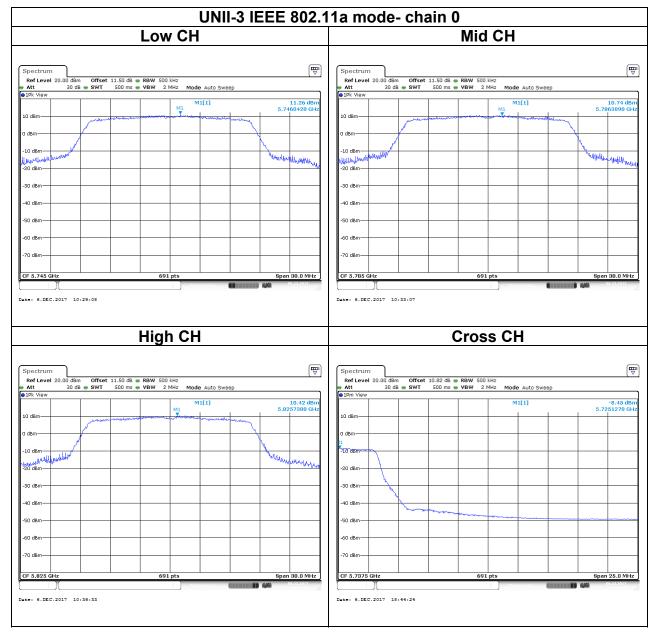
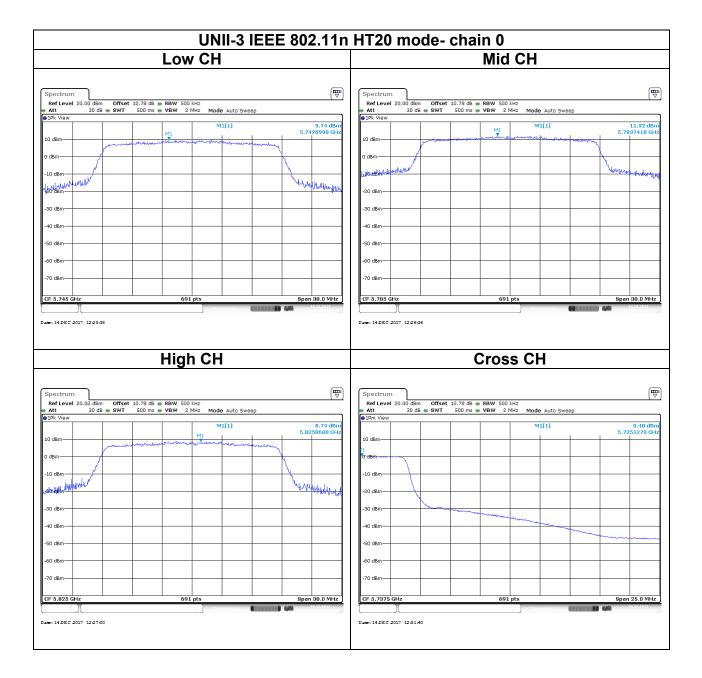
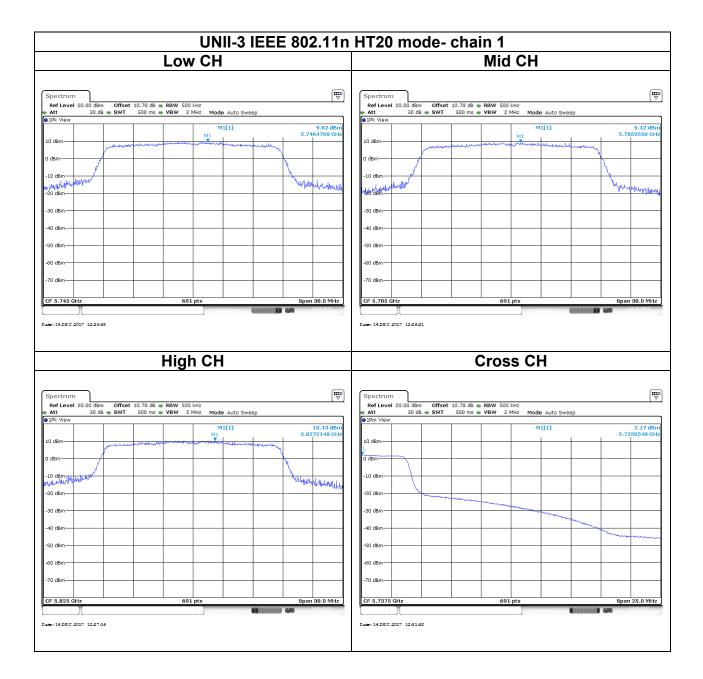


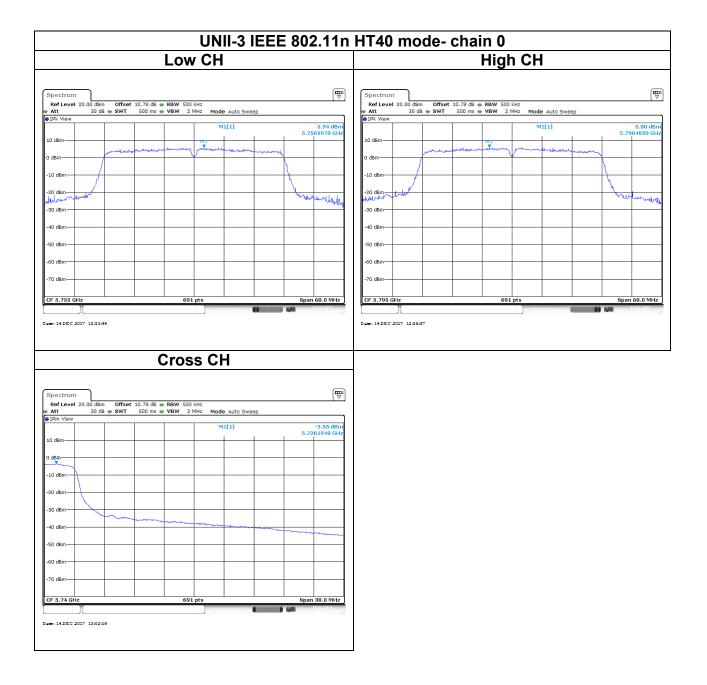
COMPLIANCE Certification Services Inc. FCC ID: PPQ-WCBN3507R ISED NO: 4491A-WCBN3507R

<u>Test Data</u>

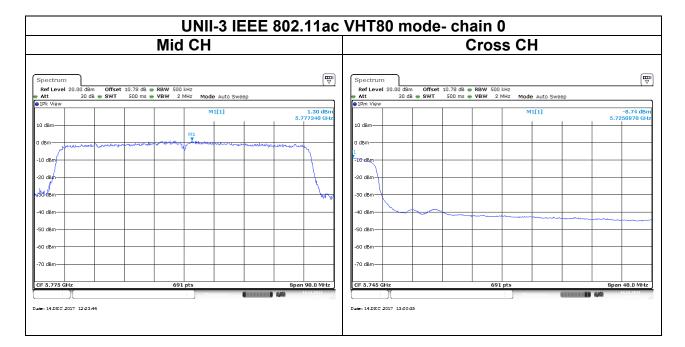


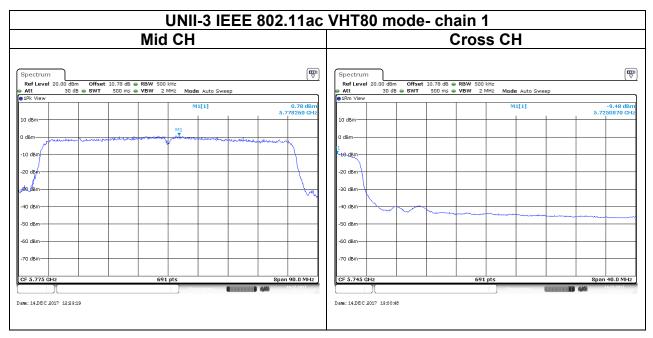












4.5 RADIATION BANDEDGE AND SPURIOUS EMISSION

4.5.1 Test Limit

FCC according to §15.407, §15.209 and §15.205,

Below 30 MHz

Frequency	Field Strength (microvolts/m)	Magnetic H-Field (microamperes/m)	Measurement Distance (metres)
9-490 kHz	2,400/F (F in kHz)	2,400/F (F in kHz)	300
490-1,705 kHz	24,000/F (F in kHz)	24,000/F (F in kHz)	30
1.705-30 MHz	30	N/A	30

Above 30 MHz

Frequency	Field Strength microvolts/m at 3 metres (watts, e.i.r.p.)						
(MHz)	Transmitters	Receivers					
30-88	100 (3 nW)	100 (3 nW)					
88-216	150 (6.8 nW)	150 (6.8 nW)					
216-960	200 (12 nW)	200 (12 nW)					
Above 960	500 (75 nW)	500 (75 nW)					

IC according to RSS-247 section 6.2.1(2), section 6.2.2(2), section 6.2.3(2) and section 6.2.4(2)

<u>UNII-1 :</u>

For transmitters operating in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. However, any unwanted emissions that fall into the band 5250-5350 MHz must be 26 dBc, when measured using a resolution bandwidth between 1 and 5% of the occupied bandwidth, above 5.25 GHz. Otherwise, the transmission is considered as intentional and the devices shall implement dynamic frequency selection (DFS) and transmitter power control (TPC) as per the requirements for the band 5250-5350 MHz

UNII-2a and 2c :

For devices with operating frequencies in the band 5250-5350 MHz but having a channel bandwidth that overlaps the band 5150-5250 MHz, the devices' unwanted emission shall not exceed -27 dBm/MHz e.i.r.p. outside the band 5150-5350 MHz and its power shall comply with the spectral power density for operation within the band 5150-5250 MHz. The device shall be labelled "for indoor use only." Emissions outside the band 5470-5725 MHz shall not exceed -27 dBm/MHz e.i.r.p.

<u>UNII-3:</u>

All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

4.5.2 Test Procedure

Test method Refer as KDB 789033 D02 v02r01, Section G.3, G.4, G.5, and G.6,.

1. The EUT is placed on a turntable, Above 1 GHz is 1.5m and below 1 GHz is 0.8m above ground plane. The EUT Configured un accordance with ANSI C63.10, and the EUT set in a continuous mode.

2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level. And EUT is set 3m away from the receiving antenna, which is scanned from 1m to 4m above the ground plane to find out the highest emissions. Measurement are made polarized in both the vertical and the horizontal positions with antenna.

3. Span shall wide enough to full capture the emission measured. The SA from 9kHz to 26.5GHz set to the low, Mid and High channels with the EUT transmit.

4. No emission found between lowest internal used/generated frequency to 30MHz (9KHz~30MHz)

- 5. The SA setting following :
 - (1) Below 1G : RBW = 100kHz, VBW ≥ 3*RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.
 - (2) Above 1G:
 - (2.1) For Peak measurement : RBW = 1MHz, VBW ≥ 3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.
 - (2.2) For Average measurement : RBW = 1MHz, VBW

If Duty Cycle \geq 98%, VBW=10Hz.

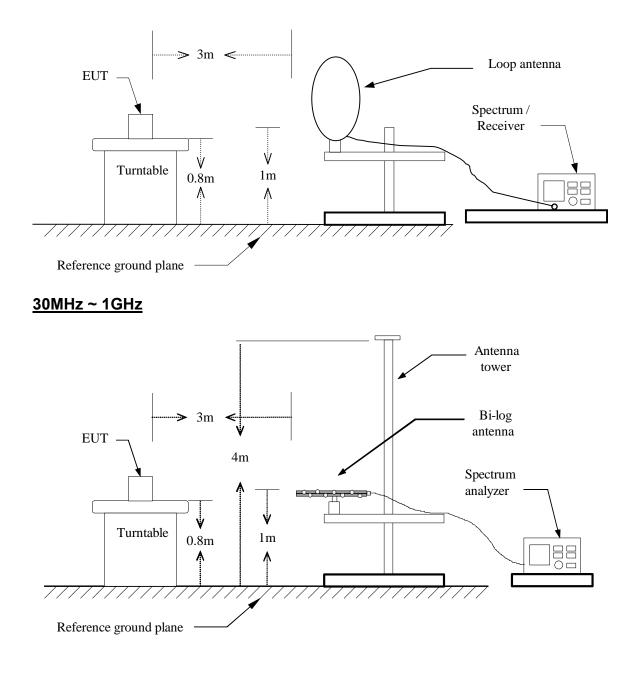
If Duty Cycle < 98%, VBW=1/T.

Configuration	Duty Cycle (%)	T(ms)	1/T (Hz)	VBW Setting
802.11a	88%	1.4600	684.932	750Hz
802.11n HT20	91%	1.3900	719.424	750Hz
802.11n HT40	85%	0.7100	1408.451	1.5KHz
802.11ac VHT80	66%	0.3500	2857.143	3KHz

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4.5.3 Test Setup

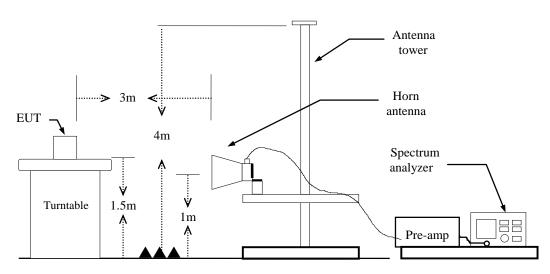
<u>9kHz ~ 30MHz</u>



CELERE Compliance Certification Services Inc. ISED NO: 4491A-WCBN3507R

Above 1 GHz

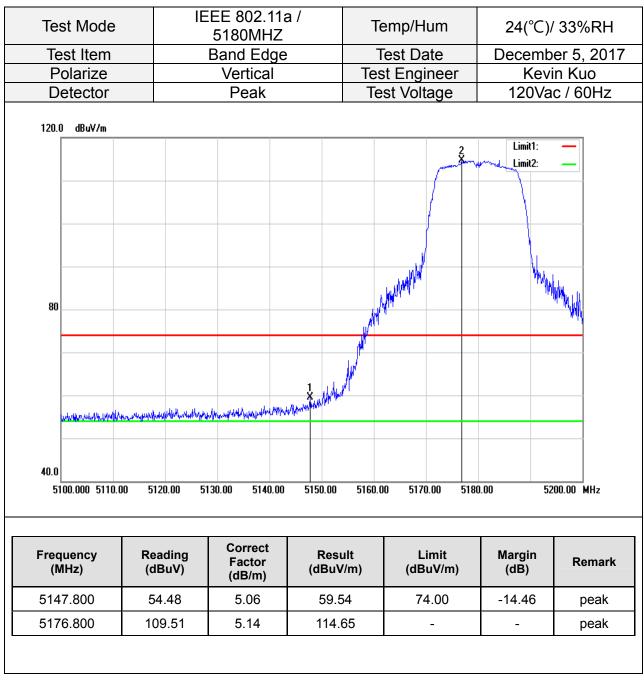
FCC ID: PPQ-WCBN3507R



4.5.4 Test Result

Test Data

Band Edge Test Data for UNII-1



Test Mode	IE	IEEE 802.11a / 5180MHZ			nperature	24(°C)/	/ 33%RH
Test Item		Band Edge	;	Test Date			er 5, 2017
Polarize		Vertical		Test Engineer			in Kuo
Detector		Average		Te	st Voltage	120Va	c / 60Hz
120.0 dBu¥/m							
						Limit1: Limit2:	_
					2		
80							
				\square			
40.0 5100.000 5110.0	00 5120.00 5	5130.00 5140.00	5150.00	5160.0	0 5170.00 518	0.00 52	200.00 MHz
		Correct					
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Resu (dBuV		Limit (dBuV/m)	Margin (dB)	Remark
5149.600	41.89	5.06	46.9	5	54.00	-7.05	AVG
5179.100	99.78	5.14	104.9	92	-	-	AVG

Test	Mode	IE	IEEE 802.11a / 5240MHZ			mp/Hum	24(°C)/ 33%RH	
Tes	t Item		Band Edge	;	Те	st Date	Decemb	er 5, 201
Pol	larize		Vertical			Engineer		in Kuo
Det	tector		Peak		Tes	t Voltage	120Va	c / 60Hz
120.0	dBuV/m							
				2			Limit1: Limit2:	_
80			/					
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40.0								
5100	0.000 5130.00	5160.00 5	190.00 5220.00	5250.00	5280.00	5310.00 5340	D.OO 54	00.00 MHz
Freque (MH		Reading (dBuV)	Correct Factor (dB/m)	Resı (dBuV		Limit (dBuV/m)	Margin (dB)	Remark
5145.	.600	50.77	5.06	55.8	3	74.00	-18.17	peak
5238.	.600	107.10	5.28	112.3	38	-	-	peak
0200.			5.56	56.4		74.00	-17.59	peak

Test Mode	IE	IEEE 802.11a / 5240MHZ			o/Hum	24(°C)/ 33%RH	
Test Item		Band Edge		Test Date			er 5, 2017
Polarize		Vertical			ngineer		n Kuo
Detector		Average		Test \	/oltage	120Va	c / 60Hz
120.0 dBu∀/m							
						Limit1: Limit2:	_
			2				
80							
40.0						3	
5100.000 5130.	00 5160.00 5	190.00 5220.00	5250.00	5280.00	5310.00 5340	0.00 54	00.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resu (dBuV/		Limit (dBuV/m)	Margin (dB)	Remark
5141.100	38.67	5.03	43.70)	54.00	-10.30	AVG
5241.000	97.69	5.28	102.9	7	-	-	AVG
	1	5.56	44.34	.	54.00	-9.66	AVG

Test Mode		IEEE 802.11n HT20 / 5180MHZ			emp/Hum	24(°C)/	′ 33%RH
Test Item		Ind Edge			est Date	December 12, 20 ⁻	
Polarize	\ \	Vertical			t Engineer		in Kuo
Detector		Peak		Te	st Voltage	120Va	c / 60Hz
120.0 dBuV/m							
80					10000000000000000000000000000000000000	Limit1: Limit2:	
80			1 × 104	WW .			
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40.0 5100.000 5110.		30.00 5140.00	5150.00	5160.0	0 5170.00 518	0.00 52	00.00 MHz
		Correct					
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Resu (dBuV		Limit (dBuV/m)	Margin (dB)	Remark
5149.000	66.66	5.06	71.7	2	74.00	-2.28	peak
5182.100	106.39	5.14	111.5	53	-	-	peak

Test Mode		IEEE 802.11n HT20 / 5180MHZ			emp/Hum	I)/ 33%RH
Test Item		and Edge			est Date		December 12, 20 ²	
Polarize		Vertical		Test Engineer				vin Kuo
Detector		Average		Test Voltage		120V	/ac / 60Hz	
120.0 dBuV/m								
							Limit1: Limit2:	
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80								
				A A	MAN			
40.0	and the second		Ť.					
5100.000 5110.	00 5120.00 51	130.00 5140.00	5150.00	5160.0	0 5170.00	5180	.00	5200.00 MHz
Frequency	Reading	Correct	Resu	.1+	Limit		Margin	
(MHz)	(dBuV)	Factor (dB/m)	(dBuV		(dBuV/		(dB)	Remark
5150.000	45.64	5.06	50.7	0	54.00)	-3.30	AVG
5179.000	95.21	5.14	100.3	35	-		-	AVG

Test Mode)2.11n HT2 240MHZ	0 /	Temp/Hum	24(℃)/ 33%RH	
Test Item	Ba	nd Edge		Test Date	Decembe	er 12, 2017
Polarize	١	/ertical	Т	est Engineer		n Kuo
Detector		Peak	7	est Voltage	120Va	c / 60Hz
120.0 dBu¥/m					Limit1:	
			~		Limit2:	_
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<mark>₩₽₽<mark>₽</mark>₩₽₽₩₽₽₩₽₽₩₽₽₩₽₽₩₽₽₩₽₽₩₽₽₩₽₽₩₽₽₩₽₽₩₽₽₩₽</mark>	angen in the second	M ^M		Whitemanialismuseressee	ut densi alter den den ser tigen	ruthranc X
40.0						
5100.000 5130.	00 5160.00 51	90.00 5220.00	5250.00 528	0.00 5310.00 534	0.00 54	00.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5145.600	50.68	5.06	55.74	74.00	-18.26	peak
5241.000	108.62	5.28	113.90	-	-	peak
	51.12	5.67	56.79	74.00	-17.21	peak

Test Mode		2.11n HT20 40MHZ)/	Ter	nperature	;	24(° ℃)/	33%RH
Test Item		nd Edge			est Date			er 12, 2017
Polarize	V	ertical			t Enginee			n Kuo
Detector	Av	/erage		Tes	st Voltage	•	120Va	c / 60Hz
120.0 dBu¥/m								
							Limit1: Limit2:	_
			2					
80								
	1				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		3	
40.0 5100.000 513).00	90.00 5220.00	5250.00	5280.00) 5310.00	5340.	00 54	00.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resı (dBuV		Limit (dBuV/n	ו)	Margin (dB)	Remark
5150.000	38.83	5.06	43.8	89	54.00		-10.11	AVG
5242.500	98.83	5.29	104.	12	-		-	AVG
5350.000	38.93	5.56	44.4	9	54.00		-9.51	AVG

Test Mode		IEEE 802.11n HT40 / 5190MHZ		Te	emp/Hum	24(℃)/ 33%RI	
Test Item	Bar	nd Edge			Test Date December 12,		
Polarize	V	ertical		Tes	t Engineer	Kevi	n Kuo
Detector		Peak		Te	st Voltage	120Va	c / 60Hz
120.0 dBuV/m					1		
80				aght MM			
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40.0							
5100.000 5111	.00 5122.00 513	33.00 5144.00	5155.00	5166.0	0 5177.00 518	8.00 52	10.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resu (dBuV		Limit (dBuV/m)	Margin (dB)	Remark
5150.000	65.61	5.06	70.6	7	74.00	-3.33	peak
5187.560	105.01	5.16	110.1	17	-	-	peak

