Internal Use Only

MOBILE PHONE

SERVICE MANUAL

CAUTION

BEFORE SERVICING THE UNIT, READ THE “SAFETY PRECAUTIONS” IN THIS MANUAL

MODEL : **LM-X120HM**

Date: June 2019 / Issue 1.0

Table Of Contents

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

This material is prohibited to share and release to unauthorized person, in accordance with the regulations, LG Electronics, Civil / criminal responsibility in accordance with the relevant provisions violate.

B. Precautions for repair

- In case of Disassembly or Assembly to repair product, be careful of a product failure caused by RF signals and Static electricity.
- When using Magnetic tool for the Phone's SVC repair, you should check affect the Electric parts according to effect of Magnet.
- When fastening the screw, be careful not to damage the head of screw and even product.

C. Attention

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

Following information is ESD handling:

- Service personal should ground themselves by using a wrist, strap when exchange system board.
- When repair 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 board or parts like EEPROM to the Factory, use the protective package as described.

2.1 Band Specification

Support Band	TX Freq (MHz)	RX Freq (MHz)
WCDMA(FDD1)	1922 – 1978	2112 – 2167
WCDMA(FDD2)	1852 – 1908	1932 – 1988
WCDMA(FDD4)	1712 – 1753	2112-2153
WCDMA(FDD5)	826 – 847	871 – 892
WCDMA(FDD8)	882 – 913	927 – 958
EGSM	880 – 915	925 – 960
GSM850	824 – 849	869 – 894
DCS1800	1710 – 1785	1805 – 1880
PCS1900	1850 – 1910	1930 – 1990
LTE1	1920 – 1980	2110 – 2170
LTE2	1850 – 1910	1930 – 1990
LTE3	1710 – 1785	1805 – 1880
LTE4	1710 – 1755	2110 – 2155
LTE5	1920 – 1980	2110 – 2170
LTE7	2500 – 2570	2620 – 2690
LTE8	880 – 915	925 – 960
LTE17	704 – 716	734 – 746
LTE28	703 – 748	758 – 2620
LTE66	1710 – 1780	2110 – 2180

2.2 HW Features

List	Type / Spec.	
1. Phone Type	DOP Type	
2. Size	148.6mm x 71.9mm x 8.3mm	
3. Weight	145 g (with Battery)	
4. Battery	3,000mAh(Typ) (Li-Ion), 2,890mAh(Min.)	
5.Chipset	MT6739WW (2.0GHz Ouad-core + 1.5GHz Quad-core)	
6. Memory	16GB(EMMC) + 1GB(LPDDR3) External Memory(SD Card) : Up to 2TB	
7. LCD	Size	5.45 inch
	Display Type	TFT
	Color	16.7M colors
	Resolution	480(V) X 960(H)
8. Touch	Type	5.45 inch Capacitive type
9. Main Camera (8M)	Type	CMOS image sensor
	Resolution	3264(H) X 2448(V) pixels.
	Image Scaling Down	4:3(8.0MP – 3264x2448)
	Format	**Image :** JPG, **Video :** MP4

2.2 HW Features

10. Audio	Receiver	12 X 06 X 2.0T Receiver
	Speaker	15 X 11 X 2.5T Speaker
	Format	MP3, AAC, MIDI, EAAC+, OGG, AMR
11. Bluetooth	Standard	Bluetooth 4.2
	Effective Distance	10M
	Distance	0 m ~ 10 m (depend on environment)
12. WLAN	Standard	IEEE 802.11 b/g/n
	Throughput	Max 112Mbps
	Depend on environment	0 ~ 15m (depend on environment)
13. GPS	type	A-GPS, Glonass

2.3 RSSI Display

RSSI BAR	GSM RSSI	WCDMA RSSI	LTE RSSI	Comment
BAR 4->3	- 85dBm± 5dB	- 72dBm± 3dB	-92dBm ± 6dB	1. Call Connected & CPIPH Level=-3.3 2. LTE:RSRP
BAR 3->2	- 95dBm± 4dB	- 80dBm± 5dB	-102dBm ± 5dB	
BAR 2->1	- 102dBm± 2dB	- 91dBm± 5dB	-113dBm ± 5dB	
BAR 1->0	- 106dBm± 2dB	- 101dBm± 4dB	-121dBm ± 4dB	

2.4 Current consumption

	Stand by		Voice Call (LTE Data connection)	Measurement Condition
	Bluetooth Off	Bluetooth Connected		
WCDMA Only	12 mA under (DRX=7)	15 mA under (DRX=7)	500 mA under (Tx=10dBm)	LCD off
GSM Only	12 mA under (PP=5)	15 mA under (PP=5)	500 mA under (Lvl=5)	LCD off
LTE	12 mA under (LTE 2.56S)	15 mA under (LTE 2.56s)	500 mA under (@TX 10 dBm)	LCD off

2.5 Battery bar

Battery Bar icon	Specification(%)
Level 20	98 ~ 100
Level 19	93 ~ 97
Level 18	88 ~ 92
Level 17	83 ~ 87
Level 16	78 ~ 82
Level 15	73 ~ 77
Level 14	68 ~ 72
Level 13	63 ~ 67
Level 12	58 ~ 62
Level 11	53 ~ 57
Level 10	48 ~ 52
Level 9	43 ~ 47
Level 8	38 ~ 42
Level 7	33 ~ 37
Level 6	28 ~ 32
Level 5	23 ~ 27
Level 4	16 ~ 22
Level 3	13 ~ 15
Level 2	8 ~ 12
Level 1	3 ~ 7
Level 0	0 ~ 2
Low Battery Pop-up	16% →15% : One Time popup (No call) There is no pop-up until 5% if you delete pop-up.
Critical Low battery pop-up	6% → 5% : One Time popup (No call) There is no pop-up until 3% if you delete pop-up.
Power off	Under 1%

2.6 SW Specification

Function	Detail Item	O / X	Specification	Etc.
OS	OS	O	Android P Go	
Data	Circuit	X		
	Packet	O		
Connectivity	Infrared (IrDA)	X		
	Bluetooth	O	Ver. 5.0	
	Wi-Fi	O	802.11 b/g/n	
	USB	O	Ver. 2.0	
	USB Mass storage	X	MTP support	
	RS232	X		
	DLNA1.5	X		
Voice Function	Voice Recording	O	app downloading	
	Voice Command	X		
		X		
		X		
		X		
	Answering machine	X		
Memory	User Memory	O	Total	16GB
		O	Total User Memory	12GB (w/o MicroSD)
		X	MMS	
		O	Pictures (Still Image & Moving Image)	
		O	MP3 (Music Contents)	
		X	Java Contents	
		X	Wallpaper	
		X	Ringtone	
		O	external memory (microSD)	up to 32TB
Camera (Still Capture)	Memory	O	MicroSD	
	Camera Module	O	8M AF	
	Auto Focus	O		
	Digital Zoom	O	4x	
	Capture Resolution	O	rear capture : 3264x2448, 3328x1872, 3264x1632, 2560x1920, 2560x1440, 2560x1280, 2448x2448, 1840x1840 front capture : 2560x1920, 2560x1440, 2560x1280, 1920x1920,	
	Continuous Shot	X		
	Quality	X		
	Preview Image	O		
	TV-Out	X		
	Flash	O		

2.6 SW Specification

Camera (Movie Capture)	Movie Resolution	O	Rear 1920x1080, 1280x720 Front 1920x1080, 1280x720	
	Filter	X		
	Quality	X		
	MPEG Visual Bit Rate	X		Default code H.264 And video Bit rate is 17Mbps We can support MPEG-4, but the bit rate is depend on Application setting
	Audio Encode	O	AAC, , AMR-NB	
	Audio Decode	O	AMR	
	Movie Recode	O	Recode, Stop, Pause, Resume	
	Movie Playback	O	Play, Stop, Pause	
	Stream Format (Mux)	O	mp4, 3gp	mp4 – normal 3gp – mms
	Stream Format (Demux)	O	mp4, 3gp	mp4 – normal 3gp – mms
	Recoding Time	O	Real Time Recoding	
	TV-Out	X		
Audio Multimedia	Voice Codec	O	AMR/ 3gpp	
	AAC /AAC+/ EAAC+	O		
	MP3, WAV	O		
	WMA	O		
	Midi	O	● Type 0 and 1 (.mid, .xmf, .mxmf) ● RTTTL/RTX (.rtttl, .rtx) ● OTA (.ota) ● iMelody (.imy)	
	Music ringtone	O	MP3, AAC, AAC+, eAAC+, AMR, OGG, FLAC, ALAC, PCM, WMA, OPUS	
	AMR-NB	O		
	Music player skin	O	Music Player	
	FM Radio	O		
	Speakerphone	O		

2.6 SW Specification

Multimedia	MPEG4/H.263	O	MPEG4 - Decoding : 1080p/30fps/20Mbps H.263 - Decoding : 704*576/30fps/15Mbps	
	H.264	O	Decoding : 1080p/30fps/20Mbps	
	WMV	X		
	Normal View	O	Moving Image Capture & Movie Contents	contents size
	Wide View	O	Full Screen mode	
	Custom DTV Zoom	X		
Other Features	File Viewer	X		Android App can be downloaded in Play Store
	Macromedia Flash Lite	X	Not Available	
	e-Book/e-Comic Book	X	*.doc, *.jpg, *.gif	E-book reader program is not included in ROM. But user can download in internet..
	Flight Mode	O		
Internet Browser	WAP (Windows Mobile 6.0 IE Mobile)	X	version 2.0	
		X	WML1.3	
		O	XHTML1.1	
		O	HTML4.01	Partially support - HTML 5
Java	MIDP	X		
	J2ME support	X		
	Game & Contents	X		
	CLDC	X		
Flash	Flash Game	X		
Streaming Service	H.263+AAC/AMR-NB	O	H.263 - Decoding : 704*576/30fps/15Mbps	
	MPEG4+AAC/AMR-NB	O	MPEG4 - Decoding : 1080p/30fps/20Mbps	
	WMV9	X		
DRM	OMA DRM	O	Forward Lock	
		X	Separate Delivery	
		X	Combined Delivery - Count-only	
OTA	OTA	O	OTA 1.0	
Display	RSSI	O	6 level (Include No service)	
	Battery Level	O	with percentage	Yes
	RTC	O		
	Multi Language	O	depending on build language.	
	Quick Access Mode	X		
	PLMN/Service Indicator	O		
	Dimming Clock	X	Battery power 15s, 30s, 1min, 2min, 5min 10min, 15min External power 15s, 30s, 1min, 2min, 10min, 15min	Screen timeout supports

2.6 SW Specification

Normal Features	Last Dialed Number	O		
	Last Received Number	O		
	Last Missed Number	O		
	Scratch Pad Memory	X		
Call Management Managemen	Call Waiting	O		
	Call Swap	O		
	Call Retrieve	O		
	Auto Answer	O		
	Automatic Redial	X		
	Calling Line Identification	O		
	Full Call divert	O		
	Speed Dialing	O		
	Last Number Redial	X		
	Multiparty Call (Conference Call)	O		
	Explicit Call Transfer	O		
Network	Automatic Network Selection	O		
	Manual Network Selection	O		
	Network Service Status	O		
DTMF	DTMF Signaling	O		
	DTMF Enable & Disable	X		
Audio	Key Tone Volume	O	16 Level (Include Mute)	
	Ring Tone Volume	O	16 Level (Include Mute)	
	Ring Tone Pattern	O	ogg	
	Ring Type Silent	O	Vibrator & Ring (Indicator)	
	Earpiece Volume	O	16 Level (Include Mute)	
	Mute	O		
Cell Broadcast	Read Cell Broadcast	O		
	Cell Broadcast Categories	X		
	Cell Broadcast Message Language	O	Supports filtering with language IDs (German,Italian,French, Spanish, Dutch,Swedish,Danish,Portuguese,Finnish,Norweggian, Greek,Turkish,Hungarian,Polish,Czech)	

2.6 SW Specification

Phone Book	Entry	O	Name, Phone, Email, Groups, Postal address, Ringtone, Notification Sound, Phonetic name, Organization, IM, Notes,Nickname, Website, Event	
	Field	O	Phone(Mobile,Work,Home,Main, Work Fax,Home Fax,Pager, Other, Custom) Email(Home,Work,Other,Custom) Groups(Coworkers,Family,Friends) Postal address(Home,Work,Other,Custom) Organization(Company,Title) IM(AIM,Windows Live,Yahoo,Skype,QQ,Hangouts,ICQ,Jabber,Custom) Event(Birthday,Anniversary,Other, Custom)	
	Numeric Store and Recall	O		
	Alphabetic Store	O		
	Alphabetic Recall	X		
	Scroll by alphabetic or numeric order	O		
	Last Number Dialed	O		
	Last Number Missed	O		
	Last Number Received	O		
	Copy & Move	X	Move not support	
	Fixed Dial Number	O		
	Barred Dial Number	X		
	Service Dial Number	X	It depends on SIM card	
	Email Entry	O		
	Picture ID	O	Relating Photo caller ID	
	My Name card	O	Bluetooth transmission (OPP	
Call Cost	Last Call Timer	X		
	Last Call Charge Units	X		
	Total Call Timer	X		
	Total Charge Units	X		
	Visible, Audible Call Time/Cost Indication	X		
Supp. Services	Call Forwarding	O	All Incoming Calls,	
		O	No Reply	

2.6 SW Specification

SIM	Plug In Type	O		
	SIM Lock	O		
	SIM Toolkit	O		
	Prepaid SIM Operation	O		
Short Messaging	Read Message	O	EMS Not Support	
	Write and Edit Message	O		
	Send and Receive Message	O		
	Reply to Message	O		
	Forward Message	O		
	Extract Number from Message	O		
	Message Status	O		
	Message Unread Indicator	O		
	Settable Message Center Number,	O		
	Reply Path and Validity	X		
	Visible and Audible Message Receive Alertin g	O		
	Voice Mail	O		
	Settable Voice Mail Center Number	X		
	Message Protocol	X		
	Message Overflow Indicator	O		
	Message Center Number	O		
	Help Menu	X		
Multimedia Messaging	Picture Attachable	O		Max bytes is it, According to inserted usim
	Moving Picture Attachable	O	Video MMS	Max bytes is it, According to inserted usim
	Voice Attachable	O	AMR	
	Help Menu	X		

2.6 SW Specification

Instant Messaging Service	IM	X		Android App can be downloaded in Play Store
	PC Compatable	X		
	Menu Option	X		
E-Mail	Protocol	O	IMAP4	
		O	SMTP	
		O	POP3	
		X	Help Menu	
Voice Instant Messaging Service	PTT	X	Full Duplex	
		X	Half Duplex	
	Menu Option	X	Grouping	
		X	Status List	
		X	Help	
		X	Others	
Sound Contents	Wallpaper	X		
	Screen Saver	X		
	Ringtones	O		
	Karaoke	X		
	Stutter Sound	O		
	Flip tone	X		
	Button tone	O	can be enable or disable button press sound.	
	Others	X		
Calendar	New Event	O		
	Edit Event	O		
	Agenda	O		
	Reminder	O		
	Google sync	O		
Miscellaneous Function	Development & Test Facility	O		
	Field Test Facility	X		
	Display Software Version	O		
	IMEI	O	*#06#	
Text Input	Language	O		
	Predictive word input	O	T9 predictive supported.	
Scheduler	Schedule	O		
	To Do List	O		
	Memo	O		
	D-day counter	X		
	Send via Bluetooth	O		
World Time	Setting Local Time	O		
	Display Two Number of Cities Time	X		

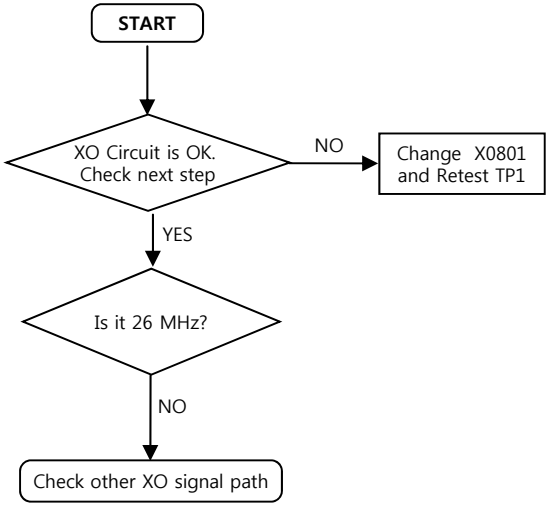
2.6 SW Specification

Unit converter		X		
Stop watch		O		
Calculator	Calculation	O		
PC Sync	Phone Book Sync	X	PC Bridge supports backup and restore (not sync)	
	Message Sync	x	PC Bridge supports backup and restore (not sync)	
	Multimedia Contents Sync	x	PC Bridge supports backup and restore (not sync)	
	Scheduler Sync	X	PC Bridge supports backup and restore (not sync)	
Sync ML	DS	X		
	DM	X		
Game		X		
Menu	Quick Access Mode (Profile)	O		
External Interface	Electrical Man Machine Interface	X		
	Development and Test Facility	X		
Handset	Restore Factory Setting	O		
	Read Software Version	O		
	Battery Charging Mode	O	USB/ TA Charging	USB/ TA Charging
Security	Emergency Call	O		
	Handset Lock	O		
	Security Code	O		
	SIM Lock	O		
	Key guard	X		
Real Time Clock	12/24 hour	O		
	Calendar	O		
	Time Zone	O		
	Alarm Manager	O		
	Dimming Clock	X	Battery power 15s, 30s, 1min, 2min, 10min, 15min External power 15s, 30s, 1min, 2min, 10min, 15min	Screen timeout supports
	Power-off Alarm	X		
	On Alarm Event	O	Display	

3.1 Checking XO Block

The out put frequency(26MHz) of XO(X0801) is used as the reference one of MT6739 internal DCO

Checking Flow



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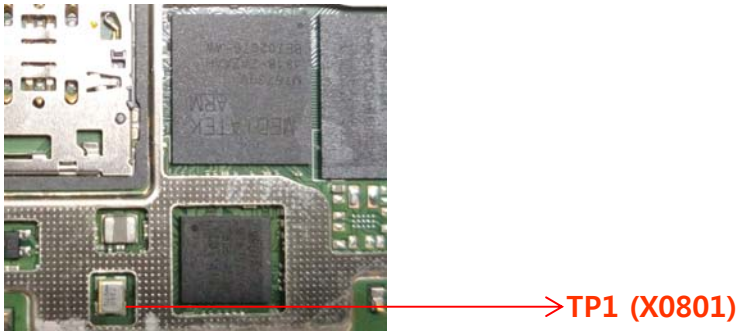
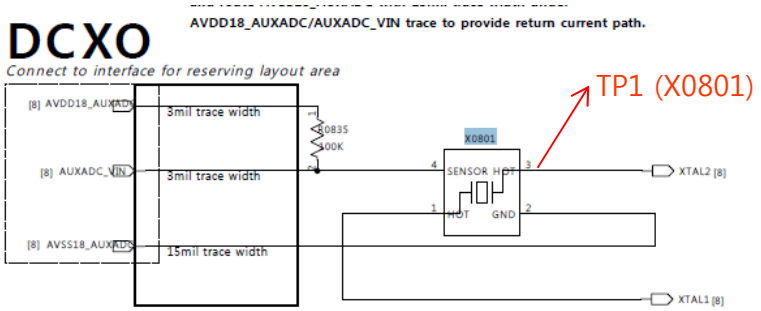
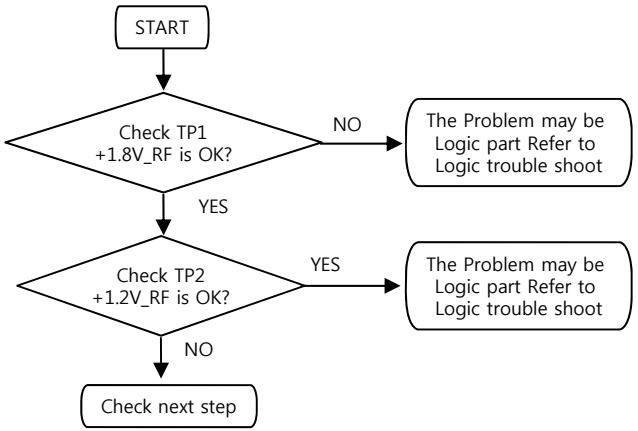


Circuit Diagram



The MT6177M operating voltages used two voltage sources 1.8V and 1.2V

Checking Flow



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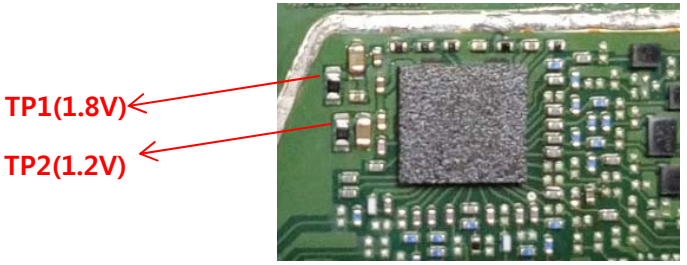
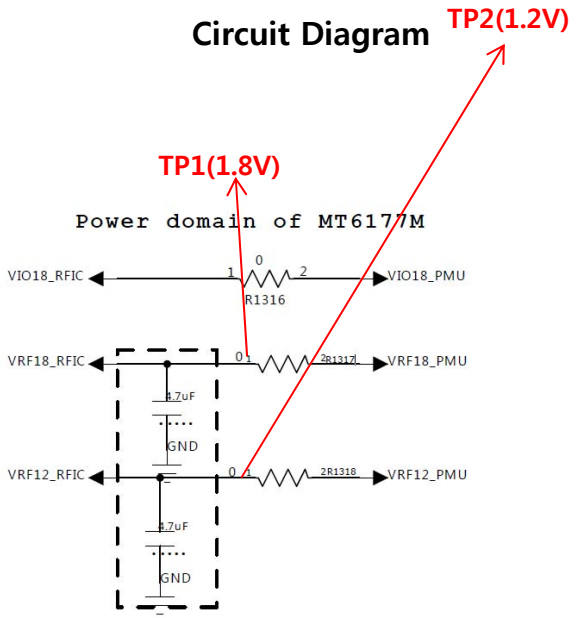
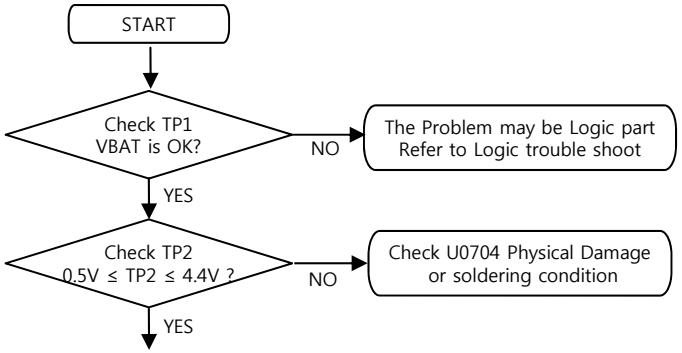


Circuit Diagram



The PMIC(MT6357, U0704) output voltages is used as the reference one of RF Device

Checking Flow



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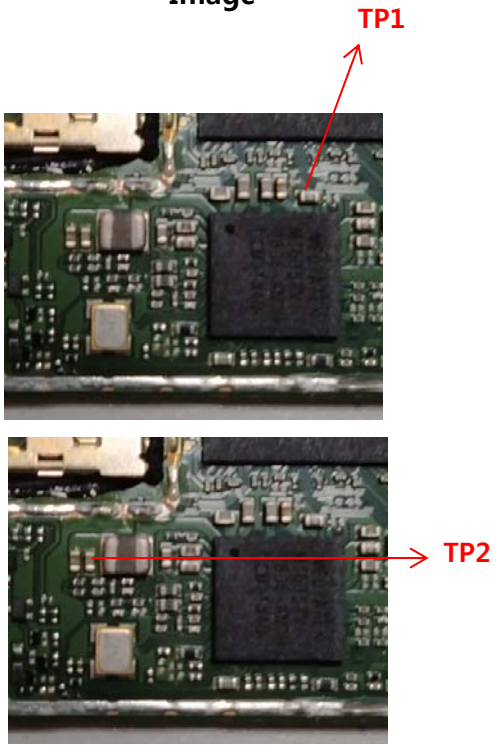
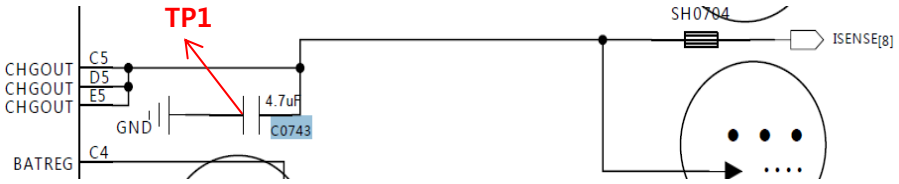
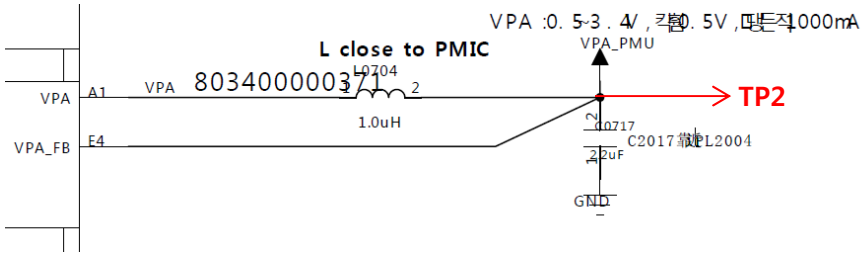


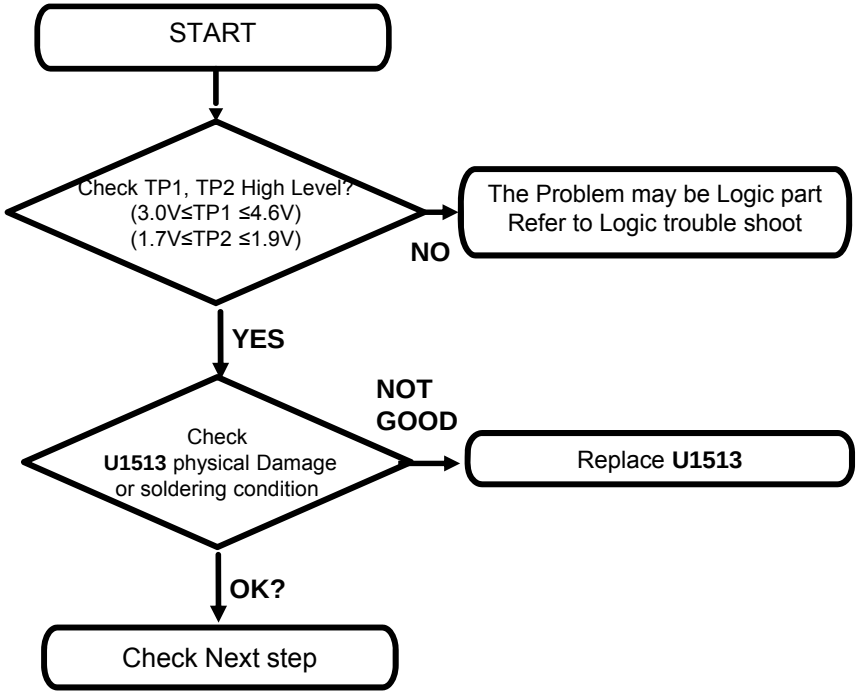
Circuit Diagram





Checking ASM Block

Checking Flow



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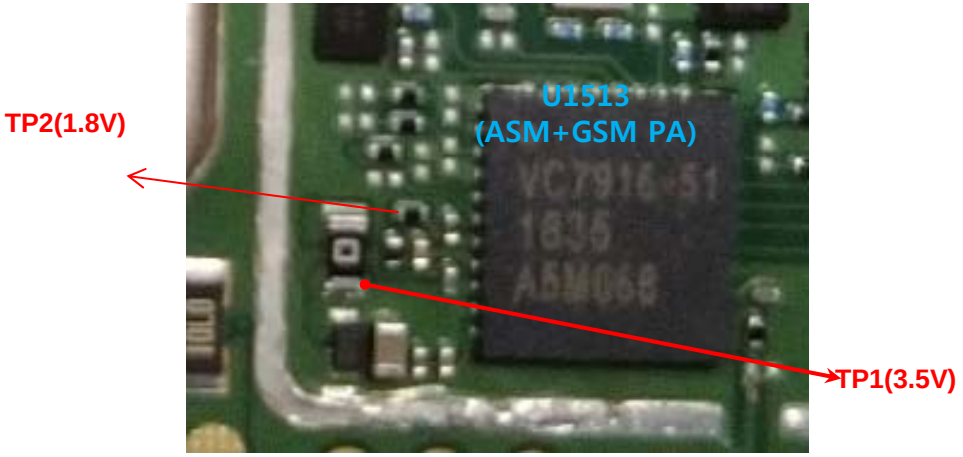
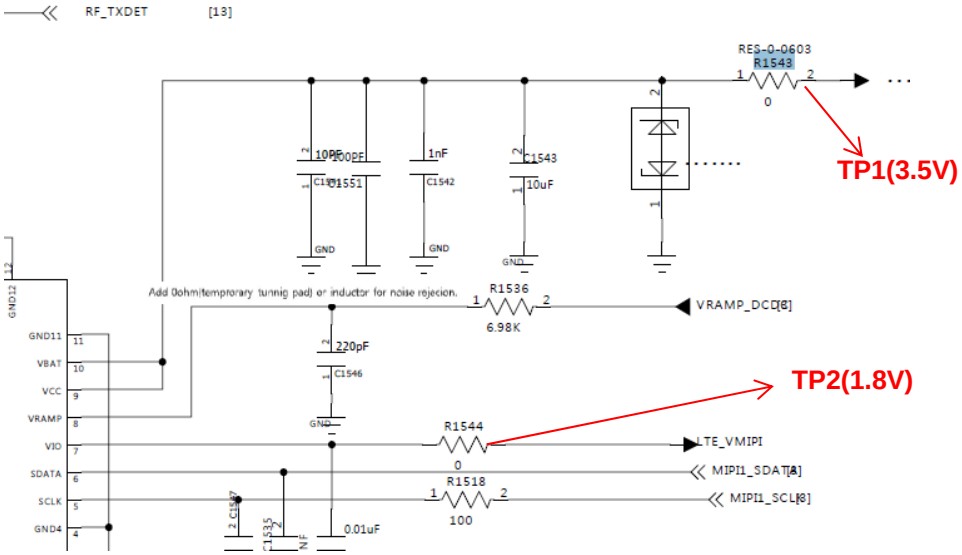


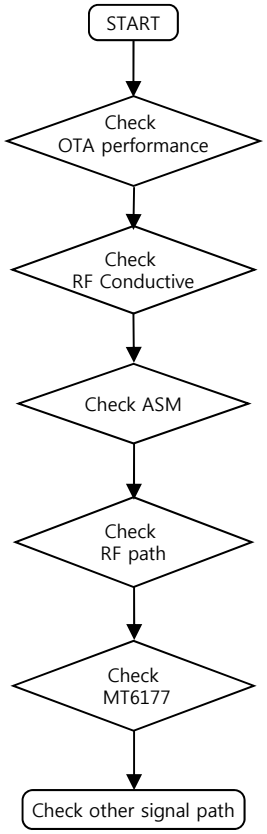
Circuit Diagram



3.5.1 GSM RF PART

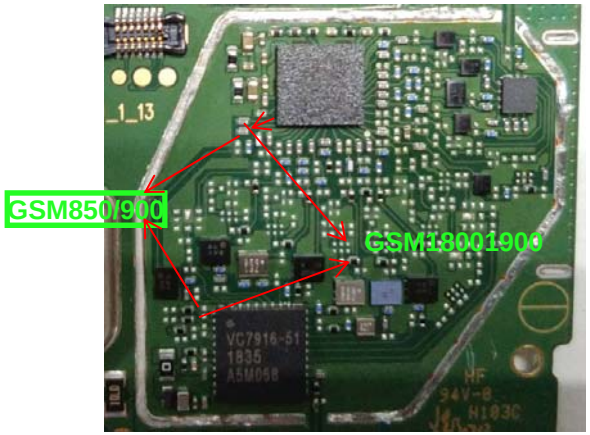
GSM RF Part support GSM850/900/1800/1900 with ASM, PAM, Transceiver component

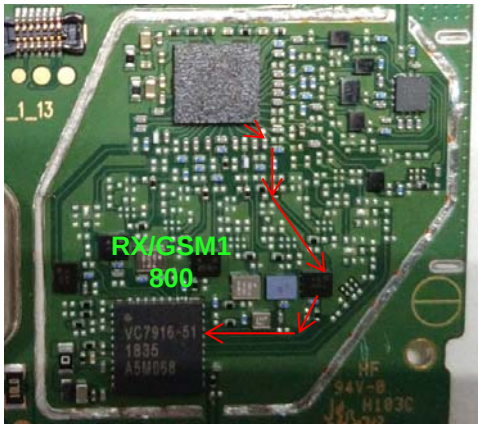
Checking Flow

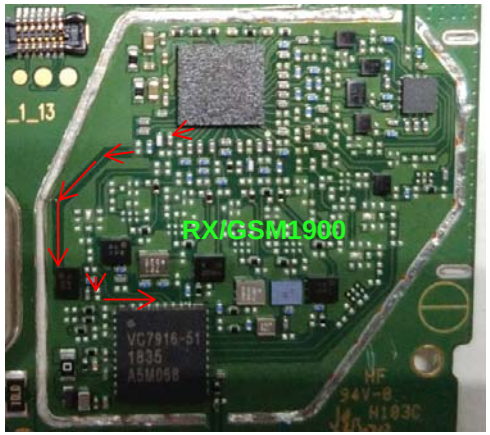


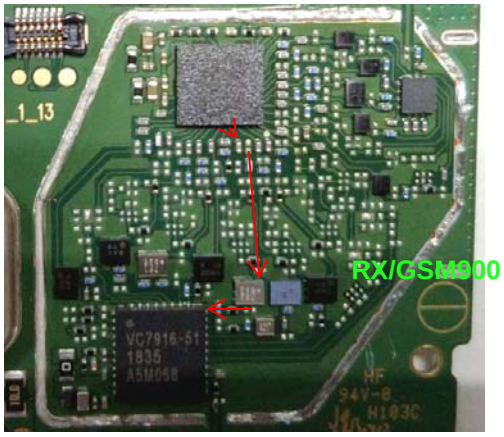
3.5.1 GSM RF PART

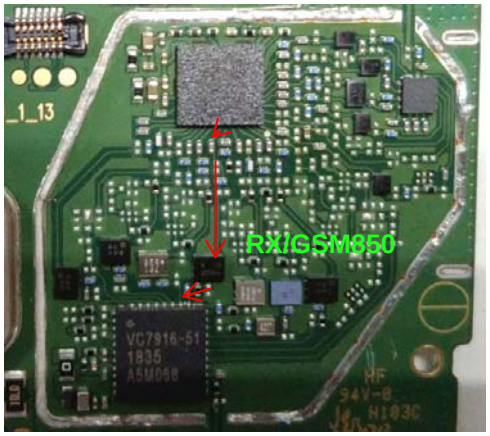
GSM850/900/1800/1900 Tx/Rx Path







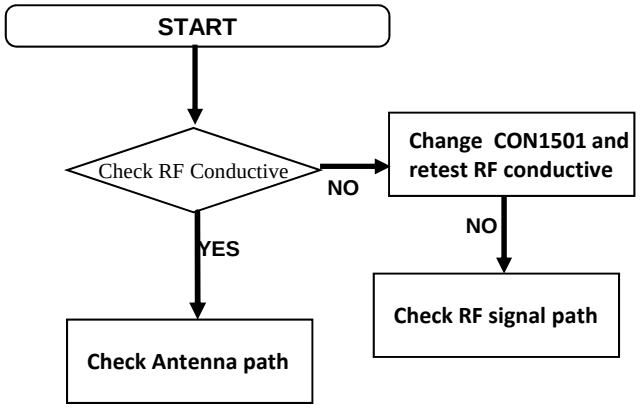




3.5.1 GSM RF PART

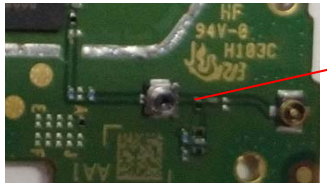
Checking RF signal path (SW)

Checking Flow



Image

Main Bot

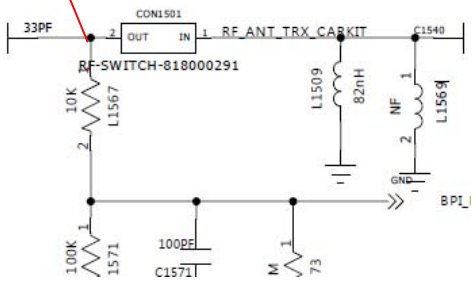


CON1501

TP1(CON1501)

CON1501

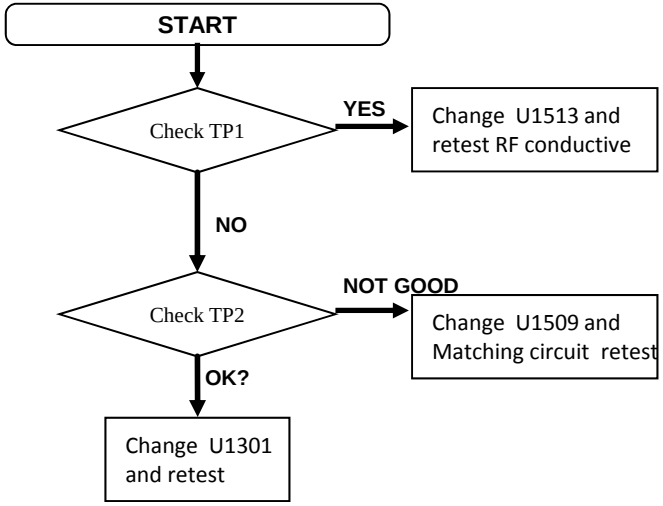
Circuit Diagram



3.5.1 GSM RF PART

Checking RF Signal RX path(GSM850)

Checking Flow



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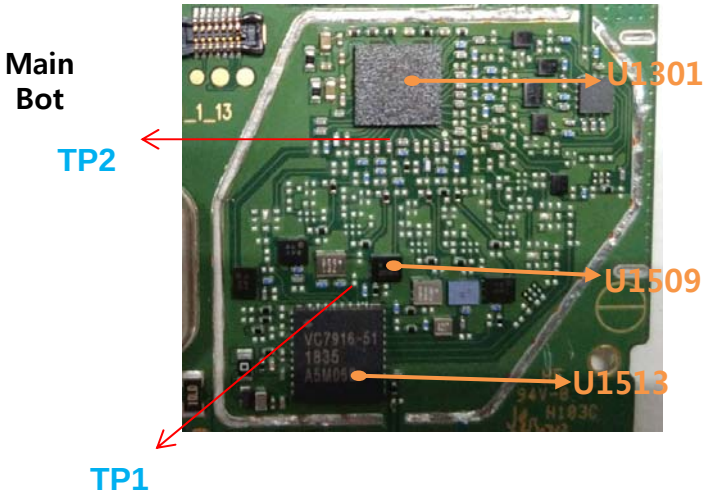
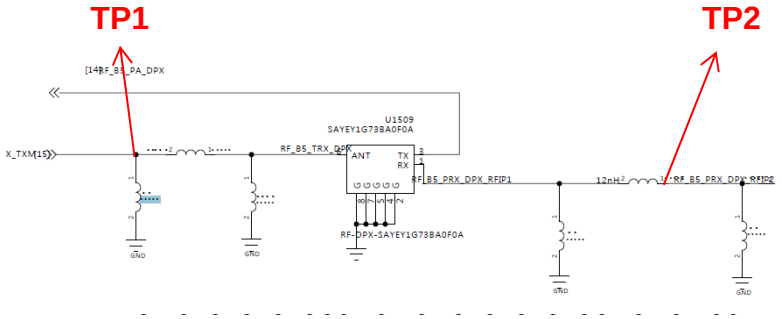


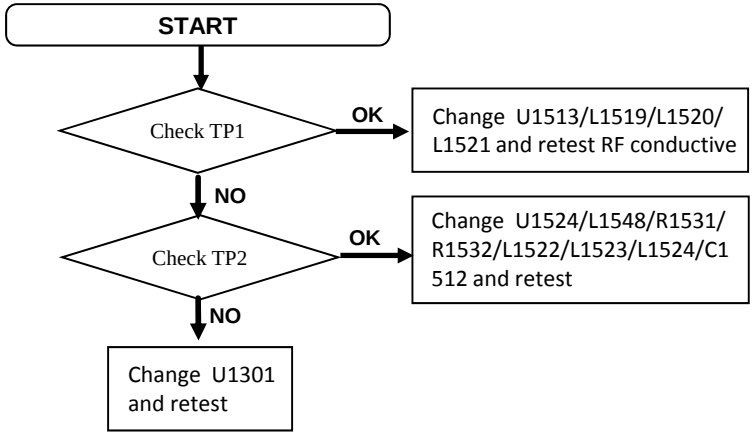
Circuit Diagram



3.5.1 GSM RF PART

Checking RF Signal RX path(GSM900)

Checking Flow



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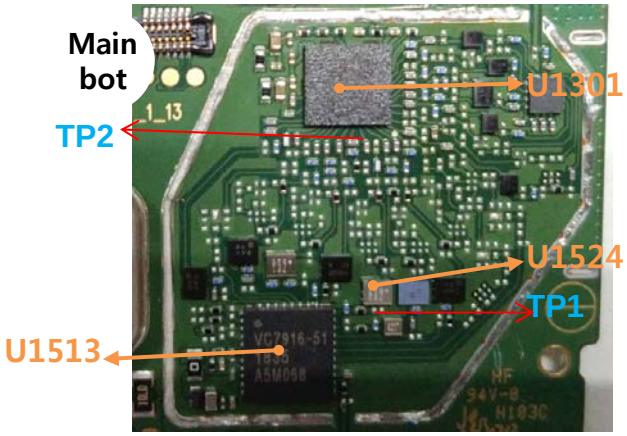
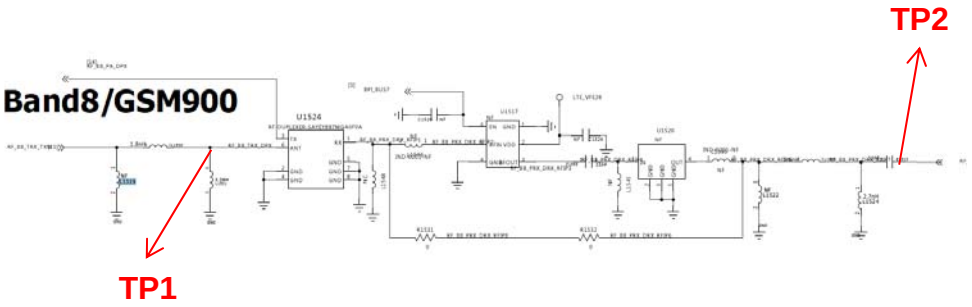


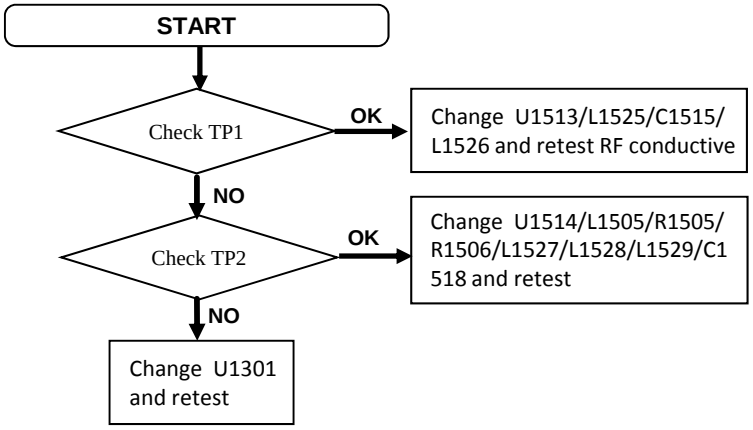
Circuit Diagram



3.5.1 GSM RF PART

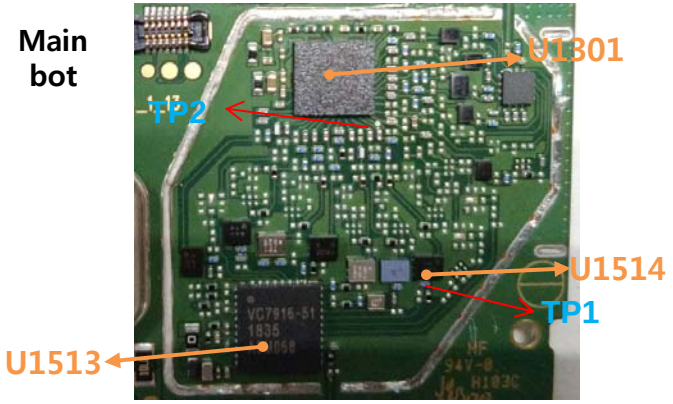
Checking RF Signal RX path(GSM1800)

Checking Flow

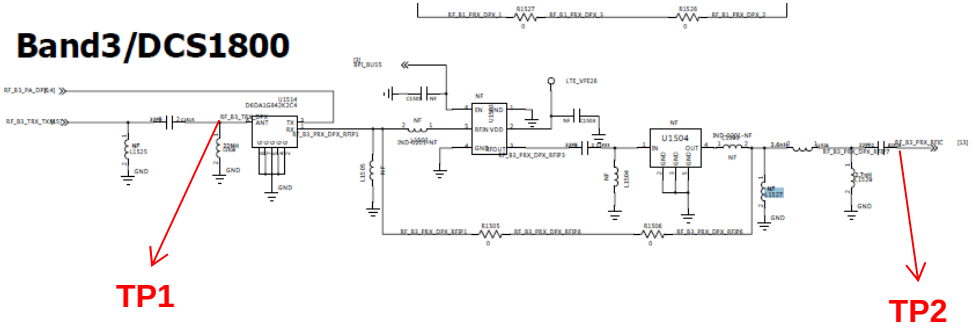


Image

Main bot



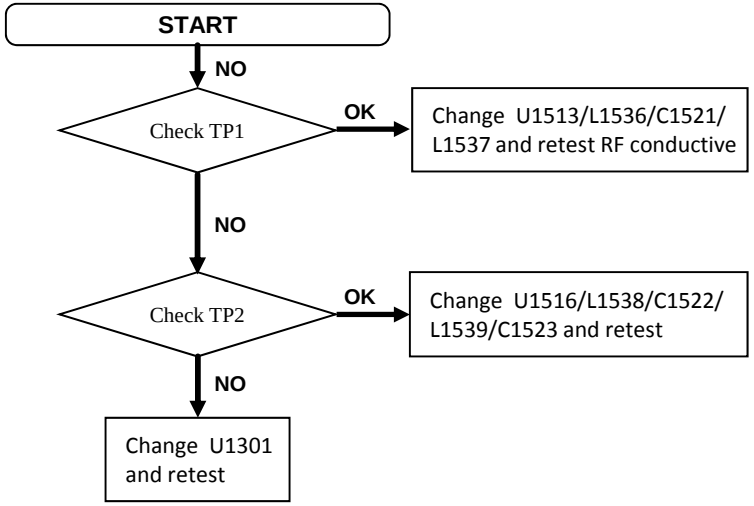
Circuit Diagram



3.5.1 GSM RF PART

Checking RF Signal RX path(GSM1900)

Checking Flow



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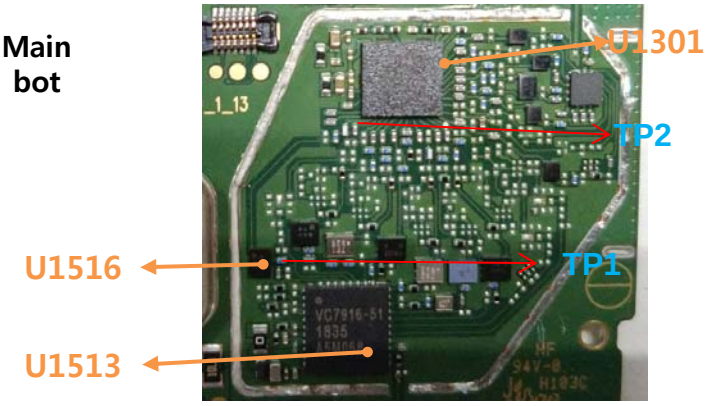
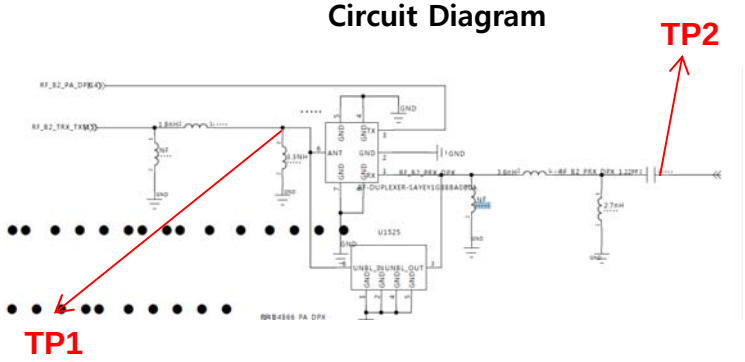


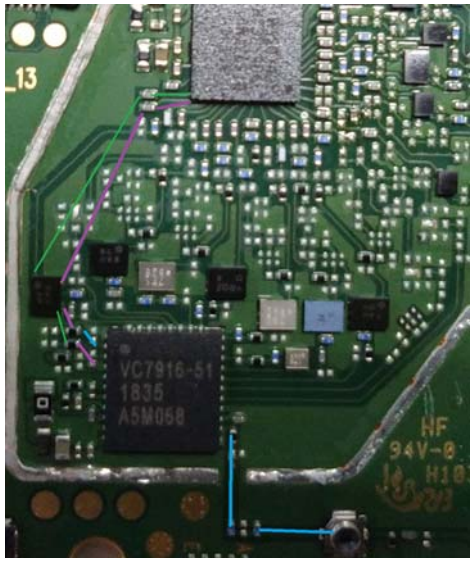
Circuit Diagram



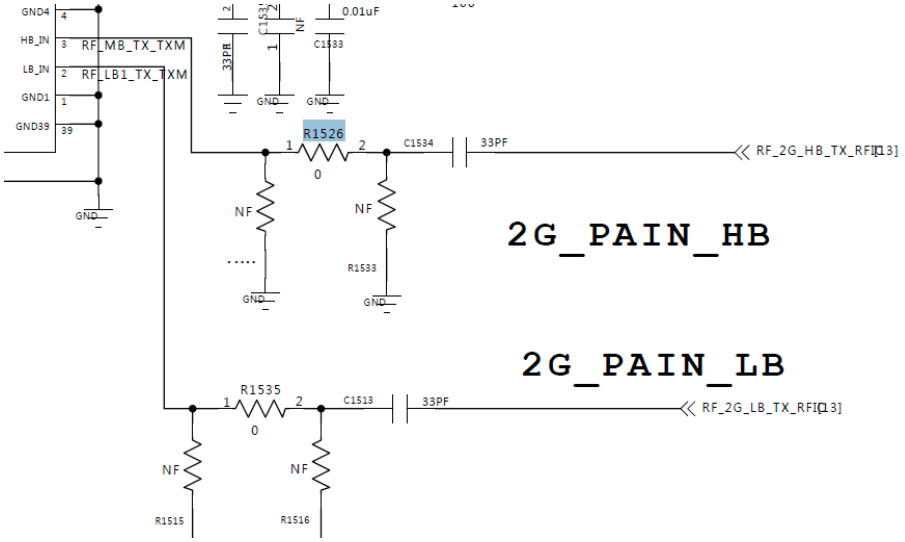
3.5.1 GSM RF PART

GSM850/900/1800/1900 Tx

Main Bot



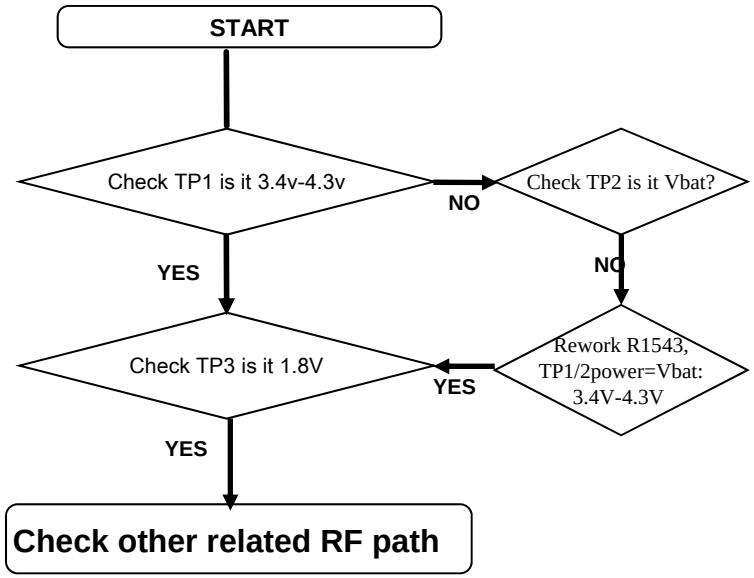
1. GSM850/GSM900 TX PATH
2. DCS1800/PCS1900 TX PATH
3. COMMON TX/RX PATH



3.5.1 GSM RF PART

Checking GSM PAM DC Power Circuit

Checking Flow



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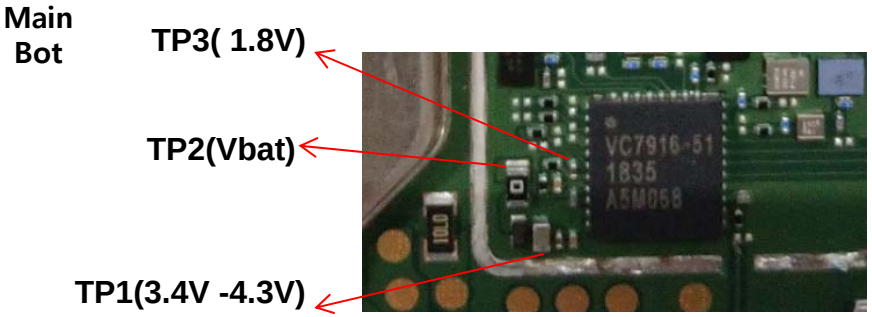
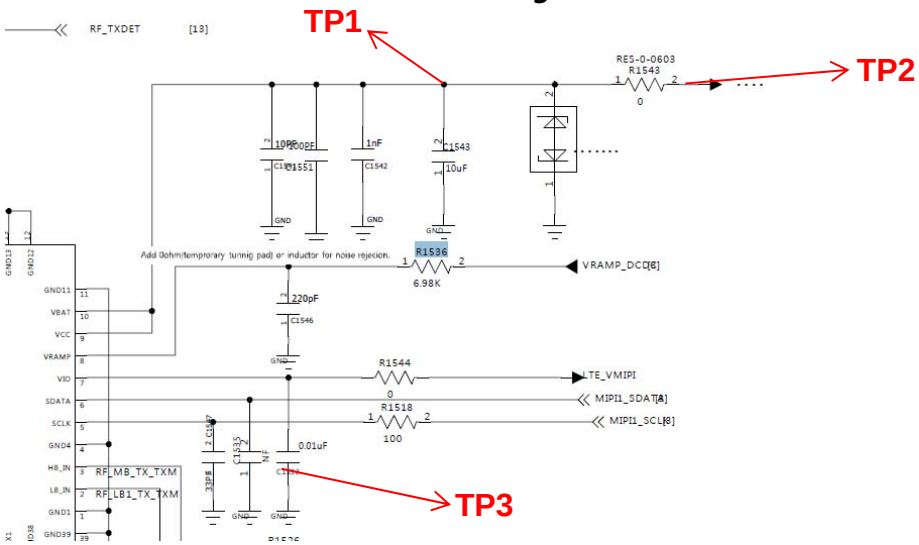


