

## **8.4 FREQUENCY STABILITY**

### 8.4.1 Applicable Standard

According to FCC Part 15.407(g)  
ANSI C63.10 Section 6.8

### 8.4.2 Conformance Limit

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 users manual.

### 8.4.3 Test Configuration

Test according to clause 6.1 radio frequency test setup

### 8.4.4 Test Procedure

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.

Set to the maximum power setting and enable the EUT transmit continuously

Set RBW = 10 kHz.

Set the video bandwidth (VBW) =30 kHz.

Set Span= Entire absence of modulation emissions bandwidth

Set Detector = Peak.

Set Trace mode = max hold.

Set Sweep = auto couple.

Allow the trace to stabilize.

The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value.

Beginning at each temperature level specified in user manual, the frequency shall be measured within one minute after application of primary power to the transmitter and at intervals of no more than one minute thereafter until ten minutes have elapsed or until sufficient measurements are obtained to indicate clearly that the frequency has stabilized within the applicable tolerance, whichever time period is greater. During each test, the ambient temperature shall not be allowed to rise more than 10° centigrade above the respective beginning ambient temperature level

Measure and record the results in the test report.

### 8.4.5 Test Results

Antenna 0	5180
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5179.993	-7.000	Pass
	-10	5179.993	-7.000	Pass
	0	5179.993	-7.000	Pass
	10	5179.991	-9.000	Pass
	20	5179.992	-8.000	Pass
	30	5179.991	-9.000	Pass
	40	5179.990	-10.000	Pass
	50	5179.990	-10.000	Pass
85% Vnom	20	5179.993	-7.000	Pass
115% Vnom	20	5179.992	-8.000	Pass

Antenna 0	5200
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5199.984	-16.000	Pass
	-10	5199.984	-16.000	Pass
	0	5199.985	-15.000	Pass
	10	5199.985	-15.000	Pass
	20	5199.998	-2.000	Pass
	30	5199.983	-17.000	Pass
	40	5199.984	-16.000	Pass
	50	5199.981	-19.000	Pass
85% Vnom	20	5199.985	-15.000	Pass
115% Vnom	20	5199.985	-15.000	Pass

Antenna 0	5240
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5239.992	-8.000	Pass
	-10	5239.991	-9.000	Pass
	0	5239.992	-8.000	Pass
	10	5239.991	-9.000	Pass
	20	5239.989	-11.000	Pass
	30	5239.991	-9.000	Pass
	40	5239.987	-13.000	Pass
	50	5239.989	-11.000	Pass
85% Vnom	20	5239.992	-8.000	Pass
115% Vnom	20	5239.991	-9.000	Pass

<b>Antenna 0</b>	<b>5260</b>
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5259.998	-2.000	Pass
	-10	5260.001	1.000	Pass
	0	5260.000	0.000	Pass
	10	5260.001	1.000	Pass
	20	5260.000	0.000	Pass
	30	5260.001	1.000	Pass
	40	5259.998	-2.000	Pass
	50	5260.002	2.000	Pass
85% Vnom	20	5260.001	1.000	Pass
115% Vnom	20	5259.999	-1.000	Pass

<b>Antenna 0</b>	<b>5280</b>
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5279.999	-1.000	Pass
	-10	5280.000	0.000	Pass
	0	5280.004	4.000	Pass
	10	5280.003	3.000	Pass
	20	5280.002	2.000	Pass
	30	5279.998	-2.000	Pass
	40	5280.003	3.000	Pass
	50	5280.000	0.000	Pass
85% Vnom	20	5279.999	-1.000	Pass
115% Vnom	20	5280.003	3.000	Pass

<b>Antenna 0</b>	<b>5320</b>
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5319.983	-17.000	Pass
	-10	5319.981	-19.000	Pass
	0	5319.983	-17.000	Pass
	10	5319.979	-21.000	Pass
	20	5319.983	-17.000	Pass
	30	5319.979	-21.000	Pass
	40	5319.983	-17.000	Pass
	50	5319.981	-19.000	Pass
85% Vnom	20	5319.983	-17.000	Pass
115% Vnom	20	5319.983	-17.000	Pass

Antenna 0 5500  
 Temperature : -- Test Date : February 07, 2018  
 Humidity : 65 % Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5499.996	-4.000	Pass
	-10	5499.997	-3.000	Pass
	0	5499.998	-2.000	Pass
	10	5499.998	-2.000	Pass
	20	5499.997	-3.000	Pass
	30	5499.997	-3.000	Pass
	40	5499.994	-6.000	Pass
	50	5499.994	-6.000	Pass
85% Vnom	20	5499.998	-2.000	Pass
115% Vnom	20	5499.996	-4.000	Pass

Antenna 0 5600  
 Temperature : -- Test Date : February 07, 2018  
 Humidity : 65 % Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5600.003	3.000	Pass
	-10	5600.004	4.000	Pass
	0	5600.004	4.000	Pass
	10	5600.003	3.000	Pass
	20	5600.006	6.000	Pass
	30	5600.004	4.000	Pass
	40	5600.003	3.000	Pass
	50	5600.006	6.000	Pass
85% Vnom	20	5600.005	5.000	Pass
115% Vnom	20	5600.003	3.000	Pass

Antenna 0 5700  
 Temperature : -- Test Date : February 07, 2018  
 Humidity : 65 % Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5699.988	-12.000	Pass
	-10	5699.989	-11.000	Pass
	0	5699.987	-13.000	Pass
	10	5699.988	-12.000	Pass
	20	5699.987	-13.000	Pass
	30	5699.986	-14.000	Pass
	40	5699.987	-13.000	Pass
	50	5699.990	-10.000	Pass
85% Vnom	20	5699.987	-13.000	Pass
115% Vnom	20	5699.987	-13.000	Pass

Antenna 0	5745
Temperature : --	Test Date : May04, 2017
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5744.995	-5.000	Pass
	-10	5744.994	-6.000	Pass
	0	5744.997	-3.000	Pass
	10	5744.998	-2.000	Pass
	20	5744.999	-1.000	Pass
	30	5744.996	-4.000	Pass
	40	5744.995	-5.000	Pass
	50	5744.997	-3.000	Pass
85% Vnom	20	5744.997	-3.000	Pass
115% Vnom	20	5744.997	-3.000	Pass

Antenna 0	5785
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5784.994	-6.000	Pass
	-10	5784.996	-4.000	Pass
	0	5784.998	-2.000	Pass
	10	5784.997	-3.000	Pass
	20	5784.997	-3.000	Pass
	30	5784.999	-1.000	Pass
	40	5784.997	-3.000	Pass
	50	5785.000	0.000	Pass
85% Vnom	20	5785.000	0.000	Pass
115% Vnom	20	5785.000	0.000	Pass

Antenna 0	5825
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5824.992	-8.000	Pass
	-10	5824.990	-10.000	Pass
	0	5824.991	-9.000	Pass
	10	5824.988	-12.000	Pass
	20	5824.987	-13.000	Pass
	30	5824.989	-11.000	Pass
	40	5824.992	-8.000	Pass
	50	5824.989	-11.000	Pass
85% Vnom	20	5824.988	-12.000	Pass
115% Vnom	20	5824.993	-7.000	Pass

Antenna 0	5190
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5189.984	-16.000	Pass
	-10	5189.984	-16.000	Pass
	0	5189.981	-19.000	Pass
	10	5189.981	-19.000	Pass
	20	5189.983	-17.000	Pass
	30	5189.984	-16.000	Pass
	40	5189.984	-16.000	Pass
	50	5189.982	-18.000	Pass
85% Vnom	20	5189.981	-19.000	Pass
115% Vnom	20	5189.982	-18.000	Pass

Antenna 0	5230
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5229.979	-21.000	Pass
	-10	5229.980	-20.000	Pass
	0	5229.982	-18.000	Pass
	10	5229.980	-20.000	Pass
	20	5229.979	-21.000	Pass
	30	5229.981	-19.000	Pass
	40	5229.982	-18.000	Pass
	50	5229.982	-18.000	Pass
85% Vnom	20	5229.979	-21.000	Pass
115% Vnom	20	5229.979	-21.000	Pass

Antenna 0	5270
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5269.992	-8.000	Pass
	-10	5269.989	-11.000	Pass
	0	5269.992	-8.000	Pass
	10	5269.992	-8.000	Pass
	20	5269.988	-12.000	Pass
	30	5269.991	-9.000	Pass
	40	5269.989	-11.000	Pass
	50	5269.990	-10.000	Pass
85% Vnom	20	5269.989	-11.000	Pass
115% Vnom	20	5269.991	-9.000	Pass

Antenna 0	5310
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5309.992	-8.000	Pass
	-10	5309.994	-6.000	Pass
	0	5309.991	-9.000	Pass
	10	5309.992	-8.000	Pass
	20	5309.994	-6.000	Pass
	30	5309.993	-7.000	Pass
	40	5309.991	-9.000	Pass
	50	5309.992	-8.000	Pass
85% Vnom	20	5309.993	-7.000	Pass
115% Vnom	20	5309.989	-11.000	Pass

<b>Antenna 0</b>	<b>5510</b>
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5510.004	4.000	Pass
	-10	5510.006	6.000	Pass
	0	5510.004	4.000	Pass
	10	5510.003	3.000	Pass
	20	5510.004	4.000	Pass
	30	5510.003	3.000	Pass
	40	5510.003	3.000	Pass
	50	5510.005	5.000	Pass
85% Vnom	20	5510.003	3.000	Pass
115% Vnom	20	5510.005	5.000	Pass

<b>Antenna 0</b>	<b>5590</b>
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5589.997	-3.000	Pass
	-10	5589.998	-2.000	Pass
	0	5589.997	-3.000	Pass
	10	5589.998	-2.000	Pass
	20	5589.998	-2.000	Pass
	30	5590.000	0.000	Pass
	40	5589.996	-4.000	Pass
	50	5589.997	-3.000	Pass
85% Vnom	20	5590.000	0.000	Pass
115% Vnom	20	5589.997	-3.000	Pass

<b>Antenna 0</b>	<b>5670</b>
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5669.982	-18.000	Pass
	-10	5669.980	-20.000	Pass
	0	5669.982	-18.000	Pass
	10	5669.978	-22.000	Pass
	20	5669.981	-19.000	Pass
	30	5669.980	-20.000	Pass
	40	5669.980	-20.000	Pass
	50	5669.981	-19.000	Pass
85% Vnom	20	5669.979	-21.000	Pass
115% Vnom	20	5669.978	-22.000	Pass



Antenna 0	5755
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5754.993	-7.000	Pass
	-10	5754.992	-8.000	Pass
	0	5754.995	-5.000	Pass
	10	5754.994	-6.000	Pass
	20	5754.993	-7.000	Pass
	30	5754.996	-4.000	Pass
	40	5754.992	-8.000	Pass
	50	5754.992	-8.000	Pass
85% Vnom	20	5754.996	-4.000	Pass
115% Vnom	20	5754.992	-8.000	Pass

Antenna 0	5795
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5794.986	-14.000	Pass
	-10	5794.986	-14.000	Pass
	0	5794.983	-17.000	Pass
	10	5794.984	-16.000	Pass
	20	5794.983	-17.000	Pass
	30	5794.984	-16.000	Pass
	40	5794.985	-15.000	Pass
	50	5794.986	-14.000	Pass
85% Vnom	20	5794.987	-13.000	Pass
115% Vnom	20	5794.984	-16.000	Pass

Antenna 0	5210
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5209.983	-17.000	Pass
	-10	5209.983	-17.000	Pass
	0	5209.983	-17.000	Pass
	10	5209.983	-17.000	Pass
	20	5209.984	-16.000	Pass
	30	5209.984	-16.000	Pass
	40	5209.986	-14.000	Pass
	50	5209.982	-18.000	Pass
85% Vnom	20	5209.983	-17.000	Pass
115% Vnom	20	5209.984	-16.000	Pass

Antenna 0	5290
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5290.009	9.000	Pass
	-10	5290.010	10.000	Pass
	0	5290.008	8.000	Pass
	10	5290.009	9.000	Pass
	20	5290.008	8.000	Pass
	30	5290.011	11.000	Pass
	40	5290.009	9.000	Pass
	50	5290.009	9.000	Pass
85% Vnom	20	5290.008	8.000	Pass
115% Vnom	20	5290.009	9.000	Pass

Antenna 0	5530
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5529.985	-15.000	Pass
	-10	5529.985	-15.000	Pass
	0	5529.985	-15.000	Pass
	10	5529.983	-17.000	Pass
	20	5529.984	-16.000	Pass
	30	5529.985	-15.000	Pass
	40	5529.986	-14.000	Pass
	50	5529.985	-15.000	Pass
85% Vnom	20	5529.983	-17.000	Pass
115% Vnom	20	5529.985	-15.000	Pass

Antenna 0	5610
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5609.995	-5.000	Pass
	-10	5609.992	-8.000	Pass
	0	5609.992	-8.000	Pass
	10	5609.992	-8.000	Pass
	20	5609.995	-5.000	Pass
	30	5609.993	-7.000	Pass
	40	5609.995	-5.000	Pass
	50	5609.995	-5.000	Pass
85% Vnom	20	5609.991	-9.000	Pass
115% Vnom	20	5609.992	-8.000	Pass

Antenna 0	5775
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5775.005	5.000	Pass
	-10	5775.007	7.000	Pass
	0	5775.006	6.000	Pass
	10	5775.007	7.000	Pass
	20	5775.003	3.000	Pass
	30	5775.004	4.000	Pass
	40	5775.004	4.000	Pass
	50	5775.003	3.000	Pass
85% Vnom	20	5775.005	5.000	Pass
115% Vnom	20	5775.006	6.000	Pass

<b>Antenna 1</b>	<b>5180</b>
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5180.005	5.000	Pass
	-10	5180.005	5.000	Pass
	0	5180.001	1.000	Pass
	10	5180.003	3.000	Pass
	20	5180.005	5.000	Pass
	30	5180.002	2.000	Pass
	40	5180.002	2.000	Pass
	50	5180.003	3.000	Pass
85% Vnom	20	5180.005	5.000	Pass
115% Vnom	20	5180.003	3.000	Pass

<b>Antenna 1</b>	<b>5200</b>
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5199.997	-3.000	Pass
	-10	5199.998	-2.000	Pass
	0	5199.995	-5.000	Pass
	10	5199.996	-4.000	Pass
	20	5200.072	72.000	Pass
	30	5199.996	-4.000	Pass
	40	5199.997	-3.000	Pass
	50	5199.998	-2.000	Pass
85% Vnom	20	5199.995	-5.000	Pass
115% Vnom	20	5199.994	-6.000	Pass

<b>Antenna 1</b>	<b>5240</b>
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5240.012	12.000	Pass
	-10	5240.014	14.000	Pass
	0	5240.013	13.000	Pass
	10	5240.013	13.000	Pass
	20	5240.012	12.000	Pass
	30	5240.014	14.000	Pass
	40	5240.011	11.000	Pass
	50	5240.011	11.000	Pass
85% Vnom	20	5240.015	15.000	Pass
115% Vnom	20	5240.011	11.000	Pass

Antenna 1	5260
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5260.009	9.000	Pass
	-10	5260.010	10.000	Pass
	0	5260.010	10.000	Pass
	10	5260.008	8.000	Pass
	20	5260.007	7.000	Pass
	30	5260.006	6.000	Pass
	40	5260.010	10.000	Pass
	50	5260.007	7.000	Pass
85% Vnom	20	5260.008	8.000	Pass
115% Vnom	20	5260.007	7.000	Pass

Antenna 1	5280
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5280.017	17.000	Pass
	-10	5280.015	15.000	Pass
	0	5280.014	14.000	Pass
	10	5280.013	13.000	Pass
	20	5280.016	16.000	Pass
	30	5280.013	13.000	Pass
	40	5280.014	14.000	Pass
	50	5280.015	15.000	Pass
85% Vnom	20	5280.013	13.000	Pass
115% Vnom	20	5280.015	15.000	Pass

Antenna 1	5320
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5319.985	-15.000	Pass
	-10	5319.985	-15.000	Pass
	0	5319.985	-15.000	Pass
	10	5319.986	-14.000	Pass
	20	5319.982	-18.000	Pass
	30	5319.982	-18.000	Pass
	40	5319.985	-15.000	Pass
	50	5319.983	-17.000	Pass
85% Vnom	20	5319.986	-14.000	Pass
115% Vnom	20	5319.982	-18.000	Pass

<b>Antenna 1</b>	<b>5500</b>
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5499.998	-2.000	Pass
	-10	5499.998	-2.000	Pass
	0	5499.998	-2.000	Pass
	10	5499.998	-2.000	Pass
	20	5500.001	1.000	Pass
	30	5500.001	1.000	Pass
	40	5499.998	-2.000	Pass
	50	5499.998	-2.000	Pass
85% Vnom	20	5499.999	-1.000	Pass
115% Vnom	20	5499.998	-2.000	Pass

<b>Antenna 1</b>	<b>5600</b>
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5600.003	3.000	Pass
	-10	5600.001	1.000	Pass
	0	5600.001	1.000	Pass
	10	5600.000	0.000	Pass
	20	5600.000	0.000	Pass
	30	5599.999	-1.000	Pass
	40	5600.003	3.000	Pass
	50	5600.003	3.000	Pass
85% Vnom	20	5600.002	2.000	Pass
115% Vnom	20	5600.000	0.000	Pass

