



47 CFR PART 15B

TEST REPORT

Of

HSDPA USB Modem

Trade Name: Alcatel
Brand Name: Alcatel
Model Name: One Touch X080A
Report No.: SZ10050072E01
FCC ID.: RAD129

prepared for

TCT Mobile Limited

4/F, South Building, No.2966, Jinke Road, Zhangjiang High-Tech Park, Pudong, Shanghai, 201203,
P.R.China

prepared by
Shenzhen Electronic Product Quality Testing Center

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LAB CODE 20081223-00

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| Change History | | |
|----------------|---------------|-------------------|
| Issue | Date | Reason for change |
| 1.0 | June 11, 2010 | First edition |
| | | |

1. TEST CERTIFICATION

Equipment under Test: HSDPA USB Modem

Trade Name: Alcatel
Brand Name: Alcatel
Model Name: One Touch X080A
FCC ID: RAD129
Applicant: TCT Mobile Limited
4/F, South Building, No.2966, Jinke Road, Zhangjiang High-Tech Park,
Pudong, Shanghai, 201203, P.R.China
Manufacturer: TCL Mobile Communication Co., LTD.
No. 23 Zone, Zhongkai High-Technology Development Zone, Huizhou,
Guangdong, 516006, China

Emission Designator 300KGXW, 4M20F9W
Test Standards: 47 CFR Part 15 Subpart B

Test Date(s): May 20, 2010 - June 04, 2010

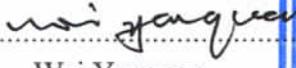
Test Result: PASS

* We Hereby Certify That:

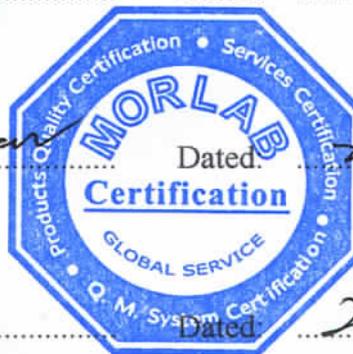
The equipment under test was tested by Shenzhen Electronic Product Quality Testing Center Morlab Laboratory. The test data, data evaluation, test procedures and equipment configurations shown in this report were made in accordance with the requirement of related FCC rules.

The test results of this report only apply for the tested sample equipment identified above. The test report shall be invalid without all the signatures of the test engineer, the reviewer and the approver.

Tested by:  Dated: 2010.6.11
Cao Shaodong

Reviewed by:  Dated: 2010.6.11
Wei Yanquan

Approved by:  Dated: 2010.6.11
Shu Luan



2. GENERAL INFORMATION

2.1 EUT Description

EUT Type HSDPA USB Modem
Model Name..... One Touch X080A
Serial No..... (n.a, marked #1 by test site)
Hardware Version..... Proto _05
Software Version (n,a)
Modulation Type GMSK, WCDMA
Power Supply USB of PC, 5V

Note 1: The EUT is a HSDPA USB Modem; it supports GSM 850MHz, GSM 900MHz, GSM 1800MHz, GSM 1900MHz, GPRS, EDGE, WCDMA 850MHz, WCDMA 1900MHz and HSDPA module.

Note 2: The EUT is equipped with a T-Flash card slot; equipped with a special port which can be connected to the ancillary equipments supplied by the manufacturer e.g. the AC Adapter and the USB Adapter Cable.

Note 3: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

2.2 Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 15 Subpart B:

| No. | Identity | Document Title |
|-----|-------------------------------------|-------------------------|
| 1 | 47 CFR Part 15 (10-1-05 Edition) | Radio Frequency Devices |

Test detailed items/section required by FCC rules and results are as below:

| No. | Section | Description | Result |
|-----|---------|--------------------|--------|
| 1 | 15.107 | Conducted Emission | PASS |
| 2 | 15.109 | Radiated Emission | PASS |

NOTE:

The tests were performed according to the method of measurements prescribed in ANSI C63.4 2003.

2.3 Facilities and Accreditations

2.3.1 Facilities

Shenzhen Electronic Product Quality Testing Center Morlab Laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L3572.

All measurement facilities used to collect the measurement data are located at Electronic Testing Building, Shahe Road, Xili, Nanshan District, Shenzhen 518055 CHINA. The test site is constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22; the FCC registration number is 741109.

2.3.2 Test Environment Conditions

During the measurement, the environmental conditions were within the listed ranges:

| | |
|-----------------------------|---------|
| Temperature (°C): | 20 - 25 |
| Relative Humidity (%): | 40 - 60 |
| Atmospheric Pressure (kPa): | 96 |

2.3.3 Measurement Uncertainty

The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in Measurement" (GUM) published by ISO.

| | |
|------------------------------------|--------|
| Uncertainty of Conducted Emission: | ±1.8dB |
| Uncertainty of Radiated Emission: | ±3.1dB |

3. TEST CONDITIONS SETTING

3.1 Test Mode

1. GSM Test Mode

- (1) The first test mode (GSM-850MHz)

The EUT configuration of the emission tests is EUT + PC.

During the measurement of Traffic operating mode, a communication link was established between the EUT and a System Simulator (SS). The EUT operated at GSM 850MHz mid ARFCN (190) and maximum output power (level 5).

- (2) The second test mode (GPRS-850MHz)

The EUT configuration of the emission tests is EUT + PC.

In this test mode, a GPRS link was established between the EUT and a System Simulator (SS); data was transmitted between EUT and System Simulator (SS), and maintained during the measurement.

- (3) The third test mode (EDGE-850MHz)

The EUT configuration of the emission tests is EUT + PC.

In this test mode, an EDGE link was established between the EUT and a System Simulator (SS); data was transmitted between EUT and System Simulator (SS), and maintained during the measurement.

- (4) The fourth test mode (GSM-1900MHz)

The EUT configuration of the emission tests is EUT + PC.

During the measurement of Traffic operating mode, a communication link was established between the EUT and a System Simulator (SS). The EUT operated at GSM 1900MHz mid ARFCN (661) and maximum output power (level 0).

- (5) The fifth test mode (GPRS-1900MHz)

The EUT configuration of the emission tests is EUT + PC.

In this test mode, a GPRS link was established between the EUT and a System Simulator (SS); data was transmitted between EUT and System Simulator (SS), and maintained during the measurement.

- (6) The sixth test mode (EDGE-1900MHz)

The EUT configuration of the emission tests is EUT + PC.

In this test mode, an EDGE link was established between the EUT and a System Simulator (SS); data was transmitted between EUT and System Simulator (SS), and maintained during the measurement.

NOTE: All test modes are performed, only the worst cases are recorded in this report.

2. WCDMA Test Mode

- (1) The first test mode (WCDMA-850MHz)

The EUT configuration of the emission tests is EUT + PC.

