Test mode: IEEE 802.11n HT 40 MHz mode / 5190 ~ 5230MHz

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Margin	Result
Low	5190	-7.438	11	-18.438	PASS
High	5230	-5.762		-16.762	PASS

Test mode: IEEE 802.11n HT 40 MHz mode / 5755 ~ 5795MHz

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Margin	Result
Low	5755	-7.326	30	-37.326	PASS
High	5795	-6.884		-36.884	PASS

Test mode: IEEE 802.11ac 80 mode / 5210MHz

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Margin	Result
	5210	-11.125	11	-22.125	PASS

Test mode: IEEE 802.11ac 80 mode / 5775MHz

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Margin	Result
	5775	-10.094	30	-40.094	PASS

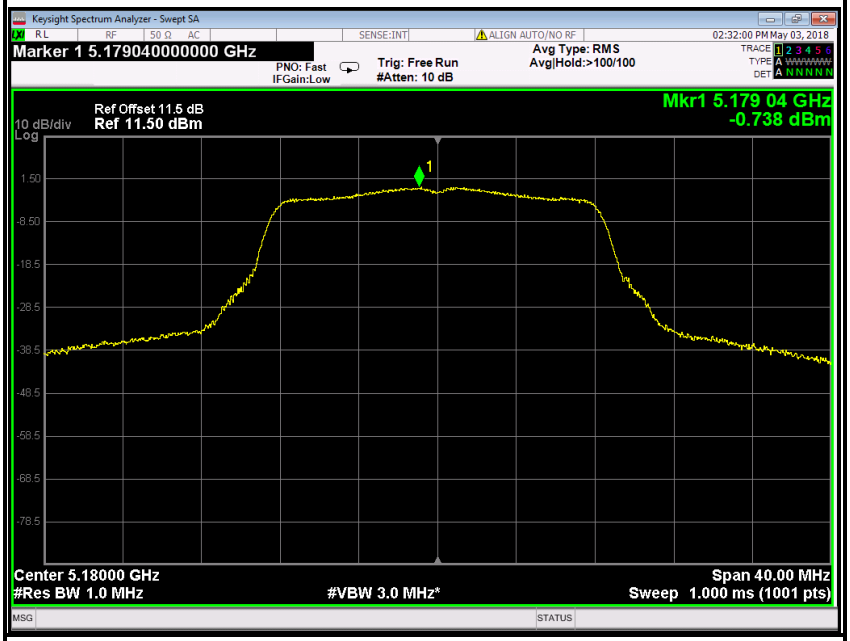
Remark:

The RBW factor = 10log10(500/470)=0.269 dB into test plots.

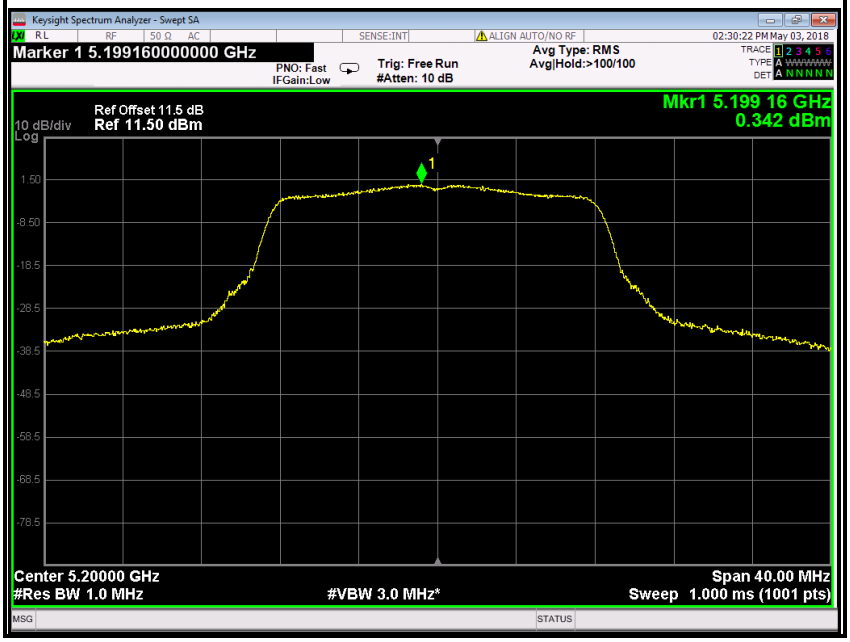
Test Plot

IEEE 802.11a mode / 5180 ~ 5240MHz

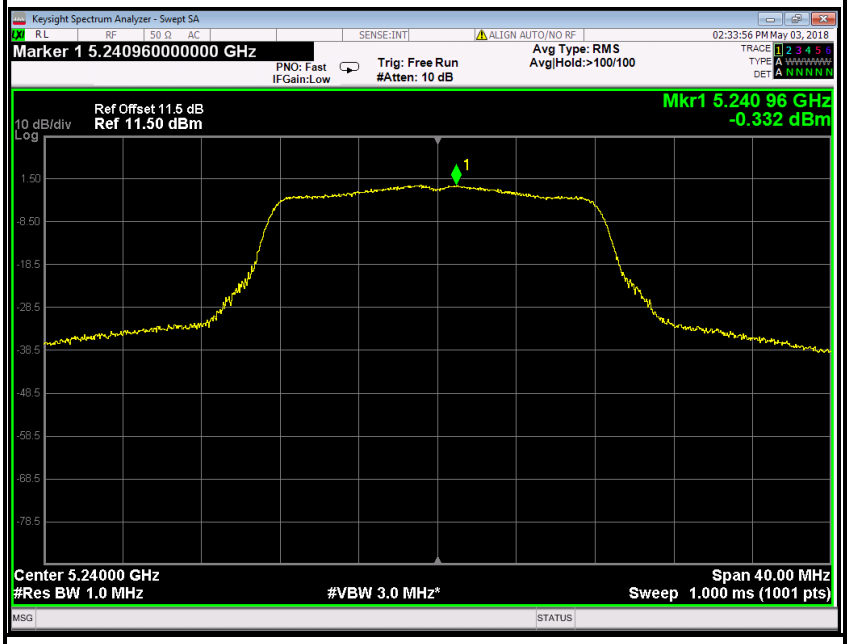
PPSD (CH Low)



PPSD (CH Mid)

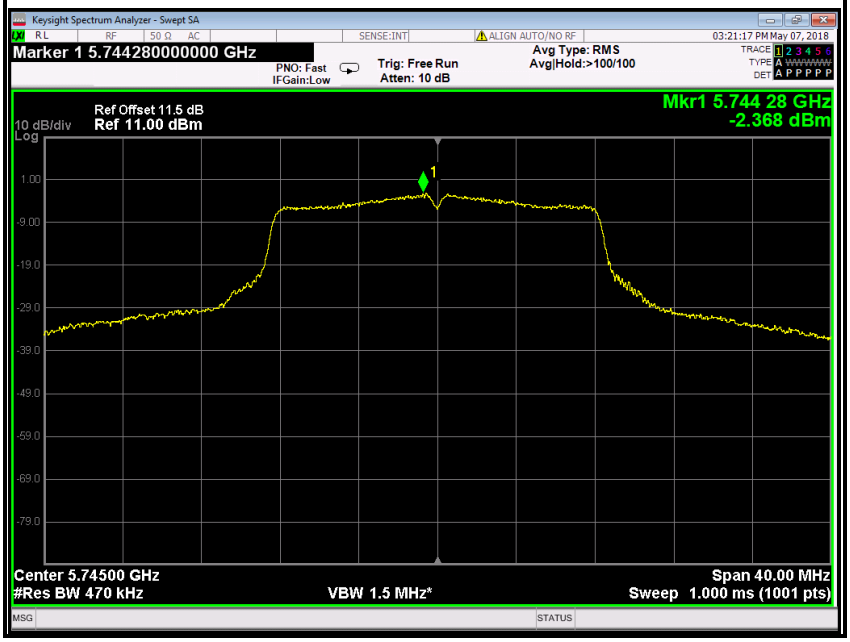


PPSD (CH High)

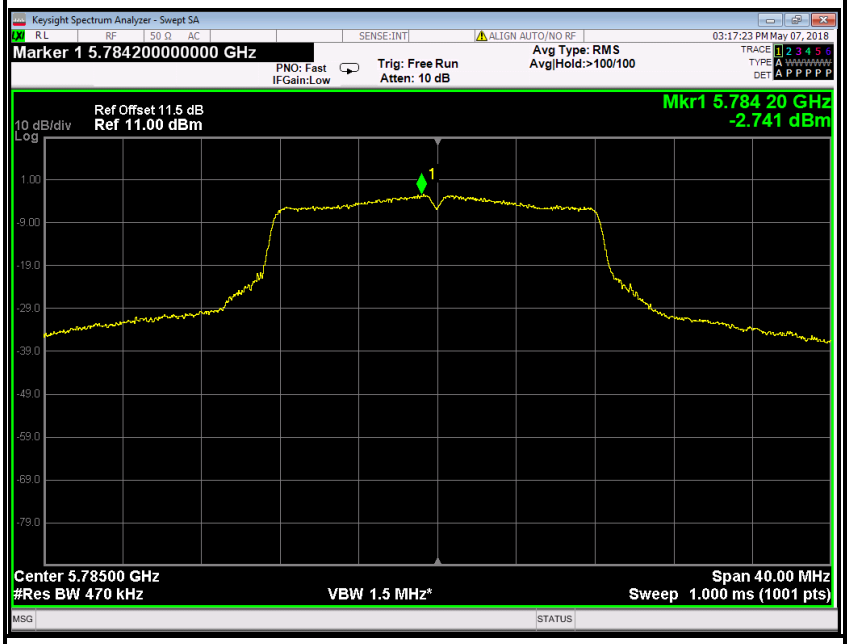


IEEE 802.11a mode / 5745 ~ 5825MHz

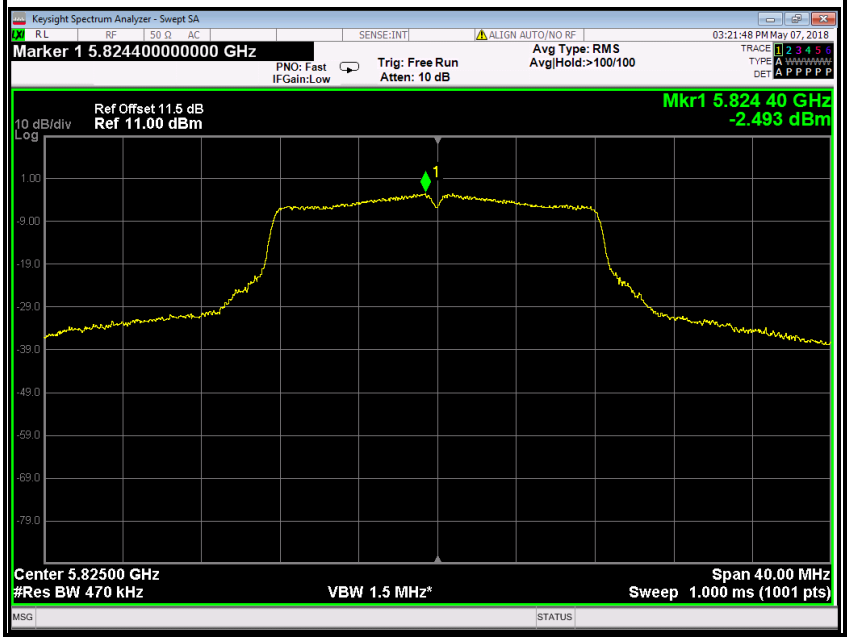
PPSD (CH Low)



PPSD (CH Mid)

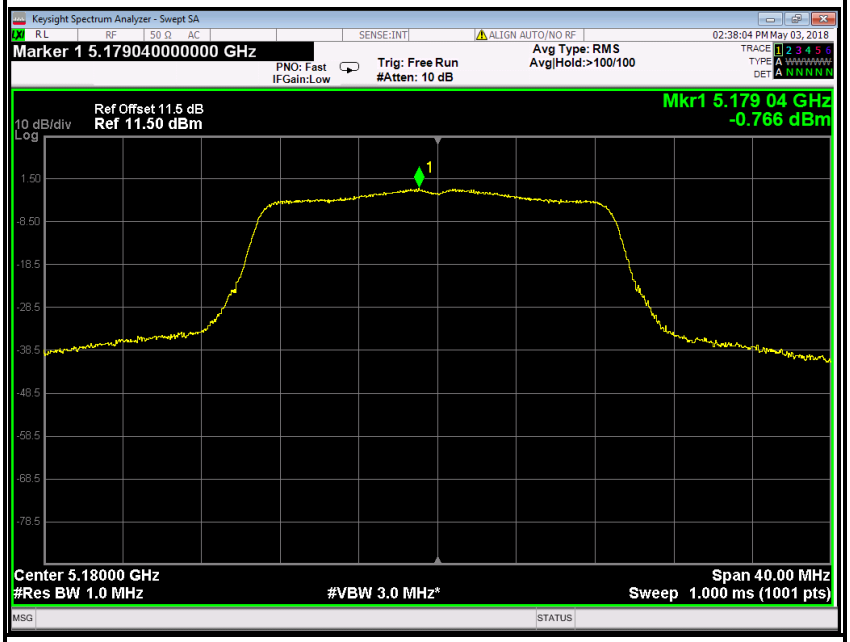


PPSD (CH High)

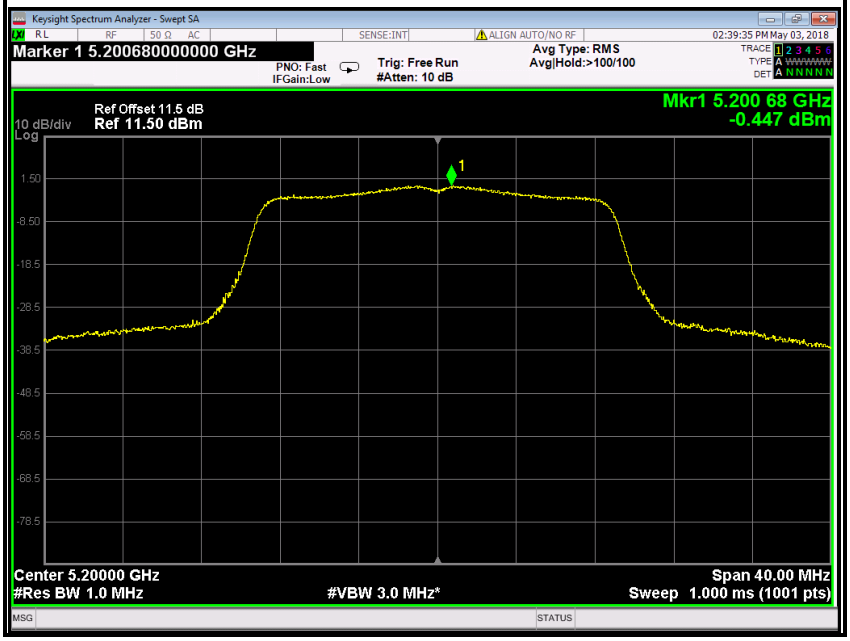


IEEE 802.11n HT 20 MHz mode / 5180 ~ 5240MHz

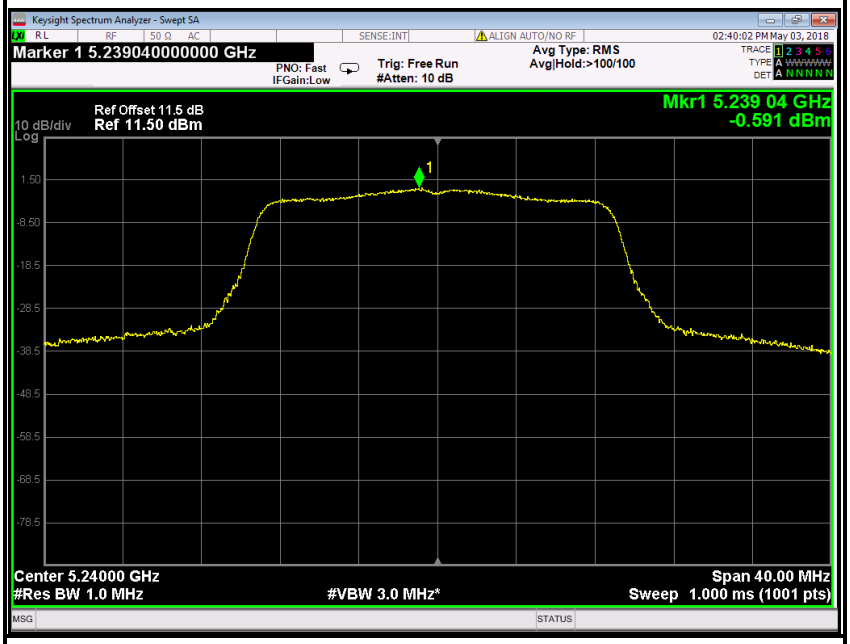
PPSD (CH Low)



PPSD (CH Mid)

