

# FCC 47 CFR PART 15 SUBPART C

for

**300M Wireless Range Extender** 

Model: RE3002, RE3001, iB-WRR312N, RE3\*\*\*\*(\* from 0 to 9)

Brand: AMTC, IBALL

<u>Test Report Number:</u> C160617Z05-RP1 Issued Date: July 11, 2016

Issued for

Shen Zhen MTC Co., LTD MTC Industry Park, 1<sup>st</sup> Lilang Road, Xialilang community, Nanwan street Longgang district, Shenzhen, China

Issued by:

### Compliance Certification Services (Shenzhen) Inc.

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# **Revision History**

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	July 11, 2016	Initial Issue	ALL	Sabrina Wang



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# **1 TEST CERTIFICATION**

Product	300M Wireless Range Extender	
Model	RE3002, RE3001, iB-WRR312N, RE3****(* from 0 to 9)	
Brand	AMTC, IBALL	
Tested	June 17~July 11, 2016	
Applicant	Shen Zhen MTC Co., LTD MTC Industry Park, 1st Lilang Road, Xialilang community, Nanwan street, Longgang district, Shenzhen, China	
Manufacturer	Shen Zhen MTC Co., LTD MTC Industry Park, 1st Lilang Road, Xialilang community, Nanwan street, Longgang district, Shenzhen, China	

APPLICABLE STANDARDS				
Standard	Test Type	Standard	Test Type	
15.207(a)	Power Line Conducted Emissions	15.247(d) 15.209(a)	<ul> <li>Spurious Emissions</li> <li>Conducted Measurement</li> <li>Radiated Emissions</li> </ul>	
15.247(a)(2)	6dB Bandwidth Measurement	15.247(b)(3) 15.247(b)(4)	Peak Power Measurement	
15.247(d)	Band Edges Measurement	15.247(e)	Peak Power Spectral Density	

## We hereby certify that:

The above equipment was tested by Compliance Certification Services (Shenzhen) Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in **ANSI C63.10: 2013** and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules Part 15.207, 15.209, 15.247. The test results of this report relate only to the tested sample EUT identified in this report.

#### Approved by:

hand

Sunday Hu Supervisor of EMC Dept. Compliance Certification Services (Shenzhen) Inc.

Reviewed by:

Ruby Zhang Supervisor of Report Dept. Compliance Certification Services (Shenzhen) Inc.



# 2 TEST RESULT SUMMARY

APPLICABLE STANDARDS				
Standard	Test Type	Result	Remark	
15.247(a)(2)	6dB Bandwidth Measurement	Pass	Meet the requirement of limit.	
15.247(b)(3) 15.247(b)(4)	Peak Power Measurement	Pass	Meet the requirement of limit.	
15.247(d)	Band Edges Measurement	Pass	Meet the requirement of limit.	
15.247(e)	Peak Power Spectral Density	Pass	Meet the requirement of limit.	
15.247(d) 15.209(a)	<ul> <li>Spurious Emissions</li> <li>Conducted Measurement</li> <li>Radiated Emissions</li> </ul>	Pass	Meet the requirement of limit.	
15.207(a)	Power line Conducted Emissions	Pass	Meet the requirement of limit.	

Note: 1. The statements of test result on the above are decided by the request of test standard only; the measurement uncertainties are not factored into this compliance determination.

2. The information of measurement uncertainty is available upon the customer's request.



# **3 EUT DESCRIPTION**

Product	300M Wireless Range Extender		
Model Number	RE3002, RE3001, iB-WRR312N, RE3****(* from 0 to 9)		
Brand	AMTC, IBALL		
Model Discrepancy	<ol> <li>"*" from 0 to 9;</li> <li>Model numbers are identical in circuitry and electrical, mechanical and physical construction; the only differences are decorative parts in front panels, color of enclosures and shape of signal input/output terminals in secondary circuits, antenna type. Trademark for trading purpose.</li> </ol>		
Identify Number	C160617Z05-RP1		
Received Date	June 17, 2016		
Power Supply	RE3001: Input: 100-240V~ 50/60Hz; 16A ( 0.15A, product only) RE3002: Input: 100-240V~ 50/60Hz ( 0.15A, product only)		
Transmit PowerIEEE 802.11b mode: 17.90dBm (Antenna 0) IEEE 802.11b mode: 17.30dBm (Antenna 1) IEEE 802.11g mode: 23.69dBm (Antenna 0) IEEE 802.11g mode: 24.81dBm (Antenna 1) 			
Modulation Technique	IEEE 802.11b mode: DSSS(CCK,QPSK, BPSK) IEEE 802.11g mode: OFDM (BPSK/QPSK/16QAM/64QAM) IEEE 802.11n HT20 MHz mode: OFDM (BPSK/QPSK/16QAM/64QAM) IEEE 802.11n HT40 MHz mode: OEDM (BPSK/QPSK/16QAM/64QAM)		
Transmit Data RateIEEE 802.11b: 11Mbps(CCK) with fall back rates of 5.5/2/1Mbps IEEE 802.11g: 54Mbps with fall back rates of 48/36/24/18/12/9 /6Mbps IEEE 802.11n HT20: 130Mbps with fall back rates of 130/117/104/ 78/52/39/26/13Mbps IEEE 802.11n HT40: 270Mbps with fall back rates of 270/243/216/ 162/108/81/54/27Mbps			
Number of ChannelsIEEE 802.11b mode: 11 Channels IEEE 802.11g mode: 11 Channels IEEE 802.11n HT20 MHz mode: 11 Channels IEEE 802.11n HT40 MHz mode: 7 Channels			
Antenna Specification	Embedded Antenna with 3dBi gain (Max)		
Channels Spacing	IEEE 802.11b/g ,802.11n HT20/HT40 : 5MHz		
Temperature Range 0 °C ~ +40 °C			
Hardware Version RE3001-ZC01-01, RE3002-ZC01-01			
Software Version	RE300XH012V001R001CXXBXXX_XX		

*Note:* 1. The sample selected for test was engineering sample that approximated to production product and was provided by manufacturer.

2. This submittal(s) (test report) is intended for FCC ID: <u>2AHVHRE3001</u> filing to comply with Section 15.207, 15.209 and 15.247 of the FCC Part 15, Subpart C Rules.



# 4 TEST METHODOLOGY

# 4.1. DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition.

Software used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

Test Item	Test mode	Worse mode
Conducted	Mode 1: 10Mbps 10%	Mode 2
Emission	Mode 2: 100Mbps 10%	Mode 2
Radiated Emission	Mode 1: TX	Mode 1

After verification, all tests were carried out with the worst case test modes as shown below except radiated spurious emission below 1GHz, which worst case was in normal link mode only, and power line conducted emission below 30MHz, which worst case was in normal link mode.

IEEE802.11b mode: Channel Low (2412MHz), Channel Mid (2437MHz) and Channel High (2462MHz) with 1Mbps data rate were chosen for full testing.

IEEE802.11g mode: Channel Low (2412MHz), Channel Mid (2437MHz) and Channel High (2462MHz) with 6Mbps data rate were chosen for full testing.

IEEE 802.11n HT20 MHz mode: Channel Low (2412MHz), Channel Mid(2437MHz) and Channel High (2462MHz) with 13Mbps data rate were chosen for full testing.

IEEE 802.11n HT40 MHz mode: Channel Low (2422MHz), Channel Mid (2437MHz) and Channel High (2452MHz) with 27Mbps data rate were chosen for full testing.



# 5 SETUP OF EQUIPMENT UNDER TEST

### 5.1. DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

No.	Equipment	Model No.	Serial No.	FCC ID	Brand	Data Cable	Power Cord
1	Notebook	E335	R9-WN1EF	DoC	Thinkpad	Unshielded 1.50m	Unshielded 1.80m

#### Note:

Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

### 5.2. CONFIGURATION OF SYSTEM UNDER TEST

See test photographs attached in Appendix II for the actual connections between EUT and support equipment.



# 6 FACILITIES AND ACCREDITATIONS

### 6.1. FACILITIES

All measurement facilities used to collect the measurement data are located at No.10-1 Mingkeda Logistics park, No.18, Huanguan South Rd., Guan Lan Town, Baoan District, Shenzhen, China

The sites are constructed in conformance with the requirements of ANSI C63.10, ANSI C63.7 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

## **6.2. ACCREDITATIONS**

Our laboratories are accredited and approved by the following accreditation body according to ISO/IEC 17025.

USA	A2LA
China	CNAS

The measuring facility of laboratories has been authorized or registered by the following approval agencies.

USA	FCC
Japan	VCCI (C-4815,R-4320,T-2317, G-10624)
Canada	INDUSTRY CANADA

Copies of granted accreditation certificates are available for downloading from our web site, <u>http://www.ccssz.com</u>

## 6.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Parameter	Uncertainty
Radiated Emission, 30 to 200 MHz Test Site : 966(2)	+/-3.6880dB
Radiated Emission, 200 to 1000 MHz Test Site : 966(2)	+/-3.6695dB
Radiated Emission, 1 to 8 GHz	+/-5.1782dB
Radiated Emission, 8 to 18 GHz	+/-5.2173dB
Conducted Emissions	+/-3.6836dB
Band Width	178kHz
Peak Output Power MU	+/-1.906dB
Band Edge MU	+/-0.182dB
Channel Separation MU	416.178Hz
Duty Cycle MU	0.054ms
Frequency Stability MU	226Hz

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

The measured result is above (below) the specification limit by a margin less than the measurement uncertainty; it is therefore not possible to state compliance based on the 95% level of confidence. However, the result indicates that compliance (non-compliance) is more probable than non-compliance) with the specification limit.