<b>Antenna 1</b>	<b>5700</b>
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5699.989	-11.000	Pass
	-10	5699.989	-11.000	Pass
	0	5699.992	-8.000	Pass
	10	5699.990	-10.000	Pass
	20	5699.989	-11.000	Pass
	30	5699.993	-7.000	Pass
	40	5699.992	-8.000	Pass
	50	5699.992	-8.000	Pass
85% Vnom	20	5699.989	-11.000	Pass
115% Vnom	20	5699.989	-11.000	Pass

Antenna 1 5745  
 Temperature : -- Test Date : May04, 2017  
 Humidity : 65 % Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5744.998	-2.000	Pass
	-10	5745.002	2.000	Pass
	0	5744.999	-1.000	Pass
	10	5744.997	-3.000	Pass
	20	5745.002	2.000	Pass
	30	5744.999	-1.000	Pass
	40	5744.997	-3.000	Pass
	50	5745.001	1.000	Pass
85% Vnom	20	5745.002	2.000	Pass
115% Vnom	20	5745.001	1.000	Pass

Antenna 1 5785  
 Temperature : -- Test Date : February 07, 2018  
 Humidity : 65 % Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5785.005	5.000	Pass
	-10	5785.004	4.000	Pass
	0	5785.004	4.000	Pass
	10	5785.004	4.000	Pass
	20	5785.002	2.000	Pass
	30	5785.006	6.000	Pass
	40	5785.003	3.000	Pass
	50	5785.004	4.000	Pass
85% Vnom	20	5785.003	3.000	Pass
115% Vnom	20	5785.005	5.000	Pass

Antenna 1 5825  
 Temperature : -- Test Date : February 07, 2018  
 Humidity : 65 % Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5824.995	-5.000	Pass
	-10	5824.995	-5.000	Pass
	0	5824.995	-5.000	Pass
	10	5824.997	-3.000	Pass
	20	5824.998	-2.000	Pass
	30	5824.995	-5.000	Pass
	40	5824.997	-3.000	Pass
	50	5824.997	-3.000	Pass
85% Vnom	20	5824.995	-5.000	Pass
115% Vnom	20	5824.996	-4.000	Pass

Antenna 1	5190
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5189.989	-11.000	Pass
	-10	5189.992	-8.000	Pass
	0	5189.991	-9.000	Pass
	10	5189.988	-12.000	Pass
	20	5189.992	-8.000	Pass
	30	5189.989	-11.000	Pass
	40	5189.988	-12.000	Pass
	50	5189.990	-10.000	Pass
85% Vnom	20	5189.990	-10.000	Pass
115% Vnom	20	5189.989	-11.000	Pass

Antenna 1	5230
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5229.986	-14.000	Pass
	-10	5229.987	-13.000	Pass
	0	5229.985	-15.000	Pass
	10	5229.988	-12.000	Pass
	20	5229.988	-12.000	Pass
	30	5229.987	-13.000	Pass
	40	5229.989	-11.000	Pass
	50	5229.987	-13.000	Pass
85% Vnom	20	5229.987	-13.000	Pass
115% Vnom	20	5229.988	-12.000	Pass



Antenna 1	5270
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5270.013	13.000	Pass
	-10	5270.015	15.000	Pass
	0	5270.015	15.000	Pass
	10	5270.013	13.000	Pass
	20	5270.014	14.000	Pass
	30	5270.011	11.000	Pass
	40	5270.012	12.000	Pass
	50	5270.012	12.000	Pass
85% Vnom	20	5270.013	13.000	Pass
115% Vnom	20	5270.016	16.000	Pass

Antenna 1	5310
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5309.993	-7.000	Pass
	-10	5309.989	-11.000	Pass
	0	5309.992	-8.000	Pass
	10	5309.992	-8.000	Pass
	20	5309.991	-9.000	Pass
	30	5309.991	-9.000	Pass
	40	5309.990	-10.000	Pass
	50	5309.992	-8.000	Pass
85% Vnom	20	5309.990	-10.000	Pass
115% Vnom	20	5309.992	-8.000	Pass

Antenna 1	5510
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5509.998	-2.000	Pass
	-10	5509.995	-5.000	Pass
	0	5509.997	-3.000	Pass
	10	5509.995	-5.000	Pass
	20	5509.996	-4.000	Pass
	30	5509.994	-6.000	Pass
	40	5509.995	-5.000	Pass
	50	5509.995	-5.000	Pass
85% Vnom	20	5509.996	-4.000	Pass
115% Vnom	20	5509.994	-6.000	Pass

Antenna 1	5590
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5589.989	-11.000	Pass
	-10	5589.992	-8.000	Pass
	0	5589.992	-8.000	Pass
	10	5589.992	-8.000	Pass
	20	5589.991	-9.000	Pass
	30	5589.988	-12.000	Pass
	40	5589.989	-11.000	Pass
	50	5589.991	-9.000	Pass
85% Vnom	20	5589.990	-10.000	Pass
115% Vnom	20	5589.990	-10.000	Pass

Antenna 1	5670
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5669.989	-11.000	Pass
	-10	5669.989	-11.000	Pass
	0	5669.990	-10.000	Pass
	10	5669.987	-13.000	Pass
	20	5669.990	-10.000	Pass
	30	5669.989	-11.000	Pass
	40	5669.988	-12.000	Pass
	50	5669.990	-10.000	Pass
85% Vnom	20	5669.987	-13.000	Pass
115% Vnom	20	5669.987	-13.000	Pass

Antenna 1	5755
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5755.003	3.000	Pass
	-10	5755.005	5.000	Pass
	0	5755.004	4.000	Pass
	10	5755.004	4.000	Pass
	20	5755.001	1.000	Pass
	30	5755.002	2.000	Pass
	40	5755.004	4.000	Pass
	50	5755.004	4.000	Pass
85% Vnom	20	5755.004	4.000	Pass
115% Vnom	20	5755.001	1.000	Pass

Antenna 1	5795
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5794.992	-8.000	Pass
	-10	5794.993	-7.000	Pass
	0	5794.992	-8.000	Pass
	10	5794.992	-8.000	Pass
	20	5794.994	-6.000	Pass
	30	5794.995	-5.000	Pass
	40	5794.993	-7.000	Pass
	50	5794.995	-5.000	Pass
85% Vnom	20	5794.993	-7.000	Pass
115% Vnom	20	5794.993	-7.000	Pass

Antenna 1	5210
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5209.988	-12.000	Pass
	-10	5209.988	-12.000	Pass
	0	5209.987	-13.000	Pass
	10	5209.987	-13.000	Pass
	20	5209.987	-13.000	Pass
	30	5209.986	-14.000	Pass
	40	5209.987	-13.000	Pass
	50	5209.987	-13.000	Pass
85% Vnom	20	5209.990	-10.000	Pass
115% Vnom	20	5209.990	-10.000	Pass

Antenna 1	5290
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5290.016	16.000	Pass
	-10	5290.016	16.000	Pass
	0	5290.018	18.000	Pass
	10	5290.013	13.000	Pass
	20	5290.017	17.000	Pass
	30	5290.014	14.000	Pass
	40	5290.017	17.000	Pass
	50	5290.016	16.000	Pass
85% Vnom	20	5290.015	15.000	Pass
115% Vnom	20	5290.016	16.000	Pass

Antenna 1	5530
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5529.980	-20.000	Pass
	-10	5529.976	-24.000	Pass
	0	5529.979	-21.000	Pass
	10	5529.979	-21.000	Pass
	20	5529.978	-22.000	Pass
	30	5529.976	-24.000	Pass
	40	5529.979	-21.000	Pass
	50	5529.980	-20.000	Pass
85% Vnom	20	5529.979	-21.000	Pass
115% Vnom	20	5529.979	-21.000	Pass

Antenna 1	5610
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5609.990	-10.000	Pass
	-10	5609.986	-14.000	Pass
	0	5609.988	-12.000	Pass
	10	5609.989	-11.000	Pass
	20	5609.989	-11.000	Pass
	30	5609.988	-12.000	Pass
	40	5609.989	-11.000	Pass
	50	5609.985	-15.000	Pass
85% Vnom	20	5609.990	-10.000	Pass
115% Vnom	20	5609.990	-10.000	Pass

Antenna 1	5775
Temperature : --	Test Date : February 07, 2018
Humidity : 65 %	Test By: King Kong

Voltage(V)	Temp( )	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5774.997	-3.000	Pass
	-10	5774.999	-1.000	Pass
	0	5775.001	1.000	Pass
	10	5774.997	-3.000	Pass
	20	5774.998	-2.000	Pass
	30	5775.000	0.000	Pass
	40	5775.000	0.000	Pass
	50	5774.998	-2.000	Pass
85% Vnom	20	5774.999	-1.000	Pass
115% Vnom	20	5774.999	-1.000	Pass

## 8.5 UNDESIRABLE RADIATED SPURIOUS EMISSION

### 8.5.1 Applicable Standard

According to FCC Part 15.407 (b)  
According to 789033 D02 Section II(G)

### 8.5.2 Conformance Limit

For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209

The emissions from an intentional radiator shall not exceed the field strength levels specified in the following table 15.209(a):

Restricted Frequency(MHz)	Field Strength (μV/m)	Field Strength (dBμV/m)	Measurement Distance
0.009-0.490	2400/F(KHz)	20 log (uV/m)	300
0.490-1.705	2400/F(KHz)	20 log (uV/m)	30
1.705-30	30	29.5	30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

The provisions of §15.205 apply to intentional radiators operating under this section, 15.205 Restricted bands of operation

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
10.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(2)
13.36-13.41			

- Remark:
1. Emission level in dBuV/m=20 log (uV/m)
  2. Measurement was performed at an antenna to the closed point of EUT distance of meters.
  3. Only spurious frequency is permitted to locate within the Restricted Bands specified in provision of § 15.205, and the emissions located in restricted bands also comply with 15.209 limit.

### 8.5.3 Test Configuration

Test according to clause 6.2 radio frequency test setup

### 8.5.4 Test Procedure

#### ■ Unwanted Emissions Measurements below 1000 MHz

Compliance shall be demonstrated using CISPR quasi-peak detection; however, peak detection is permitted as an alternative to quasi-peak detection.

The EUT was placed on a turn table which is 0.8m above ground plane.

And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

Repeat above procedures until all frequency measured was complete.

We use software control the EUT, Let EUT hopping on and transmit with highest power, All the modes have been tested and the worst result was reported.

Use the following spectrum analyzer settings:

Set RBW=120kHz for  $f < 1$  GHz(30MHz to 1GHz), 200Hz for  $f < 150$ KHz(9KHz to 150KHz), 9KHz for  $< 30$ MHz (150KHz to 30KHz).

Set the VBW > RBW.

Detector = Peak.

Trace mode = max hold.

Follow the guidelines in ANSI C63.10-2013 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization, etc. A pre-amp and a high pass filter are required for this test, in order to provide the measuring system with sufficient sensitivity. Allow the trace to stabilize. The peak reading of the emission, after being corrected by the antenna factor, cable loss, pre-amp gain, etc., is the peak field strength, which must comply with the limit specified in Section 15.35(b). Submit this data.

Repeat above procedures until all frequency measured was complete.

#### ■ Unwanted Maximum peak Emissions Measurements above 1000 MHz

Maximum emission levels are measured by setting the analyzer as follows:

RBW = 1 MHz.

VBW  $\geq$  3 MHz.

Detector = Peak.

Sweep time = auto.

Trace mode = max hold.

Allow sweeps to continue until the trace stabilizes. Note that if the transmission is not continuous, the time required for the trace to stabilize will increase by a factor of approximately  $1/x$ , where  $x$  is the duty cycle. For example, at 50 percent duty cycle, the measurement time will increase by a factor of two relative to measurement time for continuous transmission.

#### ■ Unwanted Average Emissions Measurements above 1000 MHz

Method VB (Averaging using reduced video bandwidth): Alternative method.

RBW = 1 MHz.

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

• If the EUT duty cycle is  $<$  98 percent, set  $VBW \geq 1/T$ , where  $T$  is defined in section II.B.1.a).

Video bandwidth mode or display mode • The instrument shall be set to ensure that video filtering is applied in the power domain. Typically, this requires setting the detector mode to RMS and setting the Average-VBW Type to Power (RMS).

• As an alternative, the analyzer may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some analyzers require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode.

Detector = Peak.

Sweep time = auto.

Trace mode = max hold.

Allow max hold to run for at least 50 traces if the transmitted signal is continuous or has at least 98 percent duty cycle. For lower duty cycles, increase the minimum number of traces by a factor of  $1/x$ , where  $x$  is the duty cycle. For example, use at least 200 traces if the duty cycle is 25 percent. (If a specific emission is demonstrated to be continuous—i.e., 100 percent duty cycle—rather than turning on and off with the transmit cycle, at least 50 traces shall be averaged.)

■ Band edge measurements.

Unwanted band-edge emissions may be measured using either of the special band-edge measurement techniques (the marker-delta or integration methods) described below. Note that the marker-delta method is primarily a radiated measurement technique that requires the 99% occupied bandwidth edge to be within 2 MHz of the authorized band edge, whereas the integration method can be used in either a radiated or conducted measurement without any special requirement with regards to the displacement of the unwanted emission(s) relative to the authorized bandwidth.

Marker-Delta Method.

The marker-delta method, as described in ANSI C63.10, can be used to perform measurements of the radiated unwanted emissions level of emissions provided that the 99% occupied bandwidth of the fundamental is within 2 MHz of the authorized band-edge.

#### 8.5.5 Test Results

■  For Undesirable radiated Spurious Emission in UNII Band I

The modes 802.11a/n/ac has been tested and the worst result recorded as below:



●  Undesirable radiated Spurious Emission Above 1GHz (1GHz to 40GHz)

Temperature :	28	Test Date :	February 07, 2018
Humidity :	65 %	Test By:	King Kong
Test mode:	802.11a	Frequency(MHz):	5180

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
4877.5	V	55.27	-39.96	-27.00	-12.96
7472.74	V	56.75	-38.48	-27.00	-11.48
10953.82	V	62.1	-33.13	-27.00	-6.13
5247.14	H	53.58	-41.65	-27.00	-14.65
7932	H	60.67	-34.56	-27.00	-7.56
11250.73	H	63.71	-31.52	-27.00	-4.52

Temperature :	28	Test Date :	February 07, 2018
Humidity :	65 %	Test By:	King Kong
Test mode:	802.11a	Frequency(MHz):	5220

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
5331.75	V	53.39	-41.84	-27.00	-14.84
7927.94	V	56.36	-38.87	-27.00	-11.87
10897.49	V	62.42	-32.81	-27.00	-5.81
4815	H	51.85	-43.38	-27.00	-16.38
8707.84	H	60.61	-34.62	-27.00	-7.62
11857.39	H	63.66	-31.57	-27.00	-4.57

Temperature :	28	Test Date :	February 07, 2018
Humidity :	65 %	Test By:	King Kong
Test mode:	802.11a	Frequency(MHz):	5240

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
5633.45	V	55.79	-39.44	-27.00	-12.44
7561.02	V	55.69	-39.54	-27.00	-12.54
10717.07	V	62.21	-33.02	-27.00	-6.02
4831.11	H	51.00	-44.23	-27.00	-17.23
8300.64	H	59.10	-36.13	-27.00	-9.13
11626.79	H	63.20	-32.03	-27.00	-5.03

**Note:** (1) Emission Level= Reading Level+Probe Factor +Cable Loss.  
 (2) EIRP[dBm] = E[dBuV/m] + 20 log(d[meters]) - 104.77  
 d is the measurement distance in 3 meters

●  Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Temperature :	28	Test Date :	February 07, 2018
Humidity :	65 %	Test By:	King Kong
Test mode:	802.11a	Frequency(MHz):	5180

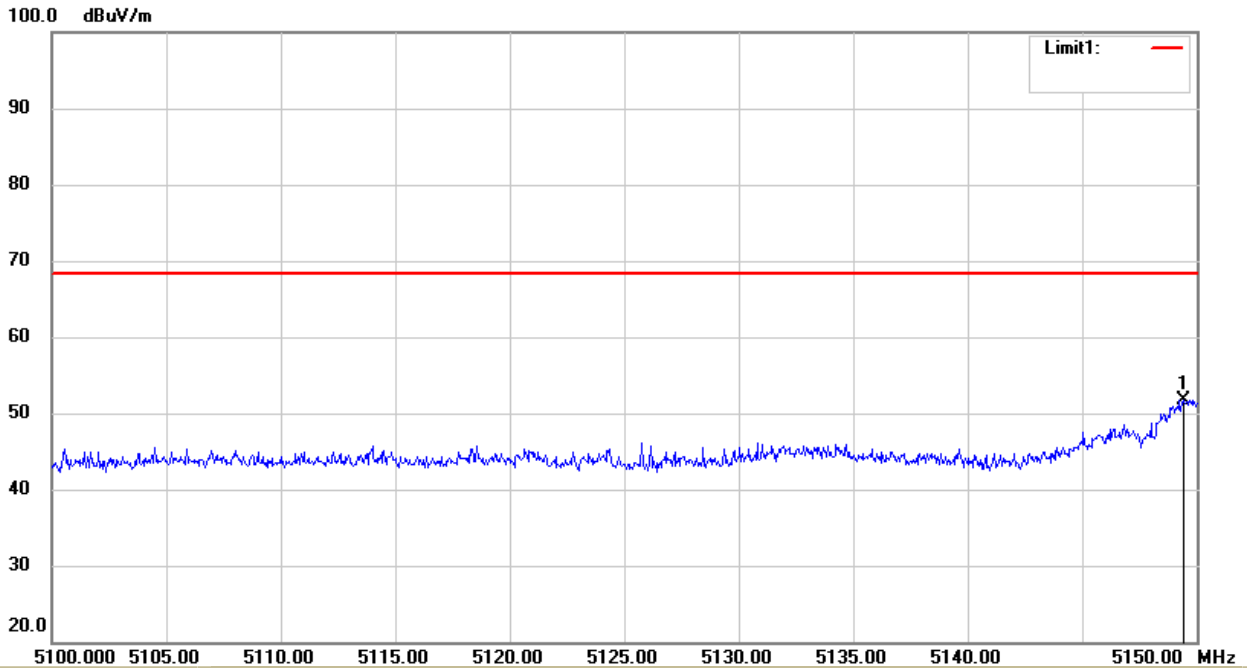
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5149.50	V	51.79	-43.44	-27.00	Pass
5149.40	H	51.79	-43.44	-27.00	Pass

