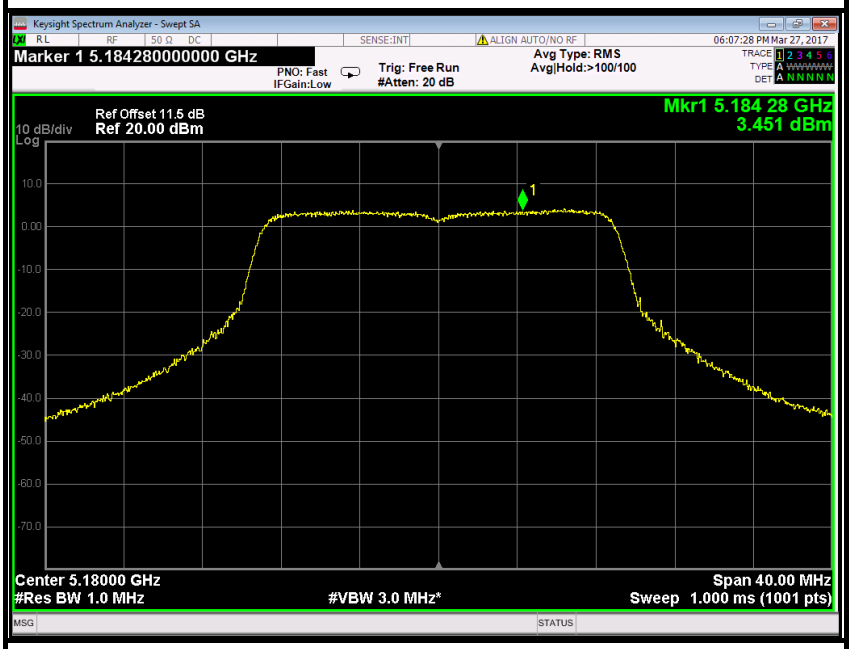
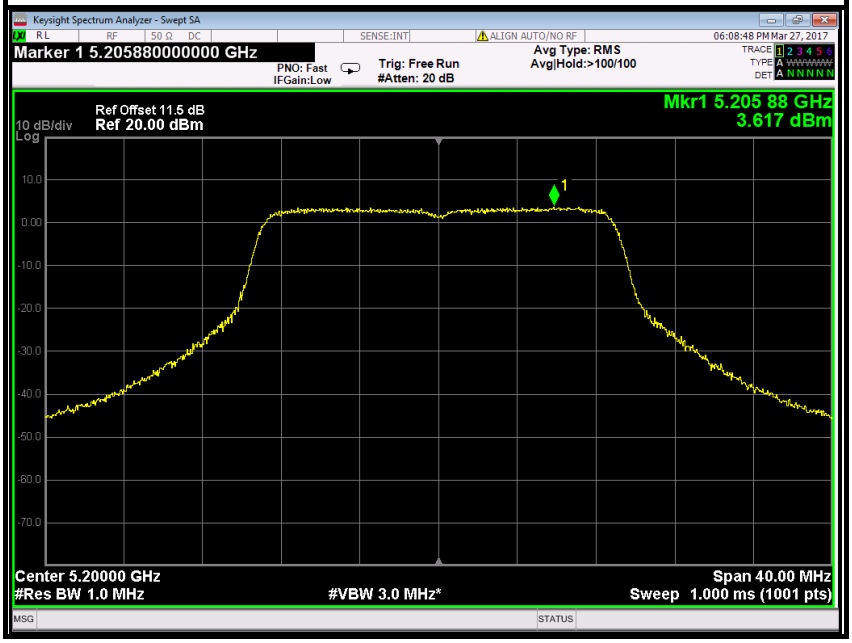
Antenna 0

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

PPSD (CH Low)



PPSD (CH Mid)



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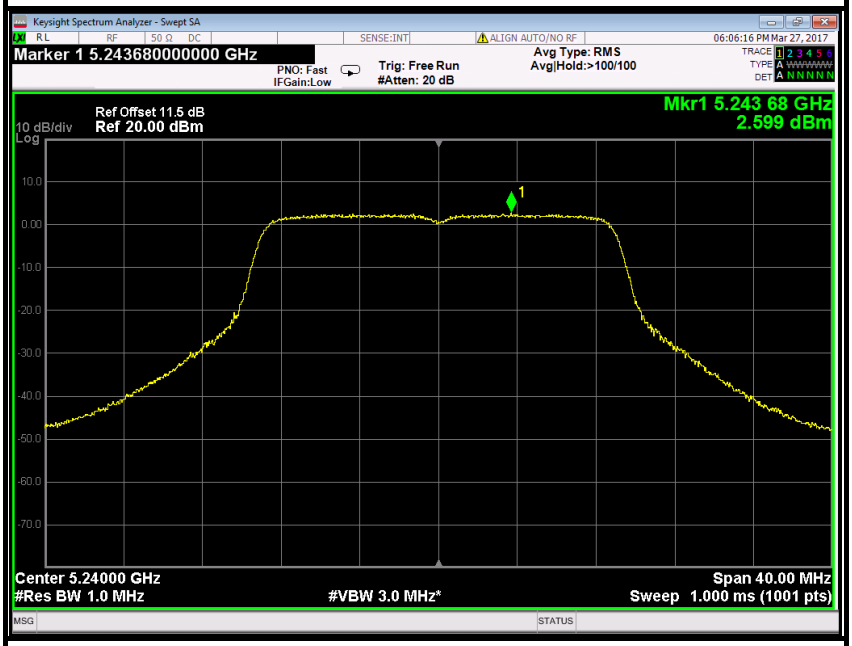
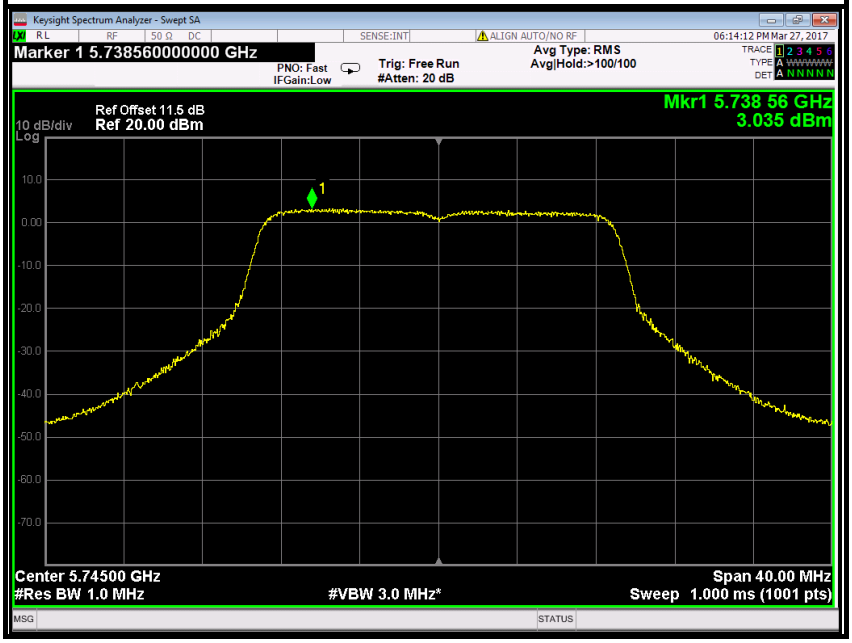
PPSD (CH High)



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

PPSD (CH Low)



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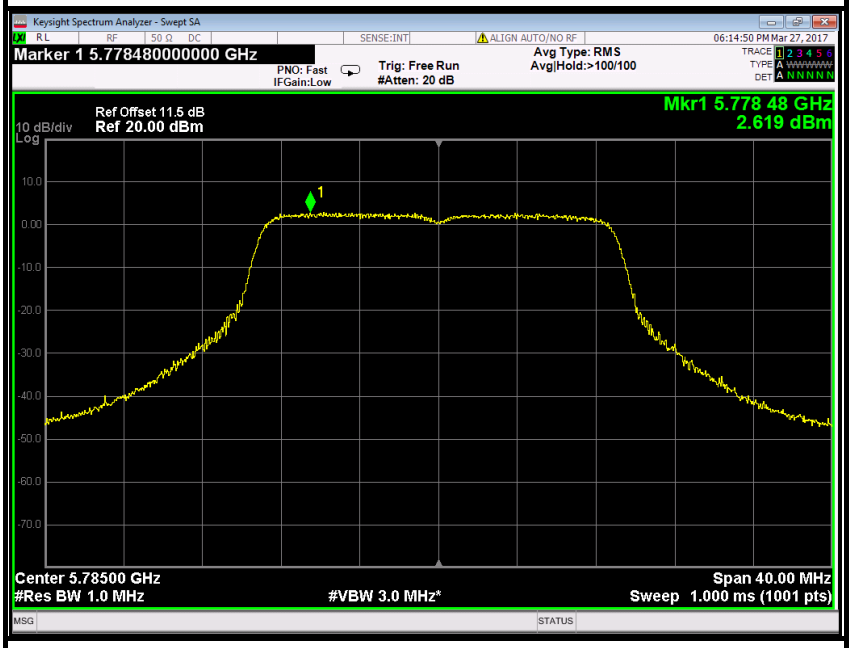
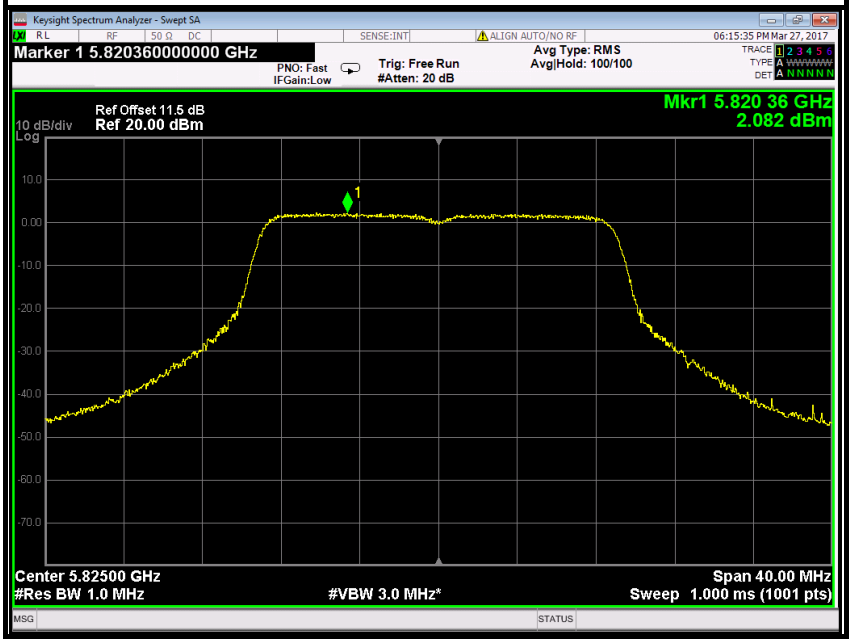
PPSD (CH Mid)



PPSD (CH High)



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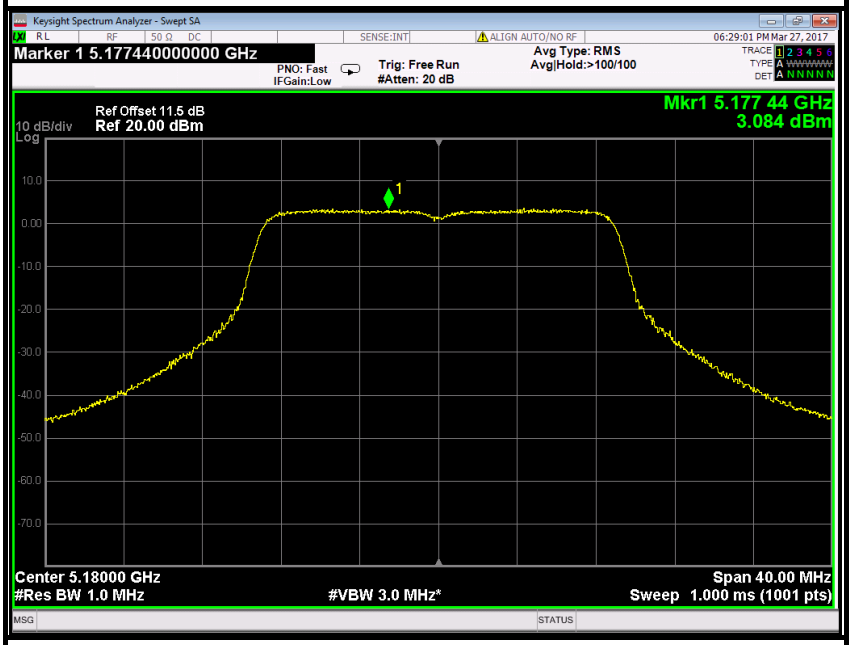
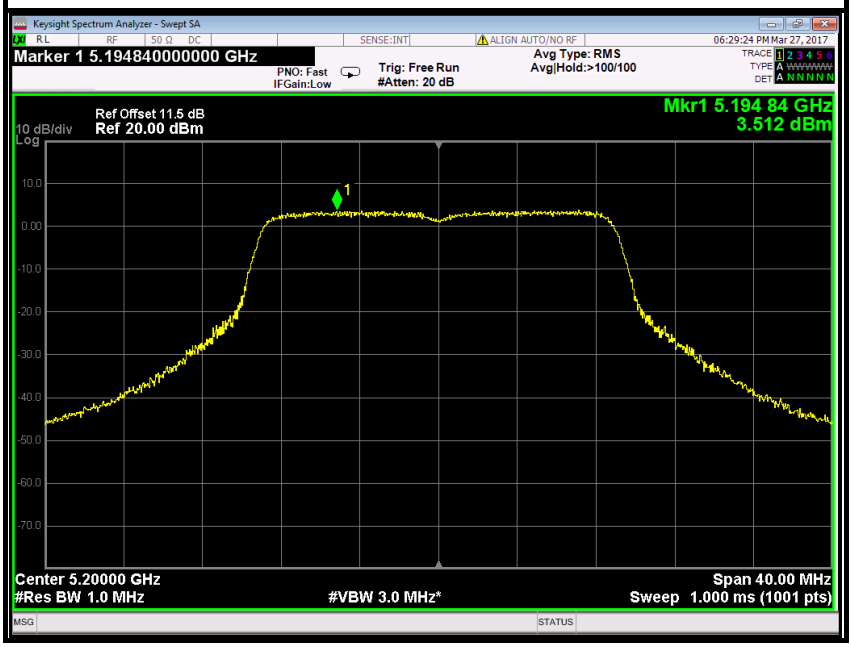
Antenna 1

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

PPSD (CH Low)



PPSD (CH Mid)



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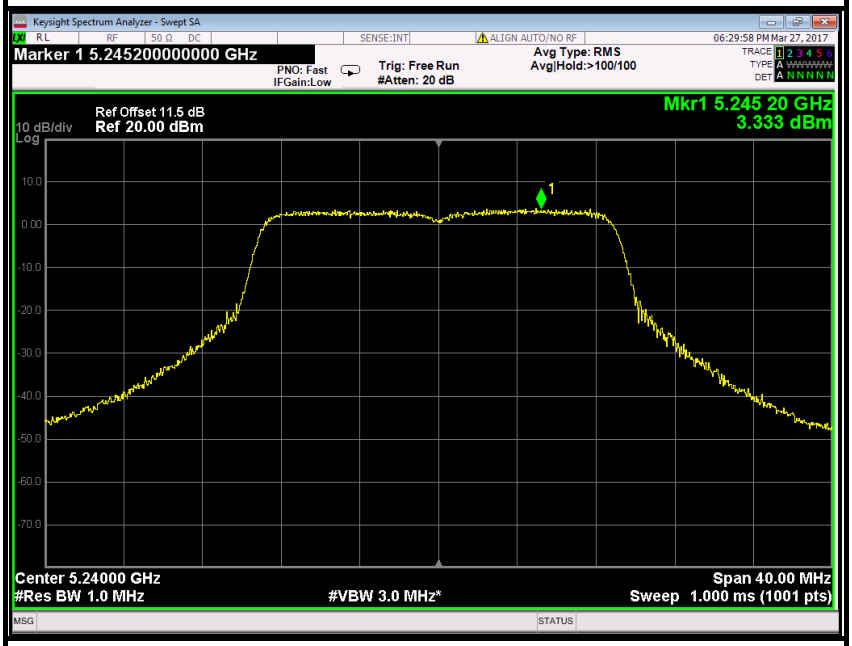
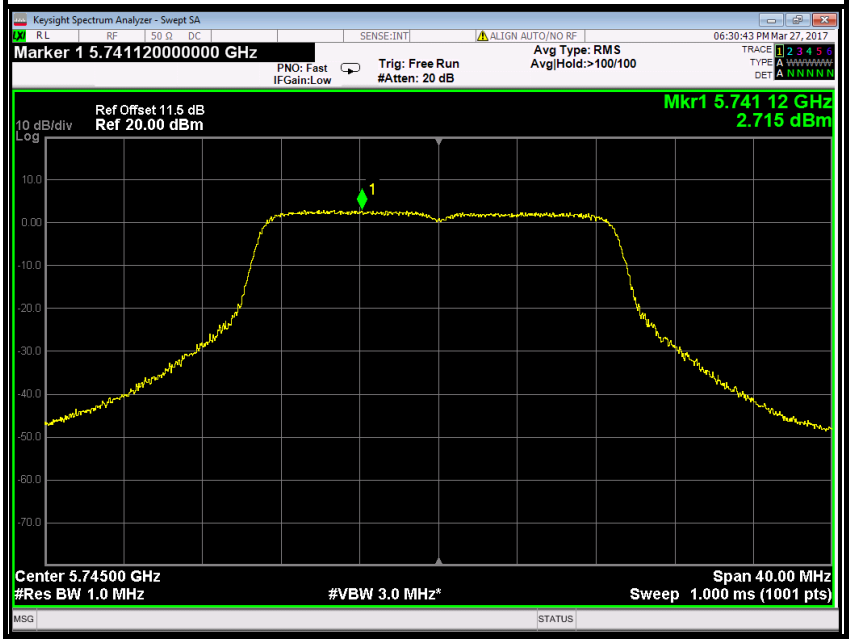
PPSD (CH High)



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

PPSD (CH Low)



