

---

# ASUS A400CG

## RF Hardware Trouble Shooting Guide

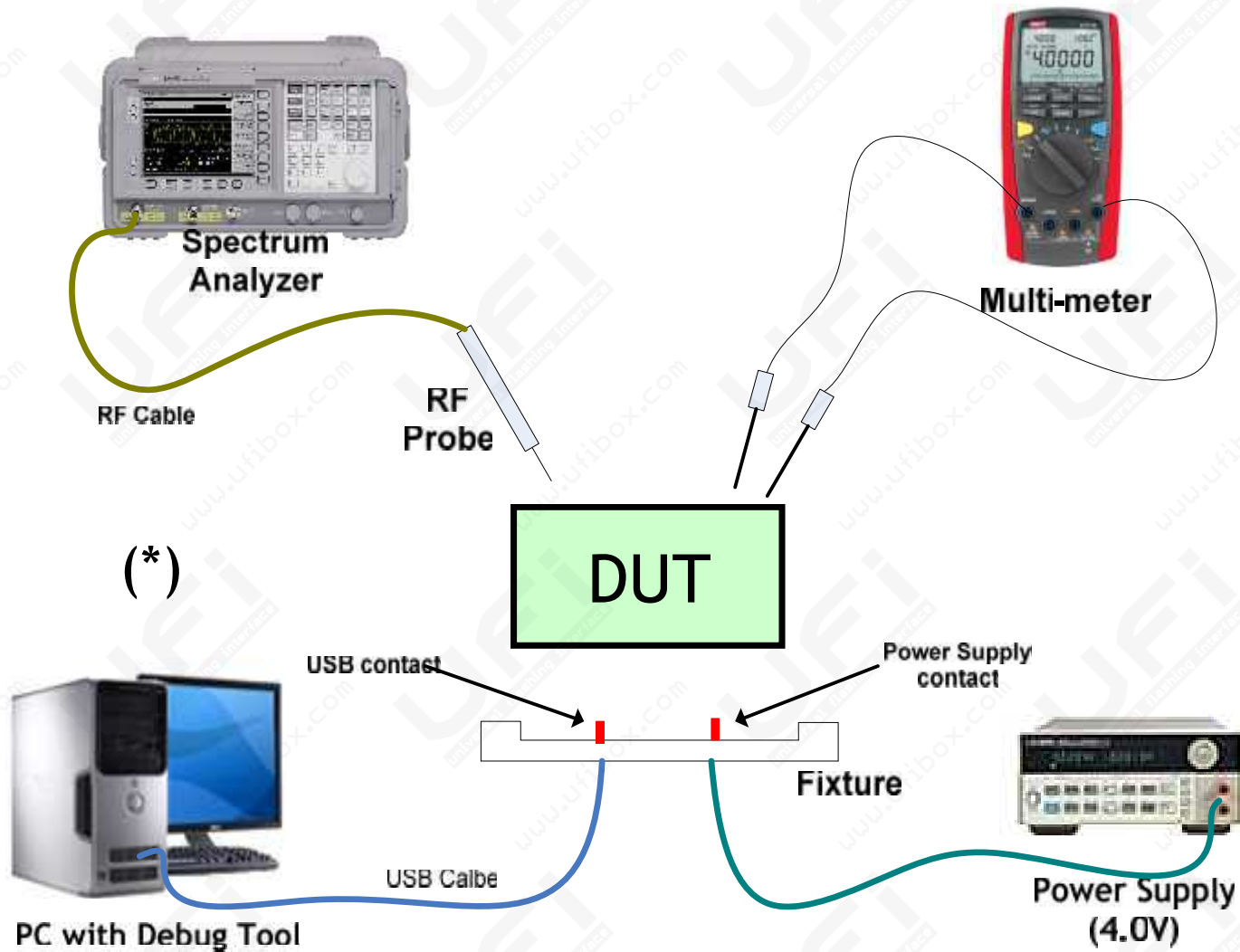
**PMD-HW2**

# Outline

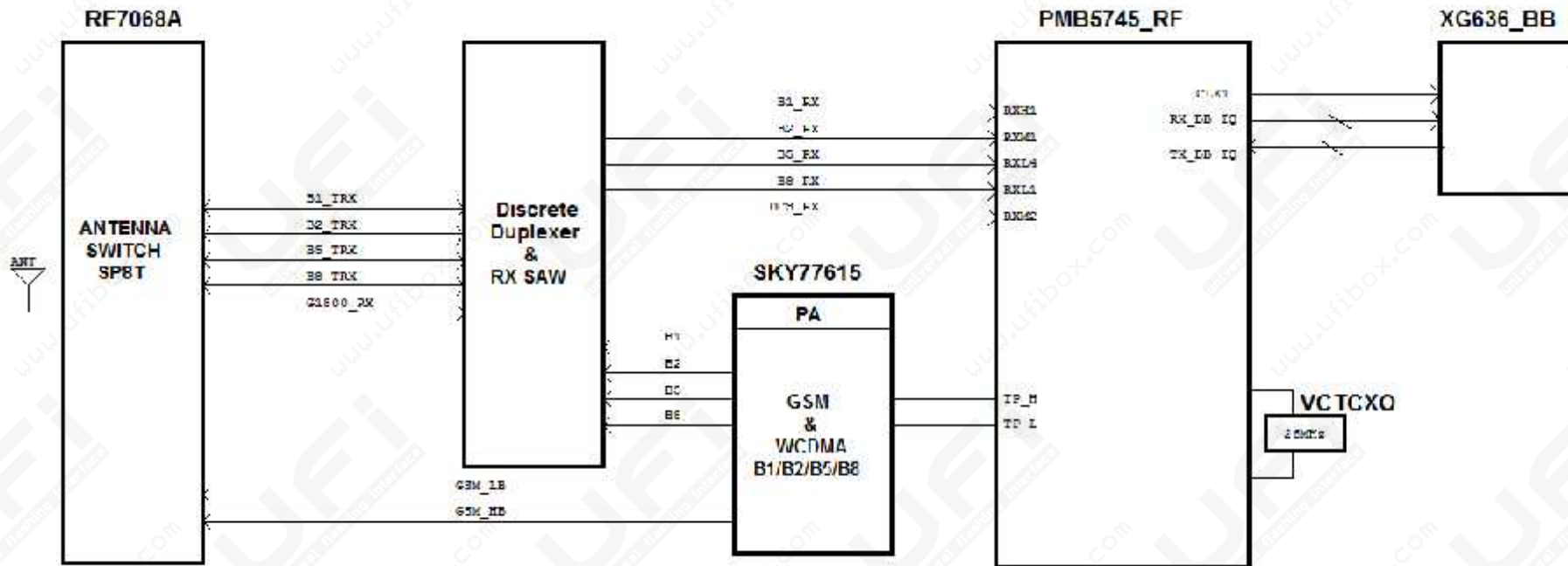
---

- Repair and Test Environment (\*)
- RF Block Diagram
- Key components location
- RF Tx /Rx Path
  - GSM and WCDMA Tx Path
  - GSM and WCDMA Rx Path
  - GSM and WCDMA Tx/Rx fail analysis
  - GPS RF Path
- BT/WiFi RF Path
- GPS and BT/WiFi BL Tx/Rx fail analysis
- Antenna & Spring Location

# Repair and Test Environment (\*)

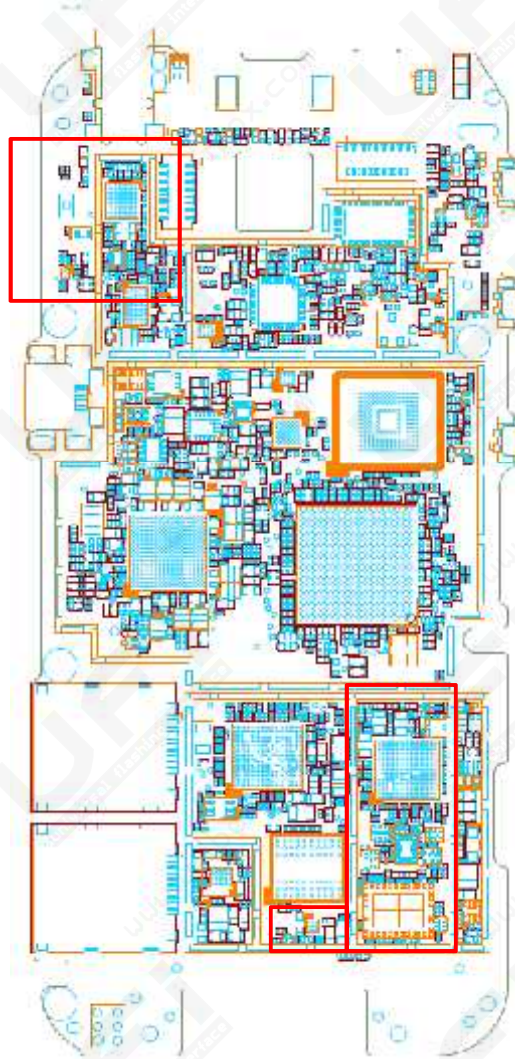


# RF Block Diagram — 2G/3G System



# A400CG RF Areas Top Side

BT/WiFi/GPS  
TOP



2/3G RF TOP

## PF400CG RF Areas Bottom Side

GPS BOT

Div RX & WiFi  
BOT

2/3G RF BOT



# Outline

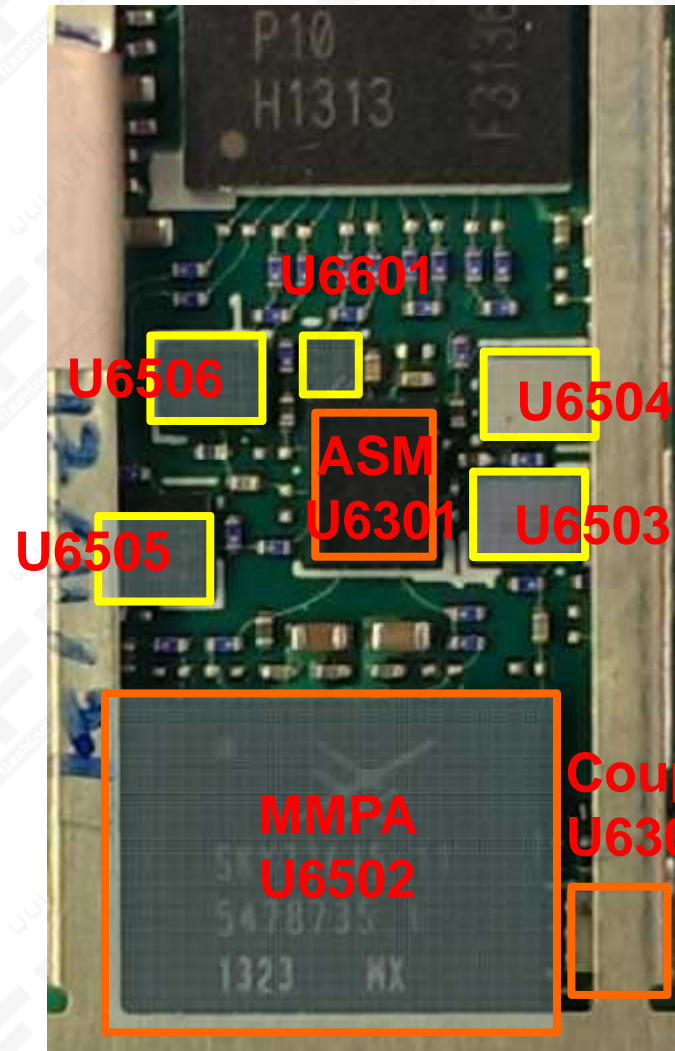
---

- Repair and Test Environment (\*)
- RF Block Diagram
- Key components location
- RF Tx /Rx Path
  - GSM and WCDMA Tx Path
  - GSM and WCDMA Rx Path
  - GSM and WCDMA Tx/Rx fail analysis
  - GPS RF Path
- BT/WiFi RF Path
- GPS and BT/WiFi BL Tx/Rx fail analysis
- Antenna & Spring Location

