
FCC Test Report

Report No.: AGC00653151201FE07

FCC ID : 2AFD9Q6
APPLICATION PURPOSE : Original Equipment
PRODUCT DESIGNATION : MOBILE PHONE
BRAND NAME : ZOOM
MODEL NAME : Q6
CLIENT : MOVEON TECHNOLOGY LIMITED
DATE OF ISSUE : Jan.08, 2016
STANDARD(S) : FCC Part 15 Rules
REPORT VERSION : V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd



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Report Revise Record

| Report Version | Revise Time | Issued Date | Valid Version | Notes |
|----------------|-------------|--------------|---------------|-----------------|
| V1.0 | / | Jan.08, 2016 | Valid | Original Report |

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2. SYSTEM DESCRIPTION

EUT test procedure:

1. Connect EUT and peripheral devices (PC) through USB port.
2. Power on the EUT, use the software to transfer data between EUT and PC.
3. Make sure the EUT operates normally during the test.

Test Mode

| TEST MODE DESCRIPTION | | |
|--|--|-------|
| NO. | TEST MODE DESCRIPTION | WORST |
| 1 | USB (connection for data transferring) | V |
| Note: 1.V means EMI worst mode 2 .Other modes have been verified through VOC mode. 3. USB cable is provided by AGC-Lab. | | |

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.

Conducted measurement: +/- 2.75dB

Radiated measurement: +/- 3.2Db

Summary Of Test Results

| FCC Rules | Description Of Test | Result |
|-----------|---------------------|-----------|
| §15.107 | Conduction Emission | Compliant |
| §15.109 | Radiated Emission | Compliant |

4. PRODUCT INFORMATION

| | |
|-----------------------|----------------------------|
| Housing Type | plastics |
| Adapter Input | AC100-240V, 50-60Hz, 150mA |
| Adapter Output | DC5V, 1000mA |

I/O Port Information (Applicable Not Applicable)

| I/O Port of EUT | | | |
|------------------------|-------------|-------------------|--------------------|
| I/O Port Type | Q'TY | Cable | Tested with |
| USB Port | 1 | N/A | N/A |
| Earphone Port | 1 | 1.0 m, unshielded | 1 |

5. SUPPORT EQUIPMENT

| Device Type | Manufacturer | Model Name | Serial No. | Data Cable | Power Cable |
|-------------|--------------|------------|------------|------------|-----------------|
| Notebook | Lenovo | B460 | WB03928113 | 1 | 1.5m unshielded |

Note: All the above equipment/cables were placed in worse case positions to maximize emission signals during emission test.

6. TEST FACILITY

| | |
|-----------------------------|--|
| Site | Dongguan Precise Testing Service Co., Ltd. |
| Location | Building D, Baoding Technology Park, Guangming Road2,Dongcheng District, Dongguan, Guangdong, China, |
| FCC Registration No. | 371540 |
| Description | The test site is constructed and calibrated to meet the FCC requirements in documents ANSI C63.4:2009. |

ALL TEST EQUIPMENT LIST

FOR RADIATED EMISSION TEST (BELOW 1GHZ)

| Radiated Emission Test Site | | | | | |
|-------------------------------------|-----------------|--------------|---------------|------------------|-----------------|
| Name of Equipment | Manufacturer | Model Number | Serial Number | Last Calibration | Due Calibration |
| EMI Test Receiver | Rohde & Schwarz | ESCI | 101417 | July 4, 2015 | July 3, 2016 |
| Trilog Broadband Antenna (25M-1GHz) | SCHWARZBECK | VULB9160 | 9160-3355 | July 4, 2015 | July 3, 2016 |
| Signal Amplifier | SCHWARZBECK | BBV 9475 | 9745-0013 | July 4, 2015 | July 3, 2016 |
| RF Cable | SCHWARZBECK | AK9515E | 96221 | July 4, 2015 | July 3, 2016 |
| 3m Anechoic Chamber | CHENGYU | 966 | PTS-001 | June 6, 2015 | June 5, 2016 |
| MULTI-DEVICE Positioning Controller | Max-Full | MF-7802 | MF780208339 | N/A | N/A |
| Active loop antenna (9K-30MHz) | Schwarzbeck | FMZB1519 | 1519-038 | June 6, 2015 | June 5, 2016 |
| Spectrum analyzer | Agilent | E4407B | MY46185649 | June 6, 2015 | June 5, 2016 |

FOR RADIATED EMISSION TEST (1GHZ ABOVE)

| Radiated Emission Test Site | | | | | |
|-----------------------------|-----------------|--------------|---------------|------------------|-----------------|
| Name of Equipment | Manufacturer | Model Number | Serial Number | Last Calibration | Due Calibration |
| EMI Test Receiver | Rohde & Schwarz | ESCI | 101417 | July 4, 2015 | July 3, 2016 |
| Horn Antenna (1G-18GHz) | SCHWARZBECK | BBHA9120D | 9120D-1246 | July 11, 2015 | July 10, 2016 |
| Spectrum Analyzer | Agilent | E4411B | MY4511453 | July 4, 2015 | July 3, 2016 |
| Signal Amplifier | SCHWARZBECK | BBV 9718 | 9718-269 | July 7, 2015 | July 6, 2016 |
| RF Cable | SCHWARZBECK | AK9515H | 96220 | July 8, 2015 | July 7, 2016 |
| 3m Anechoic Chamber | CHENGYU | 966 | PTS-001 | June 6, 2015 | June 5, 2016 |