Test Mode		IEEE 802.11n HT40 / 5190MHZ				e	24(℃)/ 33%RH	
Test Item		nd Edge			est Date			er 12, 2017
Polarize	V	ertical		Test Engineer				in Kuo
Detector	Av	/erage		Tes	st Voltag	e	120Va	c / 60Hz
120.0 dBu¥/m								
							Limit1: Limit2:	_
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		and the second sec						
40.0 5100.000 51	11.00 5122.00 51	33.00 5144.00	5155.00	5166.00) 5177.00	5188	.00 52	110.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resı (dBuV		Limi (dBuV/		Margin (dB)	Remark
5150.000	47.67	5.06	52.7	3	54.00)	-1.27	AVG
5186.130	93.91	5.15	99.0	6	-		-	AVG

Test Mode		02.11n HT4 230MHZ	0 /	Tem	p/Hum	24(°C)/	′ 33%RH
Test Item	Ba	nd Edge		Test	t Date	Decembe	er 12, 2017
Polarize	١	/ertical		Test E	Ingineer		in Kuo
Detector		Peak		Test \	Voltage	120Va	c / 60Hz
120.0 dBu¥/m							
			ing			Limit1: Limit2:	_
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40.0							
5100.000 5130.	.00 5160.00 51	90.00 5220.00	5250.00	5280.00	5310.00 534	D.00 54	00.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resul (dBuV/		Limit (dBuV/m)	Margin (dB)	Remark
5132.100	51.62	5.02	56.64	4	74.00	-17.36	peak
5231.100	106.49	5.26	111.7	5	-	-	peak
5354.100	52.20	5.56	57.76	a –	74.00	-16.24	peak

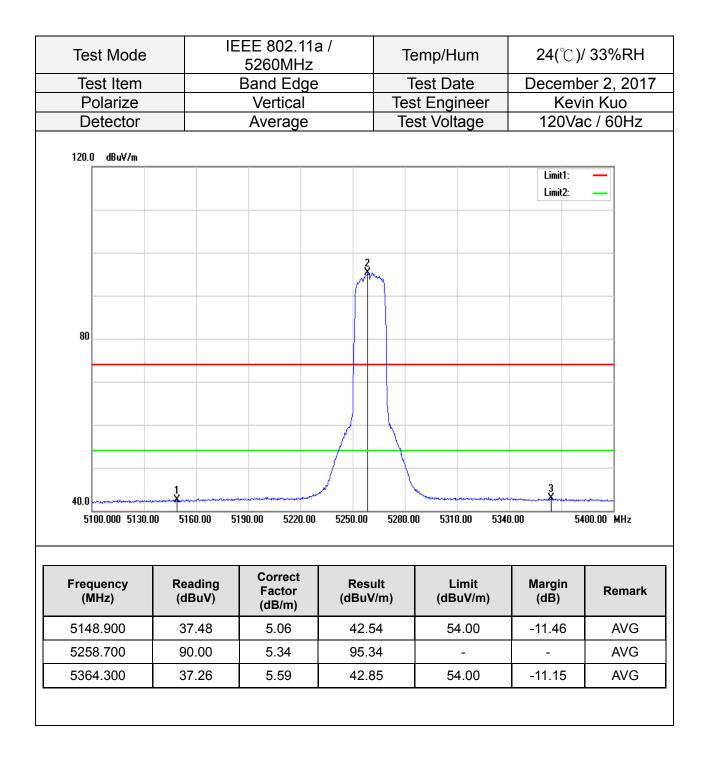
Test Mode		02.11n HT4 230MHZ	0 /	Те	emp/Hu	n	24(°C)/ 33%RH
Test Item	Ba	nd Edge		Т	est Date	Э		per 12, 2017
Polarize		/ertical			t Engin			vin Kuo
Detector	A	verage		Tes	st Volta	ge	120V	ac / 60Hz
120.0 dBuV/m								
							Limit1: Limit2:	
80								
	/							
40.0	1 00 5160.00 51	90.00 5220.00	5250.00	5280.00	D 5310.0	D 5340	3	5400.00 MHz
5100.000 5130.	00 3160.00 31	30.00 5220.00	5250.00	5260.00	0 3310.0	J JJ4U		3400.00 MHZ
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resu (dBuV		Lim (dBu\		Margin (dB)	Remark
5144.100	39.46	5.05	44.5	1	54.0	00	-9.49	AVG
5228.400	97.08	5.26	102.3	34	-		-	AVG
5351.100	39.99	5.56	45.5	5	54.0	00	-8.45	AVG
								·

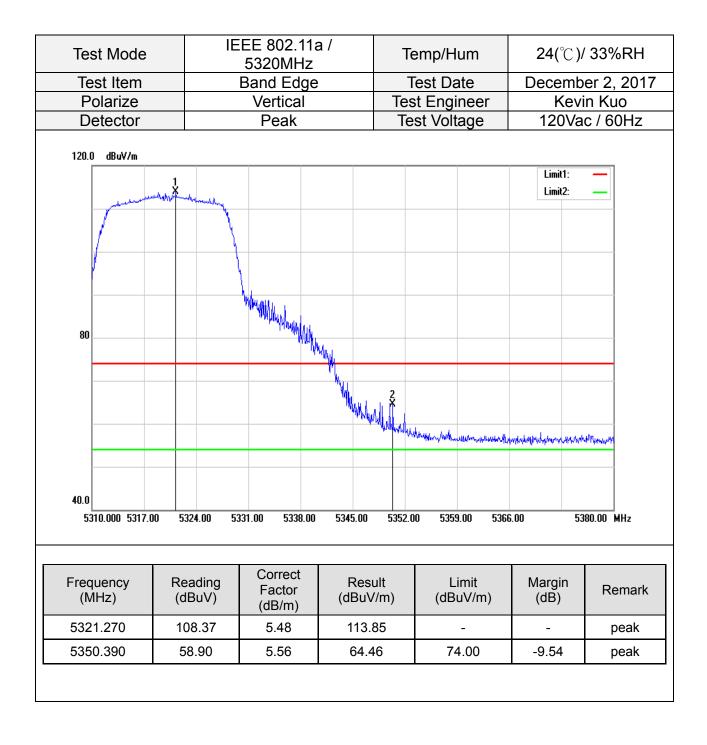
Test Mode		2.11ac VHT 10MHZ	80 /	Те	mp/Hum		24(°C)/ 33%RH
Test Item		nd Edge			est Date			ber 12, 2017
Polarize	V	/ertical		Tes	t Engine	er		vin Kuo
Detector		Peak		Tes	st Voltage	e	120\	/ac / 60Hz
120.0 dBuV/m							1	
							Limit1: Limit2:	_
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The state	WANNIN MAR	handrade and a second a						
40.0		45.00 5160.00	5175.00	5190.00) 5205.00	5220	1 00	5250.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resı (dBuV		Limit (dBuV/ı		Margin (dB)	Remark
5141.100	63.11	5.03	68.1	4	74.00		-5.86	peak
5212.800	98.21	5.22	103.4	43	-		-	peak

Test Mode		2.11ac VHT 210MHZ	80 /	Те	mp/Hum	24(°C)∕	′ 33%RH
Test Item	Ba	nd Edge			est Date		er 12, 2017
Polarize	\	/ertical			t Engineer		in Kuo
Detector	A	verage		Tes	st Voltage	120Va	c / 60Hz
120.0 dBuV/m							
						Limit1: Limit2:	_
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80							
			\mathcal{N}				
	mm	wether the second se					_
40.0 5100.000 5115.	00 5130.00 51	45.00 5160.00	5175.00	5190.00) 5205.00 5220).00 52	50.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resı (dBuV		Limit (dBuV/m)	Margin (dB)	Remark
5148.300	47.66	5.06	52.7	2	54.00	-1.28	AVG
5204.250	87.71	5.19	92.9	0	-	-	AVG

Band Edge Test Data for UNII-2a

Test Mode	I	EEE 802.11a 5260 MHz	a /	Те	emp/Hum	24(°C)/	33%RH
Test Item		Band Edge	9	T	est Date	Decemb	er 2, 2017
Polarize		Vertical		Tes	t Engineer	Kevi	n Kuo
Detector		Peak		Tes	st Voltage	120Va	c / 60Hz
120.0 dBu¥/m							
			2			Limit1: Limit2:	_
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40.0							
5100.000 5130.0	00 5160.00 5	190.00 5220.00	5250.00	5280.00	D 5310.00 534	0.00 54	00.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resu (dBuV		Limit (dBuV/m)	Margin (dB)	Remark
5145.300	52.01	5.06	57.0)7	74.00	-16.93	peak
5259.900	102.03	5.34	107.3	37	-	-	peak
5373.900	51.02	5.61	56.6	2	74.00	-17.37	peak





Test Mode	IE	EEE 802.11a 5320MHz	а/		mp/Hum		33%RH
Test Item		Band Edge	;		est Date		er 2, 2017
Polarize		Vertical			Engineer		n Kuo
Detector		Average		Tes	st Voltage	120Va	c / 60Hz
120.0 dBu¥/m							
	1					Limit1: Limit2:	
80		Landon Mark					
40.0				2			
5310.000 5317.0	0 5324.00 5	i331.00	5345.00	5352.00	5359.00 5366	6.00 53	80.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resul (dBuV/		Limit (dBuV/m)	Margin (dB)	Remark
5318.540	97.88	5.48	103.3	6	-	-	AVG
5350.000	41.51	5.56	47.07	7	54.00	-6.93	AVG

Test Mode		02.11n HT2 260MHz	20 /	Temp/	Hum	24(℃).	/ 33%RH
Test Item	Ba	and Edge		Test D	Date		er 12, 2017
Polarize		Vertical		Test Eng			in Kuo
Detector		Peak		Test Vo	ltage	120Va	c / 60Hz
120.0 dBuV/m			2				
80						Limit1: Limit2:	
40.0	n service and the second s	which have been a second se			Mutumanya	3 Mining Manual Manual Mining Manual Manual Mining Manual	ury'llunch
40.0 5100.000 5130	.00 5160.00 51	90.00 5220.00	5250.00	5280.00 53	310.00 5340	D.00 54	100.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m		Limit BuV/m)	Margin (dB)	Remark
5142.000	51.06	5.04	56.10		74.00	-17.90	peak
5258.700	113.86	5.34	119.20		-	-	peak
5352.900	53.07	5.56	58.63		74.00	-15.37	peak
i	1			I		I	<u> </u>

Test Mode		02.11n HT2 260MHz	20 /	Te	emp/Hum	24(°C)/	33%RH
Test Item	Ba	and Edge		Т	est Date	Decembe	er 12, 2017
Polarize		Vertical		Tes	t Engineer		n Kuo
Detector		Average		Te	st Voltage	120Va	c / 60Hz
120.0 dBuV/m							
			2			Limit1: Limit2:	_
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	1				Mun manana	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
40.0 5100.000 5130.0	0 5160.00 51	90.00 5220.00	5250.00	5280.0	0 5310.00 5340).00 54	00.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Res (dBu\		Limit (dBuV/m)	Margin (dB)	Remark
5150.000	38.66	5.06	43.7	72	54.00	-10.28	AVG
5259.000	103.71	5.34	109.	05	-	-	AVG
5350.000	40.35	5.56	45.9	91	54.00	-8.09	AVG
	-		-			-	•

Test Mode		2.11n HT2 20MHz	0 /	Te	emp/Hun	n	24(°C)/ 33%RH
Test Item	Ba	nd Edge		Т	est Date	;		per 12, 2017
Polarize	\sim	/ertical		Tes	st Engine	er	Key	vin Kuo
Detector		Peak		Те	st Voltag	ge	120V	ac / 60Hz
120.0 dBuV/m	1	- i i						
80				2		Mentholisatist		Alvy-heide
40.0 5310.000 5317.	.00 5324.00 53	31.00 5338.00	5345.00	5352.0				5380.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resu (dBuV		Limi (dBuV		Margin (dB)	Remark
5323.090	112.00	5.48	117.4	48	-		-	peak
5352.070	67.26	5.56	72.8	2	74.0	0	-1.18	peak

Test Mode		2.11n HT2(20MHz)/	Ter	mperature	24(°C)/	33%RH
Test Item		nd Edge		Т	est Date	Decembe	er 12, 2017
Polarize	V	ertical			t Engineer		n Kuo
Detector	A	verage		Te	st Voltage	120Va	c / 60Hz
120.0_dBu∀/m							
80						Limit1: Limit2:	
			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~			
					· ·····	· ·····	
40.0							
5310.000 5317	7.00 5324.00 53	331.00 5338.00	5345.00	5352.0	0 5359.00 53	66.00 53	80.00 MHz
Frequency	Reading	Correct	Resu	ult	Limit	Margin	
(MHz)	(dBuV)	Factor (dB/m)	(dBuV	/m)	(dBuV/m)	(dB)	Remark
5320.850	102.19	5.48	107.6	67	-	-	AVG
5350.000	46.44	5.56	52.0	0	54.00	-2.00	AVG
5350.000	46.44	5.56	52.0	U	54.00	-2.00	AVG

Test Item		270MHz		Temp/Hum	24(0)	33%RH
	Ba	nd Edge		Test Date	Decembe	er 12, 2017
Polarize	١	/ertical		Test Engineer		n Kuo
Detector		Peak		Test Voltage	120Va	c / 60Hz
120.0 dBuV/m						
					Limit1: Limit2:	_
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80		, hull				
adografian no or statistic	aliter and the second	in Athen and the		he he	Worked William Contacted	when
40.0						
5100.000 5130.	00 5160.00 51	90.00 5220.00	5250.00 5	280.00 5310.00 534	10.00 54	00.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5143.800	51.93	5.05	56.98	74.00	-17.02	peak
5267.700	108.19	5.36	113.55	-	-	peak
5352.000	53.07	5.56	58.63	74.00	-15.37	peak

Test Mode	IEEE 802.11r	n HT40 / 52	70MHz	Temperature	<b>24(°</b> ℃)/	′ 33%RH
Test Item	Bai	Band Edge			Decembe	er 12, 2017
Polarize	V	Vertical			Kevi	in Kuo
Detector	A	verage		Test Voltage	120Va	c / 60Hz
120.0 dBu¥/m	1	-	·		•	
					Limit1: Limit2:	
			2	mmy		
80						
		/				
	1				······································	
40.0	damman and a second	And the second sec				and the second se
5100.000 51	30.00 5160.00 5	90.00 5220.00	5250.00 52	80.00 5310.00 53	40.00 54	00.00 MHz
<b>F</b>	Deeding	Correct	Desult	Limit	Manaia	
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	(dBuV/m)	Margin (dB)	Remark
5144.400	39.18	5.05	44.23	54.00	-9.77	AVG
5271.300	98.17	5.36	103.53	-	-	AVG
5350.200	40.79	5.56	46.35	54.00	-7.65	AVG

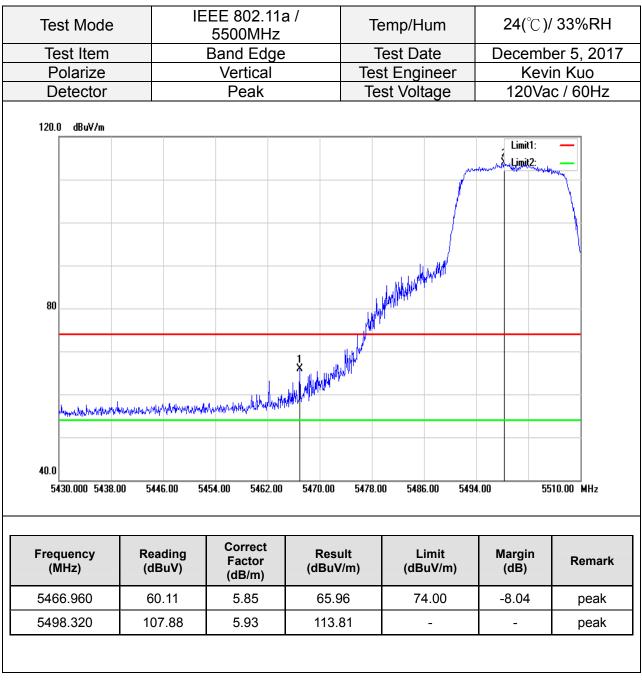
Test Mode		2.11n HT4 10MHz	0 /	Те	mp/H	um	<b>24(</b> ℃)	/ 33%RH
Test Item	Bar	nd Edge		Te	est Da	te		er 12, 2017
Polarize	V	'ertical		Tes	t Engii	neer	Kev	rin Kuo
Detector		Peak		Tes	st Volta	age	120Va	ac / 60Hz
120.0 dBuV/m								
80	Watana Wint			W ^{all} utu _k ng Jah	mm &	Ang and a second se		
40.0								
5290.000 5299	.00 5308.00 531	17.00 5326.00	5335.00	5344.00	) 5353	.00 5362	2.00 5	380.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resı (dBuV			mit JV/m)	Margin (dB)	Remark
5319.070	104.46	5.48	109.9	94		-	-	peak
5350.210	67.14	5.56	72.7	0	74	.00	-1.30	peak
							•	<u> </u>

Test Mode		)2.11n HT4 310MHz	0 /	Ter	nperature	<b>24(</b> °C)/	33%RH
Test Item	Ba	nd Edge		Te	est Date	Decembe	er 12, 2017
Polarize	١	/ertical			t Engineer		n Kuo
Detector	Α	verage		Tes	st Voltage	120Va	c / 60Hz
120.0 dBu¥/m							
						Limit1: Limit2:	_
80	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~						
			L.	huren	~~~ 3		
					m 5		
					- manut	- Martine -	
40.0							man
40.0 5290.000 5299.	00 5308.00 53	317.00 5326.00	5335.00	5344.00	) 5353.00 536	2.00 53	80.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resı (dBuV		Limit (dBuV/m)	Margin (dB)	Remark
5308.630	94.43	5.46	99.8	9	-	-	AVG
5350.000	48.39	5.56	53.9	5	54.00	-0.05	AVG

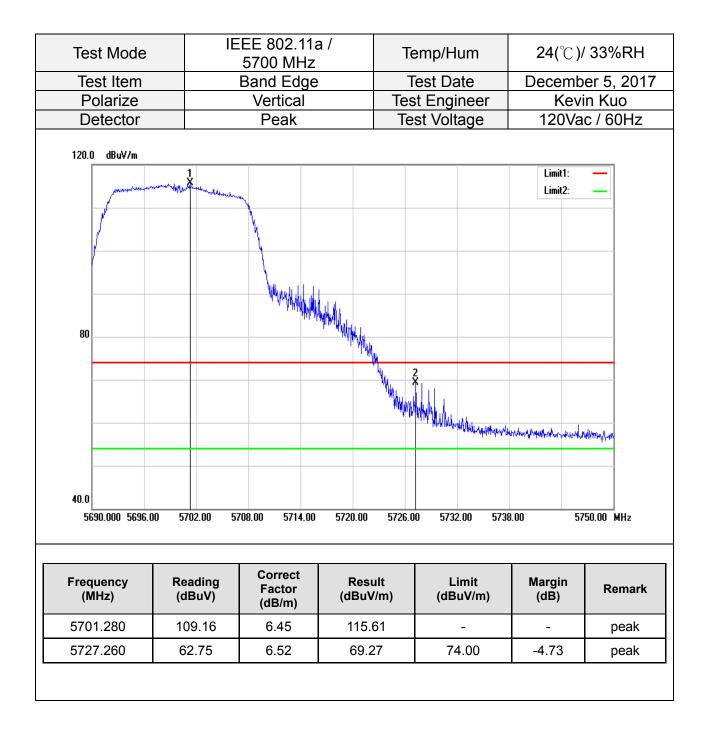
Test Mode		11ac VHT 90MHz	80 /	Те	mp/Hur	n	<b>24(</b> °(	C)/ 33%RH
Test Item	Ba	nd Edge		Te	est Date	;		ber 12, 2017
Polarize	$\sim$	/ertical		Tes	t Engine	er	Ke	evin Kuo
Detector		Peak		Tes	st Voltag	ge	120	Vac / 60Hz
120.0 dBu∀/m	ĺ		i				Limit1:	
80	www.hundanee.New.You	kander han som	num 1				Limit2	
				*****		W.L.M.M.	humanh	Ammy /
40.0 5250.000 5265	.00 5280.00 52	95.00 5310.00	5325.00	5340.00	) 5355.00	5370	.00	5400.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resı (dBuV		Lim (dBuV		Margin (dB)	Remark
5293.800	100.07	5.42	105.4	49	-		-	peak
5350.950	63.29	5.56	68.8	5	74.0	0	-5.15	peak

Test Moc	le		2.11ac VHT 290MHz	^{80 /} Г	emperature	<b>24(</b> °C)/	′ 33%RH
Test Iter	n	Ba	nd Edge		Test Date	December 12, 20	
Polarize	<b>;</b>	١	/ertical	Т	est Engineer	Kevi	in Kuo
Detecto	r	A	verage	7	est Voltage	120Va	c / 60Hz
120.0 d	Bu¥/m						
						Limit1: Limit2:	_
		ţ					
_/**	yezer Kirineko	www.www	and the second second second	manning			
80							
					margan A	which	
40.0 3 5250.00	00 5265.	00 5280.00 5	295.00 5310.00	5325.00 53	40.00 5355.00 53	70.00 5	400.00 MHz
Frequen (MHz)	су	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5286.45	50	90.38	5.40	95.78	-	-	AVG
5351.70	00	48.10	5.56	53.66	54.00	-0.34	AVG

