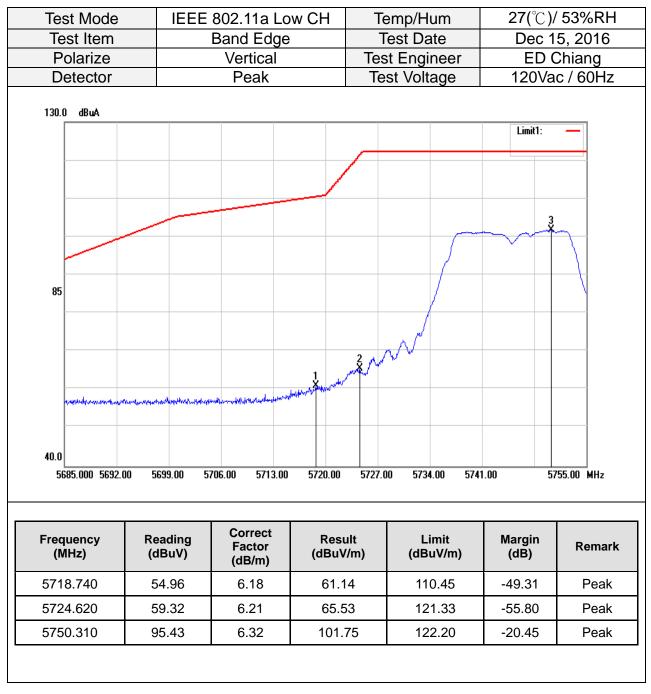
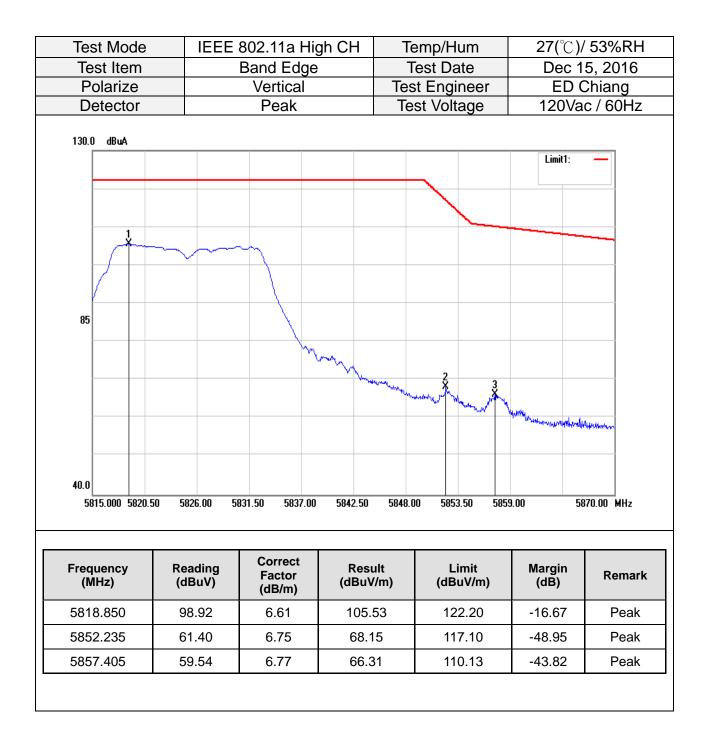


## **Band Edge Test Data for UNII-3**

### For FCC



Test Mode	IEE	EE 802.11a Lo	w CH	Temperature	27(°C)/ 53%RH	
Test Item		Band Edge	)	Test Date	Dec 1	5, 2016
Polarize		Vertical		est Engineer	ED Chiang	
Detector		Average	-	Test Voltage	120Va	c / 60Hz
130.0 dBuA						
					Limit1:	_
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85						
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40.0						
5685.000 5692.0	10 5699.00	5706.00 5713.00	5720.00 573	27.00 5734.00 574	\$1.00 57	755.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5720.070	39.12	6.19	45.31	110.96	-65.65	AVG
5724.900	42.24	6.21	48.45	121.97	-73.52	AVG
	85.83	6.32	92.15	122.20	-30.05	AVG



Test Mode	IEEE	802.11a Hig	gh CH 🛛 Te	emperature	<b>27(°</b> ℃)/	′ 53%RH
Test Item		Band Edge		Test Date	Dec 1	5, 2016
Polarize		Vertical	Те	st Engineer	ED Chiang	
Detector		Average	Т	est Voltage	120Va	c / 60Hz
130.0 dBuA						
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40.0						
5815.000 5820.5	0 5826.00 5	831.50 5837.00	5842.50 5848	.00 5853.50 585	9.00 58	70.00 MHz
		Correct				
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5831.060	88.89	6.66	95.55	122.20	-26.65	AVG
5850.035	44.31	6.74	51.05	122.12	-71.07	AVG
	41.59	6.76	48.35	110.83	-62.48	AVG

Test Mode	IEEE 802.	11n HT20 L	ow CH	Te	emp/Hum	<b>27(°</b> ℃)/	/ 53%RH
Test Item	B	and Edge		Т	est Date	Dec 1	5, 2016
Polarize		Vertical		Tes	t Engineer		Chiang
Detector		Peak			st Voltage		c / 60Hz
130.0 dBuA	·				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
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5685.000 5692.	00 5699.00 5	706.00 5713.00	5720.00	5727.0	0 5734.00 57	41.00 57	755.00 MHz
		Correct					
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Resu (dBuV/		Limit (dBuV/m)	Margin (dB)	Remark
5719.930	67.51	6.19	73.7	0	110.78	-37.08	Peak
5724.480	74.09	6.21	80.3	0	121.01	-40.71	Peak
5750.660	102.42	6.32	108.7	<b>'</b> 4	122.20	-13.46	Peak

Test Mode	IEEE 802.2	11n HT20 L	ow CH	Terr	nperatur	e	27(°(	C) <b>/ 53%</b> ₽	RH
Test Item	Ba	and Edge		Te	est Date		Dec	c 15, 201	6
Polarize		Vertical		Test	Engine	er	ED Chiang		
Detector		Average		Tes	t Voltag	e	120	Vac / 60F	Ιz
130.0 dBuA									
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40.0 5685.000 5692.0	0 5699.00 57	706.00 5713.00	5720.00	5727.00	5734.00	5741	.00	5755.00 MH;	z
	0 5699.00 57		5720.00	5727.00	5734.00	5741	.00	5755.00 MH;	z
	0 5699.00 57 Reading (dBuV)	206.00 5713.00 Correct Factor (dB/m)	5720.00 Resu (dBuV/	lt	5734.00 Limit (dBuV/	t	.00 Margin (dB)	_	
5685.000 5692.0 Frequency	Reading	Correct Factor	Resu	lt ′m)	Limit	t ′m)	Margin	Rem	ark
5685.000 5692.0 Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resu (dBuV/	<b>It</b> ( <b>'m)</b>	Limit (dBuV/	t ( <b>m)</b>	Margin (dB)	Rem	ark G

Test Mode	IEEE 802.1	1n HT20 H	igh CH	Te	mp/Hum	<b>27(°</b> ℃)/	′ 53%RH
Test Item	Ba	and Edge		Test Date			5, 2016
Polarize		Vertical		Tes	t Engineer	ED (	Chiang
Detector		Peak		Tes	st Voltage	120Va	c / 60Hz
130.0 dBuA							
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5815.000 5820.	50 5826.00 5	831.50 5837.00	5842.50	5848.00	) 5853.50	5859.00 58	70.00 MHz
F	Desclines	Correct	Deer		1	Manadia	
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Resu (dBuV/		Limit (dBuV/m)	Margin (dB)	Remark
5830.785	102.37	6.66	109.0	3	122.20	-13.17	Peak
0000.100		1	76.9	5	122.12	-45.17	Peak
5850.035	70.21 64.34	6.74	70.9		110.14		Feak

Test Mode	IEEE 802.1	1n HT20 Hiệ	gh CH 🛛 Te	emperature	<b>27(°</b> ℃)/	′ 53%RH
Test Item	Ba	nd Edge		Test Date	Dec 1	5, 2016
Polarize	١	/ertical		st Engineer		Chiang
Detector	A	verage	Te	est Voltage	120Va	c / 60Hz
130.0 dBuA						
					Limit1:	-
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40.0						~~~
5815.000 5820	.50 5826.00 5	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
5831.445	91.76	6.66	98.42	122.20	-23.78	AVG
5850.035	53.38	6.74	60.12	122.12	-62.00	AVG
			55.86	111.34	-55.48	AVG

Test Mode	IEEE 802.1	1n HT40 Lo	w CH	Temp/Hum	<b>27(°</b> ℃)/	<sup>/</sup> 53%RH
Test Item	Ba	ind Edge		Test Date	Dec 1	5, 2016
Polarize	N	/ertical	Te	est Engineer	ED (	Chiang
Detector		Peak	Т	est Voltage	120Va	c / 60Hz
130.0 dBuA						
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40.0 5680.000 5690	.00 5700.00 5	710.00 5720.00	5730.00 574	).00 5750.00 576	0.00 57	780.00 MHz
3680.000 3630	1.00 3700.00 3	710.00 5720.00	3730.00 574	J.UU 373U.UU 376	iu.uu 5i	780.00 MHZ
		-				
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5715.400	73.85	6.17	80.02	109.51	-29.49	Peak
	70.10	6.20	78.60	118.78	-40.18	Peak
5723.500	72.40	0.20			-	

T ( 1)		1n HT40 Lo	ow CH	Ter	mperat	ture	<b>27(°</b> C).	/ 53%RH
Test Item	Ba	nd Edge		Т	est Da	te	Dec 1	5, 2016
Polarize		/ertical		Tes	t Engi	neer		Chiang
Detector	A	verage			st Volta			ic / 60Hz
130.0 dBuA		-						
							Limit1:	
		/						
85								
		*	2					
40.0								
5680.000 5690.0	00 5700.00 57	710.00 5720.00	5730.00	5740.0	0 5750	.00 5760	).00 5	780.00 MHz
		Correct						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Resu (dBuV			mit uV/m)	Margin (dB)	Remark
5720.100	58.36	6.19	64.5	5	11 <sup>.</sup>	1.03	-46.48	AVG
5724.900	59.86	6.21	66.0	7	12	1.97	-55.90	AVG
5757.000	86.67	6.34	93.0	1	12	2.20	-29.19	AVG

Test Item Polarize Detector	V	nd Edge /ertical			est Date	Dec 1	5, 2016
		lortical					
Detector		entical		Test	Engineer		Chiang
		Peak		Tes	st Voltage	120Va	c / 60Hz
130.0 dBuA							
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40.0							
5770.000 5780.0	0 5790.00 58	300.00 5810.00	5820.00	5830.00	) 5840.00 5	850.00 58	870.00 MHz
-		Correct					
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Resu (dBuV/		Limit (dBuV/m)	Margin (dB)	Remark
5790.800	98.18	6.49	104.6	67	122.20	-17.53	Peak
5851.100	59.28	6.75	66.0	3	119.69	-53.66	Peak
5858.800	58.48	6.78	65.2	6	109.74	-44.48	Peak

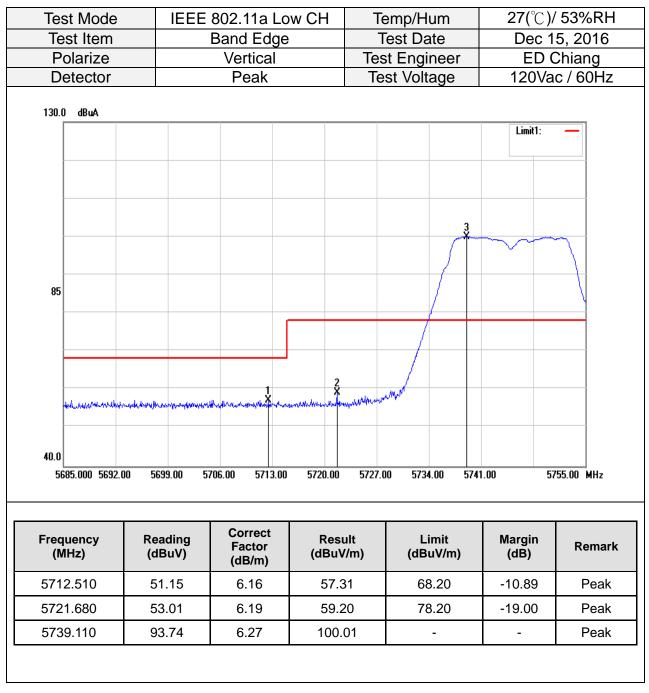
Test Mode	IEEE 802.1	1n HT40 Hi	gh CH	Tempera	ture	27(°∁)/ 53%RH	
Test Item		ind Edge		Test Date		Dec 15, 2016	
Polarize	\	/ertical		Test Engi		ED Chiang	
Detector	A	verage		Test Volta	age	120Va	c / 60Hz
130.0 dBuA							
						Limit1:	-
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40.0							
5770.000 5780	.00 5790.00 58	800.00 5810.00	5820.00	5830.00 5840	.00 5850.	.00 58	870.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m		mit uV/m)	Margin (dB)	Remark
5809.800	87.88	6.57	94.45	12	2.20	-27.75	AVG
5850.100	44.74	6.74	51.48	12	1.97	-70.49	AVG
	43.47	6.76	50.23	44	0.80	-60.57	AVG

Test Mode		2.11ac VHT Mid CH	80 T	ſemp/Hum	<b>27(</b> °C),	<sup>/</sup> 53%RH
Test Item		and Edge		Test Date	Dec 15, 2016	
Polarize		Vertical	Те	est Engineer	ED Chiang	
Detector		Peak	Te	est Voltage	120Va	c / 60Hz
130.0 dBuA			i		Limit1:	
90		- www.w	ww	(why)		
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50.0 5700.000 571	7.00 5734.00 5	751.00 5768.00	5785.00 5802	2.00 5819.00 583	6.00 58	370.00 MHz
	7.00 5734.00 5 Reading (dBuV)	751.00 5768.00 Correct Factor (dB/m)	5785.00 5802 Result (dBuV/m)	2.00 5819.00 583 Limit (dBuV/m)	6.00 54	370.00 MHz Remark
5700.000 571	Reading	Correct Factor	Result	Limit	Margin	
5700.000 5713 Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5700.000 5711 Frequency (MHz) 5714.450	Reading (dBuV) 67.86	Correct Factor (dB/m) 6.16	Result (dBuV/m) 74.02	Limit (dBuV/m) 109.25	Margin (dB) -35.23	Remark Peak
5700.000 5717 Frequency (MHz) 5714.450 5723.800	Reading (dBuV)           67.86           68.82	Correct Factor (dB/m) 6.16 6.20	Result (dBuV/m) 74.02 75.02	Limit (dBuV/m) 109.25 119.46	Margin (dB) -35.23 -44.44	Remark Peak Peak

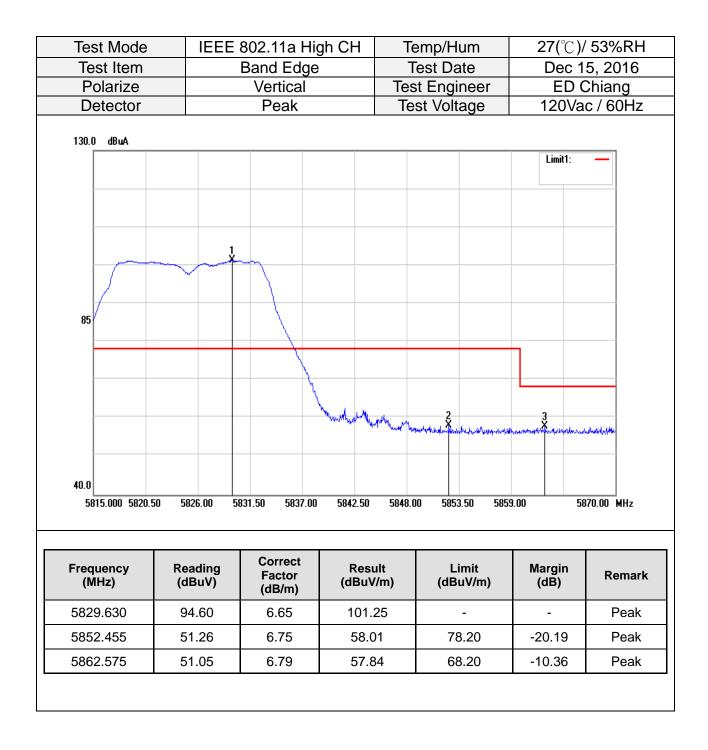
Test Mode		2.11ac VHT 1id CH	<sup>80</sup> Te	emperature	<b>27(</b> °∁)/	<sup>/</sup> 53%RH
Test Item	Ba	nd Edge		Test Date	Dec 1	5, 2016
Polarize	V	<i>'ertical</i>		st Engineer		Chiang
Detector	A	verage	Te	est Voltage	120Va	c / 60Hz
130.0 dBuA						
					Limit1:	
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5700.000 57	17.00 5734.00 5	751.00 5768.00	5785.00 5802	.00 5819.00 583	6.00 58	370.00 MHz
Frequency (MHz	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
	55.72	6.17	61.89	109.67	-47.78	AVG
5715.980					1	1
5715.980 5723.120	55.90	6.20	62.10	117.91	-55.81	AVG
	55.90 82.51	6.20 6.50	62.10 89.01	117.91 122.20	-55.81 -33.19	AVG AVG
5723.120						

