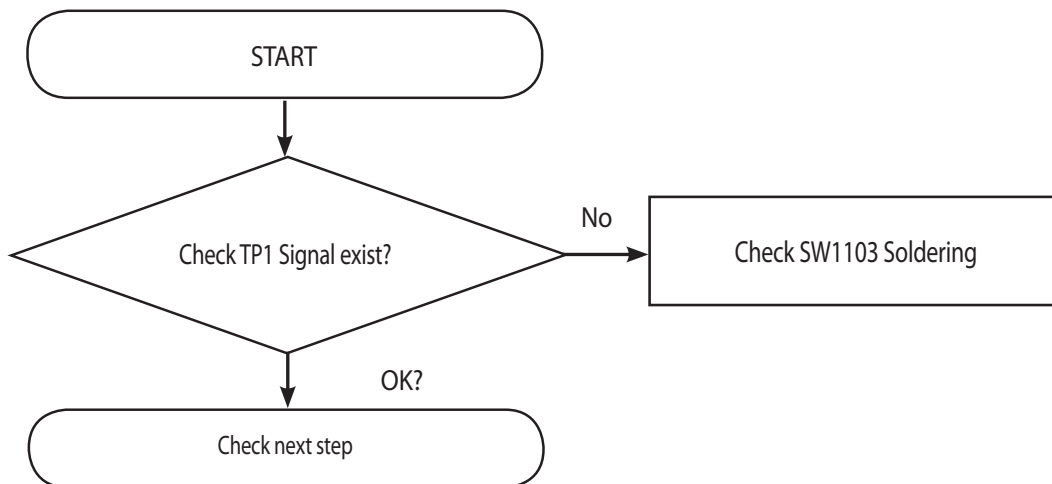
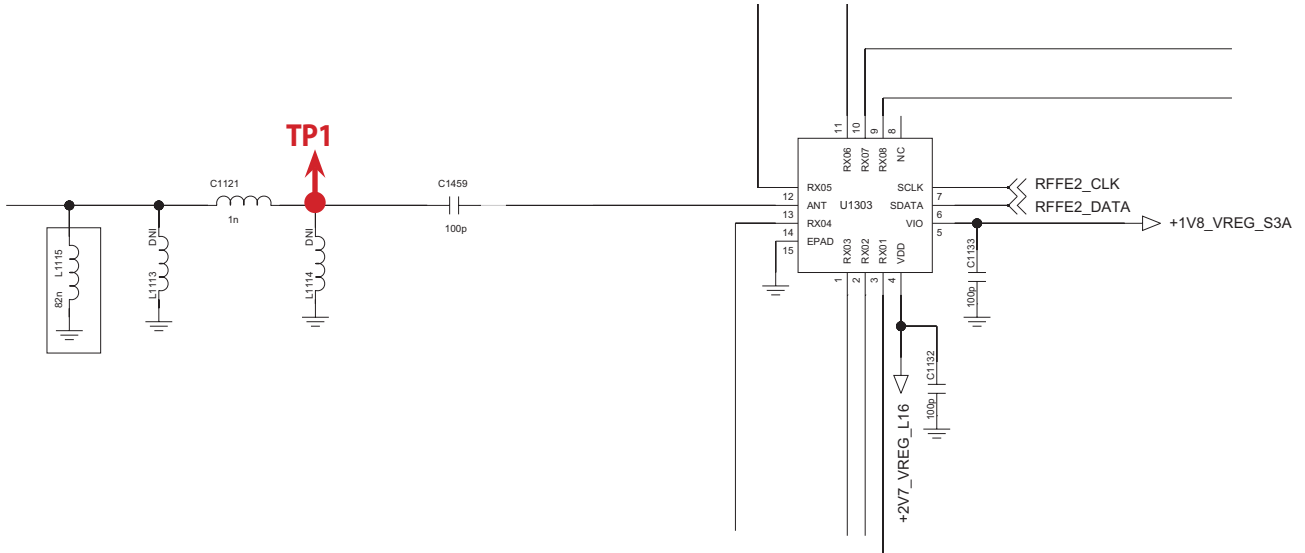
Refer to 3.4.1.4

#### 3.7.2.2 Checking DRX Antenna Switching Module



<Main Bot>

### 3. TROUBLE SHOOTING

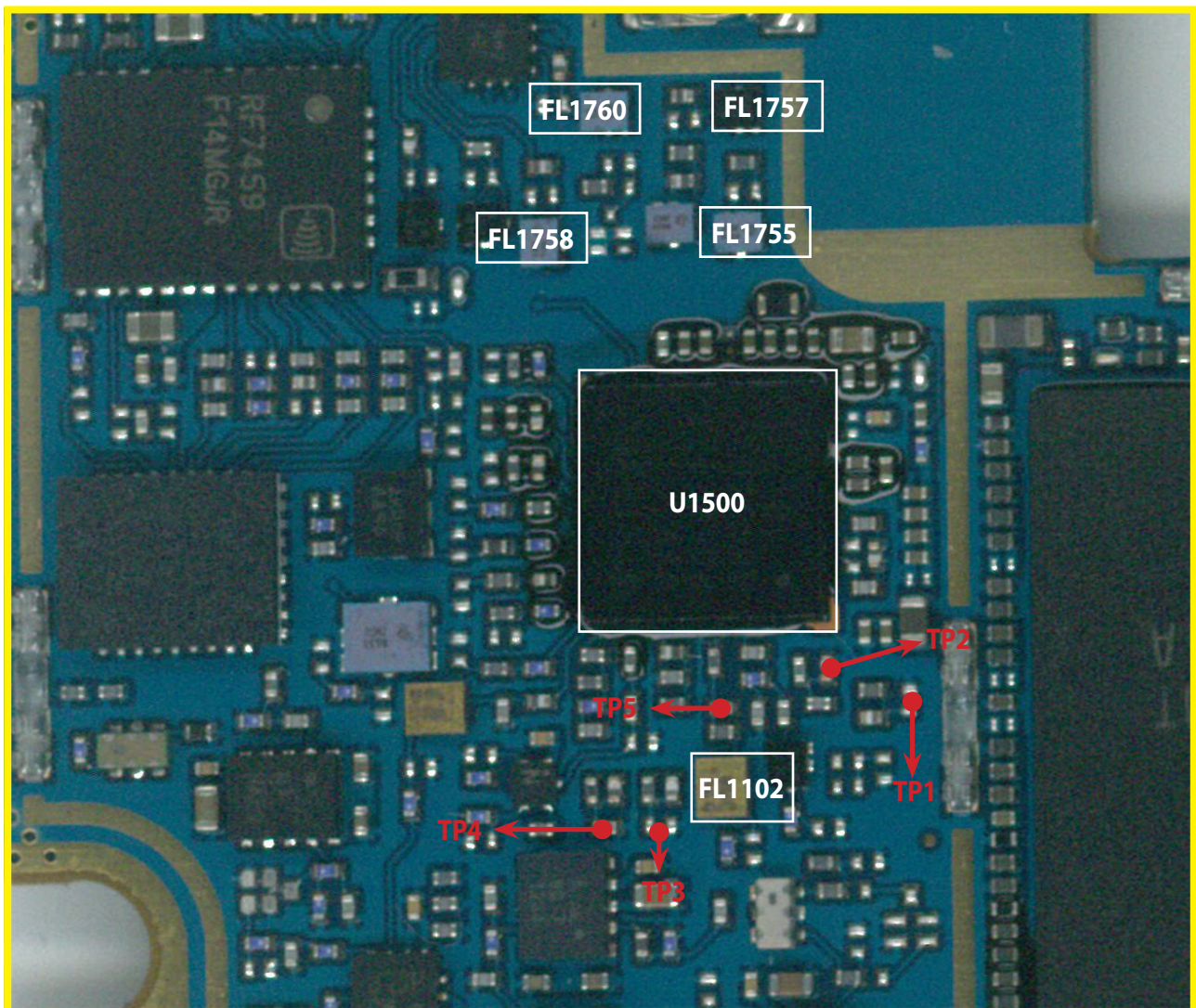




#### 3.7.2.3 Checking DRX Antenna Switching Module(B1/3/8/20/28/40)

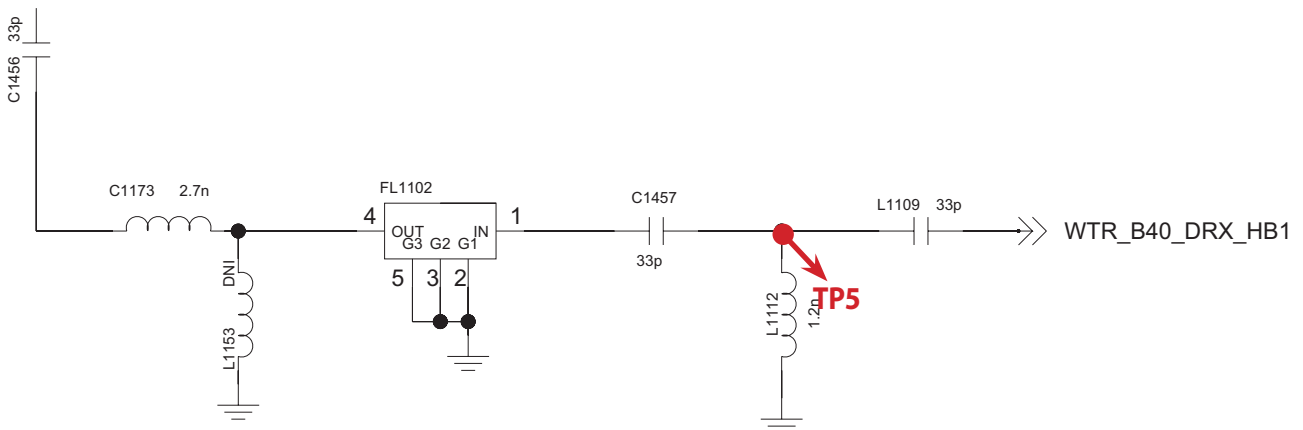
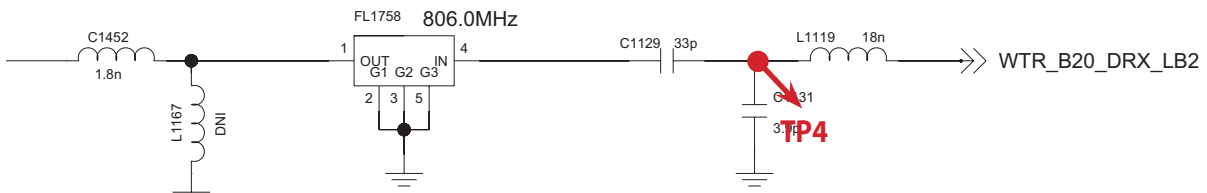
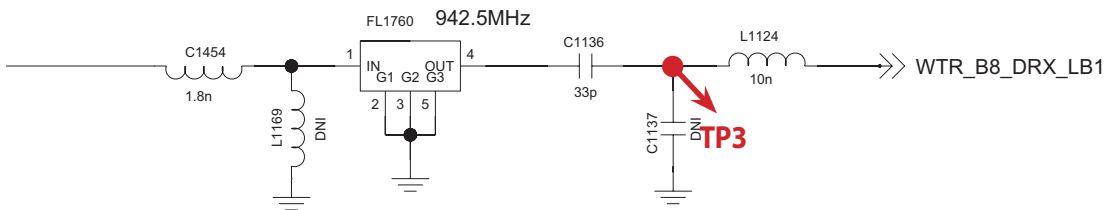
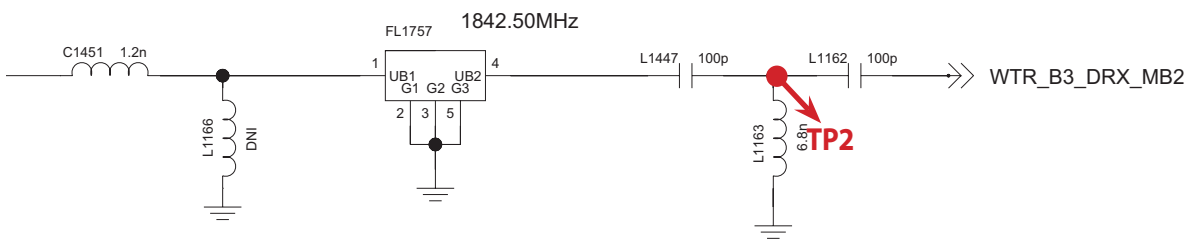
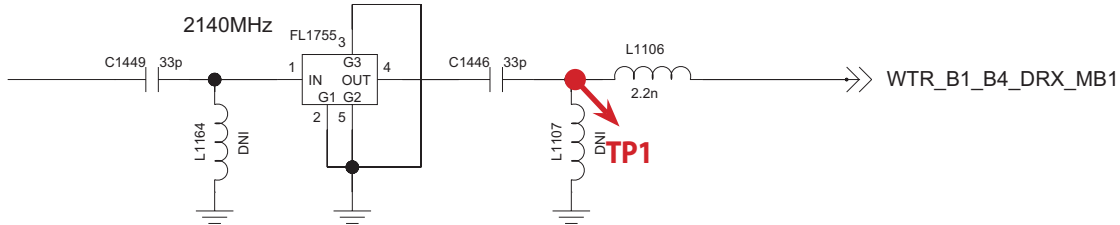
Refer to 3.6.1.4

#### 3.7.2.4 Checking DRX Antenna Switching Module(B1/3/8/20/40)



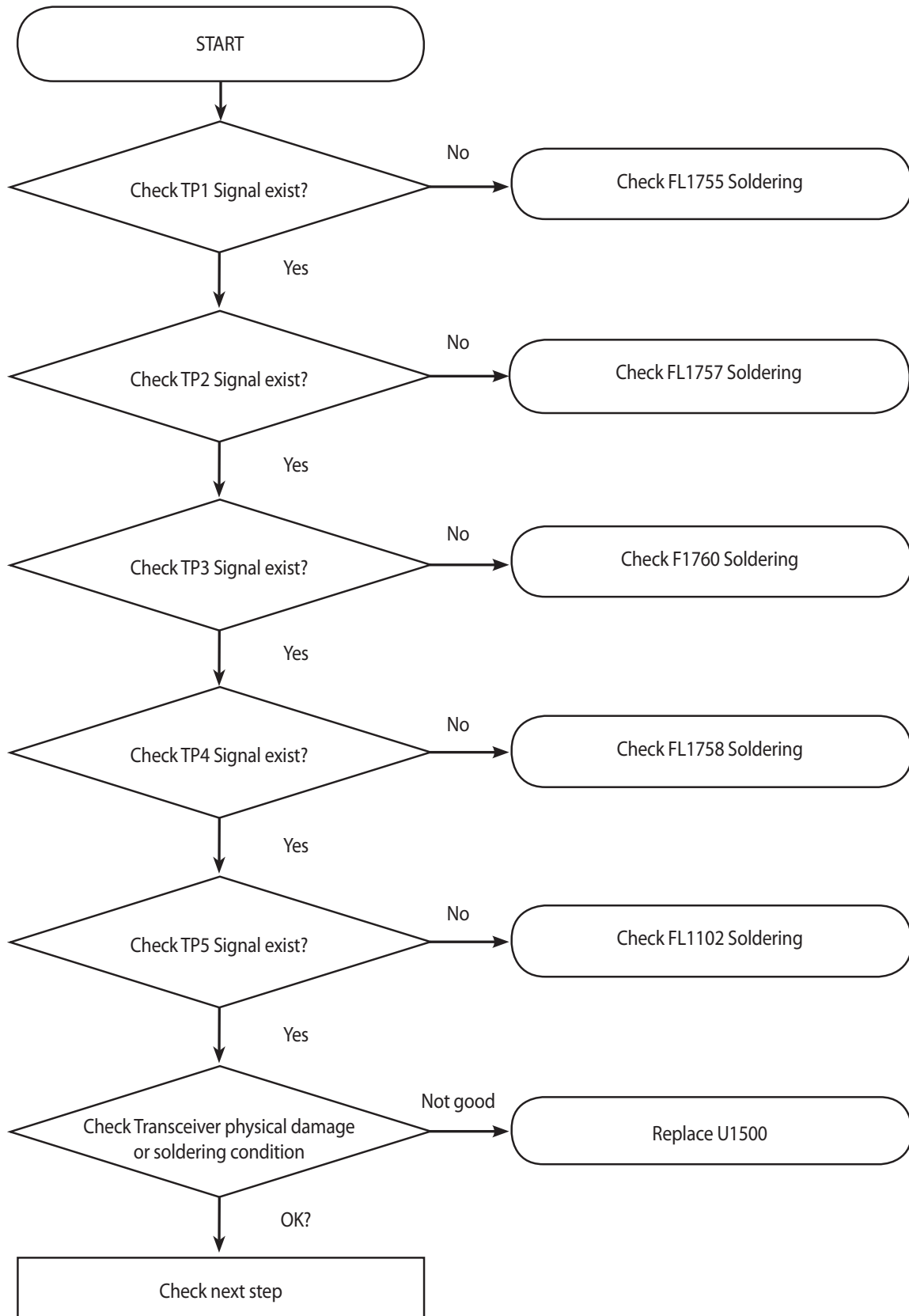
<Main Top>

### 3. TROUBLE SHOOTING

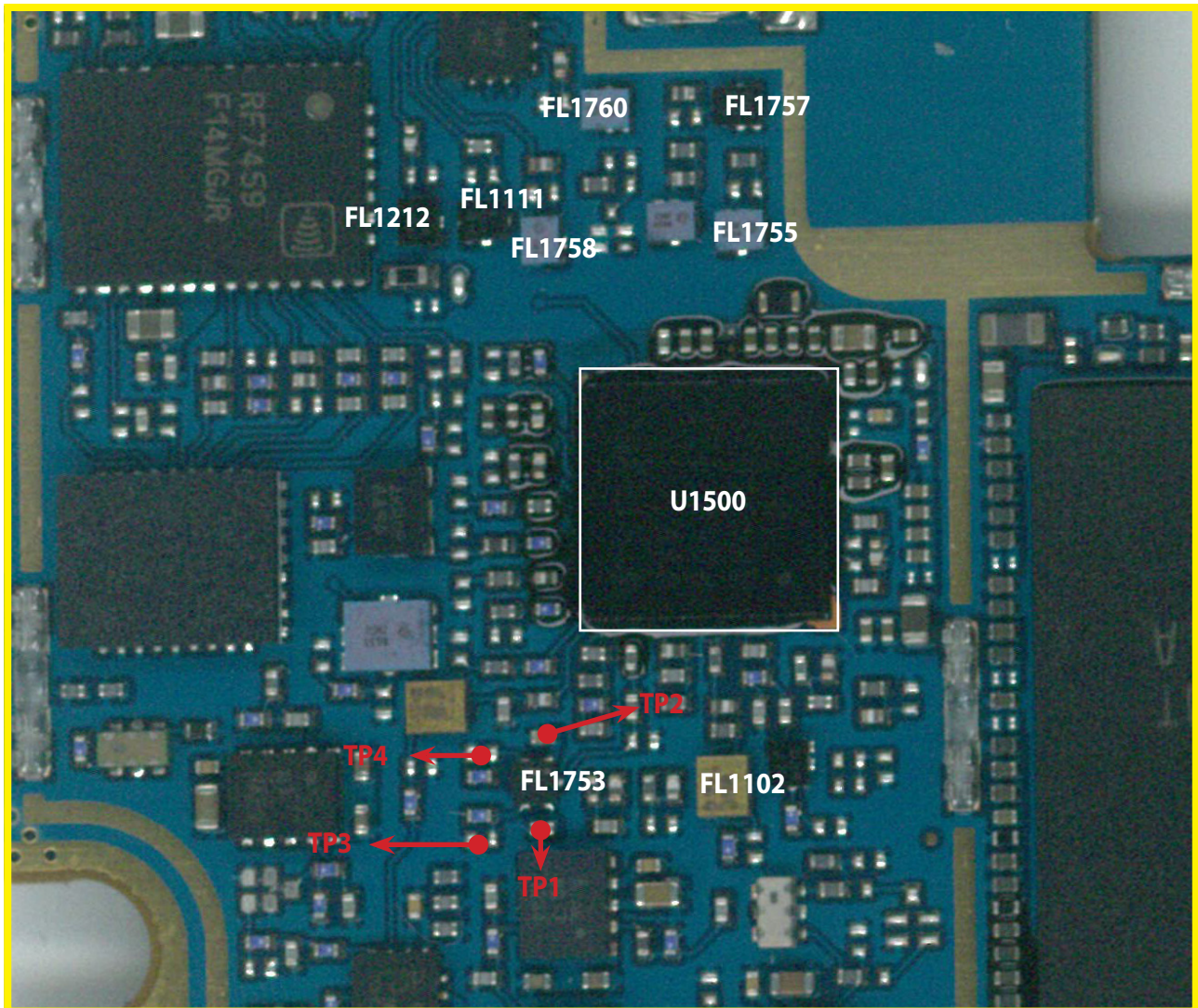




### 3. TROUBLE SHOOTING

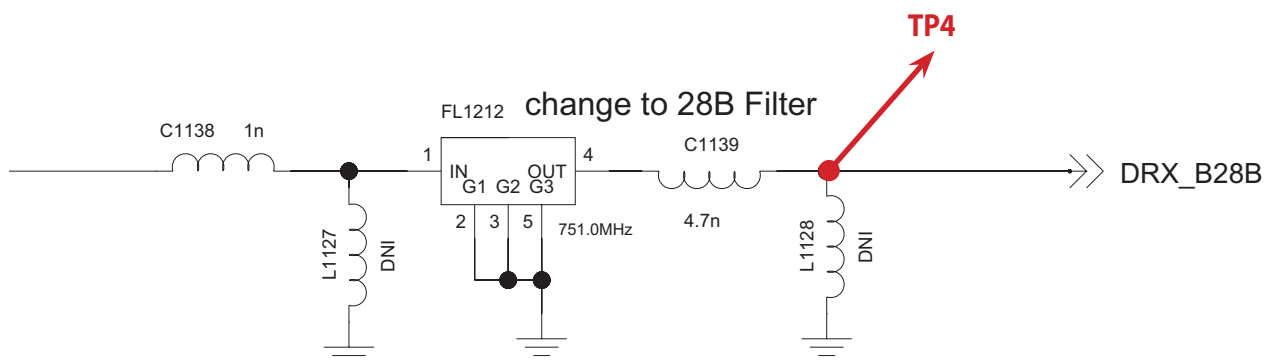
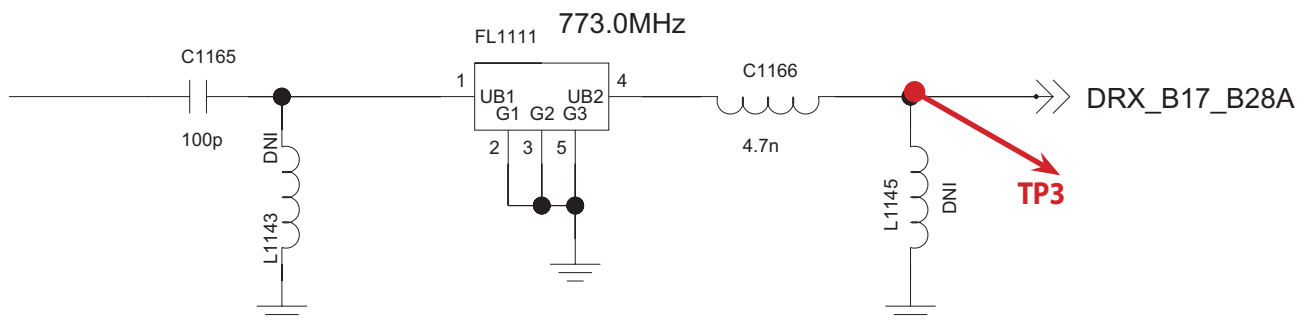
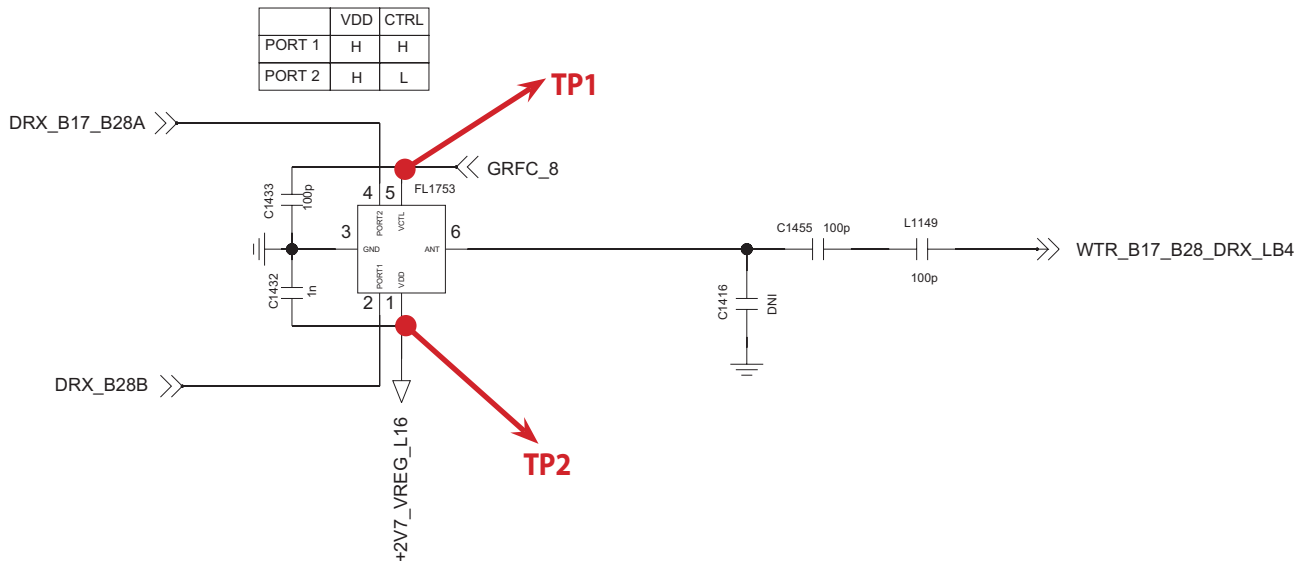


#### 3.7.2.5 Checking DRX Antenna Switching Module(B28 A&B)

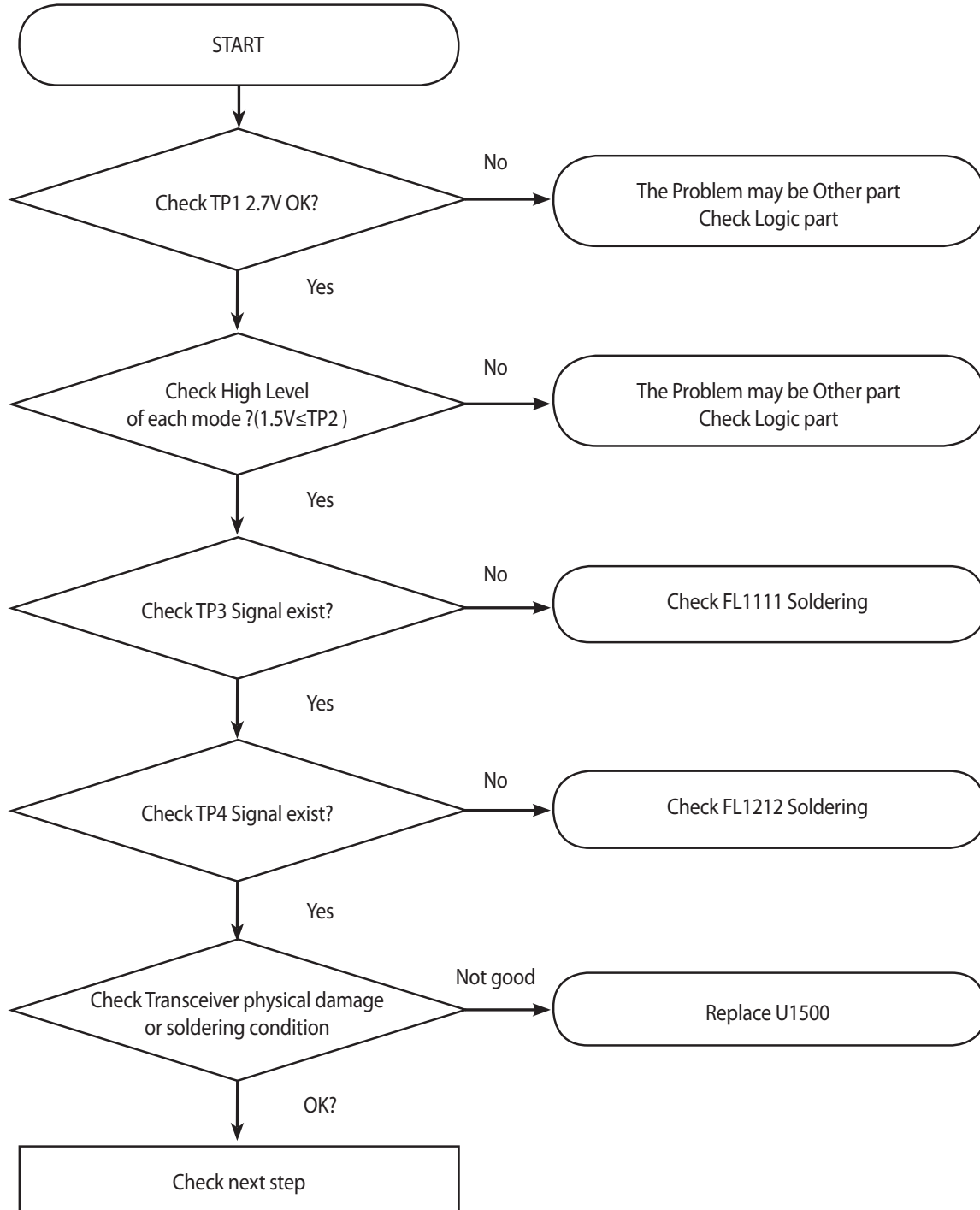


<Main Top>

### 3. TROUBLE SHOOTING



### 3. TROUBLE SHOOTING



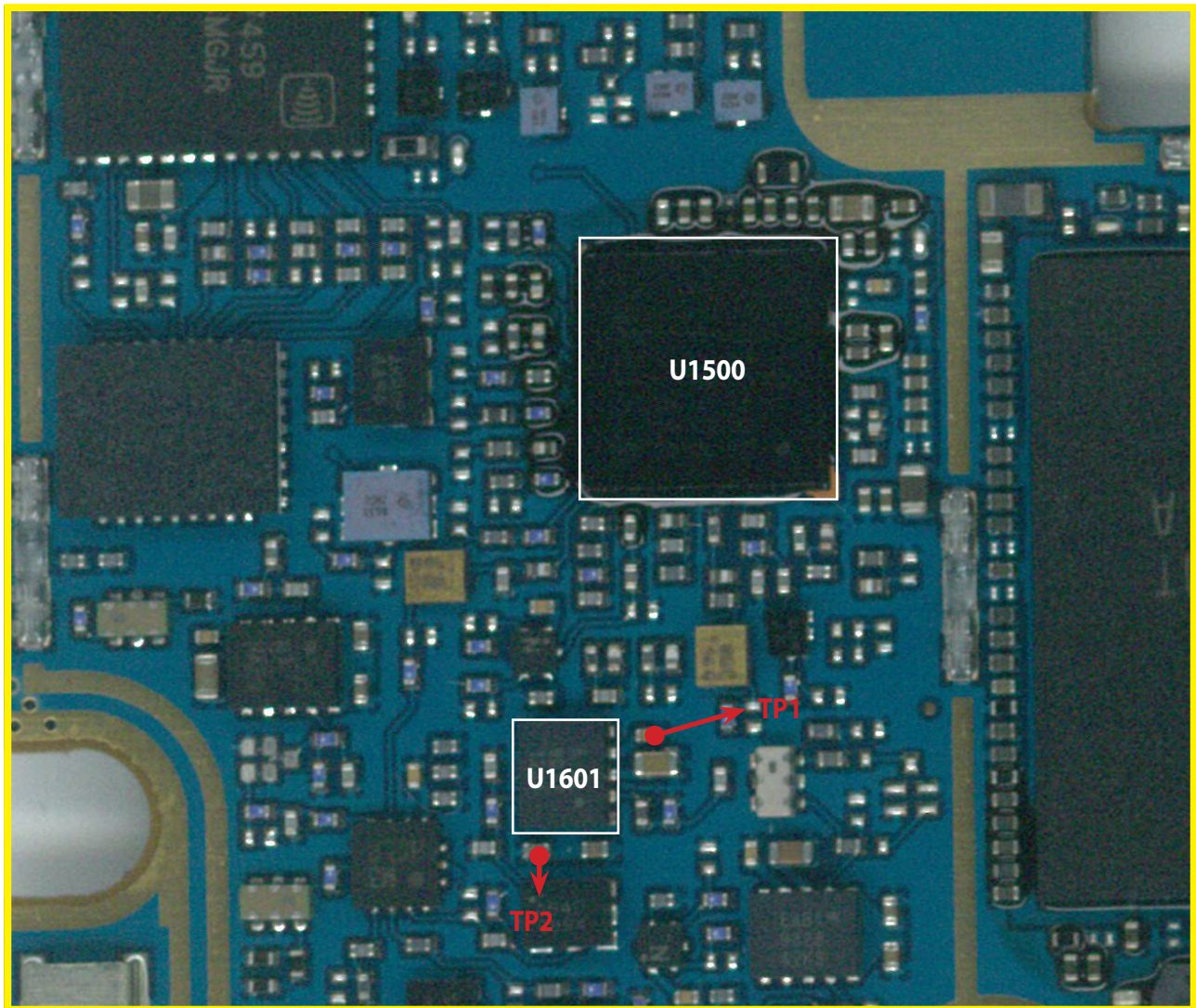


### 3.7.3 LTE B1/B3/B7/B8/B20/B28A/B28B/B40 TX

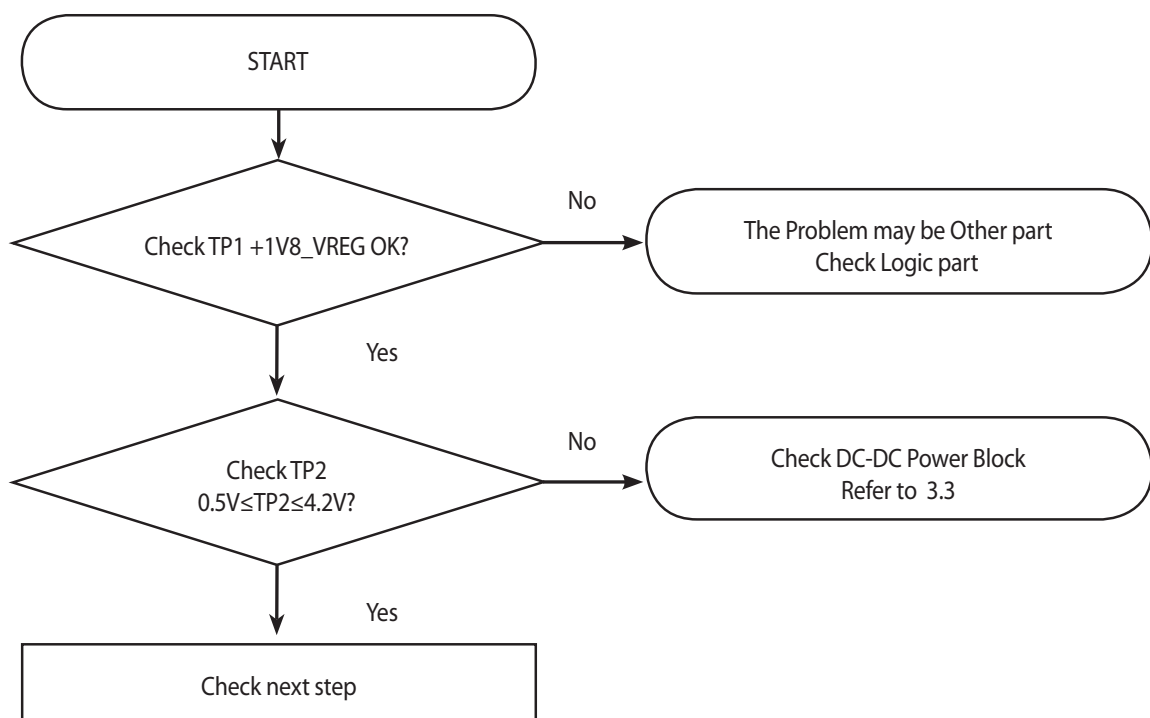
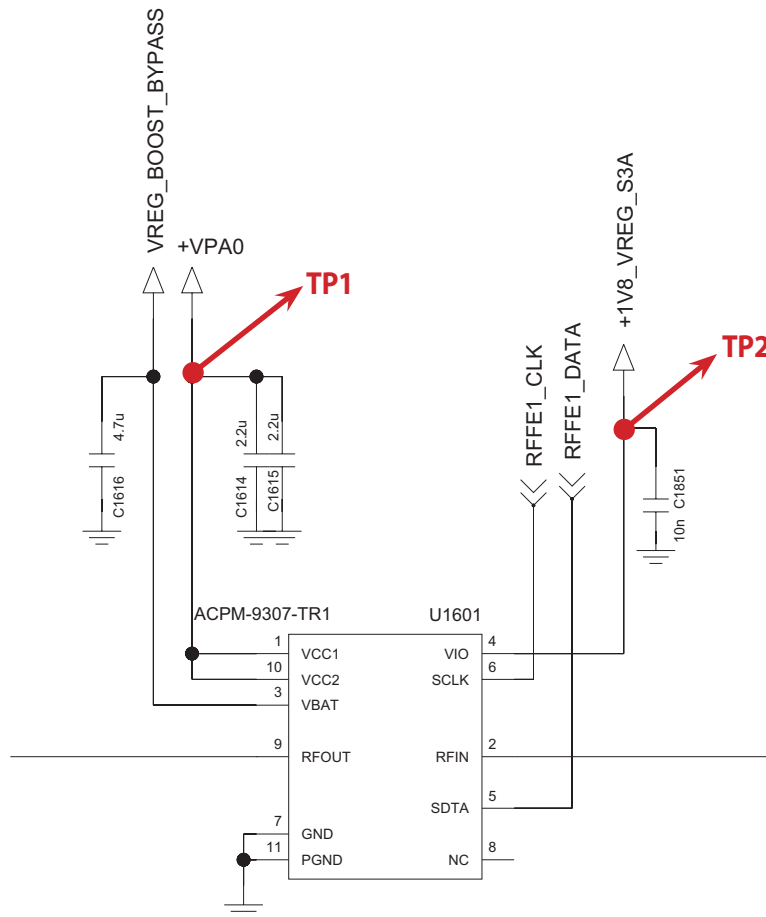
#### 3.7.3.1 Checking LTE PAM DC Power Circuit (B7/B28/B40)

Refer to 3.6.2.1

#### 3.7.3.2 Checking LTE PAM DC Power Circuit (B7)

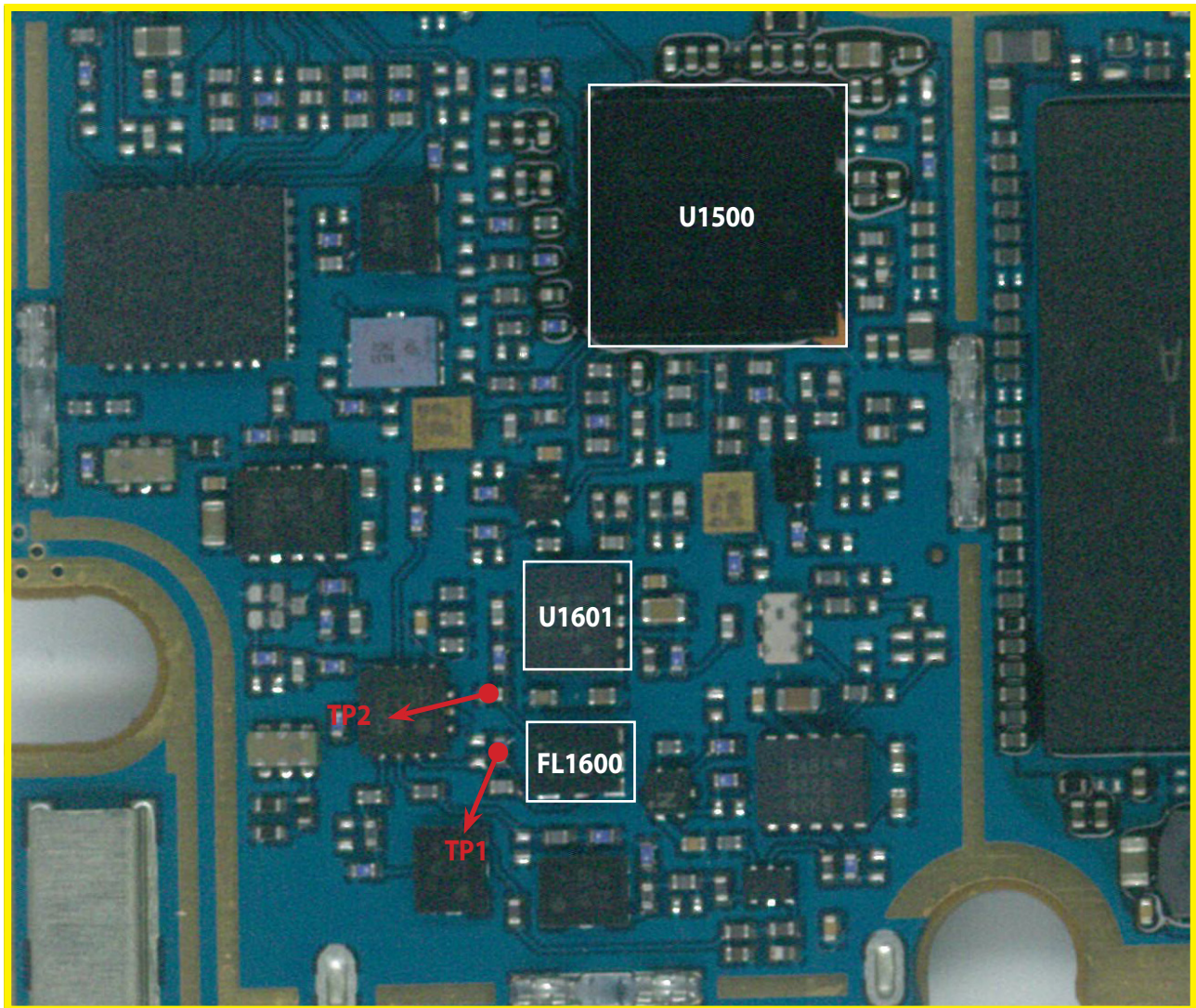


<Main Top>





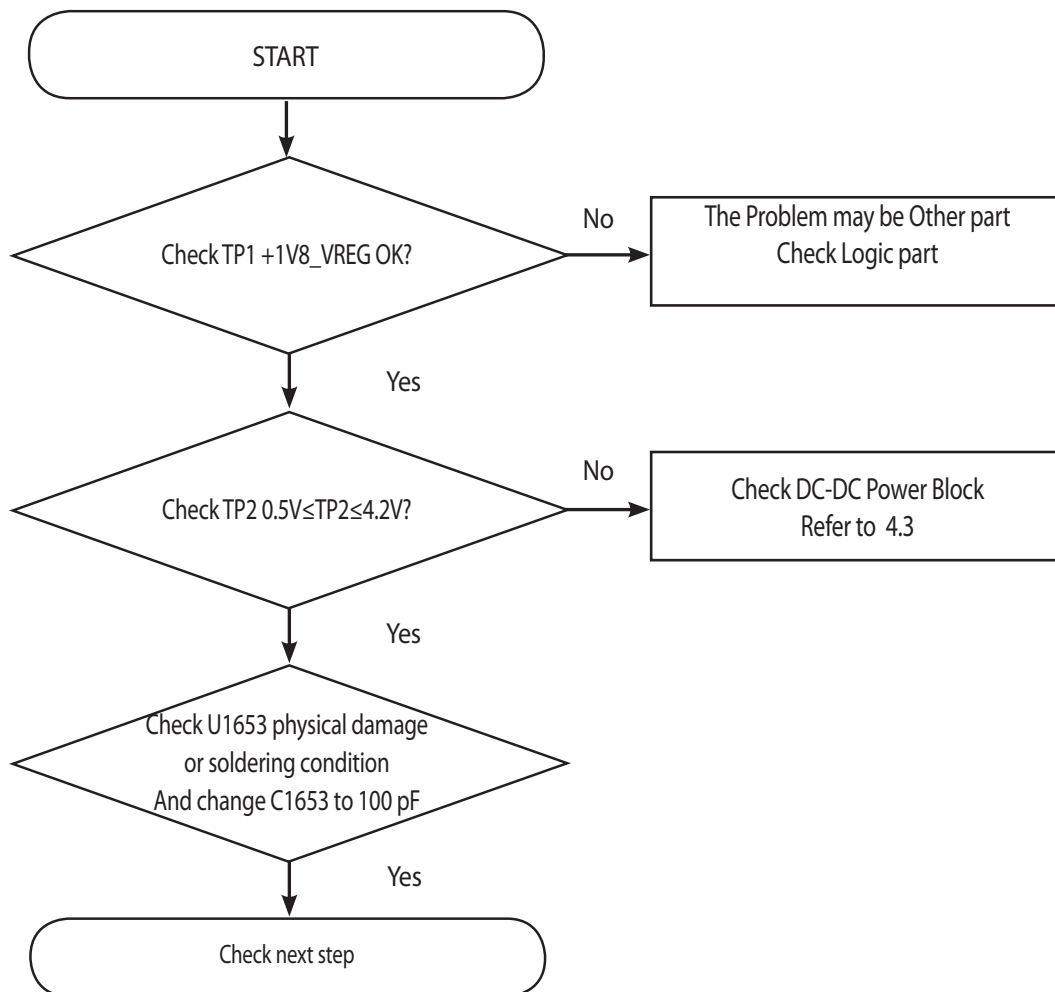
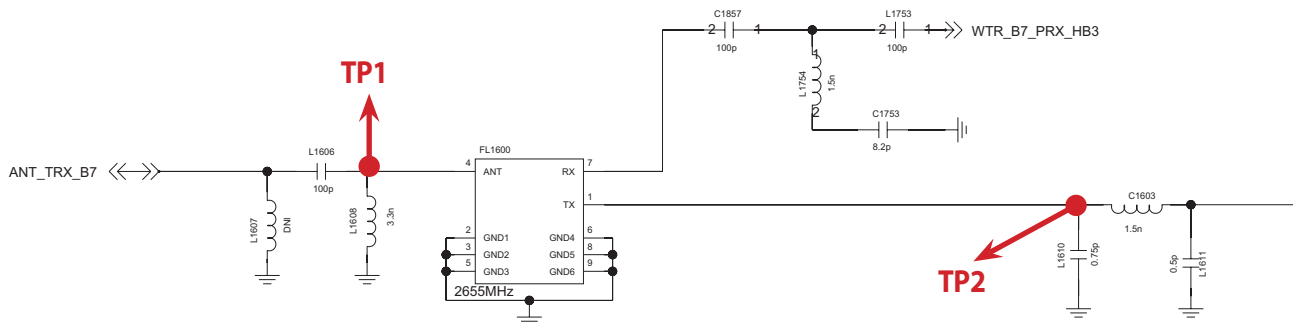
#### 3.7.3.3 Checking RF signal path(B7)



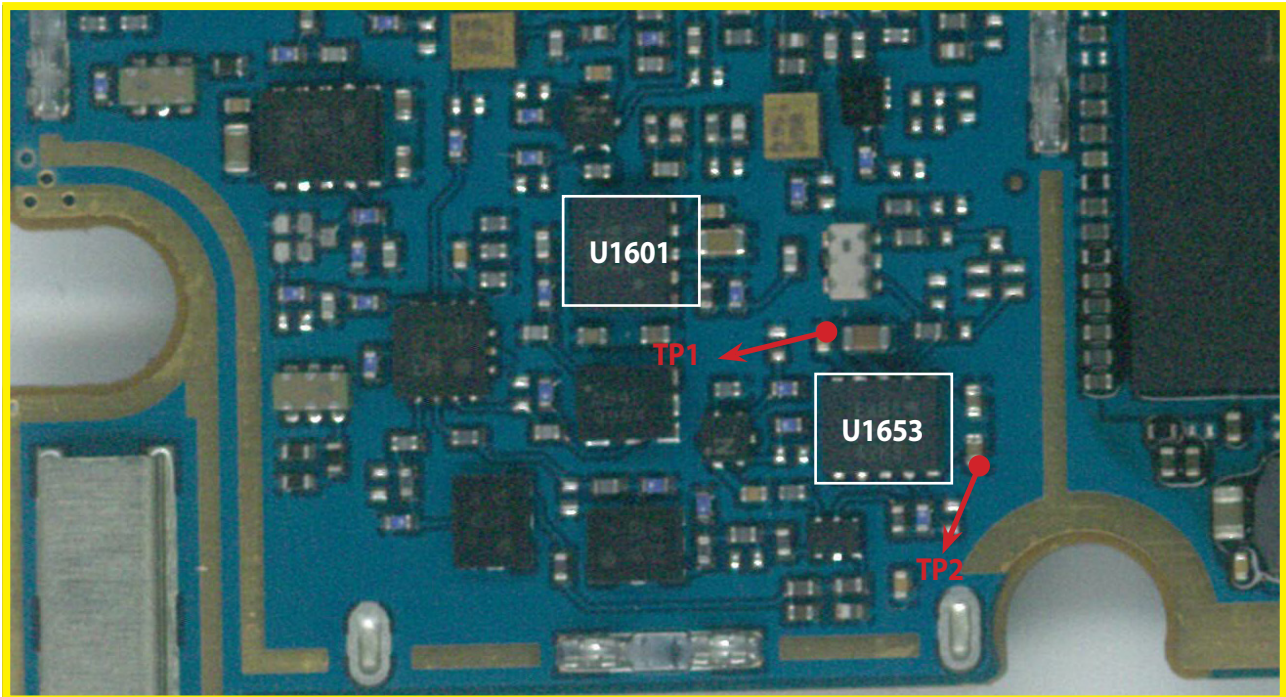
<Main Top>



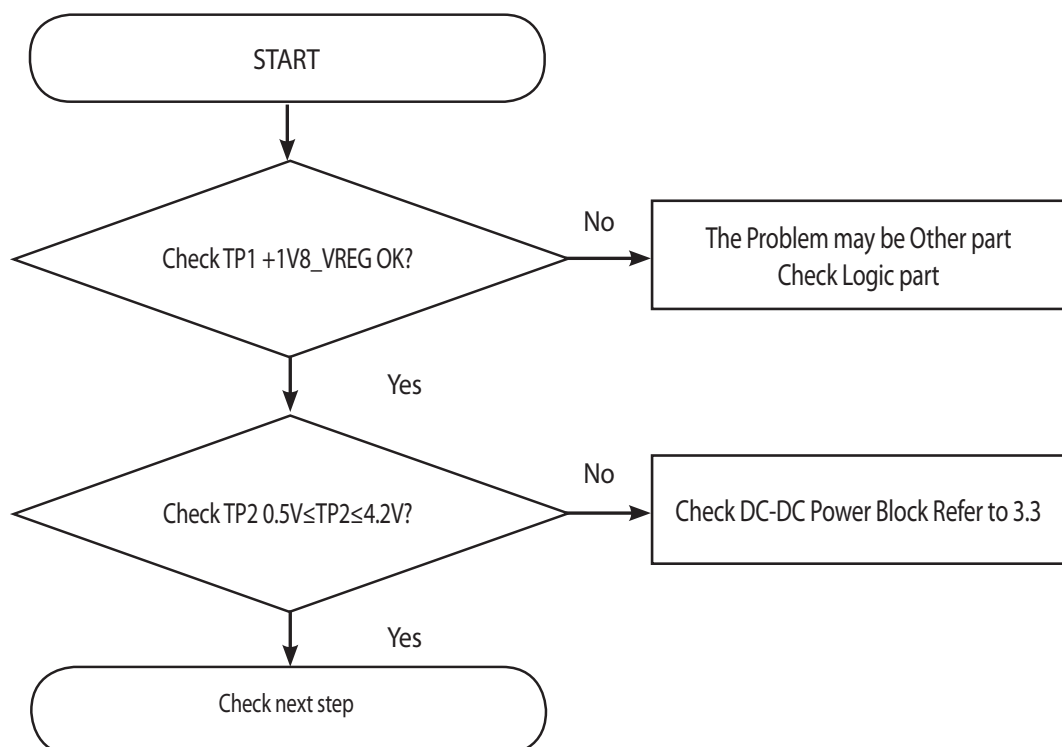
### 3. TROUBLE SHOOTING



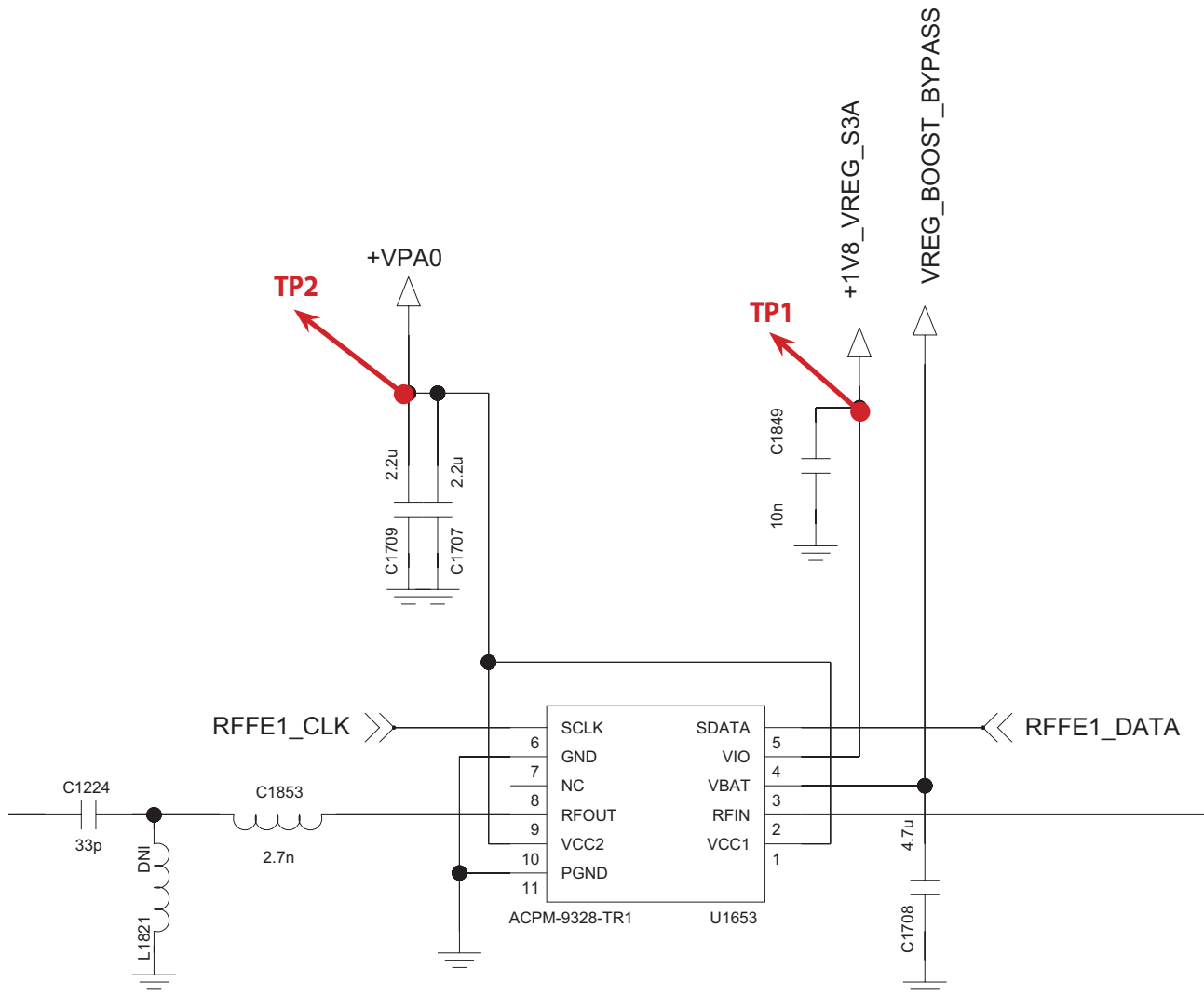
### 3.7.3.4 Checking LTE PAM DC Power Circuit (B28 A&B)



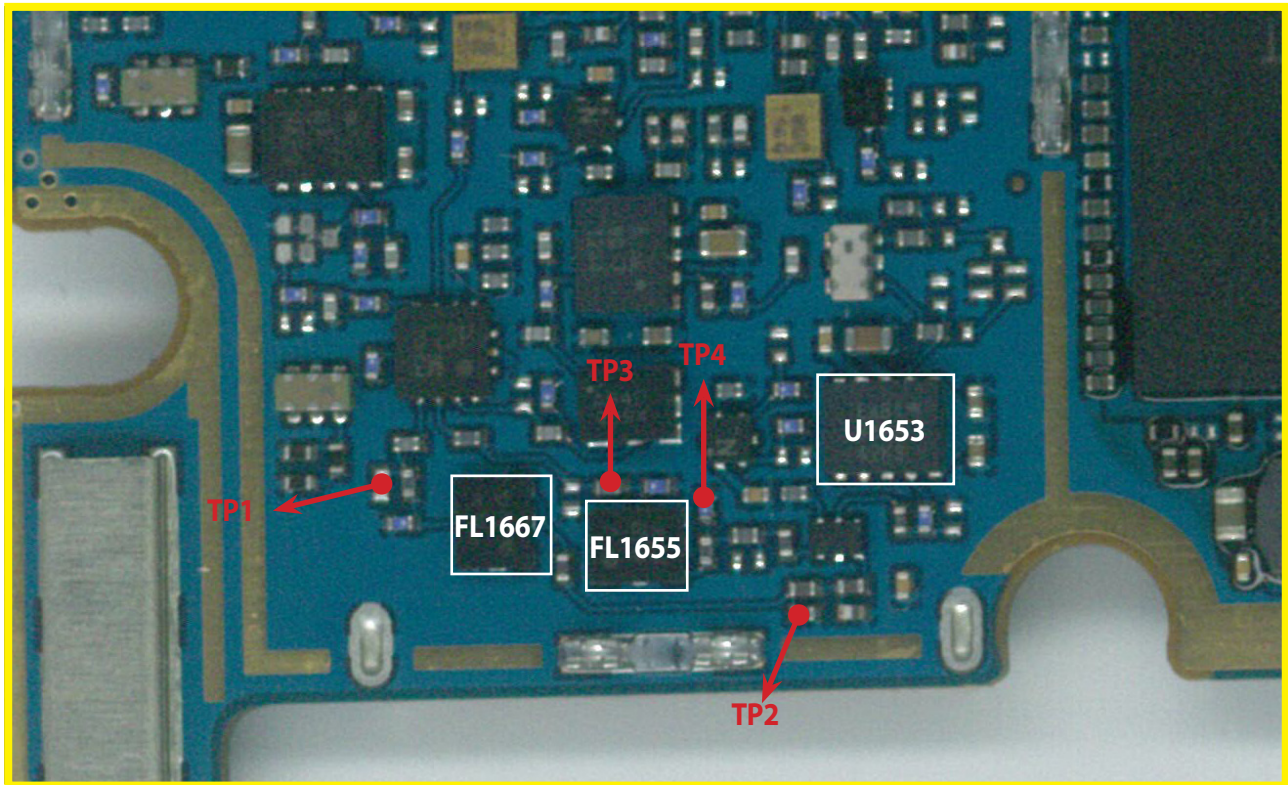
<Main Top>



### 3. TROUBLE SHOOTING

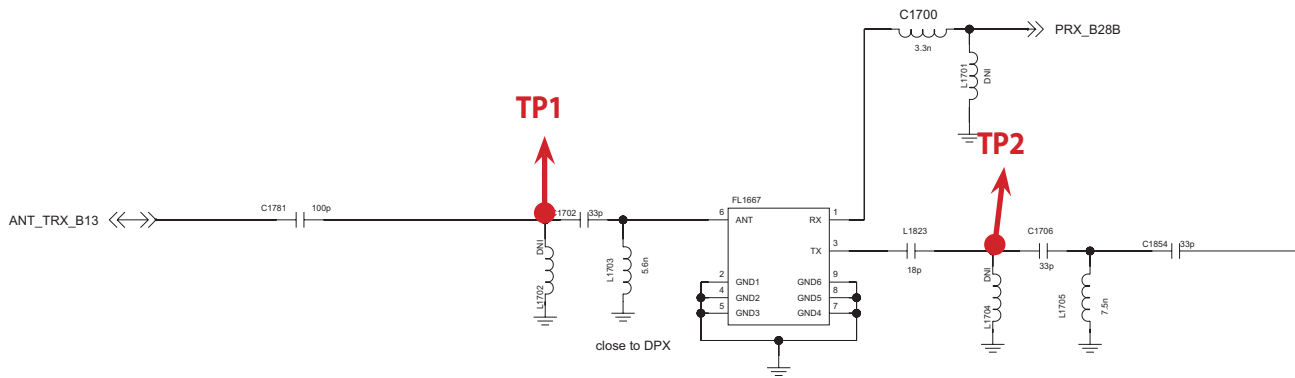
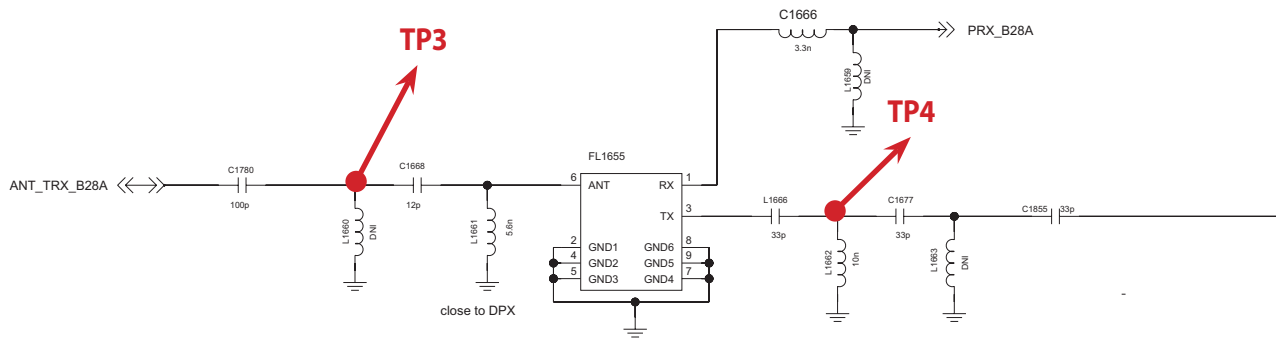


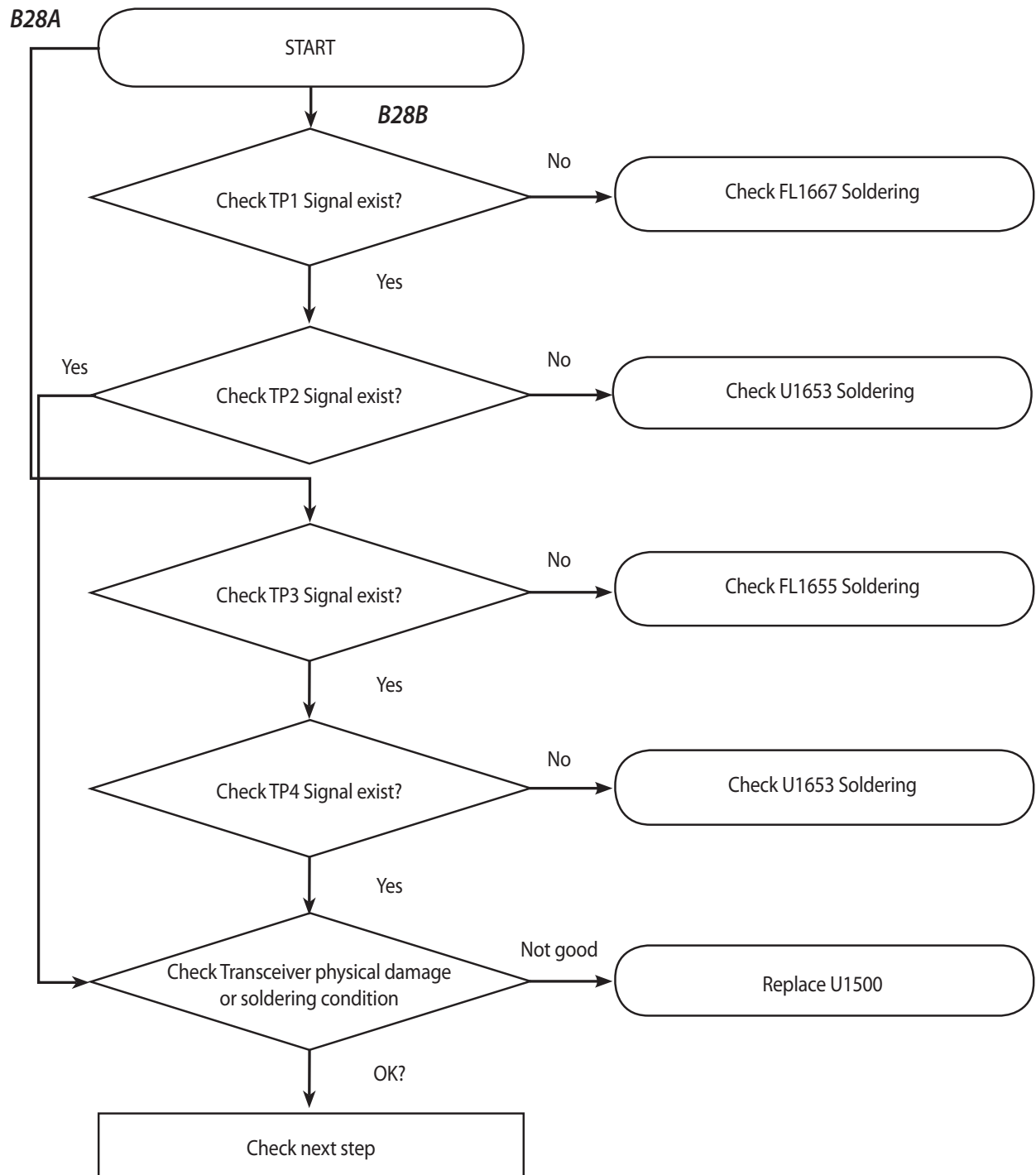
#### 3.7.3.5 Checking RF signal path (B28 A&B)



<Main Top>

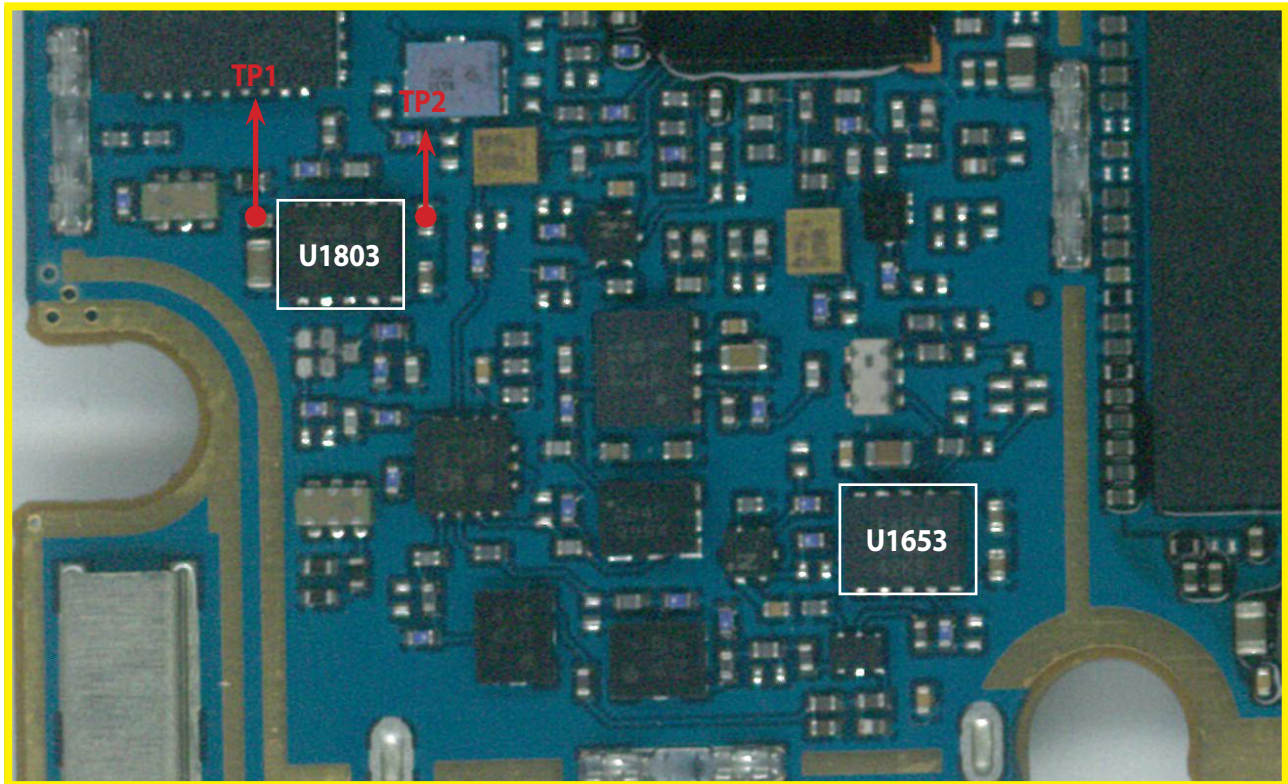
### 3. TROUBLE SHOOTING





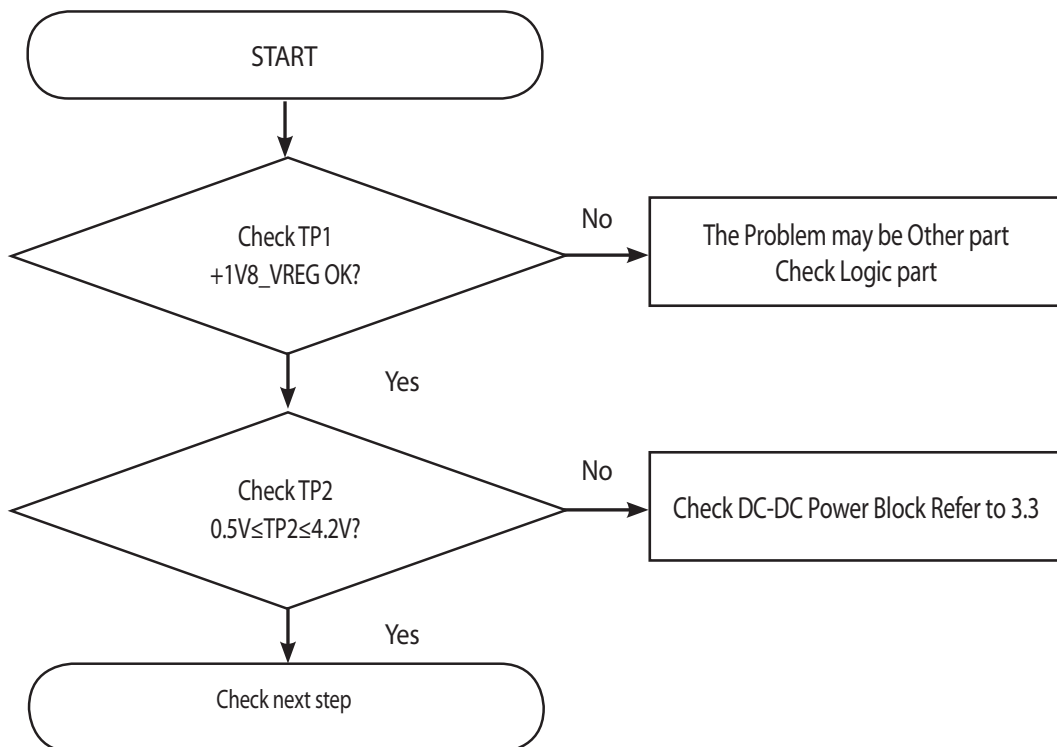
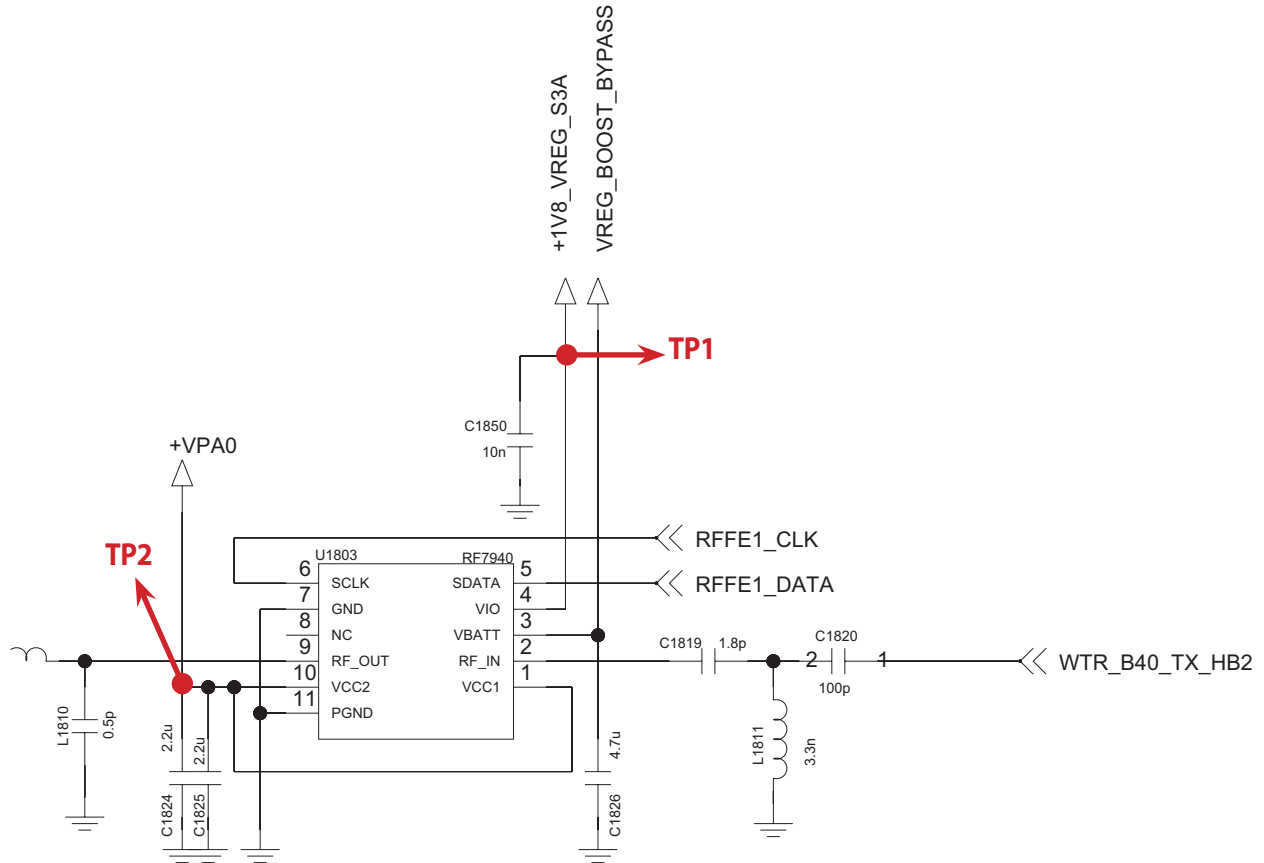


#### 3.7.3.6 Checking LTE PAM DC Power Circuit (B40)

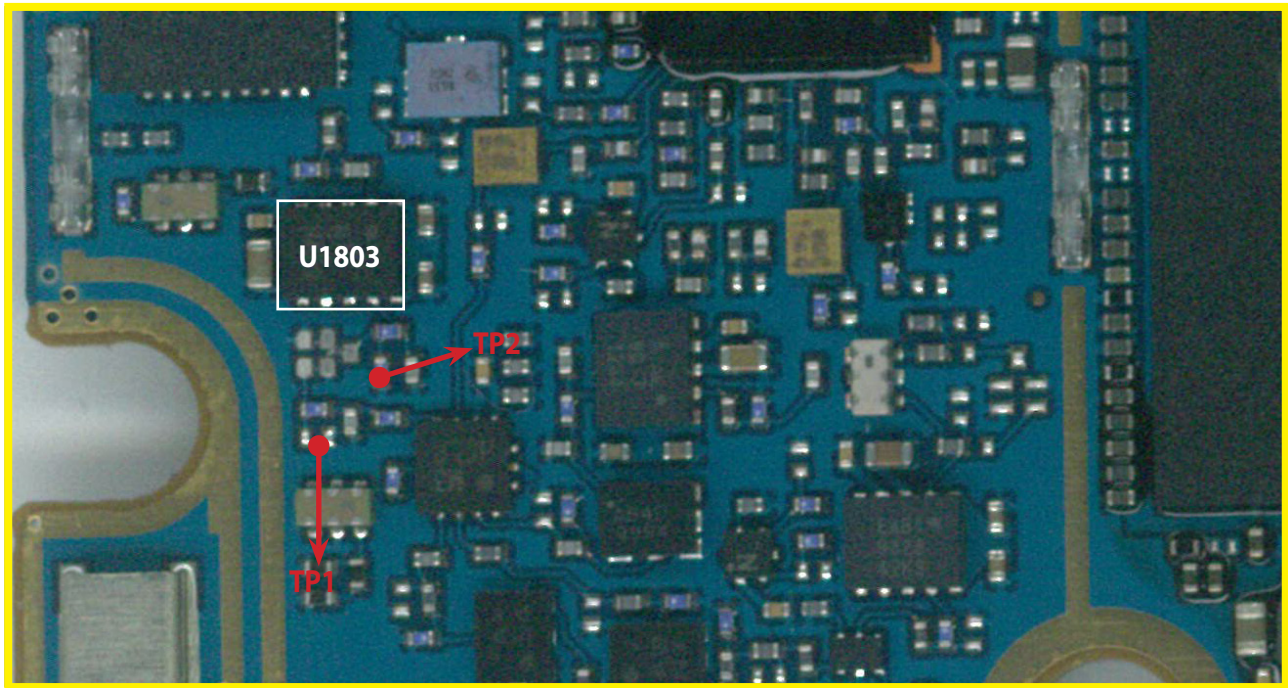


<Main Top>

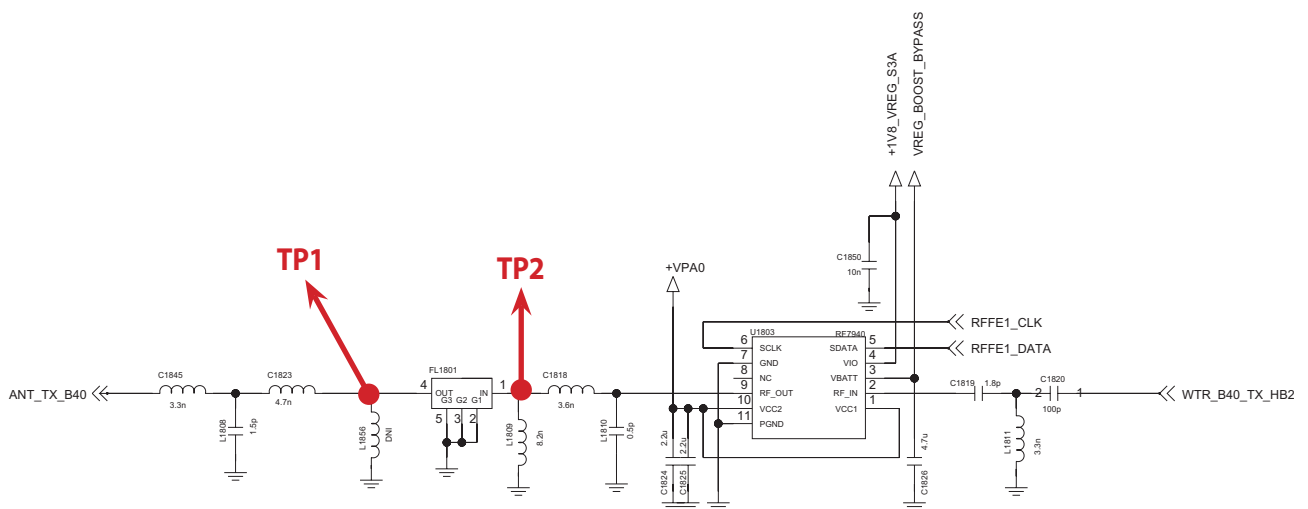
### 3. TROUBLE SHOOTING



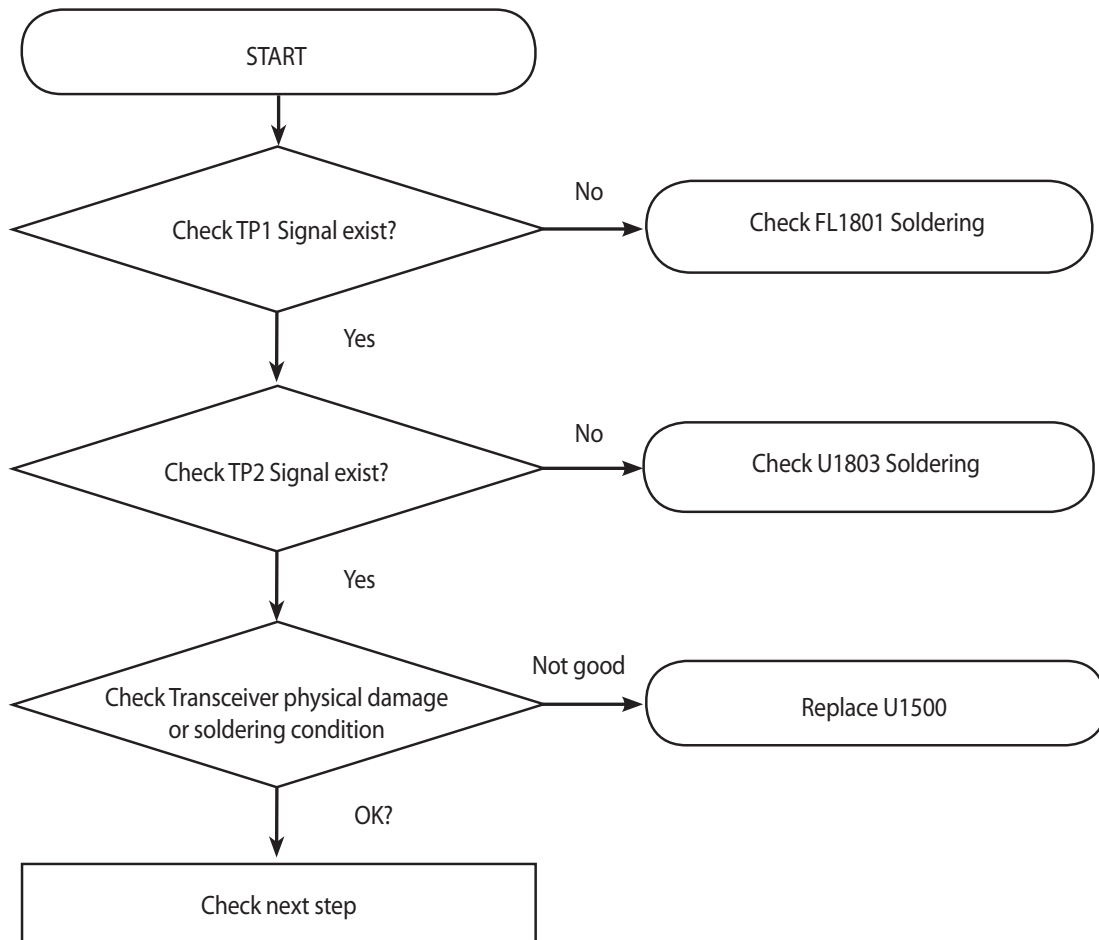
### 3.7.3.7 Checking RF signal path (B40)



<Main Top>



### 3. TROUBLE SHOOTING



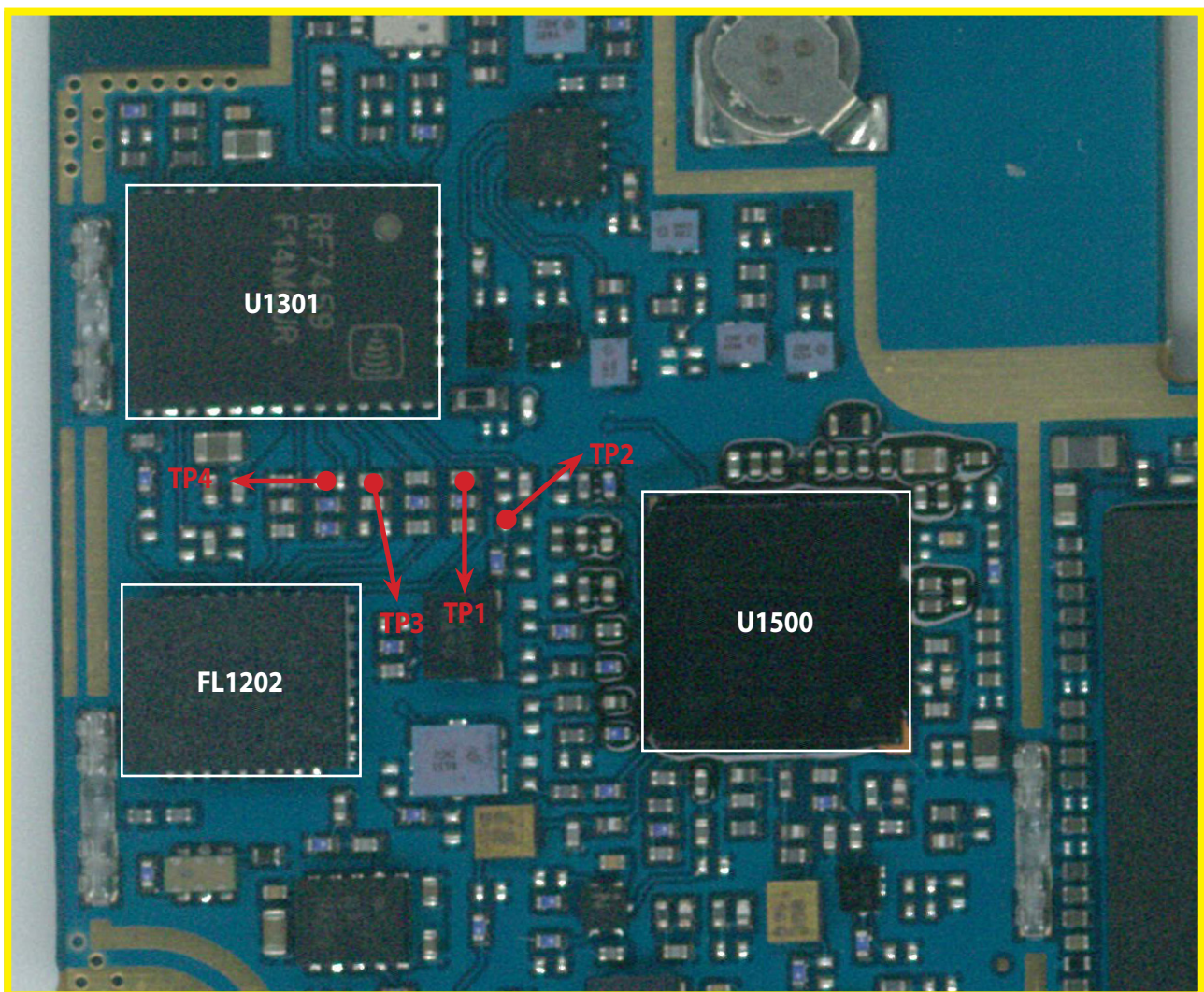


### 3.7.4 LTE B1/B3/B7/B8/B20/B28A/B28B/B40 TX

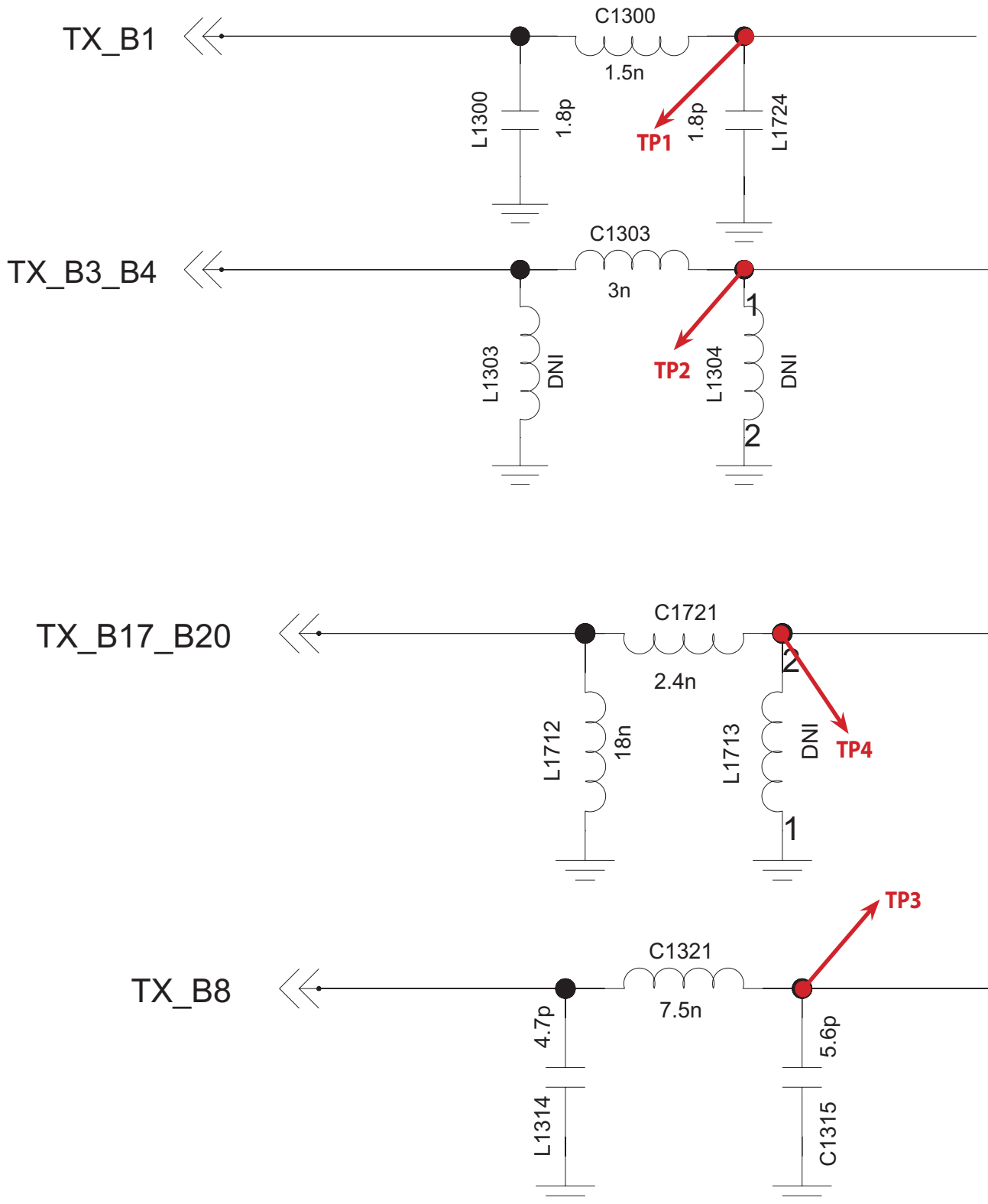
#### 3.7.4.1 Checking RF signal path(LTE B1/B3/8/20)

Refer to 3.5.1.1

#### 3.7.4.2 Checking RF signal path(LTE B1/3/8/20 output)



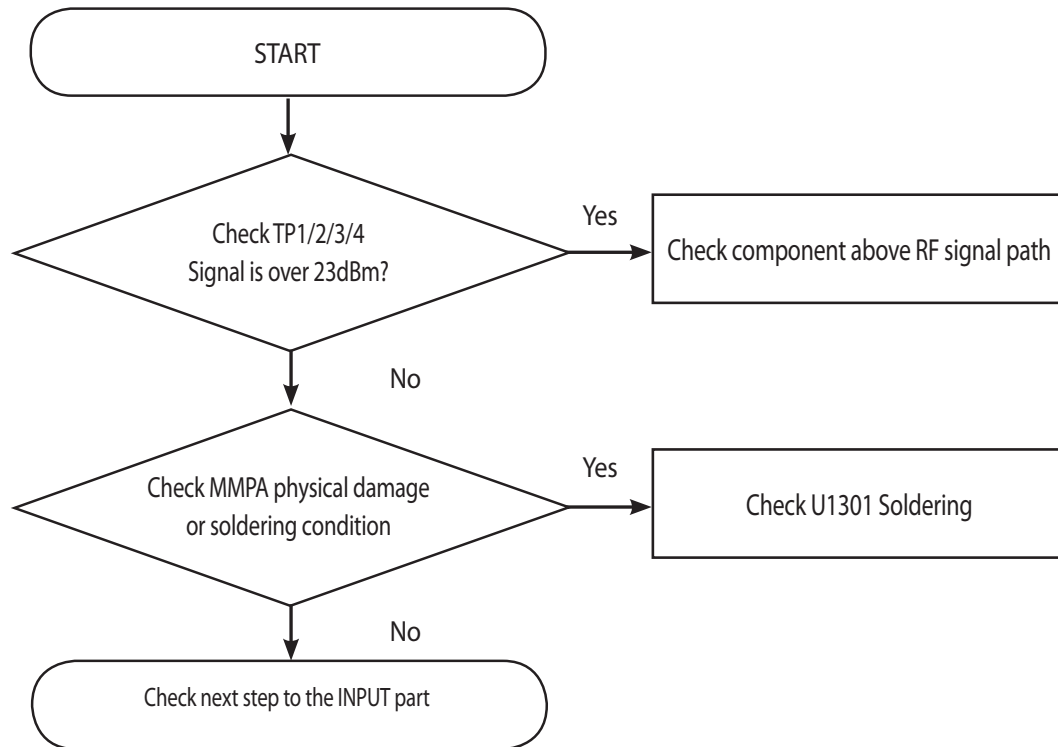
<Main Top>



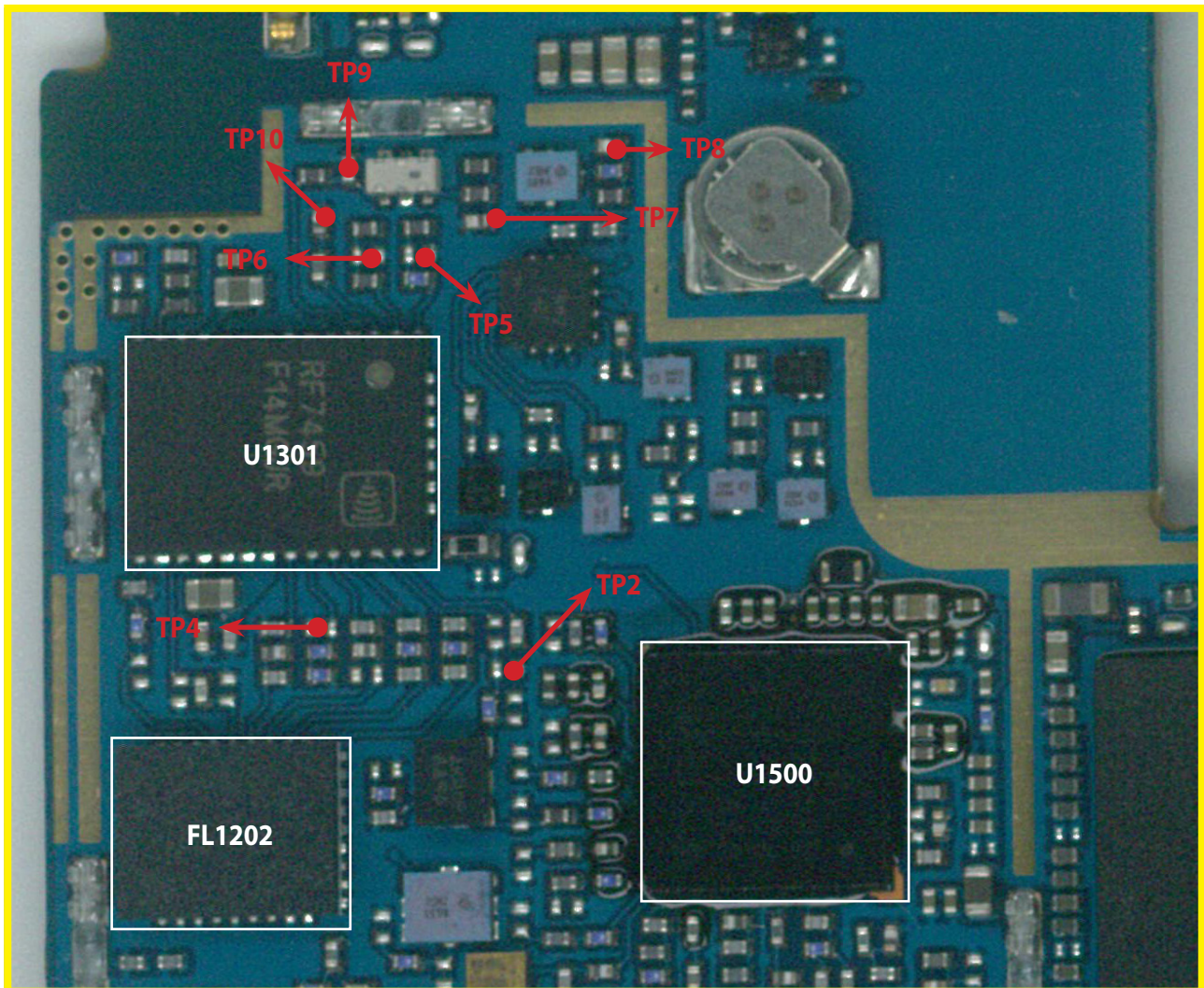


### 3. TROUBLE SHOOTING

---

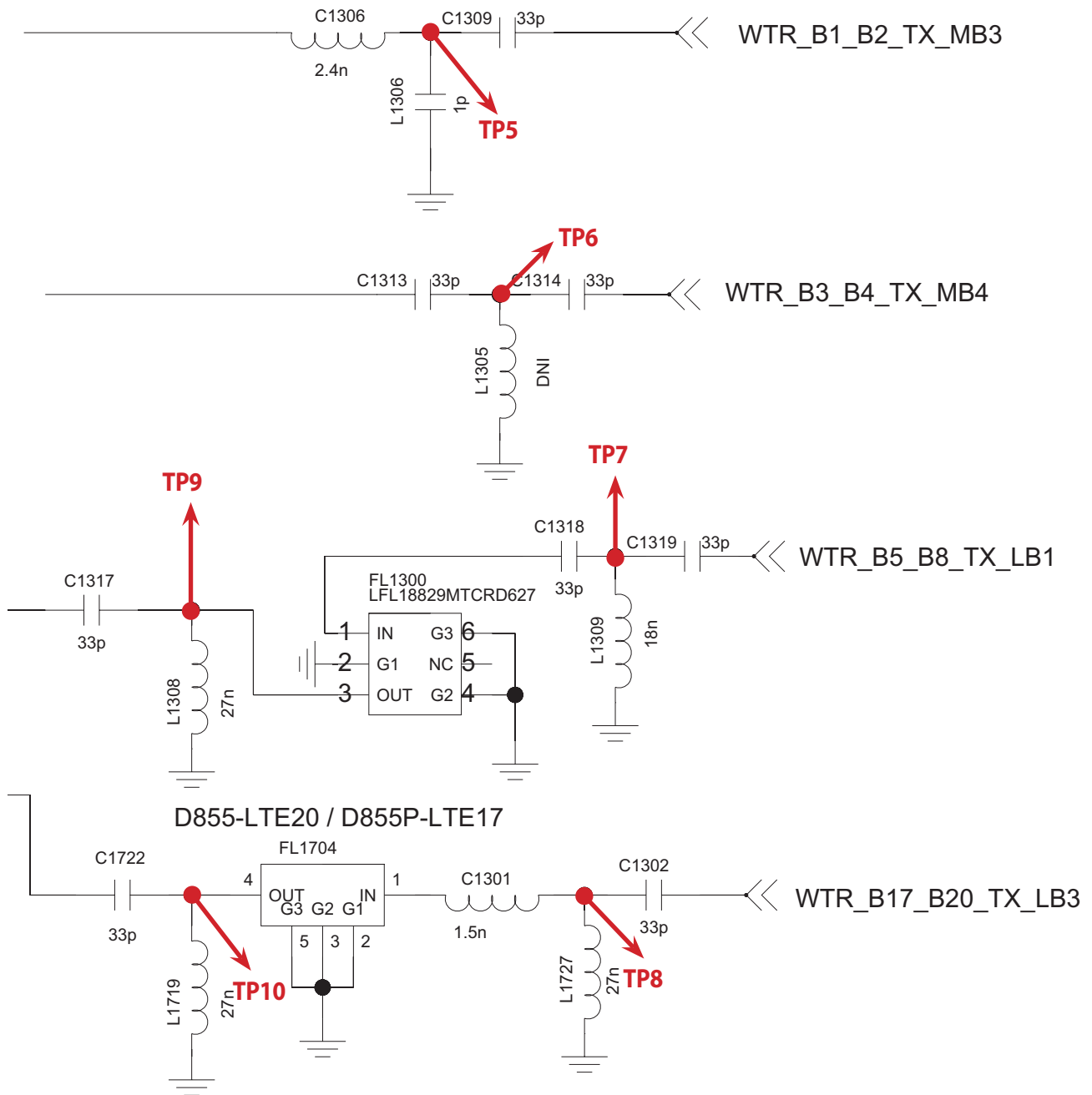


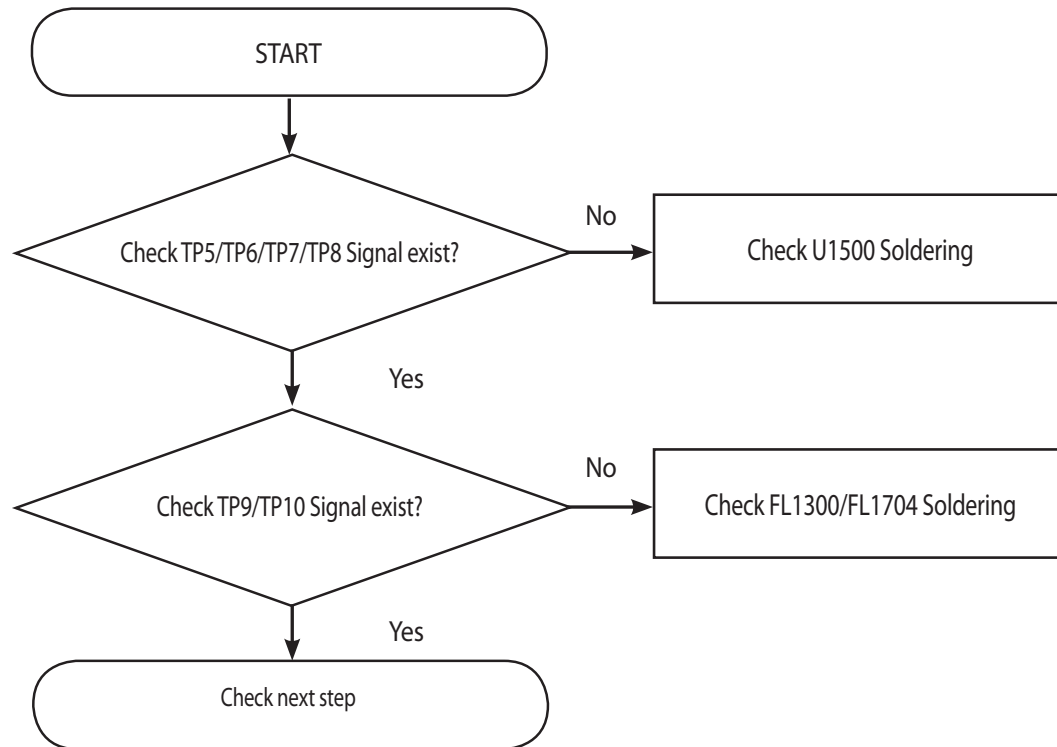
### 3.7.4.3 Checking RF signal path(LTE B1/3/8/20 Input)



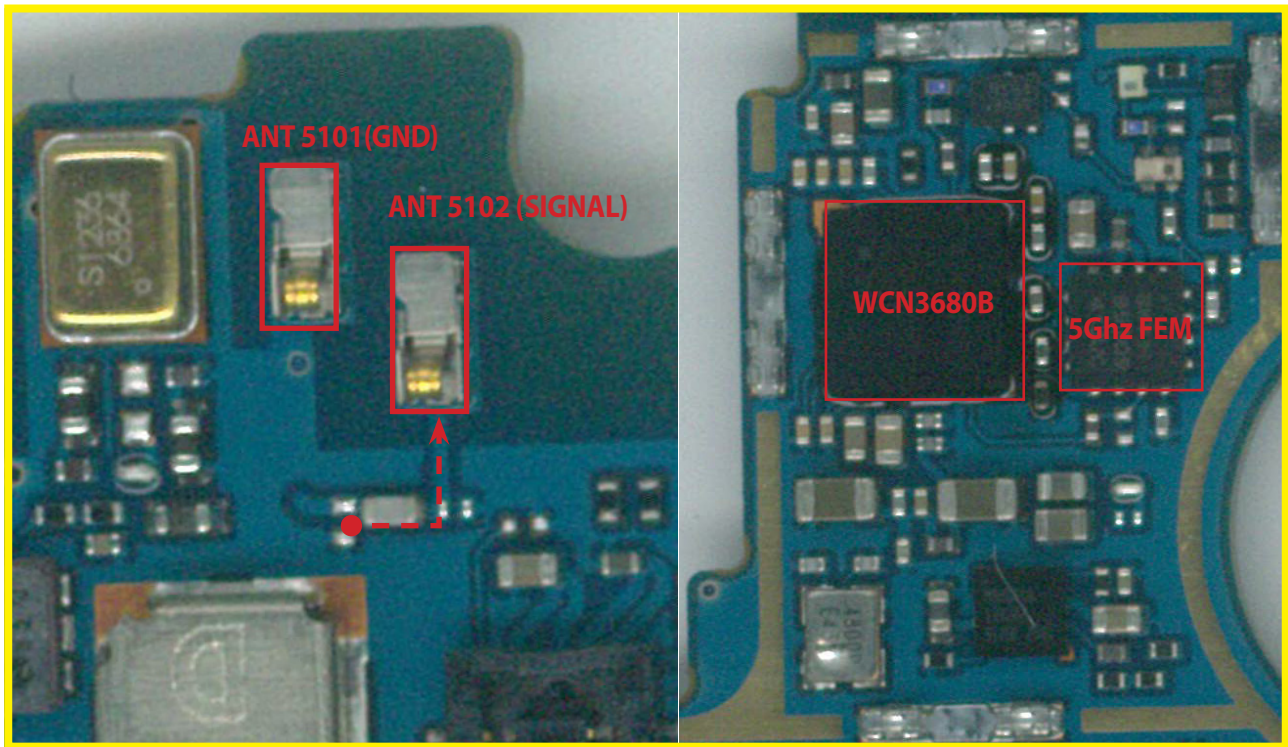
<Main Top>

### 3. TROUBLE SHOOTING



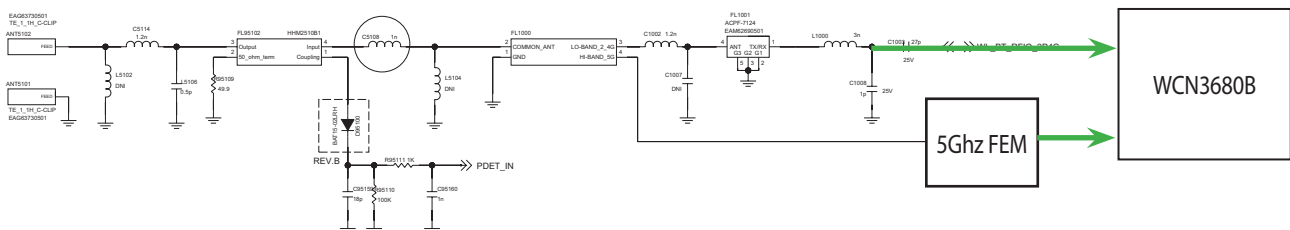


#### 3.8 BT&WIFI&FM PART



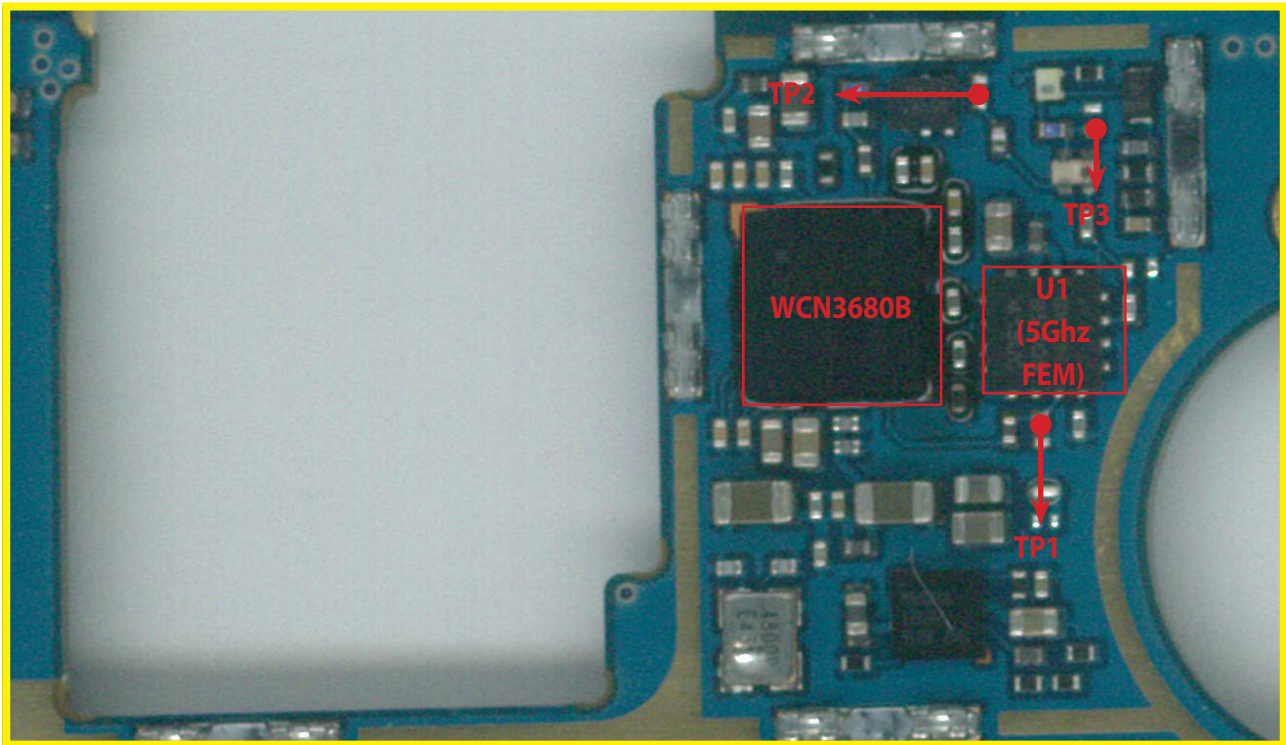
*BOTTOM*

*TOP*





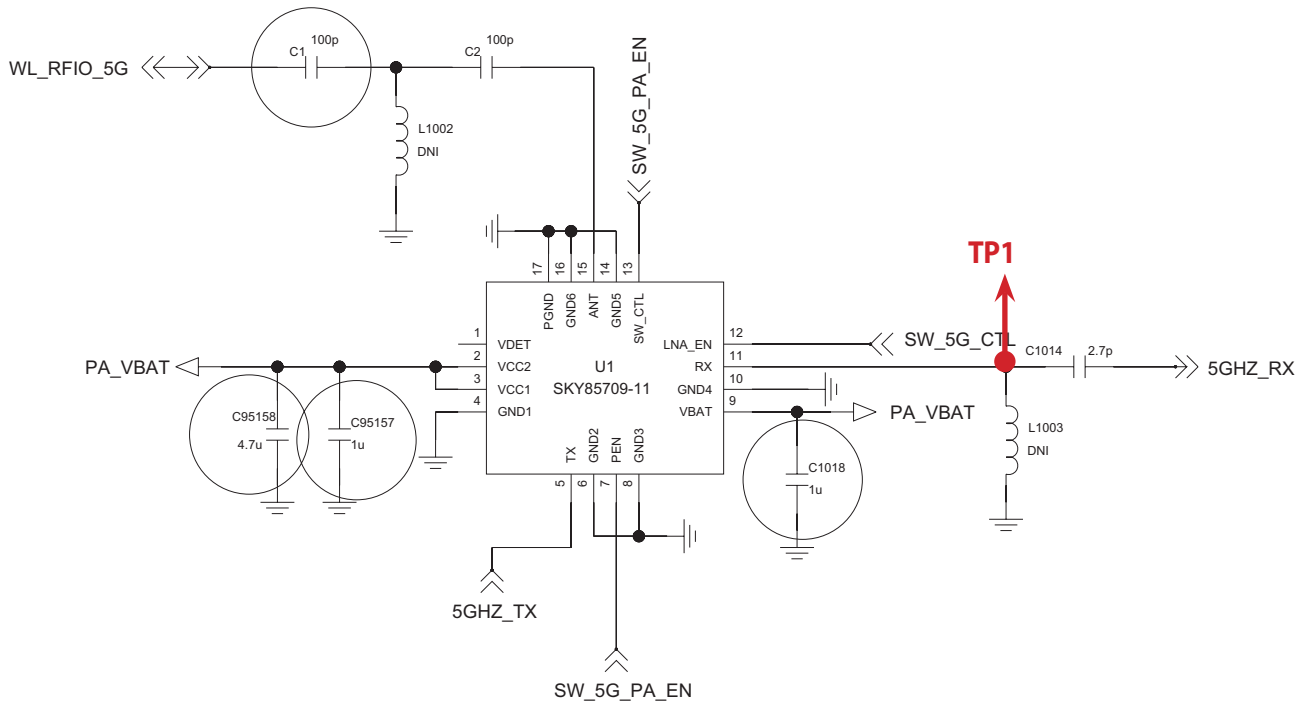
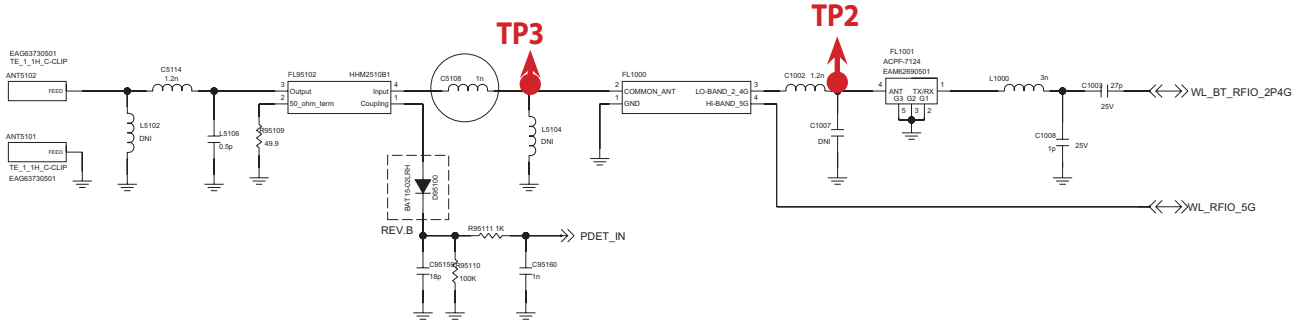
### 3.8.1 BT&WIFI



