Conducted Output Power (802.11n-CH 36) 40.5 Mbps

Conducted Output Power (802.11n-CH 36) 54 Mbps

Conducted Output Power (802.11n-CH 36) 81 Mbps

Conducted Output Power (802.11n-CH 36) 108 Mbps

Conducted Output Power (802.11n-CH 36) 121.5 Mbps

Conducted Output Power (802.11n-CH 36) 135 Mbps

Conducted Output Power (802.11n-CH 36) 13.5 Mbps

Conducted Output Power (802.11n-CH 36) 27 Mbps

Conducted Output Power (802.11n-CH 36) 40.5 Mbps

Conducted Output Power (802.11n-CH 36) 54 Mbps

Conducted Output Power (802.11n-CH 36) 81 Mbps

Conducted Output Power (802.11n-CH 36) 108 Mbps

Conducted Output Power (802.11n-CH 36) 121.5 Mbps

Conducted Output Power (802.11n-CH 36) 135 Mbps

▣ RESULT PLOTS (5270 MHz ~5310 MHz)

Conducted Output Power (802.11n-CH 52) 13.5 Mbps

Conducted Output Power (802.11n-CH 52) 27 Mbps

Conducted Output Power (802.11n-CH 52) 40.5 Mbps

Conducted Output Power (802.11n-CH 52) 54 Mbps

Conducted Output Power (802.11n-CH 52) 81 Mbps

Conducted Output Power (802.11n-CH 52) 108 Mbps

Conducted Output Power (802.11n-CH 52) 121.5 Mbps

Conducted Output Power (802.11n-CH 60) 135 Mbps

Conducted Output Power (802.11n-CH 52) 13.5 Mbps

Conducted Output Power (802.11n-CH 52) 27 Mbps

Conducted Output Power (802.11n-CH 52) 40.5 Mbps

Conducted Output Power (802.11n-CH 52) 54 Mbps

Conducted Output Power (802.11n-CH 52) 81 Mbps

Conducted Output Power (802.11n-CH 52) 108 Mbps

Conducted Output Power (802.11n-CH 52) 121.5 Mbps

Conducted Output Power (802.11n-CH 60) 135 Mbps

▣ RESULT PLOTS (5510 MHz ~5670 MHz)

Conducted Output Power (802.11n-CH 100) 13.5 Mbps

Conducted Output Power (802.11n-CH 100) 27 Mbps

Conducted Output Power (802.11n-CH 100) 40.5 Mbps

Conducted Output Power (802.11n-CH 100) 54 Mbps

Conducted Output Power (802.11n-CH 100) 81 Mbps

Conducted Output Power (802.11n-CH 100) 108 Mbps

Conducted Output Power (802.11n-CH 100) 121.5 Mbps

Conducted Output Power (802.11n-CH 100) 135 Mbps

Conducted Output Power (802.11n-CH 100) 13.5 Mbps

Conducted Output Power (802.11n-CH 100) 27 Mbps

Conducted Output Power (802.11n-CH 100) 40.5 Mbps

Conducted Output Power (802.11n-CH 100) 54 Mbps

Conducted Output Power (802.11n-CH 100) 81 Mbps

Conducted Output Power (802.11n-CH 100) 108 Mbps

Conducted Output Power (802.11n-CH 100) 121.5 Mbps

Conducted Output Power (802.11n-CH 100) 135 Mbps

Conducted Output Power (802.11n-CH 100) 13.5 Mbps

Conducted Output Power (802.11n-CH 100) 27 Mbps

Conducted Output Power (802.11n-CH 100) 40.5 Mbps

Conducted Output Power (802.11n-CH 100) 54 Mbps

Conducted Output Power (802.11n-CH 100) 81 Mbps

Conducted Output Power (802.11n-CH 100) 108 Mbps

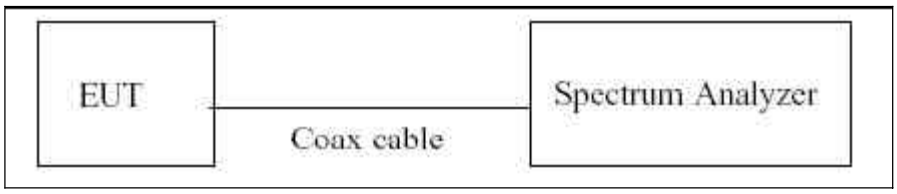
Conducted Output Power (802.11n-CH 100) 121.5 Mbps

Conducted Output Power (802.11n-CH 100) 135 Mbps

8.3 POWER SPECTRAL DENSITY

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 maximum permissible peak power spectral density is 4 dBm/ MHz in the 5.15 GHz – 5.25 GHz band and 11 dBm/ MHz in the 5.25 GHz – 5.35 GHz and 5.47 GHz – 5.725 GHz bands

▣ TEST CONFIGURATION



▣ TEST PROCEDURE

The spectrum analyzer is set to :

RBW = 1 MHz

VBW = 3 MHz

SPAN = to encompass the entire EBW of the signal

Sweep Time = auto

Sweep Point = 601

Detector Mode = Average

Trace average at least 100 traces in power averaging(RMS) mode

▣ Sample Calculation

PSD = Reading Value + ATT loss + Cable loss(1 ea)

= -5 dBm + 10 dB + 0.8 dB = 15.8 dBm

Note :

1. Spectrum reading values are not plot data. 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 2.4 GHz and 5 GHz range that was rounded off to the closest tenth dB. Actual value of loss for the attenuator and cable combination is 11 dB at 2.4 GHz and 12 dB at 5 GHz. We used the particular cable type that is supported by manufacture.

▣ TEST RESULTS

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result		
			Power Density (dBm)	Limit (dBm)	Pass/Fail
5180	36	802.11a	-0.299	4	Pass
5200	40		-0.238	4	Pass
5240	48		0.099	4	Pass
5260	52	802.11a	0.326	11	Pass
5300	60		0.039	11	Pass
5320	64		-0.032	11	Pass
5500	100	802.11a	1.018	11	Pass
5600	120		2.582	11	Pass
5700	140		0.219	11	Pass

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result		
			Power Density (dBm)	Limit (dBm)	Pass/Fail
5180	36	802.11n_20MHz BW	-1.816	4	Pass
5200	40		-1.632	4	Pass
5240	48		-1.134	4	Pass
5260	52	802.11n_20MHz BW	-0.651	11	Pass
5300	60		-0.316	11	Pass
5320	64		-1.231	11	Pass
5500	100	802.11n_20MHz BW	1.004	11	Pass
5600	120		-1.461	11	Pass
5700	140		-0.906	11	Pass

Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result		
			Power Density (dBm)	Limit (dBm)	Pass/Fail
5190	38	802.11n_40 MHz BW	-4.330	4	Pass
5230	46		-3.954	4	Pass
5270	54	802.11n_40 MHz BW	-4.339	4	Pass
5310	62		-3.971	11	Pass
5510	102	802.11n_40 MHz BW	-1.773	11	Pass
5590	118		-0.961	11	Pass
5670	134		-3.788	11	Pass

▣ RESULT PLOTS

Power Spectral Density (802.11a-CH 36)

Power Spectral Density (802.11a-CH 40)

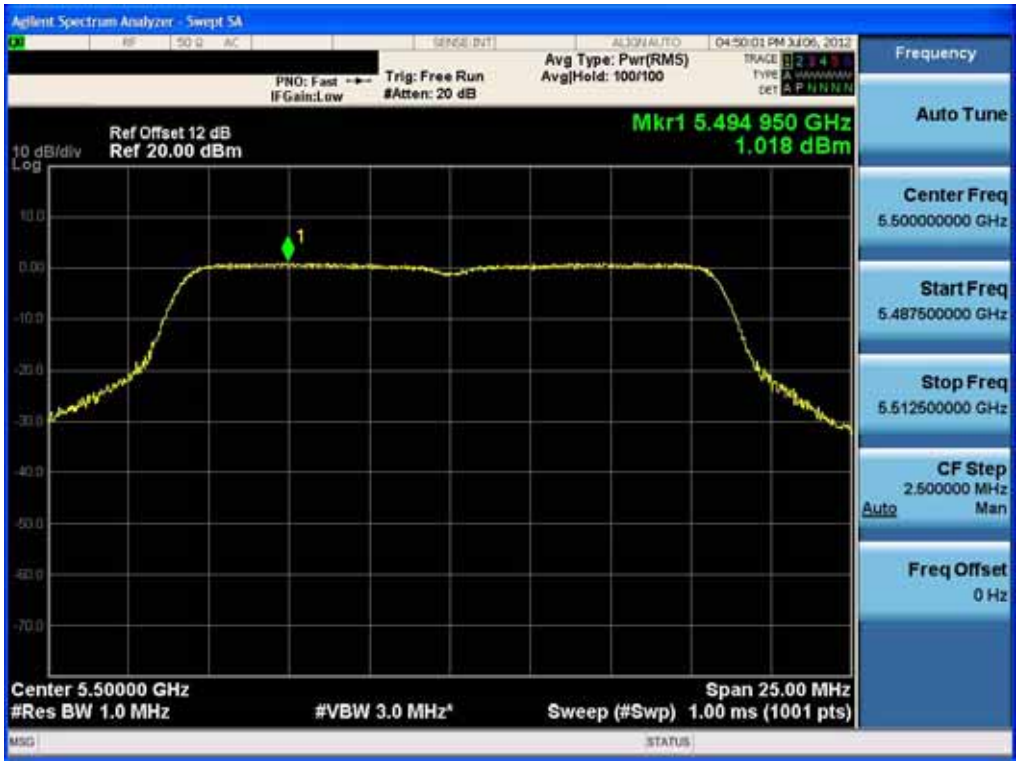
Power Spectral Density (802.11a-CH 48)

