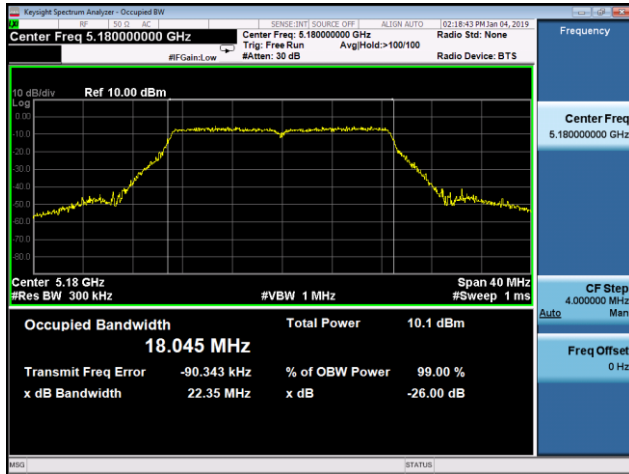
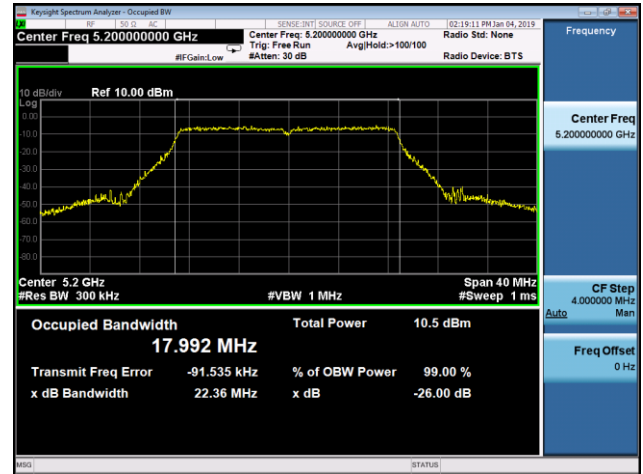


802.11n(HT20)

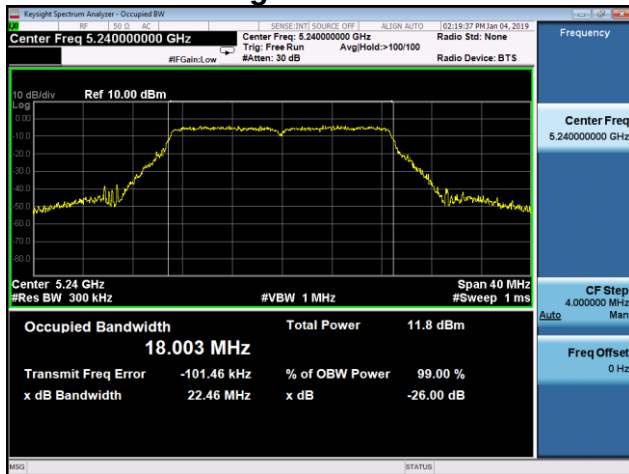
Low Channel



Middle Channel

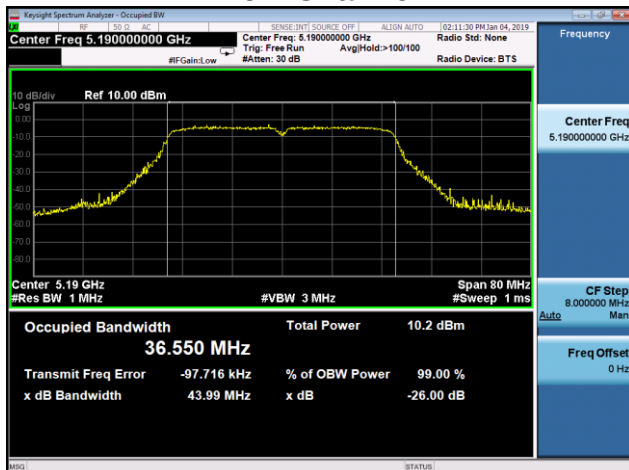


High Channel

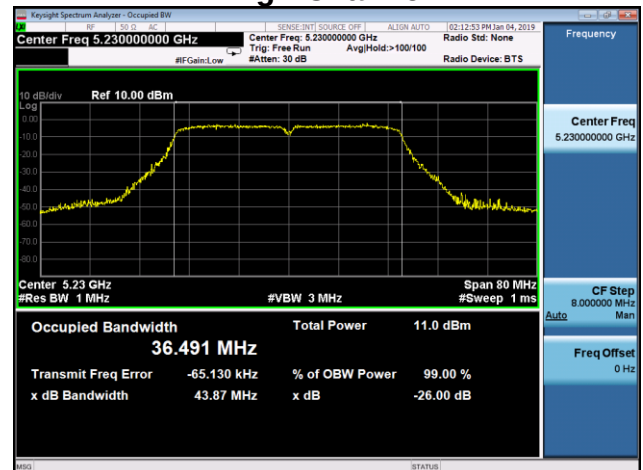


802.11n(HT40)

Low Channel

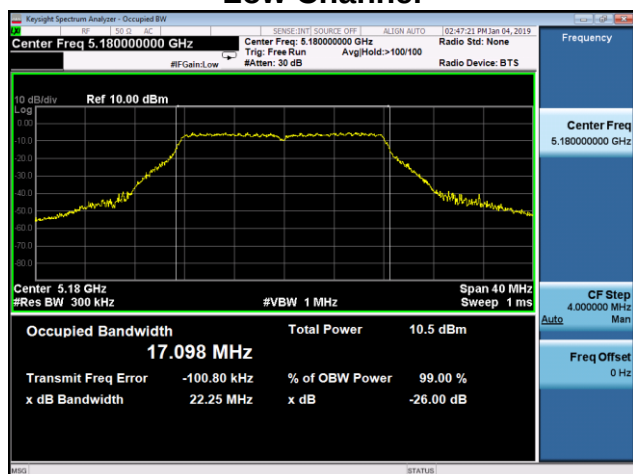


High Channel

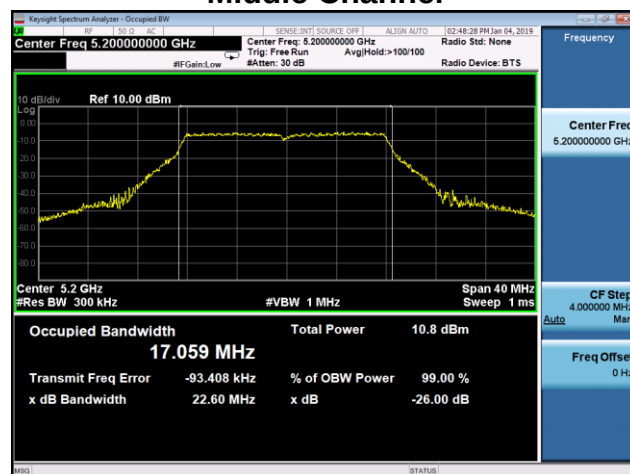


Band 5725-5850MHz IEEE 802.11a

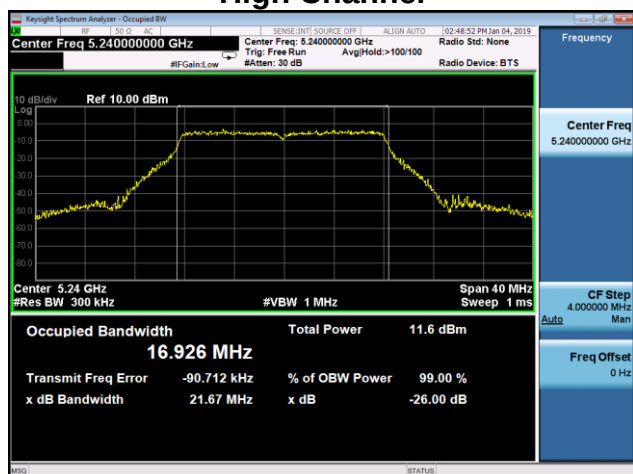
Low Channel



Middle Channel

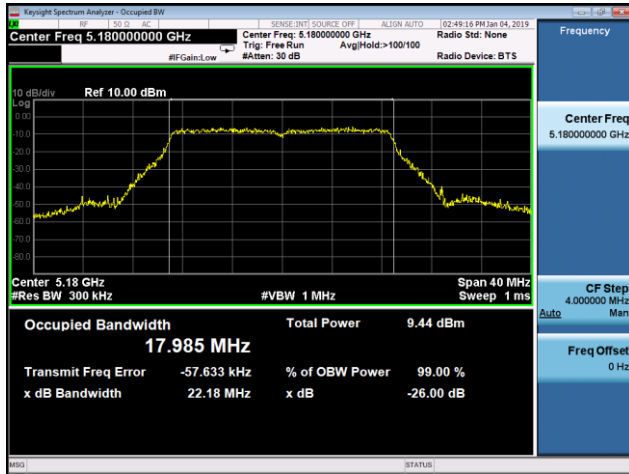


High Channel

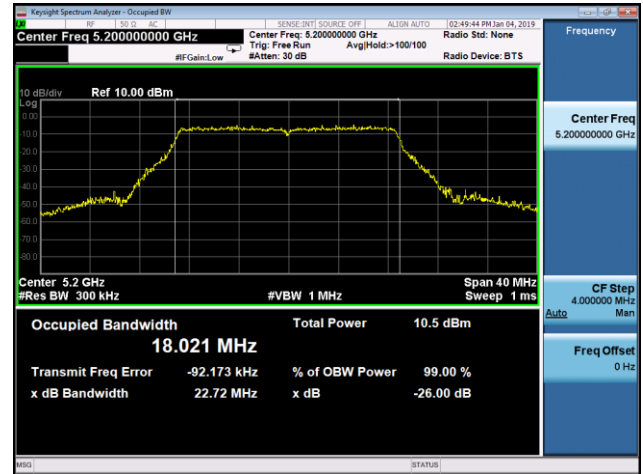


802.11n(HT20)