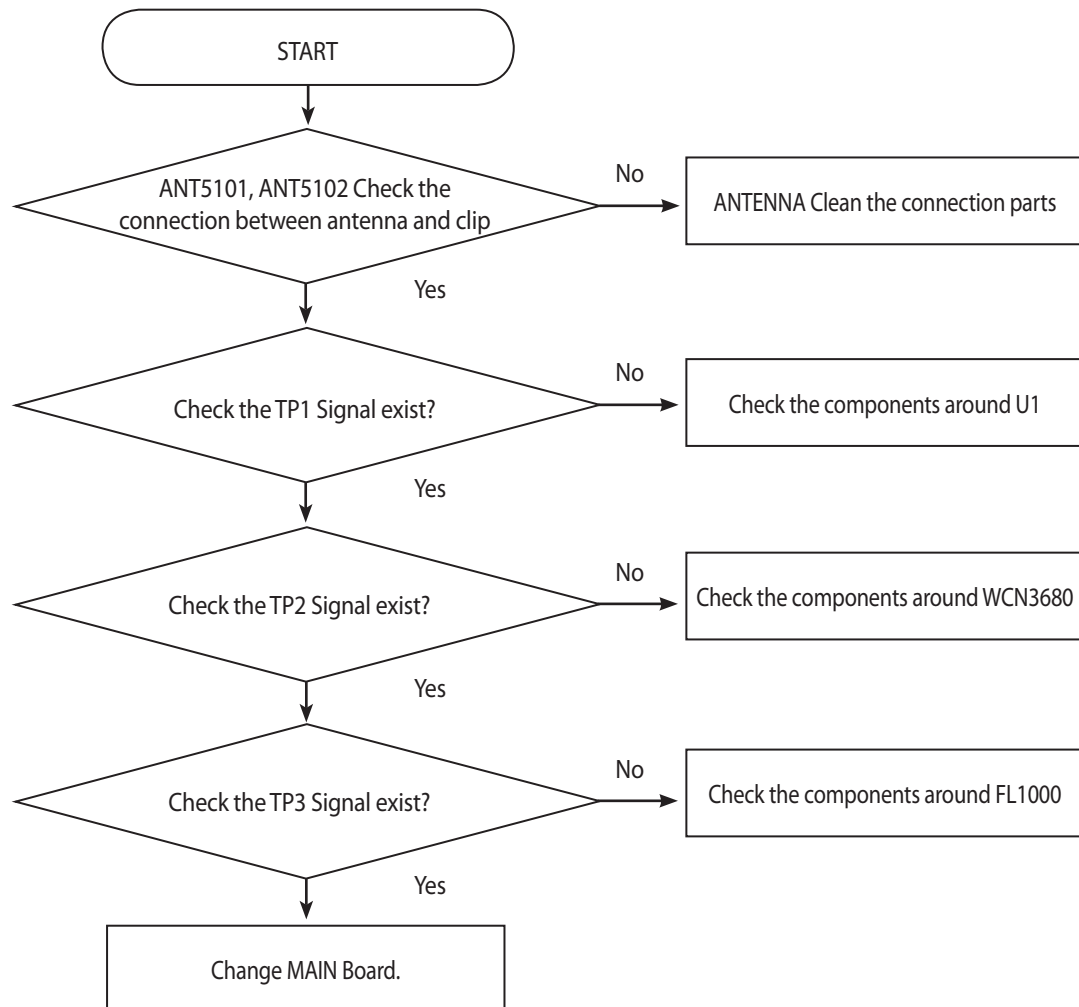
<Main Top>



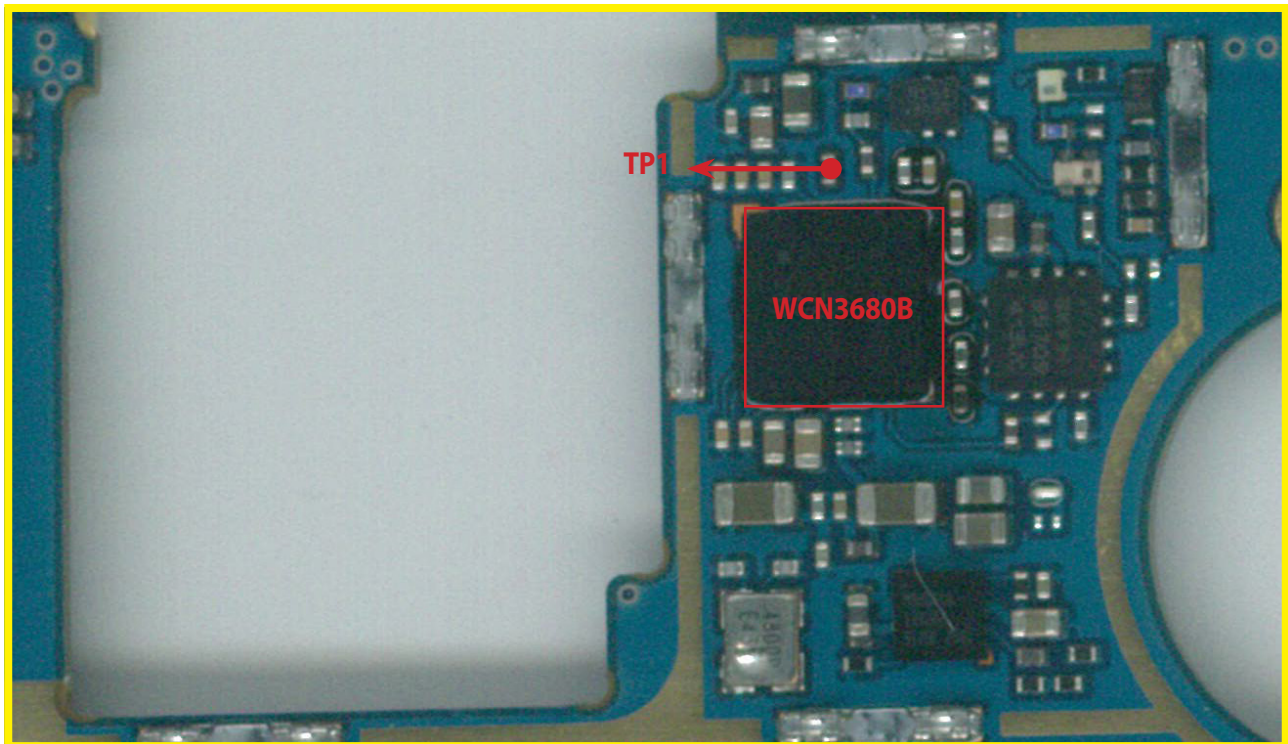
### 3. TROUBLE SHOOTING



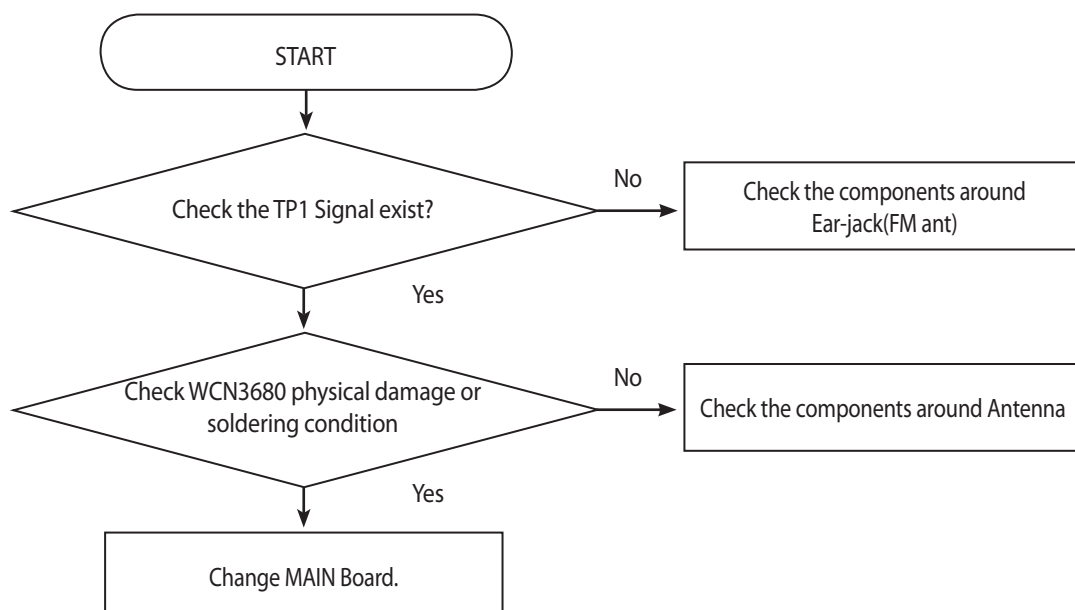
### 3. TROUBLE SHOOTING



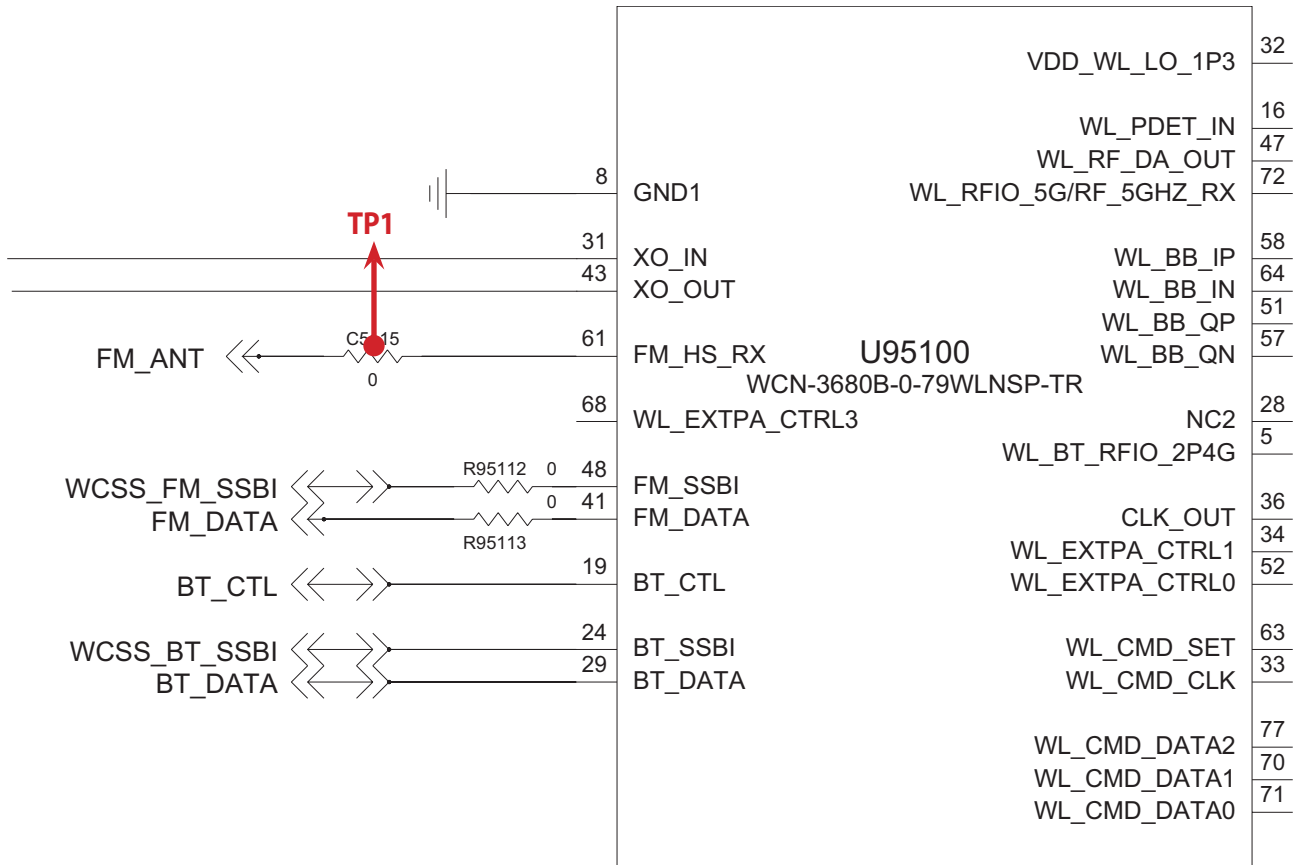
### 3.8.2 FM



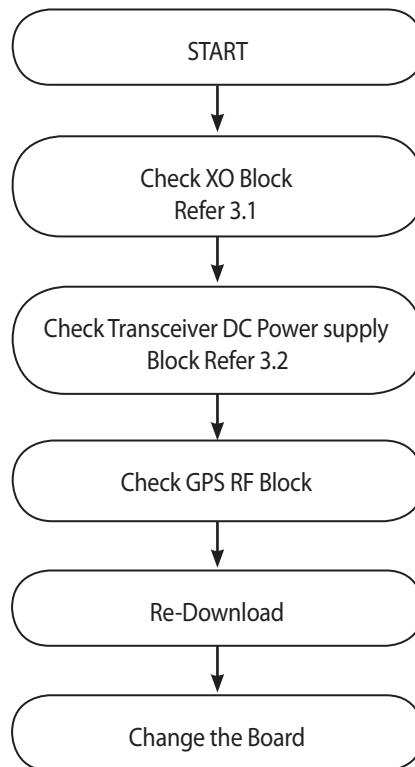
<Main Top>



### 3. TROUBLE SHOOTING



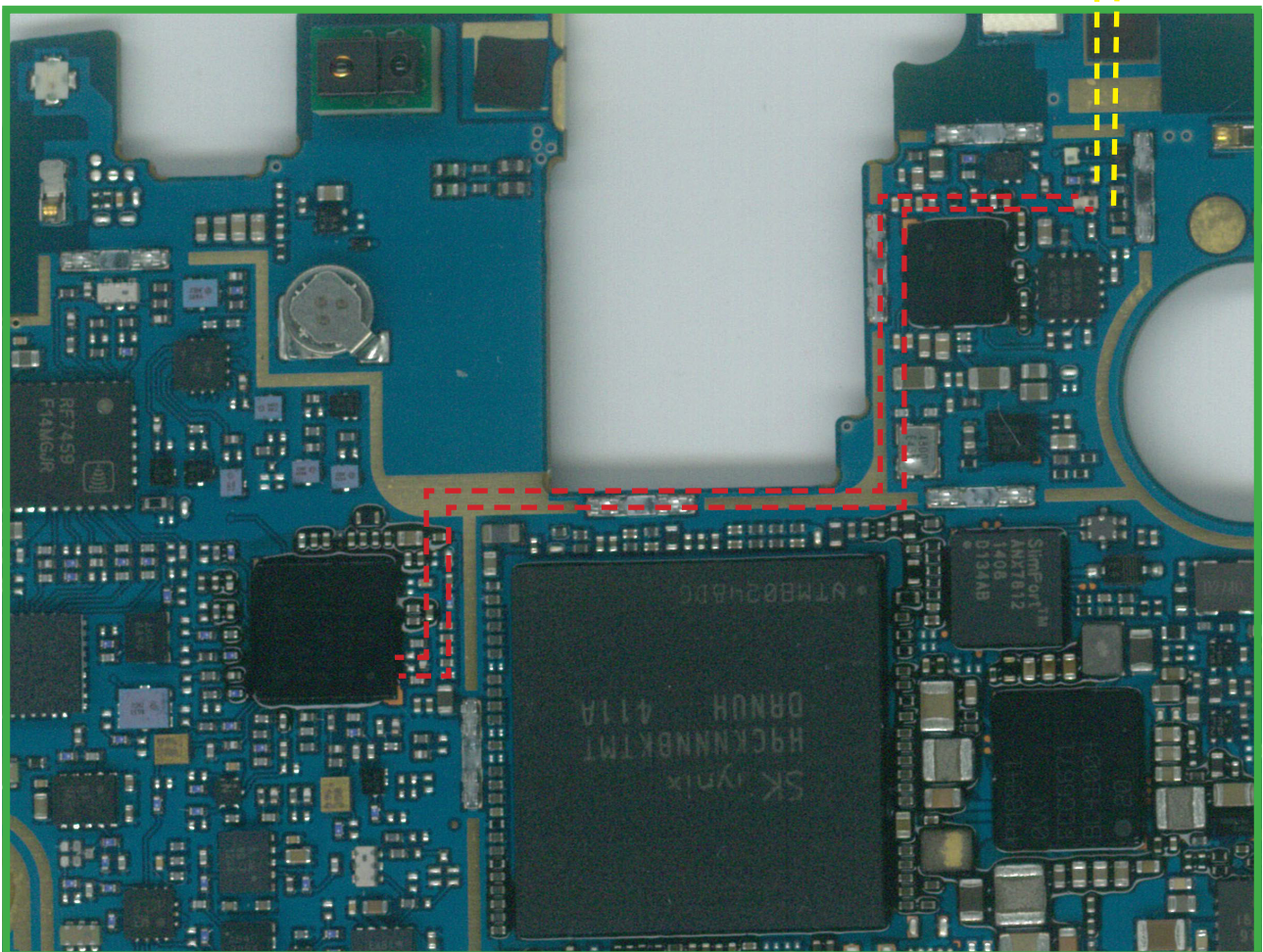
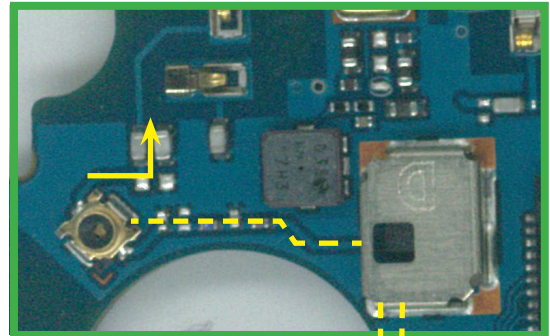
### 3.9 GPS Part



### 3. TROUBLE SHOOTING

#### GPS RF PATH

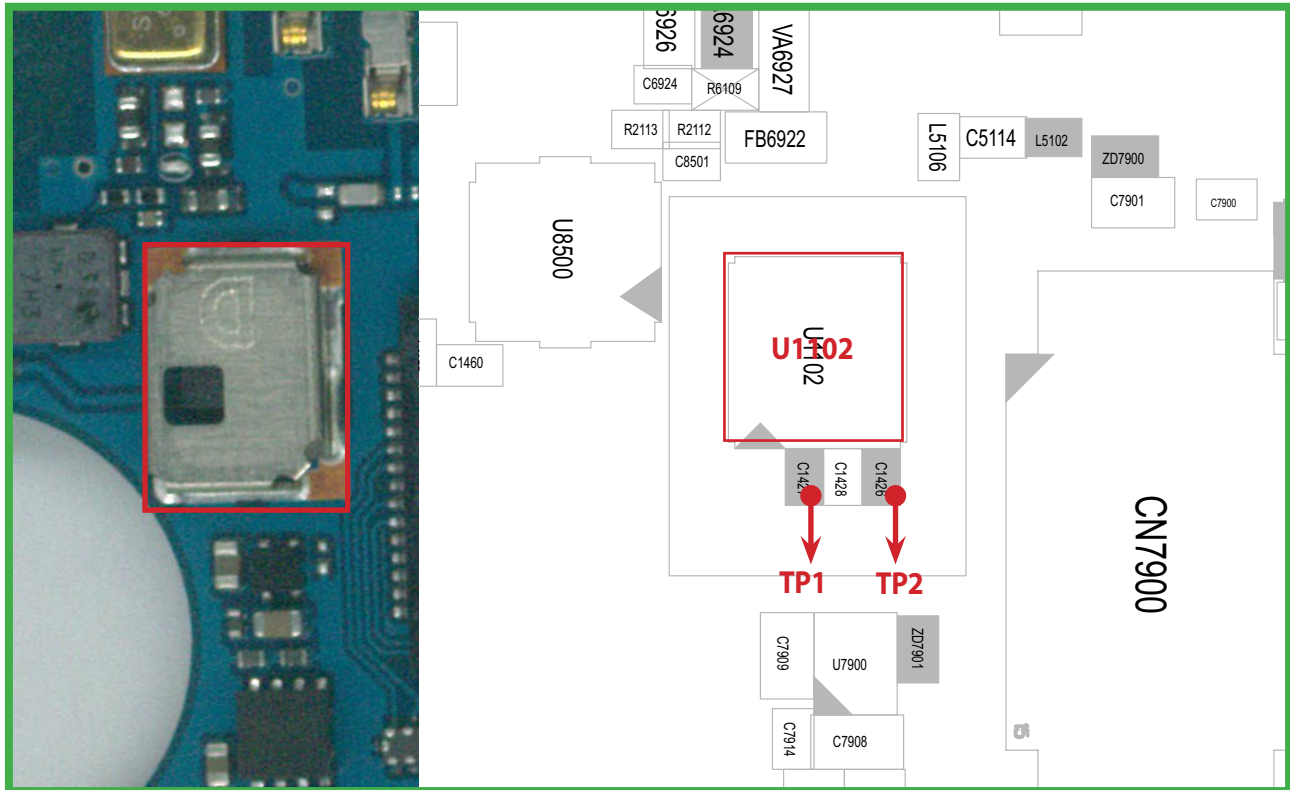
<Main Bot>



<Main Top>

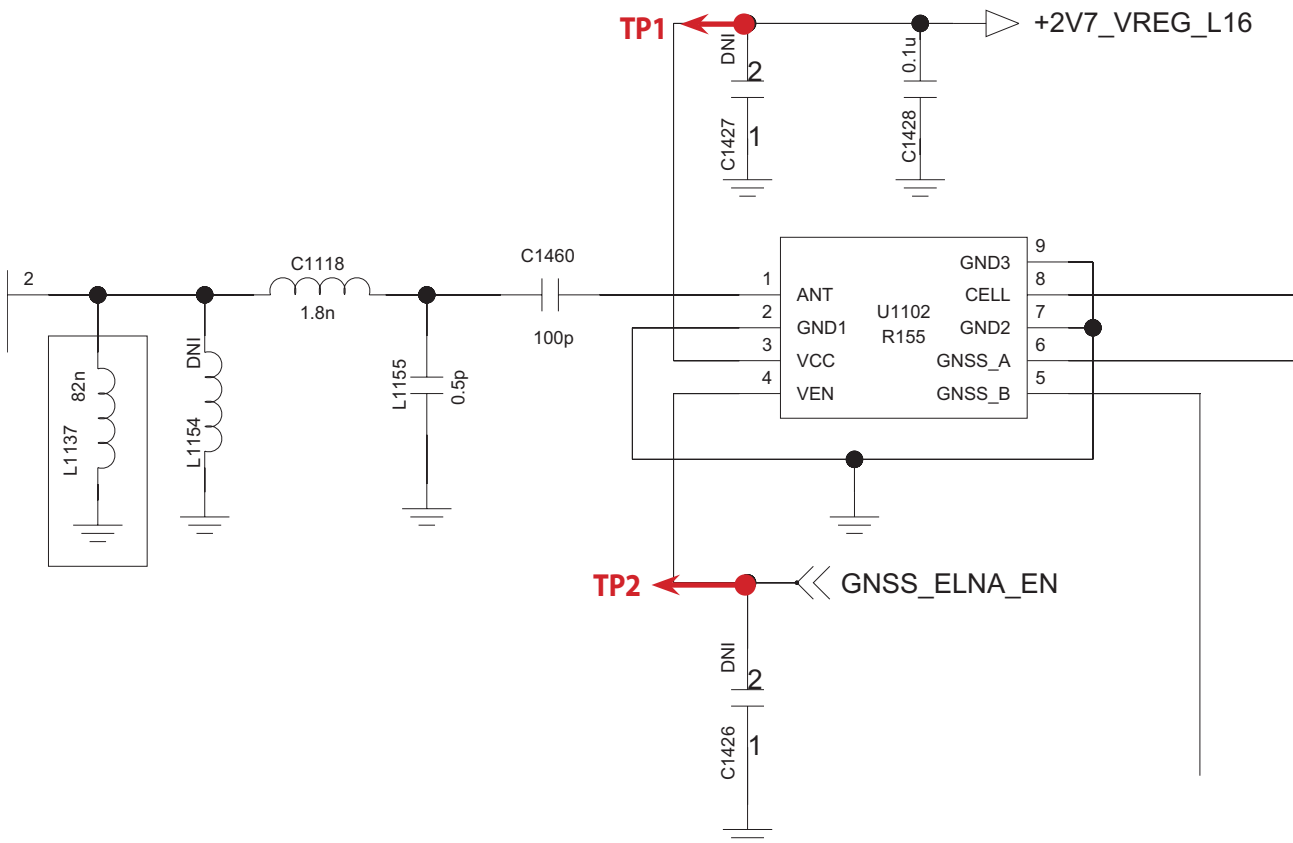
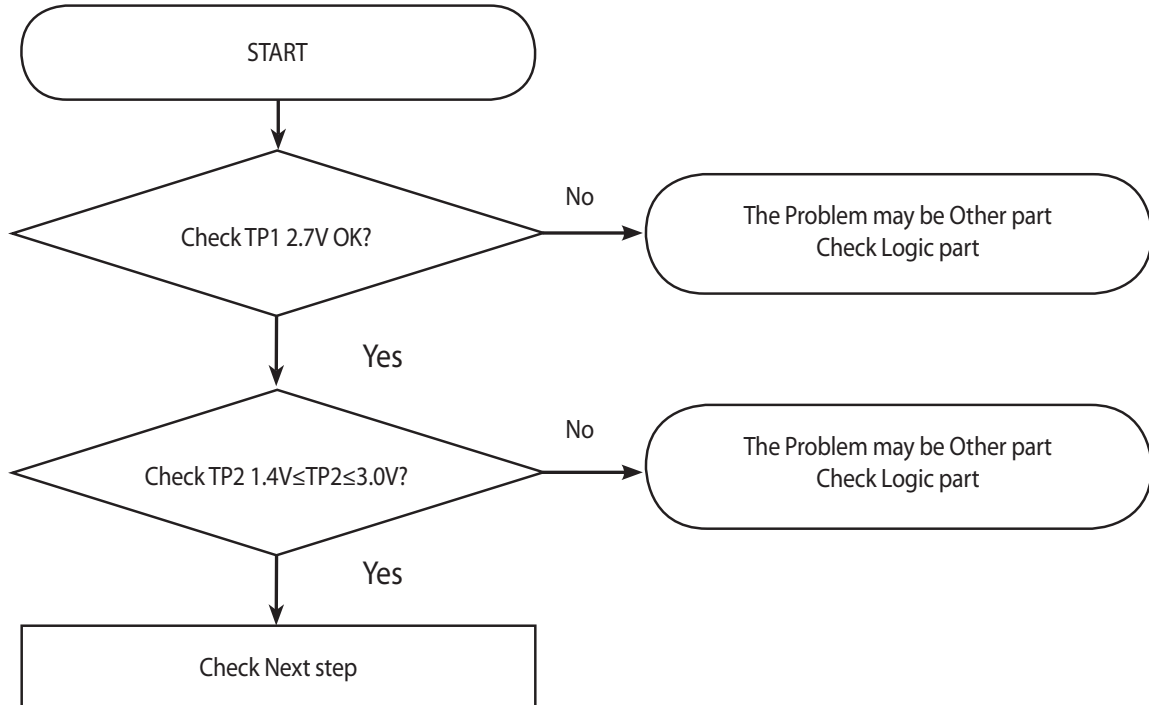


### 3.9.1 Checking GPS LNA DC Power Circuit

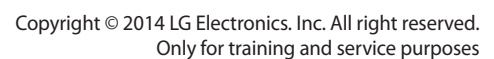


<Main Bot>

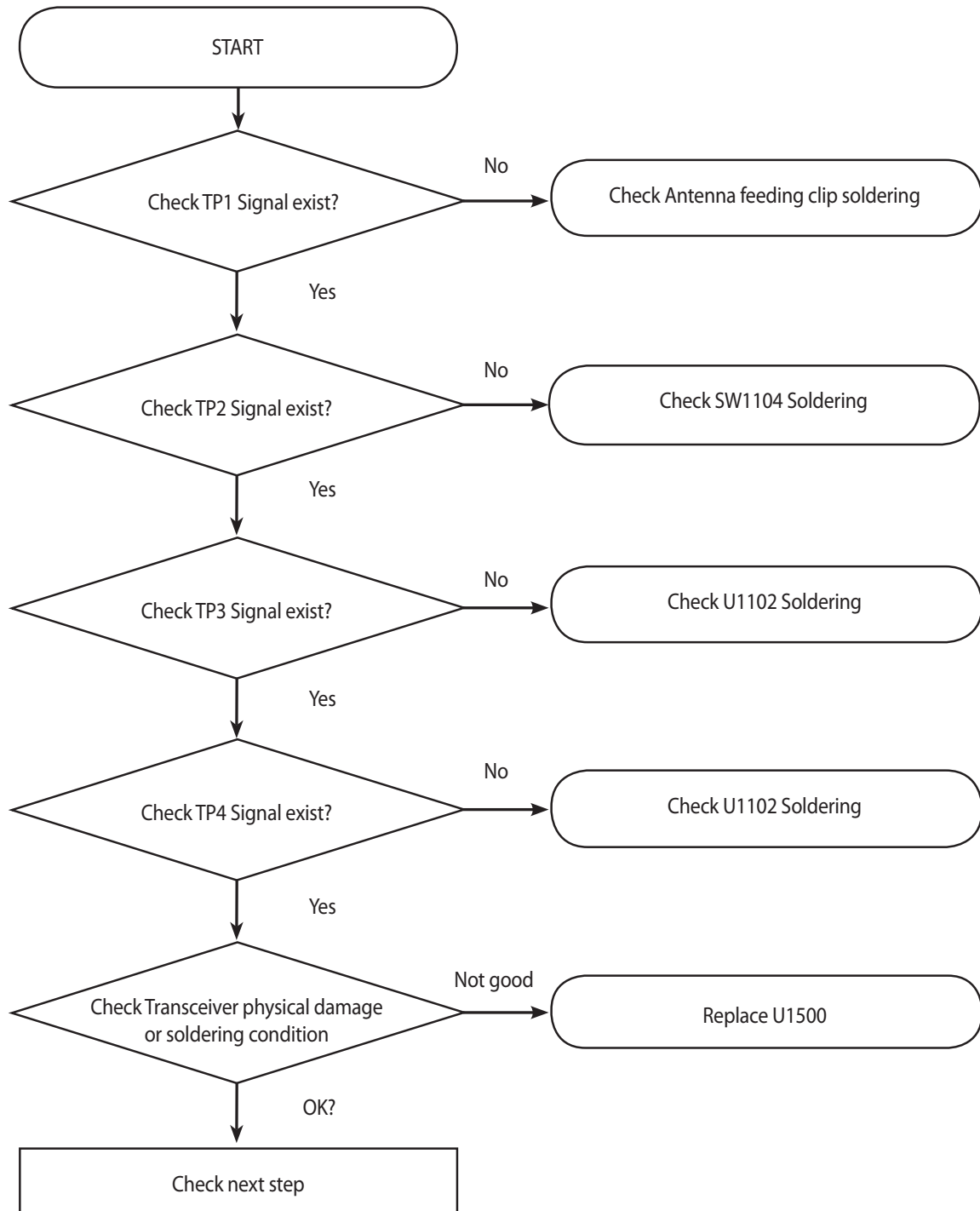
### 3. TROUBLE SHOOTING



**TOP**

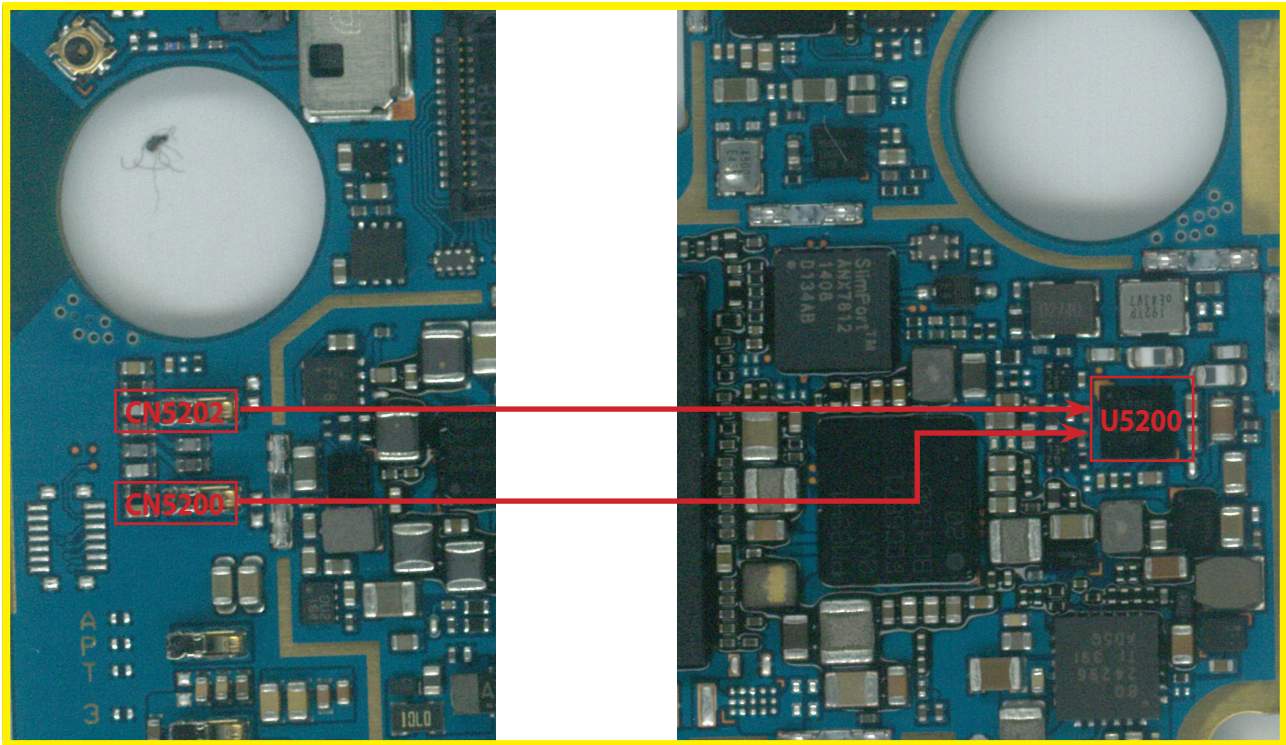


### 3. TROUBLE SHOOTING



### 3.10 NFC Part

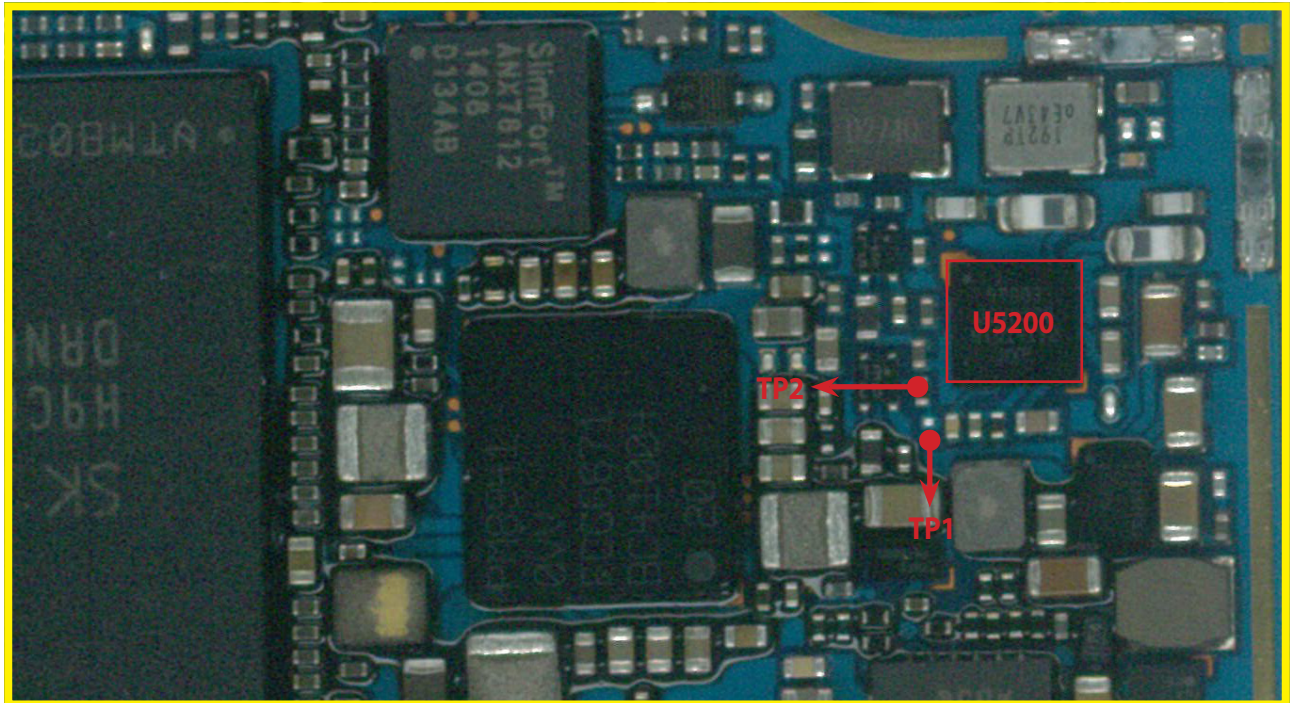
*NFC RF PATH*



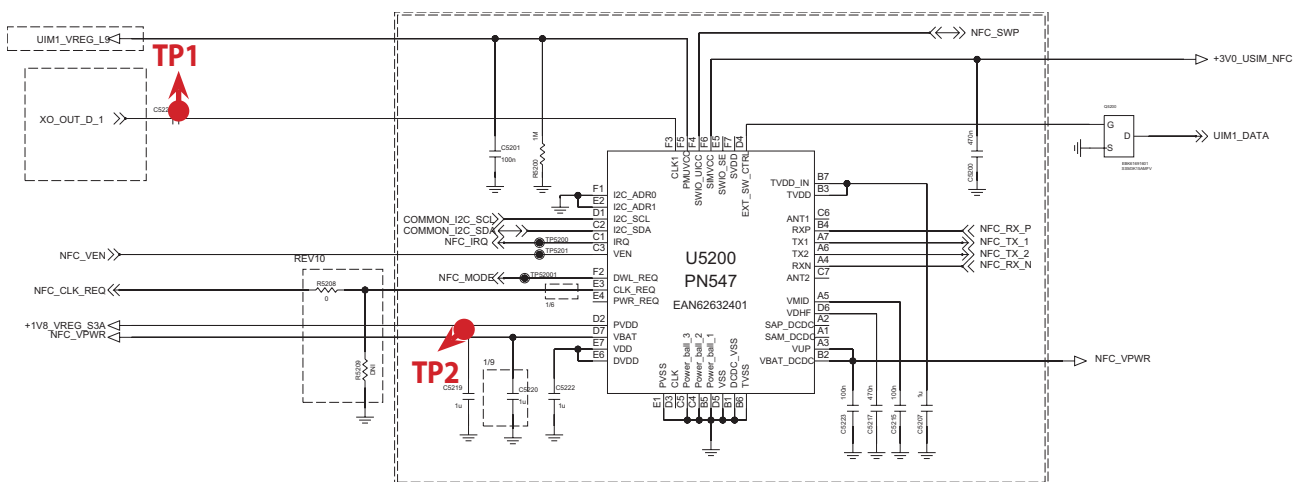
*BOTTOM*

*TOP*



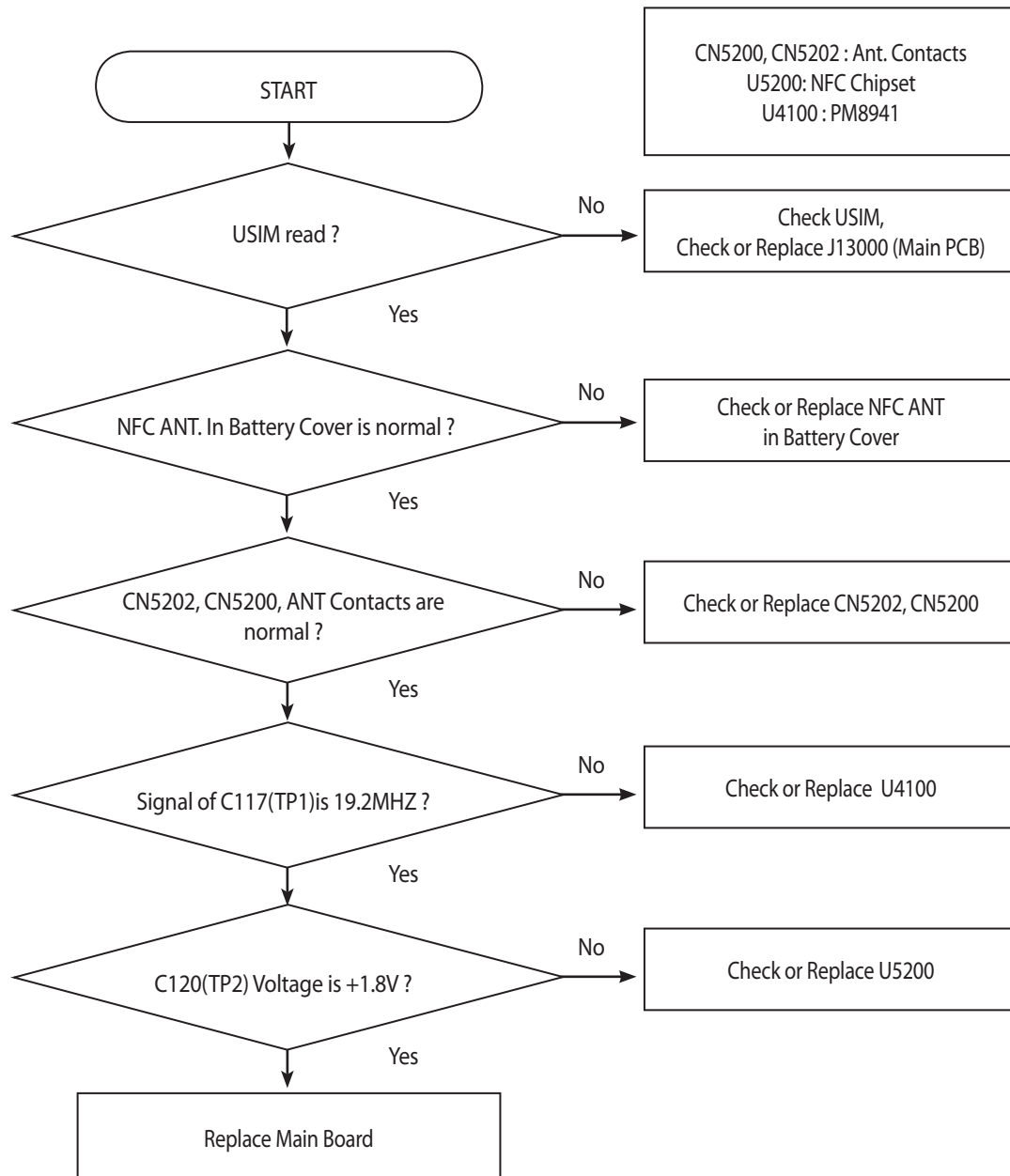


[<Main Top>](#)

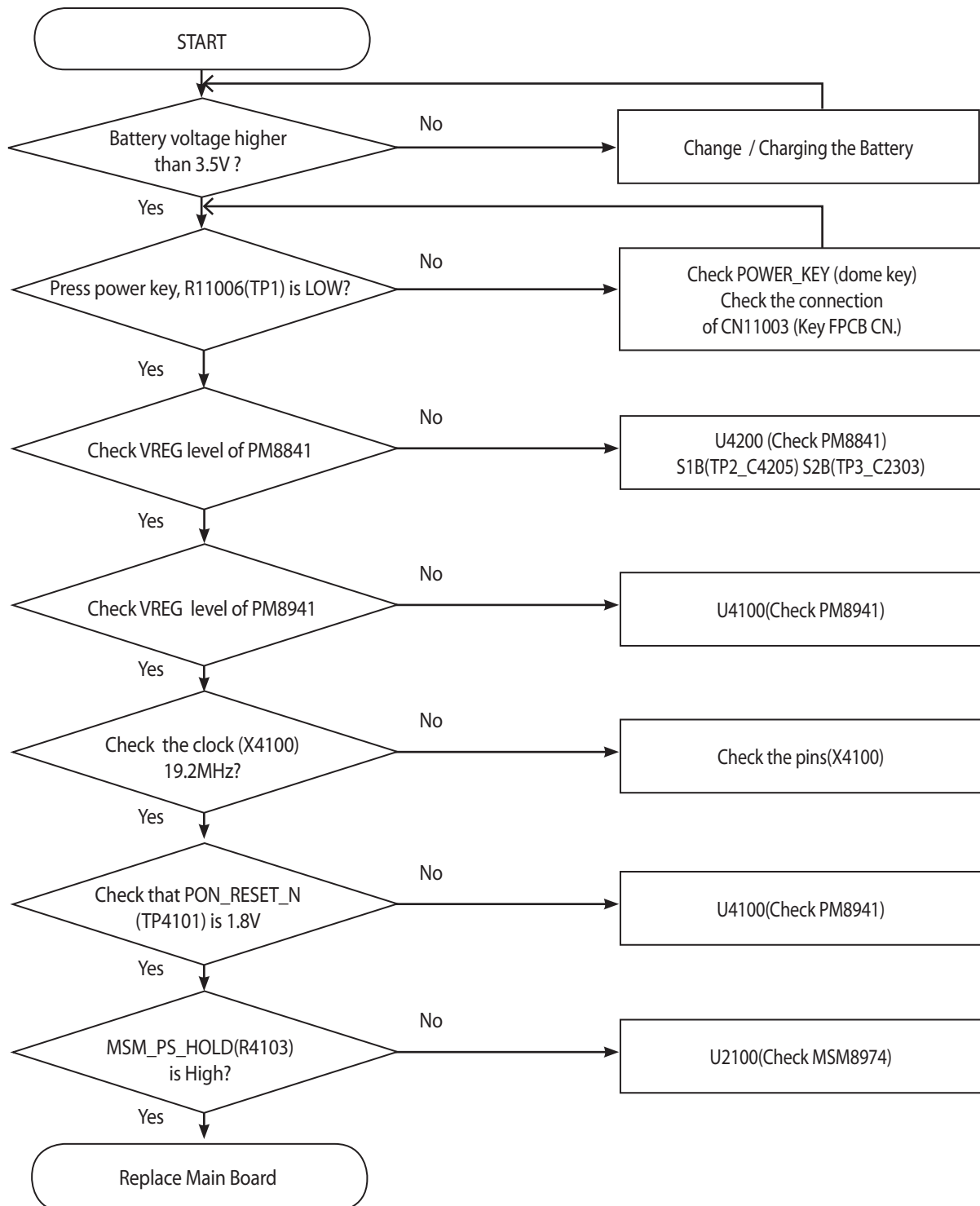


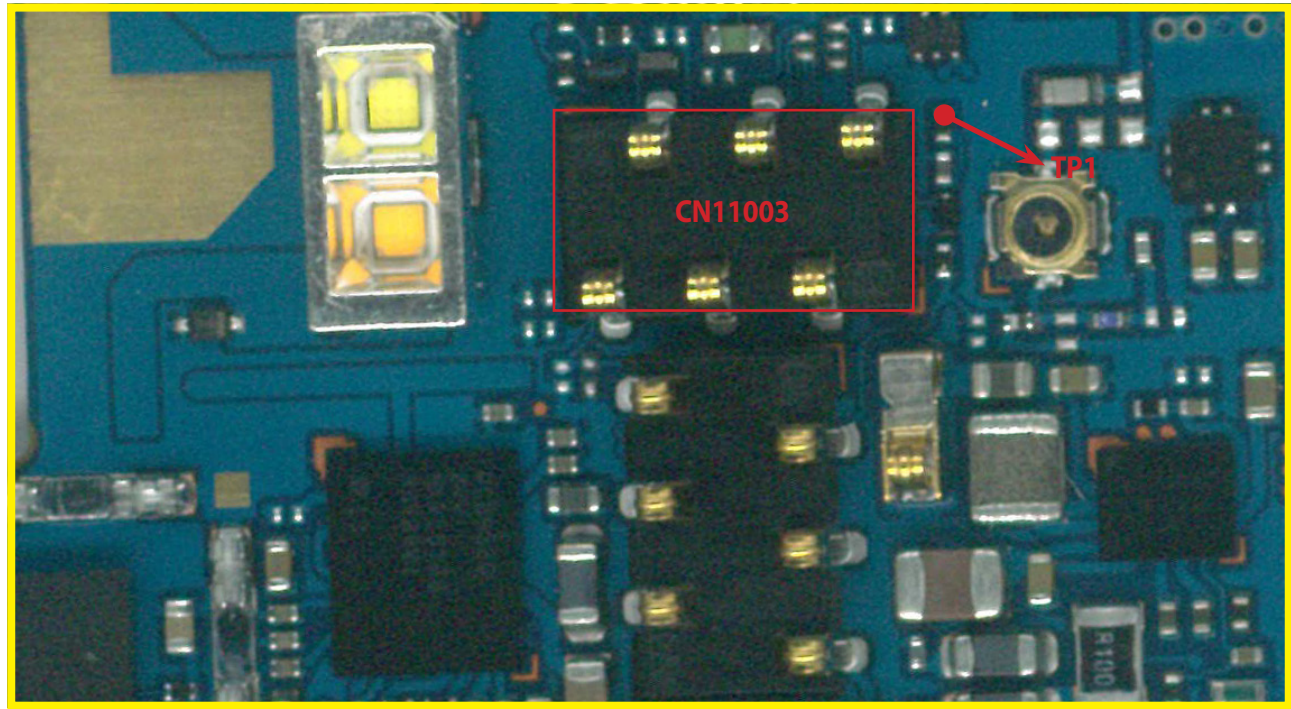


### 3. TROUBLE SHOOTING



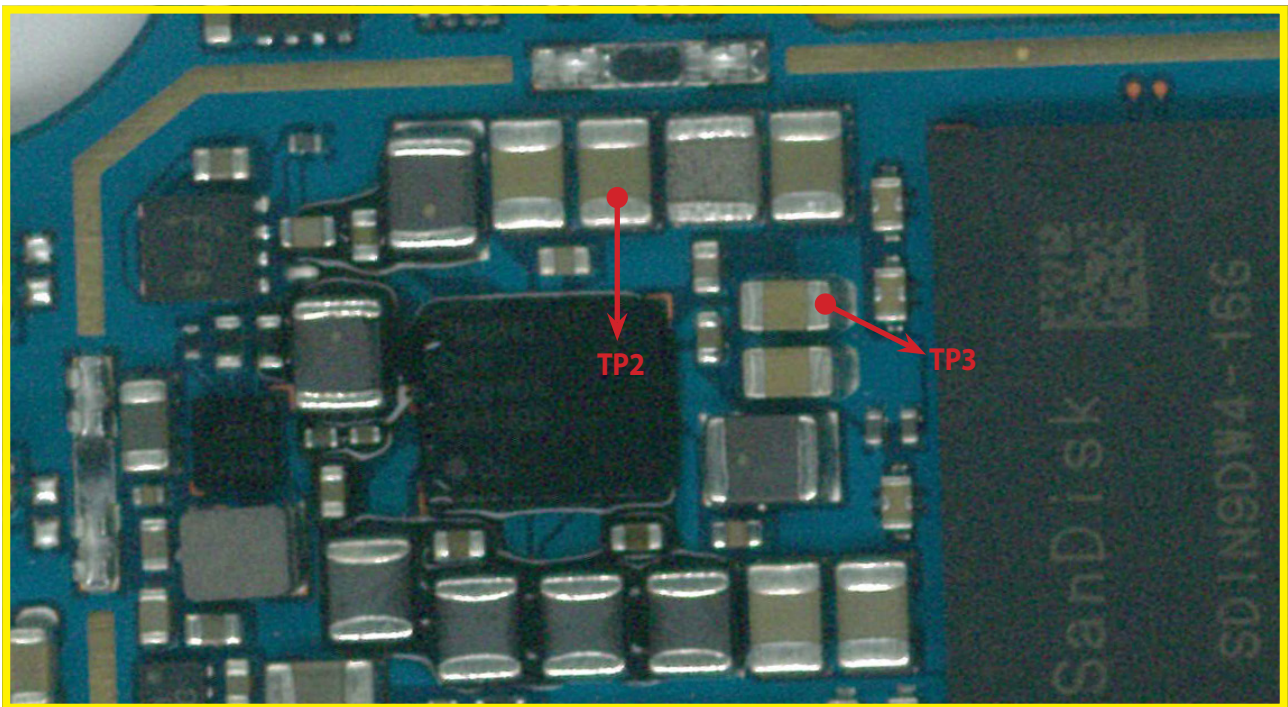
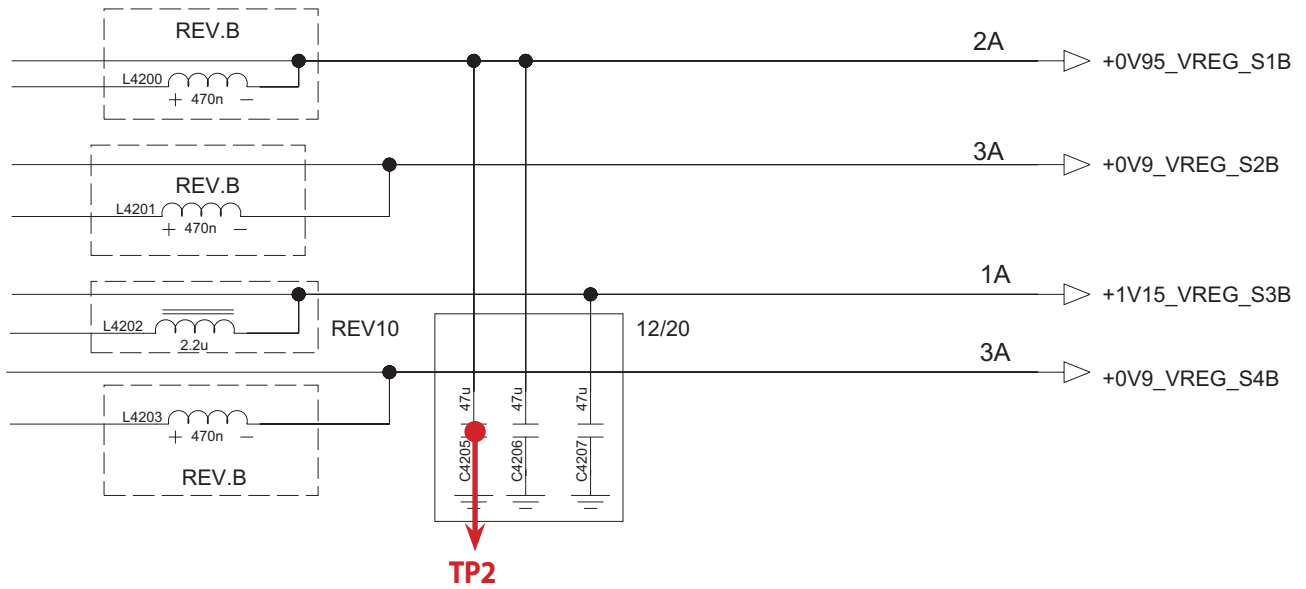
### 3.11 Power





LGE Internal Use Only - 145 - Copyright © 2014 LG Electronics, Inc. All right reserved.  
Only for training and service purposes

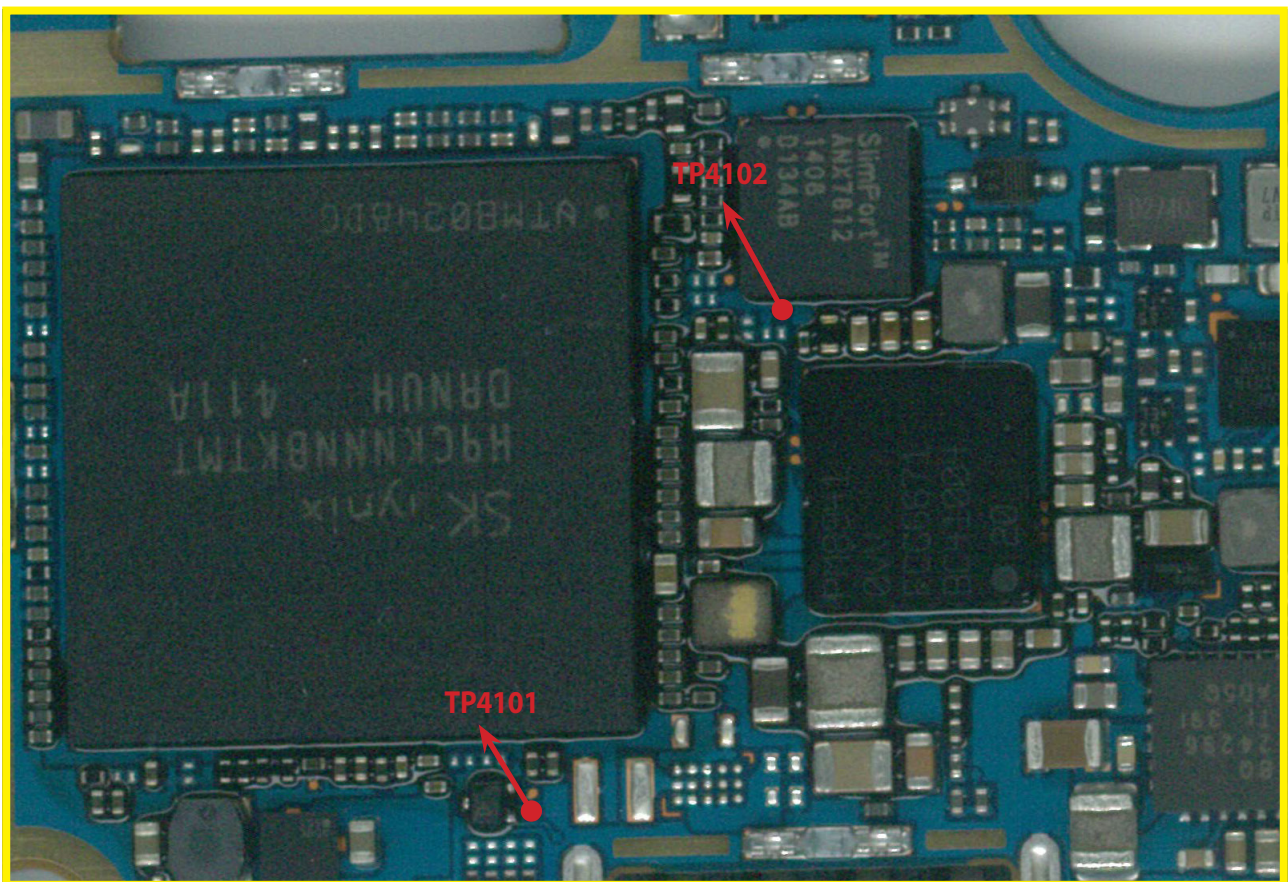
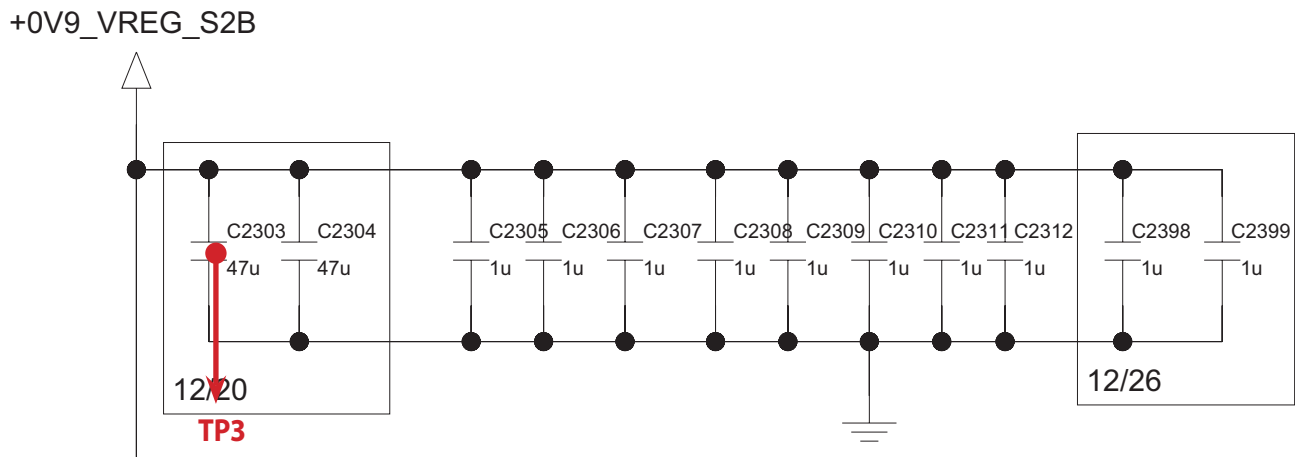
### 3. TROUBLE SHOOTING



<Main Bot>



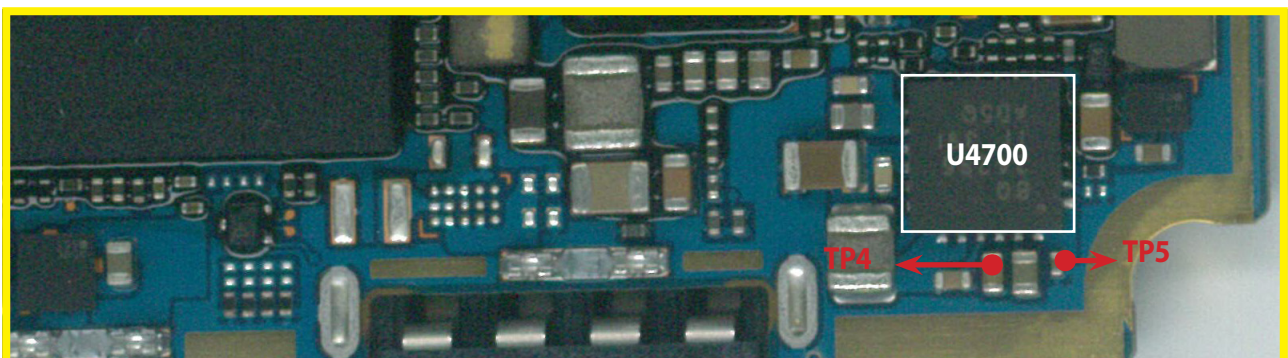
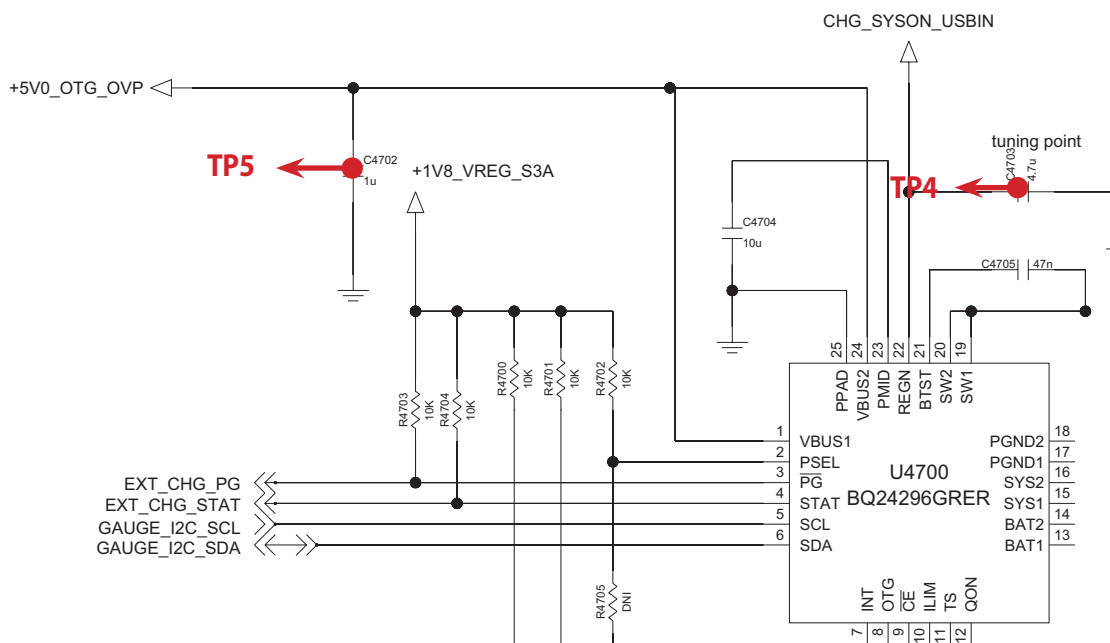
### 3. TROUBLE SHOOTING



<Main Top>

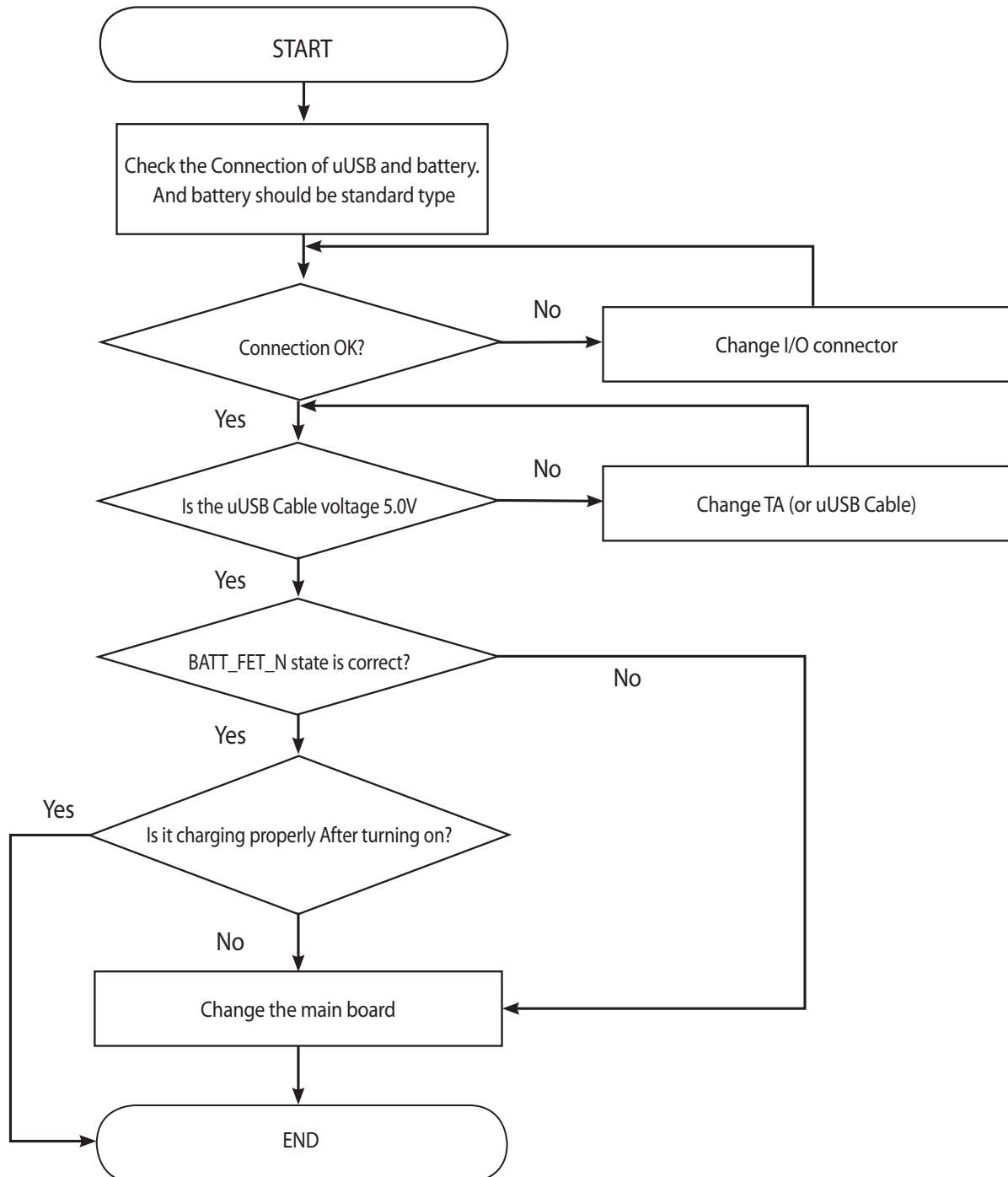
### 3.12 Charger

- D855 uses BQ24296 (External charger IC) for charging control.
- Charging Procedure
  - Supply the VBUS\_USB\_IN\_PM through a TA or u-USB cable
  - BQ24296 controls the charging current
  - Charging current flows into the main battery
- Troubleshooting Check Point
  - Connection of the TA or u-USB cable (OVP U4750)
  - Charging current path (Charger IC U4700)
  - Main battery
- During charging operation TP signal goes low and when stop charging goes high.



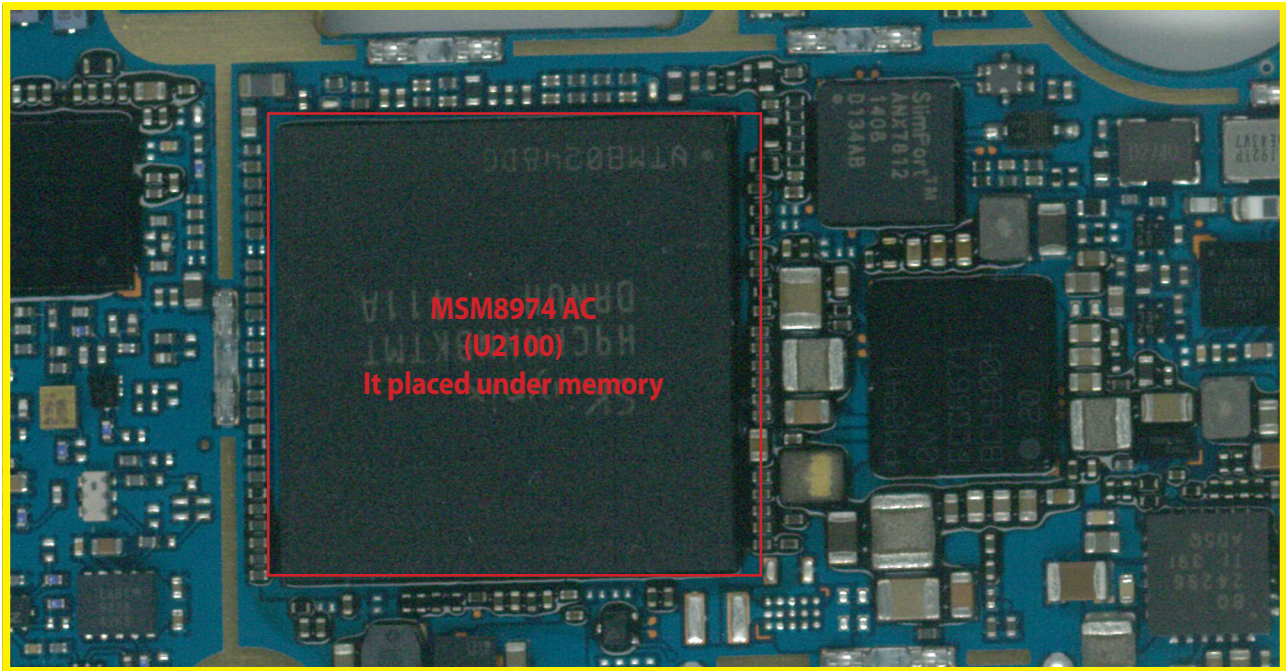
<Main Top>



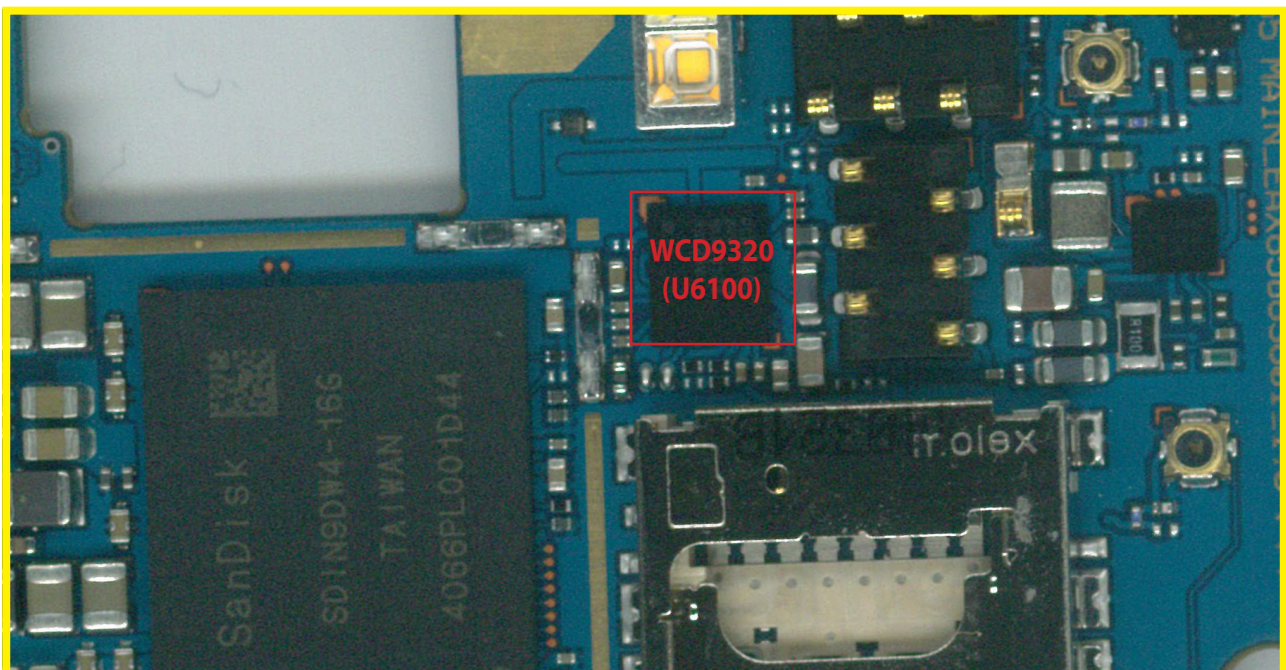


### 3.13 Audio

#### 3.13.1 Overview

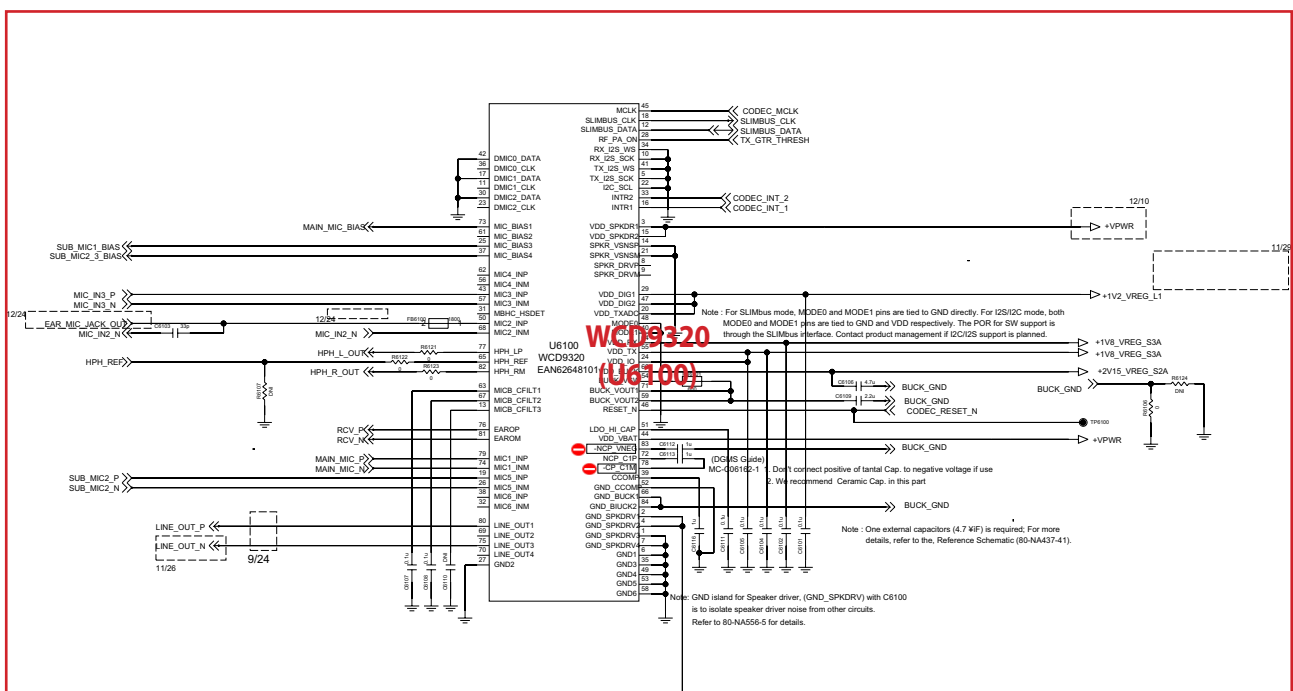
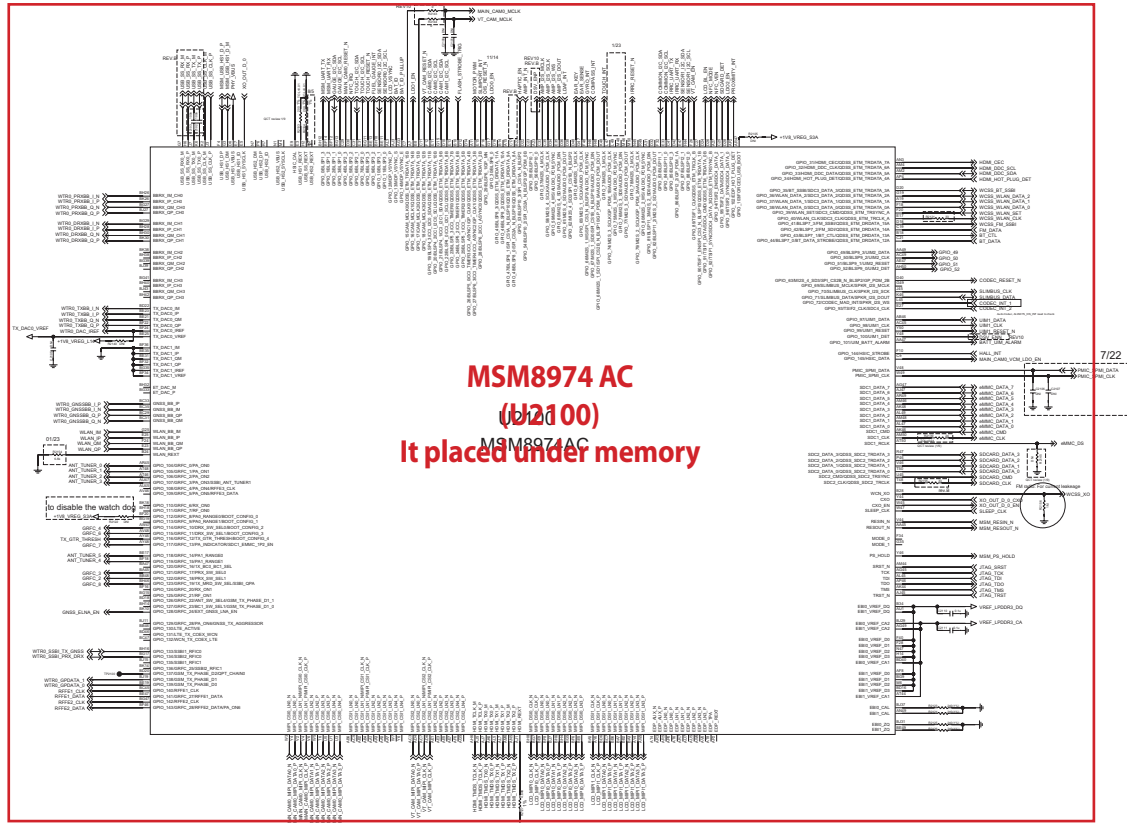


<Main Top>



<Main Bot>

### 3. TROUBLE SHOOTING

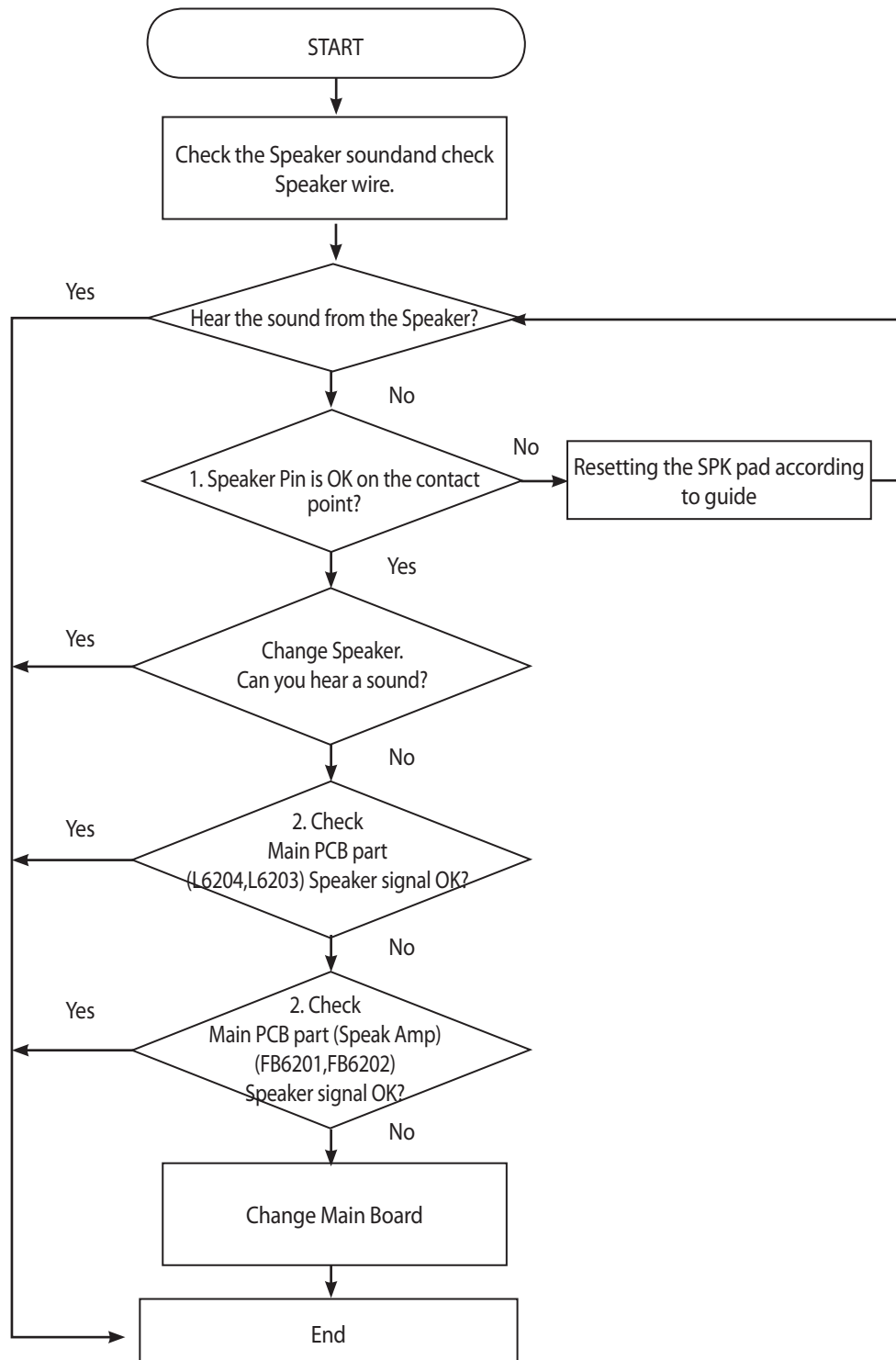


### 3.13.2 Speaker Trouble Shooting

It's trouble shooting guide for no sound case.

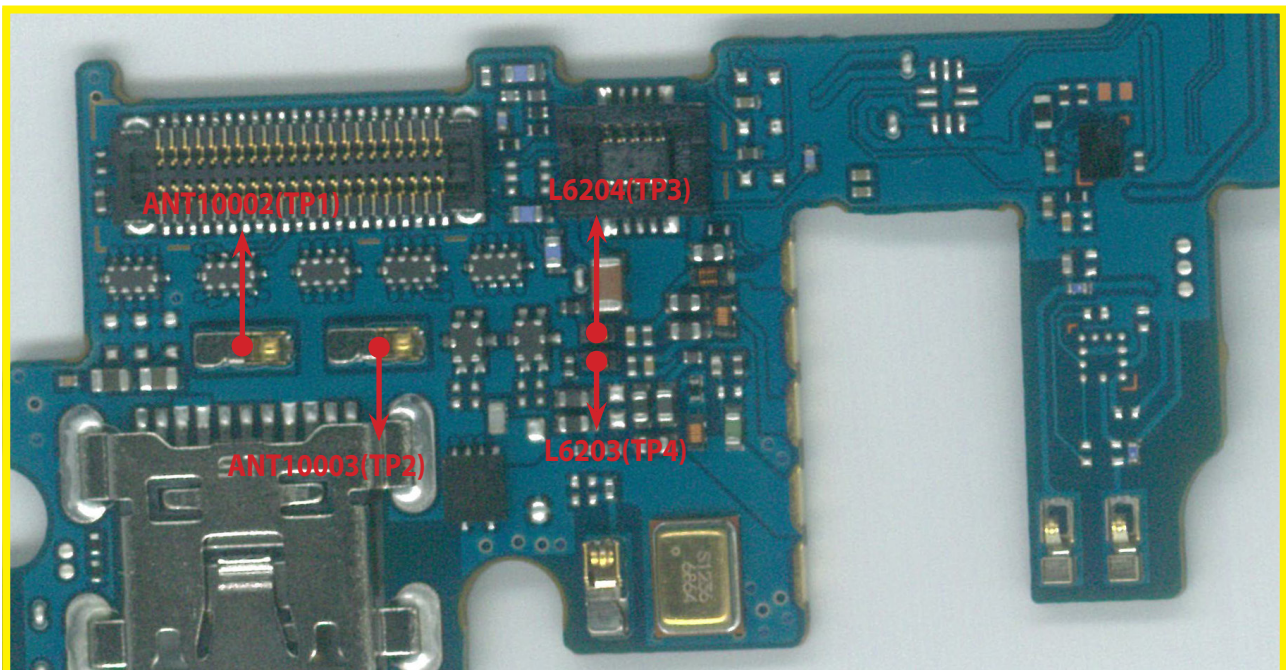
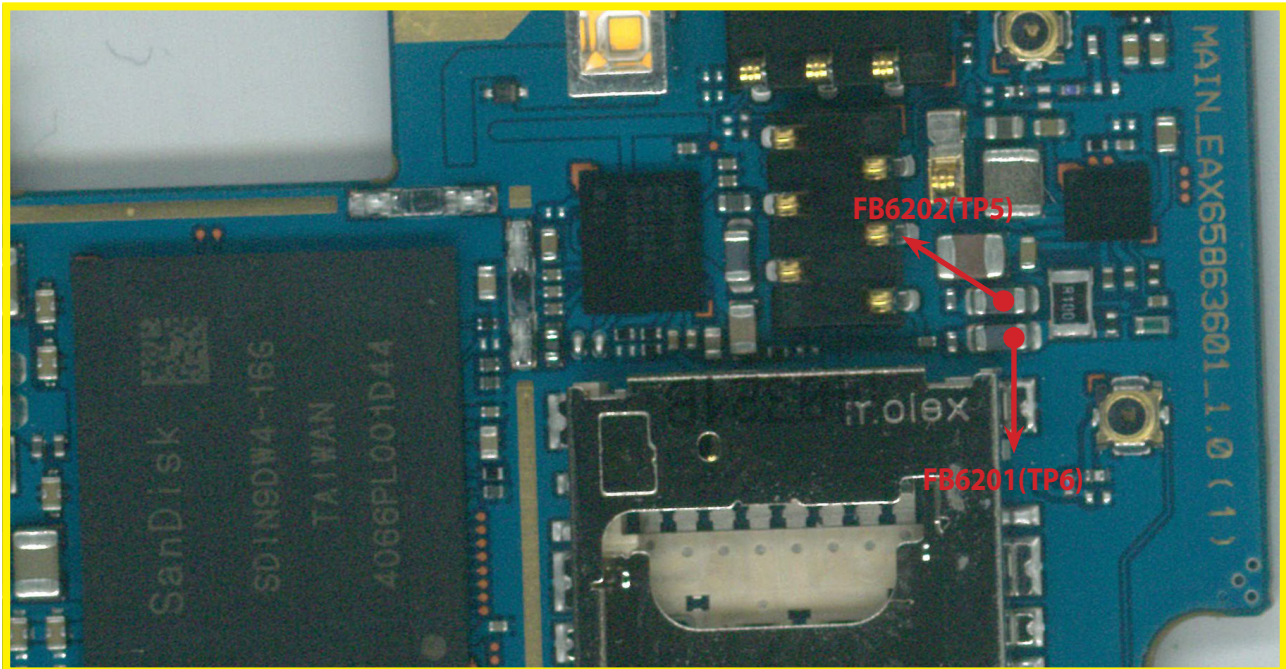
Speaker control signals are generate by MSM8974(U2100), WCD9320(U6100)

Speak Boost\_Amp (U6200)



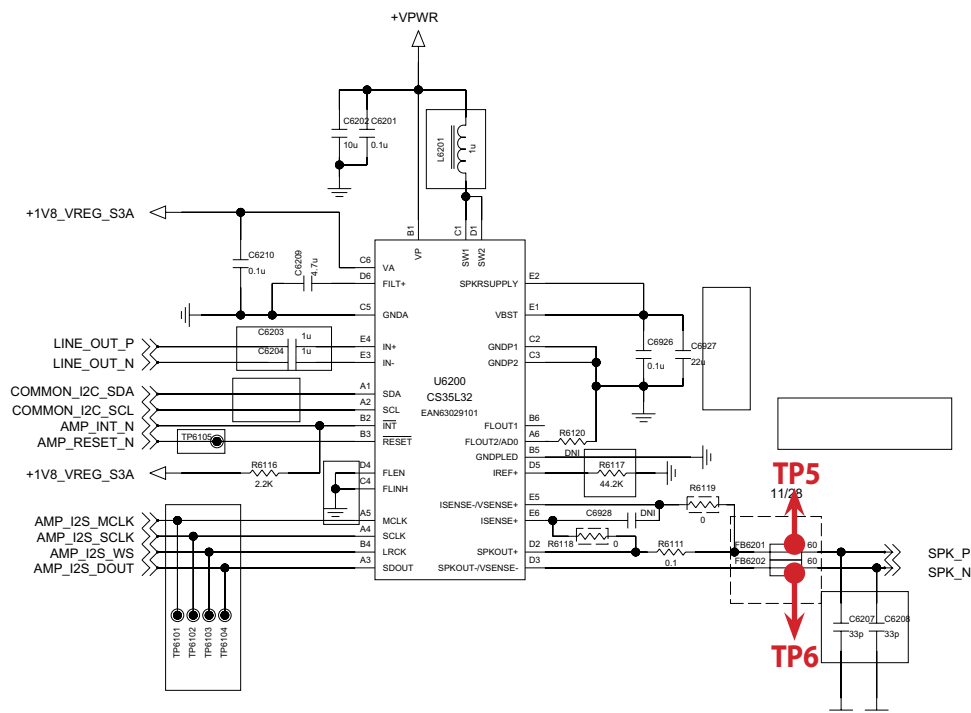
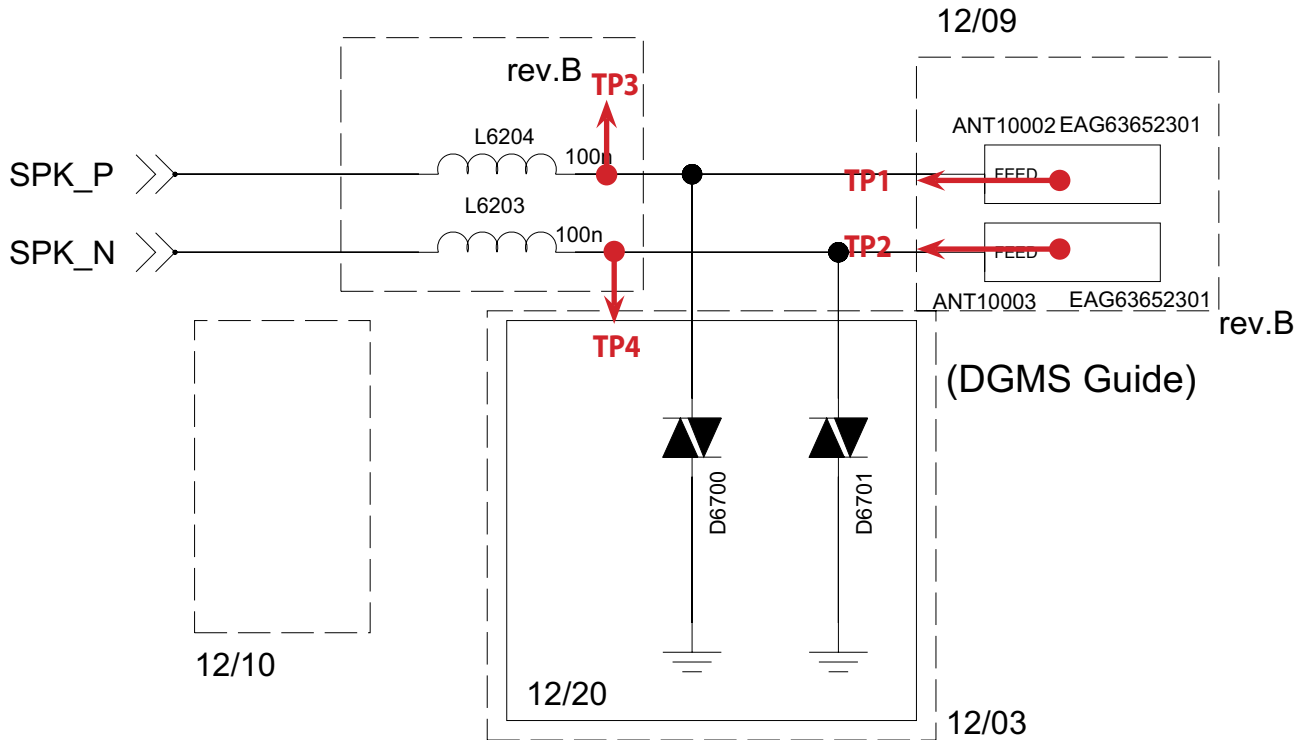


### 3. TROUBLE SHOOTING



<Main Bot>

### 3. TROUBLE SHOOTING



1. Speaker contact is OK on the contact point? check the ANT10002\_TP1, ANT10003\_TP2
2. Check PCB part (L6204\_TP3, L6203\_TP4). Speaker sound OK?
3. Check PCB part (FB6201\_TP5, FB6202\_TP6). Speaker sound OK?

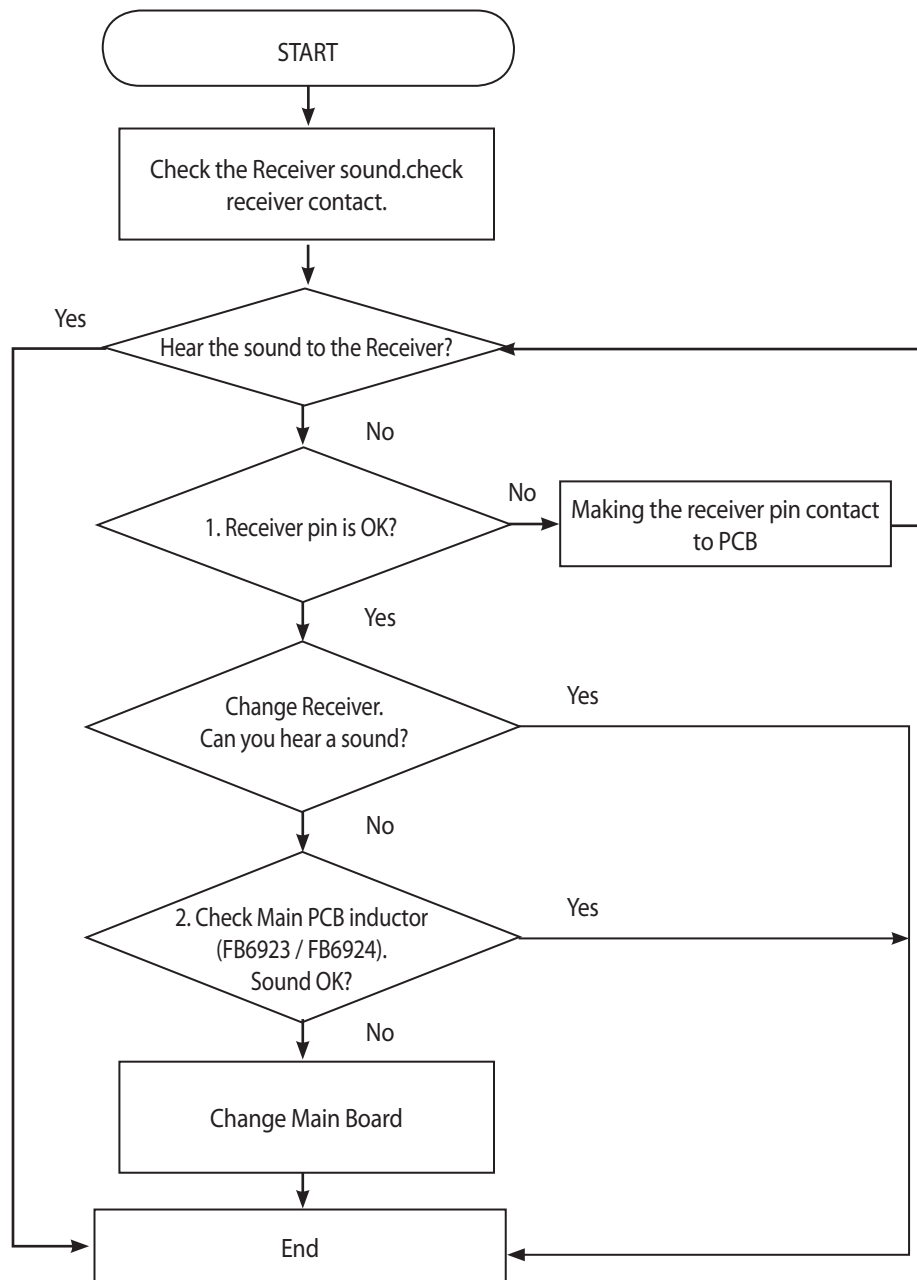


### 3.13.3 Receiver Trouble Shooting

Receiver control signals are generate by MSM8974(U2100), WCD9320(U6100)

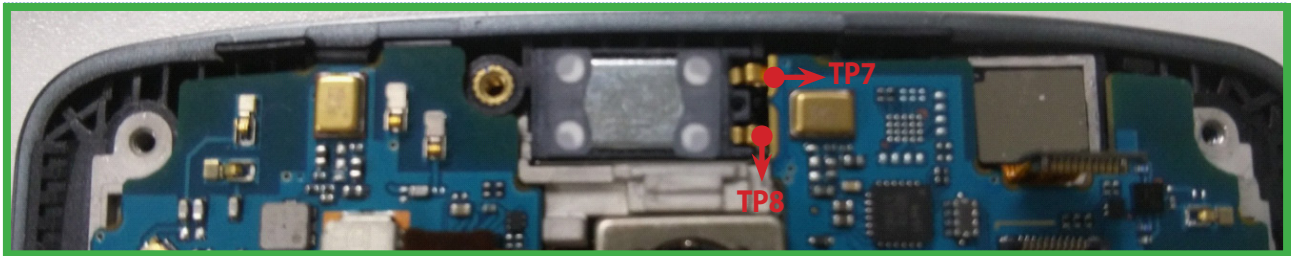
Voice Receiving path as below :

MSM8974 -> WCD9320 -> EAROP/EARON -> Receiver

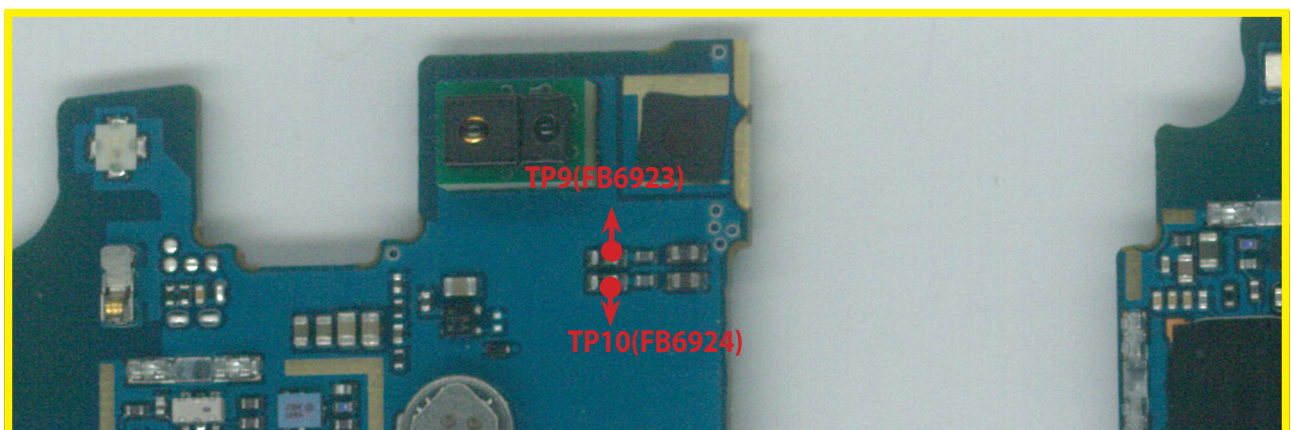
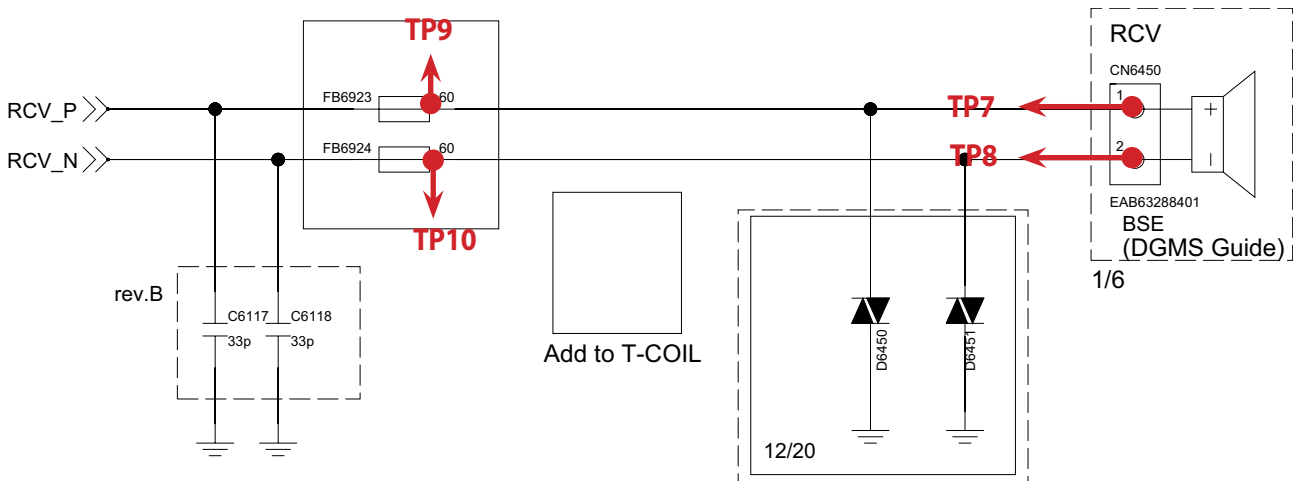


### 3. TROUBLE SHOOTING

1. Receiver pin is OK? Checking the receiver pin and PCB are contacted well.



2. Check Main PCB inductor (FB6923/ FB6924).



<Main Top>

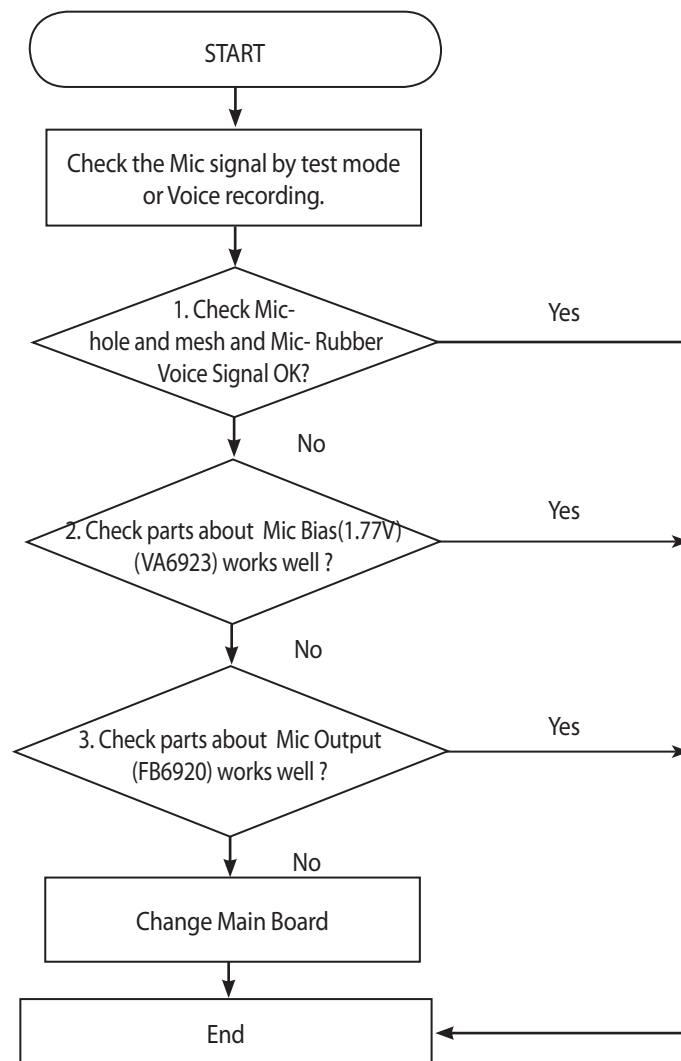
In case of No Receiver sound, not only Receiver fault but MIC fault.

You must check the voice recording test first. After voice recording, if you could hear the recorded sound, It is nor MIC fault And receiver path or parts is something wrong.

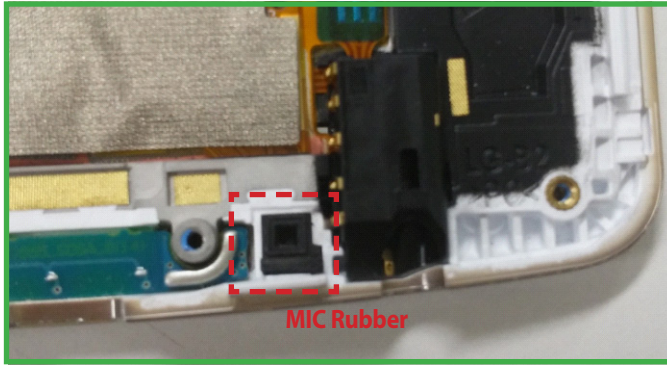
### 3.13.4 Main MIC Trouble Shooting

A Main MIC is located at the bottom of PCB

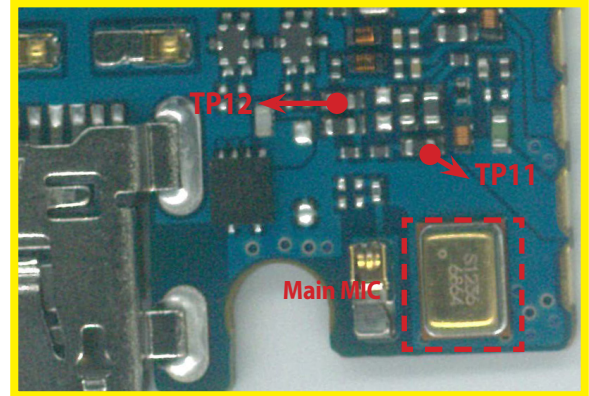
It operates in case of voice call (handset), voice recording, camcorder recording



1. Check Mic Rubber, MIC Mesh. Voice Signal OK?



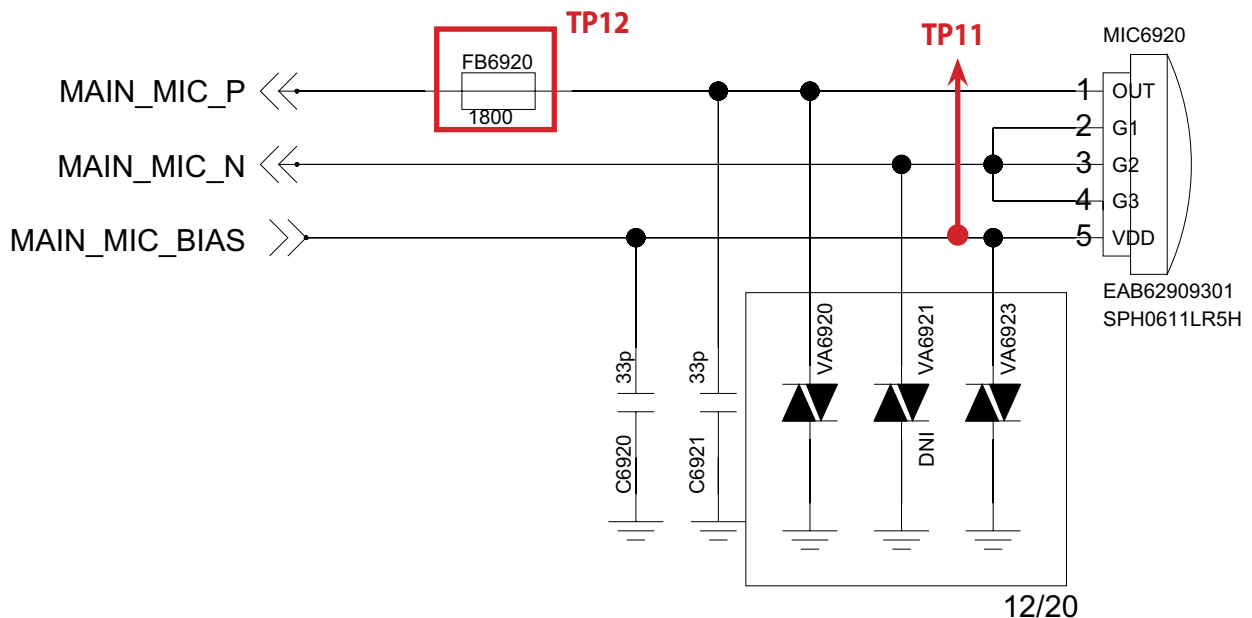
Front Assembly



<Main Bot>

# Main MIC

Lower FPCB assigned



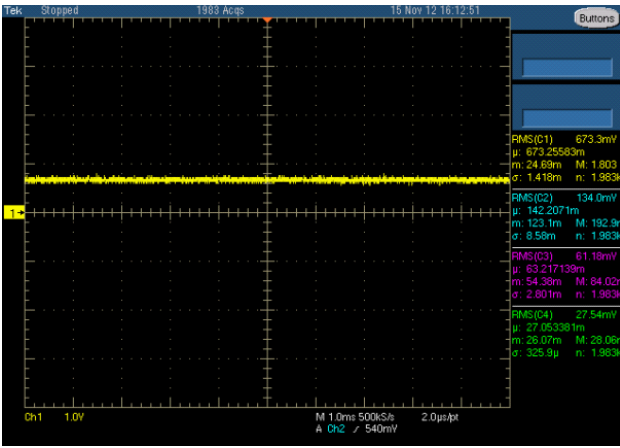
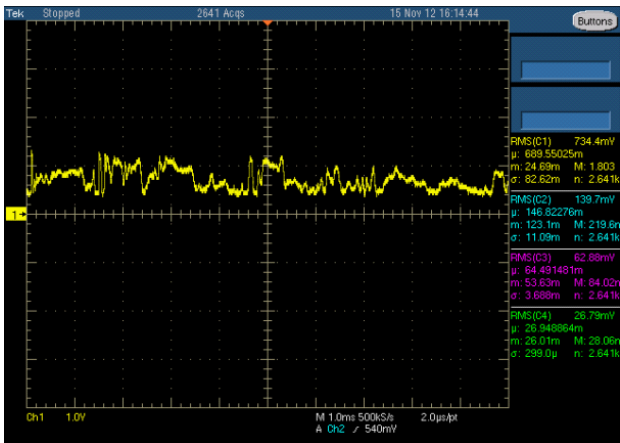
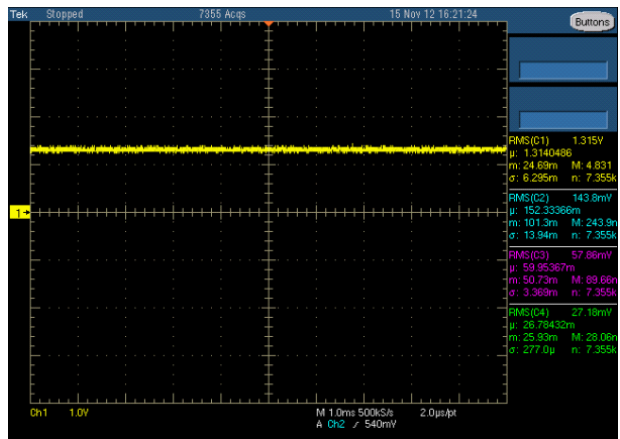
2. Check parts about Mic Bias(VA6923\_TP11) works well (about 1.77V) ?

3. Check parts about Mic Output (FB6920\_TP12) works well ?

– waveform moves with oscilloscope

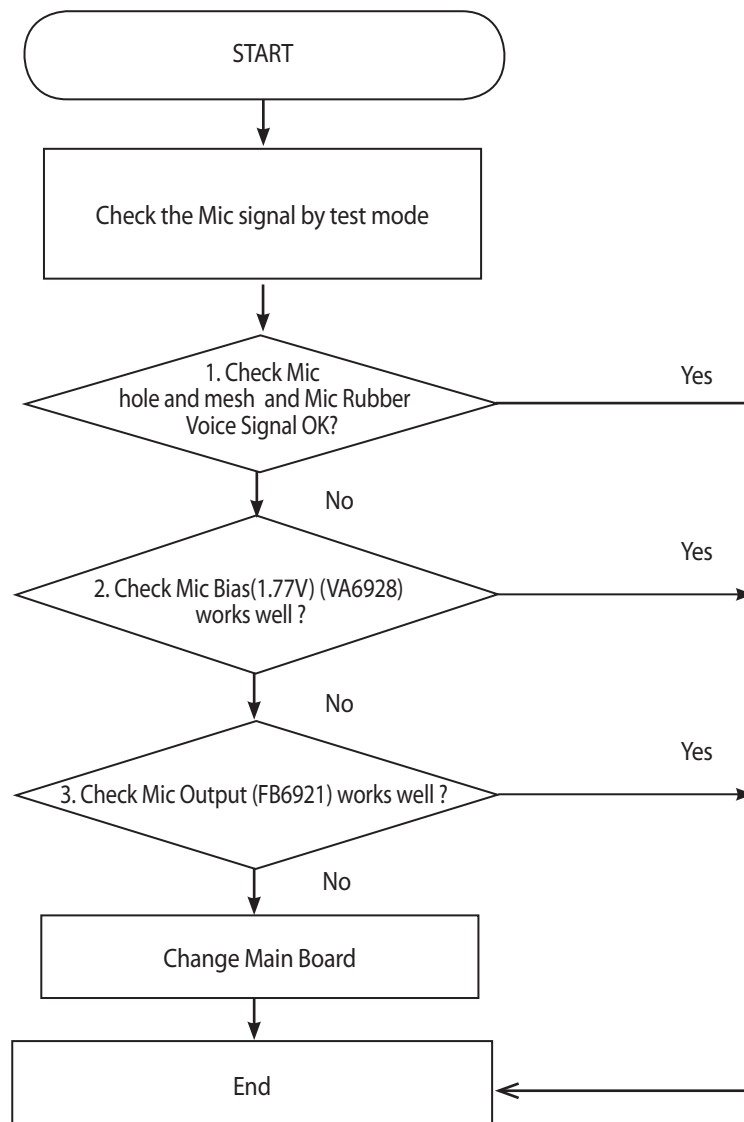
### 3. TROUBLE SHOOTING

#### waveform with oscilloscope

<p><b>Normal</b></p> <p>MIC Out Signal (Idle)</p>		<p>About 0.7V (Flat)</p>
<p><b>Normal</b></p> <p>MIC Out Signal (Voice Input)</p>		<p>Moves(Dynamic)</p>
<p><b>Malfunction</b></p> <p>MIC Out Signal (Idle and Voice Input)</p>		<p>1.31V (fixed)</p>

### 3.13.5 Sub MIC1 Trouble Shooting

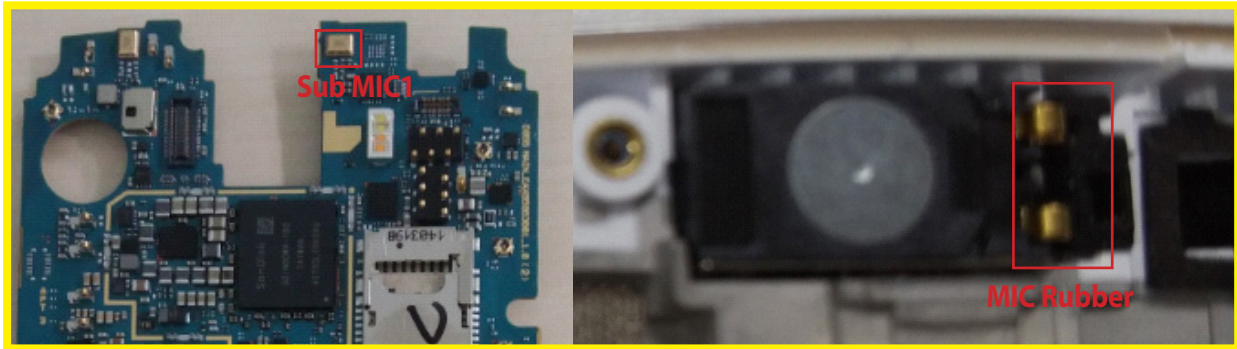
A sub MIC1 (called MIC 2 during Loopback Test) is located beside receiver.  
It operates in case of camcorder recording





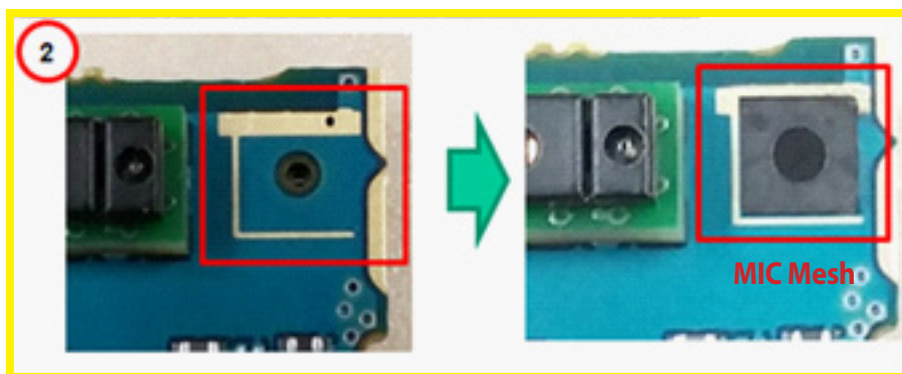
### 3. TROUBLE SHOOTING

1. Check Mic hole and mesh Mash on PCB and Mic Rubber in Front Ass'y. Voice Signal OK?



*Main PCB*

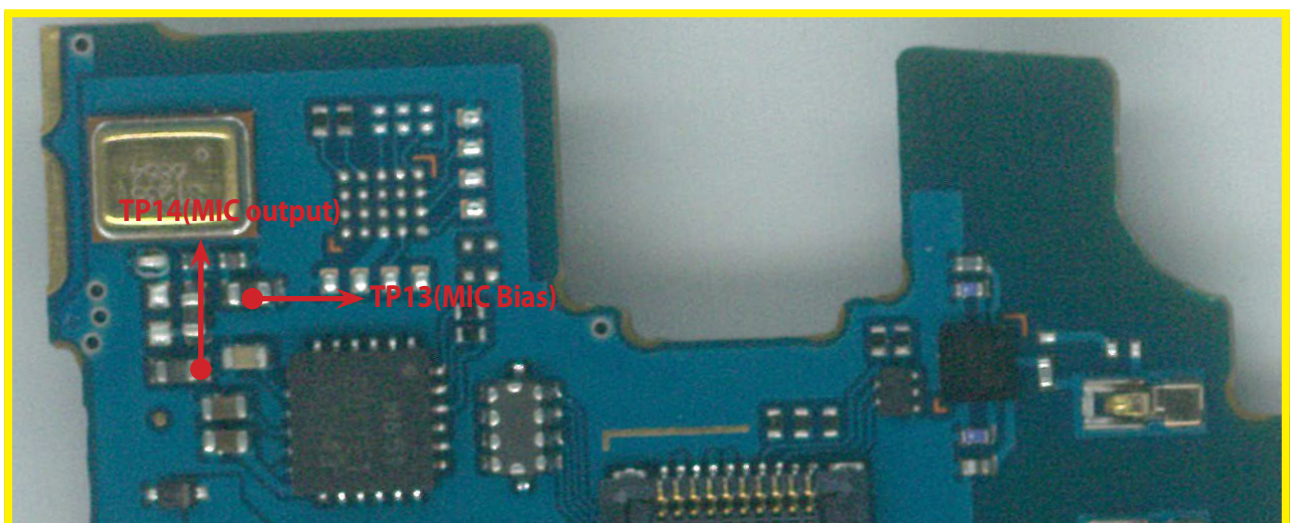
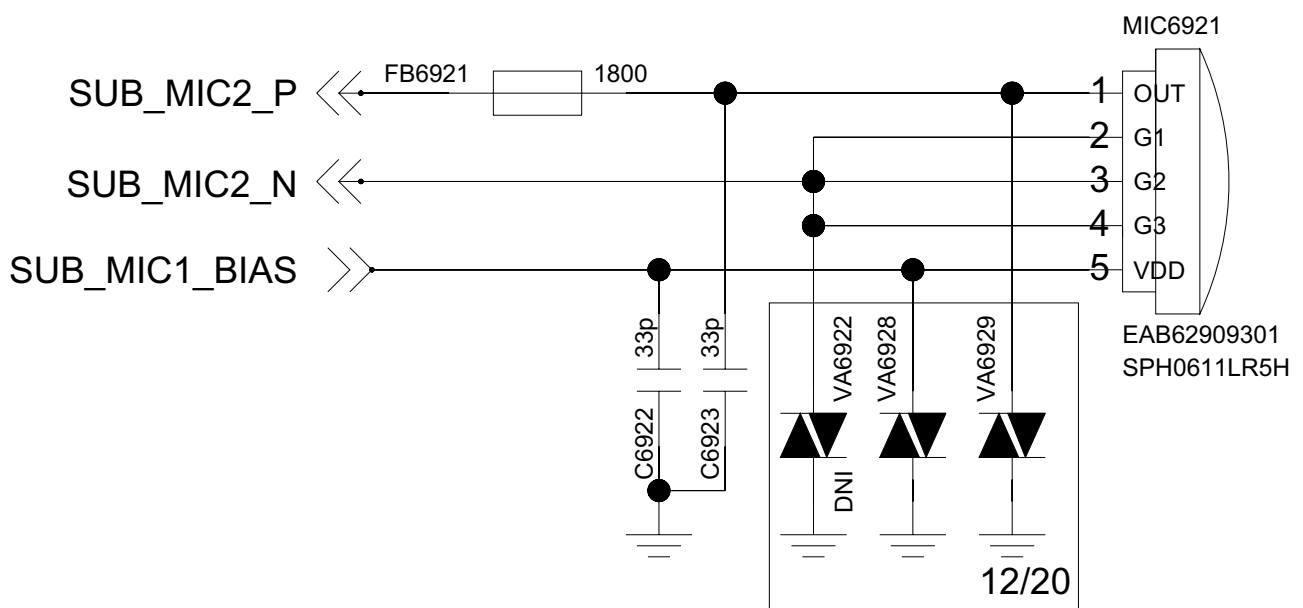
*Front Assembly*



Should match with mesh hole  
and MIC holes

2. Check parts about Mic Bias(VA6928\_TP13) works well (about 1.77V) ?
3. Check parts about Mic Output (FB6621\_TP14) works well ?
  - waveform moves

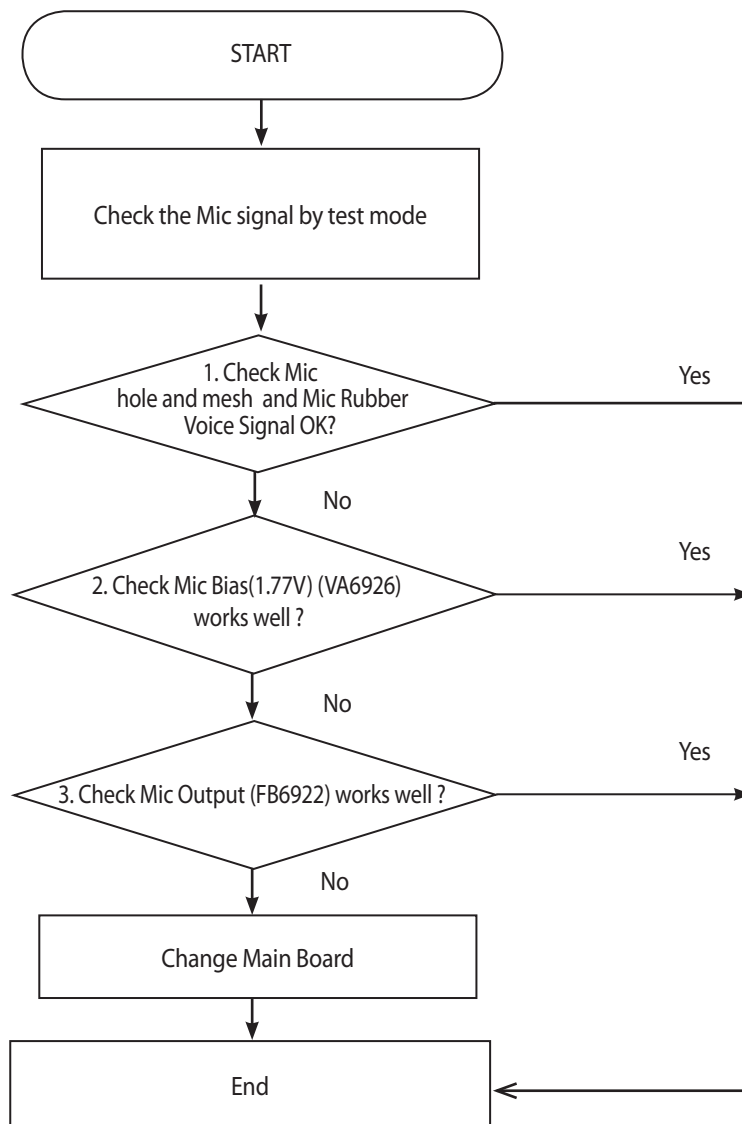
# Sub\_MIC1



<Main Bot>

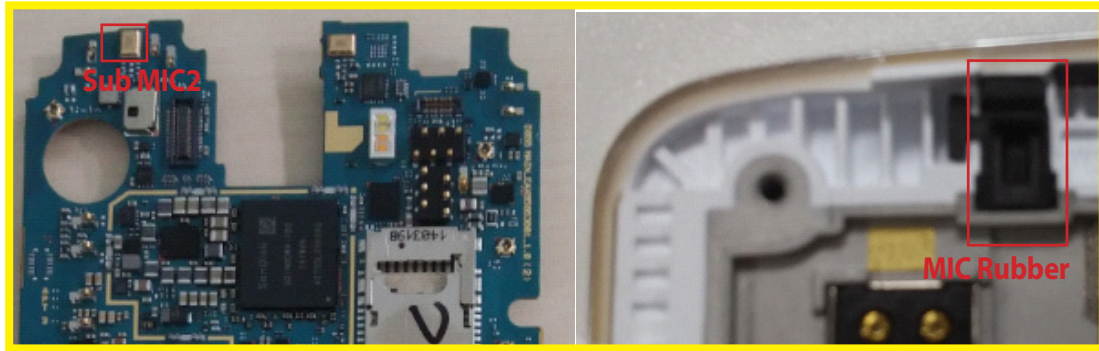
### 3.13.6 Sub MIC2 Trouble Shooting

A sub MIC2 (called MIC 3 during Loopback Test) is located at the top of PCB  
It operates in case of voice call (Speaker phone).



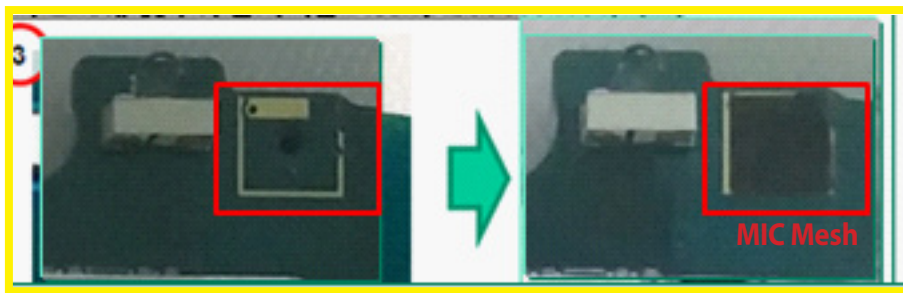
### 3. TROUBLE SHOOTING

1. Check Mic hole and mesh Mash on PCB and Mic Rubber in Front Ass'y. Voice Signal OK?



*Main PCB*

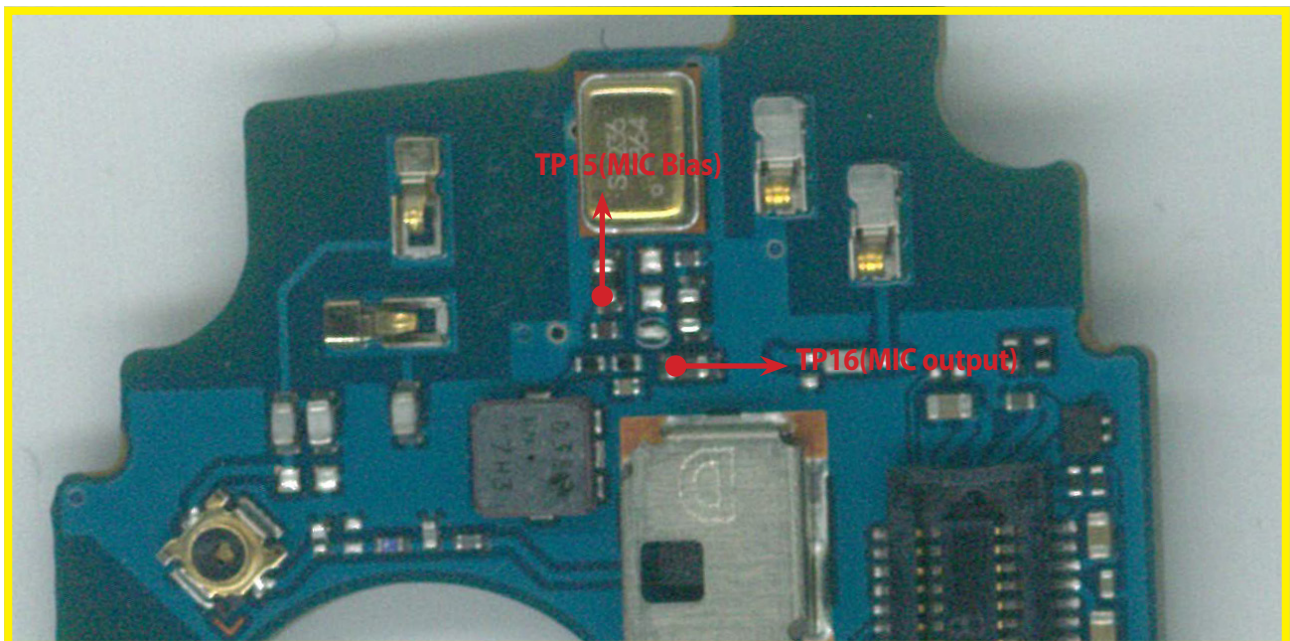
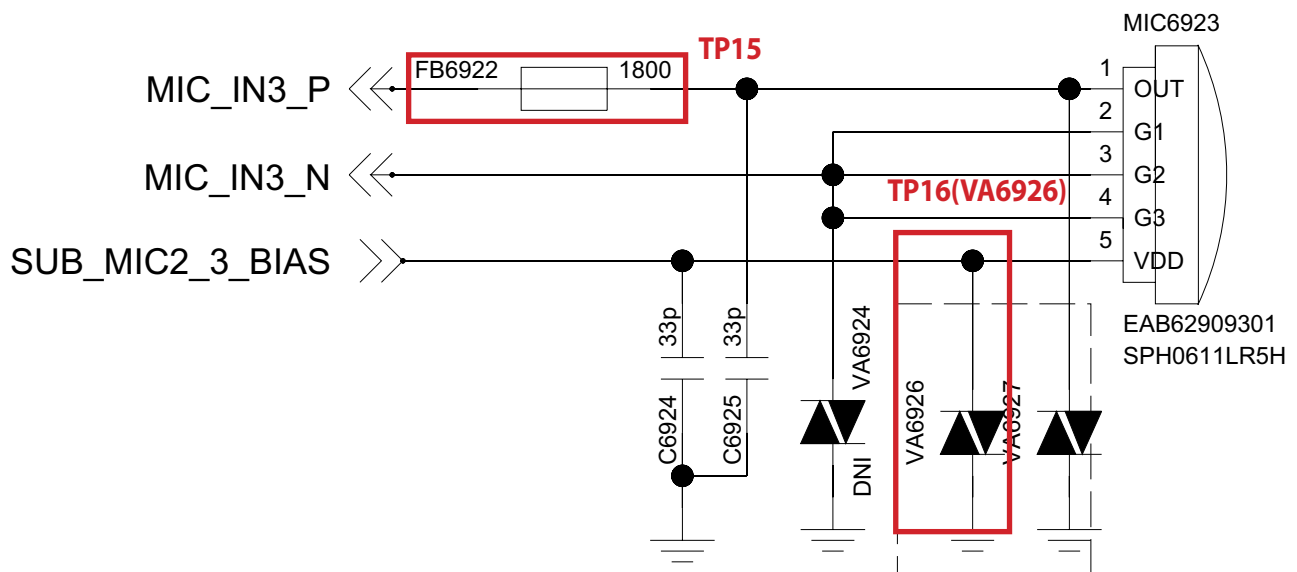
*Front Assembly*



Should match with mesh hole  
and MIC holes

2. Check parts about Mic Bias(VA6926\_TP15) works well (about 1.77V) ?
3. Check parts about Mic Output (FB6622\_TP16) works well ?
  - waveform moves

# Sub\_MIC2



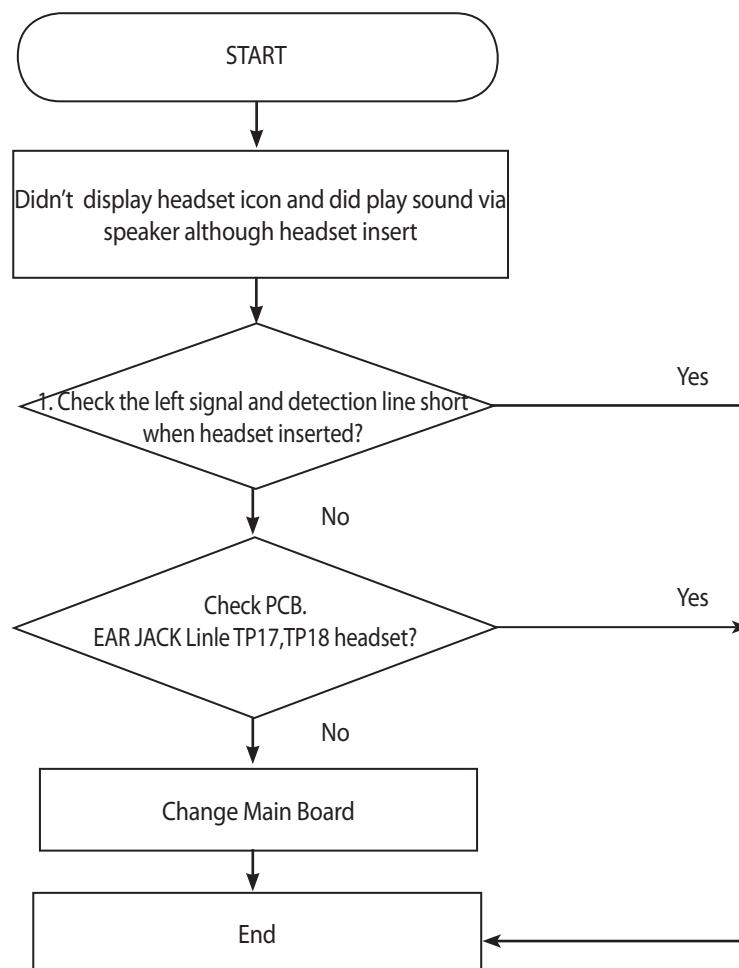
<Main Bot>



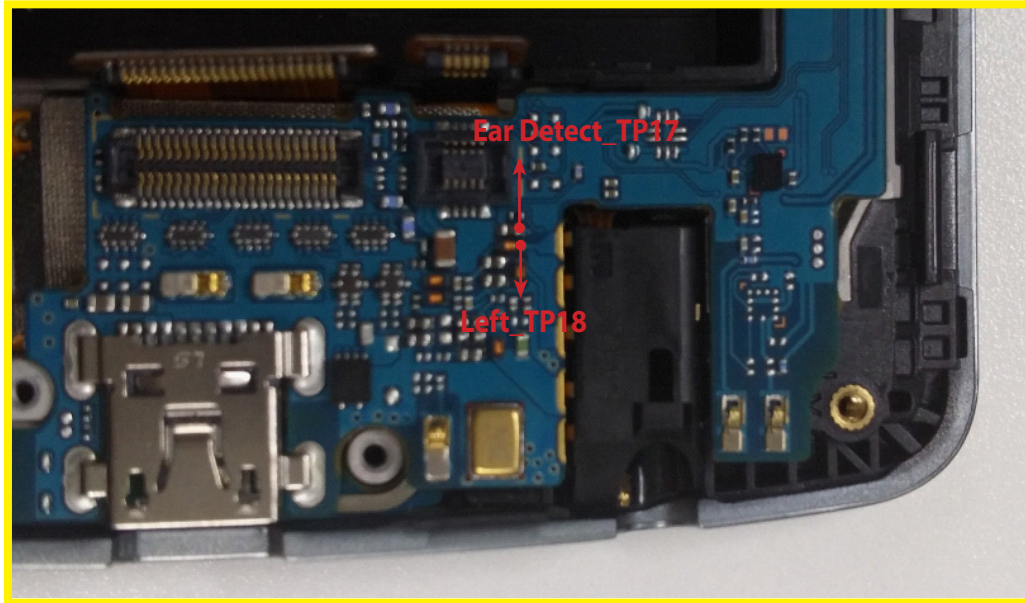
### 3.13.7 Ear-MIC Trouble Shooting

Ear MIC control signals are generate by MSM8974AC(U2100), WCD9320(U6100)

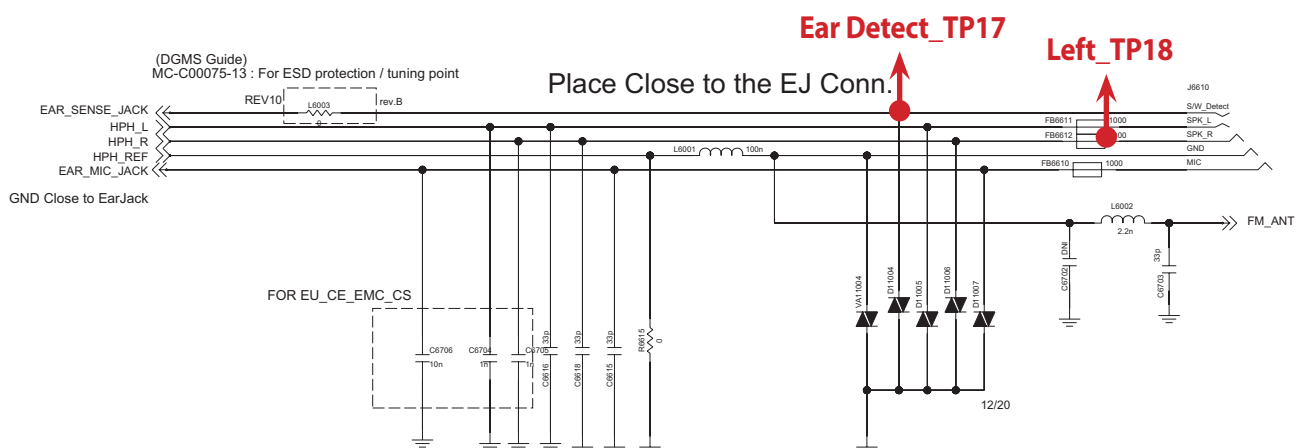
*Case A. Unable detection of headset insert.*



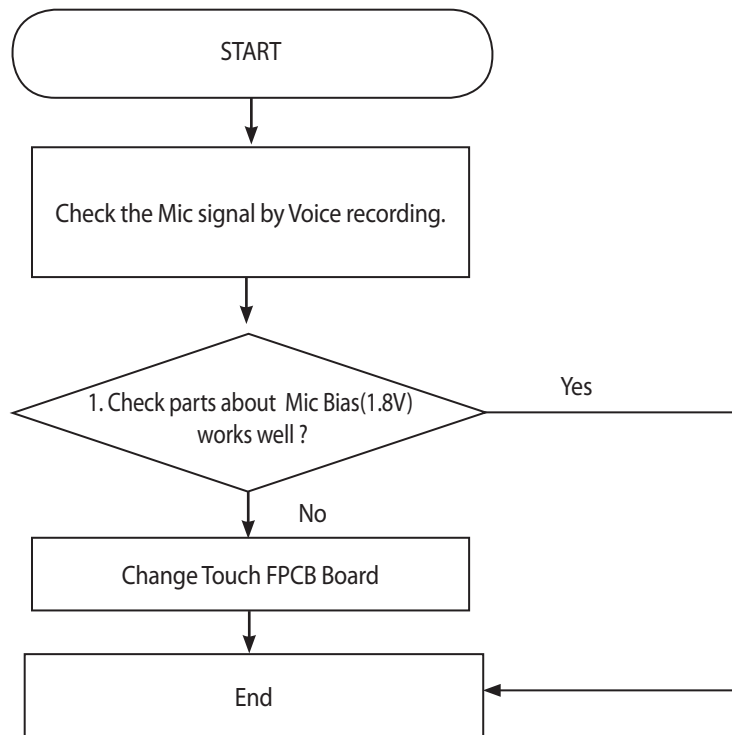




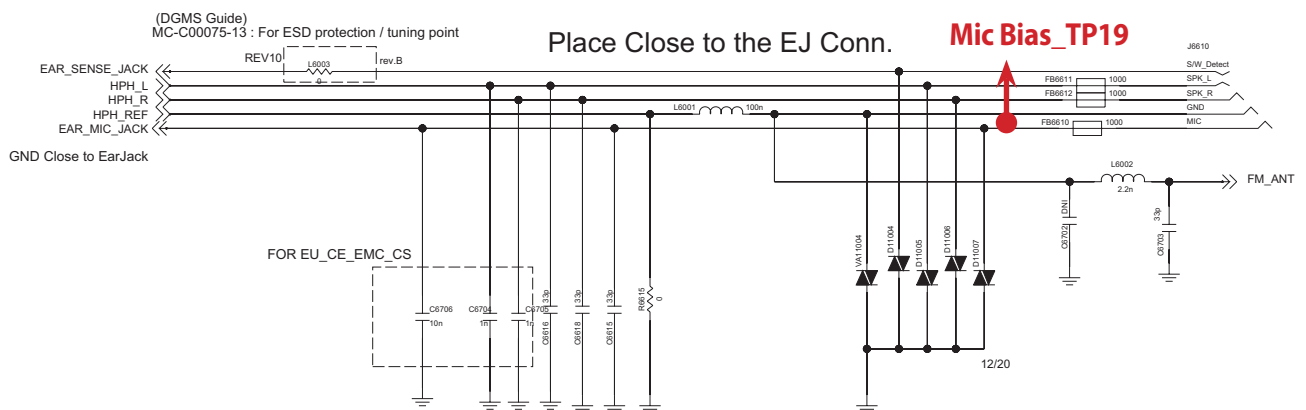
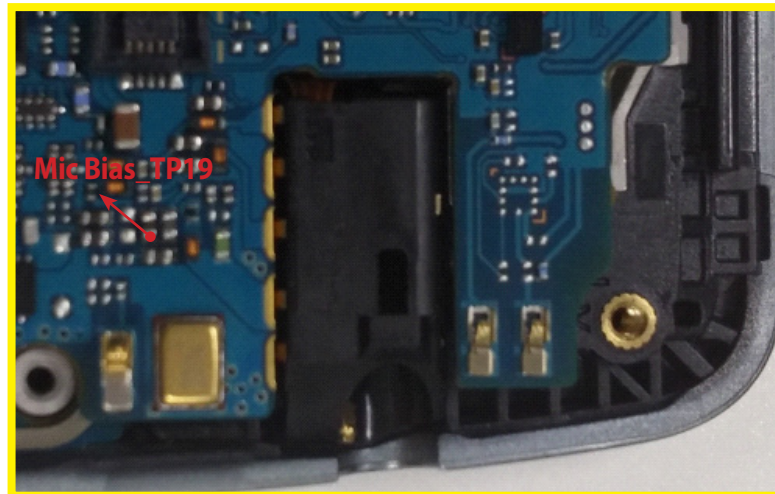
1. Check the left signal(HPH\_L)(FB6611 TP17) and detection line(EAR\_SENSE\_JACK)(D11004 TP18) are shorted when headset inserted. See PCB Contact terminal also.



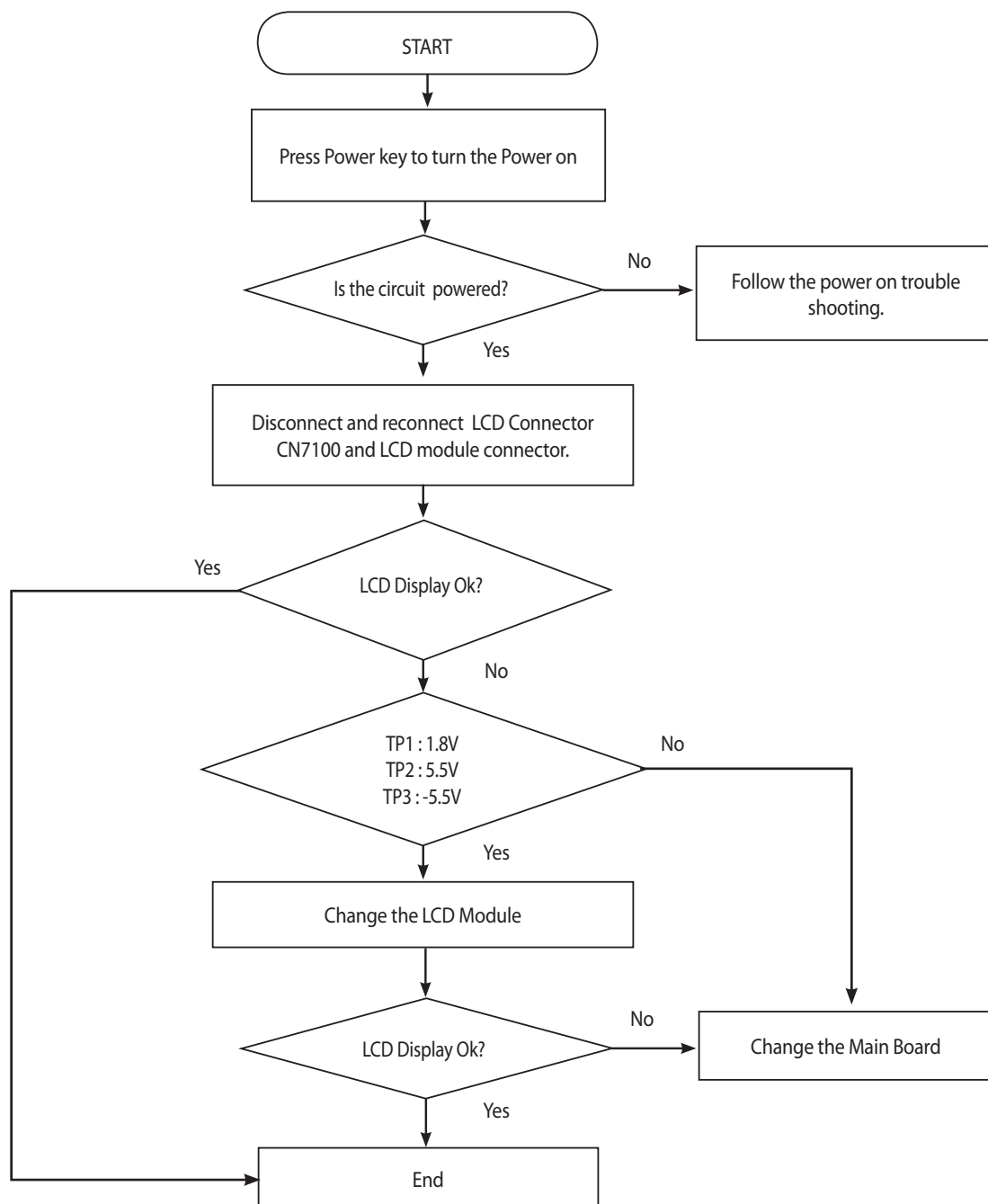
#### Case B. No Sound from Ear-mic

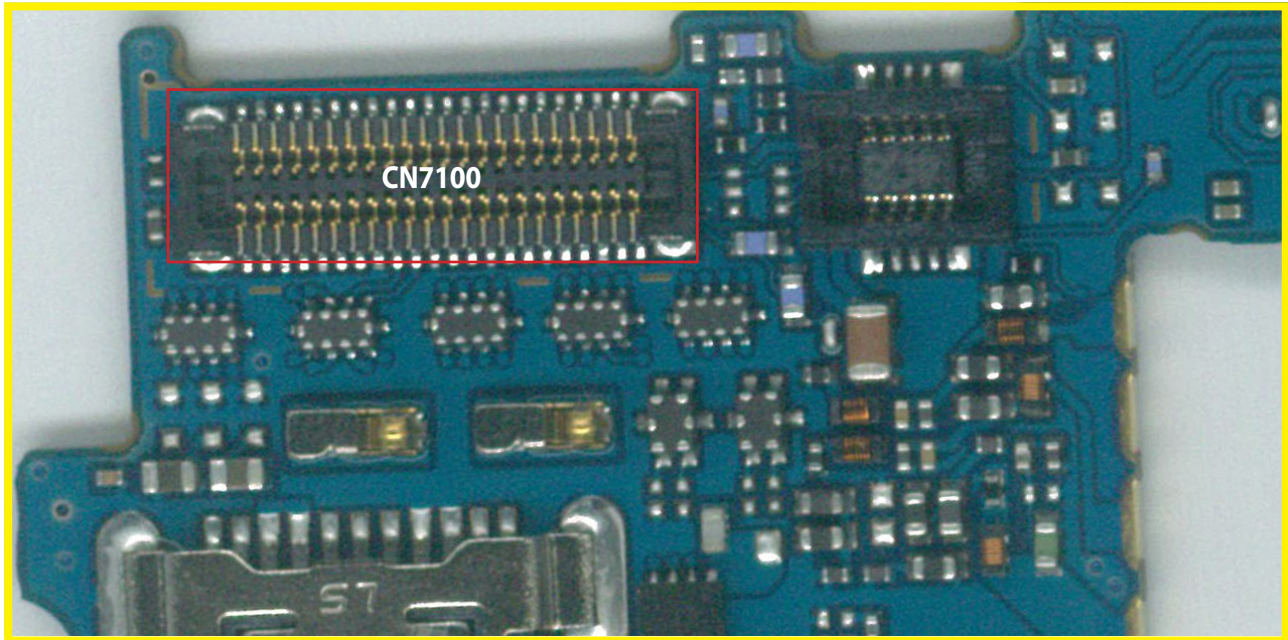


**1. Check parts about Mic Bias(1.8V) (D11007) works well ?**



### 3.14 LCD



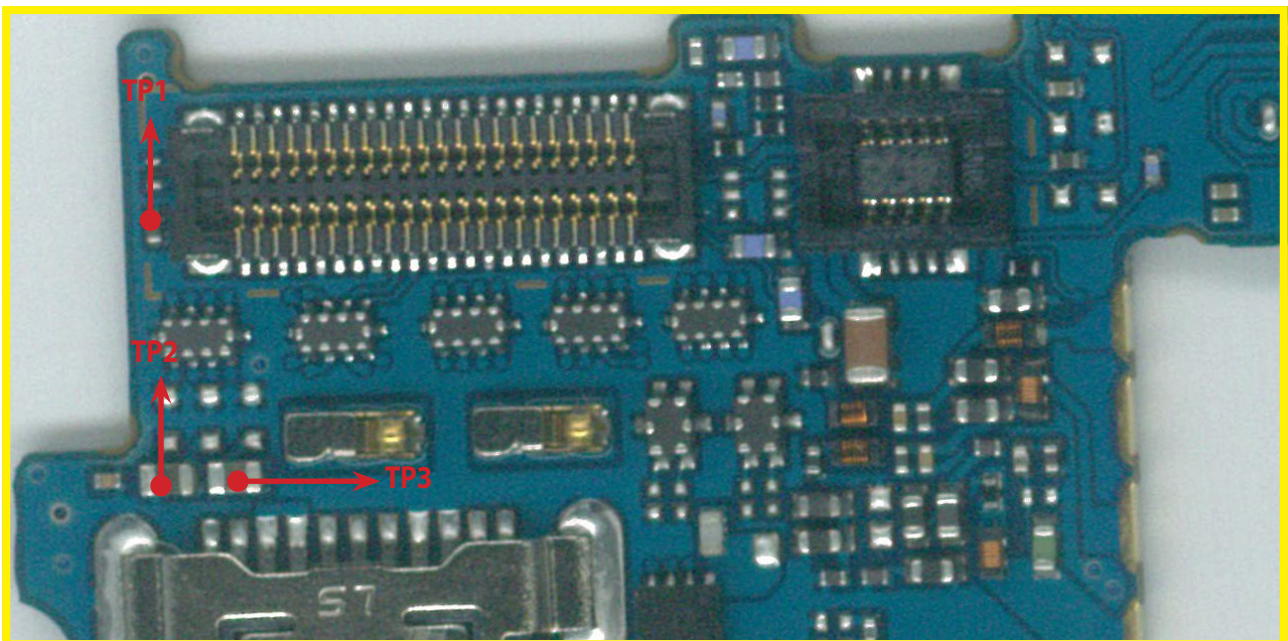
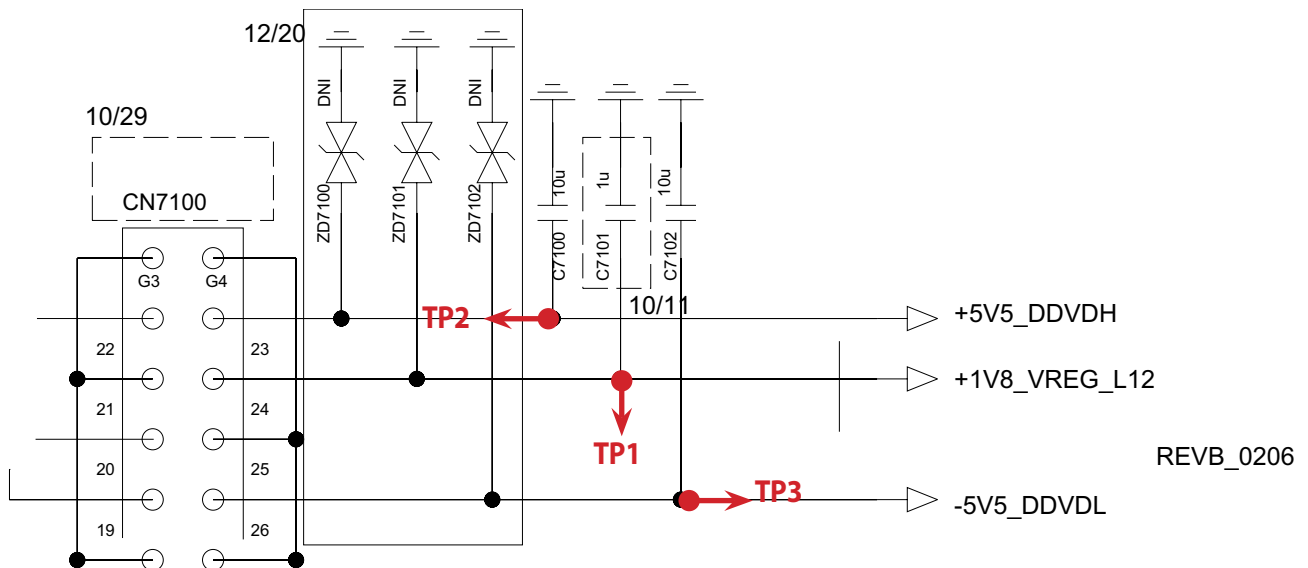


<Main Bot>





### 3. TROUBLE SHOOTING



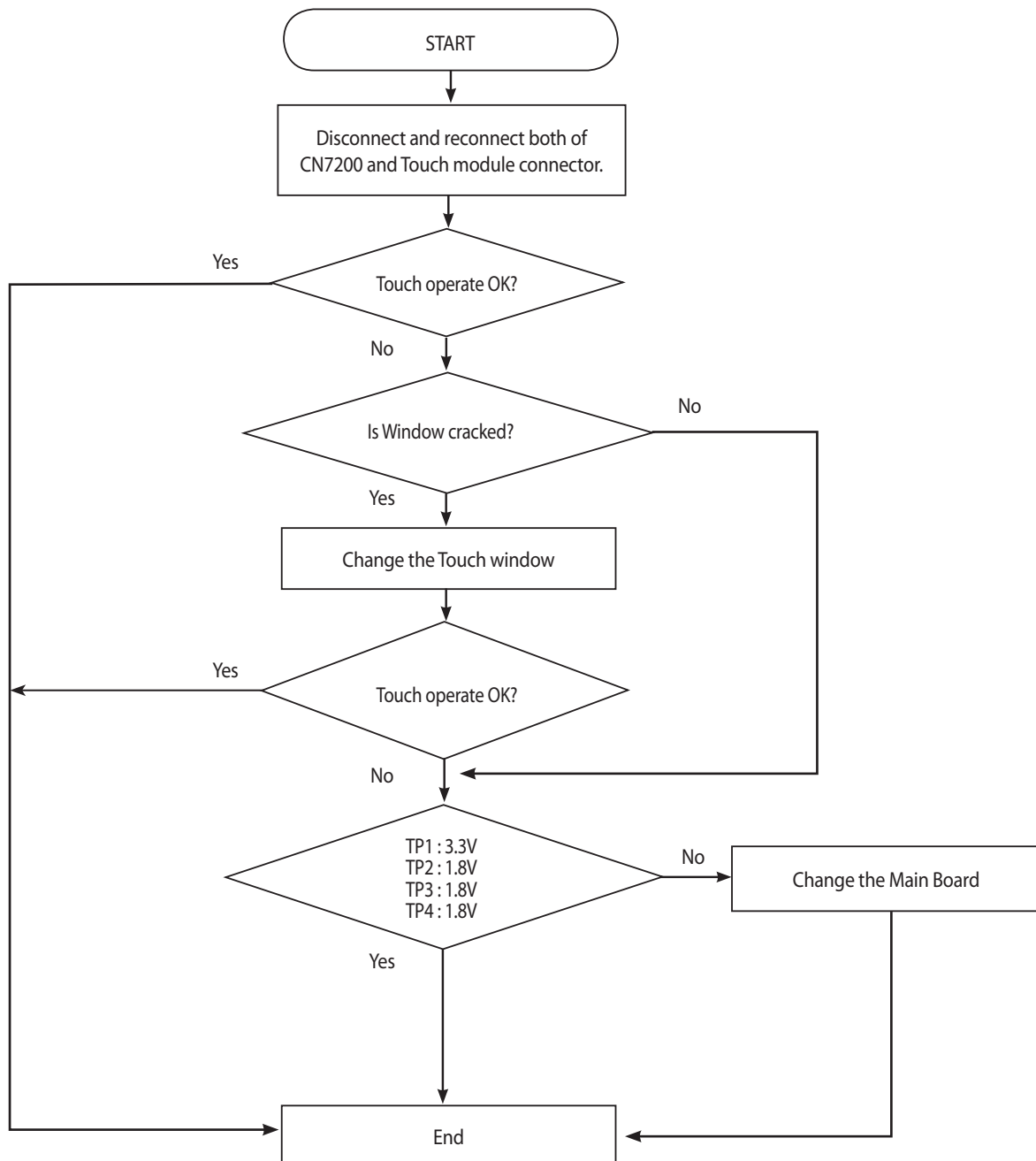
<Main Bot>



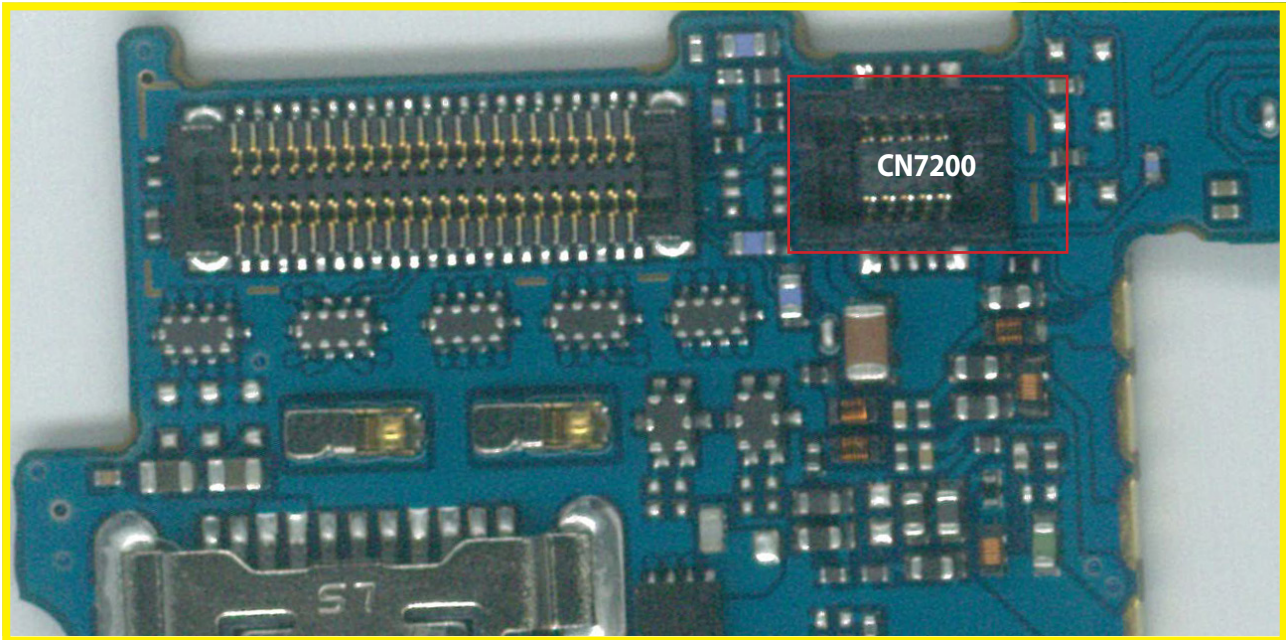
### 3.15 Touch

Touch control signals are generated by touch sensor.

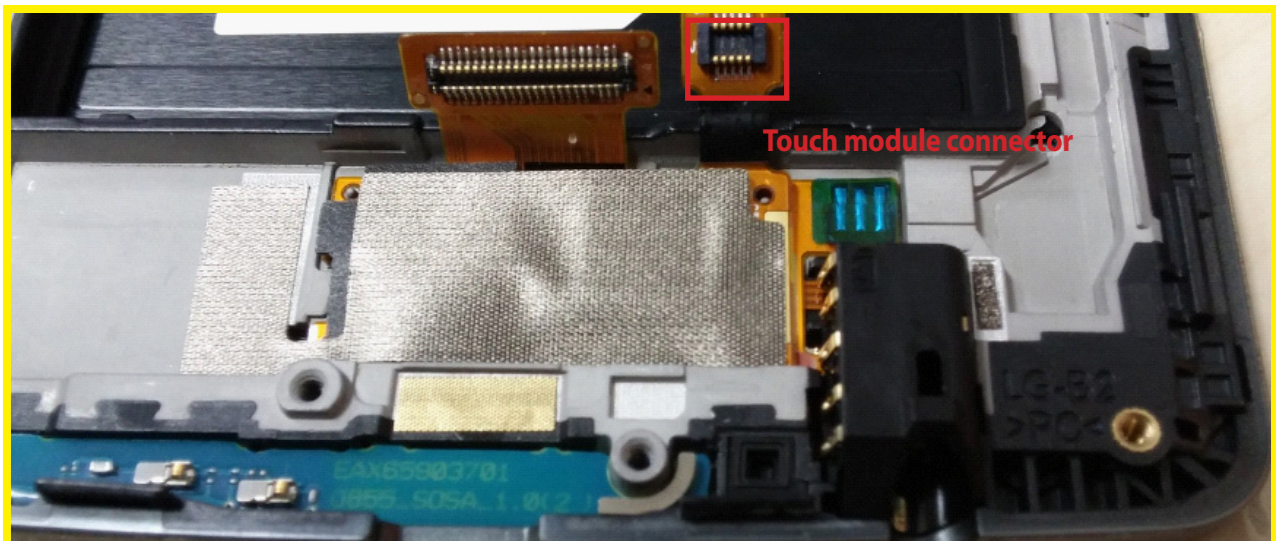
Those signal's path are touch sensor -> MSM8974



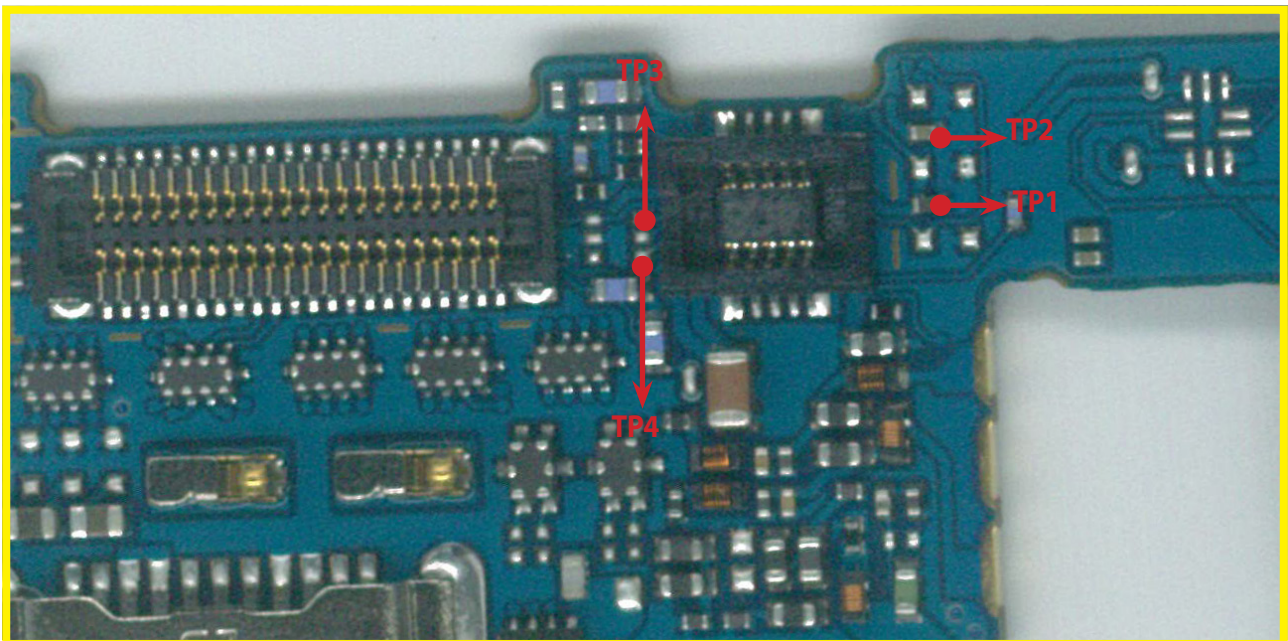
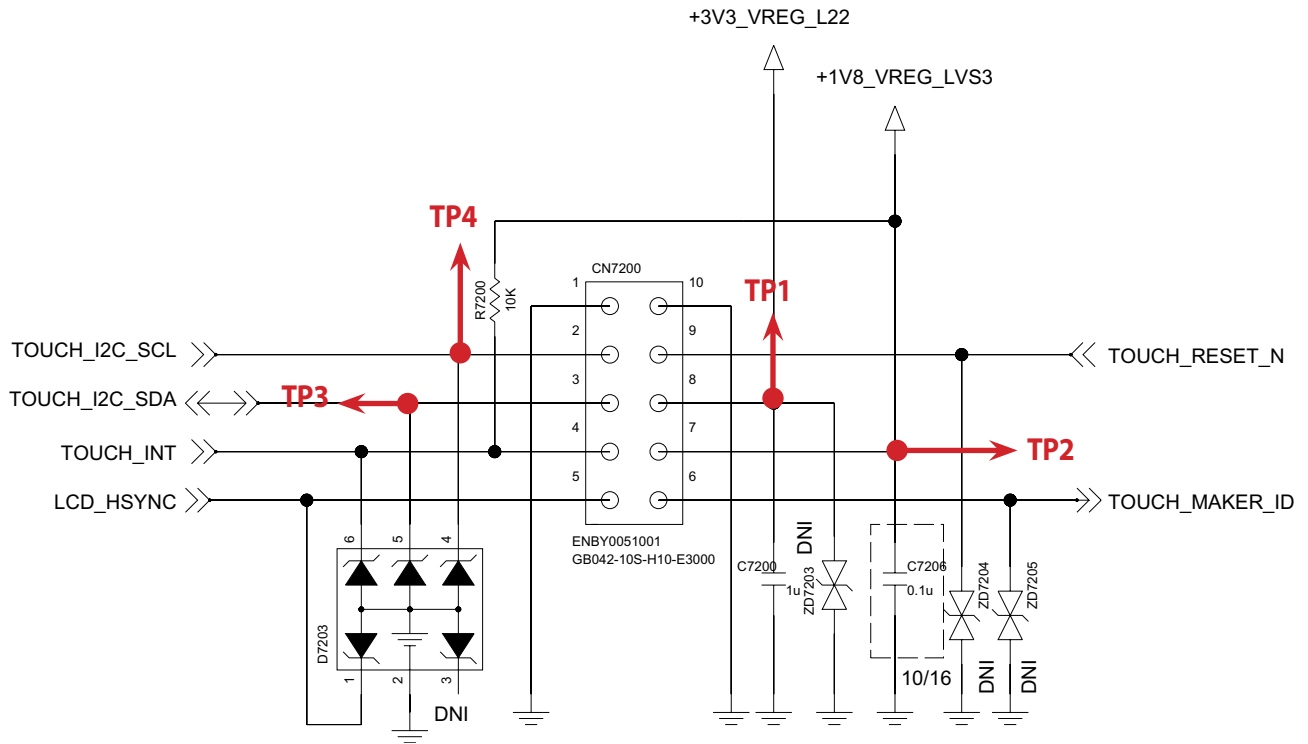
### 3. TROUBLE SHOOTING



<Main Bot>



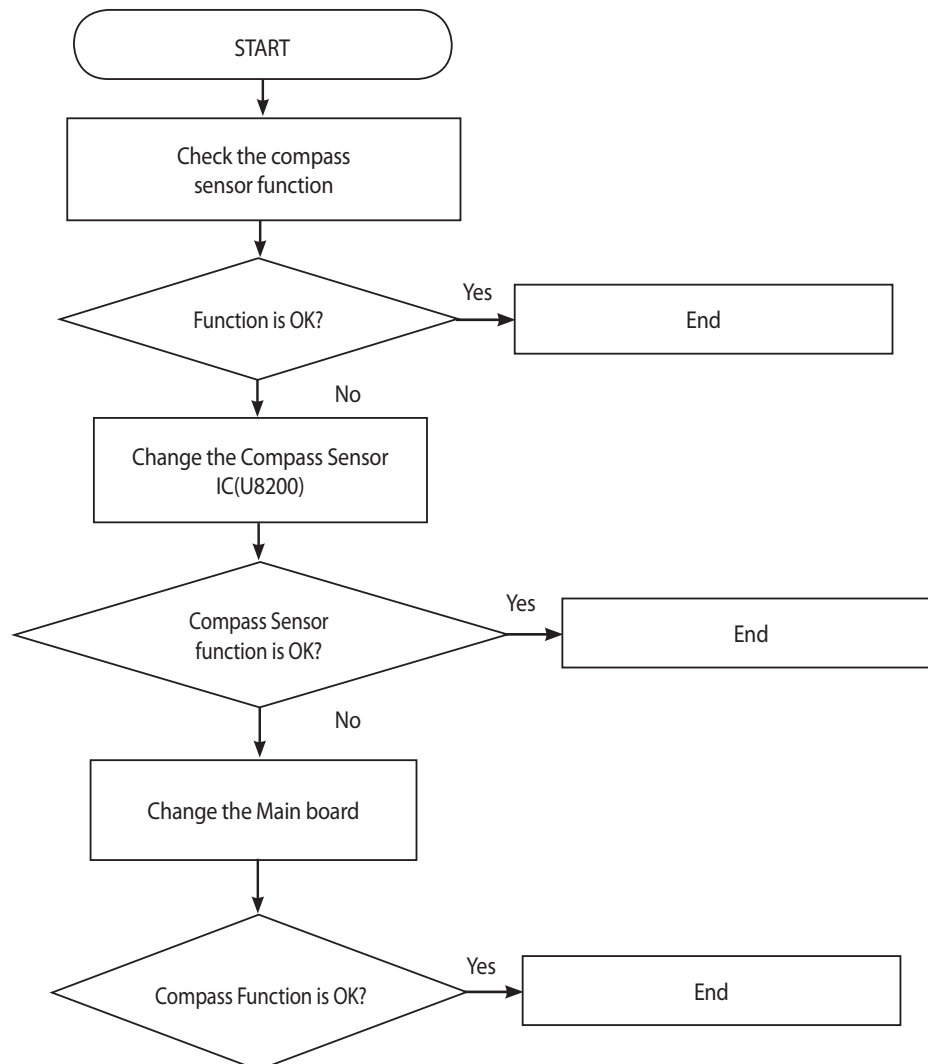
### 3. TROUBLE SHOOTING



<Main Bot>

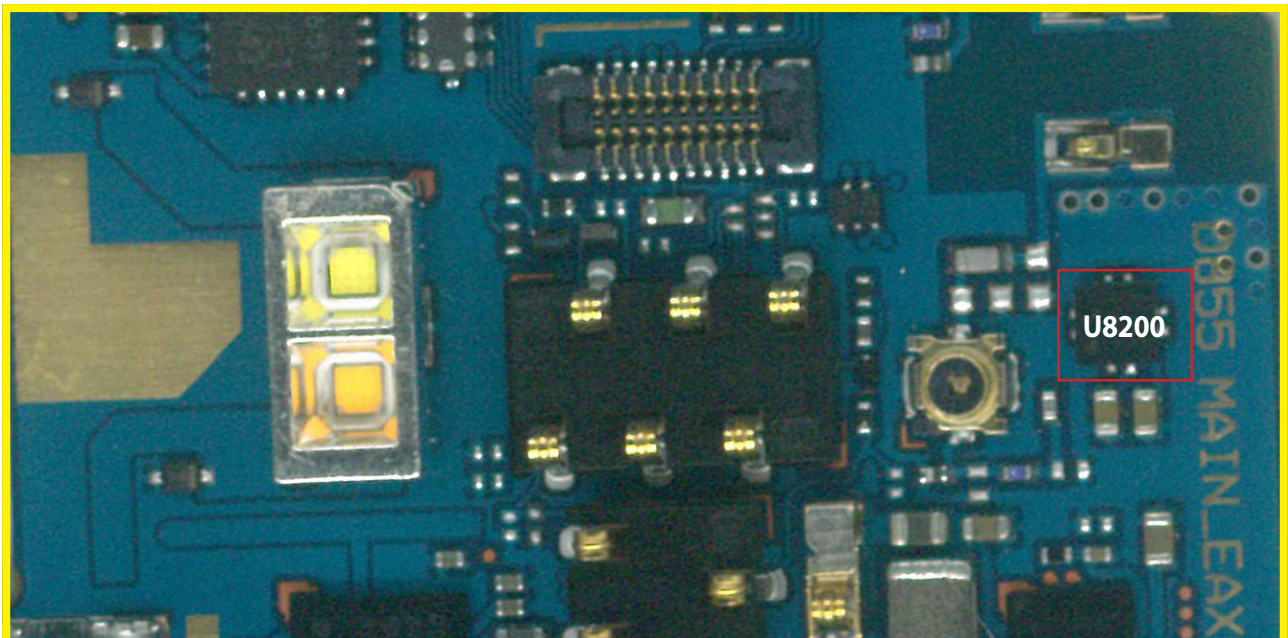
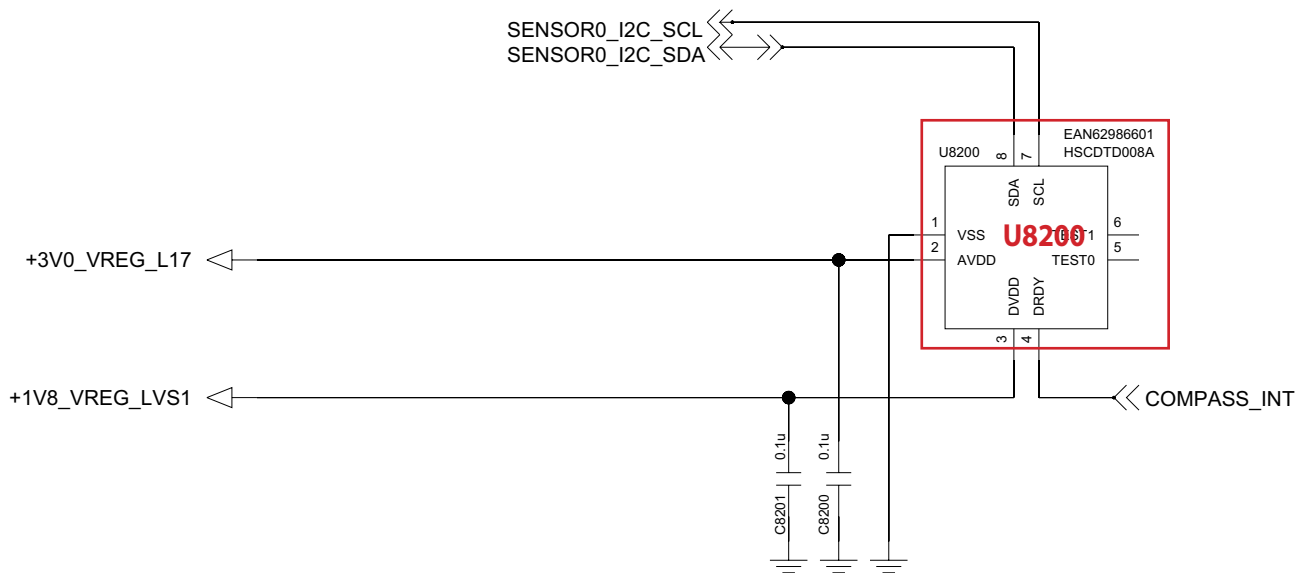
### 3.16 Sensor

#### 3.16.1 Compass + Motion Sensor



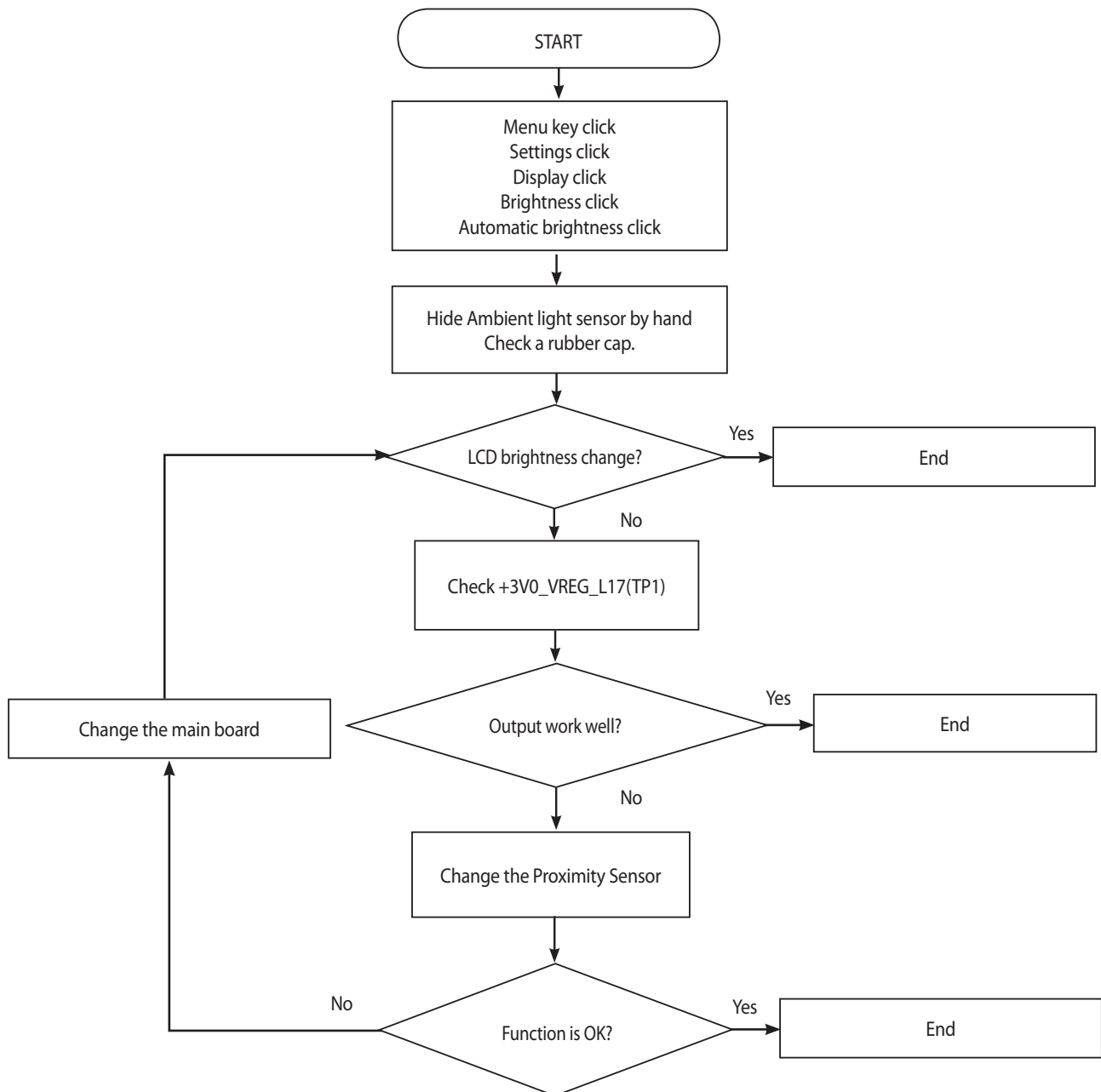


### 3. TROUBLE SHOOTING



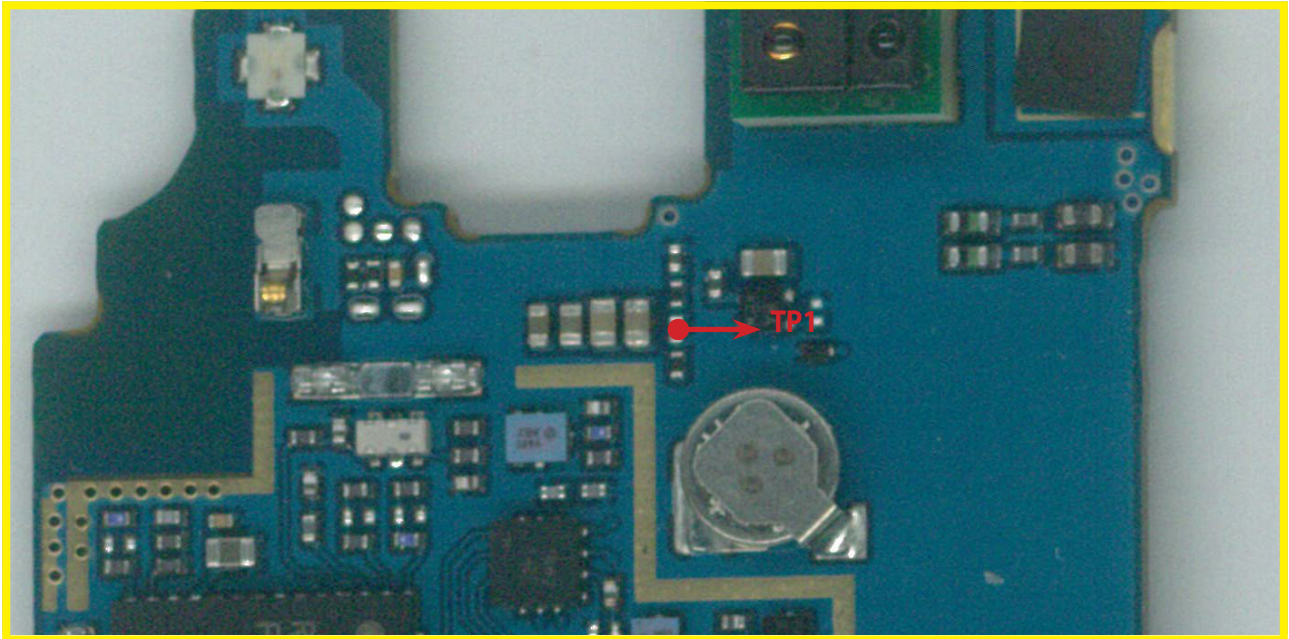
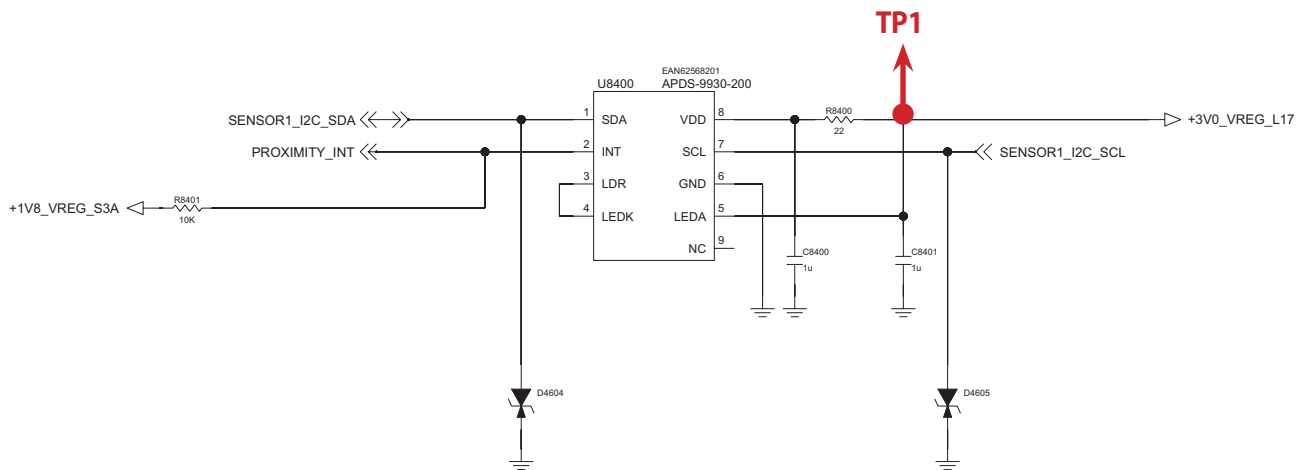
<Main Bot>

### 3.16.2 Ambient light sensor





### 3. TROUBLE SHOOTING



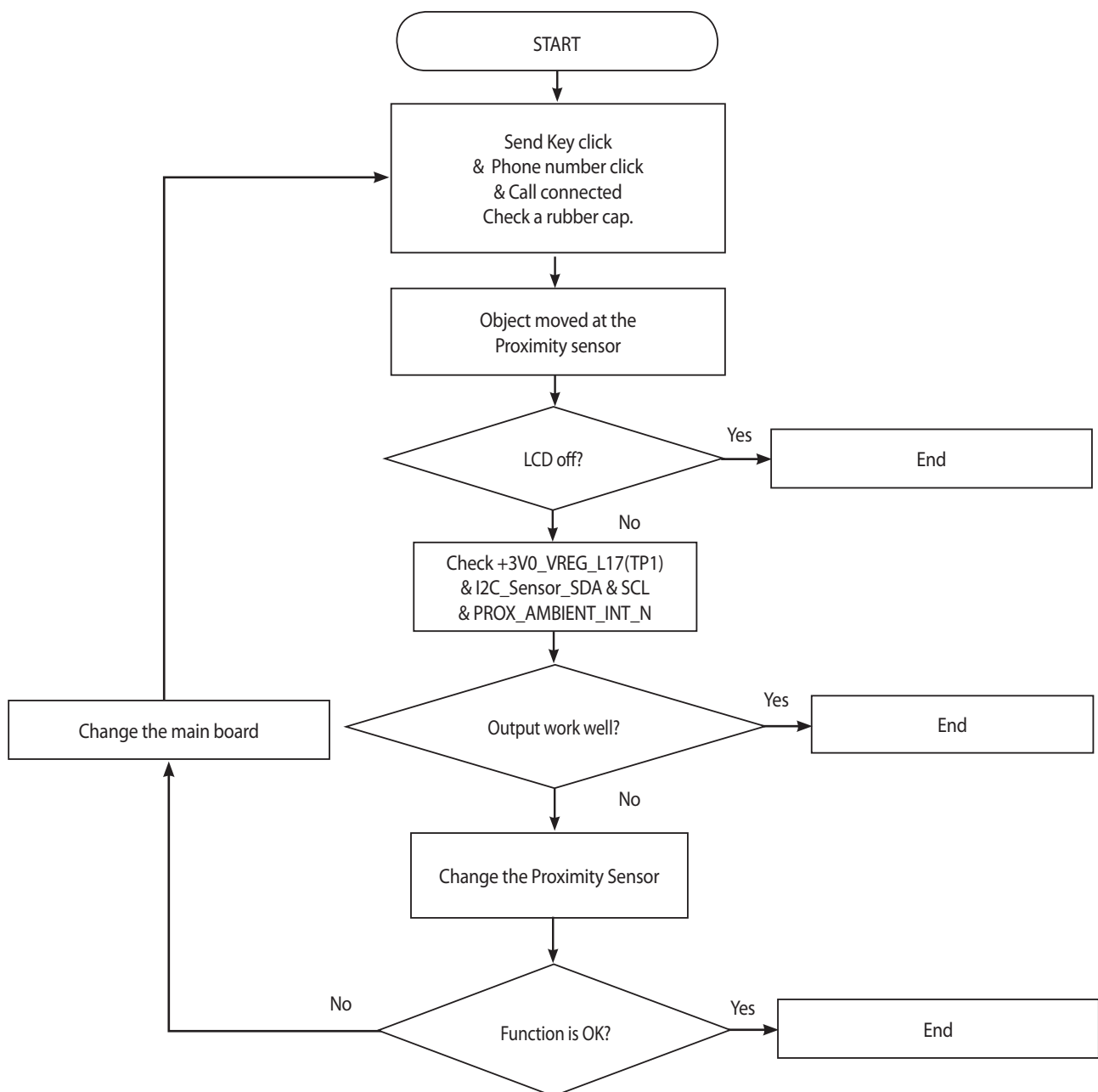
<Main Top>

### 3.16.3 Proximity

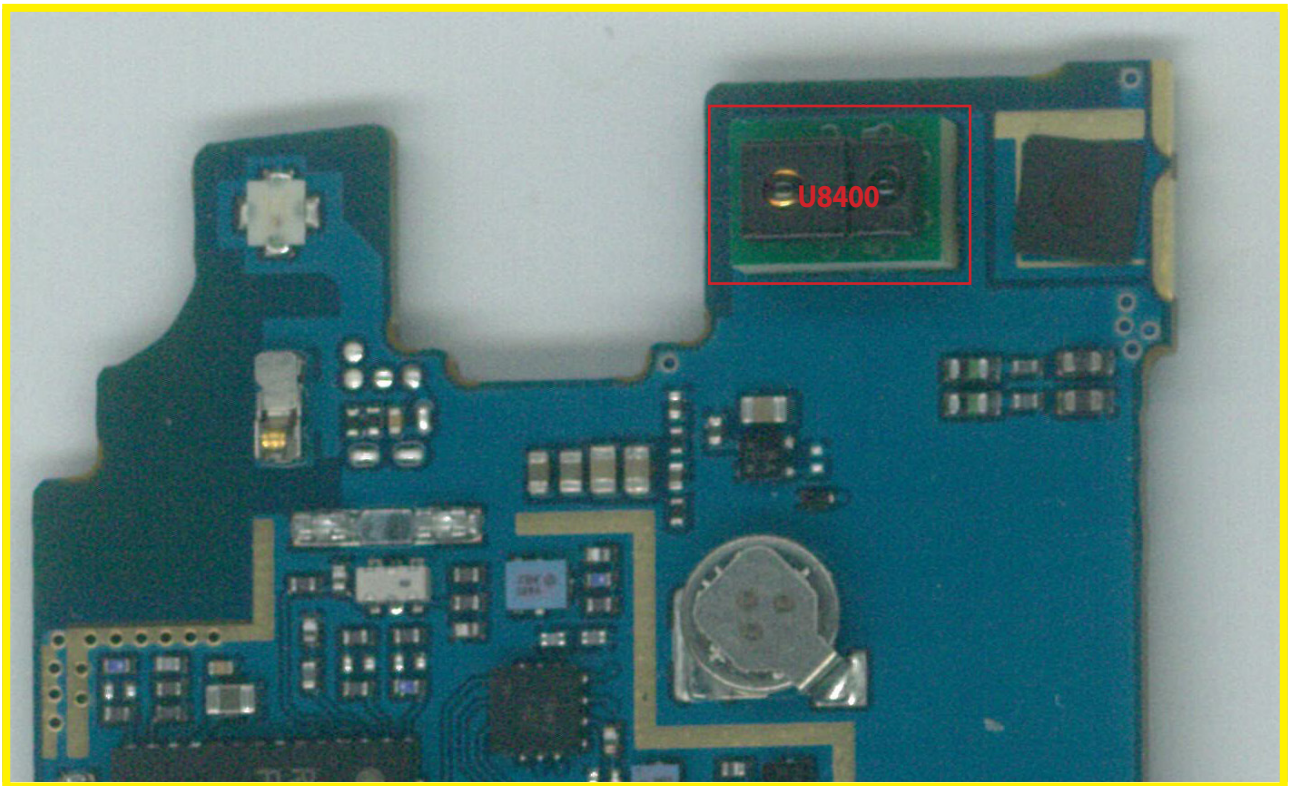
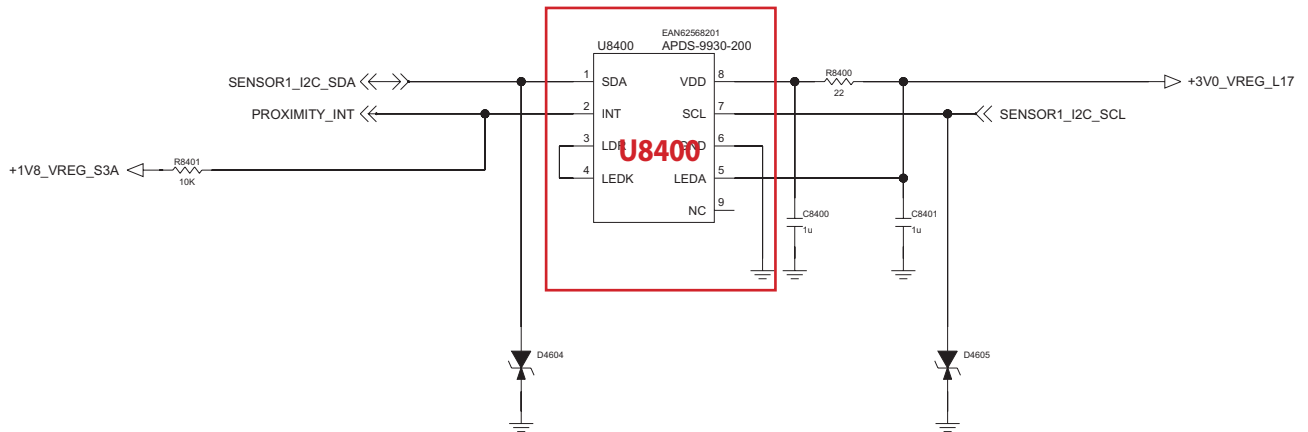
APDS-9130-200 is Proximity sensor.

Proximity Sensor is worked as below:

Send Key click -> Phone number click -> Call connected -> Object moved at the sensor -> Control the screen's on/off operation automatically

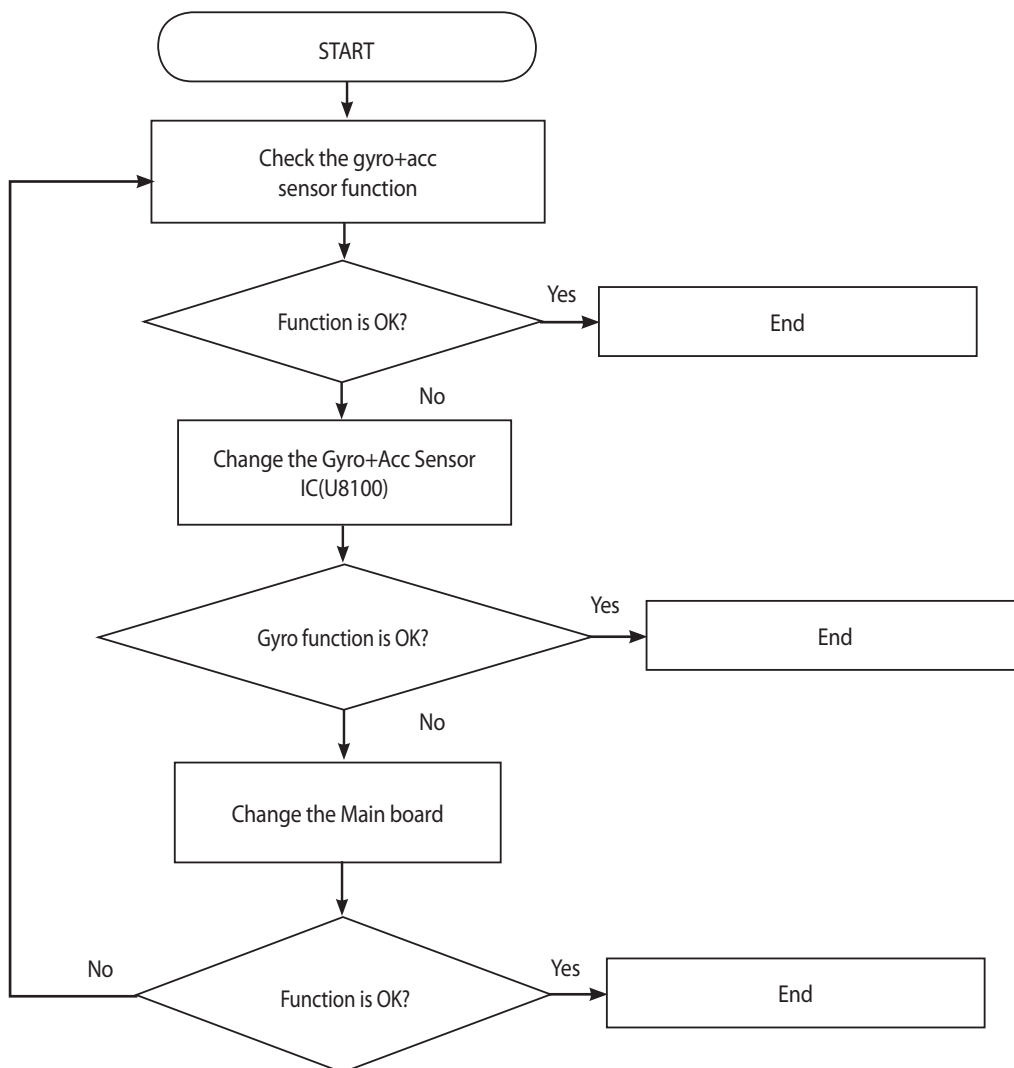


### 3. TROUBLE SHOOTING

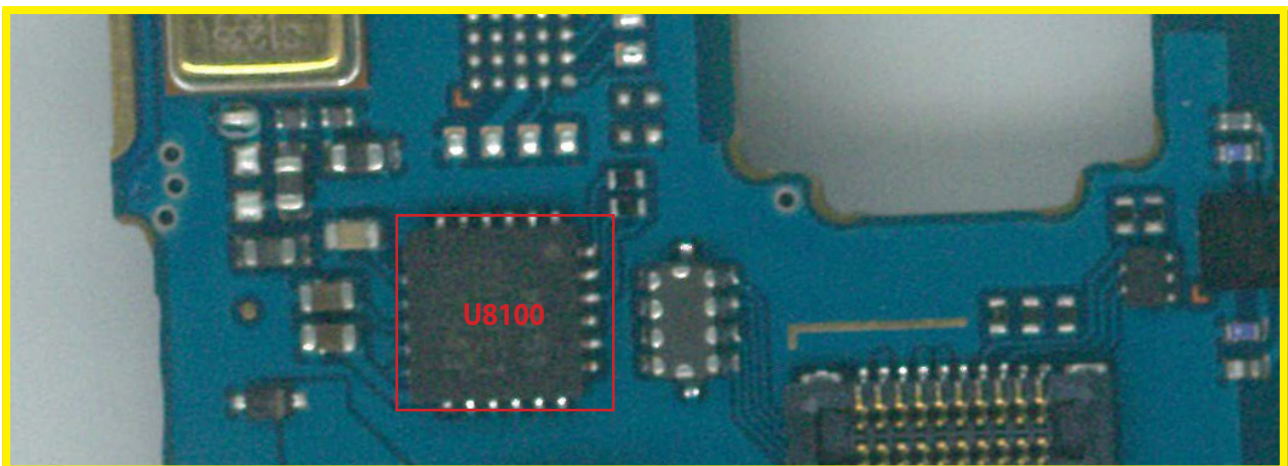
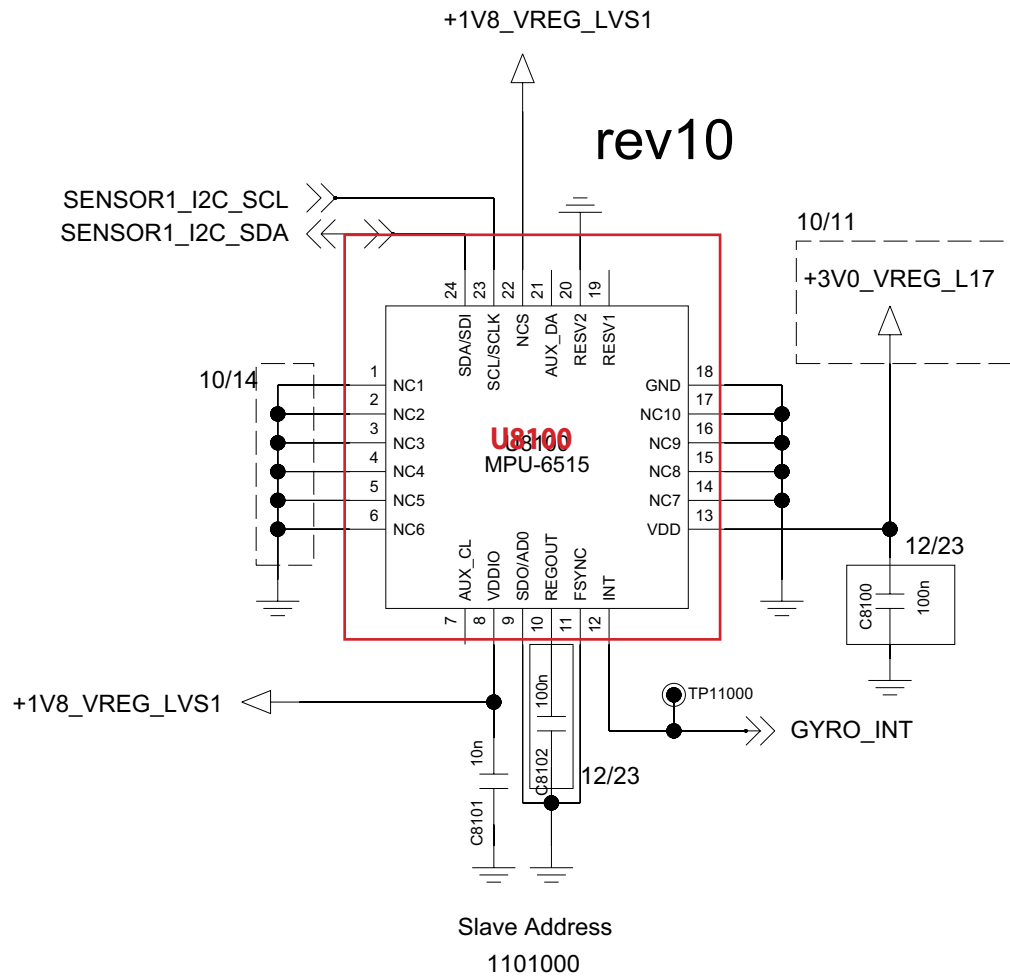


<Main Top>

### 3.16.4 Gyroscope + Accelometer sensor



### 3. TROUBLE SHOOTING



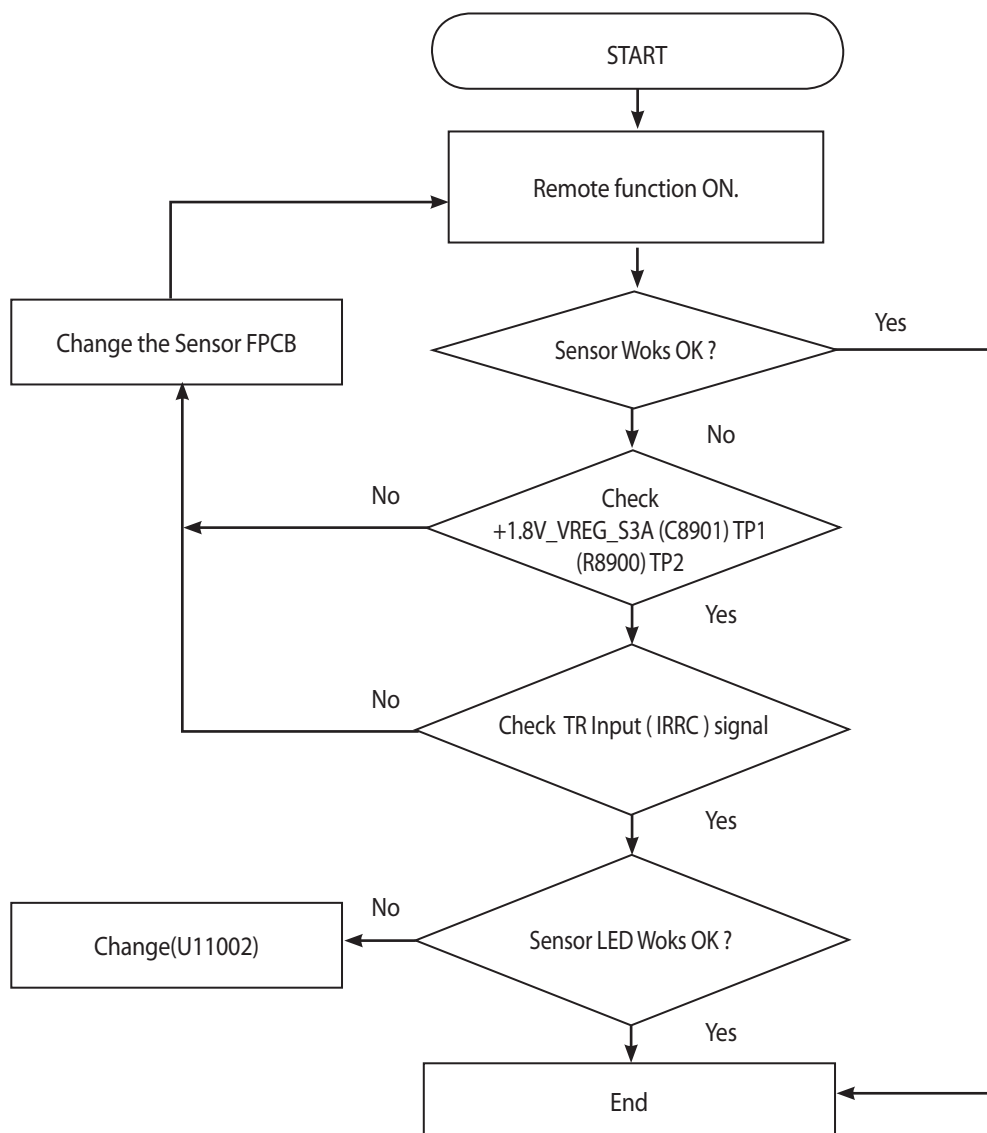
<Main Bot>

### 3.17 Remote Sensor ( IRRC Sensor)

The sequence of QuickRemote Operation Path

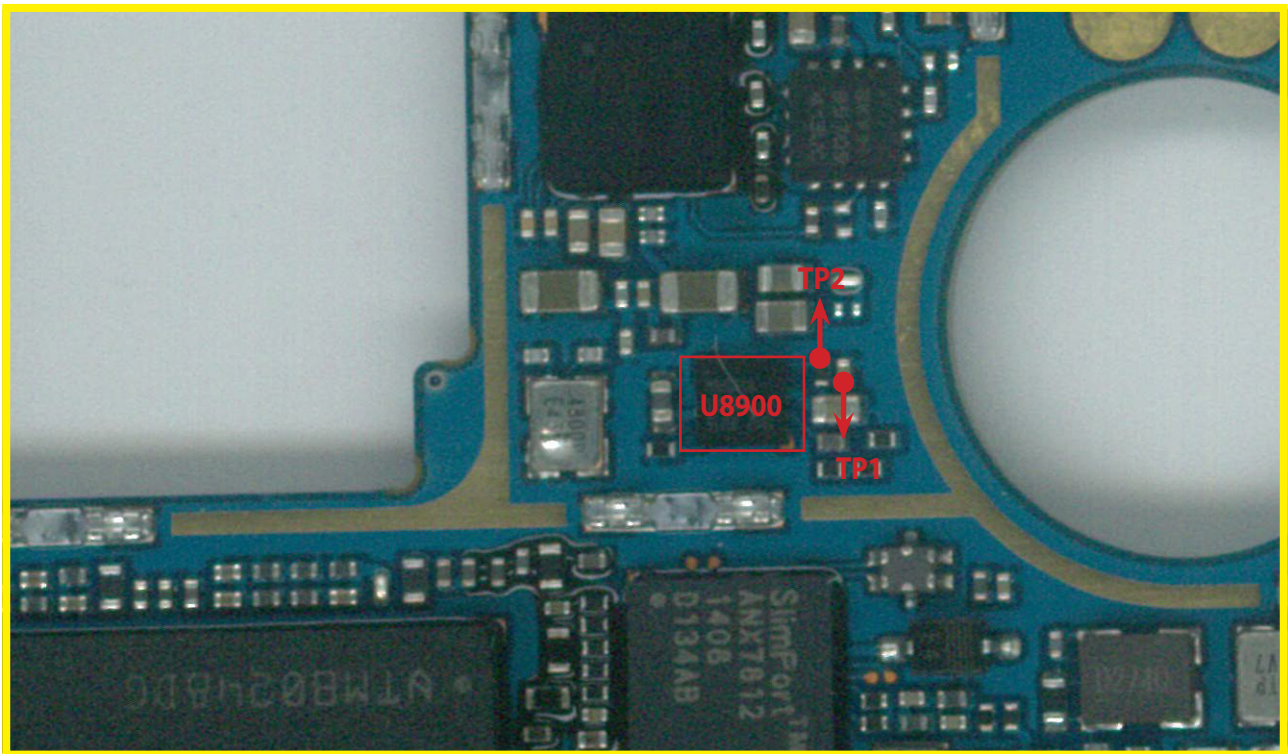
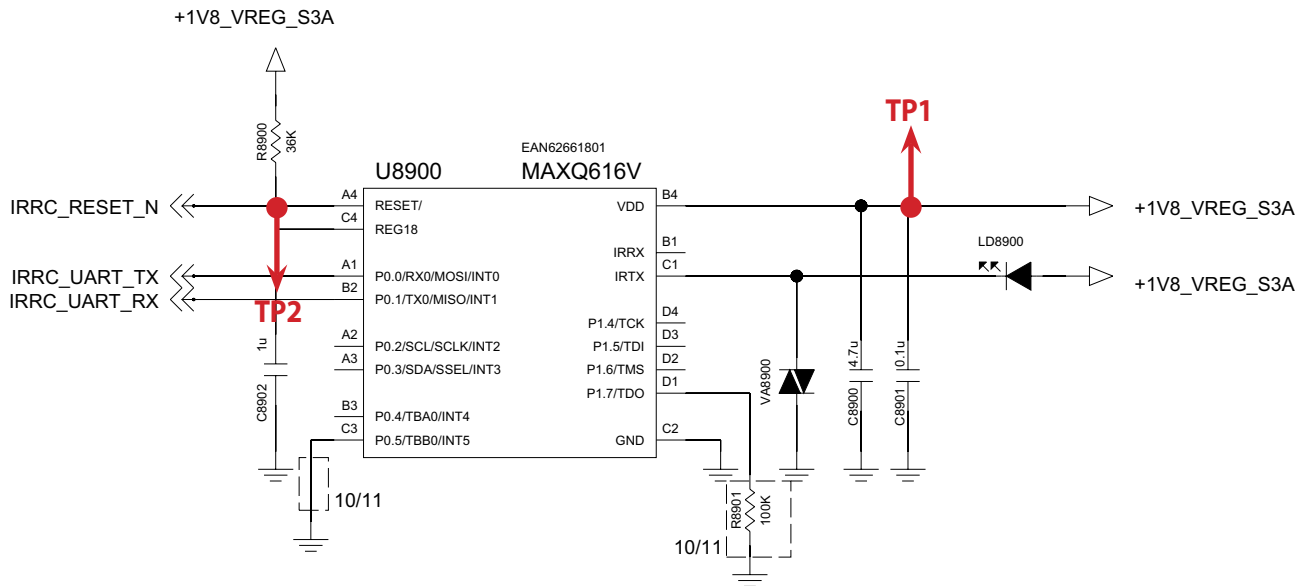
Proximity Sensor is worked as below:

QuickRemote function Check -> Menu Remote on -> TV Setting on



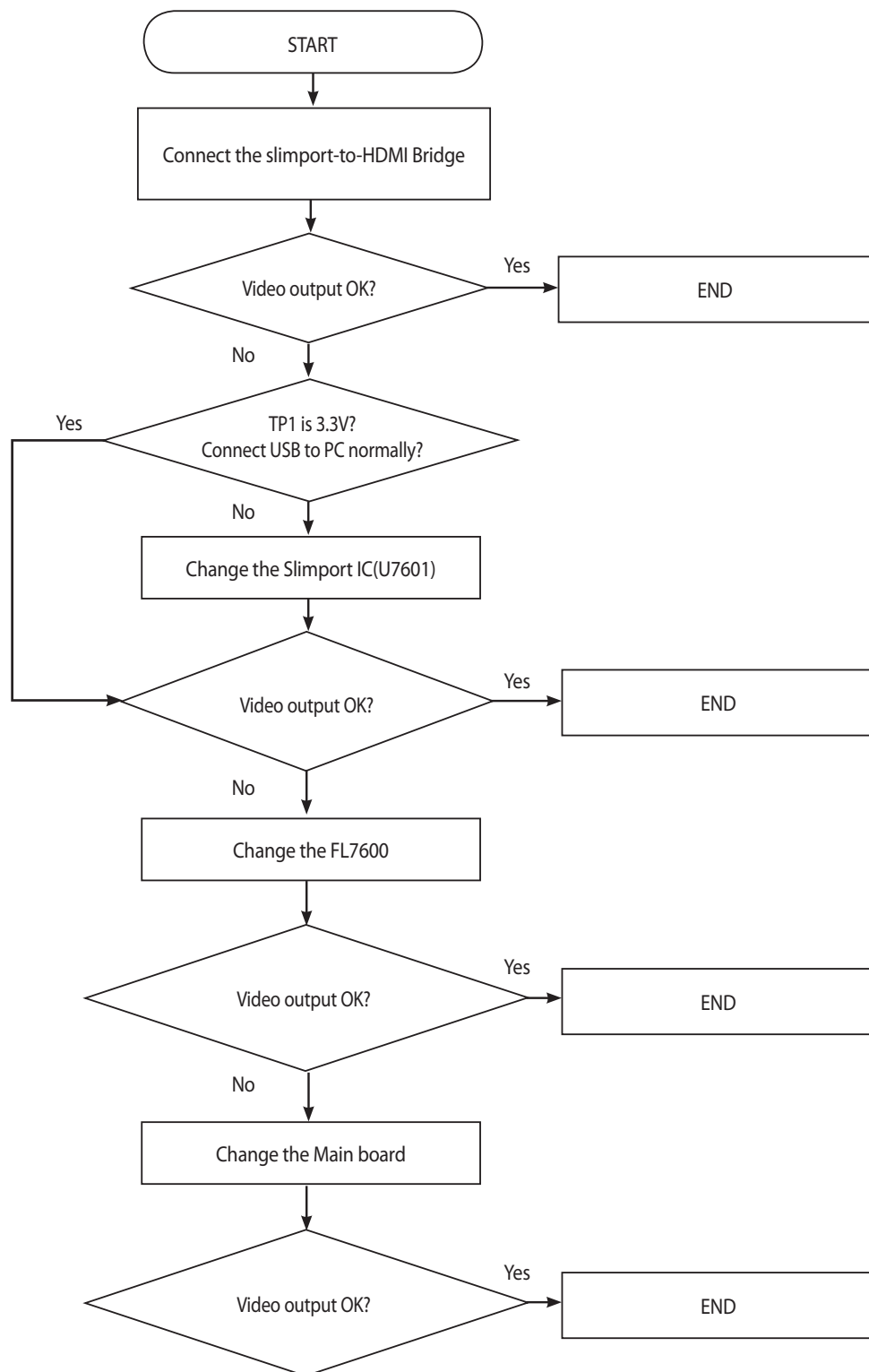


### 3. TROUBLE SHOOTING

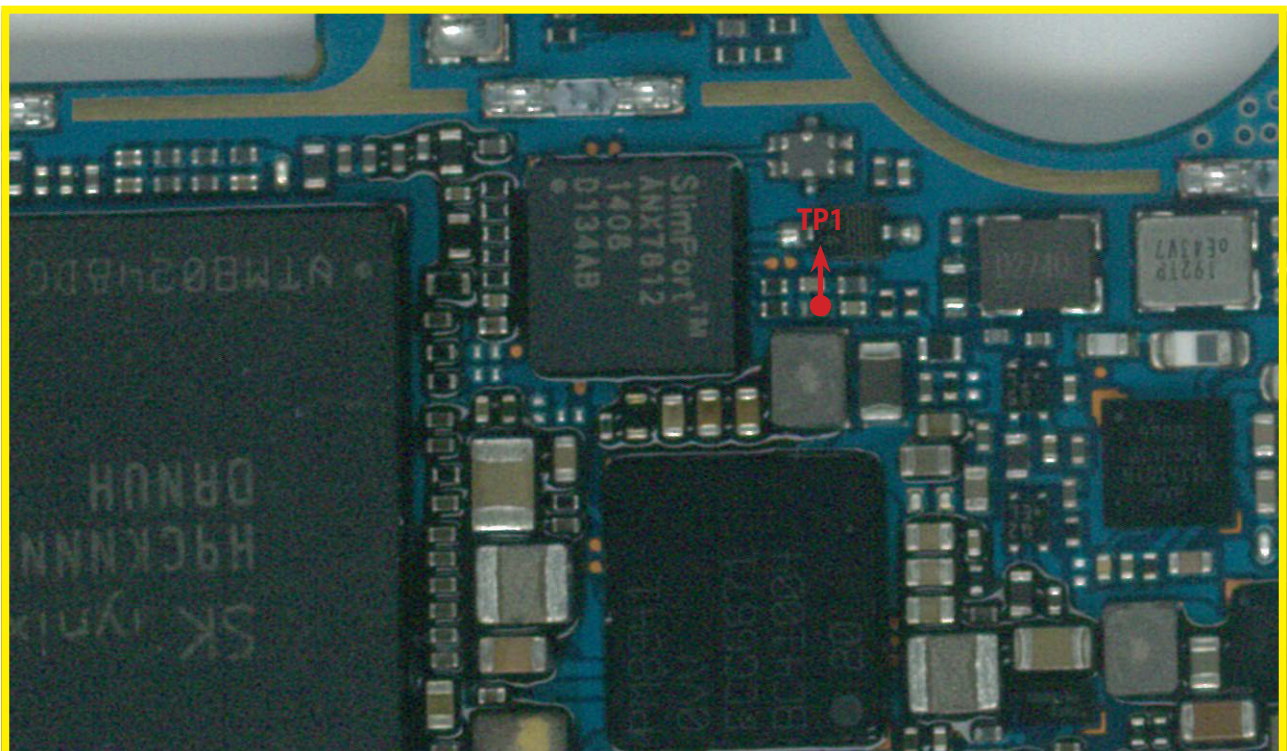
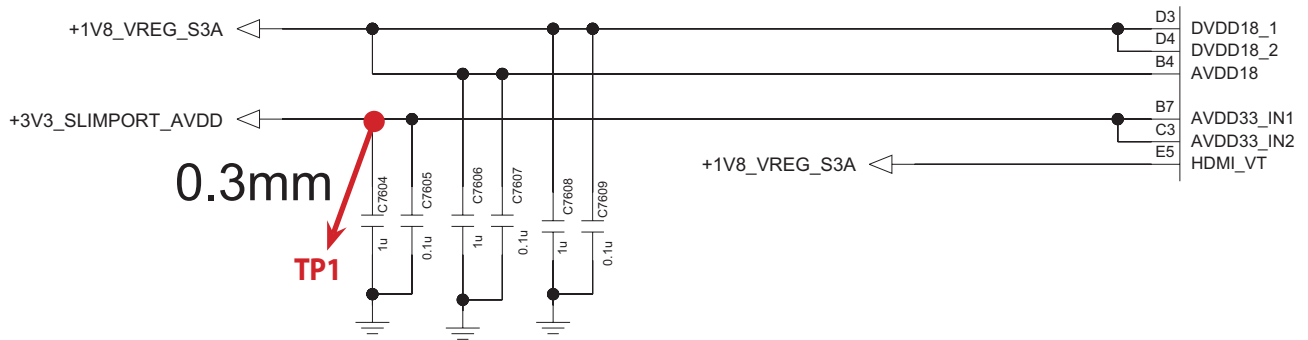