# 7 FCC PART 15.247 REQUIREMENTS

### 7.1. POWER LINE CONDUCTED EMISSIONS MEASUREMENT

#### 7.1.1. LIMITS OF CONDUCTED EMISSIONS MEASUREMENT

According to \$15.207(a), except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50  $\mu$ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency Range	Limits (dBµV)		
(MHz)	Quasi-peak	Average	
0.15 to 0.50	66 to 56*	56 to 46*	
0.50 to 5	56	46	
5 to 30	60	50	

NOTE:

(1) The lower limit shall apply at the transition frequencies.

(2) The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

(3) All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

#### 7.1.2. TEST INSTRUMENTS

Conducted Emission Test Site									
Name of Equipment	Manufacturer	Model Number	Serial Number	Last Calibration	Due Calibration				
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI	100783	02/21/2016	02/20/2017				
LISN(EUT)	ROHDE&SCHWARZ	ENV216	101543-WX	02/21/2016	02/20/2017				
LISN	EMCO	3825/2	8901-1459	02/21/2016	02/20/2017				
Temp. / Humidity Meter	VICTOR	HTC-1	N/A	02/21/2016	02/20/2017				
Test S/W	FARAD	EZ-EMC/ CCS-3A1-CE							

**NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. N.C.R = No Calibration Request.



#### 7.1.3. TEST PROCEDURES (please refer to measurement standard)

- The EUT and Support equipment, if needed, was placed on a non-conducted table, which is 0.8m above the ground plane and 0.4m away from the conducted wall.
- The test equipment EUT installed received AC main power, through a Line Impedance Stabilization Network (LISN), which supplied power source and was grounded to the ground plane. All support equipment power received from a second LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- The EUT test program was started. Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.
- The frequency range from 150 kHz to 30 MHz was searched. The test data of the worst-case condition(s) was recorded. Emission levels under limit 20dB were not recorded.



#### 7.1.4. TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

#### 7.1.5. DATA SAMPLE

Frequency (MHz)	QuasiPeak Reading (dBuV)	Average Reading (dBuV)	Correction Factor (dB)	QuasiPeak Result (dBuV)	Average Result (dBuV)	QuasiPeak Limit (dBuV)	Average Limit (dBuV)	QuasiPeak Margin (dB)	Average Margin (dB)	Remark (Pass/Fail)
X.XXXX	32.69	25.65	11.52	44.21	37.17	65.78	55.79	-21.57	-18.62	Pass

Factor = Insertion loss of LISN + Cable Loss

Result = Quasi-peak Reading/ Average Reading + Factor

Limit = Limit stated in standard

Margin = Result (dBuV) – Limit (dBuV)



#### 7.1.6. TEST RESULTS

Model No.	RE3002	RBW,VBW	9 kHz
Environmental Conditions	22°C, 45% RH	Test Mode	Mode 2
Tested by	Saber Huang	Line	L1
Tested Date	2016/06/27		

(The chart below shows the highest readings taken from the final data.)



Frequency	QuasiPeak	Average	Correction	QuasiPeak	Average	QuasiPeak	Average	QuasiPeak	Average	Remark
(MHz)	Reading	Reading	Factor	Result	Result	Limit	Limit	Margin	Margin	(Pass/Fail)
	(abuv)	(aBuv)	(aB)	(abuv)	(aBuv)	(abuv)	(aBuv)	(ab)	(aB)	(* 565 5/* 567)
0.1500	45.20	26.88	9.58	54.78	36.46	65.99	56.00	-11.21	-19.54	Pass
0.1819	43.56	23.37	9.65	53.21	33.02	64.39	54.40	-11.18	-21.38	Pass
0.2020	41.05	20.83	9.69	50.74	30.52	63.52	53.53	-12.78	-23.01	Pass
0.8900	23.22	8.10	9.74	32.96	17.84	56.00	46.00	-23.04	-28.16	Pass
2.0180	28.83	11.66	9.73	38.56	21.39	56.00	46.00	-17.44	-24.61	Pass
23.1299	21.34	14.84	9.87	31.21	24.71	60.00	50.00	-28.79	-25.29	Pass

**REMARKS:** L1 = Line One (Live Line)



Model No.	RE3002	RBW,VBW	9 kHz
Environmental Conditions	22°C, 45% RH	Test Mode	Mode 2
Tested by	Saber Huang	Line	L2
Tested Date	2016/06/27		

(The chart below shows the highest readings taken from the final data.)



Frequency (MHz)	QuasiPeak Reading (dBuV)	Average Reading (dBuV)	Correction Factor (dB)	QuasiPeak Result (dBuV)	Average Result (dBuV)	QuasiPeak Limit (dBuV)	Average Limit (dBuV)	QuasiPeak Margin (dB)	Average Margin (dB)	Remark (Pass/Fail)
0.1740	45.55	25.38	9.78	55.33	35.16	64.76	54.77	-9.43	-19.61	Pass
0.2100	38.68	19.24	9.79	48.47	29.03	63.20	53.21	-14.73	-24.18	Pass
0.2660	31.65	12.68	9.77	41.42	22.45	61.24	51.24	-19.82	-28.79	Pass
0.8820	24.29	6.45	9.76	34.05	16.21	56.00	46.00	-21.95	-29.79	Pass
1.9500	28.83	7.14	9.73	38.56	16.87	56.00	46.00	-17.44	-29.13	Pass
23.9980	21.87	18.48	9.78	31.65	28.26	60.00	50.00	-28.35	-21.74	Pass

**REMARKS:** L2 = Line Two (Neutral Line).



# 7.2. SPURIOUS EMISSIONS MEASUREMENT

#### 7.2.1. CONDUCTED EMISSIONS MEASUREMENT

#### 7.2.1.1. LIMITS OF CONDUCTED EMISSIONS MEASUREMENT

§15.247(d)specifies that in any 100 kHz bandwidth outside of the authorized frequency band, the power shall be attenuated according to the following conditions:

If the peakoutput power procedure is used to measure the fundamental emission powerto demonstrate compliance to 15.247(b)(3)requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency bandshall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level.

If the averageoutput power procedure is used to measure the fundamental emission powerto demonstrate compliance to 15.247(b)(3)requirements,then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measuredin-band average PSD level.

In addition, radiated emissions which fall in the restricted bands, as defined in \$15.205(a), must also comply with the radiated emission limits specified in 15.209(a) (see Section 15.205(c)).

#### 7.2.1.2. TEST INSTRUMENTS

Name of Equipment	Manufacturer	Model Serial Number		Last Calibration	Due Calibration
Spectrum Analyzer	Agilent	N9010A	MY55370330	02/21/2016	02/20/2017

#### 7.2.1.3. TEST PROCEDURE (please refer to measurement standard)

Conducted RF measurements of the transmitter output were made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

Measurements are made over the 10MHz to 26GHz range with the transmitter set to the lowest, middle, and highest channels. No emission found between lowest internal used/generated frequency to 10MHz, it is only recorded 10MHz to 26GHz.



#### 7.2.1.4. TEST RESULTS































### CH Low (10MHz ~26.5GHz) Keysight Spect ALIGN AU 05:45:31 PM Avg Type: Log-Pwi Avg|Hold:>1/1 Marker 1 16.638435250000 GHz 234 PNO: Fast Trig: Free Run IFGain:Low #Atten: 20 dB Mkr1 16.638 4 Gi -44.813 dB Ref Offset 11 dB Ref 11.00 dBm **∳**<sup>1</sup> Start 0.01 GHz #Res BW 100 kHz Stop 26.50 GHz Sweep 88.00 ms (40001 pts) VBW 300 kHz ^ 16.638 4 GHz -44.813 dBm 1 f CH Low (2.31GHz ~2.43GHz) Marker 2 2.4000000000000 GHz Avg Type: Log-Pwr Avg|Hold:>1/1 PNO: Fast Trig: Free Run IFGain:Low #Atten: 20 dB Mkr2 2.400 000 G -35.281 dl Ref Offset 11 dB Ref 11.00 dBm $\Diamond^1$ Start 2.31000 GHz #Res BW 100 kHz Stop 2.43000 GHz 2.667 ms (40001 pts) VBW 300 kHz Sweep 2.412 705 GHz 2.400 000 GHz -0.141 dBm -35.281 dBm N STATUS

