

# FCC C2PC Test Report

**FCC ID** : PY313200235  
**Equipment** : LTE Gateway  
**Model No.** : LG6100D  
**Brand Name** : NETGEAR  
**Applicant** : NETGEAR, Inc.  
**Address** : 350 East Plumeria Drive, San Jose, California  
95134, USA  
**Standard** : 47 CFR FCC Part 15.407  
**Received Date** : Nov. 05, 2013  
**Tested Date** : Nov. 28 ~ Dec. 02, 2013

We, International Certification Corp., would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It may be duplicated completely for legal use with the approval of the applicant. It shall not be reproduced except in full without the written approval of our laboratory.

Approved & Reviewed by:

  
\_\_\_\_\_  
Gary Chang / Manager



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## Release Record

Report No.	Version	Description	Issued Date
FR3O2308AN-02	Rev. 01	Initial issue	Jan. 15, 2014

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## Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.407(b)(1)(2)(3) 15.209	Radiated Emissions	[dBuV/m at 3m]: 6986.70MHz 68.07 (Margin -0.13dB) - PK	Pass

# 1 General Description

## 1.1 Information

This report is issued as a FCC Class II Permissive Change. No hardware and software change for this device. The modification is only adding a foundation and absorber therefore only radiated emission is performed for this C2PC.

### 1.1.1 Specification of the Equipment under Test (EUT)

RF General Information					
IEEE Std. 802.11	Frequency Range (MHz)	Ch. Freq. (MHz)	Channel Number	Transmit Chains ( $N_{TX}$ )	Data Rate / MCS
a	5150-5250	5180-5240	36-48 [4]	2	6-54 Mbps
n (HT20)	5150-5250	5180-5240	36-48 [4]	2	MCS 0-15
n (HT40)	5150-5250	5190-5230	38-46 [2]	2	MCS 0-15
ac (VHT20)	5150-5250	5180-5240	36-48 [4]	2	MCS 0-9
ac (VHT40)	5150-5250	5190-5230	38-46 [2]	2	MCS 0-9
ac (VHT80)	5150-5250	5210	42 [1]	2	MCS 0-9

Note 1: RF output power specifies that Maximum Conducted Output Power.  
 Note 2: 802.11a/n uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.

### 1.1.2 Antenna Details

Model	Type	Gain (dBi)	Connector
401-10007-01	PCB Dipole Antenna	2.9	U.FL

### 1.1.3 EUT Operational Condition

<b>Power Supply Type</b>	12Vdc from AC adapter
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### 1.1.4 Accessories

Accessories		
No.	Equipment	Description
1	AC adapter 1	Brand Name: NETGEAR Model Name: P030WF120B Power Rating: I/P: 100-240Vac, 50-60Hz, 1.0A O/P: 12Vdc, 2.5A Power Line: DC 1.8m non-shielded cable w/o core
2	AC adapter 2	Brand Name: NETGEAR Model Name: MU30-5120250-A1 Power Rating: I/P: 100-240Vac, 50-60Hz, 0.8A O/P: 12Vdc, 2.5A Power Line: DC 1.8m non-shielded cable w/o core
3	AC adapter 3	Brand Name: NETGEAR Model Name: SAS030F1 Power Rating: I/P: 100-120Vac, 47-63Hz, 0.9A O/P: 12Vdc, 2.5A Power Line: DC 1.8m non-shielded cable w/o core

### 1.1.5 Channel List

Frequency band (MHz)		5150~5250	
802.11 a / HT20 / VHT20		HT40 / VHT40	
Channel	Frequency(MHz)	Channel	Frequency(MHz)
36	5180	38	5190
40	5200	46	5230
44	5220	<b>VHT80</b>	
48	5240	42	5210

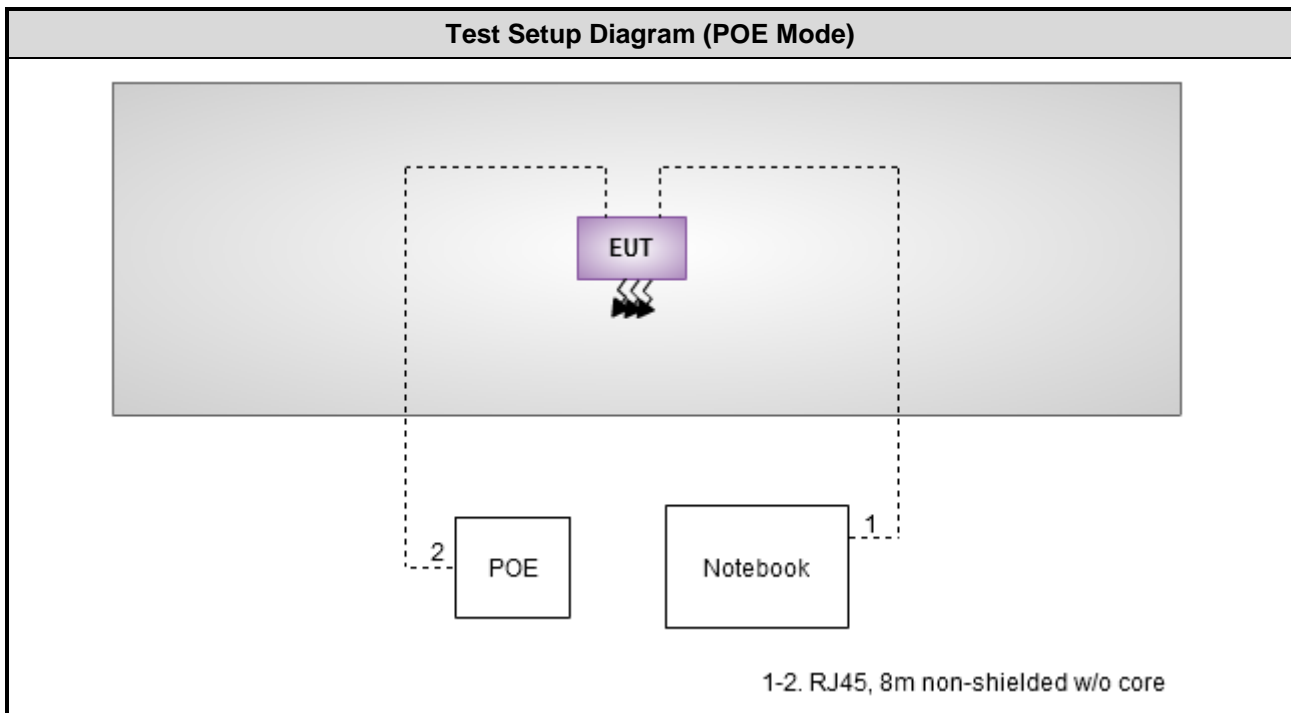
## 1.2 Local Support Equipment List

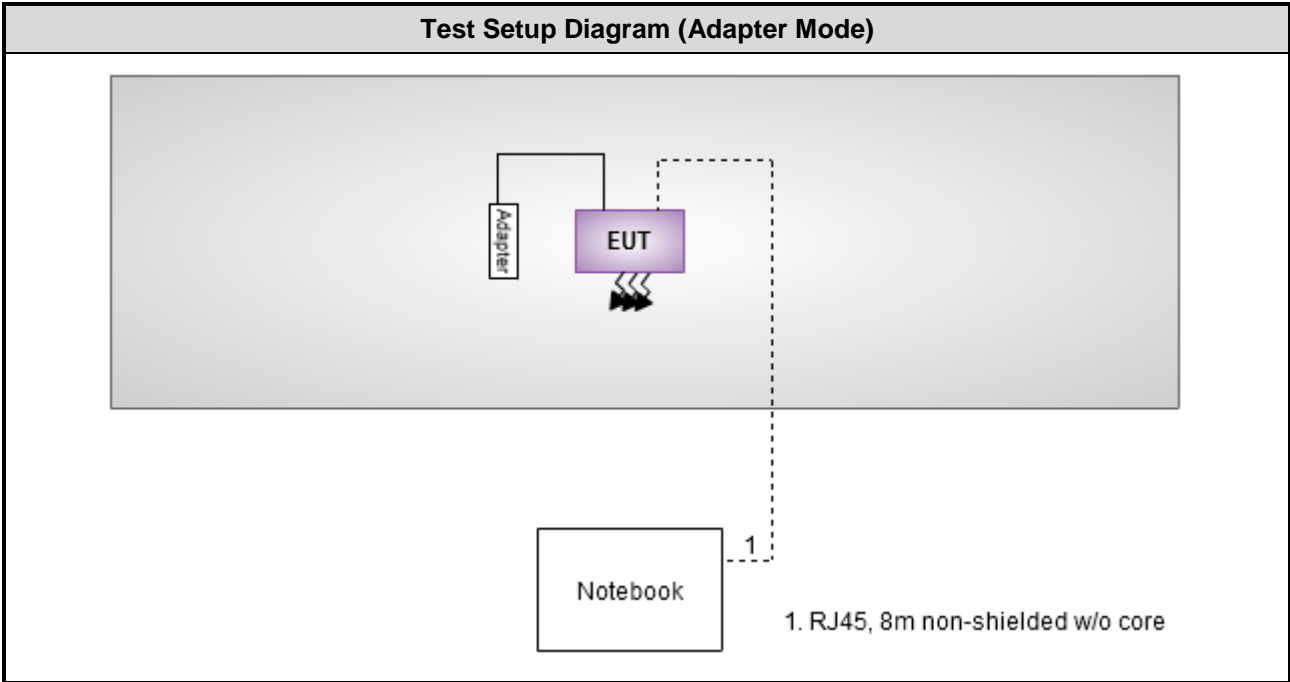
Support Equipment List						
No.	Equipment	Brand	Model	S/N	FCC ID	Signal cable / Length (m)
1	Notebook	DELL	E6430	---	DoC	RJ45, 8m non-shielded w/o core.
2	POE	PowerDsine	PD-3001G C/AC	---	DoC	RJ45, 8m non-shielded w/o core.

