













































7.7. Frequency Stability Measurement

7.7.1.Test Limit

Manufactures of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

7.7.2.Test Procedure Used

Frequency Stability under Temperature Variations:

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to highest. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C decreased per stage until the lowest temperature reached.

Frequency Stability under Voltage Variations:

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation (±15%) and endpoint, record the maximum frequency change.

7.7.3.Test Setup





7.7.4.Test Result

Test Engineer	Amy Zhang	Temperature	-30 ~ 50°C
Test Time	2016/12/10	Relative Humidity	52%RH
Test Mode	5180MHz		

Voltage	Power	Temp	Frequency Tolerance (ppm)				
(%)	(VAC)	(°C)	0 minutes	2 minutes	5 minutes	10 minutes	
		- 30	-7.92	-5.87	-3.74	-4.33	
		- 20	-4.28	-5.32	-5.93	-3.88	
		- 10	-5.67	-4.87	-3.25	-2.36	
		0	-6.06	-6.94	-7.94	-3.31	
100%	120	+ 10	5.08	2.52	-4.70	-4.63	
		+ 20 (Ref)	4.53	6.41	3.86	5.32	
		+ 30	6.68	-6.91	2.89	2.99	
		+ 40	5.90	3.78	2.84	7.71	
		+ 50	5.25	3.21	3.19	2.95	
115%	138	+ 20	5.15	5.27	4.86	4.10	
85%	102	+ 20	4.56	4.36	3.50	0.78	

Note: Frequency Tolerance (ppm) = {[Measured Frequency (Hz) - Declared Frequency (Hz)] / Declared Frequency (Hz)} $*10^{6}$.



7.8. Radiated Spurious Emission Measurement

7.8.1.Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47

CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209								
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]						
0.009 - 0.490	2400/F (kHz)	300						
0.490 - 1.705	24000/F (kHz)	30						
1.705 - 30	30	30						
30 - 88	100	3						
88 - 216	150	3						
216 - 960	200	3						
Above 960	500	3						

7.8.2.Test Procedure Used

KDB 789033 D02v01r03 - Section G

7.8.3. Test Setting

Peak Measurements above 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest

- 2. RBW = 1MHz
- 3. VBW = 3MHz
- 4. Detector = peak
- 5. Sweep time = auto couple
- 6. Trace mode = max hold
- 7. Trace was allowed to stabilize

Quasi-Peak Measurements below 1GHz

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. Span was set greater than 1MHz
- 3. RBW = 120 kHz



- 4. Detector = CISPR quasi-peak
- 5. Sweep time = auto couple
- 6. Trace was allowed to stabilize

Average Measurements above 1GHz (Method AD)

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. RBW = 1MHz
- 3. VBW = 3MHz
- 4. Detector = power average (Average)
- 5. Number of measurement points = 1001 (Number of points must be > 2 x span/RBW)
- 6. Sweep time = auto
- 7. Trace was averaged over at 100 sweeps

7.8.4.Test Setup

9kHz ~ 30MHz Test Setup:





30MHz ~ 1GHz Test Setup:





7.8.5.Test Result

Test Mode:	802.11a	Test Site:	AC1				
Test Channel:	36	Test Engineer:	Roy Cheng				
Remark:	1. Average measurement was not performed if peak level lower than average						
	limit.						
	2. Other frequency was 20dB bel	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show					
	in the report.						

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
*	7856.3	35.2	8.4	43.6	68.2	-24.6	Peak	Horizontal
*	8698.5	35.7	9.0	44.7	68.2	-23.5	Peak	Horizontal
	9125.3	34.9	9.6	44.5	74.0	-29.5	Peak	Horizontal
	11250.4	34.9	12.4	47.3	74.0	-26.7	Peak	Horizontal
	7596.0	39.5	8.1	47.6	74.0	-26.4	Peak	Vertical
*	10358.5	37.3	12.2	49.5	68.2	-18.7	Peak	Vertical
*	14540.5	37.6	15.7	53.3	68.2	-14.9	Peak	Vertical
	15535.0	39.9	12.2	52.1	74.0	-21.9	Peak	Vertical
	"+11 · · · ·					()		

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBµV/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)



Test Mode:	802.11a	Test Site:	AC1				
Test Channel:	44	Test Engineer:	Roy Cheng				
Remark:	1. Average measurement was not performed if peak level lower than average						
	limit.						
	2. Other frequency was 20dB bel	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show					
	in the report.						

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization	
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)			
		(dBµV)		(dBµV/m)					
	7336.6	33.7	8.0	41.7	74.0	-32.3	Peak	Horizontal	
*	9225.8	34.6	10.1	44.7	68.2	-23.5	Peak	Horizontal	
*	10443.5	42.4	12.0	54.4	68.2	-13.8	Peak	Horizontal	
	15654.0	46.7	12.0	58.7	74.0	-15.3	Peak	Horizontal	
	15665.4	31.0	12.0	43.0	54.0	-11.0	Average	Horizontal	
	7630.0	41.3	8.0	49.3	74.0	-24.7	Peak	Vertical	
*	8678.5	35.5	9.0	44.5	68.2	-23.7	Peak	Vertical	
*	10443.5	42.0	12.0	54.0	68.2	-14.2	Peak	Vertical	
	15662.5	50.9	12.0	62.9	74.0	-11.1	Peak	Vertical	
	15663.3	36.3	12.0	48.3	54.0	-5.7	Average	Vertical	
Note 1:	Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength								
limit in	imit in $dB\mu V/m$ can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of								
-27dBn	n/MHz to obta	ain the limit fo	or out of ba	ind spurious (emissions.				