# Key Components Location

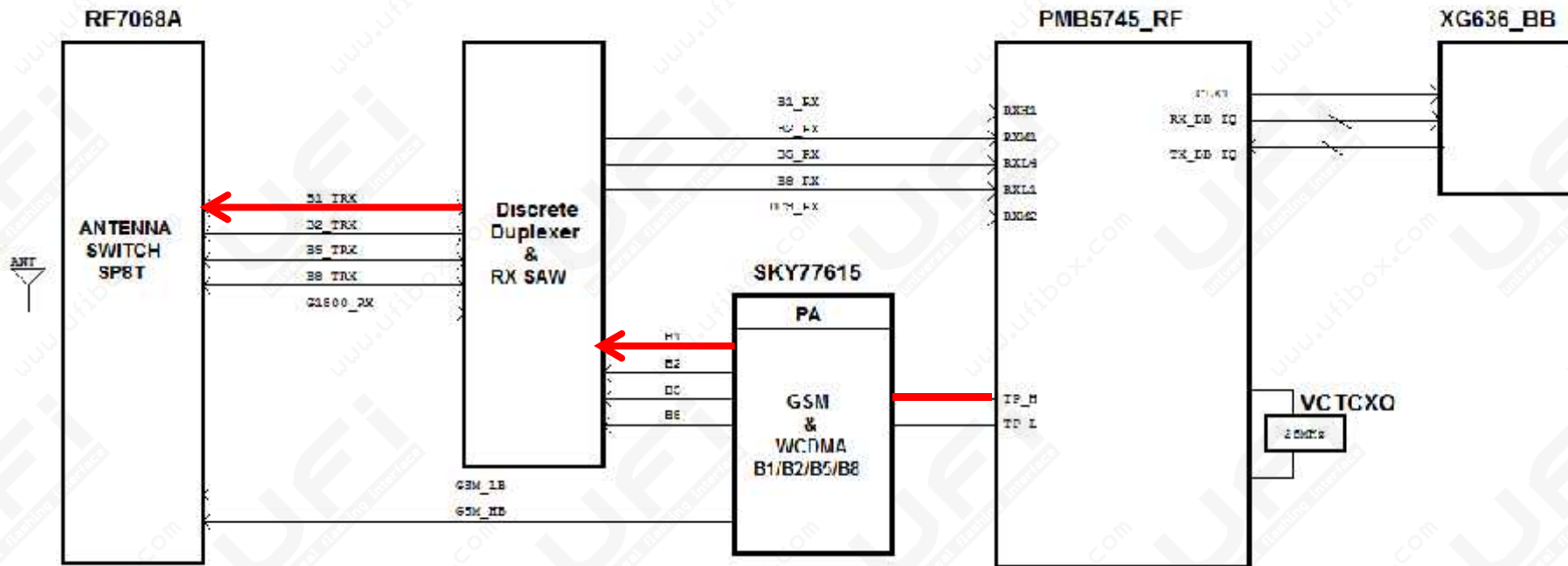


VCTCXO  
OSC6401

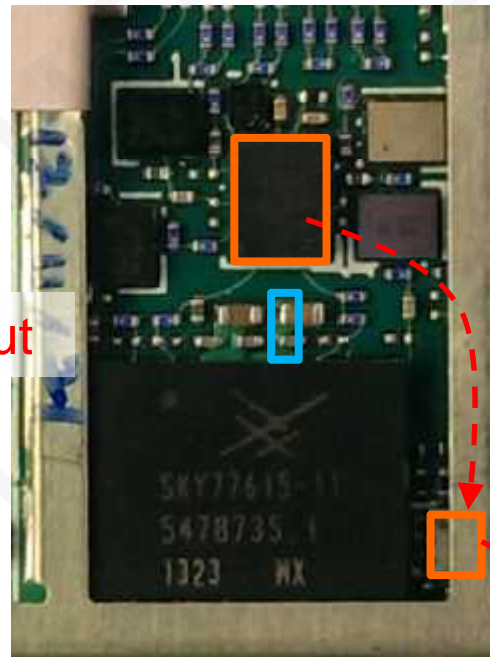
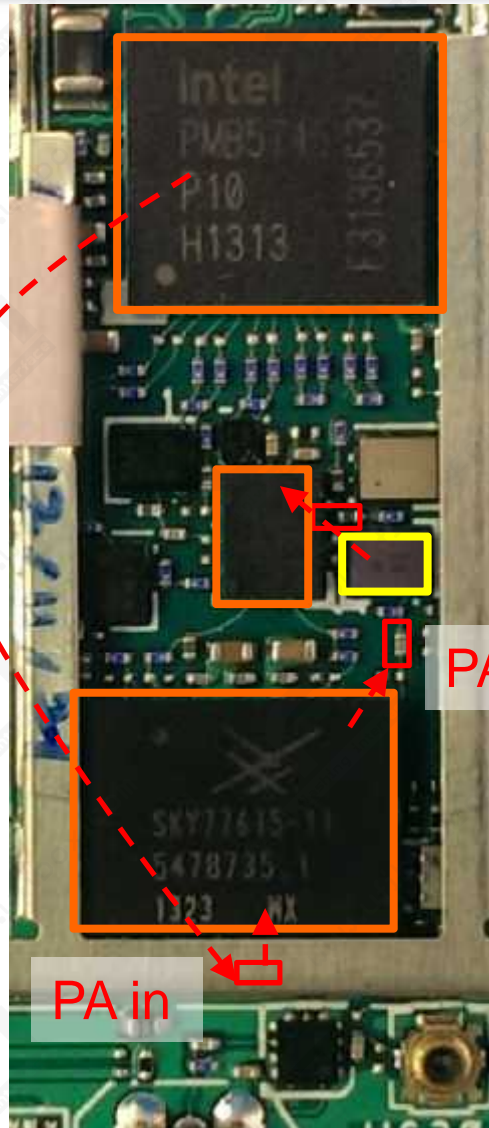




# RF Block Diagram — 2G/3G System

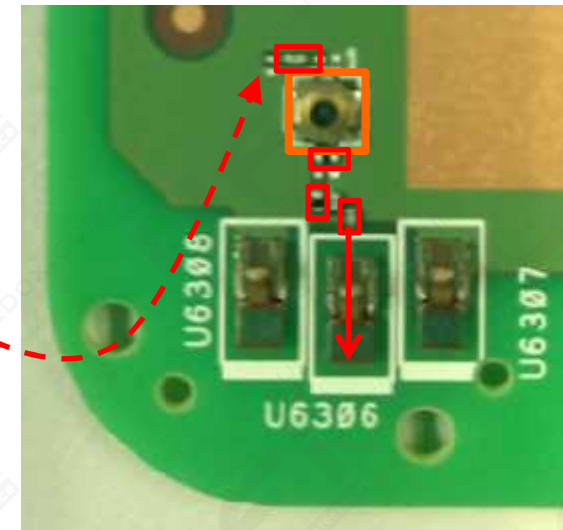


# Band1 Tx Path

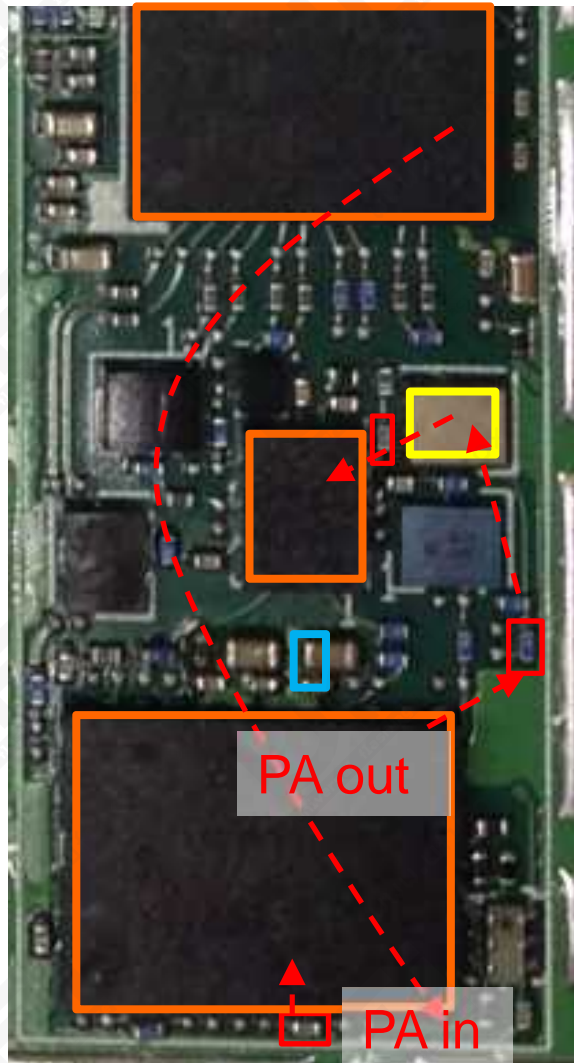


- |            |  |
|------------|--|
| Key part   |  |
| Test point |  |
| VDD point  |  |

