# FCC REPORT

| | |
|---|---|
| **Applicant:** | AZUMI S.A |
| **Address of Applicant:** | Avenida Aquilino de la Guardia con Calle 47, PH Ocean Plaza, Piso 16 of. 16-01, Marbella, Ciudad de Panamá City, Rep. Panamá |

**Equipment Under Test (EUT)**

| | |
|---|---|
| Product Name: | Mobile phone |
| Model No.: | A50 Style Plus |
| Trade mark: | Azumi |
| **FCC ID:** | QRP-AZUMIA50STP |
| **Applicable standards:** | FCC CFR Title 47 Part 15 Subpart B |
| **Date of sample receipt:** | 29 Mar., 2016 |
| **Date of Test:** | 29 Mar., to 13 Apr., 2016 |
| **Date of report issued:** | 13 Apr., 2016 |
| **Test Result:** | Pass * |

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:


Bruce Zhang
Laboratory Manager

# 2 Version

| Version No. | Date | Description |
|---|---|---|
| *00* | *13 Apr., 2016* | *Original* |
| | | |
| | | |
| | | |
| | | |

***Tested by:*** Viki zhu ***Date:*** *13 Apr., 2016*

***Test Engineer***

***Reviewed by:*** M.T.Liang ***Date:*** *13 Apr., 2016*

***Project Engineer***

# 3 Contents

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# 4 Test Summary

| Test Item | Section in CFR 47 | Result |
|---|---|---|
| Conducted Emission | Part 15.107 | Pass |
| Radiated Emission | Part 15.109 | Pass |

*Pass: The EUT complies with the essential requirements in the standard.*

# 5 General Information

## 5.1 Client Information

| | |
|---|---|
| Applicant: | AZUMI S.A |
| Address of Applicant: | Avenida Aquilino de la Guardia con Calle 47, PH Ocean Plaza, Piso 16 of. 16-01, Marbella, Ciudad de Panamá City, Rep. Panamá |
| Manufacturer | AZUMI HK LTD. |
| Address of Manufacturer: | FLAT/RM 18 BLK 1 14/F GOLDEN INDUSTRIAL BUILDING 16-26 KWAI TAK STREET KWAI CHUNG, HK |
| Factory: | Longconn Electronics(Shenzhen) Co., Ltd. |
| Address of Factory: | (Xinchuangji Industrial park) NO.42, Xingye 1 Road, Phoenix 1st Industrial Zone, Fuyong Town, Baoan District, Shenzhen, China |

## 5.2 General Description of E.U.T.

| | |
|---|---|
| Product Name: | Mobile phone |
| Model No.: | A50 Style Plus |
| Power supply: | Rechargeable Li-ion Battery DC3.7V-2200mAh |
| AC adapter : | Model No.:SC050060-US<br>Input: AC100-240V 50/60Hz 0.15A<br>Output: DC 5.0V, 600mA |

## 5.3 Test Mode

| Operating mode | Detail description |
|---|---|
| PC mode | Keep the EUT in Downloading mode(Worst case) |
| Charging+Recording mode | Keep the EUT in Charging+Recording mode |
| Charging+Playing mode | Keep the EUT in Charging+Playing mode |
| FM mode | Keep the EUT in FM receiver mode |
| GPS mode | Keep the EUT in GPS receiver mode |
| The sample was placed 0.8m above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages. | |

## 5.4 Description of Support Units

| Manufacturer | Description | Model | Serial Number | FCC ID/DoC |
|---|---|---|---|---|
| DELL | PC | OPTIPLEX745 | N/A | DoC |
| DELL | MONITOR | E178FPC | N/A | DoC |
| DELL | KEYBOARD | SK-8115 | N/A | DoC |
| DELL | MOUSE | MOC5UO | N/A | DoC |
| HP | Printer | CB495A | 05257893 | DoC |
| MERCURY | Wireless router | MW150R | 12922104015 | FCC ID |
| NAKAMICHI | Bluetooth earphone | T8 | N/A | FCC ID |

## 5.5 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC - Registration No.: 817957**

Shenzhen Zhongjian Nanfang Testing Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in out files. Registration 817957, February 27, 2012.

- **IC - Registration No.: 10106A-1**

The 3m Semi-anechoic chamber of Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

- **CNAS - Registration No.: CNAS L6048**

Shenzhen Zhongjian Nanfang Testing Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing.The Registration No. is CNAS L6048.