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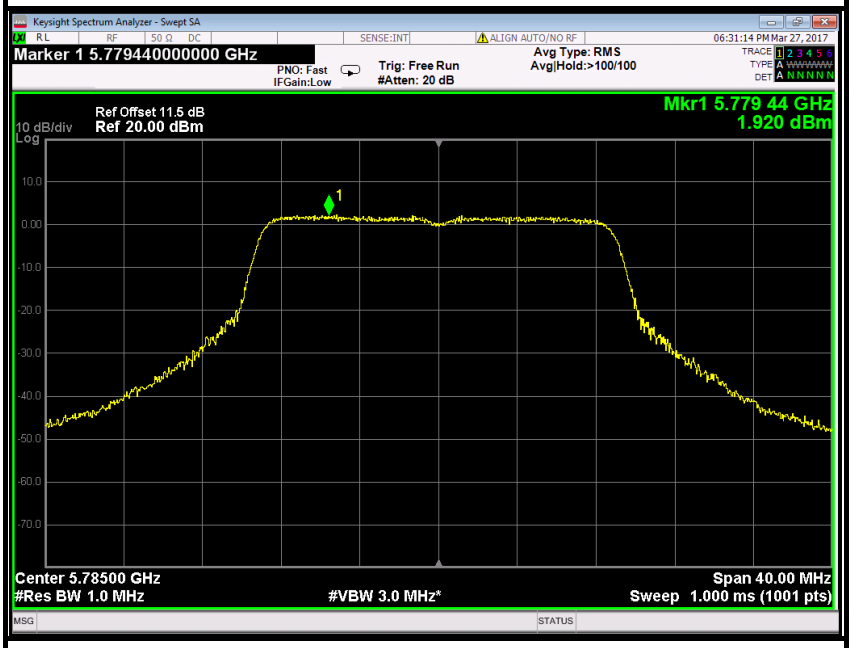
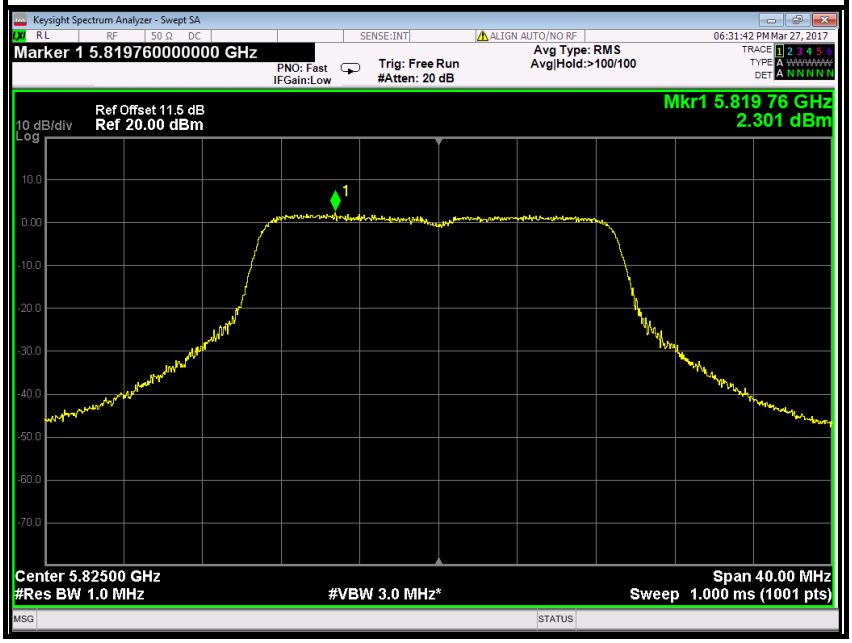
PPSD (CH Mid)



PPSD (CH High)



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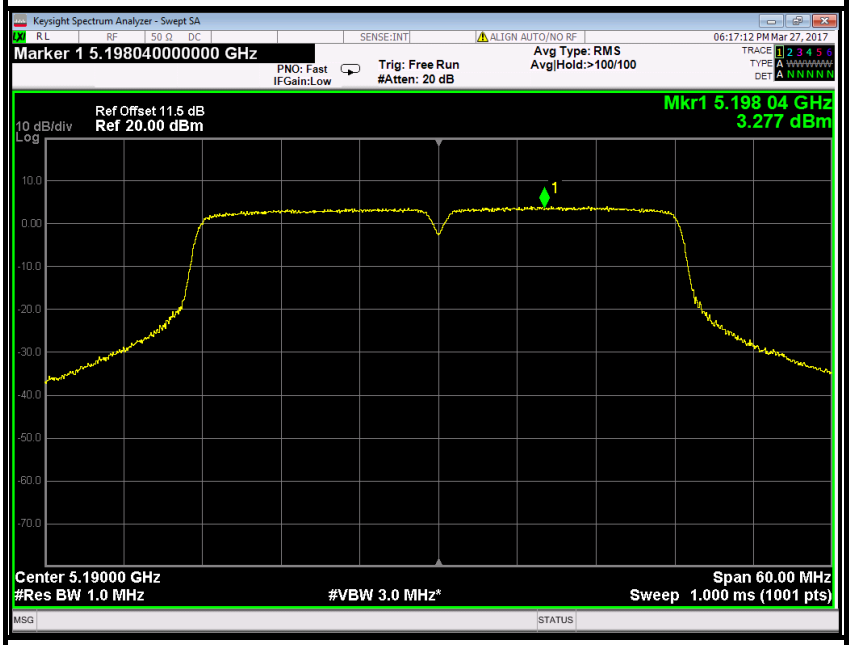
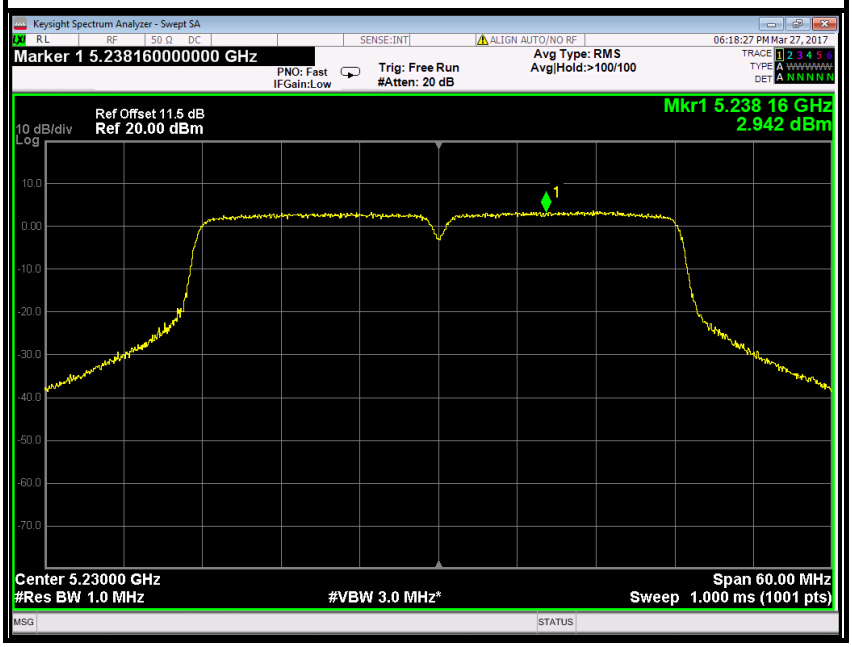
Antenna 0

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

PPSD (CH Low)



PPSD (CH High)



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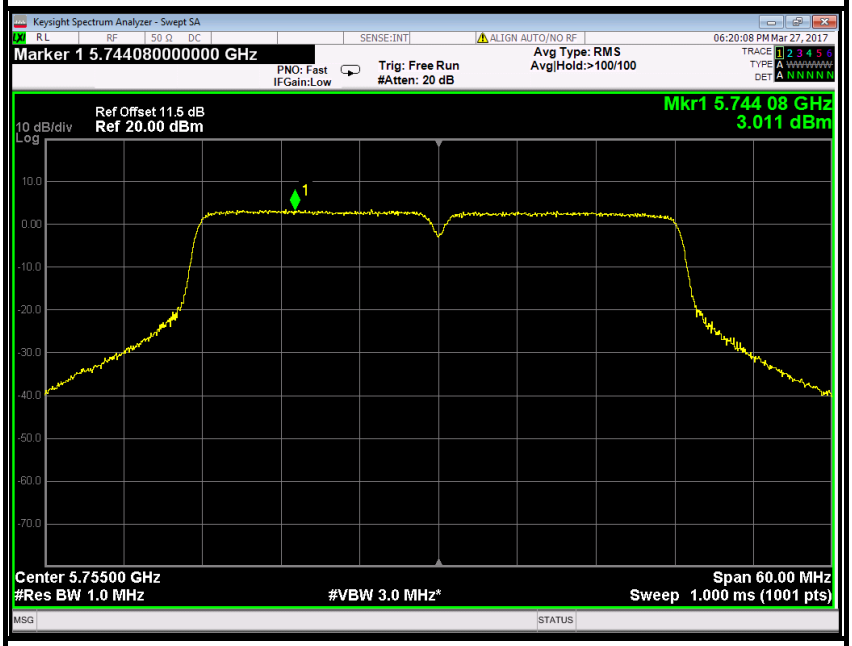
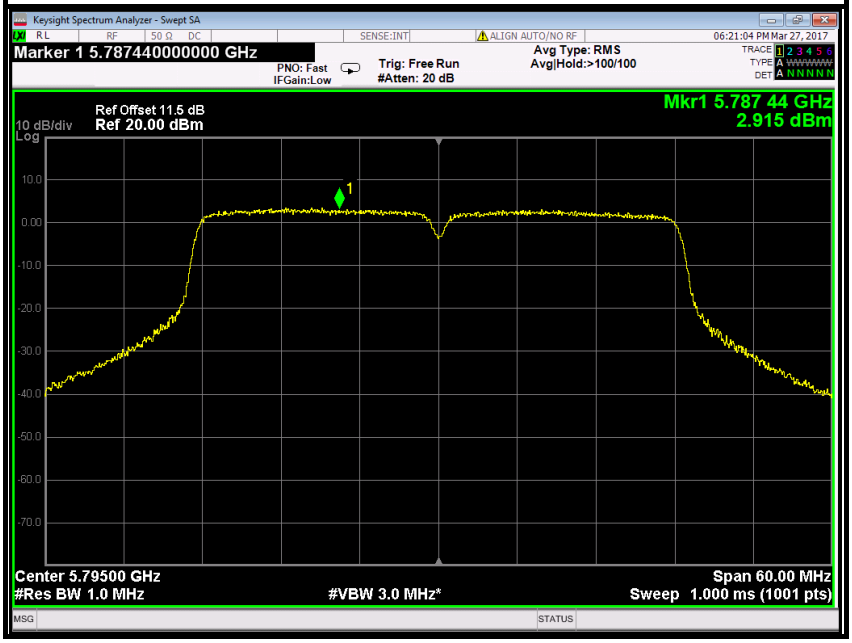
IEEE 802.11n HT 40 MHz mode / 5755 ~ 5795MHz

PPSD (CH Low)



PPSD (CH High)



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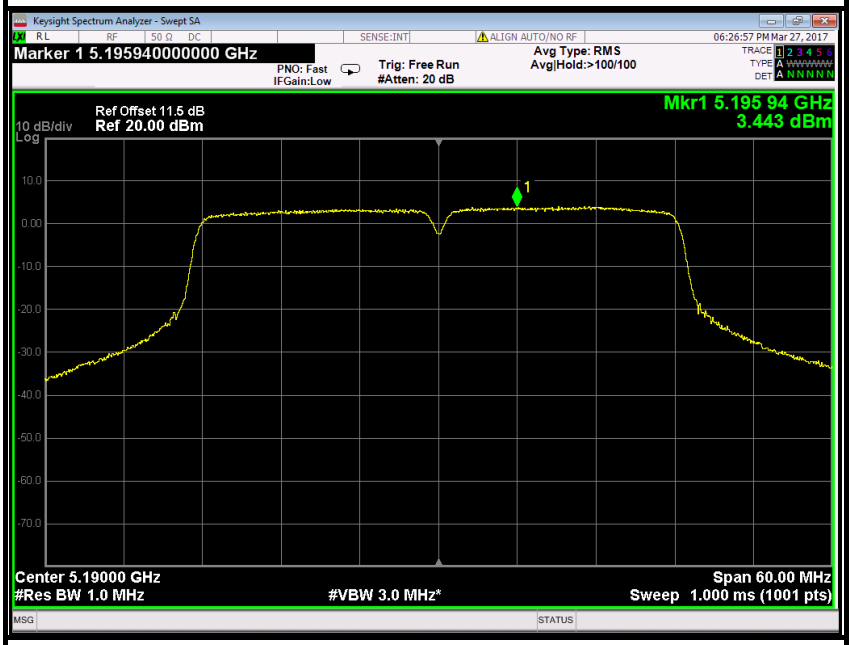
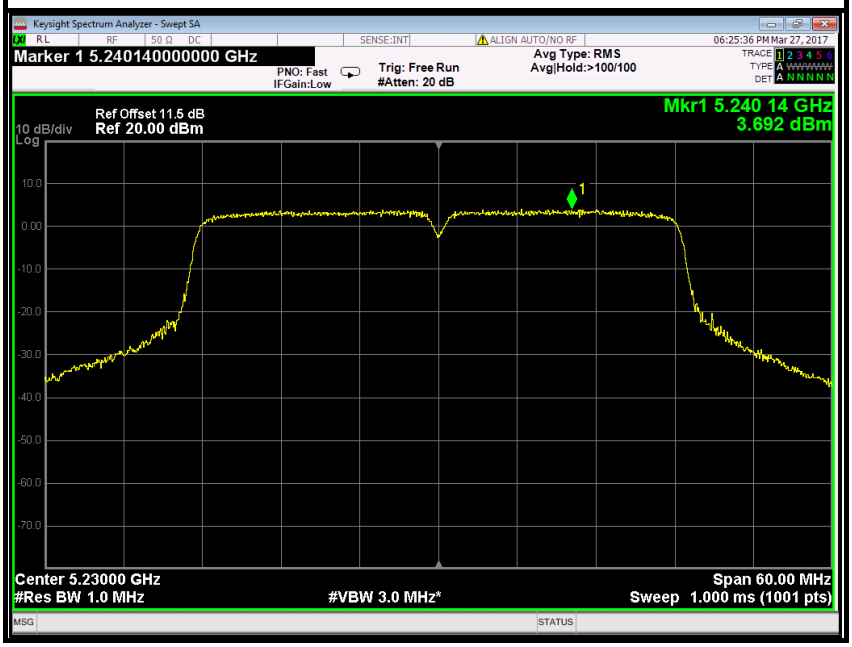
Antenna 1

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

PPSD (CH Low)



PPSD (CH High)



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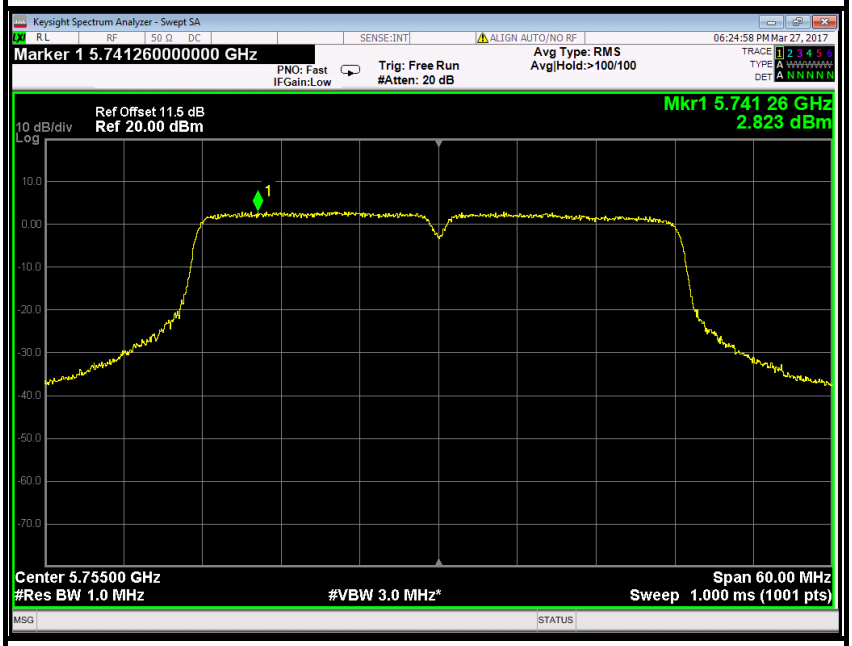
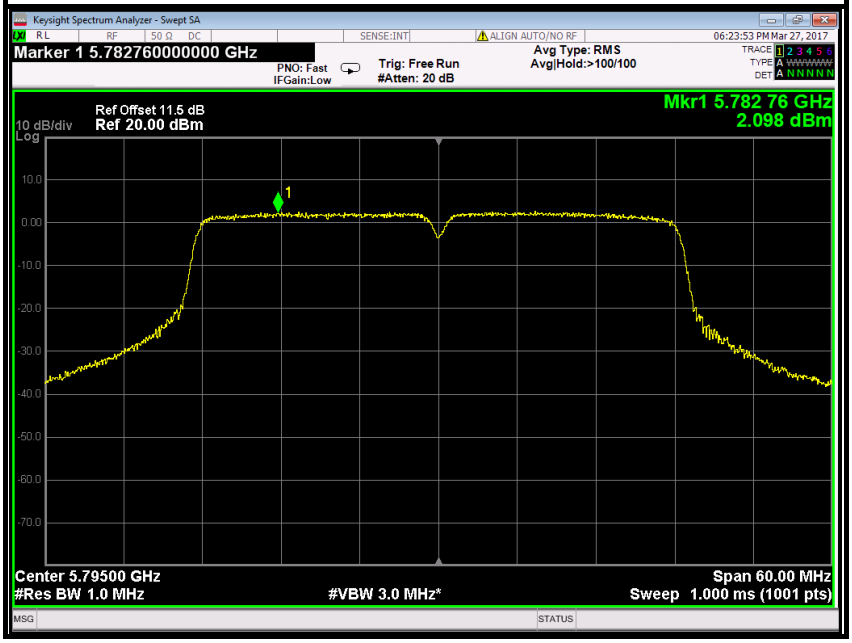
IEEE 802.11n HT 40 MHz mode / 5755 ~ 5795MHz

PPSD (CH Low)



PPSD (CH High)



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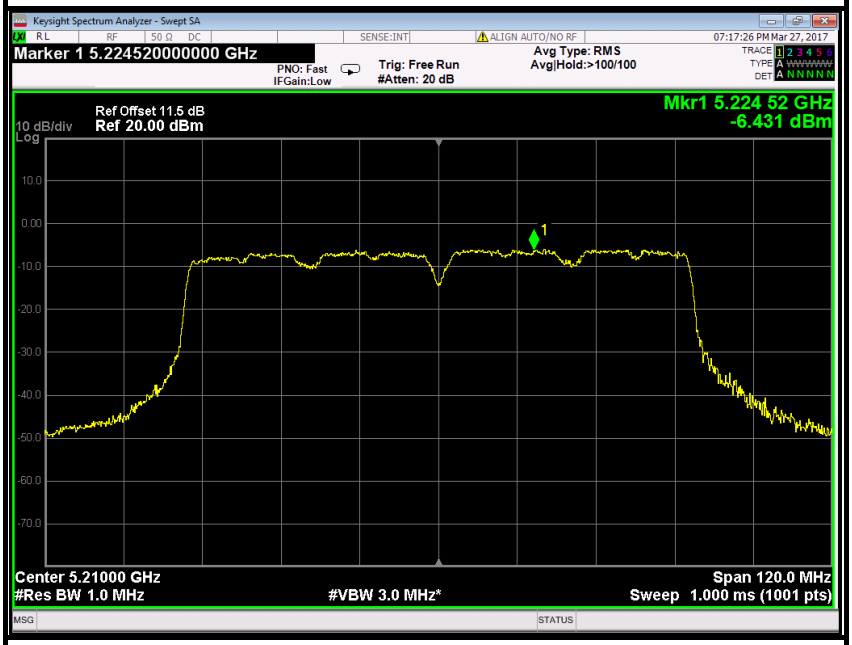
Antenna 0