BOT



## Band2 Tx Path



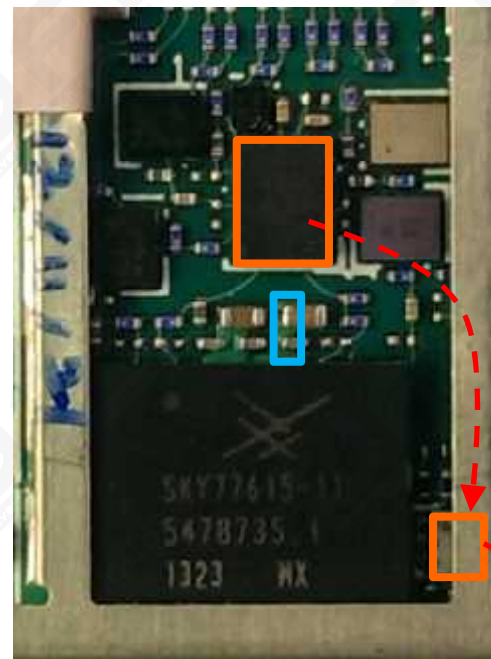
Key part



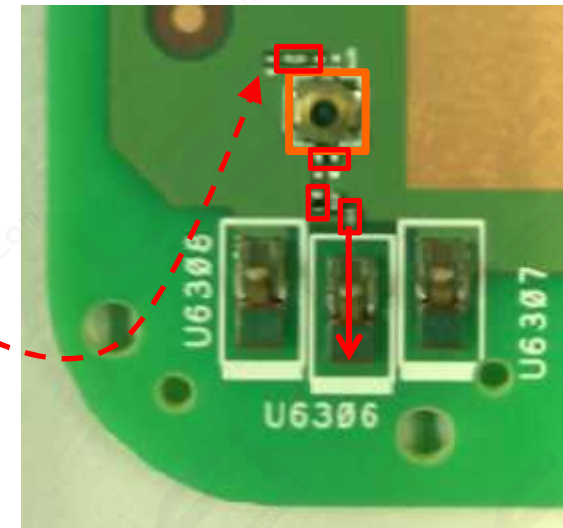
Test point



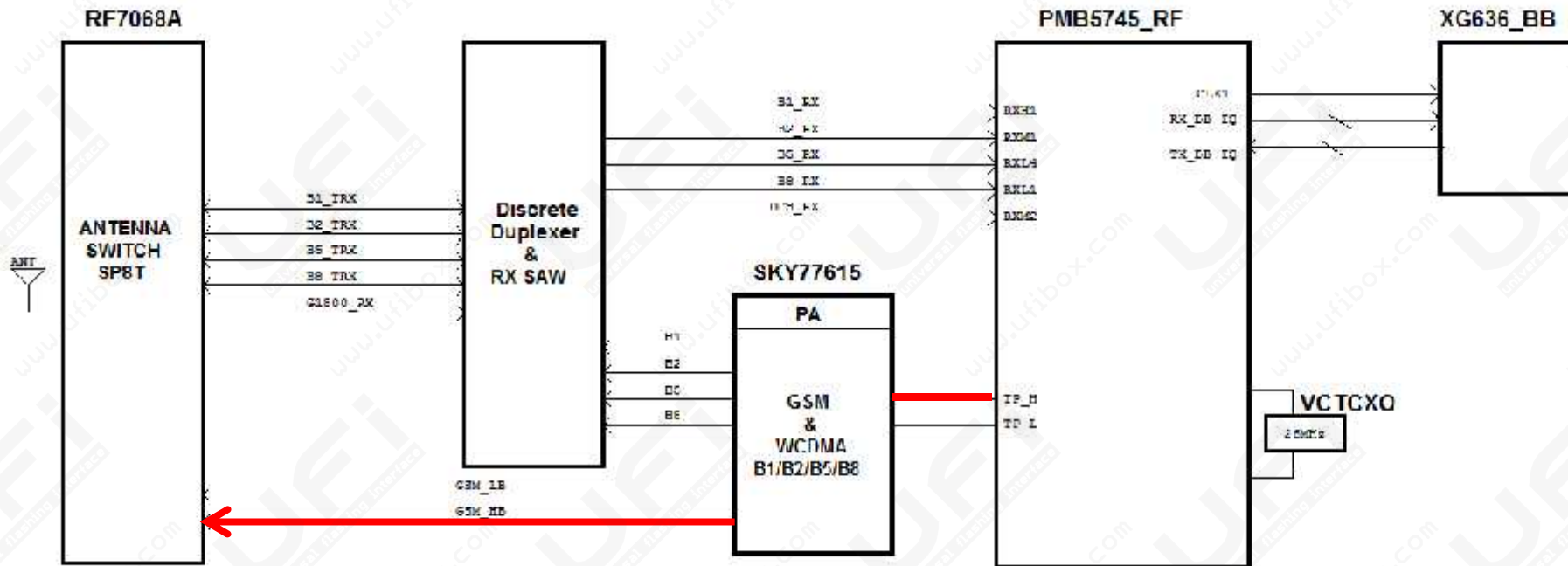
VDD point



BOT

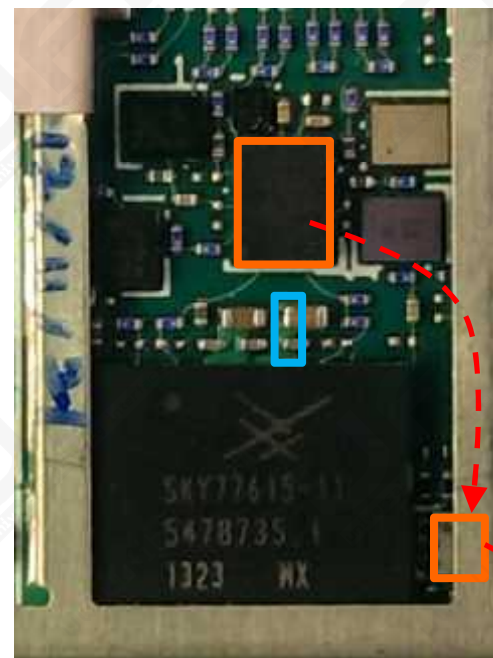
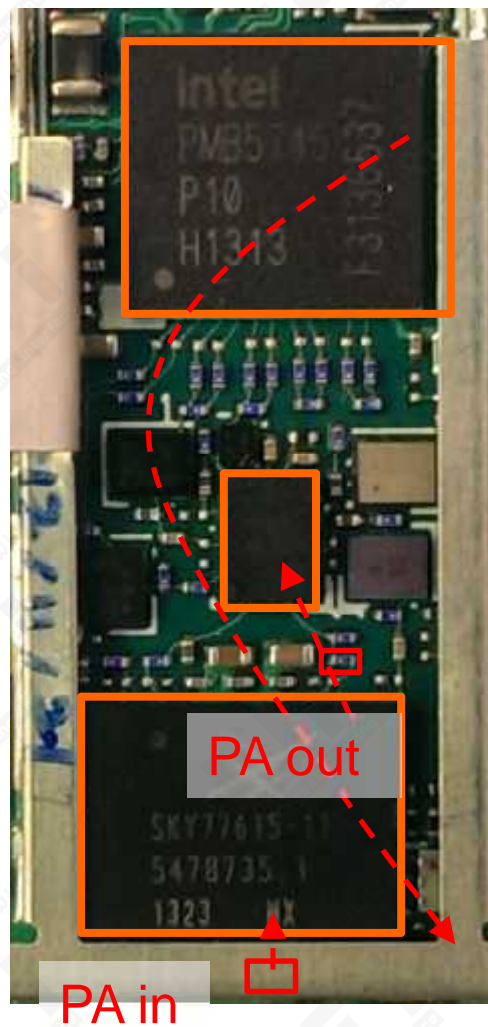


