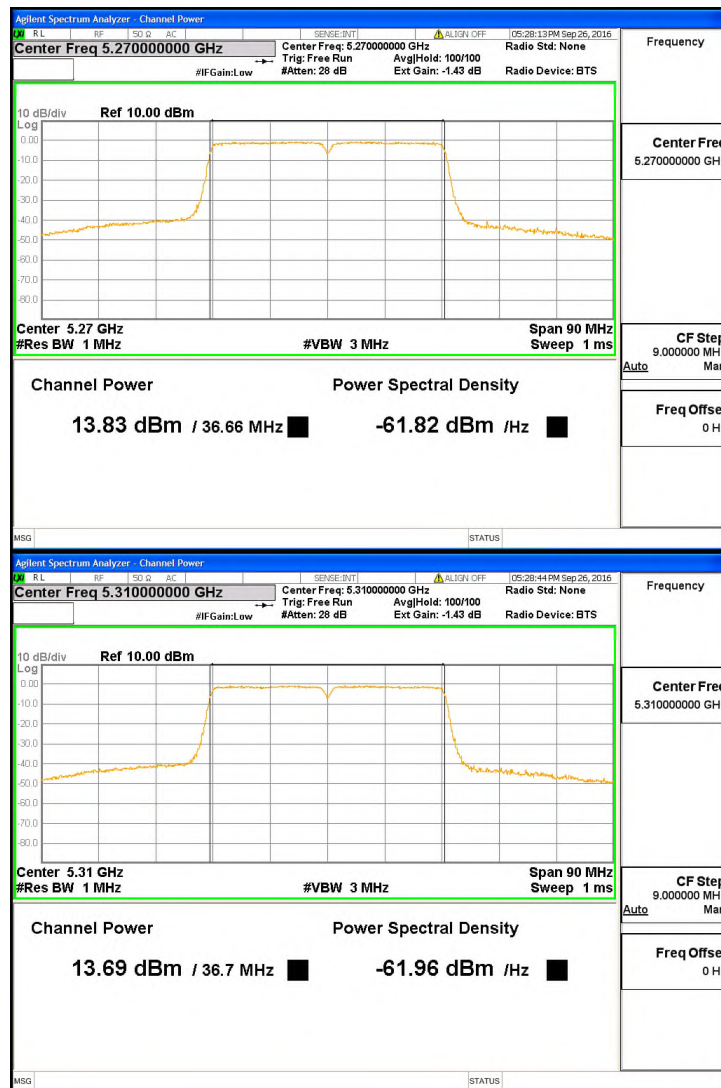
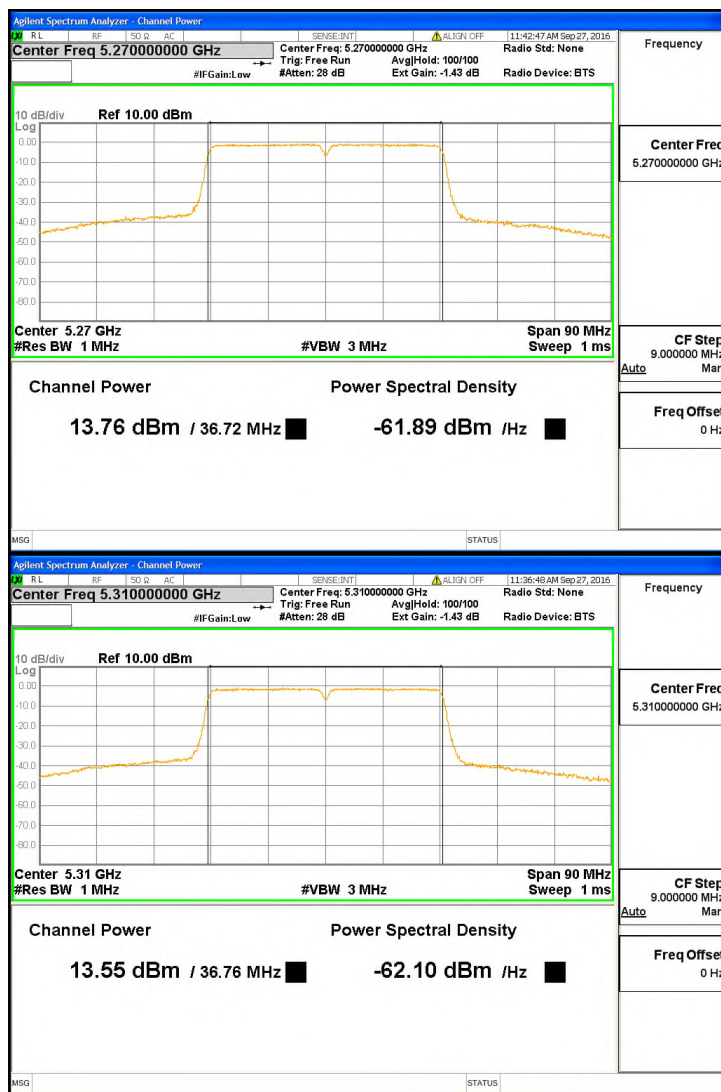




Ant : A1_802.11ac_VHT40_UNII 2A



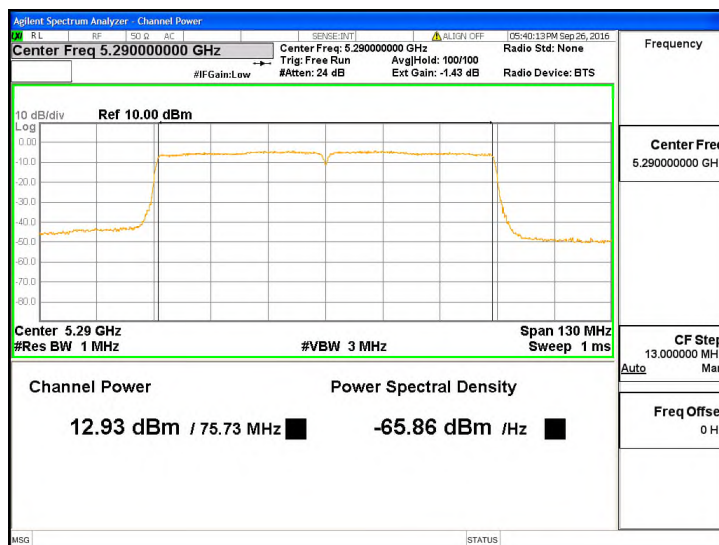
Ant : A1_802.11ac_VHT40_UNII 2C



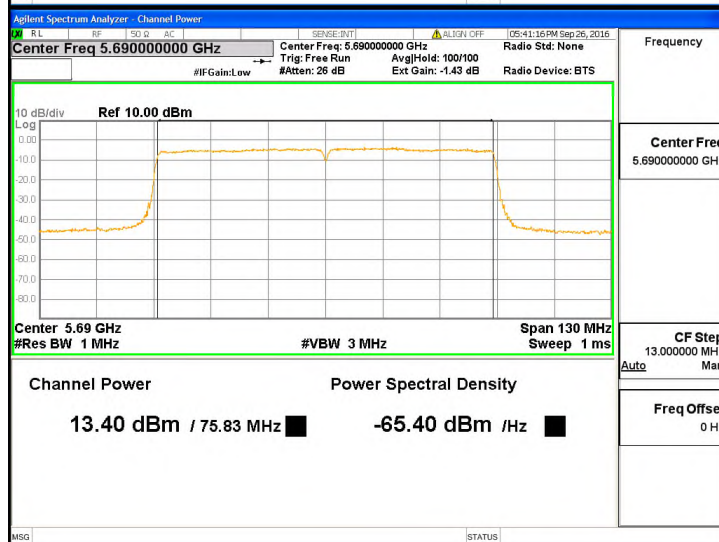
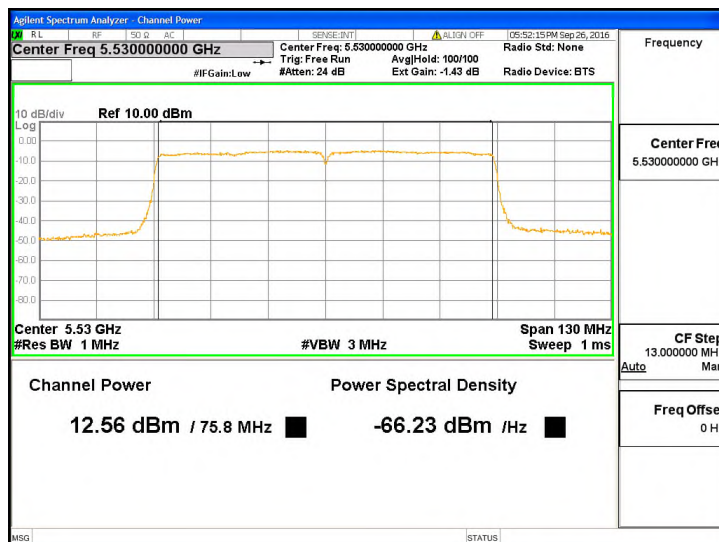
Ant : A2_802.11ac_VHT40_UNII 2A



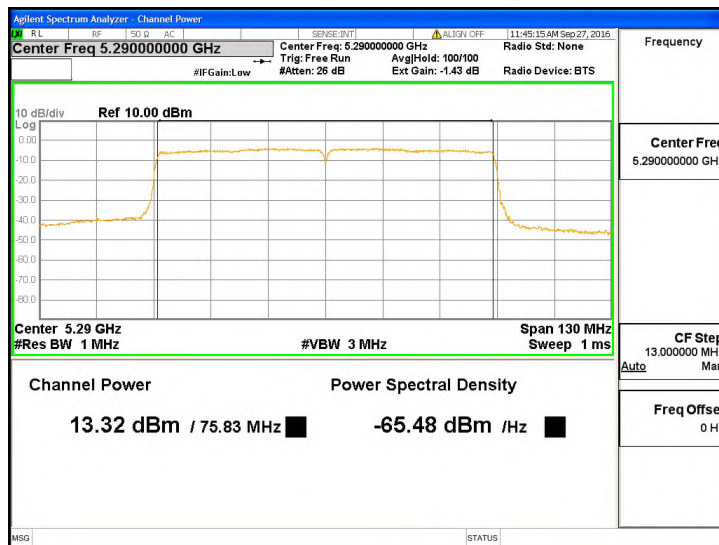
Ant : A2_802.11ac_VHT40_UNII 2C



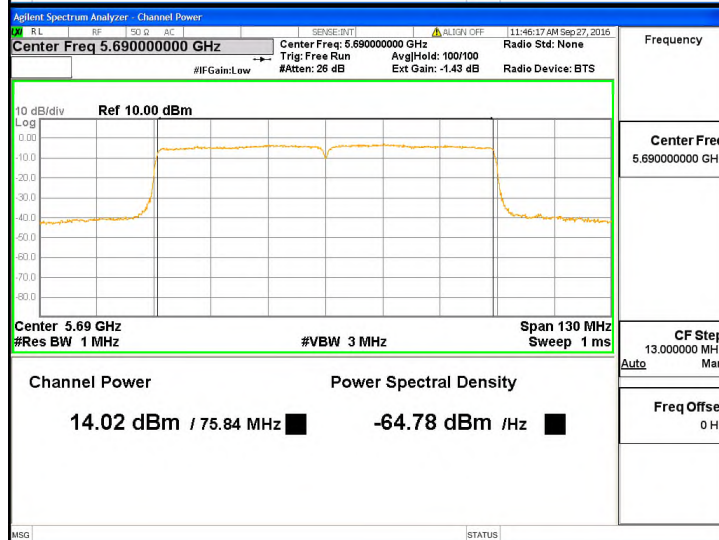
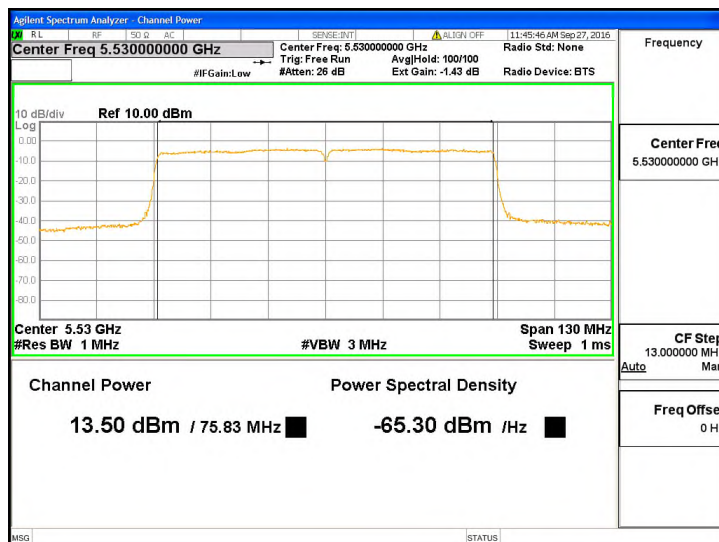
Ant : A1_802.11ac_VHT80_UNII 2A



Ant : A1_802.11ac_VHT80_UNII 2C



Ant : A2_802.11ac_VHT80_UNII 2A



Ant : A2_802.11ac_VHT80_UNII 2C

2.1.5 Power Spectral Density

Procedure:

The peak power density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating in transmission mode at the appropriate frequencies.

The spectrum analyzer is set to:

RBW = 1 MHz, 500 KHz (UNII 3)

VBW = 3 MHz, 1.5 MHz (UNII 3)

Trace = average at least 100

Sweep = auto

Detector function = RMS

Limit

Operating Mode	Band	Mode	ANT Configuration	ANT Gain (dBi)	Limit (dBm)	
					FCC	IC
SISO	UNII 2A	802.11a/n/ac	ANT1, ANT2	5.73	11	11
	UNII 2C				11	11
MIMO (2Tx)	UNII 2A	802.11a/n/ac	ANT1 + ANT2	8.74	7.99	7.99
	UNII 2C				7.99	7.99

Test Results

Ant : A1

	Measured Power Density (dBm)		
Mode	802.11a	802.11n_HT20	802.11ac_VHT20
Frequency			
5260 MHz	2.25	3.44	4.37
5300 MHz	1.80	3.31	4.08
5320 MHz	1.73	3.09	4.28
5500 MHz	4.24	3.81	3.91
5600 MHz	4.61	4.66	4.99
5720 MHz	4.81	4.81	4.86
Measurement uncertainty	± 3 dB		

Ant : A2

	Measured Power Density (dBm)		
Mode	802.11a	802.11n_HT20	802.11ac_VHT20
Frequency			
5260 MHz	2.90	3.57	4.55
5300 MHz	2.71	3.38	4.28
5320 MHz	2.43	3.36	4.29
5500 MHz	3.82	3.54	3.64
5600 MHz	4.70	4.39	4.30
5720 MHz	4.56	4.53	4.52
Measurement uncertainty	± 3 dB		

Ant : A1 + A2

	Measured Power Density (dBm)		
Mode	802.11a	802.11n_HT20	802.11ac_VHT20
Frequency			
5260 MHz	5.60	6.52	7.47
5300 MHz	5.29	6.36	7.19
5320 MHz	5.10	6.24	7.30
5500 MHz	7.05	6.69	6.79
5600 MHz	7.67	7.54	7.67
5720 MHz	7.70	7.68	7.70
Measurement uncertainty	± 3 dB		

Ant : A1

	Measured Power Density (dBm)	
Mode	802.11n_HT40	802.11ac_VHT40
Frequency		
5270 MHz	-1.14	-0.78
5310 MHz	-1.44	-0.82
5510 MHz	0.55	0.51
5590 MHz	1.03	1.18
5710 MHz	1.22	1.41
Measurement uncertainty	± 3 dB	

Ant : A2

	Measured Power Density (dBm)	
Mode	802.11n_HT40	802.11ac_VHT40
Frequency		
5270 MHz	-1.35	-0.79
5310 MHz	-1.59	-1.13
5510 MHz	0.79	0.80
5590 MHz	1.11	1.43
5710 MHz	1.69	1.77
Measurement uncertainty	± 3 dB	

Ant : A1 + A2

	Measured Power Density (dBm)	
Mode	802.11n_HT40	802.11ac_VHT40
Frequency		
5270 MHz	1.77	2.23
5310 MHz	1.50	2.04
5510 MHz	3.68	3.67
5590 MHz	4.08	4.32
5710 MHz	4.47	4.60
Measurement uncertainty	± 3 dB	

Ant : A1, A2, A3

	Measured Power Density (dBm)	
Mode	Ant : A1	Ant : A2
Frequency	802.11ac_VHT80	802.11ac_VHT80
5290 MHz	-4.59	-4.07
5530 MHz	-4.84	-3.91
5690 MHz	-3.82	-3.15
Measurement uncertainty	± 3 dB	

Ant : A1 + A2

	Measured Power Density (dBm)
Mode	Ant : A1_802.11ac_VHT80
Frequency	
5290 MHz	-1.31
5530 MHz	-1.34
5690 MHz	-0.46
Measurement uncertainty	± 3 dB

See next pages for actual measured spectrum plots.