Temperature :	28	Test Date :	February 07, 2018
Humidity :	65 %	Test By:	King Kong
Test mode:	802.11a	Frequency(MHz):	5240

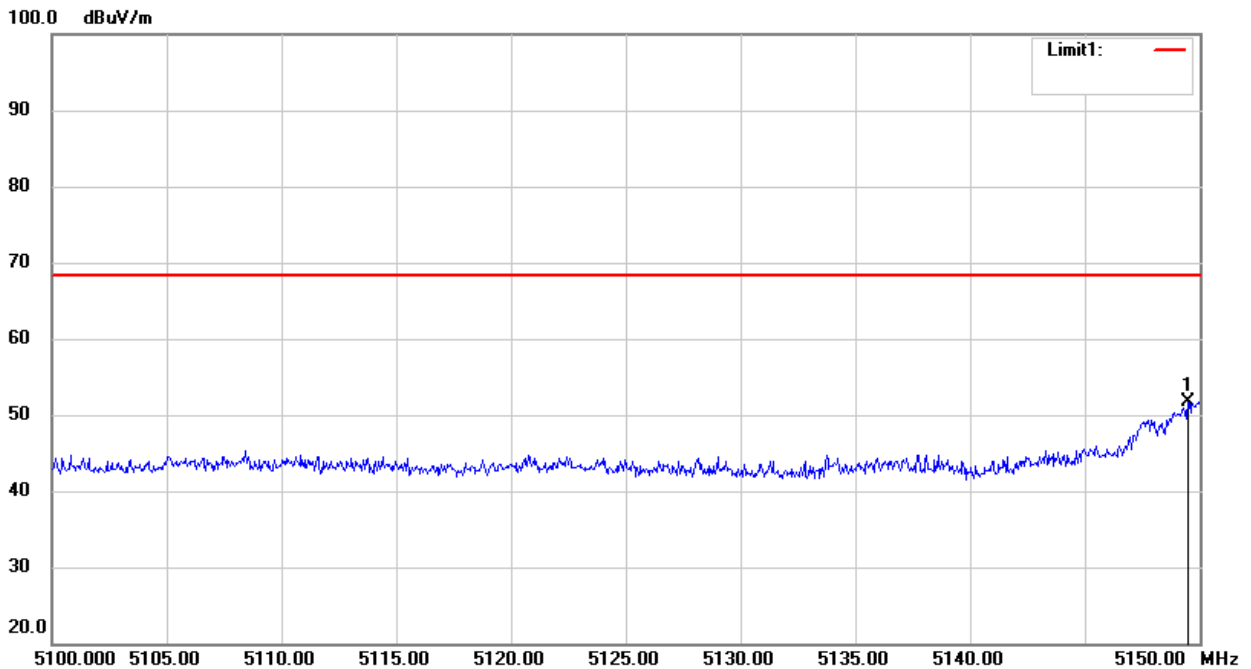
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5353.05	V	45.14	-50.09	-27.00	Pass
5353.10	H	45.26	-49.97	-27.00	Pass

**Note:** (1) Emission Level= Reading Level+Probe Factor +Cable Loss.  
 (2) EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77  
 d is the measurement distance in 3 meters

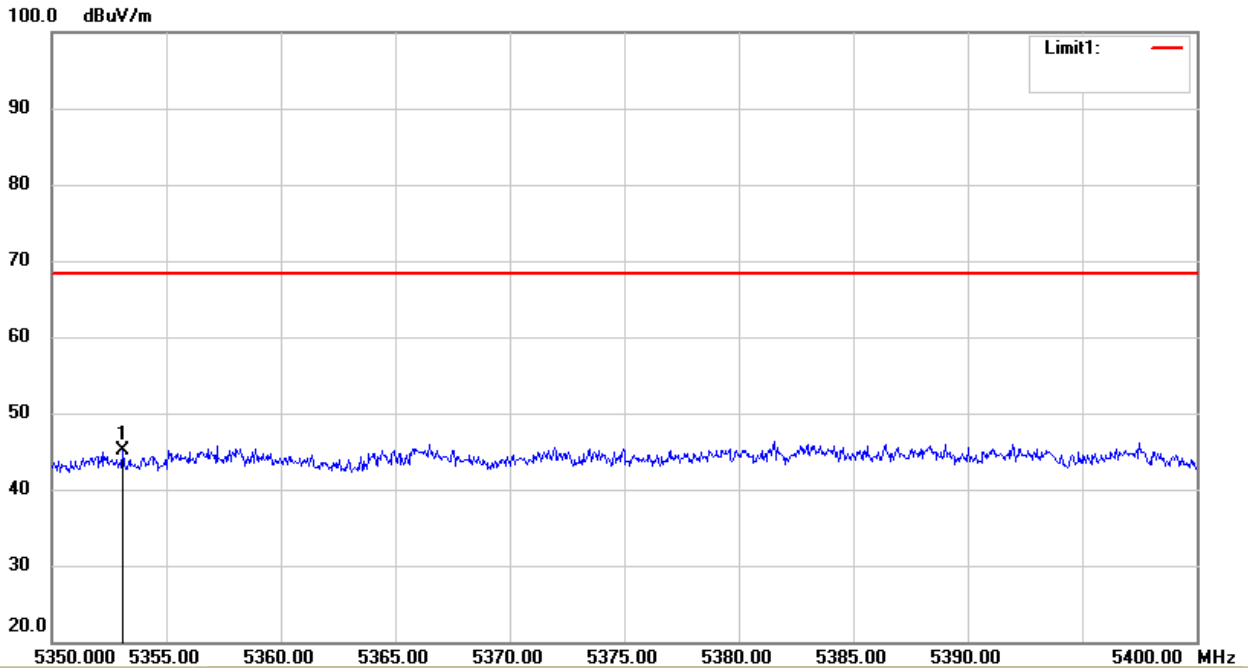
UNII Band I	
Test Model	Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
	<input checked="" type="checkbox"/> 802.11a <input type="checkbox"/> 802.11n(HT20) <input type="checkbox"/> 802.11n(HT40)
	<input checked="" type="checkbox"/> 5180 <input type="checkbox"/> 5200 <input type="checkbox"/> 5240      Ant.Pol      H



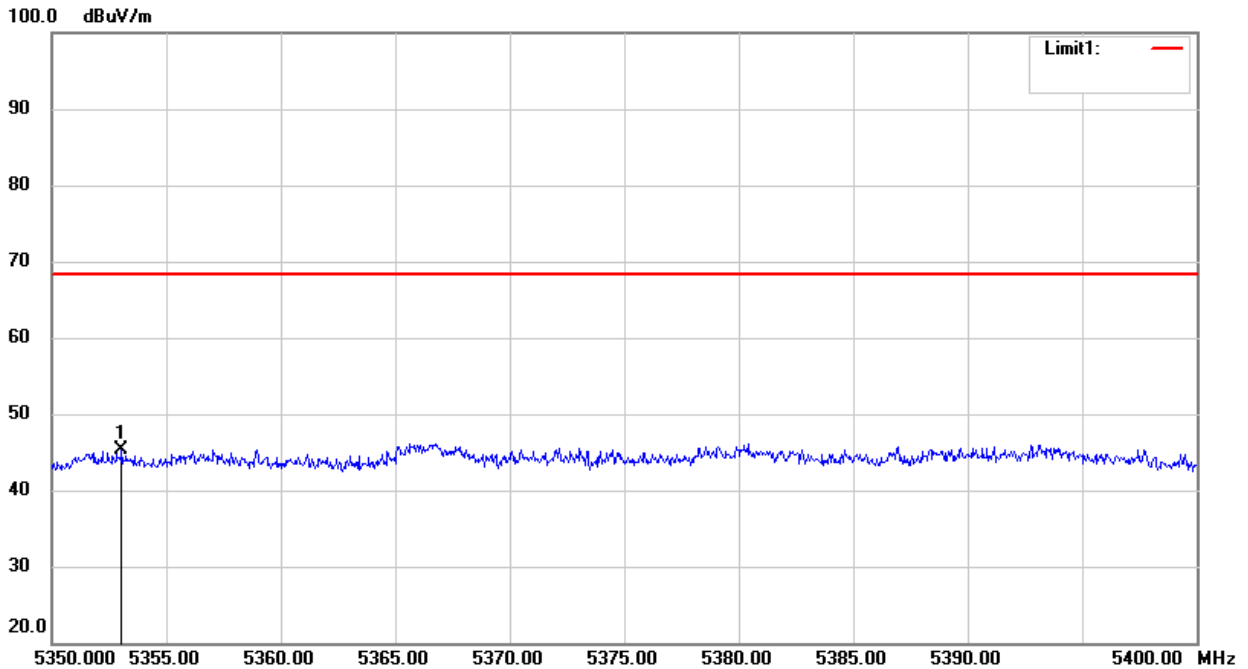
UNII Band I	
Test Model	Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
	<input checked="" type="checkbox"/> 802.11a <input type="checkbox"/> 802.11n(HT20) <input type="checkbox"/> 802.11n(HT40)
	<input checked="" type="checkbox"/> 5180 <input type="checkbox"/> 5200 <input type="checkbox"/> 5240      Ant.Pol      V



UNII Band I	
Test Model	Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz )
	<input checked="" type="checkbox"/> 802.11a <input type="checkbox"/> 802.11n(HT20) <input type="checkbox"/> 802.11n(HT40)
	<input type="checkbox"/> 5180 <input type="checkbox"/> 5200 <input checked="" type="checkbox"/> 5240      Ant.Pol      H



UNII Band I	
Test Model	Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz )
	<input checked="" type="checkbox"/> 802.11a <input type="checkbox"/> 802.11n(HT20) <input type="checkbox"/> 802.11n(HT40)
	<input type="checkbox"/> 5180 <input type="checkbox"/> 5200 <input checked="" type="checkbox"/> 5240      Ant.Pol      V



- For Undesirable radiated Spurious Emission in UNII Band II-A  
All the modes 802.11a/n/ac has been tested and the worst result 802.11a recorded as below:
- Undesirable radiated Spurious Emission Above 1GHz (1GHz to 40GHz)

Temperature :	28	Test Date :	February 07, 2018
Humidity :	65 %	Test By:	King Kong
Test mode:	802.11a	Frequency(MHz):	5260

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
5125.85	V	54.65	-40.58	-27.00	-13.58
7677.66	V	55.91	-39.32	-27.00	-12.32
10941.2	V	61.67	-33.56	-27.00	-6.56
5380.83	H	51.59	-43.64	-27.00	-16.64
8438.7	H	60.82	-34.41	-27.00	-7.41
11790.54	H	61.9	-33.33	-27.00	-6.33

Temperature :	28	Test Date :	February 07, 2018
Humidity :	65 %	Test By:	King Kong
Test mode:	802.11a	Frequency(MHz):	5280

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
4801.72	V	53.41	-41.82	-27.00	-14.82
7809.98	V	57.6	-37.63	-27.00	-10.63
10829.36	V	63.59	-31.64	-27.00	-4.64
4948.16	H	51.9	-43.33	-27.00	-16.33
8198.44	H	58.94	-36.29	-27.00	-9.29
11293.67	H	62.87	-32.36	-27.00	-5.36

Temperature :	28	Test Date :	February 07, 2018
Humidity :	65 %	Test By:	King Kong
Test mode:	802.11a	Frequency(MHz):	5320

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
5409.73	V	54.79	-40.44	-27.00	-13.44
7773.92	V	54.92	-40.31	-27.00	-13.31
11690.37	V	62.74	-32.49	-27.00	-5.49
4595.61	H	52.37	-42.86	-27.00	-15.86
8037.31	H	61.47	-33.76	-27.00	-6.76
10979.24	H	64.73	-30.5	-27.00	-3.5

**Note:** (1) Emission Level= Reading Level+Probe Factor +Cable Loss.  
 (2) EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77  
 d is the measurement distance in 3 meters

●  Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Temperature :	28	Test Date :	February 07, 2018
Humidity :	65 %	Test By:	King Kong
Test mode:	802.11a	Frequency(MHz):	5260

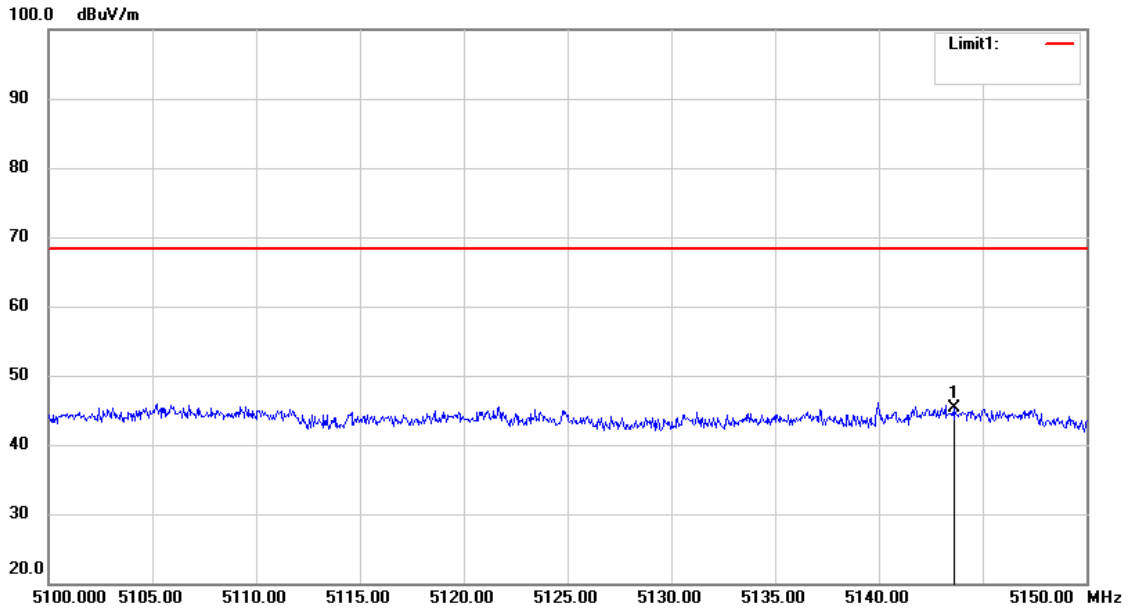
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5145.10	V	47.04	-48.19	-27.00	Pass
5143.65	H	45.36	-49.87	-27.00	Pass

Temperature :	28	Test Date :	February 07, 2018
Humidity :	65 %	Test By:	King Kong
Test mode:	802.11a	Frequency(MHz):	5320

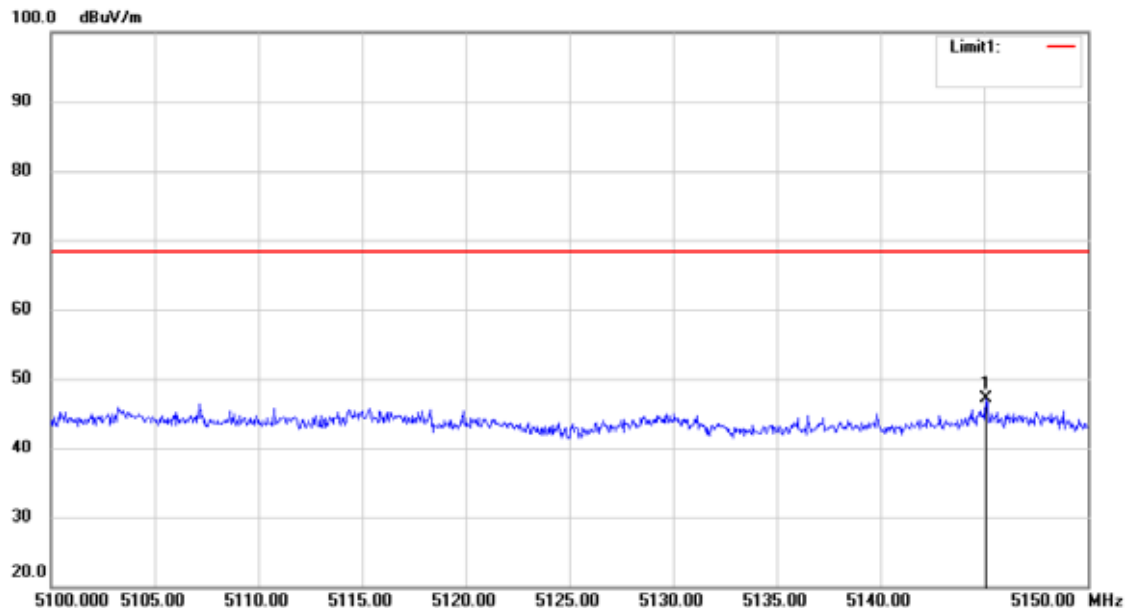
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5350.10	V	48.24	-46.99	-27.00	Pass
5350.85	H	49.73	-45.5	-27.00	Pass