During the measurement of Traffic operating mode, a communication link was established between the EUT and a System Simulator (SS). The EUT operated at WCDMA 850MHz mid channel (4175) and maximum output power.

(2) The second test mode (850MHz-HSDPA)

The EUT configuration of the emission tests is EUT + PC.

In this test mode, a HSDPA link was established between the EUT and a System Simulator (SS); data was transmitted between EUT and System Simulator (SS), and maintained during the measurement.

(3) The third test mode (WCDMA-1900MHz)

The EUT configuration of the emission tests is EUT + PC.

During the measurement of Traffic operating mode, a communication link was established between the EUT and a System Simulator (SS). The EUT operated at WCDMA 1900MHz mid channel (9400) and maximum output power.

(4) The fourth test mode (1900MHz-HSDPA)

The EUT configuration of the emission tests is EUT + PC.

In this test mode, a HSDPA link was established between the EUT and a System Simulator (SS); data was transmitted between EUT and System Simulator (SS), and maintained during the measurement.

NOTE: All test modes are performed, only the worst cases are recorded in this report.

2. USB Test Mode

(1) The first test mode (USB)

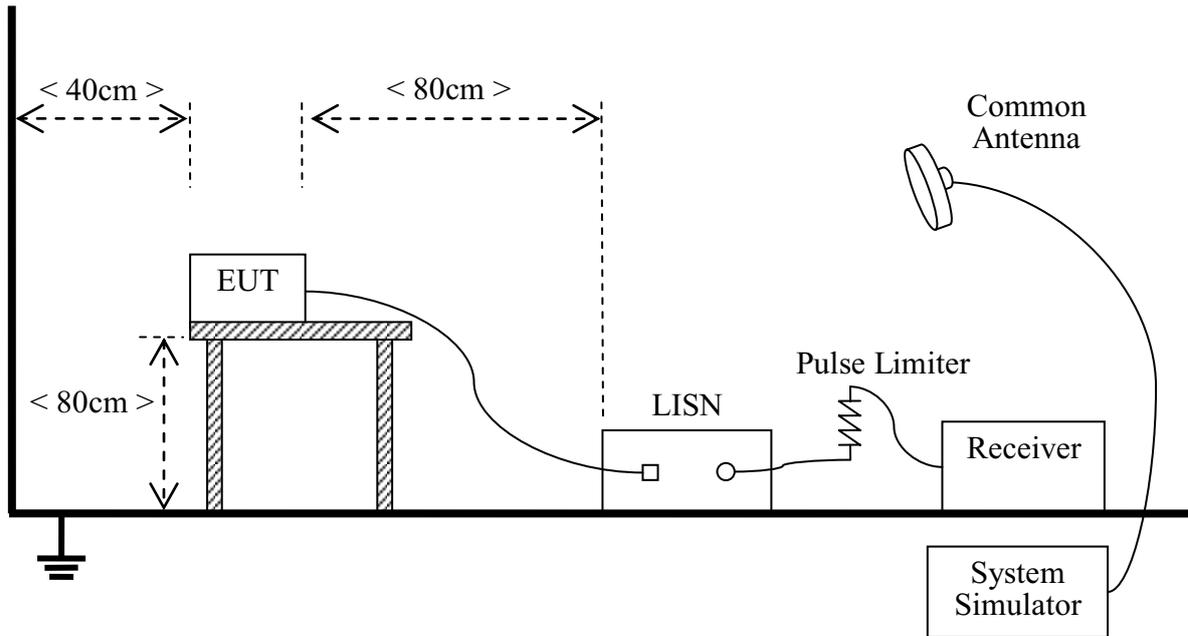
The EUT configuration of the emission tests is TransFlash Card + EUT + PC.

In this test mode, the EUT with a TransFlash Card embedded is connected with a PC. During the measurement, the EUT worked as a mass-storage.

3.2 Test Setup and Equipments List

3.2.1 Conducted Emission

A. Test Setup:



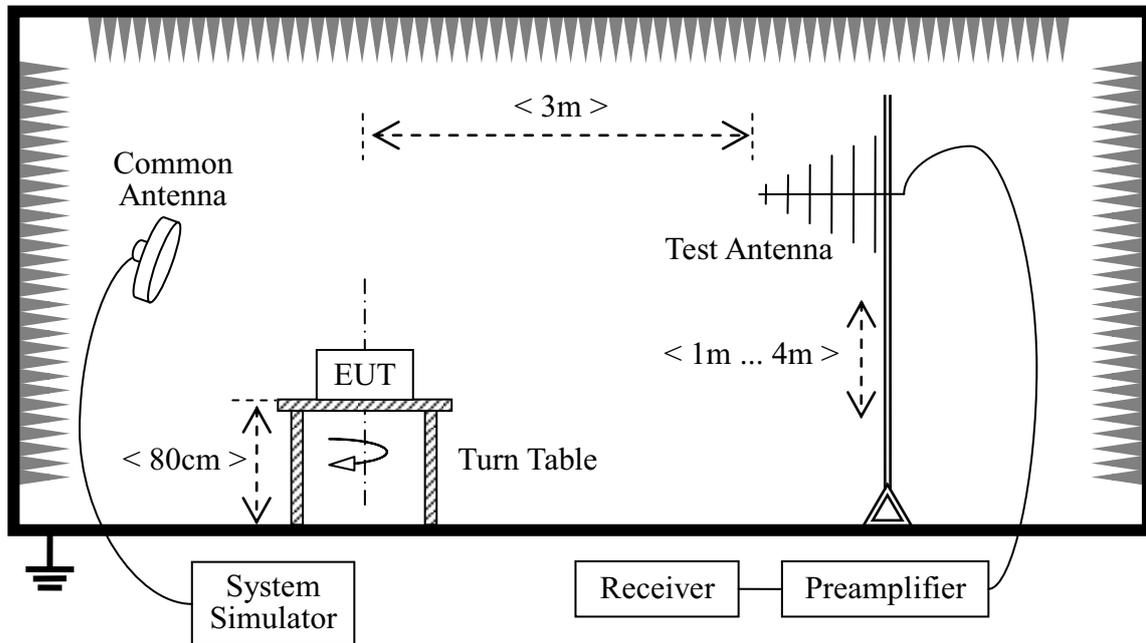
The EUT is placed on a 0.8m high insulating table, which stands on the grounded conducting floor, and keeps 0.4m away from the grounded conducting wall. The EUT is connected to the power mains through a LISN which provides $50\Omega/50\mu\text{H}$ of coupling impedance for the measuring instrument. The Common Antenna is used for the call between the EUT and the System Simulator (SS). A Pulse Limiter is used to protect the measuring instrument. The factors of the whole test system are calibrated to correct the reading.