## 5.6 Laboratory Location

Shenzhen Zhongjian Nanfang Testing Co., Ltd.
Address: No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,
Bao'an District,Shenzhen, Guangdong,China
Tel: +86-755-23118282
Fax: +86-755-23116366

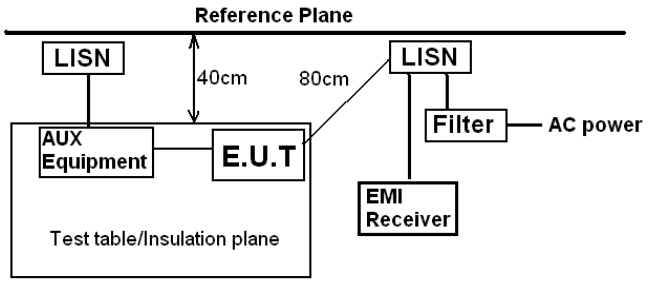
## 5.7 Test Instruments list

| Radiated Emission: | | | | | | |
|---|---|---|---|---|---|---|
| **Item** | **Test Equipment** | **Manufacturer** | **Model No.** | **Inventory No.** | **Cal. Date (mm-dd-yy)** | **Cal. Due date (mm-dd-yy)** |
| 1 | 3m SAC | SAEMC | 9(L)*6(W)* 6(H) | CCIS0001 | 08-23-2014 | 08-22-2017 |
| 2 | BiConiLog Antenna | SCHWARZBECK | VULB9163 | CCIS0005 | 03-25-2016 | 03-25-2017 |
| 3 | Horn Antenna | SCHWARZBECK | BBHA9120D | CCIS0006 | 03-25-2016 | 03-25-2017 |
| 4 | Pre-amplifier (10kHz-1.3GHz) | HP | 8447D | CCIS0003 | 04-01-2016 | 03-31-2017 |
| 5 | Pre-amplifier (1GHz-18GHz) | Compliance Direction Systems Inc. | PAP-1G18 | CCIS0011 | 04-01-2016 | 03-31-2017 |
| 6 | Spectrum analyzer 9k-30GHz | Rohde & Schwarz | FSP30 | CCIS0023 | 03-28-2016 | 03-28-2017 |
| 7 | EMI Test Receiver | Rohde & Schwarz | ESRP7 | CCIS0167 | 03-28-2016 | 03-28-2017 |

| Conducted Emission: | | | | | | |
|---|---|---|---|---|---|---|
| **Item** | **Test Equipment** | **Manufacturer** | **Model No.** | **Inventory No.** | **Cal.Date (mm-dd-yy)** | **Cal.Due date (mm-dd-yy)** |
| 1 | Shielding Room | ZhongShuo Electron | 11.0(L)x4.0(W)x3.0(H) | CCIS0061 | 08-23-2014 | 08-22-2017 |
| 2 | EMI Test Receiver | Rohde & Schwarz | ESCI | CCIS0002 | 03-24-2016 | 03-24-2017 |
| 3 | LISN | CHASE | MN2050D | CCIS0074 | 03-26-2016 | 03-26-2017 |
| 4 | Coaxial Cable | CCIS | N/A | CCIS0086 | 04-01-2016 | 03-31-2017 |

