



# CMA Testing and Certification Laboratories

廠商會檢定中心

## TEST REPORT

Report No. : AS0076327(3) Date : 23 Dec 2014

Application No. : LS046023(4)

Applicant : Asian Express Holdings Limited  
4F,-4, No.669 Jingping Rd., Zhonghe City, TaiPei county 235  
Taiwan R.O.C, Taiwan

Client : Asian Express Holdings Limited  
Rm804 Sino Centre,582-592 Nathan Road,  
Mongkok, Kowloon, Hong Kong.

Sample Description : One(1) item of submitted sample stated to be

| Sample Description | Model No.                                                                                            |
|--------------------|------------------------------------------------------------------------------------------------------|
| Sonic Drone HD     | PL-1280 / PL-1281 / PL-1282 / PL-1283 / PL-1284 /<br>PL-1285 / PL-1286 / PL-1287 / PL-1288 / PL-1289 |

Sample registration No. : RS052000-001  
Radio Frequency : 2407MHz – 2472 MHz Transceiver  
Rating : 3.7V rechargeable battery  
No. of submitted sample : Two (2) piece (s)

Date Received : 01 Dec 2014  
Test Period : 02 Dec 2014 to 15 Dec 2014.  
Test Requested : FCC Part 15 Certificate

Test Method : 47 CFR Part 15 (10-1-12 Edition), ANSI C63.4 – 2009

Test Engineer : Mr. LEUNG Shu-kan, Ken

Test Result : See attached sheet(s) from page 2 to 36.

Conclusion : The submitted sample was found to comply with requirement of FCC Part 15  
Subpart B and C.

Remark : All ten models are the same in circuitry and components; and therefore model PL-  
1280 was chosen to be the representative of the test sample. The difference  
between the tested model and the declared model(s) is/are the Model no.

For and on behalf of  
CMA Industrial Development Foundation Limited

Authorized Signature : \_\_\_\_\_

Mr. WONG Lap-pong, Andrew  
Manager  
Electrical Division

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FCC ID: VLEPL1280-R



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### 1 General Information

#### 1.1 General Description

The equipment under test (EUT) is a transceiver for Sonic Drone HD. The EUT is power by 3.7V rechargeable battery. It operates at 2407MHz – 2472MHz. When it switches on and received radio signal, it will take the corresponding action.

The brief circuit description is listed as follows:

- |                  |                                                   |
|------------------|---------------------------------------------------|
| - U4             | and its associated circuit act as RF circuit      |
| - U1, U2         | and its associated circuit act as MCU             |
| - Y1             | and its associated circuit act as oscillator      |
| - IC2, IC3       | and its associated circuit act as power regulator |
| - M1, M2, M3, M4 | and its associated circuit act as motor           |
| - D2, D6         | and its associated circuit act as LED             |



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### 1.2 Location of the test site

FCC Registered Test Site Number: 552221

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2009. A Semi-Anechoic Chamber Testing Site is set up for investigation and located at:

Ground Floor, Yan Hing Centre,  
9 – 13 Wong Chuk Yeung Street,  
Fo Tan, Shatin,  
New Territories,  
Hong Kong.

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 – 2009. A shielded room is located at :

Ground Floor, Yan Hing Centre,  
9 – 13 Wong Chuk Yeung Street,  
Fo Tan, Shatin,  
New Territories,  
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### 1.3 List of measuring equipment

| Equipment               | Manufacturer     | Model No.    | Serial No.  | Calibration Due Date | Calibration Period |
|-------------------------|------------------|--------------|-------------|----------------------|--------------------|
| EMI Test Receiver       | R&S              | ESCI         | 100152      | 28 Aug 2015          | 1Year              |
| Spectrum Analyzer       | R&S              | FSV40        | 100628      | 17 Dec 2014          | 1Year              |
| Broadband Antenna       | Schaffner        | CBL6112B     | 2718        | 06 Jan 2015          | 1Year              |
| Loop Antenna            | EMCO             | 6502         | 00056620    | 28 Oct 2015          | 1Year              |
| Horn Antenna            | Schwarzbeck      | BBHA 9120D   | 9120D-531   | 24 Nov 2016          | 2Years             |
| Horn Antenna            | Schwarzbeck      | BBHA 9170    | BBHA9170442 | 18 Jun 2015          | 2Years             |
| Broadband Pre-Amplifier | Schwarzbeck      | BBV 9718     | 9718-119    | 24 Nov 2016          | 2Years             |
| Broadband Pre-Amplifier | Schwarzbeck      | BBV 9719     | 9719-010    | 17 Jun 2015          | 2Years             |
| Coaxial Cable           | Suhner           | Sucoflex_104 | N/A         | 24 Nov 2016          | 2Years             |
| LISN                    | Rohde & Schwarz  | ENV216       | 101232      | 13 Nov 2015          | 1Year              |
| Coaxial Cable           | Tyco Electronics | RG58C/U      | N/A         | 13 Nov 2015          | 1Year              |

### 1.4 List of supporting equipment

Adaptor: Model: A1299 (Supplied by CMA)



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### 1.5 Measurement Uncertainty

The reported uncertainty is based on a standard uncertainty multiplied by a coverage factor  $k=2$ , providing a level of confidence of approximately 95%.

#### Radiated emissions

| Frequency                     | Uncertainty ( $U_{lab}$ ) |
|-------------------------------|---------------------------|
| 30MHz ~ 200MHz (Horizontal)   | 4.63dB                    |
| 30MHz ~ 200MHz (Vertical)     | 4.65dB                    |
| 200MHz ~ 1000MHz (Horizontal) | 4.45dB                    |
| 200MHz ~ 1000MHz (Vertical)   | 4.41dB                    |

#### Conducted emissions

| Frequency    | Uncertainty ( $U_{lab}$ ) |
|--------------|---------------------------|
| 150kHz~30MHz | 2.47dB                    |



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### 2 Description of the radiated emission test

#### 2.1 Test Procedure

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2009.

The equipment under test (EUT) was placed on a non-conductive turntable with dimensions of 1.5m x 1m and 0.8m high above the ground. 3m from the EUT, a broadband antenna mounting on the mast received the signal strength. The turntable was rotated to maximize the emission level. The antenna was then moving along the mast from 1m up to 4m until no more higher value was found. Both horizontal and vertical polarization of the antenna were placed and investigated.

For below 30MHz, a loop antenna with its vertical plane is placed 3m from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. And the centre of the loop shall be 1 m above the ground.

For 30MHz to 1GHz, broadband antenna with its vertical and horizontal plane is placed 3m from the EUT and rotated about its vertical and horizontal axis for maximum response at each azimuth about the EUT. And the reference point of antenna shall be 1 m above the ground.