B. Equipments List:

| Description | Manufacturer | Model | Serial No. | Cal. Date | Cal. Due |
|----------------------|--------------|-------------|------------|-----------|----------|
| Receiver | Agilent | E7405A | US44210471 | 2009.09 | 1year |
| LISN | Schwarzbeck | NSLK 8127 | 812744 | 2009.09 | 1year |
| Pulse Limiter (20dB) | Schwarzbeck | VTSD 9561-D | 9391 | (n.a.) | (n.a.) |
| System Simulator | Agilent | E5515C | GB43130131 | 2009.09 | 1year |
| Personal Computer | IBM | IBM_T20 | (n.a.) | (n.a.) | (n.a.) |
| Bluetooth-Headset | Nokia | HS-36W | (n.a.) | (n.a.) | (n.a.) |
| T-Flash Card | SanDisk | 256MB | (n.a.) | (n.a.) | (n.a.) |

3.2.2 Radiated Emission

C. Test Setup:



The test is performed in a 3m Semi-Anechoic Chamber; the antenna factor, cable loss and so on of the site (factors) is calculated to correct the reading. The EUT is placed on a 0.8m high insulating Turn Table, and keeps 3m away from the Test Antenna, which is mounted on a variable-height antenna master tower. The Common Antenna is used for the call between the EUT and the System Simulator (SS).

D. Equipments List:

| Description | Manufacturer | Model | Serial No. | Cal. Date | Cal. Due |
|-----------------------|--------------|------------|------------|-----------|----------|
| Receiver | Agilent | E7405A | US44210471 | 2009.09 | 1year |
| Semi-Anechoic Chamber | Albatross | 9m*6m*6m | (n.a.) | 2009.09 | 2year |
| Test Antenna - Bi-Log | Schwarzbeck | VULB 9163 | 9163-274 | 2009.09 | 1year |
| Test Antenna - Horn | Schwarzbeck | BBHA 9120C | 9120C-384 | 2009.09 | 1year |
| System Simulator | Agilent | E5515C | GB43130131 | 2009.09 | 1year |
| Personal Computer | IBM | IBM_T20 | (n.a.) | (n.a.) | (n.a.) |
| Bluetooth-Headset | Nokia | HS-36W | (n.a.) | (n.a.) | (n.a.) |
| T-Flash Card | SanDisk | 256MB | (n.a.) | (n.a.) | (n.a.) |

4. 47 CFR PART 15B REQUIREMENTS

4.1 Conducted Emission

4.1.1 Requirement

According to FCC section 15.107, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN).

| Frequency range (MHz) | Conducted Limit (dB μ V) | |
|-----------------------|------------------------------|----------|
| | Quasi-peak | Average |
| 0.15 - 0.50 | 66 to 56 | 56 to 46 |
| 0.50 - 5 | 56 | 46 |
| 5 - 30 | 60 | 50 |

NOTE:

- The limit subjects to the Class B digital device.
- The lower limit shall apply at the band edges.
- The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50MHz.

4.1.2 Test Description

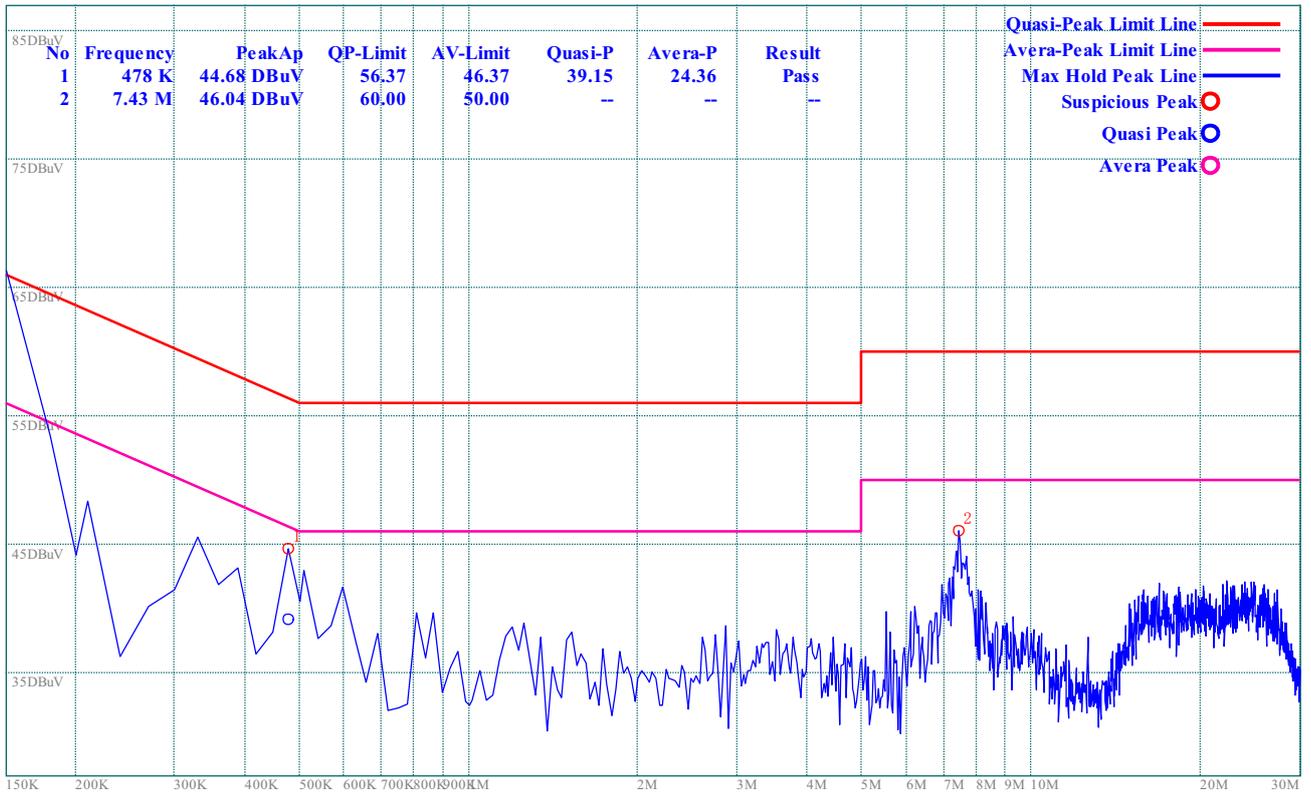
See section 3.2.1 of this report.