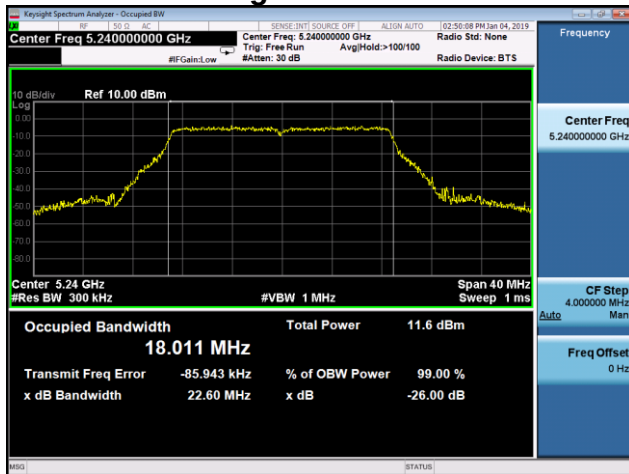
Low Channel



Middle Channel

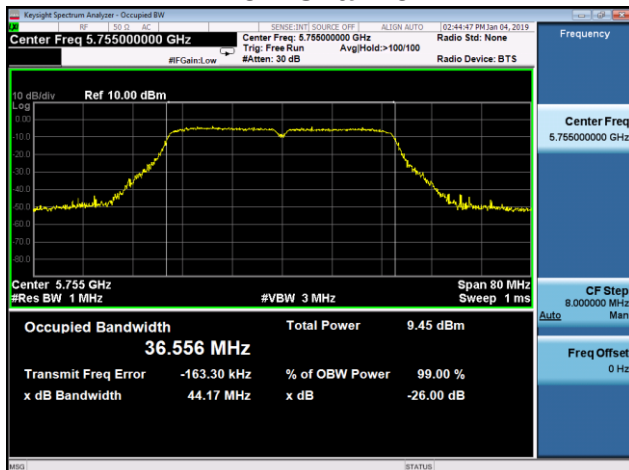


High Channel

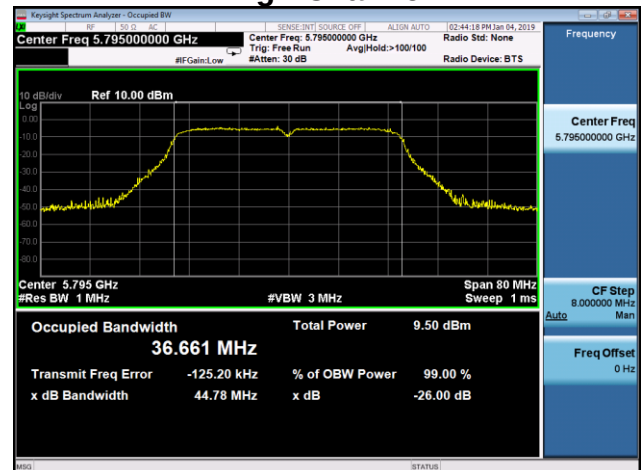


802.11n(HT40)

Low Channel



High Channel

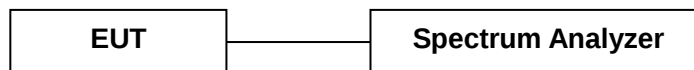


7. Power Spectral Density

7.1 Limits

Operation Band		Limit
■5180~5240MHz	□Outdoor access point	17 dBm/MHz
	■Indoor access point	17 dBm/MHz
	□Fixed point-to-point access points	17 dBm/MHz
	□Client devices	17 dBm/MHz
■5745~5825MHz		30 dBm/500kHz

7.2 Test SET-UP (Block Diagram of Configuration)

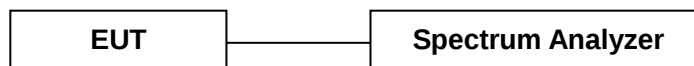


7.3 Test Procedure

The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer was set as below according to FCC KDB789033 (v01r03):

1. Set analyzer center frequency to center frequency
2. Set the RBW to: 1MHz
3. Set the VBW to: 3MHz
4. Detector = RMS
5. Sweep time = auto couple
6. Trace Average = 100 times
7. If measured bandwidth of Maximum PSD is specified in 500kHz, add $10\log(500\text{kHz}/\text{RBW})$ to the measured result, whereas RBW (<500kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.

7.4 Test SET-UP (Block Diagram of Configuration)



7.5 Measurement Results

Pass

Please refer to following table and plots.

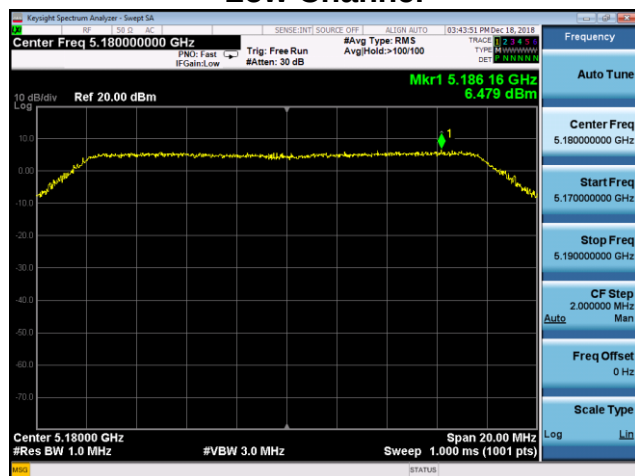
Temperature :	23 °C	Humidity :	52%
Test By:	Lee	Test Date :	December 18, 2018
Test Result:	PASS		
Frequency MHz	Data Rate Mbps	PSD dBm/MHz	Limit dBm/ MHz
IEEE 802.11a Mode (OFDM)			
Low Channel 5180	6	6.479	17
Middle Channel 5200	6	6.948	17
High Channel 5240	6	7.528	17
IEEE 802.11n(HT20) Mode (OFDM)			
Low Channel 5180	MCS0	5.877	17
Middle Channel 5200	MCS0	6.285	17
High Channel 5240	MCS0	7.152	17
IEEE 802.11n(HT40) Mode (OFDM)			
Low Channel 5190	MCS0	3.761	17
High Channel 5230	MCS0	4.602	17

Temperature :	23 °C	Humidity :		52%	
Test By:	Lee	Test Date :		December 18, 2018	
Test Result:	PASS				
Frequency MHz	Data Rate Mbps	PSD dBm/MHz	PSD dBm/ 500kHz	Limit dBm/ MHz	
IEEE 802.11a Mode (OFDM)					
Low Channel 5745	6	6.152	3.142	30	
Middle Channel 5785	6	5.996	2.986	30	
High Channel 5825	6	5.184	2.174	30	
IEEE 802.11n(HT20) Mode (OFDM)					
Low Channel 5745	MCS0	5.466	2.456	30	
Middle Channel 5785	MCS0	5.804	2.794	30	
High Channel 5825	MCS0	4.741	1.731	30	
IEEE 802.11n(HT40) Mode (OFDM)					
Low Channel 5755	MCS0	3.036	0.026	30	
High Channel 5795	MCS0	2.875	-0.135	30	