For above 1GHz, horn antenna with its vertical and horizontal plane is placed 3m from the EUT and rotated about its vertical and horizontal axis for maximum response at each azimuth about the EUT. Preamplifier and High Pass filter was used for measurements. The reference point of antenna shall be 1 m above the ground.

The device was rotated through three orthogonal to determine which attitude and configuration produce the highest emission during measurement for Radiated Emission measurement.



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### 2.2 Test Result

Peak Detector data were measured unless otherwise stated.

“#” means emissions appear within the restricted bands shall follow the requirement of section 15.205.

The frequencies from fundamental up to that tenth harmonics were investigated, and emissions more 20dB below limit were not reported. Thus, those highest emissions were presented in next page (section 2.3).

It was found that the EUT meet the FCC requirement.



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### 2.3 Radiated Emission Measurement Data

#### Radiated emission

#### pursuant to

#### the requirement of FCC Part 15 subpart C

#### Environmental conditions:

| Parameter            | Recorded value |     |
|----------------------|----------------|-----|
| Ambient temperature: | 23             | ° C |
| Relative humidity:   | 59             | %   |

Detector: Peak RBW: 1MHz VBW: 3MHz Operation mode: Transmission

Testing frequency range: 9kHz to 25GHz

| Channel | Frequency (MHz) | Polarity (H/V) | Reading at 3m (dBμV) | Transducer Factor (dB/m) | Field Strength at 3m (dBμV/m) | Limit at 3m (dBμV/m) | Margin (dB) |
|---------|-----------------|----------------|----------------------|--------------------------|-------------------------------|----------------------|-------------|
| Low     | 2407.875        | V              | 86.6                 | - 6.3                    | 80.3                          | 114.0                | - 33.7      |
|         | #4815.592       | V              | 54.2                 | 2.4                      | 56.6                          | 74.0                 | - 17.4      |
|         | #4815.656       | H              | 49.1                 | 2.4                      | 51.5                          | 74.0                 | - 22.5      |
|         | 7222.367        | H              | 38.2                 | 10.8                     | 49.0                          | 74.0                 | - 25.0      |
| Middle  | 2451.219        | V              | 87.3                 | - 6.3                    | 81.0                          | 114.0                | - 33.0      |
|         | #4903.833       | H              | 50.6                 | 2.4                      | 53.0                          | 74.0                 | - 21.0      |
|         | #4902.468       | V              | 56.7                 | 2.4                      | 59.1                          | 74.0                 | - 14.9      |
|         | #7354.056       | V              | 36.5                 | 10.8                     | 47.3                          | 74.0                 | - 26.7      |
| High    | 2472.253        | V              | 86.9                 | - 6.3                    | 80.6                          | 114.0                | - 33.4      |
|         | #4944.550       | H              | 52.4                 | 2.4                      | 54.8                          | 74.0                 | - 19.2      |
|         | #4945.747       | V              | 53.9                 | 2.4                      | 56.3                          | 74.0                 | - 17.7      |
|         | #7417.628       | V              | 36.8                 | 10.8                     | 47.6                          | 74.0                 | - 26.4      |

Remark: Other emissions more than 20dB below the limit are not reported.



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### 2.3 Radiated Emission Measurement Data (Con't)

#### Radiated emission

pursuant to

the requirement of FCC Part 15 subpart C

Environmental conditions:

| Parameter            | Recorded value |     |
|----------------------|----------------|-----|
| Ambient temperature: | 23             | ° C |
| Relative humidity:   | 59             | %   |

Detector: Average RBW: 1MHz VBW: 10Hz Operation mode: Transmission

Testing frequency range: 9kHz to 25GHz

| Channel | Frequency (MHz) | Polarity (H/V) | Reading at 3m (dBμV) | Transducer Factor (dB/m) | Field Strength at 3m (dBμV/m) | Limit at 3m (dBμV/m) | Margin (dB) |
|---------|-----------------|----------------|----------------------|--------------------------|-------------------------------|----------------------|-------------|
| Low     | 2407.615        | V              | 27.0                 | - 6.3                    | 20.7                          | 94.0                 | - 73.3      |
|         | #4815.143       | V              | 23.7                 | 2.4                      | 26.1                          | 54.0                 | - 27.9      |
|         | #4815.150       | H              | 22.9                 | 2.4                      | 25.3                          | 54.0                 | - 28.7      |
|         | 7227.859        | H              | 18.8                 | 10.8                     | 29.6                          | 54.0                 | - 24.4      |
| Middle  | 2451.580        | V              | 27.7                 | - 6.3                    | 21.4                          | 94.0                 | - 72.6      |
|         | #4903.062       | V              | 23.9                 | 2.4                      | 26.3                          | 54.0                 | - 27.7      |
|         | #4903.088       | H              | 23.2                 | 2.4                      | 25.6                          | 54.0                 | - 28.4      |
|         | #7359.714       | V              | 18.9                 | 10.8                     | 29.7                          | 54.0                 | - 24.3      |
| High    | 2472.492        | V              | 28.6                 | - 6.3                    | 22.3                          | 94.0                 | - 71.7      |
|         | #4945.013       | H              | 23.1                 | 2.4                      | 25.5                          | 54.0                 | - 28.5      |
|         | #4945.440       | V              | 23.0                 | 2.4                      | 25.4                          | 54.0                 | - 28.6      |
|         | #7423.460       | V              | 19.1                 | 10.8                     | 29.9                          | 54.0                 | - 24.1      |

Remark: Other emissions more than 20dB below the limit are not reported.



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### 2.3 Radiated Emission Measurement Data (Con't)

#### Radiated emission

pursuant to

the requirement of FCC Part 15 subpart C

Environmental conditions:

| Parameter            | Recorded value |     |
|----------------------|----------------|-----|
| Ambient temperature: | 24             | ° C |
| Relative humidity:   | 58             | %   |

Detector: Quasi-peak

RBW: 120kHz

VBW: 300kHz

Testing frequency range: 9kHz to 25GHz

Operation mode: Transmission

| Frequency (MHz) | Polarity (H/V) | Reading at 3m (dBμV) | Antenna Factor and Cable Loss (dB/m) | Field Strength at 3m (dBμV/m) | Limit at 3m (dBμV/m) | Margin (dB) |
|-----------------|----------------|----------------------|--------------------------------------|-------------------------------|----------------------|-------------|
| #253.300        | H              | 20.3                 | 15.4                                 | 35.7                          | 46.0                 | - 10.3      |
| #253.531        | V              | 12.4                 | 15.4                                 | 27.8                          | 46.0                 | - 18.2      |
| 288.019         | H              | 22.7                 | 15.4                                 | 38.1                          | 46.0                 | - 7.9       |
| #407.192        | H              | 19.0                 | 20.6                                 | 39.6                          | 46.0                 | - 6.4       |
| 430.448         | H              | 17.1                 | 20.6                                 | 37.7                          | 46.0                 | - 8.3       |
| 552.071         | V              | 16.5                 | 22.2                                 | 38.7                          | 46.0                 | - 7.3       |
| 670.120         | V              | 18.8                 | 22.8                                 | 41.6                          | 46.0                 | - 4.4       |

Remark: Other emissions more than 20dB below the limit are not reported.