| | | | | | |
|--|-------------|-----------|-------------|--------------|--------------|
| MULTI-DEVICE Positioning Controller | Max-Full | MF-7802 | MF780208339 | N/A | N/A |
| Horn Ant (18G-40GHz) | Schwarzbeck | BBHA 9170 | 9170-181 | June 6, 2015 | June 5, 2016 |

| Conducted Emission Test Site | | | | | |
|--------------------------------|-----------------|--------------|---------------|------------------|-----------------|
| Name of Equipment | Manufacturer | Model Number | Serial Number | Last Calibration | Due Calibration |
| EMI Test Receiver | Rohde & Schwarz | ESCI | 101417 | July 4, 2015 | July 3, 2016 |
| Artificial Mains Network | Narda | L2-16B | 000WX31025 | July 8, 2015 | July 7, 2016 |
| Artificial Mains Network (AUX) | Narda | L2-16B | 000WX31026 | July 8, 2015 | July 7, 2016 |
| RF Cable | SCHWARZBECK | AK9515E | 96222 | July 4, 2015 | July 3, 2016 |
| Shielded Room | CHENGYU | 843 | PTS-002 | June 6,2015 | June 5,2016 |

7. FCCLINE CONDUCTED EMISSION TEST

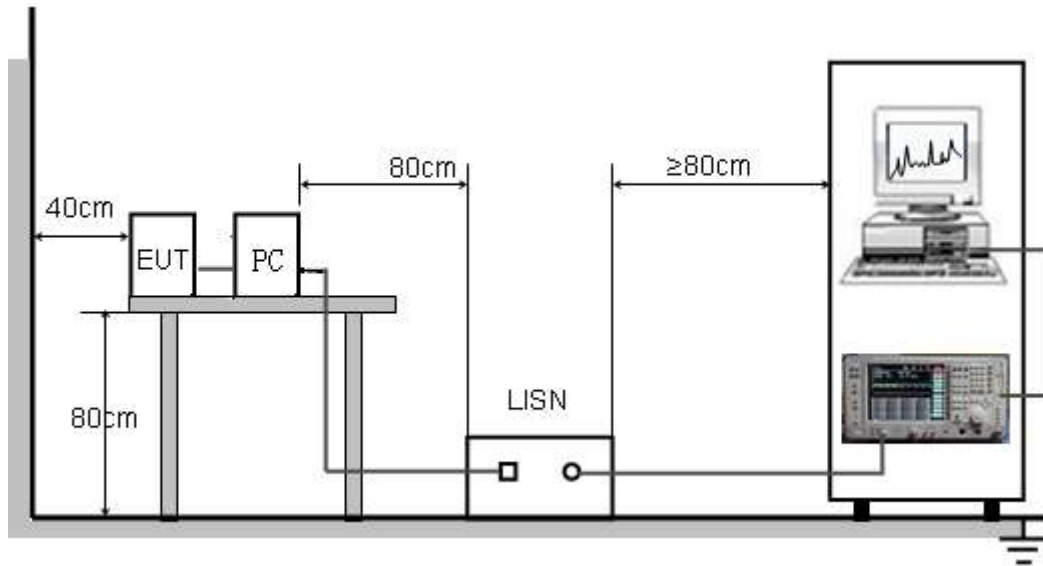
7.1. LIMITS OF LINE CONDUCTED EMISSION TEST

| Frequency | Maximum RF Line Voltage | |
|---------------|-------------------------|----------------|
| | Q.P.(dBuV) | Average(dBuV) |
| 150kHz-500kHz | 66-56 | 56-46 |
| 500kHz-5MHz | 56 | 46 |
| 5MHz-30MHz | 60 | 50 |

Note:

1. The lower limit shall apply at the transition frequency.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50MHz.

7.2. BLOCK DIAGRAM OF TEST SETUP

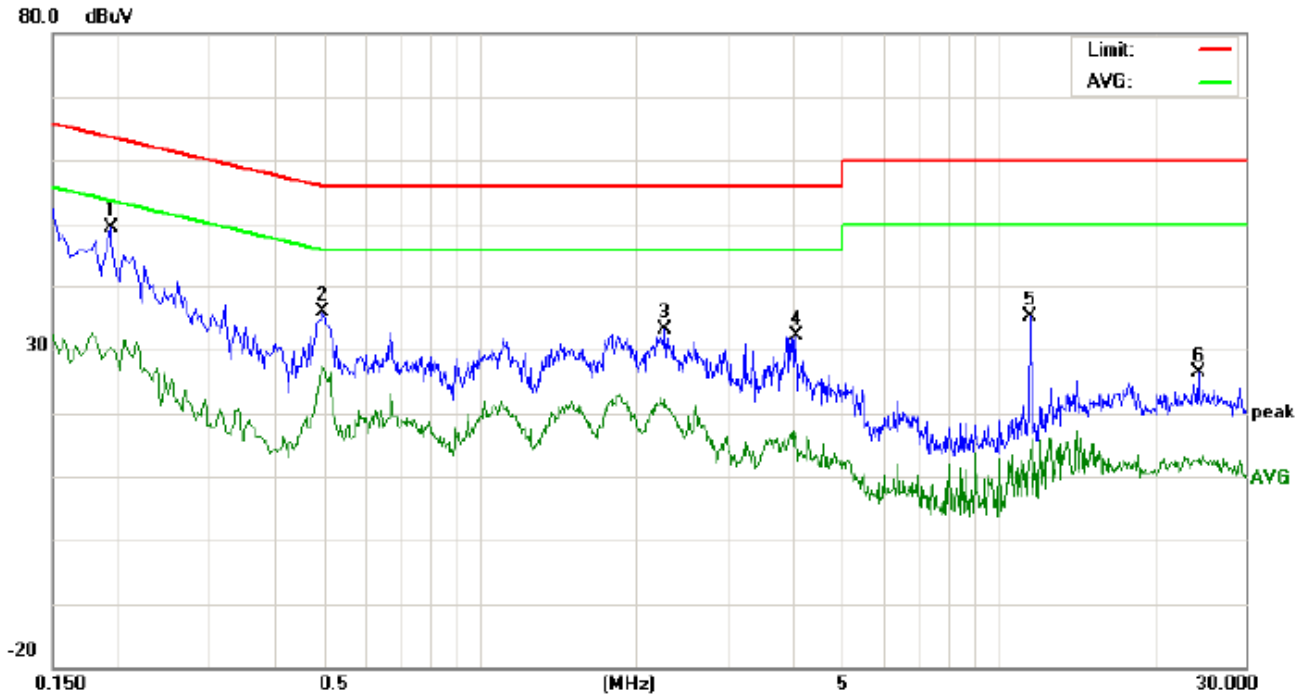


7.3. PROCEDURE OF LINE CONDUCTED EMISSION TEST

- (1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- (2) Support equipment, if needed, was placed as per ANSI C63.4.
- (3) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
- (4) The EUT received DC5V power from PC with receive AC120V/60Hz power from a LISN.
- (5) The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- (6) Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
- (7) During the above scans, the emissions were maximized by cable manipulation.
- (8) A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions.
- (9) Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less -2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.

The test data of the worst case condition (mode 1) was reported on the Summary Data page.

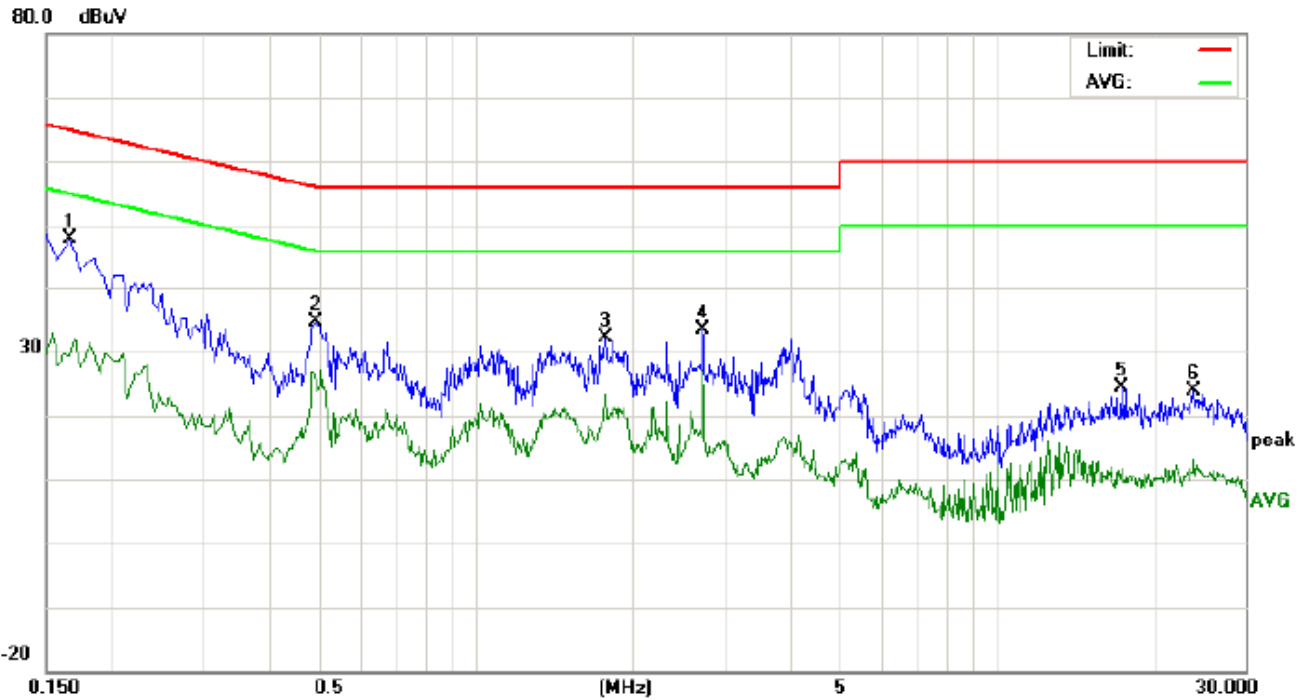
7.4. TEST RESULT OF LINE CONDUCTED EMISSION TEST
 LINE CONDUCTED EMISSION TEST-L