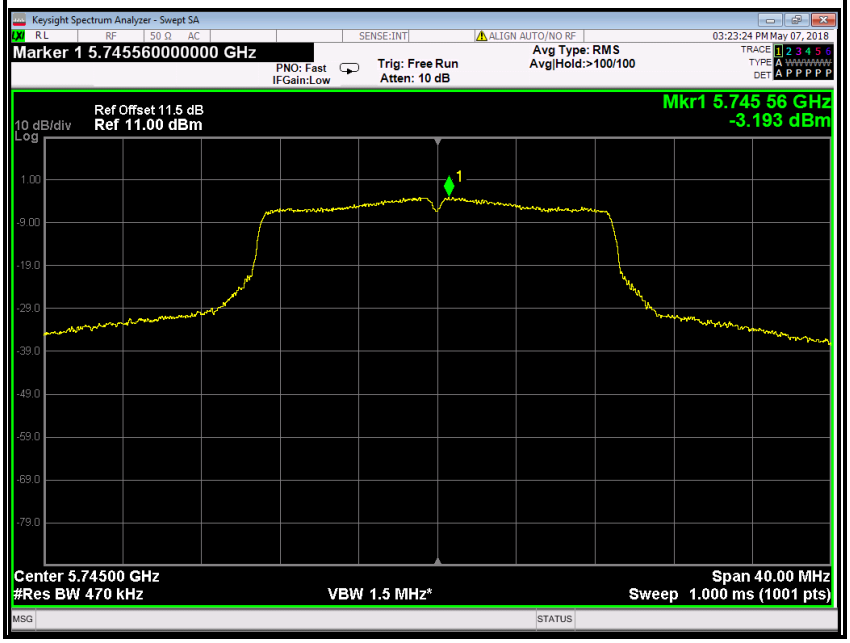


PPSD (CH High)

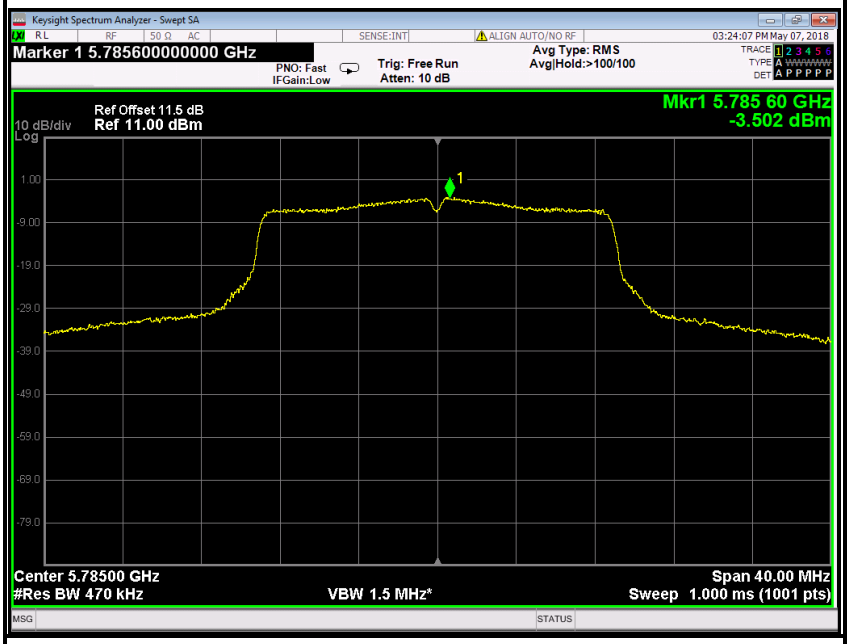


IEEE 802.11n HT 20 MHz mode / 5745 ~ 5825MHz

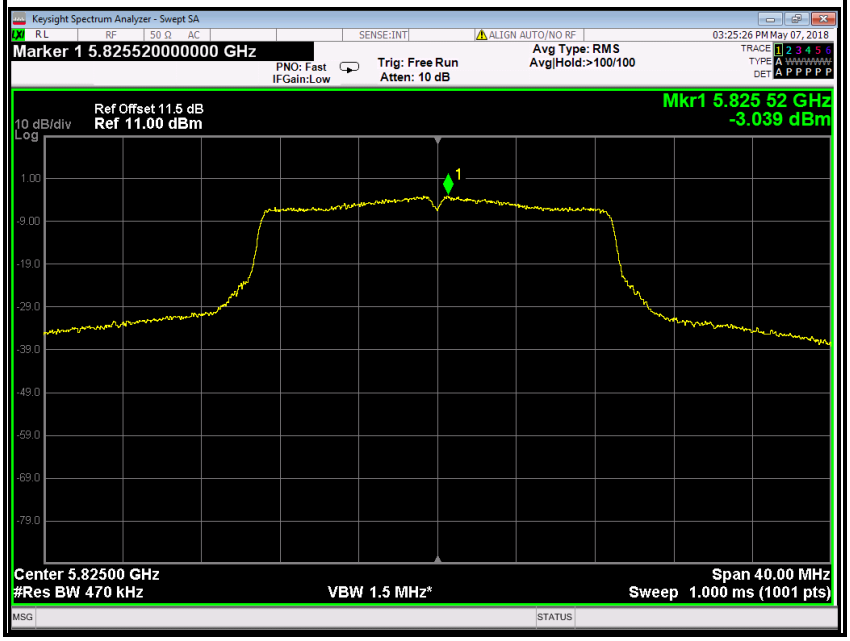
PPSD (CH Low)

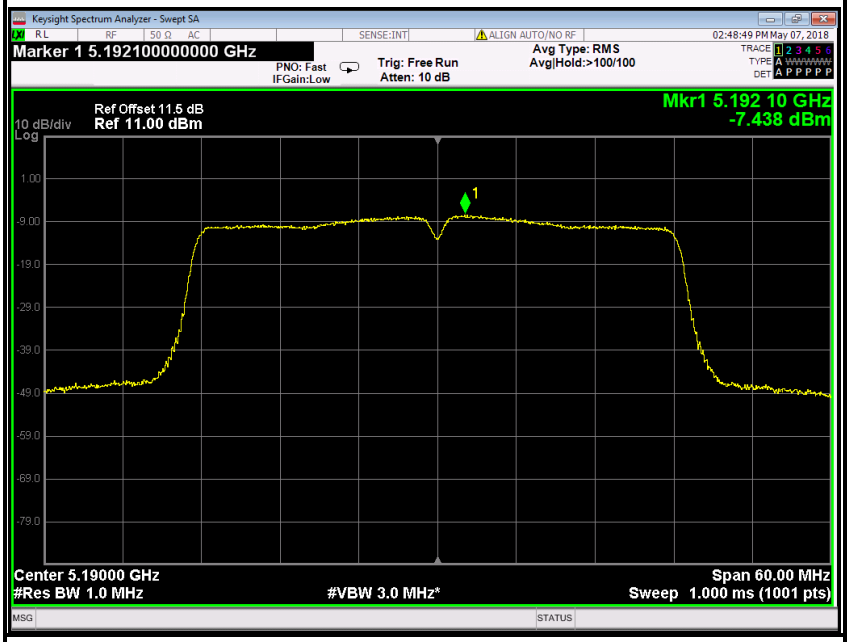
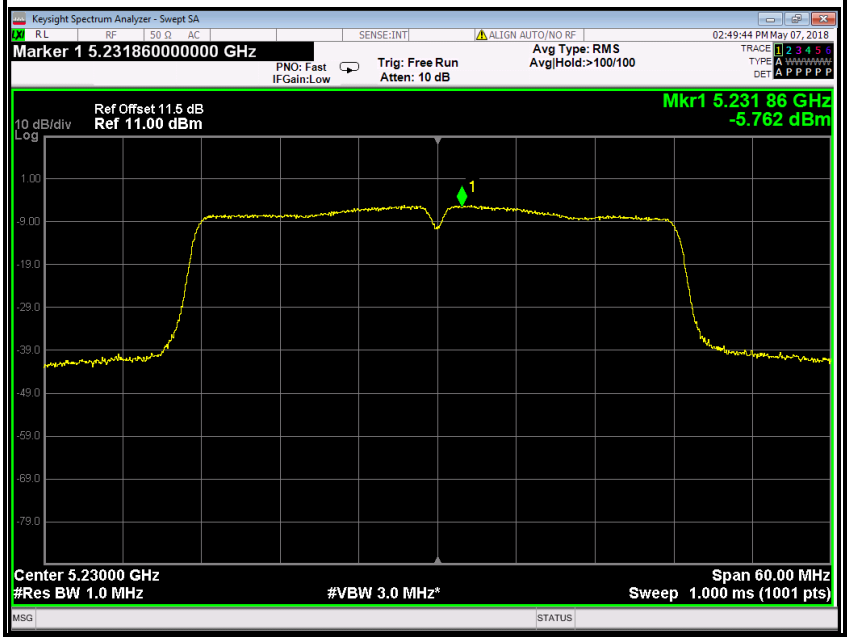


PPSD (CH Mid)



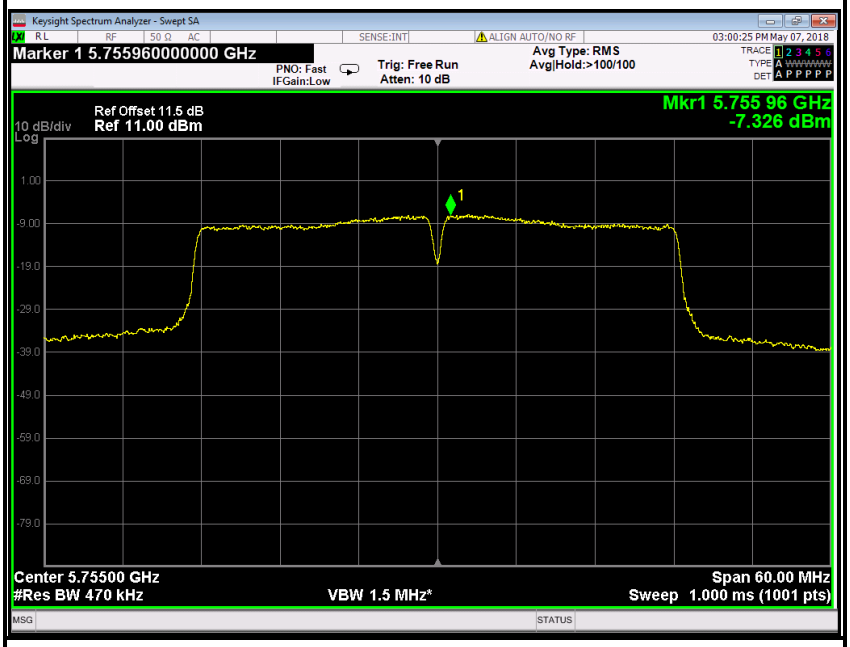
PPSD (CH High)



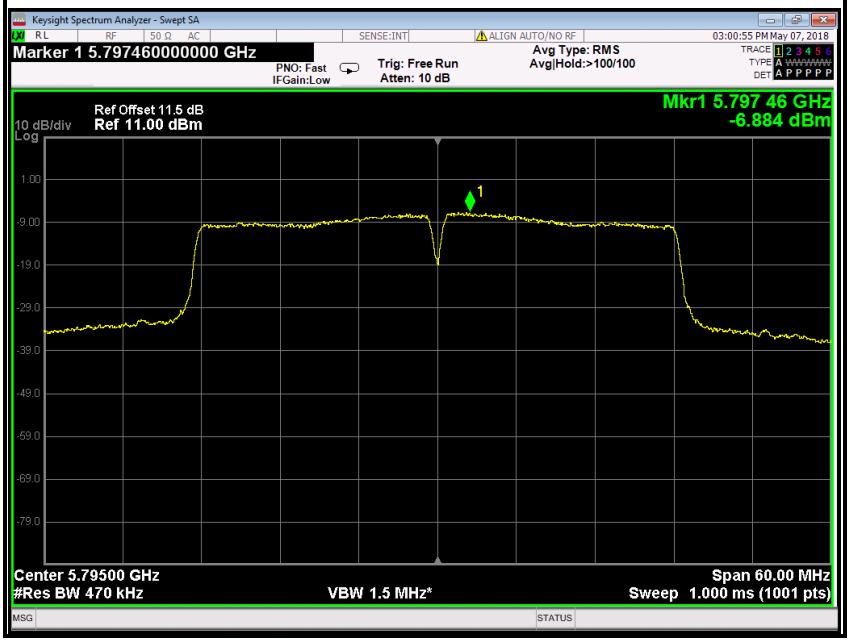
IEEE 802.11n HT 40 MHz mode / 5190 ~ 5230MHz
PPSD (CH Low)

PPSD (CH High)


IEEE 802.11n HT 40 MHz mode / 5755 ~ 5795MHz

PPSD (CH Low)

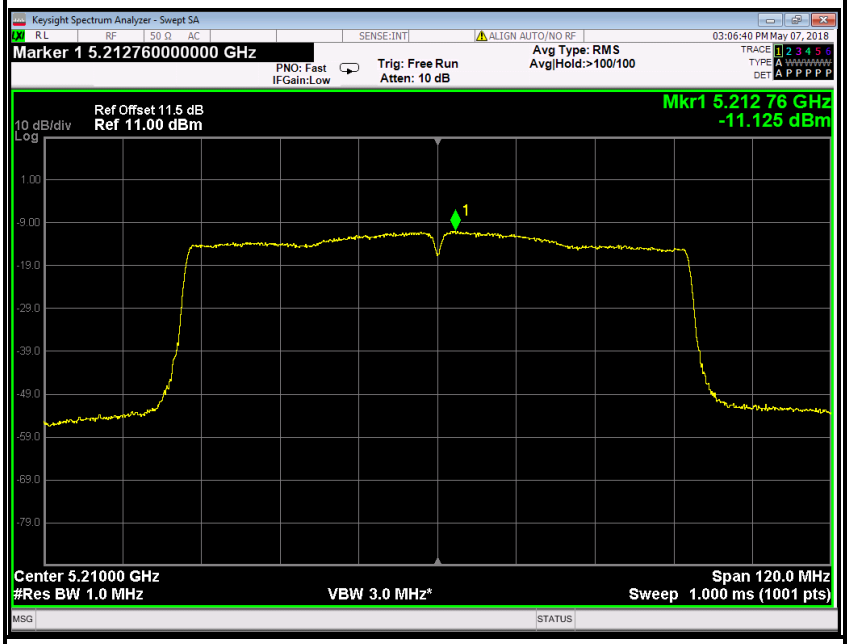


PPSD (CH High)



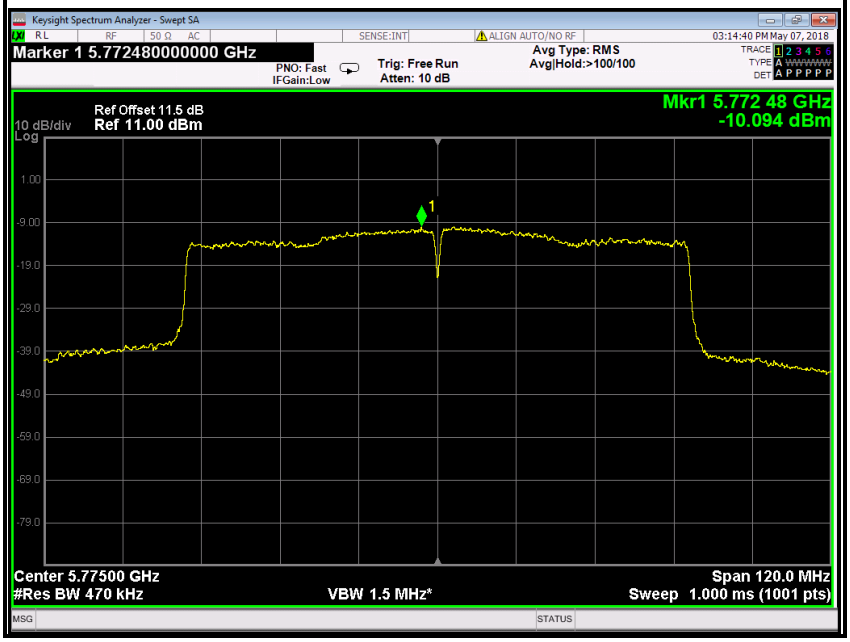
IEEE 802.11ac 80 mode / 5210MHz

PPSD



IEEE 802.11ac 80 mode / 5775MHz

PPSD



6.7 RADIATED UNDESIABLE EMISSION

6.7.1 LIMIT

1. According to §15.209(a), except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
30-88	100*	3
88-216	150*	3
216-960	200*	3
Above 960	500	3

