

FCC 15.407 NII & RSS-247 5 GHz WLAN Report

for

Amtran Technology Co., Ltd.

**17F., No. 268, Liancheng Rd., Jhonghe District,
New Taipei City 23553, Taiwan, R.O.C.**

Brand : CISCO
Product Name : Video Conferencing Equipment
Model Name : AA55WW
FCC ID : MDZAA55WW
IC : 7825A-AA55WW

**Prepared by: : AUDIX Technology Corporation,
EMC Department**



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APPENDIX A TEST PHOTOGRAPHS

TEST REPORT CERTIFICATION

Applicant : Amtran Technology Co., Ltd.
Manufacture : Amtran Technology Co., Ltd.
Product Name : Video Conferencing Equipment
Model No. : AA55WW
Serial No. : N/A
Brand : CISCO

Applicable Standards:

47 CFR FCC Part 15 Subpart E:2016
RSS-Gen (Issue 4), November 2014
RSS-247 (Issue 1), May 2015
ANSI C63.10:2013
KDB 789033 D02 General NII Test Procedures New Rules v01r03

AUDIX Technology Corp. tested the equipment mentioned in accordance with the requirements set forth in the above standards. Test results indicate that the equipment tested is capable of demonstrating compliance with the requirements as documented within this report. **AUDIX Technology Corp.** does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens and samples.

Date of Test: 2016. 11.07 ~ 10

Date of Report: 2016. 11. 10

Producer: 
(Tina Huang/Administrator)

Signatory: 
(Jarwei Wang/Section Manager)

1. REPORT HISTORY

Revision	Date	Revision Summary	Report Number
0	2016. 11. 10	Original Report.	EM-F160710

2. SUMMARY OF TEST RESULTS

Rule		Description	Results
FCC	IC		
15.207	RSS-Gen §8.8	Conducted Emission	PASS
15.247(d)/ 15.205	RSS-Gen §8.9 RSS-247 §5.5	Radiated Band Edge and Radiated Spurious Emission	PASS
15.407(a)(5)/ 15.407(e)	RSS-247 §5.2(1)	Emission Bandwidth Measurement	N/A, Note
15.407(a)	RSS-247 §5.4(4)	Maximum Output	N/A, Note
15.407(b)	RSS-247 §5.5	Conducted Band Edges and Conducted Spurious Emission	N/A, Note
15.407(a)	RSS-247 §5.2(2)	Power Spectral Density	N/A, Note
15.203	---	Antenna Requirement	PASS

Note: All conducted results are authorized to leverage to original grant FCC ID: VOB-P2180 and IC: 7361A-P2180.

3. GENERAL INFORMATION

3.1. Description of EUT

Product	Video Conferencing Equipment																								
Model Number	AA55WW																								
Serial Number	N/A																								
Brand Name	CISCO																								
Applicant	Amtran Technology Co., Ltd. 17F., No. 268, Liancheng Rd., Jhonghe District, New Taipei City 23553, Taiwan, R.O.C.																								
Manufacture	Amtran Technology Co., Ltd. 17F., No. 268, Liancheng Rd., Jhonghe District, New Taipei City 23553, Taiwan, R.O.C.																								
RF Features	WLAN:802.11a/b/g/n/ac Bluetooth: BT and BLE																								
Transmit Type	<table border="1"> <thead> <tr> <th colspan="2">2.4 GHz</th> </tr> </thead> <tbody> <tr> <td>802.11b</td> <td>1T1R</td> </tr> <tr> <td>802.11g</td> <td>1T1R</td> </tr> <tr> <td>802.11n-HT20</td> <td>2T2R</td> </tr> <tr> <td>802.11n-HT40</td> <td>2T2R</td> </tr> <tr> <td>BT</td> <td>1T1R</td> </tr> <tr> <td>BLE</td> <td>1T1R</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="2">UNII Bands</th> </tr> </thead> <tbody> <tr> <td>802.11a</td> <td>1T1R</td> </tr> <tr> <td>802.11n-HT20/ 802.11ac-VHT20</td> <td>2T2R</td> </tr> <tr> <td>802.11n-HT40/ 802.11ac-VHT40</td> <td>2T2R</td> </tr> <tr> <td>802.11ac-VHT80</td> <td>2T2R</td> </tr> </tbody> </table>	2.4 GHz		802.11b	1T1R	802.11g	1T1R	802.11n-HT20	2T2R	802.11n-HT40	2T2R	BT	1T1R	BLE	1T1R	UNII Bands		802.11a	1T1R	802.11n-HT20/ 802.11ac-VHT20	2T2R	802.11n-HT40/ 802.11ac-VHT40	2T2R	802.11ac-VHT80	2T2R
2.4 GHz																									
802.11b	1T1R																								
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802.11n-HT20/ 802.11ac-VHT20	2T2R																								
802.11n-HT40/ 802.11ac-VHT40	2T2R																								
802.11ac-VHT80	2T2R																								
Device Category	Outdoor Access Point Fixed point-to-point Access Point Indoor Access Point Mobile and Portable client device																								
Date of Receipt of Sample	2016. 09. 01																								

