

廠商會檢定中心

TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

Application No. : LU029359(6)

Applicant : Zego Electronic Company Limited

Room 703, Kowloon Building, 555 Nathan Road, Kowloon, HK

Sample Description : One(1) item of submitted sample stated to be <u>Copter of Accelerator</u>

of Model No. 6001436

Sample registration No. : RU0036012-003

Radio Frequency : 2412MHz – 2462MHz Transceiver

: 2402MHz – 2475MHz Transceiver

Rating : AC 100-240V to DC 4.2V charging adaptor

: 3.7V rechargeable battery

Date Received : 03 Aug 2016

Test Period : 15 Aug 2016 to 19 Aug 2016

Test Requested : FCC Part 15 Certificate (15.247), FCC Part 15 Verification Procedure

Test Method : 47 CFR Part 15 (10-1-14 Edition), ANSI C63.4 – 2014, ANSI C63.10 – 2013

KDB 558074 D01 DTS Meas Guidance v03r03

Test Engineer : Mr. LEUNG Shu-kan, Ken

Test Result : See attached sheet(s) from page 2 to 61.

Conclusion : The submitted sample was found to comply with requirement of FCC Part 15

Subpart B and C.

For and on behalf of

CMA Industrial Development Foundation Limited

Authorized Signature : _____ Page 1 of 61 Mr. WONG Lap-pone Andrew

Manager Electrical Division

FCC ID: 2ACS614RX



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1 General Information

1.1 General Description

The equipment under test (EUT) is a APP control drone. The EUT is power by 3.7V rechargeable battery. It operates at 2412MHz – 2462MHz. The EUT is connected with smart phone by WiFi (802.11b and 802.11g). When the user using the app, the EUT will take the corresponding action. User can also use the self-developed control protocol to control the drone. The self-develop control operates at 2402MHz – 2475MHz.

The brief circuit description is listed as follows:

- U1 (WiFi) and its associated circuit act as WiFi module

- U1, U2 and its associated circuit act as MCU

Q1 and its associated circuit act as power regulator
 Y1 and its associated circuit act as oscillator
 U4, U5 and its associated circuit act as motor control

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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 C63.10 - 2013. 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 C63.10 - 2013. A shielded room is located at:

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

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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	27 Sep 2016	1Year
Spectrum Analyzer	R&S	FSV40	100628	09 Feb 2017	1Year
Broadband Antenna	Schaffner	CBL6112B	2718	15 Mar 2017	2Years
Loop Antenna	EMCO	6502	00056620	25 Jan 2018	2Years
Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-531	24 Nov 2016	2Years
Broadband Pre-Amplifier	Schwarzbeck	BBV 9718	9718-119	24 Nov 2016	2Years
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170442	02 Aug 2017	2Years
Broadband Pre-Amplifier	Schwarzbeck	BBV 9719	9719-010	02 Aug 2017	2Years
Coaxial Cable	Schaffner	RG 213/U	N/A	18 May 2017	1Years
Coaxial Cable	Suhner	RG 214/U	N/A	18 May 2017	1Years
Coaxial Cable	Suhner	Sucoflex_104	N/A	13 Dec 2016	1Years
LISN	R&S	ENV216	101323	21 Oct 2016	1Year
Coaxial Cable	Tyco Electronics	RG 58C/U	N/A	01 Nov 2016	1Year

Support equipment:

Adaptor

Model: MKS-0421000H

Supply by Client

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1.4 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)	4.83dB		
30MHz ~ 200MHz (Vertical)	4.84dB		
200MHz ~1000MHz (Horizontal)	4.87dB		
200MHz ~1000MHz (Vertical)	5.94dB		
1GHz ~6GHz	4.41dB		
6GHz ~18GHz	4.64dB		

Conducted emissions

Frequency	Uncertainty (U _{lab})
150kHz~30MHz	2.64dB

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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 C63.10 - 2013.

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 for below 1GHz measurement and 1.5m high above the ground for above 1GHz measurement. 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

Subpart C:

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

Subpart B:

Quasi-Peak Detector data were measured unless otherwise stated.

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

The emissions meet the requirement of section 15.109 are based on measurements employing the CISPR quasi-peak detector below 1000MHz and average detector for frequencies above 1000MHz.