4.1.3 Test Result

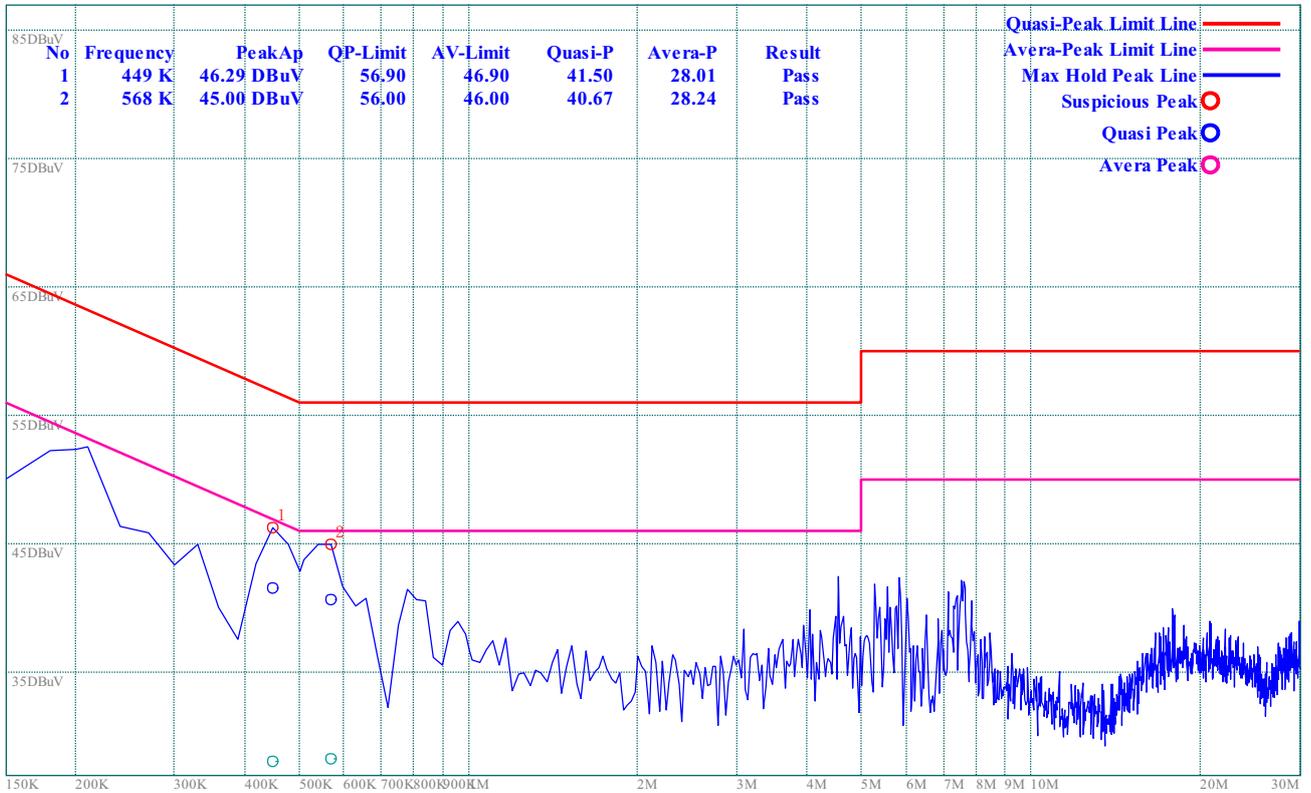
The maximum conducted interference is searched using Peak (PK), Quasi-peak (QP) and Average (AV) detectors; the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. All test modes are considered, refer to recorded points and plots below.

4.1.3.1 GSM Test Mode

A. Test Plots and Suspicious Points:



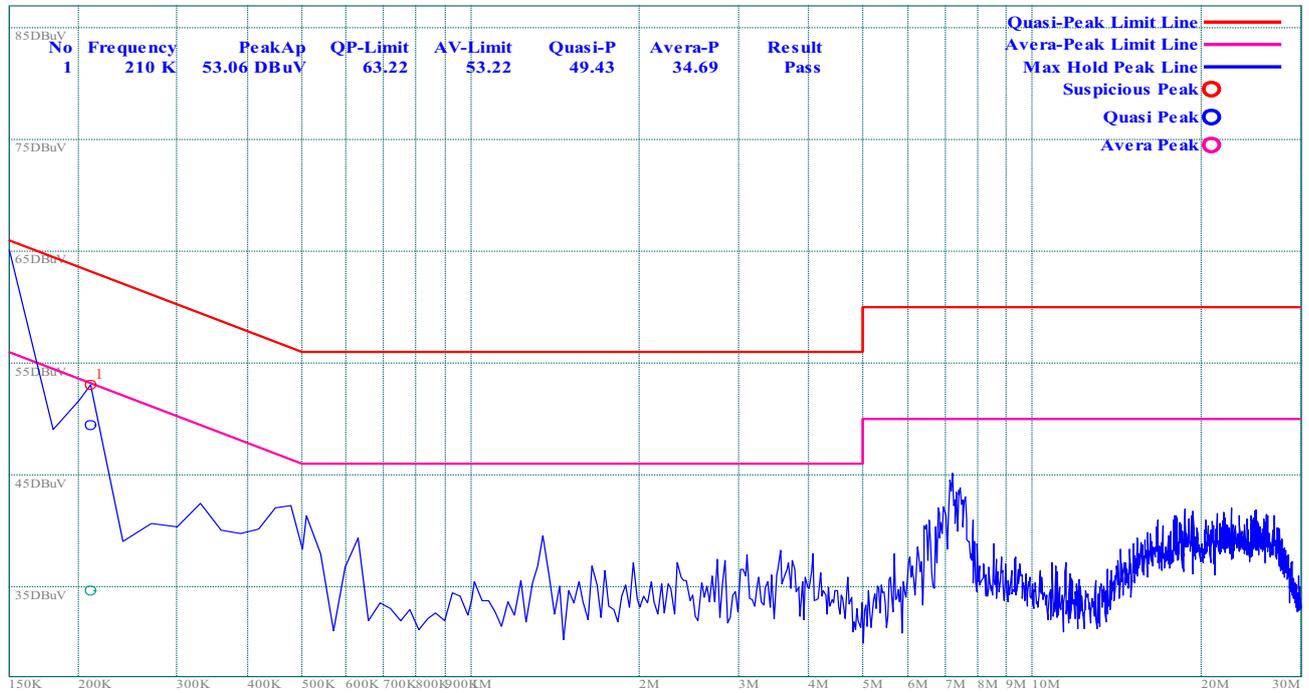
(Plot A: L Phase)