Note:

- 1) No. 2 was supplied by applicant.
- 2) POE is for POE mode only.

## 1.3 Test Setup Chart







## 1.4 The Equipment List

Test Item	Radiated Emission				
Test Site	966 chamber 2 / (03CH02-WS)				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
3m semi-anechoic chamber	CHAMPRO	SAC-03	03CH02-WS	Jan. 02, 2013	Jan. 01, 2014
Spectrum Analyzer	R&S	FSV40	101499	Jan. 28, 2013	Jan. 27, 2014
Receiver	R&S	ESR3	101657	Jan. 30, 2013	Jan. 29, 2014
Bilog Antenna	Schwarzbeck	VULB9168	VULB9168-524	Jan. 11, 2013	Jan. 10, 2014
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120D	BBHA 9120 D 1095	Jan. 29, 2013	Jan. 28, 2014
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Jan. 14, 2013	Jan. 13, 2014
Amplifier	Burgeon	BPA-530	100218	Dec. 14, 2012	Dec. 13, 2013
Amplifier	Agilent	83017A	MY39501309	Dec. 18, 2012	Dec. 17, 2013
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16140/4	Dec. 25, 2012	Dec. 24, 2013
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16018/4	Dec. 25, 2012	Dec. 24, 2013
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16015/4	Dec. 25, 2012	Dec. 24, 2013
RF Cable-R03m	Woken	CFD400NL-LW	CFD400NL-003	Dec. 25, 2012	Dec. 24, 2013
RF Cable-R10m	Woken	CFD400NL-LW	CFD400NL-004	Dec. 25, 2012	Dec. 24, 2013
control	EM Electronics	EM1000	060608	N/A	N/A
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber 2 / (03CH02-WS)				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 15, 2012	Nov. 14, 2014
Amplifier	MITEQ	AMF-6F-260400	9121372	Apr. 19, 2013	Apr. 18, 2015
Note: Calibration Interval of instruments listed above is two year.					

## 1.5 Testing Applied Standards

According to the specification of EUT, the EUT must comply with following standards and KDB documents.

47 CFR FCC Part 15.407

ANSI C63.10-2009

FCC KDB 412172

FCC KDB 789033 D01 General UNII Test procedures v01r03

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

## 1.6 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

Measurement Uncertainty	
Parameters	Uncertainty
Radiated emission	±2.49 dB

## 2 Test Configuration

### 2.1 Testing Condition

Test Item	Test Site	Ambient Condition	Tested By
Radiated Emissions	03CH02-WS	18-20°C / 62-68%	Anderson Hong Aska Huang

➤ FCC site registration No.: 657002

➤ IC site registration No.: 10807A-2

### 2.2 The Worst Test Modes and Channel Details

Test item	Modulation Mode	Test Frequency (MHz)	Data Rate (Mbps) / MCS	Test Configuration
Radiated Emissions ≤1GHz	VHT20	5200	MCS 0	1, 2
Radiated Emissions >1GHz	11a	5180 / 5200 / 5240	6 Mbps	1
	VHT20	5180 / 5200 / 5240	MCS 0	
	VHT40	5190 / 5230	MCS 0	
	VHT80	5210	MCS 0	

**NOTE:**

1. The tests reported herein were performed according to the original worst adapter 2 for final testing.
2. EUT has 2 types of power supply; each type is selected to perform radiated emission test as below test configuration.
  - 1) Configuration 1: POE Mode.
  - 2) Configuration 2: Adapter Mode.

### 3 Transmitter Test Results

#### 3.1 Transmitter Radiated Emissions

##### 3.1.1 Limit of Transmitter Radiated Emissions

Restricted Band Emissions Limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

**Note 1:**  
Qusai-Peak value is measured for frequency below 1GHz except for 9–90 kHz, 110–490 kHz frequency band. Peak and average value are measured for frequency above 1GHz. The limit on average radio frequency emission is as above table. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit

**Note 2:**  
Measurements may be performed at a distance other than what is specified provided. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor as below, Frequency at or above 30 MHz: 20 dB/decade Frequency below 30 MHz: 40 dB/decade.

Un-restricted band emissions above 1GHz Limit	
Operating Band	Limit
5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.725 - 5.825 GHz	5.715 5.725 GHz: e.i.r.p. -17 dBm [78.2 dBuV/m@3m] 5.825 5.835 GHz: e.i.r.p. -17 dBm [78.2 dBuV/m@3m] Other un-restricted band: e.i.r.p. -27 dBm [68.2 dBuV/m@3m]

**Note 1:** Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

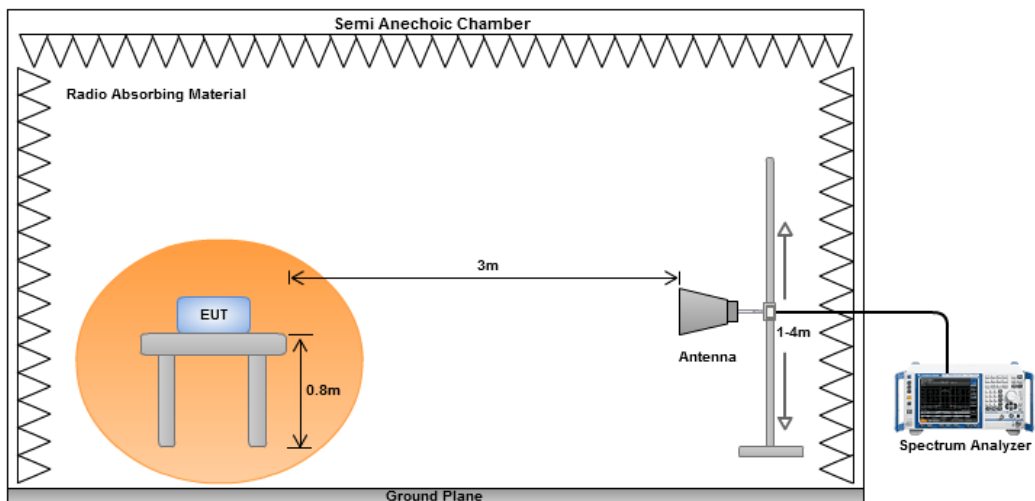
### 3.1.2 Test Procedures

1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at a height of 0.8 m test table above the ground plane.
2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1 m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
3. This investigation is performed with the EUT rotated 360°, the antenna height scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.

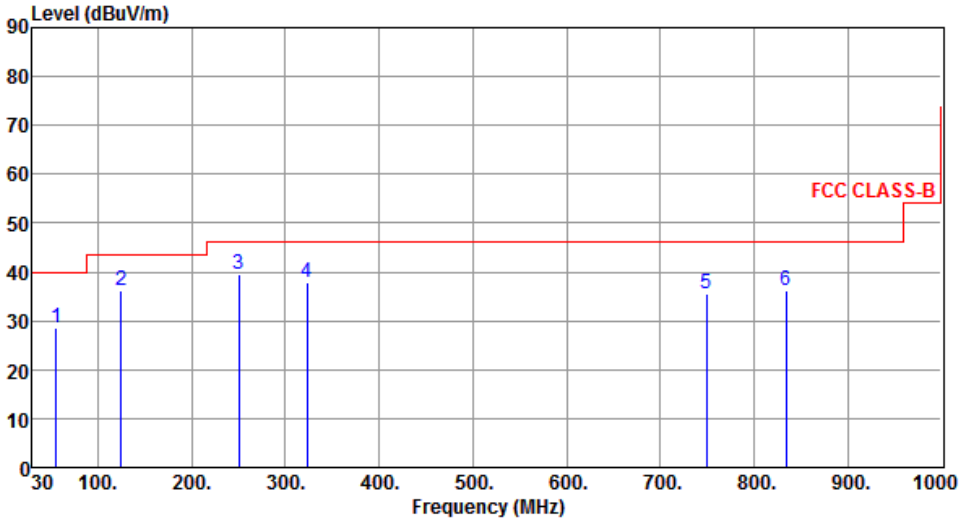
Note:

1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above 1GHz.