**Note:** (1) Emission Level= Reading Level+Probe Factor +Cable Loss.  
 (2) EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77  
 d is the measurement distance in 3 meters

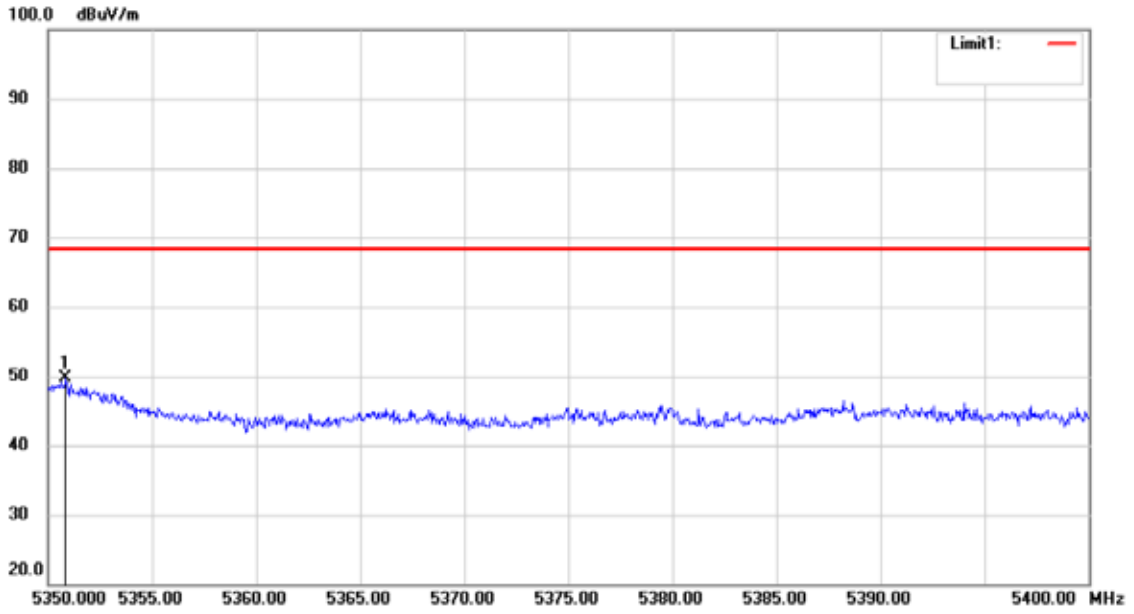
		UNII Band II-A			
Test Model	Undesirable radiated	Undesirable radiated	Spurious Emission in	Band Edge	
	<input checked="" type="checkbox"/> 802.11a	<input checked="" type="checkbox"/> 5260	<input type="checkbox"/> 802.11n(HT20)	<input type="checkbox"/> 802.11n(HT40)	Ant.Pol
					H



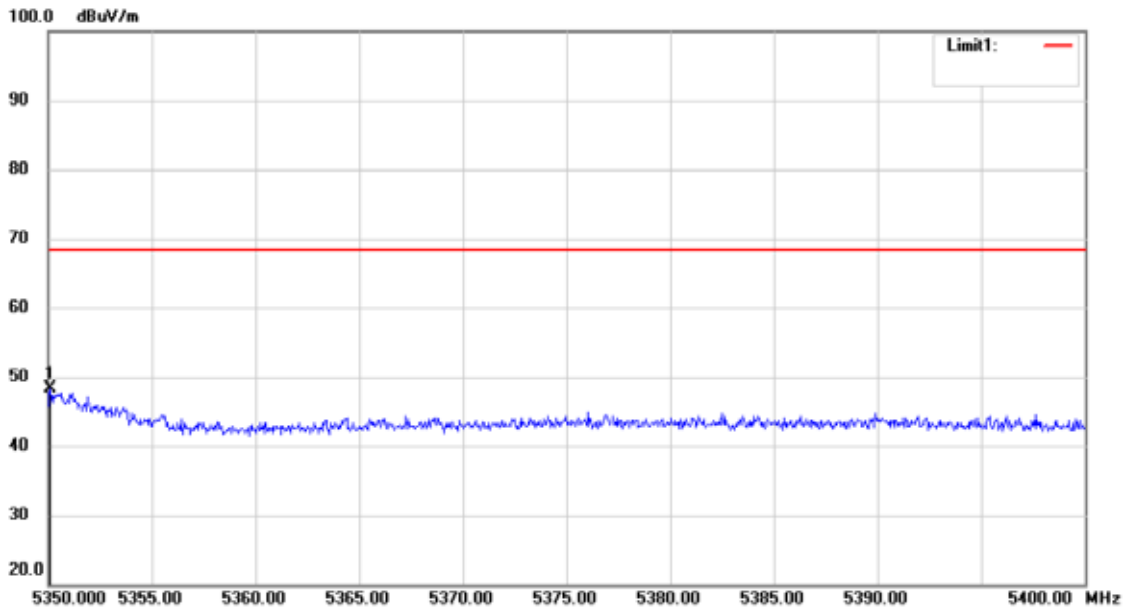
		UNII Band II-A			
Test Model	Undesirable radiated	Undesirable radiated	Spurious Emission in	Band Edge	
	<input checked="" type="checkbox"/> 802.11a	<input checked="" type="checkbox"/> 5260	<input type="checkbox"/> 802.11n(HT20)	<input type="checkbox"/> 802.11n(HT40)	Ant.Pol
					V



		UNII Band II-A			
Test Model	Undesirable radiated	Undesirable radiated	Spurious Emission in	Band Edge	
	<input checked="" type="checkbox"/> 802.11a	<input checked="" type="checkbox"/> 5320	<input type="checkbox"/> 802.11n(HT20)	<input type="checkbox"/> 802.11n(HT40)	Ant.Pol
					H



		UNII Band II-A			
Test Model	Undesirable radiated	Undesirable radiated	Spurious Emission in	Band Edge	
	<input checked="" type="checkbox"/> 802.11a	<input checked="" type="checkbox"/> 5320	<input type="checkbox"/> 802.11n(HT20)	<input type="checkbox"/> 802.11n(HT40)	Ant.Pol
					V





- For Undesirable radiated Spurious Emission in UNII Band II-C  
All the modes 802.11a/n/ac has been tested and the worst result 802.11a recorded as below:
- Undesirable radiated Spurious Emission Above 1GHz (1GHz to 40GHz)

Temperature :	28	Test Date :	February 07, 2018
Humidity :	65 %	Test By:	King Kong
Test mode:	802.11a	Frequency(MHz):	5500

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
4933.57	V	54.22	-41.01	-27.00	-14.01
8182.75	V	55.71	-39.52	-27.00	-12.52
11609.26	V	62.17	-33.06	-27.00	-6.06
4536.39	H	52.78	-42.45	-27.00	-15.45
8803.22	H	58.92	-36.31	-27.00	-9.31
11764.93	H	61.79	-33.44	-27.00	-6.44

Temperature :	28	Test Date :	February 07, 2018
Humidity :	65 %	Test By:	King Kong
Test mode:	802.11a	Frequency(MHz):	5600

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
5586.93	V	54.73	-40.5	-27.00	-13.50
8023.1	V	56.18	-39.05	-27.00	-12.05
11147.6	V	61.84	-33.39	-27.00	-6.39
4509.16	H	53.71	-41.52	-27.00	-14.52
8440.86	H	58.78	-36.45	-27.00	-9.45
11858.27	H	62.65	-32.58	-27.00	-5.58

Temperature :	28	Test Date :	February 07, 2018
Humidity :	65 %	Test By:	King Kong
Test mode:	802.11a	Frequency(MHz):	5700

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
4830.21	V	53.31	-41.92	-27.00	-14.92
7401.77	V	56.55	-38.68	-27.00	-11.68
11156.29	V	61.53	-33.70	-27.00	-6.70
5275.18	H	53.30	-41.93	-27.00	-14.93
8390.89	H	60.85	-34.38	-27.00	-7.38
11232.4	H	60.79	-34.44	-27.00	-7.44

**Note:** (1) Emission Level= Reading Level+Probe Factor +Cable Loss.  
 (2) EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77  
 d is the measurement distance in 3 meters

● Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Temperature :	28	Test Date :	February 07, 2018
Humidity :	65 %	Test By:	King Kong
Test mode:	802.11a	Frequency(MHz):	5260

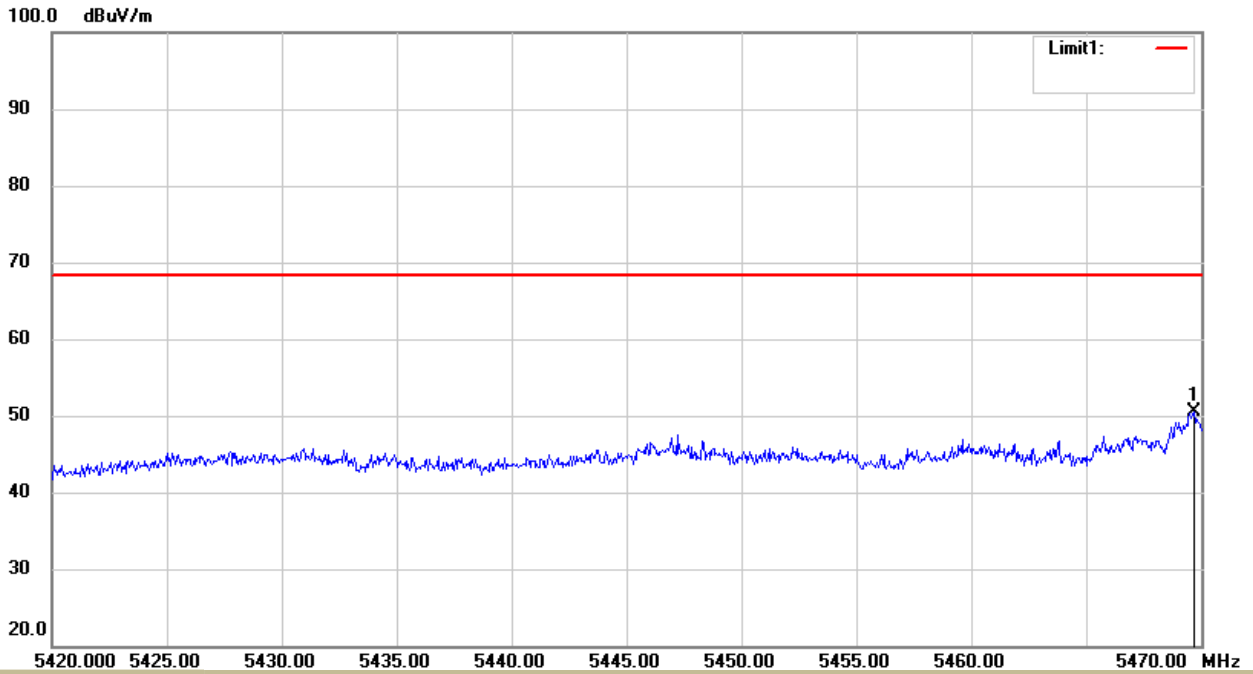
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5469.20	V	49.45	-45.78	-27.00	Pass
5469.70	H	50.51	-44.72	-27.00	Pass

Temperature :	28	Test Date :	February 07, 2018
Humidity :	65 %	Test By:	King Kong
Test mode:	802.11a	Frequency(MHz):	5320

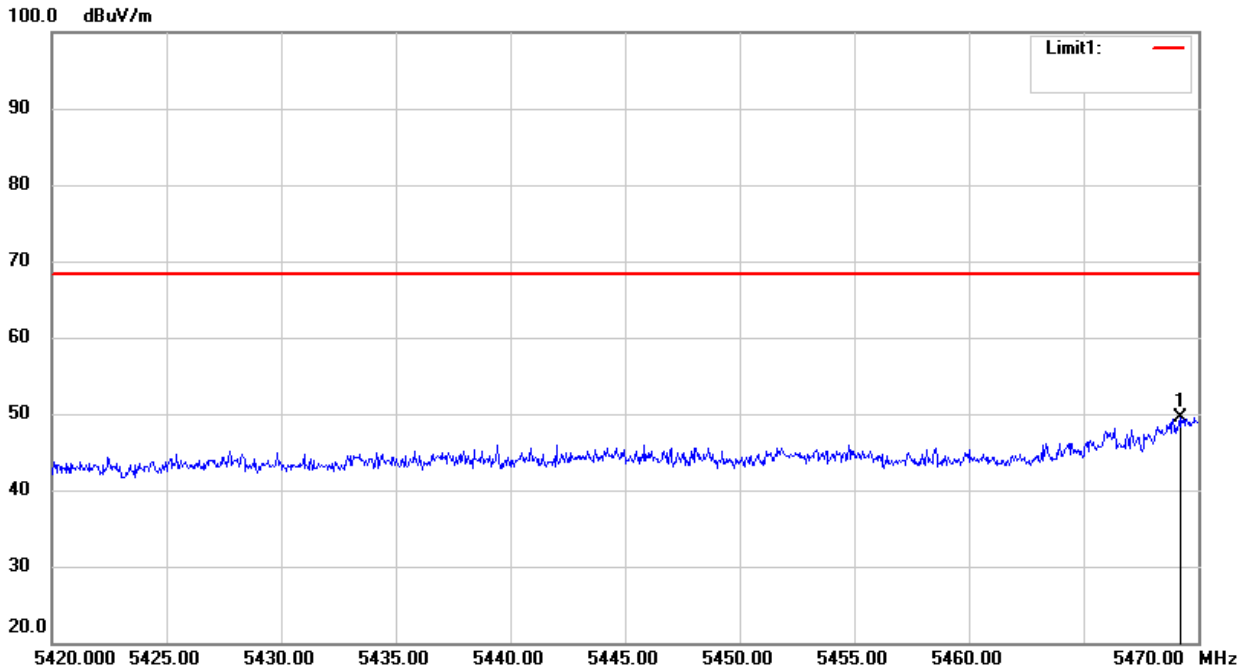
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5725.65	V	49.41	-45.82	-27.00	Pass
5726.70	H	46.91	-48.32	-27.00	Pass

**Note:** (1) Emission Level= Reading Level+Probe Factor +Cable Loss.  
 (2) EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77  
 d is the measurement distance in 3 meters

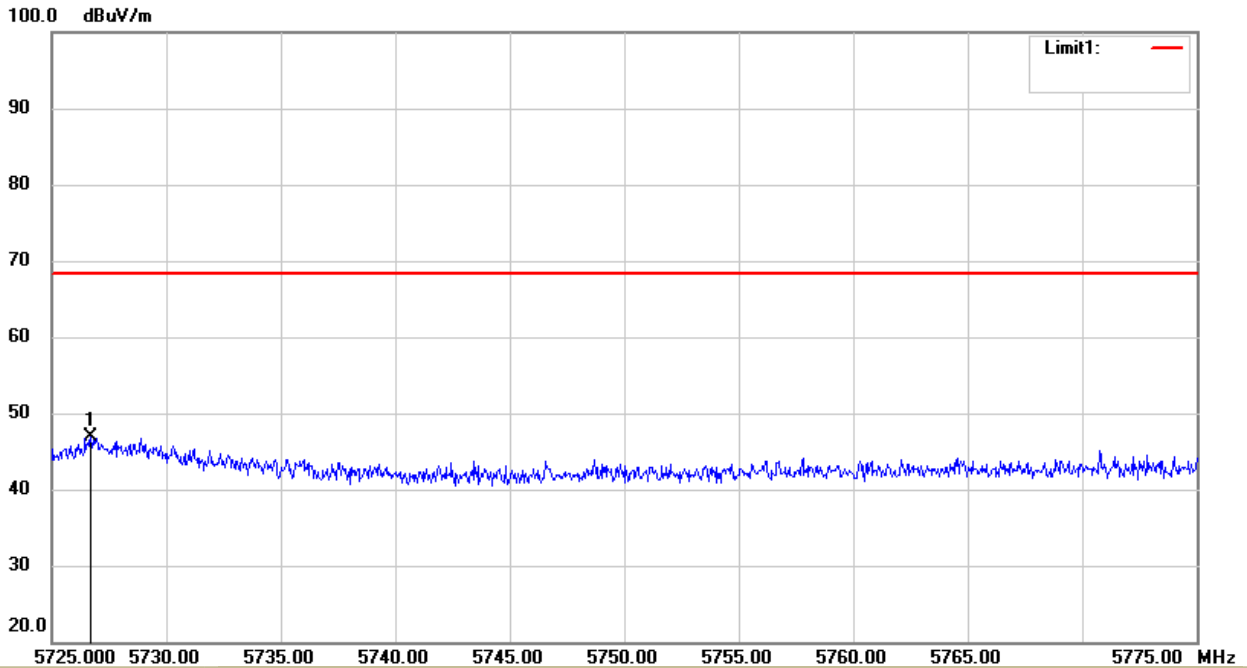
UNII Band II-C			
Test Model	Undesirable radiated	Undesirable radiated	Spurious Emission in Band Edge
	<input checked="" type="checkbox"/> 802.11a	<input type="checkbox"/> 802.11n(HT20)	<input type="checkbox"/> 802.11n(HT40)
	<input checked="" type="checkbox"/> 5500		Ant.Pol H