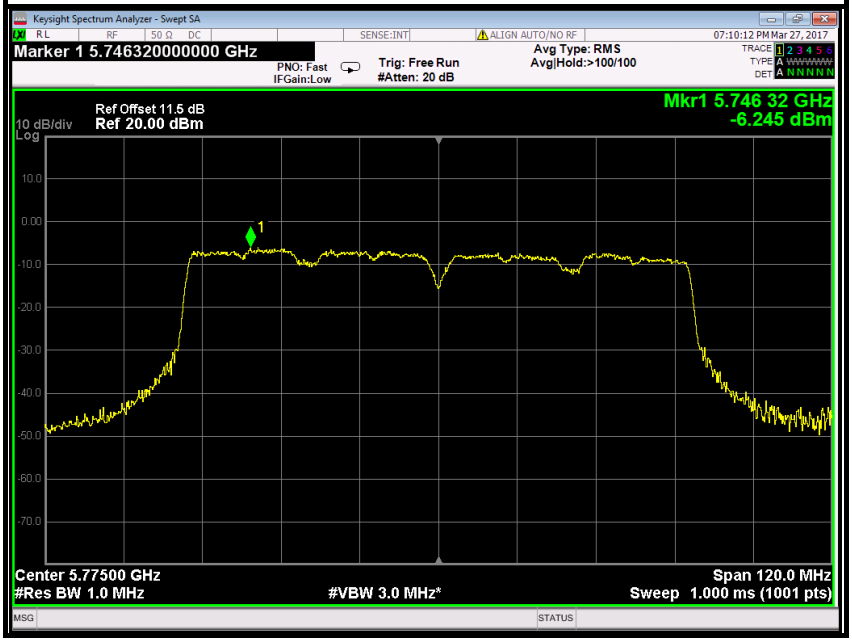
IEEE 802.11ac 80 mode / 5210MHz

PPSD



IEEE 802.11ac 80 mode / 5775MHz

PPSD



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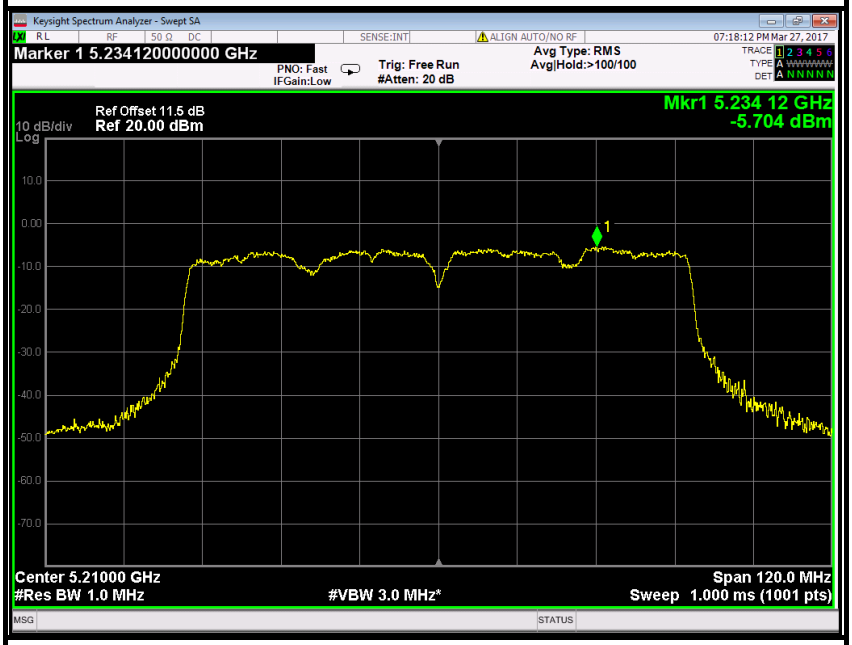
Antenna 1

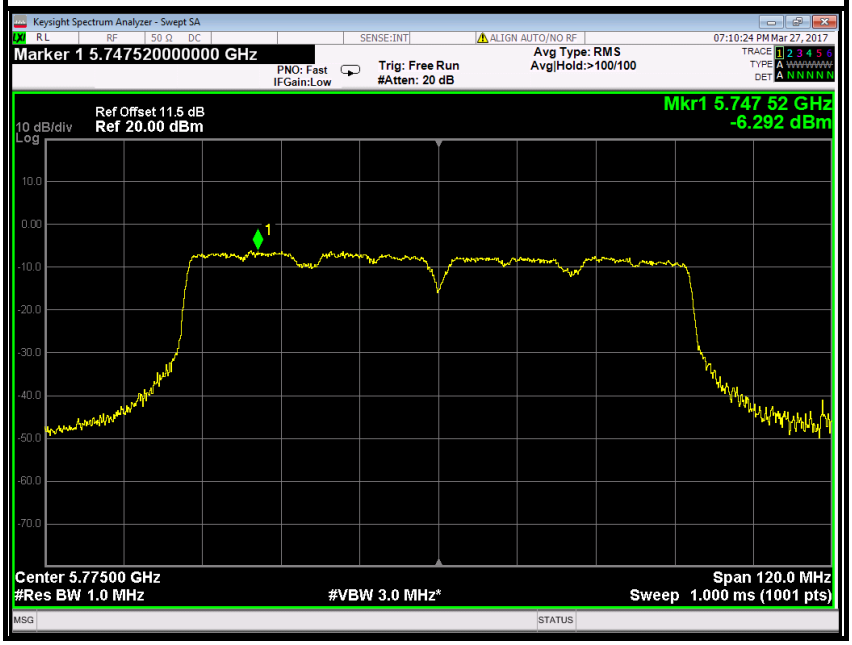
IEEE 802.11ac 80 mode / 5210MHz

PPSD



IEEE 802.11ac 80 mode / 5775MHz

PPSD



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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

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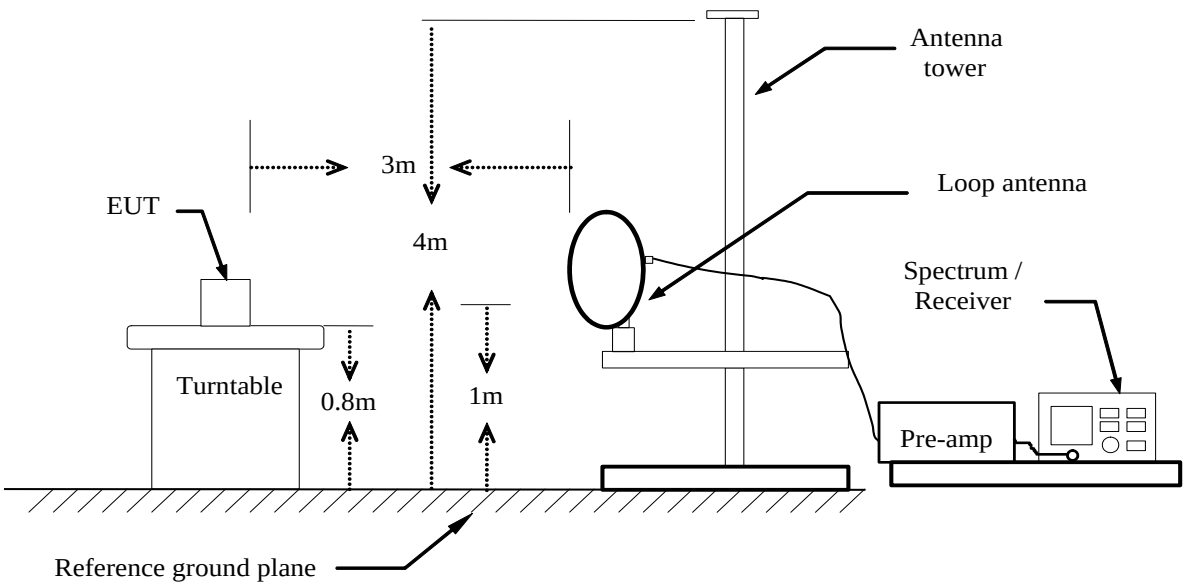
6.7.2 TEST INSTRUMENTS

Radiated Emission Test Site 966(2)					
Name of Equipment	**Manufacturer**	**Model Number**	**Serial Number**	**Last Calibration**	**Due Calibration**
PSA Series Spectrum Analyzer	Agilent	E4446A	US44300399	02/21/2017	02/20/2018
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI	100783	02/21/2017	02/20/2018
Amplifier	EMEC	EM330	060661	03/18/2017	03/17/2018
High Noise Amplifier	Agilent	8449B	3008A01838	02/21/2017	02/20/2018
Board-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170-497	02/28/2017	02/27/2018
Bilog Antenna	SCHAFFNER	CBL6143	5082	02/21/2017	02/20/2018
Horn Antenna	SCHWARZBECK	BBHA9120	D286	02/28/2017	02/27/2018
Loop Antenna	COM-POWER	AL-130	121044	09/25/2016	09/24/2017
Turn Table	N/A	N/A	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	02/21/2017	02/20/2018
Antenna Tower	SUNOL	TLT2	N/A	N.C.R	N.C.R
Test S/W	FARAD	LZ-RF / CCS-SZ-3A2			

6.7.3 TEST CONFIGURATION

Below 30MHz



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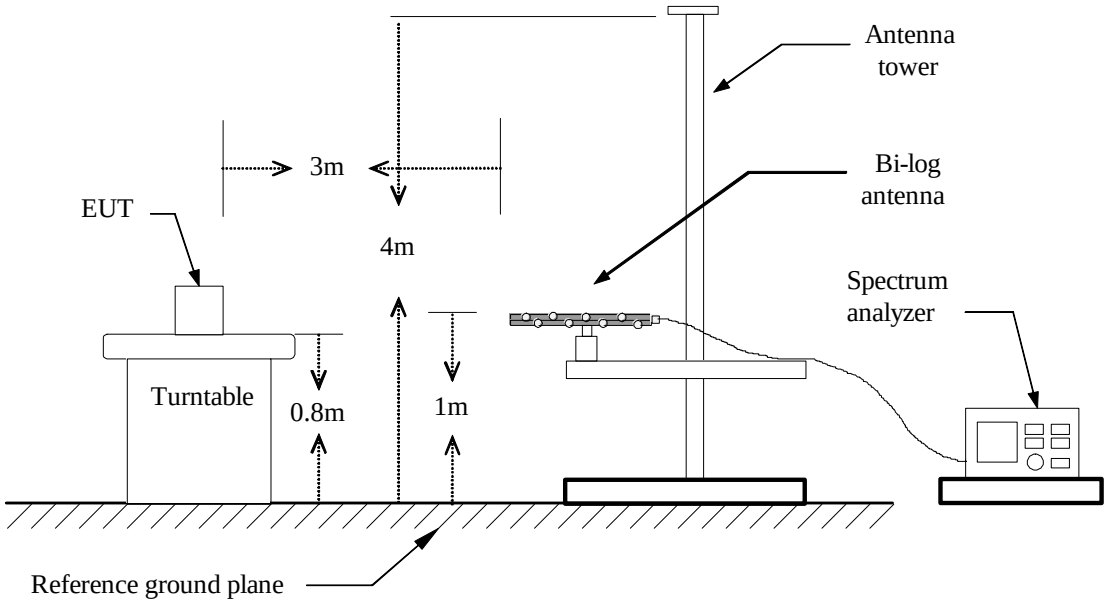
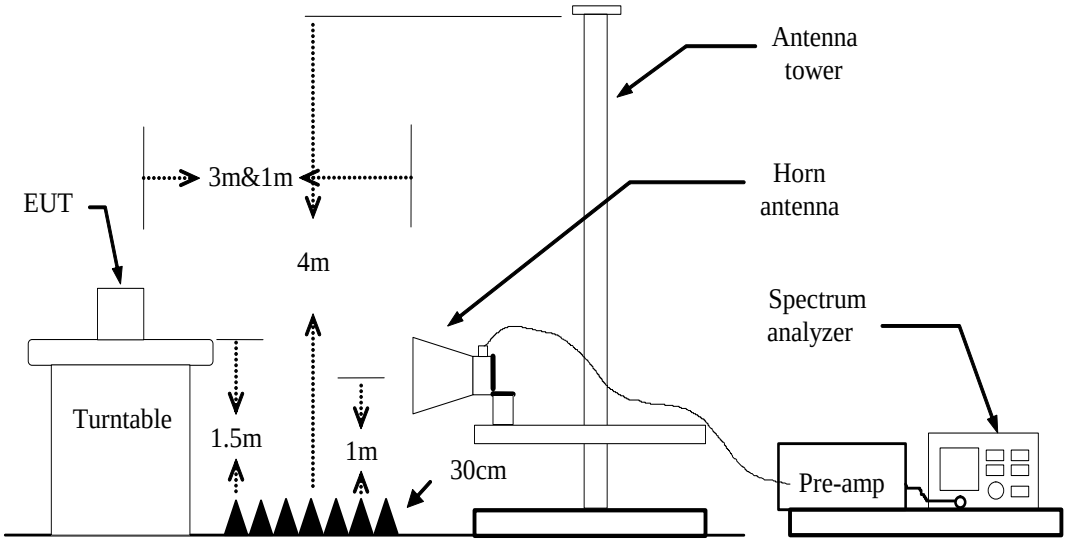
Below 1 GHz



Above 1 GHz



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

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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 / 10Hz for Average
RB / VB (Emission in non-restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz 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

6.7.5 TEST 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

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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.

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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 above 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 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.

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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 &3 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.

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6.7.6 DATA SAMPLE

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

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6.7.7 TEST RESULTS

Below 1 GHz

Antenna 1

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

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** March 4, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
38.7300	50.78	-15.79	34.99	40.00	-5.01	V	QP
104.6900	48.16	-22.81	25.35	43.50	-18.15	V	QP
219.1500	48.71	-20.45	28.26	46.00	-17.74	V	QP
275.4100	51.98	-20.44	31.54	46.00	-14.46	V	QP
324.8800	41.81	-18.67	23.14	46.00	-22.86	V	QP
399.5700	38.41	-16.10	22.31	46.00	-23.69	V	QP
39.7000	51.38	-16.11	35.27	40.00	-4.73	H	QP
104.6900	49.75	-22.81	26.94	43.50	-16.56	H	QP
151.2500	47.00	-21.86	25.14	43.50	-18.36	H	QP
220.1200	49.49	-20.37	29.12	46.00	-16.88	H	QP
275.4100	55.12	-20.44	34.68	46.00	-11.32	H	QP
324.8800	46.07	-18.67	27.40	46.00	-18.60	H	QP

Pre-scan all mode and recorded the worst case results in this report (802.11a Antenna 0(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).*

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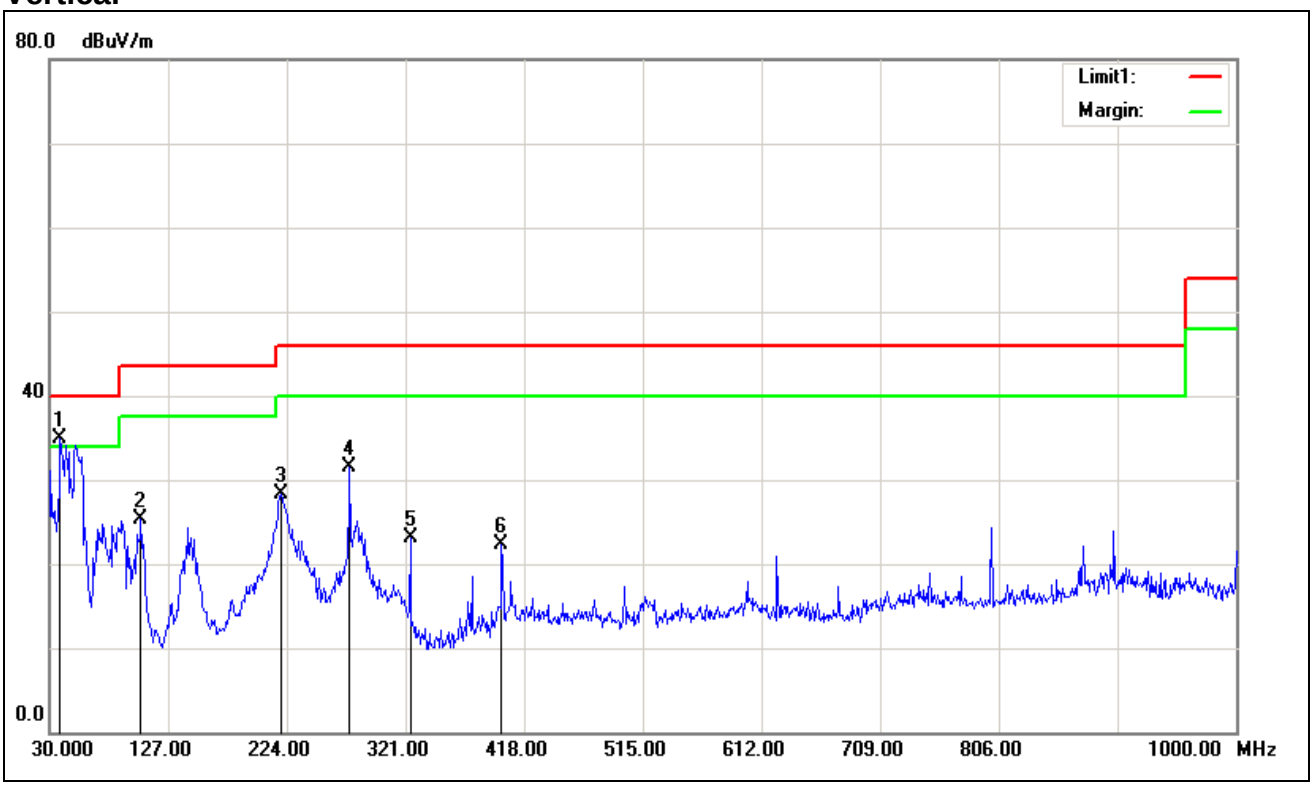
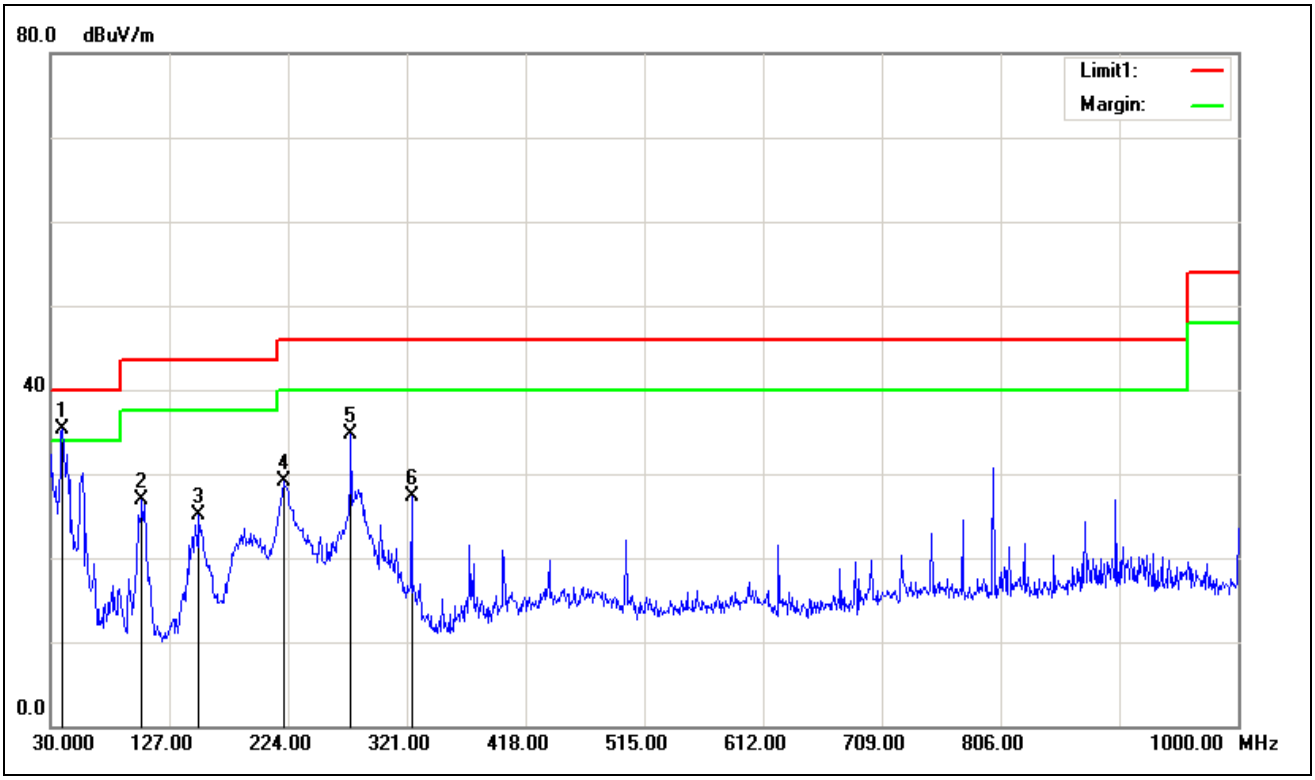
Vertical