#### IEEE 802.11g mode (Antenna 0)











# CH Low (10MHz ~26.5GHz) ysight Sp ALIGN AU Avg Type: Log-Pwi Avg|Hold:>1/1 Marker 1 3.698732500000 GHz PNO: Fast Trig: Free Run IFGain:Low #Atten: 20 dB Mkr1 3.698 7 G. -54.721 dB Ref Offset 11 dB Ref 11.00 dBm -♦1 Start 0.01 GHz #Res BW 100 kHz Stop 26.50 GHz Sweep 88.00 ms (40001 pts) VBW 300 kHz ^ 3.698 7 GHz -54.721 dBm 1 f CH Low (2.31GHz ~2.43GHz) Marker 2 2.400000000000 GHz Avg Type: Log-Pwr Avg|Hold:>1/1 PNO: Fast Trig: Free Run IFGain:Low #Atten: 20 dB Mkr2 2.40 Ref Offset 11 dB Ref 11.00 dBm Start 2.31000 GHz #Res BW 100 kHz Stop 2.43000 GHz 2.667 ms (40001 pts) VBW 300 kHz Sweep 2.411 451 GHz 2.400 000 GHz 2.162 dBm -35.227 dBm Ň STATUS

#### IEEE 802.11g mode (Antenna 1)















#### IEEE 802.11n HT20 MHz mode (Antenna 0)













#### IEEE 802.11n HT20 MHz mode (Antenna 1)













#### IEEE 802.11n HT40 MHz mode (Antenna 0)














# IEEE 802.11n HT40 MHz mode (Antenna 1)











## 7.2.2. RADIATED EMISSIONS MEASUREMENT

### 7.2.2.1. LIMITS OF RADIATED EMISSIONS MEASUREMENT

According to §15.209(a), except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (mV/m)	Measurement Distance (m)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100*	3
88-216	150*	3
216-960	200*	3
Above 960	500	3

- **Remark:** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.
- 1. In the emission table above, the tighter limit applies at the band edges.

Frequency (MHz)	Field Strength (µV/m at 3-meter)	Field Strength (dBµV/m at 3-meter)
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

**NOTE**:(1) The lower limit shall apply at the transition frequencies.

(2) Emission level  $(dBuV/m) = 20 \log Emission level (uV/m)$ .



# 7.2.2.2. TEST INSTRUMENTS

Radiated Emission Test Site 966 (2)										
Name of Equipment	Manufacturer	Model Number	Serial Number	Last Calibration	Due Calibration					
PSA Series Spectrum Analyzer	Agilent	E4446A	US44300399	02/21/2016	02/20/2017					
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI	100783	02/21/2016	02/20/2017					
Amplifier	EMEC	EM330	060661	03/18/2016	03/17/2017					
High Noise Amplifier	Agilent	8449B	3008A01838	02/21/2016	02/20/2017					
Loop Antenna	COM-POWER	AL-130	121044	09/25/2015	09/24/2016					
Bilog Antenna	SCHAFFNER	CBL6143	5082	02/21/2016	02/20/2017					
Horn Antenna	SCHWARZBECK	BBHA9120 D286		02/28/2016	02/27/2017					
Board-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170-497	02/28/2016	02/27/2017					
Turn Table	N/A	N/A	N/A	N.C.R	N.C.R					
Antenna Tower	SUNOL	TLT2	N/A	N.C.R	N.C.R					
Controller	Sunol Sciences	SC104V	022310-1	N.C.R	N.C.R					
Controller	СТ	N/A	N/A	N.C.R	N.C.R					
Temp. / Humidity Meter	Anymetre	JR913	N/A	02/21/2016	02/20/2017					
Test S/W	FARAD		LZ-RF / CCS	S-SZ-3A2						

**NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The FCC Site Registration number is 101879.

3. N.C.R = No Calibration Required.

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#### 7.2.2.3. TEST PROCEDURE (please refer to measurement standard)

- 1. The EUT is placed on a turntable, which is 0.8m or 1.5m above ground plane.
- 2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
- 3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
- 4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- 6. Set the spectrum analyzer in the following setting as:

Below 1GHz:

RBW=100kHz / VBW=300kHz / Sweep=AUTO

Above 1GHz:

- (a) PEAK: RBW=1MHz, VBW=1MHz / Sweep=AUTO
- (b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO / Detector=PEAK
- 7. Repeat above procedures until the measurements for all frequencies are complete.



# 7.2.2.4. TEST SETUP

## Below 30MHz



# Below 1 GHz



# Above 1 GHz



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For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.



## 7.2.2.5. DATA SAPLE

#### Below 1GHz

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
XXX.XXXX	36.37	-12.20	24.17	40.00	-15.83	V	QP

= Uncorrected Analyzer / Receiver reading

= Reading (dBuV) + Corr. Factor (dB/m)

= Result (dBuV/m) – Limit (dBuV/m)

= Antenna factor + Cable loss - Amplifier gain

= Emission frequency in MHz

= Limit stated in standard

= Quasi-peak Reading

Frequency (MHz) Reading (dBuV) Correct Factor (dB/m) Result (dBuV/m) Limit (dBuV/m) Margin (dB) Q.P.

#### Above 1GHz

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
XXXX.XXXX	62.09	-11.42	50.67	74.00	-23.33	V	Peak
XXXX.XXXX	49.78	-11.42	38.36	54.00	-15.64	V	AVG

Frequency (MHz) Reading (dBuV) Correction Factor (dB/m) Result (dBuV/m) Limit (dBuV/m) Margin (dB) Peak AVG

= Emission frequency in MHz

- = Uncorrected Analyzer / Receiver reading
- Correction Factor (dB/m) = Antenna factor + Cable loss Amplifier gain
  - = Reading (dBuV) + Corr. Factor (dB/m)

= Limit stated in standard

= Result (dBuV/m) – Limit (dBuV/m)

= Peak Reading

= Average Reading

## **Calculation Formula**

Margin (dB) = Result (dBuV/m) – Limits (dBuV/m) Result (dBuV/m) = Reading (dBuV) + Correction Factor



### 7.2.2.6. TEST RESULTS

#### Below 1 GHz

#### **RE3001**

Test Mode: TX

est Mode: TX Tested by: Jack Che									
Ambient temperature: 24 °C Relative humidity: 52% RH Date: July 1, 20									
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark		
31.6167	45.65	-12.61	33.04	40.00	-6.96	V	QP		
109.2167	51.98	-21.97	30.01	43.50	-13.49	V	QP		
359.8000	45.33	-17.41	27.92	46.00	-18.08	V	QP		
455.1832	47.39	-15.31	32.08	46.00	-13.92	V	QP		
532.7833	46.58	-13.72	32.86	46.00	-13.14	V	QP		
731.6332	40.98	-11.56	29.42	46.00	-16.58	V	QP		
		1							
78.5000	59.29	-26.53	32.76	40.00	-7.24	Н	QP		
188.4333	55.65	-22.87	32.78	43.50	-10.72	Н	QP		
240.1666	55.21	-21.49	33.72	46.00	-12.28	Н	QP		
351.7167	54.63	-17.62	37.01	46.00	-8.99	Н	QP		
455.1832	46.93	-15.31	31.62	46.00	-14.38	Н	QP		
498.8333	47.10	-14.36	32.74	46.00	-13.26	Н	QP		

\*\*Remark: No emission found between lowest internal used/generated frequency to 30MHz.

#### Notes:

- 1. Radiated emissions measured in frequency range from 9kHz to 1GHz were made with an instrument using Quasi-peak detector mode.
- 2. Data of measurement within this frequency range shown "----" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3. The IF bandwidth of Receiver between 30MHz to 1GHz was 120kHz.

= Emission frequency in MHz
= Receiver reading
= Antenna factor + Cable loss – Amplifier gain
= Limit stated in standard
= Measured (dBμV/m) – Limits (dBμV/m)
= Current carrying line of reading



#### <u>RE3002</u>

Test Mode:	Т <u>Х</u>	٦	fested by:	Jack Chen				
Ambient te	mperature	: <u>24℃</u> R	lelative hu	umidity: <u>52</u>	<u>2% RH</u>	Date: July 1, 2016		
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark	
31.6167	47.30	-12.61	34.69	40.00	-5.31	V	QP	
288.6666	51.38	-20.46	30.92	46.00	-15.08	V	QP	
288.6666	51.38	-20.46	30.92	46.00	-15.08	V	QP	
576.4333	44.98	-13.08	31.90	46.00	-14.10	V	QP	
599.0666	44.31	-12.89	31.42	46.00	-14.58	V	QP	
830.2500	40.09	-10.58	29.51	46.00	-16.49	V	QP	
31.6167	47.38	-12.61	34.77	40.00	-5.23	Н	QP	
183.5833	54.79	-22.92	31.87	43.50	-11.63	Н	QP	
288.6666	53.81	-20.46	33.35	46.00	-12.65	Н	QP	
364.6500	51.40	-17.32	34.08	46.00	-11.92	Н	QP	
455.1832	45.57	-15.31	30.26	46.00	-15.74	Н	QP	
665.3500	42.98	-12.24	30.74	46.00	-15.26	Н	QP	

\*\*Remark: No emission found between lowest internal used/generated frequency to 30MHz.

#### Notes:

- 1. Radiated emissions measured in frequency range from 9kHz to 1GHz were made with an instrument using Quasi-peak detector mode.
- 2. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3. The IF bandwidth of Receiver between 30MHz to 1GHz was 120kHz.