Note 2: Measure Level $(dB\mu V/m)$ = Reading Level $(dB\mu V)$ + Factor (dB)



Test Mode:	802.11a	Test Site:	AC1				
Test Channel:	48	Test Engineer:	Roy Cheng				
Remark:	1. Average measurement was not performed if peak level lower than average						
	limit.						
	2. Other frequency was 20dB bel	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show					
	in the report.						

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization	
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)			
		(dBµV)		(dBµV/m)					
	8125.9	34.1	8.6	42.7	74.0	-31.3	Peak	Horizontal	
*	10486.0	39.1	12.3	51.4	68.2	-16.8	Peak	Horizontal	
*	14090.0	37.5	15.1	52.6	68.2	-15.6	Peak	Horizontal	
	15721.5	31.3	11.8	43.1	54.0	-10.9	Average	Horizontal	
	15722.0	45.6	11.8	57.4	74.0	-16.6	Peak	Horizontal	
	7647.0	38.5	8.0	46.5	74.0	-27.5	Peak	Vertical	
*	10477.5	41.3	12.2	53.5	68.2	-14.7	Peak	Vertical	
*	13202.6	35.4	12.6	48.0	68.2	-20.2	Peak	Vertical	
	15657.6	34.3	12.0	46.3	54.0	-7.7	Average	Vertical	
	15713.5	53.0	11.8	64.8	74.0	-9.2	Peak	Vertical	
Note 1:	Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength								
limit in	dBµV/m can	be determine	d by addir	ng a "convers	ion" factor of 9	5.2dB to t	he EIRP I	imit of	
-27dBn	n/MHz to obta	ain the limit fo	or out of ba	nd spurious e	emissions.				

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)



Test Mode:	802.11a	Test Site:	AC1				
Test Channel:	149	Test Engineer:	Roy Cheng				
Remark:	1. Average measurement was not performed if peak level lower than average						
	limit.						
	2. Other frequency was 20dB bel	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show					
	in the report.						

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
*	8650.0	37.1	8.8	45.9	68.2	-22.3	Peak	Horizontal
	11487.3	36.1	12.8	48.9	54.0	-5.1	Average	Horizontal
	11489.0	48.3	12.8	61.1	74.0	-12.9	Peak	Horizontal
	14480.4	34.7	15.8	50.5	74.0	-23.5	Peak	Horizontal
*	17235.0	42.9	15.9	58.8	68.2	-9.4	Peak	Horizontal
*	7248.7	34.9	8.1	43.0	68.2	-25.2	Peak	Vertical
	9114.5	34.2	9.5	43.7	74.0	-30.3	Peak	Vertical
	11489.0	50.5	12.8	63.3	74.0	-10.7	Peak	Vertical
	11491.3	39.3	12.8	52.1	54.0	-1.9	Average	Vertical
*	17235.0	48.0	15.9	63.9	68.2	-4.3	Peak	Vertical
Note 1	: "*" is not in r	estricted ban	d, its limit i	is -27dBm/Mł	Hz or -17dBm/M	√Hz. At a	distance	of 3 meters,
the field	d strength lim	it in dBµV/m	can be det	termined by a	adding a "conve	ersion" fac	ctor of 95.	2dB to the

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)



Test Mode:	802.11a	Test Site:	AC1				
Test Channel:	157	Test Engineer:	Roy Cheng				
Remark:	1. Average measurement was not performed if peak level lower than average						
	limit.						
	2. Other frequency was 20dB bel	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show					
	in the report.						

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization	
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)			
		(dBµV)		(dBµV/m)					
*	6689.6	34.2	5.8	40.0	68.2	-28.2	Peak	Horizontal	
	9125.6	33.9	9.7	43.6	74.0	-30.4	Peak	Horizontal	
	11571.5	38.1	12.6	50.7	54.0	-3.3	Average	Horizontal	
	11582.5	48.1	12.6	60.7	74.0	-13.3	Peak	Horizontal	
*	17362.5	44.7	16.9	61.6	68.2	-6.6	Peak	Horizontal	
*	7858.7	34.0	8.4	42.4	68.2	-25.8	Peak	Vertical	
	9429.5	34.0	10.5	44.5	74.0	-29.5	Peak	Vertical	
	11571.3	39.7	12.6	52.3	54.0	-1.7	Average	Vertical	
	11574.0	50.9	12.6	63.5	74.0	-10.5	Peak	Vertical	
*	17354.0	48.5	16.9	65.4	68.2	-2.8	Peak	Vertical	
Note 1:	Note 1: "*" is not in restricted band, its limit is -27dBm/MHz or -17dBm/MHz. At a distance of 3 meters,								
the field	d strength lim	nit in dBµV/m	can be de	termined by a	adding a "conve	ersion" fac	ctor of 95.	2dB to the	

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)



Test Mode:	802.11a	Test Site:	AC1					
Test Channel:	165	Test Engineer:	Roy Cheng					
Remark:	1. Average measurement was not performed if peak level lower than average							
	limit.	limit.						
	2. Other frequency was 20dB bel	. Other frequency was 20dB below limit line within 1-18GHz, there is not show						
	in the report.							