Horizontal



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Above 1 GHz

1GHz~6GHz (Antenna 1)

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

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** March 10, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1600.000	47.26	-6.70	40.56	68.23	-27.67	V	peak
1905.000	52.31	-5.60	46.71	68.23	-21.52	V	peak
2505.000	46.04	-2.25	43.79	68.23	-24.44	V	peak
2940.000	45.18	-1.47	43.71	68.23	-24.52	V	peak
3640.000	45.11	0.07	45.18	68.23	-23.05	V	peak
4060.000	43.77	1.80	45.57	68.23	-22.66	V	peak
1360.000	47.41	-7.21	40.20	68.23	-28.03	H	Peak
1885.000	46.31	-5.73	40.58	68.23	-27.65	H	Peak
2380.000	45.38	-2.92	42.46	68.23	-25.77	H	Peak
2910.000	44.97	-1.52	43.45	68.23	-24.78	H	peak
4595.000	43.71	3.66	47.37	68.23	-20.86	H	peak
5175.000	44.30	5.29	49.59	68.23	-18.64	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).*

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Above 6GHz

Antenna 0

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

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** March 4, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6912.000	40.82	7.56	48.38	68.23	-19.85	V	peak
7968.000	32.69	9.59	42.28	68.23	-25.95	V	peak
9360.000	32.17	10.14	42.31	68.23	-25.92	V	peak
10356.000	32.96	13.08	46.04	68.23	-22.19	V	peak
11136.000	31.92	15.02	46.94	68.23	-21.29	V	peak
12264.000	31.17	15.51	46.68	68.23	-21.55	V	peak
6912.000	38.65	7.56	46.21	68.23	-22.02	H	Peak
7968.000	32.69	9.59	42.28	68.23	-25.95	H	Peak
9000.000	33.09	9.10	42.19	68.23	-26.04	H	Peak
10020.000	31.49	12.04	43.53	68.23	-24.70	H	peak
10776.000	31.77	14.39	46.16	68.23	-22.07	H	peak
11496.000	32.14	14.86	47.00	68.23	-21.23	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).*

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

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** March 4, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6936.000	41.24	7.60	48.84	68.23	-19.39	V	peak
7896.000	32.20	9.45	41.65	68.23	-26.58	V	peak
8340.000	32.81	9.46	42.27	68.23	-25.96	V	peak
10032.000	31.75	12.08	43.83	68.23	-24.40	V	peak
11064.000	31.18	15.05	46.23	68.23	-22.00	V	peak
12396.000	30.98	15.95	46.93	68.23	-21.30	V	peak
6936.000	39.09	7.60	46.69	68.23	-21.54	H	Peak
7980.000	32.79	9.61	42.40	68.23	-25.83	H	Peak
8364.000	32.81	9.45	42.26	68.23	-25.97	H	Peak
9216.000	32.10	9.72	41.82	68.23	-26.41	H	peak
9924.000	32.37	11.76	44.13	68.23	-24.10	H	peak
10680.000	31.07	14.09	45.16	68.23	-23.07	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).*

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

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** March 4, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6984.000	40.13	7.67	47.80	68.23	-20.43	V	peak
7944.000	32.86	9.54	42.40	68.23	-25.83	V	peak
9360.000	32.60	10.14	42.74	68.23	-25.49	V	peak
10128.000	31.92	12.38	44.30	68.23	-23.93	V	peak
11028.000	31.19	15.07	46.26	68.23	-21.97	V	peak
12288.000	31.23	15.59	46.82	68.23	-21.41	V	peak
6984.000	38.68	7.67	46.35	68.23	-21.88	H	Peak
7908.000	33.09	9.47	42.56	68.23	-25.67	H	Peak
9432.000	32.02	10.34	42.36	68.23	-25.87	H	Peak
10704.000	31.78	14.16	45.94	68.23	-22.29	H	peak
11136.000	32.34	15.02	47.36	68.23	-20.87	H	peak
12528.000	31.06	16.39	47.45	68.23	-20.78	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).*

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

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** March 4, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
7020.000	32.61	7.74	40.35	68.23	-27.88	V	peak
7932.000	32.24	9.52	41.76	68.23	-26.47	V	peak
9048.000	32.57	9.24	41.81	68.23	-26.42	V	peak
9924.000	31.81	11.76	43.57	68.23	-24.66	V	peak
11136.000	32.99	15.02	48.01	68.23	-20.22	V	peak
11496.000	36.07	14.86	50.93	68.23	-17.30	V	peak
7056.000	33.09	7.81	40.90	68.23	-27.33	H	Peak
8016.000	32.53	9.64	42.17	68.23	-26.06	H	Peak
9360.000	32.23	10.14	42.37	68.23	-25.86	H	Peak
10716.000	31.45	14.20	45.65	68.23	-22.58	H	peak
11484.000	34.02	14.87	48.89	68.23	-19.34	H	peak
12912.000	30.61	17.66	48.27	68.23	-19.96	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).*

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

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** March 4, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6624.000	33.08	7.09	40.17	68.23	-28.06	V	peak
7524.000	32.00	8.72	40.72	68.23	-27.51	V	peak
7968.000	32.31	9.59	41.90	68.23	-26.33	V	peak
9408.000	32.29	10.28	42.57	68.23	-25.66	V	peak
10680.000	31.40	14.09	45.49	68.23	-22.74	V	peak
11568.000	34.51	14.83	49.34	68.23	-18.89	V	peak
7044.000	33.04	7.79	40.83	68.23	-27.40	H	Peak
8088.000	32.68	9.60	42.28	68.23	-25.95	H	Peak
8988.000	33.61	9.11	42.72	68.23	-25.51	H	Peak
9936.000	31.87	11.80	43.67	68.23	-24.56	H	peak
11088.000	30.99	15.04	46.03	68.23	-22.20	H	peak
11568.000	33.38	14.83	48.21	68.23	-20.02	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).*

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

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** March 4, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6792.000	32.95	7.36	40.31	68.23	-27.92	V	peak
7872.000	32.19	9.40	41.59	68.23	-26.64	V	peak
8412.000	32.45	9.42	41.87	68.23	-26.36	V	peak
9444.000	32.21	10.38	42.59	68.23	-25.64	V	peak
11136.000	32.41	15.02	47.43	68.23	-20.80	V	peak
11652.000	35.34	14.79	50.13	68.23	-18.10	V	peak
6888.000	32.57	7.52	40.09	68.23	-28.14	H	Peak
7908.000	32.54	9.47	42.01	68.23	-26.22	H	Peak
8412.000	32.50	9.42	41.92	68.23	-26.31	H	Peak
9588.000	31.56	10.79	42.35	68.23	-25.88	H	peak
10800.000	30.98	14.46	45.44	68.23	-22.79	H	peak
11652.000	32.77	14.79	47.56	68.23	-20.67	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).*

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Antenna 1

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

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** March 4, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6912.000	38.33	7.56	45.89	68.23	-22.34	V	peak
7932.000	33.01	9.52	42.53	68.23	-25.70	V	peak
9660.000	31.44	11.00	42.44	68.23	-25.79	V	peak
10680.000	31.39	14.09	45.48	68.23	-22.75	V	peak
11172.000	32.46	15.00	47.46	68.23	-20.77	V	peak
12624.000	31.04	16.71	47.75	68.23	-20.48	V	peak
6912.000	33.46	7.56	41.02	68.23	-27.21	H	Peak
7932.000	32.63	9.52	42.15	68.23	-26.08	H	Peak
9096.000	32.26	9.38	41.64	68.23	-26.59	H	Peak
10032.000	31.83	12.08	43.91	68.23	-24.32	H	peak
11220.000	32.50	14.98	47.48	68.23	-20.75	H	peak
12504.000	31.24	16.31	47.55	68.23	-20.68	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).*

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

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** March 4, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6936.000	38.09	7.60	45.69	68.23	-22.54	V	peak
8088.000	32.83	9.60	42.43	68.23	-25.80	V	peak
9456.000	32.09	10.41	42.50	68.23	-25.73	V	peak
10848.000	31.11	14.61	45.72	68.23	-22.51	V	peak
11388.000	32.47	14.91	47.38	68.23	-20.85	V	peak
12972.000	29.91	17.86	47.77	68.23	-20.46	V	peak
6936.000	34.40	7.60	42.00	68.23	-26.23	H	Peak
8004.000	32.73	9.65	42.38	68.23	-25.85	H	Peak
9276.000	31.77	9.89	41.66	68.23	-26.57	H	Peak
10320.000	31.16	12.97	44.13	68.23	-24.10	H	peak
11160.000	32.71	15.01	47.72	68.23	-20.51	H	peak
12324.000	31.68	15.71	47.39	68.23	-20.84	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).*

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

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** March 4, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6984.000	36.30	7.67	43.97	68.23	-24.26	V	peak
7968.000	32.80	9.59	42.39	68.23	-25.84	V	peak
9336.000	31.70	10.07	41.77	68.23	-26.46	V	peak
9900.000	31.83	11.69	43.52	68.23	-24.71	V	peak
10488.000	33.41	13.49	46.90	68.23	-21.33	V	peak
11160.000	32.44	15.01	47.45	68.23	-20.78	V	peak
6900.000	32.87	7.54	40.41	68.23	-27.82	H	Peak
7740.000	32.80	9.14	41.94	68.23	-26.29	H	Peak
8976.000	33.31	9.11	42.42	68.23	-25.81	H	Peak
9900.000	31.68	11.69	43.37	68.23	-24.86	H	peak
11076.000	31.74	15.05	46.79	68.23	-21.44	H	peak
12120.000	31.51	15.04	46.55	68.23	-21.68	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).*

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

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** March 4, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6768.000	33.21	7.32	40.53	68.23	-27.70	V	peak
8028.000	32.90	9.63	42.53	68.23	-25.70	V	peak
9120.000	32.42	9.45	41.87	68.23	-26.36	V	peak
10620.000	31.46	13.90	45.36	68.23	-22.87	V	peak
11496.000	33.90	14.86	48.76	68.23	-19.47	V	peak
12672.000	30.82	16.86	47.68	68.23	-20.55	V	peak
6348.000	32.96	6.64	39.60	68.23	-28.63	H	Peak
7680.000	33.46	9.03	42.49	68.23	-25.74	H	Peak
8976.000	32.50	9.11	41.61	68.23	-26.62	H	Peak
10056.000	31.88	12.15	44.03	68.23	-24.20	H	peak
11148.000	32.56	15.01	47.57	68.23	-20.66	H	peak
12276.000	31.04	15.55	46.59	68.23	-21.64	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).*

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

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** March 4, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6804.000	32.64	7.38	40.02	68.23	-28.21	V	peak
7572.000	32.39	8.82	41.21	68.23	-27.02	V	peak
8040.000	32.64	9.63	42.27	68.23	-25.96	V	peak
9360.000	32.13	10.14	42.27	68.23	-25.96	V	peak
11172.000	32.20	15.00	47.20	68.23	-21.03	V	peak
11568.000	36.70	14.83	51.53	68.23	-16.70	V	peak
6804.000	33.15	7.38	40.53	68.23	-27.70	H	Peak
7956.000	32.72	9.56	42.28	68.23	-25.95	H	Peak
8376.000	32.91	9.44	42.35	68.23	-25.88	H	Peak
9852.000	31.41	11.55	42.96	68.23	-25.27	H	peak
11208.000	32.28	14.99	47.27	68.23	-20.96	H	peak
11568.000	33.64	14.83	48.47	68.23	-19.76	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).*

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

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** March 4, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
7020.000	33.03	7.74	40.77	68.23	-27.46	V	peak
7944.000	32.85	9.54	42.39	68.23	-25.84	V	peak
9048.000	32.49	9.24	41.73	68.23	-26.50	V	peak
10032.000	31.70	12.08	43.78	68.23	-24.45	V	peak
11064.000	30.85	15.05	45.90	68.23	-22.33	V	peak
11652.000	34.80	14.79	49.59	68.23	-18.64	V	peak
6912.000	33.13	7.56	40.69	68.23	-27.54	H	Peak
7740.000	33.03	9.14	42.17	68.23	-26.06	H	Peak
8460.000	33.04	9.40	42.44	68.23	-25.79	H	Peak
9360.000	32.06	10.14	42.20	68.23	-26.03	H	peak
10476.000	31.02	13.46	44.48	68.23	-23.75	H	peak
11340.000	32.36	14.93	47.29	68.23	-20.94	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).*

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Combine with Antenna 0 and Antenna 1

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:** March 4, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6912.000	40.44	7.56	48.00	68.23	-20.23	V	peak
7956.000	33.28	9.56	42.84	68.23	-25.39	V	peak
8400.000	33.02	9.43	42.45	68.23	-25.78	V	peak
9600.000	31.80	10.83	42.63	68.23	-25.60	V	peak
10368.000	33.56	13.12	46.68	68.23	-21.55	V	peak
11340.000	32.70	14.93	47.63	68.23	-20.60	V	peak
6912.000	39.68	7.56	47.24	68.23	-20.99	H	Peak
8172.000	33.60	9.56	43.16	68.23	-25.07	H	Peak
9408.000	32.78	10.28	43.06	68.23	-25.17	H	Peak
10104.000	32.74	12.30	45.04	68.23	-23.19	H	peak
10716.000	31.97	14.20	46.17	68.23	-22.06	H	peak
11448.000	32.65	14.88	47.53	68.23	-20.70	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).*

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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:** March 4, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6936.000	41.15	7.60	48.75	68.23	-19.48	V	peak
7944.000	33.04	9.54	42.58	68.23	-25.65	V	peak
8988.000	33.33	9.11	42.44	68.23	-25.79	V	peak
10044.000	32.20	12.12	44.32	68.23	-23.91	V	peak
11244.000	32.73	14.97	47.70	68.23	-20.53	V	peak
12660.000	30.98	16.82	47.80	68.23	-20.43	V	peak
6936.000	38.00	7.60	45.60	68.23	-22.63	H	Peak
7896.000	33.00	9.45	42.45	68.23	-25.78	H	Peak
9360.000	32.70	10.14	42.84	68.23	-25.39	H	Peak
10596.000	32.03	13.83	45.86	68.23	-22.37	H	peak
11292.000	32.43	14.95	47.38	68.23	-20.85	H	peak
12540.000	31.83	16.43	48.26	68.23	-19.97	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).*

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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:** March 4, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6984.000	38.34	7.67	46.01	68.23	-22.22	V	peak
8148.000	33.40	9.57	42.97	68.23	-25.26	V	peak
9828.000	32.03	11.48	43.51	68.23	-24.72	V	peak
10488.000	34.52	13.49	48.01	68.23	-20.22	V	peak
11352.000	32.42	14.93	47.35	68.23	-20.88	V	peak
12588.000	31.40	16.59	47.99	68.23	-20.24	V	peak
6984.000	35.08	7.67	42.75	68.23	-25.48	H	Peak
7956.000	33.23	9.56	42.79	68.23	-25.44	H	Peak
9336.000	32.44	10.07	42.51	68.23	-25.72	H	Peak
10032.000	32.32	12.08	44.40	68.23	-23.83	H	peak
10488.000	32.44	13.49	45.93	68.23	-22.30	H	peak
11172.000	32.46	15.00	47.46	68.23	-20.77	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).*

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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:** March 4, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6612.000	33.64	7.07	40.71	68.23	-27.52	V	peak
8184.000	33.14	9.55	42.69	68.23	-25.54	V	peak
9336.000	32.08	10.07	42.15	68.23	-26.08	V	peak
10704.000	31.65	14.16	45.81	68.23	-22.42	V	peak
11496.000	35.58	14.86	50.44	68.23	-17.79	V	peak
12636.000	31.16	16.75	47.91	68.23	-20.32	V	peak
7068.000	32.82	7.83	40.65	68.23	-27.58	H	Peak
7716.000	33.48	9.10	42.58	68.23	-25.65	H	Peak
9324.000	32.97	10.03	43.00	68.23	-25.23	H	Peak
10800.000	31.25	14.46	45.71	68.23	-22.52	H	peak
11484.000	33.50	14.87	48.37	68.23	-19.86	H	peak
12432.000	31.88	16.07	47.95	68.23	-20.28	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).*