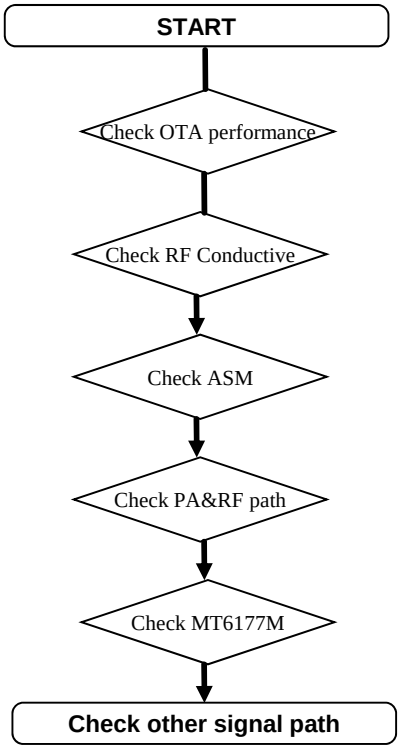
Circuit Diagram



3.5.2WCDMA RF Part

WCDMA RF Part support WCDMA B1/2/4/5/8 with FEM, PAM, PA, Transceiver component

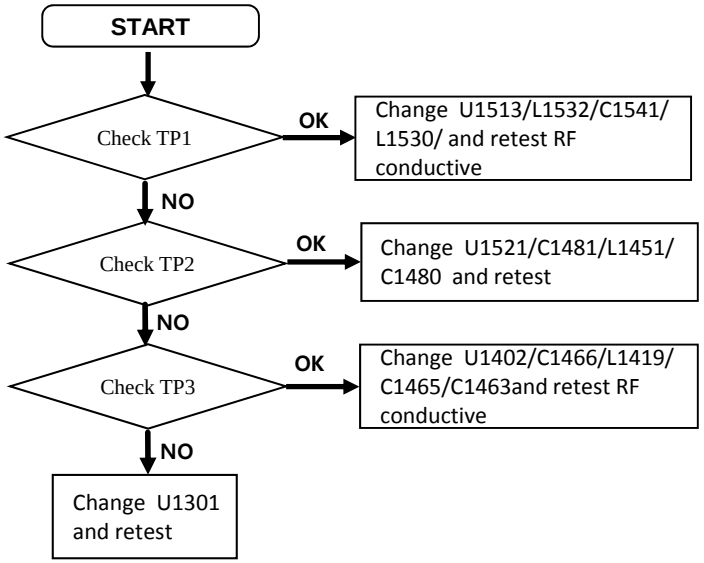
Checking Flow



3.5.2 WCDMA PART

Checking RF Signal TX path(WCDMA/LTE_B1)

Checking Flow



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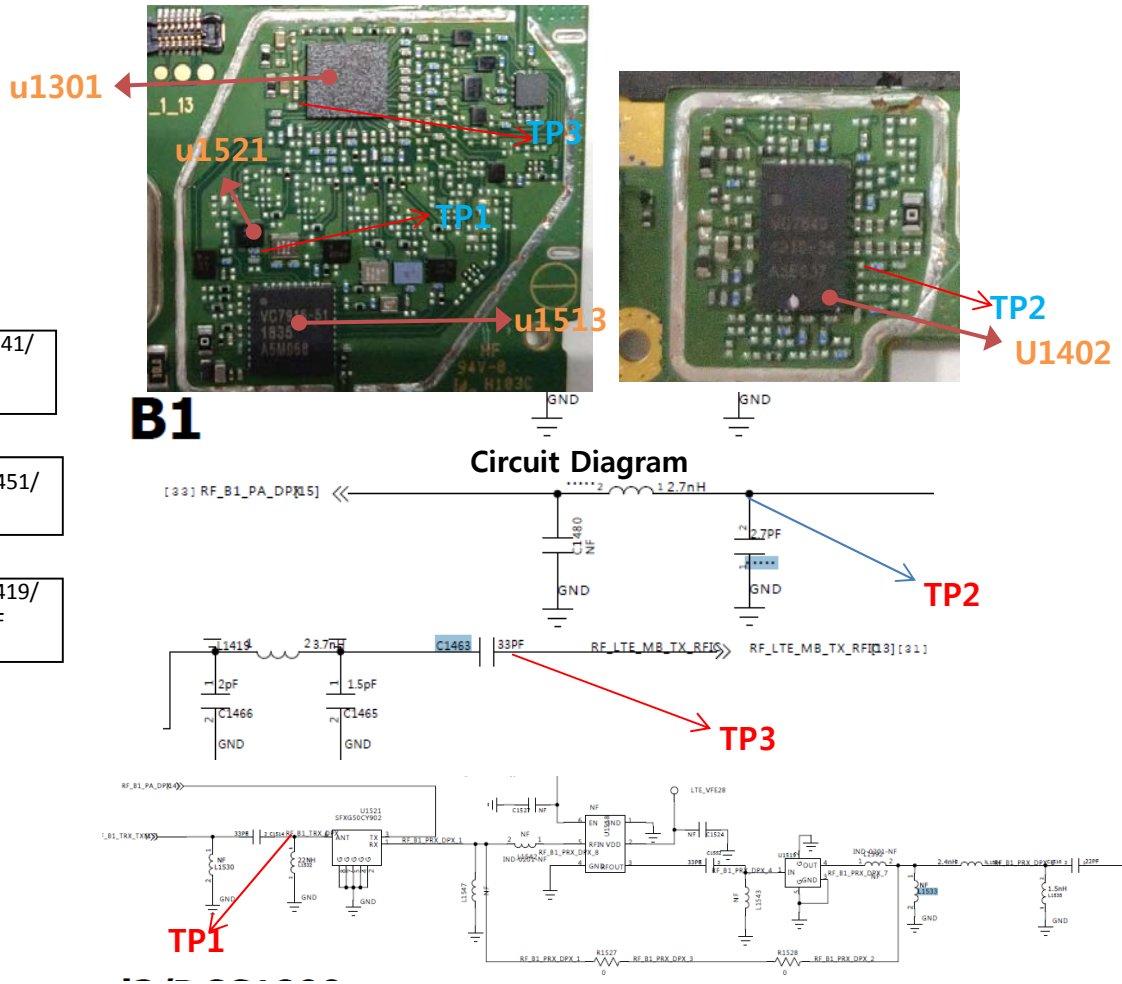
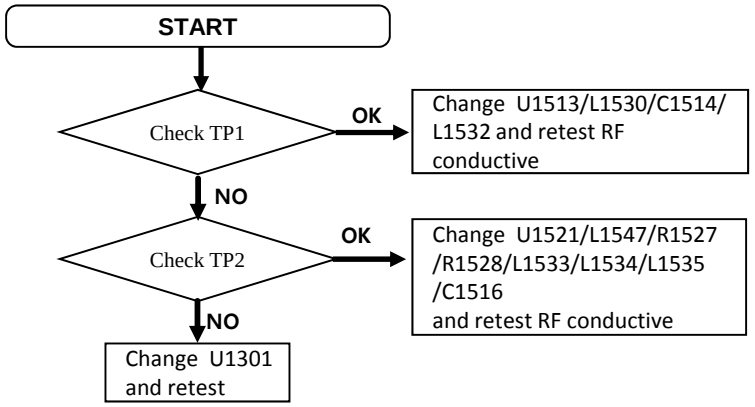


3..5.2WCDMA PART

Checking RF Signal PRX path(WCDMA_B1 (LTE _B1)

Checking Flow



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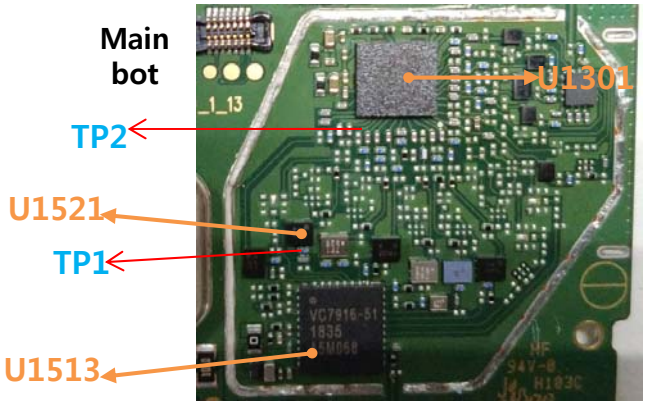
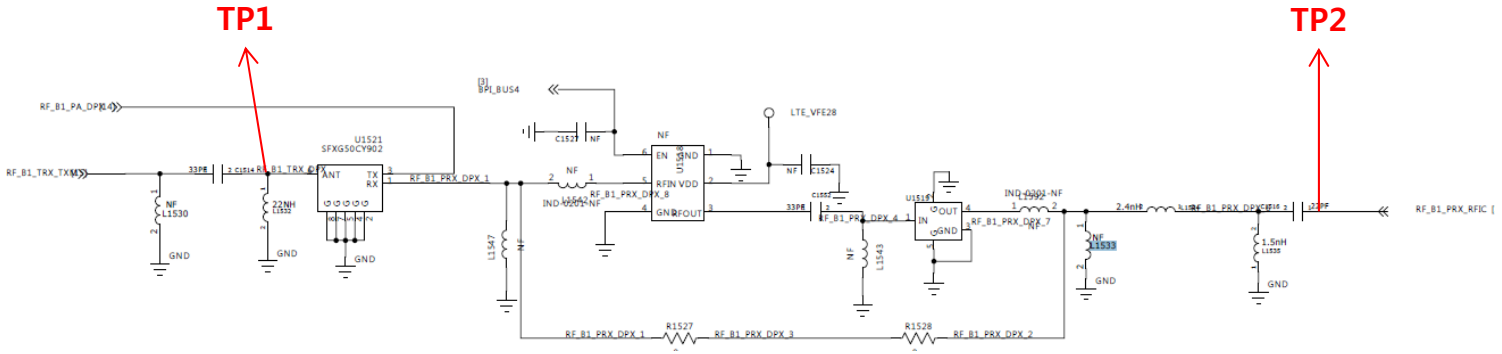


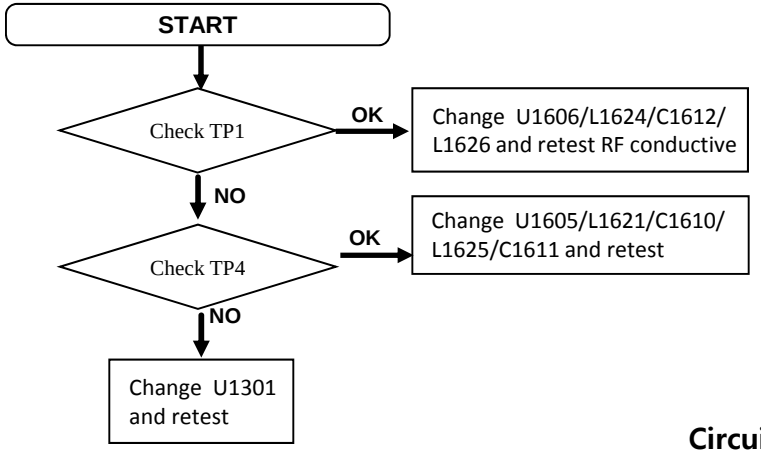
Circuit Diagram



3..5.2 WCDMA PART

Checking RF Signal DRX path(WCDMA/LTE_B1/4/66)

Checking Flow



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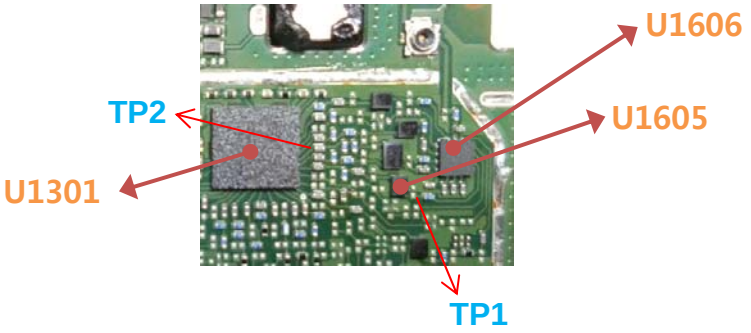
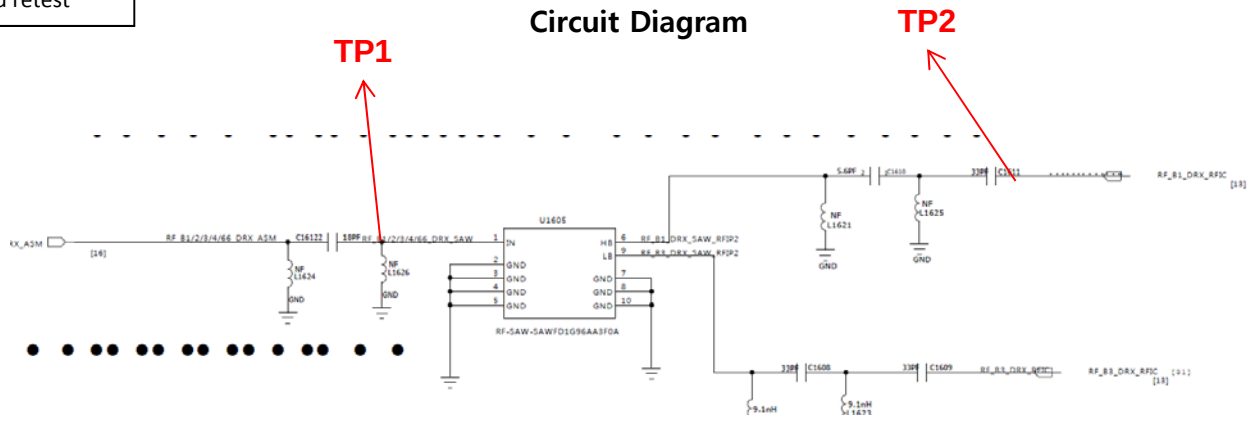


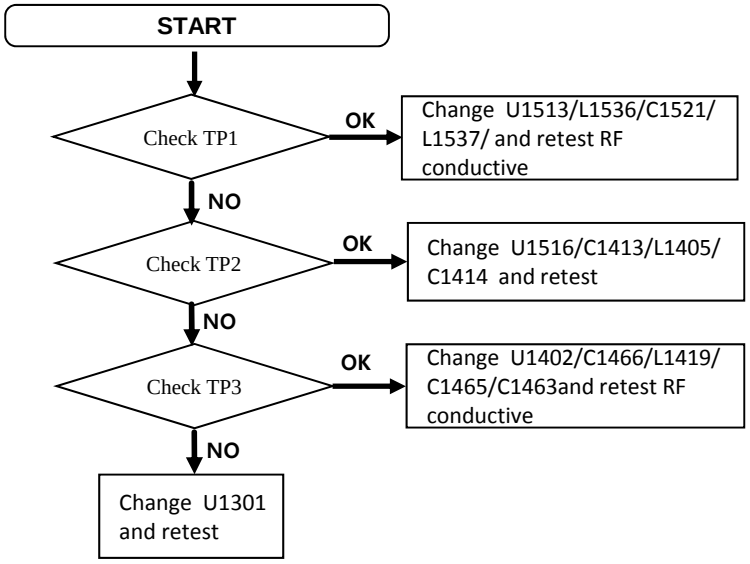
Circuit Diagram



3.5.2 WCDMA PART

Checking RF Signal TX path(WCDMA/LTE_B2)

Checking Flow



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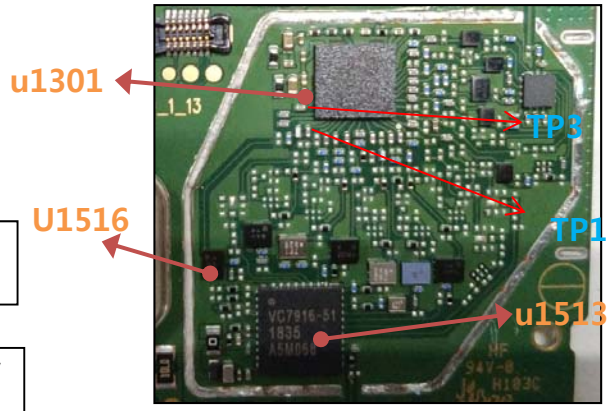
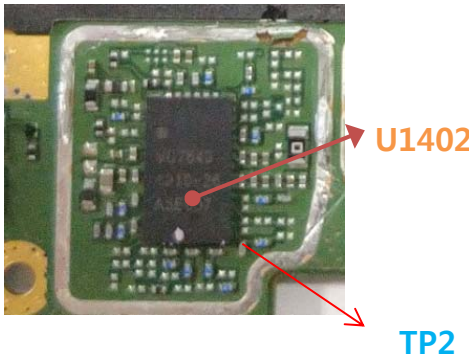
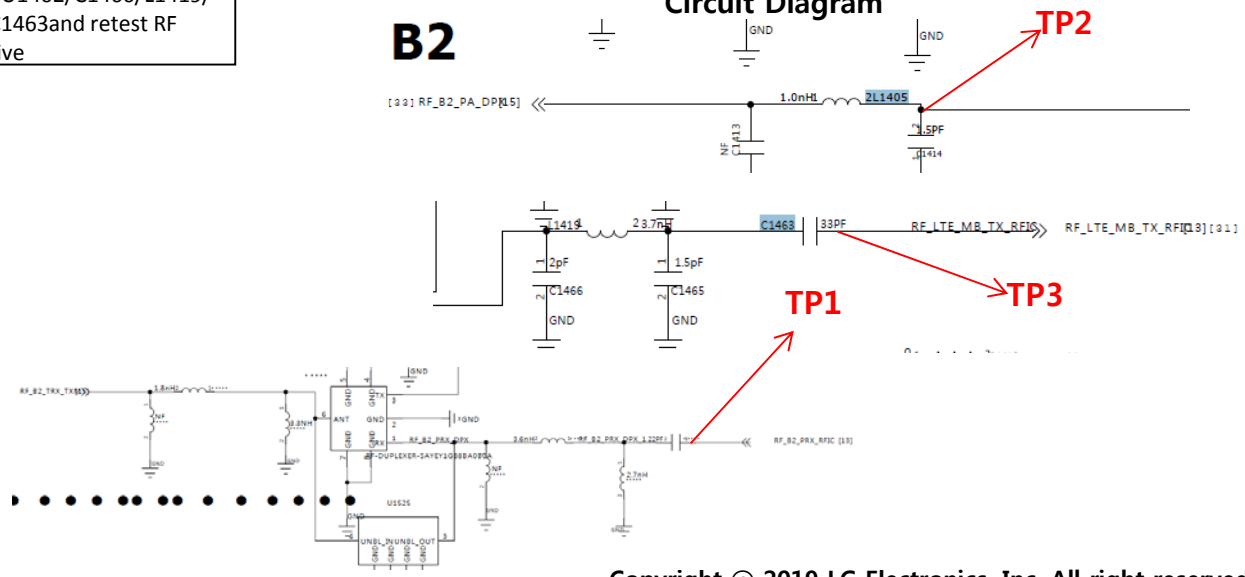




Circuit Diagram



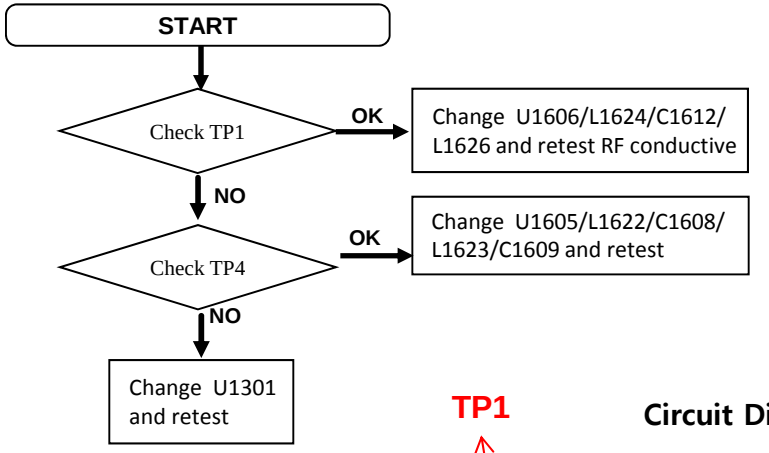
3.5.2 WCDMA PART

Checking RF Signal PRX path(WCDMA/LTE_B2), is same as RF Signal RX path(GSM1900)

3.5.2 WCDMA PART

Checking RF Signal DRX path(WCDMA/LTE_B2)

Checking Flow



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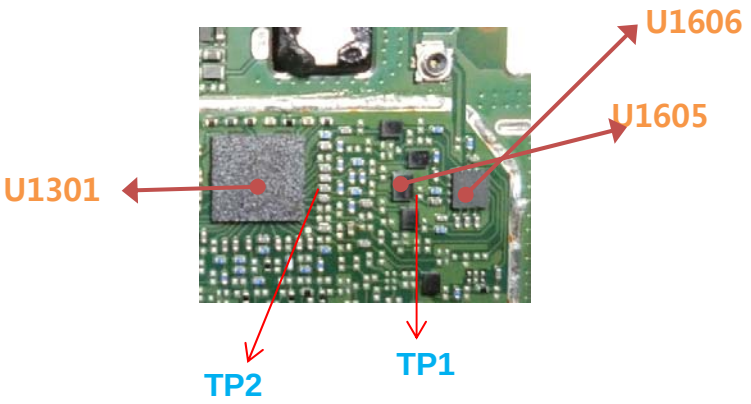
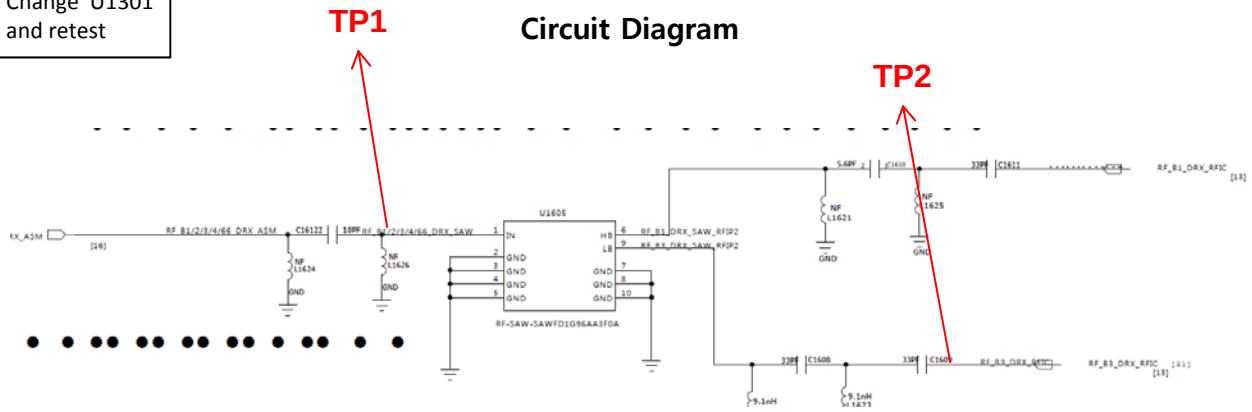


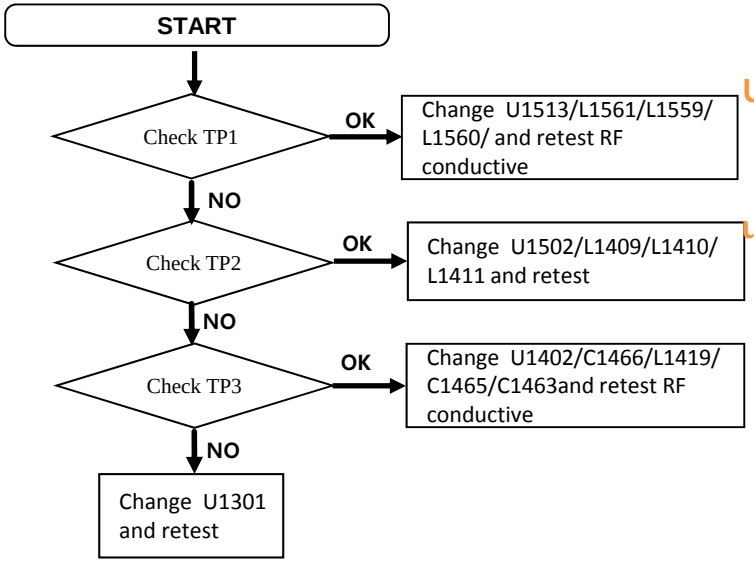
Circuit Diagram



3.5.2 WCDMA PART

Checking RF Signal TX path(WCDMA/LTE_B4)

Checking Flow



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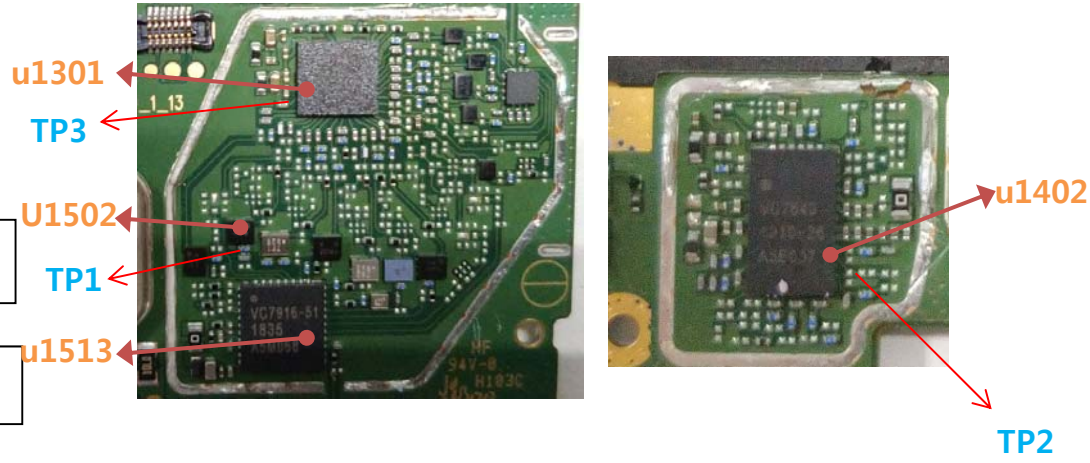
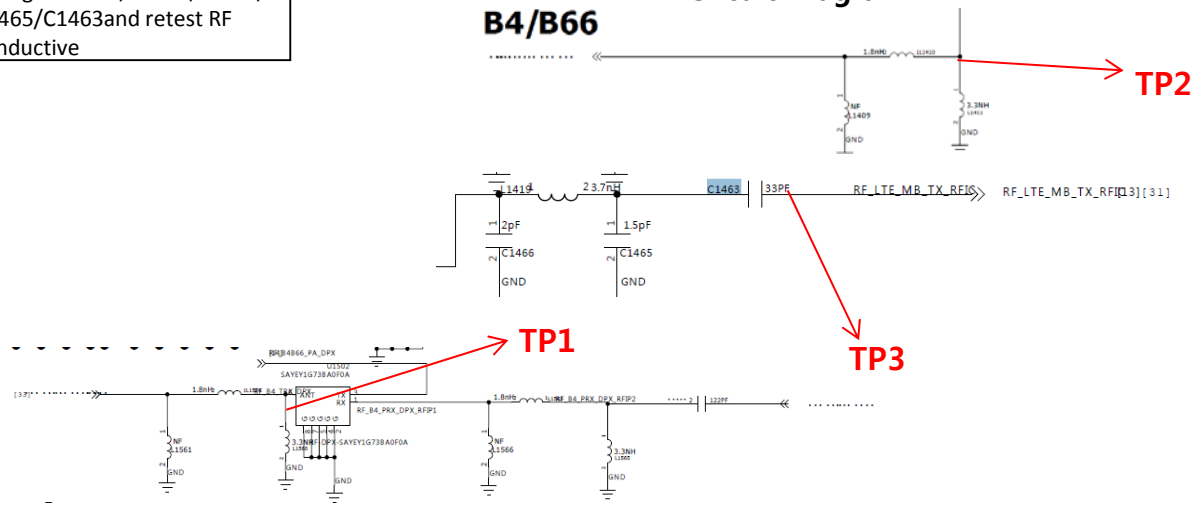


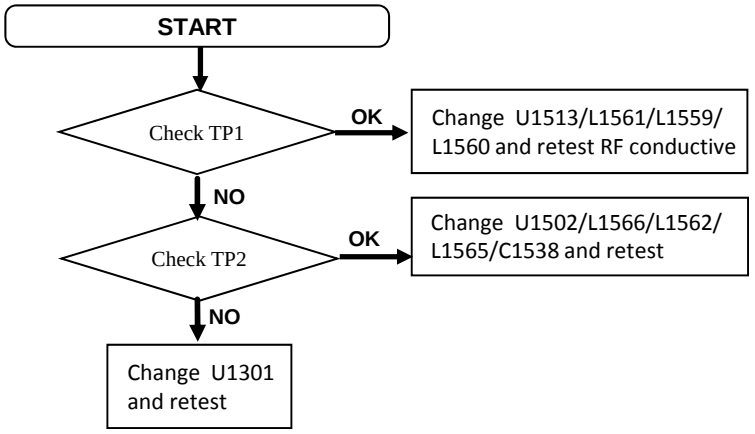
Circuit Diagram



3.5.2 WCDMA PART

Checking RF Signal PRX path(WCDMA/LTE_B4)

Checking Flow



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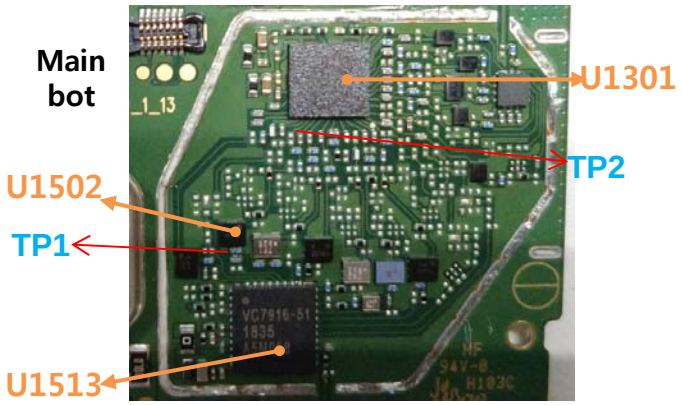
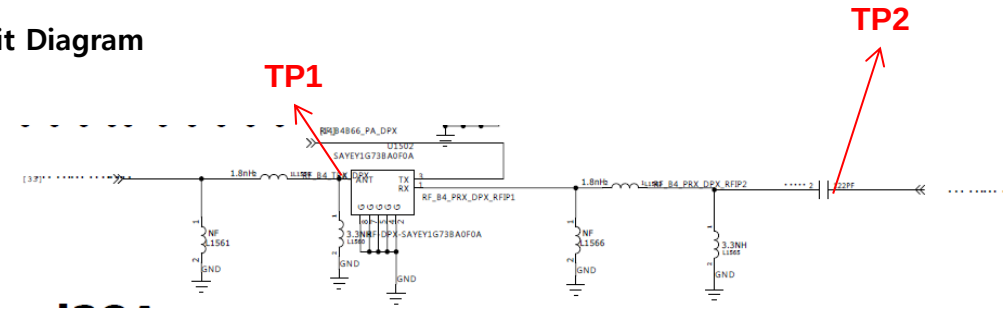


Circuit Diagram



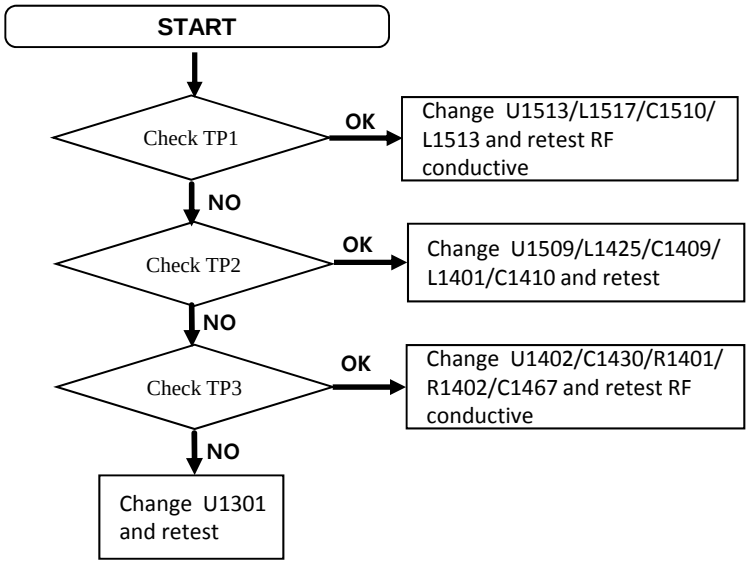
3.5.2 WCDMA PART

Checking RF Signal DRX path(WCDMA/LTE_B4), is same as DRF Signal RX path(WCDMA/LTE_B1)

3.5.2 WCDMA PART

Checking RF Signal TX path(WCDMA/LTE_B5)

Checking Flow



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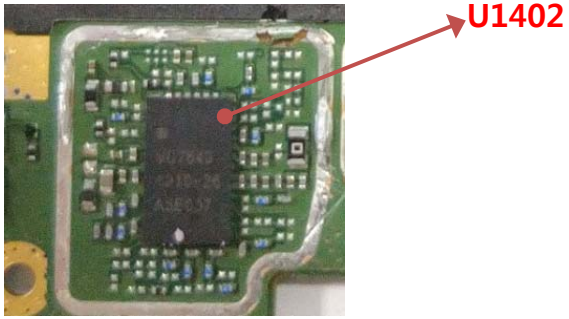
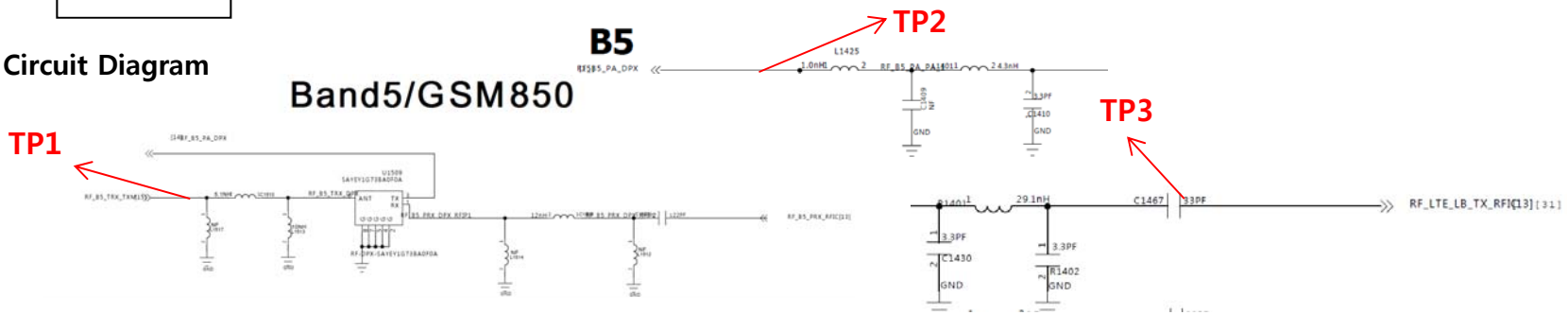


Circuit Diagram



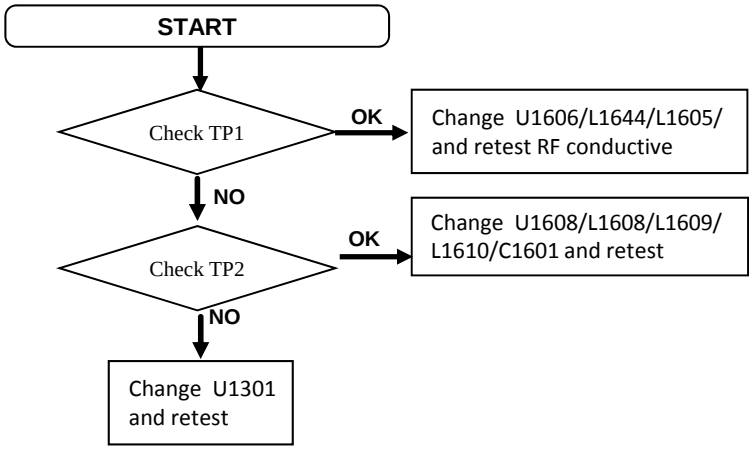
3.5.2 WCDMA PART

Checking RF Signal PRX path(WCDMA/LTE_B5), is same as RF Signal RX path(GSM850)

3.5.2 WCDMA PART

Checking RF Signal DRX path(WCDMA/LTE_B5)

Checking Flow



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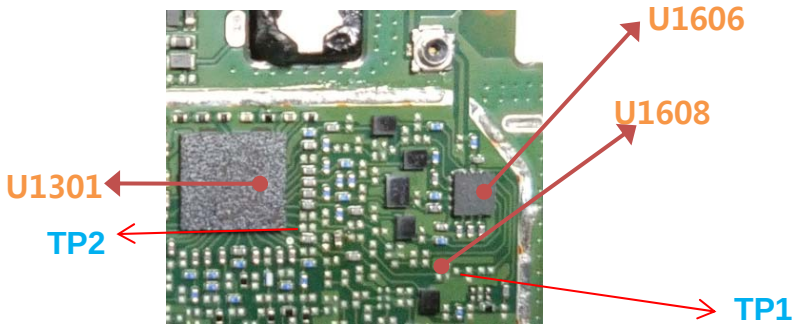
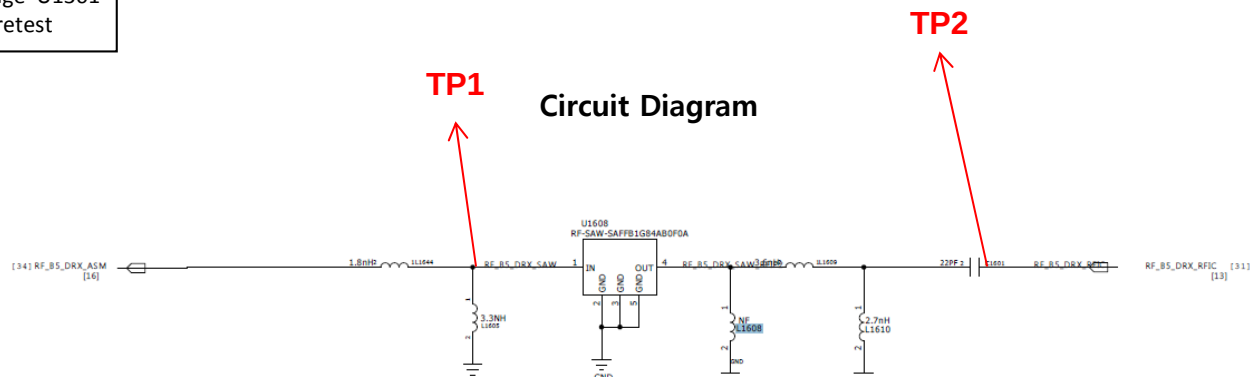
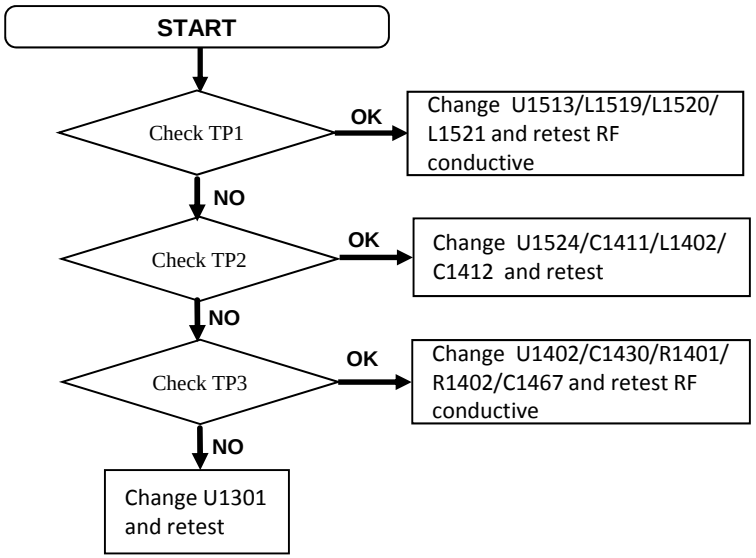


Circuit Diagram



3.5.2 WCDMA PART
Checking RF Signal TX path(WCDMA/LTE_B8)

Checking Flow



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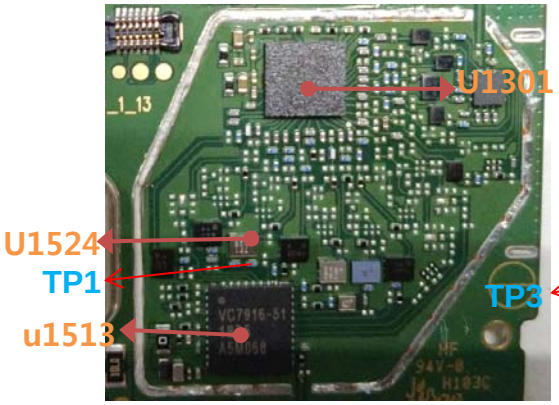
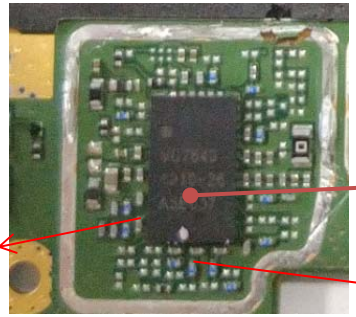
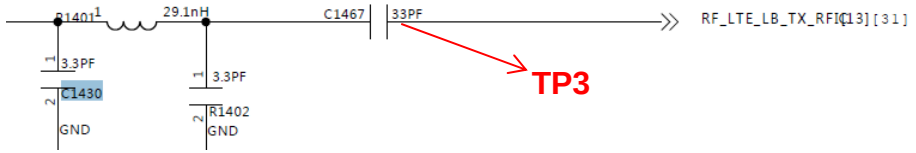
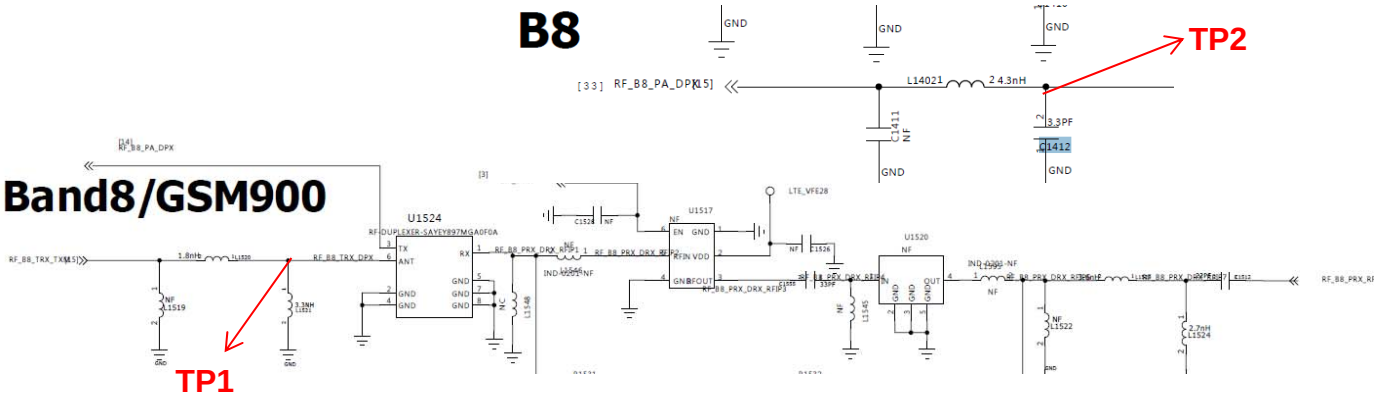




Circuit Diagram





3.5.2 WCDMA PART

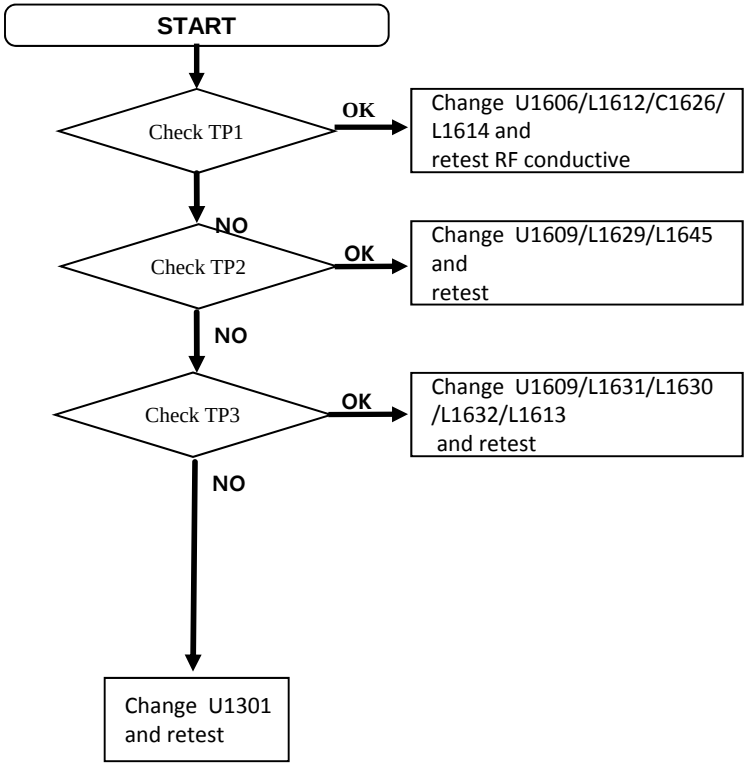
Checking RF Signal PRX path(WCDMA/LTE_B8), is same as RF Signal RX path(GSM900)

3.5.3 LTE RF PART

LTE RF Part support LTE B1/2/3/4/5/7/8/17/28/66 with FEM, PAM, PA, Transceiver component

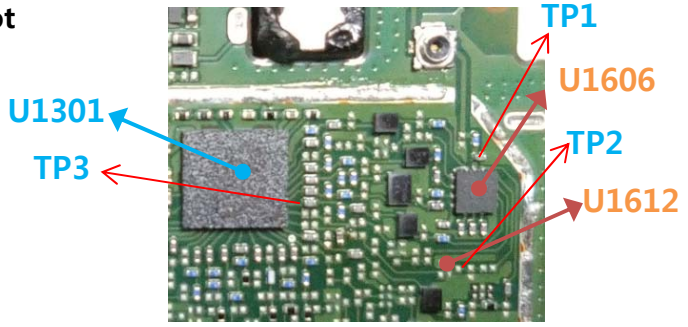
LTE RF Part (B8)---WCDMA-B8 DRX

Checking Flow

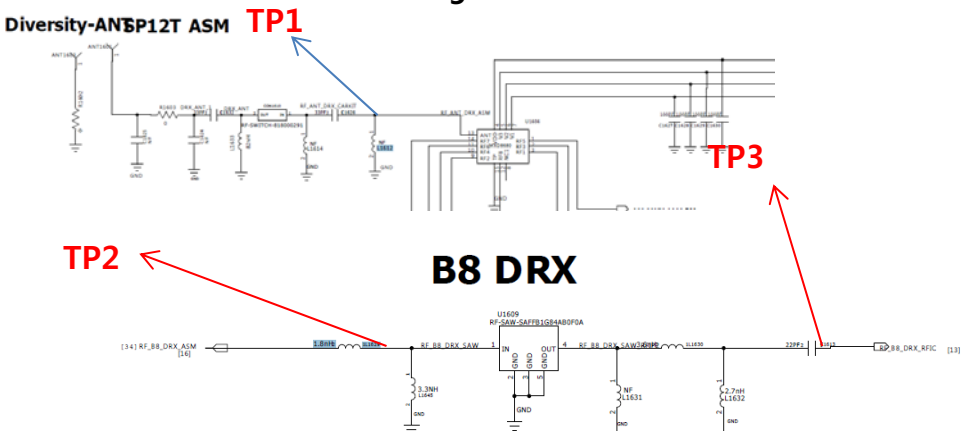


Image

Main Bot



Circuit Diagram



3.5 WCDMA PART

WCDMA DRX PATH

1. WCDMA COMMON DRX PATH

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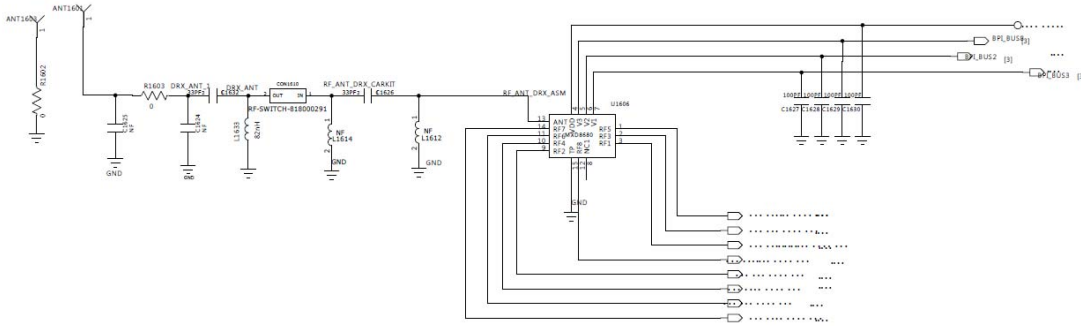
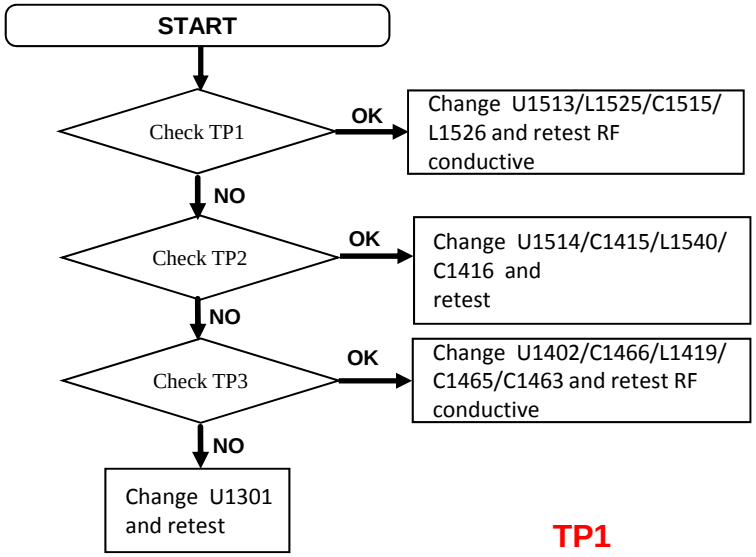


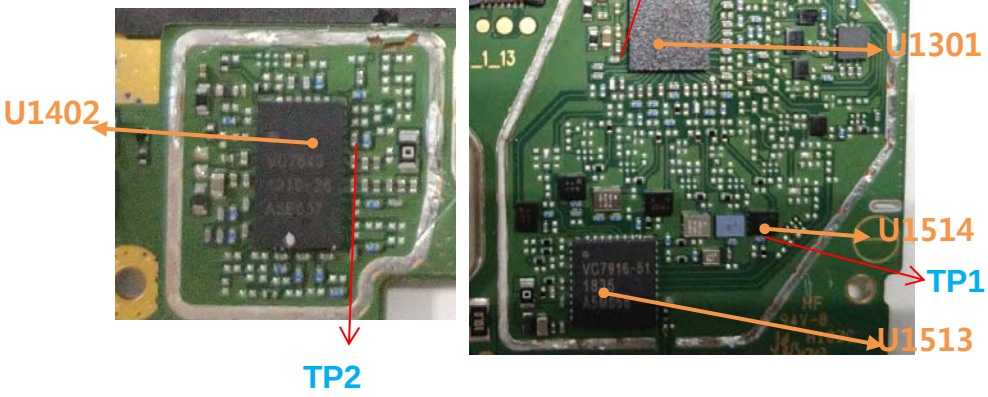
3.5.3 LTE PART

Checking RF Signal TX path(LTE_B3)

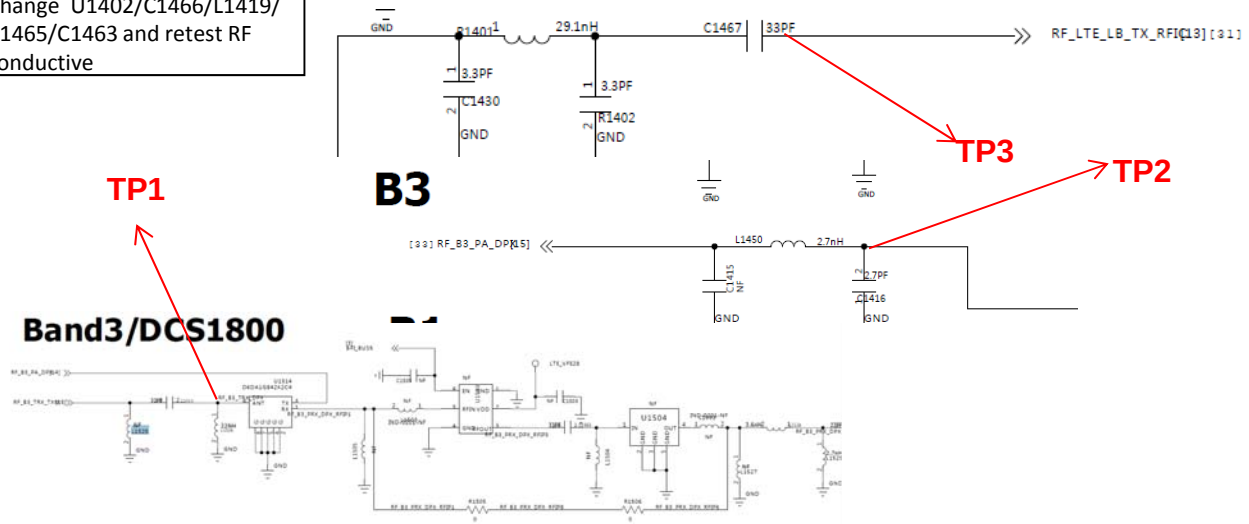
Checking Flow



Main bot Image



Circuit Diagram



3.5.3 LTE RF PART

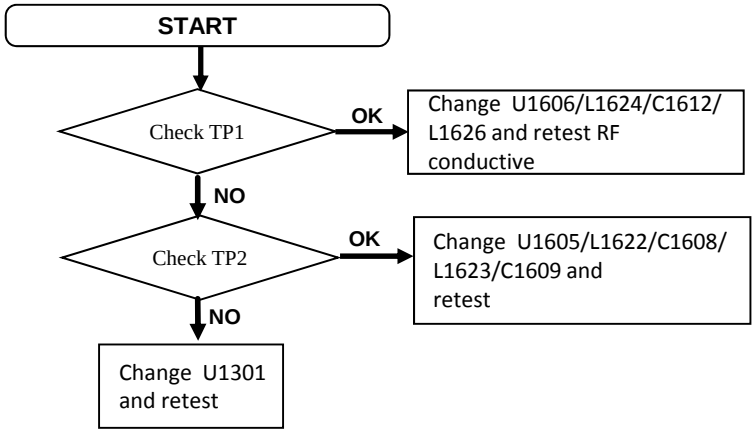
LTE RF Part (B3)---PRX,The same as RF Signal RX path(GSM1800)

Checking Flow	Image

3.5.3 LTE RF PART

LTE RF Part (B3)---DRX

Checking Flow



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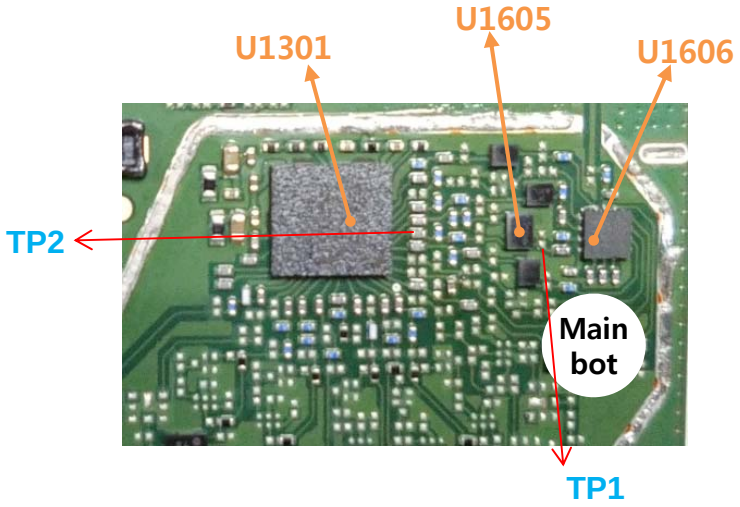
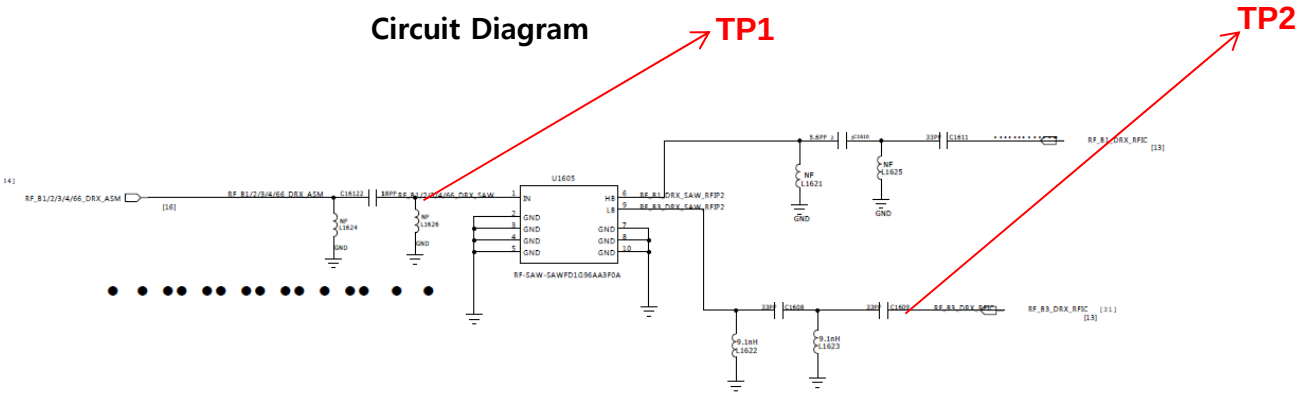