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### 2.3 Radiated Emission Measurement Data (Con't)

#### Radiated emission

pursuant to

the requirement of FCC Part 15 subpart B

Environmental conditions:

| Parameter            | Recorded value |     |
|----------------------|----------------|-----|
| Ambient temperature: | 24             | ° C |
| Relative humidity:   | 58             | %   |

Detector: Quasi-peak

RBW: 120kHz

VBW: 300kHz

Operation mode: Receiving

| Frequency (MHz) | Polarity (H/V) | Reading at 3m (dBμV) | Antenna Factor and Cable Loss (dB/m) | Field Strength at 3m (dBμV/m) | Limit at 3m (dBμV/m) | Margin (dB) |
|-----------------|----------------|----------------------|--------------------------------------|-------------------------------|----------------------|-------------|
| 199.011         | H              | 27.8                 | 11.2                                 | 39.0                          | 43.5                 | - 4.5       |
| 235.734         | H              | 19.5                 | 13.2                                 | 32.7                          | 46.0                 | - 13.3      |
| #275.220        | H              | 20.5                 | 15.4                                 | 35.9                          | 46.0                 | - 10.1      |
| 340.487         | H              | 16.2                 | 16.8                                 | 33.0                          | 46.0                 | - 13.0      |
| 392.311         | H              | 18.9                 | 16.8                                 | 35.7                          | 46.0                 | - 10.3      |
| 591.891         | H              | 15.8                 | 22.2                                 | 38.0                          | 46.0                 | - 8.0       |
| 708.917         | V              | 15.3                 | 23.5                                 | 38.8                          | 46.0                 | - 7.2       |

Remark: Other emissions more than 20dB below the limit are not reported.



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### 2.3 Radiated Emission Measurement Data (Con't)

#### Radiated emission

pursuant to

the requirement of FCC Part 15 subpart B

Environmental conditions:

| Parameter            | Recorded value |     |
|----------------------|----------------|-----|
| Ambient temperature: | 24             | ° C |
| Relative humidity:   | 58             | %   |

Detector: Quasi-peak

RBW: 120kHz

VBW: 300kHz

Operation mode: Charging

| Frequency (MHz) | Polarity (H/V) | Reading at 3m (dBμV) | Antenna Factor and Cable Loss (dB/m) | Field Strength at 3m (dBμV/m) | Limit at 3m (dBμV/m) | Margin (dB) |
|-----------------|----------------|----------------------|--------------------------------------|-------------------------------|----------------------|-------------|
| 65.008          | V              | 13.2                 | 7.6                                  | 20.8                          | 40.0                 | - 19.2      |
| 85.419          | H              | 10.4                 | 8.5                                  | 18.9                          | 40.0                 | - 21.1      |
| 142.960         | H              | 9.2                  | 14.1                                 | 23.3                          | 43.5                 | - 20.2      |
| 203.416         | H              | 9.5                  | 12.0                                 | 21.5                          | 43.5                 | - 22.0      |
| 259.548         | H              | 9.6                  | 15.4                                 | 25.0                          | 46.0                 | - 21.0      |
| 359.249         | H              | 11.3                 | 16.8                                 | 28.1                          | 46.0                 | - 17.9      |
| 474.322         | H              | 10.5                 | 20.6                                 | 31.1                          | 46.0                 | - 24.9      |

Remark: Other emissions more than 20dB below the limit are not reported.



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### 3 Description of the Line-conducted Test

#### 3.1 Test Procedure

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 – 2009. The EUT was setup as described in the procedures, and both lines were measured.

#### 3.2 Test Result

The EUT connected to adaptor for charging

It was found that the EUT met the FCC requirement.

#### 3.3 Graph and Table of Conducted Emission Measurement Data

For electronic filing, the document is saved with filename TestRpt2.pdf.



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### **4 Photograph**

#### **4.1 Photographs of the Test Setup for Radiated Emission and Conducted Emission**

For electronic filing, the photos are saved with filename TSup1.jpg to TSup11.jpg.

#### **4.2 Photographs of the External and Internal Configurations of the EUT**

For electronic filing, the photos are saved with filename ExPho1.jpg to ExPho3.jpg and InPho1.jpg to InPho6.jpg.



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### 5 Supplementary document

The following document were submitted by applicant, and for electronic filing, the document are saved with the following filenames:

| Document                | Filename     |
|-------------------------|--------------|
| ID Label/Location       | LabelSmp.jpg |
| Block Diagram           | BlkDia.pdf   |
| Schematic Diagram       | Schem.pdf    |
| Users Manual            | UserMan.pdf  |
| Operational Description | OpDes.pdf    |

#### 5.1 Bandwidth

The plot saved in TestRpt3.pdf shows the fundamental emission is confined in the specified band. It shows the 20dB bandwidth met the 15.215 requirement for frequency band 2400 to 2483.5 MHz.

The plot saved in TestRpt4.pdf shows the band edge is fulfil 15.209 requirement.

#### 5.2 Duty cycle

Not Applicable

#### 5.3 Transmission time

Not Applicable

#### 5.4 Power Spectral Density

Not Applicable

#### 5.5 Average on time

Not Applicable



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### 6 Appendices

|    |                                             |   |       |
|----|---------------------------------------------|---|-------|
| A1 | Photos of the set-up of Radiated Emissions  | 4 | pages |
| A2 | Photos of the set-up of Conducted Emissions | 2 | pages |
| A3 | Photos of External Configurations           | 2 | pages |
| A4 | Photos of Internal Configurations           | 3 | pages |
| A5 | ID Label/Location                           | 1 | page  |
| A6 | Conducted Emission Measurement Data         | 3 | pages |
| A7 | Band Edge                                   | 2 | pages |
| A8 | 20dB Bandwidth Plot                         | 2 | pages |