The frequencies from 30MHz to 1000MHz 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:

ParameterRecorded valueAmbient temperature:26° CRelative humidity:60%

Measurement: Peak RBW: 1MHz VBW: 3MHz

Testing frequency range: 9kHz to 25GHz

Mode: Self-develop control protocol

ig irequeries ra	rieducite it failige. This to 250112 whole. Self-develop control protocol							
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)		
2402.191	V	89.9	- 4.2	85.7	114.0	- 28.3		
#4802.044	Н	39.7	3.7	43.4	74.0	- 30.6		
#4803.406	V	43.9	3.7	47.6	74.0	- 26.4		
7205.289	V	40.6	11.5	52.1	74.0	- 21.9		
2433.193	V	89.2	- 4.2	85.0	114.0	- 29.0		
#4863.905	V	44.6	3.7	48.3	74.0	- 25.7		
#4865.377	Н	45.0	3.7	48.7	74.0	- 25.3		
#7299.470	V	23.6	11.5	35.1	74.0	- 38.9		
2475.214	V	90.7	- 4.3	86.4	114.0	- 27.6		
#4947.822	V	43.7	4.0	47.7	74.0	- 26.3		
#4949.988	Н	41.5	4.0	45.5	74.0	- 28.5		
#7424.031	V	40.0	11.5	51.5	74.0	- 22.5		

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

Peak measurement values are lower than average limit, therefore average measurement is not necessary.

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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 ° C Ambient temperature: 26 Relative humidity: 60 %

Measurement: Peak RBW: 1MHz VBW: 3MHz

Testing frequency range: 9kHz to 25GHz Mode: 802.11b

ig frequency ra	g frequency range. 9kHz to 25GHz Wode. 802.110						
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)	
2412.070	V	106.3	- 4.2	102.1	114.0	- 11.9	
#4824.028	V	40.5	3.7	44.2	74.0	- 29.8	
#4824.033	Н	39.6	3.7	43.3	74.0	- 30.7	
2437.030	V	100.5	- 4.2	96.3	114.0	- 17.7	
#4874.001	Н	37.0	3.7	40.7	74.0	- 33.3	
#4874.207	V	39.4	3.7	43.1	74.0	- 30.9	
			_				
2462.070	V	100.7	- 4.3	96.4	114.0	- 17.6	
#4924.042	Н	37.0	4.0	41.0	74.0	- 33.0	
#4924.078	V	39.6	4.0	43.6	74.0	- 30.4	

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 ° C Ambient temperature: 25 61 Relative humidity: %

Measurement: Average RBW: 1MHz VBW: 10Hz

Testing frequency range: 9kHz to 25GHz Mode: 802.11b

is frequency ru	1180. > 11112	10 20 0112	1410ac. 002.1			
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)
2411.090	V	64.1	- 4.2	59.9	94.0	- 34.1
#4823.769	V	24.0	3.7	27.7	54.0	- 26.3
#4824.002	Н	23.2	3.7	26.9	54.0	- 27.1
2437.790	V	61.0	- 4.2	56.8	94.0	- 37.2
#4873.948	Н	21.5	3.7	25.2	54.0	- 28.8
#4874.033	V	23.0	3.7	26.7	54.0	- 27.3
2461.110	V	61.2	- 4.3	56.9	94.0	- 37.1
#4923.990	V	22.8	4.0	26.8	54.0	- 27.2
#4923.993	Н	21.2	4.0	25.2	54.0	- 28.8

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 ° C Ambient temperature: 26 Relative humidity: 60 %

Measurement: Peak RBW: 1MHz VBW: 3MHz

Testing frequency range: 9kHz to 25GHz Mode: 802.11g

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)
2415.590	V	99.7	- 4.2	95.5	114.0	- 18.5
#4823.386	V	38.5	3.7	42.2	74.0	- 31.8
#4824.365	Н	37.1	3.7	40.8	74.0	- 33.2
2442.875	V	100.3	- 4.2	96.1	114.0	- 17.9
#4873.302	Н	35.4	3.7	39.1	74.0	- 34.9
#4873.940	V	37.4	3.7	41.1	74.0	- 32.9
2465.390	V	101.0	- 4.3	96.7	114.0	- 17.3
#4924.233	V	36.9	4.0	40.9	74.0	- 33.1
#4924.411	Н	35.0	4.0	39.0	74.0	- 35.0

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:

ParameterRecorded valueAmbient temperature:26° CRelative humidity:60%

Measurement: Average RBW: 1MHz VBW: 10Hz

Testing frequency range: 9kHz to 25GHz Mode: 802.11g

g frequency ru	11801 > 111112	10 2 0 0112	111000. 002.1	78		
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)
2408.490	V	44.8	- 4.2	40.6	94.0	- 53.4
#4823.878	Н	21.9	3.7	25.6	54.0	- 28.4
#4823.988	V	22.3	3.7	26.0	54.0	- 28.0
2441.175	V	44.7	- 4.2	40.5	94.0	- 53.5
#4873.302	Н	20.7	3.7	24.4	54.0	- 29.6
#4873.940	V	21.4	3.7	25.1	54.0	- 28.9
2457.790	V	45.0	- 4.3	40.7	94.0	- 53.3
#4923.884	V	21.1	4.0	25.1	54.0	- 28.9
#4923.994	Н	20.2	4.0	24.2	54.0	- 29.8

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:

ParameterRecorded valueAmbient temperature:26° CRelative humidity:60%

Detector: Quasi-peak RBW: 120kHz VBW: 300kHz

Testing frequency range: 9kHz to 25GHz Operation mode: Transmission

Frequency	Polarity	Reading	Antenna Factor	Field Strength	Limit at 3m	Margin
(MHz)	(H/V)	at 3m	and Cable Loss	at 3m	$(dB\mu V/m)$	(dB)
		(dBµV)	(dB/m)	(dBµV/m)		
#250.728	Н	18.2	15.4	33.6	46.0	- 12.4
288.010	Н	17.7	15.4	33.1	46.0	- 12.9
#324.011	Н	18.1	16.8	34.9	46.0	- 11.1
360.009	Н	17.4	16.8	34.2	46.0	- 11.8
398.005	Н	17.9	16.8	34.7	46.0	- 11.3
475.011	Н	20.5	20.6	41.1	46.0	- 4.9
502.015	Н	20.3	22.2	42.5	46.0	- 3.5

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:

ParameterRecorded valueAmbient temperature:26° CRelative humidity:60%

Detector: Quasi-peak RBW: 120kHz VBW: 300kHz

Testing frequency range: 9kHz to 25GHz Operation mode: Receiving

Frequency	Polarity	Reading	Antenna Factor	Field Strength	Limit at 3m	Margin
(MHz)	(H/V)	at 3m	and Cable Loss	at 3m	$(dB\mu V/m)$	(dB)
		(dBµV)	(dB/m)	(dBµV/m)		
#149.991	Н	13.0	14.1	27.1	43.5	- 16.4
200.008	Н	15.0	12.0	27.0	43.5	- 16.5
#252.007	Н	15.7	15.4	31.1	46.0	- 14.9
288.005	Н	14.8	15.4	30.2	46.0	- 15.8
397.014	Н	15.1	16.8	31.9	46.0	- 14.1
425.021	Н	15.9	20.0	35.9	46.0	- 10.1
475.021	Н	22.3	20.0	42.3	46.0	- 3.7

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:

ParameterRecorded valueAmbient temperature:26° CRelative humidity:60%

Detector: Quasi-peak RBW: 120kHz VBW: 300kHz

Testing frequency range: 9kHz to 25GHz Operation mode: Charging

Frequency	Polarity	Reading	Antenna Factor	Field Strength	Limit at 3m	Margin
(MHz)	(H/V)	at 3m	and Cable Loss	at 3m	$(dB\mu V/m)$	(dB)
		(dBµV)	(dB/m)	(dBµV/m)		
47.692	Н	6.7	12.8	19.5	40.0	- 20.5
93.587	Н	9.8	10.1	19.9	43.5	- 23.6
121.016	Н	7.9	14.1	22.0	43.5	- 21.5
217.136	Н	9.5	11.8	21.3	43.5	- 22.2
#251.198	Н	7.2	15.4	22.6	46.0	- 23.4
296.273	Н	8.1	15.4	23.5	46.0	- 22.5
#331.549	Н	8.6	16.8	25.4	46.0	- 20.6

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

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2.4 Data of Conducted Emission

Environmental conditions:

ParameterRecorded valueAmbient temperature:26° CRelative humidity:60%

Measurement: Peak RBW: 1MHz VBW: 3MHz

Mode: Self-develop control

Frequency (MHz)	Reading (dBm)	Reading (mW)	Limit (mW)	Margin (mW)	
2402.169	- 6.22	0.239	1000.0	- 999.761	
2433.209	- 5.68	0.270	1000.0	- 999.730	
2474.715	- 5.30	0.295	1000.0	- 999.705	

Mode: 802.11b

2412.050	2.09	1.618	501.2	- 499.582
2437.050	1.82	1.521	501.2	- 499.679
2462.050	1.04	1.271	501.2	- 499.929

Mode: 802.11g

2415.696	1.11	1.291	501.2	- 499.909
2440.646	0.65	1.161	501.2	- 500.039
2465.646	- 0.16	0.964	501.2	- 500.236

Remark:

Antenna gain for WiFi: 11 dBi

The antenna gain of the WiFi of the EUT is greater than 6dBi. Following 15.247(c), the total conducted output power shall be reduced by 1 dB below the specified limits for each 3dB. Therefore the total conducted output power shall be reduced by 3dB.

1W = 30dBm, thus the limit is reduced to 27dB due to antenna gain is greater than 6dBi. 27dBm = 501.2mW

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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 C63.10 - 2013. The EUT was setup as described in the procedures, and both lines were measured.

3.2 Test Result

The EUT connected to an adaptor for charging

3.3 Graph and Table of Conducted Emission Measurement Data

The plots in Appendices A6 show the graph and data of conducted emission.

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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 2ACS614RX TSup.pdf.

4.2 Photographs of the External and Internal Configurations of the EUT

For electronic filing, the photos are saved with filename 2ACS614RX ExPho.pdf and 2ACS614RX InPho.pdf.