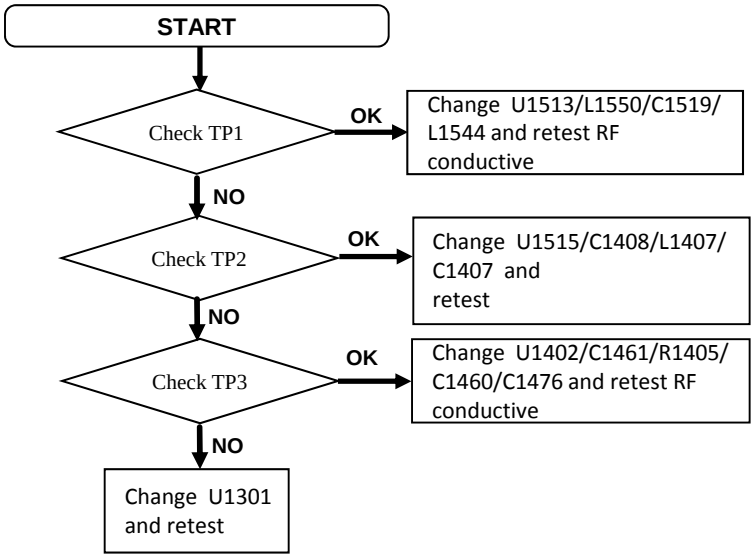
Circuit Diagram



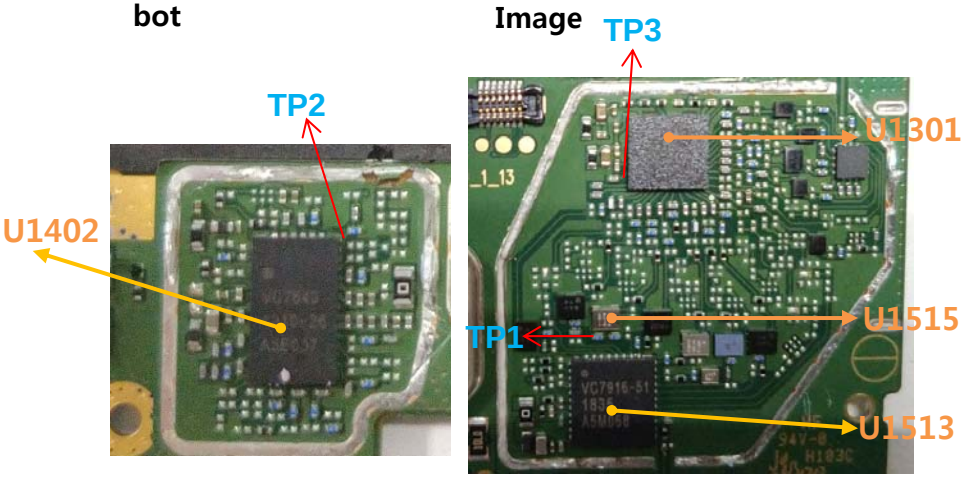
3.5.3 LTE PART

Checking RF Signal TX path(LTE_B7)

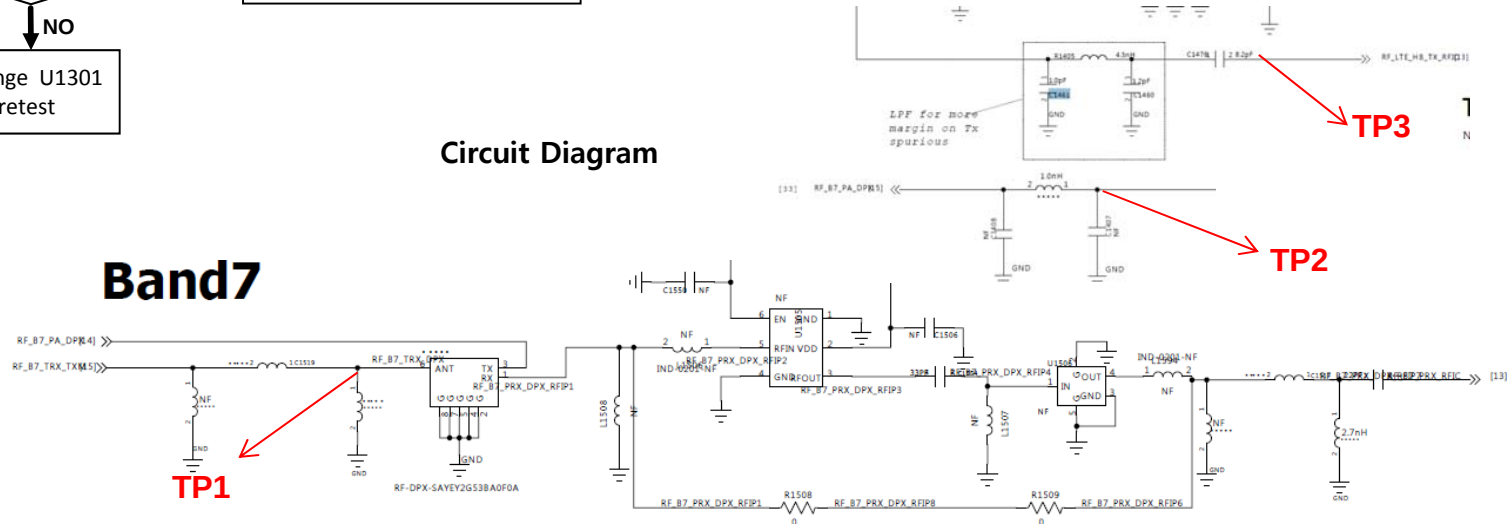
Checking Flow



Main bot Image



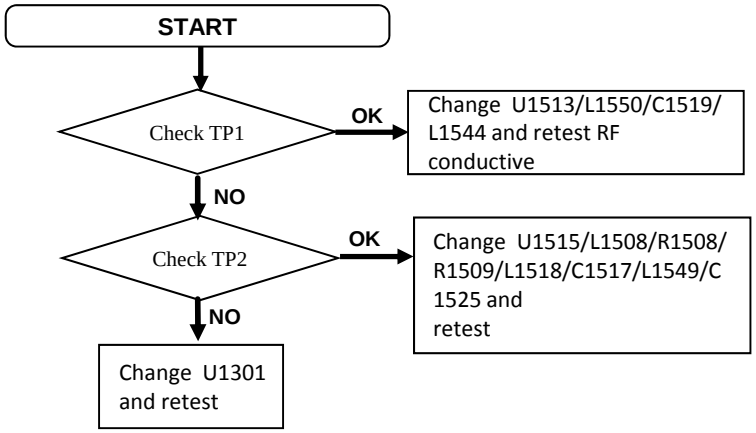
Circuit Diagram



3.5.3 LTE RF PART

LTE RF Part (B7)---PRX

Checking Flow



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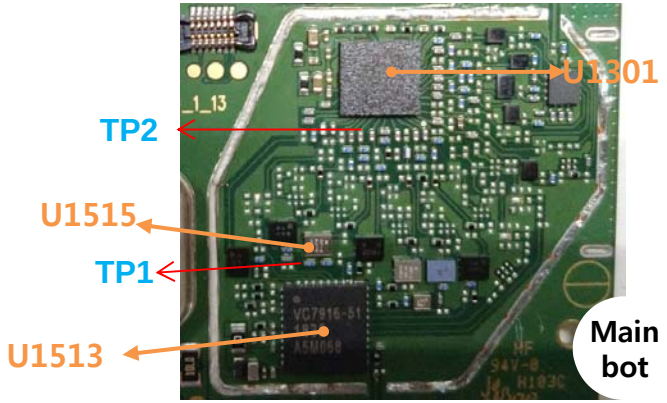
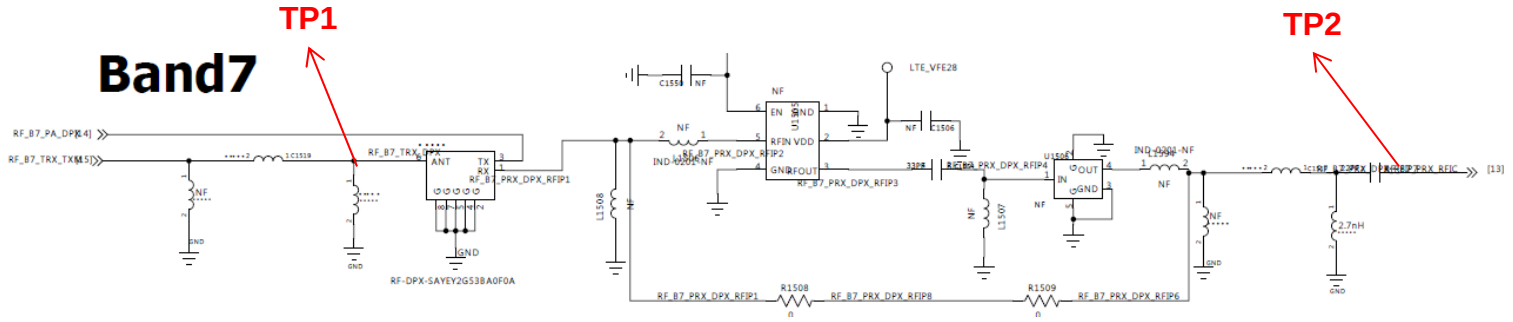


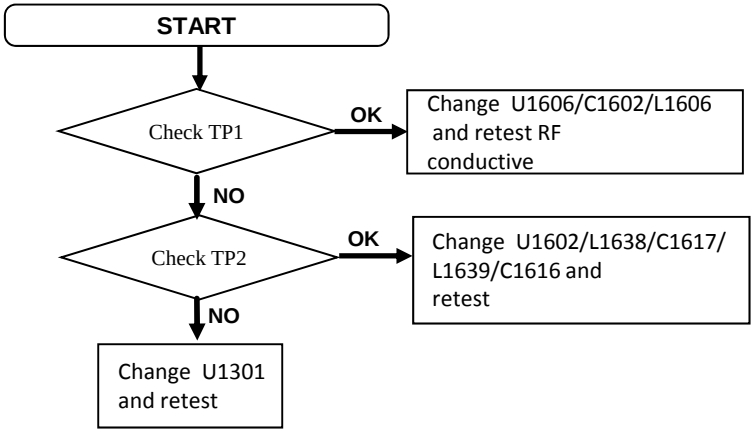
Circuit Diagram



3.5.3 LTE RF PART

LTE RF Part (B7)---DRX

Checking Flow



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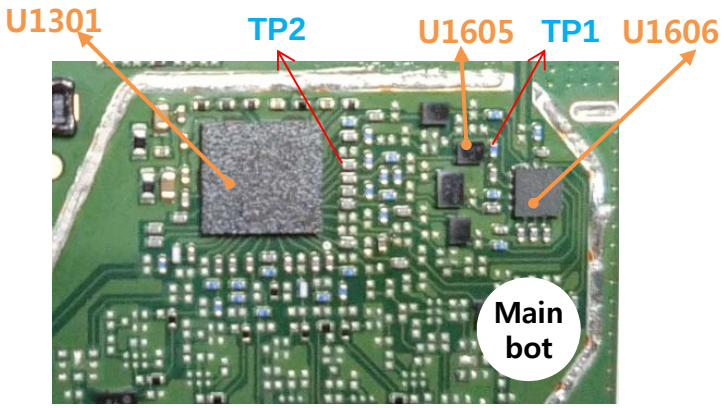
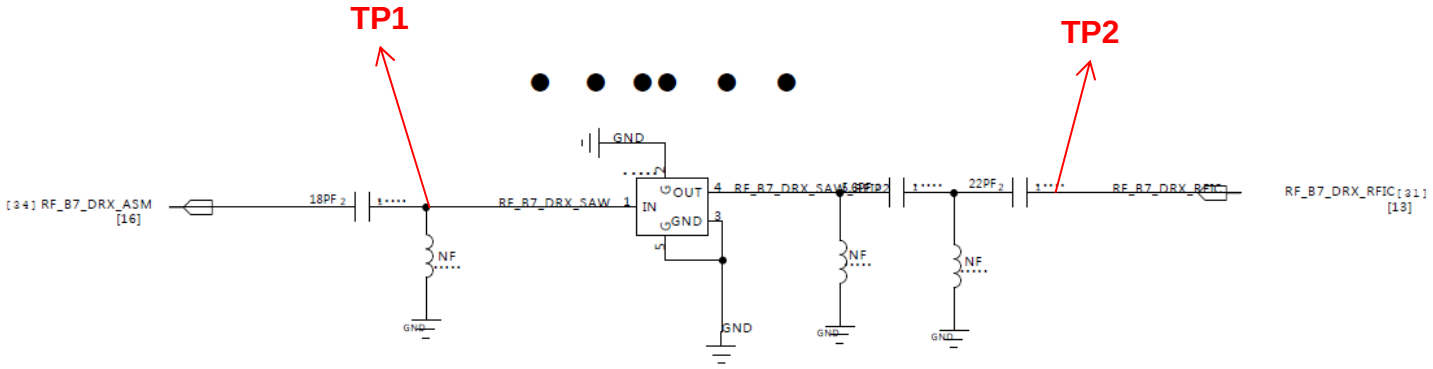


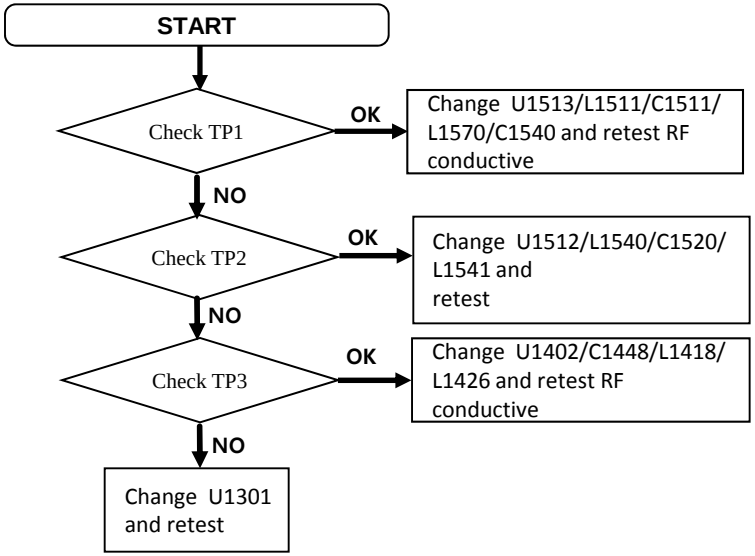
Circuit Diagram

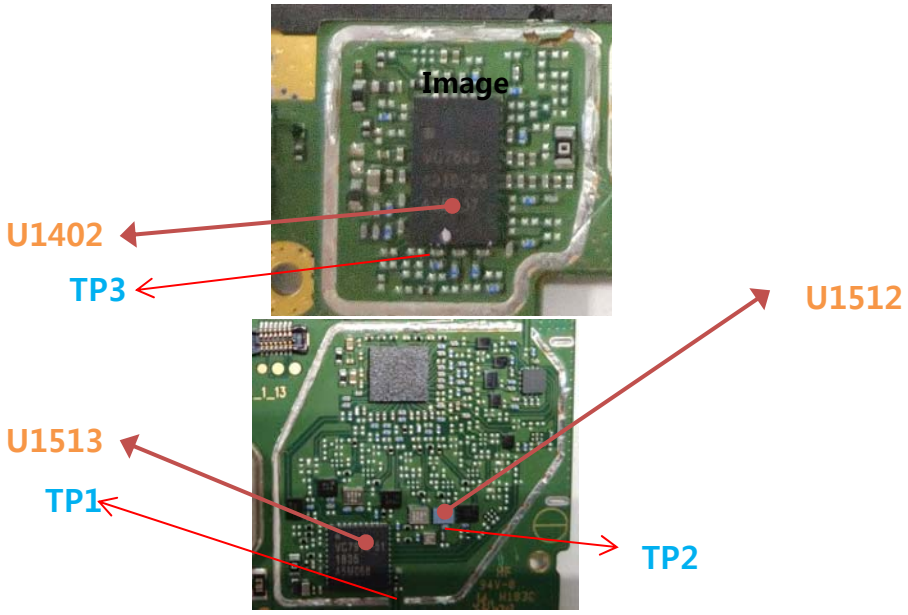


3.5.3 LTE RF PART

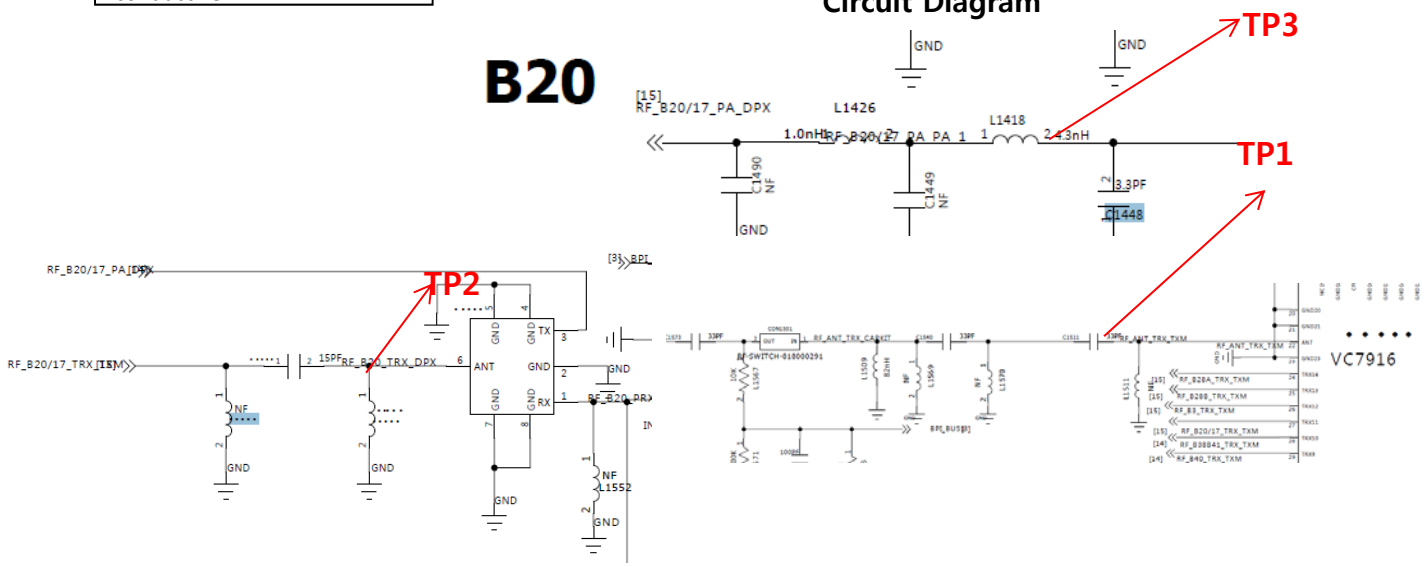
LTE RF Part (B17)--- TX

Checking Flow





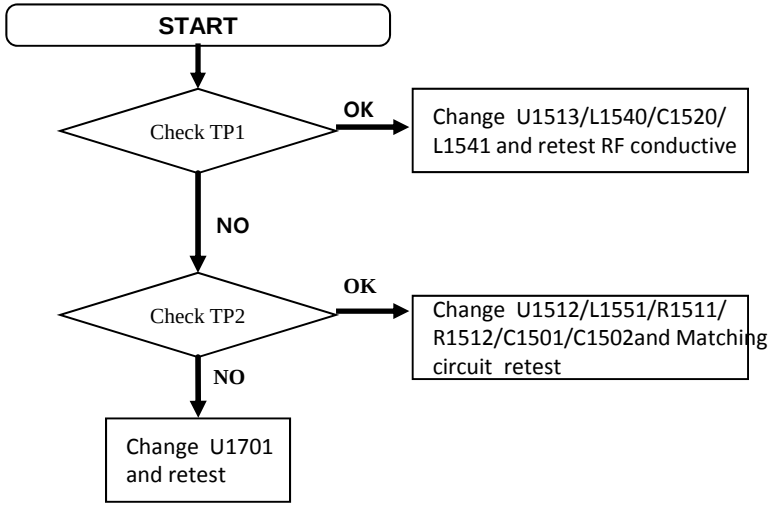
Circuit Diagram



3.5.3 LTE RF PART

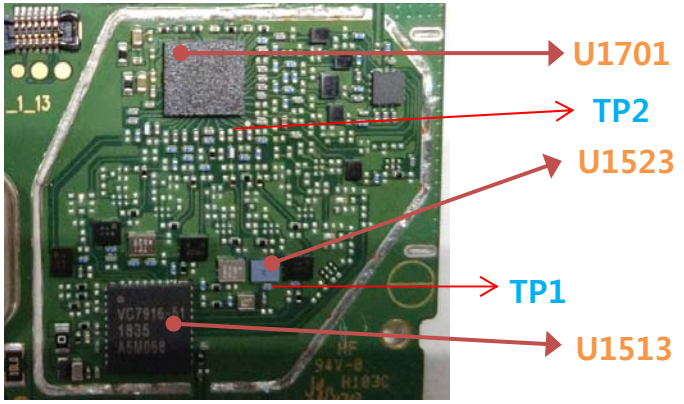
LTE RF Part (B17)---PRX

Checking Flow

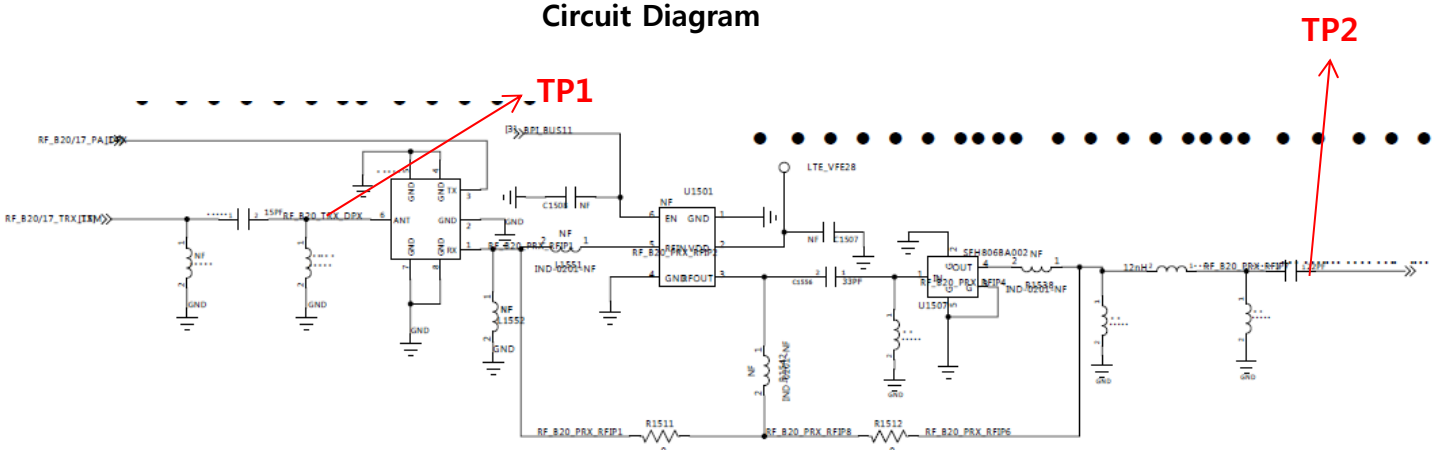


Image

Main Bot



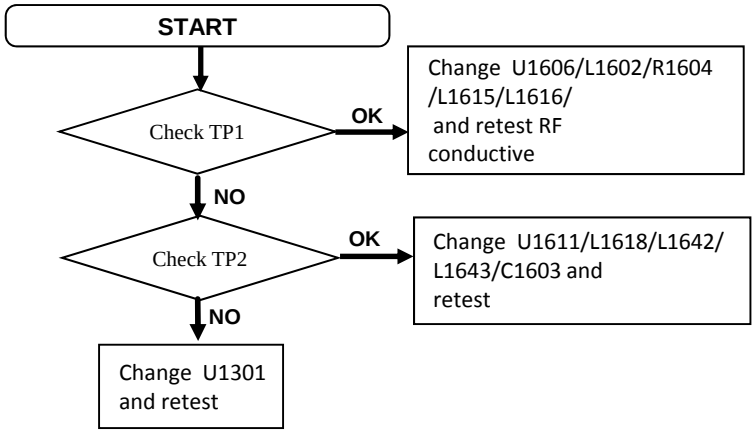
Circuit Diagram



3.5.3 LTE RF PART

LTE RF Part (B17)---DRX

Checking Flow



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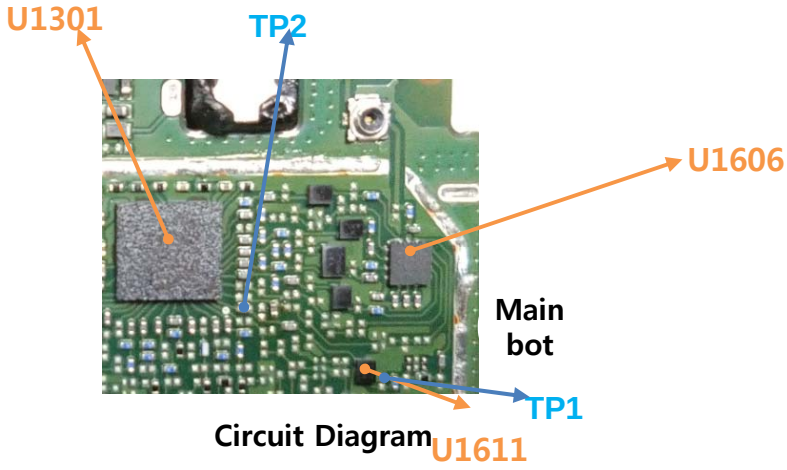
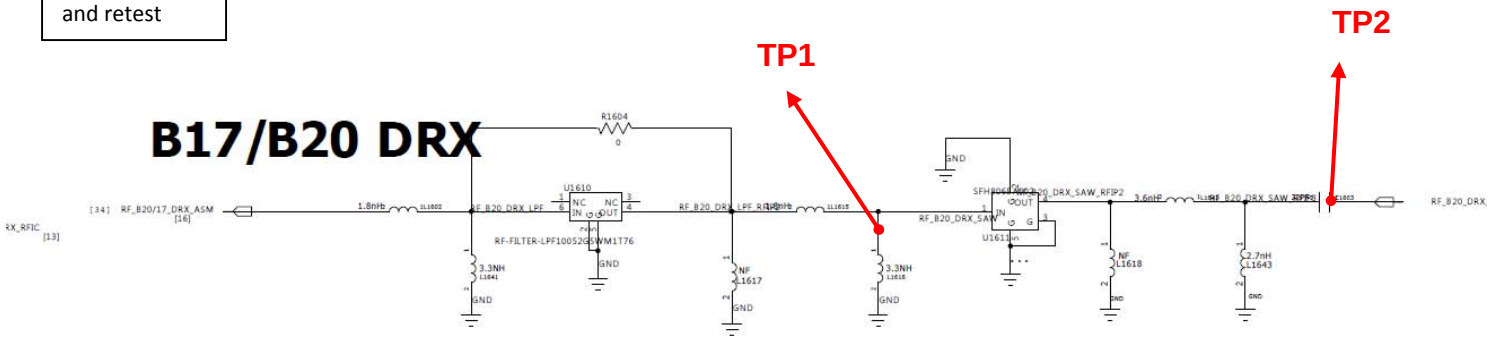


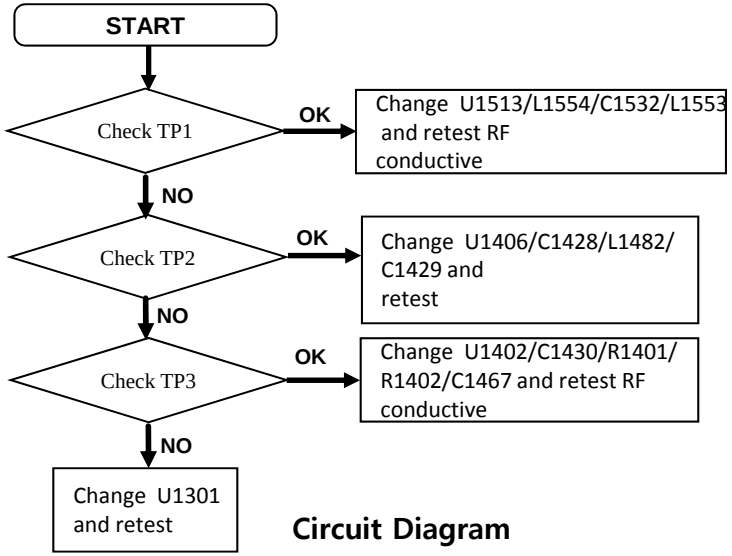
Circuit Diagram



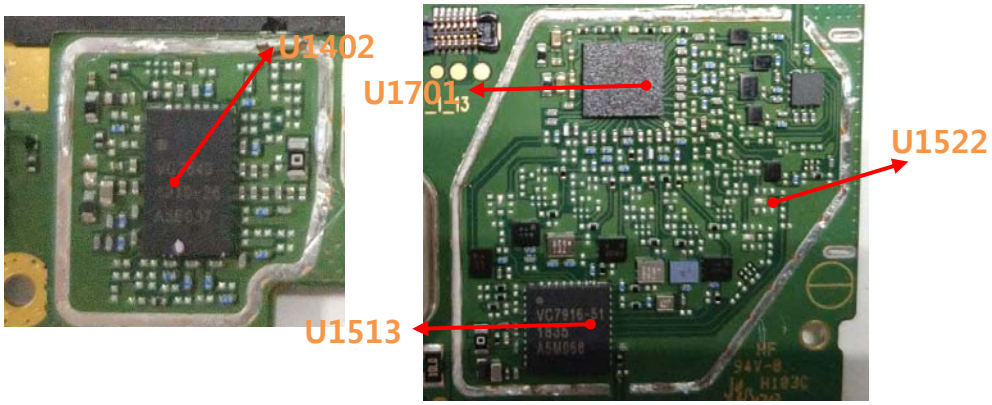
3.5.3 LTE RF PART

Checking RF Signal TX path(LTE_B28A)

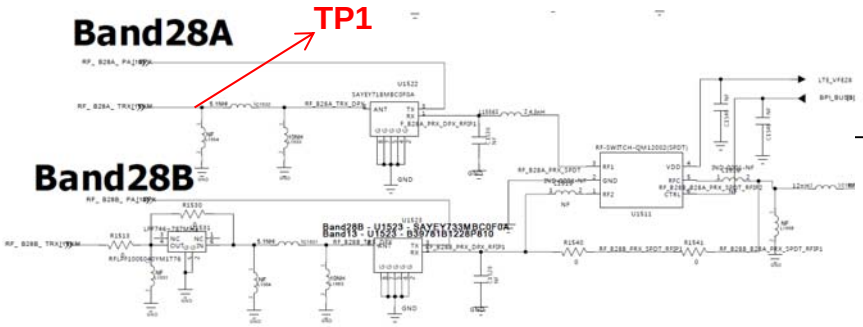
Checking Flow

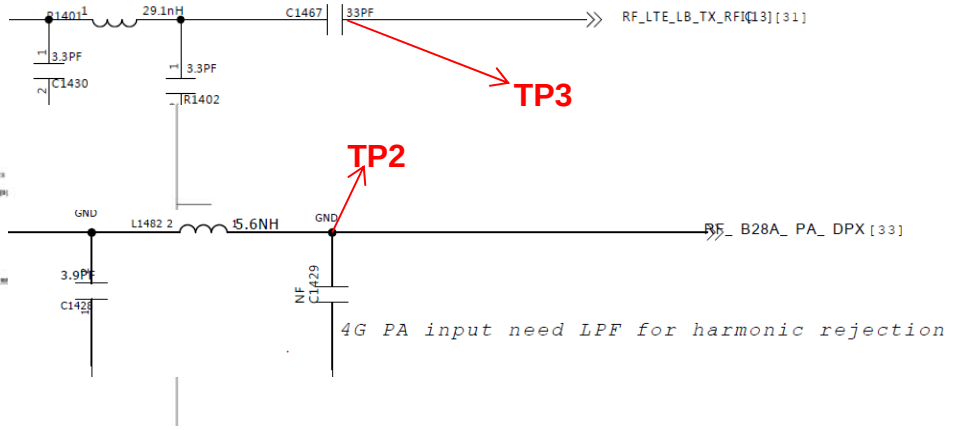


Main bot Image



Circuit Diagram

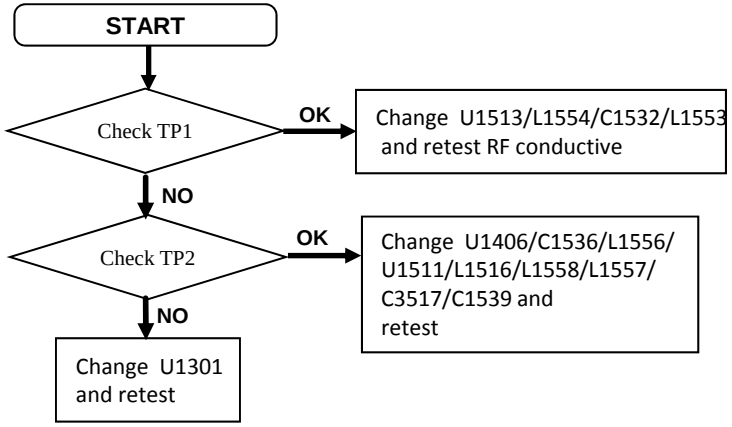




3.5.3 LTE RF PART

Checking RF Signal PRX path(LTE_B28A)

Checking Flow



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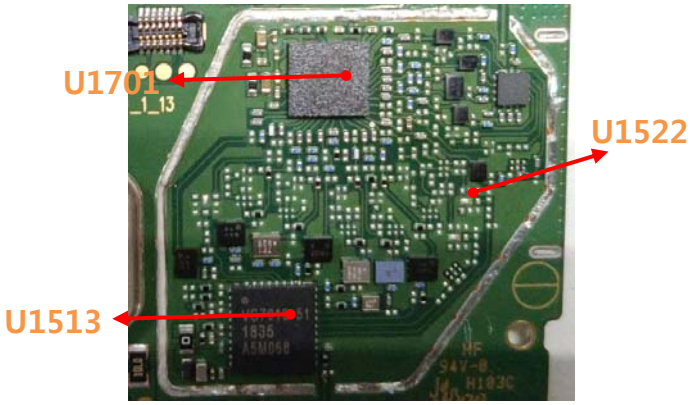
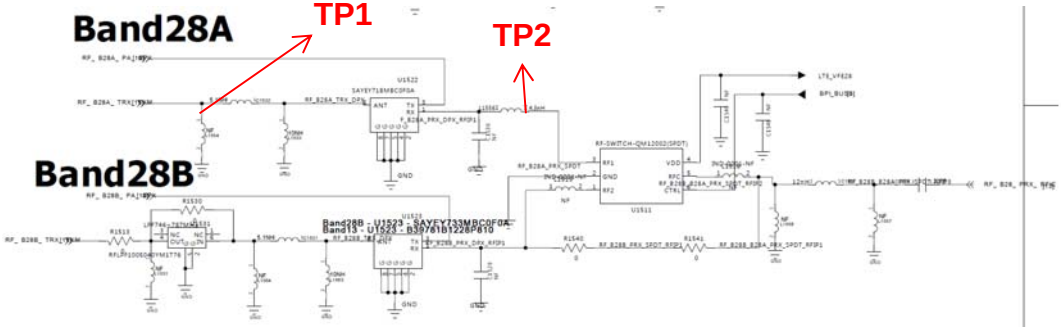


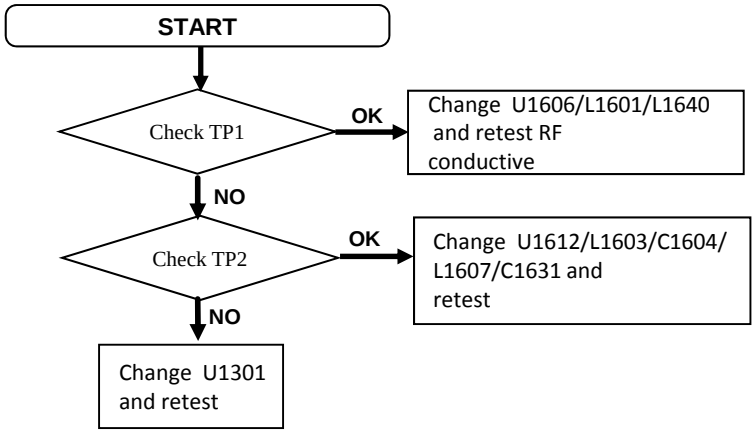
Circuit Diagram



3.5.3 LTE RF PART

LTE RF Part (B28)---DRX

Checking Flow



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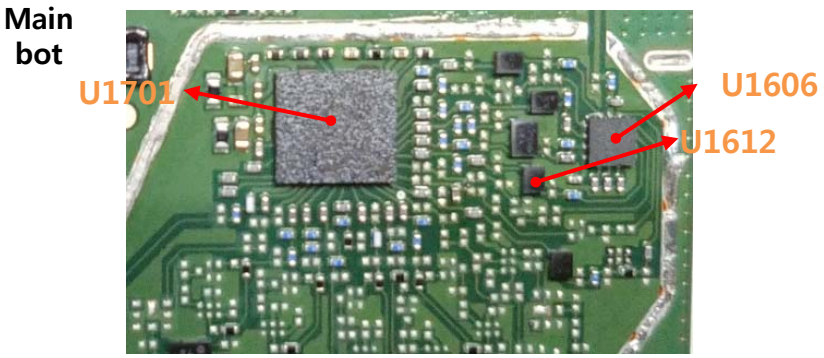
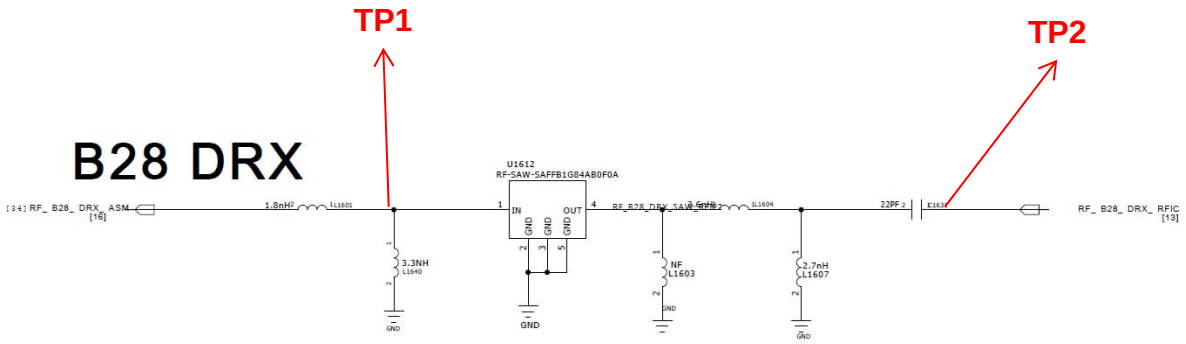


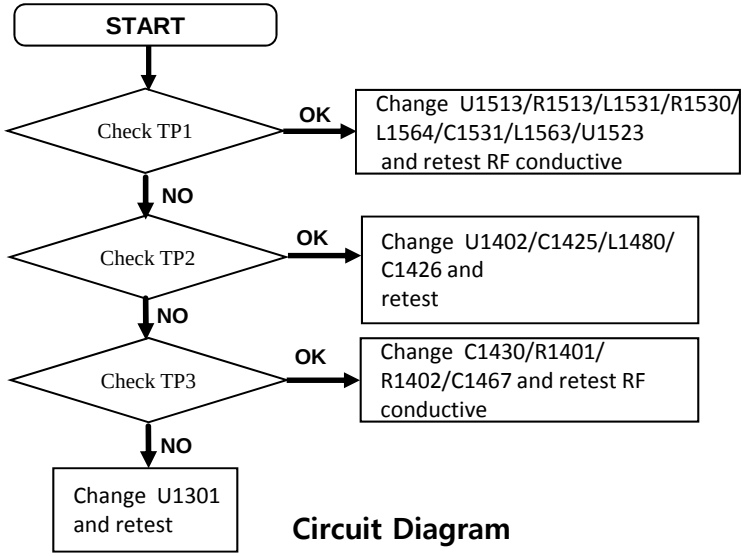
Circuit Diagram



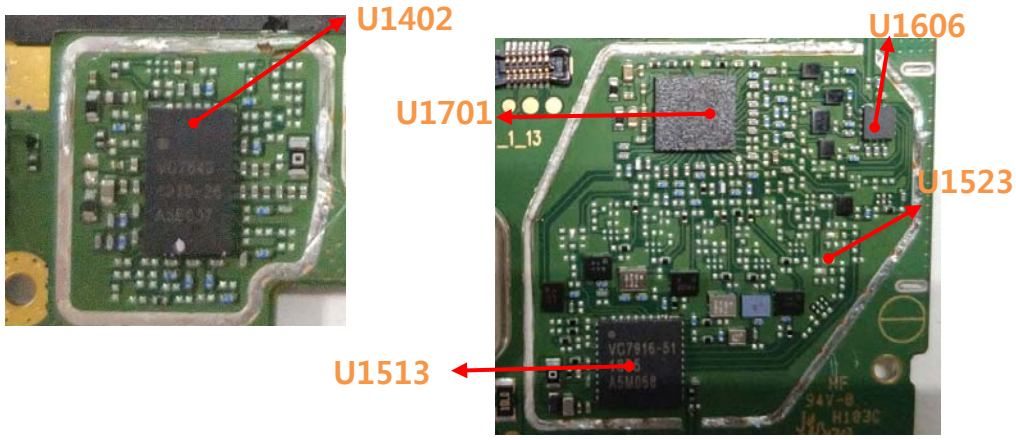
3.5.3 LTE RF PART

Checking RF Signal TX path(LTE_B28B)

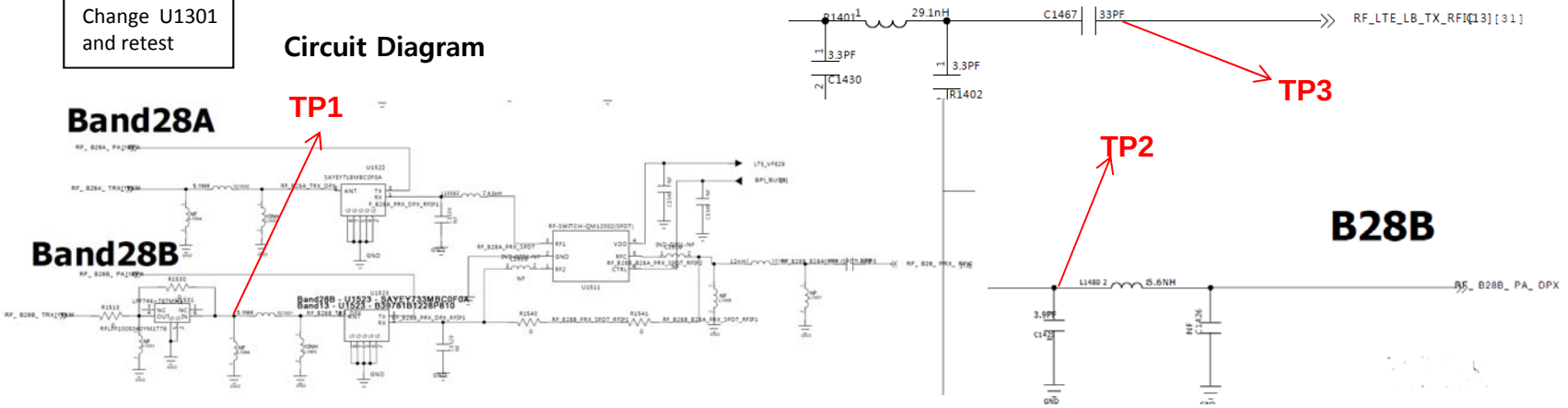
Checking Flow



Main bot Image



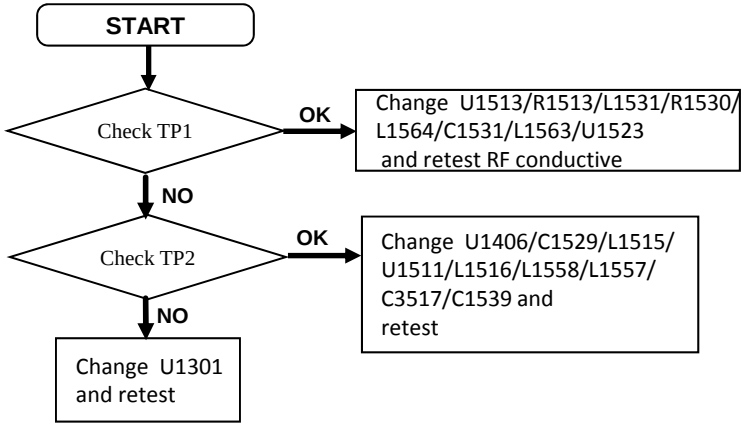
Circuit Diagram



3.5.3 LTE RF PART

Checking RF Signal PRX path(LTE_B28B)

Checking Flow



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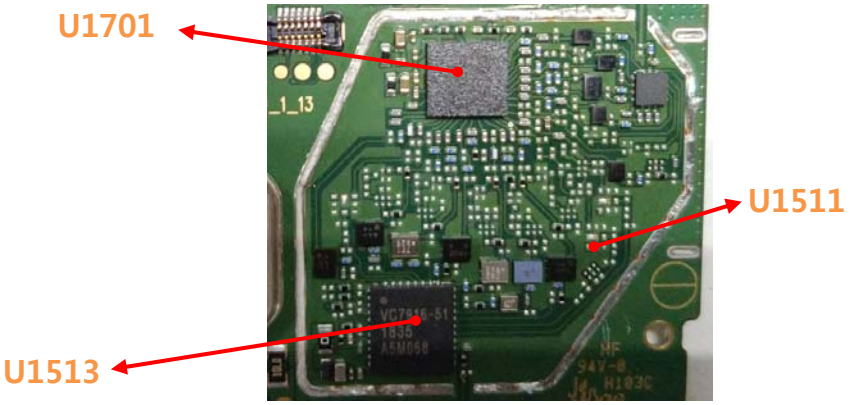
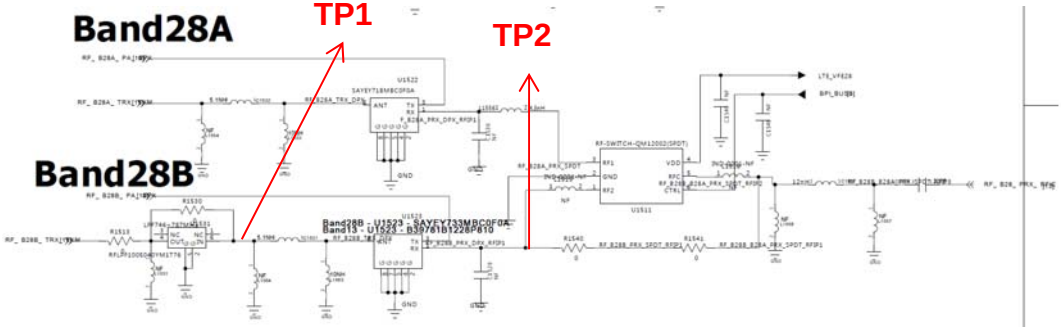


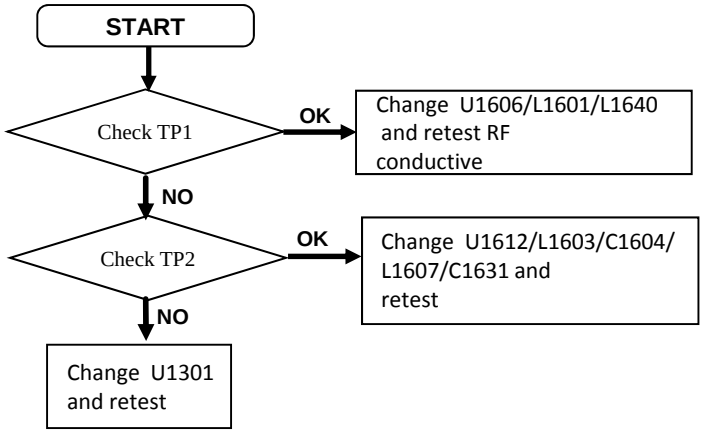
Circuit Diagram



3.5.3 LTE RF PART

LTE RF Part (B28)---DRX

Checking Flow



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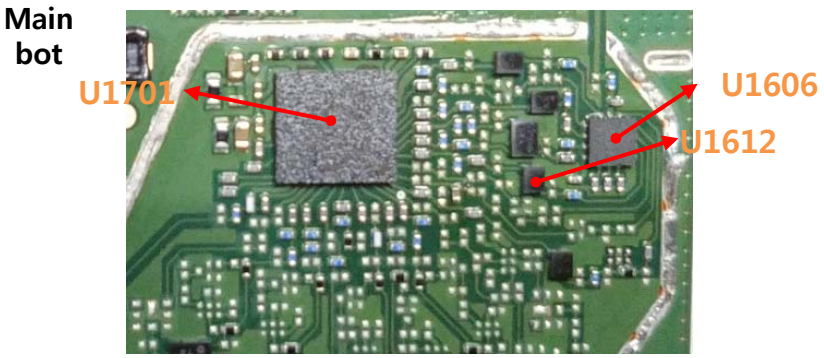
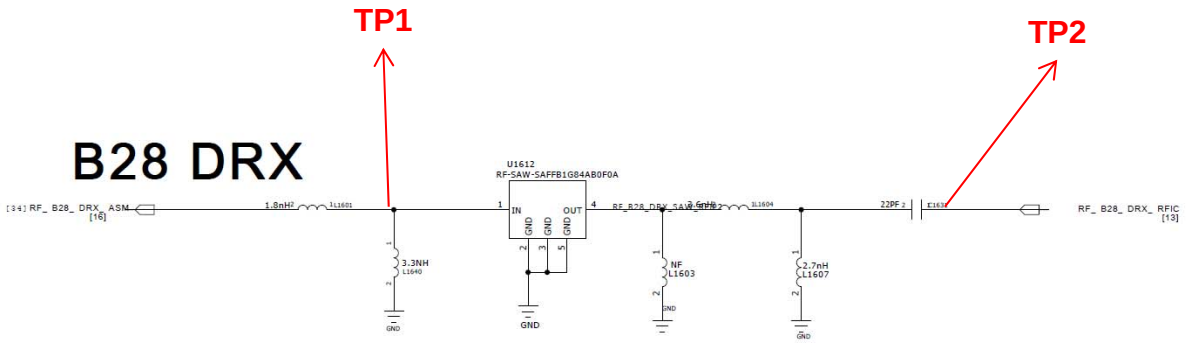


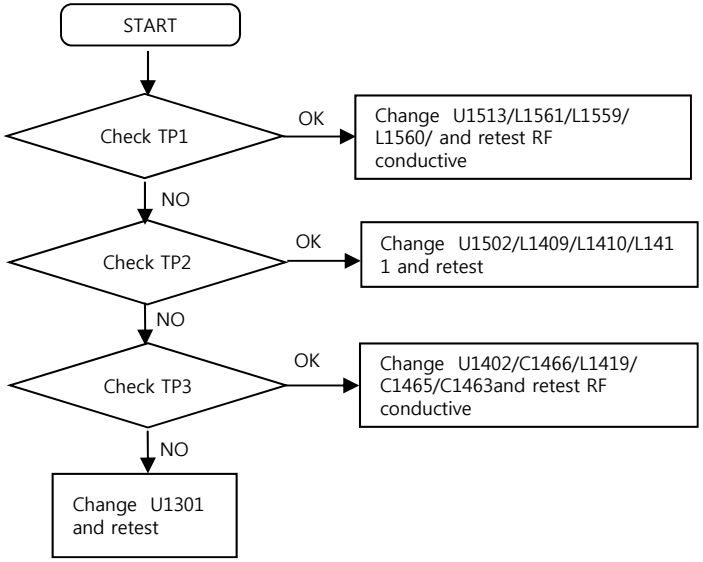
Circuit Diagram



3.5.3 LTE PART

Checking RF Signal TX path(WCDMA/LTE_B4)

Checking Flow



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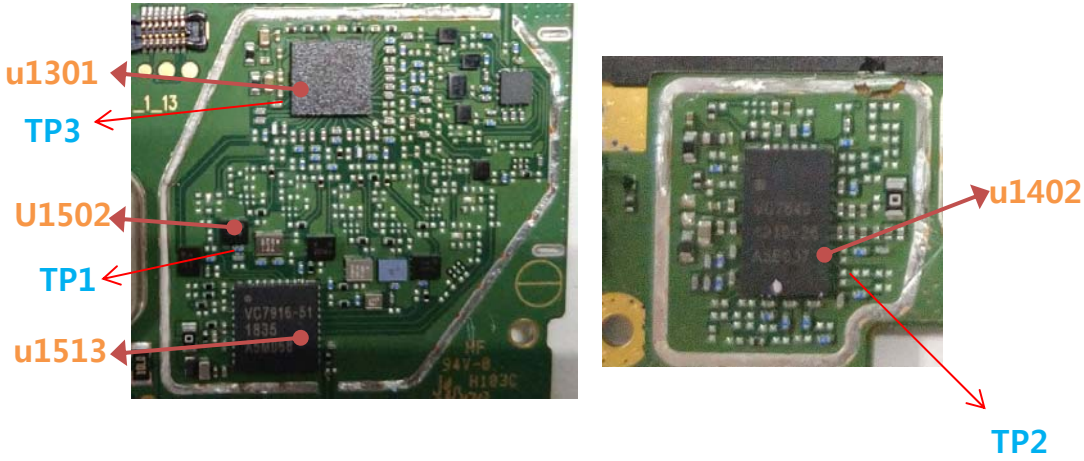
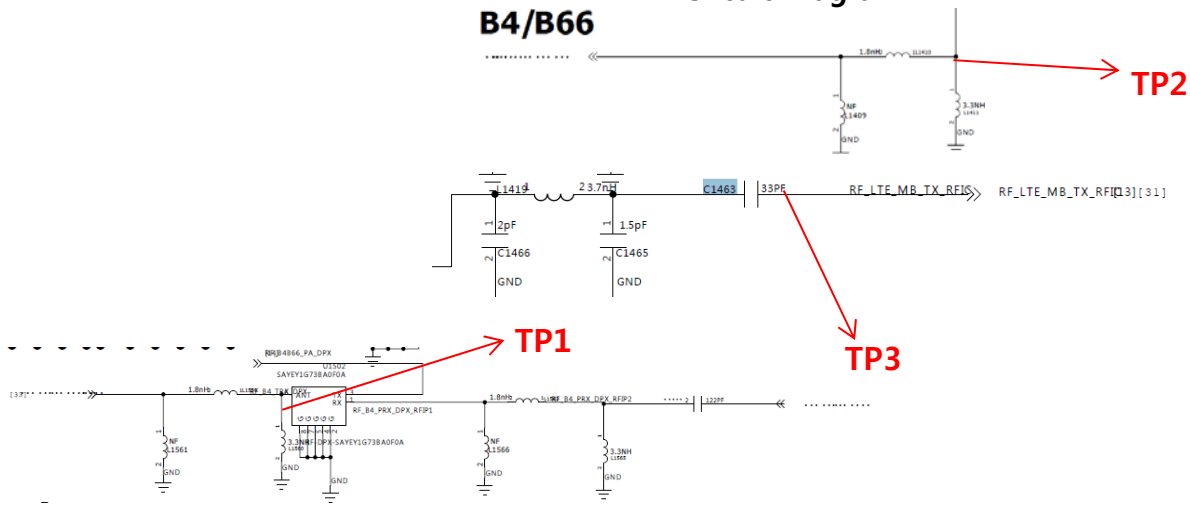


