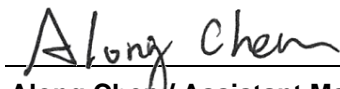


FCC Test Report

FCC ID : 2AIHD1041
Equipment : HW-IG41
Model No. : 010-1041
Brand Name : Samsara
Applicant : Samsara Networks Inc.
Address : 1990 Alameda Street, San Francisco, CA
94103, United States
Standard : 47 CFR FCC Part 15.407
Received Date : Sep. 01, 2020
Tested Date : Sep. 14 ~ Sep. 30, 2020

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.

Reviewed by:



Along Chen / Assistant Manager

Approved by:



Gary Chang / Manager



Table of Contents

1	GENERAL DESCRIPTION	5
1.1	Information.....	5
1.2	Local Support Equipment List	8
1.3	Test Setup Chart	8
1.4	The Equipment List	10
1.5	Test Standards	11
1.6	Reference Guidance	11
1.7	Deviation from Test Standard and Measurement Procedure.....	11
1.8	Measurement Uncertainty	11
2	TEST CONFIGURATION.....	12
2.1	Testing Facility	12
2.2	The Worst Test Modes and Channel Details	13
3	TRANSMITTER TEST RESULTS	14
3.1	Conducted Emissions.....	14
3.2	Emission Bandwidth	19
3.3	RF Output Power.....	28
3.4	Peak Power Spectral Density.....	31
3.5	Transmitter Radiated and Band Edge Emissions	41
3.6	Frequency Stability.....	124
4	TEST LABORATORY INFORMATION	127

Release Record

Report No.	Version	Description	Issued Date
FR090103AN	Rev. 01	Initial issue	Oct. 20, 2020

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 0.168MHz 45.40 (Margin -9.68dB) - AV	Pass
15.407(b) 15.209	Radiated Emissions	[dBuV/m at 3m]: 5150.00MHz 53.00 (Margin -1.00dB) - AV	Pass
15.407(a)	Emission Bandwidth	Meet the requirement of limit	Pass
15.407(e)	6dB bandwidth	Meet the requirement of limit	Pass
15.407(a)	RF Output Power	Max Power [dBm]: 5150-5250MHz: 18.79 5725-5850MHz: 18.39	Pass
15.407(a)	Peak Power Spectral Density	Meet the requirement of limit	Pass
15.407(g)	Frequency Stability	Meet the requirement of limit	Pass
15.203	Antenna Requirement	Meet the requirement of limit	Pass

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Information

1.1.1 Specification of the Equipment under Test (EUT)

RF General Information					
Frequency Range (MHz)	IEEE Std. 802.11	Ch. Freq. (MHz)	Channel Number	Transmit Chains (N _{TX})	Data Rate / MCS
5150-5250 5725-5850	a	5180-5240 5745-5825	36-48 [4] 149-165 [5]	1	6-54 Mbps
5150-5250 5725-5850	n (HT20)	5180-5240 5745-5825	36-48 [4] 149-165 [5]	1	MCS 0-7
5150-5250 5725-5850	n (HT40)	5190-5230 5755-5795	38-46 [2] 151-159 [2]	1	MCS 0-7
5150-5250 5725-5850	ac (VHT20)	5180-5240 5745-5825	36-48 [4] 149-165 [5]	1	MCS 0-9
5150-5250 5725-5850	ac (VHT40)	5190-5230 5755-5795	38-46 [2] 151-159 [2]	1	MCS 0-9
5150-5250 5725-5850	ac (VHT80)	5210 5775	42 [1] 155 [1]	1	MCS 0-9

Note 1: RF output power specifies that Maximum Conducted Output Power.
 Note 2: 802.11a/n/ac uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.

1.1.2 Antenna Details

5150~5250MHz

Ant. No.	Model	Type	Connector	Ant. gain with cable loss (dBi)	Ant. gain (dBi)	Cable loss (dB)
1	Individual antenna (OA-DB-05-0205-C5R-SE)	Dipole	RP-SMA PLUG	6	6	-
2	Array antenna (OS-PENTA-014-01-SA)	PIFA	RP-SMA PLUG	6.23	9.6	3.37

5725~5850MHz

Ant. No.	Model	Type	Connector	Ant. gain with cable loss (dBi)	Ant. gain (dBi)	Cable loss (dB)
1	Individual antenna (OA-DB-05-0205-C5R-SE)	Dipole	RP-SMA PLUG	6.2	6.2	-
2	Array antenna (OS-PENTA-014-01-SA)	PIFA	RP-SMA PLUG	6.23	9.6	3.37

Note: The antenna assembly includes Array antenna and Individual antenna.

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	24Vdc from DC power
--------------------------	---------------------

Note: The above power supply is not bundled in market.

1.1.4 Accessories

N/A

1.1.5 Channel List

802.11a / n HT20 / ac VHT20		802.11n HT40 / ac VHT40	
Channel	Frequency(MHz)	Channel	Frequency(MHz)
36	5180	38	5190
40	5200	46	5230
44	5220	151	5755
48	5240	159	5795
149	5745	802.11ac VHT80	
153	5765	42	5210
157	5785	155	5775
161	5805	-	-
165	5825	-	-

1.1.6 Test Tool and Duty Cycle

Test Tool	QPSR, V5.0-00188		
Duty Cycle and Duty Factor	Mode	Duty Cycle (%)	Duty Factor (dB)
	11a	94.39%	0.25
	VHT20	95.54%	0.20
	VHT40	92.28%	0.35
	VHT80	83.80%	0.77

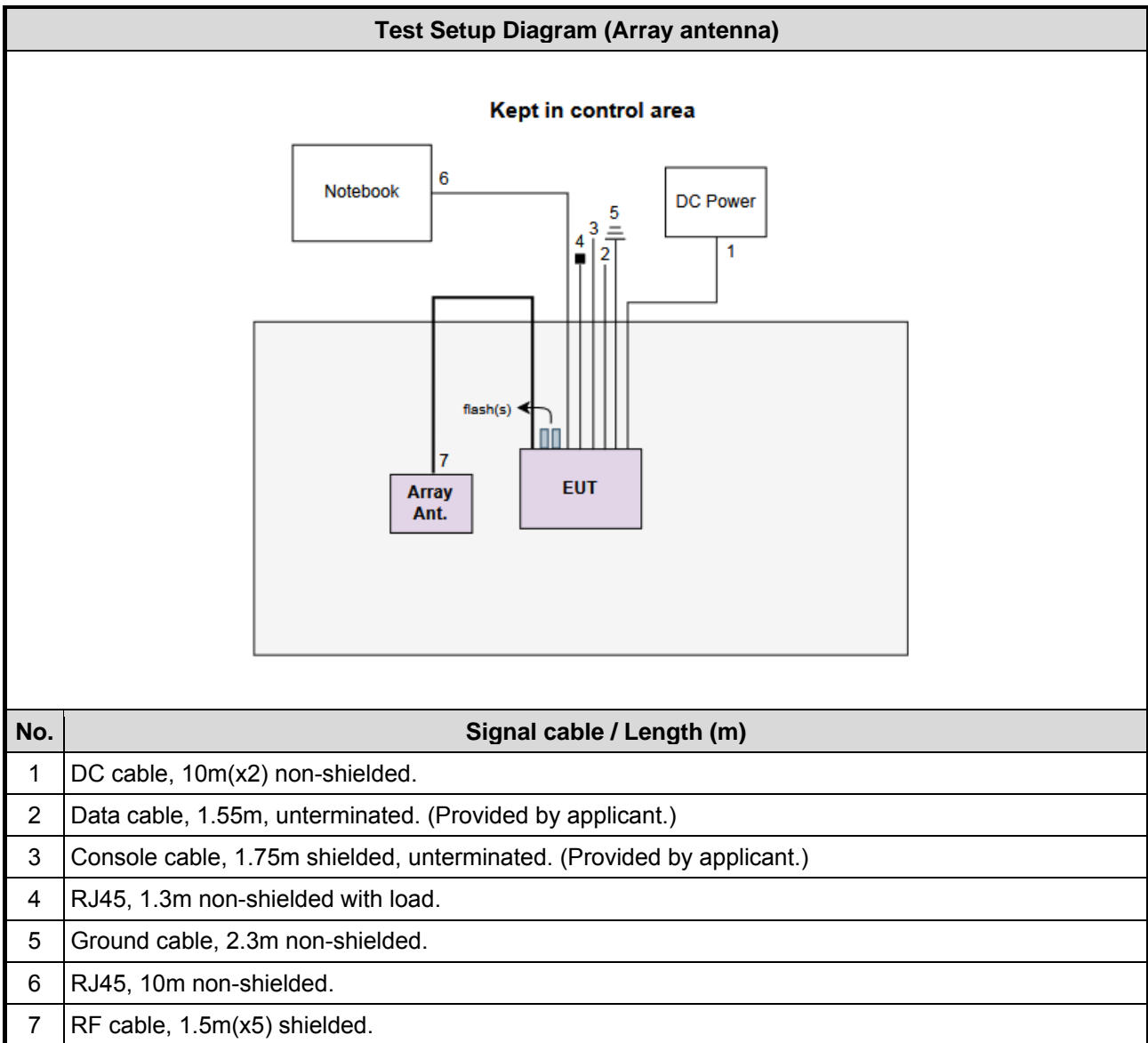
1.1.7 Power Index of Test Tool

Modulation Mode	Test Frequency (MHz)	Power Index
11a	5180	21
11a	5200	23
11a	5240	21.5
11a	5745	23
11a	5785	23
11a	5825	23
VHT20	5180	21
VHT20	5200	23
VHT20	5240	21.5
VHT20	5745	23
VHT20	5785	23
VHT20	5825	23
VHT40	5190	16
VHT40	5230	20.5
VHT40	5755	23
VHT40	5795	23
VHT80	5210	15
VHT80	5775	21

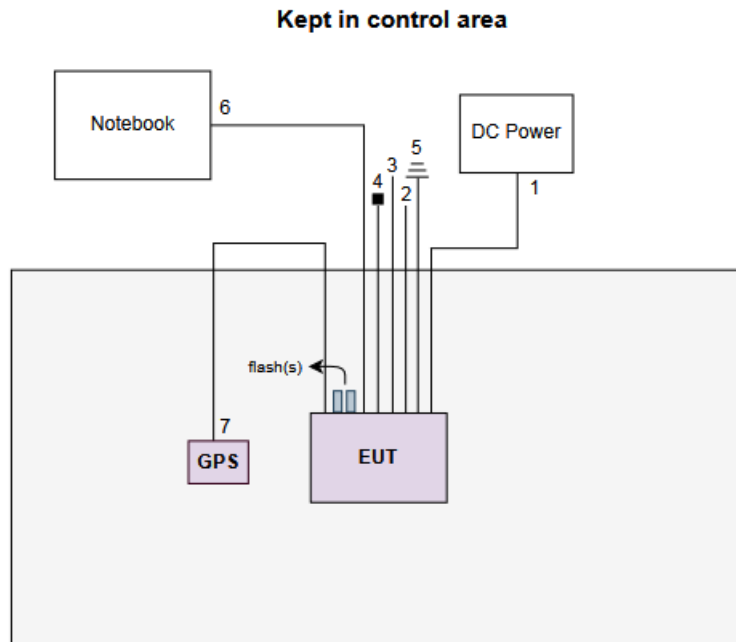
1.2 Local Support Equipment List

Support Equipment List					
No.	Equipment	Brand	Model	FCC ID	Remarks
1	Notebook	DELL	Latitude E5400	DoC	---
2	USB Flash	Kingston	DTSE9	---	---
3	USB Flash	Kingston	DTSE9	---	---
4	RJ45 Load	ICC	---	---	---
5	DC power	MEAN WELL	SDR-75-24	---	Provided by applicant.

1.3 Test Setup Chart



Test Setup Diagram (Individual antenna)



No.	Signal cable / Length (m)
1	DC cable, 10m(x2) non-shielded.
2	Data cable, 1.55m, unterminated. (Provided by applicant.)
3	Console cable, 1.75m shielded, unterminated. (Provided by applicant.)
4	RJ45, 1.3m non-shielded with load.
5	Ground cable, 2.3m non-shielded.
6	RJ45, 10m non-shielded.
7	RF cable, 1.5m shielded.

1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested Date	Sep. 30, 2020				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Receiver	R&S	ESR3	101658	Dec. 12, 2019	Dec. 11, 2020
LISN	R&S	ENV216	101579	Mar. 12, 2020	Mar. 11, 2021
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Oct. 22, 2019	Oct. 21, 2020
Measurement Software	AUDIX	e3	6.120210k	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber 3 / (03CH03-WS)				
Tested Date	Sep. 14 ~ Sep. 25, 2020				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101499	Jan. 09, 2020	Jan. 08, 2021
Receiver	R&S	ESR3	101657	Feb. 14, 2020	Feb. 13, 2021
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-685	Apr. 29, 2020	Apr. 28, 2021
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1206	Dec. 27, 2019	Dec. 26, 2020
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 15, 2019	Nov. 14, 2020
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 13, 2019	Nov. 12, 2020
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 07, 2019	Oct. 06, 2020
Preamplifier	EMC	EMC02325	980187	Aug. 05, 2020	Aug. 04, 2021
Preamplifier	Agilent	83017A	MY39501309	Sep. 02, 2020	Sep. 01, 2021
Preamplifier	EMC	EMC184045B	980192	Jul. 21, 2020	Jul. 20, 2021
RF cable-3M	HUBER+SUHNER	SUCOFLEX104	MY22620/4	Sep. 27, 2019	Sep. 26, 2020
RF cable-8M	EMC	EMC104-SM-SM-8000	181107	Sep. 27, 2019	Sep. 26, 2020
RF cable-1M	HUBER+SUHNER	SUCOFLEX104	MY22624/4	Sep. 27, 2019	Sep. 26, 2020
LF cable-0.8M	EMC	EMC8D-NM-NM-800	EMC8D-NM-NM-800-001	Sep. 27, 2019	Sep. 26, 2020
LF cable-3M	EMC	EMC8D-NM-NM-3000	131103	Sep. 27, 2019	Sep. 26, 2020
LF cable-13M	EMC	EMC8D-NM-NM-13000	131104	Sep. 27, 2019	Sep. 26, 2020
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Tested Date	Sep. 29, 2020				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101063	Apr. 30, 2020	Apr. 29, 2021
TEMP&HUMIDITY CHAMBER	GIANT FORCE	GCT-225-40-SP-SD	MAF1212-002	Dec. 12, 2019	Dec. 11, 2020
Power Meter	Anritsu	ML2495A	1241002	Oct. 23, 2019	Oct. 22, 2020
Power Sensor	Anritsu	MA2411B	1207366	Oct. 23, 2019	Oct. 22, 2020
Measurement Software	ICC	SENSE-15407_NII	V5.10	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Test Standards

47 CFR FCC Part 15.407
ANSI C63.10-2013

1.6 Reference Guidance

FCC KDB 412172 D01 Determining ERP and EIRP v01r01
FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01

1.7 Deviation from Test Standard and Measurement Procedure

None

1.8 Measurement Uncertainty

The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)).

Measurement Uncertainty	
Parameters	Uncertainty
Bandwidth	±34.130 Hz
Conducted power	±0.808 dB
Frequency error	±1x10 ⁻⁹
Power density	±0.583 dB
Conducted emission	±2.715 dB
AC conducted emission	±2.92 dB
Radiated emission ≤ 1GHz	±3.96 dB
Radiated emission > 1GHz	±4.51 dB
Time	±0.1%
Temperature	±0.4 °C

2 Test Configuration

2.1 Testing Facility

Test Laboratory	International Certification Corp.
Test Site	CO01-WS, TH01-WS
Address of Test Site	No. 3-1, Lane 6, Wen San 3rd St., Kwei Shan District, Tao Yuan City 333, Taiwan, R.O.C.
Test Site	03CH03-WS
Address of Test Site	No. 14-1, Lane 19, Wen San 3rd St., Kwei Shan District, Tao Yuan City 333, Taiwan, R.O.C.

- FCC Designation No.: TW0009
- FCC site registration No.: 207696
- ISED#: 10807A
- CAB identifier: TW2732

2.2 The Worst Test Modes and Channel Details

For Frequency band 5150-5250 MHz				
Test item	Modulation Mode	Test Frequency (MHz)	Data Rate	Test Configuration
Conducted Emissions	11a	5200	6 Mbps	1
Radiated Emissions ≤1GHz	11a	5200	6 Mbps	1, 2
Radiated Emissions >1GHz	11a VHT20 VHT40 VHT80	5180 / 5200 / 5240 5180 / 5200 / 5240 5190 / 5230 5210	6 Mbps MCS 0 MCS 0 MCS 0	1, 2
RF Output Power Emission Bandwidth Peak Power Spectral Density	11a VHT20 VHT40 VHT80	5180 / 5200 / 5240 5180 / 5200 / 5240 5190 / 5230 5210	6 Mbps MCS 0 MCS 0 MCS 0	1
Frequency Stability	Un-modulation	5200	---	1
For Frequency band 5725-5850 MHz				
Test item	Modulation Mode	Test Frequency (MHz)	Data Rate	Test Configuration
Conducted Emissions	VHT40	5755	MCS 0	1
Radiated Emissions ≤1GHz	VHT40	5755	MCS 0	1, 2
Radiated Emissions >1GHz	11a VHT20 VHT40 VHT80	5745 / 5785 / 5825 5745 / 5785 / 5825 5755 / 5795 5775	6 Mbps MCS 0 MCS 0 MCS 0	1, 2
Emission Bandwidth 6dB bandwidth Peak Power Spectral Density	11a VHT20 VHT40 VHT80	5745 / 5785 / 5825 5745 / 5785 / 5825 5755 / 5795 5775	6 Mbps MCS 0 MCS 0 MCS 0	1
Frequency Stability	Un-modulation	5785	---	1
NOTE:				
<p>1. The antenna assembly includes Array antenna and Individual antenna.</p> <ul style="list-style-type: none"> - Individual antenna without antenna cable. - Array antenna with antenna cable and need to be assessed with 3 orientations placed on the table for the radiated emission measurement– X, Y, and Z-plane. The Z-plane results were found as the worst case and were shown in this report. <p>2. Test configurations are listed as below:</p> <ol style="list-style-type: none"> 1) Configuration 1: Array antenna with antenna cable, Z-plane 2) Configuration 2: Individual antenna 				

3 Transmitter Test Results

3.1 Conducted Emissions

3.1.1 Limit of Conducted Emissions

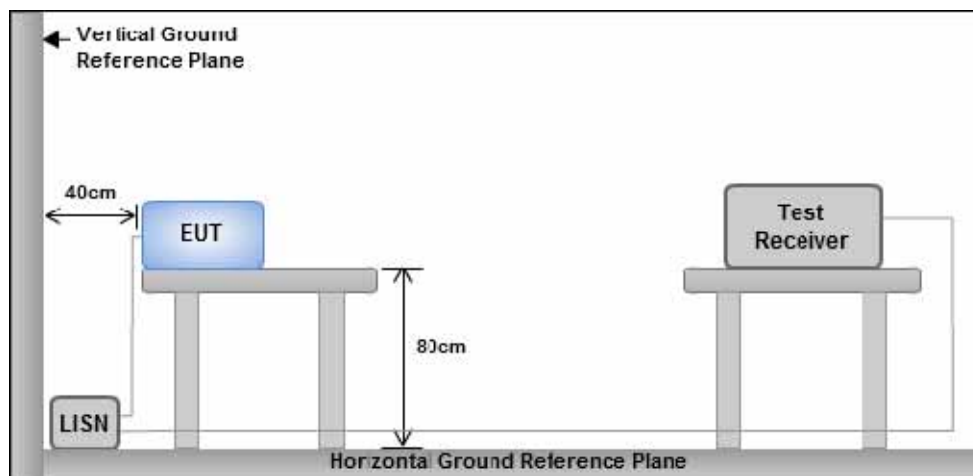
Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: * Decreases with the logarithm of the frequency.

3.1.2 Test Procedures

1. The device is placed on a test table, raised 80 cm above the reference ground plane. The vertical conducting plane is located 40 cm to the rear of the device.
2. The device is connected to line impedance stabilization network (LISN) and other accessories are connected to other LISN. Measured levels of AC power line conducted emission are across the 50 Ω LISN port.
3. AC conducted emission measurements is made over frequency range from 150 kHz to 30 MHz.
4. This measurement was performed with AC 120V / 60Hz.

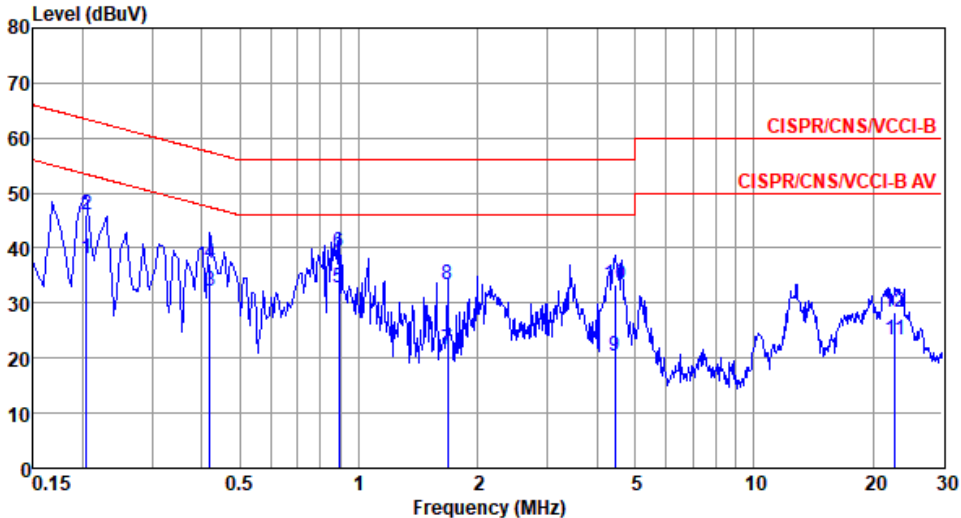
3.1.3 Test Setup



Note 1. Support units were connected to second LISN

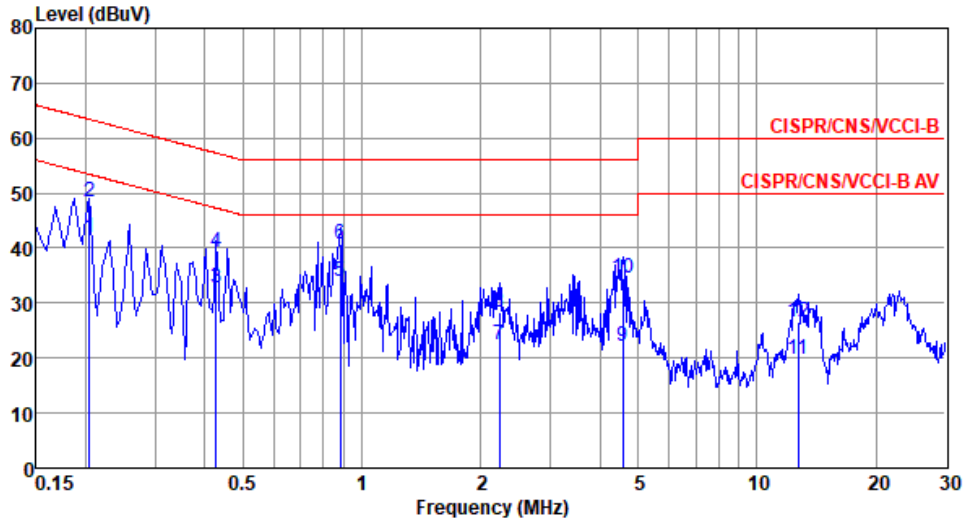
2. Ccth of LISNs (LISNs) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.1.4 Test Result of Conducted Emissions

Modulation	11a	Test Freq. (MHz)	5200																																																																																																																																							
Power Phase	Line																																																																																																																																									
<p>Test by : Alex Tsai Temperature: 22°C Humidity: 56%</p>																																																																																																																																										
																																																																																																																																										
<table border="1"> <thead> <tr> <th></th> <th>Freq</th> <th>Level</th> <th>Limit</th> <th>Over</th> <th>Read</th> <th>LISN</th> <th>cable</th> <th>Remark</th> </tr> <tr> <th></th> <th>MHz</th> <th>dBuV</th> <th>Line</th> <th>Limit</th> <th>Level</th> <th>factor</th> <th>loss</th> <th></th> </tr> <tr> <th></th> <th></th> <th></th> <th>dBuV</th> <th>dB</th> <th>dBuV</th> <th>dB</th> <th>dB</th> <th></th> </tr> </thead> <tbody> <tr><td>1</td><td>0.204</td><td>38.07</td><td>53.45</td><td>-15.38</td><td>28.19</td><td>9.63</td><td>0.06</td><td>Average</td></tr> <tr><td>2</td><td>0.204</td><td>46.12</td><td>63.45</td><td>-17.33</td><td>36.24</td><td>9.63</td><td>0.06</td><td>QP</td></tr> <tr><td>3</td><td>0.419</td><td>32.13</td><td>47.46</td><td>-15.33</td><td>22.17</td><td>9.63</td><td>0.08</td><td>Average</td></tr> <tr><td>4</td><td>0.419</td><td>37.22</td><td>57.46</td><td>-20.24</td><td>27.26</td><td>9.63</td><td>0.08</td><td>QP</td></tr> <tr><td>5*</td><td>0.890</td><td>32.85</td><td>46.00</td><td>-13.15</td><td>22.80</td><td>9.63</td><td>0.11</td><td>Average</td></tr> <tr><td>6</td><td>0.890</td><td>39.36</td><td>56.00</td><td>-16.64</td><td>29.31</td><td>9.63</td><td>0.11</td><td>QP</td></tr> <tr><td>7</td><td>1.680</td><td>21.56</td><td>46.00</td><td>-24.44</td><td>11.41</td><td>9.64</td><td>0.17</td><td>Average</td></tr> <tr><td>8</td><td>1.680</td><td>33.36</td><td>56.00</td><td>-22.64</td><td>23.21</td><td>9.64</td><td>0.17</td><td>QP</td></tr> <tr><td>9</td><td>4.454</td><td>20.23</td><td>46.00</td><td>-25.77</td><td>9.91</td><td>9.65</td><td>0.30</td><td>Average</td></tr> <tr><td>10</td><td>4.454</td><td>33.24</td><td>56.00</td><td>-22.76</td><td>22.92</td><td>9.65</td><td>0.30</td><td>QP</td></tr> <tr><td>11</td><td>22.775</td><td>23.47</td><td>50.00</td><td>-26.53</td><td>12.43</td><td>9.69</td><td>0.69</td><td>Average</td></tr> <tr><td>12</td><td>22.775</td><td>28.40</td><td>60.00</td><td>-31.60</td><td>17.36</td><td>9.69</td><td>0.69</td><td>QP</td></tr> </tbody> </table>					Freq	Level	Limit	Over	Read	LISN	cable	Remark		MHz	dBuV	Line	Limit	Level	factor	loss					dBuV	dB	dBuV	dB	dB		1	0.204	38.07	53.45	-15.38	28.19	9.63	0.06	Average	2	0.204	46.12	63.45	-17.33	36.24	9.63	0.06	QP	3	0.419	32.13	47.46	-15.33	22.17	9.63	0.08	Average	4	0.419	37.22	57.46	-20.24	27.26	9.63	0.08	QP	5*	0.890	32.85	46.00	-13.15	22.80	9.63	0.11	Average	6	0.890	39.36	56.00	-16.64	29.31	9.63	0.11	QP	7	1.680	21.56	46.00	-24.44	11.41	9.64	0.17	Average	8	1.680	33.36	56.00	-22.64	23.21	9.64	0.17	QP	9	4.454	20.23	46.00	-25.77	9.91	9.65	0.30	Average	10	4.454	33.24	56.00	-22.76	22.92	9.65	0.30	QP	11	22.775	23.47	50.00	-26.53	12.43	9.69	0.69	Average	12	22.775	28.40	60.00	-31.60	17.36	9.69	0.69	QP
	Freq	Level	Limit	Over	Read	LISN	cable	Remark																																																																																																																																		
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8	1.680	33.36	56.00	-22.64	23.21	9.64	0.17	QP																																																																																																																																		
9	4.454	20.23	46.00	-25.77	9.91	9.65	0.30	Average																																																																																																																																		
10	4.454	33.24	56.00	-22.76	22.92	9.65	0.30	QP																																																																																																																																		
11	22.775	23.47	50.00	-26.53	12.43	9.69	0.69	Average																																																																																																																																		
12	22.775	28.40	60.00	-31.60	17.36	9.69	0.69	QP																																																																																																																																		
<p>Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB). Note 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).</p>																																																																																																																																										

Modulation	11a	Test Freq. (MHz)	5200
Power Phase	Neutral		

Test by : Alex Tsai Temperature: 22°C Humidity: 56%



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1*	0.204	41.78	53.45	-11.67	31.92	9.65	0.06	Average
2	0.204	48.39	63.45	-15.06	38.53	9.65	0.06	QP
3	0.428	32.87	47.29	-14.42	22.97	9.65	0.08	Average
4	0.428	39.34	57.29	-17.95	29.44	9.65	0.08	QP
5	0.880	33.99	46.00	-12.01	24.03	9.65	0.11	Average
6	0.880	40.72	56.00	-15.28	30.76	9.65	0.11	QP
7	2.225	22.34	46.00	-23.66	12.22	9.66	0.20	Average
8	2.225	28.38	56.00	-27.62	18.26	9.66	0.20	QP
9	4.574	22.17	46.00	-23.83	11.92	9.68	0.30	Average
10	4.574	34.69	56.00	-21.31	24.44	9.68	0.30	QP
11	12.716	19.68	50.00	-30.32	9.05	9.77	0.51	Average
12	12.716	26.68	60.00	-33.32	16.05	9.77	0.51	QP

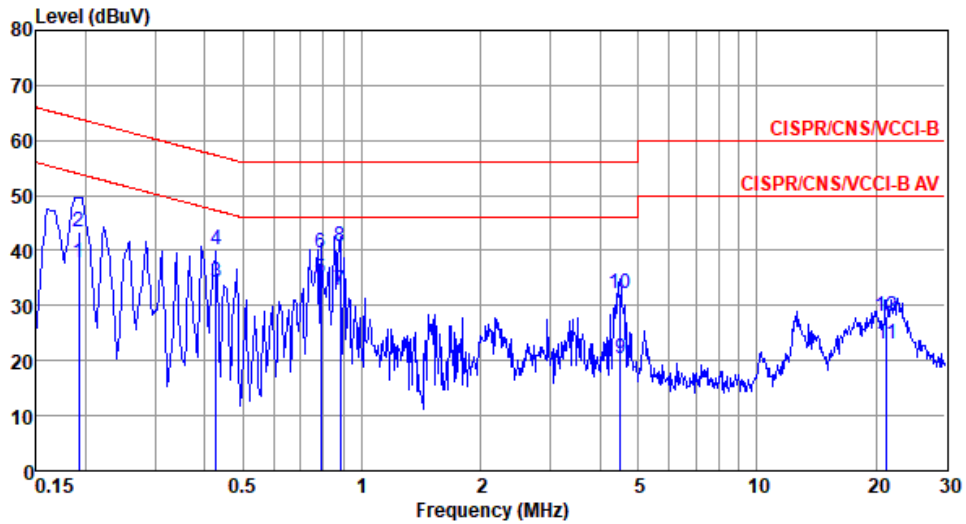
Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Modulation	VHT40	Test Freq. (MHz)	5755
Power Phase	Line		

Test by : Alex Tsai

Temperature: 22°C

Humidity: 56%

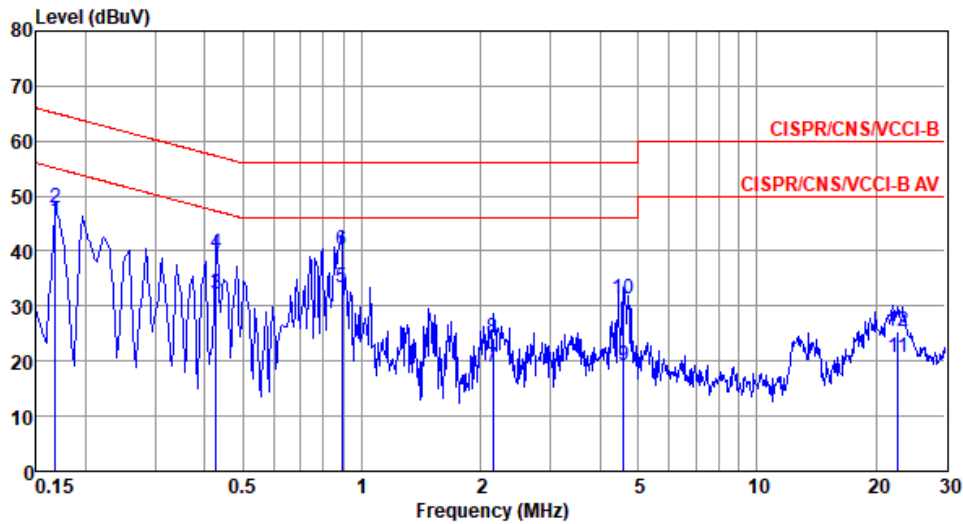


	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.192	37.73	53.93	-16.20	27.85	9.63	0.06	Average
2	0.192	43.41	63.93	-20.52	33.53	9.63	0.06	QP
3	0.428	34.39	47.29	-12.90	24.42	9.63	0.08	Average
4	0.428	40.03	57.29	-17.26	30.06	9.63	0.08	QP
5*	0.788	34.91	46.00	-11.09	24.87	9.63	0.11	Average
6	0.788	39.51	56.00	-16.49	29.47	9.63	0.11	QP
7	0.880	32.90	46.00	-13.10	22.85	9.63	0.11	Average
8	0.880	40.84	56.00	-15.16	30.79	9.63	0.11	QP
9	4.501	20.37	46.00	-25.63	10.04	9.66	0.30	Average
10	4.501	32.24	56.00	-23.76	21.91	9.66	0.30	QP
11	21.260	23.11	50.00	-26.89	12.10	9.70	0.67	Average
12	21.260	27.97	60.00	-32.03	16.96	9.70	0.67	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Modulation	VHT40	Test Freq. (MHz)	5755
Power Phase	Neutral		

Test by : Alex Tsai Temperature: 22°C Humidity: 56%



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1*	0.168	45.40	55.08	-9.68	35.56	9.66	0.05	Average
2	0.168	47.81	65.08	-17.27	37.97	9.66	0.05	QP
3	0.428	32.22	47.29	-15.07	22.32	9.65	0.08	Average
4	0.428	39.58	57.29	-17.71	29.68	9.65	0.08	QP
5	0.890	33.47	46.00	-12.53	23.51	9.65	0.11	Average
6	0.890	40.04	56.00	-15.96	30.08	9.65	0.11	QP
7	2.144	18.89	46.00	-27.11	8.78	9.66	0.19	Average
8	2.144	24.10	56.00	-31.90	13.99	9.66	0.19	QP
9	4.598	19.08	46.00	-26.92	8.82	9.68	0.31	Average
10	4.598	31.18	56.00	-24.82	20.92	9.68	0.31	QP
11	22.775	20.60	50.00	-29.40	9.48	9.82	0.69	Average
12	22.775	25.30	60.00	-34.70	14.18	9.82	0.69	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

3.2 Emission Bandwidth

3.2.1 Limit of Emission bandwidth

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

3.2.2 Test Procedures

26dB Bandwidth

1. Set RBW = approximately 1% of the emission bandwidth.
2. Set the VBW > RBW, Detector = Peak.
3. Trace mode = max hold.
4. Measure the maximum width of the emission that is 26 dB down from the peak of the emission.

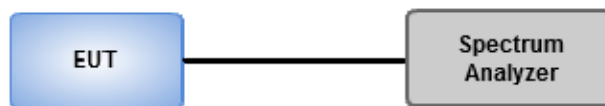
Occupied Bandwidth

1. Set RBW = 1 % to 5 % of the OBW.
2. Set VBW \geq 3 RBW.
3. Sample detection and single sweep mode shall be used.
4. Use the 99 % power bandwidth function of the instrument.