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

2. In the emission table above, the tighter limit applies at the band edges.

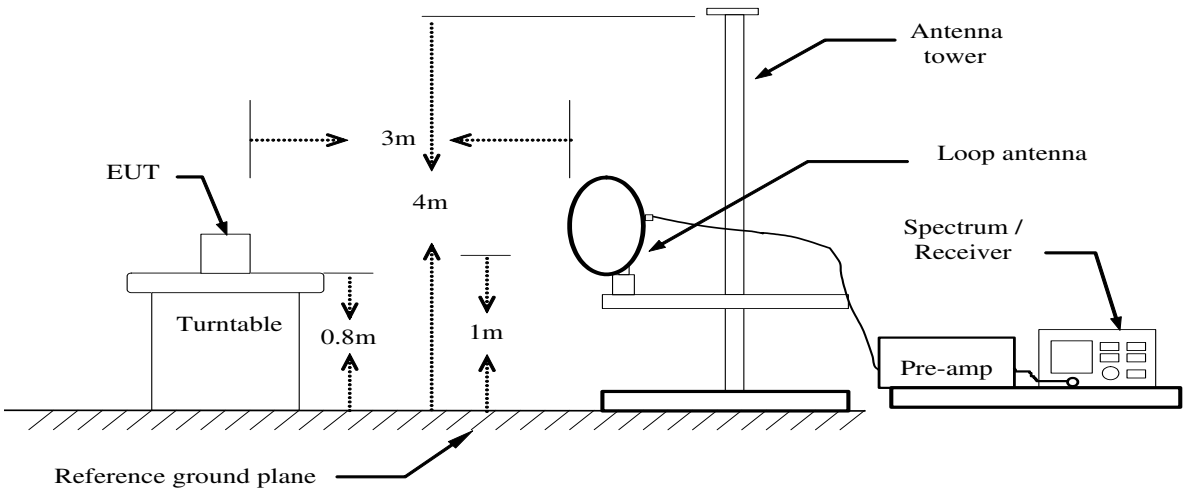
Frequency (MHz)	Field Strength (μV/m at 3-meter)	Field Strength (dBμV/m at 3-meter)
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

6.7.2 TEST INSTRUMENTS

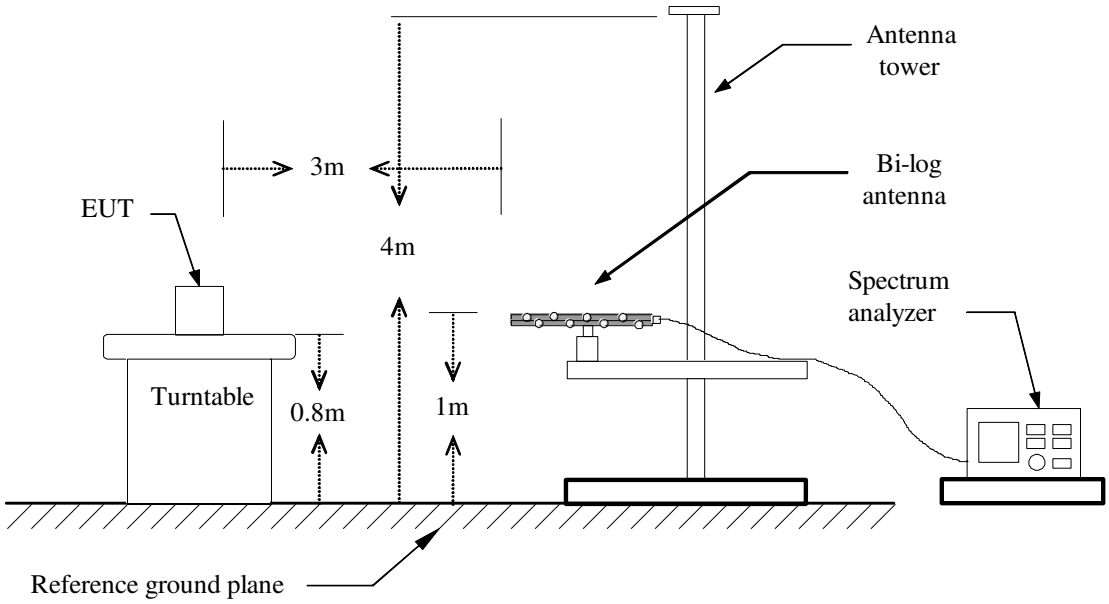
Radiated Emission Test Site 966（2）					
Name of Equipment	**Manufacturer**	**Model Number**	**Serial Number**	**Last Calibration**	**Due Calibration**
PSA Series Spectrum Analyzer	Agilent	N9010A	MY52221469	01/27/2018	01/26/2019
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI	100783	01/27/2018	01/26/2019
Amplifier	EMEC	EM330	060661	01/27/2018	01/26/2019
High Noise Amplifier	Agilent	8449B	3008A01838	01/27/2018	01/26/2019
Loop Antenna	COM-POWER	AL-130	121044	01/30/2018	01/29/2019
Bilog Antenna	SCHAFFNER	CBL6143	5082	02/21/2018	02/20/2019
Horn Antenna	SCHWARZBECK	BBHA9120	D286	01/27/2018	01/26/2019
Board-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170-497	01/24/2018	01/23/2019
Turn Table	N/A	N/A	N/A	N.C.R	N.C.R
Antenna Tower	SUNOL	TLT2	N/A	N.C.R	N.C.R
Controller	Sunol Sciences	SC104V	022310-1	N.C.R	N.C.R
Controller	CT	N/A	N/A	N.C.R	N.C.R
Temp. / Humidity Meter	Anymetre	JR913	N/A	01/29/2018	01/28/2019
Test S/W	FARAD	LZ-RF / CCS-SZ-3A2			

6.7.3 TEST CONFIGURATION

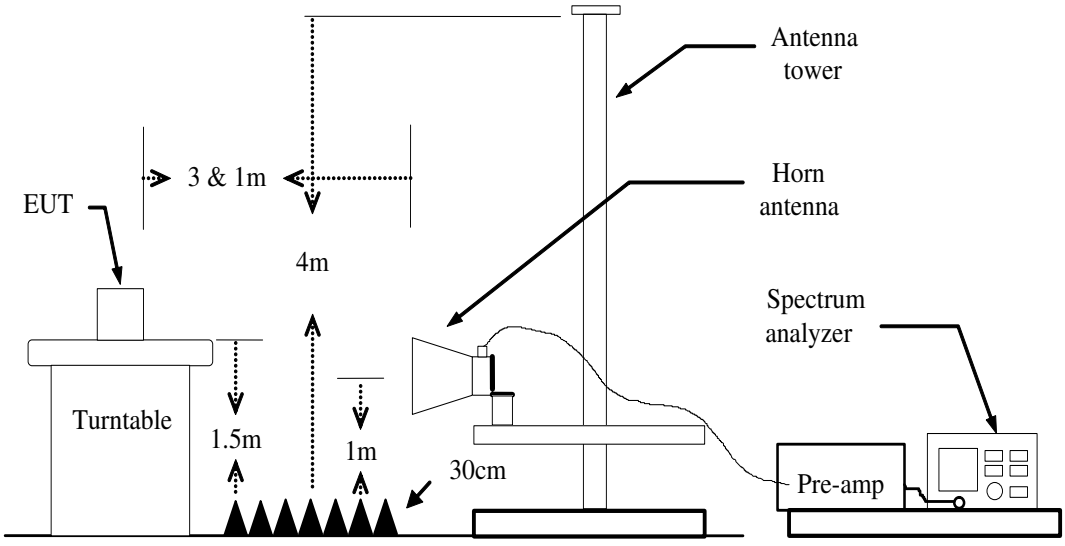
Below 30MHz



Below 1 GHz



Above 1 GHz



For the actual test configuration, please refer to the related item – Photographs of the TEST CONFIGURATION.

6.7.4 MEASURING SETTING

The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (Emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 1/T for Average
RB / VB (Emission in non-restricted band)	1MHz / 1MHz for Peak, 1 MHz / 1/T for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP/AVG
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP/AVG
Start ~ Stop Frequency	30MHz~1000MHz / RB 100kHz for QP

6.7.5TEST PROCEDURE

1) Sequence of testing 9 kHz to 30 MHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 0.8 m height is used.

--- If the EUT is a floor standing device, it is placed on the ground.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions.

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Pre measurement:

--- The turntable rotates from 0° to 315° using 45° steps.

--- The antenna height is 0.8 meter.

--- At each turntable position the analyzer sweeps with peak detection to find the maximum of all emissions

Final measurement:

--- Identified emissions during the pre measurement the software maximizes by rotating the turntable position (0° to 360°) and by rotating the elevation axes (0° to 360°).

--- The final measurement will be done in the position (turntable and elevation) causing the highest emissions with QPK detector.

--- The final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the pre measurement and the limit will be stored.

2) Sequence of testing 30 MHz to 1 GHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a table with 0.8 m height is used, which is placed on the ground plane.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Pre measurement:

--- The turntable rotates from 0° to 315° using 45° steps.

--- The antenna is polarized vertical and horizontal.

--- The antenna height changes from 1 to 3 meter.

--- At each turntable position, antenna polarization and height the analyzer sweeps three times in peak to find the maximum of all emissions.

Final measurement:

--- The final measurement will be performed with minimum the six highest peaks.

--- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position (± 45°) and antenna movement between 1 and 4 meter.

--- The final measurement will be done with QP detector with an EMI receiver.

--- The final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

3) Sequence of testing 1 GHz to 18 GHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Pre measurement:

--- The turntable rotates from 0° to 315° using 45° steps.

--- The antenna is polarized vertical and horizontal.

--- The antenna height scan range is 1 meter to 2.5 meter.

--- At each turntable position and antenna polarization the analyzer sweeps with peak detection to find the maximum of all emissions.

Final measurement:

--- The final measurement will be performed with minimum the six highest peaks.

--- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position (± 45°) and antenna movement between 1 and 4 meter. This procedure is repeated for both antenna polarizations.

--- The final measurement will be done in the position (turntable, EUT-table and antenna polarization) causing the highest emissions with Peak and Average detector.
--- The final levels, frequency, measuring time, bandwidth, turntable position, EUT-table position, antenna polarization, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the pre measurement with marked maximum final measurements and the limit will be stored.

4) Sequence of testing above 18 GHz
Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 1 meter.

--- The EUT was set into operation.

Pre measurement:

--- The antenna is moved spherical over the EUT in different polarisations of the antenna.

Final measurement:

--- The final measurement will be performed at the position and antenna orientation for all detected emissions that were found during the premeasurements with Peak and Average detector.
--- The final levels, frequency, measuring time, bandwidth, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.

6.7.6 DATA SAPLE

Below 1GHz

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
XXX.XXXX	36.37	-12.20	24.17	40.00	-15.83	V	QP

Frequency (MHz) = Emission frequency in MHz
Reading (dBuV) = Uncorrected Analyzer / Receiver reading
Correct Factor (dB/m) = Antenna factor + Cable loss – Amplifier gain
Result (dBuV/m) = Reading (dBuV) + Corr. Factor (dB/m)
Limit (dBuV/m) = Limit stated in standard
Margin (dB) = Result (dBuV/m) – Limit (dBuV/m)
Q.P. = Quasi-peak Reading

Above 1GHz

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
XXXX.XXXX	62.09	-11.42	50.67	74.00	-23.33	V	Peak
XXXX.XXXX	49.78	-11.42	38.36	54.00	-15.64	V	AVG

Frequency (MHz) = Emission frequency in MHz
Reading (dBuV) = Uncorrected Analyzer / Receiver reading
Correction Factor (dB/m) = Antenna factor + Cable loss – Amplifier gain
Result (dBuV/m) = Reading (dBuV) + Corr. Factor (dB/m)
Limit (dBuV/m) = Limit stated in standard
Margin (dB) = Result (dBuV/m) – Limit (dBuV/m)
Peak = Peak Reading
AVG = Average Reading

Calculation Formula

Margin (dB) = Result (dBuV/m) – Limits (dBuV/m)
Result (dBuV/m) = Reading (dBuV) + Correction Factor

6.7.7 TEST RESULTS

Below 1 GHz

Test Mode: TX / IEEE 802.11a / 5180MHz /(CH Low) **Tested by:** Saber Huang

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** May 8, 2018

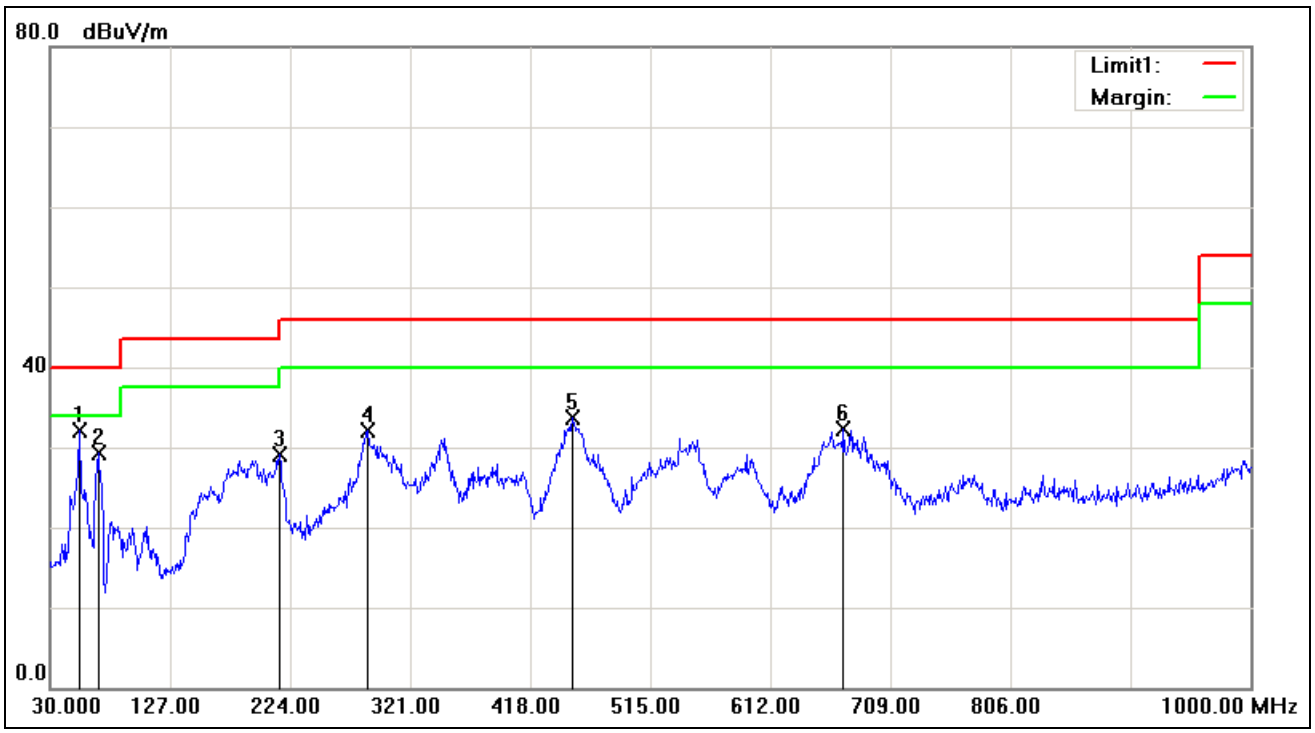
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
54.2500	44.76	-12.70	32.06	40.00	-7.94	V	QP
68.8000	43.84	-14.52	29.32	40.00	-10.68	V	QP
215.2700	40.31	-11.13	29.18	43.50	-14.32	V	QP
286.0800	41.87	-9.79	32.08	46.00	-13.92	V	QP
451.9500	42.10	-8.32	33.78	46.00	-12.22	V	QP
671.1700	37.06	-4.77	32.29	46.00	-13.71	V	QP
67.8300	39.10	-14.39	24.71	40.00	-15.29	H	QP
296.7500	42.55	-9.96	32.59	46.00	-13.41	H	QP
389.8700	43.88	-8.44	35.44	46.00	-10.56	H	QP
450.0100	38.63	-8.51	30.12	46.00	-15.88	H	QP
596.4800	38.33	-5.96	32.37	46.00	-13.63	H	QP
677.9600	38.32	-4.64	33.68	46.00	-12.32	H	QP

Pre-scan all mode and recorded the worst case results in this report (802.11a (Low Mid)).