Ant : A1_802.11a_UNII 2A



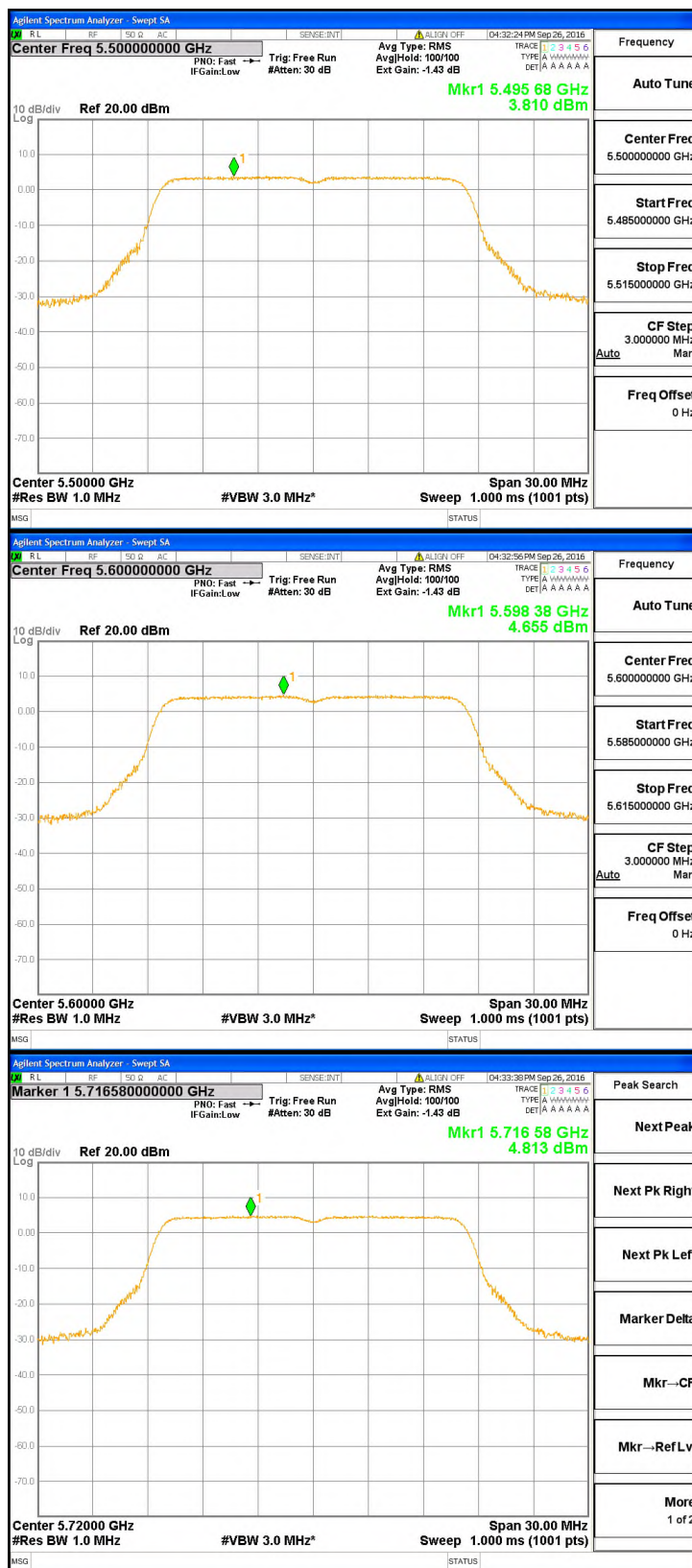
Ant : A1_802.11a_UNII 2C



Ant : A2_802.11a_UNII 2A



Ant : A2_802.11a_UNII 2C



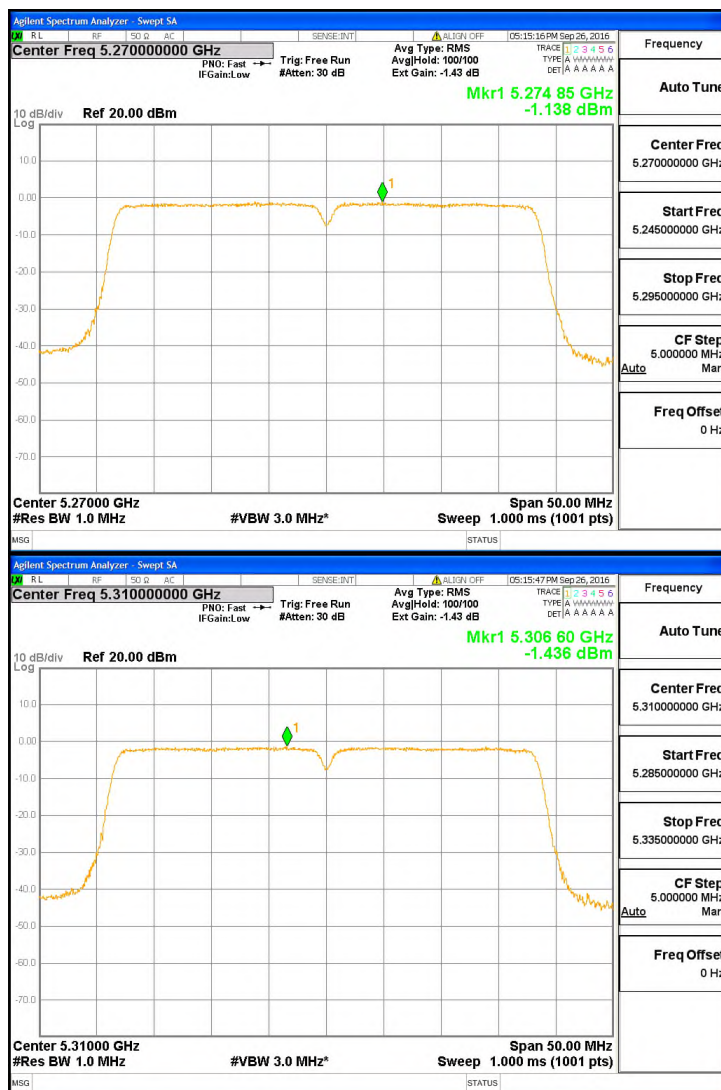
Ant : A1_802.11n_HT20_UNII 2C



Ant : A2_802.11n_HT20_UNII 2A



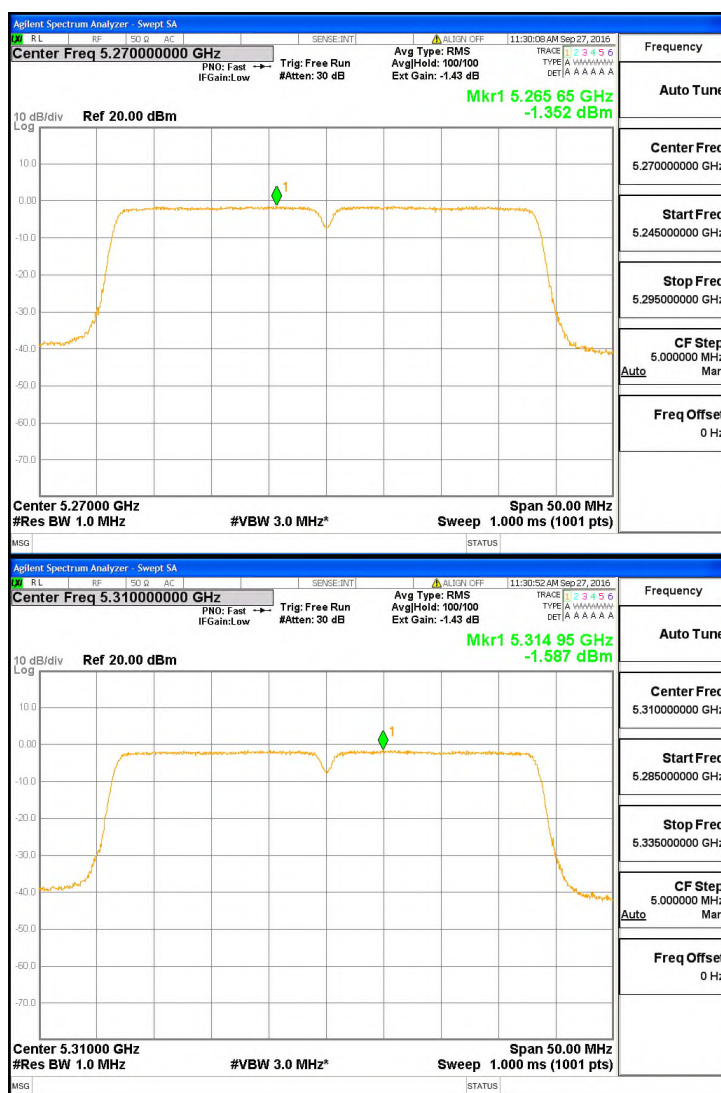
Ant : A2_802.11n_HT20_UNII 2C



Ant : A1_802.11n_HT40_UNII 2A



Ant : A1_802.11n_HT40_UNII 2C



Ant : A2_802.11n_HT40_UNII 2A



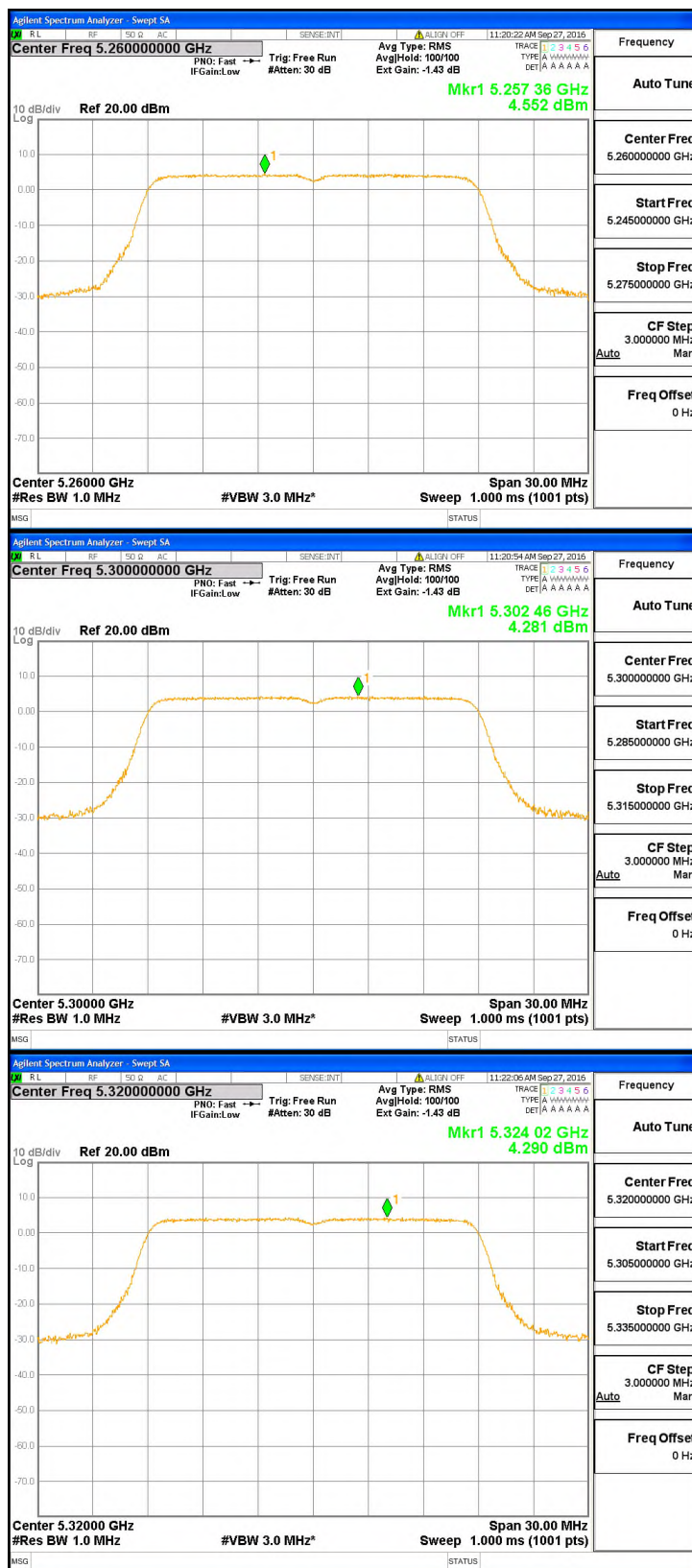
Ant : A2_802.11n_HT40_UNII 2C



Ant : A1_802.11ac_VHT20_UNII 2A



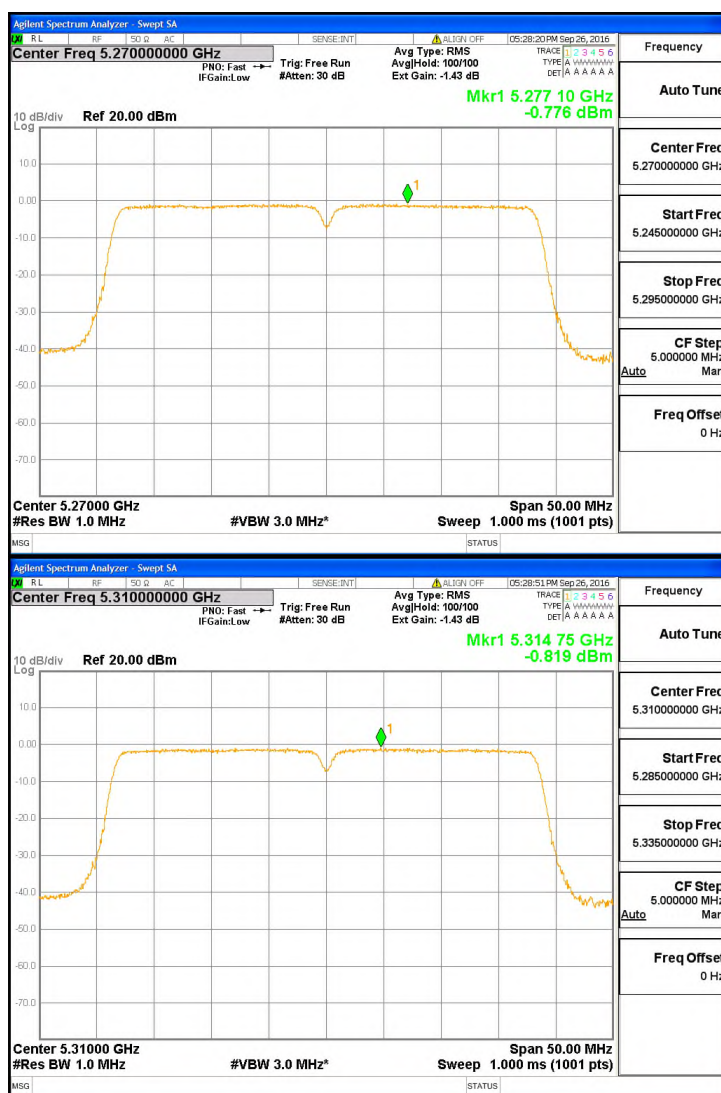
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Ant : A2_802.11ac_VHT20_UNII 2A