# 6 Test results and Measurement Data

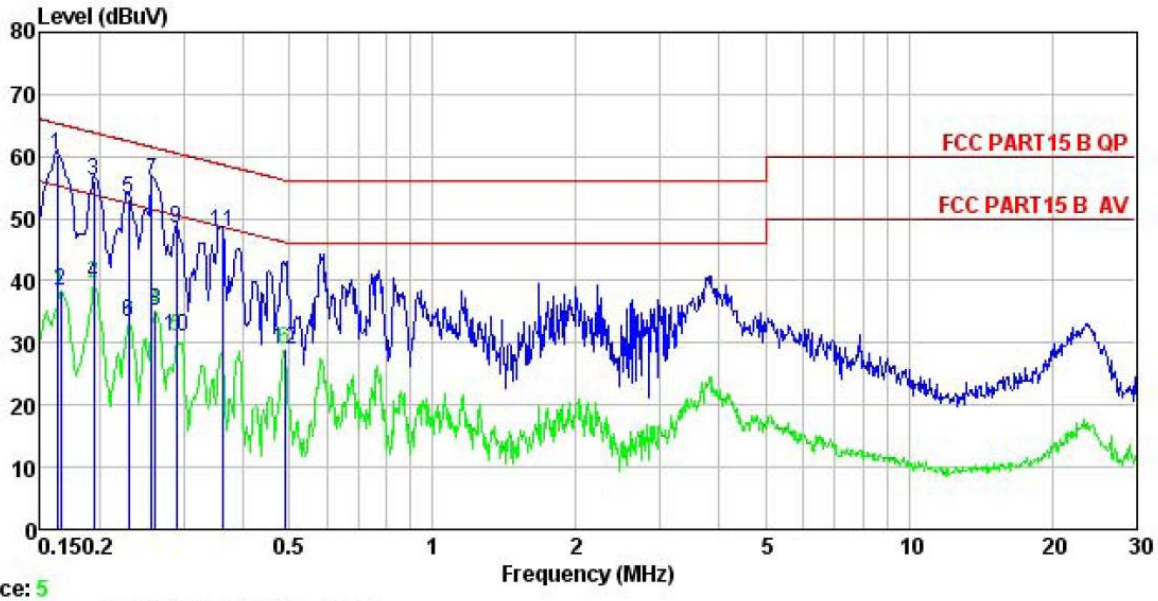
## 6.1 Conducted Emission

<table>
<tr><td>Test Requirement:</td><td colspan="3">FCC Part 15 B Section 15.107</td></tr>
<tr><td>Test Method:</td><td colspan="3">ANSI C63.4:2009</td></tr>
<tr><td>Test Frequency Range:</td><td colspan="3">150kHz to 30MHz</td></tr>
<tr><td>Class / Severity:</td><td colspan="3">Class B</td></tr>
<tr><td>Receiver setup:</td><td colspan="3">RBW=9kHz, VBW=30kHz</td></tr>
<tr><td>Limit:</td><td rowspan="2">Frequency range (MHz)</td><td colspan="2">Limit (dBµV)</td></tr>
<tr><td></td><td>Quasi-peak</td><td>Average</td></tr>
<tr><td></td><td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr>
<tr><td></td><td>0.5-5</td><td>56</td><td>46</td></tr>
<tr><td></td><td>0.5-30</td><td>60</td><td>50</td></tr>
<tr><td></td><td colspan="3">* Decreases with the logarithm of the frequency.</td></tr>
<tr><td>Test setup:</td><td colspan="3"> 

Remark:<br>E.U.T: Equipment Under Test<br>LISN: Line Impedence Stabilization Network<br>Test table height=0.8m</td></tr>
<tr><td>Test procedure</td><td colspan="3">1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network(L.I.S.N.). The provide a 50ohm/50uH coupling impedance for the measuring equipment.<br>2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs).<br>3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2009 on conducted measurement.</td></tr>
<tr><td>Test environment:</td><td colspan="3">Temp.: 23 °C Humid.: 56% Press.: 101kPa</td></tr>
<tr><td>Measurement Record:</td><td colspan="3">Uncertainty: ±3.28dB</td></tr>
<tr><td>Test Instruments:</td><td colspan="3">Refer to section 5.7 for details</td></tr>
<tr><td>Test mode:</td><td colspan="3">Refer to section 5.3 for details</td></tr>
<tr><td>Test results:</td><td colspan="3">Pass</td></tr>
</table>

**Measurement data:**

Line:

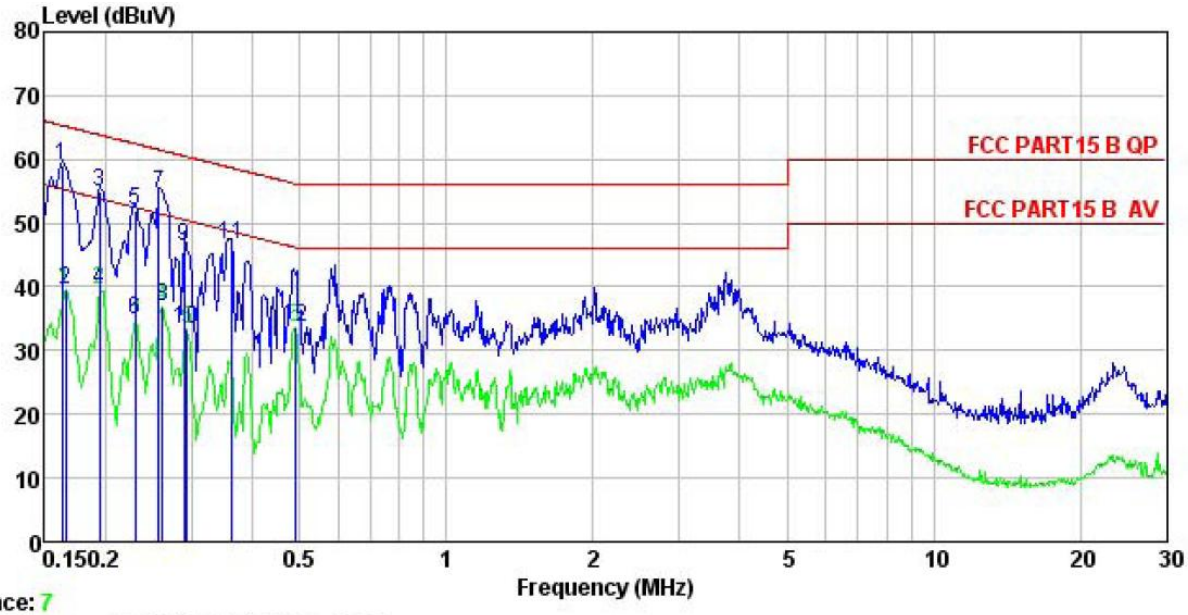



Trace: 5

Site : CCIS Shielding Room
Condition : FCC PART15 B QP LISN LINE
EUT : Mobile phone
Model : A50 Style Plus
Test Mode : PC mode
Power Rating : AC 120V/60Hz
Environment : Temp: 23 'C Huni:56% Atmos:101KPa
Test Engineer: Viki
Remark :