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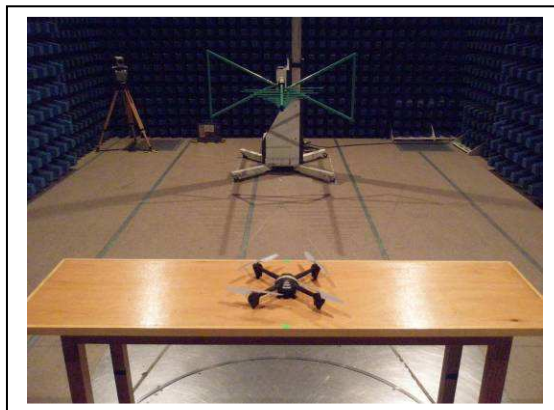
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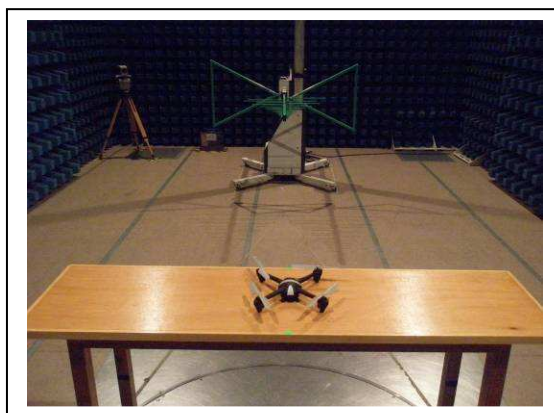
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### A1. Photos of the set-up of Radiated Emissions



(Front view, 30MHz – 1GHz)



(Back view, 30MHz – 1GHz)

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



# CMA Testing and Certification Laboratories

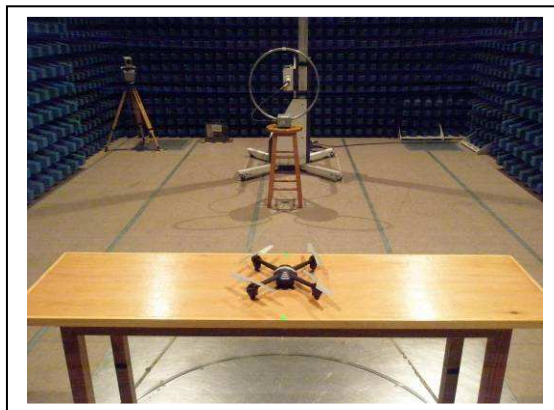
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## TEST REPORT

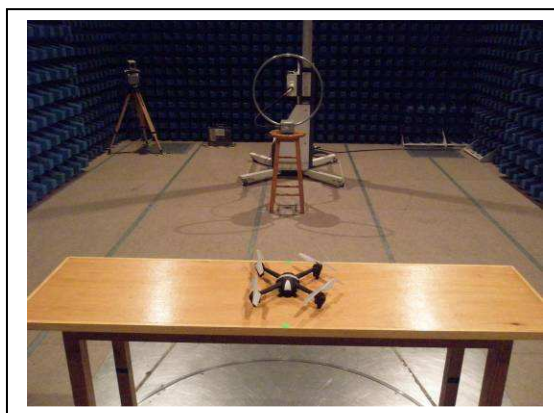
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Date : 23 Dec 2014

### A1. Photos of the set-up of Radiated Emissions



(Front view, 9kHz – 30MHz)



(Back view, 9kHz – 30MHz)

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



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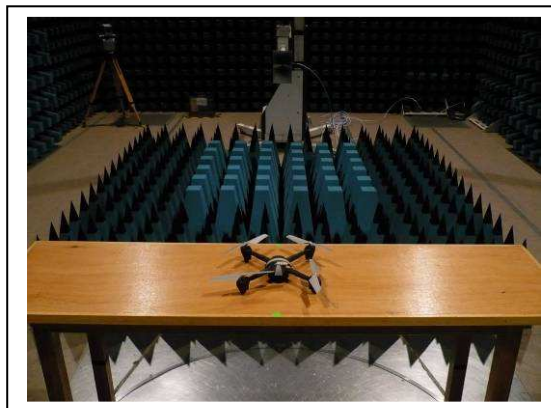
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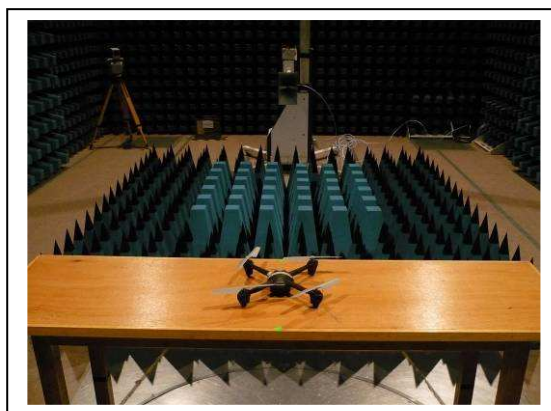
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### A1. Photos of the set-up of Radiated Emissions



(Front view, 1GHz – 25GHz)



(Back view, above 1GHz – 25GHz)

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



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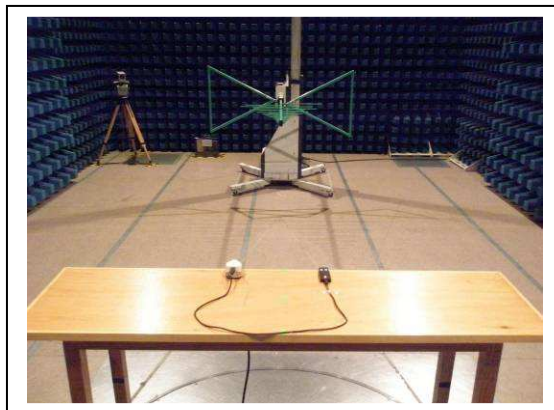
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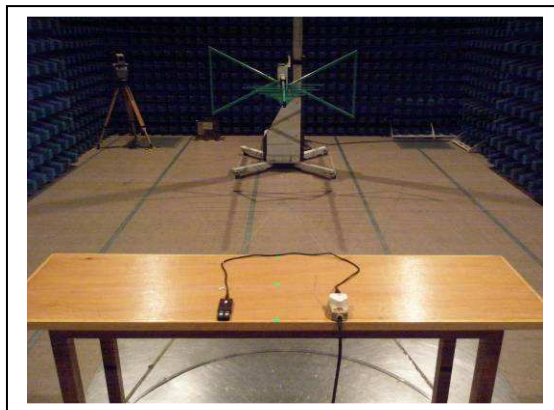
Report No. : AS0076327(3)

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### A1. Photos of the set-up of Radiated Emissions



(Front view, Charging)



(Back view, Charging)

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



# CMA Testing and Certification Laboratories

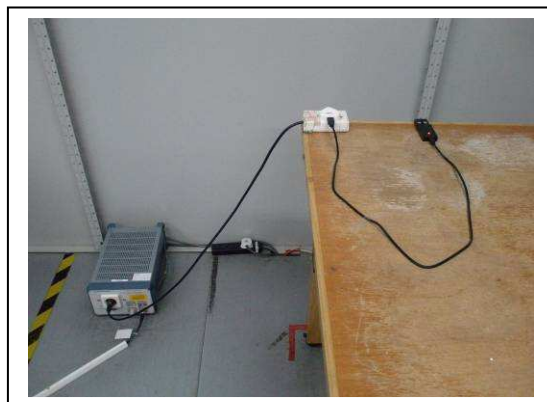
廠商會檢定中心

## TEST REPORT

Report No. : AS0076327(3)