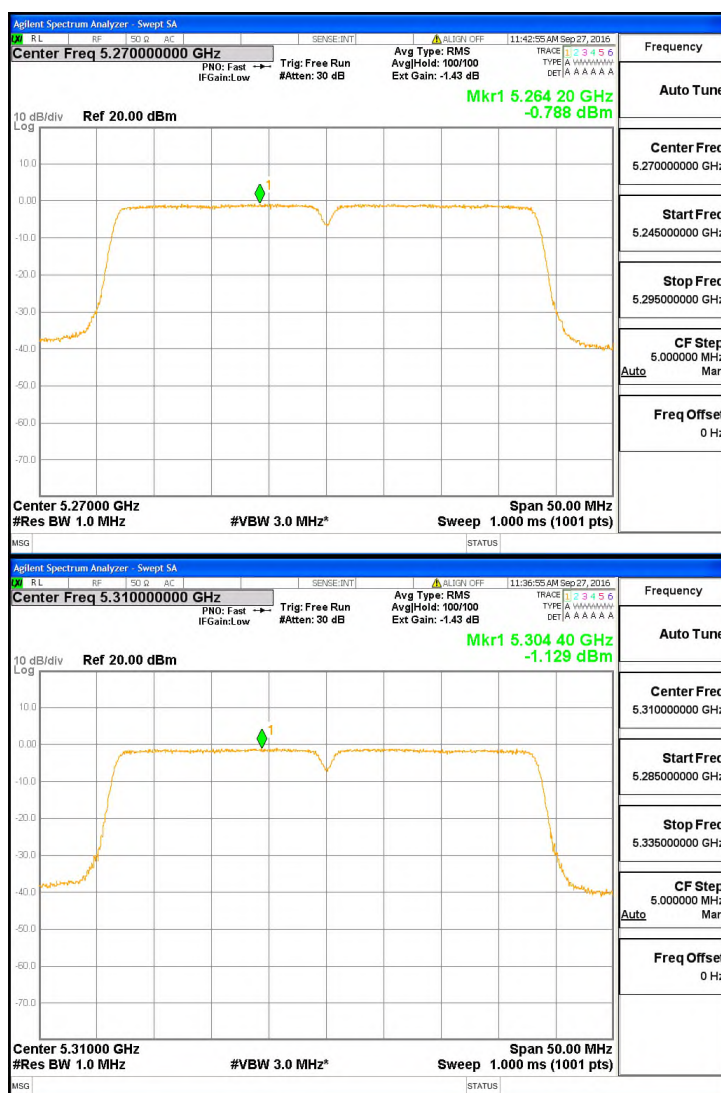
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Ant : A1_802.11ac_VHT40_UNII 2A



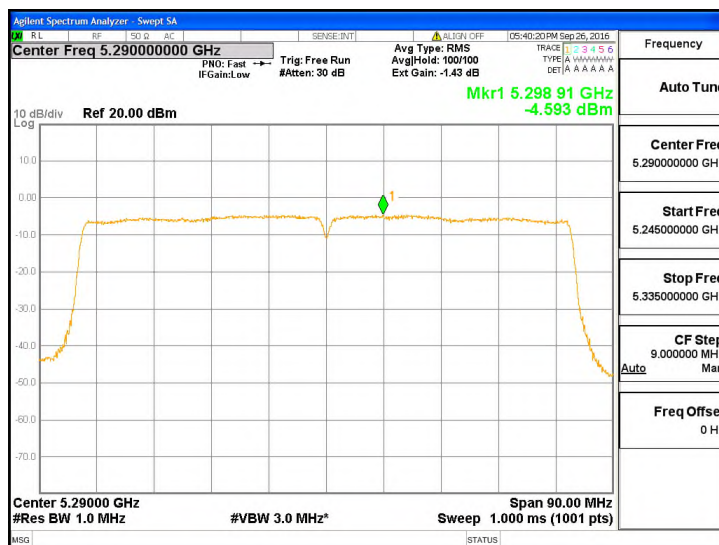
Ant : A1_802.11ac_VHT40_UNII 2C



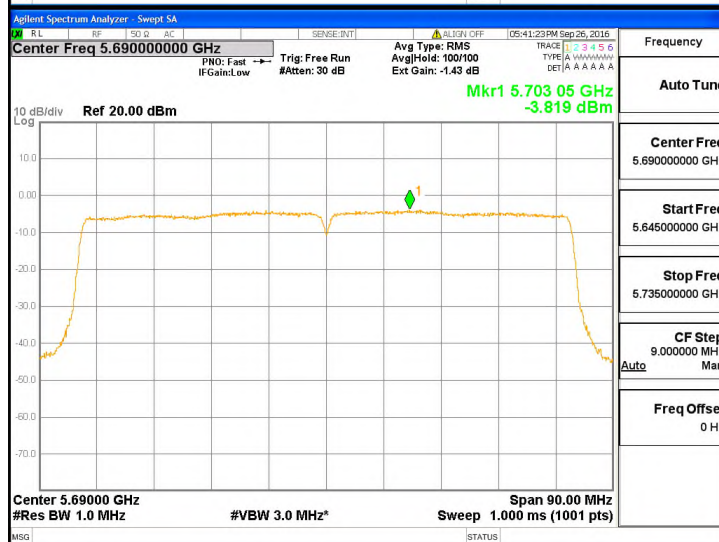
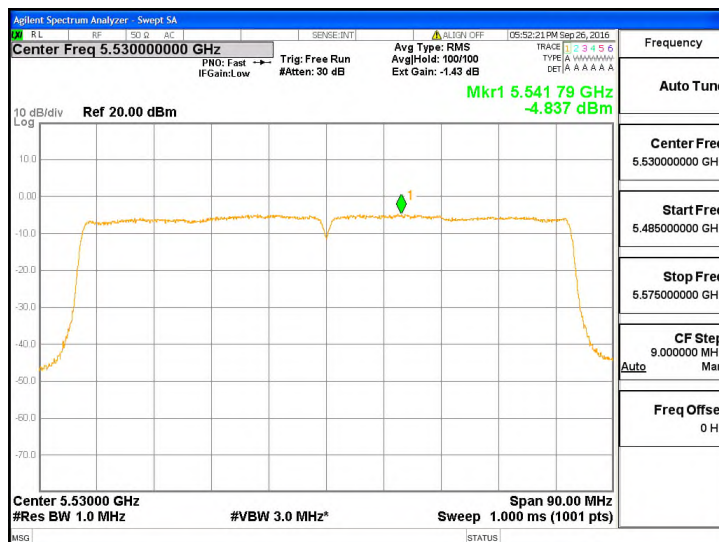
Ant : A2_802.11ac_VHT40_UNII 2A



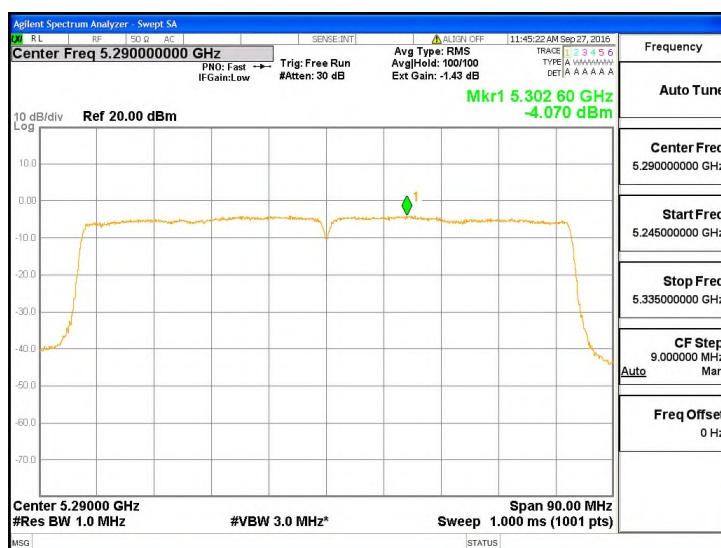
Ant : A2_802.11ac_VHT40_UNII 2C



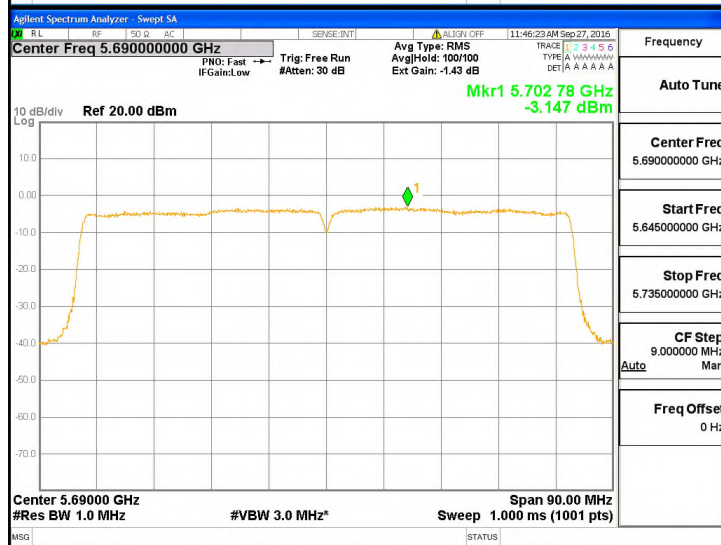
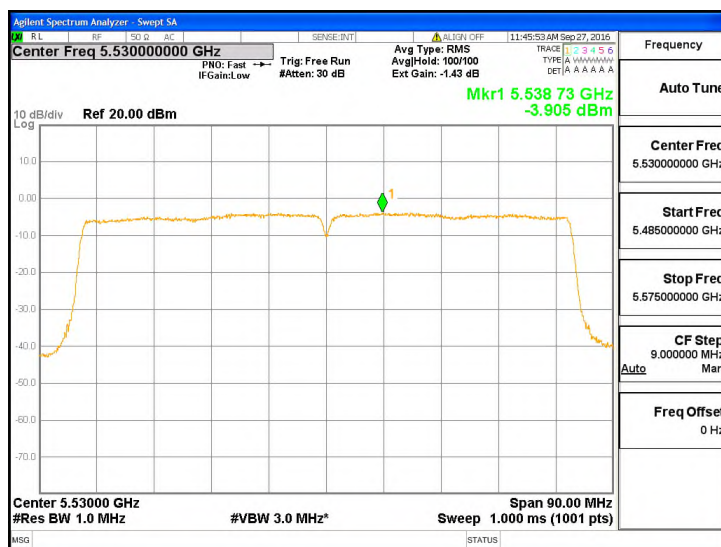
Ant : A1_802.11ac_VHT80_UNII 2A



Ant : A1_802.11ac_VHT80_UNII 2C



Ant : A2_802.11ac_VHT80_UNII 2A



Ant : A2_802.11ac_VHT80_UNII 2C

2.1.6 Frequency Stability

Procedure:

The EUT was placed inside of an environmental chamber as the temperature in the chamber was varied between 0℃ and +45℃(Declaration by the Manufacturer). The temperature was incremented by 10℃(5℃) intervals and the unit was allowed to stabilize at each temperature before each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel's center frequency was recorded.

Data for the worst case channel is shown below.

Temperature (℃)	0	10	20	30	40	45
Frequency	Mesured Frequency Error (kHz)					
5260 MHz	51.477	57.880	52.955	45.716	-5.110	39.507
5300 MHz	71.145	49.517	52.758	-5.660	13.316	38.374
5320 MHz	70.064	51.724	59.095	29.218	22.190	50.632
5500 MHz	72.074	75.622	77.764	54.033	42.058	64.426
5600 MHz	100.25	55.781	56.044	66.124	30.714	74.766
5720 MHz	28.784	62.743	10.317	-23.807	-10.498	2.180

Note :

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature range as tested.

2.1.7 Unwanted Emissions

Test Location

- ☒ 10 m SAC (test distance : ☐ 10 m, ☒ 3 m)
☒ 3 m SAC (test distance : 3 m)

Test Procedures

- 1) In the frequency range of 9 kHz to 30 MHz, magnetic field is measured with Loop Antenna. The Test Antenna is positioned with its plane vertical at 1m distance from the EUT. The center of the Loop Test Antenna is 1m above the ground. During the measurement the Loop Test Antenna rotates about its vertical axis for maximum response at each azimuth about the EUT.
- 2) In the frequency range above 30 MHz, Bi-Log Test Antenna(30 MHz to 1 GHz) and Horn Test Antenna(above 1 GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is carried from 1m to 4m above the ground to determine the maximum value of the field strength. The emissions levels at both horizontal and vertical polarizations should be tested.

The spectrum analyzer is set to:

Frequency Range = 9 kHz ~ 40 GHz

RBW = 1 MHz for $f \geq 1$ GHz, 120 kHz for $f < 1$ GHz, 9 kHz for $f < 30$ MHz

VBW $\geq$ RBW

Sweep = auto

Limit

- 15.209(a)

Frequency(MHz)	Field Strength uV/m@3m	Field Strength dBuV/m@3m	Measurement Distance (meters)
0.009-0.490	2400/F(kHz)	-	300
0.490-1.705	24000/F(kHz)	-	30
1.705-30	30	-	30
30-88	100**	40	3
88-216	150**	43.5	3
216-960	200**	46	3
Above 960	500	54	3

** Except as provided in 15.209(g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72MHz, 76-88MHz, 174-216MHz, 470-806MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g. 15.231 and 15.241.