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
*	9679.5	32.2	10.9	43.1	68.2	-25.1	Peak	Horizontal
	11650.5	51.8	12.3	64.1	74.0	-9.9	Peak	Horizontal
	11651.7	39.7	12.3	52.0	54.0	-2.0	Average	Horizontal
	13258.7	35.2	12.8	48.0	74.0	-26.0	Peak	Horizontal
*	17473.0	43.6	17.2	60.8	68.2	-7.4	Peak	Horizontal
*	7979.5	34.7	8.7	43.4	68.2	-24.8	Peak	Vertical
	11650.5	51.1	12.3	63.4	74.0	-10.6	Peak	Vertical
	11651.8	40.7	12.3	53.0	54.0	-1.0	Average	Vertical
	13369.8	35.6	13.7	49.3	74.0	-24.7	Peak	Vertical
*	17473.0	48.5	17.2	65.7	68.2	-2.5	Peak	Vertical
Note 1:	: "*" is not in r	estricted ban	d, its limit i	is -27dBm/MI	Hz or -17dBm/	MHz. At a	distance	of 3 meters,
the field	d strength lim	nit in dBµV/m	can be def	termined by a	adding a "conve	ersion" fac	ctor of 95.	2dB to the

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)



Test Mode:	802.11n-HT20	Test Site:	AC1				
Test Channel:	36	Test Engineer:	Roy Cheng				
Remark:	1. Average measurement was not performed if peak level lower than average						
	limit.	limit.					
	2. Other frequency was 20dB bel	Other frequency was 20dB below limit line within 1-18GHz, there is not show					
	in the report.						

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
*	6857.5	33.9	6.4	40.3	68.2	-27.9	Peak	Horizontal
	8248.7	34.4	8.1	42.5	74.0	-31.5	Peak	Horizontal
*	9236.8	34.0	10.2	44.2	68.2	-24.0	Peak	Horizontal
	14490.6	35.2	15.8	51.0	74.0	-23.0	Peak	Horizontal
	7613.0	39.5	8.1	47.6	74.0	-26.4	Peak	Vertical
	9348.6	35.2	10.5	45.7	74.0	-28.3	Peak	Vertical
*	10358.5	36.7	12.2	48.9	68.2	-19.3	Peak	Vertical
*	14719.0	37.6	15.6	53.2	68.2	-15.0	Peak	Vertical
	" * "						(ald a fundada tila

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)



Test Mode:	802.11n-HT20	Test Site:	AC1				
Test Channel:	44	Test Engineer:	Roy Cheng				
Remark:	1. Average measurement was not performed if peak level lower than average						
	limit.	limit.					
	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show						
	in the report.						

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization	
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)			
		(dBµV)		(dBµV/m)					
*	7979.5	34.0	8.7	42.7	68.2	-25.5	Peak	Horizontal	
	9117.5	34.0	9.5	43.5	74.0	-30.5	Peak	Horizontal	
*	10452.0	40.6	12.0	52.6	68.2	-15.6	Peak	Horizontal	
	15661.1	27.8	12.0	39.8	54.0	-14.2	Average	Horizontal	
	15662.5	42.3	12.0	54.3	74.0	-19.7	Peak	Horizontal	
	7630.0	41.8	8.0	49.8	74.0	-24.2	Peak	Vertical	
*	10443.5	39.4	12.0	51.4	68.2	-16.8	Peak	Vertical	
*	13920.0	37.6	14.7	52.3	68.2	-15.9	Peak	Vertical	
	15661.4	32.2	12.0	44.2	54.0	-9.8	Average	Vertical	
	15662.5	46.8	12.0	58.8	74.0	-15.2	Peak	Vertical	
Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength									
limit in	limit in $dB\mu V/m$ can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of								
-27dBn	n/MHz to obta	ain the limit fc	or out of ba	and spurious (emissions.				

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)



Test Mode:	802.11n-HT20	Test Site:	AC1				
Test Channel:	48	Test Engineer:	Roy Cheng				
Remark:	1. Average measurement was not performed if peak level lower than average						
	limit.	limit.					
	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show						
	in the report.						