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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 in Appendices A7 shows the band edge is fulfil 15.205 restricted band, 15.247(d) requirement.

The plot in Appendices A8 shows the 6dB bandwidth has minimum 500kHz for frequency channel 2402MHz, 2433MHz and 2475MHz. It fulfils the section 15.247(a)(2) requirement.

The plot in Appendices A8 shows the 6dB bandwidth has minimum 500kHz for frequency channel 2412MHz, 2437MHz and 2462MHz. It fulfils the section 15.247(a)(2) requirement.

5.2 Power Spectral Density

The plot in Appendices A9 shows the frequency channel 2402MHz, 2433MHz and 2475MHz were not excess 8dBm for 3kHz bandwidth. It fulfils the section 15.247(e) requirement.

The plot in Appendices A9 shows the frequency channel 2412MHz, 2437MHz and 2462MHz were not excess 8dBm for 3kHz bandwidth. It fulfils the section 15.247(e) requirement.

5.3 Antenna requirement

Appendices A4 shows the antenna is permanently attached and cannot be changed. Therefore it fulfils the section 15.203 requirement

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6 Appendices

A1	Photos of the set-up of Radiated Emissions	3	pages
A2	Photos of the set-up of Conducted Emissions	1	pages
A3	Photos of External Configurations	4	pages
A4	Photos of Internal Configurations	5	pages
A5	ID Label/Location	1	page
A6	Conducted Emission Measurement Data	2	pages
A7	Band Edge	6	pages
A8	6dB Bandwidth Plot	6	pages
A9	Power Spectral Density	6	pages
A10	Transmission Power	6	pages

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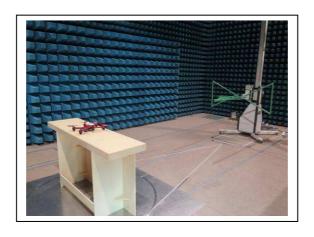


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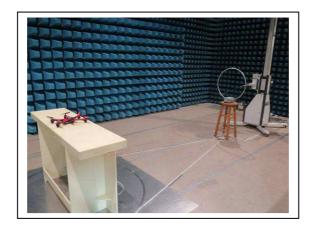
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A1. Photos of the set-up of Radiated Emissions



30Hz - 1GHz



9kHz - 30MHz

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX

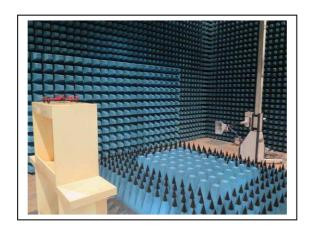


廠商會檢定中心

TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A1. Photos of the set-up of Radiated Emissions



1GHz - 25GHz

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX

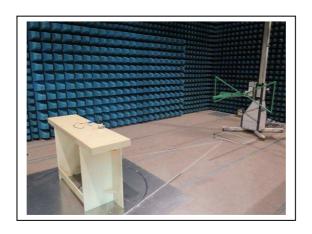


廠商會檢定中心

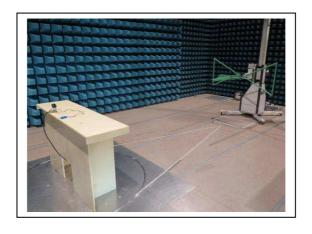
TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

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

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FCC ID: 2ACS614RX



廠商會檢定中心

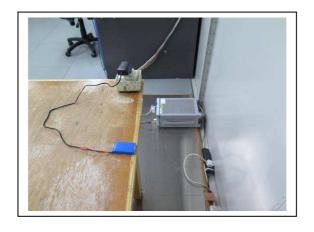
TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A2. Photos of the set-up of Conducted Emissions



(Front view)



(Side view)

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX



廠商會檢定中心

TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

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

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廠商會檢定中心

TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A3 Photos of External Configurations



External Configuration 3



External Configuration 4

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX



廠商會檢定中心

TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A3 Photos of External Configurations



External Configuration 5



External Configuration 6

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX



廠商會檢定中心

TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A3 Photos of External Configurations



External Configuration 7

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX

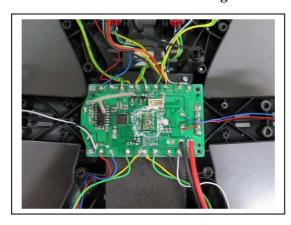


廠商會檢定中心

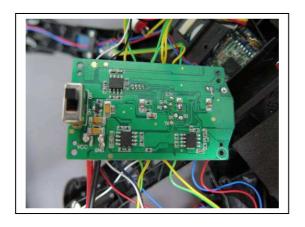
TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