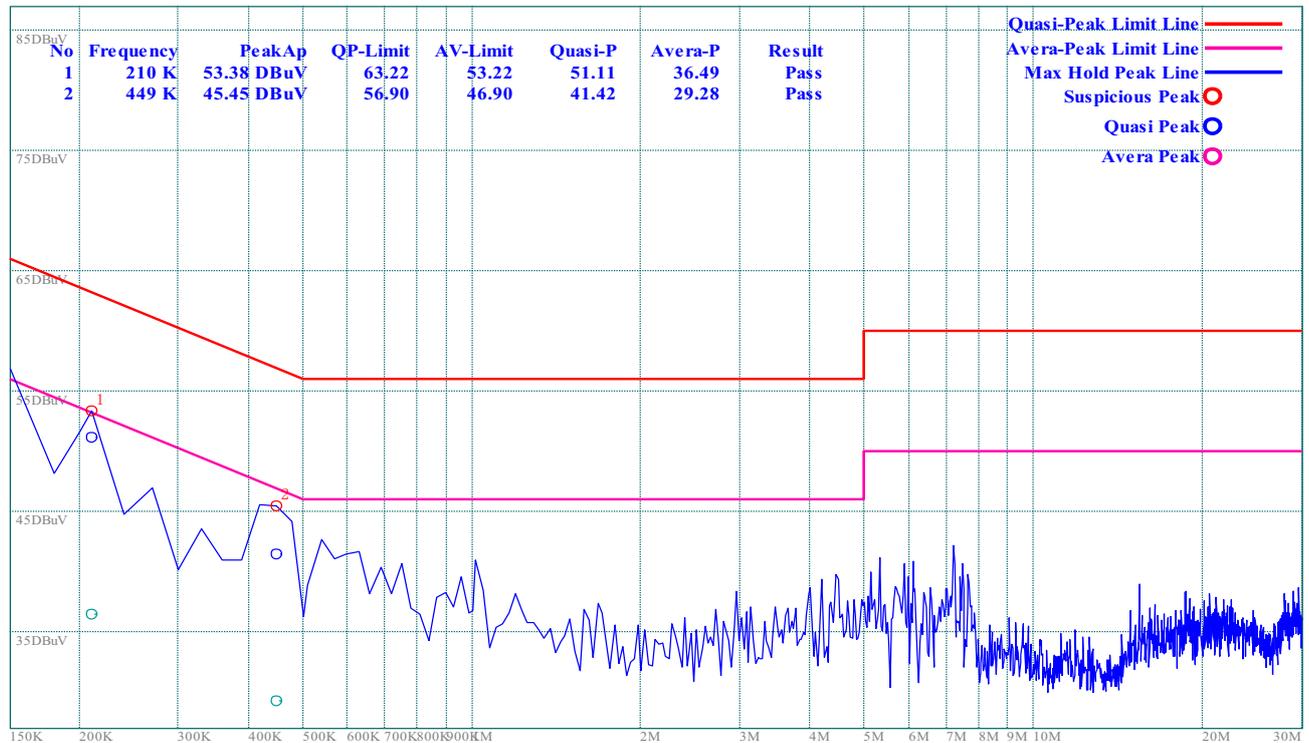
(Plot B: N Phase)

4.1.3.2 WCDMA Test Mode

Test Plots and Suspicious Points:



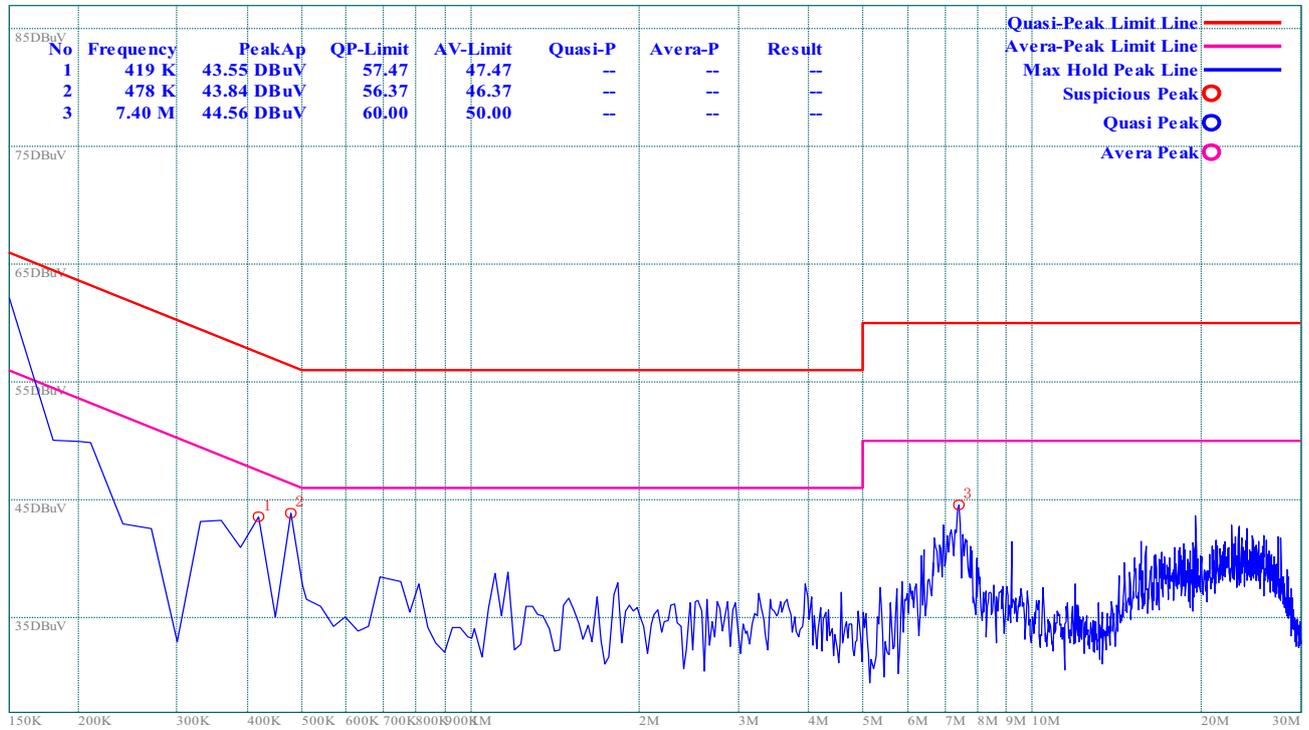
(Plot A: L Phase)