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization	
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)			
		(dBµV)		(dBµV/m)					
*	10477.5	38.1	12.2	50.3	68.2	-17.9	Peak	Horizontal	
	10945.0	35.8	13.1	48.9	74.0	-25.1	Peak	Horizontal	
*	12970.0	34.2	12.1	46.3	68.2	-21.9	Peak	Horizontal	
	15720.0	29.4	11.8	41.2	54.0	-12.8	Average	Horizontal	
	15722.0	41.7	11.8	53.5	74.0	-20.5	Peak	Horizontal	
	7706.5	39.4	8.0	47.4	74.0	-26.6	Peak	Vertical	
*	10486.0	40.1	12.3	52.4	68.2	-15.8	Peak	Vertical	
*	14175.0	37.1	15.3	52.4	68.2	-15.8	Peak	Vertical	
	15720.0	32.3	11.8	44.1	54.0	-9.9	Average	Vertical	
	15722.0	46.1	11.8	57.9	74.0	-16.1	Peak	Vertical	
Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength									
limit in	limit in $dB\mu V/m$ can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of								
-27dBn	n/MHz to obta	ain the limit fc	or out of ba	and spurious (emissions.				

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)



Test Mode:	802.11n-HT20	Test Site:	AC1				
Test Channel:	149	Test Engineer:	Roy Cheng				
Remark:	1. Average measurement was not performed if peak level lower than average						
	limit.	limit.					
	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show						
	in the report.						

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
*	8987.2	34.1	8.9	43.0	68.2	-25.2	Peak	Horizontal
	11489.0	48.8	12.8	61.6	74.0	-12.4	Peak	Horizontal
	11490.0	37.3	12.8	50.1	54.0	-3.9	Average	Horizontal
	13347.2	36.2	13.5	49.7	74.0	-24.3	Peak	Horizontal
*	17226.5	41.1	16.0	57.1	68.2	-11.1	Peak	Horizontal
*	6882.7	35.0	6.4	41.4	68.2	-26.8	Peak	Vertical
	9113.5	34.7	9.5	44.2	74.0	-29.8	Peak	Vertical
	11489.0	50.3	12.8	63.1	74.0	-10.9	Peak	Vertical
	11490.2	38.1	12.8	50.9	54.0	-3.1	Average	Vertical
*	17243.5	45.7	16.0	61.7	68.2	-6.5	Peak	Vertical
Note 1	: "*" is not in r	estricted ban	d, its limit i	is -27dBm/MI	Hz or -17dBm/	MHz. At a	distance	of 3 meters,
the field	d strength lim	it in dBµV/m	can be def	termined by a	adding a "conve	ersion" fac	ctor of 95.	2dB to the

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)



Test Mode:	802.11n-HT20	Test Site:	AC1				
Test Channel:	157	Test Engineer:	Roy Cheng				
Remark:	1. Average measurement was not performed if peak level lower than average						
	limit.	limit.					
	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show						
	in the report.						

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
*	7117.5	34.2	7.6	41.8	68.2	-26.4	Peak	Horizontal
	9478.3	32.9	10.6	43.5	74.0	-30.5	Peak	Horizontal
	11570.4	40.1	12.6	52.7	54.0	-1.3	Average	Horizontal
	11574.0	48.9	12.6	61.5	74.0	-12.5	Peak	Horizontal
*	17354.0	40.4	16.9	57.3	68.2	-10.9	Peak	Horizontal
*	7985.2	34.4	8.7	43.1	68.2	-25.1	Peak	Vertical
	11570.3	39.2	12.6	51.8	54.0	-2.2	Average	Vertical
	11574.0	49.6	12.6	62.2	74.0	-11.8	Peak	Vertical
	14480.0	35.3	15.8	51.1	74.0	-22.9	Peak	Vertical
*	17345.5	44.5	16.8	61.3	68.2	-6.9	Peak	Vertical
Note 1	: "*" is not in r	estricted ban	d, its limit i	is -27dBm/MI	Hz or -17dBm/I	MHz. At a	distance	of 3 meters,
the fiel	d strenath lim	nit in dBuV/m	can be det	termined by a	adding a "conve	ersion" fac	ctor of 95.	2dB to the

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)



Test Mode:	802.11n-HT20	Test Site:	AC1				
Test Channel:	165	Test Engineer:	Roy Cheng				
Remark:	1. Average measurement was not performed if peak level lower than average						
	limit.						
	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show						
	in the report.						

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
*	8628.2	34.9	8.8	43.7	68.2	-24.5	Peak	Horizontal
	11650.2	40.2	12.3	52.5	54.0	-1.5	Average	Horizontal
	11650.5	52.4	12.3	64.7	74.0	-9.3	Peak	Horizontal
	13352.2	35.3	13.5	48.8	74.0	-25.2	Peak	Horizontal
*	17473.0	40.9	17.2	58.1	68.2	-10.1	Peak	Horizontal
*	6998.7	34.8	6.8	41.6	68.2	-26.6	Peak	Vertical
	9125.4	34.0	9.7	43.7	74.0	-30.3	Peak	Vertical
	11650.2	40.3	12.3	52.6	54.0	-1.4	Average	Vertical
	11650.5	49.5	12.3	61.8	74.0	-12.2	Peak	Vertical
*	17473.0	46.1	17.2	63.3	68.2	-4.9	Peak	Vertical
Note 1:	: "*" is not in r	estricted ban	d, its limit i	is -27dBm/MI	Hz or -17dBm/	MHz. At a	distance	of 3 meters,
the fiel	d strength lim	nit in dBµV/m	can be det	termined by a	adding a "conve	ersion" fac	ctor of 95.	2dB to the