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

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FCC ID: 2ACS614RX

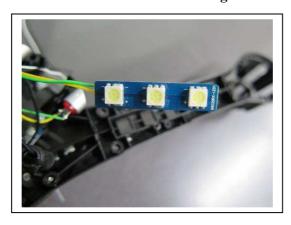


廠商會檢定中心

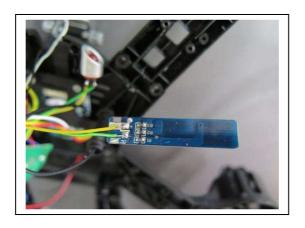
TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

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

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FCC ID: 2ACS614RX



廠商會檢定中心

TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

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

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FCC ID: 2ACS614RX

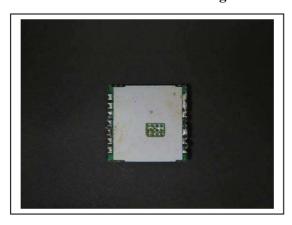


廠商會檢定中心

TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A4 Photos of Internal Configurations



Internal Configuration 7

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX

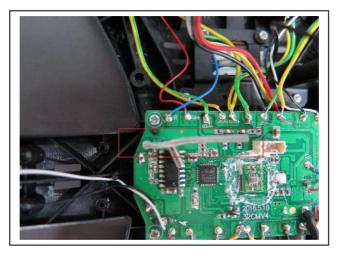


廠商會檢定中心

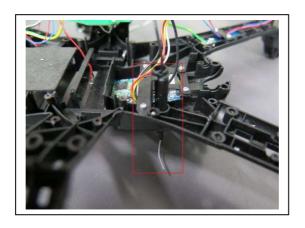
TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A4 Photos of Internal Configurations



EUT antenna 1 (Self-develop RF module)



EUT antenna 2 (WiFi)

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX



廠商會檢定中心

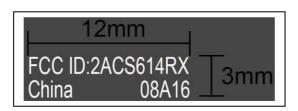
TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A5 ID Label / Location



ID Label 1



ID Label2

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX



廠商會檢定中心

TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A6 Conducted Emission Measurement Date

9 kHz RBW MT1 s Att 10 dB AUTO PREAMP OFF $dB\mu V$ ШНZ 10 MHz 90 SGL 1 PK 2 AV CLRWR TDF -10 150 kHz 30 MHz

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX



廠商會檢定中心

TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A6 Conducted Emission Measurement Date

EDIT PEAK LIST (Final Measurement Results)				
Tracel:		FCC-QP		
Trace2:		FCC-AV		
Trace3:				
	TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1	Quasi Peak	159 kHz	51.32 N gnd	-14.19
2	Average	159 kHz	33.74 N gnd	-21.77
1	Quasi Peak	258 kHz	40.61 L1 gnd	-20.88
2	Average	258 kHz	21.63 N gnd	-29.86
1	Quasi Peak	447 kHz	30.92 L1 gnd	-26.00
2	Average	474 kHz	25.66 N gnd	-20.78
2	Average	1.877 MHz	17.49 N gnd	-28.50
1	Quasi Peak	1.931 MHz	28.28 N gnd	-27 . 72
1	Quasi Peak	2.3855 MHz	28.26 N gnd	-27.73
2	Average	3.587 MHz	20.78 N gnd	-25.21
2	Average	4.667 MHz	18.31 N gnd	-27 . 68
1	Quasi Peak	4.8335 MHz	25.51 N gnd	-30.48
1	Quasi Peak	6.6875 MHz	26.03 N gnd	-33 . 97
2	Average	6.9215 MHz	18.56 N gnd	-31.43

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX



廠商會檢定中心

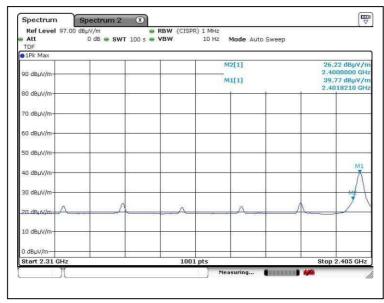
TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A7. Band Edge



Self-develop RF lower edge (Peak measurement)



Self-develop RF lower edge (Average measurement)

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX

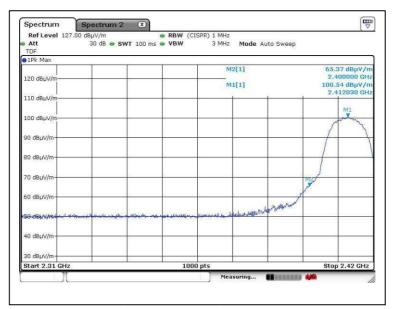


廠商會檢定中心

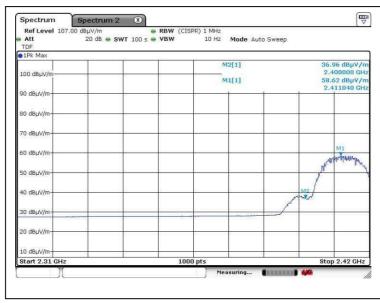
TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A7. Band Edge