6dB Bandwidth

1. Set RBW = 100kHz, VBW = 300kHz.
2. Detector = Peak, Trace mode = max hold.
3. Allow the trace to stabilize.
4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

3.2.3 Test Setup



3.2.4 Test Result of Emission Bandwidth

Ambient Condition	22°C / 67%	Tested By	Brad Wu
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Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	38.768M	24.168M	24M2D1D	30.072M	17.149M
802.11ac VHT20_Nss1,(MCS0)_1TX	40.29M	23.372M	23M4D1D	31.884M	17.873M
802.11ac VHT40_Nss1,(MCS0)_1TX	73.913M	36.614M	36M6D1D	41.159M	35.745M
802.11ac VHT80_Nss1,(MCS0)_1TX	83.768M	74.964M	75M0D1D	83.768M	74.964M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	16.304M	23.878M	23M9D1D	15.29M	20.26M
802.11ac VHT20_Nss1,(MCS0)_1TX	15.362M	23.517M	23M5D1D	14.928M	19.175M
802.11ac VHT40_Nss1,(MCS0)_1TX	31.594M	50.651M	50M7D1D	31.304M	48.915M
802.11ac VHT80_Nss1,(MCS0)_1TX	72.754M	84.805M	84M8D1D	72.754M	84.805M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;

Max-OBW = Maximum 99% occupied bandwidth;

Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;

Min-OBW = Minimum 99% occupied bandwidth;

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-
5180MHz	Pass	Inf	30.072M	17.149M
5200MHz	Pass	Inf	38.768M	24.168M
5240MHz	Pass	Inf	35.652M	18.452M
5745MHz	Pass	500k	16.304M	20.26M
5785MHz	Pass	500k	15.29M	23.878M
5825MHz	Pass	500k	15.87M	23.01M
802.11ac VHT20_Nss1,(MCS0)_1TX	-	-	-	-
5180MHz	Pass	Inf	31.884M	17.873M
5200MHz	Pass	Inf	40.29M	23.372M
5240MHz	Pass	Inf	33.696M	18.09M
5745MHz	Pass	500k	14.928M	19.175M
5785MHz	Pass	500k	15M	23.517M
5825MHz	Pass	500k	15.362M	21.997M
802.11ac VHT40_Nss1,(MCS0)_1TX	-	-	-	-
5190MHz	Pass	Inf	41.159M	35.745M
5230MHz	Pass	Inf	73.913M	36.614M
5755MHz	Pass	500k	31.594M	50.651M
5795MHz	Pass	500k	31.304M	48.915M
802.11ac VHT80_Nss1,(MCS0)_1TX	-	-	-	-
5210MHz	Pass	Inf	83.768M	74.964M
5775MHz	Pass	500k	72.754M	84.805M

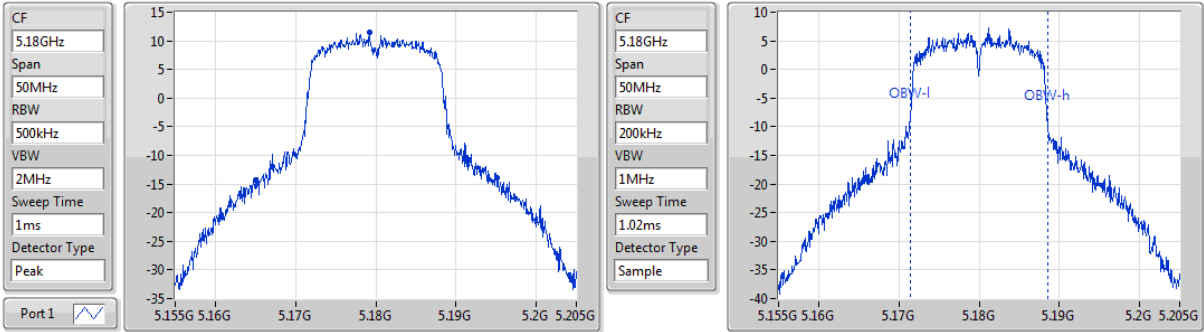
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band

Port X-OBW = Port X 99% occupied bandwidth;

802.11a_Nss1,(6Mbps)_1TX

EBW

5180MHz

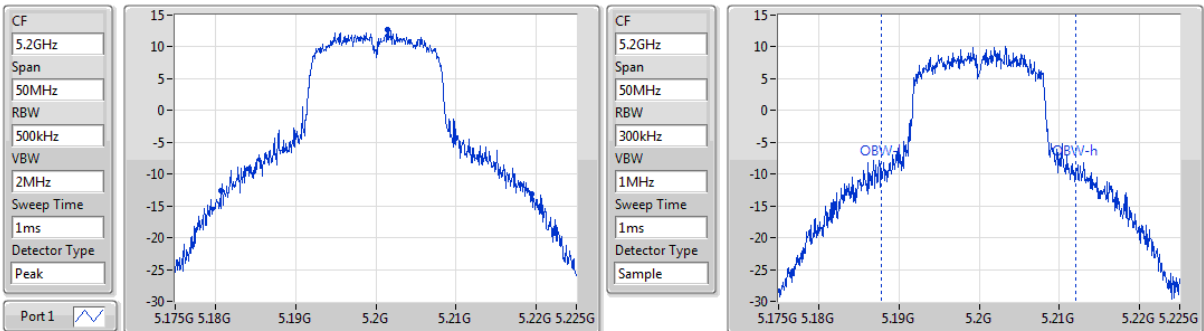


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
30.072M	5.165072G	5.195145G	17.149M	5.171389G	5.188538G	Inf	1

802.11a_Nss1,(6Mbps)_1TX

EBW

5200MHz

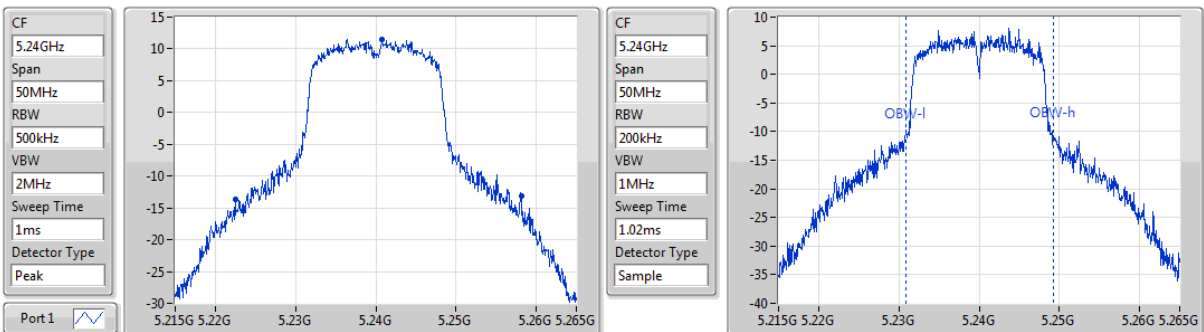


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
38.768M	5.180725G	5.219493G	24.168M	5.187844G	5.212012G	Inf	1

802.11a_Nss1,(6Mbps)_1TX

EBW

5240MHz

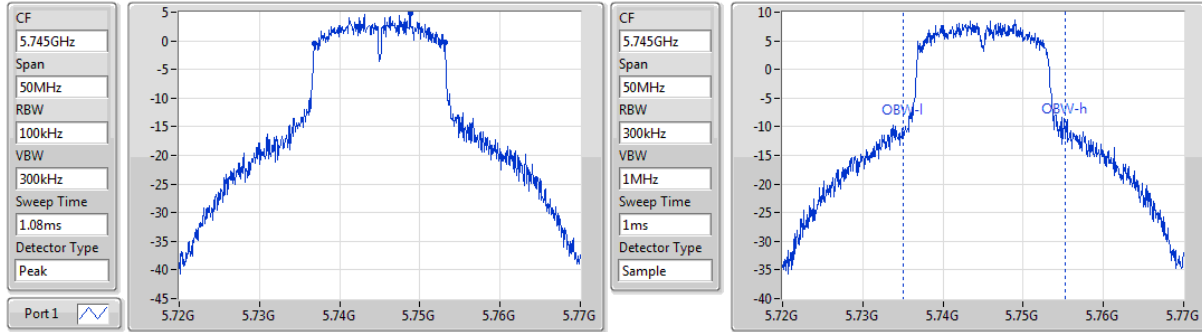


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.652M	5.222464G	5.258116G	18.452M	5.23081G	5.249262G	Inf	1

802.11a_Nss1,(6Mbps)_1TX

EBW

5745MHz

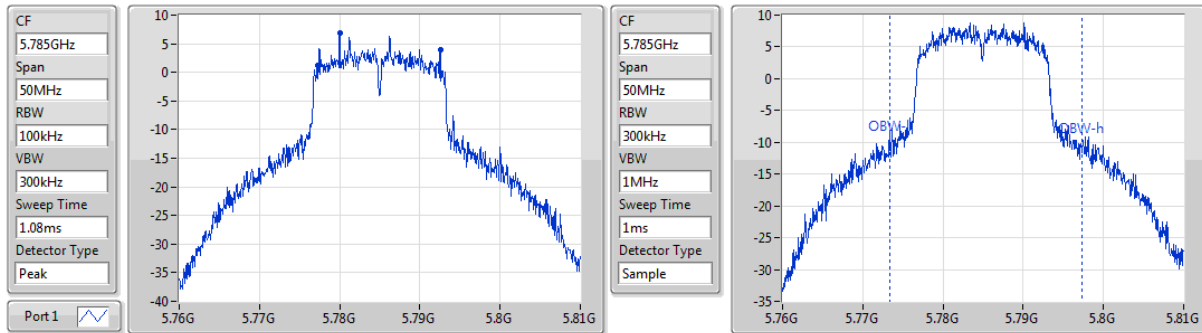


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.304M	5.736812G	5.753116G	20.26M	5.735014G	5.755275G	500k	1

802.11a_Nss1,(6Mbps)_1TX

EBW

5785MHz

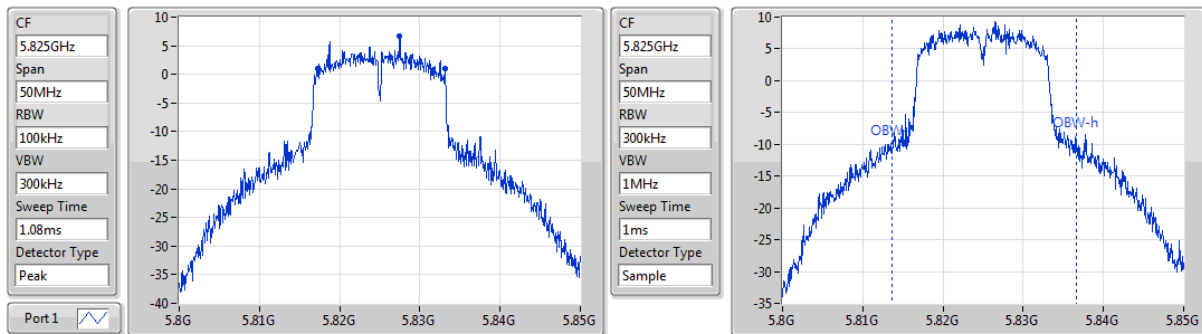


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.29M	5.777246G	5.792536G	23.878M	5.773423G	5.797301G	500k	1

802.11a_Nss1,(6Mbps)_1TX

EBW

5825MHz

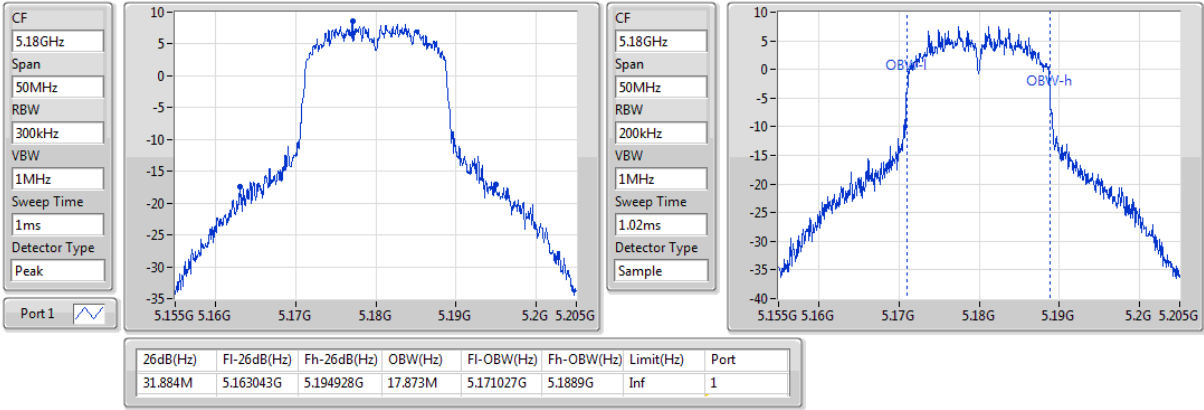


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.87M	5.817246G	5.833116G	23.01M	5.81364G	5.83665G	500k	1

802.11ac VHT20_Nss1,(MCS0)_1TX

EBW

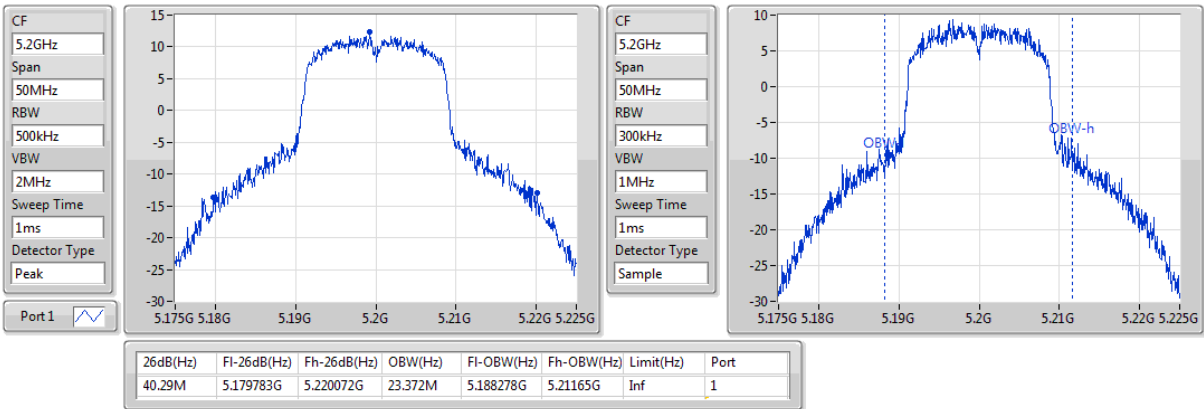
5180MHz



802.11ac VHT20_Nss1,(MCS0)_1TX

EBW

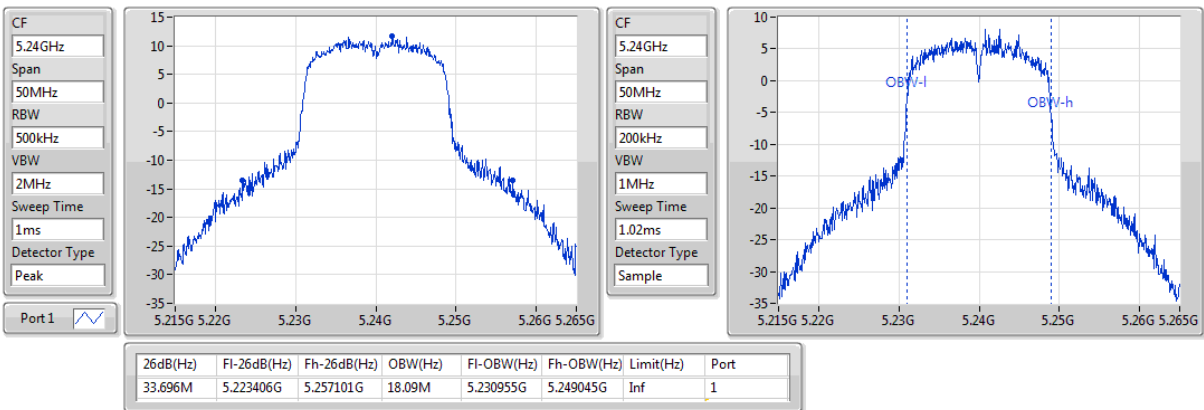
5200MHz



802.11ac VHT20_Nss1,(MCS0)_1TX

EBW

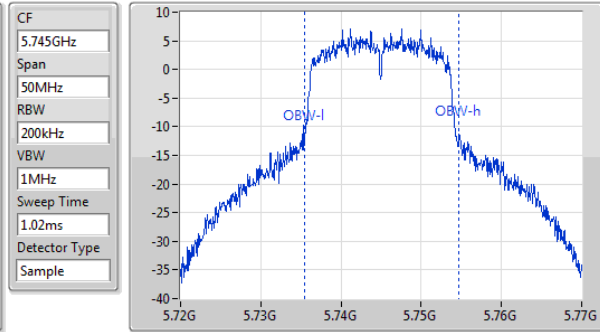
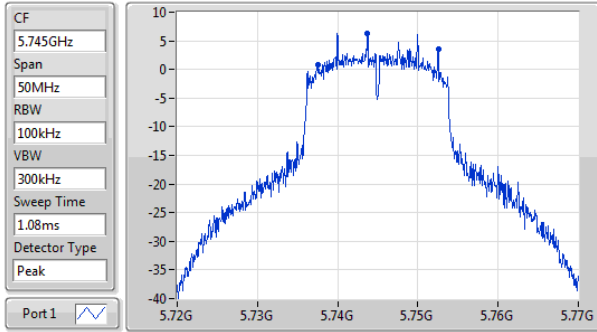
5240MHz



802.11ac VHT20_Nss1,(MCS0)_1TX

EBW

5745MHz

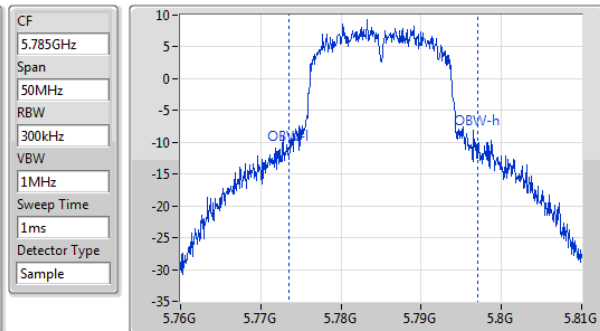
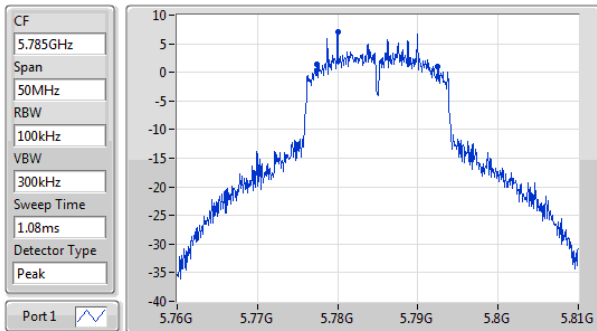


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
14.928M	5.737609G	5.752536G	19.175M	5.735521G	5.754696G	500k	1

802.11ac VHT20_Nss1,(MCS0)_1TX

EBW

5785MHz

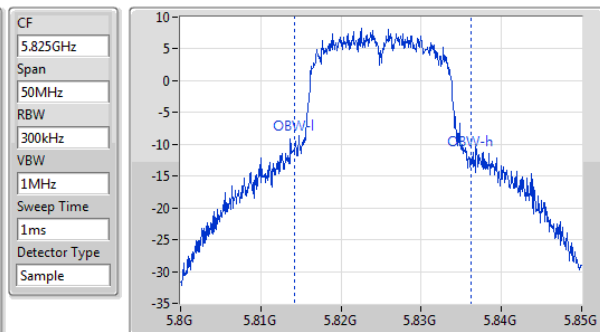
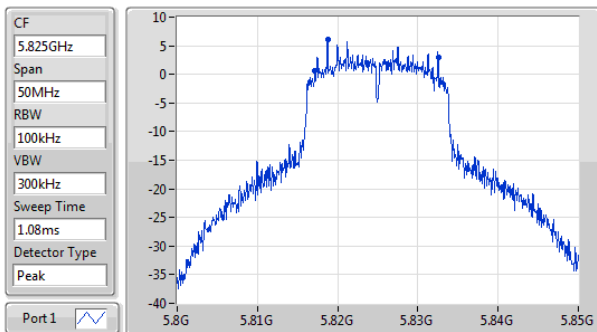


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15M	5.777464G	5.792464G	23.517M	5.773495G	5.797012G	500k	1

802.11ac VHT20_Nss1,(MCS0)_1TX

EBW

5825MHz

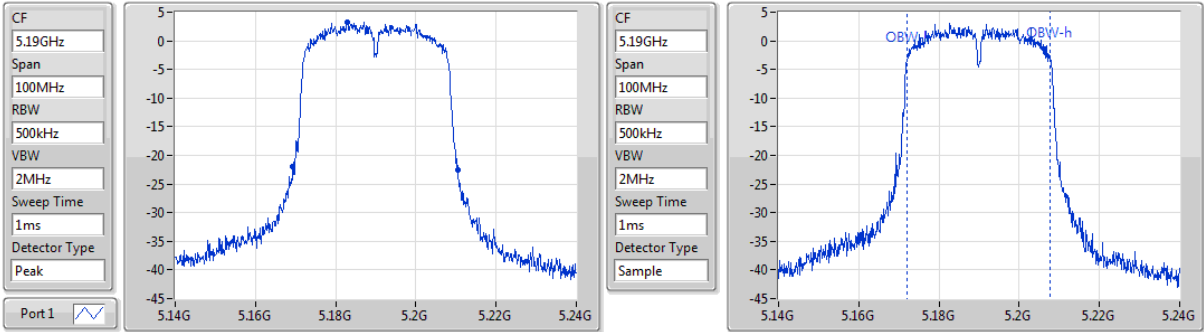


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.362M	5.817174G	5.832536G	21.997M	5.814219G	5.836216G	500k	1

802.11ac VHT40_Nss1,(MCS0)_1TX

EBW

5190MHz

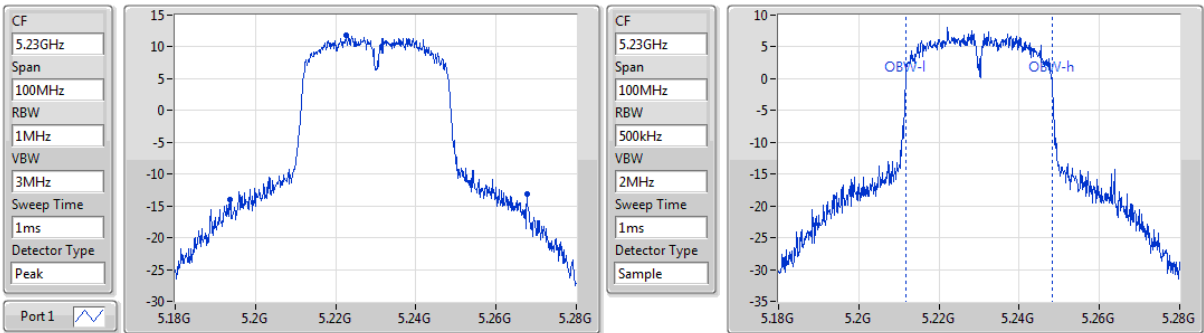


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
41.159M	5.169275G	5.210435G	35.745M	5.172055G	5.2078G	Inf	1

802.11ac VHT40_Nss1,(MCS0)_1TX

EBW

5230MHz

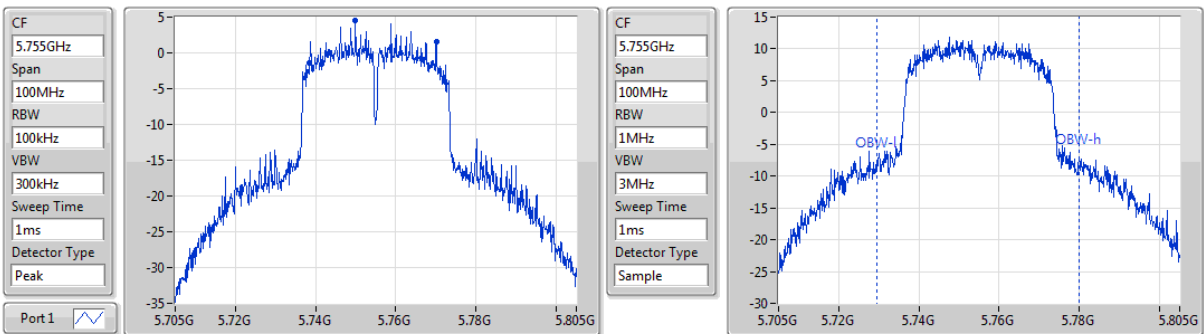


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
73.913M	5.193768G	5.267681G	36.614M	5.211621G	5.248234G	Inf	1

802.11ac VHT40_Nss1,(MCS0)_1TX

EBW

5755MHz

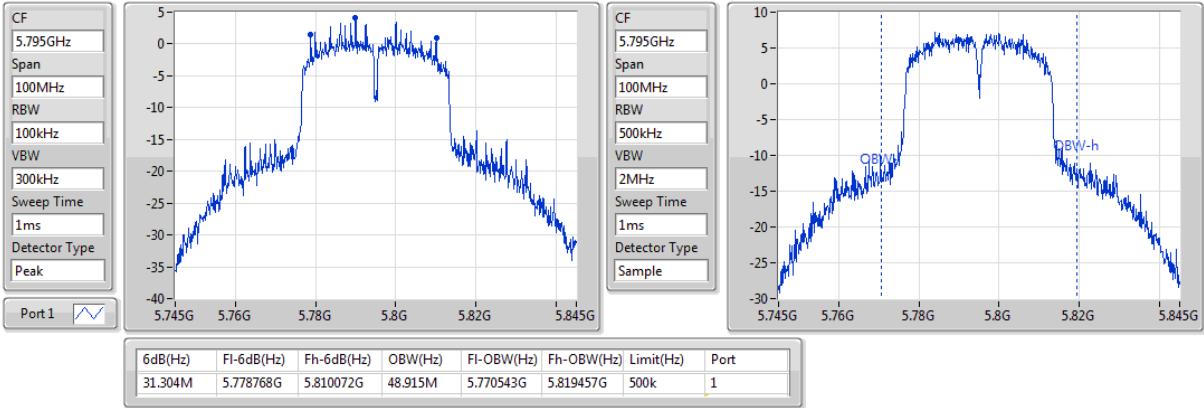


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
31.594M	5.738478G	5.770072G	50.651M	5.729385G	5.780036G	500k	1

802.11ac VHT40_Nss1,(MCS0)_1TX

EBW

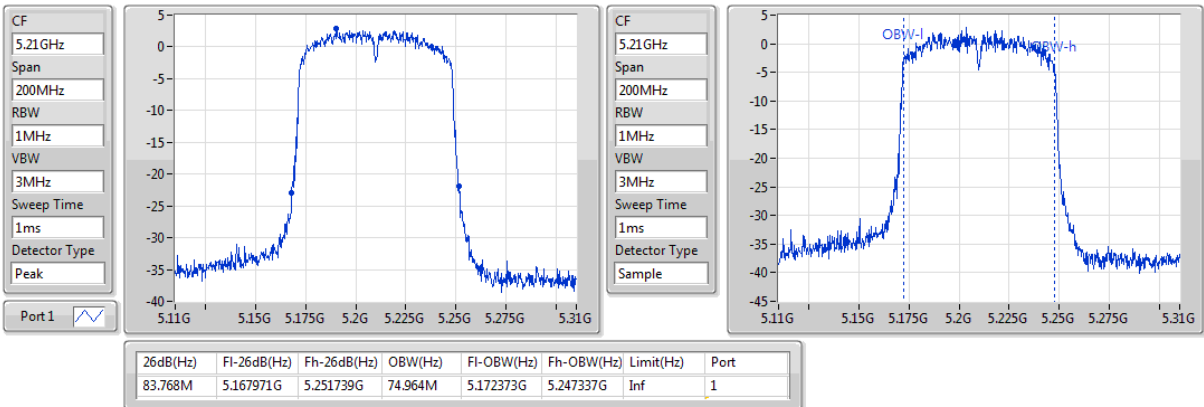
5795MHz



802.11ac VHT80_Nss1,(MCS0)_1TX

EBW

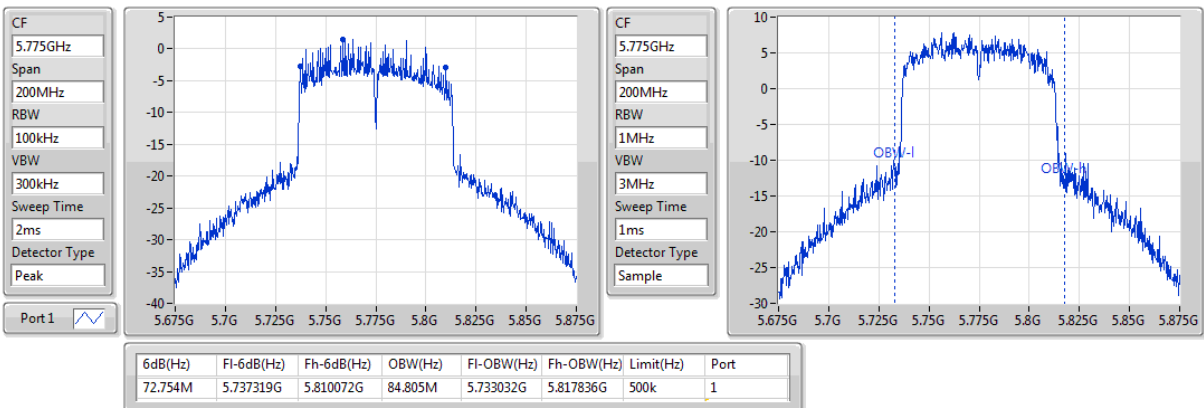
5210MHz



802.11ac VHT80_Nss1,(MCS0)_1TX

EBW

5775MHz



3.3 RF Output Power

3.3.1 Limit of RF Output Power

Frequency band 5150-5250 MHz	
Operating Mode	Limit
<input type="checkbox"/> Outdoor access point	Conducted Power: 1 W The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm)
<input type="checkbox"/> Indoor access point	Conducted Power: 1 W
<input type="checkbox"/> Fixed point-to-point access points	Conducted Power: 1 W
<input checked="" type="checkbox"/> Client devices	Conducted Power: 250 mW

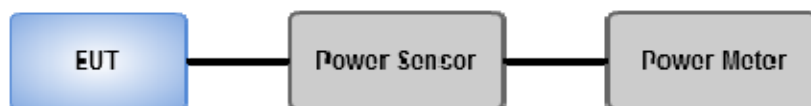
Frequency Band (MHz)	Limit
<input checked="" type="checkbox"/> 5725 ~ 5850	Conducted Power: 1 W

3.3.2 Test Procedures

Method PM-G (Measurement using a gated RF average power meter)

Measurements is performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

3.3.3 Test Setup



3.3.4 Test Result of Maximum Conducted Output Power

Ambient Condition	22°C / 67%	Tested By	Brad Wu
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Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	18.79	0.07568	25.02	0.31769
802.11ac VHT20_Nss1,(MCS0)_1TX	18.77	0.07534	25.00	0.31623
802.11ac VHT40_Nss1,(MCS0)_1TX	17.72	0.05916	23.95	0.24831
802.11ac VHT80_Nss1,(MCS0)_1TX	11.84	0.01528	18.07	0.06412
5.725-5.85GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	17.96	0.06252	24.19	0.26242
802.11ac VHT20_Nss1,(MCS0)_1TX	17.95	0.06237	24.18	0.26182
802.11ac VHT40_Nss1,(MCS0)_1TX	18.39	0.06902	24.62	0.28973
802.11ac VHT80_Nss1,(MCS0)_1TX	17.23	0.05284	23.46	0.22182

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-
5180MHz	Pass	6.23	17.82	17.82	23.77	24.05	30.00
5200MHz	Pass	6.23	18.79	18.79	23.77	25.02	30.00
5240MHz	Pass	6.23	18.17	18.17	23.77	24.40	30.00
5745MHz	Pass	6.23	17.81	17.81	29.77	24.04	36.00
5785MHz	Pass	6.23	17.96	17.96	29.77	24.19	36.00
5825MHz	Pass	6.23	17.85	17.85	29.77	24.08	36.00
802.11ac VHT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
5180MHz	Pass	6.23	17.66	17.66	23.77	23.89	30.00
5200MHz	Pass	6.23	18.77	18.77	23.77	25.00	30.00
5240MHz	Pass	6.23	18.02	18.02	23.77	24.25	30.00
5745MHz	Pass	6.23	17.61	17.61	29.77	23.84	36.00
5785MHz	Pass	6.23	17.95	17.95	29.77	24.18	36.00
5825MHz	Pass	6.23	17.67	17.67	29.77	23.90	36.00
802.11ac VHT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
5190MHz	Pass	6.23	13.25	13.25	23.77	19.48	30.00
5230MHz	Pass	6.23	17.72	17.72	23.77	23.95	30.00
5755MHz	Pass	6.23	18.39	18.39	29.77	24.62	36.00
5795MHz	Pass	6.23	18.05	18.05	29.77	24.28	36.00
802.11ac VHT80_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
5210MHz	Pass	6.23	11.84	11.84	23.77	18.07	30.00
5775MHz	Pass	6.23	17.23	17.23	29.77	23.46	36.00

DG = Directional Gain

For 5.15 ~ 5.25 GHz

Directional Gain = 6.23 dBi > 6dBi, limit shall be reduced to 24 dBm – (6.23 dBi – 6 dBi) = 23.77 dBm

For 5.725 ~ 5.85 GHz

Directional Gain = 6.23 dBi > 6dBi, limit shall be reduced to 30 dBm – (6.23 dBi – 6 dBi) = 29.77 dBm

Port X = Port X output power

3.4 Peak Power Spectral Density

3.4.1 Limit of Peak Power Spectral Density

Frequency band 5150-5250 MHz		
Operating Mode		Limit
<input type="checkbox"/>	Outdoor access point	17 dBm / MHz
<input type="checkbox"/>	Indoor access point	17 dBm / MHz
<input type="checkbox"/>	Fixed point-to-point access points	17 dBm / MHz
<input checked="" type="checkbox"/>	Client devices	11 dBm / MHz

Frequency Band (MHz)		Limit
<input checked="" type="checkbox"/>	5725 ~ 5850	30 dBm /500 kHz

3.4.2 Test Procedures

For 5150 ~ 5250 MHz

Duty cycle \geq 98 %

1. Set RBW = 1 MHz, VBW = 3 MHz, Sweep time = auto, Detector = RMS.
2. Trace average 100 traces.
3. Use the peak marker function to determine the maximum amplitude level.

Duty cycle $<$ 98 %

1. Set RBW = 1 MHz, VBW = 3 MHz, Detector = RMS.
2. Set sweep time \geq 10 * (number of points in sweep) * (total on/off period of the transmitted signal).
3. Perform a single sweep.
4. Use the peak marker function to determine the maximum amplitude level.
5. Add 10 log(1/x), where x is the duty cycle.

For 5725 ~ 5850 MHz

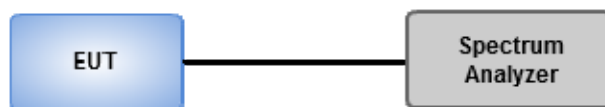
Duty cycle \geq 98 %

1. Set RBW = 500 kHz, VBW = 3 MHz, Sweep time = auto, Detector = RMS.
2. Trace average 100 traces.
3. Use the peak marker function to determine the maximum amplitude level.

Duty cycle $<$ 98 %

1. Set RBW = 500 kHz, VBW = 3 MHz, Detector = RMS.
2. Set sweep time \geq 10 * (number of points in sweep) * (total on/off period of the transmitted signal).
3. Perform a single sweep.
4. Use the peak marker function to determine the maximum amplitude level.
5. Add 10 log(1/x), where x is the duty cycle.