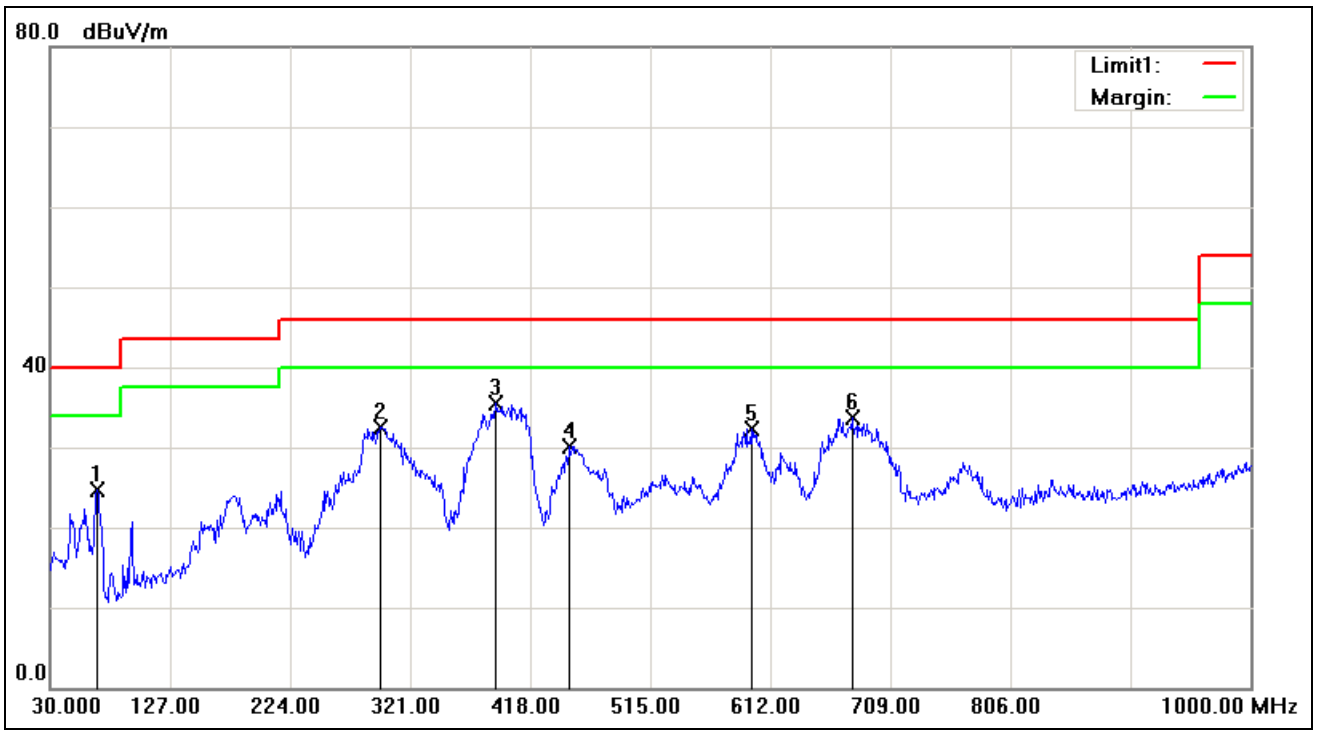
Remark:

1. No emission found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz)
2. Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using peak/quasi-peak detector mode.
3. Quasi-peak test would be performed if the peak result were greater than the quasi-peak limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Quasi-peak limit (dBuV/m).

Vertical



Horizontal



Above 1-6GHz

Test Mode: TX / IEEE 802.11a / 5180MHz /(CH Low) **Tested by:** Saber Huang

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** April 28, 2018

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2365.000	48.16	-3.00	45.16	74.00	-28.84	V	peak
2585.000	48.38	-2.11	46.27	74.00	-27.73	V	peak
2615.000	48.22	-2.05	46.17	74.00	-27.83	V	peak
2810.000	42.97	-1.70	41.27	74.00	-32.73	V	peak
3810.000	43.05	0.79	43.84	74.00	-30.16	V	peak
4360.000	40.95	2.86	43.81	74.00	-30.19	V	peak
1510.000	45.92	-6.86	39.06	74.00	-34.94	H	Peak
1900.000	45.28	-5.63	39.65	74.00	-34.35	H	Peak
2120.000	44.13	-4.34	39.79	74.00	-34.21	H	Peak
2605.000	46.70	-2.07	44.63	74.00	-29.37	H	peak
3085.000	43.38	-1.22	42.16	74.00	-31.84	H	peak
3445.000	42.34	-0.61	41.73	74.00	-32.27	H	peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

Above 6GHz

Test Mode: TX / IEEE 802.11a / 5180MHz /(CH Low) **Tested by:** Saber Huang

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** April 28, 2018

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6564.000	32.17	6.99	39.16	74.00	-34.84	V	peak
7932.000	31.77	9.52	41.29	74.00	-32.71	V	peak
8400.000	32.41	9.43	41.84	74.00	-32.16	V	peak
9852.000	31.17	11.55	42.72	74.00	-31.28	V	peak
10788.000	30.67	14.42	45.09	74.00	-28.91	V	peak
11136.000	31.43	15.02	46.45	74.00	-27.55	V	peak
6468.000	31.93	6.84	38.77	74.00	-35.23	H	Peak
7248.000	32.55	8.18	40.73	74.00	-33.27	H	Peak
8016.000	32.17	9.64	41.81	74.00	-32.19	H	Peak
8556.000	32.01	9.34	41.35	74.00	-32.65	H	peak
9372.000	31.54	10.17	41.71	74.00	-32.29	H	peak
10680.000	30.74	14.09	44.83	74.00	-29.17	H	peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

Test Mode: TX / IEEE 802.11a / 5200MHz /(CH Mid) **Tested by:** Saber Huang

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** April 28, 2018

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
7392.000	31.94	8.46	40.40	74.00	-33.60	V	peak
7920.000	31.92	9.49	41.41	74.00	-32.59	V	peak
8352.000	31.58	9.46	41.04	74.00	-32.96	V	peak
9168.000	31.49	9.58	41.07	74.00	-32.93	V	peak
10128.000	31.01	12.38	43.39	74.00	-30.61	V	peak
10692.000	30.46	14.13	44.59	74.00	-29.41	V	peak
7068.000	31.63	7.83	39.46	74.00	-34.54	H	Peak
7548.000	31.96	8.77	40.73	74.00	-33.27	H	Peak
8076.000	31.89	9.61	41.50	74.00	-32.50	H	Peak
8412.000	31.78	9.42	41.20	74.00	-32.80	H	peak
9240.000	31.08	9.79	40.87	74.00	-33.13	H	peak
9996.000	30.75	11.97	42.72	74.00	-31.28	H	peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

Test Mode: TX / IEEE 802.11a / 5240MHz /(CH High) **Tested by:** Saber Huang

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** April 28, 2018

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6816.000	31.89	7.40	39.29	74.00	-34.71	V	peak
7320.000	31.84	8.32	40.16	74.00	-33.84	V	peak
8088.000	31.81	9.60	41.41	74.00	-32.59	V	peak
8400.000	31.68	9.43	41.11	74.00	-32.89	V	peak
9408.000	31.74	10.28	42.02	74.00	-31.98	V	peak
10668.000	31.03	14.05	45.08	74.00	-28.92	V	peak
7428.000	31.58	8.53	40.11	74.00	-33.89	H	Peak
7704.000	31.99	9.07	41.06	74.00	-32.94	H	Peak
8052.000	32.05	9.62	41.67	74.00	-32.33	H	Peak
8364.000	31.64	9.45	41.09	74.00	-32.91	H	peak
9408.000	31.13	10.28	41.41	74.00	-32.59	H	peak
9756.000	30.80	11.28	42.08	74.00	-31.92	H	peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

Test Mode: TX / IEEE 802.11a / 5745MHz /(CH Low) **Tested by:** Saber Huang

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** April 28, 2018

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6576.000	31.75	7.01	38.76	74.00	-35.24	V	peak
7176.000	31.67	8.04	39.71	74.00	-34.29	V	peak
7728.000	31.69	9.12	40.81	74.00	-33.19	V	peak
8388.000	31.58	9.44	41.02	74.00	-32.98	V	peak
8784.000	30.87	9.22	40.09	74.00	-33.91	V	peak
10152.000	30.40	12.45	42.85	74.00	-31.15	V	peak
7080.000	31.50	7.86	39.36	74.00	-34.64	H	Peak
7560.000	31.64	8.79	40.43	74.00	-33.57	H	Peak
7908.000	31.44	9.47	40.91	74.00	-33.09	H	Peak
8136.000	31.91	9.58	41.49	74.00	-32.51	H	peak
8844.000	31.35	9.19	40.54	74.00	-33.46	H	peak
9324.000	31.04	10.03	41.07	74.00	-32.93	H	peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

Test Mode: TX / IEEE 802.11a / 5785MHz /(CH Mid) **Tested by:** Saber Huang

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** April 28, 2018

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6276.000	31.88	6.53	38.41	74.00	-35.59	V	peak
6804.000	31.86	7.38	39.24	74.00	-34.76	V	peak
7272.000	31.64	8.23	39.87	74.00	-34.13	V	peak
8004.000	31.88	9.65	41.53	74.00	-32.47	V	peak
8640.000	31.79	9.30	41.09	74.00	-32.91	V	peak
9024.000	31.66	9.17	40.83	74.00	-33.17	V	peak
6816.000	32.08	7.40	39.48	74.00	-34.52	H	Peak
7380.000	31.48	8.44	39.92	74.00	-34.08	H	Peak
7752.000	31.81	9.17	40.98	74.00	-33.02	H	Peak
8112.000	32.61	9.59	42.20	74.00	-31.80	H	peak
8304.000	31.59	9.48	41.07	74.00	-32.93	H	peak
9348.000	31.21	10.10	41.31	74.00	-32.69	H	peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

Test Mode: TX / IEEE 802.11a / 5825MHz /(CH High) **Tested by:** Saber Huang

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** April 28, 2018

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6564.000	32.33	6.99	39.32	74.00	-34.68	V	peak
7596.000	31.75	8.86	40.61	74.00	-33.39	V	peak
8328.000	31.75	9.47	41.22	74.00	-32.78	V	peak
8988.000	31.33	9.11	40.44	74.00	-33.56	V	peak
9360.000	31.36	10.14	41.50	74.00	-32.50	V	peak
10152.000	30.46	12.45	42.91	74.00	-31.09	V	peak
7080.000	31.87	7.86	39.73	74.00	-34.27	H	Peak
7620.000	31.85	8.91	40.76	74.00	-33.24	H	Peak
8352.000	32.13	9.46	41.59	74.00	-32.41	H	Peak
8640.000	30.97	9.30	40.27	74.00	-33.73	H	peak
9432.000	31.04	10.34	41.38	74.00	-32.62	H	peak
9924.000	30.94	11.76	42.70	74.00	-31.30	H	peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

Test Mode: TX / IEEE 802.11n HT 20 MHz / 5180MHz /(CH Low) **Tested by:** Saber Huang

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** April 28, 2018

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6744.000	31.52	7.29	38.81	74.00	-35.19	V	peak
7092.000	31.53	7.88	39.41	74.00	-34.59	V	peak
7632.000	31.27	8.93	40.20	74.00	-33.80	V	peak
7884.000	31.15	9.42	40.57	74.00	-33.43	V	peak
8352.000	31.69	9.46	41.15	74.00	-32.85	V	peak
9012.000	31.40	9.13	40.53	74.00	-33.47	V	peak
7116.000	31.84	7.93	39.77	74.00	-34.23	H	Peak
7752.000	31.84	9.17	41.01	74.00	-32.99	H	Peak
8088.000	31.89	9.60	41.49	74.00	-32.51	H	Peak
9144.000	30.89	9.51	40.40	74.00	-33.60	H	peak
10128.000	30.52	12.38	42.90	74.00	-31.10	H	peak
10488.000	30.10	13.49	43.59	74.00	-30.41	H	peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

Test Mode: TX / IEEE 802.11n HT 20 MHz / 5200MHz /(CH Mid) **Tested by:** Saber Huang

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** April 28, 2018

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6516.000	32.32	6.92	39.24	74.00	-34.76	V	peak
7068.000	31.36	7.83	39.19	74.00	-34.81	V	peak
7644.000	31.70	8.96	40.66	74.00	-33.34	V	peak
8520.000	31.33	9.36	40.69	74.00	-33.31	V	peak
9036.000	31.45	9.20	40.65	74.00	-33.35	V	peak
9828.000	31.25	11.48	42.73	74.00	-31.27	V	peak
7032.000	31.31	7.76	39.07	74.00	-34.93	H	Peak
7260.000	31.64	8.21	39.85	74.00	-34.15	H	Peak
7740.000	31.77	9.14	40.91	74.00	-33.09	H	Peak
8568.000	31.34	9.34	40.68	74.00	-33.32	H	peak
9288.000	31.11	9.93	41.04	74.00	-32.96	H	peak
10944.000	30.06	14.91	44.97	74.00	-29.03	H	peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

Test Mode: TX / IEEE 802.11n HT 20 MHz / 5240MHz /(CH High) **Tested by:** Saber Huang

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** April 28, 2018

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6408.000	32.07	6.74	38.81	74.00	-35.19	V	peak
6828.000	31.79	7.42	39.21	74.00	-34.79	V	peak
7176.000	32.00	8.04	40.04	74.00	-33.96	V	peak
7728.000	31.92	9.12	41.04	74.00	-32.96	V	peak
8148.000	31.78	9.57	41.35	74.00	-32.65	V	peak
8988.000	31.75	9.11	40.86	74.00	-33.14	V	peak
6528.000	32.08	6.94	39.02	74.00	-34.98	H	Peak
7464.000	31.61	8.60	40.21	74.00	-33.79	H	Peak
8004.000	31.70	9.65	41.35	74.00	-32.65	H	Peak
8400.000	32.28	9.43	41.71	74.00	-32.29	H	peak
9204.000	30.93	9.69	40.62	74.00	-33.38	H	peak
10152.000	31.05	12.45	43.50	74.00	-30.50	H	peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

Test Mode: TX / IEEE 802.11n HT 20 MHz / 5745MHz /(CH Low) **Tested by:** Saber Huang

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** April 28, 2018

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6780.000	31.92	7.34	39.26	74.00	-34.74	V	peak
7140.000	31.77	7.97	39.74	74.00	-34.26	V	peak
7272.000	31.65	8.23	39.88	74.00	-34.12	V	peak
7848.000	31.93	9.35	41.28	74.00	-32.72	V	peak
8400.000	32.28	9.43	41.71	74.00	-32.29	V	peak
9060.000	31.43	9.27	40.70	74.00	-33.30	V	peak
6384.000	32.65	6.70	39.35	74.00	-34.65	H	Peak
6996.000	31.95	7.69	39.64	74.00	-34.36	H	Peak
7716.000	31.85	9.10	40.95	74.00	-33.05	H	Peak
7920.000	31.89	9.49	41.38	74.00	-32.62	H	peak
8028.000	32.09	9.63	41.72	74.00	-32.28	H	peak
8988.000	31.53	9.11	40.64	74.00	-33.36	H	peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

Test Mode: TX / IEEE 802.11n HT 20 MHz / 5785MHz /(CH Mid) **Tested by:** Saber Huang

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date: Date:** April 28, 2018

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6528.000	31.86	6.94	38.80	74.00	-35.20	V	peak
6780.000	31.62	7.34	38.96	74.00	-35.04	V	peak
7248.000	31.76	8.18	39.94	74.00	-34.06	V	peak
8076.000	32.01	9.61	41.62	74.00	-32.38	V	peak
8400.000	31.67	9.43	41.10	74.00	-32.90	V	peak
9000.000	31.60	9.10	40.70	74.00	-33.30	V	peak
6120.000	31.95	6.27	38.22	74.00	-35.78	H	Peak
6780.000	31.61	7.34	38.95	74.00	-35.05	H	Peak
7032.000	31.96	7.76	39.72	74.00	-34.28	H	Peak
7644.000	31.51	8.96	40.47	74.00	-33.53	H	peak
8316.000	31.79	9.48	41.27	74.00	-32.73	H	peak
9336.000	31.17	10.07	41.24	74.00	-32.76	H	peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

Test Mode: TX / IEEE 802.11n HT 20 MHz / 5825MHz /(CH High) **Tested by:** Saber Huang

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date: Date:** April 28, 2018

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6408.000	31.70	6.74	38.44	74.00	-35.56	V	peak
6720.000	31.62	7.25	38.87	74.00	-35.13	V	peak
7176.000	31.87	8.04	39.91	74.00	-34.09	V	peak
7548.000	31.43	8.77	40.20	74.00	-33.80	V	peak
7644.000	31.67	8.96	40.63	74.00	-33.37	V	peak
8376.000	31.66	9.44	41.10	74.00	-32.90	V	peak
6336.000	31.93	6.62	38.55	74.00	-35.45	H	Peak
6612.000	32.14	7.07	39.21	74.00	-34.79	H	Peak
7152.000	31.58	8.00	39.58	74.00	-34.42	H	Peak
7632.000	31.83	8.93	40.76	74.00	-33.24	H	peak
8124.000	31.81	9.58	41.39	74.00	-32.61	H	peak
9036.000	31.60	9.20	40.80	74.00	-33.20	H	peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

Test Mode: TX / IEEE 802.11n HT 40 MHz / 5190MHz /(CH Low) **Tested by:** Saber Huang

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date: Date:** April 28, 2018

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6540.000	31.79	6.95	38.74	74.00	-35.26	V	peak
7224.000	31.45	8.14	39.59	74.00	-34.41	V	peak
7740.000	31.63	9.14	40.77	74.00	-33.23	V	peak
8940.000	30.75	9.13	39.88	74.00	-34.12	V	peak
10104.000	30.43	12.30	42.73	74.00	-31.27	V	peak
10704.000	30.31	14.16	44.47	74.00	-29.53	V	peak
6060.000	32.27	6.18	38.45	74.00	-35.55	H	Peak
6600.000	31.89	7.05	38.94	74.00	-35.06	H	Peak
6828.000	31.56	7.42	38.98	74.00	-35.02	H	Peak
7128.000	31.49	7.95	39.44	74.00	-34.56	H	peak
7716.000	31.68	9.10	40.78	74.00	-33.22	H	peak
8520.000	31.25	9.36	40.61	74.00	-33.39	H	peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