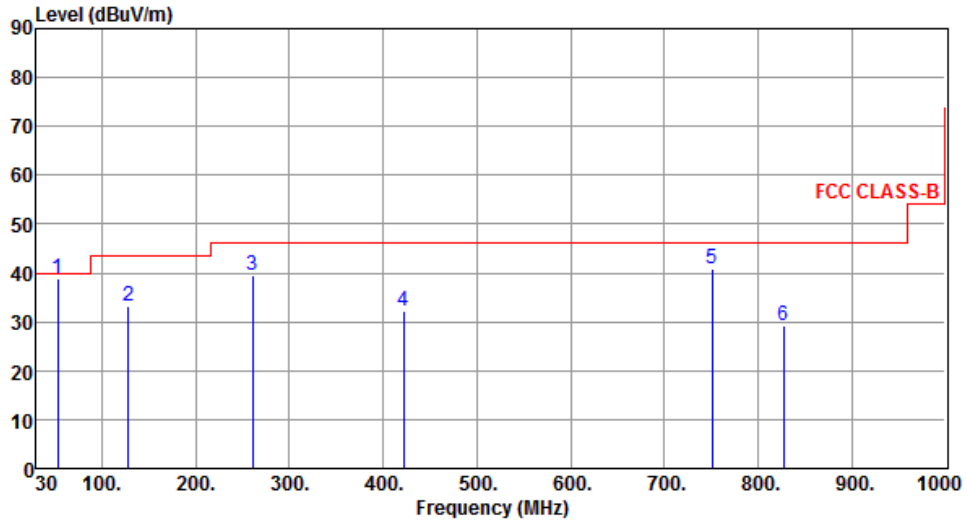
### 3.1.3 Test Setup



### 3.1.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

Modulation	VHT20	Test Freq. (MHz)	5200																																																																								
Polarization	Horizontal	Test Configuration	1																																																																								
 <p>The graph plots Level (dBuV/m) on the y-axis (0 to 90) against Frequency (MHz) on the x-axis (30 to 1000). A red line represents the FCC CLASS-B limit, which is 40 dBuV/m from 30 to 100 MHz, 45 dBuV/m from 100 to 200 MHz, 46 dBuV/m from 200 to 1000 MHz, and 55 dBuV/m at 1000 MHz. Six blue vertical lines represent emission peaks labeled 1 through 6, with their corresponding data listed in the table below.</p>																																																																											
	<table border="1"> <thead> <tr> <th>Freq.</th> <th>Emission level</th> <th>Limit</th> <th>Margin</th> <th>SA reading</th> <th>Factor</th> <th>Remark</th> <th>ANT High cm</th> <th>Turn Table deg</th> </tr> <tr> <th>MHz</th> <th>dBuV/m</th> <th>dBuV/m</th> <th>dB</th> <th>dBuV</th> <th>dB</th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>55.22</td> <td>28.58</td> <td>40.00</td> <td>-11.42</td> <td>44.90</td> <td>-16.32</td> <td>Peak</td> <td>---</td> </tr> <tr> <td>2</td> <td>125.06</td> <td>36.10</td> <td>43.50</td> <td>-7.40</td> <td>54.35</td> <td>-18.25</td> <td>Peak</td> <td>---</td> </tr> <tr> <td>3</td> <td>250.19</td> <td>39.60</td> <td>46.00</td> <td>-6.40</td> <td>56.94</td> <td>-17.34</td> <td>Peak</td> <td>---</td> </tr> <tr> <td>4</td> <td>322.94</td> <td>37.93</td> <td>46.00</td> <td>-8.07</td> <td>52.97</td> <td>-15.04</td> <td>Peak</td> <td>---</td> </tr> <tr> <td>5</td> <td>749.74</td> <td>35.52</td> <td>46.00</td> <td>-10.48</td> <td>42.14</td> <td>-6.62</td> <td>Peak</td> <td>---</td> </tr> <tr> <td>6</td> <td>834.13</td> <td>36.09</td> <td>46.00</td> <td>-9.91</td> <td>41.72</td> <td>-5.63</td> <td>Peak</td> <td>---</td> </tr> </tbody> </table>	Freq.	Emission level	Limit	Margin	SA reading	Factor	Remark	ANT High cm	Turn Table deg	MHz	dBuV/m	dBuV/m	dB	dBuV	dB				1	55.22	28.58	40.00	-11.42	44.90	-16.32	Peak	---	2	125.06	36.10	43.50	-7.40	54.35	-18.25	Peak	---	3	250.19	39.60	46.00	-6.40	56.94	-17.34	Peak	---	4	322.94	37.93	46.00	-8.07	52.97	-15.04	Peak	---	5	749.74	35.52	46.00	-10.48	42.14	-6.62	Peak	---	6	834.13	36.09	46.00	-9.91	41.72	-5.63	Peak	---		
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<p>Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)            *Factor includes antenna factor , cable loss and amplifier gain            Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).</p>																																																																											

<b>Modulation</b>	VHT20	<b>Test Freq. (MHz)</b>	5200
<b>Polarization</b>	Vertical	<b>Test Configuration</b>	1



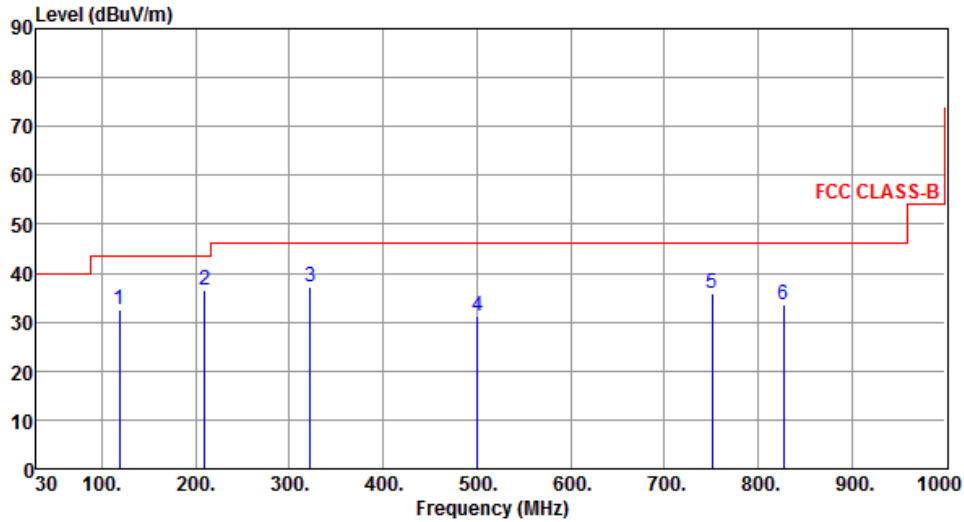
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	53.28	38.75	40.00	-1.25	54.93	-16.18	QP	100	36
2	127.97	33.07	43.50	-10.43	51.06	-17.99	Peak	---	---
3	260.86	39.61	46.00	-6.39	56.58	-16.97	Peak	---	---
4	421.88	32.14	46.00	-13.86	44.63	-12.49	Peak	---	---
5	750.71	40.97	46.00	-5.03	47.58	-6.61	Peak	---	---
6	827.34	29.07	46.00	-16.93	34.79	-5.72	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

\*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

<b>Modulation</b>	VHT20	<b>Test Freq. (MHz)</b>	5200
<b>Polarization</b>	Horizontal	<b>Test Configuration</b>	2



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	118.27	32.55	43.50	-10.95	51.42	-18.87	Peak	---	---
2	209.45	36.63	43.50	-6.87	55.49	-18.86	Peak	---	---
3	321.97	37.15	46.00	-8.85	52.21	-15.06	Peak	---	---
4	500.45	31.34	46.00	-14.66	42.28	-10.94	Peak	---	---
5	750.71	36.00	46.00	-10.00	42.61	-6.61	Peak	---	---
6	827.34	33.56	46.00	-12.44	39.28	-5.72	Peak	---	---

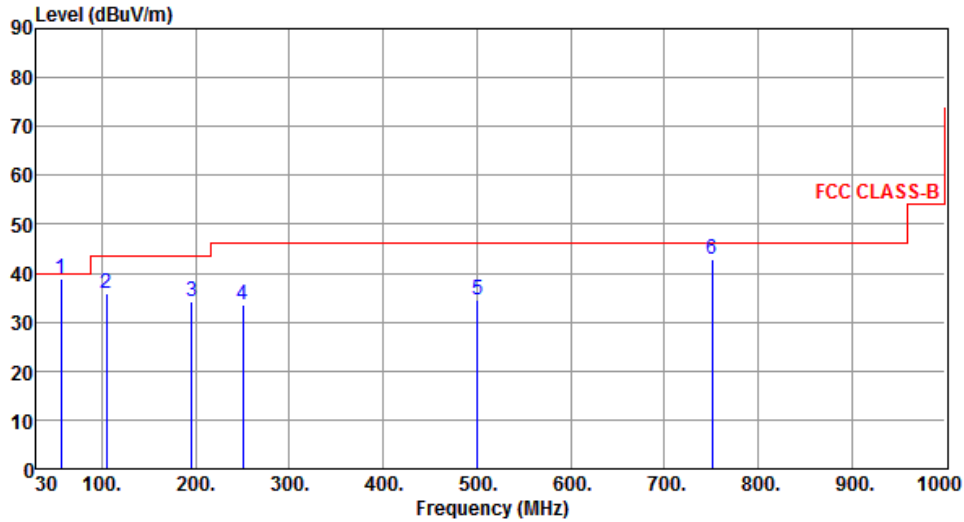
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

\*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).