Power Spectral Density (802.11a-CH 52)

Power Spectral Density (802.11a-CH 60)

Power Spectral Density (802.11a-CH 64)

Power Spectral Density (802.11a-CH 100)



Power Spectral Density (802.11a-CH 120)

Power Spectral Density (802.11a-CH 140)

20 MHz BW

Power Spectral Density (802.11n-CH 36)

Power Spectral Density (802.11n-CH 40)

Power Spectral Density (802.11n-CH 48)

Power Spectral Density (802.11n-CH 52)

Power Spectral Density (802.11n-CH 60)

Power Spectral Density (802.11n-CH 64)

Power Spectral Density (802.11n-CH 100)

Power Spectral Density (802.11n-CH 120)

Power Spectral Density (802.11n-CH 140)

40 MHz BW

Power Spectral Density (802.11n-CH 38)

Power Spectral Density (802.11n-CH 46)

Power Spectral Density (802.11n-CH 54)

Power Spectral Density (802.11n-CH 62)

Power Spectral Density (802.11n-CH 102)

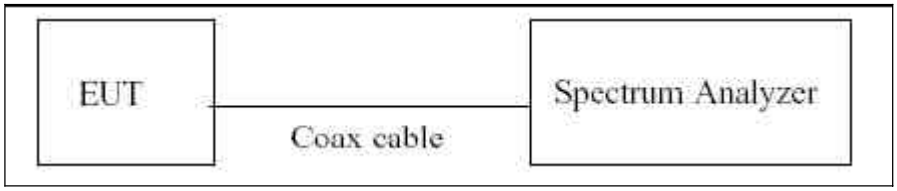
Power Spectral Density (802.11n-CH 118)

Power Spectral Density (802.11n-CH 134)

8.4 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 03/05/2012).

The spectrum analyzer is set to :

1. Span = Set the span to view the entire emission bandwidth.
2. RBW = 1 MHz
3. VBW = 3 MHz
4. Sweep = Auto couple
5. Detector Mode = Peak
6. Trace Mode = Max hold
7. Use the procedure to measure the PPSD
8. Compute the ratio of the maximum of the peak-max-hold spectrum to the PPSD.

Note :

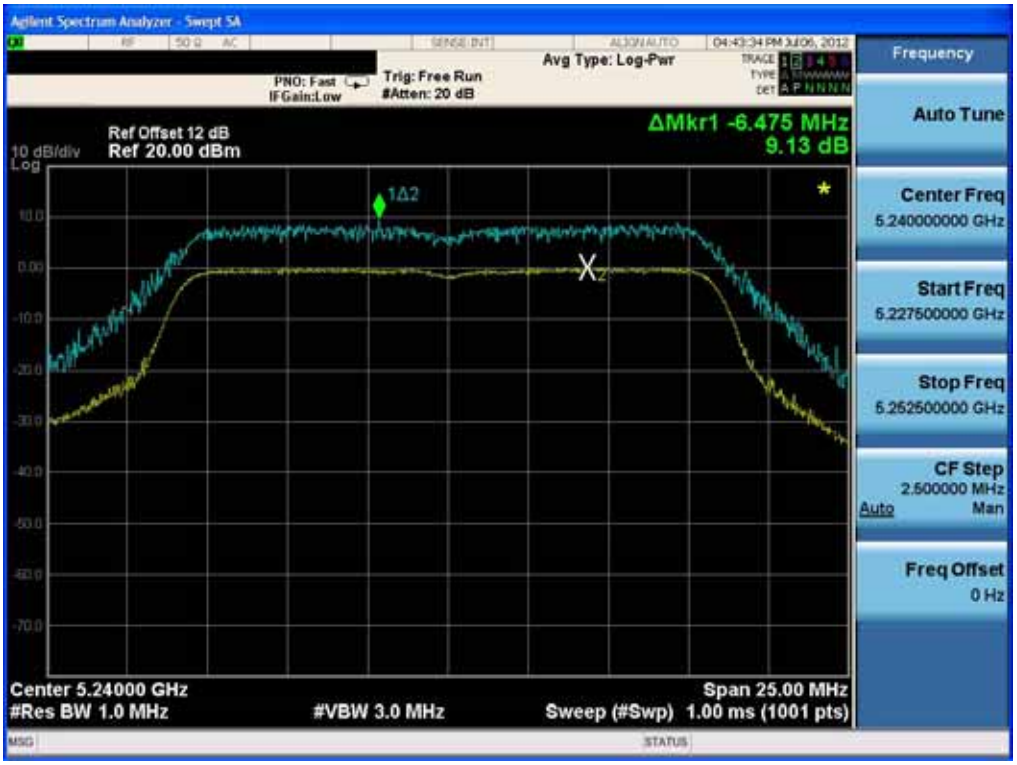
1. The PSD results in plot is already including the actual values of loss for the attenuator and cable combination.
2. Spectrum offset = Attenuator loss + Cable loss
3. We apply to the offset in the 2.4 GHz and 5 GHz range that was rounded off to the closest tenth dB. Actual value of loss for the attenuator and cable combination is 11 dB at 2.4 GHz and 12 dB at 5 GHz. We used the particular cable type that is supported by manufacture.

▣ RESULT PLOTS

Peak Excursion Ratio (802.11a-CH 36)

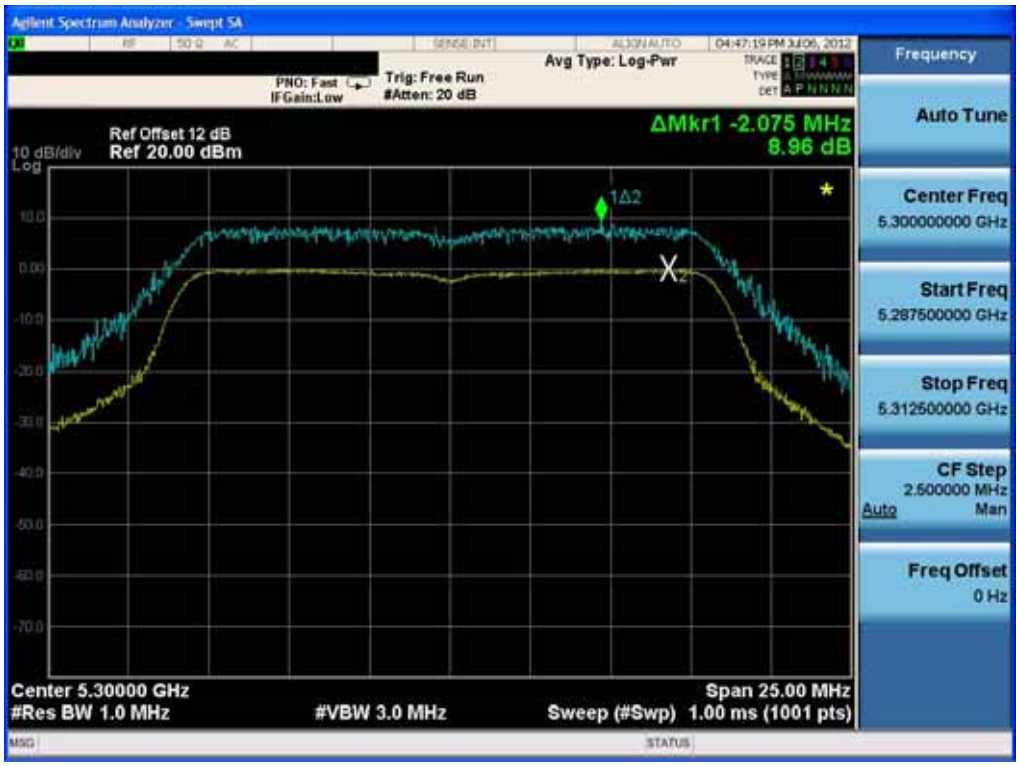
Peak Excursion Ratio (802.11a-CH 40)

Peak Excursion Ratio (802.11a-CH 48)



Peak Excursion Ratio (802.11a-CH 52)

Peak Excursion Ratio (802.11a-CH 60)

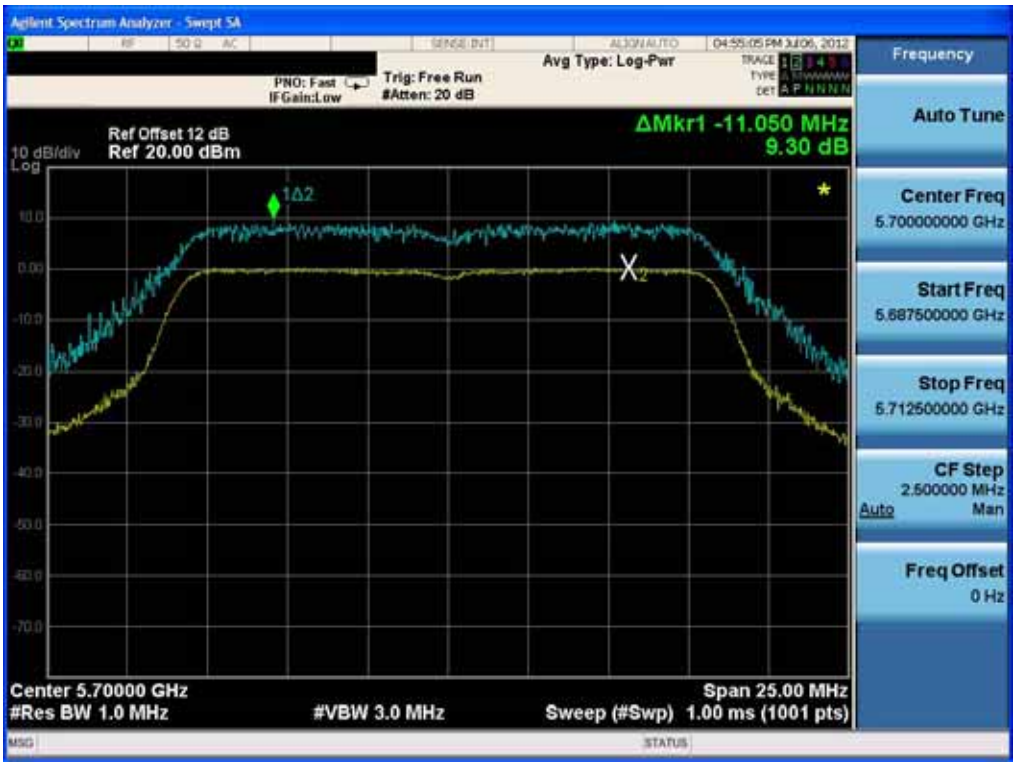


Peak Excursion Ratio (802.11a-CH 64)