3.4.3 Test Setup



3.4.4 Test Result of Peak Power Spectral Density

Ambient Condition	22°C / 67%	Tested By	Brad Wu
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Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_1TX	5.84	12.07
802.11ac VHT20_Nss1,(MCS0)_1TX	5.72	11.95
802.11ac VHT40_Nss1,(MCS0)_1TX	1.22	7.45
802.11ac VHT80_Nss1,(MCS0)_1TX	-7.76	-1.53
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_1TX	3.05	9.28
802.11ac VHT20_Nss1,(MCS0)_1TX	2.91	9.14
802.11ac VHT40_Nss1,(MCS0)_1TX	-0.03	6.20
802.11ac VHT80_Nss1,(MCS0)_1TX	-3.71	2.52

RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-
5180MHz	Pass	6.23	4.46	4.46	10.77	10.69	17.00
5200MHz	Pass	6.23	5.84	5.84	10.77	12.07	17.00
5240MHz	Pass	6.23	4.77	4.77	10.77	11.00	17.00
5745MHz	Pass	6.23	2.45	2.45	29.77	8.68	36.00
5785MHz	Pass	6.23	3.05	3.05	29.77	9.28	36.00
5825MHz	Pass	6.23	2.46	2.46	29.77	8.69	36.00
802.11ac VHT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
5180MHz	Pass	6.23	4.74	4.74	10.77	10.97	17.00
5200MHz	Pass	6.23	5.72	5.72	10.77	11.95	17.00
5240MHz	Pass	6.23	4.85	4.85	10.77	11.08	17.00
5745MHz	Pass	6.23	2.31	2.31	29.77	8.54	36.00
5785MHz	Pass	6.23	2.91	2.91	29.77	9.14	36.00
5825MHz	Pass	6.23	2.32	2.32	29.77	8.55	36.00
802.11ac VHT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
5190MHz	Pass	6.23	-3.26	-3.26	10.77	2.97	17.00
5230MHz	Pass	6.23	1.22	1.22	10.77	7.45	17.00
5755MHz	Pass	6.23	-0.03	-0.03	29.77	6.20	36.00
5795MHz	Pass	6.23	-0.45	-0.45	29.77	5.78	36.00
802.11ac VHT80_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
5210MHz	Pass	6.23	-7.76	-7.76	10.77	-1.53	17.00
5775MHz	Pass	6.23	-3.71	-3.71	29.77	2.52	36.00

DG = Directional Gain

For 5.15 ~ 5.25 GHz

Directional Gain = 6.23 dBi > 6dBi, limit shall be reduced to 11 dBm – (6.23 dBi – 6 dBi) = 10.77 dBm

For 5.725 ~ 5.85 GHz

Directional Gain = 6.23 dBi > 6dBi, limit shall be reduced to 30 dBm – (6.23 dBi – 6 dBi) = 29.77 dBm

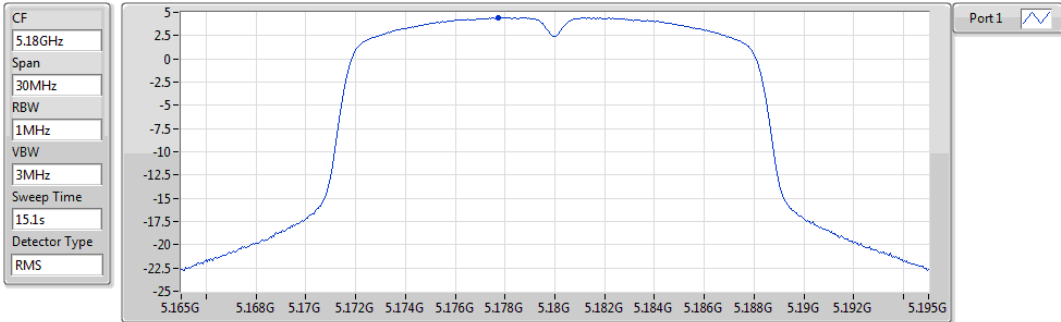
RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

PD = Maximum power density; **Port X** = Port X power density;

802.11a_Nss1,(6Mbps)_1TX

PSD

5180MHz

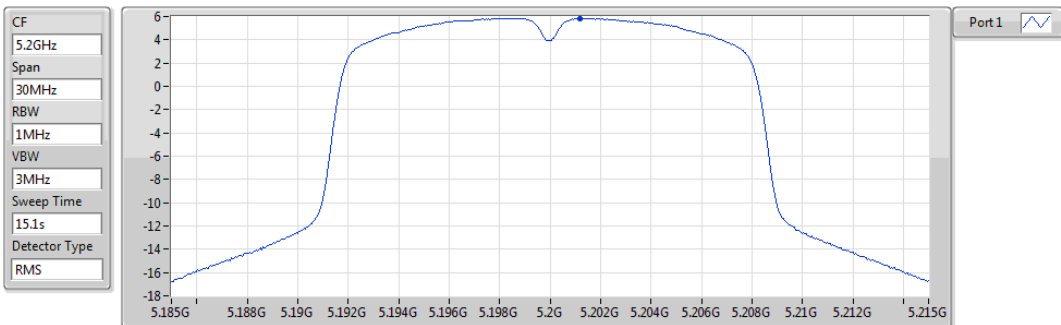


Sum	PD	Port1
(dBm/1MHz)	(dBm/1MHz)	(dBm/1MHz)
4.46	4.46	4.46

802.11a_Nss1,(6Mbps)_1TX

PSD

5200MHz

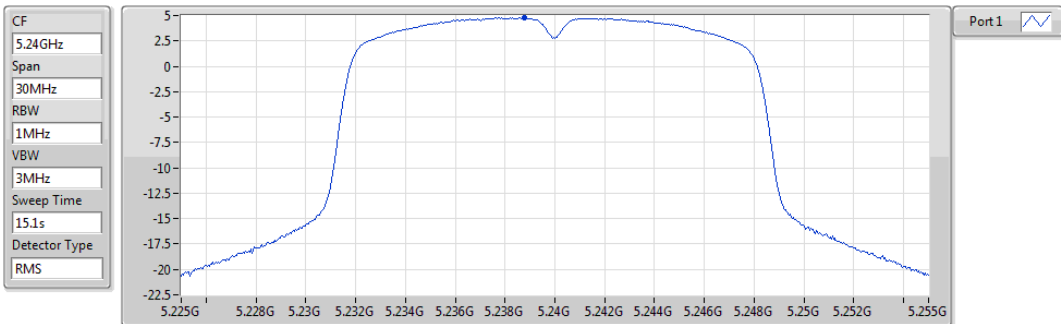


Sum	PD	Port1
(dBm/1MHz)	(dBm/1MHz)	(dBm/1MHz)
5.84	5.84	5.84

802.11a_Nss1,(6Mbps)_1TX

PSD

5240MHz

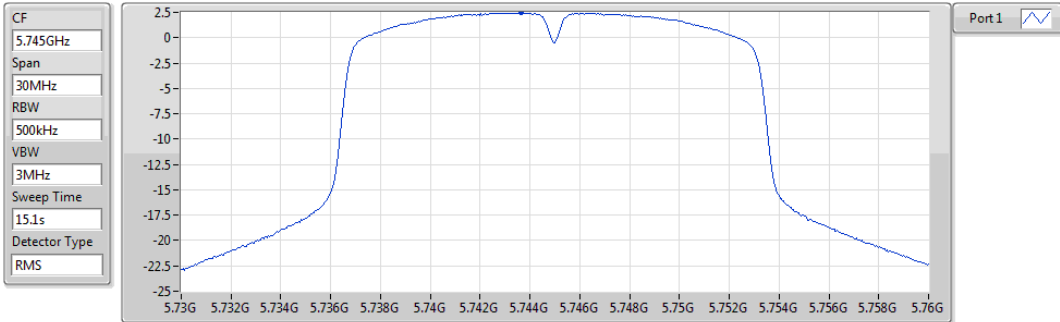


Sum	PD	Port1
(dBm/1MHz)	(dBm/1MHz)	(dBm/1MHz)
4.77	4.77	4.77

802.11a_Nss1,(6Mbps)_1TX

PSD

5745MHz

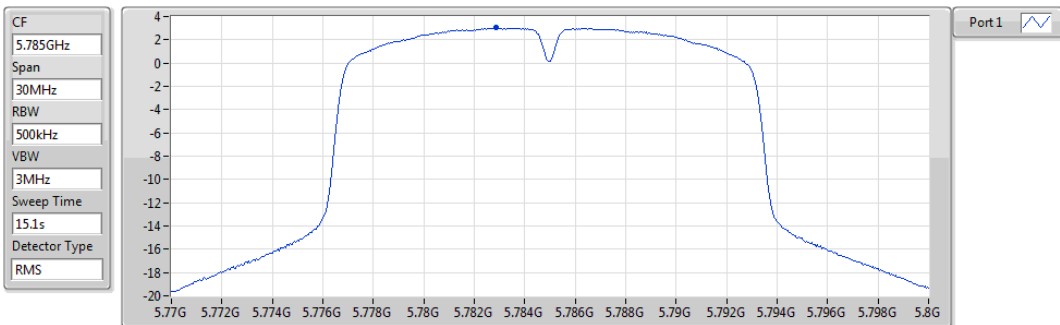


Sum	PD	Port1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.45	2.45	2.45

802.11a_Nss1,(6Mbps)_1TX

PSD

5785MHz

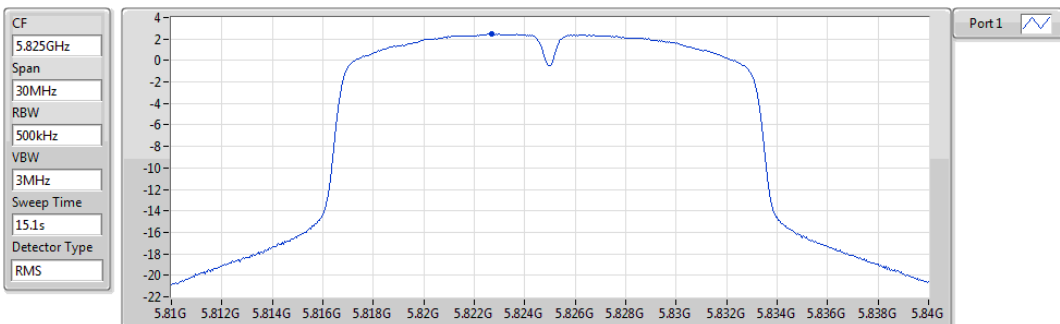


Sum	PD	Port1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.05	3.05	3.05

802.11a_Nss1,(6Mbps)_1TX

PSD

5825MHz

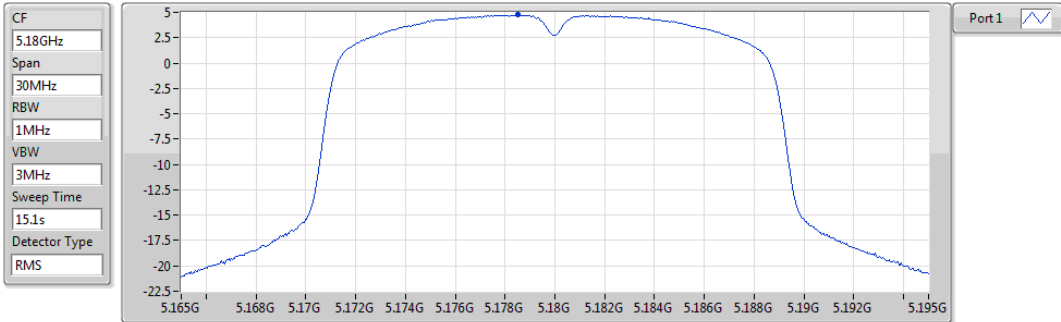


Sum	PD	Port1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.46	2.46	2.46

802.11ac VHT20_Nss1,(MCS0)_1TX

PSD

5180MHz

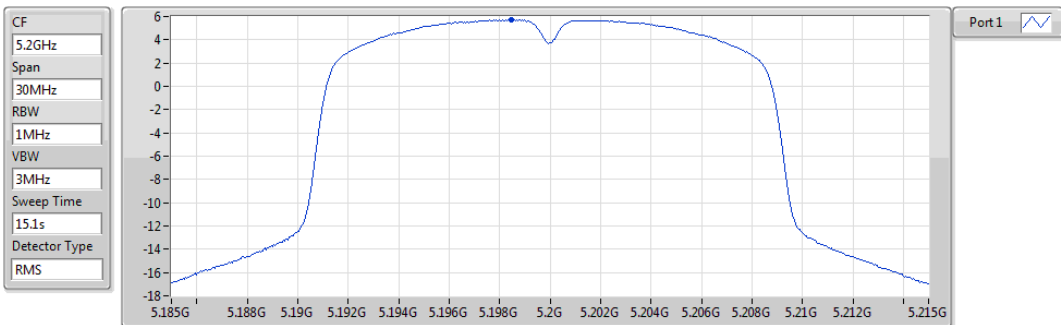


Sum	PD	Port1
(dBm/1MHz)	(dBm/1MHz)	(dBm/1MHz)
4.74	4.74	4.74

802.11ac VHT20_Nss1,(MCS0)_1TX

PSD

5200MHz

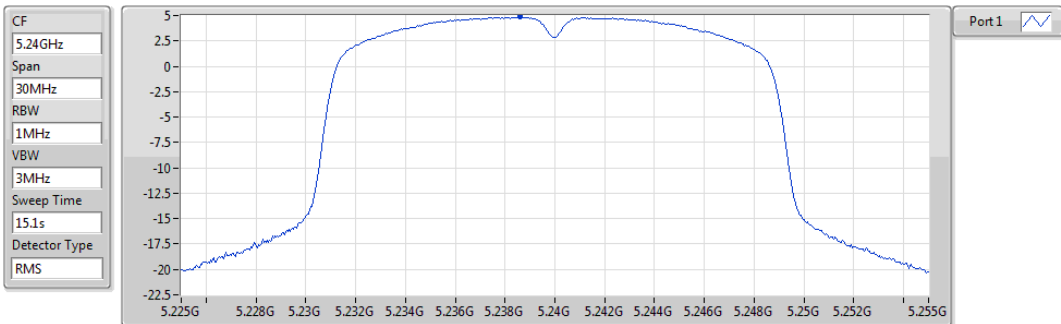


Sum	PD	Port1
(dBm/1MHz)	(dBm/1MHz)	(dBm/1MHz)
5.72	5.72	5.72

802.11ac VHT20_Nss1,(MCS0)_1TX

PSD

5240MHz

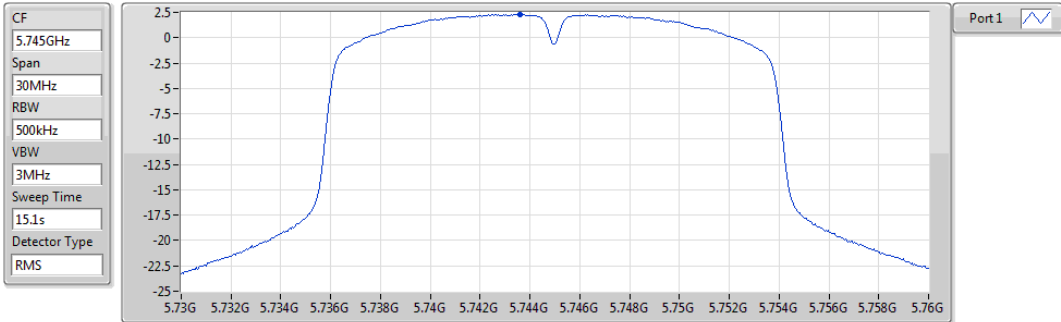


Sum	PD	Port1
(dBm/1MHz)	(dBm/1MHz)	(dBm/1MHz)
4.85	4.85	4.85

802.11ac VHT20_Nss1,(MCS0)_1TX

PSD

5745MHz

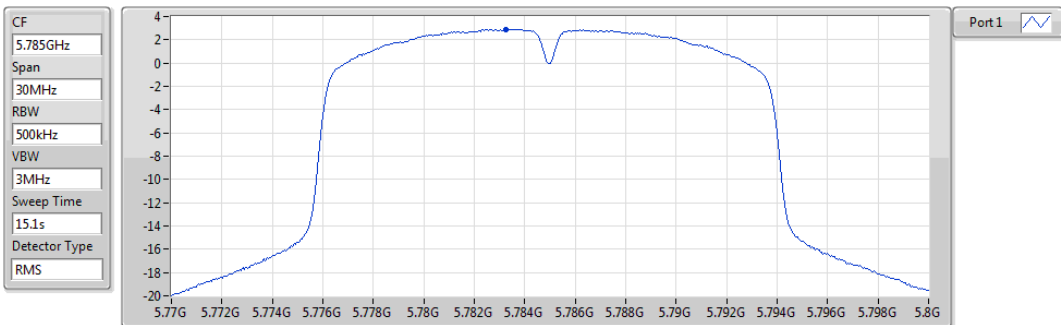


Sum	PD	Port1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.31	2.31	2.31

802.11ac VHT20_Nss1,(MCS0)_1TX

PSD

5785MHz

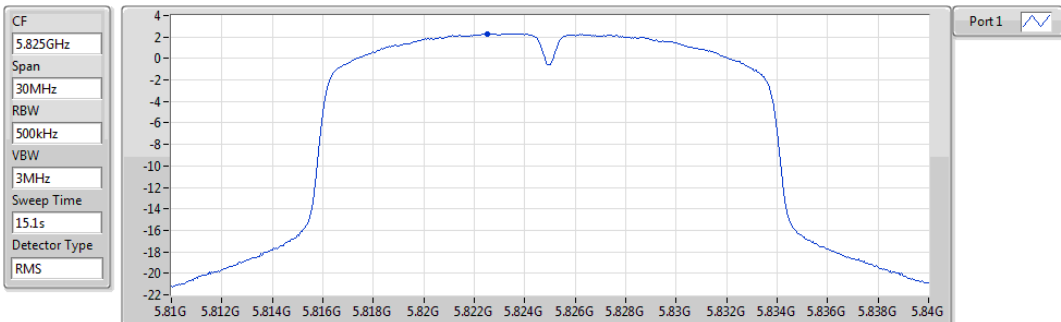


Sum	PD	Port1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.91	2.91	2.91

802.11ac VHT20_Nss1,(MCS0)_1TX

PSD

5825MHz

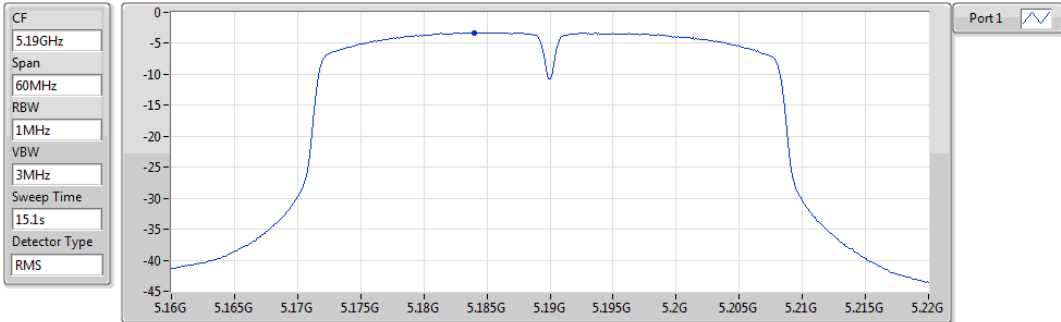


Sum	PD	Port1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.32	2.32	2.32

802.11ac VHT40_Nss1,(MCS0)_1TX

PSD

5190MHz

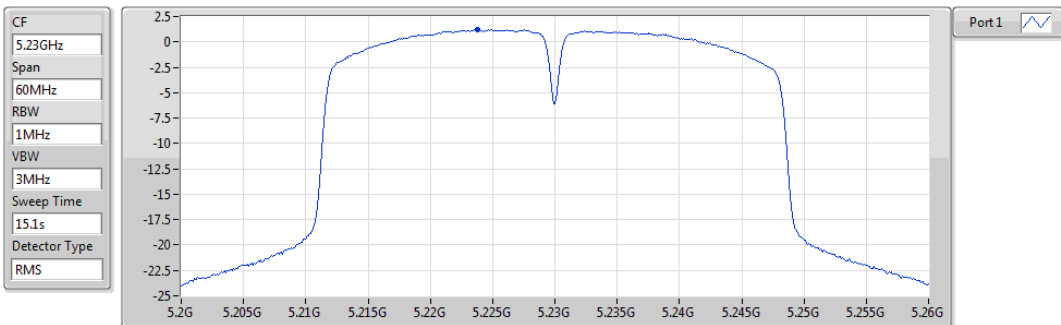


Sum	PD	Port 1
(dBm/1MHz)	(dBm/1MHz)	(dBm/1MHz)
-3.26	-3.26	-3.26

802.11ac VHT40_Nss1,(MCS0)_1TX

PSD

5230MHz

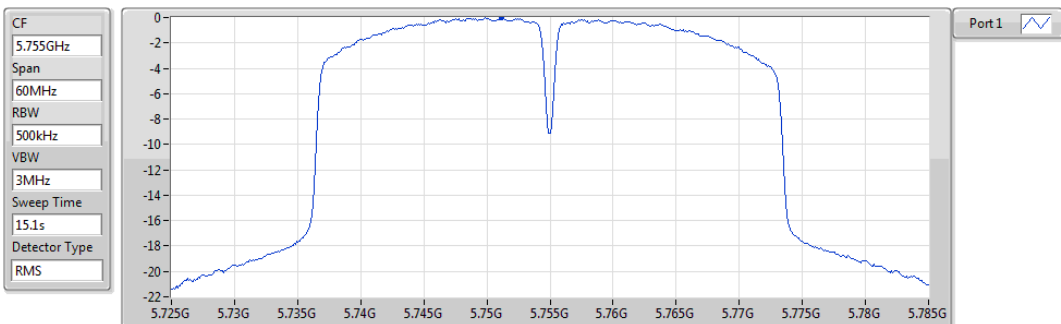


Sum	PD	Port 1
(dBm/1MHz)	(dBm/1MHz)	(dBm/1MHz)
1.22	1.22	1.22

802.11ac VHT40_Nss1,(MCS0)_1TX

PSD

5755MHz

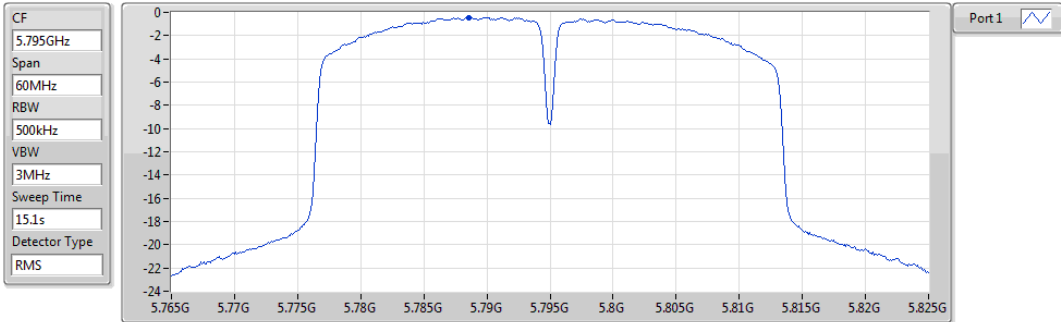


Sum	PD	Port 1
(dBm/1MHz)	(dBm/1MHz)	(dBm/1MHz)
-0.03	-0.03	-0.03

802.11ac VHT40_Nss1,(MCS0)_1TX

PSD

5795MHz

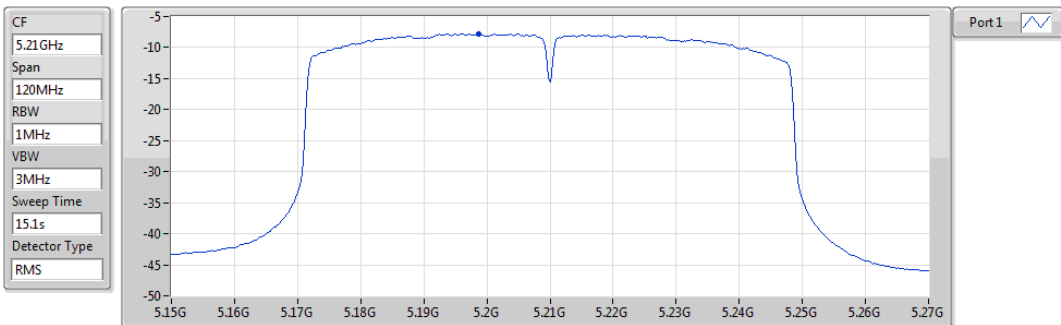


Sum	PD	Port1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.45	-0.45	-0.45

802.11ac VHT80_Nss1,(MCS0)_1TX

PSD

5210MHz

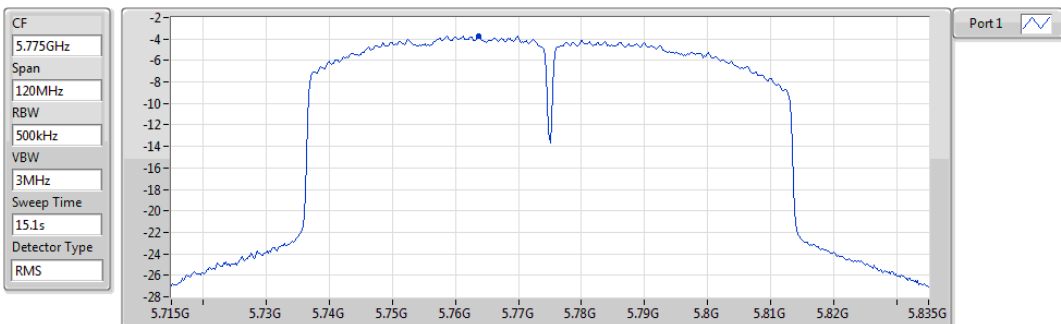


Sum	PD	Port1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.76	-7.76	-7.76

802.11ac VHT80_Nss1,(MCS0)_1TX

PSD

5775MHz



Sum	PD	Port1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.71	-3.71	-3.71

3.5 Transmitter Radiated and Band Edge Emissions

3.5.1 Limit of Transmitter Radiated and Band Edge 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]
5.725 - 5.850 GHz	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.

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).

3.5.2 Test Procedures

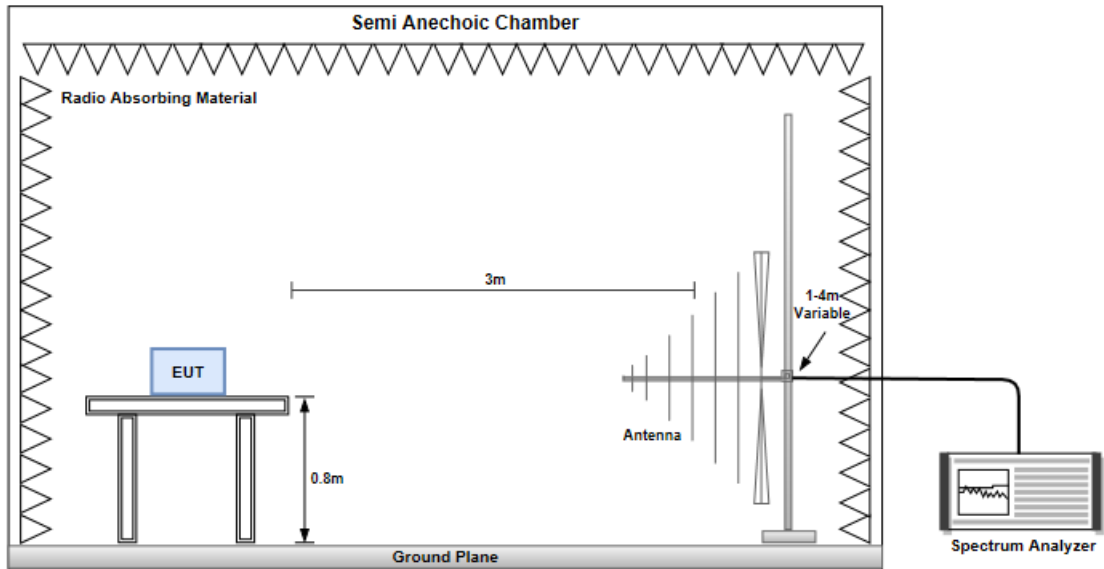
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at test table. For emissions testing at or below 1 GHz, the table height is 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height is 1.5 m
2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 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:

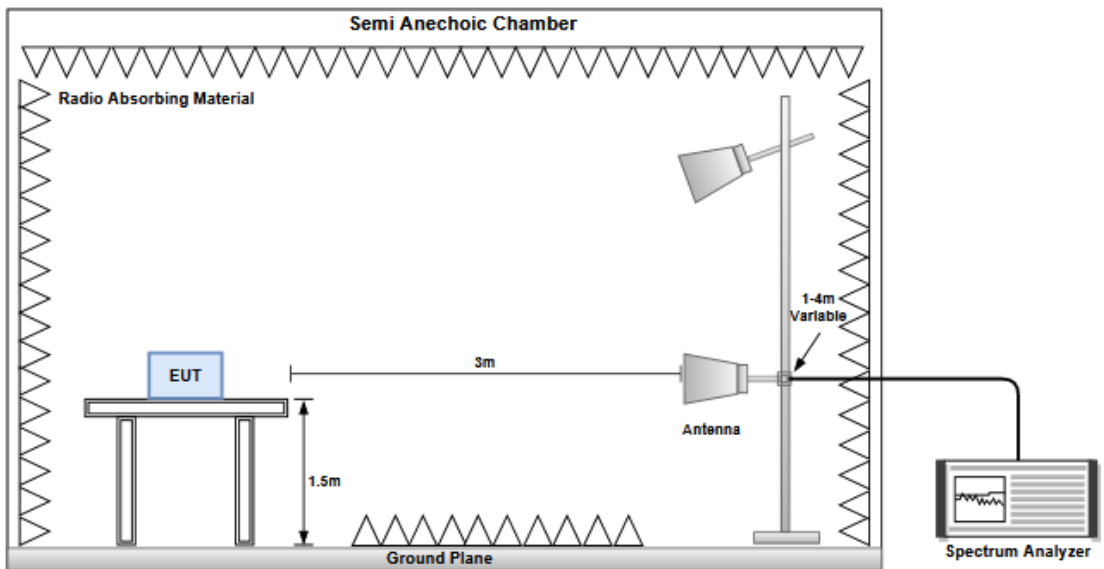
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.5.3 Test Setup

Radiated Emissions below 1 GHz



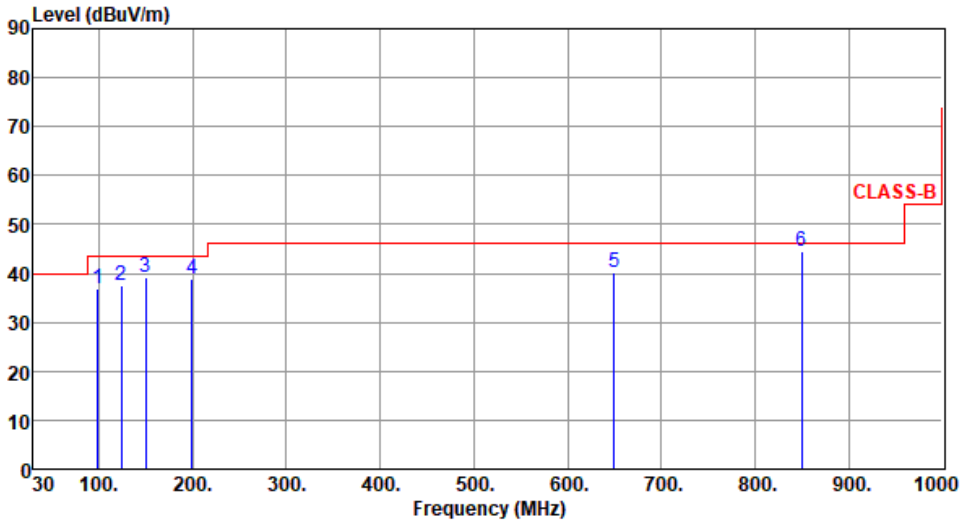
Radiated Emissions above 1 GHz



Configuration 1: Array antenna with antenna cable, Z-plane

3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

Modulation	11a	Test Freq. (MHz)	5200
Polarization	Horizontal		
Test By :BRAD WU		Temperature(°C):22	Humidity(%):64



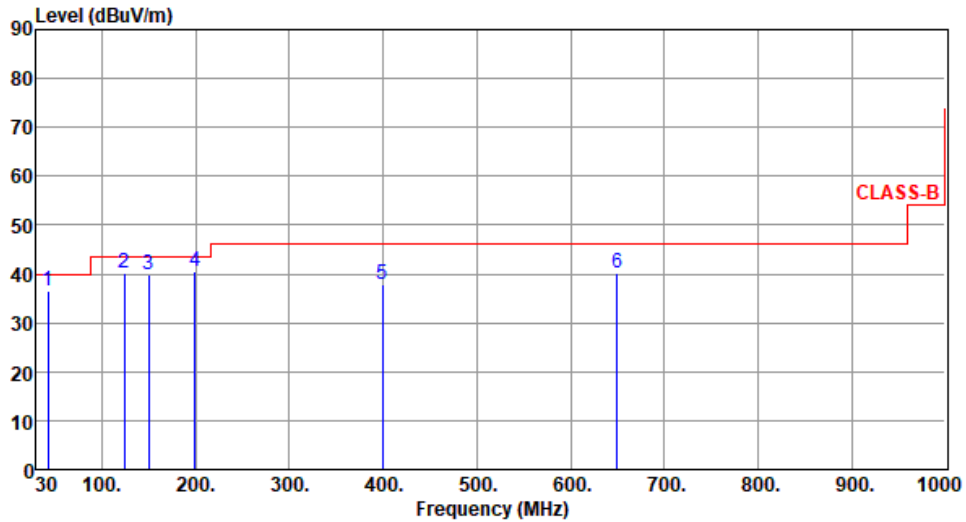
The graph plots Level (dBuV/m) on the y-axis (0 to 90) against Frequency (MHz) on the x-axis (30 to 1000). A red line represents the CLASS-B limit, which is constant at 40 dBuV/m until 200 MHz, then steps up to 45 dBuV/m until 950 MHz, and finally to 55 dBuV/m at 1000 MHz. Six blue vertical lines represent emission peaks, labeled 1 through 6, with their respective frequencies and levels indicated in the table below.