Site: Conduction Phase: **L1** Temperature: 23.4
 Limit: FCC Class B Conduction(QP) Power: AC 120V/60Hz Humidity: 55.4 %
 EUT: MOBILE PHONE
 M/N: Q6
 Mode: USB
 Note:

| No. | Freq. (MHz) | Reading_Level (dBuV) | | | Correct Factor | Measurement (dBuV) | | | Limit (dBuV) | | Margin (dB) | | P/F | Comment |
|-----|-------------|----------------------|----|-------|----------------|--------------------|------|-------|--------------|-------|-------------|--------|-----|---------|
| | | Peak | QP | AVG | | dB | Peak | QP | AVG | QP | AVG | QP | | |
| 1 | 0.1940 | 39.09 | | 20.26 | 10.21 | 49.30 | | 30.47 | 63.86 | 53.86 | -14.56 | -23.39 | P | |
| 2 | 0.4980 | 25.42 | | 16.87 | 10.40 | 35.82 | | 27.27 | 56.03 | 46.03 | -20.21 | -18.76 | P | |
| 3 | 2.2740 | 22.79 | | 11.81 | 10.33 | 33.12 | | 22.14 | 56.00 | 46.00 | -22.88 | -23.86 | P | |
| 4 | 4.0739 | 21.61 | | 6.54 | 10.40 | 32.01 | | 16.94 | 56.00 | 46.00 | -23.99 | -29.06 | P | |
| 5 | 11.5060 | 25.05 | | 2.71 | 10.12 | 35.17 | | 12.83 | 60.00 | 50.00 | -24.83 | -37.17 | P | |
| 6 | 24.3060 | 16.15 | | 2.76 | 10.11 | 26.26 | | 12.87 | 60.00 | 50.00 | -33.74 | -37.13 | P | |

LINE CONDUCTED EMISSION TEST-N



Site: Conduction Phase: **N** Temperature: 23.4
Limit: FCC Class B Conduction(QP) Power: AC 120V/60Hz Humidity: 55.4 %
EUT: MOBILE PHONE
M/N: Q6
Mode: USB
Note:

| No. | Freq. (MHz) | Reading_Level (dBuV) | | | Correct Factor (dB) | Measurement (dBuV) | | | Limit (dBuV) | | Margin (dB) | | P/F | Comment |
|-----|-------------|----------------------|----|-------|---------------------|--------------------|----|-------|--------------|-------|-------------|--------|-----|---------|
| | | Peak | QP | AVG | | Peak | QP | AVG | QP | AVG | QP | AVG | | |
| 1 | 0.1660 | 37.71 | | 19.07 | 10.18 | 47.89 | | 29.25 | 65.15 | 55.15 | -17.26 | -25.90 | P | |
| 2 | 0.4940 | 24.12 | | 14.59 | 10.40 | 34.52 | | 24.99 | 56.10 | 46.10 | -21.58 | -21.11 | P | |
| 3 | 1.7780 | 21.79 | | 13.04 | 10.29 | 32.08 | | 23.33 | 56.00 | 46.00 | -23.92 | -22.67 | P | |
| 4 | 2.7340 | 22.79 | | 16.60 | 10.49 | 33.28 | | 27.09 | 56.00 | 46.00 | -22.72 | -18.91 | P | |
| 5 | 17.3660 | 14.28 | | 1.51 | 10.13 | 24.41 | | 11.64 | 60.00 | 50.00 | -35.59 | -38.36 | P | |
| 6 | 23.8580 | 13.77 | | 1.06 | 10.11 | 23.88 | | 11.17 | 60.00 | 50.00 | -36.12 | -38.83 | P | |

RESULT: PASS

8. FCC RADIATED EMISSION TEST

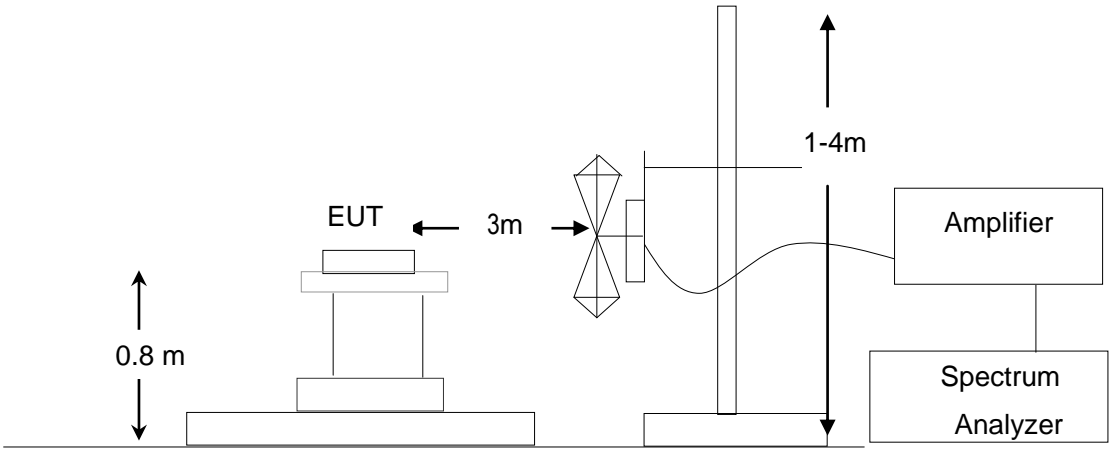
8.1. LIMITS OF RADIATED EMISSION TEST

| Frequency (MHz) | Distance (m) | Maximum Field Strength Limit (dBuV/m/ Q.P.) |
|-----------------|--------------|---|
| 30~88 | 3 | 40.0 |
| 88~216 | 3 | 43.5 |
| 216~960 | 3 | 46.0 |
| Above 960 | 3 | 54.0 |

Note: The lower limit shall apply at the transition frequency.