# RF Block Diagram — 2G/3G System



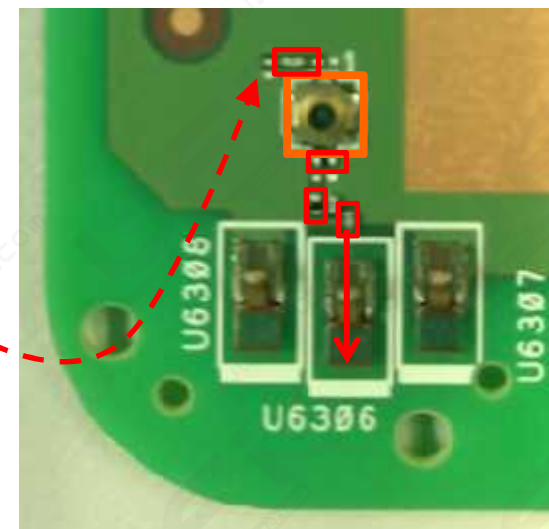


# DCS1800/PCS1900 Tx Path



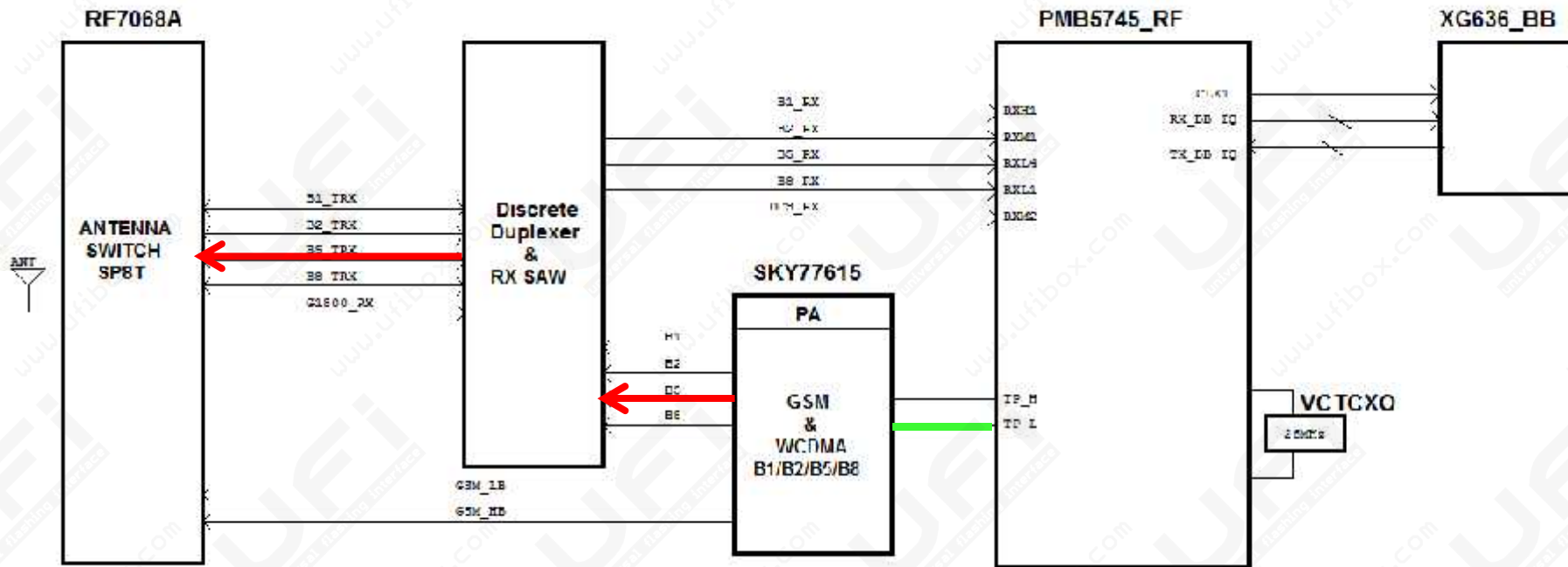
Key part ☐  
Test point ☐  
VDD point ☐

BOT

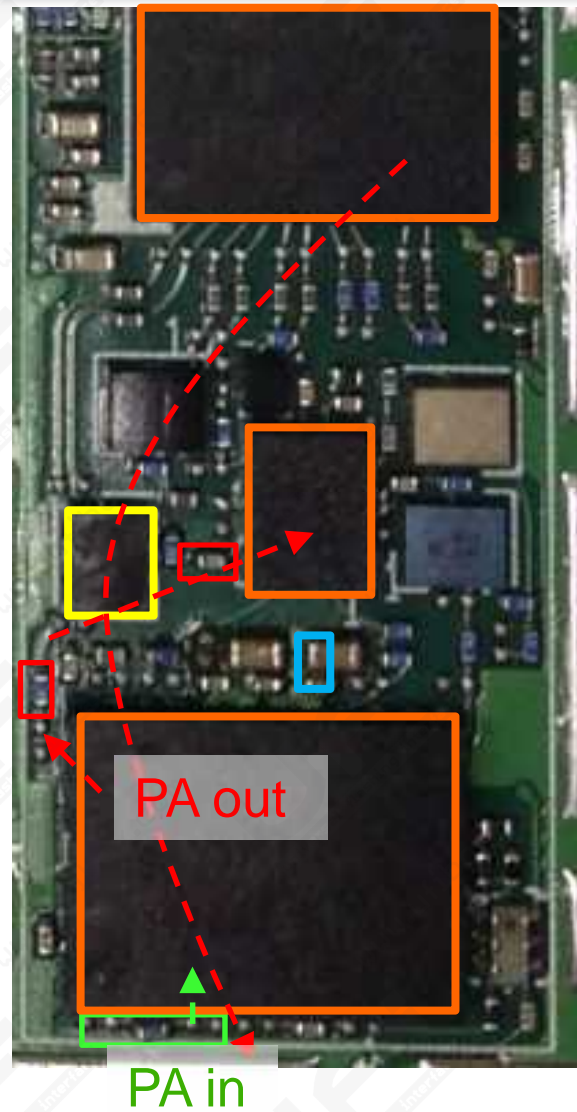




# RF Block Diagram — 2G/3G System



# Band5 Tx Path



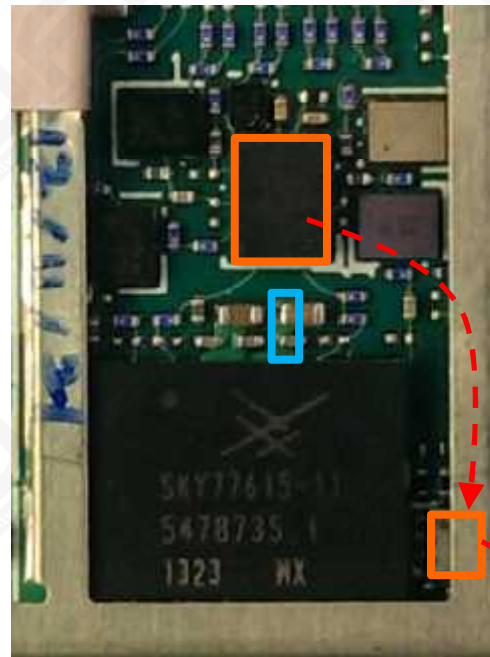
Key part



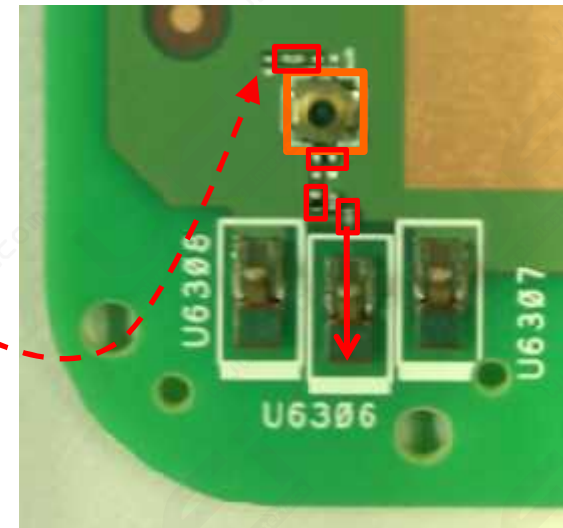
Test point



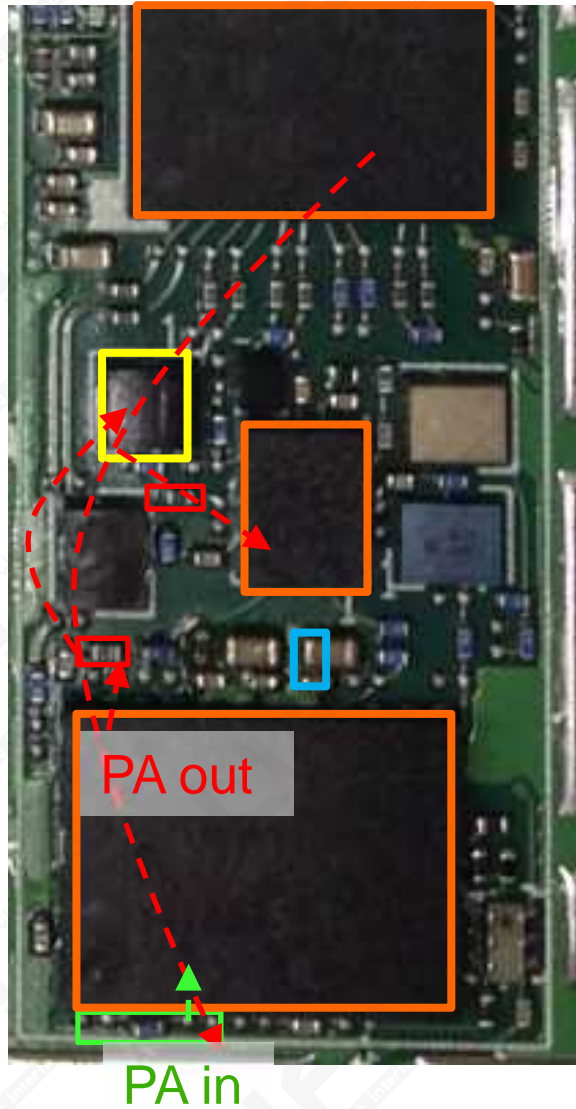
VDD point



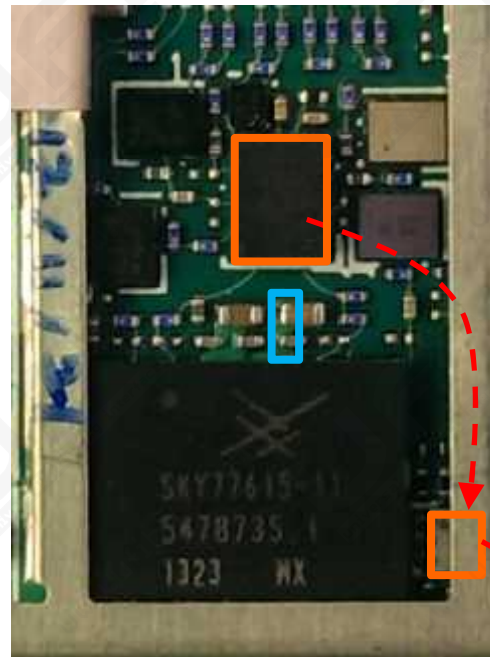
BOT



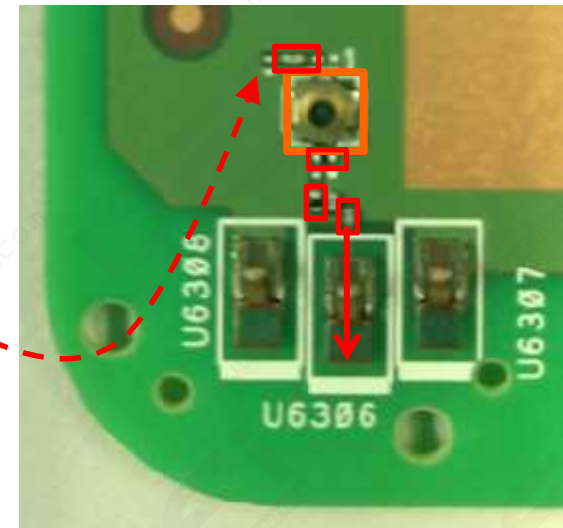
# Band8 Tx Path



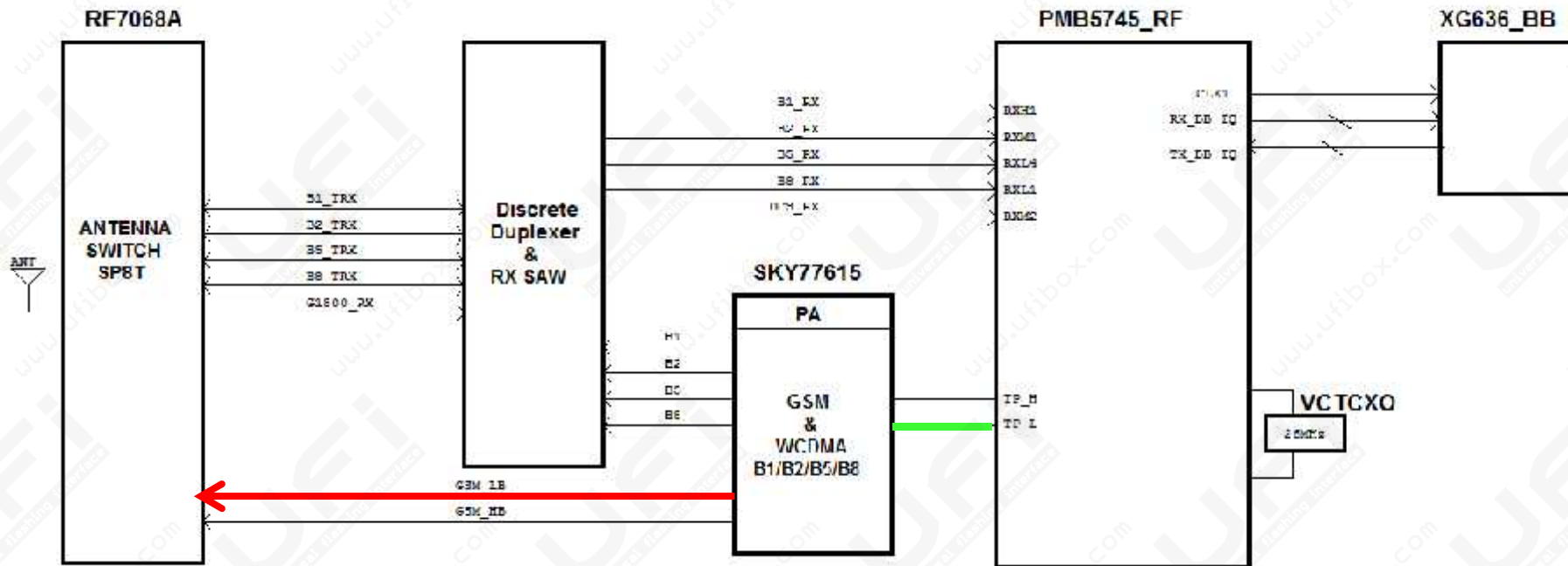
- |            |                                                                                     |
|------------|-------------------------------------------------------------------------------------|
| Key part   |  |
| Test point |  |
| VDD point  |  |