| | Freq | Read Level | LISN Factor | Cable Loss | Level | Limit Line | Over Limit | Remark |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dBuV | dBuV | dB | |
| 1 | 0.162 | 49.17 | 0.26 | 10.77 | 60.20 | 65.34 | -5.14 | QP |
| 2 | 0.166 | 27.44 | 0.26 | 10.77 | 38.47 | 55.16 | -16.69 | Average |
| 3 | 0.194 | 45.19 | 0.26 | 10.76 | 56.21 | 63.84 | -7.63 | QP |
| 4 | 0.194 | 28.62 | 0.26 | 10.76 | 39.64 | 53.84 | -14.20 | Average |
| 5 | 0.230 | 42.18 | 0.26 | 10.75 | 53.19 | 62.44 | -9.25 | QP |
| 6 | 0.230 | 22.27 | 0.26 | 10.75 | 33.28 | 52.44 | -19.16 | Average |
| 7 | 0.258 | 44.94 | 0.26 | 10.75 | 55.95 | 61.51 | -5.56 | QP |
| 8 | 0.262 | 24.20 | 0.26 | 10.75 | 35.21 | 51.38 | -16.17 | Average |
| 9 | 0.289 | 37.48 | 0.26 | 10.74 | 48.48 | 60.54 | -12.06 | QP |
| 10 | 0.289 | 20.04 | 0.26 | 10.74 | 31.04 | 50.54 | -19.50 | Average |
| 11 | 0.361 | 36.76 | 0.26 | 10.73 | 47.75 | 58.69 | -10.94 | QP |
| 12 | 0.489 | 18.05 | 0.27 | 10.76 | 29.08 | 46.19 | -17.11 | Average |

Neutral:




Trace: 7

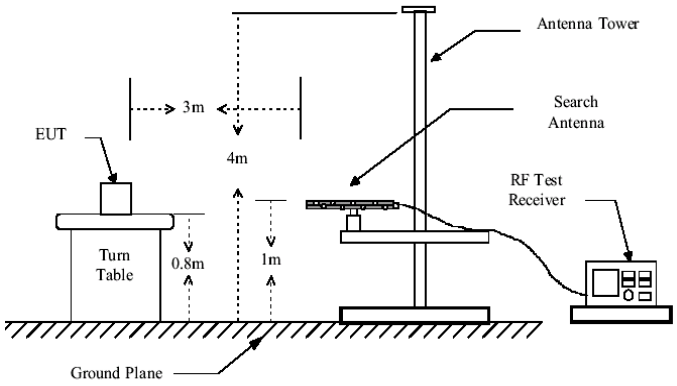
```
Site          : CCIS Shielding Room
Condition     : FCC PART15 B QP LISN NEUTRAL
EUT           : Mobile phone
Model         : A50 Style Plus
Test Mode     : PC mode
Power Rating  : AC 120V/60Hz
Environment   : Temp: 23 'C Huni:56%  Atmos:101KPa
Test Engineer: Viki
Remark        :
```

