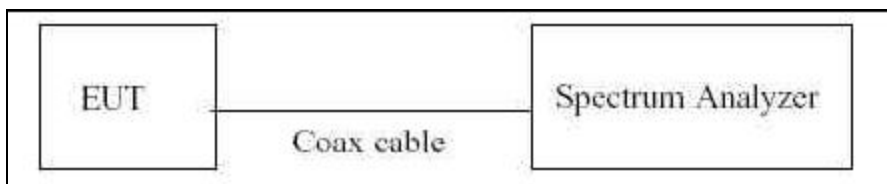


9.5 PEAK EXCURSION RATIO

The spectrum analyzer was connected to the antenna terminal while the EUT was operating in the continuous transmission mode at the appropriate center frequencies. The largest permissible difference between the modulation envelope(measured using a peak hold function) and the maximum conducted output power 13 dB/MHz.

■ TEST CONFIGURATION



■ TEST PROCEDURE

We tested according to KDB 789033(issued 04/08/2013).

The spectrum analyzer is set to :

1. Span = Set the span to view the entire emission bandwidth.
2. RBW = 1 MHz
3. VBW $\geq$ 3 MHz
4. Detector Mode = Peak
5. Trace Mode = Max hold
6. Allow the sweeps to continue until the trace stabilizes.
7. Use the peak search function to find the peak of the spectrum.
8. Use the procedure to measure the PPSP
9. Compute the ratio of the maximum of the peak-max-hold spectrum to the PPSP.

Note :

1. The PSD results in plot is already including the actual values of loss for the attenuator and cable combination.
2. Spectrum offset = Attenuator loss + Cable loss
3. We apply to the offset in the UNII 2/2e band that was rounded off to the closest tenth dB. Actual value of loss for the attenuator and cable combination is below table. We used the particular cable type that is supported by manufacture.

Band	Loss(dB)
UNII 2	21.0
UNII 2e	21.0

(Actual value of loss for the attenuator and cable combination)

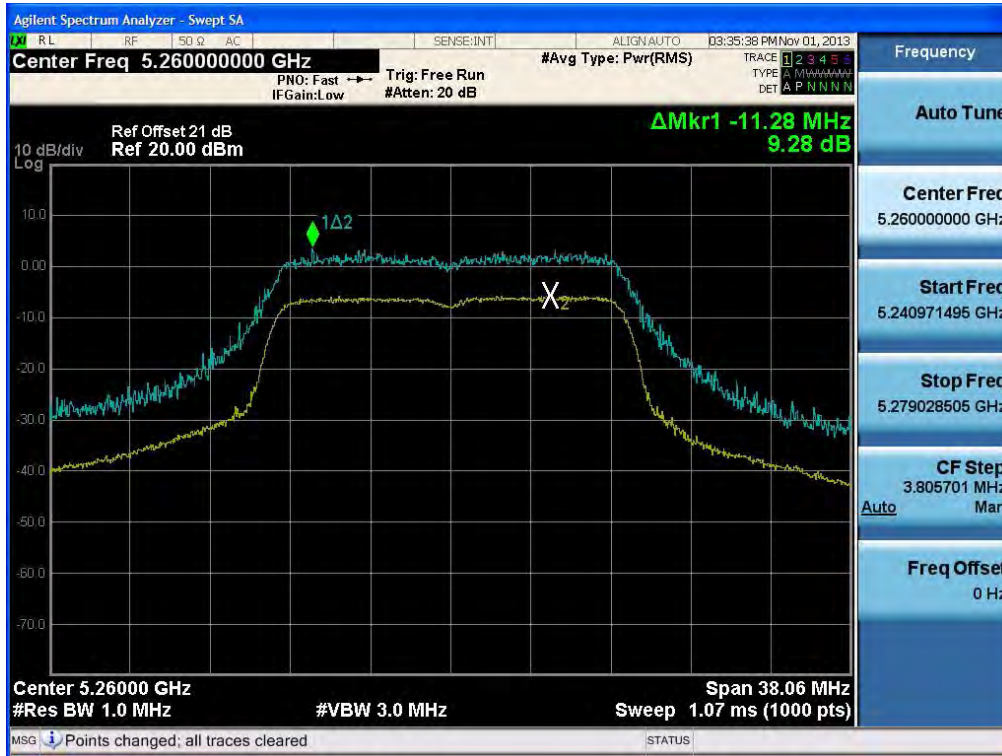
FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR02	Date of Issue: November 04, 2013	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

Monitoring Port Ant.1

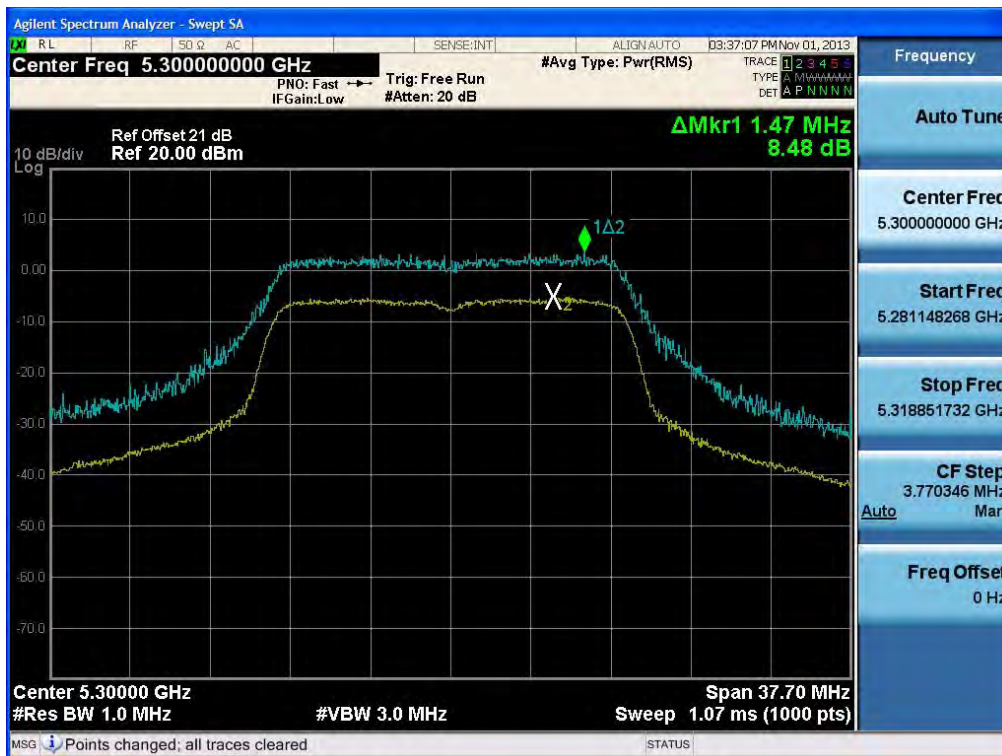
RESULT PLOTS

20 MHz BW

Peak Excursion Ratio (802.11a-CH 52)



Peak Excursion Ratio (802.11a-CH 60)



FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR02	Date of Issue: November 04, 2013	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

Peak Excursion Ratio (802.11a-CH 64)



Peak Excursion Ratio (802.11a-CH 100)



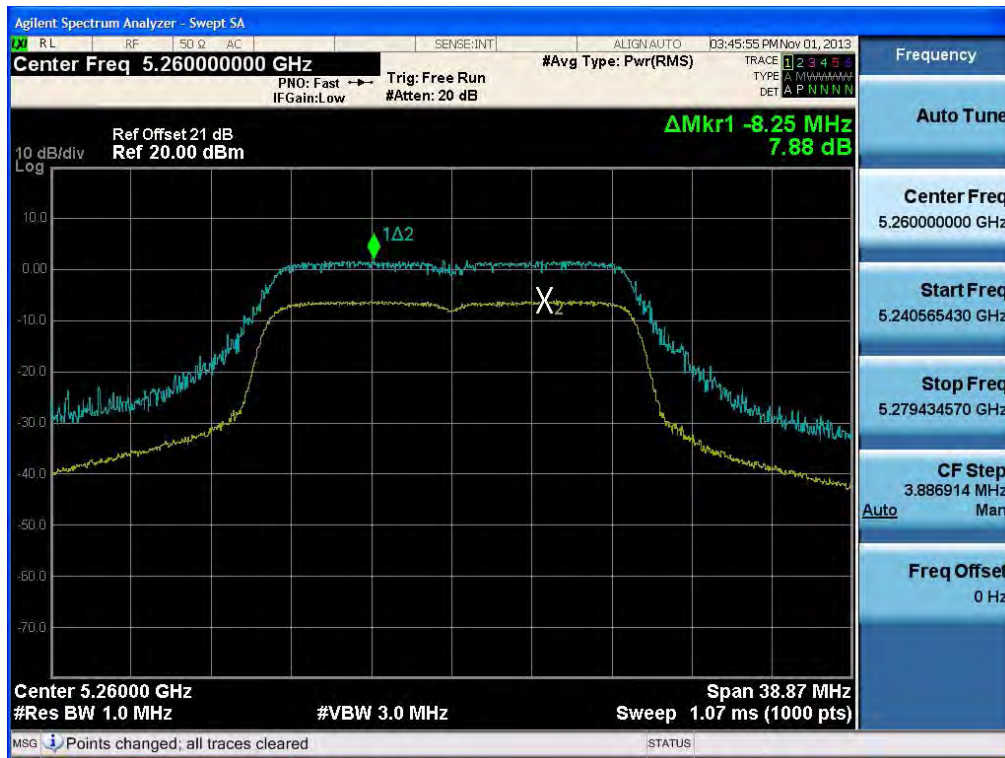
Peak Excursion Ratio (802.11a-CH 120)



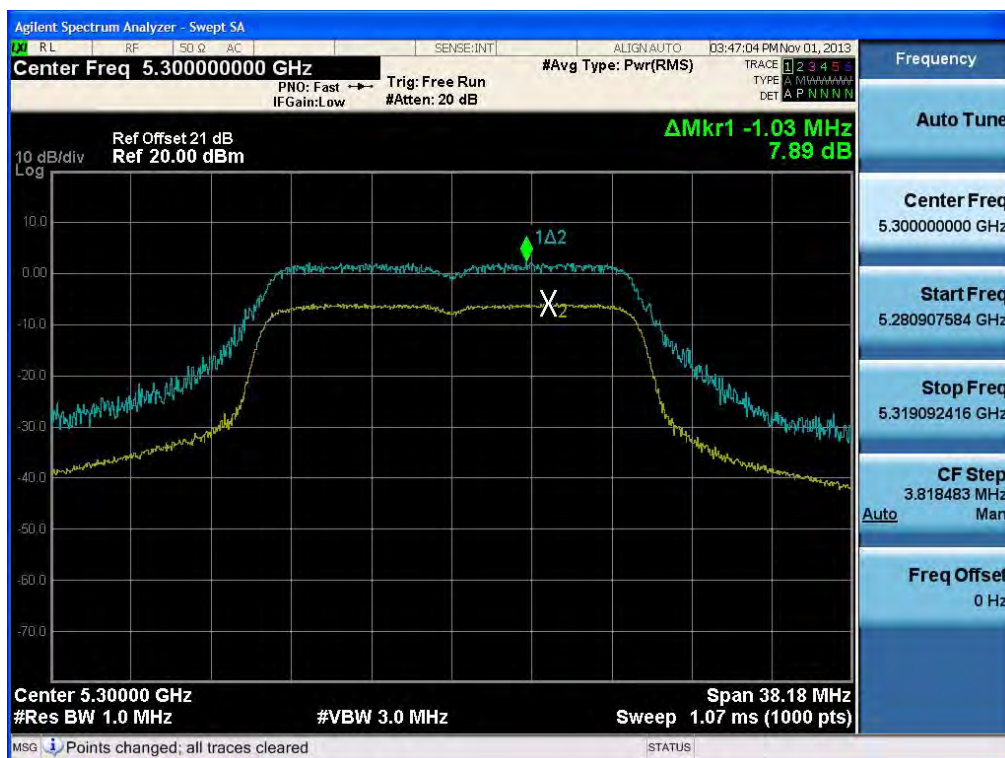
Peak Excursion Ratio (802.11a-CH 140)



Peak Excursion Ratio (802.11n-CH 52)



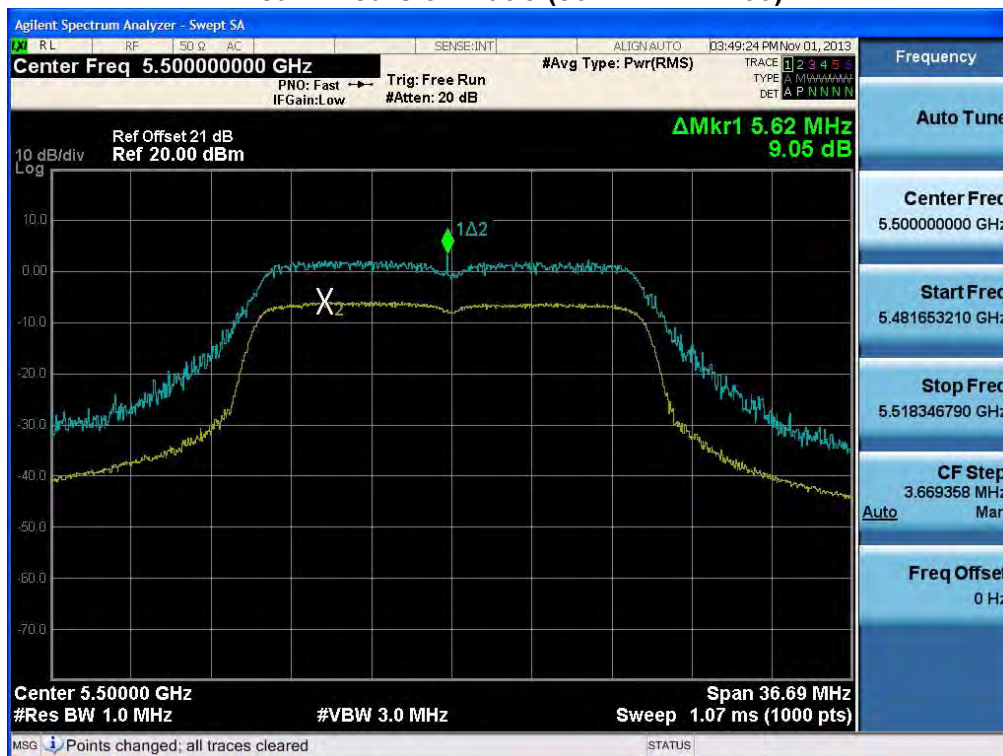
Peak Excursion Ratio (802.11n-CH 60)



Peak Excursion Ratio (802.11n-CH 64)



Peak Excursion Ratio (802.11n-CH 100)

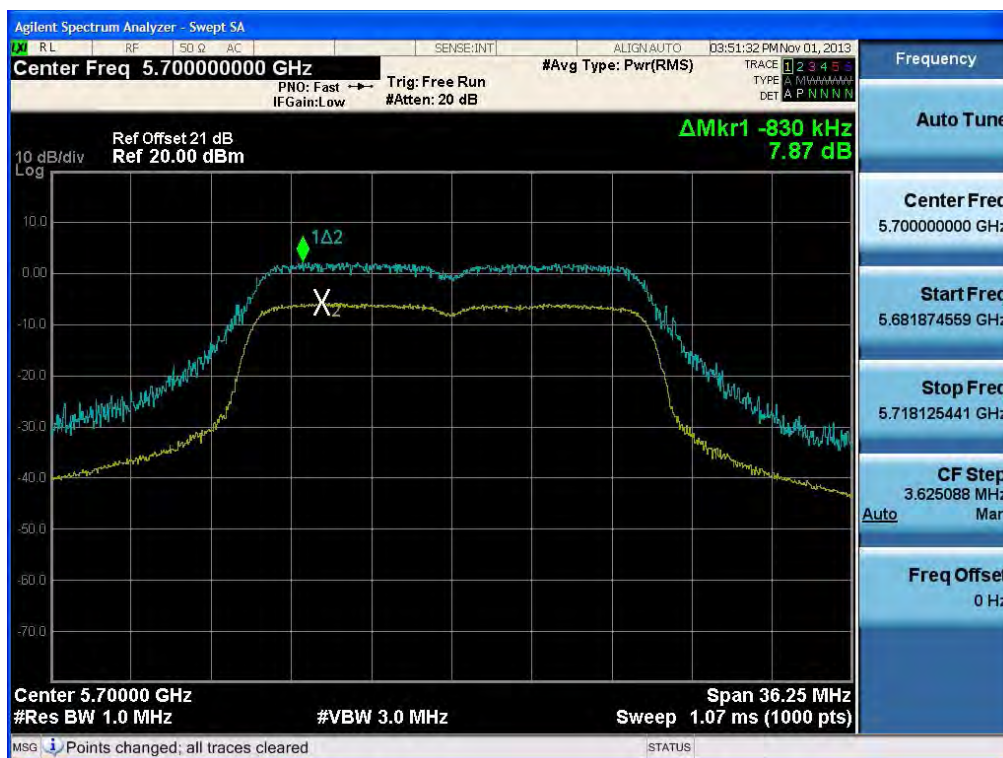


FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR02	Date of Issue: November 04, 2013	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

Peak Excursion Ratio (802.11n-CH 120)

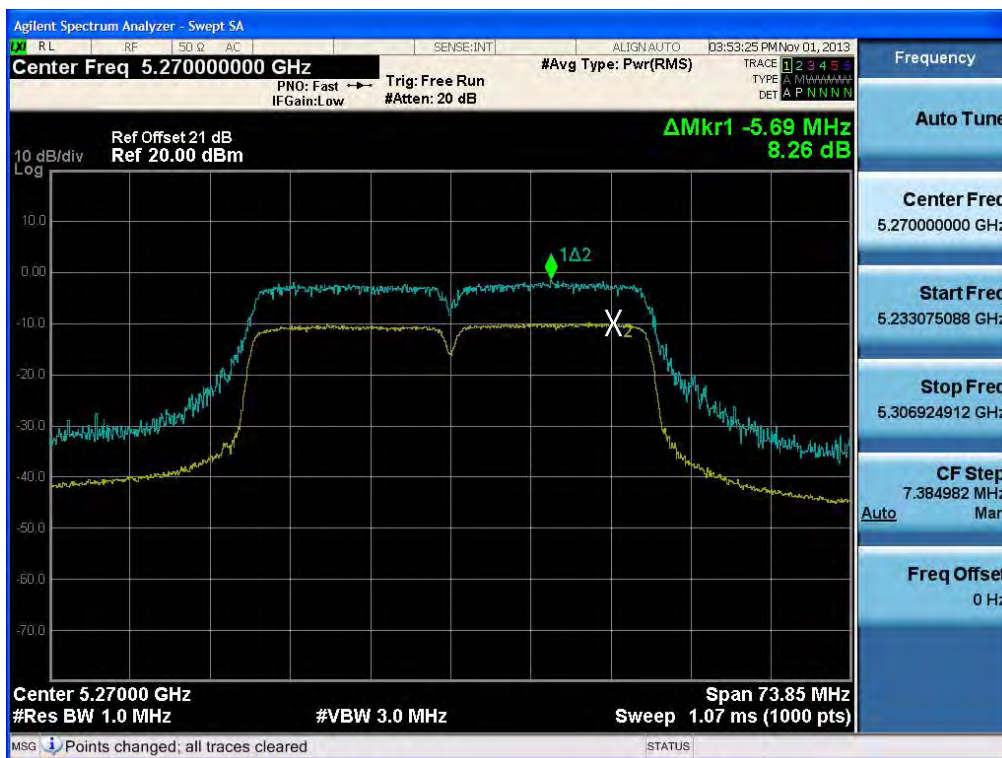


Peak Excursion Ratio (802.11n-CH 140)

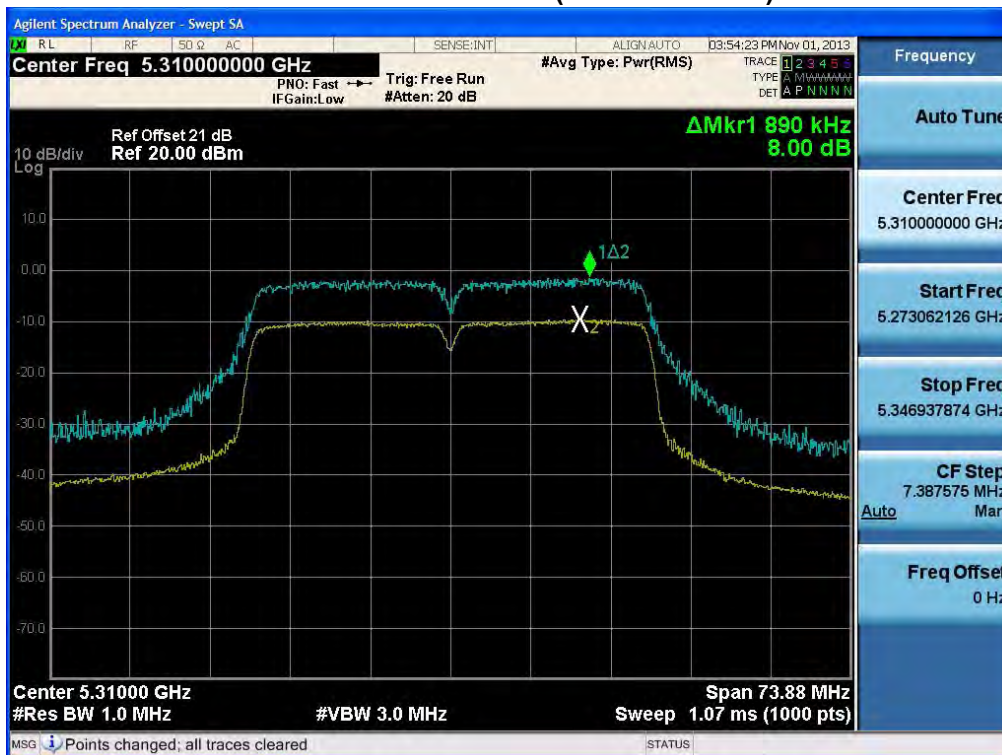


40MHz BW

Peak Excursion Ratio (802.11n-CH 54)