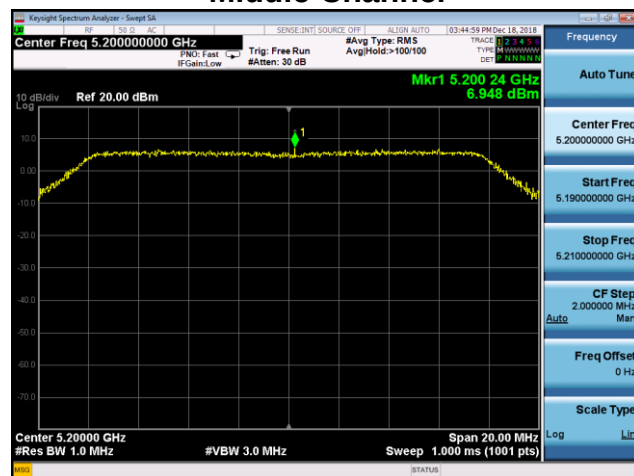
Note: $10\log(500\text{kHz}/\text{RBW})$ Factor = -3.01dB

Band 5150-5250MHz IEEE 802.11a

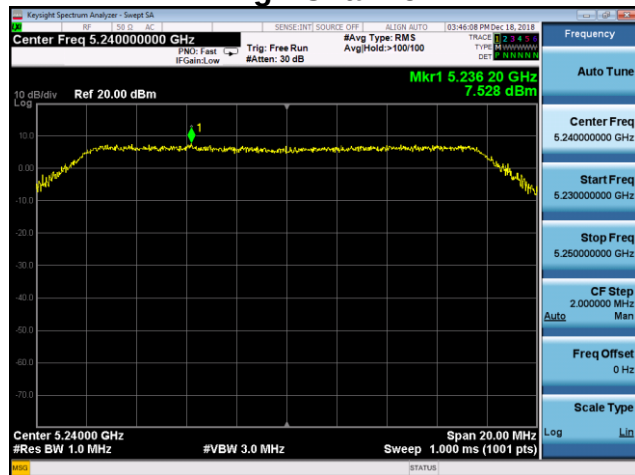
Low Channel



Middle Channel

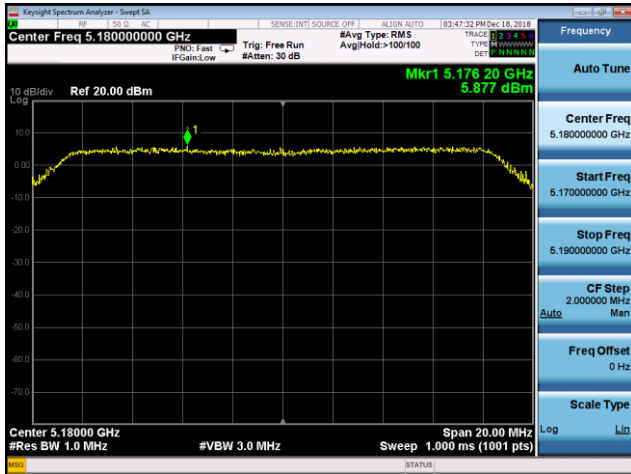


High Channel



802.11n(HT20)

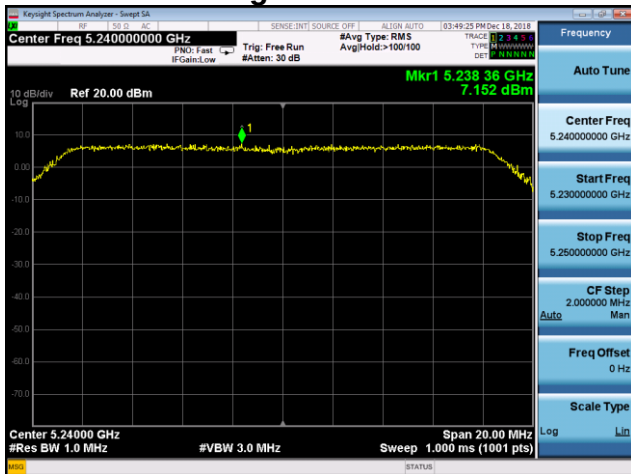
Low Channel



Middle Channel

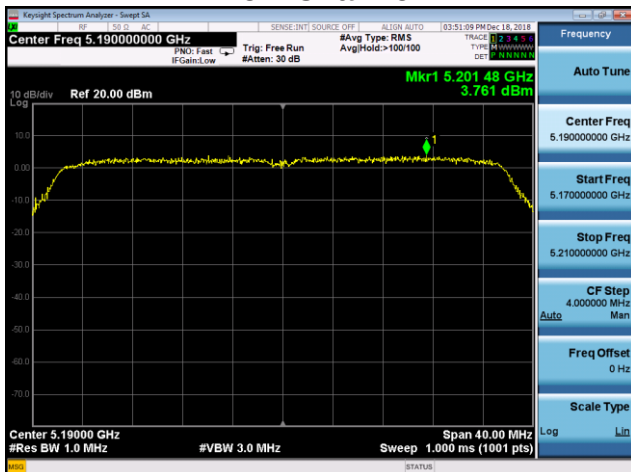


High Channel



802.11n(HT40)

Low Channel

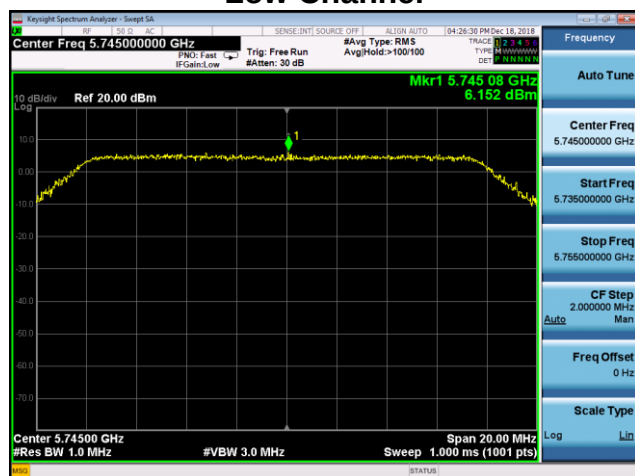


High Channel



Band 5725-5850MHz IEEE 802.11a

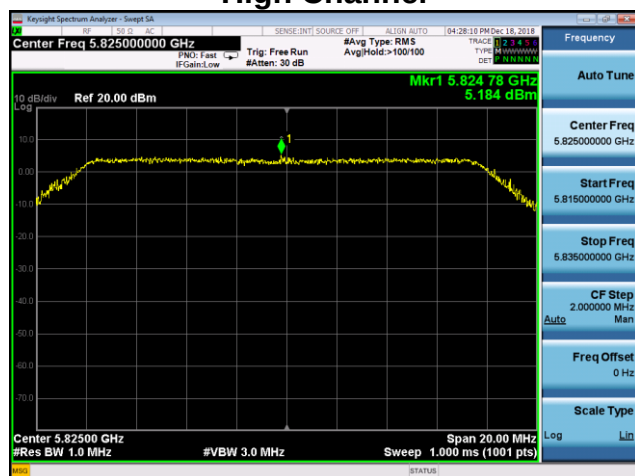
Low Channel



Middle Channel



High Channel



802.11n(HT20)

Low Channel



Middle Channel



High Channel



802.11n(HT40)

Low Channel



High Channel



8. Band Edge

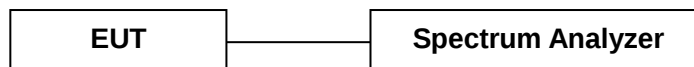
8.1 Limits

For transmitters operating in the 5.15-5.25GHz band: all emissions outside of the 5.15-5.35GHz band shall not exceed an EIRP of -27dBm

For transmitter operating in the 5.25-5.35GHz band: all emissions outside of the 5.15-5.35GHz band shall not exceed an EIRP of -27dBm/MHz. Devices operating in the 5.25-5.35GHz band generate emissions in the 5.15-5.25GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27dBm/MHz in the 5.15-5.25GHz band.

For transmitters operating in the 5.725-5.850GHz band: all emissions shall be limited to a level of -27dBm/MHz at 75MHz or more above or below the band edge increasing linearly to 10dBm/MHz at 25MHz above or below the band edge, and from 25MHz above or below the band edge increasing linearly to a level of 15.6dBm/MHz at 5MHz above or below the band edge, and from 5MHz above or below the band increasing linearly to a level of 27dBm/MHz at the band edge.