## Band Edge Test Data for UNII-3

#### For IC



Test Mode	IEEE	802.11a Lo	w CH	Temperature		27(℃)/ 53%RH	
Test Item		Band Edge			Date	Dec 15, 2016	
Polarize		Vertical			ngineer	ED Chiang	
Detector		Average		Test ∖	/oltage	120Vac / 60Hz	
120.0 dBuA							
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5685.000 5692.	00 5699.00 5	706.00 5713.00	5720.00	5727.00	5734.00 574	1.00 57	755.00 MHz
Frequency	Deading	Correct	Decul	.	Limit	Morgin	
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Resul (dBuV/r		Limit (dBuV/m)	Margin (dB)	Remark
5712.930	36.83	6.16	42.99		68.20	-25.21	AVG
5724.130	37.14	6.20	43.34		78.20	-34.86	AVG
	83.52	6.27	89.79		-	-	AVG



Test Mode	IEEE	802.11a Hi	-	emperature	27(℃)/ 53%RH		
Test Item		Band Edge		Test Date	Dec 15, 2016		
Polarize		Vertical		est Engineer	ED Chiang		
Detector		Average	Т	est Voltage	120Va	c / 60Hz	
130.0 dBuA							
					Limit1:	-	
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85							
40.0				2	3		
5815.000 5820.5	0 5826.00 5	831.50 5837.00	5842.50 5848	3.00 5853.50 585	9.00 58	870.00 MHz	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	
5819.785	84.79	6.61	91.40	-	-	AVG	
	36.95	6.74	43.69	78.20	-34.51	AVG	
5850.530							

Test Mode	IEEE 802.	11n HT20 L	ow CH	Temp/⊢	lum	<b>27(°</b> ℃)/	/ 53%RH
Test Item		and Edge		Test Da	ate	Dec 15, 2010	
Polarize		Vertical		Test Eng	Engineer ED Chiar		Chiang
Detector		Peak		Test Vol	tage	120Va	c / 60Hz
130.0 dBuA							
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40.0							
5685.000 5692.0	00 5699.00 5	706.00 5713.00	5720.00	5727.00 573	4.00 574	1.00 57	755.00 MHz
Frequency	Reading (dBuV)	Correct Factor	Result		.imit	Margin	Remark
(MHz) 5706.840	(dBuV) 51.74	(dB/m) 6.13	(dBuV/n 57.87		8 <b>uV/m)</b> 8.20	(dB) -10.33	Peak
5721.470	54.51	6.19	60.70		8.20	-17.50	Peak
5740.790	97.42	6.28	103.70	)	-	-	Peak

Test Mode	IEEE 802.	11n HT20 L	ow CH 🛛 Te	emperature	27(°C)/ 53%RH	
Test Item	Band Edge			Test Date		5, 2016
Polarize		Vertical		st Engineer		Chiang
Detector		Average	Te	est Voltage	120Va	c / 60Hz
130.0 dBuA						
					Limit1:	-
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85						
		1	2			
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5685.000 5692.00	) 5699.00 57	706.00 5713.00	5720.00 5727.	00 5734.00 5741	1.00 57	'55.00 MHz
-		Correct				
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5711.390	37.11	6.15	43.26	68.20	-24.94	AVG
E704 000	39.63	6.21	45.84	78.20	-32.36	AVG
5724.830						

	nd Edge /ertical Peak		Test Date Test Engineer Test Voltage	ED (	5, 2016 Chiang c / 60Hz
				120Va	
	Peak		Test Voltage		<u>ic / 60Hz</u>
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				Limit1:	_
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5826.00 58	31.50 5837.00	5842.50 5	848.00 5853.50	5859.00 58	870.00 MHz
	Correct				
Reading (dBuV)	Factor (dB/m)				Remark
96.47	6.62	103.09	-	-	Peak
51.34	6.76	58.10	78.20	-20.10	Peak
51.07	6.81	57.88	68.20	-10.32	Peak
	<b>Reading</b> (dBuV) 96.47 51.34	Reading (dBuV)Correct Factor (dB/m)96.476.6251.346.76	S826.00       5831.50       5837.00       5842.50       5         Reading (dBuV)       Correct Factor (dB/m)       Result (dBuV/m)         96.47       6.62       103.09         51.34       6.76       58.10	S826.00       5831.50       5837.00       5842.50       5848.00       5853.50         Reading (dBuV)       Correct Factor (dB/m)       Result (dBuV/m)       Limit (dBuV/m)         96.47       6.62       103.09       -         51.34       6.76       58.10       78.20	Reading (dBuV)         Correct Factor (dB/m)         Result (dBuV/m)         Limit (dBuV/m)         Margin (dB)           96.47         6.62         103.09         -         -           51.34         6.76         58.10         78.20         -20.10

Test Mode	IEEE 802.1	1n HT20 Hi	gh CH 🛛 🤉	Temperature	<b>27(</b> °C)/	<sup>/</sup> 53%RH
Test Item		nd Edge		Test Date	Dec 15, 2016	
Polarize	\	/ertical		est Engineer		Chiang
Detector	A	verage		Test Voltage	120Va	c / 60Hz
120.0 dBuA						
					Limit1:	-
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75						
			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	2		3 A
30.0						
5815.000 5820	1.50 5826.00 56	831.50 5837.00	5842.50 584	18.00 5853.50 585	59.00 58	370.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5831.445	85.17	6.66	91.83	-	-	AVG
5850.530	36.85	6.74	43.59	78.20	-34.61	AVG
	36.88	6.81	43.69	68.20	-24.51	AVG

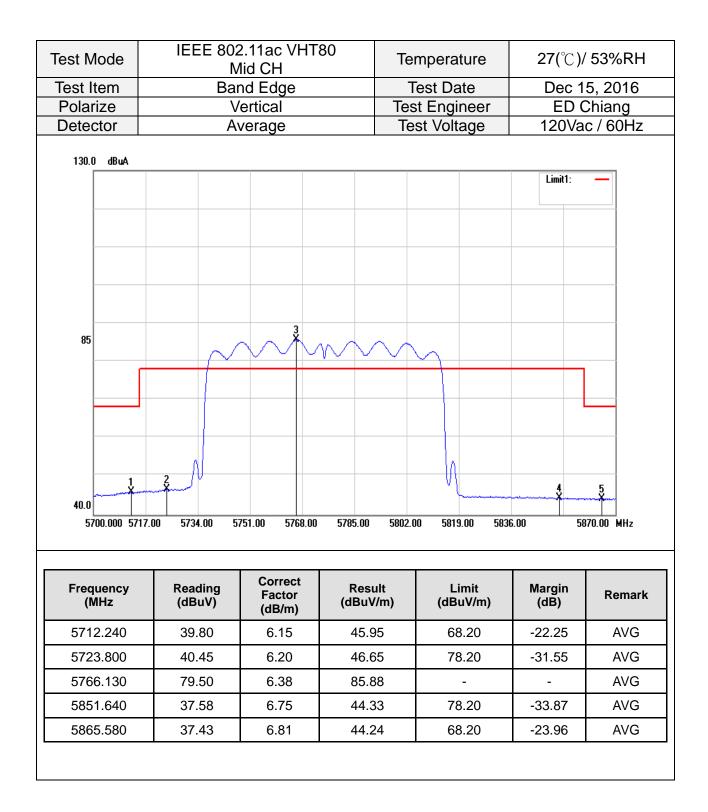
	IEEE 802.1	1n HT40 Lo	w CH T	emp/Hum	<b>27(°</b> ℃)/	<sup>/</sup> 53%RH
Test Item	Ba	and Edge		Test Date	Dec 15, 2016	
Polarize	, v	Vertical	Te	st Engineer	ED (	Chiang
Detector		Peak	Test Voltage 120Vac / 60Hz			c / 60Hz
130.0 dBuA						
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40.0						
5680.000 5690	).00 5700.00 5	710.00 5720.00	5730.00 5740	.00 5750.00 576	0.00 57	780.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
	51.39	6.16	57.55	68.20	-10.65	Peak
5714.400			58.81	78.20	-19.39	Peak
5714.400 5717.800	52.63	6.18	50.01		10.00	I Cult

Test Mode	IEEE 802.1	1n HT40 Lo	W CH Te	emperature	27(℃)/ 53%RH	
Test Item	Band Edge			Test Date	Dec 1	5, 2016
Polarize		Vertical	Te	st Engineer	ED (	Chiang
Detector	A	verage		est Voltage		c / 60Hz
130.0 dBuA						
					Limit1:	-
85						
				V		
40.0		4	3			
5680.000 5690	.00 5700.00 5	710.00 5720.00	5730.00 5740	.00 5750.00 576	0.00 57	780.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5711.800	37.73	6.15	43.88	68.20	-24.32	AVG
5724.600	38.88	6.21	45.09	78.20	-33.11	AVG
	80.86	6.34	87.20	-	-	AVG

Test Mode	IEEE 802.1	1n HT40 Hi	gh CH	Temp/Hum		27(℃)/ 53%RH		
Test Item	Ba	ind Edge	Edge Test Date			Dec 15, 2016		
Polarize		/ertical			ingineer	ED Chiang		
Detector		Peak		Test \	Voltage	120Va	c / 60Hz	
130.0 dBuA								
						Limit1:	-	
	m	many	1					
85								
/						2	3	
			"Marmer	and the second	Marth mathematical da	w. The state way and a second state of the second state of the second state of the second state of the second st	4,	
40.0								
5770.000 5780	.00 5790.00 5	800.00 5810.00	5820.00	5830.00	5840.00 585	0.00 58	370.00 MHz	
Frequency	Reading	Correct	Resul	•	Limit	Margin		
(MHz)	(dBuV)	Factor (dB/m)	(dBuV/i		(dBuV/m)	(dB)	Remark	
5790.500	91.25	6.49	97.74		-	-	Peak	
5851.700	51.37	6.75	58.12	2	78.20	-20.08	Peak	
3031.700			58.06		68.20	-10.14	Peak	

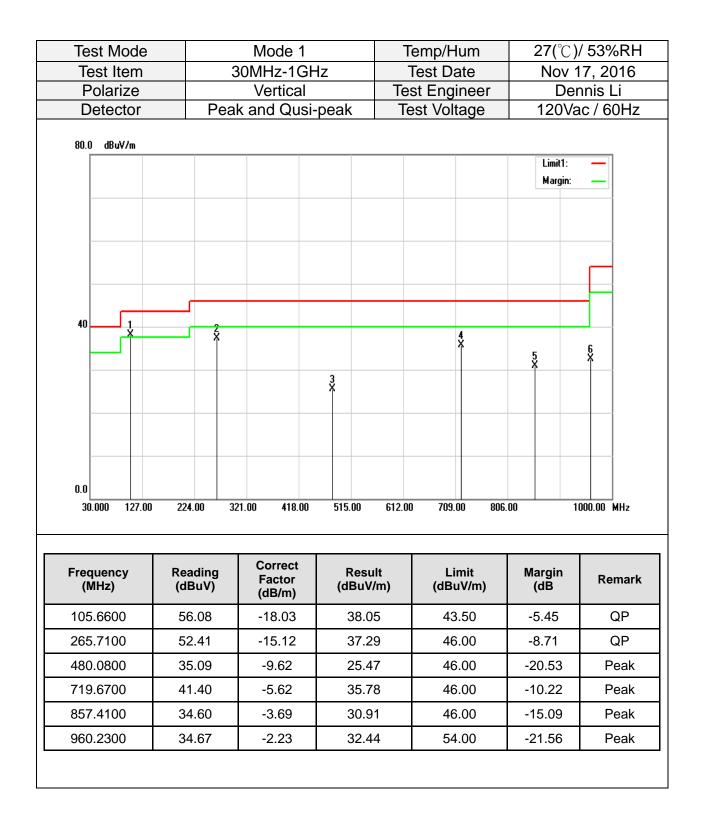
Test Mode	IEEE 802.11n HT40 High CH			Temperature			27(°∁)/ 53%RH		
Test Item		nd Edge		Test Date		Dec 15, 2016			
Polarize	١	/ertical		Test Engineer				D Chia	
Detector	A	verage		Test Voltage		120	)Vac / 6	60Hz	
130.0 dBuA									
							Limi	i1: <u> </u>	
05	1								
85	V								
							2	3	
40.0			5000.00	5000.0					]
5770.000 5780	).00	300.00 5810.00	5820.00	5830.0	0 5840.	00 585	0.00	5870.00	MHZ
		Connect							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resu (dBuV/			nit IV/m)	Margir (dB)	n R	emark
5796.800	80.57	6.51	87.0	8		-	-		AVG
5851.300	36.75	6.75	43.5	0	78	.20	-34.70	0	AVG
5864.400	36.76	6.80	43.5	6	68	.20	-24.64	4	AVG

Test N	Node		2.11ac VH⊺ ∕lid CH	<sup>-80</sup> T	emp/Hum	<b>27(°</b> ℃)/	′ 53%RH
Test I	Item		ind Edge	-	Fest Date	Dec 1	5, 2016
Pola	rize		/ertical	Tes	st Engineer		Chiang
Dete	ctor		Peak	Te	est Voltage	120Va	c / 60Hz
130.0	) dBuA						
						Limit1:	-
		~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~	5		
85							
	1 2 ************************************	educer of Marin I			Wester Sum With	land far welden in the second	5 Prahistory
40.0 57	00.000 5717.0	00 5734.00 5	751.00 5768.00	5785.00 5802.	00 5819.00 583	6.00 58	370.00 MHz
	uency IHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
•	9.690	54.06	6.14	60.20	68.20	-8.00	Peak
5709	9.690 7.170	54.06 53.95	6.14 6.18	60.20 60.13	68.20 78.20	-8.00 -18.07	Peak Peak
5709 5717					-		
5709 5717 5760	7.170	53.95	6.18	60.13	78.20	-18.07	Peak

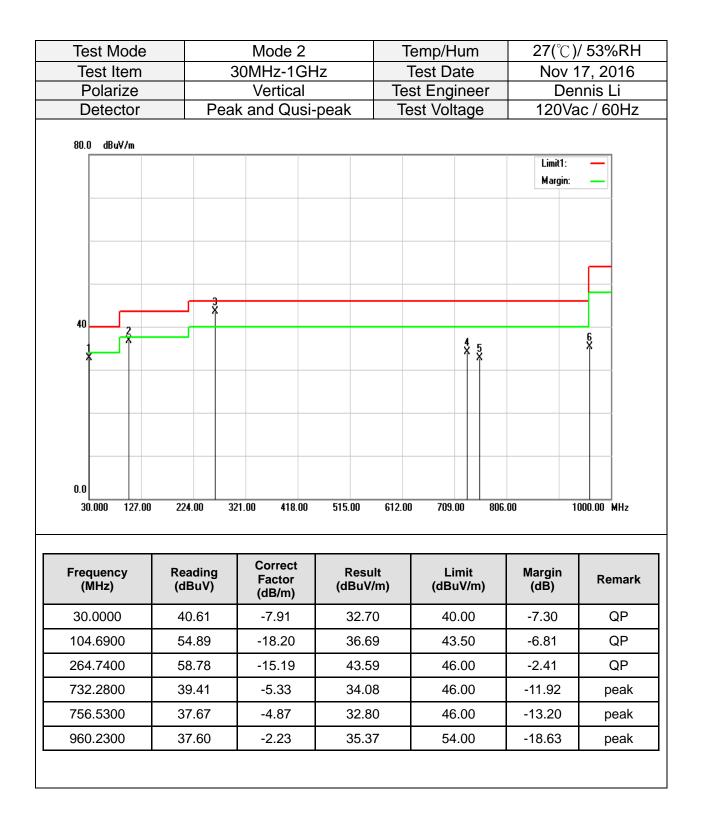


# Below 1G Test Data

Test Mode		Mode 1		Temp	o/Hum	<b>27(°</b> C)/	′ 53%RH
Test Item		30MHz-1GH	Z	Test	Date	Dec 1	6, 2016
Polarize		Vertical			ngineer		Chiang
Detector	Pea	k and Qusi-	peak	Test \	/oltage	120Va	c / 60Hz
80.0 dBuV/m						Limit1:	
						Margin:	_
							F
40 1 2 X X							6 X
			<b>4</b> ×		5 X		
0.0	224.00	321.00 418.00	515.00	612.00	709.00 806.	00 10	)00.00 MHz
Frequency	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m	)	Limit (dBuV/m)	Margin (dB)	Remark
(MHz)		(42/11)					
(MHz) 31.9400	44.61	-9.35	35.26		40.00	-4.74	Peak
	44.61 53.39		35.26 35.53	-	40.00 43.50	-4.74 -7.97	Peak Peak
31.9400		-9.35					
31.9400 106.6300	53.39	-9.35 -17.86	35.53		43.50	-7.97	Peak
31.9400 106.6300 264.7400	53.39 52.32	-9.35 -17.86 -15.19	35.53 37.13		43.50 46.00	-7.97 -8.87	Peak Peak