	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	98.65	36.75	43.50	-6.75	50.95	-14.20	Peak	---	---
2	124.15	37.64	43.50	-5.86	48.60	-10.96	Peak	---	---
3	149.46	39.28	43.50	-4.22	48.38	-9.10	Peak	---	---
4	199.61	38.94	43.50	-4.56	51.32	-12.38	Peak	---	---
5	649.79	40.31	46.00	-5.69	39.88	0.43	Peak	---	---
6	850.15	44.49	46.00	-1.51	41.10	3.39	QP	100	143

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).
 Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	11a	Test Freq. (MHz)	5200
Polarization	Vertical		

Test By :BRAD WU Temperature(°C):22 Humidity(%):64



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	42.55	36.64	40.00	-3.36	45.49	-8.85	Peak	---	---
2	124.15	40.25	43.50	-3.25	51.21	-10.96	Peak	---	---
3	149.56	39.87	43.50	-3.63	48.98	-9.11	Peak	---	---
4	199.66	40.61	43.50	-2.89	52.98	-12.37	QP	100	116
5	399.61	37.84	46.00	-8.16	43.72	-5.88	Peak	---	---
6	649.77	40.15	46.00	-5.85	39.72	0.43	Peak	---	---

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

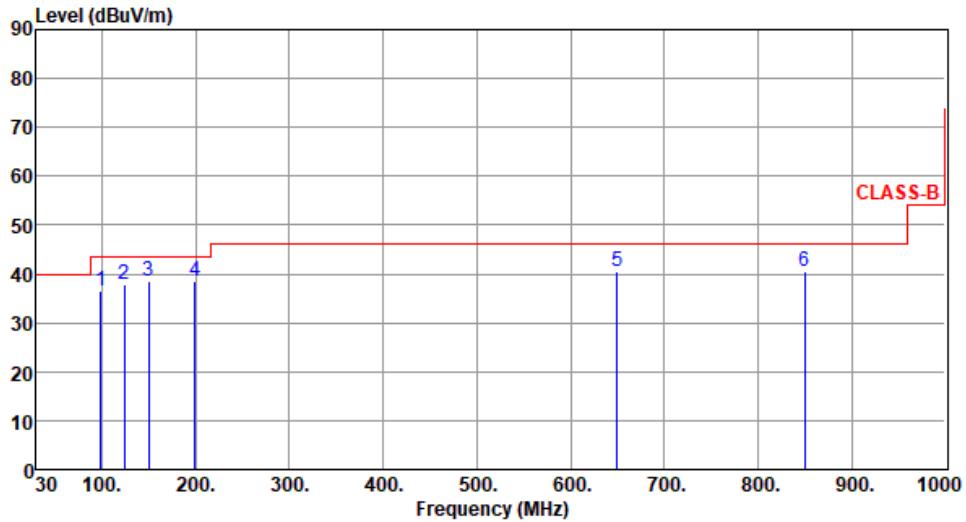
*Factor includes antenna factor , cable loss and amplifier gain

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

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Horizontal		

Test By :BRAD WU Temperature(°C):22 Humidity(%):64



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	98.68	36.67	43.50	-6.83	50.87	-14.20	Peak	---	---
2	124.18	37.84	43.50	-5.66	48.79	-10.95	Peak	---	---
3	149.56	38.59	43.50	-4.91	47.70	-9.11	Peak	---	---
4	199.60	38.61	43.50	-4.89	50.99	-12.38	Peak	---	---
5	649.79	40.39	46.00	-5.61	39.96	0.43	Peak	---	---
6	850.11	40.48	46.00	-5.52	37.10	3.38	QP	100	143

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

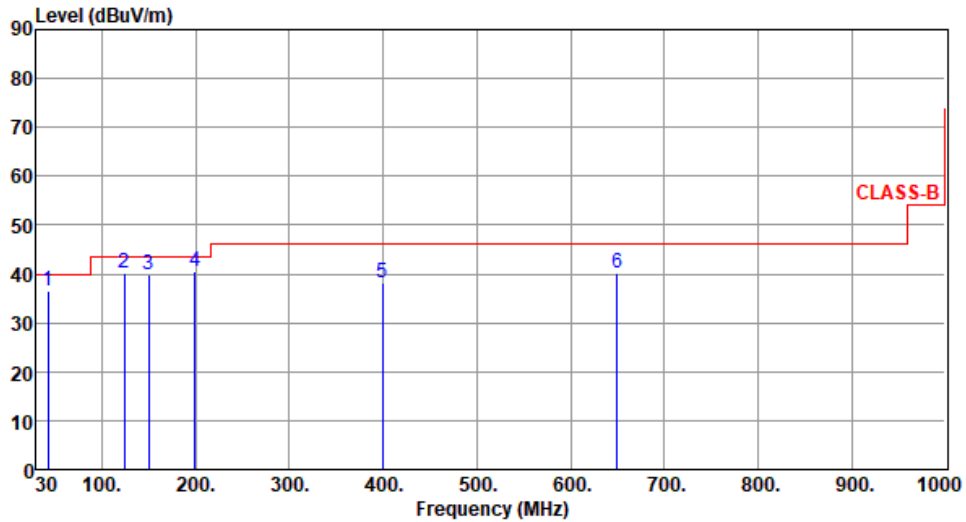
*Factor includes antenna factor , cable loss and amplifier gain

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

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical		

Test By :BRAD WU Temperature(°C):22 Humidity(%):64



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	42.52	36.64	40.00	-3.36	45.49	-8.85	Peak	---	---
2	124.15	40.25	43.50	-3.25	51.21	-10.96	Peak	---	---
3	149.45	39.87	43.50	-3.63	48.96	-9.09	Peak	---	---
4	199.61	40.58	43.50	-2.92	52.96	-12.38	QP	100	111
5	399.61	38.15	46.00	-7.85	44.03	-5.88	Peak	---	---
6	649.79	40.35	46.00	-5.65	39.92	0.43	Peak	---	---

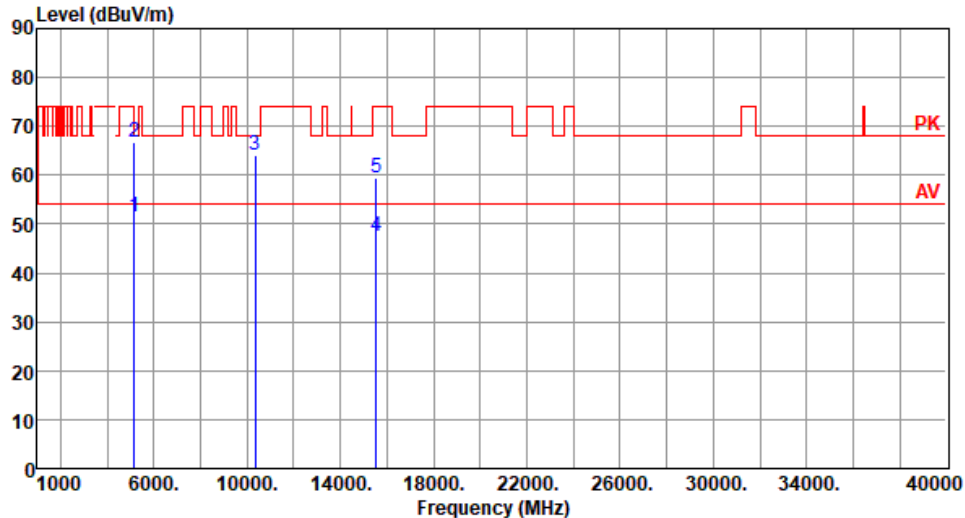
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

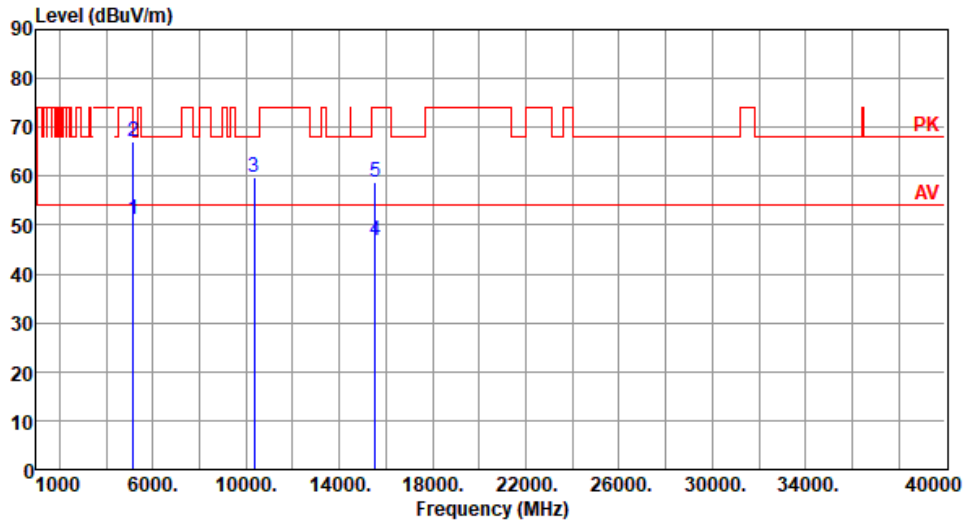
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

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

Modulation	11a	Test Freq. (MHz)	5180						
Polarization	Horizontal								
Test By : BRAD WU Temperature(°C):23 Humidity(%):66									
									
	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	51.62	54.00	-2.38	46.21	5.41	Average	214	321
2	5150.00	66.66	74.00	-7.34	61.25	5.41	Peak	214	321
3	10360.00	64.08	68.20	-4.12	50.65	13.43	Peak	233	301
4	15540.00	47.43	54.00	-6.57	32.05	15.38	Average	100	61
5	15540.00	59.43	74.00	-14.57	44.05	15.38	Peak	100	61
<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>									

Modulation	11a	Test Freq. (MHz)	5180
Polarization	Vertical		

Test By :BRAD WU Temperature(°C):23 Humidity(%):66



	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	51.30	54.00	-2.70	45.89	5.41	Average	206	309
2	5150.00	67.05	74.00	-6.95	61.64	5.41	Peak	206	309
3	10360.00	59.86	68.20	-8.34	46.43	13.43	Peak	100	308
4	15540.00	46.95	54.00	-7.05	31.57	15.38	Average	100	48
5	15540.00	58.92	74.00	-15.08	43.54	15.38	Peak	100	48

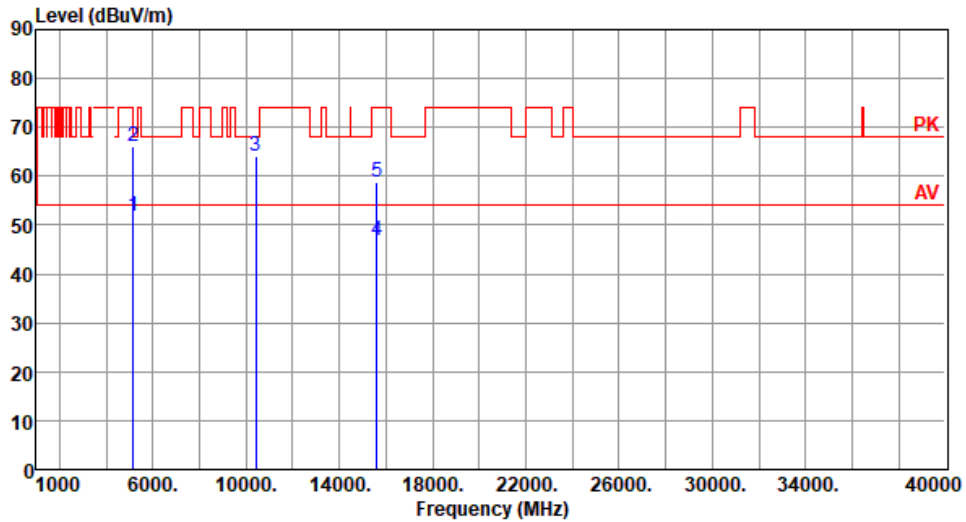
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5200
Polarization	Horizontal		

Test By :Roger Lu Temperature(°C):23 Humidity(%):66



	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	51.86	54.00	-2.14	46.45	5.41	Average	112	269
2	5150.00	66.21	74.00	-7.79	60.80	5.41	Peak	112	269
3	10400.00	63.99	68.20	-4.21	50.36	13.63	Peak	226	302
4	15600.00	46.97	54.00	-7.03	31.68	15.29	Average	100	50
5	15600.00	58.87	74.00	-15.13	43.58	15.29	Peak	100	50

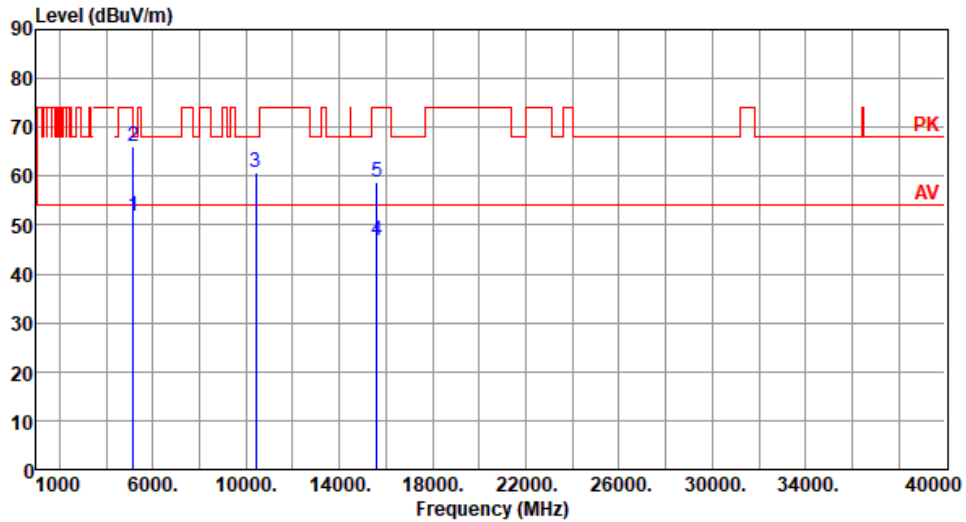
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5200
Polarization	Vertical		

Test By :Roger Lu Temperature(°C):23 Humidity(%):66



	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	51.66	54.00	-2.34	46.25	5.41	Average	206	308
2	5150.00	65.95	74.00	-8.05	60.54	5.41	Peak	206	308
3	10400.00	60.78	68.20	-7.42	47.15	13.63	Peak	100	305
4	15600.00	46.71	54.00	-7.29	31.42	15.29	Average	100	60
5	15600.00	58.64	74.00	-15.36	43.35	15.29	Peak	100	60

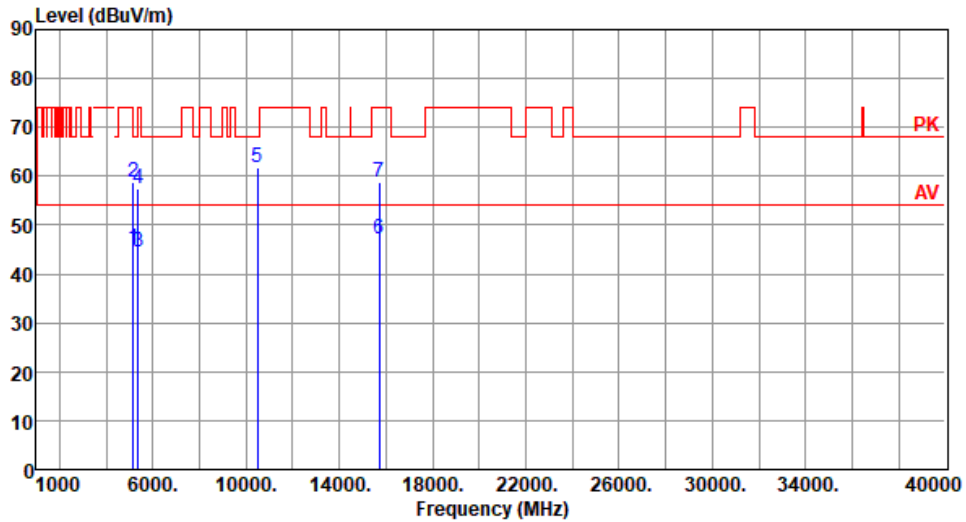
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5240
Polarization	Horizontal		

Test By :BRAD WU Temperature(°C):23 Humidity(%):66



	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	45.20	54.00	-8.80	39.79	5.41	Average	100	269
2	5150.00	58.64	74.00	-15.36	53.23	5.41	Peak	100	269
3	5350.00	44.40	54.00	-9.60	39.43	4.97	Average	100	269
4	5350.00	57.62	74.00	-16.38	52.65	4.97	Peak	100	269
5	10480.00	61.84	68.20	-6.36	48.04	13.80	Peak	224	305
6	15720.00	47.06	54.00	-6.94	32.41	14.65	Average	100	47
7	15720.00	58.92	74.00	-15.08	44.27	14.65	Peak	100	47

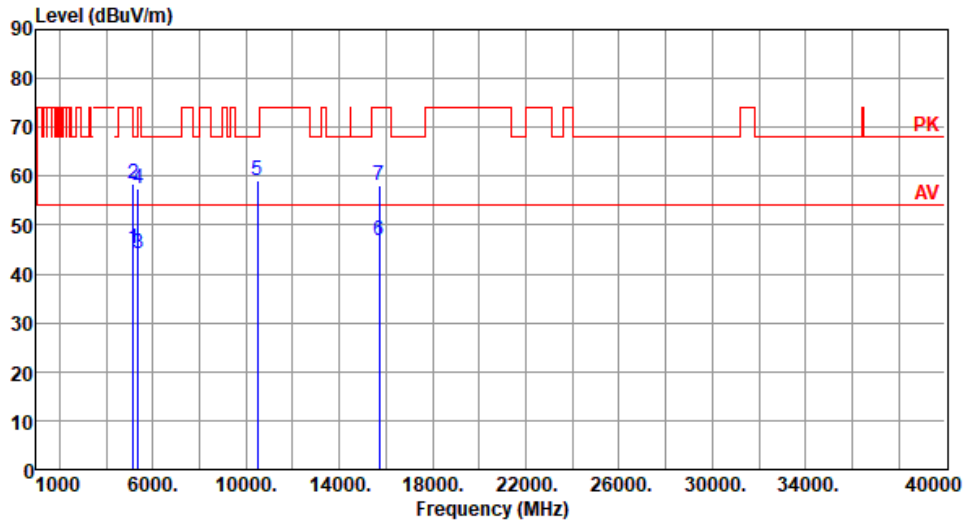
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5240
Polarization	Vertical		

Test By :BRAD WU Temperature(°C):23 Humidity(%):66



	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	45.06	54.00	-8.94	39.65	5.41	Average	205	305
2	5150.00	58.56	74.00	-15.44	53.15	5.41	Peak	205	305
3	5350.00	44.23	54.00	-9.77	39.26	4.97	Average	205	305
4	5350.00	57.52	74.00	-16.48	52.55	4.97	Peak	205	305
5	10480.00	59.01	68.20	-9.19	45.21	13.80	Peak	100	305
6	15720.00	46.89	54.00	-7.11	32.24	14.65	Average	100	50
7	15720.00	58.20	74.00	-15.80	43.55	14.65	Peak	100	50

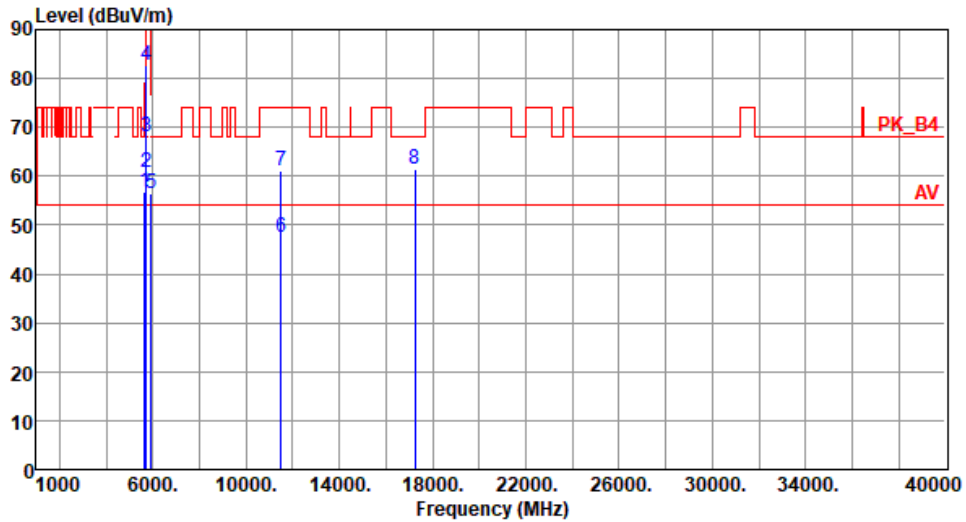
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5745
Polarization	Horizontal		

Test By :BRAD WU Temperature(°C):23 Humidity(%):66



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.71	68.20	-11.49	51.16	5.55	Peak	100	313
2	5700.00	60.93	105.20	-44.27	55.27	5.66	Peak	100	313
3	5720.00	68.11	110.80	-42.69	62.32	5.79	Peak	100	313
4	5725.00	82.80	122.20	-39.40	76.98	5.82	Peak	100	313
5	5925.00	56.48	68.20	-11.72	50.21	6.27	Peak	100	313
6	11490.00	47.42	54.00	-6.58	33.01	14.41	Average	181	316
7	11490.00	61.15	74.00	-12.85	46.74	14.41	Peak	181	316
8	17235.00	61.56	68.20	-6.64	44.37	17.19	Peak	100	59

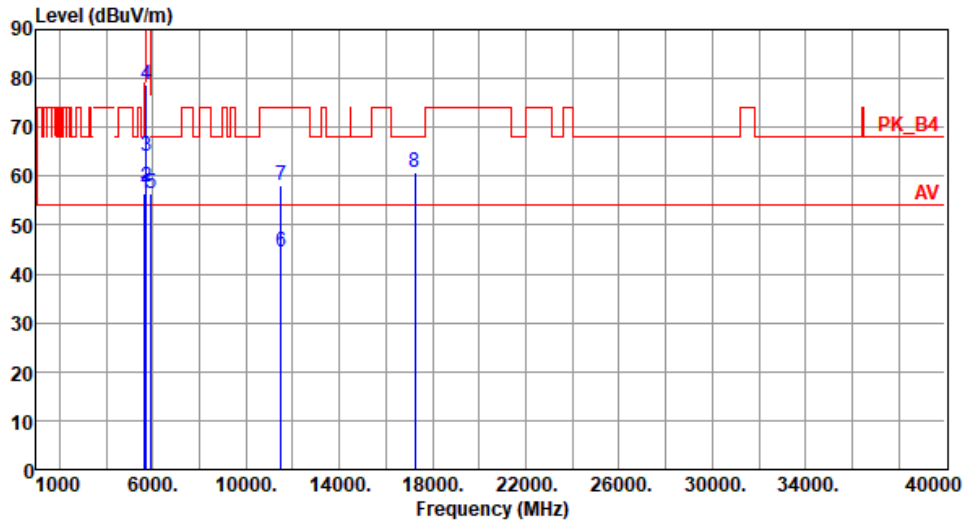
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5745
Polarization	Vertical		

Test By :BRAD WU Temperature(°C):23 Humidity(%):66



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.60	68.20	-11.60	51.05	5.55	Peak	100	245
2	5700.00	57.92	105.20	-47.28	52.26	5.66	Peak	100	245
3	5720.00	64.25	110.80	-46.55	58.46	5.79	Peak	100	245
4	5725.00	78.70	122.20	-43.50	72.88	5.82	Peak	100	245
5	5925.00	56.38	68.20	-11.82	50.11	6.27	Peak	100	245
6	11490.00	44.43	54.00	-9.57	30.02	14.41	Average	100	306
7	11490.00	57.99	74.00	-16.01	43.58	14.41	Peak	100	306
8	17235.00	60.87	68.20	-7.33	43.68	17.19	Peak	100	50

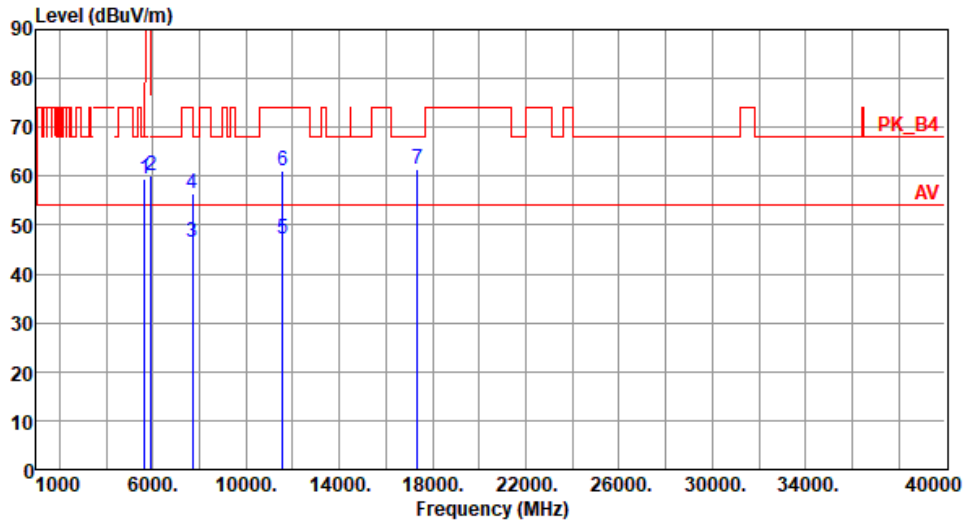
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5785
Polarization	Horizontal		

Test By :Roger Lu Temperature(°C):23 Humidity(%):66



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.37	68.20	-8.83	53.82	5.55	Peak	112	313
2	5925.00	60.12	68.20	-8.08	53.85	6.27	Peak	112	313
3	7713.33	46.36	54.00	-7.64	37.12	9.24	Average	258	134
4	7713.33	56.43	74.00	-17.57	47.19	9.24	Peak	258	134
5	11570.00	47.28	54.00	-6.72	33.01	14.27	Average	177	314
6	11570.00	61.08	74.00	-12.92	46.81	14.27	Peak	177	314
7	17355.00	61.42	68.20	-6.78	43.59	17.83	Peak	100	60

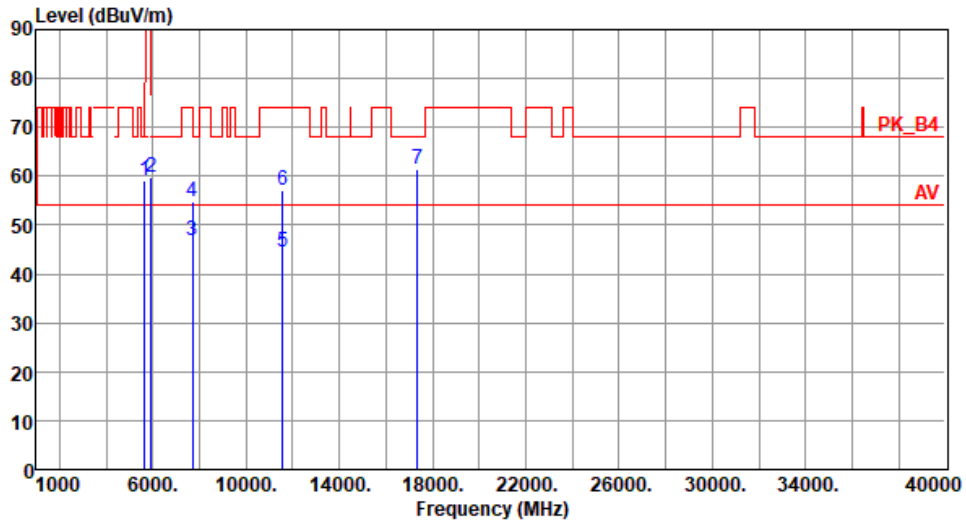
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5785
Polarization	Vertical		

Test By :Roger Lu Temperature(°C):23 Humidity(%):66



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.12	68.20	-9.08	53.57	5.55	Peak	100	247
2	5925.00	59.76	68.20	-8.44	53.49	6.27	Peak	100	247
3	7713.33	46.87	54.00	-7.13	37.63	9.24	Average	100	202
4	7713.33	54.87	74.00	-19.13	45.63	9.24	Peak	100	202
5	11570.00	44.38	54.00	-9.62	30.11	14.27	Average	100	308
6	11570.00	57.20	74.00	-16.80	42.93	14.27	Peak	100	308
7	17355.00	61.51	68.20	-6.69	43.68	17.83	Peak	100	20

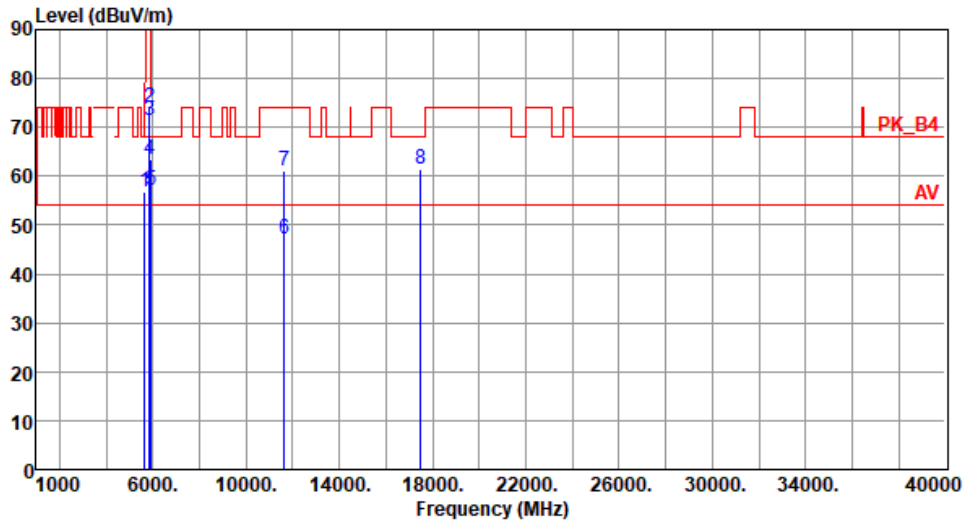
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5825
Polarization	Horizontal		

Test By :BRAD WU Temperature(°C):23 Humidity(%):66



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.86	68.20	-11.34	51.31	5.55	Peak	100	312
2	5850.00	74.18	122.20	-48.02	67.98	6.20	Peak	100	312
3	5855.00	71.31	110.80	-39.49	65.11	6.20	Peak	100	312
4	5875.00	63.35	105.20	-41.85	57.14	6.21	Peak	100	312
5	5925.00	57.23	68.20	-10.97	50.96	6.27	Peak	100	312
6	11650.00	47.14	54.00	-6.86	33.10	14.04	Average	165	316
7	11650.00	61.02	74.00	-12.98	46.98	14.04	Peak	165	316
8	17475.00	61.35	68.20	-6.85	42.94	18.41	Peak	105	35

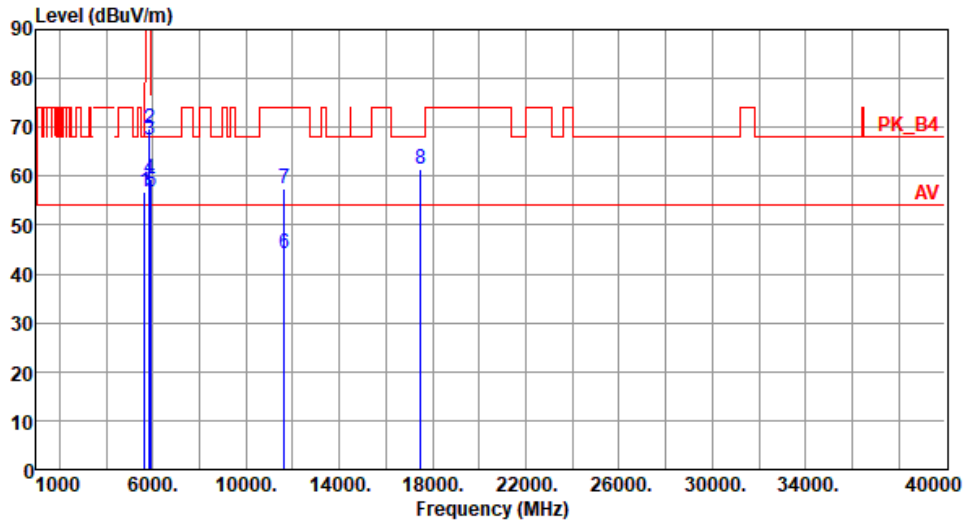
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5825
Polarization	Vertical		

Test By :BRAD WU Temperature(°C):23 Humidity(%):66



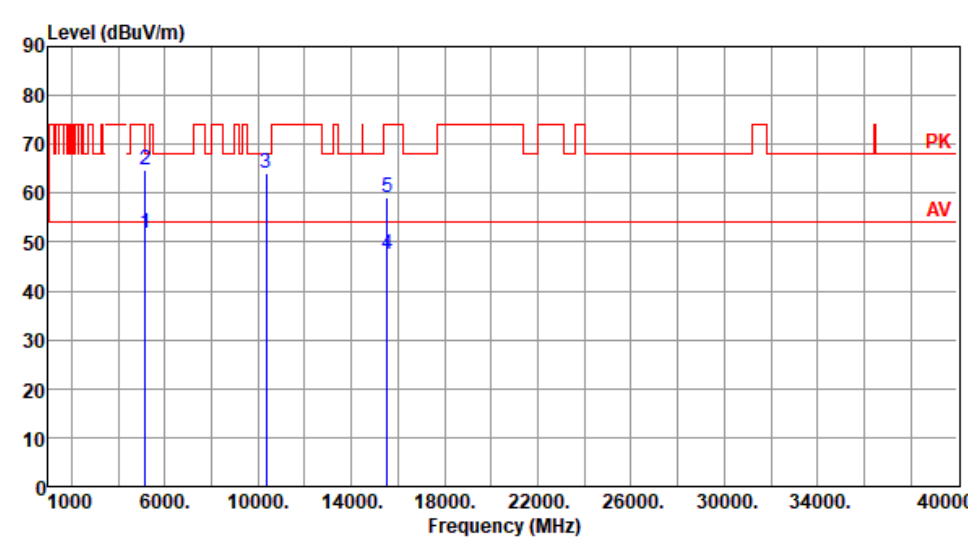
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.80	68.20	-11.40	51.25	5.55	Peak	100	248
2	5850.00	69.76	122.20	-52.44	63.56	6.20	Peak	100	248
3	5855.00	67.45	110.80	-43.35	61.25	6.20	Peak	100	248
4	5875.00	59.47	105.20	-45.73	53.26	6.21	Peak	100	248
5	5925.00	56.81	68.20	-11.39	50.54	6.27	Peak	100	248
6	11650.00	44.30	54.00	-9.70	30.26	14.04	Average	100	303
7	11650.00	57.30	74.00	-16.70	43.26	14.04	Peak	100	303
8	17475.00	61.43	68.20	-6.77	43.02	18.41	Peak	100	40

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

*Factor includes antenna factor , cable loss and amplifier gain

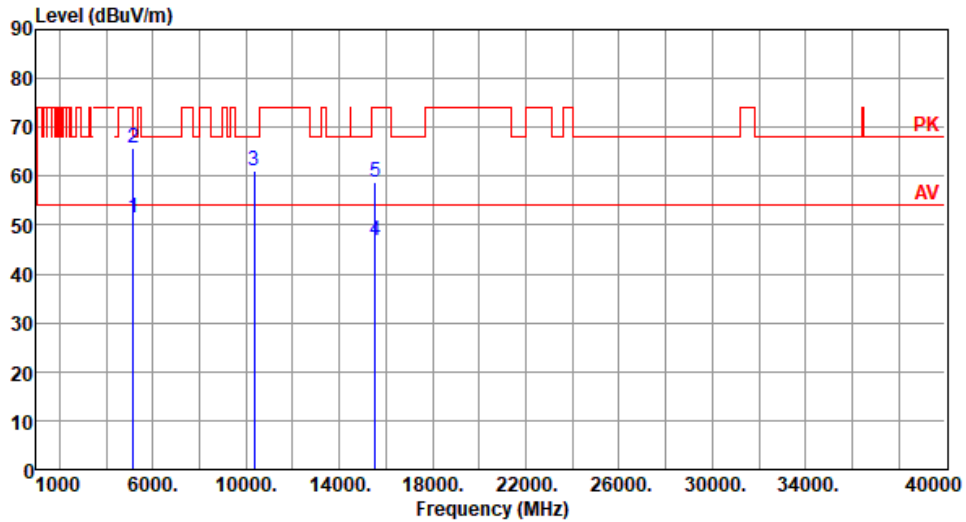
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

3.5.6 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT20

Modulation	VHT20	Test Freq. (MHz)	5180						
Polarization	Horizontal								
Test By : BRAD WU Temperature(°C):23 Humidity(%):66									
									
	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	51.76	54.00	-2.24	46.35	5.41	Average	215	301
2	5150.00	64.69	74.00	-9.31	59.28	5.41	Peak	215	301
3	10360.00	64.14	68.20	-4.06	50.71	13.43	Peak	224	306
4	15540.00	47.39	54.00	-6.61	32.01	15.38	Average	100	47
5	15540.00	59.26	74.00	-14.74	43.88	15.38	Peak	100	47
<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>									

Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Vertical		

Test By :BRAD WU Temperature(°C):23 Humidity(%) :66



	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	51.52	54.00	-2.48	46.11	5.41	Average	206	309
2	5150.00	65.66	74.00	-8.34	60.25	5.41	Peak	206	309
3	10360.00	60.99	68.20	-7.21	47.56	13.43	Peak	100	303
4	15540.00	46.90	54.00	-7.10	31.52	15.38	Average	100	40
5	15540.00	58.62	74.00	-15.38	43.24	15.38	Peak	100	40

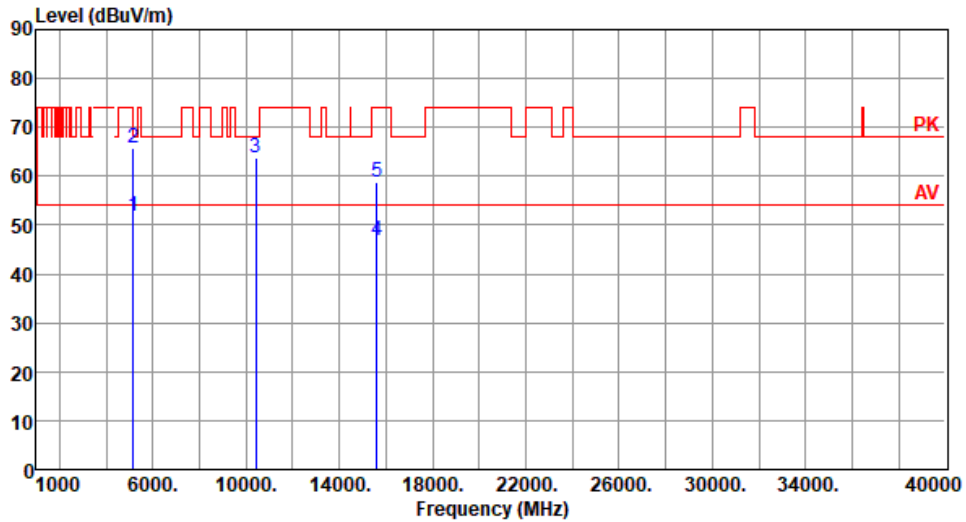
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Horizontal		