Date : 23 Dec 2014

### A2. Photos of the set-up of Conducted Emission



(front view)



(rear view)

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



# CMA Testing and Certification Laboratories

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## TEST REPORT

Report No. : AS0076327(3)

Date : 23 Dec 2014

### A2. Photos of the set-up of Conducted Emission



(side view)

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



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## TEST REPORT

Report No. : AS0076327(3)

Date : 23 Dec 2014

### A3. Photos of External Configurations



(External Configuration 1)



(External Configuration 2)

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



# CMA Testing and Certification Laboratories

廠商會檢定中心

## TEST REPORT

Report No. : AS0076327(3)

Date : 23 Dec 2014

### A3. Photos of External Configurations



(External Configuration 3)

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



# CMA Testing and Certification Laboratories

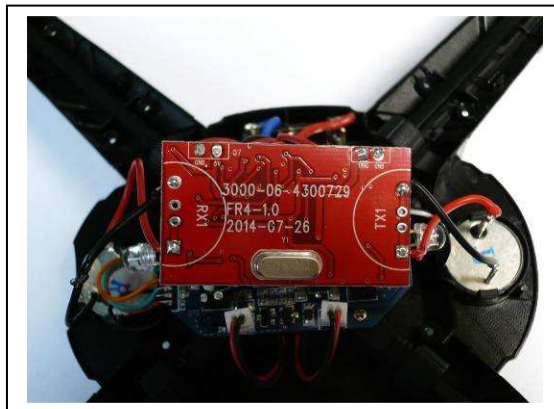
廠商會檢定中心

## TEST REPORT

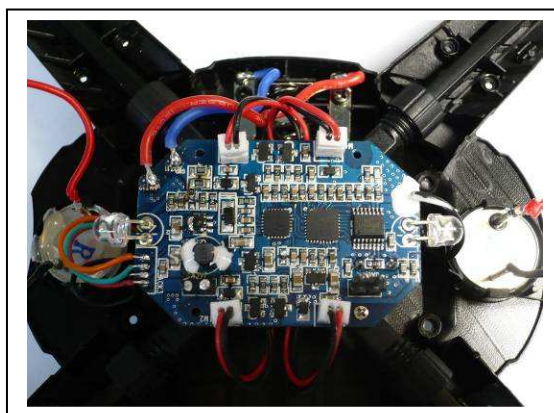
Report No. : AS0076327(3)

Date : 23 Dec 2014

### A4. Photos of Internal Configurations



Internal Configuration 1



Internal Configuration 2

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



# CMA Testing and Certification Laboratories

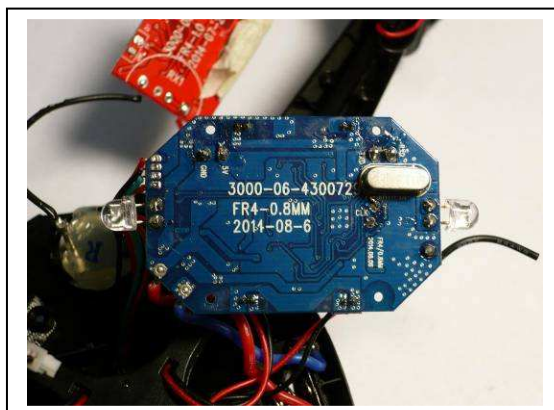
廠商會檢定中心

## TEST REPORT

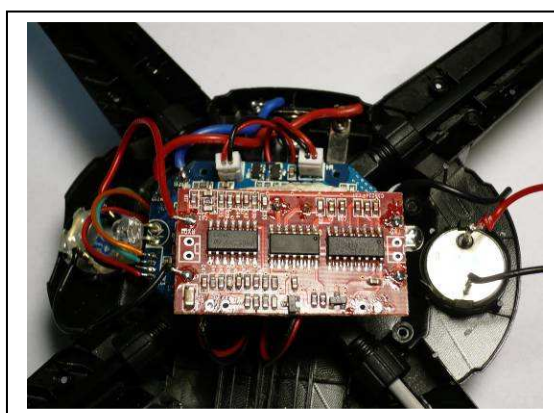
Report No. : AS0076327(3)

Date : 23 Dec 2014

### A4. Photos of Internal Configurations



Internal Configuration 3



Internal Configuration 4

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



# CMA Testing and Certification Laboratories

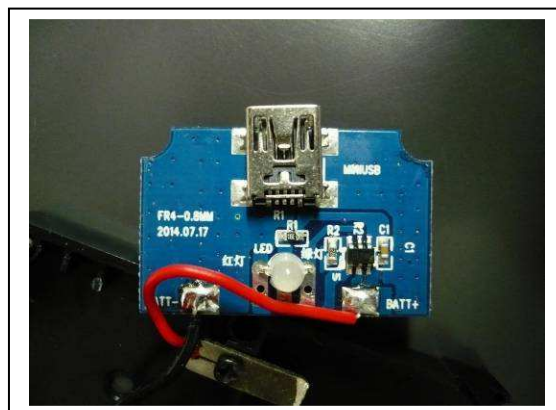
廠商會檢定中心

## TEST REPORT

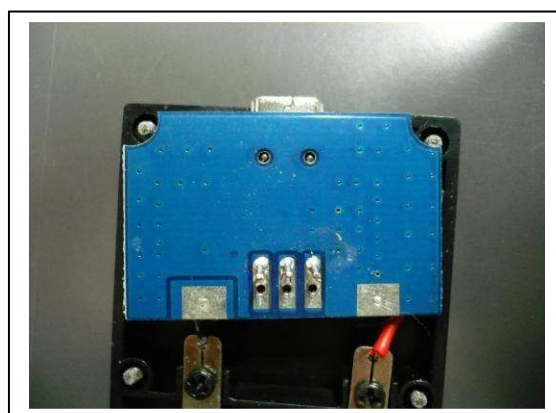
Report No. : AS0076327(3)

Date : 23 Dec 2014

### A4. Photos of Internal Configurations



Internal Configuration 5



Internal Configuration 6

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



# CMA Testing and Certification Laboratories

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## TEST REPORT

Report No. : AS0076327(3)

Date : 23 Dec 2014

### A5. ID Label / Location



ID Label 1

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

FCC ID: VLEPL1280-R



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## TEST REPORT

Report No. : AS0076327(3)