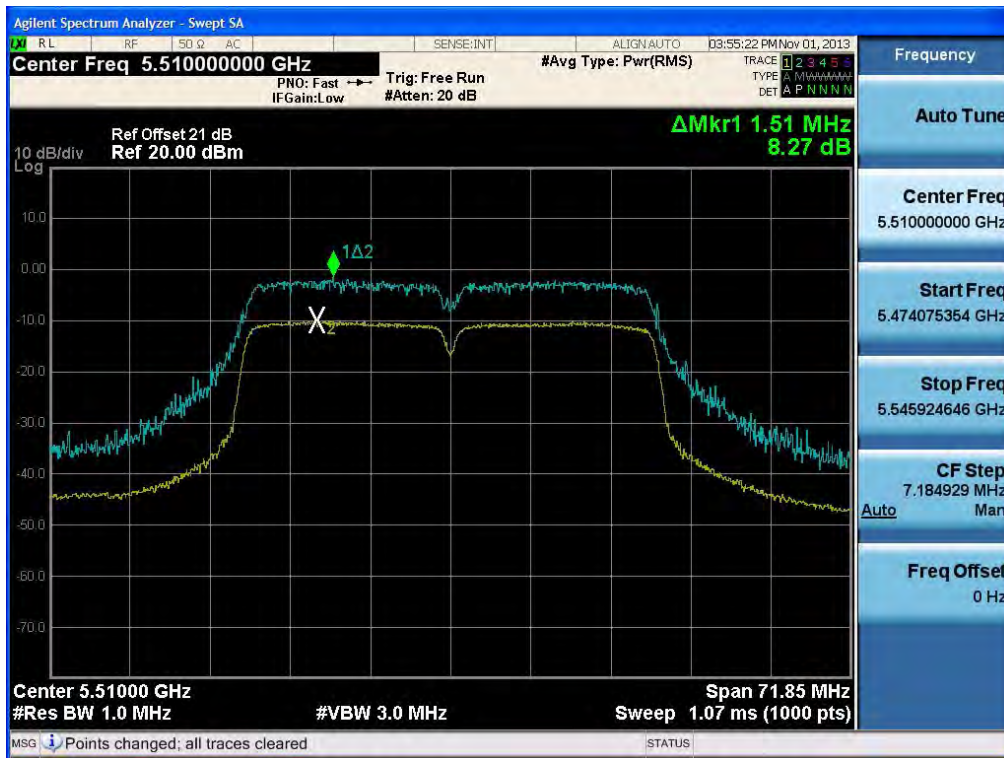


Peak Excursion Ratio (802.11n-CH 62)

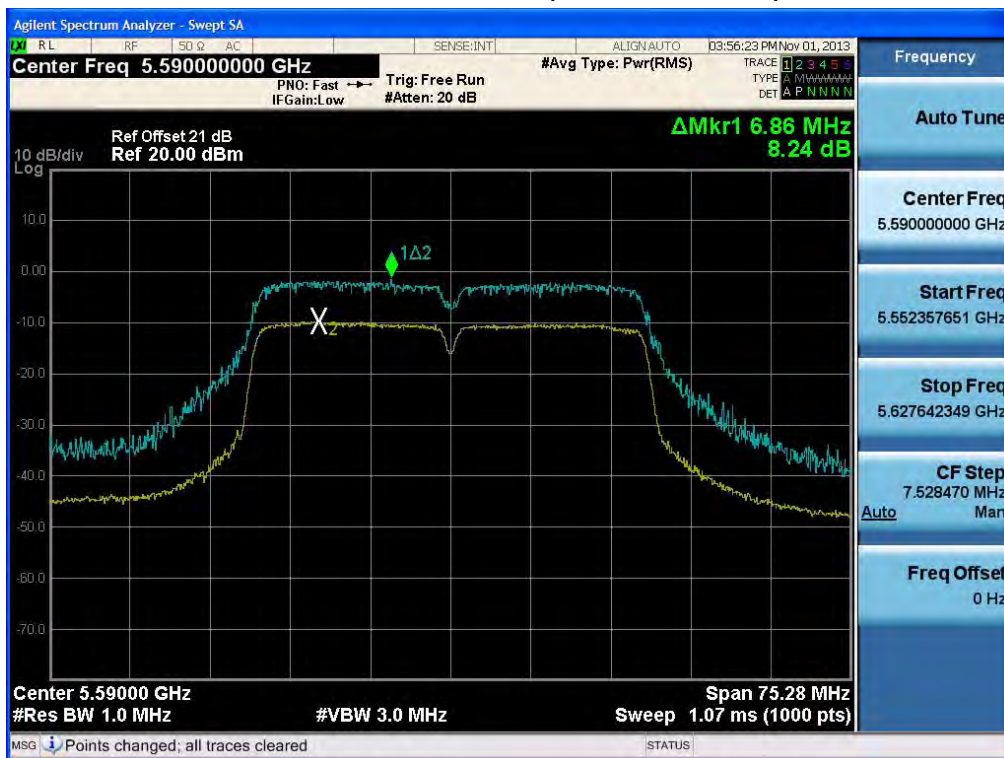


FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR02	Date of Issue: November 04, 2013	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

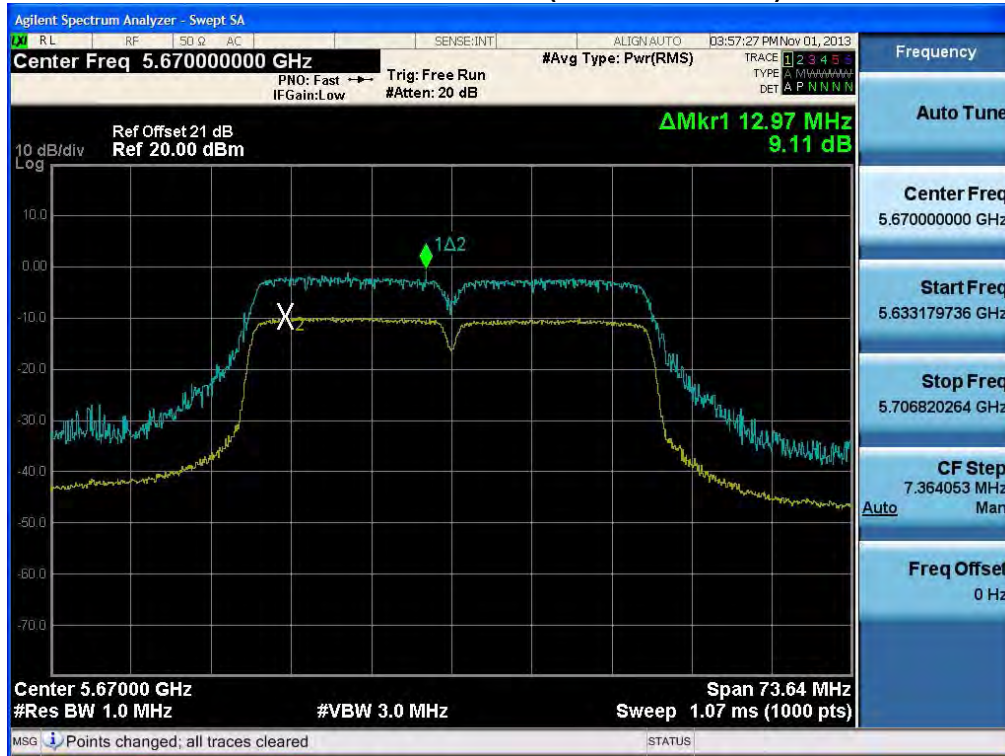
Peak Excursion Ratio (802.11n-CH 102)



Peak Excursion Ratio (802.11n-CH 118)



Peak Excursion Ratio (802.11n-CH 134)



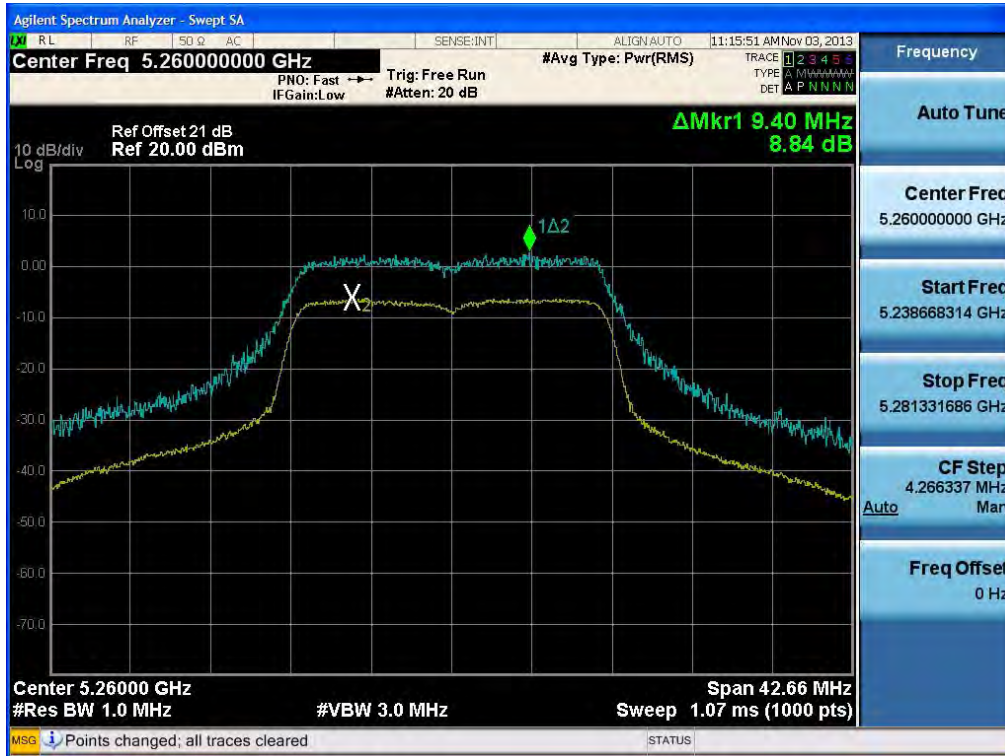
FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR02	Date of Issue: November 04, 2013	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

Monitoring Port Ant.2

RESULT PLOTS

20 MHz BW

Peak Excursion Ratio (802.11a-CH 52)



Peak Excursion Ratio (802.11a-CH 60)

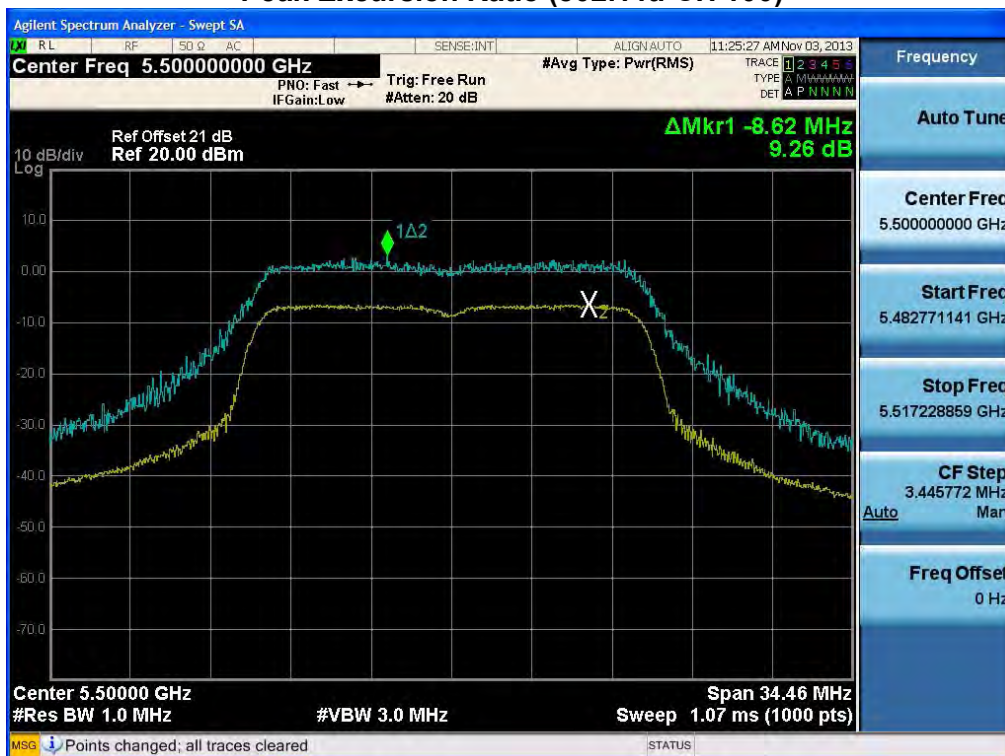


FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR02	Date of Issue: November 04, 2013	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

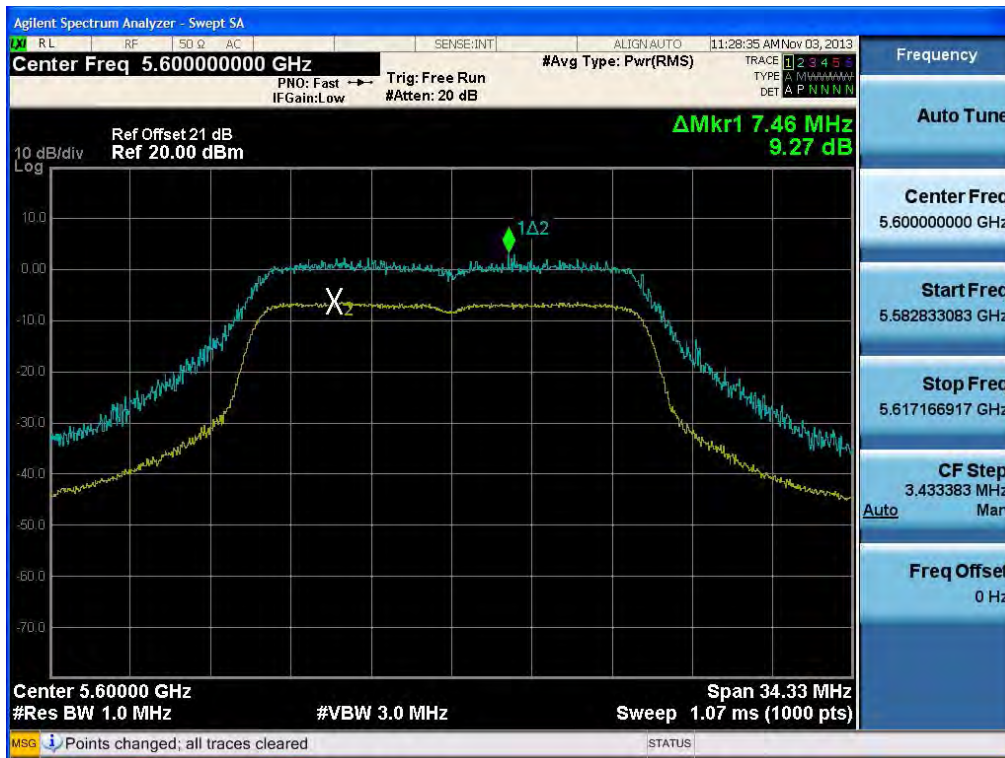
Peak Excursion Ratio (802.11a-CH 64)



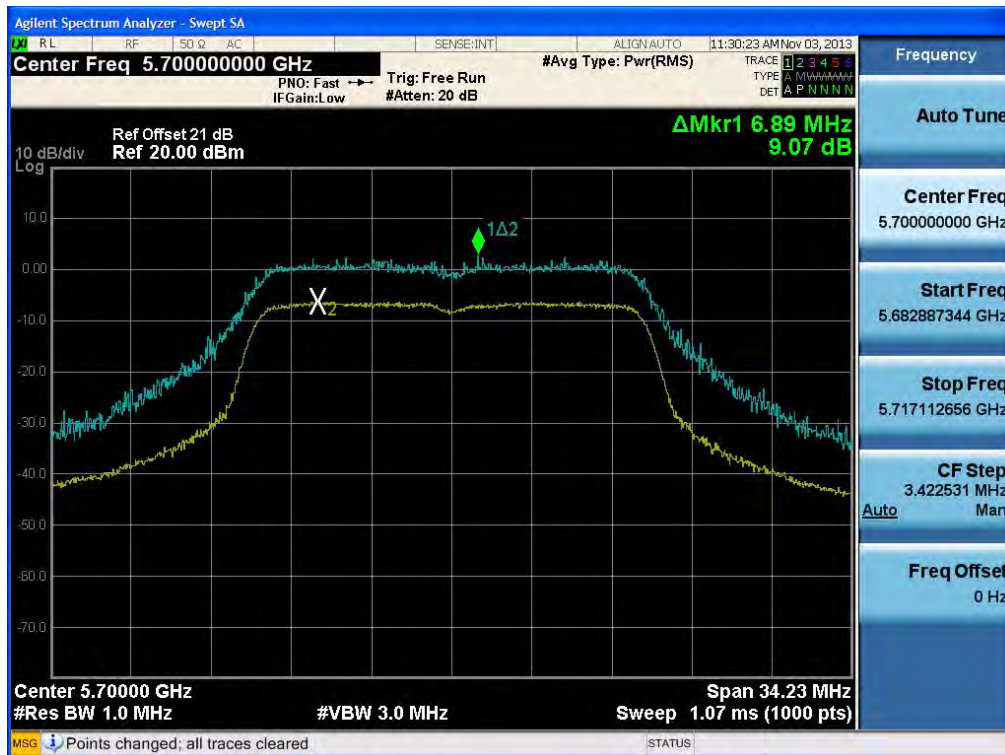
Peak Excursion Ratio (802.11a-CH 100)



Peak Excursion Ratio (802.11a-CH 120)



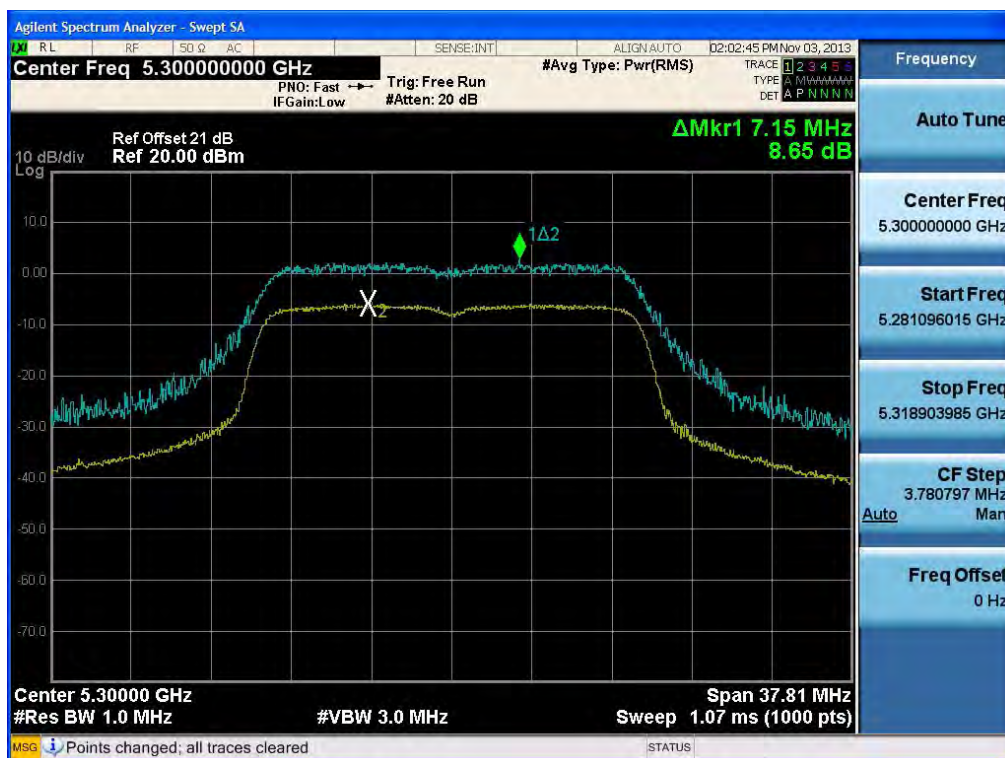
Peak Excursion Ratio (802.11a-CH 140)



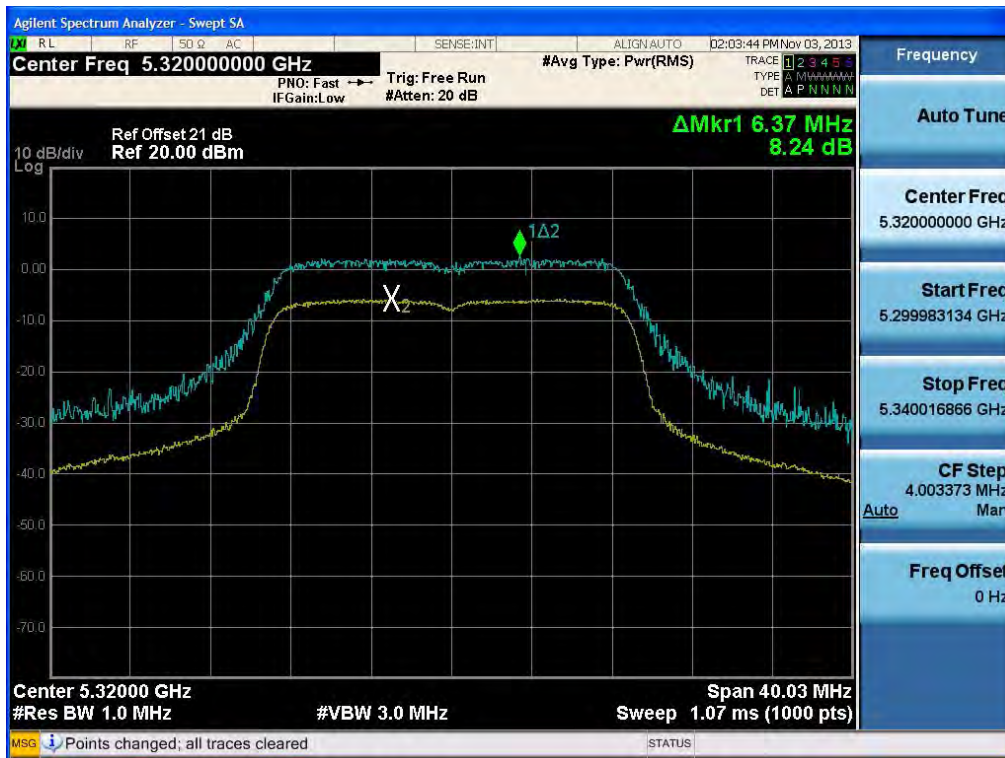
Peak Excursion Ratio (802.11n-CH 52)



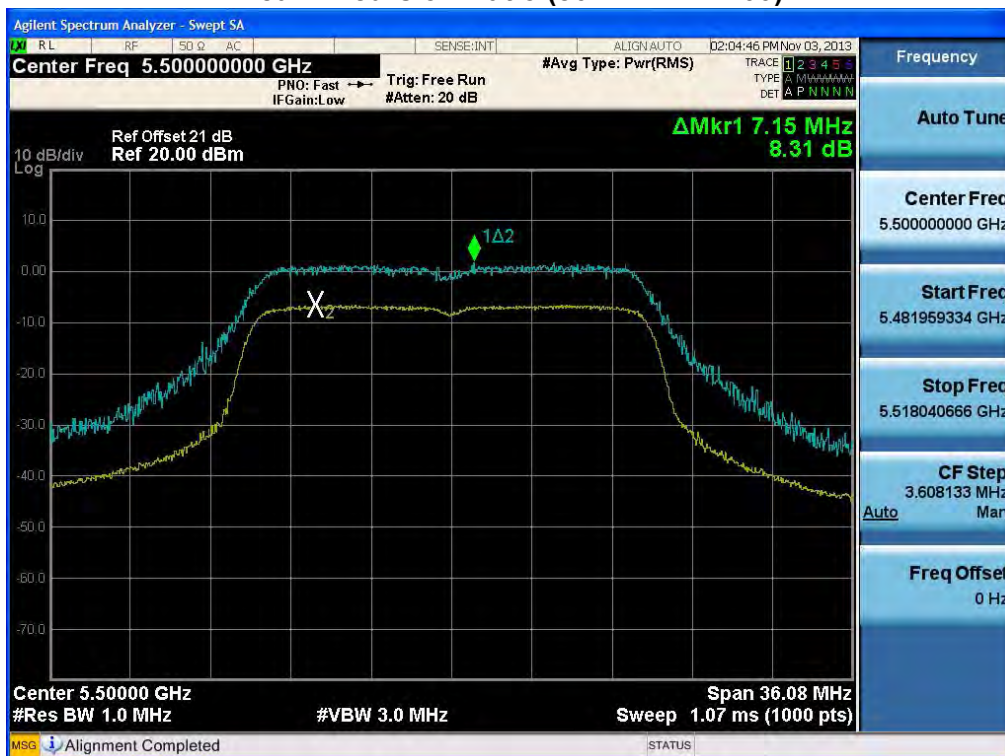
Peak Excursion Ratio (802.11n-CH 60)



Peak Excursion Ratio (802.11n-CH 64)



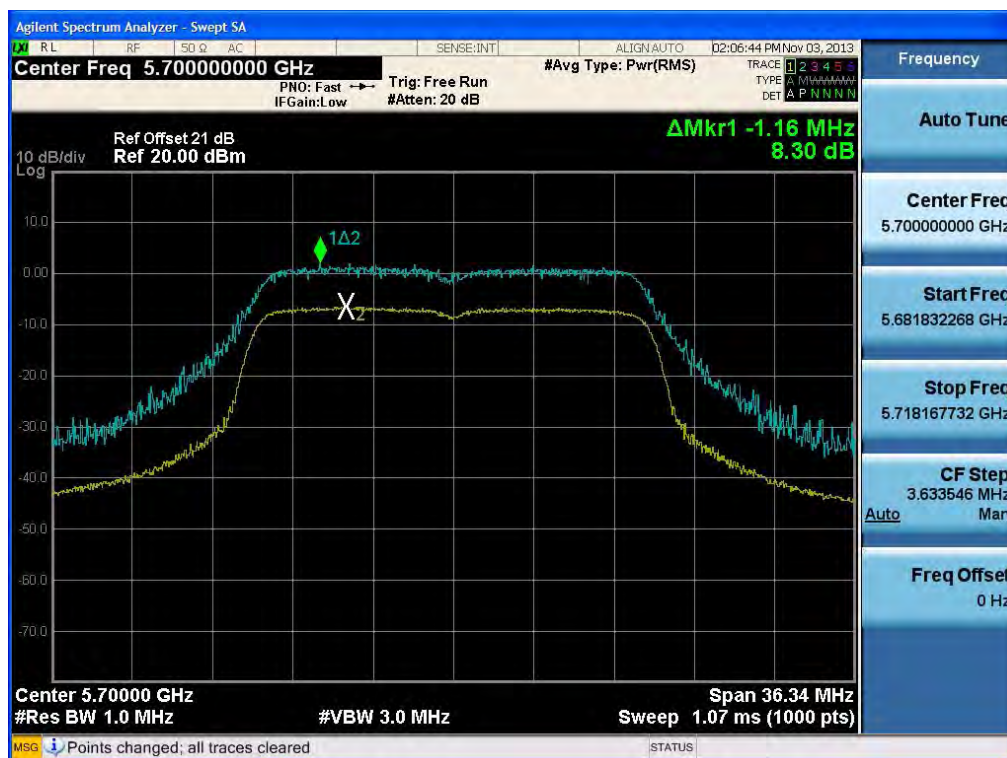
Peak Excursion Ratio (802.11n-CH 100)



Peak Excursion Ratio (802.11n-CH 120)

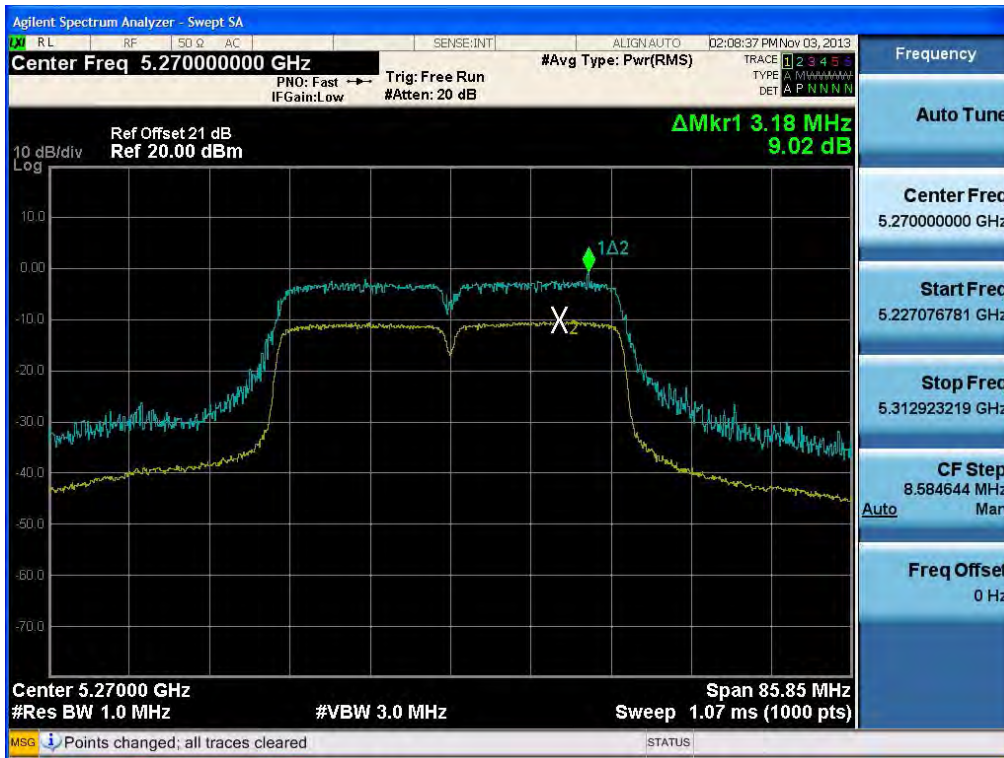


Peak Excursion Ratio (802.11n-CH 140)

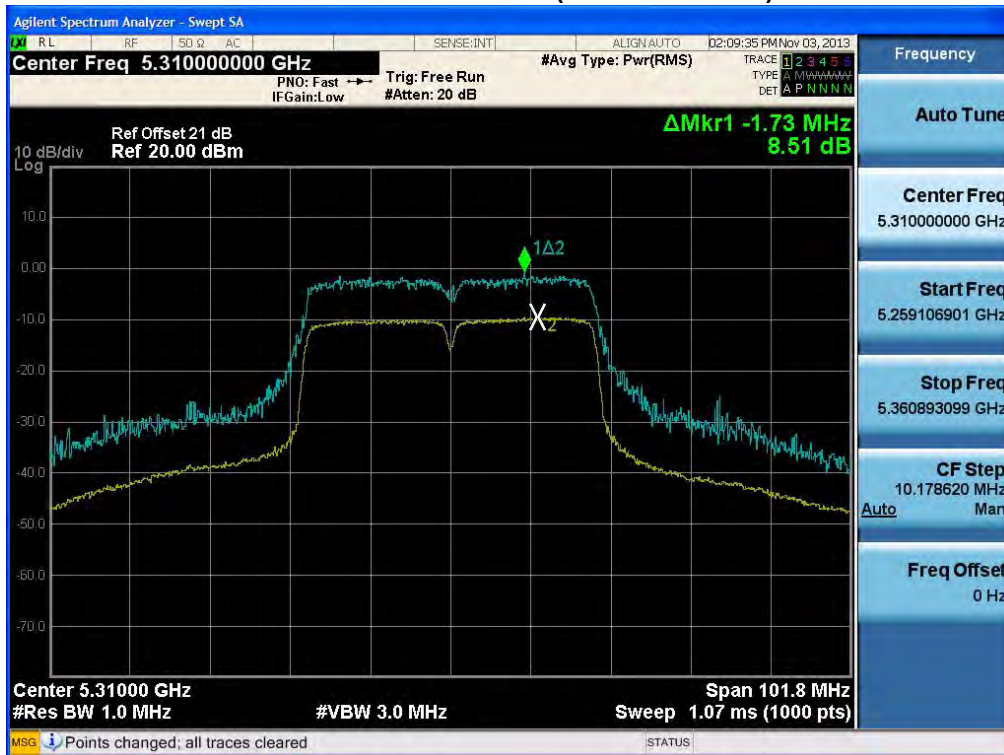


40MHz BW

Peak Excursion Ratio (802.11n-CH 54)



Peak Excursion Ratio (802.11n-CH 62)



FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR02	Date of Issue: November 04, 2013	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

Peak Excursion Ratio (802.11n-CH 102)



Peak Excursion Ratio (802.11n-CH 118)



Peak Excursion Ratio (802.11n-CH 134)



FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR02	Date of Issue: November 04, 2013	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

Service Port Ant.1

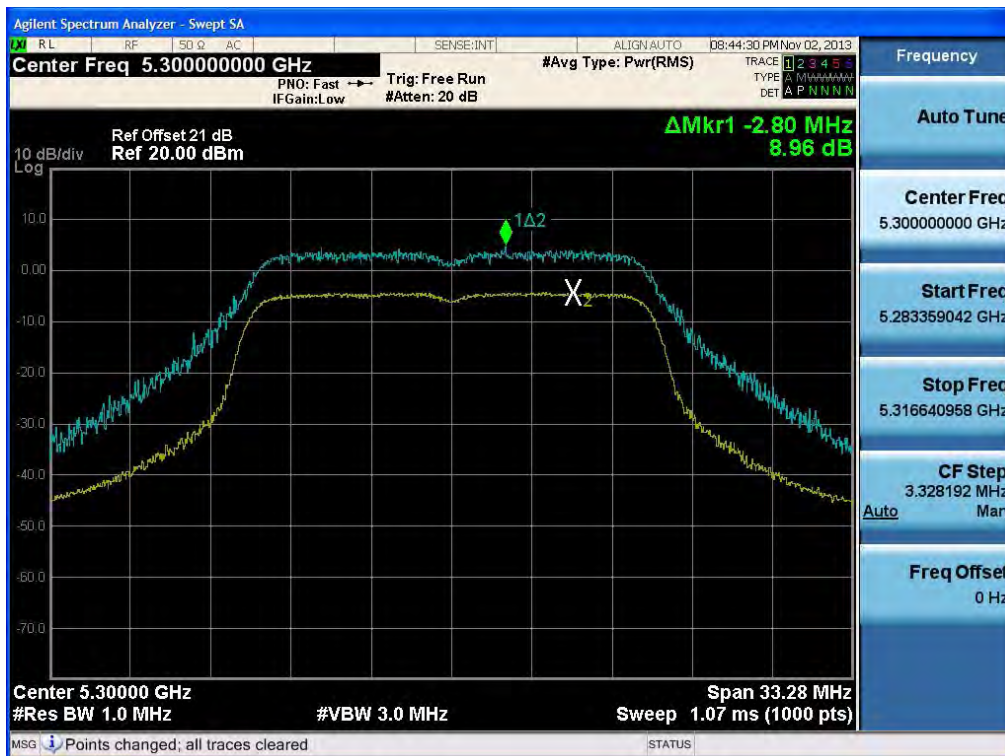
RESULT PLOTS

20 MHz BW

Peak Excursion Ratio (802.11a-CH 52)

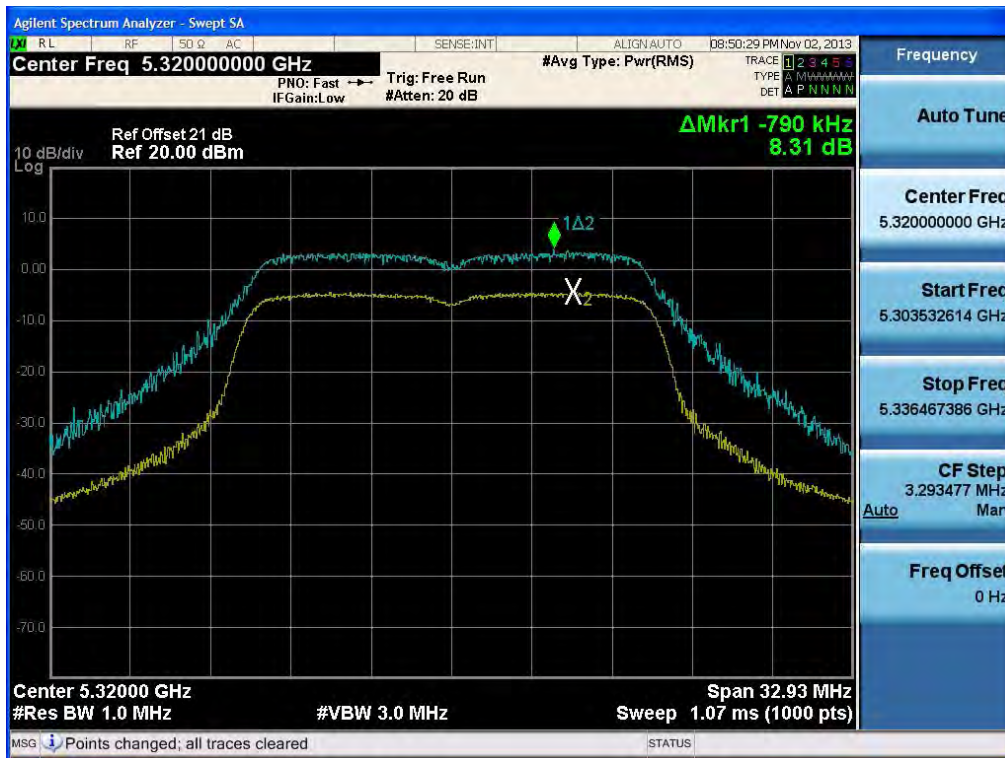


Peak Excursion Ratio (802.11a-CH 60)

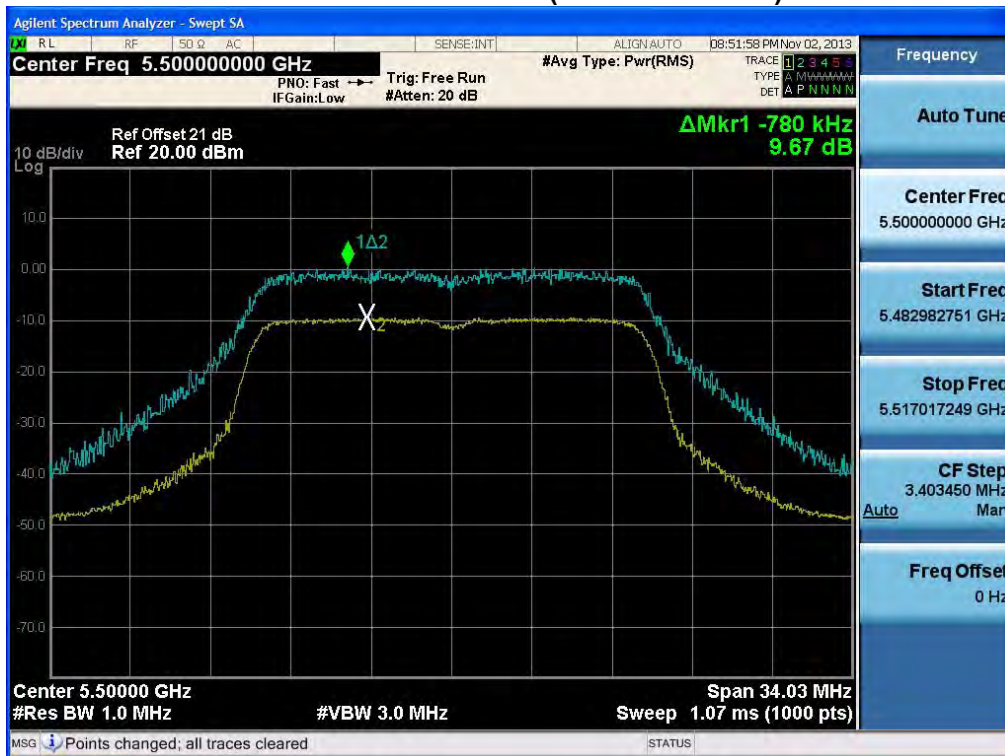


FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR02	Date of Issue: November 04, 2013	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

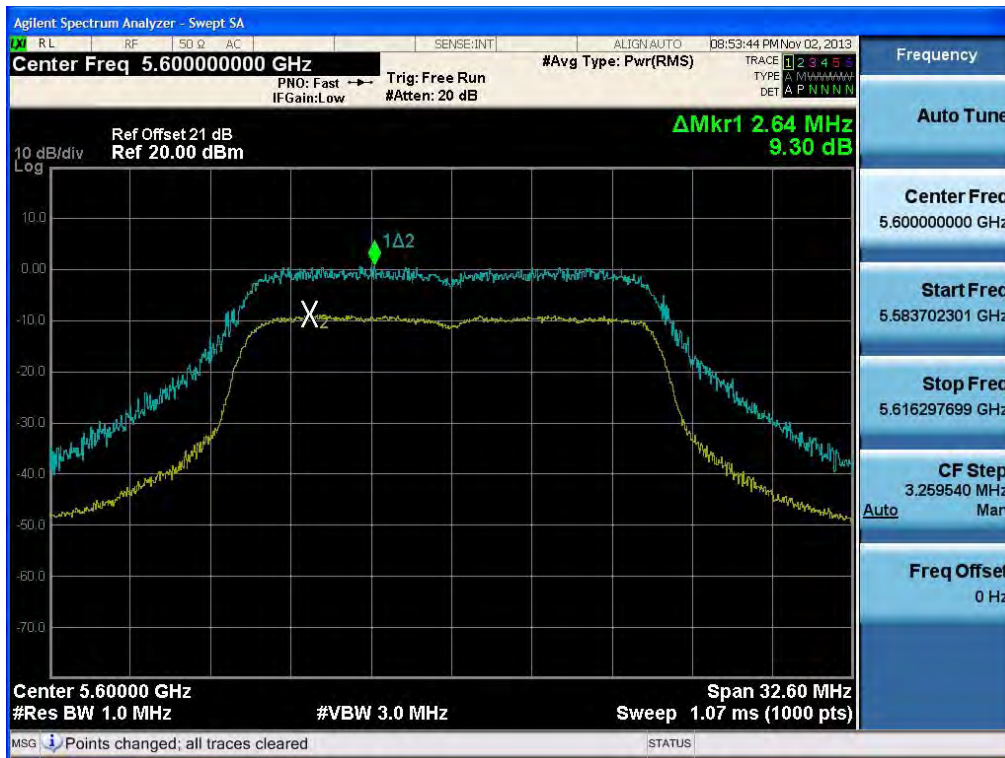
Peak Excursion Ratio (802.11a-CH 64)



Peak Excursion Ratio (802.11a-CH 100)



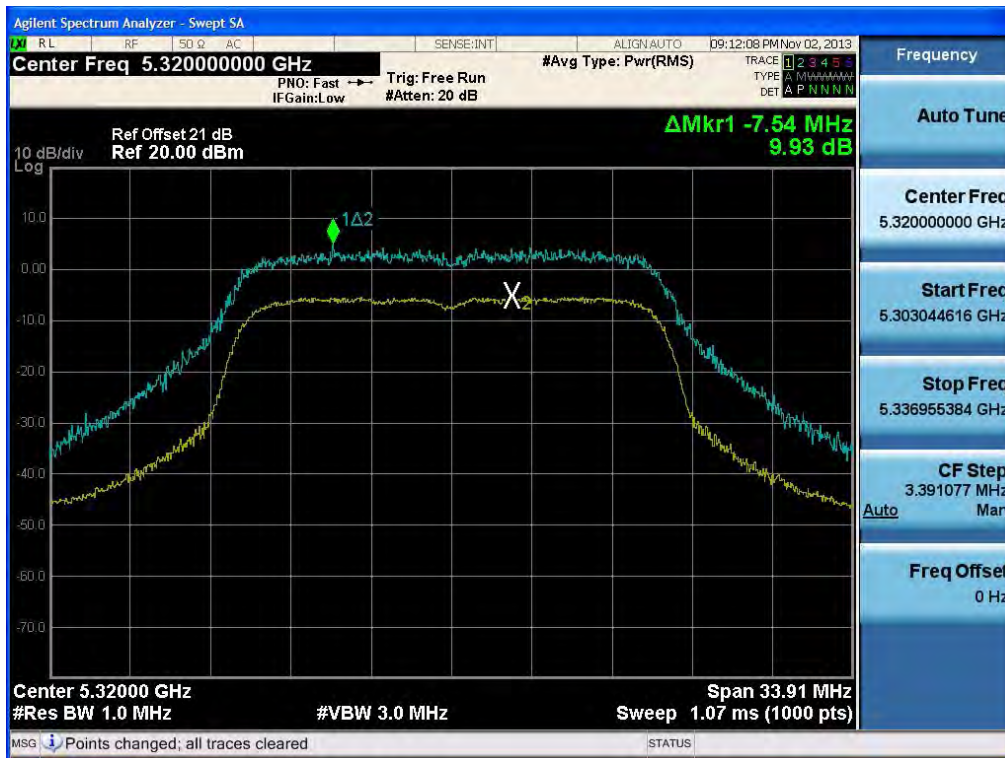
Peak Excursion Ratio (802.11a-CH 120)