Peak Excursion Ratio (802.11a-CH 100)

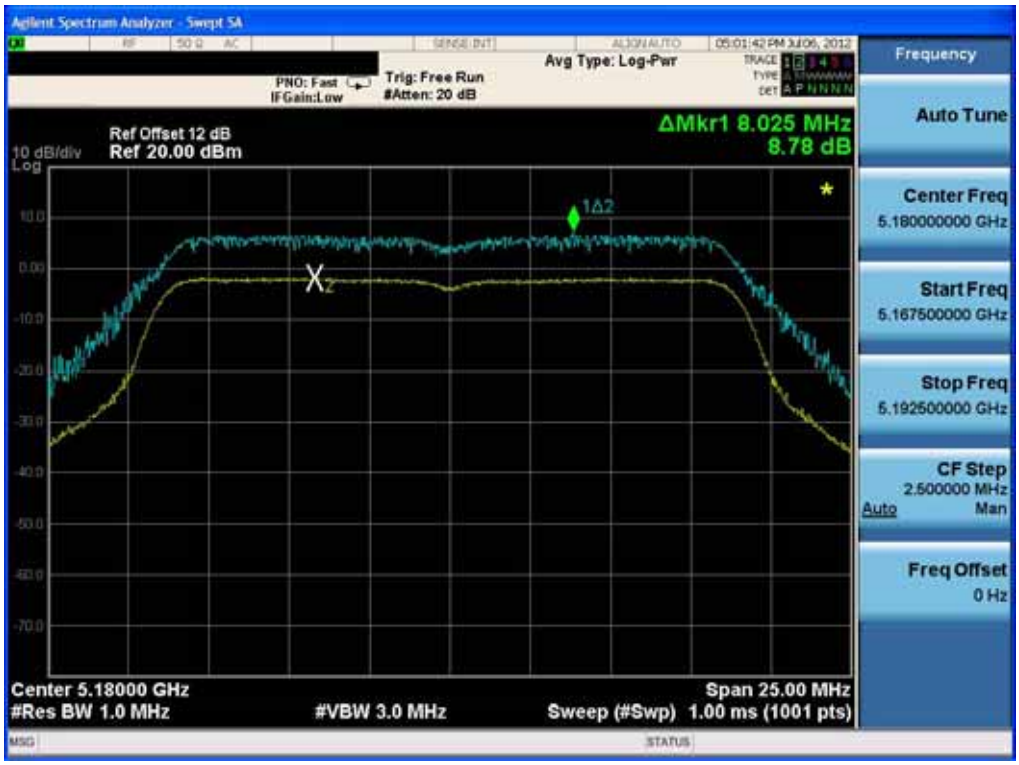
Peak Excursion Ratio (802.11a-CH 120)

Peak Excursion Ratio (802.11a-CH 140)



20 MHz BW

Peak Excursion Ratio (802.11n-CH 36)



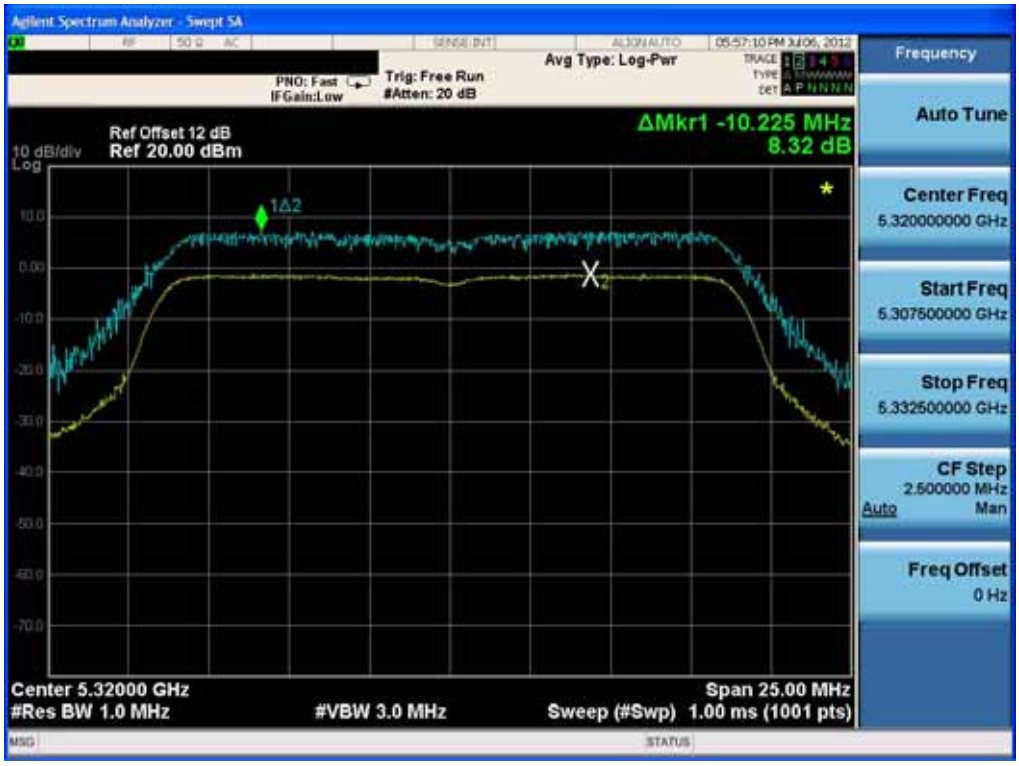
Peak Excursion Ratio (802.11n-CH 40)

Peak Excursion Ratio (802.11n-CH 48)

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)

40 MHz BW

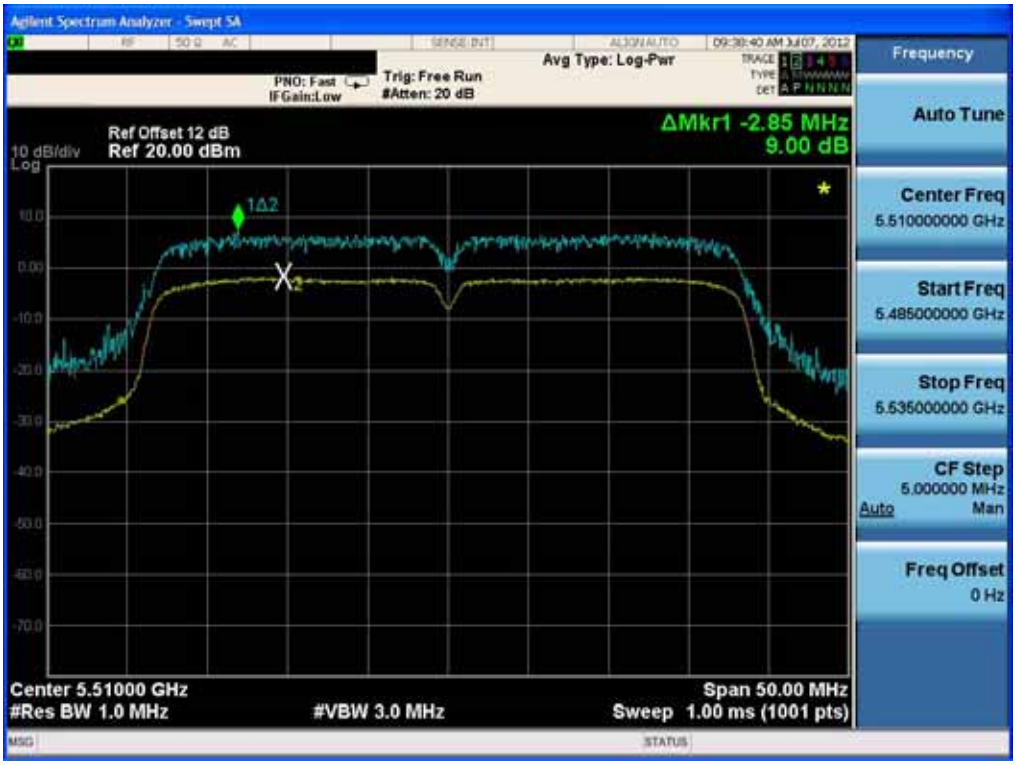
Peak Excursion Ratio (802.11n-CH 38)

Peak Excursion Ratio (802.11n-CH 46)

Peak Excursion Ratio (802.11n-CH 54)

Peak Excursion Ratio (802.11n-CH 62)

Peak Excursion Ratio (802.11n-CH 102)



Peak Excursion Ratio (802.11n-CH 118)

Peak Excursion Ratio (802.11n-CH 134)