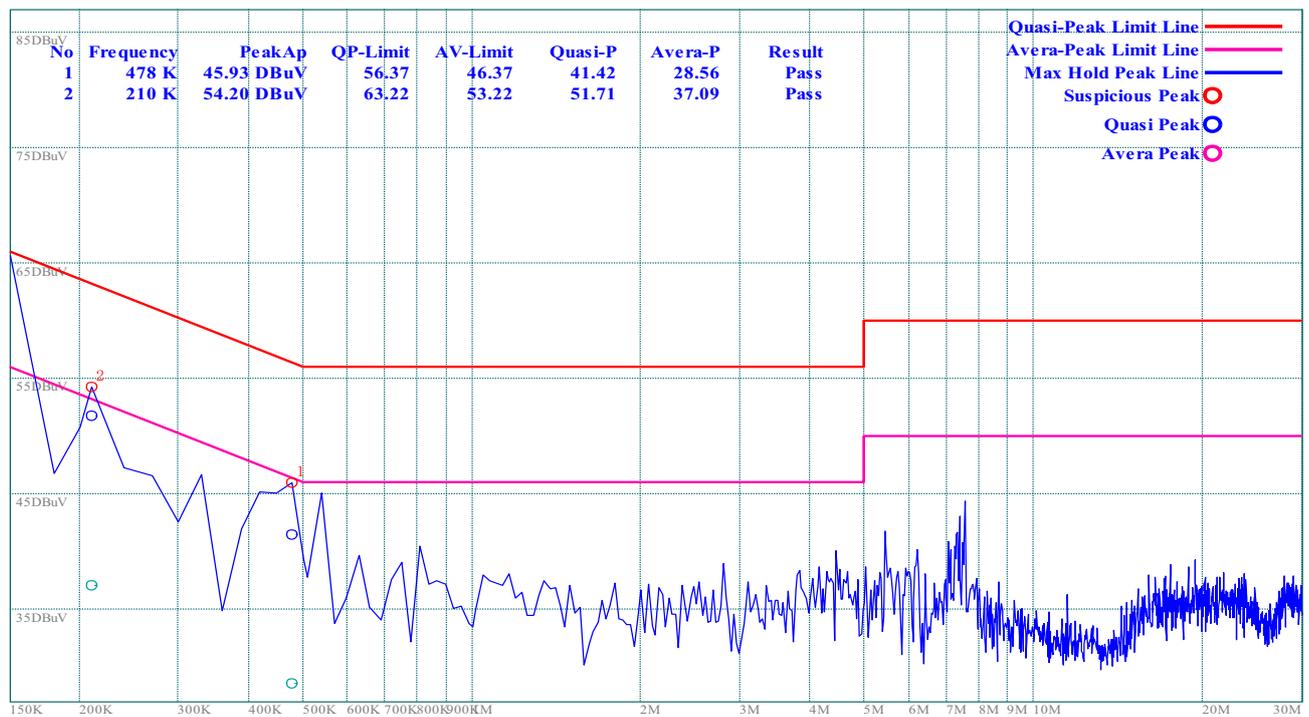
(Plot B: N Phase)

4.1.3.3 USB Test Mode

Test Plots and Suspicious Points:



(Plot A: L Phase)



(Plot B: N Phase)

4.2 Radiated Emission

4.2.1 Requirement

According to FCC section 15.109, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

| Frequency range (MHz) | Field Strength | |
|-----------------------|-----------------|--------------------------|
| | $\mu\text{V/m}$ | $\text{dB}\mu\text{V/m}$ |
| 30 - 88 | 100 | 40 |
| 88 - 216 | 150 | 43.5 |
| 216 - 960 | 200 | 46 |
| Above 960 | 500 | 54 |

NOTE:

- Field Strength ($\text{dB}\mu\text{V/m}$) = $20 \cdot \log[\text{Field Strength } (\mu\text{V/m})]$.
- In the emission tables above, the tighter limit applies at the band edges.

4.2.2 Test Description

See section 3.2.2 of this report.

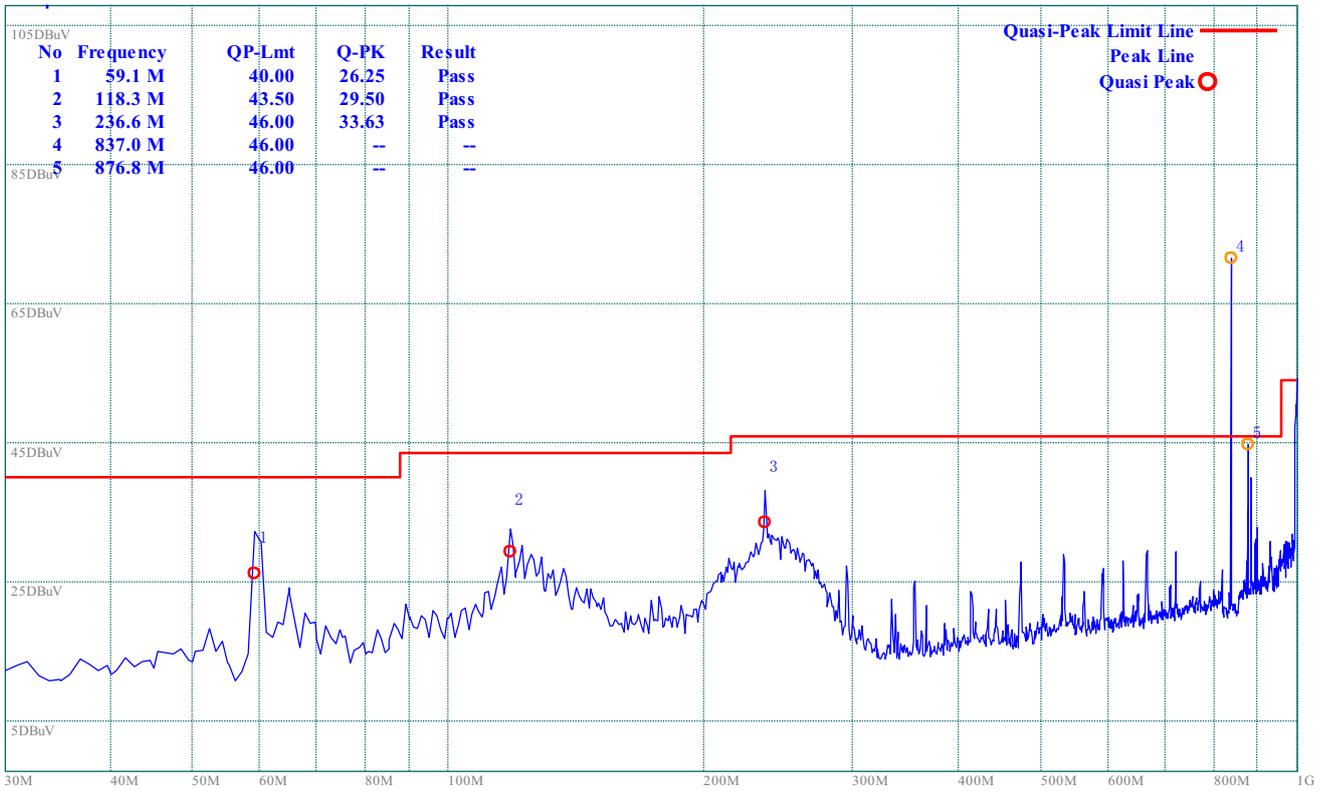
4.2.3 Test Result

The maximum radiated emission is searched using PK, QP and AV detectors; the emission levels more than the limits, and that have narrow margins from the limits will be re-measured with AV and QP detectors. Both the vertical and the horizontal polarizations of the Test Antenna are considered to perform the tests. All test modes are considered, refer to recorded points and plots below.