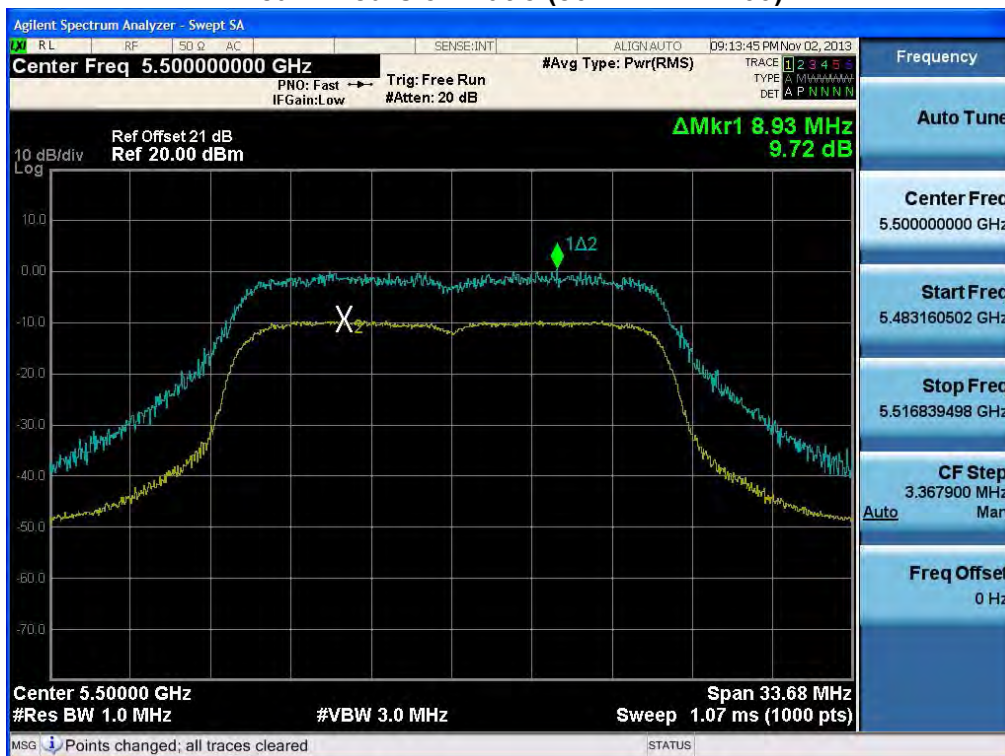
Peak Excursion Ratio (802.11a-CH 140)



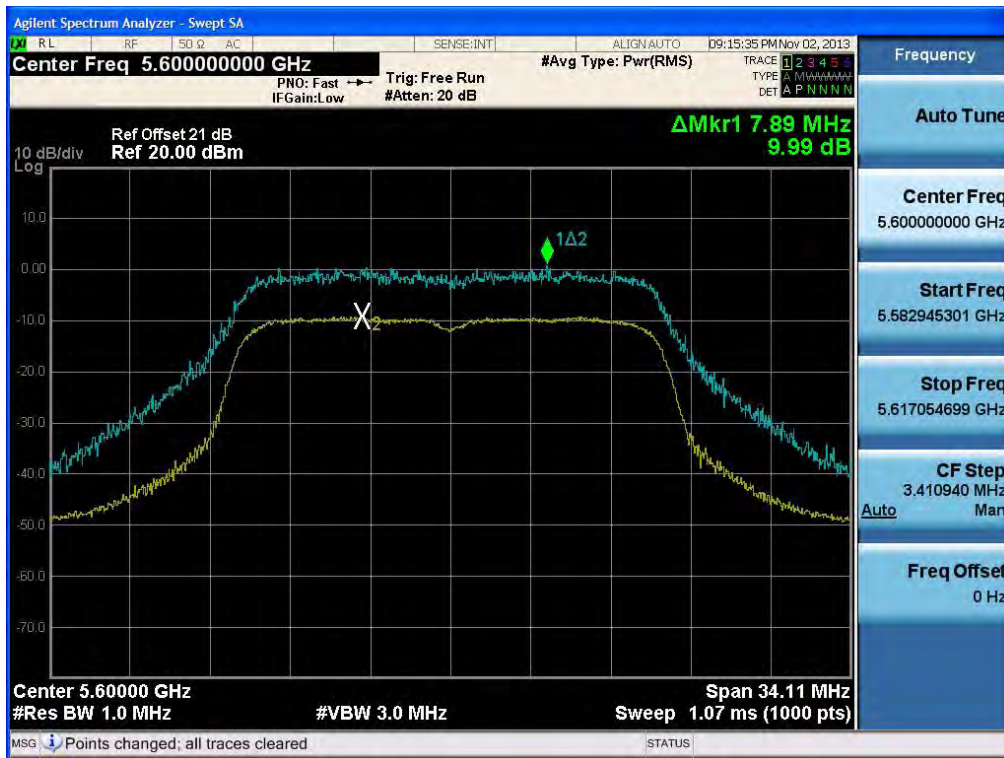
Peak Excursion Ratio (802.11n-CH 64)



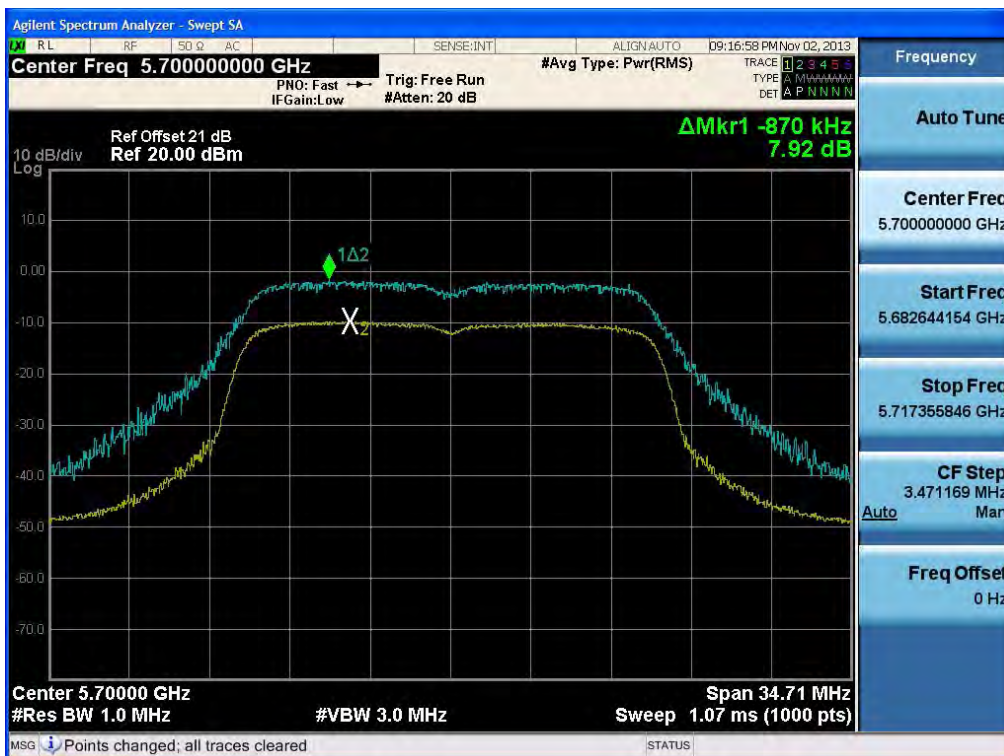
Peak Excursion Ratio (802.11n-CH 100)



Peak Excursion Ratio (802.11n-CH 120)



Peak Excursion Ratio (802.11n-CH 140)

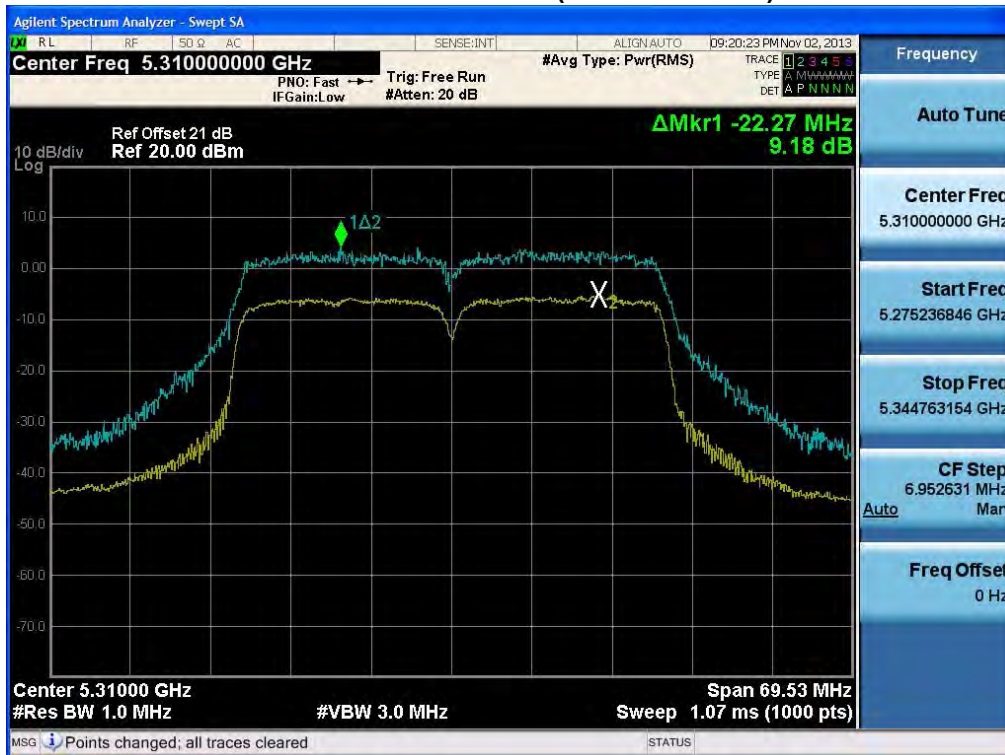


40MHz BW

Peak Excursion Ratio (802.11n-CH 54)



Peak Excursion Ratio (802.11n-CH 62)

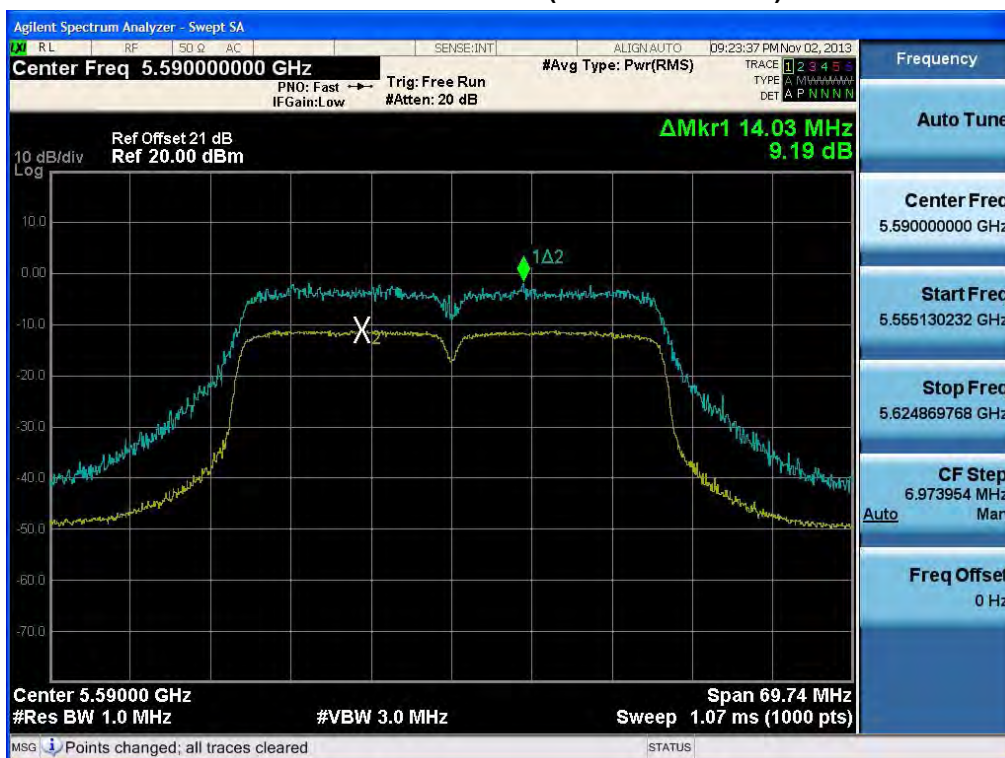


FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR02	Date of Issue: November 04, 2013	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

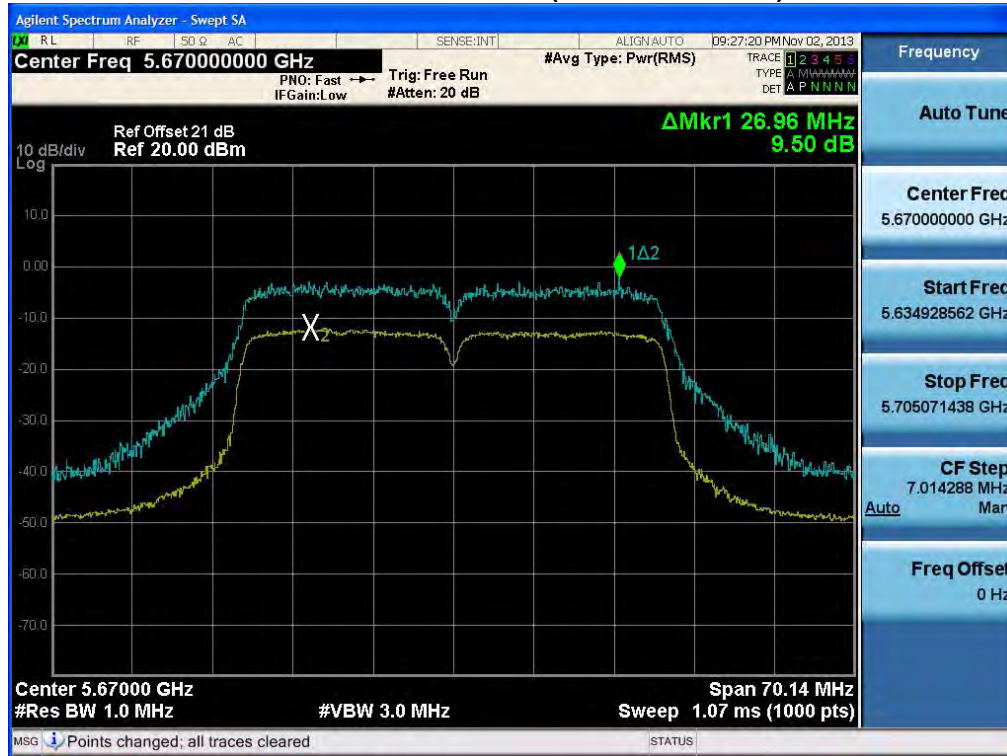
Peak Excursion Ratio (802.11n-CH 102)



Peak Excursion Ratio (802.11n-CH 118)



Peak Excursion Ratio (802.11n-CH 134)



FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR02	Date of Issue: November 04, 2013	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

Service Port Ant.2

RESULT PLOTS

20 MHz BW

Peak Excursion Ratio (802.11a-CH 52)



Peak Excursion Ratio (802.11a-CH 60)



FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR02	Date of Issue: November 04, 2013	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

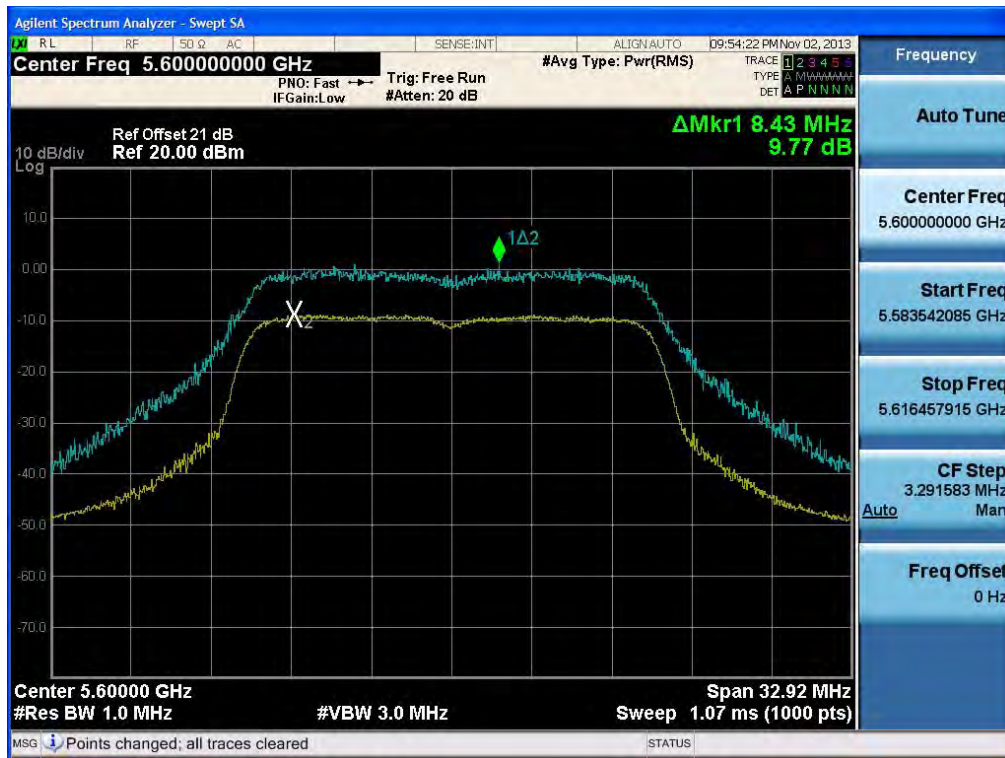
Peak Excursion Ratio (802.11a-CH 64)



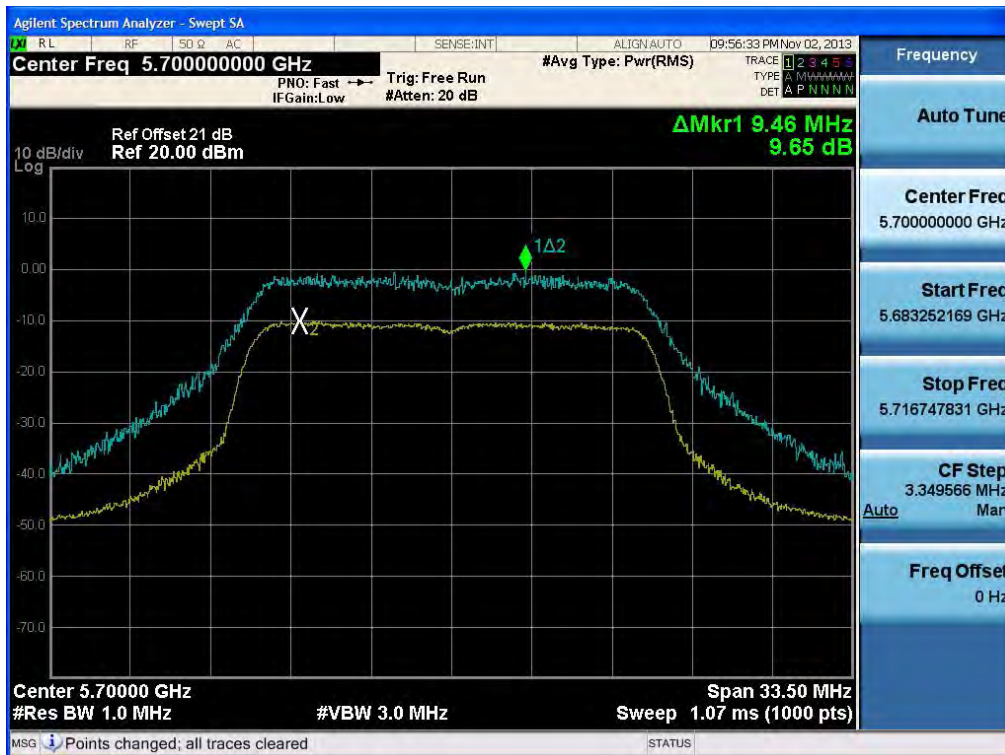
Peak Excursion Ratio (802.11a-CH 100)



Peak Excursion Ratio (802.11a-CH 120)