Test Mode: TX / IEEE 802.11n HT 40 MHz / 5230MHz /(CH High) **Tested by:** Saber Huang

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** April 28, 2018

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6804.000	32.00	7.38	39.38	74.00	-34.62	V	peak
7344.000	32.13	8.37	40.50	74.00	-33.50	V	peak
7968.000	32.29	9.59	41.88	74.00	-32.12	V	peak
8868.000	30.85	9.17	40.02	74.00	-33.98	V	peak
9924.000	31.14	11.76	42.90	74.00	-31.10	V	peak
10476.000	30.70	13.46	44.16	74.00	-29.84	V	peak
6540.000	31.80	6.95	38.75	74.00	-35.25	H	Peak
7080.000	32.38	7.86	40.24	74.00	-33.76	H	Peak
7392.000	31.87	8.46	40.33	74.00	-33.67	H	Peak
8076.000	32.01	9.61	41.62	74.00	-32.38	H	peak
8964.000	31.62	9.12	40.74	74.00	-33.26	H	peak
9924.000	30.97	11.76	42.73	74.00	-31.27	H	peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

Test Mode: TX / IEEE 802.11n HT 40 MHz / 5755MHz /(CH Low) **Tested by:** Saber Huang

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** April 28, 2018

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
7284.000	32.00	8.25	40.25	74.00	-33.75	V	peak
7644.000	32.14	8.96	41.10	74.00	-32.90	V	peak
7920.000	31.19	9.49	40.68	74.00	-33.32	V	peak
9252.000	31.47	9.83	41.30	74.00	-32.70	V	peak
10272.000	30.43	12.82	43.25	74.00	-30.75	V	peak
11220.000	31.40	14.98	46.38	74.00	-27.62	V	peak
6504.000	31.73	6.90	38.63	74.00	-35.37	H	Peak
7176.000	31.61	8.04	39.65	74.00	-34.35	H	Peak
7692.000	31.53	9.05	40.58	74.00	-33.42	H	Peak
8448.000	31.61	9.40	41.01	74.00	-32.99	H	peak
9300.000	31.65	9.96	41.61	74.00	-32.39	H	peak
10200.000	30.94	12.60	43.54	74.00	-30.46	H	peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

Test Mode: TX / IEEE 802.11n HT 40 MHz / 5795MHz /(CH High) **Tested by:** Saber Huang

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** April 28, 2018

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6852.000	31.76	7.46	39.22	74.00	-34.78	V	peak
7224.000	31.69	8.14	39.83	74.00	-34.17	V	peak
7860.000	31.10	9.38	40.48	74.00	-33.52	V	peak
8184.000	31.72	9.55	41.27	74.00	-32.73	V	peak
9060.000	31.38	9.27	40.65	74.00	-33.35	V	peak
9900.000	30.96	11.69	42.65	74.00	-31.35	V	peak
6672.000	31.64	7.17	38.81	74.00	-35.19	H	Peak
7248.000	32.01	8.18	40.19	74.00	-33.81	H	Peak
7980.000	31.83	9.61	41.44	74.00	-32.56	H	Peak
8532.000	31.58	9.36	40.94	74.00	-33.06	H	peak
9264.000	30.87	9.86	40.73	74.00	-33.27	H	peak
9912.000	30.79	11.73	42.52	74.00	-31.48	H	peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

Test Mode: TX / IEEE 802. 11ac 80 / 5210MHz /(CH Low) **Tested by:** Saber Huang

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** April 28, 2018

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6480.000	32.23	6.86	39.09	74.00	-34.91	V	peak
6804.000	31.39	7.38	38.77	74.00	-35.23	V	peak
7344.000	31.74	8.37	40.11	74.00	-33.89	V	peak
7860.000	31.47	9.38	40.85	74.00	-33.15	V	peak
8208.000	31.27	9.54	40.81	74.00	-33.19	V	peak
8952.000	31.44	9.13	40.57	74.00	-33.43	V	peak
6816.000	31.68	7.40	39.08	74.00	-34.92	H	Peak
7428.000	31.26	8.53	39.79	74.00	-34.21	H	Peak
8160.000	31.99	9.56	41.55	74.00	-32.45	H	Peak
8472.000	30.98	9.39	40.37	74.00	-33.63	H	peak
9552.000	30.52	10.69	41.21	74.00	-32.79	H	peak
10152.000	30.46	12.45	42.91	74.00	-31.09	H	peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

Test Mode: TX / IEEE 802.11ac 80 / 5775MHz **Tested by:** Saber Huang

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** April 28, 2018

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6780.000	31.66	7.34	39.00	74.00	-35.00	V	peak
7320.000	31.29	8.32	39.61	74.00	-34.39	V	peak
7836.000	31.61	9.33	40.94	74.00	-33.06	V	peak
8448.000	31.39	9.40	40.79	74.00	-33.21	V	peak
9096.000	31.07	9.38	40.45	74.00	-33.55	V	peak
9660.000	30.33	11.00	41.33	74.00	-32.67	V	peak
6816.000	31.77	7.40	39.17	74.00	-34.83	H	Peak
7272.000	31.81	8.23	40.04	74.00	-33.96	H	Peak
7896.000	31.46	9.45	40.91	74.00	-33.09	H	Peak
8124.000	31.61	9.58	41.19	74.00	-32.81	H	peak
9012.000	31.53	9.13	40.66	74.00	-33.34	H	peak
9768.000	30.26	11.31	41.57	74.00	-32.43	H	peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

6.8 CONDUCTED UNDESIRABLE EMISSION

6.8.1 LIMIT

According to 15.407(b),

(1) For transmitters operating in the 5.15-5.25 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.

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

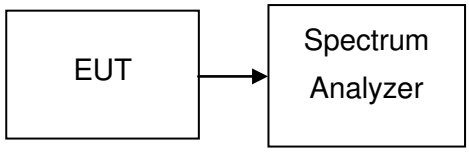
(3) The provisions of §15.205 apply to intentional radiators operating under this section.

6.8.2 MEASUREMENT EQUIPMENT USED

Name of Equipment	Manufacturer	Model	Serial Number	Last Calibration	Due Calibration
Spectrum Analyzer	Agilent	N9010A	MY52221469	01/27/2018	01/26/2019

Remark: *Each piece of equipment is scheduled for calibration once a year.*

6.8.3 TEST CONFIGURATION



6.8.4 TEST PROCEDURE

Conducted RF measurements of the transmitter output were made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 1MHz. The video bandwidth is set to 3MHz. Peak detection measurements are compared to the average EIRP limit, adjusted for the maximum antenna gain. If necessary, additional average detection measurements are made.

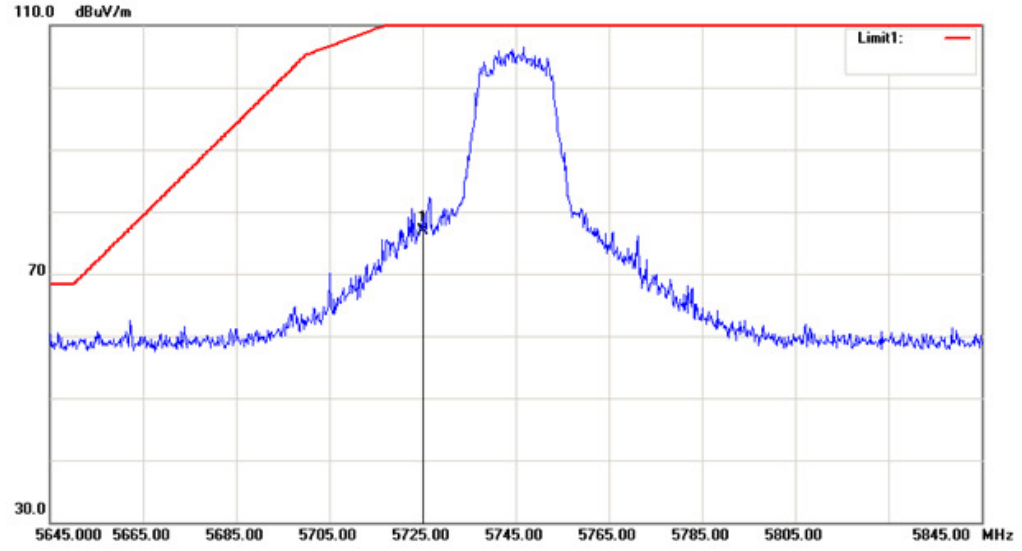
Measurements are made over the 30 MHz to 40 GHz range with the transmitter set to the lowest, middle, and highest channels.

6.8.5 TEST RESULTS

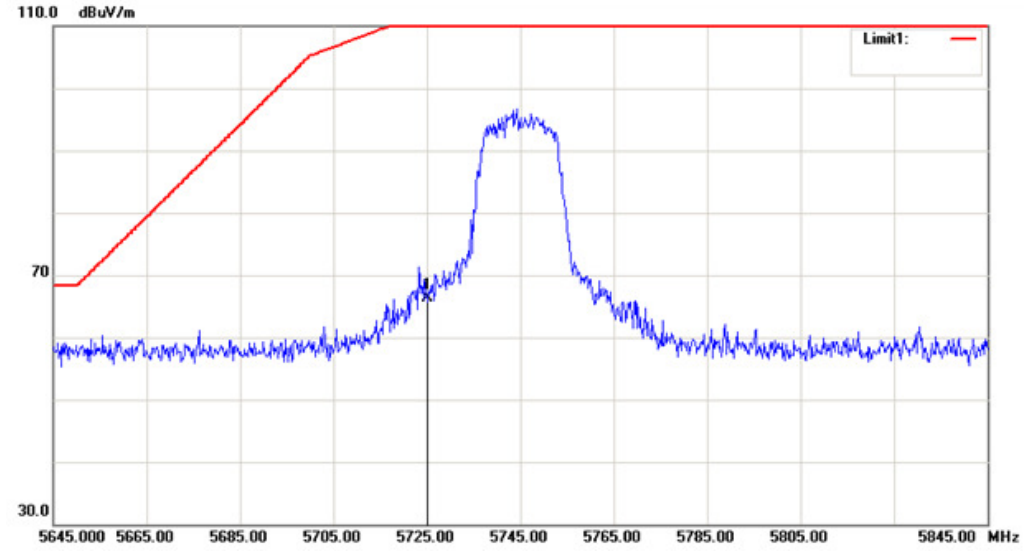
No non-compliance noted

Test Plot

IEEE 802.11a mode / 5745 ~ 5825MHz	
CH Low	
Detector mode: Peak	Polarity: Vertical



Detector mode: Peak	Polarity: Horizontal

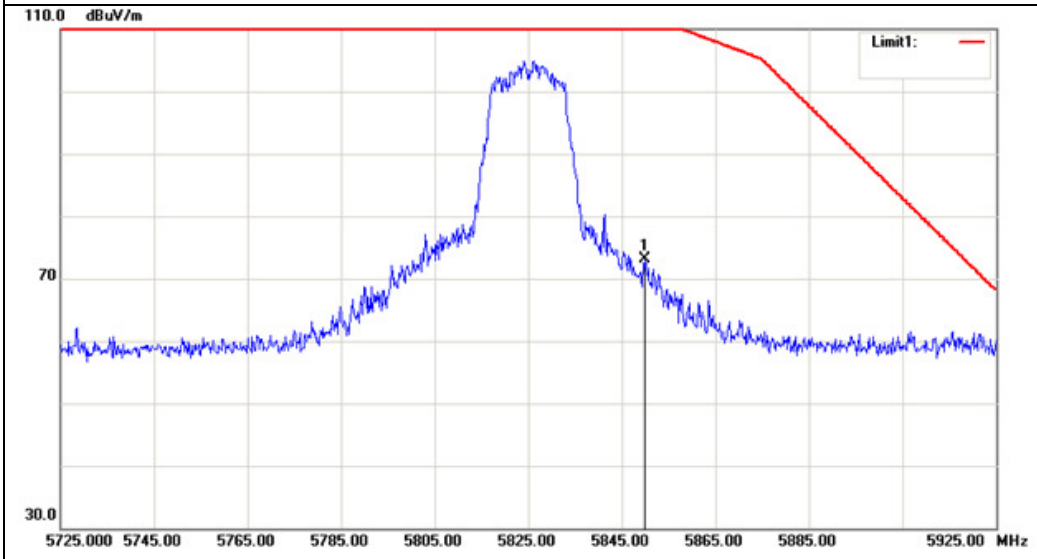


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Antenna Polar
1	5725.000	70.90	5.96	76.86	122.20	-45.34	Peak	Vertical
2	5725.000	60.39	5.96	66.35	122.20	-55.85	Peak	Horizontal

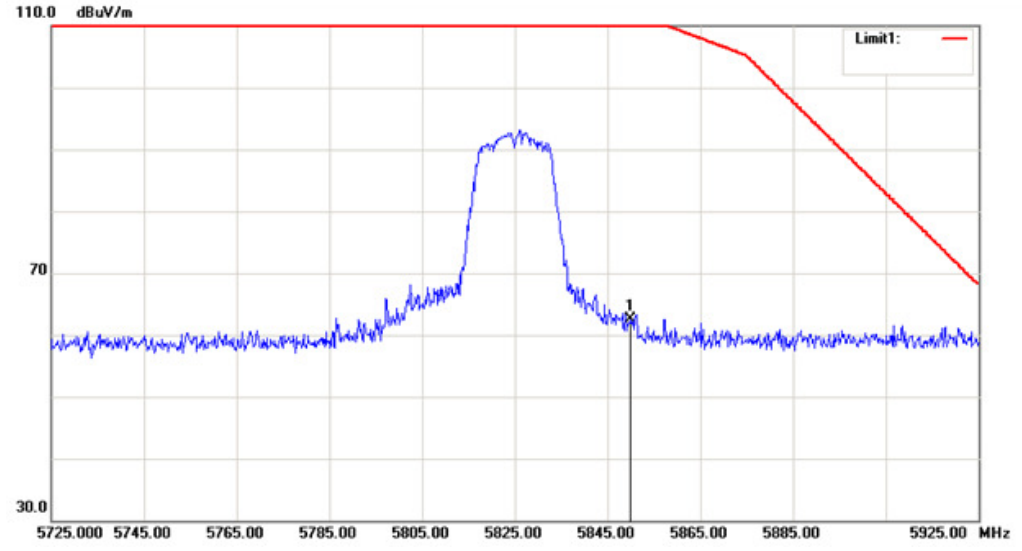
IEEE 802.11a mode / 5745 ~ 5825MHz

CH High

Detector mode: Peak **Polarity: Vertical**



Detector mode: Peak **Polarity: Horizontal**

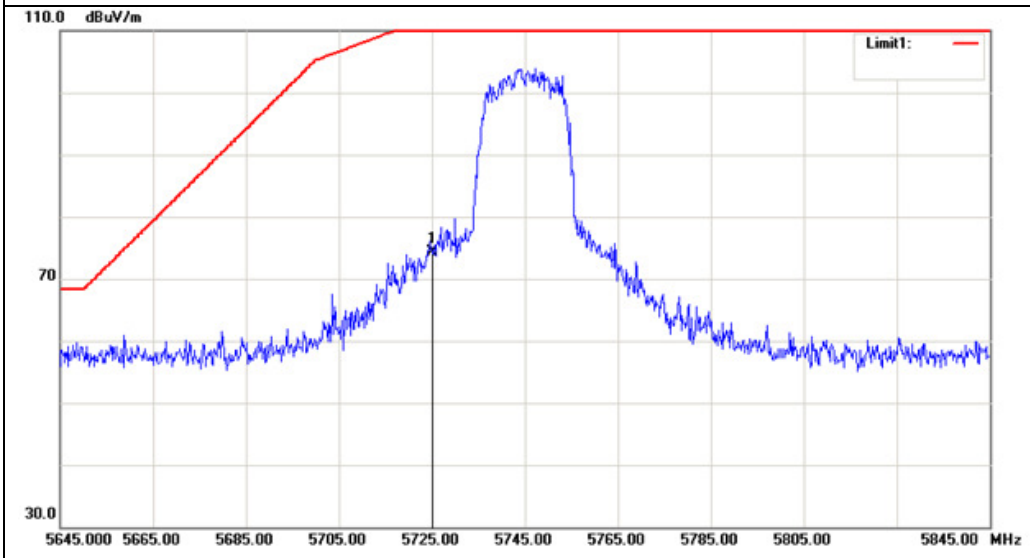


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Antenna Polar
1	5850.000	67.00	6.02	73.02	122.20	-49.18	Peak	Vertical
2	5850.000	56.53	6.02	62.55	122.20	-59.65	Peak	Horizontal