802.11b lower edge (Peak measurement)



802.11b lower edge (Average measurement)

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX



廠商會檢定中心

TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A7. Band Edge



802.11g lower edge (Peak measurement)



802.11g lower edge (Average measurement)

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX

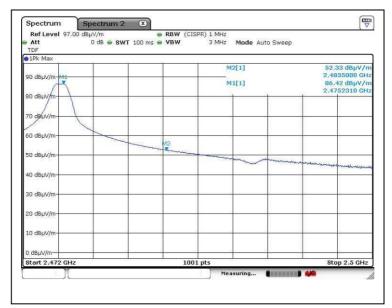


廠商會檢定中心

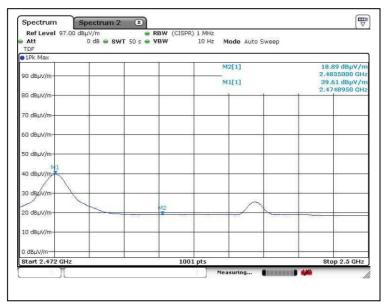
TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A7. Band Edge



Self-develop RF higher edge (Peak measurement)



Self-develop RF higher edge (Average measurement)

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX

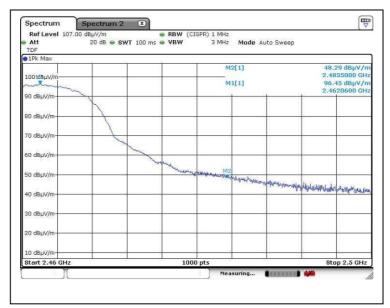


廠商會檢定中心

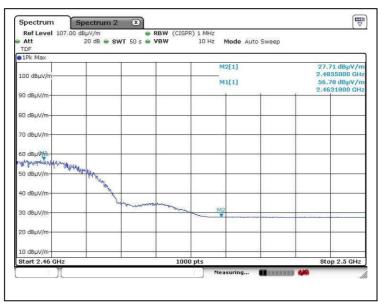
TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A7. Band Edge



802.11b higher edge (Peak measurement)



802.11b higher edge (Average measurement)

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX

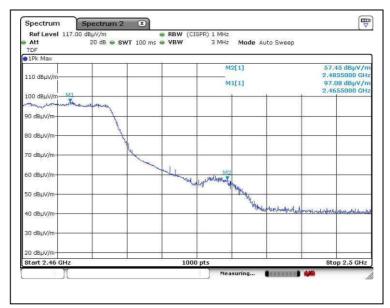


廠商會檢定中心

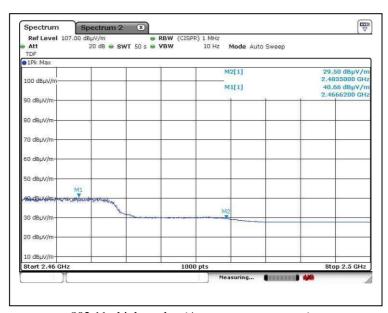
TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A7. Band Edge



802.11g higher edge (Peak measurement)



802.11g higher edge (Average measurement)

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX

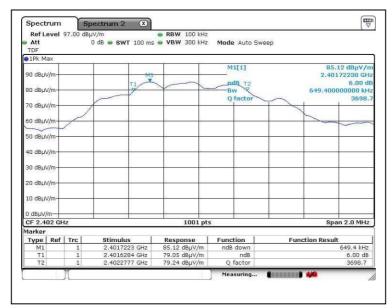


廠商會檢定中心

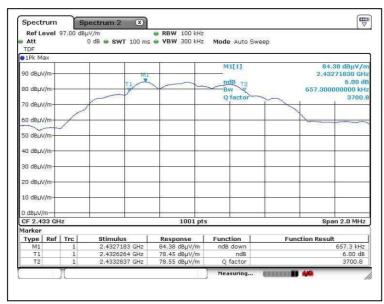
TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A8. 6dB Bandwidth Plot



Self-develop RF lower channel



Self-develop RF middle channel

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX

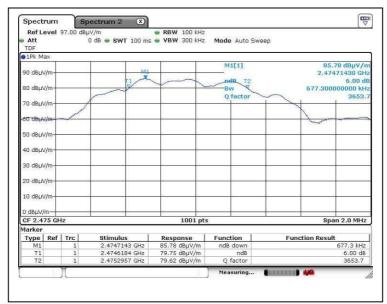


廠商會檢定中心

TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A8. 6dB Bandwidth Plot



Self-develop RF higher channel

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX

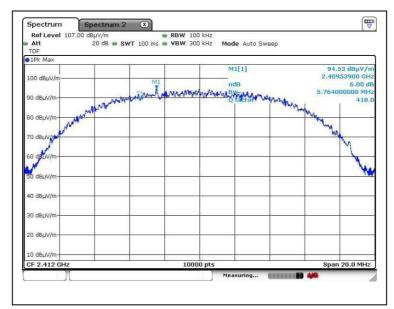


廠商會檢定中心

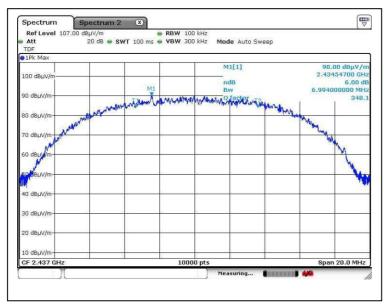
TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A8. 6dB Bandwidth Plot