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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:** March 4, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
7056.000	33.27	7.81	41.08	68.23	-27.15	V	peak
7980.000	33.42	9.61	43.03	68.23	-25.20	V	peak
9024.000	33.26	9.17	42.43	68.23	-25.80	V	peak
10044.000	31.98	12.12	44.10	68.23	-24.13	V	peak
10932.000	31.31	14.87	46.18	68.23	-22.05	V	peak
11568.000	34.41	14.83	49.24	68.23	-18.99	V	peak
6852.000	33.12	7.46	40.58	68.23	-27.65	H	Peak
8040.000	33.04	9.63	42.67	68.23	-25.56	H	Peak
9324.000	32.27	10.03	42.30	68.23	-25.93	H	Peak
10932.000	31.11	14.87	45.98	68.23	-22.25	H	peak
11568.000	33.61	14.83	48.44	68.23	-19.79	H	peak
13044.000	30.47	18.07	48.54	68.23	-19.69	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).*

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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:** March 4, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6528.000	33.66	6.94	40.60	68.23	-27.63	V	peak
7308.000	32.74	8.30	41.04	68.23	-27.19	V	peak
7908.000	33.03	9.47	42.50	68.23	-25.73	V	peak
9360.000	32.50	10.14	42.64	68.23	-25.59	V	peak
10500.000	31.44	13.53	44.97	68.23	-23.26	V	peak
11652.000	34.46	14.79	49.25	68.23	-18.98	V	peak
6480.000	33.91	6.86	40.77	68.23	-27.46	H	Peak
7692.000	33.25	9.05	42.30	68.23	-25.93	H	Peak
9348.000	32.48	10.10	42.58	68.23	-25.65	H	Peak
10704.000	31.79	14.16	45.95	68.23	-22.28	H	peak
11508.000	32.77	14.86	47.63	68.23	-20.60	H	peak
13128.000	30.43	18.29	48.72	68.23	-19.51	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).*

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Combine with Antenna 0 and Antenna 1

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:** March 4, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6924.000	41.62	7.58	49.20	68.23	-19.03	V	peak
7728.000	33.36	9.12	42.48	68.23	-25.75	V	peak
8136.000	33.34	9.58	42.92	68.23	-25.31	V	peak
9264.000	32.52	9.86	42.38	68.23	-25.85	V	peak
9924.000	32.95	11.76	44.71	68.23	-23.52	V	peak
10716.000	31.91	14.20	46.11	68.23	-22.12	V	peak
6924.000	37.22	7.58	44.80	68.23	-23.43	H	Peak
7944.000	32.94	9.54	42.48	68.23	-25.75	H	Peak
8244.000	33.07	9.52	42.59	68.23	-25.64	H	Peak
9324.000	32.90	10.03	42.93	68.23	-25.30	H	peak
10548.000	31.94	13.68	45.62	68.23	-22.61	H	peak
11148.000	32.78	15.01	47.79	68.23	-20.44	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).*

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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:** March 4, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6972.000	37.87	7.65	45.52	68.23	-22.71	V	peak
7992.000	33.34	9.63	42.97	68.23	-25.26	V	peak
8400.000	33.22	9.43	42.65	68.23	-25.58	V	peak
9384.000	32.41	10.21	42.62	68.23	-25.61	V	peak
10380.000	31.63	13.16	44.79	68.23	-23.44	V	peak
11196.000	32.92	14.99	47.91	68.23	-20.32	V	peak
6552.000	33.83	6.97	40.80	68.23	-27.43	H	Peak
7704.000	33.12	9.07	42.19	68.23	-26.04	H	Peak
9324.000	32.17	10.03	42.20	68.23	-26.03	H	Peak
10680.000	31.76	14.09	45.85	68.23	-22.38	H	peak
11136.000	32.70	15.02	47.72	68.23	-20.51	H	peak
11976.000	32.15	14.65	46.80	68.23	-21.43	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).*

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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:** March 4, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6372.000	33.64	6.68	40.32	68.23	-27.91	V	peak
7044.000	33.23	7.79	41.02	68.23	-27.21	V	peak
7968.000	33.12	9.59	42.71	68.23	-25.52	V	peak
9096.000	32.96	9.38	42.34	68.23	-25.89	V	peak
10116.000	32.78	12.34	45.12	68.23	-23.11	V	peak
11508.000	34.30	14.86	49.16	68.23	-19.07	V	peak
6600.000	33.35	7.05	40.40	68.23	-27.83	H	Peak
7692.000	33.06	9.05	42.11	68.23	-26.12	H	Peak
8148.000	33.90	9.57	43.47	68.23	-24.76	H	Peak
9000.000	32.89	9.10	41.99	68.23	-26.24	H	peak
9900.000	32.03	11.69	43.72	68.23	-24.51	H	peak
11280.000	33.62	14.96	48.58	68.23	-19.65	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).*

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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:** March 4, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6636.000	33.18	7.11	40.29	68.23	-27.94	V	peak
7608.000	32.60	8.89	41.49	68.23	-26.74	V	peak
8160.000	33.05	9.56	42.61	68.23	-25.62	V	peak
9360.000	32.24	10.14	42.38	68.23	-25.85	V	peak
10284.000	31.82	12.86	44.68	68.23	-23.55	V	peak
11592.000	33.01	14.82	47.83	68.23	-20.40	V	peak
6528.000	33.58	6.94	40.52	68.23	-27.71	H	Peak
7476.000	32.61	8.63	41.24	68.23	-26.99	H	Peak
8064.000	33.39	9.61	43.00	68.23	-25.23	H	Peak
8340.000	33.17	9.46	42.63	68.23	-25.60	H	peak
9480.000	32.43	10.48	42.91	68.23	-25.32	H	peak
10632.000	31.76	13.94	45.70	68.23	-22.53	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).*

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Combine with Antenna 0 and Antenna 1

Test Mode: TX / IEEE 802.11ac 80 / 5210MHz **Tested by:** Saber Huang

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** March 4, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
7176.000	33.01	8.04	41.05	68.23	-27.18	V	peak
8004.000	33.04	9.65	42.69	68.23	-25.54	V	peak
8964.000	32.63	9.12	41.75	68.23	-26.48	V	peak
10020.000	32.31	12.04	44.35	68.23	-23.88	V	peak
11148.000	32.59	15.01	47.60	68.23	-20.63	V	peak
11520.000	32.45	14.85	47.30	68.23	-20.93	V	peak
6696.000	33.33	7.21	40.54	68.23	-27.69	H	Peak
7740.000	32.68	9.14	41.82	68.23	-26.41	H	Peak
8988.000	32.74	9.11	41.85	68.23	-26.38	H	Peak
10452.000	32.56	13.38	45.94	68.23	-22.29	H	peak
11160.000	32.43	15.01	47.44	68.23	-20.79	H	peak
12360.000	30.78	15.83	46.61	68.23	-21.62	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).*

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

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** March 4, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
6948.000	37.39	7.62	45.01	68.23	-23.22	V	peak
7896.000	33.15	9.45	42.60	68.23	-25.63	V	peak
8340.000	33.26	9.46	42.72	68.23	-25.51	V	peak
9384.000	32.12	10.21	42.33	68.23	-25.90	V	peak
10140.000	32.21	12.41	44.62	68.23	-23.61	V	peak
11196.000	32.82	14.99	47.81	68.23	-20.42	V	peak
6948.000	36.71	7.62	44.33	68.23	-23.90	H	Peak
7884.000	33.13	9.42	42.55	68.23	-25.68	H	Peak
9024.000	33.08	9.17	42.25	68.23	-25.98	H	Peak
10284.000	31.34	12.86	44.20	68.23	-24.03	H	peak
11100.000	32.56	15.04	47.60	68.23	-20.63	H	peak
12396.000	31.06	15.95	47.01	68.23	-21.22	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).*

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6.8 CONDUCTED UNDESIRABLE EMISSION

6.8.1 LIMIT

FCC 15.407			
Frequency Band (MHz)	**Frequency (MHz)**	**EIRP Limit (dBm)**	**Equivalent Field Strength (3m) (dBuV/m)**
5725~5850	< 5650	-27	68.2
	5650~5700	-27~10	68.2~105.2
	5700~5720	10~15.6	105.2~110.8
	5720~5725	15.6~27	110.8~122.2
	5850~5855	27~15.6	122.2~110.8
	5855~5875	15.6~10	110.8~105.2
	5875~5925	10~-27	105.2~68.2
	>5925	-27	68.2

Note:

(i) Section 15.407(b)(1-3) specifies the unwanted emissions limit for the U-NII-1 and 2 bands. As specified, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27dBm/MHz. However, an out-of-band emission that complies with both the average and peak limits of Section 15.209 is not required to satisfy the -27 dBm/MHz dBm/MHz peak emission limit.

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6.8.2 MEASUREMENT EQUIPMENT USED

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	02/21/2017	02/20/2018
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI	100783	02/21/2017	02/20/2018
Amplifier	EMEC	EM330	060661	03/18/2017	03/17/2018
High Noise Amplifier	Agilent	8449B	3008A01838	02/21/2017	02/20/2018
Loop Antenna	COM-POWER	AL-130	121044	09/25/2016	09/24/2017
Bilog Antenna	SCHAFFNER	CBL6143	5082	02/21/2017	02/20/2018
Horn Antenna	SCHWARZBECK	BBHA9120	D286	02/21/2017	02/20/2018
Board-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170-497	02/28/2017	02/27/2018
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	02/21/2017	02/20/2018
Test S/W	FARAD	LZ-RF / CCS-SZ-3A2			

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. The FCC Site Registration number is 101879.

3. N.C.R = No Calibration Required.

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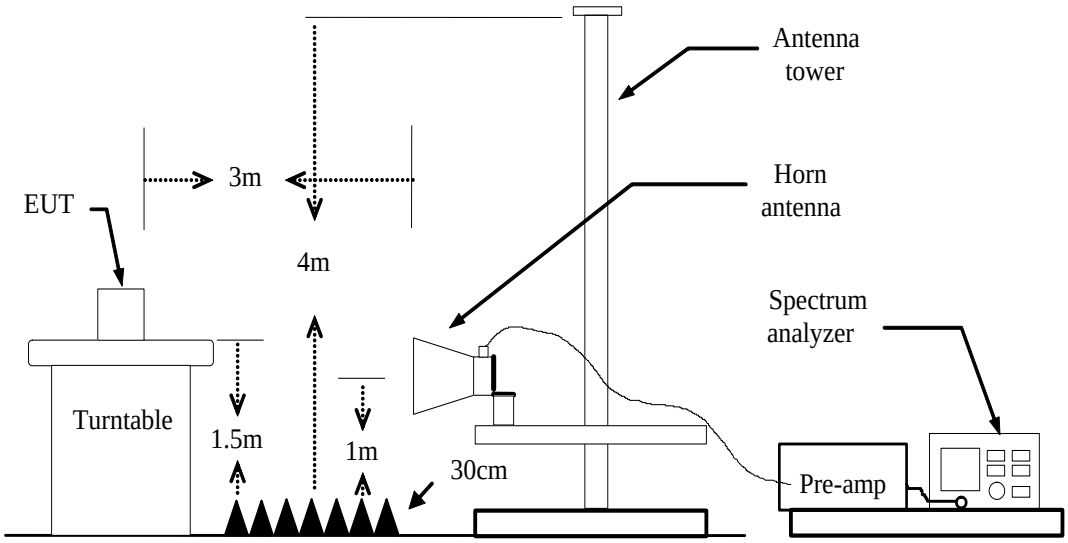
6.8.3 TEST CONFIGURATION



6.8.4TEST 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.

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6.8.5 TEST RESULTS

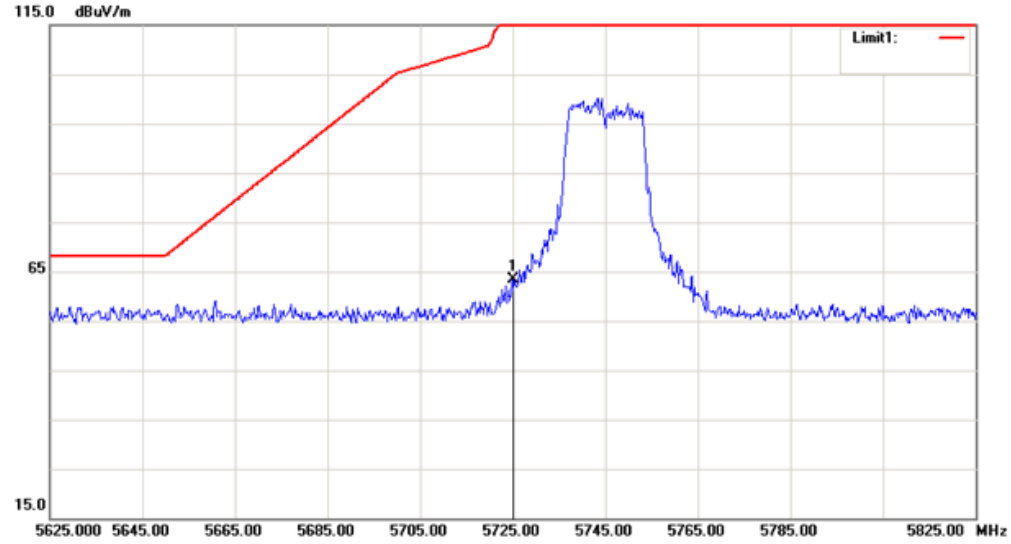
No non-compliance noted

Test Plot

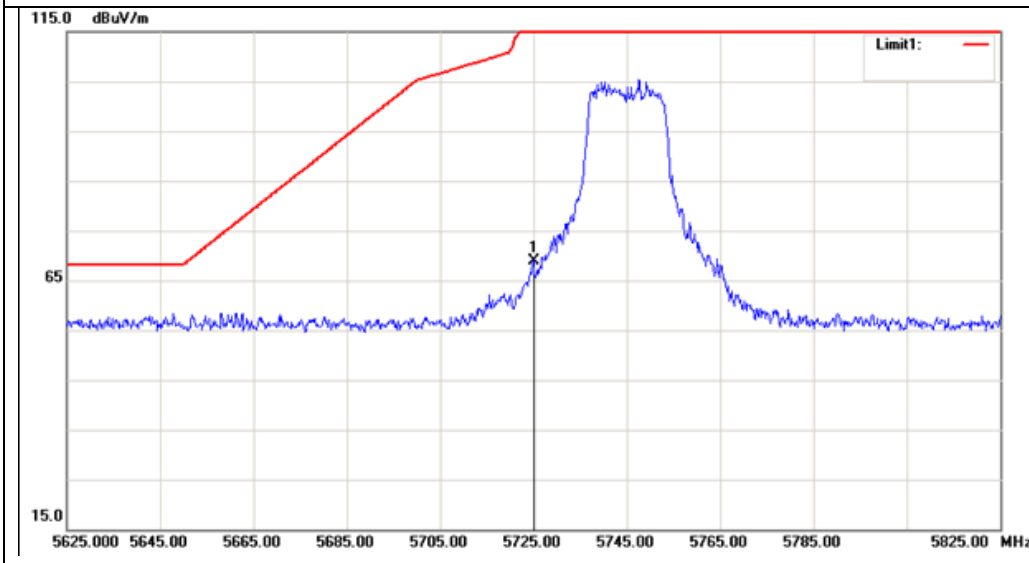
Antenna 0

IEEE 802.11a mode / 5625 ~ 5825MHz

Detector mode: Peak **Polarity: Vertical**



Detector mode: Peak **Polarity: Horizontal**



No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	5725.000	57.50	5.96	63.46	122.20	-58.74	Peak	Vertical
2.	5725.000	63.04	5.96	69.00	122.20	-53.20	Peak	Horizontal

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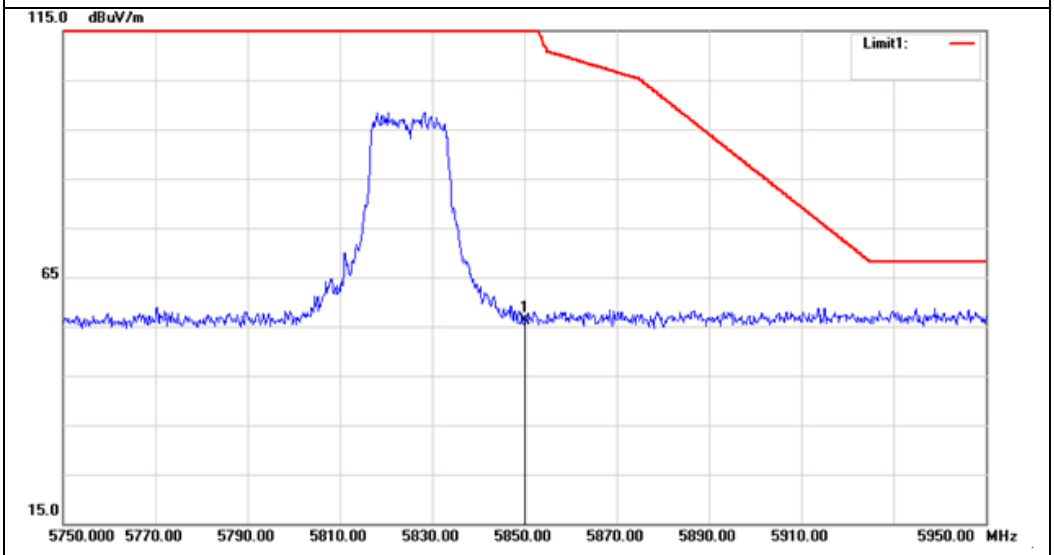
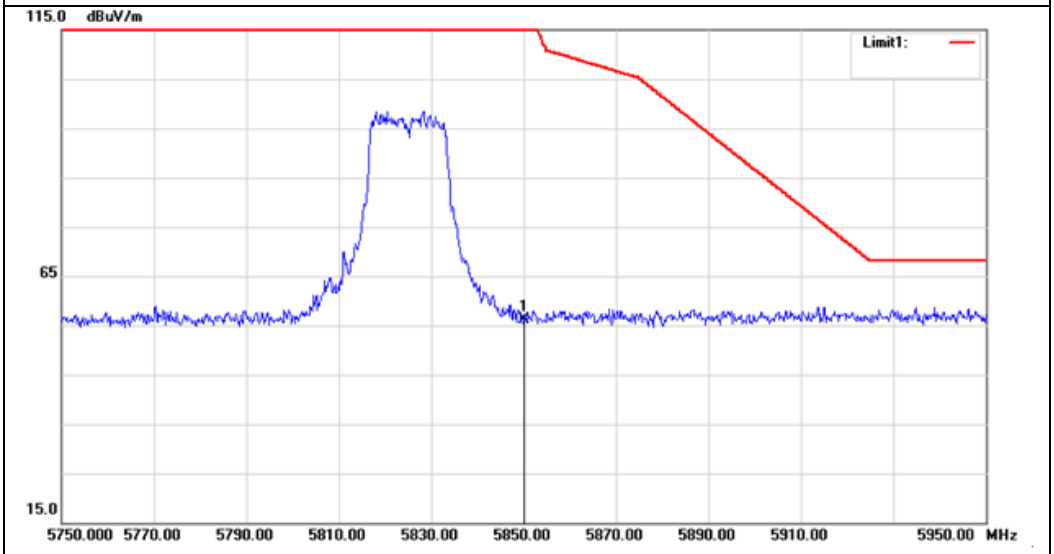
IEEE 802.11a mode / mode/5750~ 5950MHz