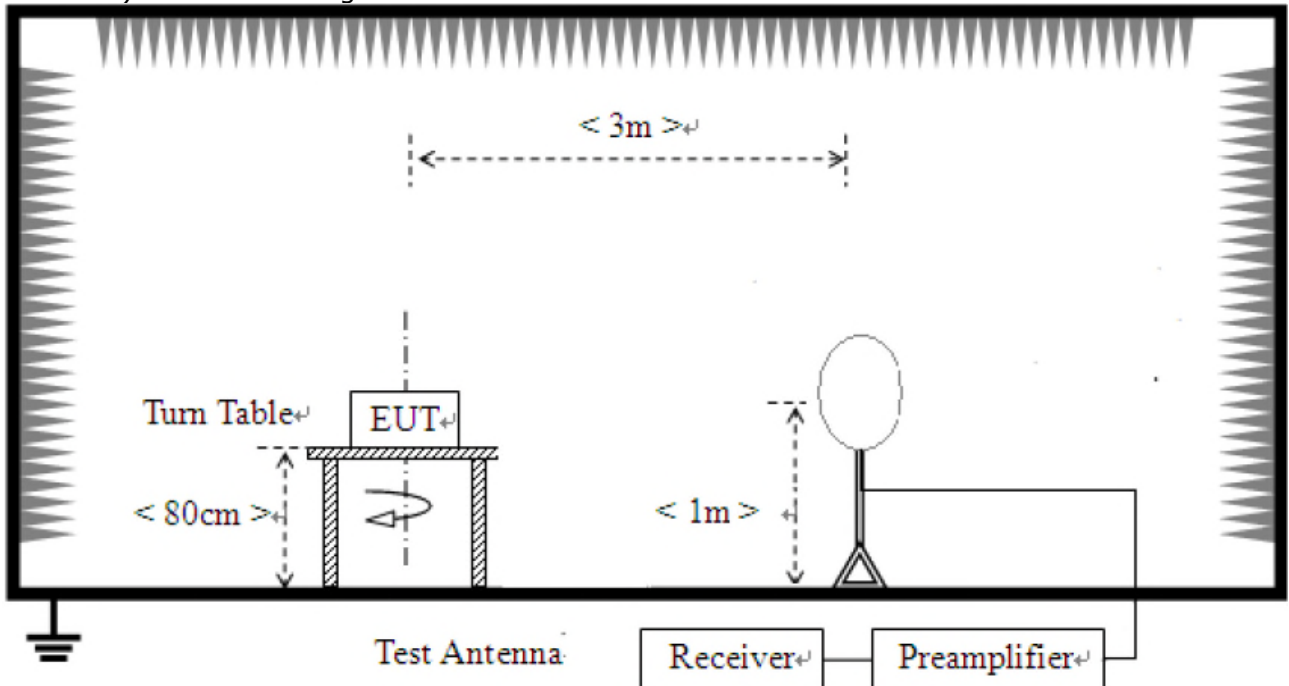
- 15.407, KDB 789033

E.I.R.P -27 dBm/MHz

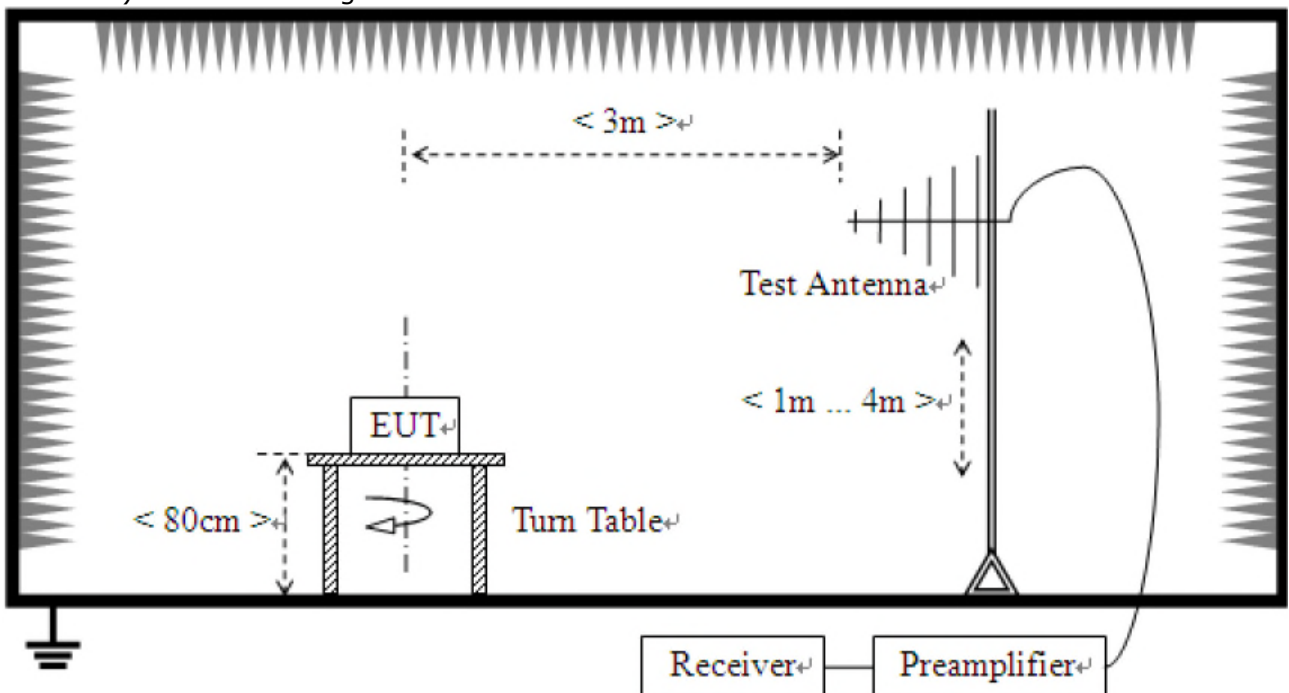
$E[dBuV/m] = EIRP[dBm] + 95.2$, for $d = 3m$

Test Setup:

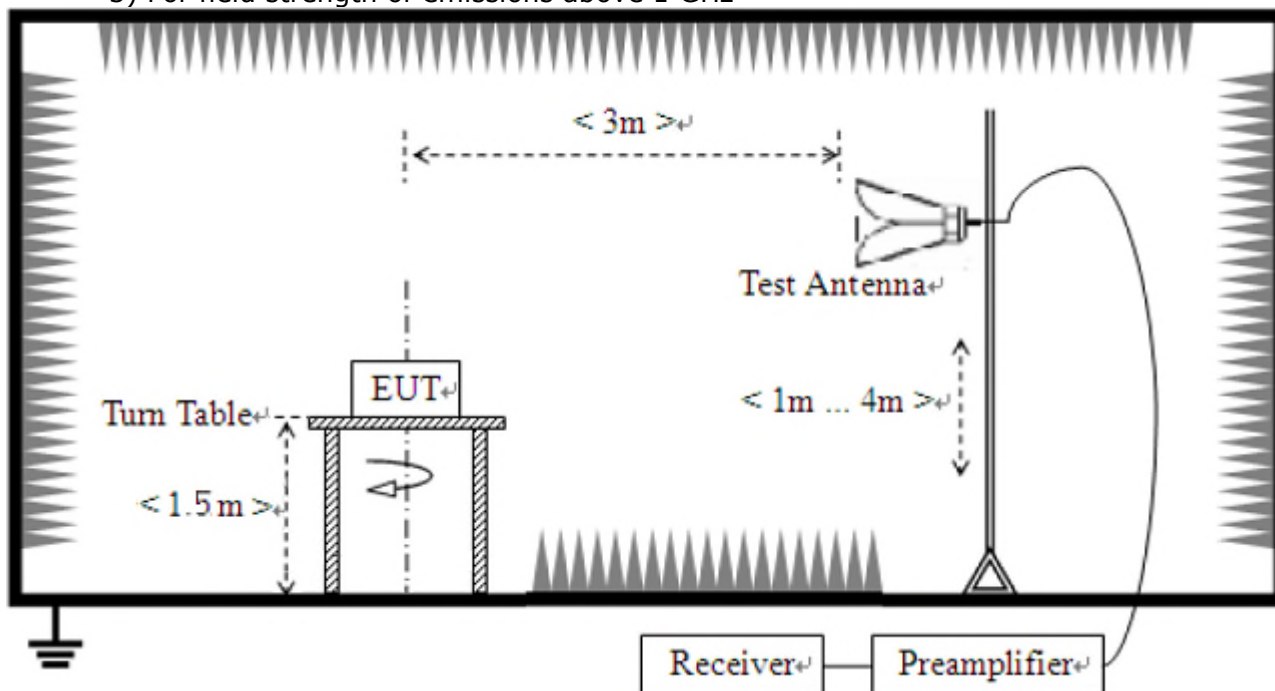
- 1) For field strength of emissions from 9 kHz to 30 MHz



- 2) For field strength of emissions from 30 MHz to 1 GHz



3) For field strength of emissions above 1 GHz



Test Mode

The worst-case antenna configuration are determined to be as follows for each mode.

802.11n_HT20 mode : ANT1 + ANT2

Test Results

1) 9 kHz to 30 MHz

EUT	WLAN Access Point	Measurement Detail	
Model	WEA412h	Frequency Range	9 kHz – 30 MHz
Test mode	802.11n_HT20	Detector function	Quasi-Peak

The requirements are:

☒ Complies

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
-	-	-	See note

Note :

The amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB)

2) 30 MHz to 1 GHz

Test mode : 802.11n_HT20

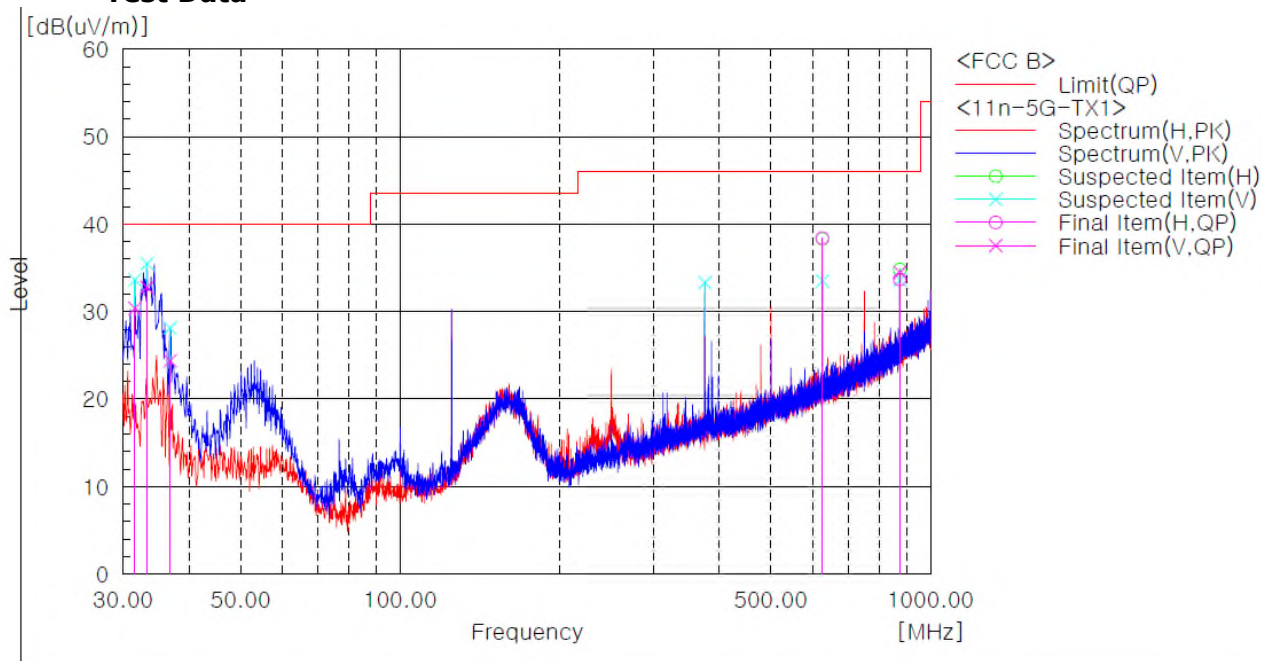
EUT	WLAN Access Point	Measurement Detail	
Model	WEA412h	Frequency Range	Below 1000MHz
Configuration	ANT A1+A2	Detector function	Quasi-Peak

The requirements are:

☒ Complies

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
33.274	32.8	7.2	Quasi-Peak

Test Data



Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Angle [deg]
1	31.576	V	47.7	-17.3	30.4	40.0	9.6	335.3
2	33.274	V	50.2	-17.4	32.8	40.0	7.2	335.3
3	36.790	V	41.6	-17.2	24.4	40.0	15.6	335.3
4	624.974	H	43.9	-5.5	38.4	46.0	7.6	183.6
5	875.112	H	35.0	-1.3	33.7	46.0	12.3	262.9
6	875.112	V	35.8	-1.3	34.5	46.0	11.5	144.1

Remark :

1. The field strength of spurious emission was measured in the following position: EUT and antenna stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.

3) above 1 GHz_Radiated Spurious Emission Measurements

Test mode : 802.11a

EUT	WLAN Access Point	Measurement Detail	
Model	WEA412h	Frequency Range	1-40GHz
Mode	ANT A1+A2	Detector function	Average / Peak

Remarks

We have tested three mode (X, Y, Z). The worst mode (Z axis) for final test.

The requirements are:

☒ Complies

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
11200.00	53.58	0.42	Average

Ch.52(5260 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	45.22	47.00	8.78	27.00
1375.00	V	54.00	74.00	47.12	49.00	6.88	25.00
1375.30	H	54.00	74.00	42.93	44.62	11.07	29.38
1375.30	V	54.00	74.00	43.34	45.13	10.66	28.87
10520.00	H	54.00	74.00	51.49	59.36	2.51	14.64
10520.00	V	54.00	74.00	52.84	58.59	1.16	15.41

Ch.60(5300 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	45.36	47.06	8.64	26.94
1375.00	V	54.00	74.00	47.32	48.93	6.68	25.07
1375.30	H	54.00	74.00	42.42	44.00	11.58	30.00
1375.30	V	54.00	74.00	43.21	45.35	10.79	28.65
10600.00	H	54.00	74.00	50.80	59.13	3.20	14.87
10600.00	V	54.00	74.00	52.49	58.30	1.51	15.70

Ch.64(5320 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	45.17	46.57	8.83	27.43
1375.00	V	54.00	74.00	46.94	48.70	7.06	25.30
1375.30	H	54.00	74.00	42.02	44.44	11.98	29.56
1375.30	V	54.00	74.00	43.54	45.88	10.46	28.12
10640.00	H	54.00	74.00	50.84	57.76	3.16	16.24
10640.00	V	54.00	74.00	52.70	58.41	1.30	15.59

Ch.100(5500 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	44.94	46.92	9.06	27.08
1375.00	V	54.00	74.00	46.78	48.11	7.22	25.89
1375.30	H	54.00	74.00	42.77	44.11	11.23	29.89
1375.30	V	54.00	74.00	43.89	45.23	10.11	28.77
11000.00	H	54.00	74.00	51.52	58.44	2.48	15.56
11000.00	V	54.00	74.00	49.92	57.34	4.08	16.66

Ch.120(5600 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	44.86	46.95	9.14	27.05
1375.00	V	54.00	74.00	46.79	48.50	7.21	25.50
1375.30	H	54.00	74.00	42.01	44.31	11.99	29.69
1375.30	V	54.00	74.00	43.16	45.15	10.84	28.85
11200.00	H	54.00	74.00	53.58	59.01	0.42	14.99
11200.00	V	54.00	74.00	49.68	57.80	4.32	16.20

Ch.144(5720 MHz)

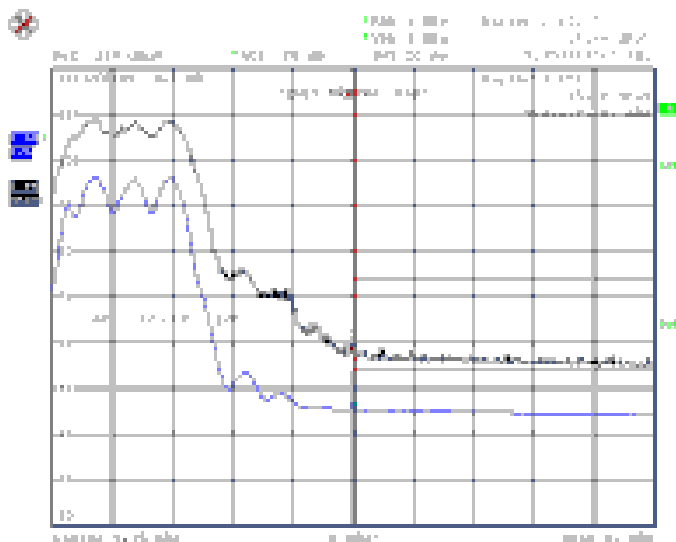
Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	44.95	46.81	9.05	27.19
1375.00	V	54.00	74.00	46.91	48.16	7.09	25.84
1375.30	H	54.00	74.00	42.97	44.34	11.03	29.66
1375.30	V	54.00	74.00	43.92	45.08	10.08	28.92
11440.00	H	54.00	74.00	51.69	58.04	2.31	15.96
11440.00	V	54.00	74.00	50.66	59.35	3.34	14.65