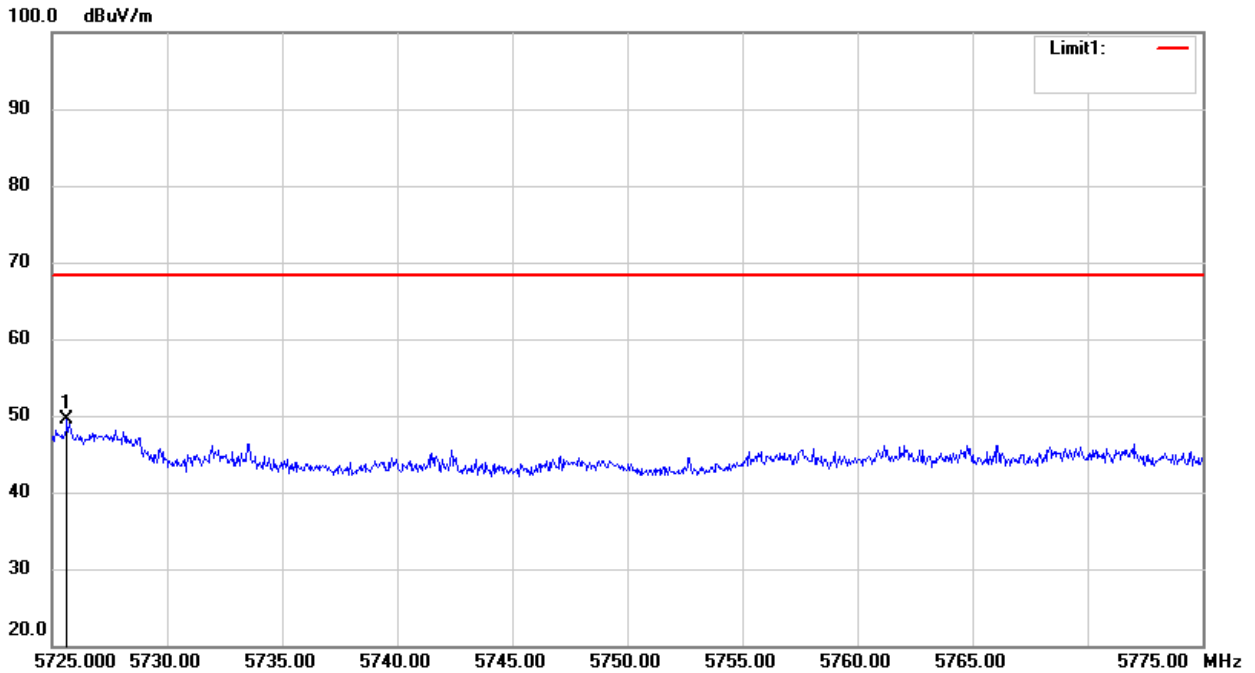
UNII Band II-C			
Test Model	Undesirable radiated	Undesirable radiated	Spurious Emission in Band Edge
	<input checked="" type="checkbox"/> 802.11a	<input type="checkbox"/> 802.11n(HT20)	<input type="checkbox"/> 802.11n(HT40)
	<input checked="" type="checkbox"/> 5500		Ant.Pol V



UNII Band II-C			
Test Model	Undesirable radiated	Undesirable radiated	Spurious Emission in Band Edge
	<input checked="" type="checkbox"/> 802.11a	<input type="checkbox"/> 802.11n(HT20)	<input type="checkbox"/> 802.11n(HT40)
	<input checked="" type="checkbox"/> 5700		Ant.Pol H



UNII Band II-C			
Test Model	Undesirable radiated	Undesirable radiated	Spurious Emission in Band Edge
	<input checked="" type="checkbox"/> 802.11a	<input type="checkbox"/> 802.11n(HT20)	<input type="checkbox"/> 802.11n(HT40)
	<input checked="" type="checkbox"/> 5700		Ant.Pol V



- For Undesirable radiated Spurious Emission in UNII Band III

All the modes 802.11a/n/ac has been tested and the worst result 802.11a recorded as below:

- Undesirable radiated Spurious Emission Above 1GHz (1GHz to 40GHz)

Temperature :	28	Test Date :	February 07, 2018
Humidity :	65 %	Test By:	King Kong
Test mode:	802.11a	Frequency(MHz):	5745

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
5369.44	V	53.25	-41.98	-27.00	-14.98
8161.74	V	56.8	-38.43	-27.00	-11.43
10793.67	V	61.44	-33.79	-27.00	-6.79
5113.52	H	52.47	-42.76	-27.00	-15.76
8350.23	H	61.34	-33.89	-27.00	-6.89
11179.96	H	60.79	-34.44	-27.00	-7.44

Temperature :	28	Test Date :	February 07, 2018
Humidity :	65 %	Test By:	King Kong
Test mode:	802.11a	Frequency(MHz):	5785

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
5411.13	V	53.98	-41.25	-27.00	-14.25
8188.53	V	57.46	-37.77	-27.00	-10.77
11318.74	V	60.38	-34.85	-27.00	-7.85
4634.17	H	53.67	-41.56	-27.00	-14.56
8387.38	H	59.15	-36.08	-27.00	-9.08
10911.07	H	60.23	-35.00	-27.00	-8.00

Temperature :	28	Test Date :	February 07, 2018
Humidity :	65 %	Test By:	King Kong
Test mode:	802.11a	Frequency(MHz):	5825

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
5599.09	V	55.64	-39.59	-27.00	-12.59
8238.8	V	56.32	-38.91	-27.00	-11.91
11063.59	V	62.18	-33.05	-27.00	-6.05
4591.12	H	51.3	-43.93	-27.00	-16.93
8379.75	H	59.16	-36.07	-27.00	-9.07
11672.88	H	61.23	-34.00	-27.00	-7.00

**Note:** (1) Emission Level= Reading Level+Probe Factor +Cable Loss.  
 (2) EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77  
 d is the measurement distance in 3 meters

●  Undesirable radiated Spurious Emission in band edge

Temperature :	28	Test Date :	February 07, 2018
Humidity :	65 %	Test By:	King Kong
Test mode:	802.11a	Frequency:	5745

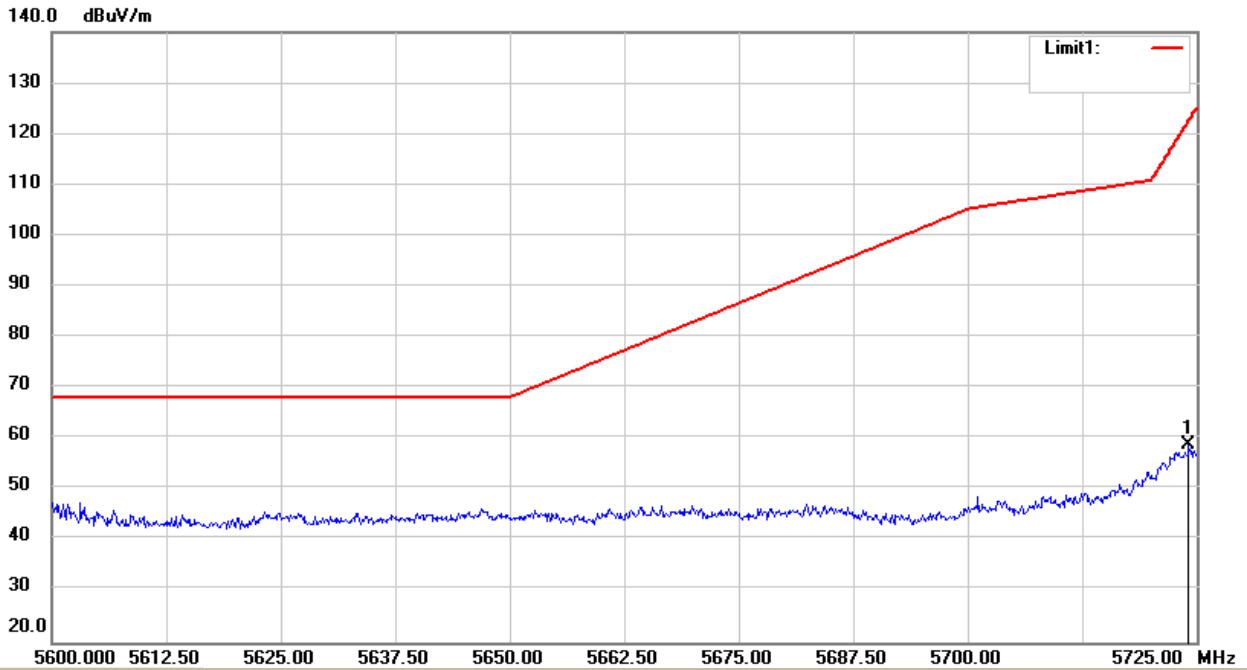
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5724.125	V	58.86	-36.37	27.48	PASS
5723.750	H	54.16	-41.07	26.40	PASS

Temperature :	28	Test Date :	February 07, 2018
Humidity :	65 %	Test By:	King Kong
Test mode:	802.11a	Frequency:	5825

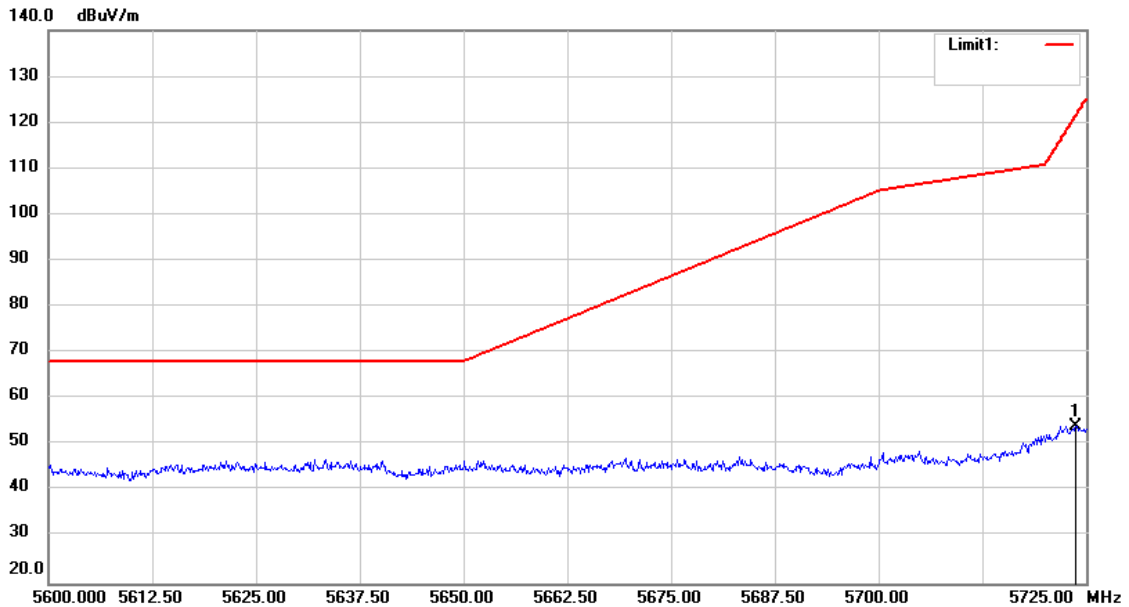
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5850.125	V	59.91	-35.32	26.76	PASS
5850.875	H	55.00	-40.23	27.48	PASS

**Note:** (1) Emission Level= Reading Level+Probe Factor +Cable Loss.  
 (2) EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77  
 d is the measurement distance in 3 meters

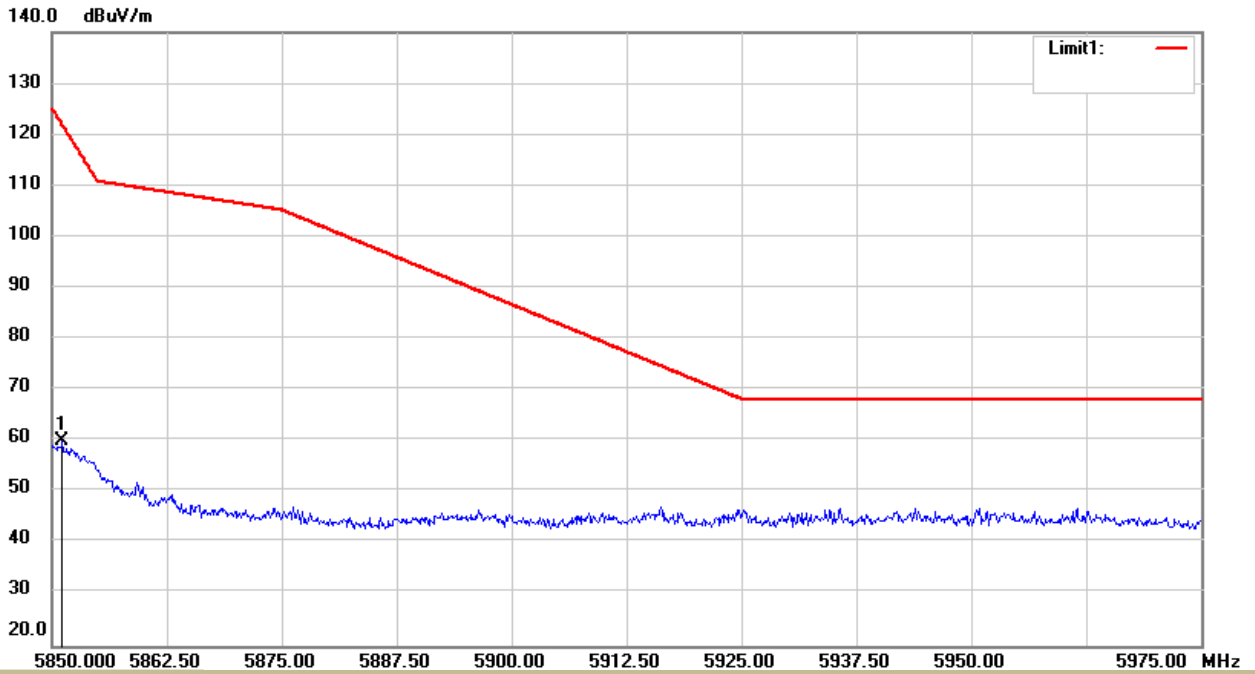
UNII Band III			
Test Model	Undesirable radiated	Undesirable radiated	Spurious Emission in Band Edge
	<input checked="" type="checkbox"/> 802.11a	<input type="checkbox"/> 802.11n(HT20)	<input type="checkbox"/> 802.11n(HT40)
	<input checked="" type="checkbox"/> 5745		Ant.Pol H



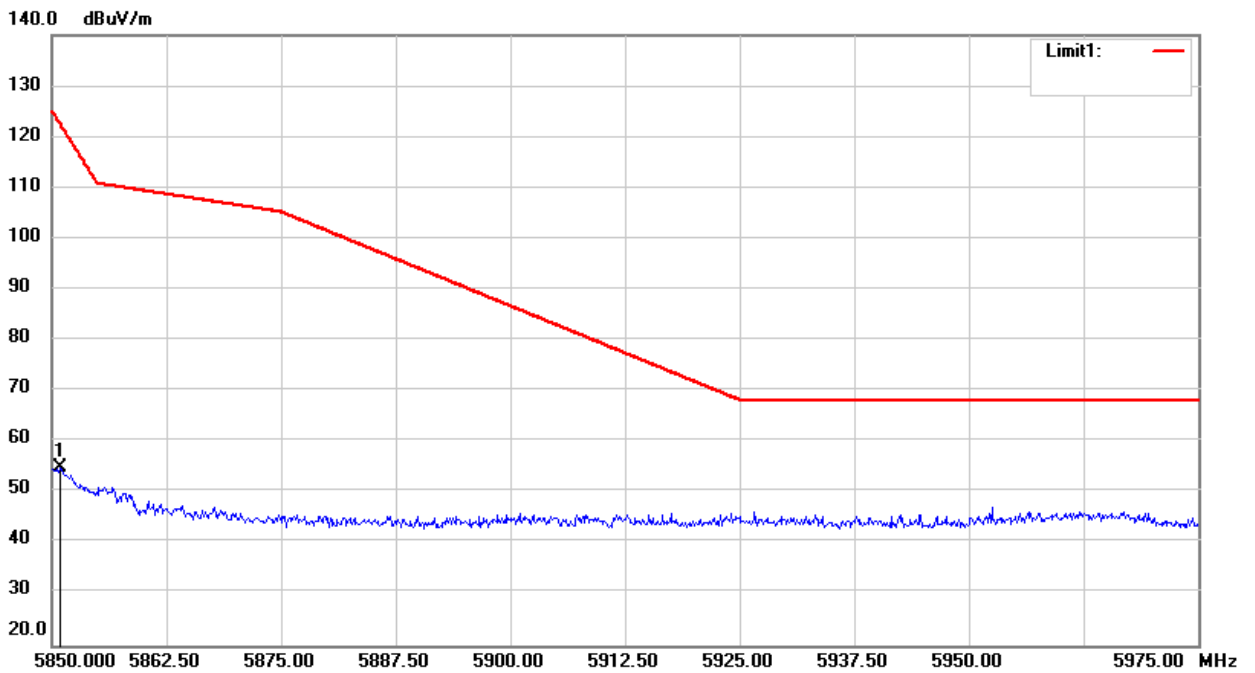
UNII Band III			
Test Model	Undesirable radiated	Undesirable radiated	Spurious Emission in Band Edge
	<input checked="" type="checkbox"/> 802.11a	<input type="checkbox"/> 802.11n(HT20)	<input type="checkbox"/> 802.11n(HT40)
	<input checked="" type="checkbox"/> 5745		Ant.Pol V