BOT

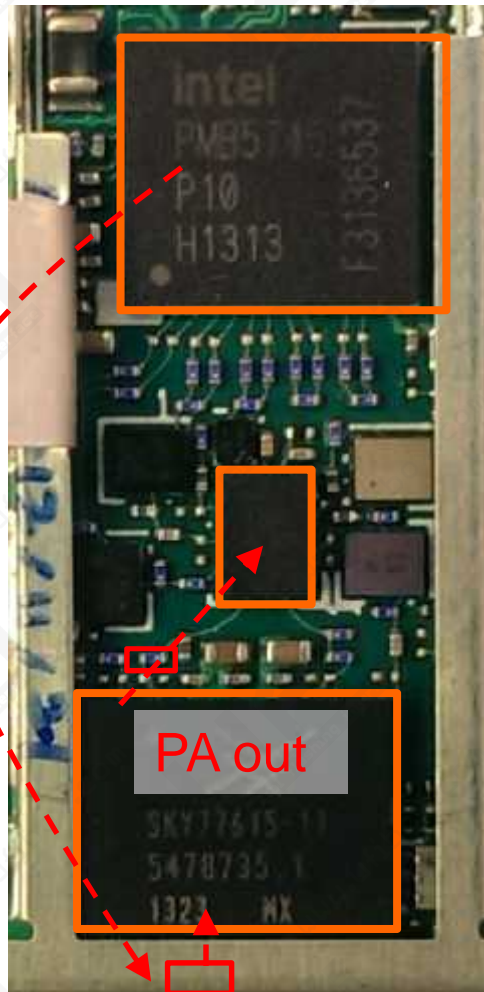


# RF Block Diagram — 2G/3G System

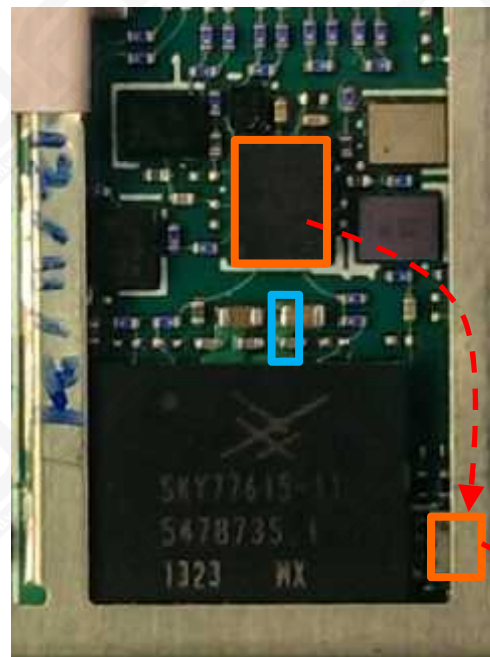




# EGSM900/GSM850 Tx Path



PA in



Key part



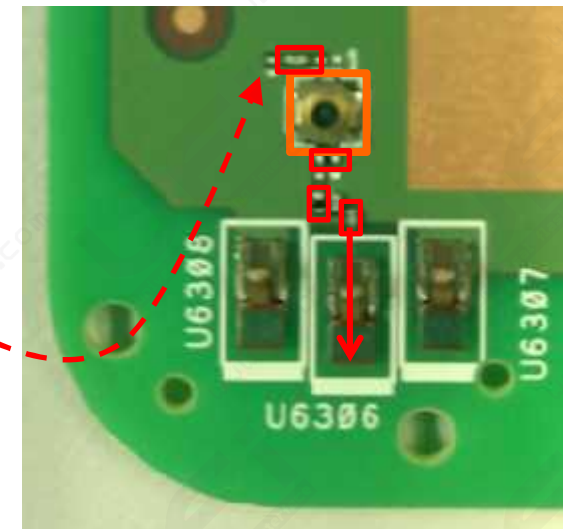
Test point



VDD point

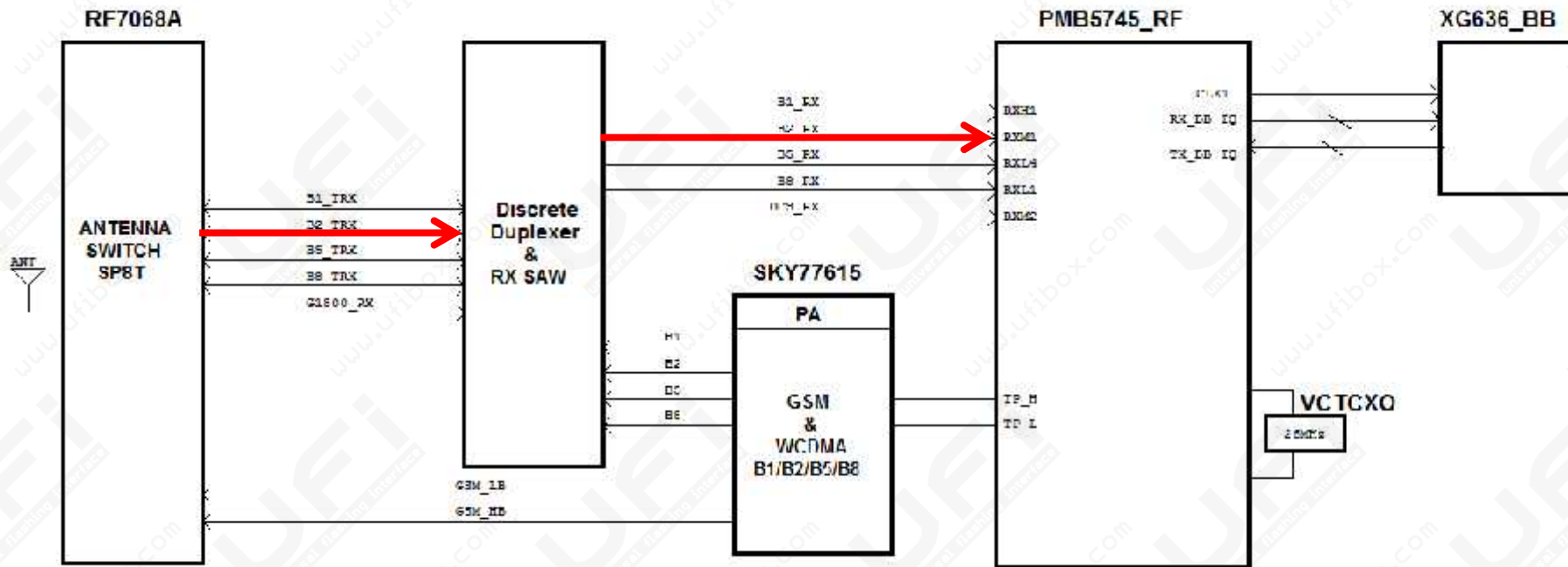


BOT





# RF Block Diagram — 2G/3G System



RX: B2 & PCS ; B5 & GSM850 ; B8 & EGSM900

# Band1 Rx Path

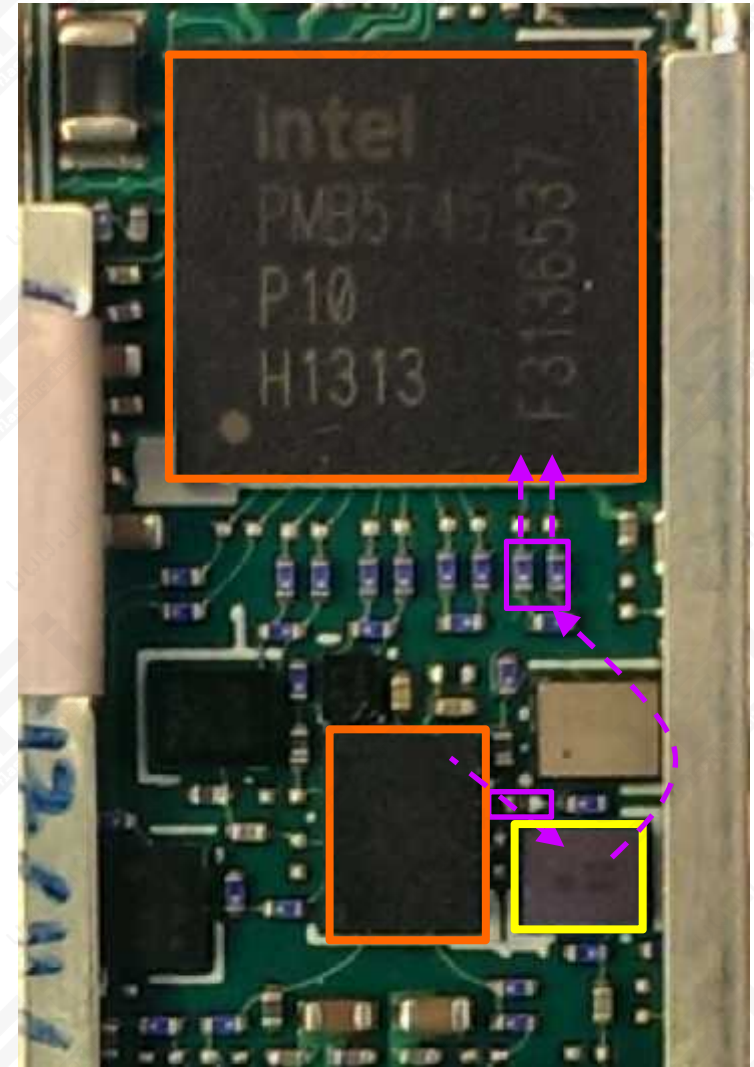
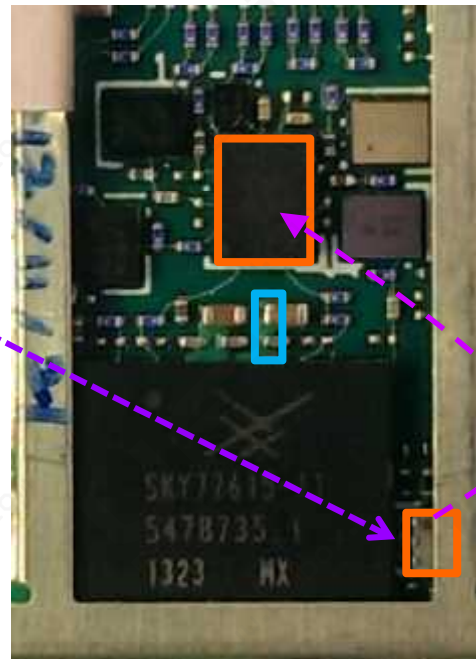
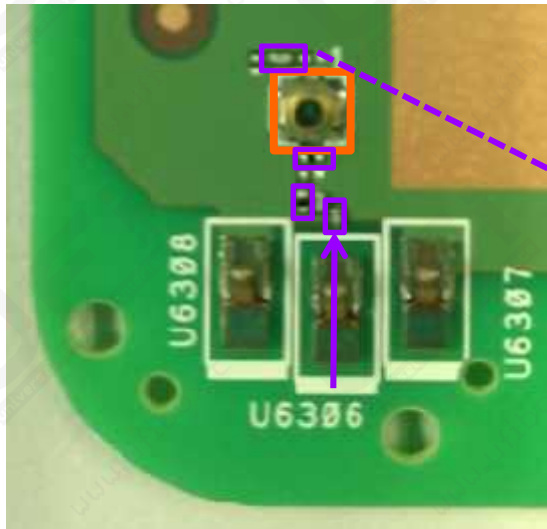
Key part



Test point



BOT



## Band2/PCS1900 Rx Path

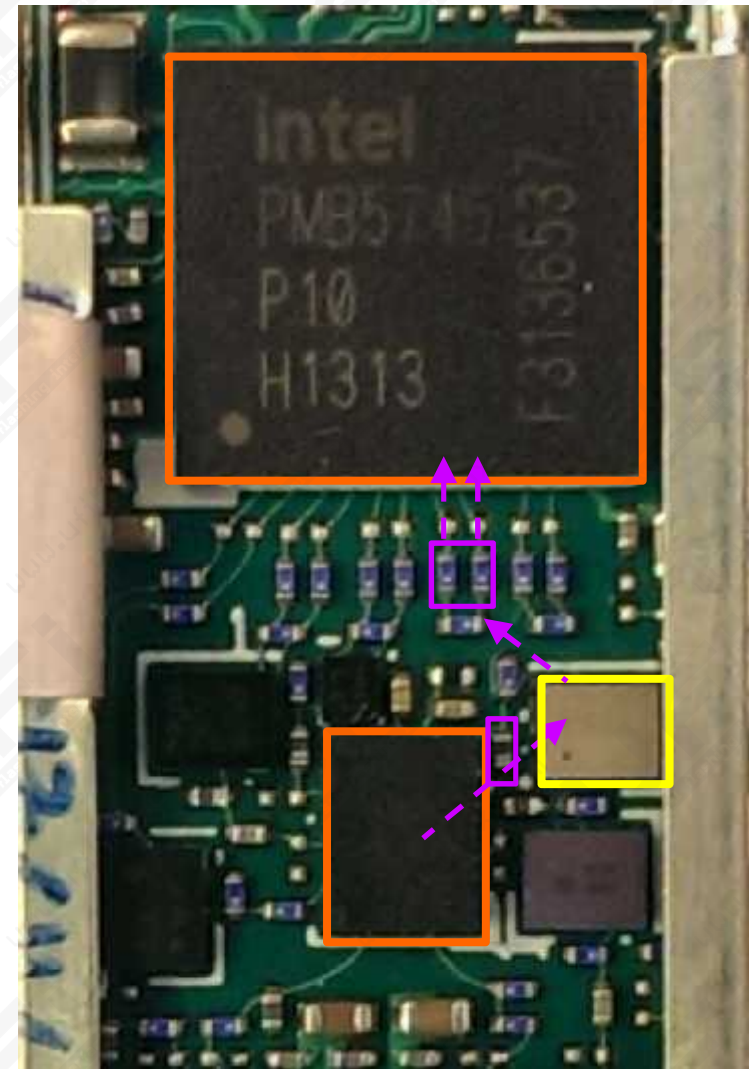
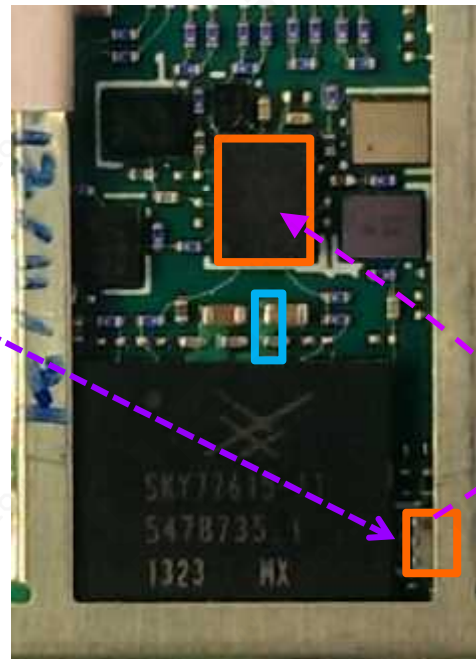
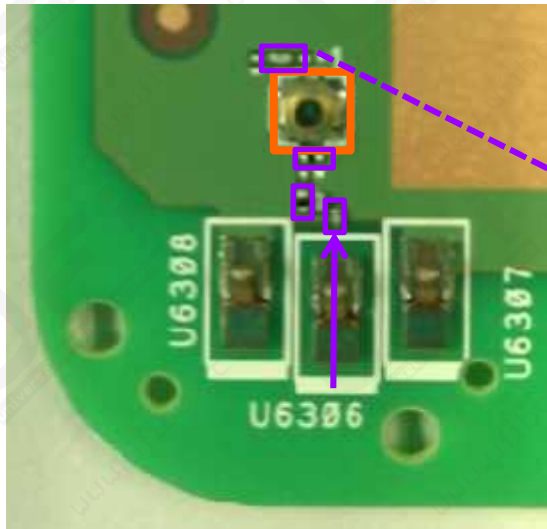
Key part