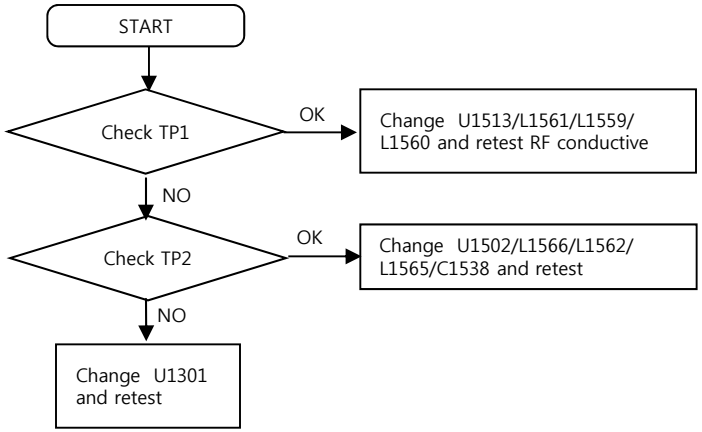
Circuit Diagram



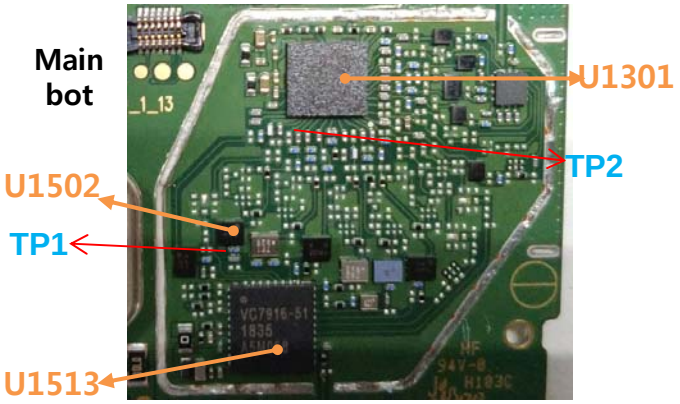
3.5.3 LTE PART

Checking RF Signal PRX path(WCDMA/LTE_B4)

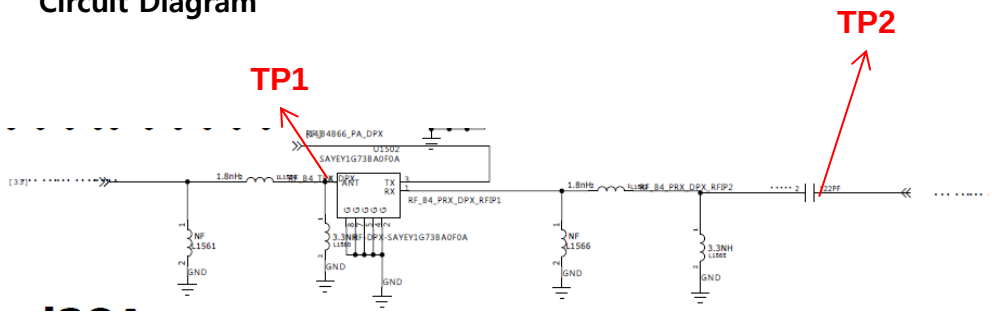
Checking Flow



Image



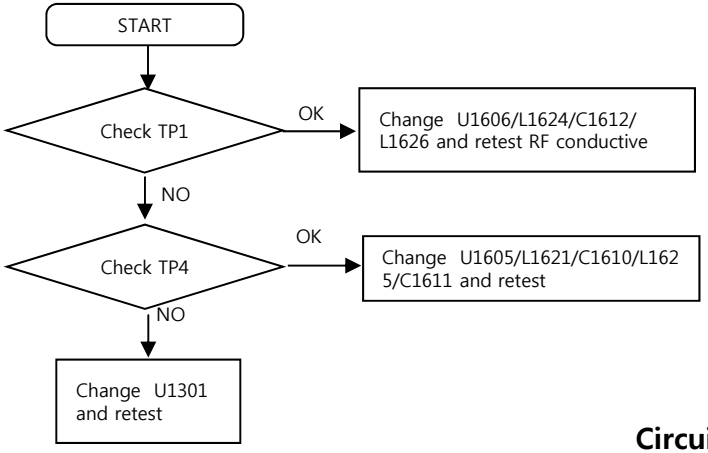
Circuit Diagram



3..5.3 LTE PART

Checking RF Signal DRX path(WCDMA/LTE_B1/4/66)

Checking Flow



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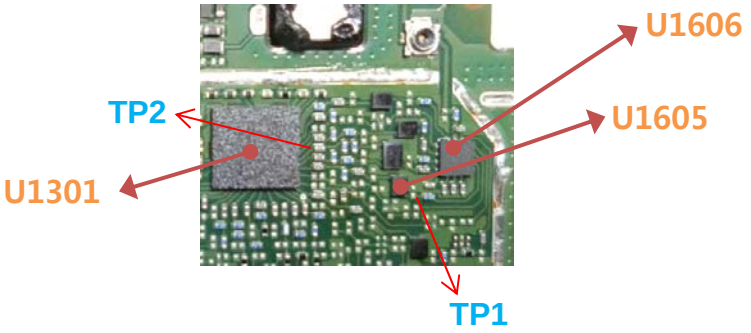
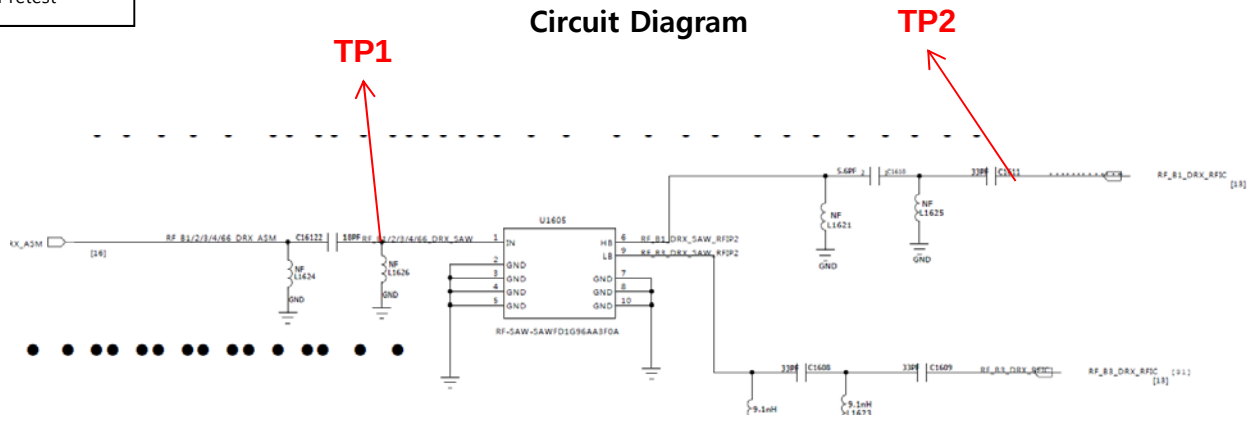
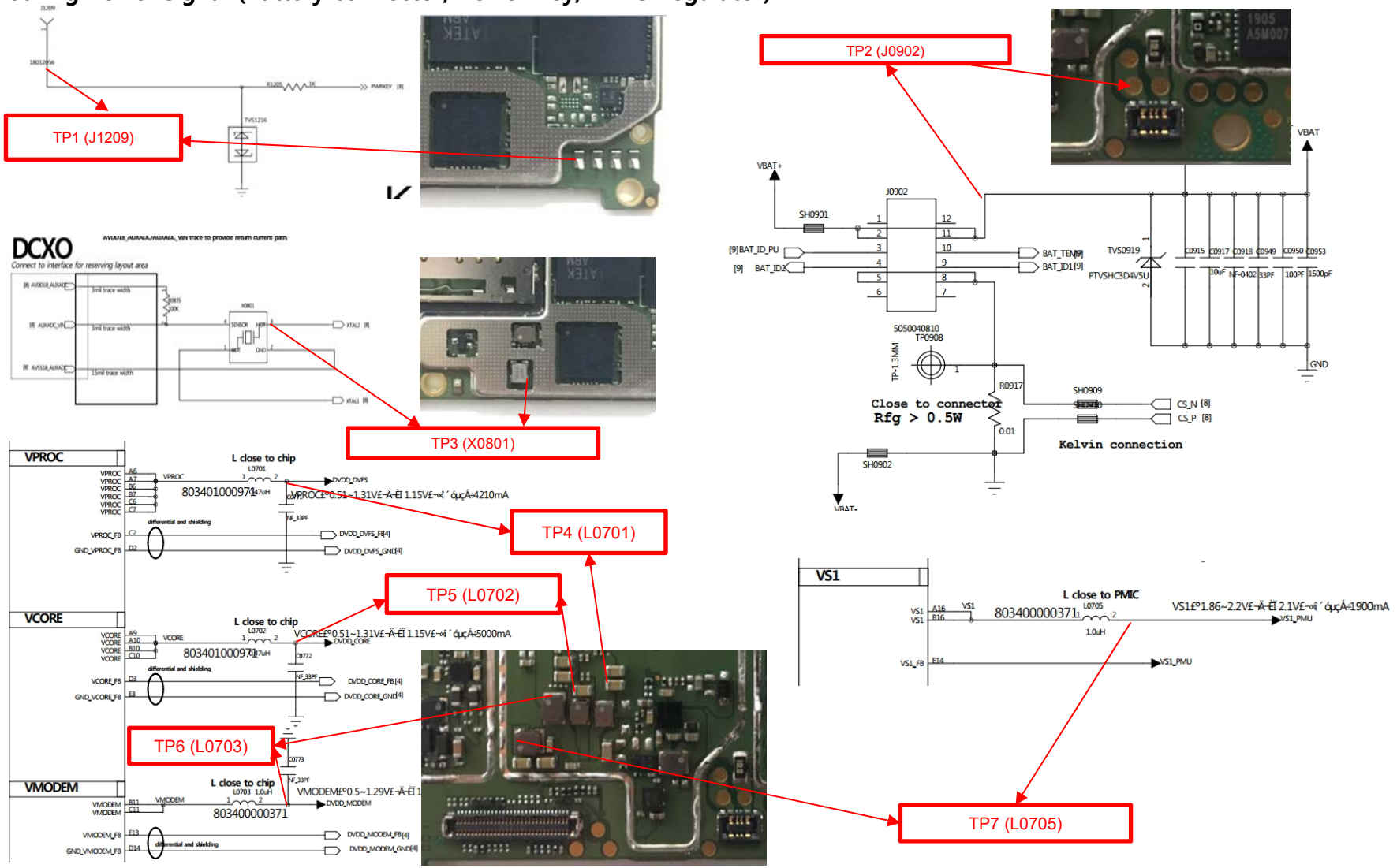


Circuit Diagram

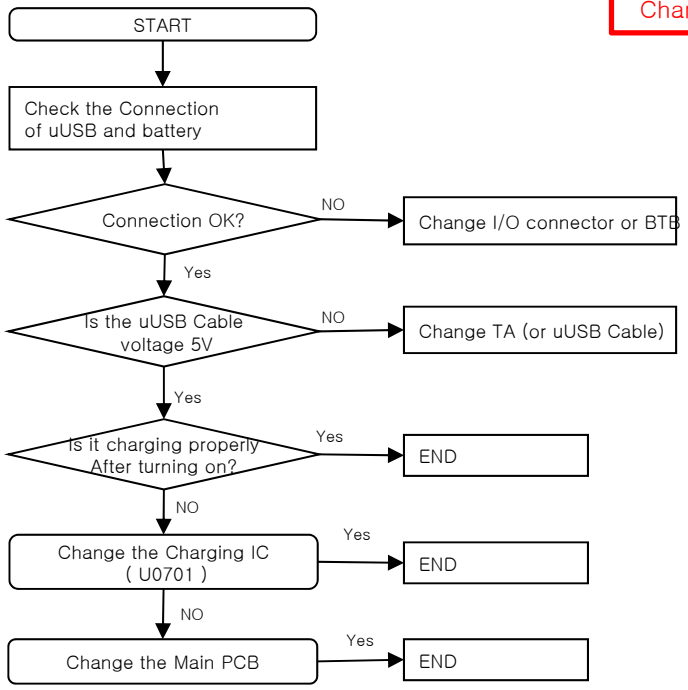


Checking Power signal (Battery connector, Power Key, PMIC Regulator)



The I/O connector and USB cable voltage(5.0V) is used as the reference one of PMIC for charging.

Checking Flow



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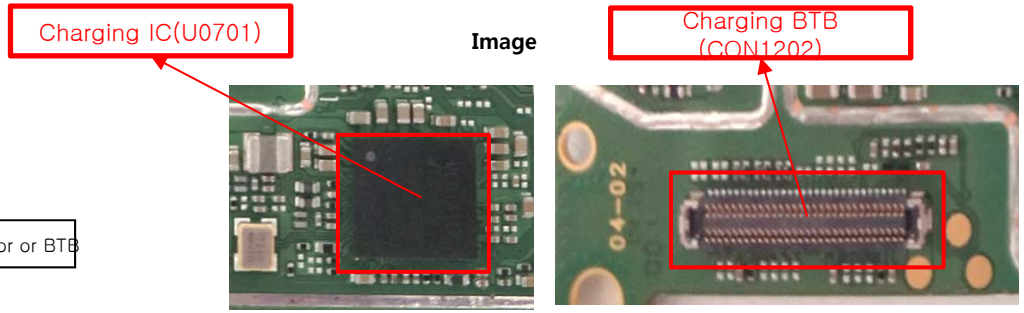
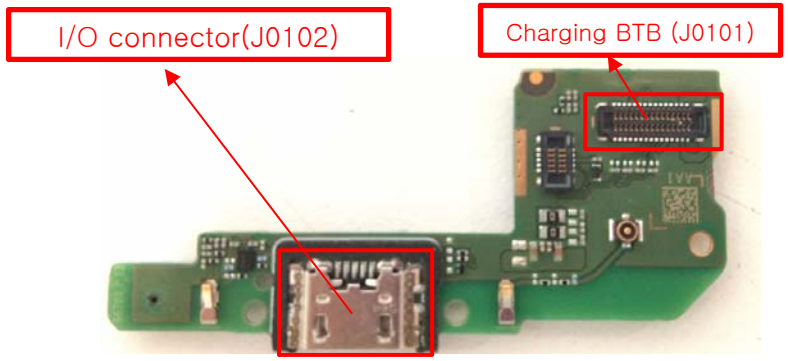
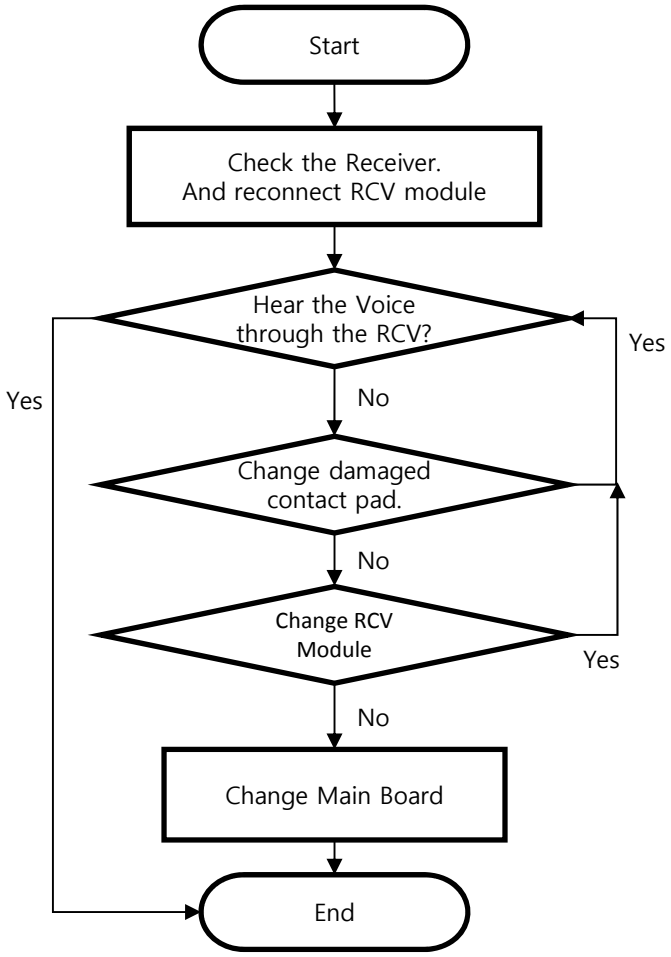


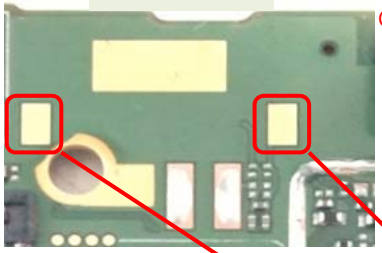


The receiver control signal is generated by MT6357(U0701), the chipset and the receiver should be checked.

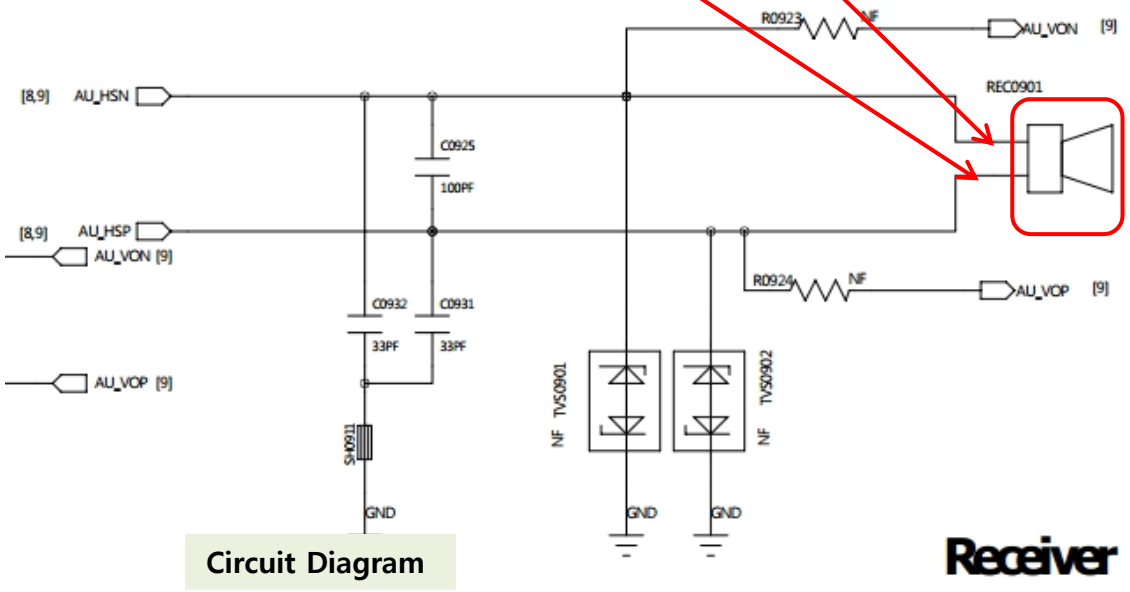
Checking Flow



Placement

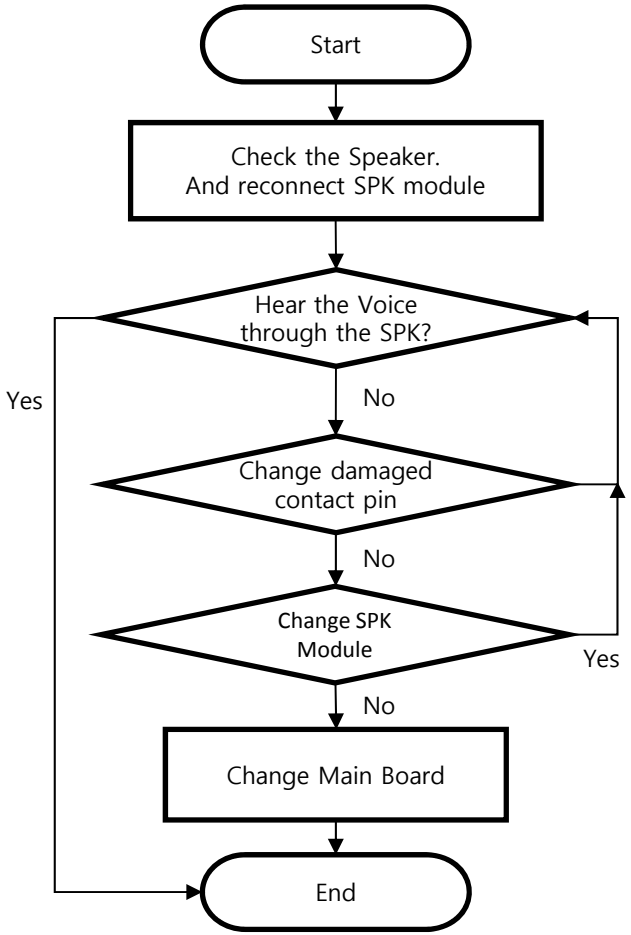


Circuit Diagram



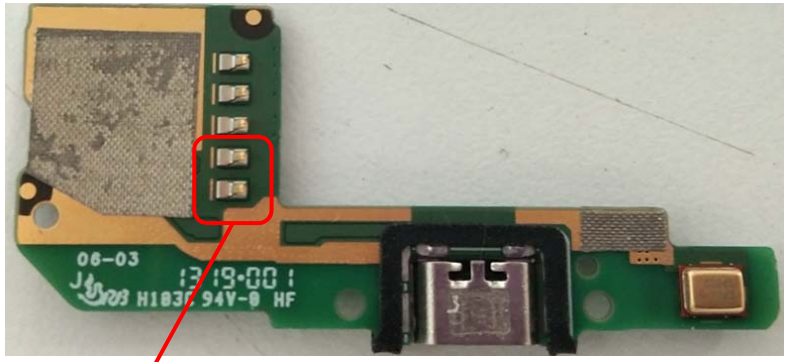
The speaker control signal is generated by MT6357(U0701), the chipset and the speaker should be checked.

Checking Flow

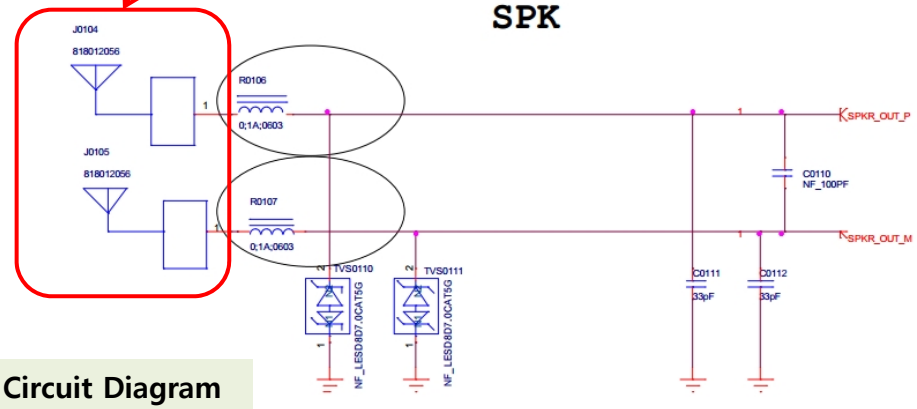


Contact pin
(J0104 J0105)

BOT



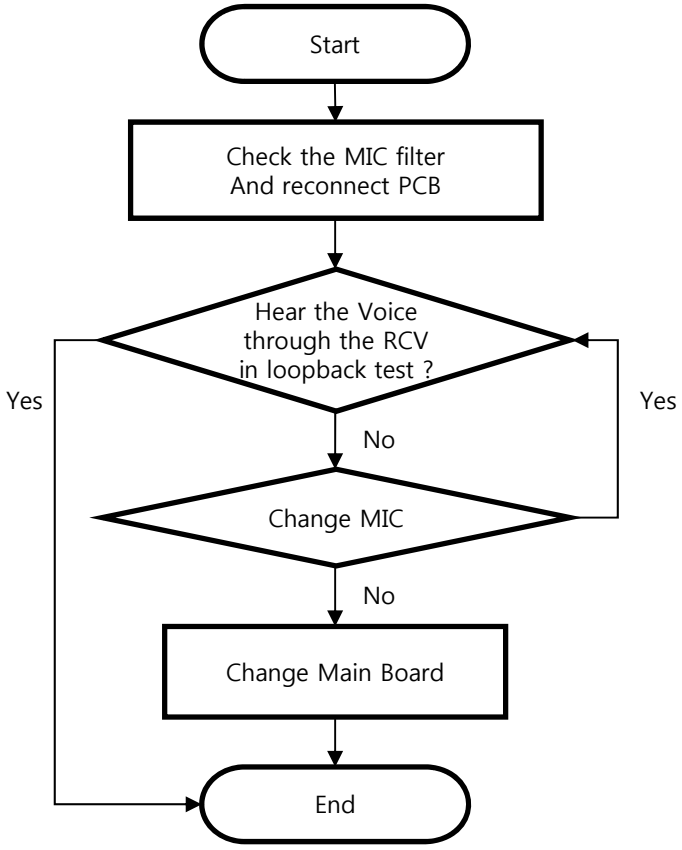
Placement



Circuit Diagram

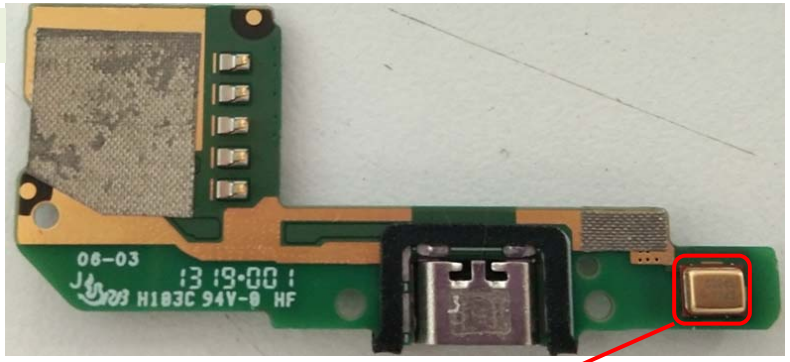
It's operating voice call(except speakerphone), voice recording, camcorder recording.

Checking Flow

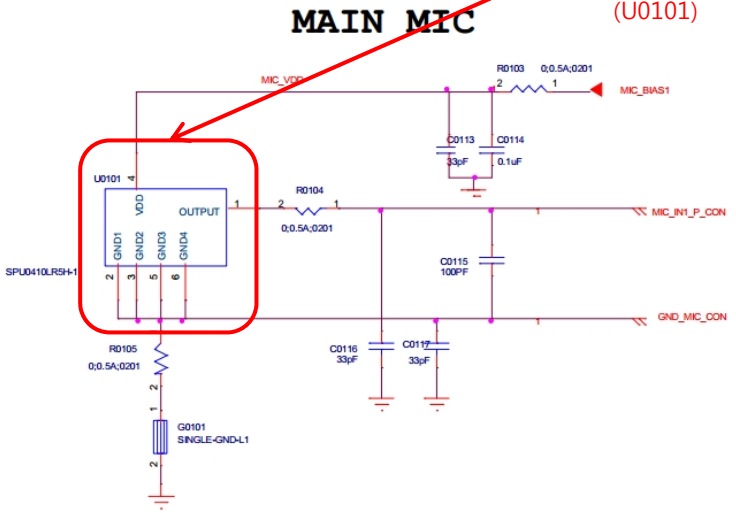


Placement

BOT

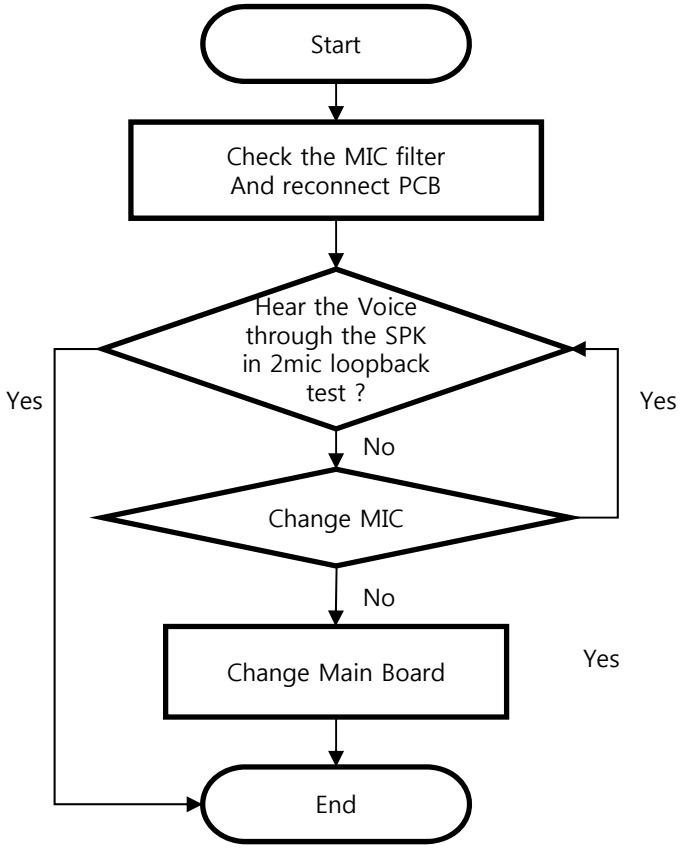


Circuit Diagram



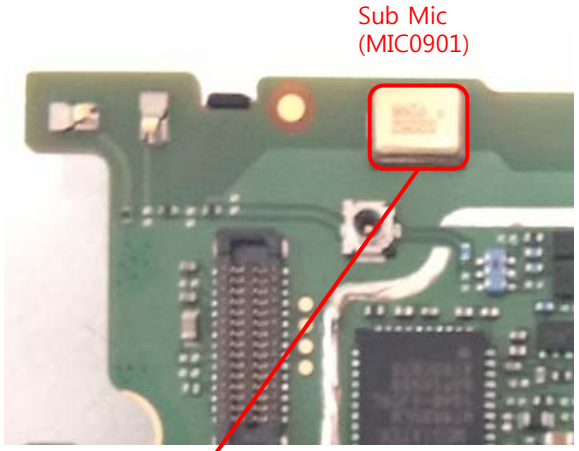
It's operating Speakerphone call.

Checking Flow

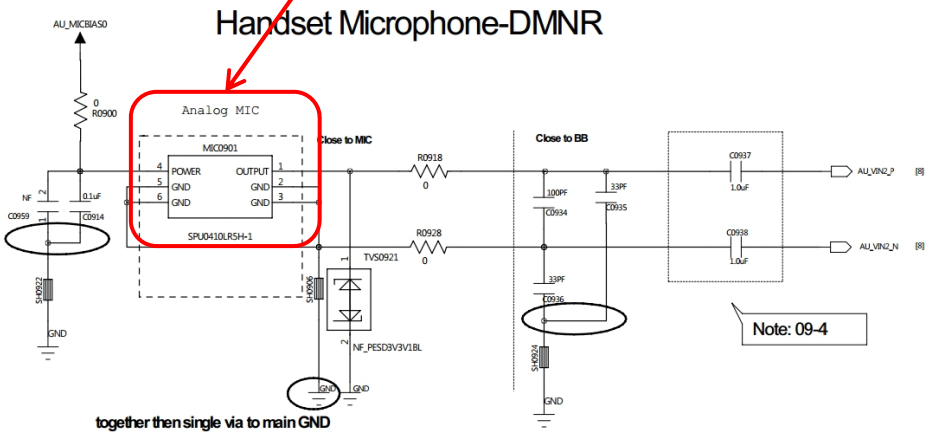


Placement

BOT

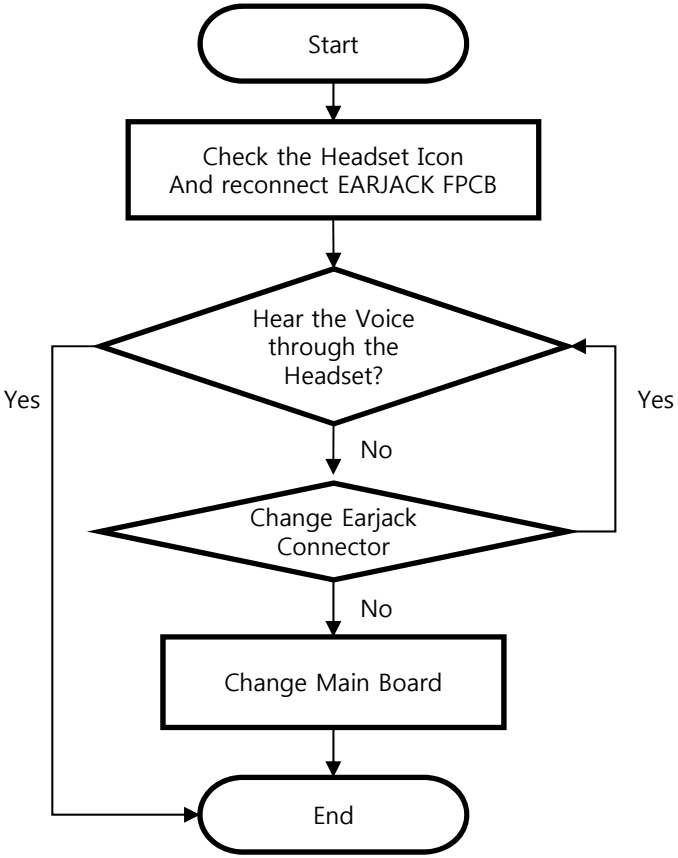


Circuit Diagram

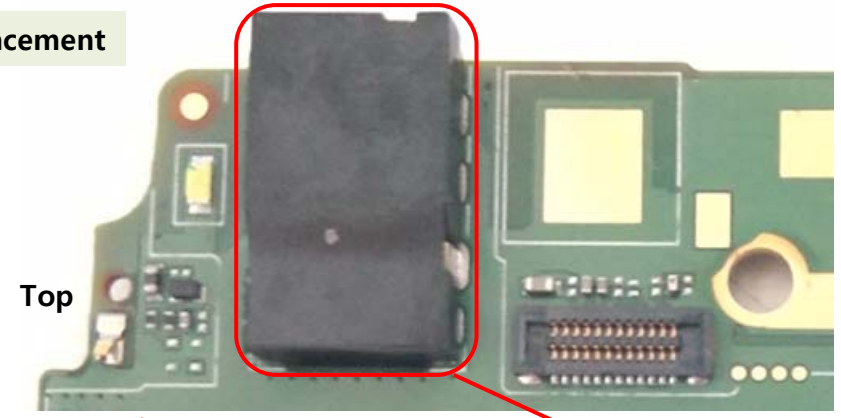


Disable detecting headset insert or No sound from Earphone, Check the Connector and Main PCB.

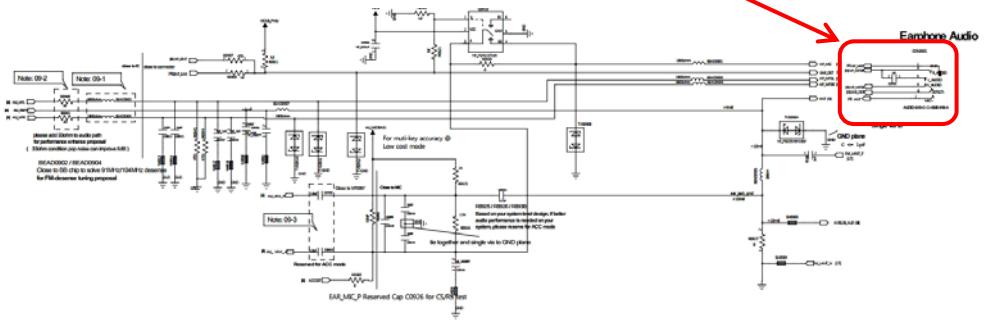
Checking Flow



Placement

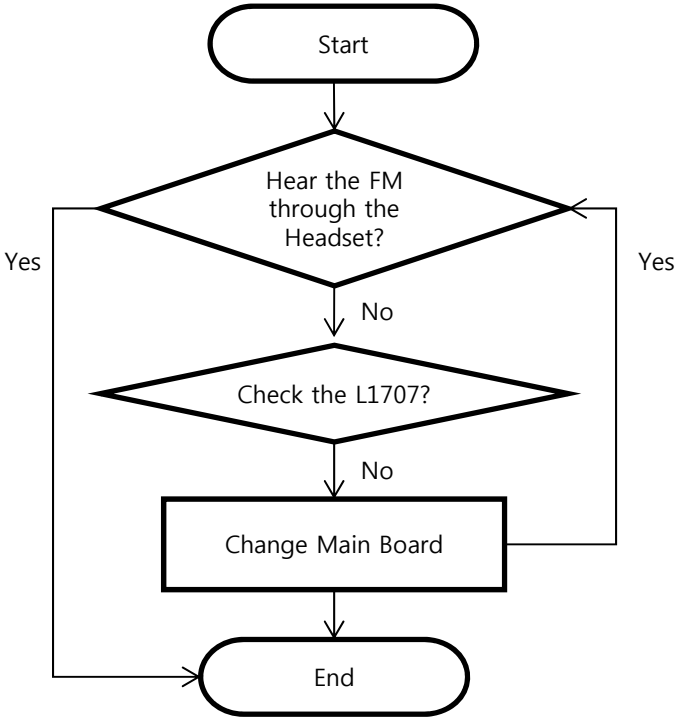


Circuit Diagram

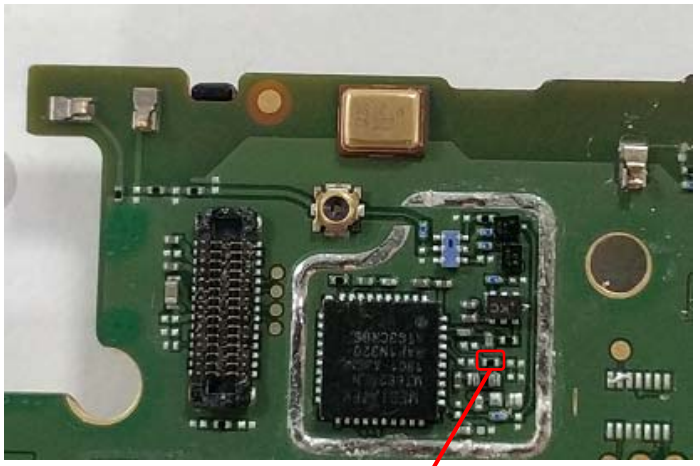


It's operating FM Radio.

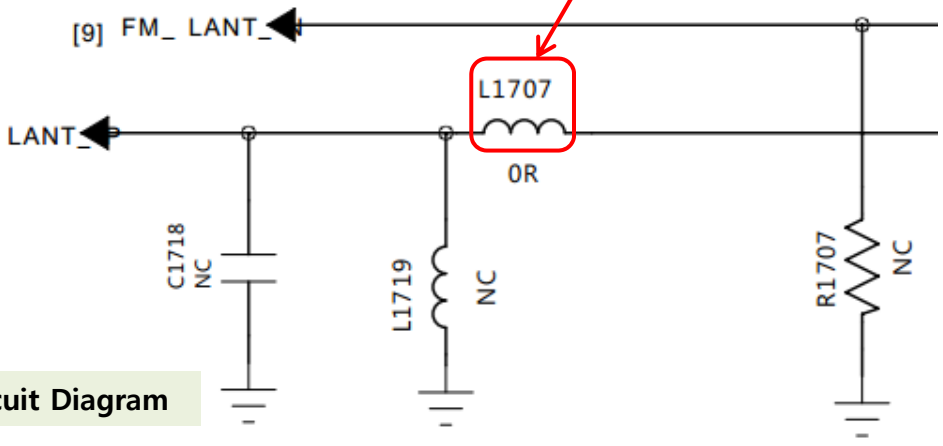
Checking Flow



Placement



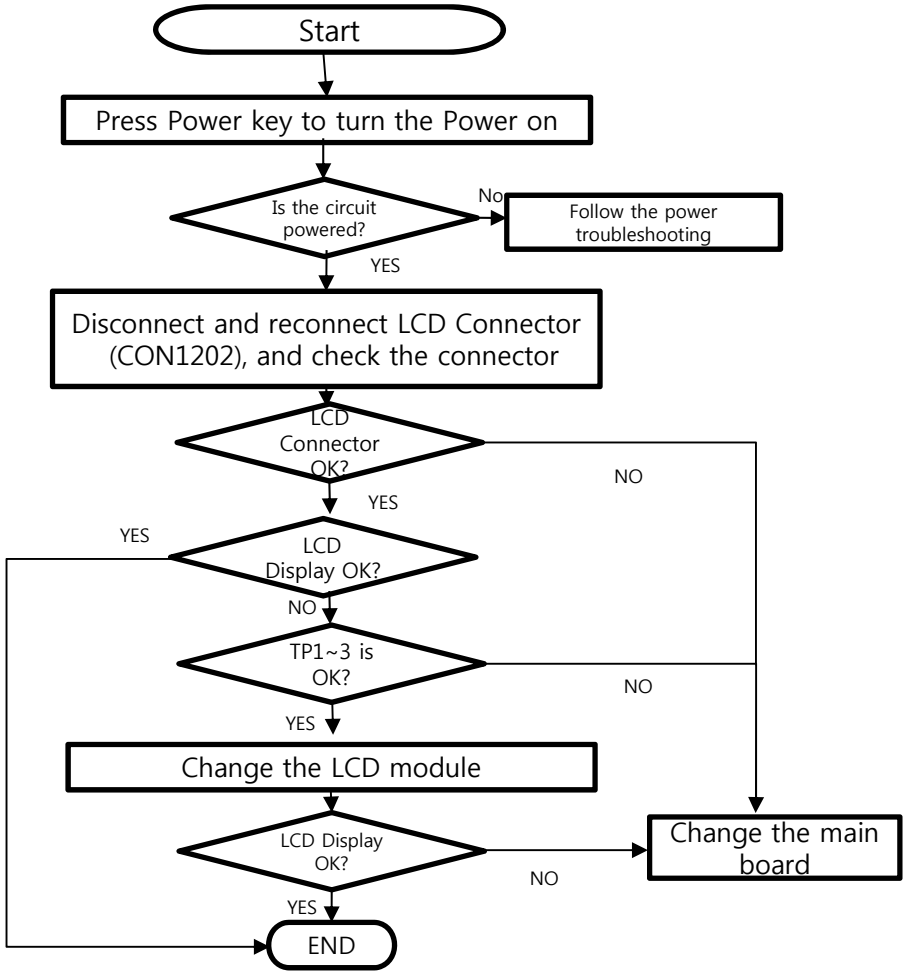
Circuit Diagram



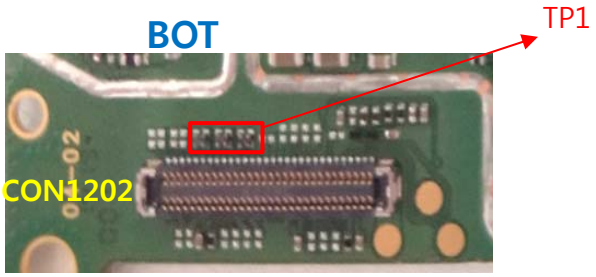
LCD Parts on the main board

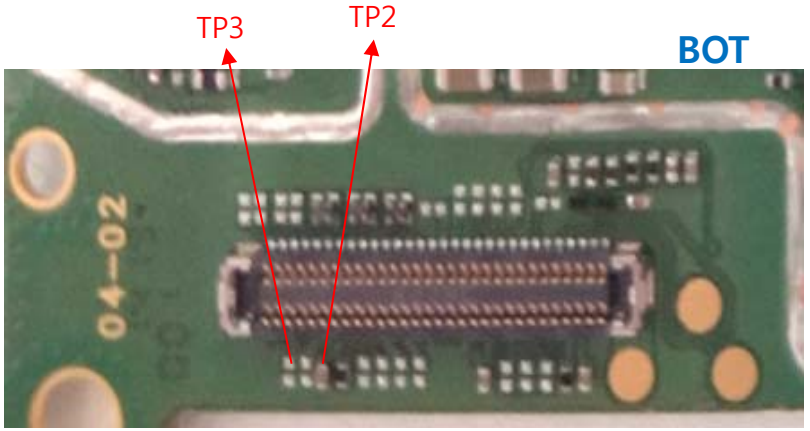
Main LCD control signals are generated by MT6739

Checking Flow



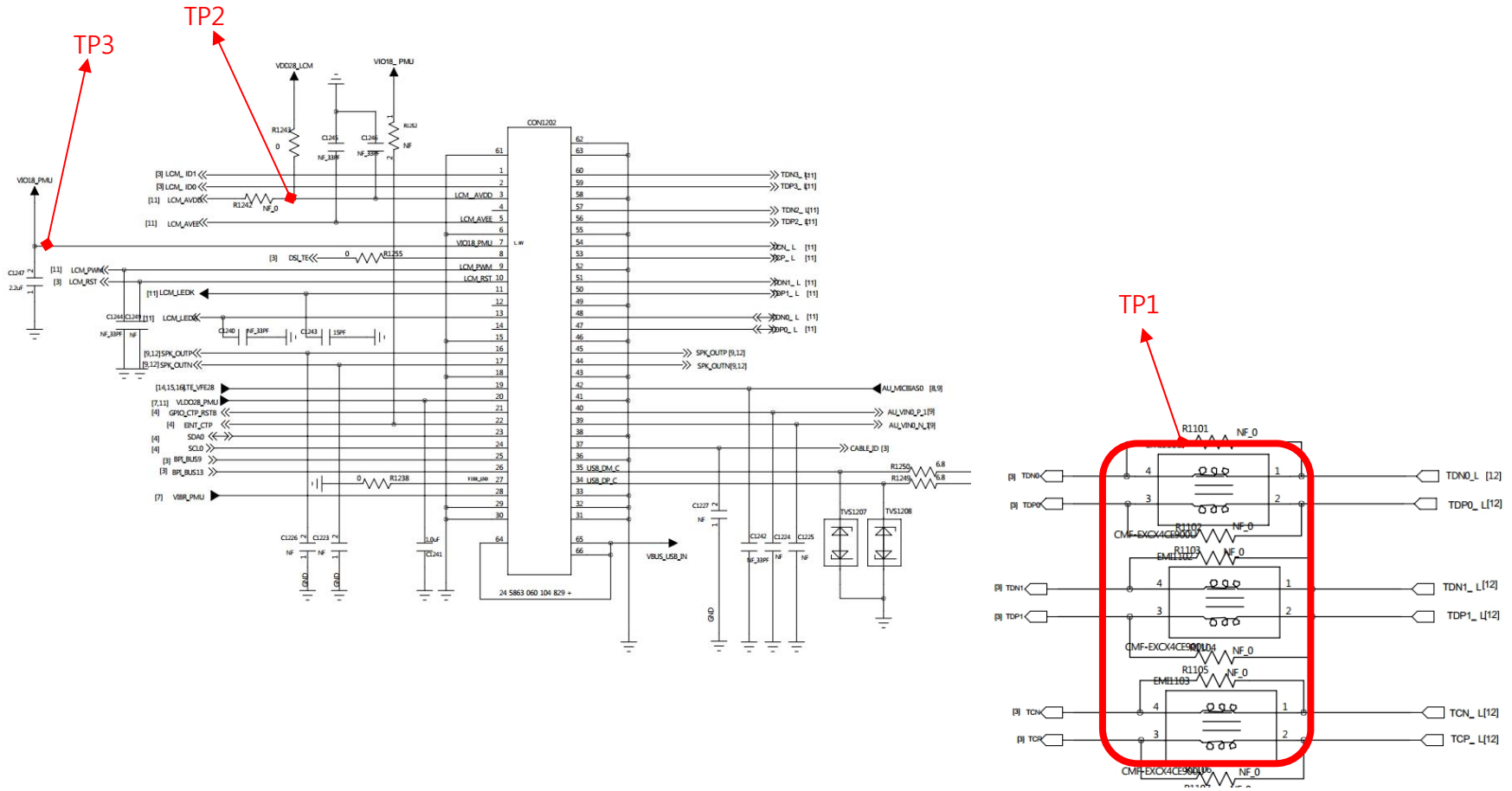
PCB Image





Main LCD control signals are generated by MT6739

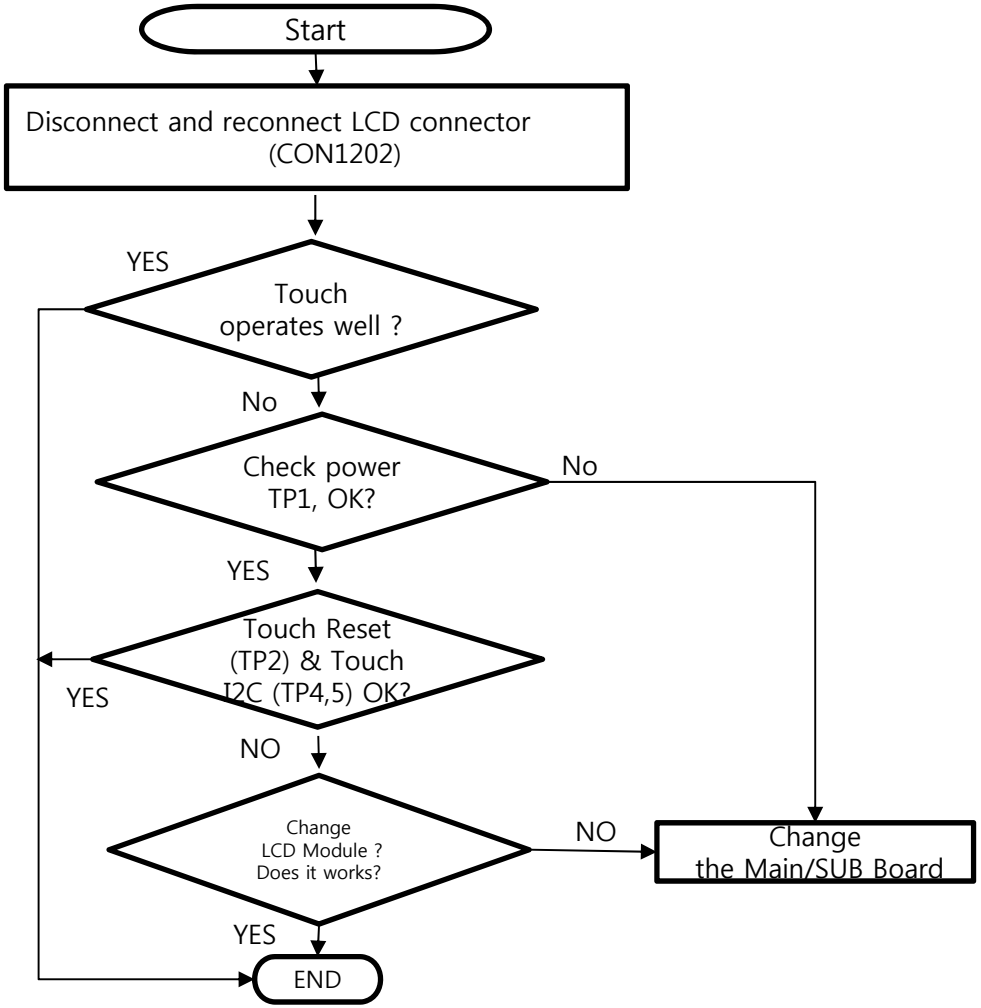
Circuit Diagram



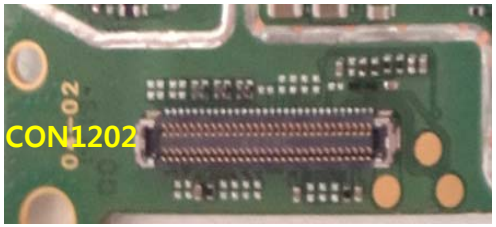
Touch Parts on the main board

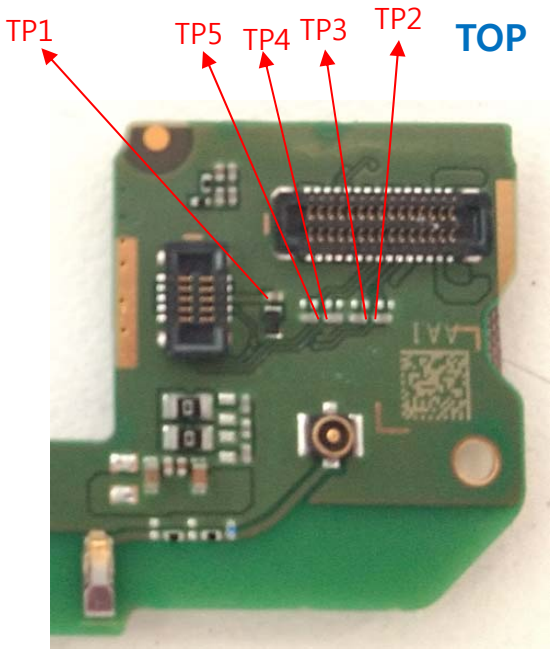
Touch control signals are generated by MT6739

Checking Flow



PCB Image

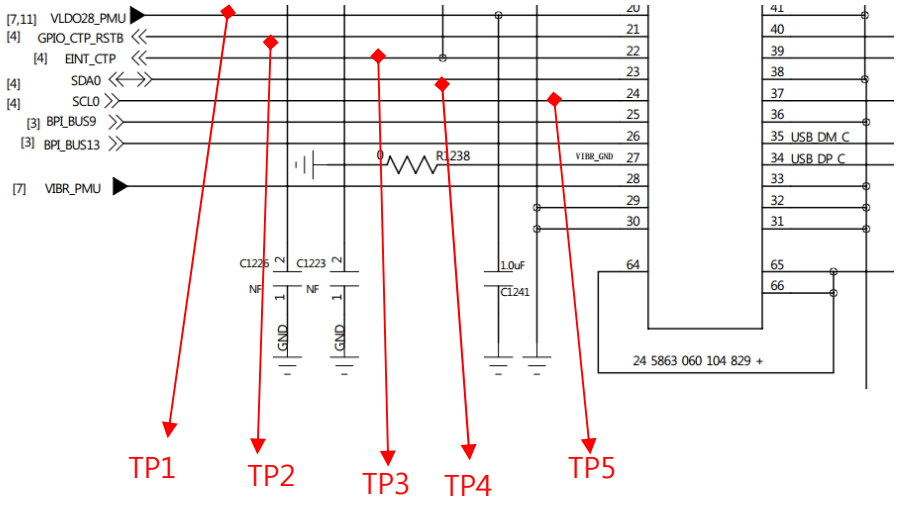




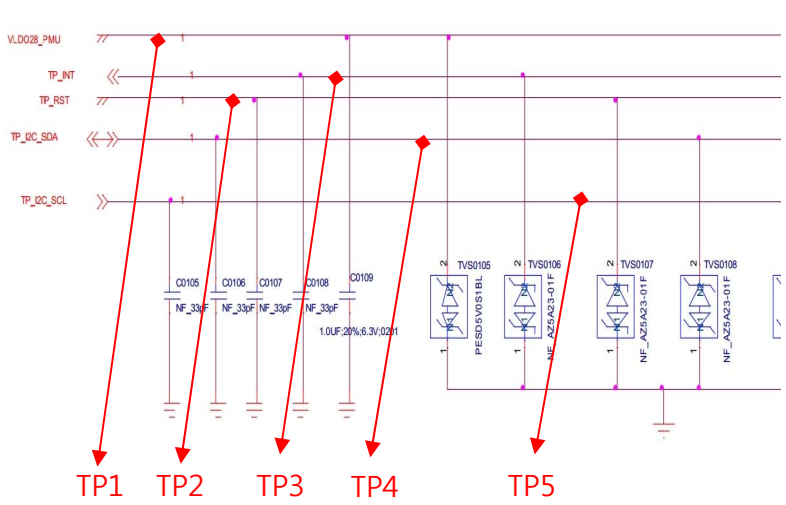
Touch Parts on the main board

Touch control signals are generated by MT6739

Circuit Diagram-Main Board

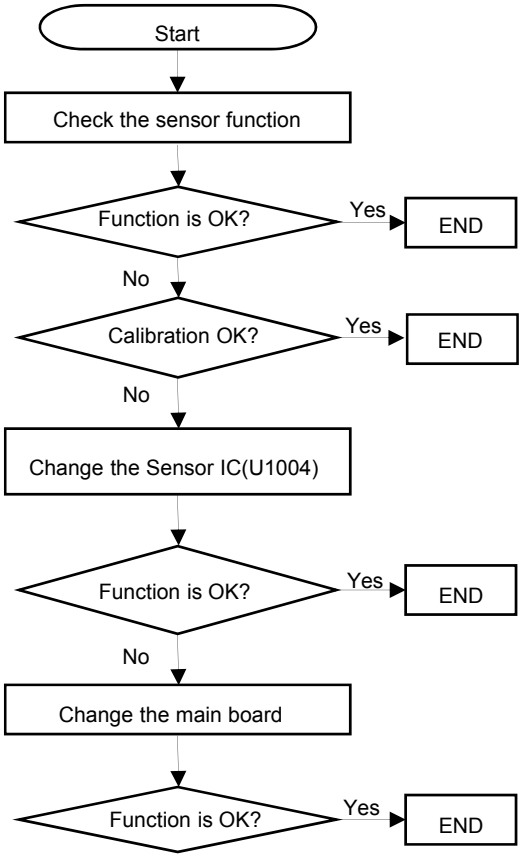


Circuit Diagram-SUB Board

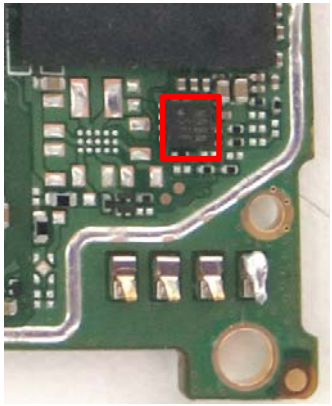


The acc. sensors are calibrated by using SW algorithm.