3.2. EUT Specifications Assessed in Current Report

Mode	UNII Band	Fundamental Range (MHz)	Channel Number	Modulation	Data Rate (Mbps)
802.11a	I	5180-5240	4	OFDM Modulation (BPSK/QPSK/16QAM/64QAM)	Up to 54
	II-2A	5260-5320	4		
	II-2C	5500-5720	12		
	III	5745-5825	5		
802.11n-HT20/ 802.11ac-VHT20	I	5180-5240	4	OFDM Modulation (BPSK/QPSK/16QAM/64QAM)	MCS0~15
	II-2A	5260-5320	4		
	II-2C	5500-5720	12		
	III	5745-5825	5		
802.11n-HT40/ 802.11ac-VHT40	I	5190-5230	2	OFDM Modulation (BPSK/QPSK/16QAM/64QAM)	MCS0~15
	II-2A	5270-5310	2		
	II-2C	5510-5710	6		
	III	5755-5795	2		
802.11ac-VHT80	I	5210	1	OFDM Modulation (BPSK/QPSK/16QAM/64QAM)	MCS0~15
	II-2A	5290	1		
	II-2C	5530-5690	3		
	III	5775	1		
Remark: UNII Band II (DFS Function, Slave/no In service monitor, no Ad-Hoc mode)					

Channel List						
802.11a/802.11n-HT20/802.11ac-VHT20						
UNII Band	Channel Number	Frequency (MHz)	UNII Band	Channel Number	Frequency (MHz)	
I	36	5180	II-2C	120	5600	
	40	5200		124	5620	
	44	5220		128	5640	
	48	5240		132	5660	
II-2A	52	5260		136	5680	
	56	5280		140	5700	
	60	5300		144	5720	
	64	5320		149	5745	
II-2C	100	5500		III	153	5765
	104	5520			157	5785
	108	5540	161		5805	
	112	5560	165		5825	
	116	5580				

Channel List					
802.11n-HT40/802.11ac-VHT40					
UNII Band	Channel Number	Frequency (MHz)	UNII Band	Channel Number	Frequency (MHz)
I	38	5190	II-2C	118	5590
	46	5230		126	5630
II-2A	54	5270		134	5670
	62	5310		142	5710
II-2C	102	5510	III	151	5755
	110	5550		159	5795

Channel List					
802.11ac-VHT80					
UNII Band	Channel Number	Frequency (MHz)	UNII Band	Channel Number	Frequency (MHz)
I	42	5210	II-2C	138	5690
II-2A	58	5290	III	155	5775
II-2C	106	5530			
	122	5610			

Note 1: 802.11ac has similar modulation to 802.11n at 20 MHz and 40 MHz bandwidths, we assess the worst case to be the representative mode in this report.
 2: Test modes are presented at section 3.5.