8.2. BLOCK DIAGRAM OF TEST SETUP

System Diagram of Connections between EUT and Simulators



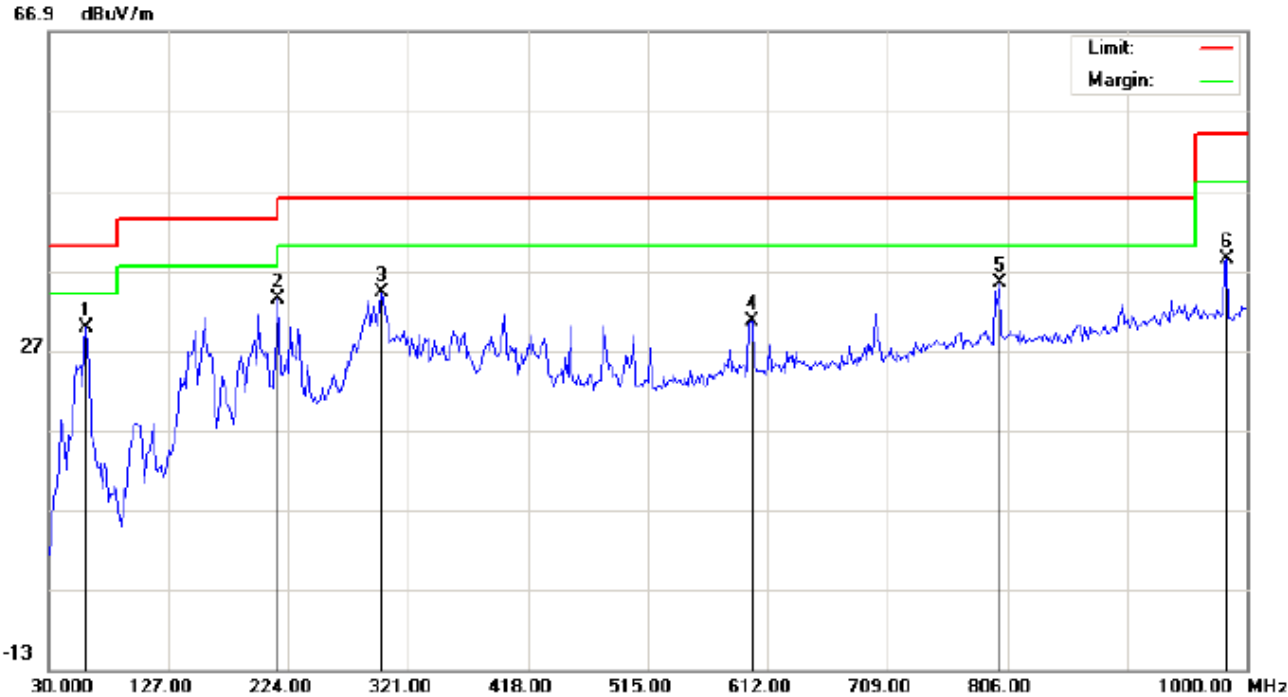
8.3. PROCEDURE OF RADIATED EMISSION TEST

- (1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden turntable with a height of 0.8 meters is used which is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- (2) Support equipment, if needed, was placed as per ANSI C63.4.
- (3) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
- (4) The EUT received DC 5V power from PC with receive AC120V/60Hz power from socket under the turntable through a LISN.
- (5) The antenna was placed at 3 meter away from the EUT as stated in FCC Part 15. The antenna connected to the Analyzer via a cable and at times a pre-amplifier would be used.
- (6) The Analyzer / Receiver quickly scanned from 30MHz to 1000MHz. The EUT test program was started. Emissions were scanned and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- (7) The test mode(s) were scanned during the test:
- (8) Recorded at least the six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit and Q.P./Peak reading is presented.

The test data of the worst case condition (mode 1) was reported on the Summary Data page.