4. Frequency (MHz).	= Emission frequency in MHz
Reading (dBµV/m)	= Receiver reading
Correction Factor (dB)	= Antenna factor + Cable loss – Amplifier gain
Limit (dBµV/m)	= Limit stated in standard
Margin (dB)	= Measured (dBμV/m) – Limits (dBμV/m)
Antenna Pol e(H/V)	= Current carrying line of reading



#### Above 1 GHz

# <u>RE3001</u>

#### Antenna 0

Test Mode: TX / IEEE 802.11b(CH Low)

#### Tested by: Jack Chen

Ambient temperature: $24^{\circ}C$ Relative humidity: $52^{\circ}RH$					Date: July	<u>y 1, 2016</u>	
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
3862.0000	42.99	1.01	44.00	74.00	-30.00	V	peak
4825.0000	49.64	4.41	54.05	74.00	-19.95	V	peak
4825.0000	46.46	4.41	50.87	54.00	-3.13	V	AVG
5212.0000	42.50	5.36	47.86	74.00	-26.14	V	peak
5851.0000	41.87	6.02	47.89	74.00	-26.11	V	peak
7057.0000	41.35	7.81	49.16	74.00	-24.84	V	peak
7651.0000	43.72	8.97	52.69	74.00	-21.31	V	peak
7651.0000	39.34	8.97	48.31	54.00	-5.69	V	AVG
4825.0000	49.76	4.41	54.17	74.00	-19.83	Н	Peak
4825.0000	46.95	4.41	51.36	54.00	-2.64	Н	AVG
5203.0000	44.89	5.34	50.23	74.00	-23.77	Н	Peak
6085.0000	41.13	6.22	47.35	74.00	-26.65	Н	peak
6958.0000	41.63	7.63	49.26	74.00	-24.74	Н	peak
7768.0000	40.90	9.20	50.10	74.00	-23.90	Н	peak
8308.0000	41.28	9.48	50.76	74.00	-23.24	Н	Peak

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).

## Test Mode: TX / IEEE 802.11b (CH Mid)

Ambient temperature: <u>24 °C</u> Relative humidity: <u>52% RH</u>

Tested by: Jack Chen

Date: July 1, 2016

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1747.0000	56.04	-6.38	49.66	74.00	-24.34		Peak
4267.0000	42.68	2.53	45.21	74.00	-28.79		Peak
4870.0000	43.92	4.56	48.48	74.00	-25.52		Peak
7003.0000	40.93	7.71	48.64	74.00	-25.36		Peak
7885.0000	40.61	9.43	50.04	74.00	-23.96		Peak
8371.0000	40.80	9.45	50.25	74.00	-23.75		Peak
3655.0000	45.79	0.13	45.92	74.00	-28.08	Н	Peak
4870.0000	47.32	4.56	51.88	74.00	-22.12	н	Peak
5203.0000	43.58	5.34	48.92	74.00	-25.08	н	Peak
6247.0000	41.09	6.48	47.57	74.00	-26.43	Н	Peak
6859.0000	41.81	7.47	49.28	74.00	-24.72	Н	Peak
7750.0000	41.26	9.16	50.42	74.00	-23.58	Н	Peak

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "----" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).

Test Mode: T	<b>sted by:</b> <u>Ja</u>	<u>ack Chen</u>					
Ambient temperature: <u>24 °C</u> Relative humidity: <u>52% RH</u>						Date: Jul	<u>y 1, 2016</u>
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1981.0000	52.07	-5.12	46.95	74.00	-27.05	V	Peak
4924.0000	49.41	4.73	54.14	74.00	-19.86	V	Peak
4924.0000	46.57	4.73	51.30	54.00	-2.70	V	AVG
5644.0000	41.47	5.93	47.40	74.00	-26.60	V	Peak
6976.0000	41.32	7.66	48.98	74.00	-25.02	V	Peak
7786.0000	40.95	9.23	50.18	74.00	-23.82	V	Peak
8983.0000	41.28	9.11	50.39	74.00	-23.61	V	Peak
	1	I		I	ſ		I
3691.0000	45.74	0.29	46.03	74.00	-27.97	Н	Peak
4924.0000	50.21	4.73	54.94	74.00	-19.06	Н	Peak
4924.0000	46.77	4.73	51.50	54.00	-2.50	Н	AVG
5059.0000	42.88	5.09	47.97	74.00	-26.03	Н	Peak
6292.0000	40.99	6.55	47.54	74.00	-26.46	Н	Peak
7453.0000	40.59	8.58	49.17	74.00	-24.83	Н	Peak
8443.0000	41.23	9.41	50.64	74.00	-23.36	Н	Peak

# Test Mode: TX / IEEE 802 11h (CH High)

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "----" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).



#### Antenna 1

Test Mode: TX / IEEE 802.11b(CH Low)

Ambient temperature: <u>24 °C</u> Relative humidity: <u>52% RH</u>

Tested by: Jack Chen

Date: July 1, 2016

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
4006.0000	42.36	1.61	43.97	74.00	-30.03	V	peak
4825.0000	45.53	4.41	49.94	74.00	-24.06	V	peak
5518.0000	41.64	5.88	47.52	74.00	-26.48	V	peak
6328.0000	41.33	6.61	47.94	74.00	-26.06	V	peak
6976.0000	41.72	7.66	49.38	74.00	-24.62	V	peak
7768.0000	41.43	9.20	50.63	74.00	-23.37	V	peak
1747.0000	54.28	-6.38	47.90	74.00	-26.10	Н	Peak
3619.0000	47.19	-0.02	47.17	74.00	-26.83	Н	Peak
4825.0000	44.00	4.41	48.41	74.00	-25.59	Н	Peak
5734.0000	41.72	5.97	47.69	74.00	-26.31	Н	peak
7084.0000	41.26	7.86	49.12	74.00	-24.88	Н	peak
8326.0000	41.20	9.47	50.67	74.00	-23.33	Н	peak

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).

# Test Mode: TX / IEEE 802.11b (CH Mid)

Ambient temperature: <u>24 ℃</u> Relative humidity: <u>52% RH</u>

Tested by: Jack Chen Date: July 1, 2016

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
4195.0000	42.56	2.28	44.84	74.00	-29.16	V	Peak
4870.0000	43.13	4.56	47.69	74.00	-26.31	V	Peak
6553.0000	40.37	6.98	47.35	74.00	-26.65	V	Peak
6967.0000	41.82	7.65	49.47	74.00	-24.53	V	Peak
7903.0000	40.74	9.46	50.20	74.00	-23.80	V	Peak
8335.0000	41.45	9.47	50.92	74.00	-23.08	V	Peak
	•			•	•	•	
1747.0000	56.97	-6.38	50.59	74.00	-23.41	Н	Peak
3655.0000	47.46	0.13	47.59	74.00	-26.41	Н	Peak
4870.0000	43.37	4.56	47.93	74.00	-26.07	Н	Peak
5347.0000	42.58	5.60	48.18	74.00	-25.82	Н	Peak
6958.0000	41.74	7.63	49.37	74.00	-24.63	Н	Peak
7570.0000	41.57	8.81	50.38	74.00	-23.62	Н	Peak

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).

## Test Mode: TX / IEEE 802.11b (CH High)

Ambient temperature: <u>24 ℃</u> Relative humidity: <u>52% RH</u>

Tested by: Jack Chen Date: July 1, 2016

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1774.0000	57.37	-6.33	51.04	74.00	-22.96	V	Peak
4258.0000	43.56	2.50	46.06	74.00	-27.94	V	Peak
5311.0000	41.69	5.53	47.22	74.00	-26.78	V	Peak
6805.0000	41.29	7.38	48.67	74.00	-25.33	V	Peak
7750.0000	41.40	9.16	50.56	74.00	-23.44	V	Peak
8425.0000	40.56	9.42	49.98	74.00	-24.02	V	Peak
	•			•	•	•	
1747.0000	53.95	-6.38	47.57	74.00	-26.43	Н	Peak
3691.0000	45.55	0.29	45.84	74.00	-28.16	Н	Peak
4447.0000	42.57	3.16	45.73	74.00	-28.27	Н	Peak
5383.0000	41.17	5.66	46.83	74.00	-27.17	Н	Peak
6958.0000	41.18	7.63	48.81	74.00	-25.19	Н	Peak
7714.0000	41.41	9.09	50.50	74.00	-23.50	Н	Peak

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).



## Antenna 0

Test Mode: TX / IEEE 802.11g(CH Low)

Ambient temperature: <u>24 °C</u> Relative humidity: <u>52% RH</u>

Tested by: Jack Chen Date: July 1 2016

						<b>Dato:</b> <u>daty 1, 2010</u>	
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1747.0000	57.24	-6.38	50.86	74.00	-23.14	V	peak
4654.0000	42.26	3.85	46.11	74.00	-27.89	V	peak
4825.0000	44.56	4.41	48.97	74.00	-25.03	V	peak
5608.0000	41.72	5.92	47.64	74.00	-26.36	V	peak
6670.0000	41.84	7.17	49.01	74.00	-24.99	V	peak
7561.0000	41.83	8.79	50.62	74.00	-23.38	V	peak
4825.0000	51.87	4.41	56.28	74.00	-17.72	Н	Peak
4825.0000	39.73	4.41	44.14	54.00	-9.86	Н	AVG
5203.0000	45.69	5.34	51.03	74.00	-22.97	Н	Peak
6319.0000	41.21	6.60	47.81	74.00	-26.19	Н	Peak
6922.0000	41.09	7.57	48.66	74.00	-25.34	Н	peak
7723.0000	40.85	9.11	49.96	74.00	-24.04	Н	peak
8812.0000	41.86	9.20	51.06	74.00	-22.94	Н	peak

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).