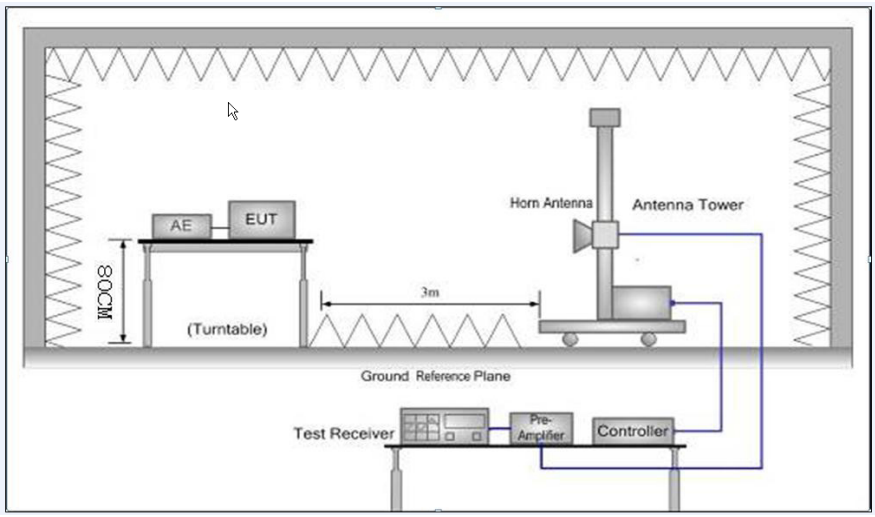
| | Freq | Read Level | LISN Factor | Cable Loss | Level | Limit Line | Over Limit | Remark |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dBuV | dBuV | dB | |
| 1 | 0.162 | 48.06 | 0.17 | 10.77 | 59.00 | 65.34 | -6.34 | QP |
| 2 | 0.166 | 28.60 | 0.17 | 10.77 | 39.54 | 55.16 | -15.62 | Average |
| 3 | 0.194 | 43.95 | 0.16 | 10.76 | 54.87 | 63.84 | -8.97 | QP |
| 4 | 0.194 | 28.59 | 0.16 | 10.76 | 39.51 | 53.84 | -14.33 | Average |
| 5 | 0.230 | 40.91 | 0.16 | 10.75 | 51.82 | 62.44 | -10.62 | QP |
| 6 | 0.230 | 23.87 | 0.16 | 10.75 | 34.78 | 52.44 | -17.66 | Average |
| 7 | 0.258 | 43.67 | 0.16 | 10.75 | 54.58 | 61.51 | -6.93 | QP |
| 8 | 0.262 | 26.12 | 0.16 | 10.75 | 37.03 | 51.38 | -14.35 | Average |
| 9 | 0.289 | 35.50 | 0.16 | 10.74 | 46.40 | 60.54 | -14.14 | QP |
| 10 | 0.294 | 22.33 | 0.16 | 10.74 | 33.23 | 50.41 | -17.18 | Average |
| 11 | 0.361 | 35.73 | 0.16 | 10.73 | 46.62 | 58.69 | -12.07 | QP |
| 12 | 0.489 | 22.81 | 0.16 | 10.76 | 33.73 | 46.19 | -12.46 | Average |

Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT
2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.

## 6.2 Radiated Emission

<table>
<tr><td>Test Requirement:</td><td colspan="5">FCC Part 15 B Section 15.109</td></tr>
<tr><td>Test Method:</td><td colspan="5">ANSI C63.4:2009</td></tr>
<tr><td>Test Frequency Range:</td><td colspan="5">30MHz to 6000MHz</td></tr>
<tr><td>Test site:</td><td colspan="5">Measurement Distance: 3m (Semi-Anechoic Chamber)</td></tr>
<tr><td rowspan="4">Receiver setup:</td><td>Frequency</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Remark</td></tr>
<tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>120kHz</td><td>300kHz</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
<tr><td>RMS</td><td>1MHz</td><td>3MHz</td><td>Average Value</td></tr>
<tr><td rowspan="7">Limit:</td><td colspan="2">Frequency</td><td colspan="2">Limit (dBuV/m @3m)</td><td>Remark</td></tr>
<tr><td colspan="2">30MHz-88MHz</td><td colspan="2">40.0</td><td>Quasi-peak Value</td></tr>
<tr><td colspan="2">88MHz-216MHz</td><td colspan="2">43.5</td><td>Quasi-peak Value</td></tr>
<tr><td colspan="2">216MHz-960MHz</td><td colspan="2">46.0</td><td>Quasi-peak Value</td></tr>
<tr><td colspan="2">960MHz-1GHz</td><td colspan="2">54.0</td><td>Quasi-peak Value</td></tr>
<tr><td colspan="2" rowspan="2">Above 1GHz</td><td colspan="2">54.0</td><td>Average Value</td></tr>
<tr><td colspan="2">74.0</td><td>Peak Value</td></tr>
<tr><td>Test setup:</td><td colspan="5">Below 1GHz<br> 