		Mode 2				um	27(°C)/ 53%RH	
Test Item		30MHz-1GH	Test Date			Nov 17, 2016		
Polarize		Vertical	Test Engineer Test Voltage			Dennis Li 120Vac / 60Hz		
Detector	Pea	k and Qusi-	peak	le	st Volt	age	120V	ac / 60Hz
80.0 dBu¥/m							Limit1:	_
							Margin:	
40	3 4 X X							6 X
2			5 X					
2 X								
0.0	) 224.00	321.00 418.00	515.00	612 00	1 709	00 806	00	1000 00 MHz
0.0 30.000 127.00	) 224.00	321.00 418.00	515.00	612.00	) 709.	.00 806.	.00	1000.00 MHz
	) 224.00	-	515.00	612.00	0 709.	00 806.	00	1000.00 MHz
	) 224.00 Reading (dBuV)	321.00 418.00 Correct Factor (dB/m)	515.00 Rest (dBu)	ult	L	00 806. imit uV/m)	00 Margin (dB)	
30.000 127.00 Frequency	Reading	Correct Factor	Resi	ult //m)	L (dB	imit	Margin	
30.000 127.00 Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resi (dBuV	ult //m) 13	L (dB 4(	imit uV/m)	Margin (dB)	Remark
30.000 127.00 Frequency (MHz) 30.0000	Reading (dBuV) 42.34	Correct Factor (dB/m) -7.91	Resi (dBuV 34.4	ult //m) 13 )3	L (dB 4(	<b>imit</b> uV/m) 0.00	Margin (dB) -5.57	Remark
30.000 127.00 Frequency (MHz) 30.0000 113.4200	Reading (dBuV) 42.34 41.69	Correct Factor (dB/m) -7.91 -16.66	Rest (dBu) 34.4 25.0	ult //m) 13 03	L (dB 4( 4(	<b>imit</b> uV/m) 0.00 3.50	Margin (dB) -5.57 -18.47	Remark QP QP
30.000 127.00 Frequency (MHz) 30.0000 113.4200 201.6900	Reading (dBuV) 42.34 41.69 49.78	Correct Factor (dB/m) -7.91 -16.66 -15.67	Rest (dBu) 34.4 25.0 34.1	ult //m) 13 11 199	L (dB 4( 4; 4; 4(	<b>imit</b> uV/m) 0.00 3.50 3.50	Margin (dB) -5.57 -18.47 -9.39	Remark QP QP peak



Test Mode	IEEE	802.11a Lo	W CH T	emp/Hum	27(°∁)/ 53%RH		
Test Item		Harmonic		Test Date	Dec 16, 2016		
Polarize		Vertical		st Engineer	ED Chiang		
Detector	Pea	ak and Aver	age Te	est Voltage	120Vac / 60Hz		
110.0 dBuA							
					Limit1: — Limit2: —		
70							
	1 2	*					
		57					
30.0							
1000.000 4900.	00 8800.00 1	2700.00 16600.00	0 20500.00 2440	0.00 28300.00 3220	00.00 40	0000.00 MHz	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	
8620.000	34.12	13.70	47.82	74.00	-26.18	Peak	
10360.000	32.76	16.52	49.28	74.00	-24.72	Peak	
10360.000	21.93	16.52	38.45	54.00	-15.55	AVG	
15540.000	32.58	19.04	51.62	74.00	-22.38	Peak	
	1		(	54.00	1	1	

## Above 1G Test Data for UNII-1

#### 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

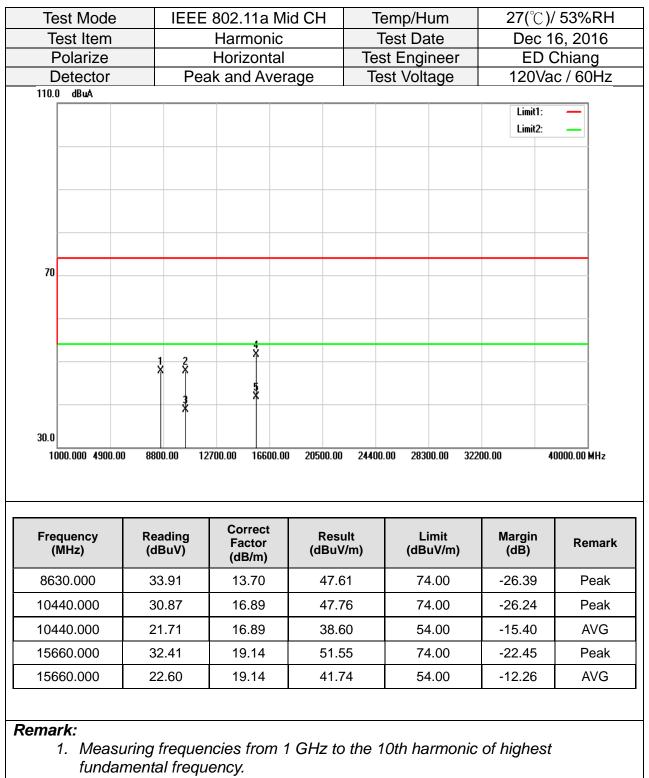
	st Mode		IEEE 802.11a Low CH					Temp/Hum			27(°C)/ 53%R⊦			
	est Item		Harmonic					Test Date				Dec 16, 2016		
	Polarize		Horizontal Peak and Average					Test Engineer Test Voltage			ED Chiang 120Vac / 60Hz			
D	etector		Pea	ik and	Aver	age		lest \	/olta	ge	12	UVa	<u>c/60</u>	HZ
110.0	) dBuA											nit1: nit2:	_	
70			2 3 3 2 3 3 2 0 0 12	700.00	4 5 5 8 16600.00	0 20500			28300.	00 322	00.00	41		IHz
L	00.000 4900.00	) 8800.0						100.00	20300.					
10 Free	quency MHz)	Read (dBu			rect ctor s/m)	Re	esult suV/m)		Lim (dBu\	it	Marg (dB)		Ren	nark
Frec (N	quency	Read	uV)¯	Fac (dB	ctor	Re (dB	esult		Lim	iit //m)	Marg	)	-	<b>nark</b> eak
10 Frec (M 861	quency MHz)	Read (dBu	u <b>V)</b> 09	Fac (dB 13.	ctor 5/m)	Re (dB	esult suV/m)		Lim (dBu\	iit //m)	Marg (dB)	) 22	Pe	
10 Frec (N 861 103	<b>quency</b> MHz) 10.000	Read (dBu 34.0	<b>µV)</b> 09 55	Fac (dB 13. 16.	<b>ctor</b> 5 <b>/m)</b> .69	<b>Re</b> (dB	esult suV/m) 7.78		Lim (dBu\ 74.(	<b>it</b> //m) 00	Marg (dB) -26.2	) 22 93	Pe	eak
10 Free (N 861 103 103	<b>quency</b> MHz) 10.000 60.000	Read (dBu 34.( 33.5	<b>↓V)</b> 09 55 77	Fac (dB 13. 16. 16.	.69 .52	(dB 47 50 40	esult suV/m) 7.78 0.07		Lim (dBu\ 74.( 74.(	<b>it</b> //m) 00 00	Marg (dB) -26.2 -23.9	) 22 )3 71	Pe Pe A\	eak eak

- 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

Rev.00

Test Mode	IEEE	EEE 802.11a Mid CH Temp/Hum			27(°C)/ 53%R			
Test Item		Harmonic			est Da			16, 2016
Polarize		Vertical			st Engi			Chiang
Detector	Pe	ak and Aver	age	le	st Volt	age	1200	/ac / 60Hz
110.0 dBuA								
							Limit1:	—
							Limit2:	
70								
		4						
	1 2							
	X X							
	3	5 X						
	*							
30.0								
30.0 1000.000 4900.0	DO 8800.00 ·	12700.00 16600.00	0 20500.00	24400	.00 283	DO.OO 322	00.00	40000.00 MHz
	00 8800.00 ···	12700.00 16600.00	0 20500.00	24400	.00 283	DO.OO 322	00.00	40000.00 MHz
	JO 8800.00	12700.00 16600.00	0 20500.00	24400	.00 283	00.00 322	00.00	40000.00 MHz
1000.000 4900.0		Correct						
	00 8800.00 Reading (dBuV)		0 20500.00 Resu (dBuV	ılt	L	00.00 322 imit uV/m)	00.00 Margin (dB)	40000.00 MHz
1000.000 4900.0	Reading	Correct Factor	Resu	ılt /m)	L (dB	imit	Margin	
1000.000 4900.0 Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resu (dBuV	<b>ilt</b> / <b>m)</b> 55	L (dB	imit uV/m)	Margin (dB)	Remarl
1000.000 4900.0 Frequency (MHz) 8640.000	Reading (dBuV) 34.95	Correct Factor (dB/m) 13.70	Resu (dBuV 48.6	<b>ilt</b> /m) 55	L (dB 74	imit uV/m) 4.00	Margin (dB) -25.35	Remarl Peak
1000.000 4900.0 Frequency (MHz) 8640.000 10440.000	Reading (dBuV) 34.95 30.92	Correct Factor (dB/m) 13.70 16.89	Resu (dBuV 48.6 47.8	<b>ilt</b> /m) 55 11 33	L (dB 74 74 54	<b>imit</b> uV/m) 4.00 4.00	Margin (dB) -25.35 -26.19	Remarl Peak Peak

- 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 Test Item		802.11a Hi <u>ę</u> Harmonic			emp/H est Da			<u>)/ 53%RH</u> 16, 2016
Polarize		Vertical	/ertical Test Engineer				Chiang	
Detector	Pea	ak and Aver	age					ac / 60Hz
110.0 dBuA							Limit1: Limit2:	
70								
30.0 1000.000 4900.		× 5 × 2700.00 16600.00	) 20500.00	24400.	.00 283	00.00 322	00.00	40000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/n			imit uV/m)	Margin (dB)	Remar
8660.000	33.96	13.71	47.67		74	4.00	-26.33	Peak
10480.000	31.14	17.07	48.21		74	4.00	-25.79	Peak
10480.000	21.30	17.07	38.37		54	4.00	-15.63	AVG
15720.000	32.65	19.19	51.84		74	4.00	-22.16	Peak
15720.000	22.10	19.19	41.29		54	4.00	-12.71	AVG
mark:							of highes	

	IEEE	EEE 802.11a High CH Harmonic			o/Hum	· · ·	/ 53%RH
Test Item					Date		6, 2016
Polarize Detector	D	Horizontal ak and Aver	200		ngineer /oltage		<u>Chiang</u> .c / 60Hz
110.0 dBuA						Limit1: Limit2:	_
70							
30.0			0 00500.00	24400.00	28300.00 322	00.00 40	)000.00 MHz
30.0 1000.000 4900.	.00 8800.00	12700.00 16600.0	0 20500.00	24400.00			
	.00 8800.00 Reading (dBuV)	12700.00 16600.0 Correct Factor (dB/m)	Result (dBuV/m		Limit (dBuV/m)	Margin (dB)	Remark
1000.000 4900. Frequency	Reading	Correct Factor	Result		Limit		<b>Remark</b> Peak
1000.000 4900. Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m		Limit (dBuV/m)	(dB)	
1000.000 4900. Frequency (MHz) 8650.000	Reading (dBuV) 34.01	Correct Factor (dB/m) 13.71	Result (dBuV/m 47.72		Limit (dBuV/m) 74.00	(dB) -26.28	Peak
1000.000 4900. Frequency (MHz) 8650.000 10480.000	Reading (dBuV)           34.01           32.59	Correct Factor (dB/m) 13.71 17.07	Result (dBuV/m 47.72 49.66		Limit (dBuV/m) 74.00 74.00	(dĒ) -26.28 -24.34	Peak

- 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

est Mode		1n HT20 Lo	w CH		emp/H			)/ 53%RH
Test Item		armonic			est Da			16, 2016
Polarize		Vertical			st Engi			Chiang
Detector	Peak	and Average	9	le	st Volt	age	120\	/ac / 60Hz
110.0 dBuA								
							Limit1:	-
							Limit2:	
70								
	1 2	* *						
	ÎÎ	E E						
	3							
30.0								
1000.000 4900	D.00 8800.00 1	2700.00 16600.00	) 20500.00	24400	.00 283	0.00 322	0.00	40000.00 MHz
		Correct						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Resulf (dBuV/r			imit uV/m)	Margin (dB)	Remark
8670.000	34.33	13.72	48.05		74	4.00	-25.95	Peak
10360.000	31.67	16.52	48.19		74	4.00	-25.81	Peak
10360.000	22.19	16.52	38.71		54	4.00	-15.29	AVG
15540.000	31.81	19.04	50.85		74	4.00	-23.15	Peak
15540.000	21.85	19.04	40.89		54	4.00	-13.11	AVG
emark:								

Test Mode	IEEE 802.		ow CH		emp/H			)/ 53%RH
Test Item		larmonic			est Da			16, 2016
Polarize		lorizontal			t Engi			Chiang
Detector	Peak	and Averag	je	le	st Volt	age	1200	ac / 60Hz
110.0 dBuA								
							Limit1:	
							Limit2:	
70								
		_						
	1 2	Å.						
	X	E E						
	3	5 X						
30.0 1000.000 4900.1	00 8800.00 1	2700.00 16600.00	0 20500.00	24400.	00 2830	0.00 322	D0.00	40000.00 MHz
1000.000 4300.	0000.00	2100.00 10000.00	5 20300.00	24400.	2050	0.00 322	50.00	40000.00 MHZ
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/n			imit uV/m)	Margin (dB)	Remark
8670.000	33.32	13.72	47.04		74	1.00	-26.96	Peak
10360.000	33.26	16.52	49.78		74	1.00	-24.22	Peak
10360.000	22.04	16.52	38.56		54	1.00	-15.44	AVG
15540.000	32.02	19.04	51.06		74	4.00	-22.94	Peak
15540.000	22.24	19.04	41.28		54	4.00	-12.72	AVG
mark:								
marv								

Test Item Polarize		EEE 802.11n HT20 Mid CH Harmonic			emp/H	1.0	27(°C)/ 53%RH Dec 16, 2016		
FUIAIIZE	F	<u>Harmonic</u> Vertical			est Da				
Detector	Peak	and Averag			st Engi st Volt			Chiang /ac / 60Hz	
110.0 dBuA							Limit1: Limit2:		
70									
30.0		2700.00 10000.00	0 20500 00	24400.	00 2020	0.00 322	00.00	40000.00 MHz	
1000.000 4900.0	0 8800.00 1	2700.00 16600.00	0 20500.00	24400.	00 2830			10000.00 PHT2	
1000.000 4900.0 Frequency (MHz)	0 8800.00 1 Reading (dBuV)	Correct Factor (dB/m)	Resu (dBuV/	ılt	L	imit uV/m)	Margin (dB)	Remark	
Frequency	Reading	Correct Factor	Resu	ılt /m)	L (dB				
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resu (dBuV/	ılt /m) 3	Li (dB	uV/m)	(dB)	Remark	
Frequency (MHz) 8690.000	Reading (dBuV) 33.80	Correct Factor (dB/m) 13.73	Resu (dBuV/ 47.5	llt /m) 3 4	Li (dB 74	u <b>V/m)</b> 4.00	(dB) -26.47	Remark Peak	
Frequency (MHz)           8690.000           10440.000	Reading (dBuV) 33.80 31.35	Correct Factor (dB/m) 13.73 16.89	Resu (dBuV/ 47.5 48.2	llt /m) 3 4 3	Li (dB 74 74 54	uV/m) 4.00 4.00	(dB) -26.47 -25.76	Remark Peak Peak	

Test Mode		11n HT20 N	/lid CH	Temp/Hum		′ 53%RH
Test Item		larmonic		Test Date		6, 2016
Polarize		lorizontal		Test Engineer		Chiang
Detector	Peak	and Averag	je	Test Voltage	120Va	c / 60Hz
110.0 dBuA						
					Limit1:	-
					Limit2:	_
70						
70						
		*				
	1 2 X X					
		5				
		1				
30.0						
1000.000 4900.00	) 8800.00 1	2700.00 16600.00	0 20500.00 2	4400.00 28300.00 3	2200.00 40	000.00 MHz
		Correct				
Frequency (MHz)	Reading (dBuV)	Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
		(dB/m)				
8680.000	34.06	13.72	47.78	74.00	-26.22	Peak
10440.000	31.59	16.89	48.48	74.00	-25.52	Peak
10440.000	22.54	16.89	39.43	54.00	-14.57	AVG
15660.000	32.52	19.14	51.66	74.00	-22.34	Peak
15660.000		1				
15660.000	21.72	19.14	40.86	54.00	-13.14	AVG

- 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

est Mode	IEEE 802.1		gh CH		emp/H		(	2) <b>/ 53%RH</b>
Test Item		armonic			est Da			16, 2016
Polarize		Vertical	-		t Engi		ED Chiang 120Vac / 60Hz	
Detector	Реак	and Average	e	Ie	st Volt	age	120\	/ac / 60Hz
110.0 dBuA								
							Limit1:	
							Limit2:	
70								
		4						
	1 <u>2</u>	X						
	ÎĪ	5						
	*	*						
30.0								
1000.000 490	D.00 8800.00 1	2700.00 16600.00	0 20500.00	24400.	00 2830	0.00 322	0.00	40000.00 MHz
		0						
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resul (dBuV/i	-		imit uV/m)	Margin (dB)	Remark
8690.000	34.01	13.73	47.74	Ļ	74	4.00	-26.26	Peak
10480.000	31.04	17.07	48.11		74	4.00	-25.89	Peak
10480.000	21.58	17.07	38.65	5	54	4.00	-15.35	AVG
15720.000	33.20	19.19	52.39	)	74	4.00	-21.61	Peak
15720.000	22.29	19.19	41.48	}	54	4.00	-12.52	AVG
emark:								

est Mode		<u>1n HT20 Hig</u>	gh CH	Temp/Hum		′ 53%RH
Test Item		armonic		Test Date		6, 2016
Polarize		orizontal		Test Engineer		Chiang
Detector	Peak	and Average	3	Test Voltage	120Va	c / 60Hz
110.0 dBuA						
					Limit1:	-
					Limit2:	
70						
10						
		<u>4</u> ×				
	1 <u>4</u>					
		5 X				
	*					
30.0						
1000.000 4900	.00 8800.00 1	2700.00 16600.00	20500.00 24	4400.00 28300.00 3	2200.00 40	000.00 MHz
		Correct				
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8700.000	34.20	13.73	47.93	74.00	-26.07	Peak
10480.000	31.14	17.07	48.21	74.00	-25.79	Peak
10480.000	21.46	17.07	38.53	54.00	-15.47	AVG
15720.000	33.03	19.19	52.22	74.00	-21.78	Peak
		10.10	44.96	E4.00	-12.14	AVG
15720.000	22.67	19.19	41.86	54.00	-12.14	AVG

