



CMA Testing and Certification Laboratories

廠商會檢定中心

TEST REPORT

Report No. : AU0039409(3) Date : 17 Jun 2016

Application No. : LU018535(0)

Client : Control Company
12554 Old Galveston Road Suite B230 Webster,
Texas 77598 USA

Applicant : Electronics Tomorrow Limited
Unit 903-7, 9/F., Tower 1, Harbour Center,
1 Hok Cheung Street, Hung Hom, Kowloon, Hong Kong

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

Sample description	Model number
TraceableLIVE™ WiFi Datalogging Refrigerator/Freezer Thermometer with Remote Notification	650
TraceableLIVE™ Ultra-Low Temperature WiFi Datalogging Thermometer with Remote Notification	651
TraceableLIVE™ WiFi Datalogging Hygrometer/Thermometer with Remote Notification	652

Sample registration No. : RU015708-001
Radio Frequency : 2412MHz – 2462MHz Transceiver
Rating : 4 x 1.5V AAA size batteries
No. of submitted sample : Eight (8) piece (s)

Date Received : 23 May 2016
Test Period : 26 May 2016 to 10 Jun 2016.

Test Requested : FCC Part 15 Permissive Change (15.247)
Industry Canada Interference Causing Equipment Standard RSS-247
Test Method : 47 CFR Part 15 (10-1-14 Edition), ANSI C63.10 – 2013,
Industry Canada RSS-Gen Issue 4, KDB 558074 D01 DTS Meas Guidance v03r03

Test Engineer : Mr. LEUNG Shu-kan, Ken
Test Result : See attached sheet(s) from page 2 to 62.

Conclusion : The submitted sample was found to comply with requirement of FCC Part 15 Subpart C and Industry
Canada RSS-247 Issue 1.

Remark : All three models are the same in circuitry and components and construction, and therefore model 650
was chosen to be the representative of the test sample. The difference(s) between the tested model
and the declared model(s) is outlook

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: PEQ650171115
IC: 5226A-65001115



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1 General Information

1.1 General Description

The equipment under test (EUT) is a Wifi Temperature sensor. The EUT is power by 4 x 1.5V AAA size batteries. It operates at 2412MHz – 2462MHz. The EUT will use sensor probe to record the temperature and using Wifi connection to store the data. The USB ports are only for sensor probes connection. They are no use for computer data transfer.

The brief circuit description is listed as follows:

- U4 and its associated circuit act as WiFi module
- IC1 and its associated circuit act as MCU
- U2 and its associated circuit act as power regulator
- X1, X2 and its associated circuit act as oscillator
- U5, U6 and its associated circuit act as eeprom



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1.2 Location of the test site

FCC Registered Test Site Number: 552221

Industry Canada Registered Test Site Number: 4093A

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 2016	1Years
Coaxial Cable	Suhner	RG 214/U	N/A	18 May 2016	1Years
Coaxial Cable	Suhner	Sucoflex_104	N/A	13 Dec 2016	1Years



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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

Peak Detector data were measured unless otherwise stated.

“#” means emissions appear within the restricted bands shall follow the requirement of section 15.205 and RSS-Gen 8.10.

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 and RSS requirement.



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2.3 Radiated Emission Measurement Data

Radiated emission

pursuant to

the requirement of FCC Part 15 subpart C and RSS

Environmental conditions:

Parameter	Recorded value	
Ambient temperature:	27	° C
Relative humidity:	65	%

Measurement: Peak RBW: 1MHz VBW: 3MHz
Testing frequency range: 9kHz to 25GHz Mode: 802.11b

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)
2411.101	H	83.2	- 4.2	79.0	114.0	- 35.0
4823.958	H	53.0	1.4	54.4	74.0	- 19.6
6431.895	V	53.1	5.0	58.1	74.0	- 15.9
6431.950	H	51.8	5.0	56.8	74.0	- 17.2

2436.081	H	84.8	- 4.2	80.6	114.0	- 33.4
4873.968	H	52.8	1.4	54.2	74.0	- 19.8
6498.584	V	55.0	5.0	60.0	74.0	- 14.0
6498.605	H	51.7	5.0	56.7	74.0	- 17.3

2462.879	H	84.9	- 4.3	81.0	114.0	- 33.4
4923.945	H	52.8	1.4	51.2	74.0	- 19.8
6565.270	V	52.7	7.3	59.9	74.0	- 14.0
6565.308	H	49.4	7.3	55.7	74.0	- 17.3

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 and RSS

Environmental conditions:

Parameter	Recorded value	
Ambient temperature:	27	° C
Relative humidity:	65	%

Measurement: Average RBW: 1MHz VBW: 10Hz
Testing frequency range: 9kHz to 25GHz Mode: 802.11b

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)
2410.152	H	65.1	- 4.2	60.9	94.0	- 33.1
4824.935	H	43.3	1.4	44.7	54.0	- 9.3
6431.850	H	42.9	5.0	47.9	54.0	- 6.1
6431.879	V	43.9	5.0	48.9	54.0	- 5.1

2436.201	H	66.0	- 4.2	61.8	94.0	- 32.2
4873.902	H	43.3	1.4	44.7	54.0	- 9.3
6498.524	V	45.7	5.0	50.7	54.0	- 3.3
6498.592	H	43.3	5.0	48.3	54.0	- 5.7

2462.669	H	66.0	- 4.3	61.7	94.0	- 32.3
4923.578	H	40.5	1.4	41.9	54.0	- 12.1
6565.108	V	43.3	7.3	50.6	54.0	- 3.4
6565.202	H	39.6	7.3	46.9	54.0	- 7.1

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 and RSS

Environmental conditions:

Parameter	Recorded value	
Ambient temperature:	27	° C
Relative humidity:	65	%

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)
2411.920	H	66.0	- 4.2	81.8	114.0	- 52.2
4822.670	H	43.3	1.4	54.2	74.0	- 29.3
6431.858	H	45.7	5.0	56.8	74.0	- 23.3
6431.995	V	43.3	5.0	58.0	74.0	- 25.7

2436.890	H	89.6	- 4.2	85.4	114.0	- 28.6
4872.513	H	54.0	1.4	55.4	74.0	- 18.6
6498.555	V	55.1	5.0	60.1	74.0	- 13.9
6498.589	H	51.6	5.0	56.6	74.0	- 17.4

2461.970	H	86.2	- 4.3	81.9	114.0	- 32.1
4925.224	H	48.8	1.4	50.2	74.0	- 23.8
6565.225	H	48.1	7.3	55.4	74.0	- 18.6
6565.259	V	53.0	7.3	60.3	74.0	- 13.7

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 C and RSS

Environmental conditions:

Parameter	Recorded value	
Ambient temperature:	27	° C
Relative humidity:	65	%

Measurement: Average RBW: 1MHz VBW: 10Hz
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)
2410.571	H	41.0	- 4.2	36.8	94.0	- 57.2
4824.913	H	28.4	1.4	29.8	54.0	- 24.2
6431.769	V	32.4	5.0	37.4	54.0	- 16.6
6431.839	H	31.9	5.0	36.9	54.0	- 17.1
2434.353	H	40.8	- 4.2	36.6	94.0	- 57.4
4872.469	H	28.3	1.4	29.7	54.0	- 24.3
6498.511	V	33.4	5.0	38.4	54.0	- 15.6
6498.536	H	34.2	5.0	39.2	54.0	- 14.8
2463.359	H	39.9	- 4.3	35.6	94.0	- 58.4
4922.539	H	26.2	1.4	27.6	54.0	- 26.4
6565.102	H	29.7	7.3	37.0	54.0	- 17.0
6565.238	V	31.6	7.3	38.9	54.0	- 15.1

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 and RSS

Environmental conditions:

Parameter	Recorded value	
Ambient temperature:	27	° C
Relative humidity:	65	%

Measurement: Peak RBW: 1MHz VBW: 3MHz
Testing frequency range: 9kHz to 25GHz Mode: 802.11n

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)
2413.049	H	85.0	- 4.2	80.8	114.0	- 33.2
4823.218	H	52.3	1.4	53.7	74.0	- 20.3
6431.869	H	52.1	5.0	57.1	74.0	- 16.9
6431.962	V	53.1	5.0	58.1	74.0	- 15.9

2434.353	H	86.9	- 4.2	82.7	114.0	- 31.3
4871.848	H	53.9	1.4	55.3	74.0	- 18.7
6498.614	V	55.2	5.0	60.2	74.0	- 13.8
6498.621	H	52.0	5.0	57.0	74.0	- 17.0

2462.999	H	86.2	- 4.3	81.0	114.0	- 32.1
4923.202	H	48.8	1.4	50.2	74.0	- 23.8
6565.234	V	48.1	7.3	60.2	74.0	- 18.6
6565.245	H	53.0	7.3	55.6	74.0	- 13.7

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 C and RSS

Environmental conditions:

Parameter	Recorded value	
Ambient temperature:	27	° C
Relative humidity:	65	%

Measurement: Average RBW: 1MHz VBW: 10Hz
Testing frequency range: 9kHz to 25GHz Mode: 802.11n

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)
2410.442	H	41.3	- 4.2	37.1	94.0	- 56.9
4824.947	H	28.0	1.4	29.4	54.0	- 24.6
6431.869	H	32.3	5.0	37.3	54.0	- 16.7
6431.905	V	32.9	5.0	37.9	54.0	- 16.1

2434.293	H	41.0	- 4.2	36.8	94.0	- 57.2
4872.550	H	28.2	1.4	29.6	54.0	- 24.4
6498.522	V	33.8	5.0	38.8	54.0	- 15.2
6498.534	H	34.2	5.0	39.2	54.0	- 14.8

2463.489	H	40.2	- 4.3	35.9	94.0	- 58.1
4922.826	H	26.0	1.4	27.4	54.0	- 26.6
6565.162	V	32.0	7.3	39.3	54.0	- 14.7
6565.199	H	30.0	7.3	37.3	54.0	- 16.7

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



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2.4 Data of Conducted Emission

Environmental conditions:

Parameter	Recorded value	
Ambient temperature:	27	° C
Relative humidity:	65	%

Measurement: Peak RBW: 1MHz VBW: 3MHz

Mode: 802.11b

Frequency (MHz)	Reading (dBm)	Reading (mW)	Limit (mW)	Margin (mW)
2412.899	- 0.88	0.817	1000.0	- 999.183
2437.899	1.44	1.393	1000.0	- 998.607
2461.101	2.21	1.663	1000.0	- 998.337

Mode: 802.11g

2413.449	- 0.77	0.838	1000.0	- 999.162
2438.349	3.72	2.355	1000.0	- 997.645
2463.199	1.77	1.503	1000.0	- 998.497

Mode: 802.11n

2413.748	- 1.58	0.695	1000.0	- 999.305
2439.198	3.55	2.265	1000.0	- 997.735
2463.698	0.99	1.256	1000.0	- 998.744



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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

No measurement is required as the EUT is a battery-operated product.

3.3 Graph and Table of Conducted Emission Measurement Data

Not Applicable



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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 PEQ650171115 TSup.pdf.

4.2 Photographs of the External and Internal Configurations of the EUT

For electronic filing, the photos are saved with filename PEQ650171115 ExPho.pdf and PEQ650171115 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 plots in Appendices A5 shows the band edge is fulfil 15.205 restricted band, 15.247(d) and RSS-247 clause 5.5 requirement.