UNII Band III			
Test Model	Undesirable radiated	Undesirable radiated	Spurious Emission in Band Edge
	<input checked="" type="checkbox"/> 802.11a	<input type="checkbox"/> 802.11n(HT20)	<input type="checkbox"/> 802.11n(HT40)
	<input checked="" type="checkbox"/> 5825		Ant.Pol
			H

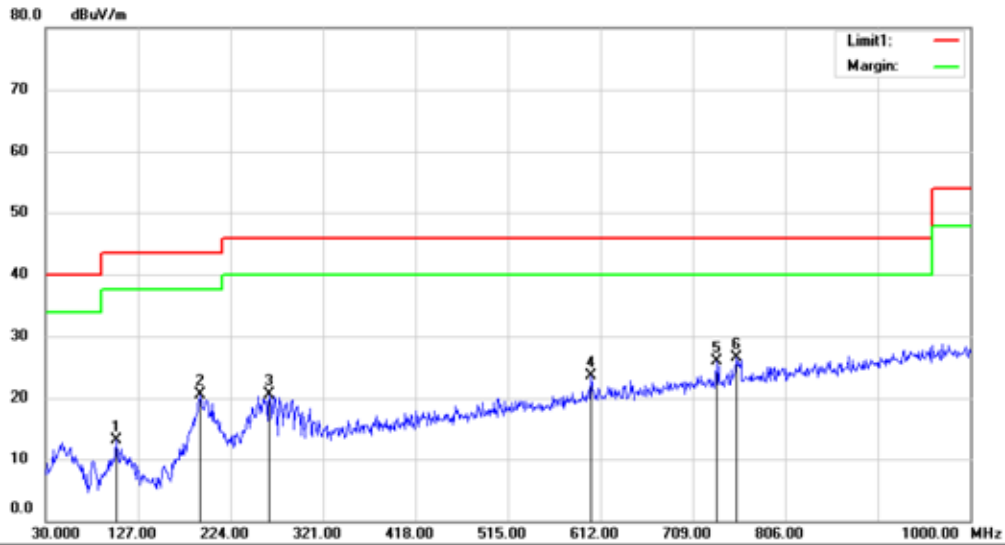


UNII Band III			
Test Model	Undesirable radiated	Undesirable radiated	Spurious Emission in Band Edge
	<input checked="" type="checkbox"/> 802.11a	<input type="checkbox"/> 802.11n(HT20)	<input type="checkbox"/> 802.11n(HT40)
	<input checked="" type="checkbox"/> 5825		Ant.Pol
			V



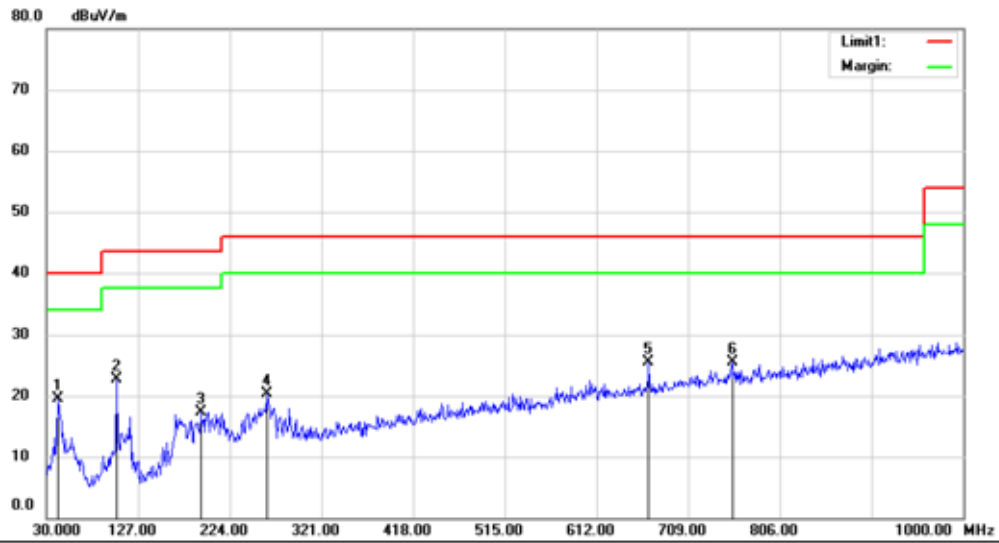


- Undesirable radiated Spurious Emission below 1GHz (30MHz to 1GHz)  
All mode have been tested, and the worst results have been recorded in the report.



Site 3m Chamber 3# Polarization: **Horizontal** Temperature: 24 C  
 Limit: (RE)FCC PART 15C Power: AC 120V/60Hz Humidity: 53 %  
 Mode:WIFI 5G TX5180  
 Note:

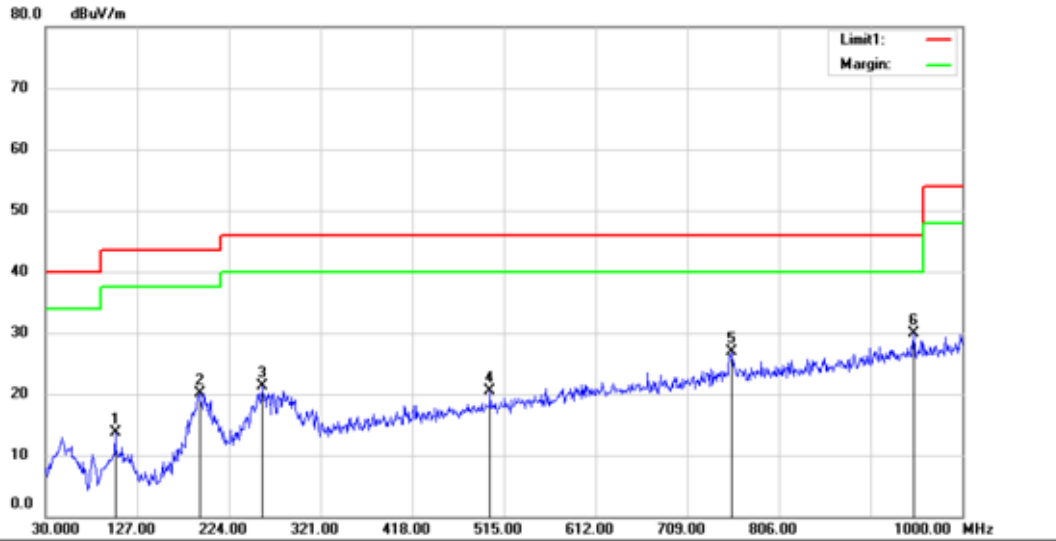
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree	Comment
1		103.7200	28.77	-15.64	13.13	43.50	-30.37	QP		
2		191.9900	36.61	-16.07	20.54	43.50	-22.96	QP		
3		264.7400	33.83	-13.28	20.55	46.00	-25.45	QP		
4		602.3000	28.49	-4.97	23.52	46.00	-22.48	QP		
5		734.2200	28.86	-2.88	25.98	46.00	-20.02	QP		
6	*	754.5900	29.04	-2.62	26.42	46.00	-19.58	QP		



Site: 3m Chamber 3#      Polarization: **Vertical**      Temperature: 24 C  
 Limit: (RE)FCC PART 15C      Power: AC 120V/60Hz      Humidity: 53 %  
 Mode:WIFI 5G TX5180

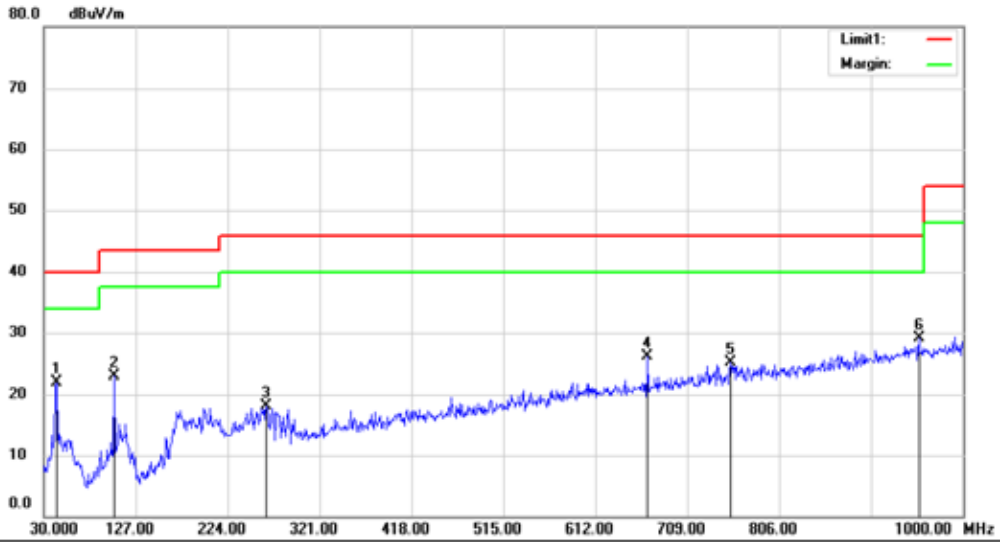
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	42.6100	33.80	-14.26	19.54	40.00	-20.46	QP		
2		103.7200	38.33	-15.64	22.69	43.50	-20.81	QP		
3		192.9600	33.32	-15.94	17.38	43.50	-26.12	QP		
4		262.8000	33.63	-13.37	20.26	46.00	-25.74	QP		
5		667.2900	29.74	-4.31	25.43	46.00	-20.57	QP		
6		755.5600	28.09	-2.60	25.49	46.00	-20.51	QP		



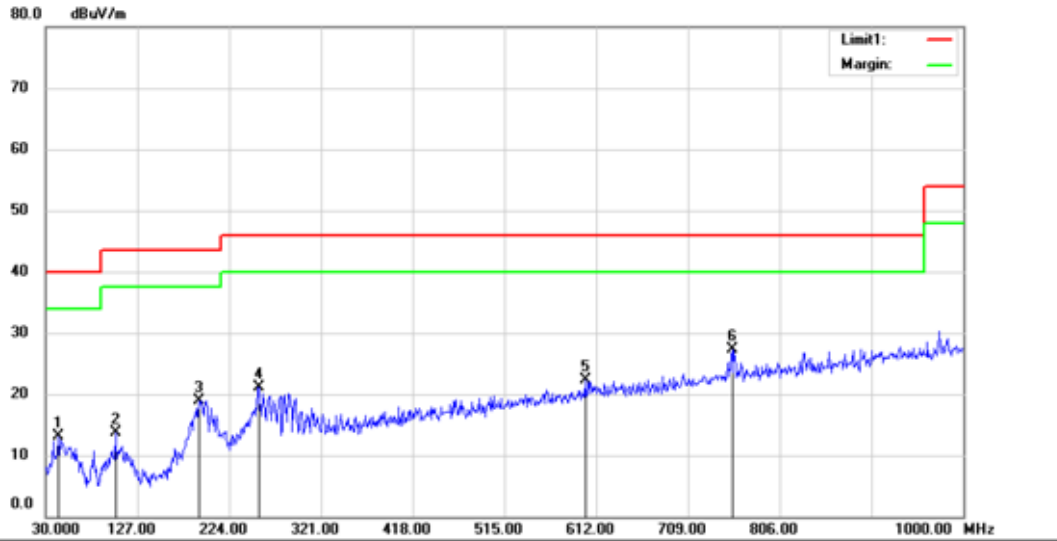
Site 3m Chamber 3# Polarization: *Horizontal* Temperature: 24 C  
 Limit: (RE)FCC PART 15C Power: AC 120V/60Hz Humidity: 53 %  
 Mode:WIFI 5G TX5200  
 Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	Comment
			dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	
1		103.7200	29.39	-15.64	13.75	43.50	-29.75	QP		
2		192.9600	36.06	-15.94	20.12	43.50	-23.38	QP		
3		258.9200	34.72	-13.50	21.22	46.00	-24.78	QP		
4		500.4500	28.13	-7.60	20.53	46.00	-25.47	QP		
5		755.5600	29.55	-2.60	26.95	46.00	-19.05	QP		
6	*	948.5900	29.39	0.55	29.94	46.00	-16.06	QP		



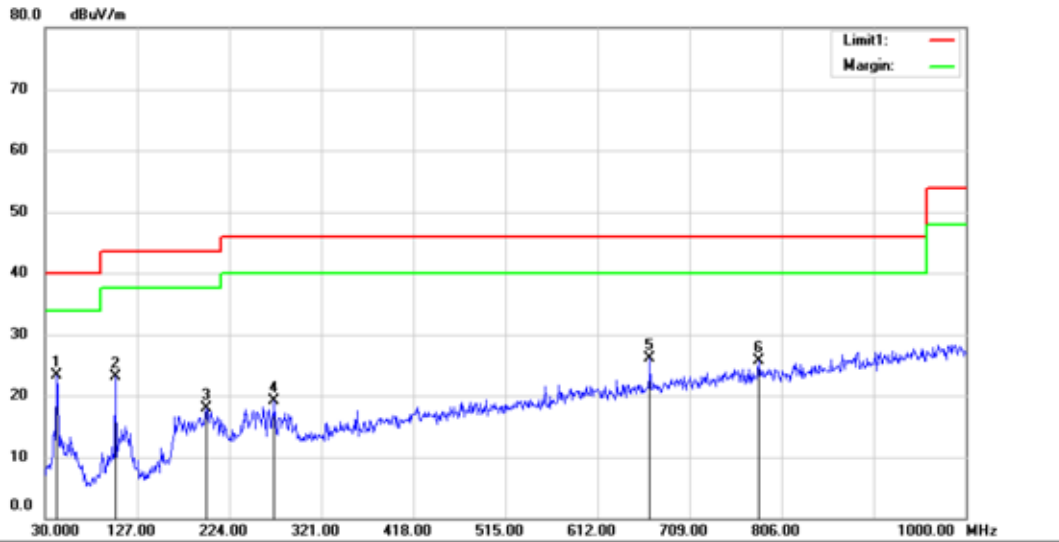
Site: 3m Chamber 3#      Polarization: **Vertical**      Temperature: 24 C  
 Limit: (RE)FCC PART 15C      Power: AC 120V/60Hz      Humidity: 53 %  
 Mode: WIFI 5G TX5200  
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree	Comment
1		43.5800	36.19	-14.25	21.94	40.00	-18.06	QP		
2		103.7200	38.52	-15.64	22.88	43.50	-20.62	QP		
3		264.7400	31.40	-13.28	18.12	46.00	-27.88	QP		
4		667.2900	30.42	-4.31	26.11	46.00	-19.89	QP		
5		754.5900	27.68	-2.62	25.06	46.00	-20.94	QP		
6	*	953.4400	28.53	0.60	29.13	46.00	-16.87	QP		



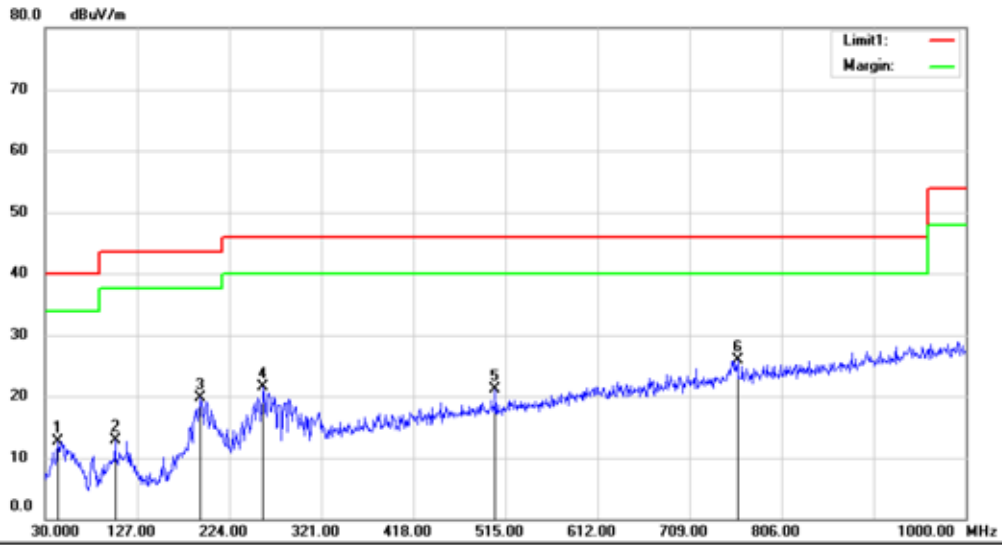
Site 3m Chamber 3# Polarization: *Horizontal* Temperature: 24 C  
 Limit: (RE)FCC PART 15C Power: AC 120V/60Hz Humidity: 53 %  
 Mode:WIFI 5G TX5240  
 Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		43.5800	27.33	-14.25	13.08	40.00	-26.92	QP		
2		103.7200	29.29	-15.64	13.65	43.50	-29.85	QP		
3		191.9900	34.97	-16.07	18.90	43.50	-24.60	QP		
4		255.0400	34.65	-13.51	21.14	46.00	-24.86	QP		
5		600.3600	27.36	-5.01	22.35	46.00	-23.65	QP		
6	*	755.5600	29.92	-2.60	27.32	46.00	-18.68	QP		