Restricted band edge test data

Measured frequency range : 5350-5460 MHz

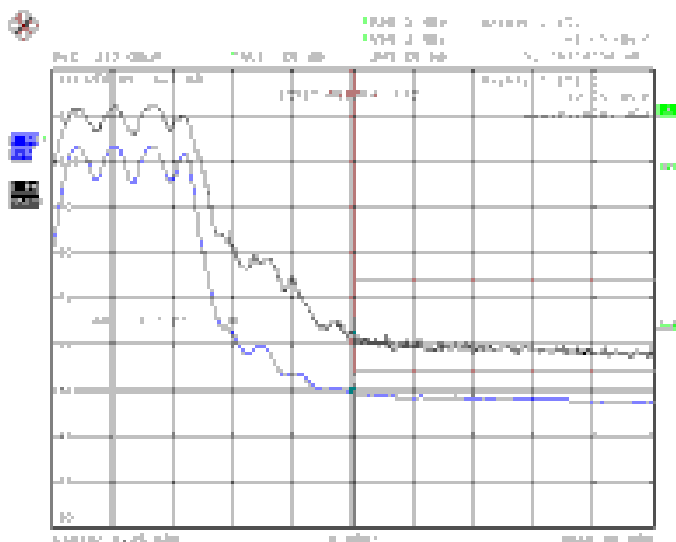
Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
5350.00	H	54.00	74.00	45.38	58.60	8.62	15.40
5350.00	V	54.00	74.00	49.25	61.69	4.75	12.31
5460.00	H	54.00	74.00	48.18	61.37	5.82	12.63
5460.00	V	54.00	74.00	53.53	63.95	0.47	10.05

Worst Case Mode :	802.11a - Ant0+Ant1
Worst Case Transfer Rate :	6 Mbps
Distance of Measurements :	3 Meters
Operating Frequency :	5320 MHz
Channel :	64



Date: 2016-10-13 Time: 14:00

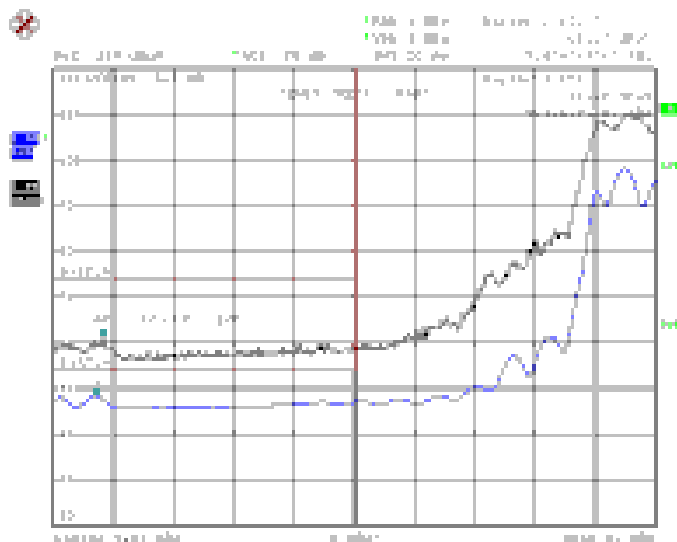
Radiated Restricted Upper Band Edge Plot (Antenna-Horizontal)



Date: 2016-10-13 Time: 14:00

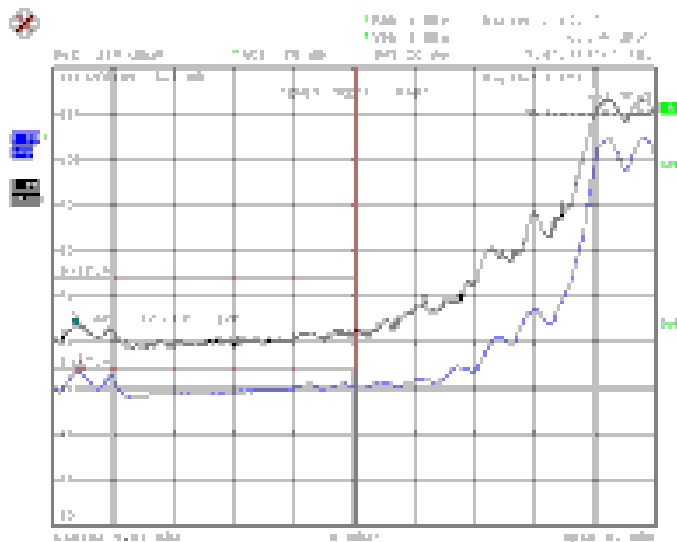
Radiated Restricted Upper Band Edge Plot (Antenna-Vertical)

Worst Case Mode :	802.11a - Ant0+Ant1
Worst Case Transfer Rate :	6 Mbps
Distance of Measurements :	3 Meters
Operating Frequency :	5500 MHz
Channel :	100



Date: 2016-10-13 11:10:00

Radiated Restricted Lower Band Edge Plot (Antenna-Horizontal)



Date: 2016-10-13 11:10:00

Radiated Restricted Lower Band Edge Plot (Antenna-Vertical)

Test mode : 802.11n_HT20

EUT	WLAN Access Point	Measurement Detail	
Model	WEA412h	Frequency Range	1-40GHz
Mode	ANT A1+A2	Detector function	Average / Peak

Remarks

We have tested three mode (X, Y, Z). The worst mode (Z axis) for final test.

The requirements are:

☒ Complies

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
11200.00	53.85	0.15	Average

Ch.52(5260 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	44.84	46.57	9.16	27.43
1375.00	V	54.00	74.00	46.54	48.18	7.46	25.82
1375.30	H	54.00	74.00	42.92	44.74	11.08	29.26
1375.30	V	54.00	74.00	43.52	45.20	10.48	28.80
10520.00	H	54.00	74.00	52.32	60.87	1.68	13.13
10520.00	V	54.00	74.00	52.94	58.54	1.06	15.46

Ch.60(5300 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	44.99	46.96	9.01	27.04
1375.00	V	54.00	74.00	46.58	48.23	7.42	25.77
1375.30	H	54.00	74.00	42.56	44.45	11.44	29.55
1375.30	V	54.00	74.00	43.47	45.05	10.53	28.95
10600.00	H	54.00	74.00	51.42	58.95	2.58	15.05
10600.00	V	54.00	74.00	52.64	59.14	1.36	14.86

Ch.64(5320 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	45.18	46.98	8.82	27.02
1375.00	V	54.00	74.00	46.65	48.20	7.35	25.80
1375.30	H	54.00	74.00	42.37	44.83	11.63	29.17
1375.30	V	54.00	74.00	43.88	45.53	10.12	28.47
10640.00	H	54.00	74.00	50.75	59.95	3.25	14.05
10640.00	V	54.00	74.00	52.43	58.90	1.57	15.10

Ch.100(5500 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	45.07	46.66	8.93	27.34
1375.00	V	54.00	74.00	46.85	47.97	7.15	26.03
1375.30	H	54.00	74.00	42.75	44.30	11.25	29.70
1375.30	V	54.00	74.00	43.74	45.63	10.26	28.37
11000.00	H	54.00	74.00	52.01	57.96	1.99	16.04
11000.00	V	54.00	74.00	49.95	57.90	4.05	16.10

Ch.120(5600 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	44.95	47.04	9.05	26.96
1375.00	V	54.00	74.00	46.72	48.13	7.28	25.87
1375.30	H	54.00	74.00	42.43	44.47	11.57	29.53
1375.30	V	54.00	74.00	43.94	45.77	10.06	28.23
11200.00	H	54.00	74.00	53.85	59.88	0.15	14.12
11200.00	V	54.00	74.00	49.87	57.82	4.13	16.18

Ch.144(5720 MHz)

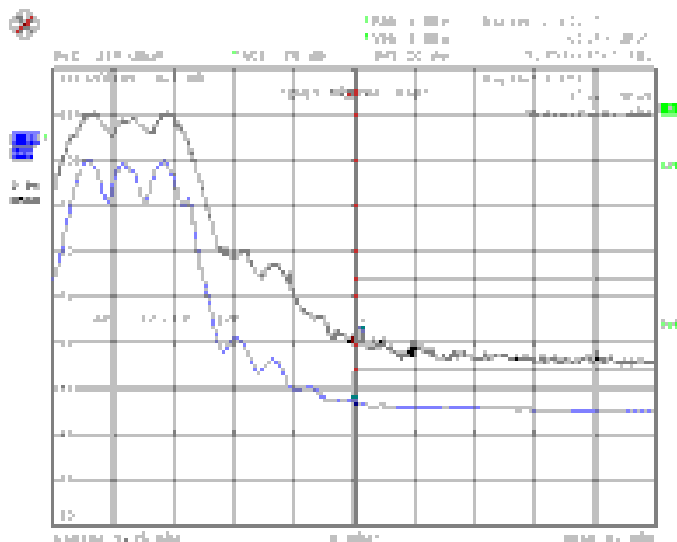
Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	45.26	46.58	8.74	27.42
1375.00	V	54.00	74.00	46.73	48.06	7.27	25.94
1375.30	H	54.00	74.00	42.38	44.62	11.62	29.38
1375.30	V	54.00	74.00	43.58	45.87	10.42	28.13
11440.00	H	54.00	74.00	51.65	59.11	2.35	14.89
11440.00	V	54.00	74.00	50.70	59.41	3.30	14.59

Restricted band edge test data

Measured frequency range : 5350-5460 MHz

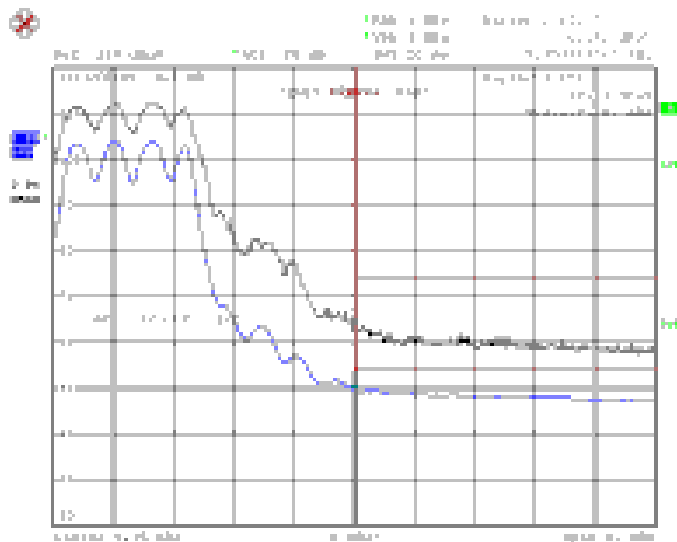
Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
5350.00	H	54.00	74.00	47.17	62.43	6.83	11.57
5350.00	V	54.00	74.00	49.61	63.52	4.39	10.48
5460.00	H	54.00	74.00	48.77	59.92	5.23	14.08
5460.00	V	54.00	74.00	52.12	63.76	1.88	10.24

Worst Case Mode :	802.11n_HT20 - Ant0+Ant1
Worst Case Transfer Rate :	MCS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5320 MHz
Channel :	64



Date: 4.00P.2016-10-13

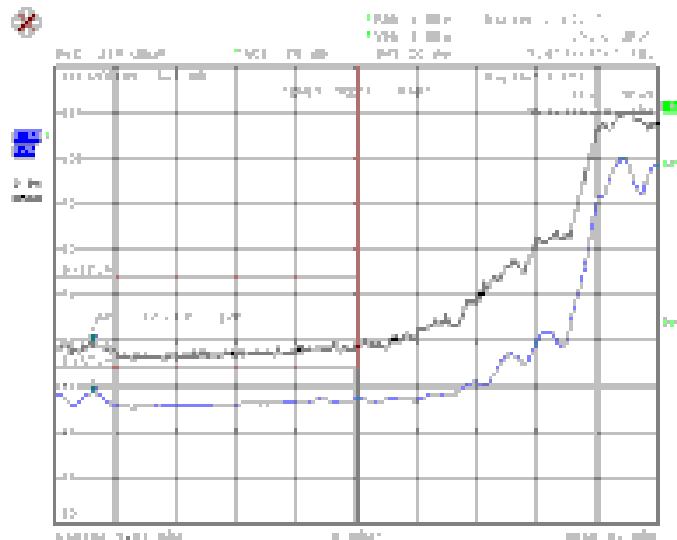
Radiated Restricted Upper Band Edge Plot (Antenna-Horizontal)



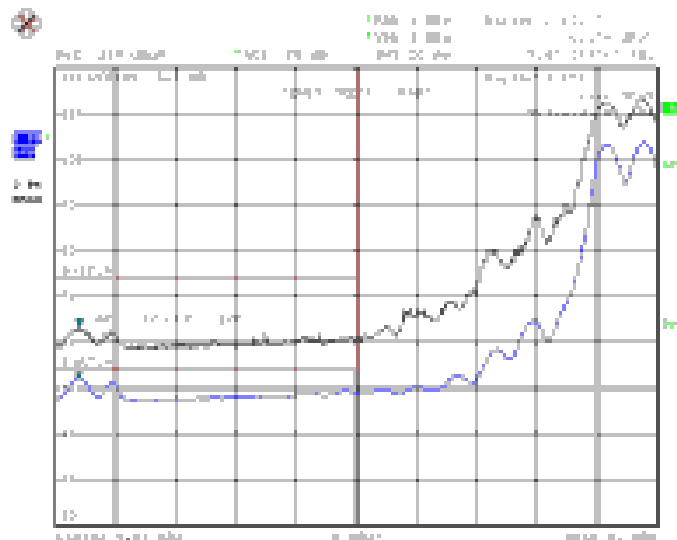
Date: 4.00P.2016-10-13

Radiated Restricted Upper Band Edge Plot (Antenna-Vertical)

Worst Case Mode :	802.11n_HT20 - Ant0+Ant1
Worst Case Transfer Rate :	MCS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5500 MHz
Channel :	100



Radiated Restricted Lower Band Edge Plot (Antenna-Horizontal)



Radiated Restricted Lower Band Edge Plot (Antenna-Vertical)

Test mode : 802.11ac_VHT20

EUT	WLAN Access Point	Measurement Detail	
Model	WEA412h	Frequency Range	1-40GHz
Mode	ANT A1+A2	Detector function	Average / Peak

Remarks

We have tested three mode (X, Y, Z). The worst mode (Z axis) for final test.