8.5 FREQUENCY STABILITY.

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

OPERATING FREQUENCY: 5,200,000,000 Hz
CHANNEL: 40
REFERENCE VOLTAGE: 3.7 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.7	+20(Ref)	5 200 016	16.0
100%		-30	5 200 018	18.3
100%		-20	5 199 982	-17.6
100%		-10	5 199 987	-13.0
100%		0	5 200 019	19.1
100%		+10	5 200 013	12.7
100%		+30	5 200 024	24.2
100%		+40	5 200 021	21.0
100%		+50	5 199 978	-22.0
115%	3.3	+20	5 200 023	23.0
Batt. Endpoint	4.7	+20	5 200 019	19.0

OPERATING FREQUENCY: 5,300,000,000 Hz

CHANNEL: 60

REFERENCE VOLTAGE: 3.7 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.7	+20(Ref)	5 300 015	15.2
100%		-30	5 300 010	10.2
100%		-20	5 300 019	18.6
100%		-10	5 300 024	24.0
100%		0	5 300 023	23.4
100%		+10	5 300 024	24.0
100%		+30	5 299 989	-11.3
100%		+40	5 300 019	19.3
100%		+50	5 300 018	17.8
115%	3.3	+20	5 300 020	20.0
Batt. Endpoint	4.7	+20	5 299 979	-20.6

OPERATING FREQUENCY: 5,600,000,000 Hz

CHANNEL: 120

REFERENCE VOLTAGE: 3.7 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.7	+20(Ref)	5 600 016	15.6
100%		-30	5 600 015	14.6
100%		-20	5 600 019	18.7
100%		-10	5 600 021	20.9
100%		0	5 600 022	22.2
100%		+10	5 600 017	16.8
100%		+30	5 600 012	12.4
100%		+40	5 600 020	19.7
100%		+50	5 599 989	-10.6
115%	3.3	+20	5 599 985	-14.6
Batt. Endpoint	4.7	+20	5 600 018	18.0

8.6 RADIATED MEASUREMENT.

8.6.1 RADIATED SPURIOUS EMISSIONS.

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

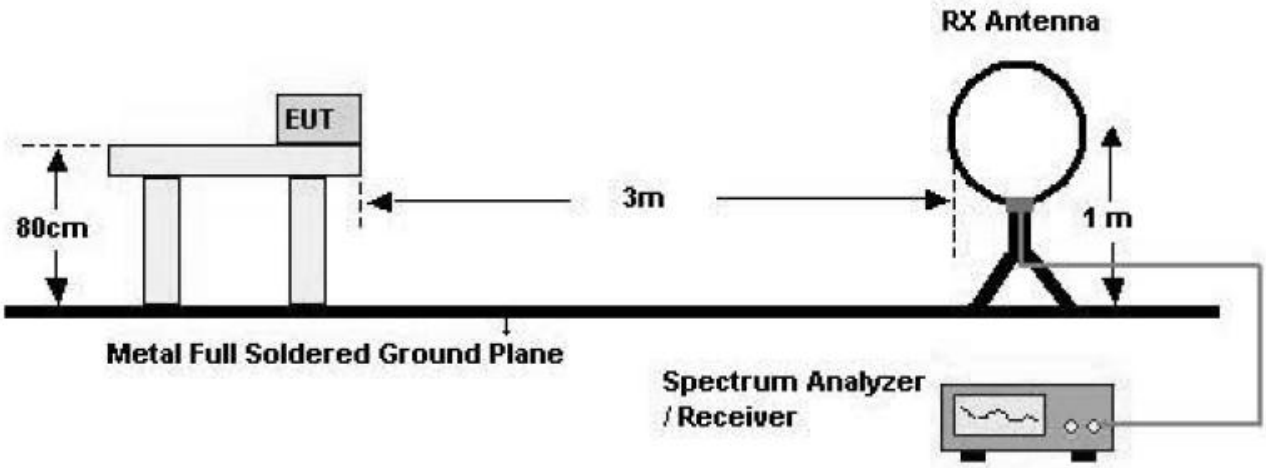
Frequency (MHz)	Field Strength (uV/m)	Measurement Distance (m)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

▣ §15.407, KDB 789033

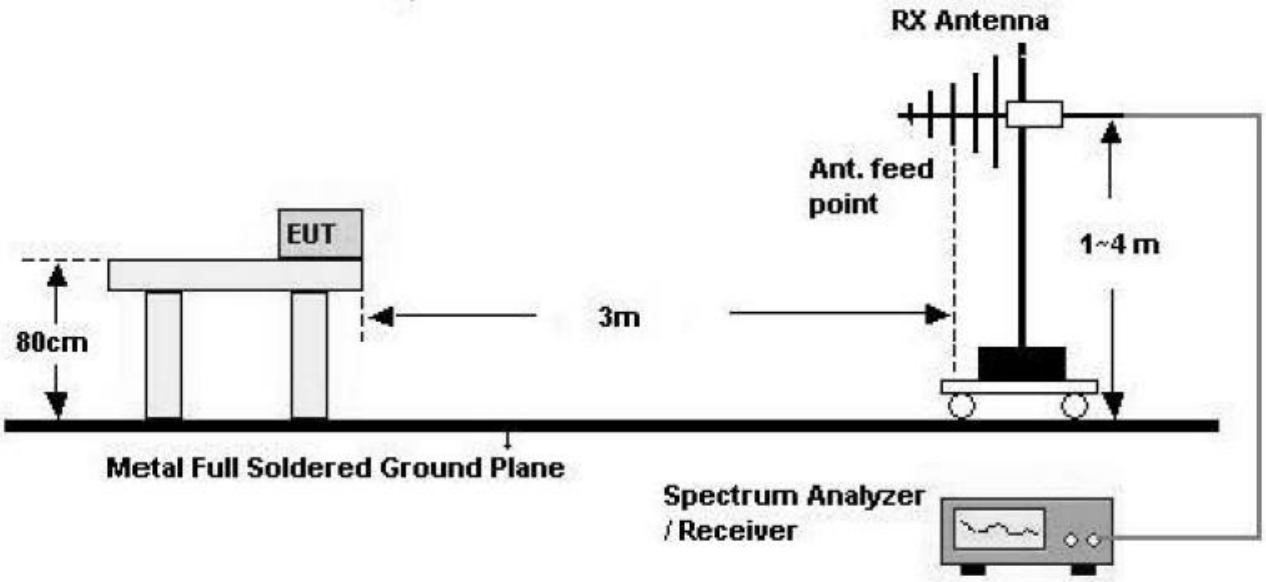
All harmonics that do not lie in a restricted band are subject to a peak limit of -27 dBm/MHz. At a distance of 3 meters the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2 dB to the EIRP limit of -27 dBm/MHz to obtain the limit for out of band spurious emissions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

Test Configuration

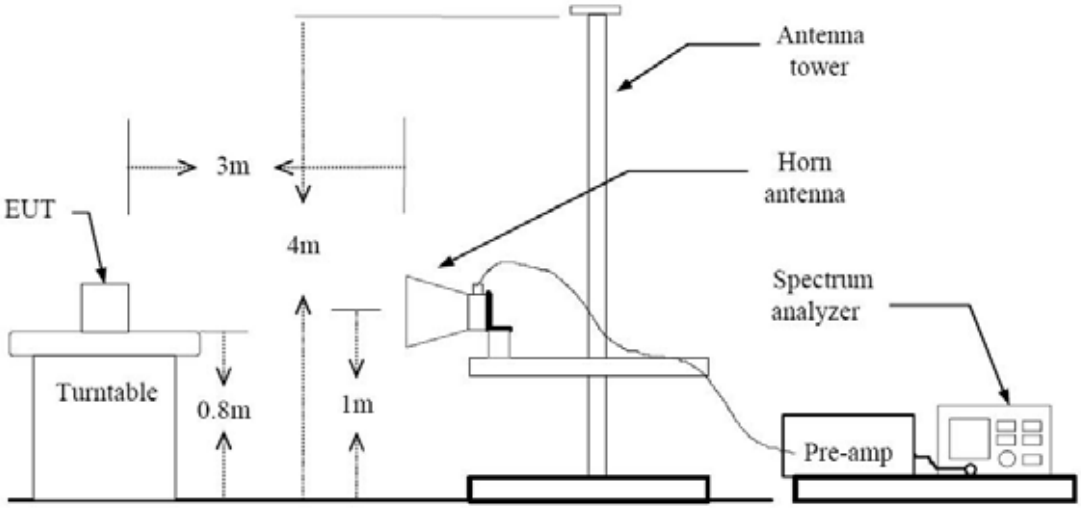
Below 30 MHz



30 MHz - 1 GHz



Above 1 GHz



TEST PROCEDURE

1. The EUT is placed on a turntable, which is 0.8 m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3 m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.