3.3. Antenna Information

No.	Antenna Part Number	Manufacture	Antenna Type	Frequency (GHz)	Max Gain (dBi)
1	RFMTA340776IMLB701	Walsin Technology Corporation	PIFA	2.4	4.61
				5	5.60
2	RFMTA340784IMLB701		PIFA	2.4	4.10
				5	5.77

3.4. Test Configuration

Mode	Duty Cycle (x)	T (ms)
802.11a	0.94	1.43
802.11n-HT20/802.11ac-VHT20	0.87	0.692
802.11n-HT40/802.11ac-VHT40	0.79	0.358
802.11ac-VHT80	0.66	0.191

AC Conduction	
Test Case	Normal operation

Item	Mode	Data Rate	Test Channel
Radiated Test Case	Radiated Band Edge <small>Note2</small>	802.11a	6 Mbps
		802.11n-HT20	MCS8
		802.11n-HT40	MCS8
		802.11ac-VHT80	MCS8
	Radiated Spurious Emission <small>Note2</small>	802.11a	6 Mbps
		802.11n-HT20	MCS8
		802.11n-HT40	MCS8
		802.11ac-VHT80	MCS8

Note 1:

- Mobile Device
 - Portable Device, and 3 axis were assessed.
 - Lie
 - Side
 - Stand

Note 2: Low, mid, and high channels were measured, only the worst channel of each modulation was presented in this report.

3.5. Tested Supporting System List

3.5.1. Support Peripheral Unit

No.	Product	Brand	Model No.	Serial No.	FCC ID
For Power Line Emission					
1.	PC System	Lenovo	MT-M 2697-AH5	PBFK914	By DoC
2.	USB Keyboard	Lenovo	SK-8825	00556863	By DoC
3.	USB Mouse	Lenovo	LXB MO28UOAUSB	4402687	By DoC
4.	Laser Printer	SAMSUNG	ML-1630	4561B1CP600023 X	A3LML1630
5.	I-POD	APPLE	A1204	4H722TG2VTE	By DoC
6.	Earphone	SAMPO	EK-Y1251MP	N/A	N/A
7.	5G Server	D-Link	DIR-868L	R3WE1D7002319	KA2IR868LA1
8.	Mobile Phone	SAMSUNG	GT-I9300	RF1C86ATMSV	N/A
For Radiated Emission					
1.	Notebook PC	acer	MS2362	N/A	PPD-AAR5B225
2.	TV	LG	22LK330-DB	N/A	N/A
3.	USB HUB	SENSE	UP250	N/A	DoC
4.	USB Storage Media	pqi	U273	N/A	DoC

3.5.2. Cable Lists

No.	Cable Description Of The Above Support Units
For Radiated Emission	
1.	HDMI Cable: Shielded, Detachable, 1.8m
2.	USB Cable: Shielded, Undetachable, 1.8m
3.	USB Cable: Shielded, Undetachable, 1.8m
4.	USB Cable: Shielded, Detachable, 1.8m Power Cord: Unshielded, Detachable, 1.8m
5.	USB Cable: Shielded, Undetachable, 1.0m
6.	Earphone Cable: Unshielded, Detachable, 1.2m
7.	LAN Cable: Unshielded, Detachable, 10.0m Adapter: WA-30B12, Power Cable: Unshielded, Undetachable, 1.2m
For Power Line Emission	
1.	Adapter: Chicony, M/N CPA09-A065N1, DC Power Cord: Unshielded, Undetachable, 1.8m, Bonded a ferrite core AC Power Cord: Unshielded, Detachable, 1.8m LAN Cable: Unshielded, Detachable, 1.8m
2.	HDMI Cable: Unshielded, Detachable, 1.8m Audio Cable: Unshielded, Detachable, 1.8m
3.	USB Cable: Unshielded, Detachable, 1.0m

3.6. Setup Configuration

3.6.1. EUT Configuration for Power Line Emission

EUT

3.7. Operating Condition of EUT

Test program “ADB” is used for enabling EUT WLAN function under continues transmitting and choosing data rate/ channel.