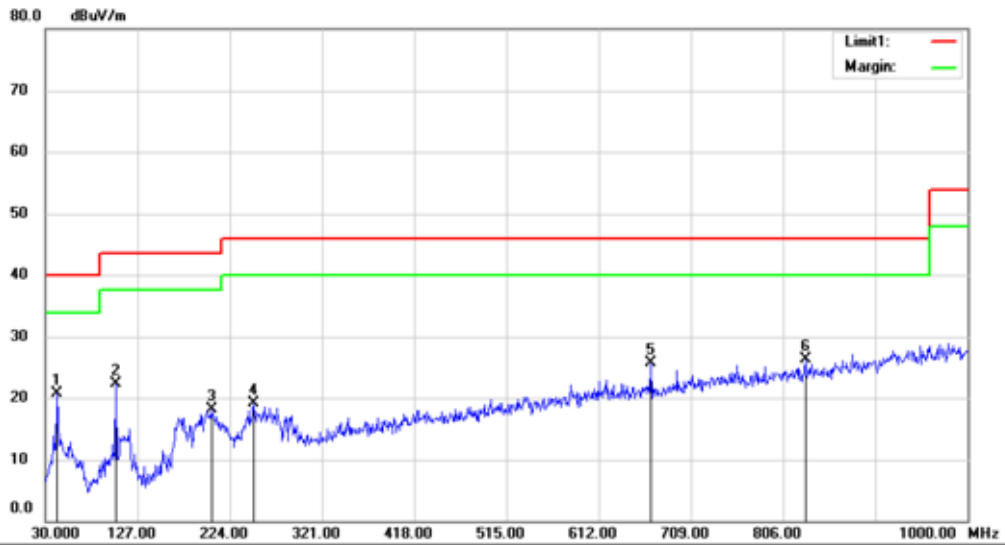
Site: 3m Chamber 3#      Polarization: **Vertical**      Temperature: 24 C  
 Limit: (RE)FCC PART 15C      Power: AC 120V/60Hz      Humidity: 53 %  
 Mode: WIFI 5G TX5240  
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree	Comment
1	*	41.6400	37.70	-14.41	23.29	40.00	-16.71	QP		
2		103.7200	38.82	-15.64	23.18	43.50	-20.32	QP		
3		199.7500	32.92	-15.08	17.84	43.50	-25.66	QP		
4		271.5300	32.32	-13.24	19.08	46.00	-26.92	QP		
5		667.2900	30.39	-4.31	26.08	46.00	-19.92	QP		
6		781.7500	27.97	-2.28	25.69	46.00	-20.31	QP		



Site 3m Chamber 3# Polarization: *Horizontal* Temperature: 24 C  
 Limit: (RE)FCC PART 15C Power: AC 120V/60Hz Humidity: 53 %  
 Mode:WIFI 5G TX5260  
 Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		43.5800	26.95	-14.25	12.70	40.00	-27.30	QP		
2		103.7200	28.61	-15.64	12.97	43.50	-30.53	QP		
3		193.9300	35.45	-15.83	19.62	43.50	-23.88	QP		
4		259.8900	34.99	-13.49	21.50	46.00	-24.50	QP		
5		504.3300	28.68	-7.54	21.14	46.00	-24.86	QP		
6	*	759.4400	28.40	-2.50	25.90	46.00	-20.10	QP		

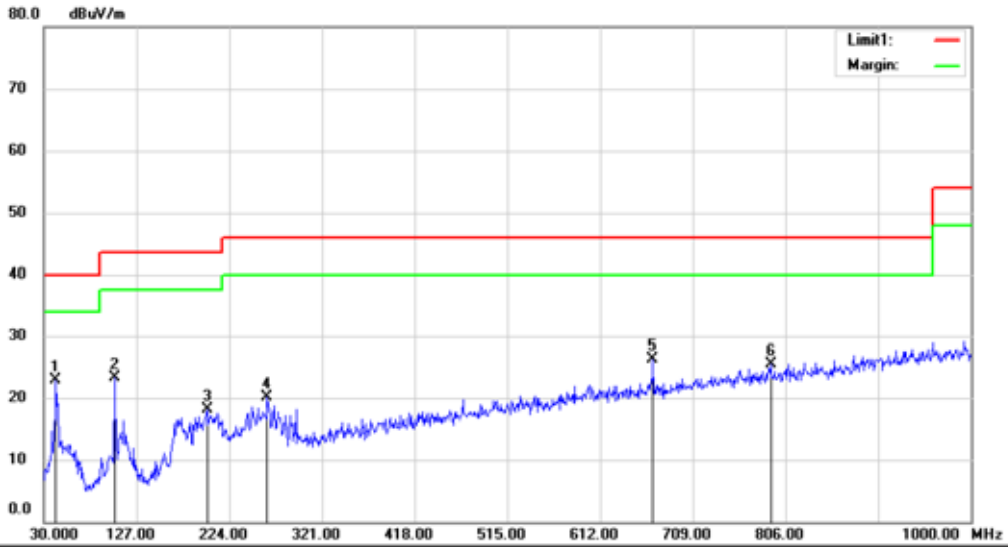


Site: 3m Chamber 3#      Polarization: *Vertical*      Temperature: 24 C  
 Limit: (RE)FCC PART 15C      Power: AC 120V/60Hz      Humidity: 53 %  
 Mode: WIFI 5G TX5260  
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree	Detector	Comment
1	*	42.6100	34.88	-14.26	20.62	40.00	-19.38			QP	
2		103.7200	38.03	-15.64	22.39	43.50	-21.11			QP	
3		204.6000	33.50	-15.49	18.01	43.50	-25.49			QP	
4		249.2200	32.91	-13.78	19.13	46.00	-26.87			QP	
5		667.2900	29.92	-4.31	25.61	46.00	-20.39			QP	
6		829.2800	28.15	-1.76	26.39	46.00	-19.61			QP	

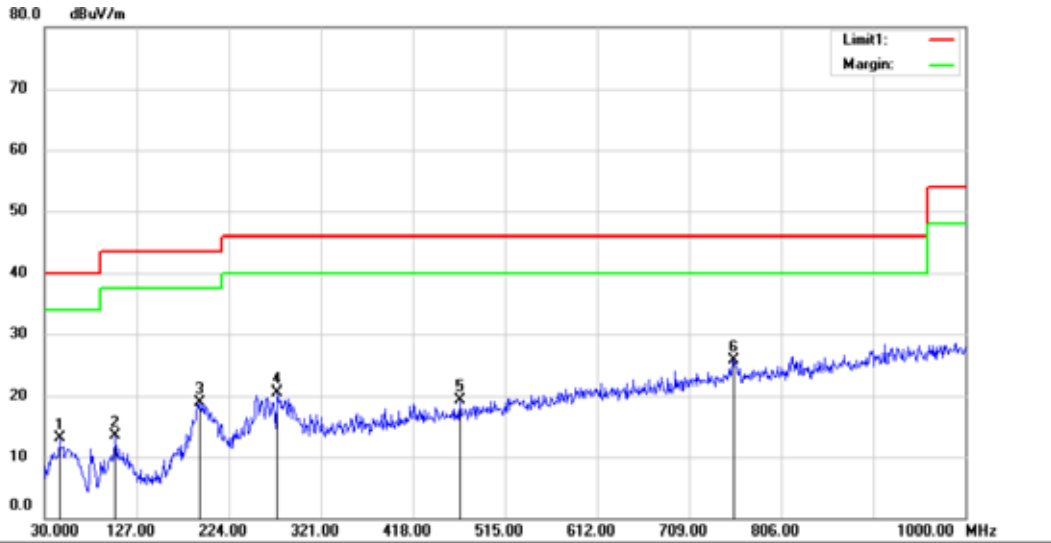






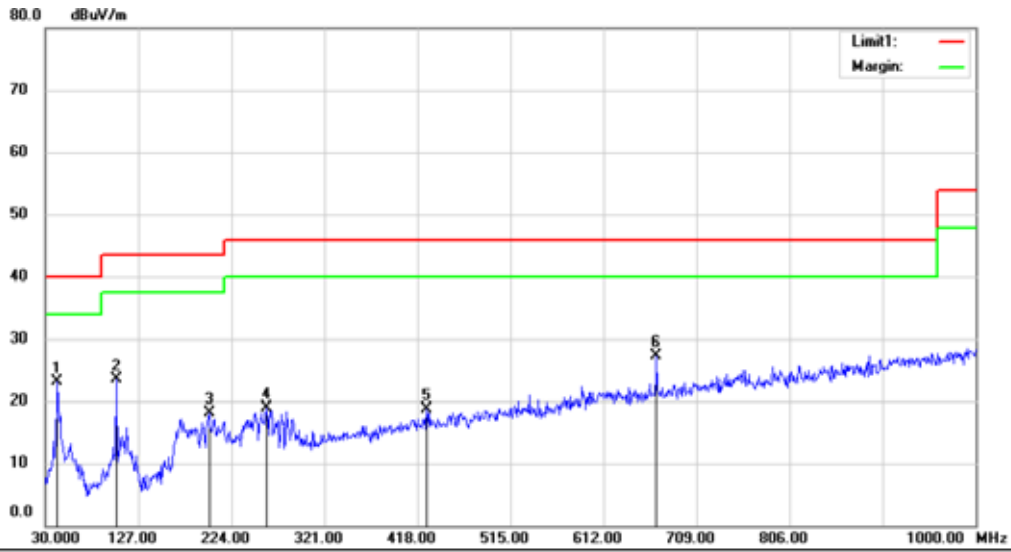
Site: 3m Chamber 3#      Polarization: **Vertical**      Temperature: 24 C  
 Limit: (RE)FCC PART 15C      Power: AC 120V/60Hz      Humidity: 53 %  
 Mode: WIFI 5G TX5280  
 Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	42.6100	37.13	-14.26	22.87	40.00	-17.13	QP		
2		103.7200	38.86	-15.64	23.22	43.50	-20.28	QP		
3		200.7200	33.24	-15.12	18.12	43.50	-25.38	QP		
4		263.7700	33.42	-13.33	20.09	46.00	-25.91	QP		
5		667.2900	30.55	-4.31	26.24	46.00	-19.76	QP		
6		790.4800	27.48	-2.07	25.41	46.00	-20.59	QP		



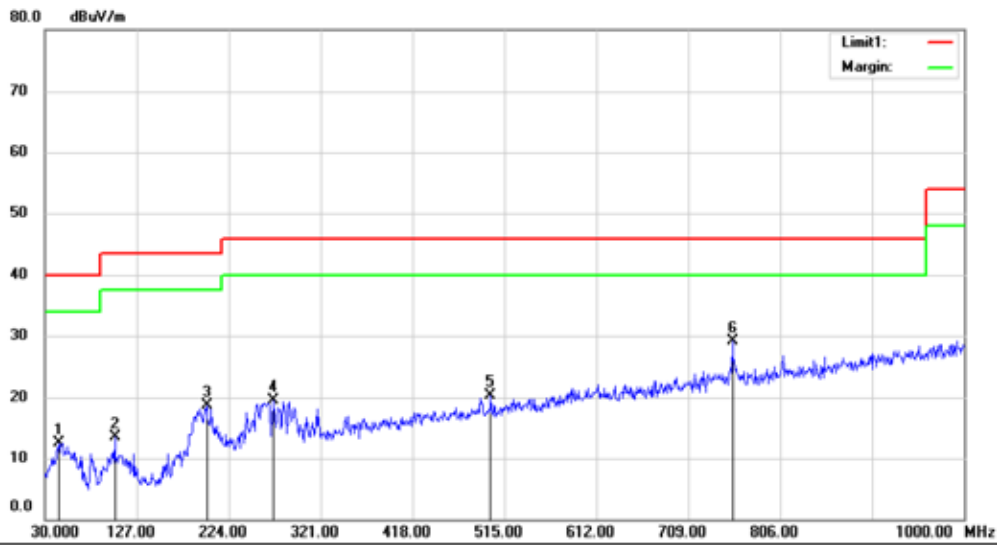
Site 3m Chamber 3# Polarization: **Horizontal** Temperature: 24 C  
 Limit: (RE)FCC PART 15C Power: AC 120V/60Hz Humidity: 53 %  
 Mode:WIFI 5G TX5320  
 Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	
			dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		45.5200	27.15	-14.07	13.08	40.00	-26.92	QP		
2		103.7200	29.23	-15.64	13.59	43.50	-29.91	QP		
3		192.9600	34.85	-15.94	18.91	43.50	-24.59	QP		
4		275.4100	33.44	-12.98	20.46	46.00	-25.54	QP		
5		467.4700	27.65	-8.34	19.31	46.00	-26.69	QP		
6	*	755.5600	28.33	-2.60	25.73	46.00	-20.27	QP		



Site 3m Chamber 3#      Polarization: **Vertical**      Temperature: 24 C  
 Limit: (RE)FCC PART 15C      Power: AC 120V/60Hz      Humidity: 53 %  
 Mode:WIFI 5G TX5320  
 Note:

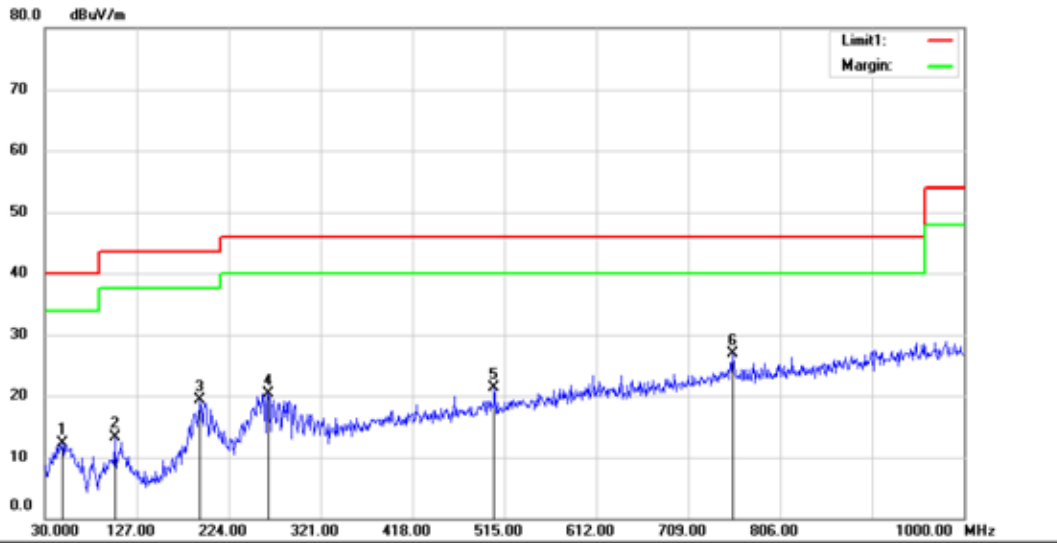
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	42.6100	37.36	-14.26	23.10	40.00	-16.90	QP		
2		103.7200	39.12	-15.64	23.48	43.50	-20.02	QP		
3		200.7200	33.15	-15.12	18.03	43.50	-25.47	QP		
4		260.8600	32.37	-13.46	18.91	46.00	-27.09	QP		
5		427.7000	27.58	-8.91	18.67	46.00	-27.33	QP		
6		667.2900	31.60	-4.31	27.29	46.00	-18.71	QP		



Site: 3m Chamber 3#      Polarization: *Horizontal*      Temperature: 24 C  
 Limit: (RE)FCC PART 15C      Power: AC 120V/60Hz      Humidity: 53 %  
 Mode: WIFI 5G TX5500  
 Note:

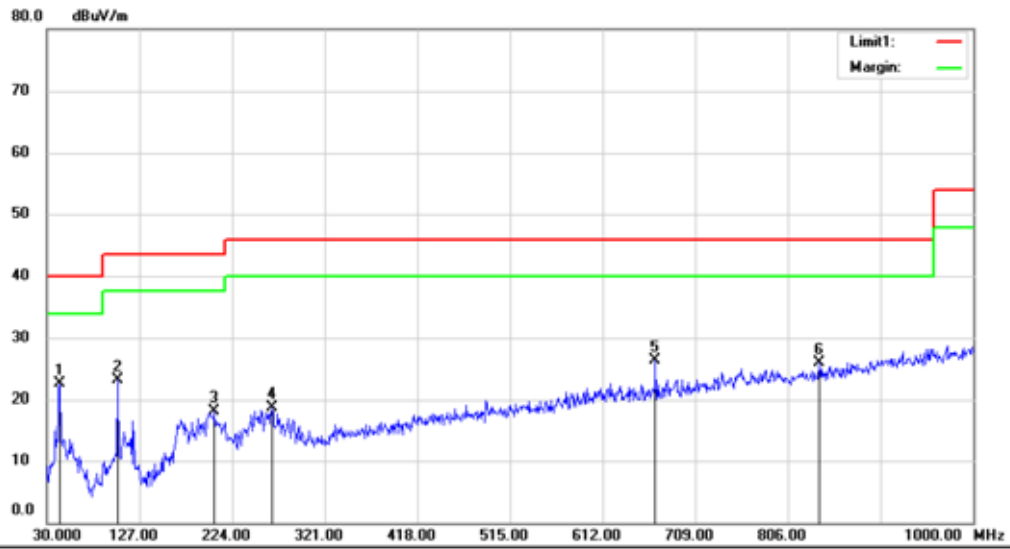
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Antenna Height cm	Table Degree	Comment
1		44.5500	26.63	-14.18	12.45	40.00	-27.55	QP			
2		103.7200	29.21	-15.64	13.57	43.50	-29.93	QP			
3		200.7200	33.81	-15.12	18.69	43.50	-24.81	QP			
4		271.5300	32.67	-13.24	19.43	46.00	-26.57	QP			
5		500.4500	27.99	-7.60	20.39	46.00	-25.61	QP			
6	*	755.5600	31.62	-2.60	29.02	46.00	-16.98	QP			





Site 3m Chamber 3# Polarization: *Horizontal* Temperature: 24 C  
 Limit: (RE)FCC PART 15C Power: AC 120V/60Hz Humidity: 53 %  
 Mode:WIFI 5G TX5600  
 Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		48.4300	26.14	-13.87	12.27	40.00	-27.73	QP	
2		103.7200	28.99	-15.64	13.35	43.50	-30.15	QP	
3		193.9300	35.16	-15.83	19.33	43.50	-24.17	QP	
4		265.7100	33.59	-13.27	20.32	46.00	-25.68	QP	
5		504.3300	28.83	-7.54	21.29	46.00	-24.71	QP	
6	*	755.5600	29.55	-2.60	26.95	46.00	-19.05	QP	



Site 3m Chamber 3#      Polarization: *Vertical*      Temperature: 24 C  
 Limit: (RE)FCC PART 15C      Power: AC 120V/60Hz      Humidity: 53 %  
 Mode:WIFI 5G TX5600  
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree	Detector	Comment
1	*	43.5800	36.71	-14.25	22.46	40.00	-17.54			QP	
2		103.7200	38.80	-15.64	23.16	43.50	-20.34			QP	
3		205.5700	33.68	-15.53	18.15	43.50	-25.35			QP	
4		265.7100	31.88	-13.27	18.61	46.00	-27.39			QP	
5		667.2900	30.65	-4.31	26.34	46.00	-19.66			QP	
6		838.9800	27.44	-1.45	25.99	46.00	-20.01			QP	





Site 3m Chamber 3# Polarization: *Horizontal* Temperature: 24 C  
 Limit: (RE)FCC PART 15C Power: AC 120V/60Hz Humidity: 53 %  
 Mode:WIFI 5G TX5700  
 Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree
1		54.2500	27.84	-14.28	13.56	40.00	-26.44	QP	
2		103.7200	30.04	-15.64	14.40	43.50	-29.10	QP	
3		198.7800	34.82	-15.21	19.61	43.50	-23.89	QP	
4		256.0100	34.48	-13.51	20.97	46.00	-25.03	QP	
5		755.5600	29.66	-2.60	27.06	46.00	-18.94	QP	
6	*	945.6800	28.88	0.54	29.42	46.00	-16.58	QP	

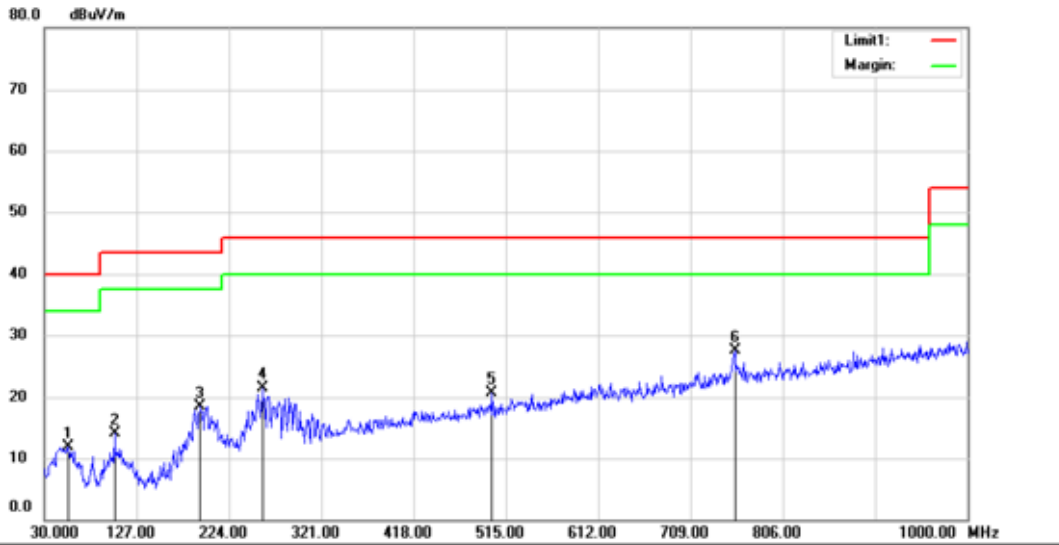






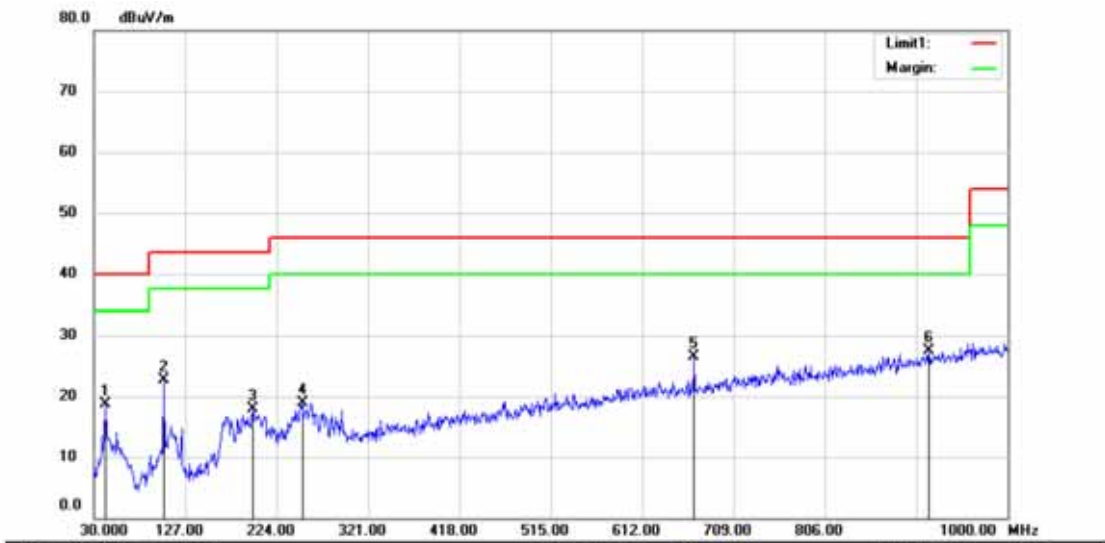






Site 3m Chamber 3# Polarization: **Horizontal** Temperature: 24 C  
 Limit: (RE)FCC PART 15C Power: AC 120V/60Hz Humidity: 53 %  
 Mode:WIFI 5G TX5825  
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Antenna Height cm	Table Degree	Comment
1		55.2200	26.40	-14.50	11.90	40.00	-28.10	QP			
2		103.7200	29.75	-15.64	14.11	43.50	-29.39	QP			
3		192.9600	34.47	-15.94	18.53	43.50	-24.97	QP			
4		259.8900	34.97	-13.49	21.48	46.00	-24.52	QP			
5		500.4500	28.26	-7.60	20.66	46.00	-25.34	QP			
6	*	755.5600	30.17	-2.60	27.57	46.00	-18.43	QP			



Site 3m Chamber 3# Polarization: **Vertical** Temperature: 24 C  
 Limit: (RE)FCC PART 15C Power: AC 120V/60Hz Humidity: 53 %  
 Mode:WIFI 5G TX5825

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		41.6400	33.05	-14.41	18.64	40.00	-21.36	QP		
2		103.7200	38.44	-15.64	22.80	43.50	-20.70	QP		
3		198.7800	33.06	-15.21	17.85	43.50	-25.65	QP		
4		251.1600	32.65	-13.69	18.96	46.00	-27.04	QP		
5		667.2900	30.79	-4.31	26.48	46.00	-19.52	QP		
6	*	916.5800	27.43	0.08	27.51	46.00	-18.49	QP		



## 8.6 POWER LINE CONDUCTED EMISSIONS

### 8.6.1 Applicable Standard

According to FCC Part 15.207(a)

### 8.6.2 Conformance Limit

Frequency(MHz)	Conducted Emission Limit	
	Quasi-peak	Average
0.15-0.5	66-56	56-46
0.5-5.0	56	46
5.0-30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

### 8.6.3 Test Configuration

Test according to clause 6.3 conducted emission test setup

### 8.6.4 Test Procedure

The EUT was placed on a table which is 0.8m above ground plane.

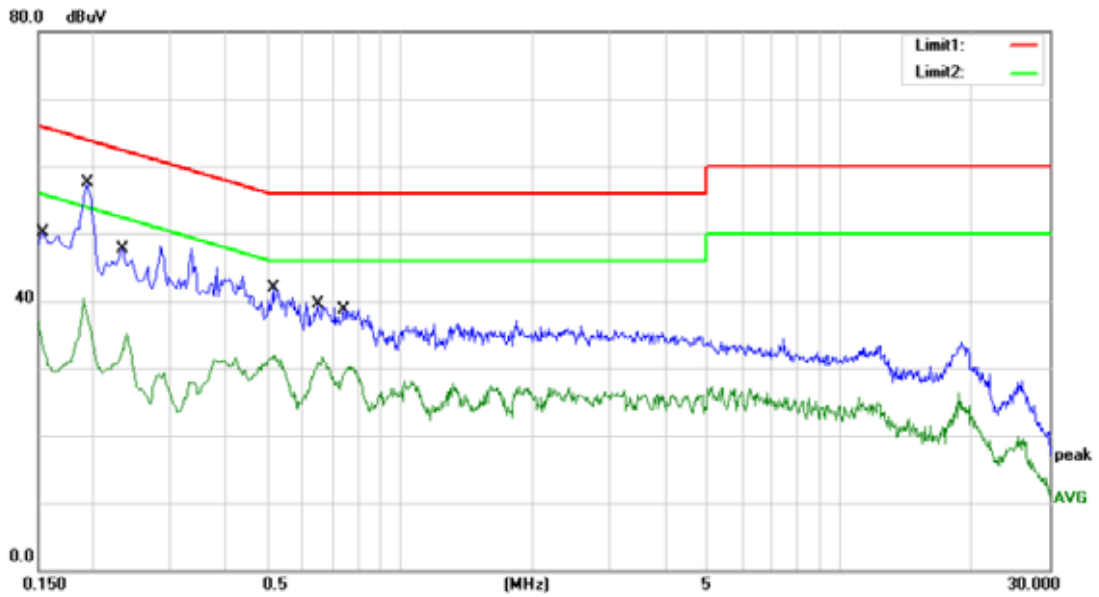
Maximum procedure was performed on the highest emissions to ensure EUT compliance.

Repeat above procedures until all frequency measured were complete.

### 8.6.5 Test Results

Pass

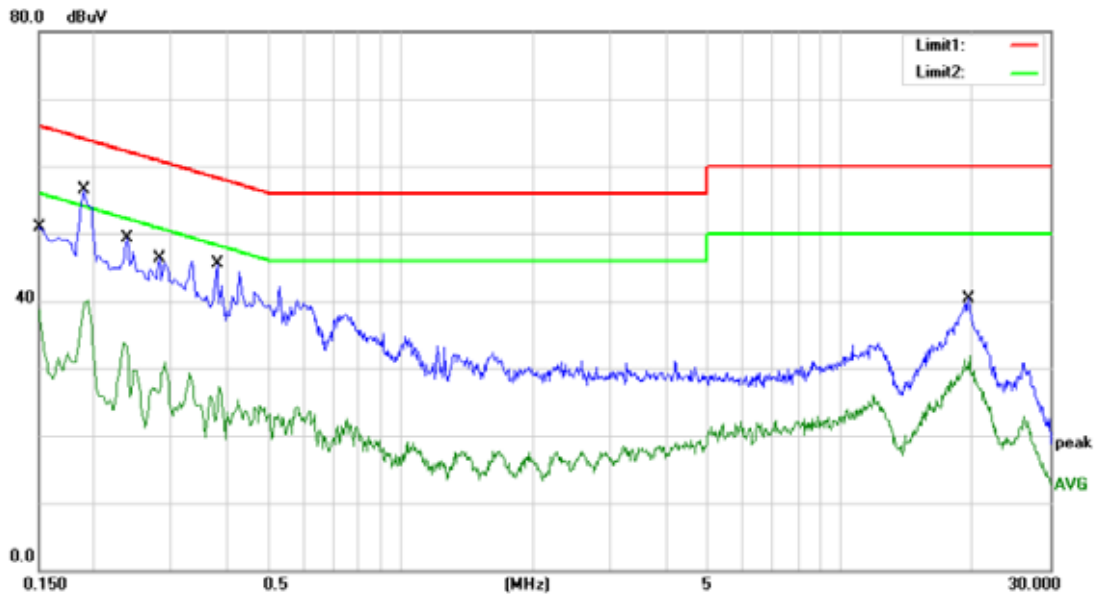
All mode and the voltage 120V and 240V have been tested, and show the worst result. (802.11a low channel, 120V~ 60Hz) as bellow.



Site Conduction #2  
 Limit: (CE)FCC PART 15 C  
 Mode: WIFI+BT ON  
 Note:

Phase: **L1**  
 Power: AC 120V/60Hz  
 Temperature: 24.9  
 Humidity: 54 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1540	40.28	9.89	50.17	65.78	-15.61	QP	
2		0.1540	27.07	9.89	36.96	55.78	-18.82	AVG	
3	*	0.1940	47.68	9.89	57.57	63.86	-6.29	QP	
4		0.1940	30.13	9.89	40.02	53.86	-13.84	AVG	
5		0.2340	37.71	9.90	47.61	62.31	-14.70	QP	
6		0.2340	25.16	9.90	35.06	52.31	-17.25	AVG	
7		0.5140	32.04	9.92	41.96	56.00	-14.04	QP	
8		0.5140	22.00	9.92	31.92	46.00	-14.08	AVG	
9		0.6500	29.54	9.94	39.48	56.00	-16.52	QP	
10		0.6500	21.73	9.94	31.67	46.00	-14.33	AVG	
11		0.7460	28.79	9.94	38.73	56.00	-17.27	QP	
12		0.7460	20.36	9.94	30.30	46.00	-15.70	AVG	



Site Conduction #2 Phase: **N** Temperature: 24.9  
 Limit: (CE)FCC PART 15 C Power: AC 120V/60Hz Humidity: 54 %  
 Mode: WIFI+BT ON  
 Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.1500	40.94	9.89	50.83	66.00	-15.17	QP	
2		0.1500	28.78	9.89	38.67	56.00	-17.33	AVG	
3	*	0.1900	46.62	9.89	56.51	64.04	-7.53	QP	
4		0.1900	30.27	9.89	40.16	54.04	-13.88	AVG	
5		0.2380	39.36	9.90	49.26	62.17	-12.91	QP	
6		0.2380	23.81	9.90	33.71	52.17	-18.46	AVG	
7		0.2820	36.33	9.90	46.23	60.76	-14.53	QP	
8		0.2820	20.98	9.90	30.88	50.76	-19.88	AVG	
9		0.3820	35.63	9.91	45.54	58.24	-12.70	QP	
10		0.3820	17.30	9.91	27.21	48.24	-21.03	AVG	
11		19.5700	30.05	10.16	40.21	60.00	-19.79	QP	
12		19.5700	21.72	10.16	31.88	50.00	-18.12	AVG	

## 8.7 ANTENNA APPLICATION

### 8.7.1 Antenna Requirement

Standard	Requirement
FCC CRF Part 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 shall be considered sufficient to comply with the provisions of this section. 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. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

For intentional device, according to FCC 47 CFR 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. And according to FCC 47 CFR Section 15.407 (a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

### 8.7.2 Result

PASS.

The EUT has two Matel antennas for WIFI, the antenna max gain is 4.51 dBi,

Note:

- Antenna use a permanently attached antenna which is not replaceable.
- Not using a standard antenna jack or electrical connector for antenna replacement
- The antenna has to be professionally installed (please provide method of installation)

W

which in accordance to section 15.203, please refer to the internal photos.