The requirements are:

☒ Complies

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
11200.00	53.72	0.28	Average

Ch.52(5260 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	45.79	47.83	8.21	26.17
1375.00	V	54.00	74.00	47.44	49.18	6.56	24.82
1375.30	H	54.00	74.00	42.15	44.80	11.85	29.20
1375.30	V	54.00	74.00	43.76	45.21	10.24	28.79
10520.00	H	54.00	74.00	52.04	60.48	1.96	13.52
10520.00	V	54.00	74.00	52.83	58.45	1.17	15.55

Ch.60(5300 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	45.84	47.34	8.16	26.66
1375.00	V	54.00	74.00	47.32	48.99	6.68	25.01
1375.30	H	54.00	74.00	42.11	44.00	11.89	30.00
1375.30	V	54.00	74.00	43.65	45.69	10.35	28.31
10600.00	H	54.00	74.00	50.72	59.15	3.28	14.85
10600.00	V	54.00	74.00	52.66	58.17	1.34	15.83

Ch.64(5320 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	45.91	47.50	8.09	26.50
1375.00	V	54.00	74.00	47.22	48.71	6.78	25.29
1375.30	H	54.00	74.00	42.58	44.97	11.42	29.03
1375.30	V	54.00	74.00	43.89	45.23	10.11	28.77
10640.00	H	54.00	74.00	51.34	58.39	2.66	15.61
10640.00	V	54.00	74.00	52.51	58.95	1.49	15.05

Ch.100(5500 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	46.05	47.98	7.95	26.02
1375.00	V	54.00	74.00	47.45	49.24	6.55	24.76
1375.30	H	54.00	74.00	42.23	44.10	11.77	29.90
1375.30	V	54.00	74.00	43.44	45.01	10.56	28.99
11000.00	H	54.00	74.00	51.81	58.48	2.19	15.52
11000.00	V	54.00	74.00	50.00	57.70	4.00	16.30

Ch.120(5600 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	46.03	47.85	7.97	26.15
1375.00	V	54.00	74.00	47.34	48.71	6.66	25.29
1375.30	H	54.00	74.00	42.44	44.03	11.56	29.97
1375.30	V	54.00	74.00	43.89	45.48	10.11	28.52
11200.00	H	54.00	74.00	53.72	59.57	0.28	14.43
11200.00	V	54.00	74.00	49.99	57.88	4.01	16.12

Ch.144(5720 MHz)

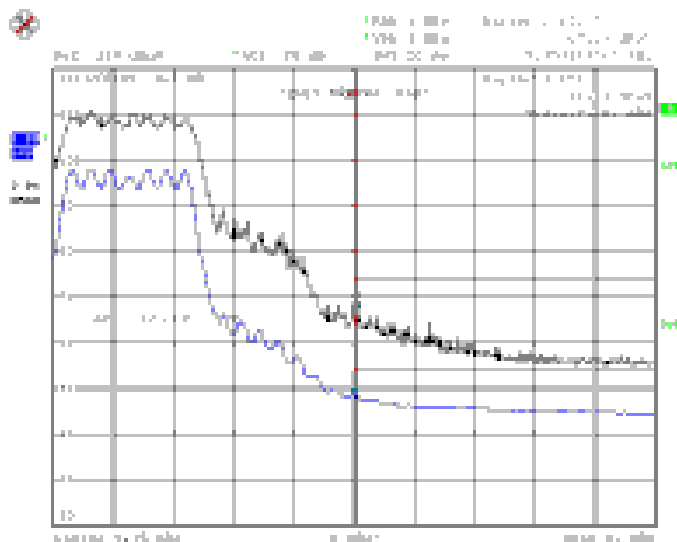
Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	45.73	47.54	8.27	26.46
1375.00	V	54.00	74.00	47.23	48.54	6.77	25.46
1375.30	H	54.00	74.00	42.92	44.79	11.08	29.21
1375.30	V	54.00	74.00	43.15	45.92	10.85	28.08
11440.00	H	54.00	74.00	51.82	58.87	2.18	15.13
11440.00	V	54.00	74.00	50.74	59.13	3.26	14.87

Restricted band edge test data

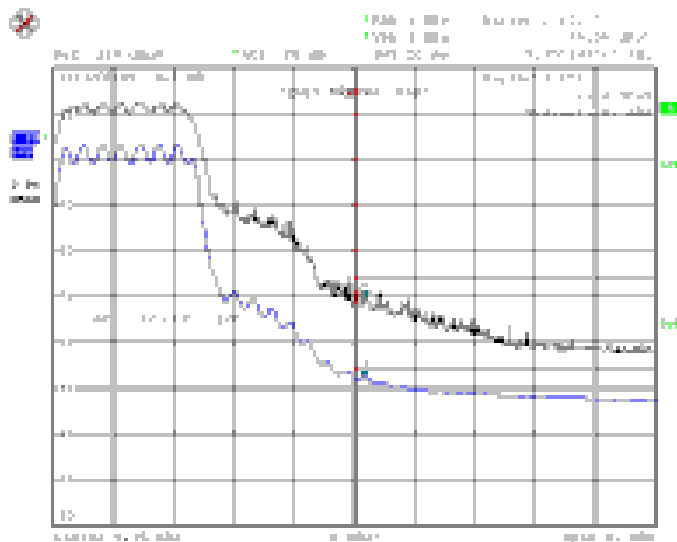
Measured frequency range : 5350-5460 MHz

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
5350.00	H	54.00	74.00	48.61	67.39	5.39	6.61
5350.00	V	54.00	74.00	52.34	70.05	1.66	3.95
5460.00	H	54.00	74.00	47.43	60.63	6.57	13.37
5460.00	V	54.00	74.00	51.43	64.62	2.57	9.38

Worst Case Mode :	802.11ac_VHT20 - Ant0+Ant1
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5320 MHz
Channel :	64

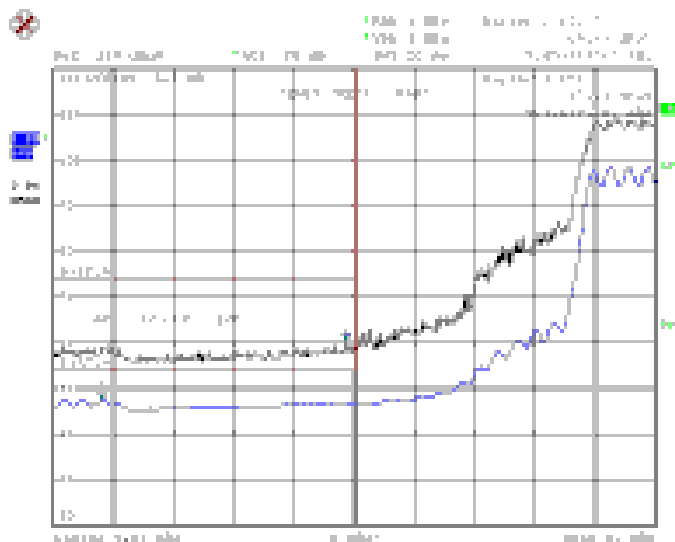


Radiated Restricted Upper Band Edge Plot (Antenna-Horizontal)



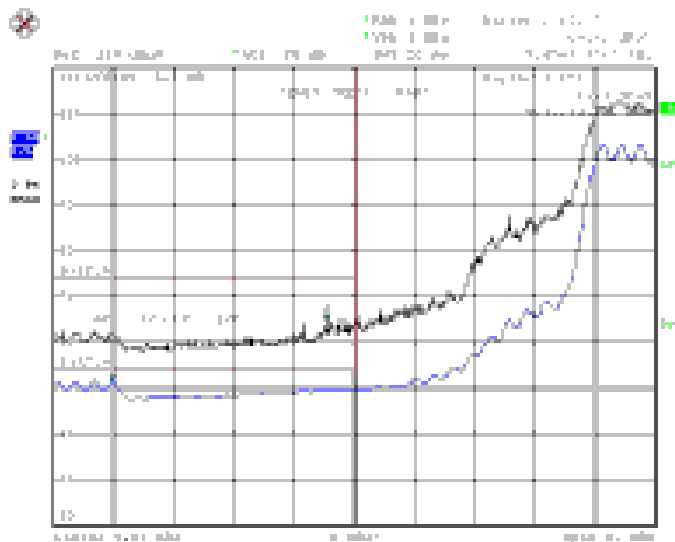
Radiated Restricted Upper Band Edge Plot (Antenna-Vertical)

Worst Case Mode :	802.11ac_VHT20 - Ant0+Ant1
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5500 MHz
Channel :	100



Date: 4.00P.2016 11:14:57

Radiated Restricted Lower Band Edge Plot (Antenna-Horizontal)



Date: 4.00P.2016 11:12:01

Radiated Restricted Lower Band Edge Plot (Antenna-Vertical)

Test mode : 802.11n_HT40

EUT	WLAN Access Point	Measurement Detail	
Model	WEA412h	Frequency Range	1-40GHz
Mode	ANT A1+A2	Detector function	Average / Peak

Remarks

We have tested three mode (X, Y, Z). The worst mode (Z axis) for final test.

The requirements are:

☒ Complies

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
11180.00	53.49	0.51	Average

Ch.52(5270 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	45.74	47.38	8.26	26.62
1375.00	V	54.00	74.00	47.15	48.98	6.85	25.02
1375.30	H	54.00	74.00	42.54	44.89	11.46	29.11
1375.30	V	54.00	74.00	43.89	45.97	10.11	28.03
10540.00	H	54.00	74.00	50.47	57.66	3.53	16.34
10540.00	V	54.00	74.00	52.64	58.12	1.36	15.88

Ch.60(5310 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	45.75	47.92	8.25	26.08
1375.00	V	54.00	74.00	47.20	49.06	6.80	24.94
1375.30	H	54.00	74.00	42.47	44.88	11.53	29.12
1375.30	V	54.00	74.00	43.89	45.62	10.11	28.38
10620.00	H	54.00	74.00	50.53	57.96	3.47	16.04
10620.00	V	54.00	74.00	52.24	58.48	1.76	15.52

Ch.100(5510 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	46.07	47.91	7.93	26.09
1375.00	V	54.00	74.00	47.47	48.81	6.53	25.19
1375.30	H	54.00	74.00	42.22	44.41	11.78	29.59
1375.30	V	54.00	74.00	43.33	45.34	10.67	28.66
11020.00	H	54.00	74.00	52.00	58.06	2.00	15.94
11020.00	V	54.00	74.00	50.75	57.29	3.25	16.71

Ch.120(5590 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	45.67	48.11	8.33	25.89
1375.00	V	54.00	74.00	47.22	49.04	6.78	24.96
1375.30	H	54.00	74.00	42.10	44.47	11.90	29.53
1375.30	V	54.00	74.00	43.02	45.89	10.98	28.11
11180.00	H	54.00	74.00	53.49	59.20	0.51	14.80
11180.00	V	54.00	74.00	50.08	59.09	3.92	14.91

Ch.140(5710 MHz)

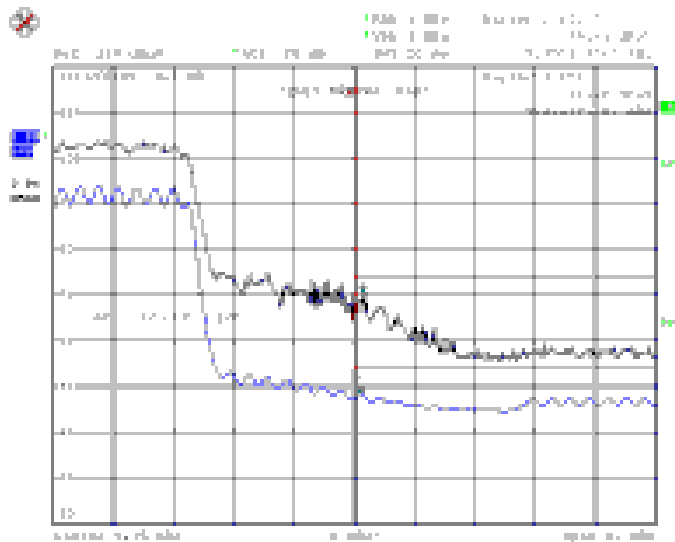
Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	45.93	47.85	8.07	26.15
1375.00	V	54.00	74.00	47.39	48.79	6.61	25.21
1375.30	H	54.00	74.00	42.87	44.35	11.13	29.65
1375.30	V	54.00	74.00	43.64	45.03	10.36	28.97
11420.00	H	54.00	74.00	51.24	58.89	2.76	15.11
11420.00	V	54.00	74.00	49.36	57.90	4.64	16.10

Restricted band edge test data

Measured frequency range : 5350-5460 MHz

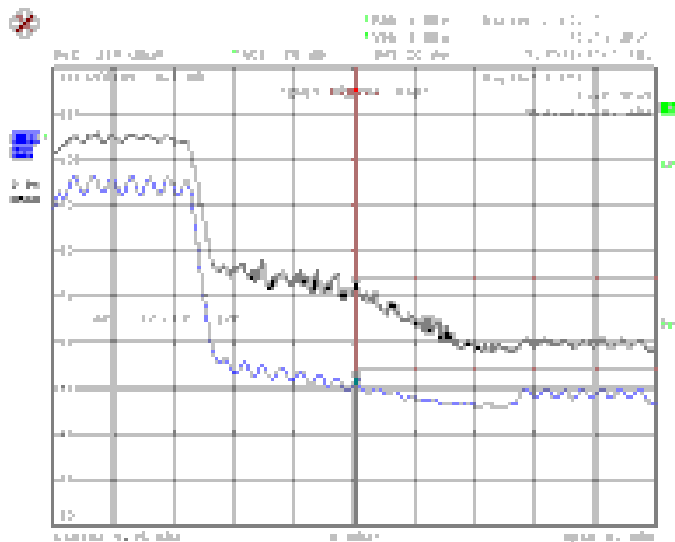
Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
5350.00	H	54.00	74.00	48.18	70.61	5.82	3.39
5350.00	V	54.00	74.00	51.18	72.71	2.82	1.29
5460.00	H	54.00	74.00	51.26	68.84	2.74	5.16
5460.00	V	54.00	74.00	52.65	69.52	1.35	4.48

Worst Case Mode :	802.11n_HT40 - Ant0+Ant1
Worst Case Transfer Rate :	MCS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5310 MHz
Channel :	62



Date: 4.000.000 12:10:11

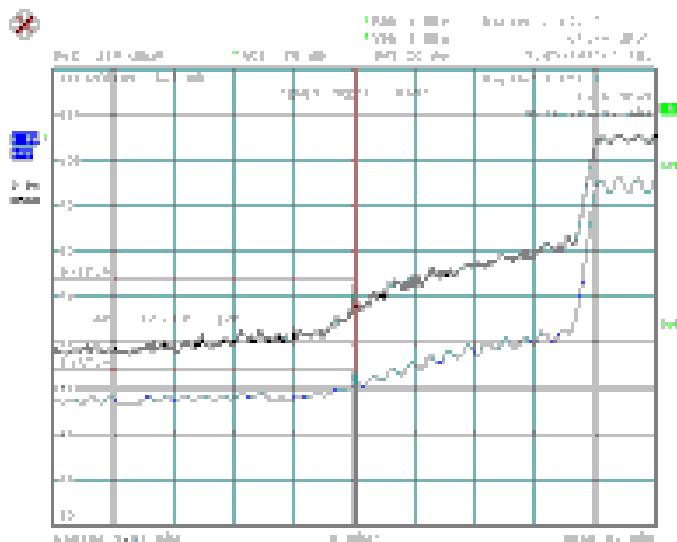
Radiated Restricted Upper Band Edge Plot (Antenna-Horizontal)



Date: 4.000.000 12:07:51

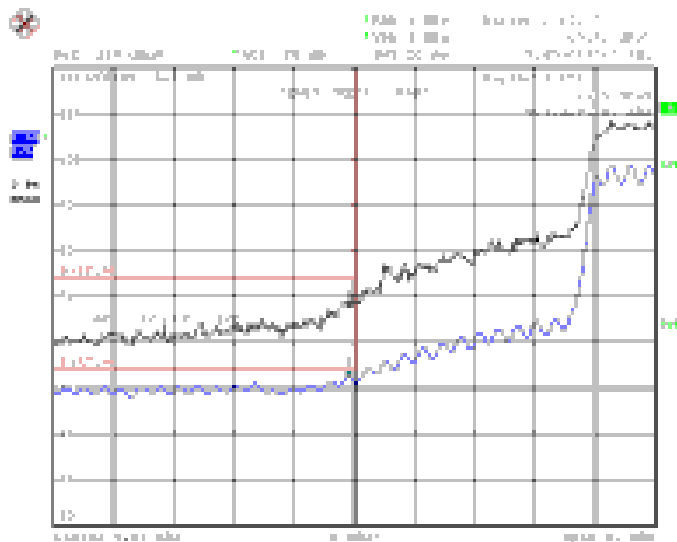
Radiated Restricted Upper Band Edge Plot (Antenna-Vertical)

Worst Case Mode :	802.11n_HT40 - Ant0+Ant1
Worst Case Transfer Rate :	MCS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5510 MHz
Channel :	102



Date: 4.000.000 12:10:10

Radiated Restricted Lower Band Edge Plot (Antenna-Horizontal)



Date: 4.000.000 12:10:10

Radiated Restricted Lower Band Edge Plot (Antenna-Vertical)

Test mode : 802.11ac_VHT40

EUT	WLAN Access Point	Measurement Detail	
Model	WEA412h	Frequency Range	1-40GHz
Mode	ANT A1+A2	Detector function	Average / Peak

Remarks

We have tested three mode (X, Y, Z). The worst mode (Z axis) for final test.