TEST RESULTS

9 kHz – 30MHz

Operation Mode: Normal Mode

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
㎒	dB㎶	dB /m	dB	(H/V)	dB㎶/m	dB㎶/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
㎒	dB㎶	dB /m	dB	(H/V)	dB㎶/m	dB㎶/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

Normal Battery Cover:

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10360	44.24	9.30	V	53.54	68.2	14.66	PK
10360	36.73	9.30	V	46.03	54.0	7.97	AV
15540	44.45	15.04	V	59.49	74.0	14.51	PK
15540	30.84	15.04	V	45.88	54.0	8.12	AV
10360	44.27	9.30	H	53.57	68.2	14.63	PK
10360	35.64	9.30	H	44.94	54.0	9.06	AV
15540	44.42	15.04	H	59.46	74.0	14.54	PK
15540	30.81	15.04	H	45.85	54.0	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5200 MHz
Channel No.	40 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10400	43.29	9.60	V	52.89	68.20	15.31	PK
10400	34.84	9.60	V	44.44	54.00	9.56	AV
15600	44.76	14.81	V	59.57	74.00	14.43	PK
15600	31.04	14.81	V	45.85	54.00	8.15	AV
10400	42.93	9.60	H	52.53	68.20	15.67	PK
10400	33.29	9.60	H	42.89	54.00	11.11	AV
15600	44.06	14.81	H	58.87	74.00	15.13	PK
15600	30.82	14.81	H	45.63	54.00	8.37	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5240 MHz
Channel No.	48 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10480	42.64	9.83	V	52.47	68.20	15.73	PK
10480	33.48	9.83	V	43.31	54.00	10.69	AV
15720	45.81	14.83	V	60.64	74.00	13.36	PK
15720	32.13	14.83	V	46.96	54.00	7.04	AV
10480	43.25	9.83	H	53.08	68.20	15.12	PK
10480	34.00	9.83	H	43.83	54.00	10.17	AV
15720	45.60	14.83	H	60.43	74.00	13.57	PK
15720	32.05	14.83	H	46.88	54.00	7.12	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 (i.e.: 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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Extended Battery Cover:

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10360	42.73	9.30	V	52.03	68.20	16.17	PK
10360	33.33	9.30	V	42.63	54.00	11.37	AV
15540	44.41	15.04	V	59.45	74.00	14.55	PK
15540	30.78	15.04	V	45.82	54.00	8.18	AV
10360	42.26	9.30	H	51.56	68.20	16.64	PK
10360	33.38	9.30	H	42.68	54.00	11.32	AV
15540	44.03	15.04	H	59.07	74.00	14.93	PK
15540	30.80	15.04	H	45.84	54.00	8.16	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5200 MHz
Channel No.	40 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10400	41.80	9.60	V	51.40	68.20	16.80	PK
10400	31.39	9.60	V	40.99	54.00	13.01	AV
15600	44.77	14.81	V	59.58	74.00	14.42	PK
15600	31.00	14.81	V	45.81	54.00	8.19	AV
10400	42.01	9.60	H	51.61	68.20	16.59	PK
10400	32.35	9.60	H	41.95	54.00	12.05	AV
15600	44.67	14.81	H	59.48	74.00	14.52	PK
15600	30.97	14.81	H	45.78	54.00	8.22	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5240 MHz
Channel No.	48 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10480	42.47	9.83	V	52.30	68.20	15.90	PK
10480	31.54	9.83	V	41.37	54.00	12.63	AV
15720	45.97	14.83	V	60.80	74.00	13.20	PK
15720	32.18	14.83	V	47.01	54.00	6.99	AV
10480	41.79	9.83	H	51.62	68.20	16.58	PK
10480	31.59	9.83	H	41.42	54.00	12.58	AV
15720	45.68	14.83	H	60.51	74.00	13.49	PK
15720	32.19	14.83	H	47.02	54.00	6.98	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 (i.e.: 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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Wireless Battery Cover:

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10360	43.59	9.30	V	52.89	68.20	15.31	PK
10360	35.61	9.30	V	44.91	54.00	9.09	AV
15540	43.95	15.04	V	58.99	74.00	15.01	PK
15540	30.82	15.04	V	45.86	54.00	8.14	AV
10360	42.38	9.30	H	51.68	68.20	16.52	PK
10360	32.97	9.30	H	42.27	54.00	11.73	AV
15540	45.36	15.04	H	60.40	74.00	13.60	PK
15540	30.84	15.04	H	45.88	54.00	8.12	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5200 MHz
Channel No.	40 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10400	42.61	9.60	V	52.21	68.20	15.99	PK
10400	33.70	9.60	V	43.30	54.00	10.70	AV
15600	44.11	14.81	V	58.92	74.00	15.08	PK
15600	31.04	14.81	V	45.85	54.00	8.15	AV
10400	41.74	9.60	H	51.34	68.20	16.86	PK
10400	31.29	9.60	H	40.89	54.00	13.11	AV
15600	43.90	14.81	H	58.71	74.00	15.29	PK
15600	31.01	14.81	H	45.82	54.00	8.18	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5240 MHz
Channel No.	48 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10480	42.92	9.83	V	52.75	68.20	15.45	PK
10480	33.08	9.83	V	42.91	54.00	11.09	AV
15720	45.98	14.83	V	60.81	74.00	13.19	PK
15720	32.23	14.83	V	47.06	54.00	6.94	AV
10480	42.08	9.83	H	51.91	68.20	16.29	PK
10480	31.47	9.83	H	41.30	54.00	12.70	AV
15720	45.76	14.83	H	60.59	74.00	13.41	PK
15720	32.26	14.83	H	47.09	54.00	6.91	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 (i.e.: 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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Normal Battery Cover:

Band :	UNII 1
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5190 MHz
Channel No.	38 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10380	42.56	9.43	V	51.99	68.20	16.21	PK
10380	33.60	9.43	V	43.03	54.00	10.97	AV
15570	43.83	14.93	V	58.76	74.00	15.24	PK
15570	30.84	14.93	V	45.77	54.00	8.23	AV
10380	41.86	9.43	H	51.29	68.20	16.91	PK
10380	32.56	9.43	H	41.99	54.00	12.01	AV
15570	44.20	14.93	H	59.13	74.00	14.87	PK
15570	30.83	14.93	H	45.76	54.00	8.24	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done all data rate in 802.11n_40 MHz BW. Worst case is 13.5 Mbps in 802.11n_40 MHz BW.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
8. We have done normal battery cover, extended battery cover and wireless charging cover. In case of 802.11n_40 MHz BW_5 GHz band, worst case is normal battery cover.

Band :	UNII 1
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5230 MHz
Channel No.	46 Ch

Frequency [MHz]	Reading dBuV	AN.+CL-Amp G. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
10460	43.40	9.72	V	53.12	68.20	15.08	PK
10460	34.73	9.72	V	44.45	54.00	9.55	AV
15690	45.44	14.81	V	60.25	74.00	13.75	PK
15690	31.83	14.81	V	46.64	54.00	7.36	AV
10460	41.73	9.72	H	51.45	68.20	16.75	PK
10460	31.48	9.72	H	41.20	54.00	12.80	AV
15690	45.39	14.81	H	60.20	74.00	13.80	PK
15690	31.86	14.81	H	46.67	54.00	7.33	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done all data rate in 802.11n_40 MHz BW. Worst case is 13.5 Mbps in 802.11n_40 MHz BW.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
8. We have done normal battery cover, extended battery cover and wireless charging cover. In case of 802.11n_40 MHz BW_5 GHz band, worst case is normal battery cover.

Normal Battery Cover:

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	43.43	9.86	V	53.29	68.20	14.91	PK
10520	34.12	9.86	V	43.98	54.00	10.02	AV
15780	45.93	14.94	V	60.87	74.00	13.13	PK
15780	31.97	14.94	V	46.91	54.00	7.09	AV
10520	43.14	9.86	H	53.00	68.20	15.20	PK
10520	33.79	9.86	H	43.65	54.00	10.35	AV
15780	45.27	14.94	H	60.21	74.00	13.79	PK
15780	31.97	14.94	H	46.91	54.00	7.09	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. 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	43.19	9.35	V	52.54	68.20	15.66	PK
10600	33.81	9.35	V	43.16	54.00	10.84	AV
15900	44.25	14.89	V	59.14	74.00	14.86	PK
15900	30.48	14.89	V	45.37	54.00	8.63	AV
10600	42.87	9.35	H	52.22	68.20	15.98	PK
10600	32.42	9.35	H	41.77	54.00	12.23	AV
15900	44.08	14.89	H	58.97	74.00	15.03	PK
15900	30.49	14.89	H	45.38	54.00	8.62	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. 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	43.22	9.46	V	52.68	74.00	21.32	PK
10640	34.34	9.46	V	43.80	54.00	10.20	AV
15960	44.12	15.06	V	59.18	74.00	14.82	PK
15960	30.18	15.06	V	45.24	54.00	8.76	AV
10640	43.19	9.46	H	52.65	74.00	21.35	PK
10640	33.75	9.46	H	43.21	54.00	10.79	AV
15960	43.09	15.06	H	58.15	74.00	15.85	PK
15960	30.22	15.06	H	45.28	54.00	8.72	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Extended Battery Cover:

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	41.94	9.86	V	51.80	68.20	16.40	PK
10520	31.75	9.86	V	41.61	54.00	12.39	AV
15780	45.42	14.94	V	60.36	74.00	13.64	PK
15780	31.98	14.94	V	46.92	54.00	7.08	AV
10520	42.63	9.86	H	52.49	68.20	15.71	PK
10520	31.98	9.86	H	41.84	54.00	12.16	AV
15780	46.08	14.94	H	61.02	74.00	12.98	PK
15780	31.99	14.94	H	46.93	54.00	7.07	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. 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	41.78	9.35	V	51.13	68.20	17.07	PK
10600	30.26	9.35	V	39.61	54.00	14.39	AV
15900	43.90	14.89	V	58.79	74.00	15.21	PK
15900	30.49	14.89	V	45.38	54.00	8.62	AV
10600	42.84	9.35	H	52.19	68.20	16.01	PK
10600	31.60	9.35	H	40.95	54.00	13.05	AV
15900	43.86	14.89	H	58.75	74.00	15.25	PK
15900	30.54	14.89	H	45.43	54.00	8.57	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. 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	42.65	9.46	V	52.11	74.00	21.89	PK
10640	31.91	9.46	V	41.37	54.00	12.63	AV
15960	43.40	15.06	V	58.46	74.00	15.54	PK
15960	30.26	15.06	V	45.32	54.00	8.68	AV
10640	42.34	9.46	H	51.80	74.00	22.20	PK
10640	32.21	9.46	H	41.67	54.00	12.33	AV
15960	44.28	15.06	H	59.34	74.00	14.66	PK
15960	30.24	15.06	H	45.30	54.00	8.70	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Wireless Battery Cover:

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	42.80	9.86	V	52.66	68.20	15.54	PK
10520	33.20	9.86	V	43.06	54.00	10.94	AV
15780	45.69	14.94	V	60.63	74.00	13.37	PK
15780	32.06	14.94	V	47.00	54.00	7.00	AV
10520	42.35	9.86	H	52.21	68.20	15.99	PK
10520	31.94	9.86	H	41.80	54.00	12.20	AV
15780	45.79	14.94	H	60.73	74.00	13.27	PK
15780	32.05	14.94	H	46.99	54.00	7.01	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. 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	41.74	9.35	V	51.09	68.20	17.11	PK
10600	31.73	9.35	V	41.08	54.00	12.92	AV
15900	43.53	14.89	V	58.42	74.00	15.58	PK
15900	30.55	14.89	V	45.44	54.00	8.56	AV
10600	42.53	9.35	H	51.88	68.20	16.32	PK
10600	31.39	9.35	H	40.74	54.00	13.26	AV
15900	43.56	14.89	H	58.45	74.00	15.55	PK
15900	30.57	14.89	H	45.46	54.00	8.54	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. 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	42.00	9.46	V	51.46	74	22.54	PK
10640	31.40	9.46	V	40.86	54	13.14	AV
15960	43.71	15.06	V	58.77	74	15.23	PK
15960	30.31	15.06	V	45.37	54	8.63	AV
10640	43.13	9.46	H	52.59	74	21.41	PK
10640	32.12	9.46	H	41.58	54	12.42	AV
15960	43.58	15.06	H	58.64	74	15.36	PK
15960	30.29	15.06	H	45.35	54	8.65	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Normal Battery Cover:

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	42.30	9.84	V	52.14	68.2	16.06	PK
10540	32.08	9.84	V	41.92	54.0	12.08	AV
15810	45.39	14.93	V	60.32	74.0	13.68	PK
15810	31.46	14.93	V	46.39	54.0	7.61	AV
10540	41.90	9.84	H	51.74	68.2	16.46	PK
10540	30.36	9.84	H	40.20	54.0	13.80	AV
15810	45.04	14.93	H	59.97	74.0	14.03	PK
15810	31.37	14.93	H	46.30	54.0	7.70	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done all data rate in 802.11n_40 MHz BW. Worst case is 13.5 Mbps in 802.11n_40 MHz BW.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
8. We have done normal battery cover, extended battery cover and wireless charging cover. In case of 802.11n_40 MHz BW_5 GHz band, worst case is normal battery cover.

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	41.83	9.32	V	51.15	68.2	17.05	PK
10620	30.89	9.32	V	40.21	54.0	13.79	AV
15930	43.52	14.98	V	58.50	74.0	15.50	PK
15930	30.10	14.98	V	45.08	54.0	8.92	AV
10620	40.99	9.32	H	50.31	68.2	17.89	PK
10620	29.17	9.32	H	38.49	54.0	15.51	AV
15930	43.70	14.98	H	58.68	74.0	15.32	PK
15930	30.44	14.98	H	45.42	54.0	8.58	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done all data rate in 802.11n_40 MHz BW. Worst case is 13.5 Mbps in 802.11n_40 MHz BW.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
8. We have done normal battery cover, extended battery cover and wireless charging cover. In case of 802.11n_40 MHz BW_5 GHz band, worst case is normal battery cover.

Normal Battery Cover:

Band :	UNII 3
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	44.38	10.54	V	54.92	74.0	19.08	PK
11000	38.33	10.54	V	48.87	54.0	5.13	AV
16500	46.11	16.37	V	62.48	68.2	5.72	PK
16500	31.60	16.37	V	47.97	54.0	6.03	AV
11000	44.32	10.54	H	54.86	74.0	19.14	PK
11000	38.52	10.54	H	49.06	54.0	4.94	AV
16500	44.78	16.37	H	61.15	68.2	7.05	PK
16500	31.60	16.37	H	47.97	54.0	6.03	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
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	44.46	10.16	V	54.62	74.0	19.38	PK
11200	39.73	10.16	V	49.89	54.0	4.11	AV
16800	43.25	18.26	V	61.51	68.2	6.69	PK
16800	31.56	18.26	V	49.82	54.0	4.18	AV
11200	45.10	10.16	H	55.26	74.0	18.74	PK
11200	40.17	10.16	H	50.33	54.0	3.67	AV
16800	44.82	18.26	H	63.08	68.2	5.12	PK
16800	31.59	18.26	H	49.85	54.0	4.15	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
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	43.33	10.21	V	53.54	74.0	20.46	PK
11400	37.27	10.21	V	47.48	54.0	6.52	AV
17100	44.86	18.86	V	63.72	68.2	4.48	PK
17100	31.31	18.86	V	50.17	54.0	3.83	AV
11400	42.29	10.21	H	52.50	74.0	21.50	PK
11400	34.91	10.21	H	45.12	54.0	8.88	AV
17100	44.50	18.86	H	63.36	68.2	4.84	PK
17100	31.35	18.86	H	50.21	54.0	3.79	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Extended Battery Cover:

Band :	UNII 3
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	44.38	10.54	V	54.92	74.0	19.08	PK
11000	37.84	10.54	V	48.38	54.0	5.62	AV
16500	45.24	16.37	V	61.61	68.2	6.59	PK
16500	31.58	16.37	V	47.95	54.0	6.05	AV
11000	43.82	10.54	H	54.36	74.0	19.64	PK
11000	35.57	10.54	H	46.11	54.0	7.89	AV
16500	45.10	16.37	H	61.47	68.2	6.73	PK
16500	31.62	16.37	H	47.99	54.0	6.01	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
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	43.82	10.16	V	53.98	74.0	20.02	PK
11200	37.99	10.16	V	48.15	54.0	5.85	AV
16800	44.99	18.26	V	63.25	68.2	4.95	PK
16800	31.67	18.26	V	49.93	54.0	4.07	AV
11200	44.54	10.16	H	54.70	74.0	19.30	PK
11200	37.40	10.16	H	47.56	54.0	6.44	AV
16800	45.54	18.26	H	63.80	68.2	4.40	PK
16800	31.66	18.26	H	49.92	54.0	4.08	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
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	43.89	10.21	V	54.10	74.0	19.90	PK
11400	38.50	10.21	V	48.71	54.0	5.29	AV
17100	44.80	18.86	V	63.66	68.2	4.54	PK
17100	31.36	18.86	V	50.22	54.0	3.78	AV
11400	41.44	10.21	H	51.65	74.0	22.35	PK
11400	33.55	10.21	H	43.76	54.0	10.24	AV
17100	44.41	18.86	H	63.27	68.2	4.93	PK
17100	31.40	18.86	H	50.26	54.0	3.74	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Wireless Battery Cover:

Band :	UNII 3
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	43.98	10.54	V	54.52	74.0	19.48	PK
11000	37.94	10.54	V	48.48	54.0	5.52	AV
16500	45.47	16.37	V	61.84	68.2	6.36	PK
16500	31.62	16.37	V	47.99	54.0	6.01	AV
11000	44.10	10.54	H	54.64	74.0	19.36	PK
11000	37.60	10.54	H	48.14	54.0	5.86	AV
16500	45.24	16.37	H	61.61	68.2	6.59	PK
16500	31.65	16.37	H	48.02	54.0	5.98	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
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	44.08	10.16	V	54.24	74.0	19.76	PK
11200	38.84	10.16	V	49.00	54.0	5.00	AV
16800	45.12	18.26	V	63.38	68.2	4.82	PK
16800	31.71	18.26	V	49.97	54.0	4.03	AV
11200	44.53	10.16	H	54.69	74.0	19.31	PK
11200	38.82	10.16	H	48.98	54.0	5.02	AV
16800	45.98	18.26	H	64.24	68.2	3.96	PK
16800	31.68	18.26	H	49.94	54.0	4.06	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Band :	UNII 3
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	43.78	10.21	V	53.99	74.0	20.01	PK
11400	38.50	10.21	V	48.71	54.0	5.29	AV
17100	44.87	18.86	V	63.73	68.2	4.47	PK
17100	31.38	18.86	V	50.24	54.0	3.76	AV
11400	42.51	10.21	H	52.72	74.0	21.28	PK
11400	35.58	10.21	H	45.79	54.0	8.21	AV
17100	44.60	18.86	H	63.46	68.2	4.74	PK
17100	31.41	18.86	H	50.27	54.0	3.73	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done 802.11a, 802.11n_20 MHz BW test. Worst case is 6 Mbps in 802.11a.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Normal Battery Cover:

Band :	UNII 3
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	44.18	10.45	V	54.63	74.0	19.37	PK
11020	38.01	10.45	V	48.46	54.0	5.54	AV
16530	44.38	16.23	V	60.61	68.2	7.59	PK
16530	31.23	16.23	V	47.46	54.0	6.54	AV
11020	44.39	10.45	H	54.84	74.0	19.16	PK
11020	38.59	10.45	H	49.04	54.0	4.96	AV
16530	44.92	16.23	H	61.15	68.2	7.05	PK
16530	31.23	16.23	H	47.46	54.0	6.54	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done all data rate in 802.11n_40 MHz BW. Worst case is 13.5 Mbps in 802.11n_40 MHz BW.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
8. We have done normal battery cover, extended battery cover and wireless charging cover. In case of 802.11n_40 MHz BW_5 GHz band, worst case is normal battery cover.