<b>Modulation</b>	VHT20	<b>Test Freq. (MHz)</b>	5200
<b>Polarization</b>	Vertical	<b>Test Configuration</b>	2



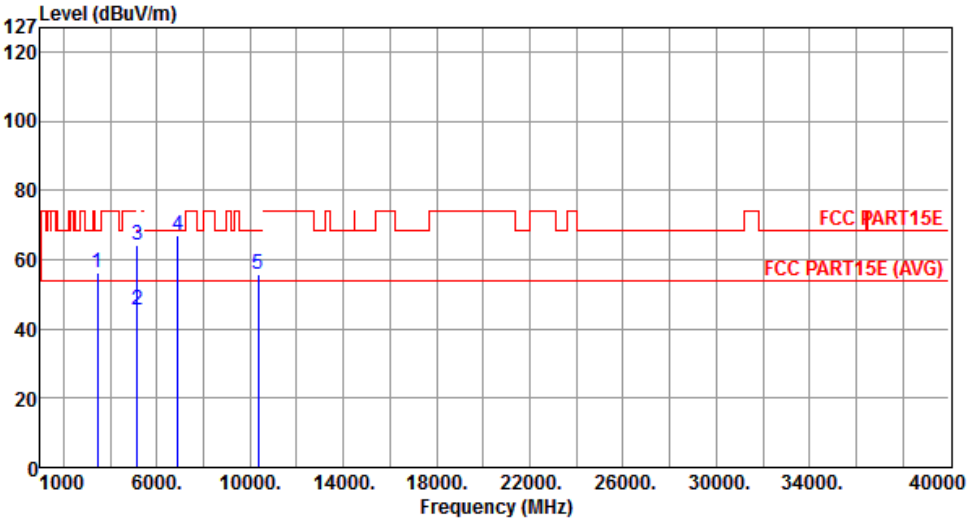
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	56.19	38.70	40.00	-1.30	55.09	-16.39	QP	100	43
2	104.69	35.88	43.50	-7.62	56.39	-20.51	Peak	---	---
3	195.87	34.07	43.50	-9.43	53.16	-19.09	Peak	---	---
4	250.19	33.63	46.00	-12.37	50.97	-17.34	Peak	---	---
5	500.45	34.60	46.00	-11.40	45.54	-10.94	Peak	---	---
6	750.71	42.93	46.00	-3.07	49.54	-6.61	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

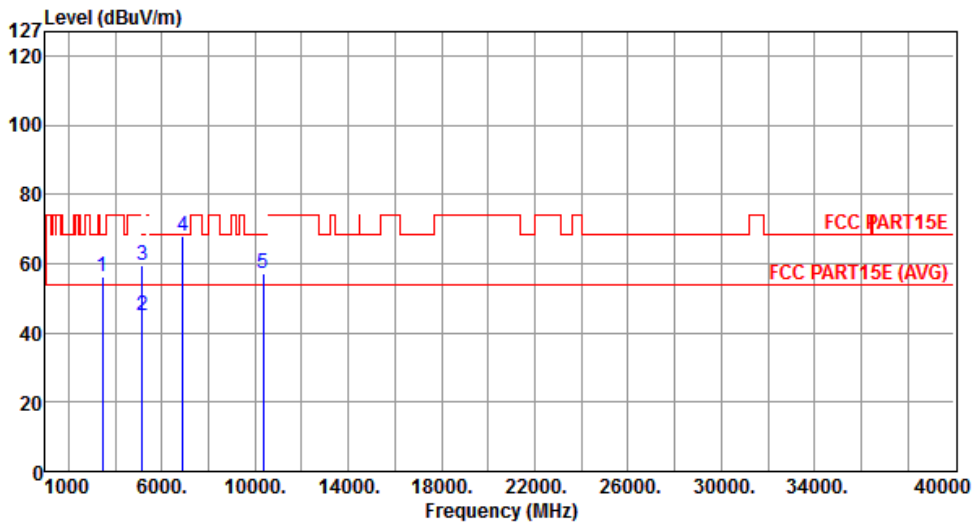
\*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

### 3.1.5 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 11a

Modulation	11a	Test Freq. (MHz)	5180																																																													
Polarization	Horizontal																																																															
																																																																
	<table border="1"> <thead> <tr> <th>Freq.</th> <th>Emission level</th> <th>Limit</th> <th>Margin</th> <th>SA reading</th> <th>Factor</th> <th>Remark</th> <th>ANT High</th> <th>Turn Table</th> </tr> <tr> <th>MHz</th> <th>dBuV/m</th> <th>dBuV/m</th> <th>dB</th> <th>dBuV</th> <th>dB</th> <th></th> <th>cm</th> <th>deg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3453.30</td> <td>56.46</td> <td>68.20</td> <td>-11.74</td> <td>55.71</td> <td>0.75</td> <td>Peak</td> <td>---</td> </tr> <tr> <td>2</td> <td>5150.00</td> <td>45.66</td> <td>54.00</td> <td>-8.34</td> <td>40.45</td> <td>5.21</td> <td>Average</td> <td>---</td> </tr> <tr> <td>3</td> <td>5150.00</td> <td>64.36</td> <td>74.00</td> <td>-9.64</td> <td>59.15</td> <td>5.21</td> <td>Peak</td> <td>---</td> </tr> <tr> <td>4</td> <td>6906.70</td> <td>66.85</td> <td>68.20</td> <td>-1.35</td> <td>58.23</td> <td>8.62</td> <td>Peak</td> <td>---</td> </tr> <tr> <td>5</td> <td>10360.00</td> <td>55.78</td> <td>68.20</td> <td>-12.42</td> <td>42.23</td> <td>13.55</td> <td>Peak</td> <td>---</td> </tr> </tbody> </table>	Freq.	Emission level	Limit	Margin	SA reading	Factor	Remark	ANT High	Turn Table	MHz	dBuV/m	dBuV/m	dB	dBuV	dB		cm	deg	1	3453.30	56.46	68.20	-11.74	55.71	0.75	Peak	---	2	5150.00	45.66	54.00	-8.34	40.45	5.21	Average	---	3	5150.00	64.36	74.00	-9.64	59.15	5.21	Peak	---	4	6906.70	66.85	68.20	-1.35	58.23	8.62	Peak	---	5	10360.00	55.78	68.20	-12.42	42.23	13.55	Peak	---
Freq.	Emission level	Limit	Margin	SA reading	Factor	Remark	ANT High	Turn Table																																																								
MHz	dBuV/m	dBuV/m	dB	dBuV	dB		cm	deg																																																								
1	3453.30	56.46	68.20	-11.74	55.71	0.75	Peak	---																																																								
2	5150.00	45.66	54.00	-8.34	40.45	5.21	Average	---																																																								
3	5150.00	64.36	74.00	-9.64	59.15	5.21	Peak	---																																																								
4	6906.70	66.85	68.20	-1.35	58.23	8.62	Peak	---																																																								
5	10360.00	55.78	68.20	-12.42	42.23	13.55	Peak	---																																																								
<p>Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)            *Factor includes antenna factor , cable loss and amplifier gain            Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).</p>																																																																