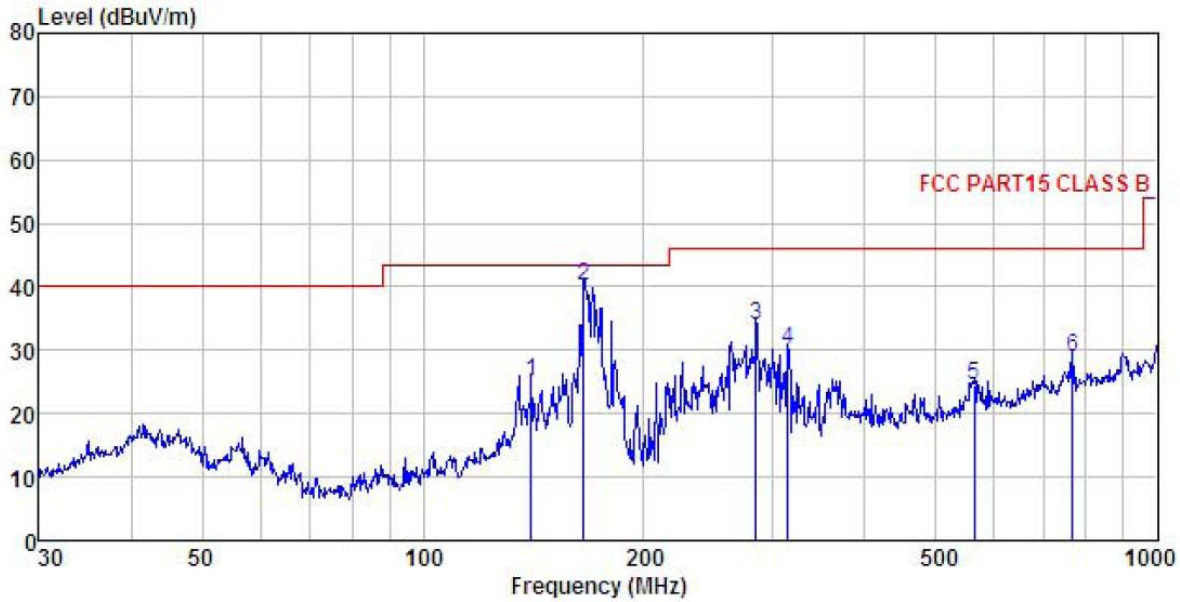
<br>Above 1GHz<br> 
</td></tr>
</table>

| | |
|---|---|
| Test Procedure: | 1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.<br>2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.<br>3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.<br>4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.<br>5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.<br>6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. |
| Test environment: | Temp.: 25 °C Humid.: 55% Press.: 1 01kPa |
| Measurement Record: | Uncertainty: ±4.88dB |
| Test Instruments: | Refer to section 5.7 for details |
| Test mode: | Refer to section 5.3 for details |
| Test results: | Passed |

**Measurement Data**

**Below 1GHz**

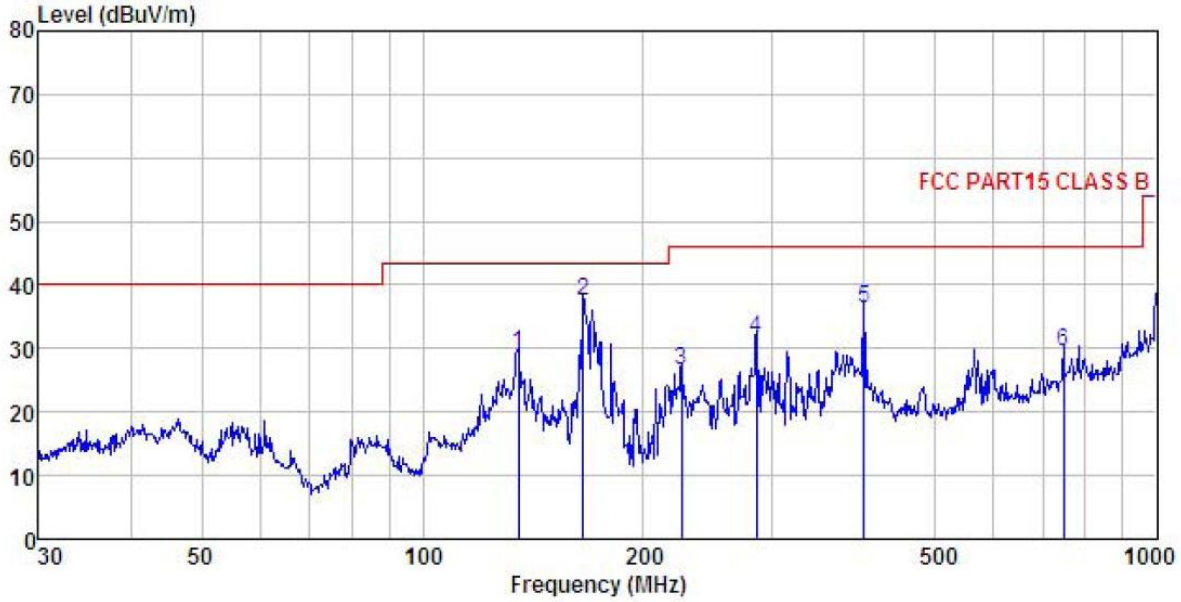
Horizontal:




Site : 3m chamber
Condition : FCC PART15 CLASS B 3m VULB9163(30M3G) HORIZONTAL
EUT : Mobile phone
Model : A50 Style Plus
Test mode : PC mode
Power Rating : AC120V/60Hz
Environment : Temp:25.5'C Huni:55% 101KPa
Test Engineer: Viki
REMARK :

| | Freq | ReadAntenna Level | Factor | Cable Loss | Preamp Factor | Level | Limit Line | Over Limit | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB/m | dB | dB | dBuV/m | dBuV/m | dB | |
| 1 | 140.342 | 40.31 | 11.70 | 2.41 | 29.27 | 25.15 | 43.50 | -18.35 | QP |
| 2 | 165.487 | 56.91 | 9.84 | 2.62 | 29.09 | 40.28 | 43.50 | -3.22 | QP |
| 3 | 283.979 | 47.35 | 12.24 | 2.90 | 28.48 | 34.01 | 46.00 | -11.99 | QP |
| 4 | 314.377 | 42.42 | 13.12 | 2.98 | 28.48 | 30.04 | 46.00 | -15.96 | QP |
| 5 | 562.662 | 31.36 | 18.21 | 3.90 | 29.06 | 24.41 | 46.00 | -21.59 | QP |
| 6 | 766.057 | 32.58 | 20.47 | 4.36 | 28.39 | 29.02 | 46.00 | -16.98 | QP |

Vertical:

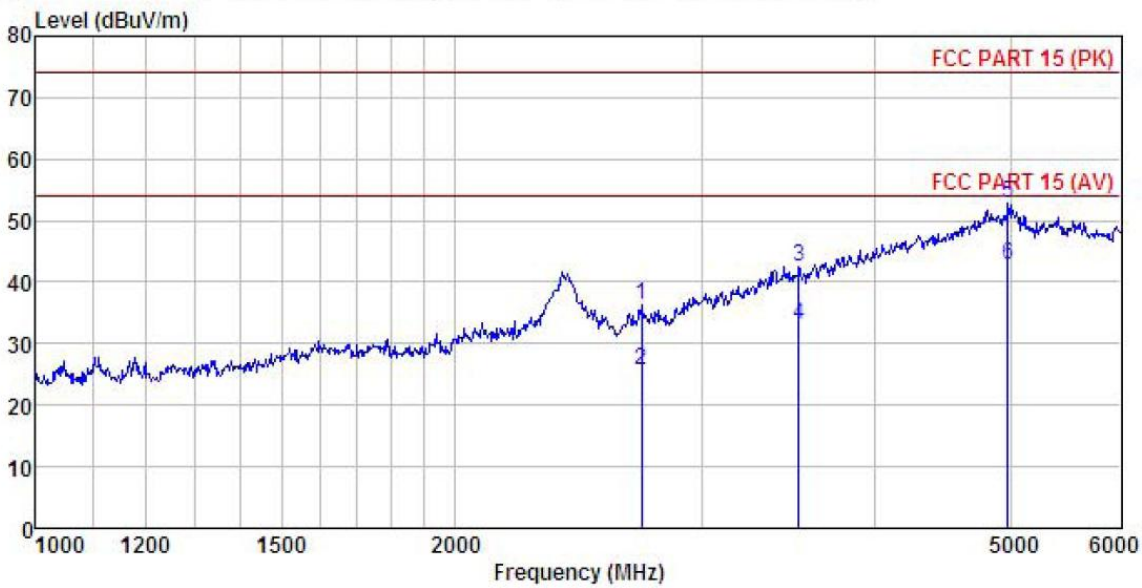



Site : 3m chamber
Condition : FCC PART15 CLASS B 3m VULB9163(30M3G) VERTICAL
EUT : Mobile phone
Model : A50 Style Plus
Test mode : PC mode
Power Rating : AC120V/60Hz
Environment : Temp:25.5℃ Huni:55% 101KPa
Test Engineer: Viki
REMARK :

| | Freq | ReadAntenna Level | Factor | Cable Loss | Preamp Factor | Level | Limit Line | Over Limit | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB/m | dB | dB | dBuV/m | dBuV/m | dB | |
| 1 | 135.032 | 44.19 | 11.98 | 2.34 | 29.30 | 29.21 | 43.50 | -14.29 | QP |
| 2 | 165.487 | 53.98 | 9.84 | 2.62 | 29.09 | 37.35 | 43.50 | -6.15 | QP |
| 3 | 225.308 | 40.73 | 11.56 | 2.84 | 28.68 | 26.45 | 46.00 | -19.55 | QP |
| 4 | 284.977 | 45.02 | 12.25 | 2.90 | 28.48 | 31.69 | 46.00 | -14.31 | QP |
| 5 | 399.030 | 46.17 | 15.90 | 3.08 | 28.77 | 36.38 | 46.00 | -9.62 | QP |
| 6 | 747.483 | 33.45 | 20.32 | 4.35 | 28.49 | 29.63 | 46.00 | -16.37 | QP |