Band :	UNII 3
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	44.24	10.19	V	54.43	74.0	19.57	PK
11180	39.22	10.19	V	49.41	54.0	4.59	AV
16770	44.23	17.30	V	61.53	68.2	6.67	PK
16770	31.01	17.30	V	48.31	54.0	5.69	AV
11180	43.61	10.19	H	53.80	74.0	20.20	PK
11180	38.48	10.19	H	48.67	54.0	5.33	AV
16770	44.76	17.30	H	62.06	68.2	6.14	PK
16770	31.44	17.30	H	48.74	54.0	5.26	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done all data rate in 802.11n_40 MHz BW. Worst case is 13.5 Mbps in 802.11n_40 MHz BW.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
8. We have done normal battery cover, extended battery cover and wireless charging cover. In case of 802.11n_40 MHz BW_5 GHz band, worst case is normal battery cover.

Band :	UNII 3
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	44.46	10.30	V	54.76	74.0	19.24	PK
11340	39.45	10.30	V	49.75	54.0	4.25	AV
17010	44.16	18.90	V	63.06	68.2	5.14	PK
17010	30.85	18.90	V	49.75	54.0	4.25	AV
11340	43.06	10.30	H	53.36	74.0	20.64	PK
11340	36.71	10.30	H	47.01	54.0	6.99	AV
17010	43.76	18.90	H	62.66	68.2	5.54	PK
17010	30.86	18.90	H	49.76	54.0	4.24	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. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
6. We have done all data rate in 802.11n_40 MHz BW. Worst case is 13.5 Mbps in 802.11n_40 MHz BW.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
8. We have done normal battery cover, extended battery cover and wireless charging cover. In case of 802.11n_40 MHz BW_5 GHz band, worst case is normal battery cover.

8.6.2 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)).

Normal Battery Cover:

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5150	59.91	4.18	H	64.09	74	9.91	PK
5150	42.26	4.18	H	46.44	54	7.56	AV
5150	62.89	4.18	V	67.07	74	6.93	PK
5150	43.92	4.18	V	48.10	54	5.90	AV

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	63.44	4.8	H	68.24	74.0	5.76	PK
5350	43.00	4.8	H	47.80	54.0	6.20	AV
5350	63.16	4.8	V	67.96	74.0	6.04	PK
5350	42.45	4.8	V	47.25	54.0	6.75	AV

Band :	UNII 3
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	61.30	5.04	H	66.34	68.2	1.86	PK
5460	41.60	5.04	H	46.64	54.0	7.36	AV
5460	62.74	5.04	V	67.78	68.2	0.42	PK
5460	42.92	5.04	V	47.96	54.0	6.04	AV

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + ATT
2. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
3. We have done 802.11a/n_20 MHz BW mode test. . Worst case of EUT is 6 Mbps in 802.11a.
4. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Extended Battery Cover:

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5150	58.84	4.18	H	63.02	74.0	10.98	PK
5150	42.20	4.18	H	46.38	54.0	7.62	AV
5150	61.35	4.18	V	65.53	74.0	8.47	PK
5150	43.68	4.18	V	47.86	54.0	6.14	AV

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	61.40	4.8	H	66.20	74.0	7.80	PK
5350	41.27	4.8	H	46.07	54.0	7.93	AV
5350	62.04	4.8	V	66.84	74.0	7.16	PK
5350	42.26	4.8	V	47.06	54.0	6.94	AV

Band :	UNII 3
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	60.6	5.04	H	65.64	68.2	2.56	PK
5460	41.16	5.04	H	46.20	54.0	7.80	AV
5460	60.30	5.04	V	65.34	68.2	2.86	PK
5460	42.13	5.04	V	47.17	54.0	6.83	AV

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + ATT
2. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
3. We have done 802.11a/n_20 MHz BW mode test. . Worst case of EUT is 6 Mbps in 802.11a.
4. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Wireless Battery Cover:

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5150	61.61	4.18	H	65.79	74.0	8.21	PK
5150	42.81	4.18	H	46.99	54.0	7.01	AV
5150	61.61	4.18	V	65.79	74.0	8.21	PK
5150	44.39	4.18	V	48.57	54.0	5.43	AV

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	60.94	4.8	H	65.74	74.0	8.26	PK
5350	41.54	4.8	H	46.34	54.0	7.66	AV
5350	61.54	4.8	V	66.34	74.0	7.66	PK
5350	42.42	4.8	V	47.22	54.0	6.78	AV

Band :	UNII 3
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	57.6	5.04	H	62.64	68.2	5.56	PK
5460	39.58	5.04	H	44.62	54.0	9.38	AV
5460	59.96	5.04	V	65.00	68.2	3.20	PK
5460	40.82	5.04	V	45.86	54.0	8.14	AV

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + ATT
2. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
3. We have done 802.11a/n_20 MHz BW mode test. . Worst case of EUT is 6 Mbps in 802.11a.
4. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Normal Battery Cover:

Band :	UNII 1
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5190 MHz
Channel No.	38 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5150	63.91	4.18	H	68.09	74.0	5.91	PK
5150	42.35	4.18	H	46.53	54.0	7.47	AV
5150	67.58	4.18	V	71.76	74.0	2.24	PK
5150	44.56	4.18	V	48.74	54.0	5.26	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	63.43	4.8	H	68.23	74.0	5.77	PK
5350	40.54	4.8	H	45.34	54.0	8.66	AV
5350	66.78	4.8	V	71.58	74.0	2.42	PK
5350	42.49	4.8	V	47.29	54.0	6.71	AV

Band :	UNII 3
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	56.55	5.04	H	61.59	74.0	12.41	PK
5460	39.50	5.04	H	44.54	54.0	9.46	AV
5460	59.46	5.04	V	64.50	74.0	9.50	PK
5460	40.83	5.04	V	45.87	54.0	8.13	AV

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + ATT
2. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
3. We have done 802.11n_40 MHz BW mode test. . Worst case of EUT is 13.5 Mbps in 802.11n_40 MHz BW.
4. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Extended Battery Cover:

Band :	UNII 1
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5190 MHz
Channel No.	38 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5150	65.17	4.18	H	69.35	74.0	4.65	PK
5150	43.38	4.18	H	47.56	54.0	6.44	AV
5150	67.20	4.18	V	71.38	74.0	2.62	PK
5150	44.77	4.18	V	48.95	54.0	5.05	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	62.42	4.8	H	67.22	74.0	6.78	PK
5350	40.78	4.8	H	45.58	54.0	8.42	AV
5350	64.90	4.8	V	69.70	74.0	4.30	PK
5350	41.63	4.8	V	46.43	54.0	7.57	AV

Band :	UNII 3
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	56.75	5.04	H	61.79	74.0	12.21	PK
5460	39.52	5.04	H	44.56	54.0	9.44	AV
5460	58.29	5.04	V	63.33	74.0	10.67	PK
5460	40.74	5.04	V	45.78	54.0	8.22	AV

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + ATT
2. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
3. We have done 802.11n_40 MHz BW mode test. . Worst case of EUT is 13.5 Mbps in 802.11n_40 MHz BW.
4. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Wireless Battery Cover:

Band :	UNII 1
Operation Mode:	802.11n_40 MHz BW
Transfer Rate:	13.5 Mbps
Operating Frequency	5190 MHz
Channel No.	38 Ch

Frequency [MHz]	Reading dBuV	AN.+CL+AMP+ATT. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
5150	64.13	4.18	H	68.31	74.0	5.69	PK
5150	42.85	4.18	H	47.03	54.0	6.97	AV
5150	64.79	4.18	V	68.97	74.0	5.03	PK
5150	43.99	4.18	V	48.17	54.0	5.83	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	62.04	4.8	H	66.84	74.0	7.16	PK
5350	39.97	4.8	H	44.77	54.0	9.23	AV
5350	62.97	4.8	V	67.77	74.0	6.23	PK
5350	40.81	4.8	V	45.61	54.0	8.39	AV

Band :	UNII 3
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	55.11	5.04	H	60.15	74.0	13.85	PK
5460	39.38	5.04	H	44.42	54.0	9.58	AV
5460	56.54	5.04	V	61.58	74.0	12.42	PK
5460	39.07	5.04	V	44.11	54.0	9.89	AV

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + ATT
2. Spectrum setting:
   a. Peak Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 3 MHz.
   b. AV Setting 1 GHz – 40 GHz, RBW = 1 MHz, VBW = 10 Hz.
3. We have done 802.11n_40 MHz BW mode test. . Worst case of EUT is 13.5 Mbps in 802.11n_40 MHz BW.
4. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

8.7 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.
5. We are performed the AC Power Line Conducted Emission test for 6 Mbps, Ch.120 and 802.11a mode in UNII 3. Because 802.11a mode in UNII 3 is worst case.