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)



Test Mode:	802.11n-HT40	Test Site:	AC1				
Test Channel:	38	Test Engineer:	Roy Cheng				
Remark:	1. Average measurement was not performed if peak level lower than average						
	limit.	limit.					
	2. Other frequency was 20dB bel	Other frequency was 20dB below limit line within 1-18GHz, there is not show					
	in the report.						

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
*	6825.1	34.6	6.2	40.8	68.2	-27.4	Peak	Horizontal
	8148.2	33.7	8.5	42.2	74.0	-31.8	Peak	Horizontal
	11475.2	33.9	12.7	46.6	74.0	-27.4	Peak	Horizontal
*	14678.4	35.2	15.7	50.9	68.2	-17.3	Peak	Horizontal
*	6556.3	32.9	6.0	38.9	68.2	-29.3	Peak	Vertical
	7325.4	33.9	8.0	41.9	74.0	-32.1	Peak	Vertical
	11457.2	33.4	12.7	46.1	74.0	-27.9	Peak	Vertical
*	13125.5	33.1	12.5	45.6	68.2	-22.6	Peak	Vertical
Nata 1	· "*" in motion		المناهمة المعالم			a af 2 ma	toro the f	أماط منتم معنام

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)



Test Mode:	802.11n-HT40	Test Site:	AC1				
Test Channel:	46	Test Engineer:	Roy Cheng				
Remark:	1. Average measurement was not performed if peak level lower than average						
	limit.	limit.					
	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show						
	in the report.						

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
*	7979.3	34.6	8.7	43.3	68.2	-24.9	Peak	Horizontal
	9147.5	33.8	9.8	43.6	74.0	-30.4	Peak	Horizontal
*	10460.5	39.6	12.1	51.7	68.2	-16.5	Peak	Horizontal
	15713.5	41.0	11.8	52.8	74.0	-21.2	Peak	Horizontal
*	7881.2	34.6	8.4	43.0	68.2	-25.2	Peak	Vertical
	9123.3	33.8	9.6	43.4	74.0	-30.6	Peak	Vertical
*	10460.5	38.6	12.1	50.7	68.2	-17.5	Peak	Vertical
	15693.4	34.2	11.9	46.1	54.0	-7.9	Average	Vertical
	15705.0	46.6	11.8	58.4	74.0	-15.6	Peak	Vertical

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)



Test Mode:	802.11n-HT40	Test Site:	AC1				
Test Channel:	151	Test Engineer:	Roy Cheng				
Remark:	1. Average measurement was not performed if peak level lower than average						
	limit.						
	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show						
	in the report.						

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization	
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)			
		(dBµV)		(dBµV/m)					
	7626.4	34.8	8.0	42.8	74.0	-31.2	Peak	Horizontal	
*	9545.1	34.0	10.5	44.5	68.2	-23.7	Peak	Horizontal	
	11509.7	37.3	12.8	50.1	54.0	-3.9	Average	Horizontal	
	11514.5	48.8	12.8	61.6	74.0	-12.4	Peak	Horizontal	
*	17269.0	41.1	16.1	57.2	68.2	-11.0	Peak	Horizontal	
*	6767.4	34.7	5.8	40.5	68.2	-27.7	Peak	Vertical	
	8256.8	34.8	8.1	42.9	74.0	-31.1	Peak	Vertical	
	11509.1	37.0	12.8	49.8	54.0	-4.2	Average	Vertical	
	11514.5	48.2	12.8	61.0	74.0	-13.0	Peak	Vertical	
*	17269.0	44.7	16.1	60.8	68.2	-7.4	Peak	Vertical	
Note 1	Note 1: "*" is not in restricted band, its limit is -27dBm/MHz or -17dBm/MHz. At a distance of 3 meters,								
the field	d strength lim	nit in dBµV/m	can be def	termined by a	adding a "conve	ersion" fac	ctor of 95.	2dB to the	

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)



Test Mode:	802.11n-HT40	Test Site:	AC1				
Test Channel:	159	Test Engineer:	Roy Cheng				
Remark:	1. Average measurement was not performed if peak level lower than average						
	limit.						
	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show						
	in the report.						