Test point



BOT



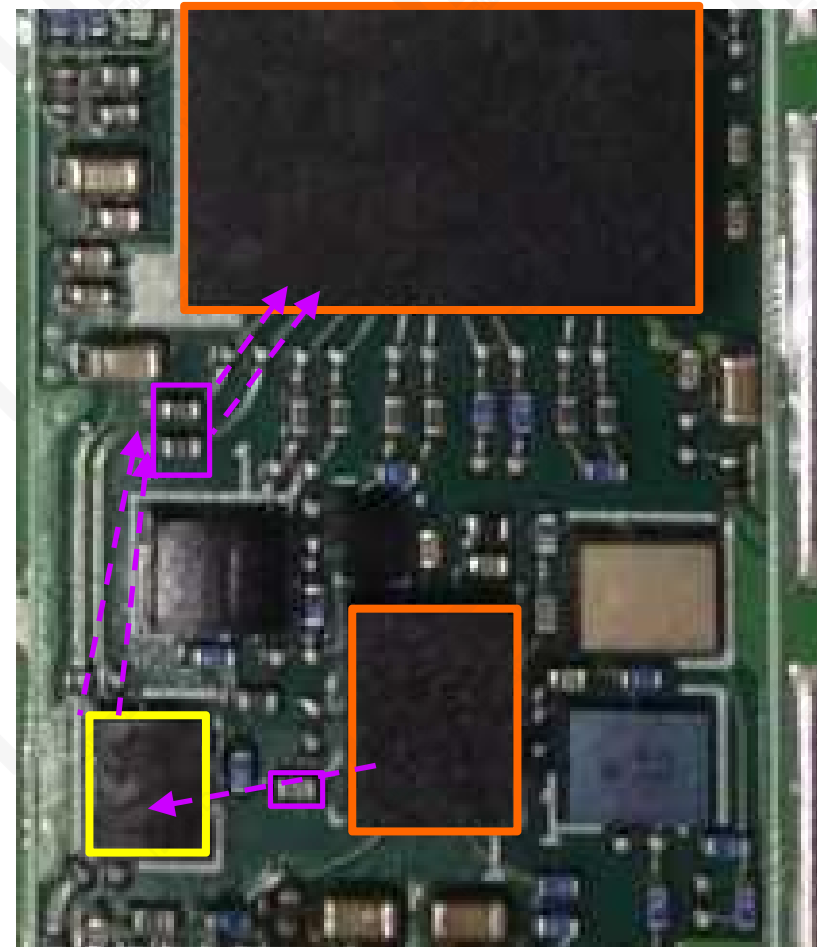
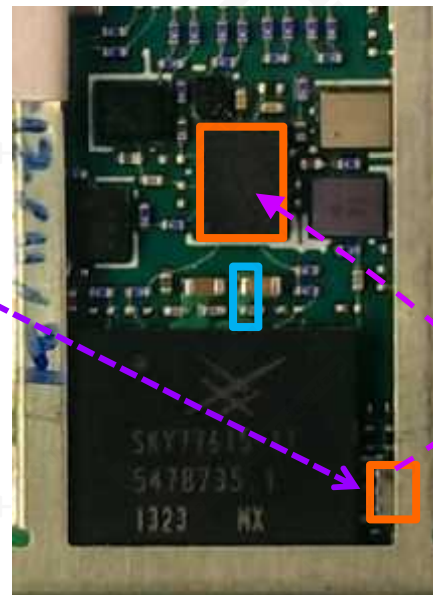
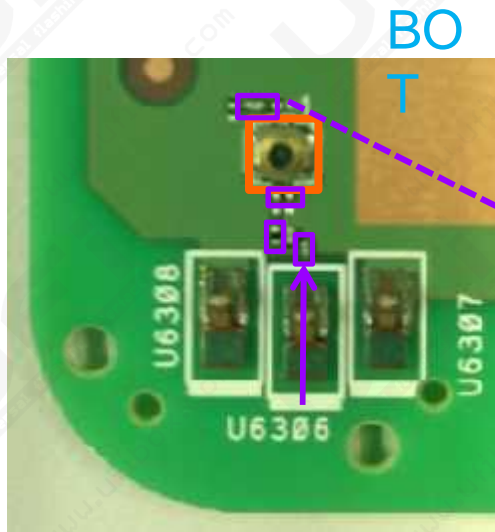


# Band5/GSM850 Rx Path

Key part



Test point

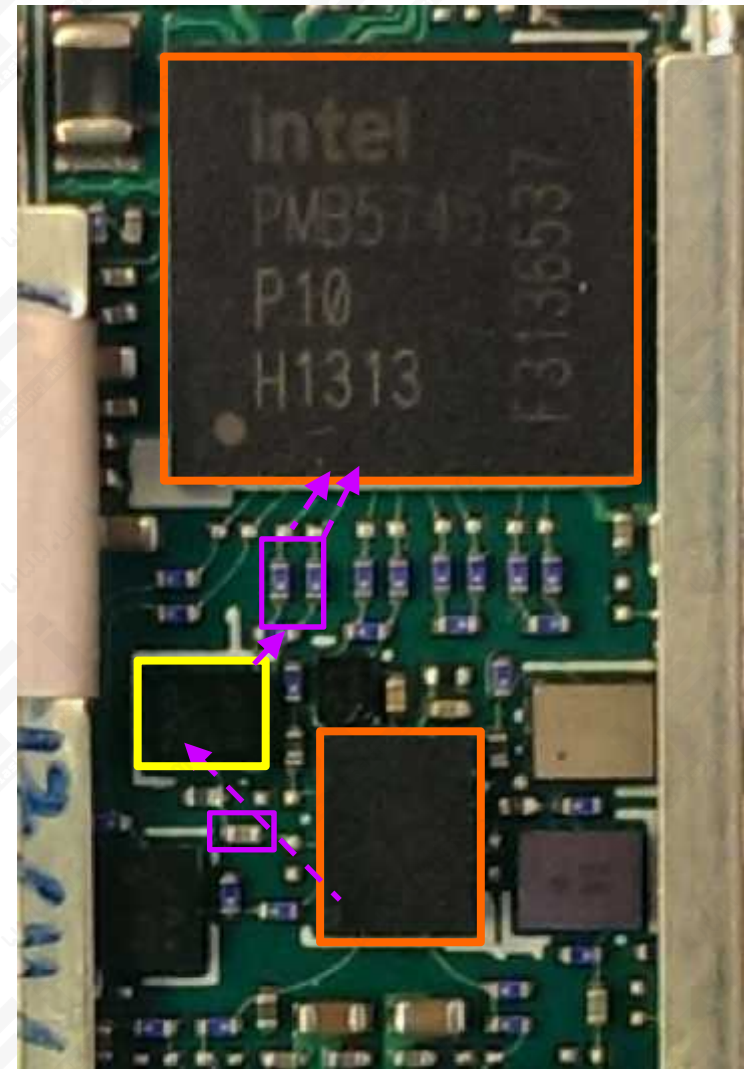
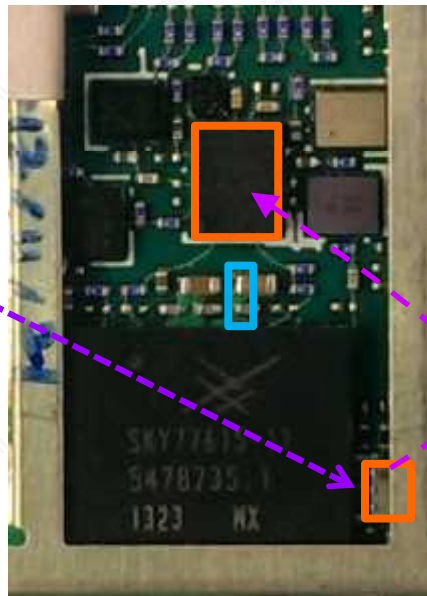
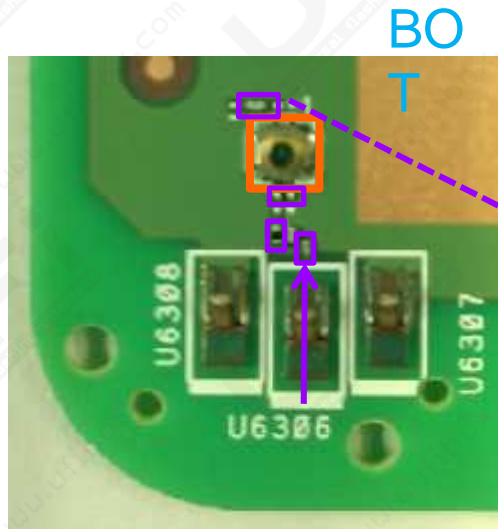