- 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		11n HT40 L	ow CH		emp/H		. ,	/ 53%RH
Test Item	F	larmonic			est Da			16, 2016
Polarize	Deals	Vertical			st Engi			Chiang
Detector	Реак	and Averag	je	le	st Volta	age	120Va	ac / 60Hz
110.0 dBuA								
							Limit1:	-
							Limit2:	
70								
	1 2	4 X						
	Ϋ́							
	3	5 X						
30.0	00 0000 00 1	2700.00 16600.00	20500.00	24400	00 2020	0.00 222	00.00	0000.00 MU-
1000.000 4900.	00 8800.00 1	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)	Result (dBuV/n			mit uV/m)	Margin (dB)	Remark
8730.000	33.66	13.75	47.41		74	.00	-26.59	Peak
10380.000	31.72	16.62	48.34		74	.00	-25.66	Peak
10380.000	21.87	16.62	38.49		54	l.00	-15.51	AVG
15570.000	31.40	19.07	50.47		74	l.00	-23.53	Peak
15570.000	21.86	19.07	40.93		54	l.00	-13.07	AVG
mark:								

Test Mode		11n HT40 L	ow CH	Temp/l		, ,	53%RH
Test Item		larmonic		Test D			6, 2016
Polarize		lorizontal		Test Eng			Chiang
Detector	Peak	and Averag	je	Test Vo	Itage	120Va	c / 60Hz
110.0 dBuA							
						Limit1:	-
						Limit2:	_
70							
	1 2	4 X					
	ŶĨ						
	3	5 X					
30.0 1000.000 <b>4</b> 900.	00 8800.00 1	2700.00 16600.00	0 20500.00 24	4400.00 28	300.00 322	D0.00 40	)000.00 MHz
1000.000 4300.	UU 00UU.UU I	2700.00 16600.00	J 20300.00 24	44UU.UU 20	300.00 322	JU.UU 4U	JUUU.UU MHZ
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)		Limit BuV/m)	Margin (dB)	Remark
8720.000	33.61	13.74	47.35		74.00	-26.65	Peak
10380.000	31.77	16.62	48.39		74.00	-25.61	Peak
10380.000	22.91	16.62	39.53		54.00	-14.47	AVG
15570.000	32.09	19.07	51.16		74.00	-22.84	Peak
15570.000	22.21	19.07	41.28		54.00	-12.72	AVG
mark:							

est Mode	IEEE 802.1		gh CH		emp/H			)/ 53%RH
Test Item		armonic			est Da			16, 2016
Polarize		Vertical			t Engi			Chiang
Detector	Peak	and Average	e	le	st Volt	age	1200	ac / 60Hz
110.0 dBuA								
							Limit1:	
							Limit2:	
70								
		4						
	1 2	X						
	Ý Ť	5						
	3	\$ X						
30.0	0.00 8800.00 1	2700.00 16600.00	) 20500.00	24400.	00 283	DO.OO 322	00.00	40000.00 MHz
1000.000 400	0.00 0000.00 1	2100.00 10000.00	20000.00	21100.	.00 200	50.00 SEE	00.00	10000.00 1112
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m			imit uV/m)	Margin (dB)	Remark
8760.000	32.97	13.76	46.73		74	4.00	-27.27	peak
10460.000	30.66	16.98	47.64		74	4.00	-26.36	peak
10460.000	20.25	16.98	37.23		54	4.00	-16.77	AVG
15690.000	33.27	19.17	52.44		74	4.00	-21.56	peak
15690.000	22.41	19.17	41.58		54	4.00	-12.42	AVG
emark:								

est Mode	IEEE 802.1	1n HT40 Hi	gh CH	Temp/Hum	<b>27(°</b> ℃)/	/ 53%RH
Test Item		armonic		Test Date		6, 2016
Polarize		orizontal		Test Engineer		Chiang
Detector	Peak	and Averag	e	Test Voltage	120Va	c / 60Hz
110.0 dBuA						
					Limit1: Limit2:	
70						
70						
		A X				
	3	5 X				
	×					
30.0						
1000.000 4900	0.00 8800.00 1	2700.00 16600.0	0 20500.00 24	400.00 28300.00 3	2200.00 40	)000.00 MHz
		Correct				
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8740.000	33.57	13.75	47.32	74.00	-26.68	Peak
10460.000	31.09	16.98	48.07	74.00	-25.93	Peak
10460.000	21.30	16.98	38.28	54.00	-15.72	AVG
15690.000	32.98	19.17	52.15	74.00	-21.85	Peak
15690.000	i	İ		54.00	10.50	
15690.000	22.25	19.17	41.42	54.00	-12.58	AVG

- 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

est Mode	IEEE 802.11ac VHT80 Mid CH			Temp/Hum	27(°C)/ 53%RH		
est Item	Harmonic			Test Date	Dec 16, 2016		
Polarize		/ertical		est Engineer	ED Chiang		
Detector	Peak a	and Average		Test Voltage	120Va	c / 60Hz	
110.0 dBuA							
					Limit1:	-	
					Limit2:		
70							
	2	×					
	i i i i i i i i i i i i i i i i i i i	5					
	3	5 X					
30.0 1000.000 49	00.00 8800.00 1	2700.00 16600.00	) 20500.00 244	400.00 28300.00 32	200.00 40	1000.00 MHz	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	
8780.000	32.61	13.77	46.38	74.00	-27.62	Peak	
10420.000	31.76	16.80	48.56	74.00	-25.44	Peak	
10420.000	21.59	16.80	38.39	54.00	-15.61	AVG	
15720.000	32.62	19.19	51.81	74.00	-22.19	Peak	
15720.000	22.70	19.19	41.89	54.00	-12.11	AVG	
emark:							

est Mode	IEEE 802.11	ac VHT80 M	1id CH	Temp/Hum	· · ·	53%RH	
est Item				Test Date	,		
Polarize	Horizontal Test Engineer				ED Chiang		
Detector	Peak a	and Average		Test Voltage	120Va	c / 60Hz	
110.0 dBuA							
					Limit1: Limit2:	_	
70							
		4 ×					
		5 ×					
30.0 1000.000 490	00.00 8800.00 1	2700.00 16600.00	) 20500.00 24	400.00 28300.00 322	200.00 40	000.00 MHz	
Frequency (MHz)	Reading (dBuV)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	
		(dB/m)					
8770.000	33.34	13.76	47.10	74.00	-26.90	Peak	
		16.80	48.73	74.00	-25.27	Peak	
10420.000	31.93	10.00					
	31.93 21.84	16.80	38.64	54.00	-15.36	AVG	
10420.000				54.00 74.00	-15.36 -21.63	AVG Peak	

- 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 Lo	w CH	Te	emp/H	um	<b>27(</b> °C)	)/ 53%RH
Test Item		Harmonic			est Da		Dec 16, 20 <sup>-</sup>	
Polarize		Vertical			t Engi			Chiang
Detector	Pea	ak and Avera	age	Te	st Volt	age	120Va	ac / 60Hz
110.0 dBuA								
							Limit1:	
							Limit2:	
70								
		4						
	1 2 X X							
		5						
	3 X							
30.0								
1000.000 4900.0	0 8800.00 1	2700.00 16600.00	20500.00	24400.	00 283	00.00 322	00.00	10000.00 MHz
_		Correct	_		_		<b>.</b>	
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Resu (dBuV/			imit uV/m)	Margin (dB)	Remark
8660.000	34.54	13.71	48.2	5	74	4.00	-25.75	Peak
10520.000	31.23	17.14	48.3	7	74	4.00	-25.63	Peak
10520.000	21.47	17.14	38.6	1	54	4.00	-15.39	AVG
15780.000	33.18	19.25	52.4	3	74	4.00	-21.57	Peak
15780.000	22.14	19.25	41.3	9	54	4.00	-12.61	AVG
mark:								

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

Test Mode Test Item		802.11a Lo Harmonic		Temp/Hum Test Date		53%RH 6, 2016
Polarize		Horizontal	Te	est Engineer	ED Chiang	
Detector	Pea	ak and Aver	age T	est Voltage	120Va	c / 60Hz
110.0 dBuA						
					Limit1: Limit2:	_
70						
	1 2 X X	×				
30.0		49X				
1000.000 4900.0	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
8690.000	34.89	13.73	48.62	74.00	-25.38	Peak
10520.000	31.43	17.14	48.57	74.00	-25.43	Peak
10520.000	21.51	17.14	38.65	54.00	-15.35	AVG
15780.000	32.85	19.25	52.10	74.00	-21.90	Peak
15780.000	22.24	19.25	41.49	54.00	-12.51	AVG
mark:						

Test Item		EE 802.11a Mid CHTemp/HumHarmonicTest Date			27(℃)/ 53%RH Dec 16, 2016		
Polarize		Vertical			Ingineer	ED Chiang	
Detector	Pe	ak and Aver			Voltage		c / 60Hz
110.0 dBuA						Limit1:	
						Limit2:	
70							
	1 2	*					
30.0	3	5					
1000.000 4900.0	00 8800.00 1	2700.00 16600.00	0 20500.00 2	4400.00	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
8640.000	33.31	13.70	47.01		74.00	-26.99	Peak
10560.000	31.41	17.11	48.52		74.00	-25.48	Peak
10560.000	21.60	17.11	38.71		54.00	-15.29	AVG
15840.000	32.26	19.30	51.56		74.00	-22.44	Peak
15840.000	21.91	19.30	41.21		54.00	-12.79	AVG
mark:							

Test Mode	IEEE	802.11a M	id CH		emp/H			°C)/ 53	
Test Item		Harmonic			est Da			ec 16, 2	
Polarize		Horizontal			t Engi		ED Chian 120Vac / 60		
Detector	Pea	ak and Aver	age	les	st Volt	age	120	)Vac/6	50Hz
110.0 dBuA									
							Limi	t1: —	
							Limi	t2: —	
									1
70									1
		4							
	1 2 X X	X							]
	ÎÎ	5							
	3	\$ *							-
30.0 1000.000 <b>4</b> 900.0	0 8800.00 1	2700.00 16600.00	0 20500.00	24400.0	00 202	00.00 3220	)0.00	40000.0	
1000.000 4300.0	0 0000.00 1	2700.00 10000.00	, 20300.00	24400.0	00 203	00.00 JZZ	0.00	40000.0	UMIIZ
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/r	-		imit uV/m)	Margi (dB)		Remark
8610.000	34.91	13.69	48.60	)	74	4.00	-25.4	0	Peak
10500.000	31.67	17.11	48.78	5	74	4.00	-25.2	2	Peak
10560.000		17.11	38.42		54	4.00	-15.5	8	AVG
10560.000	21.31	17.11			-		-21.3	F	Peak
	21.31 33.35	19.30	52.65	<b>i</b>	14	4.00	-21.3	5	reak
10560.000						4.00 4.00	-21.3		AVG

Test Mode	IEEE		IEEE 802.11a High CH Temp/Hum			
Test Item Polarize		Harmonic Vertical		Test Date		6, 2016
Detector	Pe	ak and Avera		Test Engineer Test Voltage		Chiang c / 60Hz
110.0 dBuA					Limit1: Limit2:	
30.0 4900.		2700.00 16600.00	) 20500.00 2	4400.00 28300.00 32	200.00 40	0000.00 MHz
		Correct	<b>D</b> K	11.7	Margin	
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	(dB)	Remar
						Remar Peak
(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
(MHz) 8730.000	(dBuV) 33.46	(dB/m) 13.75	(dBuV/m) 47.21	(dBuV/m) 74.00	(dB) -26.79	Peak
(MHz) 8730.000 10640.000	(dBuV) 33.46 32.03	(dB/m) 13.75 17.04	(dBuV/m) 47.21 49.07	(dBuV/m) 74.00 74.00	(dĒ) -26.79 -24.93	Peak Peak AVG
(MHz) 8730.000 10640.000 10640.000	(dBuV) 33.46 32.03 21.47	(dB/m) 13.75 17.04 17.04	(dBuV/m) 47.21 49.07 38.51	(dBuV/m) 74.00 74.00 54.00	(dĒ) -26.79 -24.93 -15.49	Peak Peak

- 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

Too	t Mode	IEEE	802.11a Hi	-		mp/Hum	ו	27(°C)/ 53%F	
	t Item	_	Harmonic			est Date		Dec 16, 20	
	larize tector	Bo	Horizontal ak and Aver			Engine			) Chiang /ac / 60Hz
110.0	dBuA							Limit1: Limit2:	
70									
1000	0.000 4900.00	8800.00 1	2700.00 16600.0	)0 20500.00	24400.0	0 28300.00	) 3220(	0.00	40000.00 MHz
			Correct						
Frequ (MF		Reading (dBuV)	Correct Factor (dB/m)	Resu (dBuV/		Limi (dBuV/		Margin (dB)	Rema
	lz)		Factor		/m)		m)		Rema
(MF	<b>1z)</b>	(dBuV)	Factor (dB/m)	(dBuV	/m) 4	(dBuV/	<b>m)</b> D	(dB)	
(MH 8730	<b>1z)</b> .000 0.000	(dBuV) 33.99	Factor (dB/m) 13.75	(dBuV) 47.7	/m) 4 4	<b>(dBuV/</b> 74.0	<b>m)</b> D	(dB) -26.26	Peak
(MF 8730 10640	.000 0.000 0.000	(dBuV) 33.99 33.00	Factor (dB/m)           13.75           17.04	(dBuV/ 47.7 50.0	/m) 4 4 9	(dBuV/ 74.00 74.00	<b>m)</b> D D D	(dĒ) -26.26 -23.96	Peak

- 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

est Mode		1n HT20 Lo	w CH		mp/Hum	. ,	53%RH
Test Item	Harmonic Test Date				Dec 16, 2016		
Polarize		Vertical			Engineer	ED Chiang	
Detector	Peak	and Average	9	les	t Voltage	120Va	c / 60Hz
110.0 dBuA							
						Limit1:	-
						Limit2:	_
70							
	1 2 X X	X					
	Î Î	5					
	3	5 X					
30.0	D.00 8800.00 1	2700.00 16600.00	) 20500.00 2	24400.00	0 28300.00 322	00.00 40	000.00 MHz
1000.000 100			. 2000.00				
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	)	Limit (dBuV/m)	Margin (dB)	Remark
8730.000	34.08	13.75	47.83		74.00	-26.17	Peak
10520.000	31.16	17.14	48.30		74.00	-25.70	Peak
10520.000	21.45	17.14	38.59		54.00	-15.41	AVG
15780.000	32.05	19.25	51.30		74.00	-22.70	Peak
15780.000	22.23	19.25	41.48		54.00	-12.52	AVG
emark:							

Test Mode		11n HT20 L		Temp/Hum	. ,	′ 53%RH
Test Item		Harmonic		Test Date		6, 2016
Polarize		lorizontal		est Engineer	ED Chiang	
Detector	Peak	and Averag	e T	est Voltage	120Va	c / 60Hz
110.0 dBuA					Limit1:	
					Limit 1.	
70						
	1 2 1 X	×				
	3	5 X				
30.0	00 0000 00 1	2700.00 10000.00	20500.00 2440	0.00 20200.00 222	00.00	0000 00 MU-
1000.000 4900.	00 8800.00 1	2700.00 16600.00	) 20500.00 2440	00.00 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
8710.000	34.14	13.74	47.88	74.00	-26.12	Peak
10520.000	32.13	17.14	49.27	74.00	-24.73	Peak
10520.000	22.05	17.14	39.19	54.00	-14.81	AVG
15780.000	32.98	19.25	52.23	74.00	-21.77	Peak
15780.000	22.19	19.25	41.44	54.00	-12.56	AVG
mark:						

Test Mode		11n HT20 N	/lid CH		emp/H			)/ 53%RH
Test Item		larmonic			est Da			<u>16, 2016</u>
Polarize Detector		Vertical and Average	ÿ		ED Chiang 120Vac / 60Hz			
110.0 dBuA							Limit1: Limit2:	_
70								
30.0 1000.000 4900.	00 8800.00 1:	2700.00 16600.00	) 20500.00	24400.	00 2830	0.00 322	00.00	40000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resu (dBuV/			imit uV/m)	Margin (dB)	Remark
8650.000	32.97	13.71	46.68	3	74	4.00	-27.32	Peak
10560.000	31.24	17.11	48.3	5	74	1.00	-25.65	Peak
10560.000	21.28	17.11	38.39	9	54	1.00	-15.61	AVG
15840.000	32.69	19.30	51.99	9	74	1.00	-22.01	Peak
15840.000	22.48	19.30	41.78			4.00	-12.22	AVG
e <b>mark:</b> 1. Measi	uring freque	ncies from 1	GHz to	the 1	0th ha	rmonic	of hiahes	t