802.11b CH1



802.11b CH6

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX

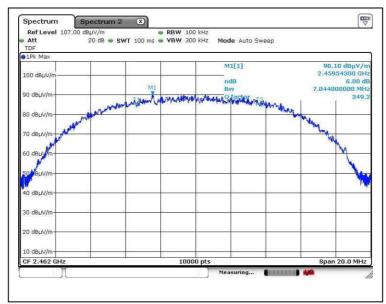


廠商會檢定中心

TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A8. 6dB Bandwidth Plot



802.11b CH11

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX

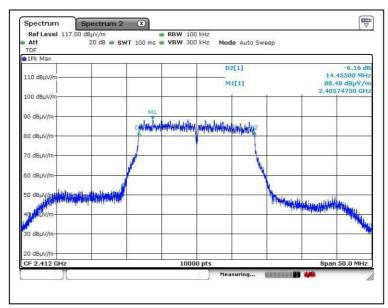


廠商會檢定中心

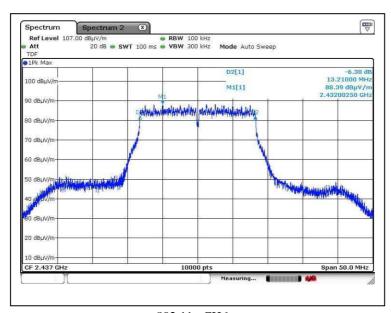
TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A8. 6dB Bandwidth Plot



802.11g CH1



802.11g CH6

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX

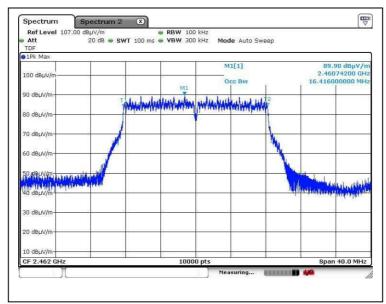


廠商會檢定中心

TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A8. 6dB Bandwidth Plot



802.11g CH11

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX

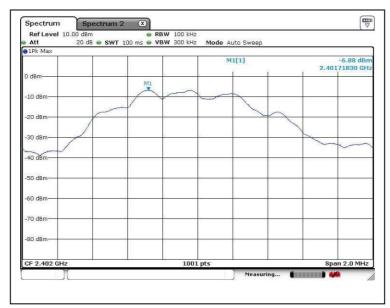


廠商會檢定中心

TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A9. Power Spectral Density



Self-develop RF lower channel



Self-develop RF middle channel

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX

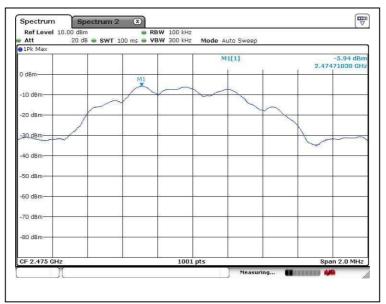


廠商會檢定中心

TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A9. Power Spectral Density



Self-develop RF higher channel

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX

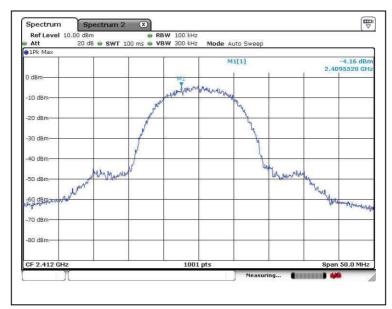


廠商會檢定中心

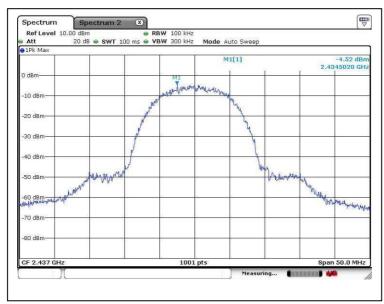
TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A9. Power Spectral Density