Detector mode: Peak **Polarity: Vertical**



Detector mode: Peak **Polarity: Horizontal**



No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	5850.000	51.35	6.02	57.37	122.20	-64.83	Peak	Vertical
2.	5850.000	50.03	6.02	56.05	122.20	-66.15	Peak	Horizontal

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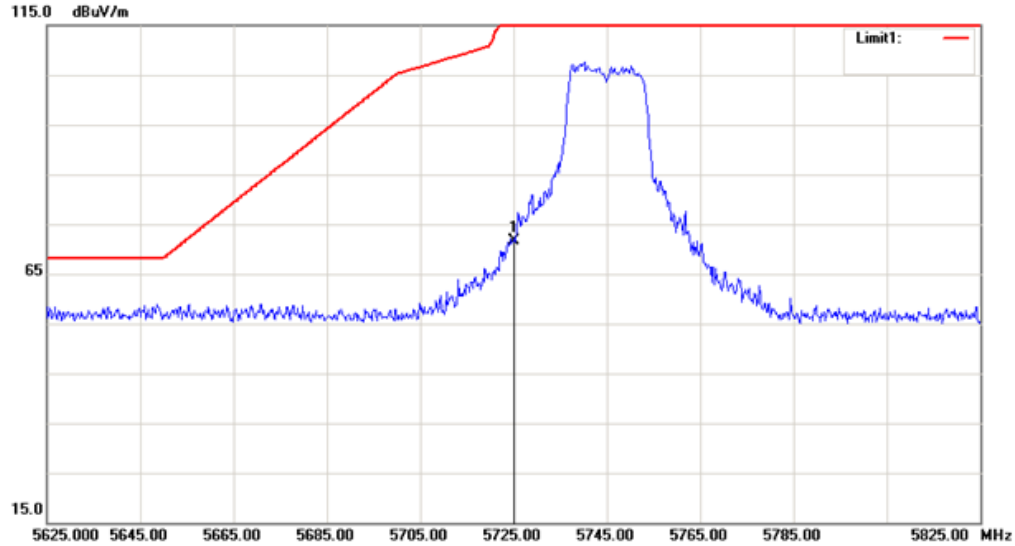
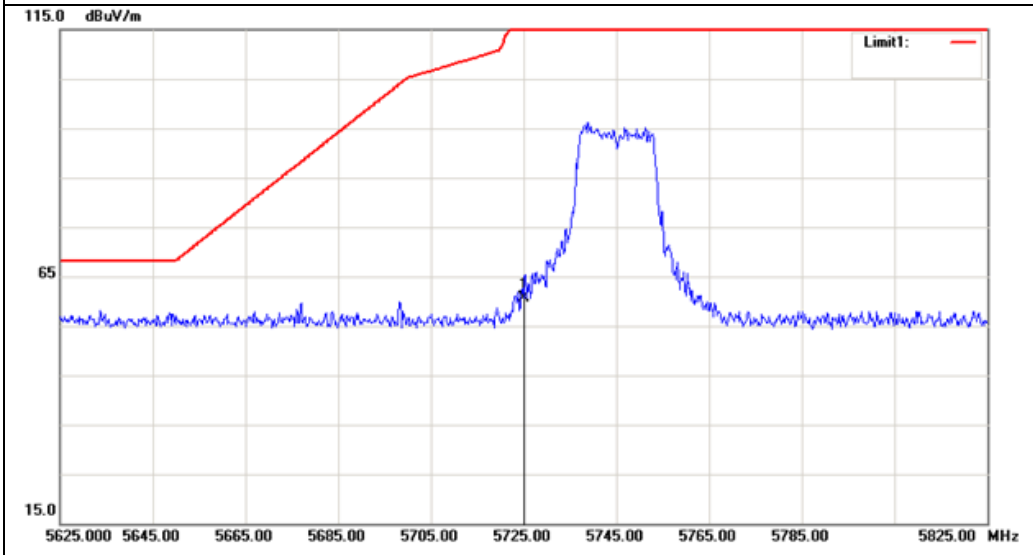
Antenna 1

IEEE 802.11a mode / 5625 ~ 5825MHz

Detector mode: Peak **Polarity: Vertical**



Detector mode: Peak **Polarity: Horizontal**



No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1	5725.000	65.69	5.96	71.65	122.20	-50.55	Peak	Vertical
2	5725.000	54.62	5.96	60.58	122.20	-61.62	Peak	Horizontal

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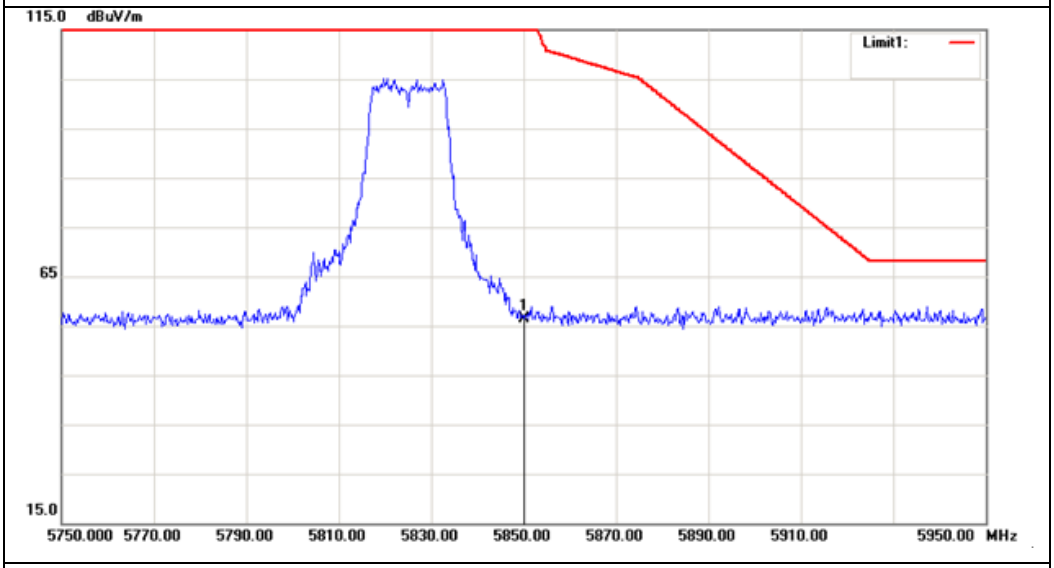
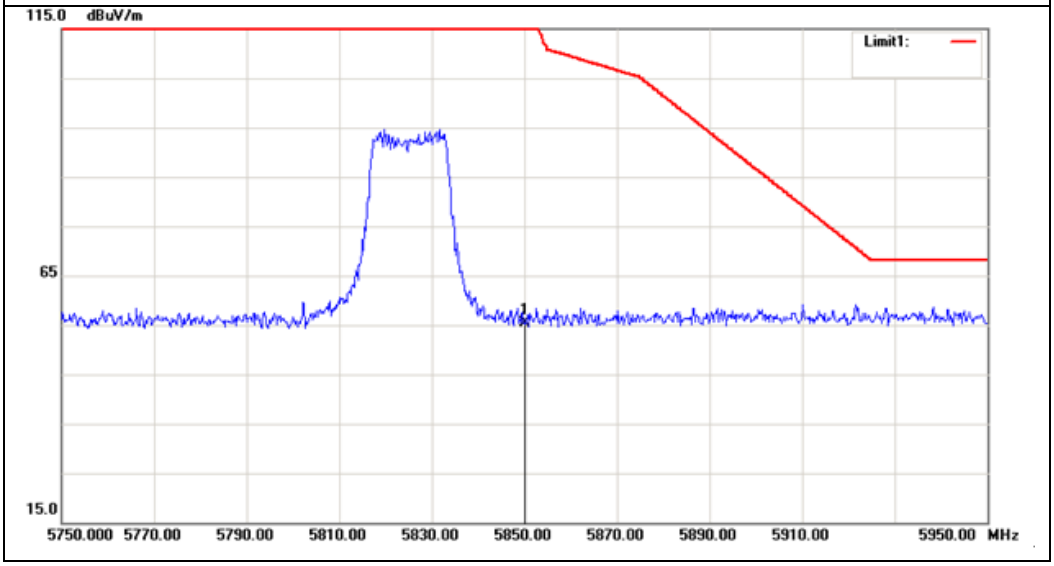
IEEE 802.11a mode / mode/5750~ 5950MHz

Detector mode: Peak **Polarity: Vertical**



Detector mode: Peak **Polarity: Horizontal**



No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1	5850.000	50.39	6.02	56.41	122.20	-65.79	Peak	Vertical
2	5850.000	49.31	6.02	55.33	122.20	-66.87	Peak	Horizontal

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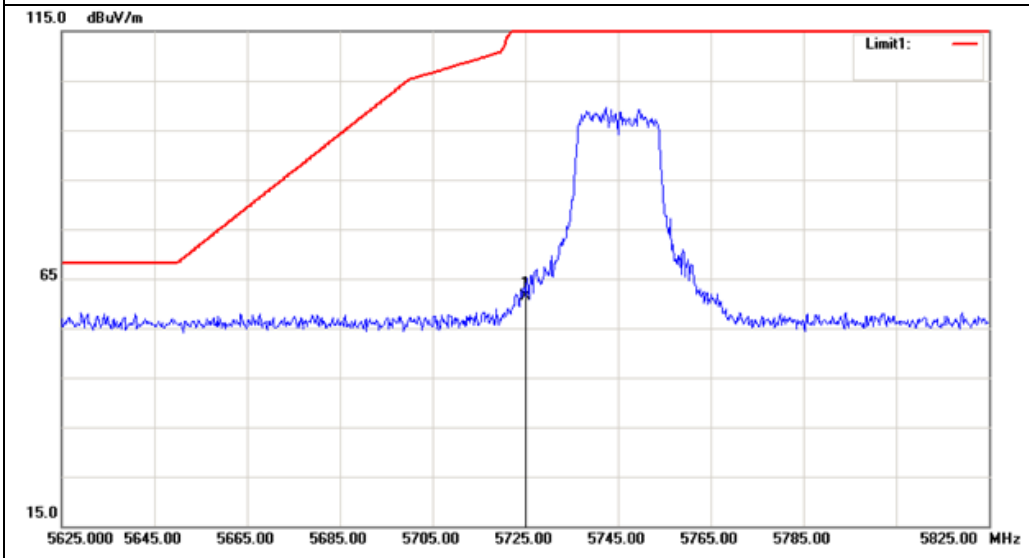
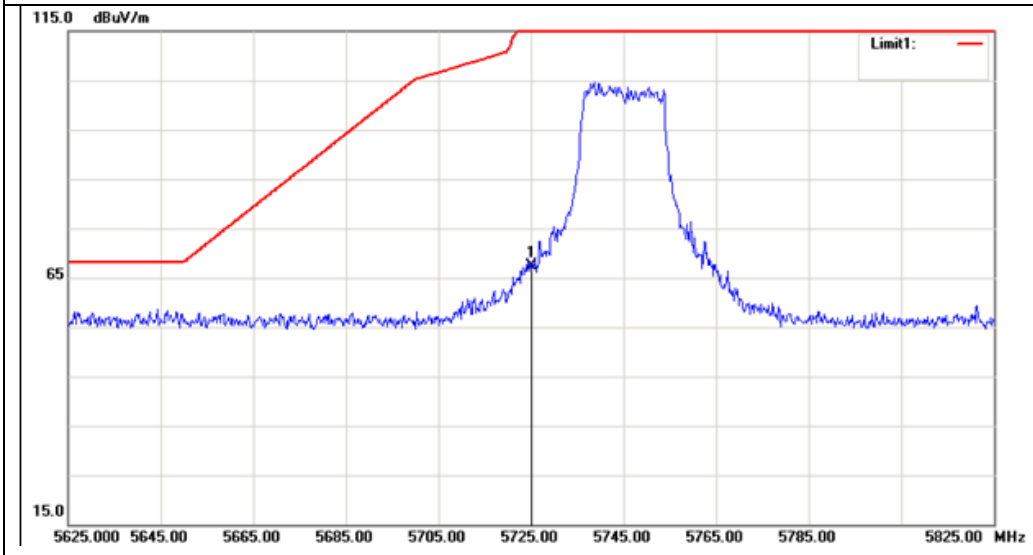
Combine with Antenna 0 and Antenna 1

IEEE 802.11n HT 20 MHz mode / 5625 ~ 5825MHz

Detector mode: Peak **Polarity: Vertical**



Detector mode: Peak **Polarity: Horizontal**



No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1	5725.000	55.53	5.96	61.49	122.20	-60.71	Peak	Vertical
2	5725.000	61.46	5.96	67.42	122.20	-54.78	Peak	Horizontal

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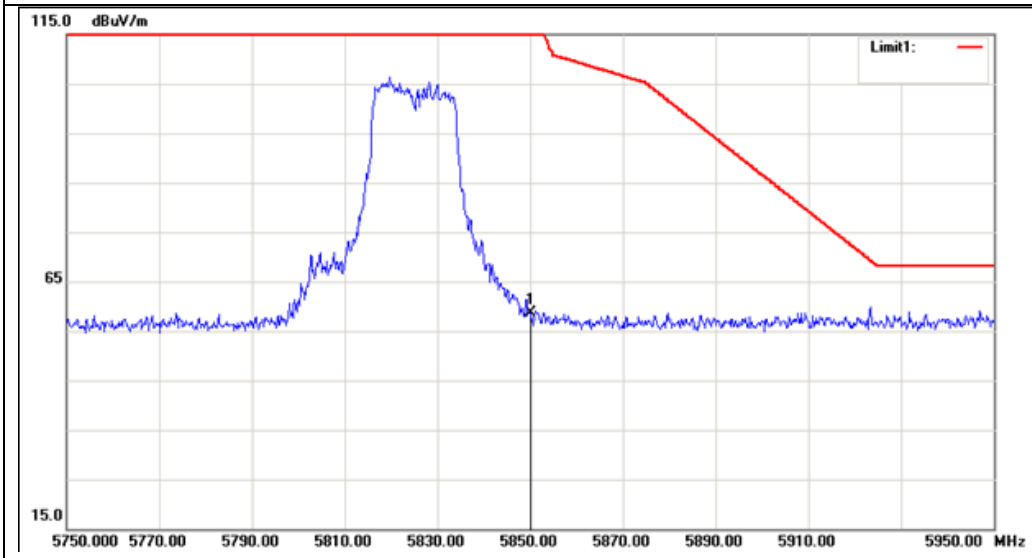
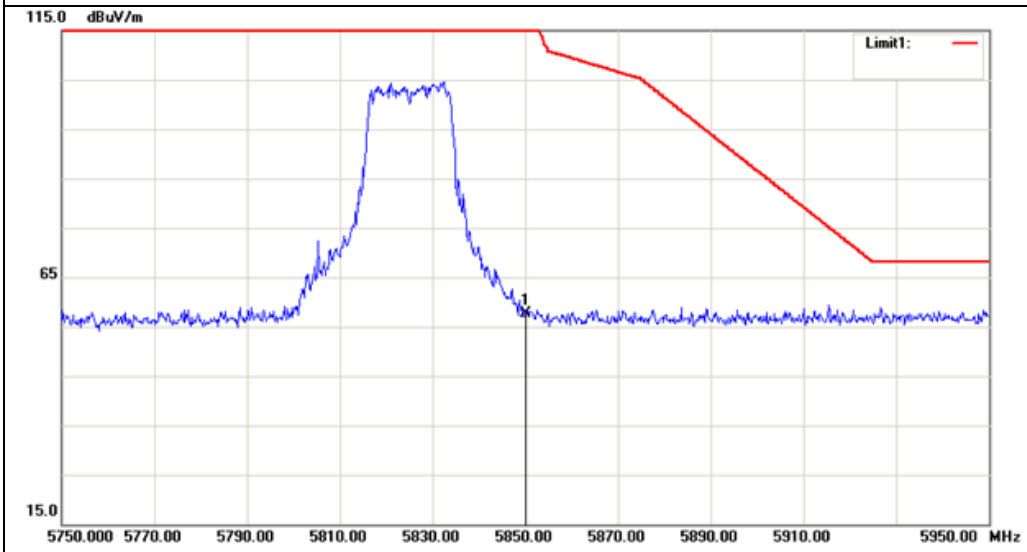
IEEE 802.11n HT 20 MHz mode / 5750~ 5950MHz

Detector mode: Peak **Polarity: Vertical**



Detector mode: Peak **Polarity: Horizontal**



No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1	5850.000	52.57	6.02	58.59	122.20	-63.61	Peak	Vertical
2	5850.000	51.52	6.02	57.54	122.20	-64.66	Peak	Horizontal