<b>Modulation</b>	11a	<b>Test Freq. (MHz)</b>	5180
<b>Polarization</b>	Vertical		



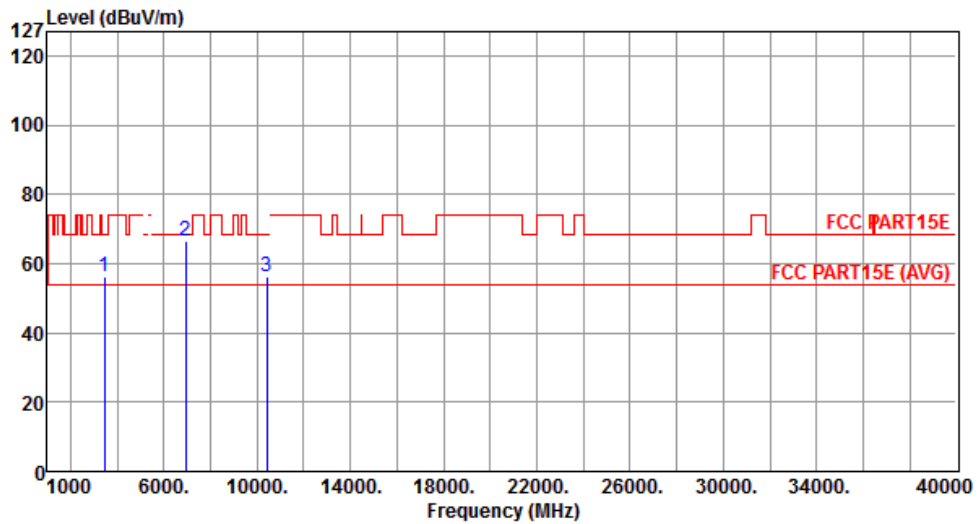
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3453.30	56.37	68.20	-11.83	55.62	0.75	Peak	---	---
2	5150.00	44.88	54.00	-9.12	39.67	5.21	Average	---	---
3	5150.00	59.36	74.00	-14.64	54.15	5.21	Peak	---	---
4	6906.70	67.86	68.20	-0.34	59.24	8.62	Peak	---	---
5	10360.00	56.95	68.20	-11.25	43.40	13.55	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

\*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

<b>Modulation</b>	11a	<b>Test Freq. (MHz)</b>	5200
<b>Polarization</b>	Horizontal		



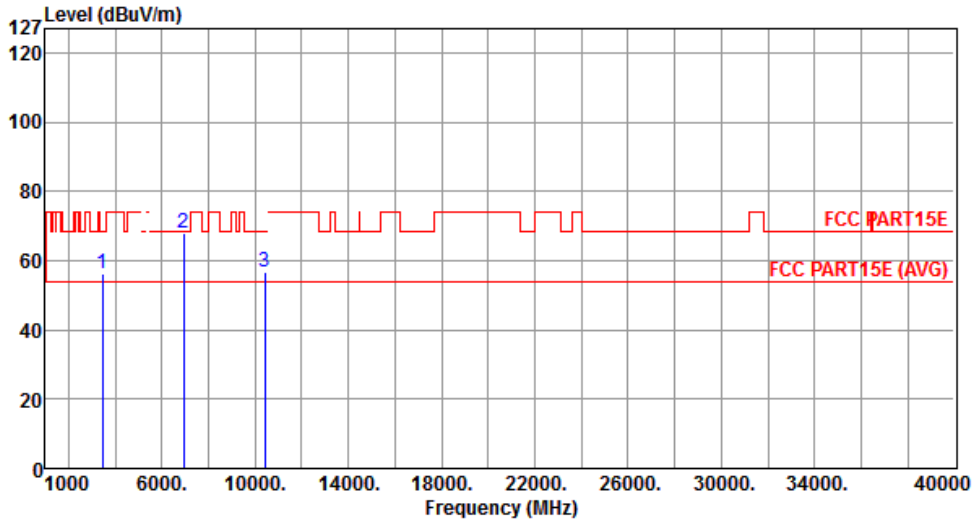
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3466.70	56.01	68.20	-12.19	55.24	0.77	Peak	---	---
2	6933.30	66.49	68.20	-1.71	57.80	8.69	Peak	---	---
3	10400.00	56.17	68.20	-12.03	42.55	13.62	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

\*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

<b>Modulation</b>	11a	<b>Test Freq. (MHz)</b>	5200
<b>Polarization</b>	Vertical		



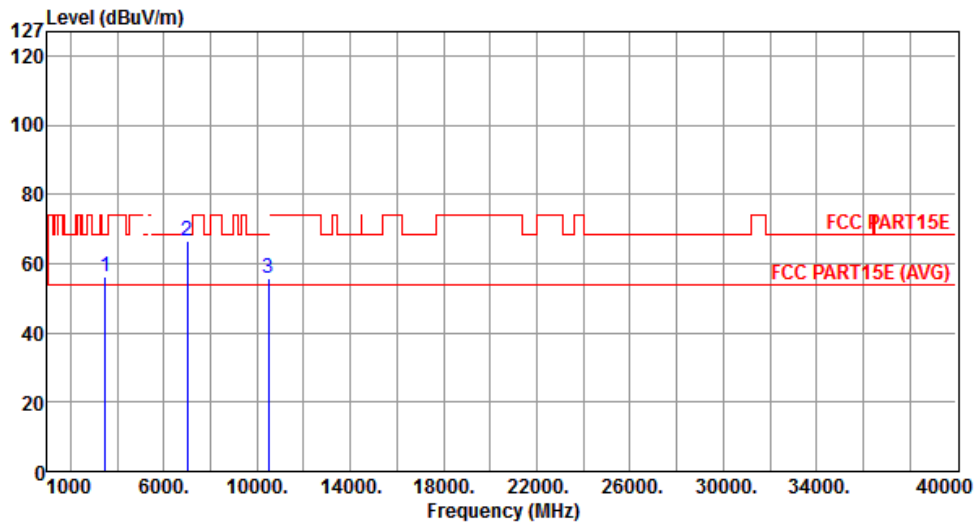
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3466.70	56.23	68.20	-11.97	55.46	0.77	Peak	---	---
2	6933.30	67.94	68.20	-0.26	59.25	8.69	Peak	---	---
3	10400.00	56.86	68.20	-11.34	43.24	13.62	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

\*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

<b>Modulation</b>	11a	<b>Test Freq. (MHz)</b>	5240
<b>Polarization</b>	Horizontal		



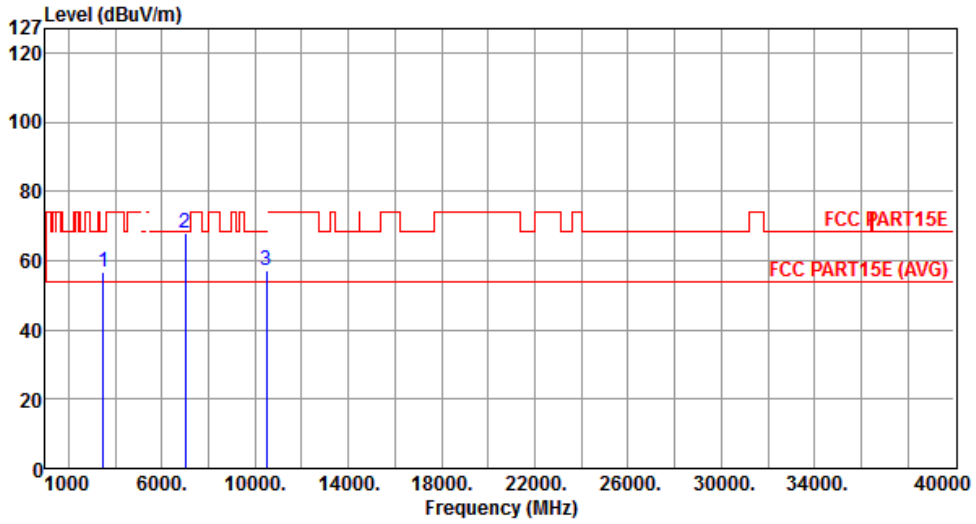
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3493.30	56.02	68.20	-12.18	55.14	0.88	Peak	---	---
2	6986.70	66.67	68.20	-1.53	57.82	8.85	Peak	---	---
3	10480.00	55.92	68.20	-12.28	42.14	13.78	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

\*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

<b>Modulation</b>	11a	<b>Test Freq. (MHz)</b>	5240
<b>Polarization</b>	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3493.30	56.72	68.20	-11.48	55.84	0.88	Peak	---	---
2	6986.70	67.73	68.20	-0.47	58.88	8.85	Peak	---	---
3	10480.00	56.98	68.20	-11.22	43.20	13.78	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