Test By :BRAD WU Temperature(°C):23 Humidity(%):66



	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	51.66	54.00	-2.34	46.25	5.41	Average	121	268
2	5150.00	65.80	74.00	-8.20	60.39	5.41	Peak	121	268
3	10400.00	63.86	68.20	-4.34	50.23	13.63	Peak	221	305
4	15600.00	46.92	54.00	-7.08	31.63	15.29	Average	100	43
5	15600.00	58.65	74.00	-15.35	43.36	15.29	Peak	100	43

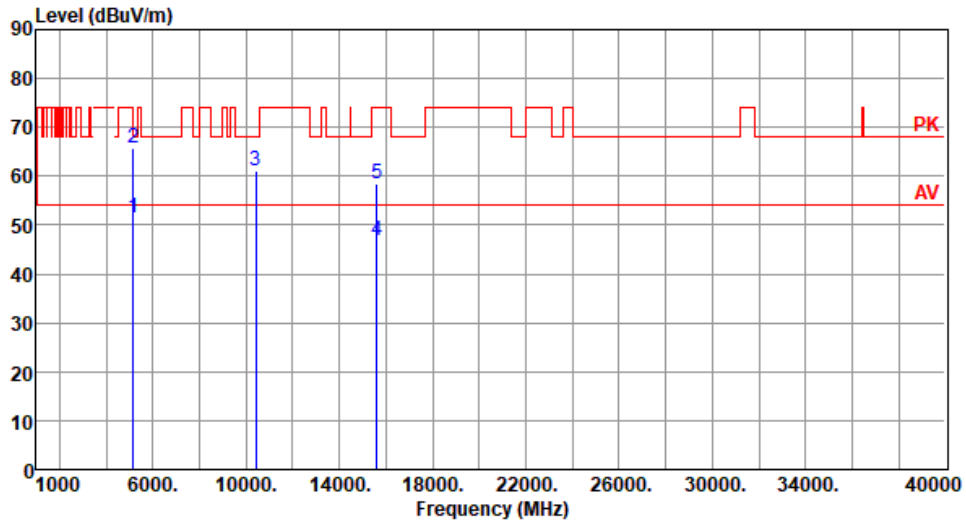
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical		

Test By :BRAD WU Temperature(°C):23 Humidity(%):66



	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	51.45	54.00	-2.55	46.04	5.41	Average	205	306
2	5150.00	65.78	74.00	-8.22	60.37	5.41	Peak	205	306
3	10400.00	61.09	68.20	-7.11	47.46	13.63	Peak	100	308
4	15600.00	46.74	54.00	-7.26	31.45	15.29	Average	100	40
5	15600.00	58.58	74.00	-15.42	43.29	15.29	Peak	100	40

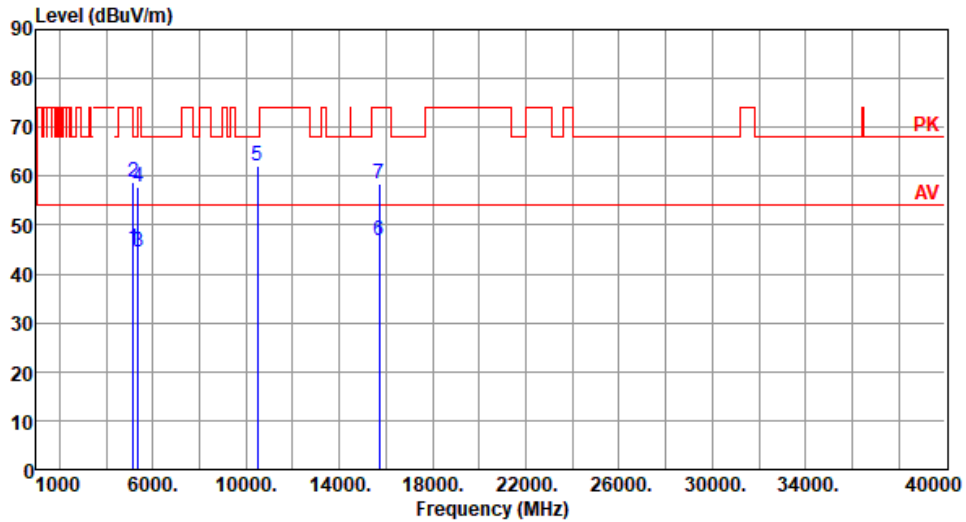
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Horizontal		

Test By :BRAD WU Temperature(°C):23 Humidity(%):66



	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	45.24	54.00	-8.76	39.83	5.41	Average	100	268
2	5150.00	58.65	74.00	-15.35	53.24	5.41	Peak	100	268
3	5350.00	44.46	54.00	-9.54	39.49	4.97	Average	100	268
4	5350.00	57.68	74.00	-16.32	52.71	4.97	Peak	100	268
5	10480.00	62.05	68.20	-6.15	48.25	13.80	Peak	225	306
6	15720.00	46.69	54.00	-7.31	32.04	14.65	Average	100	50
7	15720.00	58.33	74.00	-15.67	43.68	14.65	Peak	100	50

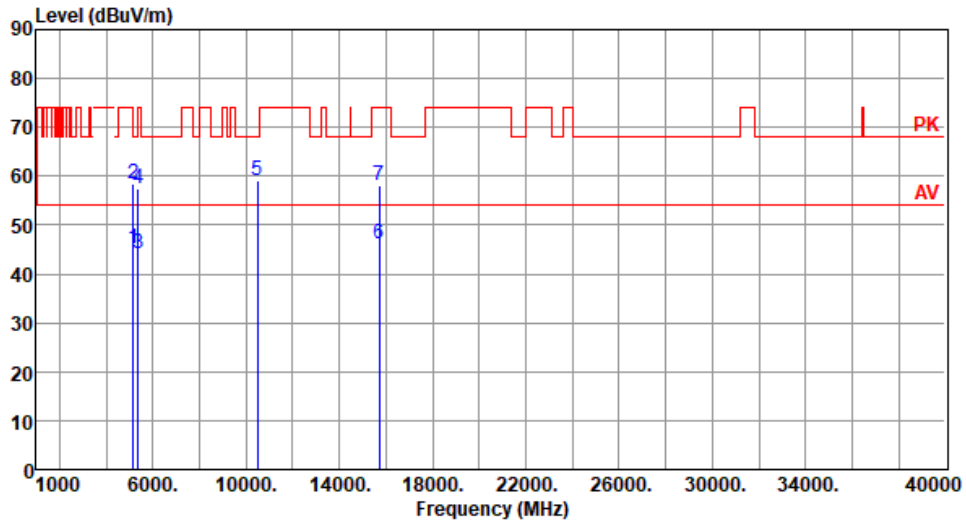
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Vertical		

Test By :BRAD WU Temperature(°C):23 Humidity(%):66



	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	45.12	54.00	-8.88	39.71	5.41	Average	202	304
2	5150.00	58.46	74.00	-15.54	53.05	5.41	Peak	202	304
3	5350.00	44.17	54.00	-9.83	39.20	4.97	Average	202	304
4	5350.00	57.43	74.00	-16.57	52.46	4.97	Peak	202	304
5	10480.00	59.11	68.20	-9.09	45.31	13.80	Peak	100	306
6	15720.00	46.32	54.00	-7.68	31.67	14.65	Average	100	40
7	15720.00	58.07	74.00	-15.93	43.42	14.65	Peak	100	40

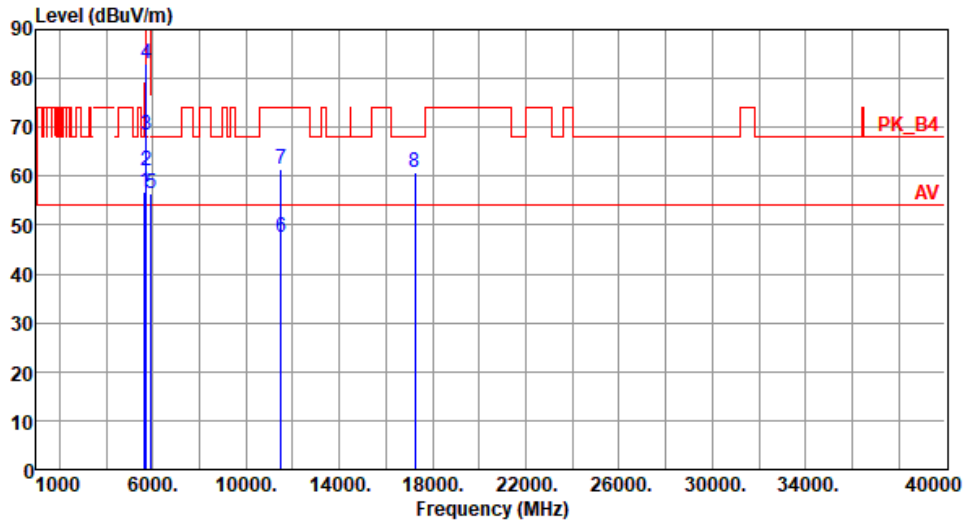
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Horizontal		

Test By :BRAD WU Temperature(°C):23 Humidity(%):66



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.75	68.20	-11.45	51.20	5.55	Peak	100	315
2	5700.00	60.98	105.20	-44.22	55.32	5.66	Peak	100	315
3	5720.00	68.33	110.80	-42.47	62.54	5.79	Peak	100	315
4	5725.00	82.94	122.20	-39.26	77.12	5.82	Peak	100	315
5	5925.00	56.54	68.20	-11.66	50.27	6.27	Peak	100	315
6	11490.00	47.62	54.00	-6.38	33.21	14.41	Average	182	318
7	11490.00	61.27	74.00	-12.73	46.86	14.41	Peak	182	318
8	17235.00	60.77	68.20	-7.43	43.58	17.19	Peak	100	60

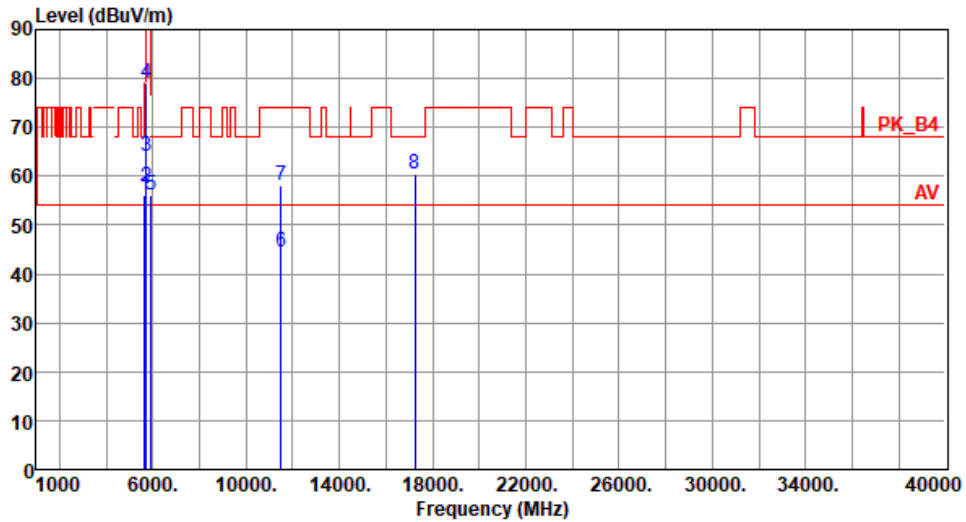
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Vertical		

Test By :BRAD WU Temperature(°C):23 Humidity(%) :66



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.11	68.20	-12.09	50.56	5.55	Peak	100	242
2	5700.00	57.92	105.20	-47.28	52.26	5.66	Peak	100	242
3	5720.00	64.25	110.80	-46.55	58.46	5.79	Peak	100	242
4	5725.00	78.97	122.20	-43.23	73.15	5.82	Peak	100	242
5	5925.00	56.29	68.20	-11.91	50.02	6.27	Peak	100	242
6	11490.00	44.56	54.00	-9.44	30.15	14.41	Average	100	306
7	11490.00	57.99	74.00	-16.01	43.58	14.41	Peak	100	306
8	17235.00	60.61	68.20	-7.59	43.42	17.19	Peak	100	50

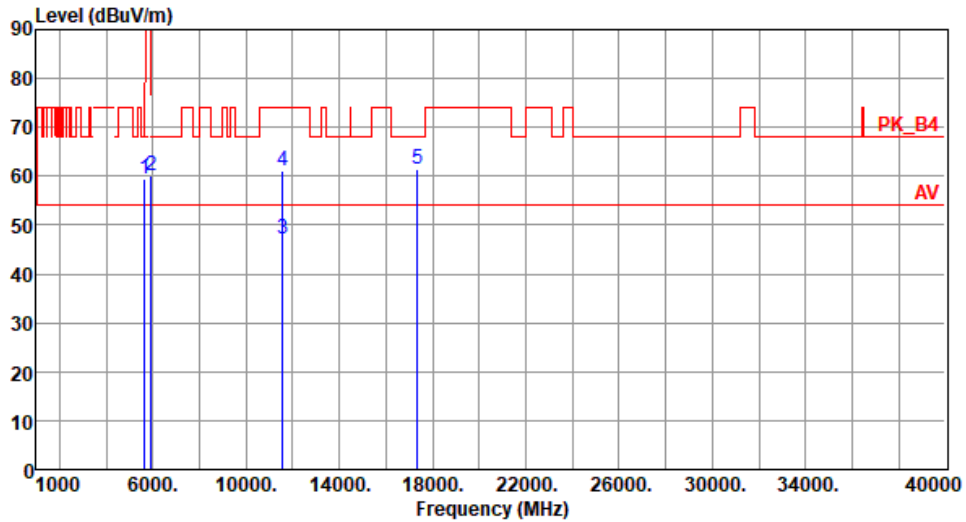
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal		

Test By :BRAD WU Temperature(°C):23 Humidity(%):66



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.42	68.20	-8.78	53.87	5.55	Peak	113	314
2	5925.00	60.26	68.20	-7.94	53.99	6.27	Peak	113	314
3	11570.00	47.13	54.00	-6.87	32.86	14.27	Average	186	315
4	11570.00	60.99	74.00	-13.01	46.72	14.27	Peak	186	315
5	17355.00	61.47	68.20	-6.73	43.64	17.83	Peak	100	55

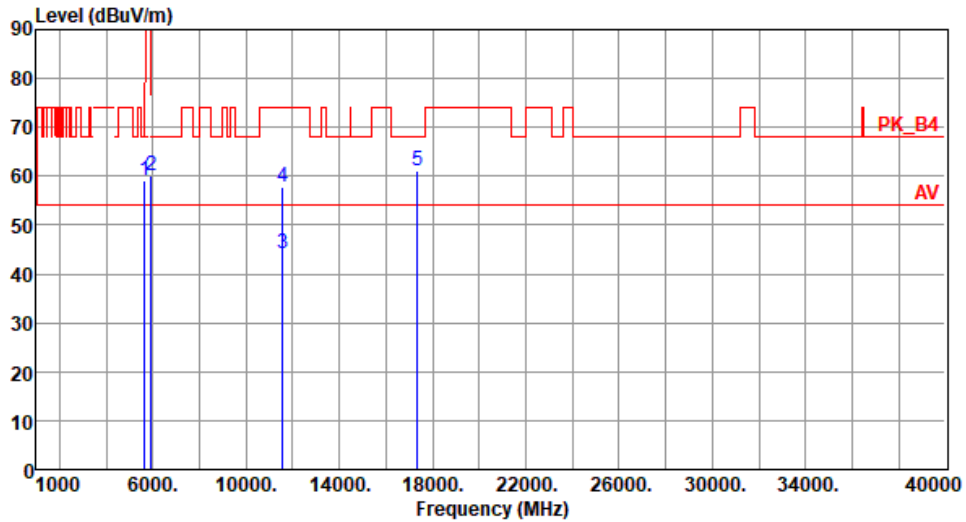
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical		

Test By :BRAD WU Temperature(°C):23 Humidity(%):66



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.20	68.20	-9.00	53.65	5.55	Peak	100	248
2	5925.00	60.11	68.20	-8.09	53.84	6.27	Peak	100	248
3	11570.00	44.29	54.00	-9.71	30.02	14.27	Average	100	304
4	11570.00	57.75	74.00	-16.25	43.48	14.27	Peak	100	304
5	17355.00	61.17	68.20	-7.03	43.34	17.83	Peak	100	50

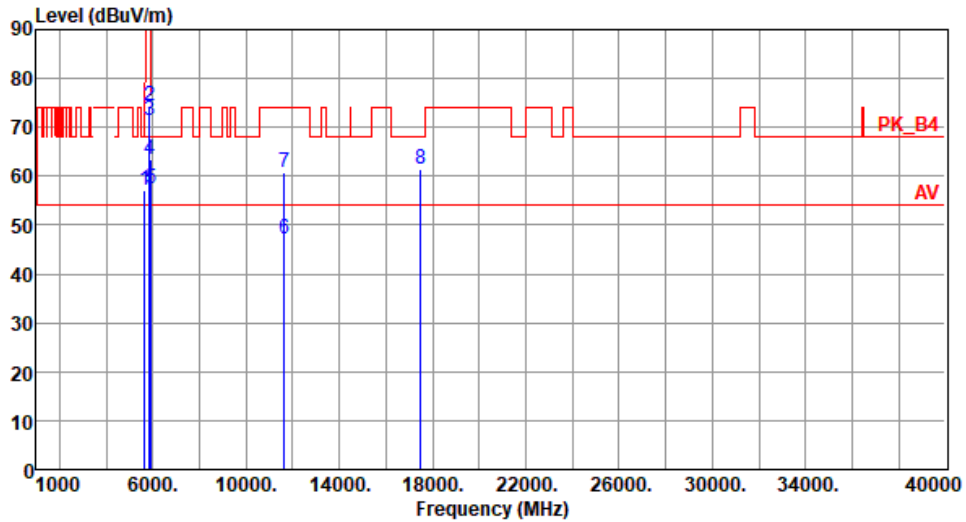
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal		

Test By :BRAD WU Temperature(°C):23 Humidity(%):66



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.98	68.20	-11.22	51.43	5.55	Peak	100	316
2	5850.00	74.29	122.20	-47.91	68.09	6.20	Peak	100	316
3	5855.00	71.48	110.80	-39.32	65.28	6.20	Peak	100	316
4	5875.00	63.52	105.20	-41.68	57.31	6.21	Peak	100	316
5	5925.00	57.42	68.20	-10.78	51.15	6.27	Peak	100	316
6	11650.00	47.30	54.00	-6.70	33.26	14.04	Average	171	318
7	11650.00	60.92	74.00	-13.08	46.88	14.04	Peak	171	318
8	17475.00	61.56	68.20	-6.64	43.15	18.41	Peak	100	30

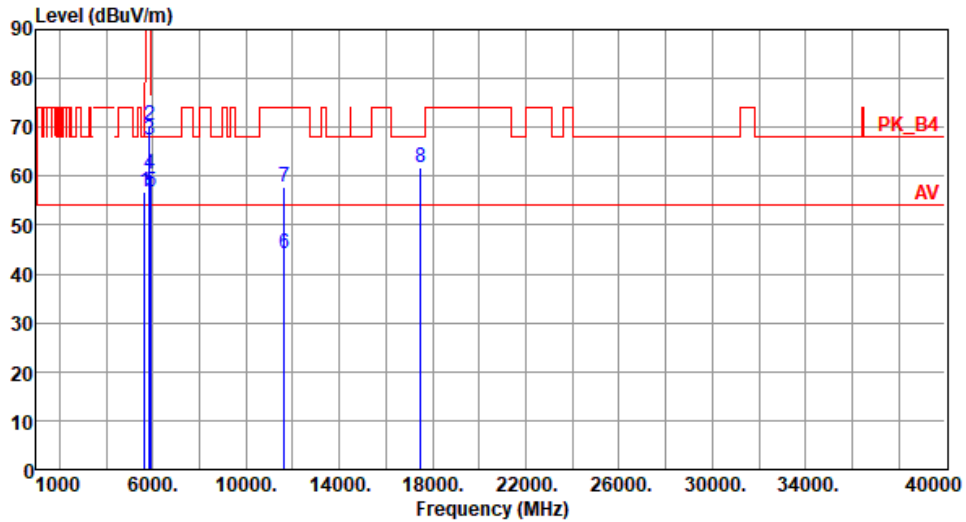
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Vertical		

Test By :BRAD WU Temperature(°C):23 Humidity(%):66



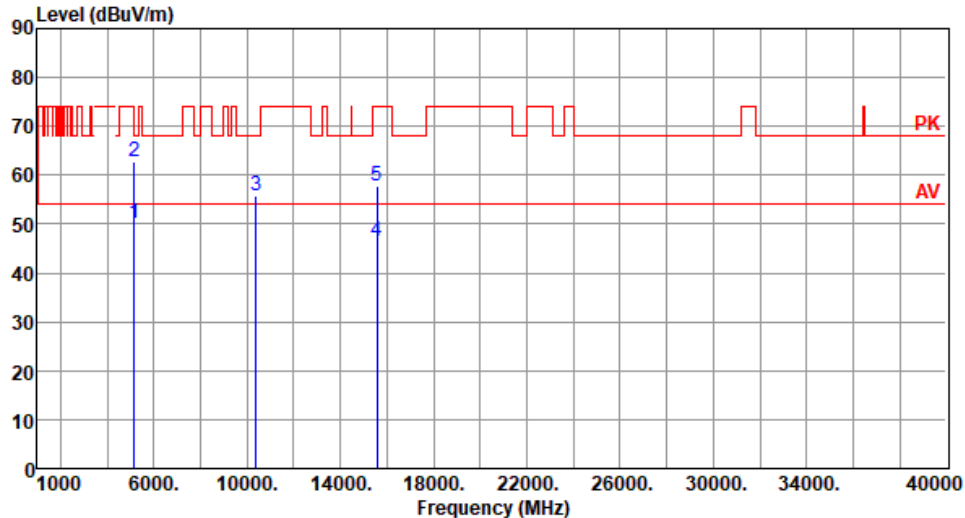
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.80	68.20	-11.40	51.25	5.55	Peak	100	243
2	5850.00	70.46	122.20	-51.74	64.26	6.20	Peak	100	243
3	5855.00	67.51	110.80	-43.29	61.31	6.20	Peak	100	243
4	5875.00	60.47	105.20	-44.73	54.26	6.21	Peak	100	243
5	5925.00	56.85	68.20	-11.35	50.58	6.27	Peak	100	243
6	11650.00	44.20	54.00	-9.80	30.16	14.04	Average	100	309
7	11650.00	57.92	74.00	-16.08	43.88	14.04	Peak	100	309
8	17475.00	61.63	68.20	-6.57	43.22	18.41	Peak	100	25

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

*Factor includes antenna factor , cable loss and amplifier gain

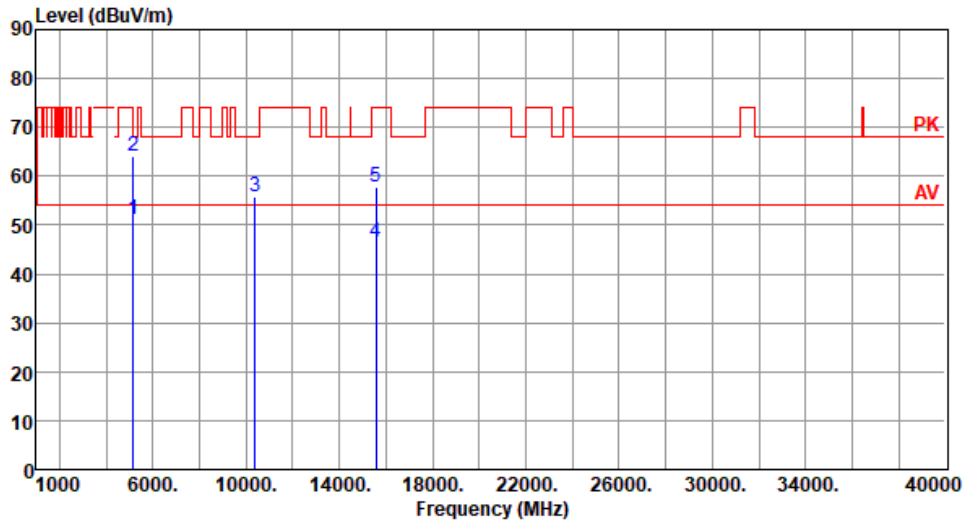
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

3.5.7 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT40

Modulation	VHT40	Test Freq. (MHz)	5190						
Polarization	Horizontal								
Test By : BRAD WU Temperature(°C):23 Humidity(%):66									
									
	Freq.	Emission level	Limit	Margin	SA reading	Factor	Remark	ANT High	Turn Table
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB		cm	deg
1	5150.00	50.12	54.00	-3.88	44.71	5.41	Average	211	245
2	5150.00	62.81	74.00	-11.19	57.40	5.41	Peak	211	245
3	10380.00	55.79	68.20	-12.41	42.26	13.53	Peak	100	20
4	15570.00	46.58	54.00	-7.42	31.24	15.34	Average	100	30
5	15570.00	57.92	74.00	-16.08	42.58	15.34	Peak	100	30
<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>									

Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Vertical		

Test By :BRAD WU Temperature(°C):23 Humidity(%):66



	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	51.26	54.00	-2.74	45.85	5.41	Average	208	308
2	5150.00	64.07	74.00	-9.93	58.66	5.41	Peak	208	308
3	10380.00	55.72	68.20	-12.48	42.19	13.53	Peak	100	20
4	15570.00	46.47	54.00	-7.53	31.13	15.34	Average	100	60
5	15570.00	57.80	74.00	-16.20	42.46	15.34	Peak	100	60

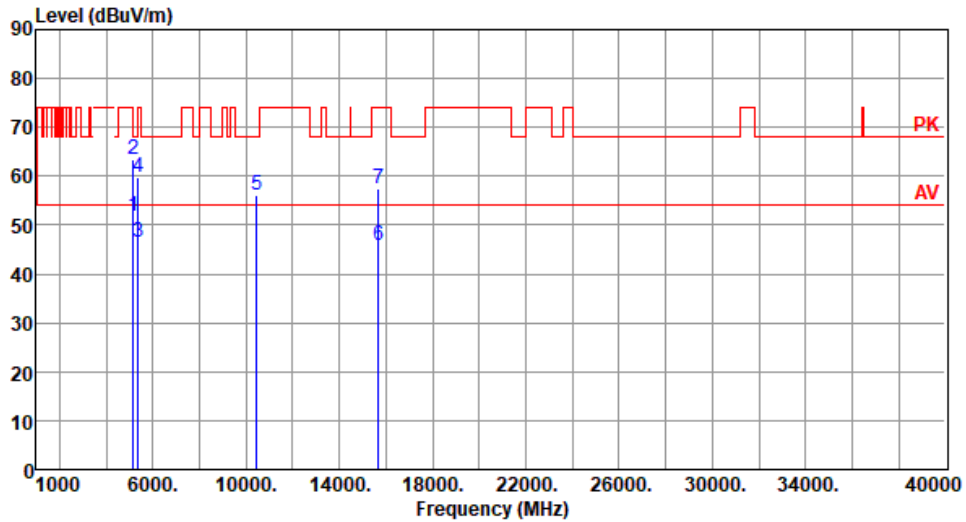
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal		

Test By :BRAD WU Temperature(°C):23 Humidity(%):66



	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	51.72	54.00	-2.28	46.31	5.41	Average	100	269
2	5150.00	63.57	74.00	-10.43	58.16	5.41	Peak	100	269
3	5350.00	46.66	54.00	-7.34	41.69	4.97	Average	100	269
4	5350.00	59.78	74.00	-14.22	54.81	4.97	Peak	100	269
5	10460.00	56.02	68.20	-12.18	42.26	13.76	Peak	100	40
6	15690.00	45.87	54.00	-8.13	31.15	14.72	Average	100	50
7	15690.00	57.39	74.00	-16.61	42.67	14.72	Peak	100	50

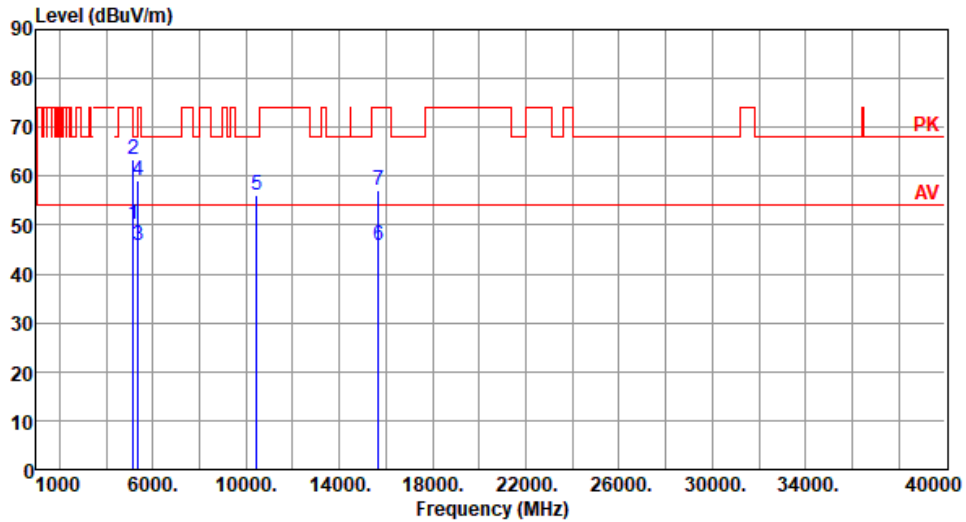
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical		

Test By :BRAD WU Temperature(°C):23 Humidity(%):66



	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	50.27	54.00	-3.73	44.86	5.41	Average	205	285
2	5150.00	63.35	74.00	-10.65	57.94	5.41	Peak	205	285
3	5350.00	45.82	54.00	-8.18	40.85	4.97	Average	205	285
4	5350.00	58.98	74.00	-15.02	54.01	4.97	Peak	205	285
5	10460.00	56.07	68.20	-12.13	42.31	13.76	Peak	100	20
6	15690.00	45.82	54.00	-8.18	31.10	14.72	Average	100	30
7	15690.00	57.02	74.00	-16.98	42.30	14.72	Peak	100	30

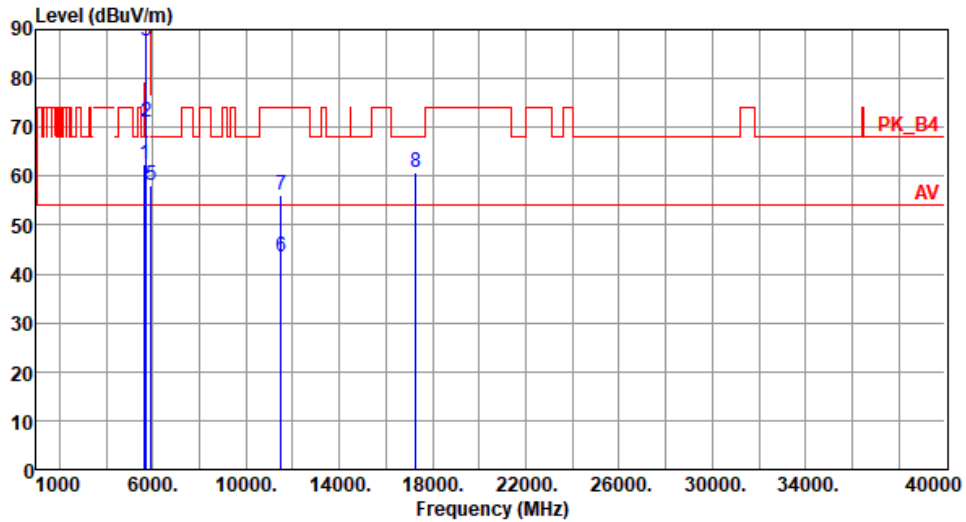
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Horizontal		

Test By :BRAD WU Temperature(°C):23 Humidity(%):66



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	62.29	68.20	-5.91	56.74	5.55	Peak	100	313
2	5700.00	70.96	105.20	-34.24	65.30	5.66	Peak	100	313
3	5720.00	87.61	110.80	-23.19	81.82	5.79	Peak	100	313
4	5725.00	89.16	122.20	-33.04	83.34	5.82	Peak	100	313
5	5925.00	58.18	68.20	-10.02	51.91	6.27	Peak	100	313
6	11510.00	43.65	54.00	-10.35	29.25	14.40	Average	100	40
7	11510.00	55.98	74.00	-18.02	41.58	14.40	Peak	100	40
8	17265.00	60.61	68.20	-7.59	43.25	17.36	Peak	100	90

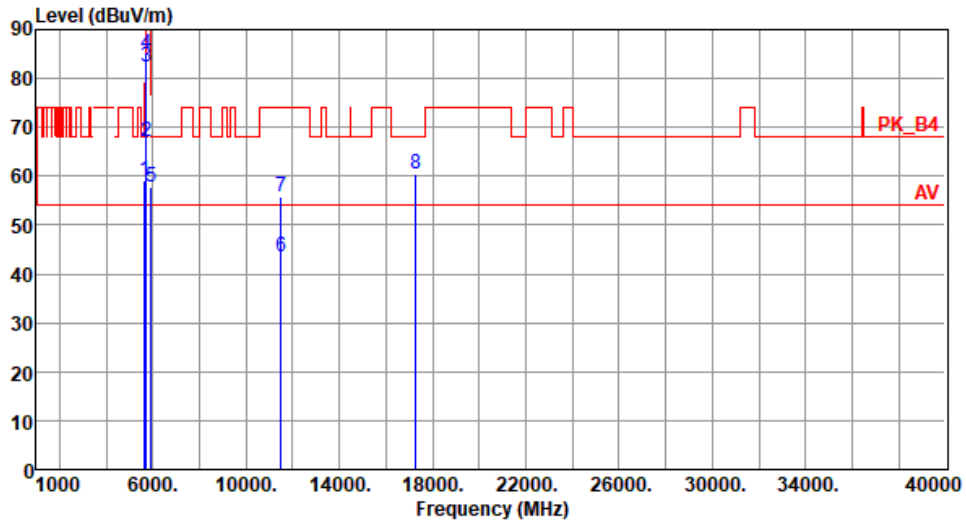
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical		

Test By :BRAD WU Temperature(°C):23 Humidity(%):66



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.01	68.20	-9.19	53.46	5.55	Peak	100	248
2	5700.00	66.92	105.20	-38.28	61.26	5.66	Peak	100	248
3	5720.00	82.36	110.80	-28.44	76.57	5.79	Peak	100	248
4	5725.00	85.15	122.20	-37.05	79.33	5.82	Peak	100	248
5	5925.00	57.72	68.20	-10.48	51.45	6.27	Peak	100	248
6	11510.00	43.58	54.00	-10.42	29.18	14.40	Average	100	50
7	11510.00	55.86	74.00	-18.14	41.46	14.40	Peak	100	50
8	17265.00	60.54	68.20	-7.66	43.18	17.36	Peak	100	40

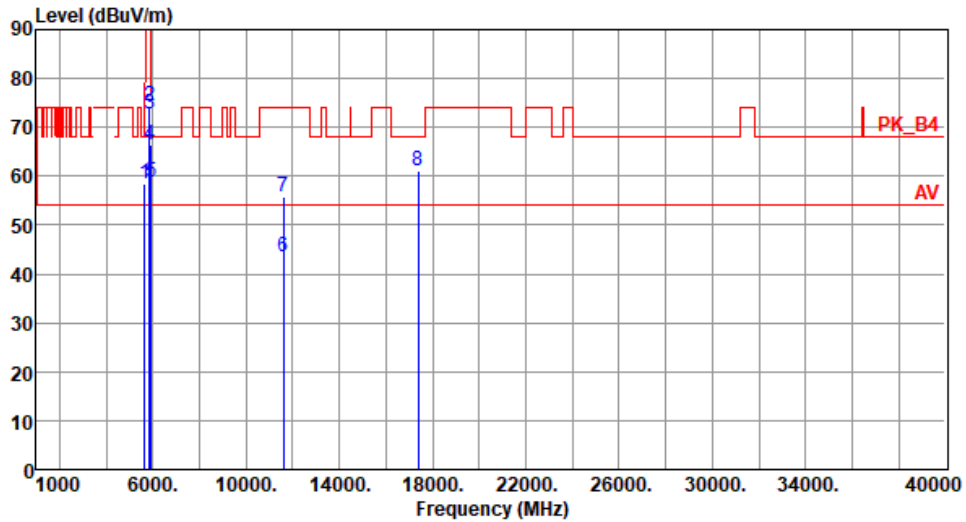
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Horizontal		

Test By :BRAD WU Temperature(°C):23 Humidity(%):66



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	58.52	68.20	-9.68	52.97	5.55	Peak	112	311
2	5850.00	74.25	122.20	-47.95	68.05	6.20	Peak	112	311
3	5855.00	72.78	110.80	-38.02	66.58	6.20	Peak	112	311
4	5875.00	66.35	105.20	-38.85	60.14	6.21	Peak	112	311
5	5925.00	58.63	68.20	-9.57	52.36	6.27	Peak	112	311
6	11590.00	43.46	54.00	-10.54	29.23	14.23	Average	100	70
7	11590.00	55.88	74.00	-18.12	41.65	14.23	Peak	100	70
8	17385.00	61.25	68.20	-6.95	43.28	17.97	Peak	100	30

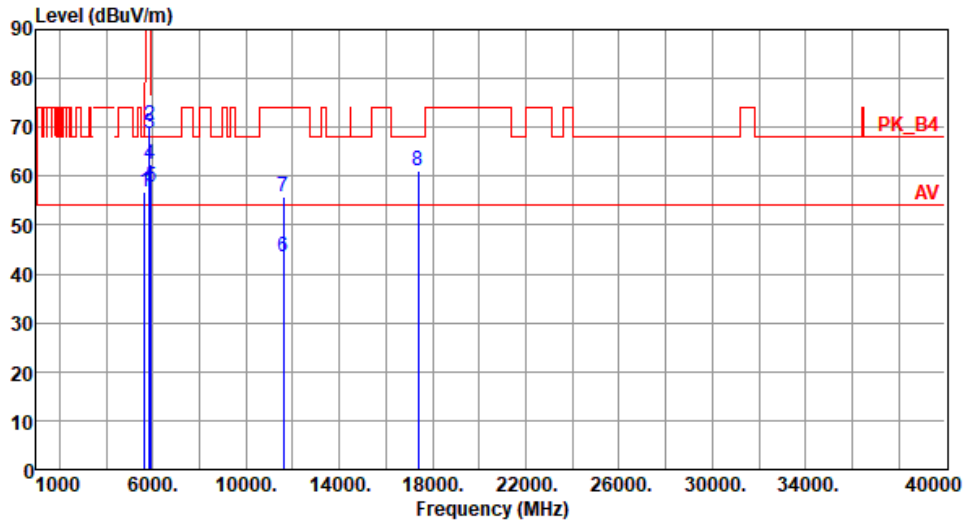
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Vertical		

Test By :BRAD WU Temperature(°C):23 Humidity(%):66



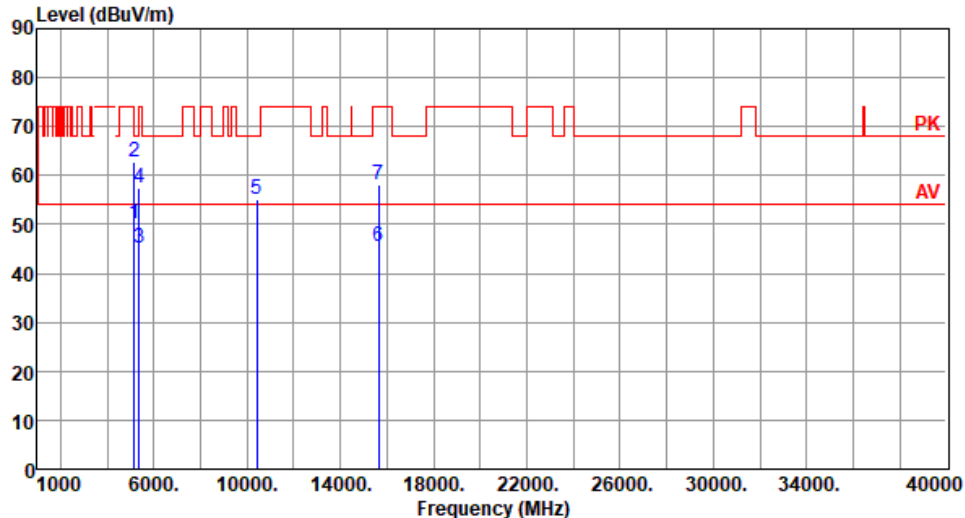
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.80	68.20	-11.40	51.25	5.55	Peak	100	245
2	5850.00	70.46	122.20	-51.74	64.26	6.20	Peak	100	245
3	5855.00	68.66	110.80	-42.14	62.46	6.20	Peak	100	245
4	5875.00	62.59	105.20	-42.61	56.38	6.21	Peak	100	245
5	5925.00	57.80	68.20	-10.40	51.53	6.27	Peak	100	245
6	11590.00	43.38	54.00	-10.62	29.15	14.23	Average	100	60
7	11590.00	55.69	74.00	-18.31	41.46	14.23	Peak	100	60
8	17385.00	61.22	68.20	-6.98	43.25	17.97	Peak	100	20

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).