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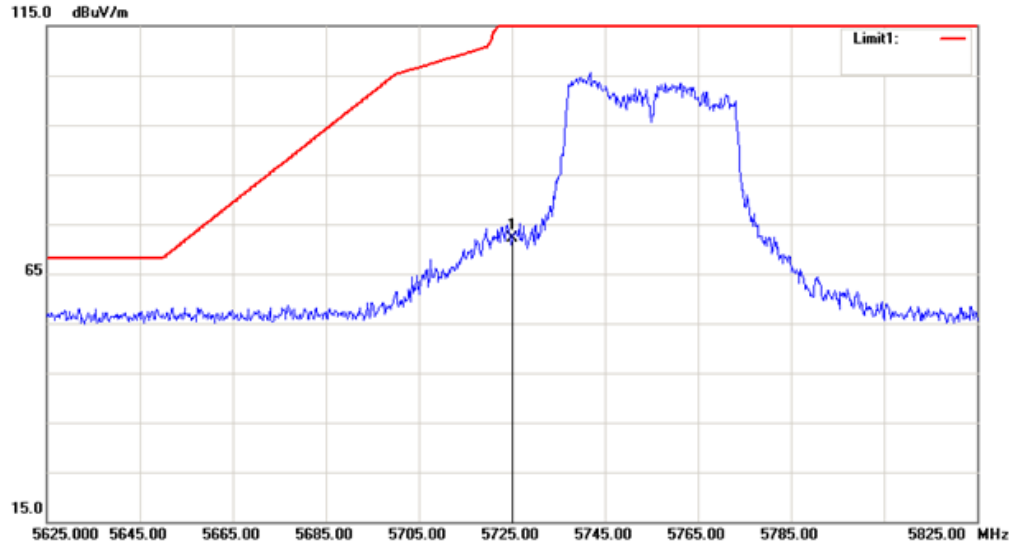
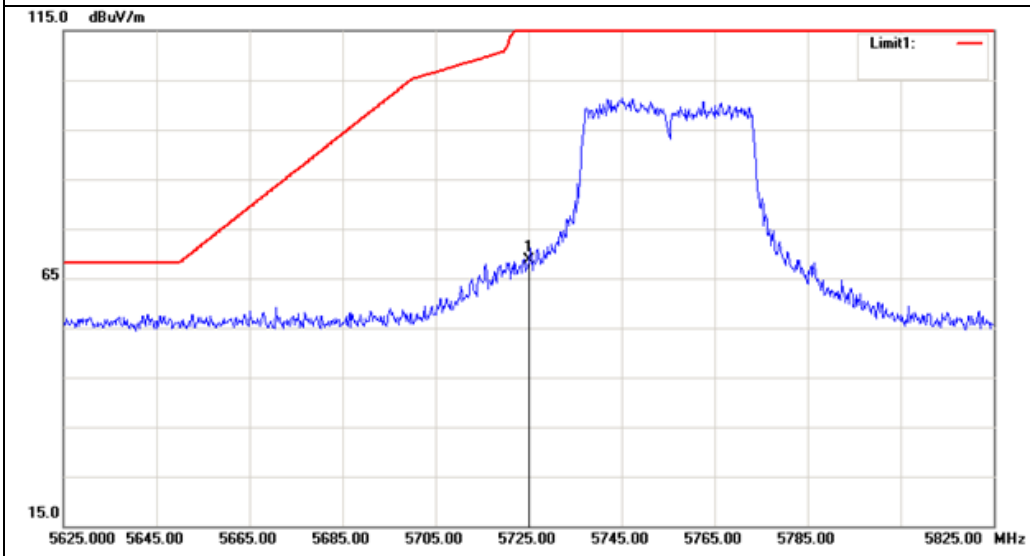
Combine with Antenna 0 and Antenna 1

IEEE 802.11n HT 40 MHz mode / 5625 ~ 5825MHz

Detector mode: Peak **Polarity: Vertical**



Detector mode: Peak **Polarity: Horizontal**



No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1	5725.000	66.24	5.96	72.20	122.20	-50.00	Peak	Vertical
2	5725.000	62.63	5.96	68.59	122.20	-53.61	Peak	Horizontal

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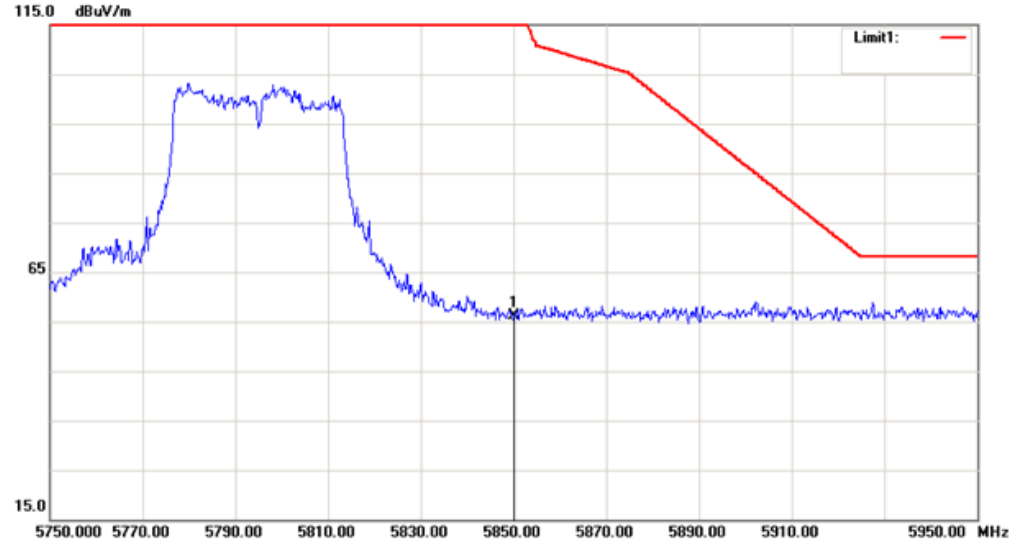
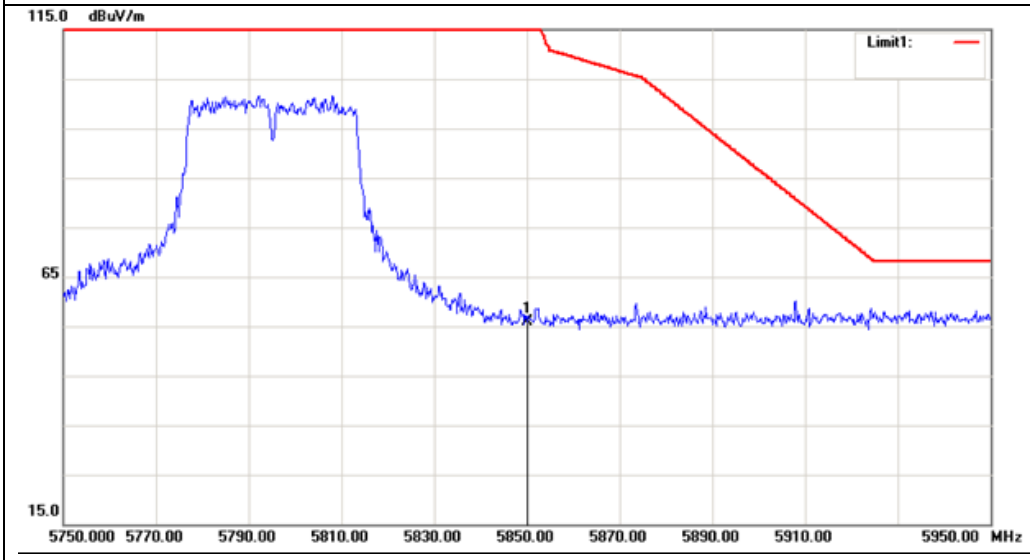
IEEE 802.11n HT 40 MHz mode / 5750~ 5950MHz

Detector mode: Peak **Polarity: Vertical**



Detector mode: Peak **Polarity: Horizontal**



No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1	5850.000	50.12	6.02	56.14	122.20	-66.06	Peak	Vertical
2	5850.000	49.93	6.02	55.95	122.20	-66.25	Peak	Horizontal

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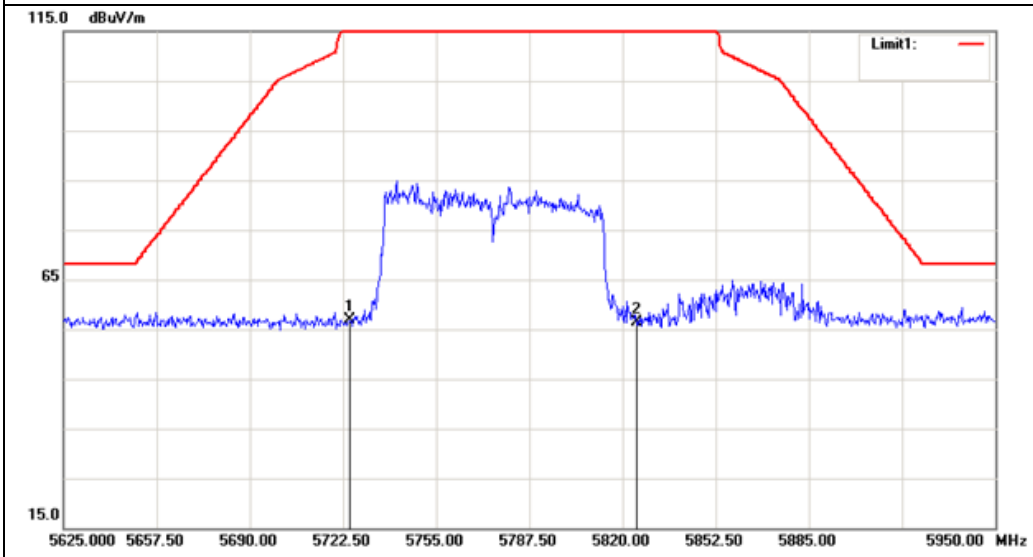
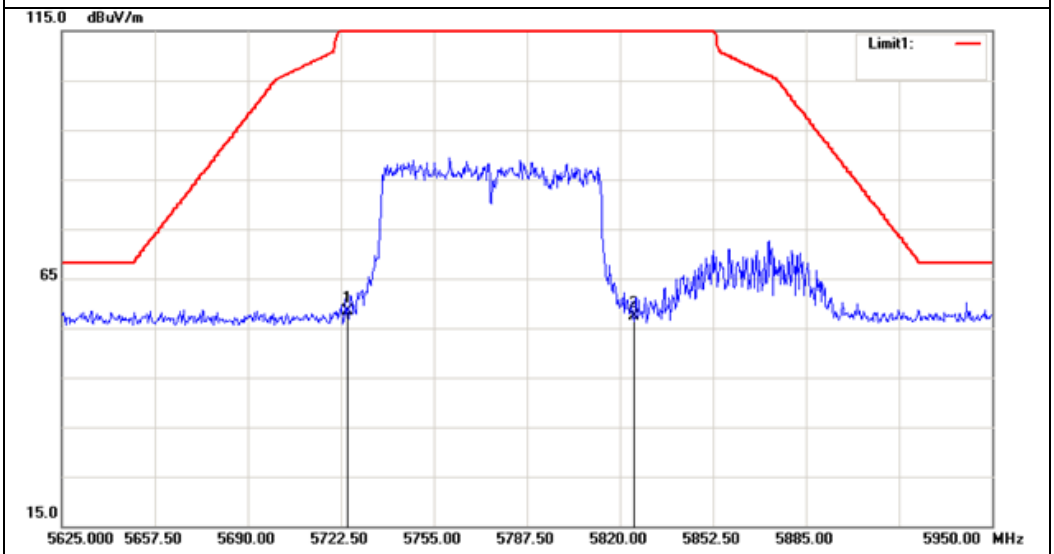
Combine with Antenna 0 and Antenna 1
IEEE 802.11ac 80 mode / 5625 ~ 5950MHz

Detector mode: Peak **Polarity: Vertical**



Detector mode: Peak **Polarity: Horizontal**



No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1	5725.000	50.85	5.96	56.81	122.20	-65.39	Peak	Vertical
2	5825.000	50.44	6.01	56.45	122.20	-65.75	Peak	Vertical
3	5725.000	52.44	5.96	58.40	122.20	-63.80	Peak	Horizontal
4	5825.000	51.33	6.01	57.34	122.20	-64.86	Peak	Horizontal

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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	02/21/2016	02/20/2017
LISN(EUT)	ROHDE&SCHWARZ	ENV216	101543-WX	02/21/2016	02/20/2017
LISN	EMCO	3825/2	8901-1459	02/21/2016	02/20/2017
Temp. / Humidity Meter	VICTOR	HTC-1	N/A	02/21/2016	02/20/2017
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.

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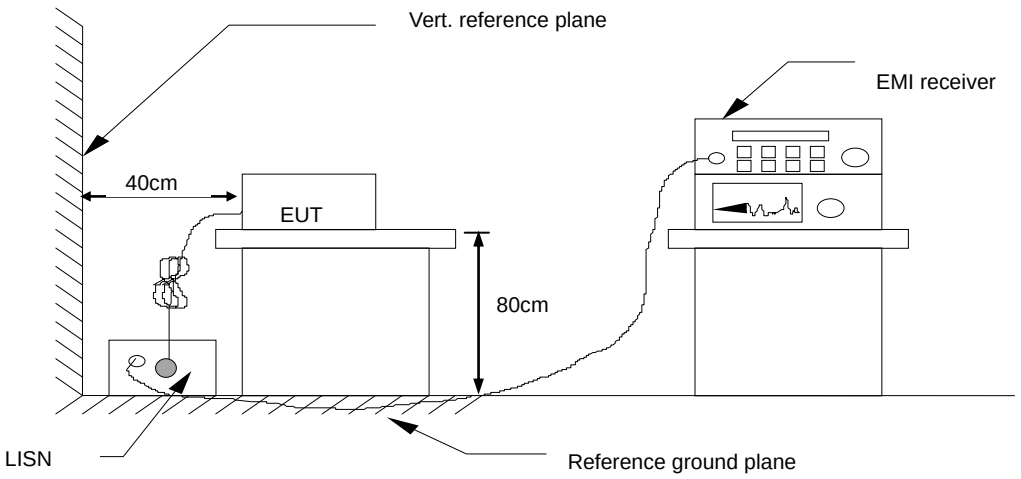
6.9.3 TEST CONFIGURATION



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)

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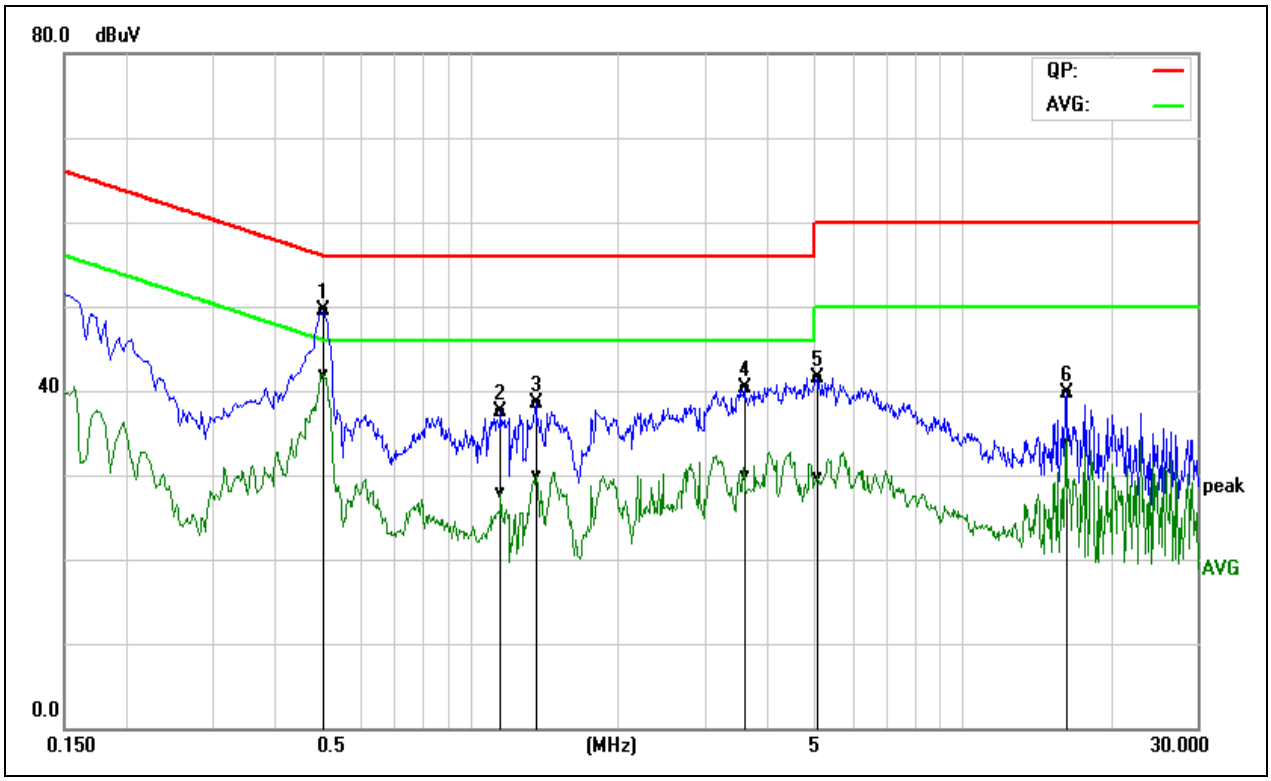
6.9.6 TEST RESULTS

Model No.	AEC120	**RBW,VBW**	9 kHz
Environmental Conditions	22°C, 45% RH	**Test Mode**	Mode 1
Tested by	David Dong	**Line**	L1
Test Date	March 14, 2017	**Test Voltage**	AC 120V/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)
0.5020	29.94	22.35	19.63	49.57	41.98	56.00	46.00	-6.43	-4.02	Pass
1.1539	17.68	8.08	19.74	37.42	27.82	56.00	46.00	-18.58	-18.18	Pass
1.3619	18.71	10.22	19.74	38.45	29.96	56.00	46.00	-17.55	-16.04	Pass
3.6060	20.48	10.10	19.73	40.21	29.83	56.00	46.00	-15.79	-16.17	Pass
5.0820	21.85	10.04	19.73	41.58	29.77	60.00	50.00	-18.42	-20.23	Pass
16.2300	19.99	14.46	19.74	39.73	34.20	60.00	50.00	-20.27	-15.80	Pass

REMARKS: *L1 = Line One (Live Line)*

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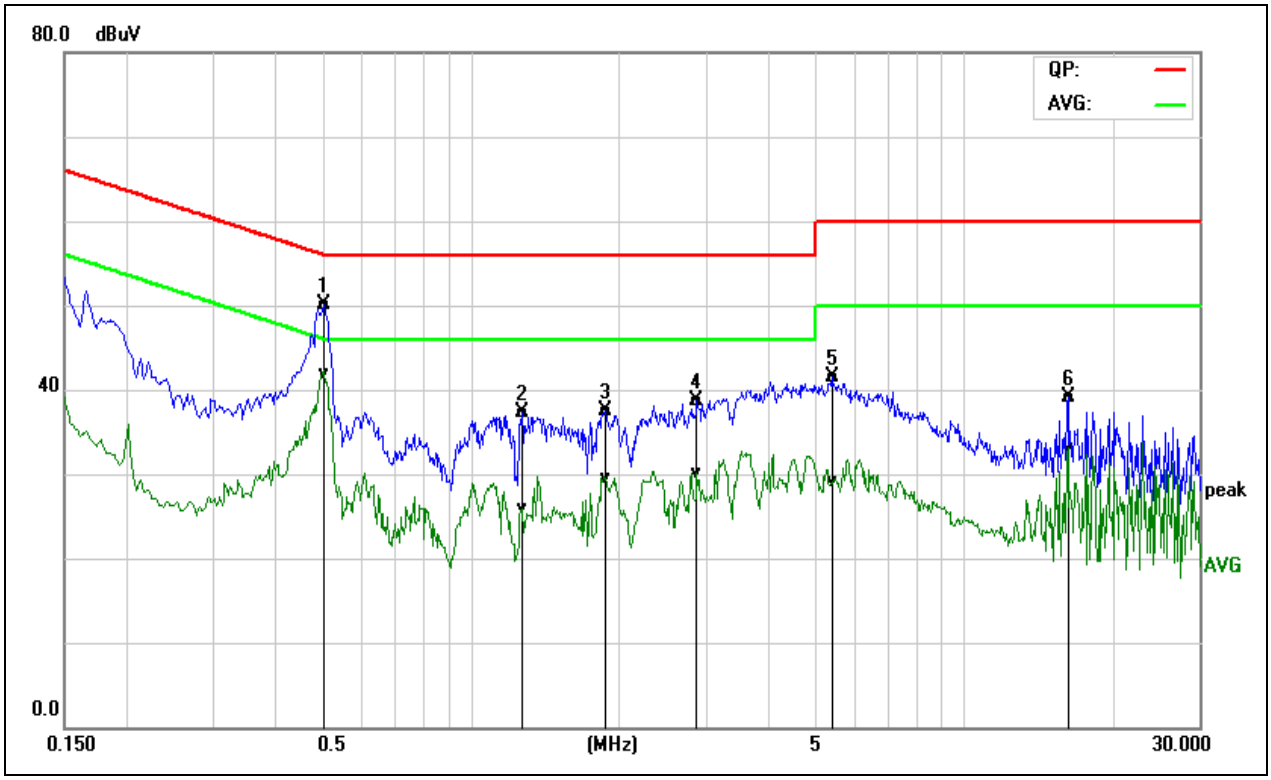
Model No.	AEC120	**RBW,VBW**	9 kHz
Environmental Conditions	22°C, 45% RH	**Test Mode**	Mode 1
Tested by	David Dong	**Line**	L2
Test Date	March 14, 2017	**Test Voltage**	AC 120V/60Hz