802.11b CH1



802.11b CH6

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX



廠商會檢定中心

TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A9. Power Spectral Density



802.11b CH11

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX

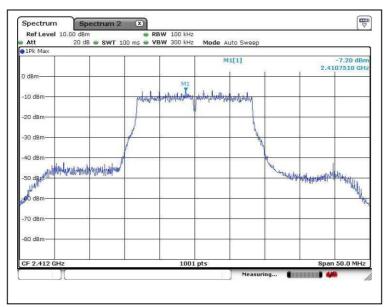


廠商會檢定中心

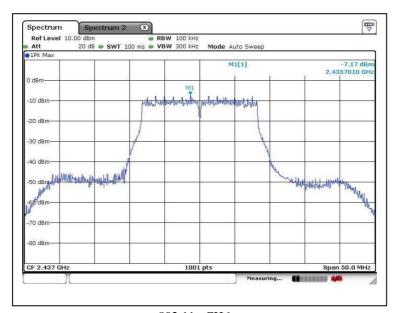
TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A9. Power Spectral Density



802.11g CH1



802.11g CH6

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX

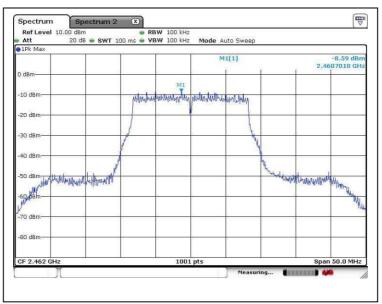


廠商會檢定中心

TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A9. Power Spectral Density



802.11g CH11

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX

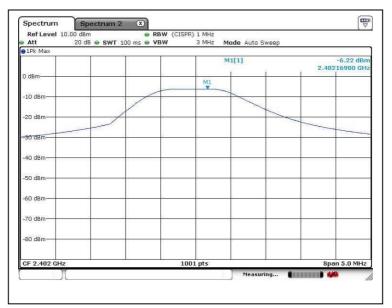


廠商會檢定中心

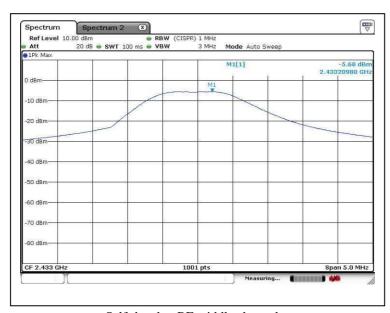
TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A10. Transmission Power



Self-develop RF lower channel



Self-develop RF middle channel

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX

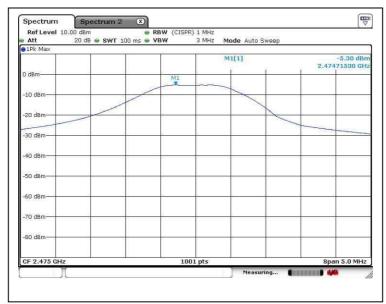


廠商會檢定中心

TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A10. Transmission Power



Self-develop RF higher channel

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX

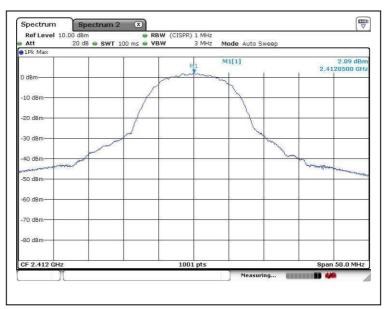


廠商會檢定中心

TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A10. Transmission Power



802.11b CH1



802.11b CH6

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX



廠商會檢定中心

TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A10. Transmission Power



802.11b CH11

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX

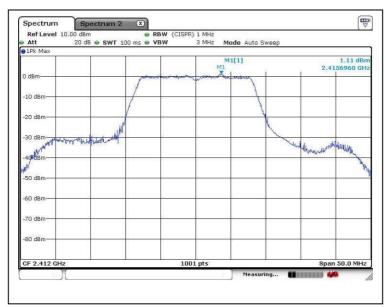


廠商會檢定中心

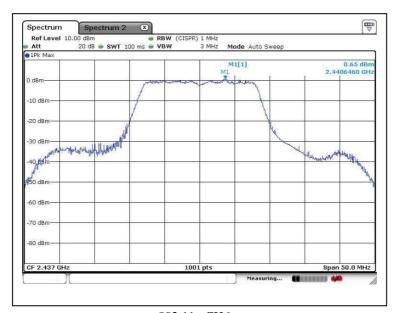
TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A10. Transmission Power



802.11g CH1



802.11g CH6

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX

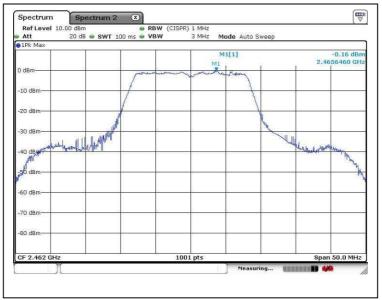


廠商會檢定中心

TEST REPORT

Report No. : AU0050959(6) Date : 29 Aug 2016

A10. Transmission Power



802.11g CH11

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

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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FCC ID: 2ACS614RX