<Main Top>

### 3.18 USB / Slimport



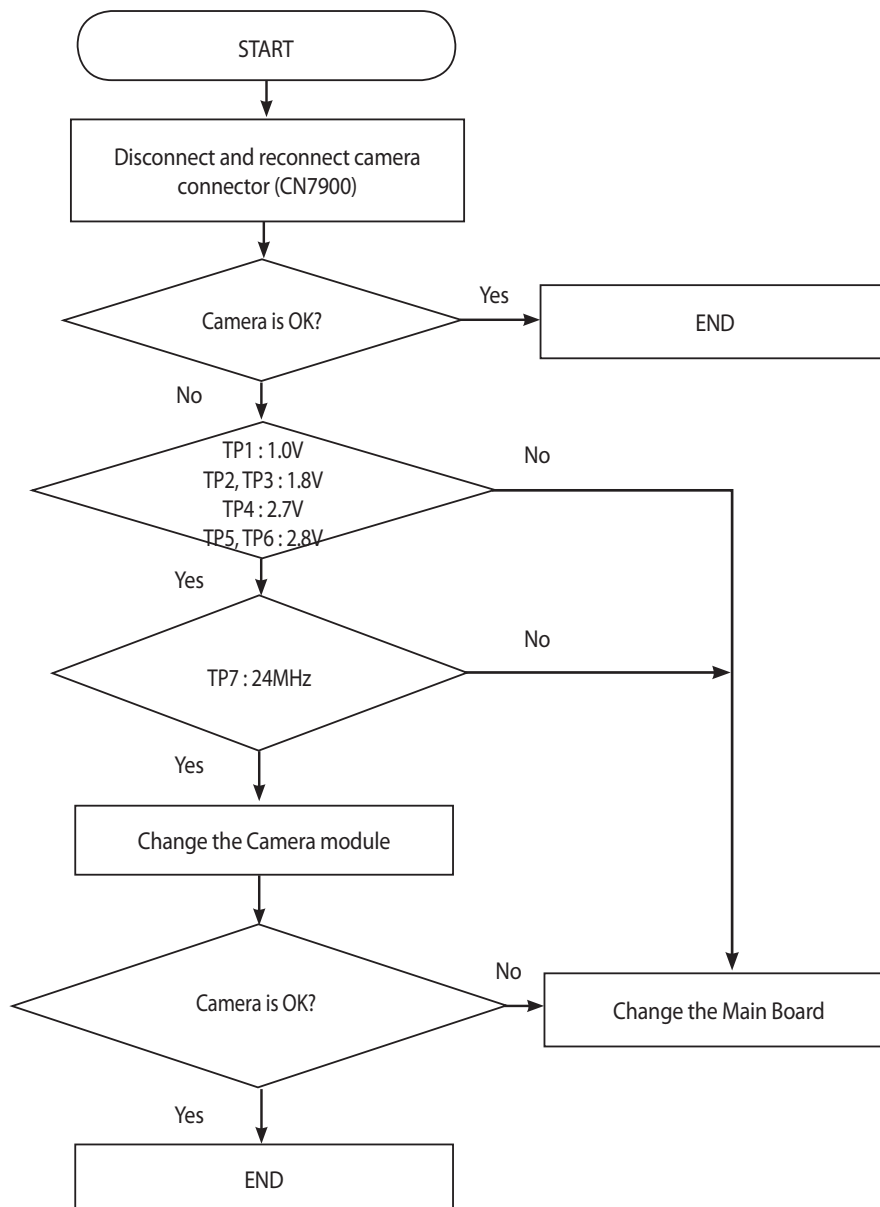
### 3. TROUBLE SHOOTING



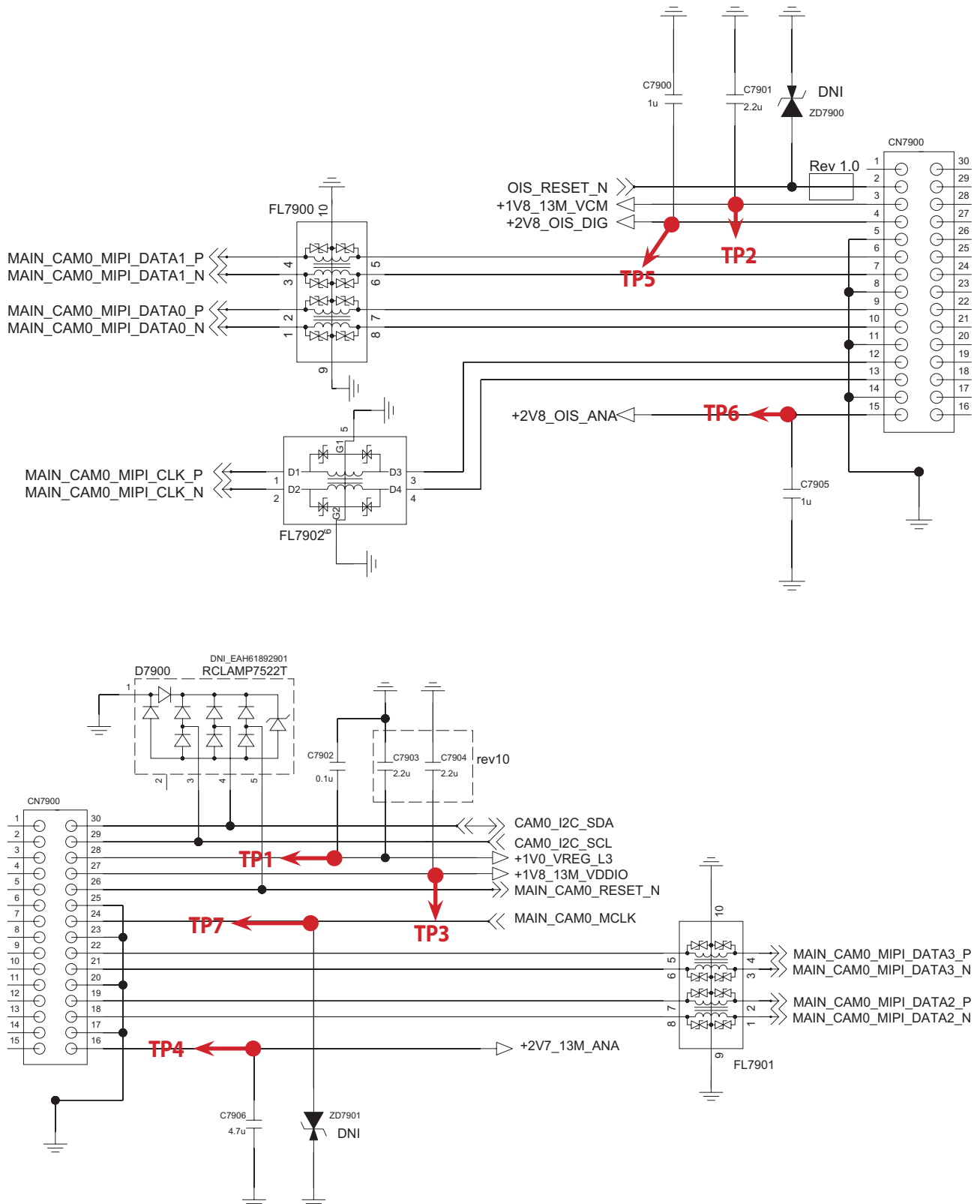
<Main Top>

### 3.19 CAMERA

#### 3.19.1 MAIN CAMERA

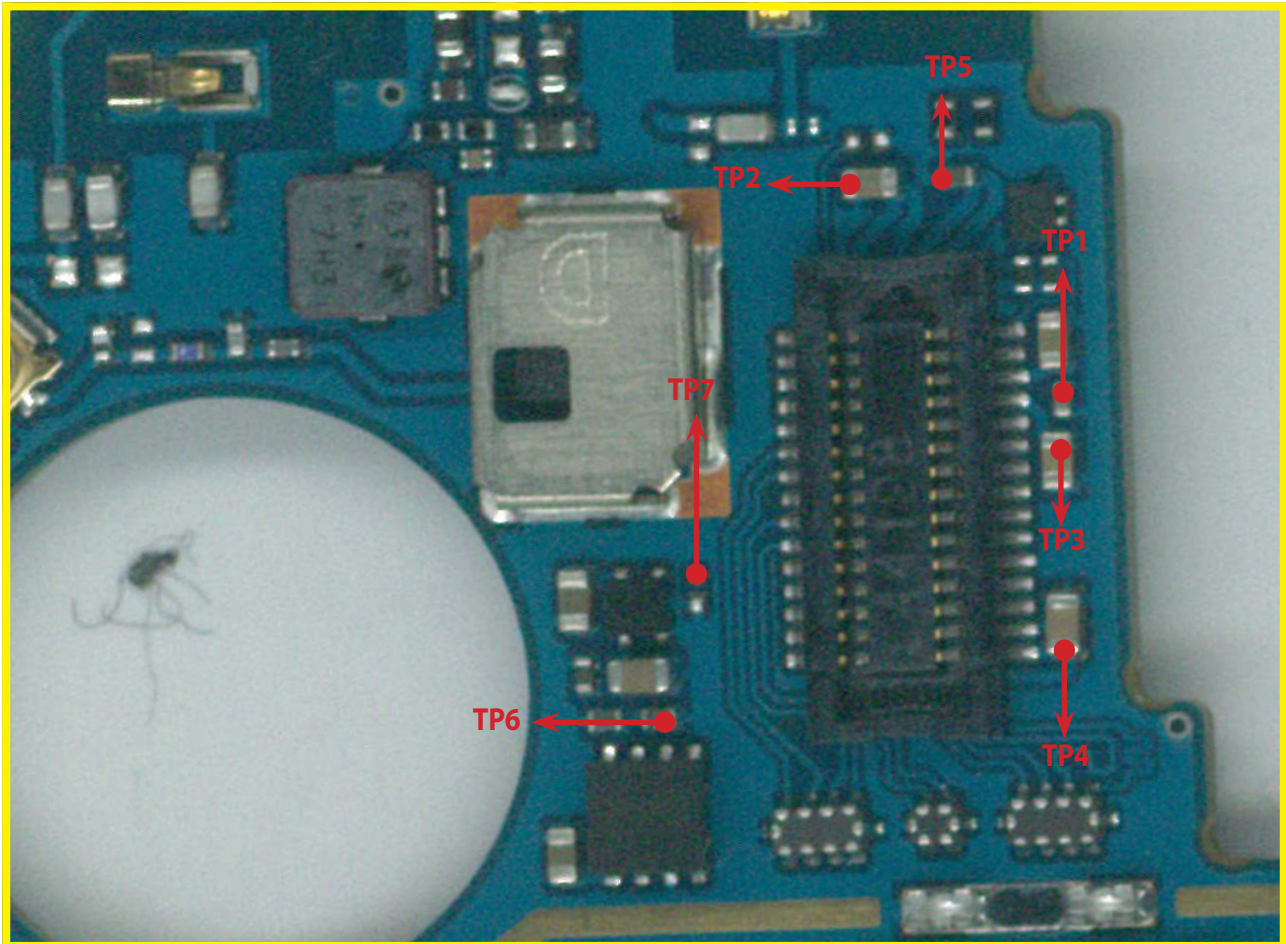


### 3. TROUBLE SHOOTING





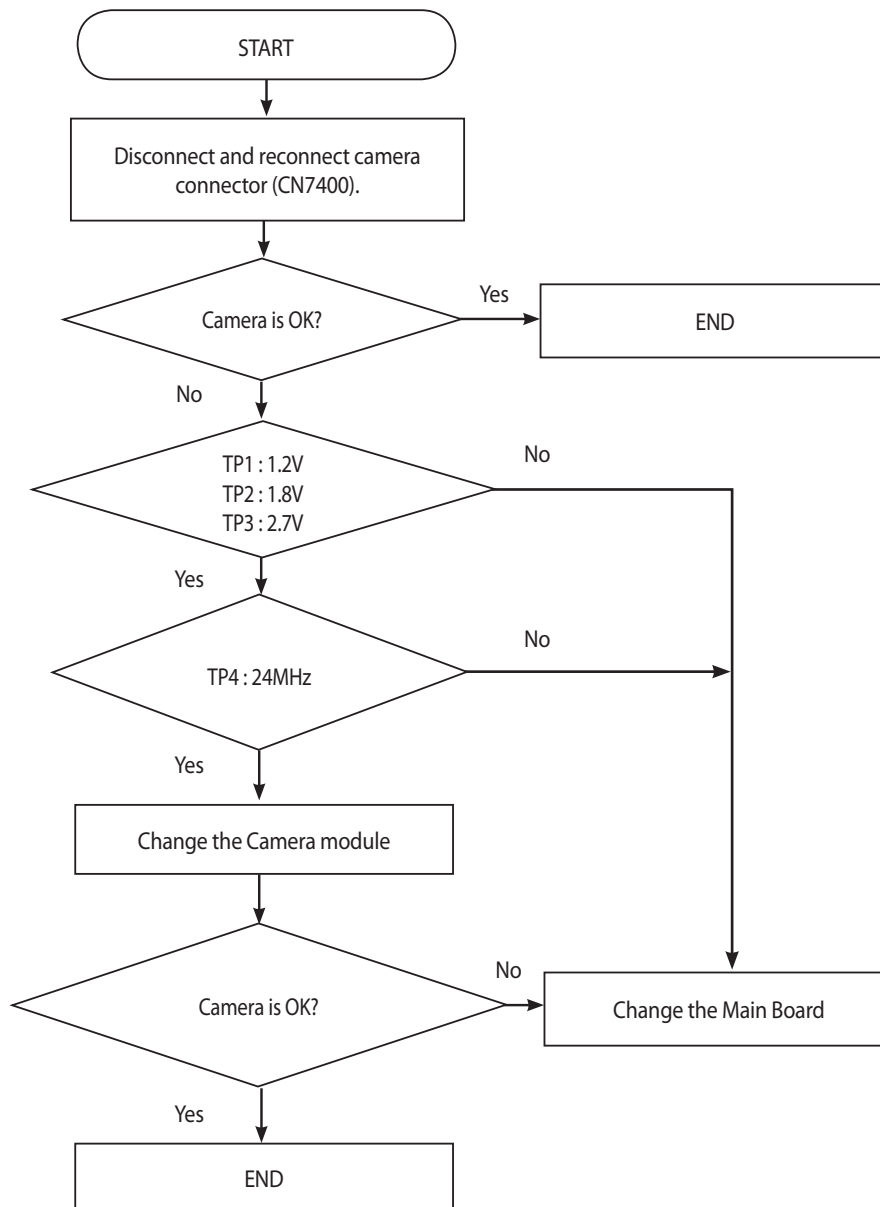
### 3. TROUBLE SHOOTING



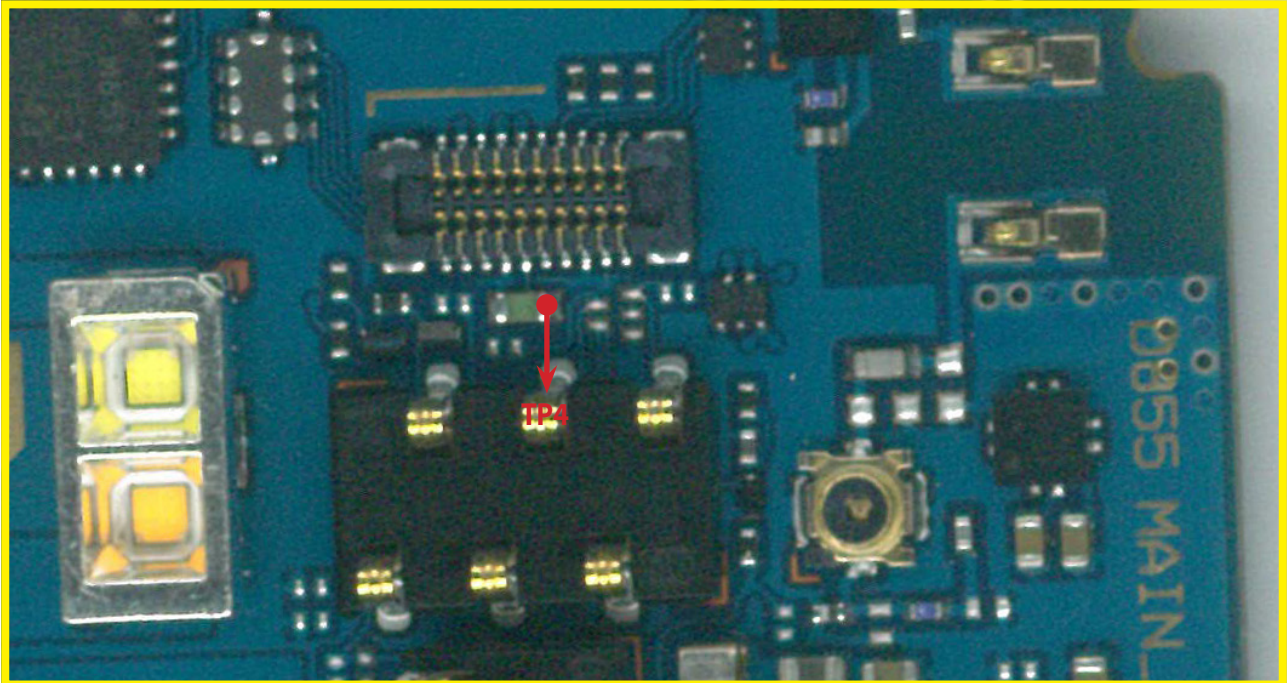
<Main Bot>



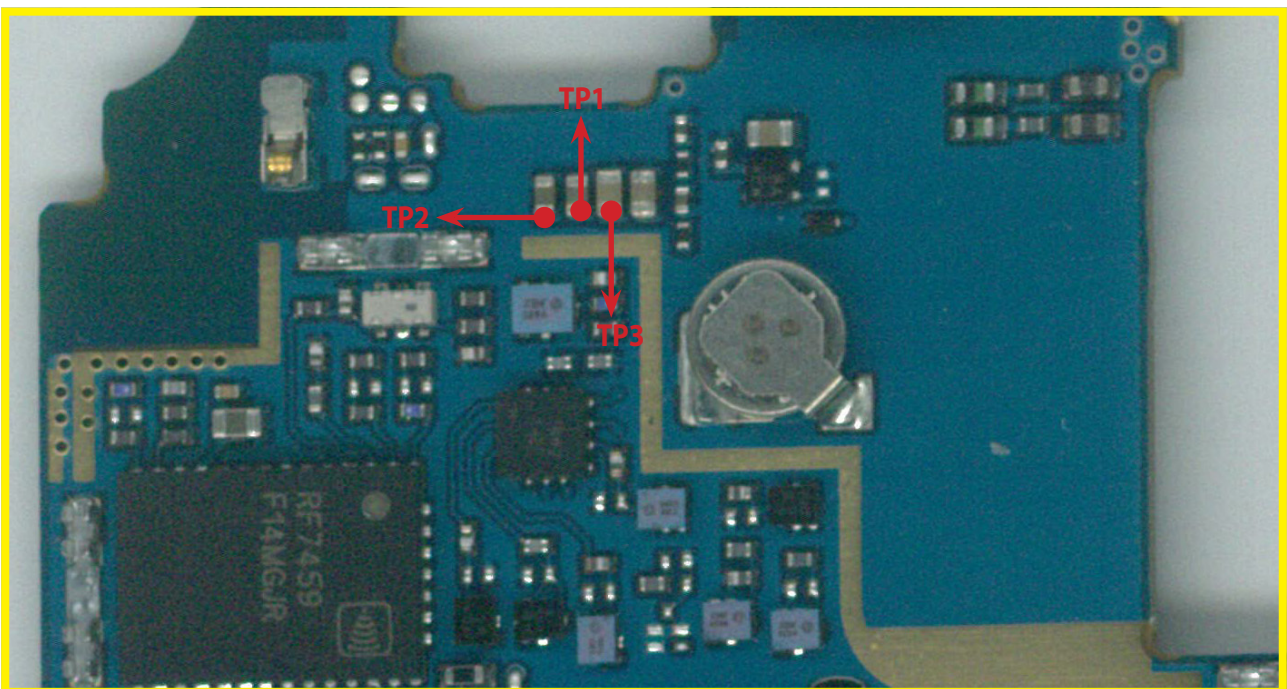
### 3.19.2 VT CAMERA



### 3. TROUBLE SHOOTING

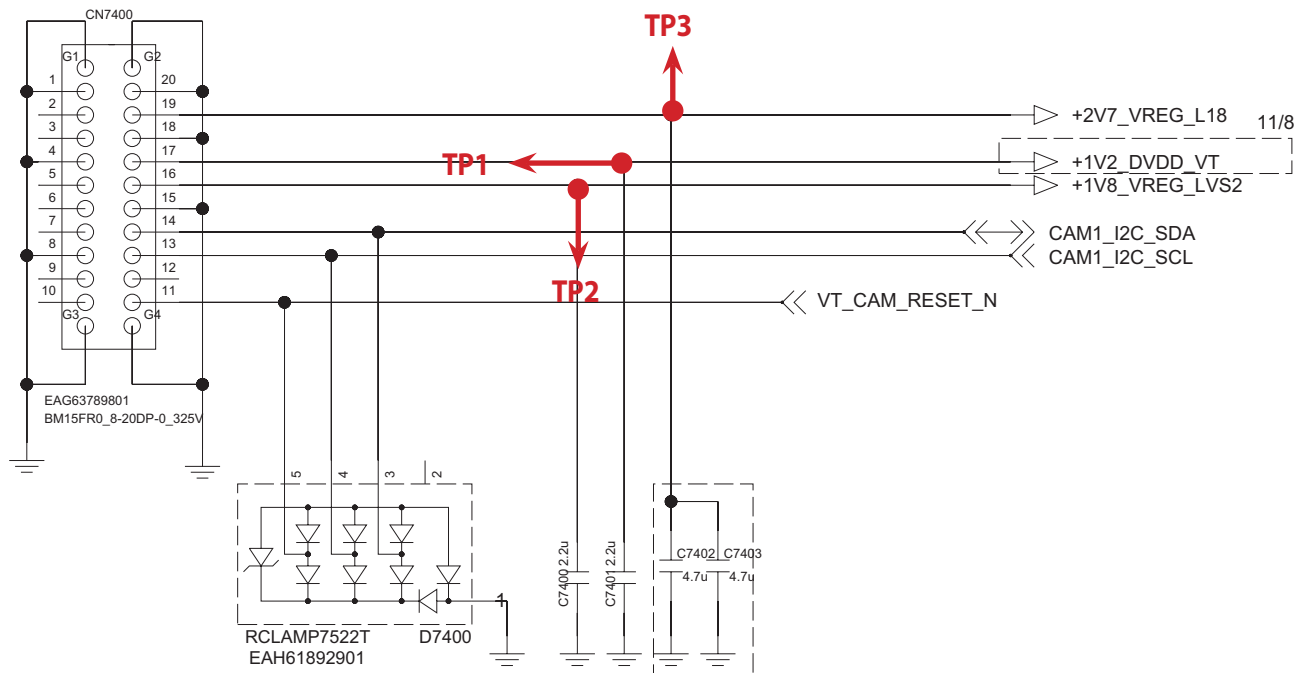
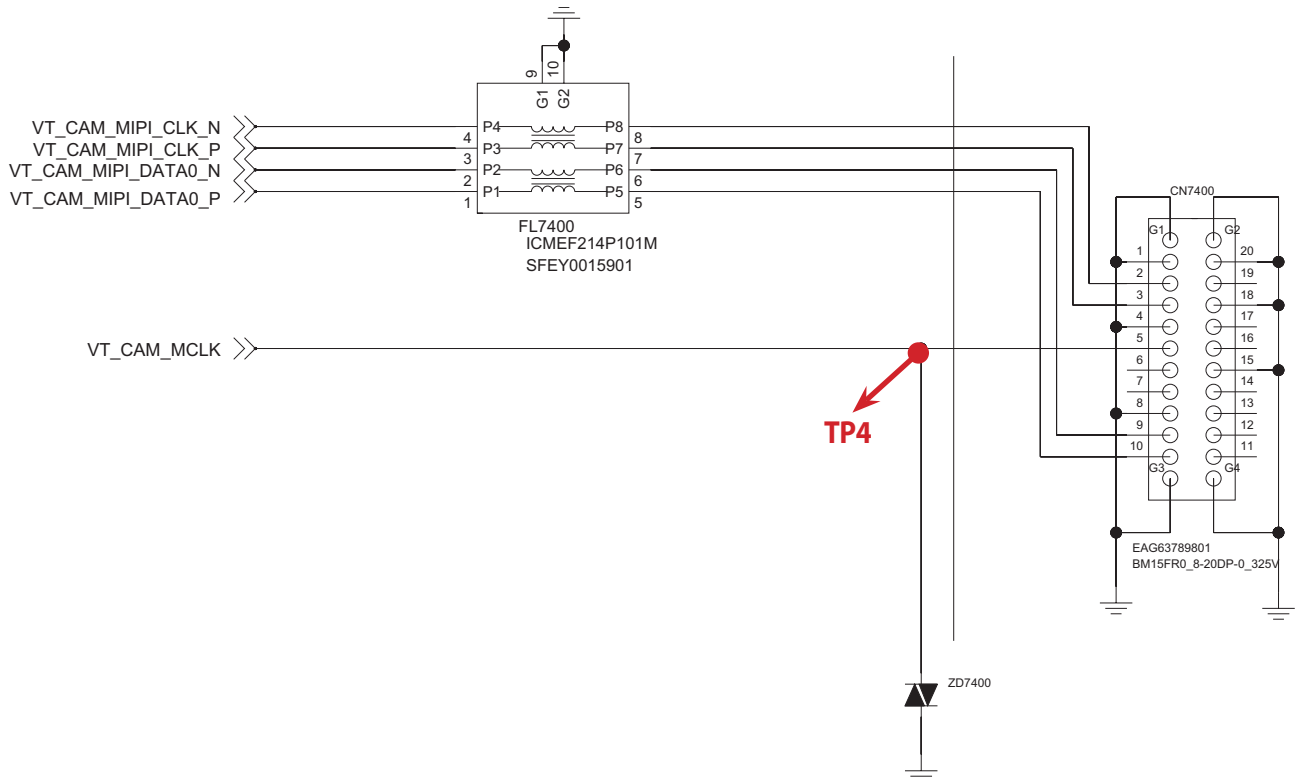


<Main Bot>



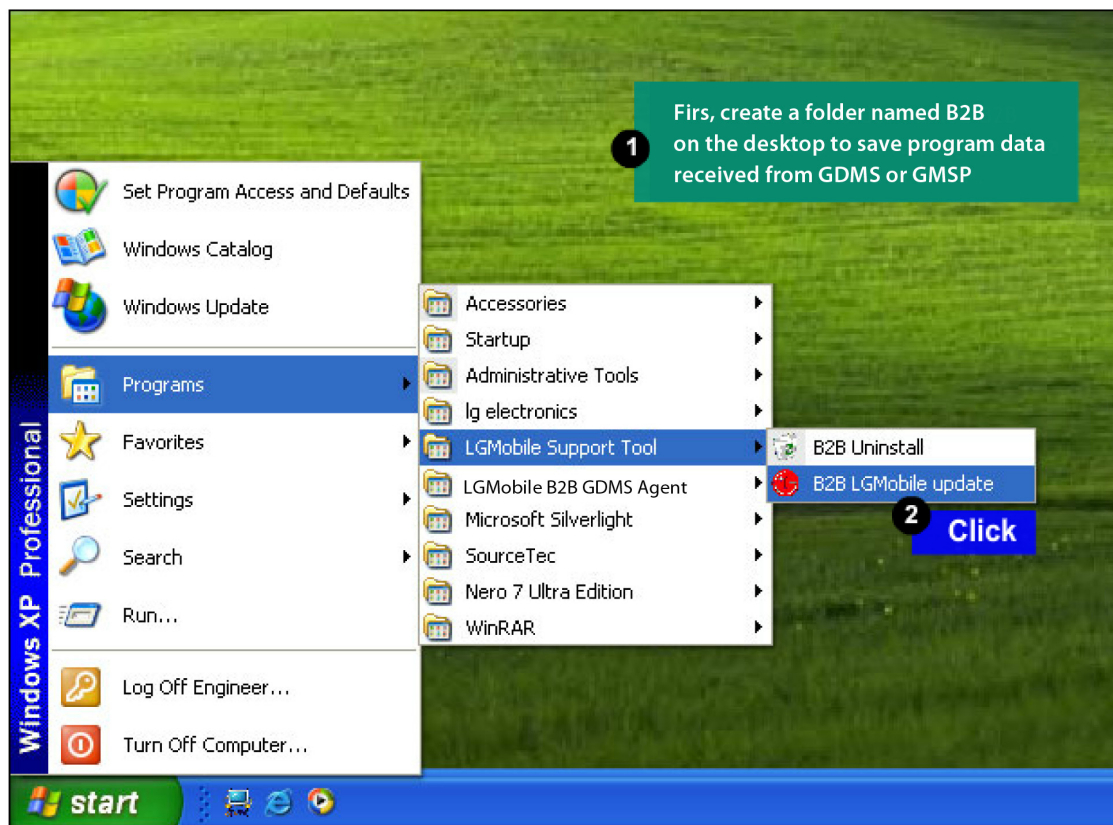
<Main Top>

### 3. TROUBLE SHOOTING



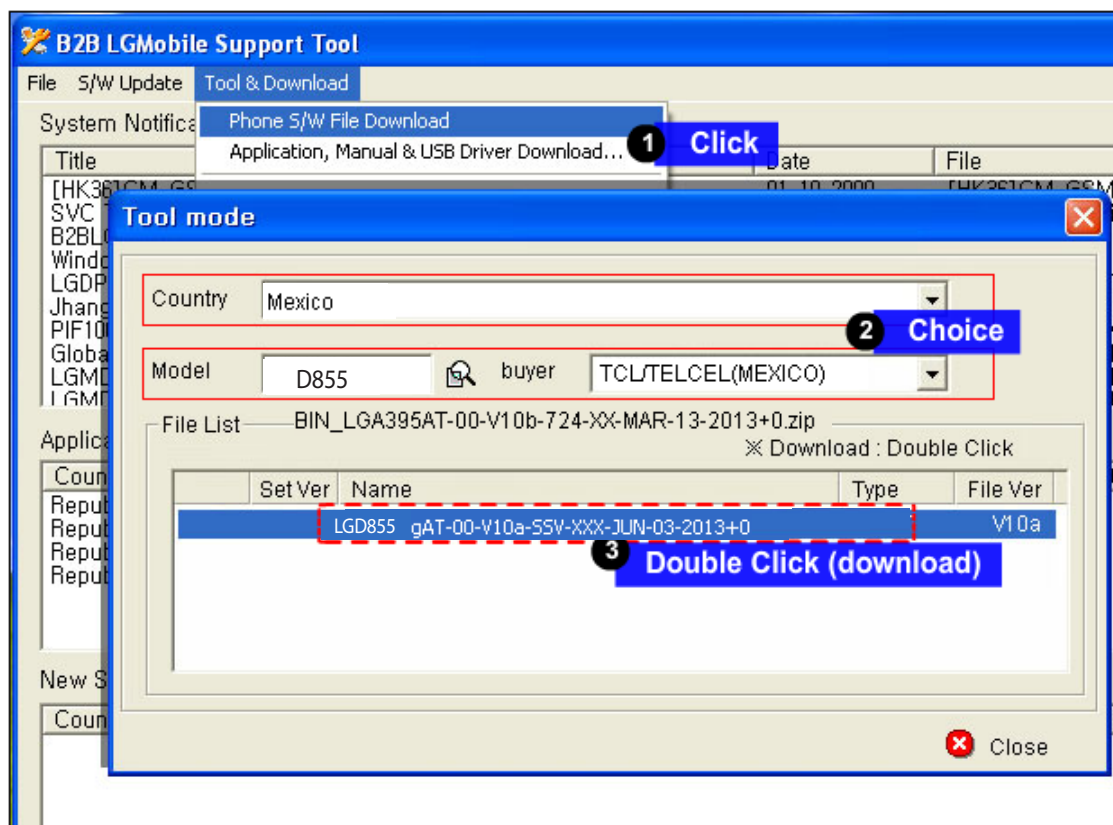
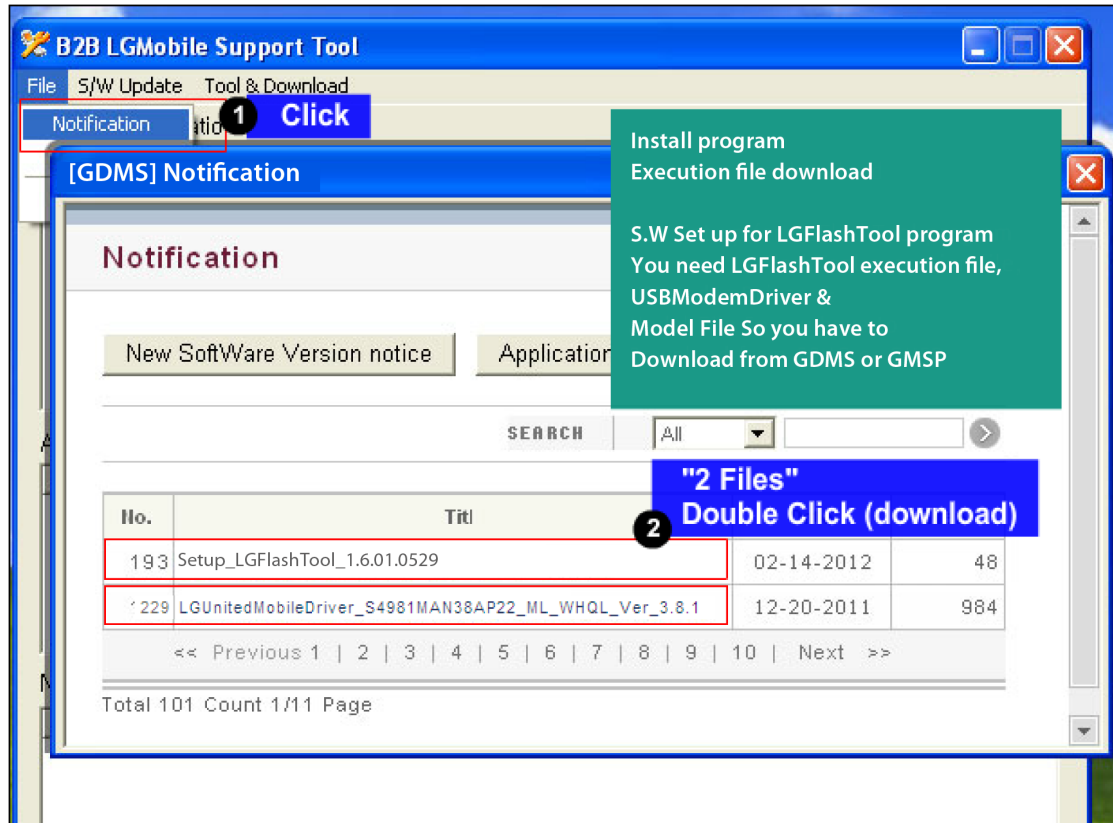
## 4. DOWNLOAD

TOOL INFORMATION			
TOOL VERSION	DLL NAME	USB DRIVER	
LGFLASHv160	LGD855_20140526_LGFLASHv160_ Download	LGUnitedMobileDriver_S4981MAN38AP22_ML_WHQL_ Ver_3.8.1	
Please Check the Version to “B2B”			
H/W			
	Name	Part No.	SW
D/L Cable	Micro 5P (56-open-910K) USB DLC	RAD32167835	TOT



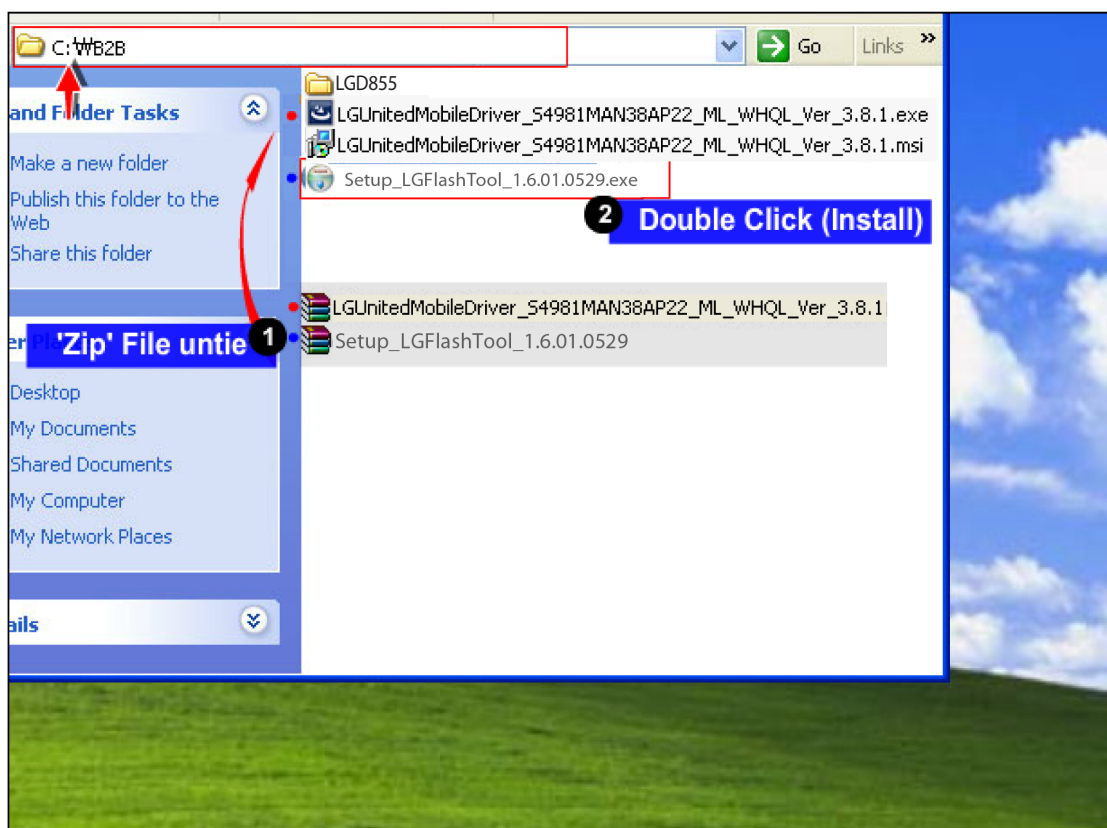
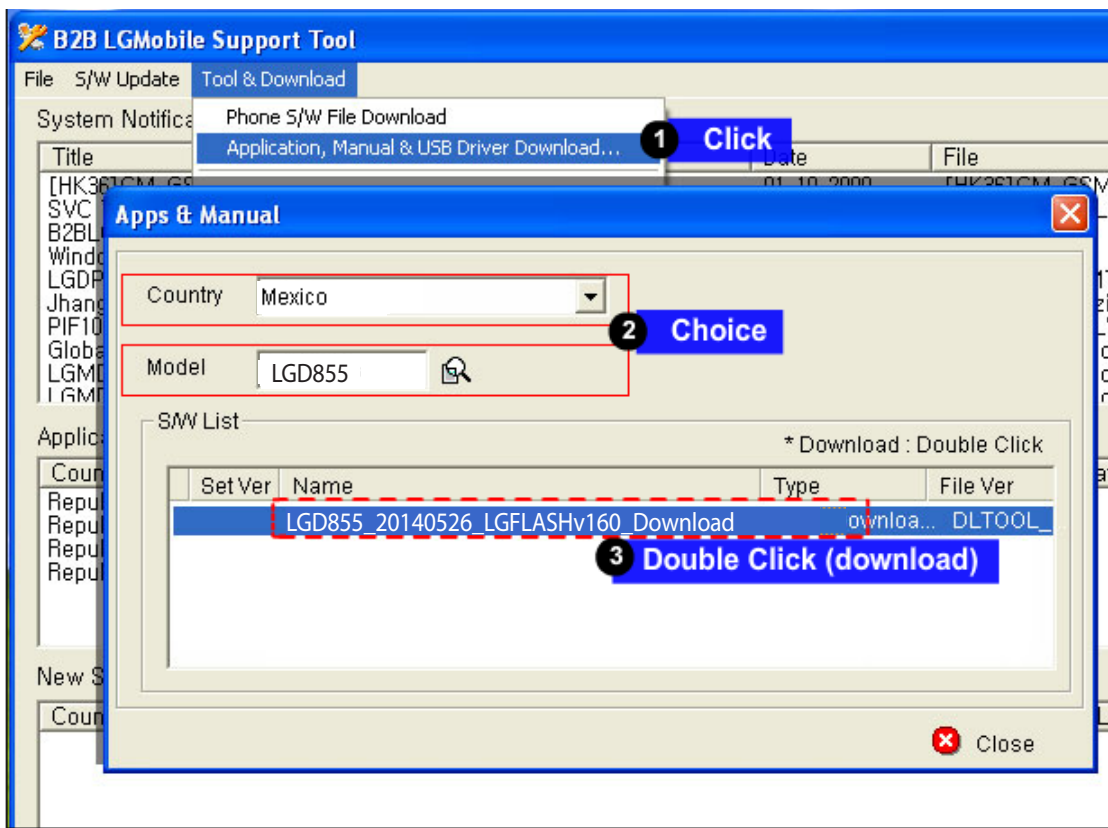


## 4. DOWNLOAD

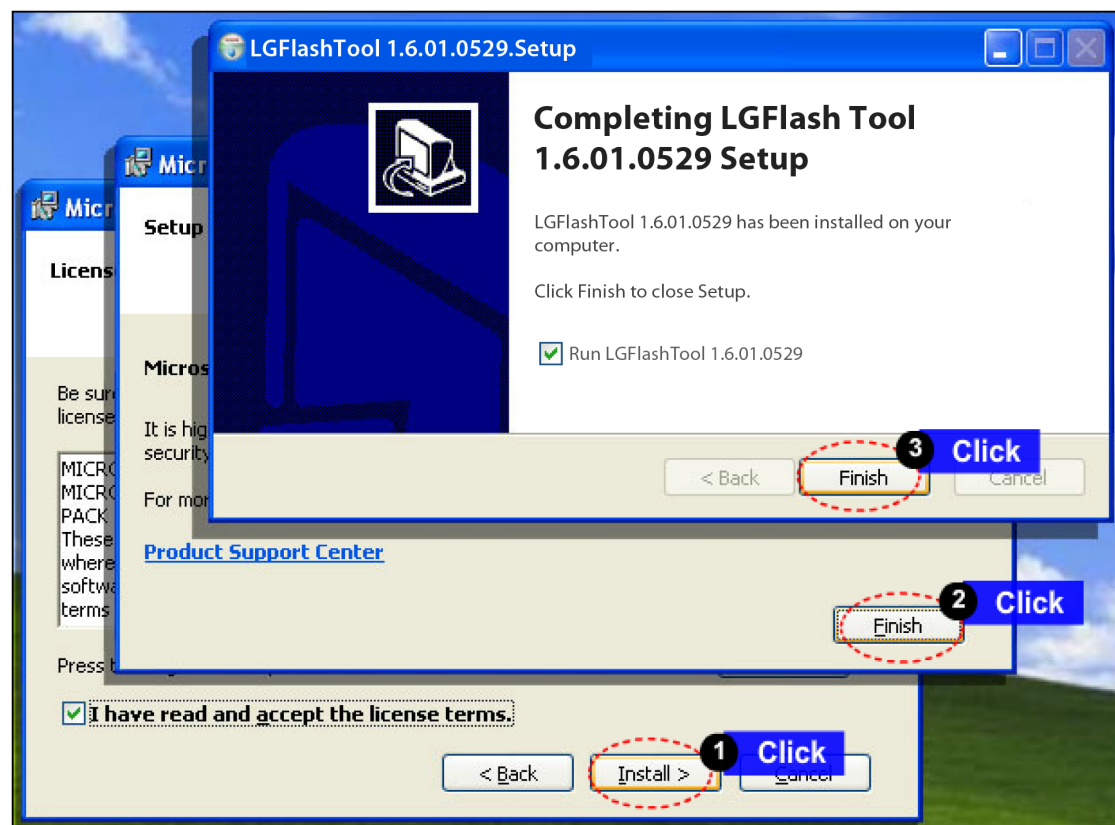
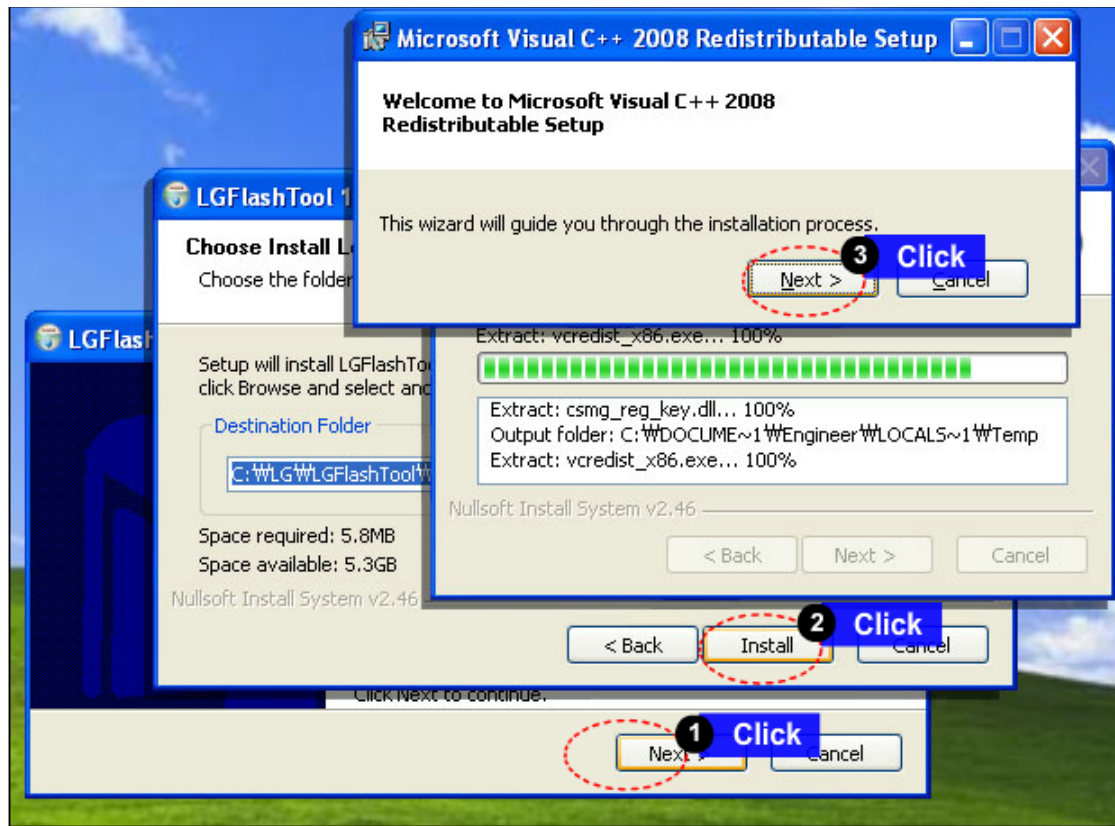


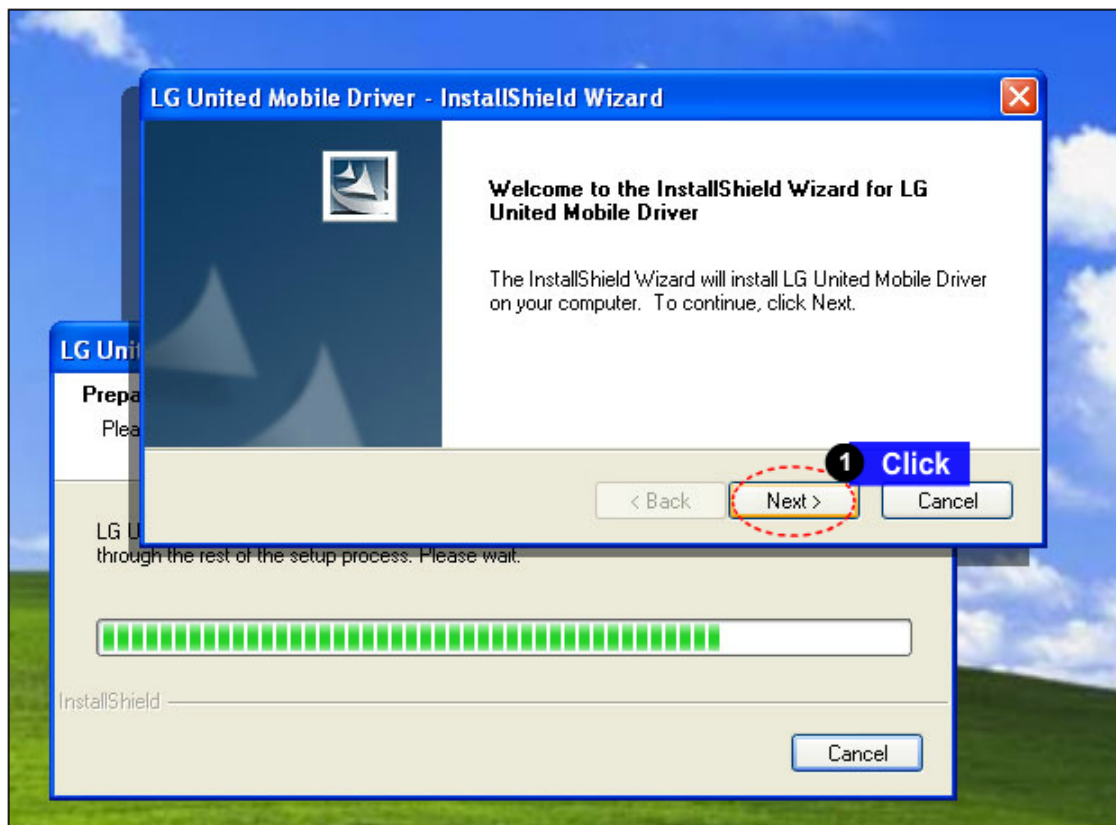
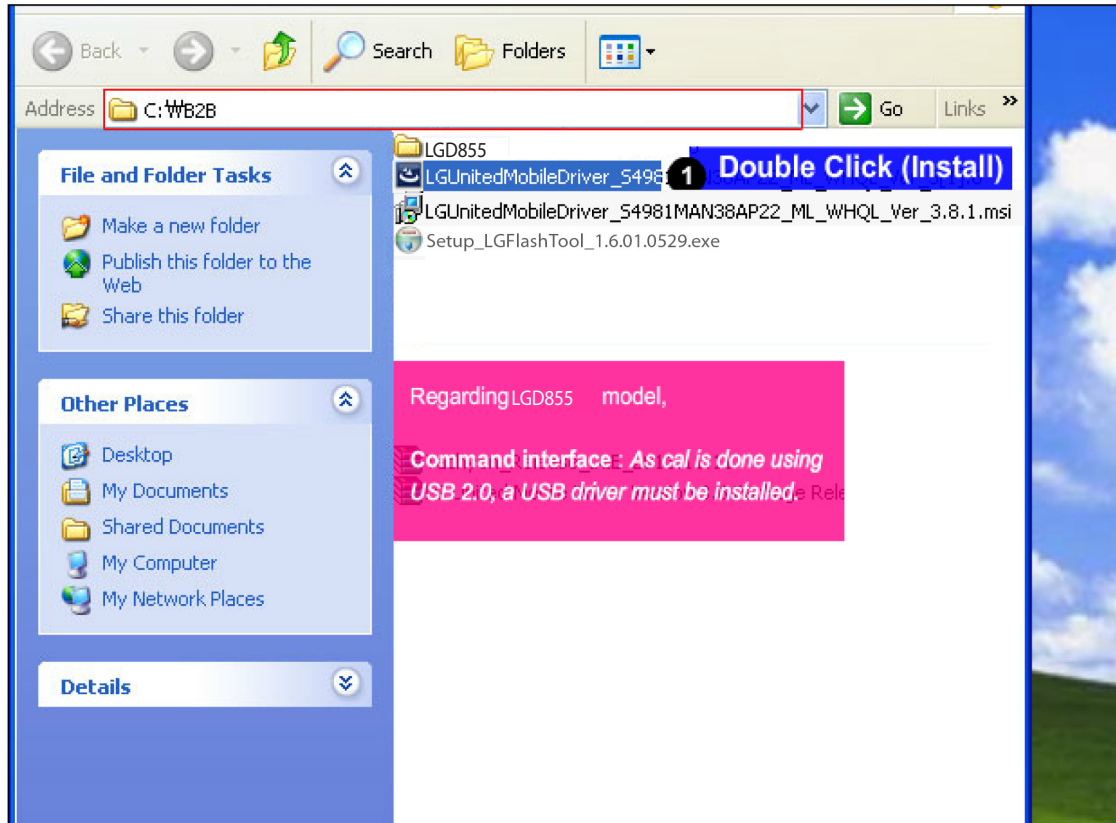


## 4. DOWNLOAD

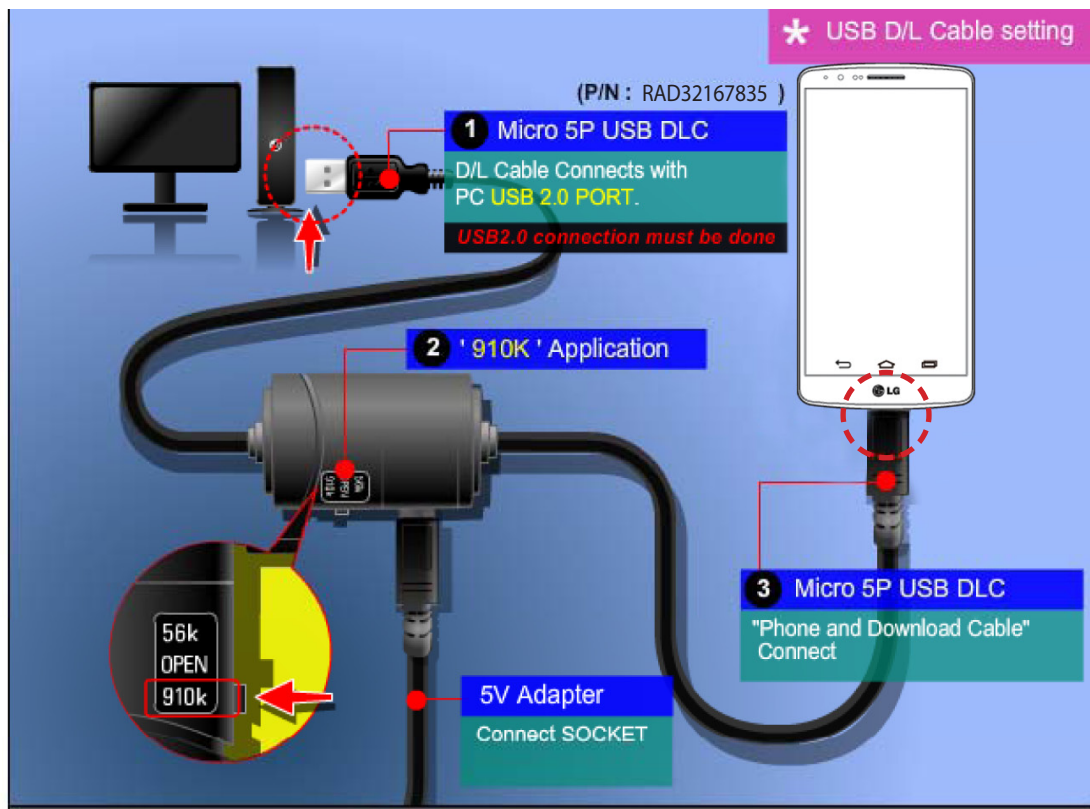
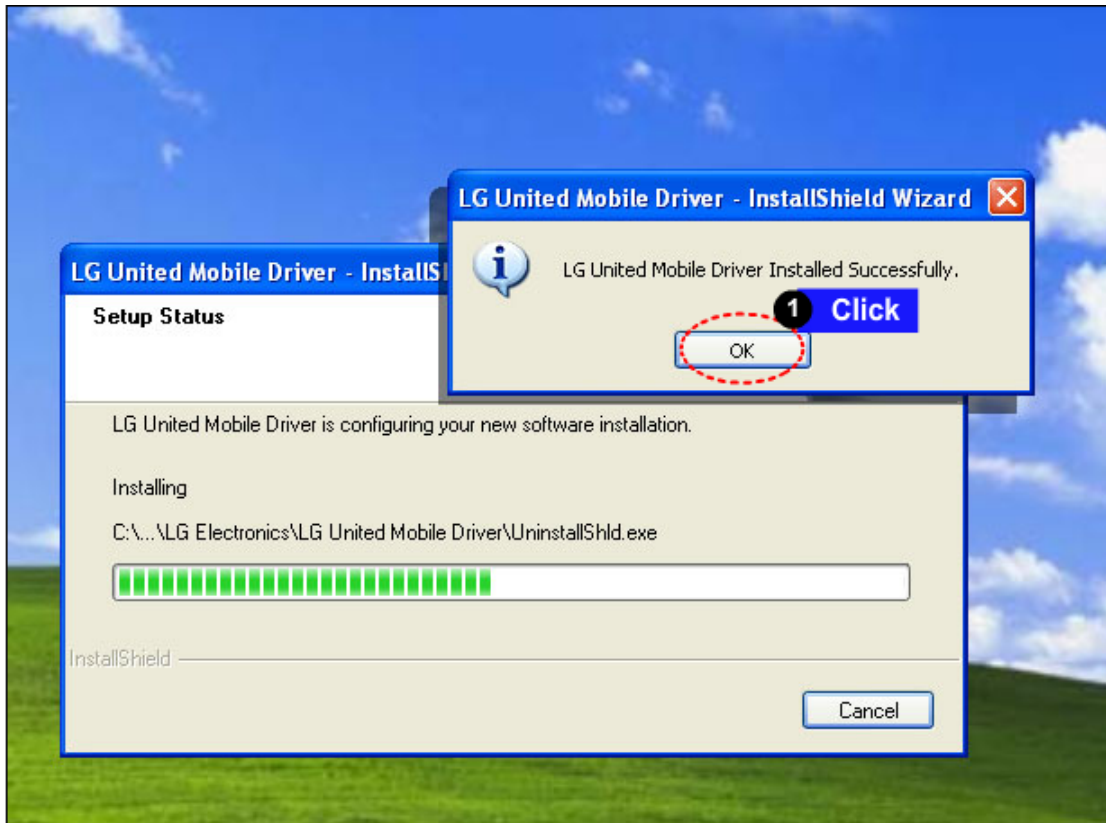


## 4. DOWNLOAD



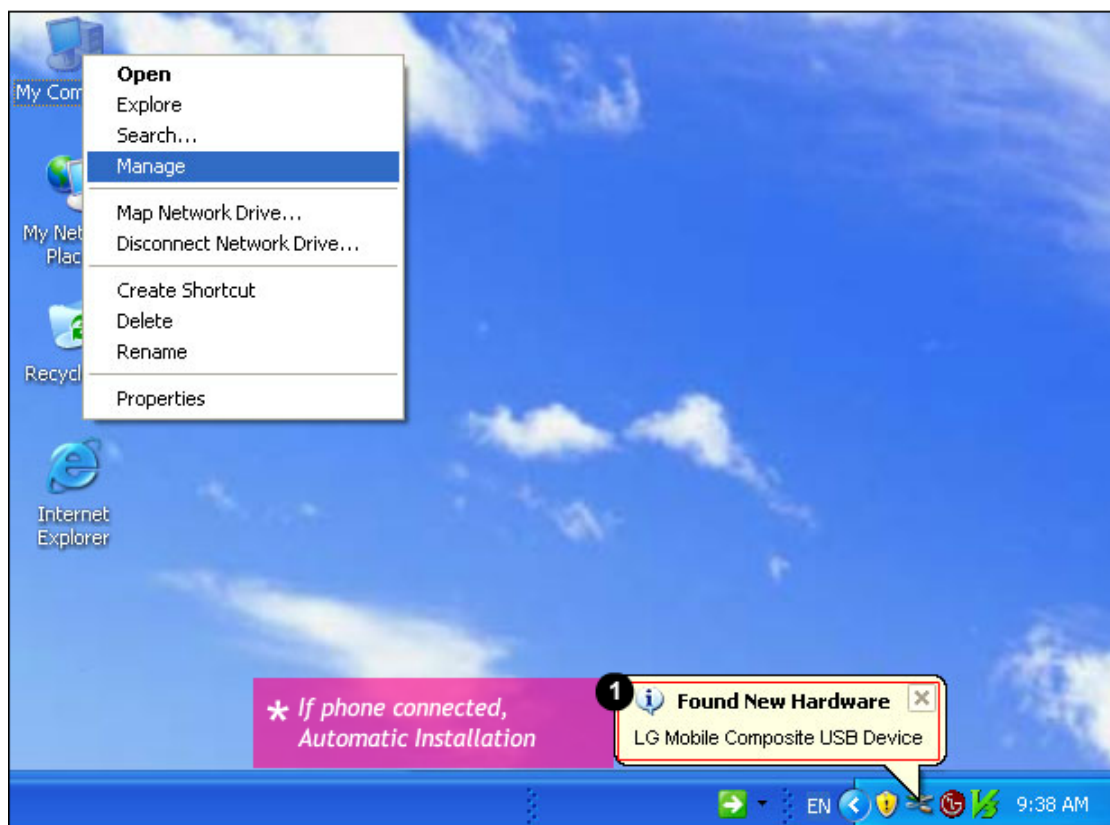
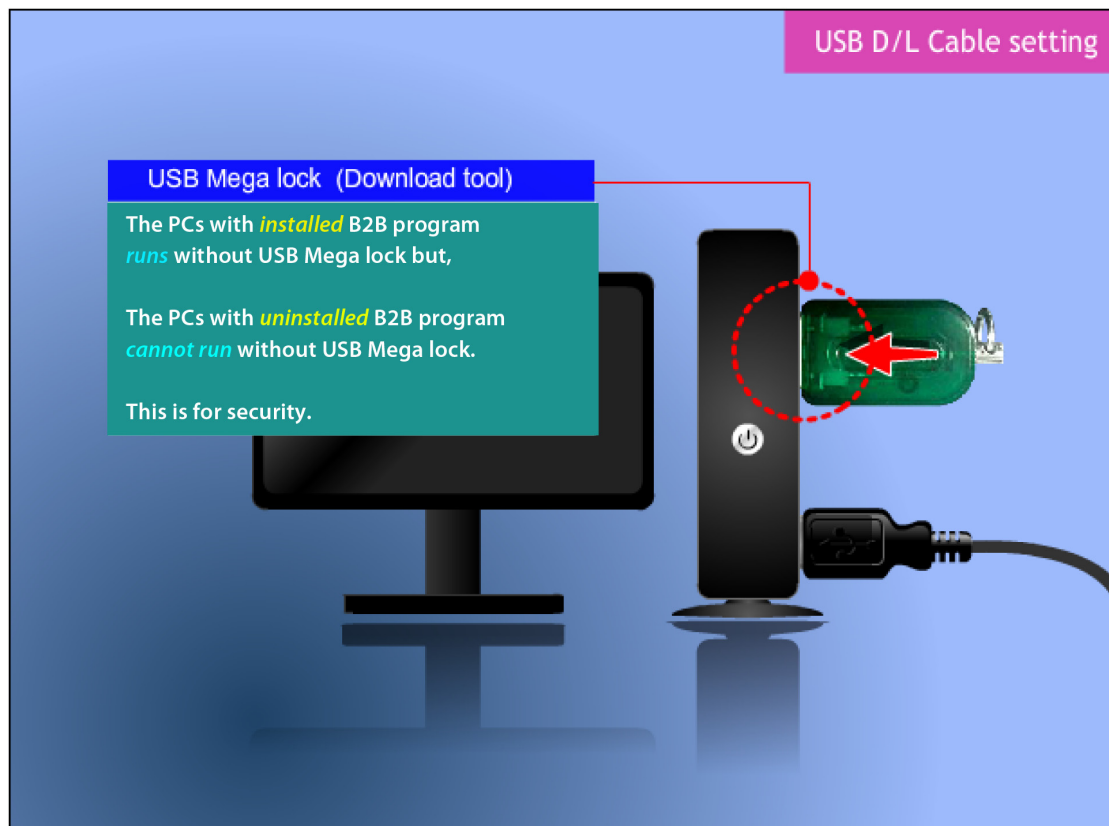


## 4. DOWNLOAD

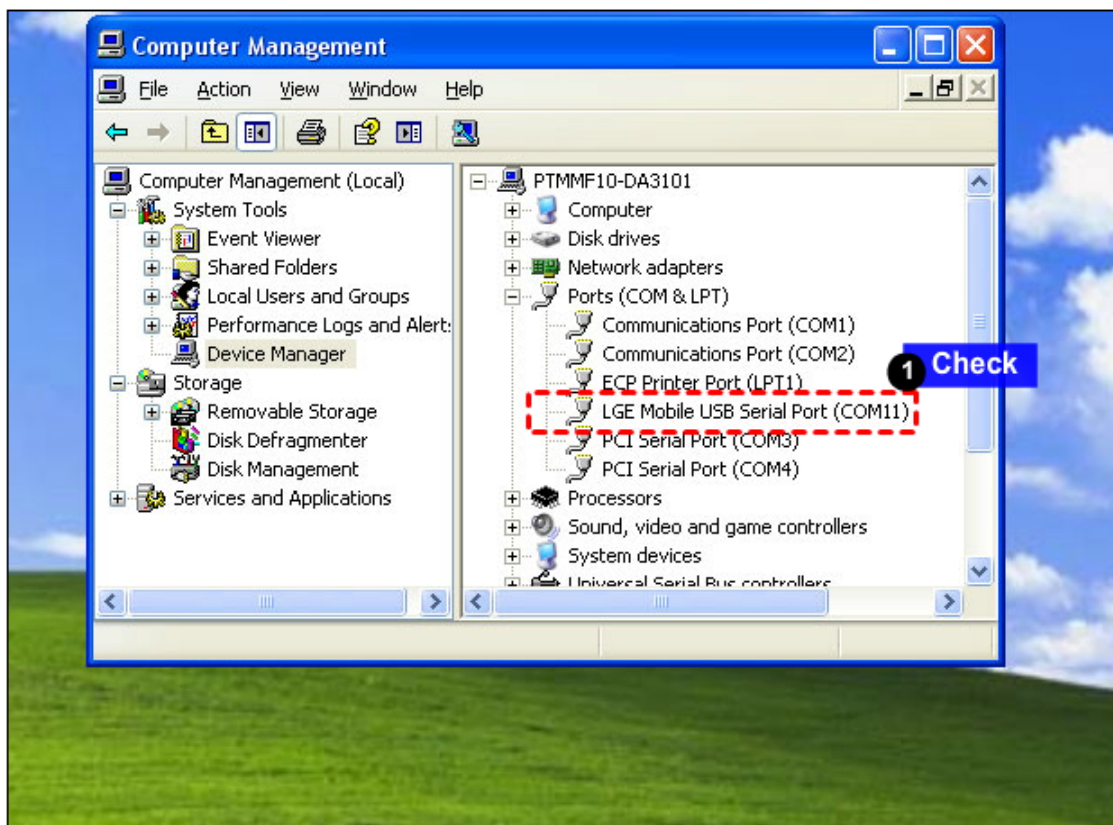
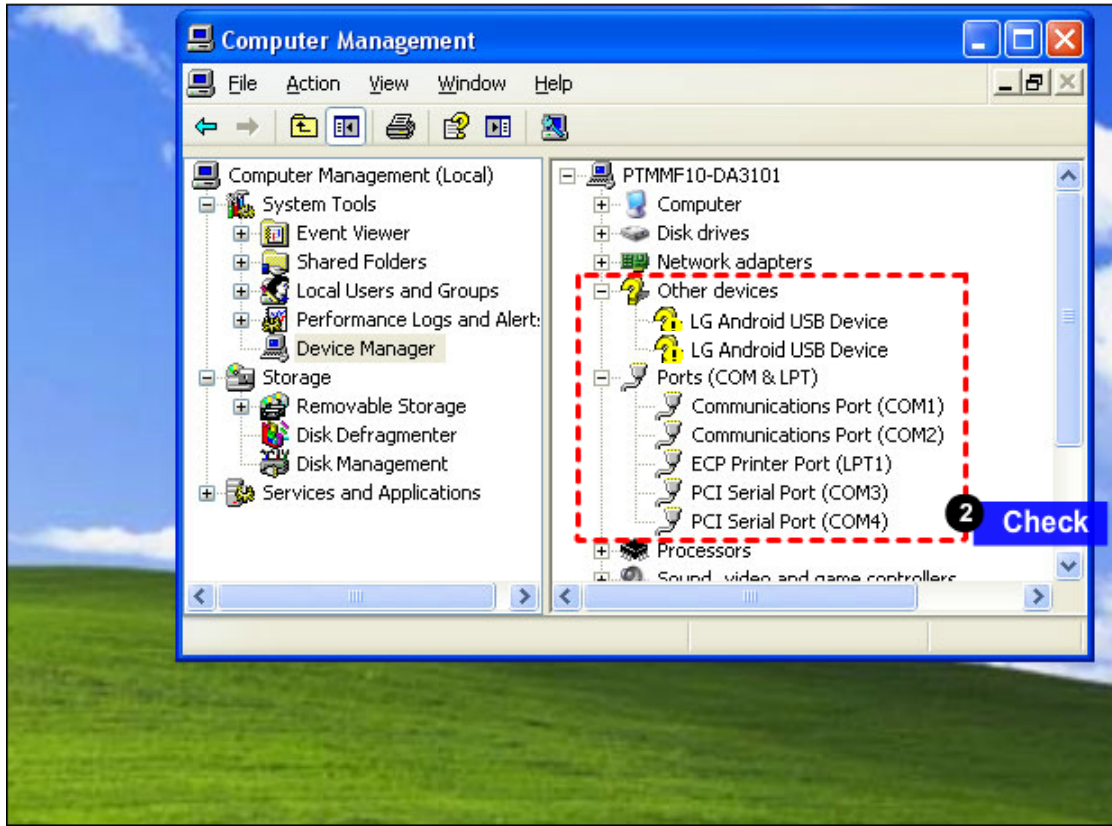




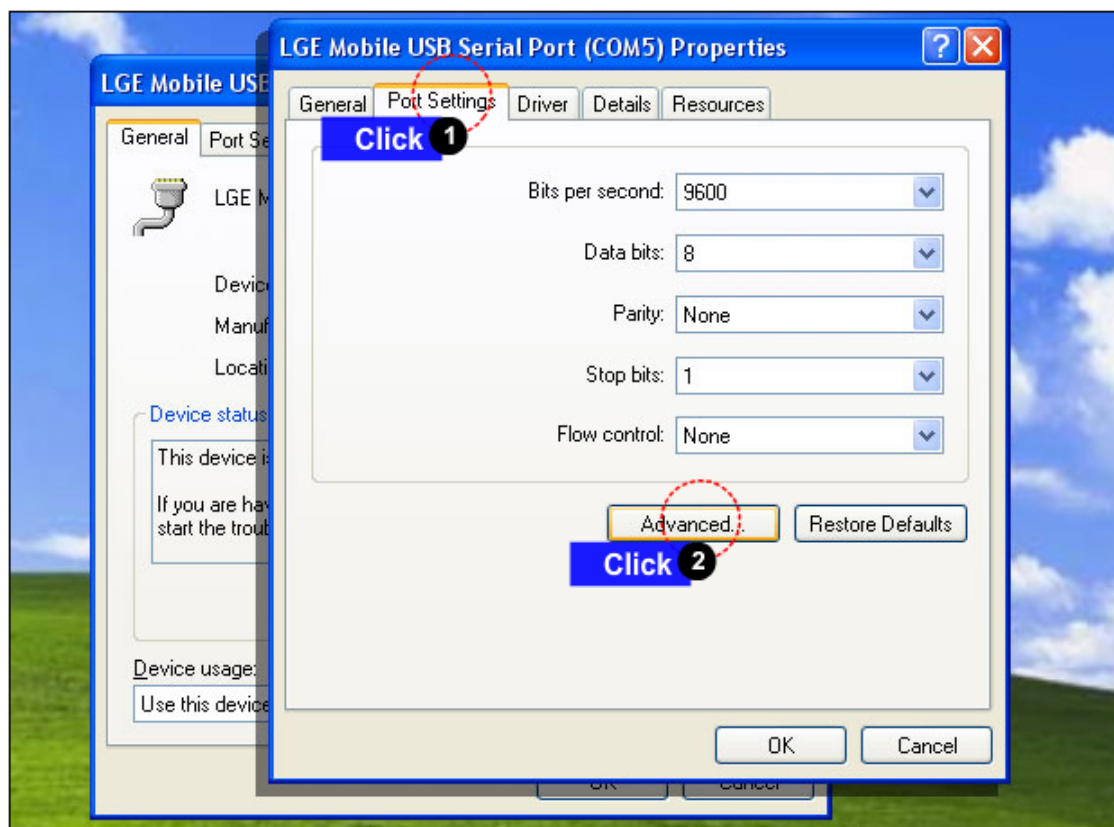
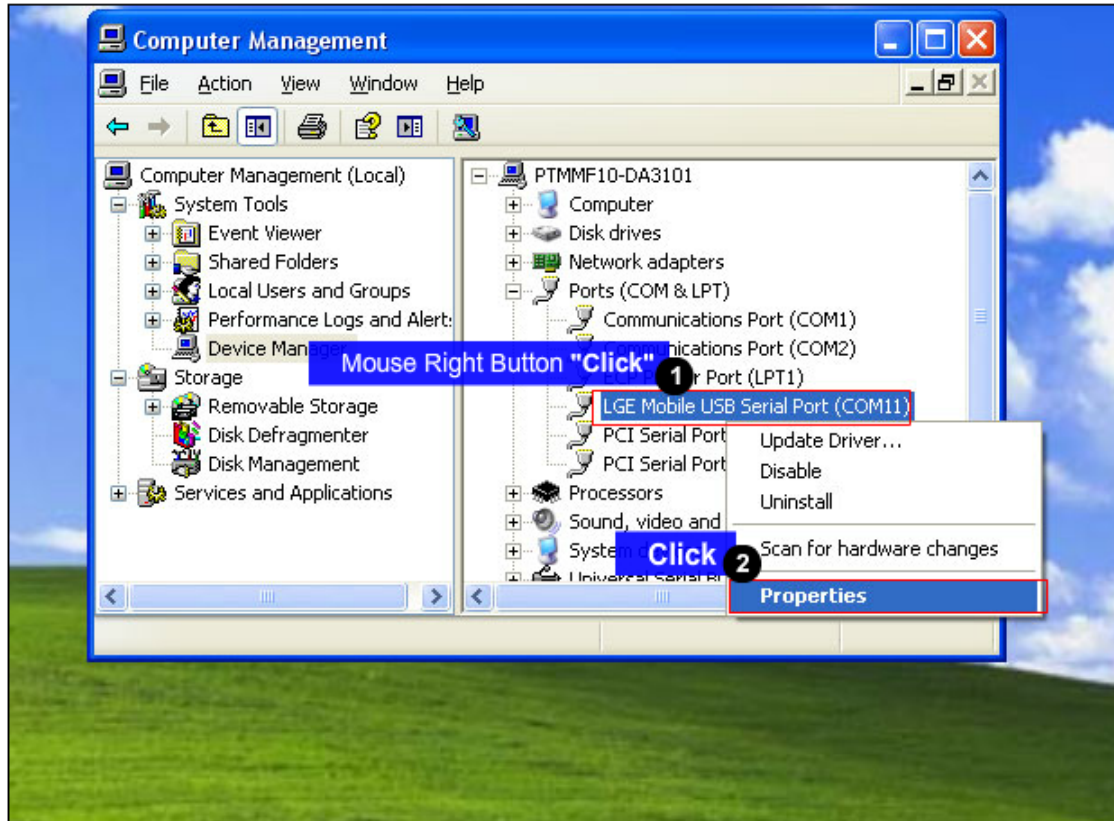
## 4. DOWNLOAD



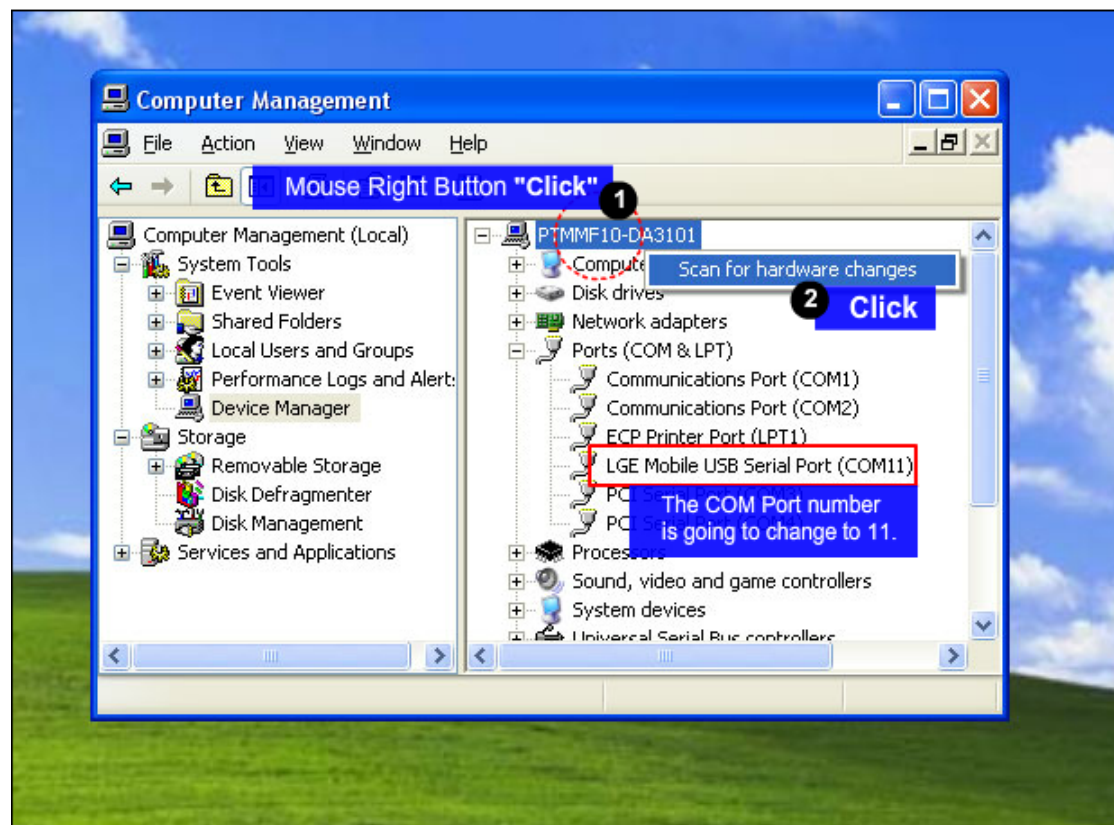
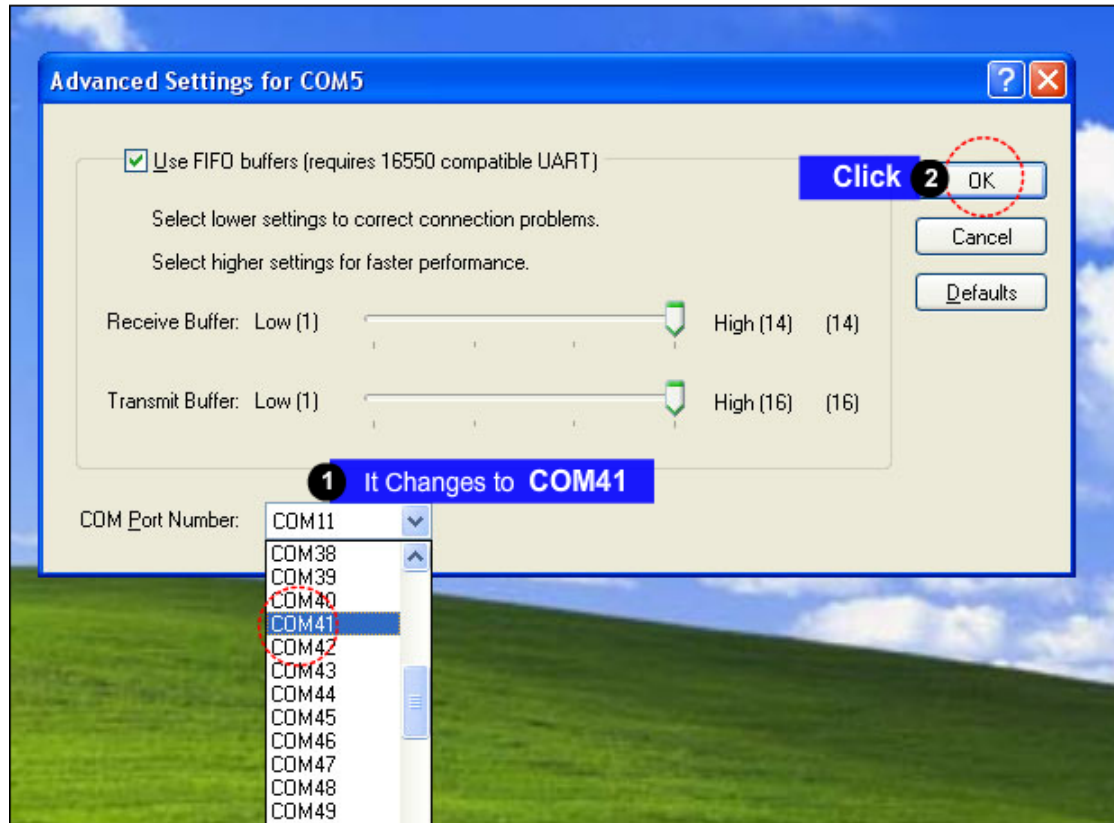




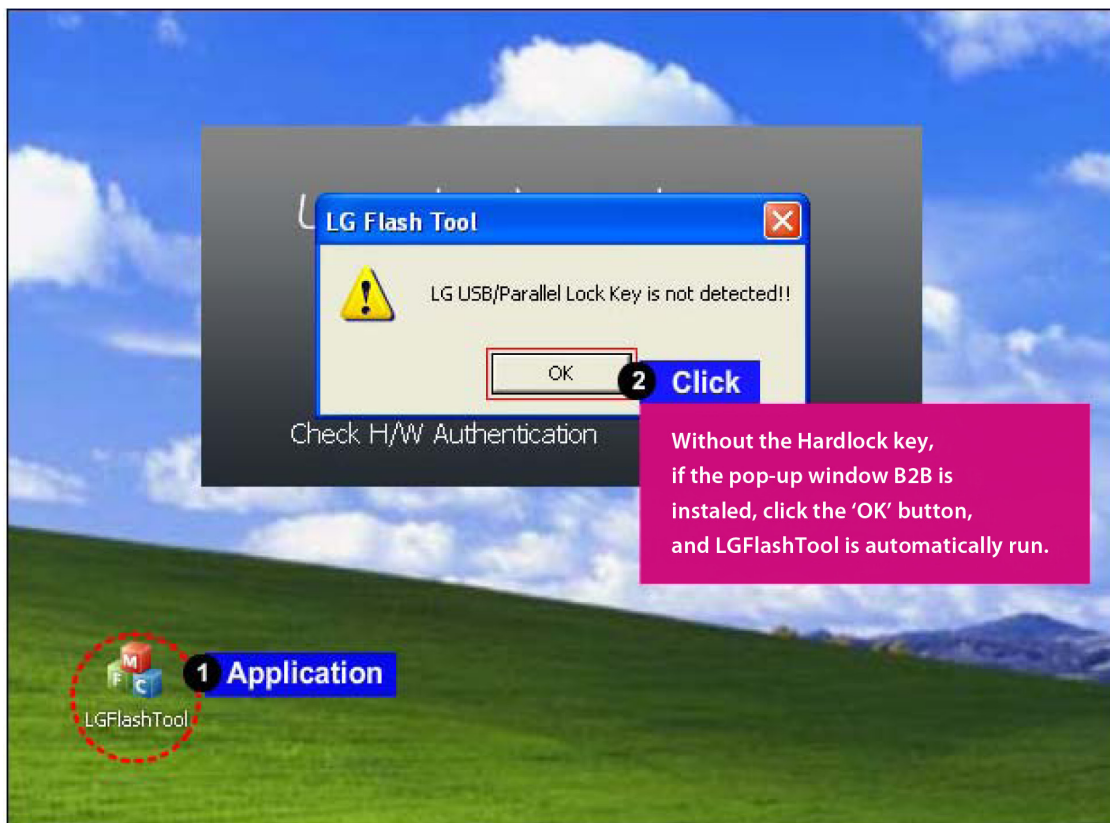
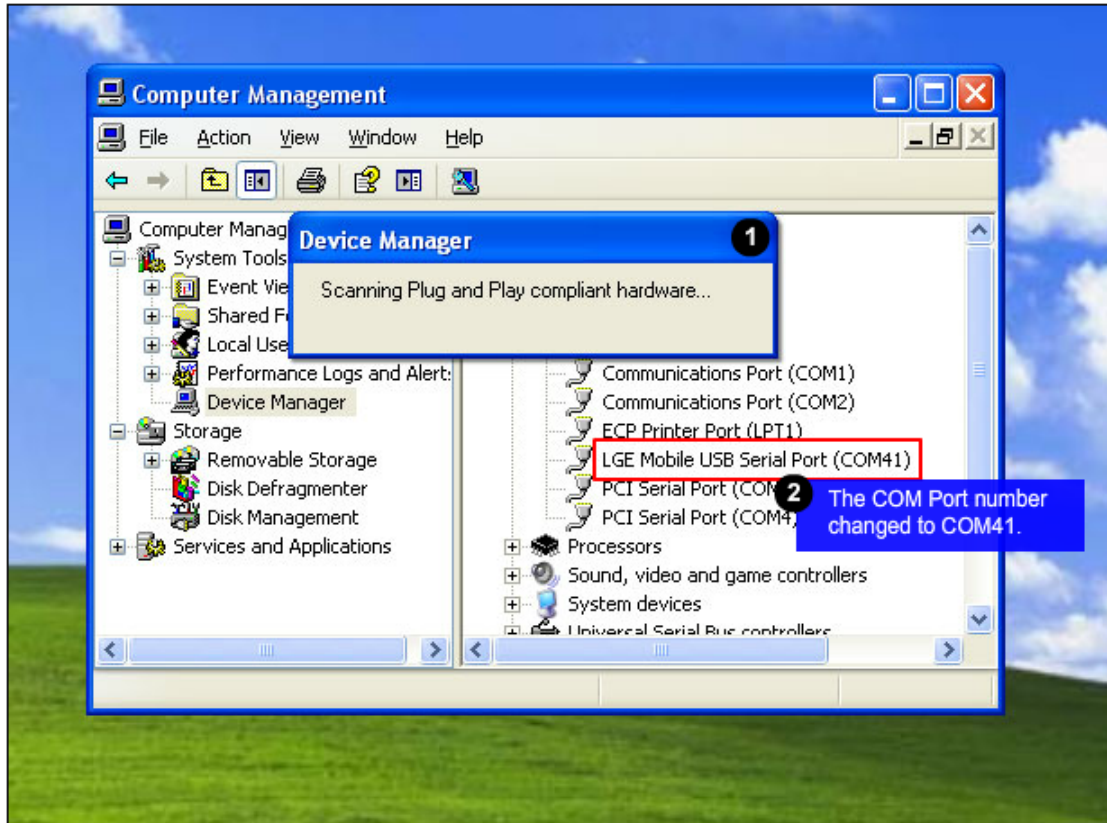
## 4. DOWNLOAD



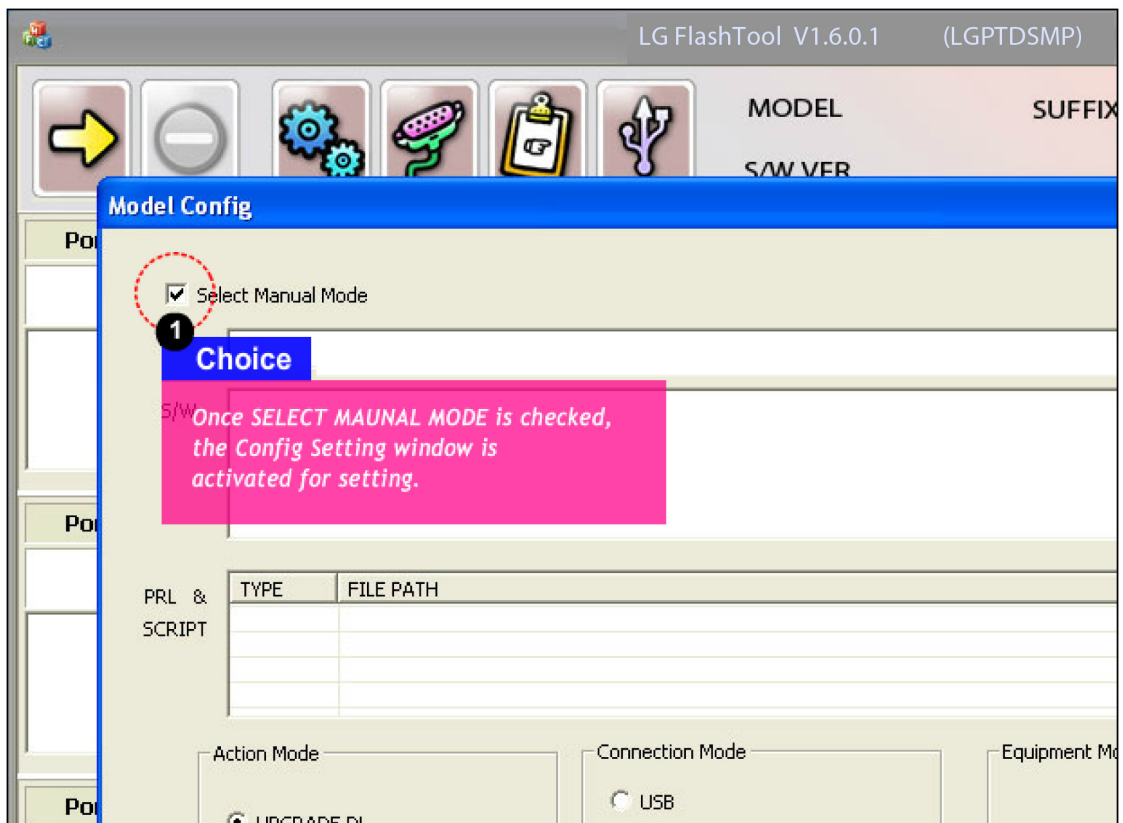
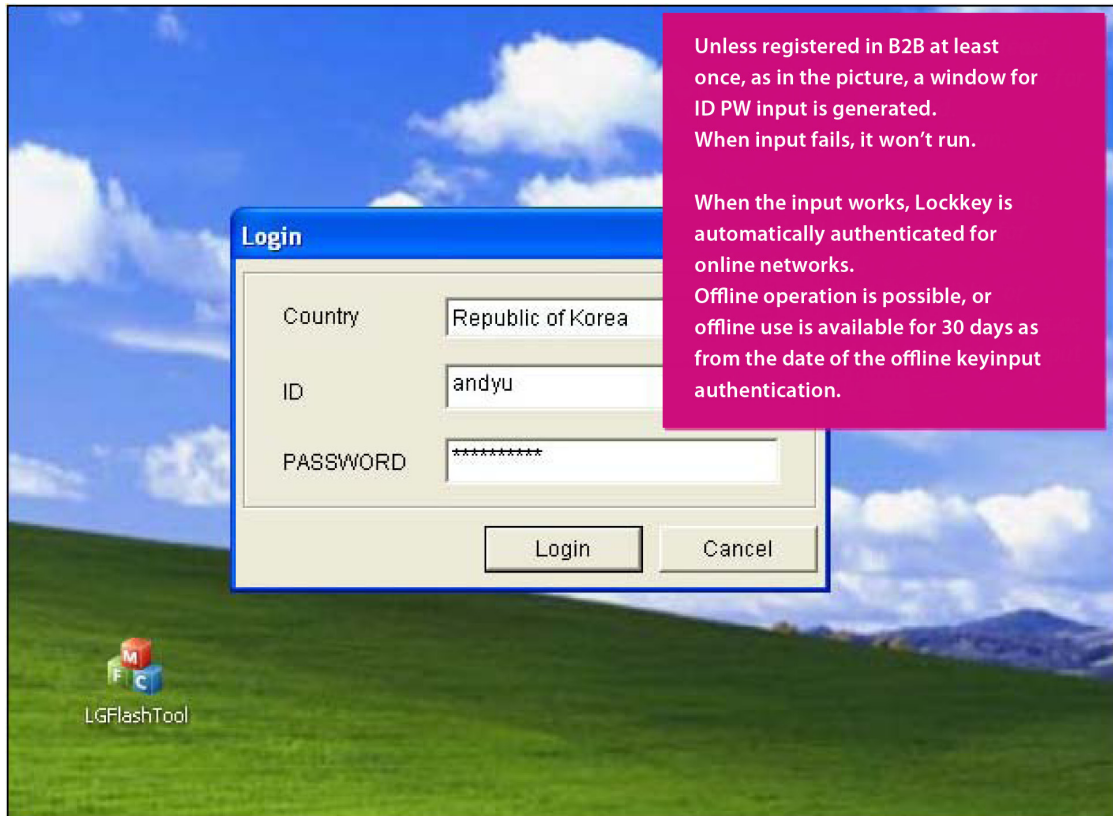
## 4. DOWNLOAD





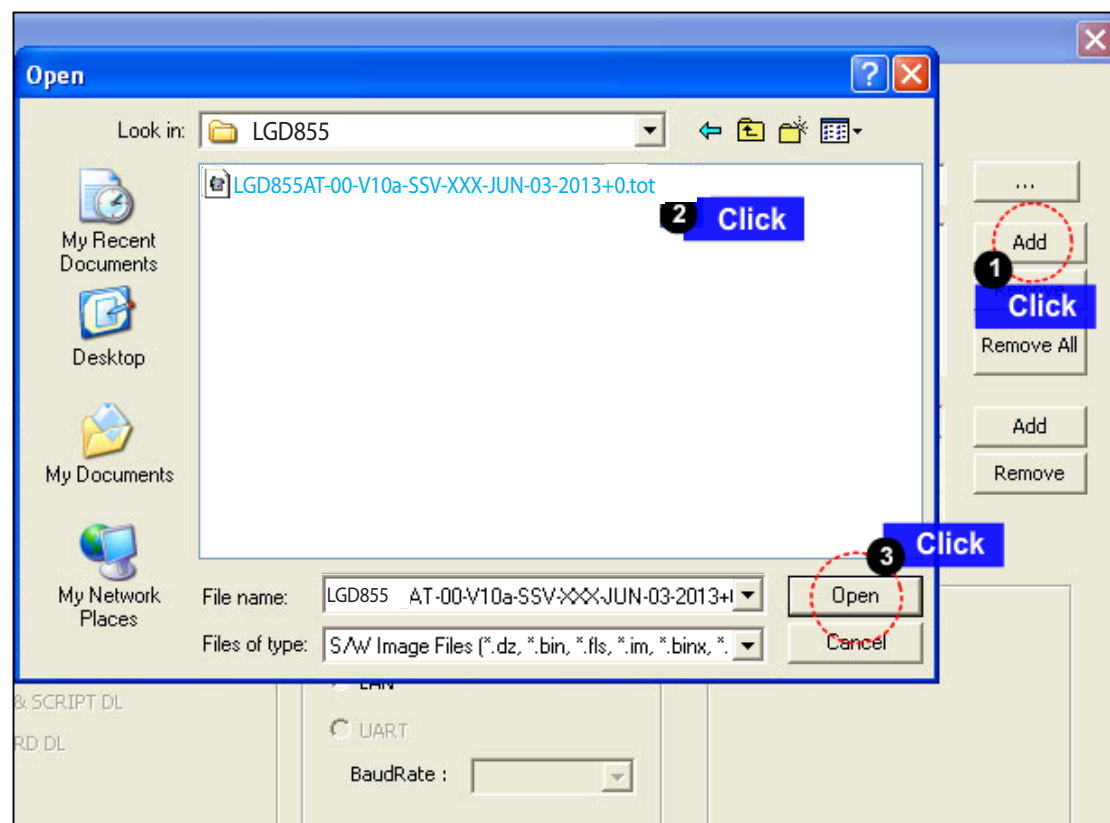
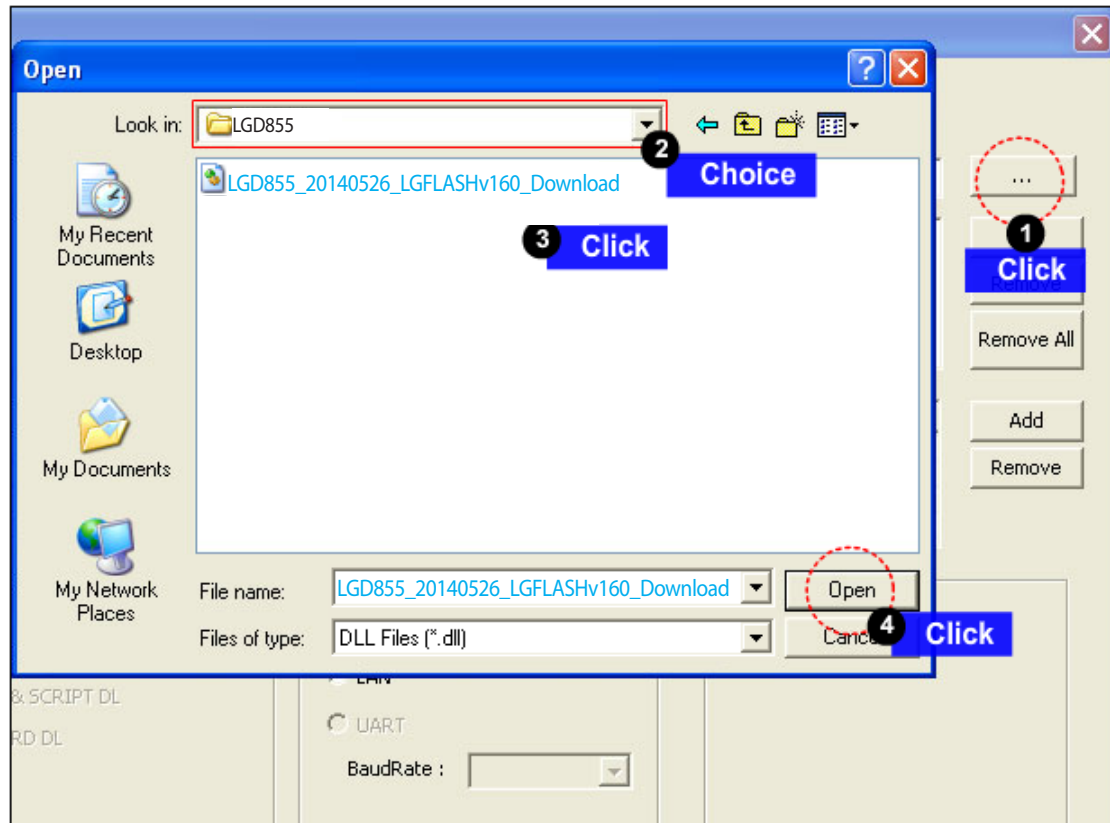


## 4. DOWNLOAD





## 4. DOWNLOAD



## 4. DOWNLOAD

DLL C:\WB2B\W\LG855 W\LG855\_20140526\_LGFLASHv160\_Download

S/W C:\WB2B\W\LG855 W\LG855AT-00-V10a-SSV-XXX-JUN-03-2013+0.tot

TYPE	FILE PATH

Action Mode

☒ UPGRADE DL **Choice 1**

☐ PRL & SCRIPT DL

☐ BOARD DL

Connection Mode

☒ USB

☐ LAN

☐ UART

BaudRate :

Equipment Mode

☒ Enable XML log

**Click 3**

OK

LG FlashTool V1.6.0.1 (LGPTDSMP)

MODEL LGD855 SUFFIX

S/W VER LGD855 AT-00-V1

**1 Click**

Port 1 (COM41) Port Setting

**Caution**

In the multi port select window, the 16 (ports) to be selected means the number of frames(windows). It doesn't refer to any USB comports.

The download process starts with the USB comport 41.

So No.1 is the USB Comport 41.

No.2 is the USB comport 42 and so on.

No.16 is the USB comport 56.

Upon initial installation of the driver, LGE mobile USB serial port( com) assigns comports randomly, so the initial comport setting is necessary.