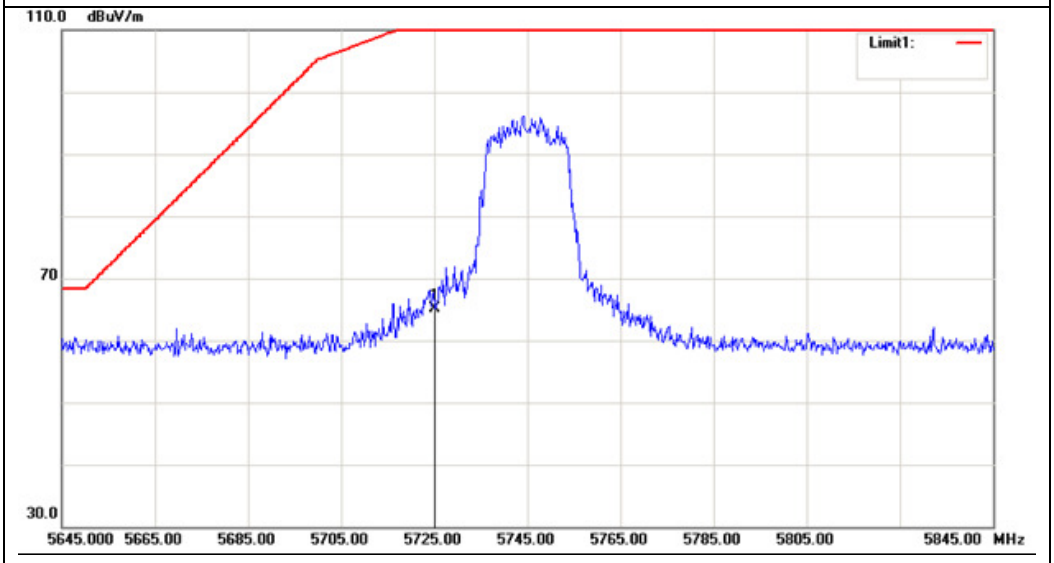
IEEE 802.11n HT 20 MHz mode / 5745 ~ 5825MHz

CH Low

Detector mode: Peak **Polarity: Vertical**



Detector mode: Peak **Polarity: Horizontal**

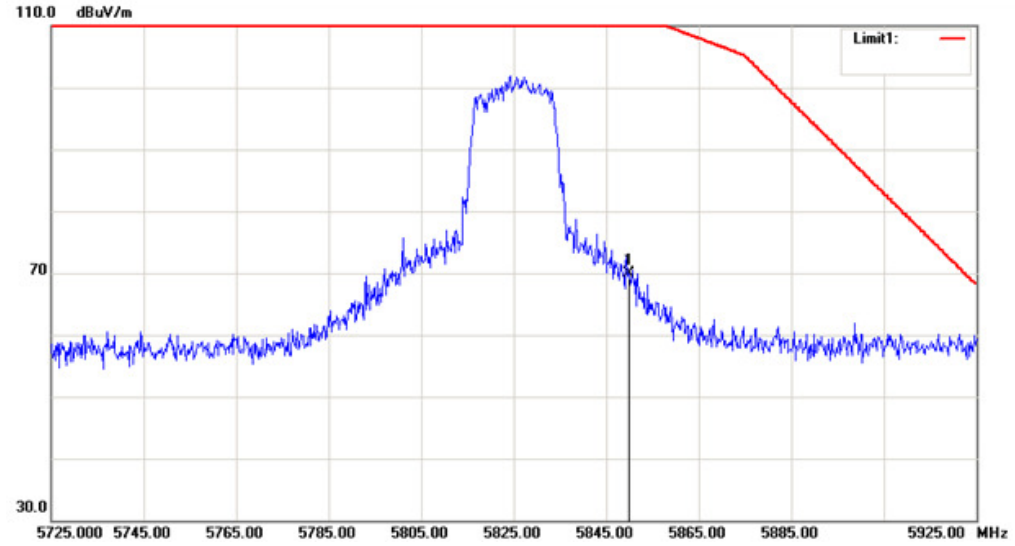


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Antenna Polar
1	5725.000	68.32	5.96	74.28	122.20	-47.92	Peak	Vertical
2	5725.000	59.12	5.96	65.08	122.20	-57.12	Peak	Horizontal

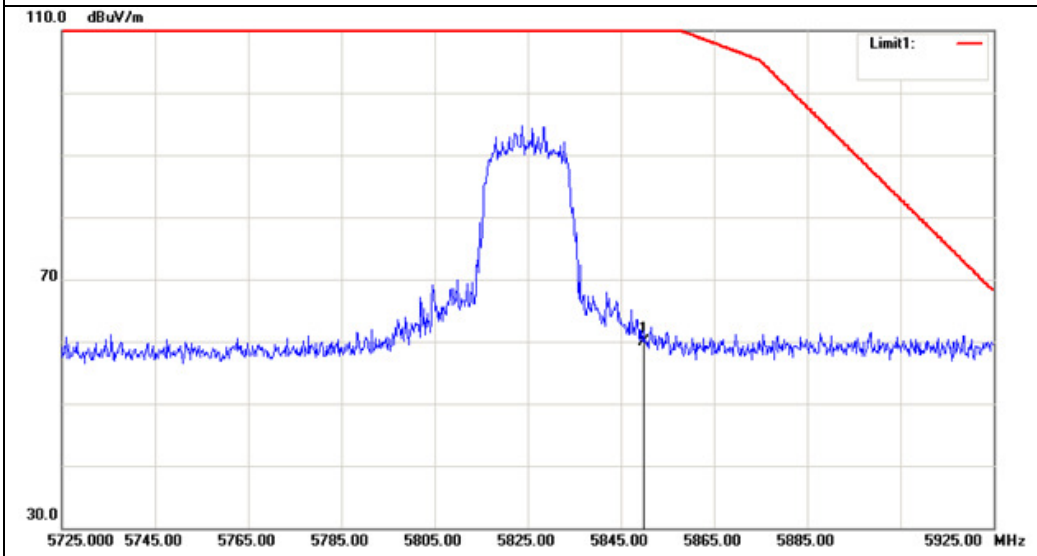
IEEE 802.11n HT 20 MHz mode / 5745 ~ 5825MHz

CH High

Detector mode: Peak **Polarity: Vertical**



Detector mode: Peak **Polarity: Horizontal**

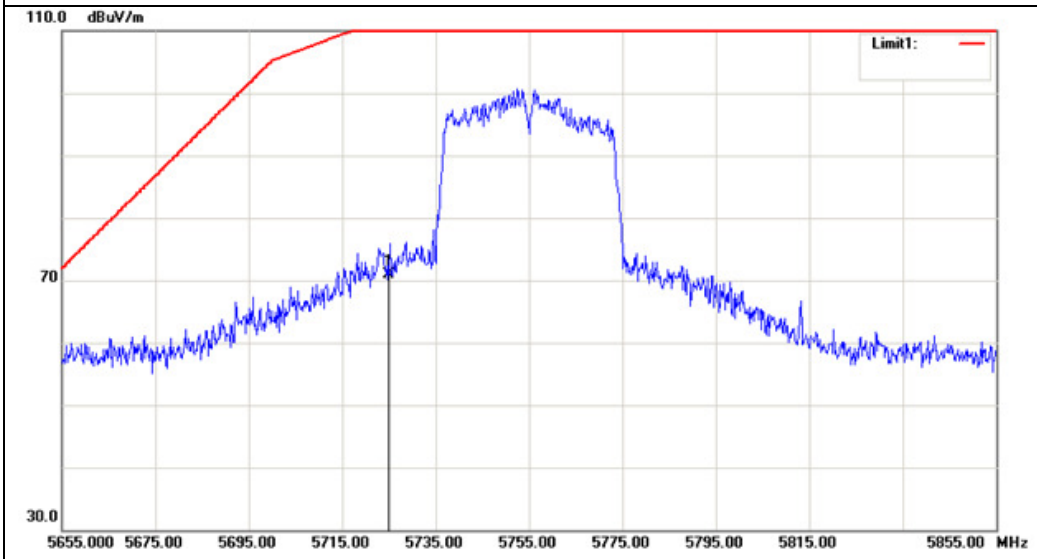


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Antenna Polar
1	5850.000	63.82	6.02	69.84	122.20	-52.36	Peak	Vertical
2	5850.000	53.87	6.02	59.89	122.20	-62.31	Peak	Horizontal

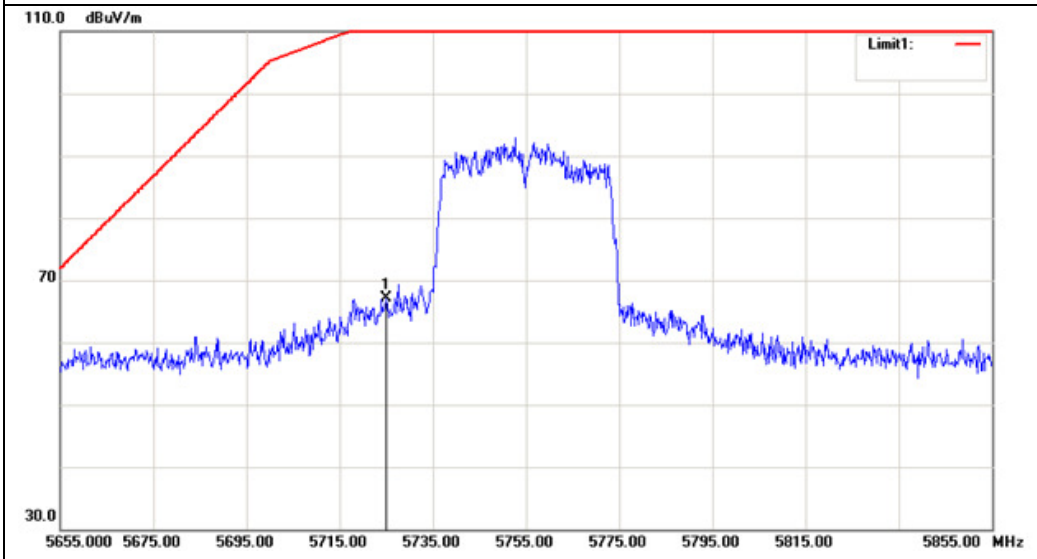
IEEE 802.11n HT 40 MHz mode / 5755 ~ 5795MHz

CH Low

Detector mode: Peak **Polarity: Vertical**



Detector mode: Peak **Polarity: Horizontal**

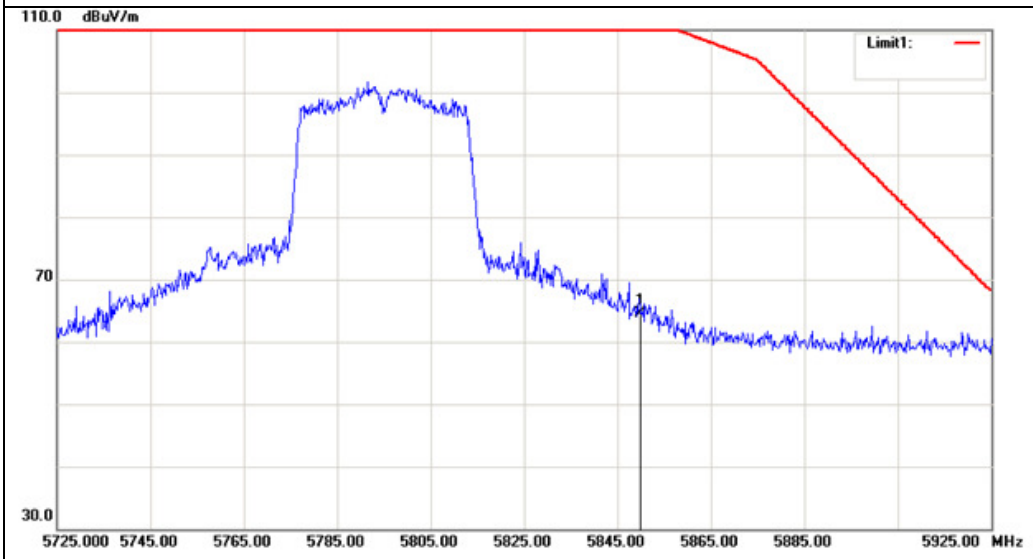


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Antenna Polar
1	5725.000	64.86	5.96	70.82	122.20	-51.38	Peak	Vertical
2	5725.000	61.10	5.96	67.06	122.20	-55.14	Peak	Horizontal

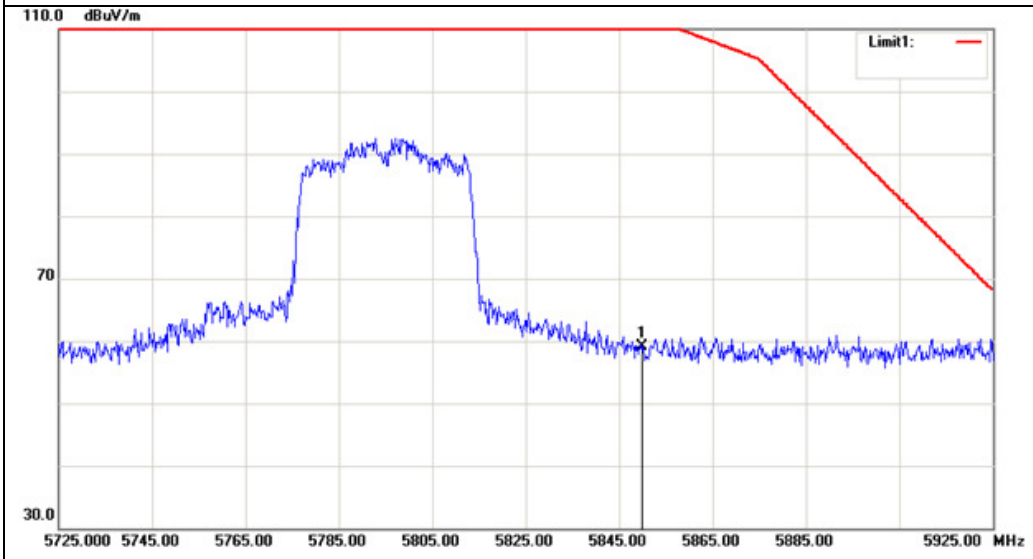
IEEE 802.11n HT 40 MHz mode / 5755 ~ 5795MHz

CH High

Detector mode: Peak **Polarity: Vertical**



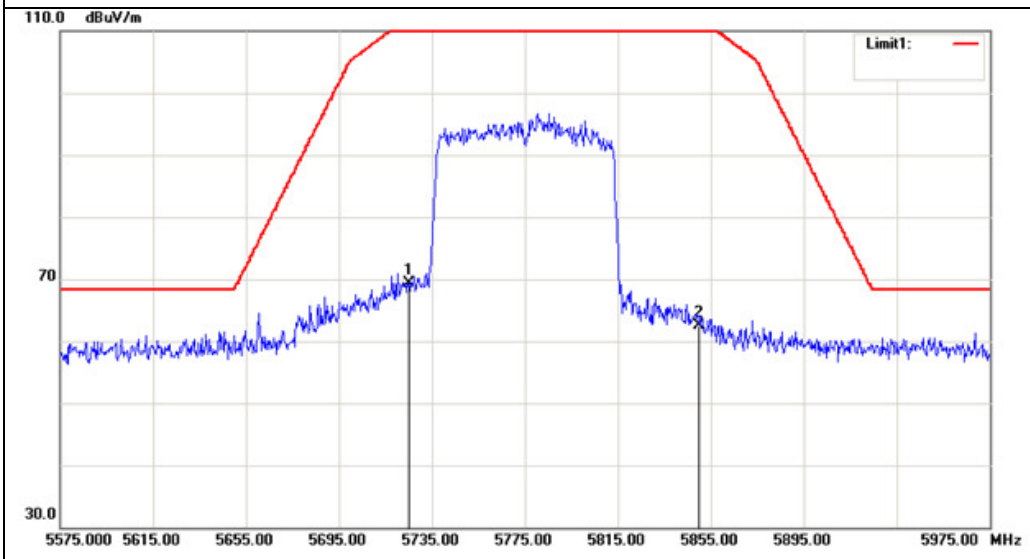
Detector mode: Peak **Polarity: Horizontal**



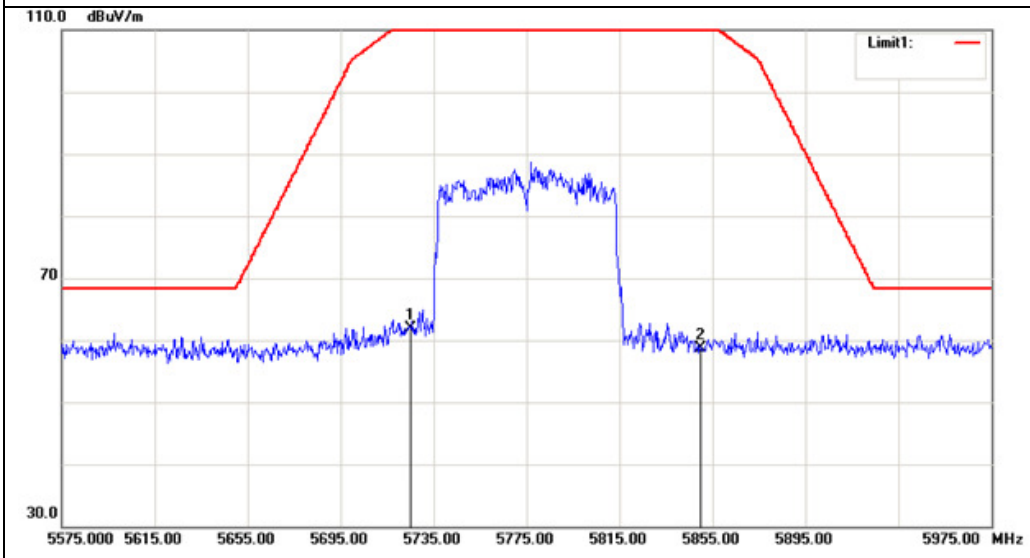
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Antenna Polar
1	5850.000	58.52	6.02	64.54	122.20	-57.66	Peak	Vertical
2	5850.000	53.08	6.02	59.10	122.20	-63.10	Peak	Horizontal