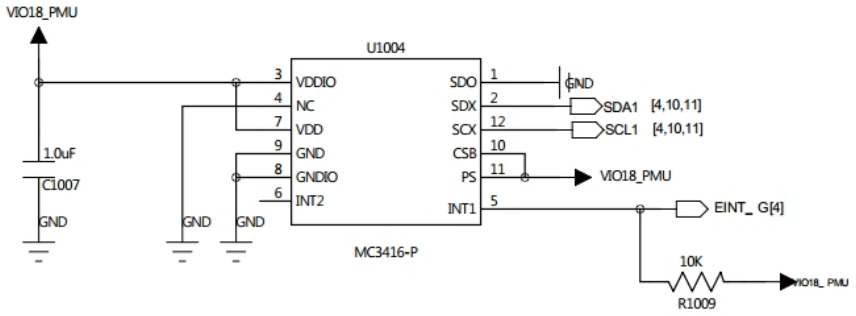
Checking Flow



Image

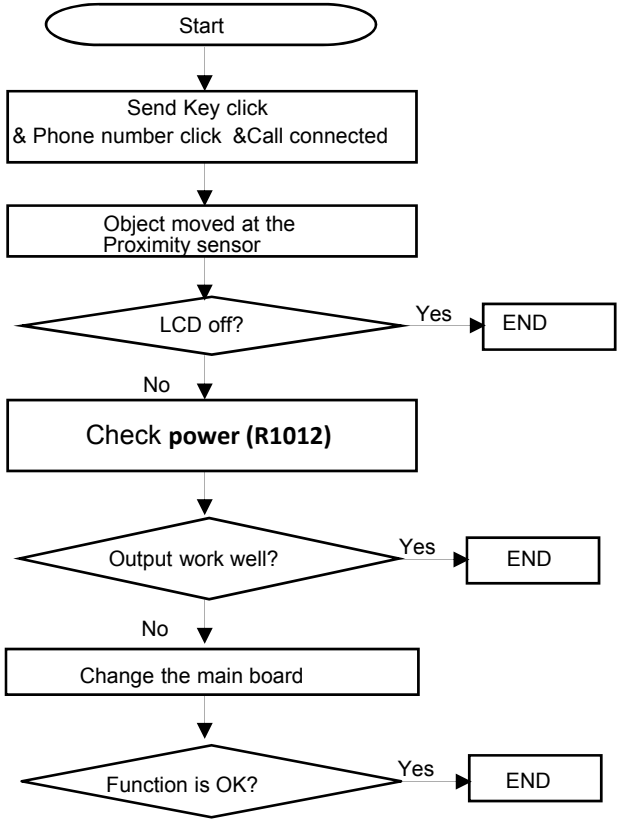


Circuit Diagram

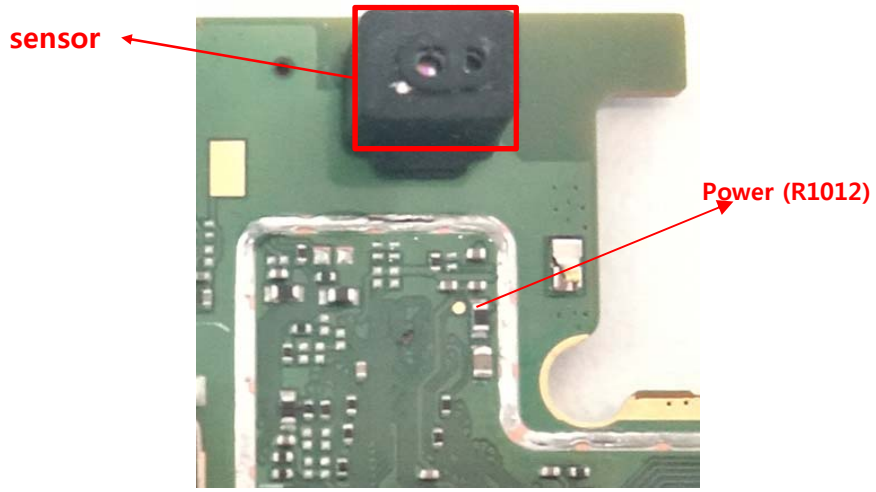


Proximity Sensor is worked as below: Send Key click ➔ Phone number click ➔ Call connected ➔ Object moved at the sensor ➔ Control the screen's on/off operation automatically

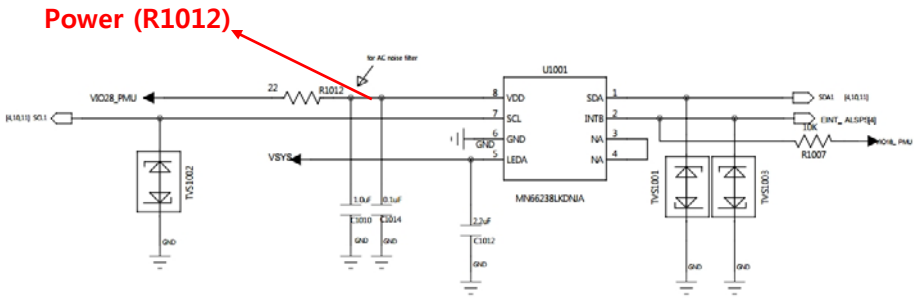
Checking Flow



Image

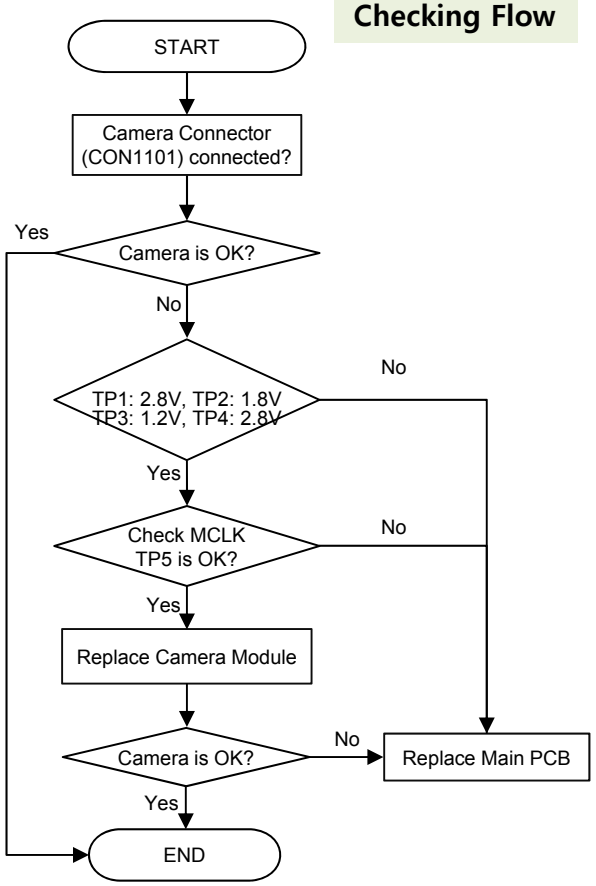


Circuit Diagram



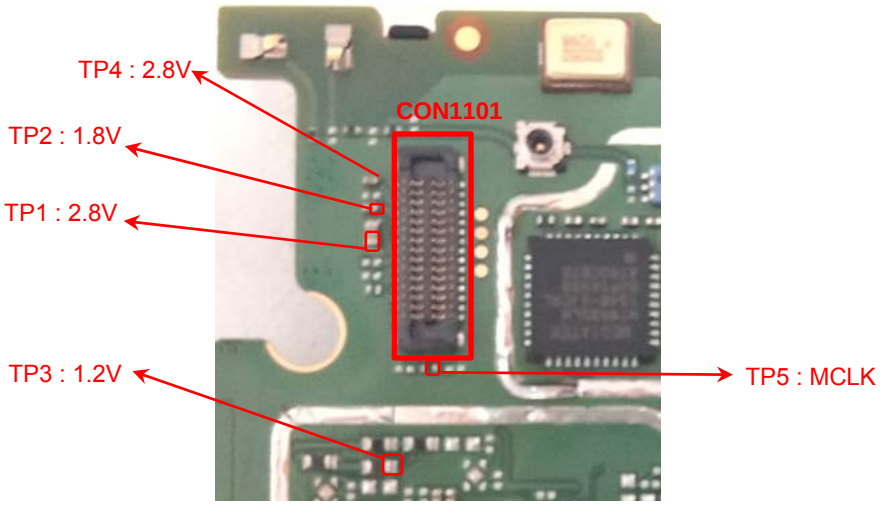
When 8M Rear Camera doesn't work, check CON1101 and TP Voltage.

Checking Flow

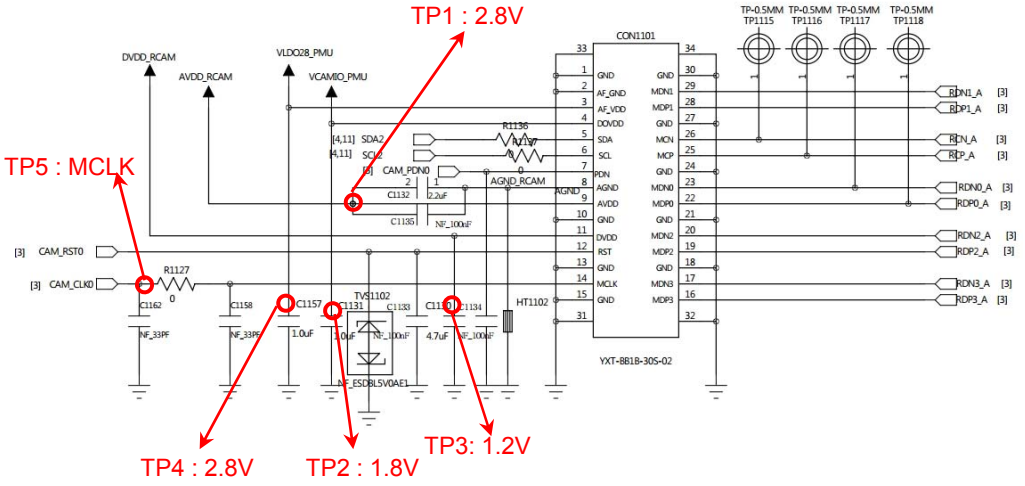


Image

BOT

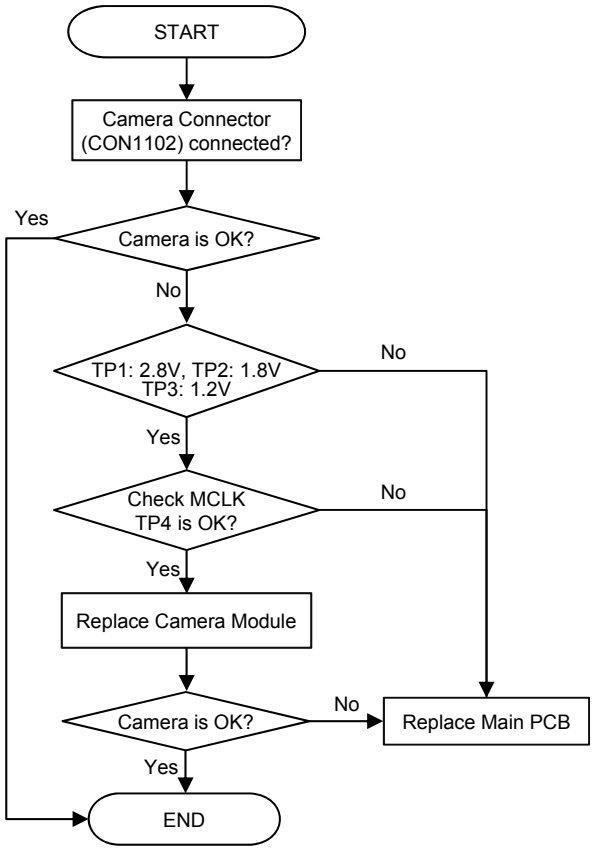


Circuit Diagram

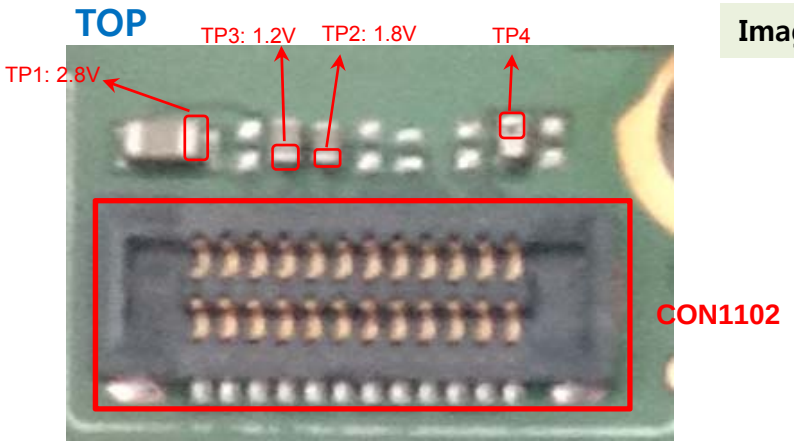


When 5M Front camera is not working, check CON1102 and TP Voltage.

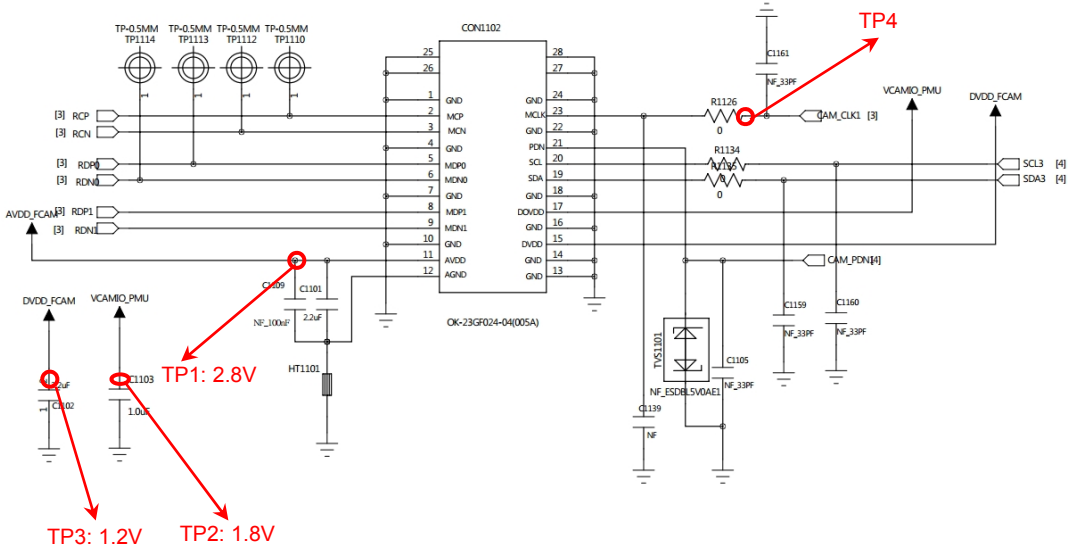
Checking Flow



Image

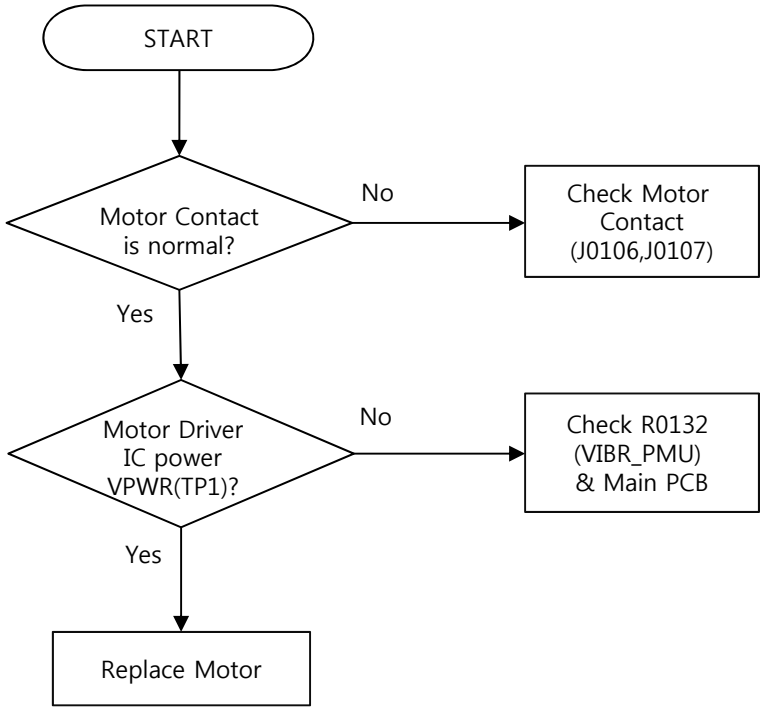


Circuit Diagram



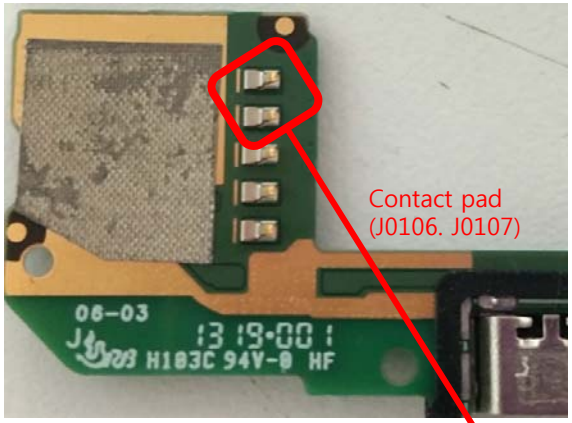
Motor is not working

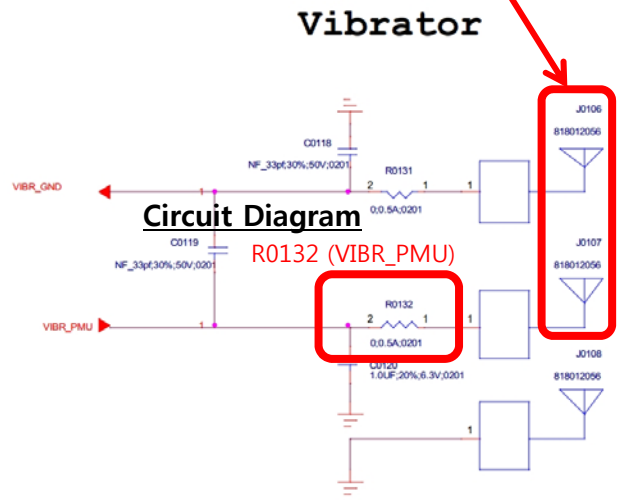
Checking Flow



Placement

Sub BOT



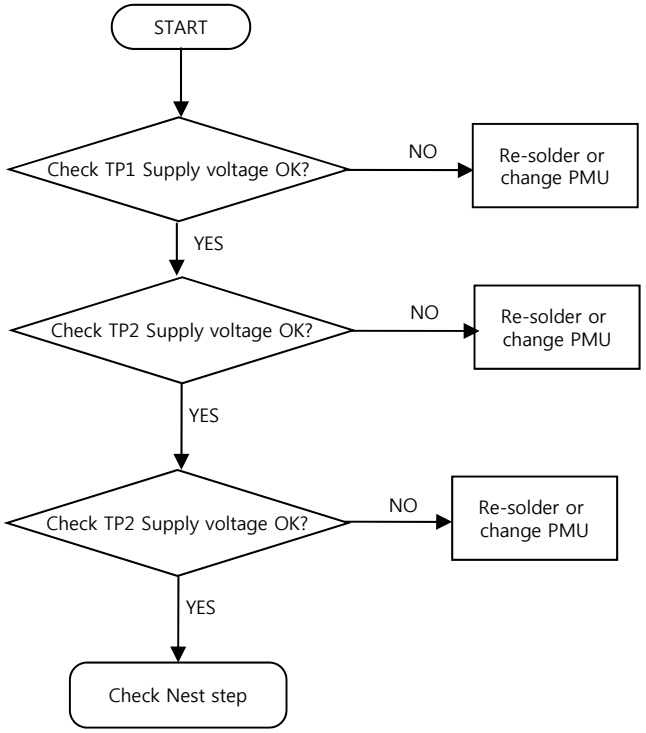


Circuit Diagram

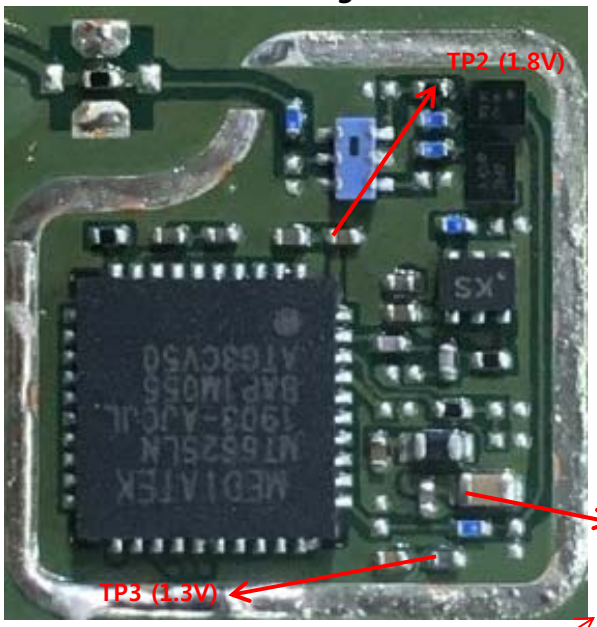
3.17 BT/Wi-Fi/GPS PART

3.17.1 Checking Connectivity DC Power

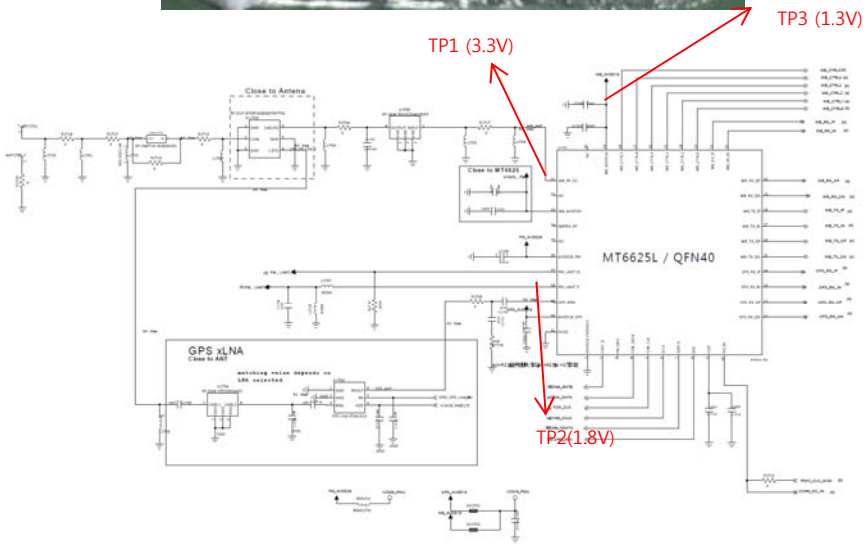
Checking Flow



Image



Main Top

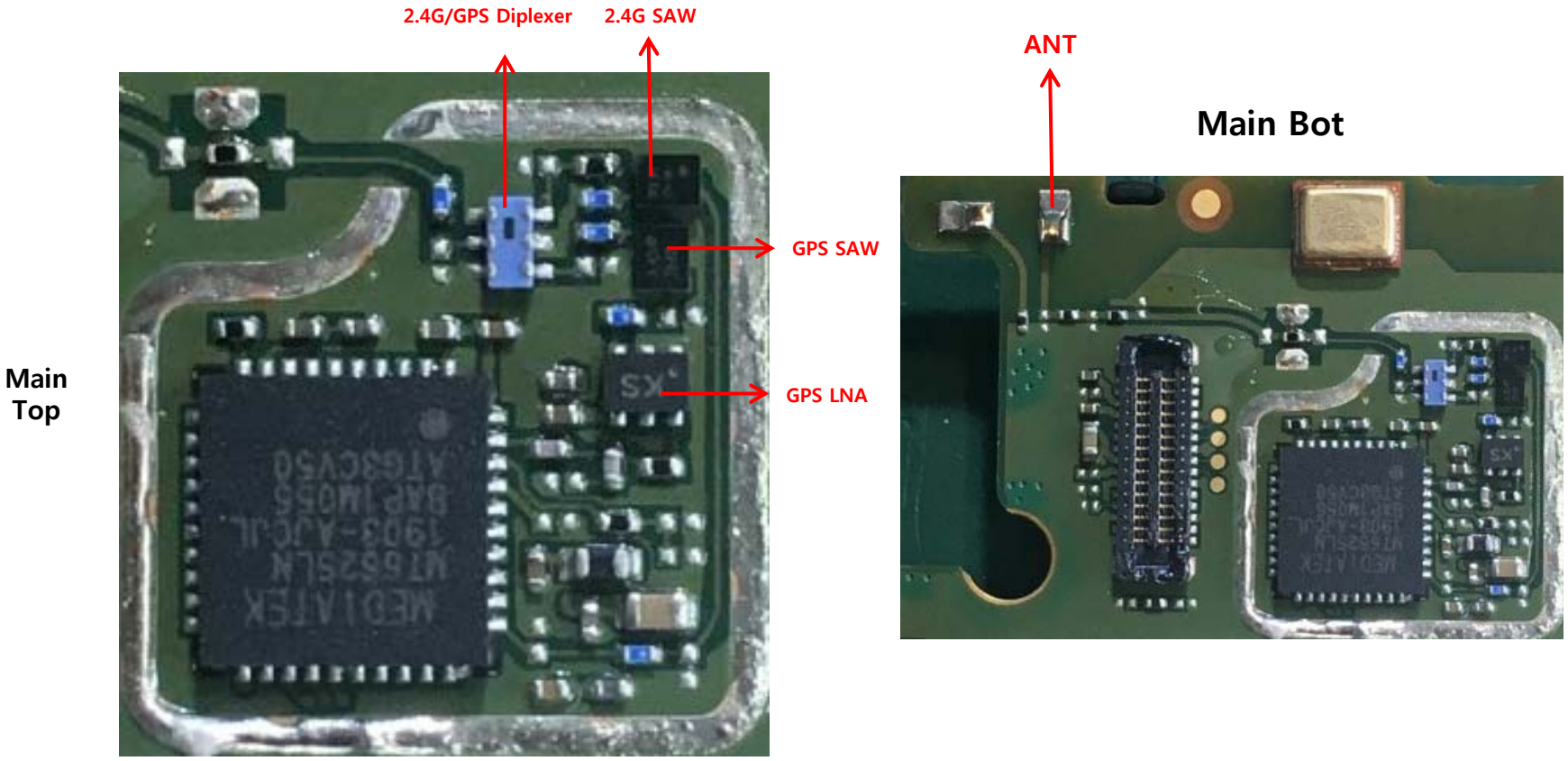


Circuit Diagram

3.17 BT/Wi-Fi/GPS PART

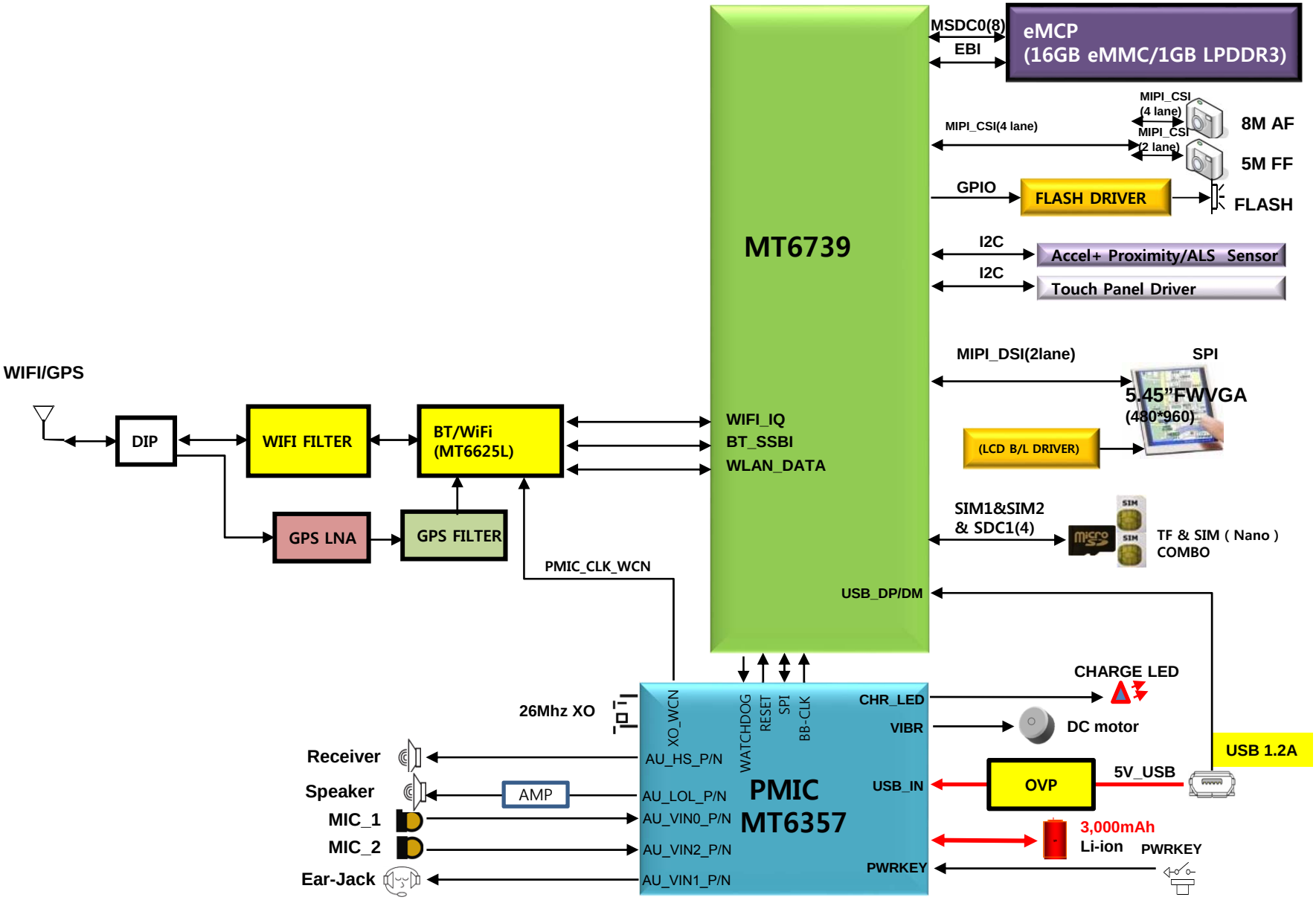
3.17.2 BT&WIFI&GPS Trouble Shooting

BT/WIFI/GPS Signal Path

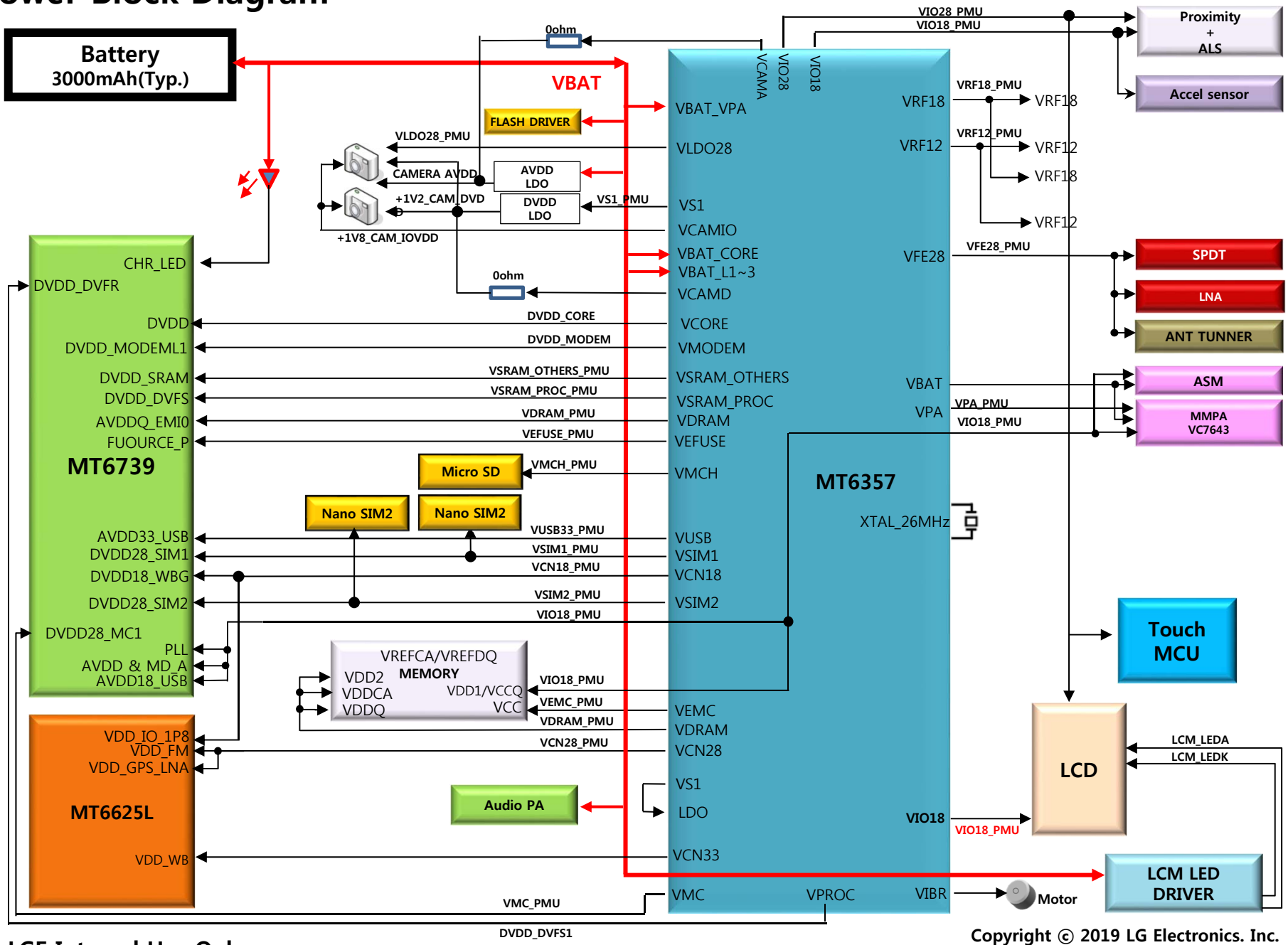


BLOCK DIAGRAM

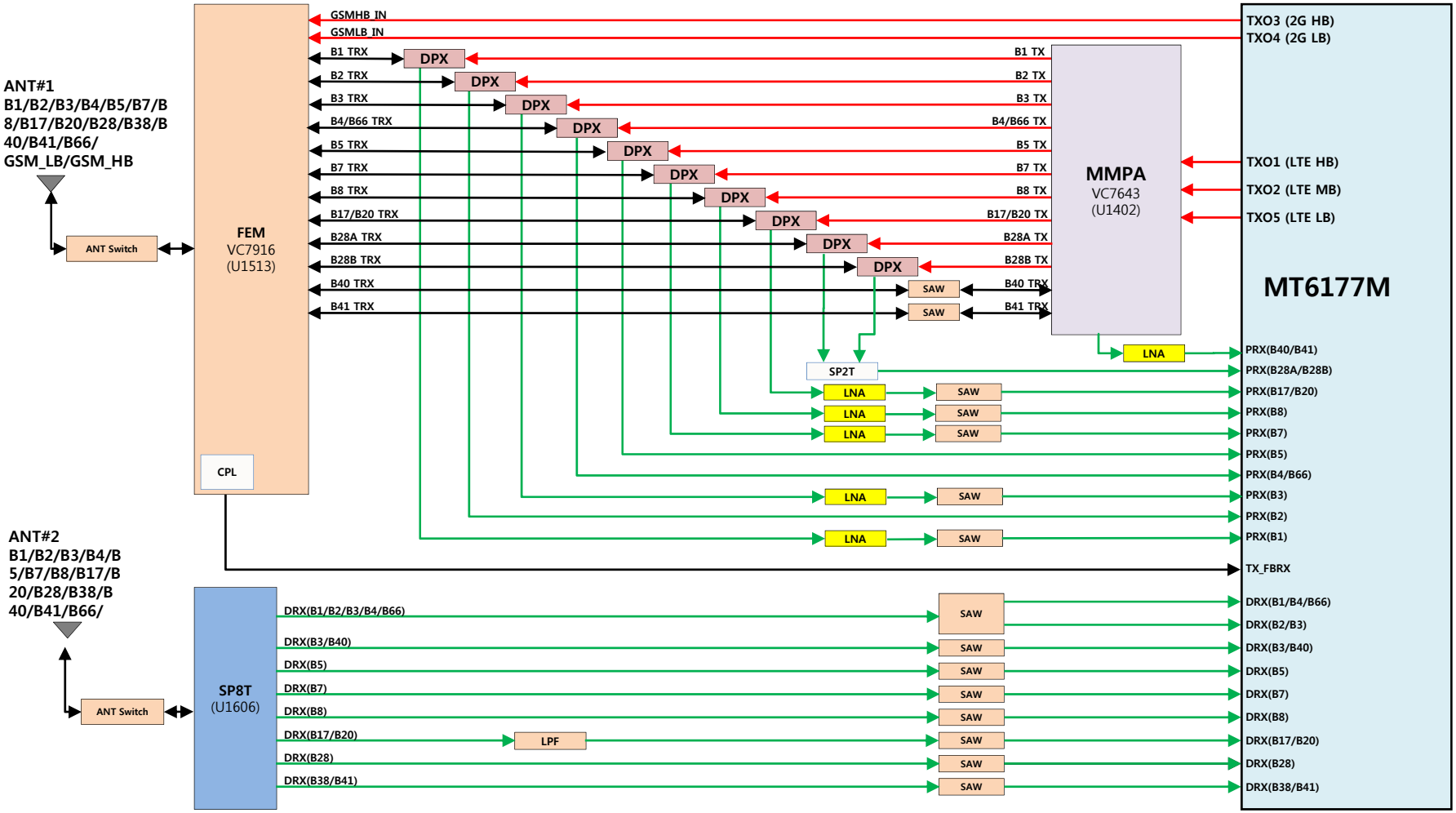
[MH6_Block Diagram]



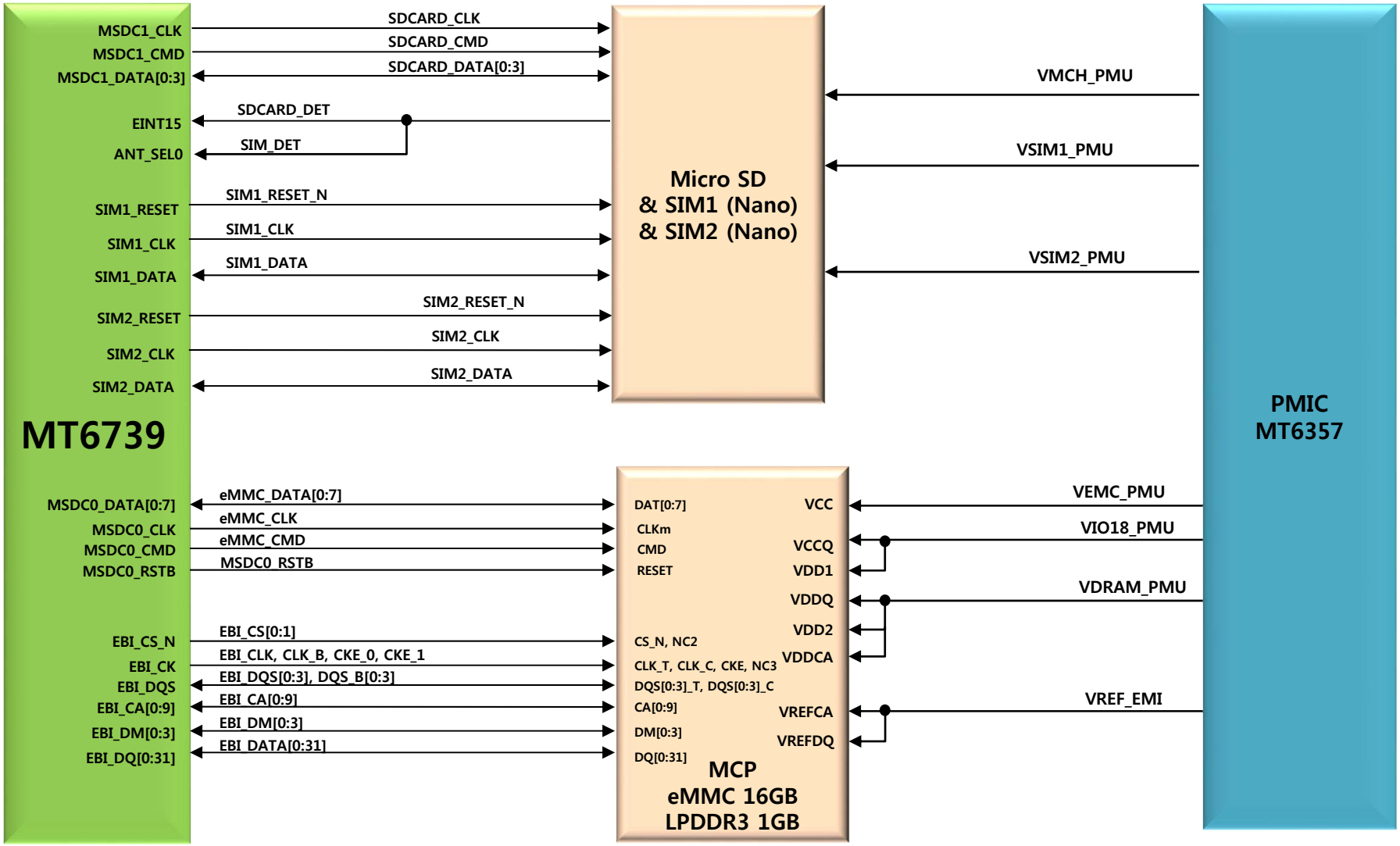
Power Block Diagram



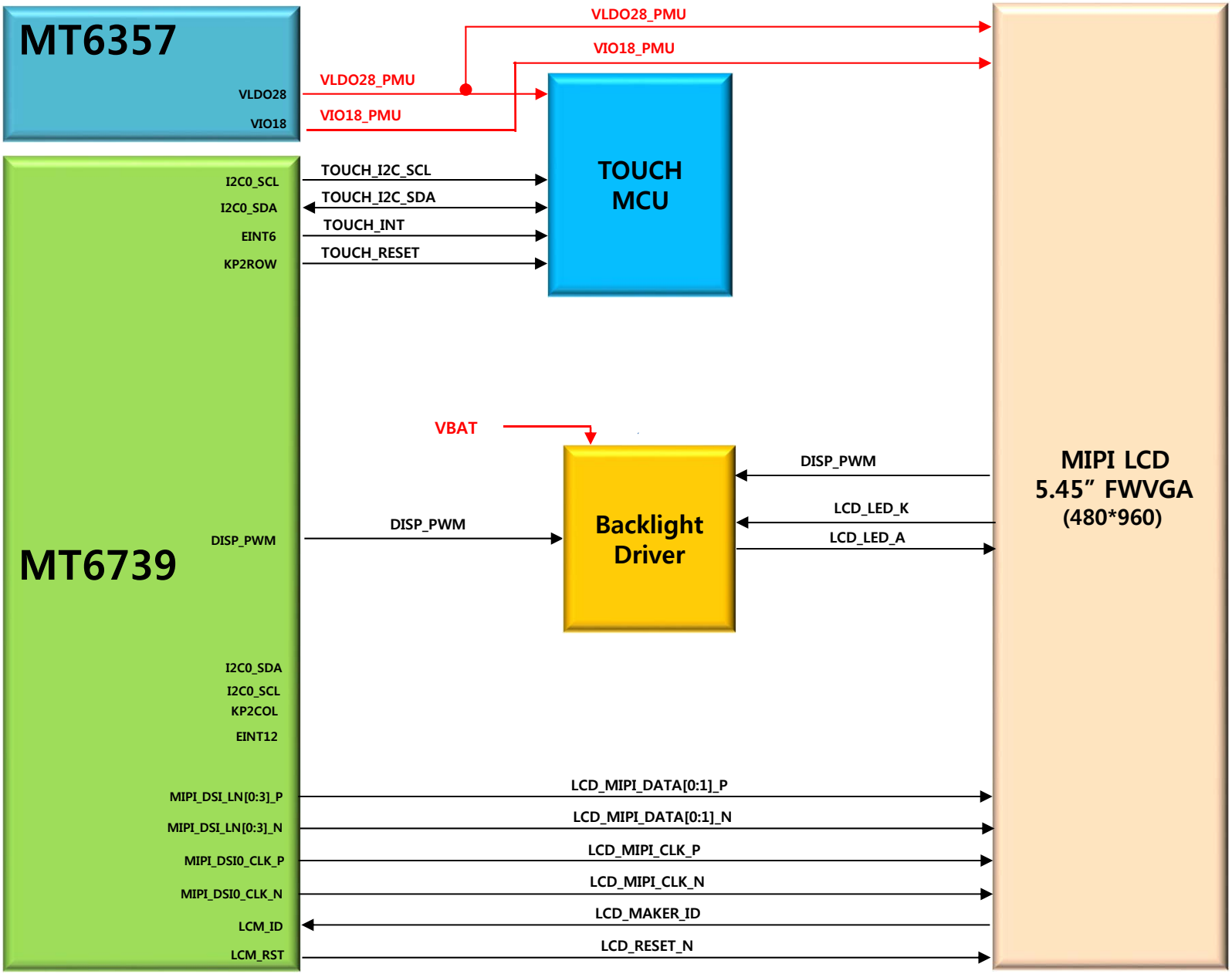
RF Block


ANT#1
B1/B2/B3/B4/B5/B7/B8/B17/B20/B28/B38/B40/B41/B66/GSM_LB/GSM_HB
ANT Switch
FEM
VC7916
(U1513)
CPL
GSMHB_IN
GSMLB_IN
B1 TRX
B2 TRX
B3 TRX
B4/B66 TRX
B5 TRX
B7 TRX
B8 TRX
B17/B20 TRX
B28A TRX
B28B TRX
B40 TRX
B41 TRX
DPX
SAW
SP2T
LNA
MMPA
VC7643
(U1402)
B1 TX
B2 TX
B3 TX
B4/B66 TX
B5 TX
B7 TX
B8 TX
B17/B20 TX
B28A TX
B28B TX
B40 TRX
B41 TRX
TXO3 (2G HB)
TXO4 (2G LB)
TXO1 (LTE HB)
TXO2 (LTE MB)
TXO5 (LTE LB)
MT6177M
PRX(B40/B41)
PRX(B28A/B28B)
PRX(B17/B20)
PRX(B8)
PRX(B7)
PRX(B5)
PRX(B4/B66)
PRX(B3)
PRX(B2)
PRX(B1)
TX_FBRX
ANT#2
B1/B2/B3/B4/B5/B7/B8/B17/B20/B28/B38/B40/B41/B66/
ANT Switch
SP8T
(U1606)
DRX(B1/B2/B3/B4/B66)
DRX(B3/B40)
DRX(B5)
DRX(B7)
DRX(B8)
DRX(B17/B20)
DRX(B28)
DRX(B38/B41)
LPF
DRX(B1/B4/B66)
DRX(B2/B3)
DRX(B3/B40)
DRX(B5)
DRX(B7)
DRX(B8)
DRX(B17/B20)
DRX(B28)
DRX(B38/B41)

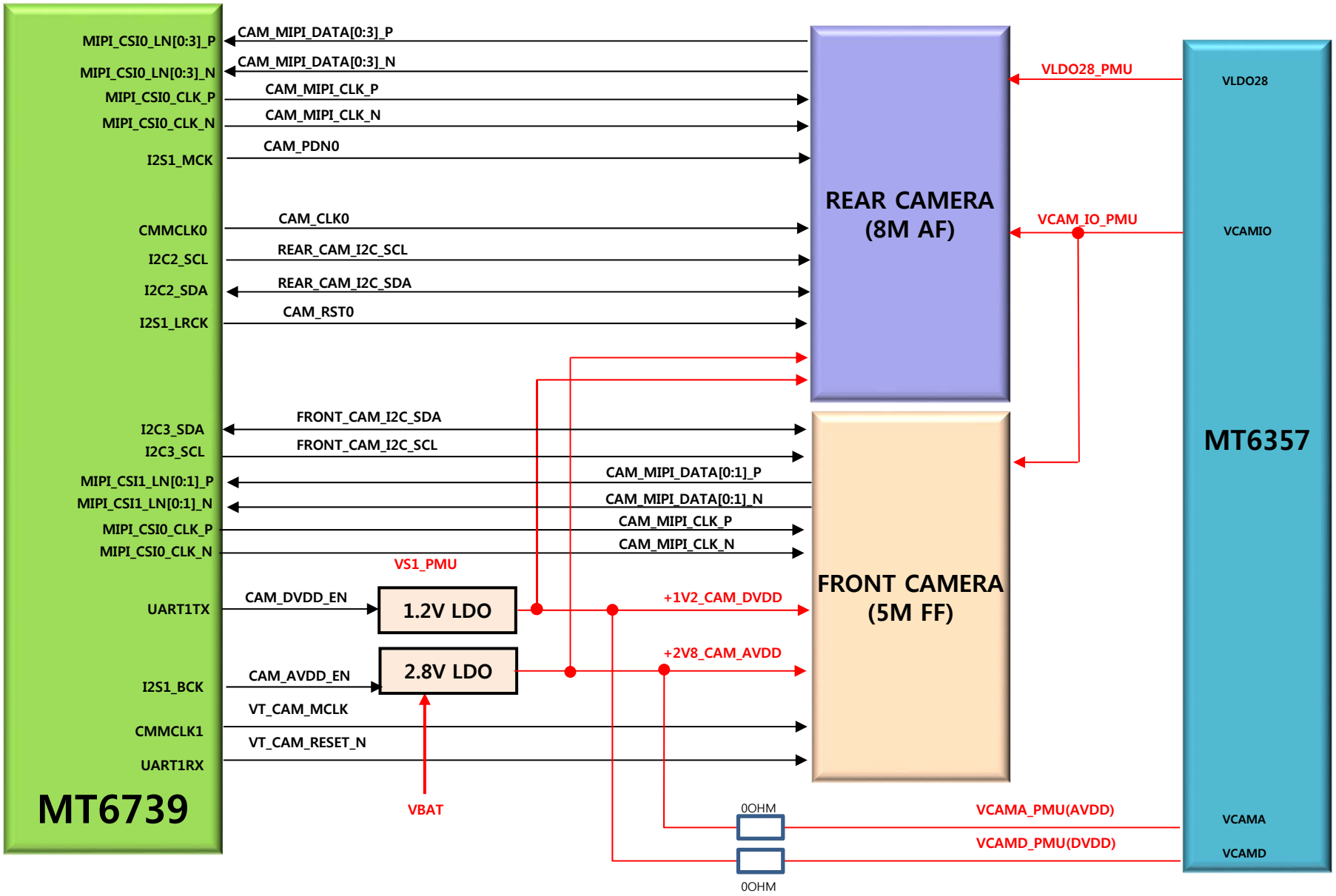
System Logic Block Diagram ; Memory, Micro SD, SIM



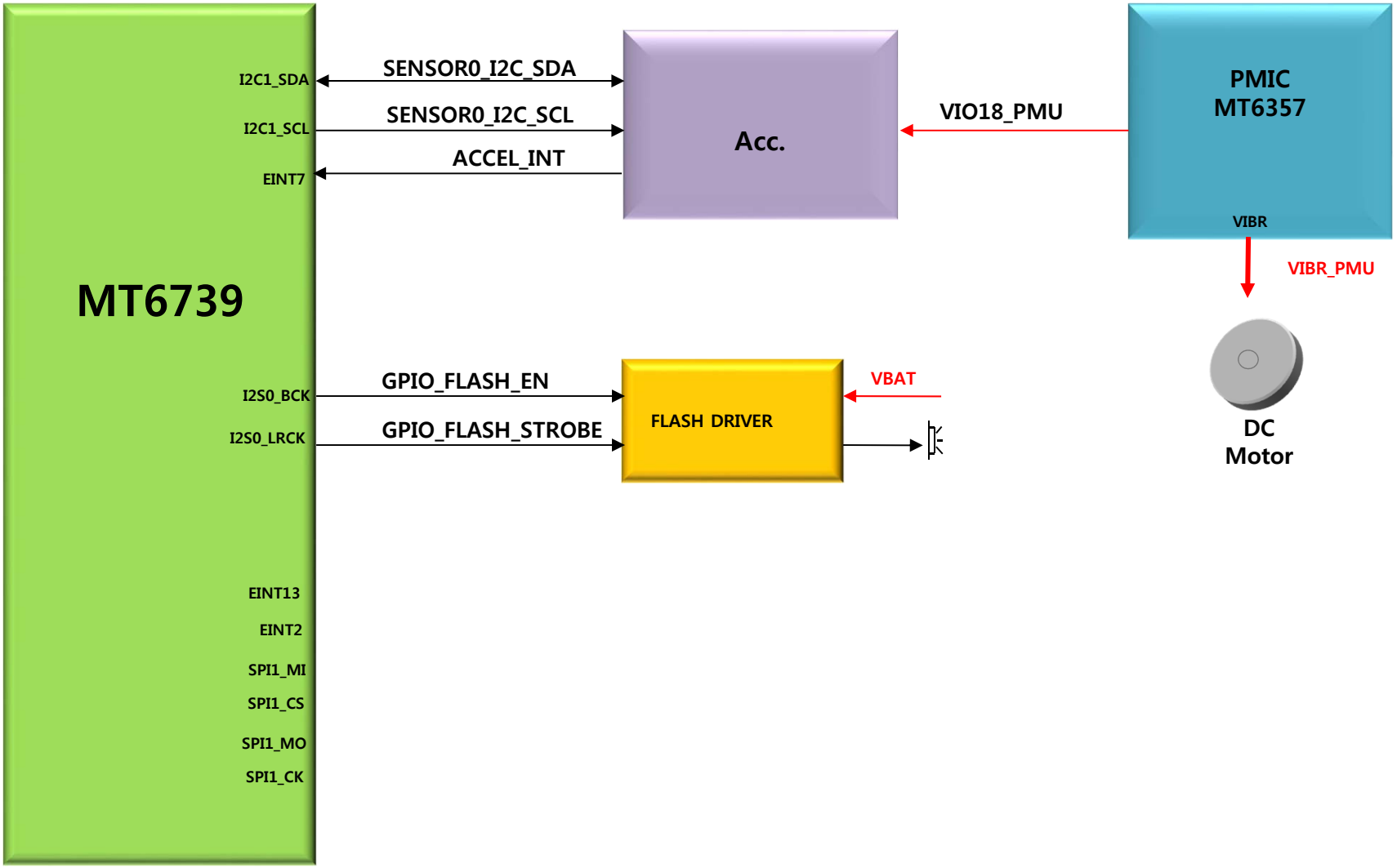
System Logic Block Diagram : LCD / TOUCH