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
*	6998.9	34.6	6.8	41.4	68.2	-26.8	Peak	Horizontal
	9445.6	34.1	10.5	44.6	74.0	-29.4	Peak	Horizontal
	11589.6	37.2	12.6	49.8	54.0	-4.2	Average	Horizontal
	11591.0	48.3	12.6	60.9	74.0	-13.1	Peak	Horizontal
*	17396.5	42.0	17.1	59.1	68.2	-9.1	Peak	Horizontal
*	6776.4	34.5	5.9	40.4	68.2	-27.8	Peak	Vertical
	8448.7	34.2	8.2	42.4	74.0	-31.6	Peak	Vertical
	11589.1	36.7	12.6	49.3	54.0	-4.7	Average	Vertical
	11591.0	48.0	12.6	60.6	74.0	-13.4	Peak	Vertical
*	17388.0	44.0	17.0	61.0	68.2	-7.2	Peak	Vertical
Note 1	: "*" is not in r	estricted ban	d, its limit	is -27dBm/MI	Hz or -17dBm/	MHz. At a	distance	of 3 meters,
the fiel	d strength lim	nit in dBµV/m	can be de	termined by a	adding a "conve	ersion" fac	ctor of 95.	2dB to the

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)



Test Mode:	802.11ac-VHT20	Test Site:	AC1					
Test Channel:	36	Test Engineer:	Roy Cheng					
Remark:	1. Average measurement was not performed if peak level lower than average							
	limit.	limit.						
	2. Other frequency was 20dB bel	. Other frequency was 20dB below limit line within 1-18GHz, there is not show						
	in the report.							

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
*	6554.2	31.8	6.0	37.8	68.2	-30.4	Peak	Horizontal
*	8545.2	33.8	8.3	42.1	68.2	-26.1	Peak	Horizontal
	9475.8	34.1	10.6	44.7	74.0	-29.3	Peak	Horizontal
	11690.9	32.9	12.0	44.9	74.0	-29.1	Peak	Horizontal
	7638.5	38.7	8.0	46.7	74.0	-27.3	Peak	Vertical
*	9247.4	33.5	10.2	43.7	68.2	-24.5	Peak	Vertical
*	10358.5	35.4	12.2	47.6	68.2	-20.6	Peak	Vertical
	14472.5	36.9	15.8	52.7	74.0	-21.3	Peak	Vertical
Note 1:	: "*" is not in r	estricted ban	d, its limit i	s -27dBm/MF	Iz. At a distanc	e of 3 me	ters, the f	ield strength

limit in dBµV/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)



Test Mode:	802.11ac-VHT20	Test Site:	AC1					
Test Channel:	44	Test Engineer:	Roy Cheng					
Remark:	1. Average measurement was not performed if peak level lower than average							
	limit.	limit.						
	2. Other frequency was 20dB bel	Other frequency was 20dB below limit line within 1-18GHz, there is not show						
	in the report.							

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
*	6714.3	34.3	5.8	40.1	68.2	-28.1	Peak	Horizontal
	8334.8	34.0	8.0	42.0	74.0	-32.0	Peak	Horizontal
*	10443.5	39.6	12.0	51.6	68.2	-16.6	Peak	Horizontal
	15662.5	41.1	12.0	53.1	74.0	-20.9	Peak	Horizontal
*	7878.8	34.9	8.4	43.3	68.2	-24.9	Peak	Vertical
	9115.6	33.5	9.5	43.0	74.0	-31.0	Peak	Vertical
*	10443.5	43.8	12.0	55.8	68.2	-12.4	Peak	Vertical
	15661.3	32.9	12.0	44.9	54.0	-9.1	Average	Vertical
	15662.5	45.9	12.0	57.9	74.0	-16.1	Peak	Vertical

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)



Test Mode:	802.11ac-VHT20	Test Site:	AC1					
Test Channel:	48	Test Engineer:	Roy Cheng					
Remark:	1. Average measurement was not performed if peak level lower than average							
	limit.	limit.						
	2. Other frequency was 20dB bel	Other frequency was 20dB below limit line within 1-18GHz, there is not show						
	in the report.							

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
*	7918.5	34.3	8.4	42.7	68.2	-25.5	Peak	Horizontal
	9335.6	35.0	10.4	45.4	74.0	-28.6	Peak	Horizontal
*	10477.5	40.9	12.2	53.1	68.2	-15.1	Peak	Horizontal
	15722.0	42.2	11.8	54.0	74.0	-20.0	Peak	Horizontal
*	7991.4	35.3	8.7	44.0	68.2	-24.2	Peak	Vertical
	9116.5	33.9	9.5	43.4	74.0	-30.6	Peak	Vertical
*	10477.5	41.8	12.2	54.0	68.2	-14.2	Peak	Vertical
	15719.9	32.4	11.8	44.2	54.0	-9.8	Average	Vertical
	15730.5	45.8	11.8	57.6	74.0	-16.4	Peak	Vertical

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)



Test Mode:	802.11ac-VHT20	Test Site:	AC1				
Test Channel:	149	Test Engineer:	Roy Cheng				
Remark:	1. Average measurement was not performed if peak level lower than average						
	limit.						
	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show						
	in the report.						