## Band Edge Test Data for UNII-2c

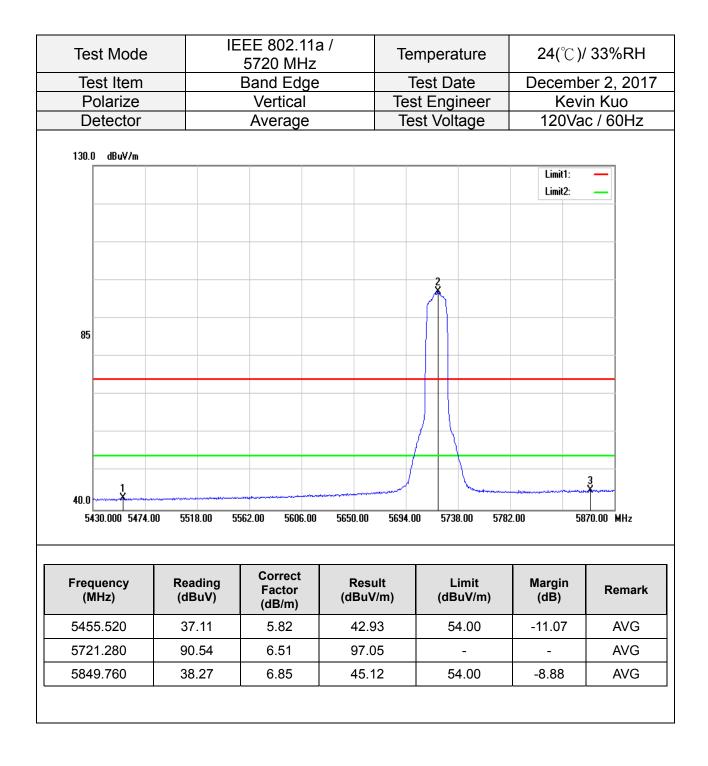


Tes	t Mode	IE	IEEE 802.11a / 5500MHz			nperature		′ 33%RH
	st Item		Band Edge	;		est Date	December 5, 2017	
	olarize		Vertical			t Engineer	Kevin Kuo	
De	etector		Average		Tes	st Voltage	120Va	c / 60Hz
120.0	dBuV/m							
							Limit1: Limit2:	_
							~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~
80								
-								
40.0								
L	0.000 5438.00	5446.00 5	i454.00 5462.00	5470.00	5478.00) 5486.00 5494	4.00 55	i10.00 MHz
			Correct					
Frequ (MI		Reading (dBuV)	Factor (dB/m)	Resı (dBuV		Limit (dBuV/m)	Margin (dB)	Remark
5470	0.000	42.10	5.85	47.9	95	54.00	-6.05	AVG
5500	.800	98.02	5.93	103.9	95	-	-	AVG
			•				-	



Test Item Band Edge Test Date December 5, Polarize Vertical Test Engineer Kevin Kur Detector Average Test Voltage 120Vac / 60	o
Detector Average Test Voltage 120Vac / 60 120.0 dBuV/m	
	<u>0Hz</u>
40.0 5690.000 5696.00 5702.00 5708.00 5714.00 5720.00 5726.00 5732.00 5738.00 5750.00 M	MHz
Frequency (MHz)Reading (dBuV)Correct Factor (dB/m)Result (dBuV/m)Limit (dBuV/m)Margin (dBuV/m)Result (dBuV/m)Result (dBuV/m)Limit (dBuV/m)Margin (dB)Result (dB)	emark
5698.160 99.10 6.46 105.56 A	AVG
5725.000 44.19 6.52 50.71 54.00 -3.29 A	AVG

Test Mod	e	IE	EE 802.1 5720 MH		Ter	mp/Hum	24(°C).	/ 33%RH
Test Item	า		Band Edg	е	Те	est Date	Decemb	er 2, 201
Polarize			Vertical		Test	Engineer		in Kuo
Detector			Peak		Tes	t Voltage	120Va	ic / 60Hz
130.0 dBu¥/m								
							Limit1: Limit2:	_
						2		
						Â.		
85								
1					h		un prominente and a state	and section for the
nin frakayan	enderteenis Abe	periodial descenses whether	udebytere and the second s		a Ministra a			
40.0								
5430.000 547	74.00 5	518.00 55	i62.00 5606.0	00 5650.00	5694.00	5738.00	5782.00 56	370.00 MHz
Frequency (MHz)		ading IBuV)	Correct Factor (dB/m)	Resi (dBu)		Limit (dBuV/m)	Margin (dB)	Remark
5442.760	5	0.58	5.79	56.3	37	74.00	-17.63	peak
	1(00.14	6.52	106.	66	-	-	peak
5723.040					61		-15.39	1



Test Mode	IEEE 802.11n F 5500MHz		Temp/Hur	n 24(°	°C)/ 33%RH
Test Item	Band Edge	e	Test Date	e Decer	nber 12, 2017
Polarize	Vertical		Test Engine	er K	evin Kuo
Detector	Peak		Test Voltag	je 120	Vac / 60Hz
120.0 dBuV/m					
80 	man and the constant of the dealer of the de		MMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM		
40.0 5430.000 5438.0	0 5446.00 5454.00 546	2.00 5470.00	5478.00 5486.00	5494.00	5510.00 MHz
_	– Correct				
Frequency (MHz)	Reading (dBuV) (dB/m)				n Remark
5469.840	65.91 5.85	71.7	6 74.0	0 -2.24	peak
5500.640	110.14 5.93	116.0		-	peak

Test Mode		02.11n HT2 500MHz	20 /	Ten	nperature	24(°C)/	′ 33%RH
Test Item		and Edge		Te	est Date	December 12, 2017	
Polarize		Vertical		Test	Engineer	Kevin Kuo	
Detector		Average			st Voltage	120Va	c / 60Hz
120.0 dBu¥/m						Limit1:	_
80							
40.0 5430.000 5438.	0 5446.00 54	454.00 5462.00	5470.00	5478.00	5486.00 5494	4.00 55	10.00 MHz
		Correct					
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Resı (dBuV		Limit (dBuV/m)	Margin (dB)	Remark
5470.000	46.24	5.85	52.0	9	54.00	-1.91	AVG
5498.720	100.40	5.93	106.3	33	-	-	AVG

Test Mode		2.11n HT2 00 MHz	0 /	Te	emp/Hum	24(℃)	/ 33%RH
Test Item	Bar	nd Edge		Т	est Date	Decemb	er 12, 2017
Polarize	V	ertical			t Engineer		vin Kuo
Detector		Peak		Te	st Voltage	120Va	ac / 60Hz
120.0 dBu∀/m	1						
80			rayuk mayakanga				
					holes we level and a start and	two with more and a second of	n-Multuder
40.0 5690.000 5696	.00 5702.00 570	08.00 5714.00	5720.00	5726.0	0 5732.00 5	5738.00 5	750.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resı (dBuV		Limit (dBuV/m)	Margin (dB)	Remark
5698.220	108.07	6.46	114.	53	-	-	peak
5725.000	65.48	6.52	72.0	0	74.00	-2.00	peak
	• • •		1				

Test Mode		2.11n HT20 00 MHz)/	Ter	mperature	24(°∁)/	/ 33%RH
Test Item	Bar	nd Edge		T	est Date	Decembe	er 12, 2017
Polarize	V	ertical		Tes	t Engineer	Kev	in Kuo
Detector	Av	verage		Tes	st Voltage	120Va	c / 60Hz
120.0 dBu¥/m							
80						Limit1: Limit2:	
				2			
40.0							
5690.000 5696	.00 5702.00 57	708.00 5714.00	5720.00	5726.00	0 5732.00 573	38.00 57	'50.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resı (dBuV		Limit (dBuV/m)	Margin (dB)	Remark
5701.280	97.77	6.45	104.2	22	-	-	AVG
5725.000	46.24	6.52	52.7	'6	54.00	-1.24	AVG
	-		-				

Test Mode		2.11n HT2(20 MHz)/	Temp	/Hum	24(℃)/ 33%RH	
Test Item	Ba	nd Edge		Test	Date	December 12, 201	
Polarize	\	/ertical		Test Er	ngineer	Kevin Kuo	
Detector		Peak		Test V	oltage	120Va	c / 60Hz
130.0 dBuV/m							
						Limit1: Limit2:	_
				2			
85							
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40.0							
5430.000 5470	6.00 5522.00 55	i68.00 561 4 .00	5660.00	5706.00	5752.00 579	8.00 58	390.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/n		Limit dBuV/m)	Margin (dB)	Remark
5454.840	49.82	5.81	55.63		74.00	-18.37	peak
5720.720	109.39	6.50	115.89)	-	-	peak
5845.380	50.88	6.83	57.71		74.00	-16.29	peak

Test Mode		2.11n HT20 20 MHz) / Te	mperature	24(°∁)/	33%RH	
Test Item	Bai	nd Edge		Fest Date	December 12, 20		
Polarize	V	'ertical		st Engineer		n Kuo	
Detector	A	verage	Те	est Voltage	120Va	c / 60Hz	
130.0 dBuV/m					1:-31.		
					Limit1: Limit2:	_	
				1			
85							
					2		
40.0 1					3	*******	
5430.000 547	6.00 5522.00 5	568.00 5614.00	5660.00 5706.0	00 5752.00 579	8.00 58	90.00 MHz	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	
5468.640	37.43	5.85	43.28	54.00	-10.72	AVG	
5721.180	99.68	6.51	106.19	-	-	AVG	
5828.360	39.29	6.79	46.08	54.00	-7.92	AVG	

				44	1174	0 /								
Test N	/lode	IEE	E 802	.11n 0 MF		U /		Te	emp/F	lum		24(°C)	/ 33%	6RH
Test I	Item		Band					Т	est D	ate	De	ecemb	er 12	, 20 ⁻
Pola			Ve	rtica					st Eng			Kev	in Kι	10
Dete	ctor		Р	eak				Те	st Vol	tage		120Va	ac / 6	0Hz
120.0	0 dBuV/m													
120.0												Limit1:	_	1
												Limit2:	_	
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40.0														
1 ⁵⁴	430.000 5440).00 5450.0	0 5460).00	5470.00	548	0.00	5490.	00 55	00.00 5	5510.00	į	5530.00	MHz
Erog	uency	Readii		Corr	ect		lesult			_imit		largin		
	Hz)	(dBu\		Fact (dB/			BuV/n			BuV/m)		(dB)	Re	emark
5466	6.200	67.8	5	. 5.8	-	7	3.70		7	4.00		-0.30	F	beak
	9.200	101.7	6	5.9	5	1	07.71			_		_	r	beak

Test Mode		2.11n HT4(10 MHz)/	Ter	nperature	24(°C).	/ 33%RH
Test Item		nd Edge			est Date		er 12, 2017
Polarize	V	ertical			t Engineer		in Kuo
Detector	Av	/erage		Tes	st Voltage	120Va	c / 60Hz
120.0 dBu∀/m							
80					2	Limit1: Limit2:	
40.0 5430.000 544	0.00 5450.00 54	60.00 5470.00	5480.00	5490.00	D 5500.00 55	10.00 55	530.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resu (dBuV		Limit (dBuV/m)	Margin (dB)	Remark
5470.000	48.02	5.85	53.8	7	54.00	-0.13	AVG
5508.200	91.73	5.96	97.6	9	-	-	AVG

Test Mode		02.11n HT40 670 MHz)/	Temp/	Hum	24(℃)/	33%RH
Test Item	Ba	and Edge		Test D	Date	Decembe	er 12, 2017
Polarize	١	Vertical		Test Eng	gineer	Kevi	n Kuo
Detector		Peak		Test Vo	ltage	120Va	c / 60Hz
120.0 dBu¥/m							
80			manda and a second			Limit1: Limit2:	
40.0					"Tent tent	anti <mark>belan</mark> anan menangan	uddiwdhy
40.0 5650.000 5660.1	00 5670.00 56	680.00 5690.00	5700.00	5710.00 57	720.00 573	0.00 57	50.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resul (dBuV/ı		Limit BuV/m)	Margin (dB)	Remark
5675.000	105.42	6.39	111.8 ⁻	1	_	-	peak
	55.69	6.52	62.21	1	74.00	-11.79	peak

Test Mode)2.11n HT4 570 MHz	0 /	Tei	mperatur	е	24(°C)/	33%RH
Test Item	Ba	nd Edge			est Date			er 12, 2017
Polarize	\	/ertical			t Engine			n Kuo
Detector	A	verage		Te	st Voltage	e	120Va	c / 60Hz
120.0 dBu¥/m								
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40.0					- The second sec	2	www.weeken	
5650.000 5660	.00 5670.00 56	80.00 5690.00	5700.00	5710.0	0 5720.00	5730).00 57	50.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resı (dBuV		Limit (dBuV/i		Margin (dB)	Remark
5674.600	94.70	6.39	101.0	09	-		-	AVG
5725.000	41.31	6.52	47.8	3	54.00)	-6.17	AVG

	FCC ID: PI	PQ-WCBN	3507R	ISED NO:	: 4491A-V	VCBN3507	R	Report No.:	T171129W02-
Test Mode			02.11n HT 10 MHz	40 /	Te	emp/Hu	m	24(℃)/ 33%RH	
Test Item		Ba	nd Edge		T	est Dat	е	Decemb	er 12, 201
Polarize			/ertical		Test Engineer				in Kuo
Detector			Peak		Те	st Volta	ge	120Va	ic / 60Hz
130.0 dBuV	/m								
								Limit1: Limit2:	
					لمرا	2			
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85									
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40.0 5430.000	5474.00 551	8.00 55	562.00 5606.0)0 5650.00	5694.0	0 5738.0	0 5782	2.00 5/	B70.00 MHz
Frequency	Rea	ading	Correct	Res	ult	Lin	nit	Margin	Bomark
(MHz)		BuV)	Factor (dB/m)	(dBu)	//m)	(dBu	V/m)	(dB)	Remark
5434.400	49	9.48	5.56	55.	04	74.	00	-18.96	peak
5707.640	10	4.03	6.13	110.	16	-		-	peak
5870.000	51	.02	6.83	57.	85	74.	00	-16.15	peak

Test Mode)2.11n HT4 10 MHz	0 /	Ter	nperature		33%RH
Test Item		nd Edge		Te	est Date	December 12, 201	
Polarize	<u>۱</u>	/ertical			t Engineer		n Kuo
Detector	A	verage		Tes	st Voltage	120Va	c / 60Hz
130.0 dBuV/m							
						Limit1: Limit2:	_
				m	2		
85							
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40.0 1		manana and and a second and a	and a survey of the second start		here		
5430.000 5474	l.00 5518.00 55	62.00 5606.00	5650.00	5694.00) 5738.00 578.	2.00 58	70.00 MHz
		Correct					
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Resu (dBuV		Limit (dBuV/m)	Margin (dB)	Remark
5444.080	37.70	5.51	43.2	:1	54.00	-10.79	AVG
5708.520	94.24	6.14	100.3	38	-	-	AVG
5827.760	39.11	6.65	45.7	6	54.00	-8.24	AVG

Test Mode			80 /	Ten	np/Hum	24(° ℃)/	33%RH
Test Item	В	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 5458.00 5472.00 5458.00 5472.00 5458.00 5500.0 Station 5500.0 Reading (dBuV) Correct Factor (dB/m) 67.17 5.85			st Date		er 12, 201
Polarize		5530 MHz Band Edge Vertical Peak			Engineer		n Kuo
Detector		Peak		Test	Voltage	120Va	c / 60Hz
120.0 dBuV	'm					Limit1:	_
						Limit2:	_
			when how and	and the second second	manny was	Mussonemanne	-MAL
80							
		1 1 1 1 1					
Appendix	August Market Market	6(N/ *11 * * *					
40.0							
1 5430.000	i444.00 5458.00	5472.00 5486.00	5500.00	5514.00	5528.00 554	12.00 5	570.00 MHz
Frequency (MHz)	Reading (dBuV)	Factor	Resu (dBuV		Limit (dBuV/m)	Margin (dB)	Remark
5469.340	67.17	5.85	73.0	2	74.00	-0.98	peak
5523.380	96.91	6.00	102.9	91	-	-	peak

Test Mode		2.11ac VHT 30 MHz	80 /	Ter	nperature	24(°ℂ)/	′ 33%RH
Test Item	Ba	nd Edge			est Date		er 12, 2017
Polarize	١	/ertical			t Engineer	Kevin Kuo	
Detector	A	verage		Tes	st Voltage	120Va	c / 60Hz
120.0 dBuV/m							
						Limit1: Limit2:	_
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80					V		
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and the second							
40.0 5430.000 5444	.00 5458.00 54	72.00 5486.00	5500.00	5514.00) 5528.00 554	12.00 55	70.00 MHz
		Correct					
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Resı (dBuV		Limit (dBuV/m)	Margin (dB)	Remark
5468.080	47.47	5.85	53.3	2	54.00	-0.68	AVG
5527.160	86.20	5.99	92.1	9	-	-	AVG

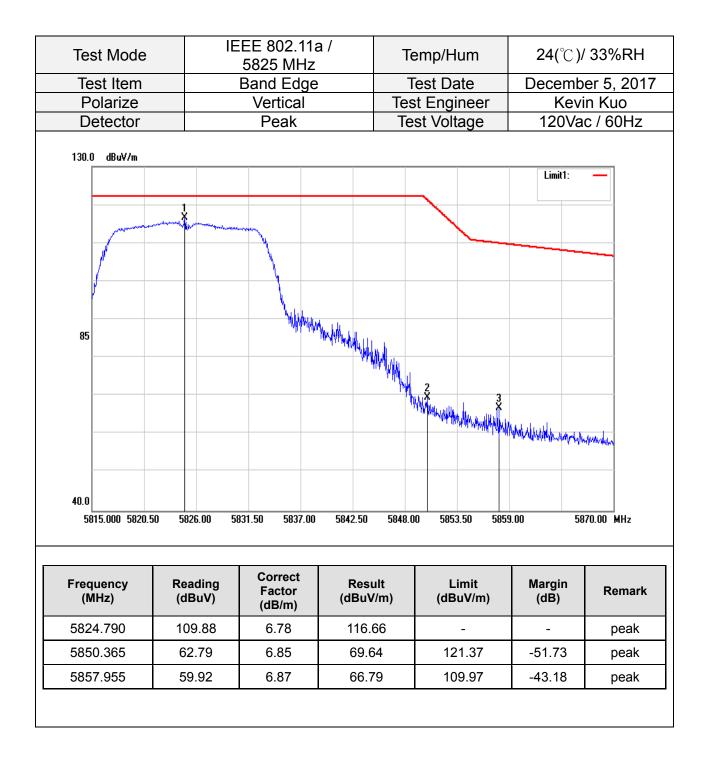
Test Mode			80 / т	ēmp/Hum	24(°C)/	′ 33%RH
Test Item	Ba	nd Edge	-	Test Date	Decembe	er 12, 2017
Polarize	١	5522.00 5568.00 5614.00 5660.00 Correct Factor (dBuV) 50.71 5.82 56.		st Engineer	Kevi	in Kuo
Detector		Peak	Te	est Voltage	120Va	c / 60Hz
130.0 dBu∀/m						
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40.0						
5430.000 5476.	00 5522.00 55	68.00 5614.00	5660.00 5706.	.00 5752.00 5798	3.00 58	90.00 MHz
Frequency (MHz)	Reading (dBuV)	Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5456.680	50.71	5.82	56.53	74.00	-17.47	peak
5694.500	102.23	6.44	108.67	-	-	peak
	1			74.00	-15.31	

Test Mode			80 /	Ter	mperature	24(°C)∕	′ 33%RH
Test Item					est Date		er 12, 2017
Polarize		ng Correct Po			t Engineer		in Kuo
Detector	A	verage		Tes	st Voltage	120Va	c / 60Hz
130.0 dBuV/m							
						Limit1: Limit2:	_
				2			
85							
			www		la l		
40.0		nAnt			My	M	3
5430.000 5476	.00 5522.00 55	i68.00 561 4 .00	5660.00	5706.0	0 5752.00 5	798.00 58	190.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resu (dBuV/		Limit (dBuV/m)	Margin (dB)	Remark
5450.240	38.44	5.81	44.2	5	54.00	-9.75	AVG
5688.520	91.79	6.43	98.22	2	-	-	AVG
	1	6.94	46.3 ⁻		54.00	-7.69	AVG

Band Edge Test Data for UNII-3

Test Mode	IE	EEE 802.11a 5745 MHz	a /	Ter	mp/Hum	24(° ℃)/	′ 33%RH
Test Item		Band Edge		Те	st Date	Decemb	er 5, 201
Polarize		Vertical			Engineer		in Kuo
Detector		Peak			t Voltage	120Va	c / 60Hz
130.0 dBuV/m							
				\rightarrow		Limit1:	
					Janstein	- mar markens	Wm.
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40.0							
5685.000 5692.0		i706.00 5713.00	5720.00	5727.00	5734.00 5741	.00 57	'55.00 MHz
		Correct					
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/n		Limit (dBuV/m)	Margin (dB)	Remark
	69.63	6.50	76.13	5	110.64	-34.51	peak
5719.440				. I	110.00	05.00	I .
5719.440 5723.990	78.15	6.52	84.67	, 	119.90	-35.23	peak

Test Mode	IE	EE 802.11a 5745 MHz		Temp	/Hum	24(℃)/ 33%RH	
Test Item		Band Edge	•	Test	Date	Decemb	er 5, 2017
Polarize		Vertical		Test Er	gineer		n Kuo
Detector		Average		Test V	oltage	120Va	c / 60Hz
130.0 dBuV/m							
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85							
				2			
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40.0							
5685.000 5692.0	0 5699.00 5	706.00 5713.00	5720.00	5727.00	i734.00 574	1.00 57	55.00 MHz
Frequency	Reading	Correct Factor	Resul	t	Limit	Margin	Remark
(MHz)	(dBuV)	(dB/m)	(dBuV/ı	m) (dBuV/m)	(dB)	Kemark
5719.860	48.21	6.50	54.71		110.76	-56.05	AVG
5724.760	58.42	6.52	64.94	ŀ	121.65	-56.71	AVG
5743.310	98.04	6.57	104.6			-	AVG