# Band8/EGSM900 Rx Path

Key part



Test point



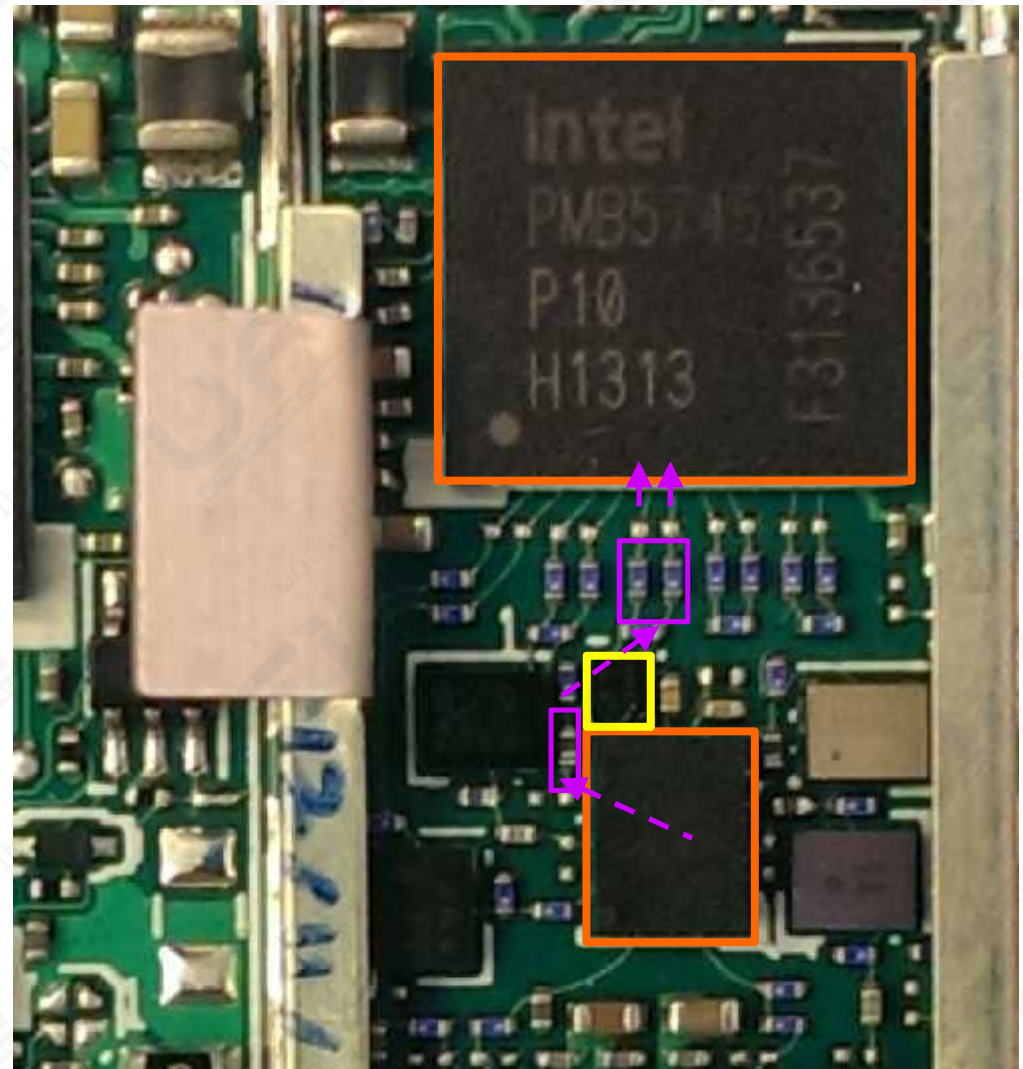
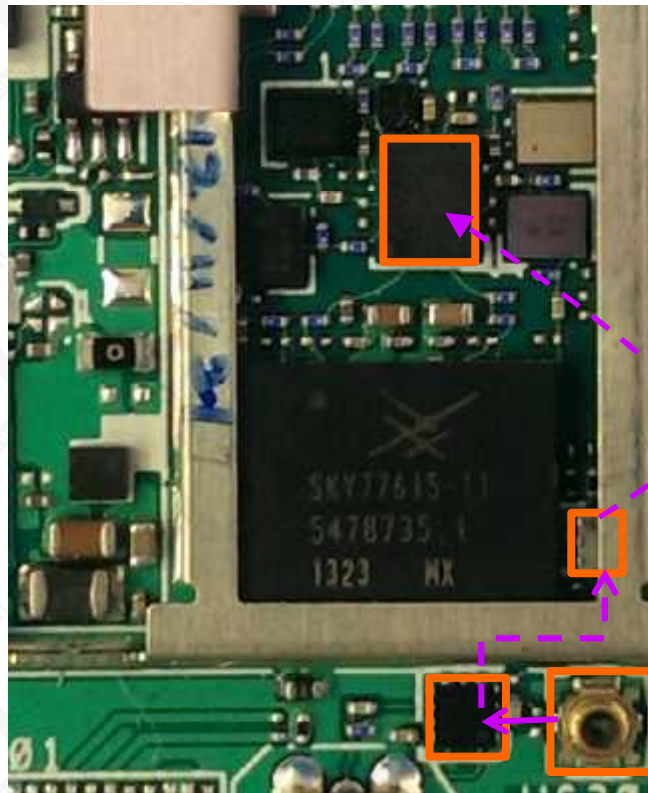


# DCS1800 Rx Path

Key part



Test point

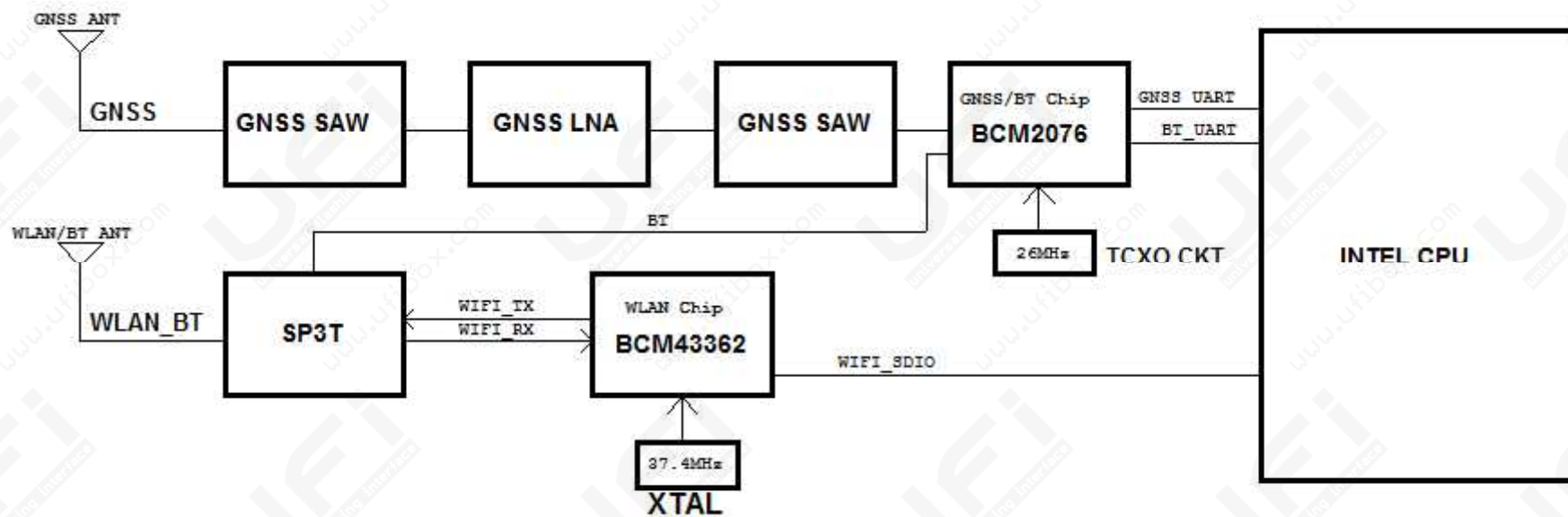


# Outline

---

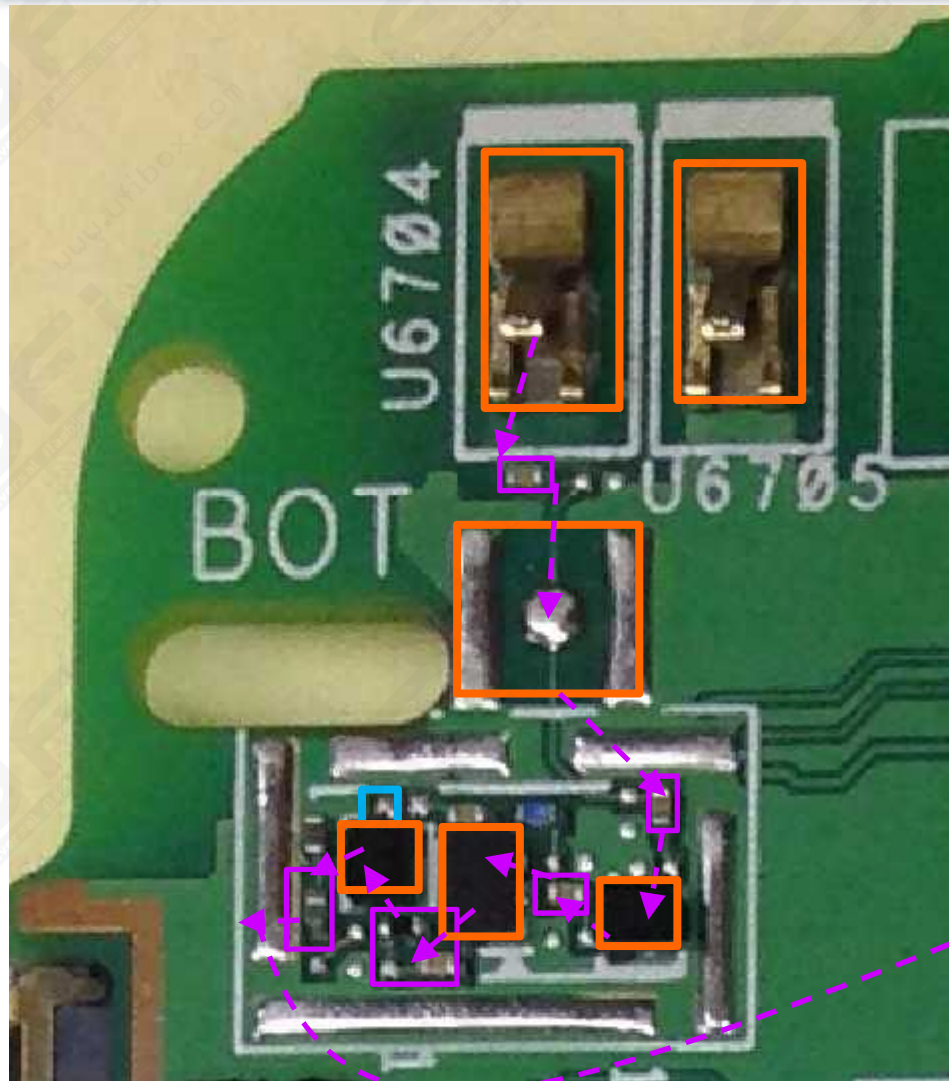
- Repair and Test Environment (\*)
- RF Block Diagram
- Key components location
- RF Tx /Rx Path
  - GSM and WCDMA Tx Path
  - GSM and WCDMA Rx Path
- GSM and WCDMA Tx/Rx fail analysis
- GPS RF Path
- BT/WiFi RF Path
- GPS and BT/WiFi BL Tx/Rx fail analysis
- Antenna & Spring Location