# Test Mode: TX / IEEE 802.11g (CH Mid)

Ambient temperature: 24 °C

Tested by: Jack Chen Date: July 1, 2016

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1747.0000	54.38	-6.38	48.00	74.00	-26.00	V	Peak
4879.0000	45.05	4.59	49.64	74.00	-24.36	V	Peak
5212.0000	43.66	5.36	49.02	74.00	-24.98	V	Peak
6922.0000	41.60	7.57	49.17	74.00	-24.83	V	Peak
7750.0000	41.46	9.16	50.62	74.00	-23.38	V	Peak
8209.0000	41.54	9.54	51.08	74.00	-22.92	V	Peak
1747.0000	56.64	-6.38	50.26	74.00	-23.74	Н	Peak
3655.0000	45.97	0.13	46.10	74.00	-27.90	Н	Peak
4870.0000	49.13	4.56	53.69	74.00	-20.31	Н	Peak
4870.0000	39.63	4.56	44.19	54.00	-9.81	Н	AVG
6157.0000	41.20	6.33	47.53	74.00	-26.47	Н	Peak
6949.0000	41.44	7.62	49.06	74.00	-24.94	Н	Peak
7759.0000	42.17	9.18	51.35	74.00	-22.65	Н	Peak

**Belative humidity:** 52% BH

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "----" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).

# Test Mode: TX / IEEE 802.11g (CH High)

Ambient temperature: <u>24 ℃</u> Relative humidity: <u>52% RH</u>

Tested by: Jack Chen Date: July 1, 2016

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1747.0000	52.63	-6.38	46.25	74.00	-27.75	V	Peak
4924.0000	43.26	4.73	47.99	74.00	-26.01	V	Peak
5626.0000	42.21	5.92	48.13	74.00	-25.87	V	Peak
7021.0000	41.14	7.74	48.88	74.00	-25.12	V	Peak
7750.0000	41.82	9.16	50.98	74.00	-23.02	V	Peak
8767.0000	42.02	9.23	51.25	74.00	-22.75	V	Peak
	•		•	•	•	•	
1747.0000	52.00	-6.38	45.62	74.00	-28.38	Н	Peak
4258.0000	41.67	2.50	44.17	74.00	-29.83	Н	Peak
4933.0000	44.84	4.76	49.60	74.00	-24.40	Н	Peak
5194.0000	43.43	5.33	48.76	74.00	-25.24	Н	Peak
6931.0000	41.40	7.59	48.99	74.00	-25.01	Н	Peak
7930.0000	42.21	9.51	51.72	74.00	-22.28	Н	Peak

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).



Test Mode: TX / IEEE 802.11g(CH Low) Tested by: Jac							
Ambient tem	perature: 2	<u>24℃ <b>Re</b></u>	lative humi	<b>dity:</b> <u>52%</u> R	<u>H</u>	Date: Jul	<u>y 1, 2016</u>
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1747.0000	57.83	-6.38	51.45	74.00	-22.55	V	Peak
3295.0000	43.92	-0.86	43.06	74.00	-30.94	V	Peak
4825.0000	45.61	4.41	50.02	74.00	-23.98	V	Peak
5590.0000	41.61	5.91	47.52	74.00	-26.48	V	Peak
7174.0000	41.37	8.04	49.41	74.00	-24.59	V	Peak
7759.0000	41.70	9.18	50.88	74.00	-23.12	V	Peak
		1		1		1	1
1747.0000	57.03	-6.38	50.65	74.00	-23.35	Н	Peak
3619.0000	46.92	-0.02	46.90	74.00	-27.10	Н	Peak
4834.0000	43.18	4.44	47.62	74.00	-26.38	Н	Peak
6301.0000	41.81	6.57	48.38	74.00	-25.62	Н	Peak
6949.0000	41.36	7.62	48.98	74.00	-25.02	Н	Peak
7687.0000	41.22	9.04	50.26	74.00	-23.74	Н	Peak

# Antenna 1

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "----" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).

Ambient tem	mbient temperature: <u>24 °C</u> Relative humidity: <u>52% RH</u>					Date: July 1, 2016	
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2017.0000	55.94	-4.91	51.03	74.00	-22.97	V	Peak
4258.0000	42.71	2.50	45.21	74.00	-28.79	V	Peak
4861.0000	43.02	4.53	47.55	74.00	-26.45	V	Peak
5644.0000	41.60	5.93	47.53	74.00	-26.47	V	Peak
7192.0000	42.01	8.07	50.08	74.00	-23.92	V	Peak
7876.0000	41.28	9.41	50.69	74.00	-23.31	V	Peak
						•	
1747.0000	53.64	-6.38	47.26	74.00	-26.74	Н	Peak
3655.0000	47.29	0.13	47.42	74.00	-26.58	Н	Peak
4303.0000	42.98	2.66	45.64	74.00	-28.36	Н	Peak
5077.0000	42.49	5.12	47.61	74.00	-26.39	Н	Peak
6733.0000	41.00	7.27	48.27	74.00	-25.73	Н	Peak
7741.0000	40.80	9.14	49.94	74.00	-24.06	Н	Peak
REMARKS:	•	•		•	•	•	

### Test Mode: TX / IEEE 802.11g (CH Mid)

Tested by: Jack Chen

4303.0000	42.98	2.66	45.64	74.00	-28.36	Н	Peak
5077.0000	42.49	5.12	47.61	74.00	-26.39	Н	Peak
6733.0000	41.00	7.27	48.27	74.00	-25.73	Н	Peak
7741.0000	40.80	9.14	49.94	74.00	-24.06	Н	Peak
EMARKS:							
1. Meas freque	uring freque ency.	encies from	1 GHz to the	e 10th harm	nonic of hig	hest funda	mental

- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "----" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).

Ambient tem	mbient temperature: <u>24°C</u> Relative humidity: <u>52% RH</u>						Date: <u>July 1, 2016</u>	
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark	
1747.0000	56.13	-6.38	49.75	74.00	-24.25	V	Peak	
2017.0000	54.68	-4.91	49.77	74.00	-24.23	V	Peak	
4969.0000	42.38	4.88	47.26	74.00	-26.74	V	Peak	
5815.0000	42.32	6.00	48.32	74.00	-25.68	V	Peak	
7462.0000	41.55	8.60	50.15	74.00	-23.85	V	Peak	
8344.0000	41.04	9.46	50.50	74.00	-23.50	V	Peak	
	-			•	-			
4951.0000	42.48	4.82	47.30	74.00	-26.70	Н	Peak	
3691.0000	45.87	0.29	46.16	74.00	-27.84	Н	Peak	
2017.0000	54.21	-4.91	49.30	74.00	-24.70	Н	Peak	
6481.0000	40.79	6.86	47.65	74.00	-26.35	Н	Peak	
7804.0000	41.00	9.27	50.27	74.00	-23.73	Н	Peak	
7210.0000	40.55	8.11	48.66	74.00	-25.34	Н	Peak	

# Test Mode: TX / IEEE 802.11g (CH High)

Tested by: Jack Chen

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "----" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).

Combine wit	Combine with Antenna 0 and Antenna 1										
lest Mode:	IX/IEEE8	302.11n HT2	<u>20 MHZ (CH</u>	LOW)		lested by: Ja	<u>ck Chen</u>				
Ambient tem	Ambient temperature: <u>24 °C</u> Relative humidity: <u>52% RH</u>										
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark				
1657.0000	55.45	-6.58	48.87	74.00	-25.13	V	Peak				
4825.0000	46.51	4.41	50.92	74.00	-23.08	V	Peak				
6148.0000	42.14	6.32	48.46	74.00	-25.54	V	Peak				
6832.0000	41.07	7.43	48.50	74.00	-25.50	V	Peak				
7687.0000	40.68	9.04	49.72	74.00	-24.28	V	Peak				
8344.0000	40.88	9.46	50.34	74.00	-23.66	V	Peak				
	•	•		•							
3619.0000	46.45	-0.02	46.43	74.00	-27.57	Н	Peak				
4825.0000	49.41	4.41	53.82	74.00	-20.18	Н	Peak				
4825.0000	41.19	4.41	45.60	54.00	-8.40	Н	AVG				
5887.0000	41.78	6.03	47.81	74.00	-26.19	Н	Peak				
6733.0000	41.34	7.27	48.61	74.00	-25.39	Н	Peak				
7678.0000	41.05	9.02	50.07	74.00	-23.93	Н	Peak				
8335.0000	40.76	9.47	50.23	74.00	-23.77	Н	Peak				

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).