The plots in Appendices A6 show the 6dB bandwidth has minimum 500kHz for frequency channel 2412MHz, 2437MHz and 2462MHz. It fulfils the section 15.247(a)(2) and RSS-247 clause 5.2 (1) requirement.

5.2 Power Spectral Density

The plots in Appendices A8 show the frequency channel 2412MHz, 2437MHz and 2462MHz were not excess 8dBm for 3kHz bandwidth. It fulfils the section 15.247(e) and RSS-247 clause 5.2 (2) requirement.

5.3 EUT Antenna

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

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A2	Photos of External Configurations	4	pages
A3	Photos of Internal Configurations	3	pages
A4	ID Label/Location	3	pages
A5	Band Edge	6	pages
A6	6dB Bandwidth Plot	6	pages
A7	99% Bandwidth Plot	6	pages
A8	Power Spectral Density	6	pages
A9	Transmission Power	6	pages



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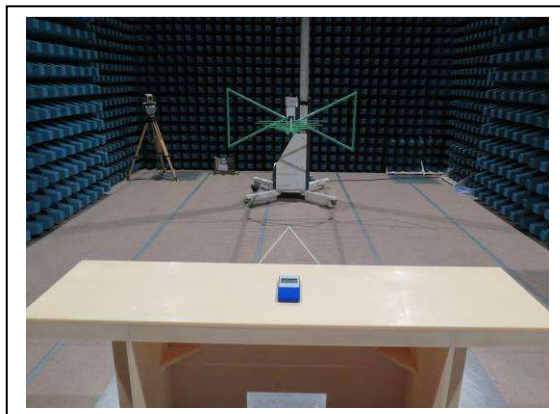
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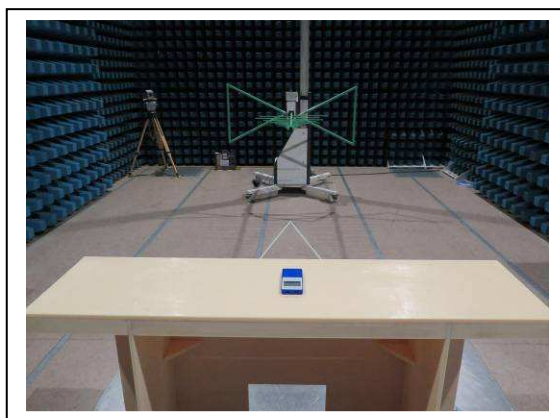
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A1. Photos of the set-up of Radiated Emissions



(Front view, 30Hz – 1GHz)



(Back view, 30MHz – 1GHz)

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

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IC: 5226A-65001115

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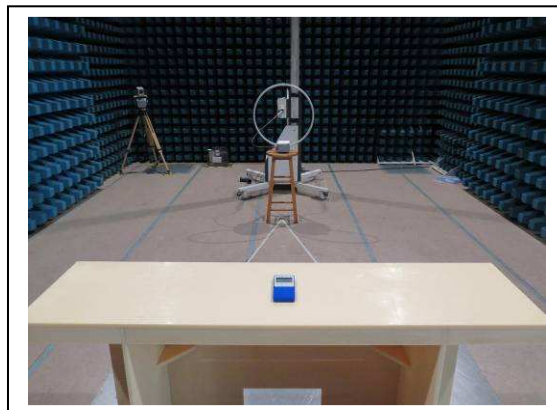
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A1. Photos of the set-up of Radiated Emissions



(Front view, 9kHz – 30MHz)



(Back view, 9kHz – 30MHz)

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



CMA Testing and Certification Laboratories

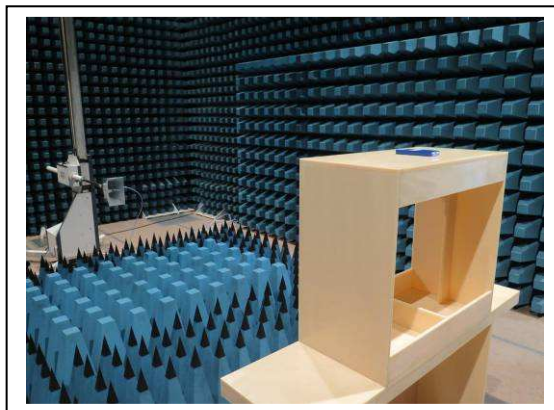
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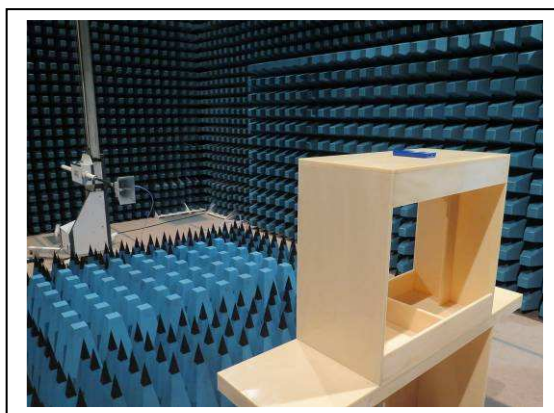
Report No. : AU0039409(3)

Date : 17 Jun 2016

A1. Photos of the set-up of Radiated Emissions



(Front view, above 1GHz)



(Back view, above 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

Report No. : AU0039409(3)

Date : 17 Jun 2016

A2 Photos of External Configurations



External Configuration 1 (650, 651)



External Configuration 2 (650, 651)

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



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TEST REPORT

Report No. : AU0039409(3)

Date : 17 Jun 2016

A2 Photos of External Configurations



External Configuration 3 (650, 651)



External Configuration 4 (650, 651)

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



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TEST REPORT

Report No. : AU0039409(3)

Date : 17 Jun 2016

A2 Photos of External Configurations



External Configuration 5 (652)



External Configuration 6 (652)

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

FCC ID: PEQ650171115

IC: 5226A-65001115

Page 25 of 62

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TEST REPORT

Report No. : AU0039409(3)

Date : 17 Jun 2016

A2 Photos of External Configurations



External Configuration 7 (652)



External Configuration 8 (652)

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



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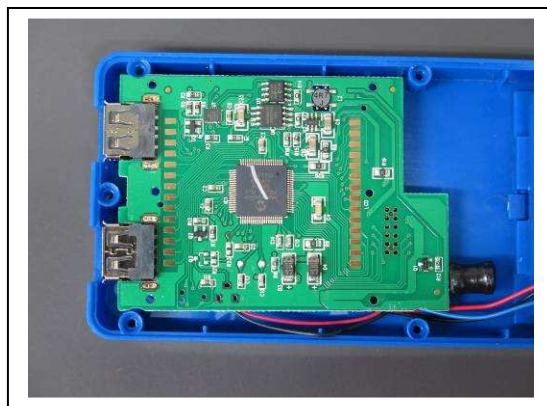
廠商會檢定中心

TEST REPORT

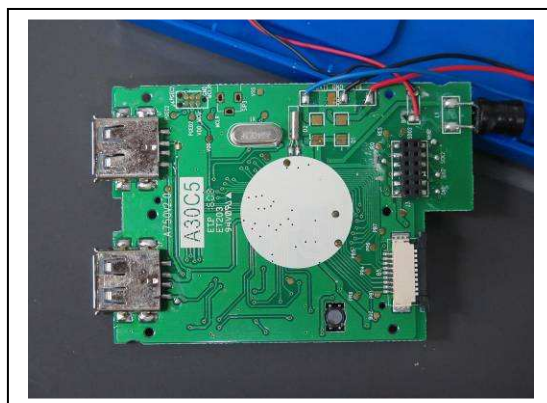
Report No. : AU0039409(3)

Date : 17 Jun 2016

A3 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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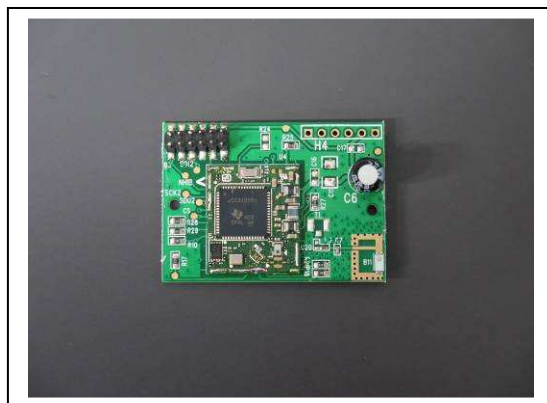
廠商會檢定中心

TEST REPORT

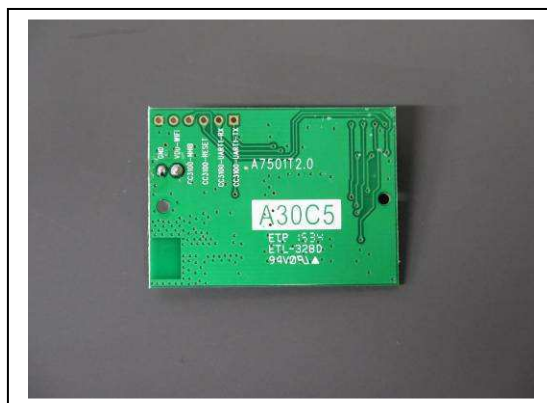
Report No. : AU0039409(3)

Date : 17 Jun 2016

A3 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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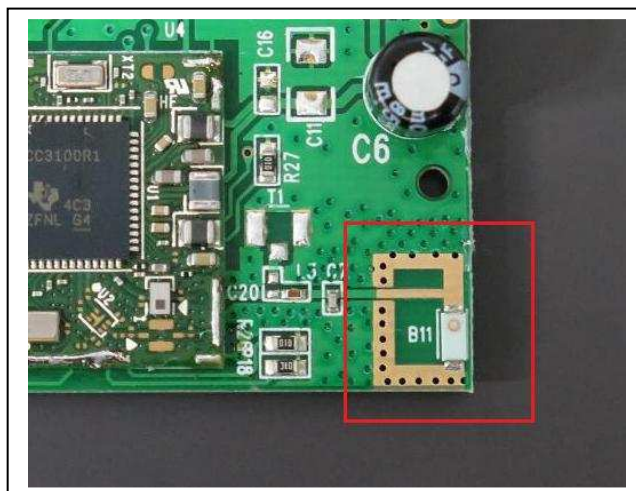
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TEST REPORT

Report No. : AU0039409(3)

Date : 17 Jun 2016

A3 Photos of Internal Configurations



EUT Antenna

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



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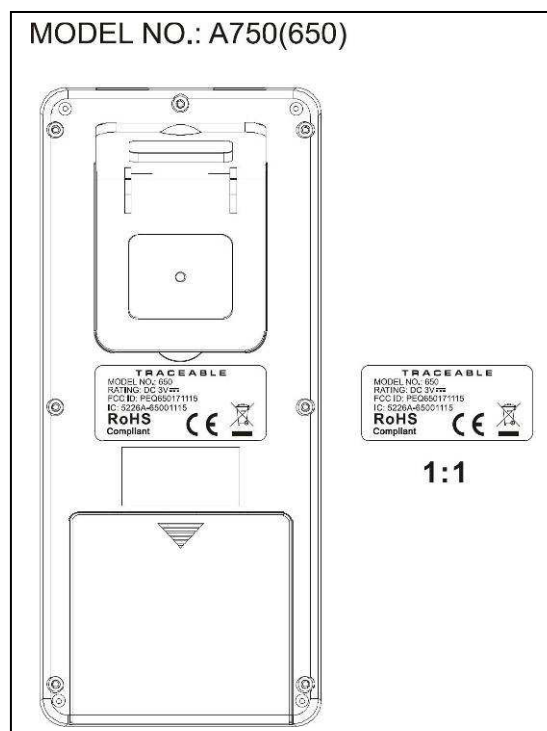
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TEST REPORT