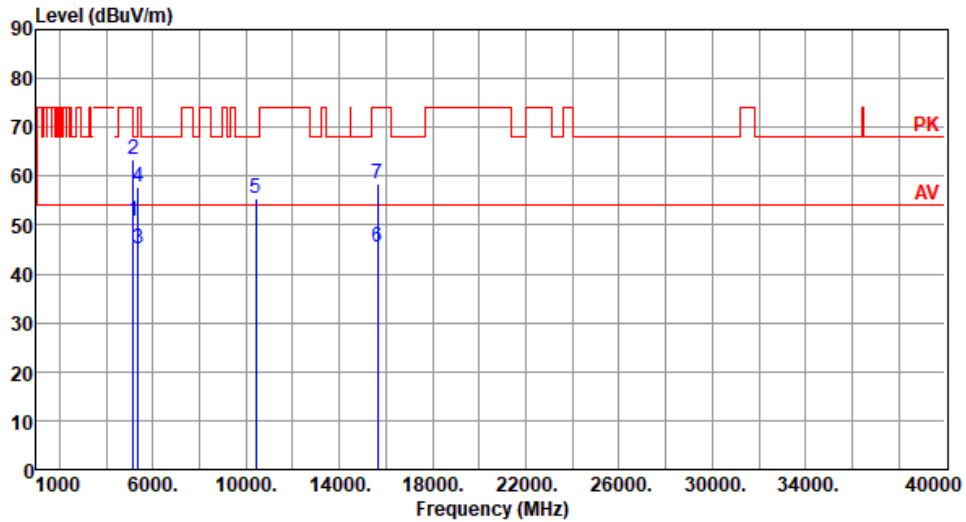
3.5.8 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT80

Modulation	VHT80	Test Freq. (MHz)	5210						
Polarization	Horizontal								
Test By : BRAD WU Temperature(°C):23 Humidity(%):66									
									
	Freq.	Emission level	Limit	Margin	SA reading	Factor	Remark	ANT High	Turn Table
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB		cm	deg
1	5150.00	50.23	54.00	-3.77	44.82	5.41	Average	212	246
2	5150.00	62.69	74.00	-11.31	57.28	5.41	Peak	212	246
3	5350.00	45.11	54.00	-8.89	40.14	4.97	Average	212	246
4	5350.00	57.58	74.00	-16.42	52.61	4.97	Peak	212	246
5	10420.00	55.26	68.20	-12.94	41.59	13.67	Peak	100	60
6	15630.00	45.35	54.00	-8.65	30.25	15.10	Average	100	40
7	15630.00	58.25	74.00	-15.75	43.15	15.10	Peak	100	40

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).

Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Vertical		

Test By :BRAD WU Temperature(°C):23 Humidity(%):66



	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	50.95	54.00	-3.05	45.54	5.41	Average	206	303
2	5150.00	63.49	74.00	-10.51	58.08	5.41	Peak	206	303
3	5350.00	45.09	54.00	-8.91	40.12	4.97	Average	206	303
4	5350.00	57.69	74.00	-16.31	52.72	4.97	Peak	206	303
5	10420.00	55.35	68.20	-12.85	41.68	13.67	Peak	100	20
6	15630.00	45.38	54.00	-8.62	30.28	15.10	Average	100	60
7	15630.00	58.32	74.00	-15.68	43.22	15.10	Peak	100	60

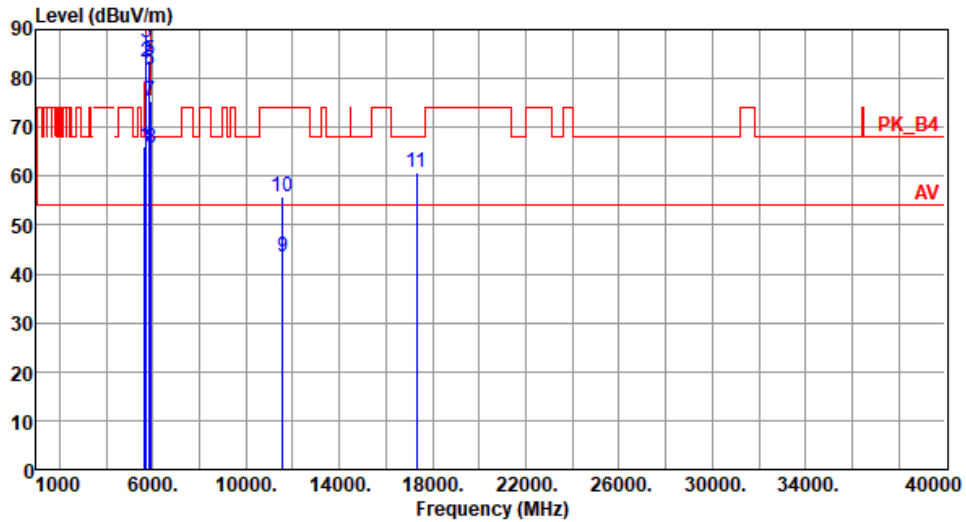
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Horizontal		

Test By :Roger Lu Temperature(°C):23 Humidity(%):66



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	66.13	68.20	-2.07	60.58	5.55	Peak	100	310
2	5700.00	83.33	105.20	-21.87	77.67	5.66	Peak	100	310
3	5720.00	87.43	110.80	-23.37	81.64	5.79	Peak	100	310
4	5725.00	89.17	122.20	-33.03	83.35	5.82	Peak	100	310
5	5850.00	83.68	122.20	-38.52	77.48	6.20	Peak	100	310
6	5855.00	81.74	110.80	-29.06	75.54	6.20	Peak	100	310
7	5875.00	75.44	105.20	-29.76	69.23	6.21	Peak	100	310
8	5925.00	65.66	68.20	-2.54	59.39	6.27	Peak	100	310
9	11550.00	43.56	54.00	-10.44	29.24	14.32	Average	100	40
10	11550.00	55.84	74.00	-18.16	41.52	14.32	Peak	100	40
11	17325.00	60.91	68.20	-7.29	43.23	17.68	Peak	100	20

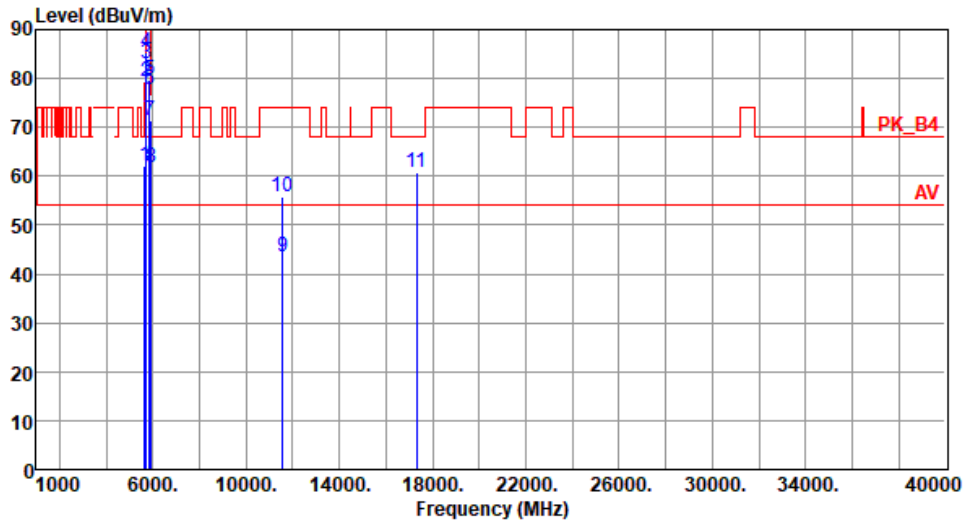
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Vertical		

Test By :Roger Lu Temperature(°C):23 Humidity(%):66



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	62.04	68.20	-6.16	56.49	5.55	Peak	100	243
2	5700.00	79.24	105.20	-25.96	73.58	5.66	Peak	100	243
3	5720.00	83.01	110.80	-27.79	77.22	5.79	Peak	100	243
4	5725.00	85.28	122.20	-36.92	79.46	5.82	Peak	100	243
5	5850.00	79.69	122.20	-42.51	73.49	6.20	Peak	100	243
6	5855.00	77.55	110.80	-33.25	71.35	6.20	Peak	100	243
7	5875.00	71.52	105.20	-33.68	65.31	6.21	Peak	100	243
8	5925.00	61.73	68.20	-6.47	55.46	6.27	Peak	100	243
9	11550.00	43.52	54.00	-10.48	29.20	14.32	Average	100	30
10	11550.00	55.77	74.00	-18.23	41.45	14.32	Peak	100	30
11	17325.00	60.80	68.20	-7.40	43.12	17.68	Peak	100	40

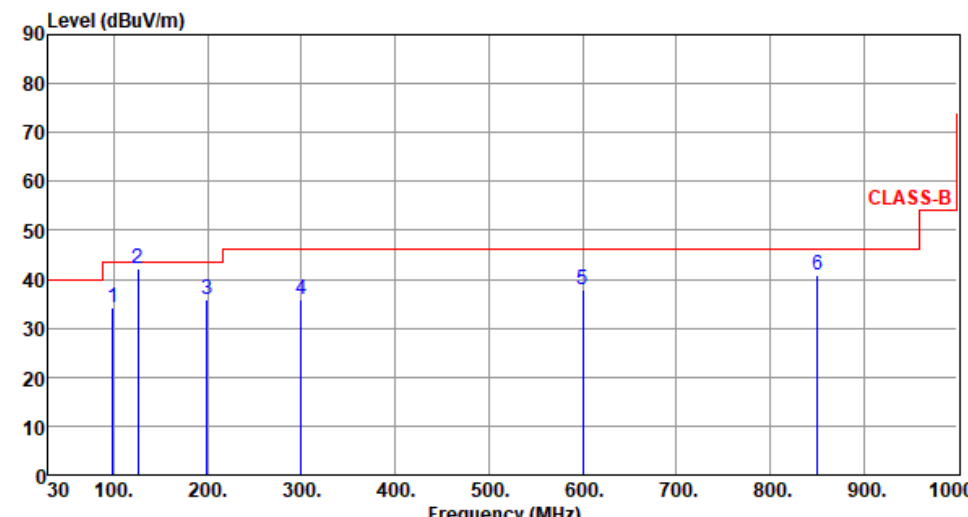
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

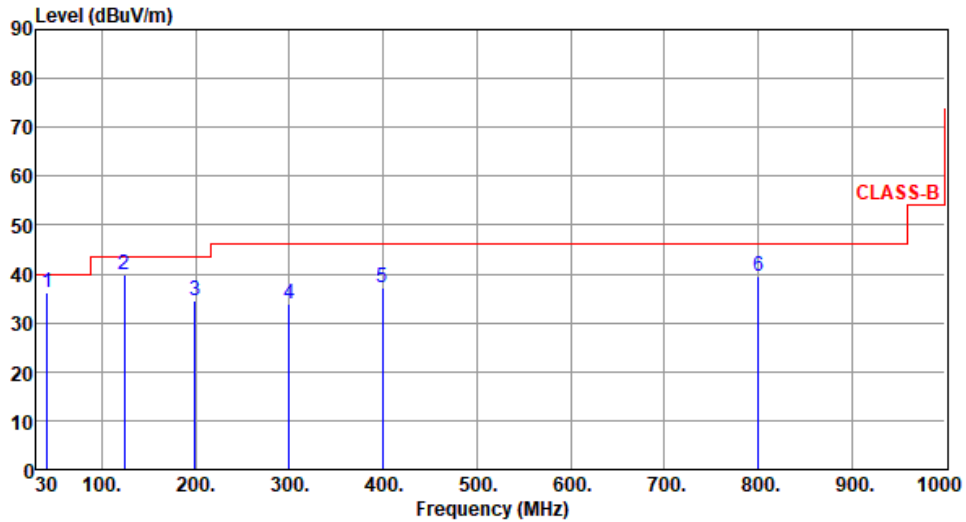
Configuration 2: Individual antenna

3.5.9 Transmitter Radiated Unwanted Emissions (Below 1GHz)

Modulation	11a	Test Freq. (MHz)	5180																																																																													
Polarization	Horizontal																																																																															
Test By : BRAD WU Temperature(°C):22 Humidity(%):64																																																																																
																																																																																
	<table border="1"> <thead> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> </tr> </thead> <tbody> <tr> <td>98.76</td> <td>125.19</td> <td>199.46</td> <td>299.55</td> <td>600.42</td> <td>850.49</td> </tr> </tbody> </table>	1	2	3	4	5	6	98.76	125.19	199.46	299.55	600.42	850.49	<table border="1"> <thead> <tr> <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>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>34.25</td> <td>43.50</td> <td>-9.25</td> <td>48.45</td> <td>-14.20</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>42.15</td> <td>43.50</td> <td>-1.35</td> <td>53.01</td> <td>-10.86</td> <td>QP</td> <td>158</td> <td>265</td> </tr> <tr> <td>35.84</td> <td>43.50</td> <td>-7.66</td> <td>48.23</td> <td>-12.39</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>35.74</td> <td>46.00</td> <td>-10.26</td> <td>44.39</td> <td>-8.65</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>37.86</td> <td>46.00</td> <td>-8.14</td> <td>38.73</td> <td>-0.87</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>40.85</td> <td>46.00</td> <td>-5.15</td> <td>37.45</td> <td>3.40</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> </tbody> </table>	Emission level	Limit	Margin	SA reading	Factor	Remark	ANT High	Turn Table	dBuV/m	dBuV/m	dB	dBuV	dB		cm	deg	34.25	43.50	-9.25	48.45	-14.20	Peak	---	---	42.15	43.50	-1.35	53.01	-10.86	QP	158	265	35.84	43.50	-7.66	48.23	-12.39	Peak	---	---	35.74	46.00	-10.26	44.39	-8.65	Peak	---	---	37.86	46.00	-8.14	38.73	-0.87	Peak	---	---	40.85	46.00	-5.15	37.45	3.40	Peak	---	---		
1	2	3	4	5	6																																																																											
98.76	125.19	199.46	299.55	600.42	850.49																																																																											
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dBuV/m	dBuV/m	dB	dBuV	dB		cm	deg																																																																									
34.25	43.50	-9.25	48.45	-14.20	Peak	---	---																																																																									
42.15	43.50	-1.35	53.01	-10.86	QP	158	265																																																																									
35.84	43.50	-7.66	48.23	-12.39	Peak	---	---																																																																									
35.74	46.00	-10.26	44.39	-8.65	Peak	---	---																																																																									
37.86	46.00	-8.14	38.73	-0.87	Peak	---	---																																																																									
40.85	46.00	-5.15	37.45	3.40	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). Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.</p>																																																																																

Modulation	11a	Test Freq. (MHz)	5180
Polarization	Vertical		

Test By :BRAD WU Temperature(°C):22 Humidity(%):64



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	41.58	36.24	40.00	-3.76	45.19	-8.95	Peak	---	---
2	124.15	39.78	43.50	-3.72	50.74	-10.96	Peak	---	---
3	199.61	34.48	43.50	-9.02	46.86	-12.38	Peak	---	---
4	299.58	33.86	46.00	-12.14	42.51	-8.65	Peak	---	---
5	399.61	37.26	46.00	-8.74	43.14	-5.88	Peak	---	---
6	800.46	39.45	46.00	-6.55	36.65	2.80	Peak	---	---

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

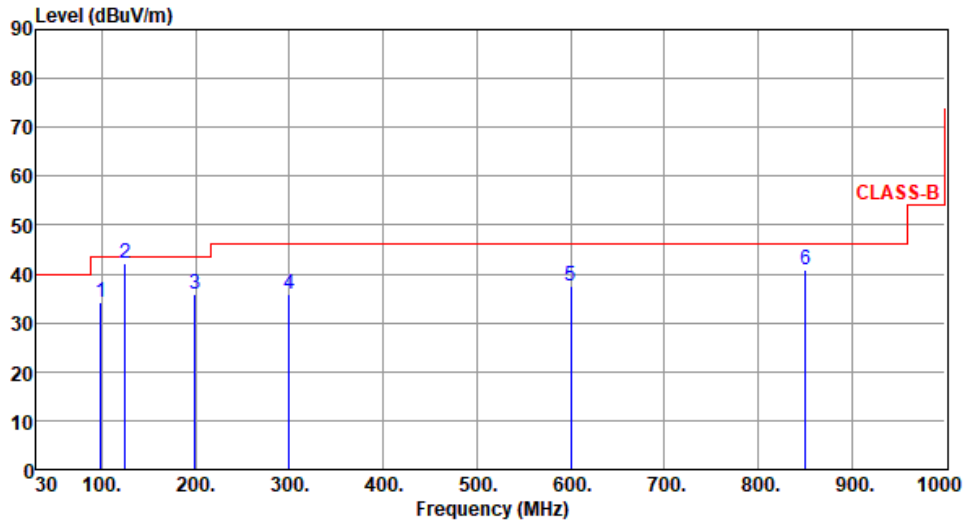
*Factor includes antenna factor , cable loss and amplifier gain

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

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal		

Test By :BRAD WU Temperature(°C):22 Humidity(%) :64



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	98.79	34.22	43.50	-9.28	48.42	-14.20	Peak	---	---
2	125.13	42.02	43.50	-1.48	52.89	-10.87	QP	146	265
3	199.61	35.87	43.50	-7.63	48.25	-12.38	Peak	---	---
4	299.59	35.73	46.00	-10.27	44.38	-8.65	Peak	---	---
5	600.42	37.54	46.00	-8.46	38.41	-0.87	Peak	---	---
6	850.49	40.85	46.00	-5.15	37.45	3.40	Peak	---	---

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

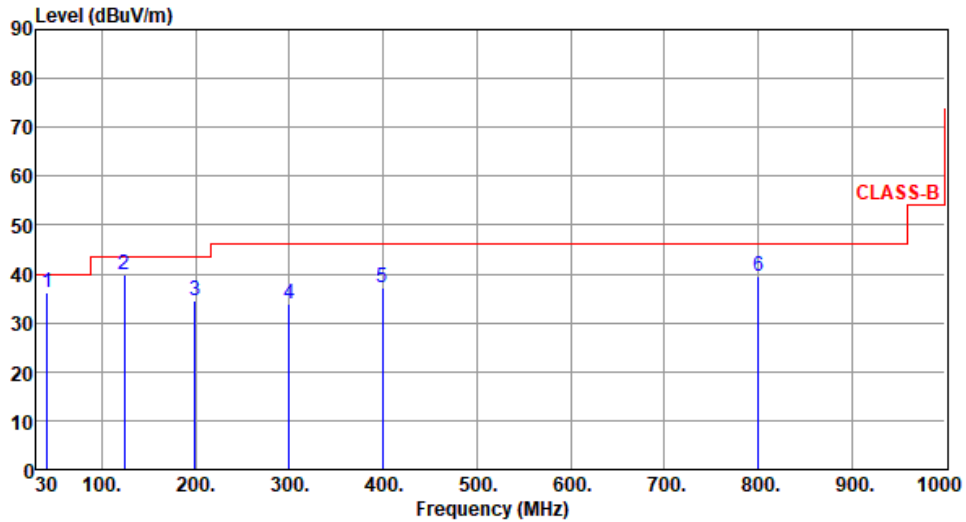
*Factor includes antenna factor , cable loss and amplifier gain

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

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical		

Test By :BRAD WU Temperature(°C):22 Humidity(%):64



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	41.55	36.23	40.00	-3.77	45.19	-8.96	Peak	---	---
2	124.16	39.74	43.50	-3.76	50.69	-10.95	Peak	---	---
3	199.61	34.46	43.50	-9.04	46.84	-12.38	Peak	---	---
4	299.75	33.74	46.00	-12.26	42.38	-8.64	Peak	---	---
5	399.61	37.23	46.00	-8.77	43.11	-5.88	Peak	---	---
6	800.26	39.48	46.00	-6.52	36.68	2.80	Peak	---	---

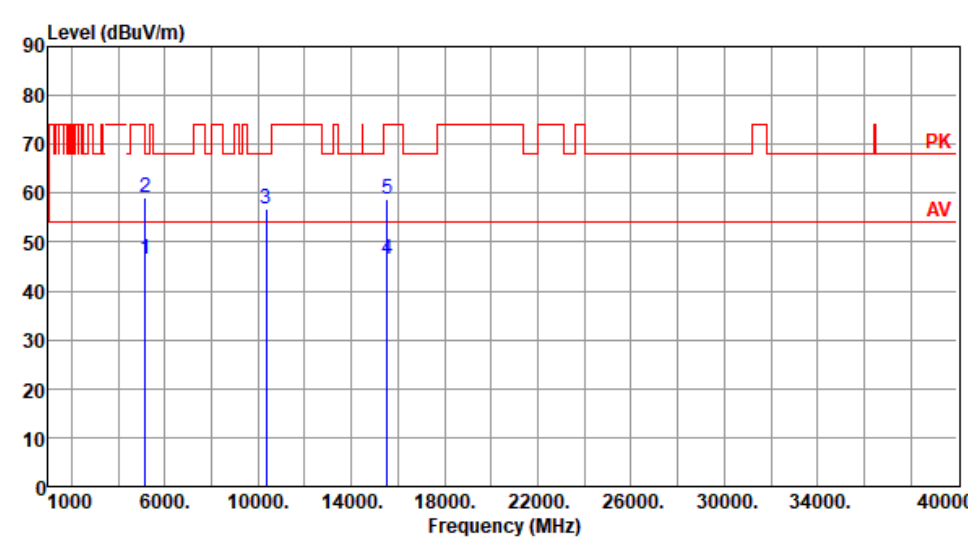
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

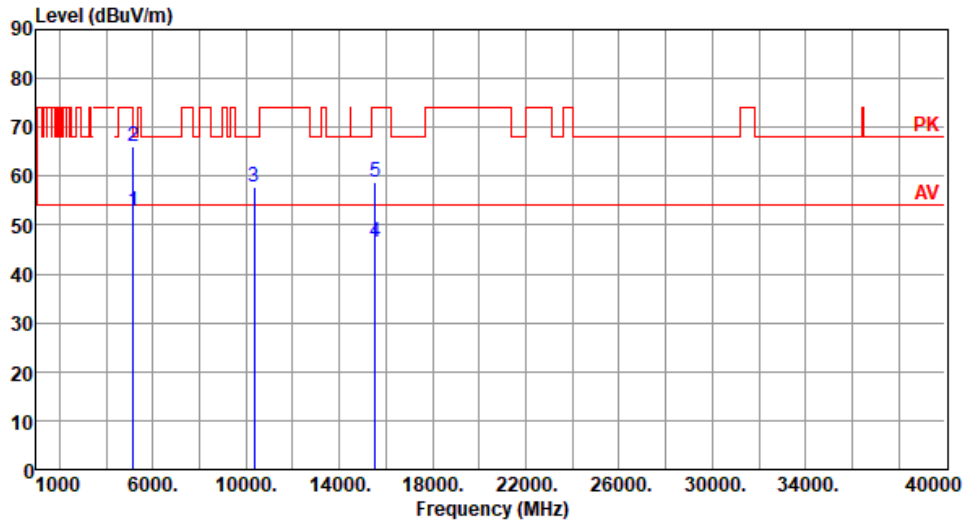
3.5.10 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 11a

Modulation	11a	Test Freq. (MHz)	5180						
Polarization	Horizontal								
Test By : Roger Lu Temperature(°C):24 Humidity(%):68									
									
	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	46.62	54.00	-7.38	41.21	5.41	Average	155	178
2	5150.00	59.00	74.00	-15.00	53.59	5.41	Peak	155	178
3	10360.00	56.88	68.20	-11.32	43.45	13.43	Peak	100	50
4	15540.00	46.52	54.00	-7.48	31.14	15.38	Average	100	25
5	15540.00	58.71	74.00	-15.29	43.33	15.38	Peak	100	25

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).

Modulation	11a	Test Freq. (MHz)	5180
Polarization	Vertical		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	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	52.66	54.00	-1.34	47.25	5.41	Average	100	234
2	5150.00	65.95	74.00	-8.05	60.54	5.41	Peak	100	234
3	10360.00	57.95	68.20	-10.25	44.52	13.43	Peak	132	126
4	15540.00	46.62	54.00	-7.38	31.24	15.38	Average	100	30
5	15540.00	58.83	74.00	-15.17	43.45	15.38	Peak	100	30

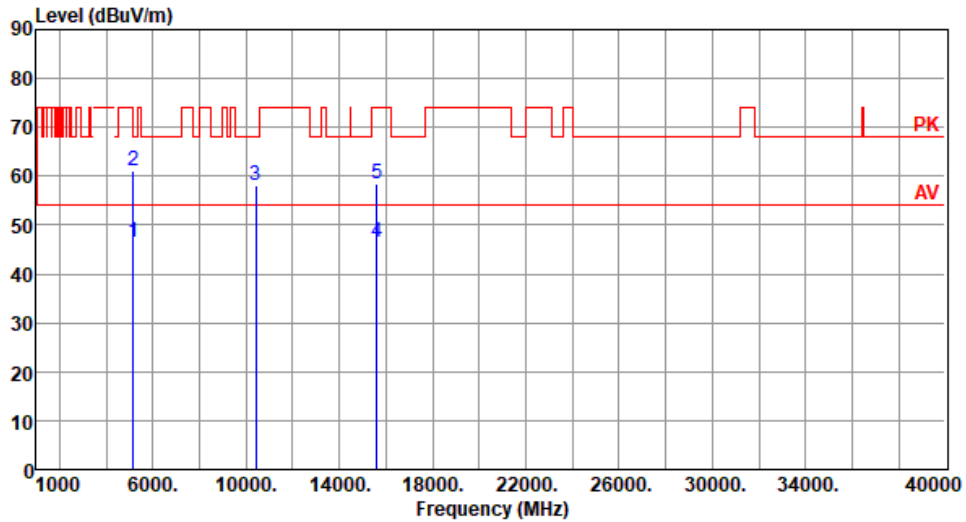
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5200
Polarization	Horizontal		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	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	46.66	54.00	-7.34	41.25	5.41	Average	155	178
2	5150.00	60.97	74.00	-13.03	55.56	5.41	Peak	155	178
3	10400.00	58.12	68.20	-10.08	44.49	13.63	Peak	100	119
4	15600.00	46.53	54.00	-7.47	31.24	15.29	Average	100	50
5	15600.00	58.58	74.00	-15.42	43.29	15.29	Peak	100	50

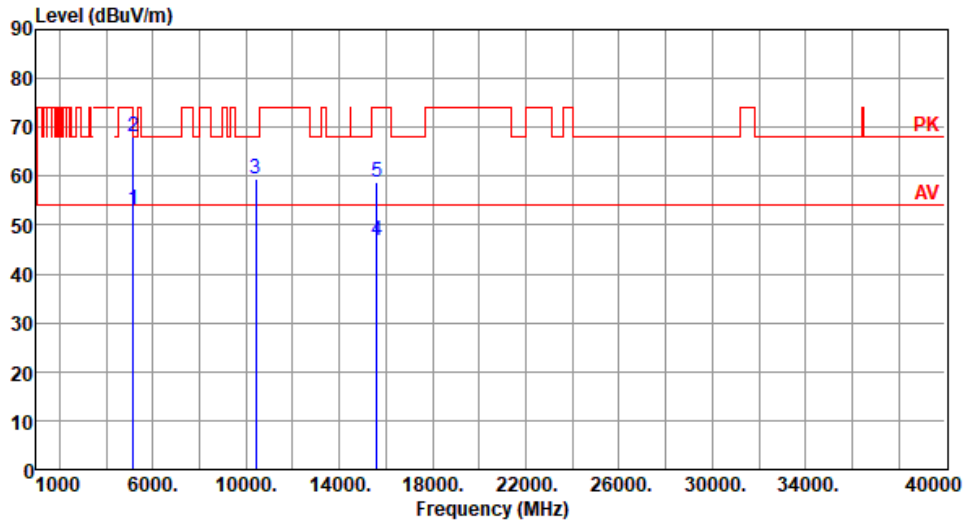
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5200
Polarization	Vertical		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	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	53.00	54.00	-1.00	47.59	5.41	Average	100	236
2	5150.00	68.09	74.00	-5.91	62.68	5.41	Peak	100	236
3	10400.00	59.49	68.20	-8.71	45.86	13.63	Peak	135	130
4	15600.00	46.85	54.00	-7.15	31.56	15.29	Average	100	20
5	15600.00	58.87	74.00	-15.13	43.58	15.29	Peak	100	20

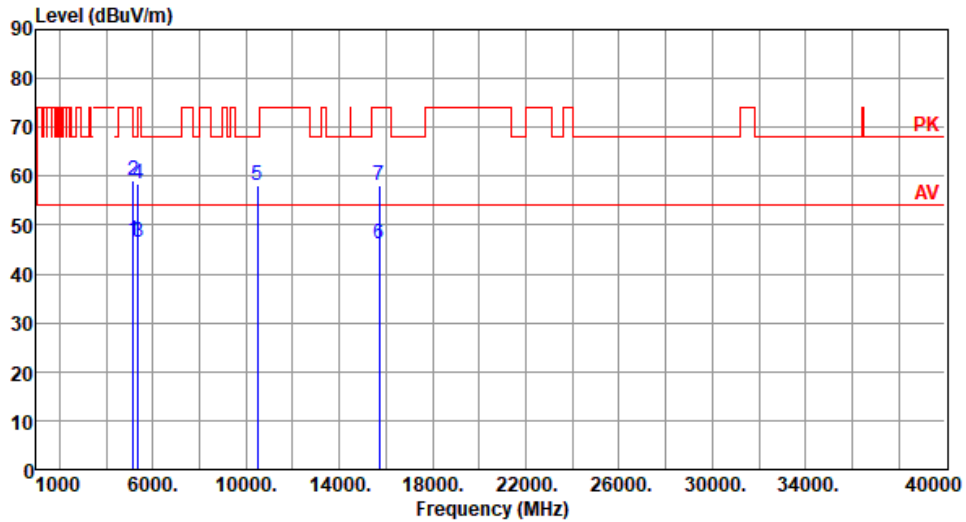
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5240
Polarization	Horizontal		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	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	46.76	54.00	-7.24	41.35	5.41	Average	159	179
2	5150.00	59.00	74.00	-15.00	53.59	5.41	Peak	159	179
3	5350.00	46.53	54.00	-7.47	41.56	4.97	Average	159	179
4	5350.00	58.43	74.00	-15.57	53.46	4.97	Peak	159	179
5	10480.00	58.11	68.20	-10.09	44.31	13.80	Peak	100	120
6	15720.00	46.09	54.00	-7.91	31.44	14.65	Average	100	20
7	15720.00	58.04	74.00	-15.96	43.39	14.65	Peak	100	20

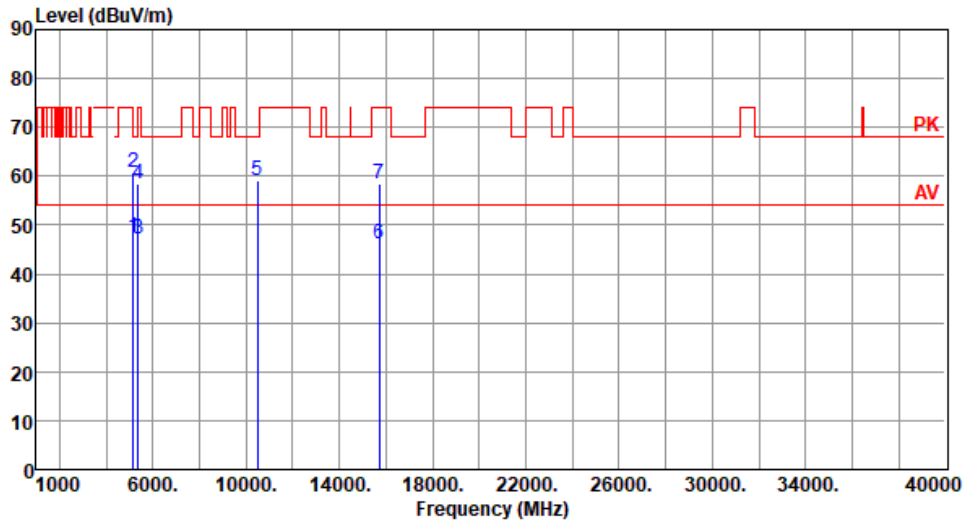
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5240
Polarization	Vertical		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	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	47.66	54.00	-6.34	42.25	5.41	Average	100	237
2	5150.00	60.89	74.00	-13.11	55.48	5.41	Peak	100	237
3	5350.00	47.31	54.00	-6.69	42.34	4.97	Average	100	237
4	5350.00	58.48	74.00	-15.52	53.51	4.97	Peak	100	237
5	10480.00	59.05	68.20	-9.15	45.25	13.80	Peak	133	135
6	15720.00	46.32	54.00	-7.68	31.67	14.65	Average	100	30
7	15720.00	58.33	74.00	-15.67	43.68	14.65	Peak	100	30