Test Mode:	<b>fest Mode:</b> <u>TX / IEEE 802.11n HT20 MHz (CH Mid)</u>							
Ambient ten	Ambient temperature: <u>24 °C</u> Relative humidity: <u>52% RH</u>							
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark	
3286.0000	44.00	-0.88	43.12	74.00	-30.88	V	Peak	
4870.0000	45.68	4.56	50.24	74.00	-23.76	V	Peak	
5194.0000	45.95	5.33	51.28	74.00	-22.72	V	Peak	
6274.0000	41.75	6.52	48.27	74.00	-25.73	V	Peak	
7228.0000	41.22	8.14	49.36	74.00	-24.64	V	Peak	
9424.0000	41.19	10.32	51.51	74.00	-22.49	V	Peak	
0004.0000	45.40	0.17	45.05	74.00	00.05			
3664.0000	45.18	0.17	45.35	/4.00	-28.65	н	Peak	
4303.0000	42.75	2.66	45.41	74.00	-28.59	Н	Peak	
4870.0000	47.59	4.56	52.15	74.00	-21.85	Н	Peak	
4870.0000	41.14	4.56	45.70	54.00	-8.30	Н	AVG	
6274.0000	40.80	6.52	47.32	74.00	-26.68	Н	Peak	
6742.0000	40.67	7.28	47.95	74.00	-26.05	Н	Peak	
7624.0000	41.14	8.92	50.06	74.00	-23.94	Н	Peak	
REMARKS								

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "----" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).



		103100 by. 00	ton onen				
Ambient ten	perature:	<u>24℃</u> <b>R</b>	elative hum	nidity: <u>52%</u>	<u>RH</u>	Date: July	<u>/ 1, 2016</u>
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
4924.0000	44.71	4.73	49.44	74.00	-24.56	V	Peak
5959.0000	41.08	6.06	47.14	74.00	-26.86	V	Peak
6904.0000	41.52	7.54	49.06	74.00	-24.94	V	Peak
7219.0000	41.39	8.13	49.52	74.00	-24.48	V	Peak
7588.0000	41.12	8.85	49.97	74.00	-24.03	V	Peak
8659.0000	41.62	9.29	50.91	74.00	-23.09	V	Peak
		Γ				1	
3763.0000	44.19	0.59	44.78	74.00	-29.22	Н	Peak
4402.0000	42.73	3.01	45.74	74.00	-28.26	Н	Peak
4924.0000	46.56	4.73	51.29	74.00	-22.71	Н	Peak
6490.0000	41.18	6.87	48.05	74.00	-25.95	Н	Peak
7111.0000	40.71	7.92	48.63	74.00	-25.37	Н	Peak
7786.0000	41.47	9.23	50.70	74.00	-23.30	Н	Peak

# Test Mode: TX / EEE 802.11n HT20 MHz (CH High)

Tested by: Jack Chen

RE	Μ	AF	RK	S

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "----" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).

Test Mode:	<u>TX/ IEEE 8</u>		Tested by: <u>Ja</u>	<u>ack Chen</u>			
Ambient ten	nperature:	<u>24℃</u> <b>R</b>	elative hum	nidity: <u>52%</u>	RH	Date: July	<u>/ 1, 2016</u>
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
4258.0000	42.52	2.50	45.02	74.00	-28.98	V	Peak
4834.0000	47.49	4.44	51.93	74.00	-22.07	V	Peak
6157.0000	42.80	6.33	49.13	74.00	-24.87	V	Peak
6157.0000	42.80	6.33	49.13	74.00	-24.87	V	Peak
6922.0000	41.15	7.57	48.72	74.00	-25.28	V	Peak
7741.0000	41.59	9.14	50.73	74.00	-23.27	V	Peak
1711.0000	54.00	-6.46	47.54	74.00	-26.46	Н	Peak
4843.0000	49.47	4.47	53.94	74.00	-20.06	Н	Peak
4843.0000	42.92	4.47	47.39	54.00	-6.61	Н	AVG
5563.0000	41.95	5.90	47.85	74.00	-26.15	Н	Peak
6949.0000	41.49	7.62	49.11	74.00	-24.89	Н	Peak
7696.0000	41.75	9.06	50.81	74.00	-23.19	Н	Peak
8299.0000	41.29	9.49	50.78	74.00	-23.22	Н	Peak

# Combine with Antenna 0 and Antenna 1

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "----" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).



## Test Mode: TX / IEEE 802.11n HT40 MHz (CH Mid)

Tested by: Jack Chen

Ambient ten	nperature:	<u>24℃</u> <b>R</b>	elative hum	nidity: <u>52%</u>	Date: July 1, 2016		
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
4888.0000	46.67	4.61	51.28	74.00	-22.72	V	Peak
5509.0000	41.14	5.87	47.01	74.00	-26.99	V	Peak
6598.0000	40.56	7.05	47.61	74.00	-26.39	V	Peak
7462.0000	39.99	8.60	48.59	74.00	-25.41	V	Peak
7759.0000	41.09	9.18	50.27	74.00	-23.73	V	Peak
8389.0000	41.52	9.44	50.96	74.00	-23.04	V	Peak
3889.0000	44.02	1.12	45.14	74.00	-28.86	Н	Peak
4870.0000	49.02	4.56	53.58	74.00	-20.42	Н	Peak
4870.0000	39.24	4.56	43.80	54.00	-10.20	Н	AVG
5653.0000	41.97	5.93	47.90	74.00	-26.10	Н	Peak
6805.0000	40.53	7.38	47.91	74.00	-26.09	Н	Peak
7759.0000	41.87	9.18	51.05	74.00	-22.95	Н	Peak
8326.0000	41.62	9.47	51.09	74.00	-22.91	Н	Peak

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "----" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).

Test Mode: <u> </u>	<u>TX/ IEEE 8</u>	Tested by: Ja	<u>ack Chen</u>				
Ambient ten	perature:	<u>24℃</u> <b>R</b>	elative hum	nidity: <u>52%</u>	RH	Date: July	<u>/ 1, 2016</u>
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
3889.0000	43.65	1.12	44.77	74.00	-29.23	V	Peak
4906.0000	45.18	4.67	49.85	74.00	-24.15	V	Peak
5590.0000	42.87	5.91	48.78	74.00	-25.22	V	Peak
6949.0000	41.40	7.62	49.02	74.00	-24.98	V	Peak
7687.0000	41.16	9.04	50.20	74.00	-23.80	V	Peak
8362.0000	41.36	9.45	50.81	74.00	-23.19	V	Peak
2854.0000	46.45	-1.62	44.83	74.00	-29.17	Н	Peak
3682.0000	45.50	0.25	45.75	74.00	-28.25	Н	Peak
4888.0000	45.91	4.61	50.52	74.00	-23.48	Н	Peak
6274.0000	41.16	6.52	47.68	74.00	-26.32	Н	Peak
7714.0000	41.67	9.09	50.76	74.00	-23.24	Н	Peak
8245.0000	41.16	9.52	50.68	74.00	-23.32	Н	Peak
REMARKS							

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).



# **RE3002**

Antenna 0

Test Mode: TX / IEEE 802.11b(CH Low)

Tested by: Jack Chen

Ambient ten	nperature:	<u>24℃</u> <b>Re</b>	Date: July 1, 2016				
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1765.0000	57.43	-6.35	51.08	74.00	-22.92	V	peak
3925.0000	42.34	1.27	43.61	74.00	-30.39	V	peak
4888.0000	42.11	4.61	46.72	74.00	-27.28	V	peak
5563.0000	42.02	5.90	47.92	74.00	-26.08	V	peak
6994.0000	42.18	7.69	49.87	74.00	-24.13	V	peak
7912.0000	41.30	9.48	50.78	74.00	-23.22	V	peak
	•					•	
4267.0000	42.19	2.53	44.72	74.00	-29.28	Н	Peak
5050.0000	41.78	5.07	46.85	74.00	-27.15	Н	Peak
5752.0000	42.17	5.98	48.15	74.00	-25.85	Н	peak
6958.0000	41.45	7.63	49.08	74.00	-24.92	Н	peak
7813.0000	41.48	9.29	50.77	74.00	-23.23	Н	Peak
9181.0000	41.22	9.62	50.84	74.00	-23.16	Н	Peak

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "----" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).

# Test Mode: TX / IEEE 802.11b (CH Mid)

Ambient temperature: <u>24 °C</u> Relative humidity: <u>52% RH</u>

Tested by: Jack Chen

Date: July 1, 2016

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
3655.0000	44.25	0.13	44.38	74.00	-29.62	V	Peak
4870.0000	48.64	4.56	53.20	74.00	-20.80	V	Peak
4870.0000	43.57	4.56	48.13	54.00	-5.87	V	AVG
5680.0000	41.67	5.95	47.62	74.00	-26.38	V	Peak
6589.0000	40.62	7.03	47.65	74.00	-26.35	V	Peak
7507.0000	39.86	8.69	48.55	74.00	-25.45	V	Peak
A7750.0000	41.34	9.16	50.50	74.00	-23.50	V	Peak
4609.0000	41.56	3.71	45.27	74.00	-28.73	Н	Peak
4870.0000	46.15	4.56	50.71	74.00	-23.29	Н	Peak
5194.0000	44.34	5.33	49.67	74.00	-24.33	Н	Peak
6805.0000	41.63	7.38	49.01	74.00	-24.99	Н	Peak
7795.0000	40.56	9.25	49.81	74.00	-24.19	Н	Peak
8452.0000	40.80	9.40	50.20	74.00	-23.80	Н	Peak

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "----" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).