▣ RESULT PLOTS

Conducted Emissions (Line 1)

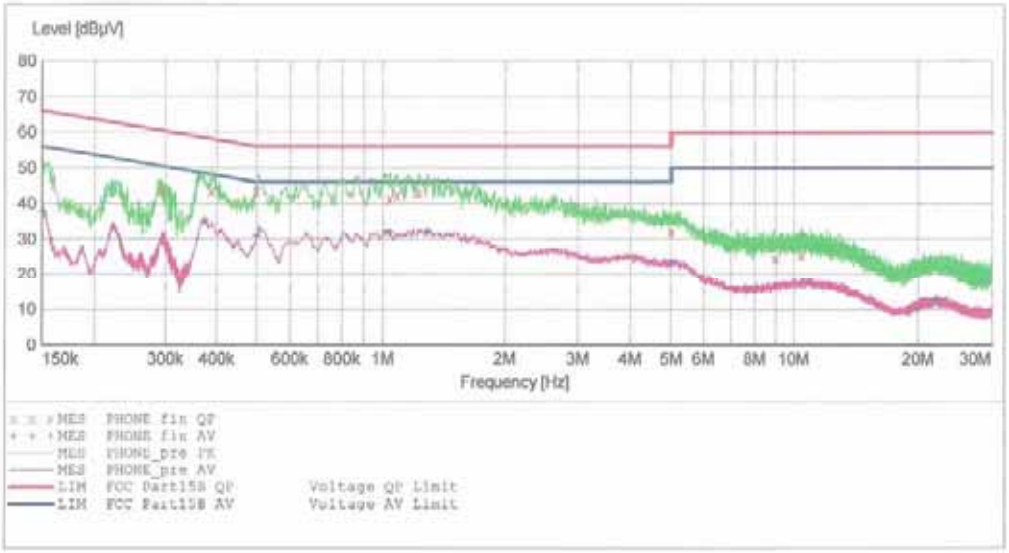
HCT

EMC

```
EUT:                    ADR930LVW
Manufacturer:           PANTECH
Operating Condition:    WLAN MODE(5 GHz)
Test Site:              SHIELD ROOM
Operator:               JS LEE
Test Specification:     FCC PART 15 B
Comment:                H
```

SCAN TABLE: "FCC PART 15 B(H)"

```
Short Description:                  FCC PART 15 CLASS B
Start       Stop        Step        Detector   Meas.     IF       Transducer
Frequency   Frequency   Width                  Time      Bandw.
150.0 kHz   500.0 kHz   1.0 kHz     MaxPeak    10.0 ms   9 kHz    None
                                    Average
500.0 kHz   5.0 MHz     4.0 kHz     MaxPeak    10.0 ms   9 kHz    None
                                    Average
5.0 MHz     30.0 MHz    4.0 kHz     MaxPeak    10.0 ms   9 kHz    None
                                    Average
```



MEASUREMENT RESULT: "PHONE_fin QP"

7/18/2012 10:25AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.293010	43.60	9.8	60	16.9	---	---
0.388010	43.60	9.8	58	14.5	---	---
0.500000	43.70	9.8	56	12.3	---	---
1.044000	41.30	9.8	56	14.7	---	---
1.084000	42.60	9.8	56	13.4	---	---
1.228000	43.10	9.8	56	12.9	---	---
5.000000	32.20	10.2	56	23.8	---	---
9.000000	24.60	10.4	60	35.4	---	---
10.452000	25.60	10.5	60	34.4	---	---

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MEASUREMENT RESULT: "PHONE_fin AV"

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Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.151010	37.90	9.8	56	18.0	---	---
0.373010	35.10	9.8	48	13.3	---	---
0.500000	30.90	9.8	46	15.1	---	---
0.508000	32.80	9.8	46	13.2	---	---
1.044000	31.80	9.8	46	14.2	---	---
1.288000	32.10	9.8	46	13.9	---	---
5.000000	23.30	10.2	46	22.7	---	---
10.976000	17.50	10.6	50	32.5	---	---
22.032000	12.40	11.9	50	37.6	---	---

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Conducted Emissions (Line 2)

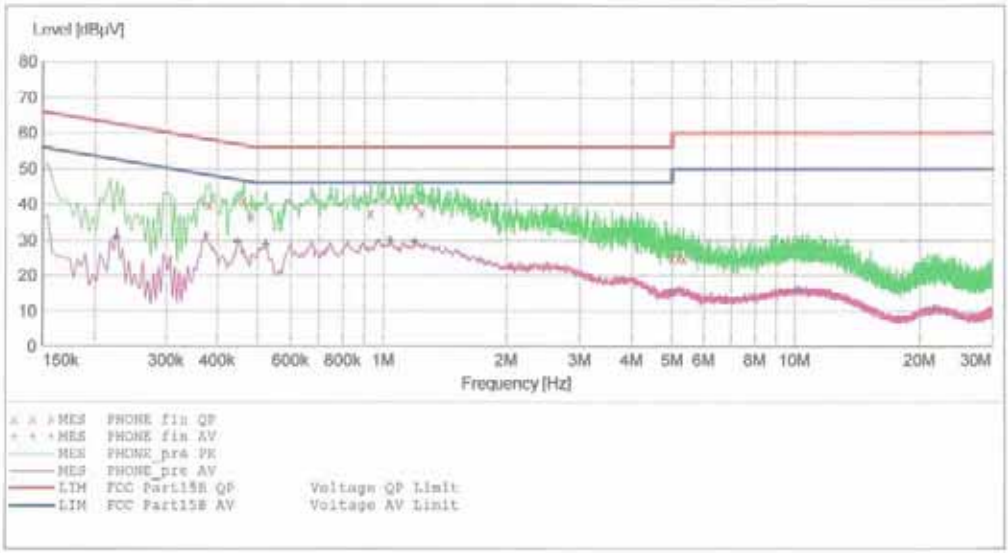
HCT

EMC

```
EUT:                    ADR930LVW
Manufacturer:           PANTECH
Operating Condition:    WLAN MODE(5 GHz)
Test Site:              SHIELD ROOM
Operator:               JS LEE
Test Specification:     FCC PART 15 CLASS B
Comment:                N
```

SCAN TABLE: "FCC PART 15 B(N)"

```
  Short Description:                FCC PART 15 CLASS B
  Start       Stop        Step        Detector   Meas.      IF       Transducer
  Frequency   Frequency   Width                  Time       Bandw.
  150.0 kHz   500.0 kHz   4.0 kHz     MaxPeak    10.0 ms    9 kHz    None
                                      Average
  500.0 kHz   5.0 MHz     4.0 kHz     MaxPeak    10.0 ms    9 kHz    None
                                      Average
  5.0 MHz     30.0 MHz    4.0 kHz     MaxPeak    10.0 ms    9 kHz    None
                                      Average
```



MEASUREMENT RESULT: "PHONE_fin QP"

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Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.382010	39.80	10.0	58	18.4	---	---
0.462010	41.00	10.0	57	15.7	---	---
0.482010	36.60	10.0	56	19.7	---	---
0.932000	37.60	10.0	56	18.4	---	---
1.204000	39.70	10.0	56	16.3	---	---
1.240000	37.60	10.0	56	18.4	---	---
5.000000	25.00	10.4	56	31.0	---	---
5.200000	25.20	10.4	60	34.8	---	---
5.352000	24.90	10.4	60	35.1	---	---

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MEASUREMENT RESULT: "PHONE_fin AV"

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Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.226010	30.90	10.0	53	21.7	---	---
0.374010	31.50	10.0	48	16.9	---	---
0.446010	29.60	10.0	47	17.4	---	---
0.524000	29.00	10.0	46	17.0	---	---
1.044000	29.90	10.0	46	16.1	---	---
1.192000	29.60	10.0	46	16.4	---	---
5.000000	15.60	10.4	46	30.4	---	---
10.216000	16.00	10.7	50	34.0	---	---
21.600000	10.70	12.2	50	39.3	---	---

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9. LIST OF TEST EQUIPMENT

Manufacturer	Model / Equipment	Calibration Interval	Calibration Due	Serial No.
Rohde & Schwarz	ENV216/ LISN	Annual	02/09/2013	100073
Schwarzbeck	VULB 9168/ TRILOG Antenna	Biennial	02/09/2013	200
Rohde & Schwarz	ESI 40 / EMI TEST RECEIVER	Annual	05/03/2013	831564103
Rohde & Schwarz	FSV 40 / Signal Analyzer	Annual	06/11/2013	1307.9002k40-100931-NK
Agilent	E4440A/ Spectrum Analyzer	Annual	05/02/2013	US45303008
Agilent	N9020A/ SIGNAL ANALYZER	Annual	09/23/2012	MY51110020
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	09/19/2012	10094
MITEQ	AMF-6B-180265-35-10P / POWER AMP	Annual	04/16/2013	667624
CERNEX	CBL26405040 / POWER AMP	Annual	04/16/2013	19660
Schwarzbeck	BBHA 9120D/ Horn Antenna	Biennial	10/17/2013	937
Schwarzbeck	BBHA9170 / Horn Antenna(15 GHz ~ 40 GHz)	Biennial	10/26/2012	BBHA9170342
Rohde & Schwarz	FSP / Spectrum Analyzer	Annual	02/09/2013	839117/011
Agilent	E4416A /Power Meter	Annual	11/07/2012	GB41291412
Agilent	E9327A /POWER SENSOR	Annual	05/02/2013	MY4442009
Wainwright Instrument	WHF3.3/18G-10EF / High Pass Filter	Annual	05/02/2013	1
Wainwright Instrument	WHNX6.0/26.5G-6SS / High Pass Filter	Annual	05/02/2013	1
Wainwright Instrument	WHNX7.0/18G-8SS / High Pass Filter	Annual	05/02/2013	29
Wainwright Instrument	WRCJ2400/2483.5-2370/2520-60/14SS / Band Reject Filter	Annual	05/02/2013	1
Hewlett Packard	11636B/Power Divider	Annual	11/07/2012	11377
Hewlett Packard	11667B / Power Splitter	Annual	06/05/2013	05001
DIGITAL	EP-3010 /DC POWER SUPPLY	Annual	11/07/2012	3110117
ITECH	IT6720 / DC POWER SUPPLY	Annual	11/07/2012	010002156287001199
Rohde & Schwarz	CBT / BLUETOOTH TESTER	Annual	05/02/2013	100422
EMCO	6502.LOOP ANTENNA	Biennial	01/11/2014	9009-2536
MITEQ	AMF-6D-001180-35-20P/ POWER AMP	Annual	12/26/2012	990893
Agilent	8493C / Attenuator(10 dB)	Annual	09/23/2012	76649
WEINSCHEL	2-3 / Attenuator(3 dB)	Annual	11/07/2013	BR0617