The requirements are:

☒ Complies

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
11180.00	53.64	0.36	Average

Ch.52(5270 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	47.31	48.52	6.69	25.48
1375.00	V	54.00	74.00	48.44	49.92	5.56	24.08
1375.30	H	54.00	74.00	42.55	44.35	11.45	29.65
1375.30	V	54.00	74.00	43.51	45.94	10.49	28.06
10540.00	H	54.00	74.00	50.49	57.64	3.51	16.36
10540.00	V	54.00	74.00	52.18	57.90	1.82	16.10

Ch.60(5310 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	47.06	48.90	6.94	25.10
1375.00	V	54.00	74.00	48.61	49.80	5.39	24.20
1375.30	H	54.00	74.00	42.92	44.40	11.08	29.60
1375.30	V	54.00	74.00	43.49	45.87	10.51	28.13
10620.00	H	54.00	74.00	50.37	57.35	3.63	16.65
10620.00	V	54.00	74.00	52.64	57.85	1.36	16.15

Ch.100(5510 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	47.10	48.80	6.90	25.20
1375.00	V	54.00	74.00	48.68	49.75	5.32	24.25
1375.30	H	54.00	74.00	42.77	44.95	11.23	29.05
1375.30	V	54.00	74.00	43.83	45.48	10.17	28.52
11020.00	H	54.00	74.00	51.95	58.21	2.05	15.79
11020.00	V	54.00	74.00	49.85	58.08	4.15	15.92

Ch.120(5590 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	47.09	48.67	6.91	25.33
1375.00	V	54.00	74.00	48.32	49.97	5.68	24.03
1375.30	H	54.00	74.00	42.21	44.19	11.79	29.81
1375.30	V	54.00	74.00	43.02	45.24	10.98	28.76
11180.00	H	54.00	74.00	53.64	59.12	0.36	14.88
11180.00	V	54.00	74.00	50.39	58.26	3.61	15.74

Ch.140(5710 MHz)

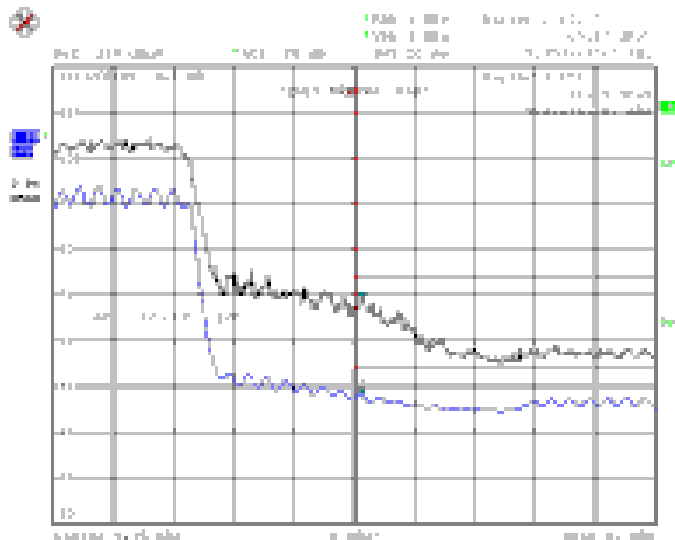
Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	47.23	48.80	6.77	25.20
1375.00	V	54.00	74.00	48.56	49.94	5.44	24.06
1375.30	H	54.00	74.00	42.97	44.32	11.03	29.68
1375.30	V	54.00	74.00	43.78	45.10	10.22	28.90
11420.00	H	54.00	74.00	51.04	58.04	2.96	15.96
11420.00	V	54.00	74.00	49.12	57.63	4.88	16.37

Restricted band edge test data

Measured frequency range : 5350-5460 MHz

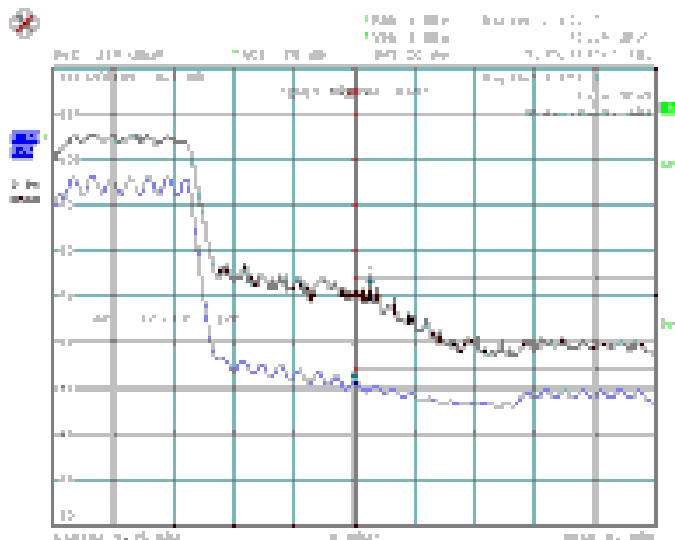
Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
5350.00	H	54.00	74.00	48.29	69.17	5.71	4.83
5350.00	V	54.00	74.00	51.60	72.25	2.40	1.75
5460.00	H	54.00	74.00	50.80	68.02	3.20	5.98
5460.00	V	54.00	74.00	52.41	69.73	1.59	4.27

Worst Case Mode :	802.11ac_VHT40 - Ant0+Ant1
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5310 MHz
Channel :	62



Date: 4.00P.2016 12:14:24

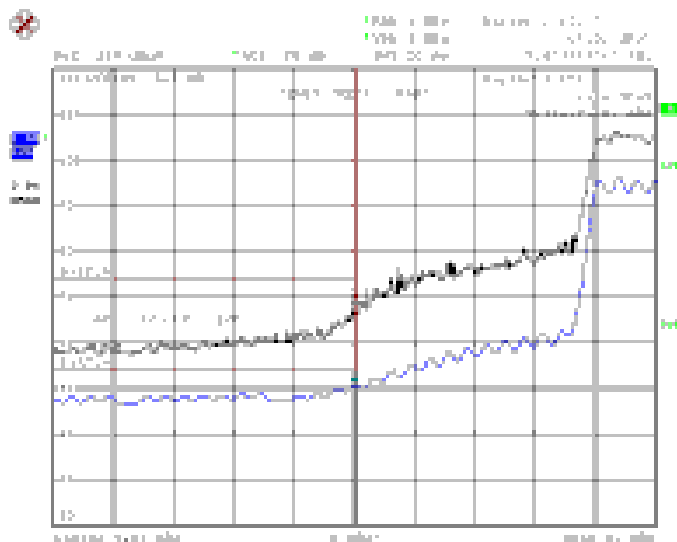
Radiated Restricted Upper Band Edge Plot (Antenna-Horizontal)



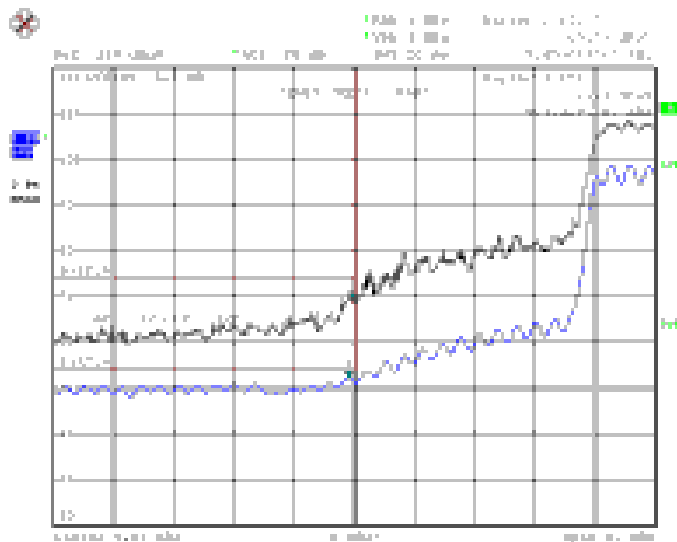
Date: 4.00P.2016 12:14:24

Radiated Restricted Upper Band Edge Plot (Antenna-Vertical)

Worst Case Mode :	802.11ac_VHT40 - Ant0+Ant1
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5510 MHz
Channel :	102



Radiated Restricted Lower Band Edge Plot (Antenna-Horizontal)



Radiated Restricted Lower Band Edge Plot (Antenna-Vertical)

Test mode : 802.11ac_VHT80

EUT	WLAN Access Point	Measurement Detail	
Model	WEA412h	Frequency Range	1-40GHz
Mode	ANT A1+A2	Detector function	Average / Peak

Remarks

We have tested three mode (X, Y, Z). The worst mode (Z axis) for final test.

The requirements are:

☒ Complies

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
5460.00	52.64	1.36	Average

Ch.52(5290 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	46.83	48.25	7.17	25.75
1375.00	V	54.00	74.00	48.44	49.78	5.56	24.22
1375.30	H	54.00	74.00	42.23	44.48	11.77	29.52
1375.30	V	54.00	74.00	43.59	45.02	10.41	28.98
10580.00	H	54.00	74.00	49.63	56.69	4.37	17.31
10580.00	V	54.00	74.00	51.91	57.47	2.09	16.53

Ch.100(5530 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	47.40	48.94	6.60	25.06
1375.00	V	54.00	74.00	48.35	49.76	5.65	24.24
1375.30	H	54.00	74.00	42.40	44.00	11.60	30.00
1375.30	V	54.00	74.00	43.87	45.69	10.13	28.31
11060.00	H	54.00	74.00	51.77	57.25	2.23	16.75
11060.00	V	54.00	74.00	49.98	56.27	4.02	17.73

Ch.132(5690 MHz)

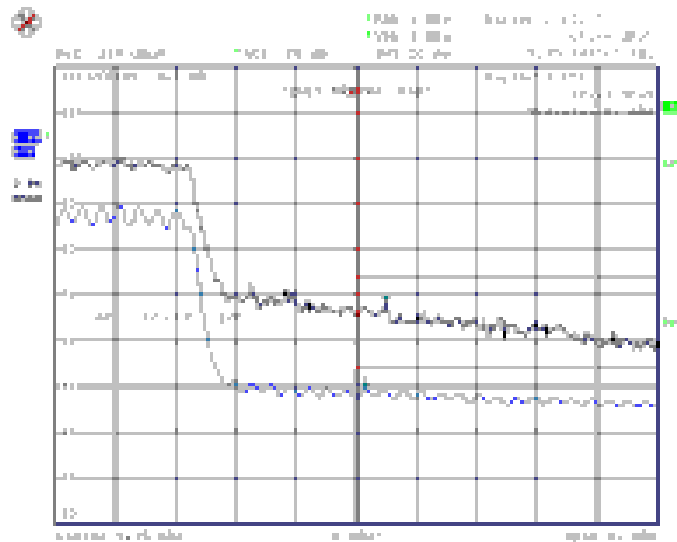
Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1375.00	H	54.00	74.00	47.01	48.64	6.99	25.36
1375.00	V	54.00	74.00	48.06	49.68	5.94	24.32
1375.30	H	54.00	74.00	42.95	44.97	11.05	29.03
1375.30	V	54.00	74.00	43.48	45.23	10.52	28.77
11380.00	H	54.00	74.00	50.62	57.92	3.38	16.08
11380.00	V	54.00	74.00	49.01	56.79	4.99	17.21

Restricted band edge test data

Measured frequency range : 5350-5460 MHz

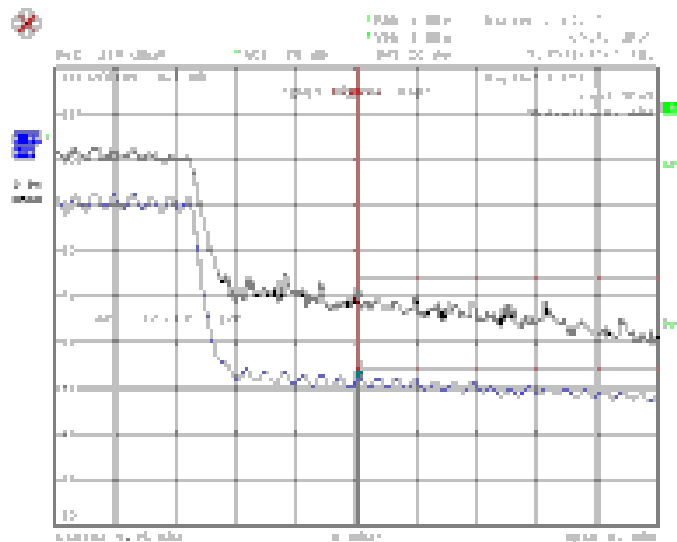
Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
5350.00	H	54.00	74.00	49.43	68.64	4.57	5.36
5350.00	V	54.00	74.00	52.51	69.42	1.49	4.58
5460.00	H	54.00	74.00	50.69	67.13	3.31	6.87
5460.00	V	54.00	74.00	52.64	67.68	1.36	6.32

Worst Case Mode :	802.11ac_VHT80 - Ant0+Ant1
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5290 MHz
Channel :	58



Date: 4.00P.2016-10-13

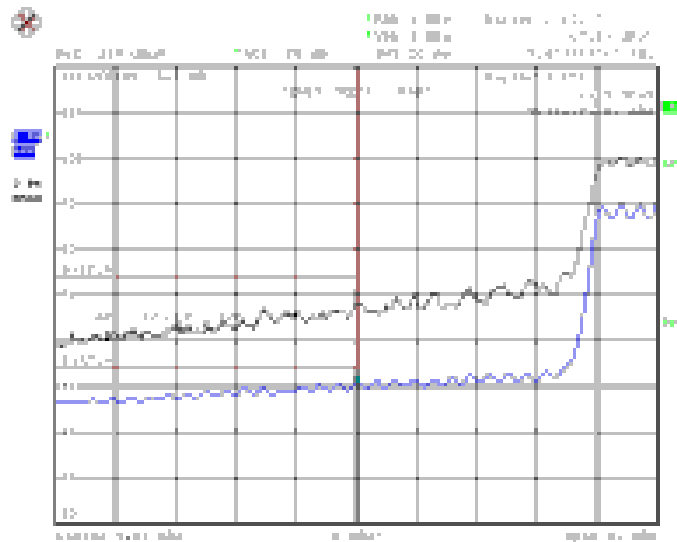
Radiated Restricted Upper Band Edge Plot (Antenna-Horizontal)