Test Mode	IE	EE 802.11a 5825 MHz	а/ Т	ēmp/Hum	24(°C)/ 33%R⊦	
Test Item		Band Edge	-	Test Date	Decemb	er 5, 2017
Polarize		Vertical	Те	st Engineer		n Kuo
Detector		Average	Te	est Voltage	120Va	c / 60Hz
130.0 dBuV/m			1		1	
				<u> </u>	Limit1:	
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40.0						
5815.000 5820.50	0 5826.00 58	831.50 5837.00	5842.50 5848.	00 5853.50 585	9.00 58	70.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5823.965	99.37	6.78	106.15	-	-	AVG
5850.035	46.63	6.85	53.48	122.12	-68.64	AVG
	43.25	6.86	50.11	111.08	-60.97	AVG

Test Mode	IEEE 802.11n HT20 / 5745 MHz			Temp/Hum		24(°C)/ 33%RH	
Test Item	Ba	and Edge		Te	est Date	Decembe	er 12, 201
Polarize		Vertical		Tes	t Engineer		in Kuo
Detector		Peak		Tes	st Voltage	120Va	c / 60Hz
130.0 dBuV/m						Limit1:	
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40.0 5685.000 5692.0		706.00 5713.00	5720.00	5727.00		1.00 57	55.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resı (dBuV		Limit (dBuV/m)	Margin (dB)	Remark
5718.250	74.86	6.50	81.3	6	110.31	-28.95	peak
57 10.250	92.65	6.52	90.1	7	120.85	-30.68	peak
5718.230	83.65	0.01					
	109.32	6.58	115.9	90	-	-	peak

Test Mode		02.11n HT2 745 MHz	20 /	Te	emp/Hum		<b>24(</b> °C)	/ 33%RH
Test Item	Ba	and Edge		Т	est Date		Decemb	er 12, 2017
Polarize		Vertical		Tes	t Enginee			/in Kuo
Detector	l A	Average		Te	st Voltage	;	120Va	ac / 60Hz
130.0 dBu¥/m								
				_			Limit1:	_
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				2				
			1					
40.0								
5685.000 5692.0	0 5699.00 57	06.00 5713.00	5720.00	5727.0	0 5734.00	5741.0	0 9	755.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor	Resu (dBuV		Limit (dBuV/m	ı)	Margin (dB)	Remark
5719.790	53.78	( <b>dB/m</b> ) 6.50	60.2		110.74		-50.46	AVG
5724.830	64.09	6.52	70.6	1	121.81		-51.20	AVG
5746.600	99.37	6.58	105.9	95	-		-	AVG

Test Mode		02.11n HT2 325 MHz	0 /	Temp/H	lum	24(°C)/ 33%RH	
Test Item	Ba	and Edge		Test D	ate	Decembe	er 12, 2017
Polarize	<u> </u>	Vertical		Test Eng			in Kuo
Detector		Peak		Test Vol	tage	120Va	c / 60Hz
130.0 dBu∀/m							
						Limit1:	—
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40.0							
5815.000 5820.	50 5826.00 5	831.50 5837.00	5842.50	5848.00 58	i3.50 5859	9.00 58	70.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m		₋imit BuV/m)	Margin (dB)	Remark
5823.250	108.12	6.78	114.90	90 -		-	peak
5852.290	72.12	6.85	78.97	1	16.98	-38.01	peak
5856.745	66.11	6.86	72.97	97 110.31		-37.34	peak

Test Item         Band Edge         Test Date         December 12, 2017           Polarize         Vertical         Test Engineer         Kevin Kuo           Detector         Average         Test Voltage         120Vac / 60Hz           130.0         dbw/m         Imit:         Imit:         Imit:           40.0         Jacobia         Jacobia         Jacobia         Jacobia           80.0         Jacobia         Jacobia         Jacobia         Jacobia         Jacobia           90.0         Jacobia	Test Mode		2.11n HT2 25 MHz	0 /	Temp/Hum		24(°C)/ 33%RH		
Detector         Average         Test Voltage         120Vac / 60Hz           130.0         dBuV/m         Imit:	Test Item								
130.0 dBuV/n 130.0 dBuV/n 130.0 dBuV/n 130.0 dBuV/n 100.0 5820.50 5825.00 5831.50 583.00 5842.50 5848.00 5853.50 5859.00 Hz 100.0 5820.50 5826.00 5831.50 5837.00 5842.50 5848.00 5853.50 5859.00 Hz 100.0 5820.50 5826.00 5831.50 5837.00 5842.50 5848.00 5853.50 5859.00 Hz 100.0 5820.50 5826.00 5831.50 5837.00 5842.50 5848.00 5853.50 5859.00 Hz		V	ertical						
Frequency         Reading (dBuV)         Correct Factor (dB/m)         Result (dBuV/m)         Limit (dBuV/m)         Margin (dBuV/m)         Remark Margin (dBuV/m)           5823.965         97.94         6.78         104.72         -         -         AVG	Detector	A	verage		Tes	st Volta	age	120Va	ac / 60Hz
Frequency         Reading         Correct Factor (dB/m)         Result (dB/W/m)         Limit (dB/W/m)         Margin (dB/W/m)         Remark Remark           5823.965         97.94         6.78         104.72         -         -         AVG	130.0 dBuV/m								
Frequency         Reading         Correct Factor (dB/m)         Result (dBUV/m)         Limit (dBUV/m)         Margin (dB)         Remark           5823.965         97.94         6.78         104.72         -         -         AVG						_		Limit1:	-
Frequency         Reading         Correct Factor (dB/m)         Result (dBUV/m)         Limit (dBUV/m)         Margin (dB)         Remark           5823.965         97.94         6.78         104.72         -         -         AVG									
Home         Home <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>									
Home         Home <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>									
40.0       5815.000       5826.00       5831.50       5837.00       5842.50       5848.00       5853.50       5859.00       5870.00       MHz         Frequency (MHz)       Reading (dBuV)       Correct Factor (dB/m)       Result (dBuV/m)       Limit (dBuV/m)       Margin (dB)       Remark         5823.965       97.94       6.78       104.72       -       -       AVG         5850.090       52.37       6.85       59.22       121.99       -62.77       AVG	85								
40.0       5815.000       5826.00       5831.50       5837.00       5842.50       5848.00       5853.50       5859.00       5870.00       MHz         Frequency (MHz)       Reading (dBuV)       Correct Factor (dB/m)       Result (dBuV/m)       Limit (dBuV/m)       Margin (dB)       Remark         5823.965       97.94       6.78       104.72       -       -       AVG         5850.090       52.37       6.85       59.22       121.99       -62.77       AVG			- have a second						
40.0       5815.000       5826.00       5831.50       5837.00       5842.50       5848.00       5853.50       5859.00       5870.00       MHz         Frequency (MHz)       Reading (dBuV)       Correct Factor (dB/m)       Result (dBuV/m)       Limit (dBuV/m)       Margin (dB)       Remark         5823.965       97.94       6.78       104.72       -       -       AVG         5850.090       52.37       6.85       59.22       121.99       -62.77       AVG				- Andrew	~~				
40.0       5815.000       5826.00       5831.50       5837.00       5842.50       5848.00       5853.50       5859.00       5870.00       MHz         Frequency (MHz)       Reading (dBuV)       Correct Factor (dB/m)       Result (dBuV/m)       Limit (dBuV/m)       Margin (dB)       Remark         5823.965       97.94       6.78       104.72       -       -       AVG         5850.090       52.37       6.85       59.22       121.99       -62.77       AVG						2			
5815.000         5826.00         5831.50         5837.00         5842.50         5848.00         5853.50         5859.00         5870.00         MHz           Frequency (MHz)         Reading (dBuV)         Correct Factor (dB/m)         Result (dBuV/m)         Limit (dBuV/m)         Margin (dB)         Remark           5823.965         97.94         6.78         104.72         -         -         AVG           5850.090         52.37         6.85         59.22         121.99         -62.77         AVG							×~~~	······	
Frequency (MHz)         Reading (dBuV)         Correct Factor (dB/m)         Result (dBuV/m)         Limit (dBuV/m)         Margin (dB)         Remark           5823.965         97.94         6.78         104.72         -         -         AVG           5850.090         52.37         6.85         59.22         121.99         -62.77         AVG	40.0								
Frequency (MHz)Reading (dBuV)Factor (dB/m)Result (dBuV/m)Limit (dBuV/m)Margin (dB)Remark5823.96597.946.78104.72AVG5850.09052.376.8559.22121.99-62.77AVG	5815.000 5820	.50 5826.00 583	31.50 5837.00	5842.50	5848.0	0 5853.	50 5859	).00 5	870.00 MHz
Frequency (MHz)Reading (dBuV)Factor (dB/m)Result (dBuV/m)Limit (dBuV/m)Margin (dB)Remark5823.96597.946.78104.72AVG5850.09052.376.8559.22121.99-62.77AVG	_		Correct	_					
5850.090 52.37 6.85 59.22 121.99 -62.77 AVG	Frequency (MHz)	Reading (dBuV)	Factor					Margin (dB)	Remark
					72 -				
5855.040 46.45 6.86 53.31 110.79 -57.48 AVG	5850.090	52.37	6.85					-62.77	
	5855.040	46.45	6.86	53.3	51	110	0.79	-57.48	AVG

Test Mode		)2.11n HT4 55 MHz	·0/ T	ēmp/Hum	24(°C)/ 33%RH	
Test Item	Ba	nd Edge	-	Test Date	Decembe	er 12, 2017
Polarize	$\sim$	/ertical	Те	st Engineer		n Kuo
Detector		Peak	Te	est Voltage	120Va	c / 60Hz
130.0 dBu∀/m						
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5680.000 5690	.00 5700.00 57	10.00 5720.00	5730.00 5740.	00 5750.00 5760	0.00 57	80.00 MHz
Frequency	Reading	Correct	Result	Limit	Margin	
(MHz)	(dBuV)	Factor (dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Remark
5714.800	75.94	6.50	82.44	109.34	-26.90	peak
5700 000	76.47	6.50	82.97	112.62	-29.65	peak
5720.800	103.71		110.29			

Test Mode		)2.11n HT4 55 MHz	0/	Temp/Hum			24(℃)/ 33%RH	
Test Item	Bai	nd Edge		Т	est Dat	e	Decemb	er 12, 2017
Polarize	V	'ertical			st Engir			in Kuo
Detector	A	verage		Те	st Volta	ige	120Va	ic / 60Hz
130.0 dBuV/m								
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5680.000 5690.	00 5700.00 57	10.00 5720.00	5730.00	5740.0	0 5750.0	0 5760	.00 57	780.00 MHz
		Correct						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Resu (dBuV		Lir (dBu		Margin (dB)	Remark
5719.700	57.82	6.50	64.3	2	110	.72	-46.40	AVG
5724.600	60.05	6.52	66.5	7	121	.29	-54.72	AVG
5753.400	93.57	6.59	100.1	16	-		-	AVG

Test Mode		02.11n HT4 95 MHz	-0/	Tei	mp/Hum	<b>24(</b> ℃).	/ 33%RH	
Test Item	Ba	nd Edge		Те	est Date	December 12, 20 ²		
Polarize	N	/ertical		Test	Engineer		in Kuo	
Detector		Peak		Tes	t Voltage	120Va	c / 60Hz	
130.0 dBuV/m						1		
						Limit1:	_	
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40.0								
5770.000 5780.	00 5790.00 58	00.00 5810.00	5820.00	5830.00	5840.00 585	i0.00 58	370.00 MHz	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resu (dBuV		Limit (dBuV/m)	Margin (dB)	Remark	
5797.400	103.27	6.71	109.9	98	-	-	peak	
5850.800	54.80	6.85	61.6	5	120.38	-58.73	peak	
5858.600	54.22	6.87	61.0	9	109.79	-48.70	peak	

Test Mode		IEEE 802.11n HT40/ 5795 MHz				m	24(℃)/ 33%RH		
Test Item	Bar	nd Edge		Test Date			December 12, 201		
Polarize	V	ertical		Test Engineer				evin Kuo	
Detector	Av	/erage		Test Voltage			120	Vac / 60Hz	
130.0 dBuV/m									
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40.0									
5770.000 5780	.00 5790.00 580	0.00 5810.00	5820.00	5830.00	) 5840.0	0 5850	).00	5870.00 MHz	
		Correct							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Resu (dBuV		Lim (dBu)		Margin (dB)	Remark	
5796.400	92.86	6.71	99.5		-		-	AVG	
5850.900	42.61	6.85	49.4	·6	120.	.15	-70.69	AVG	
5855.100	41.52	6.86	48.3	8	110.	77	-62.39	AVG	

Test Mode		2.11ac VHT 775 MHz	80 /	Temp/Hum	<b>24(</b> °C).	/ 33%RH
Test Item		and Edge		Test Date	2, December 12	
Polarize		Vertical		Test Engineer		in Kuo
Detector		Peak		Test Voltage	120Va	c / 60Hz
120.0 dBuV/m						
					Limit1:	_
	- June John	man 3	monund	. Ль.		
			V	manny		
80	1					
80	X & MAN			h hundre		
				······································	and and a stranger of the set	many a
40.0						
5700.000 5717	.00 5734.00 5	751.00 5768.00	5785.00 5	802.00 5819.00 5	B36.00 58	370.00 MHz
Frequency	Reading	Correct Factor	Result	Limit	Margin	Remark
(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
5719.550	70.57	6.50	77.07	110.67	-33.60	peak
	69.67	6.52	76.19	118.69	-42.50	peak
5723.460					1	
5723.460 5770.890	98.29	6.64	104.93	-	-	peak
	-	6.64 6.85	104.93 67.06	- 119.24	-52.18	peak peak

Test Mode		11ac VHT8 75 MHz	30 / 7	Гетр/Hum	<b>24(</b> °C)/	33%RH
Test Item		nd Edge		Test Date	Decembe	er 12, 201
Polarize		/ertical		est Engineer		n Kuo
Detector	A	verage		est Voltage	120Vac / 60H	
120.0 dBuV/m						
	/				Limit1:	
			humana	www		
80						
www.marthat	1 2 M			W.		
40.0 5700.000 57	17.00 5734.00 57	751.00 5768.00	5785.00 5802		6.00 58	70.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
		Factor				<b>Remark</b> AVG
(MHz)	(dBuV)	Factor (dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
(MHz) 5718.020	(dBuV) 54.55	Factor (dB/m) 6.50	( <b>dBuV/m)</b> 61.05	(dBuV/m) 110.25	(dB) -49.20	AVG
(MHz) 5718.020 5724.310	(dBuV) 54.55 54.70	Factor (dB/m)           6.50           6.52	(dBuV/m) 61.05 61.22	(dBuV/m) 110.25 120.63	(dĒ) -49.20 -59.41	AVG AVG

## Below 1G Test Data

Test Mode	IEEE	802.11ac V 5210MHZ	HT80 /	Tei	mp/Hum	<b>24(</b> °C)/	/ 33%RH
Test Item		30MHz-1GF	lz	Te	est Date	Decemb	er 2, 201
Polarize		Horizontal		Test	Engineer		in Kuo
Detector	Pea	k and Quasi	-peak	Tes	t Voltage	120Va	c / 60Hz
80.0 dBu¥/m						Limit1:	—
						Margin:	
							F
30						4 5 X	6 X
	1		2 X	3 X		4 X	
-20 30.000 127.00	) 224.00	321.00 418.00	515.00	612.00	709.00 80	6.00 10	00.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resı (dBuV		Limit (dBuV/m)	Margin (dB)	Remark
281.2300	25.29	-14.25	11.0	)4	46.02	-34.98	peak
483.9600	24.89	-8.85	16.0	)4	46.02	-29.98	peak
.00.0000	00.50	-7.01	19.5	55	46.02	-26.47	peak
593.5700	26.56		1				
	26.56 24.40	-3.44	20.9	96	46.02	-25.06	peak
593.5700		-3.44	20.9 22.8		46.02 46.02	-25.06	peak peak

Test Mode	IEEE	IEEE 802.11ac VHT80 / 5210MHZ			mp/Hum	24(°C)/ 33%R		
Test Item		30MHz-1GH	Ηz	T	est Date	Decemb	per 2, 201	
Polarize		Horizonta			t Engineer		vin Kuo	
Detector	Pea	k and Quas	i-peak	Tes	st Voltage	120Va	ac / 60Hz	
80.0 dBuV/m						Limit1:	_	
30		3X		4	5x	6 X		
-20 30.000 127.00 Frequency (MHz)	224.00 3 Reading (dBuV)	21.00 418.00 Correct Factor (dB/m)	515.00 Resul (dBuV/	-	709.00 806.	00 1( Margin (dB)	000.00 MHz Remark	
30.0000	24.45	-8.14	16.31	1	40.00	-23.69	peak	
133.7900	26.08	-15.37	10.71		43.52	-32.81	peak	
365.6200	25.52	-12.48	13.04		46.02	-32.98	peak	
000.0200								
E0E 0400	25.70	-7.10	18.60		46.02	-27.42	peak	
585.8100						1 26.22	I nooli	
585.8100 762.3500 861.2900	23.86 25.36	-4.06	19.80 22.69		46.02 46.02	-26.22 -23.33	peak	

## Above 1G Test Data for UNII-1

15550.000

N/A

Remark:

29.57

fundamental frequency.

18.71

Test Mode			EE 802.1 [°] 5180MH2		Te	emp/H	um	<b>24(</b> ℃)	/ 33%RH
Test Item			Harmonio	)	Т	est Da	ate	Decemb	per 5, 2017
Polarize			Vertical		Tes	st Engi	neer	Kevin Kuo	
Detector		Pea	k and Ave	erage	Те	st Volt	age	120Va	ac / 60Hz
110.0 dBu¥/m									
								Limit1: Limit2:	
70									
			1 X						
			2						
30.0									
1000.000 4900	.00 880	0.00 12	700.00 16600	.00 20500.00	24400.	.00 2830	)0.00 3220	0.00 4	0000.00 MHz
			O a ma st						
Frequency (MHz)		ading BuV)	Correct Factor (dB/m)	Resi (dBuV			imit uV/m)	Margin (dB)	Remark
15550.000	43	3.27	18.71	61.9	98	74	4.00	-12.02	peak
						1			1

2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

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

48.28

54.00

-5.72

AVG

Test Mode		IEEE 802.11a / 5180MHZ Harmonic					np/H		24(°C)/ 33%R⊦			
Test Item							Test Date			December 5, 202		
Polarize			Horizo				Test Engineer				Kevin K	
Detector		Pea	ik and A	Ver	age		Test	t Volt	age	12	0Vac / 6	50Hz
110.0 dBuV/m												
										Lim		
70			1									
			2									
			×									
30.0												
1000.000 4900.0	00 88	00.00 12	2700.00 16	5600.00	) 2050	0.00 24	400.00	2830	)0.00 322	00.00	40000.00	_ JMHz
Frequency (MHz)		ading BuV)	Corre Facto (dB/m	r		esult BuV/m)			imit uV/m)	Marg (dB)		lemark
15540.000	43	3.24	18.68	3	6	1.92		74	4.00	-12.0	8	peak
15540.000	30	0.64	18.68	3	4	9.32		54	4.00	-4.6	8	AVG
N/A												
										1		

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		IE	EEE 802 5220 N		Т	emp/H	um	<b>24(</b> ℃	)/ 33%RH		
Test Item			Horizo				Test Da		December 4, 20 ⁻		
Polarize			Vertic			Test Engineer			Kevin Kuo		
Detector		Pea	ak and A	vera	ge	Test Voltage			120V	ac / 60Hz	
110.0 dBuV/m											
									Limit1: Limit2:	_	
70											
			X								
30.0											
1000.000 4900.	00 880	0.00 1	2700.00 16	600.00	20500.00	24400	0.00 283	00.00 3220	00.00	40000.00 MHz	
Frequency (MHz)	Rea (dE	ading BuV)	Correc Facto (dB/m	r	Resu (dBuV			imit uV/m)	Margin (dB)	Remark	
15660.000	44	1.12	19.03	3	63.1	5	74	4.00	-10.85	peak	
15660.000	32	2.18	19.03	3	51.2	21	54	4.00	-2.79	AVG	
N/A											

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IE	EEE 802.11a 5220 MHz	a /	Temp/H	um	24(°C)/ 33%RH		
Test Item		Harmonic		Test Da	te	December 4, 201		
Polarize		Horizontal		Test Engi			in Kuo	
Detector	Pea	ak and Aver	age	Test Volta	age	120Va	c / 60Hz	
110.0 dBu¥/m						Limit1:		
						Limit2:	_	
70								
		×						
30.0								
1000.000 4900.0	0 8800.00 1	2700.00 16600.00	) 20500.00	24400.00 2830	0.00 322	DO. OO 40	0000.00 MHz	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m		mit JV/m)	Margin (dB)	Remark	
15670.000	39.05	19.06	58.11	74	.00	-15.89	peak	
15670.000	28.46	19.06	47.52	54	.00	-6.48	AVG	
N/A								

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		IEEE 802.11a / 5240MHZ			Т	ſemp/H	um	<b>24(</b> °(	C)/ 33%RH		
Test Item			Harmo	nic		Test Date			December 5, 201		
Polarize			Vertic			Test Engineer				evin Kuo	
Detector		Pea	ak and A	\ver	age	Te	est Volt	age	120\	/ac / 60Hz	
110.0 dBu¥/m											
									Limit1: Limit2:		
70											
			1								
			1	<u>د</u>							
			X								
30.0											
1000.000 4900.	DO 88	00.00 12	2700.00 1	6600.00	) 20500.00	2440	0.00 2830	00.00 3220	DO. OO	40000.00 MHz	
	_		Corre	ct	_						
Frequency (MHz)		ading BuV)	Facto (dB/m	or	Res (dBu\			imit uV/m)	Margin (dB)	Remar	
15720.000	4	2.18	19.2	C	61.3	38	74	4.00	-12.62	peak	
15720.000	3	0.82	19.2	)	50.0	)2	54	4.00	-3.98	AVG	
N/A											