8.2 Test SET-UP (Block Diagram of Configuration)



8.3 Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibration or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW to 1MHz and VBW to 3MHz of spectrum analyzer.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

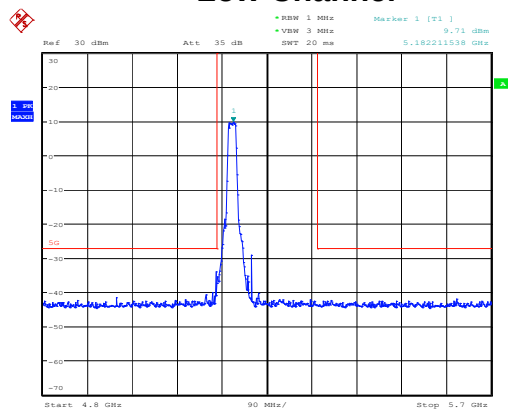
8.4 Measurement Results

Pass

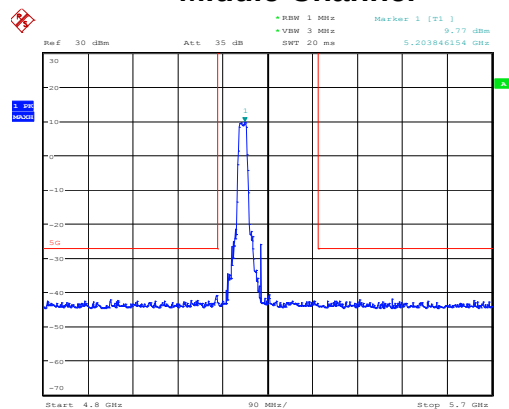
Please refer to following plots.

Band 5150-5250MHz IEEE 802.11a

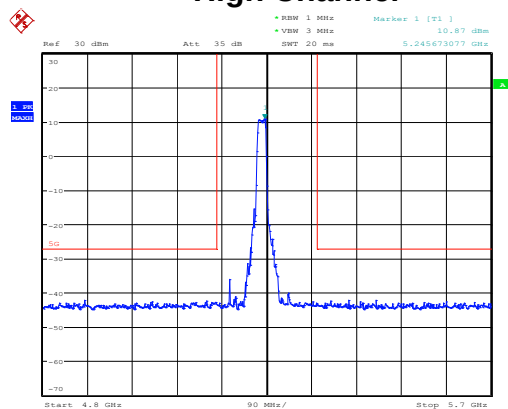
Low Channel



Middle Channel

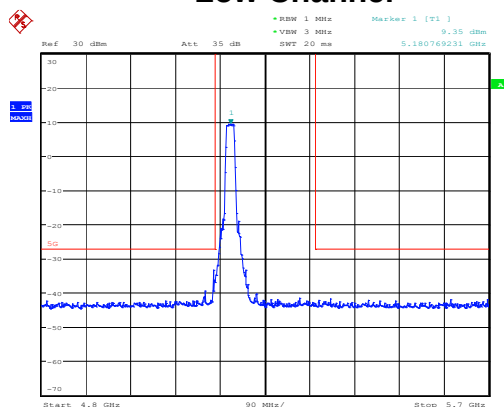


High Channel

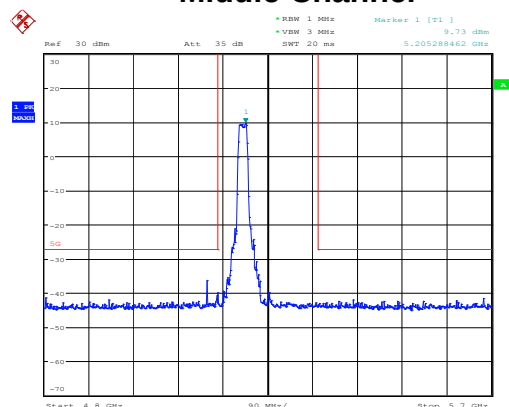


802.11n(HT20)

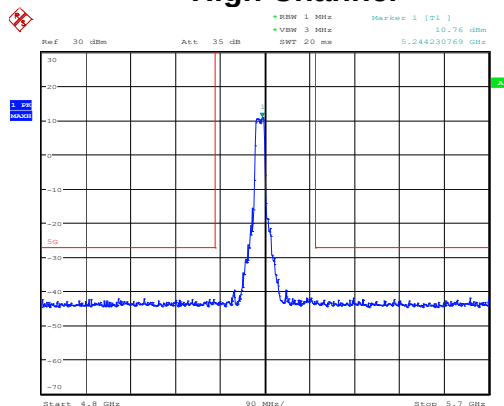
Low Channel



Middle Channel

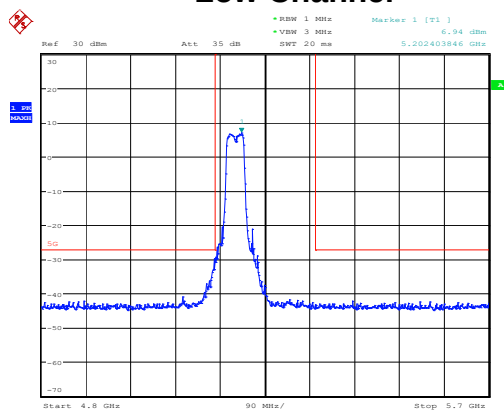


High Channel

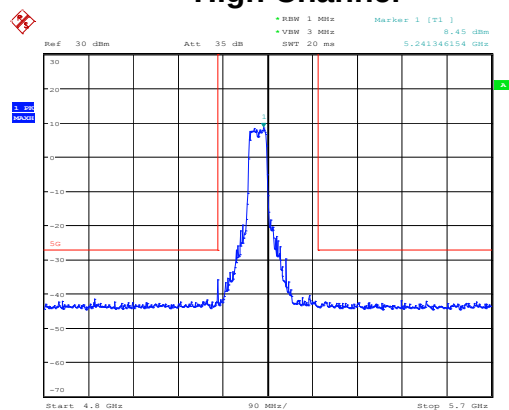


802.11n(HT40)

Low Channel

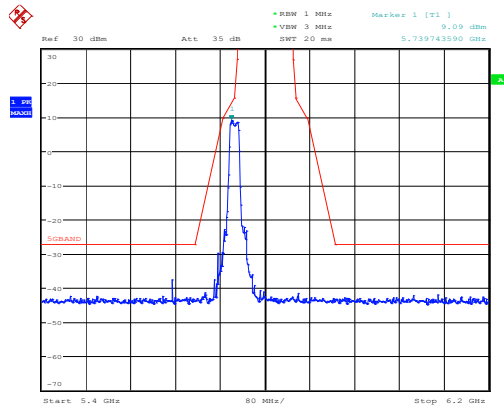


High Channel

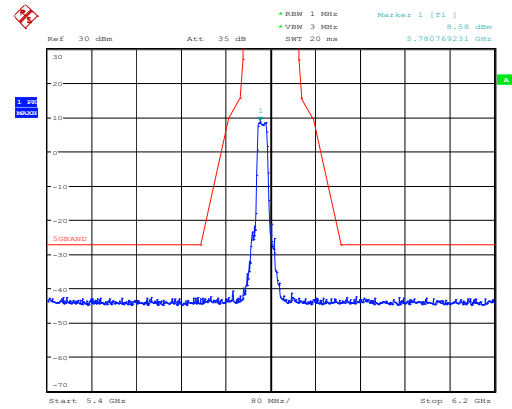


Band 5725-5850MHz IEEE 802.11a

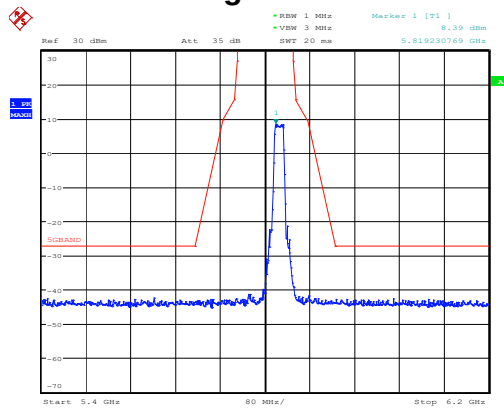
Low Channel



Middle Channel

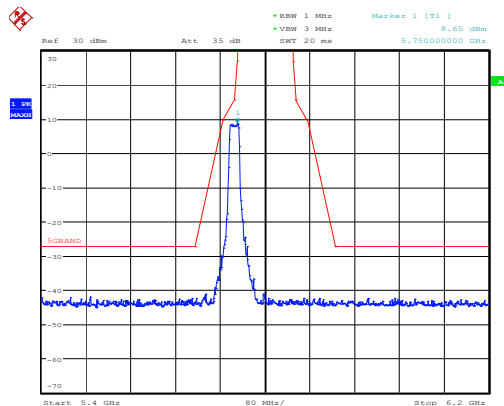


High Channel

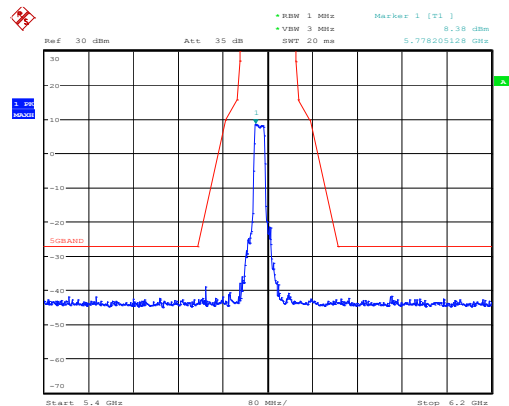


802.11n(HT20)