3.8. Description of Test Facility

Test Firm Name	:	AUDIX Technology Corporation EMC Department No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan
Test Location & Facility	:	No. 7 Shielded Room No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan Semi-Anechoic Chamber No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan Federal Communication Commission Registration Number: 90993 Renewal on May 06 2015 IC Test Site Registration No.: 5183B-1 Renewal on September 17, 2014 Fully Anechoic Chamber No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan IC Test Site Registration No.: 5183B-4 Renewal on August 31, 2015
NVLAP Lab. Code	:	200077-0
TAF Accreditation No	:	1724
FCC OET Designation	:	TW1004 & TW1090

3.9. Measurement Uncertainty

Test Item	Frequency Range	Uncertainty
Conduction Test	150kHz~30MHz	±3.5dB
Radiation Test (Distance: 3m)	30MHz~1000MHz	± 3.68dB
	Above 1GHz	± 5.82dB

Remark : Uncertainty = $ku_c(y)$

Test Item	Uncertainty
Emission Bandwidth	± 0.2kHz
Maximum output power	± 0.33dB
Power spectral density	± 0.13dB
Conducted Emission Limitations	± 0.13dB

4. MEASUREMENT EQUIPMENT LIST

4.1. Conducted Emission Measurement

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Test Receiver	R&S	ESCI	101276	2016. 03. 31	1 Year
2.	A.M.N.	R&S	ESH2-Z5	100366	2016. 07. 27	1 Year
3.	L.I.S.N.	Kyoritsu	KNW-407	8-1539-3	2016. 01. 21	1 Year
4.	Pulse Limiter	R&S	ESH3-Z2	101495	2016. 01. 17	1 Year
5.	Test Software	Audix	e3	V.6.120424	N.C.R.	N.C.R.

4.2. Radiated Emission Measurement

4.2.1. Frequency Range 9kHz~1000MHz (Semi Anechoic Chamber)

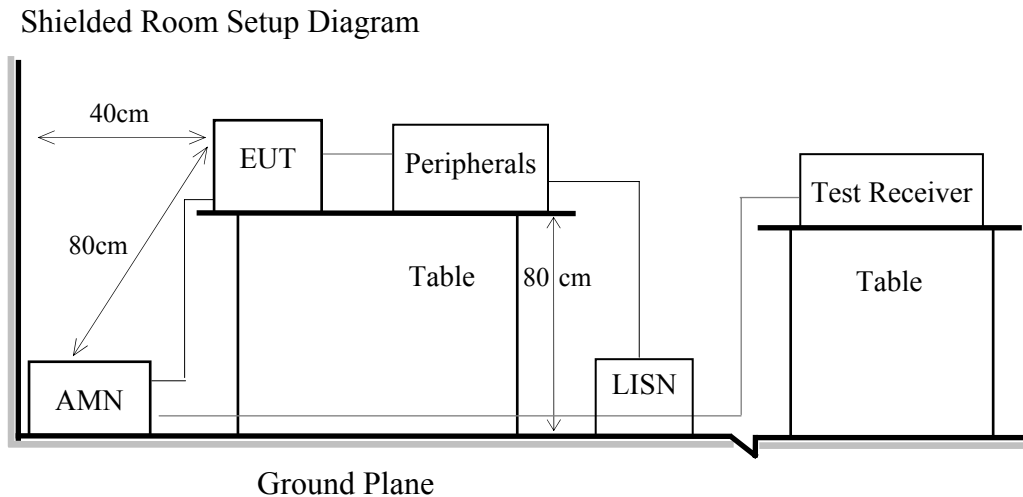
Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9010A-526	MY53400071	2016. 09. 19	1 Year
2.	Test Receiver	R & S	ESCS30	100338	2016. 06. 22	1 Year
3.	Amplifier	HP	8447D	2944A06305	2016. 02. 23	1 Year
4.	Bilog Antenna	CHASE	CBL6112D	33821	2016. 01. 30	1 Year
5.	Loop Antenna	R&S	HFH2-Z2	891847/27	2015. 12. 24	1 Year
6.	Test Software	Audix	e3	V.6.110601	N.C.R.	N.C.R.