Date : 23 Dec 2014

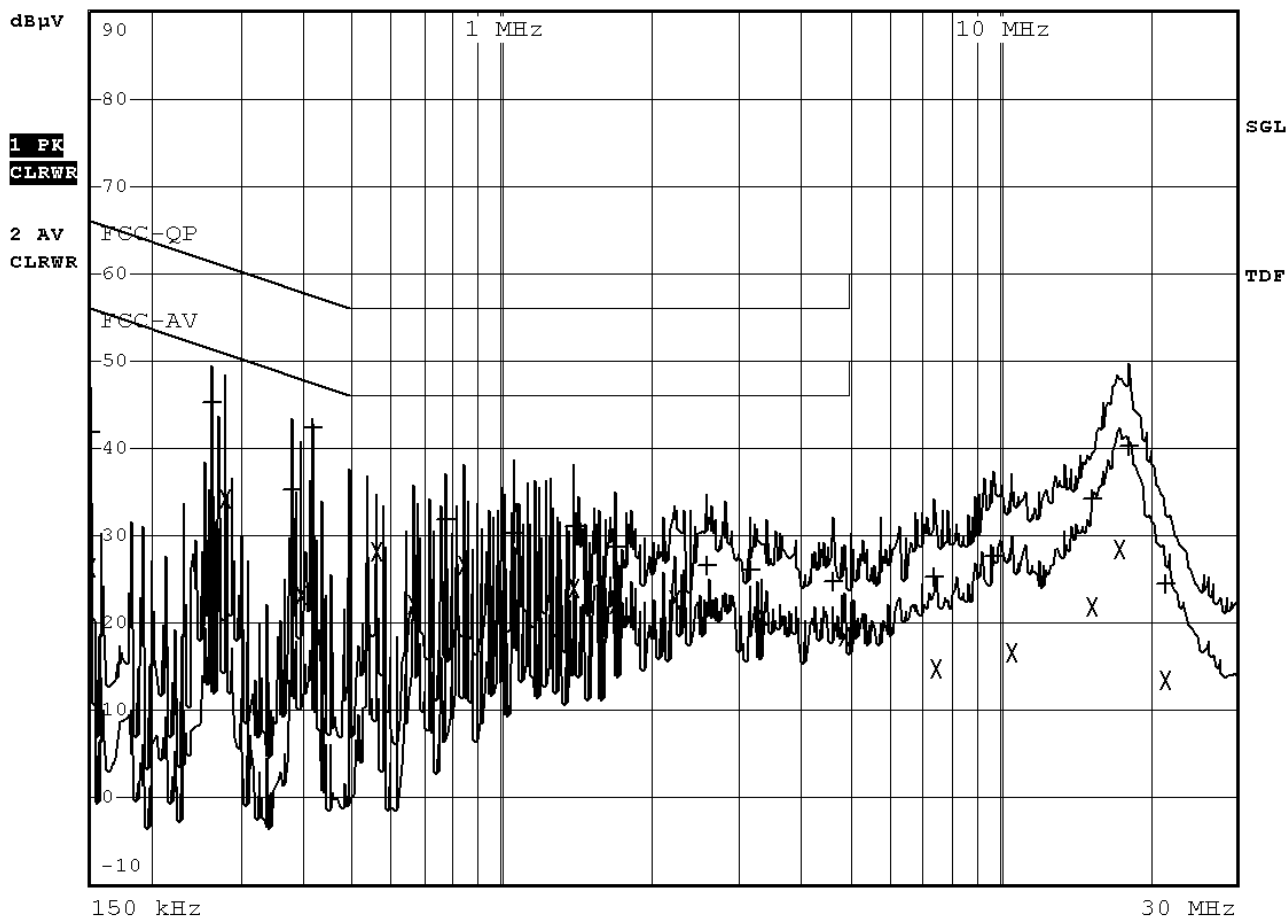
### A6. Conducted Emission Measurement Date



RBW 9 kHz

MT 1 s

Att 10 dB AUTO PREAMP OFF



Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



# CMA Testing and Certification Laboratories

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## TEST REPORT

Report No. : AS0076327(3)

Date : 23 Dec 2014

### A6. Conducted Emission Measurement Date

| EDIT PEAK LIST (Final Measurement Results) |            |                  |        |                |
|--------------------------------------------|------------|------------------|--------|----------------|
| Trace1:                                    | FCC-QP     |                  |        |                |
| Trace2:                                    | FCC-AV     |                  |        |                |
| Trace3:                                    | ---        |                  |        |                |
| TRACE                                      | FREQUENCY  | LEVEL dB $\mu$ V |        | DELTA LIMIT dB |
| 1 Quasi Peak                               | 150 kHz    | 41.79            | N gnd  | -24.20         |
| 2 Average                                  | 150 kHz    | 26.26            | N gnd  | -29.73         |
| 1 Quasi Peak                               | 262.5 kHz  | 45.21            | N gnd  | -16.13         |
| 2 Average                                  | 280.5 kHz  | 34.20            | N gnd  | -16.59         |
| 1 Quasi Peak                               | 379.5 kHz  | 35.26            | N gnd  | -23.02         |
| 2 Average                                  | 397.5 kHz  | 23.10            | N gnd  | -24.79         |
| 1 Quasi Peak                               | 420 kHz    | 42.23            | N gnd  | -15.21         |
| 2 Average                                  | 558.5 kHz  | 28.27            | N gnd  | -17.72         |
| 2 Average                                  | 662 kHz    | 22.23            | N gnd  | -23.77         |
| 1 Quasi Peak                               | 774.5 kHz  | 31.88            | N gnd  | -24.12         |
| 2 Average                                  | 837.5 kHz  | 26.74            | N gnd  | -19.25         |
| 1 Quasi Peak                               | 1.0625 MHz | 30.32            | L1 gnd | -25.67         |
| 1 Quasi Peak                               | 1.3955 MHz | 31.19            | N gnd  | -24.80         |
| 2 Average                                  | 1.3955 MHz | 23.96            | N gnd  | -22.03         |
| 1 Quasi Peak                               | 1.7015 MHz | 28.81            | N gnd  | -27.18         |
| 2 Average                                  | 1.7015 MHz | 22.15            | N gnd  | -23.84         |
| 2 Average                                  | 2.228 MHz  | 22.68            | N gnd  | -23.31         |
| 1 Quasi Peak                               | 2.588 MHz  | 26.63            | N gnd  | -29.36         |
| 1 Quasi Peak                               | 3.155 MHz  | 26.13            | N gnd  | -29.86         |
| 2 Average                                  | 3.326 MHz  | 20.71            | N gnd  | -25.28         |

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



# CMA Testing and Certification Laboratories

廠商會檢定中心

## TEST REPORT

Report No. : AS0076327(3)