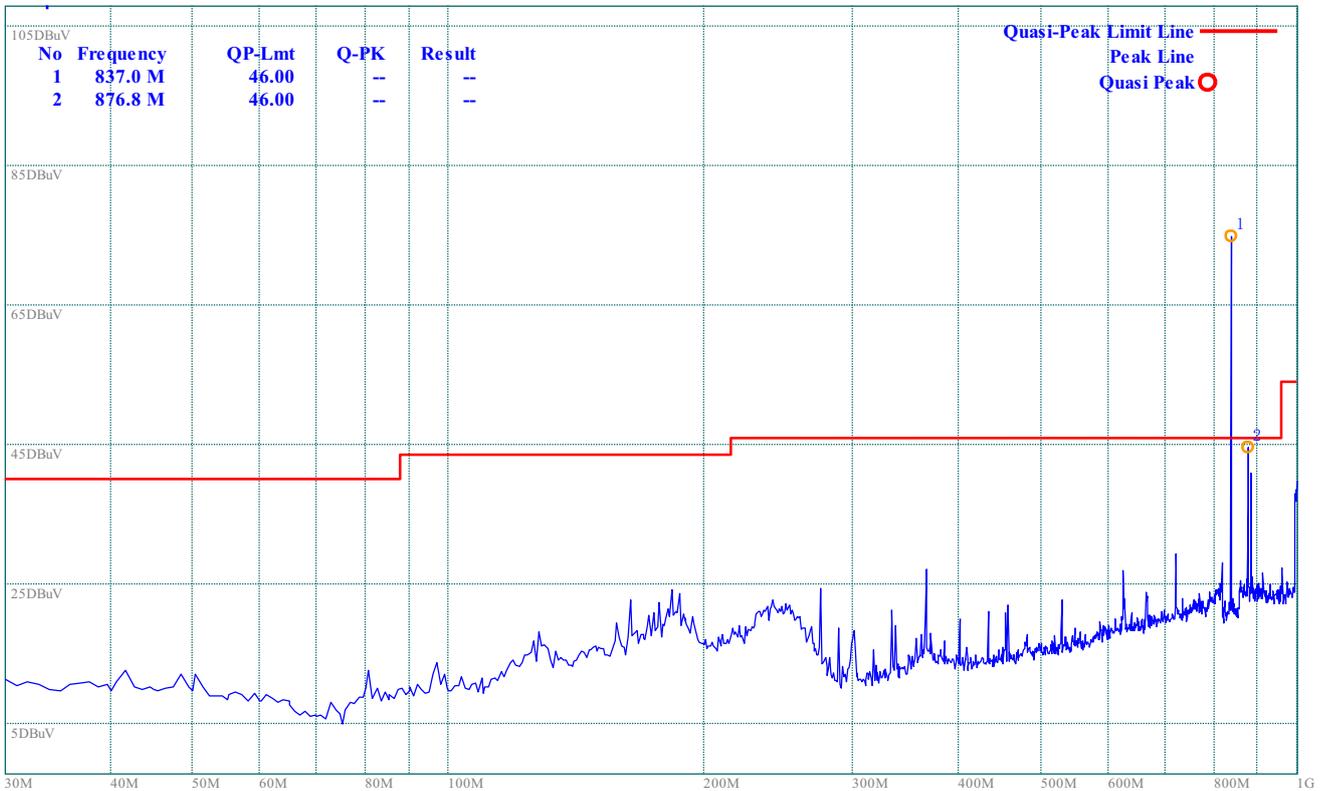
4.2.3.1 GSM Test Mode

A. Test Plots and Suspicious Points:

Note: Following is the plots for emission measurement; please note that marked spikes near 850MHz with circle should be ignored because they are MS and SS carrier frequency.



(Plot A: Test Antenna Vertical)



(Plot B: Test Antenna Horizontal)

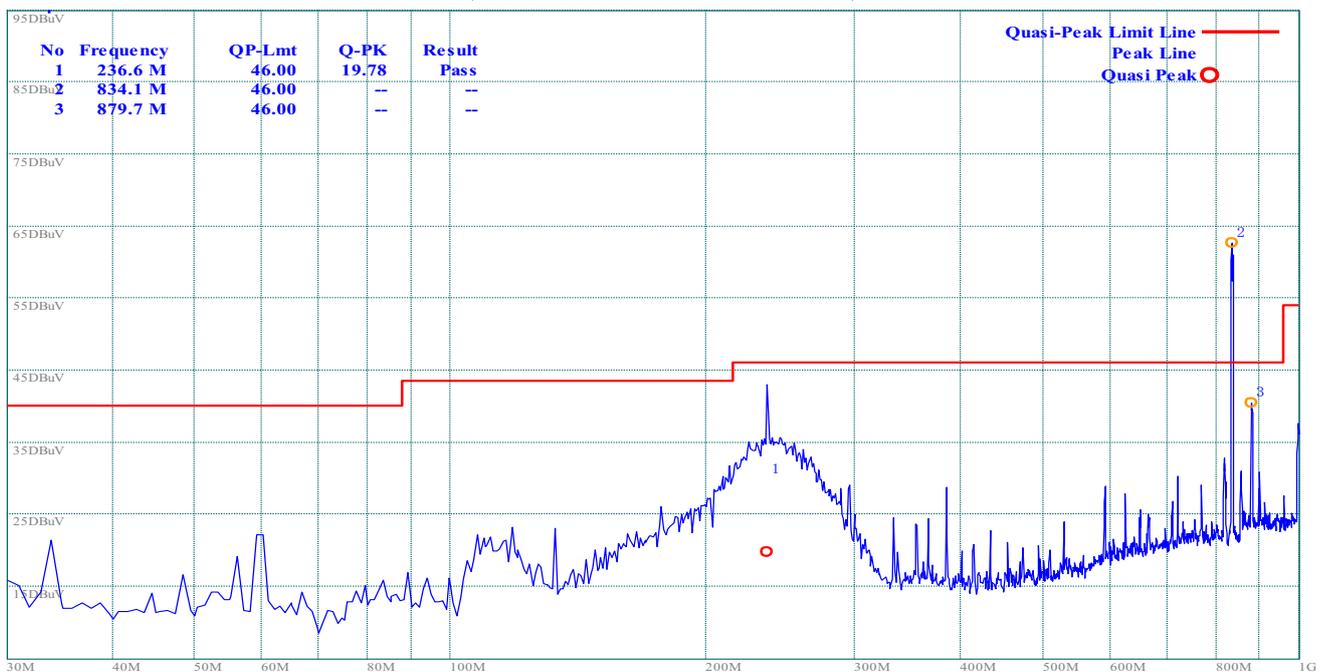
4.2.3.2 WCDMA Test Mode

Note: Following is the plots for emission measurement; please note that marked spikes near 850MHz with circle should be ignored because they are MS and SS carrier frequency.