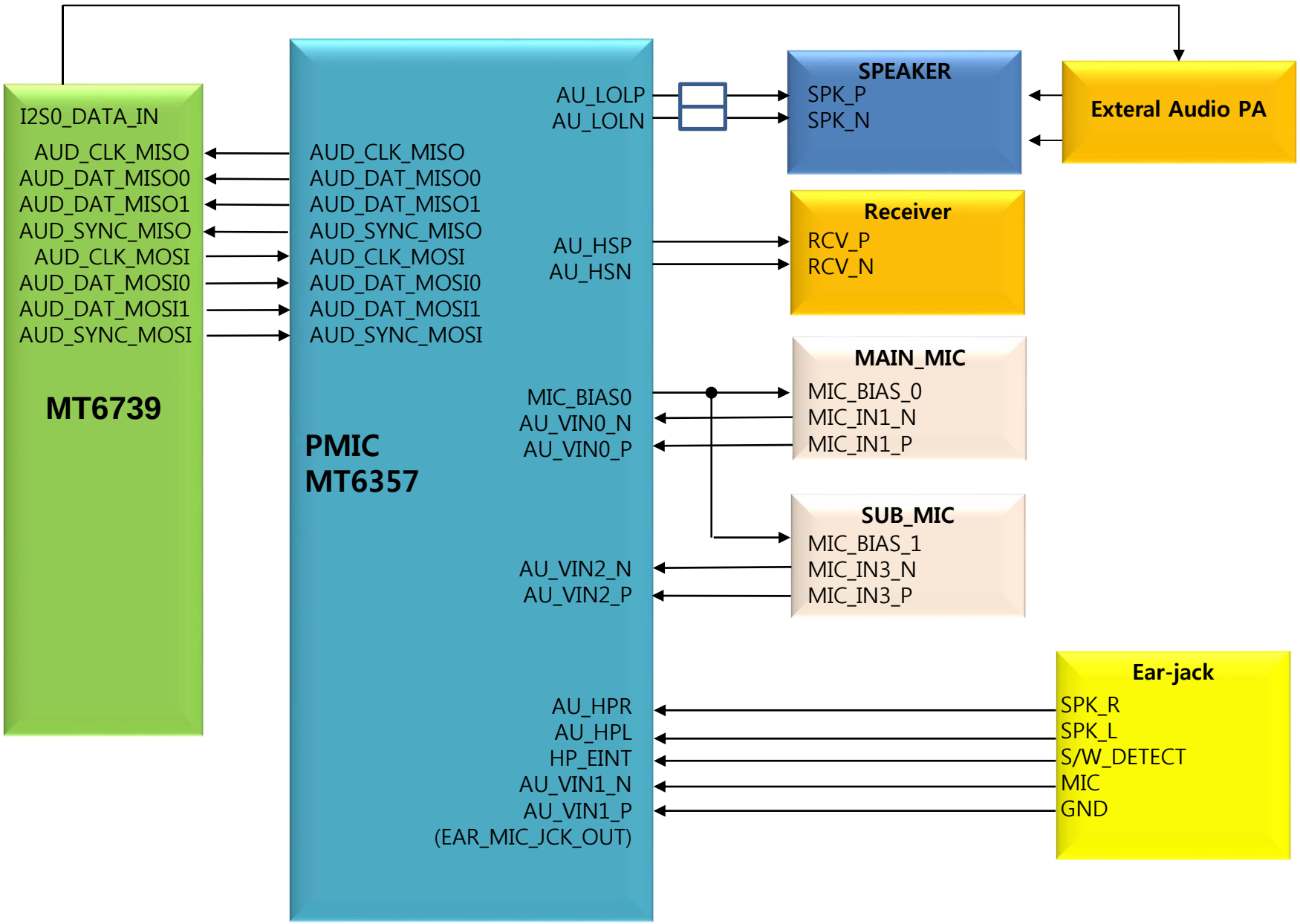
System Logic Block Diagram : CAMERA



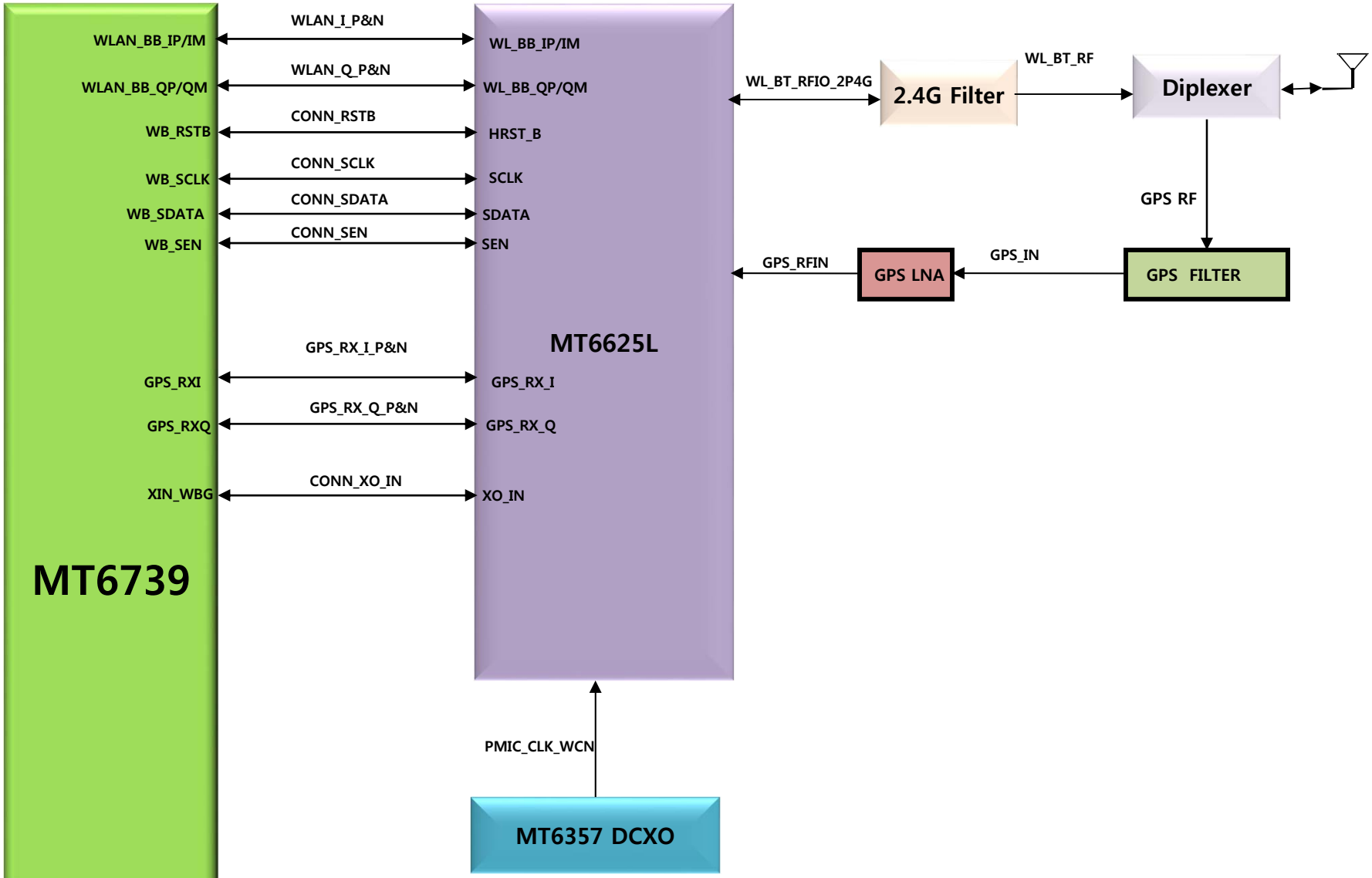
System Logic Block Diagram : SENSOR, MOTOR



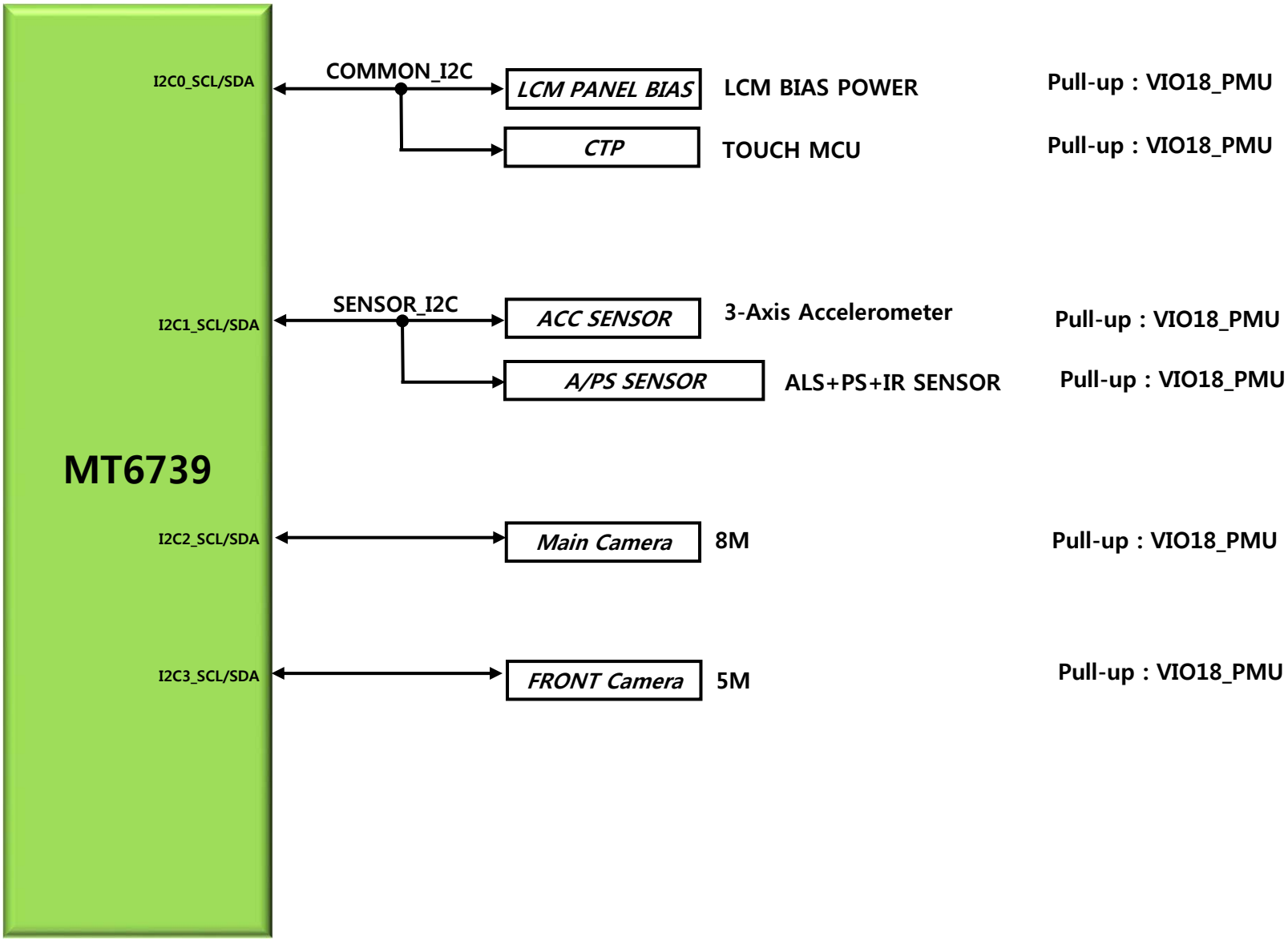
Audio Block Diagram



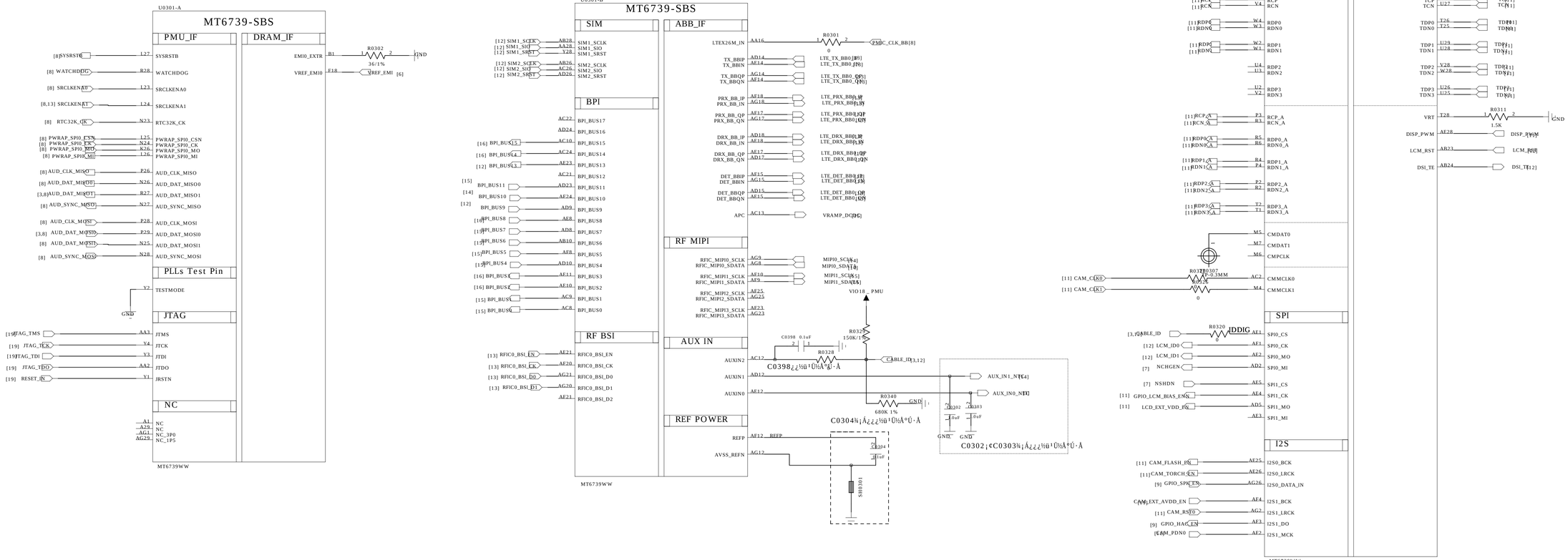
BT, WiFi,GPS

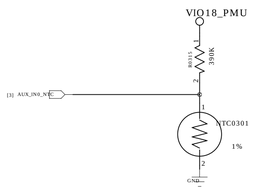


Appendix : I2C Flow



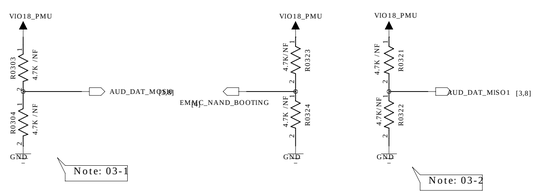
CIRCUIT DIAGRAM





Thermistor / To sense board level temperature

Distance to AP is 5~7mm and away form other heat resource 10mm~12mm



Schematic design notice of "03_MT6739_BB1" page.

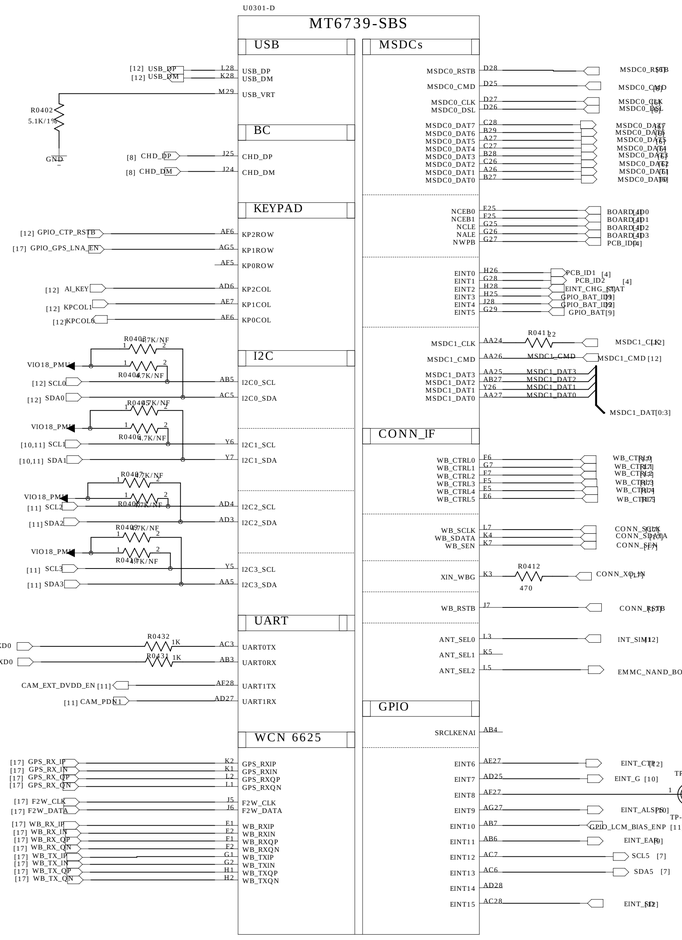
Note 03-1: AUD_DAT_MOSI is JTAG feature in bootrom. [AUD_DAT_MOSI0 default status is LO]

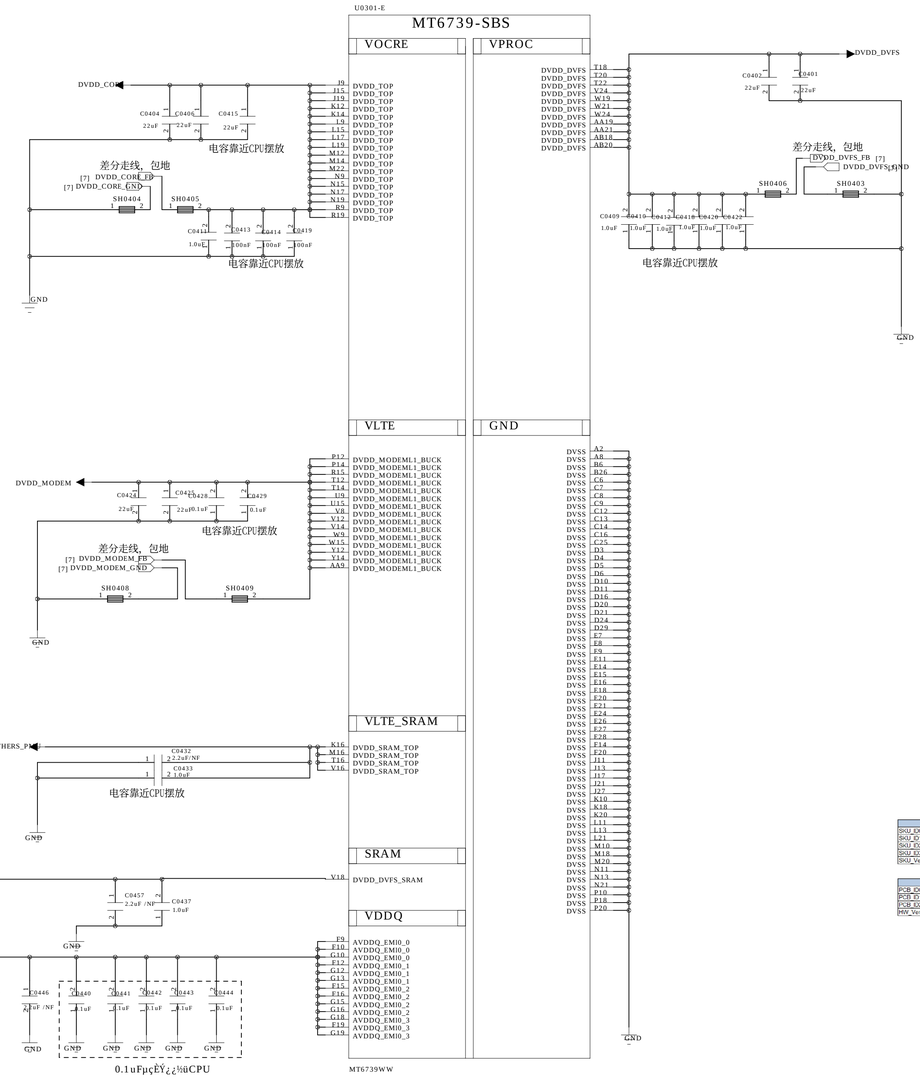
AUD_DAT_MOSI0	Mode	Note
LO	Default	N/A
HI	Aux Func. trap_MD_JTAG_AP_JTAG	MD JTAG = CMDAT0/CMDAT1/CMPCLK/CMMCLK/CMMCLK1

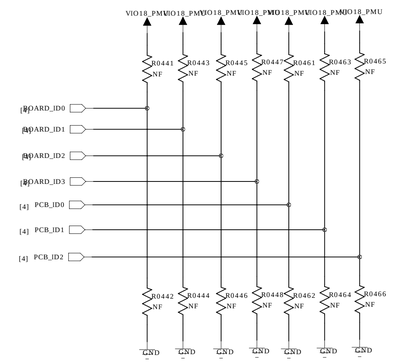
Note 03-2: ANT_SEL2 and AUD_DAT_MISO1 is storage booting trap. [ANT_SEL2 default status is LO, AUD_DAT_MISO1 default status is LO]

ANT_SEL2	AUD_DAT_MISO1	Storage Booting
HI	LO	TLC Boot
HI	HI	SLC Boot
LO	LO	eMMC Boot
LO	HI	N/A

TITLE:	<TITLE>	REV:	<REV>
DOCUMENT NO.:	03_MT6739_BB1	SIZED:	A1
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER: <DESIGNER>	Last Saved Date: 2019/4/8	SHEET: 3	OF 20



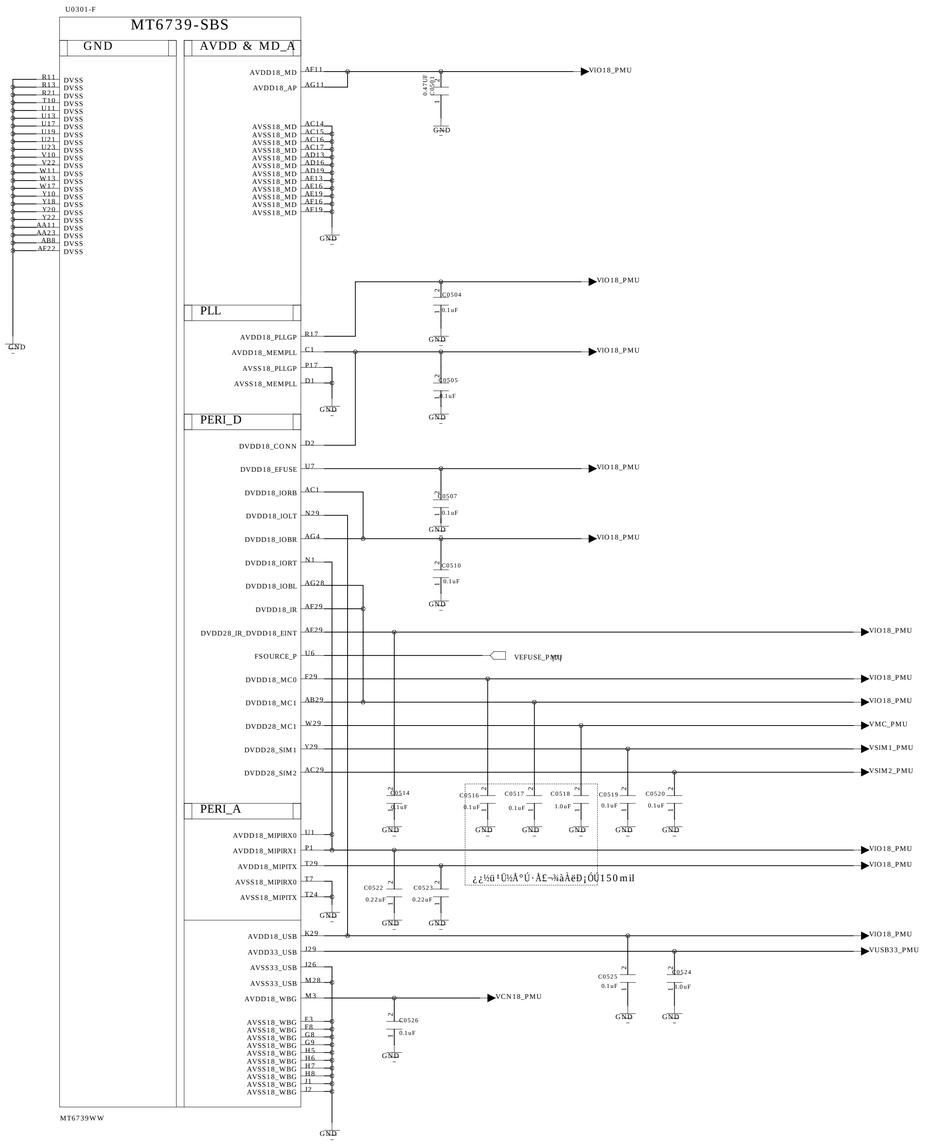




SKU_ID0	0	0	0	0	0	0	0	0	
SKU_ID1	0	0	0	0	1	1	1	1	
SKU_ID2	0	0	1	1	0	0	1	1	
SKU_ID3	0	1	0	1	0	1	0	1	
SKU_Version	96789AA1	96789BA1	96789CA1	96789DA1	96789EA1	96789FA1	96789GA1	96789HA1	

PCB_ID0	0	0	0	0	1	1	1	1	
PCB_ID1	0	0	1	1	0	0	1	1	
PCB_ID2	0	1	0	1	0	1	0	1	
HW_Version	0 (PP0)	A(PP0.5)	B(PP1)	C	D	1.5(PP2)	1.1	MKT	

TITLE:	<TITLE>	REV:	<REV>
DOCUMENT NO.:	、04_MT6739_BB2	SIZED:	A1
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER:	<DESIGNER>	Last Saved Date: 2019/4/8	SHEET: 4 OF 20



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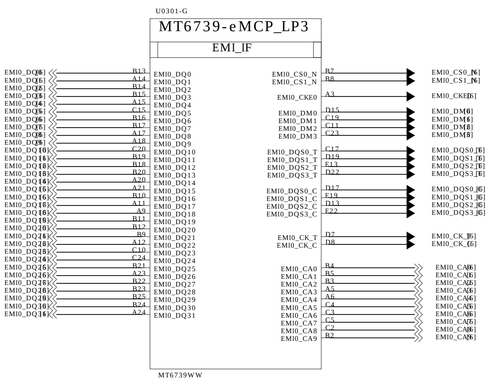
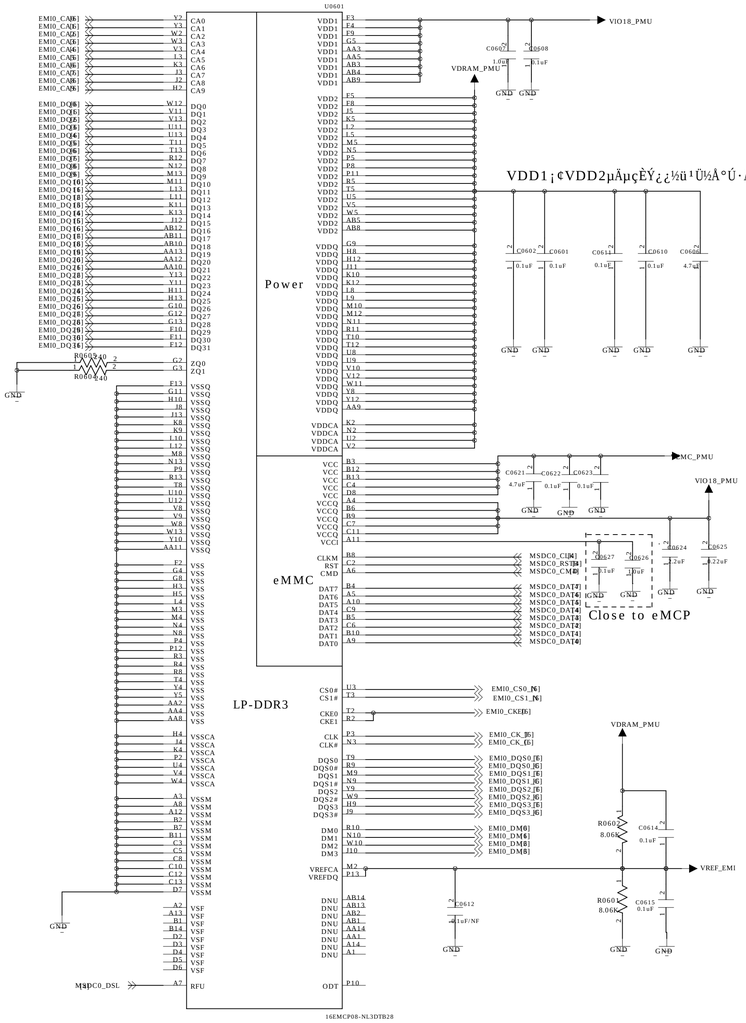
COMPANY:	WINGTECH		
DESIGNER: <DESIGNER>	Last Saved Date: 2019/4/8	SHEET: 5 OF 20	

eMMC+LPDDR3

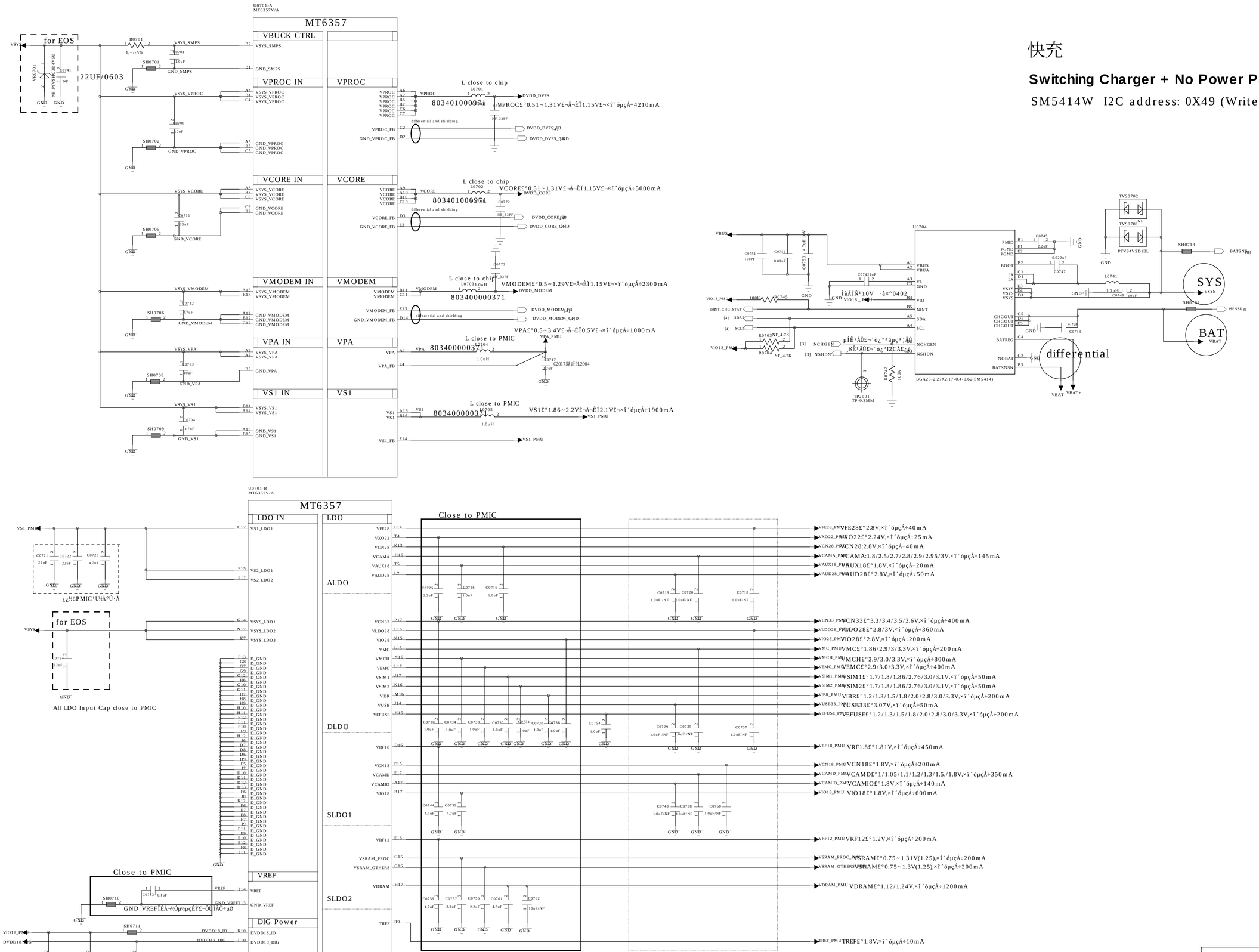

U0301-G
MT6739-eMCP_LP3
EMI_IF
MT6739WW


U0601
Power
eMMC
LP-DDR3
VDD1¡¢VDD2µÄµçÈÝ¿¿½ü¹Û½Å°Ú·Å
Close to eMCP
VIO18_PMU
VDRAM_PMU
VCC_PMU
VREF_EMI
16EMCP08-NL3DTB28

快充

Switching Charger + No Power Path

SM5414W I2C address: 0X49 (Write:0x92, Read:0x93)



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DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER:	<DESIGNER>	Last Saved Date: 2019/4/8	SHEET: 7 OF 20

U0701-C

MT6357

Control I/F

[12]PWRKEY — R4 PWRKEY
C0819 NF 2uF — [12]FCHR_ENB — N4 FCHR_ENB
[3] SYSRSTB — R5 RESETB
[3] WATCHDOG — T8 WDTRSTB_IN
GND — R0802 200K — N3 UVLO_VTH

[3]SRCLKEN_0 — N7 SRCLKEN_IN0
[3,13]SRCLKEN_1 — N8 SRCLKEN_IN1

M5 EXT_PMIC_EN1
N5 EXT_PMIC_EN2
M6 EXT_PMIC_PG

[3] PWRAP_SPI0_CSN — R8 SPI_CSN
[3] PWRAP_SPI0_CK — M8 SPI_CLK
[3] PWRAP_SPI0_MO — M7 SPI_MOSI
[3] PWRAP_SPI0_MI — M9 SPI_MISO

P5 PMU_TESTMODE
P9 FSOURCE
GND

Charger I/F

VSYS — SH0803 — differential — VSYSSNS — N9 VSYSSNS
[7] BATSNS — BATSNS — M13 BATSNS
[7] ISENSE — ISENSE — N13 ISENSE
C0801 0.1uF — C0806 0.1uF — C0807 1.0uF — BATON — R13 BATON
[9] BATON — VCDT — T11 VCDT
CHRLDO — R11 CHRLDO
VDRV — P13 VDRV
GND

VBUS — R0822 330K — VCDT rating: 1.268V
R0823 39K — GND
VBUS — 3.3K/1% R0824 — CHRLDO — close to PMIC
C0813 1.0uF — GND

[4] CHD_DM — differential — M10 CHG_DM
[4] CHD_DP — M11 CHG_DP

[1]CHR_LED — R0826 0 — N12 PCHR_LED

Gauge

[9]CS_P — differential — T10 CS_P
[9] CS_N — R10 CS_N
R0825 0

ISINK

L12 ISINK1

MT6357V/A

RTC

VRTC28 — R12
close to PMIC
C0804 1uF — GND
R0804 1.5K
C0805 2.2uF — GND

RTC32K_1V8_0 — P14 — RTC32K_CK [3]
RTC32K_1V8_1 — R15
RTC32K_2V8 — P11

DCXO

AVSS22_XO — M2 — AVSS22_XO — GND
AVSS22_XOBUF — P1 — AVSS22_XOBUF — GND
AVSS22_XOBUF — R1
P1 and R1 ball connect firstly

Please connect DCXO GND to main GND by independent L1-2 GND via. DON'T connect it through L1 GND

AVSS22_XO_ISO — N2 — AVSS22_XO_ISO — GND
AVSS22_XO_ISO — P2
P2 and N2 ball connect firstly

XO_SOC — R3 — XO_SOC — R0812 0 — PMIC_CLK_26M [8]
XO_CEL — T1 — XO_CEL — R0814 0 — PMIC_CLK_26M_CEL [8]
XO_WCN — P3 — R0816 0 — PMIC_CLK_WCN [8]
XO_NFC — R2
XO_EXT — T2

C0808 2.2pF/NF — C0809 NF — C0810 NF — GND

XTAL1 — M1 — XTAL1 — XTAL [8]
XTAL2 — N1 — XTAL2 — XTAL [8]

R0801 0 — VAUX18_PMU

AUXADC

AVDD18_AUXADC — R7 — AVDD18_AUXADC — C0814 1.0uF — AVDD18_AUXADC
AVSS18_AUXADC — P7 — AVSS18_AUXADC — C0812 0.1uF — AVSS18_AUXADC
AUXADC_VIN — T7 — AUXADC_VIN — AUXADC_VIN
GND — 2012B331 — differential

Route AVDD18_AUXADC/AUXADC_VIN as differential trace(10 mil each)with well GND shielding and route AVSS18_AUXADC with 15mil trace width under AVDD18_AUXADC/AUXADC_VIN trace to provide return current path.

DCXO

Connect to interface for reserving layout area

[8] AVDD18_AUXADC — 3mil trace width
[8] AUXADC_VIN — 3mil trace width — R0835 100K — X0801 SENSOR HOT — XTAL2 [8]
[8] AVSS18_AUXADC — 15mil trace width — HOT GND — XTAL1 [8]

U0701-D

MT6357

AUDIO IF

[3] AUD_CLK_MISO — R16 AUD_CLK_MISO
[3]AUD_DAT_MISO0 — T17 AUD_DAT_MISO0
[3] AUD_DAT_MISO1 — R17 AUD_DAT_MISO1
[3] AUD_SYNC_MISO — T16 AUD_SYNC_MISO

[3] AUD_CLK_MOSI — P16 AUD_CLK_MOSI
[3]AUD_DAT_MOSI0 — P15 AUD_DAT_MOSI0
[3] AUD_DAT_MOSI1 — N14 AUD_DAT_MOSI1
[3]AUD_SYNC_MOSI — M14 AUD_SYNC_MOSI

AUDIO INPUT

[9] AU_VIN0_P — differential — K3 AU_VIN0_P
[9] AU_VIN0_N — K4 AU_VIN0_N
[9] AU_VIN1_P — differential — K5 AU_VIN1_P
[9] AU_VIN1_N — L5 AU_VIN1_N
[9] AU_VIN2_P — differential — J4 AU_VIN2_P
[9] AU_VIN2_N — J5 AU_VIN2_N

ACCDET

[9] ACCDET — M4 ACCDET
[9] HP_EINT — J1 HP_EINT

AUDIO OUTPUT

dont' differential must add 3mil ground path to do line shielding

[9] AU_HPL — J2 AU_HPL
[9] AU_REFN — H3 AU_HPR
[9] AU_HPR — G3
C0821 1nF — GND
[9] AU_LOUT — F4 AU_LOUT
[9] AU_LOUT — F3 AU_LOUT
[9] AU_HSP — G6 AU_HSP
[9] AU_HSN — G5 AU_HSN

MT6357V/A

UL POWER

C0802 should be connected to AVSS28_AUD first and then to the main GND through single via. The trace width should

AVDD28_AUD — K1 — VAUD28_PMU
AVSS28_AUD — H5 — C0802 1.0uF — C0815 1.0uF — SH0811 — GND
AU_MICBIAS0 — L3 — AU_MICBIAS0
AU_MICBIAS1 — M3 — AU_MICBIAS1

Close to Chip

CHARGE PUMP

AVDD18_AUD — G2 — VIO18_PMU
AVSS18_AUD — F2 — AVSS_AUD — SH0810 — GND
AU_V18N — D1 — C0816 4.7uF — C0817 2.2uF
FLYP — F1 — FLYP — C0818 4.7uF
FLYN — E2

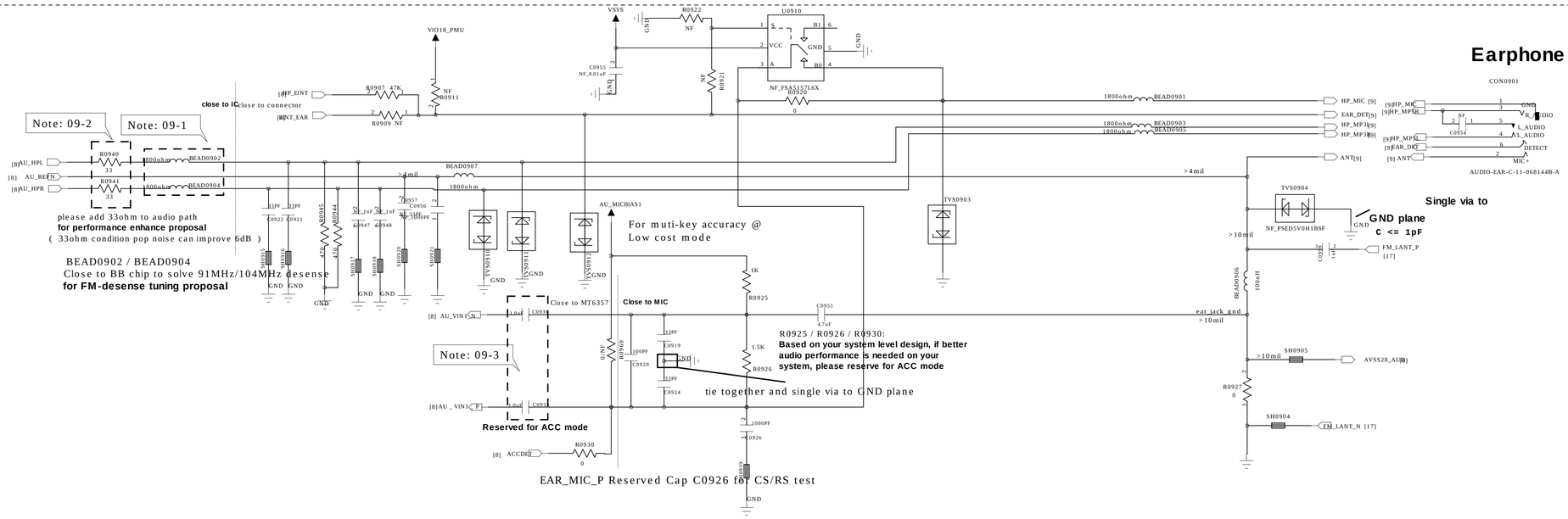
1. AVSS18_AUD is connected to GND with very short trace

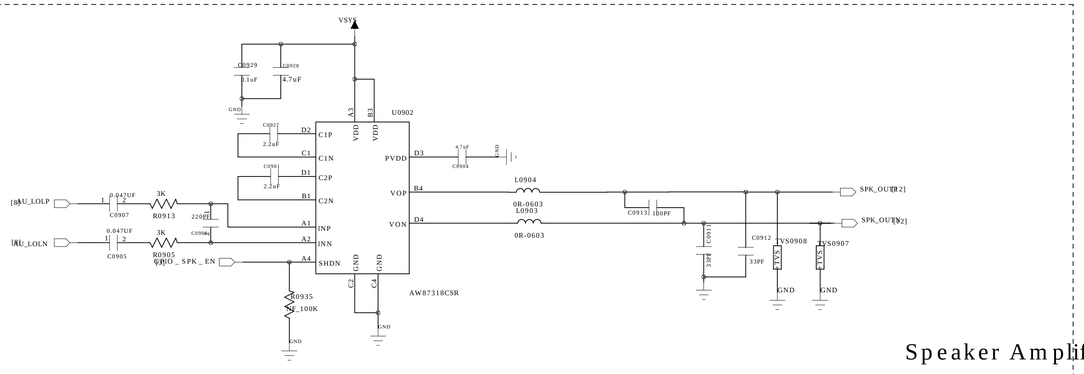
2. AVSS18_AUD is connected to de-couple cap of AVDD18_AUD and AU_V18N with 6mil trace respectively

Close to Chip

TITLE:	<TITLE>	REV:	<REV>
DOCUMENT NO.:	08_MT6357_IF_ADUIO	SIZED:	A1
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER: <DESIGNER>	Last Saved Date: 2019/4/8	SHEET: 8 OF 20	

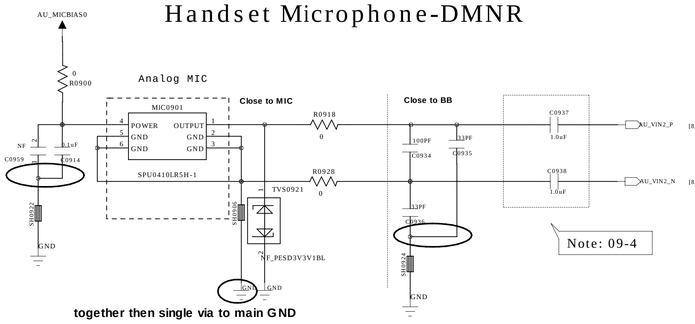
Earphone Audio

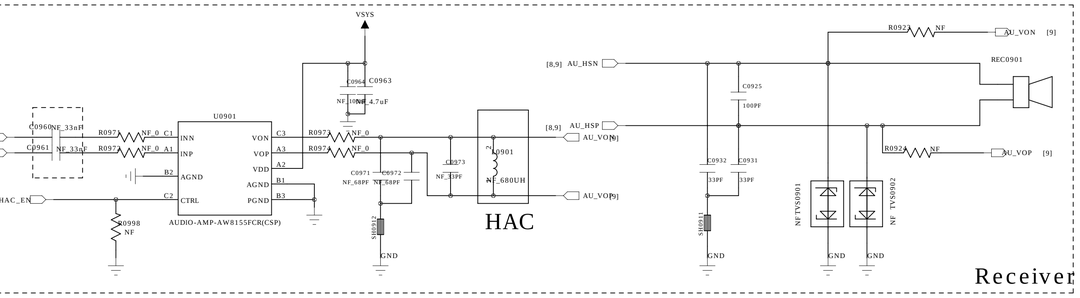


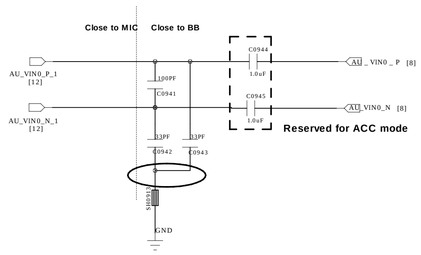


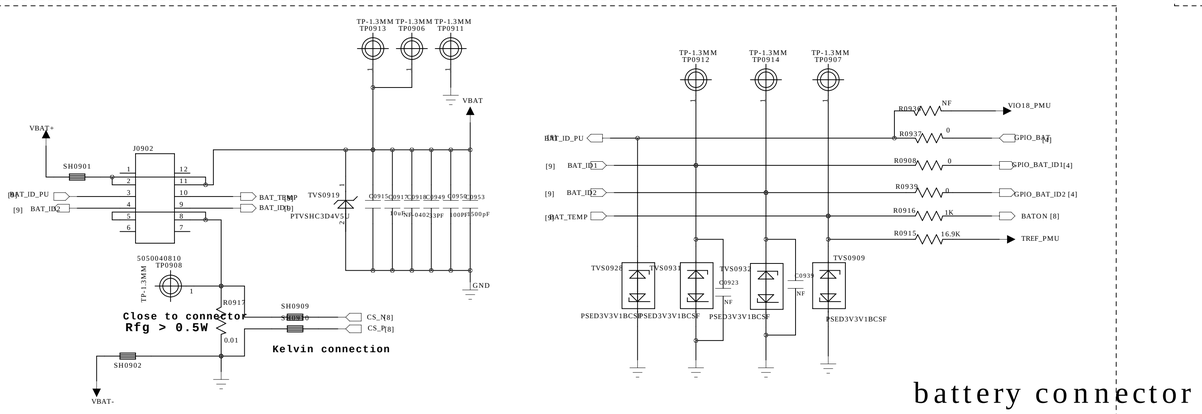
Speaker Amplifier

Handset Microphone-DMNR









Earphone Detection Circuit				
Mode	R0911	R0909	R0909	R0909
Low Cost Mode	NC	NC	47K	NC
Traditional Mode (ACC)	470K	47K	NC	0R

	ACC mode (Default)	DCC mode
C0933	1uF	0 ohm
C0930	1uF	0 ohm
R0925	1K	NC
R0926	1.5K	NC
R0960	NC	2.49K
C0951	4.7uF	0 ohm
R0909	0 ohm	NC

Main Microphone-DMNR

Schematic design notice of "09_AUDIO" page.

Note 09-1: Part # of BEAD6002, BEAD6003, BEAD6004 and BEAD6005 needs changed to "BLM18BD102SN1" for high THD performance (-90dB) but this BOM change will results in FM RSSI 10dB degraded .

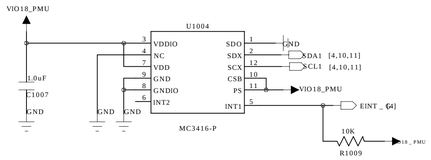
Note 09-2: To reserve a resistor in HPL and HPR in series connection both in order to optimize headphone pop noise. The recommended value of this resistor is 33R.