Report No. : AU0039409(3)

Date : 17 Jun 2016

A4. ID Label / Location



ID Label 1

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

FCC ID: PEQ650171115
IC: 5226A-65001115

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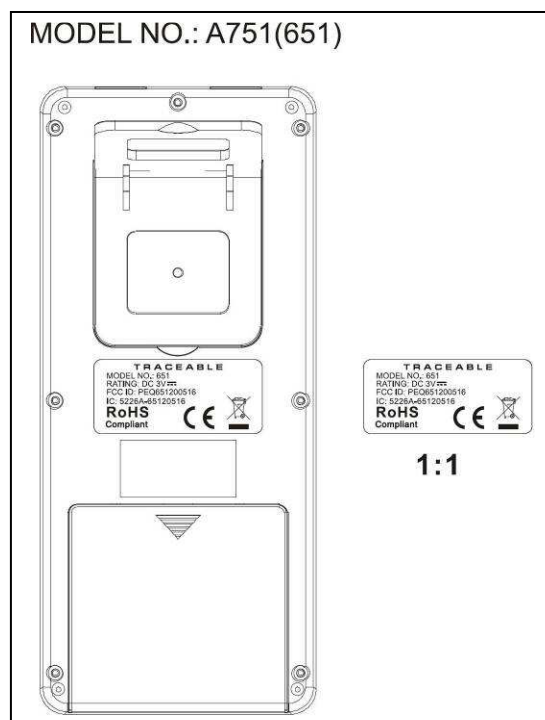
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TEST REPORT

Report No. : AU0039409(3)

Date : 17 Jun 2016

A4. ID Label / Location



ID Label 2

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



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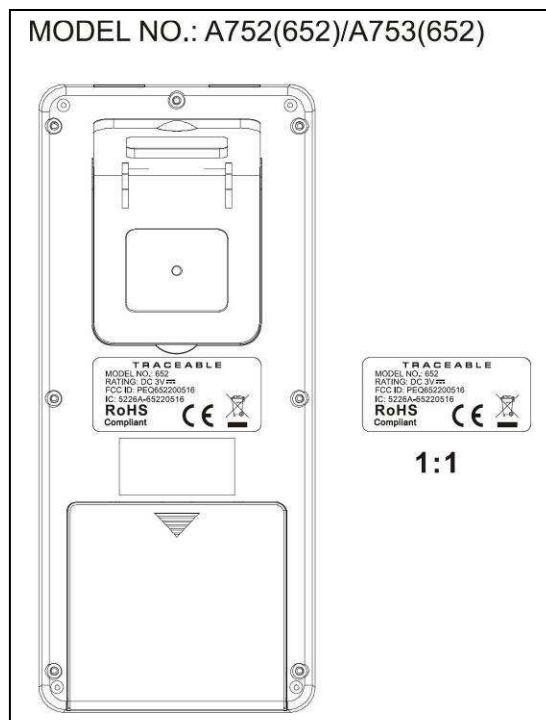
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TEST REPORT

Report No. : AU0039409(3)

Date : 17 Jun 2016

A4. ID Label / Location



ID Label 3

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



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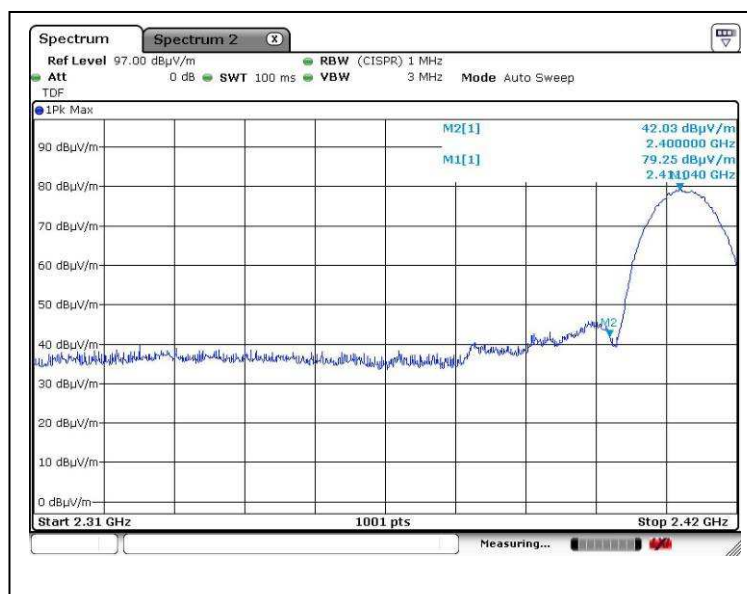
廠商會檢定中心

TEST REPORT

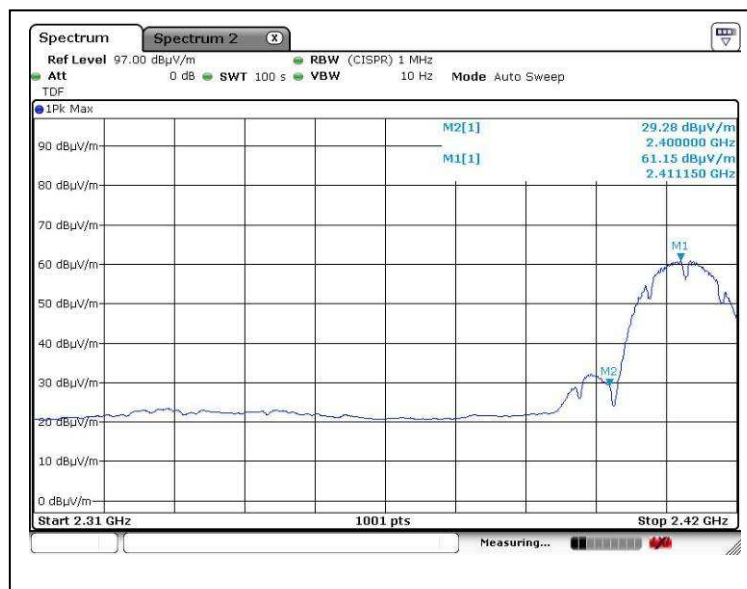
Report No. : AU0039409(3)

Date : 17 Jun 2016

A5. 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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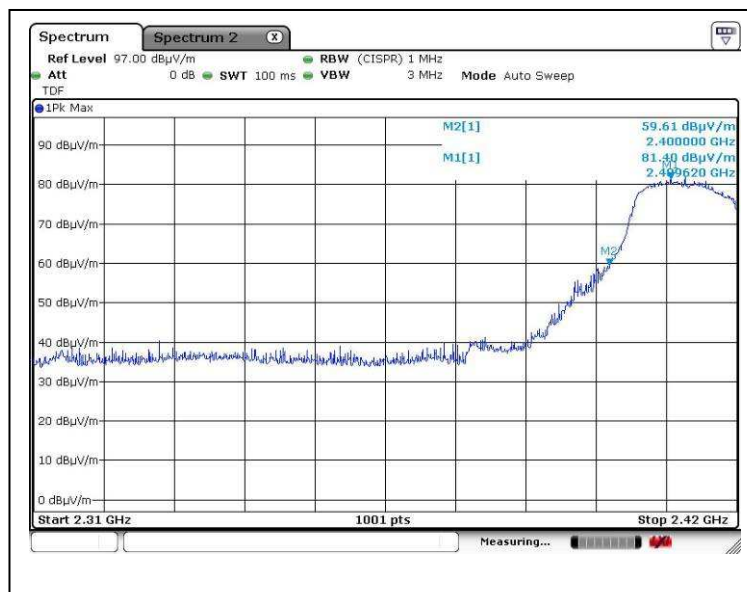
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TEST REPORT

Report No. : AU0039409(3)

Date : 17 Jun 2016

A5. 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



CMA Testing and Certification Laboratories

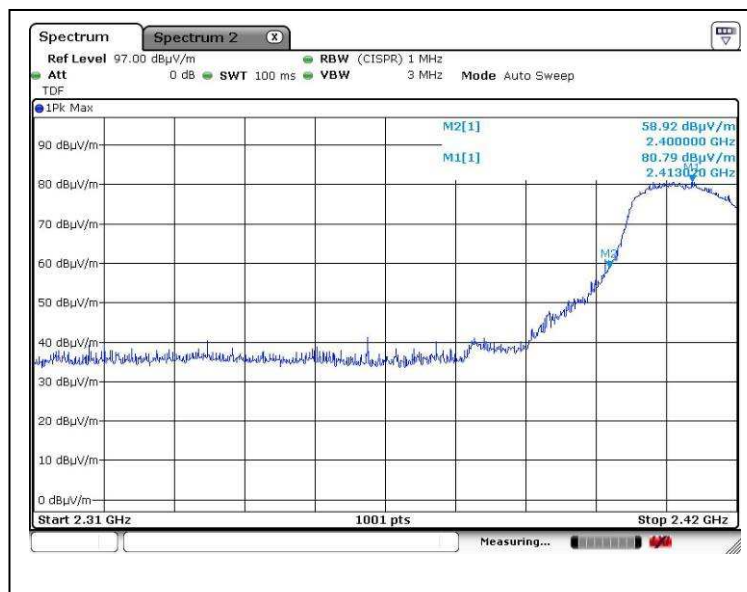
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TEST REPORT

Report No. : AU0039409(3)

Date : 17 Jun 2016

A5. Band Edge



802.11n lower edge (Peak measurement)



802.11n lower edge (Average measurement)

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



CMA Testing and Certification Laboratories

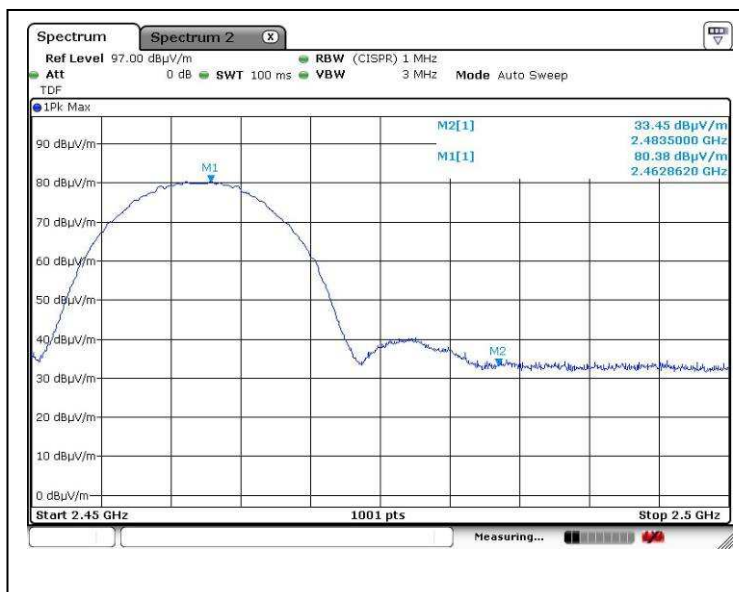
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TEST REPORT