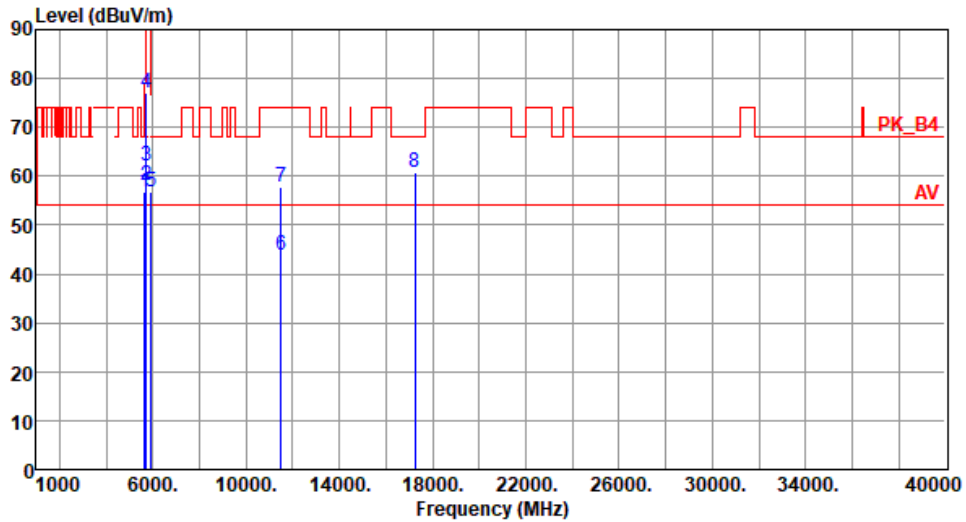
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5745
Polarization	Horizontal		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.70	68.20	-11.50	51.15	5.55	Peak	145	163
2	5700.00	58.12	105.20	-47.08	52.46	5.66	Peak	145	163
3	5720.00	62.27	110.80	-48.53	56.48	5.79	Peak	145	163
4	5725.00	77.08	122.20	-45.12	71.26	5.82	Peak	145	163
5	5925.00	56.73	68.20	-11.47	50.46	6.27	Peak	145	163
6	11490.00	43.67	54.00	-10.33	29.26	14.41	Average	200	66
7	11490.00	57.67	74.00	-16.33	43.26	14.41	Peak	200	66
8	17235.00	60.65	68.20	-7.55	43.46	17.19	Peak	100	40

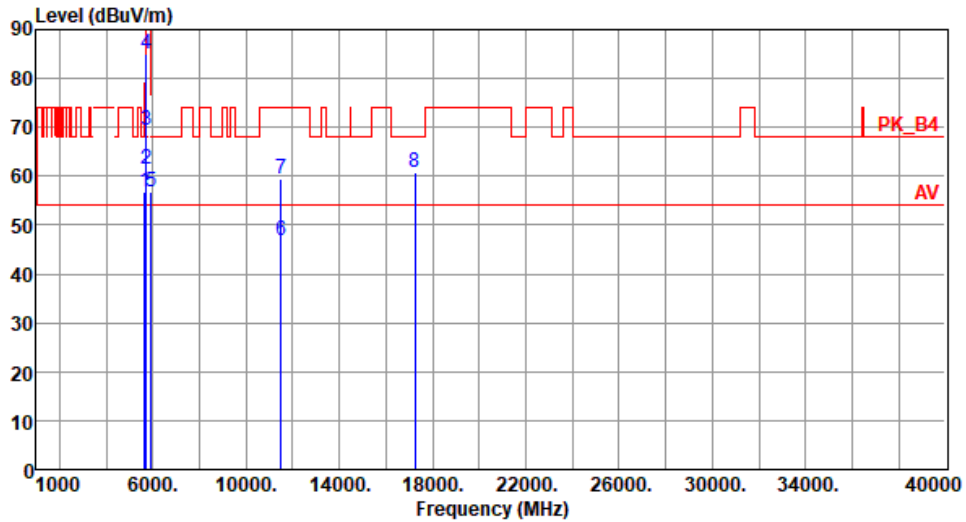
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5745
Polarization	Vertical		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.80	68.20	-11.40	51.25	5.55	Peak	100	248
2	5700.00	61.51	105.20	-43.69	55.85	5.66	Peak	100	248
3	5720.00	69.45	110.80	-41.35	63.66	5.79	Peak	100	248
4	5725.00	84.93	122.20	-37.27	79.11	5.82	Peak	100	248
5	5925.00	56.86	68.20	-11.34	50.59	6.27	Peak	100	248
6	11490.00	46.86	54.00	-7.14	32.45	14.41	Average	105	203
7	11490.00	59.56	74.00	-14.44	45.15	14.41	Peak	105	203
8	17235.00	60.74	68.20	-7.46	43.55	17.19	Peak	100	30

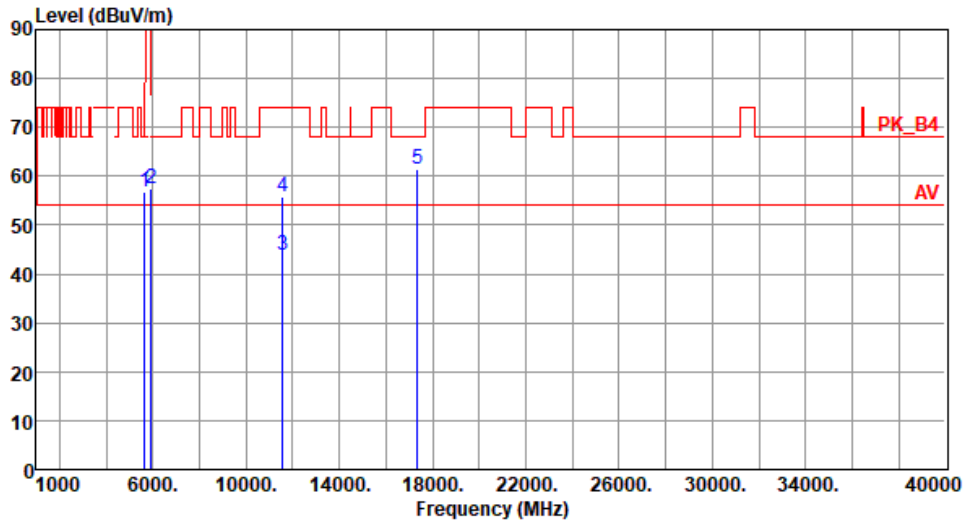
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5785
Polarization	Horizontal		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.70	68.20	-11.50	51.15	5.55	Peak	145	167
2	5925.00	57.49	68.20	-10.71	51.22	6.27	Peak	145	167
3	11570.00	43.72	54.00	-10.28	29.45	14.27	Average	100	60
4	11570.00	55.73	74.00	-18.27	41.46	14.27	Peak	100	60
5	17355.00	61.37	68.20	-6.83	43.54	17.83	Peak	100	20

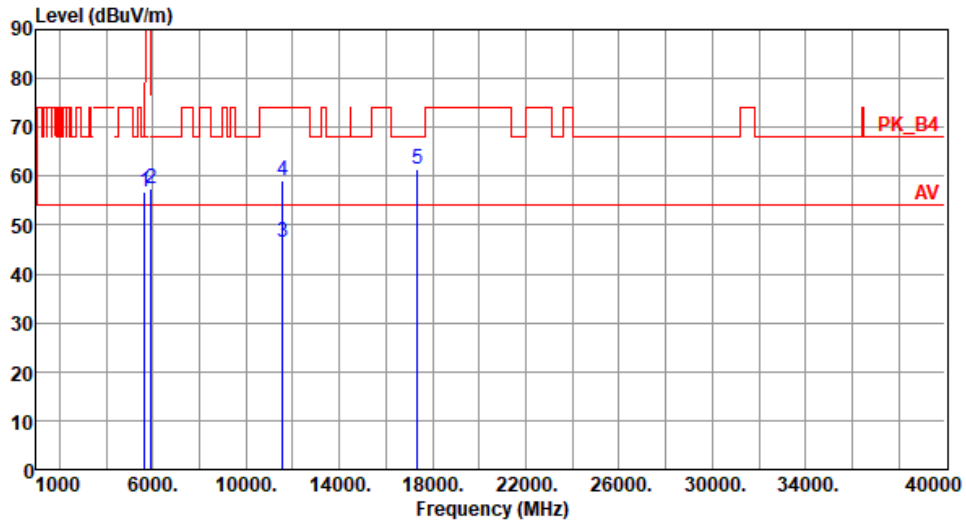
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5785
Polarization	Vertical		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.80	68.20	-11.40	51.25	5.55	Peak	100	243
2	5925.00	57.61	68.20	-10.59	51.34	6.27	Peak	100	243
3	11570.00	46.50	54.00	-7.50	32.23	14.27	Average	101	202
4	11570.00	59.22	74.00	-14.78	44.95	14.27	Peak	101	202
5	17355.00	61.52	68.20	-6.68	43.69	17.83	Peak	100	20

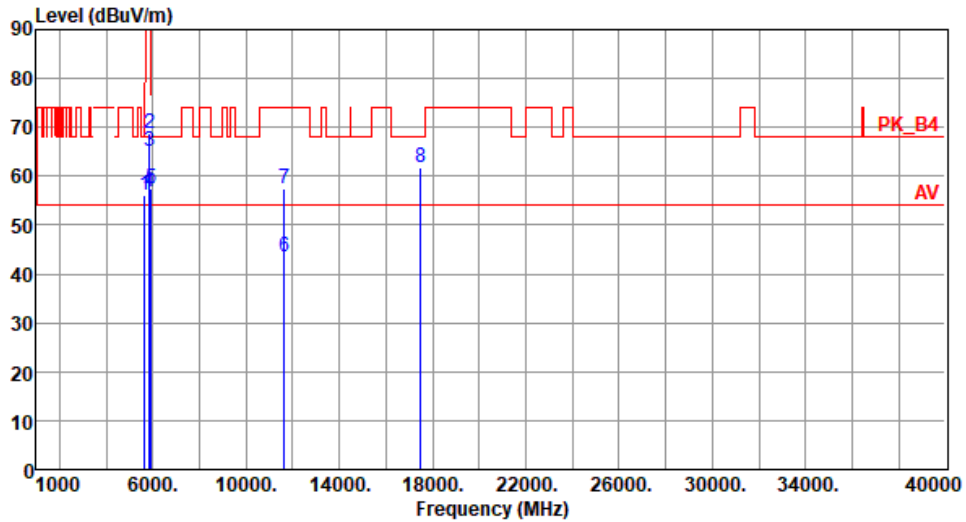
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5825
Polarization	Horizontal		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	55.98	68.20	-12.22	50.43	5.55	Peak	146	167
2	5850.00	68.66	122.20	-53.54	62.46	6.20	Peak	146	167
3	5855.00	65.17	110.80	-45.63	58.97	6.20	Peak	146	167
4	5875.00	56.67	105.20	-48.53	50.46	6.21	Peak	146	167
5	5925.00	57.48	68.20	-10.72	51.21	6.27	Peak	146	167
6	11650.00	43.40	54.00	-10.60	29.36	14.04	Average	100	50
7	11650.00	57.31	74.00	-16.69	43.27	14.04	Peak	100	50
8	17475.00	61.73	68.20	-6.47	43.32	18.41	Peak	100	60

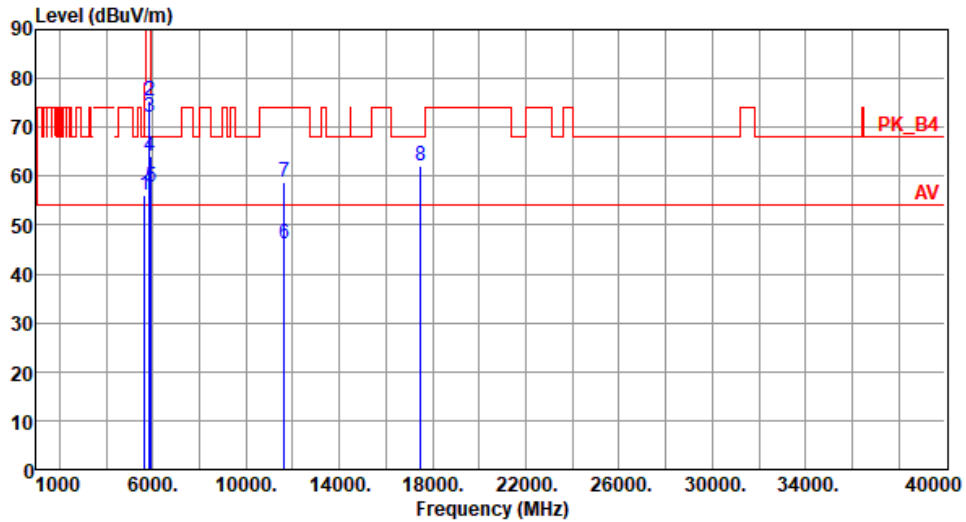
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	11a	Test Freq. (MHz)	5825
Polarization	Vertical		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



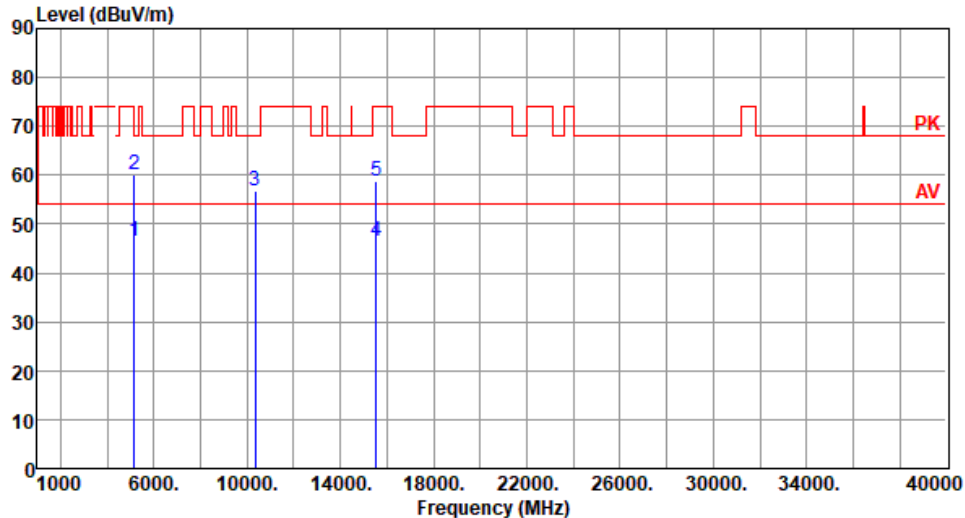
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.12	68.20	-12.08	50.57	5.55	Peak	100	237
2	5850.00	75.29	122.20	-46.91	69.09	6.20	Peak	100	237
3	5855.00	72.05	110.80	-38.75	65.85	6.20	Peak	100	237
4	5875.00	64.12	105.20	-41.08	57.91	6.21	Peak	100	237
5	5925.00	57.75	68.20	-10.45	51.48	6.27	Peak	100	237
6	11650.00	46.10	54.00	-7.90	32.06	14.04	Average	103	201
7	11650.00	58.81	74.00	-15.19	44.77	14.04	Peak	103	201
8	17475.00	61.99	68.20	-6.21	43.58	18.41	Peak	100	60

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).

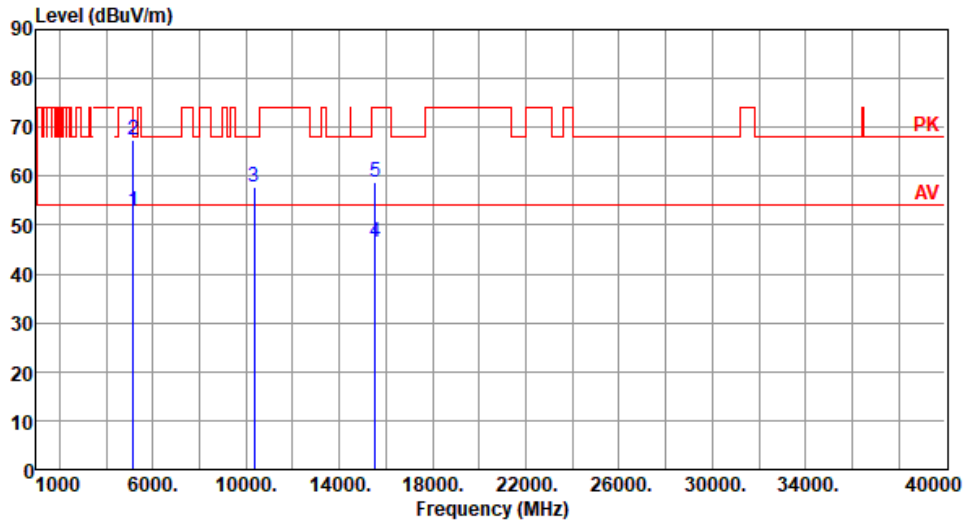
3.5.11 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT20

Modulation	VHT20	Test Freq. (MHz)	5180						
Polarization	Horizontal								
Test By : Roger Lu		Temperature(°C): 24	Humidity(%): 68						
									
	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	46.64	54.00	-7.36	41.23	5.41	Average	162	178
2	5150.00	59.97	74.00	-14.03	54.56	5.41	Peak	162	178
3	10360.00	56.68	68.20	-11.52	43.25	13.43	Peak	100	70
4	15540.00	46.56	54.00	-7.44	31.18	15.38	Average	100	30
5	15540.00	58.68	74.00	-15.32	43.30	15.38	Peak	100	30

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).

Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Vertical		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	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	52.97	54.00	-1.03	47.56	5.41	Average	100	240
2	5150.00	67.32	74.00	-6.68	61.91	5.41	Peak	100	240
3	10360.00	57.89	68.20	-10.31	44.46	13.43	Peak	133	125
4	15540.00	46.62	54.00	-7.38	31.24	15.38	Average	100	20
5	15540.00	58.76	74.00	-15.24	43.38	15.38	Peak	100	20

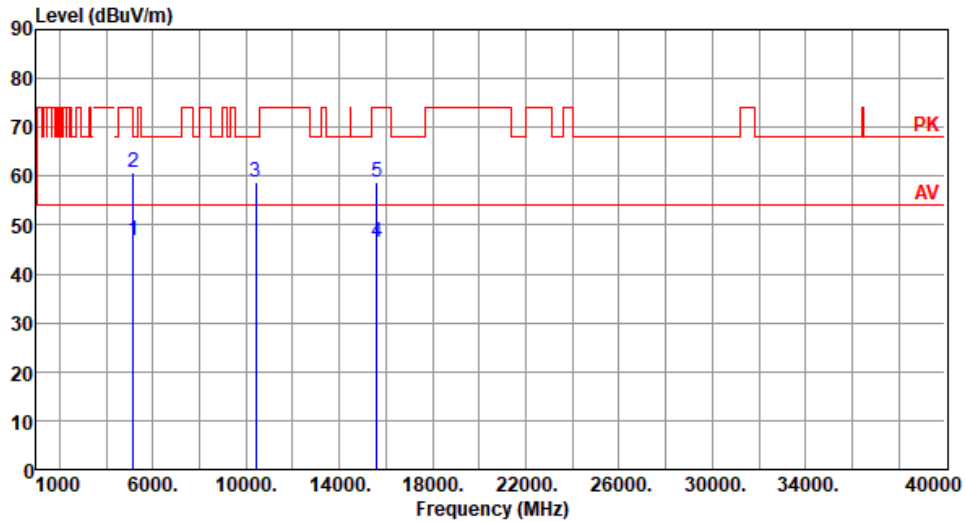
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Horizontal		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	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	46.67	54.00	-7.33	41.26	5.41	Average	165	178
2	5150.00	60.72	74.00	-13.28	55.31	5.41	Peak	165	178
3	10400.00	58.89	68.20	-9.31	45.26	13.63	Peak	100	121
4	15600.00	46.60	54.00	-7.40	31.31	15.29	Average	100	30
5	15600.00	58.66	74.00	-15.34	43.37	15.29	Peak	100	30

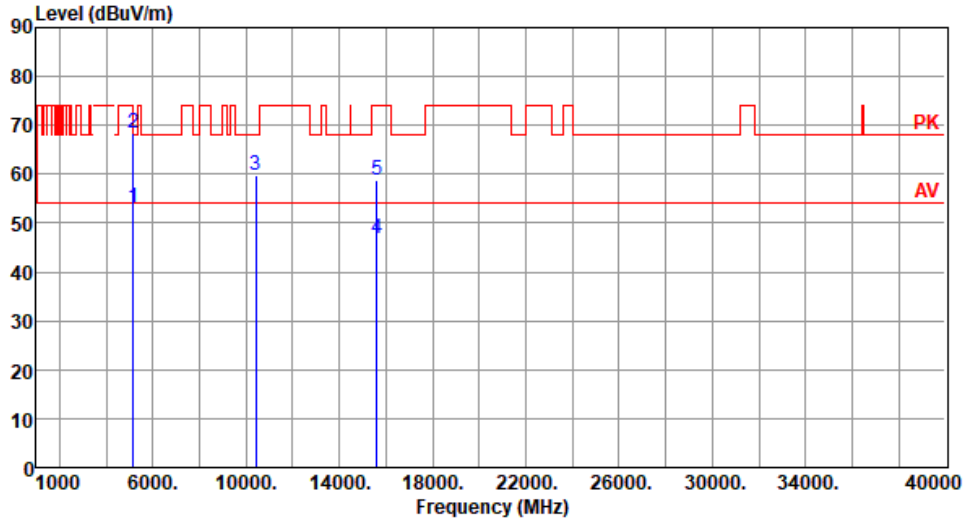
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	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	52.98	54.00	-1.02	47.57	5.41	Average	100	240
2	5150.00	68.26	74.00	-5.74	62.85	5.41	Peak	100	240
3	10400.00	59.78	68.20	-8.42	46.15	13.63	Peak	130	125
4	15600.00	46.71	54.00	-7.29	31.42	15.29	Average	100	40
5	15600.00	58.78	74.00	-15.22	43.49	15.29	Peak	100	40

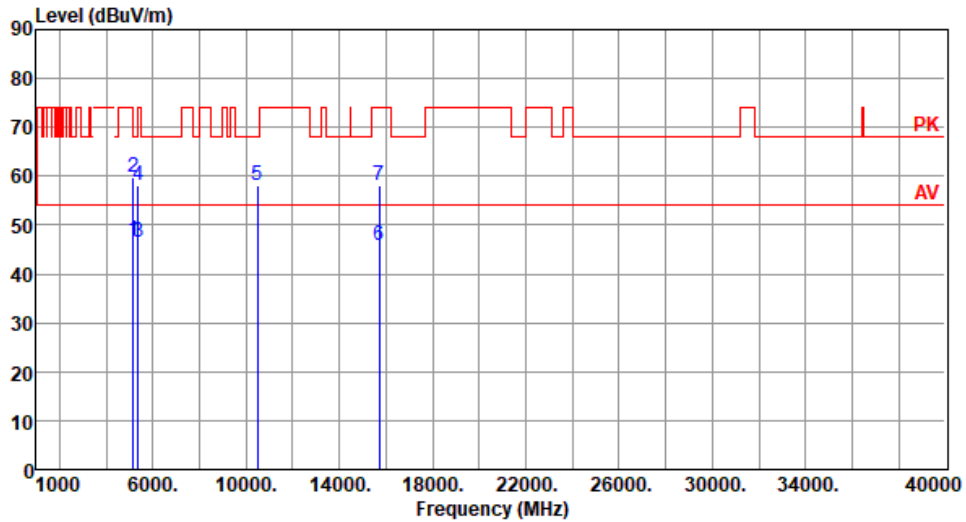
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Horizontal		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	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	46.97	54.00	-7.03	41.56	5.41	Average	159	172
2	5150.00	59.63	74.00	-14.37	54.22	5.41	Peak	159	172
3	5350.00	46.34	54.00	-7.66	41.37	4.97	Average	159	172
4	5350.00	58.16	74.00	-15.84	53.19	4.97	Peak	159	172
5	10480.00	58.15	68.20	-10.05	44.35	13.80	Peak	100	122
6	15720.00	45.99	54.00	-8.01	31.34	14.65	Average	100	50
7	15720.00	58.10	74.00	-15.90	43.45	14.65	Peak	100	50

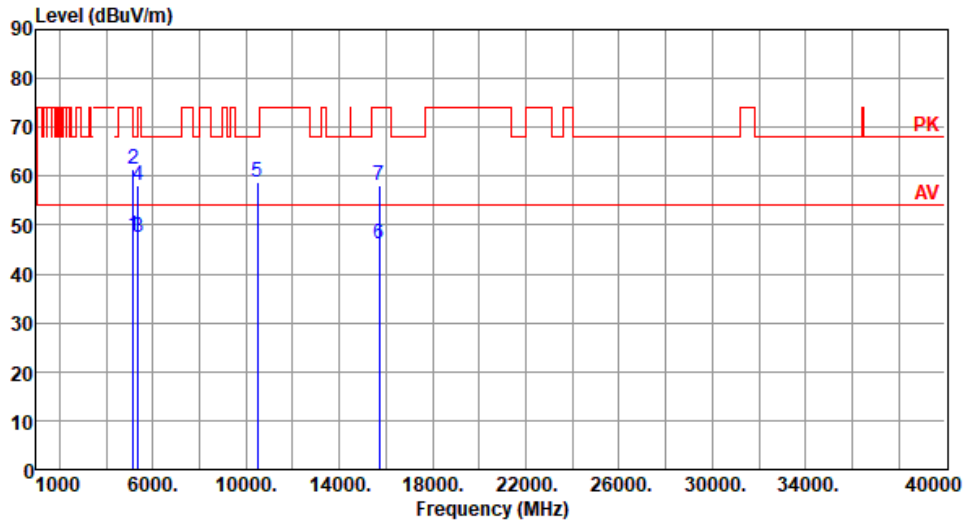
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Vertical		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	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	47.76	54.00	-6.24	42.35	5.41	Average	100	239
2	5150.00	61.56	74.00	-12.44	56.15	5.41	Peak	100	239
3	5350.00	47.43	54.00	-6.57	42.46	4.97	Average	100	239
4	5350.00	58.22	74.00	-15.78	53.25	4.97	Peak	100	239
5	10480.00	58.91	68.20	-9.29	45.11	13.80	Peak	136	133
6	15720.00	46.19	54.00	-7.81	31.54	14.65	Average	100	25
7	15720.00	58.21	74.00	-15.79	43.56	14.65	Peak	100	25

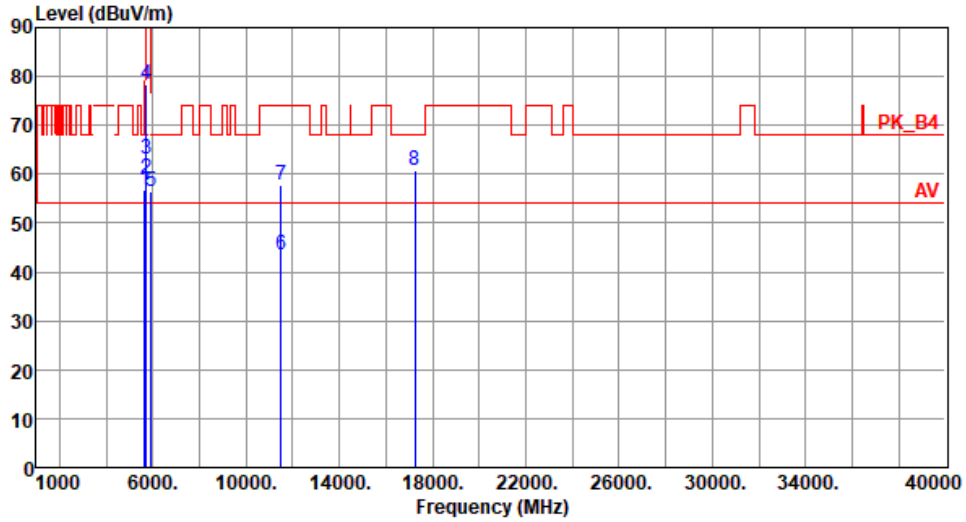
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Horizontal		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.70	68.20	-11.50	51.15	5.55	Peak	145	165
2	5700.00	59.22	105.20	-45.98	53.56	5.66	Peak	145	165
3	5720.00	63.25	110.80	-47.55	57.46	5.79	Peak	145	165
4	5725.00	78.41	122.20	-43.79	72.59	5.82	Peak	145	165
5	5925.00	56.58	68.20	-11.62	50.31	6.27	Peak	145	165
6	11490.00	43.64	54.00	-10.36	29.23	14.41	Average	100	70
7	11490.00	57.66	74.00	-16.34	43.25	14.41	Peak	100	70
8	17235.00	60.84	68.20	-7.36	43.65	17.19	Peak	100	20

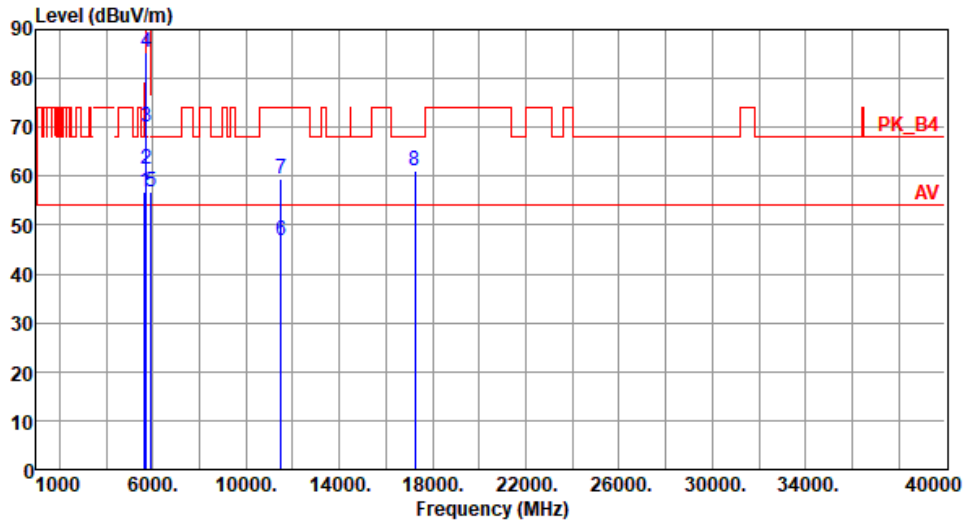
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Vertical		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.86	68.20	-11.34	51.31	5.55	Peak	100	245
2	5700.00	61.33	105.20	-43.87	55.67	5.66	Peak	100	245
3	5720.00	69.99	110.80	-40.81	64.20	5.79	Peak	100	245
4	5725.00	85.30	122.20	-36.90	79.48	5.82	Peak	100	245
5	5925.00	56.73	68.20	-11.47	50.46	6.27	Peak	100	245
6	11490.00	46.72	54.00	-7.28	32.31	14.41	Average	106	205
7	11490.00	59.49	74.00	-14.51	45.08	14.41	Peak	106	205
8	17235.00	61.09	68.20	-7.11	43.90	17.19	Peak	100	40

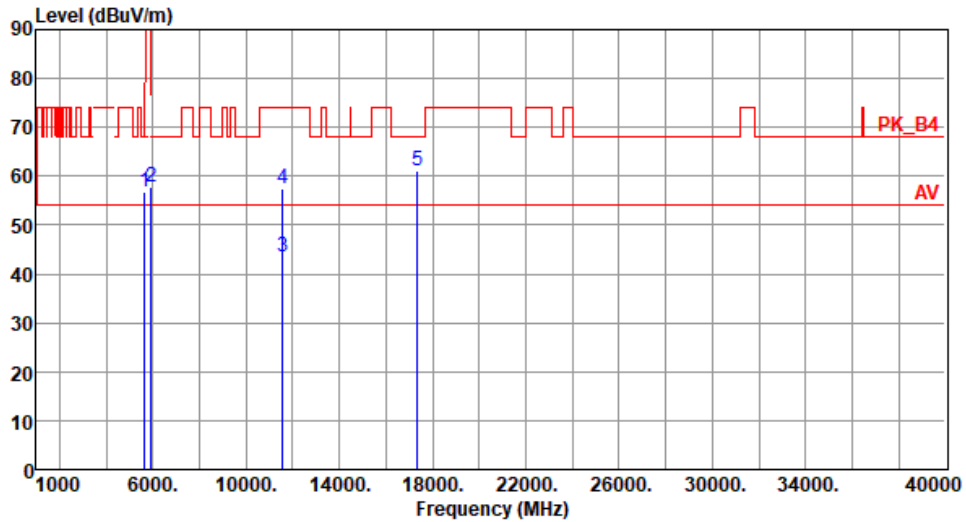
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.70	68.20	-11.50	51.15	5.55	Peak	149	165
2	5925.00	57.62	68.20	-10.58	51.35	6.27	Peak	149	165
3	11570.00	43.58	54.00	-10.42	29.31	14.27	Average	100	59
4	11570.00	57.62	74.00	-16.38	43.35	14.27	Peak	100	59
5	17355.00	61.09	68.20	-7.11	43.26	17.83	Peak	100	50

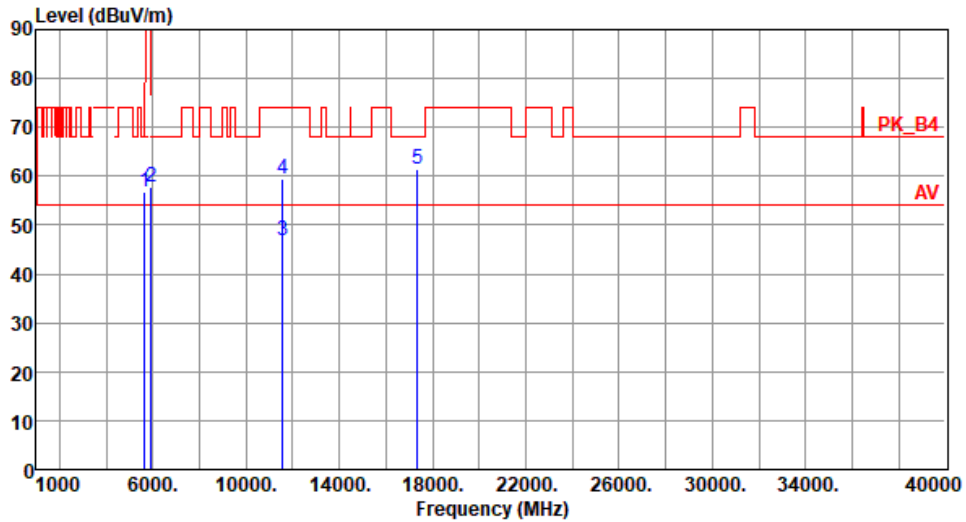
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.86	68.20	-11.34	51.31	5.55	Peak	100	241
2	5925.00	57.79	68.20	-10.41	51.52	6.27	Peak	100	241
3	11570.00	46.72	54.00	-7.28	32.45	14.27	Average	102	206
4	11570.00	59.44	74.00	-14.56	45.17	14.27	Peak	102	206
5	17355.00	61.37	68.20	-6.83	43.54	17.83	Peak	100	60