IEEE 802.	<u>11n HT20 M</u>		Temp/Hum	۱	27(°C)/	53%RH	
						6, 2016	
					ED Chiang		
Peak	and Averag	e	Test Voltag	e	120Va	c / 60Hz	
					Limit1: Limit2:	_	
1 2	*					_	
	5						
0 8800.00 1/	2700.00 16600.00	) 20500.00 24	4400.00 28300.00	) 32200.00	40	000.00 MHz	
Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limi (dBuV/		largin (dB)	Remark	
	Factor			m)		Remark Peak	
(dBuV)	Factor (dB/m)	(dBuV/m)	(dBuV/	<b>m)</b>	(dB)	Remark Peak Peak	
(dBuV) 34.16	Factor (dB/m) 13.73	( <b>dBuV/m)</b> 47.89	(dBuV/ 74.0	<b>m)</b> D -2 D -2	(d <b>Ē)</b> 26.11	Peak	
(dBuV) 34.16 31.85	Factor (dB/m) 13.73 17.11	(dBuV/m) 47.89 48.96	(dBuV/ 74.00 74.00	m) D -2 D -2 D -2	(dB) 26.11 25.04	Peak Peak	
		Harmonic Horizontal Peak and Averag	Harmonic Horizontal Peak and Average	Harmonic     Test Date       Horizontal     Test Engine       Peak and Average     Test Voltag	Harmonic     Test Date       Horizontal     Test Engineer       Peak and Average     Test Voltage	Harmonic     Test Date     Dec 1       Horizontal     Test Engineer     ED 0       Peak and Average     Test Voltage     120Va	

- 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

est Mode	IEEE 802.1		gh CH		emp/H		27(℃)/ 53%RH		
Test Item		armonic			est Da			16, 2016	
Polarize		/ertical			st Engi			Chiang	
Detector	Peak	and Average	9	Te	st Volt	age	120\	/ac / 60Hz	
110.0 dBuA									
							Limit1:		
							Limit2:		
70									
	1. X	×							
	Ť Ť	5							
	3	*							
30.0									
1000.000 4900	.00 8800.00 12	2700.00 16600.00	20500.00	24400.	.00 283	00.00 322	DO.OO	40000.00 MHz	
		Correct							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/r			imit uV/m)	Margin (dB)	Remark	
8650.000	32.97	13.71	46.68		74	4.00	-27.32	Peak	
10560.000	31.24	17.11	48.35		74	4.00	-25.65	Peak	
10560.000	21.28	17.11	38.39		54	4.00	-15.61	AVG	
15840.000	32.69	19.30	51.99		74	4.00	-22.01	Peak	
15840.000	22.48	19.30	41.78		54	4.00	-12.22	AVG	
emark:									

Test Mode	IEEE 802.1	1n HT20 Hi	gh CH	Temp/Hum		53%RH
Test Item		armonic		Test Date		6, 2016
Polarize		orizontal		Test Engineer		Chiang
Detector	Peak	and Average	Э	Test Voltage	120Va	c / 60Hz
110.0 dBuA						
					Limit1:	—
					Limit2:	_
70						
70						
		÷ X				
	1 2 1 X					
	Ĩ	5 X				
	¥					
30.0						
1000.000 4900.	.00 8800.00 1	2700.00 16600.00	) 20500.00 24	4400.00 28300.00	32200.00 40	000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8730.000	33.21	(dB/m) 13.75	46.96	74.00	-27.04	Peak
10640.000	32.03	17.04	49.07	74.00	-24.93	Peak
10640.000	21.90	17.04	38.94	54.00	-15.06	AVG
15960.000	32.13	19.40	51.53	74.00	-22.47	Peak
		40.40	44.04	54.00	12.10	AVG
15960.000	22.41	19.40	41.81	54.00	-12.19	AVG

- 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		11n HT40 L		ſemp/Hum	( )	53%RH
Test Item	F	larmonic		Test Date		6, 2016
Polarize		Vertical		st Engineer		Chiang
Detector	Peak	and Averag	e To	est Voltage	120Va	c / 60Hz
110.0 dBuA			1		Limit1:	
					Limit2:	_
70						
		** 5*				
30.0	3 X	¥				
1000.000 4900.	00 8800.00 1	2700.00 16600.00	0 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
8680.000	33.08	13.72	46.80	74.00	-27.20	Peak
10540.000	31.46	17.13	48.59	74.00	-25.41	Peak
10540.000	21.24	17.13	38.37	54.00	-15.63	AVG
15810.000	31.94	19.27	51.21	74.00	-22.79	Peak
15810.000	21.83	19.27	41.10	54.00	-12.90	AVG
mark:						

Test Mode		11n HT40 L	ow CH		emp/H		. ,	)/ 53%RH
Test Item		larmonic			est Da			16, 2016
Polarize		lorizontal			st Engi			Chiang
Detector	Peak	and Averag	je	le	st Volt	age	120Va	ac / 60Hz
110.0 dBuA								
							Limit1:	-
							Limit2:	_
70								
	2	4 X						
	Î .	5%						
	Ť							
30.0								
1000.000 4900.	00 8800.00 1	2700.00 16600.00	) 20500.00	24400.	.00 2830	00.00 322	0.00	40000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/n			imit uV/m)	Margin (dB)	Remark
8760.000	33.23	13.76	46.99		74	4.00	-27.01	Peak
10540.000	33.30	17.13	50.43		74	4.00	-23.57	Peak
10540.000	22.14	17.13	39.27		54	4.00	-14.73	AVG
15810.000	33.72	19.27	52.99		74	4.00	-21.01	Peak
15810.000	22.28	19.27	41.55		54	4.00	-12.45	AVG
mark:								

est Mode	IEEE 802.1		gh CH		emp/H			)/ 53%RH
Test Item		armonic			est Da			16, 2016
Polarize		/ertical			st Engi			Chiang
Detector	Peak	and Average	e	Te	st Volt	age	120V	ac / 60Hz
110.0 dBuA								
							Limit1:	-
							Limit2:	
70								
	1 2 1 X	×						
	ſ	5 X						
	3 X	X						
30.0								
1000.000 4900	0.00 8800.00 1	2700.00 16600.00	20500.00	24400	.00 2830	0.00 322	00.00	40000.00 MHz
Frequency	Reading	Correct Factor	Result			mit	Margin	Remark
(MHz)	(dBuV)	(dB/m)	(dBuV/n	1)	(dB	uV/m)	(dB)	rtoman
8680.000	33.51	13.72	47.23		74	1.00	-26.77	Peak
10620.000	31.80	17.06	48.86		74	1.00	-25.14	Peak
10620.000	21.59	17.06	38.65		54	1.00	-15.35	AVG
15930.000	32.60	19.37	51.97		74	1.00	-22.03	Peak
15930.000	21.91	19.37	41.28		54	1.00	-12.72	AVG
emark:								

est Mode		1n HT40 Hig	gh CH	Temp/ł			/ 53%RH	
Test Item		armonic		Test D		Dec 16, 2016		
Polarize		orizontal		Test Eng		ED Chiang		
Detector	Peak	and Average	3	Test Vo	Itage	120Vac / 60		
110.0 dBuA								
						Limit1:	-	
						Limit2:	_	
70								
70								
		* *						
	1 2 X 1							
		5 X						
30.0								
1000.000 4900.	00 8800.00 1	2700.00 16600.00	20500.00	24400.00 28	300.00 3220	10.00 40	0000.00 MHz	
		0						
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m		Limit BuV/m)	Margin (dB)	Remark	
8680.000	33.33	13.72	47.05		74.00	-26.95	Peak	
10620.000	31.92	17.06	48.98	7	74.00	-25.02	Peak	
10620.000	21.21	17.06	38.27	Ę	54.00	-15.73	AVG	
15930.000	32.24	19.37	51.61		74.00	-22.39	Peak	
	22.17	19.37	41.54	Ę	54.00	-12.46	AVG	
15930.000								

- 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

est Mode	IEEE 802.11		1id CH		emp/H		27(°C)/ 53%RH		
lest Item		armonic		Test Date			Dec 16, 2016		
Polarize		/ertical			t Engi			Chiang	
Detector	Peak a	and Average		le	st Volt	age	120\	/ac / 60Hz	
110.0 dBuA									
							Limit1:	—	
							Limit2:	—	
70									
	1 2 X X	×							
	ÎÎ	5							
	3	5 X							
30.0 1000.000 <b>4</b> 9	00.00 8800.00 1	2700.00 16600.00	20500.00	24400.	00 202	00.00 322	DO.00	40000.00 MHz	
1000.000 45	00.00 0000.00 1	2700.00 10000.00	20300.00	24400.	.00 203	UU.UU JZZ	00.00	40000.00 MH2	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resul (dBuV/i			imit uV/m)	Margin (dB)	Remark	
8620.000	34.74	13.70	48.44	ŀ	74	4.00	-25.56	Peak	
10580.000	31.25	17.09	48.34	ŀ	74	4.00	-25.66	Peak	
10580.000	21.47	17.09	38.56	;	54	4.00	-15.44	AVG	
15870.000	32.23	19.32	51.55	5	74	4.00	-22.45	Peak	
15870.000	22.51	19.32	41.83	}	54	4.00	-12.17	AVG	
emark:	suring freque	ncios from 1	CH- to	tha 1	Oth he	rmonio	of higho	ot	
	lamental freque				ULITE		or nights	51	

est Mode	IEEE 802.11	ac VHT80 M	lid CH	Temp/Hum	27(°C)/ 53%RH		
Fest Item		armonic		Test Date	Dec 16, 2016		
Polarize		orizontal		est Engineer		Chiang	
Detector	Peak a	and Average	T	est Voltage	120Va	c / 60Hz	
110.0 dBuA							
					Limit1:	-	
					Limit2:		
70							
70							
		\$					
	1 2 X 1						
		5					
	3	*					
30.0							
1000.000 490	0.00 8800.00 1	2700.00 16600.00	20500.00 244	D0.00 28300.00 322	00.00 40	000.00 MHz	
1000.000 430	0.00 0000.00 1	2100.00 10000.00	20300.00 244	50.00 20300.00 322	00.00 40	000.00 MTZ	
Frequency	Reading	Correct	Result	Limit	Margin	Demeric	
(MHz)	(dBuV)	Factor (dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Remark	
8770.000	33.95	13.76	47.71	74.00	-26.29	Peak	
10580.000	32.53	17.09	49.62	74.00	-24.38	Peak	
10580.000	21.19	17.09	38.28	54.00	-15.72	AVG	
15870.000	32.45	19.32	51.77	74.00	-22.23	Peak	
15870.000	22.07	19.32	41.39	54.00	-12.61	AVG	
15670.000							

- 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	IEEI	E 802.11a Lo	w CH	Te	emp/H	um	<b>27(</b> °℃	)/ 53%RH
Test Item		Harmonic			est Da			16, 2016
Polarize		Vertical			t Engi			Chiang
Detector	P€	eak and Aver	age	Tes	st Volt	age	120V	ac / 60Hz
110.0 dBuA								
							Limit1:	-
							Limit2:	
70								
	2	4						
	1 2 X 1							
		5 *						
	Ť							
30.0								
1000.000 4900.	00 8800.00	12700.00 16600.0	0 20500.00	24400.	00 2830	00.00 3220	)0.00	40000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resi (dBuV			imit uV/m)	Margin (dB)	Remark
8630.000	33.85	13.70	47.5	55	74	4.00	-26.45	Peak
11000.000	33.00	16.73	49.7	'3	74	4.00	-24.27	Peak
11000.000	22.48	16.73	39.2	21	54	4.00	-14.79	AVG
16500.000	32.60	21.39	53.9	99	74	4.00	-20.01	Peak
16500.000	20.71	21.39	42.1	0	54	4.00	-11.90	AVG
mark:								

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

-	Mode			<u>02.11a</u>		Temp/Hum Test Date			27(°C)/ 53%RH		
	t Item			<u>larmon</u>						16, 2016	
	arize ector			lorizont and Av			t Engi st Volt			) Chiang /ac / 60Hz	
110.0	dBuA								Limit1: Limit2:		
70		1	2	**************************************							
30.0 1000	.000 4900.0	) 8800.00	1270	0.00 1660	0.00 20500.00	24400.	00 2830	00.00 3220	0.00	40000.00 MHz	
Freque (MH		Readin (dBuV		Correct Factor (dB/m)	Resu (dBuV			imit uV/m)	Margin (dB)	Remarl	
	z)		)	Factor		//m)	(dB			Remarl	
(MH	<b>z)</b>	(dBuV	)	Factor (dB/m)	(dBuV	<b>//m)</b> 6	(dB 74	uV/m)	(dB)		
(MH 8640.	<b>z)</b> 000 .000	(dBuV 33.76	)	Factor (dB/m) 13.70	(dBuV 47.4	/ <b>/m)</b> 46 4	(dB 74 74	<b>uV/m)</b> 4.00	(dB) -26.54	Peak	
(MH 8640. 11000	<b>z)</b> 000 .000 .000	(dBuV 33.76 36.41	)	Factor (dB/m) 13.70 16.73	(dBuV 47.4 53.1	7 <b>/m)</b> 46 4 34	(dB 74 74 54	<b>uV/m)</b> 4.00 4.00	(dB) -26.54 -20.86	Peak Peak	

- 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

	t Item Harmonic			Т	emp/H est Da	ate	Dec	)/ 53%RH 16, 2016
Polarize Detector	Pe	Vertical ak and Aver	ane		st Engi st Volt			Chiang /ac / 60Hz
110.0 dBuA							Limit1:	
70								
30.0 1000.000 4900.	00 8800.00 1	2700.00 16600.00	0 20500.00	24400.	00 283	00.00 3220	0.00	40000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resu (dBuV/			imit uV/m)	Margin (dB)	Remarl
Frequency (MHz) 8750.000		Factor		'm)	(dB			Remarl Peak
(MHz)	(dBuV)	Factor (dB/m)	(dBuV/	/ <b>m)</b> 5	(dB 74	uV/m)	(dB)	
(MHz) 8750.000	(dBuV) 33.70	Factor (dB/m) 13.75	<b>(dBuV/</b> 47.4	7 <b>m)</b> 5 0	(dB 74 74	<b>uV/m)</b> 4.00	(dB) -26.55	Peak
(MHz) 8750.000 11160.000	(dBuV) 33.70 32.85	Factor (dB/m)           13.75           16.75	(dBuV/ 47.4 49.60	7 <b>m)</b> 5 0 1	(dB 74 74 54	uV/m) 4.00 4.00	(dB) -26.55 -24.40	Peak Peak

Test Mode	IEEE	802.11a M	id CH	Temp/Hum		/ 53%RH
Test Item		Harmonic		Test Date		6, 2016
Polarize Detector	De	Horizontal		Test Engineer		Chiang
Detector	Pe	ak and Aver	age	Test Voltage	120Va	c / 60Hz
110.0 dBuA						
					Limit1:	
					Limit2:	_
70						
	2	4				
	Á					
	X 3	5				
		X				
30.0						
1000.000 4900.0	)0 8800.00	12700.00 16600.0	0 20500.00 2	<b>4400.00 28300.00 3</b>	2200.00 40	)000.00 MHz
Frequency	Reading	Correct	Result	Limit	Margin	
(MHz)	(dBuV)	Factor (dB/m)	(dBuV/m)		(dĔ)	Remark
8720.000	33.18	13.74	46.92	74.00	-27.08	Peak
11160.000	35.34	16.75	52.09	74.00	-21.91	Peak
11160.000	28.41	16.75	45.16	54.00	-8.84	AVG
16740.000	32.07	22.82	54.89	74.00	-19.11	Peak
	20.85	22.82	43.67	54.00	-10.33	AVG
16740.000						

- 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		802.11a Hig Harmonic Vertical		Temp/Hum Test Date Test Engineer	Dec 1	<sup>/</sup> 53%RH 6, 2016 Chiang
Detector	Pe	ak and Aver		Test Voltage		c / 60Hz
110.0 dBuA						
					Limit1: Limit2:	_
70		4				
	1 2	5 X				
30.0 1000.000 4900.0	X 00 8800.00 1	2700.00 16600.00	) 20500.00 24	400.00 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)	Remar
8730.000	33.55	13.75	47.30	74.00	-26.70	Peak
11400.000	31.58	16.77	48.35	74.00	-25.65	Peak
11400.000	21.88	16.77	38.65	54.00	-15.35	AVG
17100.000	31.67	24.75	56.42	74.00	-17.58	Peak
17100.000	19.53	24.75	44.28	54.00	-9.72	AVG
mark:						

	Mode	IEEE	802.11a Hi	gh CH	Temp/Hum	· · ·	53%RH
	t Item		Harmonic		Test Date		6, 2016
	arize ector	Bo	Horizontal ak and Aver		Test Engineer Test Voltage		<u>Chiang</u> c / 60Hz
110.0	dBuA					Limit1: Limit2:	
70							
30.0 1000.	.000 4900.00	8800.00	12700.00 16600.0	0 20500.00 2	4400.00 28300.00	32200.00 40	0000.00 MHz
Freque	ency	Reading	Correct Factor	Result	Limit	Margin	Remark
(MH		(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Nemar
	z)			(dBuV/m) 47.95	(dBuV/m) 74.00	(dB) -26.05	Peak
(MH	<b>z)</b>	(dBuV)	(dB/m)				
(MH 8760.	<b>z)</b> 000 .000	( <b>dBuV</b> ) 34.19	(dB/m) 13.76	47.95	74.00	-26.05	Peak
(MH 8760.0 11400.	<b>z)</b> 000 .000 .000 .000	(dBuV) 34.19 35.42	(dB/m) 13.76 16.77	47.95 52.19	74.00	-26.05 -21.81	Peak Peak