A. Test Plots and Suspicious Points:



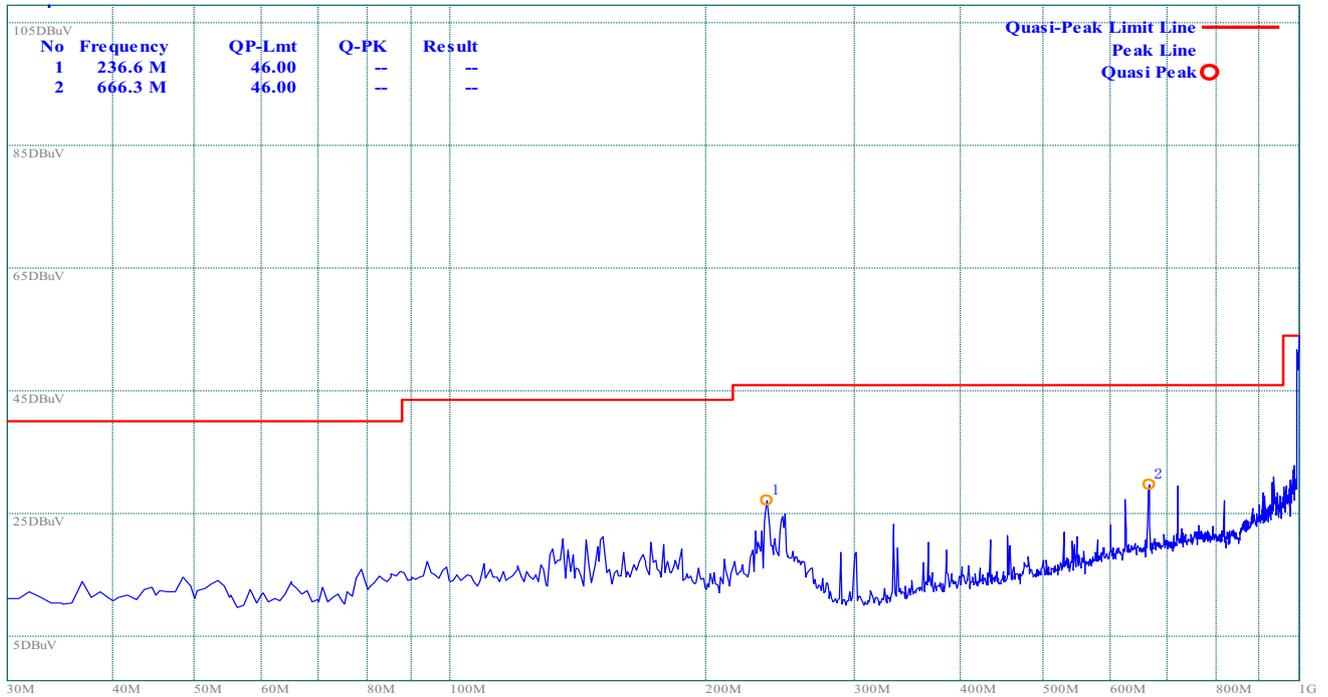
(Plot A: Test Antenna Vertical)



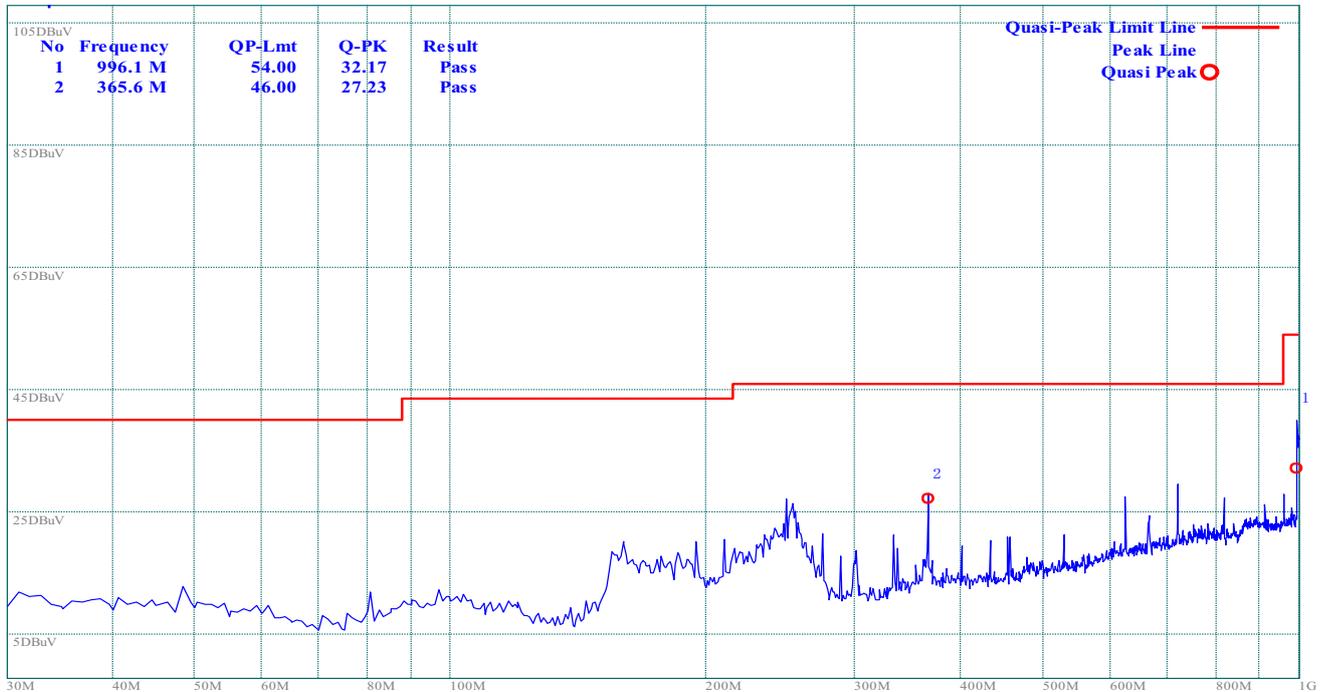
(Plot B: Test Antenna Horizontal)

4.2.3.3 USB Test Mode

B. Test Plots and Suspicious Points:



(Plot A: Test Antenna Vertical)



(Plot B: Test Antenna Horizontal)

** END OF REPORT **