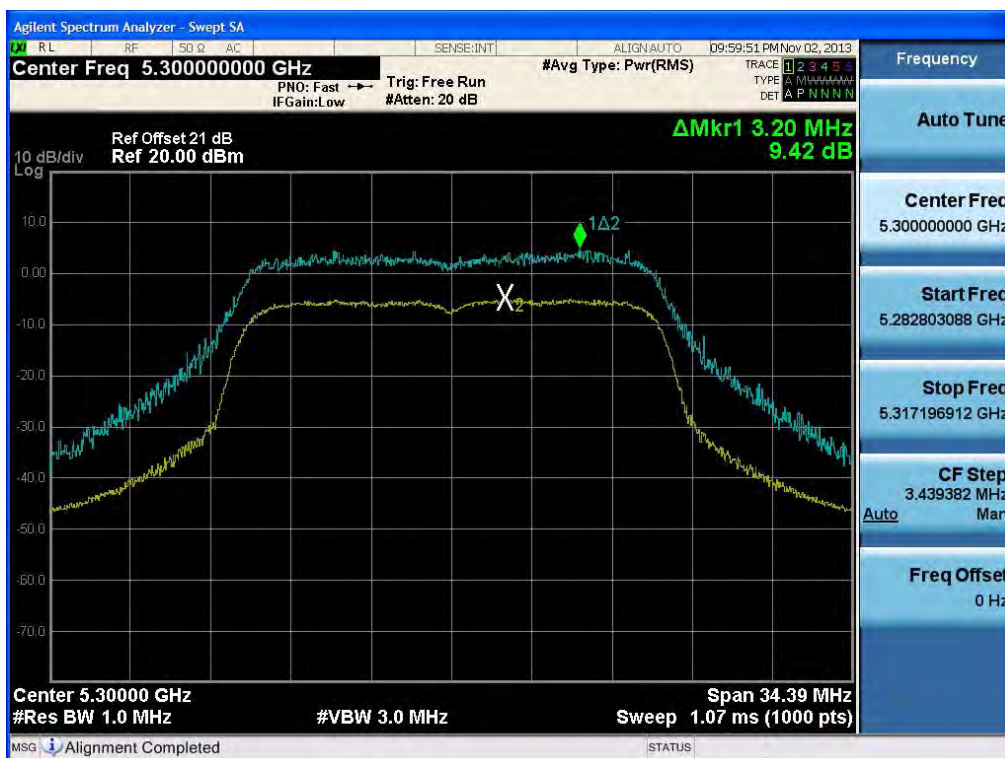
Peak Excursion Ratio (802.11a-CH 140)



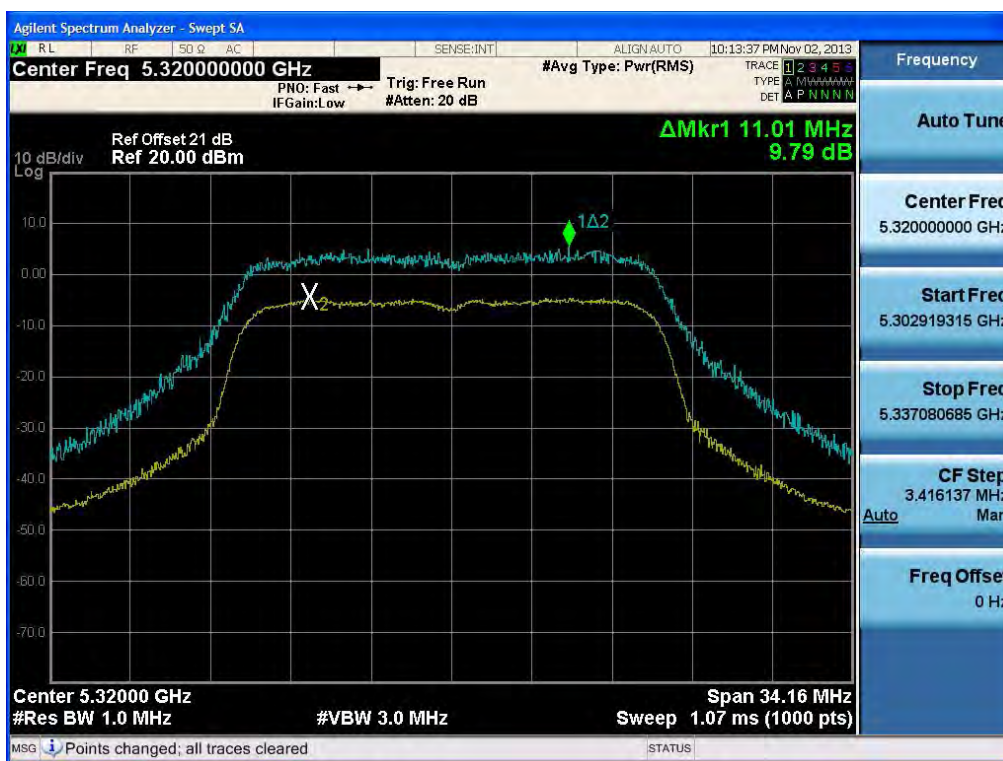
Peak Excursion Ratio (802.11n-CH 52)



Peak Excursion Ratio (802.11n-CH 60)



Peak Excursion Ratio (802.11n-CH 64)

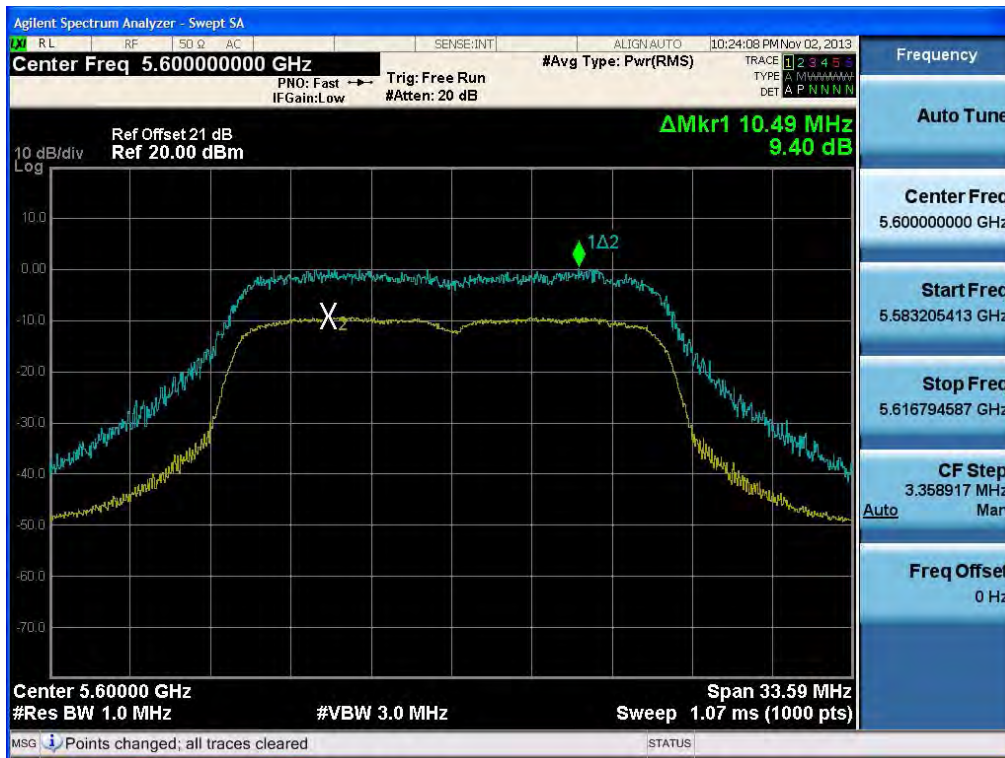


Peak Excursion Ratio (802.11n-CH 100)

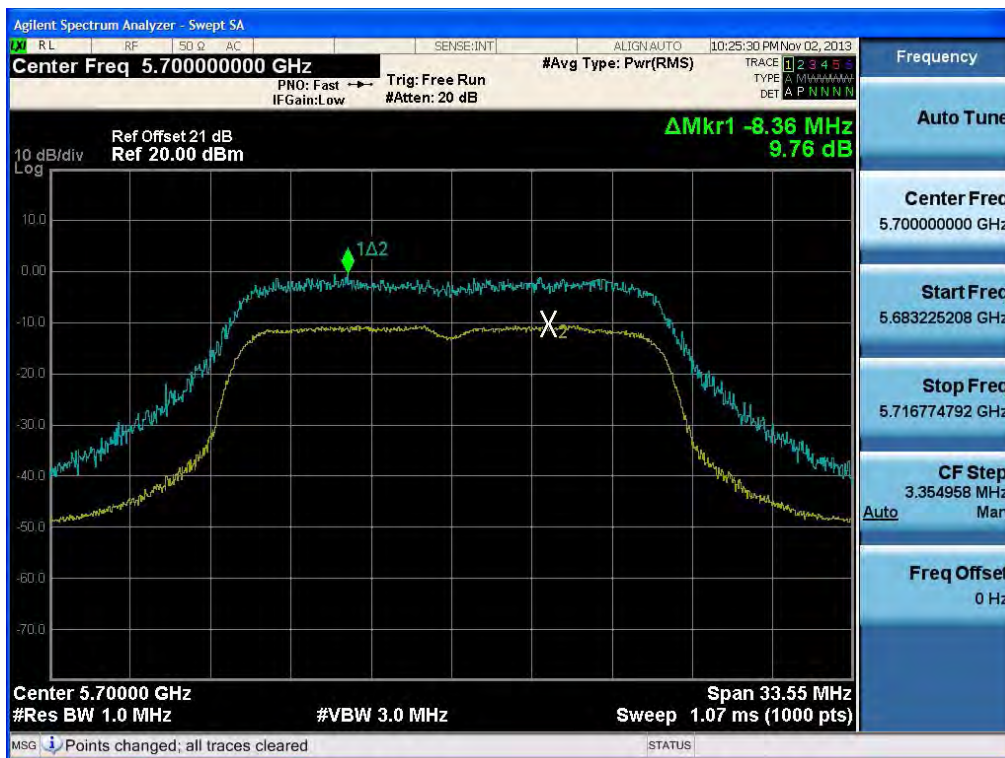


FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR02	Date of Issue: November 04, 2013	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

Peak Excursion Ratio (802.11n-CH 120)

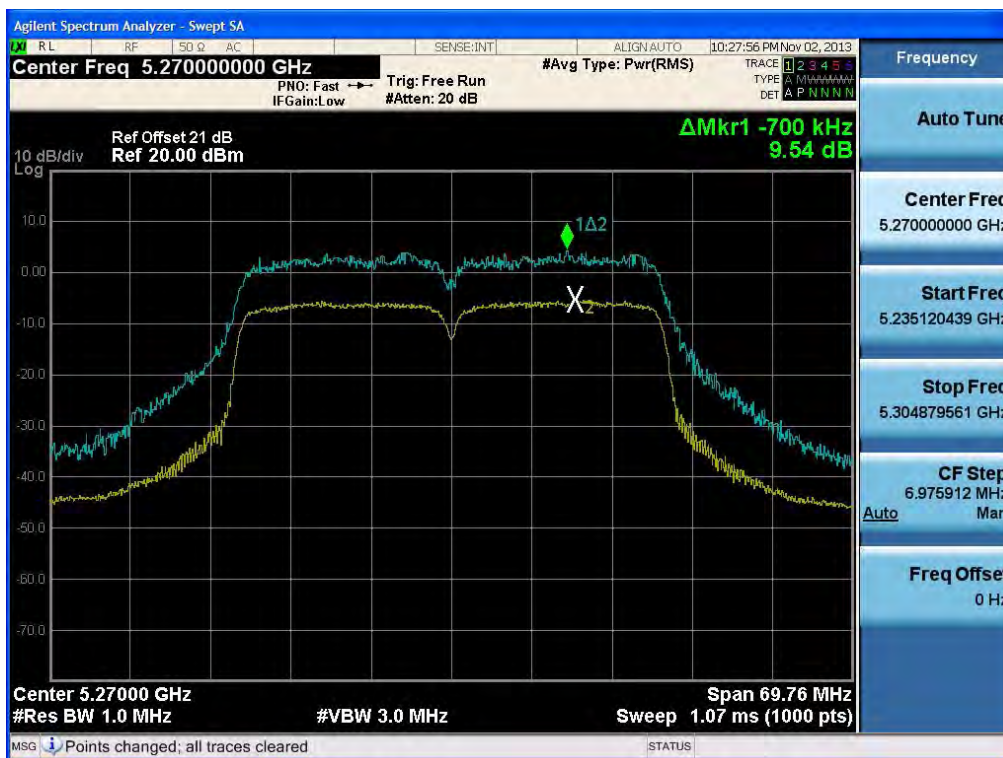


Peak Excursion Ratio (802.11n-CH 140)

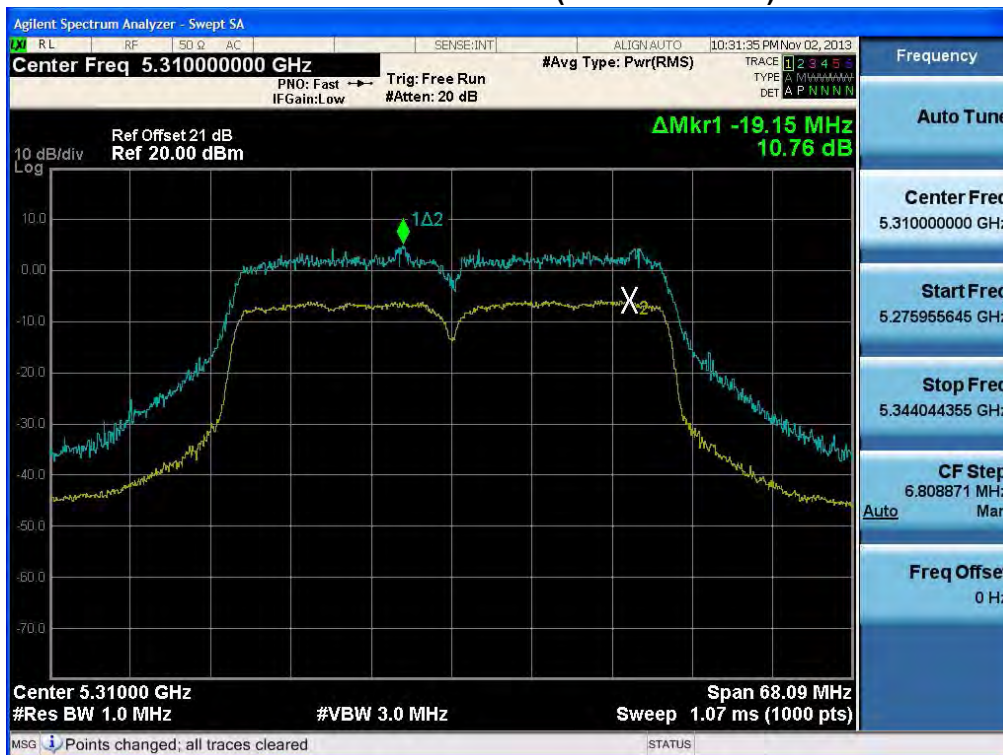


40MHz BW

Peak Excursion Ratio (802.11n-CH 54)

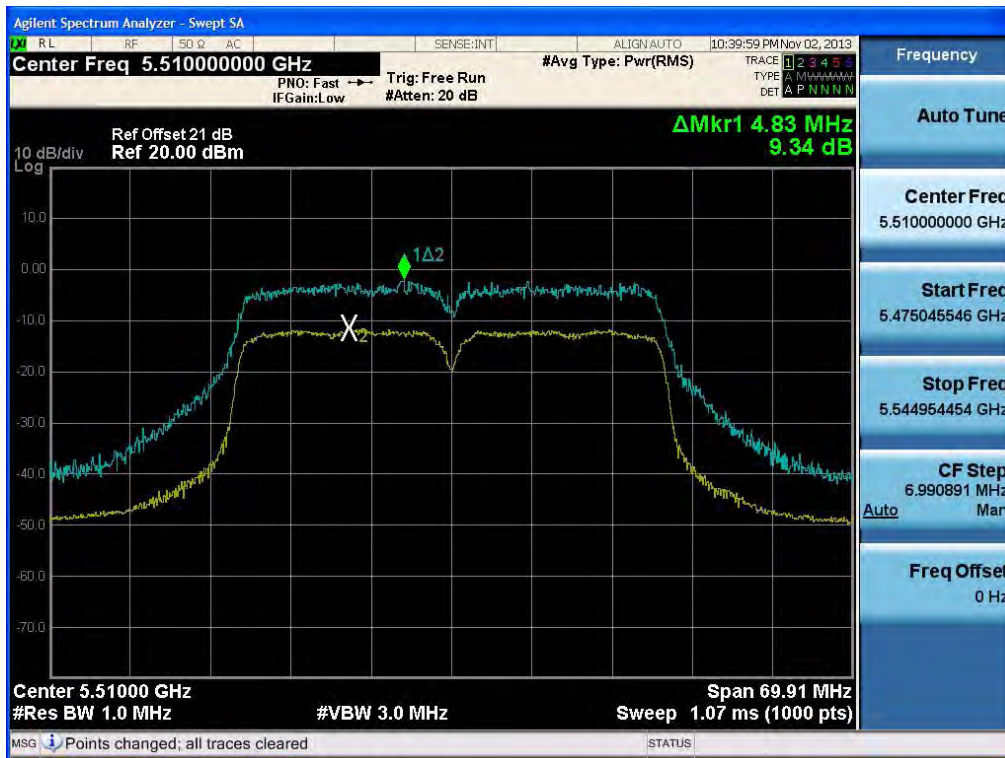


Peak Excursion Ratio (802.11n-CH 62)

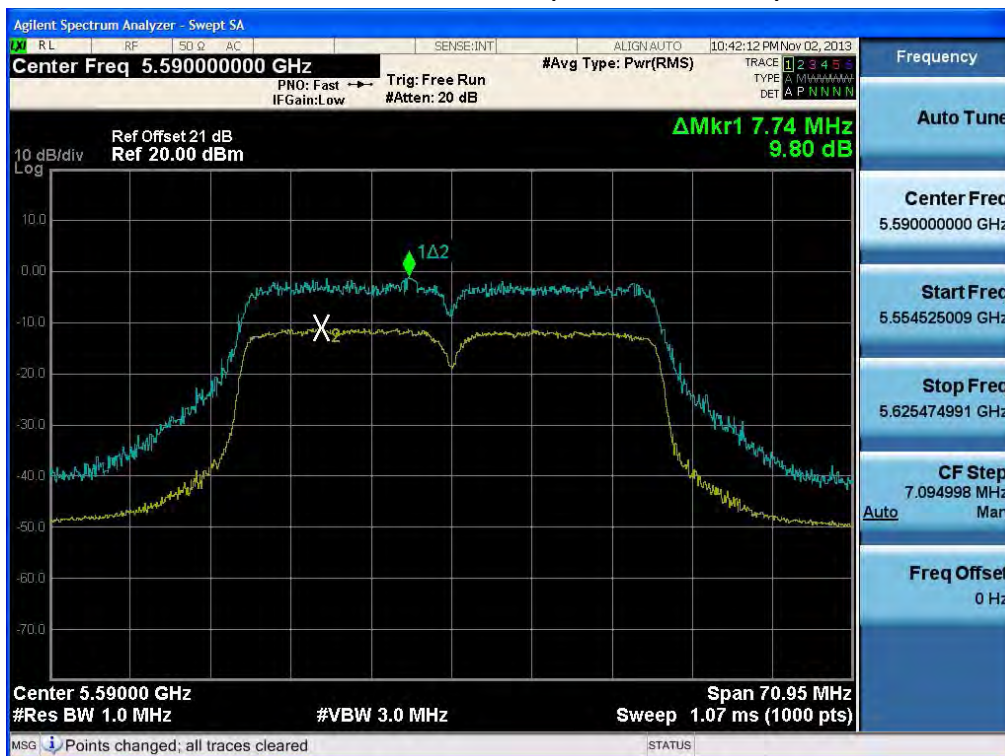


FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR02	Date of Issue: November 04, 2013	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

Peak Excursion Ratio (802.11n-CH 102)



Peak Excursion Ratio (802.11n-CH 118)



Peak Excursion Ratio (802.11n-CH 134)



FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR02	Date of Issue: November 04, 2013	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

Service Port Ant.3

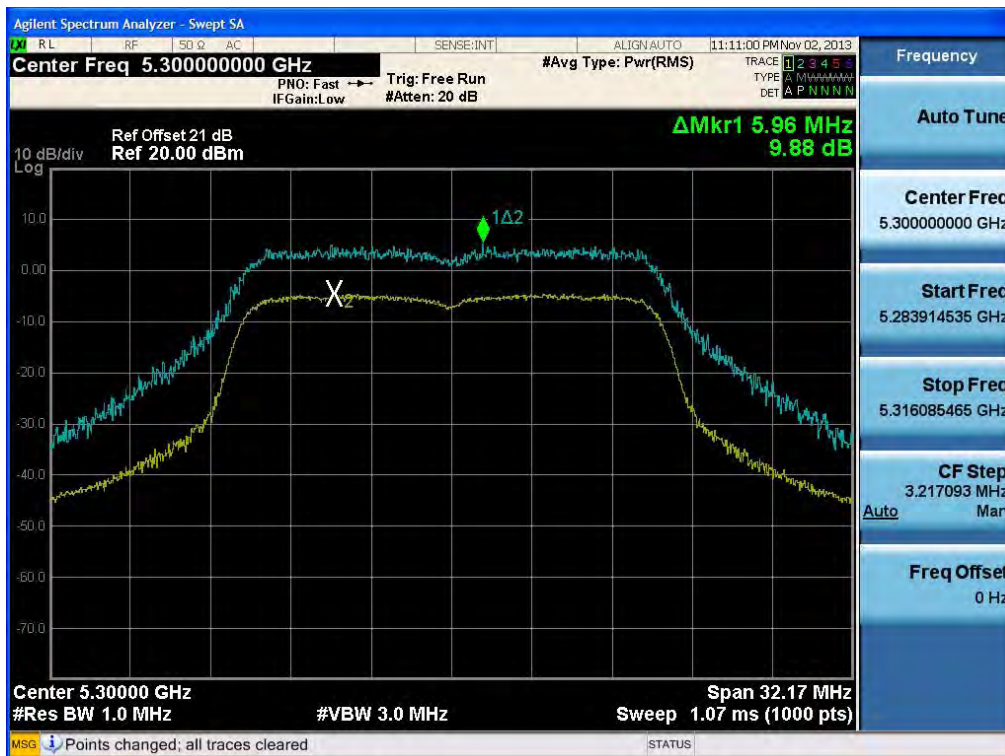
RESULT PLOTS

20 MHz BW

Peak Excursion Ratio (802.11a-CH 52)



Peak Excursion Ratio (802.11a-CH 60)



FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR02	Date of Issue: November 04, 2013	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