- 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		Harmonic Vertical		Temp/H Test D Test Eng	ate	Dec 1	/ 53%RH 6, 2016 Chiang
Detector	Pea	ak and Aver		Test Vo			c / 60Hz
110.0 dBuA							
						Limit1: Limit2:	_
70		4					
	1 2 X 1	4 × 5 ×					
30.0 1000.000 4900.	3 X 00 8800.00 1	2700.00 16600.00	) 20500.00 2	24400.00 28	300.00 3220	00.00 40	0000.00 MHz
	1						
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)		Limit BuV/m)	Margin (dB)	Remar
8710.000	33.72	13.74	47.46	7	4.00	-26.54	Peak
11440.000	32.61	16.77	49.38	7	4.00	-24.62	Peak
11440.000	21.72	16.77	38.49	5	54.00	-15.51	AVG
17160.000	33.71	24.99	58.70	7	4.00	-15.30	Peak
17160.000	22.76	24.99	47.75	5	54.00	-6.25	AVG

Test Mode	IEEE	802.11a Cro	oss CH	Temp/Hum		53%RH
Test Item		Harmonic		Test Date		6, 2016
Polarize Detector	Po	Horizontal ak and Avera		est Engineer Test Voltage		Chiang c / 60Hz
110.0 dBuA					Limit1: Limit2:	
70		4				
	1 33	5 ×				
30.0 1000.000 4900.	00 8800.00	12700.00 16600.00	) 20500.00 24	400.00 28300.00 33	2200.00 40	1000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
	34.10	13.72	47.82	74.00	-26.18	Peak
8670.000	34.10	-				
8670.000 11440.000	34.10 35.36	16.77	52.13	74.00	-21.87	Peak
			52.13 41.82	74.00 54.00	-21.87 -12.18	Peak AVG
11440.000	35.36	16.77				

- 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

est Mode	IEEE 802.1		w CH		emp/H		· · ·	/ 53%RH
Test Item		armonic			est Da			16, 2016
Polarize		Vertical	_		t Engi			Chiang
Detector	Реак	and Average	9	Ie	st Volt	age	120Va	ac / 60Hz
110.0 dBuA								
							Limit1:	—
							Limit2:	
70								
	ę	4 *						
	3	5 X						
	Ť.							
30.0								
1000.000 4900	.00 8800.00 1	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)	Resul (dBuV/			mit uV/m)	Margin (dB)	Remark
8670.000	33.47	13.72	47.19	)	74	1.00	-26.81	Peak
11000.000	33.62	16.73	50.35	5	74	1.00	-23.65	Peak
11000.000	23.14	16.73	39.87	7	54	1.00	-14.13	AVG
16500.000	31.73	21.39	53.12	2	74	1.00	-20.88	Peak
16500.000	20.59	21.39	41.98	3	54	1.00	-12.02	AVG
emark:								

Test Mode		11n HT20 Lo	ow CH	Temp/H		. ,	/ 53%RH
Test Item		larmonic		Test D			6, 2016
Polarize		lorizontal		Test Eng			Chiang
Detector	Peak	and Averag	e	Test Vol	tage	120Va	ic / 60Hz
110.0 dBuA							
						Limit1:	-
						Limit2:	
70							
		4					
		5					
	3						
30.0							
1000.000 4900.00	) 8800.00 12	2700.00 16600.00	20500.00	24400.00 283	300.00 3220	0.00 4	0000.00 MHz
							1
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m		₋imit BuV/m)	Margin (dB)	Remark
8690.000	34.08	13.73	47.81	7	4.00	-26.19	Peak
11000.000	33.86	16.73	50.59	7	4.00	-23.41	Peak
11000.000	22.78	16.73	39.51	5	4.00	-14.49	AVG
16500.000	31.94	21.39	53.33	7	4.00	-20.67	Peak
16500.000	21.19	21.39	42.58	5	4.00	-11.42	AVG
•							

- 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		11n HT20 N	/lid CH		emp/H		· · ·	/ 53%RH
Test Item		larmonic			est Da			16, 2016
Polarize Detector		Vertical			st Engi			Chiang ac / 60Hz
Detector	Реак	and Averag	je	Ie	st Volt	age	120Va	ac / 60HZ
110.0 dBuA							Limit1: Limit2:	_
70								
30.0 1000.000 4900.0	00 8800.00 12	2700.00 16600.00	) 20500.00	24400.	.00 283	00.00 3220	00.00 4	0000.00 MHz
		Correct						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Resu (dBuV/			imit uV/m)	Margin (dB)	Remark
8690.000	33.95	13.73	47.6	8	74	4.00	-26.32	Peak
11160.000	31.60	16.75	48.3	5	74	4.00	-25.65	Peak
11160.000	21.53	16.75	38.2	8	54	4.00	-15.72	AVG
16740.000	32.28	22.82	55.1	0	74	4.00	-18.90	Peak
16740.000	20.46	22.82	43.2			4.00	-10.72	AVG
		I			I		1	1
emark:	uring frequer	noing from 1		46-0-1				4

ode	IEEE 802.	11n HT20 N	/lid CH	Tem	ip/Hum	<b>27(°</b> ℃)/	53%RH
em		larmonic			t Date		6, 2016
ize		lorizontal			Engineer		Chiang
tor	Peak	and Averag	je	Test	Voltage	120Va	c / 60Hz
dBuA							
						Limit1: Limit2:	-
	2	4 *					
		5X					
000 4900 0		2700.00 15500.00	0 20500 00	24400.00	20300 00 333	00.00 40	000.00 MHz
4300.00		2700.00 10000.00	20300.00	24400.00	20300.00 322	00.00 40	000.00 MH2
ency z)	Reading (dBuV)	Correct Factor (dB/m)			Limit (dBuV/m)	Margin (dB)	Remark
000	33.97	13.74	47.71		74.00	-26.29	Peak
		1	F0.40	)	74.00	-23.60	Peak
000	33.65	16.75	50.40				
000 000	33.65 22.81	16.75 16.75	39.56	;	54.00	-14.44	AVG
					54.00 74.00	-14.44 -19.03	AVG Peak
	tor dBuA 000 4900.0	tor Peak dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA	tor Peak and Average dBuA dBuA dBuA dBuA dBuA dBuA dBuA dBuA	Itor         Peak and Average           dBuA	tor         Peak and Average         Test           dBuA	tor         Peak and Average         Test Voltage           dBuA	tor         Peak and Average         Test Voltage         120Va           dBuA

- 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

est Mode		1n HT20 Hig	gh CH	Temp/H		27(°C)/ 53%RH	
Test Item		armonic		Test Da		Dec 16, 2016	
Polarize		Vertical		lest Engi			Chiang
Detector	Peak	and Average	9	Test Volt	tage	120Va	c / 60Hz
110.0 dBuA							
						Limit1: Limit2:	_
70							
		4 X					
	. 2						
		5×					
	3						
20.0							
30.0 1000.000 <b>4</b> 900.	.00 8800.00 1/	2700.00 16600.00	20500.00 24	400.00 283	00.00 3220	0.00 40	)000.00 MHz
Frequency	Reading	Correct	Result		imit	Margin	
(MHz)	(dBuV)	Factor (dB/m)	(dBuV/m)		uV/m)	(dB)	Remark
8630.000	33.34	13.70	47.04	74	4.00	-26.96	Peak
11400.000	31.64	16.77	48.41	7.	4.00	-25.59	Peak
11400.000	21.52	16.77	38.29	54	4.00	-15.71	AVG
17100.000	32.28	24.75	57.03	7.	4.00	-16.97	Peak
17100.000	21.33	24.75	46.08	54	4.00	-7.92	AVG
emark:							

est Mode		1n HT20 Hi	gh CH	Temp/Hum		′ 53%RH
Test Item		armonic		Test Date		6, 2016
Polarize		orizontal		est Engineer	ED Chiang	
Detector	Peak	and Average	e 7	Fest Voltage	120Va	c / 60Hz
110.0 dBuA						
					Limit1:	-
					Limit2:	
70						
		4 ×				
	2					
	× Å	5				
	3	×				
	*					
30.0						
1000.000 4900	.00 8800.00 1	2700.00 16600.00	20500.00 244	00.00 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
8740.000	33.67	13.75	47.42	74.00	-26.58	Peak
11400.000	33.42	16.77	50.19	74.00	-23.81	Peak
11400.000	22.76	16.77	39.53	54.00	-14.47	AVG
17100.000	31.90	24.75	56.65	74.00	-17.35	Peak
17100.000	20.10	24.75	44.85	54.00	-9.15	AVG
			-			

- 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

# **ELSR** Compliance Certification Services Inc.

Test Item Polarize Detector		armania	IEEE 802.11n HT20 Cross CH				27(℃)/ 53%RH	
	Harmonic			Test Date			Dec 16, 2016	
Detector	Vertical			Test Engineer				Chiang
	Peak	and Average	e	Те	st Volt	age	120Va	ac / 60Hz
110.0 dBuA								
							Limit1: Limit2:	_
70		4 X						
	1 ×	57						
30.0 1000.000 4900.0	0 8800.00 1	2700.00 16600.00	20500.00	24400	.00 283	00.00 3220	0.00 4	0000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resu (dBuV			imit uV/m)	Margin (dB)	Remark
8660.000	32.85	13.71	46.5	6	74	4.00	-27.44	Peak
11440.000	31.88	16.77	48.6	5	74	4.00	-25.35	Peak
11440.000	21.52	16.77	38.2	9	54	4.00	-15.71	AVG
17160.000	33.20	24.99	58.1	9	74	4.00	-15.81	Peak
17160.000	24.52	24.99	49.5	1	54	4.00	-4.49	AVG
emark:								

est Mode	IEEE 802.11n HT20 Cross CH			Temp/H	lum	27(°∁)/ 53%Rŀ	
Test Item	Н	armonic		Test Date		Dec 16, 2016	
Polarize		orizontal		Test Eng			Chiang
Detector	Peak	and Average	9	Test Vo	ltage	120Va	c / 60Hz
110.0 dBuA						Limit1:	—
						Limit2:	
70							
		4					
	1 ×	5					
	3						
30.0							
1000.000 4900.0	0 8800.00 1	2700.00 16600.00	20500.00 2	4400.00 28	300.00 3220	DO.OO 4	0000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)		Limit BuV/m)	Margin (dB)	Remark
8650.000	33.35	13.71	47.06	7	74.00	-26.94	Peak
11440.000	35.24	16.77	52.01	7	74.00	-21.99	Peak
11440.000	24.52	16.77	41.29	Ę	54.00	-12.71	AVG
17160.000	33.07	24.99	58.06	7	74.00	-15.94	Peak
17160.000	24.68	24.99	49.67	Ę	54.00	-4.33	AVG

- 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		11n HT40 L	ow CH		emp/H		· · /	/ 53%RH
Test Item		larmonic		Test Date			Dec 16, 2016	
Polarize		Vertical		Test Engineer				Chiang
Detector	Peak	Peak and Average			st Volt	age	120Va	ac / 60Hz
110.0 dBuA							Limit1: Limit2:	-
70								
	1	4						
30.0	3 3 70 8800.00 12	5 2700.00 16600.00	) 20500.00	24400.	00 202	00.00 3220	0.00 4	0000.00 MHz
1000.000 4300.0	JU 00UU.UU 17	2700.00 10000.00	5 20500.00	24400.	00 203	JU.UU 3220	JU.UU 4	0000.00 MHZ
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resu (dBuV/			imit uV/m)	Margin (dB)	Remark
8710.000	34.96	13.74	48.7	0	74	4.00	-25.30	Peak
11020.000	33.50	16.73	50.2	3	74	4.00	-23.77	Peak
11020.000	22.75	16.73	39.4	8	54	4.00	-14.52	AVG
16530.000	32.39	21.57	53.9	6	74	4.00	-20.04	Peak
16530.000	20.99	21.57	42.5	6	54	4.00	-11.44	AVG
	•	•					•	-
e <b>mark:</b> 1 Measu	uring frequer	ncies from 1	GHz to	the 1	Oth ha	armonic	of highes	t

Test Mode	IEEE 802.	11n HT40 Lo	ow CH		o/Hum	27(℃)/ 53%RH		
Test Item	F	larmonic			Date	Dec 16, 2016		
Polarize		Horizontal			ngineer		Chiang	
Detector	Peak	and Averag	e	Test \	/oltage	120Va	c / 60Hz	
110.0 dBuA								
						Limit1:	-	
						Limit2:	_	
70								
70								
	ž	4						
	1							
	3	5						
	X							
30.0								
1000.000 4900.0	00 8800.00 1	2700.00 16600.00	20500.00	24400.00	28300.00 322	00.00 40	)000.00 MHz	
Frequency	Reading	Correct Factor	Result		Limit	Margin	Remark	
(MHz)	(dBuV)	(dB/m)	(dBuV/m	)	(dBuV/m)	(dB)	Remain	
8620.000	33.73	13.70	47.43		74.00	-26.57	Peak	
11020.000	35.07	16.73	51.80		74.00	-22.20	Peak	
11020.000	23.85	16.73	40.58		54.00	-13.42	AVG	
16530.000	31.71	21.57	53.28		74.00	-20.72	Peak	
16530.000	21.16	21.57	42.73		54.00	-11.27	AVG	

- 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		La march 1	/id CH	Temp/Hum			27(°C)/ 53%RH	
Polanze	F	larmonic		Test Date			Dec 16, 2016	
Detector	Dook	Vertical and Average		Test Engineer Test Voltage				) Chiang /ac / 60Hz
110.0 dBuA							Limit1: Limit2:	
70 		4 5 5 2700.00 16600.00	) 20500.00	24400.0	0 28300	00 2220		40000.00 MHz
1000.000 4300.0	0 0000.00 1	2700.00 10000.00	0 20300.00	24400.0	JU 20300	.00 J220	0.00	40000.00 M112
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m	)	Lin (dBu'		Margin (dB)	Remar
		Factor		)		V/m)		Remar
(MHz)	(dBuV)	Factor (dB/m)	(dBuV/m	)	(dBu	<b>V/m)</b> 00	(dB)	
(MHz) 8680.000	(dBuV) 34.19	Factor (dB/m) 13.72	<b>(dBuV/m</b> 47.91	)	<b>(dBu</b> ) 74.	<b>V/m)</b> 00 00	(dB) -26.09	Peak
(MHz) 8680.000 11100.000	(dBuV) 34.19 33.65	Factor           (dB/m)           13.72           16.74	(dBuV/m 47.91 50.39	)	(dBu) 74. 74.	V/m) 00 00 00	(d <b>B</b> ) -26.09 -23.61	Peak Peak

Test Item				Temp/Hum			53%RH
Delerine		larmonic			Date	Dec 16, 2016	
Polarize Detector		lorizontal and Averag	10		ngineer /oltage	ED Chiang 120Vac / 60Hz	
110.0 dBuA						Limit1: Limit2:	_
70	č	4					
30.0 1000.000 4900.00	D 8800.00 12	2700.00 16600.00	D 20500.00	24400.00	28300.00 322	00.00 40	000.00 MHz
Frequency	Reading	Correct	Result		Limit	Margin	
(MHz)	(dBuV)	Factor (dB/m)	(dBuV/m	)	(dBuV/m)	(dB)	Remark
8660.000	32.93	13.71	46.64		74.00	-27.36	Peak
11100.000	34.09	16.74	50.83		74.00	-23.17	Peak
11100.000	22.63	16.74	39.37		54.00	-14.63	AVG
16650.000	32.24	22.28	54.52		74.00	-19.48	Peak
10000.000	20.50	22.28	42.78		54.00	-11.22	AVG

est Mode	IEEE 802.1		gh CH		np/Hum		53%RH
Test Item		armonic			st Date	Dec 16, 2016	
Polarize					Engineer		Chiang
Detector	Peak	ak and Average Test Voltage		120Va	c / 60Hz		
110.0 dBuA						Limit1:	
						Limit1: Limit2:	
70							
70							
		4 ×					
	1 2 X	5 X					
	3						
30.0 1000.000 4900	).00 8800.00 1;	2700.00 16600.00	20500.00	4400.00	28300.00 3220	DO.OO 40	000.00 MHz
		Operation					
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Remark
8730.000	33.23	13.75	46.98		74.00	-27.02	Peak
11340.000	32.58	16.76	49.34		74.00	-24.66	Peak
11340.000	21.93	16.76	38.69		54.00	-15.31	AVG
17010.000	31.15	24.40	55.55		74.00	-18.45	Peak
17010.000	20.33	24.40	44.73		54.00	-9.27	AVG
emark:							

est Mode	IEEE 802.11n HT40 High CH			Temp/Hum	27(°C)/ 53%RH		
Test Item		armonic		Test Date	Dec 16, 2016		
Polarize		orizontal		est Engineer		Chiang	
Detector	Peak	and Average	)	Test Voltage	120Va	c / 60Hz	
110.0 dBuA							
					Limit1:	-	
					Limit2:		
70							
		4 ×					
	1 2						
	Ϋ́	5					
		X					
	Å						
30.0							
1000.000 4900.	00 8800.00 1	2700.00 16600.00	20500.00 24	400.00 28300.00 32	200.00 40	000.00 MHz	
Frequency	Reading	Correct	Result	Limit	Margin		
Frequency (MHz)	(dBuV)	Factor (dB/m)	(dBuV/m)	(dBuV/m)	Margin (dB)	Remark	
8610.000	34.29	13.69	47.98	74.00	-26.02	Peak	
11340.000	32.43	16.76	49.19	74.00	-24.81	Peak	
11340.000	21.41	16.76	38.17	54.00	-15.83	AVG	
17010.000	31.72	24.40	56.12	74.00	-17.88	Peak	
17010.000	20.19	24.40	44.59	54.00	-9.41	AVG	