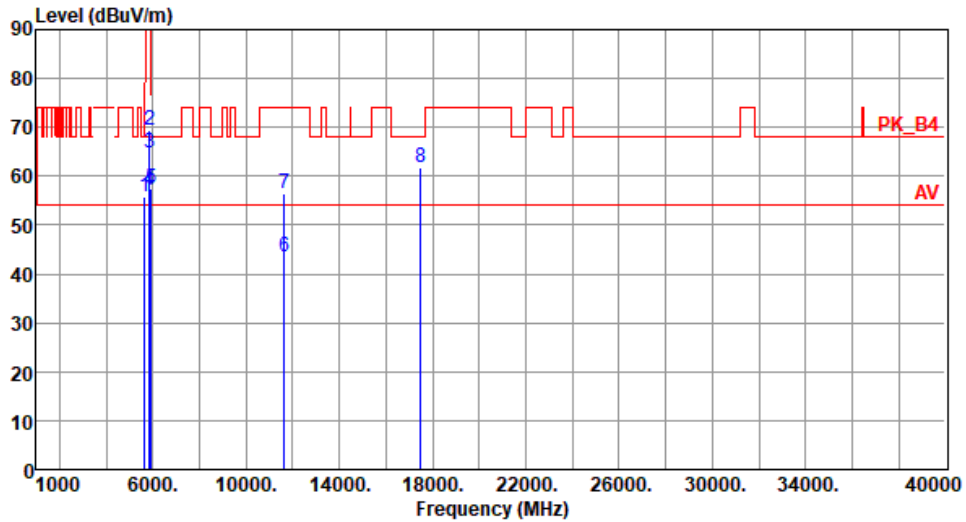
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	55.86	68.20	-12.34	50.31	5.55	Peak	151	167
2	5850.00	69.45	122.20	-52.75	63.25	6.20	Peak	151	167
3	5855.00	64.66	110.80	-46.14	58.46	6.20	Peak	151	167
4	5875.00	57.05	105.20	-48.15	50.84	6.21	Peak	151	167
5	5925.00	57.53	68.20	-10.67	51.26	6.27	Peak	151	167
6	11650.00	43.37	54.00	-10.63	29.33	14.04	Average	100	58
7	11650.00	56.59	74.00	-17.41	42.55	14.04	Peak	100	58
8	17475.00	61.87	68.20	-6.33	43.46	18.41	Peak	100	40

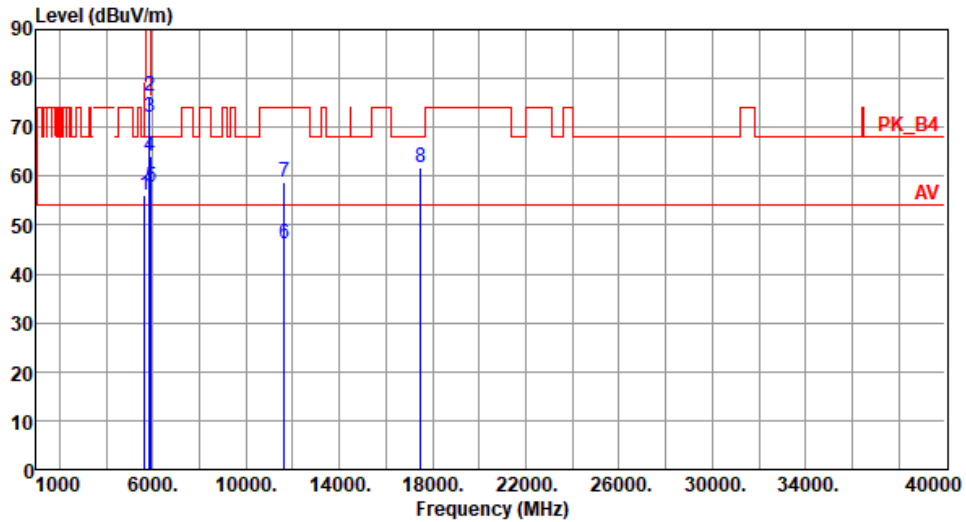
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Vertical		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



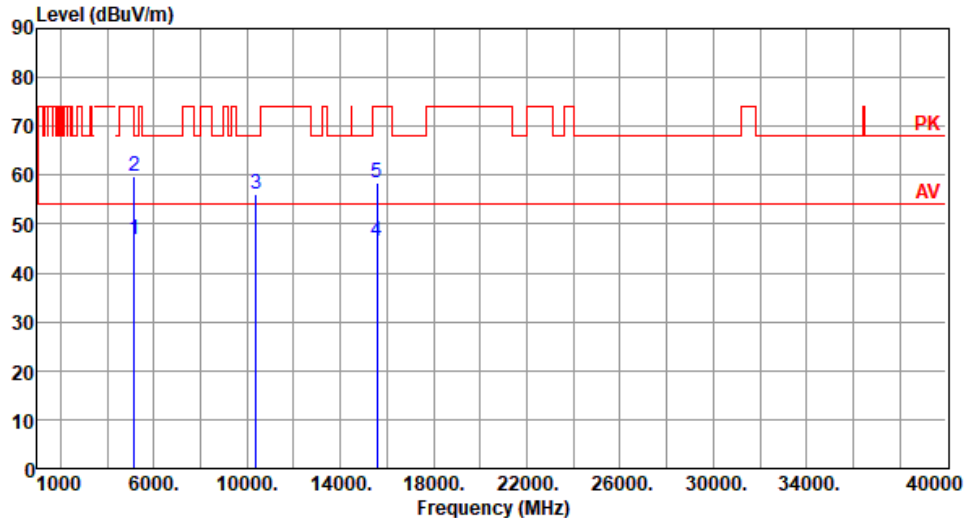
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.01	68.20	-12.19	50.46	5.55	Peak	100	238
2	5850.00	76.22	122.20	-45.98	70.02	6.20	Peak	100	238
3	5855.00	71.96	110.80	-38.84	65.76	6.20	Peak	100	238
4	5875.00	64.20	105.20	-41.00	57.99	6.21	Peak	100	238
5	5925.00	57.80	68.20	-10.40	51.53	6.27	Peak	100	238
6	11650.00	46.30	54.00	-7.70	32.26	14.04	Average	100	205
7	11650.00	58.70	74.00	-15.30	44.66	14.04	Peak	100	205
8	17475.00	61.92	68.20	-6.28	43.51	18.41	Peak	100	30

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).

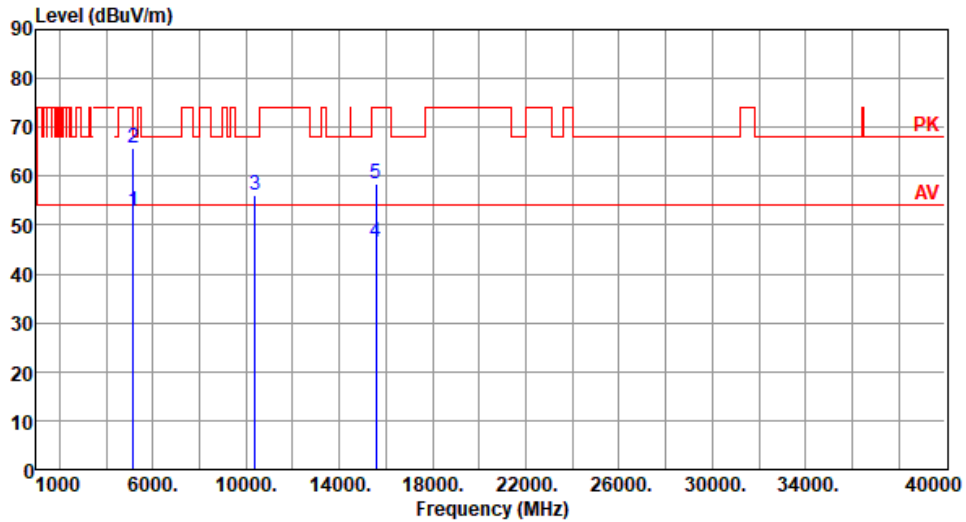
3.5.12 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT40

Modulation	VHT40	Test Freq. (MHz)	5190						
Polarization	Horizontal								
Test By : Roger Lu		Temperature(°C):24	Humidity(%):68						
									
	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	46.67	54.00	-7.33	41.26	5.41	Average	157	174
2	5150.00	59.70	74.00	-14.30	54.29	5.41	Peak	157	174
3	10380.00	55.96	68.20	-12.24	42.43	13.53	Peak	100	20
4	15570.00	46.49	54.00	-7.51	31.15	15.34	Average	100	60
5	15570.00	58.48	74.00	-15.52	43.14	15.34	Peak	100	60

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).

Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Vertical		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	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	52.76	54.00	-1.24	47.35	5.41	Average	102	239
2	5150.00	65.66	74.00	-8.34	60.25	5.41	Peak	102	239
3	10380.00	56.09	68.20	-12.11	42.56	13.53	Peak	100	30
4	15570.00	46.59	54.00	-7.41	31.25	15.34	Average	100	40
5	15570.00	58.45	74.00	-15.55	43.11	15.34	Peak	100	40

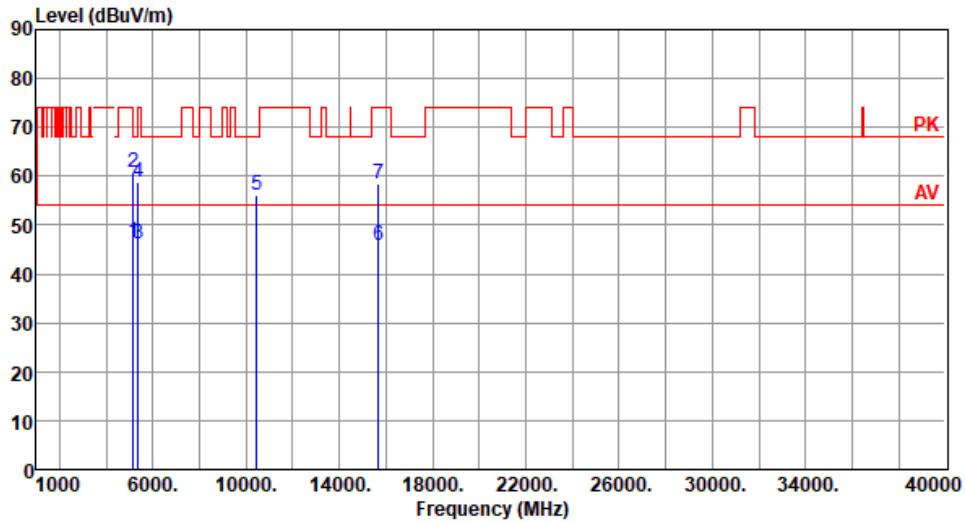
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	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	46.64	54.00	-7.36	41.23	5.41	Average	158	179
2	5150.00	60.90	74.00	-13.10	55.49	5.41	Peak	158	179
3	5350.00	46.09	54.00	-7.91	41.12	4.97	Average	158	179
4	5350.00	58.76	74.00	-15.24	53.79	4.97	Peak	158	179
5	10460.00	56.11	68.20	-12.09	42.35	13.76	Peak	100	60
6	15690.00	45.84	54.00	-8.16	31.12	14.72	Average	100	50
7	15690.00	58.30	74.00	-15.70	43.58	14.72	Peak	100	50

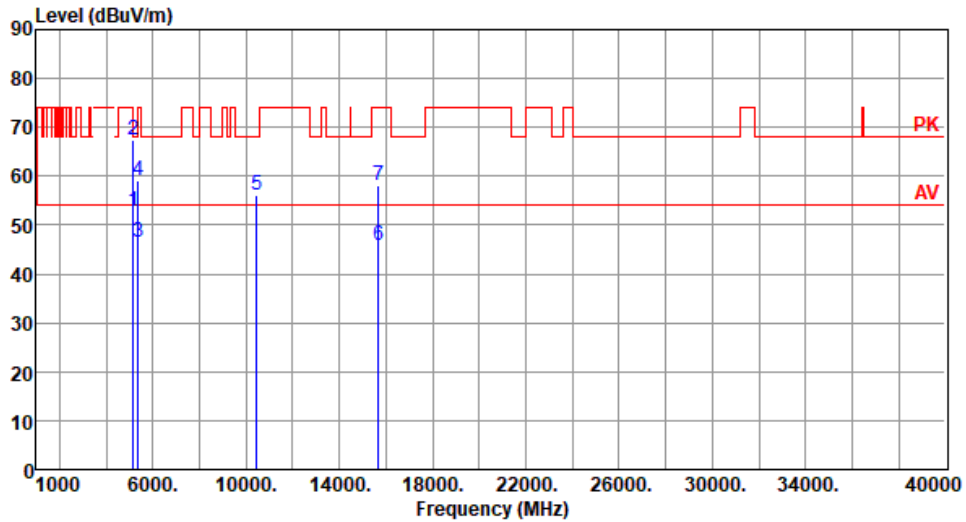
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	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	52.97	54.00	-1.03	47.56	5.41	Average	100	240
2	5150.00	67.49	74.00	-6.51	62.08	5.41	Peak	100	240
3	5350.00	46.53	54.00	-7.47	41.56	4.97	Average	100	240
4	5350.00	59.12	74.00	-14.88	54.15	4.97	Peak	100	240
5	10460.00	56.22	68.20	-11.98	42.46	13.76	Peak	100	30
6	15690.00	45.96	54.00	-8.04	31.24	14.72	Average	100	60
7	15690.00	58.17	74.00	-15.83	43.45	14.72	Peak	100	60

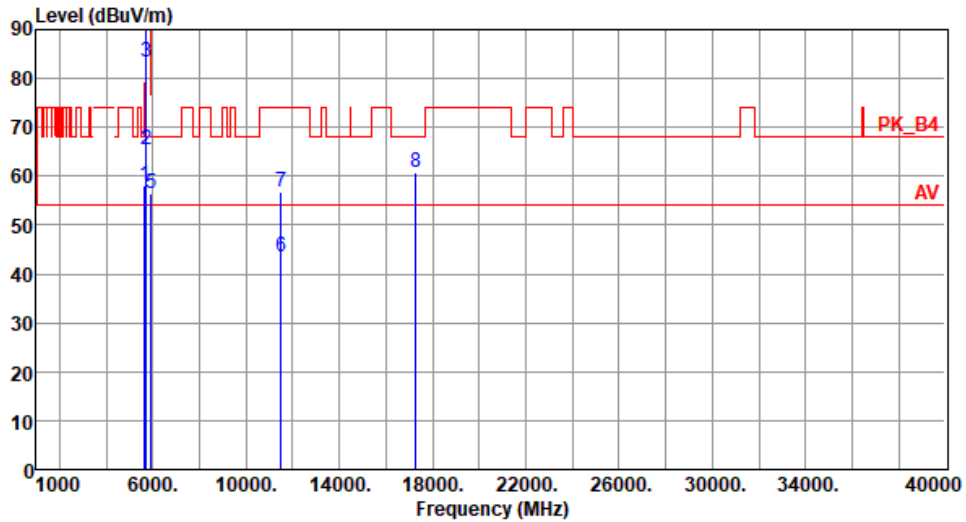
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Horizontal		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	58.01	68.20	-10.19	52.46	5.55	Peak	145	167
2	5700.00	65.46	105.20	-39.74	59.80	5.66	Peak	145	167
3	5720.00	83.35	110.80	-27.45	77.56	5.79	Peak	145	167
4	5725.00	95.40	122.20	-26.80	89.58	5.82	Peak	145	167
5	5925.00	56.53	68.20	-11.67	50.26	6.27	Peak	145	167
6	11510.00	43.53	54.00	-10.47	29.13	14.40	Average	100	50
7	11510.00	56.71	74.00	-17.29	42.31	14.40	Peak	100	50
8	17265.00	60.62	68.20	-7.58	43.26	17.36	Peak	100	90

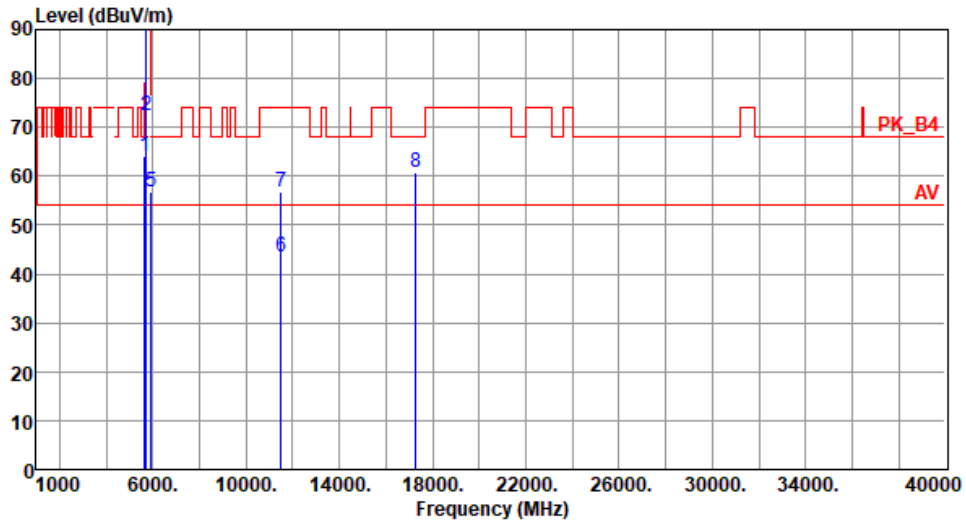
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	64.04	68.20	-4.16	58.49	5.55	Peak	100	238
2	5700.00	72.44	105.20	-32.76	66.78	5.66	Peak	100	238
3	5720.00	90.13	110.80	-20.67	84.34	5.79	Peak	100	238
4	5725.00	92.31	122.20	-29.89	86.49	5.82	Peak	100	238
5	5925.00	56.85	68.20	-11.35	50.58	6.27	Peak	100	238
6	11510.00	43.66	54.00	-10.34	29.26	14.40	Average	100	40
7	11510.00	56.66	74.00	-17.34	42.26	14.40	Peak	100	40
8	17265.00	60.71	68.20	-7.49	43.35	17.36	Peak	100	20

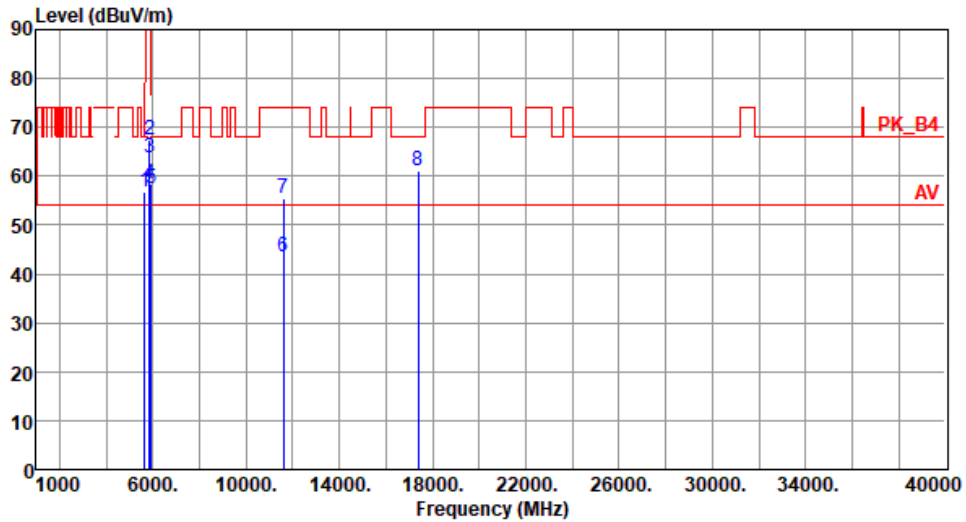
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Horizontal		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.66	68.20	-11.54	51.11	5.55	Peak	140	164
2	5850.00	67.46	122.20	-54.74	61.26	6.20	Peak	140	164
3	5855.00	63.66	110.80	-47.14	57.46	6.20	Peak	140	164
4	5875.00	58.47	105.20	-46.73	52.26	6.21	Peak	140	164
5	5925.00	57.33	68.20	-10.87	51.06	6.27	Peak	140	164
6	11590.00	43.41	54.00	-10.59	29.18	14.23	Average	100	15
7	11590.00	55.55	74.00	-18.45	41.32	14.23	Peak	100	15
8	17385.00	61.20	68.20	-7.00	43.23	17.97	Peak	100	90

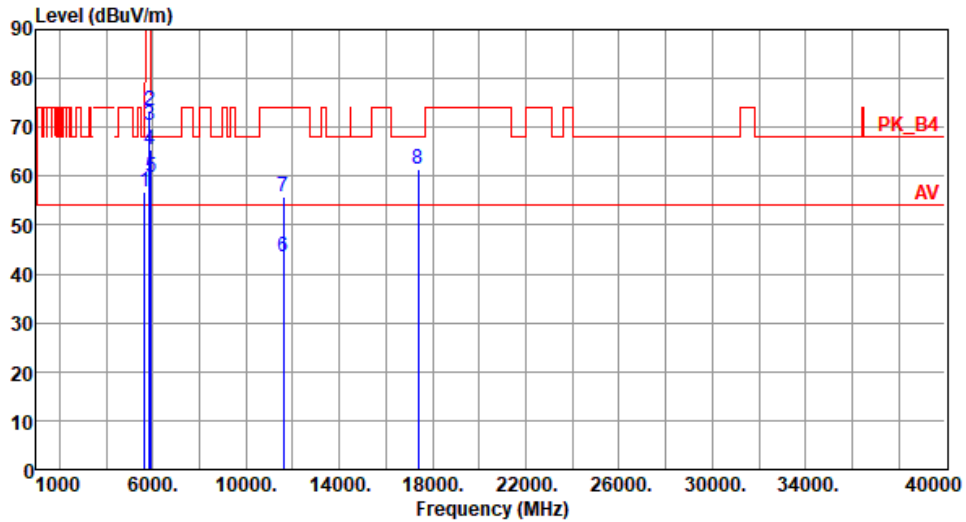
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Vertical		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



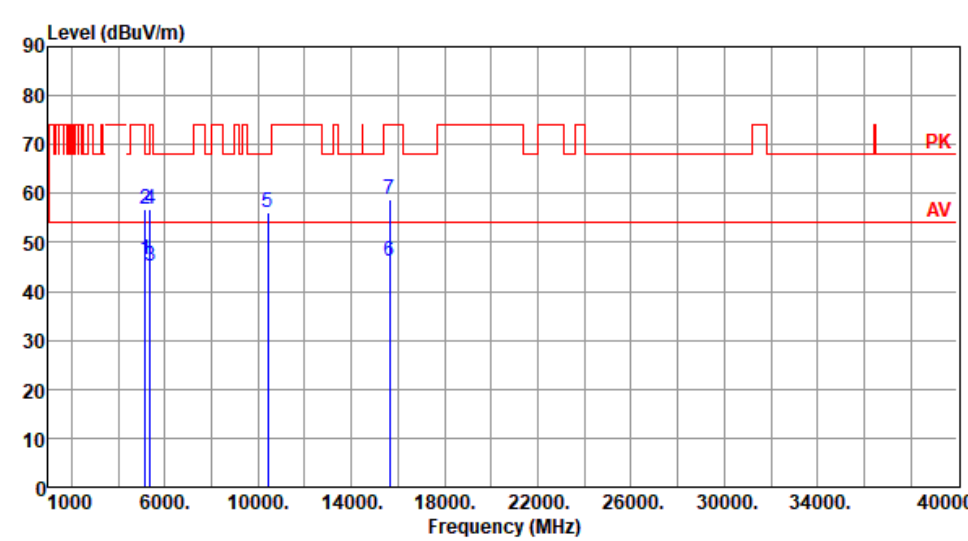
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	56.80	68.20	-11.40	51.25	5.55	Peak	100	247
2	5850.00	73.48	122.20	-48.72	67.28	6.20	Peak	100	247
3	5855.00	70.43	110.80	-40.37	64.23	6.20	Peak	100	247
4	5875.00	65.37	105.20	-39.83	59.16	6.21	Peak	100	247
5	5925.00	59.68	68.20	-8.52	53.41	6.27	Peak	100	247
6	11590.00	43.46	54.00	-10.54	29.23	14.23	Average	100	20
7	11590.00	55.69	74.00	-18.31	41.46	14.23	Peak	100	20
8	17385.00	61.35	68.20	-6.85	43.38	17.97	Peak	100	50

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).

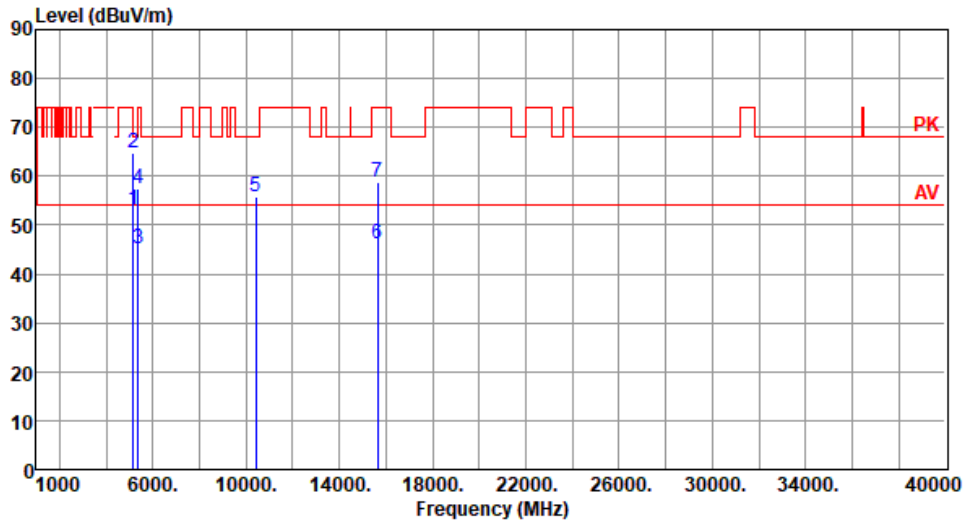
3.5.13 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT80

Modulation	VHT80	Test Freq. (MHz)	5210						
Polarization	Horizontal								
Test By : Roger Lu		Temperature(°C):24	Humidity(%):68						
									
	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	46.50	54.00	-7.50	41.09	5.41	Average	161	176
2	5150.00	56.86	74.00	-17.14	51.45	5.41	Peak	161	176
3	5350.00	45.32	54.00	-8.68	40.35	4.97	Average	161	176
4	5350.00	56.83	74.00	-17.17	51.86	4.97	Peak	161	176
5	10420.00	56.26	68.20	-11.94	42.59	13.67	Peak	100	20
6	15630.00	46.32	54.00	-7.68	31.22	15.10	Average	100	40
7	15630.00	58.66	74.00	-15.34	43.56	15.10	Peak	100	40

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).

Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Vertical		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	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	52.98	54.00	-1.02	47.57	5.41	Average	104	240
2	5150.00	64.75	74.00	-9.25	59.34	5.41	Peak	104	240
3	5350.00	45.22	54.00	-8.78	40.25	4.97	Average	104	240
4	5350.00	57.56	74.00	-16.44	52.59	4.97	Peak	104	240
5	10420.00	55.93	68.20	-12.27	42.26	13.67	Peak	100	20
6	15630.00	46.27	54.00	-7.73	31.17	15.10	Average	100	40
7	15630.00	58.63	74.00	-15.37	43.53	15.10	Peak	100	40

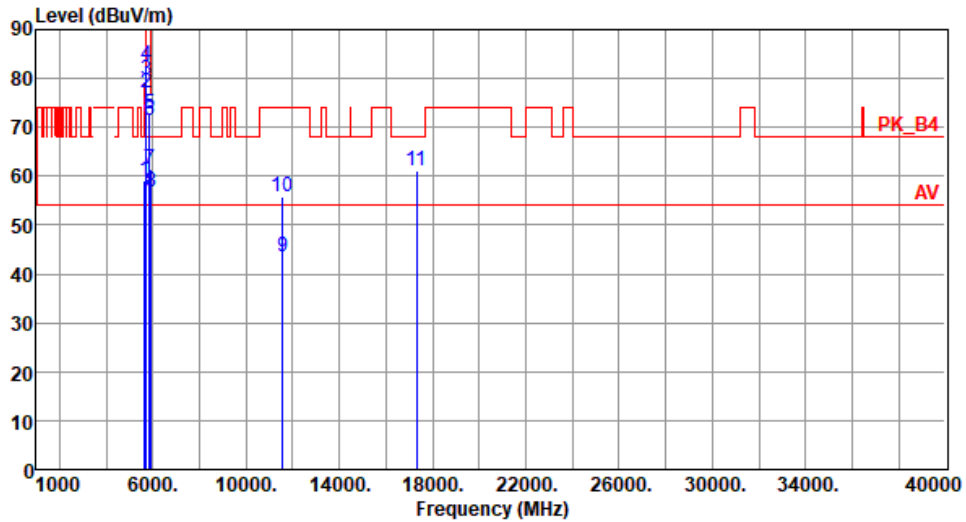
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Horizontal		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.12	68.20	-9.08	53.57	5.55	Peak	143	169
2	5700.00	76.91	105.20	-28.29	71.25	5.66	Peak	143	169
3	5720.00	79.82	110.80	-30.98	74.03	5.79	Peak	143	169
4	5725.00	82.85	122.20	-39.35	77.03	5.82	Peak	143	169
5	5850.00	72.65	122.20	-49.55	66.45	6.20	Peak	143	169
6	5855.00	71.40	110.80	-39.40	65.20	6.20	Peak	143	169
7	5875.00	61.58	105.20	-43.62	55.37	6.21	Peak	143	169
8	5925.00	56.85	68.20	-11.35	50.58	6.27	Peak	143	169
9	11550.00	43.57	54.00	-10.43	29.25	14.32	Average	100	30
10	11550.00	55.87	74.00	-18.13	41.55	14.32	Peak	100	30
11	17325.00	61.25	68.20	-6.95	43.57	17.68	Peak	100	40

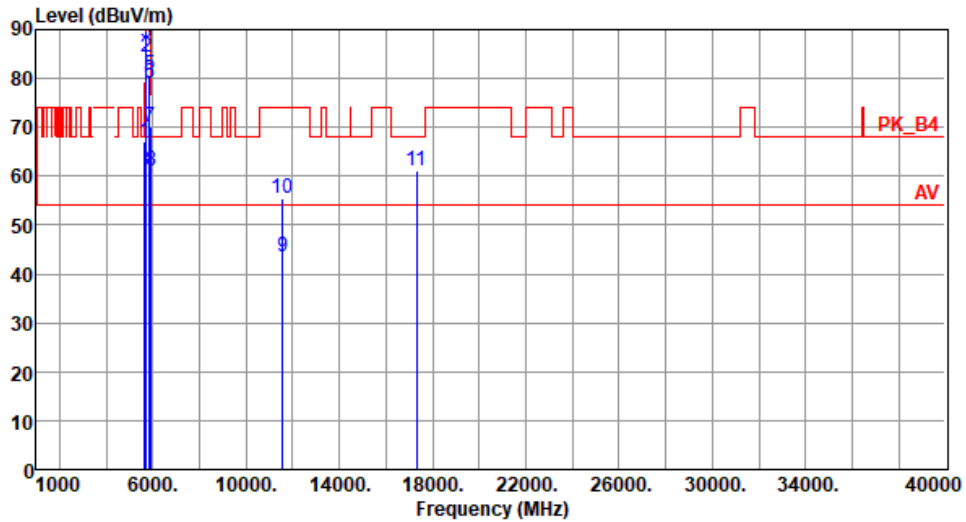
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

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

Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Vertical		

Test By :Roger Lu Temperature(°C):24 Humidity(%):68



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	67.00	68.20	-1.20	61.45	5.55	Peak	100	239
2	5700.00	84.37	105.20	-20.83	78.71	5.66	Peak	100	239
3	5720.00	87.46	110.80	-23.34	81.67	5.79	Peak	100	239
4	5725.00	89.81	122.20	-32.39	83.99	5.82	Peak	100	239
5	5850.00	80.60	122.20	-41.60	74.40	6.20	Peak	100	239
6	5855.00	79.17	110.80	-31.63	72.97	6.20	Peak	100	239
7	5875.00	70.22	105.20	-34.98	64.01	6.21	Peak	100	239
8	5925.00	61.08	68.20	-7.12	54.81	6.27	Peak	100	239
9	11550.00	43.52	54.00	-10.48	29.20	14.32	Average	100	20
10	11550.00	55.57	74.00	-18.43	41.25	14.32	Peak	100	20
11	17325.00	61.07	68.20	-7.13	43.39	17.68	Peak	100	50

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).

3.6 Frequency Stability

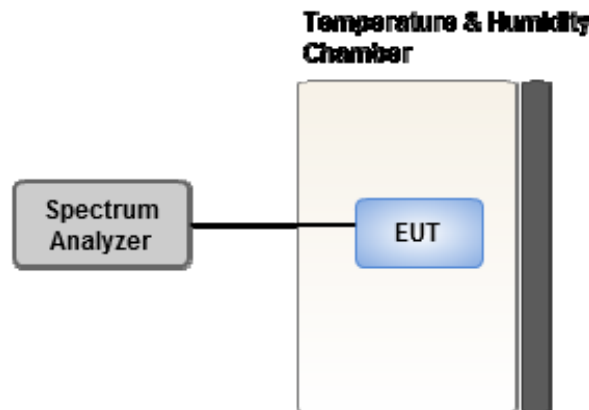
3.6.1 Limit of Frequency Stability

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 user's manual.

3.6.2 Test Procedures

1. The EUT is installed in an environment test chamber with external power source.
2. Set the chamber to operate at 20 centigrade and external power source to output at nominal voltage of EUT.
3. A sufficient stabilization period at each temperature is used prior to each frequency measurement.
4. When temperature is stabled, measure the frequency stability.
5. The test shall be performed under normal and extreme condition for temperature and voltage.

3.6.3 Test Setup



3.6.4 Test Result of Frequency Stability

Ambient Condition	22°C / 67%	Tested By	Brad Wu
--------------------------	------------	------------------	---------

Frequency: 5200 MHz	Frequency Drift (ppm)			
	0 minute	2 minutes	5 minutes	10 minutes
Temperature (°C)				
T20°C Vmax	-4.81	-4.14	-4.82	-4.38
T20°C Vmin	-3.24	-3.51	-2.68	-3.20
T70°C Vnom	-8.66	-8.52	-8.77	-8.40
T60°C Vnom	-7.84	-8.13	-8.37	-8.45
T50°C Vnom	-6.89	-7.61	-6.73	-7.45
T40°C Vnom	-6.05	-6.16	-6.00	-6.34
T30°C Vnom	-5.56	-5.54	-5.34	-5.53
T20°C Vnom	-4.43	-4.46	-5.30	-4.44
T10°C Vnom	-0.84	-1.31	-1.10	-1.40
T0°C Vnom	-0.64	0.14	0.14	-0.07
T-10°C Vnom	4.09	3.97	3.77	3.72
T-20°C Vnom	5.37	5.52	5.50	5.60
T-30°C Vnom	7.82	7.59	7.61	7.49
T-40°C Vnom	10.01	9.55	10.12	9.83
Vnom [V]: 24		Vmax [V]: 28		Vmin [V]: 10
Tnom [°C]: 20		Tmax [°C]: 70		Tmin [°C]: -40

Frequency: 5785 MHz	Frequency Drift (ppm)			
Temperature (°C)	0 minute	2 minutes	5 minutes	10 minutes
T20°C _{Vmax}	-4.21	-4.50	-3.86	-4.35
T20°C _{Vmin}	-3.54	-3.10	-3.81	-3.07
T70°C _{Vnom}	-8.17	-8.15	-8.08	-8.67
T60°C _{Vnom}	-7.99	-8.35	-8.41	-7.67
T50°C _{Vnom}	-6.84	-6.59	-6.25	-7.24
T40°C _{Vnom}	-5.42	-5.27	-5.70	-5.11
T30°C _{Vnom}	-5.86	-5.26	-5.15	-5.60
T20°C _{Vnom}	-4.81	-4.85	-4.40	-4.59
T10°C _{Vnom}	-2.01	-1.59	-1.96	-1.76
T0°C _{Vnom}	0.00	-0.24	-0.34	0.59
T-10°C _{Vnom}	2.83	2.66	2.98	3.01
T-20°C _{Vnom}	4.21	4.19	4.16	4.49
T-30°C _{Vnom}	5.99	6.48	6.26	5.70
T-40°C _{Vnom}	7.87	8.30	8.24	8.43
Vnom [V]: 24		Vmax [V]: 28		Vmin [V]: 10
Tnom [°C]: 20		Tmax [°C]: 70		Tmin [°C]: -40

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.

International Certification Corp (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. 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 District, Tao Yuan City
333, Taiwan, R.O.C.

Kwei Shan Site II

Tel: 886-3-271-8640

No. 14-1, Lane 19, Wen San 3rd
St., Kwei Shan District, Tao Yuan
City 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

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