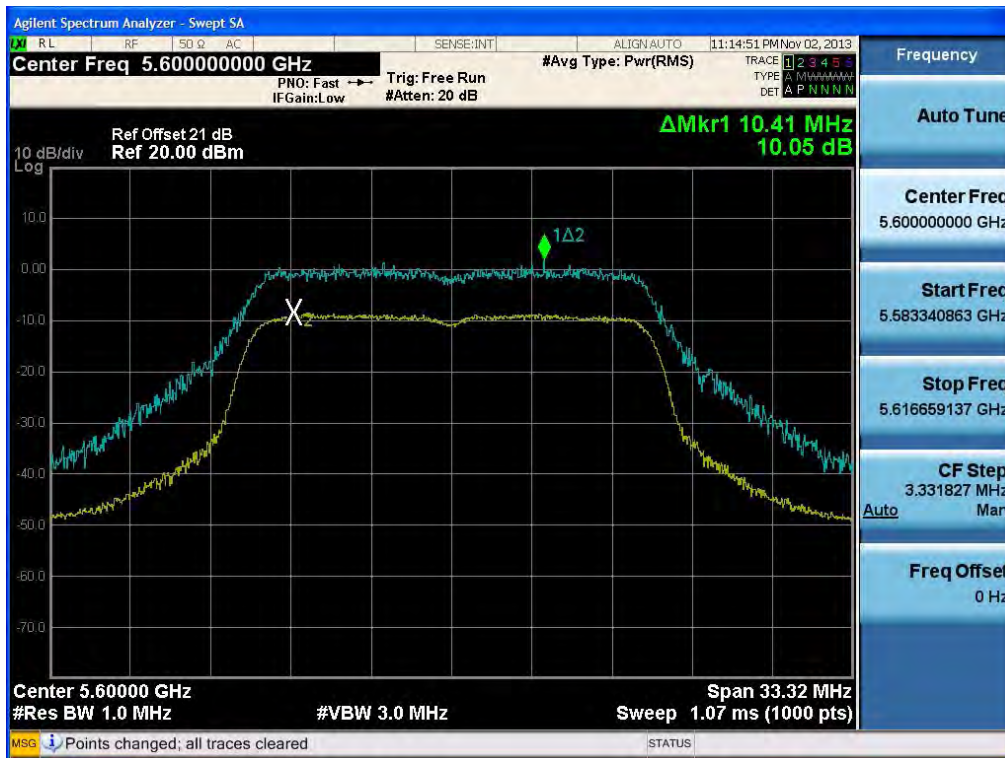
Peak Excursion Ratio (802.11a-CH 64)



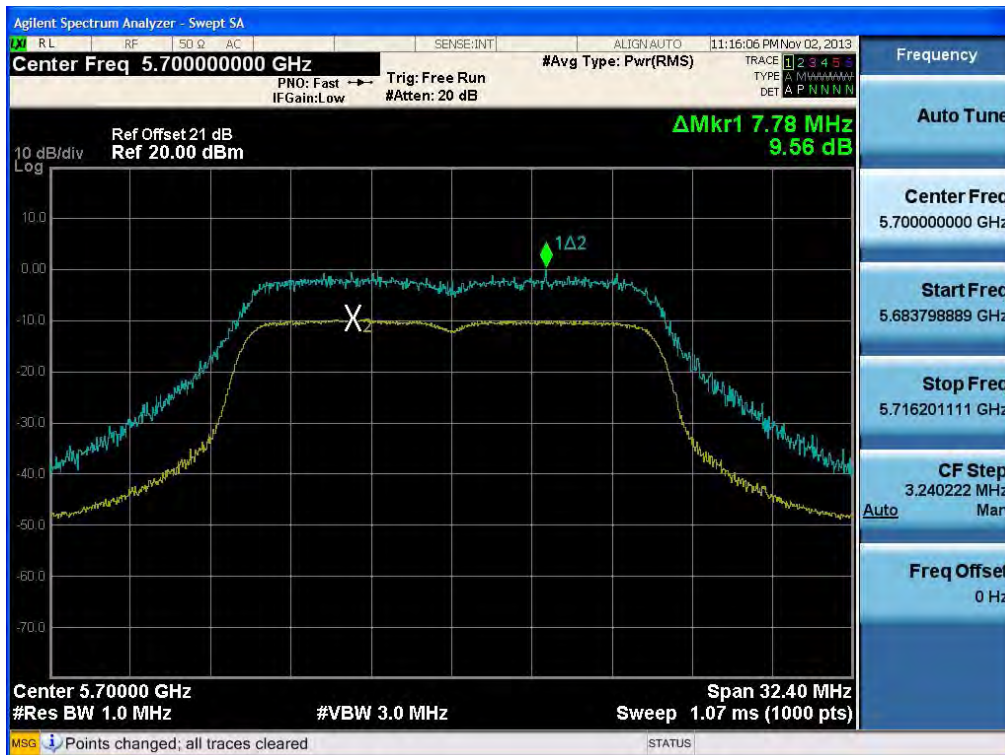
Peak Excursion Ratio (802.11a-CH 100)



Peak Excursion Ratio (802.11a-CH 120)



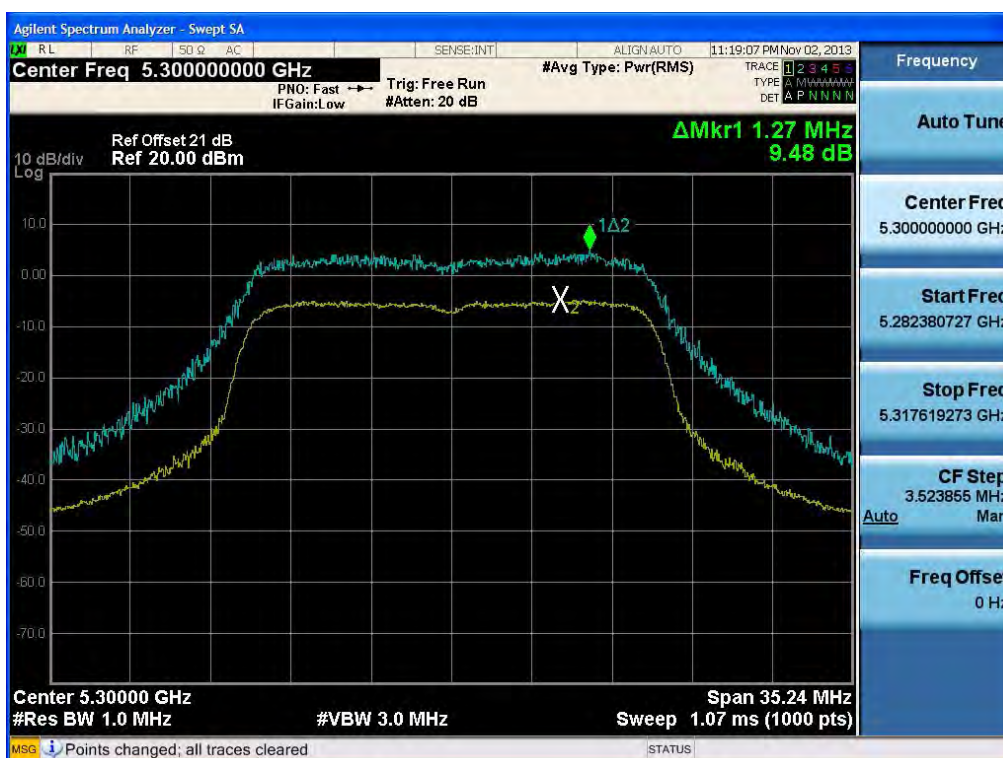
Peak Excursion Ratio (802.11a-CH 140)



Peak Excursion Ratio (802.11n-CH 52)



Peak Excursion Ratio (802.11n-CH 60)



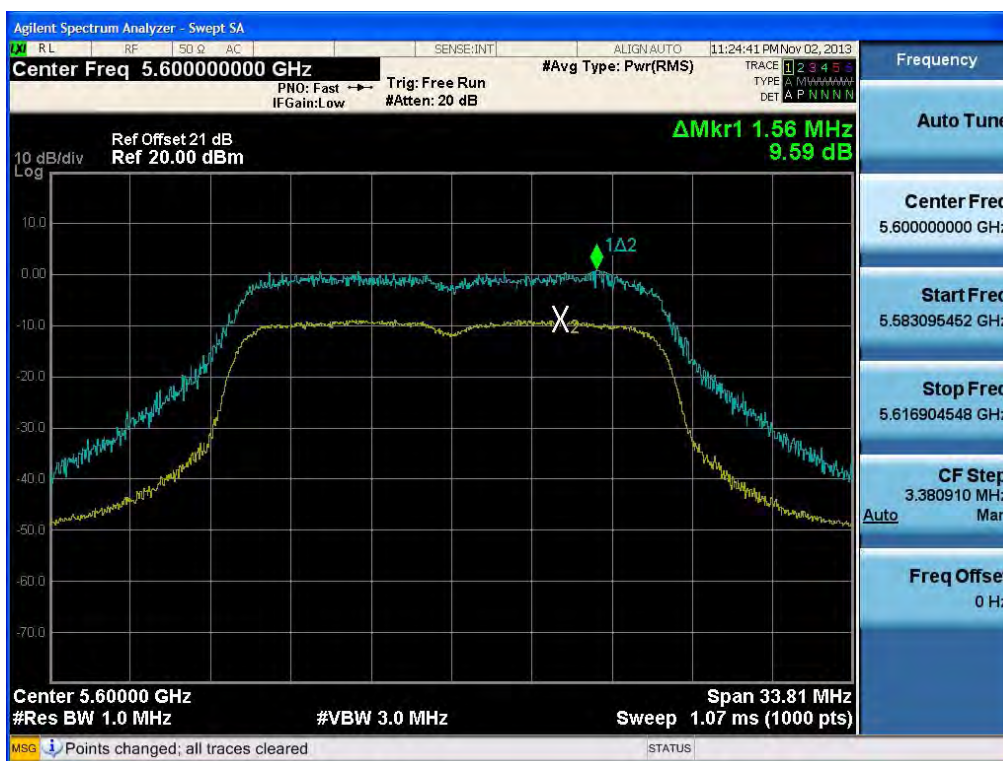
Peak Excursion Ratio (802.11n-CH 64)



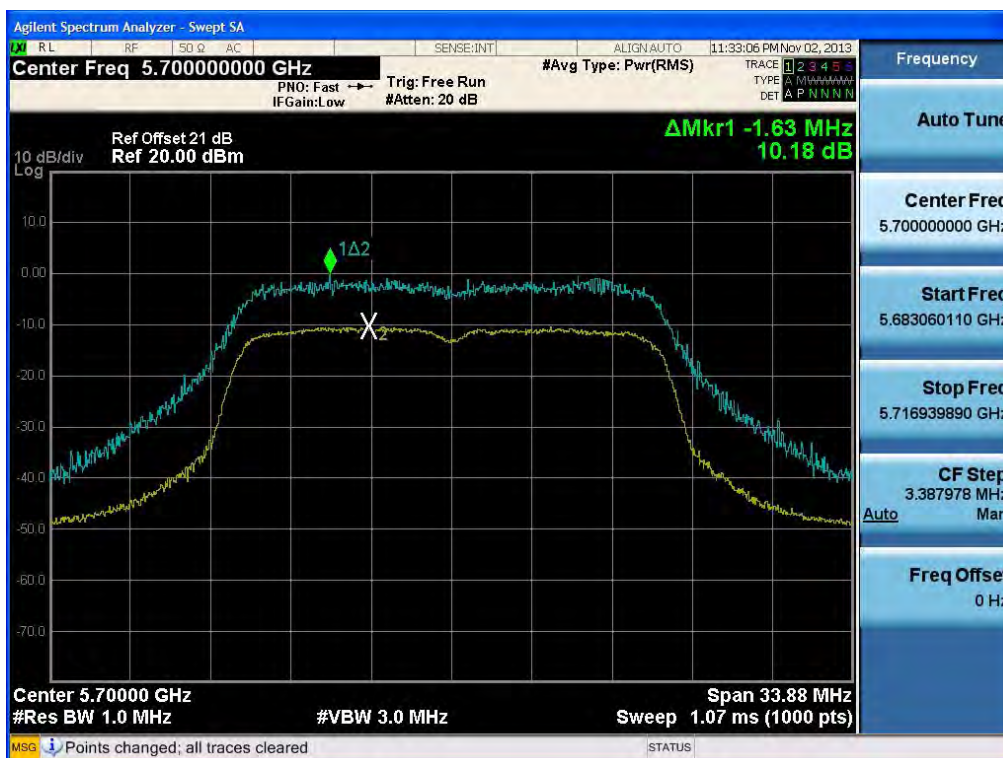
Peak Excursion Ratio (802.11n-CH 100)



Peak Excursion Ratio (802.11n-CH 120)



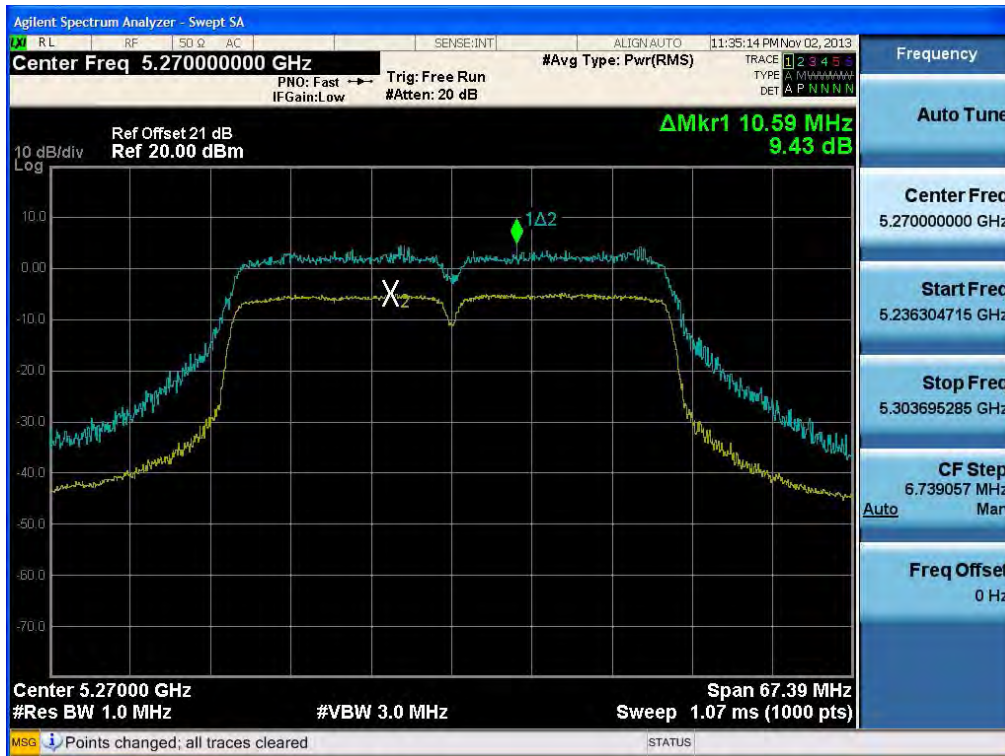
Peak Excursion Ratio (802.11n-CH 140)



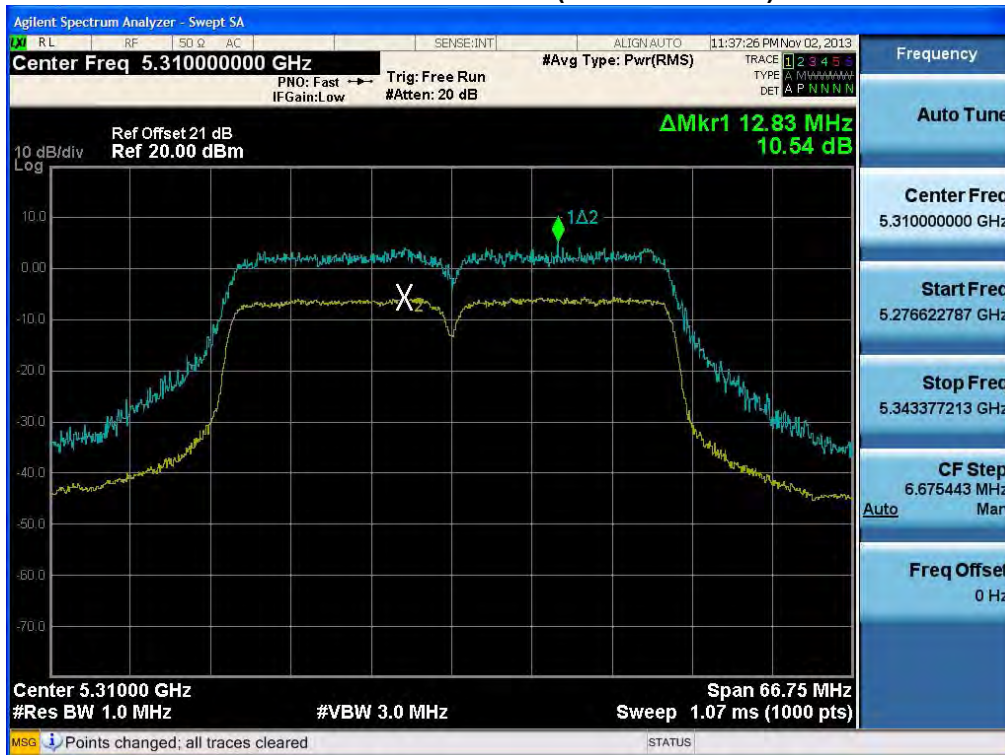
FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR02	Date of Issue: November 04, 2013	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

40MHz BW

Peak Excursion Ratio (802.11n-CH 54)

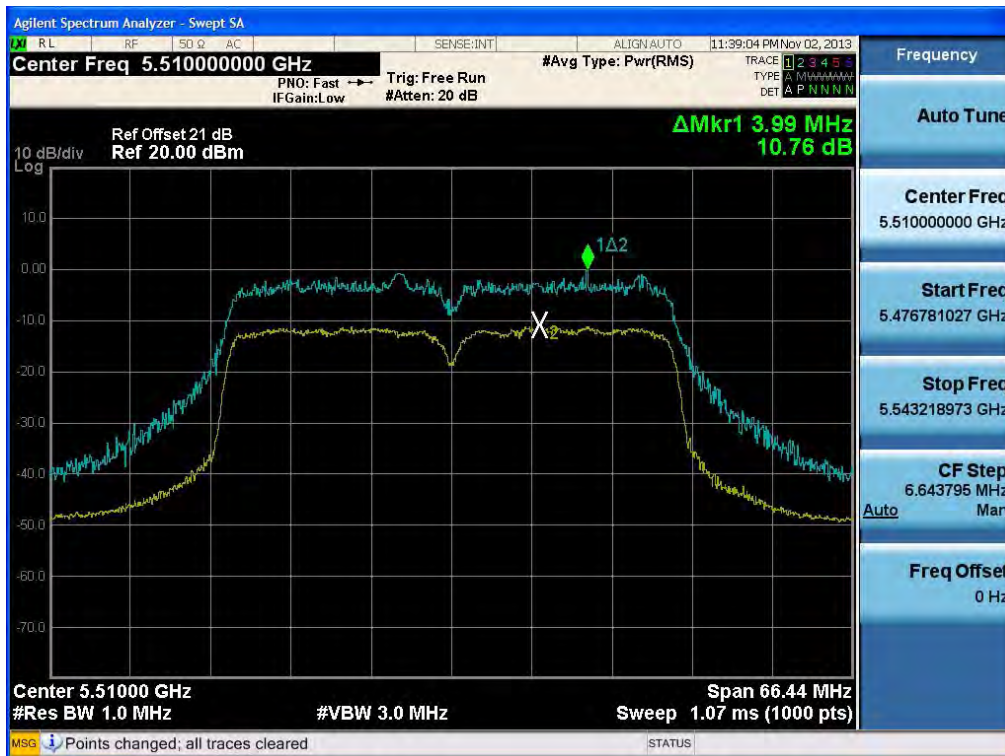


Peak Excursion Ratio (802.11n-CH 62)



FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR02	Date of Issue: November 04, 2013	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

Peak Excursion Ratio (802.11n-CH 102)

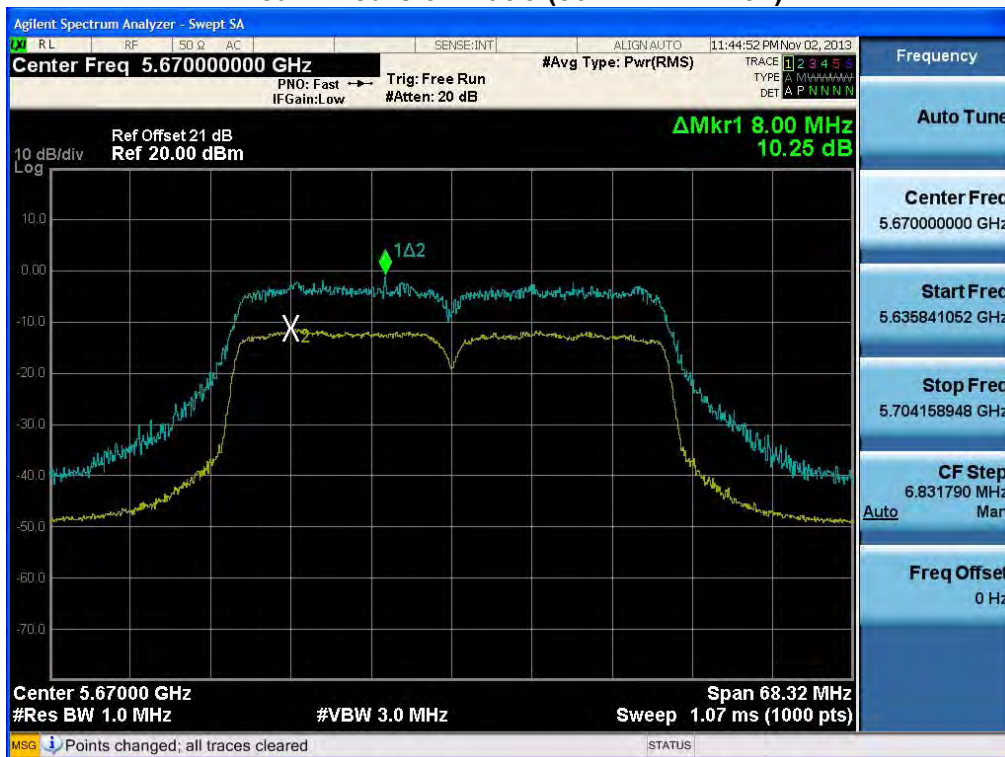


Peak Excursion Ratio (802.11n-CH 118)



FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR02	Date of Issue: November 04, 2013	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

Peak Excursion Ratio (802.11n-CH 134)



FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR02	Date of Issue: November 04, 2013	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

9.6 FREQUENCY STABILITY.

The EUT was placed inside an environmental chamber as the temperature in the chamber was varied between -30 °C and 50 °C. The temperature was incremented by 10 °C 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.