**Above 1GHz**

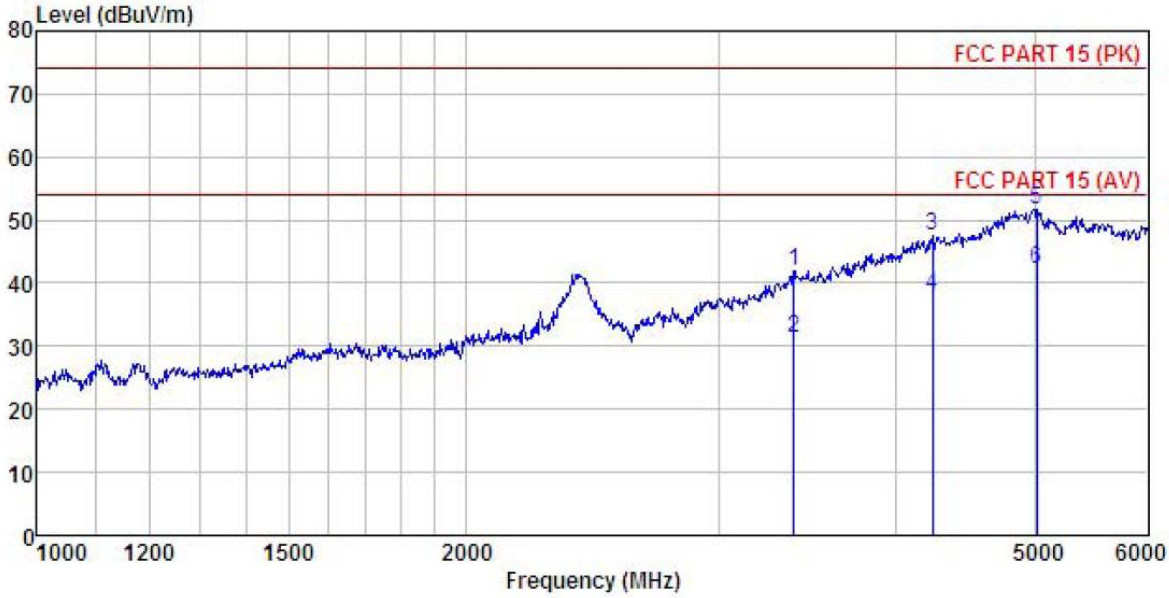
Horizontal:




Site : 3m chamber
Condition : FCC PART 15 (PK) 3m BBHA9120(1G18) HORIZONTAL
EUT : Mobile phone
Model : A50 Style Plus
Test mode : PC mode
Power Rating : AC120V/60Hz
Environment : Temp:25.5℃ Huni:55% 101KPa
Test Engineer: Viki
REMARK :

| | Freq | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Level | Limit Line | Over Limit | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB/m | dB | dB | dBuV/m | dBuV/m | dB | |
| 1 | 2717.743 | 44.76 | 24.57 | 7.31 | 40.45 | 36.19 | 74.00 | -37.81 | Peak |
| 2 | 2717.743 | 34.13 | 24.57 | 7.31 | 40.45 | 25.56 | 54.00 | -28.44 | Average |
| 3 | 3524.036 | 45.39 | 28.09 | 8.83 | 39.71 | 42.60 | 74.00 | -31.40 | Peak |
| 4 | 3524.036 | 35.97 | 28.09 | 8.83 | 39.71 | 33.18 | 54.00 | -20.82 | Average |
| 5 | 4979.933 | 45.37 | 36.77 | 10.75 | 40.00 | 52.89 | 74.00 | -21.11 | Peak |
| 6 | 4979.933 | 35.26 | 36.77 | 10.75 | 40.00 | 42.78 | 54.00 | -11.22 | Average |

Vertical:




Site : 3m chamber
Condition : FCC PART 15 (PK) 3m BBHA9120(1G18) VERTICAL
EUT : Mobile phone
Model : A50 Style Plus
Test mode : PC mode
Power Rating : AC120V/60Hz
Environment : Temp:25.5℃ Huni:55% 101KPa
Test Engineer: Viki
REMARK :

| | Freq | ReadAntenna Level | Antenna Factor | Cable Loss | Preamp Factor | Level | Limit Line | Over Limit | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB/m | dB | dB | dBuV/m | dBuV/m | dB | |
| 1 | 3387.825 | 45.00 | 27.34 | 8.58 | 39.00 | 41.92 | 74.00 | -32.08 | Peak |
| 2 | 3387.825 | 34.29 | 27.34 | 8.58 | 39.00 | 31.21 | 54.00 | -22.79 | Average |
| 3 | 4238.283 | 45.17 | 33.40 | 9.92 | 40.93 | 47.56 | 74.00 | -26.44 | Peak |
| 4 | 4238.283 | 35.64 | 33.40 | 9.92 | 40.93 | 38.03 | 54.00 | -15.97 | Average |
| 5 | 5015.753 | 44.15 | 36.83 | 10.80 | 39.99 | 51.79 | 74.00 | -22.21 | Peak |
| 6 | 5015.753 | 34.65 | 36.83 | 10.80 | 39.99 | 42.29 | 54.00 | -11.71 | Average |