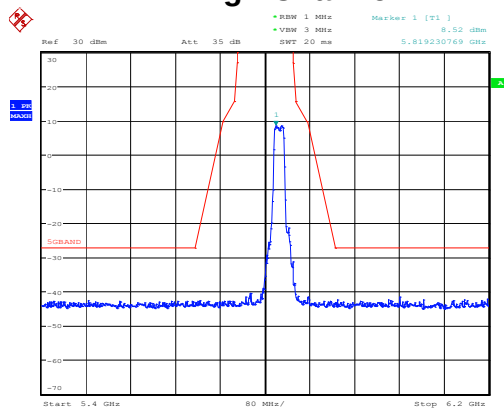
Low Channel



Middle Channel

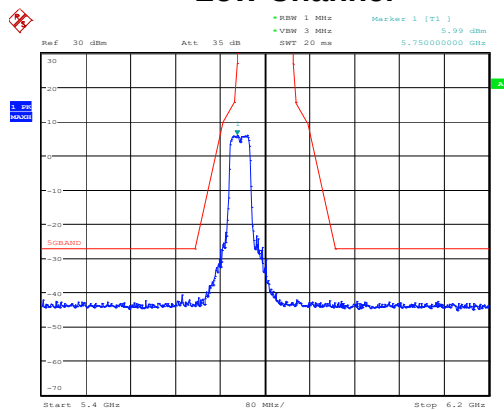


High Channel

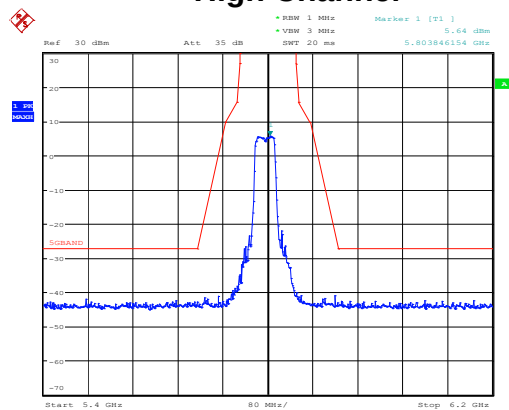


802.11n(HT40)

Low Channel



High Channel

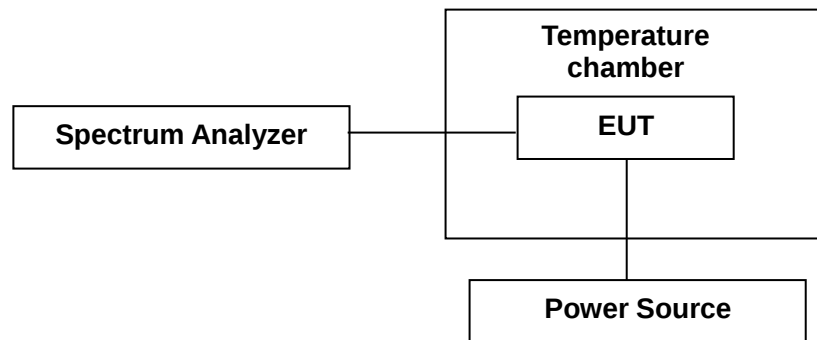


9. Frequency Stability

9.1 Limits

Manufactures 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 users manual.

9.2 Test SET-UP (Block Diagram of Configuration)



9.3 Test Procedure

1. The EUT was placed inside the environmental test chamber and powered by Power source.
2. Turn the EUT on and couple its output to a spectrum analyzer.
3. Turn the EUT off and set the chamber to the highest temperature specified.
4. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
5. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
6. The chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

Note: The EUT set at un-modulation mode during frequency stability test.

9.4 Measurement Results

Pass

Please refer to following tables.

Temperature :	21 °C	Humidity :	51 %			
Test By:	Lee	Test Date :	December 18, 2018			
5150~5250MHz Band						
Lowest channel 5180MHz						
Temperature (°C)	Power Supplied (Vac)	Measured Frequency (MHz)				Test Result
		0 Minute	2 Minute	5 Minute	10 Minute	
0	120.0	5179.931	5179.931	5179.930	5179.930	Pass
10		5179.931	5179.931	5179.929	5179.929	Pass
20		5179.931	5179.931	5179.930	5179.930	Pass
30		5179.930	5179.930	5179.930	5179.930	Pass
45		5179.931	5179.931	5179.931	5179.931	Pass
20	138.0	5179.930	5179.930	5179.928	5179.928	Pass
	102.0	5179.931	5179.931	5179.931	5179.930	Pass

Note: EUT temperature working range is 0°C to 45°C.

Temperature :		21 °C		Humidity :		51 %	
Test By:		Lee		Test Date :		December 18, 2018	
5150~5250MHz Band							
Highest channel 5240MHz							
Temperature (°C)	Power Supplied (Vac)	Measured Frequency (MHz)				Test Result	
		0 Minute	2 Minute	5 Minute	10 Minute		
0	120.0	5239.930	5239.930	5239.930	5239.930	Pass	
10		5239.928	5239.928	5239.928	5239.928	Pass	
20		5239.930	5239.925	5239.925	5239.925	Pass	
30		5239.928	5239.928	5239.928	5239.925	Pass	
45		5239.930	5239.930	5239.928	5239.928	Pass	
20	138.0	5239.930	5239.927	5239.927	5239.927	Pass	
	102.0	5239.928	5239.925	5239.925	5239.925	Pass	

Note: EUT temperature working range is 0°C to 45°C.

Temperature :	21 °C	Humidity :	51 %			
Test By:	Lee	Test Date :	December 18, 2018			
5725~5850MHz Band						
Lowest channel 5745MHz						
Temperature (°C)	Power Supplied (Vac)	Measured Frequency (MHz)				Test Result
		0 Minute	2 Minute	5 Minute	10 Minute	
0	120.0	5744.932	5744.930	5744.930	5744.930	Pass
10		5744.932	5744.932	5744.930	5744.930	Pass
20		5744.932	5744.932	5744.932	5744.931	Pass
30		5744.930	5744.930	5744.930	5744.929	Pass
45		5744.932	5744.932	5744.932	5744.930	Pass
20	138.0	5744.930	5744.930	5744.928	5744.928	Pass
	102.0	5744.927	5744.926	5744.926	5744.926	Pass

Note: EUT temperature working range is 0°C to 45°C.

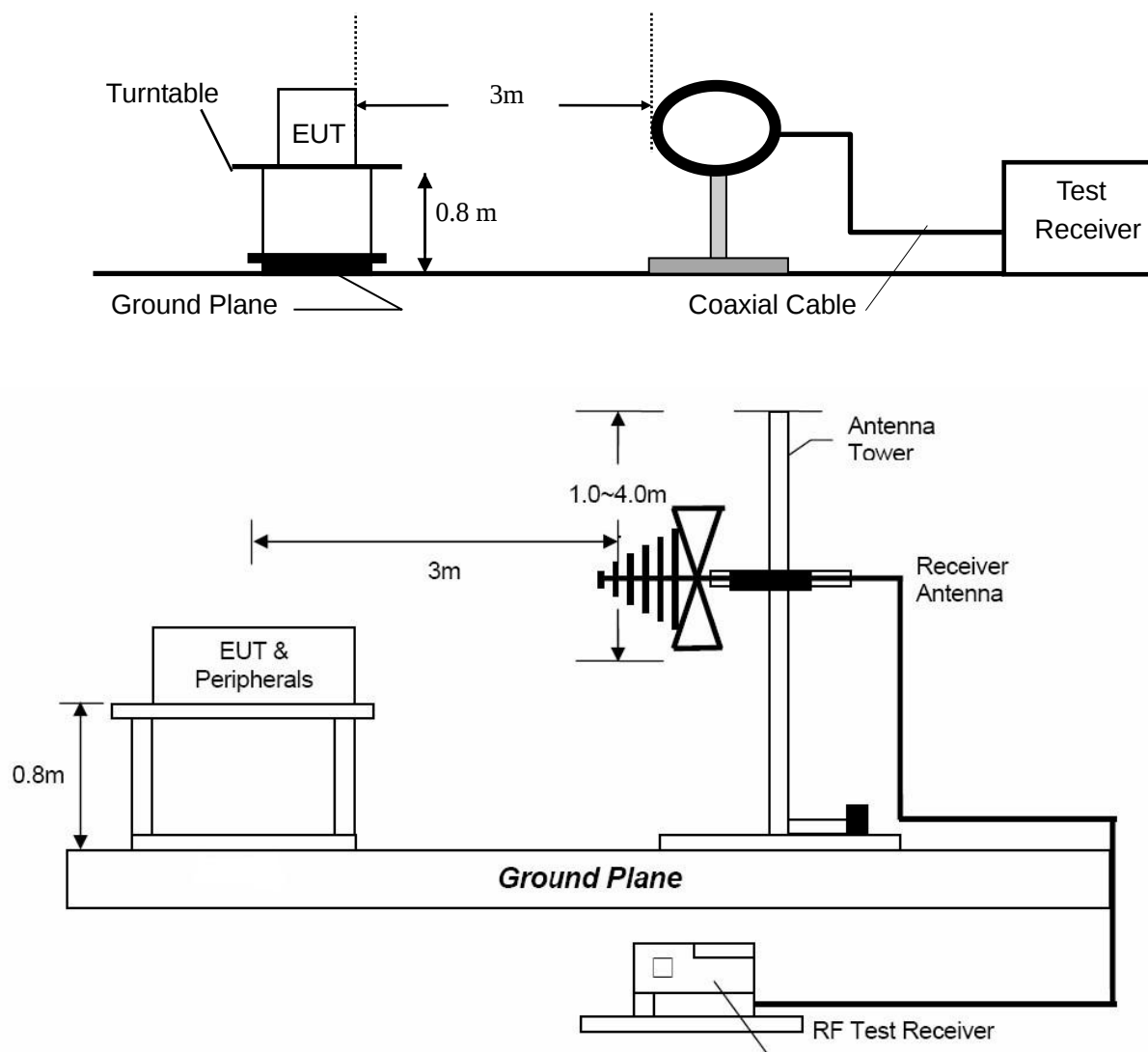
Temperature :	21 °C	Humidity :	51 %			
Test By:	Lee	Test Date :	December 18, 2018			
5725~5850MHz Band						
Highest channel 5825MHz						
Temperature (°C)	Power Supplied (Vac)	Measured Frequency (MHz)				Test Result
		0 Minute	2 Minute	5 Minute	10 Minute	
0	120.0	5824.934	5824.933	5824.933	5824.933	Pass
10		5824.933	5824.931	5824.931	5824.931	Pass
20		5824.931	5824.931	5824.930	5824.930	Pass
30		5824.933	5824.933	5824.933	5824.930	Pass
45		5824.934	5824.934	5824.932	5824.932	Pass
20	138.0	5824.930	5824.929	5824.929	5824.929	Pass
	102.0	5824.932	5824.930	5824.930	5824.930	Pass