Service Port

OPERATING BAND:	UNII Band 2
OPERATING FREQUENCY:	5,260,000,000 Hz
CHANNEL:	52
REFERENCE VOLTAGE:	220 VAC

Voltage (%)	Power (VAC)	Temp. (°C)	Frequency (kHz)	Frequency Error (kHz)
100	220	+20(Ref)	5 260 018	18.0
100		-30	5 260 009	9.1
100		-20	5 260 007	7.4
100		-10	5 260 007	6.9
100		0	5 260 006	5.8
100		+10	5 260 014	14.1
100		+30	5 260 016	16.3
100		+40	5 260 015	15.0
100		+50	5 260 010	10.4
115	253	+20	5 260 017	17.2
85	187	+20	5 260 017	17.1

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 error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 2e
OPERATING FREQUENCY:	5,500,000,000 Hz
CHANNEL:	100
REFERENCE VOLTAGE:	220 VAC

Voltage (%)	Power (VAC)	Temp. (°C)	Frequency (kHz)	Frequency Error (kHz)
100	220	+20(Ref)	5 500 020	20.2
100		-30	5 500 009	8.9
100		-20	5 500 008	7.7
100		-10	5 500 008	8.0
100		0	5 500 004	4.4
100		+10	5 500 019	18.9
100		+30	5 500 013	13.1
100		+40	5 500 014	14.2
100		+50	5 500 016	16.3
115	253	+20	5 500 019	18.8
85	187	+20	5 500 019	19.3

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 error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

Monitoring Port

OPERATING BAND: UNII Band 2

OPERATING FREQUENCY: 5,260,000,000 Hz

CHANNEL: 52

REFERENCE VOLTAGE: AC 220 V

Voltage (%)	Power (VAC)	Temp. (°C)	Frequency (kHz)	Frequency Error (kHz)
100	220	+20(Ref)	5 259 973	-26.6
100		-30	5 259 983	-16.5
100		-20	5 259 982	-18.3
100		-10	5 259 981	-19.1
100		0	5 259 977	-22.6
100		+10	5 259 975	-24.9
100		+30	5 259 974	-26.2
100		+40	5 259 978	-22.7
100		+50	5 259 978	-22.1
115	253	+20	5 259 975	-25.3
85	187	+20	5 259 976	-23.6

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 error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 2e
OPERATING FREQUENCY:	5,500,000,000 Hz
CHANNEL:	100
REFERENCE VOLTAGE:	AC 220 V

Voltage (%)	Power (VAC)	Temp. (°C)	Frequency (kHz)	Frequency Error (kHz)
100	220	+20(Ref)	5 499 974	-25.9
100		-30	5 499 985	-15.4
100		-20	5 499 984	-16.0
100		-10	5 499 983	-17.4
100		0	5 499 979	-20.6
100		+10	5 499 977	-23.1
100		+30	5 499 977	-22.6
100		+40	5 499 975	-25.4
100		+50	5 499 978	-22.3
115	253	+20	5 499 976	-23.5
85	187	+20	5 499 975	-25.2

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 error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

9.7 RADIATED MEASUREMENT.

9.7.1 RADIATED SPURIOUS EMISSIONS.

Test Requirements and limit, §15.205, §15.209, §15.407

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

■ §15.407, KDB 789033

All harmonics that do not lie in a restricted band are subject to a peak limit of -27 dBm/MHz. At a distance of 3 meters the field strength limit in dBµV/m can be determined by adding a “conversion” factor of 95.2 dB to the EIRP limit of -27 dBm/MHz to obtain the limit for out of band spurious emissions of 68.2 dBµV/m.

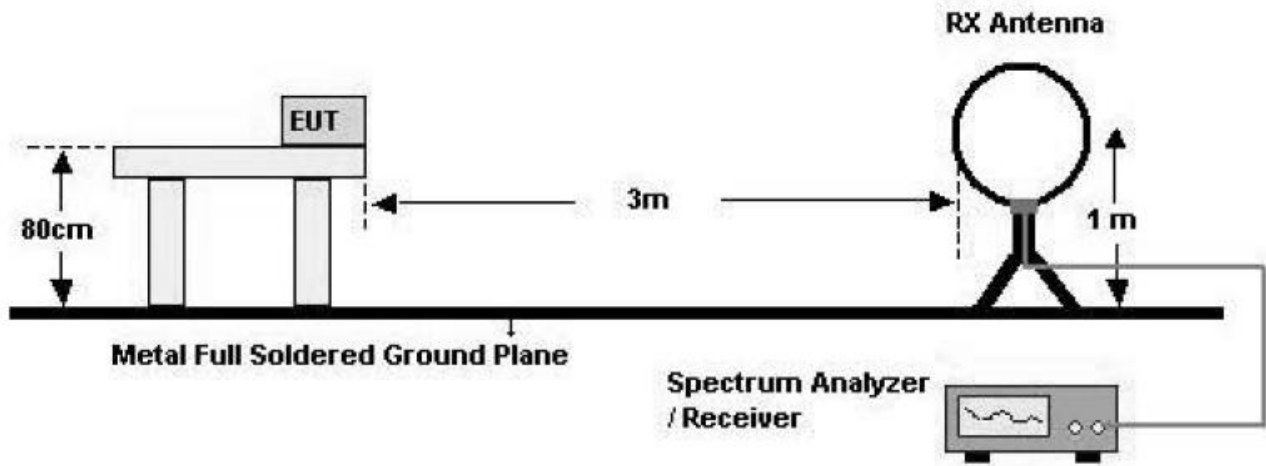
■ Test case

Monitoring	SISO	Ant 1
		Ant 2
Service	SISO	Ant 1 & 2
		Ant 1
		Ant 2
	MIMO	Ant 3
		Ant 1 & 2
		Ant 1 & 2 & 3

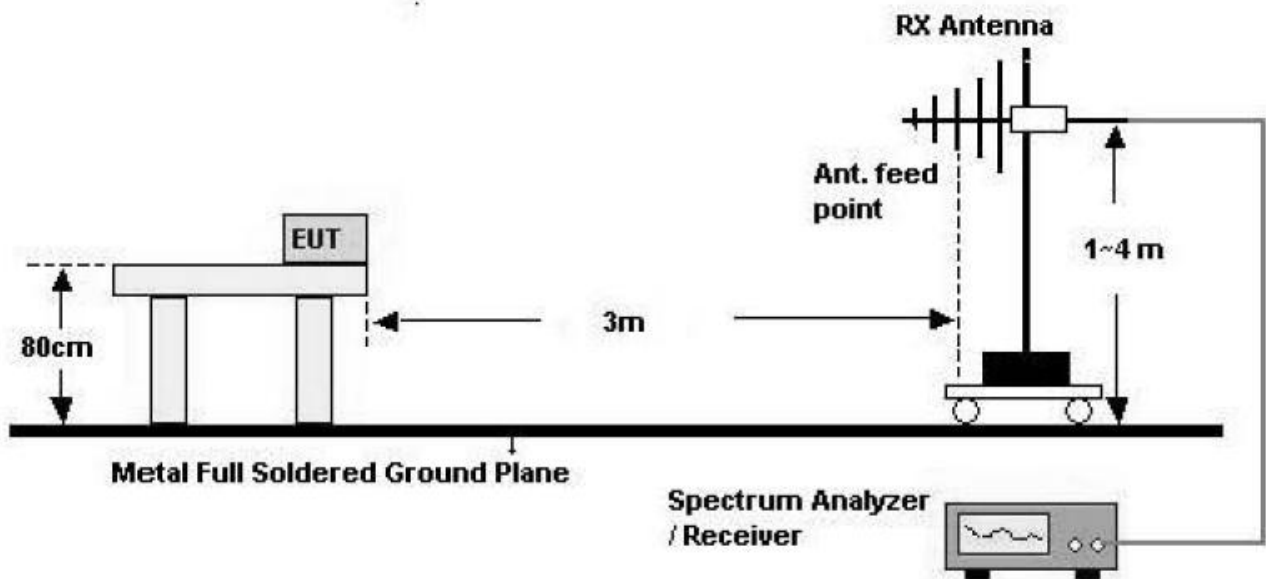
Note : We have done all test case. Worst case is Ant 1 & 2 for monitoring and Ant 1 & 2 & 3 for service. So, we attached the results of only worst case.

Test Configuration

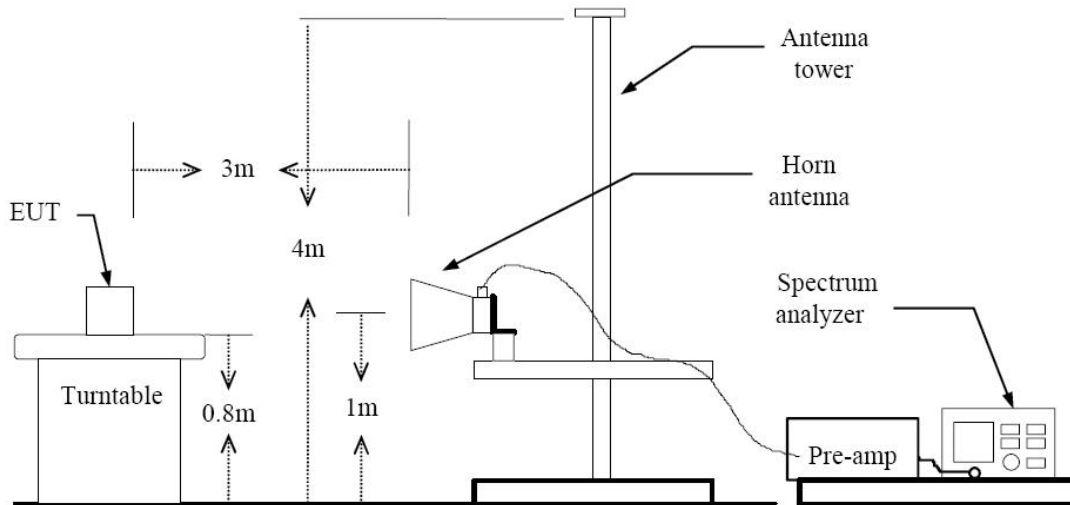
Below 30 MHz



30 MHz - 1 GHz



Above 1 GHz



TEST PROCEDURE USED

ANSI C63.4(2003)

Method H)5) in KDB 789033, issued 04/08/2013 (Peak)

Method H)6)d) in KDB 789033, issued 04/08/2013 (Average)

Spectrum setting:

- Peak.

1. RBW = 1 MHz

2. VBW $\geq$ 3 MHz

3. Detector = Peak

4. Sweep Time = auto

5. Trace mode = max hold

6. Allow sweeps to continue until the trace stabilizes.

7. Note that if the transmission is not continuous, the time required for the trace to stabilize will increase by a factor of approximately $1/x$, where x is the duty cycle.

- Average (Method VB :Averaging using reduced video bandwidth)

1. RBW = 1 MHz

2. VBW

2.1. If the EUT is configured to transmit with duty cycle $\geq$ 98 percent, set $VBW \leq RBW/100$ (i.e., 10 kHz) but not less than 10 Hz.

2.2. If the EUT duty cycle is $<$ 98 percent, set $VBW \geq 1/T$, where T is the minimum transmission duration.

3. The analyzer is set to linear detector mode.

4. Detector = Peak.

FCC PT.15.407 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1311FR02	Date of Issue: November 04, 2013	EUT Type: WLAN Access Point	FCC ID: A3LWEA303I

5. Sweep time = auto.
6. Trace mode = max hold.
7. Allow max hold to run for at least 50 traces if the transmitted signal is continuous or has at least 98 percent duty cycle. For lower duty cycles, increase the minimum number of traces by a factor of 1/x, where x is the duty cycle.

Note :

1. We used the case 2 for 802.11a/n_20/n_40 to perform the average field strength measurements for RSE and radiated band edge test.
2. The actual setting value of VBW for 802.11a/n_20/n_40.

Monitoring

Mode	Worst Data rate (Mbps)	T _{on} (ms)	T _{total} (ms)	Duty Cycle (%)	VBW(1/T) (Hz)	The actual setting value of VBW (Hz)
a	6	2.020	2.070	97.6	495.0	1000
n_20	6.5	1.885	1.930	97.7	530.5	1000
n_40	13.5	0.926	0.960	96.5	1079.9	3000

Service

Mode	Worst Data rate (Mbps)	T _{on} (ms)	T _{total} (ms)	Duty Cycle (%)	VBW(1/T) (Hz)	The actual setting value of VBW (Hz)
a	6	1.335	1.405	95.0	749.1	1000
n_20	6.5	1.269	1.317	96.4	788.0	1000
n_40	13.5	0.630	0.664	94.9	1587.3	3000

TEST RESULTS

9 kHz – 30MHz

Operation Mode: Normal Mode

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dB μ V	dB /m	dB	(H/V)	dB μ V/m	dB μ V/m	dB
No Critical peaks found							

Notes:

1. Measuring frequencies from 9 kHz to the 30MHz.
2. The reading of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.
3. Distance extrapolation factor = 40 log (specific distance / test distance) (dB)
4. Limit line = specific Limits (dBuV) + Distance extrapolation factor
5. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

TEST RESULTS

Below 1 GHz

Operation Mode: Normal Mode

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dB μ V	dB /m	dB	(H/V)	dB μ V/m	dB μ V/m	dB
No Critical peaks found							

Notes:

1. Measuring frequencies from 30 MHz to the 1 GHz.
2. Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Quasi peak detector mode.
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Above 1 GHz

Monitoring MIMO(Ant 1 & 2)

Band :	UNII 2
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5260 MHz
Channel No.	52 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10520	39.54	10.38	V	49.92	68.20	18.28	PK
15780	46.08	14.38	V	60.46	73.98	13.52	PK
15780	32.09	14.38	V	46.47	53.98	7.51	AV
10520	40.18	10.38	H	50.56	68.20	17.64	PK
15780	46.47	14.38	H	60.85	73.98	13.13	PK
15780	32.33	14.38	H	46.71	53.98	7.27	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5300 MHz
Channel No.	60 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10600	42.01	10.39	V	52.40	73.98	21.58	PK
10600	28.05	10.39	V	38.44	53.98	15.54	AV
15900	46.88	14.00	V	60.88	73.98	13.10	PK
15900	32.31	14.00	V	46.31	53.98	7.67	AV
10600	40.97	10.39	H	51.36	73.98	22.62	PK
10600	26.88	10.39	H	37.27	53.98	16.71	AV
15900	45.88	14.00	H	59.88	73.98	14.10	PK
15900	32.40	14.00	H	46.40	53.98	7.58	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10640	40.89	10.50	V	51.39	73.98	22.59	PK
10640	27.55	10.50	V	38.05	53.98	15.93	AV
15960	46.59	14.27	V	60.86	73.98	13.12	PK
15960	32.37	14.27	V	46.64	53.98	7.34	AV
10640	40.79	10.50	H	51.29	73.98	22.69	PK
10640	26.66	10.50	H	37.16	53.98	16.82	AV
15960	45.84	14.27	H	60.11	73.98	13.87	PK
15960	32.04	14.27	H	46.31	53.98	7.67	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5260 MHz
Channel No.	52 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10520	39.78	10.38	V	50.16	68.20	18.04	PK
15780	46.71	14.38	V	61.09	73.98	12.89	PK
15780	32.16	14.38	V	46.54	53.98	7.44	AV
10520	40.05	10.38	H	50.43	68.20	17.77	PK
15780	46.44	14.38	H	60.82	73.98	13.16	PK
15780	32.18	14.38	H	46.56	53.98	7.42	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n_20 MHz BW. Worst case is 6.5 Mbps in 802.11n_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5300 MHz
Channel No.	60 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10600	41.55	10.39	V	51.94	73.98	22.04	PK
10600	27.32	10.39	V	37.71	53.98	16.27	AV
15900	46.50	14.00	V	60.50	73.98	13.48	PK
15900	32.40	14.00	V	46.40	53.98	7.58	AV
10600	40.11	10.39	H	50.50	73.98	23.48	PK
10600	26.03	10.39	H	36.42	53.98	17.56	AV
15900	45.99	14.00	H	59.99	73.98	13.99	PK
15900	32.15	14.00	H	46.15	53.98	7.83	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n_20 MHz BW. Worst case is 6.5 Mbps in 802.11n_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10640	40.51	10.50	V	51.01	73.98	22.97	PK
10640	26.69	10.50	V	37.19	53.98	16.79	AV
15960	46.33	14.27	V	60.60	73.98	13.38	PK
15960	32.07	14.27	V	46.34	53.98	7.64	AV
10640	40.06	10.50	H	50.56	73.98	23.42	PK
10640	26.22	10.50	H	36.72	53.98	17.26	AV
15960	46.80	14.27	H	61.07	73.98	12.91	PK
15960	32.40	14.27	H	46.67	53.98	7.31	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n_20 MHz BW. Worst case is 6.5 Mbps in 802.11n_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5270 MHz
Channel No.	54 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10540	39.74	10.55	V	50.29	68.20	17.91	PK
15810	45.88	14.26	V	60.14	73.98	13.84	PK
15810	32.09	14.26	V	46.35	53.98	7.63	AV
10540	39.65	10.55	H	50.20	68.20	18.00	PK
15810	46.44	14.26	H	60.70	73.98	13.28	PK
15810	32.05	14.26	H	46.31	53.98	7.67	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n_40 MHz BW. Worst case is 13.5 Mbps in 802.11n_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5310 MHz
Channel No.	62 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10620	40.56	10.25	V	50.81	73.98	23.17	PK
10620	25.98	10.25	V	36.23	53.98	17.75	AV
15930	45.80	13.62	V	59.42	73.98	14.56	PK
15930	32.18	13.62	V	45.80	53.98	8.18	AV
10620	39.77	10.25	H	50.02	73.98	23.96	PK
10620	25.87	10.25	H	36.12	53.98	17.86	AV
15930	45.61	13.62	H	59.23	73.98	14.75	PK
15930	32.21	13.62	H	45.83	53.98	8.15	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n_40 MHz BW. Worst case is 13.5 Mbps in 802.11n_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2e
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11000	39.56	11.28	V	50.84	73.98	23.14	PK
11000	25.38	11.28	V	36.66	53.98	17.32	AV
16500	46.50	14.19	V	60.69	68.20	7.51	PK
11000	39.54	11.28	H	50.82	73.98	23.16	PK
11000	25.99	11.28	H	37.27	53.98	16.71	AV
16500	47.15	14.19	H	61.34	68.20	6.86	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2e
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5600 MHz
Channel No.	120 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11200	39.88	10.87	V	50.75	73.98	23.23	PK
11200	26.00	10.87	V	36.87	53.98	17.11	AV
16800	45.97	17.15	V	63.12	68.20	5.08	PK
11200	39.54	10.87	H	50.41	73.98	23.57	PK
11200	25.69	10.87	H	36.56	53.98	17.42	AV
16800	45.32	17.15	H	62.47	68.20	5.73	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2e
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5700 MHz
Channel No.	140 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11400	40.12	10.97	V	51.09	73.98	22.89	PK
11400	25.80	10.97	V	36.77	53.98	17.21	AV
17100	46.11	17.82	V	63.93	68.20	4.27	PK
11400	40.00	10.97	H	50.97	73.98	23.01	PK
11400	25.67	10.97	H	36.64	53.98	17.34	AV
17100	46.23	17.82	H	64.05	68.20	4.15	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2e
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11000	39.12	11.28	V	50.40	73.98	23.58	PK
11000	25.66	11.28	V	36.94	53.98	17.04	AV
16500	46.31	14.19	V	60.50	68.20	7.70	PK
11000	39.55	11.28	H	50.83	73.98	23.15	PK
11000	25.30	11.28	H	36.58	53.98	17.40	AV
16500	46.68	14.19	H	60.87	68.20	7.33	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n_20 MHz BW. Worst case is 6.5 Mbps in 802.11n_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2e
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5600 MHz
Channel No.	120 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11200	39.97	10.87	V	50.84	73.98	23.14	PK
11200	25.44	10.87	V	36.31	53.98	17.67	AV
16800	45.67	17.15	V	62.82	68.20	5.38	PK
11200	40.32	10.87	H	51.19	73.98	22.79	PK
11200	25.61	10.87	H	36.48	53.98	17.50	AV
16800	46.51	17.15	H	63.66	68.20	4.54	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n_20 MHz BW. Worst case is 6.5 Mbps in 802.11n_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2e
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5700 MHz
Channel No.	140 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11400	40.69	10.97	V	51.66	73.98	22.32	PK
11400	25.87	10.97	V	36.84	53.98	17.14	AV
17100	46.07	17.82	V	63.89	68.20	4.31	PK
11400	40.84	10.97	H	51.81	73.98	22.17	PK
11400	26.03	10.97	H	37.00	53.98	16.98	AV
17100	46.57	17.82	H	64.39	68.20	3.81	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n_20 MHz BW. Worst case is 6.5 Mbps in 802.11n_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2e
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5510 MHz
Channel No.	102 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11020	39.89	11.28	V	51.17	73.98	22.81	PK
11020	25.33	11.28	V	36.61	53.98	17.37	AV
16530	46.05	14.83	V	60.88	68.20	7.32	PK
11020	40.23	11.28	H	51.51	73.98	22.47	PK
11020	25.61	11.28	H	36.89	53.98	17.09	AV
16530	45.68	14.83	H	60.51	68.20	7.69	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n_40 MHz BW. Worst case is 13.5 Mbps in 802.11n_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2e
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5590 MHz
Channel No.	118 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11180	40.24	11.12	V	51.36	73.98	22.62	PK
11180	25.79	11.12	V	36.91	53.98	17.07	AV
16770	47.28	16.52	V	63.80	68.20	4.40	PK
11180	40.69	11.12	H	51.81	73.98	22.17	PK
11180	26.07	11.12	H	37.19	53.98	16.79	AV
16770	46.26	16.52	H	62.78	68.20	5.42	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n_40 MHz BW. Worst case is 13.5 Mbps in 802.11n_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2e
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5670 MHz
Channel No.	134 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11340	40.33	10.86	V	51.19	73.98	22.79	PK
11340	25.64	10.86	V	36.50	53.98	17.48	AV
17010	46.87	18.15	V	65.02	68.20	3.18	PK
11340	39.41	10.86	H	50.27	73.98	23.71	PK
11340	26.00	10.86	H	36.86	53.98	17.12	AV
17010	46.91	18.15	H	65.06	68.20	3.14	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n_40 MHz BW. Worst case is 13.5 Mbps in 802.11n_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Service MIMO(Ant 1 & 2 & 3)