IEEE 802.11ac 80 mode / 5775MHz

Detector mode: Peak **Polarity: Vertical**



Detector mode: Peak **Polarity: Horizontal**



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Antenna Polar
1	5725.000	63.27	5.96	69.23	122.20	-52.97	Peak	Vertical
2	5850.000	56.53	6.02	62.55	122.20	-59.65	Peak	Vertical
1	5725.000	56.01	5.96	61.97	122.20	-60.23	Peak	Horizontal
2	5850.000	52.59	6.02	58.61	122.20	-63.59	Peak	Horizontal

6.9 POWERLINE CONDUCTED EMISSIONS

6.9.1 LIMIT

According to §15.207(a), except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that 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 the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

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

** Decreases with the logarithm of the frequency.*

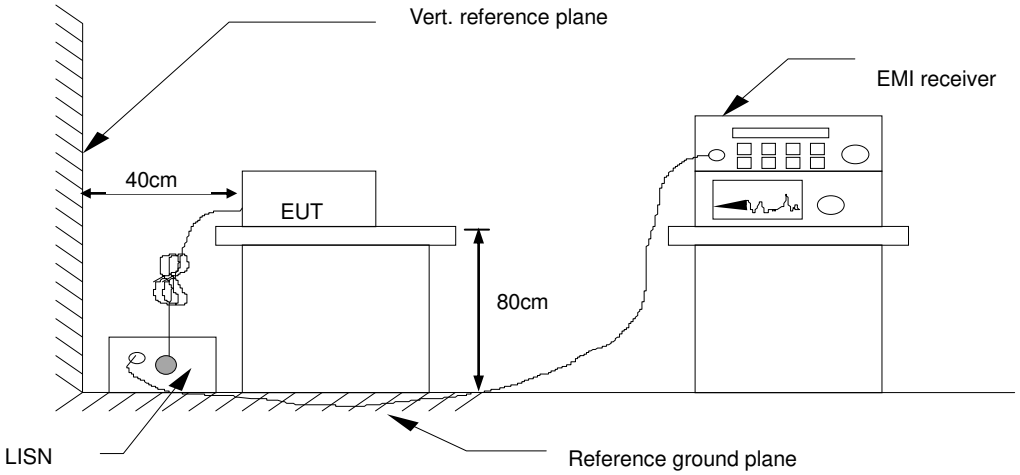
6.9.2 TEST INSTRUMENTS

Conducted Emission Test Site					
Name of Equipment	Manufacturer	Model Number	Serial Number	Last Calibration	Due Calibration
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI	100783	01/27/2018	01/26/2019
LISN(EUT)	ROHDE&SCHWARZ	ENV216	101543-WX	01/27/2018	01/26/2019
LISN	EMCO	3825/2	8901-1459	01/27/2018	01/26/2019
Temp. / Humidity Meter	VICTOR	HTC-1	N/A	01/29/2018	01/28/2019
Test S/W	FARAD	EZ-EMC/ CCS-3A1-CE			

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. N.C.R = No Calibration Request.

6.9.3 TEST CONFIGURATION



6.9.4 TEST PROCEDURE

1. The EUT was placed on a table, which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured were complete.

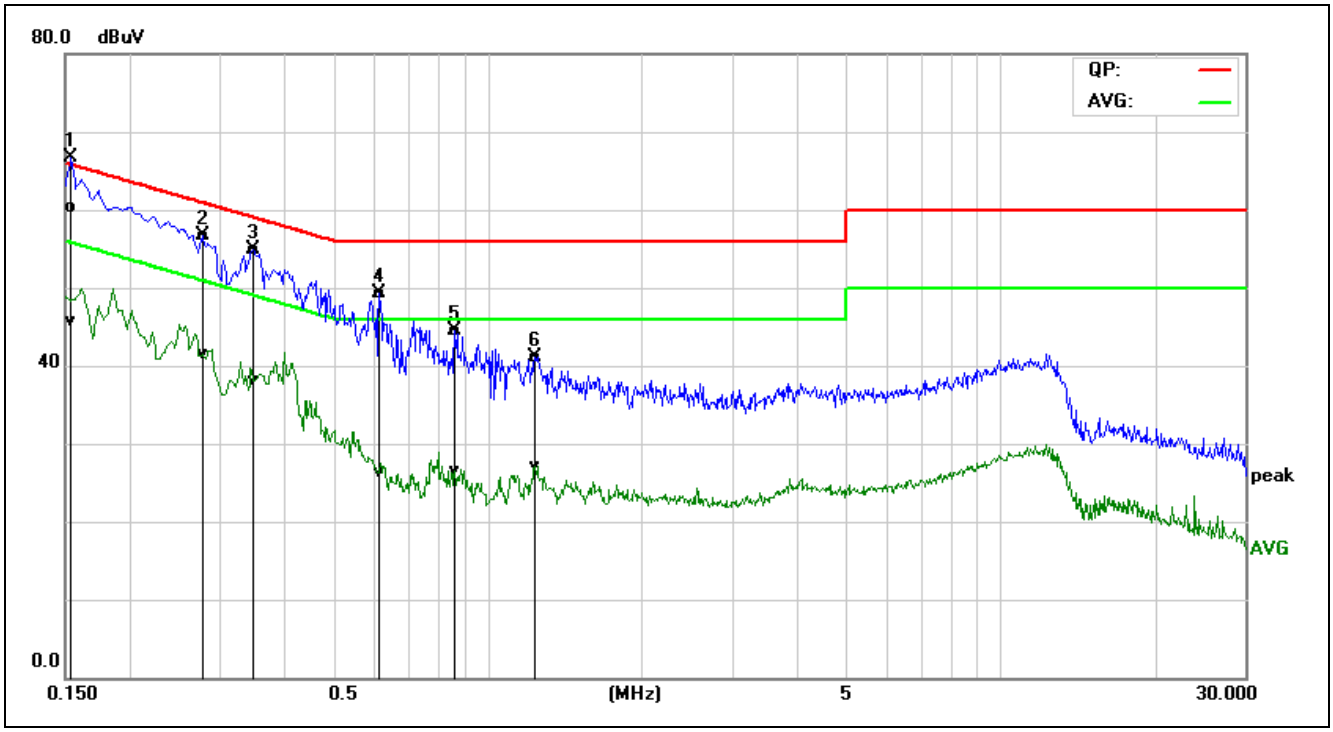
6.9.5 DATA SAMPLE

Frequency (MHz)	QuasiPeak Reading (dBuV)	Average Reading (dBuV)	Correction Factor (dB)	QuasiPeak Result (dBuV)	Average Result (dBuV)	QuasiPeak Limit (dBuV)	Average Limit (dBuV)	QuasiPeak Margin (dB)	Average Margin (dB)	Remark (Pass/Fail)
X.XXXX	32.69	25.65	11.52	44.21	37.17	65.78	55.79	-21.57	-18.62	Pass

Factor = Insertion loss of LISN + Cable Loss
Result = Quasi-peak Reading/ Average Reading + Factor
Limit = Limit stated in standard
Margin = Result (dBuV) – Limit (dBuV)

6.9.6 TEST RESULTS

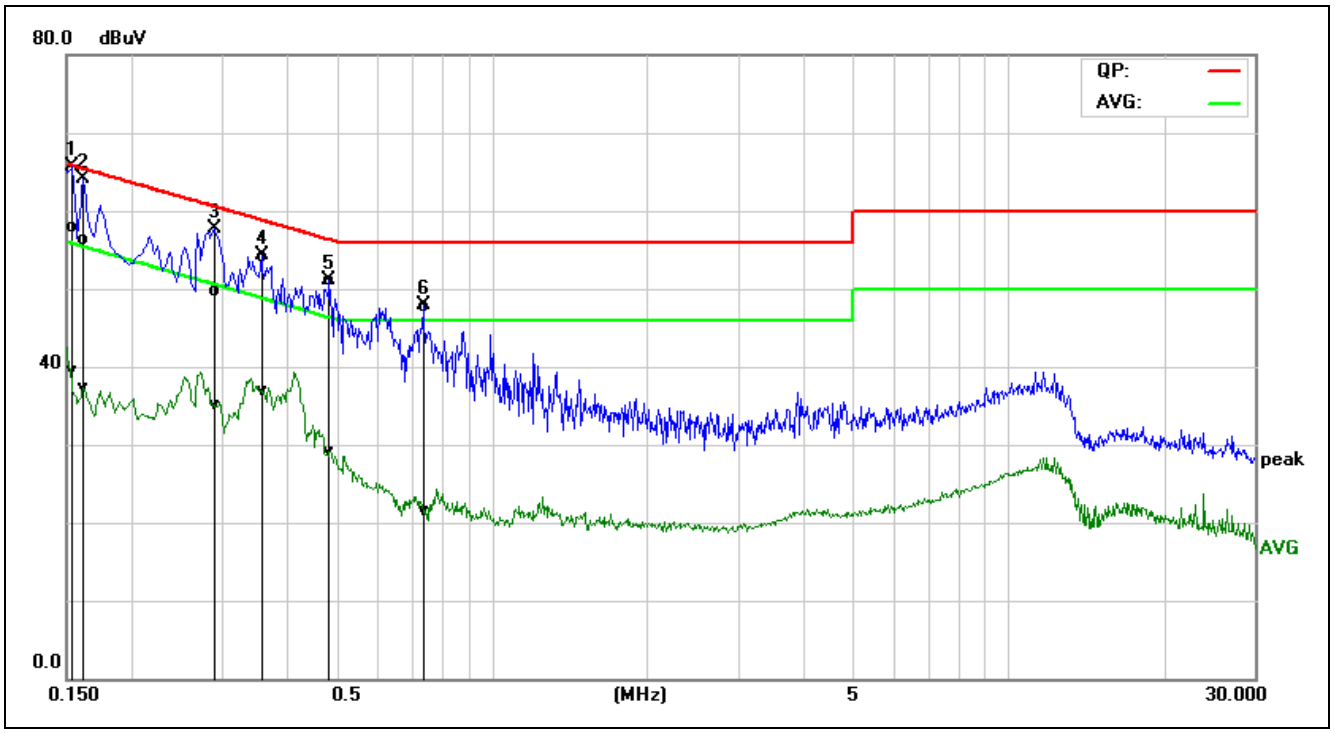
Model No.	MP90	RBW,VBW	9 kHz
Environmental Conditions	22°C, 45% RH	Test Mode	Mode 1
Tested by	Evan Ai	Line	L
Test Date	April 17, 2018	Test Voltage	AC120V/60Hz



Frequency (MHz)	QuasiPeak Reading (dBuV)	Average Reading (dBuV)	Correction Factor (dB)	QuasiPeak Result (dBuV)	Average Result (dBuV)	QuasiPeak Limit (dBuV)	Average Limit (dBuV)	QuasiPeak Margin (dB)	Average Margin (dB)	Remark (Pass/Fail)	**Line (L1/L2)**
0.1539	40.78	26.18	19.62	60.40	45.80	65.78	55.79	-5.38	-9.99	Pass	L1
0.2779	37.19	21.93	19.61	56.80	41.54	60.88	50.88	-4.08	-9.34	Pass	L1
0.3500	35.37	18.57	19.58	54.95	38.15	58.96	48.96	-4.01	-10.81	Pass	L1
0.6140	29.63	6.82	19.58	49.21	26.40	56.00	46.00	-6.79	-19.60	Pass	L1
0.8660	24.92	6.96	19.58	44.50	26.54	56.00	46.00	-11.50	-19.46	Pass	L1
1.2420	21.52	7.60	19.59	41.11	27.19	56.00	46.00	-14.89	-18.81	Pass	L1

REMARKS: *L= Line One (Live Line)*

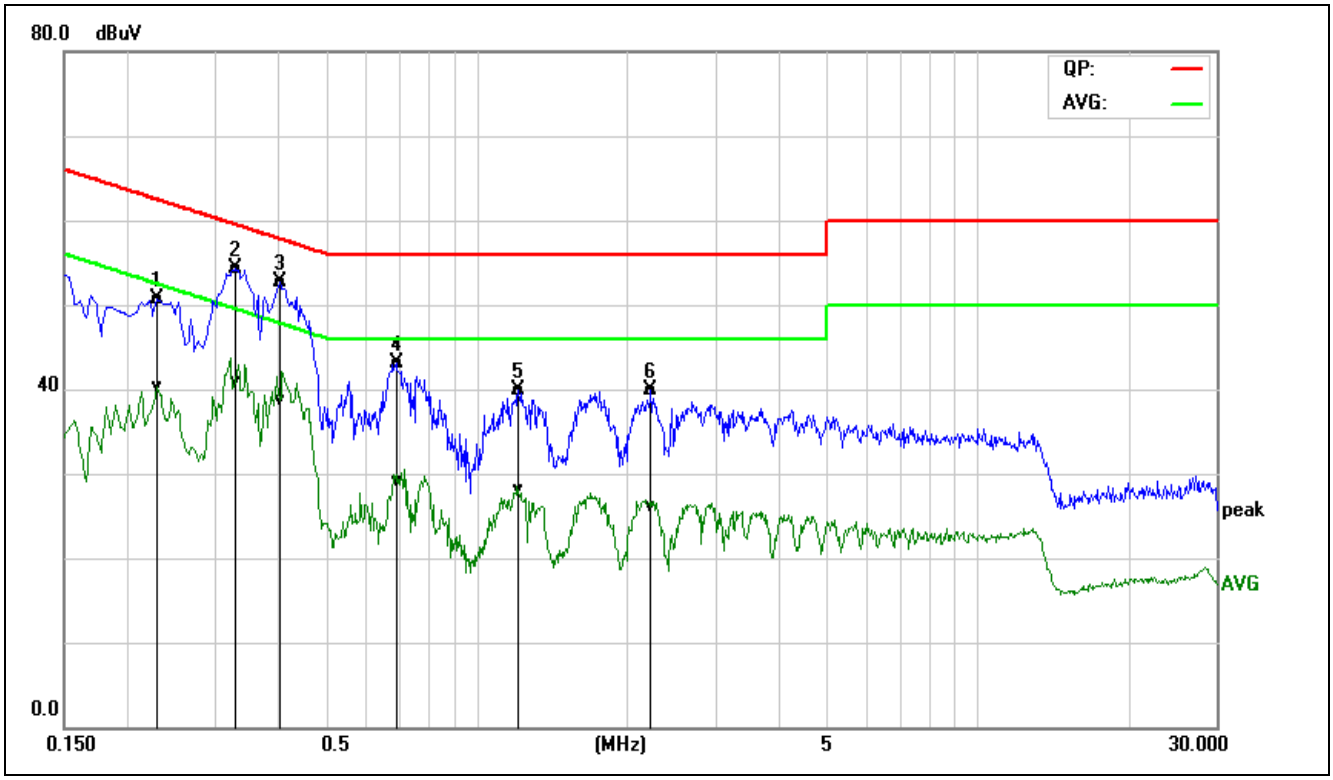
Model No.	MP90	**RBW,VBW**	9 kHz
Environmental Conditions	22°C, 45% RH	**Test Mode**	Mode 1
Tested by	Evan Ai	**Line**	N
Test Date	April 17, 2018	**Test Voltage**	AC120V/60Hz



Frequency (MHz)	QuasiPeak Reading (dBuV)	Average Reading (dBuV)	Correction Factor (dB)	QuasiPeak Result (dBuV)	Average Result (dBuV)	QuasiPeak Limit (dBuV)	Average Limit (dBuV)	QuasiPeak Margin (dB)	Average Margin (dB)	Remark (Pass/Fail)	**Line (L1/L2)**
0.1539	38.38	20.08	19.52	57.90	39.60	65.78	55.79	-7.88	-16.19	Pass	L2
0.1620	36.88	17.72	19.52	56.40	37.24	65.36	55.36	-8.96	-18.12	Pass	L2
0.2900	30.26	15.47	19.54	49.80	35.01	60.52	50.52	-10.72	-15.51	Pass	L2
0.3580	34.67	17.28	19.53	54.20	36.81	58.77	48.77	-4.57	-11.96	Pass	L2
0.4860	31.50	9.66	19.53	51.03	29.19	56.24	46.24	-5.21	-17.05	Pass	L2
0.7380	28.20	1.97	19.60	47.80	21.57	56.00	46.00	-8.20	-24.43	Pass	L2