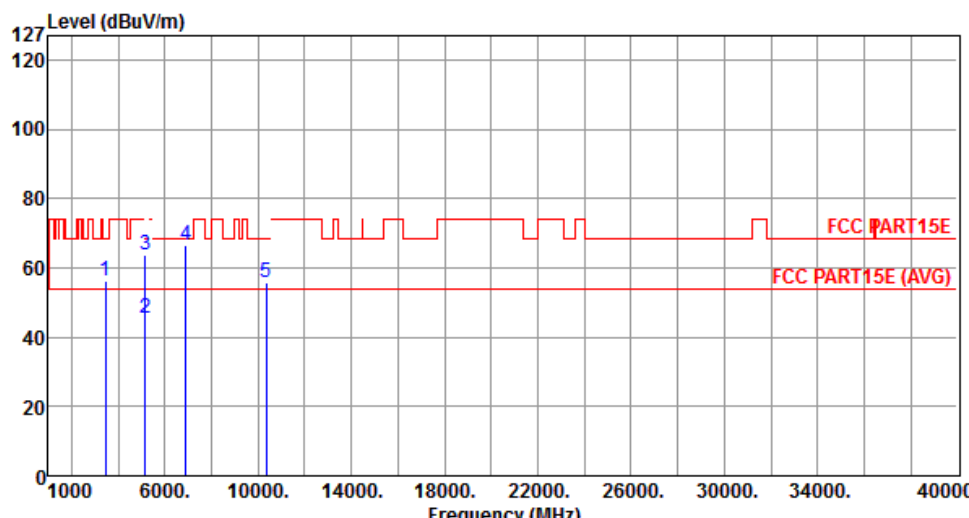
\*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

### 3.1.6 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT20

<b>Modulation</b>	VHT20	<b>Test Freq. (MHz)</b>	5180
<b>Polarization</b>	Horizontal		



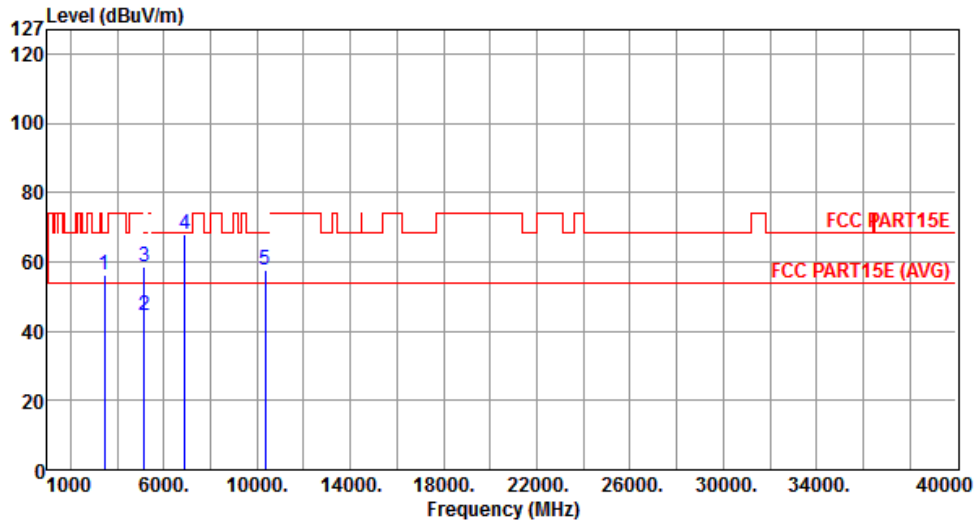
The spectrum plot displays the radiated unwanted emissions for VHT20. The y-axis represents the Level in dBuV/m, ranging from 0 to 127. The x-axis represents the Frequency in MHz, ranging from 1000 to 40000. A red line indicates the FCC PART15E limit, and a blue line indicates the FCC PART15E (AVG) limit. Five peaks are identified and labeled 1 through 5.

	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3453.30	56.43	68.20	-11.77	55.68	0.75	Peak	---	---
2	5150.00	45.52	54.00	-8.48	40.31	5.21	Average	---	---
3	5150.00	63.76	74.00	-10.24	58.55	5.21	Peak	---	---
4	6906.70	66.73	68.20	-1.47	58.11	8.62	Peak	---	---
5	10360.00	55.89	68.20	-12.31	42.34	13.55	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)  
\*Factor includes antenna factor , cable loss and amplifier gain  
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).



<b>Modulation</b>	VHT20	<b>Test Freq. (MHz)</b>	5180
<b>Polarization</b>	Vertical		



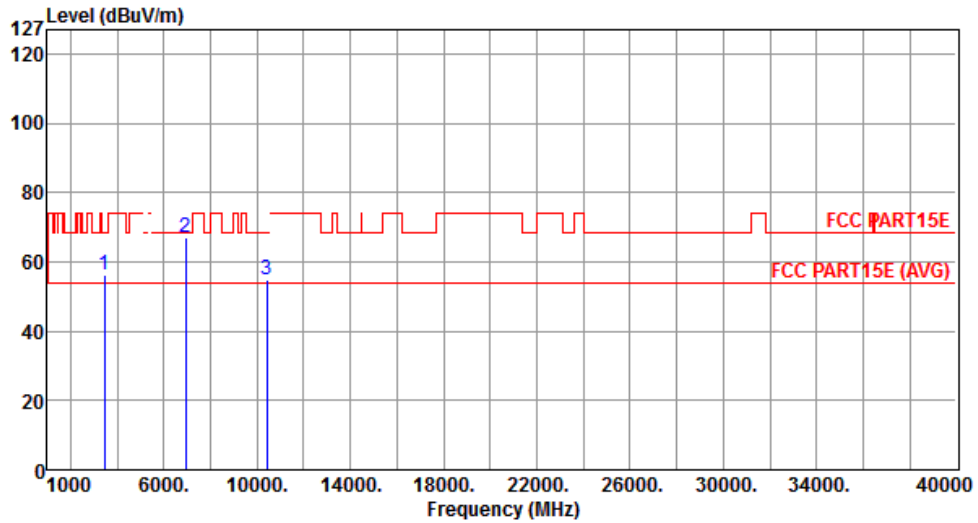
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3453.30	56.23	68.20	-11.97	55.48	0.75	Peak	---	---
2	5150.00	44.69	54.00	-9.31	39.48	5.21	Average	---	---
3	5150.00	58.79	74.00	-15.21	53.58	5.21	Peak	---	---
4	6906.70	68.00	68.20	-0.20	59.38	8.62	Peak	---	---
5	10360.00	57.45	68.20	-10.75	43.90	13.55	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

\*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

<b>Modulation</b>	VHT20	<b>Test Freq. (MHz)</b>	5200
<b>Polarization</b>	Horizontal		



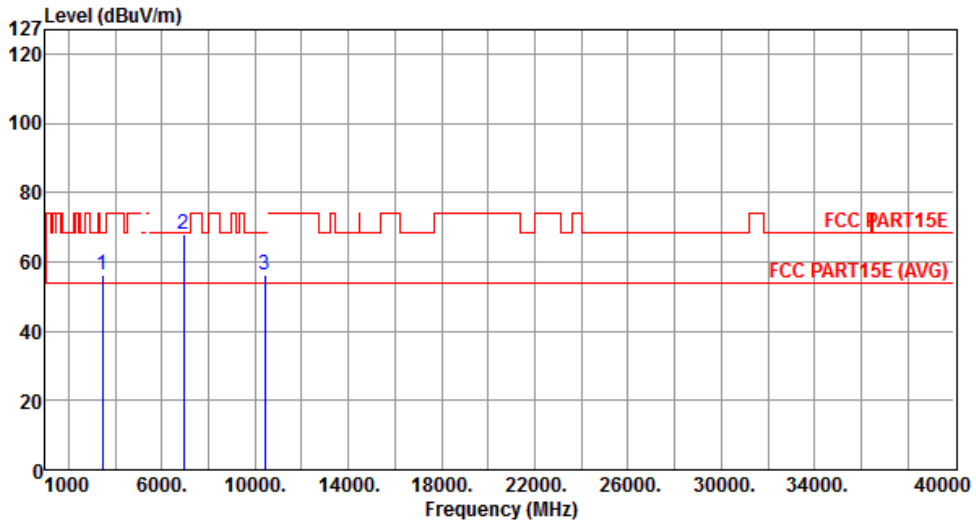
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3466.70	56.39	68.20	-11.81	55.62	0.77	Peak	---	---
2	6933.30	66.80	68.20	-1.40	58.11	8.69	Peak	---	---
3	10400.00	54.95	68.20	-13.25	41.33	13.62	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

\*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

<b>Modulation</b>	VHT20	<b>Test Freq. (MHz)</b>	5200
<b>Polarization</b>	Vertical		