Note 09-3: 0.1/1 uF for ACC mode (1uF for WB_AMR Speech/0.1uF for NB_AMR Speech)
0 ohm for DCC mode

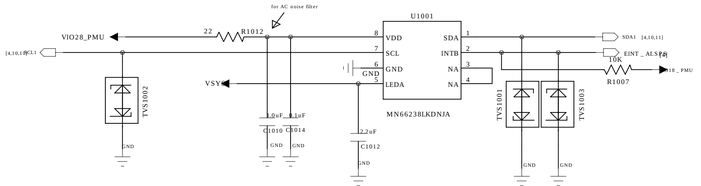
Note 09-4: **1 uF for ACC mode**
0 ohm for DCC mode

TITLE:	<TITLE>	REV:	<REV>
DOCUMENT NO:	09_AUDIO_BATCONNECTOR	SIZED:	A1
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER:	<DESIGNER>	Last Saved Date: 2019/4/8	SHEET: 9 OF 20

G-SENSOR



PL-SENSOR



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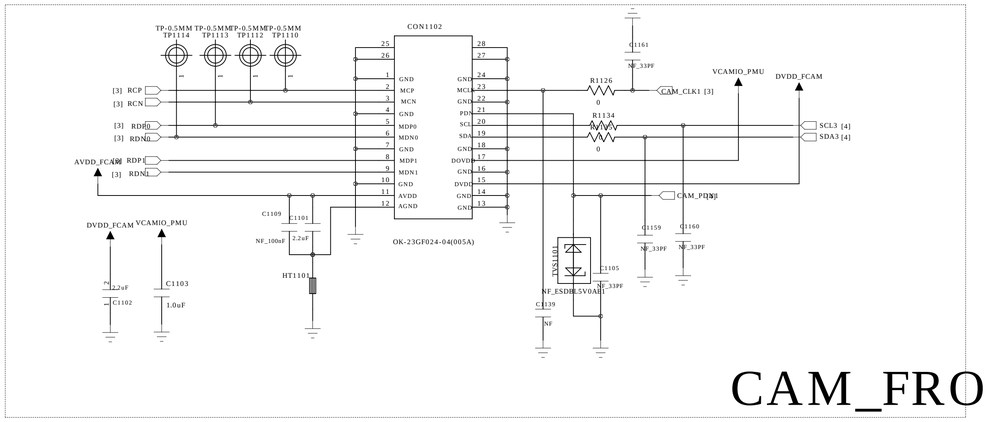
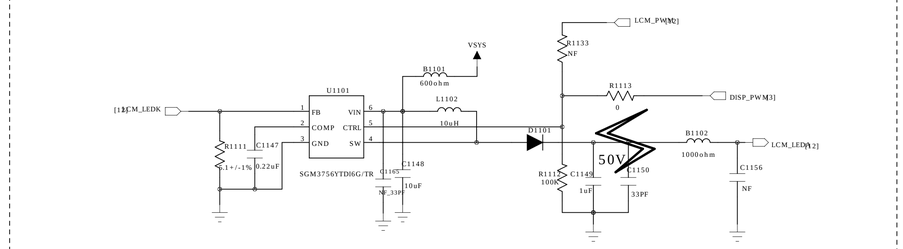
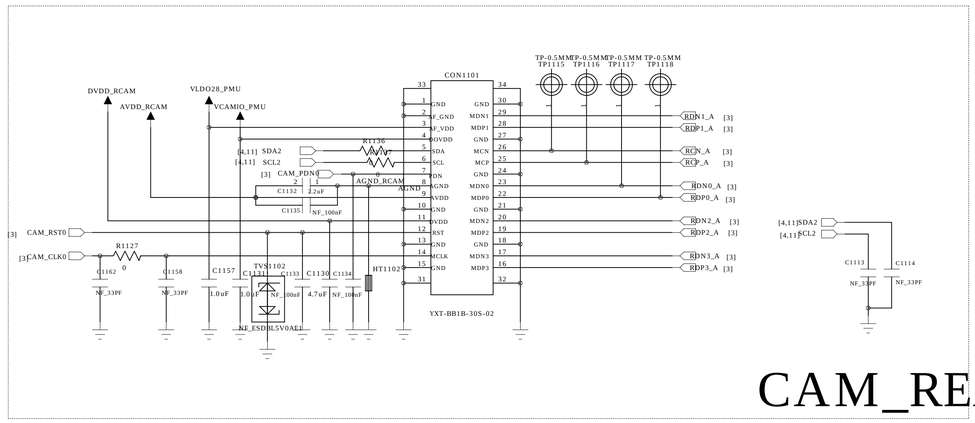


CAM_FRONT



Serial Number	Vendor No.	Vendor
807300000551	AW9961DNR	AWINIC
807300000551	SGM3756YTDI6G/TR	SGMC

LCM_BL



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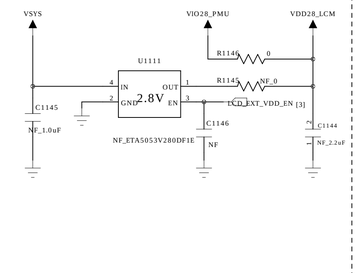
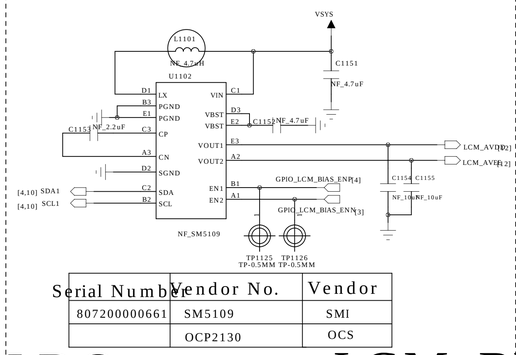
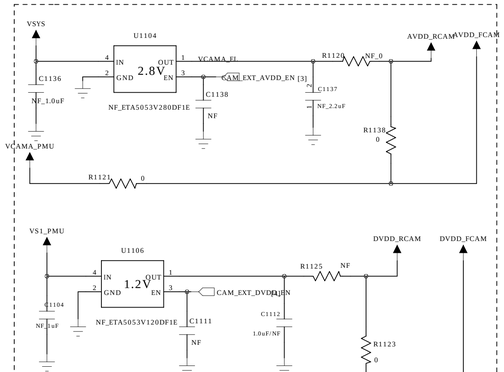


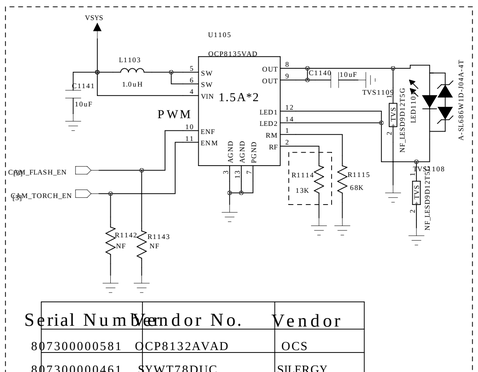
LCM_EXT_LDO



Serial Number	Vendor No.	Vendor
807200000661	SM5109	SMI
	OCP2130	OCS

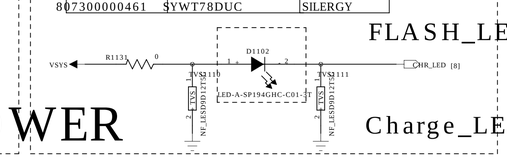
LCM_BIAS





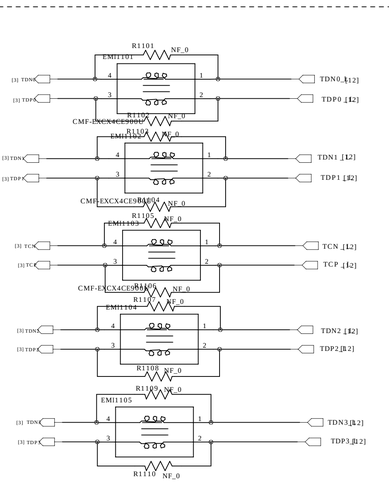
Serial Number	Vendor No.	Vendor
807300000581	OCP8132AVAD	OCS
807300000461	SYWT78DUC	SILERGY

FLASH_LED



CAM_POWER

Charge_LED



LCM_MIPI

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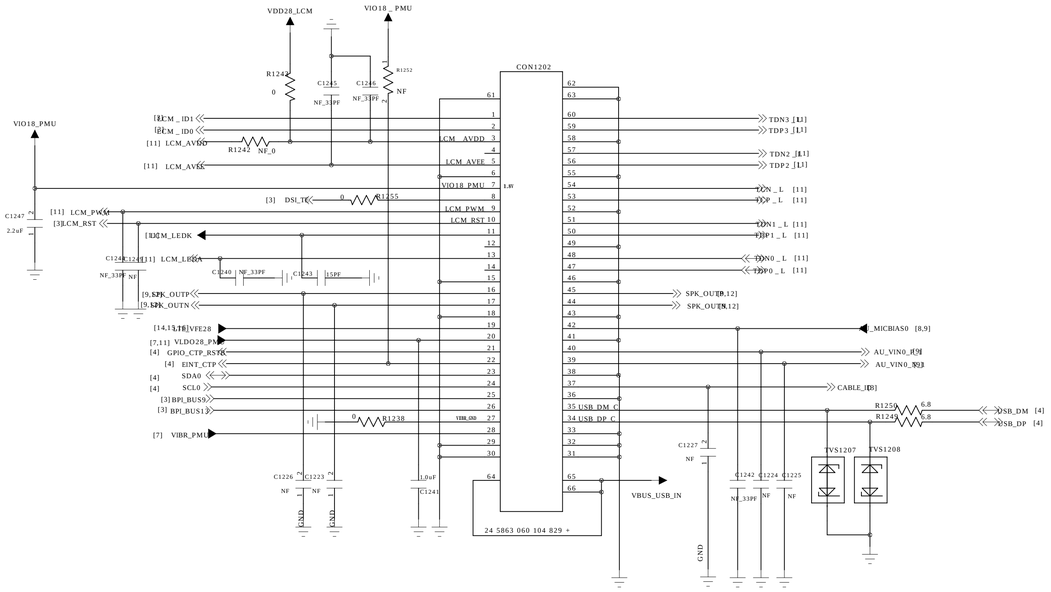
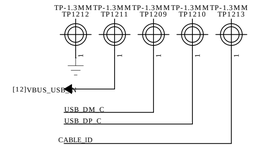
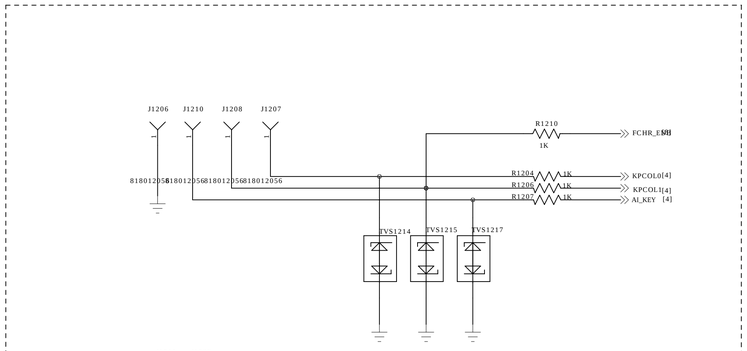
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER: <DESIGNER>	Last Saved Date: 2019/4/8	SHEET: 11 OF 20	

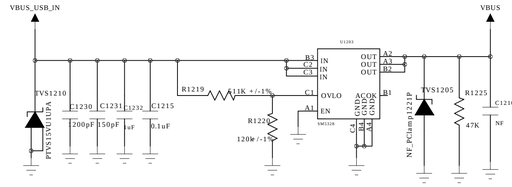


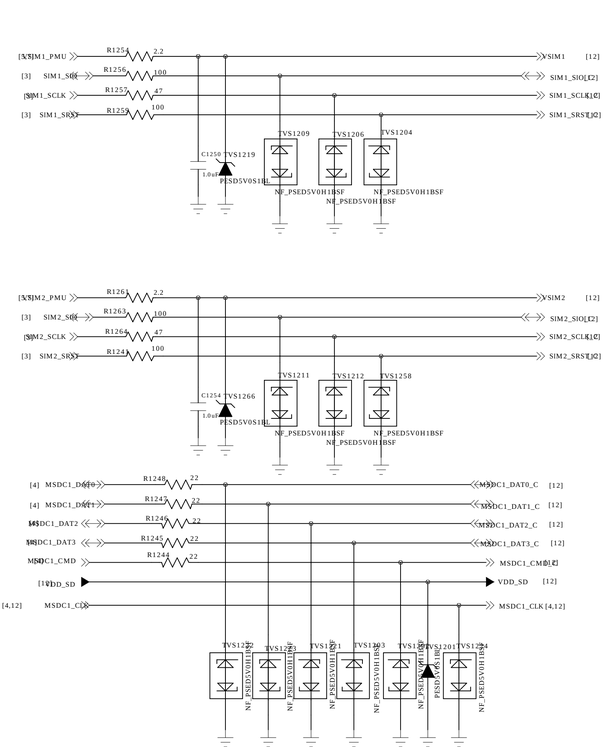


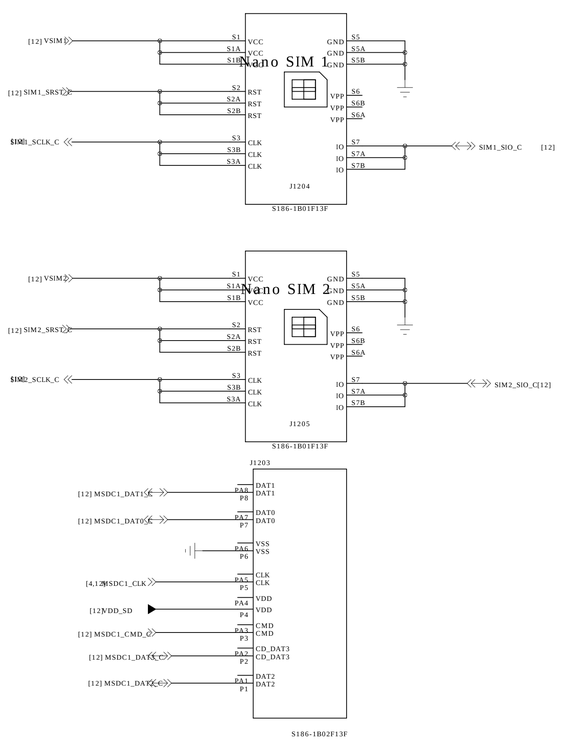
SUB _ IO

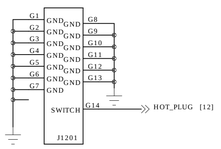


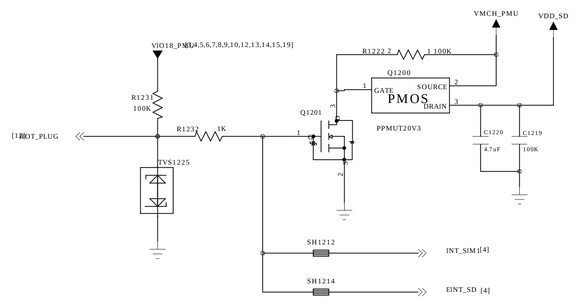
KEYS











SIM1+SIM2+SD

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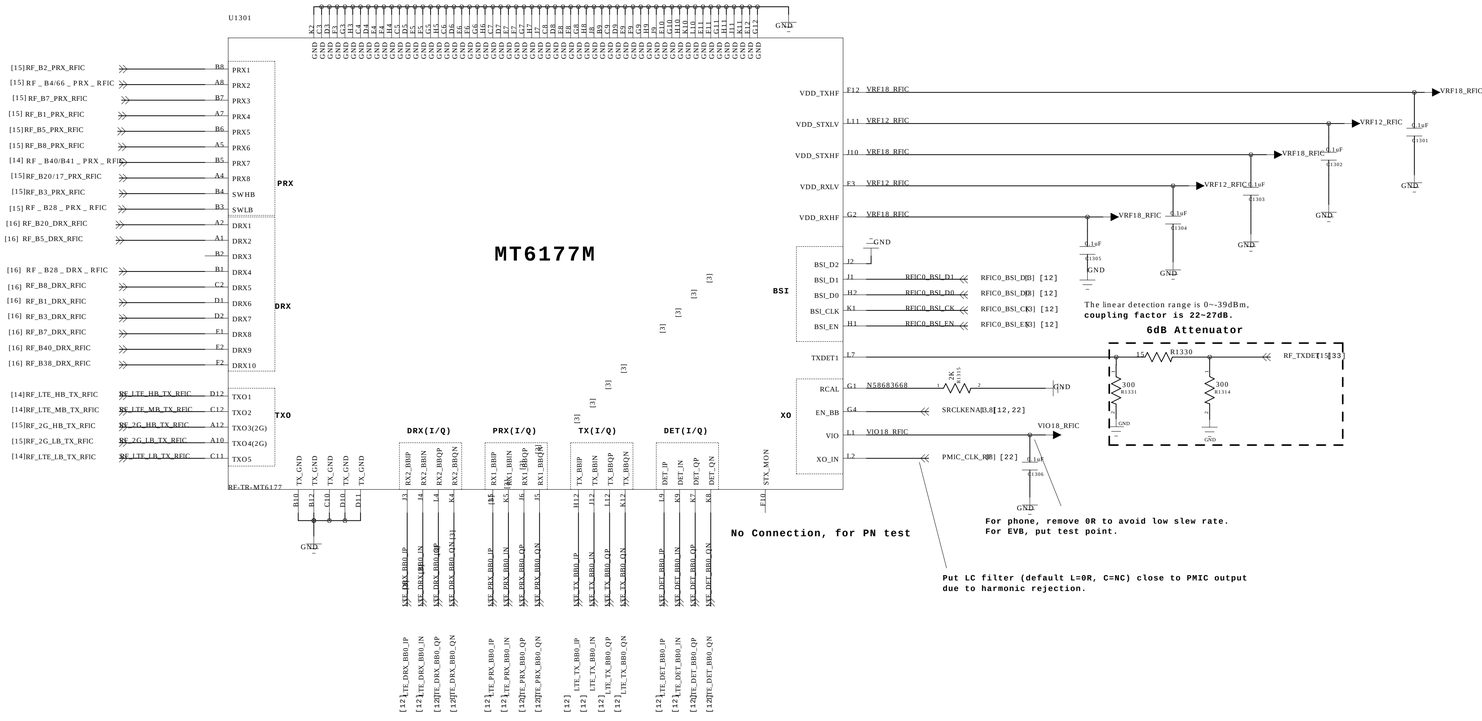
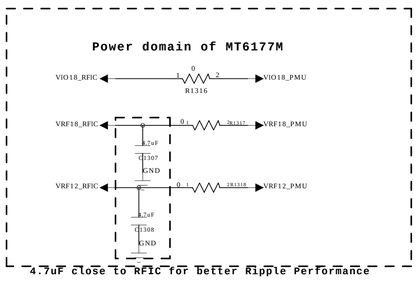
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER:	<DESIGNER>	Last Saved Date: 2019/4/8	SHEET: 12 OF 20





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DOCUMENT NO.: 13_TRANCEIVER	SIZED: A1
DEPARTMENT: Hardware DEPT.	
COMPANY: WINGTECH	
DESIGNER: <DESIGNER>	Last Saved Date: 2019/4/8 — SHEET: 13 OF 20

B5

B8

B20

B2

B3

B1

B4/B66

B28B

B28A

4G PA input need LPF for harmonic rejection

sequence by alphabet

LPF for more margin on Tx spurious

B38/B40/B41 PRX

MXD8015H Maxscend

Thermistor / To sense board level temperatur

NTC3201 close to PA , and located in the same layer

TRX B40

TRX B38B41

B7 TX

From PMIC

For power LTE_VMIPI star connection

For power VFE28 star connection

Note:
Use 0603 for lower Capacitance drop

Note:
Reserve one tuning cap. For PMIC VPA total cap requirement,
the total cap at RF side should be in 6.2uF +/-10%.

TITLE:	<TITLE>	REV:	<REV>
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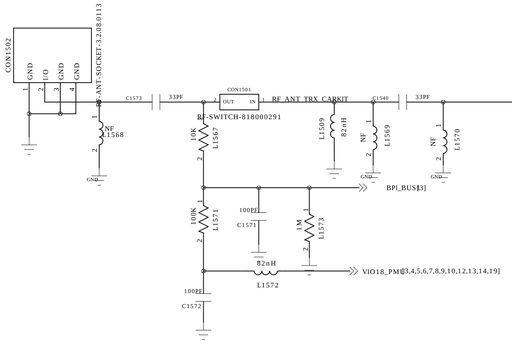
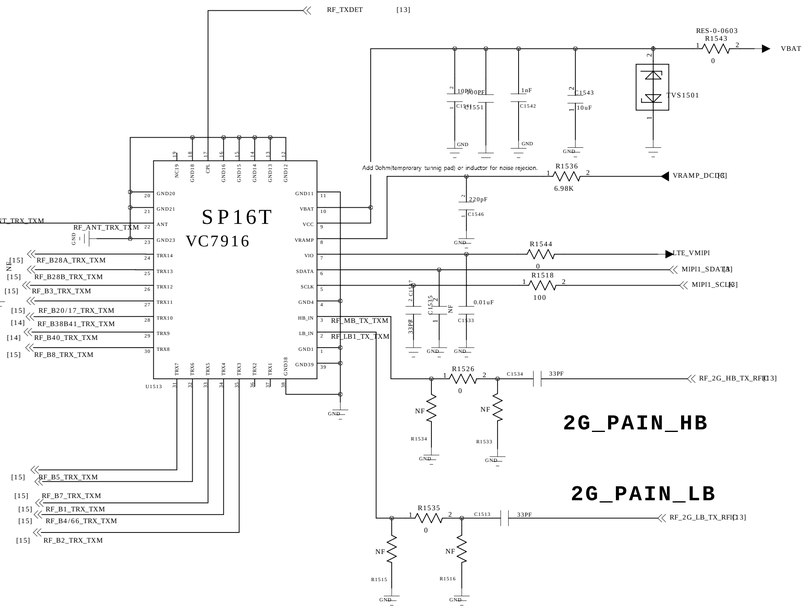
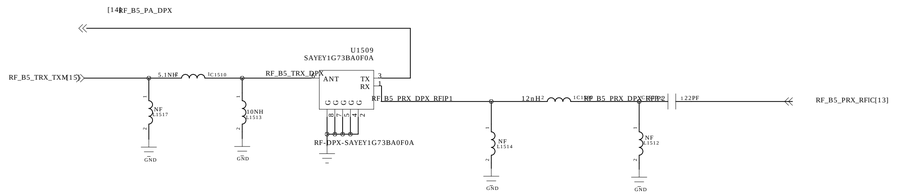
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER:	<DESIGNER>	Last Saved Date:	2019/4/8
		SHEET:	14 OF 20

ASM_Main

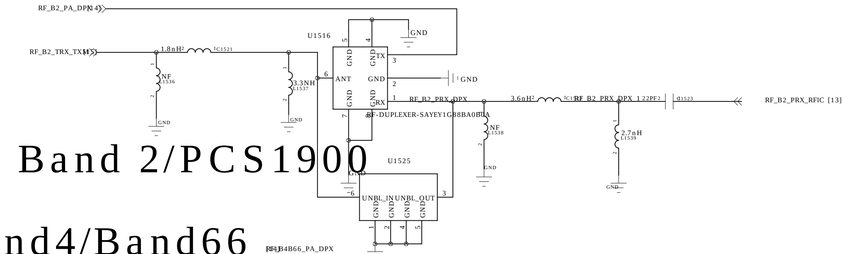




Band5/GSM850

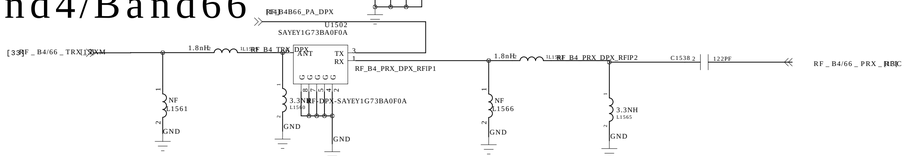


U1525 PCS1900 SKU:MEA&Asia ---SFHG
U1516 Band 2 SKU:EU&LATAM--- SAYEY1

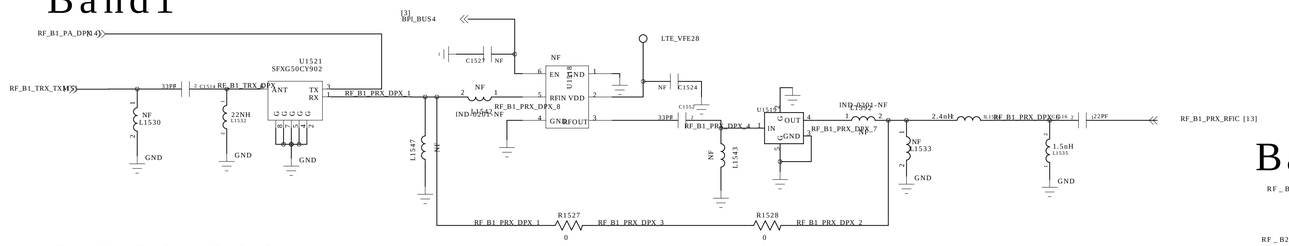


Band 2/PCS1900

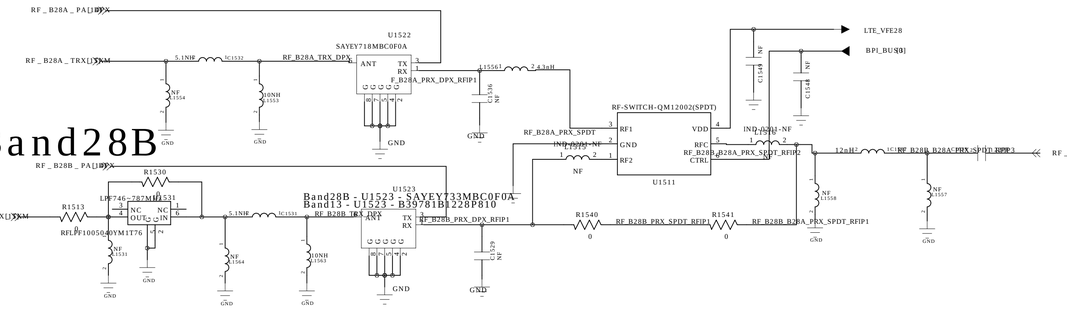
Band4/Band66



Band1

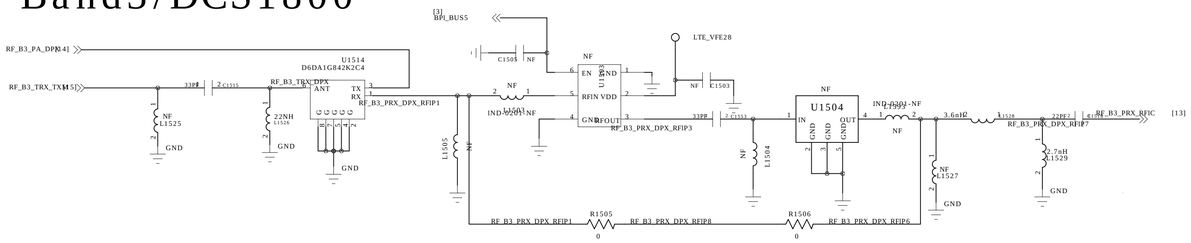


Band28A

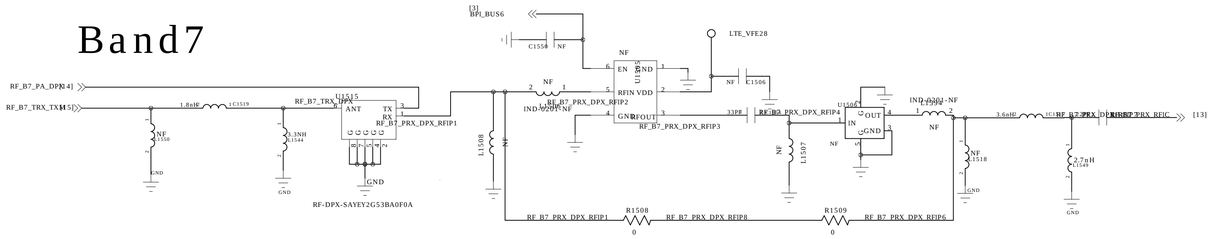


Band28B

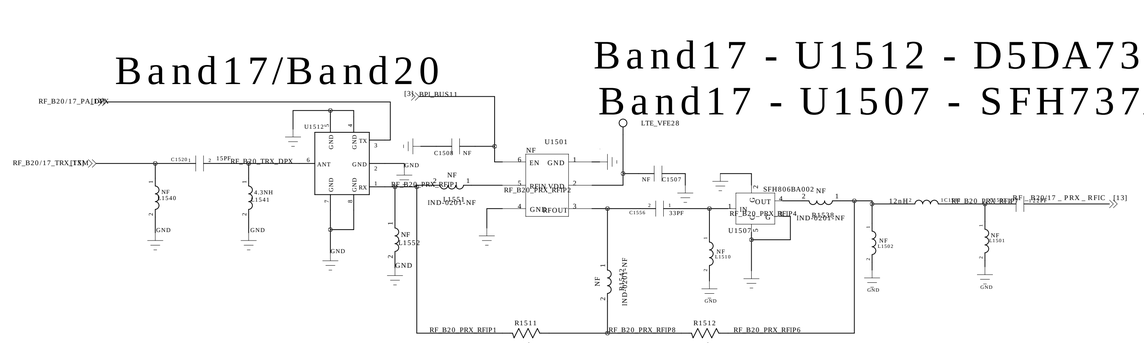
Band3/DCS1800



Band7



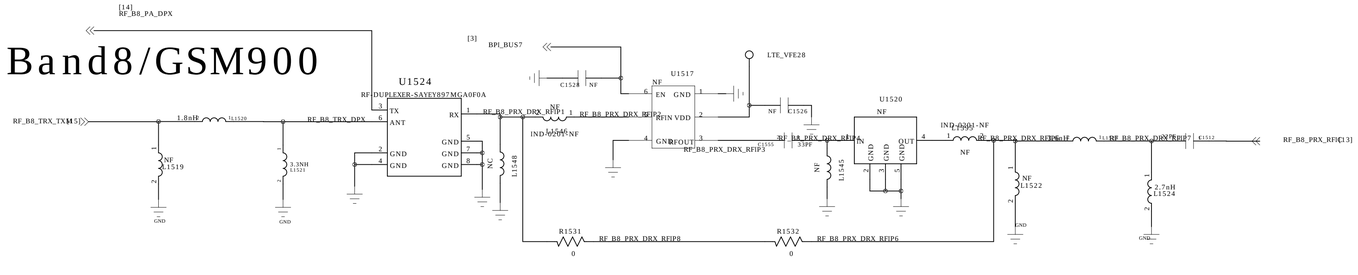
Band17/Band20



Band17 - U1512 - D5DA737M5
Band17 - U1507 - SFH737AA0

Band20 - U1512 - B39851B8622P
Band20 - U1507 - SAFFB806MAA

Band8/GSM900



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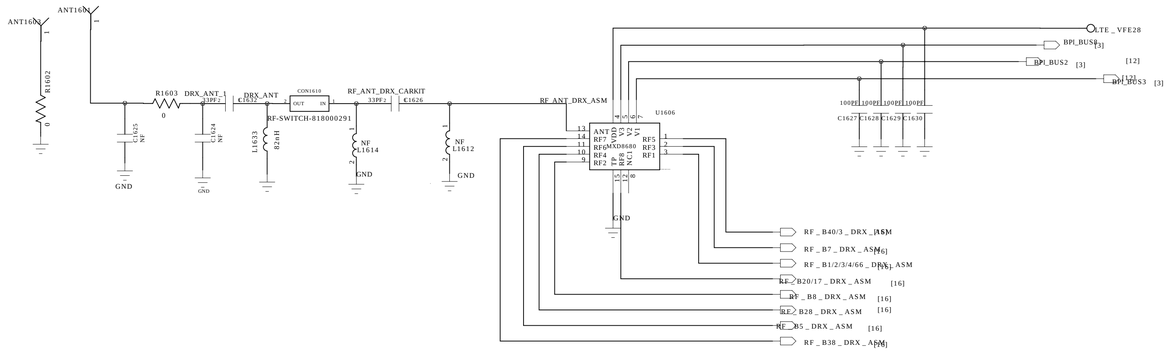
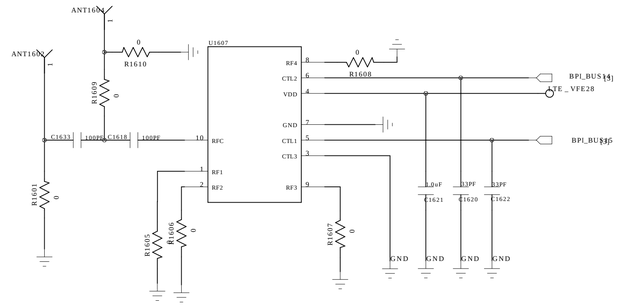
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER: <DESIGNER>	Last Saved Date: 2019/4/8	SHEET:	15 OF 20

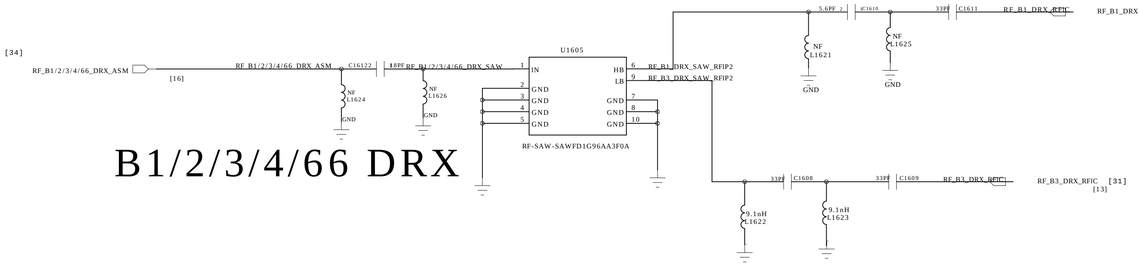
Diversity-ANT 5P12T ASM



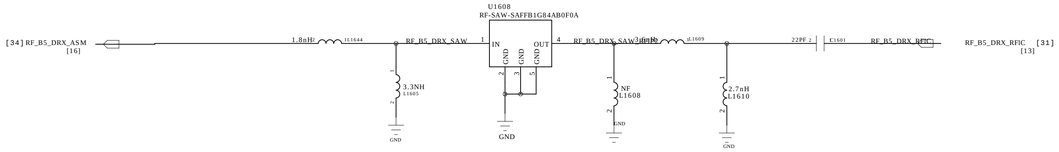


EU&MEA&Asia 1/3 --- SAWFD1G84AA0F0A
LATAM 2/66 --- SAWFD1G96AA3F0A

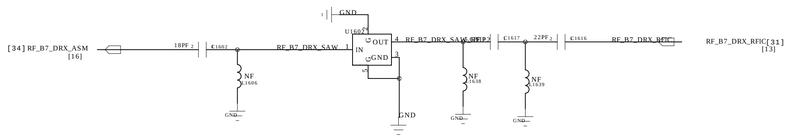
B1/2/3/4/66 DRX



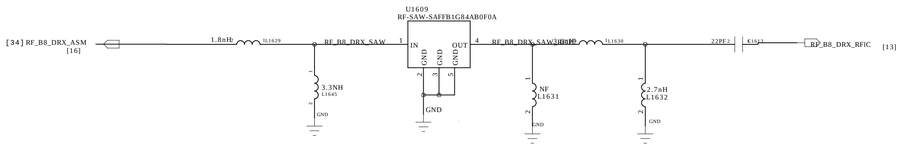
B5 DRX



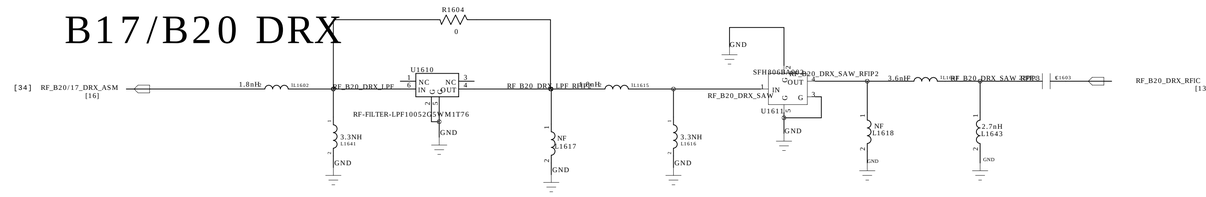
B7 DRX



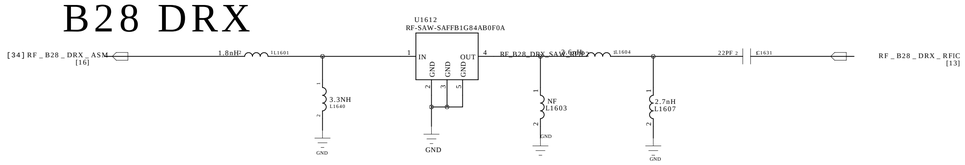
B8 DRX



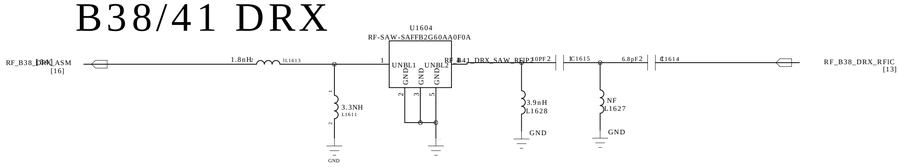
B17/B20 DRX



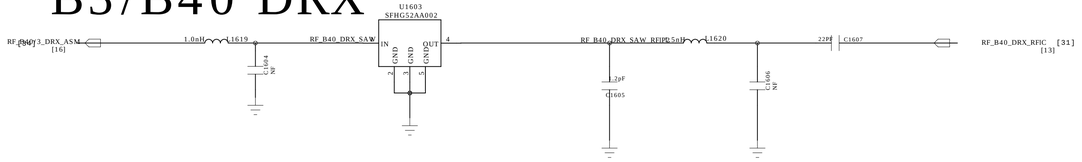
B28 DRX



B38/41 DRX



LATAM B3
B3/B40 DRX



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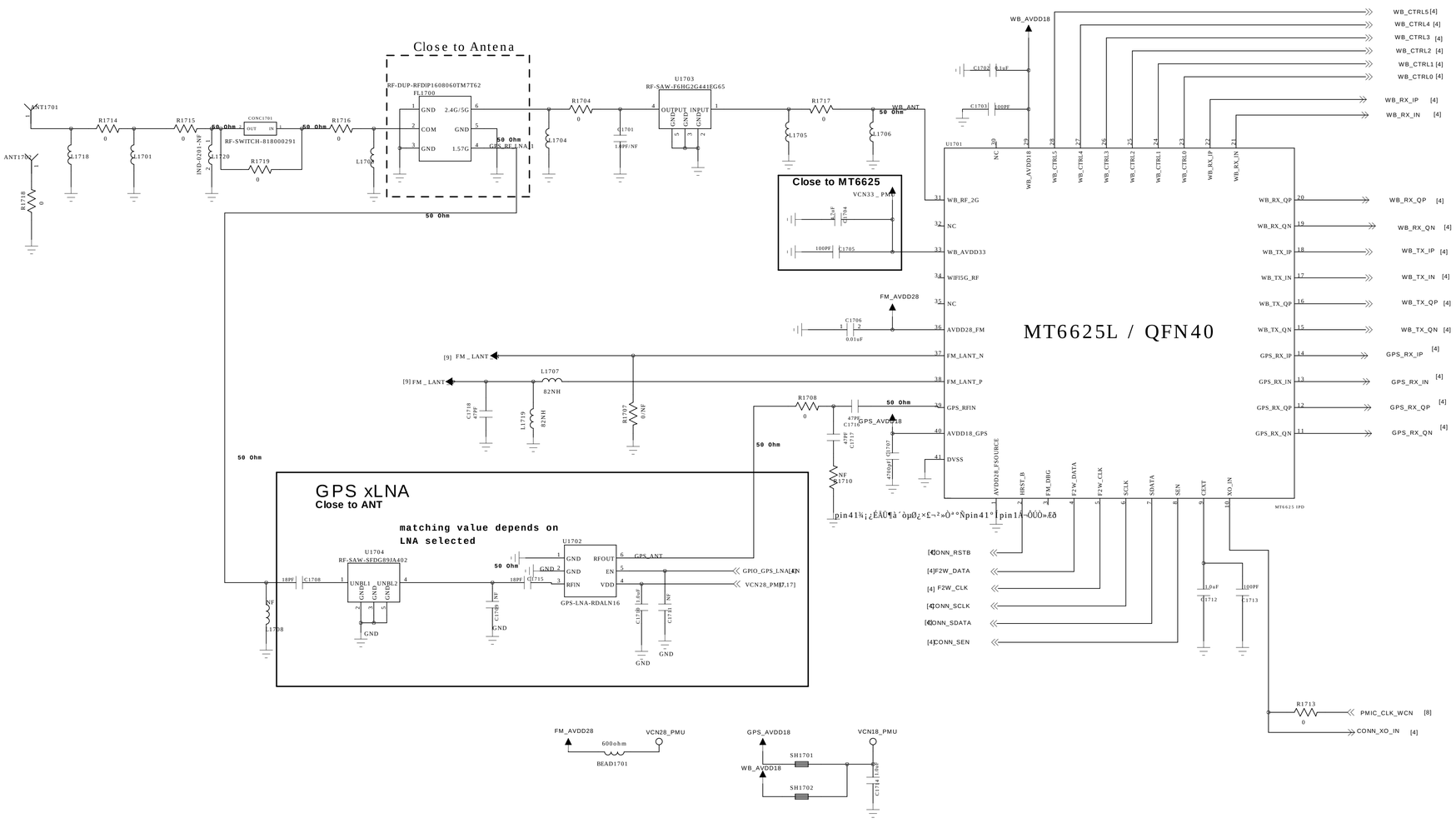
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER: <DESIGNER>	Last Saved Date: 2019/4/8	SHEET: 16 OF 20	



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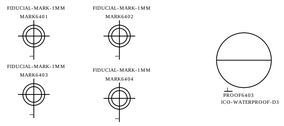
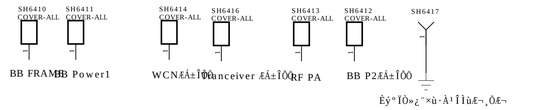
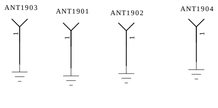
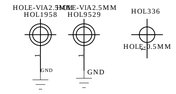
COMPANY:	WINGTECH		
DESIGNER: <DESIGNER>	Last Saved Date: 2019/4/8	SHEET:	17 OF 20

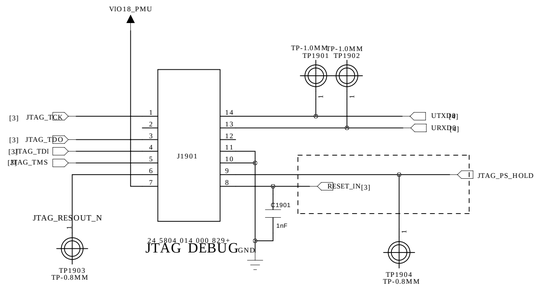
MARK







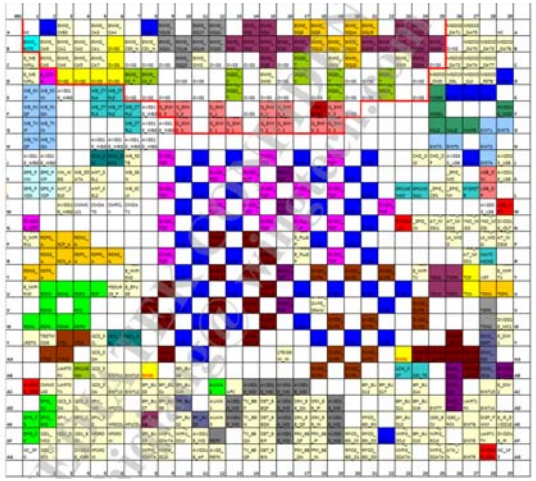




JTAG CONNECTOR

TITLE:	<TITLE>	REV:	<REV>
DOCUMENT NO.:	19_MARK	SIZED:	A1
DEPARTMENT:	Hardware DEPT.		
COMPANY:	WINGTECH		
DESIGNER: <DESIGNER>	Last Saved Date: 2019/4/8	SHEET: 19 OF 20	

U0301_MT6739WW_BB chip IC , Digital Baseband Processor(Top)



U0601_16EMCP08-NL3DTB28,IC,MCP. eMMC+LPDDR3(Top)

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A	DNU	NC	VSSm	VCCQ	DAT6	CMD	DS	VSSm	DAT0	DAT5	VDDI	VSSm	NC	DNU	A
B	NC	VSSm	VCC	DAT7	DAT3	VCCQ	VSSm	CLK	VCCQ	DAT1	VSSm	VCC	VCC	NC	B
C		RST_n	VSSm	VCC	VSSm	DAT2	VCCQ	VSSm	DAT4	VSSm	VCCQ	VSSm	VSSm		C
D		NC	NC	NC	NC	NC	VSSm	VCC							D
E															E
F		VSS	VDD1	VDD1	VDD2			VDD2	VDD1	DQ29	DQ30	DQ31	VSS		F
G		ZQ0	NC	VSS	VDD1			VSS	VDDQ	DQ26	VSS	DQ27	DQ28		G
H		CA9	VSS	VSS	VSS			VDDQ	DQS3_t	VSS	DQ24	VDDQ	DQ25		H
J		CA8	CA7	VSS	VDD2			VSS	DQS3_c	DM3	VDDQ	DQ15	VSS		J
K		VDDCA	CA6	VSS	VDD2			VSS	VSS	VDDQ	DQ13	VDDQ	DQ14		K
L		VDD2	CA5	VSS	VDD2			VDDQ	VDDQ	VSS	DQ12	VSS	DQ11		L
M		VREF (CA)	VSS	VSS	VDD2			VSS	DQS1_t	VDDQ	DQ10	VDDQ	DQ9		M
N		VDDCA	CK_c	VSS	VDD2			VSS	DQS1_c	DM1	VDDQ	DQ8	VSS		N
P		VSS	CK_t	VSS	VDD2			VDD2	VSS	ODT	VDD2	VSS	VREF (DQ)		P
R		CKE1	VSS	VSS	VDD2			VSS	DQS0_c	DM0	VDDQ	DQ7	VSS		R
T		CKE0	CS1_n	VSS	VDD2			VSS	DQS0_t	VDDQ	DQ5	VDDQ	DQ6		T
U		VDDCA	CS0_n	VSS	VDD2			VDDQ	VDDQ	VSS	DQ3	VSS	DQ4		U
V		VDDCA	CA4	VSS	VDD2			VSS	VSS	VDDQ	DQ1	VDDQ	DQ2		V
W		CA2	CA3	VSS	VDD2			VSS	DQS2_c	DM2	VDDQ	DQ0	VSS		W
Y		CA0	CA1	VSS	VSS			VDDQ	DQS2_t	VSS	DQ23	VDDQ	DQ22		Y
AA	DNU	VSS	VDD1	VSS	VDD1			VSS	VDDQ	DQ21	VSS	DQ20	DQ19	DNU	AA
AB	DNU	DNU	VDD1	VDD1	VDD2			VDD2	VDD1	DQ18	DQ17	DQ16	DNU	DNU	AB
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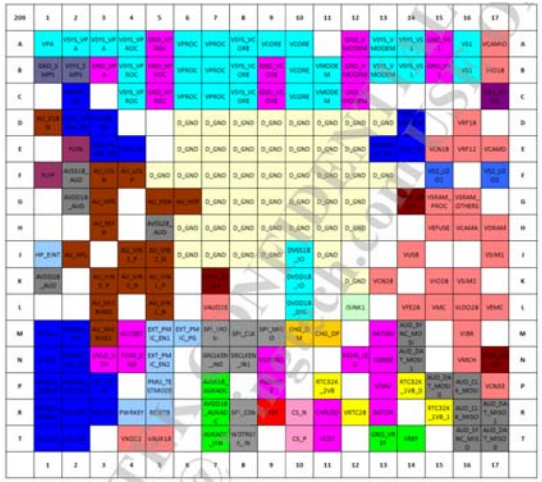
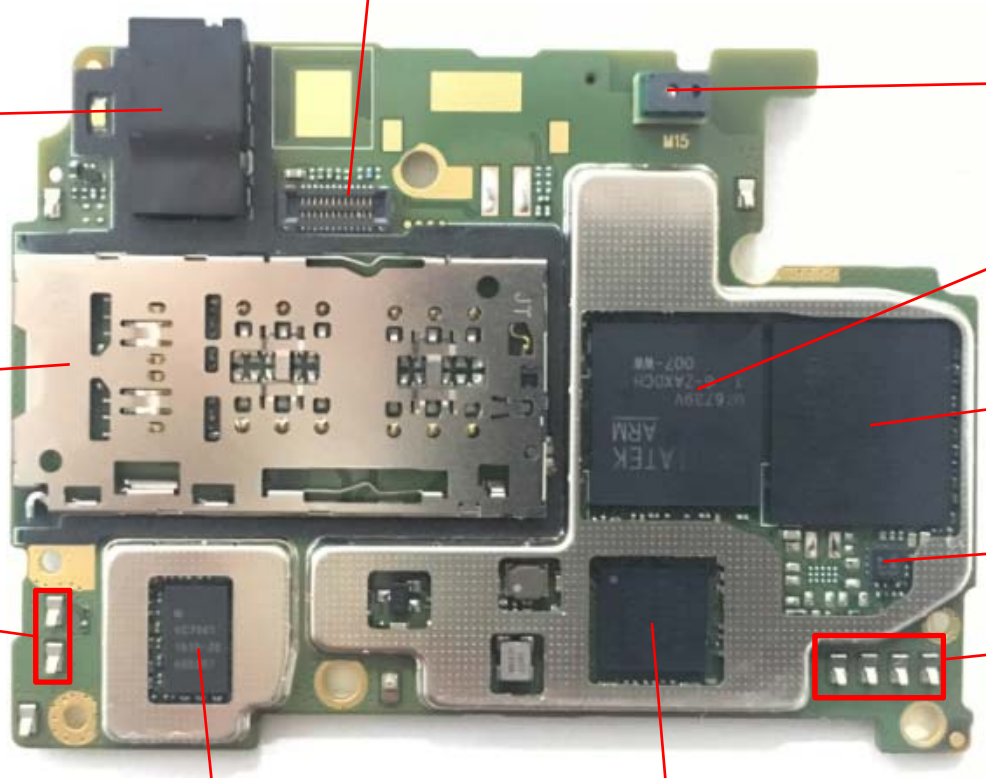
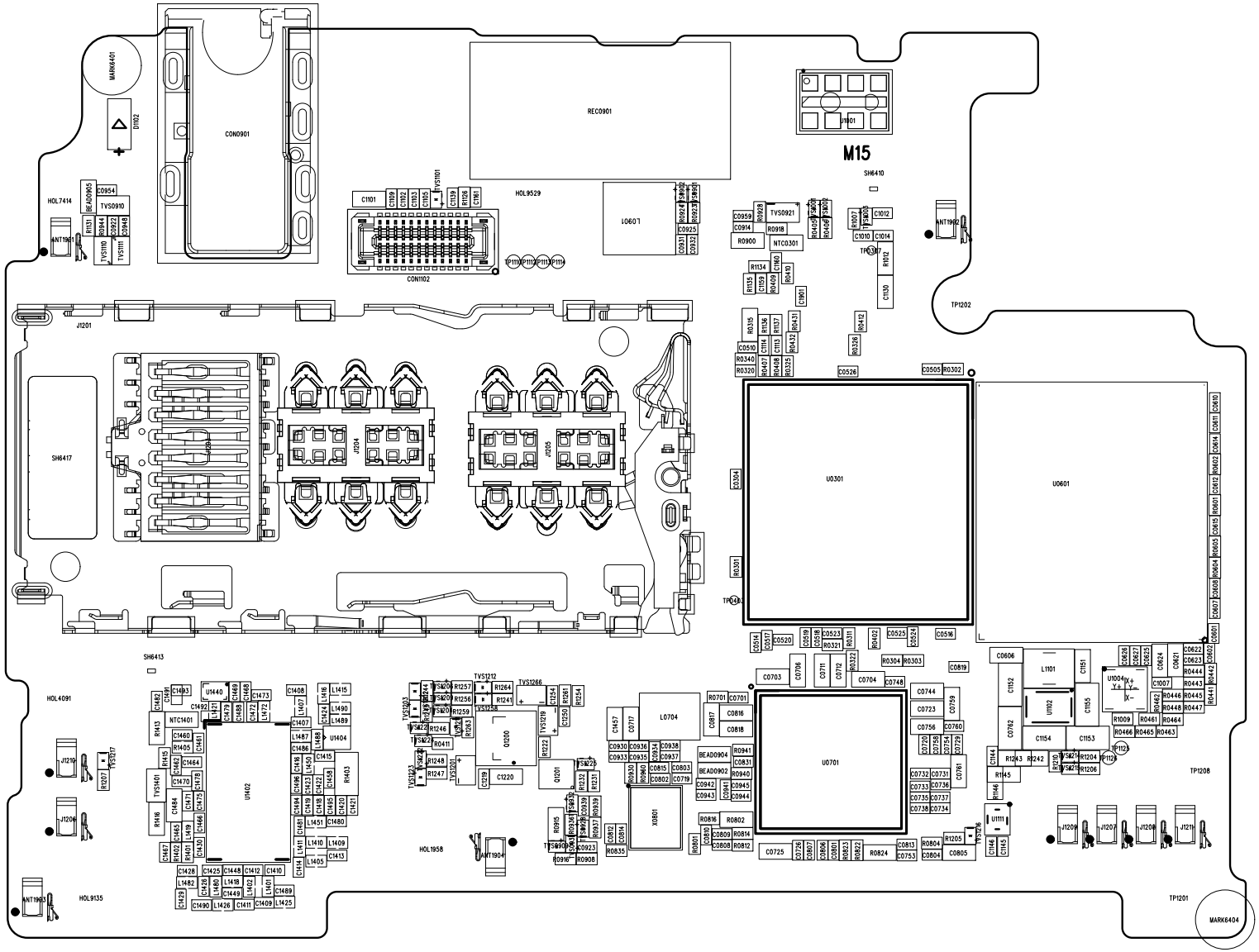
U0701_MT6357_IC,PMIC (Top)



LG-model name-MAIN Board_TOP




M15
CON0901
REC0901
U1101
L0901
CON1102
HOL9529
HOL7414
HOL4091
HOL1958
HOL9135
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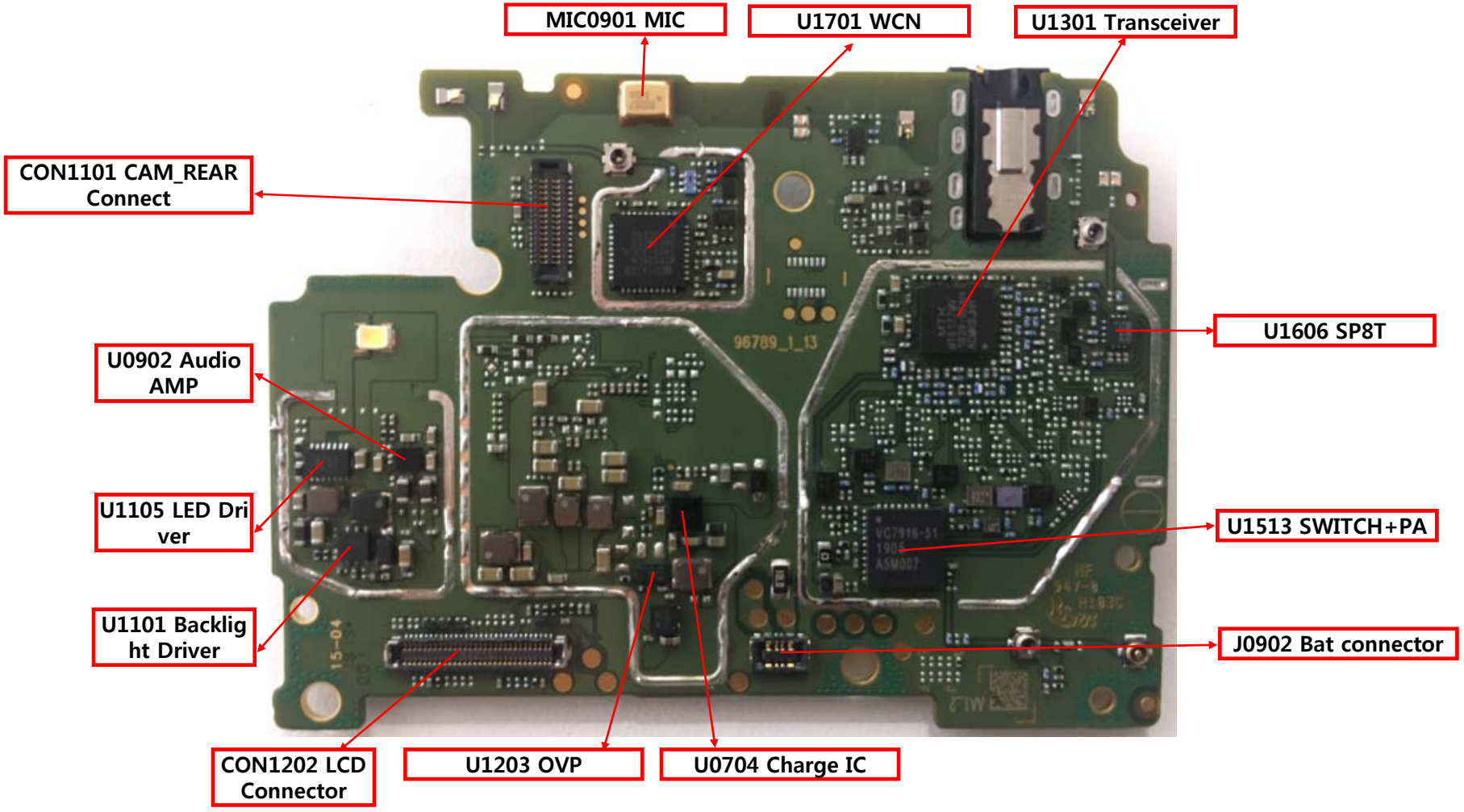
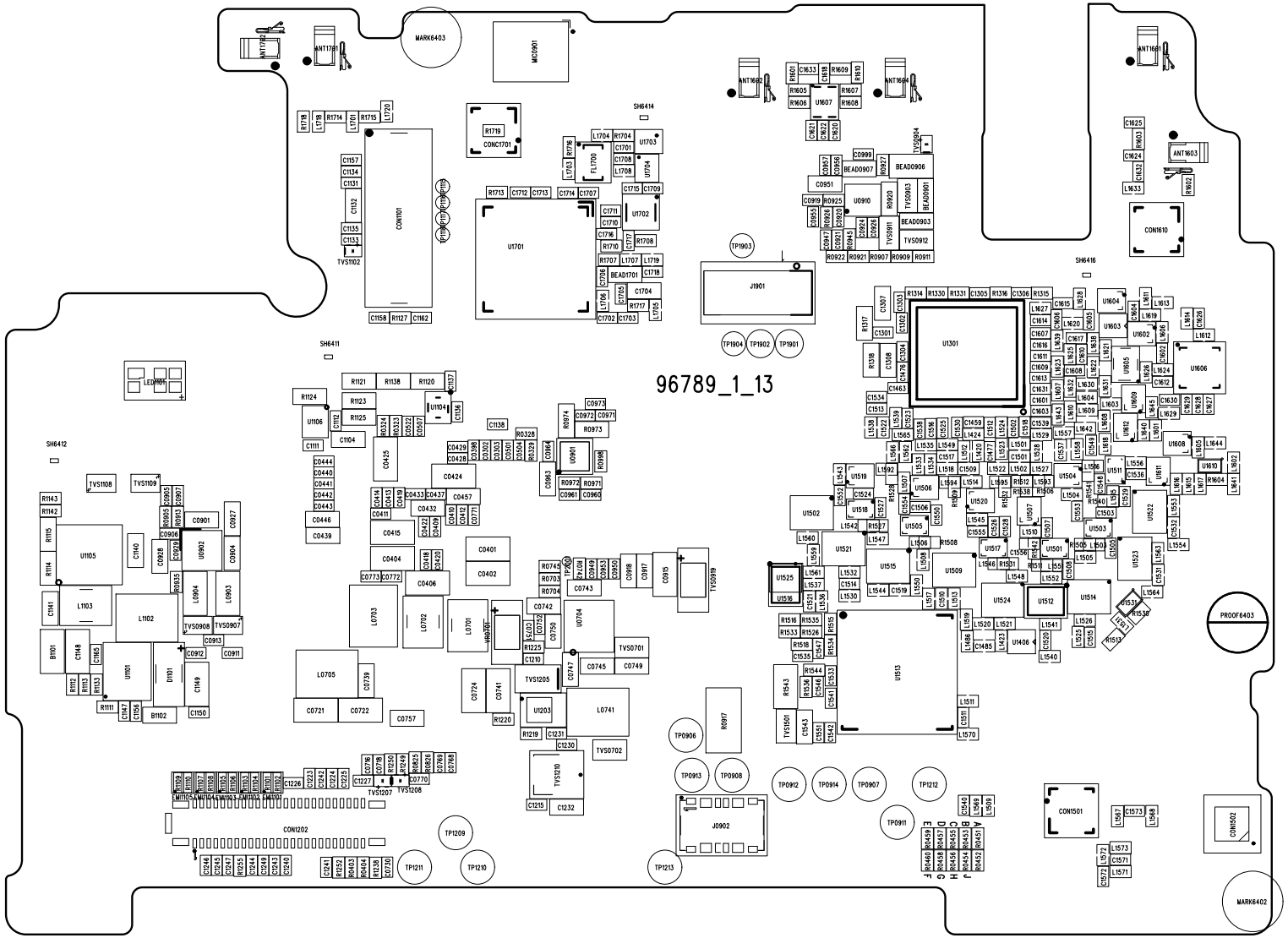
SH6417
SH6413
J1201
J1204
J1205
U0301
U0601
U0701
U1402
Q0200
Q0201
L0704
X0801
TP1202
TP1208
TP1201
MARK6401
MARK6404