REMARKS: *N = Line Two (Neutral Line)*

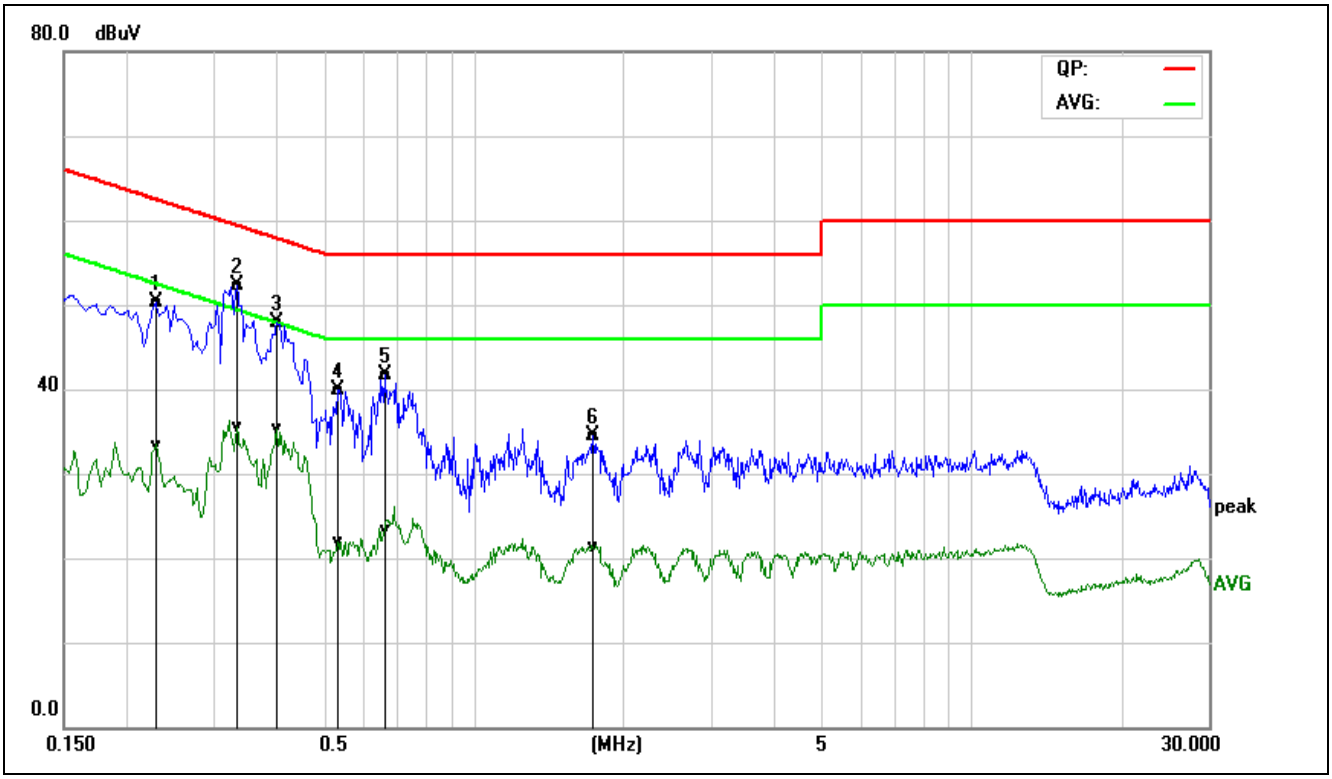
Model No.	MP90	**RBW,VBW**	9 kHz
Environmental Conditions	22°C, 45% RH	**Test Mode**	Mode 2
Tested by	David Dong	**Line**	L
Test Date	May 11, 2018	**Test Voltage**	AC240V/50Hz



Frequency (MHz)	QuasiPeak Reading (dBuV)	Average Reading (dBuV)	Correction Factor (dB)	QuasiPeak Result (dBuV)	Average Result (dBuV)	QuasiPeak Limit (dBuV)	Average Limit (dBuV)	QuasiPeak Margin (dB)	Average Margin (dB)	Remark (Pass/Fail)	**Line (L1/L2)**
0.2300	31.11	20.58	19.63	50.74	40.21	62.45	52.45	-11.71	-12.24	Pass	L1
0.3300	34.63	21.32	19.60	54.23	40.92	59.45	49.45	-5.22	-8.53	Pass	L1
0.4060	33.09	19.24	19.56	52.65	38.80	57.73	47.73	-5.08	-8.93	Pass	L1
0.6900	23.41	9.40	19.61	43.02	29.01	56.00	46.00	-12.98	-16.99	Pass	L1
1.2100	20.29	8.50	19.58	39.87	28.08	56.00	46.00	-16.13	-17.92	Pass	L1
2.2260	20.13	6.34	19.72	39.85	26.06	56.00	46.00	-16.15	-19.94	Pass	L1

REMARKS: *L= Line One (Live Line)*

Model No.	MP90	**RBW,VBW**	9 kHz
Environmental Conditions	22°C, 45% RH	**Test Mode**	Mode 2
Tested by	David Dong	**Line**	N
Test Date	May 11, 2018	**Test Voltage**	AC240V/50Hz



Frequency (MHz)	QuasiPeak Reading (dBuV)	Average Reading (dBuV)	Correction Factor (dB)	QuasiPeak Result (dBuV)	Average Result (dBuV)	QuasiPeak Limit (dBuV)	Average Limit (dBuV)	QuasiPeak Margin (dB)	Average Margin (dB)	Remark (Pass/Fail)	**Line (L1/L2)**
0.2300	30.80	13.86	19.54	50.34	33.40	62.45	52.45	-12.11	-19.05	Pass	L2
0.3339	32.68	15.90	19.54	52.22	35.44	59.35	49.35	-7.13	-13.91	Pass	L2
0.4020	28.30	15.73	19.53	47.83	35.26	57.81	47.81	-9.98	-12.55	Pass	L2
0.5340	20.40	2.31	19.54	39.94	21.85	56.00	46.00	-16.06	-24.15	Pass	L2
0.6620	22.17	3.73	19.59	41.76	23.32	56.00	46.00	-14.24	-22.68	Pass	L2
1.7420	14.91	1.63	19.67	34.58	21.30	56.00	46.00	-21.42	-24.70	Pass	L2

REMARKS: *N= Line Two (Neutral Line)*

6.10 FREQUENCY STABILITY

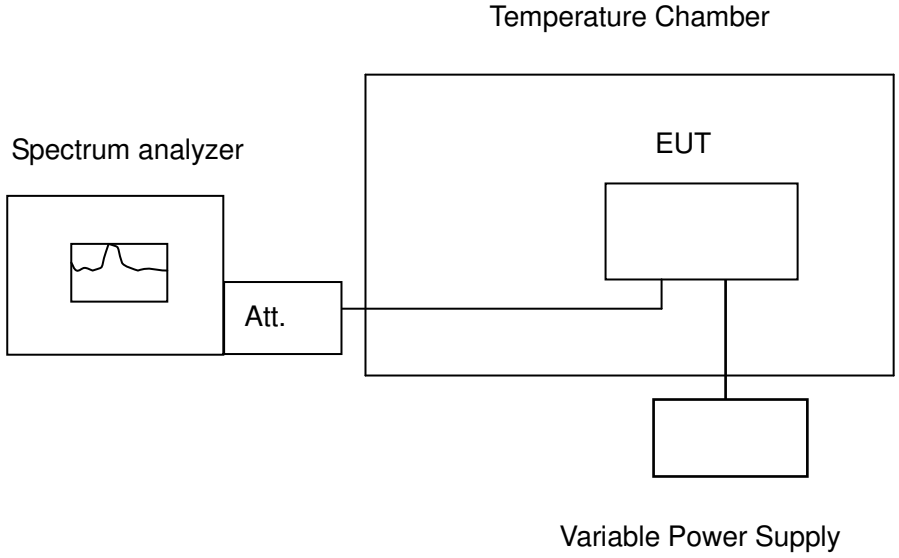
6.10.1 LIMIT

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

6.10.2 TEST INSTRUMENTS

Name of Equipment	Manufacturer	Model Number	Serial Number	Last Calibration	Due Calibration
Spectrum Analyzer	Agilent	N9010A	MY52221469	01/27/2018	01/26/2019
DC Power Supply	DAZHENG	PS-605D	20018978	N.C.R	N.C.R
AC POWER SOUCE	UMART	HPA1010	N/A	N.C.R	N.C.R
Power Meter	Anritsu	ML2495A	1204003	01/27/2018	01/26/2019
Power Sensor	Anritsu	MA2411B	1126150	01/27/2018	01/26/2019
Temperature Chamber	TERCHY	MHG-800N	E21104	11/18/2017	11/17/2018
Temp. / Humidity Meter	Anymetre	JR913	N/A	01/29/2018	01/28/2019

6.10.3 TEST CONFIGURATION



Remark: *Measurement setup for testing on Antenna connector*

6.10.4 TEST PROCEDURE

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to –20°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

6.10.5 TEST RESULTS

No non-compliance noted.

Test Data

IEEE 802.11a MHz mode / 5180 ~ 5240MHz (Low)

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5179.969059	5150-5250	PASS
40	120	5179.979350	5150-5250	PASS
30	120	5179.962757	5150-5250	PASS
20	120	5179.917200	5150-5250	PASS
10	120	5179.982708	5150-5250	PASS
0	120	5179.990483	5150-5250	PASS
-10	120	5179.984399	5150-5250	PASS
-20	120	5179.956851	5150-5250	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5179.987085	5150-5250	PASS
	120	5179.917200	5150-5250	PASS
	132	5179.972612	5150-5250	PASS

IEEE 802.11a MHz mode / 5180 ~ 5240MHz (High)

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5239.950866	5150-5250	PASS
40	120	5239.980316	5150-5250	PASS
30	120	5239.971891	5150-5250	PASS
20	120	5239.919800	5150-5250	PASS
10	120	5239.955576	5150-5250	PASS
0	120	5239.977612	5150-5250	PASS
-10	120	5239.997445	5150-5250	PASS
-20	120	5239.982565	5150-5250	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5239.997060	5150-5250	PASS
	120	5239.919800	5150-5250	PASS
	132	5239.999977	5150-5250	PASS

IEEE 802.11a mode / 5745 ~ 5825MHz (Low)

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5744.973862	5725-5850	PASS
40	120	5744.970742	5725-5850	PASS
30	120	5744.950938	5725-5850	PASS
20	120	5744.910800	5725-5850	PASS
10	120	5744.972039	5725-5850	PASS
0	120	5744.984608	5725-5850	PASS
-10	120	5744.955234	5725-5850	PASS
-20	120	5744.980099	5725-5850	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5744.990734	5725-5850	PASS
	120	5744.910800	5725-5850	PASS
	132	5744.994518	5725-5850	PASS

IEEE 802.11a mode / 5745 ~ 5825MHz (High)

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5824.986369	5725-5850	PASS
40	120	5824.965407	5725-5850	PASS
30	120	5824.977710	5725-5850	PASS
20	120	5824.909400	5725-5850	PASS
10	120	5824.958117	5725-5850	PASS
0	120	5824.980988	5725-5850	PASS
-10	120	5824.984420	5725-5850	PASS
-20	120	5824.969392	5725-5850	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5824.970876	5725-5850	PASS
	120	5824.909400	5725-5850	PASS
	132	5824.960357	5725-5850	PASS

IEEE 802.11n HT 20 MHz mode / 5180 ~ 5240MHz (Low)

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5179.975713	5150-5250	PASS
40	120	5179.962532	5150-5250	PASS
30	120	5179.975187	5150-5250	PASS
20	120	5179.917200	5150-5250	PASS
10	120	5179.995793	5150-5250	PASS
0	120	5179.959644	5150-5250	PASS
-10	120	5179.976073	5150-5250	PASS
-20	120	5179.964905	5150-5250	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5179.972753	5150-5250	PASS
	120	5179.917200	5150-5250	PASS
	132	5179.963295	5150-5250	PASS

IEEE 802.11n HT 20 MHz mode / 5180 ~ 5240MHz (High)

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5239.991288	5150-5250	PASS
40	120	5239.975026	5150-5250	PASS
30	120	5239.991778	5150-5250	PASS
20	120	5239.919800	5150-5250	PASS
10	120	5239.974299	5150-5250	PASS
0	120	5239.998598	5150-5250	PASS
-10	120	5239.984684	5150-5250	PASS
-20	120	5239.971482	5150-5250	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5239.967307	5150-5250	PASS
	120	5239.919800	5150-5250	PASS
	132	5239.964011	5150-5250	PASS

IEEE 802.11n HT 20 MHz mode / 5745 ~ 5825MHz (Low)

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5744.983967	5725-5850	PASS
40	120	5744.971143	5725-5850	PASS
30	120	5744.980515	5725-5850	PASS
20	120	5744.910800	5725-5850	PASS
10	120	5744.955163	5725-5850	PASS
0	120	5744.989796	5725-5850	PASS
-10	120	5744.978622	5725-5850	PASS
-20	120	5744.955267	5725-5850	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5744.959369	5725-5850	PASS
	120	5744.910800	5725-5850	PASS
	132	5744.978005	5725-5850	PASS

IEEE 802.11n HT 20 MHz mode / 5745 ~ 5825MHz (High)

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5824.976610	5725-5850	PASS
40	120	5824.977267	5725-5850	PASS
30	120	5824.993730	5725-5850	PASS
20	120	5824.909400	5725-5850	PASS
10	120	5824.989642	5725-5850	PASS
0	120	5824.990370	5725-5850	PASS
-10	120	5824.995871	5725-5850	PASS
-20	120	5824.954408	5725-5850	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5824.977573	5725-5850	PASS
	120	5824.909400	5725-5850	PASS
	132	5824.965055	5725-5850	PASS

IEEE 802.11n HT 40 MHz mode / 5190 ~ 5230MHz (Low)

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5189.973167	5150-5250	PASS
40	120	5189.975830	5150-5250	PASS
30	120	5189.979755	5150-5250	PASS
20	120	5189.921800	5150-5250	PASS
10	120	5189.996166	5150-5250	PASS
0	120	5189.970121	5150-5250	PASS
-10	120	5189.973436	5150-5250	PASS
-20	120	5189.954848	5150-5250	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5189.997607	5150-5250	PASS
	120	5189.921800	5150-5250	PASS
	132	5189.974128	5150-5250	PASS

IEEE 802.11n HT 40 MHz mode / 5190 ~ 5230MHz (High)

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5229.959009	5150-5250	PASS
40	120	5229.999556	5150-5250	PASS
30	120	5229.966176	5150-5250	PASS
20	120	5229.918000	5150-5250	PASS
10	120	5229.961876	5150-5250	PASS
0	120	5229.960428	5150-5250	PASS
-10	120	5229.953246	5150-5250	PASS
-20	120	5229.959483	5150-5250	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5229.986112	5150-5250	PASS
	120	5229.918000	5150-5250	PASS
	132	5229.956362	5150-5250	PASS

IEEE 802.11n HT 40 MHz mode / 5755 ~ 5795MHz (Low)

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5754.965025	5725-5850	PASS
40	120	5754.988103	5725-5850	PASS
30	120	5754.979513	5725-5850	PASS
20	120	5754.917000	5725-5850	PASS
10	120	5754.961446	5725-5850	PASS
0	120	5754.977983	5725-5850	PASS
-10	120	5754.995680	5725-5850	PASS
-20	120	5754.951729	5725-5850	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5754.965062	5725-5850	PASS
	120	5754.917000	5725-5850	PASS
	132	5754.977093	5725-5850	PASS

IEEE 802.11n HT 40 MHz mode / 5755 ~ 5795MHz (High)

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5794.977981	5725-5850	PASS
40	120	5794.989063	5725-5850	PASS
30	120	5794.987574	5725-5850	PASS
20	120	5794.919000	5725-5850	PASS
10	120	5794.967322	5725-5850	PASS
0	120	5794.996259	5725-5850	PASS
-10	120	5794.997742	5725-5850	PASS
-20	120	5794.952643	5725-5850	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5794.954369	5725-5850	PASS
	120	5794.919000	5725-5850	PASS
	132	5794.995346	5725-5850	PASS

IEEE 802.11ac 80 mode / 5210MHz

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5209.950648	5150-5250	PASS
40	120	5209.971579	5150-5250	PASS
30	120	5209.997376	5150-5250	PASS
20	120	5209.925000	5150-5250	PASS
10	120	5209.990536	5150-5250	PASS
0	120	5209.964210	5150-5250	PASS
-10	120	5209.971232	5150-5250	PASS
-20	120	5209.961784	5150-5250	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5209.971413	5150-5250	PASS
	120	5209.925000	5150-5250	PASS
	132	5209.966039	5150-5250	PASS

IEEE 802.11ac 80 mode / 5775MHz

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5774.979707	5725-5850	PASS
40	120	5774.977122	5725-5850	PASS
30	120	5774.966356	5725-5850	PASS
20	120	5774.918000	5725-5850	PASS
10	120	5774.987193	5725-5850	PASS
0	120	5774.988758	5725-5850	PASS
-10	120	5774.963712	5725-5850	PASS
-20	120	5774.985618	5725-5850	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5774.950124	5725-5850	PASS
	120	5774.918000	5725-5850	PASS
	132	5774.965667	5725-5850	PASS