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(IVIHZ)	Level	(ab)	Lever	(αθμν/m)	(aB)		
		(dBµV)		(dBµV/m)				
*	6828.5	33.9	6.2	40.1	68.2	-28.1	Peak	Horizontal
	9465.1	34.1	10.5	44.6	74.0	-29.4	Peak	Horizontal
	11489.0	49.5	12.8	62.3	74.0	-11.7	Peak	Horizontal
	11490.3	38.3	12.8	51.1	54.0	-2.9	Average	Horizontal
*	17235.0	44.0	15.9	59.9	68.2	-8.3	Peak	Horizontal
*	7115.8	35.0	7.6	42.6	68.2	-25.6	Peak	Vertical
	9157.4	34.5	9.8	44.3	74.0	-29.7	Peak	Vertical
	11489.0	49.3	12.8	62.1	74.0	-11.9	Peak	Vertical
	11490.3	38.5	12.8	51.3	54.0	-2.7	Average	Vertical
*	17235.0	45.1	15.9	61.0	68.2	-7.2	Peak	Vertical
Note 1:	Note 1: "*" is not in restricted band, its limit is -27dBm/MHz or -17dBm/MHz. At a distance of 3 meters,							
the field	d strength lim	nit in dBµV/m	can be det	termined by a	adding a "conve	ersion" fac	ctor of 95.	2dB to the

Note 2: Measure Level $(dB\mu V/m)$ = Reading Level $(dB\mu V)$ + Factor (dB)



Test Mode:	802.11ac-VHT20	Test Site:	AC1				
Test Channel:	157	Test Engineer:	Roy Cheng				
Remark:	1. Average measurement was not performed if peak level lower than average						
	limit.						
	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show						
	in the report.						

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
*	7008.5	35.0	6.9	41.8	68.2	-26.4	Peak	Horizontal
	9447.3	33.7	10.5	44.2	74.0	-29.8	Peak	Horizontal
	11570.3	39.9	12.6	52.6	54.0	-1.4	Average	Horizontal
	11574.0	49.2	12.6	61.9	74.0	-12.1	Peak	Horizontal
*	17354.0	41.5	16.9	58.4	68.2	-9.8	Peak	Horizontal
*	7135.4	35.0	6.9	41.9	68.2	-26.3	Peak	Vertical
	9125.8	33.7	10.5	44.2	74.0	-29.8	Peak	Vertical
	11565.5	39.9	12.6	52.5	74.0	-21.5	Peak	Vertical
	11570.3	49.2	12.6	61.8	54.0	7.8	Average	Vertical
*	17362.5	41.5	16.9	58.4	68.2	-9.8	Peak	Vertical
Note 1	: "*" is not in r	estricted ban	d, its limit i	is -27dBm/MI	Hz or -17dBm/N	MHz. At a	distance	of 3 meters,
the fiel	d strength lim	it in dBµV/m	can be det	termined by a	adding a "conve	ersion" fac	ctor of 95.	2dB to the

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)



Test Mode:	802.11ac-VHT20	Test Site:	AC1				
Test Channel:	165	Test Engineer:	Roy Cheng				
Remark:	1. Average measurement was not performed if peak level lower than average						
	limit.						
	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show						
	in the report.						

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
*	6978.0	34.5	6.8	41.3	68.2	-26.9	Peak	Horizontal
	8256.4	33.5	8.1	41.6	74.0	-32.4	Peak	Horizontal
	11650.5	51.9	12.3	64.2	74.0	-9.8	Peak	Horizontal
	11650.5	41.2	12.3	53.5	54.0	-0.5	Average	Horizontal
*	17464.5	40.2	17.2	57.4	68.2	-10.8	Peak	Horizontal
*	7101.5	35.4	7.5	42.9	68.2	-25.3	Peak	Vertical
	8264.7	35.2	8.1	43.3	74.0	-30.7	Peak	Vertical
	11642.0	49.8	12.4	62.2	74.0	-11.8	Peak	Vertical
	11650.4	40.4	12.3	52.7	54.0	-1.3	Average	Vertical
*	17473.0	46.1	17.2	63.3	68.2	-4.9	Peak	Vertical
Note 1	: "*" is not in r	estricted ban	d, its limit i	is -27dBm/Mł	Hz or -17dBm/M	√Hz. At a	distance	of 3 meters,
the fiel	d strength lim	it in dBµV/m	can be def	termined by a	adding a "conve	ersion" fac	ctor of 95.	2dB to the

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)



Test Mode:	802.11ac-VHT40	Test Site:	AC1				
Test Channel:	38	Test Engineer:	Roy Cheng				
Remark:	1. Average measurement was not performed if peak level lower than average						
	limit.						
	. Other frequency was 20dB below limit line within 1-18GHz, there is not show						
	in the report.						