8.4. TEST RESULT OF RADIATED EMISSION TEST

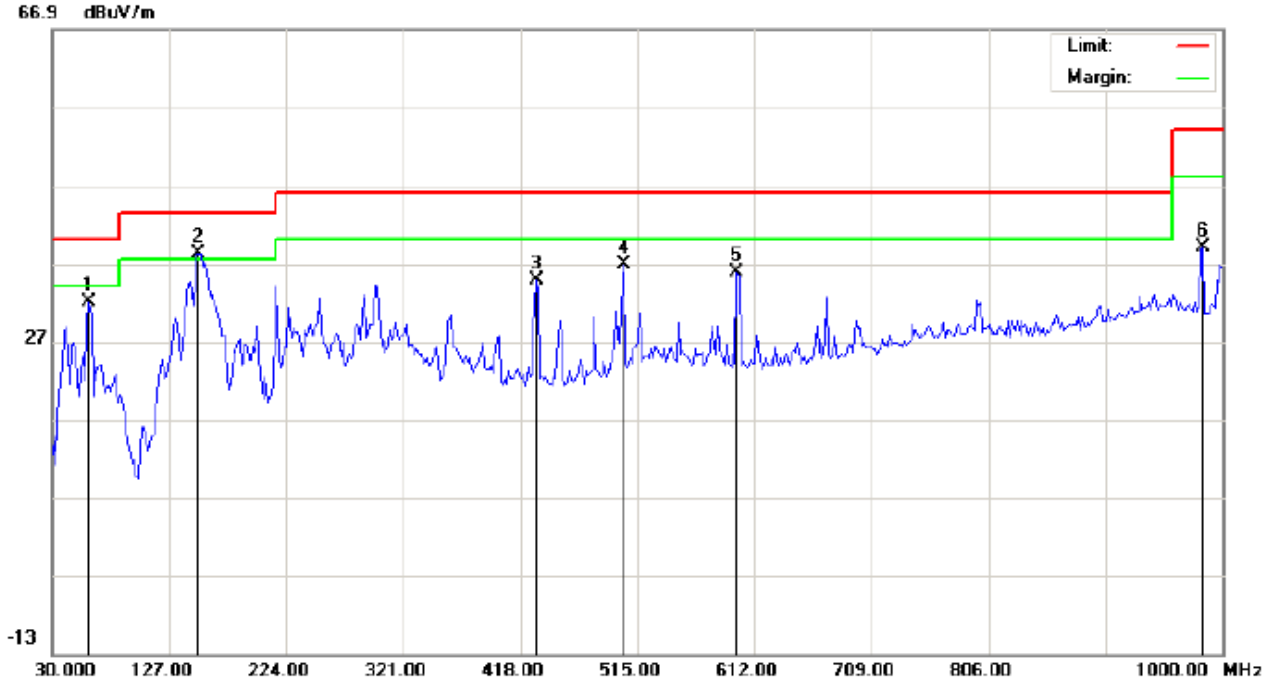
Radiated Emission Test at 3m Distance-Horizontal



| | | |
|---------------------------------|---------------------------------|-------------------|
| Site: site #1 | Polarization: <i>Horizontal</i> | Temperature: 23.3 |
| Limit: FCC Class B 3M Radiation | Power: AC 120V/60Hz | Humidity: 56.9 % |
| EUT: MOBILE PHONE | Distance: | |
| M/N: Q6 | | |
| Mode: USB | | |
| Note: | | |

| No. | Mk | Freq. | Reading | Factor | Measurement | Limit | Over | Detector | Antenna Height | Table Degree | Comment |
|-----|----|----------|---------|--------|-------------|--------|--------|----------|----------------|--------------|---------|
| | | MHz | dBuV | dB/m | dBuV/m | dBuV/m | dB | | cm | degree | |
| 1 | * | 60.7167 | 28.64 | 1.20 | 29.84 | 40.00 | -10.16 | peak | | | |
| 2 | | 215.9167 | 22.95 | 10.38 | 33.33 | 43.50 | -10.17 | peak | | | |
| 3 | | 299.9833 | 18.81 | 15.41 | 34.22 | 46.00 | -11.78 | peak | | | |
| 4 | | 599.0667 | 6.88 | 23.71 | 30.59 | 46.00 | -15.41 | peak | | | |
| 5 | | 799.5333 | 8.10 | 27.31 | 35.41 | 46.00 | -10.59 | peak | | | |
| 6 | | 983.8333 | 8.69 | 29.68 | 38.37 | 54.00 | -15.63 | peak | | | |

Radiated Emission Test at 3m Distance-Vertical



| | | |
|---------------------------------|-------------------------------|-------------------|
| Site: site #1 | Polarization: <i>Vertical</i> | Temperature: 23.3 |
| Limit: FCC Class B 3M Radiation | Power: AC 120V/60Hz | Humidity: 56.9 % |
| EUT: MOBILE PHONE | Distance: | |
| M/N: Q6 | | |
| Mode: USB | | |
| Note: | | |

| No. | Mk | Freq. | Reading | Factor | Measurement | Limit | Over | Detector | Antenna Height | Table Degree | Comment |
|-----|----|----------|---------|--------|-------------|--------|--------|----------|----------------|--------------|---------|
| | | MHz | dBuV | dB/m | dBuV/m | dBuV/m | dB | | cm | degree | |
| 1 | | 60.7167 | 24.11 | 7.87 | 31.98 | 40.00 | -8.02 | peak | | | |
| 2 | * | 151.2500 | 22.99 | 15.27 | 38.26 | 43.50 | -5.24 | peak | | | |
| 3 | | 430.9333 | 14.89 | 20.01 | 34.90 | 46.00 | -11.10 | peak | | | |
| 4 | | 503.6833 | 15.55 | 21.23 | 36.78 | 46.00 | -9.22 | peak | | | |
| 5 | | 597.4500 | 13.05 | 22.72 | 35.77 | 46.00 | -10.23 | peak | | | |
| 6 | | 983.8333 | 9.41 | 29.68 | 39.09 | 54.00 | -14.91 | peak | | | |