Port 9 (COM49)

Multi Port Select

☐ 16 ports

☐ Port 1 ~ Port

☐ 1

☐ 2

☐ 3

☐ 4

☐ 5

☐ 6

☐ 7

☐ 8

☐ 9

☐ 10

☐ 11

☐ 12

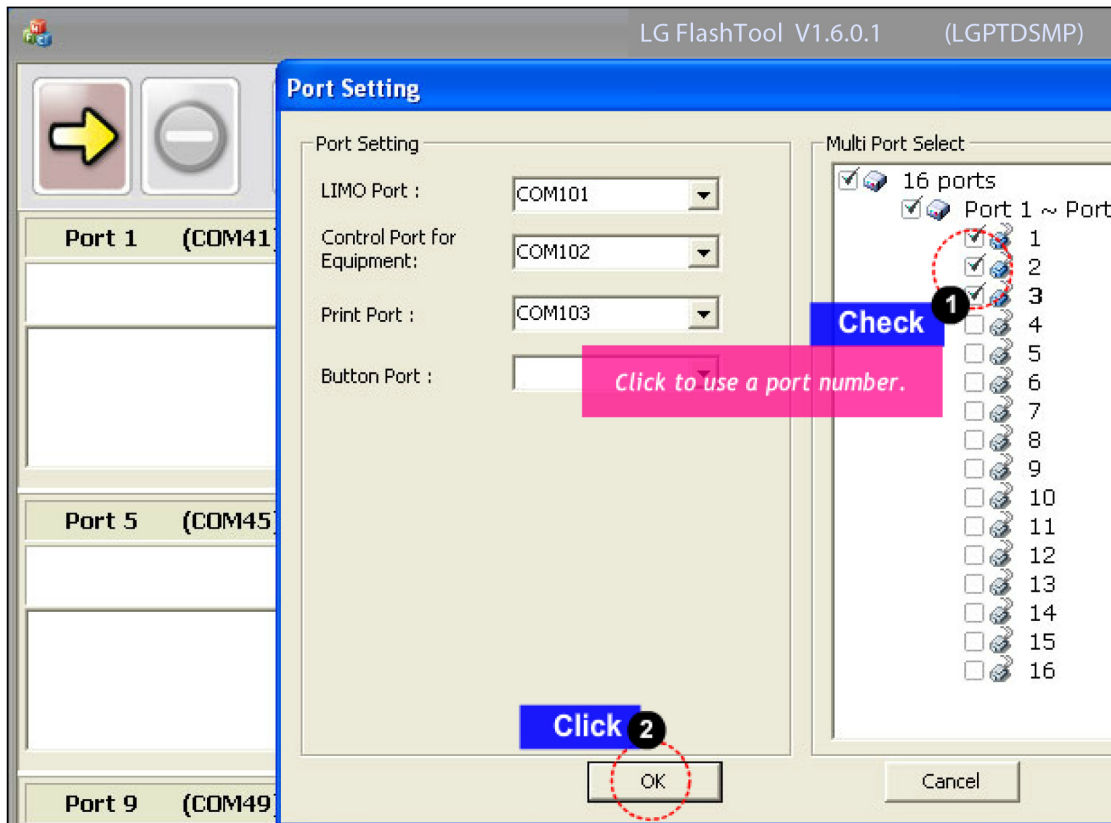
☐ 13

☐ 14

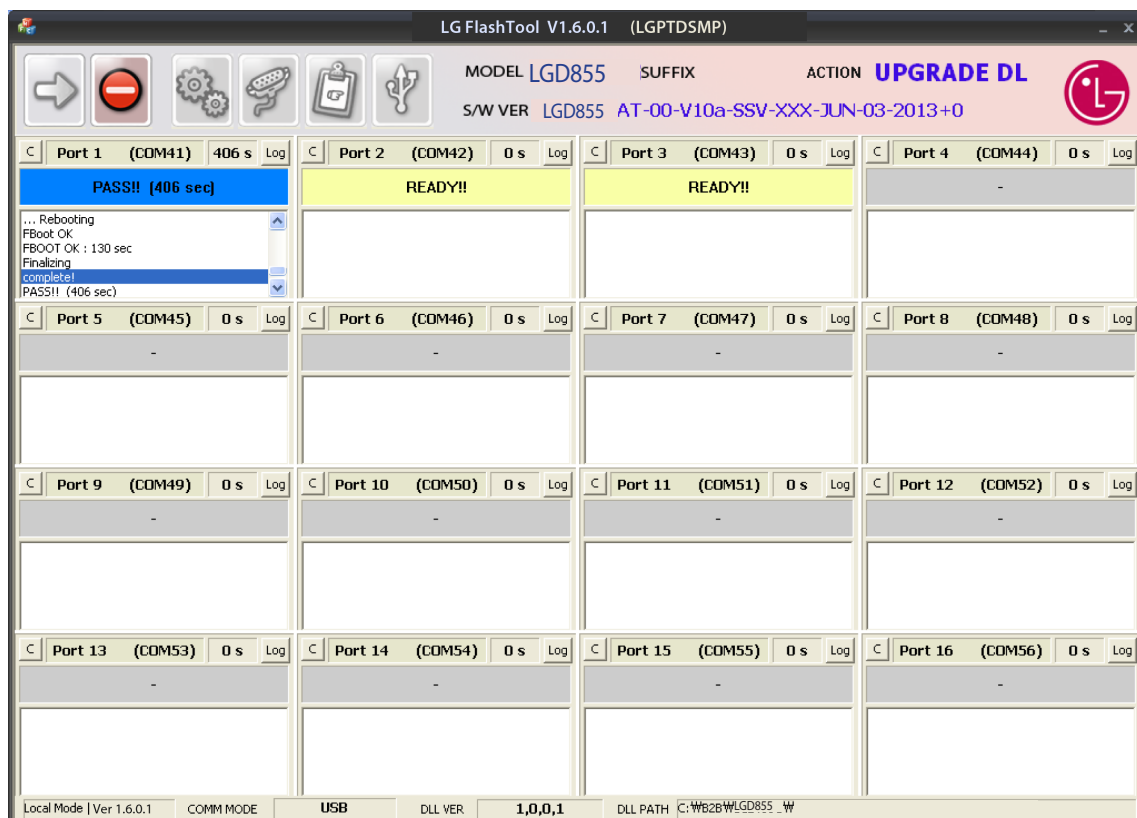
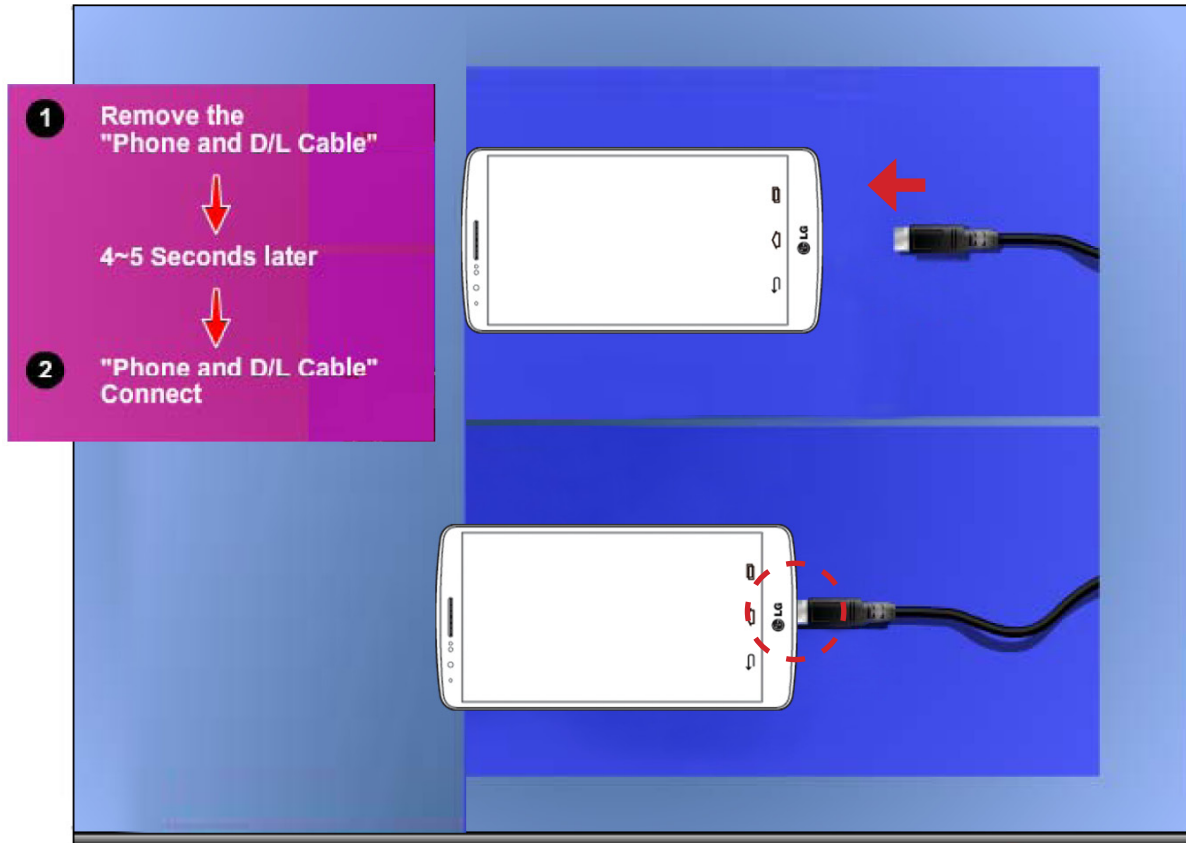
☐ 15

☐ 16

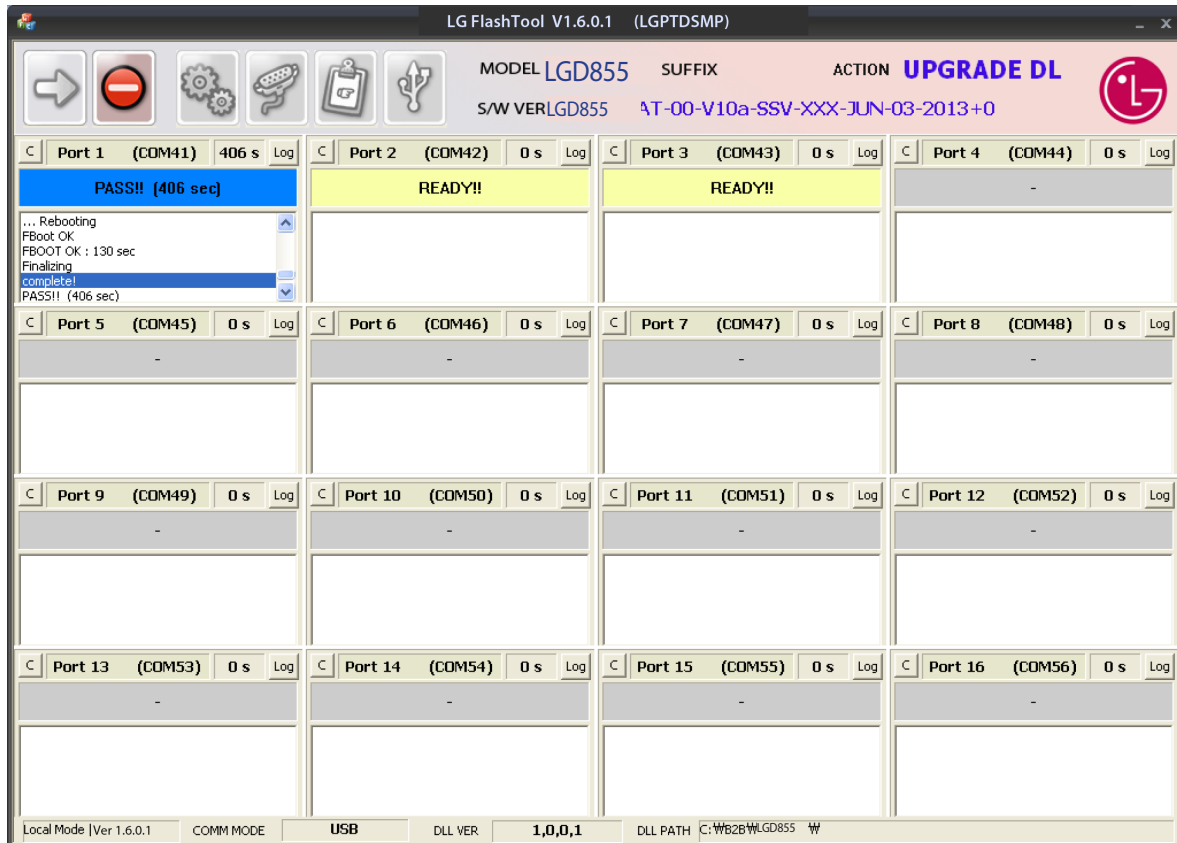
## 4. DOWNLOAD



## 4. DOWNLOAD



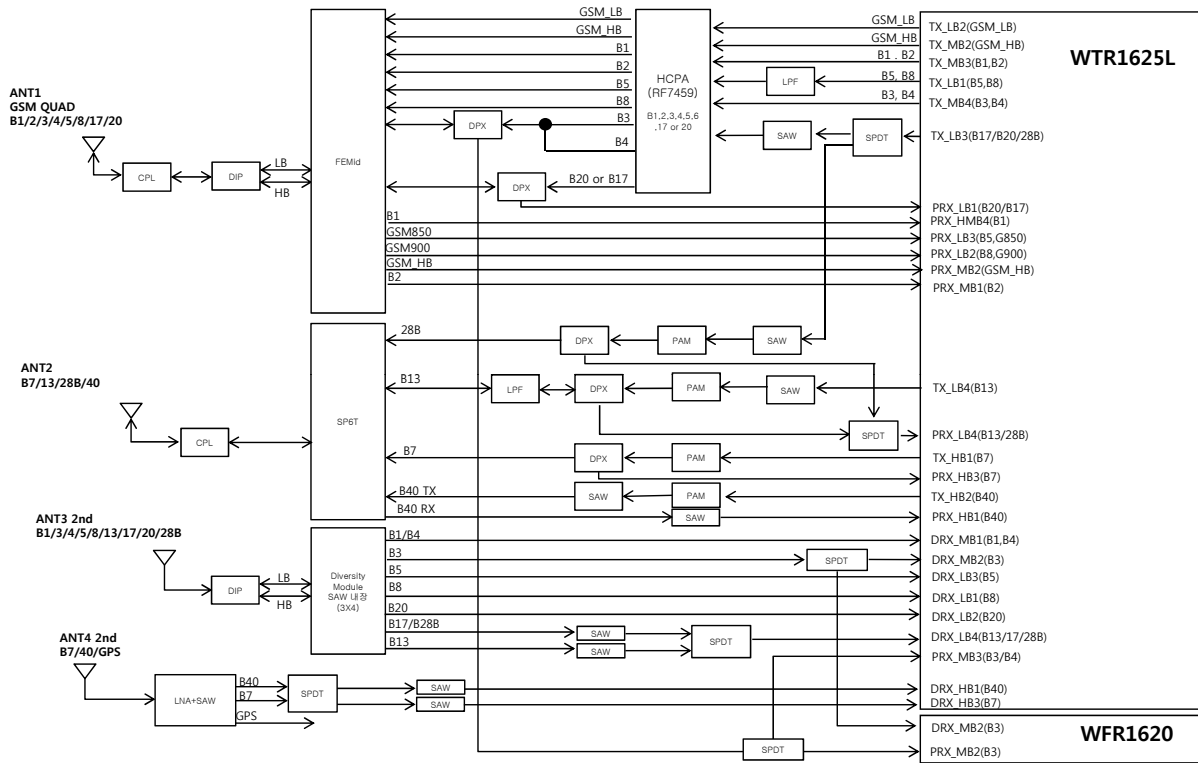
## 4. DOWNLOAD



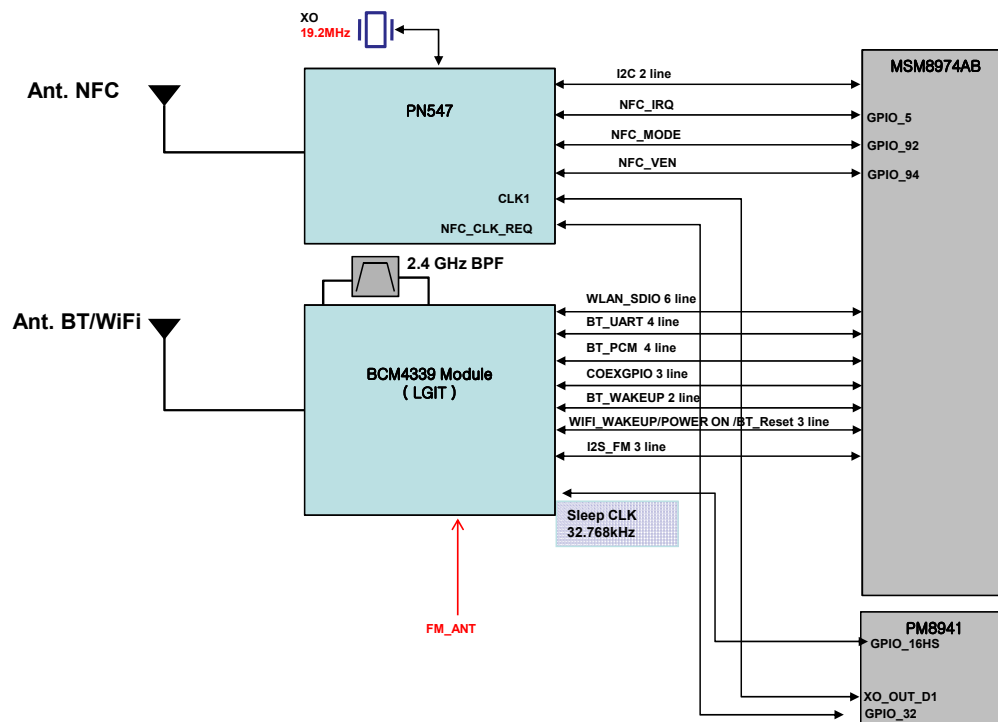


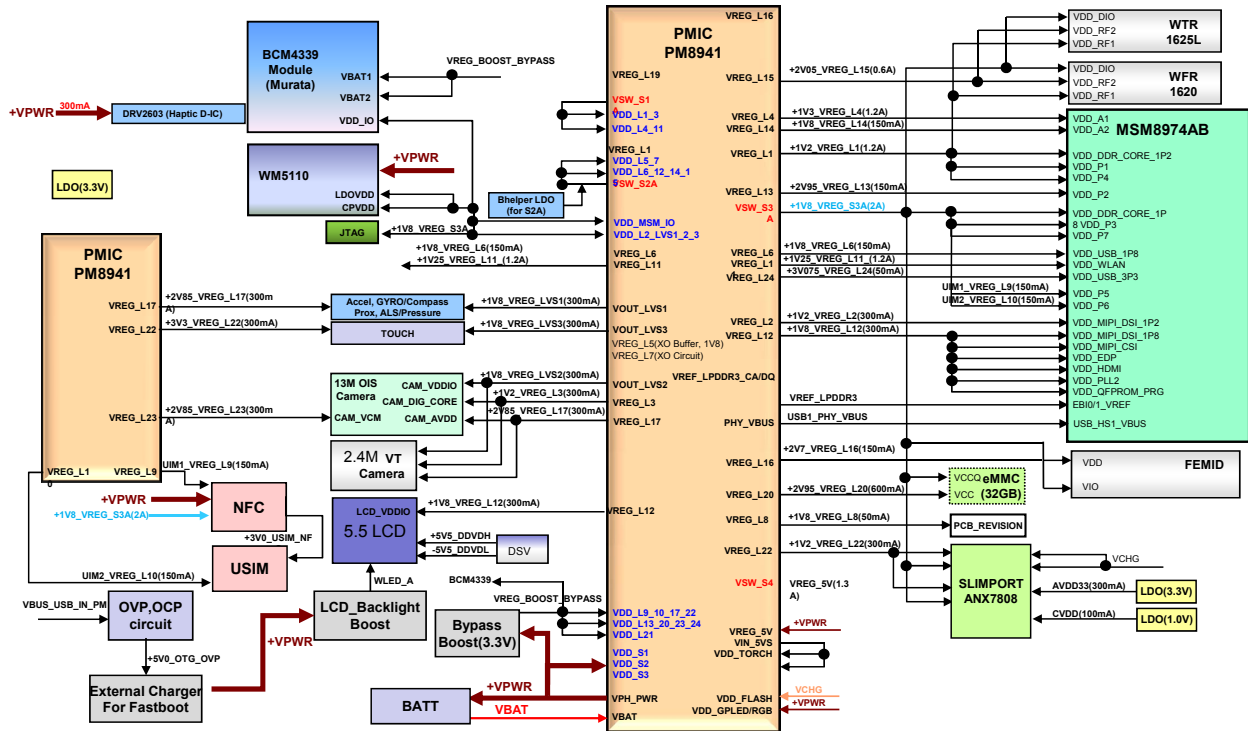
# 5. BLOCK DIAGRAM

## [D855] RF Block Diagram

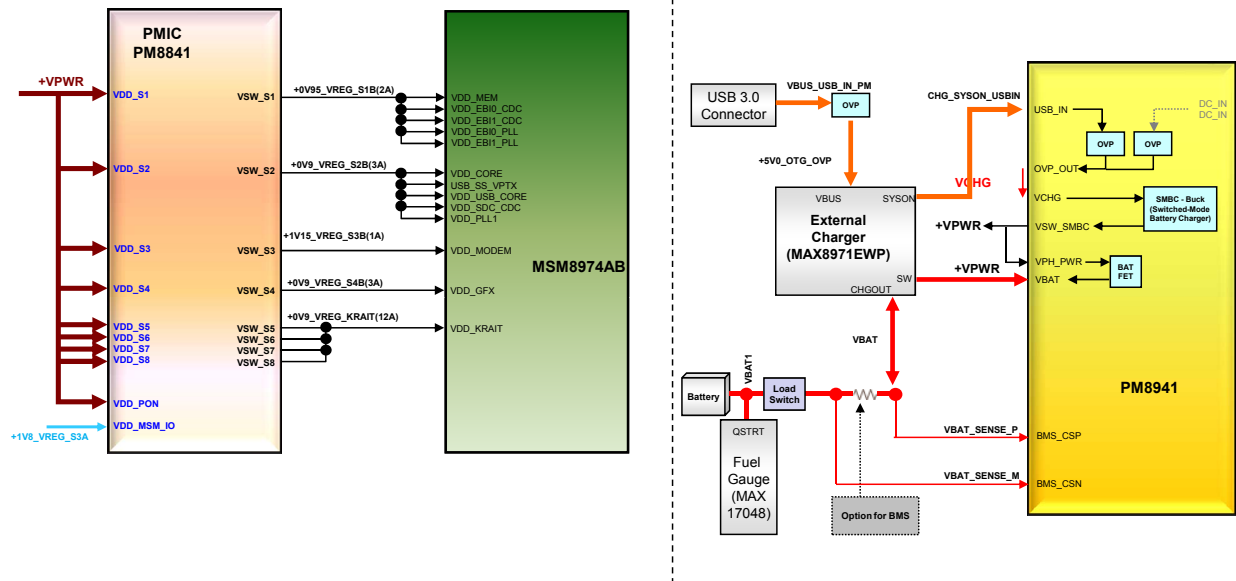


[D855] Connectivity Block-diagram



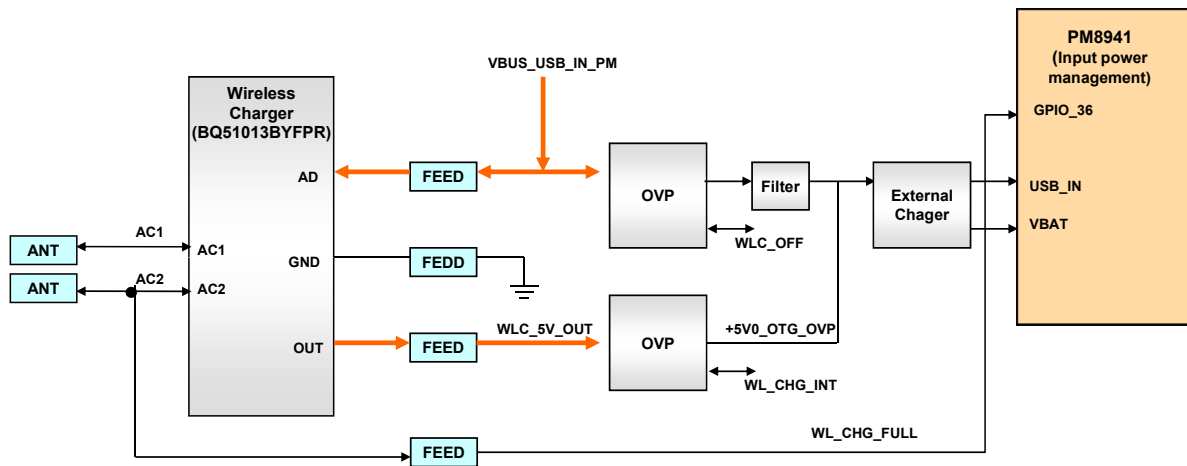


### [D855] PM8841 SMPS / PM8941 Input Power Management



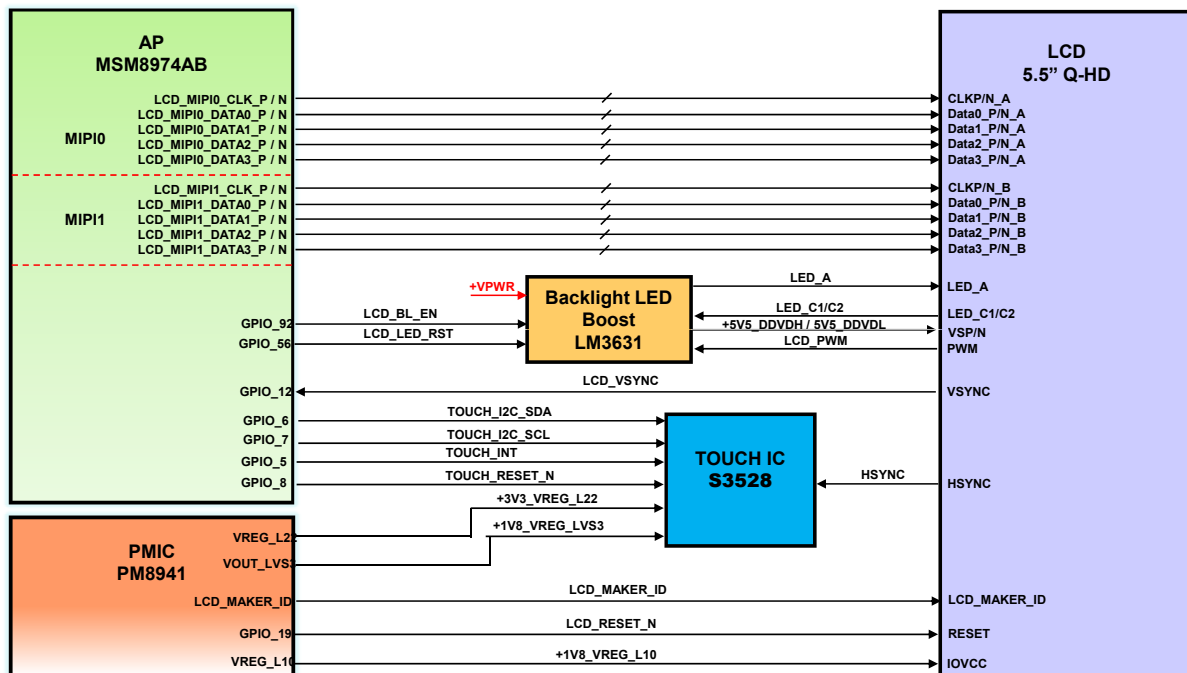
## 5. BLOCK DIAGRAM

### [D855] Wireless charger



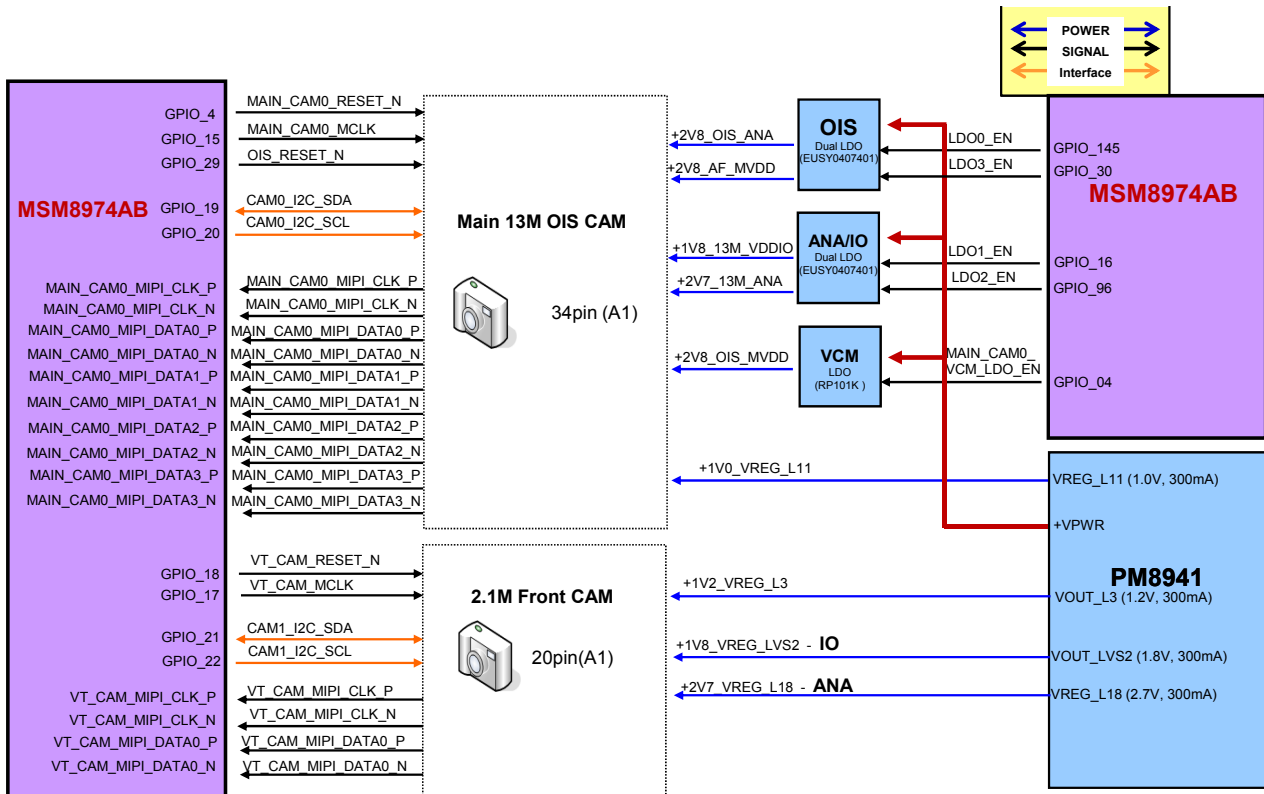


### [D855] Main Display I/F



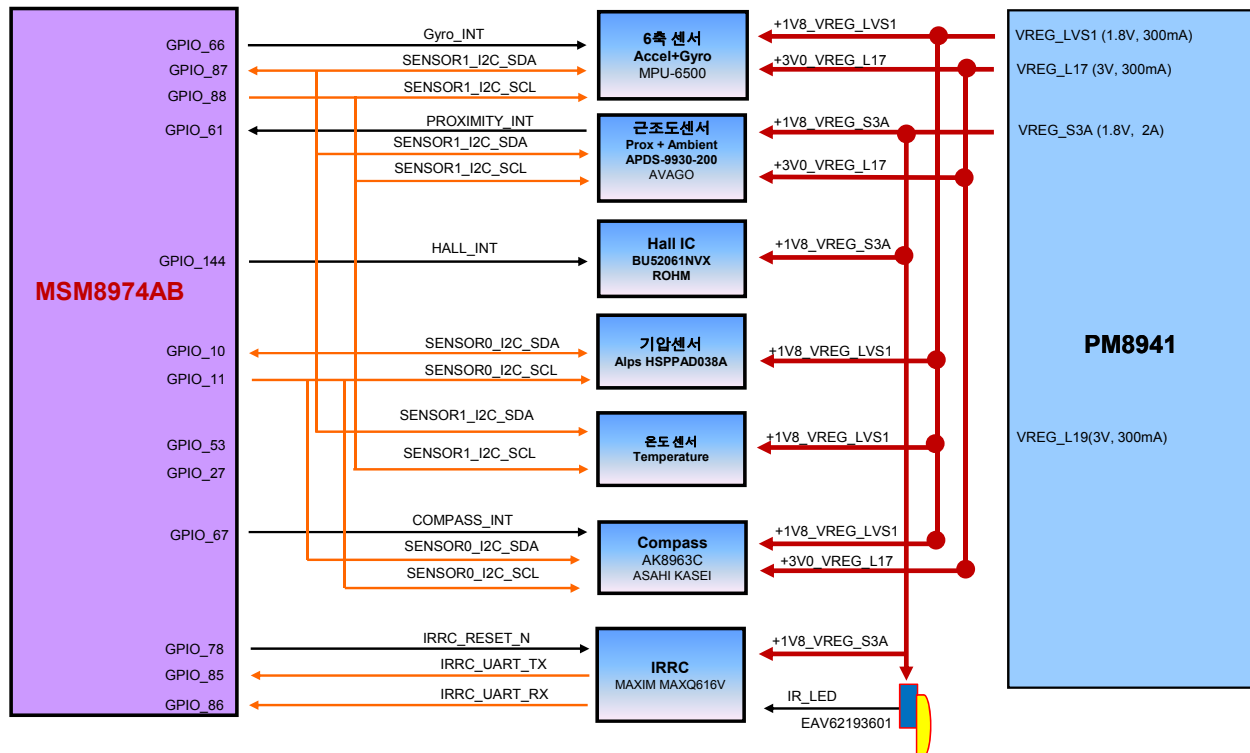
## 5. BLOCK DIAGRAM

### [D855] 13M OIS Camera, 2.1M VT Camera



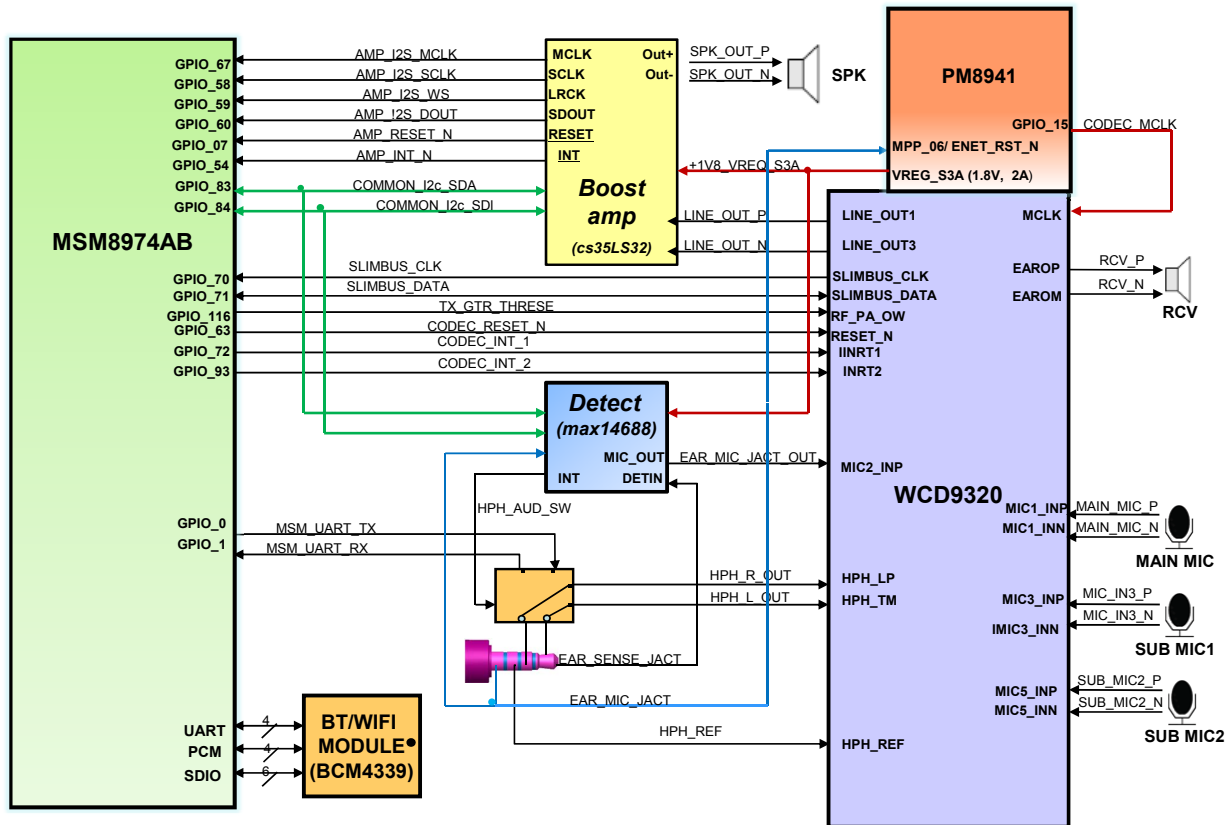
## 5. BLOCK DIAGRAM

### [D855] Sensor



## 5. BLOCK DIAGRAM

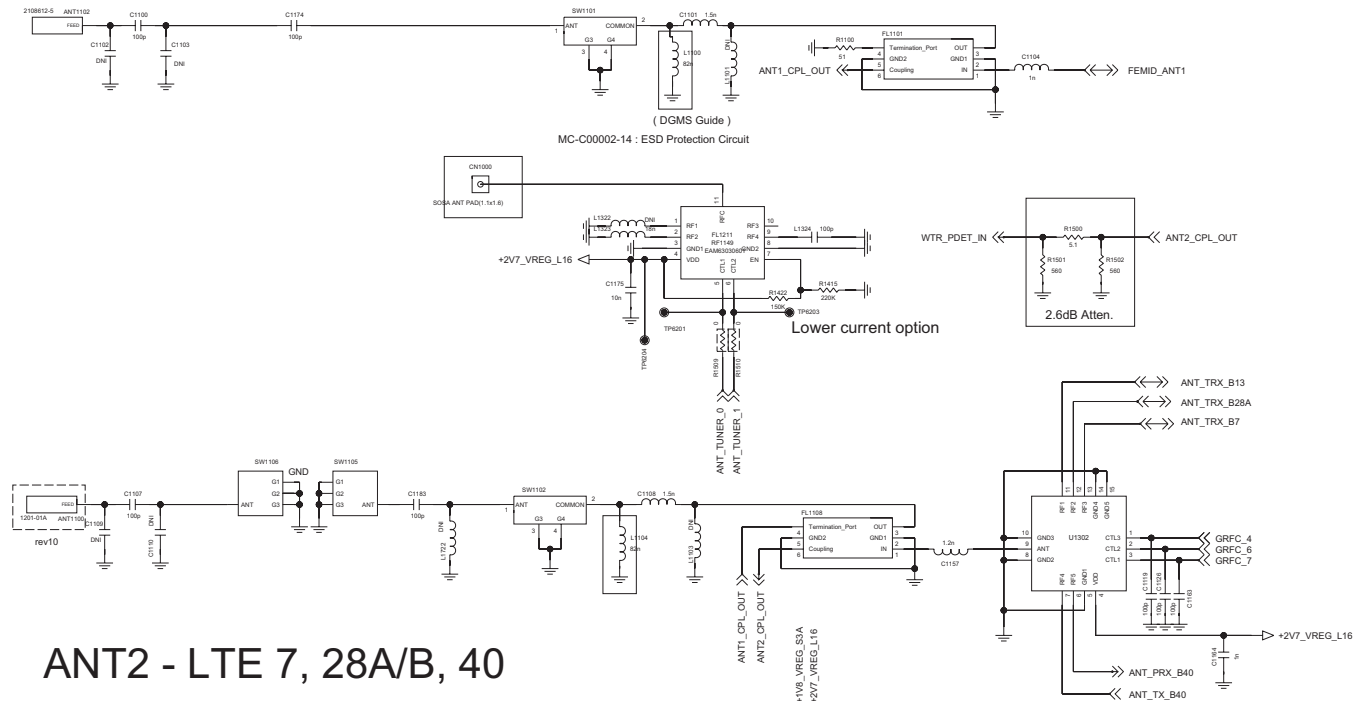
### [D855] Audio Codec I/F



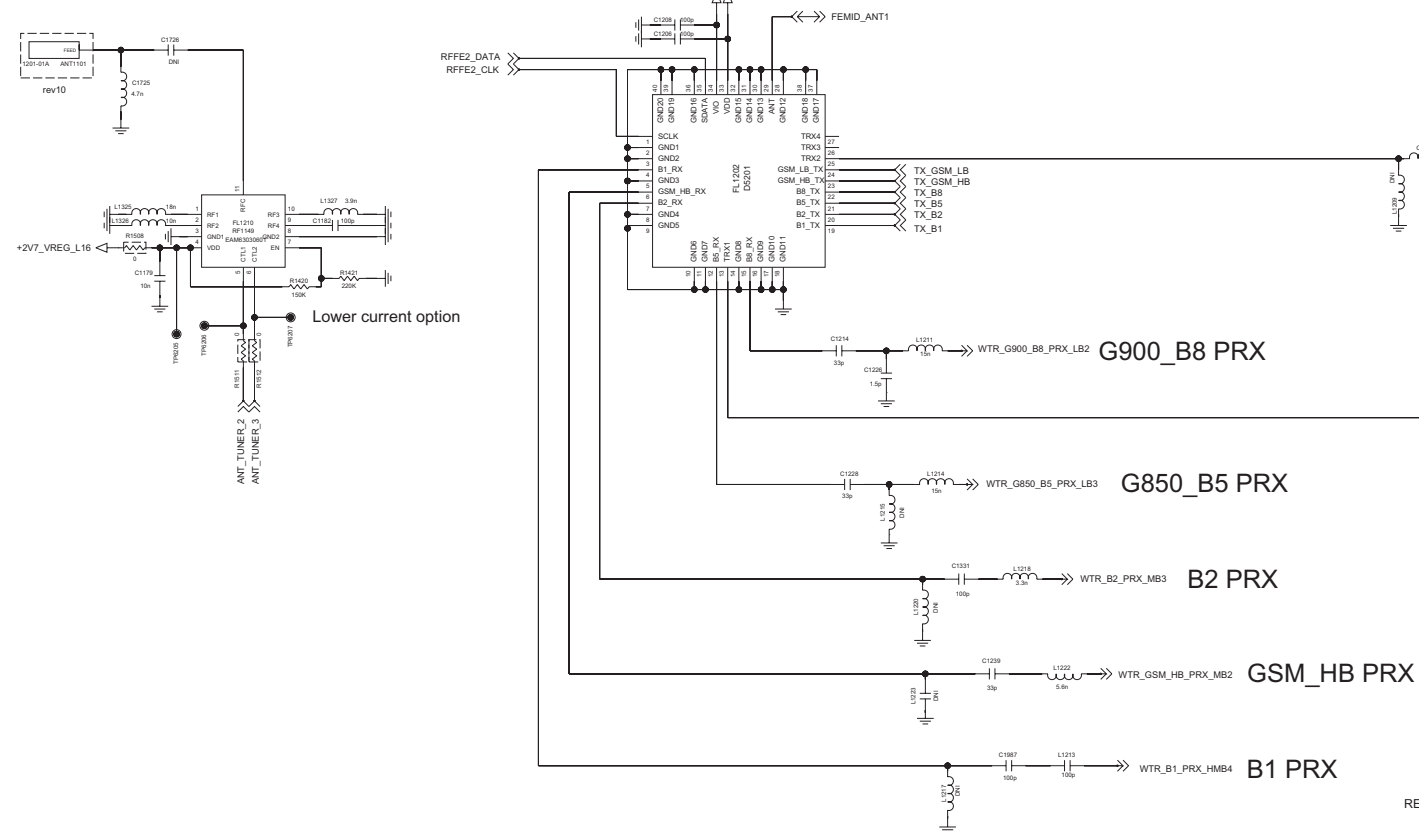
## 6. CIRCUIT DIAGRAM

## 6. CIRCUIT DIAGRAM

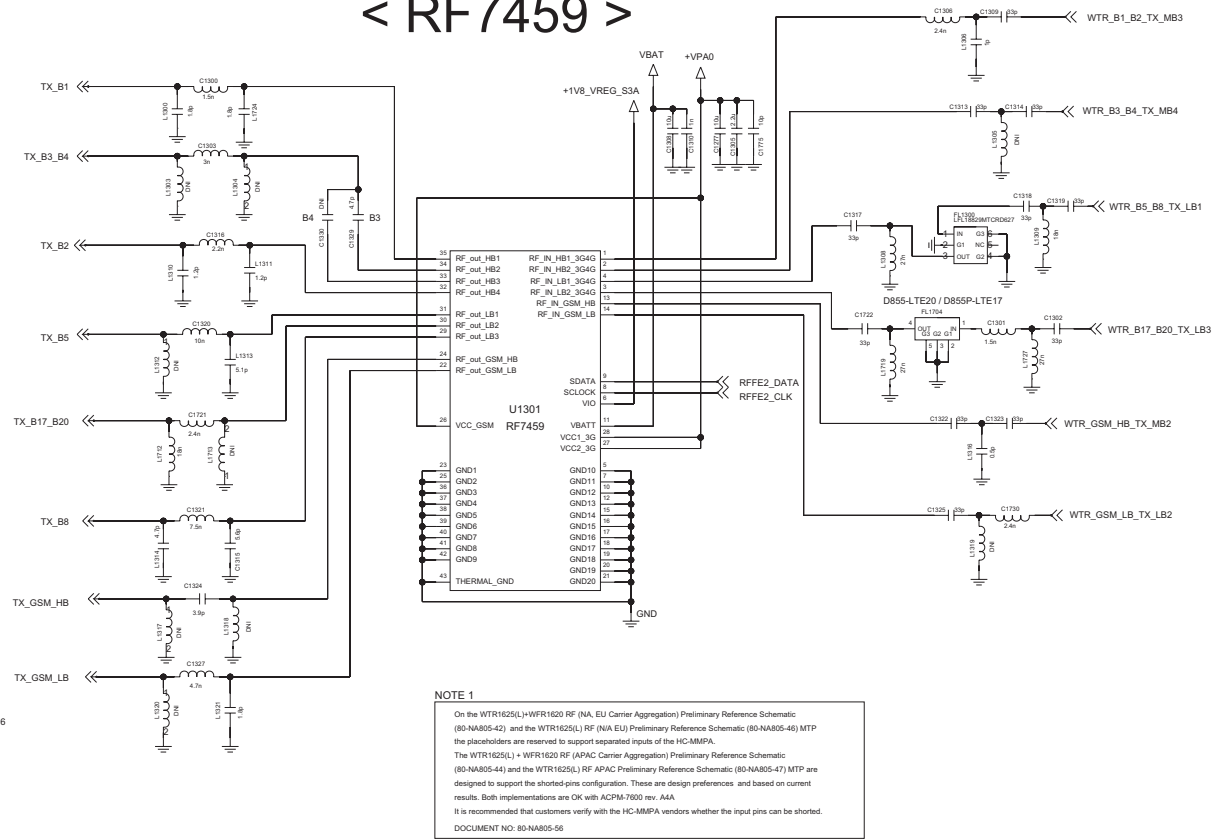
ANT1- GSM QUAD / WCDMA 1,2,5,8 / LTE 1,(2),3,(4),8,(17),20



ANT2 - LTE 7, 28A/B, 40



< RF7459 >



**NOTE 1**

On the WTR1625J/-WFR1620 RF (NA, EU Carrier Aggregation) Preliminary Reference Schematic (80-NA805-46) and the WTR1625J/-RF (NA, EU) Preliminary Reference Schematic (80-NA805-46) MTP are placedholders are reserved to support input/output pairs of the HC-MMPA.

The WTR1625J/- + WFR1620 RF (APAC Carrier Aggregation) Preliminary Reference Schematic (80-NA805-44) and the WTR1625J/-RF APAC Preliminary Reference Schematic (80-NA805-47) MTP are designed to support the shorted-pins configuration. These are design preferences and based on current results. Both implementations are OK with ACPM-7600 rev. AAA

It is recommended that customers verify with the HC-MMPA vendors whether the input pins can be shorted.

DOCUMENT NO: 80-NA805-56

B3/B4 NON-CA

B17\_B20\_TRX

The diagram illustrates the wiring for the REV10 board. It is divided into four main sections:

- RX:** Shows a dashed box labeled "rev10" containing a component labeled "SC1108" connected to ground. To its right, a component labeled "rev.B" is also connected to ground.
- GPS SUS:** Shows two components, "SC1101" and "SC1102", each connected to ground.
- SUS Plate:** Shows two components, "SC1103" and "SC1104", each connected to ground. A label "MGLN405K001" is placed below the ground connection for SC1104.
- 12/25 GND Contact:** Shows two components, "12/25 0.4T CLIP" and "rev10", each connected to ground. A label "12/25 0.4T CLIP" is placed above the component.

At the bottom left, a note reads: "REV10\_Coaxial Cable Y-clip added. (03/28)".

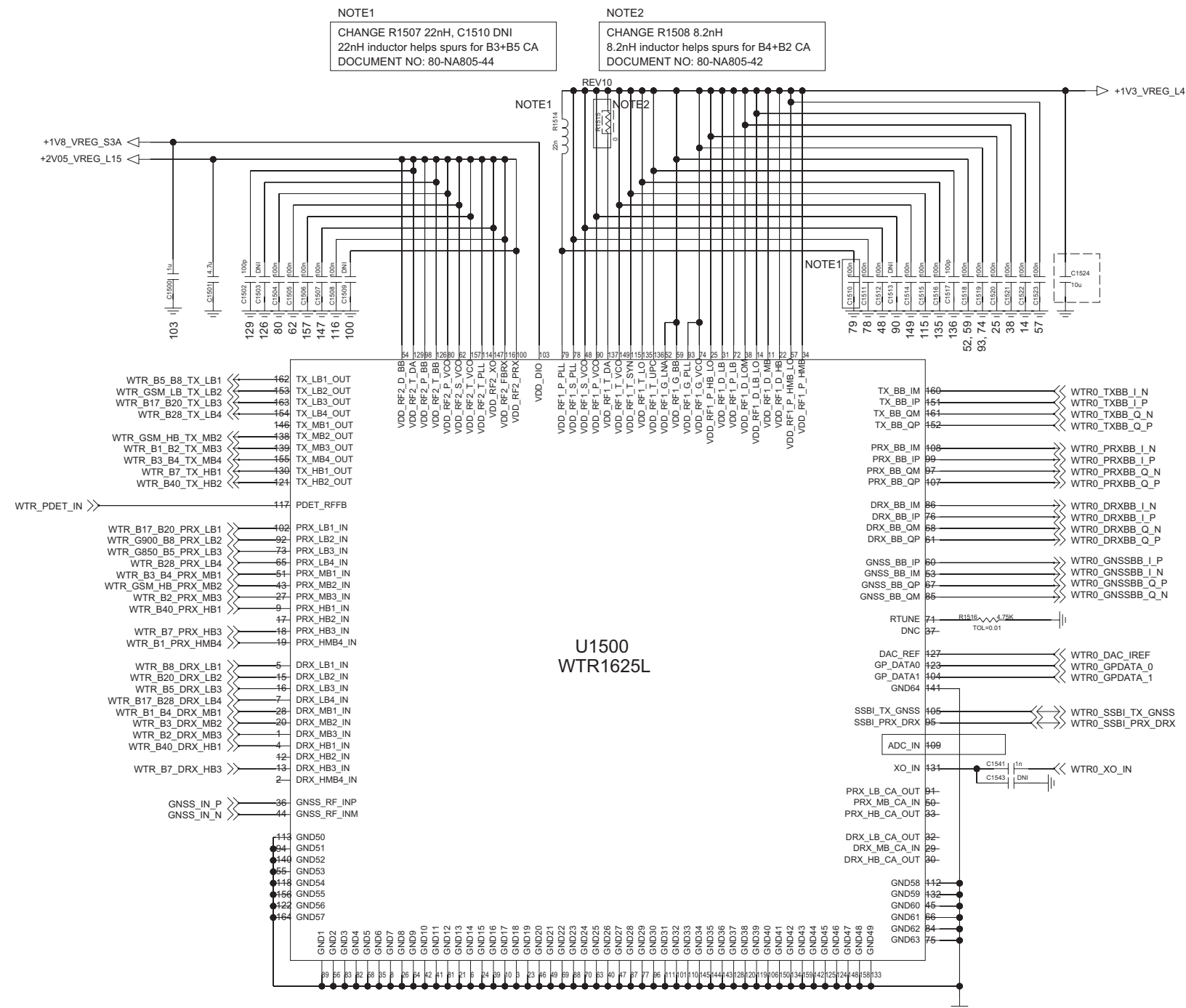


The schematic diagram illustrates the B7 TRX circuit. It begins with the **TRX\_B7** input, which passes through an antenna matching network consisting of inductors **L1607** (0.7nH), **L1608** (3.3nH), and **L1609** (5.5nH), along with capacitors **C1607** (100pF) and **C1608** (100pF). The signal then enters a 2655MHz crystal. The output of the crystal is connected to the **WTR\_B7\_PRX\_HB3** input. The circuit also includes a **WTR\_B7\_TX\_HB1** output and a **MIPI APT** interface. Power supply rails for **+VPA0** and **+VBS\_VREG\_SSA** are shown, along with various capacitors and inductors for filtering and matching.

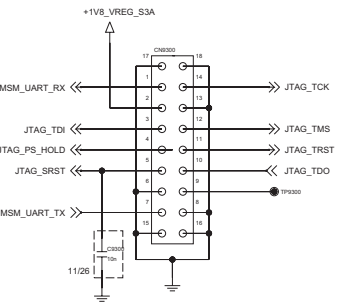
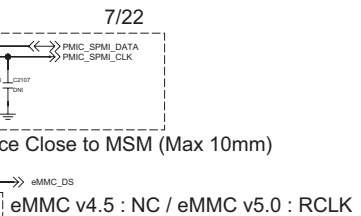
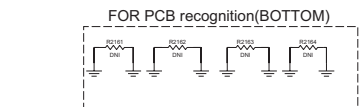
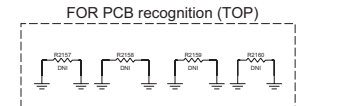
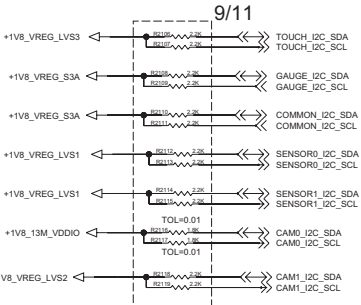


## &lt; 1-3-5-1\_RFIC\_CA\_nCA\_WTR1625 &gt; Rev\_0.4

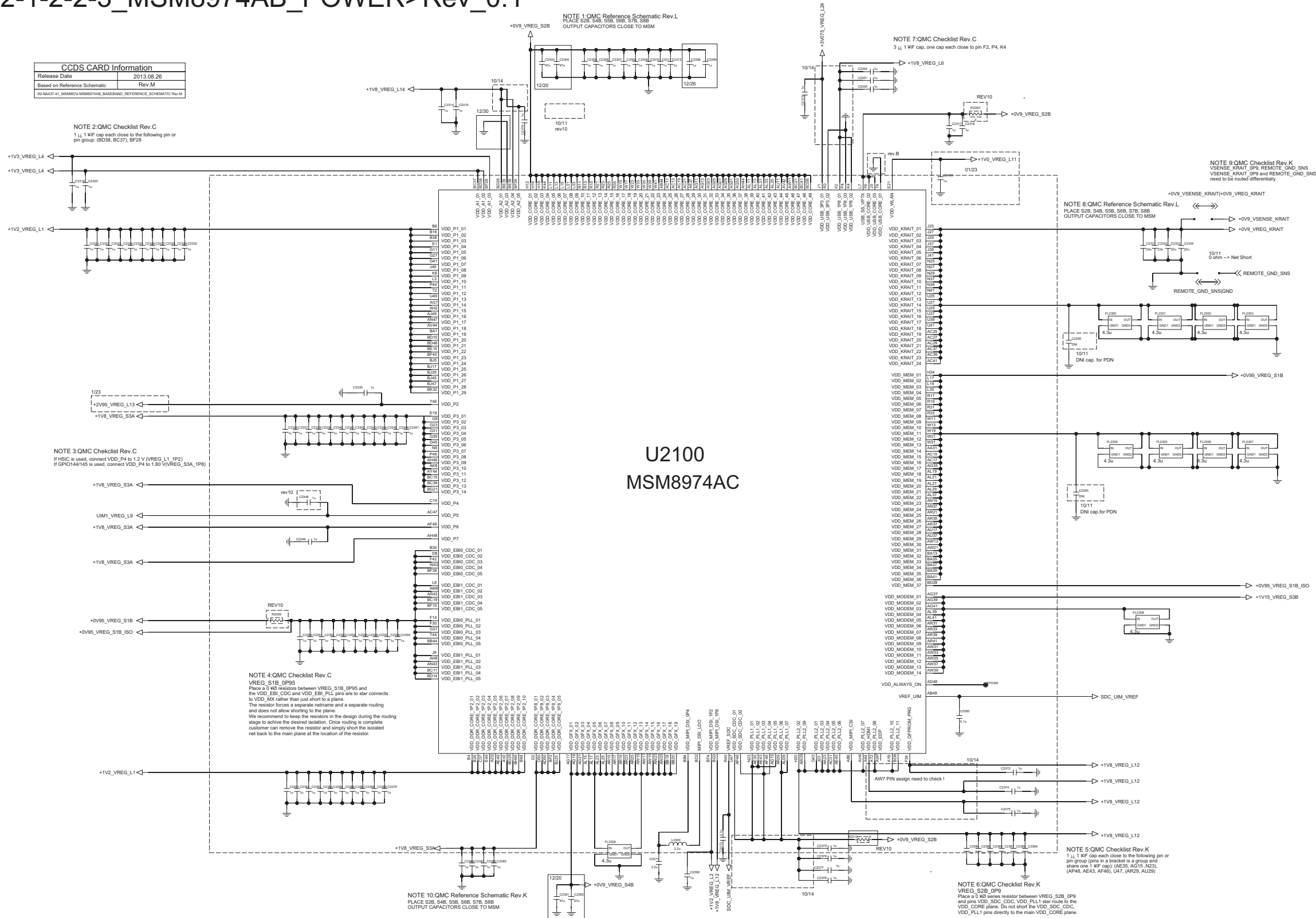
CAUTION: YOU MUST CHECK &amp; MODIFY RF PORT AND GPIO ON YOUR SCHEMATICS.



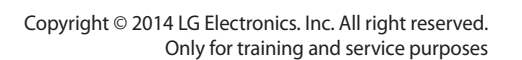
## I2C Pull-Up



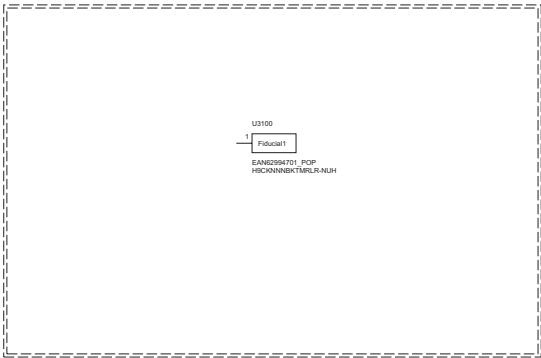
<2-1-2-2-3\_MSM8974AB\_POWER>Rev\_0.1



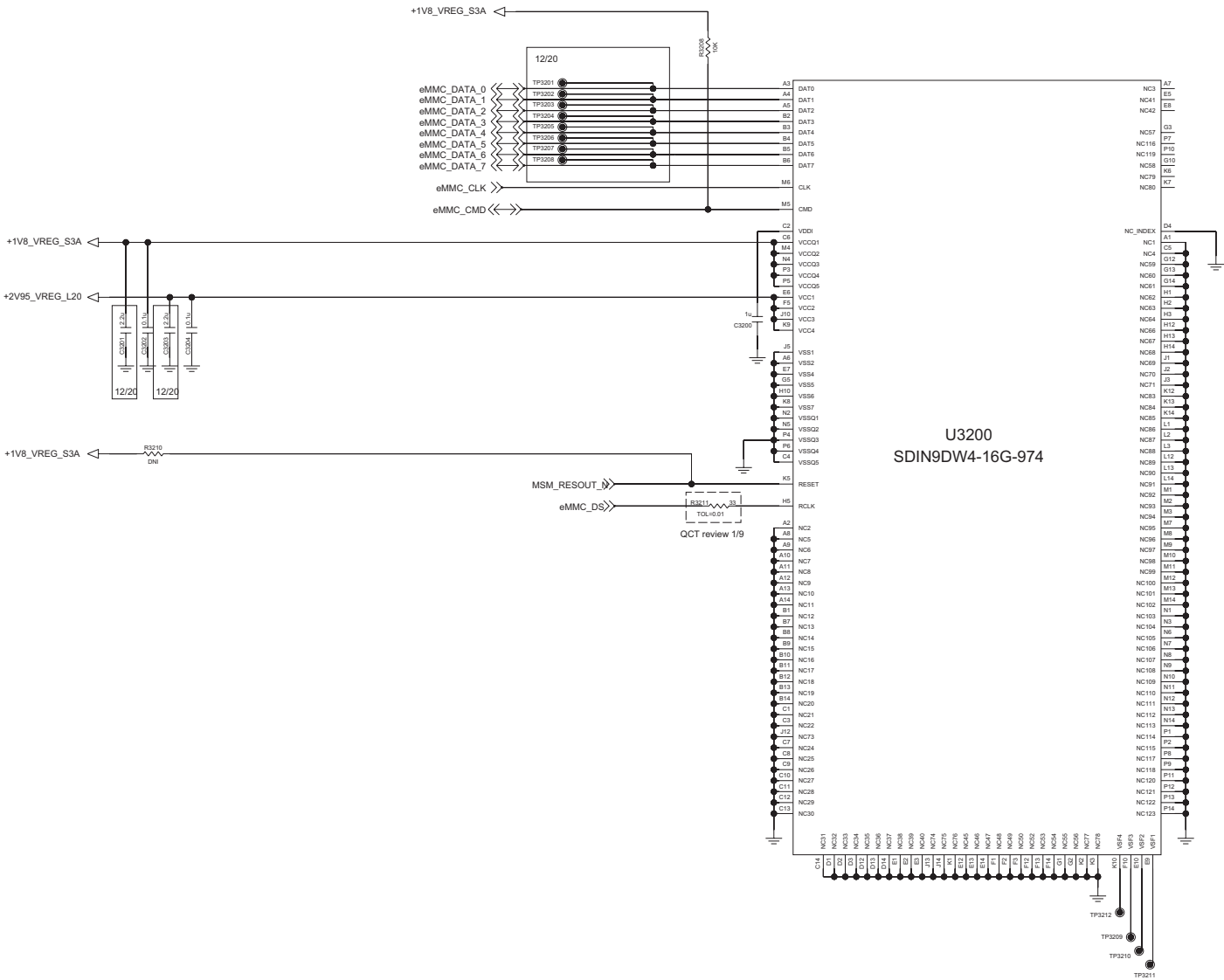




<3-1-4-3-1\_LPDDR3\_POP\_SK Hynix\_16G-Bit> <3-2-2-3-1\_eMMC\_4\_5\_Toshiba\_32G-Byte> Rev\_0.4  
Rev\_0.3



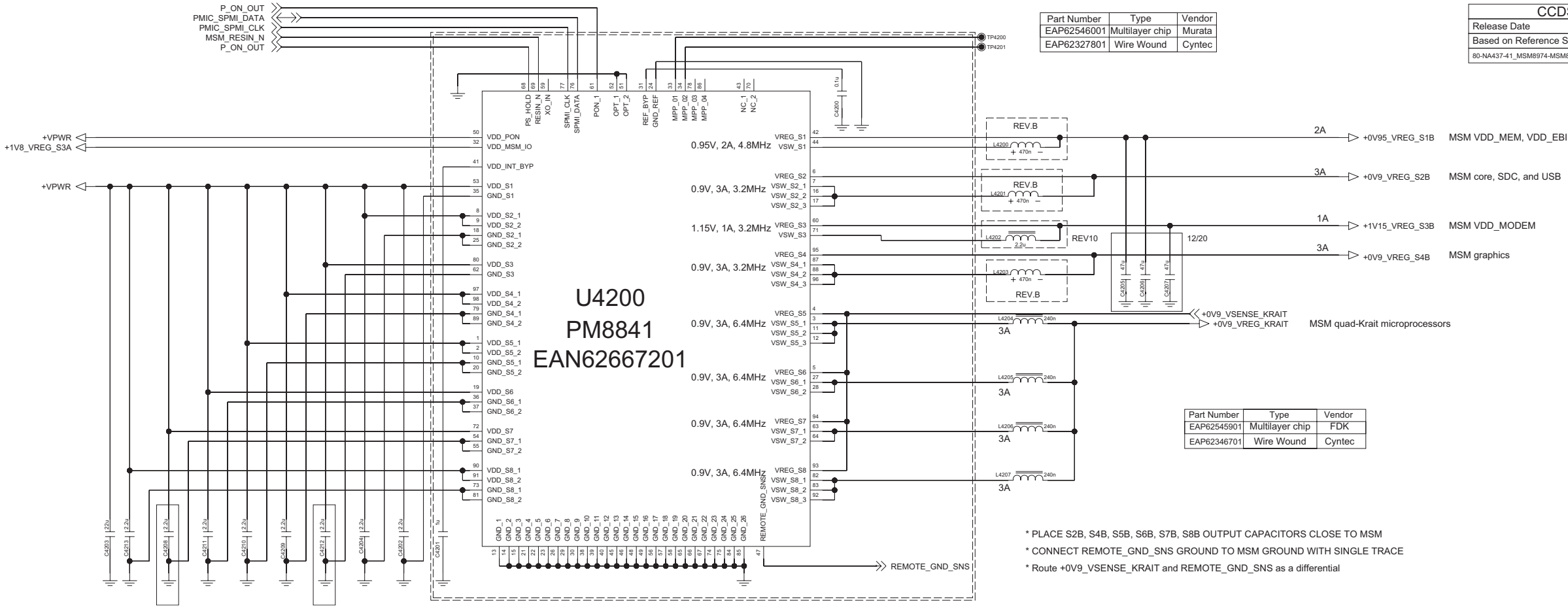
Have to Change to 3GB LPDDR3



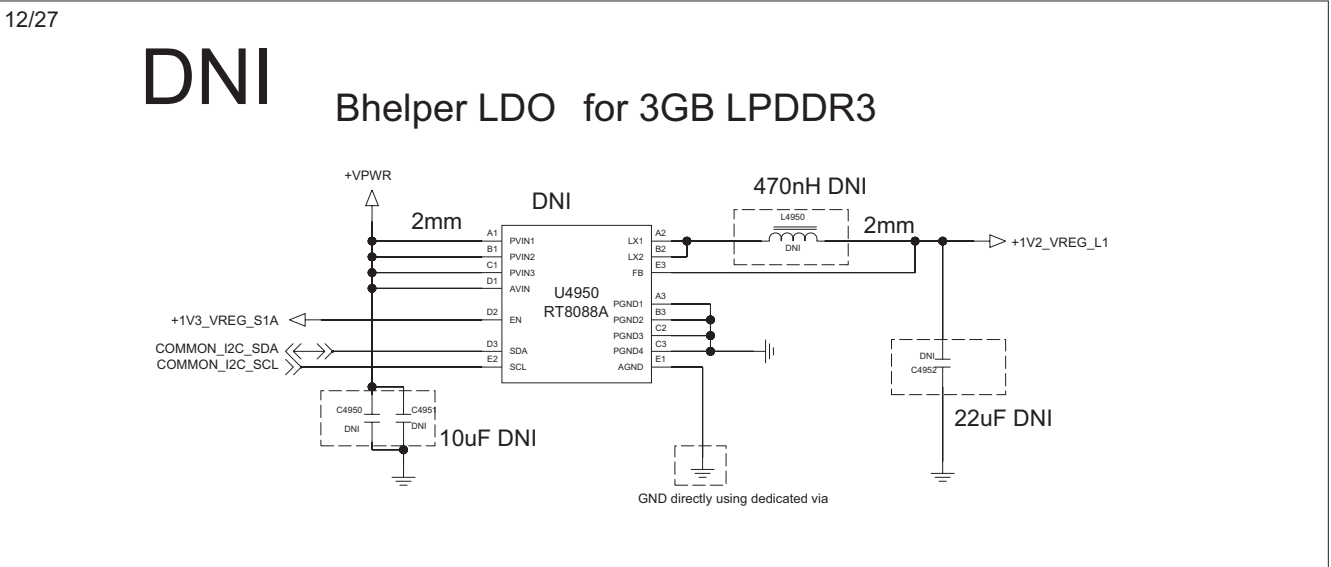
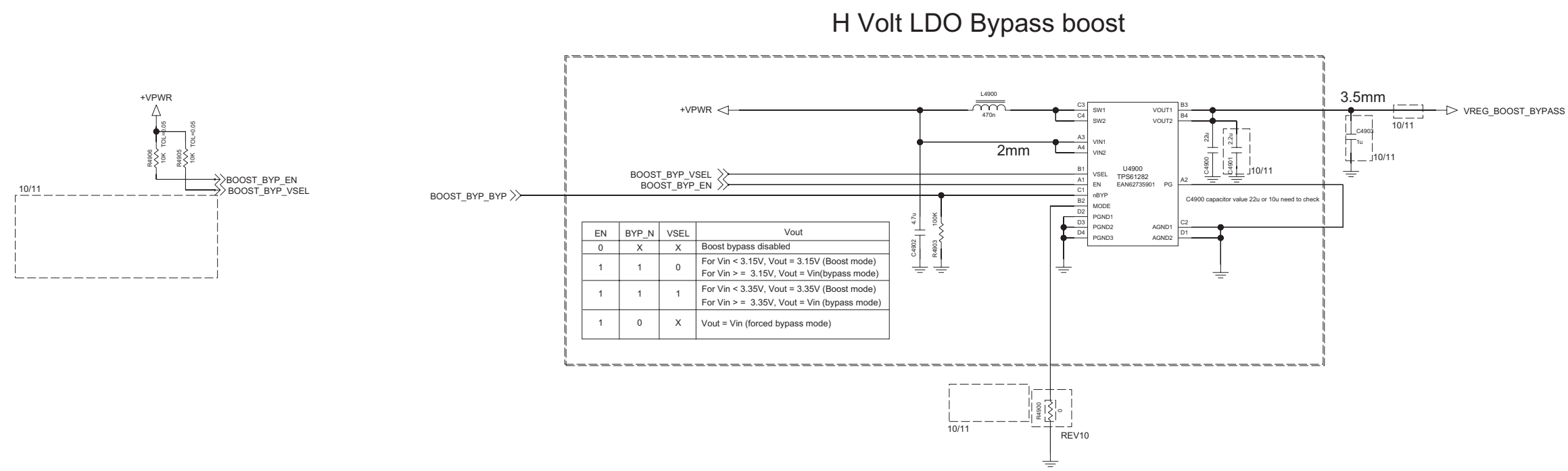
Rev\_0.3



<4-2-1\_PMIC\_PM8841> Rev\_0.3

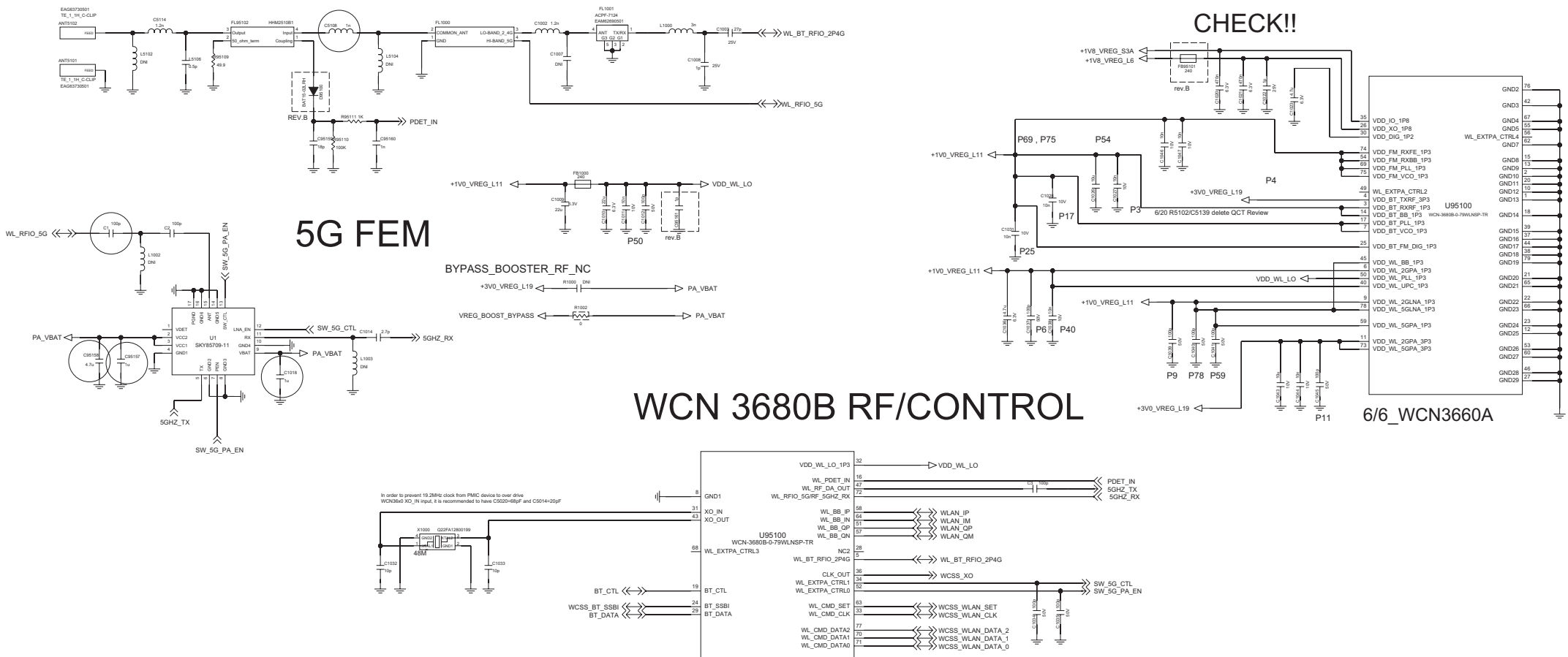


<4-9-1-4-3\_Bypass\_Booster\_Single\_TPS61282> Rev\_0.3

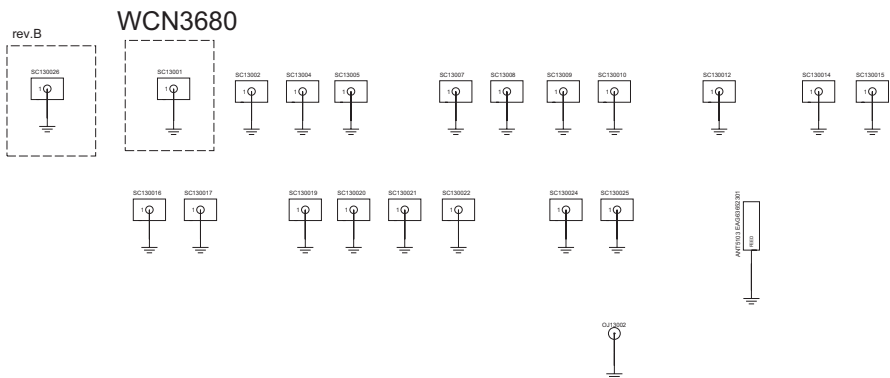


BT/WiFi RF Filter

REV 0.3



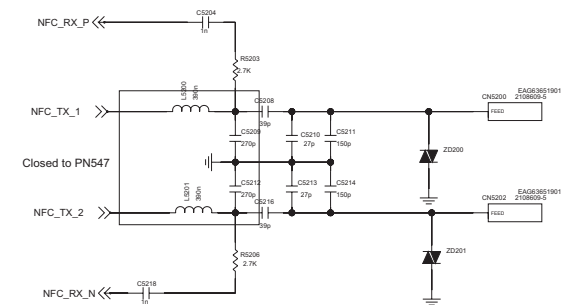
SMT Boss / Screw / Shield can frame / Clip





<5-2-1-4\_NFC\_PN547>Rev\_0.5

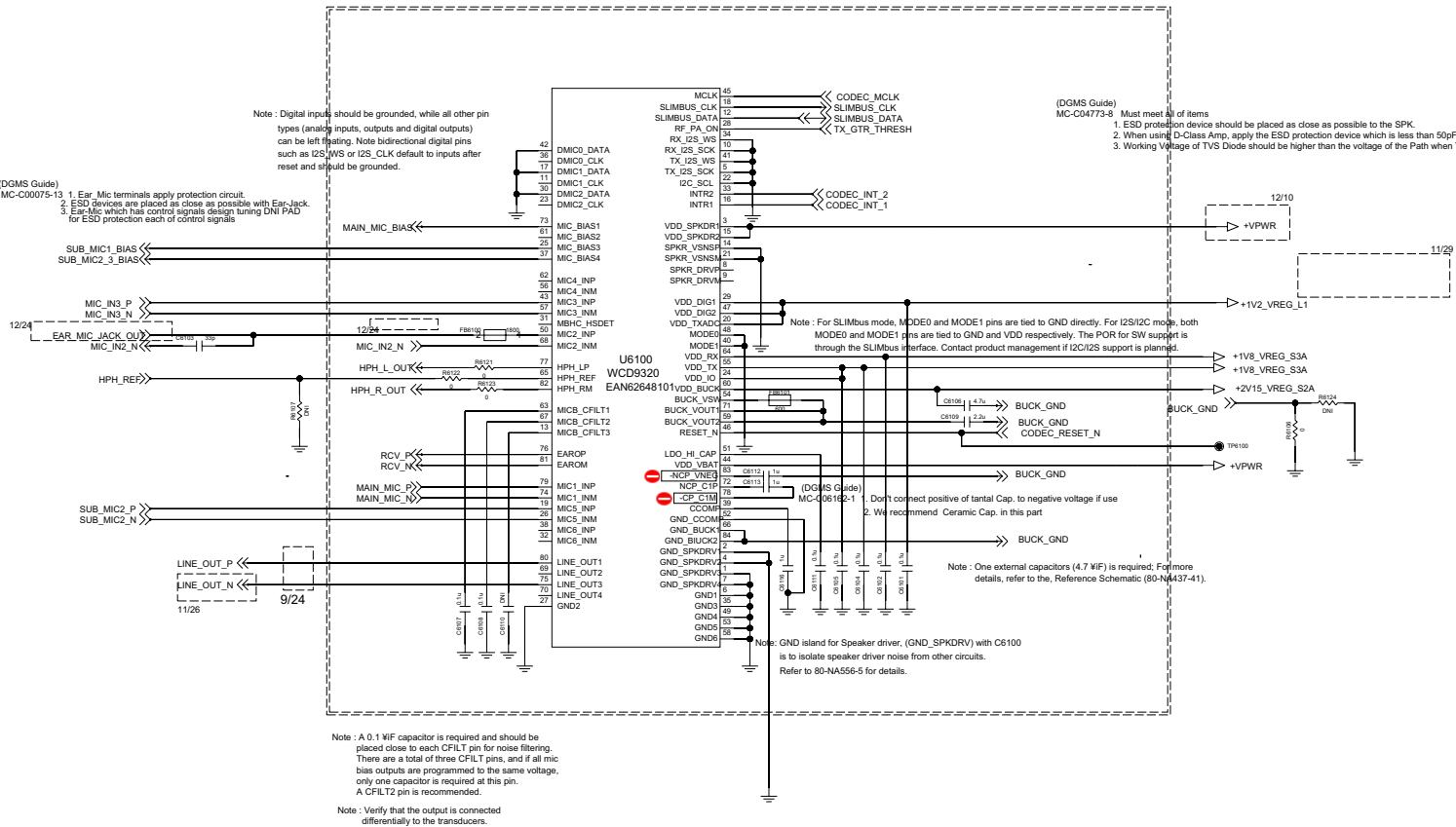
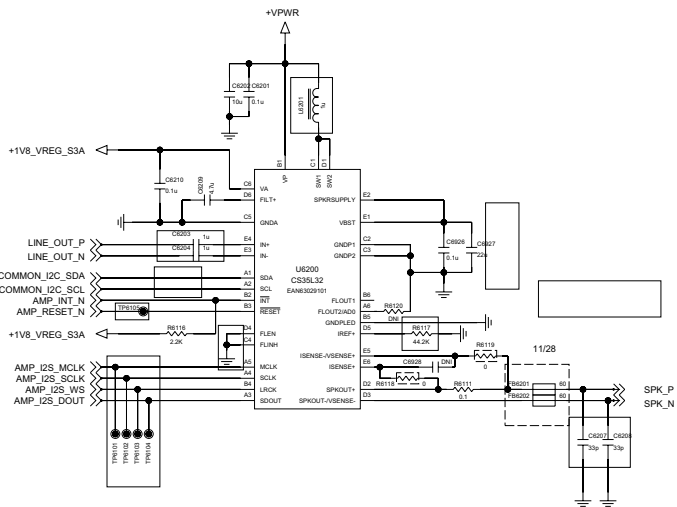
## NFC Antenna



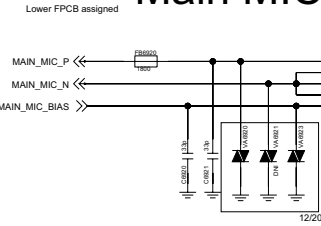
<6-1-1-5\_WCD9320> REV\_0.3

12/16

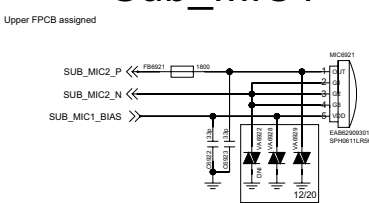
SPK BOOST AMP



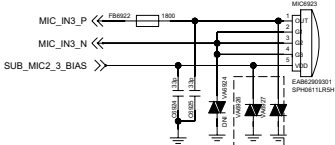
Main MIC



Sub\_MIC1



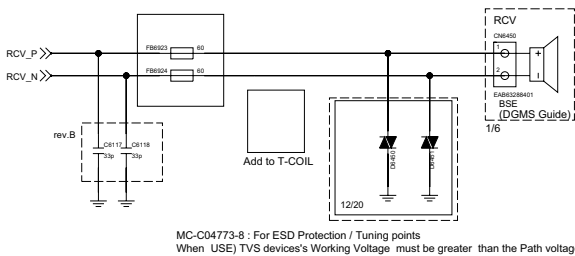
Sub\_MIC2



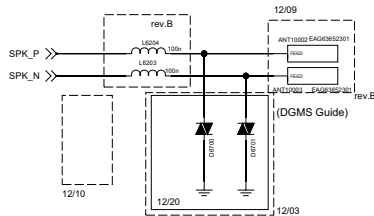
Sub\_MIC3



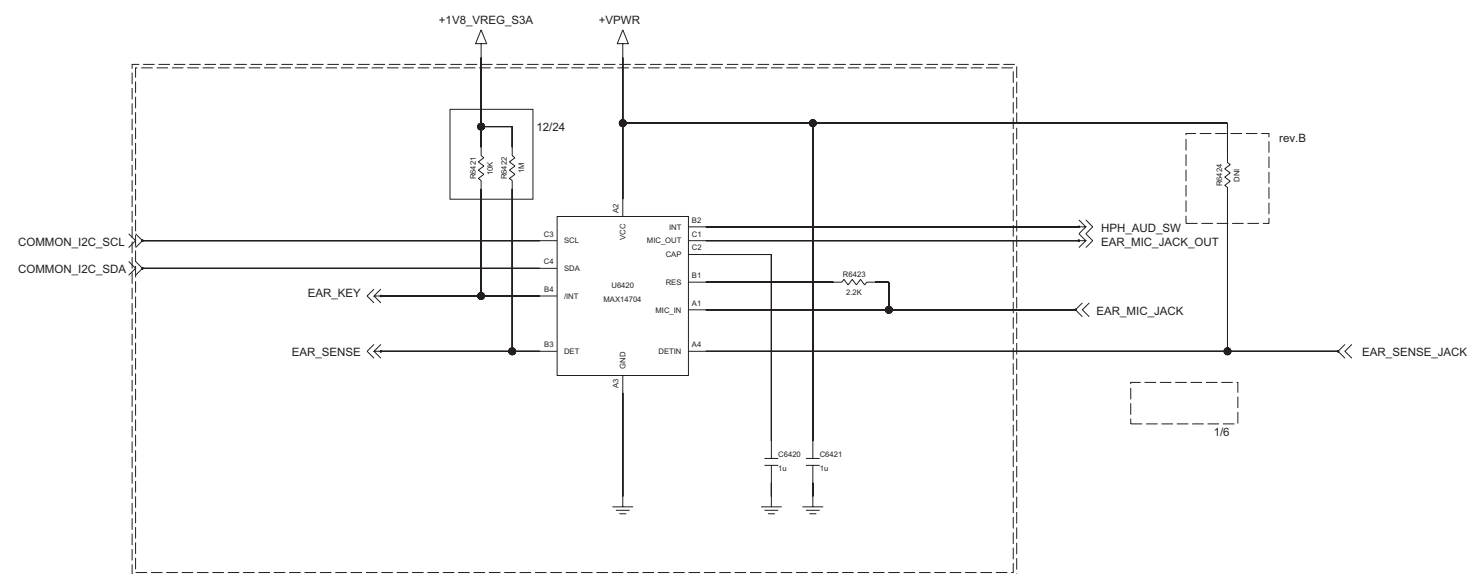
< 6-8-2\_Receiver > Rev\_0.4



< 6-7-1\_Speaker > Rev\_0.4

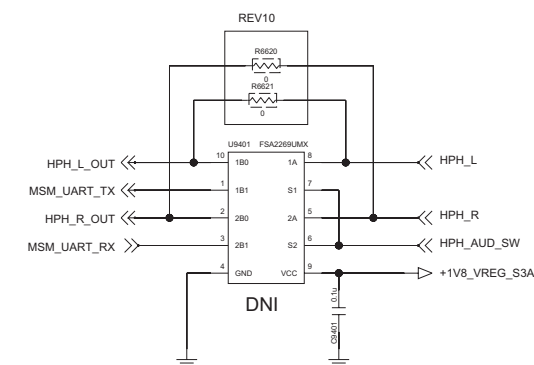


< Earjack detect IC > 12/4

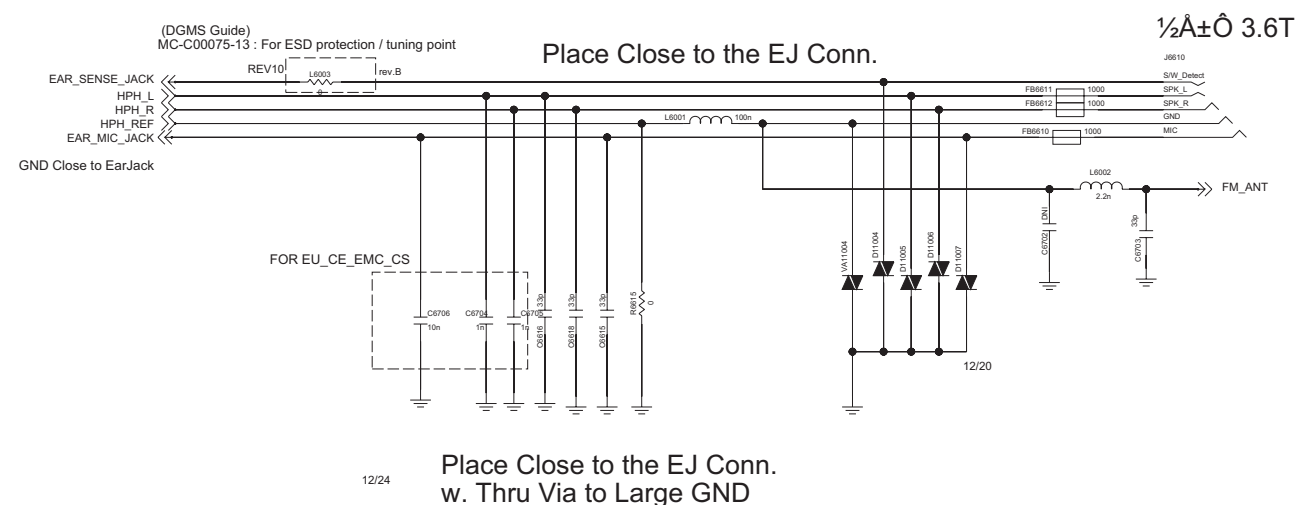


12/4

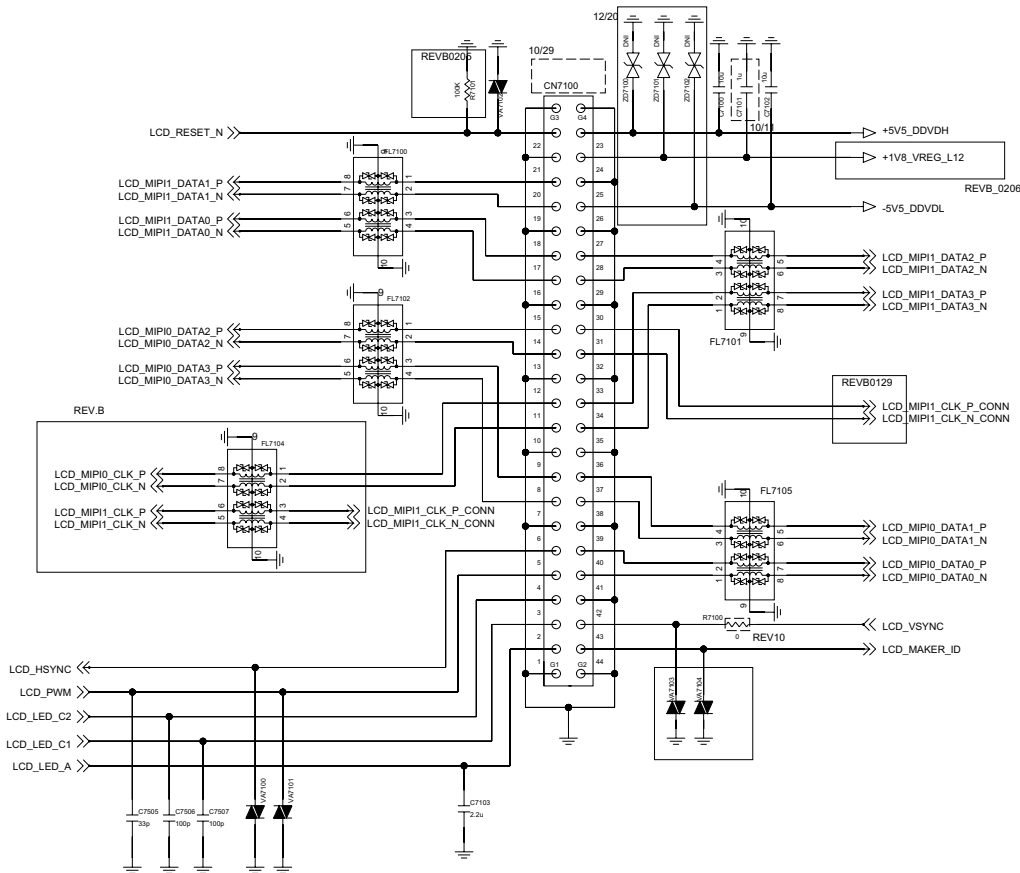
<Earjack\_Debug\_Port >



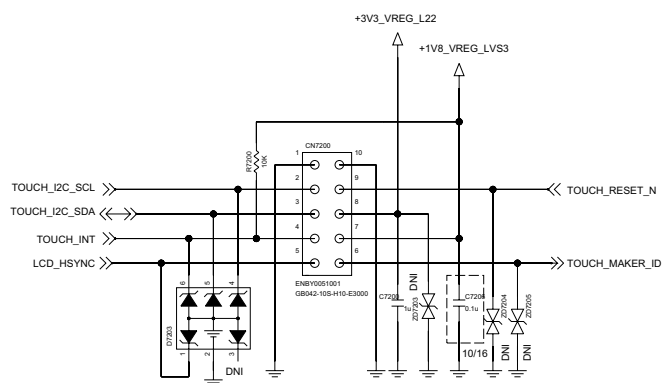
< 6-6-1\_Earjack > Rev\_0.5



<7-1-8-4-2\_Quad\_LCD\_5.5"> Rev\_0.1

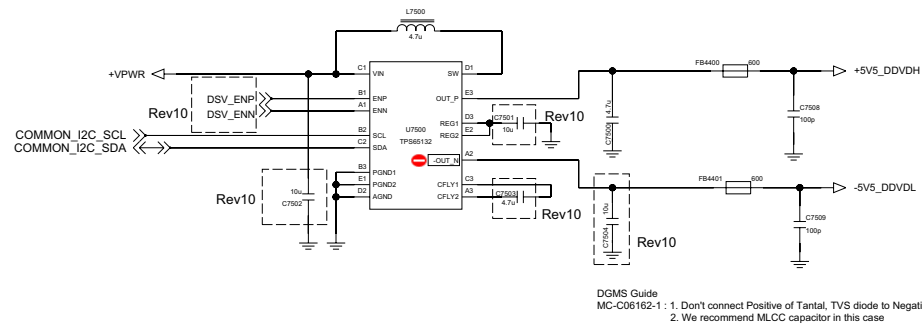


## 5.5" Touch



## RevB

<7-5-1\_DSV\_TPS65132> Rev\_0.3



## RevB\_0213

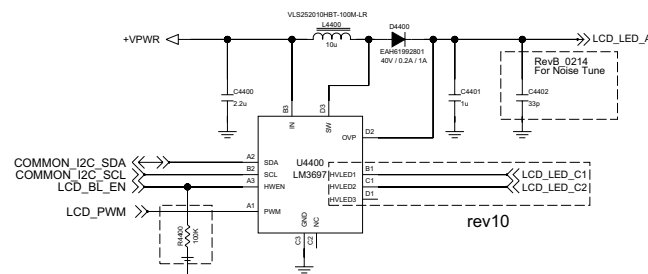
<4-4-4\_LCD\_BL\_Booster\_LM3697> Rev\_0.1

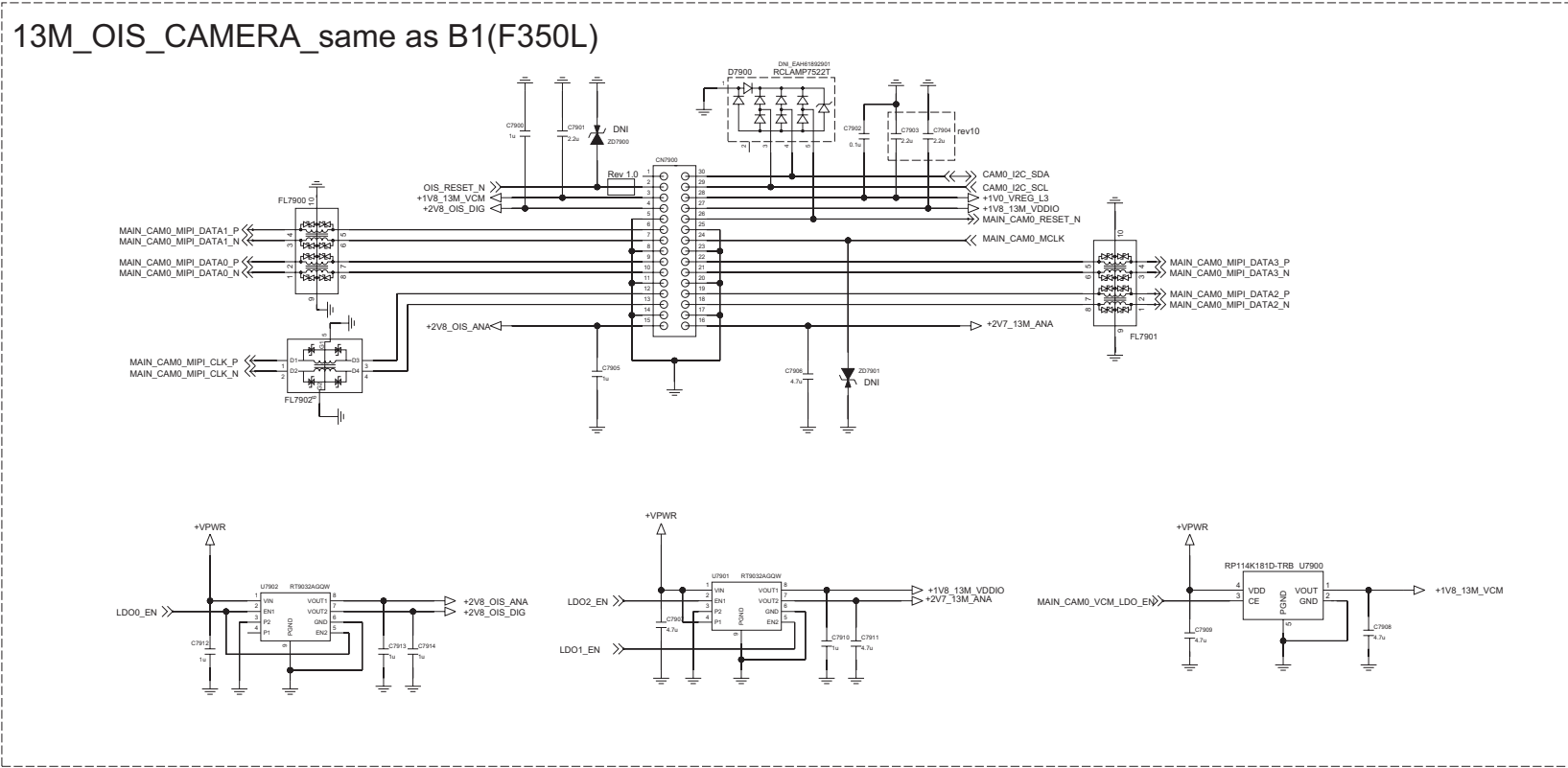
LED Vf=3.2V, If=23mA/46mA(2string), 2P7S  
 20% inductor tolerance => fsw=500khz; lpeak = 722.6mA, fsw=1MHz; lpeak = 541.9mA  
 30% inductor tolerance => fsw=500khz; lpeak = 774.2mA, fsw=1MHz; lpeak = 567.7mA

LED Vf=3.0V, If=20mA/46mA(2string), 2P7S  
 20% inductor tolerance => fsw=500khz; lpeak = 651.9mA, fsw=1MHz; lpeak = 473.3mA  
 30% inductor tolerance => fsw=500khz; lpeak = 702.9mA, fsw=1MHz; lpeak = 508.0mA

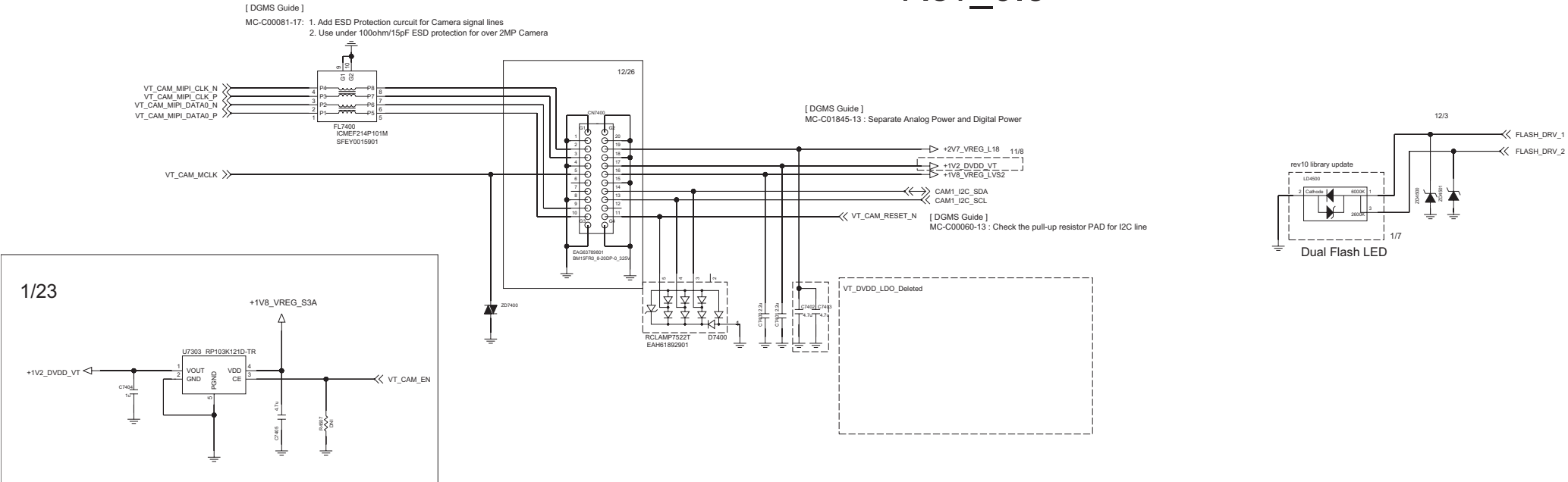
If you have other LED spec&quantity, recalculate lpeak And select Power inductor

You select diode spec :  $V_R > V_{out\_max}$ ,  $I_f > LED\ I_f(\text{all string current})$ ,  $I_{FRM} > \text{Inductor } I_{peak}$





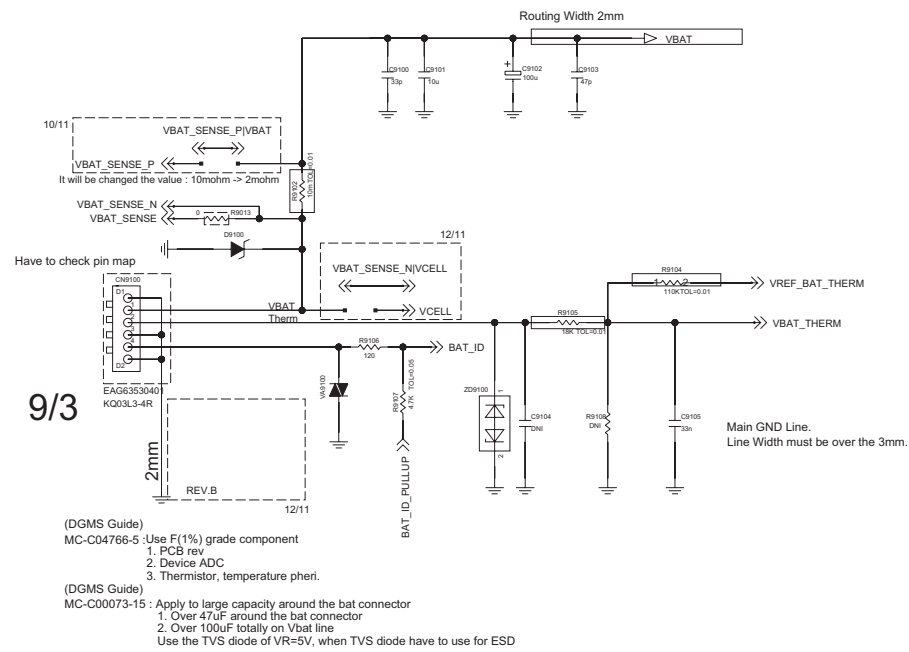
< 7-4-1\_VT\_Camera\_20pin\_VGA\_1.26M\_1.3M\_2.4M>  
Rev\_0.3 < Flash Driver\_LM3646 > 11/25



<7-6-2-1\_SlimPort\_ANX7812BH-AA-R>

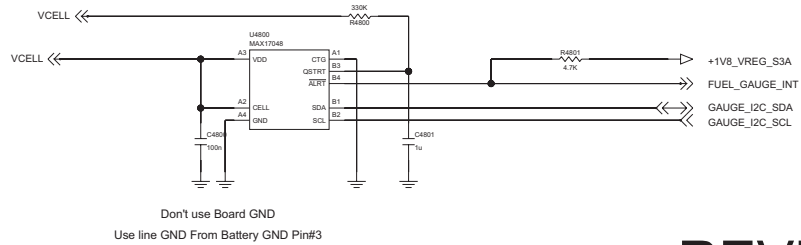


<9-1-2\_Battery\_CNT\_4P> REV.0.5



<4-8-1\_Fuel\_Gauge\_MAX17048> Rev\_0.3

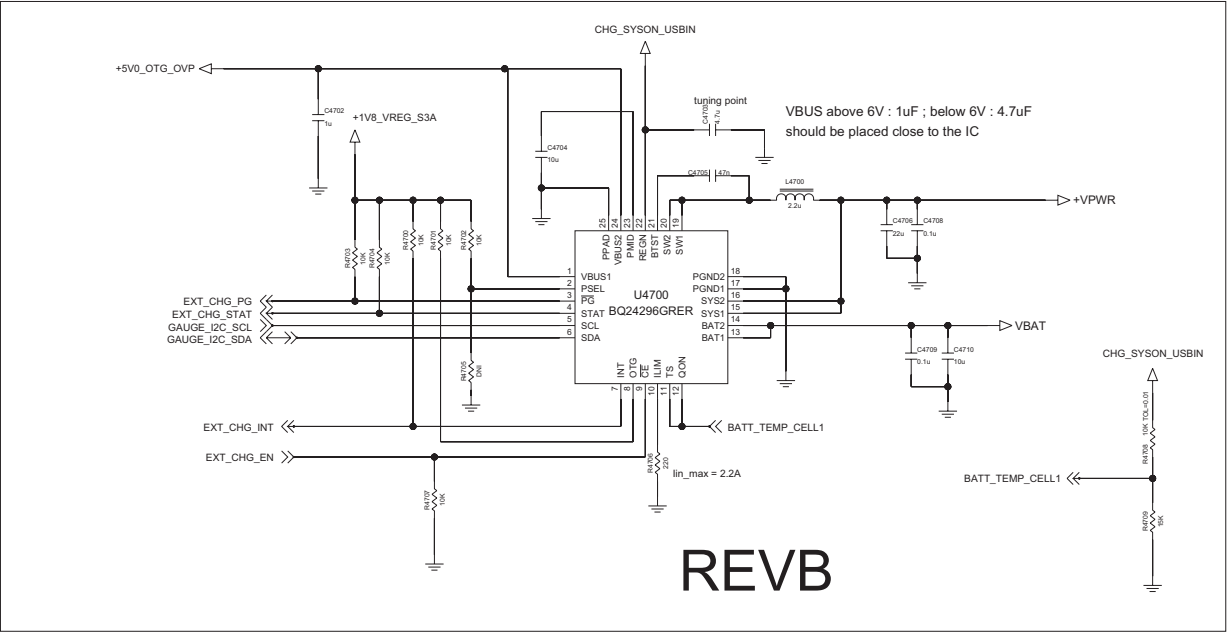
Only use line VBAT1 from Battery Connector.  
CLOSE TO Battery CONNECTOR



REVB

SINGLE charger IC

<4-7-2-4\_Charger\_Switching\_BQ24192> Rev\_0.3

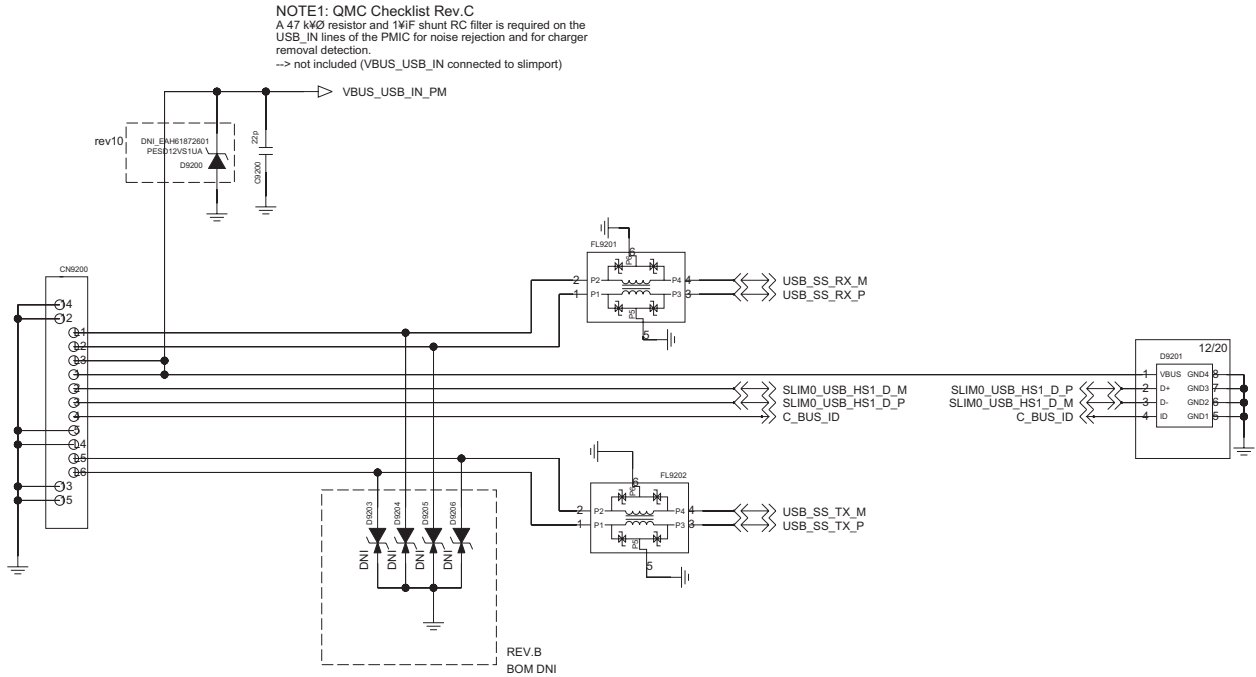


PSEL High : USB host source Low : adapter source  
STAT Low : charge in progress High : complete  
OTG : PSEL HIGH & OTG HIGH IIN LIMIT 500mA OTG LOW IIN LIMIT 100mA  
IILIM : set the maximum input current limit

<9-2-3-1\_USB\_Redriver\_SN65LVPE502A> Rev\_0.3

Tiger\_EU USB\_Redriver\_delete\_rev.A

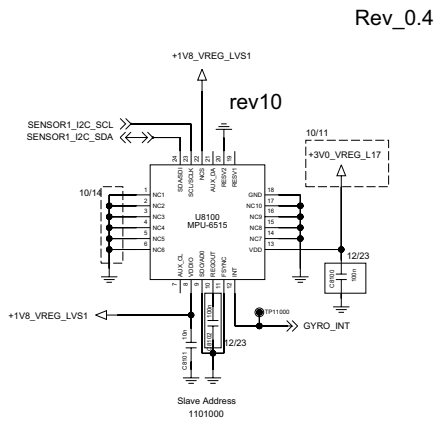
<9-2-2\_Multi\_IO\_USB3\_0>Rev\_0.3



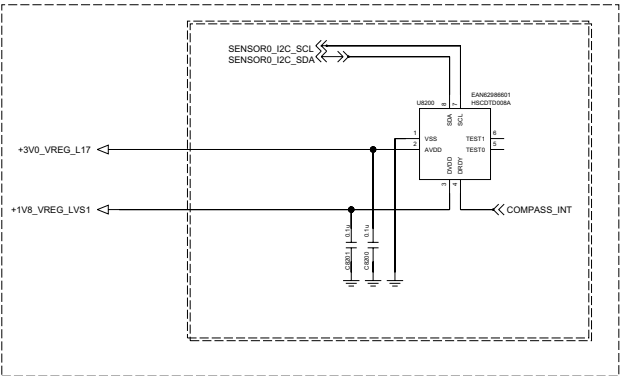
SENSOR/MOTOR/IRRRC/SIM/SD/LED

I2C	Devices
Sensor0	Compass, Temp+Humid+Pressure
Sensor1	Accel+Gyro, Pressure, UV, Prox+RGB+IR Gesture

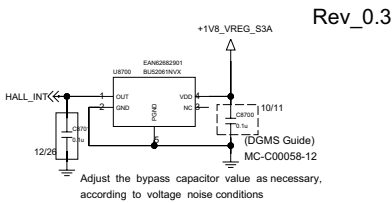
<8-1-3-3\_Accel\_Gyro\_MPU-6515 >



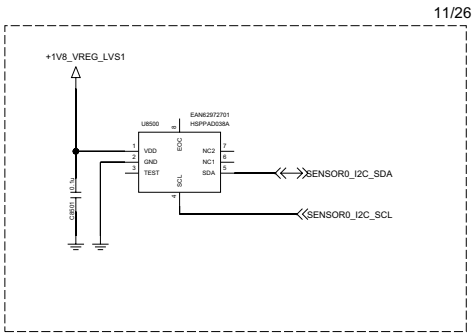
< 8-2-1-2\_Compass\_HSCDTD008A> Rev\_0.3



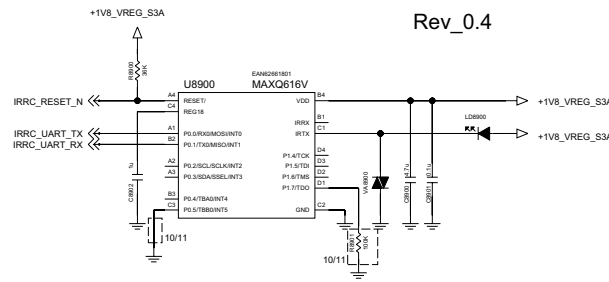
<8-7-1-1\_Hall IC\_BU52061NVX>



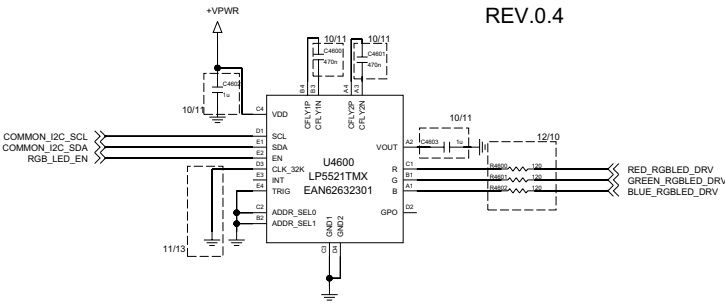
<Pressure\_HSPPAD038A >



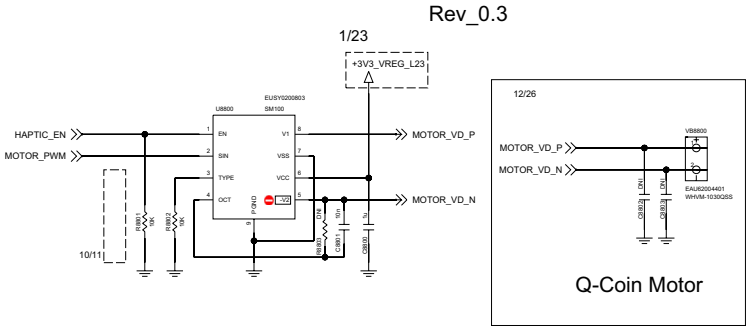
< 8-9-1-1\_IRRC\_MAXQ616V >



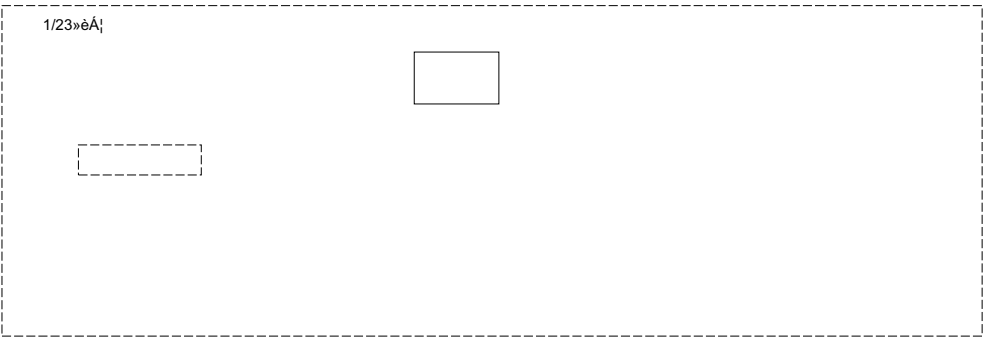
<4-6-1\_LED\_Driver\_IC\_LP5521>



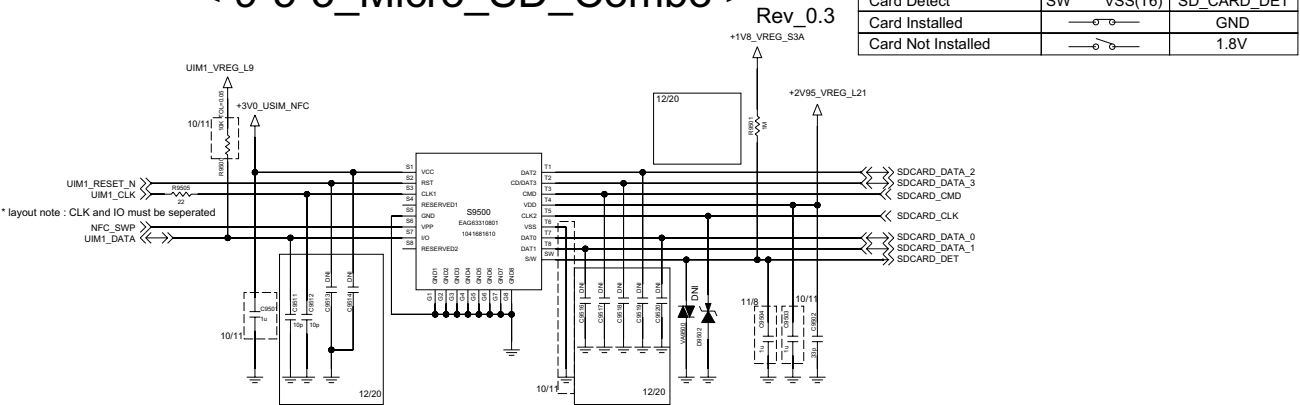
< 8-8-1-1\_Haptic\_SM100 >



<LEVEL TRANSLATOR>



< 9-5-3\_Micro\_SD\_Combo >



Card Detect	SW	VSS(T6)	SD_CARD DET
Card Installed	—○—	—○—	GND
Card Not Installed	—○—	—○—	1.8V

# FPCB\_CNT

I2C	Devices
Sensor0	Compass, Temp+Humid+Pressure
Sensor1	Accel+Gyro, Pressure, UV, Prox+RGB+IR Gesture

# Upper FPCB

11/13

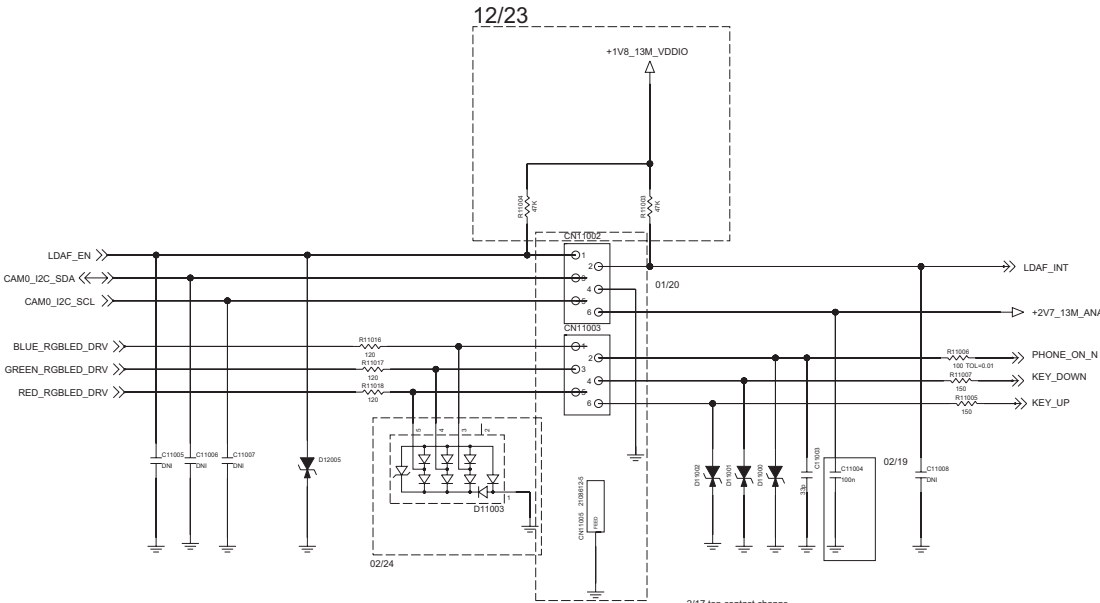
# Deleted

# Lower FPCB

11/13

Deleted

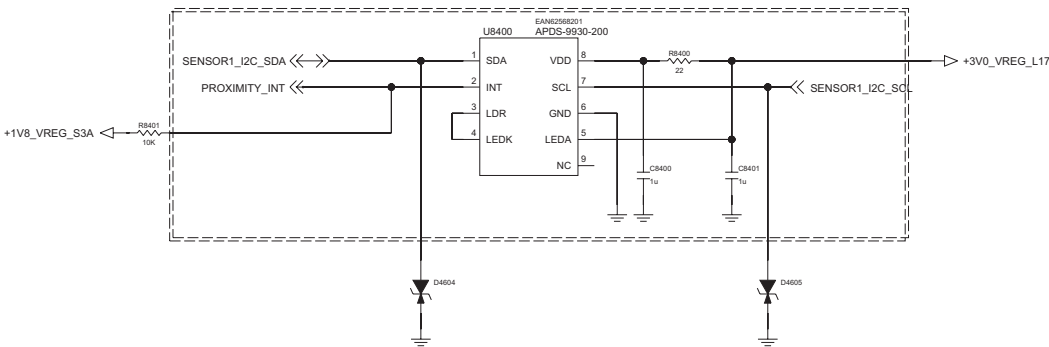
Back Key LDAF FPCB 12/20



From previously Upper FPCB to Main PCB (11/13 now)