Test Mode.									
Ambient tem	perature: <u>2</u>	<u>24°C</u> <b>Re</b>	lative humi	<b>dity:</b> <u>52%</u> R	<u>lH</u>	Date: July	<u>y 1, 2016</u>		
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark		
1783.0000	56.33	-6.31	50.02	74.00	-23.98	V	Peak		
4312.0000	41.99	2.69	44.68	74.00	-29.32	V	Peak		
4924.0000	50.60	4.73	55.33	74.00	-18.67	V	Peak		
4924.0000	46.41	4.73	51.14	54.00	-2.86	V	AVG		
5572.0000	41.40	5.90	47.30	74.00	-26.70	V	Peak		
7102.0000	40.56	7.90	48.46	74.00	-25.54	V	Peak		
7912.0000	41.03	9.48	50.51	74.00	-23.49	V	Peak		
4510.0000	42.11	3.38	45.49	74.00	-28.51	Н	Peak		
4924.0000	47.45	4.73	52.18	74.00	-21.82	Н	Peak		
4924.0000	44.66	4.73	49.39	54.00	-4.61	Н	AVG		
6031.0000	42.37	6.13	48.50	74.00	-25.50	Н	Peak		
7003.0000	41.11	7.71	48.82	74.00	-25.18	Н	Peak		
7912.0000	41.21	9.48	50.69	74.00	-23.31	Н	Peak		
9496.0000	41.29	10.53	51.82	74.00	-22.18	Н	Peak		

## Test Mode: TX / IEEE 802 11h (CH High)

Tested by: lack Chen

## **REMARKS**:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "----" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).



#### Antenna 1

Test Mode: TX / IEEE 802.11b(CH Low)

Ambient temperature: <u>24 °C</u> Relative humidity: <u>52% RH</u>

Tested by: Jack Chen

Date: July 1, 2016

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
4636.0000	42.10	3.79	45.89	74.00	-28.11	V	peak
4825.0000	43.66	4.41	48.07	74.00	-25.93	V	peak
6157.0000	42.21	6.33	48.54	74.00	-25.46	V	peak
7228.0000	42.14	8.14	50.28	74.00	-23.72	V	peak
7705.0000	41.91	9.07	50.98	74.00	-23.02	V	peak
8362.0000	41.63	9.45	51.08	74.00	-22.92	V	peak
		•				•	•
4825.0000	42.86	4.41	47.27	74.00	-26.73	Н	Peak
6967.0000	42.63	7.65	50.28	74.00	-23.72	Н	Peak
7750.0000	42.07	9.16	51.23	74.00	-22.77	Н	Peak
7993.0000	41.98	9.64	51.62	74.00	-22.38	Н	peak
8623.0000	41.23	9.31	50.54	74.00	-23.46	Н	peak
9685.0000	40.15	11.07	51.22	74.00	-22.78	Н	peak

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).

## Test Mode: TX / IEEE 802.11b (CH Mid)

Ambient temperature: <u>24 °C</u> Relative humidity: <u>52% RH</u>

Tested by: Jack Chen Date: July 1, 2016

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
4870.0000	43.00	4.56	47.56	74.00	-26.44	V	Peak
5635.0000	41.64	5.93	47.57	74.00	-26.43	V	Peak
6580.0000	42.00	7.02	49.02	74.00	-24.98	V	Peak
6976.0000	42.48	7.66	50.14	74.00	-23.86	V	Peak
7741.0000	41.77	9.14	50.91	74.00	-23.09	V	Peak
8641.0000	41.73	9.30	51.03	74.00	-22.97	V	Peak
	•			•		•	
3655.0000	45.12	0.13	45.25	74.00	-28.75	Н	Peak
4186.0000	43.24	2.24	45.48	74.00	-28.52	Н	Peak
4870.0000	46.61	4.56	51.17	74.00	-22.83	Н	Peak
6787.0000	41.99	7.35	49.34	74.00	-24.66	Н	Peak
7759.0000	41.36	9.18	50.54	74.00	-23.46	Н	Peak
8380.0000	41.57	9.44	51.01	74.00	-22.99	Н	Peak

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).

# Test Mode: TX / IEEE 802.11b (CH High)

Ambient temperature: <u>24 °C</u> Relative humidity: <u>52% RH</u>

Tested by: Jack Chen Date: July 1, 2016

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
3691.0000	44.61	0.29	44.90	74.00	-29.10	V	Peak
4924.0000	44.49	4.73	49.22	74.00	-24.78	V	Peak
6157.0000	41.64	6.33	47.97	74.00	-26.03	V	Peak
6832.0000	40.97	7.43	48.40	74.00	-25.60	V	Peak
7120.0000	41.41	7.93	49.34	74.00	-24.66	V	Peak
7795.0000	41.45	9.25	50.70	74.00	-23.30	V	Peak
	•			•	•	•	
4960.0000	42.60	4.85	47.45	74.00	-26.55	Н	Peak
5302.0000	42.36	5.52	47.88	74.00	-26.12	Н	Peak
5770.0000	42.58	5.98	48.56	74.00	-25.44	Н	Peak
6922.0000	41.93	7.57	49.50	74.00	-24.50	Н	Peak
7606.0000	41.69	8.88	50.57	74.00	-23.43	Н	Peak
8371.0000	41.37	9.45	50.82	74.00	-23.18	Н	Peak

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).



## Antenna 0

Test Mode: TX / IEEE 802.11g(CH Low)

Ambient temperature: <u>24 °C</u> Relative humidity: <u>52% RH</u>

Tested by: Jack Chen Date: July 1 2016

				<b>Dato:</b> <u>Daty 1, 2010</u>			
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
4825.0000	45.30	4.41	49.71	74.00	-24.29	V	peak
5212.0000	43.21	5.36	48.57	74.00	-25.43	V	peak
5518.0000	42.61	5.88	48.49	74.00	-25.51	V	peak
6787.0000	41.63	7.35	48.98	74.00	-25.02	V	peak
7723.0000	42.14	9.11	51.25	74.00	-22.75	V	peak
8002.0000	41.78	9.65	51.43	74.00	-22.57	V	peak
						•	
4159.0000	42.32	2.15	44.47	74.00	-29.53	н	Peak
4708.0000	41.84	4.03	45.87	74.00	-28.13	н	Peak
5059.0000	41.98	5.09	47.07	74.00	-26.93	н	Peak
6949.0000	41.89	7.62	49.51	74.00	-24.49	Н	peak
7750.0000	41.10	9.16	50.26	74.00	-23.74	Н	peak
8488.0000	42.03	9.38	51.41	74.00	-22.59	Н	peak

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).
### Test Mode: TX / IEEE 802.11g (CH Mid)

Ambient temperature: 24 °C

Tested by: Jack Chen Date: July 1 2016

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Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
3655.0000	45.23	0.13	45.36	74.00	-28.64	V	Peak
4879.0000	49.88	4.59	54.47	74.00	-19.53	V	Peak
4879.0000	35.30	4.59	39.89	54.00	-14.11	V	AVG
5473.0000	43.02	5.82	48.84	74.00	-25.16	V	Peak
7264.0000	42.09	8.21	50.30	74.00	-23.70	V	Peak
7714.0000	41.69	9.09	50.78	74.00	-23.22	V	Peak
8911.0000	42.62	9.15	51.77	74.00	-22.23	V	Peak
		· · · · · · · · · · · · · · · · · · ·					
3853.0000	44.31	0.97	45.28	74.00	-28.72	Н	Peak
4879.0000	44.74	4.59	49.33	74.00	-24.67	Н	Peak
5383.0000	42.90	5.66	48.56	74.00	-25.44	Н	Peak
6562.0000	42.95	6.99	49.94	74.00	-24.06	Н	Peak
7777.0000	42.23	9.22	51.45	74.00	-22.55	Н	Peak
8560.0000	42.23	9.34	51.57	74.00	-22.43	Н	Peak

**Belative humidity:** 52% BH

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "----" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).