Note: EUT temperature working range is 0°C to 45°C.

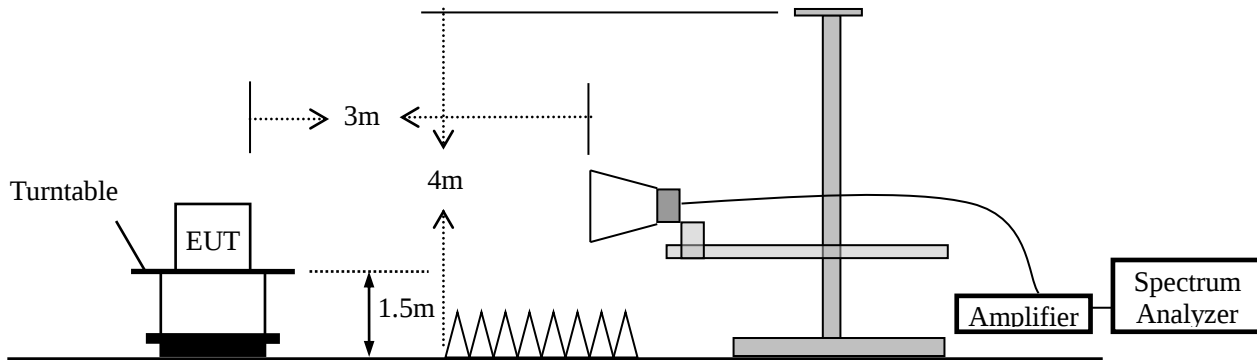
10. Radiated Spurious Emissions and Restricted Bands

10.1 Test SET-UP (Block Diagram of Configuration)

10.1.1 Radiated Emission Test Set-Up, Frequency Below 30MHz



10.1.2 Radiated Emission Test Set-Up, Frequency above 1GHz



10.2 Measurement Procedure

- Blow 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi- anechoic chamber room.
- For the radiated emission test above 1GHz:
The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter full anechoic chamber room. The table was rotated 360 degrees to determine the position of the highest radiation. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. The test-receiver system was set to peak detect function and specified bandwidth with maximum hold mode.
- A Quasi-peak measurement was then made for that frequency point for below 1GHz test. PK and AV for above 1GHz emission test.

During the radiated emission test, the spectrum analyzer was set with the following configurations:

Frequency Band (MHz)	Level	Resolution Bandwidth	Video Bandwidth
30 to 1000	QP	120 kHz	300 kHz
Above 1000	Peak	1 MHz	3 MHz
	Average	1 MHz	1/T

10.3 Limit

Frequency range MHz	Distance Meters	Field Strengths Limit (15.209)
		$\mu\text{V/m}$
0.009 ~ 0.490	300	$2400/F(\text{kHz})$
0.490 ~ 1.705	30	$24000/F(\text{kHz})$
1.705 ~ 30	30	30
30 ~ 88	3	100
88 ~ 216	3	150
216 ~ 960	3	200
Above 960	3	500

- Remark : (1) Emission level (dB) μV = 20 log Emission level $\mu\text{V/m}$
- (2) The smaller limit shall apply at the cross point between two frequency bands.
- (3) As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.
- (4) The frequency range scanned is from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or 40 GHz, whichever is lower.
- (5) §15.247(d) specifies that emissions which fall in the restricted bands, as defined in §15.205 comply with radiated emission limits specified in §15.209.

10.4 Measurement Results

For 5G WIFI Band 1

Please refer to following plots of the worst case: 802.11n(HT20) High Channel.

For 5G WIFI Band 4

Please refer to following plots of the worst case: 802.11n(HT20) Low Channel.



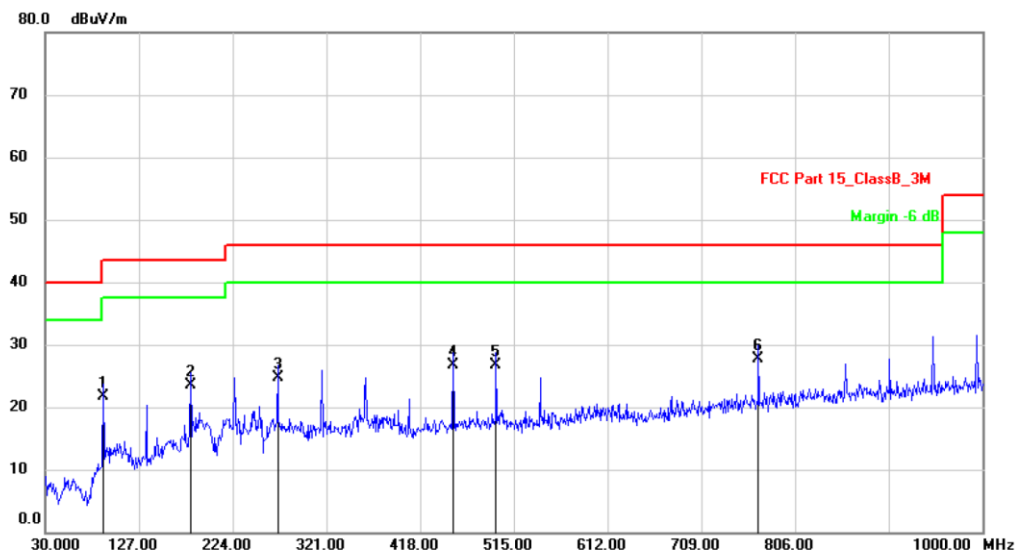
Dongguan NTC Co., Ltd.
Tel: +86-769-22022444 Fax: +86-769-22022799
Web: <http://www.ntc-c.com>

Radiated Emission Measurement

Data : #20

Date: 2018-12-6

Time: 13:51:40



Site: 3m Chamber

Polarization: **Horizontal**

Temperature: 26

Limit: FCC Part 15_ClassB_3M

Power: AC120V/60Hz

Humidity: 47 %

EUT: High Resolution Music Player

Distance: 3m

M/N: HiBy R6 Pro

Mode: TX(5G Band 1)

Note: 802.11n(HT20) High Channel

No. Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	90.1400	35.60	-13.90	21.70	43.50	-21.80	QP		
2	180.3499	37.62	-14.12	23.50	43.50	-20.00	QP		
3	270.5600	35.88	-11.18	24.70	46.00	-21.30	QP		
4	451.9499	34.62	-7.92	26.70	46.00	-19.30	QP		
5	496.5699	33.54	-6.84	26.70	46.00	-19.30	QP		
6 *	768.1699	30.15	-2.35	27.80	46.00	-18.20	QP		

*:Maximum data x:Over limit !:over margin

<Reference Only

Note: Below 30MHz, the emissions are lower than 20dB below the allowable limit.