Date: 4.00P.2016-10-13

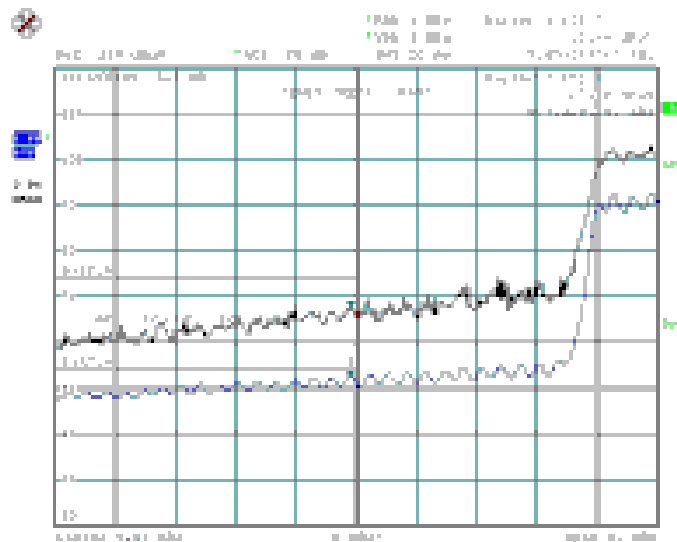
Radiated Restricted Upper Band Edge Plot (Antenna-Vertical)

Worst Case Mode :	802.11ac_VHT80 - Ant0+Ant1
Worst Case Transfer Rate :	MNSS 0
Distance of Measurements :	3 Meters
Operating Frequency :	5530 MHz
Channel :	106



Date: 4.00P.2016-10-13

Radiated Restricted Lower Band Edge Plot (Antenna-Horizontal)



Date: 4.00P.2016-10-13

Radiated Restricted Lower Band Edge Plot (Antenna-Vertical)

Test Results - Receiver mode

1) 9 kHz to 30 MHz

Test mode : Receiver

EUT	WLAN Access Point	Measurement Detail	
Model	WEA412h	Frequency Range	9 kHz - 30 MHz
Mode	Receiver	Detector function	Quasi-Peak

The requirements are:

☒ Complies

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
-	-	-	See note

Note :

The amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB)

2) 30 MHz to 1 GHz

Test mode : Receiver

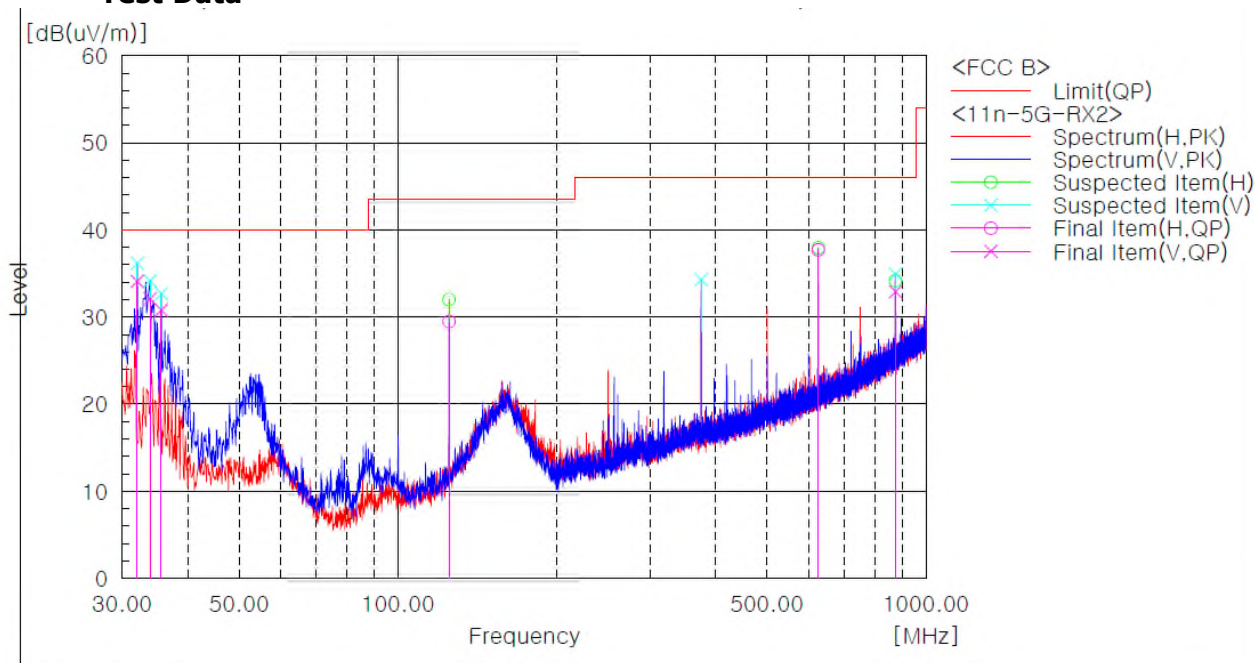
EUT	WLAN Access Point	Measurement Detail	
Model	WEA412h	Frequency Range	Below 1000MHz
Mode	Receiver	Detector function	Quasi-Peak / Peak

The requirements are:

☒ Complies

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
32.061	34.1	5.9	Quasi-Peak

Test Data



Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin [dB]	Angle [deg]
1	32.061	V	51.5	-17.4	34.1	40.0	5.9	5.8
2	33.880	V	49.5	-17.4	32.1	40.0	7.9	5.8
3	35.578	V	48.2	-17.4	30.8	40.0	9.2	60.1
4	124.939	H	44.7	-15.2	29.5	43.5	14.0	221.6
5	624.974	H	43.2	-5.5	37.7	46.0	8.3	78.1
6	875.112	V	34.2	-1.3	32.9	46.0	13.1	167.3

Remark :

1. The field strength of spurious emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.

3) above 1 GHz

Test mode : Receiver

EUT	WLAN Access Point	Measurement Detail	
Model	WEA412h	Frequency Range	1-40GHz
Mode	Receiver	Detector function	Average / Peak

Remarks

We have tested three mode (X, Y, Z). The worst mode (Z axis) for final test.

The requirements are:

☒ Complies

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
1375.00	48.16	5.84	Average

Ch.36(5210 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
1374.60	H	54.00	74.00	44.52	45.02	9.48	28.98
1374.60	V	54.00	74.00	43.59	45.19	10.41	28.81
1375.00	H	54.00	74.00	46.26	48.14	7.74	25.86
1375.00	V	54.00	74.00	48.16	49.81	5.84	24.19
1375.30	H	54.00	74.00	43.00	45.45	11.00	28.55
1375.30	V	54.00	74.00	44.17	44.89	9.83	29.11
other	No emissions were detected at a level greater than 20dB below limit.						

2.1.8 AC Conducted Emissions

Test Location

Shielded Room

Frequency Range of Measurement

150 kHz to 30 MHz

Instrument Settings

IF Band Width: 9 kHz

Test Procedures

The EUT was placed on a non-metallic table 0.8m above the metallic, grounded floor and 0.4m from the reference ground plane wall. The distance to other metallic surfaces was at least 0.8m.

Amplitude measurements were performed with a quasi-peak detector and an average detector.

Limit

- 15.207(a)

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56*	56 to 46*
0.5 ~ 5	56	46
5 ~ 30	60	50

* Decreases with the logarithm of the frequency.

Test Results

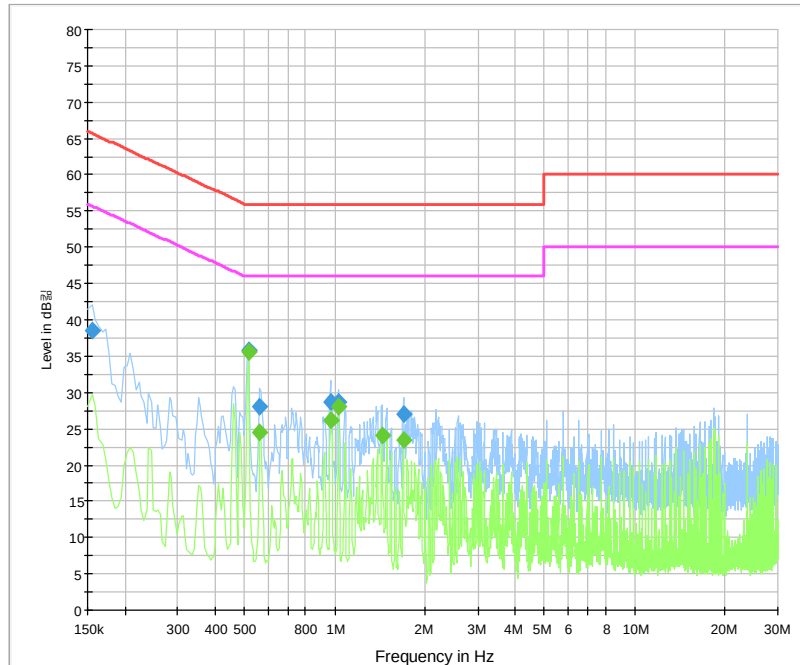
The requirements are:

☒ Complies

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
0.514500	38.7	7.3	Average

Test Data

[HOT]
CISPR 22 Class B_L1



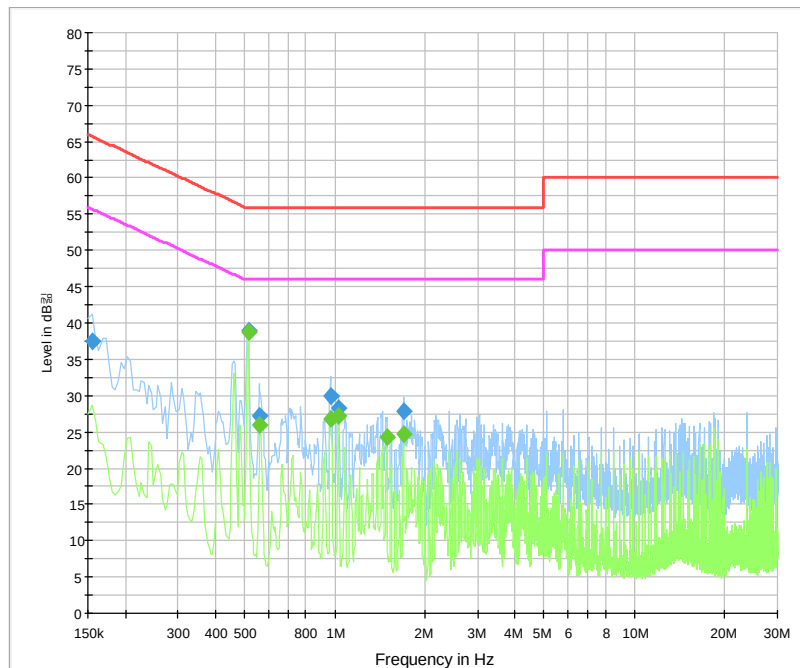
Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.154500	38.6	1000.0	9.000	On	L1	9.7	27.2	65.8
0.514500	35.8	1000.0	9.000	On	L1	9.9	20.2	56.0
0.564000	28.0	1000.0	9.000	On	L1	9.9	28.0	56.0
0.969000	28.7	1000.0	9.000	On	L1	9.8	27.3	56.0
1.027500	28.6	1000.0	9.000	On	L1	9.7	27.4	56.0
1.693500	27.0	1000.0	9.000	On	L1	9.7	29.0	56.0

Final Result 2

Frequency (MHz)	CAverage (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.514500	35.6	1000.0	9.000	On	L1	9.9	10.4	46.0
0.564000	24.4	1000.0	9.000	On	L1	9.9	21.6	46.0
0.973500	26.2	1000.0	9.000	On	L1	9.8	19.8	46.0
1.027500	28.0	1000.0	9.000	On	L1	9.7	18.0	46.0
1.437000	24.0	1000.0	9.000	On	L1	9.7	22.0	46.0
1.693500	23.4	1000.0	9.000	On	L1	9.7	22.6	46.0

[NEUTRAL]
CISPR 22 Class B_N



Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.154500	37.5	1000.0	9.000	On	N	9.7	28.3	65.8
0.514500	39.0	1000.0	9.000	On	N	9.9	17.0	56.0
0.559500	27.3	1000.0	9.000	On	N	9.9	28.7	56.0
0.969000	29.9	1000.0	9.000	On	N	9.8	26.1	56.0
1.027500	28.2	1000.0	9.000	On	N	9.7	27.8	56.0
1.693500	27.9	1000.0	9.000	On	N	9.7	28.1	56.0

Final Result 2

Frequency (MHz)	CAverage (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.514500	38.7	1000.0	9.000	On	N	9.9	7.3	46.0
0.564000	25.9	1000.0	9.000	On	N	9.9	20.1	46.0
0.969000	26.8	1000.0	9.000	On	N	9.8	19.2	46.0
1.027500	27.1	1000.0	9.000	On	N	9.7	18.9	46.0
1.486500	24.3	1000.0	9.000	On	N	9.7	21.7	46.0
1.693500	24.6	1000.0	9.000	On	N	9.7	21.4	46.0

APPENDIX A – Test Equipment Used For Tests

	Name of Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	Signal Analyzer	Agilent	N9020A	MY48011598	2015-11-02	2016-11-02
2	Spectrum Analyzer	Rohde & Schwarz	FSP-30	100994	2015-11-02	2016-11-02
3	Signal Generator	Rohde & Schwarz	SMB100A	175528	2016-01-20	2017-01-20
4	EMI Test Receiver	Rohde & Schwarz	ESCI7	100816	2015-11-02	2016-11-02
5	LISN	Rohde & Schwarz	ENV216	101760	2016-02-05	2017-02-05
6	EMI Test Receiver	Rohde & Schwarz	ESCI7	100814	2015-11-02	2016-11-02
7	Trilog Broadband Antenna	SCHWARZBECK	VULB 9161 SE	9161-4133	2015-06-18	2017-06-18
8	Active Loop Antenna	SCHWARZBECK	FMZB 1513	1513-126	2016-05-16	2018-05-16
9	6dB Attenuator	R&S	DNF	272.4110.50-1	2016-02-04	2017-02-04
10	6dB Attenuator	R&S	DNF	272.4110.50-2	2015-11-03	2016-11-03
11	AMPLIFIER	SONOMA	310	291721	2016-02-02	2017-02-02
12	EMI Test Receiver	Rohde & Schwarz	ESU40	100336	2015-05-14	2017-05-14
13	PREAMPLIFIER	Agilent	8449B	3008A02011	2015-12-08	2016-12-08
14	Horn Antenna	ETS-Lindgren	3115	00078894	2015-09-02	2017-09-02
15	Horn Antenna	ETS-Lindgren	3116	00062504	2015-09-04	2017-09-04
16	Horn Antenna	ETS-Lindgren	3116	00062916	2015-04-30	2017-04-30
17	Horn Antenna	ETS-Lindgren	3117	00154525	2015-09-02	2017-09-02
18	Band Reject Filter	Micro Tronics	BRM50702	G233	2016-05-16	2017-05-16
19	Band Reject Filter	Micro Tronics	BRM50716	G184	2016-05-16	2017-05-16
20	Signal Generator	Rohde & Schwarz	SMBV100A	258008	2016-05-13	2017-05-13
21	Temp&Humi Chamber	ESPEC CORP.	SH-241	92000872	2016-05-13	2017-05-13