LG-model name-MAIN Board_BOT

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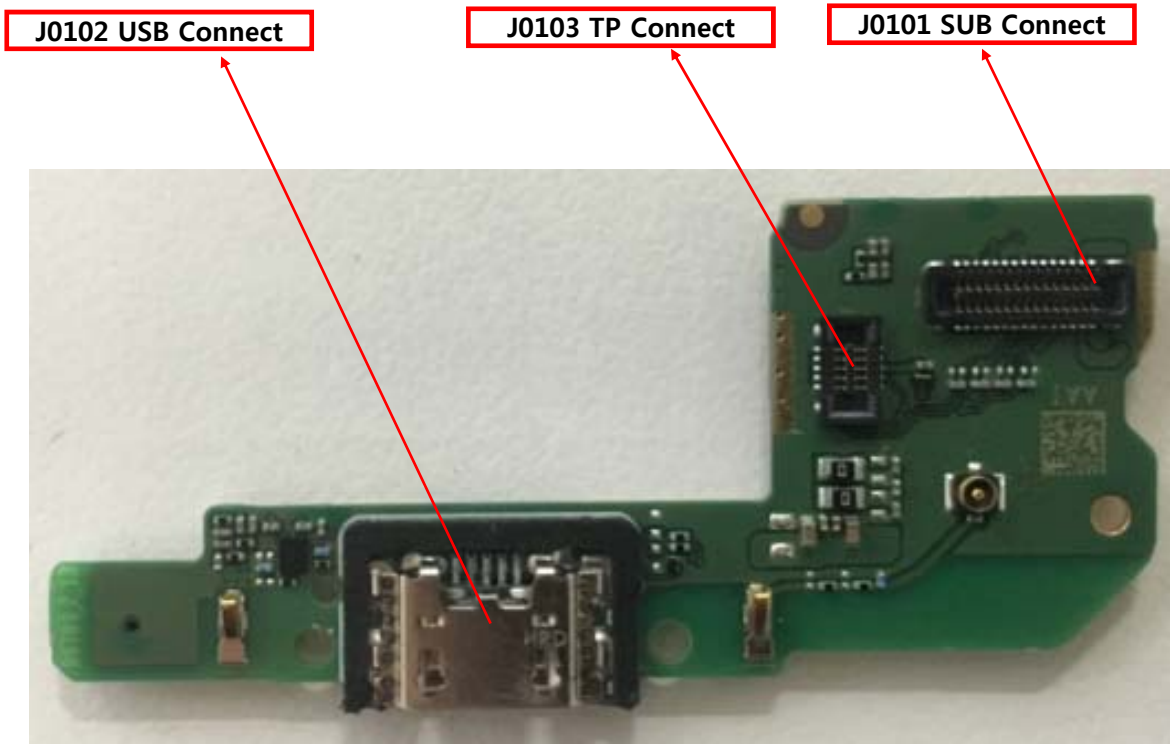
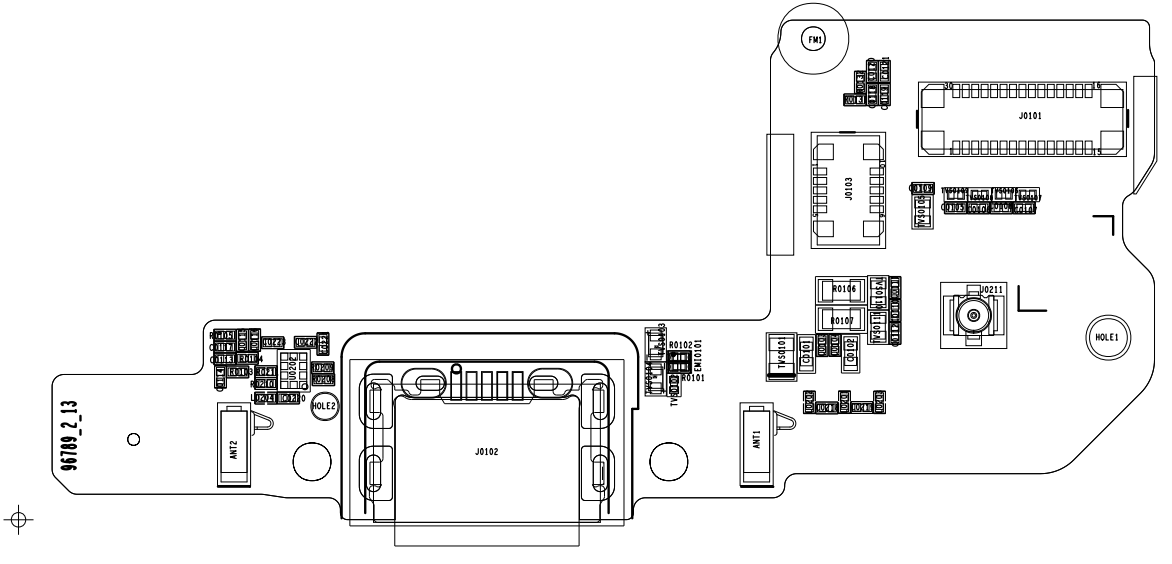
LG-model name-SUB Board_TOP



ART FILM - Adt



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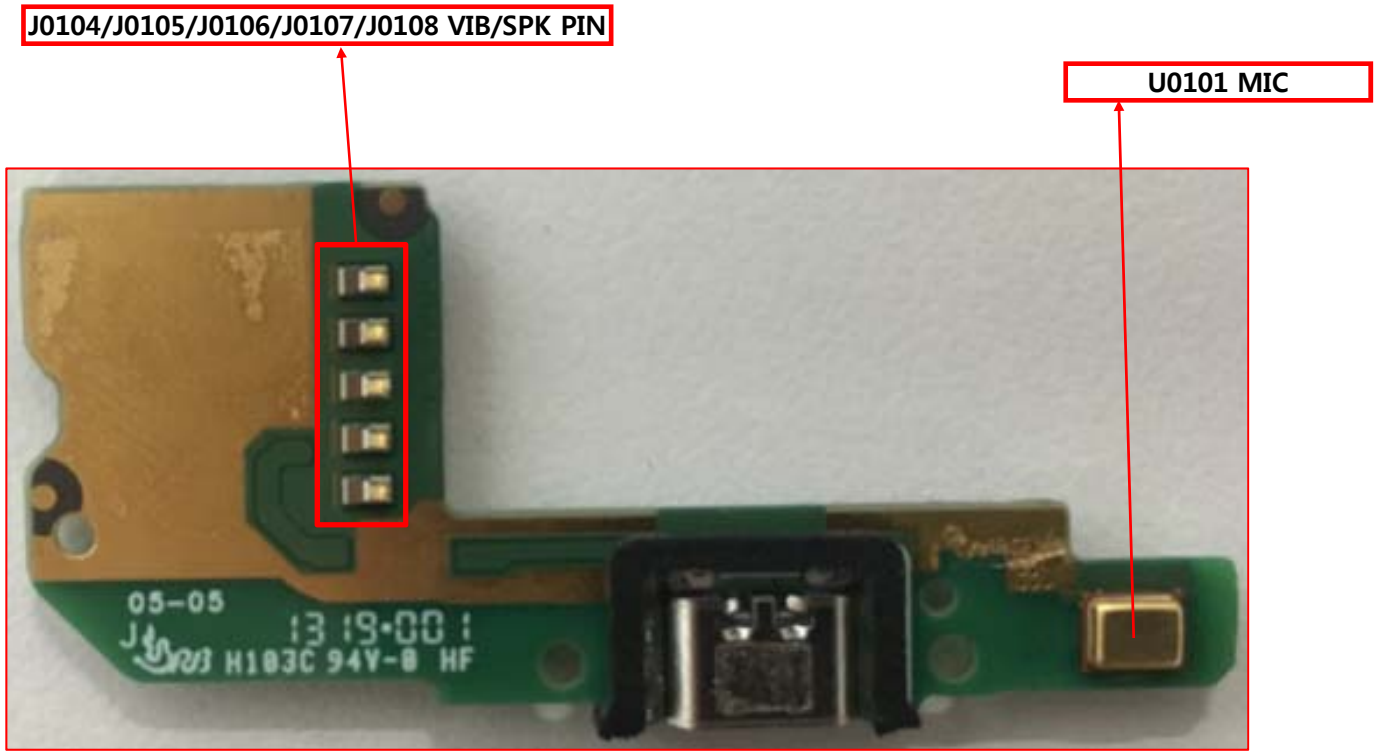
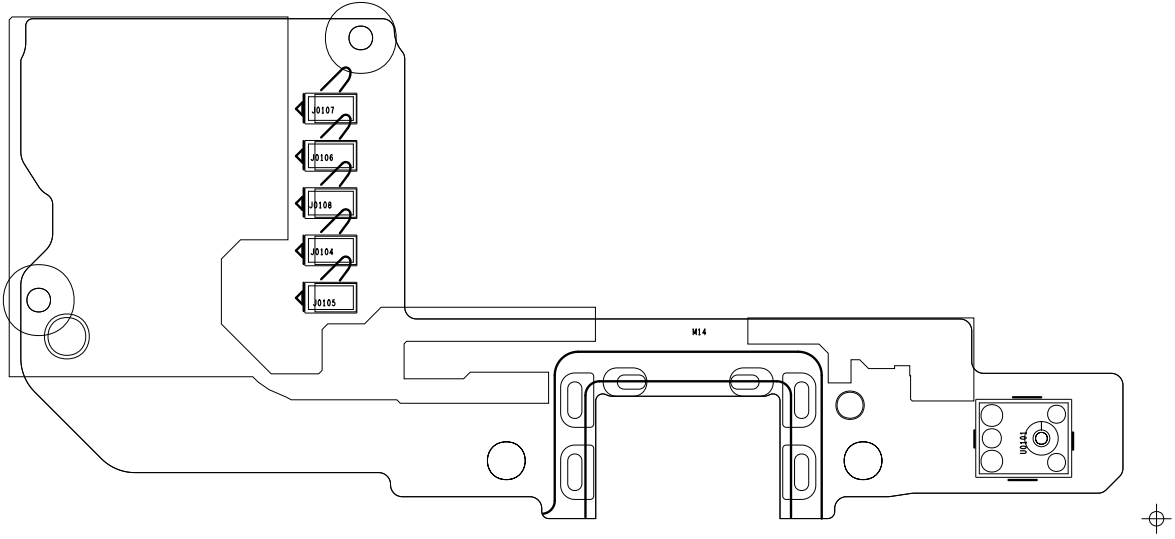
ART FILM - Adt

LG-model name-SUB Board_BOT



ART FILM - Adb



120

ART FILM - Adb

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<tr><td>PCB Revision</td><td colspan="2">
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<tr><th colspan="12">项目配置识别</th></tr>
<tr><td>SKU_ID0</td><td>GPIO51</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td></tr>
<tr><td>SKU_ID1</td><td>GPIO50</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td><td>0</td></tr>
<tr><td>SKU_ID2</td><td>GPIO54</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td></tr>
<tr><td>SKU_ID3</td><td>GPIO53</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td></tr>
<tr><td>SKU_Version</td><td></td><td>S96789AA1</td><td>S96789BA1</td><td>S96789CA1</td><td>S96789DA1</td><td>S96789EA1</td><td>S96789FA1</td><td>S96789GA1</td><td>S96789HA1</td><td>S96789JA1</td></tr>
<tr><td>LG_Version</td><td></td><td>LMX120EMW</td><td>LMX120EMW</td><td>LMX120HM</td><td>LMX120BMW</td><td>LMX120ZM</td><td>LMX120ZMW</td><td>LMX120JM</td><td>LMX120YMW</td><td>LMX120WM</td></tr>
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<tr><td>PCB_ID0</td><td>GPIO52</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td></td><td></td></tr>
<tr><td>PCB_ID1</td><td>GPIO0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td><td></td><td></td></tr>
<tr><td>PCB_ID2</td><td>GPIO1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>0</td><td>0</td><td></td><td></td></tr>
<tr><td>LG_Version</td><td></td><td>0 (PP0)</td><td>0.5(PP0.5)</td><td>A(PP1)</td><td>B(PP2)</td><td>1.0(DV1)</td><td>1.0(DV2)</td><td>1.0(PV)</td><td></td><td></td></tr>
<tr><td>WT_Version</td><td></td><td>96789_1_10</td><td>96789_1_11</td><td>96789_1_12</td><td>96789_1_13</td><td>96789_1_13M14</td><td>96789_1_13M15</td><td>96789_1_13M16</td><td></td><td></td></tr>
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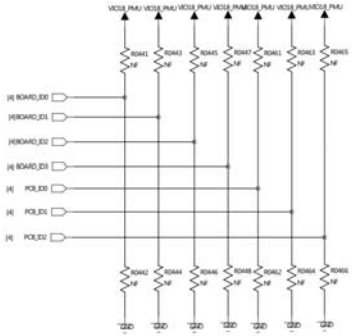
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<tr><td>Memory</td><td colspan="2">P/N: 16EMCP08_NL3DTB28
RAM Size: 1GB
ROM Size: 16GB</td></tr>
<tr><td>Applied Models</td><td colspan="2">LMX120EMW; LMX120HM; LMX120BMW;
LMX120ZM; LMX120ZMW; LMX120JM;
LMX120YMW; LMX120WM</td></tr>
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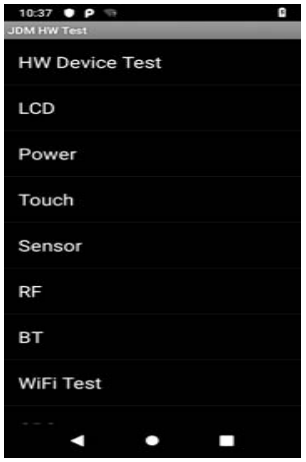
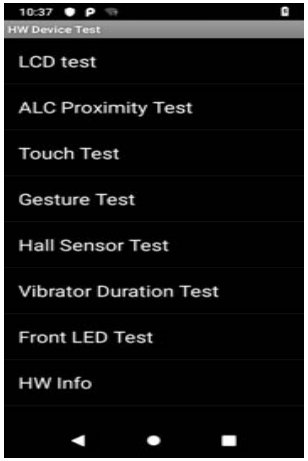
1. Hidden Menu Start

- Enable “developer options”
- Install Hidden menu apk and HWTest apk
- Run HWTest app

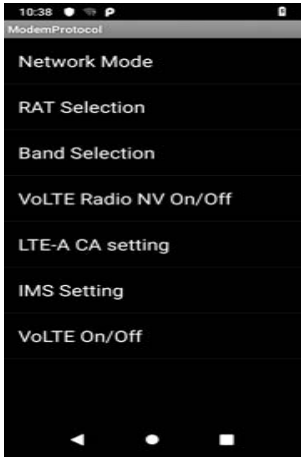
2. HW TEST

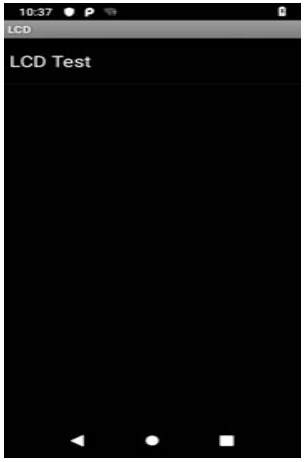
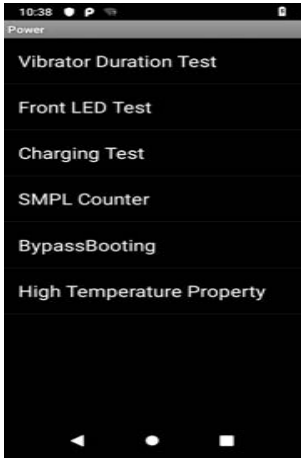
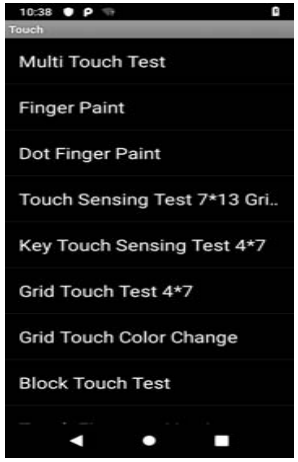
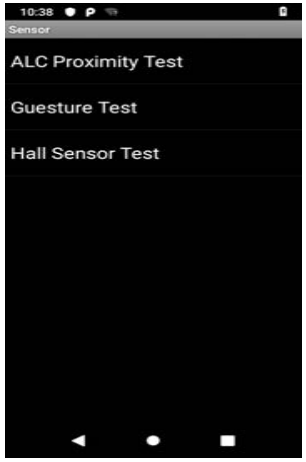
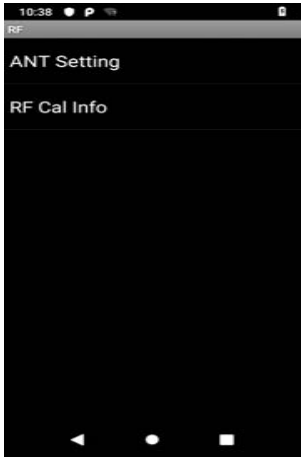
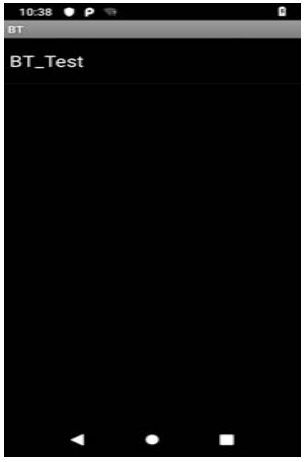
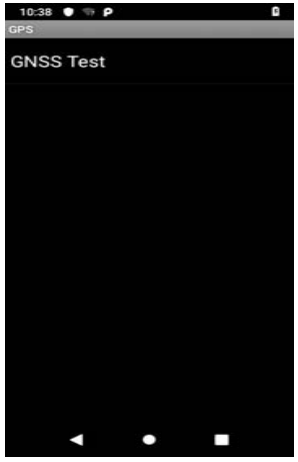


2. HW Device Test



3. MODEM TEST



1. LCD	2. Power	3. Touch	4. Sensor
			
5. RF	6. BT	7. GPS	
			

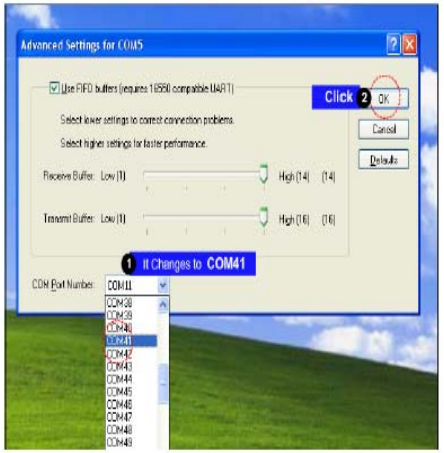
1. Summary

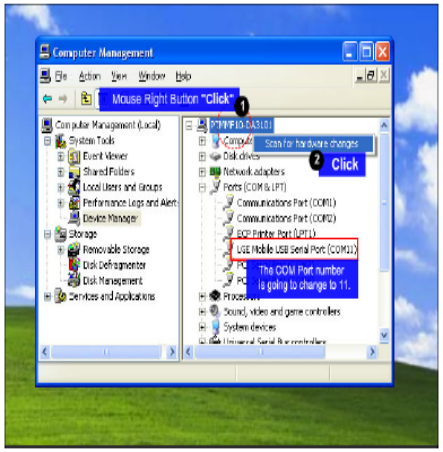
Tool Ver.	DLL name	USB Driver
2.0.2.6	COMMON_20181023_ LGFLASHv216.dll	LGMobileDriver_WHQL_Ver_4

Please Check the Version to "LGST ServiceCenter Tool"

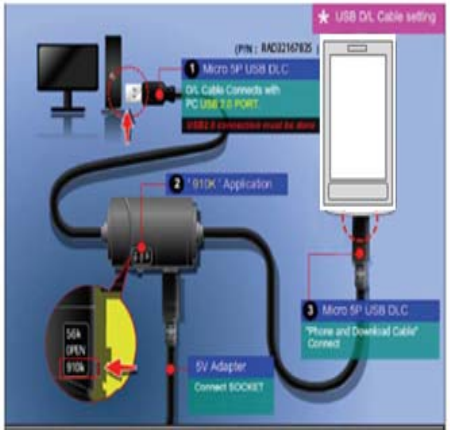
H/W			
	Name	Part No.	SW
D/L Cable	Micro 5P (56-open-910K) USB DLC	RAD32167835	TOT

2. . USB COM port Setting

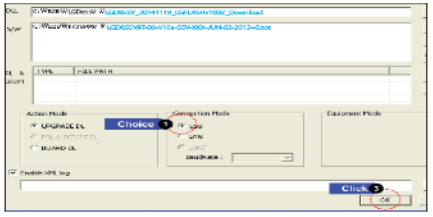


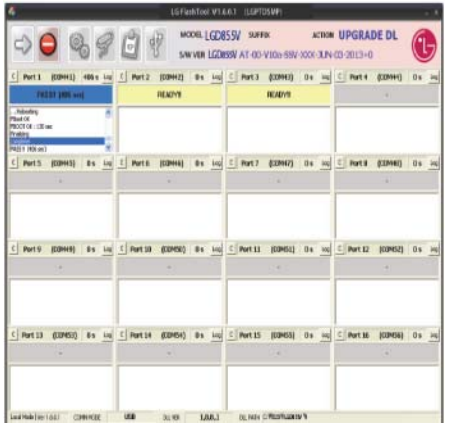


3. USB D/L Cable setting



4. Flash tool D/L setting



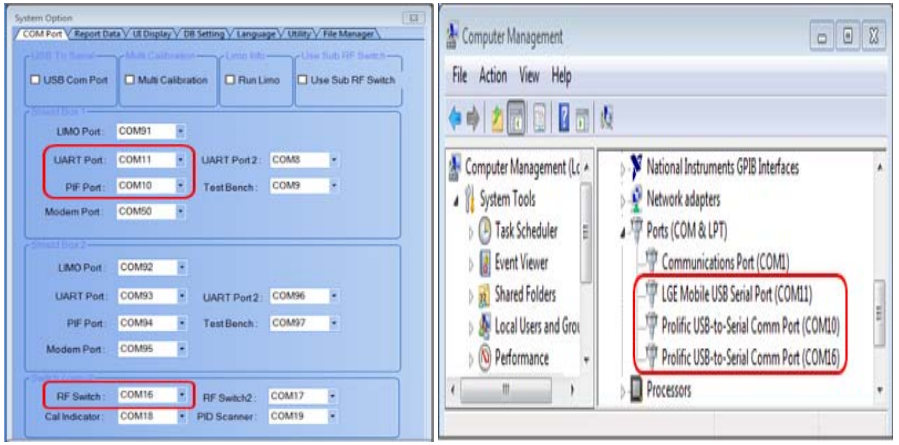


※ If you want more information, please refer LGST ServiceCenter Tool's Notification"Download User Guide".

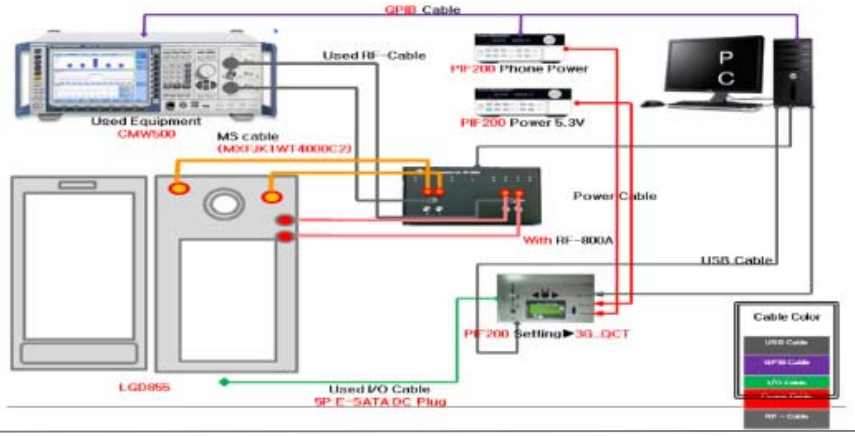
1. Summary

D/L configuration	Require	Remarks
Computer	Windows	With more than two USB ports, Equipped with GPIB card
Jig	With rf test heed	
Wire	USB cable，GPIB cable，RF cable	RF line loss is less than 1DB
Power Supply	Programmable power supply	Voltage output requires accuracy of 0.3V
All Instrument	CMW500	
Mobile Software	According to production order	
Tool Software	According to the latest release of DCC tool version list	
Operating System	Win2000、WinXP(SP2以上)	It is recommended to install anti-virus software

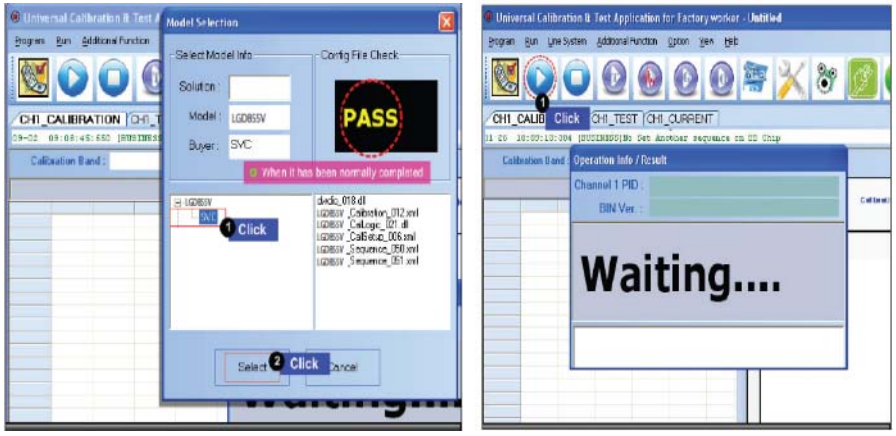
2. . USB COM port Setting



3. Calibration Cable setting

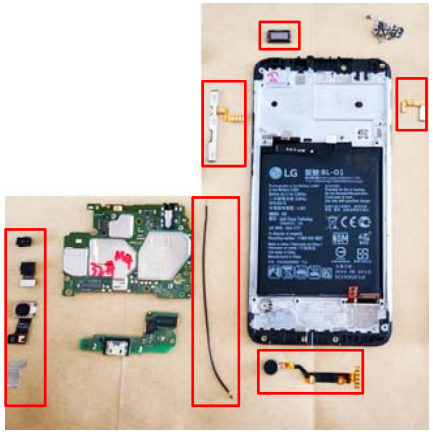


4. Tachyon setting



※ If you want more information, please refer LGST ServiceCenter Tool's Notification "RF Calibration User Guide".

12.1 Phone Disassemble Guide

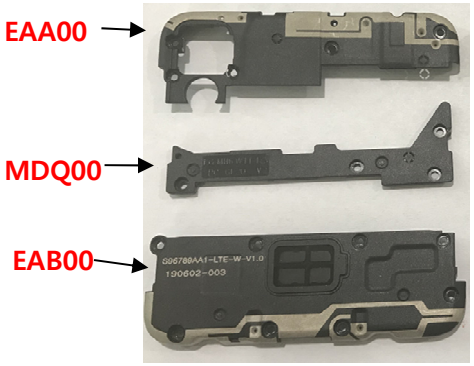
1. Disassemble SIM Tray	2. Disassemble Rear cover	3. Disassemble Screw (15ea)	4. Disassemble Inner Cover
	 Disassemble clockwise from the top		
5. Disassemble Connector (4ea)	**6. Disassemble main PCBA and Sub PCBA**	**6. Disassemble HW Parts (9ea)**	**7. Complete Disassembling**
			

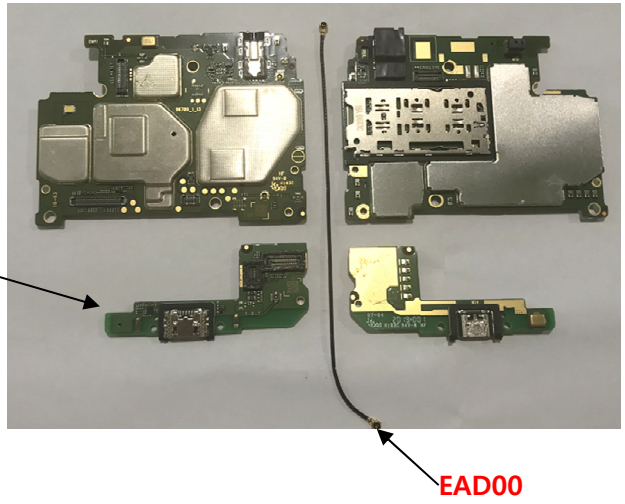
12.2 Battery Disassemble Guide

1. . Leave Bar Assy in **Temperature box (70º, 8min)**	2. Disassemble NOTES	**2. Disassemble Battery**	4.
	**1.Must use plastic tools.** **2. Do not pierce the battery. Damage to the battery skin can cause the battery to smoke or even burn** **3. When disassembling the battery, the plastic bar is left to avoid damage to LCM_FPC**		
5.	6.	7.	8.

12.3 Battery Cover Disassemble Guide

① Use the disassemble card to disassemble the hook at the corner above the tray hole
② Use the disassemble card to disassemble the hook at the corner of the rear lens
③ The battery cover can be disassemble from the bottom





No	Part No	Description	Qty	Location No.
1	AGF80302419	Package Assembly	1	AGF000000
2	MFZ66435029	Packing,Blister	1	MFZ005500
3	MAY68388950	Box,Unit	1	MAY084000
4	MAY68388904	Box,Unit	1	MAY084001
5	MHK66230304	Sheet	1	MHK000000
6	MEZ65773066	Label,Unit Box	1	MEZ084100
7	AGJ74798505	Pallet Assembly	1	AGJ000000
8	MAY68389604	Box,Pallet Sleeve	0.00167	MAY115200
9	MGA64099402	Pallet	0.00167	MGA000001
10	MLAJ0004402	Label,Master Box	0.00667	MEZ047200
11	MAY68349901	Box,Master	0.1	MAY047100
12	MLAJ0004402	Label,Master Box	0.1	MEZ047200
13	AAD89731802	Addition Assembly	1	AAD000000
14	EAY65068902	Adapters	1	EAY060000
15	EAB64468444	Earphone,Stereo	1	EAB010200
16	EAD62377927	Cable,Assembly	1	EAD010000
17	MJN71593401	Tape,Protect	1	MJN061100
18	AFN79155001	Manual Assembly,Operation	1	AFN053800
19	MBM67279101	Card,Quick Reference	1	MBM062600
20	MAF65348001	Bag,Vinyl	1	MAF086500
21	AAA78367801	Accessory Assembly	1	AAA000000
22	MAF66170501	Bag,Vinyl	1	MAF086500
23	MGJ66983901	Plate	1	MGJ000000
24	MBM67279601	Card	1	MBM000000
25	MBM66205501	Card,Warranty	1	MBM087200
26	MFL71466201	Manual,Operation	0	MFL053800
27	AGQ91073407	Phone Assembly	1	AGQ000000
28	ACQ91493907	Cover Assembly,EMS	1	ACQ100400
29	ACQ91567802	Cover Assembly,Bar	1	ACQ003400
30	ACQ91555801	Cover Assembly,Middle	1	ACQ049200
31	ACQ91575301	Cover Assembly,Middle(Sub)	1	ACQ131900
32	MCK71165501	Cover,Middle	1	MCK049200
33	MCK71165601	Cover,Middle	1	MCK049201
34	MET63537501	Insert,Nut	4	MET099500
35	MHK67386501	Sheet	1	MHK000000
36	MJN71647801	Tape,Protect	1	MJN061100
37	EBR89449801	PCB Assembly,Flexible	1	EBR070500
38	MJN71573701	Tape,Window	1	MJN089300
39	MDJ66105001	Filter	1	MDJ000000
40	EBR89485101	PCB Assembly,Flexible	1	EBR070501

No	Part No	Description	Qty	Location No.
41	MCQ70585501	Damper	1	MCQ000000
42	MCQ70509901	Damper	1	MCQ000001
43	MHK67406101	Sheet	1	MHK000001
44	MJN71591201	Tape	1	MJN000009
45	MJN71573801	Tape,Camera	1	MJN009400
46	MDS67350601	Gasket	2	MDS000000
47	MDS67370401	Gasket	4	MDS000001
48	MJN71647901	Tape	1	MJN000003
49	MJN71591001	Tape	1	MJN000004
50	MJN71667701	Tape	1	MJN000008
51	MJN71591101	Tape	1	MJN000007
52	MJN71667601	Tape	1	MJN000005
53	MJN71668001	Tape	1	MJN000011
54	MJN71667901	Tape	1	MJN000010
55	MJN71648001	Tape	1	MJN000006
56	MEZ68508301	Label	2	MEZ000000
57	MJN71573901	Tape	1	MJN000000
58	MJN71591301	Tape	1	MJN000001
59	MJN71650401	Tape	1	MJN000002
60	EAB65609701	Receiver	1	EAB010400
61	EAT64953701	Hybrid Touch LCD Module,OLED	1	EAT130000
62	EAU64904101	Motor,DC	1	EAU010000
63	EAC64559001	Rechargeable Battery,Lithium Polymer	1	EAC020200
64	EBR89518401	PCB Assembly,Sub	1	EBR072900
65	EBR89474801	PCB Assembly,Sub,Insert	1	EBR072500
66	MCQ70585601	Damper	1	MCQ000000
67	MCQ70512201	Damper	1	MCQ000001
68	EBR89518501	PCB Assembly,Sub,SMT	1	EBR072800
69	EBR89493301	PCB Assembly,Sub,SMT Bottom	1	EBR072600
70	EAB65609601	Microphone,Condenser	1	U0101
71	MBV64461601	Clip	5	J0104,J0105,J0106,J0107,J0108
72	EBR89474701	PCB Assembly,Sub,SMT Top	1	EBR072700
73	EAE65190301	Capacitor,Ceramic,Chip	1	C0102
74	EAE65190701	Capacitor,Ceramic,Chip	1	C0114
75	EAE65232701	Capacitor,Ceramic,Chip	2	C0109,C0120
76	EAE65264701	Capacitor,Ceramic,Chip	1	C0104
77	EAE65264801	Capacitor,Ceramic,Chip	1	C0103
78	EAE65265201	Capacitor,Ceramic,Chip	1	C0101
79	EAE65969301	Capacitor,Ceramic,Chip	5	C0110,C0115,C0221,C0222,C0223
80	EAE66008901	Capacitor,Ceramic,Chip	1	L0203

No	Part No	Description	Qty	Location No.
81	EAE66045501	Capacitor,Ceramic,Chip	12	C0105,C0106,C0107,C0108,C0111,C0112,C0113,C0116,C0117,C0118,C0119,C0121
82	EAG65731501	Connector,BtoB	1	J0101
83	EAG66476901	Connector,I/O	1	J0102
84	EAG66495501	Connector,RF	1	J0211
85	EAG66551701	Connector,BtoB	1	J0103
86	EAH64213301	Diode,TVS	1	TVS0105
87	EAH64873401	Diode,TVS	1	TVS0102
88	EAM64811801	Filter,Separator,Switch	1	U0202
89	EAP64971801	Inductor,Multilayer,Chip	1	C0219
90	EAP65011001	Inductor,Multilayer,Chip	1	R0210
91	EAP65068201	Inductor,Multilayer,Chip	3	L0201,L0204,R0209
92	EAX69075601	PCB,Sub	1	PCB
93	EBC64798001	Resistor,Chip	10	C0218,C0220,R0101,R0102,R0103,R0104,R0105,R0131,R0132,R0208
94	EBC64816301	Resistor,Chip	2	R0106,R0107
95	MBV64461602	Clip	2	ANT1,ANT2
96	EAD65666801	Cable,FFC	1	EAD030000
97	EAA65825401	Antenna Assembly	1	EAA040000
98	EAB65549301	Speaker Module	1	EAB010100
99	MDQ66458201	Frame	1	MDQ000000
100	ACQ91555904	Cover Assembly,Rear	1	ACQ063300
101	MCK71165704	Cover,Rear	1	MCK063300
102	MDJ66184201	Filter	1	MDJ000000
103	MHK67368601	Sheet	1	MHK000000
104	MBG67703101	Button	1	MBG000000
105	MCR68149201	Decor	1	MCR000000
106	MCR68206901	Decor	1	MCR000001
107	MJN71648101	Tape	1	MJN000001
108	MFB65333101	Lens,Flash	1	MFB029600
109	MCQ70585901	Damper	1	MCQ000000
110	MJN71591401	Tape	1	MJN000002
111	MCQ70585801	Damper,Camera	1	MCQ009400
112	MBG67684201	Button,Side	1	MBG071300
113	MJN71591501	Tape	1	MJN000000
114	MJN71574101	Tape	1	MJN000003
115	MKC67298901	Window,Camera	1	MKC009400
116	ABN76299401	Cap Assembly	1	ABN000000
117	EBR88916901	PCB Assembly,Main	1	EBR071900
118	EBR89520701	PCB Assembly,Main,Auto	1	EBR071400
119	EBR88966301	PCB Assembly,Main,SMT	1	EBR071800
120	EBR89476301	PCB Assembly,Main,SMT Top	1	EBR071700

No	Part No	Description	Qty	Location No.
121	EAE62726601	Capacitor,Ceramic,Chip	2	C1012,C1102
122	EAE65190701	Capacitor,Ceramic,Chip	29	C0304,C0505,C0510,C0514,C0516,C0517,C0519,C0520,C0525,C0526,C0601,C0602,C0608,C0610,C0611,C0614,C0615,C0622,C0623,C0627,C0753,C0801,C0804,C0806,C0812,C0914,C1014,C1469,C1471
123	EAE65232701	Capacitor,Ceramic,Chip	34	C0518,C0524,C0626,C0701,C0726,C0731,C0732,C0733,C0734,C0736,C0738,C0754,C0802,C0803,C0807,C0813,C0814,C0815,C0930,C0933,C0937,C0938,C0944,C0945,C1007,C1010,C1103,C1250,C1418,C1420,C1422,C1468,C1470,C1482
124	EAE65251401	Capacitor,Ceramic,Chip	3	C0703,C0706,C0711
125	EAE65252301	Capacitor,Ceramic,Chip	1	C0607
126	EAE65252701	Capacitor,Ceramic,Chip	2	C0523,C0625
127	EAE65252801	Capacitor,Ceramic,Chip	3	C0831,C1478,C1901
128	EAE65262801	Capacitor,Ceramic,Chip	14	C0606,C0621,C0704,C0712,C0723,C0744,C0759,C0761,C0816,C0818,C1130,C1220,C1457,C1484
129	EAE65263201	Capacitor,Ceramic,Chip	7	C0624,C0717,C0725,C0756,C0805,C0817,C1101
130	EAE65969301	Capacitor,Ceramic,Chip	8	C0925,C0934,C0941,C1419,C1421,C1423,C1475,C1488
131	EAE65969801	Capacitor,Ceramic,Chip	1	C1413
132	EAE65970001	Capacitor,Ceramic,Chip	1	R1401
133	EAE65970201	Capacitor,Ceramic,Chip	1	C1412
134	EAE66008801	Capacitor,Ceramic,Chip	8	C0922,C0931,C0932,C0935,C0936,C0942,C0943,C1467
135	EAE66008901	Capacitor,Ceramic,Chip	1	C1416
136	EAE66027001	Capacitor,Ceramic,Chip	2	C1494,C1495
137	EAE66046001	Capacitor,Ceramic,Chip	1	C1448
138	EAE66046101	Capacitor,Ceramic,Chip	2	C1425,C1428
139	EAG65811701	Socket,Card	1	J1203
140	EAG65854701	Socket,Card	1	J1204
141	EAG66531701	Socket,Card	1	J1201
142	EAG66532101	Socket,Card	1	SH6417
143	EAG66551901	Connector,BtoB	1	CON1102
144	EAH64213301	Diode,TVS	2	TVS1201,TVS1219
145	EAH64233701	Diode,Schottky	1	Q1200
146	EAH64252601	Diode,Schottky	1	Q1201
147	EAH64855001	Diode,TVS	1	TVS0910
148	EAH64855101	Diode,TVS	4	TVS1214,TVS1215,TVS1216,TVS1217
149	EAH64892901	Diode,TVS	4	TVS0909,TVS0928,TVS0931,TVS0932
150	EAM64812401	Filter,Bead	1	BEAD0905
151	EAM65572001	Filter,Bead	2	BEAD0902,BEAD0904
152	EAM65572201	Filter,Separator,Switch	1	U1402
153	EAN65983701	IC,Ambient Light Sensor	1	U1001
154	EAN65983901	IC,Digital Baseband Processor,4G	1	U0301
155	EAN66000401	IC,Acceleration Sensor	1	U1004
156	EAN66051201	IC,MCP,eMMC	1	U0601
157	EAN66069601	IC,PMIC	1	U0701
158	EAP64508001	Inductor,Wire Wound,Chip	1	L0704
159	EAP64546701	Inductor,Multilayer,Chip	2	L1402,R1405
160	EAP64566602	Inductor,Multilayer,Chip	1	C1481

No	Part No	Description	Qty	Location No.
161	EAP64906001	Inductor,Multilayer,Chip	1	L1488
162	EAP64972101	Inductor,Multilayer,Chip	2	L1401,L1419
163	EAP64972401	Inductor,Multilayer,Chip	1	L1411
164	EAP64972701	Inductor,Multilayer,Chip	1	L1418
165	EAP65011001	Inductor,Multilayer,Chip	1	L1489
166	EAP65011201	Inductor,Multilayer,Chip	1	C1414
167	EAP65048001	Inductor,Multilayer,Chip	1	R1126
168	EAP65068301	Inductor,Multilayer,Chip	1	C1407
169	EAP65068401	Inductor,Multilayer,Chip	2	L1480,L1482
170	EAW64103601	Oscillator,Crystal	1	X0801
171	EAX69095501	PCB,Main	1	PCB
172	EBC64739201	Resistor,Chip	2	NTC0301,NTC1401
173	EBC64776901	Resistor,Chip	2	R0412,R0944
174	EBC64777201	Resistor,Chip	8	R0431,R0432,R0916,R1204,R1205,R1207,R1210,R1232
175	EBC64777301	Resistor,Chip	9	R0442,R0444,R0445,R0448,R0461,R0464,R0466,R1007,R1009
176	EBC64777401	Resistor,Chip	3	C1219,R1222,R1231
177	EBC64777601	Resistor,Chip	6	R0411,R1244,R1245,R1246,R1247,R1248
178	EBC64796901	Resistor,Chip	4	R0900,R1146,R1243,R1416
179	EBC64797401	Resistor,Chip	2	R1256,R1259
180	EBC64797501	Resistor,Chip	1	R1257
181	EBC64798001	Resistor,Chip	25	L1405,L1410,L1425,L1426,L1451,R0301,R0320,R0325,R0326,R0801,R0812,R0814,R0816,R0908,R0918,R0928,R0930,R0937,R0939,R1131,R1134,R1135,R1136,R1137,R1415
182	EBC64816401	Resistor,Chip	1	R1403
183	EBC64816701	Resistor,Chip	1	R0835
184	EBC64817101	Resistor,Chip	2	R0604,R0605
185	EBC64838101	Resistor,Chip	1	R0822
186	EBC64838401	Resistor,Chip	2	R0311,R0804
187	EBC64838601	Resistor,Chip	1	R0701
188	EBC64838801	Resistor,Chip	1	R0823
189	EBC65442001	Resistor,Chip	2	R0601,R0602
190	EBC65442201	Resistor,Chip	2	R0940,R0941
191	EBC65442301	Resistor,Chip	2	R0315,R1413
192	EBC65457901	Resistor,Chip	1	R0915
193	EBC65477401	Resistor,Chip	1	R0402
194	EBC65477501	Resistor,Chip	1	R0824
195	EBC65477701	Resistor,Chip	1	R0340
196	EBC65477801	Resistor,Chip	1	R1254
197	EBC65477901	Resistor,Chip	1	R0302
198	EBC65478101	Resistor,Chip	1	R0802
199	EBC65478201	Resistor,Chip	1	R1012
200	MBK66212601	Can,Shield	1	SH6410

No	Part No	Description	Qty	Location No.
201	MBK66232501	Can,Shield	1	SH6413
202	MBL67836901	Cap,Earphone Jack	1	CON0901
203	MBV64461601	Clip	10	ANT1901,ANT1902,ANT1903,ANT1904,J1206,J1207,J1208,J1209,J1210,J1211
204	EBR89505201	PCB Assembly,Main,SMT Bottom	1	EBR071600
205	EAB65609601	Microphone,Condenser	1	MIC0901
206	EAE65190701	Capacitor,Ceramic,Chip	22	C0398,C0413,C0414,C0419,C0428,C0429,C0440,C0441,C0442,C0443,C0444,C0504,C0507,C0769,C0929,C1301,C1302,C1303,C1304,C1305,C1306,C1702
207	EAE65190801	Capacitor,Ceramic,Chip	1	C0752
208	EAE65196101	Capacitor,Ceramic,Chip	1	C1149
209	EAE65232701	Capacitor,Ceramic,Chip	22	C0302,C0303,C0409,C0410,C0411,C0412,C0418,C0420,C0422,C0433,C0437,C0716,C0730,C0768,C0770,C1131,C1157,C1241,C1621,C1710,C1712,C1714
210	EAE65232901	Capacitor,Ceramic,Chip	1	C0501
211	EAE65244802	Capacitor,Ceramic,Chip	2	C0750,C0904
212	EAE65250701	Capacitor,Ceramic,Chip	2	C0722,C0724
213	EAE65250801	Capacitor,Ceramic,Chip	1	C1148
214	EAE65251401	Capacitor,Ceramic,Chip	5	C0749,C0917,C1140,C1141,C1543
215	EAE65252601	Capacitor,Ceramic,Chip	1	C1707
216	EAE65252701	Capacitor,Ceramic,Chip	2	C0522,C1147
217	EAE65252801	Capacitor,Ceramic,Chip	3	C0926,C0999,C1542
218	EAE65253401	Capacitor,Ceramic,Chip	1	C0953
219	EAE65262801	Capacitor,Ceramic,Chip	7	C0739,C0743,C0928,C0951,C1307,C1308,C1704
220	EAE65263201	Capacitor,Ceramic,Chip	6	C0439,C0745,C0757,C0901,C0927,C1132
221	EAE65264801	Capacitor,Ceramic,Chip	1	C1230
222	EAE65265201	Capacitor,Ceramic,Chip	2	C0742,C1232
223	EAE65323701	Capacitor,Ceramic,Chip	1	C0747
224	EAE65361501	Capacitor,Ceramic,Chip	1	C0906
225	EAE65969701	Capacitor,Ceramic,Chip	2	C0905,C0907
226	EAE65969901	Capacitor,Ceramic,Chip	1	C1215
227	EAE65970001	Capacitor,Ceramic,Chip	3	C1521,C1541,C1612
228	EAE65970101	Capacitor,Ceramic,Chip	1	L1604
229	EAE66008901	Capacitor,Ceramic,Chip	5	L1511,L1525,L1561,L1612,L1633
230	EAE66009601	Capacitor,Ceramic,Chip	2	C1533,C1706
231	EAE66009701	Capacitor,Ceramic,Chip	1	C1231
232	EAE66027101	Capacitor,Ceramic,Chip	13	C1502,C1516,C1518,C1523,C1525,C1530,C1538,C1603,C1607,C1609,C1611,C1614,C1616
233	EAE66027201	Capacitor,Ceramic,Chip	1	C1514
234	EAE66027301	Capacitor,Ceramic,Chip	2	C1716,C1717
235	EAE66046001	Capacitor,Ceramic,Chip	1	L1559
236	EAE66046201	Capacitor,Ceramic,Chip	1	C1546
237	EAE66046301	Capacitor,Ceramic,Chip	2	C1512,C1601
238	EAE66046401	Capacitor,Ceramic,Chip	1	C1476
239	EAE66046501	Capacitor,Ceramic,Chip	1	L1630
240	EAF63730601	Varistor	1	U1203

No	Part No	Description	Qty	Location No.
241	EAG65731501	Connector,BtoB	1	CON1101
242	EAG66495501	Connector,RF	1	CON1502
243	EAG66495601	Connector,BtoB	1	J0902
244	EAG66531601	Connector,BtoB	1	CON1202
245	EAH64153601	Diode,TVS	1	TVS0919
246	EAH64834901	Diode,TVS	1	TVS1210
247	EAH64854901	Diode,Schottky	1	D1101
248	EAH64855001	Diode,TVS	5	TVS0701,TVS0903,TVS0911,TVS0912,TVS1501
249	EAH64893001	Diode,TVS	2	TVS1207,TVS1208
250	EAM63890202	Filter,Duplexer	1	U1514
251	EAM64811801	Filter,Separator,Switch	1	U1607
252	EAM64812401	Filter,Bead	3	BEAD0901,BEAD0903,BEAD0907
253	EAM64870601	Filter,Duplexer	1	U1521
254	EAM64870701	Filter,Separator,Switch	2	CON1501,CON1610
255	EAM64870801	Filter,Separator,Switch	1	U1606
256	EAM64871401	Filter,Duplexer	1	U1516
257	EAM64892001	Filter,Saw	1	U1602
258	EAM64892101	Filter,Saw	1	U1603
259	EAM64910601	Filter,Separator,Switch	1	U1511
260	EAM64910801	Filter,Saw	1	U1703
261	EAM64910901	Filter,LCR	3	EMI1101,EMI1102,EMI1103
262	EAM64911301	Filter,Saw	1	U1612
263	EAM64912001	Filter,Saw	1	FL1700
264	EAM64930901	Filter,Bead	1	B1102
265	EAM64931101	Filter,Duplexer	1	U1704
266	EAM64931501	Filter,Duplexer	1	U1608
267	EAM64951101	Filter,Bead	1	B1101
268	EAM64971301	Filter,Bead	1	BEAD1701
269	EAM64972301	Filter,Duplexer	1	U1502
270	EAM65499801	Filter,Bead	2	L0903,L0904
271	EAM65500301	Filter,Duplexer	1	U1524
272	EAM65519701	Filter,Duplexer	1	U1609
273	EAM65552301	Filter,Separator,Switch	1	U0704
274	EAM65552401	Filter,Duplexer	1	U1522
275	EAM65552501	Filter,Duplexer	1	U1512
276	EAM65552601	Filter,Duplexer	1	U1605
277	EAM65552701	Filter,Duplexer	1	U1515
278	EAM65552801	Filter,Duplexer	1	U1509
279	EAM65572101	Filter,Separator,Switch	1	U1513
280	EAM65572401	Filter,Duplexer	1	U1523

No	Part No	Description	Qty	Location No.
281	EAM65572501	Filter,Duplexer	1	U1611
282	EAN65227701	IC,RF Amplifier	1	U1702
283	EAN65315401	IC,LED Driver	1	U1105
284	EAN65315601	IC,WiFi	1	U1701
285	EAN65315901	IC,Audio Amplifier	1	U0902
286	EAN66000501	IC,LED Driver	1	U1101
287	EAP64467101	Inductor,Wire Wound,Chip	1	L1102
288	EAP64507501	Inductor,Multilayer,Chip	1	BEAD0906
289	EAP64508001	Inductor,Wire Wound,Chip	3	L0703,L0705,L0741
290	EAP64527001	Inductor,Wire Wound,Chip	1	L1103
291	EAP64546701	Inductor,Multilayer,Chip	1	R1606
292	EAP64566602	Inductor,Multilayer,Chip	3	L1515,L1517,L1539
293	EAP64906001	Inductor,Multilayer,Chip	4	C1701,L1540,L1554,L1639
294	EAP64971801	Inductor,Multilayer,Chip	3	C1520,C1626,R1717
295	EAP64972101	Inductor,Multilayer,Chip	2	L1486,L1606
296	EAP64972201	Inductor,Multilayer,Chip	2	L1534,L1624
297	EAP64972301	Inductor,Multilayer,Chip	2	C1604,L1535
298	EAP64972401	Inductor,Multilayer,Chip	3	C1606,L1623,L1625
299	EAP64972601	Inductor,Multilayer,Chip	1	L1509
300	EAP64972701	Inductor,Multilayer,Chip	2	L1423,R1607
301	EAP65010901	Inductor,Multilayer,Chip	6	C1515,C1519,C1540,C1617,L1556,L1613
302	EAP65011001	Inductor,Multilayer,Chip	2	L1565,L1620
303	EAP65011101	Inductor,Multilayer,Chip	3	C1522,C1708,L1532
304	EAP65011201	Inductor,Multilayer,Chip	1	C1625
305	EAP65011301	Inductor,Multilayer,Chip	5	C1501,C1537,L1523,L1609,L1642
306	EAP65011401	Inductor,Multilayer,Chip	1	L0701
307	EAP65047501	Inductor,Multilayer,Chip	4	C1608,C1610,L1526,L1537
308	EAP65047601	Inductor,Multilayer,Chip	4	L1544,L1560,L1562,L1629
309	EAP65047701	Inductor,Multilayer,Chip	1	L1564
310	EAP65047801	Inductor,Multilayer,Chip	1	C1509
311	EAP65047901	Inductor,Multilayer,Chip	2	L1528,L1644
312	EAP65048101	Inductor,Multilayer,Chip	1	L0702
313	EAP65068201	Inductor,Multilayer,Chip	1	L1632
314	EAP65068401	Inductor,Multilayer,Chip	4	C1715,L1529,L1607,L1640
315	EAP65068501	Inductor,Multilayer,Chip	2	L1519,L1615
316	EAP65068601	Inductor,Multilayer,Chip	1	L1572
317	EAP65068701	Inductor,Multilayer,Chip	2	C1517,R1716
318	EAP65068801	Inductor,Multilayer,Chip	1	L1549
319	EAV64834101	LED,Flash	1	LED1101
320	EBC64738601	Resistor,Chip	1	R1330

No	Part No	Description	Qty	Location No.
321	EBC64776601	Resistor,Chip	1	R1115
322	EBC64776901	Resistor,Chip	1	R0945
323	EBC64777101	Resistor,Chip	2	R0907,R1225
324	EBC64777201	Resistor,Chip	1	R0925
325	EBC64777401	Resistor,Chip	3	R0742,R0745,R1112
326	EBC64778401	Resistor,Chip	1	R1220
327	EBC64796901	Resistor,Chip	7	R0920,R1121,R1123,R1124,R1138,R1317,R1318
328	EBC64798001	Resistor,Chip	45	C1510,C1511,C1531,C1532,C1618,C1632,L1520,L1707,R0328,R0455,R0825,R0826,R0927,R1113,R1127,R1238,R1255,R1316,R1505,R1506,R1508,R1509,R1511,R1512,R1513,R1518,R1526,R1527,R1528,R1530,R1531,R1532,R1535,R1544,R1603,R1604,R1605,R1609,R1704,R1708,R1713,R1714,R1715,R1718,R1719
329	EBC64816401	Resistor,Chip	1	R1543
330	EBC64816701	Resistor,Chip	1	L1571
331	EBC64816801	Resistor,Chip	1	R1219
332	EBC64838201	Resistor,Chip	1	R1315
333	EBC64838401	Resistor,Chip	1	R0926
334	EBC64858101	Resistor,Chip	1	R1111
335	EBC64876601	Resistor,Chip	1	R0917
336	EBC64876901	Resistor,Chip	2	R1314,R1331
337	EBC65420001	Resistor,Chip	1	R0329
338	EBC65420101	Resistor,Chip	1	L1567
339	EBC65420201	Resistor,Chip	1	R1536
340	EBC65442101	Resistor,Chip	2	R0905,R0913
341	EBC65442601	Resistor,Chip	1	R1114
342	EBC65477601	Resistor,Chip	2	R1249,R1250
343	EBC65478001	Resistor,Chip	1	L1573
344	MBK66133401	Can,Shield	1	SH6414
345	MBK66212801	Can,Shield	1	SH6416
346	MBK66232601	Can,Shield	1	SH6412
347	MBK66232701	Can,Shield	1	SH6411
348	MBV64461601	Clip	4	ANT1601,ANT1604,ANT1701,ANT1702
349	RAA34548901	Resin,PC	1	RAA100800
350	EBR89433901	PCB Assembly,Main,Insert	1	EBR071500
351	MCQ70605601	Damper	1	MCQ000000
352	MBL68497201	Cap	1	MBL000000
353	MJN71574001	Tape,Camera	1	MJN009400
354	MJN71671001	Tape,Camera	1	MJN009401
355	MJN71650301	Tape	1	MJN000000
356	MJN71671101	Tape,Camera	1	MJN009402
357	MBK66212501	Can,Shield	1	MBK070300
358	MBK66212701	Can,Shield	1	MBK070301
359	MCQ70510001	Damper	1	MCQ000001
360	MCQ70551501	Damper	1	MCQ000003

No	Part No	Description	Qty	Location No.
361	MHK67409901	Sheet	1	MHK000000
362	MCQ70549101	Damper	1	MCQ000002
363	EBP63922901	Camera Module	1	EBP000000
364	EBP63981801	Camera Module	1	EBP000001
365	FAB34040201	Screw,Machine	17	FAB010000
366	MEZ66516305	Label,Approval	1	MEZ002100
367	MEZ67947101	Label	1	MEZ000000
368	SAD37926801	Software,Mobile	1	SAD010000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