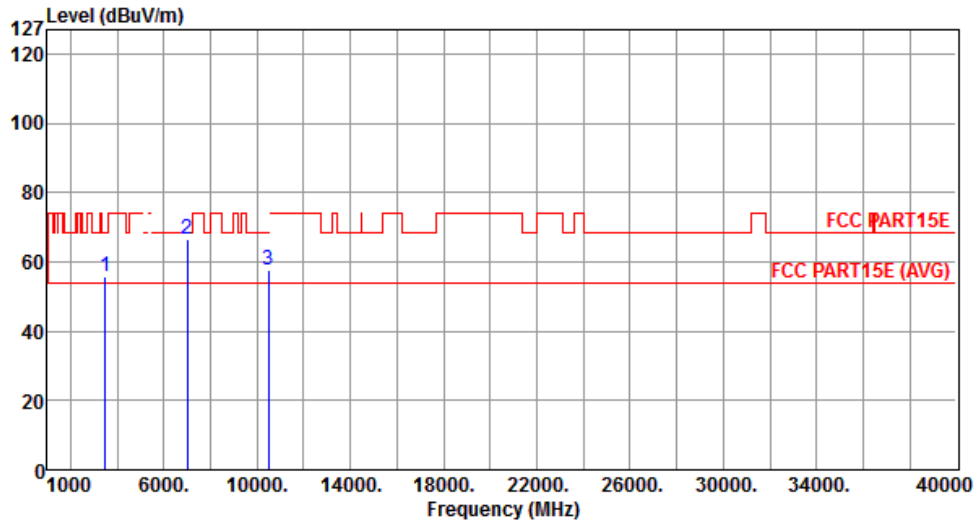
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3466.70	56.11	68.20	-12.09	55.34	0.77	Peak	---	---
2	6933.30	67.87	68.20	-0.33	59.18	8.69	Peak	---	---
3	10400.00	56.06	68.20	-12.14	42.44	13.62	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

\*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

<b>Modulation</b>	VHT20	<b>Test Freq. (MHz)</b>	5240
<b>Polarization</b>	Horizontal		



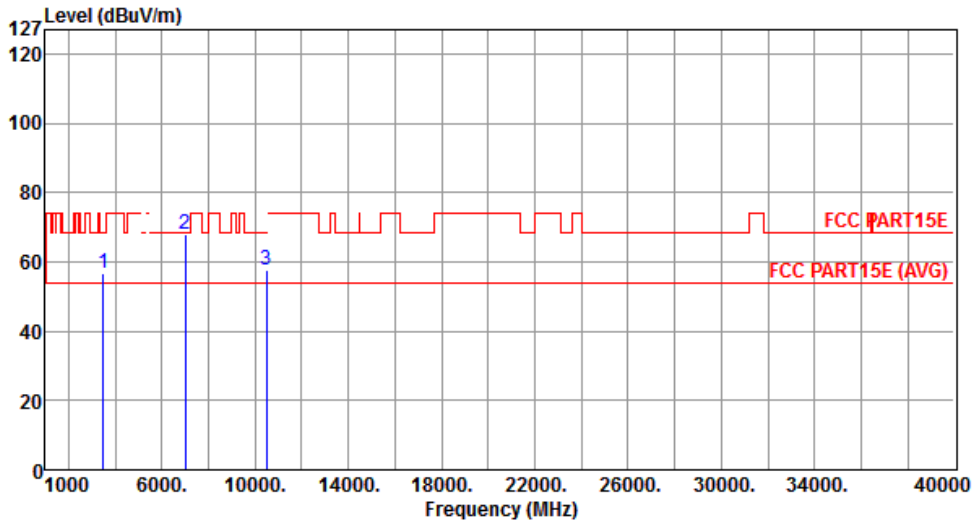
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3493.30	55.56	68.20	-12.64	54.68	0.88	Peak	---	---
2	6986.70	66.73	68.20	-1.47	57.88	8.85	Peak	---	---
3	10480.00	57.42	68.20	-10.78	43.64	13.78	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

\*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

<b>Modulation</b>	VHT20	<b>Test Freq. (MHz)</b>	5240
<b>Polarization</b>	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3493.30	56.48	68.20	-11.72	55.60	0.88	Peak	---	---
2	6986.70	68.07	68.20	-0.13	59.22	8.85	Peak	---	---
3	10480.00	57.45	68.20	-10.75	43.67	13.78	Peak	---	---

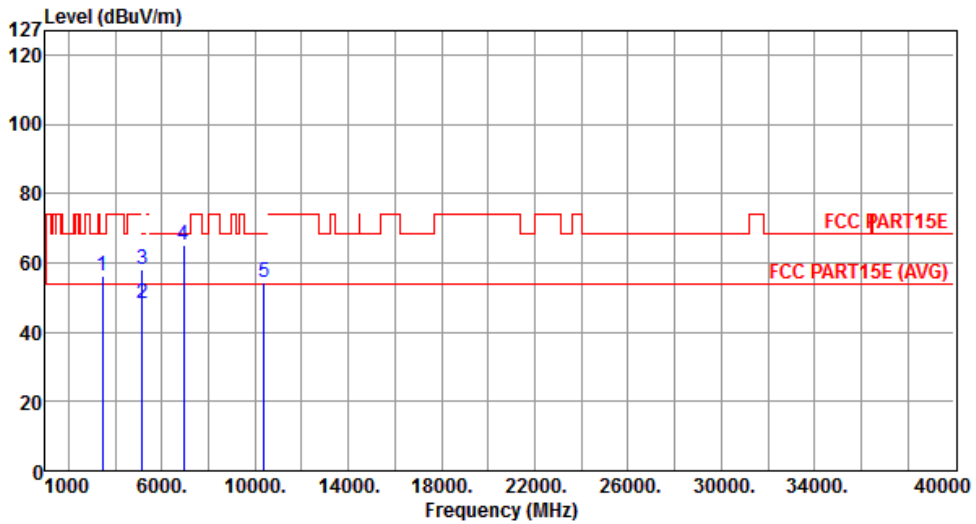
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

\*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

### 3.1.7 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT40

<b>Modulation</b>	VHT40	<b>Test Freq. (MHz)</b>	5190
<b>Polarization</b>	Horizontal		



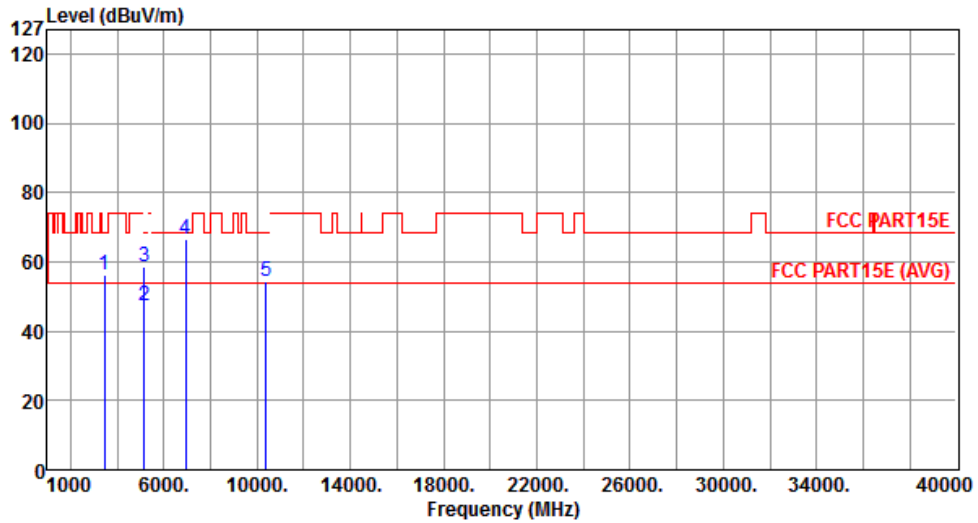
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3460.00	56.10	68.20	-12.10	55.35	0.75	Peak	---	---
2	5150.00	48.27	54.00	-5.73	43.06	5.21	Average	---	---
3	5150.00	58.16	74.00	-15.84	52.95	5.21	Peak	---	---
4	6920.00	65.35	68.20	-2.85	56.67	8.68	Peak	---	---
5	10380.00	54.36	68.20	-13.84	40.77	13.59	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

\*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

<b>Modulation</b>	VHT40	<b>Test Freq. (MHz)</b>	5190
<b>Polarization</b>	Vertical		