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IE	IEEE 802.11a / 5240MHZ			'Hum		/ 33%RH	
Test Item		Harmonic		Test I		December 5, 20 ²		
Polarize		Horizontal		Test En			in Kuo	
Detector	Pe	ak and Aver	age	Test Vo	oltage	120Va	c / 60Hz	
110.0 dBuV/m								
						Limit1:	-	
						Limit2:		
70								
10		_						
		1 X						
		× ×						
30.0								
1000.000 4900.0	00 8800.00 1	2700.00 16600.00	) 20500.00	24400.00 2	8300.00 322	00.00 40	0000.00 MHz	
Frequency (MHz)	Reading (dBuV)	Correct Factor	Result (dBuV/m	ı) (c	Limit JBuV/m)	Margin (dB)	Remark	
15720.000	43.32	(dB/m) 19.20	62.52		74.00	-11.48	peak	
15720.000	32.52	19.20	51.72		54.00	-2.28	AVG	
N/A	02.02							
IN/A								

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	5	02.11n HT2 180MHZ	0 /		emp/H			)/ 33%RH
Test Item		armonic			est Da		December 4, 201	
Polarize		/ertical			t Engi		Kevin Kuo	
Detector	Peak a	and Average	е	Te	st Volta	age	120V	ac / 60Hz
110.0 dBuV/m								
							Limit1: Limit2:	_
70								
		1 X						
		Ś.						
30.0								
1000.000 <b>4</b> 900.	00 8800.00 12	2700.00 16600.00	) 20500.00	24400.	00 2830	0.00 3220	)0.00	40000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resı (dBuV			mit uV/m)	Margin (dB)	Remark
15550.000	43.25	18.71	61.9	6	74	.00	-12.04	peak
15550.000	32.10	18.71	50.8	51	54	.00	-3.19	AVG
N/A								

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

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Test Mode		802.11n HT2 180MHZ	20/	Te	emp/Hun	n	<b>24(</b> °C	)/ 33%RH
Test Item	F	larmonic		Т	est Date	;	Decem	ber 4, 2017
Polarize		orizontal			t Engine			vin Kuo
Detector	Peak	and Averag	je	Te	st Voltag	je	120\	/ac / 60Hz
110.0 dBuV/m								
							Limit1: Limit2:	_
70								
		X						
		*						
30.0								
1000.000 4900.0	00 8800.00 12	2700.00 16600.00	) 20500.00	24400.	00 28300.0	0 3220	0.00	40000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resu (dBuV		Limi (dBuV		Margin (dB)	Remark
15540.000	43.11	18.68	61.7	9	74.0	0	-12.21	peak
15540.000	32.91	18.68	51.5	9	54.0	0	-2.41	AVG
N/A								

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		02.11n HT2 220MHZ	20 /	Te	emp/Hu	m	<b>24(</b> °C	)/ 33%RH	
Test Item	F	larmonic		Т	est Date	e	Decem	ber 4, 201	
Polarize		Vertical		Tes	st Engin	eer		Kevin Kuo	
Detector	Peak	and Average	je		st Volta		120V	ac / 60Hz	
110.0 dBu¥/m							Limit1: Limit2:	—	
70									
30.0 1000.000 4900.0	00 8800.00 1: Reading	2700.00 16600.00 Correct Factor	0 20500.00 Resu		00 28300. Lirr		00.00 Margin	40000.00 MHz	
(MHz)	(dBuV)	(dB/m)	(dBuV		(dBu\		(dB)	Remark	
15660.000	45.47	19.03	64.5		74.0		-9.50	peak	
15660.000	32.01	19.03	51.0	)4	54.0	00	-2.96	AVG	
N/A									

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		802.11n HT2 220MHZ	20 /	Temp/Hum	<b>24(</b> °C)/	33%RH
Test Item		larmonic		Test Date		er 4, 2017
Polarize		lorizontal		Test Engineer		n Kuo
Detector	Peak	and Averag	e	Test Voltage	120Va	c / 60Hz
110.0 dBuV/m					Limit1: Limit2:	
70						
30.0 1000.000 4900.0	00 8800.00 12	2700.00 16600.00	) 20500.00 24	4400.00 28300.00 32	200.00 40	000.00 MHz
Frequency	Reading	Correct Factor	Result	Limit	Margin	Remark
(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
15660.000	44.47	19.03	63.50	74.00	-10.50	peak
15660.000	31.19	19.03	50.22	54.00	-3.78	AVG
N/A						

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		02.11n HT2 240MHZ	0 /	Te	emp/Hu	Im		/ 33%RH
Test Item		armonic			est Dat			er 4, 2017
Polarize	١	/ertical			t Engir		Kev	in Kuo
Detector	Peak a	and Average	e	Te	st Volta	ige	120Va	ic / 60Hz
110.0 dBu∀/m							Limit1:	
							Limit2:	
70		1 *						
		*						
30.0 1000.000 4900.	00 8800.00 12	2700.00 16600.00	) 20500.00	24400.	00 28300	.00 322	00.00 4	0000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resu (dBuV		Lir (dBu		Margin (dB)	Remark
15720.000	44.43	19.20	63.6	3	74.	.00	-10.37	peak
15720.000	32.01	19.20	51.2	1	54.	.00	-2.79	AVG
N/A								

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		)2.11n HT2( 240MHZ		Temp/Hum	<b>24(</b> °C)/	33%RH
Test Item		armonic		Test Date		er 4, 201
Polarize		orizontal		est Engineer		in Kuo
Detector	Peak a	and Average	e	Test Voltage	120Va	c / 60Hz
110.0 dBuV/m					Limit1:	_
					Limit2:	_
70						
		1 X				
		2				
		X				
30.0						
1000.000 4900.0	0 8800.00 12	2700.00 16600.00	20500.00 24	400.00 28300.00	32200.00 40	000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
15710.000	45.00	19.17	64.17	74.00	-9.83	peak
15710.000	30.93	19.17	50.10	54.00	-3.90	AVG
N/A						

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		02.11n HT4 190MHZ	10 /	Te	emp/H	um	<b>24(</b> °C)	/ 33%RH
Test Item	F	larmonic		Т	est Da	ate	Decemb	oer 4, 2017
Polarize		Vertical		Tes	t Engi	neer		rin Kuo
Detector	Peak	and Averag	je	Test Voltage			120Va	ac / 60Hz
110.0 dBuV/m								
							Limit1: Limit2:	
							Lillikz.	
70								
		1						
		1 X						
		Ž.						
30.0								
1000.000 4900.0	0 8800.00 12	2700.00 16600.00	) 20500.00	24400.	00 2830	0.00 3220	0.00 4	0000.00 MHz
		Correct						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Resu (dBuV/			imit uV/m)	Margin (dB)	Remark
15580.000	41.99	18.79	60.78	3	74	1.00	-13.22	peak
15580.000	31.78	18.79	50.57	7	54	4.00	-3.43	AVG
N/A								
	1	<u> </u>			L		<u>ı</u>	1

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		02.11n HT4 190MHZ	0 /	Tem	p/Hum	<b>24(</b> °C)∕	′ 33%RH
Test Item	F	larmonic		Tes	t Date	Decemb	er 4, 201
Polarize		lorizontal			Ingineer		in Kuo
Detector	Peak	and Averag	e	Test '	Voltage	120Va	c / 60Hz
110.0 dBu¥/m							
						Limit1: Limit2:	_
70							
		1 X					
		*					
30.0							
1000.000 4900.0	10 8800.00 1	2700.00 16600.00	20500.00	24400.00	28300.00 322	00.00 40	000.00 MHz
		Correct					
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/n		Limit (dBuV/m)	Margin (dB)	Remark
15580.000	39.59	18.79	58.38		74.00	-15.62	peak
15580.000	29.58	18.79	48.37		54.00	-5.63	AVG
N/A							

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		02.11n HT4 230MHZ	0 /	Те	emp/Hu	m	<b>24(</b> °C	)/ 33%RH
Test Item	H	armonic		Т	est Dat	e	December 5, 20	
Polarize	١	/ertical		Tes	t Engir	ieer	Ke	vin Kuo
Detector	Peak a	and Average	e	Tes	st Volta	ige	120V	ac / 60Hz
110.0 dBuV/m							Limit1:	_
70		1 X						
30.0 1000.000 4900.	00 8800.00 12	2700.00 16600.00	) 20500.00	24400.0	DO 28300	.00 3220	0.00	40000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resul (dBuV/		Lir (dBu		Margin (dB)	Remark
15670.000	44.03	19.06	63.09	)	74.	00	-10.91	peak
15670.000	32.92	19.06	51.98	3	54.	00	-2.02	AVG
N/A								

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		02.11n HT40 230MHZ	0 /	Te	emp/Hu	Temp/Hum		/ 33%RH	
Test Item		armonic			est Dat			December 5, 201	
Polarize		orizontal			t Engir		Kevin Kuo		
Detector	Peak a	and Average	e	Te	st Volta	ige	120Va	ac / 60Hz	
110.0 dBu¥/m							Limit1: Limit2:	_	
70									
30.0 1000.000 4900.	00 8800.00 12	2700.00 16600.00	20500.00	24400.	00 28300	.00 322	0.00 4	0000.00 MHz	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resu (dBuV/		Lir (dBu		Margin (dB)	Remark	
15680.000	43.61	19.09	62.7	0	74.	00	-11.30	peak	
15680.000	32.03	19.09	51.1	2	54.	00	-2.88	AVG	
N/A									

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		11ac VHT8 10MHZ		Temp/Hum	<b>24(°</b> ℃)/	33%RH	
Test Item	Ha	armonic		Test Date	Decemb	er 4, 2017	
Polarize	V	ertical		est Engineer	Kevin Kuo		
Detector	Peak a	ind Average	e T	est Voltage	120Va	c / 60Hz	
110.0 dBuV/m	·				Limit1: Limit2:		
30.0 1000.000 49	00.00 8800.00 1	2700.00 16600.00	) 20500.00 244	00.00 28300.00 323	200.00 40	000.00 MHz	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	
15670.000	39.85	19.06	58.91	74.00	-15.09	peak	
15670.000	31.05	19.06	50.11	54.00	-3.89	AVG	
N/A							
Remark:							

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		.11ac VHT8 10MHZ	30 /	T€	emp/Hi	Jm	<b>24(</b> °C	)/ 33%RH	
Test Item	Ha	rmonic		Т	est Da	te	December 4, 201		
Polarize		rizontal			st Engii		Kevin Kuo		
Detector	Peak a	nd Average	;	Те	st Volta	age	120V	ac / 60Hz	
110.0 dBuV/m							Limit1:	_	
							Limit2:		
70									
		1							
		ž							
30.0 1000.000 490	0.00 8800.00 12	2700.00 16600.00	0 20500.00	24400.	00 2830	0.00 322	0.00	40000.00 MHz	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resı (dBuV			mit ıV/m)	Margin (dB)	Remark	
15620.000	41.04	18.91	59.9	5	74	.00	-14.05	peak	
15620.000	31.72	18.91	50.6	3	54	.00	-3.37	AVG	
N/A									

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Rev.00

## Above 1G Test Data for UNII-2a

Те	st Mode		IE	EE 802. 5260 MH		Т	emp/H	lum	<b>24(</b> ℃)	/ 33%RH
Te	est Item			Harmon	ic		lest Da	ate	Decemb	per 4, 2017
F	olarize			Vertica	l	Tes	st Eng	ineer	Kev	rin Kuo
D	etector		Pea	ik and Av	rerage	Te	est Voli	tage	120Va	ac / 60Hz
110.	0 dBuV/m									
									Limit1: Limit2:	_
70										
				1 X						
				×						
30.0										
1	000.000 4900.0	0 880	)0.00 12	700.00 1660	0.00 20500	0.00 24400	.00 283	00.00 3220	0.00 4	0000.00 MHz
Free	quency	Rea	ading	Correct	R	esult	Ι.	imit	Margin	
	MHz)		BuV)	Factor (dB/m)		uV/m)		suV/m)	(dB)	Remark
157	80.000	45	5.30	19.38	6	4.68	7	4.00	-9.32	peak
157	80.000	31	.71	19.38	5	1.09	5	4.00	-2.91	AVG
	N/A									

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode			EE 802. ⁻ 5260 MH		Т	<b>Temp/Hum</b> 24(℃)/ 33%R			)/ 33%RH	
Test Item			Harmon	ic	-	Test Da	ate	Decem	ber 4, 201	
Polarize			Horizont			st Engi		Kevin Kuo		
Detector	Polarize         Otelector           10.0         dBuV/m           70		and Av	verage	Te	est Volt	age	120\	/ac / 60Hz	
110.0 dBu¥/m								Limit1:		
								Limit2:		
70										
			1 X							
			ž							
30.0										
1000.000 4900.	UU 8800.0	JU 127	00.00 1660	0.00 20500.00	) 24400	J.OO 2830	)0.00 322(	)0.00	40000.00 MHz	
Frequency (MHz)	Readi (dBu		Correct Factor (dB/m)	Res (dBu)			imit uV/m)	Margin (dB)	Remark	
15770.000	40.9	2	19.35	60.	27	74	4.00	-13.73	peak	
15770.000	25.7	6	19.35	45.	11	54	4.00	-8.89	AVG	
N/A										

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		IEEE 802.11 5280 MHz		Ten	np/Hum	<b>24(</b> ℃)/	′ 33%RH
Test Item		Harmonic			st Date		er 5, 201
Polarize		Vertical			Engineer		n Kuo
Detector	F	Peak and Aver	age	Test	Voltage	120Va	c / 60Hz
110.0 dBuV/m						Limit1:	
						Limit2:	_
70							
		1 X					
		ž.					
30.0							
1000.000 4900.	DO 8800.00	12700.00 16600.0	0 20500.00	24400.00	28300.00 3220	00.00 40	000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resul (dBuV/		Limit (dBuV/m)	Margin (dB)	Remark
15840.000	41.82	19.55	61.37	,	74.00	-12.63	peak
15840.000	31.60	19.55	51.15	5	54.00	-2.85	AVG
N/A							

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		EEE 802.11a 5280 MHz		Те	mp/Hum	<b>24(</b> ℃)	/ 33%RH
Test Item		Harmonic		Te	est Date		oer 5, 201
Polarize		Horizontal			Engineer		in Kuo
Detector	Pe	ak and Aver	age	Tes	t Voltage	120Va	ic / 60Hz
110.0 dBu¥/m						Limit1:	
						Limit2:	
70		1					
		1 X					
		, X					
30.0							
1000.000 4900.0	0 8800.00	12700.00 16600.00	D 20500.00	24400.0	0 28300.00 32	200.00 4	0000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/r		Limit (dBuV/m)	Margin (dB)	Remark
15840.000	45.05	19.55	64.60		74.00	-9.40	peak
15840.000	32.09	19.55	51.64		54.00	-2.36	AVG
N/A							

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	;	IL	EE 802.11 5320 MHz		Te	emp/Hi	um	<b>24(</b> ℃)	/ 33%RH
Test Item			Harmonic			est Da			oer 5, 201
Polarize			Vertical			st Engi		Kevin Kuo	
Detector	Detector           10.0         dBuV/m           70		ak and Ave	rage	Те	st Volta	age	120Va	ac / 60Hz
110.0 dBuV/m									
								Limit1: Limit2:	_
70									
			1						
			× 1						
			2						
			×						
20.0									
	).00 88	800.00 12	2700.00 16600.0	0 20500.00	24400.	00 2830	0.00 3220	)0.00 4	0000.00 MHz
			Correct						
Frequency (MHz)		ading BuV)	Factor (dB/m)	Resu (dBuV			mit uV/m)	Margin (dB)	Remark
15950.000	4	0.46	19.88	60.3	4	74	1.00	-13.66	peak
15950.000	2	8.93	19.88	48.8	51	54	1.00	-5.19	AVG
N/A									

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		EEE 802.11a 5320 MHz	a /	Tei	mp/Hum	<b>24(</b> °C)∕	′ 33%RH
Test Item		Harmonic			est Date		er 5, 201
Polarize		Horizontal			Engineer		in Kuo
Detector	Pe	ak and Aver	age	Tes	t Voltage	120Va	c / 60Hz
110.0 dBuV/m						Limit1:	_
						Limit2:	_
70							
		_					
		1 X					
		*					
30.0							
1000.000 4900.0	)0 8800.00	12700.00 16600.00	0 20500.00	24400.00	) 28300.00 322	00.00 40	000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resulf (dBuV/r		Limit (dBuV/m)	Margin (dB)	Remark
15970.000	41.43	19.94	61.37		74.00	-12.63	peak
15970.000	31.28	19.94	51.22		54.00	-2.78	AVG
N/A							

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		02.11n HT2 260 MHz	0 /	Te	emp/Hi	um	<b>24(</b> ℃)	)/ 33%RH
Test Item		armonic			est Da			ber 4, 2017
Polarize		/ertical			st Engi			/in Kuo
Detector	Peaka	and Average	e	Те	st Volta	age	120Va	ac / 60Hz
110.0 dBu∀/m							Limit1:	_
							Limit2:	_
70		1						
		×.						
30.0								
1000.000 4900	.00 8800.00 12	2700.00 16600.00	) 20500.00	24400.	00 2830	0.00 322	00.00 4	10000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resı (dBuV			mit JV/m)	Margin (dB)	Remark
15780.000	47.16	19.38	66.5	4	74	.00	-7.46	peak
15780.000	31.85	19.38	51.2	3	54	.00	-2.77	AVG
N/A								
							1	<u> </u>

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Item Polarize Detector  110.0 dBuV/m  70 70	Ho	armonic prizontal and Avera		Test	est Date Enginee t Voltage	er e	Kevin	er 4, 201 N Kuo 7 60Hz
Detector           110.0         dBu∀/m		and Avera				er e	Kevin 120Vac	i Kuo
110.0 dBuV/m	Peak a						Limit1:	/ 60Hz
70								
70								
70		1 X						
70		1						
70								
		1						
		2×						
30.0 1000.000 4900.00 880	0.00 127	00.00 16600	.00 20500.00	24400.00	) 28300.00	32200.00	4000	00.00 MHz
	JU.UU 127	00.00 16600	.00 20300.00	24400.00	J 28300.00	32200.00	4000	JU. UU MITZ
	ading BuV)	Correct Factor (dB/m)	Resi (dBu\		Limit (dBuV/n		argin dB)	Remark
15790.000 39	9.61	19.41	59.0	)2	74.00	-1	4.98	peak
15790.000 25	5.19	19.41	44.6	60	54.00	-9	9.40	AVG
N/A								

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		802.11n HT2 280 MHz	20 /	Temp/H	lum	<b>24(</b> ℃)	/ 33%RH
Test Item	ŀ	larmonic		Test Da	ate	Decemb	per 5, 201
Polarize		Vertical		Test Eng	ineer		in Kuo
Detector	Peak	and Averag	e	Test Vol	tage	120Va	ac / 60Hz
110.0 dBuV/m	1				1		
						Limit1: Limit2:	_
70							
		1 X					
		*					
30.0	ND 0000 00 1		20500.00	1400.00 000	00.00 000	0.00	
1000.000 4900.0	0 8800.00 1	2700.00 16600.00	20500.00 2	4400.00 283	00.00 322	00.00 40	0000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)		imit suV/m)	Margin (dB)	Remark
15830.000	44.07	19.52	63.59	7	4.00	-10.41	peak
15830.000	31.93	19.52	51.45	5	4.00	-2.55	AVG
N/A							

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		02.11n HT2 280 MHz	20 /	Temp/Hum	າ <b>24(</b> ℃	)/ 33%RH
Test Item		larmonic		Test Date		ber 5, 2017
Polarize	H	lorizontal		Test Engine		vin Kuo
Detector	Peak	and Averag	e	Test Voltag	e 120V	/ac / 60Hz
110.0 dBu¥/m					Limit1: Limit2:	
70						
30.0 1000.000 4900.0	00 8800.00 12	2700.00 16600.00	0 20500.00	24400.00 28300.00	32200.00	40000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m	Limi ) (dBuV/		Remark
15840.000	51.08	19.55	70.63	74.00	0 -3.37	peak
15840.000	32.03	19.55	51.58	54.00	) -2.42	AVG
N/A						

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		02.11n HT2 320 MHz	0 /	Temp/Hum		' 33%RH
Test Item		armonic		Test Date		er 5, 2017
Polarize		/ertical		Test Engineer		in Kuo
Detector	Peaka	and Average	e	Test Voltage	120Va	c / 60Hz
110.0 dBu∀/m					Limit1: Limit2:	_
70						
1000.000 4900.	.00 8800.00 12	2700.00 16600.00	0 20500.00 24	4400.00 28300.00 32	2200.00 40	000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
15960.000	41.00	19.90	60.90	74.00	-13.10	peak
15960.000	30.07	19.90	49.97	54.00	-4.03	AVG
N/A						
					I	1

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	53	)2.11n HT2( )20 MHz	0 /	Те	emp/Hu	ım	<b>24(</b> °C)	/ 33%RH
Test Item		armonic			est Dat			per 5, 201
Polarize		orizontal			t Engir			rin Kuo
Detector	Peak a	and Average	e	Te	st Volta	ige	120Va	ac / 60Hz
110.0 dBuV/m							Limit1:	_
70								
30.0 1000.000 4900.	00 8800.00 12	700.00 16600.00	) 20500.00	24400.	00 28300	.00 3220	0.00 4	0000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resu (dBuV/		Lir (dBu		Margin (dB)	Remark
15960.000	45.56	19.90	65.46	6	74.	.00	-8.54	peak
15960.000	30.92	19.90	50.82	2	54.	.00	-3.18	AVG
N/A								

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		802.11n HT4 270 MHz	.0 /	Temp/H	um	<b>24(</b> ℃)	/ 33%RH
Test Item	ŀ	larmonic		Test Da	ate	Decemb	oer 5, 201
Polarize		Vertical		Test Engi	neer		in Kuo
Detector	Peak	and Averag	e	Test Volt	age	120Va	nc / 60Hz
110.0 dBuV/m							
						Limit1: Limit2:	_
70		1					
		×					
30.0							
1000.000 4900.0	0 8800.00 1	2700.00 16600.00	20500.00 2	4400.00 2830	10.00 322	00.00 4	0000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)		imit uV/m)	Margin (dB)	Remark
15810.000	42.84	19.46	62.30	74	4.00	-11.70	peak
15810.000	31.45	19.46	50.91	54	4.00	-3.09	AVG
N/A							