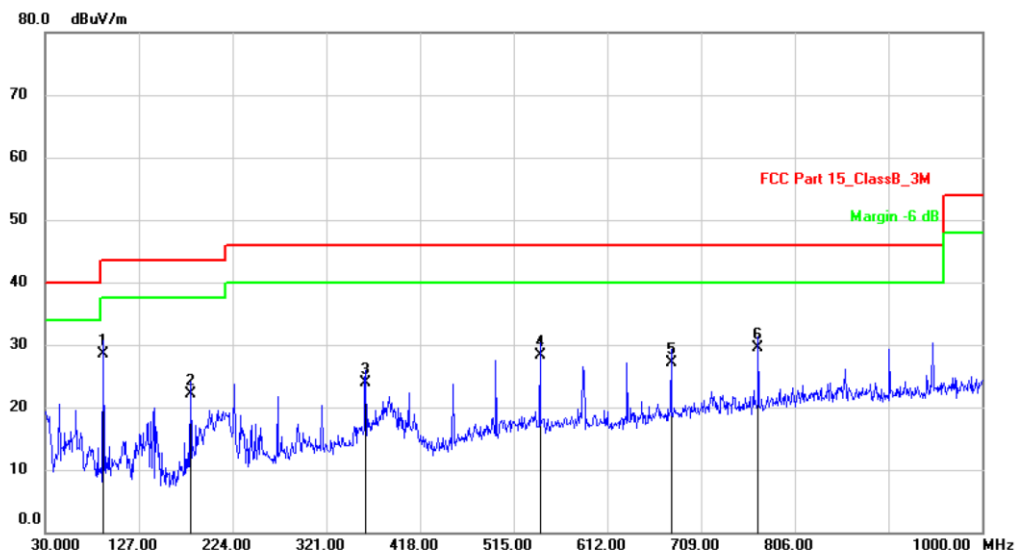
Dongguan NTC Co., Ltd.
Tel: +86-769-22022444 Fax: +86-769-22022799
Web: <http://www.ntc-c.com>

Radiated Emission Measurement

Data: #19

Date: 2018-12-6

Time: 13:43:03



Site: 3m Chamber

Polarization: **Vertical**

Temperature: 26

Limit: FCC Part 15_ClassB_3M

Power: AC120V/60Hz

Humidity: 47 %

EUT: High Resolution Music Player

Distance: 3m

M/N: HiBy R6 Pro

Mode: TX(5G Band 1)

Note: 802.11n(HT20) High Channel

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	90.1400	45.50	-16.90	28.60	43.50	-14.90	QP		
2		180.3499	39.32	-17.12	22.20	43.50	-21.30	QP		
3		361.7400	35.04	-11.14	23.90	46.00	-22.10	QP		
4		542.1599	37.04	-8.64	28.40	46.00	-17.60	QP		
5		677.9600	31.60	-4.40	27.20	46.00	-18.80	QP		
6		768.1699	31.95	-2.35	29.60	46.00	-16.40	QP		

*:Maximum data x:Over limit !:over margin

(Reference Only)

Note: Below 30MHz, the emissions are lower than 20dB below the allowable limit.



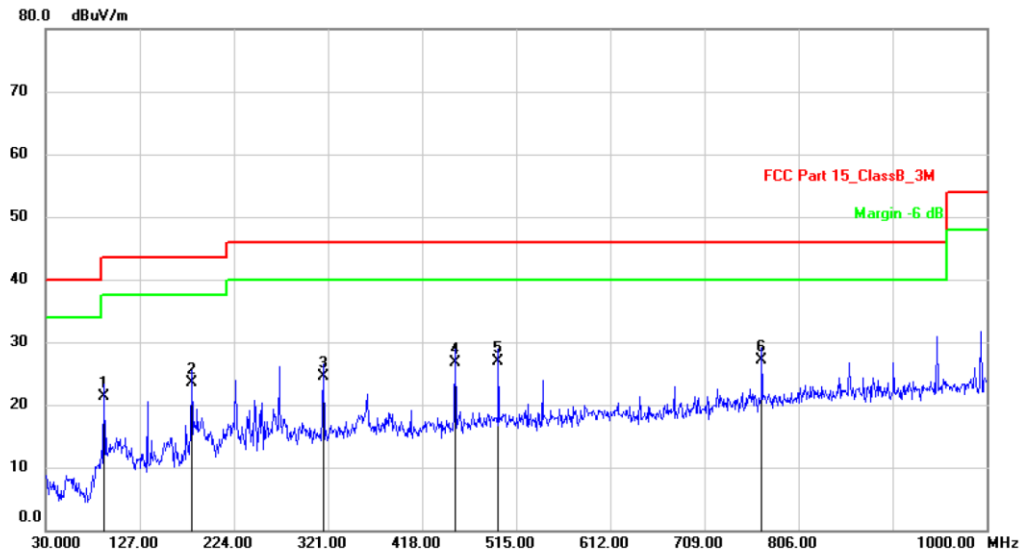
Dongguan NTC Co., Ltd.
Tel: +86-769-22022444 Fax: +86-769-22022799
Web: [Http://www.ntc-c.com](http://www.ntc-c.com)

Radiated Emission Measurement

Data : #21

Date: 2018-12-6

Time: 13:58:46



Site: 3m Chamber

Polarization: **Horizontal**

Temperature: 26

Limit: FCC Part 15_ClassB_3M

Power: AC120V/60Hz

Humidity: 47 %

EUT: High Resolution Music Player

Distance: 3m

M/N: HiBy R6 Pro

Mode: TX(5G Band 4)

Note: 802.11n(HT20) Low Channel

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		90.1400	35.20	-13.90	21.30	43.50	-22.20	QP		
2		180.3499	37.62	-14.12	23.50	43.50	-20.00	QP		
3		316.1499	34.64	-10.04	24.60	46.00	-21.40	QP		
4		451.9499	34.72	-7.92	26.80	46.00	-19.20	QP		
5		496.5699	33.74	-6.84	26.90	46.00	-19.10	QP		
6	*	768.1699	29.55	-2.35	27.20	46.00	-18.80	QP		

*:Maximum data x:Over limit !:over margin

(Reference Only)

Note: Below 30MHz, the emissions are lower than 20dB below the allowable limit.



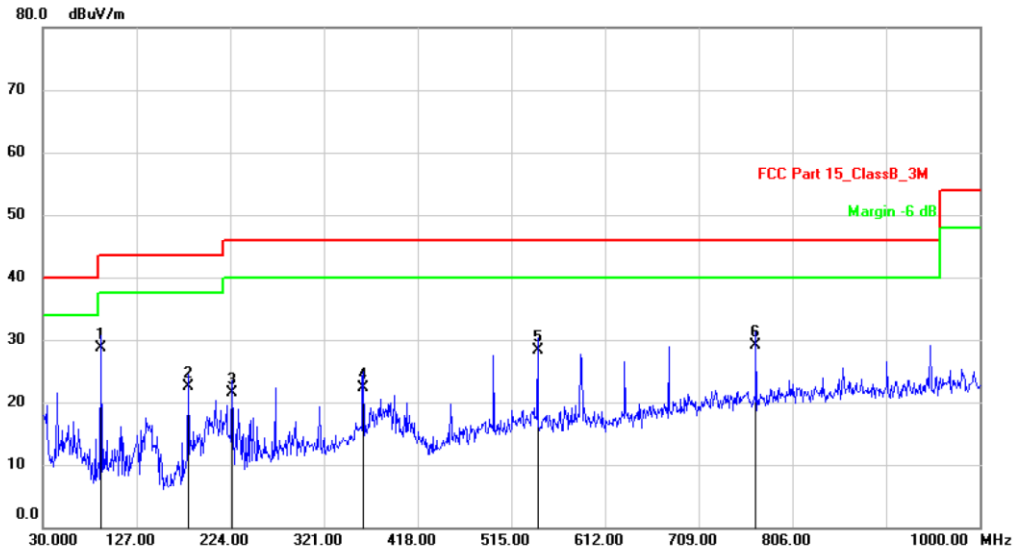
Dongguan NTC Co., Ltd.
 Tel: +86-769-22022444 Fax: +86-769-22022799
 Web: [Http://www.ntc-c.com](http://www.ntc-c.com)

Radiated Emission Measurement

Data : #22

Date: 2018-12-6

Time: 14:05:09



Site: 3m Chamber

Polarization: **Vertical**

Temperature: 26

Limit: FCC Part 15_ClassB_3M

Power: AC120V/60Hz

Humidity: 47 %

EUT: High Resolution Music Player

Distance: 3m

M/N: HiBy R6 Pro

Mode: TX(5G Band 4)

Note: 802.11n(HT20) Low Channel

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	90.1400	45.60	-16.90	28.70	43.50	-14.80	QP		
2		180.3499	39.62	-17.12	22.50	43.50	-21.00	QP		
3		225.9399	37.27	-15.67	21.60	46.00	-24.40	QP		
4		361.7400	33.54	-11.14	22.40	46.00	-23.60	QP		
5		542.1599	36.94	-8.64	28.30	46.00	-17.70	QP		
6		768.1699	31.45	-2.35	29.10	46.00	-16.90	QP		

*:Maximum data x:Over limit !:over margin

<Reference Only

Note: Below 30MHz, the emissions are lower than 20dB below the allowable limit.