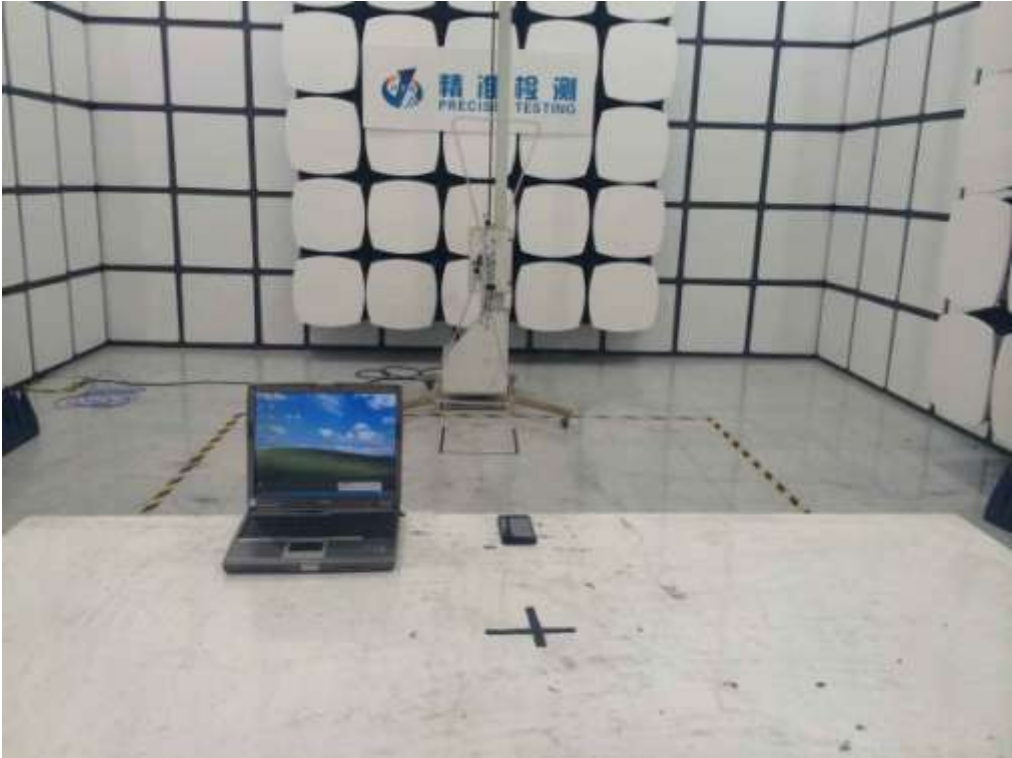
RESULT: PASS

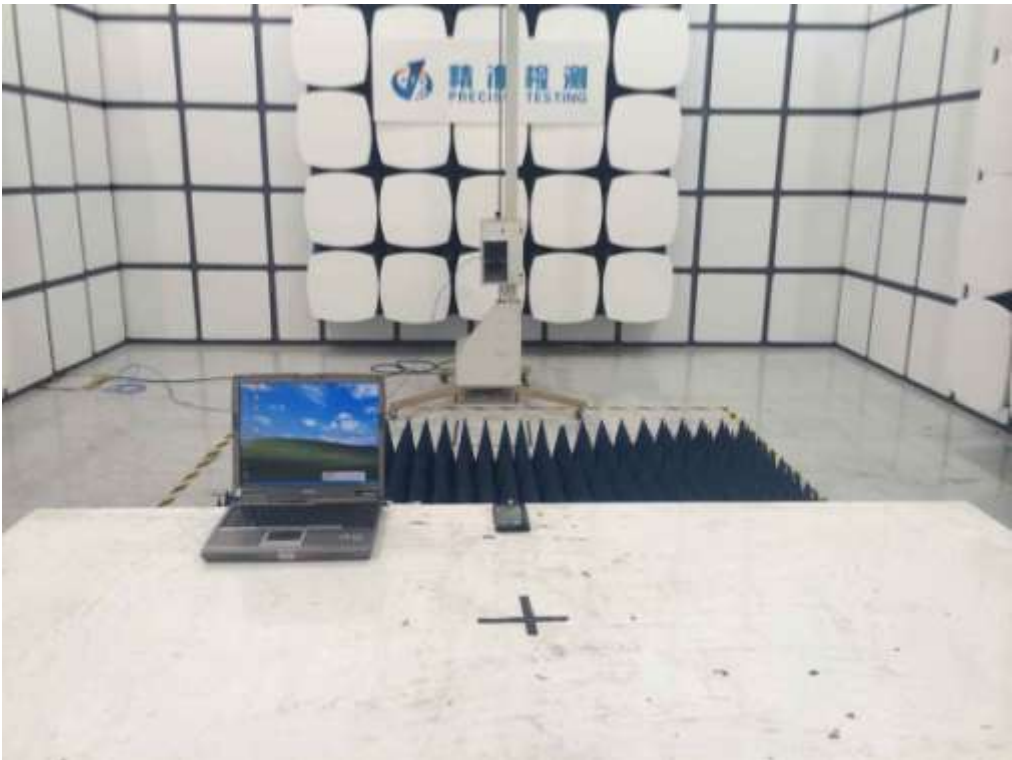
Note: All Other modes above 1GHz have more than 20db margin, no recording in the report
Measurement = Reading + Factor, Over = Measurement – Limit.