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		02.11n HT4 270 MHz	10 /	Temp/H	lum	<b>24(</b> °C)	/ 33%RH
Test Item	F	larmonic		Test D	ate	Decemb	er 5, 201
Polarize	Н	orizontal		Test Engineer			in Kuo
Detector	Peak	and Averag	je	Test Vol	tage	120Va	ic / 60Hz
110.0 dBuV/m						Limit1: Limit2:	_
70							
30.0 1000.000 4900.0	0 8800.00 12	700.00 16600.00	) 20500.00 ;	24400.00 283	00.00 3220	0.00 40	0000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m		₋imit 3uV/m)	Margin (dB)	Remark
15790.000	46.64	19.41	66.05	7	4.00	-7.95	peak
15790.000	31.81	19.41			4.00	-2.78	AVG
N/A							

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		02.11n HT4 310 MHz	0 /	Te	emp/H	um	<b>24(</b> °C)	)/ 33%RH	
Test Item		armonic			ēst Da		December 13, 20		
Polarize		/ertical			st Engi			/in Kuo	
Detector	Peak	and Average	е	Те	st Volta	age	120Va	ac / 60Hz	
110.0 dBu∀/m									
							Limit1: Limit2:		
70									
		1 X							
		*							
30.0									
1000.000 4900.	00 8800.00 12	2700.00 16600.00	) 20500.00	24400	.00 2830	0.00 322	00.00 4	0000.00 MHz	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resı (dBuV			mit JV/m)	Margin (dB)	Remark	
15930.000	36.17	19.81	55.9	98 74.00		-18.02	peak		
15930.000	26.84	19.81	46.6	5	54	.00	-7.35	AVG	
N/A									

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		02.11n HT4 310 MHz	0 /	Temp/Hu	n	<b>24(</b> °C)	/ 33%RH
Test Item		armonic		Test Date			er 13, 201
Polarize		orizontal		Test Engin			rin Kuo
Detector	Peak	and Average	e	Test Volta	ge	120Va	ac / 60Hz
110.0 dBuV/m							
						Limit1:	-
						Limit2:	
70							
		1					
		×					
30.0							
1000.000 4900	.00 8800.00 1	2700.00 16600.00	) 20500.00 24	400.00 28300.	)0 3220	0.00 4	0000.00 MHz
		0					
Frequency	Reading	Correct Factor	Result	Lim (dBu)		Margin	Remark
(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBu\	////)	(dB)	
15920.000	36.84	19.79	56.63	74.0	00	-17.37	peak
15920.000	27.24	19.79	47.03	54.0	00	-6.97	AVG
N/A							
	1						

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		2.11ac VHT80 90 MHz	ד ^{א כ}	emp/Hum	<b>24(</b> °C)/	33%RH
Test Item		armonic	-	Test Date		er 13, 2017
Polarize		/ertical		st Engineer		n Kuo
Detector	Peak a	and Average	Te	est Voltage	120Va	c / 60Hz
110.0 dBuV/m					Limit1:	
					Limit2:	_
70						
70						
	1					
30.0						
1000.000 4900	).00 8800.00 1	2700.00 16600.00	20500.00 24400	0.00 28300.00 3220	00.00 40	000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10580.000	33.34	15.10	48.44	74.00	-25.56	peak
N/A						
	1	1 1		I	I	
Remark:						

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEE		.11ac VH 90 MHz	T80 /	Te	emp/Hu	IM	<b>24(</b> ℃)	/ 33%RH	
Test Item			armonic		Т	est Dat	e		er 13, 201	
Polarize			orizontal			st Engin		Kevin Kuo		
Detector		Peak a	ind Avera	ge	Те	st Volta	ige	120Va	ac / 60Hz	
110.0 dBu∀/m								Limit1:	_	
								Limit2:		
70										
		1								
30.0	00.00 000	0.00 1/	2700.00 1000	0.00 20500.00	21100	00 20200	00 222	0.00 4	0000 00 1411	
1000.000 49	00.00 880	0.00 12	2700.00 1660	0.00 20500.00	24400.	00 28300	.00 322	00.00 4	0000.00 MHz	
Frequency (MHz)		ding BuV)	Correct Factor (dB/m)	Res (dBu\		Lin (dBu		Margin (dB)	Remark	
10580.000	34	.11	15.10	49.2	21	74.	.00	-24.79	peak	
N/A										
									1	
	1		1	1						

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

## Above 1G Test Data for UNII-2c

Test Mode		EEE 802.11a 5500 MHz	-	Te	emp/H	um	<b>24(</b> °C)	)/ 33%RH
Test Item		Harmonic Test Date December			ber 5, 201			
Polarize		Vertical			t Engi			vin Kuo
Detector	Pe	ak and Aver	age	Tes	st Volt	age	120Va	ac / 60Hz
110.0 dBuV/m								
							Limit1: Limit2:	_
70		1						
		Ś.						
30.0 1000.000 4900.00	) <u>8800.00</u>	12700.00 16600.0	0 20500.00	24400.	00 283(	00.00 3220	0.00 4	40000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resu (dBuV/			imit uV/m)	Margin (dB)	Remark
16500.000	37.68	23.01	60.6	9	74	4.00	-13.31	peak
16500.000	27.86	23.01	50.8	7	54	4.00	-3.13	AVG
N/A								
		1						1
mark:								

2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		IEEE 8 550	302.11a 0 MHz	a /	Te	emp/H	um	<b>24(</b> °C	c)/ 33%RH	
Test Item			monic			est Da			nber 5, 201	
Polarize			zontal			st Engi		Kevin Kuo		
Detector		Peak an	d Aver	age	Te	st Volt	age	120\	/ac / 60Hz	
110.0 dBuV/m										
								Limit1: Limit2:	_	
70										
								.00 4		
		1								
		×								
30.0										
1000.000 4900.0	0 8800.00	12700.00	16600.00	) 20500.00	24400.	.00 2830	0.00 3220	)0.00	40000.00 MHz	
Frequency (MHz)	Readin (dBuV)	J Fa	orrect actor B/m)	Resi (dBuV			imit uV/m)	Margin (dB)	Remark	
11000.000	36.22		6.06	52.2	28	74	1.00	-21.72	peak	
N/A										

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

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Test Mode			EE 802. ⁻ 5580 MF		Те	emp/H	um	24(°C)/ 33%R⊦		
Test Item			Harmon			est Da			nber 4,	
Polarize					evin Ku					
Detector		Peak	and Av	reage	Te	st Volt	age	120	Vac / 60	)Hz
110.0 dBu¥/m										
								Limit1: Limit2:		
70										
		1 X								
30.0										
1000.000 4900.0	0 8800.0	0 127	00.00 1660	0.00 20500.00	24400	.00 2830	0.00 3220	0.00	40000.00 M	lHz
Frequency (MHz)	Readi (dBu ^v		Correct Factor (dB/m)	Res (dBu\			imit uV/m)	Margin (dB)	Re	mark
11160.000	34.2	0	16.07	50.2	27	74	4.00	-23.73	р	eak
N/A										

- fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test M				EE 802. 5580 MI			emp/H		24(°C)/ 33%F		
Test If				Harmon			Fest Da			ber 4, 201	
Polar				Horizon			st Engi			/in Kuo	
Deteo	ctor		Peak	c and Av	/erage	Te	est Volt	age	120V	ac / 60Hz	
110.0 dB	uV/m										
									Limit1: Limit2:	_	
70											
30.0											
1000.000	0 4900.00	8800.0	0 127	00.00 1660	00.00 20500.00	) 24400	.00 2830	00.00 3220	00.00 4	40000.00 MHz	
Frequenc (MHz)	су	Readiı (dBu\		Correct Factor (dB/m)	Res (dBu)			imit uV/m)	Margin (dB)	Remark	
11160.00	00	33.5	0	16.07	49.	57	74	4.00	-24.43	peak	
N/A											
	I		I		I						
mark:											

- Measuring frequencies from FGF2 to the Four narmonic of highest fundamental frequency.
   Far above 100 F the FUT reactive was under everyone limit therefore
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Polarize         Vertical         Test Engineer         Kevin Kud           Detector         Peak and Average         Test Voltage         120Vac / 60           110.0         d8wV/m         Imit:         Imit:         Imit:         Imit:           10.0         d8wV/m         Imit:         Imit:         Imit:         Imit:         Imit:           10.0         Imit:         Imit:         Imit:         Imit:         Imit:         Imit:		Temp/Hum 24(°C)/ 33%R
Polarize         Vertical         Test Engineer         Kevin Kud           Detector         Peak and Average         Test Voltage         120Vac / 60           110.0         dBuV/m         Imit:         Imit:         Imit:         Imit:           10.0         dBuV/m         Imit:         Imit:         Imit:         Imit:         Imit:           70         Imit:         Imit:         Imit:         Imit:         Imit:         Imit:           30.0         Imit:         Imit:         Imit:         Imit:         Imit:         Imit:		
110.0       dBuV/m         1100.000       4000.00         1100.000       4000.00         1100.000       4000.00         1100.000       31.83         1100.000       31.83		Test Engineer Kevin Kuo
Image:	etector	Test Voltage 120Vac / 60H
Image:	dBuV/m	
30.0         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1 <th1< th="">         1         1         1</th1<>		
Image: Second		
Image: Second		
Image: Second		
30.0       30.0       30.0       1000.000 4900.00       8800.00       12700.00       16600.00       20500.00       24400.00       28300.00       32200.00       40000.00 M         Frequency (MHz)       Reading (dBuV)       Correct Factor (dB/m)       Result (dBuV/m)       Limit (dBuV/m)       Margin (dB)       Rer         11400.000       31.83       16.08       47.91       74.00       -26.09       pe		
30.0       30.0       30.0       1000.000 4900.00       8800.00       12700.00       16600.00       20500.00       24400.00       28300.00       32200.00       40000.00 M         Frequency (MHz)       Reading (dBuV)       Correct Factor (dB/m)       Result (dBuV/m)       Limit (dBuV/m)       Margin (dB)       Rer         11400.000       31.83       16.08       47.91       74.00       -26.09       pe		
30.0       30.0       30.0       1000.000 4900.00       8800.00       12700.00       16600.00       20500.00       24400.00       28300.00       32200.00       40000.00 M         Frequency (MHz)       Reading (dBuV)       Correct Factor (dB/m)       Result (dBuV/m)       Limit (dBuV/m)       Margin (dB)       Rer         11400.000       31.83       16.08       47.91       74.00       -26.09       pe		
Index         Reading (dBuV)         Correct Factor (dB/m)         Result (dBuV/m)         Limit (dBuV/m)         Margin (dBuV/m)         Rer (dBuV/m)           11400.000         31.83         16.08         47.91         74.00         -26.09         per		
Index         Reading (dBuV)         Correct Factor (dB/m)         Result (dBuV/m)         Limit (dBuV/m)         Margin (dBuV/m)         Rer (dBuV/m)           11400.000         31.83         16.08         47.91         74.00         -26.09         per		
Frequency (MHz)Reading (dBuV)Factor (dB/m)Result (dBuV/m)Limit (dBuV/m)Margin (dB)Rer11400.00031.8316.0847.9174.00-26.09per	JO.000 <b>4</b> 900.00	0 24400.00 28300.00 32200.00 40000.00 MHz
Frequency (MHz)Reading (dBuV)Factor (dB/m)Result (dBuV/m)Limit (dBuV/m)Margin (dB)Rer11400.00031.8316.0847.9174.00-26.09per		
	0.000	91 74.00 -26.09 pea
N/A	/A	

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode			E 802. ⁻ 5700 MF		Те	emp/H	um	<b>24(</b> °C	)/ 33%RH
Test Item			Harmon			est Da			ber 4, 201
Polarize		Horizontal Test Engine				vin Kuo			
Detector		Peak	and Av	reage	Te	st Volt	age	120V	ac / 60Hz
110.0 dBuV/m									
								Limit1: Limit2:	_
70									
		1 X							
30.0									
1000.000 4900.0	DO 8800.	00 1270	00.00 1660	0.00 20500.00	24400	.00 2830	)0.00 322(	00.00	40000.00 MHz
Frequency (MHz)	Read (dBu		Correct Factor (dB/m)	Res (dBu)			imit uV/m)	Margin (dB)	Remark
11400.000	33.5	54	16.08	49.6	62	74	4.00	-24.38	peak
N/A									

fundamental frequency.2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		IEEE 802.1 5720 MH		Terr	ıp/Hum	24(°C)/ 33%F	
Test Item		Harmoni			t Date		er 4, 201
Polarize		Vertical			Engineer		in Kuo
Detector	F	Peak and Ave	erage	Test Voltage 120Vac		c / 60Hz	
110.0 dBu∀/m							
						Limit1: Limit2:	_
70							
		:	1 X				
			×				
30.0							
1000.000 4900.0	0 8800.00	12700.00 16600	0.00 20500.00	24400.00	28300.00 322	00.00 40	0000.00 <b>M</b> Hz
Frequency	Reading	Correct	Resu	ult	Limit	Margin	
(MHz)	(dBuV)	Factor (dB/m)	(dBuV		(dBuV/m)	(dB)	Remark
17160.000	35.68	28.35	64.0		74.00	-9.97	peak
17160.000	22.56	28.35	50.9	)1	54.00	-3.09	AVG
N/A							

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode			E 802.′ 720 M⊦		Те	emp/H	um	24(℃)/ 33%RH	
Test Item			larmon			lest Da			ber 4, 201
Polarize			lorizont			st Engi			vin Kuo
Detector		Peak	and Av	erage	Te	st Volt	age	120V	ac / 60Hz
110.0 dBuV/m								Limit1:	
								Limit2:	_
70									
		X							
30.0									
1000.000 4900.0	)0 8800.0	0 1270	D.OO 1660	0.00 20500.00	24400	.00 2830	0.00 322	00.00	40000.00 MHz
Frequency (MHz)	Readiı (dBu\		Correct Factor (dB/m)	Resi (dBuV			imit uV/m)	Margin (dB)	Remark
11440.000	32.08	8	16.09	48.1	7	74	4.00	-25.83	peak
N/A									
									<u> </u>
emark:									

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		02.11n HT20 500 MHz		Temp/Hum		33%RH
Test Item		armonic		Test Date		er 4, 201
Polarize		/ertical		est Engineer		n Kuo
Detector	Peak	and Average	e	Test Voltage	120Va	c / 60Hz
110.0 dBuV/m					Limit1:	
					Limit1:	
70						
		1				
		Ň.				
		1				
30.0						
1000.000 4900.	00 8800.00 12	2700.00 16600.00	20500.00 24	400.00 28300.00 32	200.00 40	000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
16500.000	37.30	23.01	60.31	74.00	-13.69	peak
16500.000	28.33	23.01	51.34	54.00	-2.66	AVG
N/A						

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		802.11n HT2 500 MHz	20 /	Terr	np/Hum	24(°∁)/ 33%R	
Test Item		larmonic		Tes	st Date	Decemb	er 4, 201
Polarize	F	lorizontal			Engineer	Kev	in Kuo
Detector	Peak	and Averag	e	Test	Voltage	120Va	c / 60Hz
110.0 dBuV/m							
						Limit1: Limit2:	_
70							
		1 X					
		3					
30.0							
1000.000 4900.0	0 8800.00 1.	2700.00 16600.00	20500.00	24400.00	28300.00 32	200.00 40	0000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resul (dBuV/		Limit (dBuV/m)	Margin (dB)	Remark
16490.000	39.30	22.95	62.25	5	74.00	-11.75	peak
16490.000	26.37	22.95	49.32	2	54.00	-4.68	AVG
N/A							

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		02.11n HT2 580 MHz	0 /	Temp/Hum	<b>24(</b> °C)/	/ 33%RH
Test Item	F	larmonic		Test Date	December 5, 201	
Polarize		Vertical		est Engineer		in Kuo
Detector	Peak	and Averag	e	Test Voltage	120Va	c / 60Hz
110.0 dBuV/m						
					Limit1: Limit2:	_
70						
	1 X					
	2 X					
30.0						
1000.000 4900.	00 8800.00 12	2700.00 16600.00	20500.00 244	100.00 28300.00 322	00.00 40	1000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11160.000	38.53	16.07	54.60	74.00	-19.40	peak
11160.000	29.03	16.07	45.10	54.00	-8.90	AVG
N/A						

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		302.11n HT2 580 MHz	20 /	Temp/Hum	24(°C)/ 33%RI	
Test Item		larmonic		Test Date	Decemb	er 5, 201
Polarize	F	lorizontal	1	Fest Engineer		in Kuo
Detector	Peak	and Average	je	Test Voltage	120Va	c / 60Hz
110.0 dBuV/m						
					Limit1: Limit2:	
70						
	1					
	×					
	2 X					
30.0						
1000.000 4900.0	00 8800.00 1	2700.00 16600.00	0 20500.00 24	400.00 28300.00 32	200.00 40	000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11160.000	40.80	16.07	56.87	74.00	-17.13	peak
11160.000	32.87	16.07	48.94	54.00	-5.06	AVG
N/A						

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		02.11n HT20 200 MHz	)/ -	Temp/Hum	<b>24(</b> °C)/	33%RH
Test Item		armonic		Test Date		er 4, 201
Polarize		/ertical		est Engineer		n Kuo
Detector	Peaka	and Average	э Т	est Voltage	120Va	c / 60Hz
110.0 dBuV/m					Limit1: Limit2:	
70						
30.0 1000.000 4900.	.00 8800.00 13	2700.00 16600.00	20500.00 2440	10.00 28300.00 322	00.00 40	000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
17110.000	35.52	28.19	63.71	74.00	-10.29	peak
17110.000	22.20	28.19	50.39	54.00	-3.61	AVG
N/A						

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Fest Mode		302.11n HT20 / 700 MHz	Temp/Hu	um 24	4(℃)/ 33%RH
Test Item	ŀ	Harmonic	Test Da	te De	cember 4, 201
Polarize		lorizontal	Test Engir		Kevin Kuo
Detector	Peak	and Average	Test Volta	age 1	20Vac / 60Hz
110.0 dBuV/m					
					imit1: — imit2: —
70					
		4			
30.0					
1000.000 4900.00	8800.00	12700.00 16600.00 205	0.00 24400.00 28300	).00 32200.00	40000.00 MHz
Frequency (MHz)	Reading (dBuV)			mit Maı ıV/m) (d	
11400.000	34.38	16.08	60.46 74	.00 -23	.54 peak
N/A					
emark:					

2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		02.11n HT20 / ′20 MHz	Т	emp/Hum	24(℃)/ 33%RH	
Test Item	Н	armonic	-	Test Date	December 4, 201	
Polarize	N N	/ertical		st Engineer		n Kuo
Detector	Peak	and Average	Te	est Voltage	120Va	c / 60Hz
110.0 dBu¥/m						
					Limit1: Limit2:	_
70						
	1					
30.0						
1000.000 4900.	00 8800.00 1	2700.00 16600.00	20500.00 24400	1.00 28300.00 322	00.00 40	000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11450.000	36.52	16.09	52.61	54.00	-1.39	AVG
N/A						

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		802.11n HT20 / 5720 MHz	Te	emp/Hum	<b>24(</b> °C)/	33%RH
Test Item		Harmonic		est Date	December 4, 20 ²	
Polarize		Horizontal		st Engineer		n Kuo
Detector	Peak	and Average	Te	st Voltage	120Va	c / 60Hz
110.0 dBuV/m						
					Limit1: Limit2:	_
70						
		1 X				
30.0						
1000.000 4900.0	0 8800.00	12700.00 16600.00 20	i00.00 2 <b>44</b> 00.	.00 28300.00 3220	DO.OO 40	000.00 MHz
Frequency (MHz)	Reading (dBuV)		Result IBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11440.000	35.20	16.09	51.29	54.00	-2.71	AVG
N/A						
emark:						

2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		802.11n HT4 510 MHz	ר / כ	ſemp/Hum	24(°C)/ 33%I	
Test Item	ŀ	Iarmonic		Test Date	December 4, 20	
Polarize		Vertical		est Engineer		in Kuo
Detector	Peak	and Average	e T	est Voltage	120Va	c / 60Hz
110.0 dBuV/m						
					Limit1: Limit2:	_
70						
/0						
	1 X					
30.0 1000.000 <b>4</b> 900.0	DO 8800.00 1	2700.00 16600.00	20500.00 2440	0.00 28300.00 322	00.00 40	000.00 MHz
1000.000 4300.0	JU 8800.00 I	2700.00 16600.00	20300.00 2440	0.00 28300.00 322	00.00 40	000.00 MHZ
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11020.000	36.10	16.05	52.15	74.00	-21.85	peak
N/A						
		I				

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		802.11n HT4 510 MHz	0/ т	emp/Hum	24(°C)/ 33%R⊦	
Test Item	ŀ	Harmonic	-	Test Date		er 4, 201 [°]
Polarize		lorizontal		st Engineer		n Kuo
Detector	Peak	and Average	e Te	est Voltage	120Va	c / 60Hz
110.0 dBuV/m						
					Limit1: Limit2:	_
70						
	1					
	×					
30.0						
1000.000 4900.0	DO 8800.00 1	2700.00 16600.00	20500.00 24400	0.00 28300.00 3220	00.00 40	000.00 MHz
Frequency	Reading	Correct Factor	Result	Limit	Margin	Remark
(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Kennark
11020.000	34.00	16.05	50.05	74.00	-23.95	peak
N/A						