Band 1(5150-5250 MHz)

Test Mode: The worst case: 802.11n(HT20) Test Date : December 14, 2018
Frequency Range: Above 1GHz Temperature : 24°C
Test Result: PASS Humidity : 47 %
Measured Distance: 3m Test By: Lee

Freq. (MHz)	Ant.Pol. (H/V)	Reading Level(dBuV)		Factor (dB/m)	Emission Level (dBuV)		Limit 3m (dBuV/m)		Margin (dB)	
		PK	AV		PK	AV	PK	AV	PK	AV
Operation Mode: TX Mode (Low)										
5150	V	45.16	31.85	6.91	52.07	38.76	74.00	54.00	-21.93	-15.24
10360	V	47.22	34.39	14.04	61.26	48.43	74.00	54.00	-12.74	-5.57
15540	V	44.34	30.97	19.00	63.34	49.97	74.00	54.00	-10.66	-4.03

5150	H	44.11	32.61	6.91	51.02	39.52	74.00	54.00	-22.98	-14.48
10360	H	47.29	34.46	14.04	61.33	48.50	74.00	54.00	-12.67	-5.50
15540	H	43.25	28.11	21.12	64.37	49.23	74.00	54.00	-9.63	-4.77

Operation Mode: TX Mode (Mid)										
10400	V	47.18	34.40	14.12	61.30	48.52	74.00	54.00	-12.70	-5.48
15600	V	44.31	31.04	20.20	63.37	50.10	74.00	54.00	-10.63	-3.90

10400	H	46.84	33.49	14.12	60.96	47.61	74.00	54.00	-13.04	-6.39
15600	H	42.03	27.81	20.82	62.85	48.63	74.00	54.00	-11.15	-5.37

Operation Mode: TX Mode (High)										
10480	V	47.07	34.39	14.29	61.36	48.68	74.00	54.00	-12.64	-5.32
15720	V	43.04	30.64	19.16	62.20	49.80	74.00	54.00	-11.80	-4.20

10480	H	47.20	34.30	14.29	61.49	48.59	74.00	54.00	-12.51	-5.41
15720	H	45.22	30.11	20.82	65.42	50.31	74.00	54.00	-8.58	-3.69

- Note:** (1) All Readings are Peak Value and AV.
(2) Emission Level= Reading Level + Factor
(3) Factor= Antenna Gain + Cable Loss – Amplifier Gain
(4) Data of measurement within this frequency range shown “ ---” in the table above means the reading of emissions are attenuated more than 10dB below the permissible limits.
(5) Measurement uncertainty : ± 3.7 dB.
(6) Horn antenna used for the emission over 1000MHz.

Band4 (5725-5850 MHz)

Test Mode: The worst case: 802.11n(HT20) Test Date : December 14, 2018
Frequency Range: Above 1GHz Temperature : 24°C
Test Result: PASS Humidity : 47 %
Measured Distance: 3m Test By: Lee

Freq. (MHz)	Ant.Pol. (H/V)	Reading Level(dBuV)		Factor (dB/m)	Emission Level (dBuV)		Limit 3m (dBuV/m)		Margin (dB)	
		PK	AV		PK	AV	PK	AV	PK	AV
Operation Mode: TX Mode (Low)										
11490	V	45.69	32.37	16.86	62.55	49.23	74.00	54.00	-11.45	-4.77
17235	V	41.19	27.87	22.23	63.42	50.10	74.00	54.00	-10.58	-3.90

11490	H	43.27	30.21	16.86	60.13	47.07	74.00	54.00	-13.87	-6.93
17235	H	41.54	27.38	22.23	63.77	49.61	74.00	54.00	-10.23	-4.39

Operation Mode: TX Mode (Mid)										
11570	V	45.95	32.81	17.01	62.96	49.82	74.00	54.00	-11.04	-4.18
17355	V	41.65	27.31	22.62	64.27	49.93	74.00	54.00	-9.73	-4.07

11570	H	44.70	31.34	17.01	61.71	48.35	74.00	54.00	-12.29	-5.65
17355	H	40.62	26.76	22.62	63.24	49.38	74.00	54.00	-10.76	-4.62

Operation Mode: TX Mode (High)										
11650	V	44.99	31.48	17.16	62.15	48.64	74.00	54.00	-11.85	-5.36
17475	V	40.49	26.52	23.01	63.50	49.53	74.00	54.00	-10.50	-4.47

11650	H	42.86	29.80	17.16	60.02	46.96	74.00	54.00	-13.98	-7.04
17475	H	40.29	25.22	23.01	63.30	48.23	74.00	54.00	-10.70	-5.77

- Note:** (1) All Readings are Peak Value and AV.
(2) Emission Level= Reading Level + Factor
(3) Factor= Antenna Gain + Cable Loss – Amplifier Gain
(4) Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 10dB below the permissible limits.
(5) Measurement uncertainty : ± 3.7 dB.
(6) Horn antenna used for the emission over 1000MHz.

11. Antenna Application

11.1 Antenna requirement

According to of FCC part 15C section 15.203:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section 15.203 of the rules.

And according to 47 CFR section 15.407(a), if the transmitting antennas of directional gain greater than 6dBi are used, the transmit power and power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

11.2 Measurement Results

The antenna is Internal Antenna that no antenna other than furnished by the responsible party shall be used with the device, and the best case gain of the antenna is 2.0 dBi, So, the antenna is consider meet the requirement.

12. Test Equipment List

Description	Manufacturer	Model Number	Serial Number	Characteristics	Calibration Date	Calibration Due Date
Test Receiver	Rohde & Schwarz	ESCI7	100837	9KHz~7GHz	Mar. 14, 2018	Mar. 13, 2019
Antenna	Schwarzbeck	VULB9162	9162-010	30MHz~7GHz	Mar. 23, 2018	Mar. 22, 2019
Spectrum Analyzer	Rohde & Schwarz	FSU26	200409/026	20Hz~26.5GHz	Mar. 14, 2018	Mar. 13, 2019
Spectrum Analyzer	Keysight	N9020A	MY54200831	20Hz~26.5GHz	Apr. 24, 2018	Apr. 23, 2019
Spectrum Analyzer	Rohde & Schwarz	FSV40	101003	10Hz~40GHz	Apr. 24, 2018	Apr. 23, 2019
Horn Antenna	Schwarzbeck	BBHA9170	9170-372	15GHz~40GHz	Mar. 23, 2018	Mar. 22, 2019
Pre-Amplifier	EMCI	EMC 184045	980102	18GHz~40GHz	Apr. 24, 2018	Apr. 23, 2019
Power Sensor	DARE	RPR3006W	15I00041SN O64	100MHz~6GHz	Mar. 14, 2018	Mar. 13, 2019
Communication Tester	Rohde & Schwarz	CMW500	149004	70MHz~6GHz	Mar. 14, 2018	Mar. 13, 2019
Horn Antenna	COM-Power	AH-118	071078	500MHz~18GHz	Mar. 23, 2018	Mar. 22, 2019
Pre-Amplifier	HP	HP 8449B	3008A00964	1GHz~26.5GHz	Mar. 14, 2018	Mar. 13, 2019
Pre-Amplifier	HP	HP 8447D	1145A00203	100KHz~1.3GHz	Mar. 14, 2018	Mar. 13, 2019
Loop Antenna	Schwarzbeck	FMZB 1513	1513-272	9KHz~30MHz	Apr. 24, 2018	Apr. 23, 2019
Temperature & Humidity Chamber	REMAFEE	SYHR225L	N/A	-40~150°C	Apr. 24, 2018	Apr. 23, 2019
DC Source	MY	MY8811	N/A	0~30V	N/A	N/A
Temporary antenna connector	TESCOM	SS402	N/A	9KHz~25GHz	N/A	N/A
Power Meter	Anritsu	ML2495A	1139001	100k-65GHz	Apr. 24, 2018	Apr. 23, 2019
Power Sensor	Anritsu	MA2411B	100345	300M-40GHz	Apr. 24, 2018	Apr. 23, 2019
Test Software	EZ	EZ_EMC	N/A	N/A	N/A	N/A

Note: The temporary antenna connector is soldered on the PCB board in order to perform conducted tests and this temporary antenna connector is listed in the equipment list.

---End---