APPENDIX A: PHOTOGRAPHS OF TEST SETUP
FCC LINE CONDUCTED EMISSION TEST SETUP



FCC RADIATED EMISSION TEST SETUP





APPENDIX B: PHOTOGRAPHS OF EUT
TOTAL VIEW OF EUT



TOP VIEW OF EUT



BOTTOM VIEW OF EUT



FRONT VIEW OF EUT



BACK VIEW OF EUT



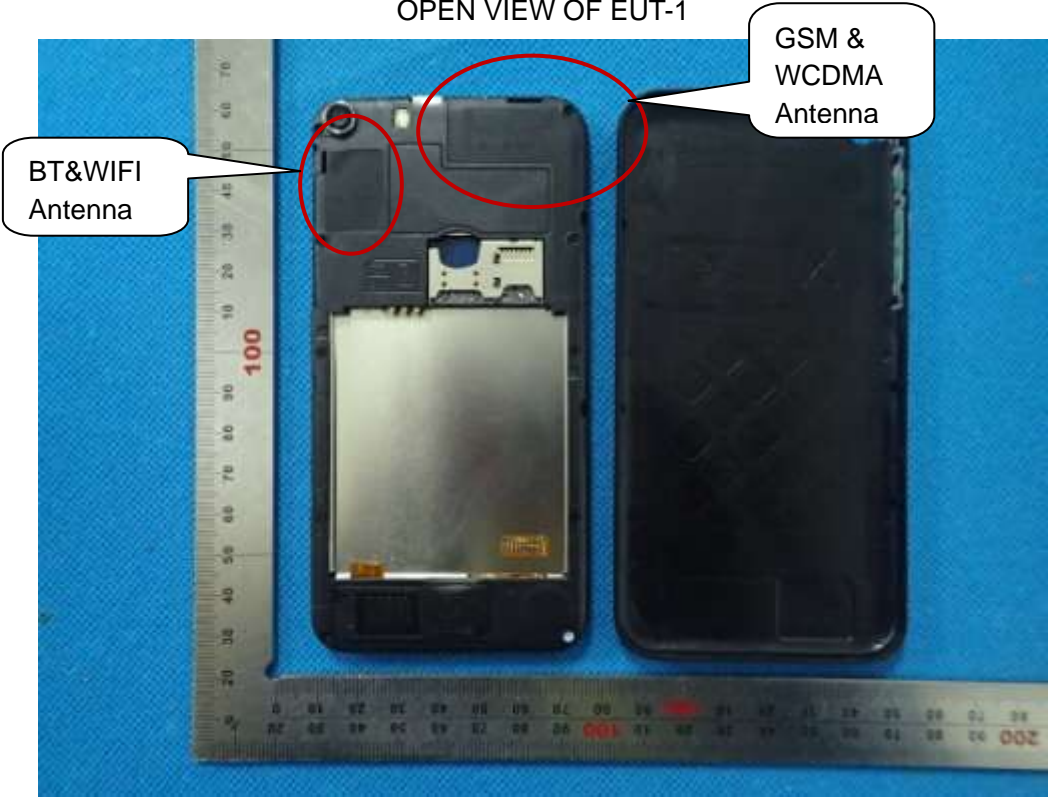
LEFT VIEW OF EUT



RIGHT VIEW OF EUT



OPEN VIEW OF EUT-1



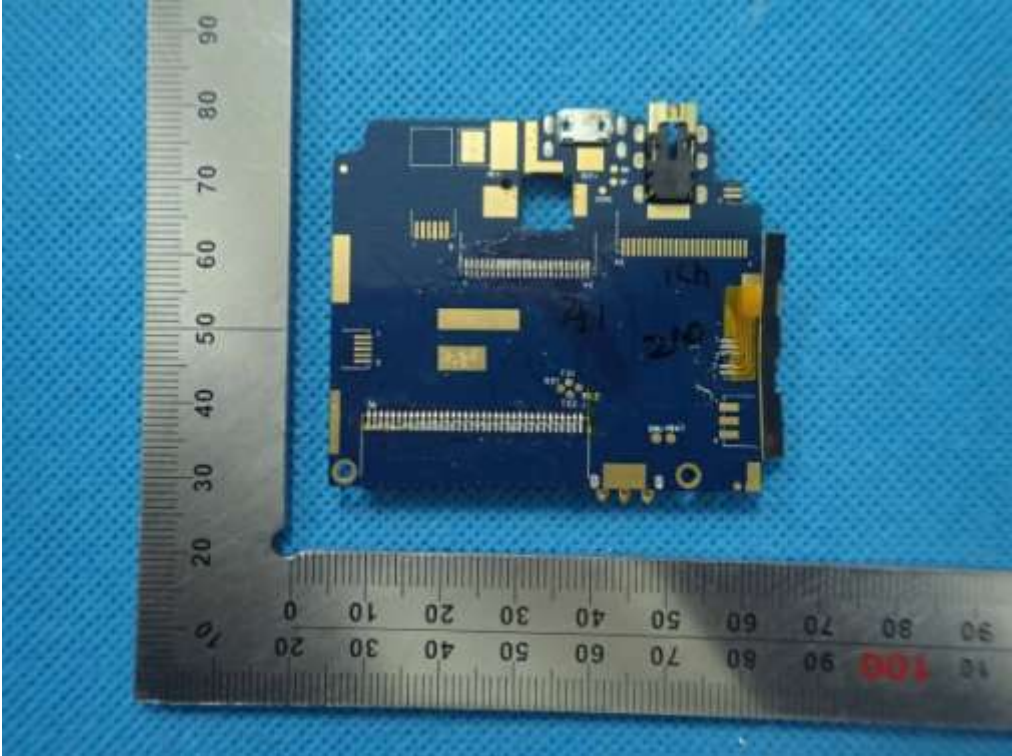
OPEN VIEW OF EUT-2



OPEN VIEW OF EUT-3



INTERNAL VIEW OF EUT-1



INTERNAL VIEW OF EUT-2



----END OF REPORT----