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		02.11n HT4 550 MHz	40 /	Temp	/Hum	24(℃)/ 33%RH		
Test Item		larmonic		Test	Date	December 5, 201		
Polarize		Vertical			ngineer		in Kuo	
Detector	Peak	and Averag	je	Test V	oltage	120Va	c / 60Hz	
110.0 dBuV/m								
						Limit1: Limit2:	_	
70								
	1							
	2							
30.0								
1000.000 4900.0	0 8800.00 12	2700.00 16600.00	) 20500.00	24400.00	28300.00 322	00.00 40	0000.00 MHz	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/r		Limit dBuV/m)	Margin (dB)	Remark	
11100.000	36.60	16.07	52.67		74.00	-21.33	peak	
11100.000	29.30	16.07	45.37		54.00	-8.63	AVG	
N/A								

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

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Test Mode		02.11n HT4 550 MHz	0 /	Temp/Hu	ım	<b>24(</b> °C)	/ 33%RH	
Test Item	F	larmonic		Test Dat	te	December 5, 20		
Polarize		lorizontal		Test Engir			in Kuo	
Detector	Peak	and Averag	e	Test Volta	age	120Va	c / 60Hz	
110.0 dBuV/m	1							
						Limit1: Limit2:	_	
70								
	1 ¥							
	2							
	X							
30.0								
1000.000 4900.0	0 8800.00 12	2700.00 16600.00	20500.00 2	4400.00 28300	1.00 3220	DO.OO 40	)000.00 MHz	
_		Correct			•			
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)		nit V/m)	Margin (dB)	Remark	
11090.000	40.91	16.07	56.98		.00	-17.02	peak	
11090.000	30.30	16.07	46.37	54	.00	-7.63	AVG	
N/A								

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		02.11n HT40 670 MHz	/ т	emp/Hum	<b>24(</b> °C)/	33%RH	
Test Item		armonic	-	Test Date	December 4, 201		
Polarize		Vertical		st Engineer	Kevi	n Kuo	
Detector	Peak	and Average	Te	est Voltage	120Va	c / 60Hz	
110.0 dBuV/m							
					Limit1: Limit2:	_	
70							
	1						
30.0							
1000.000 4900	.00 8800.00 1	2700.00 16600.00	20500.00 24400	0.00 28300.00 322	00.00 40	000.00 MHz	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	
11340.000	34.24	16.08	50.32	74.00	-23.68	peak	
N/A							

- fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		02.11n HT40 670 MHz	)/	Temp	o/Hum	24(°C)/ 33%RH		
Test Item		armonic			Date	December 4, 201		
Polarize		orizontal			ngineer		in Kuo	
Detector	Peak	and Average		Test \	/oltage	120Va	c / 60Hz	
110.0 dBu¥/m								
						Limit1: Limit2:	_	
70								
	*							
30.0								
1000.000 4900.	00 8800.00 1	2700.00 16600.00	20500.00	24400.00	28300.00 322	00.00 40	0000.00 MHz	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/n		Limit (dBuV/m)	Margin (dB)	Remark	
11340.000	34.64	16.08	50.72		74.00	-23.28	peak	
N/A								
omork:								
mark:	uring freque	noion from 1		ha 10th	hormonia	of highost		

- fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		02.11n HT4 710 MHz	0/	ſemp/Hum	24(℃)/ 33%RH		
Test Item	H	armonic		Test Date	December 4, 20 ²		
Polarize		Vertical		st Engineer		n Kuo	
Detector	Peak	and Average	e T	est Voltage	120Va	c / 60Hz	
110.0 dBu∀/m					Limit1:	_	
					Limit2:	_	
70						_	
10							
	1						
	Ŷ						
30.0							
1000.000 4900	).00 8800.00 1	2700.00 16600.00	) 20500.00 2440	0.00 28300.00 322	00.00 40	000.00 MHz	
		Correct					
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	
11420.000	39.90	16.08	55.98	74.00	-18.02	peak	
11420.000	30.85	16.08	46.93	54.00	-7.07	AVG	
N/A							

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		02.11n HT40 710 MHz	)/ -	Temp/Hum	24(°C)/ 33%RH		
Test Item		armonic		Test Date	December 4, 20		
Polarize		orizontal		est Engineer		in Kuo	
Detector	Peak	and Average	e T	est Voltage	120Va	c / 60Hz	
110.0 dBuV/m							
					Limit1: Limit2:	_	
70							
	1						
30.0							
1000.000 4900.	00 8800.00 1	2700.00 16600.00	20500.00 2440	0.00 28300.00 322	00.00 40	000.00 MHz	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	
11410.000	35.34	16.08	51.42	74.00	-22.58	peak	
N/A							
emark:							

- fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE	802.11ac VF 5530 MHz	IT80 /	Те	mp/Hum	24(°C)/ 33%RH		
Test Item		Harmonic			est Date	December 4, 20 ²		
Polarize		Vertical			t Engineer		in Kuo	
Detector	Pea	ak and Avera	age	Tes	st Voltage	120Va	c / 60Hz	
110.0 dBuV/m								
						Limit1: Limit2:	_	
70								
		X						
30.0								
1000.000 49	00.00 8800.00	12700.00 166	00.00 20500.00	24400.0	10 28300.00 32	200.00 40	000.00 MHz	
Frequency (MHz)	Readin (dBuV)		Resi (dBuV		Limit (dBuV/m)	Margin (dB)	Remark	
11060.000	34.61	16.06	50.6	67	74.00	-23.33	peak	
N/A								
Remark:								

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEI		11ac V⊦ 30 MHz	T80 /	Т	emp/H	um	24(°∁)/ 33%RH			
Test Item			rmonic			lest Da		December 4, 201			
Polarize			rizontal			st Engi			/in Kuo		
Detector	Р	eak a	nd Avera	ge	Te	est Volt	age	120Va	ac / 60Hz		
110.0 dBu∀/m								1:-31.	1		
								Limit1: Limit2:			
70											
10											
		X									
30.0											
1000.000 490	0.00 8800	.00 12	700.00 1660	0.00 20500.	)0 24400	.00 2830	)0.00 322	00.00	10000.00 MHz		
Frequency	Read	ling	Correct	Ro	sult		imit	Margin			
(MHz)	(dBi		Factor (dB/m)		iV/m)		uV/m)	(dB)	Remark		
11060.000	34.	95	16.06	51	.01	74	4.00	-22.99	peak		
N/A											

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		2.11ac VHT8 90 MHz	0/ т	emp/Hum	<b>24(</b> °C)/	33%RH	
Test Item		armonic		Test Date	December 4, 201		
Polarize		/ertical		st Engineer		n Kuo	
Detector	Peak a	and Average	Te	est Voltage	120Va	c / 60Hz	
110.0 dBuV/m							
					Limit1: Limit2:	_	
70							
	1 ×						
30.0							
1000.000 490	10.00 8800.00 1	2700.00 16600.00	20500.00 24400	).00 28300.00 322	00.00 40	000.00 MHz	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	
11380.000	32.77	16.09	48.86	74.00	-25.14	peak	
N/A							

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		11ac VHT8 90 MHz	0/т	ēmp/Hum	24(°C)/ 33%RH			
Test Item		armonic		Test Date	December 4, 201			
Polarize	Ho	orizontal		st Engineer		n Kuo		
Detector	Peak a	Ind Average	Te	est Voltage	120Va	c / 60Hz		
110.0 dBuV/m			· · · · · ·					
					Limit1: Limit2:	_		
						_		
70								
	*							
30.0 1000.000 490	0.00 8800.00 1	2700.00 16600.00	20500.00 2440	0.00 28300.00 322	00.00 40	000.00 MHz		
		Correct						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark		
11380.000	32.51	16.09	48.60	74.00	-25.40	peak		
N/A								
Remark:								

fundamental frequency.2. For above 1GHz, the EUT peak value was under average limit, therefore the

Average value compliance with the average limit

## Above 1G Test Data for UNII-3

Tes	st Mode		IE	IEEE 802.11a / 5745 MHz				ēmp/H	lum	<b>24(</b> °C)	)/ 33%RH	
	est Item				rmon			Test Da		December 4, 207		
	olarize				ertica			st Eng			/in Kuo	
D	etector		Pea	ak a	nd Av	erage	T	est Voli	tage	120Va	ac / 60Hz	
110.0	) dBuV/m											
										Limit1: Limit2:	_	
70												
			1									
30.0												
10	000.000 4900.0	00 88	DO.OO 1	2700.00	0 1660	0.00 20500	.00 2440	0.00 283	00.00 3220	0.00 4	10000.00 MHz	
	juency 1Hz)		ading BuV)	F	orrect Factor dB/m)		esult uV/m)		imit suV/m)	Margin (dB)	Remark	
1149	90.000	33	3.78		16.09	49	9.87	7	4.00	-24.13	peak	
Ν	N/A											
		1		1				1		1	1	

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		IE	EE 802. 5745 MH		Те	emp/H	um	24(°∁)/ 33%RH		
Test Item			Harmon			lest Da		December 4, 20		
Polarize			Horizont		Test Engineer				/in Kuo	
Detector		Pea	ak and Av	verage	Те	st Volt	age	120Va	ac / 60Hz	
110.0 dBuV/m								1.54		
								Limit1: Limit2:	_	
70										
		1								
		×								
30.0 1000.000 4900.0	00 88	00.00 12	2700.00 1660	0.00 20500.0	) 24400	.00 2830	10.00 3220	0.00 4	0000.00 MHz	
Frequency (MHz)		ading BuV)	Correct Factor (dB/m)	Res (dBu)			imit uV/m)	Margin (dB)	Remark	
11490.000	32	2.50	16.09	48.	59	74	4.00	-25.41	peak	
N/A										
				-						

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		EEE 802.11 5745 MHz		Temp/	Hum	<b>24(</b> °C).	/ 33%RH
Test Item		Harmonic	;	Test [			er 4, 201
Polarize		Vertical		Test En			in Kuo
Detector	Pe	Peak and Average			oltage	120Va	c / 60Hz
110.0 dBuV/m	ĺ					1	
						Limit1: Limit2:	_
70							
		1					
		×					
30.0							
1000.000 4900.0	0 8800.00	12700.00 16600.1	00 20500.00	24400.00 2	3300.00 322	00.00 40	)000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resul (dBuV/		Limit BuV/m)	Margin (dB)	Remark
11570.000	34.47	16.01	50.48	3	74.00	-23.52	peak
N/A							
		1					

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		IE	EE 802. ⁻ 5745 MF		Temp/Hum			24(°C)/ 33%RH		
Test Item			Harmon		Test Date				ber 4, 201	
Polarize			Horizont			st Engi			/in Kuo	
Detector		Pea	ik and Av	verage	Те	st Volt	age	120Va	ac / 60Hz	
110.0 dBuV/m								Limit1:		
								Limit1: Limit2:	_	
70										
70										
		1 *								
		2								
		X								
30.0										
1000.000 4900.	00 88	00.00 12	2700.00 1660	0.00 20500.00	24400.	.00 2830	)0.00 3220	00.00 4	10000.00 MHz	
Frequency	Re	ading	Correct	Res	ılt		imit	Margin		
(MHz)		BuV)	Factor (dB/m)	(dBu\			uV/m)	(dB)	Remark	
11570.000	39	9.26	16.01	55.2	27	74	4.00	-18.73	peak	
11570.000	32	2.27	16.01	48.2	28	54	4.00	-5.72	AVG	
N/A										
	-			•		-		-	-	

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IE	EE 802.11a 5825 MHz	/	Temp/Hum	<b>24(</b> °C)/	33%RH
Test Item		Harmonic		Test Date		er 4, 201
Polarize		Vertical		est Engineer		n Kuo
Detector	Pea	ak and Avera	age	Test Voltage	120Va	c / 60Hz
110.0 dBuV/m						
					Limit1: Limit2:	_
70						
	1					
30.0						
1000.000 4900.00	8800.00 12	2700.00 16600.00	20500.00 24	400.00 28300.00 323	200.00 40	000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11650.000	37.28	15.93	53.21	74.00	-20.79	peak
N/A						

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		IEEE 8 582	302.11a 5 MHz	a /	Temp/Hum			<b>24(</b> ℃	)/ 33%RH
Test Item			monic		Test Date		December 5, 20		
Polarize			zontal			st Engi			vin Kuo
Detector		Peak and Average		Te	st Volt	age	120V	ac / 60Hz	
110.0 dBu¥/m								Limit1:	
								Limit ² :	_
70									
		1 X							
		2							
		Ť							
30.0									
1000.000 4900.	00 8800.00	12700.00	16600.00	0 20500.00	24400.	00 2830	0.00 3220	0.00	40000.00 MHz
Frequency	Reading	Co	orrect	Resu	.14		imit	Margin	
(MHz)	(dBuV)	ГС	actor B/m)	(dBuV			uV/m)	(dB)	Remark
11650.000	39.01	1:	5.93	54.9	4	74	4.00	-19.06	peak
11650.000	32.05	1:	5.93	47.9	8	54	4.00	-6.02	AVG
N/A									
								l	I

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		IEEE 802.11n HT20 / 5745 MHz			<b>24(</b> °C).	/ 33%RH
Test Item		larmonic		Test Date	Decemb	er 13, 20 ⁻
Polarize		Vertical		Test Enginee		in Kuo
Detector	Peak	and Averag	e	Test Voltage	120Va	ic / 60Hz
110.0 dBuV/m						
					Limit1: Limit2:	_
70						
	1					
30.0						
1000.000 4900.0	0 8800.00 12	2700.00 16600.00	20500.00 24	400.00 28300.00	32200.00 40	0000.00 MHz
Frequency	Reading	Correct Factor	Result	Limit	Margin	Remark
(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m	) (dB)	
11490.000	34.10	16.09	50.19	74.00	-23.81	peak
N/A						

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		02.11n HT2 745 MHz	0 /	Temp/Hum	24(°C)/ 33%R⊦	
Test Item	F	larmonic		Test Date	December 13, 2	
Polarize	4	lorizontal	Te	est Engineer		in Kuo
Detector	Peak	and Averag	e 1	est Voltage	120Va	c / 60Hz
110.0 dBu¥/m						
					Limit1: Limit2:	_
70						
	1 X					
30.0						
1000.000 4900.00	) 8800.00 12	2700.00 16600.00	20500.00 244	00.00 28300.00 322	00.00 40	000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11490.000	36.63	16.09	52.72	74.00	-21.28	peak
N/A						

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		302.11n HT2 785 MHz	:0/	Temp/	Hum	<b>24(</b> °C)	/ 33%RH
Test Item		larmonic		Test D	Date	Decemb	er 5, 201
Polarize		Vertical		Test Eng			in Kuo
Detector	Peak	and Average	e	Test Vo	ltage	120Va	c / 60Hz
110.0 dBuV/m							
						Limit1: Limit2:	_
70							
	1						
	2						
30.0							
1000.000 4900.0	00 8800.00 1.	2700.00 16600.00	20500.00	24400.00 28	300.00 322	00.00 40	)000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m		Limit BuV/m)	Margin (dB)	Remark
11560.000	40.82	16.02	56.84		74.00	-17.16	peak
11560.000	32.65	16.02	48.67		54.00	-5.33	AVG
N/A							

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		IEEE 802.11n HT20/ 5785 MHz			Temp/Hum		/ 33%RH
Test Item	F	larmonic		Test Date			er 5, 2017
Polarize	H	lorizontal		Test Er		Kev	in Kuo
Detector	Peak	and Averag	e	Test V	oltage	120Va	c / 60Hz
110.0 dBuV/m						Limit1: Limit2:	_
70	1						
	×						
30.0							
1000.000 4900.0	0 8800.00 12	2700.00 16600.00	20500.00	24400.00	28300.00 322	00.00 40	0000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resul (dBuV/i		Limit dBuV/m)	Margin (dB)	Remark
11570.000	40.72	16.01	56.73	3	74.00	-17.27	peak
11570.000	31.05	16.01	47.06	6	54.00	-6.94	AVG
N/A							

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		02.11n HT2 325 MHz	0/	Temp/Hum	<b>24(</b> °C ).	24(°∁)/ 33%RH		
Test Item	Н	armonic		Test Date	Decemb	er 13, 201		
Polarize	١	Vertical	-	Test Enginee	r Kev	in Kuo		
Detector	Peak	and Average	<b>)</b>	Test Voltage	120Va	c / 60Hz		
110.0 dBuV/m					1-14			
					Limit1: Limit2:	_		
70								
	1							
	×							
30.0								
1000.000 4900.0	0 8800.00 1	2700.00 16600.00	20500.00 24	1400.00 28300.00	32200.00 44	0000.00 MHz		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m	Margin ) (dB)	Remark		
11650.000	36.99	15.93	52.92	74.00	-21.08	peak		
N/A								

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Rev.00

Test Mode		02.11n HT2 325 MHz	20/	Temp/Hum	24(°C)/ 33%RH		
Test Item	Н	armonic		Test Date	Decembe	er 13, 201	
Polarize	H	orizontal	Т	est Engineer		n Kuo	
Detector	Peak	and Average	e	Test Voltage	120Va	c / 60Hz	
110.0 dBuV/m							
					Limit1: Limit2:	_	
70							
	1 ×						
	2						
30.0	00 0000 00 1	100.00	0 20500.00 24	400.00 20200.00 222	200.00 40	000.00 MU-	
1000.000 4900.	00 8800.00 12	2700.00 16600.00	) 20500.00 24	400.00 28300.00 322	200.00 40	000.00 MHz	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	
11650.000	39.81	15.93	55.74	74.00	-18.26	peak	
11650.000	29.46	15.93	45.39	54.00	-8.61	AVG	
N/A							

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		802.11n HT₄ 755 MHz	40/	Temp/Hum		24(°∁)/ 33%RI		
Test Item	F	larmonic		Test Date			Decemb	er 13, 201
Polarize		Vertical			st Engi			/in Kuo
Detector	Peak	and Averag	e	Те	st Volt	age	120Va	ac / 60Hz
110.0 dBu¥/m							Limit1: Limit2:	—
70								
30.0 1000.000 4900.0	0 8800.00 12	700.00 16600.00	0 20500.00	24400.	00 2830	0.00 3220	00.00 4	0000.00 MHz
Frequency	Reading	Correct Factor	Resu			mit	Margin	Remark
(MHz)	(dBuV)	(dB/m)	(dBuV	/m)	(dB	uV/m)	(dB)	
11510.000	33.09	16.08	49.1	7	74	.00	-24.83	peak
N/A								
					L		<u>I</u>	<u> </u>

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		02.11n HT40 <u>755 MHz</u>	5/	Temp/H	lum	24(°C)/ 33%RH		
Test Item		armonic		Test Da		December 13, 20		
Polarize	H	orizontal		Test Eng			in Kuo	
Detector	Peak	Peak and Average			tage	120Va	c / 60Hz	
110.0 dBu¥/m								
						Limit1: Limit2:	_	
70								
	1							
30.0								
1000.000 4900.0	0 8800.00 12	2700.00 16600.00	20500.00 2	4400.00 283	00.00 322	00.00 40	0000.00 MHz	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)		.imit suV/m)	Margin (dB)	Remark	
11510.000	34.51	16.08	50.59	7	4.00	-23.41	peak	
N/A								
Remark:								

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		02.11n HT4 ′95 MHz	)/	Temp/Hum	24(°C)/ 33%RH		
Test Item	Н	armonic		Test Date	December 13, 20 ²		
Polarize	١	/ertical	Т	est Engineer		n Kuo	
Detector	Peak	and Average	;	Test Voltage	120Va	c / 60Hz	
110.0 dBuV/m							
					Limit1: Limit2:	_	
70							
	1						
30.0							
1000.000 4900.0	)O 8800.00 1;	2700.00 16600.00	20500.00 244	100.00 28300.00 32	200.00 40	000.00 MHz	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	
11590.000	34.08	16.00	50.08	74.00	-23.92	peak	
N/A							
emark:							

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode		IEEE 802.11n HT40/ 5795 MHz			p/Hum	24(°C)/ 33%RH		
Test Item		Harmonic		Tes	t Date		er 13, 201 [°]	
Polarize		Horizontal			Ingineer		n Kuo	
Detector	Pea	Peak and Average			Voltage	120Va	c / 60Hz	
110.0 dBu¥/m								
						Limit1: Limit2:	_	
70								
		1 X						
30.0								
1000.000 490	D.00 8800.00	12700.00 16600.0	00 20500.00	24400.00	28300.00 322	DO.OO 40	000.00 MHz	
_		Correct						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Resu (dBuV		Limit (dBuV/m)	Margin (dB)	Remark	
11590.000	34.54	16.00	50.5	4	74.00	-23.46	peak	
N/A								
emark:	C	encies from		1				
1 1/100	DURINA troau	analog tram						

2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Rev.00

Test Mode		2.11ac VHT8 75 MHz	80/	Temp/Hum		n	24(°∁)/ 33%RH	
Test Item		armonic		Te	est Date		December 13, 20	
Polarize		'ertical			t Engine			/in Kuo
Detector	Peak a	ind Average	;	Tes	st Voltag	e	120Va	ac / 60Hz
110.0 dBuV/n	1						Limit1: Limit2:	_
70								
30.0 1000.000 45	1 X 100.00 8800.00 12	2700.00 16600.00	) 20500.00	24400.0	0 28300.0	0 3220	00.00 4	10000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resu (dBuV/		Limi (dBuV		Margin (dB)	Remark
11550.000	34.11	16.04	50.1	5	74.0	0	-23.85	peak
N/A								

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

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Test Mode	IE		02.11a 5775 M	c VHT8 <u>Hz</u>	80/	Т	emp/H	um	24(°C	)/ 33%RH
Test Item			Harmoi				lest Da			per 13, 2017
Polarize			lorizor			Test Engineer				vin Kuo
Detector		Peak	and A	verage		Te	est Volt	age	120V	ac / 60Hz
110.0 dBu¥/m										
									Limit1: Limit2:	_
70										
			1 X							
30.0										
1000.000 490	0.00 88	300.00	12700.00	16600.00	20500.00	24400	.00 2830	00.00 322	00.00	40000.00 MHz
Frequency (MHz)	Re (d	ading BuV)	Fa	orrect actor B/m)	Resi (dBuV			imit uV/m)	Margin (dB)	Remark
11550.000	3	4.36	10	6.04	50.4	10	74	4.00	-23.60	peak
N/A										
	•		•				-		-	•
Remark:										
Sinain.			encies							

2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

# 4.6 FREQUENCY STABILITY

# 4.6.1 Test Limit

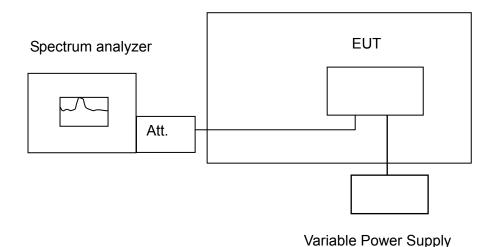
According to §15.407(g) manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the operational description.