11/26

<8-4-3-3\_Proximity\_Ambient\_APDS\_9930>  
Rev\_0.3



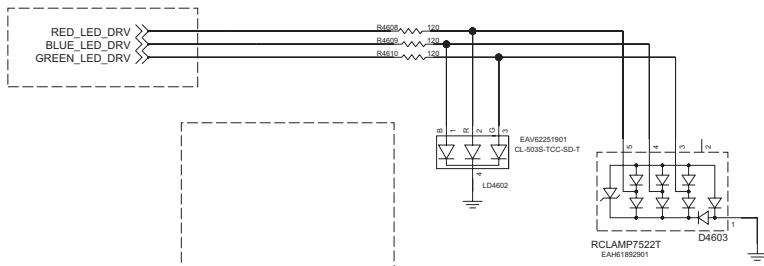
<8-10-1-1\_UV-NLSX4373MUTAG>  
Rev\_0.1

10/25

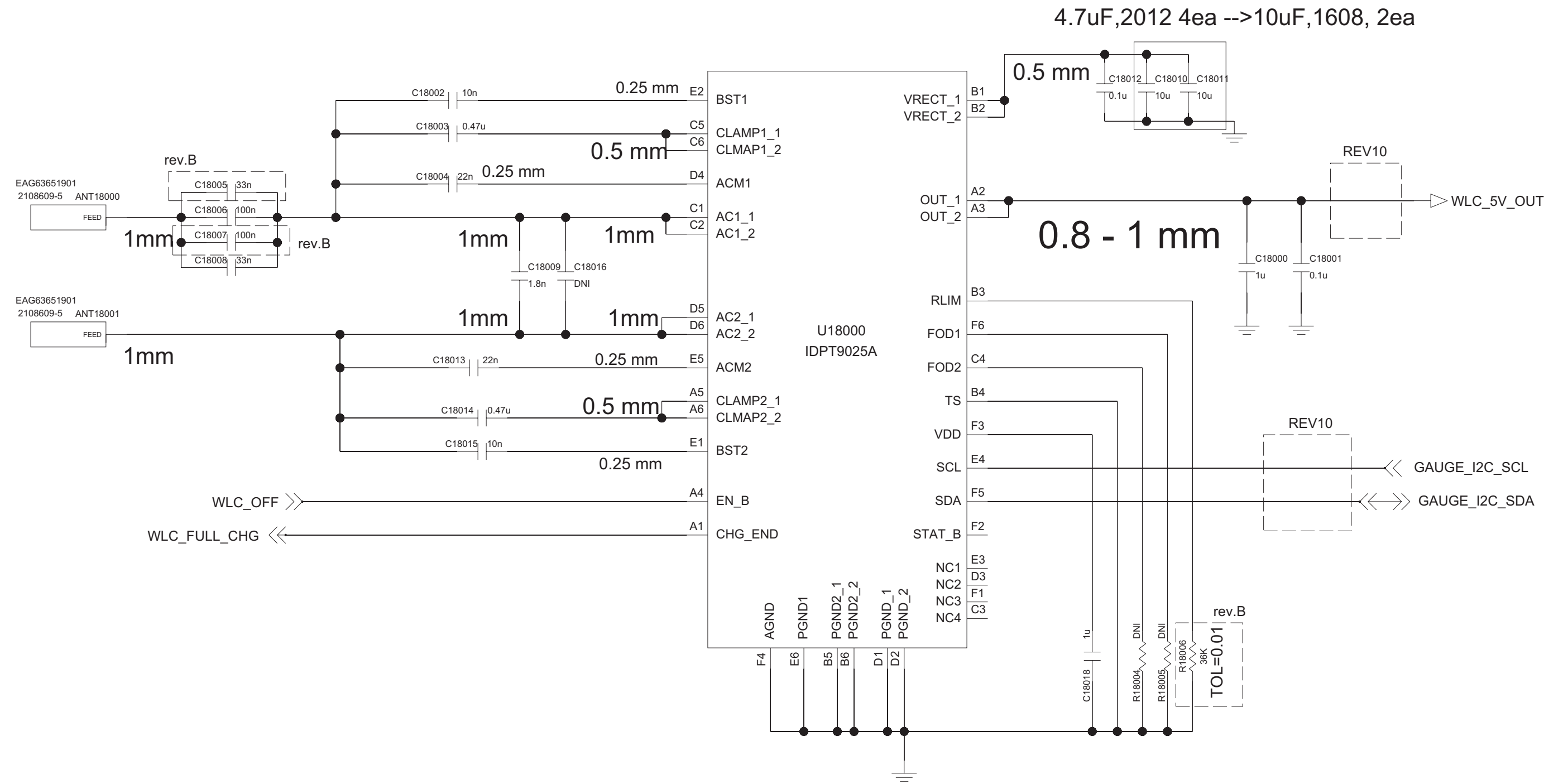


RGB LED 11/13

12/10



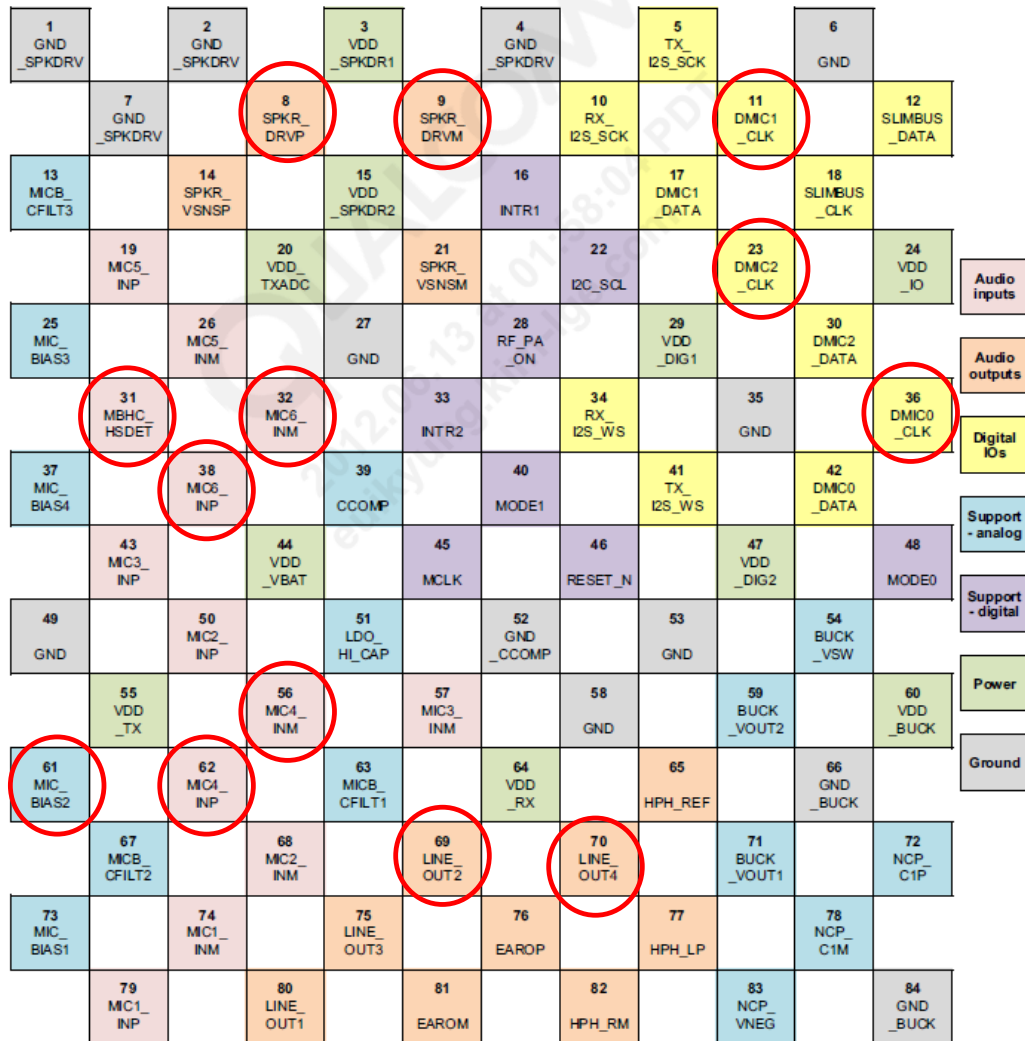
< IDPT9025A >





## 7. BGA PIN MAP

## U6100\_WCD9320\_IC, Audio Codec(Top view)



○ Not Used

U18000\_IC,Charger\_IDTP9025A (Top View)



○ Not Used

## 7. BGA PIN MAP

U4200\_PM8841\_PMIC(TOP view)

1 VDD _S5	2 VDD _S5	3 VSW _S5	4 VREG _S5	5 VREG _S6	6 VREG _S2	7 VSW _S2	8 VDD _S2	9 VDD _S2
10 GND _S5	11 VSW _S5	12 VSW _S5	13 GND	14 GND	15 GND	16 VSW _S2	17 VSW _S2	18 GND _S2
19 VDD _S6	20 GND _S5	21 GND	22 GND	23 GND	24 GND _REF		25 GND _S2	26 GND
27 VSW _S6	28 VSW _S6	29 GND	30 GND	31 REF _BYP	32 VDD _MSM_IO	33 MPP _01	34 MPP _02	35 GND _S1
36 GND _S6	37 GND _S6	38 GND	39 GND	40 GND	41 VDD _INT_BYP	42 VREG _S1	43 NC	44 VSW _S1
45 GND	46 GND	47 REMOTE _GND_SNS	48 GND	49 DNC	50 VDD _PON	51 OPT_2	52 OPT_1	53 VDD _S1
54 GND _S7	55 GND _S7	56 GND	57 GND	58 DNC	59 XO_IN	60 VREG _S3	61 PON_1	62 GND _S3
63 VSW _S7	64 VSW _S7	65 GND	66 GND	67 GND	68 PS _HOLD	69 RESIN _N	70 NC	71 VSW _S3
72 VDD _S7	73 GND _S8	74 GND	75 GND	76 SPMI _DATA	77 SPMI _CLK	78 MPP _03	79 GND _S4	80 VDD _S3
81 GND _S8	82 VSW _S8	83 VSW _S8	84 GND	85 GND	86 MPP _04	87 VSW _S4	88 VSW _S4	89 GND _S4
90 VDD _S8	91 VDD _S8	92 VSW _S8	93 VREG _S8	94 VREG _S7	95 VREG _S4	96 VSW _S4	97 VDD _S4	98 VDD _S4
OUTPUT PWR MGT	IC I/F	MPPs and GPIOs	No Connection	Power	Ground			

○ Not Used

### U3200\_eMMC(TOP\_view)

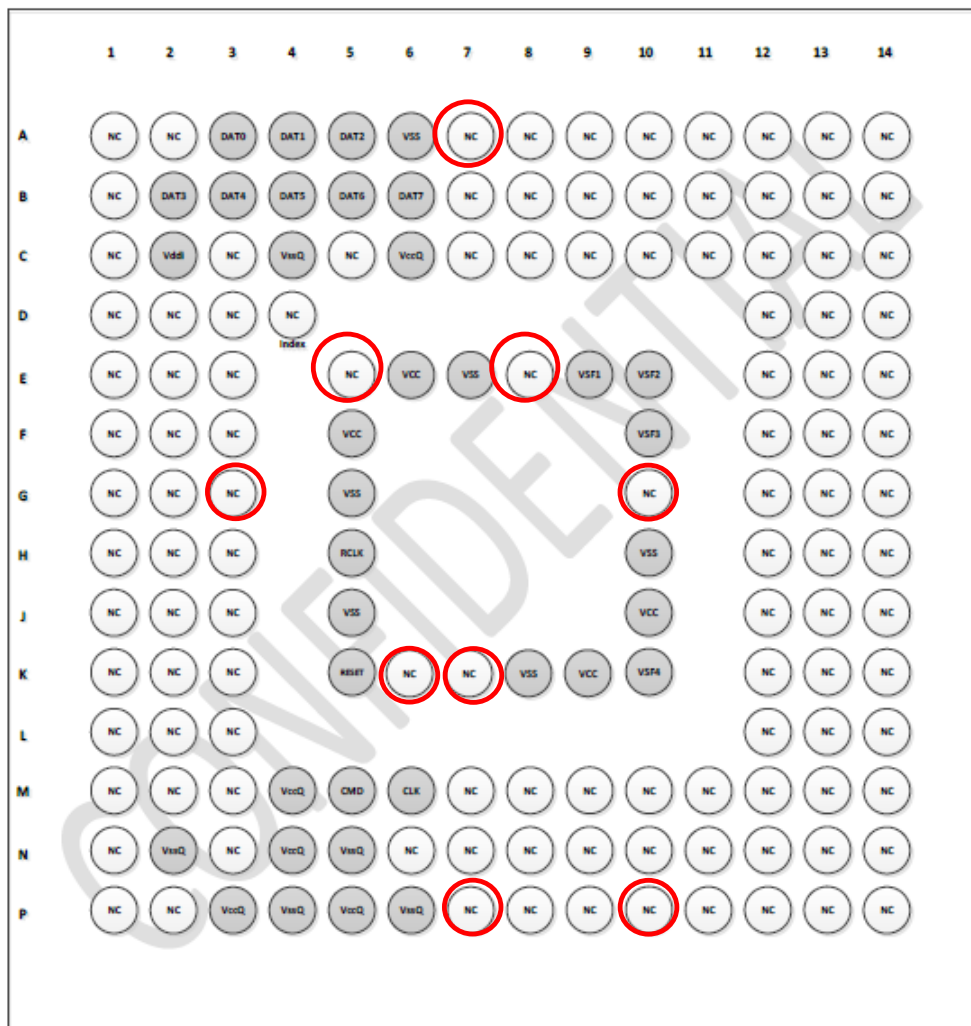
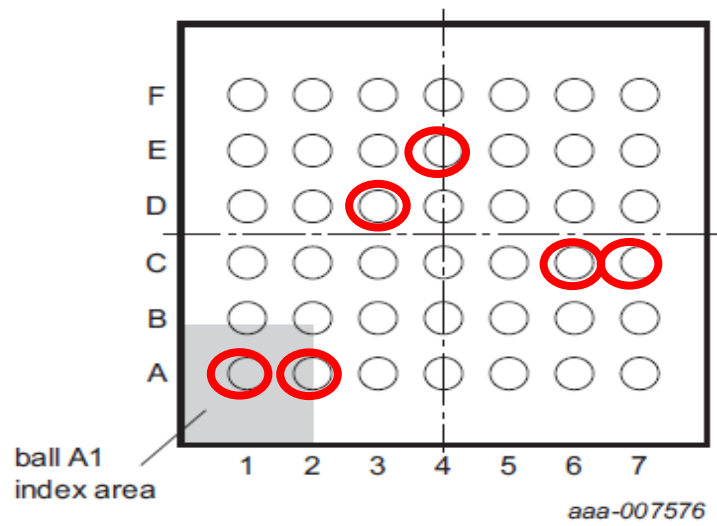


Figure 5 - 153 balls - Ball Array (Top View)

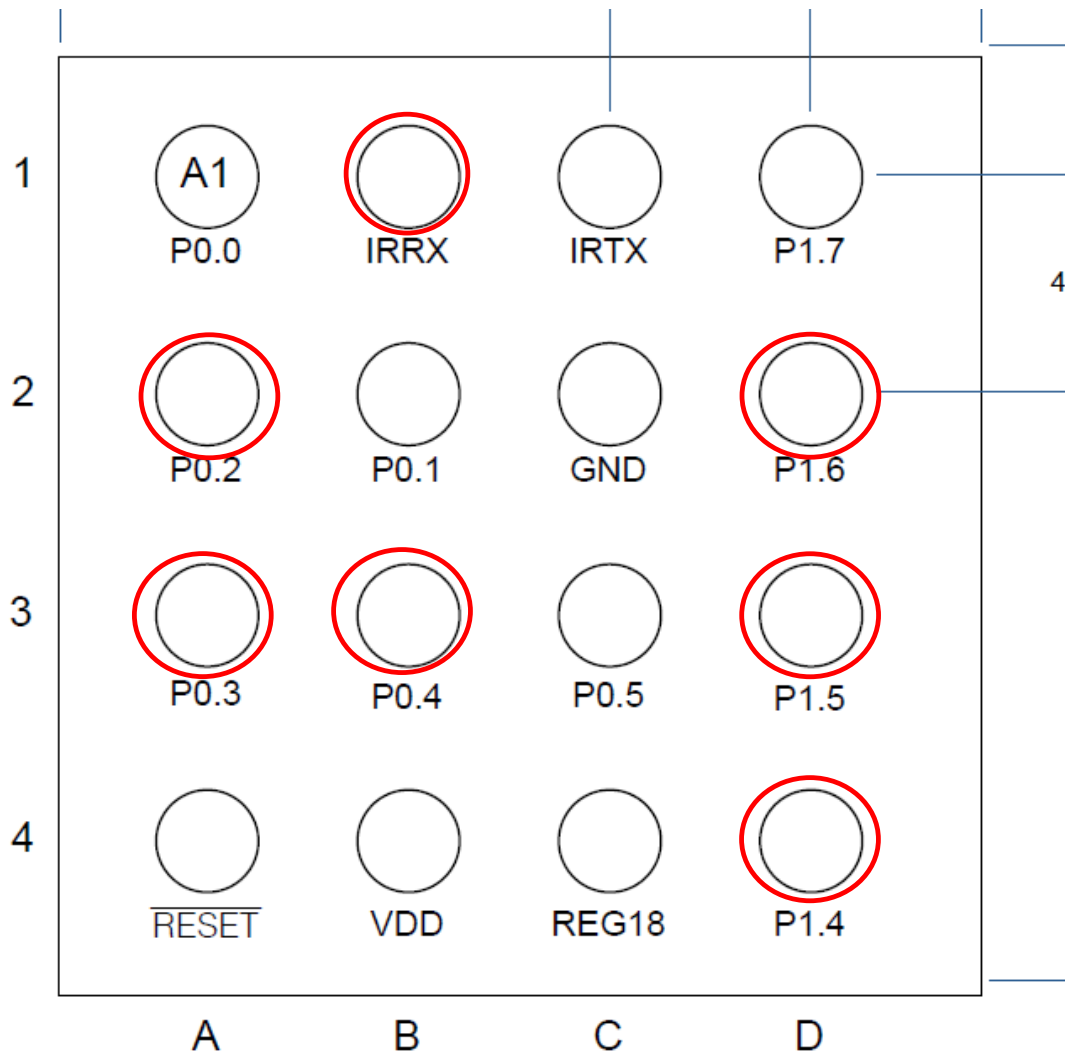
○ Not Used

### U5200\_PN547/C2\_NFC Controller



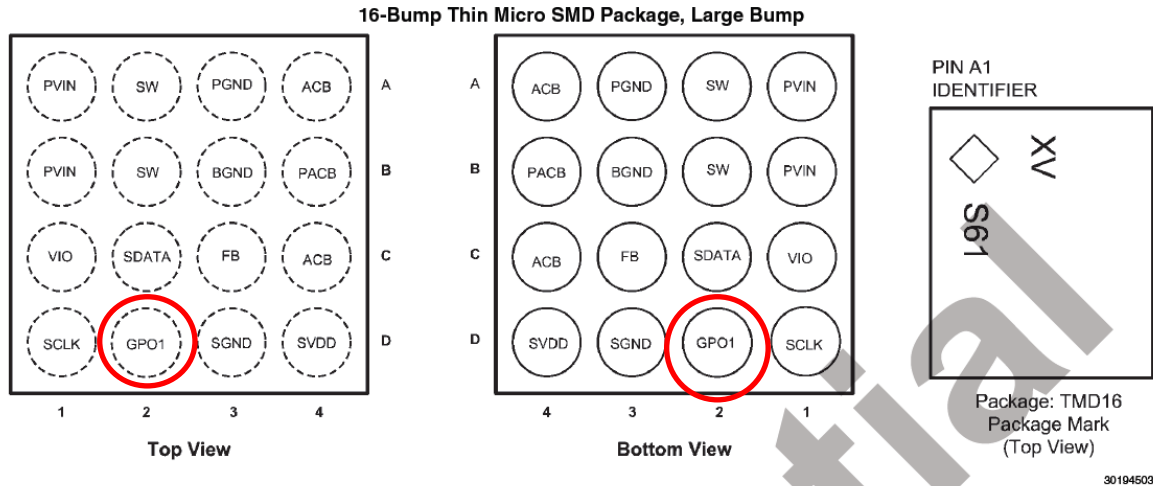
○ Not Used

U8900\_IC, Microprocessors (Bottom view)





## U1300\_IC,DC-DC Converter



## Pin Descriptions

Pin #	Name	Description
A1	PVIN	Power Supply Voltage Input to the internal PFET switch and ACB.
B1		
C1	VIO	VIO functions as the RFFE interface reference voltage. VIO also functions as reset and enable input to the LM3263. Typically connected to voltage regulator controlled by RF or Baseband IC.
D1	SCLK	Digital control interface RFFE Bus clock input. Typically connected to RFFE master on RF or Baseband IC. SCLK must be held low when VIO is not applied.
A2	SW	Switching Node connection to the internal PFET switch and NFET synchronous rectifier.
B2		
C2	SDATA	Digital control interface RFFE Bus data input/output. Typically connected to RFFE master on RF or Baseband IC. SDATA must be held low when VIO is not applied.
D2	GPO1	General Purpose Output. Also used to reconfigure USID.
A3	PGND	Power Ground to the internal NFET switch.
B3	BGND	Active Current assist and Analog Bypass Ground and Digital Ground.
C3	FB	Feedback Analog Input. Connect to the output at the output filter capacitor.
D3	SGND	Signal Analog Ground (Low Current).
A4	ACB	Active Current assist and analog Bypass output. Connect to the output at the output filter capacitor.
C4		
B4	PACB	ACB Power Supply Input.
D4	SVDD	Analog Power Supply Voltage.

○ Not Used

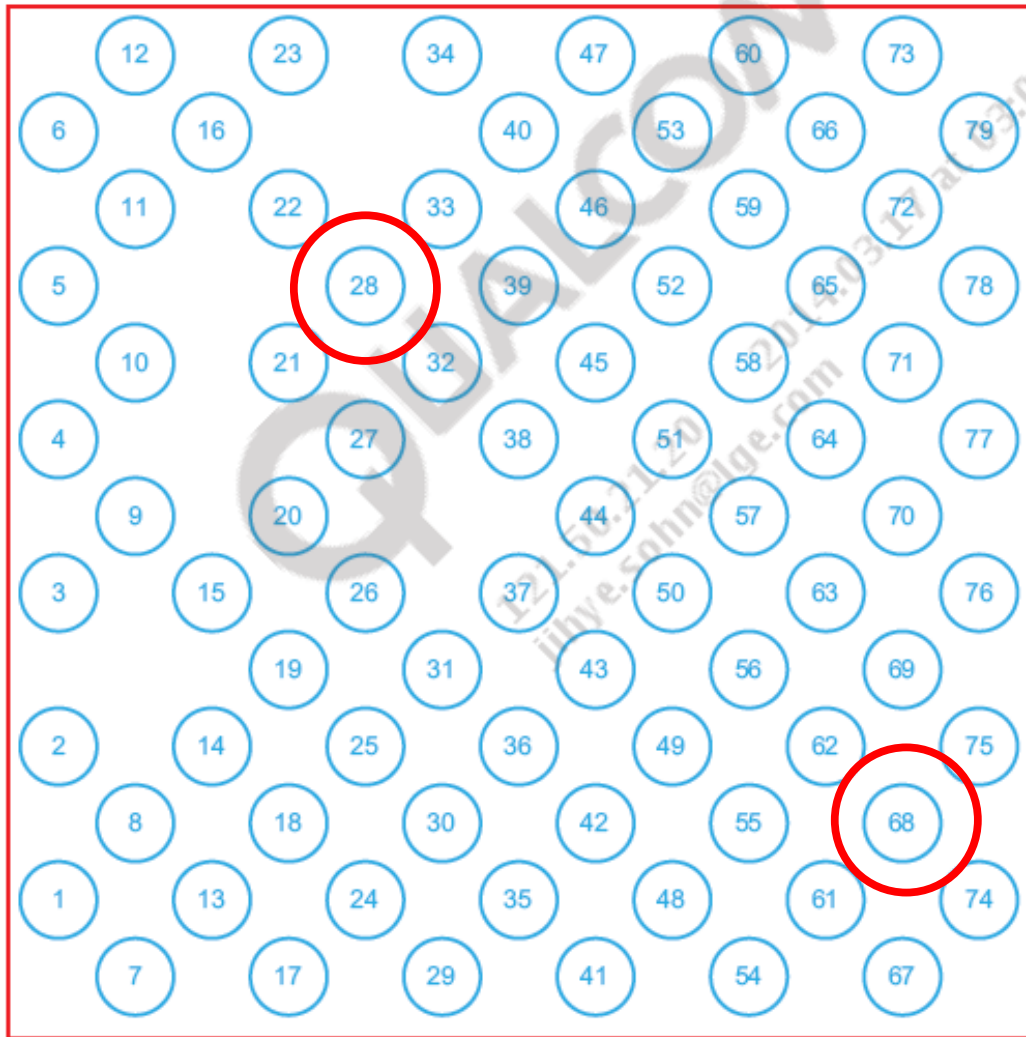
## 7. BGA PIN MAP

### U7601\_IC,Signal Bridge

	1	2	3	4	5	6	7	
A	RESISTOR	ID_OUT	C-WIRE /AUXP (AUX_HPDP)	AUXN	TX0P	TX0N	VDD33_OUT	A
B	XTAL_I	CABLE_DET	AVSS	AVDD18	USB_D+	USB_D-	AVDD33_IN	B
C	XTAL_O	R_BIAS	AVDD33_IN	DVSS	AVDD10	DVDD10	RESET_L	C
D	CHG_PMP_ PU	CHIP_PD	DVDD18	DVDD18	DVSS	DP_HPDP_IN	INTP	D
E	CEC	HDMI_P5V	DVSS	DVDD10	HDMI_VT	DDC_SDA	CSCL	E
F	HDMI_CLKN	RSVL	AVSS	AVSS	HDMI_HPDP_ OUT	DDC_SCL	CSDA	F
G	HDMI_CLKP	HDMI_D0N	HDMI_D0P	HDMI_D1N	HDMI_D1P	HDMI_D2N	HDMI_D2P	G
	1	2	3	4	5	6	7	

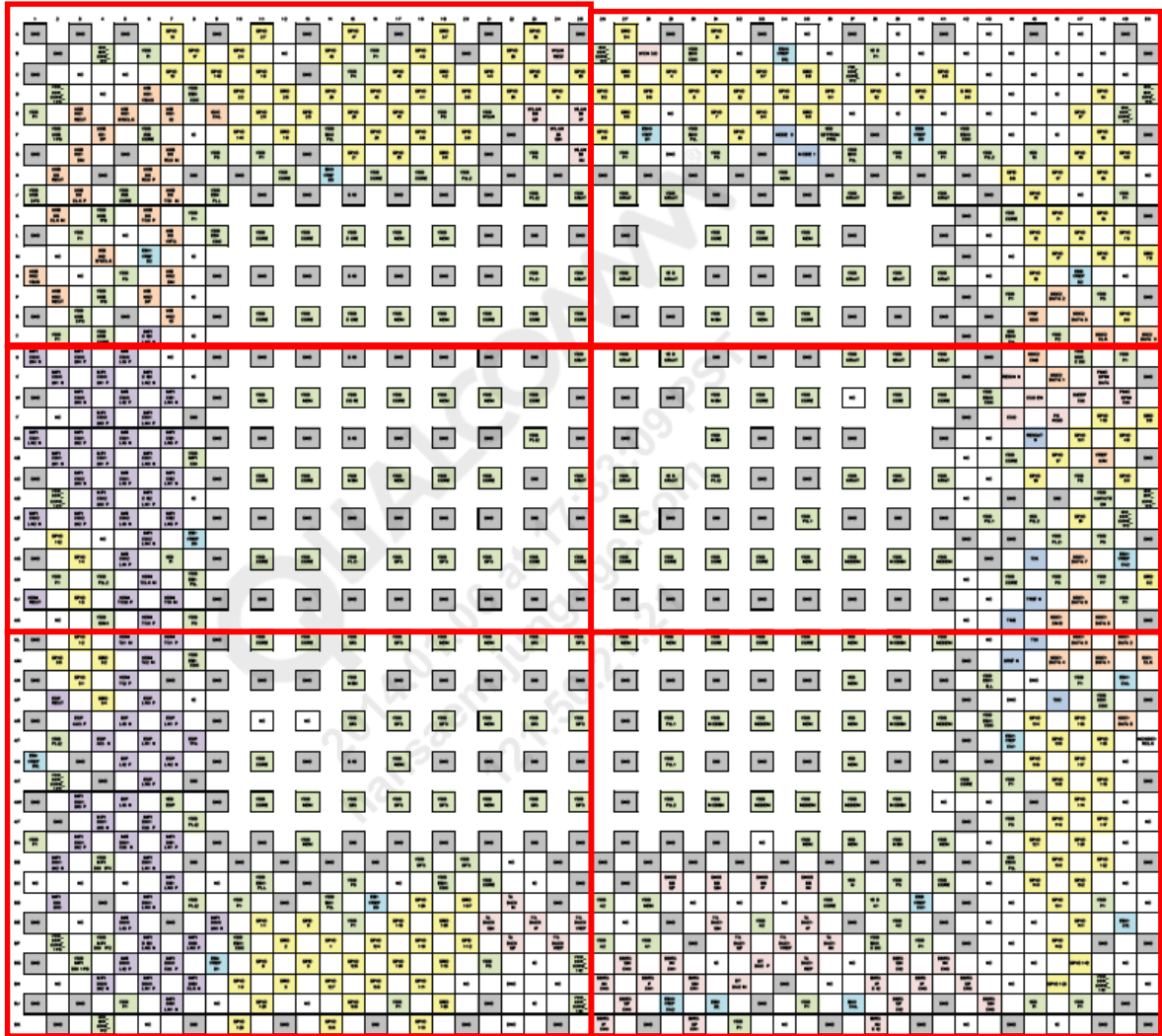
○ Not Used

### U95100\_WCN3680B\_IC,WiFi (Top View)



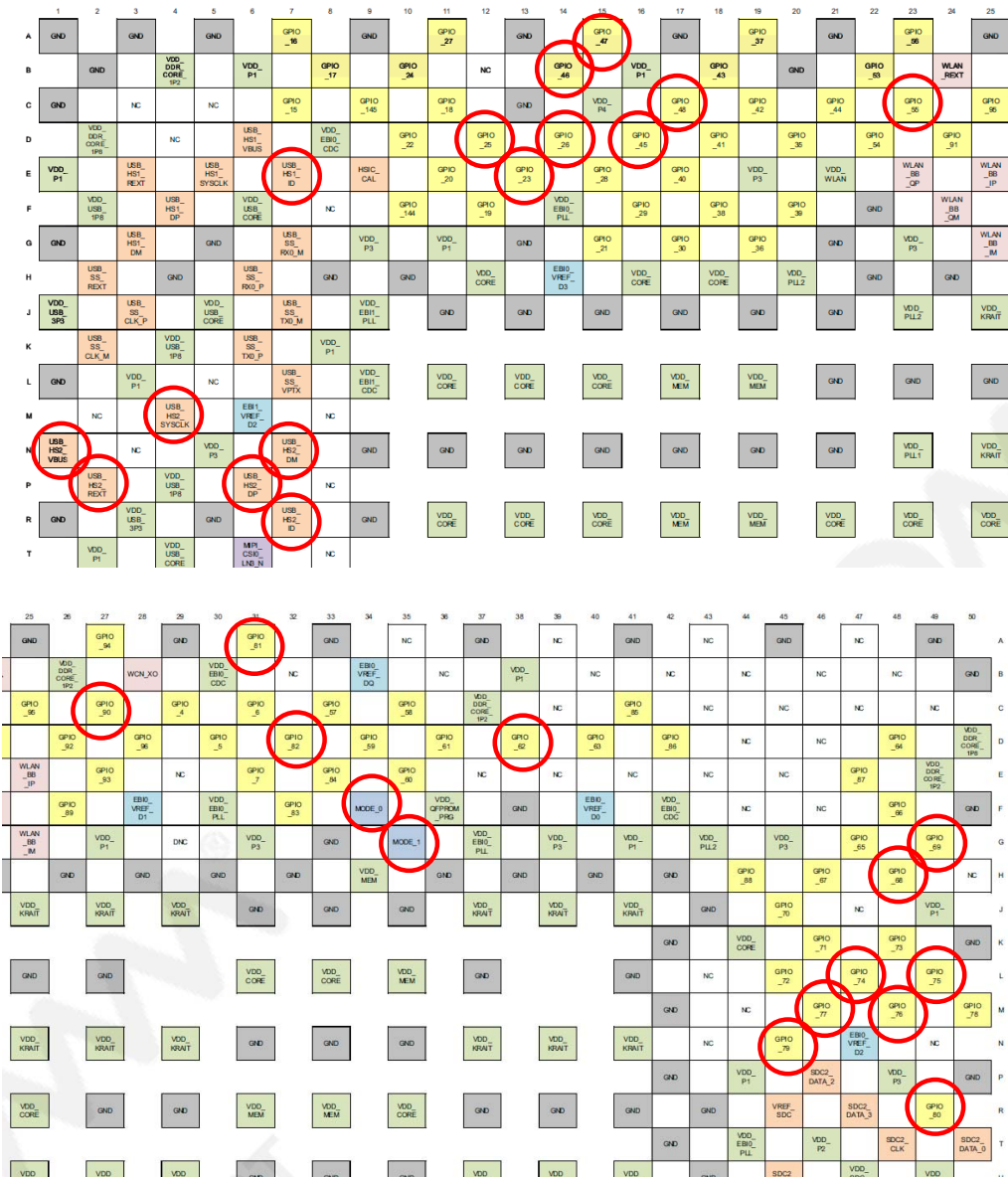
○ Not Used

### U2100- MSM8974AC (TOP view)-1/2/3



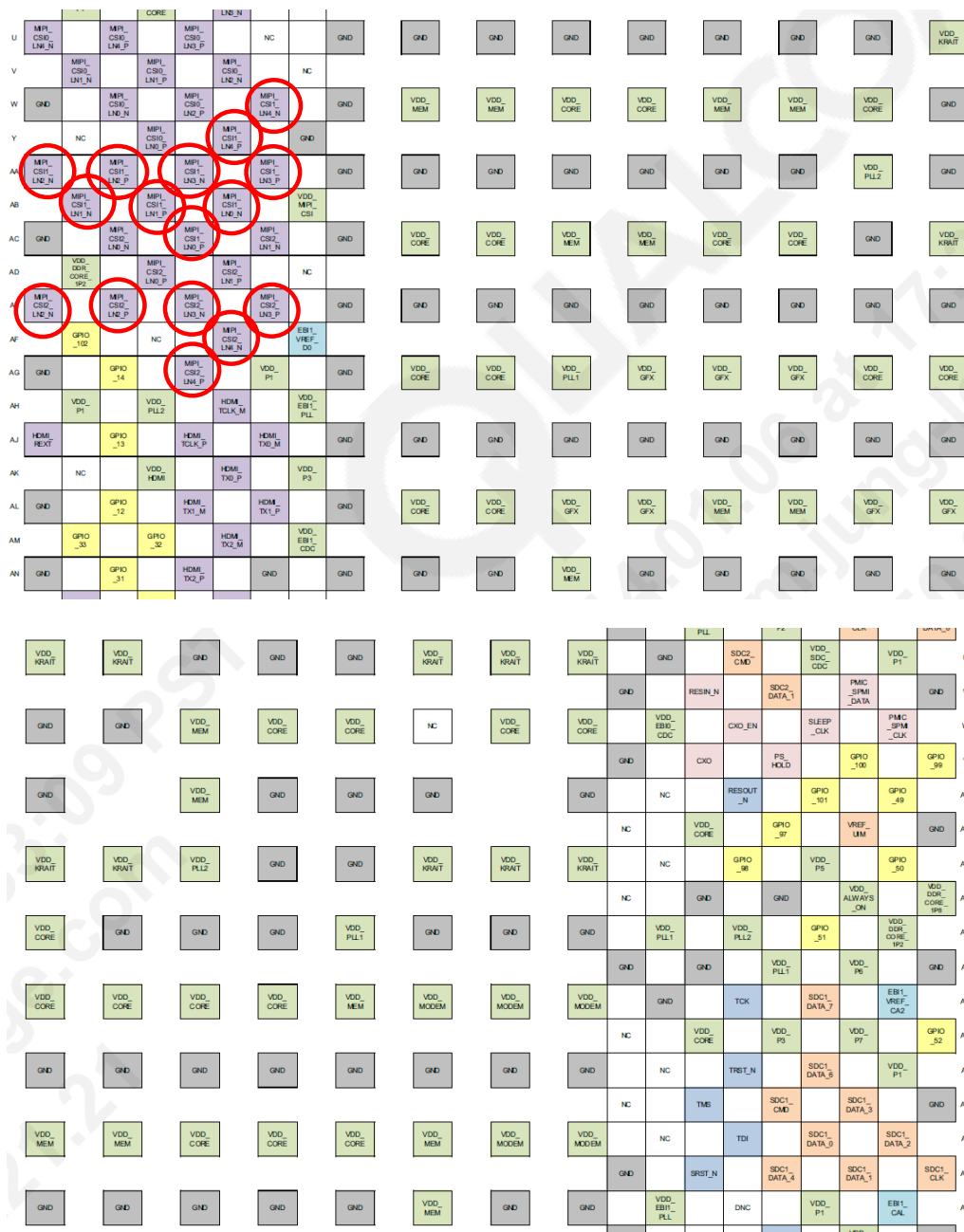
## 7. BGA PIN MAP

### U2100- MSM8974AC (TOP view)-1



○ Not Used

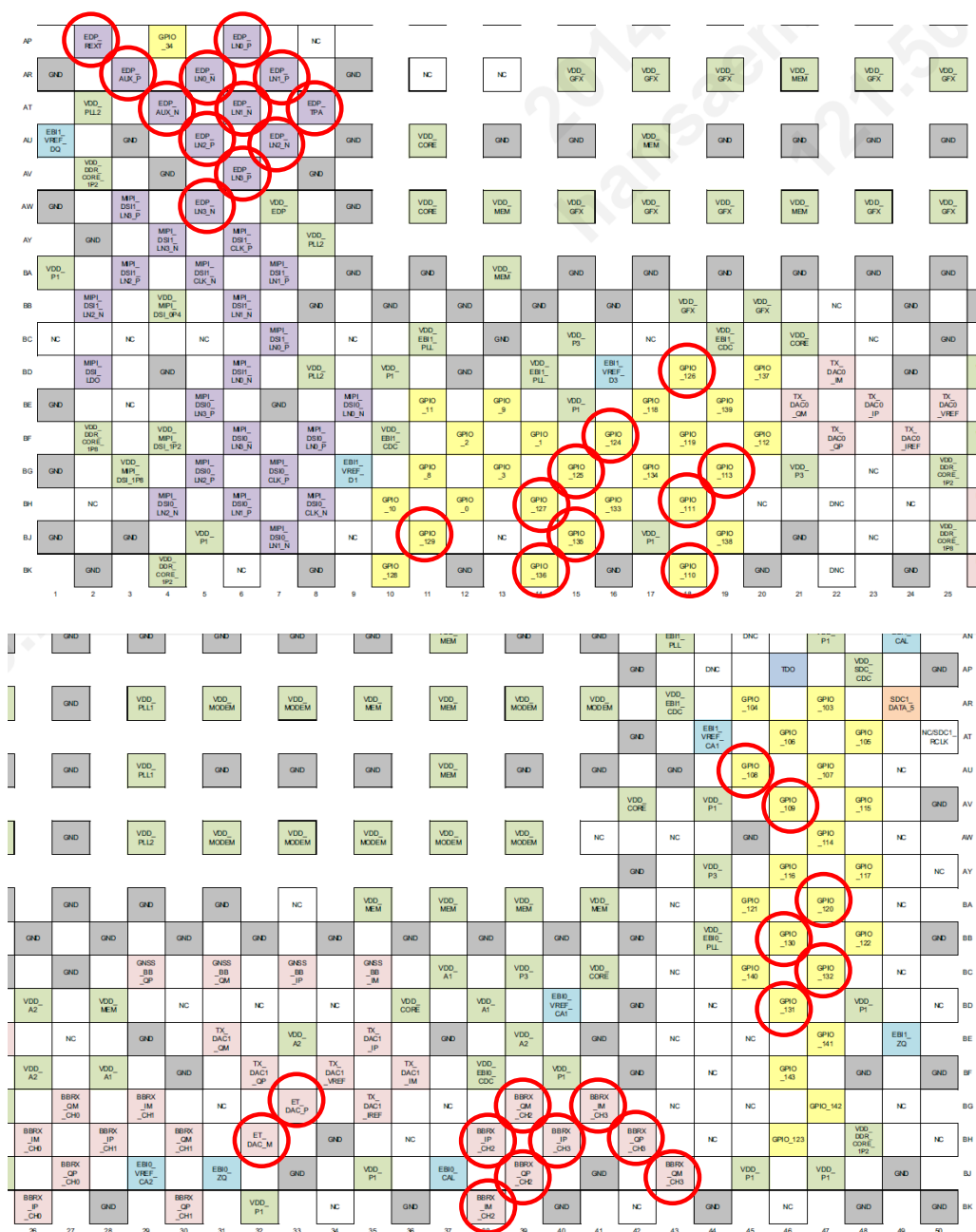
### U2100- MSM8974AC (TOP view)-2



☐ Not Used



### U2100- MSM8974AC (TOP view)-3



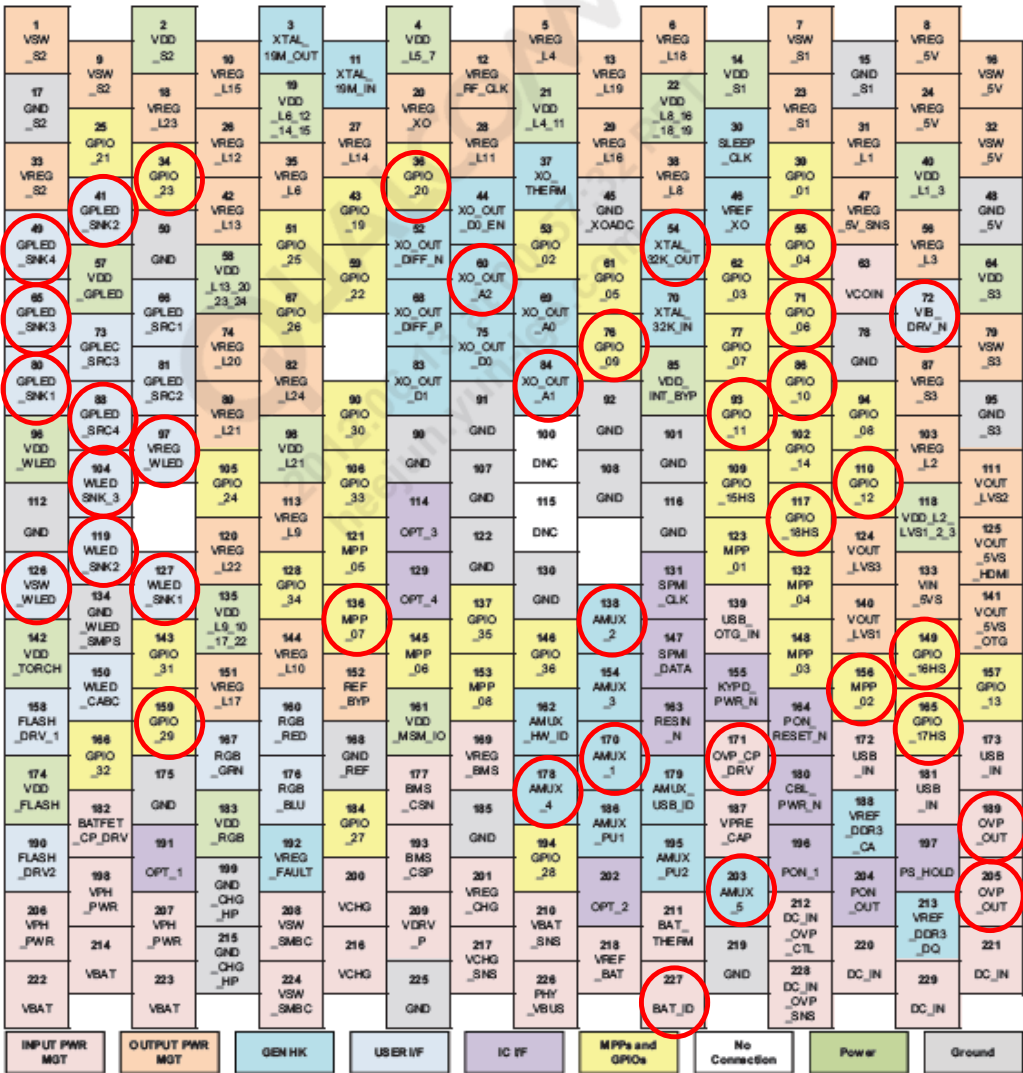
☐ Not Used

## 7. BGA PIN MAP

### U1500 – WTR1625L (Top View)

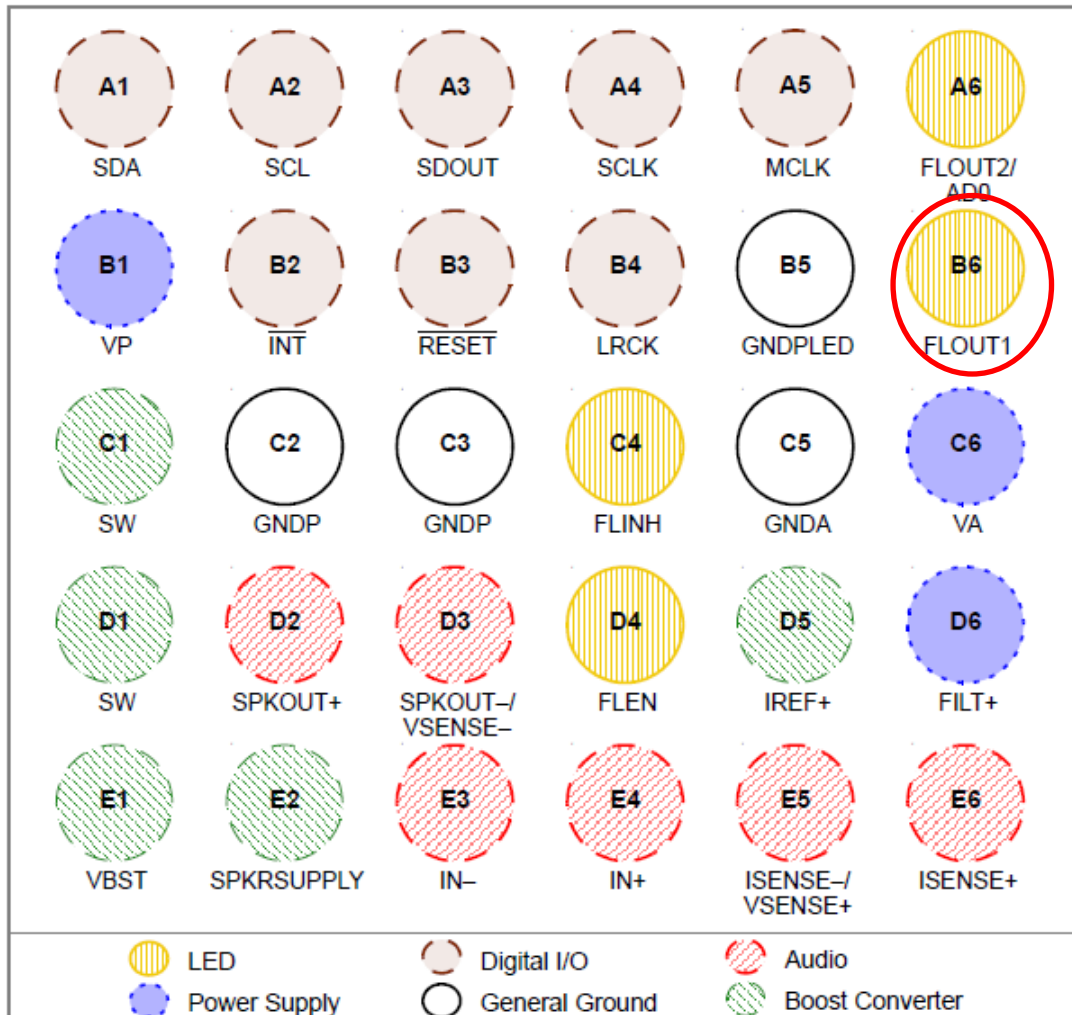
	1	DRX_MBS_IN	2	DRX_HMBS_IN	3	GND	4	DRX_HB1_IN	5	DRX_LB1_IN	6	GND	7	DRX_LB4_IN	8	GND	9	PRX_HB1_IN																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
10	GND		11	VDD_RF1_D_MB	12	DRX_MS2_IN	13	DRX_HB3_IN	14	VDD_RF1_D_LS_LO	15	DRX_LB2_IN	16	DRX_LB3_IN	17	PRX_HB2_IN	18	PRX_HB3_IN	19	PRX_HMBS_IN																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	20	DRX_MS2_IN	21	GND	22	VDD_RF1_D_HB	23	GND	24	GND	25	VDD_RF1_P_HB_LO	26	GND	27	PRX_MS3_IN	28	DRX_MS1_IN																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
29	DRX_MS1_IN	30	DRX_MS1_CA_IN	31	GND	32	DRX_HB1_CA_OUT	33	VDD_RF1_D_LS	34	DRX_LB1_CA_OUT	35	GND	36	VDD_RF1_P_HMB_LO	37	PRX_MS2_IN	38	PRX_MS1_IN																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	39	GND	40	GND	41	GND	42	GND	43	GND	44	GND	45	GND	46	GND	47	GND	48	PRX_MS1_CA_IN	49	PRX_MS1_IN																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
50	GND	51	GND	52	VDD_RF1_G_LNA	53	GND	54	VDD_RF2_D_BB	55	GND	56	GND	57	VDD_RF1_P_HMB_LO	58	GND	59	PRX_LB1_IN	60	PRX_LB4_IN																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
61	VDD_RF1_D_BB	62	GND	63	GND	64	GND	65	GND	66	GND	67	GND	68	GND	69	GND	70	GND	71	RTUNE	72	VDD_RF1_P_LS	73	PRX_LB2_IN	74	PRX_LB3_IN	75	PRX_LB4_IN																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
76	VDD_RF1_G_VCO	77	GND	78	VDD_RF1_P_VCO	79	VDD_RF1_P_PLL	80	VDD_RF1_P_VCO	81	GND	82	GND	83	GND	84	GND	85	GND	86	GND	87	GND	88	GND	89	GND	90	GND	91	PRX_LB1_CA_OUT	92	PRX_LB2_IN	93	PRX_LB3_IN	94	PRX_LB4_IN																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
95	VDD_RF1_G_PLL	96	GND	97	GND	98	GND	99	GND	100	GND	101	GND	102	GND	103	GND	104	GND	105	GND	106	GND	107	GND	108	GND	109	GND	110	GND	111	GND	112	GND	113	GND	114	GND	115	GND	116	GND	117	GND	118	GND	119	GND	120	GND	121	GND	122	GND	123	GND	124	GND	125	GND	126	GND	127	GND	128	GND	129	GND	130	GND	131	GND	132	GND	133	GND	134	GND	135	GND	136	GND	137	GND	138	GND	139	GND	140	GND	141	GND	142	GND	143	GND	144	GND	145	GND	146	GND	147	GND	148	GND	149	GND	150	GND	151	GND	152	GND	153	GND	154	GND	155	GND	156	GND	157	GND	158	GND	159	GND	160	GND	161	GND	162	GND	163	GND	164	GND	165	GND	166	GND	167	GND	168	GND	169	GND	170	GND	171	GND	172	GND	173	GND	174	GND	175	GND	176	GND	177	GND	178	GND	179	GND	180	GND	181	GND	182	GND	183	GND	184	GND	185	GND	186	GND	187	GND	188	GND	189	GND	190	GND	191	GND	192	GND	193	GND	194	GND	195	GND	196	GND	197	GND	198	GND	199	GND	200	GND	201	GND	202	GND	203	GND	204	GND	205	GND	206	GND	207	GND	208	GND	209	GND	210	GND	211	GND	212	GND	213	GND	214	GND	215	GND	216	GND	217	GND	218	GND	219	GND	220	GND	221	GND	222	GND	223	GND	224	GND	225	GND	226	GND	227	GND	228	GND	229	GND	230	GND	231	GND	232	GND	233	GND	234	GND	235	GND	236	GND	237	GND	238	GND	239	GND	240	GND	241	GND	242	GND	243	GND	244	GND	245	GND	246	GND	247	GND	248	GND	249	GND	250	GND	251	GND	252	GND	253	GND	254	GND	255	GND	256	GND	257	GND	258	GND	259	GND	260	GND	261	GND	262	GND	263	GND	264	GND	265	GND	266	GND	267	GND	268	GND	269	GND	270	GND	271	GND	272	GND	273	GND	274	GND	275	GND	276	GND	277	GND	278	GND	279	GND	280	GND	281	GND	282	GND	283	GND	284	GND	285	GND	286	GND	287	GND	288	GND	289	GND	290	GND	291	GND	292	GND	293	GND	294	GND	295	GND	296	GND	297	GND	298	GND	299	GND	300	GND	301	GND	302	GND	303	GND	304	GND	305	GND	306	GND	307	GND	308	GND	309	GND	310	GND	311	GND	312	GND	313	GND	314	GND	315	GND	316	GND	317	GND	318	GND	319	GND	320	GND	321	GND	322	GND	323	GND	324	GND	325	GND	326	GND	327	GND	328	GND	329	GND	330	GND	331	GND	332	GND	333	GND	334	GND	335	GND	336	GND	337	GND	338	GND	339	GND	340	GND	341	GND	342	GND	343	GND	344	GND	345	GND	346	GND	347	GND	348	GND	349	GND	350	GND	351	GND	352	GND	353	GND	354	GND	355	GND	356	GND	357	GND	358	GND	359	GND	360	GND	361	GND	362	GND	363	GND	364	GND	365	GND	366	GND	367	GND	368	GND	369	GND	370	GND	371	GND	372	GND	373	GND	374	GND	375	GND	376	GND	377	GND	378	GND	379	GND	380	GND	381	GND	382	GND	383	GND	384	GND	385	GND	386	GND	387	GND	388	GND	389	GND	390	GND	391	GND	392	GND	393	GND	394	GND	395	GND	396	GND	397	GND	398	GND	399	GND	400	GND	401	GND	402	GND	403	GND	404	GND	405	GND	406	GND	407	GND	408	GND	409	GND	410	GND	411	GND	412	GND	413	GND	414	GND	415	GND	416	GND	417	GND	418	GND	419	GND	420	GND	421	GND	422	GND	423	GND	424	GND	425	GND	426	GND	427	GND	428	GND	429	GND	430	GND	431	GND	432	GND	433	GND	434	GND	435	GND	436	GND	437	GND	438	GND	439	GND	440	GND	441	GND	442	GND	443	GND	444	GND	445	GND	446	GND	447	GND	448	GND	449	GND	450	GND	451	GND	452	GND	453	GND	454	GND	455	GND	456	GND	457	GND	458	GND	459	GND	460	GND	461	GND	462	GND	463	GND	464	GND	465	GND	466	GND	467	GND	468	GND	469	GND	470	GND	471	GND	472	GND	473	GND	474	GND	475	GND	476	GND	477	GND	478	GND	479	GND	480	GND	481	GND	482	GND	483	GND	484	GND	485	GND	486	GND	487	GND	488	GND	489	GND	490	GND	491	GND	492	GND	493	GND	494	GND	495	GND	496	GND	497	GND	498	GND	499	GND	500	GND	501	GND	502	GND	503	GND	504	GND	505	GND	506	GND	507	GND	508	GND	509	GND	510	GND	511	GND	512	GND	513	GND	514	GND	515	GND	516	GND	517	GND	518	GND	519	GND	520	GND	521	GND	522	GND	523	GND	524	GND	525	GND	526	GND	527	GND	528	GND	529	GND	530	GND	531	GND	532	GND	533	GND	534	GND	535	GND	536	GND	537	GND	538	GND	539	GND	540	GND	541	GND	542	GND	543	GND	544	GND	545	GND	546	GND	547	GND	548	GND	549	GND	550	GND	551	GND	552	GND	553	GND	554	GND	555	GND	556	GND	557	GND	558	GND	559	GND	560	GND	561	GND	562	GND	563	GND	564	GND	565	GND	566	GND	567	GND	568	GND	569	GND	570	GND	571	GND	572	GND	573	GND	574	GND	575	GND	576	GND	577	GND	578	GND	579	GND	580	GND	581	GND	582	GND	583	GND	584	GND	585	GND	586	GND	587	GND	588	GND	589	GND	590	GND	591	GND	592	GND	593	GND	594	GND	595	GND	596	GND	597	GND	598	GND	599	GND	600	GND	601	GND	602	GND	603	GND	604	GND	605	GND	606	GND	607	GND	608	GND	609	GND	610	GND	611	GND	612	GND	613	GND	614	GND	615	GND	616	GND	617	GND	618	GND	619	GND	620	GND	621	GND	622	GND	623	GND	624	GND	625	GND	626	GND	627	GND	628	GND	629	GND	630	GND	631	GND	632	GND	633	GND	634	GND	635	GND	636	GND	637	GND	638	GND	639	GND	640	GND	641	GND	642	GND	643	GND	644	GND	645	GND	646	GND	647	GND	648	GND	649	GND	650	GND	651	GND	652	GND	653	GND	654	GND	655	GND	656	GND	657	GND	658	GND	659	GND	660	GND	661	GND	662	GND	663	GND	664	GND	665	GND	666	GND	667	GND	668	GND	669	GND	670	GND	671	GND	672	GND	673	GND	674	GND	675	GND	676	GND	677	GND	678	GND	679	GND	680	GND	681	GND	682	GND	683	GND	684	GND	685	GND	686	GND	687	GND	688	GND	689	GND	690	GND	691	GND	692	GND	693	GND	694	GND	695	GND	696	GND	697	GND	698	GND	699	GND	700	GND	701	GND	702	GND	703	GND	704	GND	705	GND	706	GND	707	GND	708	GND	709	GND	710	GND	711	GND	712	GND	713	GND	714	GND	715	GND	716	GND	717	GND	718	GND	719	GND	720	GND	721	GND	722	GND	723	GND	724	GND	725	GND	726	GND	727	GND	728	GND	729	GND	730	GND	731	GND	732	GND	733	GND	734	GND	735	GND	736	GND	737	GND	738	GND	739	GND	740	GND	741	GND	742	GND	743	GND	744	GND	745	GND	746	GND	747	GND	748	GND	749	GND	750	GND	751	GND	752	GND	753	GND	754	GND	755	GND	756	GND	757	GND	758	GND	759	GND	760	GND	761	GND	762	GND	763	GND	764	GND	765	GND	766	GND	767	GND	768	GND	769	GND	770	GND	771	GND	772	GND	773	GND	774	GND	775	GND	776	GND	777	GND	778	GND	779	GND	780	GND	781	GND	782	GND	783	GND	784	GND	785	GND	786	GND	787	GND	788	GND	789	GND	790	GND	791	GND	792	GND	793	GND	794	GND	795	GND	796	GND	797	GND	798	GND	799	GND	800	GND	801	GND	802	GND	803	GND	804	GND	805	GND	806	GND	807	GND	808	GND	809	GND	810	GND	811	GND	812	GND	813	GND	814	GND	815	GND	816	GND	817	GND	818	GND	819	GND	820	GND	821	GND	822	GND	823	GND	824	GND	825	GND	826	GND	827	GND	828	GND	829	GND	830	GND	831	GND	832	GND	833	GND	834	GND	835	GND	836	GND	837	GND	838	GND	839	GND	840	GND	841	GND	842	GND	843	GND	844	GND	845	GND	846	GND	847	GND	848	GND	849	GND	850	GND	851	GND	852	GND	853	GND	854	GND	855	GND	856	GND	857	GND	858	GND	859	GND	860	GND	861	GND

### U4100-PM8941 (TOP VIEW)



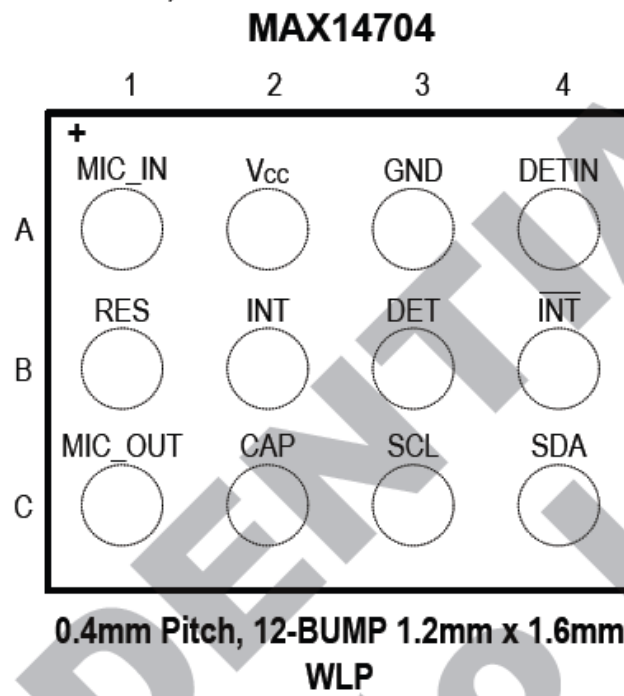
☐ Not Used

### U6200\_IC,Speaker Amplifier(Top view)



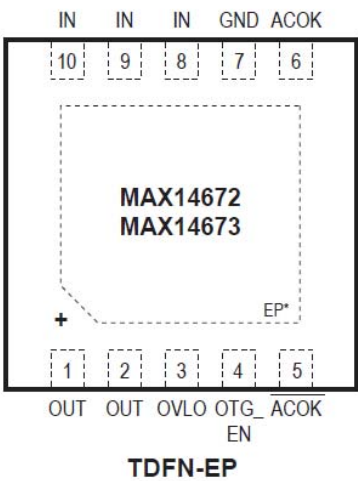
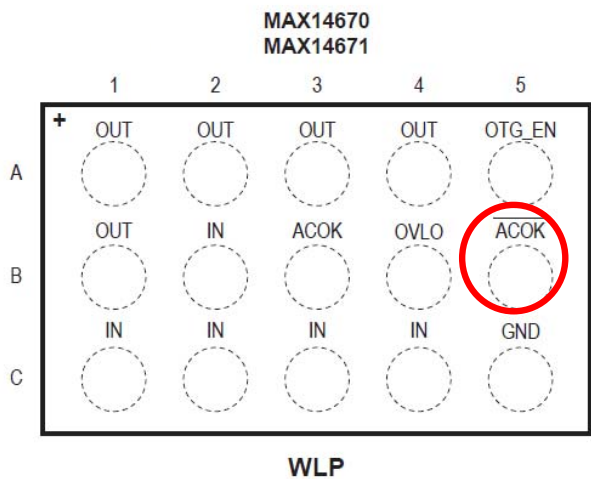
○ Not Used

### U6420\_IC,Comparator(Top view)



ALL USED

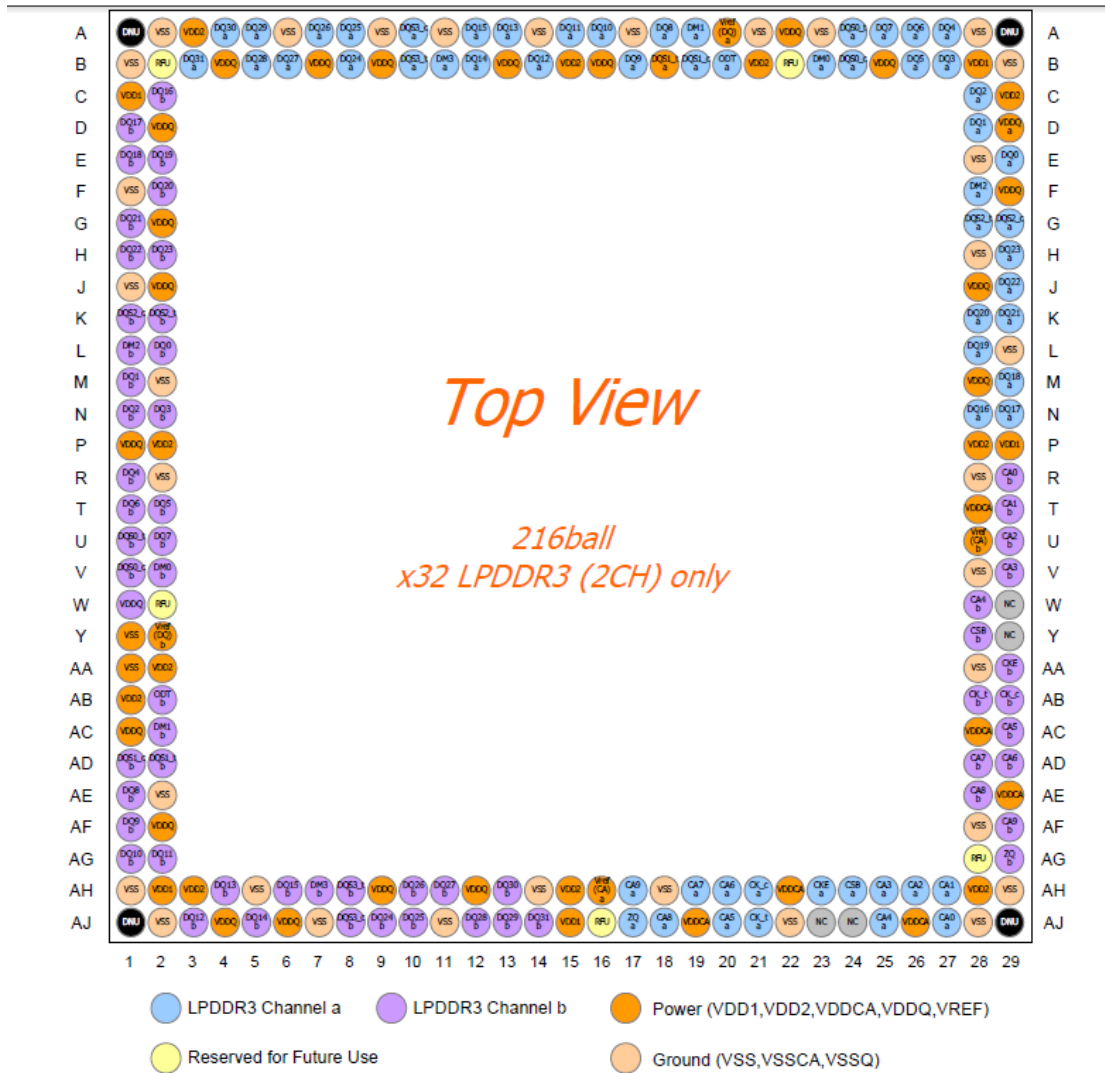
U4750,U4751\_IC,over voltage protection(Top view)



○ Not Used

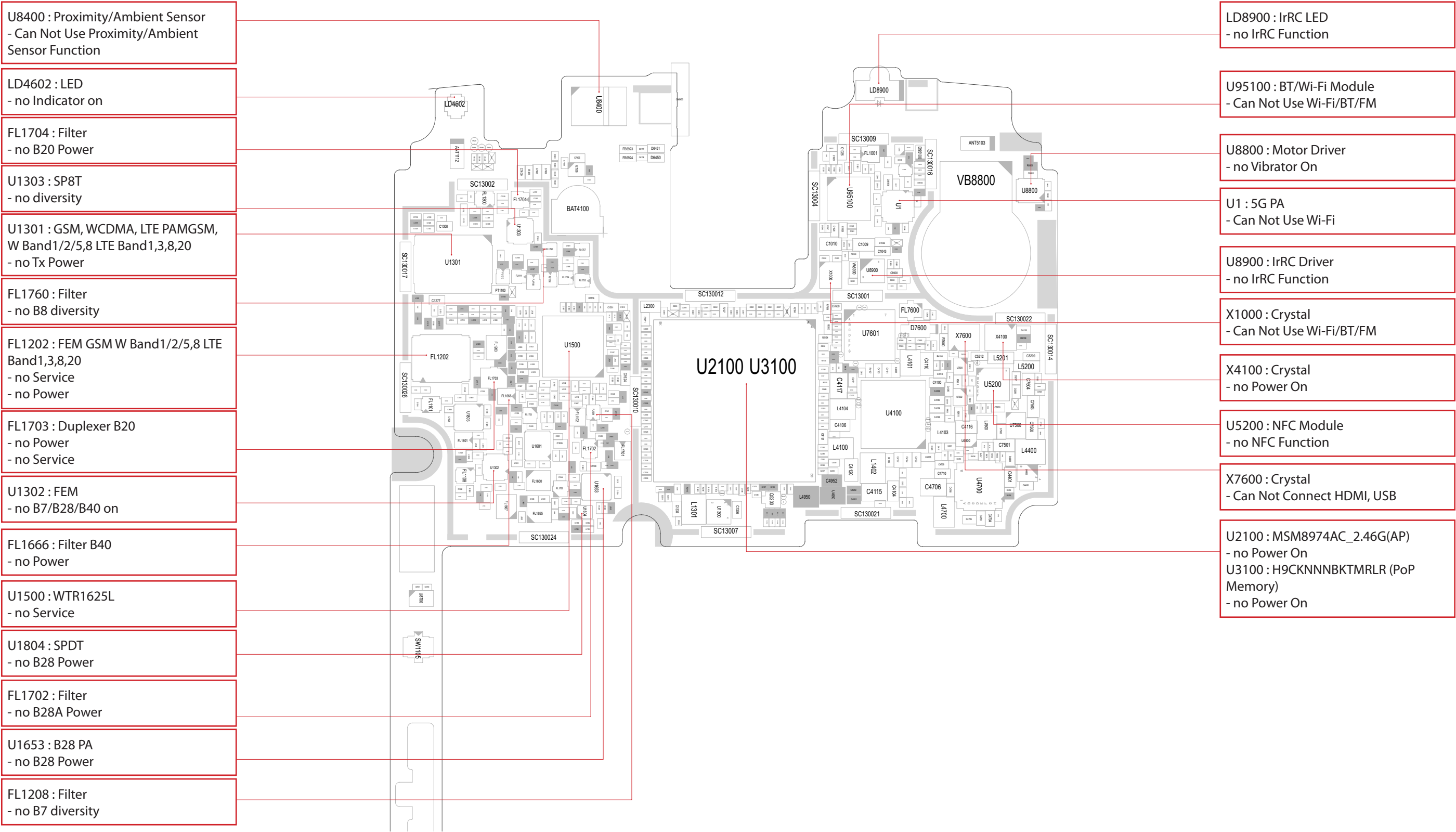


## U3100\_LPDDR3\_SDRAM(Top View)

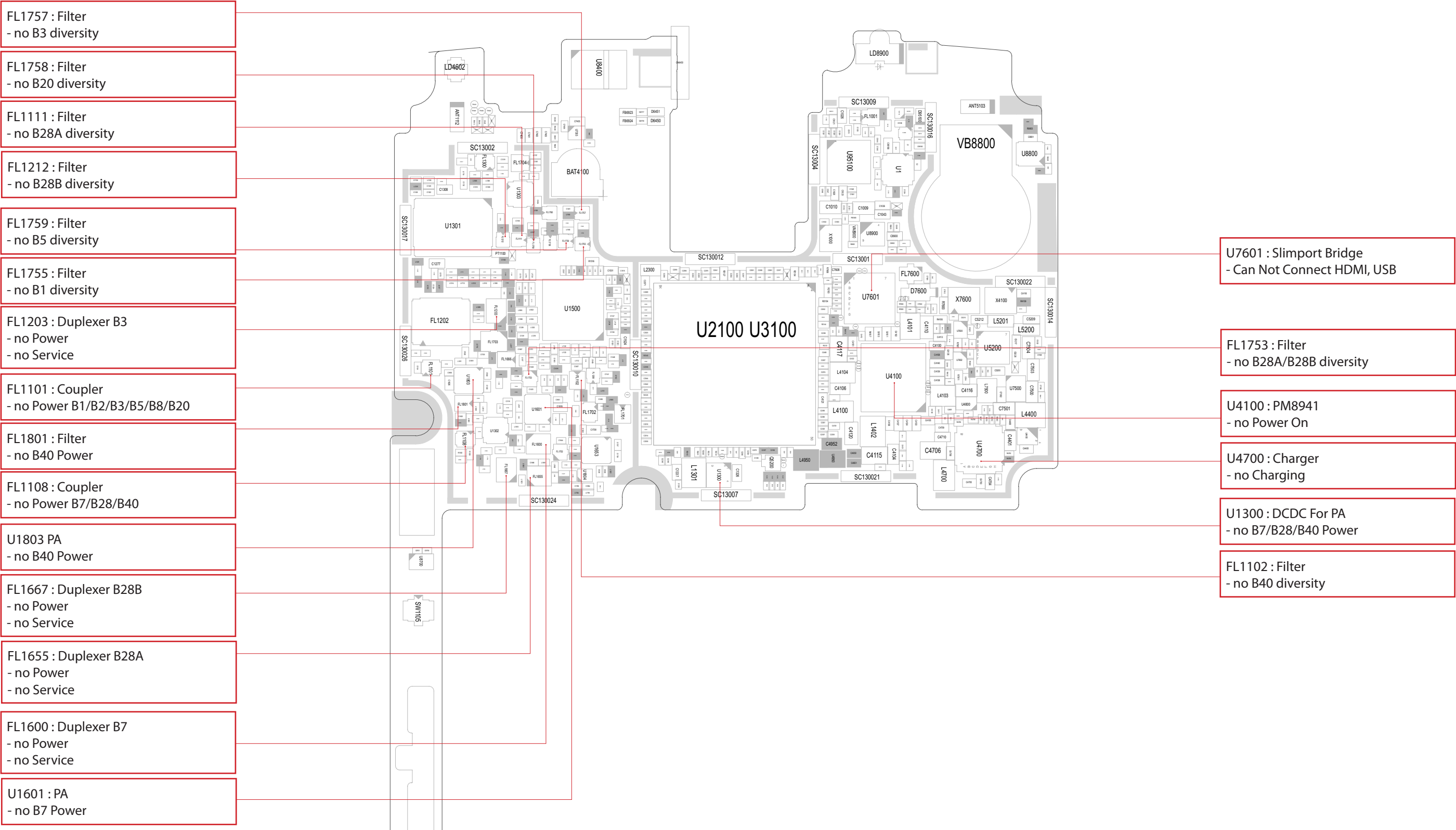


ALL USED

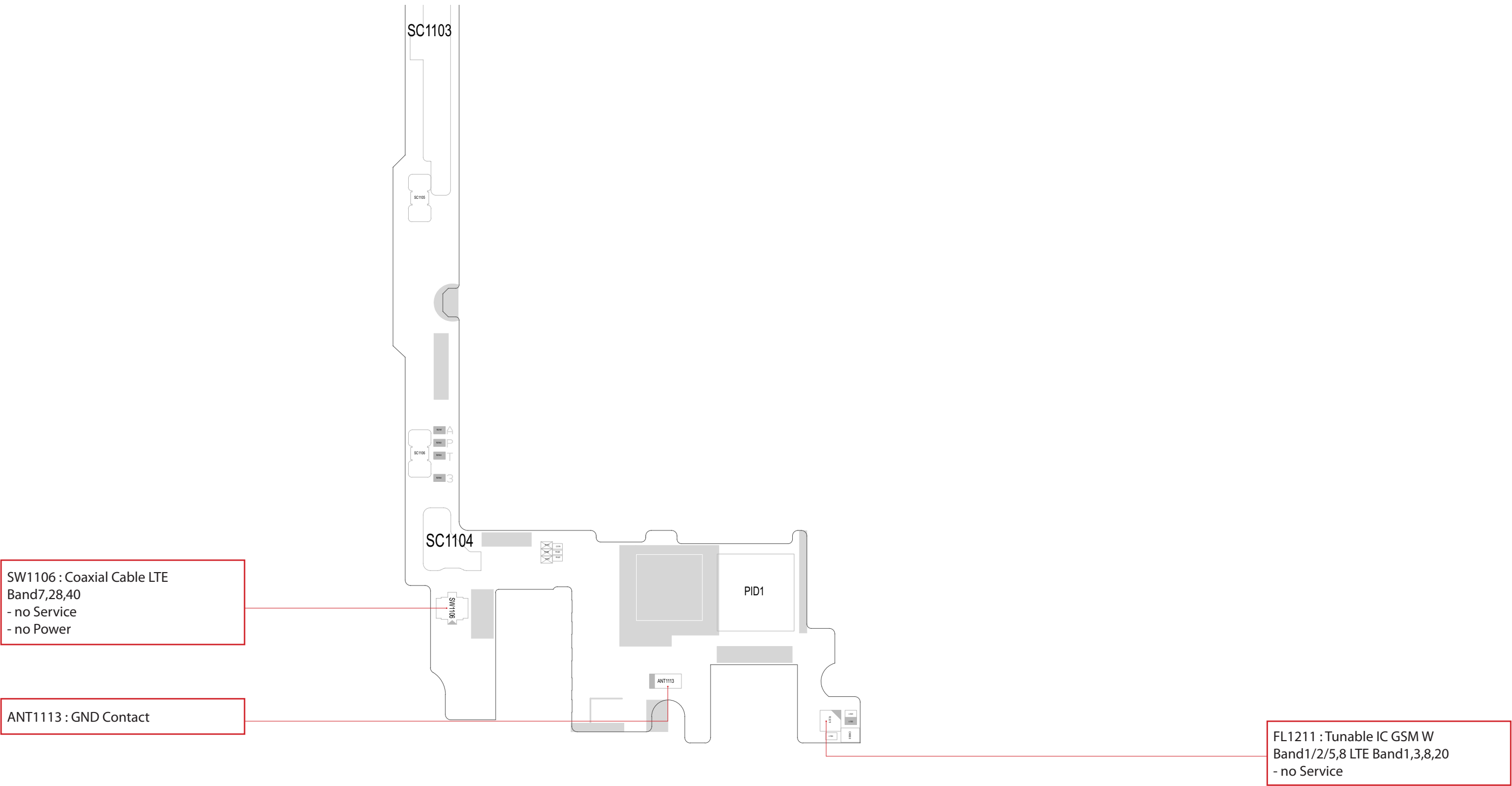
8. PCB LAYOUT



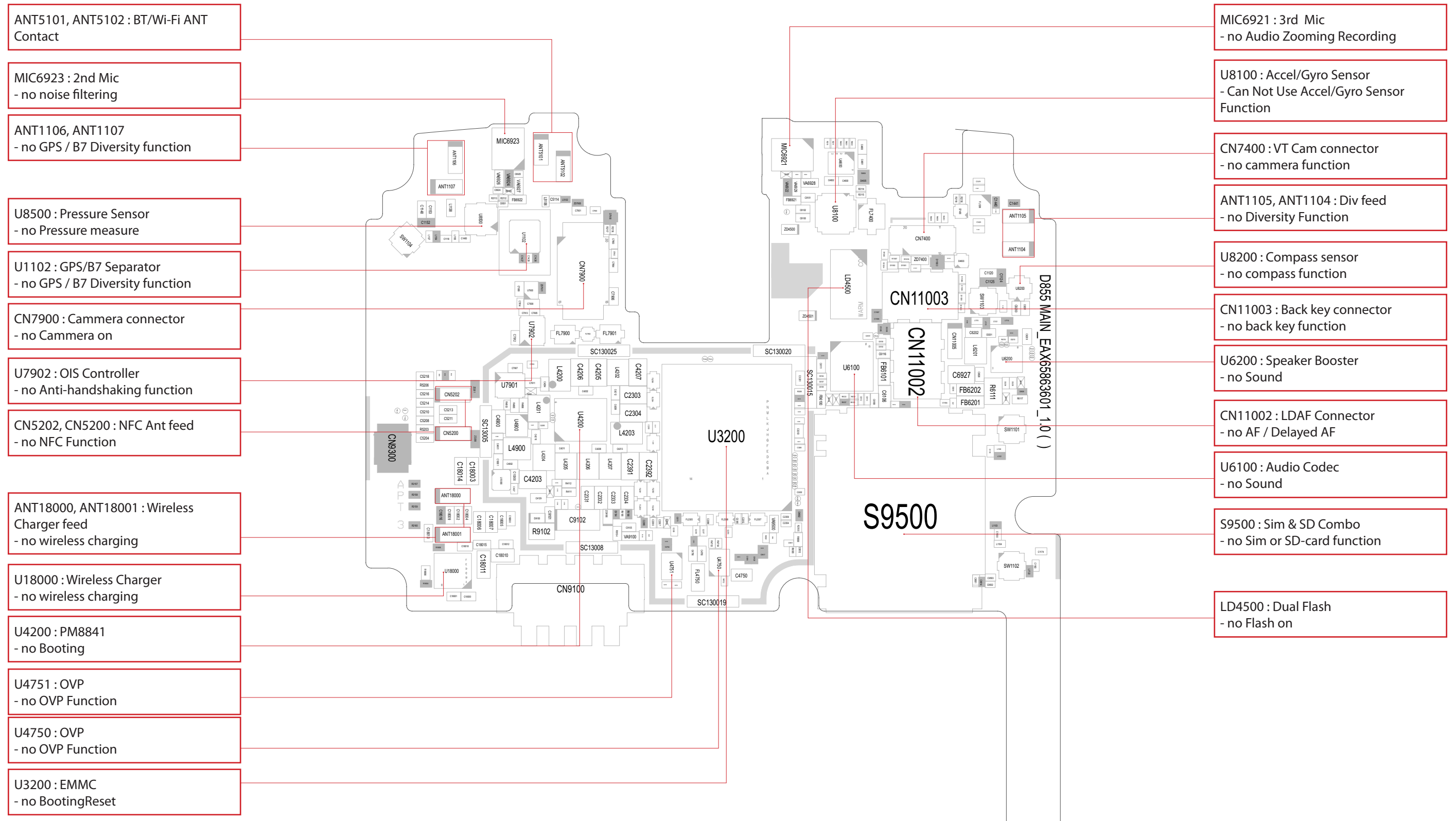
LG-D855-MAIN\_EAX65863601\_1.0\_TOP-1



LG-D855-MAIN\_EAX65863601\_1.0\_TOP-2



LG-D855-MAIN\_EAX65863601\_1.0\_TOP-3

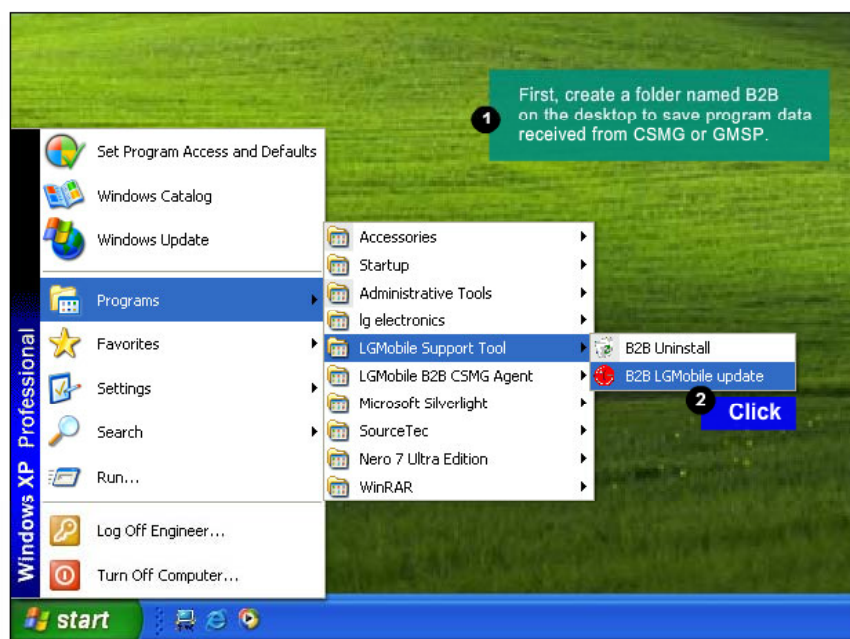


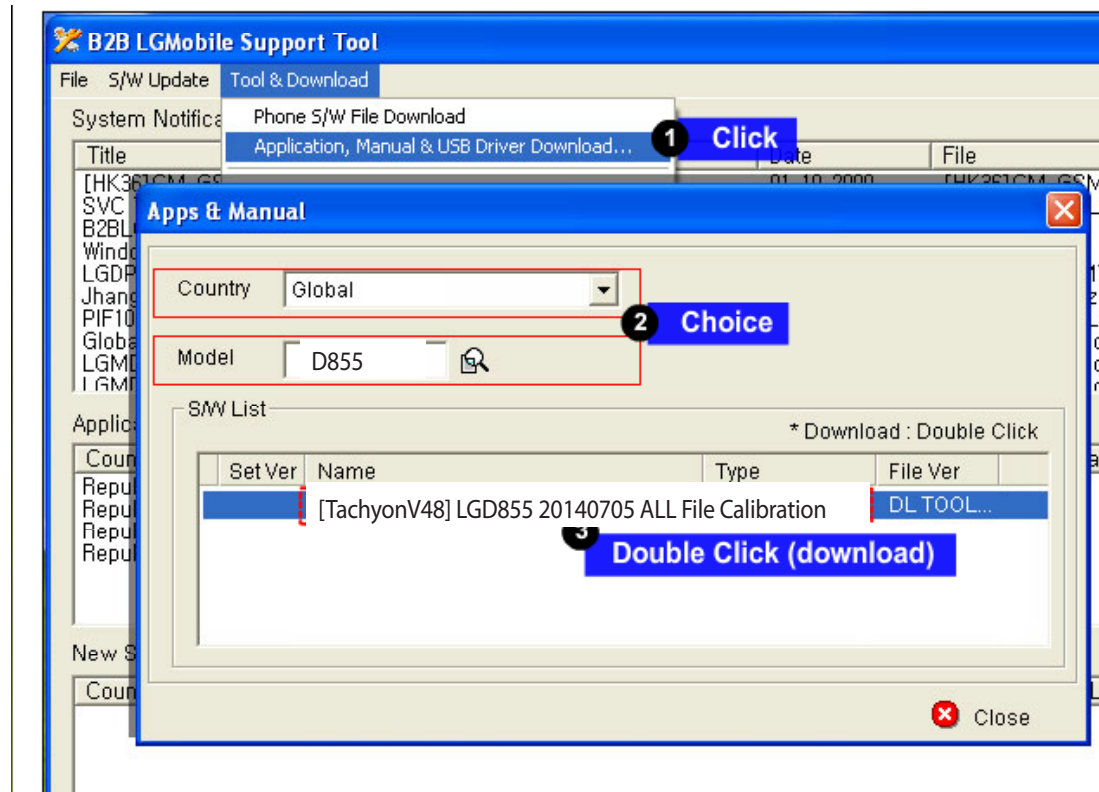
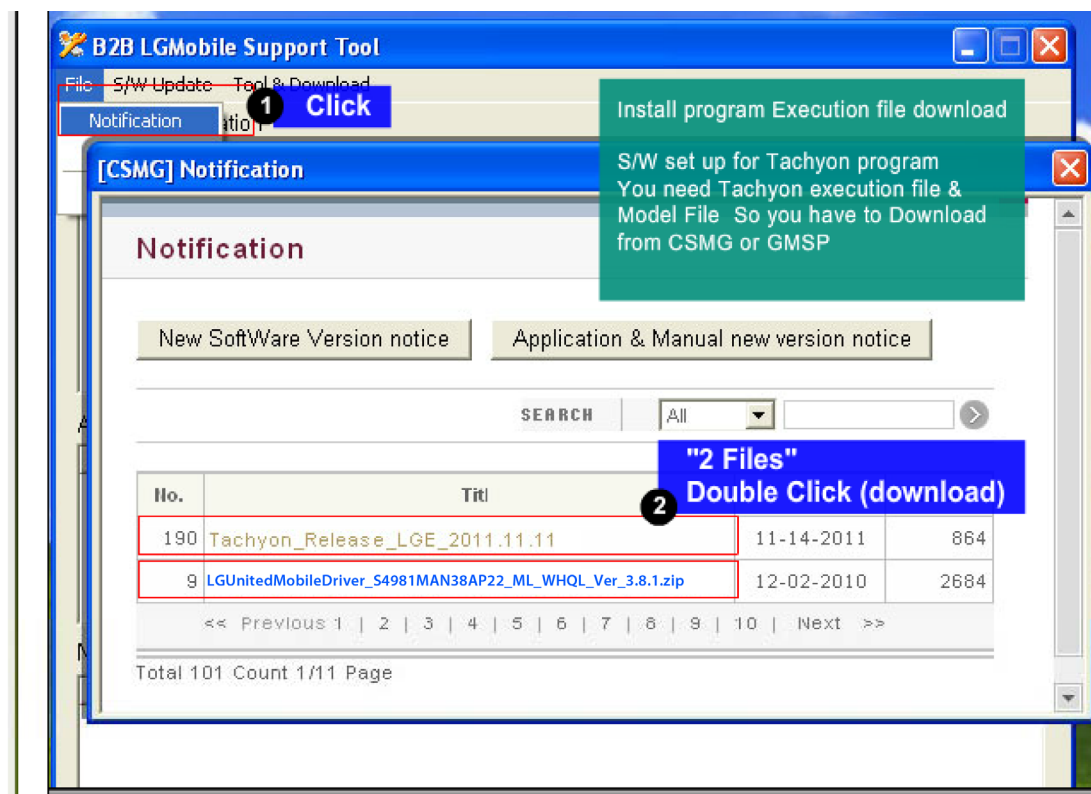


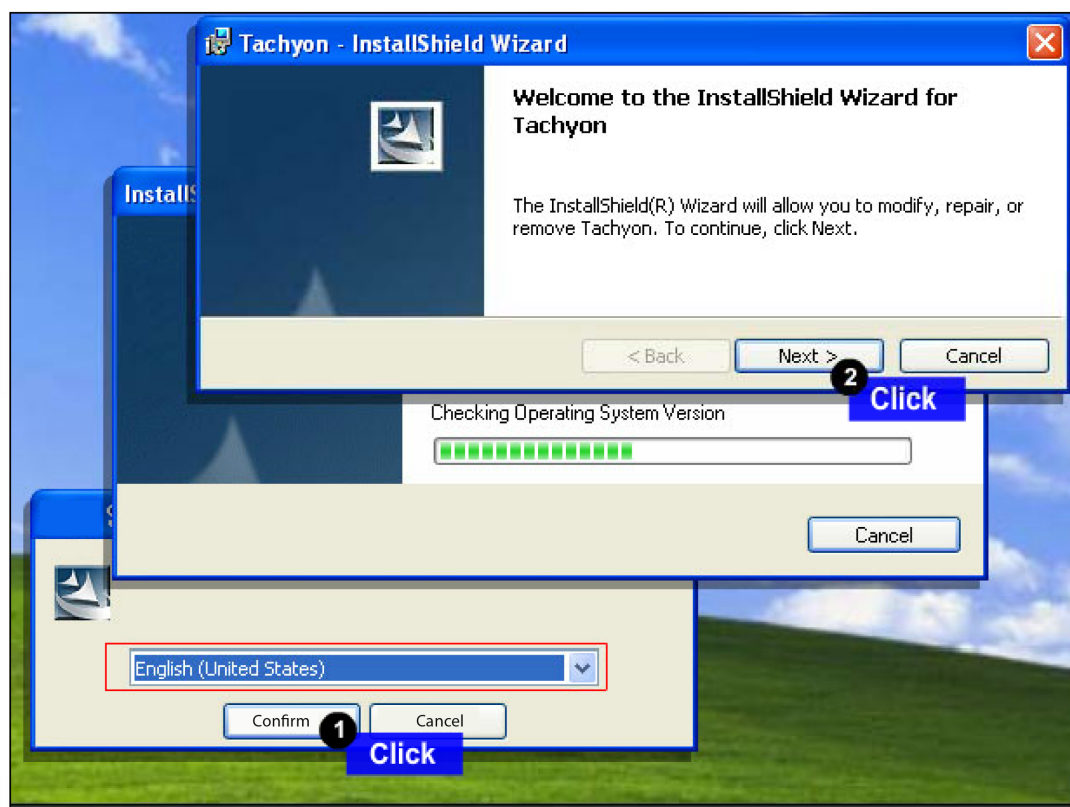
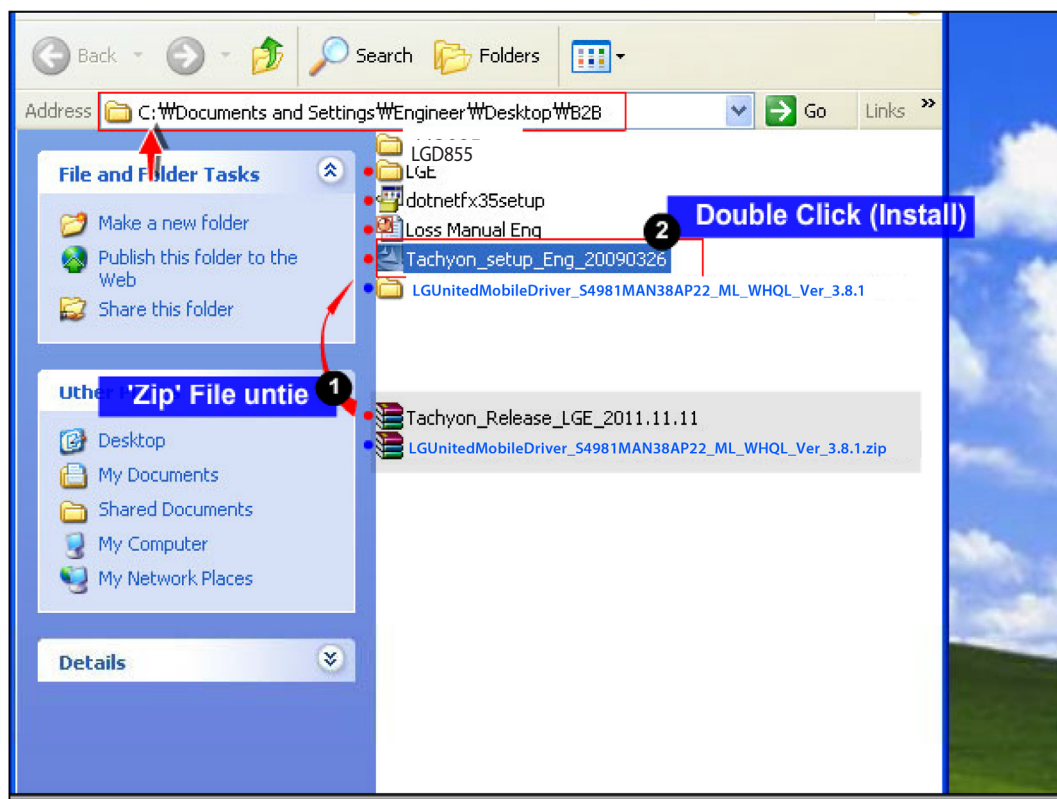


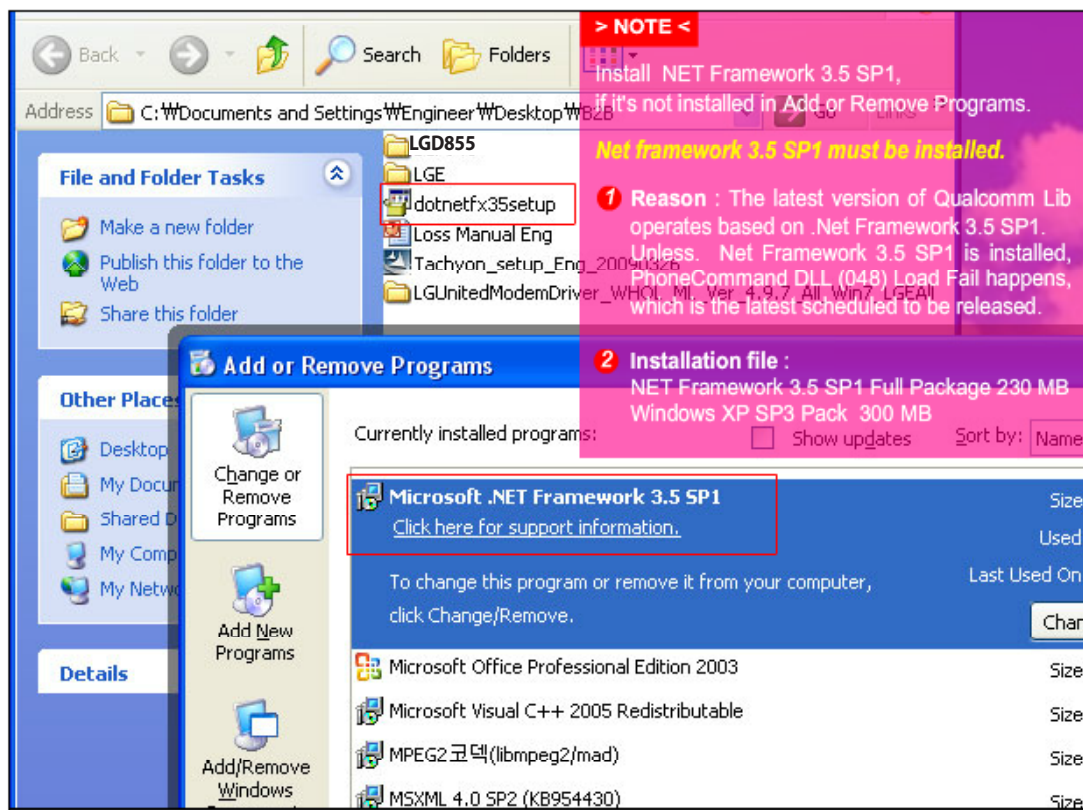
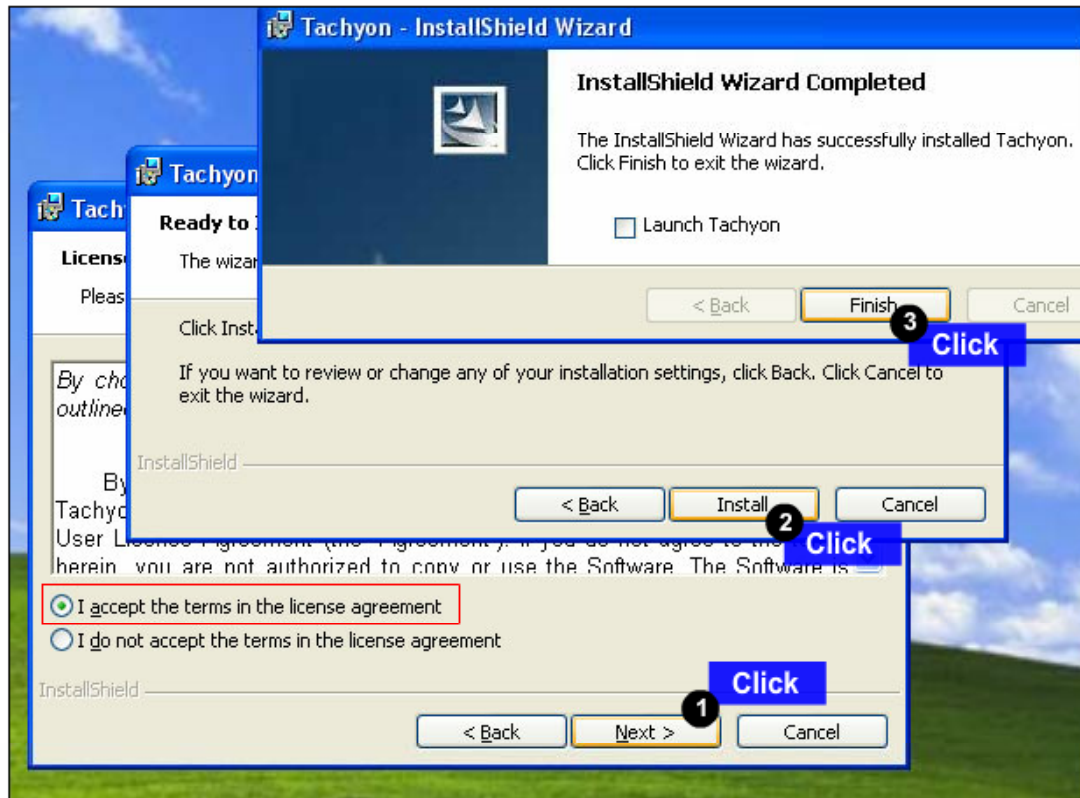
## 9. CALIBRATION

CAL INFORMATION		
S/W VERSION		
<a href="#">[TachyonV48] LGD855 20140705 ALL File Calibration</a>		
<b>Please Check the Version to "B2B"</b>		
H/W		
	Name	Part No.
PIF	PIF200(All Type)	BJAY0024021
USB Cable	USB Cable	RAD32247898
Power Cable	DC Power Cable	RAD32247878
I/O Cable	<a href="#">5P E-SATA_DC_Plug</a>	<a href="#">RAD32167861</a>
RF Cable_Main	<a href="#">MS-156C</a>	<a href="#">BJAY0024004</a>
Power Supply_PIF	Power Supply 5.3V	
Power Supply_Phone	Power Supply 5.0V	
RF Test Equipment	<a href="#">CMW500, RF800A</a>	
NOTICE	1. Use the Battery (Refer to Attached ppt) 1) Phone states: Power off 2) If do not use the battery, TX fails. 2. Port Setting (Refer to Attached ppt) 1) Uart Port1 : Use the "LGE CDMA USB Serial Port"	
CMW500 RF Cable connection	Reference to Attached ppt How to connect between phone RF switch and RF 800A: It has to be connected as below How to connect between CMW500 and RF800A ; It has to connected as below - CMW500 [RF1COM] to RF-800A [left COM], - CMW500 [RF2COM] to RF-800A [Right COM]	

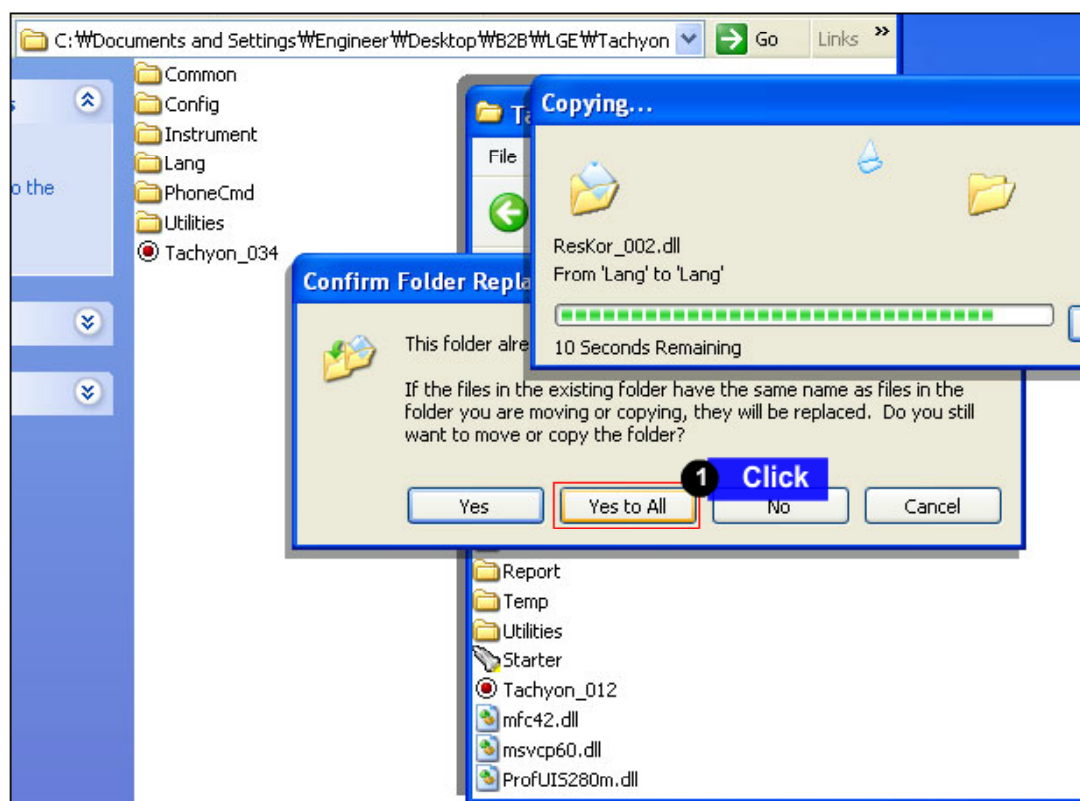
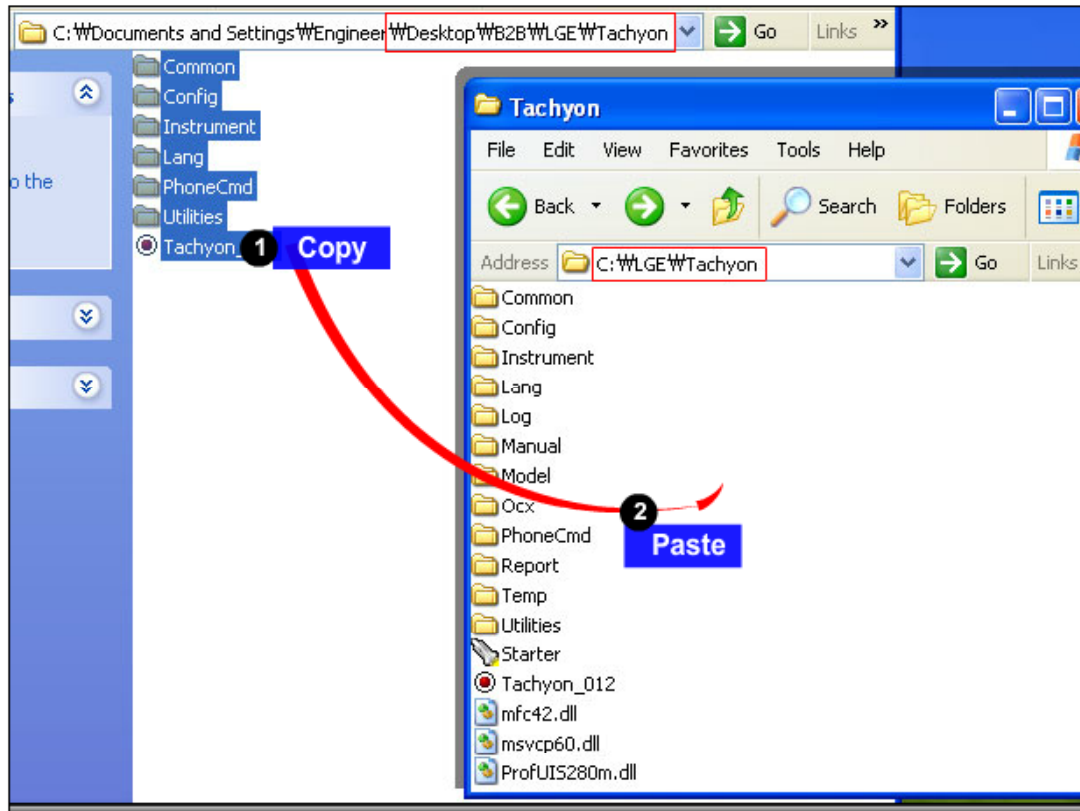




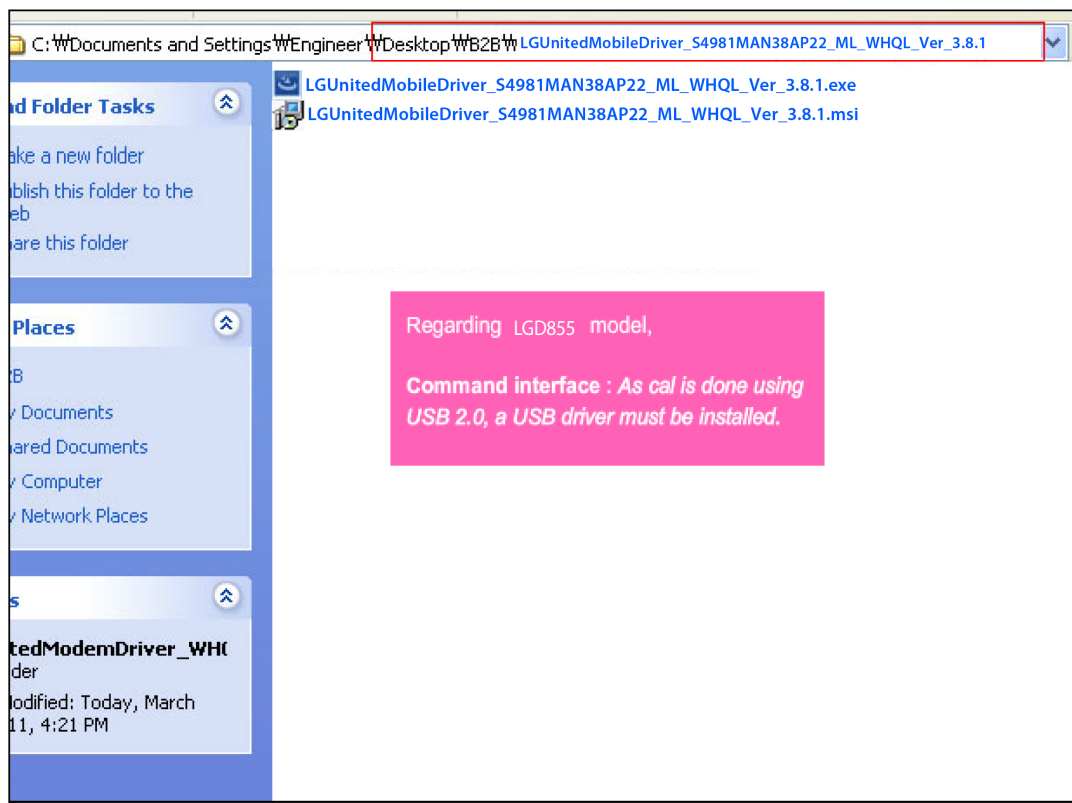
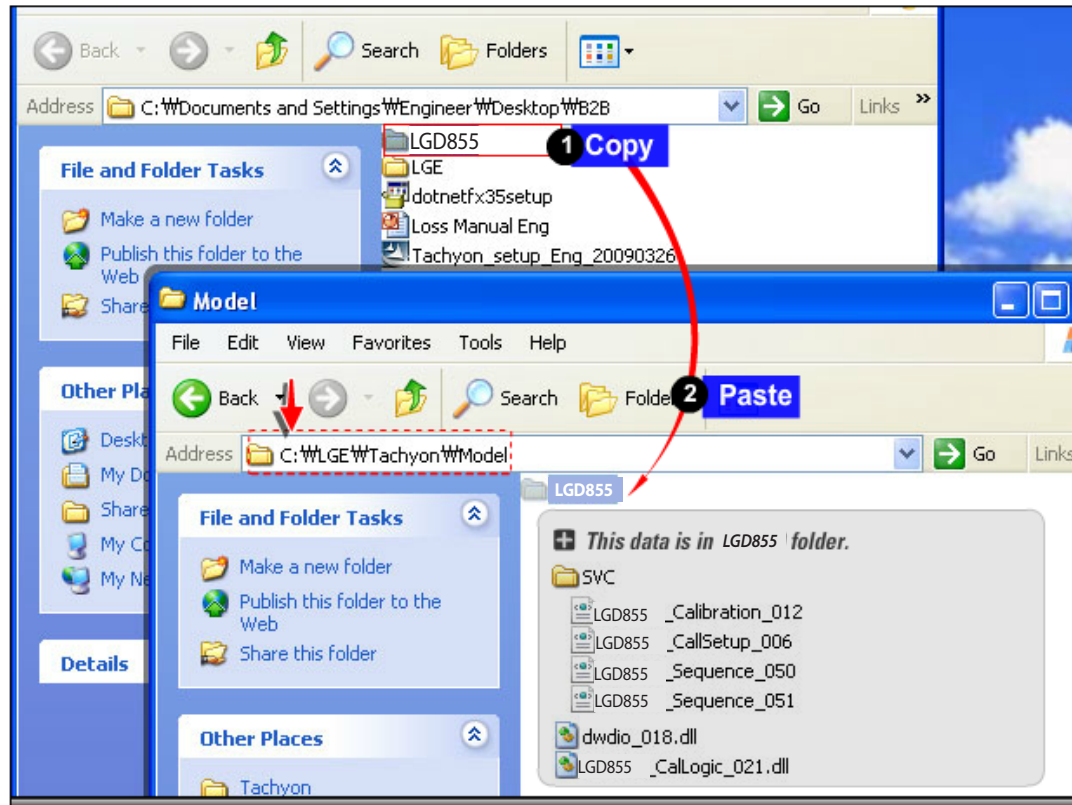