Band :	UNII 2
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5260 MHz
Channel No.	52 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10520	53.55	10.38	V	63.93	68.20	4.27	PK
15780	45.92	14.38	V	60.30	73.98	13.68	PK
15780	32.10	14.38	V	46.48	53.98	7.50	AV
10520	54.46	10.38	H	64.84	68.20	3.36	PK
15780	46.05	14.38	H	60.43	73.98	13.55	PK
15780	32.09	14.38	H	46.47	53.98	7.51	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5300 MHz
Channel No.	60 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10600	54.56	10.39	V	64.95	73.98	9.03	PK
10600	39.30	10.39	V	49.69	53.98	4.29	AV
15900	46.45	14.00	V	60.45	73.98	13.53	PK
15900	32.36	14.00	V	46.36	53.98	7.62	AV
10600	55.13	10.39	H	65.52	73.98	8.46	PK
10600	40.08	10.39	H	50.47	53.98	3.51	AV
15900	46.89	14.00	H	60.89	73.98	13.09	PK
15900	32.51	14.00	H	46.51	53.98	7.47	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10640	54.97	10.50	V	65.47	73.98	8.51	PK
10640	39.59	10.50	V	50.09	53.98	3.89	AV
15960	46.39	14.27	V	60.66	73.98	13.32	PK
15960	32.08	14.27	V	46.35	53.98	7.63	AV
10640	55.77	10.50	H	66.27	73.98	7.71	PK
10640	40.41	10.50	H	50.91	53.98	3.07	AV
15960	46.99	14.27	H	61.26	73.98	12.72	PK
15960	32.40	14.27	H	46.67	53.98	7.31	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5260 MHz
Channel No.	52 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10520	54.53	10.38	V	64.91	68.20	3.29	PK
15780	46.84	14.38	V	61.22	73.98	12.76	PK
15780	32.18	14.38	V	46.56	53.98	7.42	AV
10520	53.74	10.38	H	64.12	68.20	4.08	PK
15780	46.55	14.38	H	60.93	73.98	13.05	PK
15780	32.12	14.38	H	46.50	53.98	7.48	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n_20 MHz BW. Worst case is 6.5 Mbps in 802.11n_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5300 MHz
Channel No.	60 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10600	55.00	10.39	V	65.39	73.98	8.59	PK
10600	40.17	10.39	V	50.56	53.98	3.42	AV
15900	46.25	14.00	V	60.25	73.98	13.73	PK
15900	32.11	14.00	V	46.11	53.98	7.87	AV
10600	54.02	10.39	H	64.41	73.98	9.57	PK
10600	39.61	10.39	H	50.00	53.98	3.98	AV
15900	46.03	14.00	H	60.03	73.98	13.95	PK
15900	32.08	14.00	H	46.08	53.98	7.90	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n_20 MHz BW. Worst case is 6.5 Mbps in 802.11n_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10640	55.69	10.50	V	66.19	73.98	7.79	PK
10640	40.23	10.50	V	50.73	53.98	3.25	AV
15960	46.11	14.27	V	60.38	73.98	13.60	PK
15960	32.09	14.27	V	46.36	53.98	7.62	AV
10640	55.36	10.50	H	65.86	73.98	8.12	PK
10640	39.61	10.50	H	50.11	53.98	3.87	AV
15960	46.19	14.27	H	60.46	73.98	13.52	PK
15960	32.10	14.27	H	46.37	53.98	7.61	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n_20 MHz BW. Worst case is 6.5 Mbps in 802.11n_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5270 MHz
Channel No.	54 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10540	54.33	10.55	V	64.88	68.20	3.32	PK
15810	46.84	14.26	V	61.10	73.98	12.88	PK
15810	32.40	14.26	V	46.66	53.98	7.32	AV
10540	54.00	10.55	H	64.55	68.20	3.65	PK
15810	47.21	14.26	H	61.47	73.98	12.51	PK
15810	32.33	14.26	H	46.59	53.98	7.39	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n_40 MHz BW. Worst case is 13.5 Mbps in 802.11n_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5310 MHz
Channel No.	62 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10620	54.88	10.25	V	65.13	73.98	8.85	PK
10620	40.23	10.25	V	50.48	53.98	3.50	AV
15930	46.22	13.62	V	59.84	73.98	14.14	PK
15930	32.10	13.62	V	45.72	53.98	8.26	AV
10620	54.32	10.25	H	64.57	73.98	9.41	PK
10620	39.71	10.25	H	49.96	53.98	4.02	AV
15930	46.44	13.62	H	60.06	73.98	13.92	PK
15930	32.10	13.62	H	45.72	53.98	8.26	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n_40 MHz BW. Worst case is 13.5 Mbps in 802.11n_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2e
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11000	54.08	11.28	V	65.36	73.98	8.62	PK
11000	39.18	11.28	V	50.46	53.98	3.52	AV
16500	45.97	14.19	V	60.16	68.20	8.04	PK
11000	52.06	11.28	H	63.34	73.98	10.64	PK
11000	36.21	11.28	H	47.49	53.98	6.49	AV
16500	45.81	14.19	H	60.00	68.20	8.20	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2e
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5600 MHz
Channel No.	120 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11200	55.58	10.87	V	66.45	73.98	7.53	PK
11200	39.61	10.87	V	50.48	53.98	3.50	AV
16800	46.35	17.15	V	63.50	68.20	4.70	PK
11200	53.28	10.87	H	64.15	73.98	9.83	PK
11200	37.41	10.87	H	48.28	53.98	5.70	AV
16800	46.55	17.15	H	63.70	68.20	4.50	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2e
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5700 MHz
Channel No.	140 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11400	56.03	10.97	V	67.00	73.98	6.98	PK
11400	39.44	10.97	V	50.41	53.98	3.57	AV
17100	46.23	17.82	V	64.05	68.20	4.15	PK
11400	54.01	10.97	H	64.98	73.98	9.00	PK
11400	38.25	10.97	H	49.22	53.98	4.76	AV
17100	47.05	17.82	H	64.87	68.20	3.33	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11a. Worst case is 6 Mbps in 802.11a.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2e
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11000	54.36	11.28	V	65.64	73.98	8.34	PK
11000	38.80	11.28	V	50.08	53.98	3.90	AV
16500	46.23	14.19	V	60.42	68.20	7.78	PK
11000	52.99	11.28	H	64.27	73.98	9.71	PK
11000	37.02	11.28	H	48.30	53.98	5.68	AV
16500	45.96	14.19	H	60.15	68.20	8.05	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n_20 MHz BW. Worst case is 6.5 Mbps in 802.11n_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2e
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5600 MHz
Channel No.	120 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11200	55.36	10.87	V	66.23	73.98	7.75	PK
11200	39.81	10.87	V	50.68	53.98	3.30	AV
16800	47.33	17.15	V	64.48	68.20	3.72	PK
11200	53.65	10.87	H	64.52	73.98	9.46	PK
11200	37.77	10.87	H	48.64	53.98	5.34	AV
16800	47.52	17.15	H	64.67	68.20	3.53	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n_20 MHz BW. Worst case is 6.5 Mbps in 802.11n_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2e
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6.5 Mbps
Operating Frequency	5700 MHz
Channel No.	140 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11400	56.07	10.97	V	67.04	73.98	6.94	PK
11400	39.48	10.97	V	50.45	53.98	3.53	AV
17100	46.87	17.82	V	64.69	68.20	3.51	PK
11400	54.03	10.97	H	65.00	73.98	8.98	PK
11400	37.48	10.97	H	48.45	53.98	5.53	AV
17100	46.59	17.82	H	64.41	68.20	3.79	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n_20 MHz BW. Worst case is 6.5 Mbps in 802.11n_20 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2e
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5510 MHz
Channel No.	102 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11020	54.33	11.28	V	65.61	73.98	8.37	PK
11020	38.59	11.28	V	49.87	53.98	4.11	AV
16530	46.23	14.83	V	61.06	68.20	7.14	PK
11020	52.69	11.28	H	63.97	73.98	10.01	PK
11020	37.01	11.28	H	48.29	53.98	5.69	AV
16530	46.55	14.83	H	61.38	68.20	6.82	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n_40 MHz BW. Worst case is 13.5 Mbps in 802.11n_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2e
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5590 MHz
Channel No.	118 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11180	55.09	11.12	V	66.21	73.98	7.77	PK
11180	39.24	11.12	V	50.36	53.98	3.62	AV
16770	46.61	16.52	V	63.13	68.20	5.07	PK
11180	53.88	11.12	H	65.00	73.98	8.98	PK
11180	37.29	11.12	H	48.41	53.98	5.57	AV
16770	46.55	16.52	H	63.07	68.20	5.13	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n_40 MHz BW. Worst case is 13.5 Mbps in 802.11n_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 2e
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5670 MHz
Channel No.	134 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
11340	55.39	10.86	V	66.25	73.98	7.73	PK
11340	39.31	10.86	V	50.17	53.98	3.81	AV
17010	46.62	18.15	V	64.77	68.20	3.43	PK
11340	53.60	10.86	H	64.46	73.98	9.52	PK
11340	37.87	10.86	H	48.73	53.98	5.25	AV
17010	46.39	18.15	H	64.54	68.20	3.66	PK

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain
5. We have done all data rate in 802.11n_40 MHz BW. Worst case is 13.5 Mbps in 802.11n_40 MHz BW.
6. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

9.7.2 RADIATED RESTRICTED BAND EDGE MEASUREMENTS

Test Requirements and limit, §15.247(d) §15.205, §15.209

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in section 15.209(a) (See section 15.205(c)).

Monitoring MIMO(Ant 1 & 2)

Band :	UNII 2
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5350	52.77	-0.19	H	52.58	73.98	21.40	PK
5350	38.01	-0.19	H	37.82	53.98	16.16	AV
5350	53.02	-0.19	V	52.83	73.98	21.15	PK
5350	38.46	-0.19	V	38.27	53.98	15.71	AV

Band : UNII 2

Operation Mode: 802.11 n_20 MHz BW

Transfer Rate: 6 Mbps

Operating Frequency 5320 MHz

Channel No. 64 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5350	52.66	-0.19	H	52.47	73.98	21.51	PK
5350	38.00	-0.19	H	37.81	53.98	16.17	AV
5350	52.54	-0.19	V	52.35	73.98	21.63	PK
5350	38.15	-0.19	V	37.96	53.98	16.02	AV

Band : UNII 2

Operation Mode: 802.11n_40 MHz BW

Transfer Rate: 13.5 Mbps

Operating Frequency 5310 MHz

Channel No. 62 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5350	52.91	-0.19	H	52.72	73.98	21.26	PK
5350	38.41	-0.19	H	38.22	53.98	15.76	AV
5350	53.09	-0.19	V	52.9	73.98	21.08	PK
5350	38.51	-0.19	V	38.32	53.98	15.66	AV

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + ATT
2. We have done all data rate in 802.11a/n mode test. . Worst case of EUT is lowest data rate in 802.11a/n
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band : UNII 2e
Operation Mode: 802.11 a
Transfer Rate: 6 Mbps
Operating Frequency 5500 MHz
Channel No. 100 Ch

Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5460	52.06	0.38	H	52.44	73.98	21.54	PK
5460	38.74	0.38	H	39.12	53.98	14.86	AV
*5470	52.60	0.24	H	52.84	68.20	15.36	PK
5460	52.19	0.38	V	52.57	73.98	21.41	PK
5460	39.06	0.38	V	39.44	53.98	14.54	AV
*5470	52.58	0.24	V	52.82	68.20	15.38	PK

Band : UNII 2e
Operation Mode: 802.11 a
Transfer Rate: 6 Mbps
Operating Frequency 5700 MHz
Channel No. 140 Ch

Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
*5725	52.07	1.05	H	53.12	68.20	15.09	PK
*5725	52.21	1.05	V	53.26	68.20	14.95	PK

Band : UNII 2e

Operation Mode: 802.11 n_20 MHz BW

Transfer Rate: 6 Mbps

Operating Frequency 5500 MHz

Channel No. 100 Ch

Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5460	52.22	0.38	H	52.60	73.98	21.38	PK
5460	38.65	0.38	H	39.03	53.98	14.95	AV
*5470	52.89	0.24	H	53.13	68.20	15.07	PK
5460	52.45	0.38	V	52.83	73.98	21.15	PK
5460	38.81	0.38	V	39.19	53.98	14.79	AV
*5470	53.11	0.24	V	53.35	68.20	14.85	PK

Band : UNII 2e

Operation Mode: 802.11 n_20 MHz BW

Transfer Rate: 6.5 Mbps

Operating Frequency 5700 MHz

Channel No. 140 Ch

Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
*5725	52.79	1.05	H	53.84	68.20	14.37	PK
*5725	52.70	1.05	V	53.75	68.20	14.46	AV

Band :	UNII 2e
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5510 MHz
Channel No.	102 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5460	53.15	0.38	H	53.53	73.98	20.45	PK
5460	38.80	0.38	H	39.18	53.98	14.80	AV
*5470	53.33	0.24	H	53.57	68.20	14.63	PK
5460	52.40	0.38	V	52.78	73.98	21.20	PK
5460	38.69	0.38	V	39.07	53.98	14.91	AV
*5470	53.10	0.24	V	53.34	68.20	14.86	PK

Band :	UNII 2e
Operation Mode:	802.11 n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5670 MHz
Channel No.	134 Ch

Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
*5725	52.77	1.05	H	53.82	68.20	14.39	PK
*5725	54.09	1.05	V	55.14	68.20	13.07	AV

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + ATT
2. We have done all data rate in 802.11a/n mode test. . Worst case of EUT is lowest data rate in 802.11a/n
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
4. “*” is radiated band edge test frequency.(not restricted band emissions)

Service MIMO(Ant 1 & 2 & 3)

Band :	UNII 2
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5350	52.96	-0.19	H	52.77	73.98	21.21	PK
5350	38.57	-0.19	H	38.38	53.98	15.60	AV
5350	53.68	-0.19	V	53.49	73.98	20.49	PK
5350	38.77	-0.19	V	38.58	53.98	15.40	AV

Band :	UNII 2
Operation Mode:	802.11 n_20 MHz BW
Transfer Rate:	6 Mbps
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5350	50.84	-0.19	H	50.65	73.98	23.33	PK
5350	38.69	-0.19	H	38.5	53.98	15.48	AV
5350	51.55	-0.19	V	51.36	73.98	22.62	PK
5350	38.96	-0.19	V	38.77	53.98	15.21	AV

Band :	UNII 2
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5310 MHz
Channel No.	62 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5350	63.98	-0.19	H	63.79	73.98	10.19	PK
5350	47.05	-0.19	H	46.86	53.98	7.12	AV
5350	66.15	-0.19	V	65.96	73.98	8.02	PK
5350	48.78	-0.19	V	48.59	53.98	5.39	AV

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + ATT
2. We have done all data rate in 802.11a/n mode test. . Worst case of EUT is lowest data rate in 802.11a/n
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band : UNII 2e
Operation Mode: 802.11 a
Transfer Rate: 6 Mbps
Operating Frequency 5500 MHz
Channel No. 100 Ch

Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5460	52.87	0.38	H	53.25	73.98	20.73	PK
5460	39.25	0.38	H	39.63	53.98	14.35	AV
*5470	52.74	0.24	H	52.98	68.20	15.22	PK
5460	53.52	0.38	V	53.9	73.98	20.08	PK
5460	39.56	0.38	V	39.94	53.98	14.04	AV
*5470	53.51	0.24	V	53.75	68.20	14.45	PK

Band : UNII 2e
Operation Mode: 802.11 a
Transfer Rate: 6 Mbps
Operating Frequency 5700 MHz
Channel No. 140 Ch

Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
*5725	52.50	1.05	H	53.55	68.20	14.66	PK
*5725	52.39	1.05	V	53.44	68.20	14.77	PK

Band : UNII 2e
Operation Mode: 802.11 n_20 MHz BW
Transfer Rate: 6 Mbps
Operating Frequency 5500 MHz
Channel No. 100 Ch

Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5460	52.41	0.38	H	52.79	73.98	21.19	PK
5460	39.07	0.38	H	39.45	53.98	14.53	AV
*5470	53.00	0.24	H	53.24	68.20	14.96	PK
5460	53.12	0.38	V	53.5	73.98	20.48	PK
5460	39.09	0.38	V	39.47	53.98	14.51	AV
*5470	53.36	0.24	V	53.6	68.20	14.60	PK

Band : UNII 2e
Operation Mode: 802.11 n_20 MHz BW
Transfer Rate: 6.5 Mbps
Operating Frequency 5700 MHz
Channel No. 140 Ch

Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
*5725	52.63	1.05	H	53.68	68.20	14.53	PK
*5725	52.97	1.05	V	54.02	68.20	14.19	AV

Band :	UNII 2e
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5510 MHz
Channel No.	102 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5460	52.09	0.38	H	52.47	73.98	21.51	PK
5460	38.97	0.38	H	39.35	53.98	14.63	AV
*5470	53.61	0.24	H	53.85	68.20	14.35	PK
5460	53.01	0.38	V	53.39	73.98	20.59	PK
5460	39.21	0.38	V	39.59	53.98	14.39	AV
*5470	58.13	0.24	V	58.37	68.20	9.83	PK

Band :	UNII 2e
Operation Mode:	802.11 n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5670 MHz
Channel No.	134 Ch

Frequency [MHz]	Reading DBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
*5725	52.09	1.05	H	53.14	68.20	15.07	PK
*5725	53.05	1.05	V	54.10	68.20	14.11	AV

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + ATT
2. We have done all data rate in 802.11a/n mode test. . Worst case of EUT is lowest data rate in 802.11a/n
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
4. “*” is radiated band edge test frequency.(not restricted band emissions)

9.8 POWERLINE CONDUCTED EMISSIONS

Test Requirements and limit, §15.207

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed 250 microvolts (The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz). The limits at specific frequency range is listed as follows:

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

Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line (LINE and NEUTRAL) and ground at the power terminals.

Test Configuration

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

TEST PROCEDURE

1. The EUT is placed on a wooden table 80 cm above the reference groundplane.
2. The EUT is connected via LISN to a test power supply.
3. The measurement results are obtained as described below:
4. Detectors – Quasi Peak and Average Detector.

Note : We don't perform powerline conducted emission test. Because the manufacturer does not sell the POE.

10. LIST OF TEST EQUIPMENT

Manufacturer	Model / Equipment	Calibration Interval	Calibration Due	Serial No.
Rohde & Schwarz	ENV216/ LISN	Annual	02/06/2014	100073
Schwarzbeck	VULB 9160/ TRILOG Antenna	Biennial	12/17/2014	3150
Rohde & Schwarz	ESI 40 / EMI TEST RECEIVER	Annual	04/16/2014	831564103
Agilent	E4440A/ Spectrum Analyzer	Annual	04/25/2014	US45303008
Agilent	N9020A/ SIGNAL ANALYZER	Annual	05/14/2014	MY51110063
HD	MA240/ Antenna Position Tower	N/A	N/A	556
EMCO	1050/ Turn Table	N/A	N/A	114
HD GmbH	HD 100/ Controller	N/A	N/A	13
HD GmbH	KMS 560/ SlideBar	N/A	N/A	12
Rohde & Schwarz	SCU-18/ Signal Conditioning Unit	Annual	09/10/2014	10094
MITEQ	AMF-6B-180265-35-10P / POWER AMP	Annual	04/16/2014	667624
CERNEX	CBL26405040 / POWER AMP	Annual	04/16/2014	19660
Schwarzbeck	BBHA 9120D/ Horn Antenna	Biennial	07/05/2015	1151
Schwarzbeck	BBHA9170 / Horn Antenna(15 GHz ~ 40 GHz)	Biennial	10/30/2014	BBHA9170124
Rohde & Schwarz	FSP / Spectrum Analyzer	Annual	02/08/2014	839117/011
Agilent	N1911A/Power Meter	Annual	01/22/2014	MY45100523
Agilent	N1921A /POWER SENSOR	Annual	07/11/2014	MY45241059
Wainwright Instrument	WHF3.0/18G-10EF / High Pass Filter	Annual	02/08/2014	F6
Wainwright Instrument	WHNX6.0/26.5G-6SS / High Pass Filter	Annual	04/16/2014	1
Wainwright Instrument	WHNX7.0/18G-8SS / High Pass Filter	Annual	04/16/2014	29
Wainwright Instrument	WRCJ2400/2483.5-2370/2520-60/14SS / Band Reject Filter	Annual	03/19/2014	1
Hewlett Packard	11636B/Power Divider	Annual	11/07/2013	11377
Agilent	87300B/Directional Coupler	Annual	12/24/2013	3116A03621
Hewlett Packard	11667B / Power Splitter	Annual	05/29/2014	05001
DIGITAL	EP-3010 /DC POWER SUPPLY	Annual	11/07/2013	3110117
ITECH	IT6720 / DC POWER SUPPLY	Annual	11/07/2013	010002156287001199
TESCOM	TC-3000C / BLUETOOTH TESTER	Annual	04/24/2014	3000C000276
Rohde & Schwarz	CBT / BLUETOOTH TESTER	Annual	04/25/2014	100422
EMCO	6502.LOOP ANTENNA	Biennial	01/11/2014	9009-2536
CERNEX	CBLU1183540 / POWER AMP	Annual	07/24/2014	21691
Agilent	8493C / Attenuator(10 dB)	Annual	07/24/2014	76649
WEINSCHL	2-3 / Attenuator(3 dB)	Annual	11/07/2013	BR0617