Report No. : AU0039409(3)

Date : 17 Jun 2016

A5. 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

FCC ID: PEQ650171115

IC: 5226A-65001115



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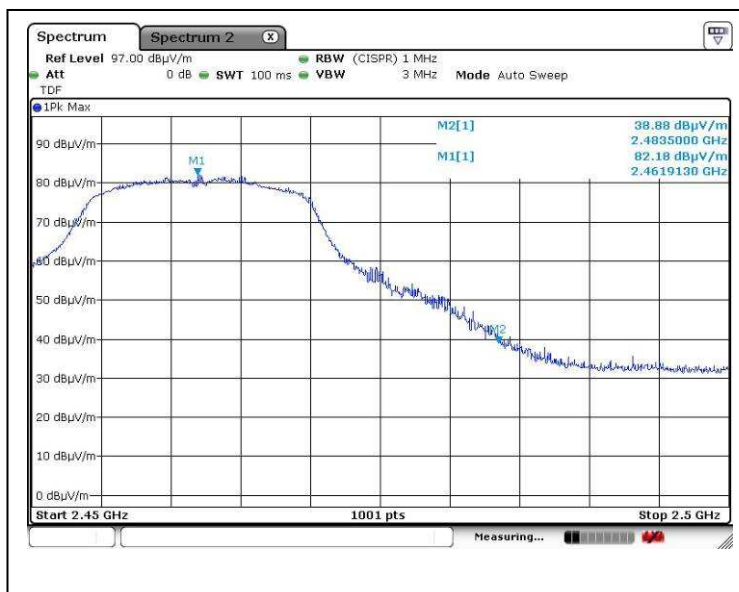
廠商會檢定中心

TEST REPORT

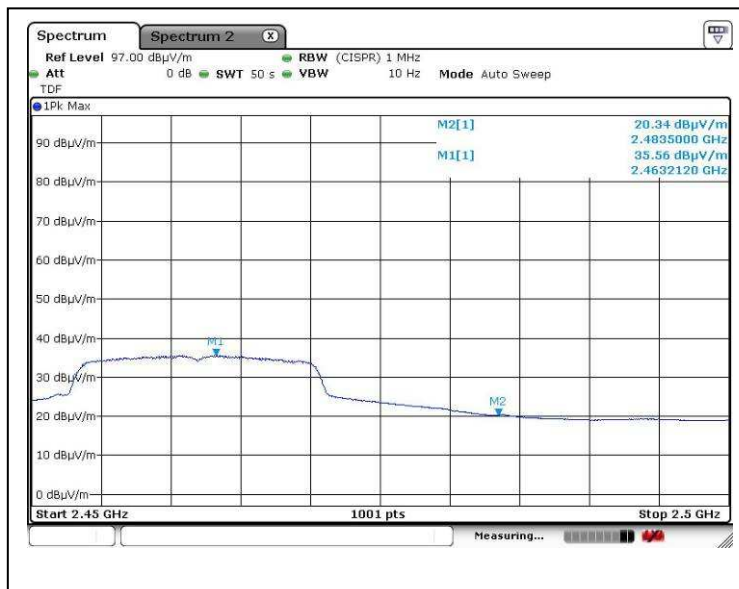
Report No. : AU0039409(3)

Date : 17 Jun 2016

A5. Band Edge



802.11g higher edge (Peak measurement)



802.11g higher edge (Average measurement)

Tested by:

Ken

Mr. LEUNG Shu-kan, Ken

Reviewed by:

PR

Mr. WONG Lap-pong, Andrew



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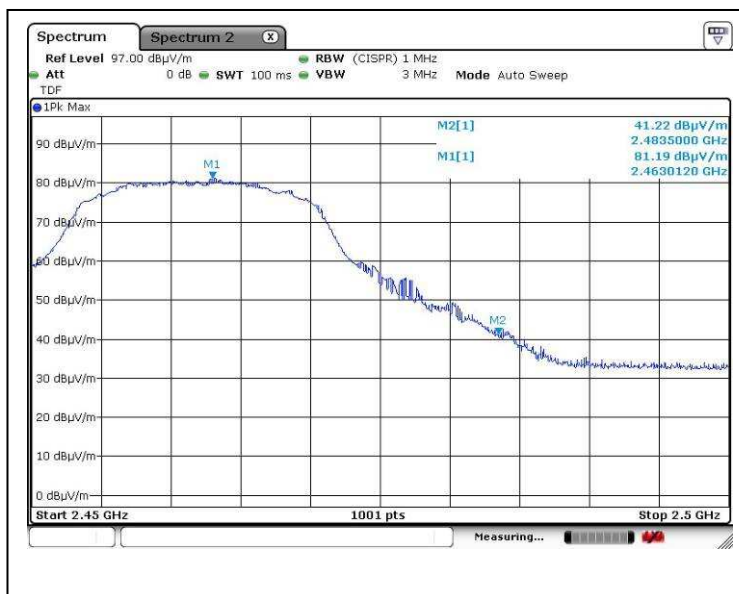
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TEST REPORT

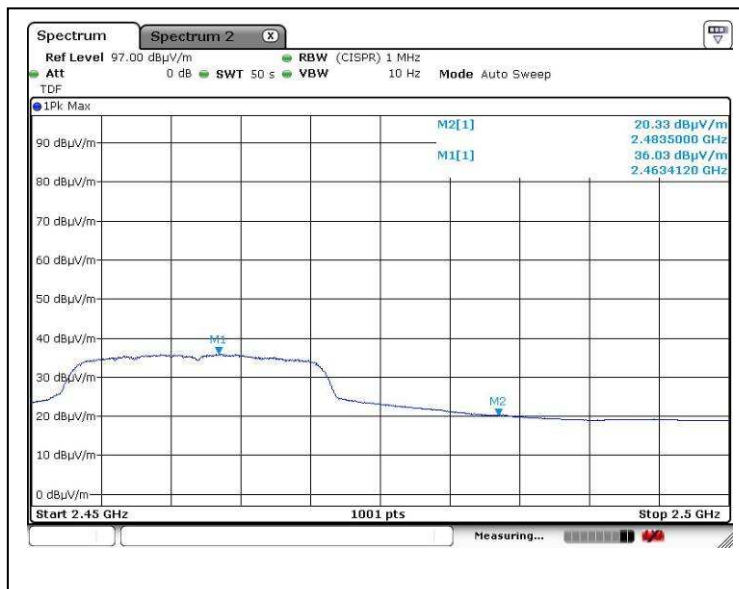
Report No. : AU0039409(3)

Date : 17 Jun 2016

A5. Band Edge



802.11n higher edge (Peak measurement)



802.11n higher edge (Average measurement)

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

FCC ID: PEQ650171115

IC: 5226A-65001115



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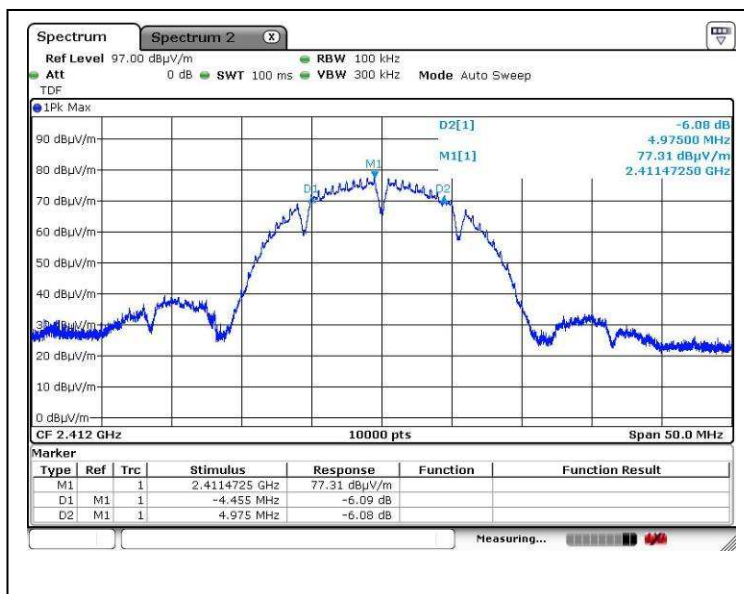
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TEST REPORT

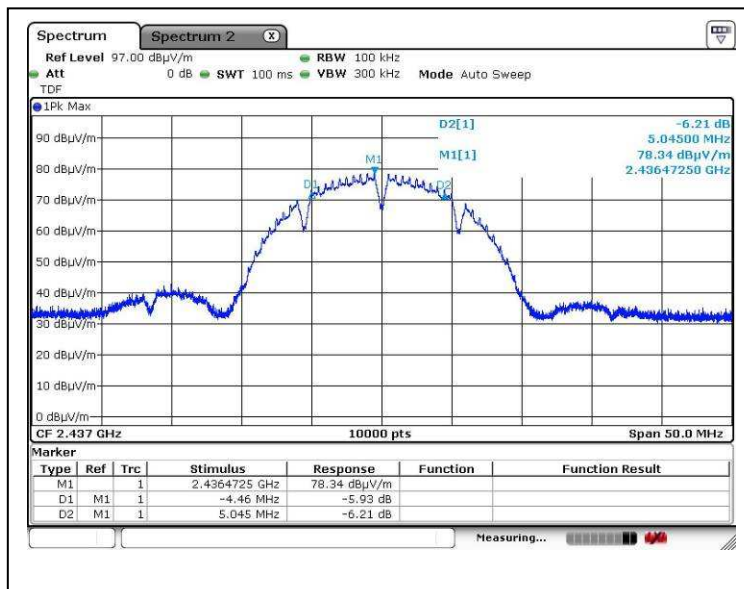
Report No. : AU0039409(3)

Date : 17 Jun 2016

A6. 6dB Bandwidth Plot



802.11b CH1



802.11b CH6

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

FCC ID: PEQ650171115

IC: 5226A-65001115



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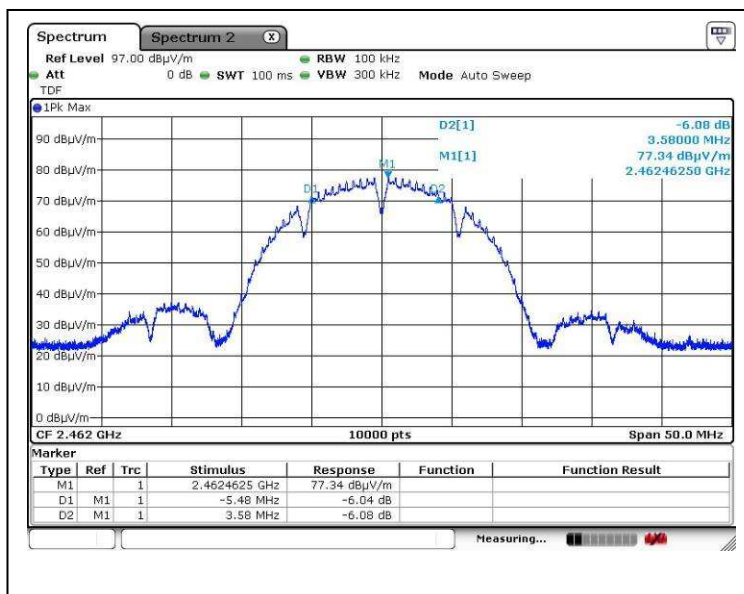
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TEST REPORT