# 4.6.2 Test Procedure

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  $-20^{\circ}$ C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with  $10^{\circ}$ C increased per stage until the highest temperature of  $+50^{\circ}$ C reached.

# 4.6.3 Test Setup

Temperature Chamber



# 4.6.4 Test Result

Tomm (°C)		Measured Frequency	51	80	(MHz)		Lir	nit			
Temp. (C)	Voltage (V)		Time (min)				20ppm				
Operating	Frequency:	0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min		
50	5	5180.01576	5180.02562	5180.02041	5180.03778	3.0425	4.9459	3.9402	7.2929	Pass	
40	5	5180.02984	5180.03147	5180.03264	5180.03547	5.7606	6.0753	6.3012	6.8475	Pass	
30	5	5180.02574	5180.02657	5180.02787	5180.03417	4.9691	5.1293	5.3803	6.5965	Pass	
20	5	5179.99514	5179.99623	5180.01540	5180.02368	-0.9382	-0.7278	2.9730	4.5714	Pass	
10	5	5179.98210	5179.98365	5179.98569	5179.98984	-3.4556	-3.1564	-2.7631	-1.9614	Pass	
0	5	5179.97300	5179.97135	5179.97091	5179.97221	-5.2124	-5.5309	-5.6158	-5.3649	Pass	
Tamm ( ⁰ C)		Measured Frequency	51	80	(MHz)		Lir	nit			
Temp. (C)	Voltage (V)		Time (min	ı)			<b>20</b> p	pm		Result	
Operating	Frequency:	0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min		
20	4.5	5179.99514	5179.99721	5180.01536	5180.02541	-0.9382	-0.5386	2.9653	4.9054	Pass	
20	5	5179.99514	5179.99623	5180.01540	5180.02368	-0.9382	-0.7278	2.9730	4.5714	Pass	
20	5.5	5179.99621	5179.99636	5180.01684	5180.02387	-0.7317	-0.7027	3.2510	4.6081	Pass	

Tomp (°C)		Measured Frequency	52	60	(MHz)		Lir	nit		
Temp. (C)	Voltage (V)		Time (min	)		20ppm				Result
Operating	Frequency:	0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
50	5	5260.03540	5260.03687	5260.03751	5260.03812	6.7300	7.0095	7.1312	7.2471	Pass
40	5	5260.02955	5260.03110	5260.03113	5260.03456	5.6179	5.9125	5.9183	6.5703	Pass
30	5	5260.02547	5260.02687	5260.02895	5260.02951	4.8422	5.1084	5.5038	5.6103	Pass
20	5	5260.01236	5260.02179	5260.02317	5260.02574	2.3498	4.1426	4.4049	4.8935	Pass
10	5	5259.99541	5259.99541	5260.01240	5260.01550	-0.8726	-0.8726	2.3574	2.9468	Pass
0	5	5259.99479	5259.98915	5259.98654	5259.98394	-0.9905	-2.0627	-2.5589	-3.0532	Pass
Tomm (°C)		Measured Frequency	52	60	(MHz)	-	Lir	nit	-	
Temp. (°C)	Voltage (V)		Time (min	)			<b>20</b> p	pm		Result
Operating	Frequency:	0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
20	4.5	5260.01236	5260.02176	5260.01557	5260.02668	2.3498	4.1369	2.9601	5.0722	Pass
20	5	5260.01236	5260.02179	5260.02317	5260.02574	2.3498	4.1426	4.4049	4.8935	Pass
20	5.5	5260.01365	5260.02630	5260.02314	5260.02574	2.5951	5.0000	4.3992	4.8935	Pass

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Report No.: T171129W02-RP4

Tamp (°C)		Measured Frequency	55	00	(MHz)		Lir	nit		
remp. ( C)	Voltage (V)		Time (min	ı)		20ppm				Result
Operating	Frequency:	0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
50	5	5500.04136	5500.04236	5500.04321	5500.04321	7.5200	7.7018	7.8564	7.8564	Pass
40	5	5500.03925	5500.03998	5500.04021	5500.04221	7.1364	7.2691	7.3109	7.6745	Pass
30	5	5500.02245	5500.02368	5500.03510	5500.03878	4.0818	4.3055	6.3818	7.0509	Pass
20	5	5500.01268	5500.01687	5500.02157	5500.02236	2.3055	3.0673	3.9218	4.0655	Pass
10	5	5499.99514	5499.99746	5500.00147	5500.01270	-0.8836	-0.4618	0.2673	2.3091	Pass
0	5	5499.98334	5499.98698	5499.98611	5499.98480	-3.0291	-2.3673	-2.5255	-2.7636	Pass
Tomp (°C)		Measured Frequency	55	00	(MHz)		Lir	nit		
remp. ( C)	Voltage (V)		Time (min	ı)			<b>20</b> p	pm		Result
Operating	Frequency:	0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
20	4.5	5500.01236	5500.01457	5500.02168	5500.02351	2.2473	2.6491	3.9418	4.2745	Pass
20	5	5500.01268	5500.01687	5500.02157	5500.02236	2.3055	3.0673	3.9218	4.0655	Pass
20	5.5	5500.01351	5500.02164	5500.02136	5500.22840	2.4564	3.9345	3.8836	4.1527	Pass

Tomp (°C)	Voltage (V)	Measured Frequency	57	45	(MHz)		Lir	mit			
remp. ( C)	voltage (v)		Time (min	Time (min)			20ppm				
Operating	Frequency:	0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min		
50	5	5745.03847	5745.03974	5745.04581	5745.05102	6.6963	6.9173	7.9739	8.8808	Pass	
40	5	5745.02365	5745.02547	5745.02687	5745.03874	4.1166	4.4334	4.6771	6.7433	Pass	
30	5	5745.01568	5745.01365	5745.01687	5745.02160	2.7293	2.3760	2.9365	3.7598	Pass	
20	5	5744.99514	5744.99362	5744.99874	5745.01450	-0.8460	-1.1105	-0.2193	2.5239	Pass	
10	5	5744.98561	5744.98961	5744.99157	5744.99263	-2.5048	-1.8085	-1.4674	-1.2829	Pass	
0	5	5745.00135	5744.98510	5744.97950	5744.98513	0.2350	-2.5936	-3.5683	-2.5883	Pass	
Tomp (°C)		Measured Frequency	57	45	(MHz)		Lir	mit	-		
Temp. (C)	Voltage (V)		Time (min	ı)			<b>20</b> p	opm		Result	
Operating	Frequency:	0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min		
20	4.5	5744.99354	5744.99657	5744.99874	5745.01555	-1.1245	-0.5970	-0.2193	2.7067	Pass	
20	5	5744.99514	5744.99362	5744.99874	5745.01450	-0.8460	-1.1105	-0.2193	2.5239	Pass	
20	5.5	5744.99514	5744.99658	5744.99987	5745.01254	-0.8460	-0.5953	-0.0226	2.1828	Pass	

# 4.7 DYNAMIC FREQUENCY SELECTION

# 4.7.1 Test Limit

FCC according to §15.407 (h), KDB 905462 D02 "compliance measurement procedures for unlicensed-national information infrastructure devices operating in the 5250-5350 MHz and 5470-5725 MHz bands incorporating dynamic frequency selection". and KDB 905462 D03 " U-NII client devices without radar detection capability.

IC according RSS-247 section 6.3, and it harmonized with FCC Part 15 DFS rules.

The EIRP refer section 4.3 output power measurement in this report.

#### Table 1: Applicability of DFS requirements prior to use of a channel

De multimente de la constante		Operational Mode						
Requirement	Master	Client (without radar detection)	Client(with radar detection)					
Non-Occupancy Period	Yes	Not required	Yes					
DFS Detection Threshold	Yes	Not required	Yes					
Channel Availability Check Time	Yes	Not required	Not required					
U-NII Detection Bandwidth	Yes	Not required	Yes					

#### Table 2: Applicability of DFS requirements during normal operation

<b>D</b> e antinement	Operational Mode					
Requirement	Master Device or Client with Radar Detection	Client Without Radar Detection				
DFS Detection Threshold	Yes	Not required				
Channel Closing Transmission Time	Yes	Yes				
Channel Move Time	Yes	Yes				
U-NII Detection Bandwidth	Yes	Not required				

Additional requirements for devices with multiple bandwidth mods	Master Device or Client with Radar Detection	Client Without Radar Detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required
Note: Frequencies selected for statistic frequencies within the radar detection detection bandwidth. For 802.11 de bonded 20 MHz cha	on bandwidth and frequencies	near the edge of the radar frequencies in each of the

#### Table 3: Interference Threshold values, Master or Client incorporating In-Service

-64 dBm
-62 dBm
-64 dBm

**Note 1:** This is the level at the input of the receiver assuming a 0 dBi receive antenna.

**Note 2:** Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.

Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.

#### Table 4: DFS Response requirement values

Parameter	Value		
Non-occupancy period	Minimum 30 minutes		
Channel Availability Check Time	60 seconds		
Channel Move Time	10 seconds See Note 1.		
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.		
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.		

**Note 1:** Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

**Note 2:** The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

**Note 3:** During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

Radar Type	Pulse Width (µsec)	PRI (µsec)	Number of Pulses         Minimum Percentage of Successful Detection		Minimum Number of Trials		
0	1	1428	18	See Not	e 1		
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a Test B: 15 unique PRI values randomly selected within the range of 518-3066 µsec, with a minimum increment of 1 µsec, excluding PRI values selected in Test A	$\operatorname{Roundup} \begin{cases} \left(\frac{1}{360}\right) \\ \left(\frac{19 \cdot 10^{6}}{\operatorname{PRI}_{\mu \operatorname{sec}}}\right) \end{cases}$	60%	30		
2	1-5	150-230	23-29	60%	30		
3	6-10	200-500	16-18	60%	30		
4	11-20	200-500	12-16	60%	30		
Note 1: S	Aggregate (Radar Types 1-4)       80%       120         Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.       80%       120						

#### Table 5 – Short Pulse Radar Test Waveforms

I	Radar Type	Pulse Width (µsec)	Chirp Width (MHz)	Ŭ	Number of Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Number of Trials
	5	50-100	5-20	1000-2000	1-3	8-20	80%	30

#### Table 6 – Long Pulse Radar Test Signal

## Table 7 – Frequency Hopping Radar Test Signal

Radar Type	Pulse Width (µsec)	PRI (µsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Number of Trials
6	1	333	9	0.333	300	70%	30

# 4.7.2 Test Procedure

#### Overview Of EUT With Respect To §15.407 (H) Requirements

The firmware installed in the EUT during testing was:

Firmware Rev: JEDI.MT76x2

The EUT operates over the 5250-5350 MHz range as a Client Device that does not have radar detection capability.

The EUT uses one transmitter connected to two 50-ohm coaxial antenna ports via a diversity switch. Only one antenna port is connected to the test system since the EUT has one antenna only.

The Slave device associated with the EUT during these tests does not have radar detection capability.

WLAN traffic is generated by streaming the video file TestFile.mp2 "6 ½ Magic Hours" from the Master to the Slave in full motion video mode using the media player with the V2.61 Codec package.

The EUT utilizes the 802.11a architecture, with a nominal channel bandwidth of 20 MHz.

The rated output power of the Master unit is < 23dBm (EIRP). Therefore the required interference threshold level is -62 dBm. After correction for antenna gain and procedural adjustments, the required conducted threshold at the antenna port is -62 + 5 = -57dBm.

The calibrated conducted DFS Detection Threshold level is set to -57 dBm. The tested level is lower than the required level hence it provides margin to the limit.

#### Manufacturer's Statement Regarding Uniform Channel Spreading

The end product implements an automatic channel selection feature at startup such that operation commences on channels distributed across the entire set of allowed 5GHz channels. This feature will ensure uniform spreading is achieved while avoiding non-allowed channels due to prior radar events.

# TEST AND MEASUREMENT SYSTEM

### System Overview

The measurement system is based on a conducted test method.

The short pulse and long pulse signal generating system utilizes the NTIA software. The Vector Signal Generator has been validated by the NTIA. The hopping signal generating system utilizes the CCS simulated hopping method and system, which has been validated by the DoD, FCC and NTIA. The software selects waveform parameters from within the bounds of the signal type on a random basis using uniform distribution.

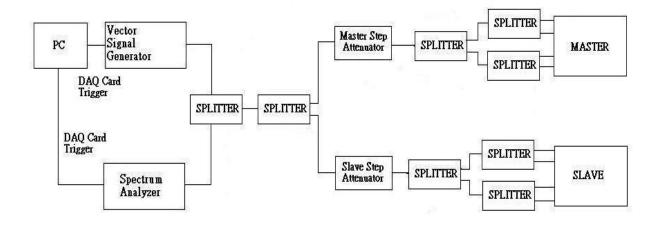
The short pulse types 2, 3 and 4, and the long pulse type 5 parameters are randomized at run-time.

The hopping type 6 pulse parameters are fixed while the hopping sequence is based on the August 2005 NTIA Hopping Frequency List. The initial starting point randomized at run-time and each subsequent starting point is incremented by 475. Each frequency in the 100-length segment is compared to the boundaries of the EUT Detection Bandwidth and the software creates a hopping burst pattern in accordance with Section 7.4.1.3 Method #2 Simulated Frequency Hopping Radar Waveform Generating Subsystem of FCC 06-96 APPENDIX. The frequency of the signal generator is incremented in 1 MHz steps from FL to FH for each successive trial. This incremental sequence is repeated as required to generate a minimum of 30 total trials and to maintain a uniform frequency distribution over the entire Detection Bandwidth.

The signal monitoring equipment consists of a spectrum analyzer set to display 8001 bins on the horizontal axis. The time-domain resolution is 2 msec / bin with a 16 second sweep time, meeting the 10 second short pulse reporting criteria. The aggregate ON time is calculated by multiplying the number of bins above a threshold during a particular observation period by the dwell time per bin, with the analyzer set to peak detection and max hold. The time-domain resolution is 3 msec / bin with a 24 second sweep time, meeting the 22 second long pulse reporting criteria and allowing a minimum of 10 seconds after the end of the long pulse waveform.

Should multiple RF ports be utilized for the Master and/or Slave devices (for example, for diversity or MIMO implementations), 50 ohm termination would be removed from the splitter so that connection can be established between splitter and the Master and/or Slave devices.

#### Conducted Method System Block Diagram



### System Calibration

Connect the spectrum analyzer to the test system in place of the master device. Set the signal generator to CW mode. Adjust the amplitude of the signal generator to yield a measured level of –62 dBm on the spectrum analyzer.

Without changing any of the instrument settings, reconnect the spectrum analyzer to the Common port of the Spectrum Analyzer Combiner/Divider and connect a 50 ohm load to the Master Device port of the test system.

Measure the amplitude and calculate the difference from –62 dBm. Adjust the Reference Level Offset of the spectrum analyzer to this difference. Confirm that the signal is displayed at –62 dBm. Readjust the RBW and VBW to 3 MHz, set the span to 10 MHz, and confirm that the signal is still displayed at –62 dBm.

The spectrum analyzer displays the level of the signal generator as received at the antenna ports of the Master Device. The interference detection threshold may be varied from the calibrated value of –62 dBm and the spectrum analyzer will still indicate the level as received by the Master Device.

Set the signal generator to produce a radar waveform, trigger a burst manually and measure the level on the spectrum analyzer. Readjust the amplitude of the signal generator as required so that the peak level of the waveform is at a displayed level equal to the required or desired interference detection threshold. Separate signal generator amplitude settings are determined as required for each radar type.

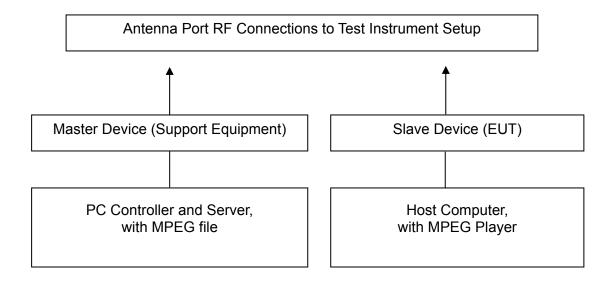
### Adjustment Of Displayed Traffic Level

Establish a link between the Master and Slave, adjusting the Link Step Attenuator as needed to provide a suitable received level at the Master and Slave devices. Stream the video test file to generate WLAN traffic. Confirm that the WLAN traffic level, as displayed on the spectrum analyzer, is at lower amplitude than the radar detection threshold. Confirm that the displayed traffic is from the Master Device. For Master Device testing confirm that the displayed traffic does not include Slave Device traffic. For Slave Device testing confirm that the displayed traffic does not include Master Device traffic.

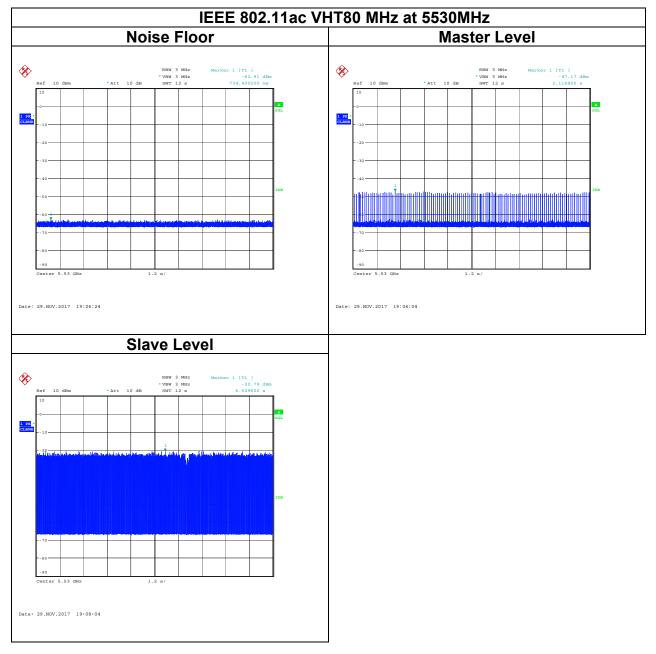
If a different setting of the Master Step Attenuator is required to meet the above conditions, perform a new System Calibration for the new Master Step Attenuator setting.

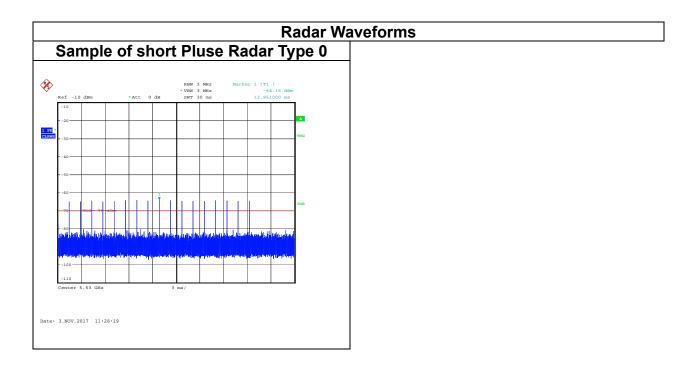


# 4.7.3 Test Setup



# 4.7.4 Test Result





# TEST CHANNEL AND METHOD

All tests were performed at a channel center frequency of 5530 MHz utilizing a conducted test method.

## CHANNEL MOVE TIME AND CHANNEL CLOSING TRANSMISSION TIME

## **GENERAL REPORTING NOTES**

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

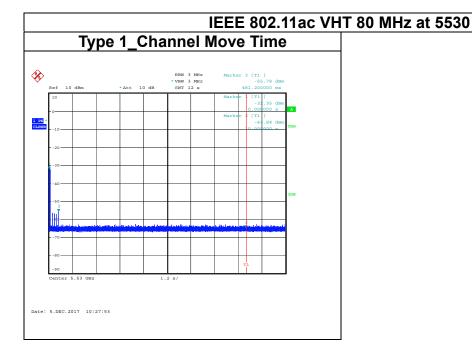
Aggregate Transmission Time =

(Number of analyzer bins showing transmission) * (dwell time per bin)

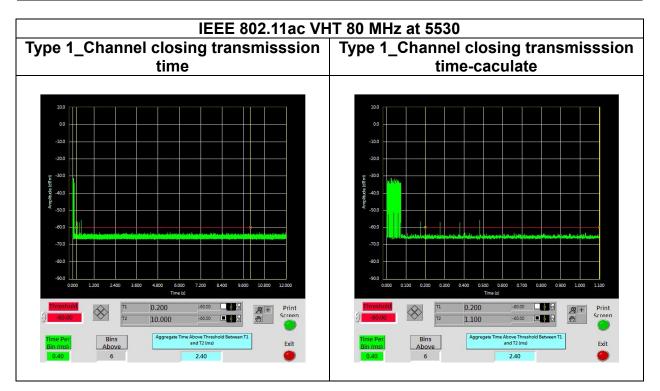
The observation period over which the aggregate time is calculated

Begins at (Reference Marker + 200 msec) and

Ends no earlier than (Reference Marker + 10 sec).



Channel Move Time	Limit
(s)	(s)
0.4812	10



Aggregate Transmission Time	Limit	Margin
(ms)	(ms)	(ms)
2.4	60	-57.6