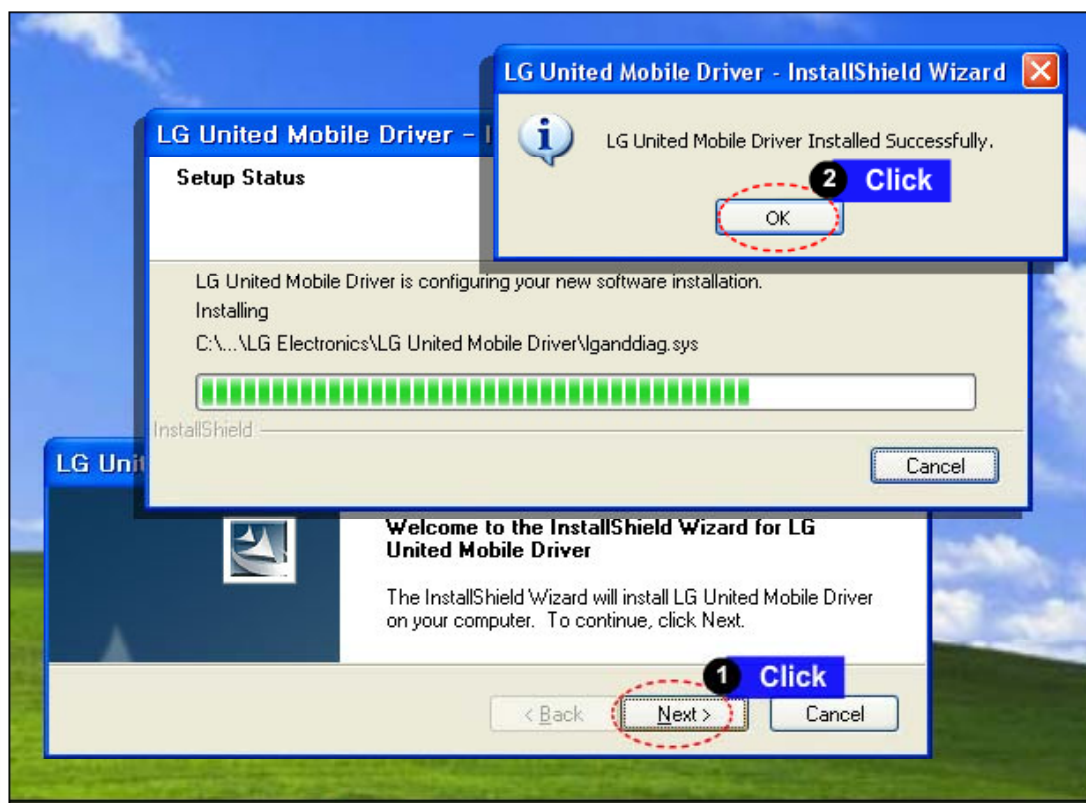
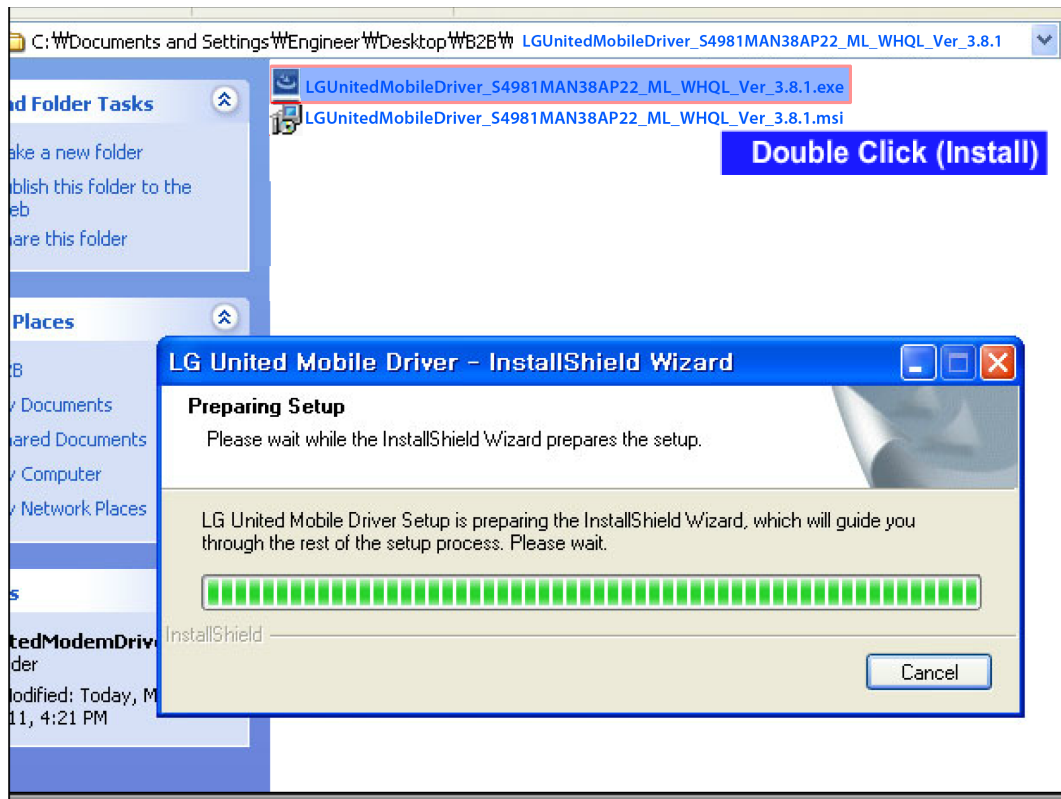




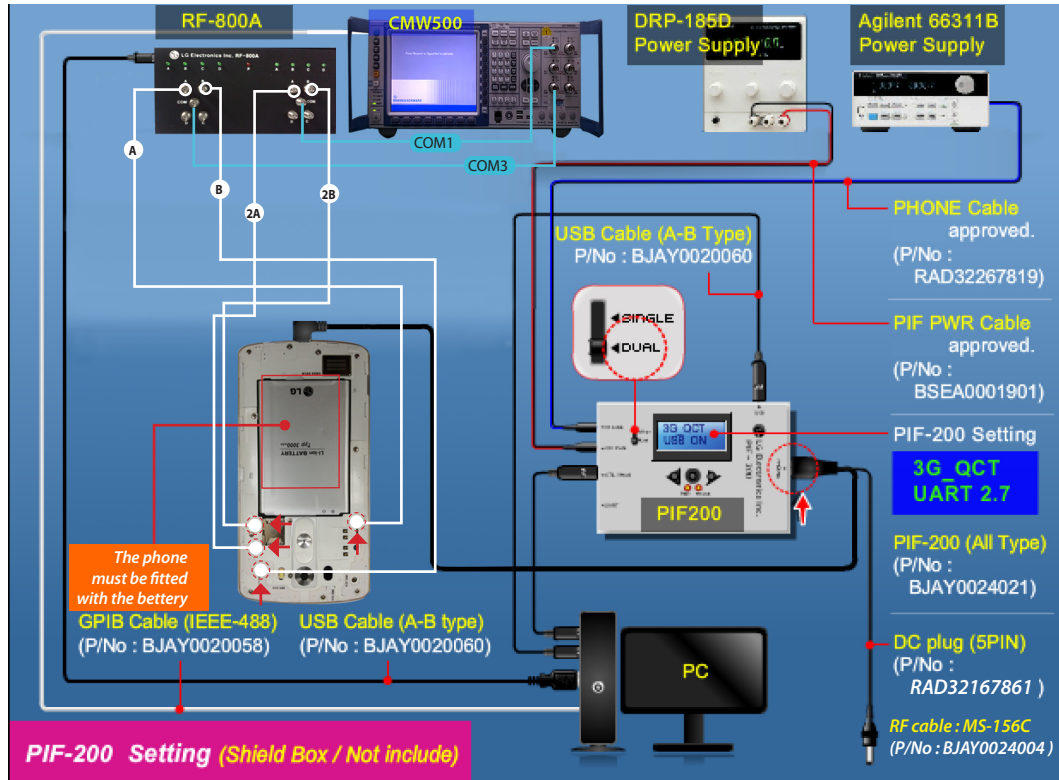
## 9. CALIBRATION



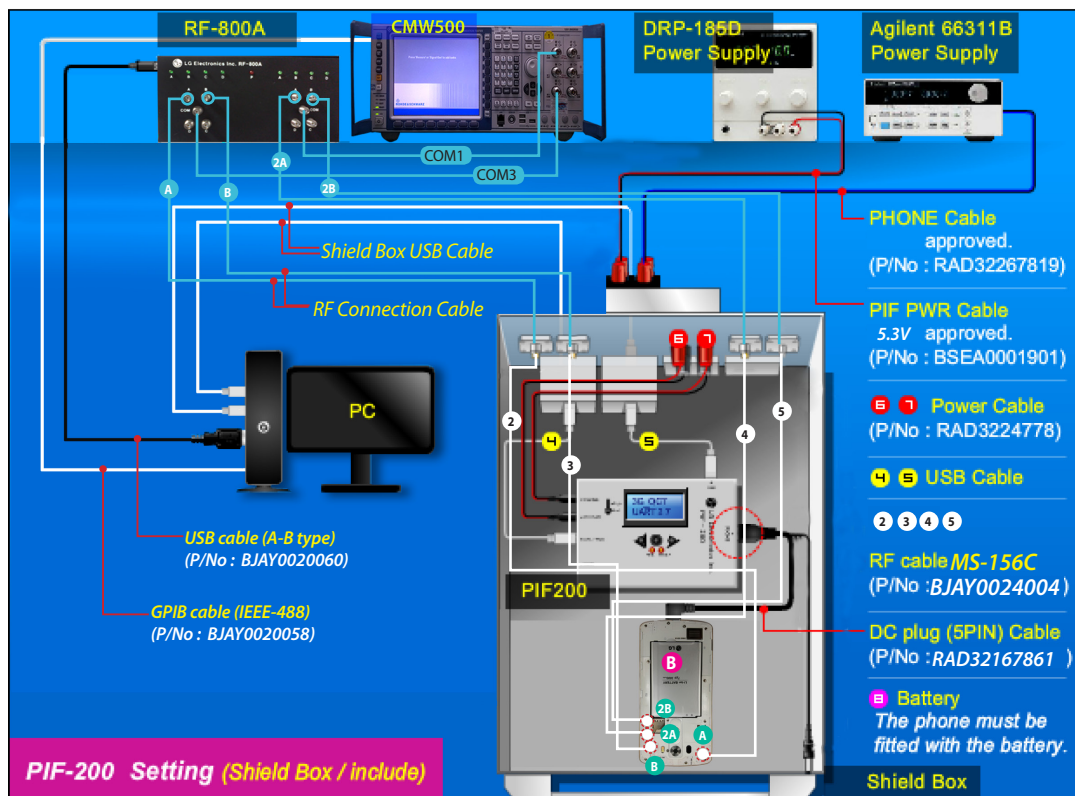


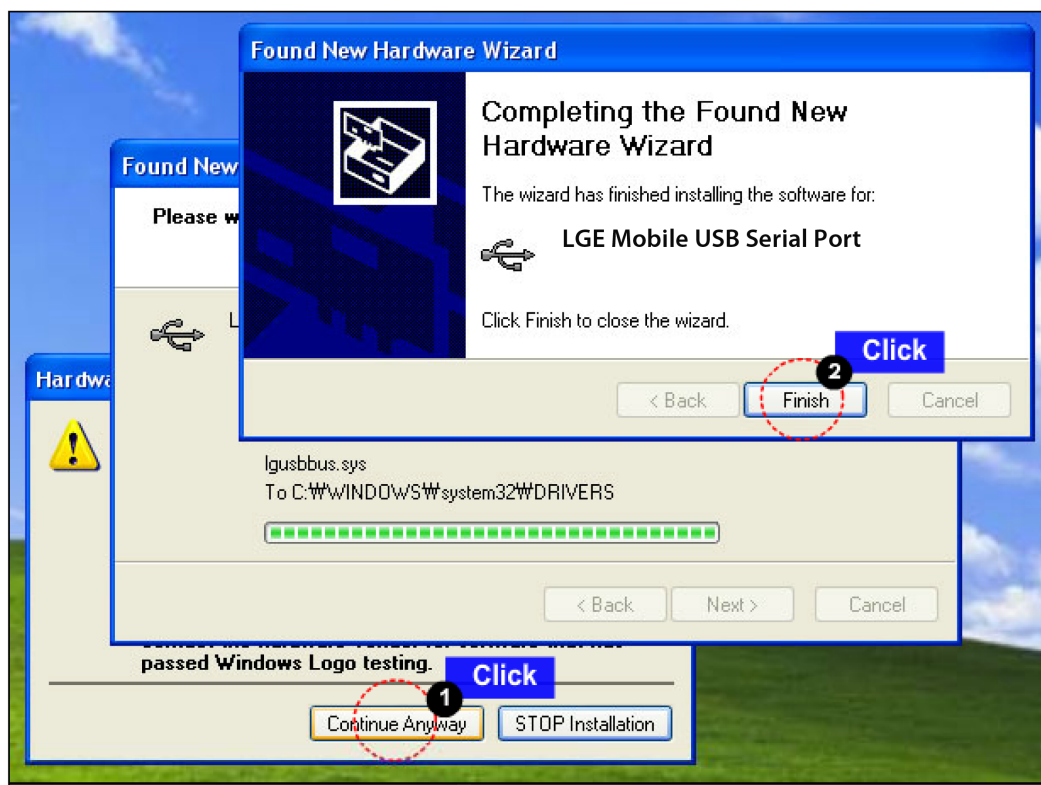
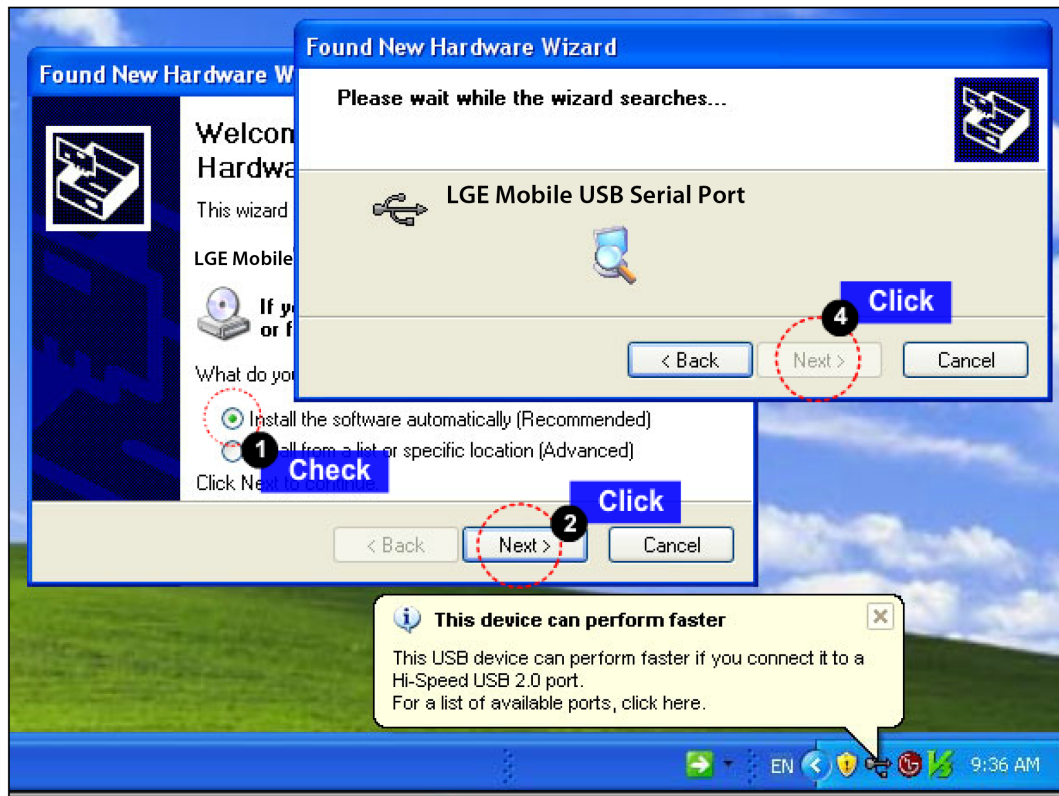


## 9. CALIBRATION

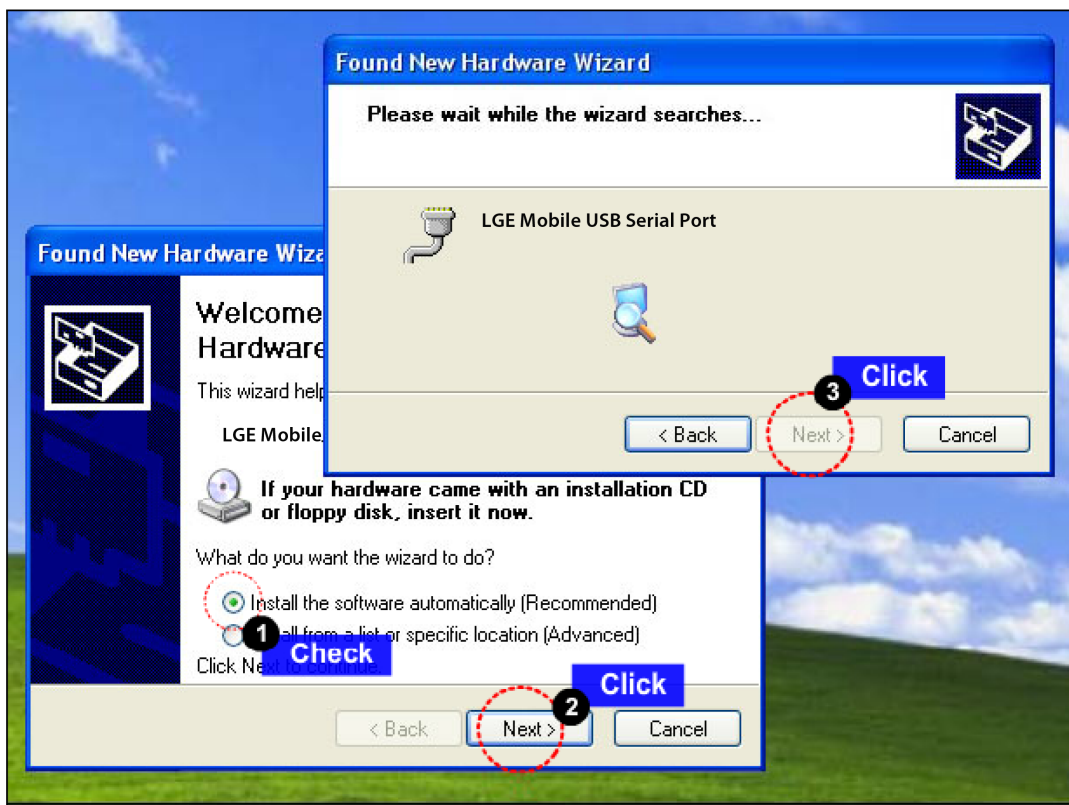
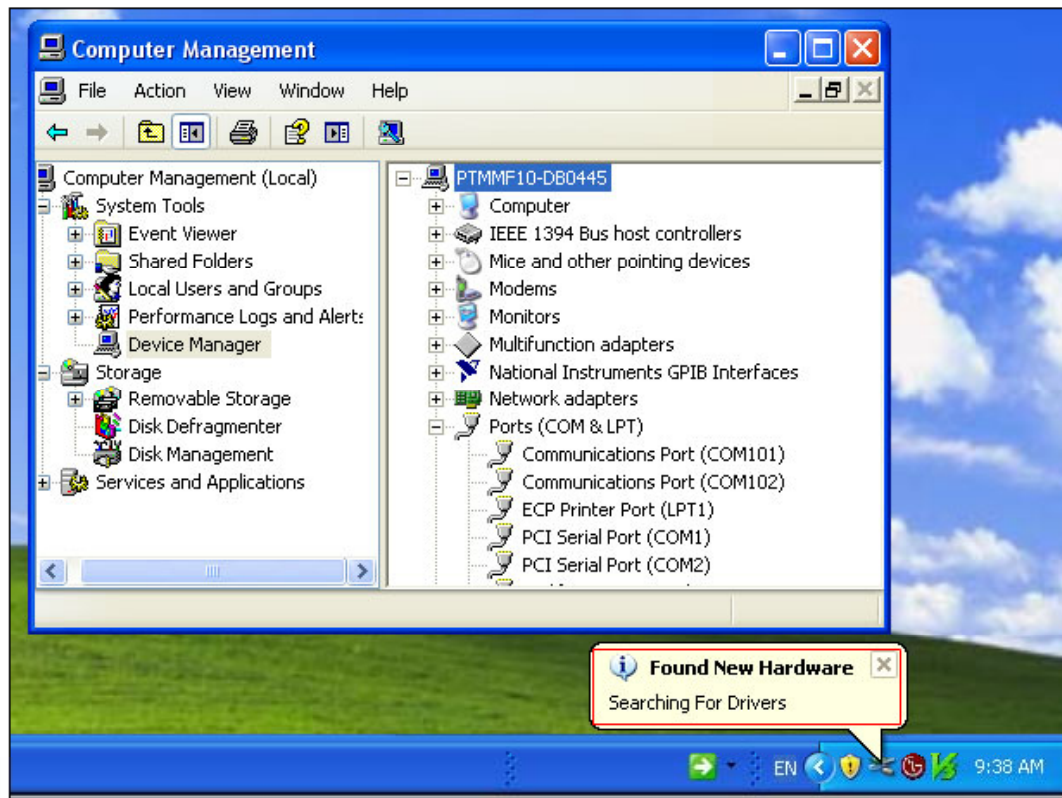


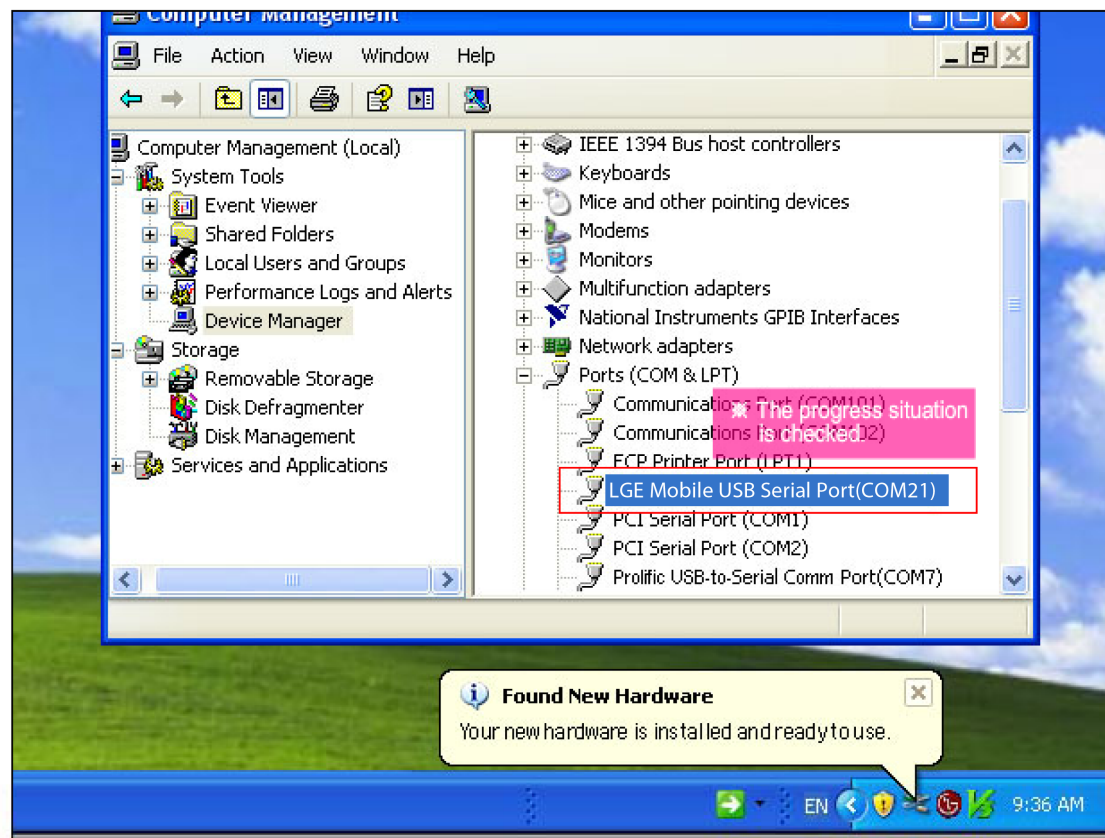
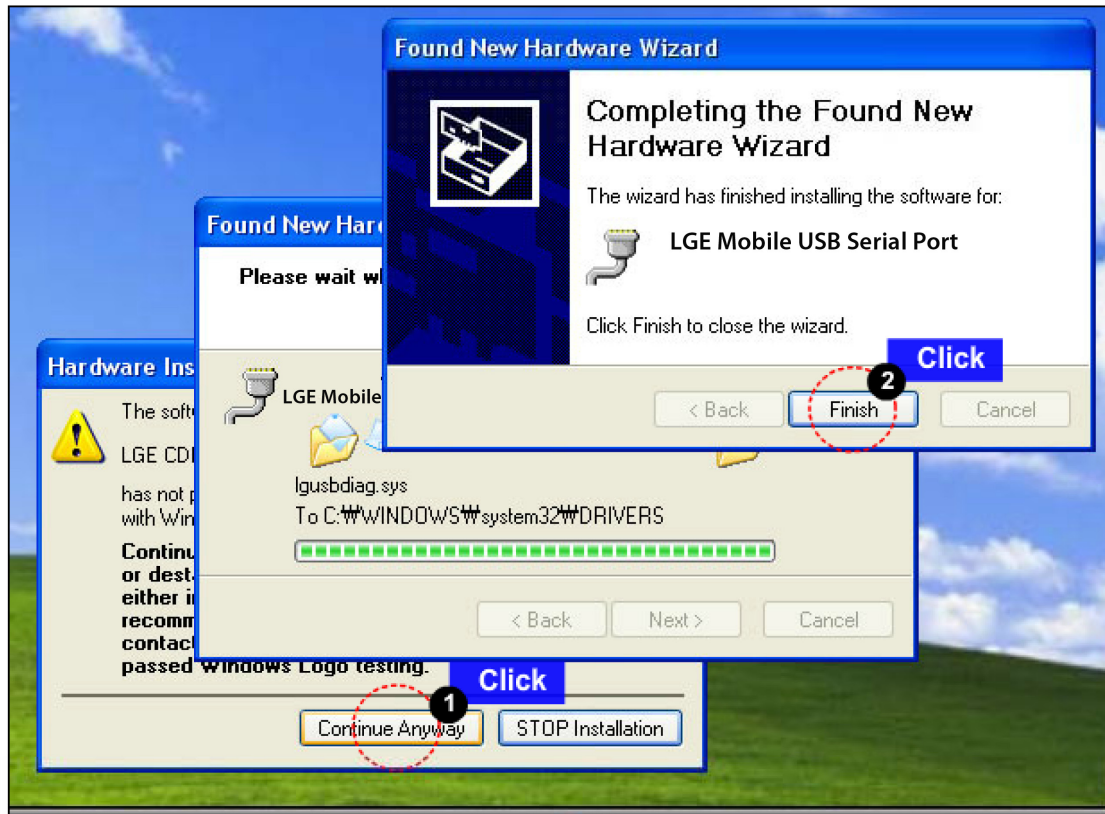
→ This is for example.  
You can check "C:\LGE\Tachyon\Model\WD855\Setting Guide"















## 9. CALIBRATION

**User Login**

User Info : FACTORY\_WORKER

Company Info

☐ Mobile Cooperation

Site Info : LGE (PT)

Operation Info : Board Calibration & Test

Location Info : Auto Assembly 1 Line

Shift Info : A

Ezlooks Connection

☐ On ☒ Off

Login Cancel

Choice

Click

Loss :

Cal Test Start

SYSTEM

Ezlooks M

RF St

RUN

Repeat

ESN V

Test

Re

Verific

Auto

BASE IN

Base

Execution

Time Elap

00:00

Voltage

Consumpt

File Edit View Help

CH1\_TEST

[SINNESS]Current & Voltate Setting success!

Voltage / Current Setting

Voltage

5.3V V (Volt)

Apply

Current Limit

3 A

Apply

OK Cancel

Click

Check

Click

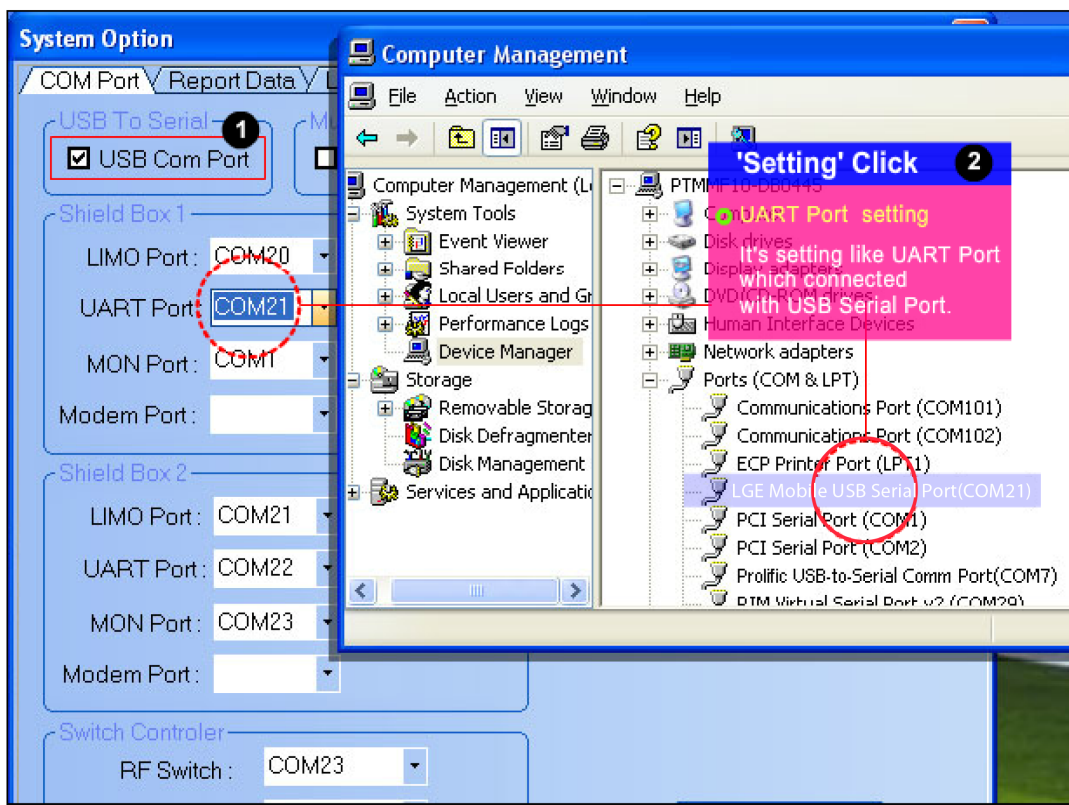
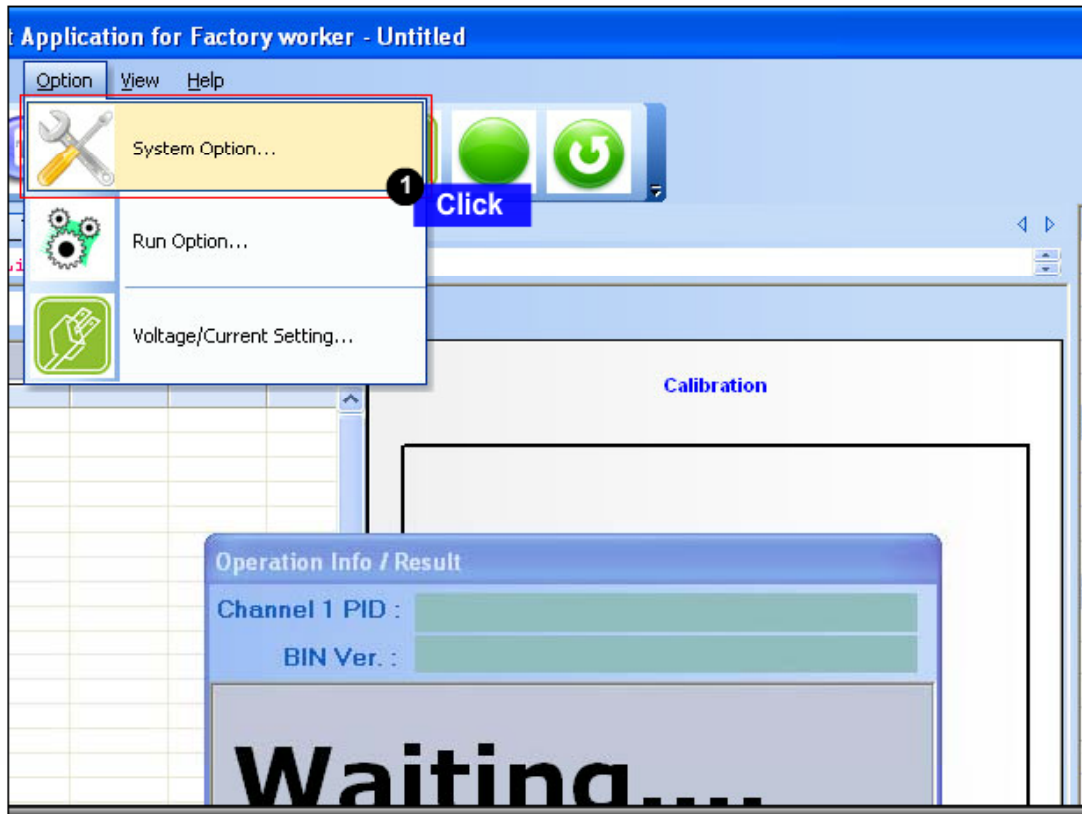
Click

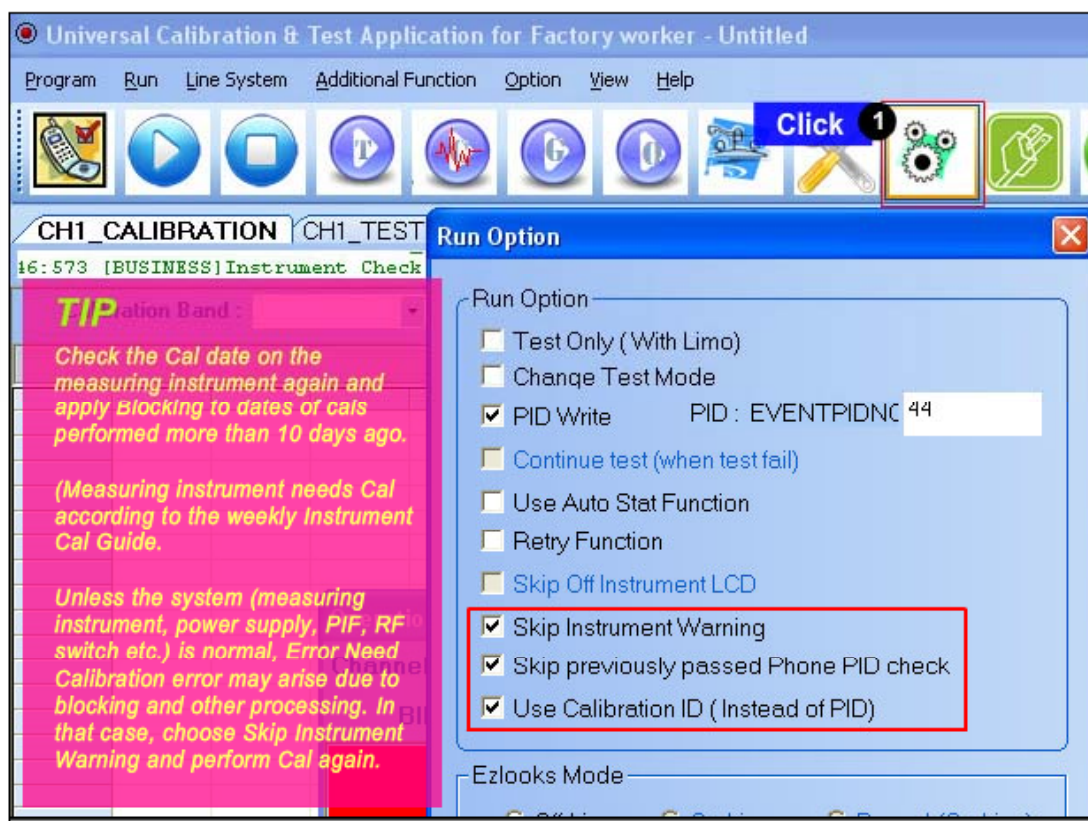
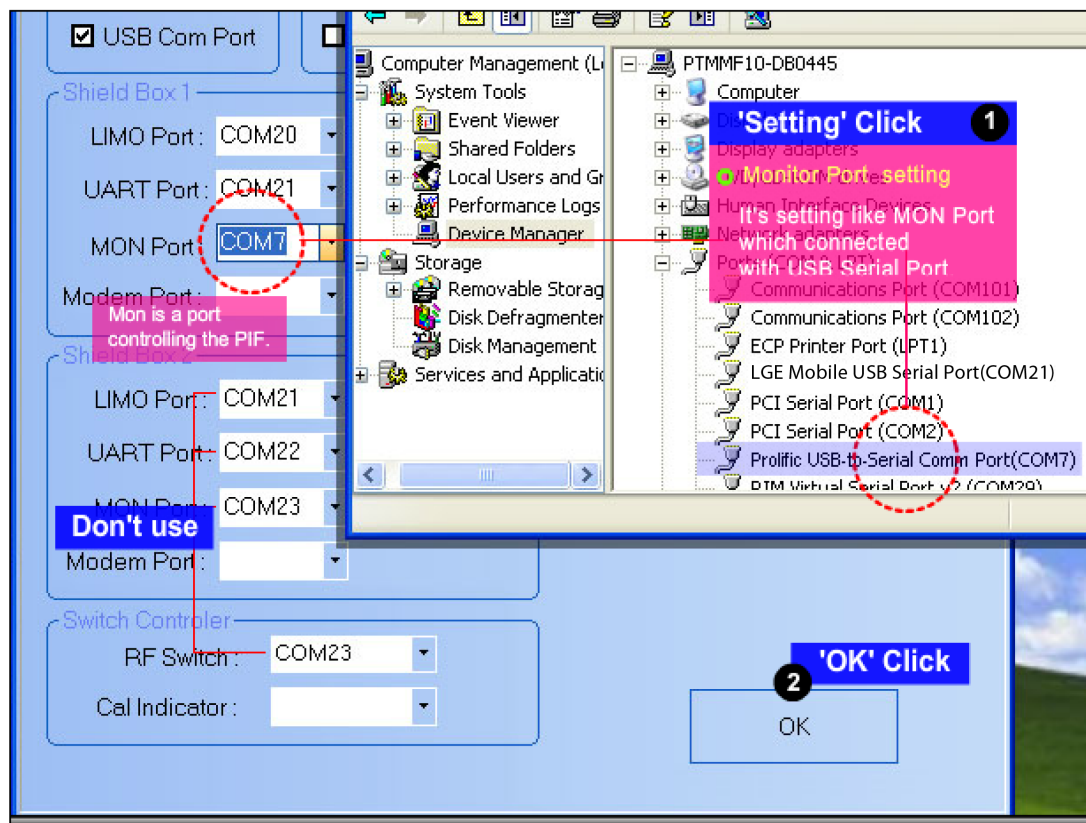
Operation

Channel

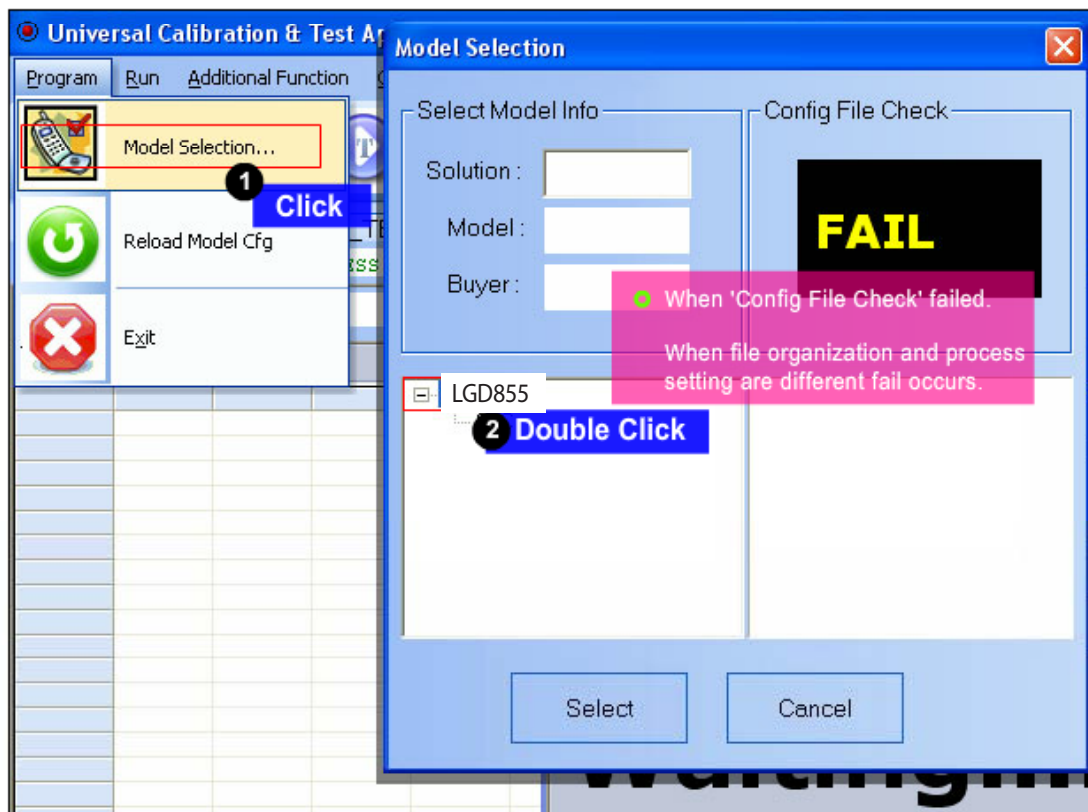
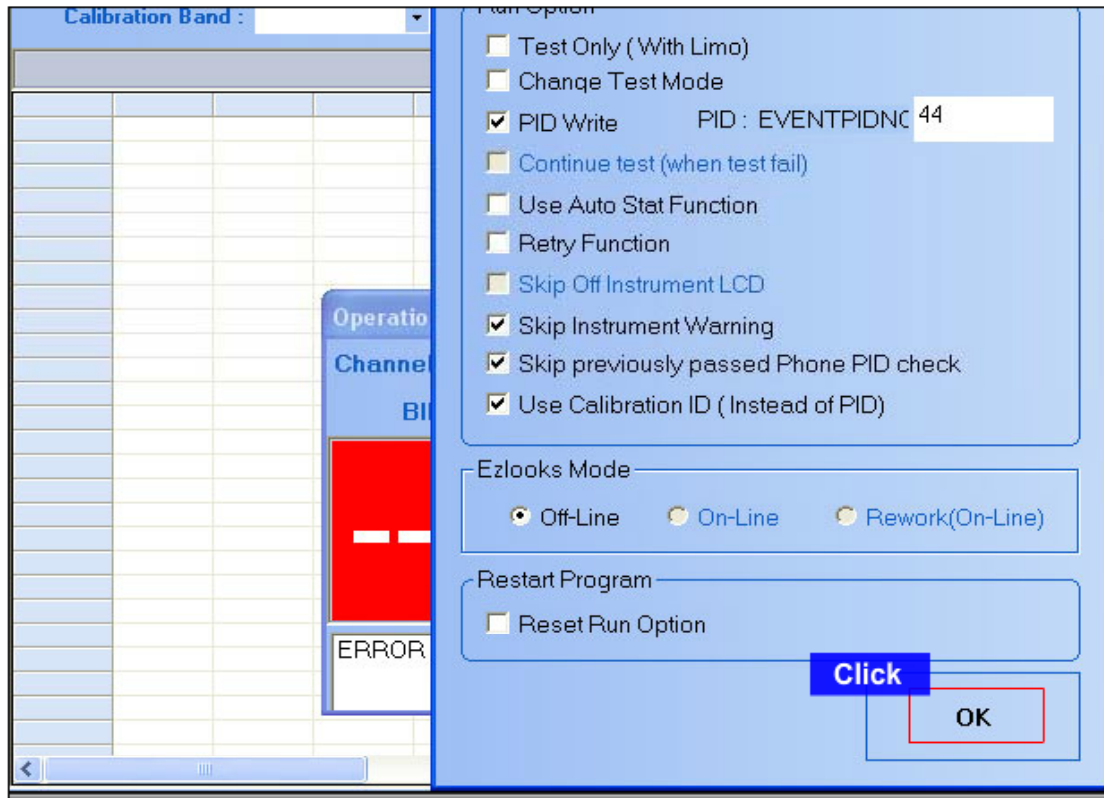
BI

W



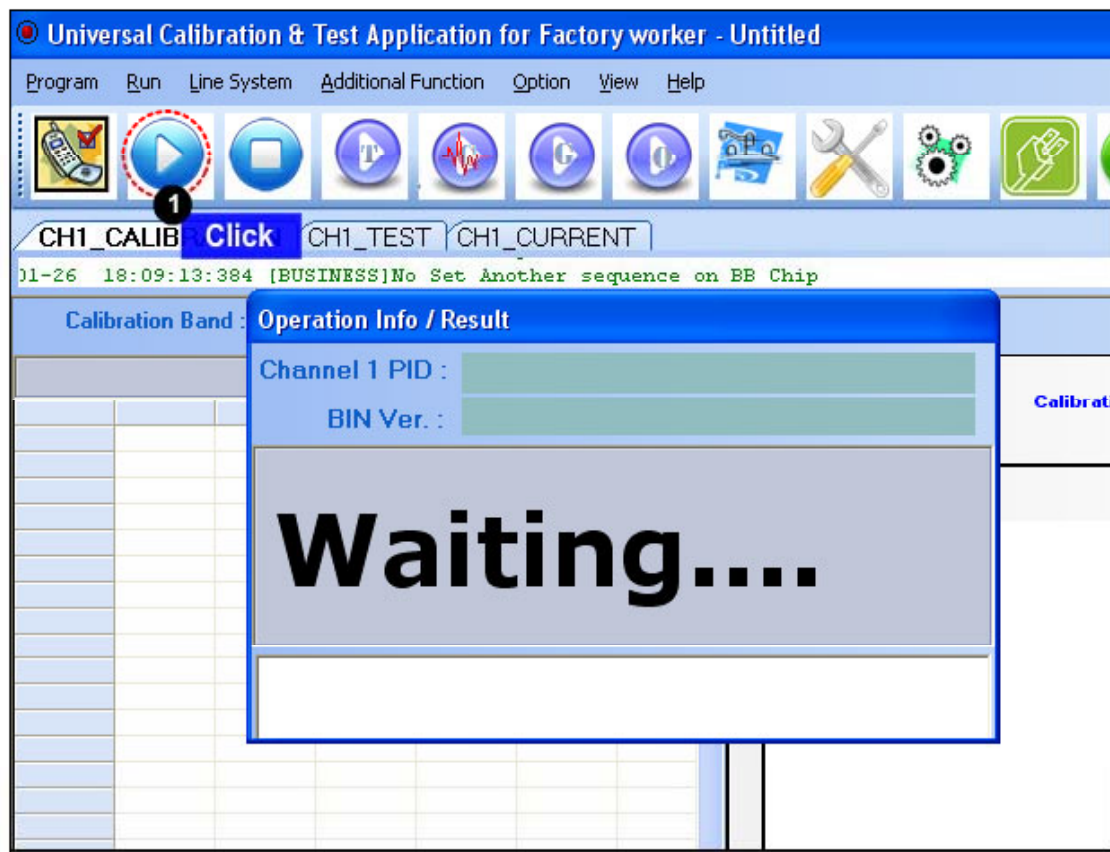
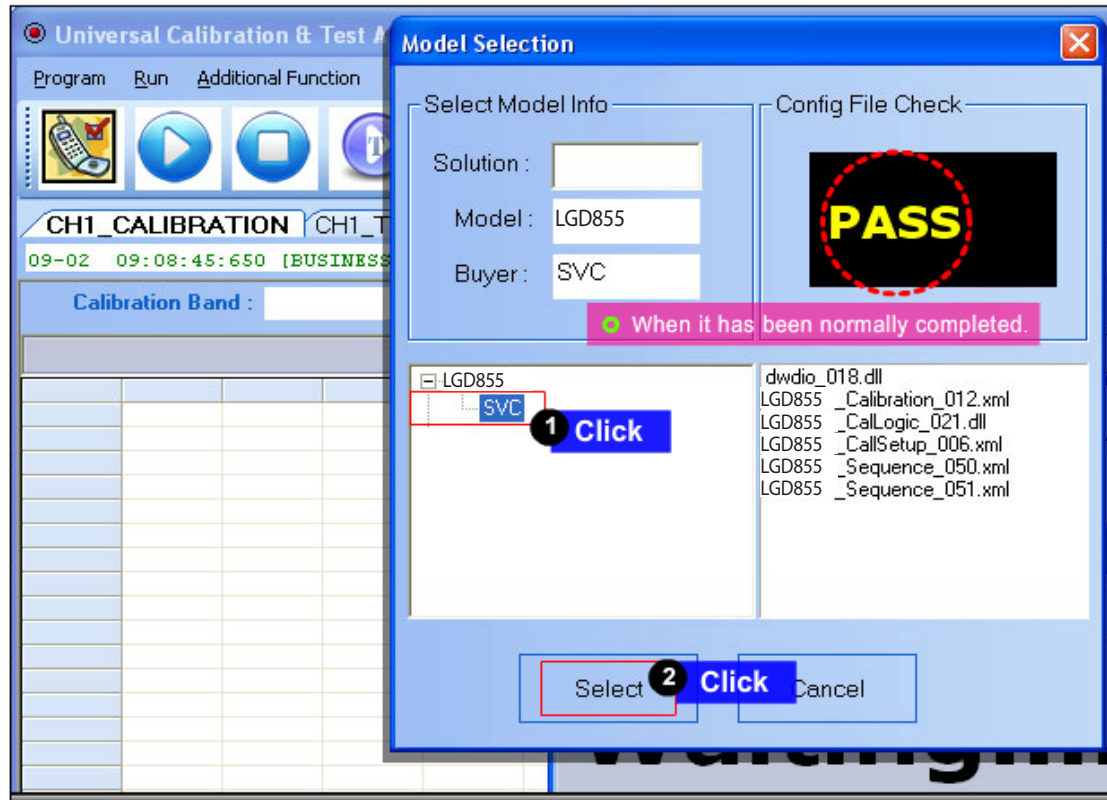


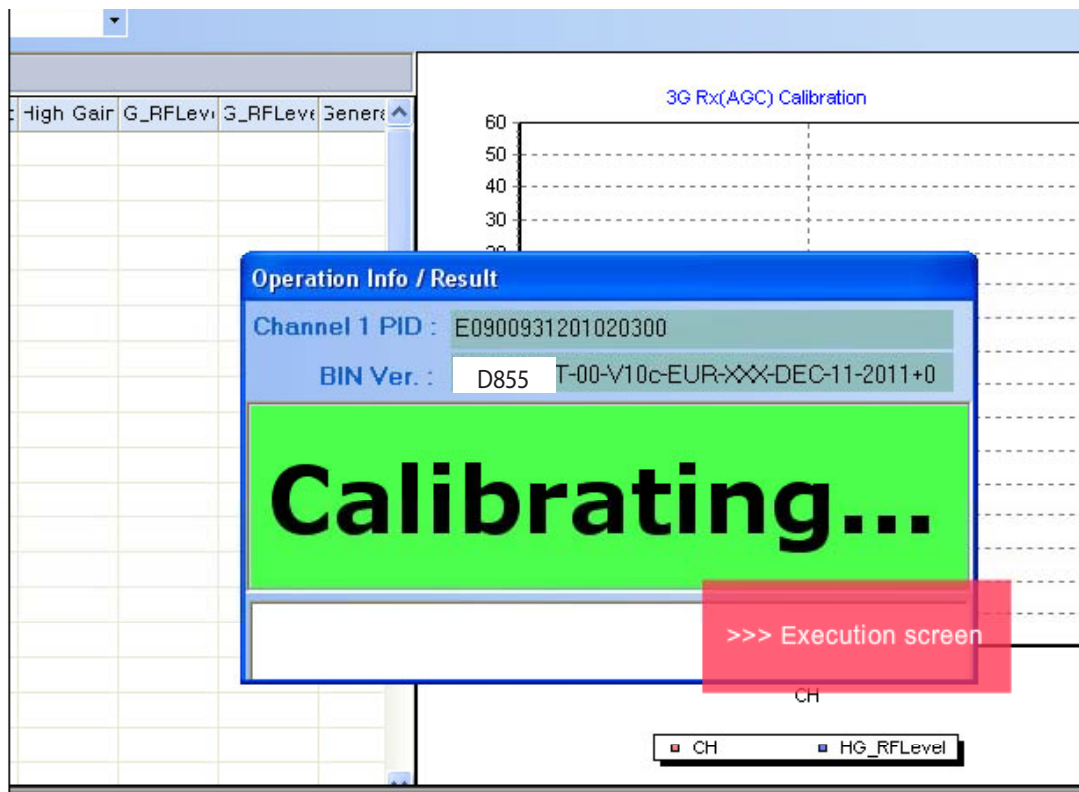
## 9. CALIBRATION





## 9. CALIBRATION





				CH01	CH02	CH03	
				10562	10700	10838	PASS
				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	NC	23,7	22,3	23,000	22,963	22,976	
MARGIN				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	SEGMENT-F	-0,4	-1,6		-1,148		
	SEGMENT						
	SEGMENT						
	SEGMENT						
H							
	NC						
LEAKAGE RAT							
	ACLR-5MHz						
	ACLR+5MHz						
	ACLR-10MHz						
	ACLR+10MHz						
MASK							
	NC						
				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	EVM-20DBM	17,50	0,00		4,933		
	PCDE-20DBM	-15,00	0,00		-38,716		

Operation Info / Result

Channel 1 PID : E0900931201020302

BIN Ver. : D855 AT-00-V10c-EUR-XXX-DEC-11-2011+0

**Auto Testing**

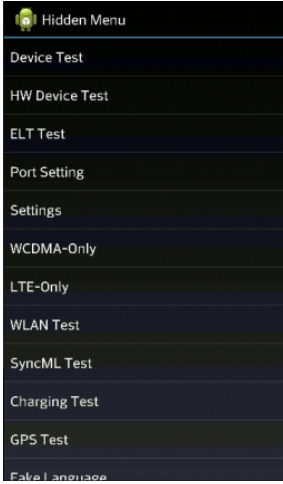
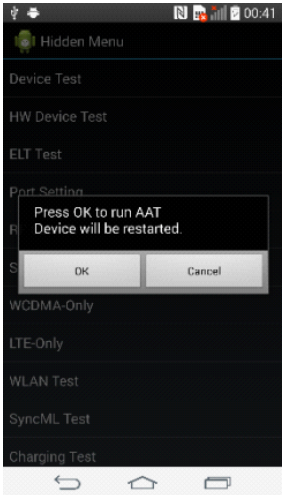
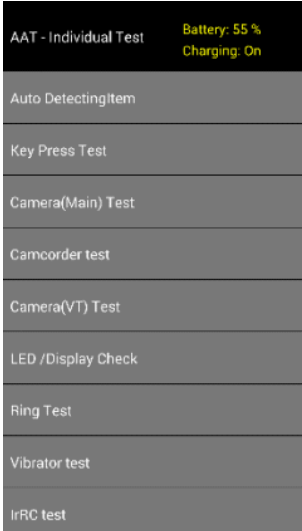
>>> Execution screen



## 9. CALIBRATION

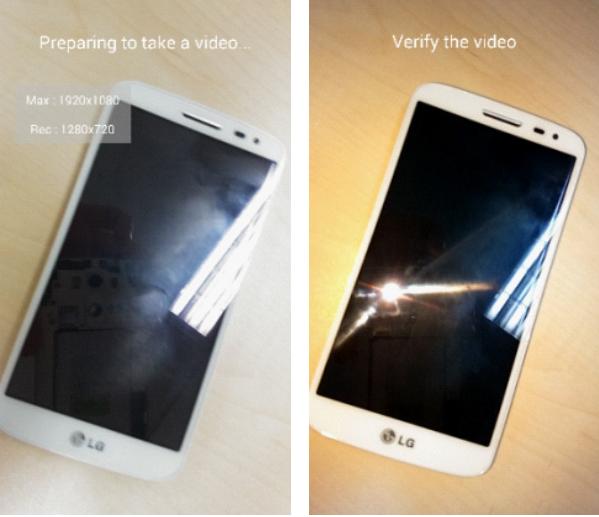
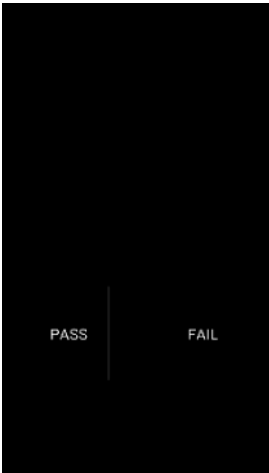
	Condition	USL	LSL	CH01	CH02	CH03	P/F
				10562	10700	10838	PASS
				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	NC	23,7	22,3	23,065	22,983	23,013	
R MARGIN				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SEGMENT	<div> <div>Operation Info / Result</div> <div>Channel 1 PID : F0900931201020299</div> <div>BIN Ver. : D855 AT-00-V10c-EUR-XXX-DEC-11-2011+0</div> <div> <div>---</div> <div>PASS</div> <div>---</div> </div> </div>						
SEGMENT							
SEGMENT							
SEGMENT							
OTH							
	NC						
LEAKAGE RAT							
ACLR-5M							
ACLR+5M							
ACLR-10M							
ACLR+10M							
IN MASK							
	NC	0,5	-0,5				
Y							
	EVM-20DBM	17,50	0,00		4,720		
	PCDE-20DBM	-15,00	0,00		-38,441		
<div> <div>System Loss :</div> <div>MySystem(MS ).gms · RF900 6C.grf</div> </div>							

## 10. HIDDEN MENU

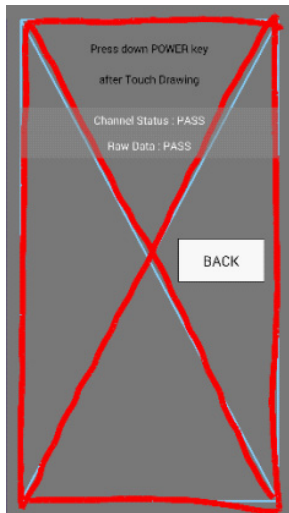
	<p><b>Hidden Menu Start</b></p> <p><b>Start shortcut keys:3845#*855#</b></p> <p>Hidden Menu List</p> <p>Start the desired menu: Menu, click</p>
	<p><b>Device Test</b></p> <p>List:</p> <p>All Auto Test – Partial : AATSET needed</p> <p>All Auto Test Result – Partial : AATSET needed</p> <p>All Auto all Test: Device functionality testing at the factory to use Normal Boot(+power key)</p> <p>FTM Boot(+power Key)</p>
	<p><b>Device Test List</b></p> <p>All Auto Test - Full:</p> <p>-&gt; All Auto Test - Full menu click</p> <p>-&gt; Continuous information on the menu, giving you ability test</p>

	<p><b>USIM, SD Card,</b> Ear Pone wrong, TA, Battery , OTG Test</p>
	<p><b>Key Press Test</b> - Check Key Press, Proximity sensor</p>
	<p><b>Camera(Main)Test</b> - Main Camera Test Preview and Result</p>

## 10. HIDDEN MENU

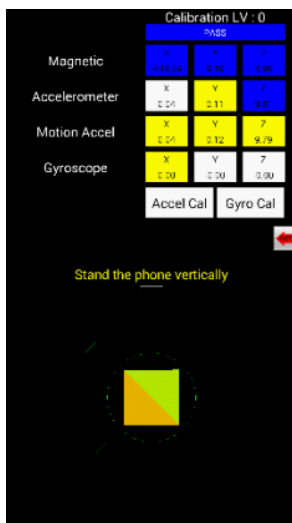
	<p><b>Camcorder Test</b></p>
	<p><b>Camera(VT) Test</b></p>
	<p><b>LED/Display Check Test</b></p> <ul style="list-style-type: none"> <li>- Check Front-Bottom 3 LED (Left/Right menu &amp; Home Button)</li> <li>- Touch 'Pass'</li> <li>-&gt; Check Change the White color</li> </ul>

	<p><b>Ring test</b></p>
	<p><b>Vibrator test</b></p>
	<p><b>IrRC Master Phone</b> IrRC Test</p>



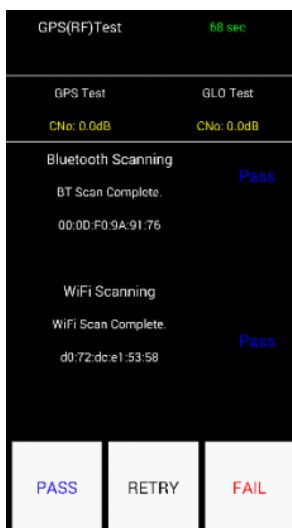
### Touch window test

- Write with finger



### Motion Sensor Test

- Check Magnetic, Accelerometer, Gyroscope Sensor



### GPS BT WIFI Test



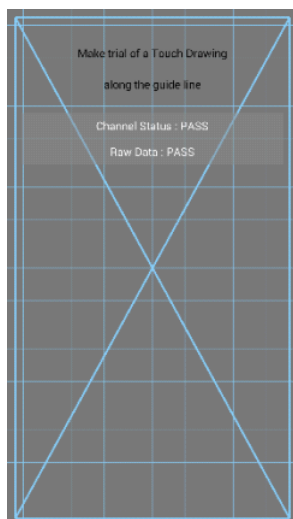
	<p><b>HDMI Test</b></p> <p>: Using HDMI output</p>
	<p><b>NFC Test</b></p>
	<p><b>FM Radio</b></p>




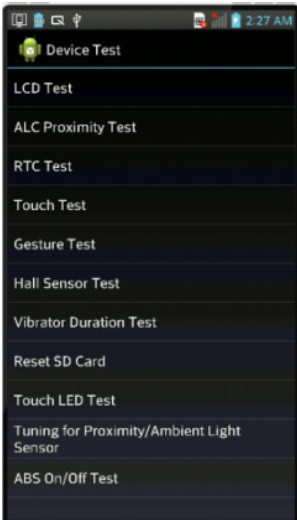
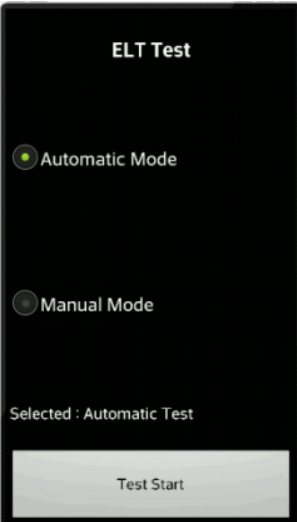
### Loopback Test : Audio

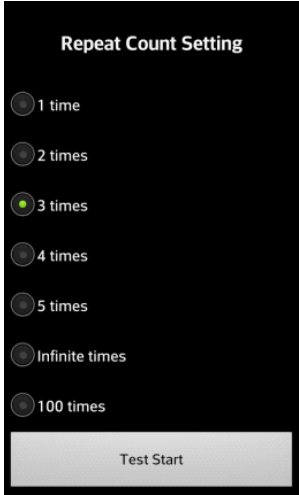
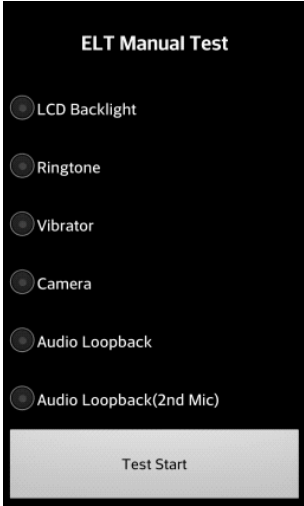
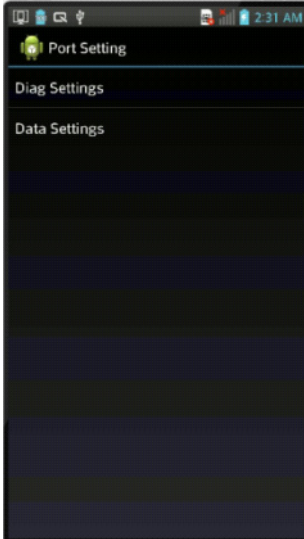


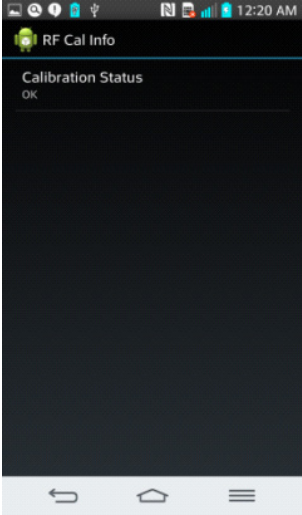
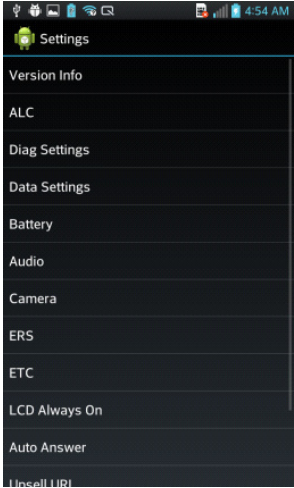
### Sensor Test

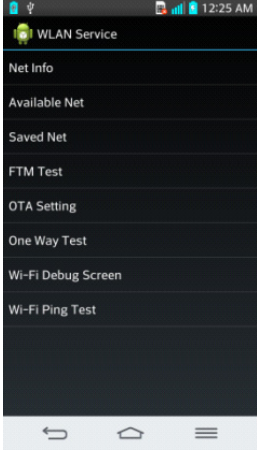
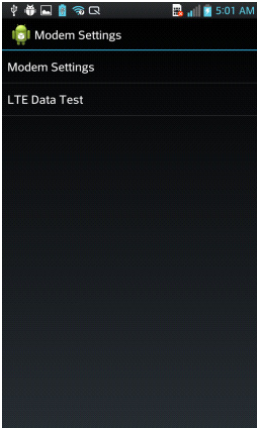


### Touch Draw Auto

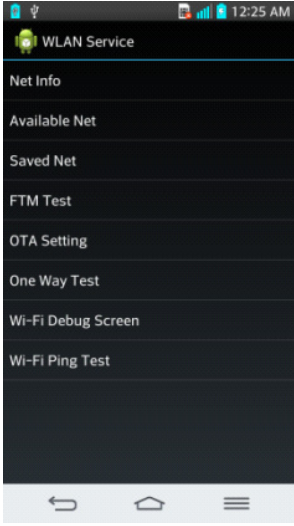
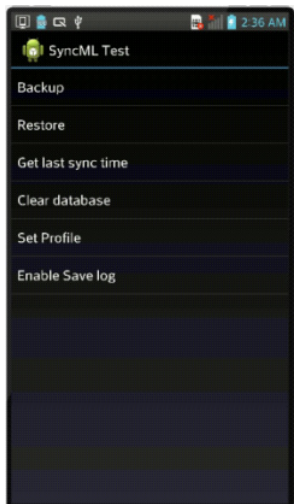
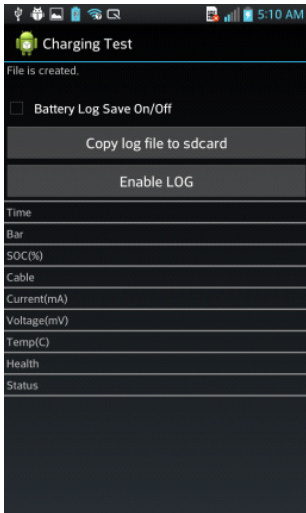
 <p>The screenshot shows the 'Camera OIS Test' interface. At the top, it says 'Camera OIS Test' and 'FujiFilm_ROHM'. Below this, there are three rows of test results: 'Gyro' with a green background and 'FAIL' in red; 'Hall' with a blue background and 'PASS' in white; and 'Driver' with a green background and 'FAIL' in red. At the bottom, there is a 'START' button and a 'FAIL' button.</p>	<p><b>Camera OIS Test</b></p>
 <p>The screenshot shows the 'Device Test' menu. The title is 'Device Test'. Below it, there is a list of test options: LCD Test, ALC Proximity Test, RTC Test, Touch Test, Gesture Test, Hall Sensor Test, Vibrator Duration Test, Reset SD Card, Touch LED Test, Tuning for Proximity/Ambient Light Sensor, and ABS On/Off Test.</p>	<p><b>HW Device Test</b></p> <ul style="list-style-type: none"> <li>- LCD Test</li> <li>- Manual Test, Automatic Test, Mura, LCD Inversion Test</li> <li>- ALC Proximity Test</li> <li>- RTC Test</li> <li>- Touch Test</li> <li>- Touch LED Test</li> <li>- Gesture Test</li> <li>- Reset SD Card</li> <li>- Hall Sensor Test</li> <li>- Vibrator Duration Test</li> <li>- Tuning for Ambient Light Sensor</li> <li>- ABS On/Off Test</li> </ul>
 <p>The screenshot shows the 'ELT Test' screen. At the top, it says 'ELT Test'. Below this, there are two radio button options: 'Automatic Mode' (selected) and 'Manual Mode'. At the bottom, it says 'Selected : Automatic Test' and there is a 'Test Start' button.</p>	<p><b>ELT Test</b></p> <p>Automatic Mode -&gt;Test Automatically Manual Mode : Test selectivity</p>


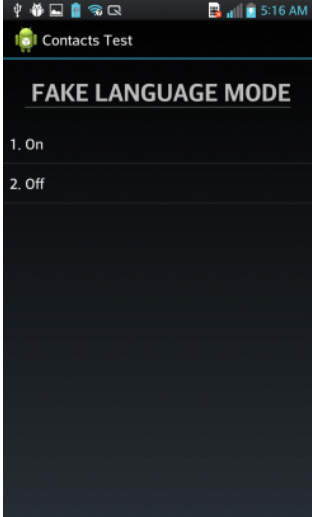
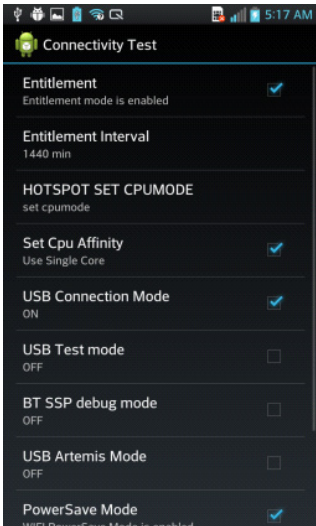
 <p><b>Repeat Count Setting</b></p> <ul style="list-style-type: none"> <li>1 time</li> <li>2 times</li> <li>3 times</li> <li>4 times</li> <li>5 times</li> <li>Infinite times</li> <li>100 times</li> </ul> <p>Test Start</p>	<p><b>ELT Test</b></p> <p>Automatic Mode : LCD Automatic on/off test</p> <p>-&gt; time setting</p>
 <p><b>ELT Manual Test</b></p> <ul style="list-style-type: none"> <li>LCD Backlight</li> <li>Ringtone</li> <li>Vibrator</li> <li>Camera</li> <li>Audio Loopback</li> <li>Audio Loopback(2nd Mic)</li> </ul> <p>Test Start</p>	<p><b>ELT Manual Test</b></p> <p>LCD Backlight</p> <p>Ringtone</p> <p>Vibrator</p> <p>Camera</p> <p>Audio Loopback</p> <p>Audio Loopback(2nd Mic)</p> <p>-&gt; test on the device is working</p> <p>(The ability to use plant)</p>
 <p><b>Port Setting</b></p> <p>Diag Settings</p> <p>Data Settings</p>	<p><b>Port Setting</b></p> <p>Diag Settings</p> <ul style="list-style-type: none"> <li>- USB Set for Diag</li> <li>- UART Set for Diag</li> <li>- NULL port</li> </ul> <p>Data Settings</p> <ul style="list-style-type: none"> <li>- USB Set for Data</li> <li>- BT Set for Data</li> <li>- UART Set for Data</li> <li>- NULL port</li> </ul>

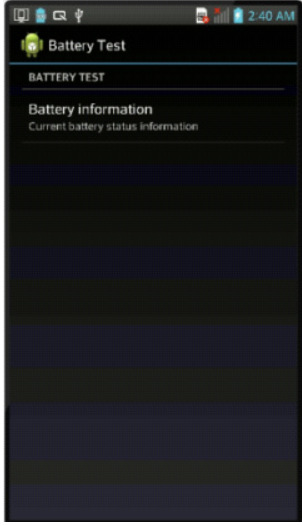
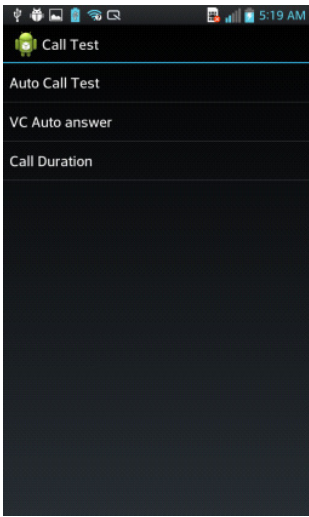
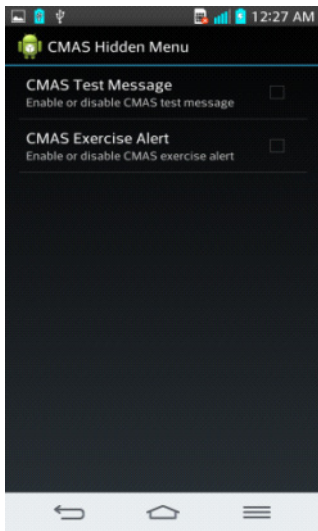
	<p><b>RF Cal Info</b></p> <ul style="list-style-type: none"> <li>- Check Calibration Status</li> </ul>
	<p><b>Settings</b></p> <ul style="list-style-type: none"> <li>Version Info -ALC</li> <li>- Diag Settings -Data Settings</li> <li>- Battery</li> <li>- Audio</li> <li>- Camera</li> <li>- ERS</li> <li>- ETC</li> <li>- LCD Always On</li> <li>- Auto Answer</li> <li>- Upsell URL</li> <li>- ATS Start Property on</li> <li>- Update Touch Firmware</li> <li>APN Delete</li> <li>FastDormancy</li> </ul>

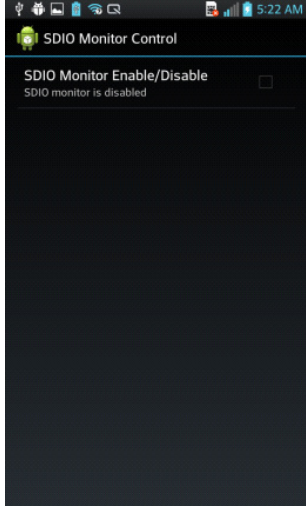

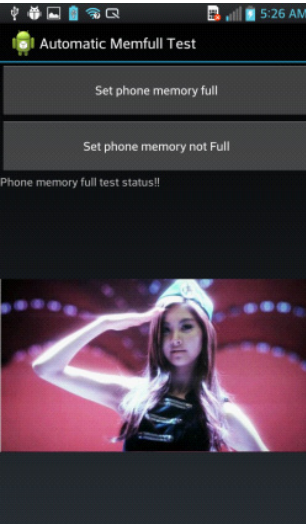
	<p><b>WCDMA Only</b></p> <p>DM/FOTA Test</p> <ul style="list-style-type: none"> <li>- Factory Reset</li> </ul> <p><b>Format SD Card, Factory reset</b></p> <ul style="list-style-type: none"> <li>- Modem Settings</li> <li>- Module Test</li> <li>- SIM Test</li> <li>- Call Test</li> <li>- Aging Test</li> <li>- SMS_AgingTest</li> <li>- Steaming</li> <li>- WAP Debug</li> <li>- DRM Test</li> <li>- Contacts Test</li> <li>- Log service</li> <li>- Fake Language</li> <li>- Mms Test</li> <li>- Flex test</li> </ul>
	<p><b>LTE Only</b></p> <ul style="list-style-type: none"> <li>• Modem Settings <ul style="list-style-type: none"> <li>- RAT Selection</li> <li>- LTE Band Selection</li> <li>- VoLTE Radio NV On/off</li> <li>- Null integrityOn/Off</li> </ul> </li> <li>• LTE Data Test <ul style="list-style-type: none"> <li>- Port Forwarding Test On/Off</li> <li>- Auto Tethering Test On/Off</li> <li>- Tethering Mode</li> <li>- Rmnet AutoConnect Mode</li> </ul> </li> </ul>

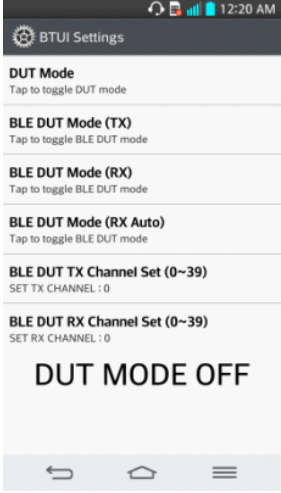
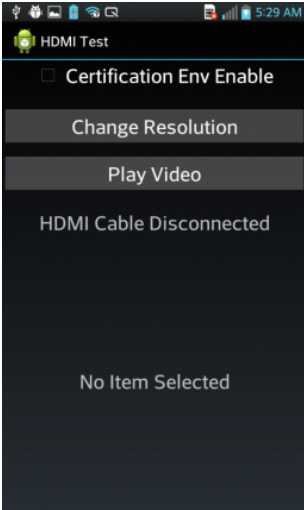
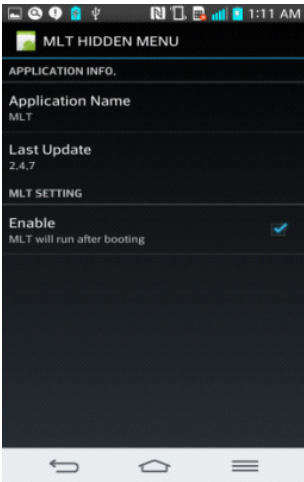


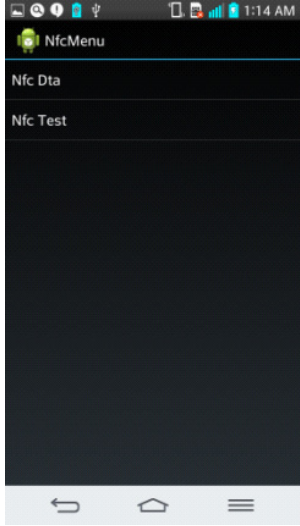
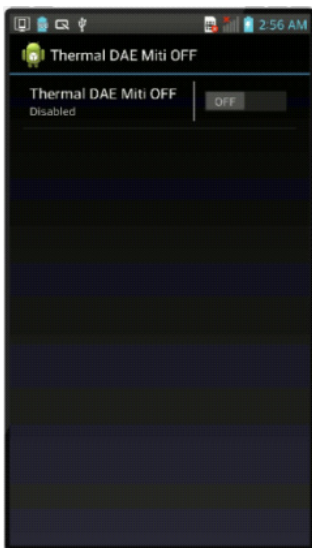
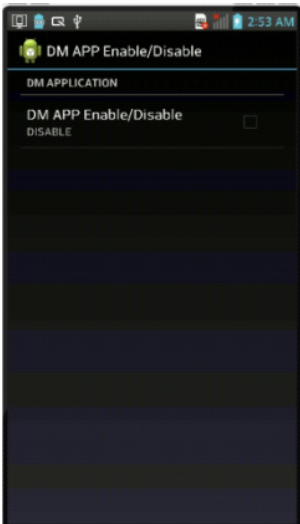
	<p><b>WLAN Test</b></p> <ul style="list-style-type: none"> <li>- WLAN performance on SW</li> </ul>
	<p><b>SyncML Test</b></p> <ul style="list-style-type: none"> <li>- Backup</li> <li>- Restore</li> <li>- Get last sync time</li> <li>- Clear database</li> <li>- Set Profile</li> <li>- Enable Save log</li> </ul>
	<p><b>Charging Test</b></p> <ul style="list-style-type: none"> <li>- You can Battery Log Save On/Off</li> </ul>

	<p><b>GNSS Test</b></p> <p>GPS Test</p>
	<p><b>Fake Language</b></p>
	<p><b>Connectivity Test</b></p>

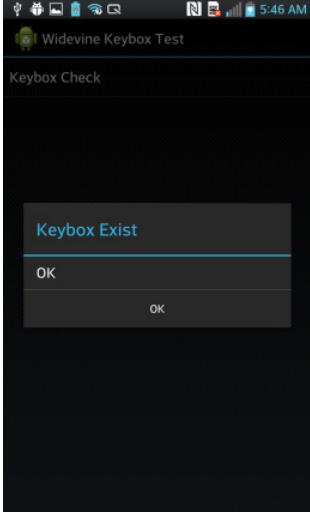
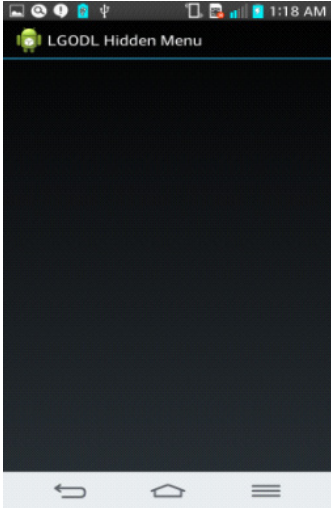
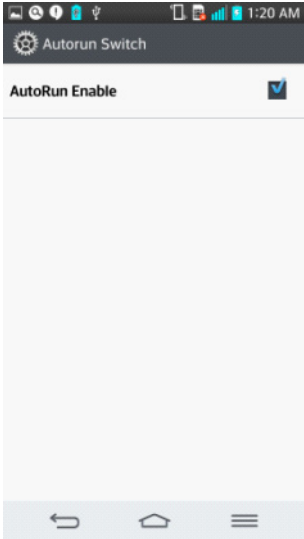
	<p><b>Battery Test</b></p>
	<p><b>Call Test</b></p> <ul style="list-style-type: none"> <li>- Auto Call Test</li> <li>- VC Auto Answer</li> <li>- Call Duration</li> </ul>
	<p><b>CMAS_RMT</b></p>

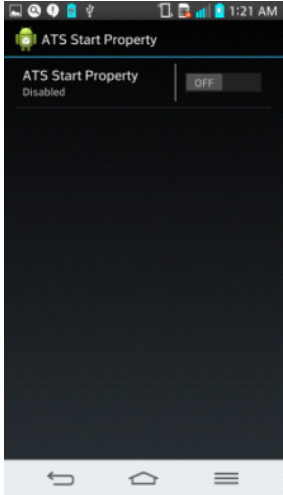
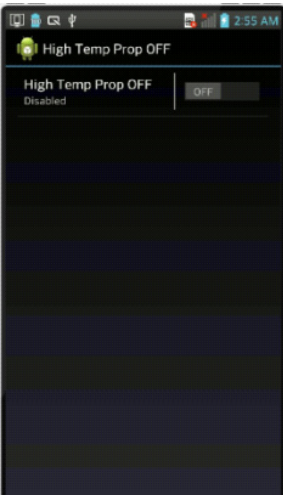
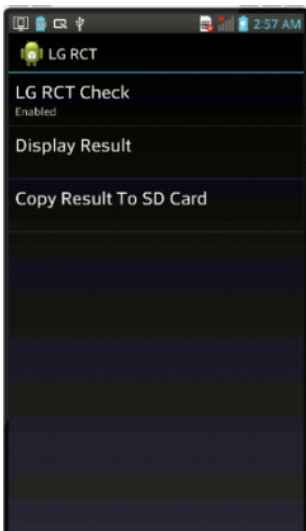
 <p>The screenshot shows the 'SDIO Monitor Control' screen. At the top, it says 'SDIO Monitor Enable/Disable' with a checkbox that is currently unchecked. Below this, it states 'SDIO monitor is disabled'.</p>	<p><b>SDIO Monitor Control</b></p> <p>- SDIO Monitor Enable/Disable</p>
 <p>The screenshot shows the 'LTE ANT Setting' screen. It has three toggle buttons at the top: 'PRX On', 'DRX On', and 'PRX/DRX On'. Below these is a section titled 'LTE ML1 Serving Cell Measurements Display' with a table showing measurements for 'ANT0', 'ANT1', and 'Comb'. The measurements include RSRP, RSRQ, RSSI, and SINR. Below the table are four empty rows for additional data. At the bottom, there are three navigation icons: a back arrow, a home button, and a menu icon.</p>	<p><b>Prx Drx On Off</b></p> <p>- Prx Drx On Off-&gt;LTE + WCDMA</p>
 <p>The screenshot shows the 'Automatic Memfull Test' screen. It has two buttons: 'Set phone memory full' and 'Set phone memory not Full'. Below these buttons, it says 'Phone memory full test status!!'. At the bottom of the screen, there is a photo of a woman in a futuristic, glowing outfit.</p>	<p><b>SMS Test</b></p> <p>SMS Test -&gt; GCF Memory full SMMA Test</p>

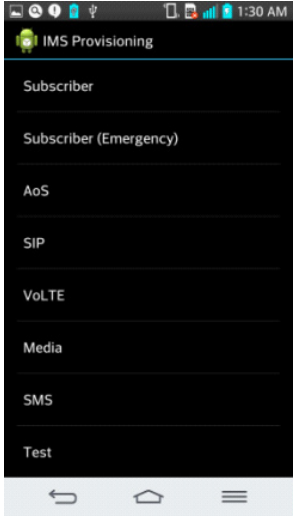
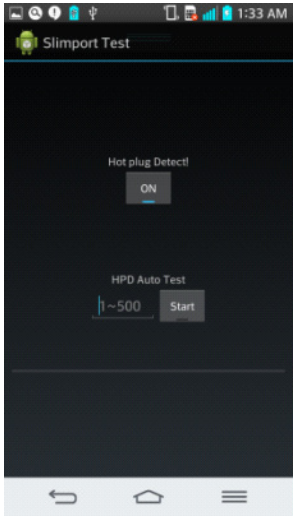
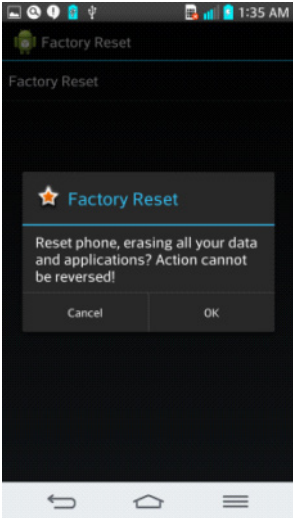
	<p><b>BT Test</b></p> <ul style="list-style-type: none"> <li>- DUT Mode On/Off Test</li> </ul>
	<p><b>HDMI Test</b></p> <ul style="list-style-type: none"> <li>• Change Resolution</li> <li>• Play Video</li> </ul>
	<p><b>MLT Test</b></p> <ul style="list-style-type: none"> <li>- Application Name</li> <li>- Last Update</li> <li>- Enable</li> </ul>

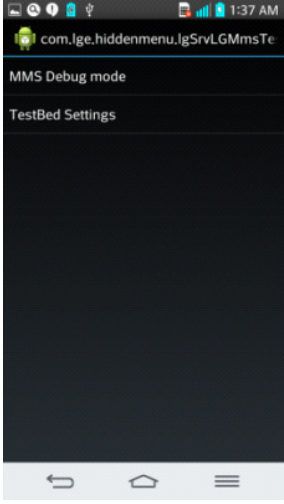
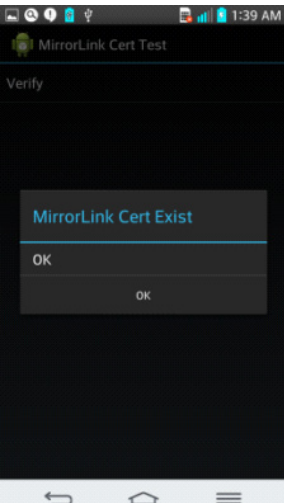
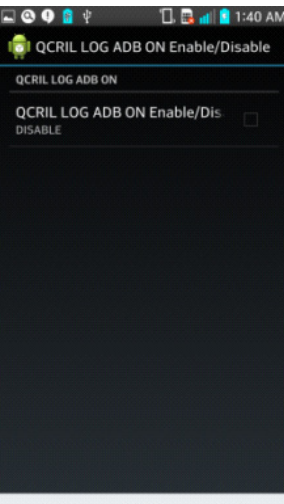
	<p><b>NFC Test</b></p> <p>- NFC test menu</p>
	<p><b>Thermal Daemon Mitigation OFF</b></p>
	<p><b>DM APP Enable/Disable</b></p>



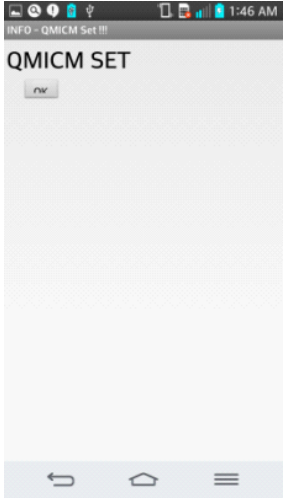
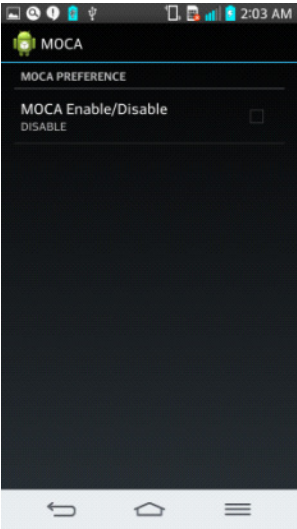
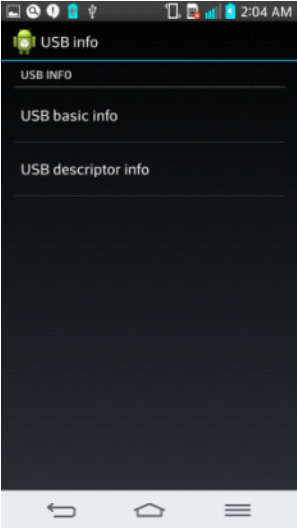
	<p><b>WVDRM Keybox</b></p>
	<p><b>LGODL On/OFF</b></p>
	<p><b>Autorun Test</b></p>

	<p><b>ATS Start Property On/OFF</b></p>
	<p><b>High Temperature Property OFF</b></p>
	<p><b>LG RCT</b></p>

 <p>The screenshot shows the 'IMS Provisioning' menu with the following options: Subscriber, Subscriber (Emergency), AoS, SIP, VoLTE, Media, SMS, and Test.</p>	<p><b>IMS</b></p> <ul style="list-style-type: none"> <li>- Subscriber</li> <li>- Subscriber (Emergency)</li> <li>- Aos</li> <li>- SIP</li> <li>- VoLTE</li> <li>- Media</li> <li>- SMS</li> <li>- Test</li> </ul>
 <p>The screenshot shows the 'Slimport Test' menu with two sections: 'Hot plug Detect!' with an 'ON' button, and 'HPD Auto Test' with a range '1~500' and a 'Start' button.</p>	<p><b>Slimport Test</b></p>
 <p>The screenshot shows a 'Factory Reset' dialog box with the text: 'Reset phone, erasing all your data and applications? Action cannot be reversed!'. It has 'Cancel' and 'OK' buttons.</p>	<p><b>Factory Reset</b></p>

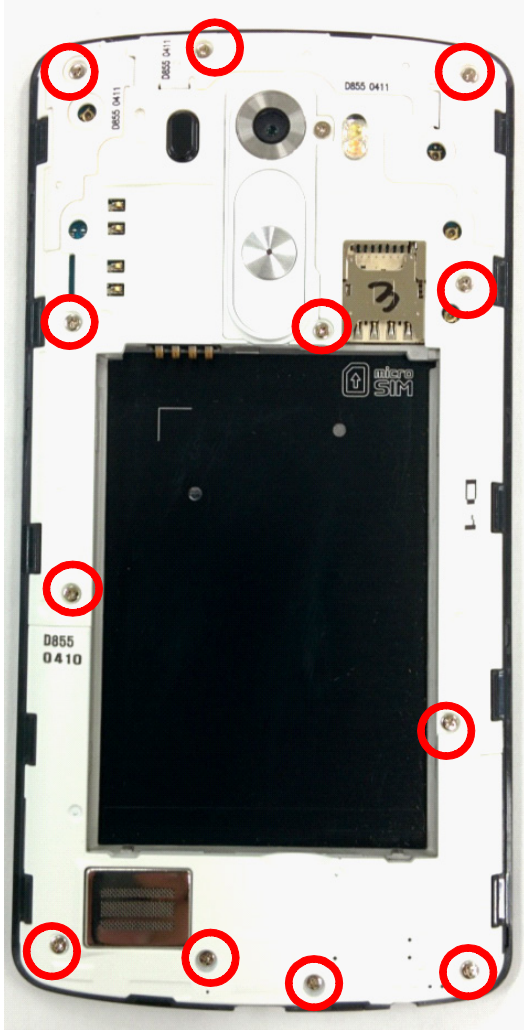
	<p><b>MMS – LG</b></p> <ul style="list-style-type: none"> <li>- MMS Debug mode</li> <li>- MMS Debug mode ON</li> <li>- MMS Debug mode OFF</li> <li>- TestBed Setting =&gt; not used</li> </ul>
	<p><b>MirrorLink Test</b></p>
	<p><b>QCRIL LOG ADB ON</b></p>

## 10. HIDDEN MENU

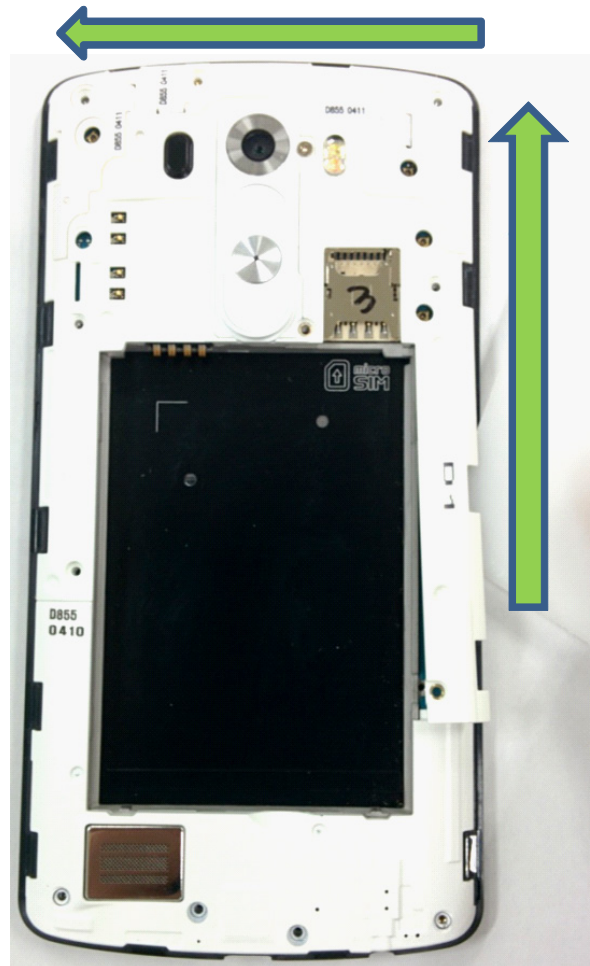
	<b>QMICMSet</b>
	<b>MOCA</b>
	<b>USB info</b>

## 11. DISASSEMBLE GUIDE

### 1. Disassemble Rear Cover, Main antenna



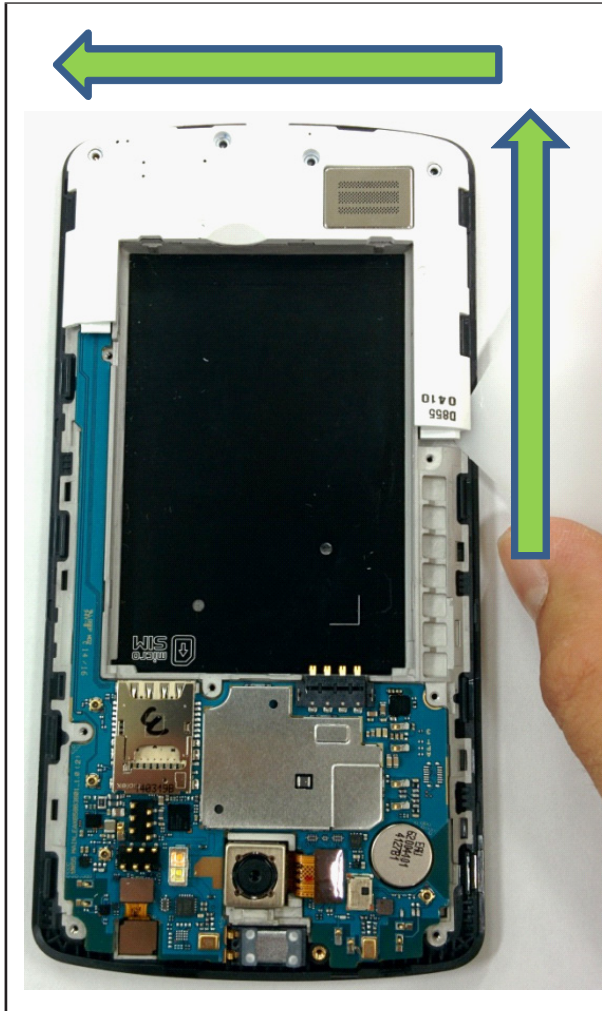
Disassemble screw (12ea)



Disassemble Rear Cover



## 11. DISASSEMBLE GUIDE

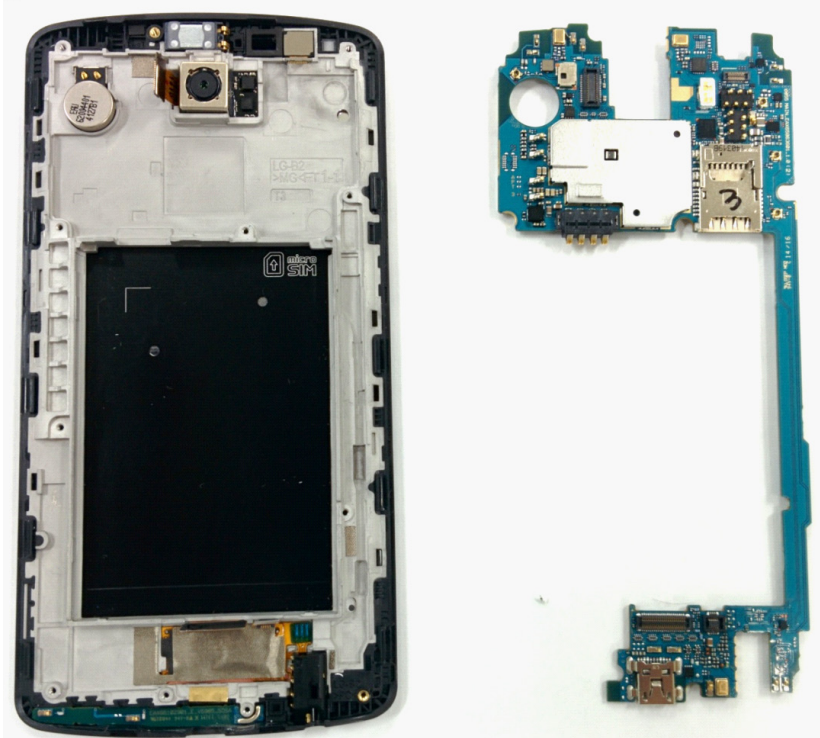


Disassemble Main Antenna

## 2. Disassemble Main PCB

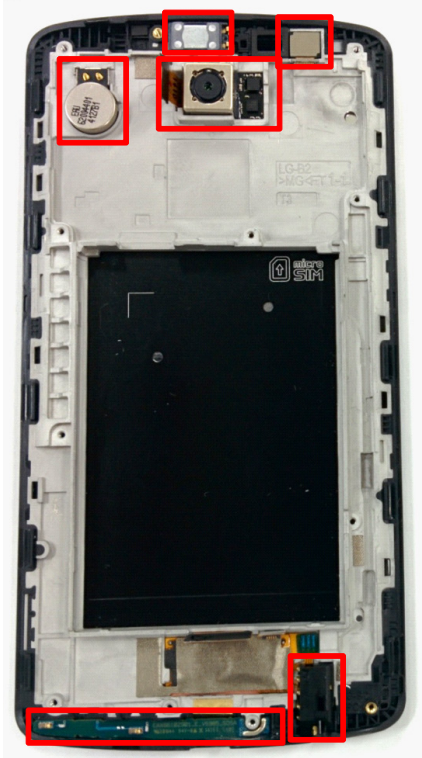


Disassemble connector

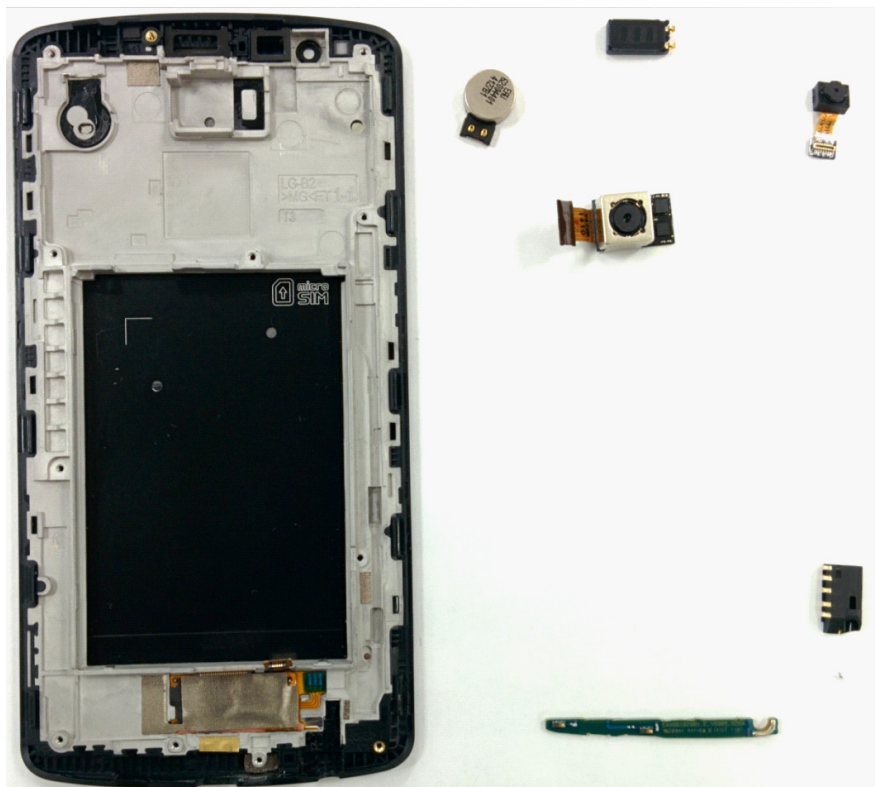


Disassemble Main PCB

## 3. Disassemble H/W parts

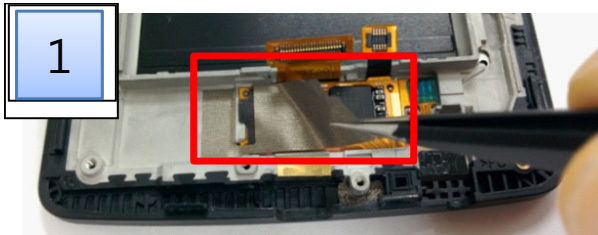


Disassemble H/W parts (6ea)

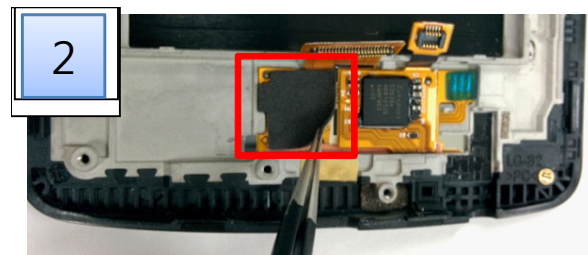




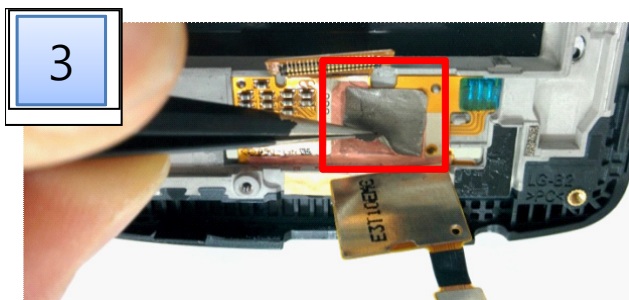
## 4. Disassemble Gasket, pad



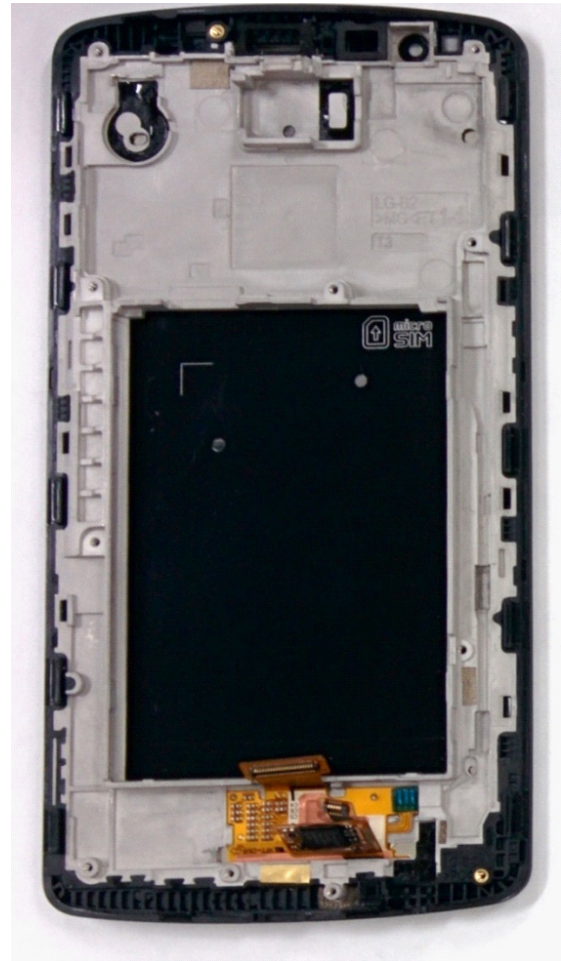
Disassemble Gasket touch IC



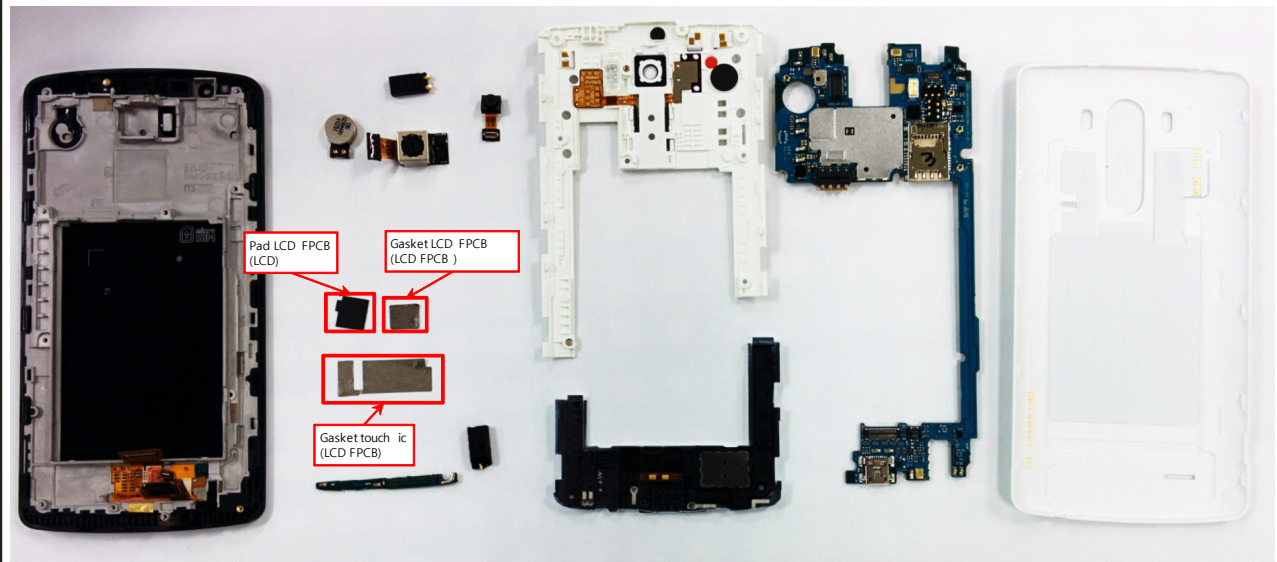
Disassemble Pad LCD FPCB



Disassemble Gasket LCD FPCB

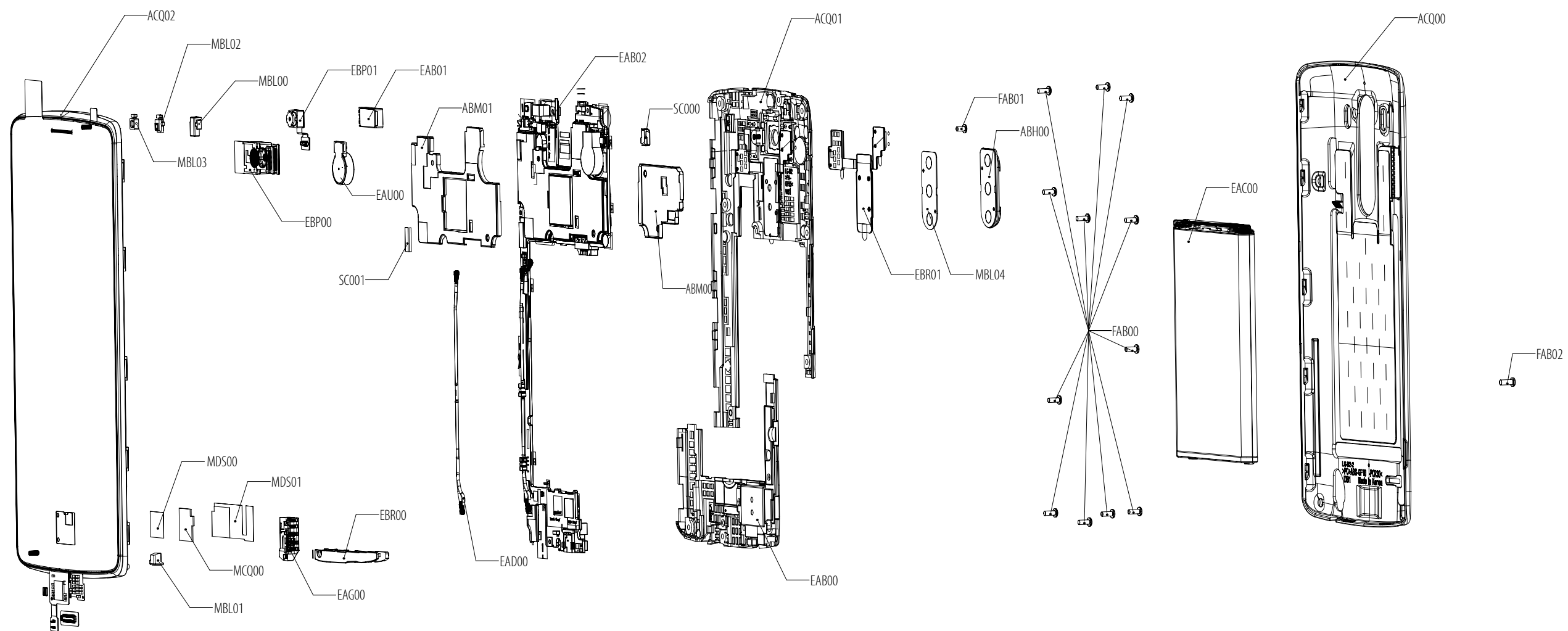


### 5. Complete disassembling D855



12. EXPLODED VIEW & REPLACEMENT PART LIST

12.1 EXPLODED VIEW(SBOM)



Location	Description	Location	Description	Location	Description	Location	Description	Location	Description
EAB00	Speaker Module	MBL02	Cap	MCQ00	Damper	FAB02	Screw, Tapping	ACQ00	Cover Assmebly, Battery
FAB00	Screw, Machine	MBL03	Cap	MDS01	Gasket	EBR02	PCB Assmebly, Main	EAC00	Rechargeable Battery, Lithium Ion
EAB01	Receiver	MDS00	Gasket	ACQ01	Cover Assembly, Rear	ABM00	Can Assembly, Shield		
EAG00	Jack, Phone	EAU00	Motor, DC	ABH00	Button Assembly	ABM01	Can Assembly, Shield		
ACQ02	Cover Assembly, Bar(Syb)	EBP00	Camera Module	MBL04	Cap	EAD00	Cable ,Assembly		
MBL00	Cap	EBP01	Camera Module	EBR01	PCB Assmebly, Flexible	SC000	Can, Shield		
MBL01	Cap	EBR00	PCB Assmebly, Sub	FAB01	Screw, Machine	SC001	Can, Shield		