Date : 23 Dec 2014

### A6 Conducted Emission Measurement Date

| EDIT PEAK LIST (Final Measurement Results) |             |                  |        |                |
|--------------------------------------------|-------------|------------------|--------|----------------|
| Trace1:                                    | FCC-QP      |                  |        |                |
| Trace2:                                    | FCC-AV      |                  |        |                |
| Trace3:                                    | ---         |                  |        |                |
| TRACE                                      | FREQUENCY   | LEVEL dB $\mu$ V |        | DELTA LIMIT dB |
| 1 Quasi Peak                               | 4.658 MHz   | 24.78            | N gnd  | -31.21         |
| 2 Average                                  | 4.901 MHz   | 18.49            | N gnd  | -27.50         |
| 1 Quasi Peak                               | 7.3895 MHz  | 25.27            | L1 gnd | -34.72         |
| 2 Average                                  | 7.493 MHz   | 14.79            | N gnd  | -35.20         |
| 1 Quasi Peak                               | 9.797 MHz   | 27.73            | N gnd  | -32.27         |
| 2 Average                                  | 10.6475 MHz | 16.75            | L1 gnd | -33.24         |
| 1 Quasi Peak                               | 15.3185 MHz | 34.35            | N gnd  | -25.64         |
| 2 Average                                  | 15.44 MHz   | 21.76            | L1 gnd | -28.23         |
| 2 Average                                  | 17.483 MHz  | 28.51            | N gnd  | -21.49         |
| 1 Quasi Peak                               | 18.1445 MHz | 40.36            | N gnd  | -19.63         |
| 1 Quasi Peak                               | 21.6365 MHz | 24.64            | N gnd  | -35.35         |
| 2 Average                                  | 21.6365 MHz | 13.38            | N gnd  | -36.61         |

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



# CMA Testing and Certification Laboratories

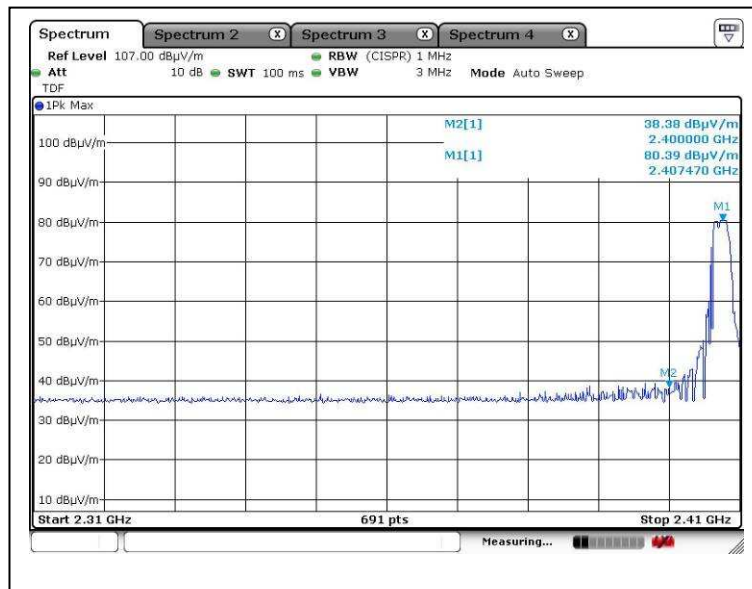
廠商會檢定中心

## TEST REPORT

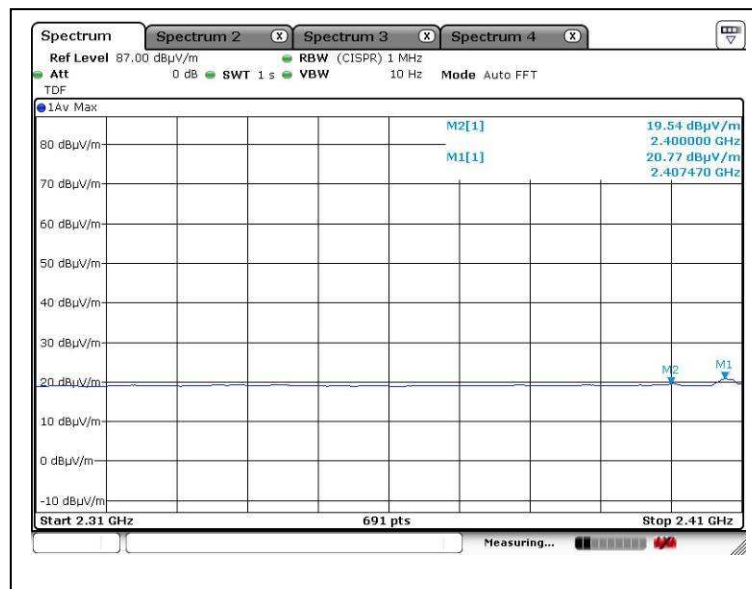
Report No. : AS0076327(3)

Date : 23 Dec 2014

### A7. Band Edge



Lower edge (Peak measurement)



Lower edge (Average measurement)

Tested by:

*Ken*

Mr. LEUNG Shu-kan, Ken

Reviewed by:

*PR*

Mr. WONG Lap-pong, Andrew



# CMA Testing and Certification Laboratories

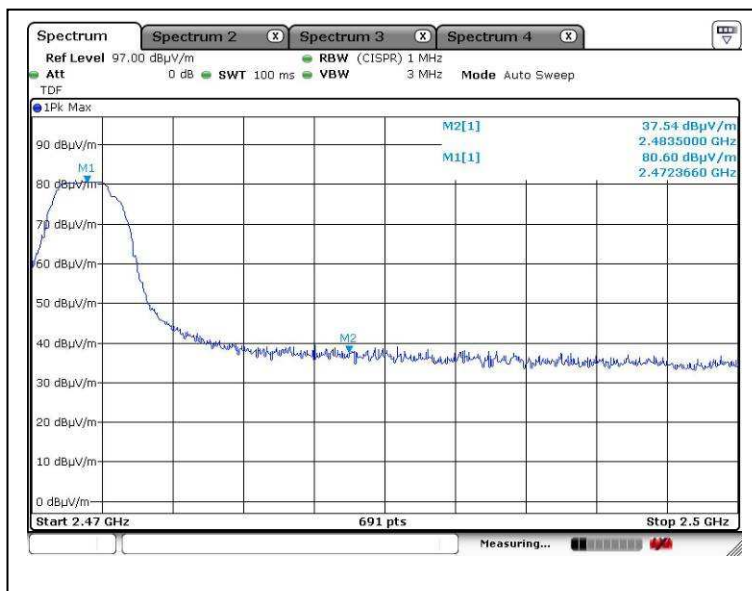
廠商會檢定中心

## TEST REPORT

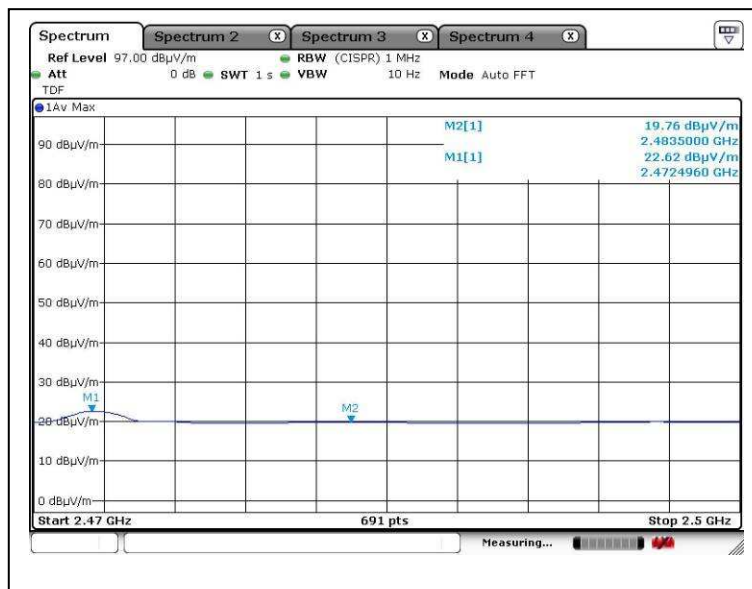
Report No. : AS0076327(3)

Date : 23 Dec 2014

### A7. Band Edge



Higher edge (Peak measurement)



Higher edge (Average measurement)

Tested by:

*Ken*

Mr. LEUNG Shu-kan, Ken

Reviewed by:

*PR*

Mr. WONG Lap-pong, Andrew



# CMA Testing and Certification Laboratories

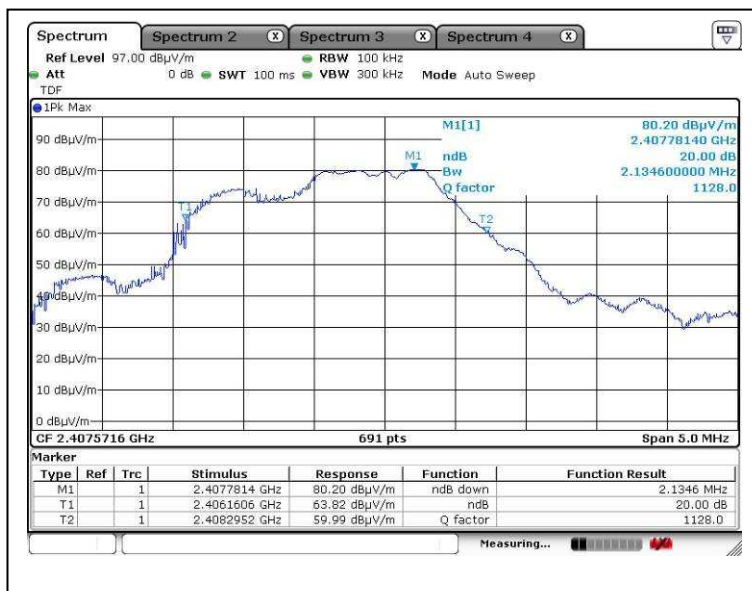
廠商會檢定中心

## TEST REPORT

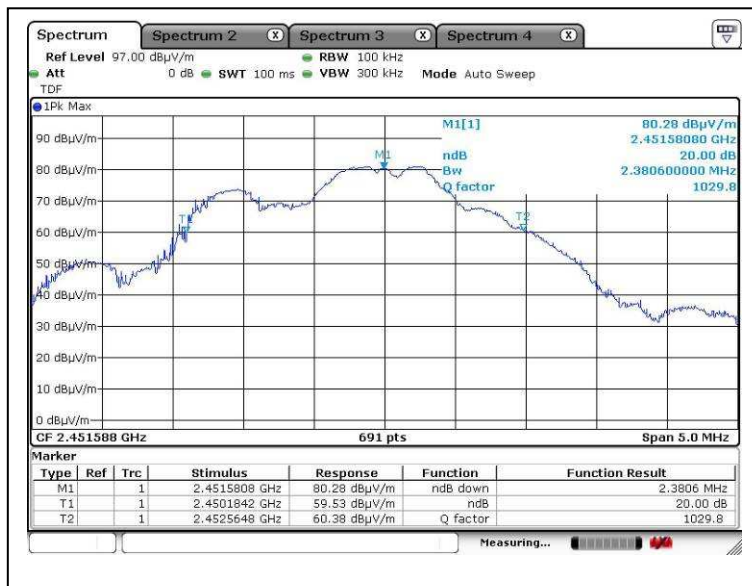
Report No. : AS0076327(3)

Date : 23 Dec 2014

### A8. 20dB Bandwidth Plot



Bandwidth 1 (2407MHz)



Bandwidth 2 (2452MHz)

Tested by:

*Ken*

Mr. LEUNG Shu-kan, Ken

Reviewed by:

*PR*

Mr. WONG Lap-pong, Andrew



# CMA Testing and Certification Laboratories

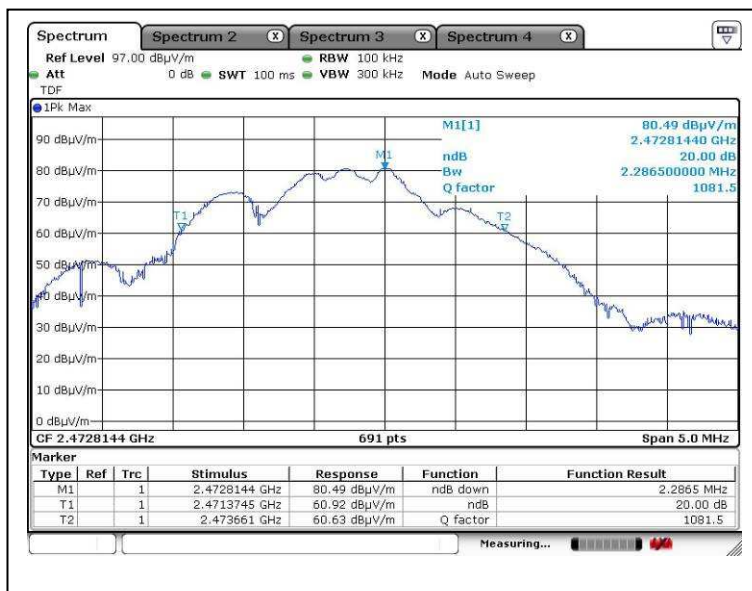
廠商會檢定中心

## TEST REPORT

Report No. : AS0076327(3)

Date : 23 Dec 2014

### A8. 20dB Bandwidth Plot



Bandwidth 3 (2472MHz)

\*\*\*\*\* End of Report \*\*\*\*\*

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew