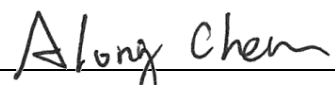


FCC C2PC Test Report

FCC ID : SQG-MSD45N
Equipment : 45 Series Pluggable module
Model No. : MSD45N
Brand Name : Laird
Applicant : Laird Connectivity
Address : W66N220 Commerce Court, Cedarburg,
Wisconsin 53012, USA
Standard : 47 CFR FCC Part 15.407
Received Date : May 03, 2019
Tested Date : May 03 ~ May 06, 2019
Nov. 04 ~ Nov. 13, 2019

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:

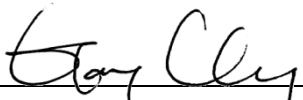

Gary Chang / Manager



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Release Record

Report No.	Version	Description	Issued Date
FR371704-09AN	Rev. 01	Initial issue	Feb. 11, 2020

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 19.428MHz 44.44 (Margin -5.56dB) - AV	Pass
15.407(b) 15.209	Radiated Emissions	[dBuV/m at 3m]: 5725.00MHz 68.00 (Margin -0.20dB) - PK	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: 16.49 5250~5350MHz: 16.78 5470~5725MHz: 17.83 5725~5850MHz: 18.45	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

This report is prepared for FCC class II permissive change.

This report is issued as a supplementary report to original ICC report no. FR371704-01AN & FR371704-01AI. The modification is concerned with following:

- ✧ PCB materials and Balun change.
- ✧ Adding 2nd source of Diplexer
- ✧ Applicant is changed.
- ✧ Adding channel 120, 124 and 128 by software setting.
- ✧ Adding 1 antenna.

In this report, all tests had been re-tested and presented in the following sections.

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 5250-5350 5470-5725 5725-5850	a	5180-5240 5260-5320 5500-5700 5745-5825	36-48 [4] 52-64 [4] 100-140 [11] 149-165 [5]	1	6-54 Mbps
5150-5250 5250-5350 5470-5725 5725-5850	n (HT20)	5180-5240 5260-5320 5500-5700 5745-5825	36-48 [4] 52-64 [4] 100-140 [11] 149-165 [5]	1	MCS 0-7
Note 1: RF output power specifies that Maximum Conducted Output Power. Note 2: 802.11a/n uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation. Note 3: 802.11n supports HT20 only.					

1.1.2 Antenna Details (New set of antenna was marked in boldface.)

Ant. No.	Brand / Model	Type	Connector	Operating Frequencies (MHz) / Antenna Gain (dBi)				
				2400~2483.5	5150~5250	5250~5350	5470~5725	5725~5850
1	MAG.LAYERS/EDA-1 513-25GR2-B2-CY	Dipole	SMA Jack Reverse	2	2	2	2	2
2	MAG.LAYERS/PCA-4 606-2G4C1-A13-CY	PCB Dipole	UFL	2.21	---	---	---	---
3	Laird/NanoBlade-IP04	PCB Dipole	UFL	2	3.9	3.9	4	4
4	Laird/MAF95310 Mini NanoBlade Flex	PCB Dipole	UFL	2.79	3.38	3.38	3.38	3.38
5	Laird/NanoBlue-IP04	PCB Dipole	UFL	2	---	---	---	---
6	Ethertronics/WLAN_1 000146	PIFA	UFL	2.5	3.5	3.5	3.5	3.5
7	SAA / MG7018-41-000-R	Dipole	UFL	1.87	0.85	0.6	0.94	0.92
8	SAA / MG7324-41-000-R	Dipole	UFL	1.32	1.04	1.6	2.75	2.24
9	EMF2449A1-33UFL	PCB Dipole	UFL	0.8	3.3	3.3	3.3	3.3

Note: The antennas with highest gain of each type were selected for final testing in this test report

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	3.3Vdc from power supply
--------------------------	--------------------------

1.1.4 Accessories

N/A

1.1.5 Channel List

802.11 a / HT20	
Channel	Frequency(MHz)
36	5180
40	5200
44	5220
48	5240
52	5260
56	5280
60	5300
64	5320
100	5500
104	5520
108	5540
112	5560
116	5580
120	5600
124	5620
128	5640
132	5660
136	5680
140	5700
149	5745
153	5765
157	5785
161	5805
165	5825

1.1.6 Test Tool and Duty Cycle

Test Tool	Terminal, Version: 2.32.1		
Duty Cycle and Duty Factor	Mode	Duty Cycle (%)	Duty Factor (dB)
	11a	99.26%	0.03
	HT20	99.62%	0.02

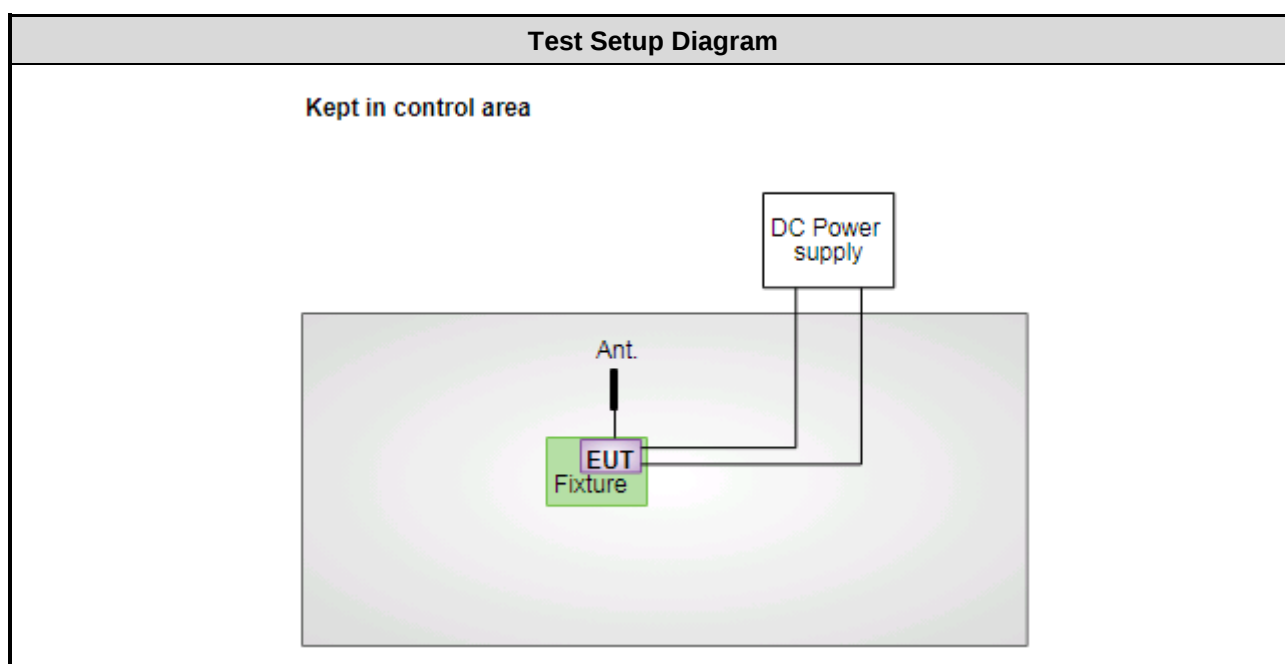
1.1.7 Power Index of Test Tool

Modulation Mode	Test Frequency (MHz)	Power Index
11a	5180	14.5
11a	5200	14
11a	5240	15
11a	5260	15.5
11a	5300	15.5
11a	5320	14.5
11a	5500	14.5
11a	5580	16.5
11a	5700	14.5
11a	5745	15
11a	5785	18
11a	5825	18
HT20	5180	14.5
HT20	5200	14
HT20	5240	15.5
HT20	5260	15.5
HT20	5300	15.5
HT20	5320	14.5
HT20	5500	14.5
HT20	5580	16.5
HT20	5700	14.5
HT20	5745	15
HT20	5785	18
HT20	5825	17

1.2 Local Support Equipment List

Support Equipment List					
No.	Equipment	Brand	Model	FCC ID	Remarks
1	DC Power Supply	GWINSTEK	GPC-3060D	---	---
2	Notebook	Lenovo	X61	---	---

1.3 Test Setup Chart



Note: The notebook is disconnected from EUT and removed from test table when EUT is set to transmit continuously.

1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Test Date	Nov. 13, 2019				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Receiver	R&S	ESR3	101657	Jan. 08, 2019	Jan. 07, 2020
LISN	R&S	ENV216	101579	Mar. 08, 2019	Mar. 07, 2020
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)				
Test Date	May 03 ~ May 06, 2019				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101499	Jan. 07, 2019	Jan. 06, 2020
Receiver	R&S	ESR3	101658	Dec. 11, 2018	Dec. 10, 2019
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-685	Apr. 17, 2019	Apr. 16, 2020
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1206	Jan. 07, 2019	Jan. 06, 2020
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 15, 2018	Nov. 14, 2019
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 09, 2018	Nov. 08, 2019
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 08, 2018	Oct. 07, 2019
Preamplifier	EMC	EMC02325	980187	Aug. 24, 2018	Aug. 23, 2019
Preamplifier	Agilent	83017A	MY53270014	Aug. 09, 2018	Aug. 08, 2019
Preamplifier	EMC	EMC184045B	980192	Aug. 09, 2018	Aug. 08, 2019
RF cable-3M	HUBER+SUHNER	SUCOFLEX104	MY22620/4	Oct. 01, 2018	Sep. 30, 2019
RF cable-8M	EMC	EMC104-SM-SM-8000	181107	Oct. 01, 2018	Sep. 30, 2019
RF cable-1M	HUBER+SUHNER	SUCOFLEX104	MY22624/4	Oct. 01, 2018	Sep. 30, 2019
LF cable-0.8M	EMC	EMC8D-NM-NM-8000	EMC8D-NM-NM-800-001	Oct. 01, 2018	Sep. 30, 2019
LF cable-3M	EMC	EMC8D-NM-NM-3000	131103	Oct. 01, 2018	Sep. 30, 2019
LF cable-13M	EMC	EMC8D-NM-NM-13000	131104	Oct. 01, 2018	Sep. 30, 2019
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)				
Test Date	Nov. 04, 2019				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101063	Apr. 17, 2019	Apr. 16, 2020
Power Meter	Anritsu	ML2495A	1241002	Oct. 23, 2019	Oct. 22, 2020
Power Sensor	Anritsu	MA2411B	1207366	Oct. 23, 2019	Oct. 22, 2020
AC POWER SOURCE	APC	AFC-500W	F312060012	Nov. 29, 2018	Nov. 28, 2019
Measurement Software	Sporton	Sporton_1	1.3.30	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Testing Applied Standards

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

47 CFR FCC Part 15.407

ANSI C63.10-2013

FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01

FCC KDB 412172 D01 Determining ERP and EIRP v01r01

1.6 Deviation from Test Standard and Measurement Procedure

None

1.7 Measurement Uncertainty

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

Measurement Uncertainty	
Parameters	Uncertainty
Bandwidth	± 34.130 Hz
Conducted power	± 0.808 dB
Frequency error	$\pm 1 \times 10^{-9}$
Power density	± 0.583 dB
Conducted emission	± 2.715 dB
AC conducted emission	± 2.92 dB
Radiated emission ≤ 1 GHz	± 3.96 dB
Radiated emission > 1 GHz	± 4.51 dB
Time	$\pm 0.1\%$
Temperature	± 0.4 °C

2 Test Configuration

2.1 Testing Condition

Test Item	Test Site	Ambient Condition	Tested By
AC Conduction	CO01-WS	22°C / 67%	Akun Chung
Radiated Emissions	03CH03-WS	23-24°C / 62-67%	Roger Lu Akun Chung
RF Conducted	TH01-WS	22°C / 63%	Brad Wu

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

2.2 The Worst Test Modes and Channel Details

Frequency band 5150~5350 MHz / 5470~5725 MHz				
Test item	Modulation Mode	Test Frequency (MHz)	Data Rate	Test Configuration
Conducted Emissions	11a	5580	6 Mbps	1
Radiated Emissions ≤1GHz	11a	5580	6 Mbps	1, 2, 3
Radiated Emissions ≤1GHz	11a	5240	6 Mbps	4
RF Output Power	11a	5180 / 5200 / 5240 / 5260 / 5300 5320 / 5500 / 5580 / 5700	6 Mbps	1
	HT20	5180 / 5200 / 5240 / 5260 / 5300 5320 / 5500 / 5580 / 5700	MCS 0	
Radiated Emissions >1GHz	11a	5180 / 5200 / 5240 / 5260 / 5300 5320	6 Mbps	1, 2, 4
		5500 / 5580 / 5700		1, 2, 3
	HT20	5180 / 5200 / 5240 / 5260 / 5300 5320	MCS 0	1, 2, 4
		5500 / 5580 / 5700		1, 2, 3
Emission Bandwidth Peak Power Spectral Density	11a	5180 / 5200 / 5240 / 5260 / 5300 5320 / 5500 / 5580 / 5700	6 Mbps	1
	HT20	5180 / 5200 / 5240 / 5260 / 5300 5320 / 5500 / 5580 / 5700	MCS 0	
Frequency Stability	Un-modulation	5320	---	1

NOTE:

1. Test configurations are listed as below:
 - 1) Configuration 1 : PCB Dipole antenna (Antenna No.3) , Y-plane
 - 2) Configuration 2 : PIFA antenna (Antenna No.6) , Y-plane
 - 3) Configuration 3 : Dipole antenna (Antenna No.8) , Y-plane / 5.47 ~ 5.725 GHz
 - 4) Configuration 4: Dipole antenna (Antenna No.1), Y-plane./ 5.15 ~ 5.35 GHz

Frequency band 5725-5850 MHz				
Test item	Modulation Mode	Test Frequency (MHz)	Data Rate	Test Configuration
Conducted Emissions	11a	5825	6 Mbps	1
Radiated Emissions ≤ 1 GHz	11a	5825	6 Mbps	1, 2, 3
RF Output Power	11a	5745 / 5785 / 5825	6 Mbps	1
	HT20	5745 / 5785 / 5825	MCS 0	
Radiated Emissions > 1 GHz	11a	5745 / 5785 / 5825	6 Mbps	1, 2, 3
	HT20	5745 / 5785 / 5825	MCS 0	
Emission Bandwidth	11a	5745 / 5785 / 5825	6 Mbps	1
6dB bandwidth	HT20	5745 / 5785 / 5825	MCS 0	
Peak Power Spectral Density				
Frequency Stability	Un-modulation	5785	---	1
NOTE: 1. 3 types antenna are used for this device, highest gain antenna of each type is selected to perform radiated emission test as below test configuration 1) Configuration 1 : PCB Dipole antenna (Antenna No.3) , Y-plane 2) Configuration 2 : PIFA antenna (Antenna No.6), Y-plane 3) Configuration 3 : Dipole antenna (Antenna No.8), Y-plane				

3 Transmitter Test Results

3.1 Conducted Emissions

3.1.1 Limit of Conducted Emissions

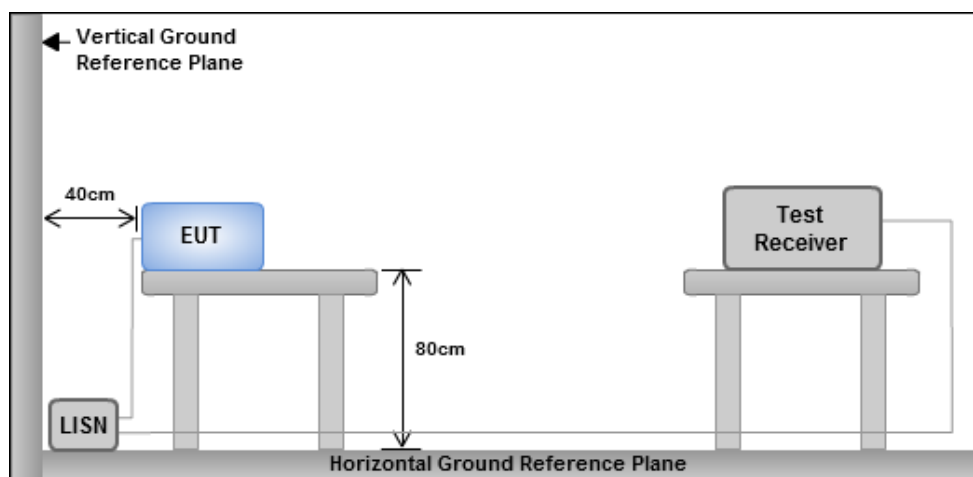
Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

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

3.1.2 Test Procedures

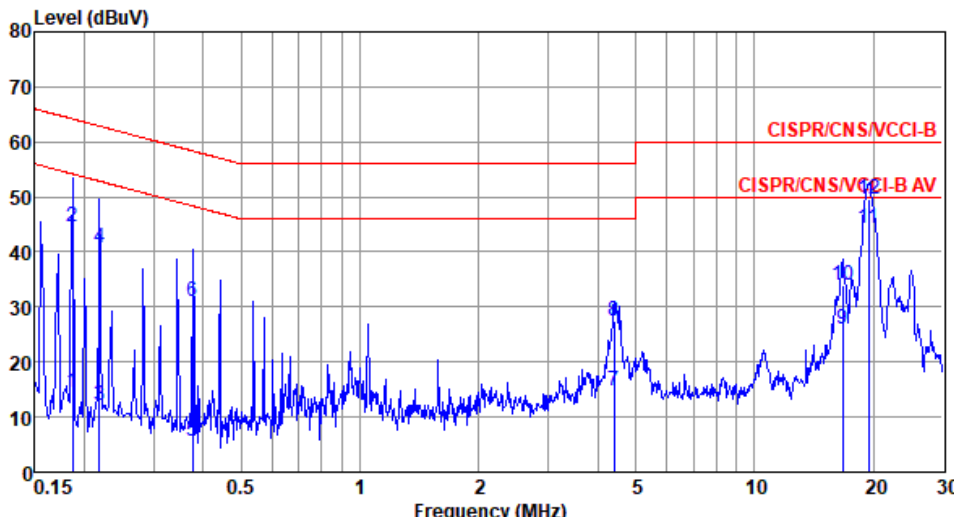
1. The device is placed on a test table, raised 80 cm above the reference ground plane. The vertical conducting plane is located 40 cm to the rear of the device.
2. The device is connected to line impedance stabilization network (LISN) and other accessories are connected to other LISN. Measured levels 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

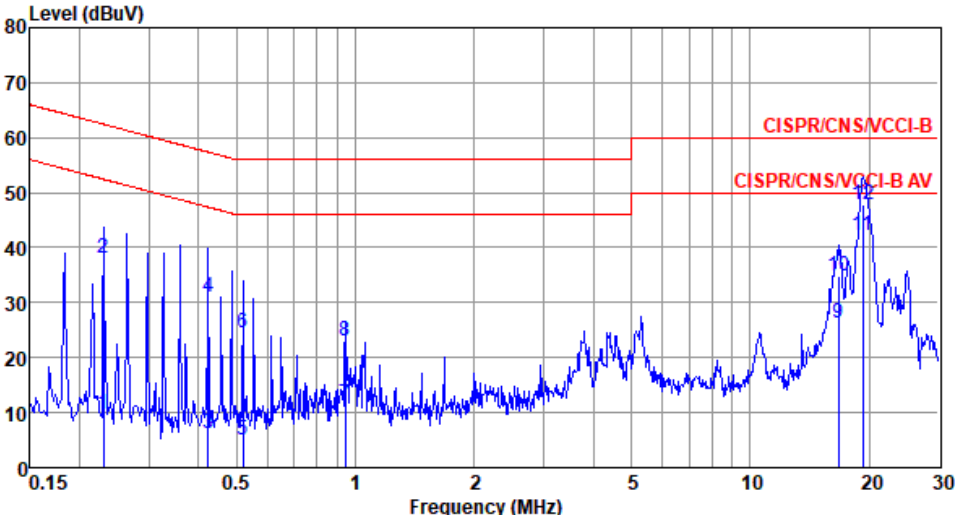
3.1.3 Test Setup



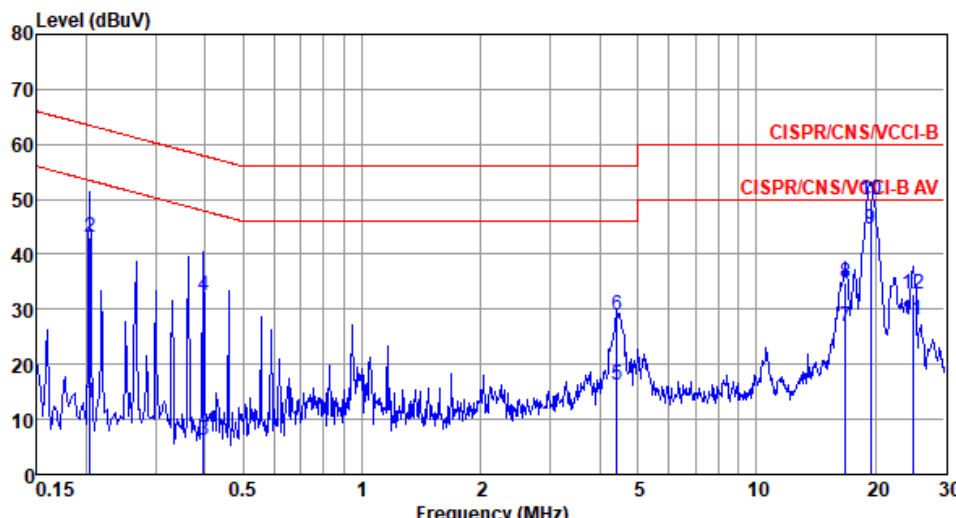
- Note: 1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.1.4 Test Result of Conducted Emissions

Modulation	11a	Test Freq. (MHz)	5580																																																																																																																														
Power Phase	Line																																																																																																																																
Level (dBUV)  Frequency (MHz) <table><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></th></tr><tr><th></th><th>MHz</th><th>dBuA</th><th>dBuA</th><th>dB</th><th>dBuA</th><th>factor</th><th>loss</th><th>Remark</th></tr></thead><tbody><tr><td>1</td><td>0.186</td><td>14.33</td><td>54.20</td><td>-39.87</td><td>4.73</td><td>9.54</td><td>0.06</td><td>Average</td></tr><tr><td>2</td><td>0.186</td><td>44.57</td><td>64.20</td><td>-19.63</td><td>34.97</td><td>9.54</td><td>0.06</td><td>QP</td></tr><tr><td>3</td><td>0.219</td><td>12.14</td><td>52.88</td><td>-40.74</td><td>2.54</td><td>9.54</td><td>0.06</td><td>Average</td></tr><tr><td>4</td><td>0.219</td><td>40.78</td><td>62.88</td><td>-22.10</td><td>31.18</td><td>9.54</td><td>0.06</td><td>QP</td></tr><tr><td>5</td><td>0.377</td><td>5.66</td><td>48.34</td><td>-42.68</td><td>-3.99</td><td>9.57</td><td>0.08</td><td>Average</td></tr><tr><td>6</td><td>0.377</td><td>31.00</td><td>58.34</td><td>-27.34</td><td>21.35</td><td>9.57</td><td>0.08</td><td>QP</td></tr><tr><td>7</td><td>4.407</td><td>14.71</td><td>46.00</td><td>-31.29</td><td>4.80</td><td>9.61</td><td>0.30</td><td>Average</td></tr><tr><td>8</td><td>4.407</td><td>27.33</td><td>56.00</td><td>-28.67</td><td>17.42</td><td>9.61</td><td>0.30</td><td>QP</td></tr><tr><td>9</td><td>16.750</td><td>25.94</td><td>50.00</td><td>-24.06</td><td>15.66</td><td>9.66</td><td>0.62</td><td>Average</td></tr><tr><td>10</td><td>16.750</td><td>33.96</td><td>60.00</td><td>-26.04</td><td>23.68</td><td>9.66</td><td>0.62</td><td>QP</td></tr><tr><td>11*</td><td>19.428</td><td>44.42</td><td>50.00</td><td>-5.58</td><td>34.11</td><td>9.66</td><td>0.65</td><td>Average</td></tr><tr><td>12</td><td>19.428</td><td>49.49</td><td>60.00</td><td>-10.51</td><td>39.18</td><td>9.66</td><td>0.65</td><td>QP</td></tr></tbody></table>					Freq	Level	Limit	Over	Read	LISN	cable			MHz	dBuA	dBuA	dB	dBuA	factor	loss	Remark	1	0.186	14.33	54.20	-39.87	4.73	9.54	0.06	Average	2	0.186	44.57	64.20	-19.63	34.97	9.54	0.06	QP	3	0.219	12.14	52.88	-40.74	2.54	9.54	0.06	Average	4	0.219	40.78	62.88	-22.10	31.18	9.54	0.06	QP	5	0.377	5.66	48.34	-42.68	-3.99	9.57	0.08	Average	6	0.377	31.00	58.34	-27.34	21.35	9.57	0.08	QP	7	4.407	14.71	46.00	-31.29	4.80	9.61	0.30	Average	8	4.407	27.33	56.00	-28.67	17.42	9.61	0.30	QP	9	16.750	25.94	50.00	-24.06	15.66	9.66	0.62	Average	10	16.750	33.96	60.00	-26.04	23.68	9.66	0.62	QP	11*	19.428	44.42	50.00	-5.58	34.11	9.66	0.65	Average	12	19.428	49.49	60.00	-10.51	39.18	9.66	0.65	QP
	Freq	Level	Limit	Over	Read	LISN	cable																																																																																																																										
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12	19.428	49.49	60.00	-10.51	39.18	9.66	0.65	QP																																																																																																																									
Note 1: Level (dBUV) = Read Level (dBUV) + LISN Factor (dB) + Cable Loss (dB). 2: Over Limit (dB) = Level (dBUV) – Limit Line (dBUV).																																																																																																																																	

Modulation	11a	Test Freq. (MHz)	5580																																																																																																																														
Power Phase	Neutral																																																																																																																																
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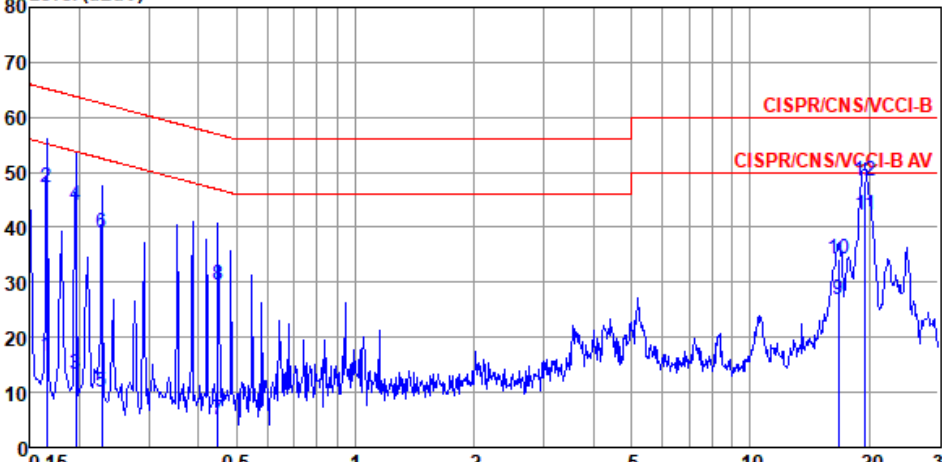
Modulation	11a	Test Freq. (MHz)	5825
Power Phase	Line		



Freq	Level	Limit	Over	Read	LISN	cable		
MHz	dBuA	Line	Limit	Level	factor	loss	Remark	
		dBuA	dB	dBuA	dB	dB		
1	0.204	12.94	53.45	-40.51	3.34	9.54	0.06	Average
2	0.204	43.19	63.45	-20.26	33.59	9.54	0.06	QP
3	0.396	6.27	47.95	-41.68	-3.38	9.57	0.08	Average
4	0.396	32.55	57.95	-25.40	22.90	9.57	0.08	QP
5	4.430	16.20	46.00	-29.80	6.29	9.61	0.30	Average
6	4.430	28.79	56.00	-27.21	18.88	9.61	0.30	QP
7	16.839	26.76	50.00	-23.24	16.48	9.66	0.62	Average
8	16.839	34.95	60.00	-25.05	24.67	9.66	0.62	QP
9*	19.428	44.44	50.00	-5.56	34.13	9.66	0.65	Average
10	19.428	49.90	60.00	-10.10	39.59	9.66	0.65	QP
11	24.922	27.96	50.00	-22.04	17.61	9.64	0.71	Average
12	24.922	32.80	60.00	-27.20	22.45	9.64	0.71	QP

Note 1: Level (dBUV) = Read Level (dBUV) + LISN Factor (dB) + Cable Loss (dB).

2: Over Limit (dB) = Level (dBUV) – Limit Line (dBUV).

Modulation	11a	Test Freq. (MHz)	5825																																																																																																																					
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Level (dBUV)  Frequency (MHz) <table><thead><tr><th></th><th>Freq MHz</th><th>Level dBUA</th><th>Limit Line dBUA</th><th>Over Limit dB</th><th>Read Level dBUA</th><th>LISN factor dB</th><th>cable loss dB</th><th>Remark</th></tr></thead><tbody><tr><td>1</td><td>0.165</td><td>16.42</td><td>55.21</td><td>-38.79</td><td>6.80</td><td>9.57</td><td>0.05</td><td>Average</td></tr><tr><td>2</td><td>0.165</td><td>47.26</td><td>65.21</td><td>-17.95</td><td>37.64</td><td>9.57</td><td>0.05</td><td>QP</td></tr><tr><td>3</td><td>0.195</td><td>13.38</td><td>53.80</td><td>-40.42</td><td>3.74</td><td>9.58</td><td>0.06</td><td>Average</td></tr><tr><td>4</td><td>0.195</td><td>43.90</td><td>63.80</td><td>-19.90</td><td>34.26</td><td>9.58</td><td>0.06</td><td>QP</td></tr><tr><td>5</td><td>0.228</td><td>10.13</td><td>52.52</td><td>-42.39</td><td>0.48</td><td>9.59</td><td>0.06</td><td>Average</td></tr><tr><td>6</td><td>0.228</td><td>38.83</td><td>62.52</td><td>-23.69</td><td>29.18</td><td>9.59</td><td>0.06</td><td>QP</td></tr><tr><td>7</td><td>0.449</td><td>5.16</td><td>46.89</td><td>-41.73</td><td>-4.53</td><td>9.61</td><td>0.08</td><td>Average</td></tr><tr><td>8</td><td>0.449</td><td>29.45</td><td>56.89</td><td>-27.44</td><td>19.76</td><td>9.61</td><td>0.08</td><td>QP</td></tr><tr><td>9</td><td>16.750</td><td>26.78</td><td>50.00</td><td>-23.22</td><td>16.38</td><td>9.78</td><td>0.62</td><td>Average</td></tr><tr><td>10</td><td>16.750</td><td>34.37</td><td>60.00</td><td>-25.63</td><td>23.97</td><td>9.78</td><td>0.62</td><td>QP</td></tr><tr><td>11*</td><td>19.532</td><td>42.17</td><td>50.00</td><td>-7.83</td><td>31.71</td><td>9.81</td><td>0.65</td><td>Average</td></tr><tr><td>12</td><td>19.532</td><td>48.44</td><td>60.00</td><td>-11.56</td><td>37.98</td><td>9.81</td><td>0.65</td><td>QP</td></tr></tbody></table>					Freq MHz	Level dBUA	Limit Line dBUA	Over Limit dB	Read Level dBUA	LISN factor dB	cable loss dB	Remark	1	0.165	16.42	55.21	-38.79	6.80	9.57	0.05	Average	2	0.165	47.26	65.21	-17.95	37.64	9.57	0.05	QP	3	0.195	13.38	53.80	-40.42	3.74	9.58	0.06	Average	4	0.195	43.90	63.80	-19.90	34.26	9.58	0.06	QP	5	0.228	10.13	52.52	-42.39	0.48	9.59	0.06	Average	6	0.228	38.83	62.52	-23.69	29.18	9.59	0.06	QP	7	0.449	5.16	46.89	-41.73	-4.53	9.61	0.08	Average	8	0.449	29.45	56.89	-27.44	19.76	9.61	0.08	QP	9	16.750	26.78	50.00	-23.22	16.38	9.78	0.62	Average	10	16.750	34.37	60.00	-25.63	23.97	9.78	0.62	QP	11*	19.532	42.17	50.00	-7.83	31.71	9.81	0.65	Average	12	19.532	48.44	60.00	-11.56	37.98	9.81	0.65	QP
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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.

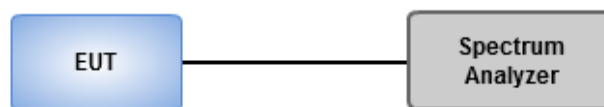
Occupied Bandwidth

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

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	24.565M	16.498M	16M5D1D	21.957M	16.498M
802.11n HT20_Nss1,(MCS0)_1TX	23.841M	17.728M	17M7D1D	22.609M	17.656M
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	23.333M	16.57M	16M6D1D	21.014M	16.498M
802.11n HT20_Nss1,(MCS0)_1TX	23.478M	17.656M	17M7D1D	22.464M	17.656M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	25.58M	16.498M	16M5D1D	21.667M	16.425M
802.11n HT20_Nss1,(MCS0)_1TX	25.652M	17.656M	17M7D1D	22.609M	17.656M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	16.087M	16.643M	16M6D1D	15.58M	16.498M
802.11n HT20_Nss1,(MCS0)_1TX	16.812M	17.8M	17M8D1D	16.522M	17.656M

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	21.957M	16.498M
5200MHz	Pass	Inf	21.957M	16.498M
5240MHz	Pass	Inf	24.565M	16.498M
5260MHz	Pass	Inf	22.029M	16.57M
5300MHz	Pass	Inf	23.333M	16.498M
5320MHz	Pass	Inf	21.014M	16.498M
5500MHz	Pass	Inf	21.739M	16.425M
5580MHz	Pass	Inf	25.58M	16.498M
5700MHz	Pass	Inf	21.667M	16.498M
5745MHz	Pass	500k	16.087M	16.498M
5785MHz	Pass	500k	15.58M	16.643M
5825MHz	Pass	500k	15.797M	16.643M
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-
5180MHz	Pass	Inf	22.609M	17.656M
5200MHz	Pass	Inf	22.826M	17.656M
5240MHz	Pass	Inf	23.841M	17.728M
5260MHz	Pass	Inf	23.478M	17.656M
5300MHz	Pass	Inf	22.754M	17.656M
5320MHz	Pass	Inf	22.464M	17.656M
5500MHz	Pass	Inf	22.681M	17.656M
5580MHz	Pass	Inf	25.652M	17.656M
5700MHz	Pass	Inf	22.609M	17.656M
5745MHz	Pass	500k	16.812M	17.656M
5785MHz	Pass	500k	16.812M	17.8M
5825MHz	Pass	500k	16.522M	17.728M

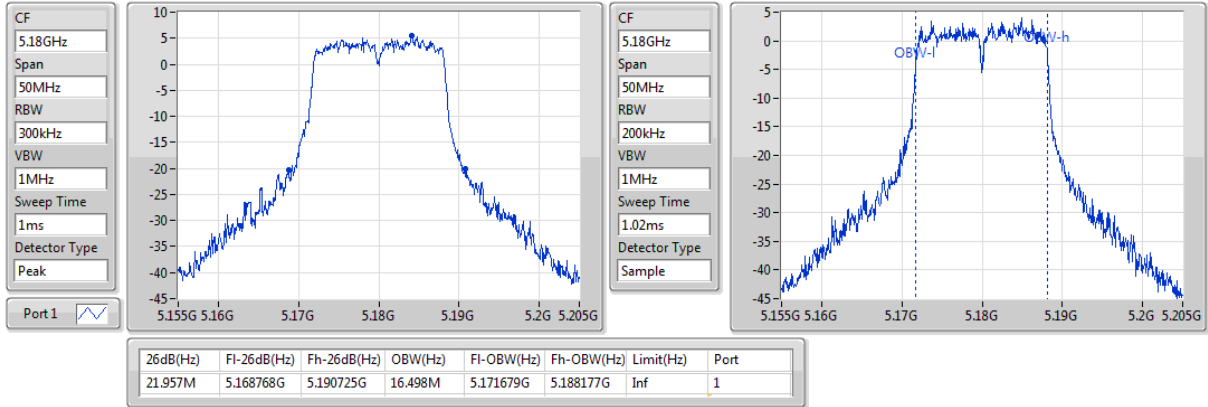
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band

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

802.11a_Nss1,(6Mbps)_1TX

EBW

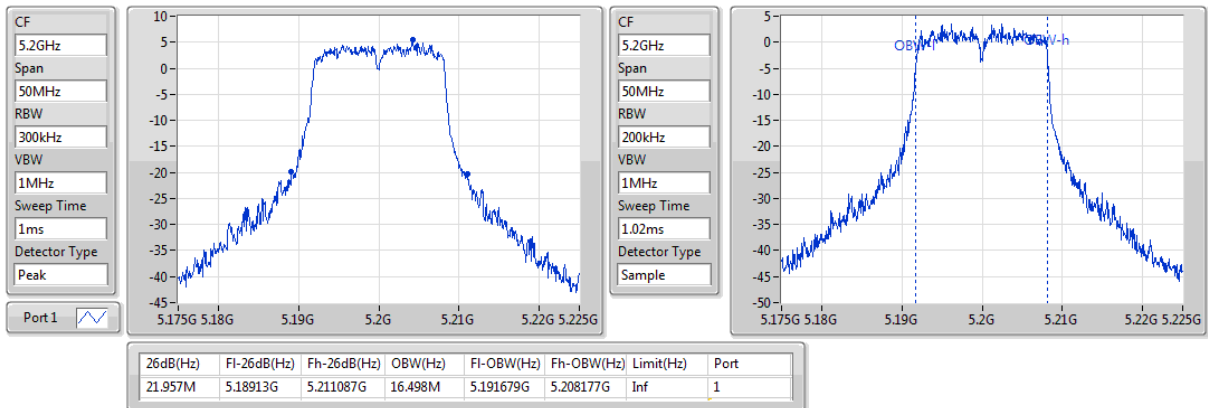
5180MHz



802.11a_Nss1,(6Mbps)_1TX

EBW

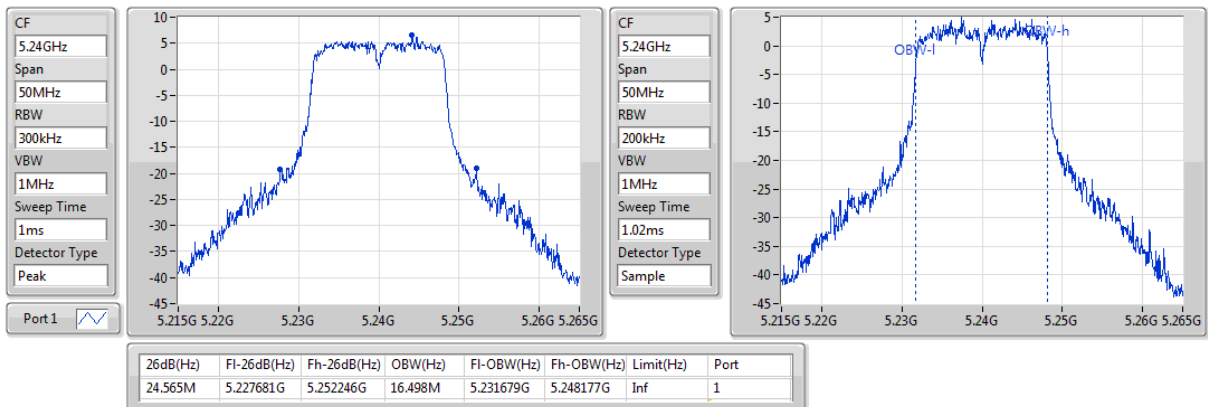
5200MHz



802.11a_Nss1,(6Mbps)_1TX

EBW

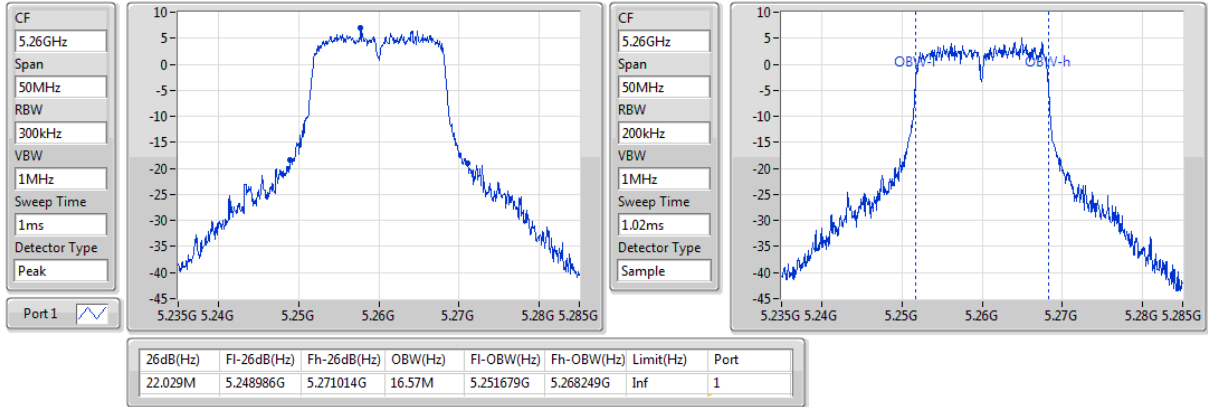
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802.11a_Nss1,(6Mbps)_1TX

EBW

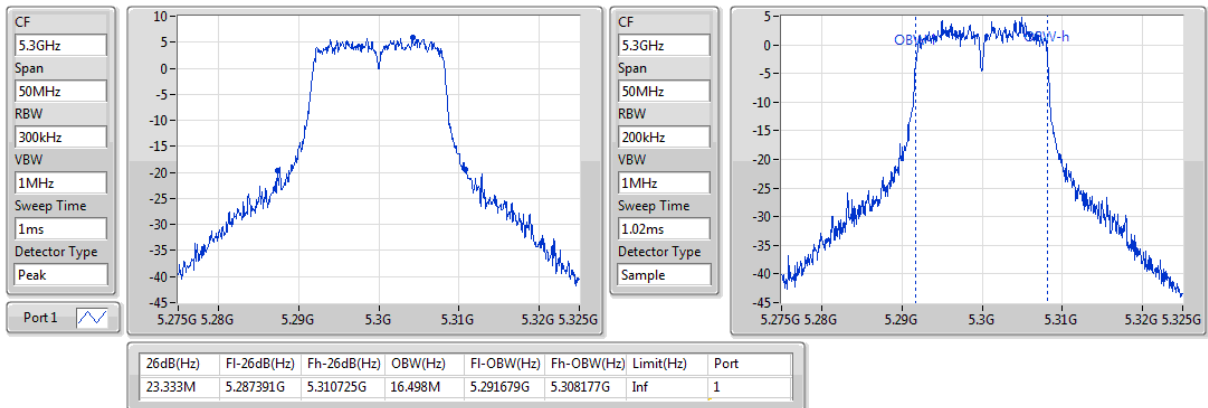
5260MHz



802.11a_Nss1,(6Mbps)_1TX

EBW

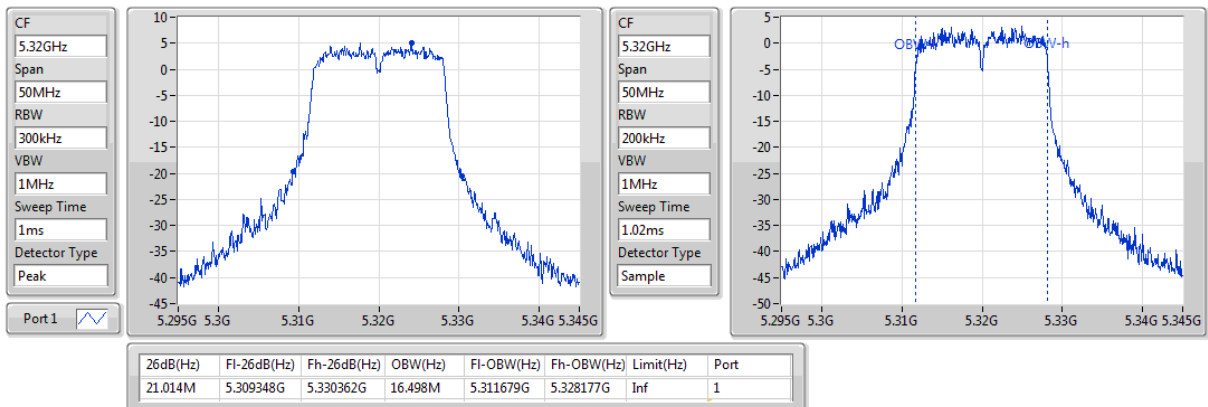
5300MHz



802.11a_Nss1,(6Mbps)_1TX

EBW

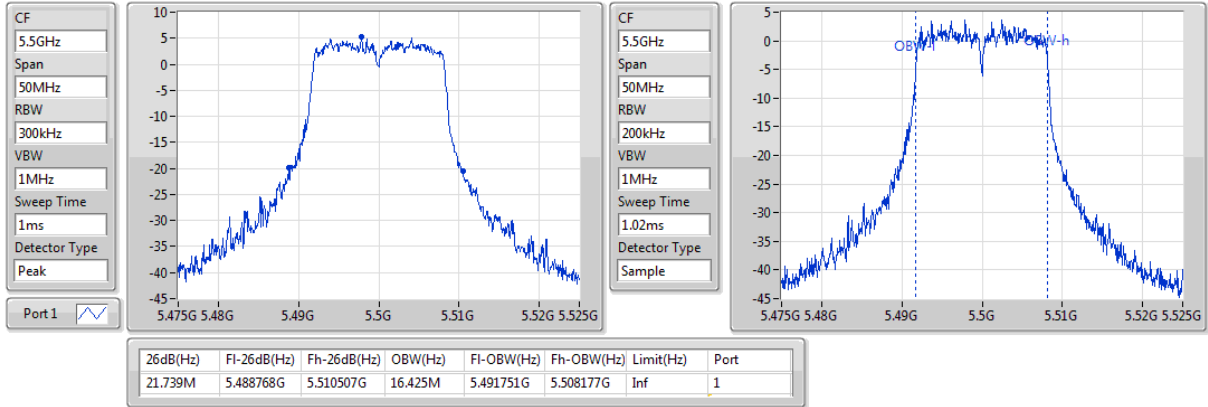
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802.11a_Nss1,(6Mbps)_1TX

EBW

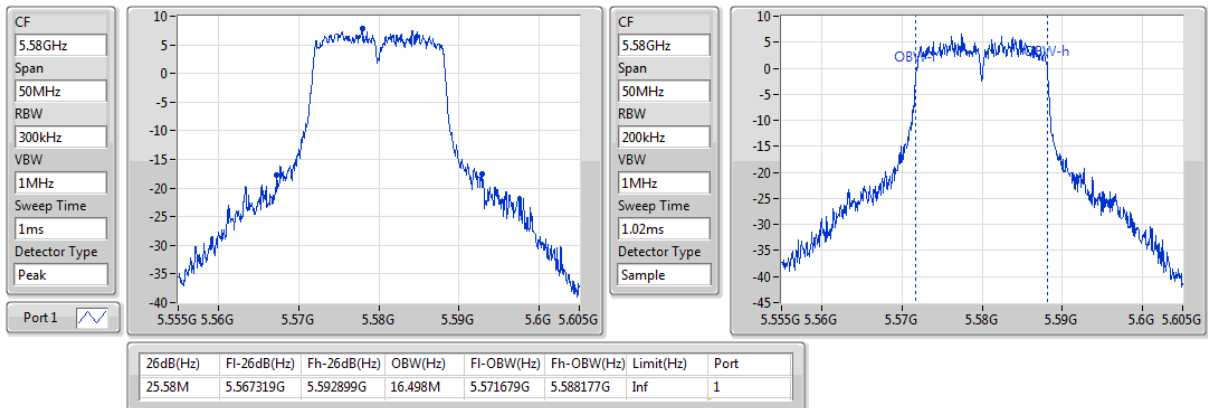
5500MHz



802.11a_Nss1,(6Mbps)_1TX

EBW

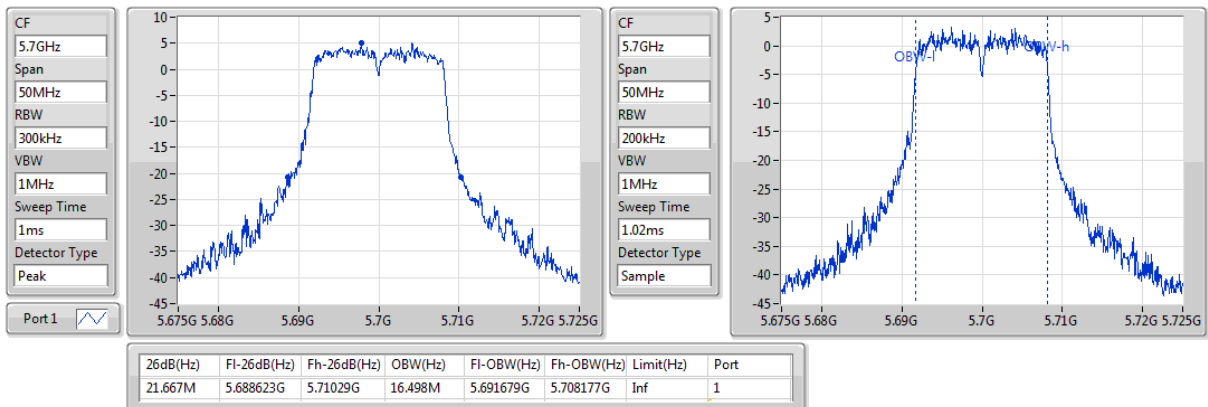
5580MHz



802.11a_Nss1,(6Mbps)_1TX

EBW

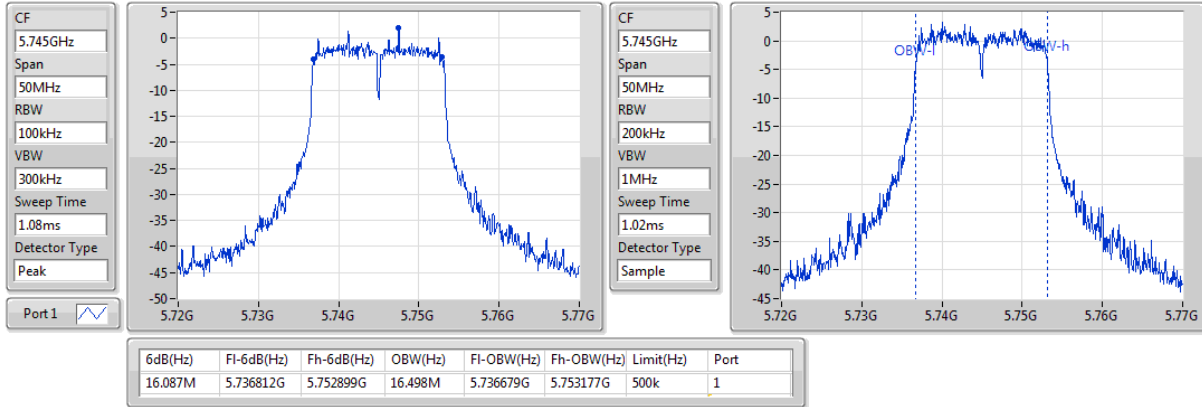
5700MHz



802.11a_Nss1,(6Mbps)_1TX

EBW

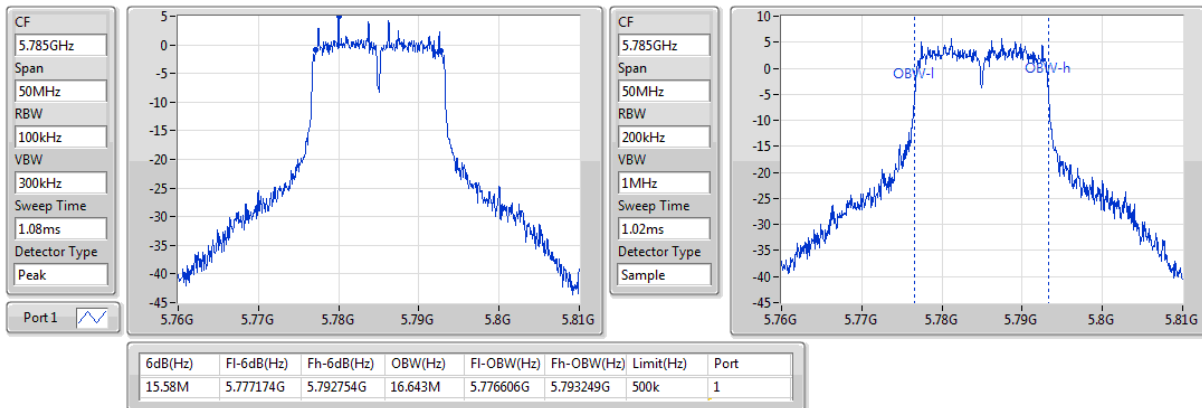
5745MHz



802.11a_Nss1,(6Mbps)_1TX

EBW

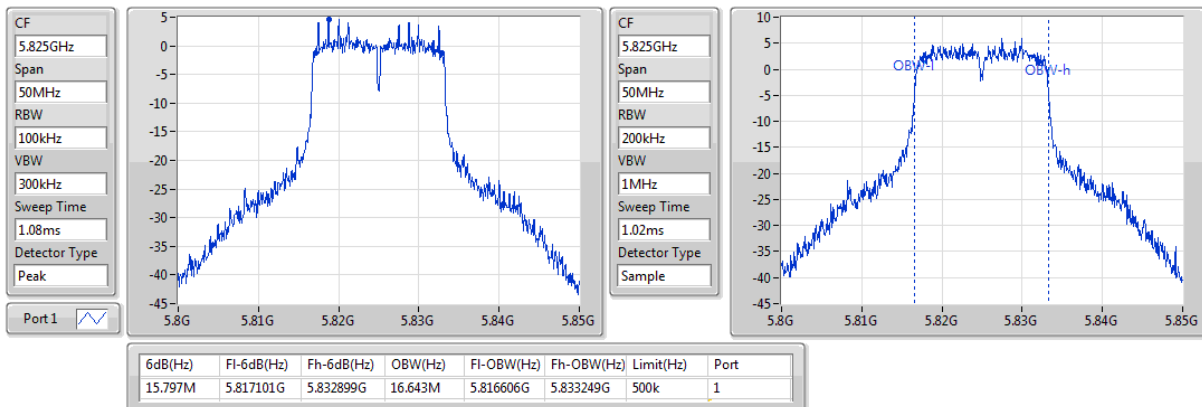
5785MHz



802.11a_Nss1,(6Mbps)_1TX

EBW

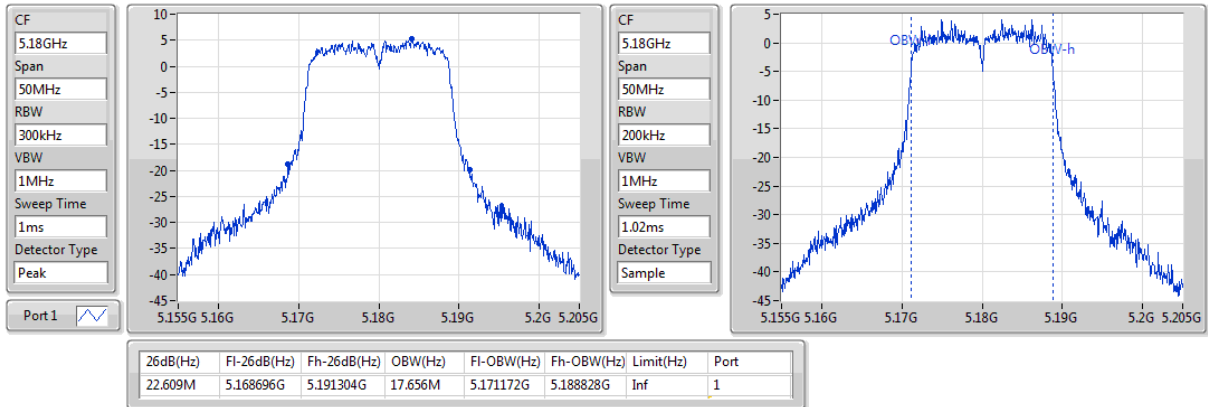
5825MHz



802.11n HT20_Nss1,(MCS0)_1TX

EBW

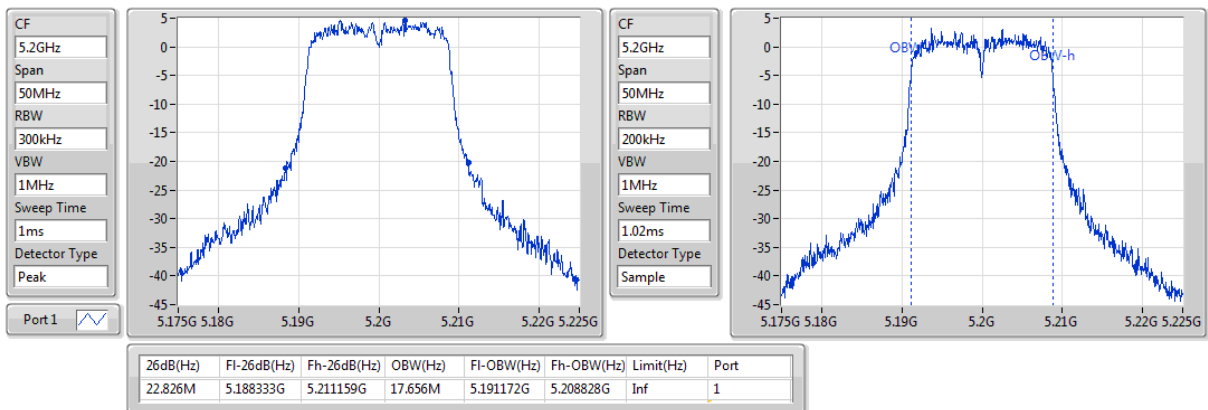
5180MHz



802.11n HT20_Nss1,(MCS0)_1TX

EBW

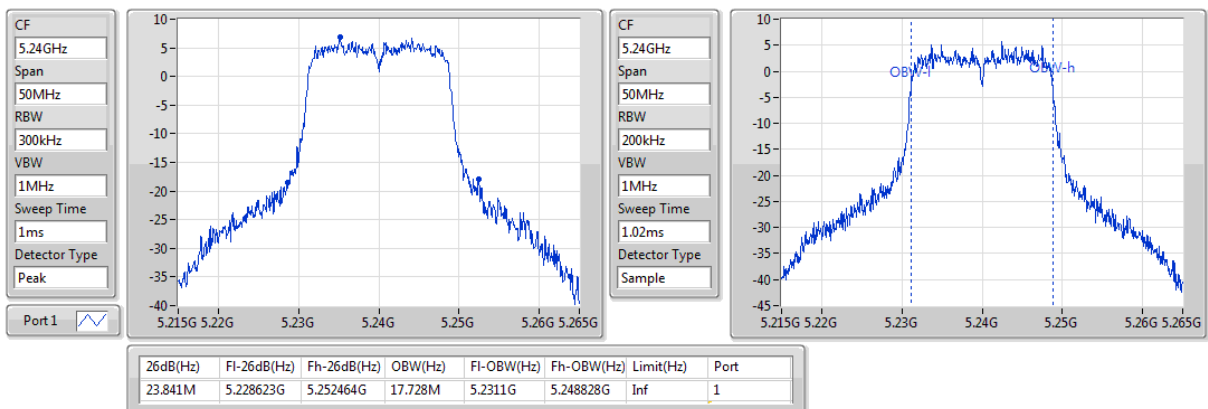
5200MHz



802.11n HT20_Nss1,(MCS0)_1TX

EBW

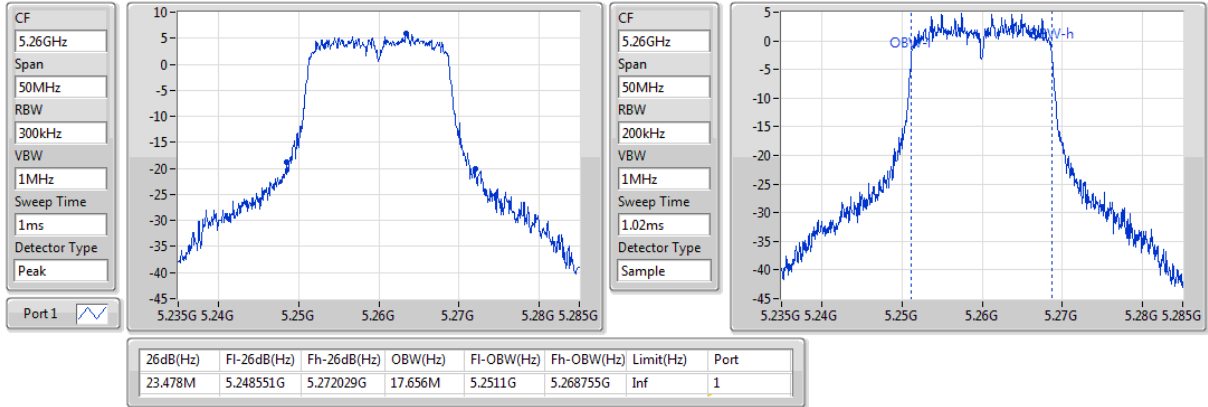
5240MHz



802.11n HT20_Nss1,(MCS0)_1TX

EBW

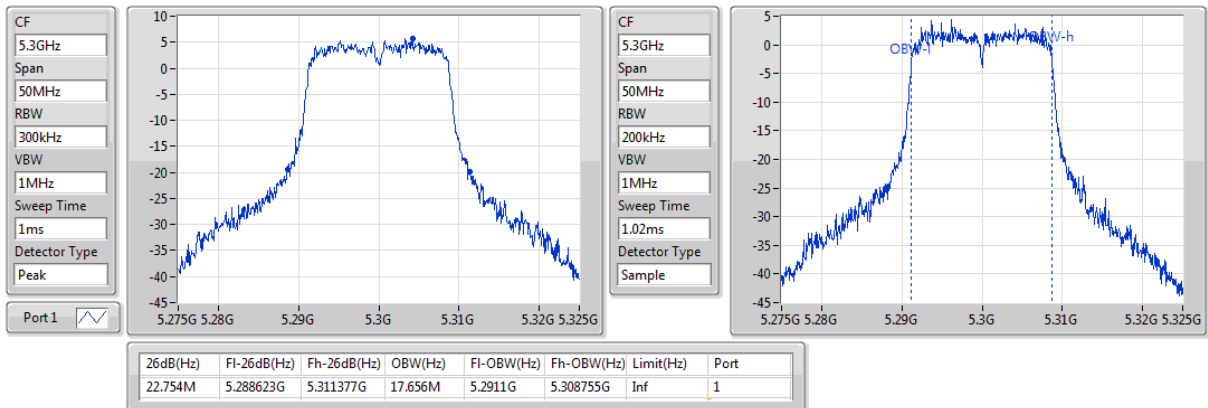
5260MHz



802.11n HT20_Nss1,(MCS0)_1TX

EBW

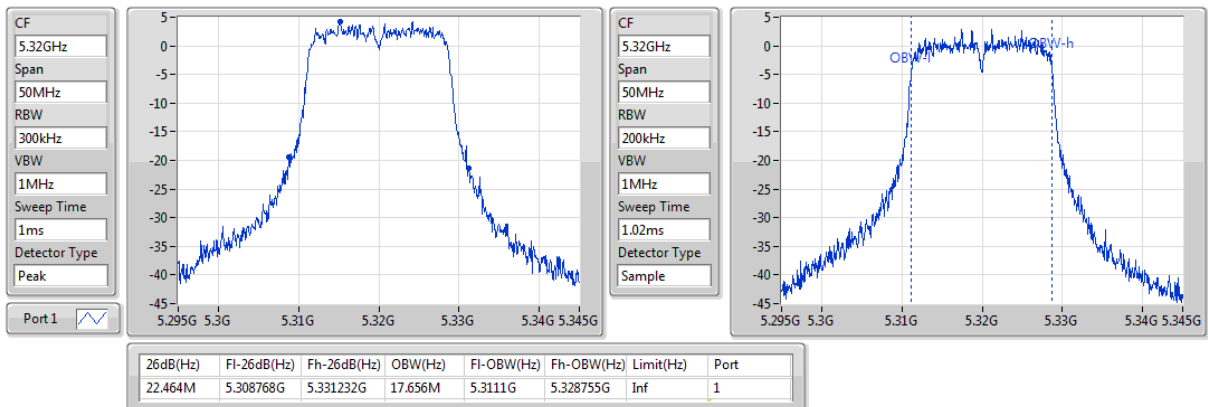
5300MHz



802.11n HT20_Nss1,(MCS0)_1TX

EBW

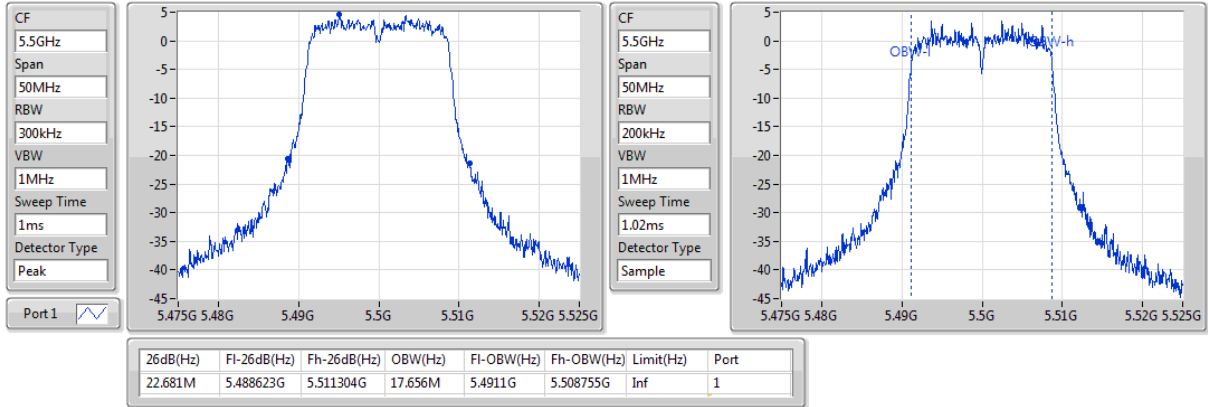
5320MHz



802.11n HT20_Nss1,(MCS0)_1TX

EBW

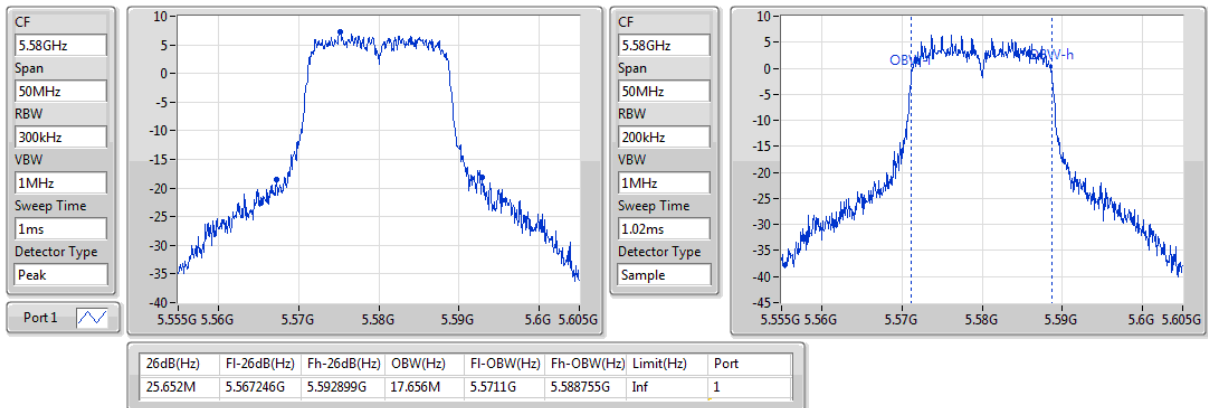
5500MHz



802.11n HT20_Nss1,(MCS0)_1TX

EBW

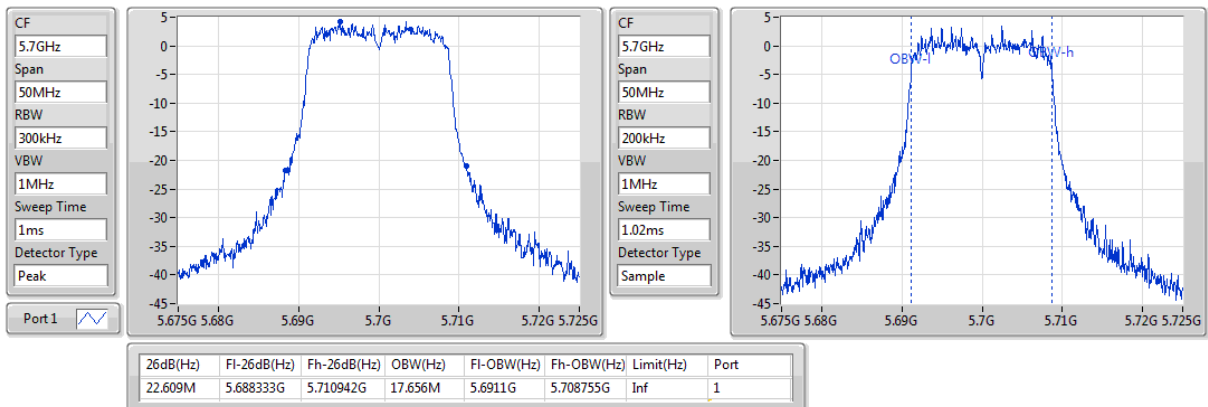
5580MHz



802.11n HT20_Nss1,(MCS0)_1TX

EBW

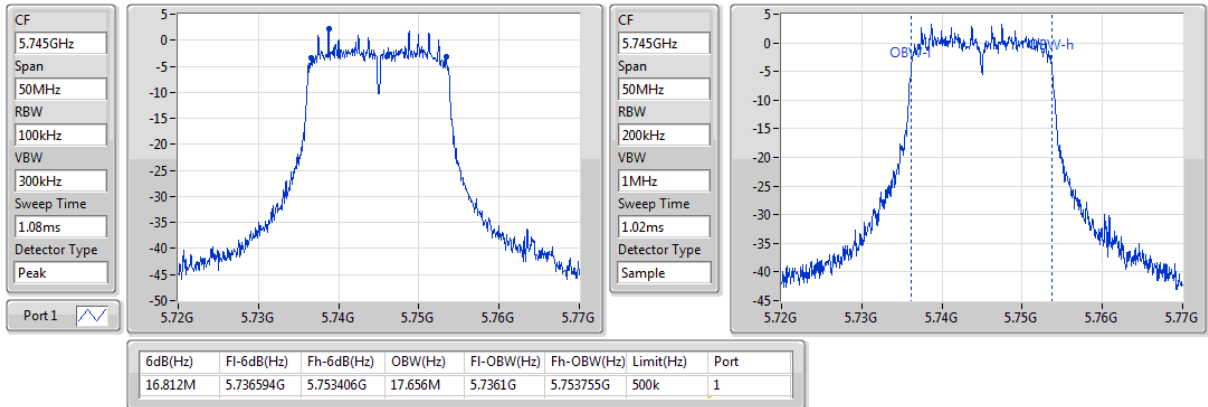
5700MHz



802.11n HT20_Nss1,(MCS0)_1TX

EBW

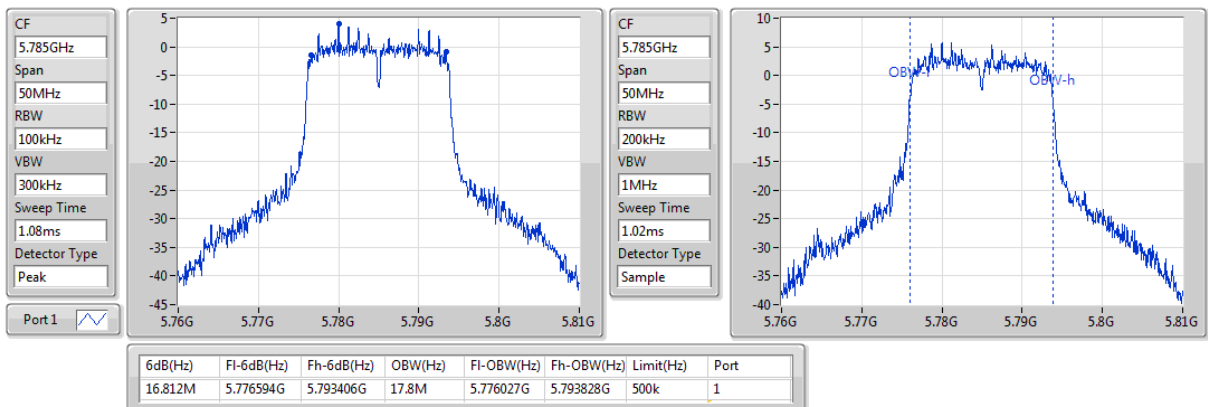
5745MHz



802.11n HT20_Nss1,(MCS0)_1TX

EBW

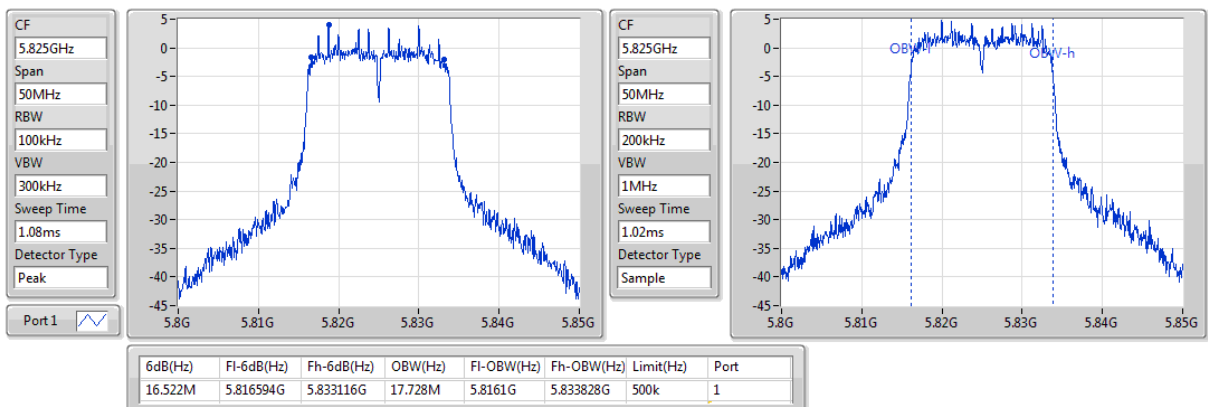
5785MHz



802.11n HT20_Nss1,(MCS0)_1TX

EBW

5825MHz



3.3 RF Output Power

3.3.1 Limit of RF Output Power

Frequency band 5150-5250 MHz		
Operating Mode		Limit
☐	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)
☐	Indoor access point	Conducted Power: 1 W
☐	Fixed point-to-point access points	Conducted Power: 1 W
☒	Client devices	Conducted Power: 250 mW

Frequency Band (MHz)		Limit
☒	5250 ~ 5350	Conducted Power: 250mW or 11dBm+10 log B
☒	5470 ~ 5725	Conducted Power: 250mW or 11dBm+10 log B
☒	5725 ~ 5850	Conducted Power: 1 W

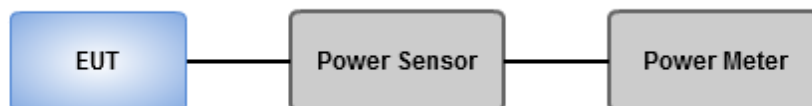
Note: "B" is the 26dB emission bandwidth in MHz.

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

Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	16.49	0.04457	20.39	0.10940
802.11n HT20_Nss1,(MCS0)_1TX	16.49	0.04457	20.39	0.10940
5.25-5.35GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	16.78	0.04764	20.68	0.11695
802.11n HT20_Nss1,(MCS0)_1TX	16.51	0.04477	20.41	0.10990
5.47-5.725GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	17.83	0.06067	21.83	0.15241
802.11n HT20_Nss1,(MCS0)_1TX	17.76	0.05970	21.76	0.14997
5.725-5.85GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	18.45	0.06998	22.45	0.17579
802.11n HT20_Nss1,(MCS0)_1TX	18.45	0.06998	22.45	0.17579

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	3.90	15.80	15.80	24.00	19.70	30.00
5200MHz	Pass	3.90	15.20	15.20	24.00	19.10	30.00
5240MHz	Pass	3.90	16.49	16.49	24.00	20.39	30.00
5260MHz	Pass	3.90	16.78	16.78	24.00	20.68	30.00
5300MHz	Pass	3.90	16.21	16.21	24.00	20.11	30.00
5320MHz	Pass	3.90	15.80	15.80	24.00	19.70	30.00
5500MHz	Pass	4.00	15.42	15.42	24.00	19.42	30.00
5580MHz	Pass	4.00	17.83	17.83	24.00	21.83	30.00
5700MHz	Pass	4.00	15.21	15.21	24.00	19.21	30.00
5745MHz	Pass	4.00	15.75	15.75	30.00	19.75	36.00
5785MHz	Pass	4.00	18.26	18.26	30.00	22.26	36.00
5825MHz	Pass	4.00	18.45	18.45	30.00	22.45	36.00
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
5180MHz	Pass	3.90	15.62	15.62	24.00	19.52	30.00
5200MHz	Pass	3.90	15.18	15.18	24.00	19.08	30.00
5240MHz	Pass	3.90	16.49	16.49	24.00	20.39	30.00
5260MHz	Pass	3.90	16.51	16.51	24.00	20.41	30.00
5300MHz	Pass	3.90	16.25	16.25	24.00	20.15	30.00
5320MHz	Pass	3.90	15.61	15.61	24.00	19.51	30.00
5500MHz	Pass	4.00	15.25	15.25	24.00	19.25	30.00
5580MHz	Pass	4.00	17.76	17.76	24.00	21.76	30.00
5700MHz	Pass	4.00	15.04	15.04	24.00	19.04	30.00
5745MHz	Pass	4.00	15.62	15.62	30.00	19.62	36.00
5785MHz	Pass	4.00	18.45	18.45	30.00	22.45	36.00
5825MHz	Pass	4.00	17.63	17.63	30.00	21.63	36.00

DG = Directional Gain; 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
☐	Outdoor access point	17 dBm / MHz
☐	Indoor access point	17 dBm / MHz
☐	Fixed point-to-point access points	17 dBm / MHz
☒	Client devices	11 dBm / MHz

Frequency Band (MHz)		Limit
☒	5250 ~ 5350	11 dBm / MHz
☒	5470 ~ 5725	11 dBm / MHz
☒	5725 ~ 5850	30 dBm /500 kHz

3.4.2 Test Procedures

For 5150 ~ 5250 MHz / 5250 ~ 5350 MHz / 5470 ~ 5725 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 $\geq 10 \times (\text{number of points in sweep}) \times (\text{total on/off period of the transmitted signal})$.
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

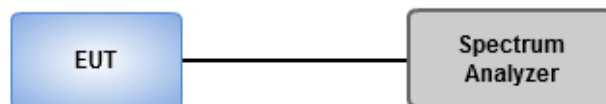
Duty cycle $\geq 98\%$

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 $\geq 10 \times (\text{number of points in sweep}) \times (\text{total on/off period of the transmitted signal})$.
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

Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_1TX	2.63	6.53
802.11n HT20_Nss1,(MCS0)_1TX	3.07	6.97
5.25-5.35GHz	-	-
802.11a_Nss1,(6Mbps)_1TX	2.46	6.36
802.11n HT20_Nss1,(MCS0)_1TX	2.47	6.37
5.47-5.725GHz	-	-
802.11a_Nss1,(6Mbps)_1TX	4.04	8.04
802.11n HT20_Nss1,(MCS0)_1TX	4.01	8.01
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_1TX	1.94	5.94
802.11n HT20_Nss1,(MCS0)_1TX	1.63	5.63

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

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW W)	PD (dBm/RBW W)	PD Limit (dBm/RBW W)	EIRP PD (dBm/RBW W)	EIRP PD Limit (dBm/RBW W)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-
5180MHz	Pass	3.90	1.57	1.57	11.00	5.47	17.00
5200MHz	Pass	3.90	1.48	1.48	11.00	5.38	17.00
5240MHz	Pass	3.90	2.63	2.63	11.00	6.53	17.00
5260MHz	Pass	3.90	2.46	2.46	11.00	6.36	17.00
5300MHz	Pass	3.90	2.29	2.29	11.00	6.19	17.00
5320MHz	Pass	3.90	0.92	0.92	11.00	4.82	17.00
5500MHz	Pass	4.00	1.11	1.11	11.00	5.11	17.00
5580MHz	Pass	4.00	4.04	4.04	11.00	8.04	17.00
5700MHz	Pass	4.00	1.08	1.08	11.00	5.08	17.00
5745MHz	Pass	4.00	-0.81	-0.81	30.00	3.19	36.00
5785MHz	Pass	4.00	1.50	1.50	30.00	5.50	36.00
5825MHz	Pass	4.00	1.94	1.94	30.00	5.94	36.00
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
5180MHz	Pass	3.90	1.81	1.81	11.00	5.71	17.00
5200MHz	Pass	3.90	1.47	1.47	11.00	5.37	17.00
5240MHz	Pass	3.90	3.07	3.07	11.00	6.97	17.00
5260MHz	Pass	3.90	2.47	2.47	11.00	6.37	17.00
5300MHz	Pass	3.90	2.06	2.06	11.00	5.96	17.00
5320MHz	Pass	3.90	0.90	0.90	11.00	4.80	17.00
5500MHz	Pass	4.00	0.95	0.95	11.00	4.95	17.00
5580MHz	Pass	4.00	4.01	4.01	11.00	8.01	17.00
5700MHz	Pass	4.00	0.65	0.65	11.00	4.65	17.00
5745MHz	Pass	4.00	-0.44	-0.44	30.00	3.56	36.00
5785MHz	Pass	4.00	1.63	1.63	30.00	5.63	36.00
5825MHz	Pass	4.00	0.44	0.44	30.00	4.44	36.00

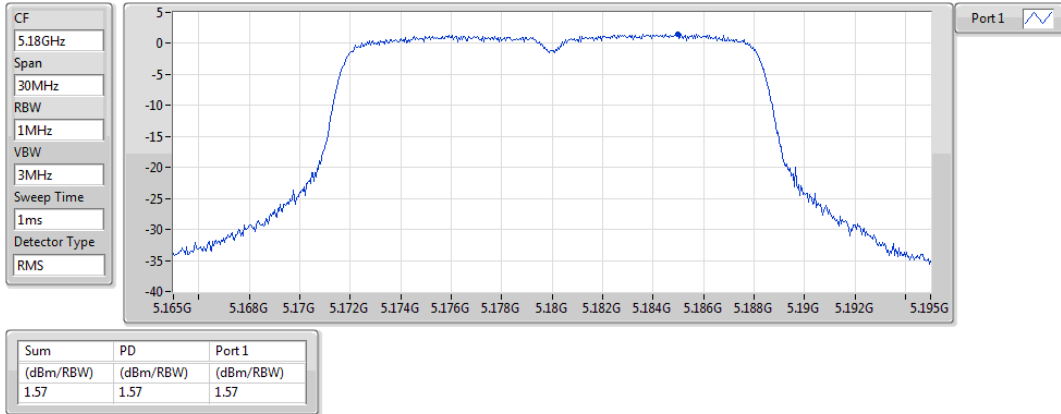
DG = Directional Gain; **RBW** = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port Xpower density;

802.11a_Nss1,(6Mbps)_1TX

PSD

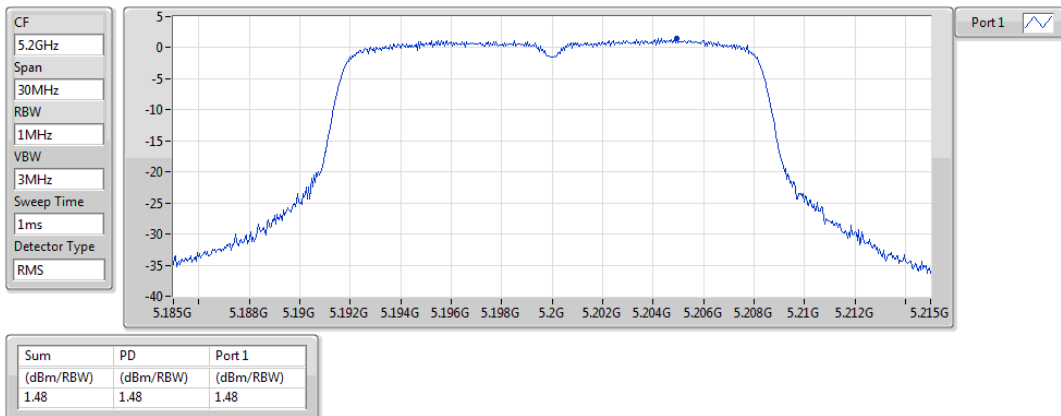
5180MHz



802.11a_Nss1,(6Mbps)_1TX

PSD

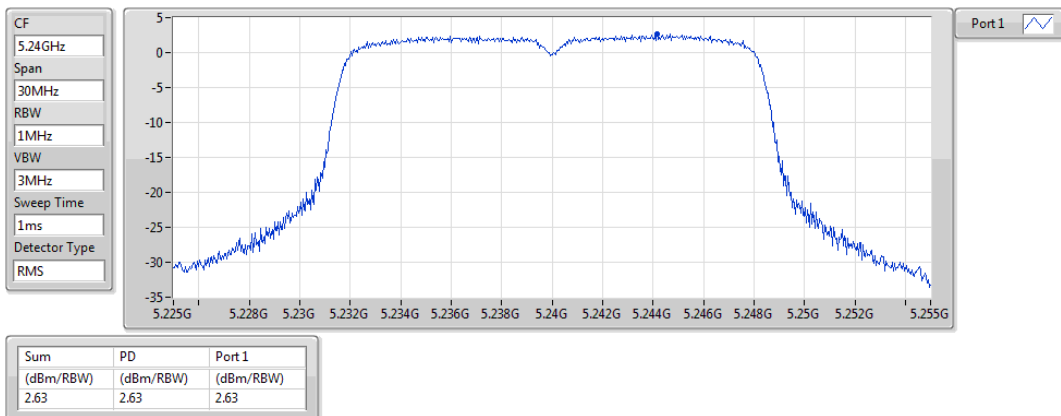
5200MHz



802.11a_Nss1,(6Mbps)_1TX

PSD

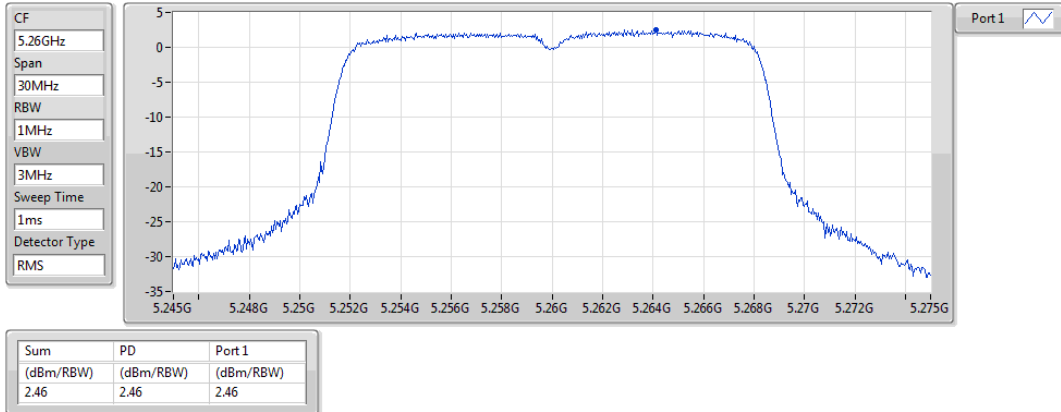
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802.11a_Nss1,(6Mbps)_1TX

PSD

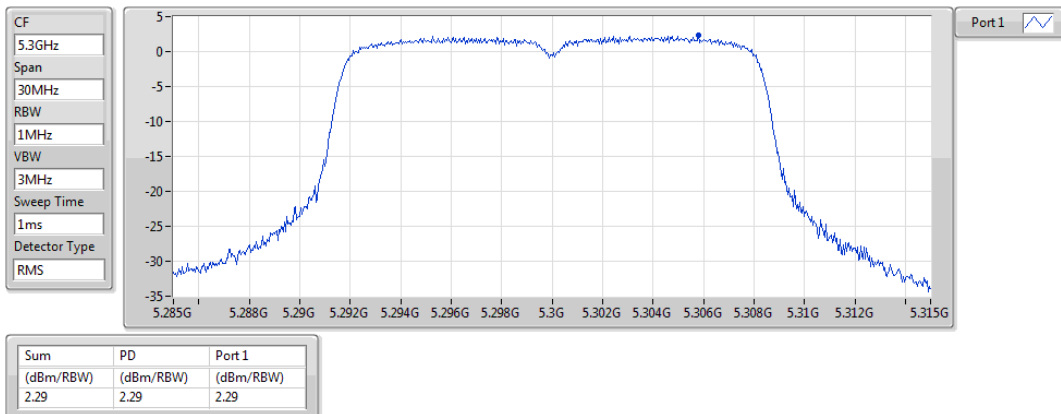
5260MHz



802.11a_Nss1,(6Mbps)_1TX

PSD

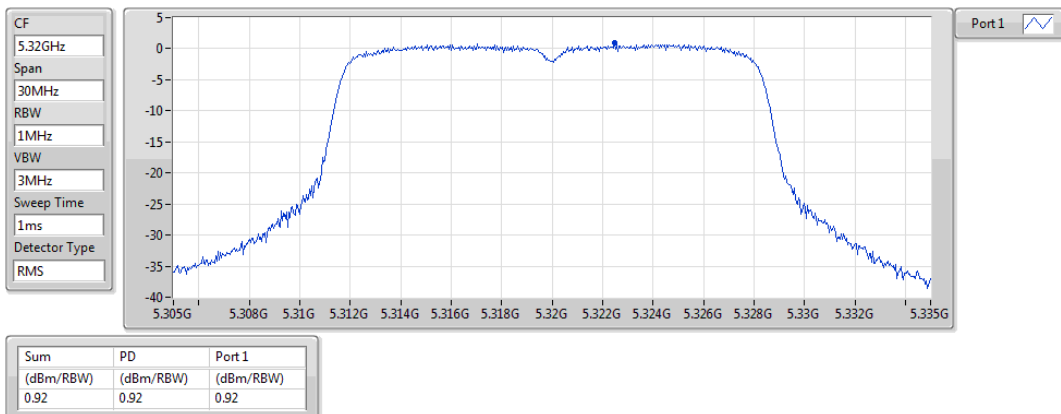
5300MHz



802.11a_Nss1,(6Mbps)_1TX

PSD

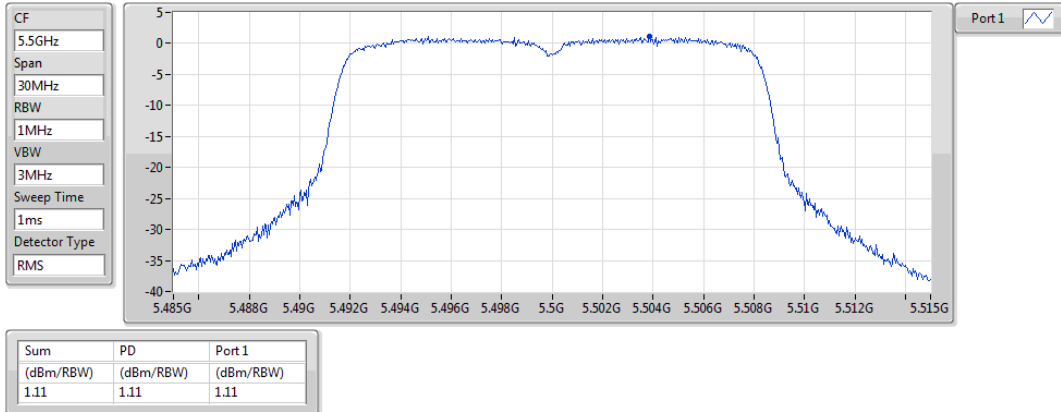
5320MHz



802.11a_Nss1,(6Mbps)_1TX

PSD

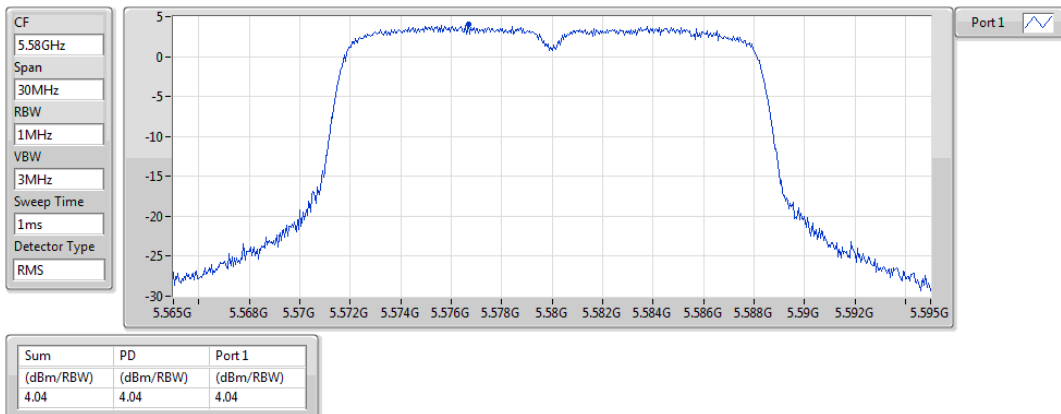
5500MHz



802.11a_Nss1,(6Mbps)_1TX

PSD

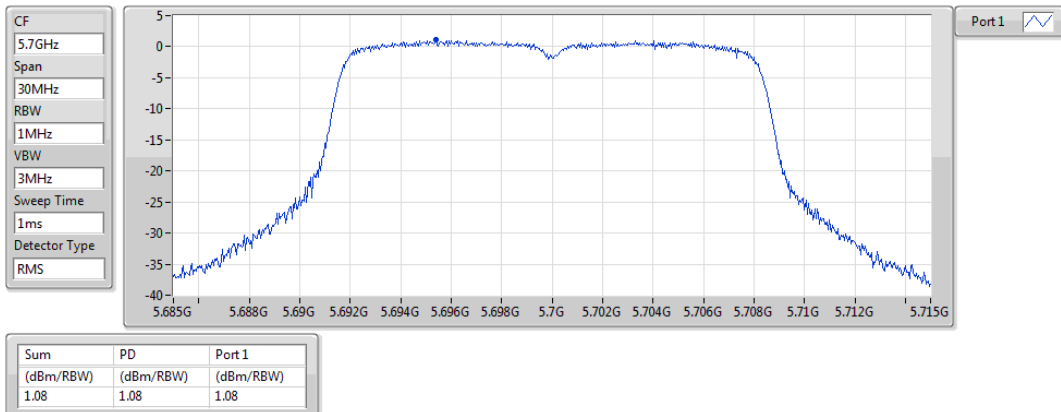
5580MHz



802.11a_Nss1,(6Mbps)_1TX

PSD

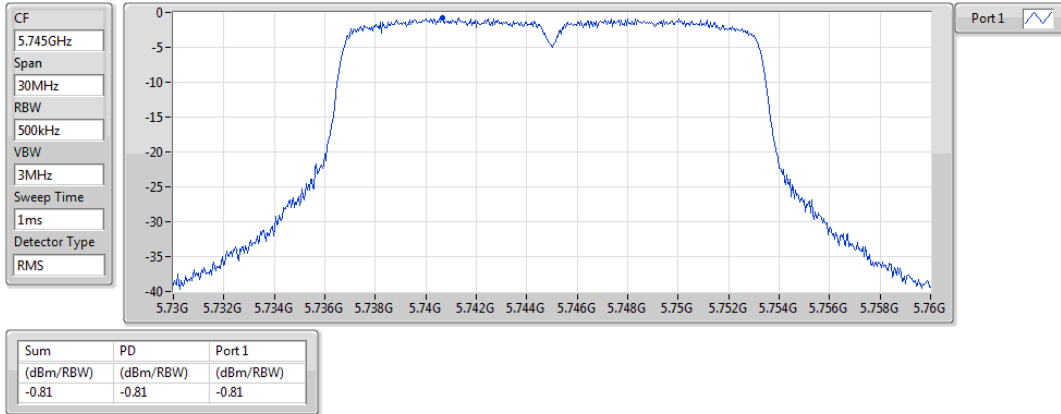
5700MHz



802.11a_Nss1,(6Mbps)_1TX

PSD

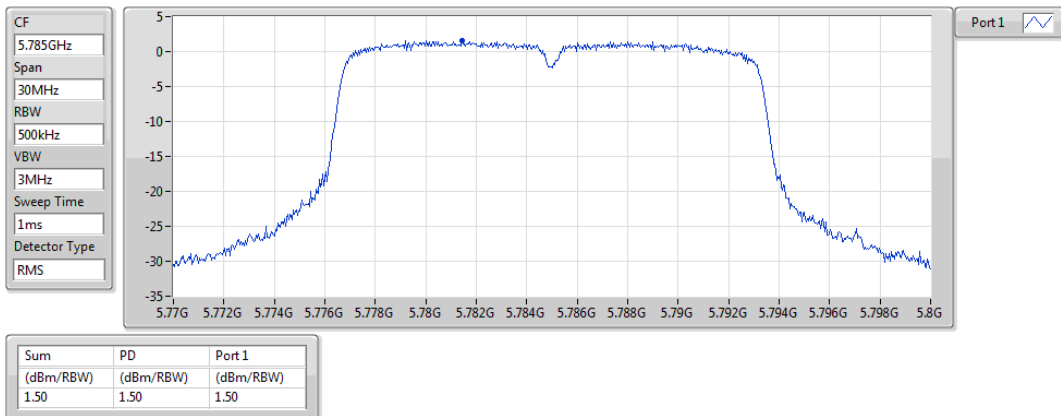
5745MHz



802.11a_Nss1,(6Mbps)_1TX

PSD

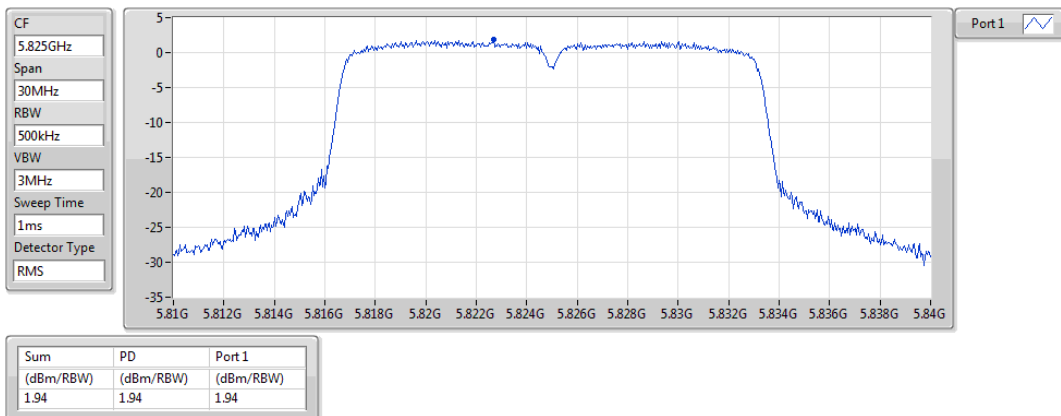
5785MHz



802.11a_Nss1,(6Mbps)_1TX

PSD

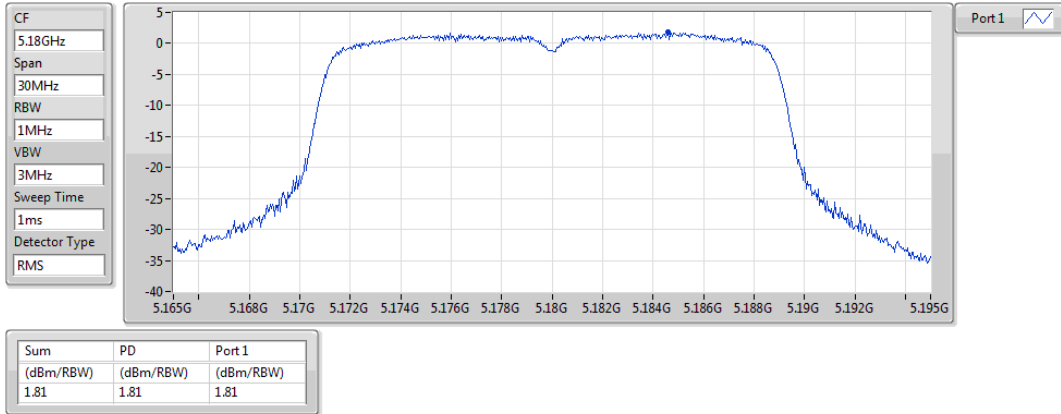
5825MHz



802.11n HT20_Nss1,(MCS0)_1TX

PSD

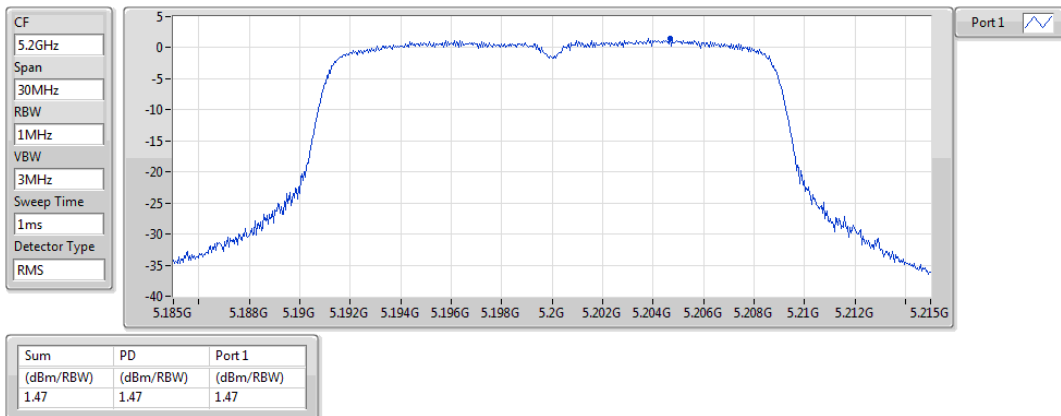
5180MHz



802.11n HT20_Nss1,(MCS0)_1TX

PSD

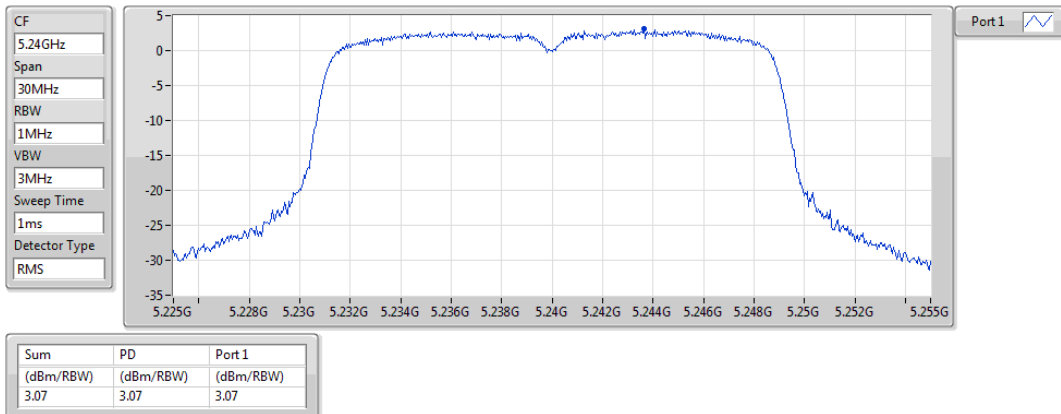
5200MHz



802.11n HT20_Nss1,(MCS0)_1TX

PSD

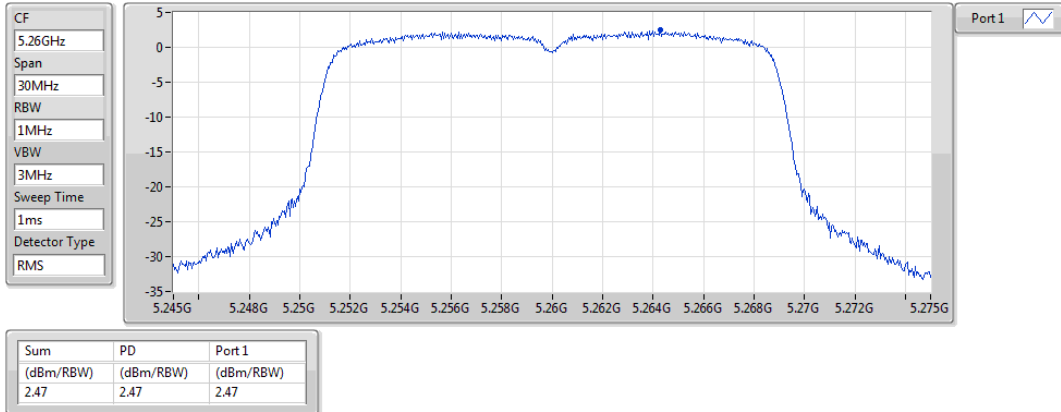
5240MHz



802.11n HT20_Nss1,(MCS0)_1TX

PSD

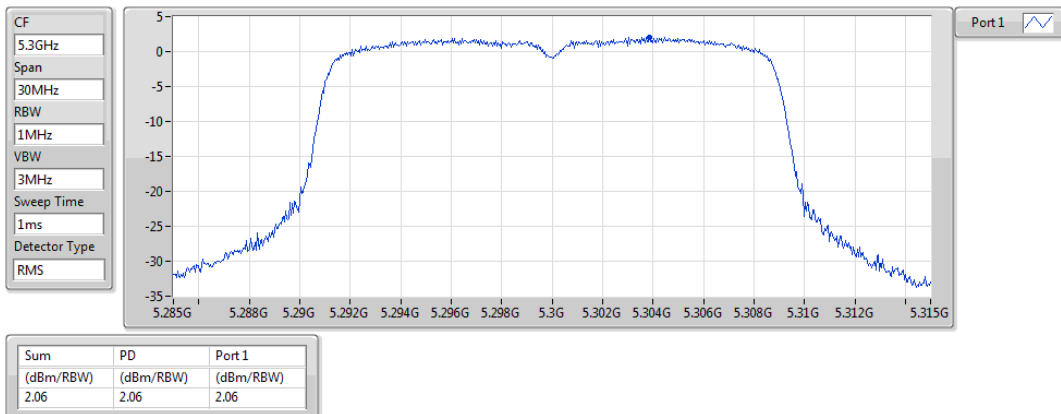
5260MHz



802.11n HT20_Nss1,(MCS0)_1TX

PSD

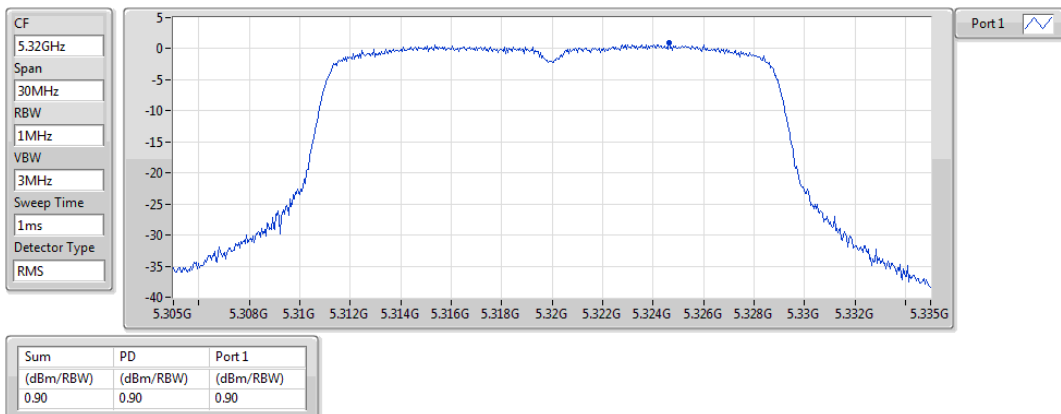
5300MHz



802.11n HT20_Nss1,(MCS0)_1TX

PSD

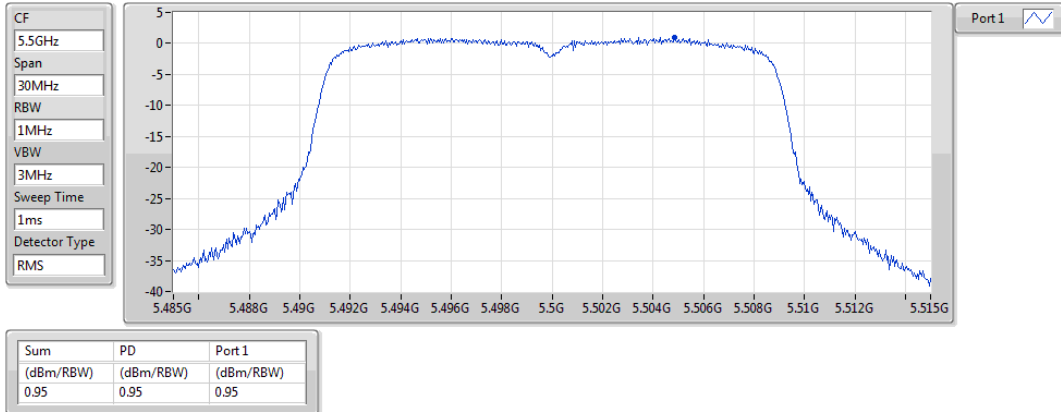
5320MHz



802.11n HT20_Nss1,(MCS0)_1TX

PSD

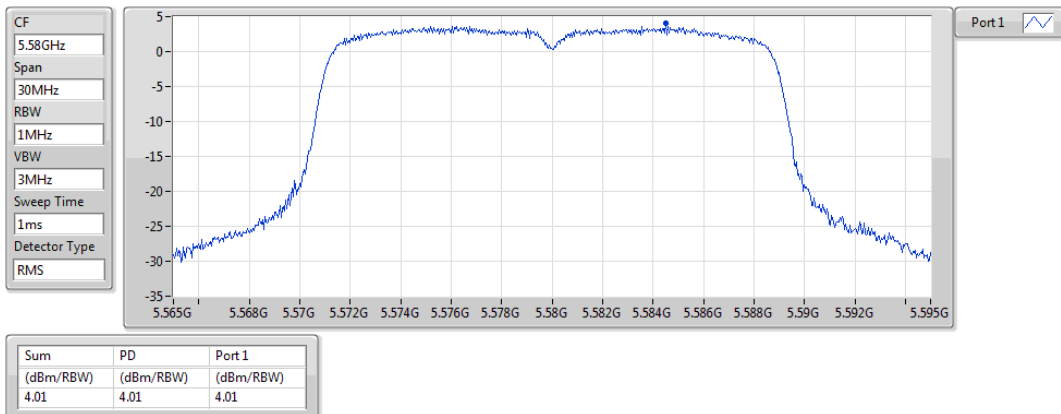
5500MHz



802.11n HT20_Nss1,(MCS0)_1TX

PSD

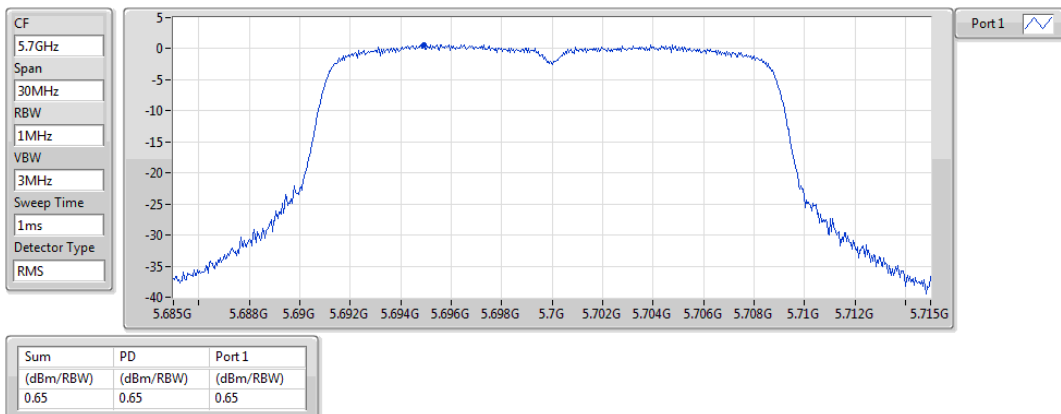
5580MHz



802.11n HT20_Nss1,(MCS0)_1TX

PSD

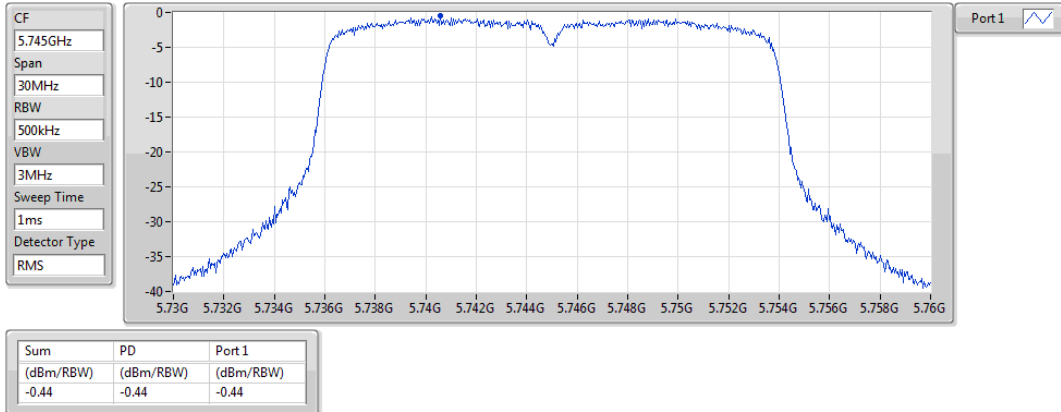
5700MHz



802.11n HT20_Nss1,(MCS0)_1TX

PSD

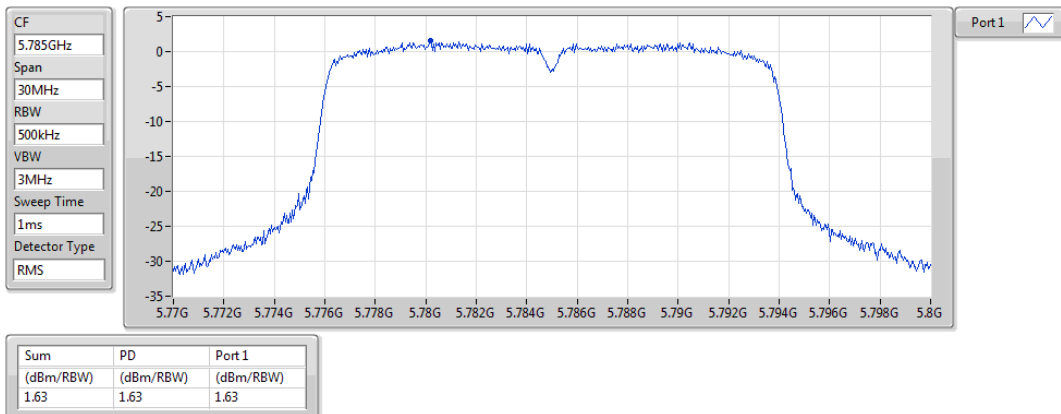
5745MHz



802.11n HT20_Nss1,(MCS0)_1TX

PSD

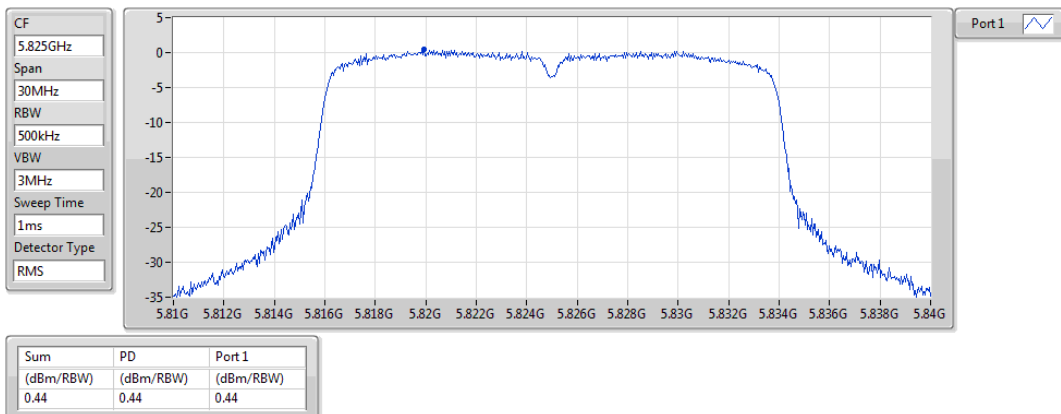
5785MHz



802.11n HT20_Nss1,(MCS0)_1TX

PSD

5825MHz



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]
5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.725 - 5.850 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

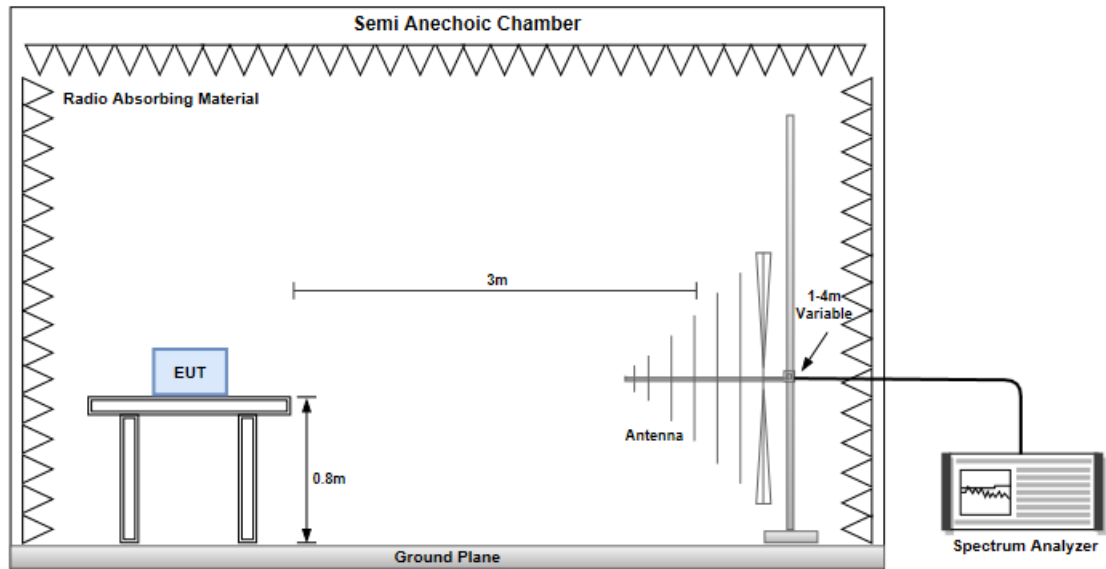
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission 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:

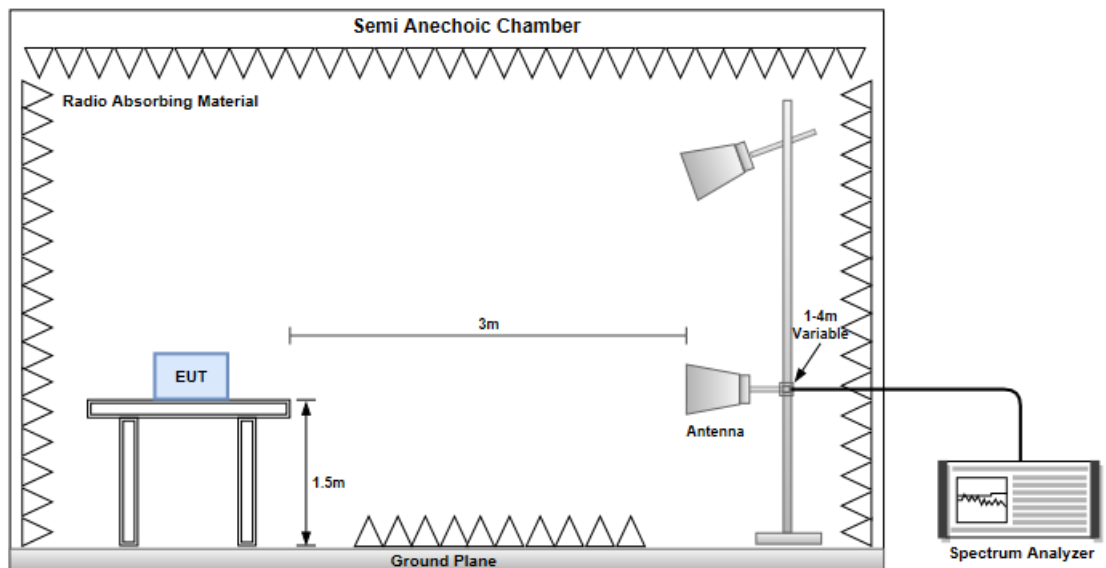
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.5.3 Test Setup

Radiated Emissions below 1 GHz



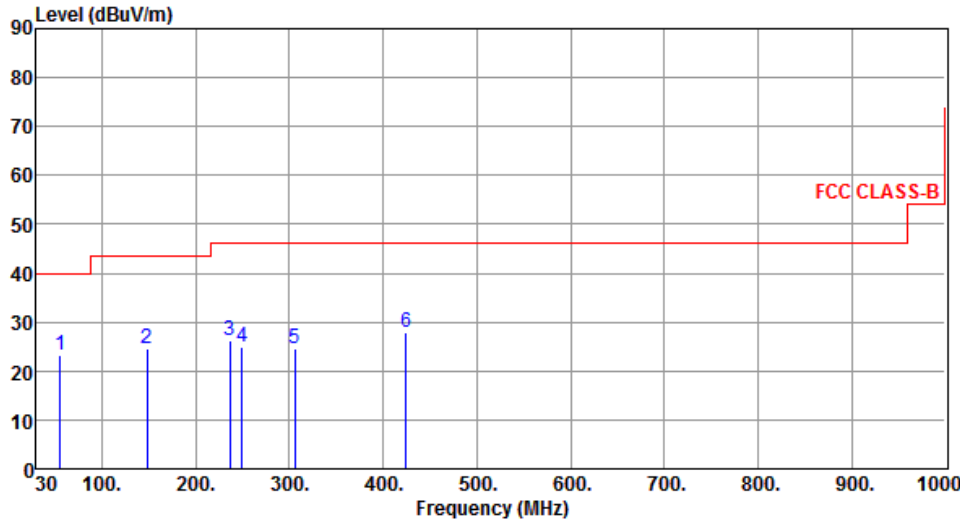
Radiated Emissions above 1 GHz



Configuration 1 : PCB Dipole antenna (Antenna No.3) , Y-plane

3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

Modulation	11a	Test Freq. (MHz)	5580
Polarization	Horizontal		



The graph displays the radiated unwanted emissions for a PCB Dipole antenna. The y-axis represents the Level in dBUV/m, ranging from 0 to 90. The x-axis represents the Frequency in MHz, ranging from 30 to 1000. A red line indicates the FCC CLASS-B limit, which is 40 dBUV/m from 30 to 100 MHz, 45 dBUV/m from 100 to 1000 MHz, and 55 dBUV/m from 1000 to 10000 MHz. Six measured peaks are shown as blue vertical lines, labeled 1 through 6. The peak levels are approximately 23.40, 24.56, 26.31, 24.90, 24.67, and 27.77 dBUV/m respectively.

	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	55.22	23.40	40.00	-16.60	32.46	-9.06	Peak	---	---
2	148.34	24.56	43.50	-18.94	33.39	-8.83	Peak	---	---
3	236.61	26.31	46.00	-19.69	37.00	-10.69	Peak	---	---
4	249.22	24.90	46.00	-21.10	34.99	-10.09	Peak	---	---
5	305.48	24.67	46.00	-21.33	32.99	-8.32	Peak	---	---
6	424.79	27.77	46.00	-18.23	32.90	-5.13	Peak	---	---

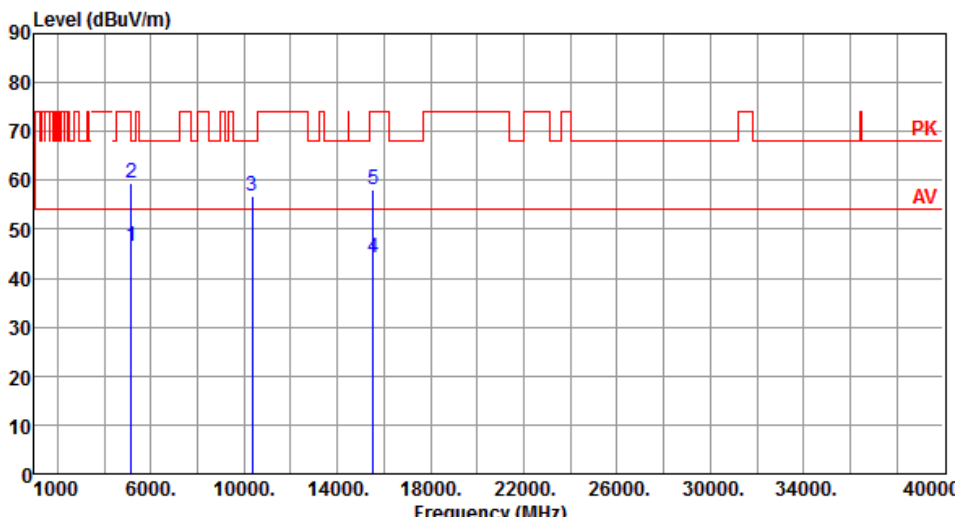
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	11a	Test Freq. (MHz)	5580
Polarization	Vertical		
Level (dBuV/m) </			

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

Modulation	11a	Test Freq. (MHz)	5825
Polarization	Vertical		
Level (dBuV/m) </			

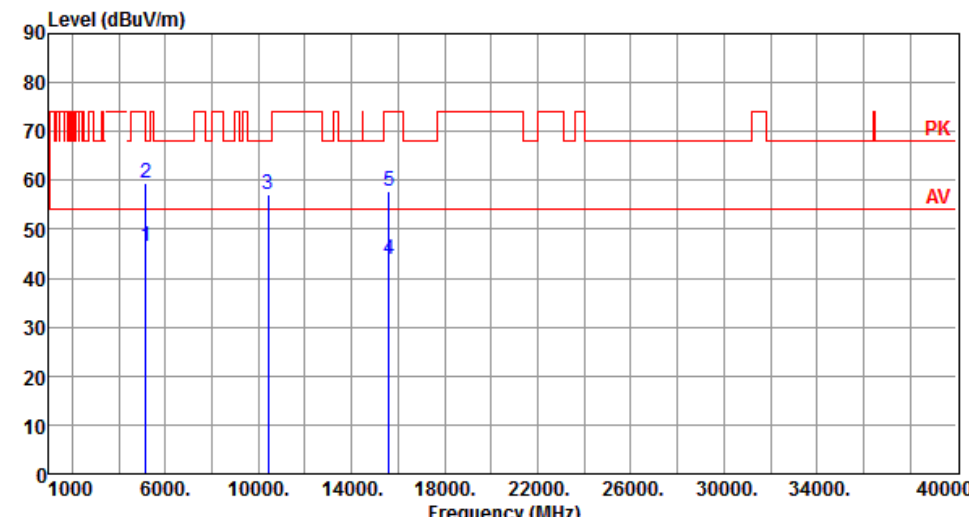
3.5.5 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 11a

Modulation	11a	Test Freq. (MHz)	5180						
Polarization	Horizontal								
									
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.51	54.00	-7.49	40.56	5.95	Average	100	78
2	5150.00	59.51	74.00	-14.49	53.56	5.95	Peak	100	78
3	10360.00	56.69	68.20	-11.51	41.59	15.10	Peak	100	40
4	15540.00	44.28	54.00	-9.72	28.63	15.65	Average	100	60
5	15540.00	58.07	74.00	-15.93	42.42	15.65	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)	5180
Polarization	Vertical		
Level (dBuV/m) <			

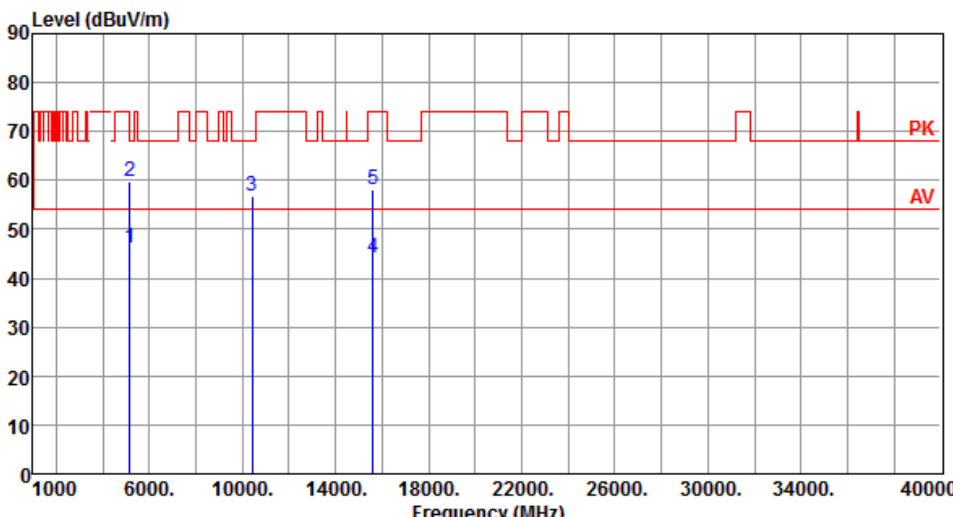
Modulation	11a	Test Freq. (MHz)	5200
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.57	54.00	-7.43	40.62	5.95	Average	100	80
2	5150.00	59.51	74.00	-14.49	53.56	5.95	Peak	100	80
3	10400.00	56.96	68.20	-11.24	41.63	15.33	Peak	100	50
4	15600.00	43.98	54.00	-10.02	28.49	15.49	Average	100	40
5	15600.00	57.80	74.00	-16.20	42.31	15.49	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).

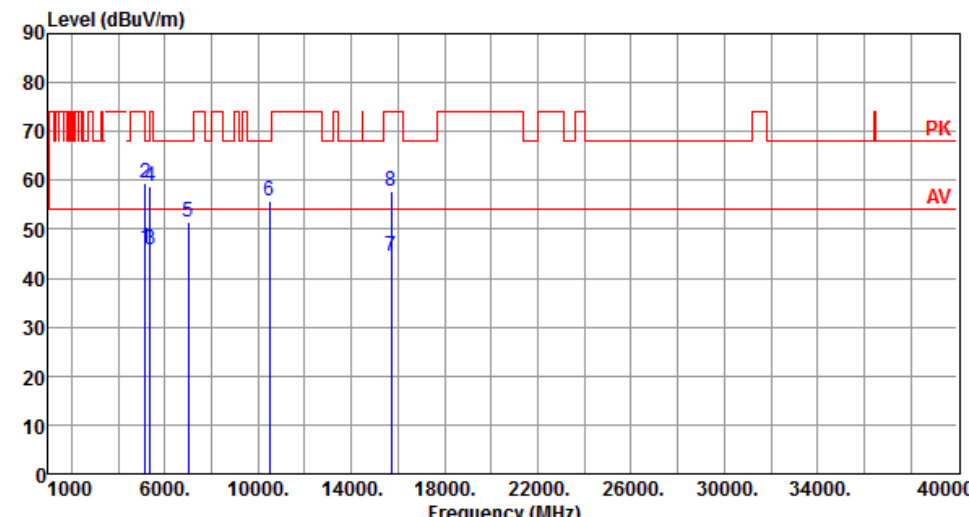
Modulation	11a	Test Freq. (MHz)	5200
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.30	54.00	-7.70	40.35	5.95	Average	195	63
2	5150.00	59.64	74.00	-14.36	53.69	5.95	Peak	195	63
3	10400.00	56.90	68.20	-11.30	41.57	15.33	Peak	100	30
4	15600.00	44.05	54.00	-9.95	28.56	15.49	Average	100	90
5	15600.00	58.03	74.00	-15.97	42.54	15.49	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	11a	Test Freq. (MHz)	5240
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.20	54.00	-7.80	40.25	5.95	Average	100	75
2	5150.00	59.47	74.00	-14.53	53.52	5.95	Peak	100	75
3	5350.00	45.90	54.00	-8.10	40.50	5.40	Average	100	75
4	5350.00	58.89	74.00	-15.11	53.49	5.40	Peak	100	75
5	6986.66	51.62	68.20	-16.58	42.33	9.29	Peak	100	136
6	10480.00	55.67	68.20	-12.53	40.36	15.31	Peak	100	60
7	15720.00	44.52	54.00	-9.48	29.29	15.23	Average	100	30
8	15720.00	57.79	74.00	-16.21	42.56	15.23	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).

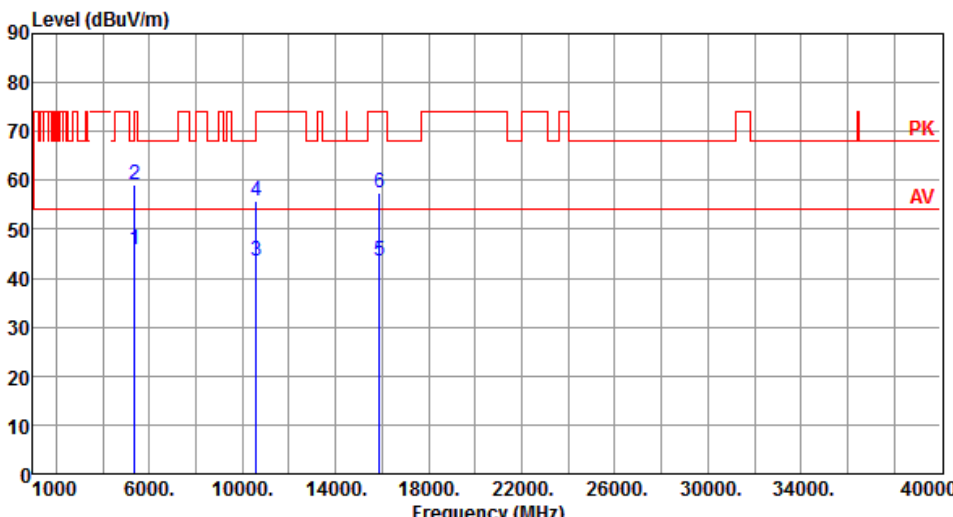
Modulation	11a	Test Freq. (MHz)	5240
Polarization	Vertical		
Level (dBuV/m) </			

Modulation	11a	Test Freq. (MHz)	5260
Polarization	Horizontal		
Level (dBUV/m)			

Modulation	11a	Test Freq. (MHz)	5260
Polarization	Vertical		
Level (dBuV/m)			

Modulation	11a	Test Freq. (MHz)	5300
Polarization	Horizontal		
 <			

Modulation	11a	Test Freq. (MHz)	5300
Polarization	Vertical		

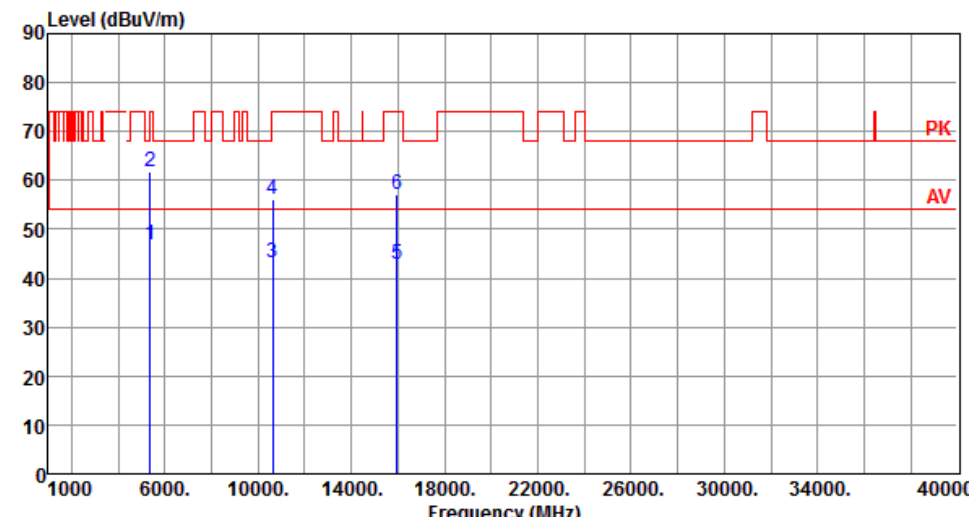


	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	45.82	54.00	-8.18	40.42	5.40	Average	193	61
2	5350.00	59.07	74.00	-14.93	53.67	5.40	Peak	193	61
3	10600.00	43.65	54.00	-10.35	28.24	15.41	Average	100	50
4	10600.00	55.94	74.00	-18.06	40.53	15.41	Peak	100	50
5	15900.00	43.46	54.00	-10.54	28.57	14.89	Average	100	60
6	15900.00	57.54	74.00	-16.46	42.65	14.89	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)	5320
Polarization	Horizontal		
Level (dBuV/m)			

Modulation	11a	Test Freq. (MHz)	5320
Polarization	Vertical		

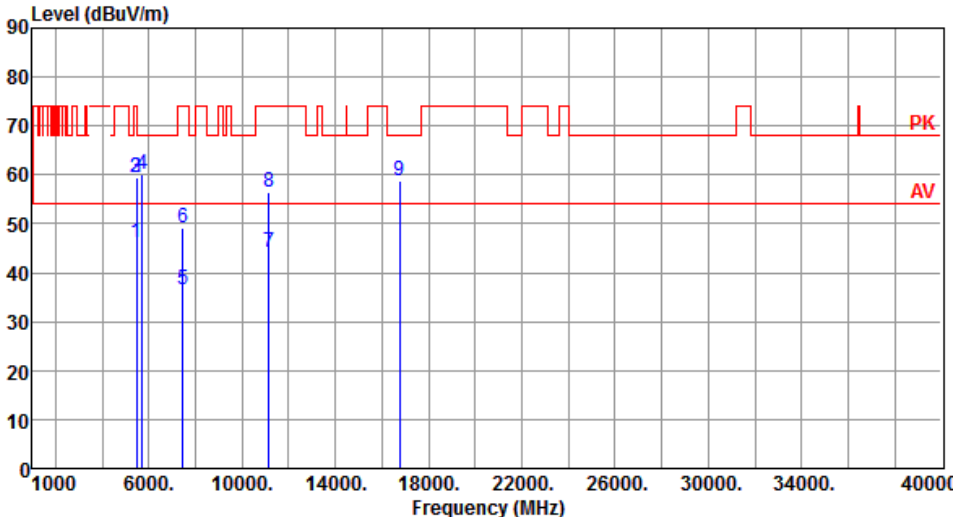


	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	46.87	54.00	-7.13	41.47	5.40	Average	131	163
2	5350.00	61.81	74.00	-12.19	56.41	5.40	Peak	131	163
3	10640.00	43.09	54.00	-10.91	27.73	15.36	Average	100	25
4	10640.00	56.07	74.00	-17.93	40.71	15.36	Peak	100	25
5	15960.00	42.97	54.00	-11.03	28.06	14.91	Average	100	40
6	15960.00	57.15	74.00	-16.85	42.24	14.91	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)	5500
Polarization	Horizontal		
Level (dBuV/m)			

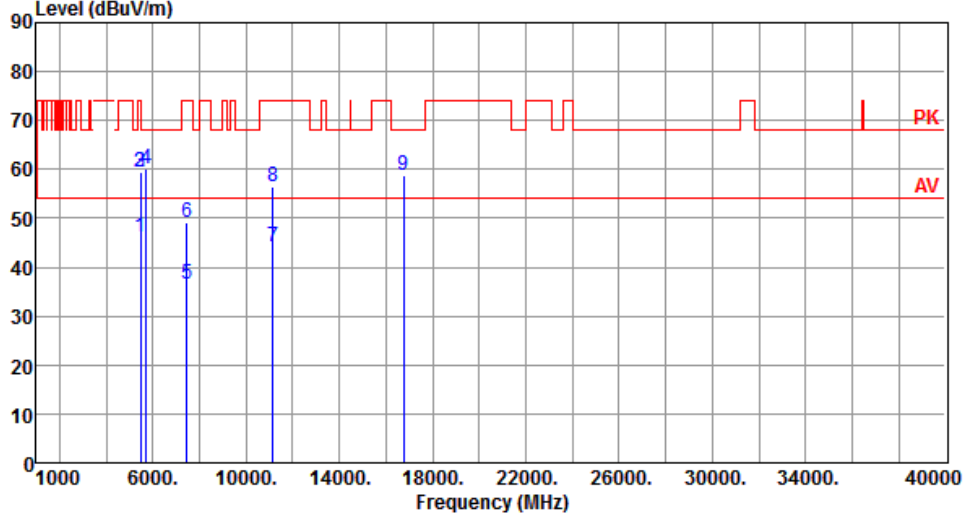
Modulation	11a	Test Freq. (MHz)	5500
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.17	54.00	-7.83	40.25	5.92	Average	100	85
2	5460.00	59.36	74.00	-14.64	53.44	5.92	Peak	100	85
3	5470.00	59.59	68.20	-8.61	53.63	5.96	Peak	100	85
4	5725.00	59.98	68.20	-8.22	53.69	6.29	Peak	100	85
5	7440.00	36.56	54.00	-17.44	26.21	10.35	Average	100	163
6	7440.00	49.25	74.00	-24.75	38.90	10.35	Peak	100	163
7	11160.00	44.05	54.00	-9.95	28.79	15.26	Average	333	122
8	11160.00	56.58	74.00	-17.42	41.32	15.26	Peak	333	122
9	16740.00	58.90	68.20	-9.30	42.05	16.85	Peak	100	163

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)	5580
Polarization	Horizontal		



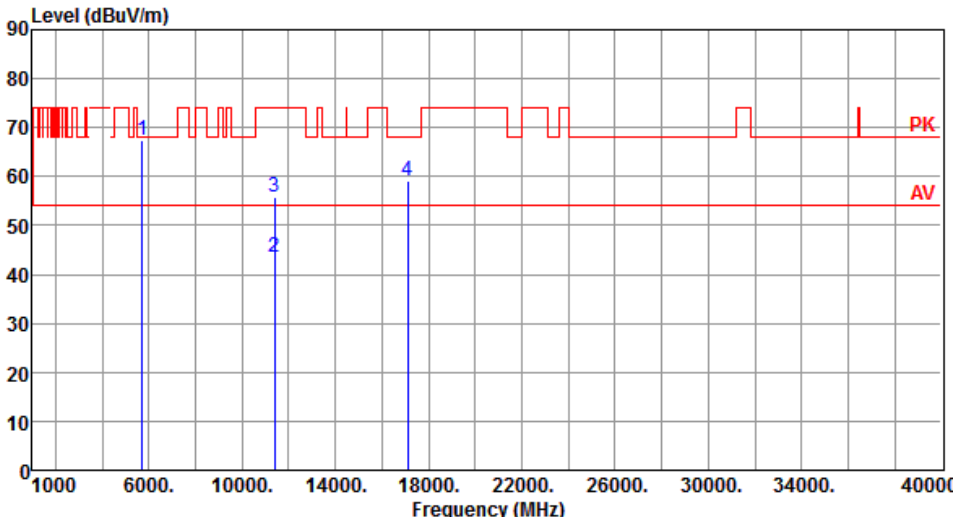
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.17	54.00	-7.83	40.25	5.92	Average	100	85
2	5460.00	59.36	74.00	-14.64	53.44	5.92	Peak	100	85
3	5470.00	59.59	68.20	-8.61	53.63	5.96	Peak	100	85
4	5725.00	59.98	68.20	-8.22	53.69	6.29	Peak	100	85
5	7440.00	36.56	54.00	-17.44	26.21	10.35	Average	100	163
6	7440.00	49.25	74.00	-24.75	38.90	10.35	Peak	100	163
7	11160.00	44.05	54.00	-9.95	28.79	15.26	Average	333	122
8	11160.00	56.58	74.00	-17.42	41.32	15.26	Peak	333	122
9	16740.00	58.90	68.20	-9.30	42.05	16.85	Peak	100	163

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)	5580
Polarization	Vertical		
Level (dBUV/m)			

Modulation	11a	Test Freq. (MHz)	5700
Polarization	Horizontal		
Level (dBuV/m) <			

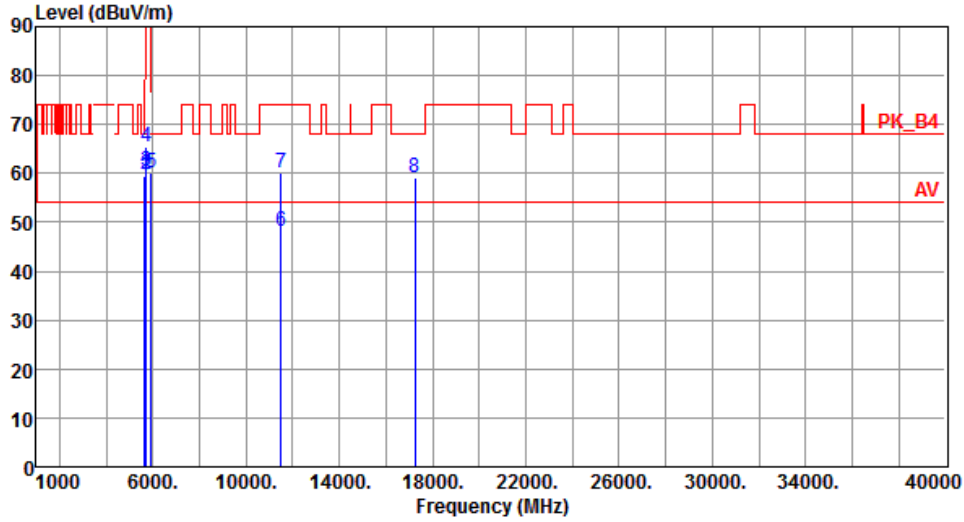
Modulation	11a	Test Freq. (MHz)	5700
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	67.31	68.20	-0.89	61.02	6.29	Peak	222	268
2	11400.00	43.54	54.00	-10.46	28.21	15.33	Average	100	90
3	11400.00	55.90	74.00	-18.10	40.57	15.33	Peak	100	90
4	17100.00	59.25	68.20	-8.95	42.36	16.89	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).

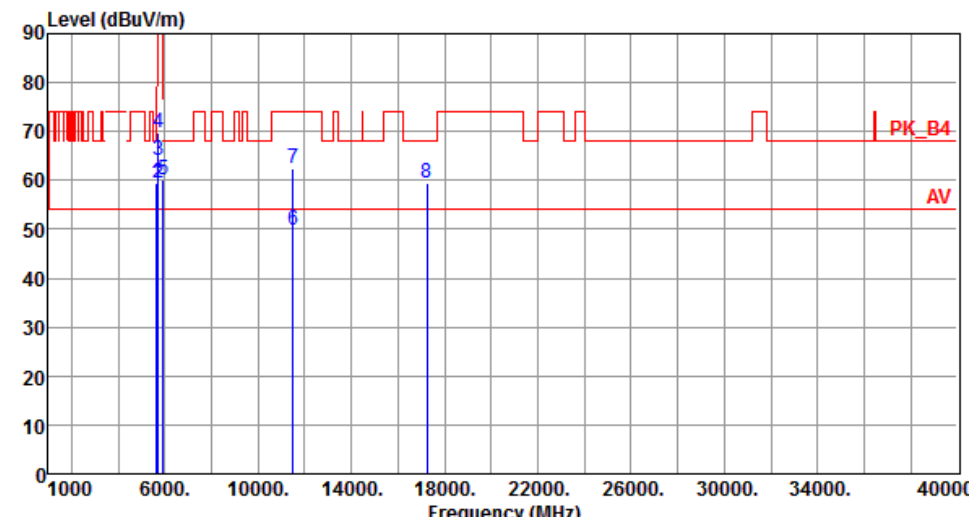
Modulation	11a	Test Freq. (MHz)	5745
Polarization	Horizontal		



	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	59.43	68.20	-8.77	53.52	5.91	Peak	100	88
2	5700.00	59.87	105.20	-45.33	53.64	6.23	Peak	100	88
3	5720.00	60.48	110.80	-50.32	54.20	6.28	Peak	100	88
4	5725.00	65.51	122.20	-56.69	59.22	6.29	Peak	100	88
5	5925.00	60.27	68.20	-7.93	53.45	6.82	Peak	100	88
6	11490.00	48.09	54.00	-5.91	32.64	15.45	Average	202	60
7	11490.00	60.13	74.00	-13.87	44.68	15.45	Peak	202	60
8	17235.00	59.21	68.20	-8.99	42.23	16.98	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).

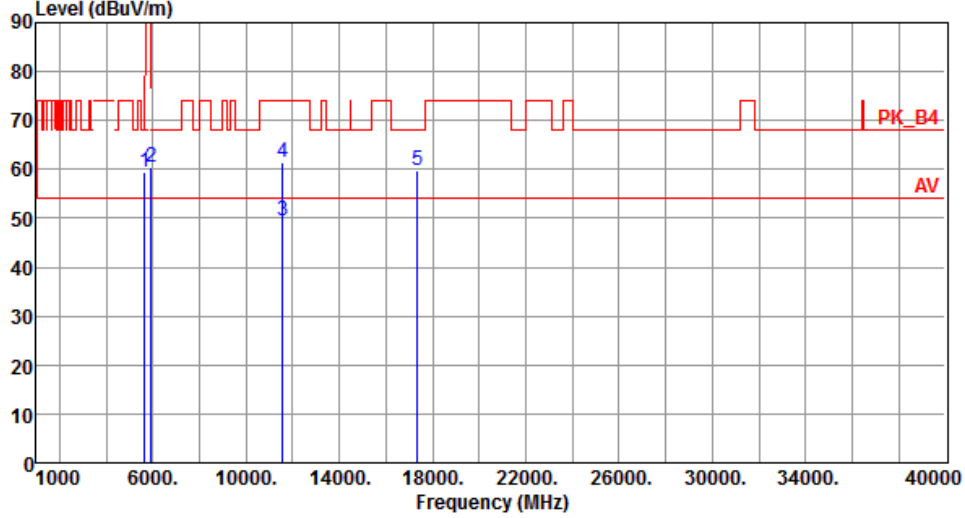
Modulation	11a	Test Freq. (MHz)	5745
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.36	68.20	-8.84	53.45	5.91	Peak	202	221
2	5700.00	59.49	105.20	-45.71	53.26	6.23	Peak	202	221
3	5720.00	64.06	110.80	-46.74	57.78	6.28	Peak	202	221
4	5725.00	69.81	122.20	-52.39	63.52	6.29	Peak	202	221
5	5925.00	60.18	68.20	-8.02	53.36	6.82	Peak	202	221
6	11490.00	49.98	54.00	-4.02	34.53	15.45	Average	205	87
7	11490.00	62.31	74.00	-11.69	46.86	15.45	Peak	205	87
8	17235.00	59.60	68.20	-8.60	42.62	16.98	Peak	100	80

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).

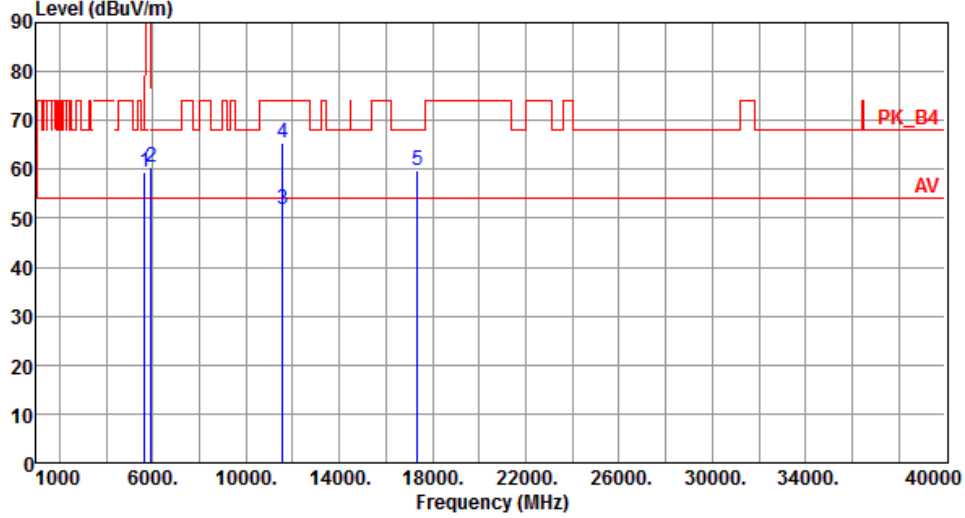
Modulation	11a	Test Freq. (MHz)	5785
Polarization	Horizontal		



	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	59.49	68.20	-8.71	53.58	5.91	Peak	100	75
2	5925.00	60.44	68.20	-7.76	53.62	6.82	Peak	100	75
3	11570.00	49.56	54.00	-4.44	34.26	15.30	Average	201	63
4	11570.00	61.51	74.00	-12.49	46.21	15.30	Peak	201	63
5	17355.00	59.87	68.20	-8.33	42.26	17.61	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	Vertical		

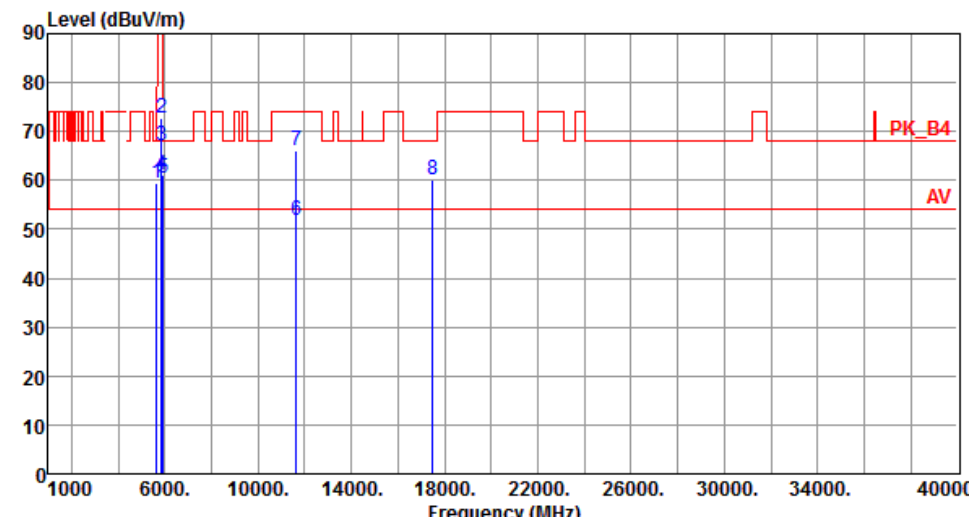


	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.45	68.20	-8.75	53.54	5.91	Peak	195	65
2	5925.00	60.50	68.20	-7.70	53.68	6.82	Peak	195	65
3	11570.00	51.75	54.00	-2.25	36.45	15.30	Average	195	85
4	11570.00	65.51	74.00	-8.49	50.21	15.30	Peak	195	85
5	17355.00	59.92	68.20	-8.28	42.31	17.61	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)	5825
Polarization	Horizontal		
Level (dBuV/m)			

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

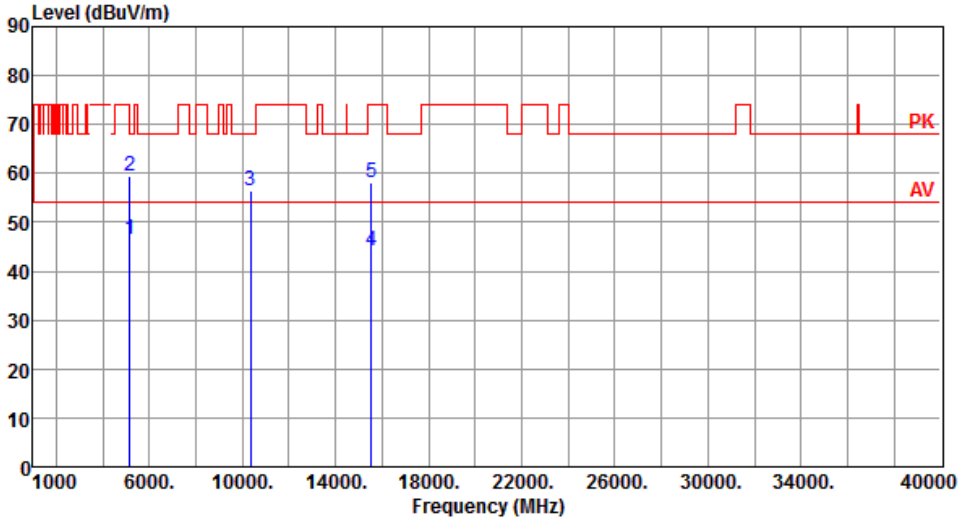


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.36	68.20	-8.84	53.45	5.91	Peak	204	224
2	5850.00	72.60	122.20	-49.60	65.93	6.67	Peak	204	224
3	5855.00	67.15	110.80	-43.65	60.47	6.68	Peak	204	224
4	5875.00	61.04	105.20	-44.16	54.32	6.72	Peak	204	224
5	5925.00	60.39	68.20	-7.81	53.57	6.82	Peak	204	224
6	11650.00	51.78	54.00	-2.22	36.72	15.06	Average	203	86
7	11650.00	65.98	74.00	-8.02	50.92	15.06	Peak	203	86
8	17475.00	60.17	68.20	-8.03	41.94	18.23	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).

3.5.6 Transmitter Radiated Unwanted Emissions (Above 1GHz) for HT20

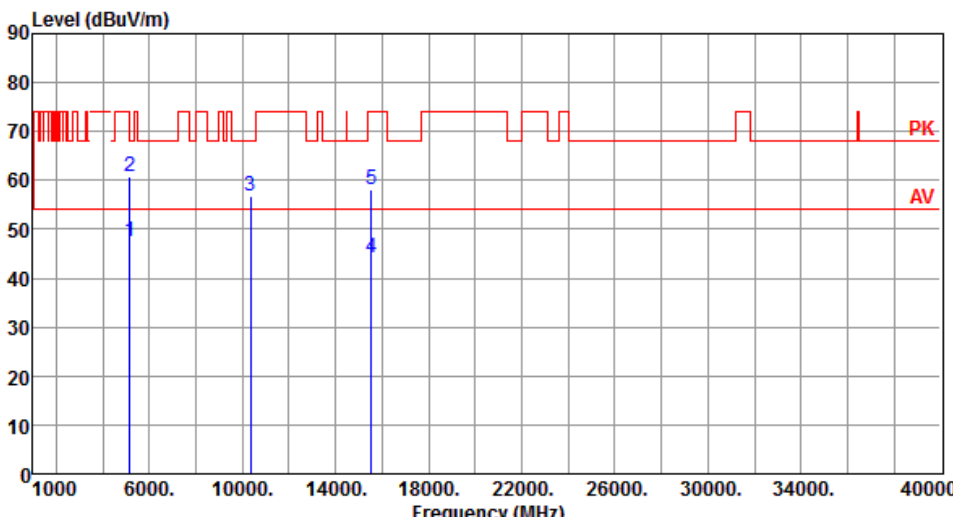
Modulation	HT20	Test Freq. (MHz)	5180
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.53	54.00	-7.47	40.58	5.95	Average	100	76
2	5150.00	59.60	74.00	-14.40	53.65	5.95	Peak	100	76
3	10360.00	56.52	68.20	-11.68	41.42	15.10	Peak	100	100
4	15540.00	44.22	54.00	-9.78	28.57	15.65	Average	100	50
5	15540.00	58.28	74.00	-15.72	42.63	15.65	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).

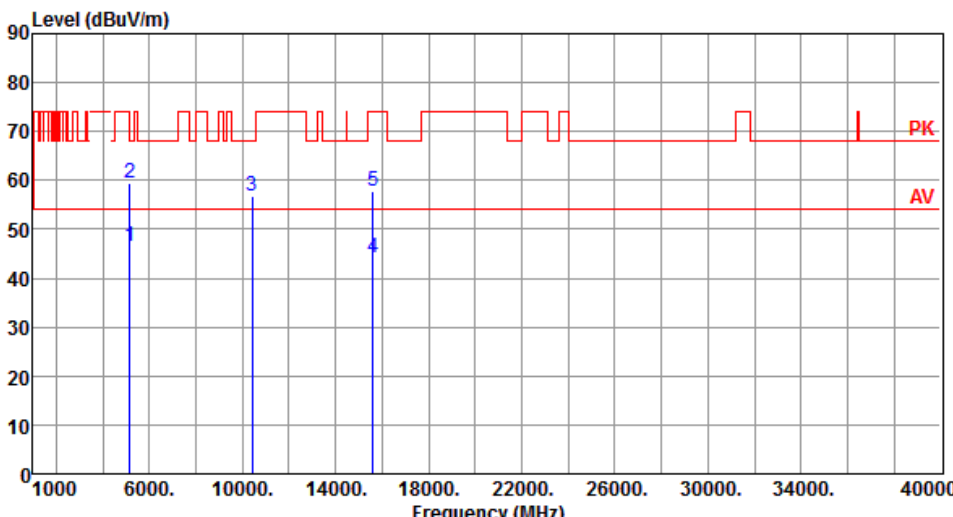
Modulation	HT20	Test Freq. (MHz)	5180
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	47.58	54.00	-6.42	41.63	5.95	Average	105	212
2	5150.00	60.90	74.00	-13.10	54.95	5.95	Peak	105	212
3	10360.00	56.66	68.20	-11.54	41.56	15.10	Peak	100	90
4	15540.00	44.32	54.00	-9.68	28.67	15.65	Average	100	30
5	15540.00	58.19	74.00	-15.81	42.54	15.65	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).

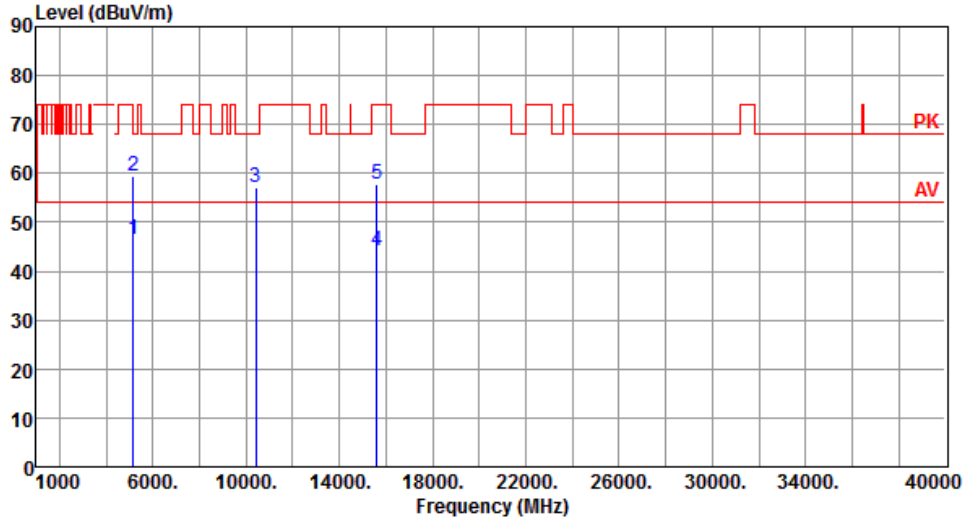
Modulation	HT20	Test Freq. (MHz)	5200
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.54	54.00	-7.46	40.59	5.95	Average	100	79
2	5150.00	59.46	74.00	-14.54	53.51	5.95	Peak	100	79
3	10400.00	56.89	68.20	-11.31	41.56	15.33	Peak	100	66
4	15600.00	44.06	54.00	-9.94	28.57	15.49	Average	100	90
5	15600.00	57.95	74.00	-16.05	42.46	15.49	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	HT20	Test Freq. (MHz)	5200
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.36	54.00	-7.64	40.41	5.95	Average	196	63
2	5150.00	59.52	74.00	-14.48	53.57	5.95	Peak	196	63
3	10400.00	56.96	68.20	-11.24	41.63	15.33	Peak	100	50
4	15600.00	44.13	54.00	-9.87	28.64	15.49	Average	100	70
5	15600.00	57.90	74.00	-16.10	42.41	15.49	Peak	100	70

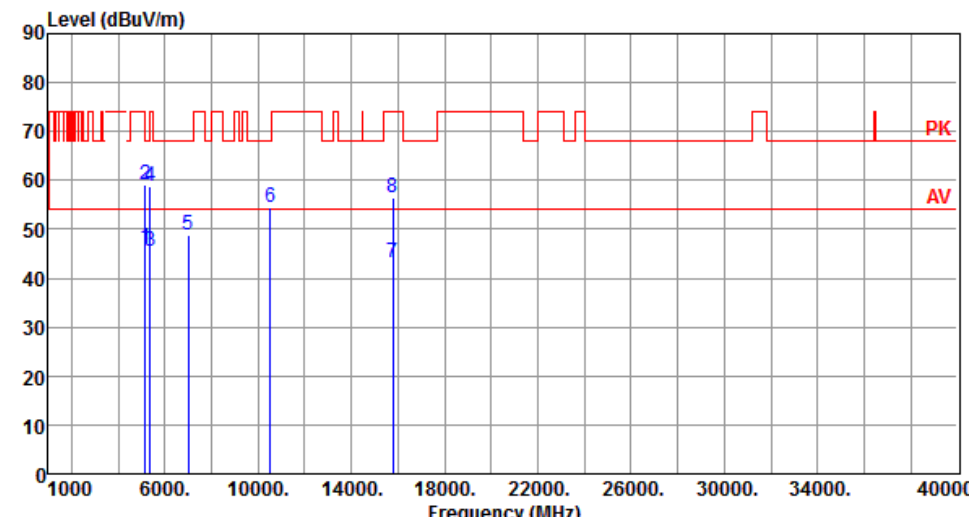
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Modulation	HT20	Test Freq. (MHz)	5240
Polarization	Horizontal		
Level (dBUV/m)			

Modulation	HT20	Test Freq. (MHz)	5240
Polarization	Vertical		
Level (dBUV/m)			

Modulation	HT20	Test Freq. (MHz)	5260
Polarization	Horizontal		
Level (dBUV/m)			

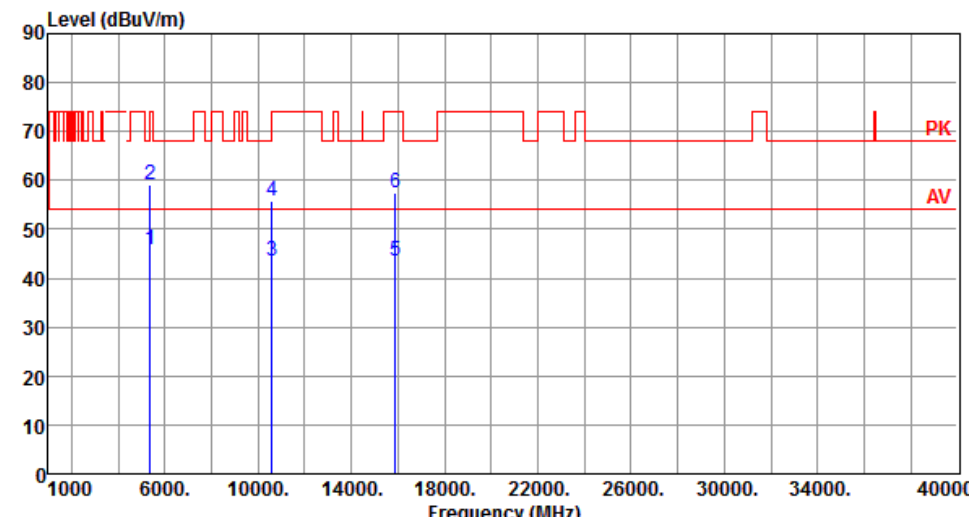
Modulation	HT20	Test Freq. (MHz)	5260
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.27	54.00	-7.73	40.32	5.95	Average	193	66
2	5150.00	59.21	74.00	-14.79	53.26	5.95	Peak	193	66
3	5350.00	45.60	54.00	-8.40	40.20	5.40	Average	193	66
4	5350.00	58.85	74.00	-15.15	53.45	5.40	Peak	193	66
5	7013.33	48.98	68.20	-19.22	39.60	9.38	Peak	100	135
6	10520.00	54.41	68.20	-13.79	39.08	15.33	Peak	100	200
7	15780.00	43.15	54.00	-10.85	28.20	14.95	Average	100	160
8	15780.00	56.35	74.00	-17.65	41.40	14.95	Peak	100	160

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).

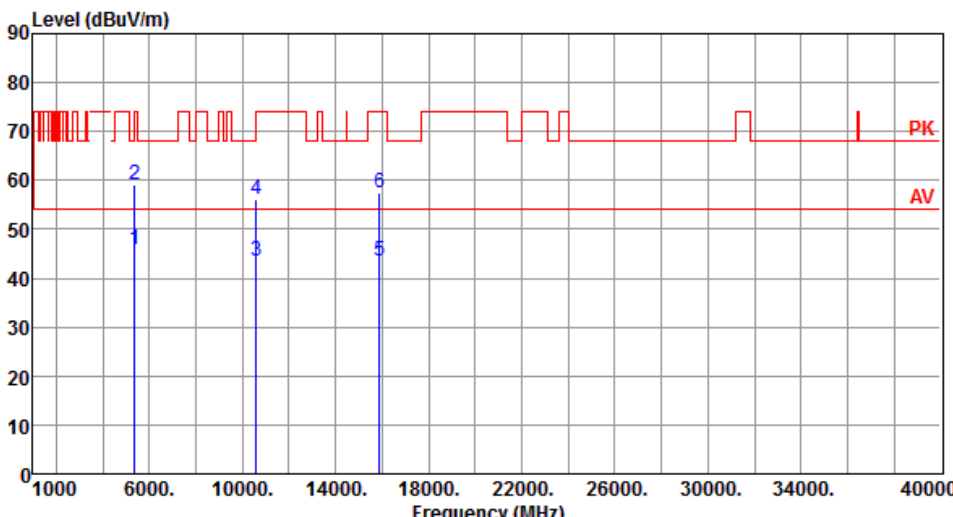
Modulation	HT20	Test Freq. (MHz)	5300
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	45.96	54.00	-8.04	40.56	5.40	Average	100	78
2	5350.00	59.08	74.00	-14.92	53.68	5.40	Peak	100	78
3	10600.00	43.64	54.00	-10.36	28.23	15.41	Average	100	30
4	10600.00	55.93	74.00	-18.07	40.52	15.41	Peak	100	30
5	15900.00	43.55	54.00	-10.45	28.66	14.89	Average	100	80
6	15900.00	57.56	74.00	-16.44	42.67	14.89	Peak	100	80

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).

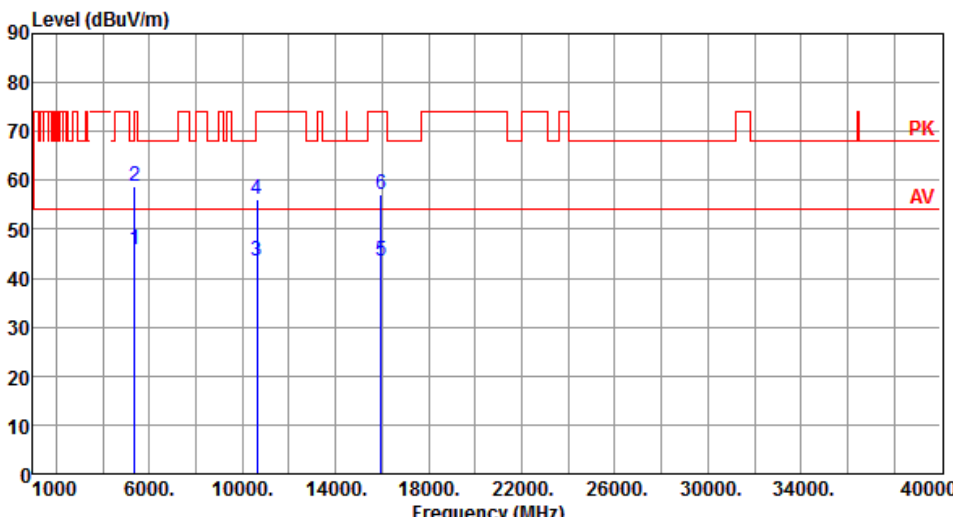
Modulation	HT20	Test Freq. (MHz)	5300
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	45.98	54.00	-8.02	40.58	5.40	Average	195	65
2	5350.00	59.02	74.00	-14.98	53.62	5.40	Peak	195	65
3	10600.00	43.64	54.00	-10.36	28.23	15.41	Average	100	30
4	10600.00	55.97	74.00	-18.03	40.56	15.41	Peak	100	30
5	15900.00	43.58	54.00	-10.42	28.69	14.89	Average	100	25
6	15900.00	57.35	74.00	-16.65	42.46	14.89	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).

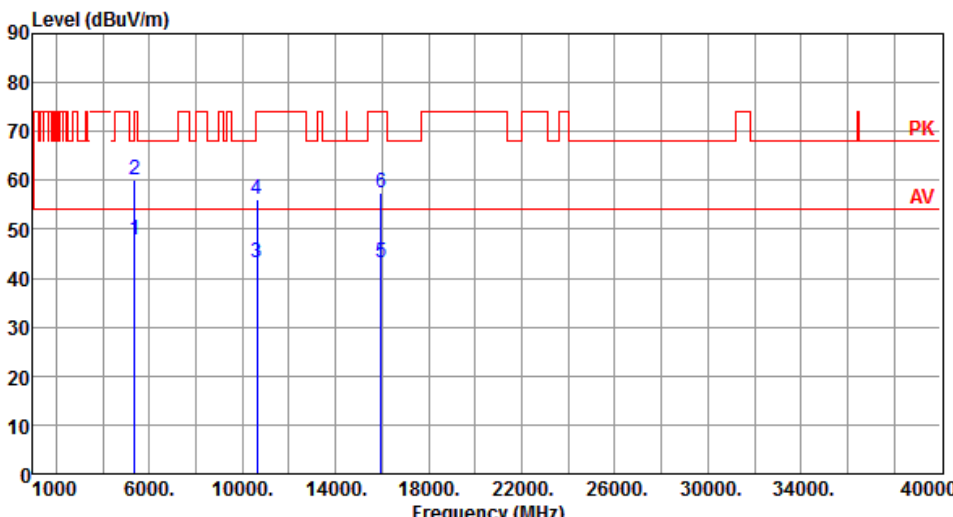
Modulation	HT20	Test Freq. (MHz)	5320
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	45.76	54.00	-8.24	40.36	5.40	Average	105	75
2	5350.00	58.94	74.00	-15.06	53.54	5.40	Peak	105	75
3	10640.00	43.50	54.00	-10.50	28.14	15.36	Average	100	60
4	10640.00	55.99	74.00	-18.01	40.63	15.36	Peak	100	60
5	15960.00	43.46	54.00	-10.54	28.55	14.91	Average	100	55
6	15960.00	57.27	74.00	-16.73	42.36	14.91	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).

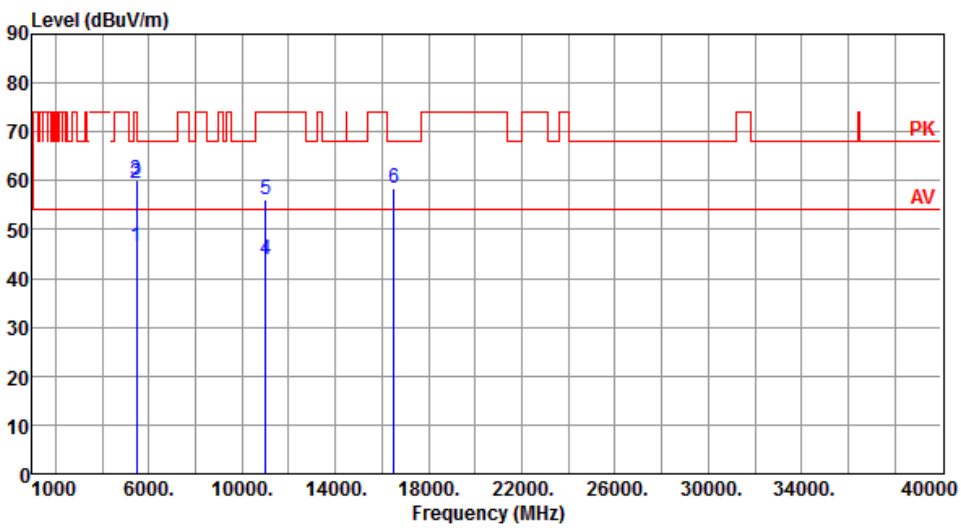
Modulation	HT20	Test Freq. (MHz)	5320
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	47.66	54.00	-6.34	42.26	5.40	Average	105	213
2	5350.00	60.19	74.00	-13.81	54.79	5.40	Peak	105	213
3	10640.00	43.09	54.00	-10.91	27.73	15.36	Average	100	30
4	10640.00	56.26	74.00	-17.74	40.90	15.36	Peak	100	30
5	15960.00	43.02	54.00	-10.98	28.11	14.91	Average	100	60
6	15960.00	57.33	74.00	-16.67	42.42	14.91	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	HT20	Test Freq. (MHz)	5500
Polarization	Horizontal		

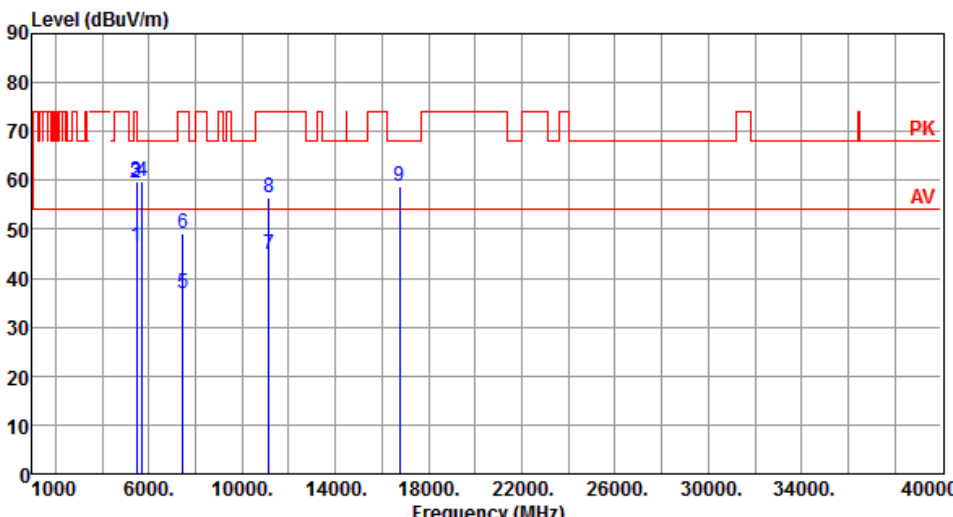


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.45	54.00	-7.55	40.53	5.92	Average	100	79
2	5460.00	59.49	74.00	-14.51	53.57	5.92	Peak	100	79
3	5470.00	60.23	68.20	-7.97	54.27	5.96	Peak	100	79
4	11000.00	43.83	54.00	-10.17	28.25	15.58	Average	100	80
5	11000.00	56.00	74.00	-18.00	40.42	15.58	Peak	100	80
6	16500.00	58.30	68.20	-9.90	42.47	15.83	Peak	100	70

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	HT20	Test Freq. (MHz)	5500
Polarization	Vertical		
Level (dBuV/m) <			

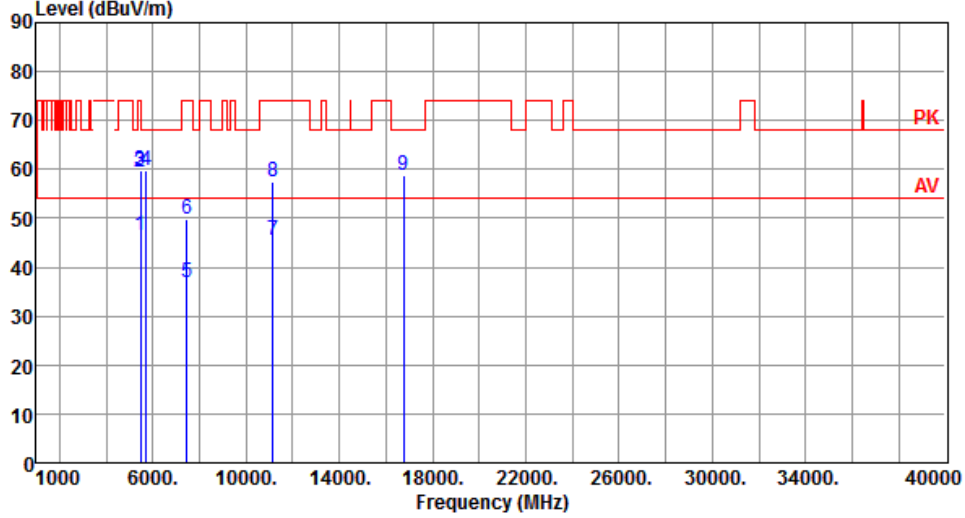
Modulation	HT20	Test Freq. (MHz)	5580
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.46	54.00	-7.54	40.54	5.92	Average	100	79
2	5460.00	59.45	74.00	-14.55	53.53	5.92	Peak	100	79
3	5470.00	59.65	68.20	-8.55	53.69	5.96	Peak	100	79
4	5725.00	59.94	68.20	-8.26	53.65	6.29	Peak	100	79
5	7440.00	36.75	54.00	-17.25	26.40	10.35	Average	100	159
6	7440.00	49.17	74.00	-24.83	38.82	10.35	Peak	100	159
7	11160.00	44.91	54.00	-9.09	29.65	15.26	Average	100	125
8	11160.00	56.34	74.00	-17.66	41.08	15.26	Peak	100	125
9	16740.00	58.73	68.20	-9.47	41.88	16.85	Peak	100	150

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).

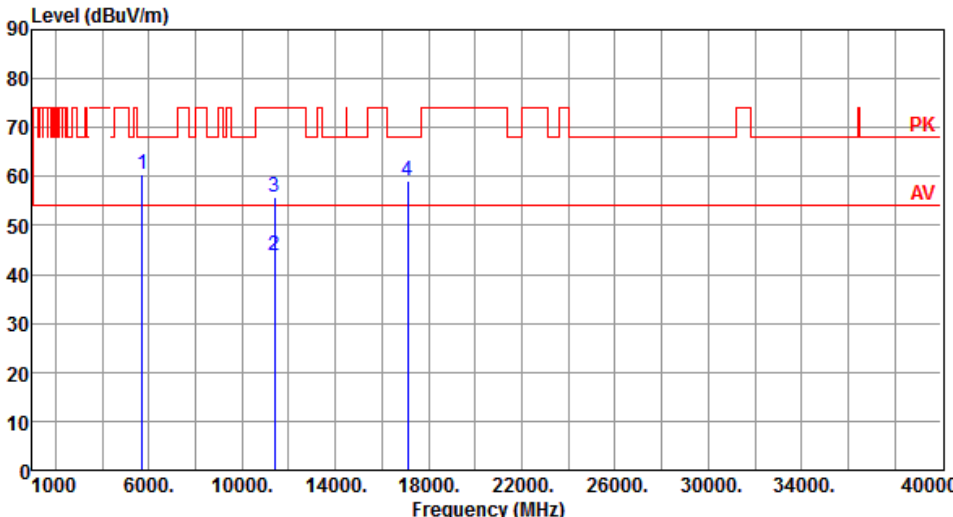
Modulation	HT20	Test Freq. (MHz)	5580
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.33	54.00	-7.67	40.41	5.92	Average	195	61
2	5460.00	59.36	74.00	-14.64	53.44	5.92	Peak	195	61
3	5470.00	59.64	68.20	-8.56	53.68	5.96	Peak	195	61
4	5725.00	59.78	68.20	-8.42	53.49	6.29	Peak	195	61
5	7440.00	36.77	54.00	-17.23	26.42	10.35	Average	100	140
6	7440.00	49.75	74.00	-24.25	39.40	10.35	Peak	100	140
7	11160.00	45.40	54.00	-8.60	30.14	15.26	Average	100	80
8	11160.00	57.45	74.00	-16.55	42.19	15.26	Peak	100	80
9	16740.00	58.71	68.20	-9.49	41.86	16.85	Peak	100	205

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	HT20	Test Freq. (MHz)	5700
Polarization	Horizontal		

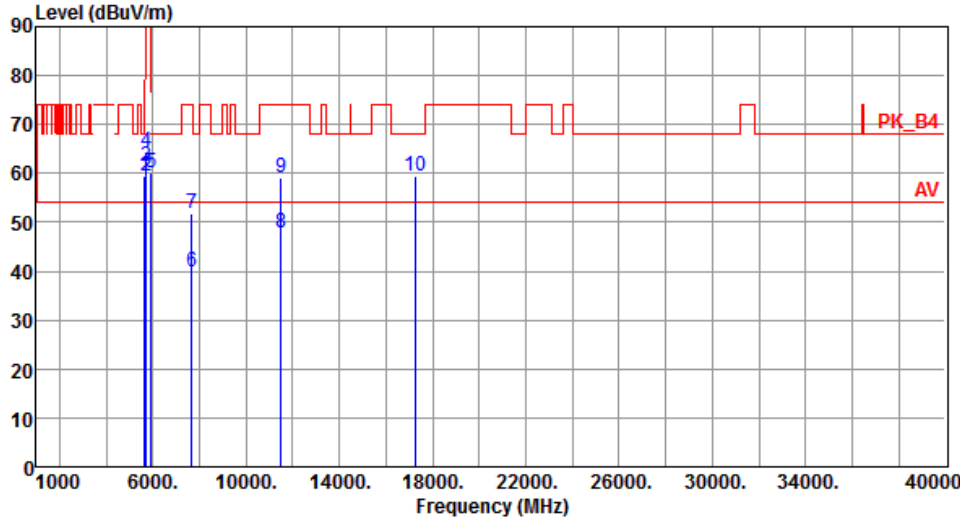


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	60.55	68.20	-7.65	54.26	6.29	Peak	110	74
2	11400.00	43.67	54.00	-10.33	28.34	15.33	Average	100	80
3	11400.00	55.92	74.00	-18.08	40.59	15.33	Peak	100	80
4	17100.00	59.26	68.20	-8.94	42.37	16.89	Peak	100	70

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	HT20		Test Freq. (MHz)		5700	
Polarization	Vertical					
Level (dBuV/m) <						

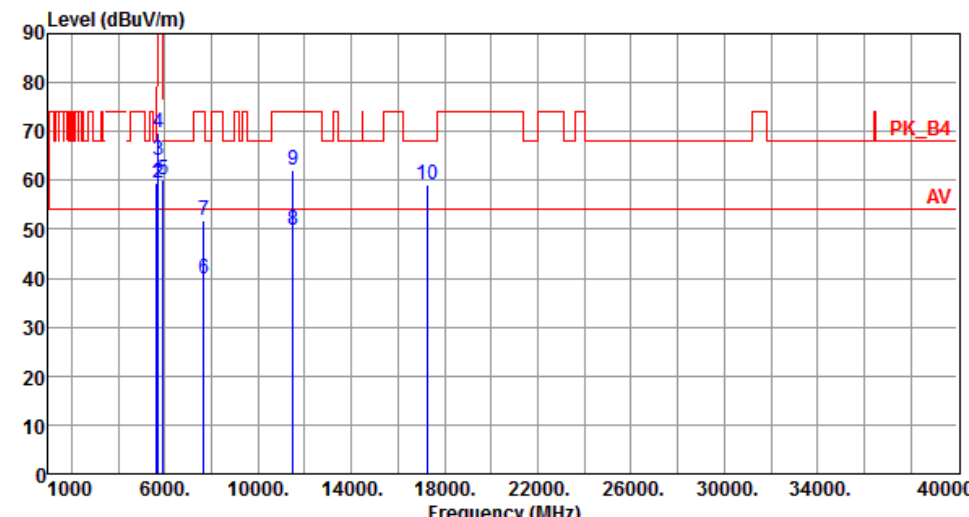
Modulation	HT20	Test Freq. (MHz)	5745
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.46	68.20	-8.74	53.55	5.91	Peak	103	77
2	5700.00	59.49	105.20	-45.71	53.26	6.23	Peak	103	77
3	5720.00	61.51	110.80	-49.29	55.23	6.28	Peak	103	77
4	5725.00	64.50	122.20	-57.70	58.21	6.29	Peak	103	77
5	5925.00	60.20	68.20	-8.00	53.38	6.82	Peak	103	77
6	7660.00	39.74	54.00	-14.26	29.40	10.34	Average	100	140
7	7660.00	51.75	74.00	-22.25	41.41	10.34	Peak	100	140
8	11490.00	47.77	54.00	-6.23	32.32	15.45	Average	201	60
9	11490.00	59.05	74.00	-14.95	43.60	15.45	Peak	201	60
10	17235.00	59.34	68.20	-8.86	42.36	16.98	Peak	100	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).

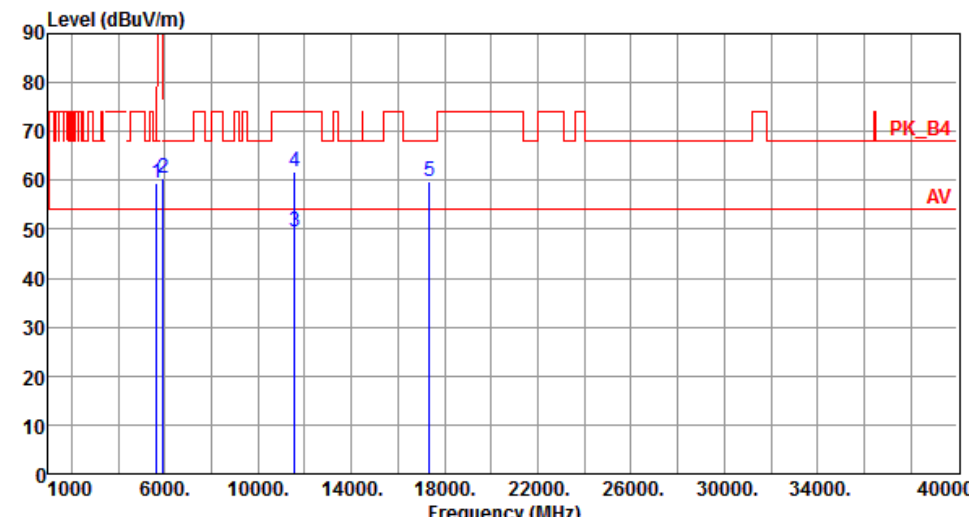
Modulation	HT20	Test Freq. (MHz)	5745
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.53	68.20	-8.67	53.62	5.91	Peak	201	221
2	5700.00	59.37	105.20	-45.83	53.14	6.23	Peak	201	221
3	5720.00	64.14	110.80	-46.66	57.86	6.28	Peak	201	221
4	5725.00	69.72	122.20	-52.48	63.43	6.29	Peak	201	221
5	5925.00	60.06	68.20	-8.14	53.24	6.82	Peak	201	221
6	7660.00	39.98	54.00	-14.02	29.64	10.34	Average	100	136
7	7660.00	51.68	74.00	-22.32	41.34	10.34	Peak	100	136
8	11490.00	49.74	54.00	-4.26	34.29	15.45	Average	201	93
9	11490.00	62.03	74.00	-11.97	46.58	15.45	Peak	201	93
10	17235.00	59.19	68.20	-9.01	42.21	16.98	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	HT20	Test Freq. (MHz)	5785
Polarization	Horizontal		

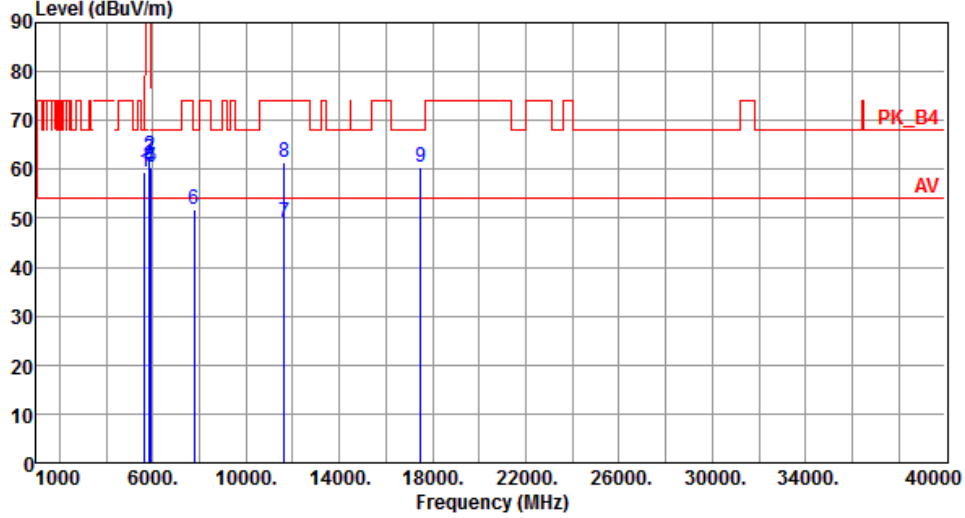


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.53	68.20	-8.67	53.62	5.91	Peak	100	75
2	5925.00	60.40	68.20	-7.80	53.58	6.82	Peak	100	75
3	11570.00	49.61	54.00	-4.39	34.31	15.30	Average	201	60
4	11570.00	61.88	74.00	-12.12	46.58	15.30	Peak	201	60
5	17355.00	59.92	68.20	-8.28	42.31	17.61	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	HT20	Test Freq. (MHz)	5785
Polarization	Vertical		
Level (dBuV/m) </			

Modulation	HT20	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.36	68.20	-8.84	53.45	5.91	Peak	100	74
2	5850.00	62.88	122.20	-59.32	56.21	6.67	Peak	100	74
3	5855.00	62.02	110.80	-48.78	55.34	6.68	Peak	100	74
4	5875.00	60.40	105.20	-44.80	53.68	6.72	Peak	100	74
5	5925.00	60.36	68.20	-7.84	53.54	6.82	Peak	100	74
6	7766.66	51.76	68.20	-16.44	41.35	10.41	Peak	100	142
7	11650.00	49.07	54.00	-4.93	34.01	15.06	Average	201	58
8	11650.00	61.40	74.00	-12.60	46.34	15.06	Peak	201	58
9	17475.00	60.38	68.20	-7.82	42.15	18.23	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	HT20	Test Freq. (MHz)	5825
Polarization	Vertical		



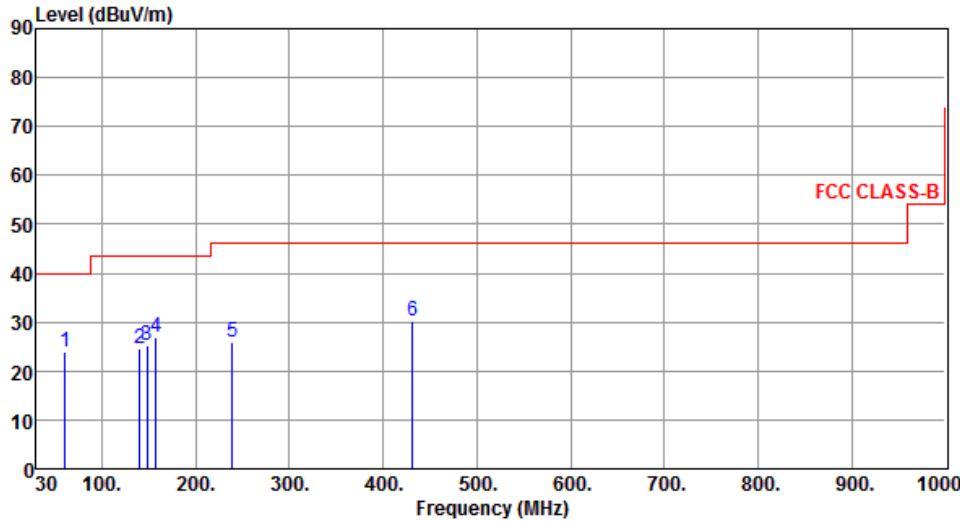
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.47	68.20	-8.73	53.56	5.91	Peak	202	225
2	5850.00	72.52	122.20	-49.68	65.85	6.67	Peak	202	225
3	5855.00	67.27	110.80	-43.53	60.59	6.68	Peak	202	225
4	5875.00	61.41	105.20	-43.79	54.69	6.72	Peak	202	225
5	5925.00	60.44	68.20	-7.76	53.62	6.82	Peak	202	225
6	7766.66	51.77	68.20	-16.43	41.36	10.41	Peak	100	140
7	11650.00	51.71	54.00	-2.29	36.65	15.06	Average	196	88
8	11650.00	65.71	74.00	-8.29	50.65	15.06	Peak	196	88
9	17475.00	60.55	68.20	-7.65	42.32	18.23	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).

Configuration 2 : PIFA antenna (Antenna No.6), Y-plane

3.5.7 Transmitter Radiated Unwanted Emissions (Below 1GHz)

Modulation	11a	Test Freq. (MHz)	5580
Polarization	Horizontal		



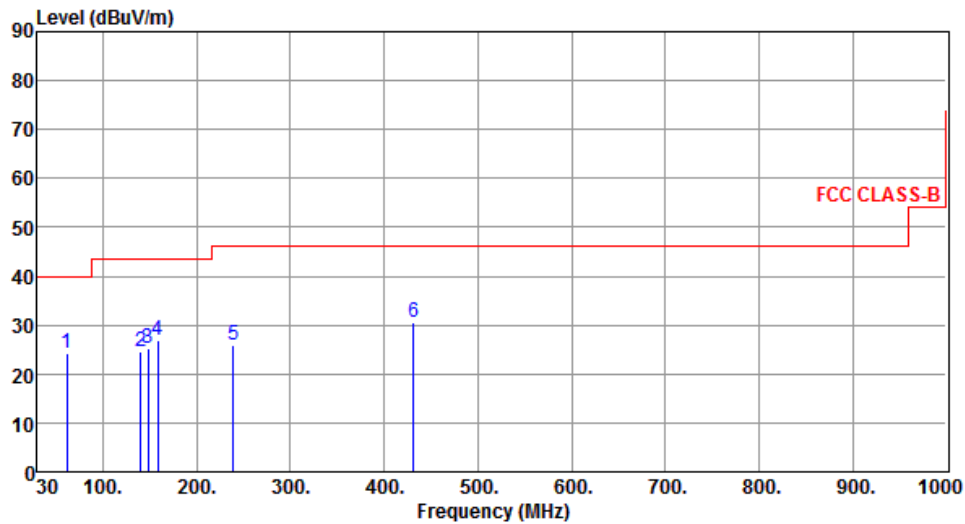
The graph displays the radiated unwanted emissions for a PIFA antenna. The y-axis represents the Level in dBuV/m, ranging from 0 to 90. The x-axis represents the Frequency in MHz, ranging from 30 to 1000. A red line indicates the FCC CLASS-B limit, which is 40 dBuV/m from 30 to 100 MHz, 45 dBuV/m from 100 to 1000 MHz, and 55 dBuV/m from 1000 to 10000 MHz. Six measured peaks are labeled with numbers 1 through 6, corresponding to the data 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	61.04	24.07	40.00	-15.93	33.53	-9.46	Peak	---	---
2	140.58	24.72	43.50	-18.78	34.00	-9.28	Peak	---	---
3	148.34	25.21	43.50	-18.29	34.04	-8.83	Peak	---	---
4	158.04	26.93	43.50	-16.57	35.64	-8.71	Peak	---	---
5	239.52	25.92	46.00	-20.08	36.37	-10.45	Peak	---	---
6	431.58	30.21	46.00	-15.79	35.05	-4.84	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	11a	Test Freq. (MHz)	5580
Polarization	Vertical		
Level (dBuV/m) <			

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



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	61.12	24.26	40.00	-15.74	33.73	-9.47	Peak	---	---
2	140.62	24.63	43.50	-18.87	33.91	-9.28	Peak	---	---
3	148.42	25.31	43.50	-18.19	34.14	-8.83	Peak	---	---
4	158.21	26.88	43.50	-16.62	35.57	-8.69	Peak	---	---
5	239.49	25.86	46.00	-20.14	36.31	-10.45	Peak	---	---
6	431.62	30.39	46.00	-15.61	35.23	-4.84	Peak	---	---

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

*Factor includes antenna factor , cable loss and amplifier gain

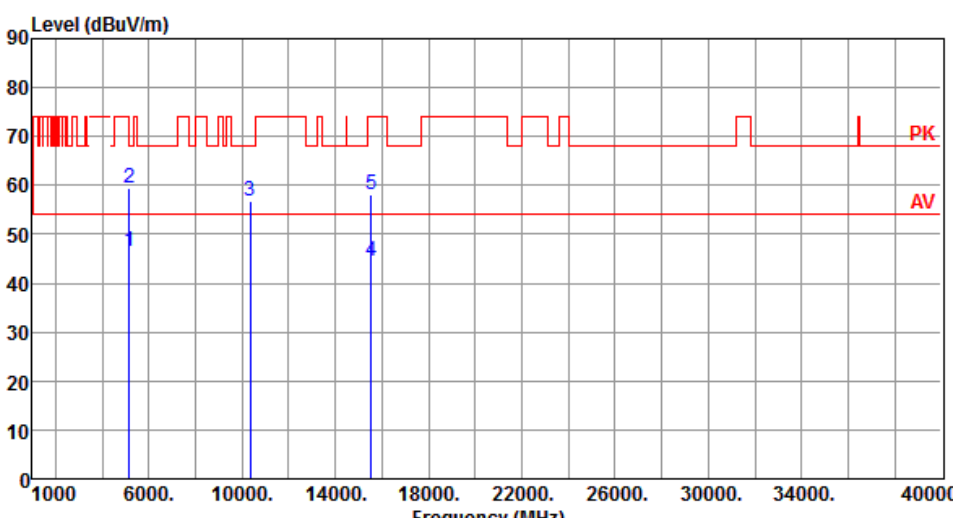
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

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

Modulation	11a	Test Freq. (MHz)	5825
Polarization	Vertical		
Level (dBuV/m)			

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

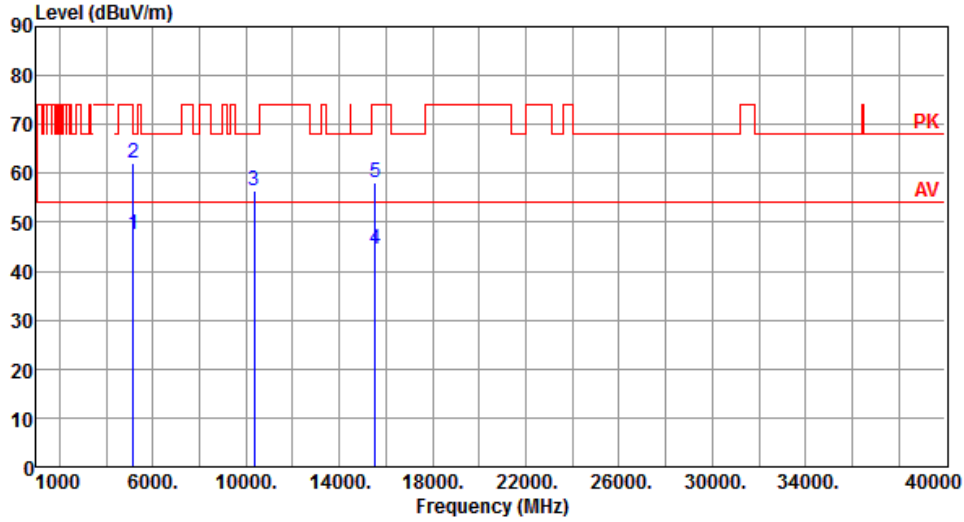
Modulation	11a	Test Freq. (MHz)	5180
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.51	54.00	-7.49	40.56	5.95	Average	103	226
2	5150.00	59.52	74.00	-14.48	53.57	5.95	Peak	103	226
3	10360.00	56.63	68.20	-11.57	41.53	15.10	Peak	100	50
4	15540.00	44.40	54.00	-9.60	28.75	15.65	Average	100	60
5	15540.00	58.02	74.00	-15.98	42.37	15.65	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).

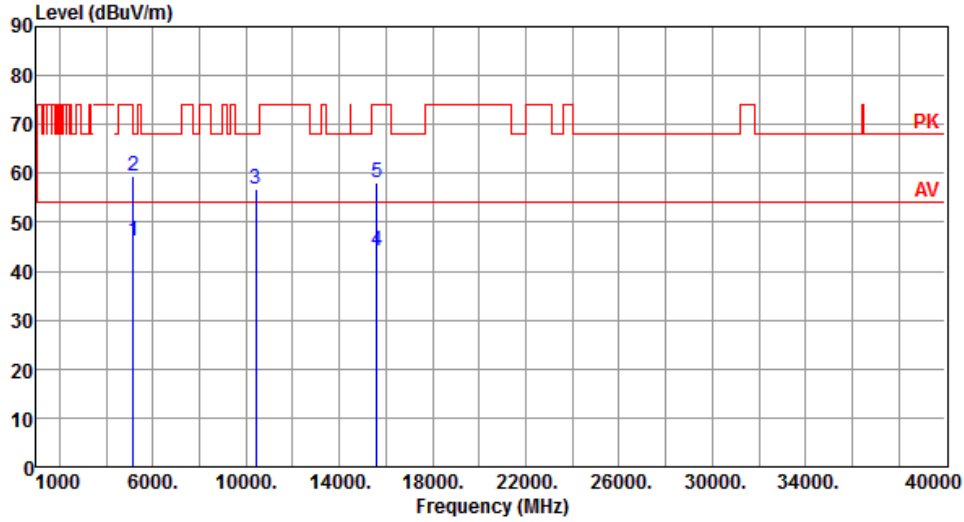
Modulation	11a	Test Freq. (MHz)	5180
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	47.60	54.00	-6.40	41.65	5.95	Average	126	279
2	5150.00	61.98	74.00	-12.02	56.03	5.95	Peak	126	279
3	10360.00	56.46	68.20	-11.74	41.36	15.10	Peak	100	20
4	15540.00	44.34	54.00	-9.66	28.69	15.65	Average	100	50
5	15540.00	58.07	74.00	-15.93	42.42	15.65	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).

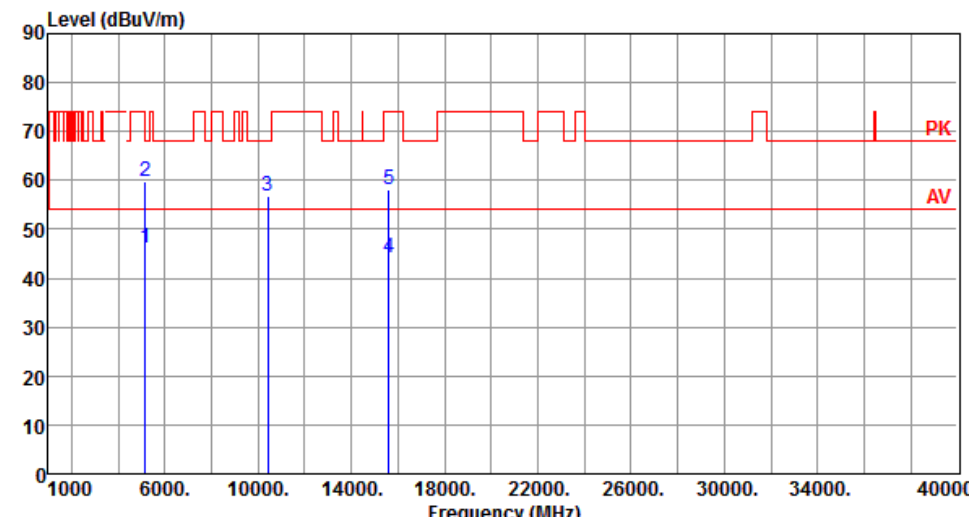
Modulation	11a	Test Freq. (MHz)	5200
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.20	54.00	-7.80	40.25	5.95	Average	105	230
2	5150.00	59.48	74.00	-14.52	53.53	5.95	Peak	105	230
3	10400.00	56.90	68.20	-11.30	41.57	15.33	Peak	100	50
4	15600.00	44.05	54.00	-9.95	28.56	15.49	Average	100	90
5	15600.00	58.00	74.00	-16.00	42.51	15.49	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	11a	Test Freq. (MHz)	5200
Polarization	Vertical		



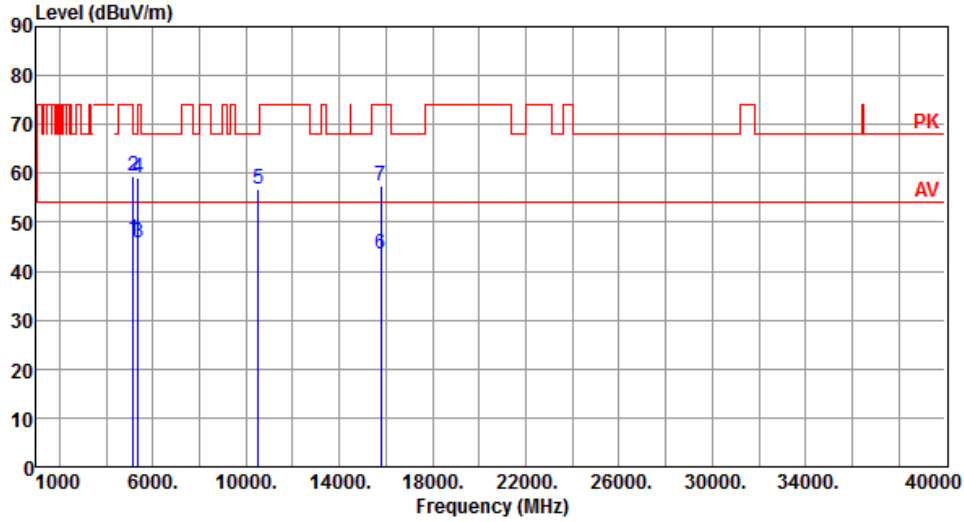
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.30	54.00	-7.70	40.35	5.95	Average	125	278
2	5150.00	59.64	74.00	-14.36	53.69	5.95	Peak	125	278
3	10400.00	56.86	68.20	-11.34	41.53	15.33	Peak	100	80
4	15600.00	44.14	54.00	-9.86	28.65	15.49	Average	100	30
5	15600.00	58.03	74.00	-15.97	42.54	15.49	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)	5240
Polarization	Horizontal		
Level (dBuV/m)			

Modulation	11a	Test Freq. (MHz)	5240
Polarization	Vertical		
Level (dBuV/m) </			

Modulation	11a	Test Freq. (MHz)	5260
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.48	54.00	-7.52	40.53	5.95	Average	105	229
2	5150.00	59.49	74.00	-14.51	53.54	5.95	Peak	105	229
3	5350.00	45.72	54.00	-8.28	40.32	5.40	Average	105	229
4	5350.00	59.08	74.00	-14.92	53.68	5.40	Peak	105	229
5	10520.00	56.86	68.20	-11.34	41.53	15.33	Peak	100	50
6	15780.00	43.52	54.00	-10.48	28.57	14.95	Average	100	40
7	15780.00	57.48	74.00	-16.52	42.53	14.95	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).

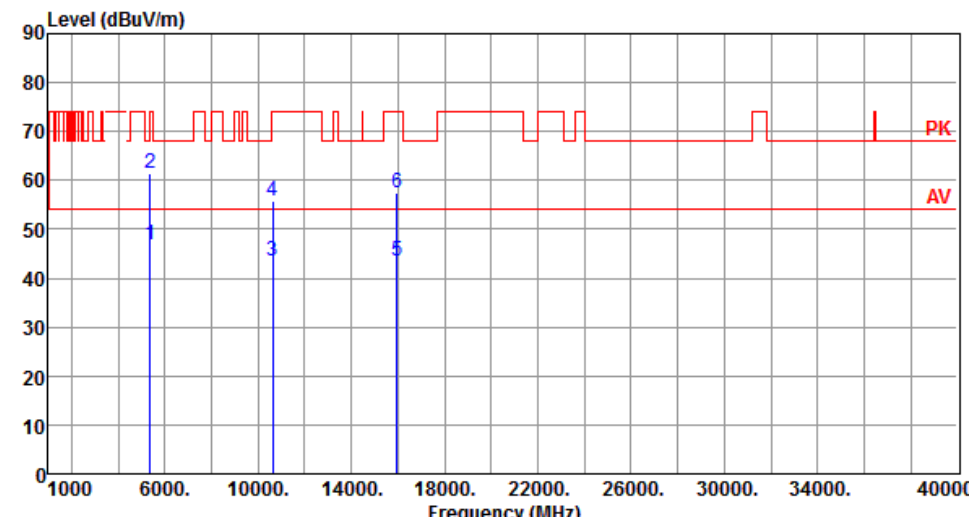
Modulation	11a	Test Freq. (MHz)	5260
Polarization	Vertical		
Level (dBUV/m) </			

Modulation	11a	Test Freq. (MHz)	5300
Polarization	Horizontal		
Level (dBuV/m)			

Modulation	11a	Test Freq. (MHz)	5300
Polarization	Vertical		
Level (dBuV/m)			

Modulation	11a	Test Freq. (MHz)	5320
Polarization	Horizontal		
 			

Modulation	11a	Test Freq. (MHz)	5320
Polarization	Vertical		

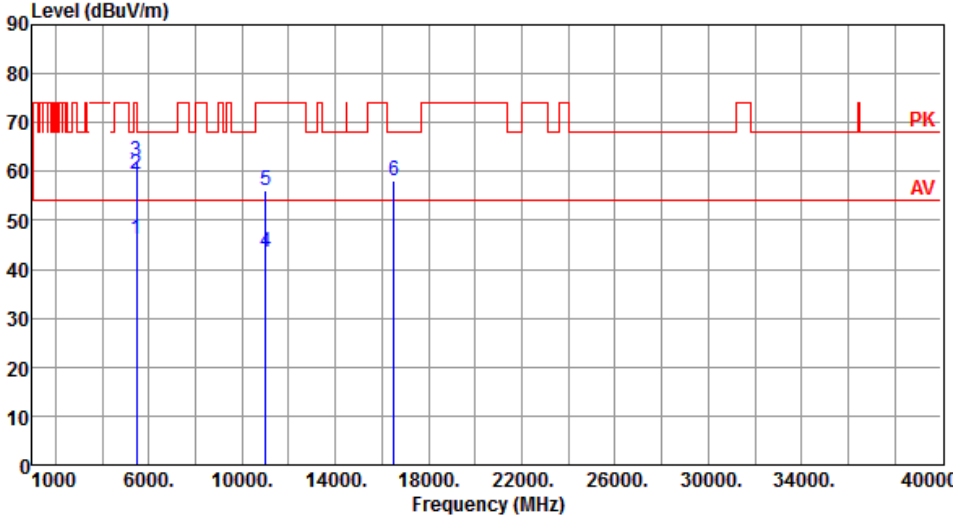


	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	46.99	54.00	-7.01	41.59	5.40	Average	131	265
2	5350.00	61.38	74.00	-12.62	55.98	5.40	Peak	131	265
3	10640.00	43.62	54.00	-10.38	28.26	15.36	Average	100	30
4	10640.00	55.94	74.00	-18.06	40.58	15.36	Peak	100	30
5	15960.00	43.65	54.00	-10.35	28.74	14.91	Average	100	50
6	15960.00	57.57	74.00	-16.43	42.66	14.91	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)	5500
Polarization	Horizontal		
Level (dBuV/m) <			

Modulation	11a	Test Freq. (MHz)	5500
Polarization	Vertical		

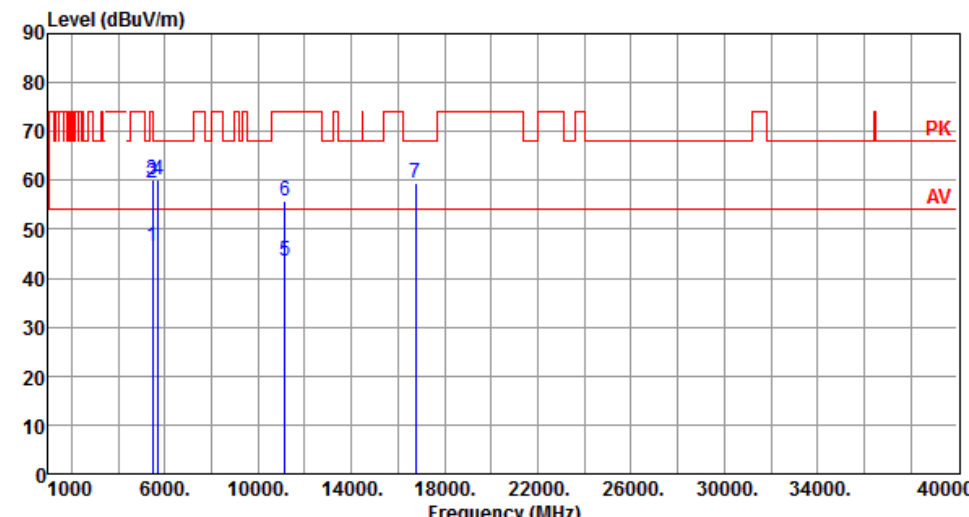


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.30	54.00	-7.70	40.38	5.92	Average	100	51
2	5460.00	59.53	74.00	-14.47	53.61	5.92	Peak	100	51
3	5470.00	61.94	68.20	-6.26	55.98	5.96	Peak	100	51
4	11000.00	43.64	54.00	-10.36	28.06	15.58	Average	100	30
5	11000.00	56.17	74.00	-17.83	40.59	15.58	Peak	100	30
6	16500.00	58.25	68.20	-9.95	42.42	15.83	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)	5580
Polarization	Horizontal		
Level (dBUV/m)			

Modulation	11a	Test Freq. (MHz)	5580
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.49	54.00	-7.51	40.57	5.92	Average	100	53
2	5460.00	59.60	74.00	-14.40	53.68	5.92	Peak	100	53
3	5470.00	60.27	68.20	-7.93	54.31	5.96	Peak	100	53
4	5725.00	59.98	68.20	-8.22	53.69	6.29	Peak	100	53
5	11160.00	43.41	54.00	-10.59	28.15	15.26	Average	100	30
6	11160.00	55.84	74.00	-18.16	40.58	15.26	Peak	100	30
7	16740.00	59.29	68.20	-8.91	42.44	16.85	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).

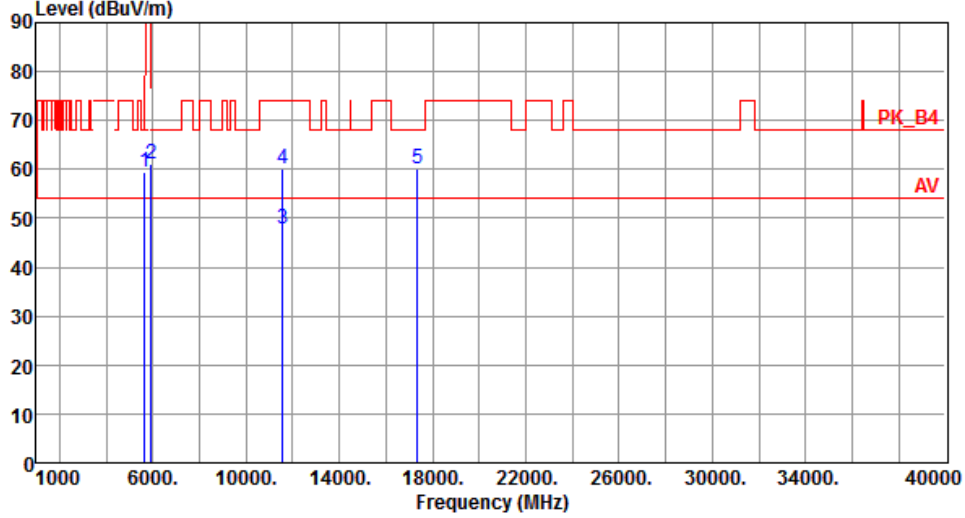
Modulation	11a	Test Freq. (MHz)	5700
Polarization	Horizontal		
Level (dBuV/m) </			

Modulation	11a	Test Freq. (MHz)	5700
Polarization	Vertical		
Level (dBuV/m)			

Modulation	11a	Test Freq. (MHz)	5745
Polarization	Horizontal		
Level (dBUV/m)			

Modulation	11a	Test Freq. (MHz)	5745
Polarization	Vertical		
Level (dBuV/m) </			

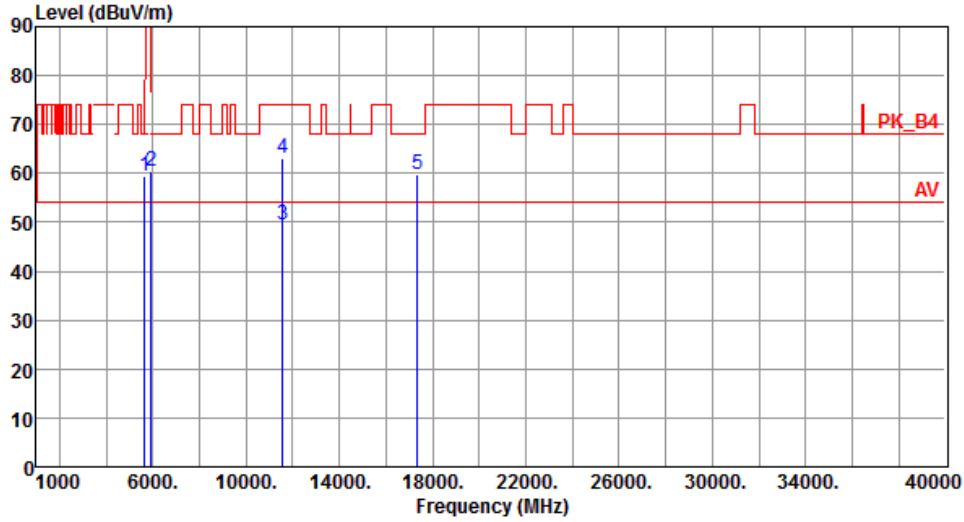
Modulation	11a	Test Freq. (MHz)	5785
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.43	68.20	-8.77	53.52	5.91	Peak	100	56
2	5925.00	61.18	68.20	-7.02	54.36	6.82	Peak	100	56
3	11570.00	47.78	54.00	-6.22	32.48	15.30	Average	202	59
4	11570.00	60.26	74.00	-13.74	44.96	15.30	Peak	202	59
5	17355.00	60.06	68.20	-8.14	42.45	17.61	Peak	100	80

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		

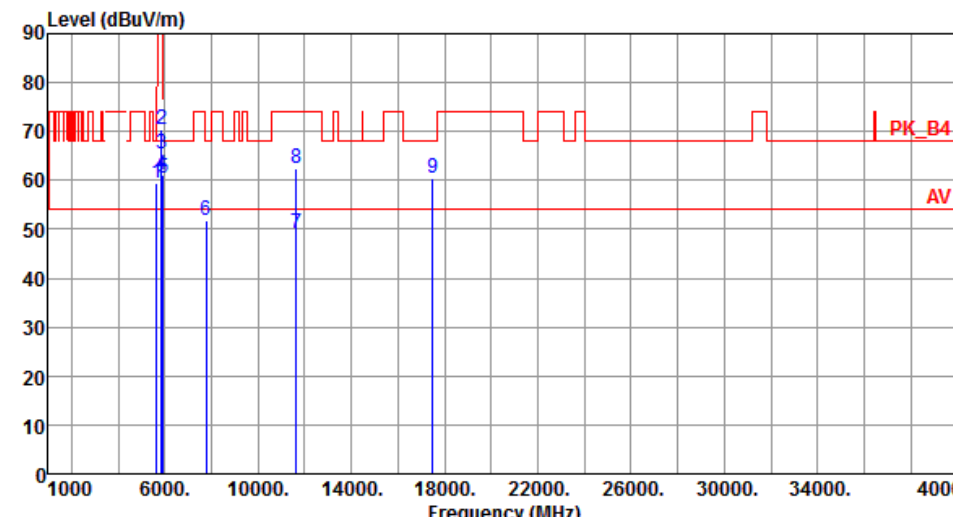


	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.36	68.20	-8.84	53.45	5.91	Peak	100	44
2	5925.00	60.47	68.20	-7.73	53.65	6.82	Peak	100	44
3	11570.00	49.61	54.00	-4.39	34.31	15.30	Average	200	118
4	11570.00	62.98	74.00	-11.02	47.68	15.30	Peak	200	118
5	17355.00	59.86	68.20	-8.34	42.25	17.61	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		
Level (dBuV/m)			

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



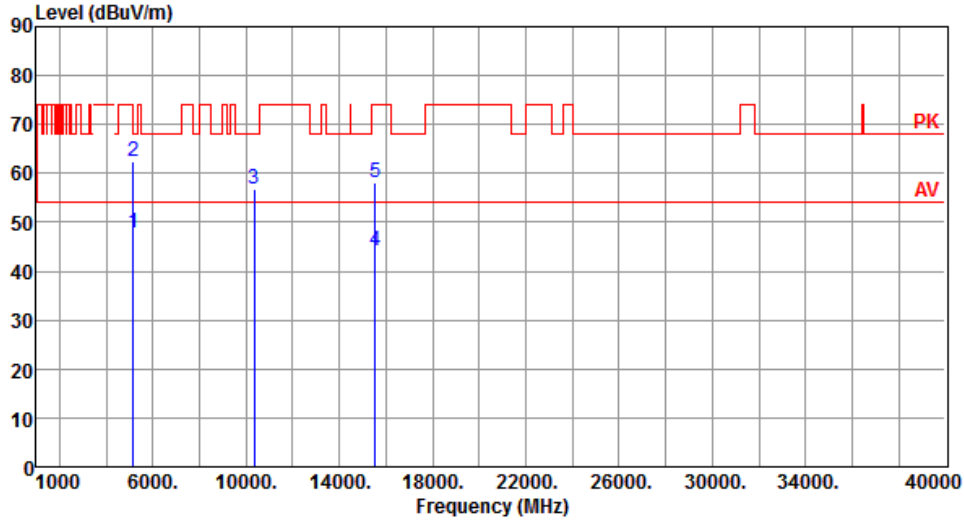
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.44	68.20	-8.76	53.53	5.91	Peak	100	49
2	5850.00	70.53	122.20	-51.67	63.86	6.67	Peak	100	49
3	5855.00	65.31	110.80	-45.49	58.63	6.68	Peak	100	49
4	5875.00	60.98	105.20	-44.22	54.26	6.72	Peak	100	49
5	5925.00	60.39	68.20	-7.81	53.57	6.82	Peak	100	49
6	7766.66	51.84	68.20	-16.36	41.43	10.41	Peak	100	50
7	11650.00	49.29	54.00	-4.71	34.23	15.06	Average	199	117
8	11650.00	62.36	74.00	-11.64	47.30	15.06	Peak	199	117
9	17475.00	60.49	68.20	-7.71	42.26	18.23	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).

3.5.9 Transmitter Radiated Unwanted Emissions (Above 1GHz) for HT20

Modulation	HT20	Test Freq. (MHz)	5180
Polarization	Horizontal		
Level (dBuV/m)			

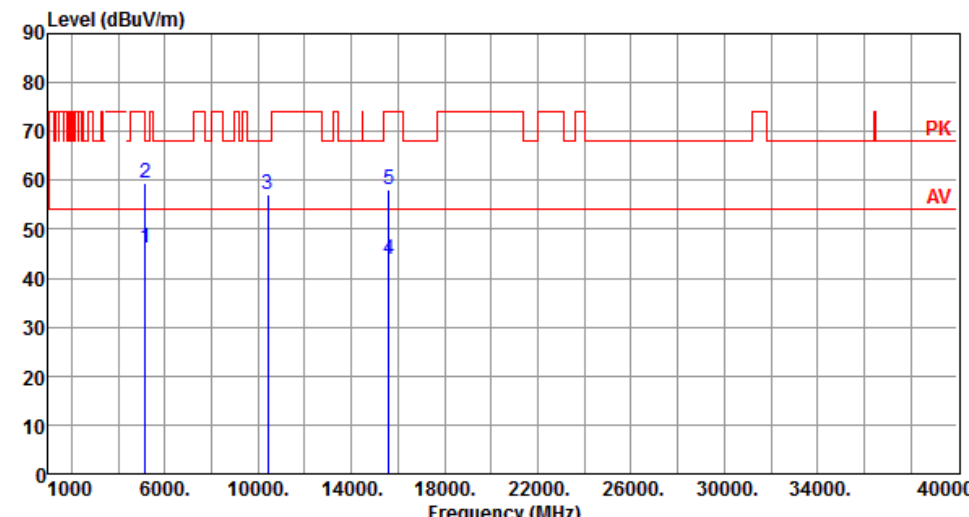
Modulation	HT20	Test Freq. (MHz)	5180
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	47.69	54.00	-6.31	41.74	5.95	Average	122	280
2	5150.00	62.53	74.00	-11.47	56.58	5.95	Peak	122	280
3	10360.00	56.64	68.20	-11.56	41.54	15.10	Peak	100	30
4	15540.00	44.21	54.00	-9.79	28.56	15.65	Average	100	50
5	15540.00	58.03	74.00	-15.97	42.38	15.65	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).

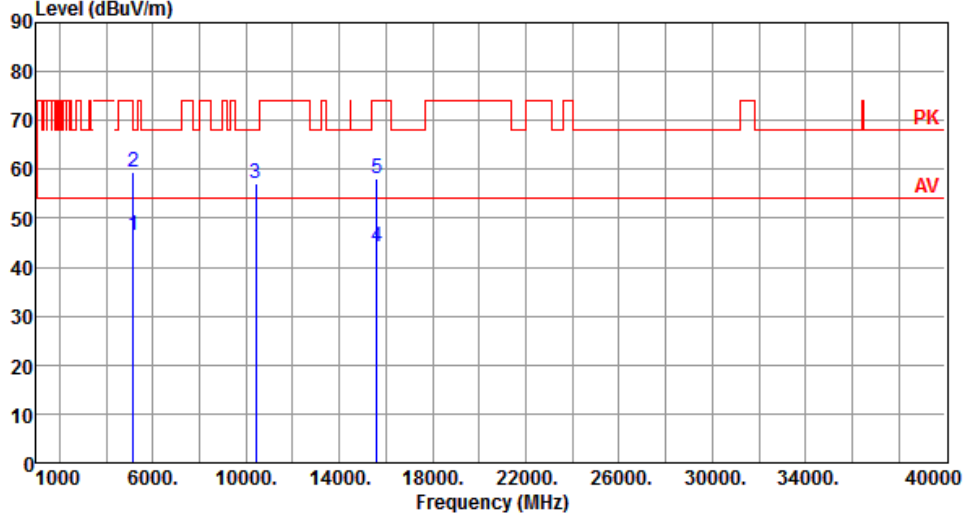
Modulation	HT20	Test Freq. (MHz)	5200
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.26	54.00	-7.74	40.31	5.95	Average	105	228
2	5150.00	59.37	74.00	-14.63	53.42	5.95	Peak	105	228
3	10400.00	56.96	68.20	-11.24	41.63	15.33	Peak	100	50
4	15600.00	43.91	54.00	-10.09	28.42	15.49	Average	100	40
5	15600.00	58.16	74.00	-15.84	42.67	15.49	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).

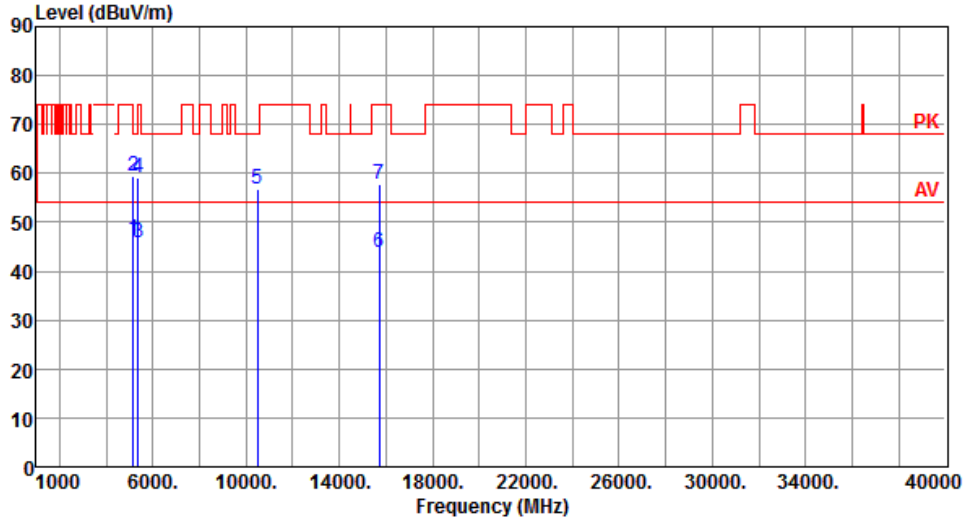
Modulation	HT20	Test Freq. (MHz)	5200
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.37	54.00	-7.63	40.42	5.95	Average	130	278
2	5150.00	59.49	74.00	-14.51	53.54	5.95	Peak	130	278
3	10400.00	57.00	68.20	-11.20	41.67	15.33	Peak	100	55
4	15600.00	44.01	54.00	-9.99	28.52	15.49	Average	100	10
5	15600.00	58.12	74.00	-15.88	42.63	15.49	Peak	100	10

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).

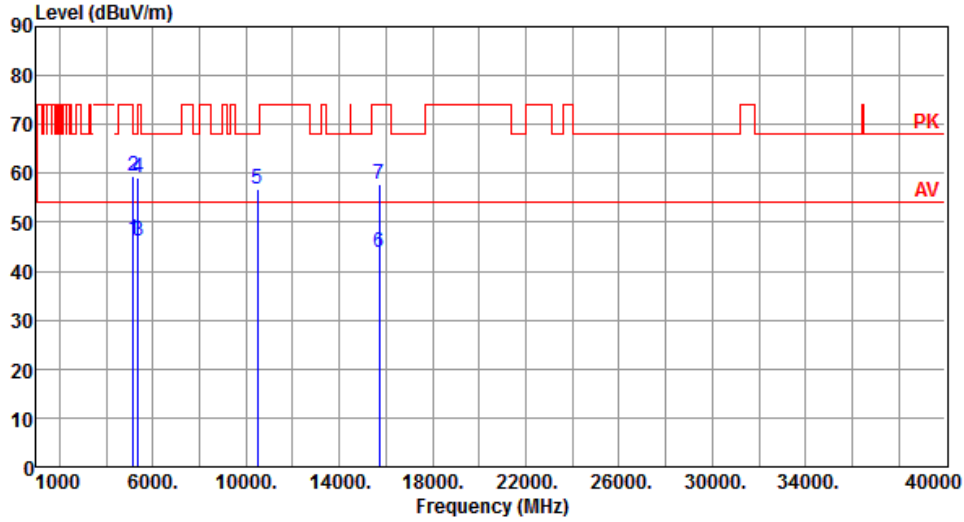
Modulation	HT20	Test Freq. (MHz)	5240
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.33	54.00	-7.67	40.38	5.95	Average	100	222
2	5150.00	59.49	74.00	-14.51	53.54	5.95	Peak	100	222
3	5350.00	45.93	54.00	-8.07	40.53	5.40	Average	100	222
4	5350.00	59.08	74.00	-14.92	53.68	5.40	Peak	100	222
5	10480.00	56.92	68.20	-11.28	41.61	15.31	Peak	100	70
6	15720.00	43.82	54.00	-10.18	28.59	15.23	Average	100	65
7	15720.00	57.79	74.00	-16.21	42.56	15.23	Peak	100	65

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).

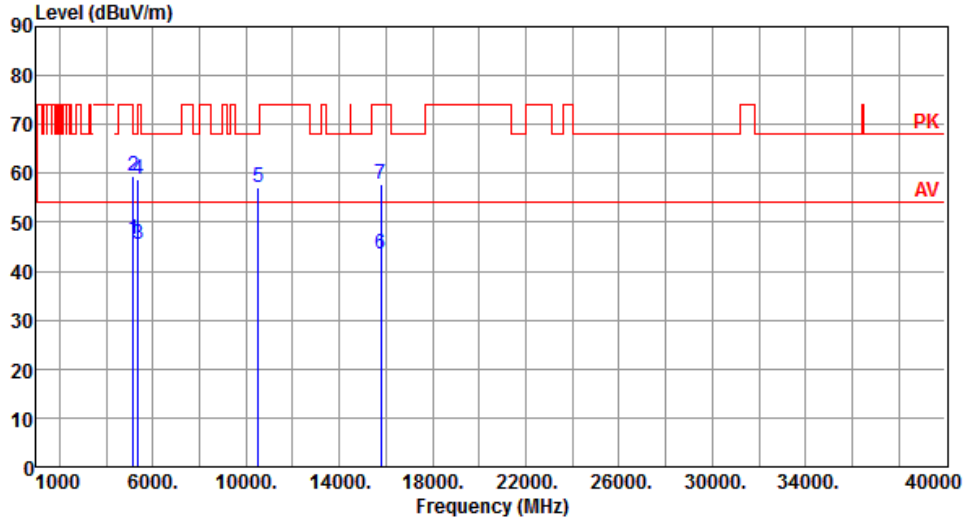
Modulation	HT20	Test Freq. (MHz)	5240
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.39	54.00	-7.61	40.44	5.95	Average	125	282
2	5150.00	59.31	74.00	-14.69	53.36	5.95	Peak	125	282
3	5350.00	46.03	54.00	-7.97	40.63	5.40	Average	125	282
4	5350.00	58.98	74.00	-15.02	53.58	5.40	Peak	125	282
5	10480.00	56.83	68.20	-11.37	41.52	15.31	Peak	100	20
6	15720.00	43.86	54.00	-10.14	28.63	15.23	Average	100	60
7	15720.00	57.65	74.00	-16.35	42.42	15.23	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	HT20	Test Freq. (MHz)	5260
Polarization	Horizontal		

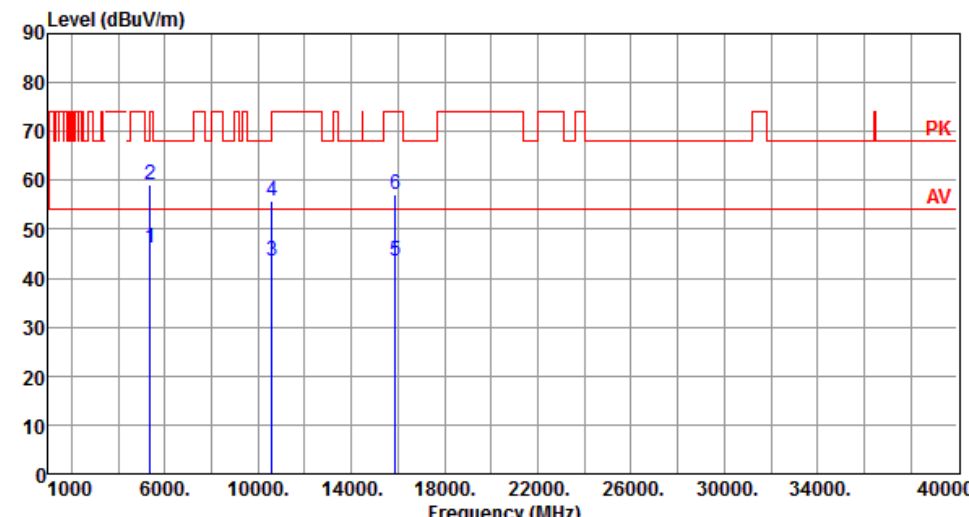


	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.41	54.00	-7.59	40.46	5.95	Average	106	229
2	5150.00	59.58	74.00	-14.42	53.63	5.95	Peak	106	229
3	5350.00	45.66	54.00	-8.34	40.26	5.40	Average	106	229
4	5350.00	58.82	74.00	-15.18	53.42	5.40	Peak	106	229
5	10520.00	56.99	68.20	-11.21	41.66	15.33	Peak	100	50
6	15780.00	43.62	54.00	-10.38	28.67	14.95	Average	100	20
7	15780.00	57.82	74.00	-16.18	42.87	14.95	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	HT20	Test Freq. (MHz)	5260
Polarization	Vertical		
Level (dBUV/m)			

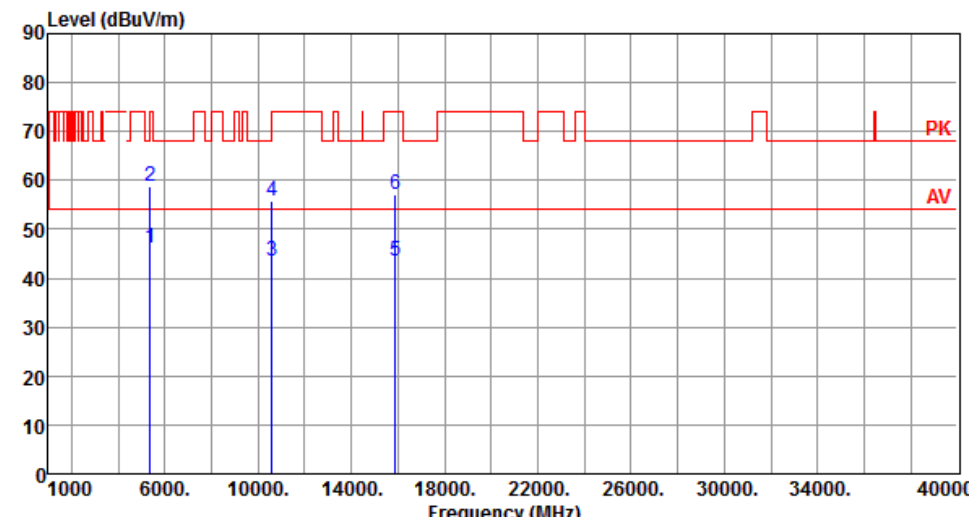
Modulation	HT20	Test Freq. (MHz)	5300
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	46.02	54.00	-7.98	40.62	5.40	Average	106	225
2	5350.00	58.98	74.00	-15.02	53.58	5.40	Peak	106	225
3	10600.00	43.54	54.00	-10.46	28.13	15.41	Average	100	65
4	10600.00	55.92	74.00	-18.08	40.51	15.41	Peak	100	65
5	15900.00	43.53	54.00	-10.47	28.64	14.89	Average	100	70
6	15900.00	57.28	74.00	-16.72	42.39	14.89	Peak	100	70

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).

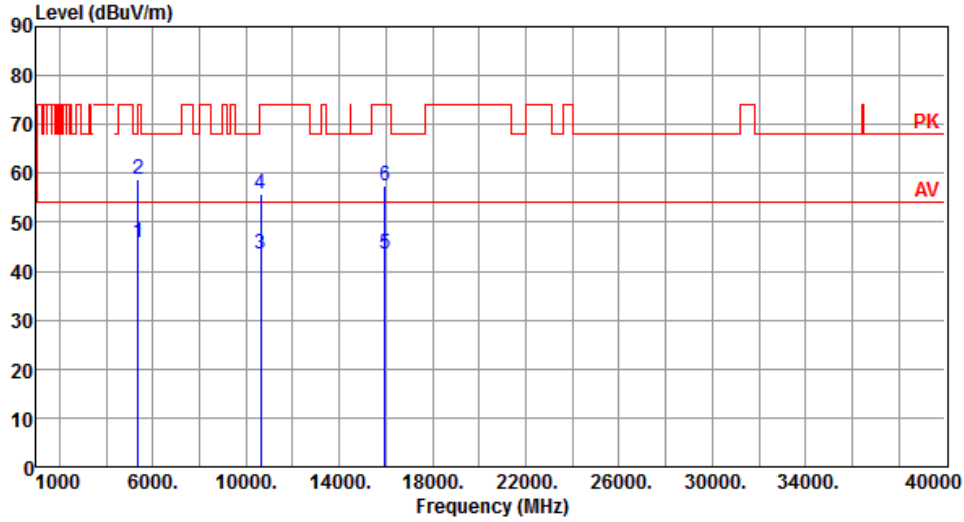
Modulation	HT20	Test Freq. (MHz)	5300
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	46.02	54.00	-7.98	40.62	5.40	Average	126	280
2	5350.00	58.92	74.00	-15.08	53.52	5.40	Peak	126	280
3	10600.00	43.51	54.00	-10.49	28.10	15.41	Average	100	70
4	10600.00	55.83	74.00	-18.17	40.42	15.41	Peak	100	70
5	15900.00	43.46	54.00	-10.54	28.57	14.89	Average	100	80
6	15900.00	57.22	74.00	-16.78	42.33	14.89	Peak	100	80

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).

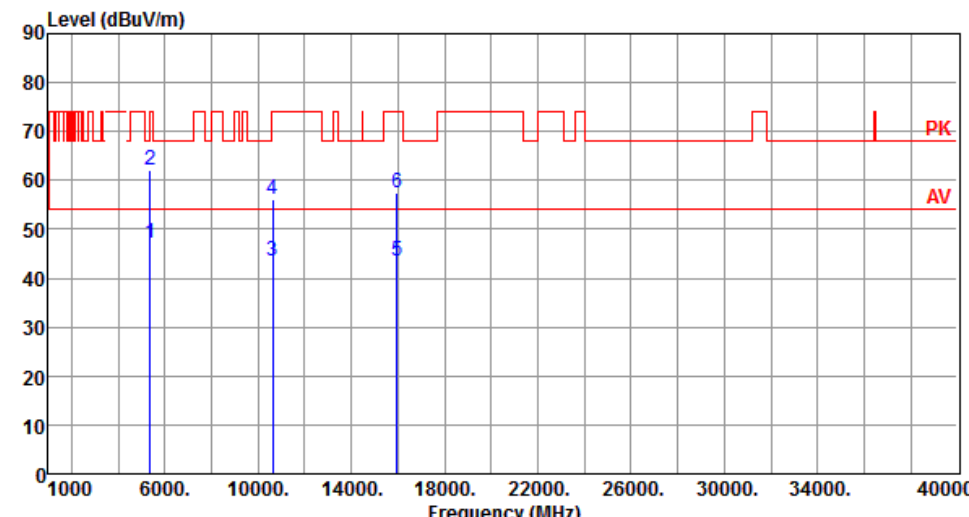
Modulation	HT20	Test Freq. (MHz)	5320
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	45.73	54.00	-8.27	40.33	5.40	Average	103	228
2	5350.00	58.91	74.00	-15.09	53.51	5.40	Peak	103	228
3	10640.00	43.60	54.00	-10.40	28.24	15.36	Average	100	70
4	10640.00	55.85	74.00	-18.15	40.49	15.36	Peak	100	70
5	15960.00	43.57	54.00	-10.43	28.66	14.91	Average	100	40
6	15960.00	57.38	74.00	-16.62	42.47	14.91	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).

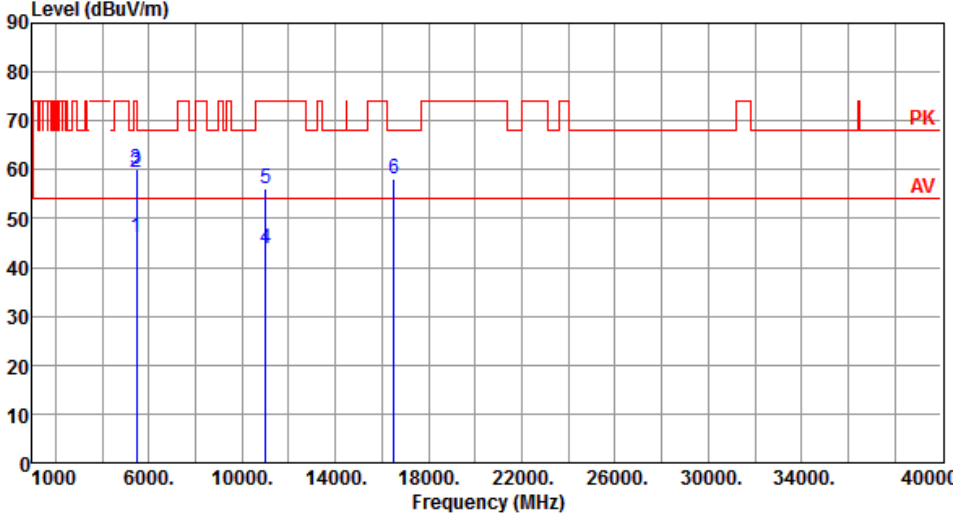
Modulation	HT20	Test Freq. (MHz)	5320
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	47.08	54.00	-6.92	41.68	5.40	Average	129	271
2	5350.00	62.08	74.00	-11.92	56.68	5.40	Peak	129	271
3	10640.00	43.50	54.00	-10.50	28.14	15.36	Average	100	40
4	10640.00	55.97	74.00	-18.03	40.61	15.36	Peak	100	40
5	15960.00	43.60	54.00	-10.40	28.69	14.91	Average	100	50
6	15960.00	57.49	74.00	-16.51	42.58	14.91	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	HT20	Test Freq. (MHz)	5500
Polarization	Horizontal		

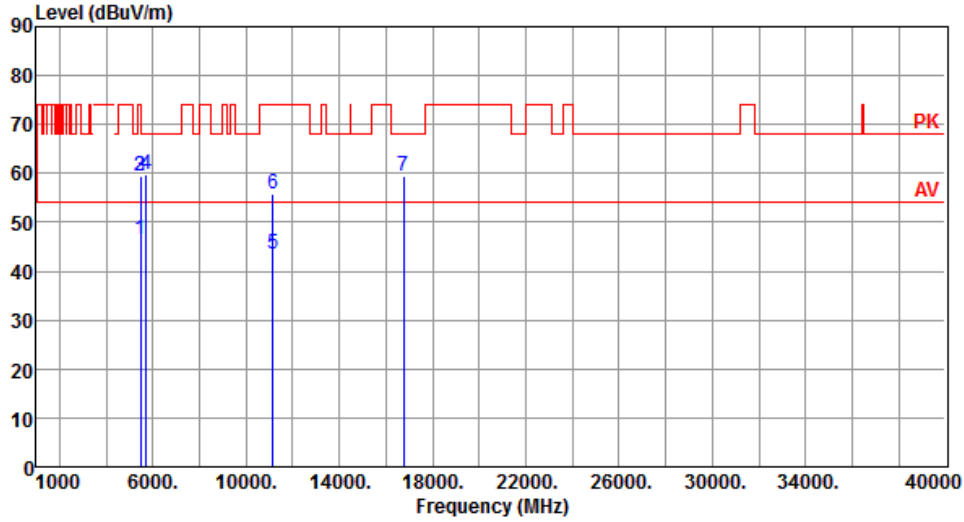


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.26	54.00	-7.74	40.34	5.92	Average	100	51
2	5460.00	59.45	74.00	-14.55	53.53	5.92	Peak	100	51
3	5470.00	60.08	68.20	-8.12	54.12	5.96	Peak	100	51
4	11000.00	43.75	54.00	-10.25	28.17	15.58	Average	100	30
5	11000.00	56.23	74.00	-17.77	40.65	15.58	Peak	100	30
6	16500.00	58.14	68.20	-10.06	42.31	15.83	Peak	100	10

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	HT20		Test Freq. (MHz)		5500	
Polarization	Vertical					
Level (dBuV/m) <						

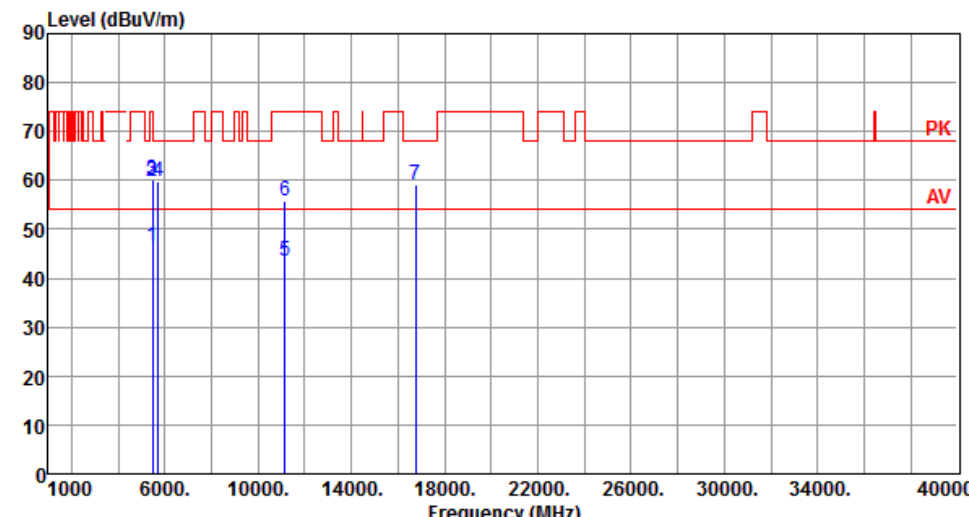
Modulation	HT20	Test Freq. (MHz)	5580
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.37	54.00	-7.63	40.45	5.92	Average	100	51
2	5460.00	59.53	74.00	-14.47	53.61	5.92	Peak	100	51
3	5470.00	59.54	68.20	-8.66	53.58	5.96	Peak	100	51
4	5725.00	59.71	68.20	-8.49	53.42	6.29	Peak	100	51
5	11160.00	43.40	54.00	-10.60	28.14	15.26	Average	100	50
6	11160.00	55.89	74.00	-18.11	40.63	15.26	Peak	100	50
7	16740.00	59.39	68.20	-8.81	42.54	16.85	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	HT20	Test Freq. (MHz)	5580
Polarization	Vertical		



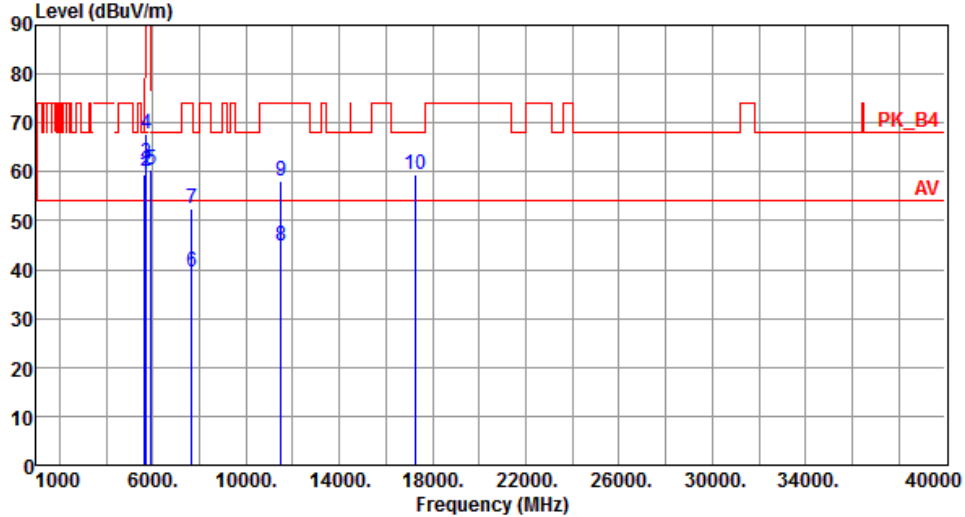
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.59	54.00	-7.41	40.67	5.92	Average	100	54
2	5460.00	59.66	74.00	-14.34	53.74	5.92	Peak	100	54
3	5470.00	60.18	68.20	-8.02	54.22	5.96	Peak	100	54
4	5725.00	59.86	68.20	-8.34	53.57	6.29	Peak	100	54
5	11160.00	43.38	54.00	-10.62	28.12	15.26	Average	100	30
6	11160.00	55.77	74.00	-18.23	40.51	15.26	Peak	100	30
7	16740.00	59.22	68.20	-8.98	42.37	16.85	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	HT20		Test Freq. (MHz)		5700	
Polarization	Horizontal					
Level (dBuV/m) <						

Modulation	HT20		Test Freq. (MHz)		5700	
Polarization	Vertical					
Level (dBuV/m)						

Modulation	HT20	Test Freq. (MHz)	5745
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.55	68.20	-8.65	53.64	5.91	Peak	100	50
2	5700.00	60.10	105.20	-45.10	53.87	6.23	Peak	100	50
3	5720.00	61.73	110.80	-49.07	55.45	6.28	Peak	100	50
4	5725.00	67.70	122.20	-54.50	61.41	6.29	Peak	100	50
5	5925.00	60.50	68.20	-7.70	53.68	6.82	Peak	100	50
6	7660.00	39.51	54.00	-14.49	29.17	10.34	Average	100	85
7	7660.00	52.51	74.00	-21.49	42.17	10.34	Peak	100	85
8	11490.00	44.70	54.00	-9.30	29.25	15.45	Average	199	135
9	11490.00	58.05	74.00	-15.95	42.60	15.45	Peak	199	135
10	17235.00	59.31	68.20	-8.89	42.33	16.98	Peak	100	75

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	HT20	Test Freq. (MHz)	5745
Polarization	Vertical		

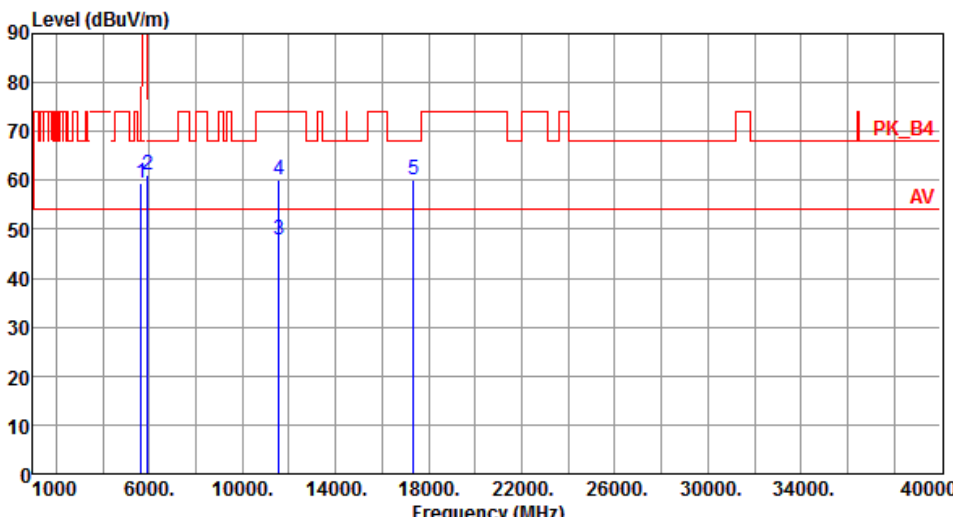
The spectrum plot shows the emission level in dBuV/m on the y-axis (0 to 90) against frequency in MHz on the x-axis (1000 to 40000). A red line represents the emission level, which is mostly between 60 and 75 dBuV/m, with several sharp peaks. A blue line represents the limit, which is a constant 68.20 dBuV/m. The peaks are labeled 1 through 10. The average level (AV) is shown as a horizontal red line at approximately 55 dBuV/m. The peak level (PK_B4) is shown as a horizontal red line at approximately 70 dBuV/m.

	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	59.45	68.20	-8.75	53.54	5.91	Peak	100	46
2	5700.00	59.92	105.20	-45.28	53.69	6.23	Peak	100	46
3	5720.00	64.93	110.80	-45.87	58.65	6.28	Peak	100	46
4	5725.00	70.84	122.20	-51.36	64.55	6.29	Peak	100	46
5	5925.00	60.37	68.20	-7.83	53.55	6.82	Peak	100	46
6	7660.00	39.54	54.00	-14.46	29.20	10.34	Average	100	70
7	7660.00	52.55	74.00	-21.45	42.21	10.34	Peak	100	70
8	11490.00	46.81	54.00	-7.19	31.36	15.45	Average	202	123
9	11490.00	59.72	74.00	-14.28	44.27	15.45	Peak	202	123
10	17235.00	59.22	68.20	-8.98	42.24	16.98	Peak	100	80

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).

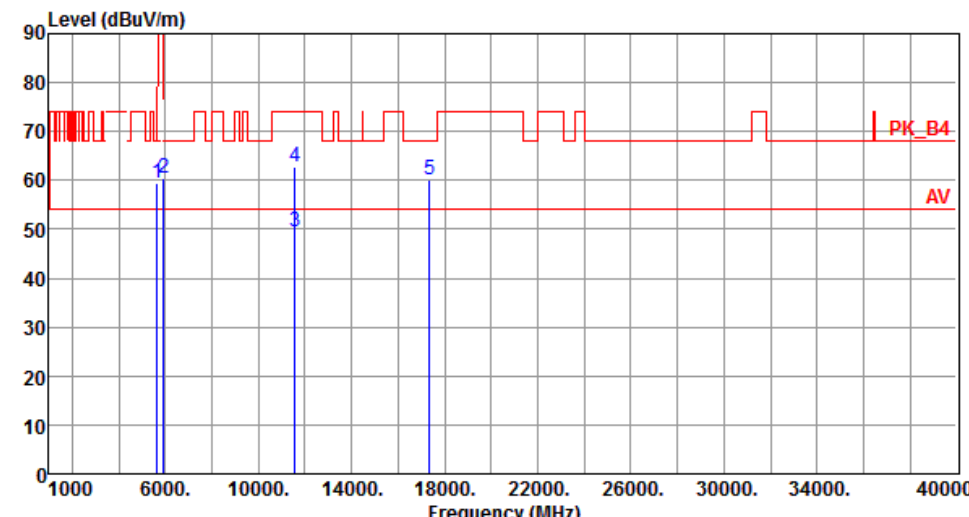
Modulation	HT20	Test Freq. (MHz)	5785
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.40	68.20	-8.80	53.49	5.91	Peak	100	54
2	5925.00	61.13	68.20	-7.07	54.31	6.82	Peak	100	54
3	11570.00	47.86	54.00	-6.14	32.56	15.30	Average	200	62
4	11570.00	60.18	74.00	-13.82	44.88	15.30	Peak	200	62
5	17355.00	60.15	68.20	-8.05	42.54	17.61	Peak	100	70

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).

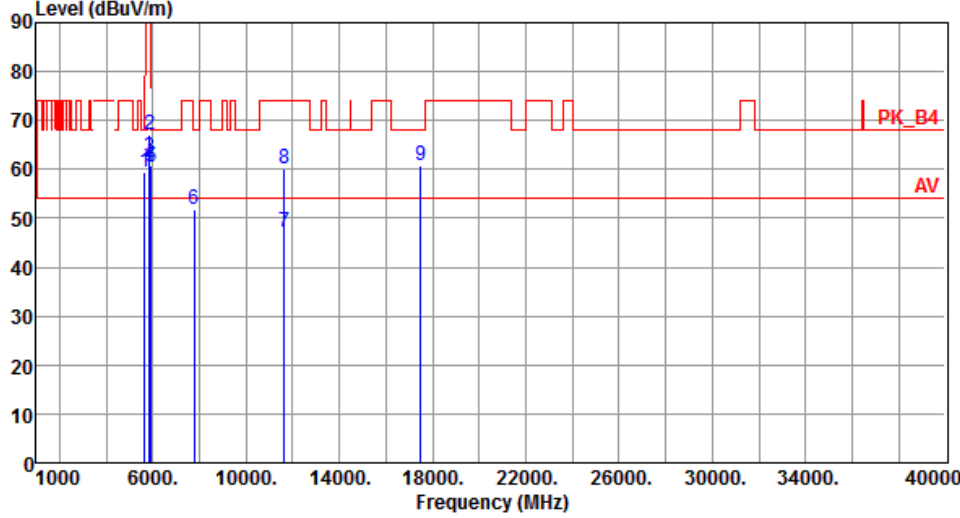
Modulation	HT20	Test Freq. (MHz)	5785
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.33	68.20	-8.87	53.42	5.91	Peak	100	48
2	5925.00	60.37	68.20	-7.83	53.55	6.82	Peak	100	48
3	11570.00	49.58	54.00	-4.42	34.28	15.30	Average	199	120
4	11570.00	62.86	74.00	-11.14	47.56	15.30	Peak	199	120
5	17355.00	59.98	68.20	-8.22	42.37	17.61	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).

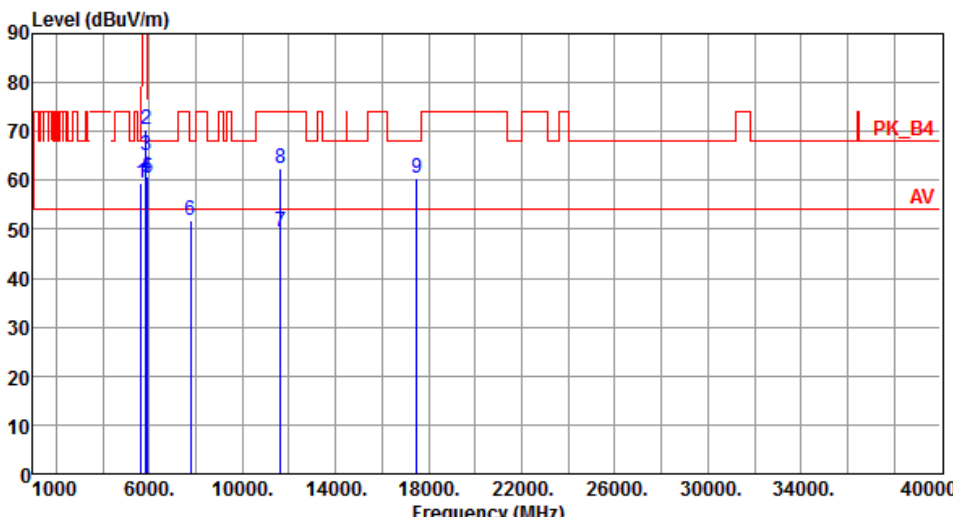
Modulation	HT20	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.35	68.20	-8.85	53.44	5.91	Peak	100	53
2	5850.00	67.22	122.20	-54.98	60.55	6.67	Peak	100	53
3	5855.00	62.35	110.80	-48.45	55.67	6.68	Peak	100	53
4	5875.00	60.68	105.20	-44.52	53.96	6.72	Peak	100	53
5	5925.00	60.29	68.20	-7.91	53.47	6.82	Peak	100	53
6	7766.66	51.96	68.20	-16.24	41.55	10.41	Peak	100	55
7	11650.00	47.31	54.00	-6.69	32.25	15.06	Average	205	119
8	11650.00	60.22	74.00	-13.78	45.16	15.06	Peak	205	119
9	17475.00	60.71	68.20	-7.49	42.48	18.23	Peak	100	70

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	HT20	Test Freq. (MHz)	5825
Polarization	Vertical		



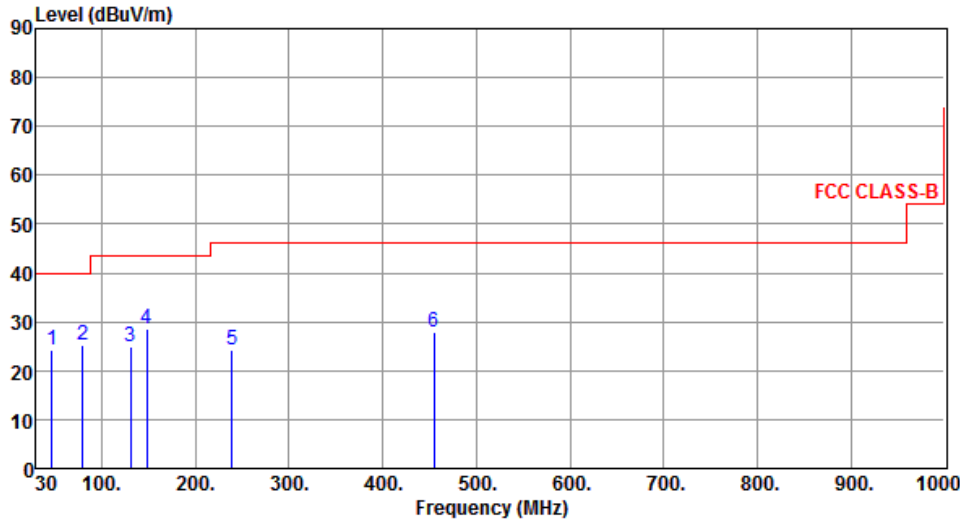
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.48	68.20	-8.72	53.57	5.91	Peak	100	51
2	5850.00	70.46	122.20	-51.74	63.79	6.67	Peak	100	51
3	5855.00	65.13	110.80	-45.67	58.45	6.68	Peak	100	51
4	5875.00	60.84	105.20	-44.36	54.12	6.72	Peak	100	51
5	5925.00	60.36	68.20	-7.84	53.54	6.82	Peak	100	51
6	7766.66	51.93	68.20	-16.27	41.52	10.41	Peak	100	60
7	11650.00	49.41	54.00	-4.59	34.35	15.06	Average	200	118
8	11650.00	62.42	74.00	-11.58	47.36	15.06	Peak	200	118
9	17475.00	60.54	68.20	-7.66	42.31	18.23	Peak	100	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).

Configuration 3 : Dipole antenna (Antenna No.8), Y-plane

3.5.10 Transmitter Radiated Unwanted Emissions (Below 1GHz)

Modulation	11a	Test Freq. (MHz)	5580
Polarization	Horizontal		

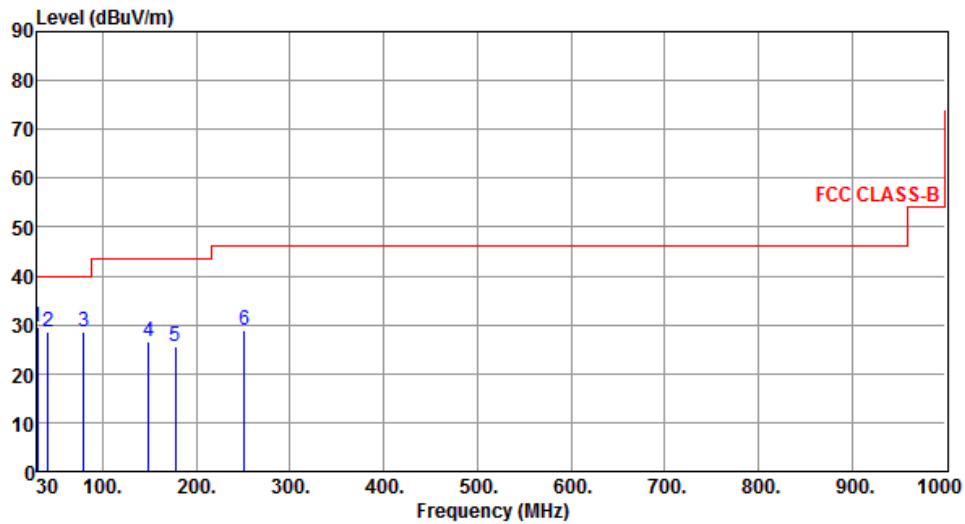


The graph displays the radiated unwanted emissions for a dipole antenna. The y-axis represents the level in dBuV/m, ranging from 0 to 90. The x-axis represents the frequency in MHz, ranging from 30 to 1000. A red line indicates the FCC CLASS-B limit, which is 40 dBuV/m from 30 to 100 MHz, 45 dBuV/m from 100 to 1000 MHz, and 55 dBuV/m from 1000 to 10000 MHz. Six peaks are identified and numbered 1 through 6, corresponding to the data 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	46.49	24.20	40.00	-15.80	32.85	-8.65	Peak	---	---
2	79.47	25.23	40.00	-14.77	38.45	-13.22	Peak	---	---
3	130.88	25.02	43.50	-18.48	35.10	-10.08	Peak	---	---
4	148.34	28.54	43.50	-14.96	37.37	-8.83	Peak	---	---
5	239.52	24.31	46.00	-21.69	34.76	-10.45	Peak	---	---
6	454.86	27.82	46.00	-18.18	31.93	-4.11	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	11a	Test Freq. (MHz)	5580
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	30.00	29.39	40.00	-10.61	39.55	-10.16	Peak	---	---
2	41.64	28.50	40.00	-11.50	37.62	-9.12	Peak	---	---
3	79.47	28.42	40.00	-11.58	41.64	-13.22	Peak	---	---
4	149.31	26.57	43.50	-16.93	35.40	-8.83	Peak	---	---
5	177.44	25.53	43.50	-17.97	35.48	-9.95	Peak	---	---
6	251.16	29.02	46.00	-16.98	39.09	-10.07	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	11a	Test Freq. (MHz)	5825
Polarization	Horizontal		
Level (dBUV/m)			

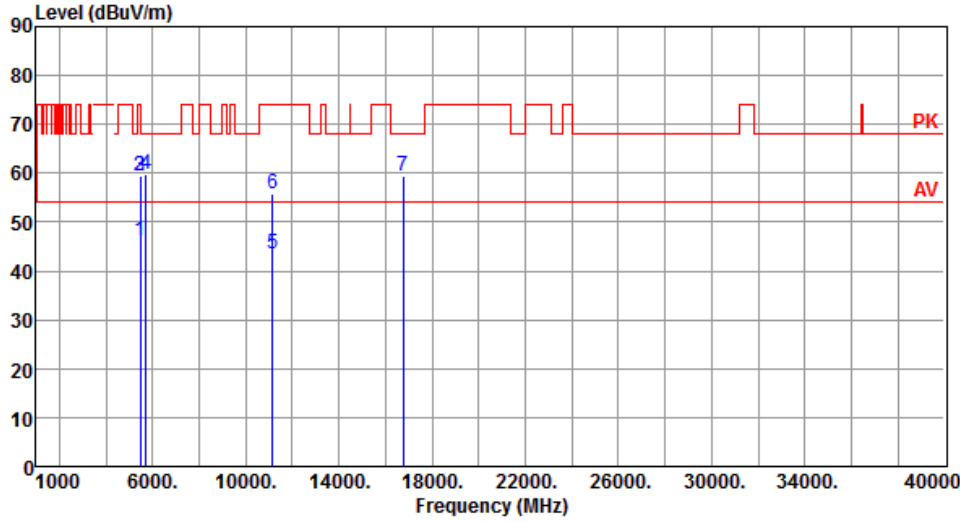
Modulation	11a	Test Freq. (MHz)	5825
Polarization	Vertical		
Level (dBuV/m) <			

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

Modulation	11a	Test Freq. (MHz)	5500
Polarization	Horizontal		
Level (dBUV/m)			

Modulation	11a	Test Freq. (MHz)	5500
Polarization	Vertical		
Level (dBuV/m)			

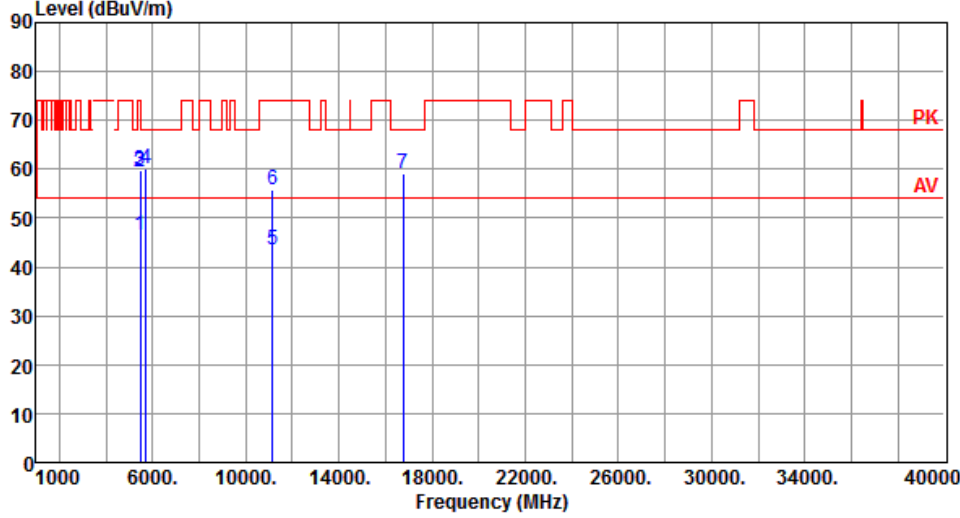
Modulation	11a	Test Freq. (MHz)	5580
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.27	54.00	-7.73	40.35	5.92	Average	105	74
2	5460.00	59.48	74.00	-14.52	53.56	5.92	Peak	105	74
3	5470.00	59.61	68.20	-8.59	53.65	5.96	Peak	105	74
4	5725.00	59.86	68.20	-8.34	53.57	6.29	Peak	105	74
5	11160.00	43.49	54.00	-10.51	28.23	15.26	Average	100	60
6	11160.00	55.94	74.00	-18.06	40.68	15.26	Peak	100	60
7	16740.00	59.47	68.20	-8.73	42.62	16.85	Peak	100	70

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).

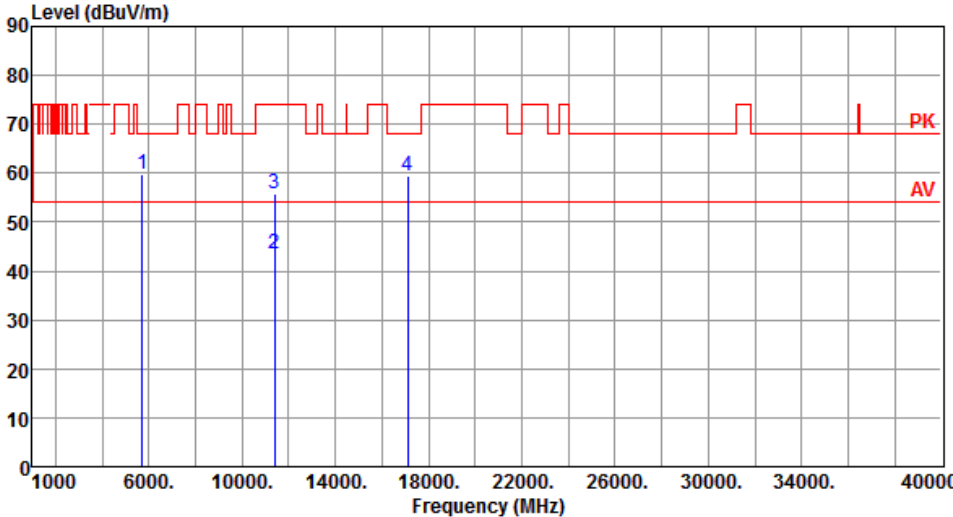
Modulation	11a	Test Freq. (MHz)	5580
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.44	54.00	-7.56	40.52	5.92	Average	249	230
2	5460.00	59.49	74.00	-14.51	53.57	5.92	Peak	249	230
3	5470.00	59.65	68.20	-8.55	53.69	5.96	Peak	249	230
4	5725.00	60.14	68.20	-8.06	53.85	6.29	Peak	249	230
5	11160.00	43.42	54.00	-10.58	28.16	15.26	Average	100	20
6	11160.00	55.92	74.00	-18.08	40.66	15.26	Peak	100	20
7	16740.00	59.26	68.20	-8.94	42.41	16.85	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)	5700
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	59.91	68.20	-8.29	53.62	6.29	Peak	106	79
2	11400.00	43.50	54.00	-10.50	28.17	15.33	Average	100	55
3	11400.00	55.79	74.00	-18.21	40.46	15.33	Peak	100	55
4	17100.00	59.40	68.20	-8.80	42.51	16.89	Peak	100	70

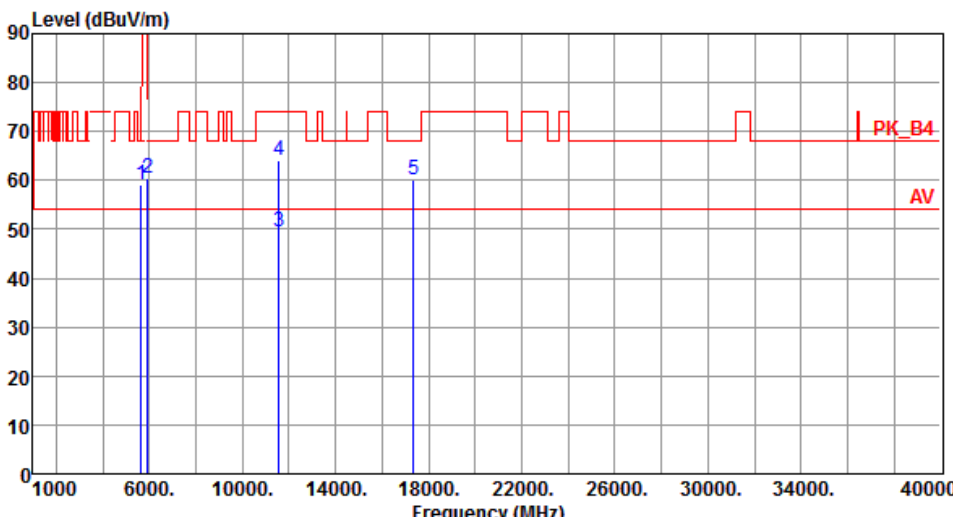
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Modulation	11a	Test Freq. (MHz)	5700
Polarization	Vertical		
Level (dBuV/m)			

Modulation	11a	Test Freq. (MHz)	5745
Polarization	Horizontal		
Level (dBuV/m) </			

Modulation	11a	Test Freq. (MHz)	5745
Polarization	Vertical		
Level (dBuV/m) <			

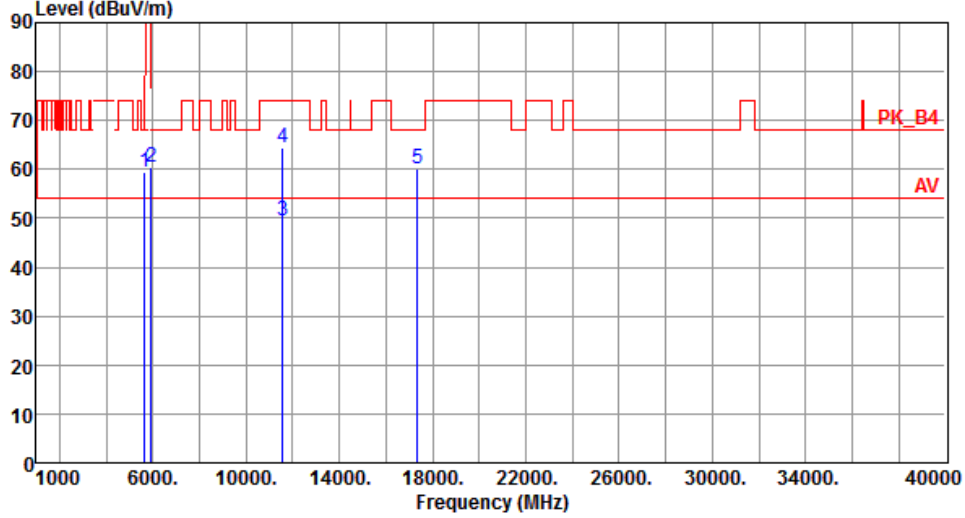
Modulation	11a	Test Freq. (MHz)	5785
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.16	68.20	-9.04	53.25	5.91	Peak	105	79
2	5925.00	60.38	68.20	-7.82	53.56	6.82	Peak	105	79
3	11570.00	49.32	54.00	-4.68	34.02	15.30	Average	185	79
4	11570.00	63.95	74.00	-10.05	48.65	15.30	Peak	185	79
5	17355.00	60.03	68.20	-8.17	42.42	17.61	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).

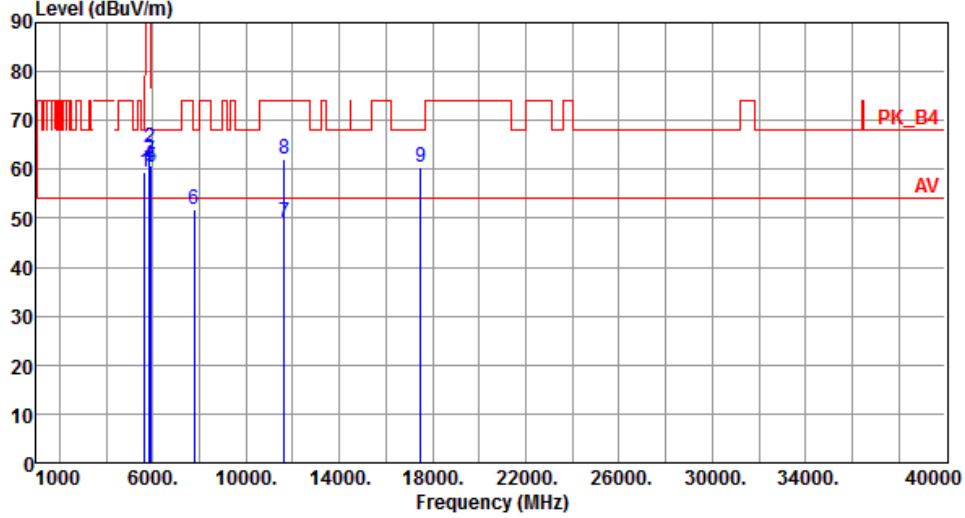
Modulation	11a	Test Freq. (MHz)	5785
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.33	68.20	-8.87	53.42	5.91	Peak	245	236
2	5925.00	60.57	68.20	-7.63	53.75	6.82	Peak	245	236
3	11570.00	49.61	54.00	-4.39	34.31	15.30	Average	100	62
4	11570.00	64.56	74.00	-9.44	49.26	15.30	Peak	100	62
5	17355.00	59.96	68.20	-8.24	42.35	17.61	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).

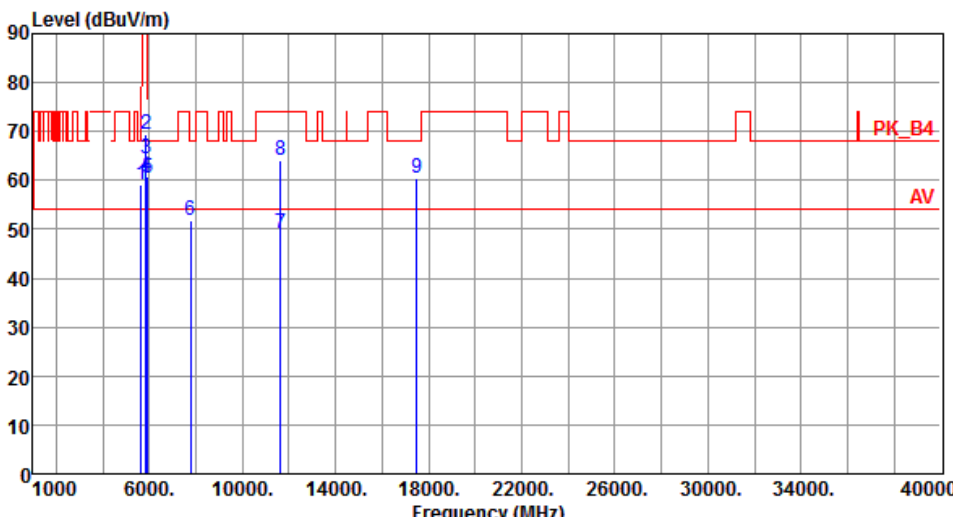
Modulation	11a	Test Freq. (MHz)	5825
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.46	68.20	-8.74	53.55	5.91	Peak	100	77
2	5850.00	64.29	122.20	-57.91	57.62	6.67	Peak	100	77
3	5855.00	62.14	110.80	-48.66	55.46	6.68	Peak	100	77
4	5875.00	60.68	105.20	-44.52	53.96	6.72	Peak	100	77
5	5925.00	60.36	68.20	-7.84	53.54	6.82	Peak	100	77
6	7766.66	51.77	68.20	-16.43	41.36	10.41	Peak	100	60
7	11650.00	49.04	54.00	-4.96	33.98	15.06	Average	181	87
8	11650.00	62.21	74.00	-11.79	47.15	15.06	Peak	181	87
9	17475.00	60.59	68.20	-7.61	42.36	18.23	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)	5825
Polarization	Vertical		

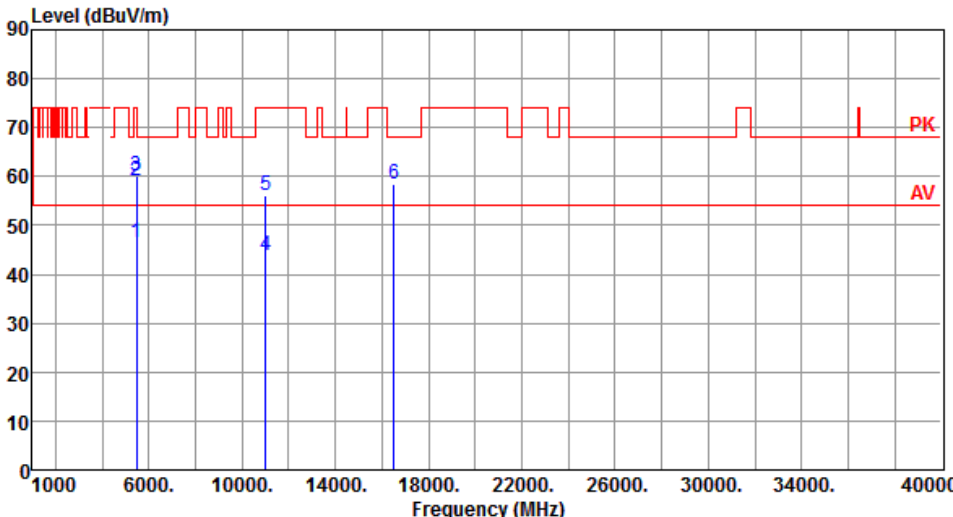


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.25	68.20	-8.95	53.34	5.91	Peak	243	232
2	5850.00	69.55	122.20	-52.65	62.88	6.67	Peak	243	232
3	5855.00	64.33	110.80	-46.47	57.65	6.68	Peak	243	232
4	5875.00	60.84	105.20	-44.36	54.12	6.72	Peak	243	232
5	5925.00	60.45	68.20	-7.75	53.63	6.82	Peak	243	232
6	7766.66	51.97	68.20	-16.23	41.56	10.41	Peak	100	90
7	11650.00	49.26	54.00	-4.74	34.20	15.06	Average	100	66
8	11650.00	64.08	74.00	-9.92	49.02	15.06	Peak	100	66
9	17475.00	60.49	68.20	-7.71	42.26	18.23	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).

3.5.12 Transmitter Radiated Unwanted Emissions (Above 1GHz) for HT20

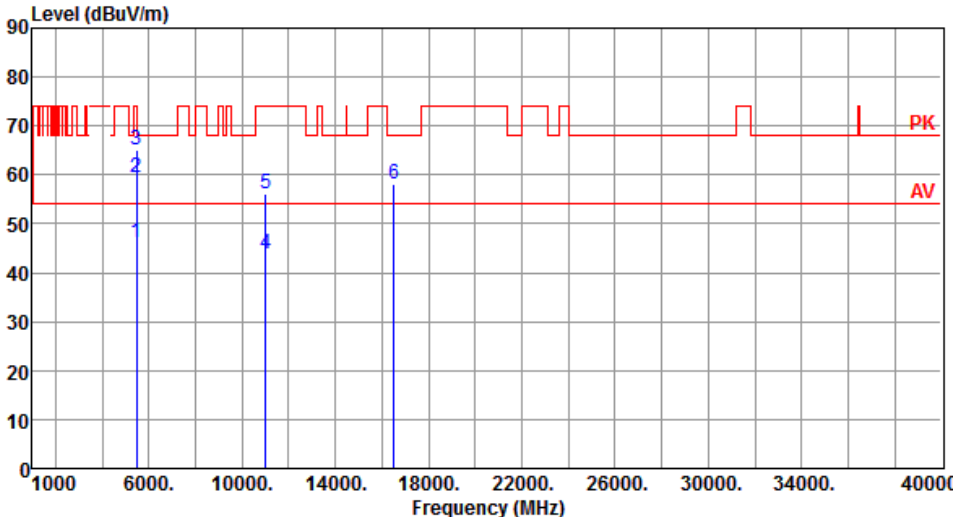
Modulation	HT20	Test Freq. (MHz)	5500
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.37	54.00	-7.63	40.45	5.92	Average	100	78
2	5460.00	59.26	74.00	-14.74	53.34	5.92	Peak	100	78
3	5470.00	60.08	68.20	-8.12	54.12	5.96	Peak	100	78
4	11000.00	43.70	54.00	-10.30	28.12	15.58	Average	100	70
5	11000.00	56.04	74.00	-17.96	40.46	15.58	Peak	100	70
6	16500.00	58.47	68.20	-9.73	42.64	15.83	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).

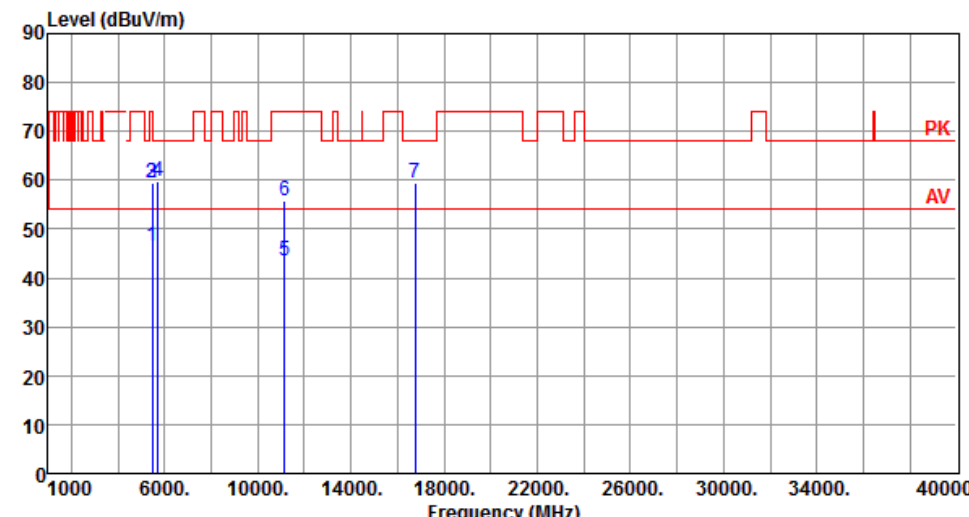
Modulation	HT20	Test Freq. (MHz)	5500
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.30	54.00	-7.70	40.38	5.92	Average	249	225
2	5460.00	59.56	74.00	-14.44	53.64	5.92	Peak	249	225
3	5470.00	65.17	68.20	-3.03	59.21	5.96	Peak	249	225
4	11000.00	43.75	54.00	-10.25	28.17	15.58	Average	100	50
5	11000.00	56.01	74.00	-17.99	40.43	15.58	Peak	100	50
6	16500.00	58.18	68.20	-10.02	42.35	15.83	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).

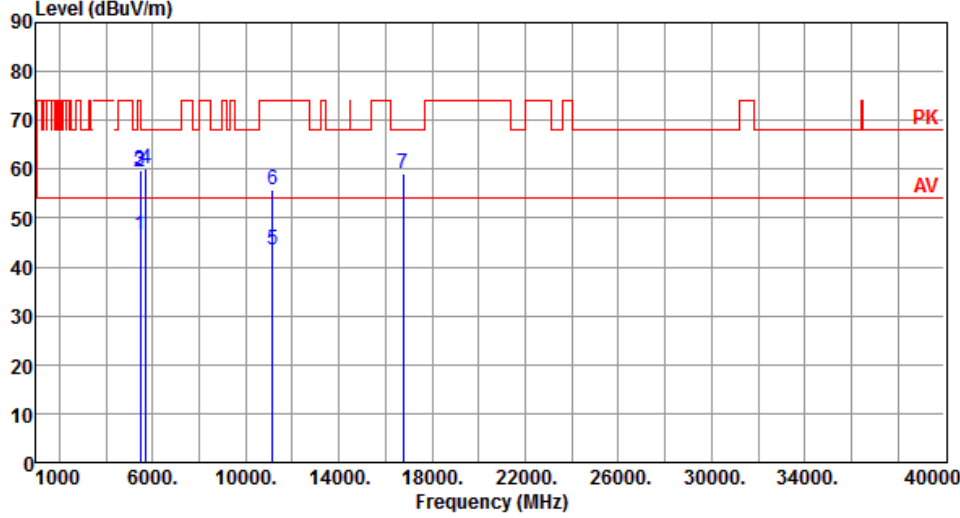
Modulation	HT20	Test Freq. (MHz)	5580
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.33	54.00	-7.67	40.41	5.92	Average	100	72
2	5460.00	59.37	74.00	-14.63	53.45	5.92	Peak	100	72
3	5470.00	59.54	68.20	-8.66	53.58	5.96	Peak	100	72
4	5725.00	59.87	68.20	-8.33	53.58	6.29	Peak	100	72
5	11160.00	43.40	54.00	-10.60	28.14	15.26	Average	100	50
6	11160.00	55.83	74.00	-18.17	40.57	15.26	Peak	100	50
7	16740.00	59.42	68.20	-8.78	42.57	16.85	Peak	100	70

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	HT20	Test Freq. (MHz)	5580
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	46.53	54.00	-7.47	40.61	5.92	Average	251	230
2	5460.00	59.59	74.00	-14.41	53.67	5.92	Peak	251	230
3	5470.00	59.83	68.20	-8.37	53.87	5.96	Peak	251	230
4	5725.00	60.03	68.20	-8.17	53.74	6.29	Peak	251	230
5	11160.00	43.51	54.00	-10.49	28.25	15.26	Average	100	20
6	11160.00	55.82	74.00	-18.18	40.56	15.26	Peak	100	20
7	16740.00	59.21	68.20	-8.99	42.36	16.85	Peak	100	30

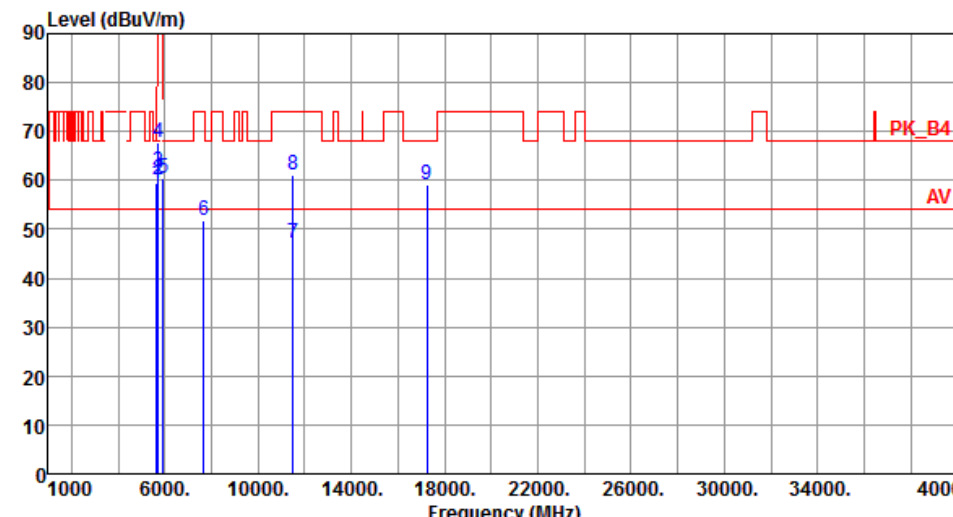
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Modulation	HT20	Test Freq. (MHz)	5700
Polarization	Horizontal		
Level (dBuV/m) </			

Modulation	HT20	Test Freq. (MHz)	5700
Polarization	Vertical		
Level (dBuV/m)			

Modulation	HT20	Test Freq. (MHz)	5745
Polarization	Horizontal		
Level (dBuV/m)			

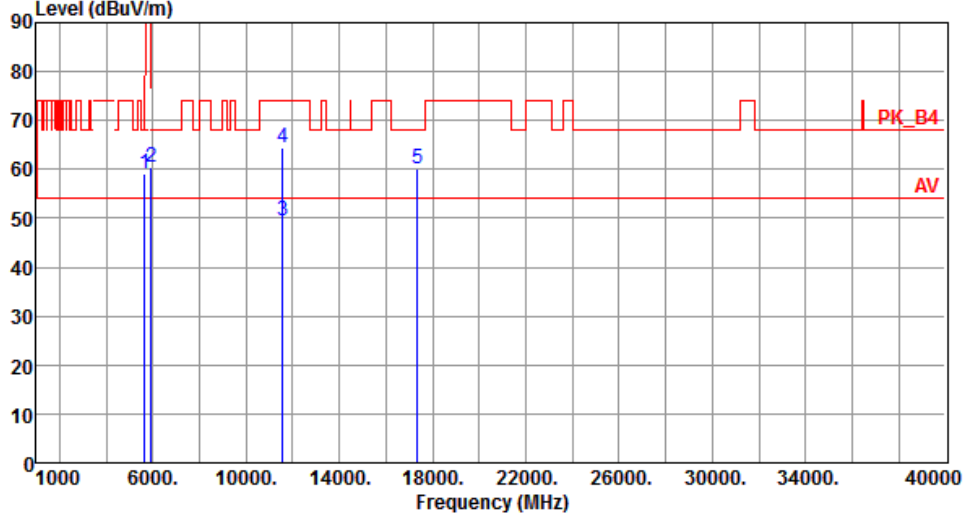
Modulation	HT20	Test Freq. (MHz)	5745
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.45	68.20	-8.75	53.54	5.91	Peak	243	240
2	5700.00	59.95	105.20	-45.25	53.72	6.23	Peak	243	240
3	5720.00	61.76	110.80	-49.04	55.48	6.28	Peak	243	240
4	5725.00	67.64	122.20	-54.56	61.35	6.29	Peak	243	240
5	5925.00	60.37	68.20	-7.83	53.55	6.82	Peak	243	240
6	7660.00	51.88	74.00	-22.12	41.54	10.34	Peak	100	60
7	11490.00	47.31	54.00	-6.69	31.86	15.45	Average	100	64
8	11490.00	61.11	74.00	-12.89	45.66	15.45	Peak	100	64
9	17235.00	59.26	68.20	-8.94	42.28	16.98	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).

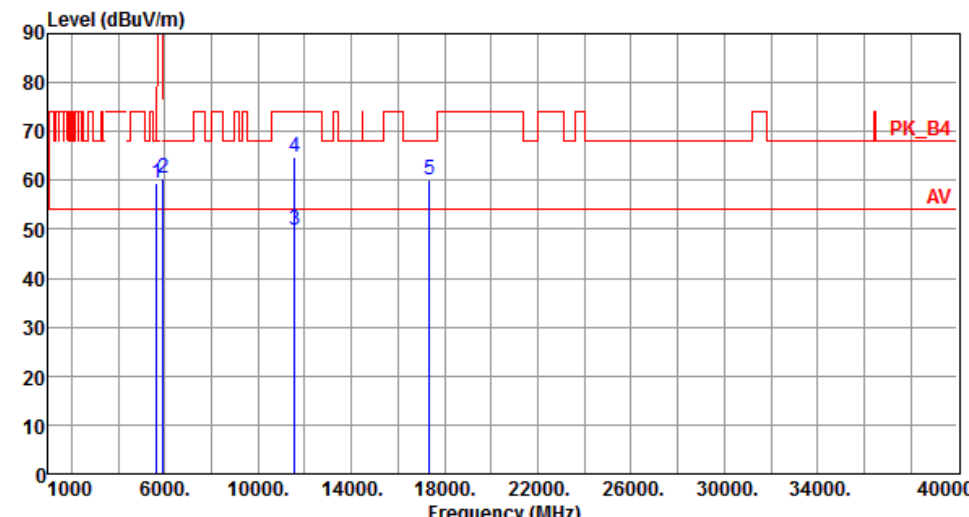
Modulation	HT20	Test Freq. (MHz)	5785
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.25	68.20	-8.95	53.34	5.91	Peak	105	83
2	5925.00	60.49	68.20	-7.71	53.67	6.82	Peak	105	83
3	11570.00	49.51	54.00	-4.49	34.21	15.30	Average	186	80
4	11570.00	64.28	74.00	-9.72	48.98	15.30	Peak	186	80
5	17355.00	59.98	68.20	-8.22	42.37	17.61	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	HT20	Test Freq. (MHz)	5785
Polarization	Vertical		

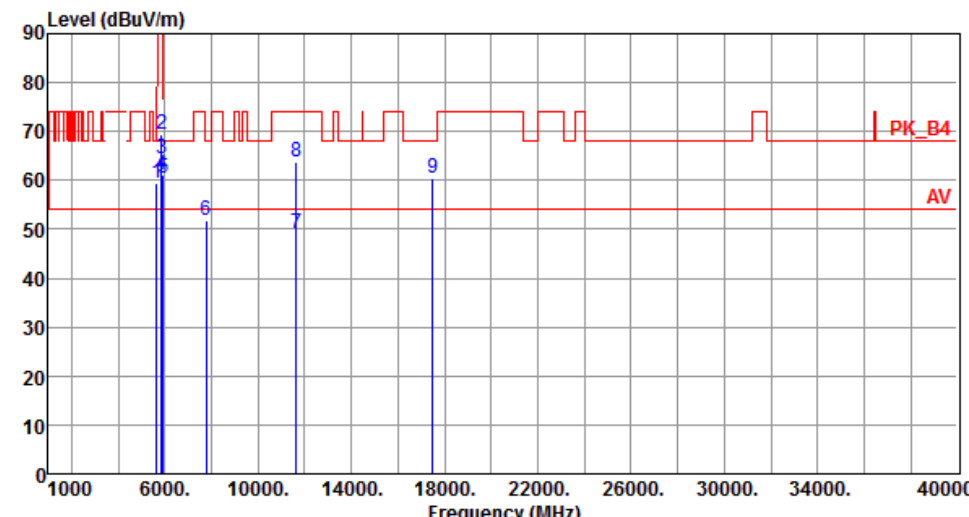


	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.46	68.20	-8.74	53.55	5.91	Peak	250	236
2	5925.00	60.47	68.20	-7.73	53.65	6.82	Peak	250	236
3	11570.00	49.85	54.00	-4.15	34.55	15.30	Average	100	59
4	11570.00	64.81	74.00	-9.19	49.51	15.30	Peak	100	59
5	17355.00	59.96	68.20	-8.24	42.35	17.61	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	HT20	Test Freq. (MHz)	5825
Polarization	Horizontal		
Level (dBuV/m)			

Modulation	HT20	Test Freq. (MHz)	5825
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5650.00	59.56	68.20	-8.64	53.65	5.91	Peak	240	236
2	5850.00	69.43	122.20	-52.77	62.76	6.67	Peak	240	236
3	5855.00	64.54	110.80	-46.26	57.86	6.68	Peak	240	236
4	5875.00	60.98	105.20	-44.22	54.26	6.72	Peak	240	236
5	5925.00	60.37	68.20	-7.83	53.55	6.82	Peak	240	236
6	7766.66	51.83	68.20	-16.37	41.42	10.41	Peak	100	80
7	11650.00	49.08	54.00	-4.92	34.02	15.06	Average	100	65
8	11650.00	63.68	74.00	-10.32	48.62	15.06	Peak	100	65
9	17475.00	60.38	68.20	-7.82	42.15	18.23	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).

Configuration 4 : Dipole antenna (Antenna No.1) , Y-plane

3.5.13 Transmitter Radiated Unwanted Emissions (Below 1GHz)

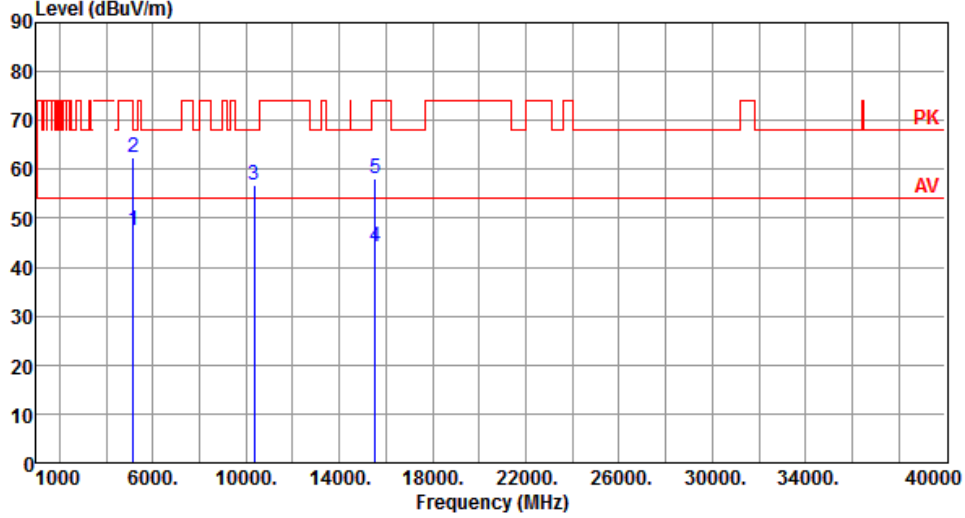
Modulation	11a	Test Freq. (MHz)	5240
Polarization	Horizontal		
Level (dBuV/m)			

Modulation	11a	Test Freq. (MHz)	5240
Polarization	Vertical		
Level (dBuV/m) </			

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

Modulation	11a	Test Freq. (MHz)	5180
Polarization	Horizontal		
Level (dBuV/m) </			

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



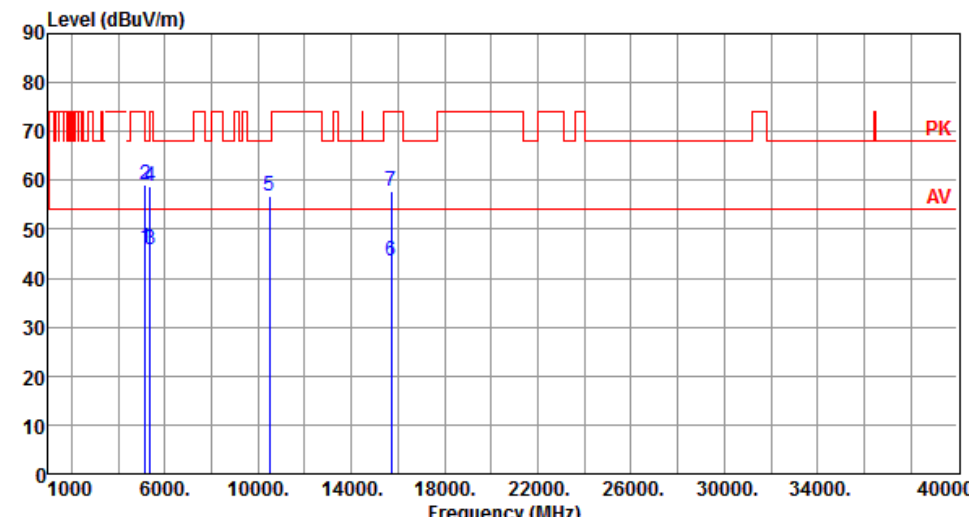
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	47.62	54.00	-6.38	41.67	5.95	Average	188	199
2	5150.00	62.51	74.00	-11.49	56.56	5.95	Peak	188	199
3	10360.00	56.63	68.20	-11.57	41.53	15.10	Peak	100	90
4	15540.00	44.33	54.00	-9.67	28.68	15.65	Average	100	30
5	15540.00	58.18	74.00	-15.82	42.53	15.65	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)	5200
Polarization	Horizontal		
Level (dBuV/m) </			

Modulation	11a	Test Freq. (MHz)	5200
Polarization	Vertical		
Level (dBuV/m) </			

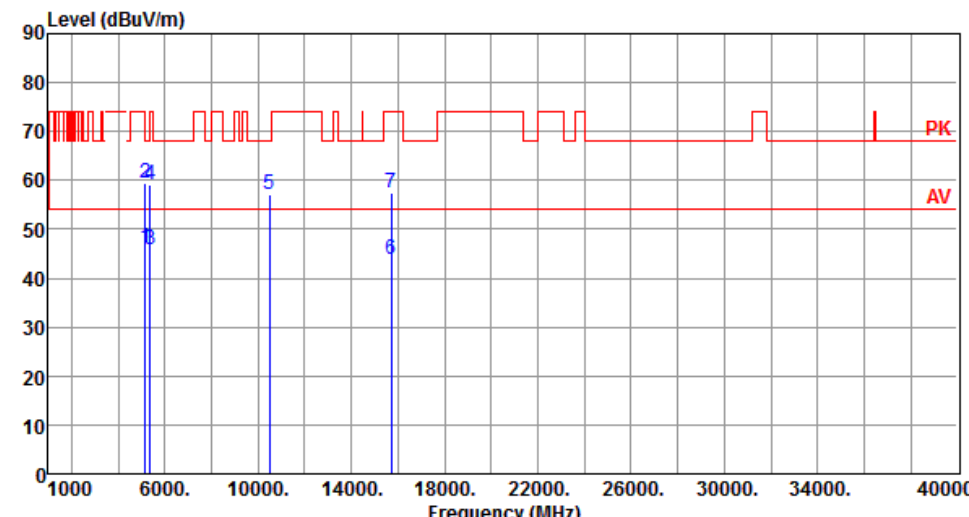
Modulation	11a	Test Freq. (MHz)	5240
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.23	54.00	-7.77	40.28	5.95	Average	311	156
2	5150.00	59.21	74.00	-14.79	53.26	5.95	Peak	311	156
3	5350.00	45.76	54.00	-8.24	40.36	5.40	Average	311	156
4	5350.00	58.94	74.00	-15.06	53.54	5.40	Peak	311	156
5	10480.00	56.77	68.20	-11.43	41.46	15.31	Peak	100	50
6	15720.00	43.66	54.00	-10.34	28.43	15.23	Average	100	90
7	15720.00	57.72	74.00	-16.28	42.49	15.23	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	11a	Test Freq. (MHz)	5240
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.30	54.00	-7.70	40.35	5.95	Average	183	195
2	5150.00	59.48	74.00	-14.52	53.53	5.95	Peak	183	195
3	5350.00	45.78	54.00	-8.22	40.38	5.40	Average	183	195
4	5350.00	58.96	74.00	-15.04	53.56	5.40	Peak	183	195
5	10480.00	57.00	68.20	-11.20	41.69	15.31	Peak	100	40
6	15720.00	43.97	54.00	-10.03	28.74	15.23	Average	100	50
7	15720.00	57.60	74.00	-16.40	42.37	15.23	Peak	100	50

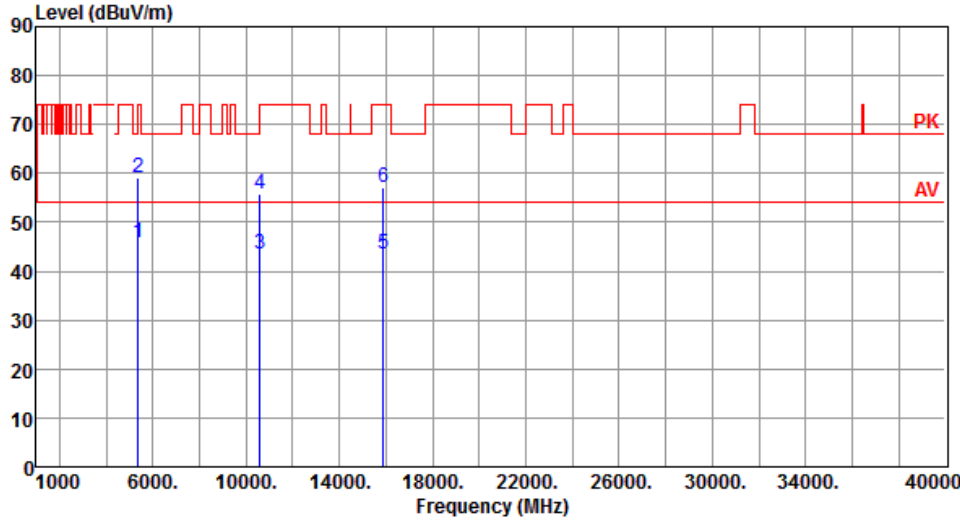
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Modulation	11a	Test Freq. (MHz)	5260
Polarization	Horizontal		
Level (dBuV/m) </			

Modulation	11a	Test Freq. (MHz)	5260
Polarization	Vertical		
Level (dBuV/m) </			

Modulation	11a	Test Freq. (MHz)	5300
Polarization	Horizontal		
Level (dBuV/m)			

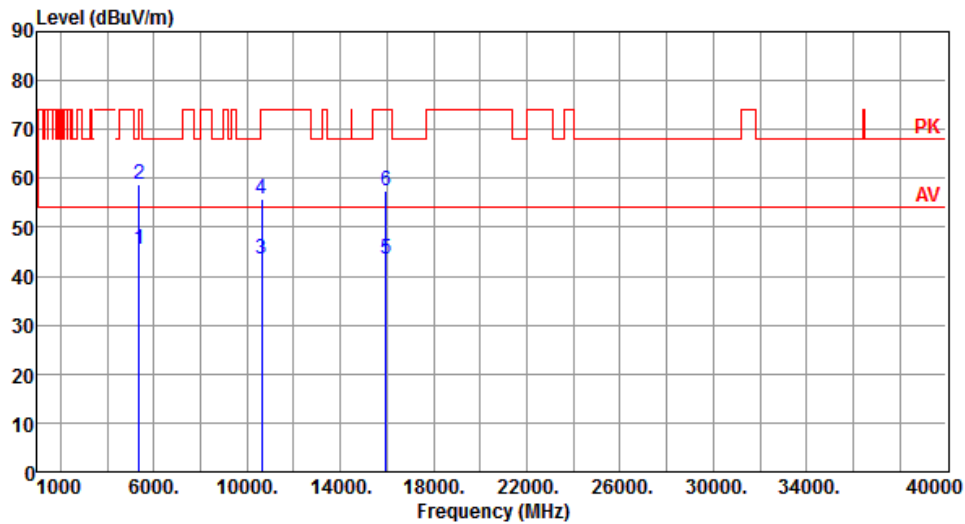
Modulation	11a	Test Freq. (MHz)	5300
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	45.97	54.00	-8.03	40.57	5.40	Average	180	196
2	5350.00	59.14	74.00	-14.86	53.74	5.40	Peak	180	196
3	10600.00	43.52	54.00	-10.48	28.11	15.41	Average	100	30
4	10600.00	55.75	74.00	-18.25	40.34	15.41	Peak	100	30
5	15900.00	43.43	54.00	-10.57	28.54	14.89	Average	100	50
6	15900.00	57.10	74.00	-16.90	42.21	14.89	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)	5320
Polarization	Horizontal		



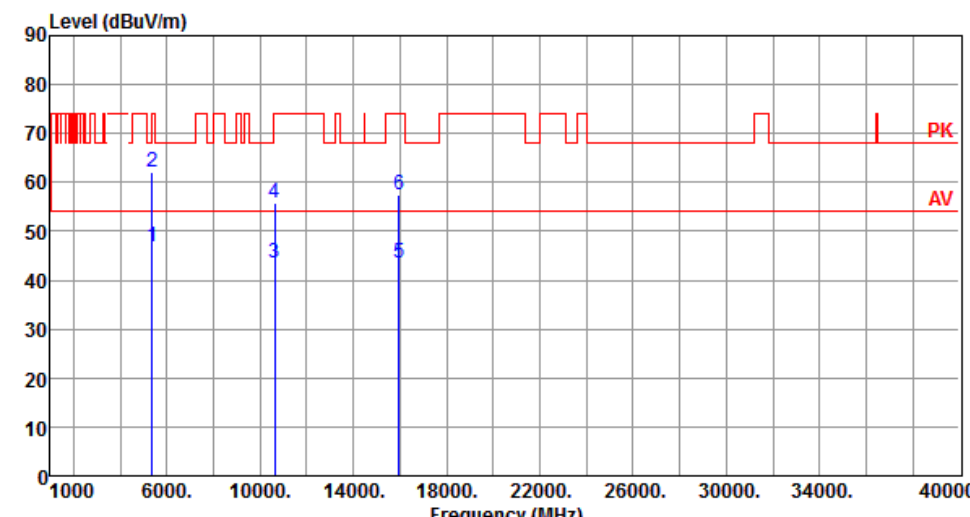
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	45.65	54.00	-8.35	40.25	5.40	Average	315	150
2	5350.00	58.72	74.00	-15.28	53.32	5.40	Peak	315	150
3	10640.00	43.61	54.00	-10.39	28.25	15.36	Average	100	30
4	10640.00	55.89	74.00	-18.11	40.53	15.36	Peak	100	30
5	15960.00	43.54	54.00	-10.46	28.63	14.91	Average	100	25
6	15960.00	57.46	74.00	-16.54	42.55	14.91	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)	5320
Polarization	Vertical		

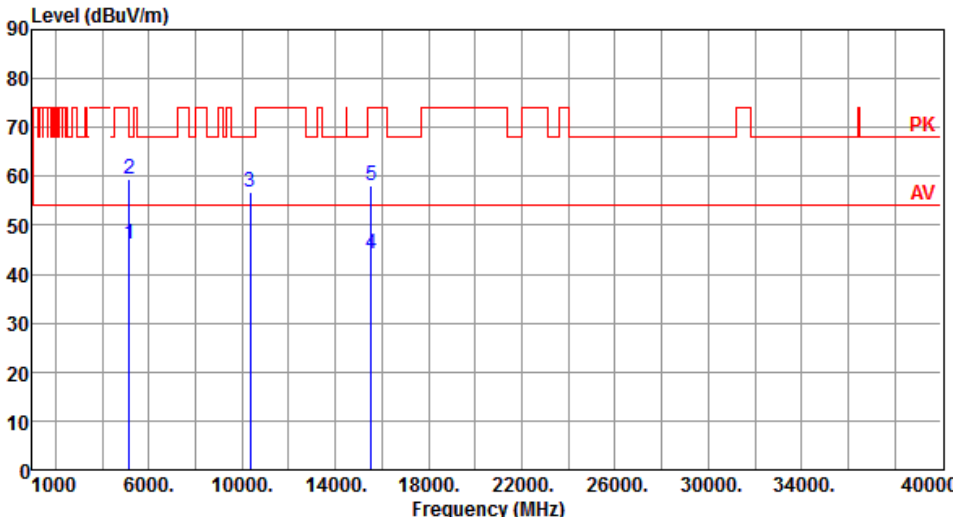


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	46.95	54.00	-7.05	41.55	5.40	Average	180	209
2	5350.00	62.08	74.00	-11.92	56.68	5.40	Peak	180	209
3	10640.00	43.57	54.00	-10.43	28.21	15.36	Average	100	50
4	10640.00	55.88	74.00	-18.12	40.52	15.36	Peak	100	50
5	15960.00	43.56	54.00	-10.44	28.65	14.91	Average	100	60
6	15960.00	57.52	74.00	-16.48	42.61	14.91	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).

3.5.15 Transmitter Radiated Unwanted Emissions (Above 1GHz) for HT20

Modulation	HT20	Test Freq. (MHz)	5180
Polarization	Horizontal		

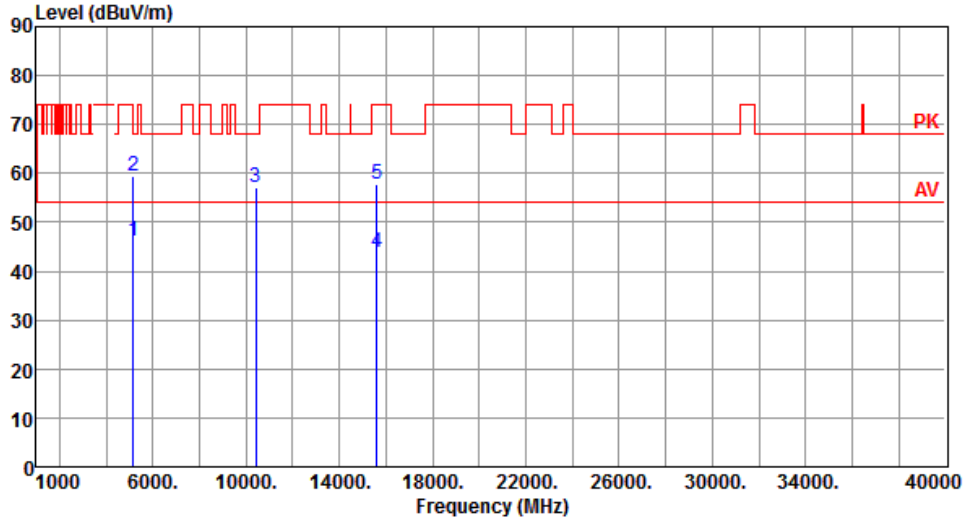


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.26	54.00	-7.74	40.31	5.95	Average	311	156
2	5150.00	59.52	74.00	-14.48	53.57	5.95	Peak	311	156
3	10360.00	56.72	68.20	-11.48	41.62	15.10	Peak	100	50
4	15540.00	44.19	54.00	-9.81	28.54	15.65	Average	100	60
5	15540.00	58.07	74.00	-15.93	42.42	15.65	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	HT20		Test Freq. (MHz)		5180	
Polarization	Vertical					
Level (dBuV/m) </						

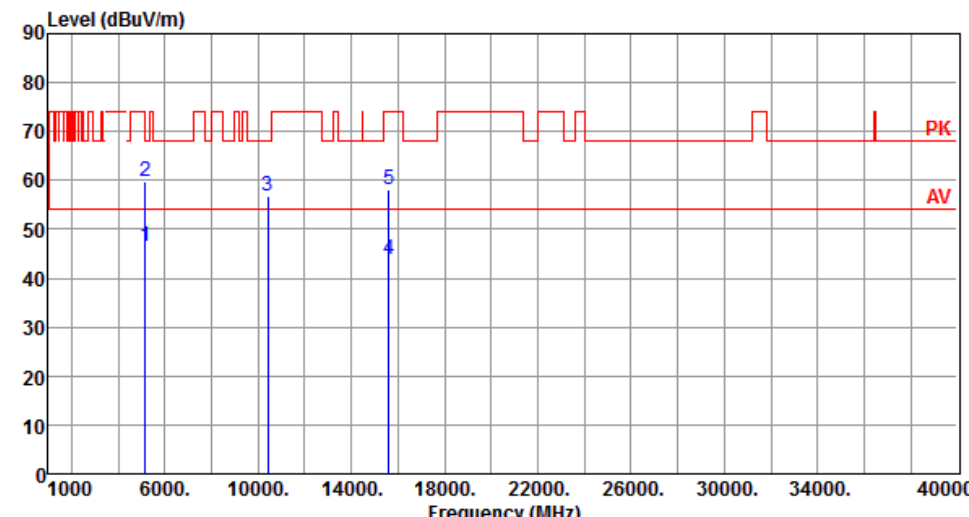
Modulation	HT20	Test Freq. (MHz)	5200
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.32	54.00	-7.68	40.37	5.95	Average	308	156
2	5150.00	59.50	74.00	-14.50	53.55	5.95	Peak	308	156
3	10400.00	57.00	68.20	-11.20	41.67	15.33	Peak	100	30
4	15600.00	43.94	54.00	-10.06	28.45	15.49	Average	100	65
5	15600.00	57.80	74.00	-16.20	42.31	15.49	Peak	100	65

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	HT20	Test Freq. (MHz)	5200
Polarization	Vertical		

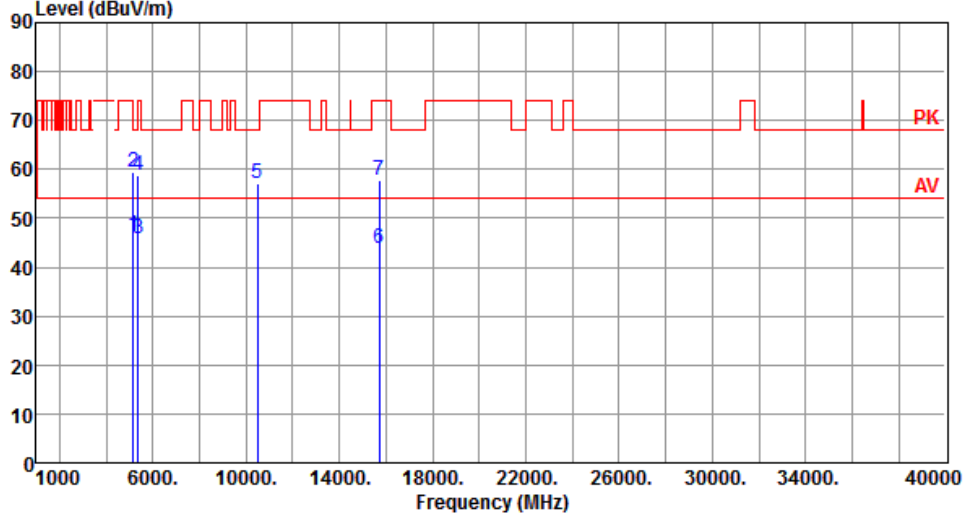


	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.40	54.00	-7.60	40.45	5.95	Average	185	210
2	5150.00	59.80	74.00	-14.20	53.85	5.95	Peak	185	210
3	10400.00	56.68	68.20	-11.52	41.35	15.33	Peak	100	40
4	15600.00	43.96	54.00	-10.04	28.47	15.49	Average	100	100
5	15600.00	57.98	74.00	-16.02	42.49	15.49	Peak	100	100

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	HT20	Test Freq. (MHz)	5240
Polarization	Horizontal		
Level (dBuV/m) </			

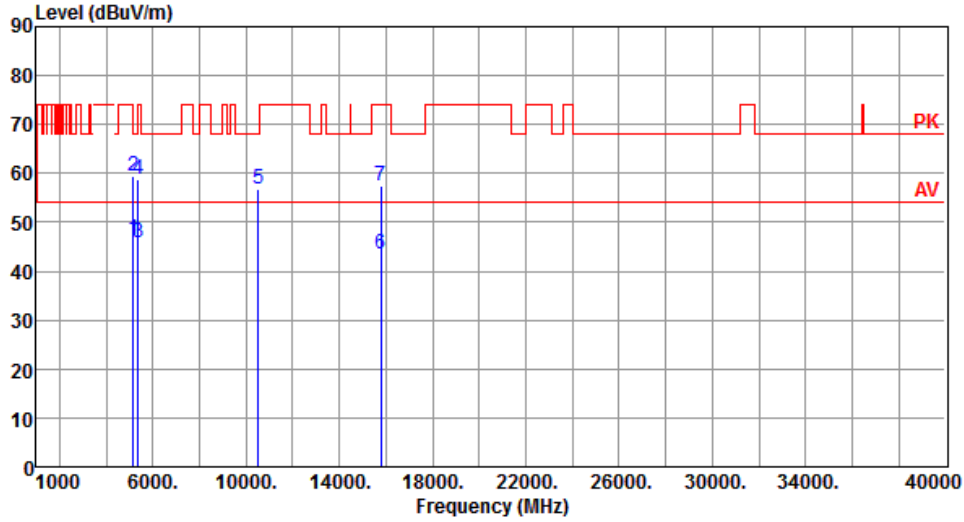
Modulation	HT20	Test Freq. (MHz)	5240
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.40	54.00	-7.60	40.45	5.95	Average	185	197
2	5150.00	59.50	74.00	-14.50	53.55	5.95	Peak	185	197
3	5350.00	45.93	54.00	-8.07	40.53	5.40	Average	185	197
4	5350.00	58.87	74.00	-15.13	53.47	5.40	Peak	185	197
5	10480.00	57.03	68.20	-11.17	41.72	15.31	Peak	100	40
6	15720.00	43.86	54.00	-10.14	28.63	15.23	Average	100	50
7	15720.00	57.82	74.00	-16.18	42.59	15.23	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).

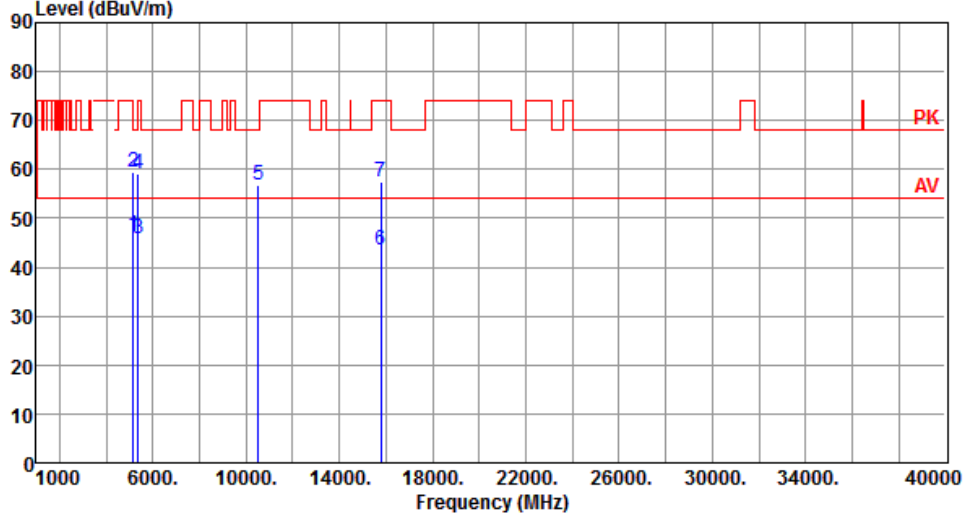
Modulation	HT20	Test Freq. (MHz)	5260
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.50	54.00	-7.50	40.55	5.95	Average	312	150
2	5150.00	59.58	74.00	-14.42	53.63	5.95	Peak	312	150
3	5350.00	45.75	54.00	-8.25	40.35	5.40	Average	312	150
4	5350.00	58.94	74.00	-15.06	53.54	5.40	Peak	312	150
5	10520.00	56.91	68.20	-11.29	41.58	15.33	Peak	100	60
6	15780.00	43.41	54.00	-10.59	28.46	14.95	Average	100	20
7	15780.00	57.62	74.00	-16.38	42.67	14.95	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).

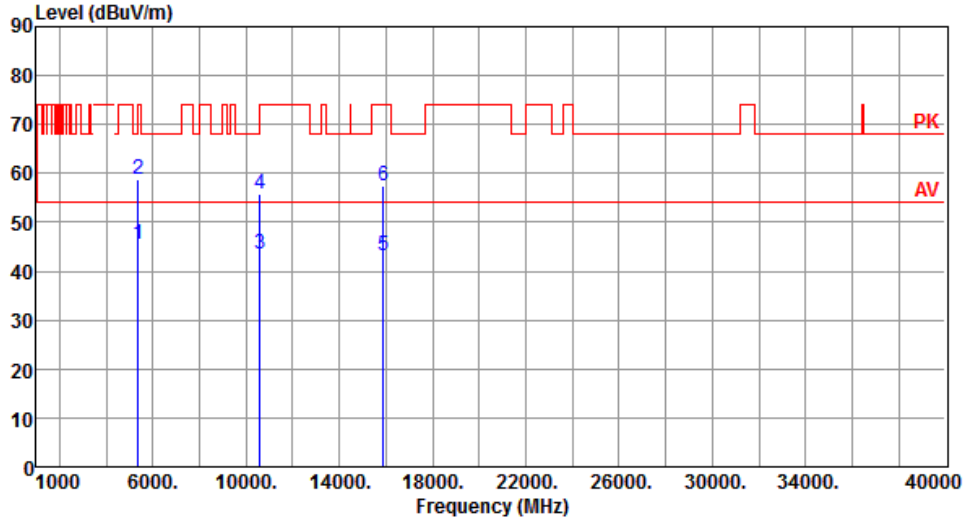
Modulation	HT20	Test Freq. (MHz)	5260
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	46.36	54.00	-7.64	40.41	5.95	Average	189	205
2	5150.00	59.61	74.00	-14.39	53.66	5.95	Peak	189	205
3	5350.00	45.88	54.00	-8.12	40.48	5.40	Average	189	205
4	5350.00	58.96	74.00	-15.04	53.56	5.40	Peak	189	205
5	10520.00	56.85	68.20	-11.35	41.52	15.33	Peak	100	50
6	15780.00	43.52	54.00	-10.48	28.57	14.95	Average	100	90
7	15780.00	57.43	74.00	-16.57	42.48	14.95	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).

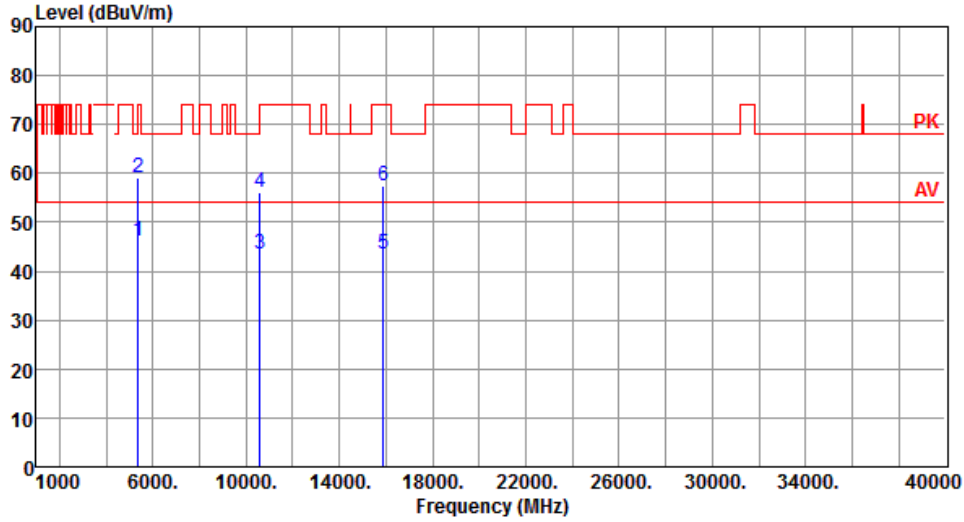
Modulation	HT20	Test Freq. (MHz)	5300
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	45.62	54.00	-8.38	40.22	5.40	Average	316	162
2	5350.00	58.85	74.00	-15.15	53.45	5.40	Peak	316	162
3	10600.00	43.49	54.00	-10.51	28.08	15.41	Average	100	60
4	10600.00	55.87	74.00	-18.13	40.46	15.41	Peak	100	60
5	15900.00	43.34	54.00	-10.66	28.45	14.89	Average	100	70
6	15900.00	57.42	74.00	-16.58	42.53	14.89	Peak	100	70

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).

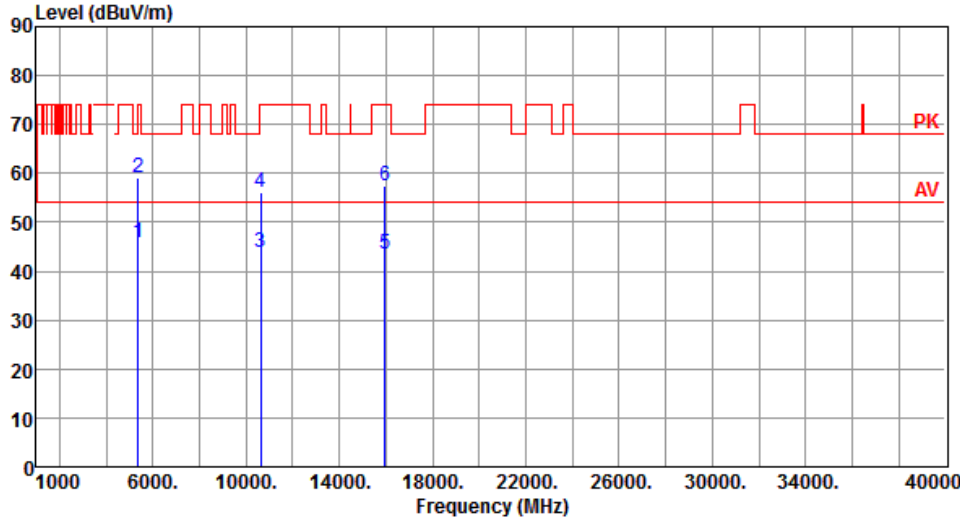
Modulation	HT20	Test Freq. (MHz)	5300
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	46.02	54.00	-7.98	40.62	5.40	Average	183	196
2	5350.00	59.08	74.00	-14.92	53.68	5.40	Peak	183	196
3	10600.00	43.45	54.00	-10.55	28.04	15.41	Average	100	20
4	10600.00	56.06	74.00	-17.94	40.65	15.41	Peak	100	20
5	15900.00	43.56	54.00	-10.44	28.67	14.89	Average	100	60
6	15900.00	57.47	74.00	-16.53	42.58	14.89	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).

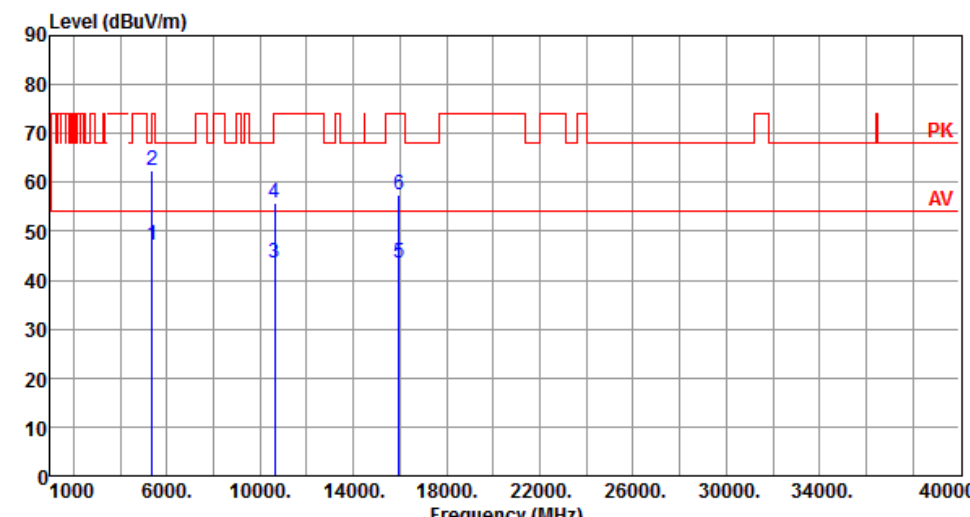
Modulation	HT20	Test Freq. (MHz)	5320
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	45.98	54.00	-8.02	40.58	5.40	Average	320	150
2	5350.00	59.09	74.00	-14.91	53.69	5.40	Peak	320	150
3	10640.00	43.83	54.00	-10.17	28.47	15.36	Average	100	30
4	10640.00	56.21	74.00	-17.79	40.85	15.36	Peak	100	30
5	15960.00	43.44	54.00	-10.56	28.53	14.91	Average	100	25
6	15960.00	57.55	74.00	-16.45	42.64	14.91	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	HT20	Test Freq. (MHz)	5320
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	47.09	54.00	-6.91	41.69	5.40	Average	181	215
2	5350.00	62.38	74.00	-11.62	56.98	5.40	Peak	181	215
3	10640.00	43.53	54.00	-10.47	28.17	15.36	Average	100	10
4	10640.00	55.78	74.00	-18.22	40.42	15.36	Peak	100	10
5	15960.00	43.46	54.00	-10.54	28.55	14.91	Average	100	60
6	15960.00	57.53	74.00	-16.47	42.62	14.91	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).

3.6 Frequency Stability

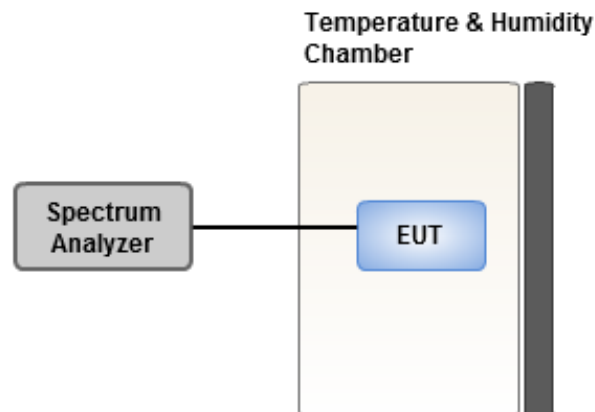
3.6.1 Limit of Frequency Stability

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

Frequency: 5320 MHz	Frequency Drift (ppm)			
Temperature (°C)	0 minute	2 minutes	5 minutes	10 minutes
T20°C Vmax	-2.50	-2.20	-2.20	-2.33
T20°C Vmin	-3.00	-2.74	-3.19	-3.08
T70°C Vnom	-2.42	-2.40	-2.60	-2.87
T60°C Vnom	-0.48	-0.57	-0.36	-0.11
T50°C Vnom	-1.49	-1.97	-1.03	-0.87
T40°C Vnom	-1.47	-1.94	-1.01	-0.85
T30°C Vnom	-2.04	-1.80	-1.92	-2.15
T20°C Vnom	-2.94	-2.95	-2.74	-2.91
T10°C Vnom	-0.49	-0.20	0.17	-0.31
T0°C Vnom	2.12	2.28	2.37	2.64
T-10°C Vnom	4.47	4.65	5.06	5.01
T-20°C Vnom	5.04	5.41	5.21	4.80
T-30°C Vnom	4.59	4.59	4.78	4.23
Vnom [Vdc]: 3.3		Vmax [Vdc]: 3.63		Vmin [Vdc]: 2.97
Tnom [°C]: 20		Tmax [°C]: 70		Tmin [°C]: -30

Frequency: 5785 MHz	Frequency Drift (ppm)			
Temperature (°C)	0 minute	2 minutes	5 minutes	10 minutes
T20°CVmax	-2.58	-1.83	-1.86	-2.42
T20°CVmin	-3.05	-2.64	-2.83	-2.78
T70°CVnom	-2.16	-2.21	-1.93	-1.69
T60°CVnom	-2.14	-2.20	-1.97	-1.70
T50°CVnom	-2.15	-2.23	-1.91	-1.70
T40°CVnom	-0.53	-0.44	-0.40	-0.24
T30°CVnom	-2.07	-2.00	-2.20	-1.50
T20°CVnom	-2.74	-3.02	-2.00	-2.24
T10°CVnom	-0.44	-0.22	0.02	-0.20
T0°CVnom	1.60	2.04	2.16	1.99
T-10°CVnom	4.68	4.84	4.36	4.68
T-20°CVnom	4.98	5.20	5.27	5.00
T-30°CVnom	4.57	4.35	4.72	4.49
Vnom [Vdc]: 3.3		Vmax [Vdc]: 3.63		Vmin [Vdc]: 2.97
Tnom [°C]: 20		Tmax [°C]: 70		Tmin [°C]: -30

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>.

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