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)
0.5060	30.50	22.19	19.63	50.13	41.82	56.00	46.00	-5.87	-4.18	Pass
1.2700	17.63	6.25	19.74	37.37	25.99	56.00	46.00	-18.63	-20.01	Pass
1.8860	17.83	9.70	19.72	37.55	29.42	56.00	46.00	-18.45	-16.58	Pass
2.8820	19.02	10.47	19.72	38.74	30.19	56.00	46.00	-17.26	-15.81	Pass
5.4140	21.82	9.29	19.73	41.55	29.02	60.00	50.00	-18.45	-20.98	Pass
16.2300	19.42	13.33	19.74	39.16	33.07	60.00	50.00	-20.84	-16.93	Pass

REMARKS: *L2 = Line Two (Neutral Line)*

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6.10 FREQUENCY STABILITY

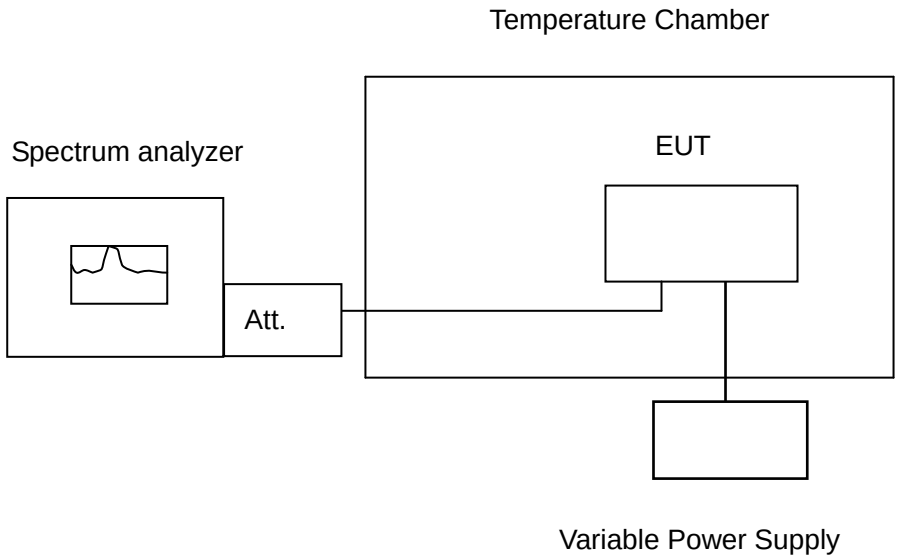
6.10.1 LIMIT

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	02/21/2017	02/20/2018
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	02/21/2017	02/20/2018
Power Sensor	Anritsu	MA2411B	1126150	02/21/2017	02/20/2018
Temperature Chamber	TERCHY	MHG-800N	E21104	11/18/2016	11/17/2017
Temp. / Humidity Meter	Anymetre	JR913	N/A	02/21/2017	02/20/2018

6.10.3 TEST CONFIGURATION



Remark: *Measurement setup for testing on Antenna connector*

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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.

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Test Data
Antenna 0

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

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5179.970949	5150-5250	PASS
40	120	5179.995448	5150-5250	PASS
30	120	5179.961206	5150-5250	PASS
20	120	5179.987264	5150-5250	PASS
10	120	5179.973433	5150-5250	PASS
0	120	5179.992262	5150-5250	PASS
-10	120	5179.986845	5150-5250	PASS
-20	120	5179.953449	5150-5250	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5179.953498	5150-5250	PASS
	120	5179.987264	5150-5250	PASS
	132	5179.996508	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	5239.973799	5150-5250	PASS
40	120	5239.972602	5150-5250	PASS
30	120	5239.970172	5150-5250	PASS
20	120	5239.996883	5150-5250	PASS
10	120	5239.990444	5150-5250	PASS
0	120	5239.977628	5150-5250	PASS
-10	120	5239.986729	5150-5250	PASS
-20	120	5239.995644	5150-5250	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5239.975473	5150-5250	PASS
	120	5239.996883	5150-5250	PASS
	132	5239.981455	5150-5250	PASS

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

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5744.970940	5725-5850	PASS
40	120	5744.969243	5725-5850	PASS
30	120	5744.963866	5725-5850	PASS
20	120	5744.986387	5725-5850	PASS
10	120	5744.949597	5725-5850	PASS
0	120	5744.988849	5725-5850	PASS
-10	120	5744.973577	5725-5850	PASS
-20	120	5744.998173	5725-5850	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5744.967727	5725-5850	PASS
	120	5744.986387	5725-5850	PASS
	132	5744.984215	5725-5850	PASS

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

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5824.995187	5725-5850	PASS
40	120	5824.951808	5725-5850	PASS
30	120	5824.979098	5725-5850	PASS
20	120	5824.976821	5725-5850	PASS
10	120	5824.960563	5725-5850	PASS
0	120	5824.980103	5725-5850	PASS
-10	120	5824.949092	5725-5850	PASS
-20	120	5824.990620	5725-5850	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5824.982886	5725-5850	PASS
	120	5824.976821	5725-5850	PASS
	132	5824.990977	5725-5850	PASS

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Antenna 1

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

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5179.952891	5150-5250	PASS
40	120	5179.979388	5150-5250	PASS
30	120	5179.980047	5150-5250	PASS
20	120	5179.987266	5150-5250	PASS
10	120	5179.998279	5150-5250	PASS
0	120	5179.961957	5150-5250	PASS
-10	120	5179.949487	5150-5250	PASS
-20	120	5179.963154	5150-5250	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5179.965198	5150-5250	PASS
	120	5179.987266	5150-5250	PASS
	132	5179.989713	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	5239.980655	5150-5250	PASS
40	120	5239.960883	5150-5250	PASS
30	120	5239.961909	5150-5250	PASS
20	120	5239.996880	5150-5250	PASS
10	120	5239.980664	5150-5250	PASS
0	120	5239.976911	5150-5250	PASS
-10	120	5239.951779	5150-5250	PASS
-20	120	5239.952866	5150-5250	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5239.992012	5150-5250	PASS
	120	5239.996880	5150-5250	PASS
	132	5239.991988	5150-5250	PASS

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

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5744.965808	5725-5850	PASS
40	120	5744.987820	5725-5850	PASS
30	120	5744.976625	5725-5850	PASS
20	120	5744.986388	5725-5850	PASS
10	120	5744.988607	5725-5850	PASS
0	120	5744.973207	5725-5850	PASS
-10	120	5744.987324	5725-5850	PASS
-20	120	5744.950328	5725-5850	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5744.990734	5725-5850	PASS
	120	5744.986388	5725-5850	PASS
	132	5744.950609	5725-5850	PASS

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

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5824.992318	5725-5850	PASS
40	120	5824.986169	5725-5850	PASS
30	120	5824.966882	5725-5850	PASS
20	120	5824.976826	5725-5850	PASS
10	120	5824.996728	5725-5850	PASS
0	120	5824.961843	5725-5850	PASS
-10	120	5824.955712	5725-5850	PASS
-20	120	5824.959770	5725-5850	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5824.970047	5725-5850	PASS
	120	5824.976826	5725-5850	PASS
	132	5824.961185	5725-5850	PASS

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Antenna 0

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

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5179.976230	5150-5250	PASS
40	120	5179.975684	5150-5250	PASS
30	120	5179.983532	5150-5250	PASS
20	120	5179.994532	5150-5250	PASS
10	120	5179.957220	5150-5250	PASS
0	120	5179.962200	5150-5250	PASS
-10	120	5179.986283	5150-5250	PASS
-20	120	5179.984658	5150-5250	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5179.977669	5150-5250	PASS
	120	5179.994532	5150-5250	PASS
	132	5179.979195	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	5239.997852	5150-5250	PASS
40	120	5239.978505	5150-5250	PASS
30	120	5239.959148	5150-5250	PASS
20	120	5239.996451	5150-5250	PASS
10	120	5239.952090	5150-5250	PASS
0	120	5239.974476	5150-5250	PASS
-10	120	5239.949019	5150-5250	PASS
-20	120	5239.986108	5150-5250	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5239.979543	5150-5250	PASS
	120	5239.996451	5150-5250	PASS
	132	5239.985191	5150-5250	PASS

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

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5744.974388	5725-5850	PASS
40	120	5744.983696	5725-5850	PASS
30	120	5744.971324	5725-5850	PASS
20	120	5744.965480	5725-5850	PASS
10	120	5744.974881	5725-5850	PASS
0	120	5744.997092	5725-5850	PASS
-10	120	5744.949311	5725-5850	PASS
-20	120	5744.982693	5725-5850	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5744.989274	5725-5850	PASS
	120	5744.965480	5725-5850	PASS
	132	5744.957814	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	5824.967730	5725-5850	PASS
40	120	5824.961973	5725-5850	PASS
30	120	5824.992944	5725-5850	PASS
20	120	5824.973580	5725-5850	PASS
10	120	5824.993905	5725-5850	PASS
0	120	5824.978234	5725-5850	PASS
-10	120	5824.972298	5725-5850	PASS
-20	120	5824.974283	5725-5850	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5824.995846	5725-5850	PASS
	120	5824.973580	5725-5850	PASS
	132	5824.967139	5725-5850	PASS

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Antenna 1

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

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5179.999120	5150-5250	PASS
40	120	5179.950117	5150-5250	PASS
30	120	5179.989672	5150-5250	PASS
20	120	5179.994783	5150-5250	PASS
10	120	5179.977662	5150-5250	PASS
0	120	5179.950648	5150-5250	PASS
-10	120	5179.974233	5150-5250	PASS
-20	120	5179.955910	5150-5250	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5179.967222	5150-5250	PASS
	120	5179.994783	5150-5250	PASS
	132	5179.953016	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	5239.949226	5150-5250	PASS
40	120	5239.954198	5150-5250	PASS
30	120	5239.979510	5150-5250	PASS
20	120	5239.997784	5150-5250	PASS
10	120	5239.987716	5150-5250	PASS
0	120	5239.965393	5150-5250	PASS
-10	120	5239.959180	5150-5250	PASS
-20	120	5239.991697	5150-5250	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5239.991764	5150-5250	PASS
	120	5239.997784	5150-5250	PASS
	132	5239.990783	5150-5250	PASS

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

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5744.969594	5725-5850	PASS
40	120	5744.987477	5725-5850	PASS
30	120	5744.973064	5725-5850	PASS
20	120	5744.965550	5725-5850	PASS
10	120	5744.959529	5725-5850	PASS
0	120	5744.955841	5725-5850	PASS
-10	120	5744.999827	5725-5850	PASS
-20	120	5744.977888	5725-5850	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5744.969158	5725-5850	PASS
	120	5744.965550	5725-5850	PASS
	132	5744.964947	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	5824.950654	5725-5850	PASS
40	120	5824.990373	5725-5850	PASS
30	120	5824.951089	5725-5850	PASS
20	120	5824.973881	5725-5850	PASS
10	120	5824.973960	5725-5850	PASS
0	120	5824.995418	5725-5850	PASS
-10	120	5824.955941	5725-5850	PASS
-20	120	5824.988594	5725-5850	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5824.956705	5725-5850	PASS
	120	5824.973881	5725-5850	PASS
	132	5824.998136	5725-5850	PASS

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Antenna 0

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

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5189.961617	5150-5250	PASS
40	120	5189.971000	5150-5250	PASS
30	120	5189.978313	5150-5250	PASS
20	120	5189.935478	5150-5250	PASS
10	120	5189.970359	5150-5250	PASS
0	120	5189.983402	5150-5250	PASS
-10	120	5189.996659	5150-5250	PASS
-20	120	5189.955067	5150-5250	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5189.966258	5150-5250	PASS
	120	5189.935478	5150-5250	PASS
	132	5189.985013	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	5229.976964	5150-5250	PASS
40	120	5229.980055	5150-5250	PASS
30	120	5229.986696	5150-5250	PASS
20	120	5230.006879	5150-5250	PASS
10	120	5229.967236	5150-5250	PASS
0	120	5229.951498	5150-5250	PASS
-10	120	5229.955410	5150-5250	PASS
-20	120	5229.989749	5150-5250	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5229.974194	5150-5250	PASS
	120	5230.006879	5150-5250	PASS
	132	5229.991403	5150-5250	PASS

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

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5754.969706	5725-5850	PASS
40	120	5754.998990	5725-5850	PASS
30	120	5754.950498	5725-5850	PASS
20	120	5754.994124	5725-5850	PASS
10	120	5754.975628	5725-5850	PASS
0	120	5754.980386	5725-5850	PASS
-10	120	5754.985128	5725-5850	PASS
-20	120	5754.952949	5725-5850	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5754.986396	5725-5850	PASS
	120	5754.994124	5725-5850	PASS
	132	5754.953065	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	5794.956597	5725-5850	PASS
40	120	5794.993090	5725-5850	PASS
30	120	5794.983411	5725-5850	PASS
20	120	5794.983278	5725-5850	PASS
10	120	5794.952665	5725-5850	PASS
0	120	5794.990446	5725-5850	PASS
-10	120	5794.967584	5725-5850	PASS
-20	120	5794.970386	5725-5850	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5794.963727	5725-5850	PASS
	120	5794.983278	5725-5850	PASS
	132	5794.976879	5725-5850	PASS

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

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5189.964533	5150-5250	PASS
40	120	5189.994001	5150-5250	PASS
30	120	5189.962719	5150-5250	PASS
20	120	5189.935446	5150-5250	PASS
10	120	5189.955063	5150-5250	PASS
0	120	5189.960023	5150-5250	PASS
-10	120	5189.990834	5150-5250	PASS
-20	120	5189.953378	5150-5250	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5189.985285	5150-5250	PASS
	120	5189.935446	5150-5250	PASS
	132	5189.980070	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	5229.988938	5150-5250	PASS
40	120	5229.976735	5150-5250	PASS
30	120	5229.995063	5150-5250	PASS
20	120	5230.001122	5150-5250	PASS
10	120	5229.953461	5150-5250	PASS
0	120	5229.986121	5150-5250	PASS
-10	120	5229.959491	5150-5250	PASS
-20	120	5229.955451	5150-5250	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5229.997034	5150-5250	PASS
	120	5230.001122	5150-5250	PASS
	132	5229.999553	5150-5250	PASS

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

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5754.982827	5725-5850	PASS
40	120	5754.974670	5725-5850	PASS
30	120	5754.991145	5725-5850	PASS
20	120	5754.994111	5725-5850	PASS
10	120	5754.977977	5725-5850	PASS
0	120	5754.980232	5725-5850	PASS
-10	120	5754.955047	5725-5850	PASS
-20	120	5754.958922	5725-5850	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5754.952526	5725-5850	PASS
	120	5754.994111	5725-5850	PASS
	132	5754.973884	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	5794.964586	5725-5850	PASS
40	120	5794.961936	5725-5850	PASS
30	120	5794.962066	5725-5850	PASS
20	120	5794.983335	5725-5850	PASS
10	120	5794.978155	5725-5850	PASS
0	120	5794.953098	5725-5850	PASS
-10	120	5794.972035	5725-5850	PASS
-20	120	5794.968136	5725-5850	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5794.964474	5725-5850	PASS
	120	5794.983335	5725-5850	PASS
	132	5794.992447	5725-5850	PASS

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IEEE 802.11ac 80 mode / 5210MHz

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5209.960381	5150-5250	PASS
40	120	5209.993648	5150-5250	PASS
30	120	5209.969066	5150-5250	PASS
20	120	5209.975565	5150-5250	PASS
10	120	5209.967413	5150-5250	PASS
0	120	5209.985283	5150-5250	PASS
-10	120	5209.949826	5150-5250	PASS
-20	120	5209.949323	5150-5250	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5209.989048	5150-5250	PASS
	120	5209.975565	5150-5250	PASS
	132	5209.964955	5150-5250	PASS

IEEE 802.11ac 80 mode / 5775MHz

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5774.972696	5725-5850	PASS
40	120	5774.998740	5725-5850	PASS
30	120	5774.966924	5725-5850	PASS
20	120	5774.944748	5725-5850	PASS
10	120	5774.986070	5725-5850	PASS
0	120	5774.999537	5725-5850	PASS
-10	120	5774.950356	5725-5850	PASS
-20	120	5774.985617	5725-5850	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5774.956661	5725-5850	PASS
	120	5774.944748	5725-5850	PASS
	132	5774.999737	5725-5850	PASS

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Antenna 1

IEEE 802.11ac 80 mode / 5210MHz

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5209.988337	5150-5250	PASS
40	120	5209.965717	5150-5250	PASS
30	120	5209.992033	5150-5250	PASS
20	120	5209.975450	5150-5250	PASS
10	120	5209.980358	5150-5250	PASS
0	120	5209.971108	5150-5250	PASS
-10	120	5209.997161	5150-5250	PASS
-20	120	5209.971823	5150-5250	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5209.967274	5150-5250	PASS
	120	5209.975450	5150-5250	PASS
	132	5209.974551	5150-5250	PASS

IEEE 802.11ac 80 mode / 5775MHz

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
50	120	5774.959524	5725-5850	PASS
40	120	5774.987091	5725-5850	PASS
30	120	5774.962766	5725-5850	PASS
20	120	5774.944670	5725-5850	PASS
10	120	5774.977343	5725-5850	PASS
0	120	5774.977531	5725-5850	PASS
-10	120	5774.985535	5725-5850	PASS
-20	120	5774.961639	5725-5850	PASS

Environment Temperature (°C)	Volage (V)	Measured Frequency (MHz)	limit Range	Test Result
20	108	5774.997543	5725-5850	PASS
	120	5774.944670	5725-5850	PASS
	132	5774.976258	5725-5850	PASS

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