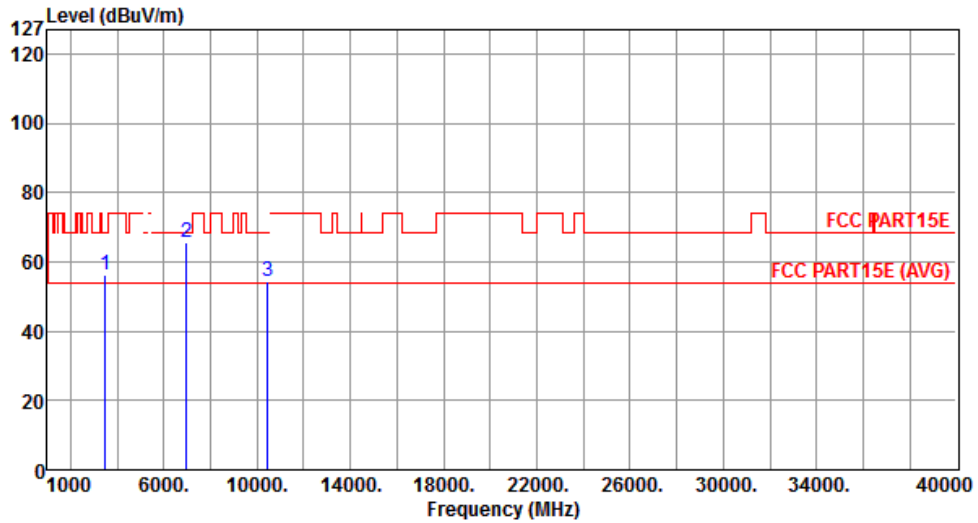
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3460.00	56.24	68.20	-11.96	55.49	0.75	Peak	---	---
2	5150.00	47.52	54.00	-6.48	42.31	5.21	Average	---	---
3	5150.00	58.38	74.00	-15.62	53.17	5.21	Peak	---	---
4	6920.00	66.69	68.20	-1.51	58.01	8.68	Peak	---	---
5	10380.00	54.44	68.20	-13.76	40.85	13.59	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

\*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

<b>Modulation</b>	VHT40	<b>Test Freq. (MHz)</b>	5230
<b>Polarization</b>	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3486.70	56.32	68.20	-11.88	55.46	0.86	Peak	---	---
2	6973.30	65.61	68.20	-2.59	56.81	8.80	Peak	---	---
3	10460.00	54.52	68.20	-13.68	40.77	13.75	Peak	---	---

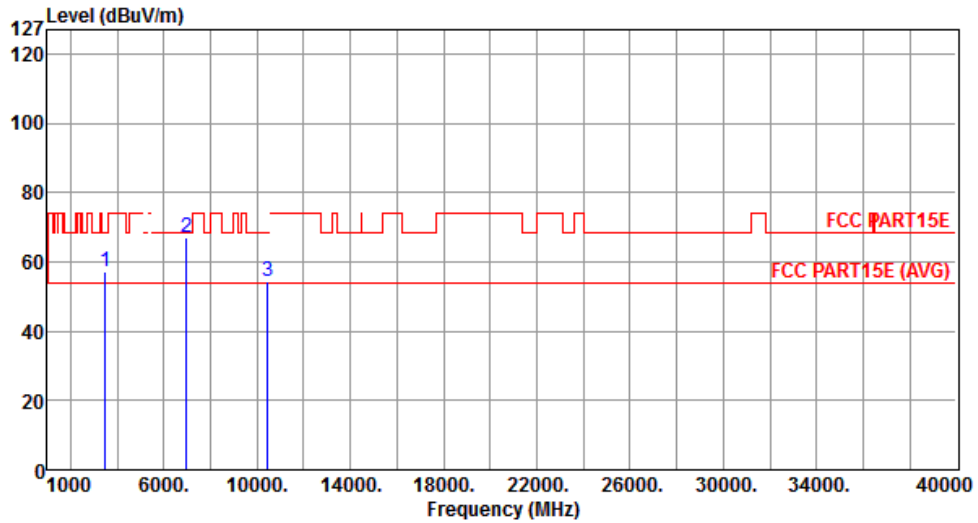
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

\*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).



<b>Modulation</b>	VHT40	<b>Test Freq. (MHz)</b>	5230
<b>Polarization</b>	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3486.70	57.38	68.20	-10.82	56.52	0.86	Peak	---	---
2	6973.30	66.89	68.20	-1.31	58.09	8.80	Peak	---	---
3	10460.00	54.32	68.20	-13.88	40.57	13.75	Peak	---	---

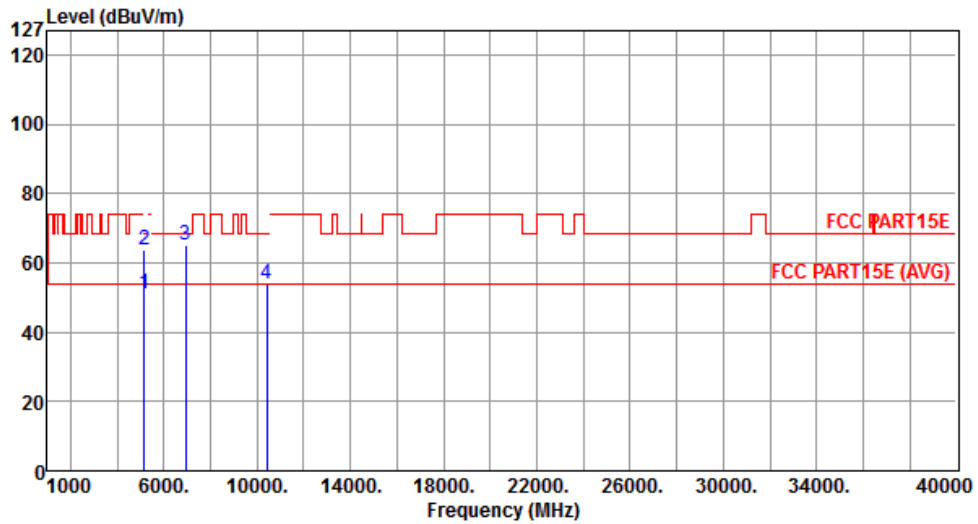
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

\*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

### 3.1.8 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT80

<b>Modulation</b>	VHT80	<b>Test Freq. (MHz)</b>	5210
<b>Polarization</b>	Horizontal		



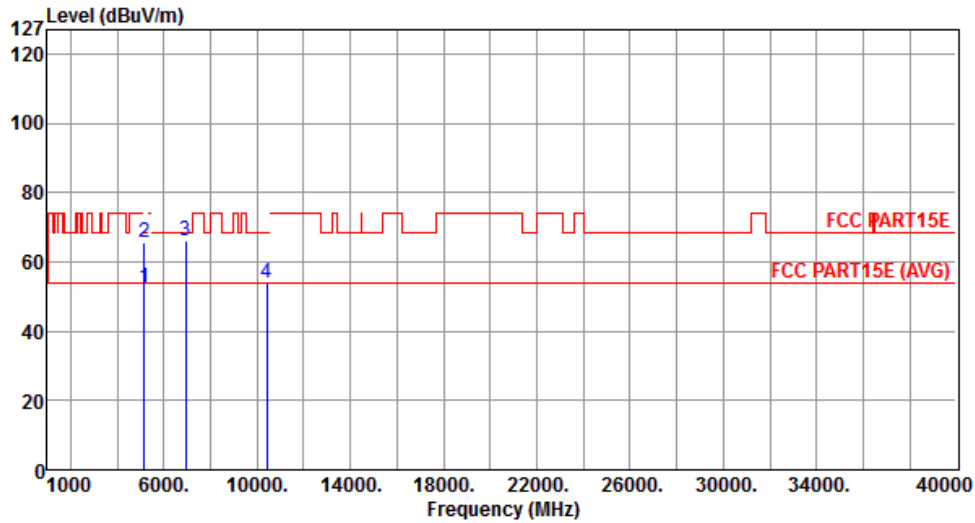
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	50.97	54.00	-3.03	45.76	5.21	Average	---	---
2	5150.00	63.86	74.00	-10.14	58.65	5.21	Peak	---	---
3	6946.70	65.22	68.20	-2.98	56.51	8.71	Peak	---	---
4	10420.00	54.00	68.20	-14.20	40.33	13.67	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

\*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

<b>Modulation</b>	VHT80	<b>Test Freq. (MHz)</b>	5210
<b>Polarization</b>	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.33	54.00	-1.67	47.12	5.21	Average	---	---
2	5150.00	65.76	74.00	-8.24	60.55	5.21	Peak	---	---
3	6946.70	66.13	68.20	-2.07	57.42	8.71	Peak	---	---
4	10420.00	53.80	68.20	-14.40	40.13	13.67	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

\*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

## 4 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

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Our Test sites are located at Linkou District and Kwei Shan Hsiang. Location map can be found on our website <http://www.icertifi.com.tw>.

### **Linkou**

Tel: 886-2-2601-1640

No. 30-2, Ding Fwu Tsuen, Lin Kou District, New Taipei City, Taiwan, R.O.C.

### **Kwei Shan**

Tel: 886-3-271-8666

No. 3-1, Lane 6, Wen San 3rd St., Kwei Shan Hsiang, Tao Yuan Hsien 333, Taiwan, R.O.C.

If you have any suggestion, please feel free to contact us as below information

Tel: 886-3-271-8666

Fax: 886-3-318-0155

Email: ICC\_Service@icertifi.com.tw

==END==