Report No. : AU0039409(3)

Date : 17 Jun 2016

A6. 6dB Bandwidth Plot



802.11b CH11

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

FCC ID: PEQ650171115

IC: 5226A-65001115



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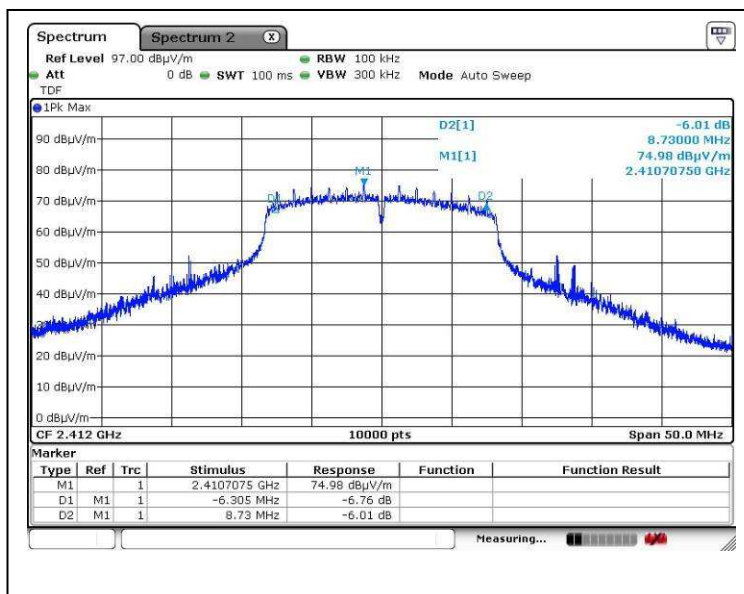
廠商會檢定中心

TEST REPORT

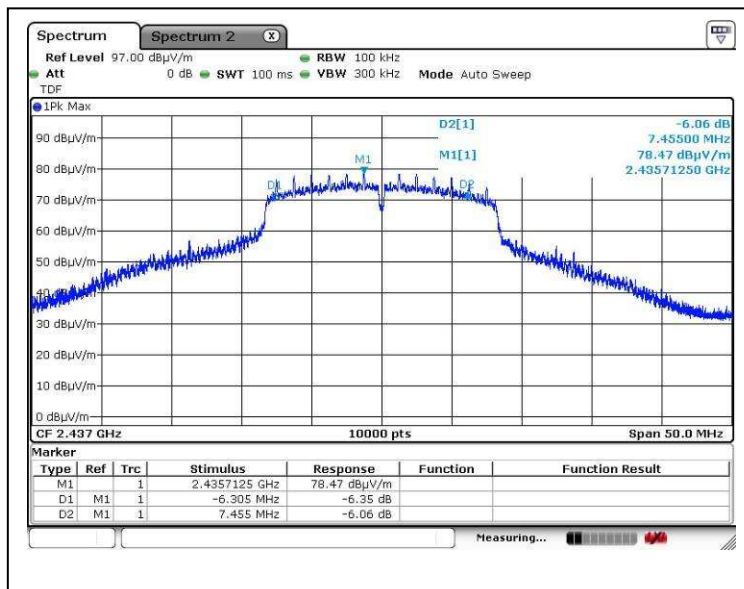
Report No. : AU0039409(3)

Date : 17 Jun 2016

A6. 6dB Bandwidth Plot



802.11g CH1



802.11g CH6

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

FCC ID: PEQ650171115

IC: 5226A-65001115



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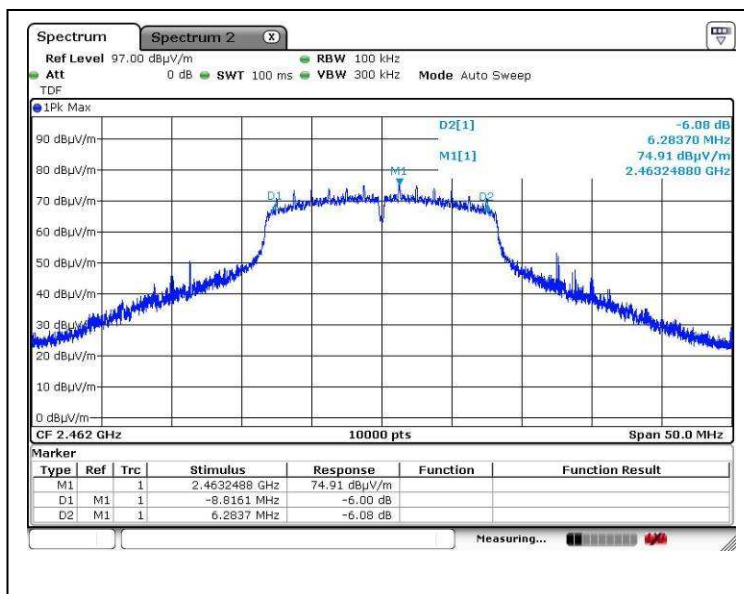
廠商會檢定中心

TEST REPORT

Report No. : AU0039409(3)

Date : 17 Jun 2016

A6. 6dB Bandwidth Plot



802.11g CH11

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

FCC ID: PEQ650171115

IC: 5226A-65001115



TEST REPORT

Date : 17 Jun 2016

Spectrum Spectrum 2 [Icon]

Ref Level 97.00 dBμV/m RBW 100 kHz
 Att 0 dB SWT 100 ms VBW 300 kHz Mode Auto Sweep
 TDF

● 1Pk Max

90 dBμV/m
 80 dBμV/m
 70 dBμV/m
 60 dBμV/m
 50 dBμV/m
 40 dBμV/m
 30 dBμV/m
 20 dBμV/m
 10 dBμV/m
 0 dBμV/m

D2[1] -6.00 dB
 8.72000 MHz
 74.64 dBμV/m
 2.41071750 GHz
 M1[1]

CF 2.412 GHz 10000 pts Span 50.0 MHz

Marker

Type	Ref	Trc	Stimulus	Response	Function	Function Result
M1	1		2.4107175 GHz	74.64 dBμV/m		
D1	1		-6.31 MHz	-6.30 dB		
D2	M1	1	8.72 MHz	-6.00 dB		

Measuring... [Icon]

Spectrum 2

Ref Level 97.00 dBμV/m
 Att 0 dB
 TDF
 RBW 100 kHz
 VBW 300 kHz
 Mode Auto Sweep

● Lpk Max

90 dBμV/m
 80 dBμV/m
 70 dBμV/m
 60 dBμV/m
 50 dBμV/m
 40 dBμV/m
 30 dBμV/m
 20 dBμV/m
 10 dBμV/m
 0 dBμV/m

D2[1] -6.11 dB
 7.45000 MHz
 77.60 dBμV/m
 2.4357175 GHz

M1
 M1[1]
 D1
 D2

CF 2.437 GHz 10000 pts Span 50.0 MHz

Marker

Type	Ref	Trc	Stimulus	Response	Function	Function Result
M1	1		2.4357175 GHz	77.60 dBμV/m		
D1	1		-6.305 MHz	-6.17 dB		
D2	M1	1	7.45 MHz	-6.11 dB		

Measuring...

Mr. LEUNG Shu-kan, Ken

Mr. WONG Lap-pong, Andrew

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IC: 5226A-65001115

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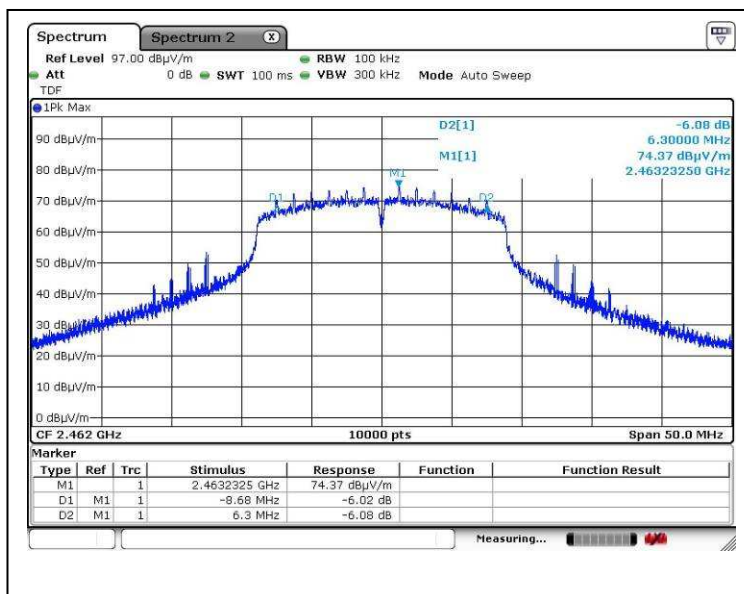
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TEST REPORT

Report No. : AU0039409(3)

Date : 17 Jun 2016

A6. 6dB Bandwidth Plot



802.11n CH11

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

FCC ID: PEQ650171115

IC: 5226A-65001115



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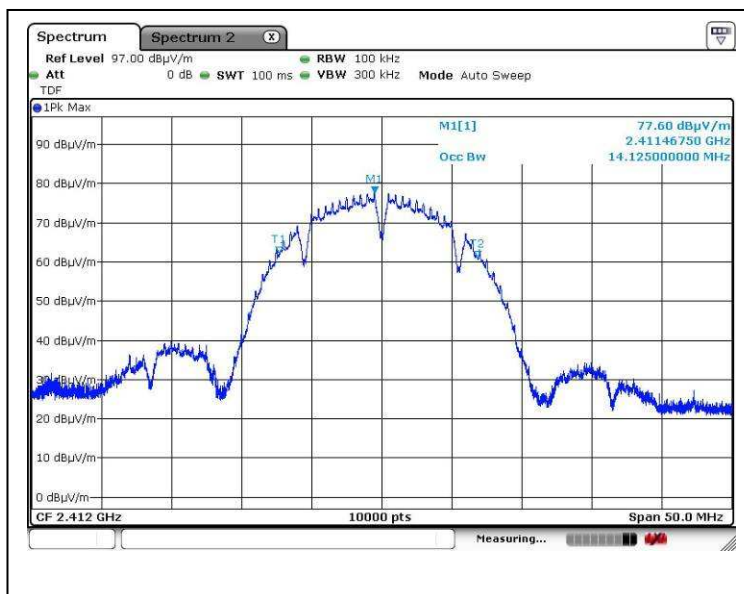
廠商會檢定中心