- 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

# **ELSR** Compliance Certification Services Inc.

est Mode	IEEE 802.	11n HT40 C CH	ross	ſemp/Hum	27(°C)/ 53%RH	
Test Item	Н	armonic		Test Date	Dec 16, 2016	
Polarize	١	/ertical	Те	st Engineer		Chiang
Detector	Peak	and Average	e T	est Voltage	120Va	c / 60Hz
110.0 dBuA						
					Limit1: Limit2:	
70						
		4				
	2					
		\$				
30.0 1000.000 4900.	00 8800.00 1	2700.00 16600.00	20500.00 2440	0.00 28300.00 322	00.00 40	1000.00 MHz
1000.000 4300.		2700.00 10000.00	20300.00 2440	0.00 20300.00 322		000.00 MH2
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8745.000	32.59	13.75	46.34	74.00	-27.66	Peak
11420.000	32.24	16.77	49.01	74.00	-24.99	Peak
11420.000	21.71	16.77	38.48	54.00	-15.52	AVG
17130.000	33.76	24.87	58.63	74.00	-15.37	Peak
17130.000	21.41	24.87	46.28	54.00	-7.72	AVG
	1	<u> </u>		1	1	1

est Mode	IEEE 802.	.11n HT40 C CH	Cross	Temp/Hum	<b>27(</b> °C)/	/ 53%RH
Test Item	Н	armonic		Test Date		6, 2016
Polarize		orizontal		est Engineer		Chiang
Detector	Peak	and Average	e 1	Fest Voltage	120Va	c / 60Hz
110.0 dBuA					Limit1:	_
					Limit2:	
70						
	2 X	×				
	1 33	5%				
30.0						
1000.000 4900.	.00 8800.00 1	2700.00 16600.00	) 20500.00 244	100.00 28300.00 32	200.00 40	0000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8843.000	33.42	13.80	47.22	74.00	-26.78	Peak
11420.000	35.64	16.77	52.41	74.00	-21.59	Peak
11420.000	26.70	16.77	43.47	54.00	-10.53	AVG
17130.000	32.52	24.87	57.39	74.00	-16.61	Peak
17130.000	21.26	24.87	46.13	54.00	-7.87	AVG

- 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

est Mode	IEEE 802.11		/id CH	Temp/Hu Test Dat		27(°C)/ 53%RH		
est Item		Harmonic				Dec 16, 2016		
Polarize		Vertical			leer		Chiang	
Detector	Peak	Peak and Average			ige	120Va	c / 60Hz	
110.0 dBuA								
						Limit1:	-	
						Limit2:	_	
70								
		4 ×						
		5 X						
	*							
30.0	00.00 8800.00	12700.00 16600.00	) 20500.00 2	4400.00 28300	.00 3220	0.00 40	)000.00 MHz	
1000.000		12100.00 10000.00	. 20000.00 2	100.00 20000				
	_							
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Lir (dBu		Margin (dB)	Remark	
8690.000	35.02	13.73	48.75	74.	00	-25.25	Peak	
11380.000	30.45	16.77	47.22	74.	00	-26.78	Peak	
11380.000	20.07	16.77	36.84	54.	00	-17.16	AVG	
17070.000	31.82	24.63	56.45	74.	00	-17.55	Peak	
17070.000	20.84	24.63	45.47	54.	00	-8.53	AVG	
	•			•			•	
emark:								

est Mode	IEEE 802.11	ac VHT80 N	/lid CH	Temp/Hu	Im	27(°C)/ 53%RH		
Test Item	Ha	armonic		Test Dat	e	Dec 16, 2016		
Polarize		Horizontal			ieer	ED Chiang		
Detector	Peak a	Peak and Average			ige	120Va	ac / 60Hz	
110.0 dBuA						Limit1:		
						Limit2:		
70								
		4						
	1 Ž	Ť.						
		5						
	× ×							
30.0								
1000.000 49	900.00 8800.00 1	2700.00 16600.00	) 20500.00 2	4400.00 28300	.00 3220	0.00 4	0000.00 MHz	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Lir (dBu		Margin (dB)	Remark	
8740.000	34.46	13.75	48.21	74.	00	-25.79	Peak	
11060.000	34.32	16.74	51.06	74.	00	-22.94	Peak	
11060.000	23.54	16.74	40.28	54.	00	-13.72	AVG	
16590.000	32.12	21.92	54.04	74.		-19.96	Peak	
16590.000	20.86	21.92	42.78	51	00	-11.22	AVG	

- 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

est Mode	IEEE 802.1 <sup>°</sup>	Cross	Temp/Hum			27(℃)/ 53%RH		
Test Item	est Item Harmonic			Test Date				16, 2016
Polarize	١	/ertical			st Engine			Chiang
Detector	Peak a	and Average		Te	st Voltag	e	120Va	ac / 60Hz
110.0 dBuA								
							Limit1: Limit2:	
70								
		4						
	2 1 X	\$						
	3							
30.0 1000.000 4900	.00 8800.00 1	2700.00 16600.00	20500.00	24400.	.00 28300.0	0 322	00.00 4	0000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/n		Limi (dBuV/		Margin (dB)	Remark
8820.000	31.99	13.79	45.78		74.0	0	-28.22	Peak
11380.000	33.03	16.77	49.80		74.0	0	-24.20	Peak
11380.000	21.97	16.77	38.74		54.0	0	-15.26	AVG
17070.000	34.21	24.63	58.84		74.0	0	-15.16	Peak
17070.000	22.29	24.63	46.92		54.0	0	-7.08	AVG
emark:								
		ncies from 1			o			

est Mode	IEEE 802.11	ac VHT80 M	1id CH	Temp/Hum	27(°C)/ 53%RH		
Fest Item		armonic		Test Date		6, 2016	
Polarize		orizontal		est Engineer		Chiang	
Detector	Peak a	and Average	Т	est Voltage	120Va	c / 60Hz	
110.0 dBuA							
					Limit1:	—	
					Limit2:		
70							
	_	Å					
	2 X						
	1	5					
	3	Î					
30.0							
1000.000 49	00.00 8800.00 1	2700.00 16600.00	20500.00 2440	0.00 28300.00 322	200.00 40	000.00 MHz	
Frequency	Reading	Correct Factor	Result	Limit	Margin	Remark	
(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Remark	
8740.000	33.03	13.75	46.78	74.00	-27.22	Peak	
11380.000	35.74	16.77	52.51	74.00	-21.49	Peak	
11380.000	25.05	16.77	41.82	54.00	-12.18	AVG	
17070.000	33.54	24.63	58.17	74.00	-15.83	Peak	
17070.000	20.81	24.63	45.44	54.00	-8.56	AVG	

- 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 Lo	w CH	Temp/Hum	<b>27(</b> °C)	/ 53%RH
Test Item		Harmonic		Test Date	Dec '	16, 2016
Polarize		Vertical		Test Enginee		Chiang
Detector	Pea	ak and Aver	age	Test Voltage	e   120Va	ac / 60Hz
110.0 dBuA						
					Limit1: Limit2:	_
70						
		4 ×				
	1 3					
30.0						
1000.000 4900.	.00 8800.00 1	2700.00 16600.00	) 20500.00 2	4400.00 28300.00	32200.00 4	0000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/n	Margin n) (dB)	Remark
8698.000	34.31	13.73	48.04	74.00	-25.96	Peak
11490.000	34.58	16.78	51.36	74.00	-22.64	Peak
11490.000	31.54	16.78	48.32	54.00	-5.68	AVG
	25.07	25.28	60.35	74.00	-13.65	Peak
17235.000	35.07	25.20	00.00	74.00	10.00	I Cak

## Above 1G Test Data for UNII-3

- 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 Lo	w CH		/Hum	27(℃)/ 53%RH		
Test Item		Harmonic		Test			6, 2016	
Polarize		Horizontal			ngineer		Chiang	
Detector	Pe	ak and Aver	age	Test Voltage		120Va	ic / 60Hz	
110.0 dBuA								
						Limit1: Limit2:		
70								
	ą							
	X	4						
30.0								
1000.000 4900.0	0 8800.00 1	2700.00 16600.00	0 20500.00	24400.00	28300.00 322	00.00 4	0000.00 MHz	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resul (dBuV/r		Limit dBuV/m)	Margin (dB)	Remark	
8698.000	33.60	13.73	47.33	3	74.00	-26.67	Peak	
11490.000	43.52	16.78	60.30	)	74.00	-13.70	Peak	
11490.000	33.92	16.78	50.70	)	54.00	-3.30	AVG	
						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	ICC	E 802.11a N			mp/Hum	27(°C)/ 53%RH		
	Test Item		Harmonic			est Date	Dec 16, 2016		
	Polarize Detector		Vertical eak and Ave	rago		t Engineer st Voltage		Chiang ic / 60Hz	
110.0		F	eak and Ave	lage	Tes	si vollage	120Va		
								Limit1: Limit2:	
70				4					
		1							
30.0									
10							300.00 32200	00 4/	
10	00.000 4900.00	8800.00	12700.00 16	600.00 20	)500.00	24400.00 28	300.00 32200	0.00 40	
	00.000 4900.00 Frequency (MHz)	8800.00 Reading (dBuV)	12700.00 16 Correct Factor (dB/m)	6600.00 20 Resu (dBuV	ılt	24400.00 28 Limit (dBuV/m)	Margin (dB)	Remark	
F	Frequency	Reading	Correct Factor	Resu	ılt /m)	Limit	Margin		
F	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Resu (dBuV	ılt /m) )3	Limit (dBuV/m)	Margin (dB)	Remark	
F { 1	Frequency (MHz) 8745.000	Reading (dBuV) 32.28	Correct Factor (dB/m) 13.75	Resu (dBuV 46.0	ult /m) 13 59	Limit (dBuV/m) 74.00	Margin (dB) -27.97	Remark Peak	

Test Mode	IEEE	802.11a M	id CH	Temp/Hum			27(°C)/ 53%RH		
Test Item		Harmonic			est Da		Dec 16, 2016		
Polarize		Horizontal Test Engineer		ED Chiang					
Detector	Pea	ak and Aver	age	Tes	st Volta	age	120\	/ac / 60Hz	
110.0 dBuA									
							Limit1: Limit2:	_	
70									
	2	4							
	Ň	Î							
	1								
30.0	00 0000 00 1	2700.00 1000.00	0 20500.00	24400.0	0 2020	0.00 2220	20.00	40000.00 MU	
1000.000 4900.	00 8800.00 1	2700.00 16600.0	0 20500.00	24400.0	)0 2830	0.00 3220	00.00	40000.00 MHz	
Frequency	Reading	Correct	Result			mit	Morgin		
(MHz)	(dBuV)	Factor (dB/m)	(dBuV/r			uV/m)	Margin (dB)	Remark	
8645.000	32.86	13.71	46.57		74	.00	-27.43	Peak	
11570.000	42.55	16.84	59.39		74	.00	-14.61	Peak	
11570.000	33.74	16.84	50.58		54	.00	-3.42	AVG	
17355.000	34.07	25.75	59.82		7/	.00	-14.18	Peak	

- 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	IEEE 802.11a High CH			lum	· · ·	/ 53%RH
Test Item		Harmonic		Test D			16, 2016
Polarize		Vertical		Test Eng			Chiang
Detector	Pea	ak and Aver	age	Test Voltage		120Va	ac / 60Hz
110.0 dBuA							
						Limit1: Limit2:	_
70							
		4					
	1 22 1 X						
30.0							
1000.000 4900.0	0 8800.00 1	2700.00 16600.00	) 20500.00	24400.00 283	800.00 3220	00.00	10000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m		₋imit BuV/m)	Margin (dB)	Remark
8699.000	33.61	13.73	47.34	7	4.00	-26.66	Peak
11650.000	34.45	16.91	51.36	7	4.00	-22.64	Peak
	32.41	16.91	49.32	5	4.00	-4.68	AVG
11650.000	02.71						

- 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 Hi	gh CH	Temp/		. ,	/ 53%RH	
Test Item		Harmonic		Test D		Dec 16, 2016		
Polarize		Horizontal		Test En			Chiang	
Detector	Pea	ak and Aver	age	Test Voltage		120Va	ac / 60Hz	
110.0 dBuA								
						Limit1: Limit2:	_	
70								
	2	4						
	*							
30.0								
1000.000 4900.0	00 8800.00 1	2700.00 16600.00	0 20500.00	24400.00 2	8300.00 322	00.00 4	0000.00 MHz	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/n		Limit IBuV/m)	Margin (dB)	Remark	
8854.000	32.17	13.80	45.97		74.00	-28.03	Peak	
11650.000	43.36	16.91	60.27		74.00	-13.73	Peak	
11650.000	34.33	16.91	51.24		54.00	-2.76	AVG	
	33.28	26.22	59.50		74.00	-14.50	Peak	

- 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 Low CH			Temp/Hum		)/ 53%RH
Test Item				Test Date		16, 2016
Polarize		Vertical		Test Engine		Chiang
Detector	Peak	and Averag	je	Test Voltage	e 120V	ac / 60Hz
110.0 dBuA						
					Limit1: Limit2:	_
70						
70						
		4 ×				
	2					
	× ×					
30.0 1000.000 <b>4</b> 900.	00 8800.00 1	2700.00 16600.00	0 20500.00 2	24400.00 28300.00	32200.00	40000.00 MHz
1000.000 4300.	00 0000.00 1	2700.00 10000.00	20300.00 2	.4400.00 20300.00	52200.00	40000.00 MTI2
Frequency	Reading	Correct	Result	Limit	Margin	
(MHz)	(dBuV)	Factor (dB/m)	(dBuV/m)			Remark
8978.000	33.43	13.86	47.29	74.00	) -26.71	Peak
11490.000	36.47	16.78	53.25	74.00	) -20.75	Peak
11490.000	30.91	16.78	47.69	54.00	-6.31	AVG
	34.79	25.28	60.07	74.00	) -13.93	Peak

- 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 L	ow CH	Temp/H	lum		/ 53%RH	
Test Item		larmonic		Test D		Dec 16, 2016		
Polarize		lorizontal		Test Eng			Chiang	
Detector	Peak	and Averag	e	Test Voltage		120Va	ac / 60Hz	
110.0 dBuA								
						Limit1: Limit2:	_	
70								
	2	4						
		1						
	1 X							
30.0								
1000.000 4900.0	0 8800.00 1	2700.00 16600.00	) 20500.00	24400.00 28	300.00 3220	00.00 4	0000.00 MHz	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/n		Limit BuV/m)	Margin (dB)	Remark	
8798.000	32.02	13.78	45.80	7	4.00	-28.20	Peak	
11490.000	45.56	16.78	62.34	7	4.00	-11.66	Peak	
11490.000	34.40	16.78	51.18	5	54.00	-2.82	AVG	
11100.000						T	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	IEEE 802.	11n HT20 N	/lid CH	Temp/Hum	· · /	/ 53%RH
Test Item	ŀ	larmonic		Test Date		6, 2016
Polarize		Vertical		Test Engineer		Chiang
Detector	Peak	and Averag	je	Test Voltage	120Va	c / 60Hz
110.0 dBuA					Limit1:	
					Limit2:	_
70						
		4				
	1 ¥					
30.0						
1000.000 4900.0	0 8800.00 1	2700.00 16600.00	) 20500.00 2	4400.00 28300.00 32	200.00 40	0000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8796.000	32.12	13.78	45.90	74.00	-28.10	Peak
11570.000	34.32	16.84	51.16	74.00	-22.84	Peak
	31.52	16.84	48.36	54.00	-5.64	AVG
11570.000	31.52	10.01				

- 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 N	/lid CH	Temp/Hum			<b>27(</b> ℃	)/ 53%RH
Test Item			Test Date			Dec 16, 2016		
Polarize		lorizontal		Test Engineer				Chiang
Detector	Peak and Average Test Voltage		120V	/ac / 60Hz				
110.0 dBuA								
							Limit1: Limit2:	
70								
	2 X	4 ×						
	*							
	1 X							
30.0								
1000.000 4900.	00 8800.00 1	2700.00 16600.00	0 20500.00	24400.0	DO 2830	0.00 3220	00.00	40000.00 MHz
_		Correct	_					
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Resul (dBuV/			mit uV/m)	Margin (dB)	Remark
8659.000	33.46	13.71	47.17	7	74	1.00	-26.83	Peak
11570.000	45.52	16.84	62.36	6	74	.00	-11.64	Peak
11570.000	34.12	16.84	50.96	6	54	.00	-3.04	AVG
17355.000	36.34	25.75	62.09	a	7/	l.00	-11.91	Peak

- 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 802.1	1n HT20 Hig	gh CH	Temp/Hum	27(°∁)/ 53%RH		
Test Item		armonic		Test Date	Dec 16, 2016		
Polarize		/ertical		est Engineer	ED Chiang		
Detector	Peak	and Average	е -	Test Voltage	120Va	c / 60Hz	
110.0 dBuA							
					Limit1: Limit2:	_	
70							
	2	4					
30.0							
1000.000 4900	.00 8800.00 1	2700.00 16600.00	) 20500.00 244	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	
8878.000	33.12	13.81	46.93	74.00	-27.07	Peak	
	35.41	16.91	52.32	74.00	-21.68	Peak	
11650.000	00.41				1		
11650.000 11650.000	32.45	16.91	49.36	54.00	-4.64	AVG	