4.2.2. Frequency Range Above 1GHz (Fully Anechoic Chamber)

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300366	2016. 08. 19	1 Year
3.	Amplifier	Agilent	8449B	3008A02678	2016. 03. 04	1 Year
4.	5G Notch Filter	Microwave Circuits	N0452502	459775	2016. 01. 28	1 Year
5.	5G Notch Filter	Microwave Circuits	N0555983	459481	2016. 01. 28	1 Year
6.	5G Notch Filter	Microwave Circuits	N0258771	459776	2016. 01. 28	1 Year
7.	Double-Ridged Waveguide Horn	ETS-Lindgren	3117	00135902	2016. 03. 05	1 Year
8.	Horn Antenna	EMCO	3116	2653	2016. 10. 24	1 Year
9.	Test Software	Audix	e3	V.6.110601	N.C.R.	N.C.R.

5. CONDUCTED EMISSION MEASUREMENT

5.1. Block Diagram of Test Setup



5.2. Power Line Conducted Emission Limit

Frequency	Conducted Limit	
	Quasi-Peak Level	Average Level
150kHz ~ 500kHz	66 ~ 56 dB μ V	56 ~ 46 dB μ V
500kHz ~ 5MHz	56 dB μ V	46 dB μ V
5MHz ~ 30MHz	60 dB μ V	50 dB μ V

Remark 1.: If the average limit is met when using a Quasi-Peak detector, the measurement using the average detector is not required.

2.: The lower limit applies to the band edges.

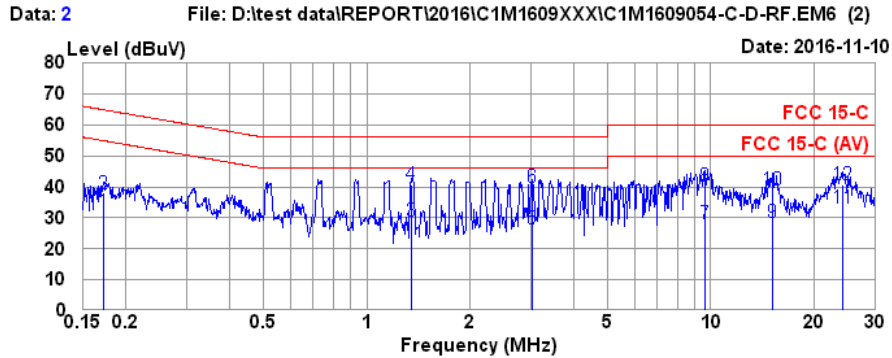
5.3. Test Procedure

- 5.3.1. To set up the EUT as indicated in ANSI C 63.10. The EUT was placed on the table which has 80 cm height to the ground and 40 cm distance to the conducting wall.
- 5.3.2. Power supplier of the EUT was connected to the AC mains through an Artificial Mains Network (A.M.N.).
- 5.3.3. The AC power supplies to all peripheral devices must be provided through line impedance stabilization network (L.I.S.N.)
- 5.3.4. Checking frequency range from 150 kHz to 30 MHz and record the emission which does not have 20 dB below limit.

5.4. Conducted Emission Measurement Results

PASSED.