TEST REPORT

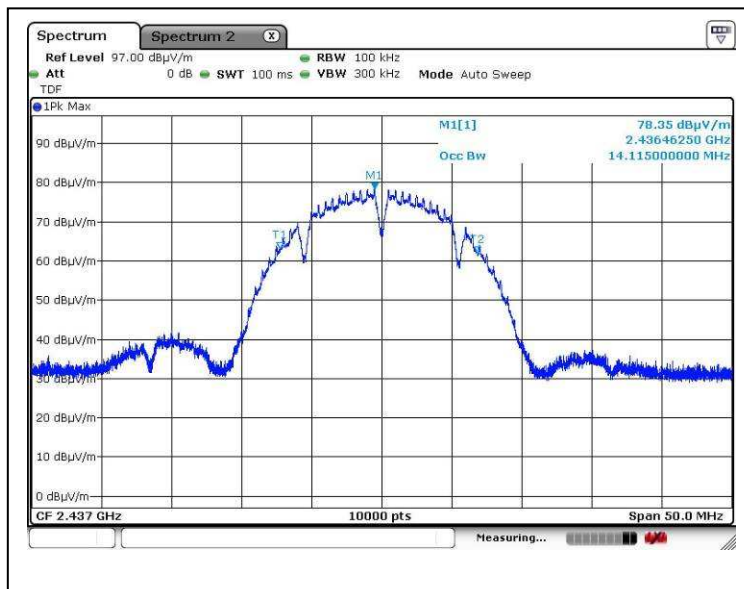
Report No. : AU0039409(3)

Date : 17 Jun 2016

A7. 99% Bandwidth Plot



802.11b CH1



802.11b CH6

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

FCC ID: PEQ650171115

IC: 5226A-65001115



TEST REPORT

Date : 17 Jun 2016

[illegible]

Tested by:

Reviewed by:

Mr. WONG Lap-pong, Andrew



CMA Testing and Certification Laboratories

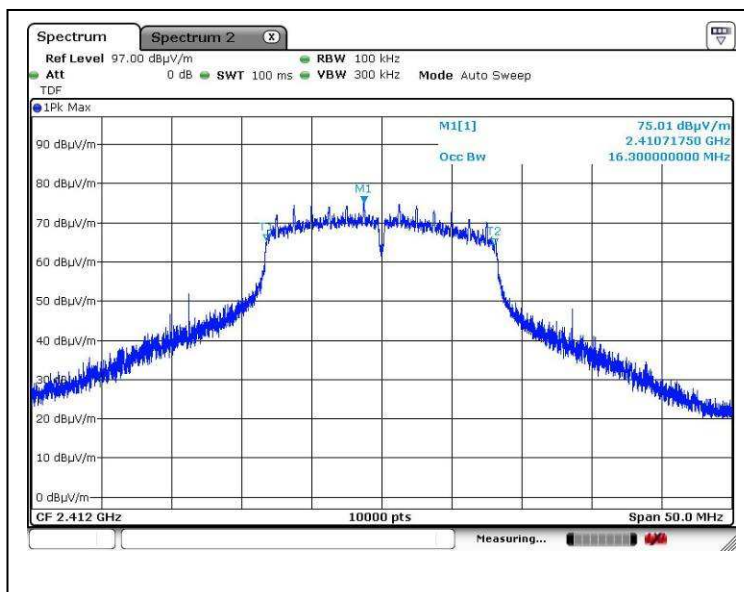
廠商會檢定中心

TEST REPORT

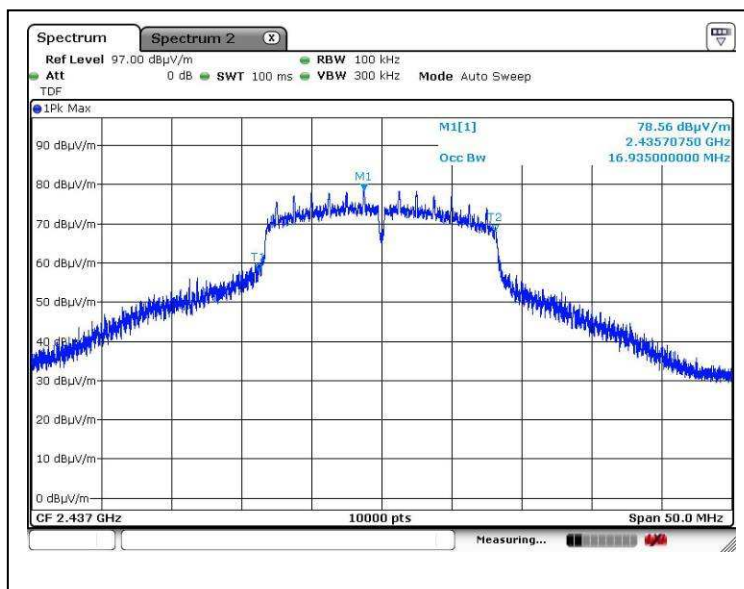
Report No. : AU0039409(3)

Date : 17 Jun 2016

A7. 99% Bandwidth Plot



802.11g CH1



802.11g CH6

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

FCC ID: PEQ650171115

IC: 5226A-65001115



TEST REPORT

Date : 17 Jun 2016

Spectrum **Spectrum 2** X

Ref Level 97.00 dBμV/m RBW 100 kHz
 Att 0 dB SWT 100 ms VBW 300 kHz Mode Auto Sweep
 TDF

● 1Pk Max

90 dBμV/m
 80 dBμV/m
 70 dBμV/m
 60 dBμV/m
 50 dBμV/m
 40 dBμV/m
 30 dBμV/m
 20 dBμV/m
 10 dBμV/m
 0 dBμV/m

M1[1]
 Occ BW
 74.95 dBμV/m
 2.46324250 GHz
 16.27000000 MHz

CF 2.462 GHz 10000 pts Span 50.0 MHz

Measuring...

Tested by:

Reviewed by:

Mr. WONG Lap-pong, Andrew

FCC ID: PEQ650171115

IC: 5226A-65001115

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Tel: (852) 2698 8198 Fax: (852) 2695 4177 E-mail: info@cmatcl.com Web Site: <http://www.cmatcl.com>





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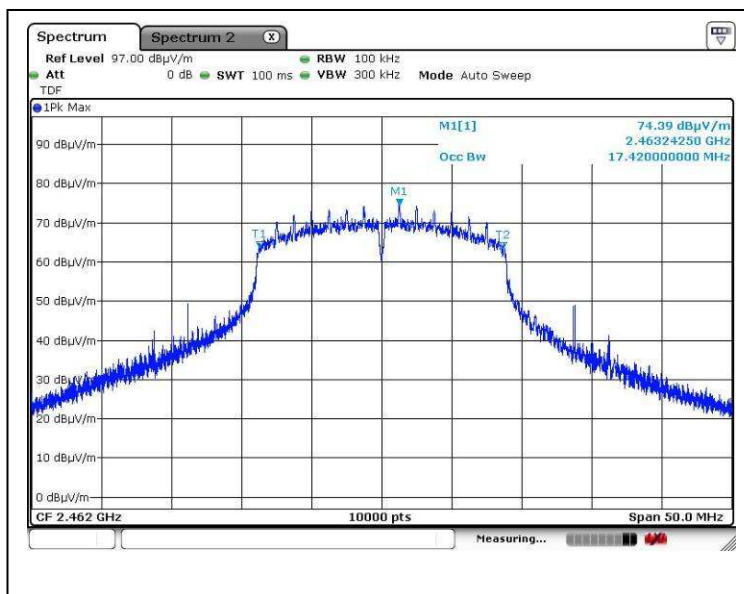
廠商會檢定中心

TEST REPORT

Report No. : AU0039409(3)

Date : 17 Jun 2016

A7. 99% Bandwidth Plot



802.11n CH11

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



CMA Testing and Certification Laboratories

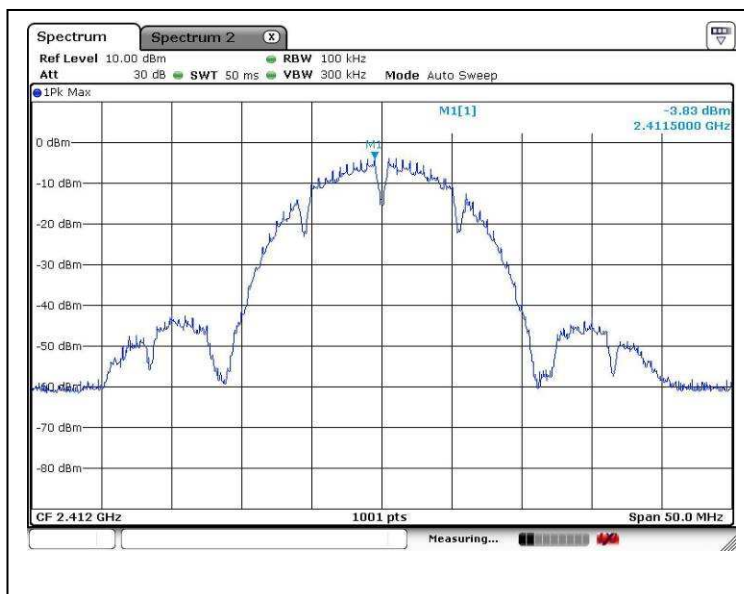
廠商會檢定中心

TEST REPORT

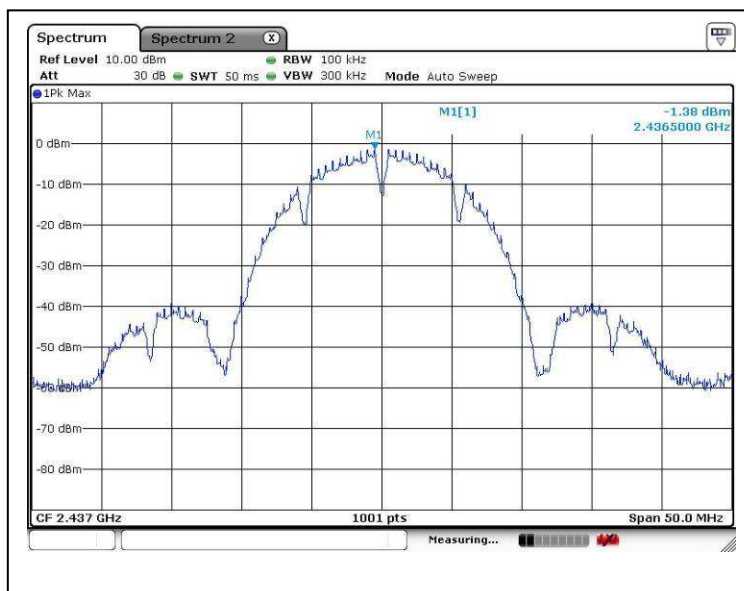
Report No. : AU0039409(3)

Date : 17 Jun 2016

A8. Power Spectral Density



802.11b CH1



802.11b CH6

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

FCC ID: PEQ650171115

IC: 5226A-65001115



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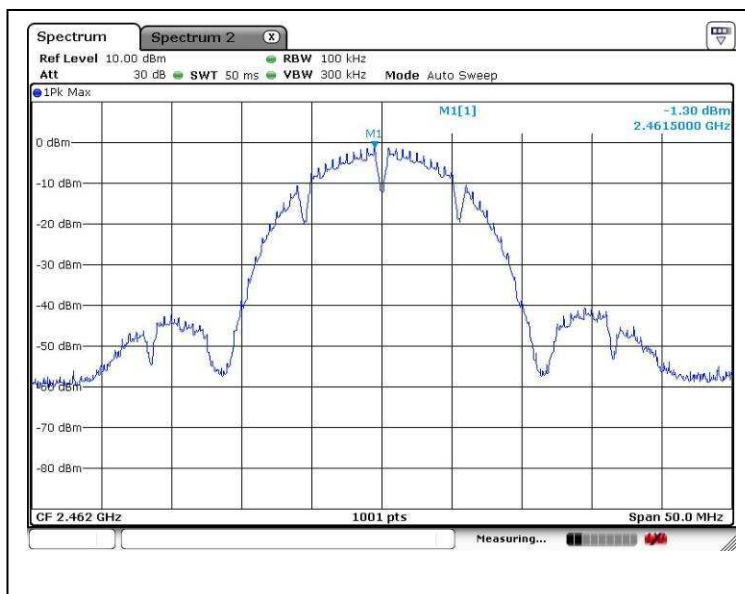
廠商會檢定中心