# RF Block Diagram — GPS/BT/WiFi





# GPS Rx Path



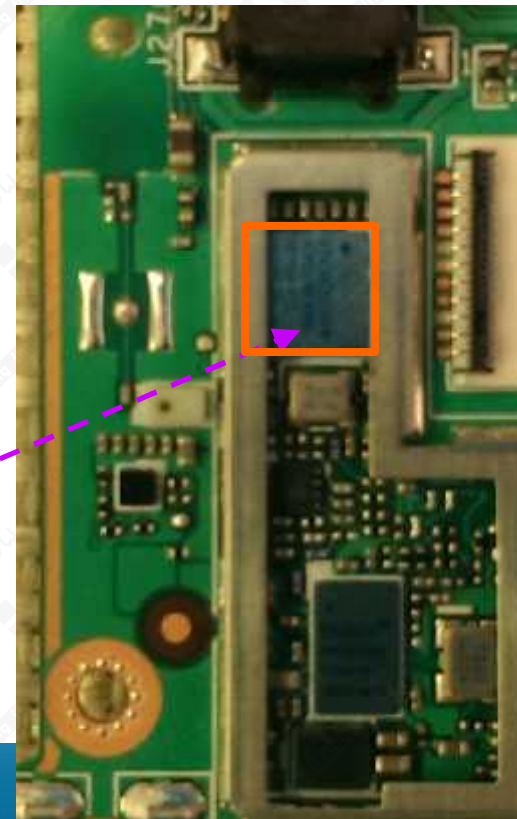
Key part



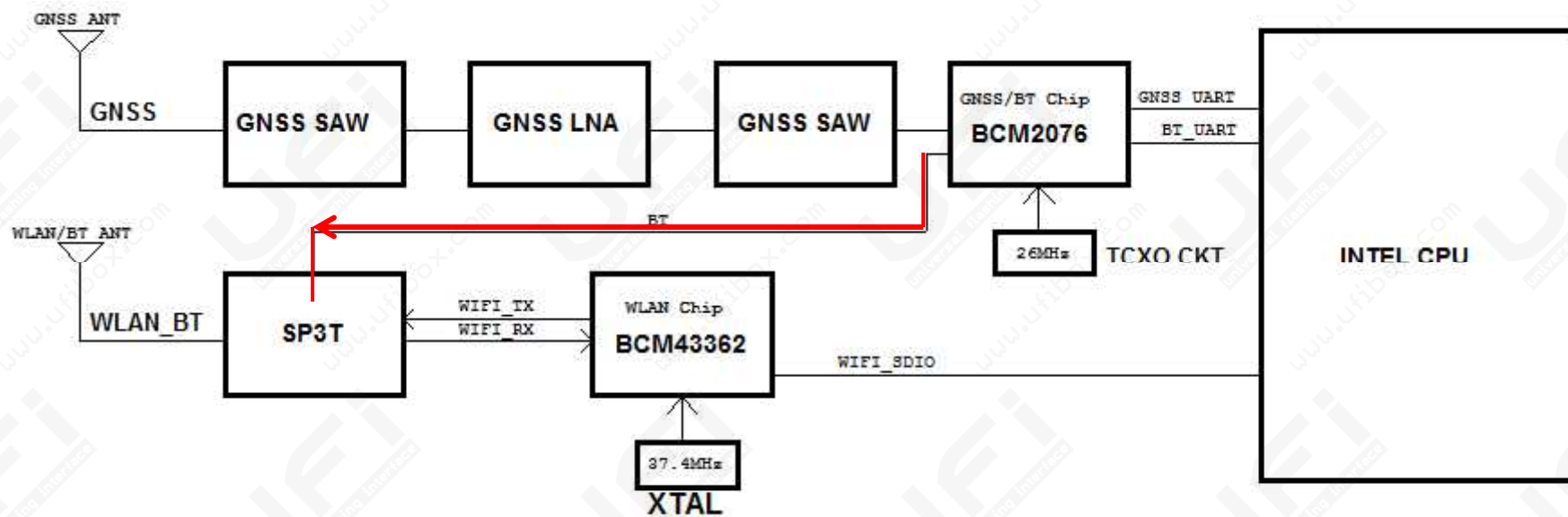
Test point



VDD point



# RF Block Diagram — GPS/BT/WiFi



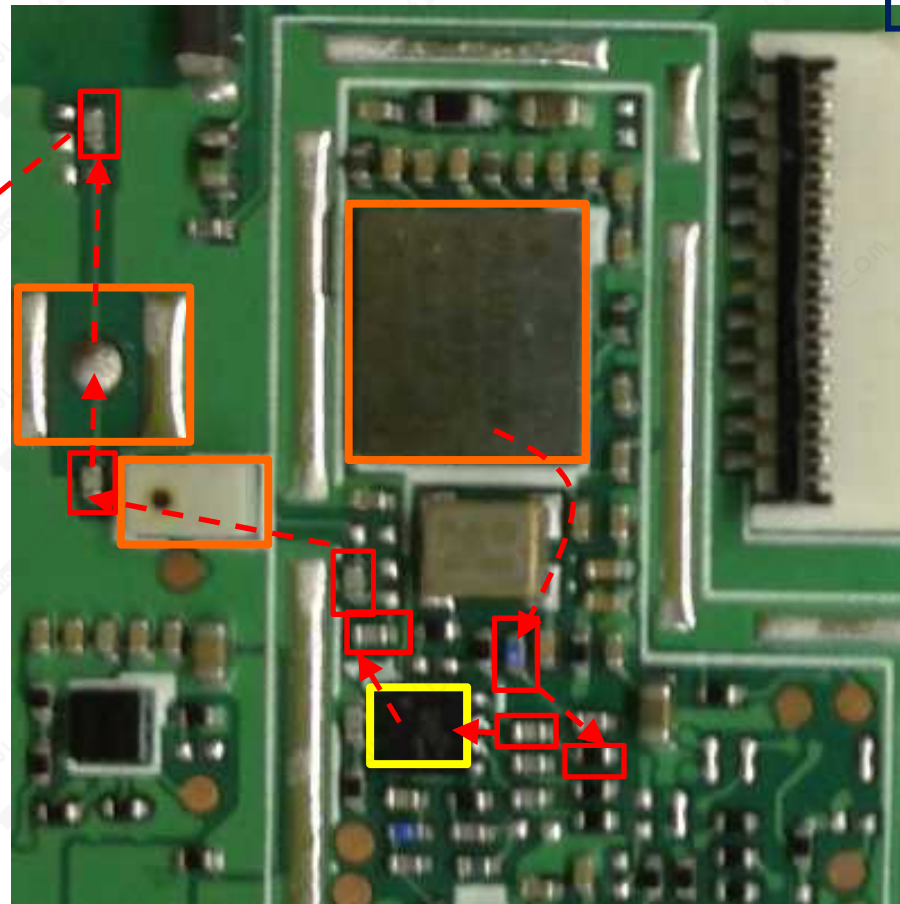


# BT RF Path

BOT



TOP



Key part

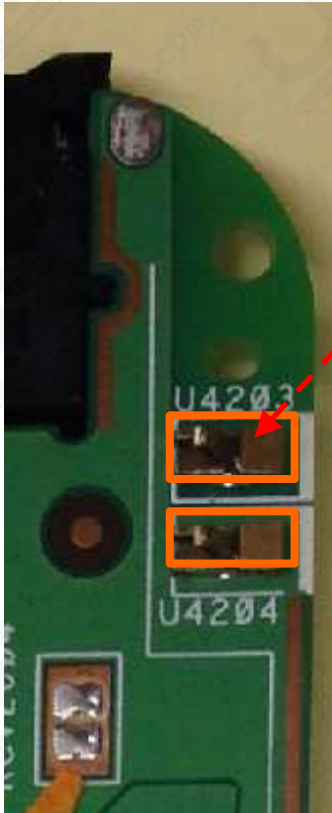


Test point

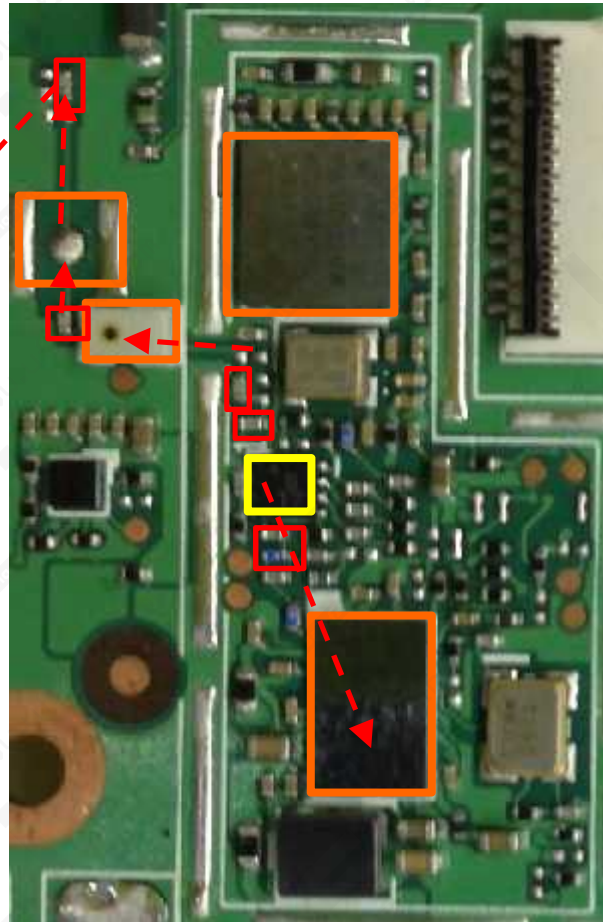


# WiFi TX RF Path

BOT



TOP



Key part

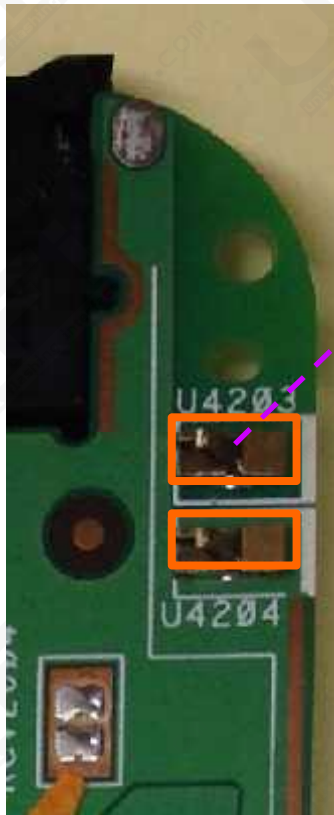


Test point

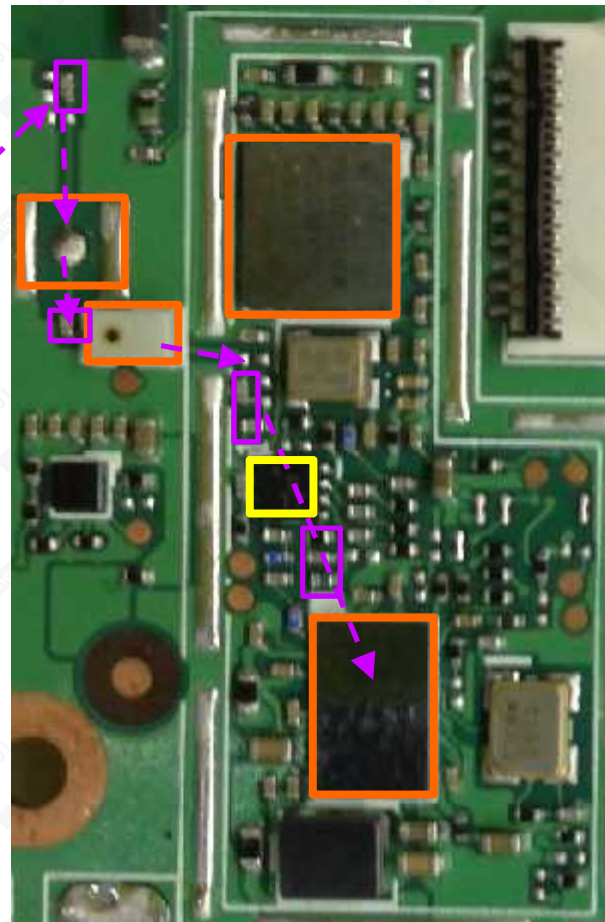


# WiFi RX RF Path

BOT



TOP



Key part



Test point





## Antenna & Spring Location



GPS Antenna



WiFi/BT Antenna

2/3G Phone Antenna



---

[www.ufibox.com](http://www.ufibox.com)