						· -	
Ambient tem	perature: <u>2</u>	<u>24°C</u> <b>Re</b>	<u>IH</u>	Date: July 1, 20			
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
4276.0000	43.40	2.56	45.96	74.00	-28.04	V	Peak
4933.0000	50.69	4.76	55.45	74.00	-18.55	V	Peak
4933.0000	37.77	4.76	42.53	54.00	-11.47	V	AVG
5203.0000	46.30	5.34	51.64	74.00	-22.36	V	Peak
5995.0000	42.26	6.08	48.34	74.00	-25.66	V	Peak
7192.0000	42.20	8.07	50.27	74.00	-23.73	V	Peak
8515.0000	43.03	9.37	52.40	74.00	-21.60	V	Peak
	-			•		•	
3754.0000	44.40	0.55	44.95	74.00	-29.05	Н	Peak
4933.0000	47.36	4.76	52.12	74.00	-21.88	Н	Peak
4933.0000	36.22	4.76	40.98	54.00	-13.02	Н	AVG
5680.0000	42.05	5.95	48.00	74.00	-26.00	Н	Peak
6715.0000	42.53	7.24	49.77	74.00	-24.23	Н	Peak
7660.0000	42.02	8.99	51.01	74.00	-22.99	Н	Peak
8047.0000	41.72	9.62	51.34	74.00	-22.66	Н	Peak
REMARKS:							

#### Test Mode: TX / IEEE 802.11g (CH High)

Tested by: Jack Chen

### 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "----" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).



Test Mode: 1	<u>X / IEEE 80</u>	<u>)2.11g(CH l</u>	<u>_ow)</u>		Te	sted by: <u>Ja</u>	<u>ack Chen</u>		
Ambient tem	perature: 2	<u>24℃</u> <b>Re</b>	lative humi	<b>dity:</b> <u>52% F</u>	<u>% RH</u> <b>Date:</b> July 1, 20				
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark		
4411.0000	42.23	3.04	45.27	74.00	-28.73	V	Peak		
4825.0000	42.77	4.41	47.18	74.00	-26.82	V	Peak		
5860.0000	41.71	6.02	47.73	74.00	-26.27	V	Peak		
6949.0000	41.24	7.62	48.86	74.00	-25.14	V	Peak		
7840.0000	41.10	9.34	50.44	74.00	-23.56	V	Peak		
8497.0000	41.13	9.38	50.51	74.00	-23.49	V	Peak		
	-	1	1	1					
4312.0000	42.75	2.69	45.44	74.00	-28.56	Н	Peak		
5194.0000	45.64	5.33	50.97	74.00	-23.03	Н	Peak		
6553.0000	41.64	6.98	48.62	74.00	-25.38	Н	Peak		
7228.0000	41.12	8.14	49.26	74.00	-24.74	Н	Peak		
8425.0000	40.96	9.42	50.38	74.00	-23.62	Н	Peak		
9199.0000	42.07	9.67	51.74	74.00	-22.26	Н	Peak		

# Antenna 1

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "----" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).

						, <u> </u>	
Ambient temperature: 24 °CRelative humidity: 52% RHDate: July 1, 2							
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
4231.0000	42.86	2.40	45.26	74.00	-28.74	V	Peak
4825.0000	42.77	4.41	47.18	74.00	-26.82	V	Peak
5860.0000	41.71	6.02	47.73	74.00	-26.27	V	Peak
7138.0000	41.15	7.97	49.12	74.00	-24.88	V	Peak
7840.0000	41.10	9.34	50.44	74.00	-23.56	V	Peak
8497.0000	41.13	9.38	50.51	74.00	-23.49	V	Peak
		·		•	•	•	·
3898.0000	43.26	1.16	44.42	74.00	-29.58	Н	Peak
4474.0000	42.17	3.26	45.43	74.00	-28.57	Н	Peak
5203.0000	42.34	5.34	47.68	74.00	-26.32	Н	Peak
6796.0000	40.72	7.37	48.09	74.00	-25.91	Н	Peak
7534.0000	40.79	8.74	49.53	74.00	-24.47	Н	Peak
8209.0000	42.24	9.54	51.78	74.00	-22.22	Н	Peak

### Test Mode: TX / IEEE 802.11g (CH Mid)

Tested by: Jack Chen

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "----" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).

Ambient tem	perature: 2	<u>24°C</u> <b>Re</b>	lative humic	<b>dity:</b> <u>52% F</u>	<u>IH</u>	Date: July	<u>y 1, 2016</u>
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1747.0000	57.38	-6.38	51.00	74.00	-23.00	V	Peak
1945.0000	55.61	-5.35	50.26	74.00	-23.74	V	Peak
4258.0000	42.24	2.50	44.74	74.00	-29.26	V	Peak
4915.0000	43.57	4.70	48.27	74.00	-25.73	V	Peak
6553.0000	41.80	6.98	48.78	74.00	-25.22	V	Peak
7651.0000	41.51	8.97	50.48	74.00	-23.52	V	Peak
	1	1		1			
1765.0000	56.97	-6.35	50.62	74.00	-23.38	Н	Peak
4258.0000	42.74	2.50	45.24	74.00	-28.76	Н	Peak
4816.0000	43.00	4.38	47.38	74.00	-26.62	Н	Peak
6301.0000	41.91	6.57	48.48	74.00	-25.52	Н	Peak
6886.0000	42.40	7.52	49.92	74.00	-24.08	Н	Peak
7723.0000	41.10	9.11	50.21	74.00	-23.79	Н	Peak

### Test Mode: TX / IEEE 802.11g (CH High)

Tested by: Jack Chen

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "----" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).

Combine with Antenna 0 and Antenna 1											
Test Mode: ]	Tested by: <u>Ja</u>	<u>ck Chen</u>									
Ambient temperature: 24 °CRelative humidity: 52% RHDate						Date: July	<u>, 1, 2016</u>				
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark				
1756.0000	54.95	-6.36	48.59	74.00	-25.41	V	Peak				
4825.0000	46.17	4.41	50.58	74.00	-23.42	V	Peak				
6553.0000	41.34	6.98	48.32	74.00	-25.68	V	Peak				
7219.0000	42.06	8.13	50.19	74.00	-23.81	V	Peak				
7642.0000	41.29	8.95	50.24	74.00	-23.76	V	Peak				
7732.0000	41.56	9.13	50.69	74.00	-23.31	V	Peak				
				1							
3844.0000	44.06	0.93	44.99	74.00	-29.01	Н	Peak				
4825.0000	43.25	4.41	47.66	74.00	-26.34	Н	Peak				
5113.0000	42.51	5.18	47.69	74.00	-26.31	Н	Peak				
6013.0000	42.39	6.10	48.49	74.00	-25.51	Н	Peak				
6976.0000	42.34	7.66	50.00	74.00	-24.00	Н	Peak				
7750.0000	41.23	9.16	50.39	74.00	-23.61	Н	Peak				

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).



Test Mode:	<u> TX / IEEE 8</u>	<u>302.11n HT2</u>	<u>20 MHz (CH</u>	<u> Mid)</u>		Tested by: Ja	<u>ick Chen</u>
Ambient ten	nperature:	<u>24℃</u> <b>R</b>	elative hum	ative humidity: <u>52% RH</u> Date: <u>July</u>			
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
4402.0000	42.44	3.01	45.45	74.00	-28.55	V	Peak
4870.0000	47.80	4.56	52.36	74.00	-21.64	V	Peak
4870.0000	42.03	4.56	46.59	54.00	-7.41	V	AVG
5653.0000	41.53	5.93	47.46	74.00	-26.54	V	Peak
6418.0000	41.22	6.76	47.98	74.00	-26.02	V	Peak
6832.0000	41.38	7.43	48.81	74.00	-25.19	V	Peak
7876.0000	41.32	9.41	50.73	74.00	-23.27	V	Peak
	1					1	
1954.0000	53.10	-5.29	47.81	74.00	-26.19	Н	Peak
4879.0000	44.46	4.59	49.05	74.00	-24.95	Н	Peak
7768.0000	41.69	9.20	50.89	74.00	-23.11	Н	Peak
8209.0000	41.01	9.54	50.55	74.00	-23.45	Н	Peak
8326.0000	42.08	9.47	51.55	74.00	-22.45	Н	Peak
8551.0000	42.40	9.35	51.75	74.00	-22.25	Н	Peak
REMARKS.							

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "----" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).



		•=		<u>9</u> /			
Ambient ten	nperature:	<u>24℃</u> <b>R</b>	elative hum	nidity: <u>52%</u>	RH	Date: July	<u>/ 1, 2016</u>
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
3979.0000	43.96	1.50	45.46	74.00	-28.54	V	Peak
4933.0000	46.68	4.76	51.44	74.00	-22.56	V	Peak
6274.0000	40.88	6.52	47.40	74.00	-26.60	V	Peak
7471.0000	41.39	8.62	50.01	74.00	-23.99	V	Peak
7795.0000	40.62	9.25	49.87	74.00	-24.13	V	Peak
8380.0000	41.20	9.44	50.64	74.00	-23.36	V	Peak
					[	T	
1765.0000	51.82	-6.35	45.47	74.00	-28.53	Н	Peak
4222.0000	42.47	2.37	44.84	74.00	-29.16	Н	Peak
4924.0000	44.78	4.73	49.51	74.00	-24.49	Н	Peak
6157.0000	40.91	6.33	47.24	74.00	-26.76	Н	Peak
7687.0000	41.05	9.04	50.09	74.00	-23.91	Н	Peak
8371.0000	41.64	9.45	51.09	74.00	-22.91	Н	Peak
REMARKS:							

### Test Mode: TX / FEE 802 11n HT20 MHz (CH High)

Tested by: Jack Chen

1.0000	41.64	9.45	51.09	74.00	-22.91	Н	Peak
RKS:							
1. Meas frequ	suring frequ Iency.	uencies fror	n 1 GHz to t	he 10th ha	rmonic of l	nighest fundar	mental
	atad amiaa		we at the free and				

- 2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- 3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4. Data of measurement within this frequency range shown "----" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- 6. Margin (dB) = Remark result (dBuV/m) Average limit (dBuV/m).