TEST REPORT

Report No. : AU0039409(3)

Date : 17 Jun 2016

A8. Power Spectral Density



802.11b CH11

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



CMA Testing and Certification Laboratories

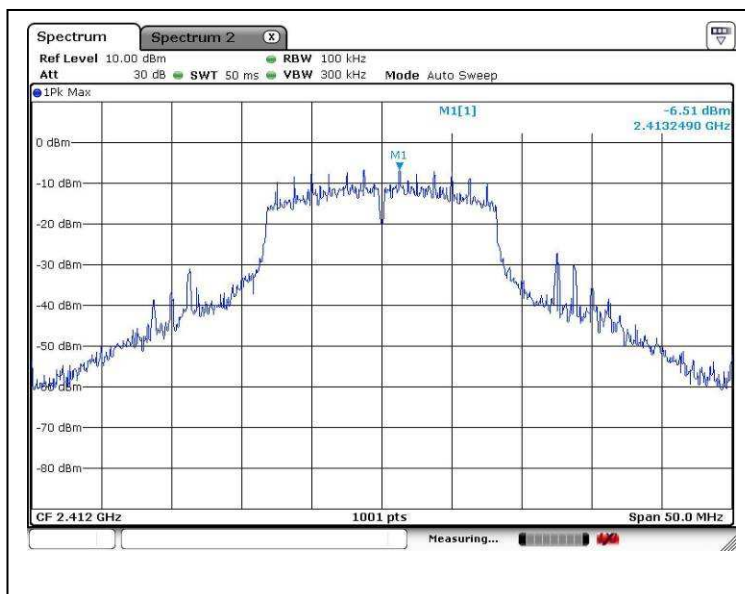
廠商會檢定中心

TEST REPORT

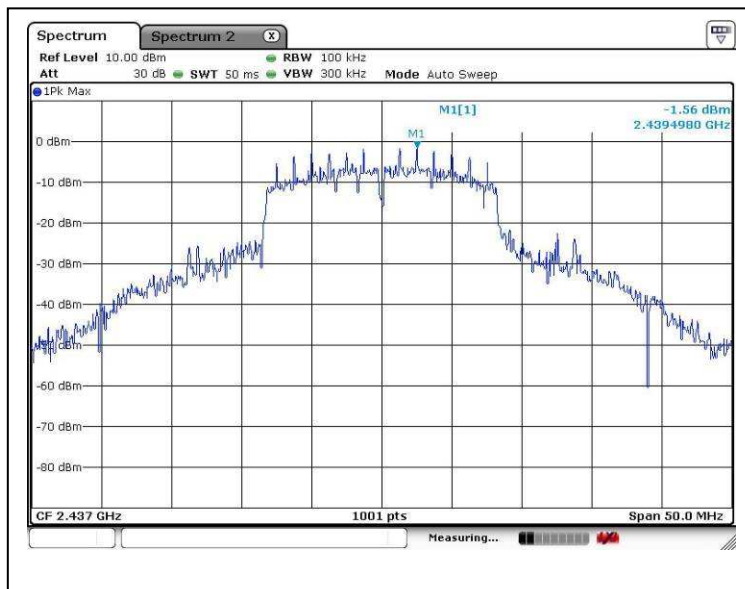
Report No. : AU0039409(3)

Date : 17 Jun 2016

A8. Power Spectral Density



802.11g CH1



802.11g CH6

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

FCC ID: PEQ650171115

IC: 5226A-65001115



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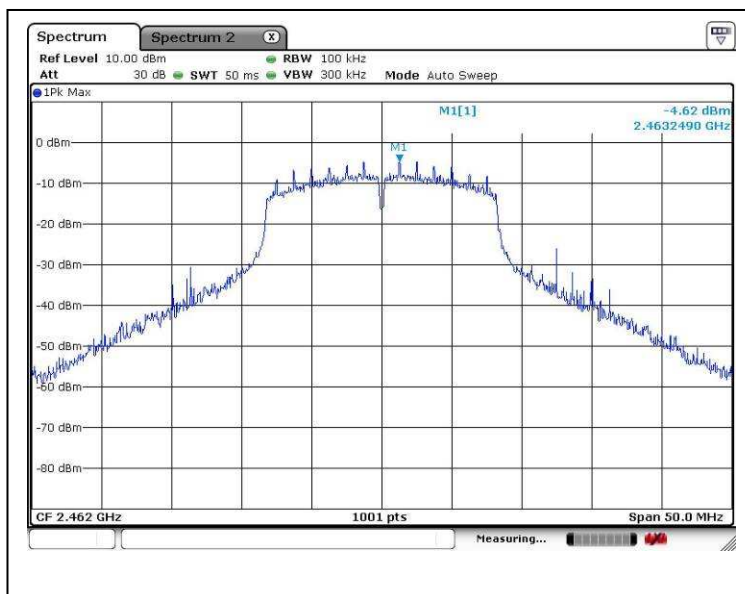
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TEST REPORT

Report No. : AU0039409(3)

Date : 17 Jun 2016

A8. Power Spectral Density



802.11g CH11

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



CMA Testing and Certification Laboratories

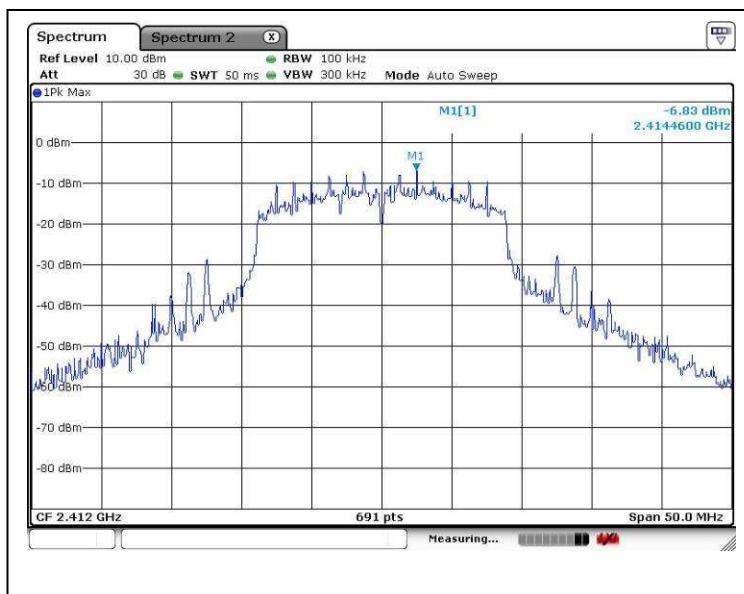
廠商會檢定中心

TEST REPORT

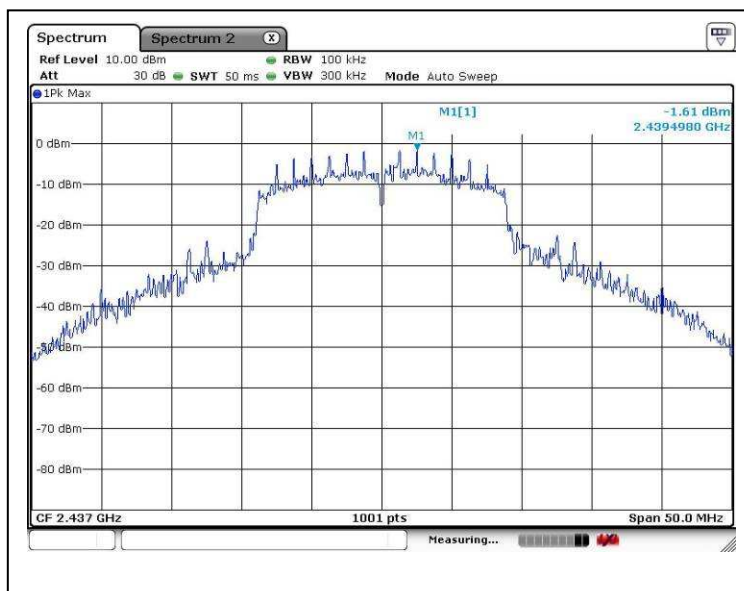
Report No. : AU0039409(3)

Date : 17 Jun 2016

A8. Power Spectral Density



802.11n CH1



802.11n CH6

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

FCC ID: PEQ650171115

IC: 5226A-65001115



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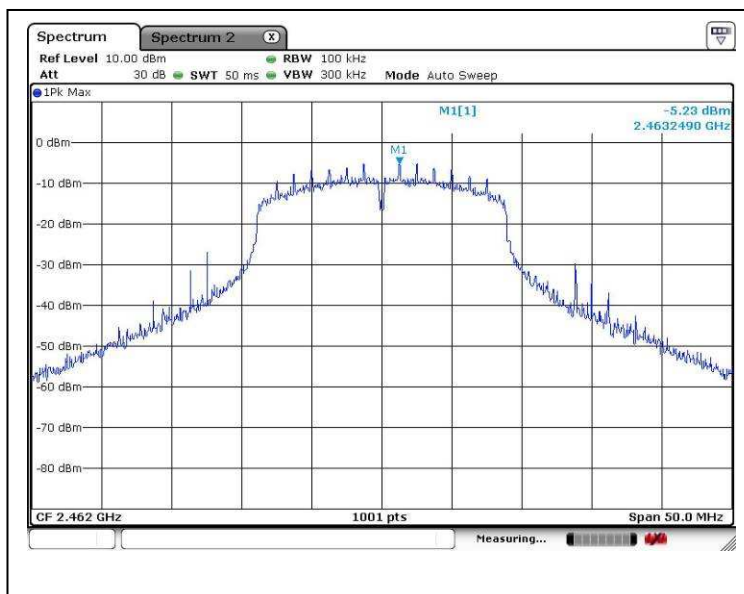
廠商會檢定中心

TEST REPORT

Report No. : AU0039409(3)