- 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 802.1		gh CH	Temp/Hum	( )	/ 53%RH
Test Item		armonic		Test Date		6, 2016
Polarize		orizontal		est Engineer		Chiang
Detector	Peak	and Average	е Т	est Voltage	120Va	c / 60Hz
110.0 dBuA						
					Limit1: Limit2:	_
70						
	2	4 *				
	Å Í					
30.0						
1000.000 4900	.00 8800.00 1	2700.00 16600.00	0 20500.00 244	0.00 28300.00 322	00.00 40	0000.00 MHz
Frequency	Reading	Correct	Result	Limit	Margin	
(MHz)	(dBuV)	Factor (dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Remark
8769.000	32.99	13.76	46.75	74.00	-27.25	Peak
11650.000	45.48	16.91	62.39	74.00	-11.61	Peak
11650.000	34.87	16.91	51.78	54.00	-2.22	AVG
17475.000	37.04	26.22	63.26	74.00	-10.74	Peak

#### 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		11n HT40 L	ow CH	Temp/⊢			53%RH
Test Item	F	larmonic		Test Da		Dec 16, 20	
Polarize		Vertical		Test Eng		ED Chiang	
Detector	Peak	and Averag	e	Test Vol	tage	120Va	c / 60Hz
110.0 dBuA						Limit1: Limit2:	_
70							
30.0 1000.000 4900.0	0 8800.00 13	2700.00 16600.00	) 20500.00 2	4400.00 283	00.00 3220	0.00 40	000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)		imit uV/m)	Margin (dB)	Remark
8745.000	32.59	13.75	46.34	7	4.00	-27.66	Peak
11420.000	32.24	16.77	49.01	7	4.00	-24.99	Peak
11420.000	21.71	16.77	38.48	5	4.00	-15.52	AVG
17130.000	33.76	24.87	58.63	7	4.00	-15.37	Peak
17130.000	21.41	24.87	46.28	5	4.00	-7.72	AVG
emark:		1					

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

est Mode	IEEE 802.1		w CH		emp/Hu			)/ 53%RH	
Test Item		armonic			est Dat		Dec 16, 201		
Polarize		orizontal	_		st Engin		ED Chiang		
Detector	Peak	and Average	9	le	st Volta	age	120Va	ac / 60Hz	
110.0 dBuA									
							Limit1:	-	
							Limit2:		
70									
		4 X							
	2								
	1	5							
	A A A A A A A A A A A A A A A A A A A	1							
30.0									
1000.000 4900	).00 8800.00 1	2700.00 16600.00	) 20500.00	24400.	.00 28300	).00 322	00.00	40000.00 MHz	
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m	1)	Lir (dBu	nit V/m)	Margin (dB)	Remark	
8843.000	33.42	13.80	47.22		74.	.00	-26.78	Peak	
11420.000	35.64	16.77	52.41		74.	.00	-21.59	Peak	
11420.000	26.70	16.77	43.47		54.	.00	-10.53	AVG	
17130.000	32.52	24.87	57.39		74.	.00	-16.61	Peak	
17130.000	21.26	24.87	46.13		54.	.00	-7.87	AVG	
emark:									

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

# **EEERF** Compliance Certification Services Inc.

Test Mode		IEEE 802.11n HT40 Mid CH		emp/Hum	27(℃)/ 53%RH	
Test Item		armonic	1	est Date	Dec 1	6, 2016
Polarize	N	Vertical	Tes	st Engineer		Chiang
Detector	Peak	and Average	Te	st Voltage	120Va	c / 60Hz
110.0 dBuA		1			Limit1:	
					Limit1:	
70						
30.0 1000.000 4900.		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
8689.000	33.59	13.73	47.32	74.00	-26.68	Peak
11510.000	33.07	16.79	49.86	74.00	-24.14	Peak
11510.000	25.57	16.79	42.36	54.00	-11.64	AVG
17265.000	34.24	25.40	59.64	74.00	-14.36	Peak
11510.000 17265.000		16.79 25.40	42.36 59.64		-11.64 -14.36	

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

Teet Here		302.11n HT4 Mid CH	.0	Temp/Hum	<b>27(°</b> ∁)/ 53%R	
Test Item		armonic		Test Date		6, 2016
Polarize		orizontal		est Engineer		Chiang
Detector	Peak	and Average	э Т	est Voltage	120Va	c / 60Hz
110.0 dBuA					Limit1: Limit2:	—
70						
	2	4				
	1 X					
30.0 1000.000 4900.0	0 8800.00 1	2700.00 16600.00	) 20500.00 2440	00.00 28300.00 322	200.00 40	0000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8695.000	33.56	13.73	47.29	74.00	-26.71	Peak
	42.74	16.79	59.53	74.00	-14.47	Peak
11510.000			50.20	54.00	-3.80	AVG
11510.000 11510.000	33.41	16.79	00.20			

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

est Mode		802.11n HT40 ligh CH	Te	emp/Hum	<b>27(</b> °C)/	53%RH
Test Item	Н	armonic	Т	est Date	Dec 16, 201	
Polarize	N	Vertical		st Engineer		Chiang
Detector	Peak	and Average	Te	st Voltage	120Va	c / 60Hz
110.0 dBuA					Limit1:	_
					Limit2:	_
70						
		<b>4</b>				
	1 2 X 3					
30.0						
1000.000 4900.	00 8800.00 1	2700.00 16600.00	20500.00 24400	.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
8675.000	33.32	13.72	47.04	74.00	-26.96	Peak
11590.000	33.12	16.86	49.98	74.00	-24.02	Peak
11590.000	25.50	16.86	42.36	54.00	-11.64	AVG
17385.000	33.43	25.87	59.30	74.00	-14.70	Peak
emark:		ncies from 1				

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

est Mode		802.11n HT4 High CH	0	Temp/Hum		Im	27(°C)/ 53%RI	
Test Item		armonic		Т	est Dat	e		16, 2016
Polarize		orizontal			st Engin			Chiang
Detector	Peak	and Average	e	Te	st Volta	ige	120Va	ac / 60Hz
110.0 dBuA							Limit1:	_
							Limit2:	_
70								
	2	4						
30.0								
1000.000 4900.	00 8800.00 1	2700.00 16600.00	20500.00	24400.	.00 28300	.00 322	00.00	10000.00 MHz
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/n		Lin (dBu		Margin (dB)	Remark
8695.000	33.97	13.73	47.70		74.	00	-26.30	Peak
11600.000	38.48	16.87	55.35		74.	00	-18.65	Peak
11600.000	33.06	16.87	49.93		54.	00	-4.07	AVG
17385.000	33.70	25.87	59.57		74.	00	-14.43	Peak
emark:								
	urina freque	ncies from 1	CHz to t	ha 1	Oth har	monio	of biabos	+

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

	IEEE 802.11a	ac VHT80 N	/lid CH	ſemp/Hum	<b>27(°</b> C)/	53%RH	
Test Item		armonic		Test Date	Dec 16, 2016		
Polarize		ertical		est Engineer	ED Chiang		
Detector	Peak a	ind Average	; T	est Voltage	120Va	c / 60Hz	
110.0 dBuA		1					
					Limit1: Limit2:	_	
70							
		4 X					
	2 1 2 1 1						
	***						
30.0							
1000.000 490	0.00 8800.00 1	2700.00 16600.00	0 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	
8789.000	33.14	13.77	46.91	74.00	-27.09	Peak	
11550.000	32.68	16.82	49.50	74.00	-24.50	Peak	
11000.000	1	40.00	42.33	54.00	-11.67	AVG	
11550.000	25.51	16.82	42.00	04.00	11.07	70	

- 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	ac VHT80 N	/lid CH	Temp/Hum	<b>27(</b> °(	C)/ 53%RH
Test Item	Ha	armonic		Test Date	Dec	: 16, 2016
Polarize		orizontal		Test Enginee		) Chiang
Detector	Peak a	and Average	)	Test Voltage	e 120'	Vac / 60Hz
110.0 dBuA						
					Limit1 Limit2	
70						
	2	4 X				
30.0						
1000.000 49	00.00 8800.00 1	2700.00 16600.00	) 20500.00 2	4400.00 28300.00	32200.00	40000.00 MHz
<b>F</b>	Deeding	Correct	Desult	Limit	Manain	
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/r		Remark
8789.000	33.07	13.77	46.84	74.00	-27.16	Peak
11550.000	36.42	16.82	53.24	74.00	-20.76	Peak
11550.000	33.39	16.82	50.21	54.00	-3.79	AVG
17325.000	33.68	25.63	59.31	74.00	-14.69	Peak

#### 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

# 4.6 FREQUENCY STABILITY

# 4.6.1 Test Limit

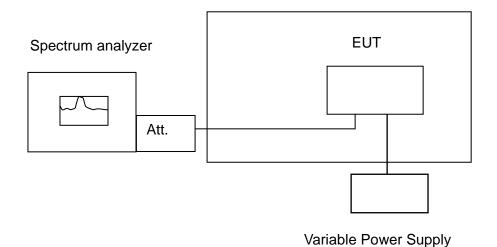
According to §15.407(g) manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the operational description.

# 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

Tamp (°C)	Veltere ()()	Measured Frequency	51	80	(MHz)		Liı	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	
50	5	5180.03647	5180.02996	5180.03340	5180.02431	7.0405	5.7838	6.4479	4.6931	Pass
40	5	5180.00129	5180.00391	5180.00434	5180.00521	0.2490	0.7548	0.8378	1.0058	Pass
30	5	5179.99913	5179.99696	5179.99740	5179.99783	-0.1680	-0.5869	-0.5019	-0.4189	Pass
20	5	5179.99653	5179.99783	5179.99783	5179.99740	-0.6699	-0.4189	-0.4189	-0.5019	Pass
10	5	5180.00087	5180.00347	5180.00478	5180.00564	0.1680	0.6699	0.9228	1.0888	Pass
0	5	5180.00868	5180.00852	5180.01120	5180.01193	1.6757	1.6448	2.1622	2.3031	Pass
-10	5	5180.01780	5180.01997	5180.02084	5180.02170	3.4363	3.8552	4.0232	4.1892	Pass
-20	5	5180.02388	5180.02865	5180.02865	5180.02950	4.6100	5.5309	5.5309	5.6950	Pass
Tomp (°C)	Voltage (V)	Measured Frequency	51	80	(MHz)	Limit				
Temp. (C)	vollage (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	5179.997320	5179.99800	5179.99824	5179.99886	-0.5174	-0.3861	-0.3398	-0.2201	Pass
20	5	5179.996530	5179.99783	5179.99783	5179.99740	-0.6699	-0.4189	-0.4189	-0.5019	Pass
20	5.5	5179.995240	5179.99601	5179.99669	5179.99707	-0.9189	-0.7703	-0.6390	-0.5656	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,

<b>.</b>		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 1: Applicability of DFS requirements prior to use of a channel

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

<b>_</b>	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 statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.					

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

Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP ≥ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-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	e (Radar Types hort Pulse Rad nel closing time	dar Type 0 sho	ould be used for the detection	80% bandwidth test, chann	120 el move time,

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Radar Type	Pulse Width (µsec)	Chirp Width (MHz)	PRI (µsec)	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.MP2.mt76x2u.wifi.v3.1.0

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.

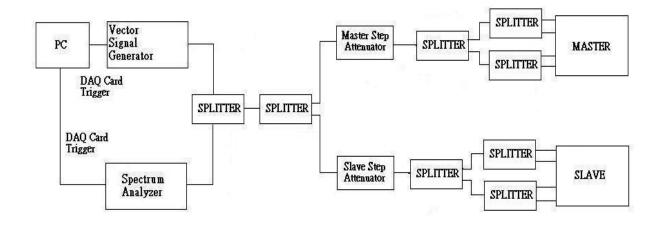
The short pulse types 2, 3 and 4, and the long pulse type 5 parameters are randomized at run-time.

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.

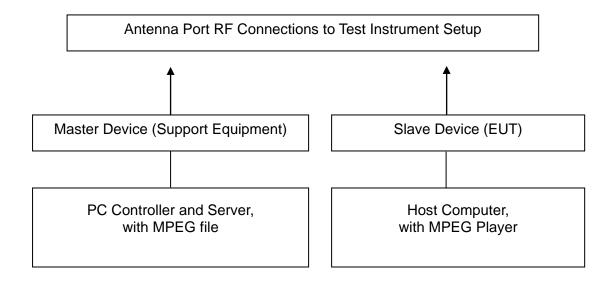
Set the signal generator to produce a radar waveform, trigger a burst manually and measure the level on the spectrum analyzer. Readjust the amplitude of the signal generator as required so that the peak level of the waveform is at a displayed level equal to the required or desired interference detection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

## Adjustment Of Displayed Traffic Level

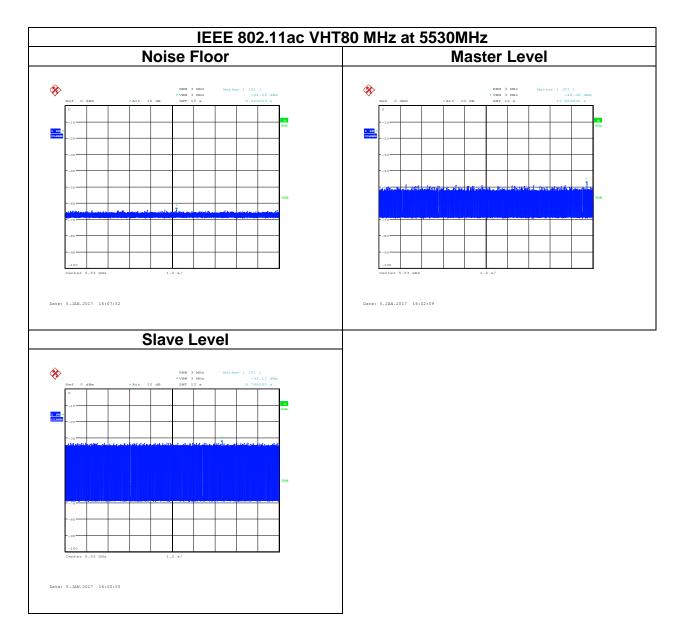
Establish a link between the Master and Slave, adjusting the Link Step Attenuator as needed to provide a suitable received level at the Master and Slave devices. Stream the video test file to generate WLAN traffic. Confirm that the WLAN traffic level, as displayed on the spectrum analyzer, is at lower 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.

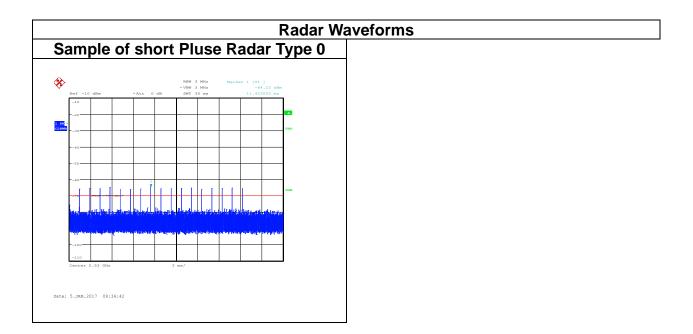
If a different setting of the Master Step Attenuator is required to meet the above conditions, perform a new System Calibration for the new Master Step Attenuator setting.

# 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:

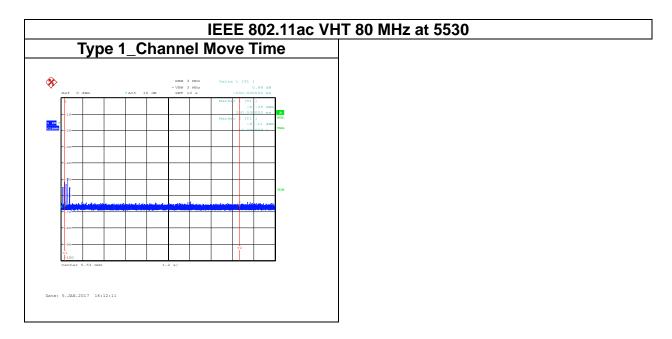
Aggregate Transmission Time =

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

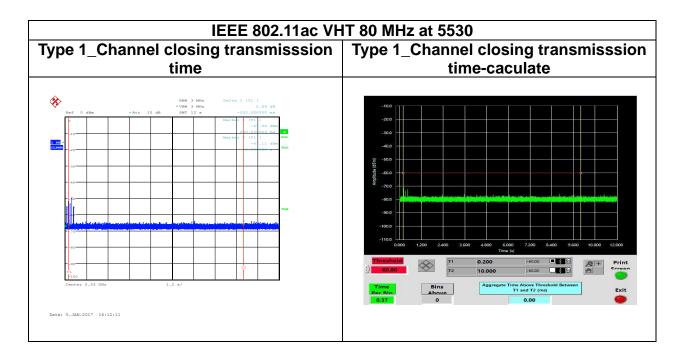
The observation period over which the aggregate time is calculated

Begins at (Reference Marker + 200 msec) and

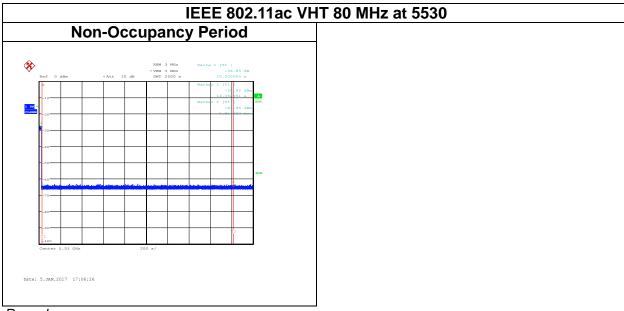
Ends no earlier than (Reference Marker + 10 sec).



Channel Move Time	Limit
(s)	(s)
0	10



Aggregate Transmission Time	Limit	Margin
(ms)	(ms)	(ms)
0	60	12



Remark :

1. No EUT transmissions were observed on the test channel during the 30 minute observation time.