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization		
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)				
		(dBµV)		(dBµV/m)						
*	6978.8	34.7	6.8	41.5	68.2	-26.7	Peak	Horizontal		
	7352.6	34.3	8.0	42.3	74.0	-31.7	Peak	Horizontal		
*	9233.3	34.1	10.1	44.2	68.2	-24.0	Peak	Horizontal		
	11770.5	33.4	11.9	45.3	74.0	-28.7	Peak	Horizontal		
*	6887.6	35.2	6.5	41.7	68.2	-26.5	Peak	Vertical		
	7336.8	33.7	8.0	41.7	74.0	-32.3	Peak	Vertical		
*	9228.5	34.4	10.1	44.5	68.2	-23.7	Peak	Vertical		
	13368.3	35.7	13.6	49.3	74.0	-24.7	Peak	Vertical		
Noto 1	Note 1. "*" is not in restricted band, its limit is 27dDm/MUz. At a distance of 2 meters, the field strength									

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)



Test Mode:	802.11ac-VHT40	Test Site:	AC1			
Test Channel:	46	Test Engineer:	Roy Cheng			
Remark:	1. Average measurement was not performed if peak level lower than average					
	limit.					
	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show					
	in the report.					

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)		
		(dBµV)		(dBµV/m)				
*	7999.3	34.3	8.7	43.0	68.2	-25.2	Peak	Horizontal
	9145.6	34.5	9.8	44.3	74.0	-29.7	Peak	Horizontal
*	10452.0	39.4	12.0	51.4	68.2	-16.8	Peak	Horizontal
	15705.0	43.7	11.8	55.5	74.0	-18.5	Peak	Horizontal
*	6671.4	33.7	5.9	39.6	68.2	-28.6	Peak	Vertical
	8228.5	34.4	8.2	42.6	74.0	-31.4	Peak	Vertical
*	10469.0	38.5	12.1	50.6	68.2	-17.6	Peak	Vertical
	15685.8	33.0	11.9	44.9	54.0	-9.1	Average	Vertical
	15696.5	45.0	11.9	56.9	74.0	-17.1	Peak	Vertical

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)



Test Mode:	802.11ac-VHT40	Test Site:	AC1				
Test Channel:	151	Test Engineer:	Roy Cheng				
Remark:	1. Average measurement was not performed if peak level lower than average						
	limit.						
	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show						
	in the report.						

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization	
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)			
		(dBµV)		(dBµV/m)					
*	6779.8	34.2	5.9	40.1	68.2	-28.1	Peak	Horizontal	
	8226.1	34.2	8.2	42.4	74.0	-31.6	Peak	Horizontal	
	11506.0	47.4	12.8	60.2	74.0	-13.8	Peak	Horizontal	
	11509.7	37.0	12.8	49.8	54.0	-4.2	Average	Horizontal	
*	17286.0	38.7	16.4	55.1	68.2	-13.1	Peak	Horizontal	
*	6823.6	34.0	6.2	40.2	68.2	-28.0	Peak	Vertical	
	9114.6	33.7	9.5	43.2	74.0	-30.8	Peak	Vertical	
	11509.3	37.1	12.8	49.9	54.0	-4.1	Average	Vertical	
	11514.5	47.7	12.8	60.5	74.0	-13.5	Peak	Vertical	
*	17252.0	44.8	16.1	60.9	68.2	-7.3	Peak	Vertical	
Note 1	: "*" is not in r	estricted ban	d, its limit i	is -27dBm/MI	Hz or -17dBm/	MHz. At a	distance	of 3 meters,	
the fiel	he field strength limit in dB μ V/m can be determined by adding a "conversion" factor of 95.2dB to the								

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)



Test Mode:	802.11ac-VHT40	Test Site:	AC1				
Test Channel:	159	Test Engineer:	Roy Cheng				
Remark:	1. Average measurement was not performed if peak level lower than average						
	limit.						
	2. Other frequency was 20dB below limit line within 1-18GHz, there is not show						
	in the report.						

Mark	Frequency	Reading	Factor	Measure	Limit	Margin	Detector	Polarization	
	(MHz)	Level	(dB)	Level	(dBµV/m)	(dB)			
		(dBµV)		(dBµV/m)					
*	7992.5	35.0	8.7	43.7	68.2	-24.5	Peak	Horizontal	
	9446.5	33.7	10.5	44.2	74.0	-29.8	Peak	Horizontal	
	11589.6	37.0	12.6	49.6	54.0	-4.4	Average	Horizontal	
	11591.0	47.5	12.6	60.1	74.0	-13.9	Peak	Horizontal	
*	17396.5	42.2	17.1	59.3	68.2	-8.9	Peak	Horizontal	
*	6917.2	35.3	6.6	41.9	68.2	-26.3	Peak	Vertical	
	9127.3	34.6	9.7	44.3	74.0	-29.7	Peak	Vertical	
	11588.9	37.9	12.6	50.5	54.0	-3.5	Average	Vertical	
	11591.0	46.6	12.6	59.2	74.0	-14.8	Peak	Vertical	
*	17396.5	48.2	17.1	65.3	68.2	-2.9	Peak	Vertical	
Note 1:	: "*" is not in r	estricted ban	d, its limit i	is -27dBm/MI	Hz or -17dBm/	MHz. At a	distance	of 3 meters,	
the field	he field strength limit in dB μ V/m can be determined by adding a "conversion" factor of 95.2dB to the								

Note 2: Measure Level ($dB\mu V/m$) = Reading Level ($dB\mu V$) + Factor (dB)