Date : 17 Jun 2016

A8. Power Spectral Density



802.11n CH11

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



CMA Testing and Certification Laboratories

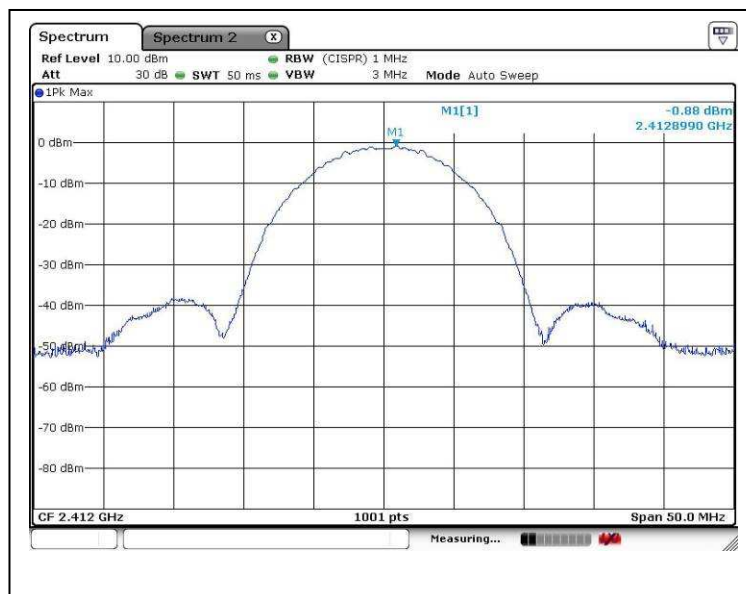
廠商會檢定中心

TEST REPORT

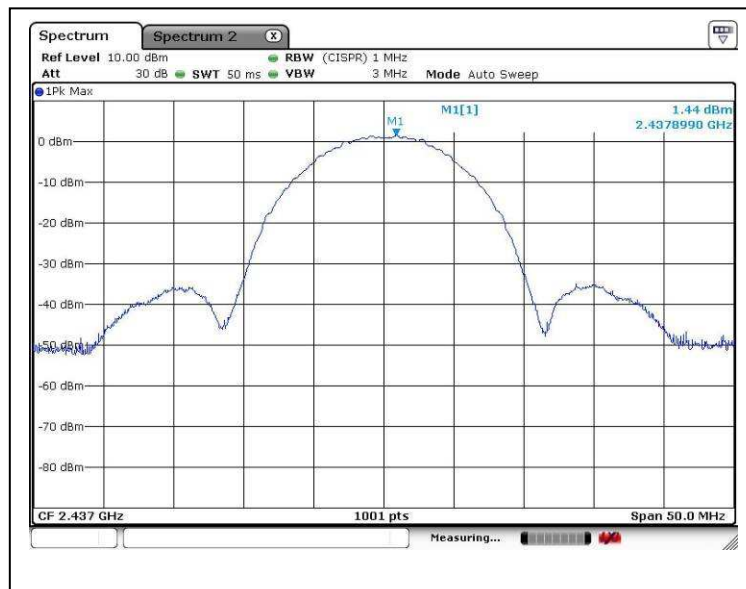
Report No. : AU0039409(3)

Date : 17 Jun 2016

A9. Transmission Power



802.11b CH1



802.11b CH6

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

FCC ID: PEQ650171115

IC: 5226A-65001115



CMA Testing and Certification Laboratories

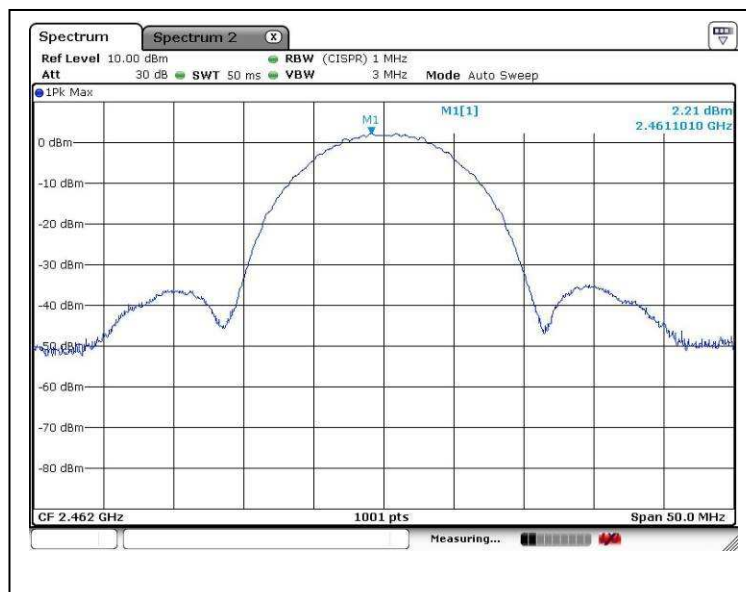
廠商會檢定中心

TEST REPORT

Report No. : AU0039409(3)

Date : 17 Jun 2016

A9. Transmission Power



802.11b CH11

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



CMA Testing and Certification Laboratories

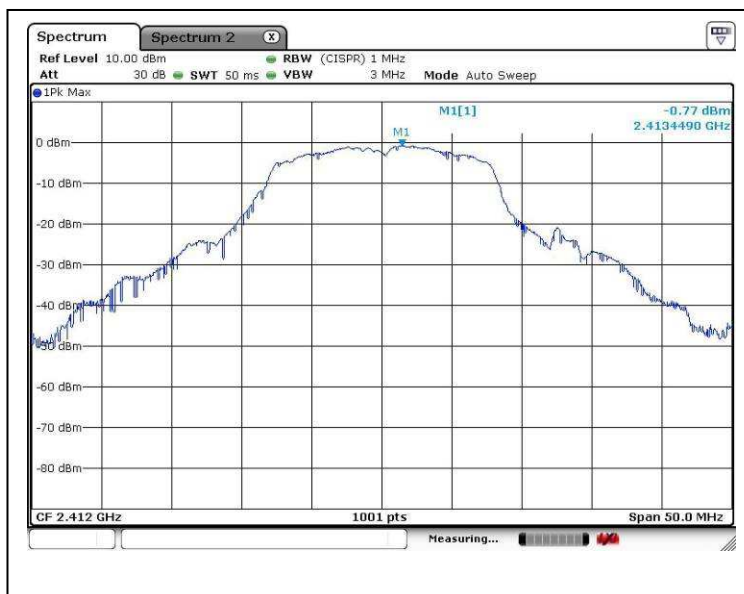
廠商會檢定中心

TEST REPORT

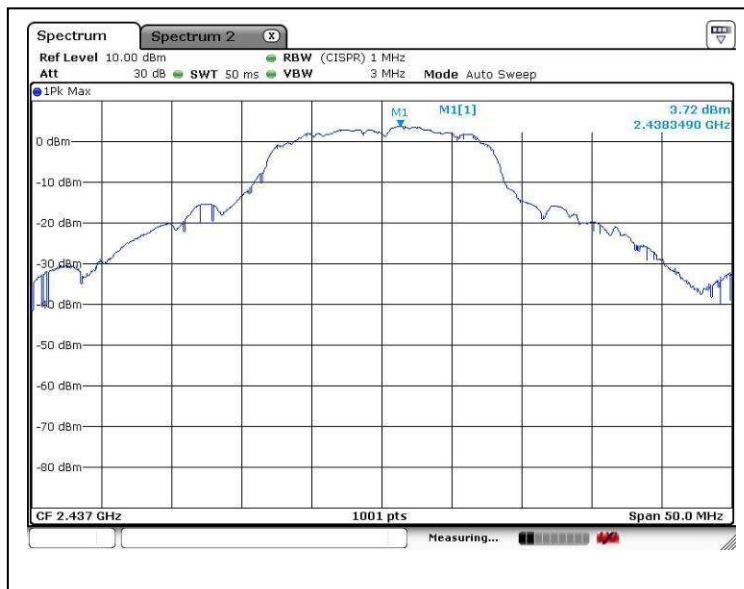
Report No. : AU0039409(3)

Date : 17 Jun 2016

A9. Transmission Power



802.11g CH1



802.11g CH6

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

FCC ID: PEQ650171115

IC: 5226A-65001115



CMA Testing and Certification Laboratories

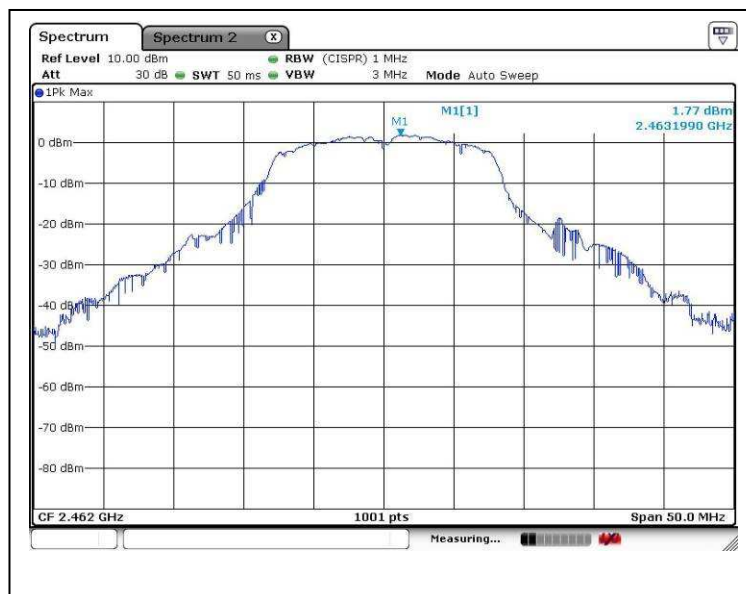
廠商會檢定中心

TEST REPORT

Report No. : AU0039409(3)

Date : 17 Jun 2016

A9. Transmission Power



802.11g CH11

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew



CMA Testing and Certification Laboratories

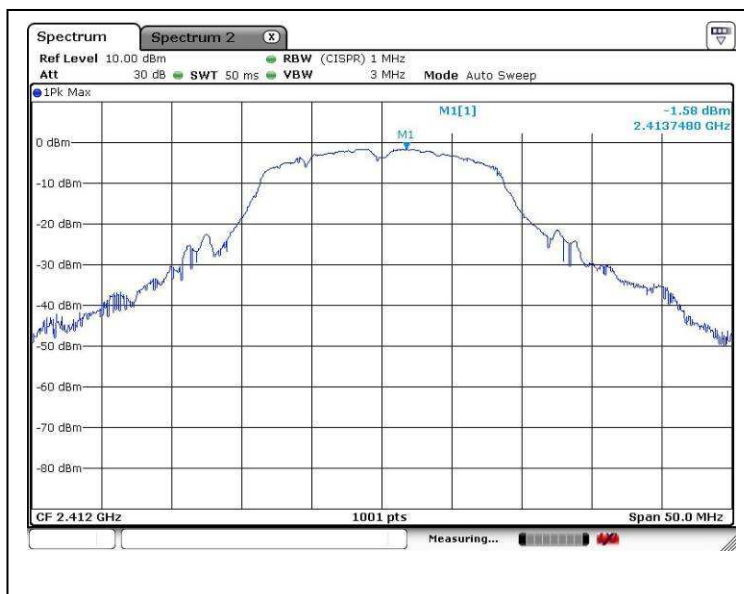
廠商會檢定中心

TEST REPORT

Report No. : AU0039409(3)

Date : 17 Jun 2016

A9. Transmission Power



802.11n CH1



802.11n CH6

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew

FCC ID: PEQ650171115

IC: 5226A-65001115



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廠商會檢定中心

TEST REPORT

Report No. : AU0039409(3)

Date : 17 Jun 2016

A9. Transmission Power



802.11n CH11

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

Tested by:

Mr. LEUNG Shu-kan, Ken

Reviewed by:

Mr. WONG Lap-pong, Andrew