## 12. EXPLODED VIEW & REPLACEMENT PART LIST

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

### 12.2 Replacement Parts <Mechanic component>

**Note:** This Chapter is used for reference. Part order is ordered

by SBOM standard on GCSC

Level	Location no	Description	P/N	Specification	Remark
1	AAD000000	Addition Assembly	AAD87042601	LGD855.A6D2TN TN:TITAN TITAN -	
5	ABH00	Button Assembly	ABH74999612	LGD855.A6D2TN BK:BLACK BLACK D855_Button_Assy_Rear_Key	
5	ABM00dddd	Can Assembly Shield	ABM74416701	LGD855.ADEUWH ZY:Color Unfixed -	
5	ABM01	Can Assembly Shield	ABM74416801	LGD855.ADEUWH ZY:Color Unfixed -	
2	ACQ00	Cover Assembly Battery	ACQ87482402	LGD855.ADEUWH TN:TITAN TITAN -	
3	ACQ003400	Cover Assembly Bar	ACQ87133402	LGD855.ADEUTN TK:TITAN BLACK -	
3	ACQ01	Cover Assembly Rear	ACQ87172302	LGD855.ADEUTN TK:TITAN BLACK -	
4	ACQ02	Cover Assembly Bar(Sub)	ACQ87190302	LGD855.ADEUTN TL:Titanium Black -	
5	ACQ032700	Cover Assembly Front	ACQ87172202	LGD855.ADEUTN TK:TITAN BLACK -	
6	ACQ033200	Cover Assembly Front(Sub)	ACQ87132902	LGD855.ADEUTN TK:TITAN BLACK -	
5	ACQ063401	Cover Assembly Rear(Sub)	ACQ87133102	LGD855.ADEUTN TK:TITAN BLACK -	
2	ACQ100400	Cover Assembly EMS	ACQ87528901	LGD855.A6D2TN TN:TITAN TITAN -	
4	ACQ105800	Cover Assembly Rear(SVC)	ACQ87133502	LGD855.ADEUTN TK:TITAN BLACK -	
5	ACW000000	Decor Assembly	ACW74417202	LGF400L.ALGTTN BK:BLACK BLACK -	
7	ADB048600	Dome Assembly,Metal	ADB74258101	LGF400L.ALGTWH WH:WHITE WHITE -	
1	AGF000000	Package Assembly	AGF77485801	LGD855.A6D2TN BK:BLACK BLACK LG- D855(B2 Global) 6D2(STD UB/English USP LB/Seal_UB2/Body/Cap/600ea)	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
2	AGJ000000	Pallet Assembly	AGJ73858401	LGD855.A6D2TN BK:BLACK BLACK LG-D855(B2 Global) 6D2 Pallet assy(Body/Cap/1200X800 Size/600ea)	
1	AGQ000000	Phone Assembly	AGQ87902301	LGD855.A6D2TN TN:TITAN TITAN -	
7	ANT100 ANT101 ANT102	C-Clip	EAG63730501	TE 1.1H C-CLIP 1P ANT TERMINAL STRAIGHT SMD T/REEL AU 2.5 X 1.0X 1.1(L X W X H) SERVEONE CO., LTD.	
6	ANT100 ANT101 ANT102	C-Clip	EAG63730501	TE 1.1H C-CLIP 1P ANT TERMINAL STRAIGHT SMD T/REEL AU 2.5 X 1.0X 1.1(L X W X H) SERVEONE CO., LTD.	
6	ANT100 ANT101 ANT102	C-Clip	EAG63730501	TE 1.1H C-CLIP 1P ANT TERMINAL STRAIGHT SMD T/REEL AU 2.5 X 1.0X 1.1(L X W X H) SERVEONE CO., LTD.	
6	ANT1102 CN11005	C-Clip	EAG63613001	2108612-5 1P ANT TERMINAL STRAIGHT SMD T/REEL AU 2.9X1.0X2.05(L X W X H) SERVEONE CO., LTD.	
6	ANT1113	C-Clip	EAG63910001	1201-01A 1P ANT TERMINAL STRAIGHT SMD REEL AU 2.6X1.0X0.9(LXWXH) SERVEONE CO., LTD.	
6	ANT1113	C-Clip	EAG63910001	1201-01A 1P ANT TERMINAL STRAIGHT SMD REEL AU 2.6X1.0X0.9(LXWXH) SERVEONE CO., LTD.	
6	ANT18000 ANT18001 CN5200 CN5202	C-Clip	EAG63651901	2108609-5 1P ANT TERMINAL STRAIGHT SMD T/REEL AU 2.9 X 1.0 X 3.0(L X W X H) SERVEONE CO., LTD.	
6	ANT5103	C-Clip	EAG63652301	2108610-5 1P ANT TERMINAL STRAIGHT SMD T/REEL AU 2.9X1.0X1.4(L X W X H) SERVEONE CO., LTD.	
6	ANT5103	C-Clip	EAG63652301	2108610-5 1P ANT TERMINAL STRAIGHT SMD T/REEL AU 2.9X1.0X1.4(L X W X H) SERVEONE CO., LTD.	
3	FAB00	Screw,Machine	GMEY0009201	GMEY0009201 BH + 2.7mM 3.5mM MSWR3 FZB N N LG ELECTRONICS INC.	
5	FAB01	Screw,Machine	GMEY0012902	GMEY0012902 FH + 1.4mM 2.5mM MSWR ZN N - LG ELECTRONICS INC.	
3	FAB02	Screw,Tapping	FAB32258701	BH + 1 2.7M 3.5M NI PLT ZN	
6	FB1000 FB95101	Filter,Bead	EAM62471001	BLM03AX241SN1D 240 ohm 0.6X0.3X0.33 25% 0.38 ohm 0.35A SMD R/TP 2P 0 MURATA MANUFACTURING CO.,LTD.	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	FB4400 FB4401	Filter,Bead	EAM62070901	BLM03AX601SN1D 600 ohm 0.6X0.3X0.3 25% 0.85 ohm 0.25A SMD R/TP 2P 0 MURATA MANUFACTURING CO.,LTD.	
6	FB6100 FB6920 FB6921 FB6922	Filter,Bead	SFBH0008102	BLM15HD182SN1D 1800 ohm 1.0X0.5X0.5 25% 2.2 ohm 0.2A SMD R/TP 2P 0 MURATA MANUFACTURING CO.,LTD.	
6	FB6101 FB6201 FB6202	Filter,Bead	EAM62633801	MPZ1608S601AT000 600 1.6X0.8X0.8 25% 0.15 1 SMD R/TP 2P - TDK KOREA COOPERATION	
6	FB6610	Filter,Bead	SFBH0008103	BLM15BD102SN1D 1000 ohm 1.0X0.5X0.5 25% 0.9 ohm 0.2A SMD R/TP 2P 0 MURATA MANUFACTURING CO.,LTD.	
6	FB6611 FB6612 L6001 L6203 L6204	Inductor Multilayer,Chip	ELCH0001444	0402AF-101XJEW 100NH 5% - 900mA - - 0.16OHM 1.4GHZ 8 NON SHIELD NONE 1.12X0.66X0.66MM R/TP COILCRAFT SINGAPORE PTE LTD.	
6	FB6923FB6924	Inductor Multilayer,Chip	ELCH0003842	LQG15HSR10J02D 100NH 5% - 150mA - - 1.25OHM 600MHZ 8 SHIELD NONE 1.0X0.5X0.5MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	FL1000	Filter,Separator	EAM63190301	DPX105950DT-6112A3 0.50dB / 0.80dB - 30dB max. LPF@2.4G / BPF@5.0G TDK CORPORATION	
6	FL1001	Filter,Ceramic	EAM62690501	ACPF-7124 BPF 2.44GHZ 1.4x1.1x0.8t SMD R/TP 5P AVAGO TECHNOLOGIES INTERNATIONAL SALES PTE. LIMITED	
6	FL1101 FL1108	Coupler RF Directional	ECA30240001	LDJ18829M24AD011 1.6x0.8x0.7t SMD COUPLER 1694MHz 1992MHz (698~2690MHz) SMD R/TP 22.4 to 25.7 0.16 26 - MURATA MANUFACTURING CO.,LTD.	
6	FL1102 FL1666 FL1801	Filter,Saw	EAM62810801	885049 2350MHz 1.4x1.2x0.46t SMD R/TP 5P TRIQUINT SEMICONDUCTOR INC.	
6	FL1111	Filter,Saw	EAM63130201	SAFFB773MAA0F0A 773.0MHz 1.1x0.9x0.5t SMD R/TP 5P MURATA MANUFACTURING CO.,LTD.	
6	FL1202	Module Rx Module	EAT62373101	D5201 0DBM 0DB 0% 0A 0A 0DB 0DBM 0DBM 40P 5.0x4.0x1.0MM - EPCOS PTE LTD.	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	FL1203	Filter,Duplexer	EAM62632601	ACMD-6103-TR1 1842.5MHz 1805to1880MHz 1747.5MHz 1710to1785MHz 1.6typ/4.0max 1.5typ/3.5max 2.0x1.6x0.9t DUAL SMD R/TP 9P AVAGO TECHNOLOGIES INTERNATIONAL SALES PTE. LIMITED	
6	FL1208	Filter,Saw	EAM62930701	SAFFB2G65AA0F0A 2655.0MHz 1.1x0.9x0.5t SMD R/TP 5P MURATA MANUFACTURING CO.,LTD.	
6	FL1211	Filter,Separator Switch	EAM63030601	RF1149A 0.25dB@700MHz 27dB@700MHz 32 - RF MICRO DEVICES INC	
6	FL1211	Filter,SeparatorSwitch	EAM63030601	RF1149A 0.25dB@700MHz 27dB@700MHz 32 - RF MICRO DEVICES INC	
6	FL1212	Filter,Saw	EAM63310701	SAFFB788MAA0F0A 788.0MHz 1.1x0.9x0.5t SMD R/TP 5P MURATA MANUFACTURING CO.,LTD.	
6	FL1300 FL1702	Filter,Ceramic	EAM62691501	LFL18829MTCRD627 LPF 829MHZ 698 to 960 MHz SMD R/TP 6P MURATA MANUFACTURING CO.,LTD.	
6	FL1600	Filter,Duplexer	EAM63230001	ACMD-6307 2655MHz 2620 to 2690MHz 2535MHz 2500 tp 2570MHz 3.0dB 3.5dB 1.6x2.0x0.925 DUAL SMD P/TR 9P AVAGO TECHNOLOGIES INTERNATIONAL SALES PTE. LIMITED	
6	FL1655	Filter,Duplexer	EAM62931601	SAYFH718MBA0F0A 773.0MHz 758.0to788.0MHz 718.0MHz 703.0to733.0MHz 2.3dB typ / 3.7dB max 2.5dB typ / 3.0dB max 2.0x1.6x0.6t DUAL SMD R/TP 9P MURATA MANUFACTURING	
6	FL1667	Filter,Duplexer	EAM63330301	SAYFH733MBA0F0A 788MHz 10~748, 814~6000 733MHz 10~710, 758~6000 2.3/2.7 2.3/2.9 2.0*1.6* DUAL SMD R/TP 9P MURATA MANUFACTURING CO.,LTD.	
6	FL1703	Filter,Duplexer	EAM63130401	B8633 806.0MHz 791.0to821.0MHz 847.0MHz 832.0to862.0MHz 1.90/3.20dB 1.80/2.50dB 2.0x1.6x0.47t DUAL SMD R/TP 9P EPCOS PTE LTD.	
6	FL1704	Filter,Saw	EAM62690401	B9485 847MHz 1.4x1.1x0.4t SMD TP 5P EPCOS PTE LTD.	
6	FL1752 FL1753	Filter,SeparatorSwitch	EAM62730001	XMSS1R6G0PA-001TMP 0.2~0.5dB 17~35dB 20dBm - MURATA MANUFACTURING CO.,LTD.	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	FL1755	Filter,Saw	EAM62771001	B9876 2140.0MHz 1.1x0.9x0.45t SMD R/TP 5P EPCOS PTE LTD.	
6	FL1757	Filter,Saw	EAM62872101	SAFFB1G84AB0F0A 1842.50MHz 1.1x0.9x0.5t SMD R/TP 5P MURATA MANUFACTURING CO.,LTD.	
6	FL1758	Filter,Saw	EAM62930501	B8814 806.0MHz 1.1x0.9x0.4t SMD R/TP 5P EPCOS PTE LTD.	
6	FL1759	Filter,Saw	EAM62732801	B8808 881.5MHz 1.1x0.9x0.45t SMD R/TP 5P EPCOS PTE LTD.	
6	FL1760	Filter,Saw	EAM62732901	B8803 942.5MHz 1.1x0.9x0.45t SMD R/TP 5P EPCOS PTE LTD.	
6	FL2300 FL2301 FL2302 FL2303 FL2304 FL2305 FL2306 FL2307 FL2308 FL2309	Capacitor,Low ESL	EAE63462901	NFM15PC435R0G3D_ 4.3uF -20TO20% 4V X5R -55TO+85C 1005 R/TP Max 0.5T (L:1.0+-0.2 W:0.5+-0.2 T:0.4+-0.1) MURATA MANUFACTURING CO.,LTD.	
6	FL4750	Filter,EMI/Power	EAM62790301	NFM18PC225B1A3D_ EMI - 0.0000022F 0H SMD R/TP size : 1.6x0.8x0.6 (3 terminal cap) MURATA MANUFACTURING CO.,LTD.	
6	FL7100 FL7101 FL7102 FL7104 FL7105 FL7900 FL7901	Filter,EMI/Power	EAM62630501	ICMEF104P101MFR COMMON MODE NOISE FILTER - 0.0000000000017F 0H SMD R/TP - INNOCHIPS TECHNOLOGY	
6	FL7400	Filter,EMI/Power	SFEY0015901	ICMEF214P101MFR ICMEF214P101MFR ICMEF214P101MFR,SMD ,ESD Common mode Filter INNOCHIPS TECHNOLOGY	
6	FL7600	Filter,LCR	EAM62451101	ICMEF112P350MFR COMMON MODE NOISE FILTER 0HZ 0F 0H SMD R/TP Common mode Impedance at 100MHz : 35ohm+-30%, DC Resistance Max :3.0ohm INNOCHIPS TECHNOLOGY	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	FL7600	Filter,LCR	EAM62451101	ICMEF112P350MFR COMMON MODE NOISE FILTER 0HZ 0F 0H SMD R/TP Common mode Impedance at 100MHz : 35ohm+ -30%, DC Resistance Max :3.0ohm INNOCHIPS TECHNOLOGY	
6	FL7902	Filter,EMI/Power	EAM62570201	ICMEF062P900MFR COMMON MODE NOISE FILTER - 0.0000000000017F 0H SMD R/TP - INNOCHIPS TECHNOLOGY	
6	FL95102	Coupler RF Bi-Directional	ECA30260001	HHM2510B1 0.5x0.65 SMD COUPLER 2450, 5375 2400-2500, 4900-5850 SMD R/TP 2.4-2.5GHz(19),4.9-5.85GHz(12.5) 2.4-2.5GHz(0.3),4.9-5.85GHz(0.4) 2.4-2.5GHz(30min),4.9-5.85GHz(25min) - TDK CORPORATION	
3	MAY010800	Box,Carton	MAY66695601	COMPLEX LGD855.A6D2TN BK:BLACK BLACK LG-D855(B2 Global) 6D2 Body (1200X800 Size)_1/600	
2	MAY047100	Box,Master	MAY66695701	COMPLEX LGD855.A6D2TN BK:BLACK BLACK LG-D855(B2 Global) VD2(Small) Master Box	
2	MAY084000	Box,Unit	MAY66695501	COMPLEX LGD855.A6D2KG BK:BLACK BLACK LG-D855(B2 Global) 6D2(English Open) Unit Box Upper	
2	MAY084001	Box,Unit	MAY66695502	COMPLEX LGD855.A6D2KG BK:BLACK BLACK LG-D855(B2 Global) 6D2(English Open) Unit Box Lower	
6	MBF000000	Bush	MBF63223801	COMPLEX LGF350L.ALGTWH ZZ:Without Color -	
6	MBF000000	Bush	MBF63223801	COMPLEX LGF350L.ALGTWH ZZ:Without Color -	
6	MBG000000	Button	MBG65303202	MOLD PC LGF400L.ALGTTN BK:BLACK BLACK -	
6	MBG000001	Button	MBG65323002	CUTTING AL LGF400L.ALGTTN BK:BLACK BLACK -	
6	MBK070300	Can,Shield	MBK63852501	PRESS SUS 0.15 LGD855.ADEUWH ZZ:Without Color -	
6	MBK070300	Can,Shield	MBK63852701	PRESS SUS 0.15 LGD855.ADEUWH ZZ:Without Color -	
6	MBK070301	Can,Shield	MBK64052901	PRESS STS 0.15 LGD855.ADEUWH ZY:Color Unfixed -	



## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	MBK070302	Can,Shield	MBK63993301	PRESS STS 0.15 LGD855.ADEUWH ZY:Color Unfixed -	
6	MBL00	Cap	MBL65877101	MOLD Rubber LGF400L.ALGTWH ZY:Color Unfixed -	
3	MBL007000	Cap,Box	MBL66100101	COMPLEX LGD855.A6D2TN BK:BLACK BLACK LG-D855(B2 Global) 6D2 Cap (1200X800 Size)	
6	MBL01	Cap	MBL65877201	MOLD Rubber LGF400L.ALGTWH ZY:Color Unfixed -	
6	MBL02	Cap	MBL65916901	MOLD Rubber LGF400L.ALGTWH ZY:Color Unfixed -	
6	MBL03	Cap	MBL66099701	MOLD ABS LGF400L.ALGTWH BK:BLACK BLACK -	
6	MBL04	Cap	MBL66117701	MOLD RUBBER SILICON LGF400L.ALGTWH ZZ:Without Color -	
3	MCK004100	Cover,Battery	MCK68167902	MOLD PC+ABS LGD855.ADEUWH TN:TITAN TITAN -	
7	MCK032700	Cover,Front	MCK68105302	MOLD PC LGD855.ADEUTN TK:TITAN BLACK -	
7	MCK032701	Cover,Front	MCK68126301	CASTING MG LGD855.ADEUWH ZZ:Without Color -	
6	MCK063300	Cover,Rear	MCK68105502	MOLD PC LGD850.AATTZY TK:TITAN BLACK -	
4	MCQ00	Damper	MCQ67705201	COMPLEX LGF400L.ALGTWH BK:BLACK BLACK -	
6	MCQ000000	Damper	MCQ67684801	COMPLEX LGF400L.ALGTWH BK:BLACK BLACK -	
5	MCQ000000	Damper	MCQ67685201	COMPLEX LGF400L.ALGTWH BK:BLACK BLACK -	
6	MCQ000001	Damper	MCQ67685001	COMPLEX LGF400L.ALGTWH BK:BLACK BLACK -	
5	MCQ000001	Damper	MCQ67705301	COMPLEX LGF400L.ALGTWH BK:BLACK BLACK -	
6	MCQ000002	Damper	MCQ68006201	COMPLEX LGF400L.ALGTWH BK:BLACK BLACK -	
6	MCQ000003	Damper	MCQ68125301	COMPLEX LGVS985.AVRZTN ZY:Color Unfixed -	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
5	MCQ009400	Damper,Camera	MCQ67685101	COMPLEX LGF400L.ALGTWH BK:BLACK BLACK -	
6	MCQ043300	Damper,LCD	MCQ67684901	COMPLEX LGF400L.ALGTWH BK:BLACK BLACK -	
5	MCR000000	Decor	MCR65486502	PRESS STS 0.2 LGF400L.ALGTWH BK:BLACK BLACK -	
6	MCR000000	Decor	MCR65447202	MOLD PC LGF400L.ALGTTN BK:BLACK BLACK -	
5	MDJ000000	Filter	MDJ63984601	COMPLEX LGF400L.ALGTWH ZZ:Without Color -	
5	MDJ000001	Filter	MDJ63984701	COMPLEX LGF400L.ALGTWH ZZ:Without Color -	
5	MDS00	Gasket	MDS64610801	COMPLEX LGF400L.ALGTWH ZZ:Without Color -	
6	MDS000000	Gasket	MDS64570601	COMPLEX LGF400L.ALGTWH ZZ:Without Color -	
5	MDS000000	Gasket	MDS64950101	COMPLEX LGF400L.ALGTWH WH:WHITE WHITE -	
5	MDS000000	Gasket	MDS64814001	COMPLEX LGF400L.ALGTWH SV:SILVER SILVER -	
6	MDS000000	Gasket	MDS64854501	COMPLEX LGD855.ADEUWH ZY:Color Unfixed -	
6	MDS000001	Gasket	MDS64610701	COMPLEX LGF400L.ALGTWH ZZ:Without Color -	
5	MDS000001	Gasket	MDS64970301	COMPLEX LGD855.A6D2TN ZY:Color Unfixed -	
6	MDS000002	Gasket	MDS64832801	COMPLEX LGD855.ADEUWH ZY:Color Unfixed -	
6	MDS000004	Gasket	MDS64814301	COMPLEX LGD855.ADEUWH ZY:Color Unfixed -	
6	MDS000005	Gasket	MDS64814401	COMPLEX LGD855.ADEUWH ZY:Color Unfixed -	
4	MDS01	Gasket	MDS64610901	COMPLEX LGF400L.ALGTWH ZZ:Without Color -	
7	MET099500	Insert,Nut	MICE0016907	COMPLEX MECH_COMMON ZZ:Without Color -	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	MET099500	Insert,Nut	MICE0016903	COMPLEX MECH_COMMON ZZ:Without Color -	
6	MEV000000	Insulator	MEV64996001	COMPLEX LGF400L.ALGTWH ZZ:Without Color -	
5	MEV000000	Insulator	MEV65014401	COMPLEX LGF400L.ALGTWH WH:WHITE WHITE -	
5	MEV000000	Insulator	MEV65110801	COMPLEX LGF400L.ALGTWH WH:WHITE WHITE -	
7	MEV000000	Insulator	MEV65014701	COMPLEX LGF400L.ALGTWH ZZ:Without Color -	
6	MEV000000	Insulator	MEV65071001	COMPLEX LGD855.ADEUWH ZY:Color Unfixed -	
6	MEV000000	Insulator	MEV64890801	COMPLEX LGD855.ADEUWH ZZ:Without Color -	
5	MEV000000	Insulator	MEV65112101	COMPLEX LGD855.A6D2TN ZZ:Without Color -	
6	MEV000001	Insulator	MEV64890901	COMPLEX LGD855.ADEUWH ZZ:Without Color -	
4	MEZ000000	Label	MLAZ0038301	COMPLEX LG-VX6000 ZZ:Without Color PID Label 4 Array PRINTING,	
2	MEZ000000	Label	MLAZ0050901	COMPLEX KU990.AGBRBK ZZ:Without Color Battery Warning Label (Lithium ion Battery Label)	
5	MEZ000900	Label,After Service	MLAB0001102	COMPLEX C2000 CGRSV WA:White C2000 USASV DIA 4.0 PRINTING,	
2	MEZ002100	Label,Approval	MLAA0062316	COMPLEX GU280 OREBK ZZ:Without Color COMPLEX, (empty), , , , ,	
2	MEZ047200	Label,Master Box	MLAJ0004402	PRINTING CG300 CGR DG ZZ:Without Color LABEL MASTER BOX(for CGR TDR 2VER. mbox_label) GSM standard_master box label	
2	MEZ049600	Label,Model	MEZ65817601	COMPLEX LGD855.A6D2TN BK:BLACK BLACK LG-D855(B2 Global) English Open USP Label	
2	MEZ067500	Label,Sealing	MEZ65347401	COMPLEX LGD820.AUSGBK WH:WHITE WHITE Nexus5(D820) Seal label (50*25)	
2	MEZ084100	Label,Unit Box	MEZ65773003	PRINTING LGW100.AUSGBK ZZ:Without Color Unit Box STD Label_75*40	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
5	MFB029600	Lens,Flash	MFB63432901	MOLD PC LGF400L.ALGTWH ZZ:Without Color -	
5	MFB029601	Lens,Flash	MFB63592901	MOLD PC LGF400L.ALGTWH BK:BLACK BLACK -	
3	MGA000000	Pallet	MPCY0012403	COMPLEX KG800 FRABK DB:DARK BLUE -	
6	MGJ000000	Plate	MGJ63766001	PRESS STS 0.2 LGF350L.ALGTWH ZZ:Without Color -	
7	MGJ000000	Plate	MGJ64044601	PRESS SUS 0.8 LGF400L.ALGTWH ZZ:Without Color -	
6	MGJ000001	Plate	MGJ63993402	PRESS STS 0.2 LGD855.ADEUWH ZY:Color Unfixed -	
6	MHK000000	Sheet	MHK64386601	COMPLEX LGF400L.ALGTWH ZZ:Without Color -	
3	MHK000000	Sheet	MHK64667202	COMPLEX LGD855.ADEUWH BK:BLACK BLACK D855 GRAPHITE SHEET BK	
6	MHK000001	Sheet	MHK64425401	COMPLEX LGF400L.ALGTWH ZY:Color Unfixed -	
3	MHK000001	Sheet	MHK64688201	COMPLEX LGVS985.AVRZTN ZZ:Without Color -	
6	MIC6920 MIC6921 MIC6923	Microphone Condenser	EAB62909301	SPH0611LR5H -38DB 400OHM OMNI 1.5 TO 3.6V 3.5 x 2.65 x 0.98T SMD KNOWLES ACOUSTICS	
6	MJN000000	Tape	MJN68867701	COMPLEX LGF400L.ALGTWH ZZ:Without Color -	
7	MJN000000	Tape	MJN68946901	COMPLEX LGF400L.ALGTWH ZZ:Without Color -	
6	MJN000001	Tape	MJN68867801	COMPLEX LGF400L.ALGTWH ZZ:Without Color -	
7	MJN000001	Tape	MJN68947001	COMPLEX LGF400L.ALGTWH ZZ:Without Color -	
6	MJN000003	Tape	MJN68868001	COMPLEX LGF400L.ALGTWH ZZ:Without Color -	
7	MJN000003	Tape	MJN68907001	COMPLEX LGF400L.ALGTWH ZZ:Without Color -	
6	MJN000004	Tape	MJN68847601	COMPLEX LGF400L.ALGTWH ZZ:Without Color -	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	MJN000005	Tape	MJN69147401	COMPLEX LGF400L.ALGTWH ZZ:Without Color -	
6	MJN000006	Tape	MJN69267801	COMPLEX LGD855.A6D2TN ZZ:Without Color -	
6	MJN061100	Tape,Protect	MJN69169201	COMPLEX LGF400L.ALGTWH ZZ:Without Color -	
4	MJN061100	Tape,Protect	MJN69307901	COMPLEX LGD855.A6D2TN ZZ:Without Color -	
6	MJN061100	Tape,Protect	MJN69187411	COMPLEX LGD855.A6D2TN ZZ:Without Color -	
5	MJN061100	Tape,Protect	MJN68927001	COMPLEX LGF400L.ALGTWH ZZ:Without Color -	
3	MJN061100	Tape,Protect	MJN68927101	COMPLEX LGF400L.ALGTWH ZY:Color Unfixed -	
6	MJN061101	Tape,Protect	MJN69130301	COMPLEX LGF400L.ALGTWH ZZ:Without Color -	
6	MJN061102	Tape,Protect	MJN68848101	COMPLEX LGF400L.ALGTWH ZZ:Without Color -	
6	MJN061104	Tape,Protect	MJN69189701	COMPLEX LGD855.ADEUWH ZY:Color Unfixed -	
5	MJN089300	Tape,Window	MJN68868101	COMPLEX LGF400L.ALGTWH BK:BLACK BLACK -	
5	MJN089300	Tape,Window	MJN68868301	COMPLEX LGF400L.ALGTWH ZZ:Without Color -	
5	MJN089301	Tape,Window	MJN68847701	COMPLEX LGF400L.ALGTWH ZZ:Without Color -	
5	MJN089302	Tape,Window	MJN68868201	COMPLEX LGF400L.ALGTWH ZZ:Without Color -	
4	MJN107400	Tape,USP Film	MJN69307501	COMPLEX LGD855.A6D2TN ZZ:Without Color -	
5	MKC009400	Window,Camera	MKC64978802	CUTTING GLASS LGF400L.ALGTTN BK:BLACK BLACK -	
6	MKC041800	Window,IRDA	MKC65178801	MOLD PC LGF400L.ALGTWH BK:BLACK BLACK -	
7	R106	Wire Pad,Short	SAFP0000401	AX3100 ATL SV_SHIPBACK,MAIN,A	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	R106	Wire Pad,Short	SAFP0000401	AX3100 ATL SV_SHIPBACK,MAIN,A	
6	R106	Wire Pad,Short	SAFP0000401	AX3100 ATL SV_SHIPBACK,MAIN,A	
6	R1100	Resistor,Chip	ERHY0009311	MCR006YZPF51R0 51OHM 1% 1/20W 0603 R/TP - ROHM.	
6	R11005 R11007	Resistor,Chip	ERHY0024601	RC0603J151CS 150OHM 5% 1/20W 0603 R/TP - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	R11006	Resistor,Chip	ERHY0009301	MCR006YZPF1000 100OHM 1% 1/20W 0603 R/TP - ROHM.	
6	R1413 R4105	Resistor,Chip	ERHY0009537	MCR006YZPF1503 150KOHM 1% 1/20W 0603 R/TP - ROHM.	
6	R1413 R4105	Resistor,Chip	ERHY0009537	MCR006YZPF1503 150KOHM 1% 1/20W 0603 R/TP - ROHM.	
6	R1414	Resistor,Chip	EBC62316201	RC0603F224CS 220KOHM 1% 1/20W 0603 R/TP - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	R1414	Resistor,Chip	EBC62316201	RC0603F224CS 220KOHM 1% 1/20W 0603 R/TP - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	R1500	Resistor,Chip	EBC63195901	RC0201FR-075R1L 5.1OHM 1% 1/20W 0603 R/TP - YAGEO CORPORATION	
6	R1501 R1502	Resistor,Chip	EBC63146301	RC0603F561CS 560OHM 1% 1/20W 0603 R/TP - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	R1516	Resistor,Chip	EBC62236701	RC0402FR-074K75L 4.75KOHM 1% 1/16W 1005 R/TP 0.4T max. YAGEO CORPORATION	
6	R18006	Resistor,Chip	ERHZ0000268	MCR01MZP5F3302 33KOHM 1% 1/16W 1005 R/TP - ROHM.	
6	R2103 R2104	Resistor,Chip	ERHZ0000235	MCR01MZP5F2000 200OHM 1% 1/16W 1005 R/TP - ROHM.	
6	R2108 R2109	Resistor,Chip	ERHY0009516	MCR006YZPJ222 2.2KOHM 5% 1/20W 0603 R/TP - ROHM.	
6	R2108 R2109	Resistor,Chip	ERHY0009516	MCR006YZPJ222 2.2KOHM 5% 1/20W 0603 R/TP - ROHM.	
6	R2116 R2117	Resistor,Chip	ERHY0009306	MCR006YZPF1801 1.8KOHM 1% 1/20W 0603 R/TP - ROHM.	



## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	R2121	Resistor,Chip	EBC62581901	RC0201FR-0733RL 33OHM 1% 1/20W 0603 R/TP - YAGEO CORPORATION	
6	R2121	Resistor,Chip	EBC62581901	RC0201FR-0733RL 33OHM 1% 1/20W 0603 R/TP - YAGEO CORPORATION	
6	R2123 R2124 R2125 R2126	Resistor,Chip	EBC61856201	RC0201FR-07240RL 240OHM 1% 1/20W 0603 R/TP - YAGEO CORPORATION	
6	R2127	Resistor,Chip	EBC61959901	WR04X4641FTL 4.64KOHM 1% 1/16W 1005 R/TP WALSIN (Resistor Maker) - STC (WALSIN Resistor Supplier) STC CORP.	
6	R2139	Resistor,Chip	ERHY0009584	MCR006YZPF24R0 24OHM 1% 1/20W 0603 R/TP - ROHM.	
6	R2143 R2144	Resistor,Chip	ERHY0009524	MCR006YZPJ470 47OHM 5% 1/20W 0603 R/TP - ROHM.	
6	R2146 R2148 R2150 R2152	Resistor,Chip	ERHY0009550	MCR006YZPF4702 47KOHM 1% 1/20W 0603 R/TP - ROHM.	
6	R2146 R2148 R2150 R2152	Resistor,Chip	ERHY0009550	MCR006YZPF4702 47KOHM 1% 1/20W 0603 R/TP - ROHM.	
6	R2154	Resistor,Chip	ERHZ0000311	MCR01MZP5F6801 6.8KOHM 1% 1/16W 1005 R/TP - ROHM.	
6	R2156 R2400 R2401 R5200	Resistor,Chip	ERHY0009507	MCR006YZPJ105 1MOHM 5% 1/20W 0603 R/TP - ROHM.	
6	R2156 R2400 R2401 R5200	Resistor,Chip	ERHY0009507	MCR006YZPJ105 1MOHM 5% 1/20W 0603 R/TP - ROHM.	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	R4102 R4700 R4701 R4702 R4703 R4704 R4707 R7610 R8401 R8801	Resistor,Chip	ERHY0009505	MCR006YZPJ103 10KOHM 5% 1/20W 0603 R/TP - ROHM.	
6	R4102 R4700 R4701 R4702 R4703 R4704 R4707 R7610 R8401 R8801	Resistor,Chip	ERHY0009505	MCR006YZPJ103 10KOHM 5% 1/20W 0603 R/TP - ROHM.	
6	R4106	Resistor,Chip	ERHZ0000204	MCR01MZP5F1003 100KOHM 1% 1/16W 1005 R/TP - ROHM.	
6	R4107	Resistor,Chip	EBC62616701	RC0402FR-0730K9L 30.9KOHM 1% 1/16W 1005 R/TP - YAGEO CORPORATION	
6	R4111 R4112	Resistor,Chip	ERHZ0000270	MCR01MZP5F33R0 33OHM 1% 1/16W 1005 R/TP - ROHM.	
6	R4114 R7607	Resistor,Chip	ERHY0009536	MCR006YZPF1003 100KOHM 1% 1/20W 0603 R/TP - ROHM.	
6	R4118	Resistor,Chip	ERHY0009527	MCR006YZPJ473 47KOHM 5% 1/20W 0603 R/TP - ROHM.	
6	R4118	Resistor,Chip	ERHY0009527	MCR006YZPJ473 47KOHM 5% 1/20W 0603 R/TP - ROHM.	
6	R4400 R8901 R95110	Resistor,Chip	ERHY0009506	MCR006YZPJ104 100KOHM 5% 1/20W 0603 R/TP - ROHM.	
6	R4400 R8901 R95110	Resistor,Chip	ERHY0009506	MCR006YZPJ104 100KOHM 5% 1/20W 0603 R/TP - ROHM.	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	R4608 R4609 R4610 R9106	Resistor,Chip	ERHY0009543	MCR006YZPJ121 120OHM 5% 1/20W 0603 R/TP - ROHM.	
6	R4706	Resistor,Chip	EBC63115501	RC0603F221CS 220OHM 1% 1/20W 0603 R/TP - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	R4708	Resistor,Chip	ERHY0009303	MCR006YZPF1002 10KOHM 1% 1/20W 0603 R/TP - ROHM.	
6	R4709	Resistor,Chip	EBC62596701	RC0201FR-0715KL_ 15KOHM 1% 1/20W 0603 R/TP - YAGEO CORPORATION	
6	R4752	Resistor,Chip	ERHY0009547	MCR006YZPF2003 200KOHM 1% 1/20W 0603 R/TP - ROHM.	
6	R4753	Resistor,Chip	ERHY0009511	MCR006YZPJ152 1.5KOHM 5% 1/20W 0603 R/TP - ROHM.	
6	R4800	Resistor,Chip	ERHY0017901	RC0201JR-07330KL 330KOHM 5% 1/20W 0603 R/TP - YAGEO CORPORATION	
6	R4800	Resistor,Chip	ERHY0017901	RC0201JR-07330KL 330KOHM 5% 1/20W 0603 R/TP - YAGEO CORPORATION	
6	R4801 R7604 R7605 R7606	Resistor,Chip	ERHY0009526	MCR006YZPJ472 4.7KOHM 5% 1/20W 0603 R/TP - ROHM.	
6	R4801 R7604 R7605 R7606	Resistor,Chip	ERHY0009526	MCR006YZPJ472 4.7KOHM 5% 1/20W 0603 R/TP - ROHM.	
6	R4905 R4906 R9500	Resistor,Chip	ERHZ0000405	MCR01MZPJ103 10KOHM 5% 1/16W 1005 R/TP - ROHM.	
6	R5203 R5206	Resistor,Chip	ERHY0003201	MCR01MZPJ5F1001 1KOHM 1% 1/16W 1005 R/TP - ROHM.	
6	R6111	Resistor,Chip	ERHZ0003901	RC2012FR100CS 0.1OHM 1% 1/8W 2012 R/TP - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	R6117	Resistor,Chip	EBC62975901	TNPW040244K2BEED 44.2KOHM 0.1% 1/16W 1005 R/TP - VISHAY INTERTECHNOLOGY ASIA PTE LTD	
6	R6118 R6119	Resistor,Chip	EBC62036001	RC0201FR-0710RL 10OHM 1% 1/20W 0603 R/TP - YAGEO CORPORATION	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	R6423	Resistor,Chip	ERHY0009586	MCR006YZPF2201 2.2KOHM 1% 1/20W 0603 R/TP - ROHM.	
6	R7600	Resistor,Chip	ERHZ0000205	MCR01MZP5F1004 1MOHM 1% 1/16W 1005 R/TP - ROHM.	
6	R7601 R7611	Resistor,Chip	ERHZ0000438	MCR01MZP5J203 20KOHM 5% 1/16W 1005 R/TP - ROHM.	
6	R7602 R7609	Resistor,Chip	EBC62296301	RC0201FR-07665KL 665KOHM 1% 1/20W 0603 R/TP 0.26T max. YAGEO CORPORATION	
6	R7603	Resistor,Chip	ERHY0009555	MCR006YZPF1202 12KOHM 1% 1/20W 0603 R/TP - ROHM.	
6	R7608	Resistor,Chip	ERHZ0000350	MCR01MZP5F6203 620KOHM 1% 1/16W 1005 R/TP - ROHM Semiconductor KOREA CORPORATION	
6	R8400	Resistor,Chip	EBC61856101	RC0201JR-0722RL 22OHM 5% 1/20W 0603 R/TP - YAGEO CORPORATION	
6	R8400	Resistor,Chip	EBC61856101	RC0201JR-0722RL 22OHM 5% 1/20W 0603 R/TP - YAGEO CORPORATION	
6	R8900	Resistor,Chip	EBC62235801	RC0603F363CS 36KOHM 1% 1/20W 0603 R/TP - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	R9102	Resistor,Chip	ERHY0035601	PMR10EZPFU10L0 0.01OHM 1% 1/2W 2012 R/TP - ROHM.	
6	R9104	Resistor,Chip	ERHZ0000331	RC1005F114CS 110KOHM 1% 1/16W 1005 R/TP - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	R9105	Resistor,Chip	ERHY0009538	MCR006YZPF1802 18KOHM 1% 1/20W 0603 R/TP - ROHM.	
6	R95109	Resistor,Chip	ERHY0042409	RC0201FR-0749R9L 49.9OHM 1% 1/20W 0603 R/TP - YAGEO CORPORATION	
6	R95111	Resistor,Chip	ERHY0009504	MCR006YZPJ102 1KOHM 5% 1/20W 0603 R/TP - ROHM.	
5	RAA050100	Resin,PC	BRAH0001303	UF2040 or 3075BHF . . NONE	
5	RAA050101	Resin,PC	BRAH0001304	UF2040 or 3075BHF . . NONE	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

### 12.2 Replacement Parts

#### <Main component>

**Note:** This Chapter is used for reference, Part order is ordered by SBOM standard on GCSC

Level	Location no	Description	P/N	Specification	Remark
7	C100 C102	Capacitor Ceramic Chip	ECZH0000813	C1005C0G1H101JT 100pF 5% 50V C0G - 55TO+125C 1005 R/TP - TDK KOREA COOPERATION	
6	C100 C102	Capacitor Ceramic Chip	ECZH0000813	C1005C0G1H101JT 100pF 5% 50V C0G - 55TO+125C 1005 R/TP - TDK KOREA COOPERATION	
6	C1002 C1451 L1112	Inductor Multilayer Chip	EAP62227001	LG HK 0603 1N2S-T 1.2NH 0.3NH - 450mA - - 0.12OHM 10GHZ 4 SHIELD - 0.6X0.3X0.3MM R/TP TAIYO YUDEN CO.,LTD	
6	C1003	Capacitor,Ceramic Chip	ECCH0009506	MCH032A270JK 27pF 5% 25V NP0 -55TO+125C 0603 R/TP - ROHM.	
6	C1008 L1810	Capacitor(High Frequency) Ceramic,Chip	EAE62945801	GRM0335C1E1R0C_H 1pF 0.25PF 25V C0G - 55TO+125C 0603 R/TP 0.3+-0.03 L:0.6+-0.03 W:0.3+-0.03 T:0.3+-0.03 MURATA MANUFACTURING CO.,LTD.	
6	C1008 L1810	Capacitor(High Frequency) Ceramic,Chip	EAE62945801	GRM0335C1E1R0C_H 1pF 0.25PF 25V C0G - 55TO+125C 0603 R/TP 0.3+-0.03 L:0.6+-0.03 W:0.3+-0.03 T:0.3+-0.03 MURATA MANUFACTURING CO.,LTD.	
6	C1009 C1010	Capacitor Ceramic Chip	ECCH0017501	CL10A226MQ8NRNE 22uF 20% 6.3V X5R - 55TO+85C 1608 R/TP 0.8MM - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C1009 C1010	Capacitor Ceramic Chip	ECCH0017501	CL10A226MQ8NRNE 22uF 20% 6.3V X5R - 55TO+85C 1608 R/TP 0.8MM - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C1011 C1027 C1028 C1031 C1038 C1044 C1046 C1047 C1421 C1849 C1850 C1851	Capacitor Ceramic Chip	ECCH0009106	C0603X7R1C103KT 10nF 10% 10V X7R - 55TO+125C 0603 R/TP - TDK CORPORATION	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	C1011 C1027 C1028 C1031 C1038 C1044 C1046 C1047 C1421 C1849 C1850 C1851	Capacitor Ceramic Chip	ECCH0009106	C0603X7R1C103KT 10nF 10% 10V X7R - 55TO+125C 0603 R/TP - TDK CORPORATION	
6	C1014	Capacitor Ceramic Chip	ECCH0032901	GRM0335C1H2R7C 2.7pF 0.25PF 50V C0G - 55TO+125C 0603 R/TP 0.3MM MURATA MANUFACTURING CO.,LTD.	
6	C1018 C1500 C2300 C2301 C2302 C2313 C2314 C2315 C2316 C2317 C2318 C2319 C2320 C2321 C2322 C2323 C2324 C2325 C2326 C2327 C2328 C2329 C2330 C2335 C2336 C2337 C2338 C2339 C2340 C2341 C2342 C2343 C2344 C2345	Capacitor Ceramic Chip	ECCH0017301	CL03A105MQ3CSNH 0.000001F 20% 6.3V X5R - 45TO+85C 0603 R/TP - SAMSUNG ELECTRO- MECHANICS CO., LTD.	



## 12. EXPLODED VIEW & REPLACEMENT PART LIST

---

Level	Location no	Description	P/N	Specification	Remark
	C2346				
	C2347				
	C2348				
	C2349				
	C2350				
	C2351				
	C2352				
	C2353				
	C2355				
	C2356				
	C2357				
	C2358				
	C2361				
	C2362				
	C2363				
	C2364				
	C2365				
	C2366				
	C2367				
	C2368				
	C2369				
	C2370				
	C2372				
	C2374				
	C2375				
	C2380				
	C2381				
	C2382				
	C2383				
	C2384				
	C2385				
	C2386				
	C2387				
	C2388				

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

---

Level	Location no	Description	P/N	Specification	Remark
	C2389				
	C2390				
	C2398				
	C2400				
	C4122				
	C4123				
	C4125				
	C4126				
	C4128				
	C4130				
	C4131				
	C4132				
	C4134				
	C4142				
	C4145				
	C4146				
	C5207				
	C5219				
	C5222				
	C7606				
	C7608				
	C8400				
	C8401				
	C8902				
	C95157				

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	C1018 C1500 C2300 C2301 C2302 C2313 C2314 C2315 C2316 C2317 C2318 C2319 C2320 C2321 C2322 C2323 C2324 C2325 C2326 C2327 C2328 C2329 C2330 C2335 C2336 C2337 C2338 C2339 C2340 C2341 C2342 C2343 C2344 C2345 C2346 C2347	Capacitor Ceramic Chip	ECCH0017301	CL03A105MQ3CSNH 0.000001F 20% 6.3V X5R - 45TO+85C 0603 R/TP - SAMSUNG ELECTRO- MECHANICS CO., LTD.	
6	C1020 C5200 C5217	Capacitor Ceramic Chip	ECZH0001217	GRM155R60J474K 470nF 10% 6.3V X5R - 25TO+70C 1005 BK-DUP - MURATA MANUFACTURING CO.,LTD.	
6	C1021	Capacitor(High Frequency) Ceramic,Chip	EAE63021901	RMUMK105CG1R5CV-F_H 1.5pF 0.25PF 50V C0G -55TO+125C 1005 R/TP 0.5+-0.05 L:1.0+- 0.05, W:0.5+-0.05, T:0.5+-0.05 KOREA TAIYO YUDEN.CO., LTD.	
6	C1022 C1819 L1300 L1311 L1321	Capacitor(High Frequency) Ceramic Chip	EAE62946001	GRM0335C1E1R8C_H 1.8pF 0.25PF 25V C0G - 55TO+125C 0603 R/TP 0.3+-0.03 L:0.6+-0.03 W:0.3+-0.03 T:0.3+-0.03 MURATA MANUFACTURING CO.,LTD.	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	C1023 C1036 C1501 C4121 C4124 C4133 C4137 C4138 C4139 C4140 C7402 C7403 C7405 C8900 C95158	Capacitor Ceramic Chip	ECCH0017601	CL05A475MQ5NRNC 4.7uF 20% 6.3V X5R - 55TO+85C 1005 R/TP 0.5MM - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C1023 C1036 C1501 C4121 C4124 C4133 C4137 C4138 C4139 C4140 C7402 C7403 C7405 C8900 C95158	Capacitor Ceramic Chip	ECCH0017601	CL05A475MQ5NRNC 4.7uF 20% 6.3V X5R - 55TO+85C 1005 R/TP 0.5MM - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C1026 C1524	Capacitor Ceramic Chip	ECCH0007805	CL05A106MQ5NUNC 10uF 20% 6.3V X5R - 55TO+85C 1005 R/TP 0.5+-0.05 - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C1032 C1033 C1775	Capacitor(High Frequency) Ceramic Chip	EAE62947001	GRM0335C1E100J_H 10pF 5% 25V C0G - 55TO+125C 0603 R/TP 0.3+-0.03 :0.6+-0.03 W:0.3+-0.03 T:0.3+-0.03 MURATA MANUFACTURING CO.,LTD.	
6	C1043 C1308 C4100 C4704 C4710 C7502	Capacitor Ceramic Chip	EAE62502901	CL05A106MP5NUNC 10uF 20% 10V X5R - 55TO+85C 1005 R/TP 0.55T max. SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C1043 C1308 C4100 C4704 C4710 C7502	Capacitor Ceramic Chip	EAE62502901	CL05A106MP5NUNC 10uF 20% 10V X5R - 55TO+85C 1005 R/TP 0.55T max. SAMSUNG ELECTRO-MECHANICS CO., LTD.	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
7	C105	Capacitor,Ceramic Chip	ECCH0009103	C0603C0G1H101JT00NN 100pF 5% 50V C0G - 55TO+125C 0603 R/TP - - TDK CORPORATION	
6	C105	Capacitor,Ceramic Chip	ECCH0009103	C0603C0G1H101JT00NN 100pF 5% 50V C0G - 55TO+125C 0603 R/TP - - TDK CORPORATION	
6	C105	Capacitor,Ceramic Chip	ECCH0009103	C0603C0G1H101JT00NN 100pF 5% 50V C0G - 55TO+125C 0603 R/TP - - TDK CORPORATION	
6	C1104 C1117 C1300 C5108	Inductor Multilayer Chip	EAP62225901	LQP03TG1N0C02D 1NH 0.2NH - 600mA - - 0.15OHM 6GHZ 12 SHIELD - 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	C1104 C1117 C1300 C5108	Inductor Multilayer Chip	EAP62225901	LQP03TG1N0C02D 1NH 0.2NH - 600mA - - 0.15OHM 6GHZ 12 SHIELD - 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	C1125	Inductor Multilayer Chip	ELCH0004705	1005GC2T8N2JLF 8.2NH 5% - 250mA 0.37OHM 2.8GHZ 8 SHIELD NONE 1.0X0.5X0.5MM R/TP PILKOR ELECTRONICS LTD.	
6	C1129 C1135 C1136 C1228 C1239 C1446 C1449 C1453 C1456 C1457 C1674 C1676 C1677 C1702 C1722 C1856 C4402 C6117 C6118 L1109 L1666 L1716	Capacitor Ceramic Chip	ECCH0009104	C0603C0G1H330JT00NN 33pF 5% 50V C0G - 55TO+125C 0603 R/TP - - TDK CORPORATION	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	C1129 C1135 C1136 C1228 C1239 C1446 C1449 C1453 C1456 C1457 C1674 C1676 C1677 C1702 C1722 C1856 C4402 C6117 C6118 L1109 L1666 L1716	Capacitor Ceramic Chip	ECCH0009104	C0603C0G1H330JT00NN 33pF 5% 50V C0G - 55TO+125C 0603 R/TP - - TDK CORPORATION	
6	C1131 C1324	Capacitor(High Frequency) Ceramic Chip	EAE62946501	GRM0335C1E3R9B_H 3.9pF 0.1PF 25V C0G - 55TO+125C 0603 R/TP 0.3+-0.03 L:0.6+-0.03 W:0.3+-0.03 T:0.3+-0.03 MURATA MANUFACTURING CO.,LTD.	
6	C1138	Inductor Multilayer Chip	EAP62226901	LG HK 0603 1N0S-T 1NH 0.3NH - 470mA - - 0.11OHM 10GHZ 4 SHIELD - 0.6X0.3X0.3MM R/TP TAIYO YUDEN CO.,LTD	
6	C1139 C1166 C1327 L1204	Inductor Multilayer Chip	EAP62226201	LQP03TG4N7J02D 4.7NH 5% - 250mA - - 0.72OHM 6GHZ 12 SHIELD - 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	C1145 C1315	Capacitor(High Frequency) Ceramic Chip	EAE62884301	GRM0335C1H5R6C_H 5.6pF 0.25PF 50V C0G - 55TO+125C 0603 R/TP 0.3+-0.03 L:0.6+-0.03 W:0.3+-0.03 T:0.3+-0.03 MURATA MANUFACTURING CO.,LTD.	
6	C1147 C1156 L1313	Capacitor(High Frequency) Ceramic,Chip	EAE63024501	GRM0335C1H5R1C_H 5.1pF 0.25PF 50V C0G - 55TO+125C 0603 R/TP 0.3+-0.03 L:0.6+-0.03, W:0.3+-0.03, T:0.3+-0.03 MURATA MANUFACTURING CO.,LTD.	
6	C1153	Capacitor(High Frequency) Ceramic Chip	EAE62882601	GRM1555C1H1R0C_H 1pF 0.25PF 50V C0G - 55TO+125C 1005 R/TP 0.5+/-0.05 L:1.0+-0.05 W:0.5+-0.05 T:0.5+-0.05 MURATA MANUFACTURING CO.,LTD.	
6	C1157 L1213	Inductor Multilayer Chip	EAP62226001	LQP03TG1N2C02D 1.2NH 0.2NH - 600mA - - 0.15OHM 6GHZ 13 SHIELD - 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	



## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	C1164 C1310 C1432 C1842 C1843 C4119 C95160	Capacitor Ceramic Chip	EAE62282201	GRM033R71E102KA01D 0.000000001F 10% 25V X7R -55TO+125C 0603 R/TP 0.3+/-0.03 MM - MURATA MANUFACTURING CO.,LTD.	
6	C1173	Inductor Multilayer Chip	EAP62266401	LQP03TN2N7B02D 2.7NH 0.1NH - 500mA - - 0.2OHM 6GHZ 14 SHIELD - 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	C1214 C1224 C1302 C1309 C1313 C1314 C1317 C1318 C1319 C1322 C1323 C1325 C1706 C1854 C1855 C1986 L1609 L1823	Capacitor Ceramic Chip	ECZH0025916	GRM0335C1E330J 33pF 5% 25V NP0 - 55TO+125C 0603 R/TP - - MURATA MANUFACTURING CO.,LTD.	
6	C1214 C1224 C1302 C1309 C1313 C1314 C1317 C1318 C1319 C1322 C1323 C1325 C1706 C1854 C1855 C1986 L1609 L1823	Capacitor Ceramic Chip	ECZH0025916	GRM0335C1E330J 33pF 5% 25V NP0 - 55TO+125C 0603 R/TP - - MURATA MANUFACTURING CO.,LTD.	
6	C1215 C1316 C1845	Inductor Multilayer Chip	EAP62108001	LQP03TG2N2C02D 2.2NH 0.2NH - 450mA - - 0.25OHM 6GHZ 13 SHIELD - 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	C1226 L1210 L1316 L1611 L1817	Capacitor Ceramic Chip	ECCH0009208	GRM0335C1ER50C 0.5pF 0.25PF 25V X7R - 55TO+125C 0603 R/TP - MURATA MANUFACTURING CO.,LTD.	
6	C1226 L1210 L1316 L1611 L1817	Capacitor Ceramic Chip	ECCH0009208	GRM0335C1ER50C 0.5pF 0.25PF 25V X7R - 55TO+125C 0603 R/TP - MURATA MANUFACTURING CO.,LTD.	
6	C1277 C1326 C1337	Capacitor Ceramic Chip	EAE63143201	CL05A106MP8NUB8 10uF -20TO20% 10V X5R - 55TO+85C 1005 R/TP L:1.0+-0.2, W:0.5+-0.2, T:0.8+-0.1 Max 0.9T, SEMCO Acoustic Noise MLCC THMC SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C1301 L1754	Inductor Multilayer Chip	EAP62107901	LQP03TG1N5C02D 1.5NH 0.2NH - 600mA - - 0.15OHM 6GHZ 13 SHIELD - 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	C1301 L1754	Inductor Multilayer Chip	EAP62107901	LQP03TG1N5C02D 1.5NH 0.2NH - 600mA - - 0.15OHM 6GHZ 13 SHIELD - 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	C1303 L1000	Inductor Multilayer Chip	EAP61767701	LQP03TN3N0B02D 3NH 0.1NH - 450mA - - 0.25OHM 6GHZ 14 SHIELD NONE 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	C1305 C1614 C1615 C1707 C1709 C1824 C1825	Capacitor Ceramic Chip	EAE63286601	CM03X5R225M10AH 2.2uF -20TO20% 10V X5R - 55TO+85C 0603 R/TP Max 0.39T L:0.6+-0.09 W:0.3+-0.09 T:0.3+-0.09 KYOCERA ELECTRONIC DEVICES HONG KONG LIMITED	
6	C1306 C1835 C1853 L1131	Inductor Multilayer Chip	EAP62186301	LQP03TG1N8C02D 1.8NH 0.2NH - 500mA - - 0.2OHM 6GHZ 13 SHIELD - 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	C1306 C1835 C1853 L1131	Inductor Multilayer Chip	EAP62186301	LQP03TG1N8C02D 1.8NH 0.2NH - 500mA - - 0.2OHM 6GHZ 13 SHIELD - 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	C1320 L1662	Inductor Multilayer Chip	EAP62526201	LQP03TN10NH02D 10NH 3% - 250mA - - 0.7OHM 3.2GHZ 14 SHIELD - 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	C1321 L1705	Inductor Multilayer Chip	EAP61866801	LG HK0603 7N5J-T 7.5NH 5% - 240mA - - 0.41OHM 3.6GHZ 5 SHIELD 0 0.6X0.3X0.3MM R/TP TAIYO YUDEN CO.,LTD	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	C1329 L1314	Capacitor(High Frequency) Ceramic Chip	EAE62946601	GRM0335C1E4R7C_H 4.7pF 0.25PF 25V C0G - 55TO+125C 0603 R/TP 0.3+-0.03 L:0.6+-0.03 W:0.3+-0.03 T:0.3+-0.03 MURATA MANUFACTURING CO.,LTD.	
6	C1338 C1541 C5225	Capacitor Ceramic Chip	ECZH0025920	GRM033R71C102K 1nF 10% 16V X7R - 55TO+125C 0603 R/TP - - MURATA MANUFACTURING CO.,LTD.	
6	C1423	Inductor Multilayer Chip	EAP62226801	LQP03TN56NJ02D 56NH 5% - 100mA - - 3.9OHM 1.2GHZ 9 SHIELD - 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	C1452 C1454	Inductor Multilayer Chip	EAP62227201	LG HK 0603 1N8S-T 1.8NH 0.3NH - 380mA - - 0.16OHM 10GHZ 4 SHIELD - 0.6X0.3X0.3MM R/TP TAIYO YUDEN CO.,LTD	
6	C1504 C1505 C1506 C1507 C1508 C1510 C1511 C1512 C1514 C1515 C1516 C1518 C1519 C1520 C1521 C1522 C1523 C4111 C4112 C4800 C5201 C5215 C5223	Capacitor Ceramic Chip	EAE62286801	CL03A104KP3NNNC 0.0000001F 10% 10V X5R - 55TO+85C 0603 R/TP 0.3 - SAMSUNG ELECTRO-MECHANICS CO., LTD.	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	C1504 C1505 C1506 C1507 C1508 C1510 C1511 C1512 C1514 C1515 C1516 C1518 C1519 C1520 C1521 C1522 C1523 C4111 C4112 C4800 C5201 C5215 C5223	Capacitor Ceramic Chip	EAE62286801	CL03A104KP3NNNC 0.0000001F 10% 10V X5R - 55TO+85C 0603 R/TP 0.3 - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C1603	Inductor Multilayer Chip	EAP62108101	LQP03TG2N7C02D 2.7NH 0.2NH - 450mA - - 0.25OHM 6GHZ 13 SHIELD - 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	C1605 L1129	Capacitor Ceramic Chip	ECCH0009212	GRM0335C1E4R7C 4.7pF 0.25PF 25V C0G - 55TO+125C 0603 R/TP - - MURATA MANUFACTURING CO.,LTD.	
6	C1616 C1708 C1826 C4101 C4102 C4703	Capacitor Ceramic Chip	EAE62506501	CL05A475MP5NRNC 4.7uF 20% 10V X5R - 55TO+85C 1005 R/TP - - SAMSUNG ELECTRO- MECHANICS CO., LTD.	
6	C1616 C1708 C1826 C4101 C4102 C4703	Capacitor Ceramic Chip	EAE62506501	CL05A475MP5NRNC 4.7uF 20% 10V X5R - 55TO+85C 1005 R/TP - - SAMSUNG ELECTRO- MECHANICS CO., LTD.	
6	C1666 C1700 C1823 L1218 L1811	Inductor Multilayer Chip	EAP62108201	LQP03TG3N3C02D 3.3NH 0.2NH - 400mA - - 0.32OHM 6GHZ 13 SHIELD - 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	C1668 C7611 C7612 C95159	Capacitor Ceramic Chip	ECCH0009504	MCH032A180JK 18pF 5% 25V NP0 -55TO+125C 0603 R/TP - ROHM.	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	C1720	Inductor Multilayer Chip	EAP62108301	LQP03TG8N2J02D 8.2NH 5% - 200mA - - 1.4OHM 4.8GHZ 12 SHIELD - 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	C1721 C1730	Inductor Multilayer Chip	EAP61767801	LQP03TN2N4B02D 2.4NH 0.1NH - 500mA - - 0.2OHM 6GHZ 14 SHIELD NONE 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	C1753	Capacitor(High Frequency) Ceramic,Chip	EAE62946901	GRM0335C1E8R2B_H 8.2pF 0.1PF 25V C0G - 55TO+125C 0603 R/TP 0.3+-0.03 L:0.6+-0.03 W:0.3+-0.03 T:0.3+-0.03 MURATA MANUFACTURING CO.,LTD.	
6	C18002 C18015	Capacitor Ceramic Chip	EAE62685701	GRM155R71H103KA88D 10nF 10% 50V X7R - 55TO+125C 1005 R/TP 0.55T max. - MURATA MANUFACTURING CO.,LTD.	
6	C18003 C18014	Capacitor Ceramic Chip	EAE63162301	GRM188R61H474K 0.47uF -10TO+10% 50V X5R - 55TO+85C 1608 R/TP Max 0.9T L:1.6+-0.1 W:0.8+-0.1 T:0.8+-0.1 MURATA MANUFACTURING CO.,LTD.	
6	C18004 C18013	Capacitor Ceramic Chip	EAE62685601	GRM155R71H223KA12D 22nF 10% 50V X7R - 55TO+125C 1005 R/TP 0.55T max. MURATA MANUFACTURING CO.,LTD.	
6	C18005 C18008	Capacitor Ceramic Chip	EAE63069301	C1005X7R1H333K050BB 33nF -10TO+10% 50V X7R -55TO+125C 1005 R/TP Max 0.55T L:1.0+- 0.05 W:0.5+-0.05 T:0.5+-0.05 TDK KOREA COOPERATION	
6	C18006 C18007	Capacitor Ceramic Chip	EAE62966901	CL10B104KB8NNNC_ 100nF -10TO+10% 50V X7R -55TO+125C 1608 R/TP 0.8 L:1.6+-0.1 W:0.8+-0.1 T:0.8+-0.1 SAMSUNG ELECTRO- MECHANICS CO., LTD.	
6	C18009	Capacitor Ceramic Chip	ECCH0000146	MCH155C182K 1.8nF 10% 50V X7R -55TO+125C 1005 R/TP - - ROHM Semiconductor KOREA CORPORATION	
6	C1818	Inductor Multilayer Chip	EAP61747501	LQP03TN3N6B02D 3.6NH 0.1NH - 400mA - - 0.3OHM 6GHZ 14 SHIELD NONE 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	C2303 C2304	Capacitor Ceramic Chip	EAE63602001	ZRB18AR60J476M 47uF -20TO20% 6.3V X5R - 55TO+85C 1608 R/TP L:1.6+-0.2, W:0.8+-0.2, T:1.0+-0.2 Max 1.2T, Murata Acoustic Noise MLCC ZRB MURATA MANUFACTURING CO.,LTD.	
6	C2371 C4135 C4136 C7400 C7401	Capacitor Ceramic Chip	ECCH0000198	CL05A225MQ5NSNC 2.2uF 20% 6.3V X5R - 55TO+85C 1005 R/TP . SAMSUNG ELECTRO- MECHANICS CO., LTD.	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	C2371 C4135 C4136 C7400 C7401	Capacitor Ceramic Chip	ECCH0000198	CL05A225MQ5NSNC 2.2uF 20% 6.3V X5R - 55TO+85C 1005 R/TP . SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C4103 C4708 C4709	Capacitor Ceramic Chip	ECCH0000182	GRM155R61A104K 0.1uF 10% 10V X5R - 55TO+85C 1005 R/TP - MURATA MANUFACTURING CO.,LTD.	
6	C4104 C4106	Capacitor Ceramic Chip	ECCH0005603	GRM188R61A225K 2.2uF 10% 10V X5R - 55TO+85C 1608 R/TP - MURATA MANUFACTURING CO.,LTD.	
6	C4105	Capacitor Ceramic Chip	EAE62962301	GRM155R61A225KE95 2.2uF -10TO+10% 10V X5R -55TO+85C 1005 R/TP 0.5 L:1.0+-0.05 W:0.5+-0.05 T:0.5+-0.05 MURATA MANUFACTURING CO.,LTD.	
6	C4105	Capacitor Ceramic Chip	EAE62962301	GRM155R61A225KE95 2.2uF -10TO+10% 10V X5R -55TO+85C 1005 R/TP 0.5 L:1.0+-0.05 W:0.5+-0.05 T:0.5+-0.05 MURATA MANUFACTURING CO.,LTD.	
6	C4110 C4120	Capacitor Ceramic Chip	EAE62522101	CL10A226MP8NUNE 22uF 20% 10V X5R - 55TO+85C 1608 R/TP 1.05T max. - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C4110 C4120	Capacitor Ceramic Chip	EAE62522101	CL10A226MP8NUNE 22uF 20% 10V X5R - 55TO+85C 1608 R/TP 1.05T max. - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C4113	Capacitor Ceramic Chip	ECZH0001210	C1005Y5V1A474ZT000F 470nF -20TO+80% 10V Y5V -30TO+85C 1005 R/TP - TDK KOREA COOPERATION	
6	C4114 C4141 C4702 C4801 C7404 C7604 C7610 C7614 C8800	Capacitor Ceramic Chip	EAE62762301	CL03A105MP3NSNC 1uF 20% 10V X5R - 55TO+85C 0603 R/TP 0.33 MM - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C4114 C4141 C4702 C4801 C7404 C7604 C7610 C7614 C8800	Capacitor Ceramic Chip	EAE62762301	CL03A105MP3NSNC 1uF 20% 10V X5R - 55TO+85C 0603 R/TP 0.33 MM - SAMSUNG ELECTRO-MECHANICS CO., LTD.	



## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	C4115 C4117	Capacitor Ceramic Chip	EAE62767801	JDK212BBJ476MD 47uF -20TO20% 6.3V X5R - 55TO+85C 2012 R/TP 0.85T - TAIYO YUDEN CO.,LTD	
6	C4115 C4117	Capacitor Ceramic Chip	EAE62767801	JDK212BBJ476MD 47uF -20TO20% 6.3V X5R - 55TO+85C 2012 R/TP 0.85T - TAIYO YUDEN CO.,LTD	
6	C4116	Capacitor Ceramic Chip	EAE62927201	ADK107BBJ476MA 47uF -20TO20% 4V X5R - 55TO+85C 1608 R/TP 0.8T +0.2 L:1.6+0.2 W:0.8+0.2 T:0.8+0.2 KOREA TAIYO YUDEN.CO., LTD.	
6	C4118	Capacitor Ceramic Chip	EAE62685201	C1005X5R1E104K 0.1uF 10% 25V X5R - 55TO+85C 1005 R/TP 0.55T max. TDK KOREA COOPERATION	
6	C4118	Capacitor Ceramic Chip	EAE62685201	C1005X5R1E104K 0.1uF 10% 25V X5R - 55TO+85C 1005 R/TP 0.55T max. TDK KOREA COOPERATION	
6	C4151	Capacitor Ceramic Chip	EAE62685301	CL05A105KA5NQNC 1uF 10% 25V X5R - 55TO+85C 1005 R/TP 0.6T max. Samsung(1.0+- 0.1 0.5+-0.1 0.5+-0.1) Murata (1.0+-0.05 0.5+-0.05 0.5+-0.05) SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C4151	Capacitor Ceramic Chip	EAE62685301	CL05A105KA5NQNC 1uF 10% 25V X5R - 55TO+85C 1005 R/TP 0.6T max. Samsung(1.0+- 0.1 0.5+-0.1 0.5+-0.1) Murata (1.0+-0.05 0.5+-0.05 0.5+-0.05) SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C4400	Capacitor Ceramic Chip	ECCH0007804	CL05A225MP5NSNC 2.2uF 20% 10V X5R - 55TO+85C 1005 R/TP 0.5MM - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C4400	Capacitor Ceramic Chip	ECCH0007804	CL05A225MP5NSNC 2.2uF 20% 10V X5R - 55TO+85C 1005 R/TP 0.5MM - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C4401	Capacitor Ceramic Chip	EAE62505701	CL10A105KB8NNNC 1uF 10% 50V X5R - 55TO+85C 1608 R/TP 0.9T max. - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C4401	Capacitor Ceramic Chip	EAE62505701	CL10A105KB8NNNC 1uF 10% 50V X5R - 55TO+85C 1608 R/TP 0.9T max. - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C4705	Capacitor Ceramic Chip	ECCH0002002	C1005X7R1A473KT000F 47nF 10% 10V X7R - 55TO+125C 1005 R/TP 0.5+-0.05 - TDK CORPORATION	
6	C4706	Capacitor Ceramic Chip	EAE62542701	CL21A226MPCLRNC 22uF 20% 10V X5R - 55TO+85C 2012 R/TP 0.95T max. - SAMSUNG ELECTRO-MECHANICS CO., LTD.	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	C4706	Capacitor Ceramic Chip	EAE62542701	CL21A226MPCLRNC 22uF 20% 10V X5R - 55TO+85C 2012 R/TP 0.95T max. - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
8	C5000 C5002	Capacitor Ceramic Chip	EAE62726601	CL03A225MQ3CRNC 2.2uF -20TO20% 6.3V X5R - 55TO+85C 0603 R/TP 0.3T - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C5000 C5002	Capacitor Ceramic Chip	EAE62726601	CL03A225MQ3CRNC 2.2uF -20TO20% 6.3V X5R - 55TO+85C 0603 R/TP 0.3T - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
8	C5001	Capacitor,CeramicC hip	ECCH0009101	C0603X5R0J104KT00NN 0.1uF 10% 6.3V X5R - 55TO+85C 0603 R/TP - TDK CORPORATION	
6	C5001	Capacitor,CeramicC hip	ECCH0009101	C0603X5R0J104KT00NN 0.1uF 10% 6.3V X5R - 55TO+85C 0603 R/TP - TDK CORPORATION	
6	C5001	Capacitor,CeramicC hip	ECCH0009101	C0603X5R0J104KT00NN 0.1uF 10% 6.3V X5R - 55TO+85C 0603 R/TP - TDK CORPORATION	
6	C5115 R4119 R5208	Resistor,Chip	ERHY0009501	MCR006YZPJ000 0OHM 5% 1/20W 0603 R/TP - ROHM.	
6	C5115 R4119 R5208	Resistor,Chip	ERHY0009501	MCR006YZPJ000 0OHM 5% 1/20W 0603 R/TP - ROHM.	
6	C5204 C5218	Capacitor,CeramicC hip	ECCH0000143	MCH155CN102KK 1nF 10% 50V X7R - 55TO+125C 1005 R/TP - ROHM Semiconductor KOREA CORPORATION	
6	C5208 C5216	Capacitor,CeramicC hip	ECZH0000841	C1005C0G1H560JT000F 56pF 5% 50V NP0 - 55TO+125C 1005 R/TP - - TDK Electronics KOREA CORPORATION	
6	C5209 C5212	Capacitor Ceramic Chip	EAE63144601	GRM1555C1H271J 270pF +-5% 50V C0G - 55TO+125C 1005 R/TP Max 0.55T L:1.0+-0.05 W:0.5+-0.05 T:0.5+-0.05 MURATA MANUFACTURING CO.,LTD.	
6	C5210 C5213	Capacitor Ceramic Chip	ECZH0000843	C1005C0G1H620JT 62pF 5% 50V NP0 - 55TO+125C 1005 R/TP - TDK KOREA COOPERATION	
6	C5211 C5214	Capacitor Ceramic Chip	ECZH0000844	C1005C0G1H680JT000F 68pF 5% 50V NP0 - 55TO+125C 1005 R/TP - - TDK KOREA COOPERATION	
6	C5220	Capacitor Ceramic Chip	ECZH0001215	C1005X5R1A105KT000F 1uF 10% 10V X5R - 55TO+85C 1005 R/TP - TDK KOREA COOPERATION	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	C5220	Capacitor Ceramic Chip	ECZH0001215	C1005X5R1A105KT000F 1uF 10% 10V X5R - 55TO+85C 1005 R/TP - TDK KOREA COOPERATION	
6	C6106	Capacitor,Ceramic Chip	ECCH0006201	C1608X5R0J475KT000N 4.7uF 10% 6.3V X5R - 55TO+85C 1608 R/TP - TDK CORPORATION	
6	C6111 C8200 C8201	Capacitor Ceramic Chip	ECCH0002001	C1005JB0J104KT000F 0.1uF 10% 6.3V X5R - 30TO+85C 1005 R/TP - - TDK CORPORATION	
6	C6116	Capacitor Ceramic Chip	ECCH0004904	GRM155R60J105K 1uF 10% 6.3V X5R - 55TO+85C 1005 R/TP - MURATA MANUFACTURING CO.,LTD.	
6	C6201 C6926	Capacitor Ceramic Chip	EAE62722601	CL05A104KA5NNNC 0.1uF 10% 25V X5R - 55TO+85C 1005 R/TP 0.55 max. - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C6927	Capacitor Ceramic Chip	EAE63004901	GRM219R61C226ME15 22uF -20TO20% 16V X5R -55TO+85C 2012 R/TP Max 1T L:2.0+-0.2 W:1.25+-0.2 T:0.85+-0.15 MURATA MANUFACTURING CO.,LTD.	
6	C7103	Capacitor Ceramic Chip	EAE63541901	GRM188R61H225K 2.2uF -10TO+10% 50V X5R - 55TO+85C 1608 R/TP Max 1.0T L:1.6+-0.2 W:0.8+-0.2 T:0.8+-0.2 MURATA MANUFACTURING CO.,LTD.	
6	C7500 C7503	Capacitor Ceramic Chip	EAE63067401	GRM188R61C475KAAJ 4.7uF -10TO+10% 16V X5R -55TO+85C 1608 R/TP Max 0.95T L:1.6+-0.15 W:0.8+-0.15 T:0.8+-0.15 MURATA MANUFACTURING CO.,LTD.	
6	C7501 C7504	Capacitor Ceramic Chip	EAE63162401	GRM188R61E106M 10uF -20TO20% 25V X5R - 55TO+85C 1608 R/TP Max 1.0T L:1.6+-0.2 W:0.8+-0.2 T:0.8+-0.2 MURATA MANUFACTURING CO.,LTD.	
6	C7501 C7504	Capacitor Ceramic Chip	EAE63162401	GRM188R61E106M 10uF -20TO20% 25V X5R - 55TO+85C 1608 R/TP Max 1.0T L:1.6+-0.2 W:0.8+-0.2 T:0.8+-0.2 MURATA MANUFACTURING CO.,LTD.	
6	C7613	Capacitor,Ceramic Chip	ECCH0009514	MCH032A(AN)100DK 10pF 0.5PF 25V X7R - 55TO+125C 0603 R/TP - ROHM.	
6	C7613	Capacitor,Ceramic Chip	ECCH0009514	MCH032A(AN)100DK 10pF 0.5PF 25V X7R - 55TO+125C 0603 R/TP - ROHM.	
6	C8100 C8102	Capacitor Ceramic Chip	ECZH0004402	CL05F104ZO5NNNC 0.1uF -20TO+80% 16V Y5V - 30TO+85C 1005 R/TP - - SAMSUNG ELECTRO- MECHANICS CO., LTD.	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	C8801	Capacitor Ceramic Chip	ECCH0000155	MCH153CN103KK 10nF 10% 16V X7R - 55TO+125C 1005 R/TP - ROHM Semiconductor KOREA CORPORATION	
6	C8801	Capacitor Ceramic Chip	ECCH0000155	MCH153CN103KK 10nF 10% 16V X7R - 55TO+125C 1005 R/TP - ROHM Semiconductor KOREA CORPORATION	
6	C9102	Capacitor TA,Conformal	ECTH0002703	TCTAL1A107M8R-V2 100uF 20% 10V 50UA - 55TO+125C 2.5OHM 3.2X1.6X1.1MM NONE SMD R/TP 1.2T max. ROHM CO.,LTD.	
6	C9103	Capacitor Ceramic Chip	ECZH0025917	GRM0335C1E470J 47pF 5% 25V NP0 - 55TO+125C 0603 R/TP - MURATA MANUFACTURING CO.,LTD.	
6	C9105	Capacitor Ceramic Chip	ECCH0000161	MCH153CN333KK 33nF 10% 16V X7R - 55TO+125C 1005 R/TP - ROHM Semiconductor KOREA CORPORATION	
6	C9200	Capacitor Ceramic Chip	ECCH0000115	MCH155A220JK 22pF 5% 50V NP0 -55TO+125C 1005 R/TP - ROHM Semiconductor KOREA CORPORATION	
6	CN11002 CN11003	Terminal Block	ENZY0025801	KQ13L2-6R KQ13L2-6R,6,1.0 mm,ETC6.6x4x1.35(t),Stroke:-0.65,Touch window Contact CNT HIROSE KOREA CO.,LTD	
6	CN7100	Connector,BtoB	EAG63291501	BM10NB(0.8)-44DS-0.4V 44P 0.40MM STRAIGHT FEMALE SMD R/TP 800mM - HIROSE KOREA CO.,LTD	
6	CN7200	Connector,BtoB	ENBY0051001	GB042-10S-H10-E3000 10P 0.4MM STRAIGHT FEMALE SMD R/TP 1M - LS Mtron Ltd.	
6	CN7400	Connector,BtoB	EAG63789801	BM15FR0.8-20DS-0.35V 20P 0.35MM STRAIGHT FEMALE SMD T/REEL 800mM - HIROSE KOREA CO.,LTD	
6	CN7900	Connector,BtoB	ENBY0040701	GB042-30S-H10-E3000 30P 0.4MM STRAIGHT FEMALE SMD R/TP 1M - LS Mtron Ltd.	
6	CN9100	Connector Terminal Block	EAG63530401	KQ03L3-4R 4P 2.50MM STRAIGHT DIP T/REEL - HIROSE KOREA CO.,LTD	
6	CN9200	Connector,I/O	EAG63430401	GU07L-11P-E2000 11P 0.60MM STRAIGHT RECEPTACLE DIP R/TP Normal Offset LS Mtron Ltd.	
6	D10000	Diode,TVS	EAH62033201	UCLAMP3311Z 3.3V 3.65V min. 7.5V 4A 30W SLP0603P2X3A R/TP 2P 1 SEMTECH INTERNATIONAL AG	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	D10000	Diode,TVS	EAH62033201	UCLAMP3311Z 3.3V 3.65V min. 7.5V 4A 30W SLP0603P2X3A R/TP 2P 1 SEMTECH INTERNATIONAL AG	
6	D4400	Diode,Schottky	EAH61992801	PMEG4002EL 600mV 40V 200mA 0SEC 20pF 0W SOD-882 R/TP 2P 1 NXP Semiconductors	
6	D4603 D7400 D7900	Diode,TVS	EAH61892901	RCLAMP7522T 5V 6.5V min / 9V typ / 11V max 15V 4A 500mW SLP1007N5T R/TP 5P 3 SEMTECH INTERNATIONAL AG	
8	D5001 D5002 D5003 D5004 D5005	Diode,TVS	EAH61995401	RClamp0521Z.TNT 5V 6V min. 25V 4A 100W SLP0603P2X3 R/TP 2P 1 SEMTECH INTERNATIONAL AG	
6	D6450 D6451 VA8900	Varistor	SEVY0005402	ICVS0505500FR 5.6V 0% 50F 1.0*0.5*0.55 - SMD R/TP INNOCHIPS TECHNOLOGY	
6	D6450 D6451 VA8900	Varistor	SEVY0005402	ICVS0505500FR 5.6V 0% 50F 1.0*0.5*0.55 - SMD R/TP INNOCHIPS TECHNOLOGY	
6	D6700 D6701	Varistor	SEVY0008901	ICVS0318150FR 18V 0% 15pF 0.6*0.3*0.33 NONE SMD R/TP INNOCHIPS TECHNOLOGY	
6	D7600	Diode,Switching	EDSY0019602	PMEG3005AEA 430mV 30V 500mA 3.5A 0SEC 0W SOD323 R/TP 2P 1 NXP Semiconductors	
6	D9100	Diode,TVS	EDTY0010002	PESD5V0S1UL 5V 6.4V min. 20V 15A 150W SOD- 882 R/TP 2P 1 STC CORP.	
6	D9201	Diode,TVS	EAH62172601	RCLAMP1255P 12V 13.5V min. 25V 100A 2.5KW SLP2018P6 R/TP 8P 4 SEMTECH INTERNATIONAL AG	
6	D95100	Diode,Schottky	EAH62512501	BAT15-02EL 410mV 4V 110mA 0SEC 0.35pF 0W TSLP-2-19 R/TP 2P 1 INFINEON TECHNOLOGIES (ASIA PACIFIC) PTE LTD.	
3	EAA030100	PIFA Antenna RF	EAA63406301	1NFWLG012 SINGLE -4DB 4 FPCB Type - NFC Tape IMTECH	
5	EAA030103	PIFA Antenna Multiple	EAA63607801	BSF14A011 MULTI -4DB 4 FPCB Type black LTE Tape AT&C CO.,LTD	
5	EAA030104	PIFA Antenna Bluetooth	EAA63607701	BSF14A012 DUAL -4DB 4 FPCB Type - WLAN+BT Tape AT&C CO.,LTD	
5	EAA030105	PIFA Antenna GPS	EAA63666101	BGF14A013 MULTI -4DB 4 FPCB Type - GPS Tape AT&C CO.,LTD	
3	EAB00	Speaker Module	EAB63328201	1511-8T-15MP Nd-Fe-B 1W 8OHM 82DB 850HZ 72.13 X 53.8 X 4.95 FPCB KEYRIN TELECOM CO., LTD	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
4	EAB01	Receiver	EAB63268701	EMR1206SHP1 50mW 32OHM 107DB 100HZTO7KHZ PIN - EM-TECH	
5	EAD00	Cable Assembly	EAD63050001	WFL2-2LP-04N1-A76BALG UFL-LP-066 UFL-LP-066 0.06M 2 WHITE N N HIROSE KOREA CO.,LTD	
2	EAD010000	Cable Assembly	EAD62588801	DLC-LGE51DCMUA USB USB 1.2M 5 BLACK UL N CRESYN(H.K.)CO.,LTD.	
4	EAG00	Jack Phone	EAG63849801	04-9809-005-001-868+ 5P 4P ANGLE TR 3.5M BLACK 5P Side Contact KYOCERA CONNECTOR KOREA SALES CO.,LTD.	
5	EAT130000	Module Hybrid Touch LCD	EAT62173801	LH550QH1-SD03 CAPACITIVE TOUCH G1F Synaptics S3528A1 120hz OCR 0.15mm 5.5inch QHD(2560X1440) BtoB - LG Display Co. Ltd.	
4	EAU00	Motor,DC	EAU62004401	WHVM-1030QSS 2V 40mA 0A 12KRPM 12KRPM 60mSEC 0GF.CM 29OHM WOOSUNG G&T CO.,LTD	
6	EAX010000	PCB,Main	EAX65863601	LGD855.ADEUWH 1.0 FR-4 Any Layer 10 0.8 Main	
7	EAX010300	PCB,RF	EAX65903701	LGD855.ADEUWH E FR-4 Multi 2 0.5 RF	
8	EAX010700	PCB,Flexible	EAX65783301	LGF400L.ALGTWH 1.0 POLYI Multi 2 0.2 Flexible	
4	EBP00	Camera Module	EBP61801702	CUDA-Y472B CUDA-Y472B 13M OIS, SONY IMX135 30FPS, FPC 90deg,10x15.5x5.7t, SEKONIX Lens LG INNOTEK CO., LTD	
4	EBP01	Camera Module	EBP62061901	C2FA-Y493A C2FA-Y493A Front IMX208 2.1M 0degree 4P CSP LG INNOTEK CO., LTD	
4	EBR00	PCB Assembly,Sub	EBR78759405	LGD855.ADEUWH 1.0 Sub	
5	EBR01	PCB Assembly Flexible	EBR78781801	LGF400L.ALGTWH 1.0 Flexible	
3	EBR02	PCB Assembly Main	EBR79417501	LGD855.A6D2TN 1.2 Main	
6	EBR070100	PCB Assembly Flexible,Insert	EBR79063401	LGF400L.ALGTWH 1.0 Flexible	
7	EBR070200	PCB Assembly Flexible,SMT Bottom	EBR78743101	LGF400L.ALGTWH 1.0 Flexible	
7	EBR070300	PCB Assembly Flexible,SMT Top	EBR78782001	LGF400L.ALGTWH 1.0 Flexible	
6	EBR070400	PCB Assembly Flexible,SMT	EBR78781901	LGF400L.ALGTWH 1.0 Flexible	



## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
4	EBR071500	PCB Assembly Main,Insert	EBR79601101	LGD855.A6D2TN 1.1 Main	
5	EBR071600	PCB Assembly Main,SMT Bottom	EBR78903709	LGD855.A6D2TN 1.5 Main	
5	EBR071700	PCB Assembly Main,SMT Top	EBR78882409	LGD855.A6D2TN 1.5 Main	
4	EBR071800	PCB Assembly Main,SMT	EBR78903616	LGD855.A6D2TN 1.2 Main	
6	EBR072600	PCB Assembly Sub,SMT Bottom	EBR78759605	LGD855.ADEUWH 1.0 Sub	
6	EBR072700	PCB Assembly Sub,SMT Top	EBR78784105	LGD855.ADEUWH 1.0 Sub	
5	EBR072800	PCB Assembly Sub,SMT	EBR78759505	LGD855.ADEUWH 1.0 Sub	
6	L1100 L1104 L1115 L1137	Inductor Multilayer Chip	EAP61866701	LG HK0603 82NJ-T 82NH 5% - 70mA - - 3.37OHM 1GHZ 4 SHIELD 0 0.6X0.3X0.3MM R/TP TAIYO YUDEN CO.,LTD	
6	L1106	Inductor Multilayer Chip	EAP62227301	LG HK 0603 2N2S-T 2.2NH 0.3NH - 360mA - - 0.19OHM 8.8GHZ 4 SHIELD - 0.6X0.3X0.3MM R/TP TAIYO YUDEN CO.,LTD	
6	L1106	Inductor Multilayer Chip	EAP62227301	LG HK 0603 2N2S-T 2.2NH 0.3NH - 360mA - - 0.19OHM 8.8GHZ 4 SHIELD - 0.6X0.3X0.3MM R/TP TAIYO YUDEN CO.,LTD	
6	L1119 L1168 L1309 L1323	Inductor Multilayer Chip	EAP62227901	LG HK 0603 18NJ-T 18NH 5% - 180mA - - 0.71OHM 2.3GHZ 5 SHIELD - 0.6X0.3X0.3MM R/TP TAIYO YUDEN CO.,LTD	
6	L1122 L1211 L1214	Inductor Multilayer Chip	EAP62246301	LG HK 0603 15NJ-T 15NH 5% - 180mA - - 0.71OHM 5HZ 2.3G SHIELD - 0.6X0.3X0.3MM R/TP TAIYO YUDEN CO.,LTD	
6	L1123	Capacitor Ceramic Chip	ECCH0009211	GRM0335C1E3R3C 3.3pF 0.25PF 25V X7R - 55TO+125C 0603 R/TP - MURATA MANUFACTURING CO.,LTD.	
6	L1124	Inductor Multilayer Chip	EAP62246201	LG HK 0603 10NJ-T 10NH 5% - 220mA - - 0.51OHM 2.9GHZ 5 SHIELD - 0.6X0.3X0.3MM R/TP TAIYO YUDEN CO.,LTD	
6	L1133 L1322	Inductor Multilayer Chip	EAP62227701	LG HK 0603 8N2J-T 8.2NH 5% - 230mA - - 0.45OHM 3.4GHZ 5 SHIELD - 0.6X0.3X0.3MM R/TP TAIYO YUDEN CO.,LTD	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	L1163	Inductor Multilayer Chip	EAP62227601	LG HK 0603 6N8J-T 6.8NH 5% - 250mA - - 0.39OHM 3.9GHZ 5 SHIELD - 0.6X0.3X0.3MM R/TP TAIYO YUDEN CO.,LTD	
6	L1222	Inductor Multilayer Chip	EAP62227501	LG HK 0603 5N6S-T 5.6NH 0.3NH - 260mA - - 0.36OHM 4.6GHZ 5 SHIELD - 0.6X0.3X0.3MM R/TP TAIYO YUDEN CO.,LTD	
6	L1301	Inductor Wire Wound Chip	EAP62307401	VLS252010ET-1R5N 1.5UH 30% - 1.45A 1.45 1.5 0.128OHM - - SHIELD 2.5X2.0X1.0 MM - R/TP TDK KOREA COOPERATION	
6	L1308 L1719 L1727	Inductor Multilayer Chip	EAP62228001	LG HK 0603 27NJ-T 27NH 5% - 120mA - - 1.35OHM 1.8GHZ 4 SHIELD - 0.6X0.3X0.3MM R/TP TAIYO YUDEN CO.,LTD	
6	L1310 L1808	Capacitor(High Frequency) Ceramic,Chip	EAE62945901	GRM0335C1E1R2B_H 1.2pF 0.1PF 25V C0G - 55TO+125C 0603 R/TP 0.3+-0.03 L:0.6+-0.03 W:0.3+-0.03 T:0.3+-0.03 MURATA MANUFACTURING CO.,LTD.	
6	L1402	Inductor Wire Wound Chip	EAP62526701	TFM252010GHM-2R2MTAA 2.2UH 20% - 2.5A 3.1 2.5 0.097OHM - - SHIELD 2.5X2.0X1.0 MM - R/TP TDK KOREA COOPERATION	
6	L1606	Capacitor(High Frequency) Ceramic Chip	EAE62946801	GRM0335C1E6R8B_H 6.8pF 0.1PF 25V C0G - 55TO+125C 0603 R/TP 0.3+-0.03 L:0.6+-0.03 W:0.3+-0.03 T:0.3+-0.03 MURATA MANUFACTURING CO.,LTD.	
6	L1608	Inductor Multilayer Chip	EAP62526401	LQP03TN3N3B02D 3.3NH 0.1NH - 450mA - - 0.25OHM 8GHZ 14 SHIELD - 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	L1610	Capacitor(High Frequency) Ceramic Chip	EAE62962201	GRM0335C1ER75W_H 0.75pF 0.05PF 25V C0G - 55TO+125C 0603 R/TP 0.3 L:0.6+-0.03 W:0.3+- 0.03 T:0.3+-0.03 MURATA MANUFACTURING CO.,LTD.	
6	L1612	Inductor Multilayer Chip	EAP62226101	LQP03TG3N9C02D 3.9NH 0.2NH - 350mA - - 0.35OHM 6GHZ 13 SHIELD - 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	L1612	Inductor Multilayer Chip	EAP62226101	LQP03TG3N9C02D 3.9NH 0.2NH - 350mA - - 0.35OHM 6GHZ 13 SHIELD - 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	L1661	Inductor Multilayer Chip	EAP61925901	LQP03TN6N2J02D 6.2NH 5% - 300mA - - 0.6OHM 4GHZ 14 SHIELD 0 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	L1703	Inductor Multilayer Chip	EAP62226301	LQP03TG5N6J02D 5.6NH 5% - 250mA - - 0.88OHM 6GHZ 12 SHIELD - 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	L1703	Inductor Multilayer Chip	EAP62226301	LQP03TG5N6J02D 5.6NH 5% - 250mA - - 0.88OHM 6GHZ 12 SHIELD - 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	L1704	Capacitor Ceramic Chip	ECCH0042201	CL03C020CA3GNNH 2pF 0.25PF 25V C0G - 55TO+125C 0603 R/TP 0.3+-0.03 SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	L1712	Inductor Multilayer Chip	EAP62108501	LQP03TG18NJ02D 18NH 5% - 160mA - - 2.28OHM 2.8GHZ 11 SHIELD - 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	L1724	Capacitor(High Frequency) Ceramic Chip	EAE62946201	GRM0335C1E2R2C_H 2.2pF 0.25PF 25V C0G - 55TO+125C 0603 R/TP 0.3+-0.03 L:0.6+-0.03 W:0.3+-0.03 T:0.3+-0.03 MURATA MANUFACTURING CO.,LTD.	
6	L1728 L1855 R1514	Inductor Multilayer Chip	EAP62108601	LQP03TG22NJ02D 22NH 5% - 140mA - - 2.85OHM 2.5GHZ 9 SHIELD - 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	L1728 L1855 R1514	Inductor Multilayer Chip	EAP62108601	LQP03TG22NJ02D 22NH 5% - 140mA - - 2.85OHM 2.5GHZ 9 SHIELD - 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	L1809	Inductor Multilayer Chip	EAP62226501	LQP03TG10NJ02D 10NH 5% - 190mA - - 1.52OHM 4.5GHZ 11 SHIELD - 0.6X0.3X0.3MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	L1816	Inductor Multilayer Chip	EAP62246001	LG HK 0603 3N3S-T 3.3NH 0.3NH - 320mA - - 0.23OHM 6.7GHZ 5 SHIELD - 0.6X0.3X0.3MM R/TP TAIYO YUDEN CO.,LTD	
6	L2300	Inductor Multilayer Chip	EAP62807301	LQM18FN2R2M00D 2.2UH 20% - 120mA 0.12 0.12 0.52OHM 80MHZ - SHIELD - 1.6X0.8X1.0MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	L4100 L4103 L4104 L4700	Inductor Wire Wound Chip	EAP62526601	TFM201610GHM-2R2MTAA 2.2UH 20% - 1.9A 2.4 1.9 0.152OHM - - SHIELD 2.0X1.6X1.0MM - R/TP TDK KOREA COOPERATION	
6	L4100 L4103 L4104 L4700	Inductor Wire Wound Chip	EAP62526601	TFM201610GHM-2R2MTAA 2.2UH 20% - 1.9A 2.4 1.9 0.152OHM - - SHIELD 2.0X1.6X1.0MM - R/TP TDK KOREA COOPERATION	
6	L4101	Inductor Wire Wound Chip	EAP62187401	MAKK2016T1R0M 1UH 20% - 2.2A 2.2 2.45 0.075OHM - - SHIELD 2.0X1.6X1.0MM - R/TP TAIYO YUDEN CO.,LTD	
6	L4200 L4201 L4203	Inductor Multilayer Chip	EAP62787001	MCP2016DR47 470NH 20% - 3.2A 3.2 3.5 0.045OHM 0HZ - SHIELD - 2.0X1.6X1.0MM R/TP FDK CORPORATION.	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	L4204 L4205 L4206 L4207	Inductor Multilayer Chip	EAP62545901	MIPSZ2016DR24FHS 240NH 20% - 4A 4 4 0.022OHM 0HZ - SHIELD - 2.0X1.6X1.0 MM R/TP FDK CORPORATION.	
6	L4400	Inductor Wire Wound Chip	EAP62367801	VLS252010HBT-100M-LR 10UH 20% - 750mA 0.78 0.75 0.516OHM - - SHIELD 2.5X2.0X1.0 MM - R/TP TDK KOREA COOPERATION	
6	L4900	Inductor Wire Wound Chip	EAP62327801	PIFE20161B-R47MS-39 470NH 20% - 3.5A 3.5 3.5 0.036OHM - - SHIELD 2.0X1.6X1.2 MM - R/TP CYNTEC CO., LTD.	
6	L5200 L5201	Inductor Multilayer Chip	EAP62167601	MLG1608SR39JT 390NH 5% - 1mA - - 3OHM 300MHZ 10 SHIELD 0 1.6X0.8X0.8MM R/TP TDK KOREA COOPERATION	
6	L6201	Inductor Wire Wound Chip	EAP62526501	TFM201610GHM-1R0MTAA 1UH 20% - 3A 3.6 3 0.06OHM - - SHIELD 2.0X1.6X1.0 MM - R/TP TDK KOREA COOPERATION	
6	L7500	Inductor Wire Wound Chip	EAP62588001	MAKK2016T4R7M 4.7UH 20% - 1A 1 1.05 0.38OHM - - SHIELD 2.0X1.25X1.0 MM - R/TP TAIYO YUDEN CO.,LTD	
6	LD4500	Module Assembly	EAT62233201	LEYRS63A81GW00 Tunable Dual Flash LED Module LG INNOTEK CO., LTD	
6	LD4602	LED Chip	EAV62251901	CL-503S-TCC-SD-T RED/GREEN/BLUE R(1.85~2.4) G(2.7~3.1) B(2.75~3.1) at 5mA R(30) G(20) B(20) mA R(19~33) G(90~220) B(20~65) mcd at 5mA R(618) G(530) B(470) nm at 5mA R(78) G(80) B(75) mW 1513 R/TP 4P - CITIZEN ELECTRONICS CO.,LTD.	
6	LD8900	LED Chip	EAV62193601	IR26-61C/L261/TR8(LM) CLEAR 1.2~1.5V(If=20mA) 65mA 2.0~5.0 940nm(Typ.) 100mW 3012 R/TP 2P - EVERLIGHT ELECTRONICS CO., LTD.	
6	PID1	Label	MEZ65049701	COMPLEX LGLS720.ASPRTS ZZ:Without Color PID label	
6	PT1100	Thermistor,NTC	EBG61306601	NTCG104EF104FT 100KOHM 1% 35V 35A 4.25MK SMD R/TP - TDK CORPORATION	
6	Q5200	FET	EBK61691601	SSM3K15AMFV N-CHANNEL MOSFET 30V +-20 100mA 6OHM 150mW VESM R/TP 3P TOSHIBA ELECTRONICS KOREA CORPORATION	
6	S9500	Card Socket	EAG63310801	1041681610 Micro-SD, UIMDupliSocket 16P STRAIGHT DIP T/REEL - MOLEX	
5	SAD010000	Software,Mobile	SAD34629601	Android KK Base D85510a - EUROPE QCT -	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
2	SAD010100	Software,Application	SAD34630201	- - - PCSuiteV - - EUROPE PC SYNC -	
2	SAD010500	Software,USB Driver	SAD34683202	Windows -	
2	SAD010600	Software,OSP	SAD34683102	Windows Android KK - -	
1	SAF010100	Software Assembly Common	SAF30440004	LGD855.A6D2TN KK -	
6	SC000	Can Shield	MBK63852601	PRESS SUS 0.2 LGD855.ADEUWH ZZ:Without Color -	
6	SC001	Can Shield	MBK63852801	PRESS SUS 0.2 LGD855.ADEUWH ZZ:Without Color -	
6	SC1103	Plate	MGJ64064101	PRESS STS 304 0.3 LGF400L.ALGTWH ZY:Color Unfixed -	
6	SC1104	Plate	MGJ64064201	PRESS STS 304 0.3 LGF400L.ALGTWH ZY:Color Unfixed -	
6	SC1105 SC1106	Bracket	MAZ63332001	PRESS STS 0.2 LGSU540.ASKTBK ZZ:Without Color -	
6	SC13001 SC130010 SC130012 SC130014 SC130016 SC130017 SC13002 SC130021 SC130022 SC130024 SC130026 SC13004 SC13007 SC13009	Clip	MBV62321701	PRESS STS 301 0.15 LGLU6200.ALGTBK BK:Black -	
6	SC13001 SC130010 SC130012 SC130014 SC130016 SC130017 SC13002 SC130021 SC130022 SC130024 SC130026 SC13004 SC13007 SC13009	Clip	MBV62321701	PRESS STS 301 0.15 LGLU6200.ALGTBK BK:Black -	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	SW1101 SW1102 SW1103 SW1104	Connector RF	EAG63772101	MM8030-2610RK0 NONE STRAIGHT SOCKET SMD T/REEL AU 50OHM 400mDB MURATA MANUFACTURING CO.,LTD.	
6	SW1105 SW1106	Connector RF	EAG63412001	W.FL2-R-SMT-1(61) 0.35MM STRAIGHT SOCKET SMD R/TP AU 50OHM 400mDB HIROSE KOREA CO.,LTD	
6	U1	Module FEM (Front End Module)	EAT62493501	SKY85709-11 30DBM 28DB 15% 200mA 250mA - 30DB 17DBM -3.5DBM 16P 2.5x2.5x0.45MM 11ac FEM 1.8%@16dBm, MCS9, VHT80 SKYWORKS SOLUTIONS INC.	
6	U10000	IC LDO Voltage Regulator	EAN62732201	RP115L211B-E2 under 5.25V 2.1 0W DFN R/TP 8P (1.6x1.2x0.4) stand by current : 3uA RICOH COMPANY, LTD.	
6	U1102	IC RF Amplifier	EAN62952101	D5105 1.5~3.1 4 0 10W 30W 0 2 SMD R/TP 9P - EPCOS PTE LTD.	
6	U1300	IC DC DC Converter	EAN62788501	LM3263 2.7V to 5.5V 0.4V to 3.6V 0W MICRO SMD R/TP 16P MIPI RFFE, 2G/3G/4G, 2.5A Max.(PWM), 2.7 MHz (typ.), 16-bump micro SMD TEXAS INSTRUMENTS KOREA LTD, HONGKONG BRANCH.	
6	U1301	IC,Power Amplifier	EAN62694001	RF7459 3.0V to 4.35V 0 0 0W 0W 0 9 SMD R/TP 42P MMPA for STE solution, MIPI, APT, GSM Quad, Band1/2/3/4/5/6/8/9/10/13/17/20 RF MICRO DEVICES INC	
6	U1302	Filter,Separator Switch	EAM62634001	RF1635 0 0 32dBm TDD-LTE Tx/Rx RF MICRO DEVICES INC	
6	U1303	Filter,Separator Switch	EAM63210001	BGS18MN14 0.6 23 27 - INFINEON TECHNOLOGIES (ASIA PACIFIC) PTE LTD.	
6	U1500	IC RF Transceiver 4G	EAN62697301	WTR1625L WTR1625L 2G/3G/4G GSM/GPRS/EDGE,1X, 1xEV-DO ,WCDMA , TD- SCDMA , HSPA+/DC-HSPA+ , LTE (FDD) ,TD- LTE, 164pin CSP R/TP 164P QUALCOMM INCORPORATED.	
6	U1601	IC Power Amplifier	EAN62867801	ACPM-9307-TR1 3.2V to 4.5V 0 0 0W 0W 0 1 SMD R/TP 10P Band7, 2520size, MIPI, APT AVAGO TECHNOLOGIES INTERNATIONAL SALES PTE. LIMITED	
6	U1653	IC,Power Amplifier	EAN63428501	ACPM-9328-TR1 3.0V to 4.35V 0 0 0W 0W 0 1 SMD R/TP 10P Band28, 2520size, MIPI, APT AVAGO TECHNOLOGIES INTERNATIONAL SALES PTE. LIMITED	
6	U18000	IC,Charger	EAN63086101	P9025A-2A adj adj 0W CSP R/TP 36P - IDT INC.	



## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	U1803	IC Power Amplifier	EAN62867901	RF7940 3.2V to 4.35V 0 0 0W 0W 0 1 SMD R/TP 10P 2520size, Band40, MIPI, APT, w/o CPL RF MICRO DEVICES INC	
6	U1804	Filter Separator Switch	EAM63050001	BGS12PL6 0.36 37 35 - INFINEON TECHNOLOGIES (ASIA PACIFIC) PTE LTD.	
6	U2100	IC Digital Baseband Processor 4G	EAN63106201	MSM8974AC Quad Krait 2.45GHz,28nm HPM,15x15 Bare Die PoP,2x933 LPDDR3, eMMC5.0, LTE CAT4, CA, HSPA+42Mbps, TD- SCDMA, DOrA/B, 1080@120fps,Adreno330,550MHz NSP R/TP 990P QUALCOMM INCORPORATED.	
6	U3100	IC Mobile SDRAM	EAN62994701	H9CKNNNBKMTDR-NUH 16GBIT LPDDR3 1.7VTO1.95V 933MHz 5500ns FBGA TR 216P 16Gb LPDDR3 PoP 216ball 933MHz (25nm 8Gb x 2) SK hynix Inc	
6	U3200	IC MCP eMMC	EAN63166601	SDIN9DW4-16G-974 16GBYTE 2.7VTO3.6V 11.5x13.0x1.0 TR 153P MLC NAND FBGA 16GB eMMC v5.0 (1ynm 64Gb MLC x 2, 11.5x13.0x1.0) SANDISK International Ltd	
6	U4100	IC PMIC	EAN62667101	PM8941 to 5.5V adj 0W CSP R/TP 229P - QUALCOMM INCORPORATED.	
6	U4200	IC PMIC	EAN62667201	PM8841 to 5.5V adj 0W CSP R/TP 98P - QUALCOMM INCORPORATED.	
6	U4400	IC DC DC Converter	EAN62930601	LM3697YFQR 2.7V to 5.5V up to 40V 0W DSBGA R/TP 12P 2048 Dimming, 1.30x1.65x0.6 mm, 3 series LED strings, NO USE of Negative Power TEXAS INSTRUMENTS KOREA LTD, HONGKONG BRANCH.	
6	U4700	IC Charger	EAN63049301	BQ24296RGER up to 4.35V adj 0W CSP R/TP 24P - TEXAS INSTRUMENTS KOREA LTD, HONGKONG BRANCH.	
6	U4750 U4751	IC Over Voltage Protection	EAN62773901	MAX14670EWL+T up to 28V adj 0W CSP R/TP 15P - MAXIM INTEGRATED PRODUCTS INC.	
6	U4800	IC Fuel Gauge	EAN62421601	MAX17048X+T10 2.5 to 4.5V adj 0W CSP R/TP 8P - MAXIM INTEGRATED PRODUCTS INC.	
6	U4900	IC DC DC Converter	EAN62735901	TPS61282 2.3V to 4.8V 4.8V max. 0W CSP R/TP 16P Swithcing frequency : 2.7MHz, GPIO interface, CSP(1.705X1.705) TEXAS INSTRUMENTS KOREA LTD, HONGKONG BRANCH.	
8	U5000	IC Proximity	EAN63405901	VL6180 TOF sensor, Proximity,Ambient light, measurable range : 0~10cm,0.3~100kLux 4.8x2.8x1.0mm LGA R/TP 12P - ST MICROELECTRONICS ASIA PACIFIC PTE LTD.	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	U5200	IC NFC	EAN62632401	PN5472A2UK/C20803 WLCSP 2.81x2.79x0.56 NFC IC WLCSP R/TP 42P NXP Semiconductors	
6	U6100	IC Audio Codec	EAN62648101	WCD9320 999 999W NSP R/TP 84P MSM8974 Referenced QCT CODEC QUALCOMM INCORPORATED.	
6	U6200	IC Speaker Amplifier	EAN63029101	CS35L32 999 999W WLCSP R/TP 30P - CIRRUS LOGIC, INC.,	
6	U6420	IC Comparator	EAN63149301	MAX14704 3.0~5.5V 0.8mA(MAX) COMPARATOR WLP R/TP 12P - MAXIM INTEGRATED PRODUCTS INC.	
6	U7303	IC LDO Voltage Regulator	EUSY0374201	RP103K121D-TR RP103K121D-TR RP103K121D- TR,PLP1010 ,4 ,R/TP ,1.2V 150mA Single LDO High PSRR ver RICOH COMPANY, LTD. RICOH COMPANY, LTD.	
6	U7500	IC DC DC Converter	EAN62731801	TPS65132 2.5V to 5.5V +4.0V to +6.0V, -4.0V to - 6.0V 0W WCSP R/TP 15P Dual Output LCD Bias, Output Current: 80mA Max., 15-Ball CSP Package TEXAS INSTRUMENTS KOREA LTD, HONGKONG BRANCH.	
6	U7600	IC LDO Voltage Regulator	EAN62768701	RP114K331D-TRB 1.4 to 5.25 3.3 0W DFN R/TP 4P - RICOH COMPANY, LTD.	
6	U7601	IC Signal Bridge	EAN63125901	ANX7812BH-AB-R slimport, HDMI to MyDP Tx, 4.5x4.5 VFBGA R/TP 49P ANALOGIX SEMICONDUCTOR	
6	U7602	IC LDO Voltage Regulator	EAN62735301	RP114K101D-TRB 1.4v to 5.25v 1.0 0W DFN R/TP 4P - RICOH COMPANY, LTD.	
6	U7900	IC LDO Voltage Regulator	EAN62768901	RP114K181D-TRB 1.4 to 5.25 1.8 0W DFN R/TP 4P - RICOH COMPANY, LTD.	
6	U7901 U7902	IC LDO Voltage Regulator	EUSY0407401	RT9032 2.5 to 5.5 ADJ. 0W WDFN R/TP 9P - RICHTEK TECHNOLOGY CORP.	
6	U8100	IC,Gyro Sensor	EAN62826901	MPU-6515 Accelerometer embedded Gyro Sensor 3.0x3.0x0.9 QFN R/TP 24P One Chip Solution INVENSENSE	
6	U8200	IC Geomagnetic Sensor	EAN62986601	HSCDTD008A 3 Axis Geomagnetic Sensor,measurable range : +-24G, ADC: 12bit, sensitivity : 0.15uT 1.6X1.6X0.7 LGA P/TP 8P - ALPS ELECTRIC KOREA CO.,LTD.	
6	U8400	IC Proximity	EAN62568201	APDS-9930-200 High T Proximity and Ambient Light Sensor 3.36X4.94X3.45 COB R/TP 8P High T Proximity and Ambient Light Sensor AVAGO TECHNOLOGIES INTERNATIONAL SALES PTE. LIMITED	

## 12. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location no	Description	P/N	Specification	Remark
6	U8500	IC Acceleration Sensor	EAN62972701	HSPPAD038A Pressure sensor,300~1100hPa, relative accuracy 0.15hPa,absolute accuracy 2hPa 2.5x2.5.0.8 QFN R/TP 6P - ALPS ELECTRIC KOREA CO.,LTD.	
6	U8700	IC Hall Effect Switch	EAN62682901	BU52061NVX Hall IC 1.2X1.6 SSON R/TP 4P - ROHM Semiconductor KOREA CORPORATION	
6	U8800	IC Motor Driver	EUSY0200803	SM100 2.4 3.6 0.05 1W MICRO LEAD FRAME R/TP 8P 1 - SYNCOAM CO.,LTD.	
6	U8900	IC Microprocessors	EAN62661801	MAXQ616V ~3.6V 3.1mA 12MHZ WLP R/TP 16P - MAXIM INTEGRATED PRODUCTS INC.	
6	U95100	IC,WiFi	EAN63186901	WCN-3680B-0-79WLNSP-TR-00-0 WiFi(11a/b/g/n/ac), BT4.0, FM Rx - Optional support for 2.4GHz and 5GHz external PAs/LNAs WLCSP R/TP 79P QUALCOMM INCORPORATED.	
6	VA11004 ZD7400	Varistor	EAF61650701	LXES15AAA1-117 15V 25% 0.1pF 1.0X0.5X0.33 mm IEC61000-4-2 (ESD) level #4 SMD R/TP MURATA MANUFACTURING CO.,LTD.	
6	VA7100 VA7101	Varistor	EAF61891401	IECS0305C040 5V 0% 0.5pF 0.6x0.3 IEC61000-4- 2 (ESD) level #4 SMD R/TP INNOCHIPS TECHNOLOGY	
6	VA7102 VA7103 VA7104	Varistor	SEVY0010501	IECS0505C040FR 10V 0% 4E-12F 1.0x0.5x0.3 IEC61000-4-1 (ESD) level #4 SMD R/TP INNOCHIPS TECHNOLOGY	
6	VA9500	Varistor	SEVY0005101	ICVL0518050FR 18V 0% 5F 1.0*0.5*0.55 NONE SMD R/TP INNOCHIPS TECHNOLOGY	
6	X1000	Crystal	EAW62224101	Q22FA12800199 48MHZ 20PPM 0.000000000007F,0.0000000000087F 2016 SMD R/TP EPSON TOYOCOM CORP	
6	X4100	Crystal	EAW61883401	X1E0002910001 19.2MHZ 10PPM 7F - SMD R/TP EPSON TOYOCOM CORP	
6	X7600	Crystal	EAW61543401	1ZCB27000AA0A 27MHZ 10PPM 12F ; SMD R/TP DAISHINKU CORPORATION.	
6	ZD4500 ZD4501	Diode,TVS	EDTY0009101	ESD9X5.0ST5G 5V 6.2 12.3V 8.7A 107W SOD528 R/TP 2P 1 ON SEMICONDUCTOR	
6	ZD9100	Diode,TVS	EDTY0012102	PESD5V0V1BL 5V 5.8V min. 12.5V 4.8A 45W SOD-882 R/TP 2P 1 STC CORP.	