Test Date	2016/11/10	Temp./Hum.	24 /53%
Test Voltage	AC 120V, 60Hz		

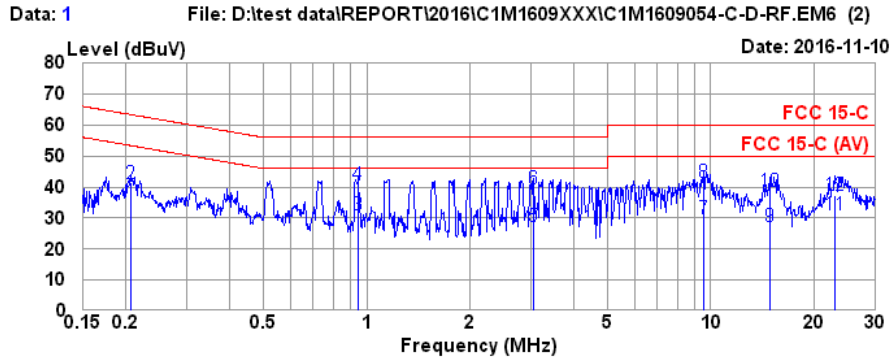


Site no. : No.7 Shielded Room Data no. : 2
 Condition : ESH2-Z5 366(ADAPTER) Phase : NEUTRAL
 Limit : FCC 15-C
 Env. / Ins. : 24°C / 53% ESCI (1276) Engineer : Nick Du
 EUT : AA55WW
 Power Rating : 120Vac/60Hz
 Test Mode : Operating

	AMN	Cable	Pulse	Emission			Limits	Margin	Remark
	Freq. (MHz)	Factor (dB)	Loss (dB)	Att. (dB)	Reading (dBμV)	Level (dBμV)	(dBμV)	(dB)	
1	0.172	0.18	0.03	9.85	21.64	31.70	64.86	33.16	Average
2	0.172	0.18	0.03	9.85	27.57	37.63	64.86	27.23	QP
3	1.352	0.23	0.07	9.93	18.80	29.03	56.00	26.97	Average
4	1.352	0.23	0.07	9.93	30.47	40.70	56.00	15.30	QP
5	3.025	0.29	0.09	9.91	16.12	26.41	56.00	29.59	Average
6	3.025	0.29	0.09	9.91	29.51	39.80	56.00	16.20	QP
7	9.654	0.52	0.17	9.88	17.52	28.09	60.00	31.91	Average
8	9.654	0.52	0.17	9.88	29.64	40.21	60.00	19.79	QP
9	15.066	0.80	0.21	9.90	17.54	28.45	60.00	31.55	Average
10	15.066	0.80	0.21	9.90	27.94	38.85	60.00	21.15	QP
11	24.271	0.95	0.28	9.96	22.01	33.20	60.00	26.80	Average
12	24.271	0.95	0.28	9.96	29.32	40.51	60.00	19.49	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.
 2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

Test Date	2016/10/06	Temp./Hum.	24 /53%
Test Voltage	AC 120V, 60Hz		



Site no. : No.7 Shielded Room Data no. : 1
 Condition : ESH2-Z5 366(ADAPTER) Phase : LINE
 Limit : FCC 15-C
 Env. / Ins. : 24°C / 53% ESCI (1276) Engineer : Nick Du
 EUT : AA55WW
 Power Rating : 120Vac/60Hz
 Test Mode : Operating

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dBμV)	Emission Level (dBμV)	Limits (dBμV)	Margin (dB)	Remark
1	0.206	0.16	0.04	9.85	25.00	35.05	53.36	18.31	Average
2	0.206	0.16	0.04	9.85	30.89	40.94	63.36	22.42	QP
3	0.948	0.21	0.06	9.90	20.95	31.12	46.00	14.88	Average
4	0.948	0.21	0.06	9.90	30.34	40.51	56.00	15.49	QP
5	3.058	0.30	0.09	9.91	17.04	27.34	46.00	18.66	Average
6	3.058	0.30	0.09	9.91	29.07	39.37	56.00	16.63	QP
7	9.552	0.56	0.17	9.88	18.98	29.59	50.00	20.41	Average
8	9.552	0.56	0.17	9.88	30.78	41.39	60.00	18.61	QP
9	14.907	0.89	0.21	9.90	16.32	27.32	50.00	22.68	Average
10	14.907	0.89	0.21	9.90	27.67	38.67	60.00	21.33	QP
11	22.896	1.18	0.27	9.95	19.51	30.91	50.00	19.09	Average
12	22.896	1.18	0.27	9.95	26.09	37.49	60.00	22.51	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.
 2. If the average limit is met when using a quasi-peak detector,
 the EUT shall be deemed to meet both limits and measurement
 with average detector is unnecessary.

6. RADIATED EMISSION MEASUREMENT

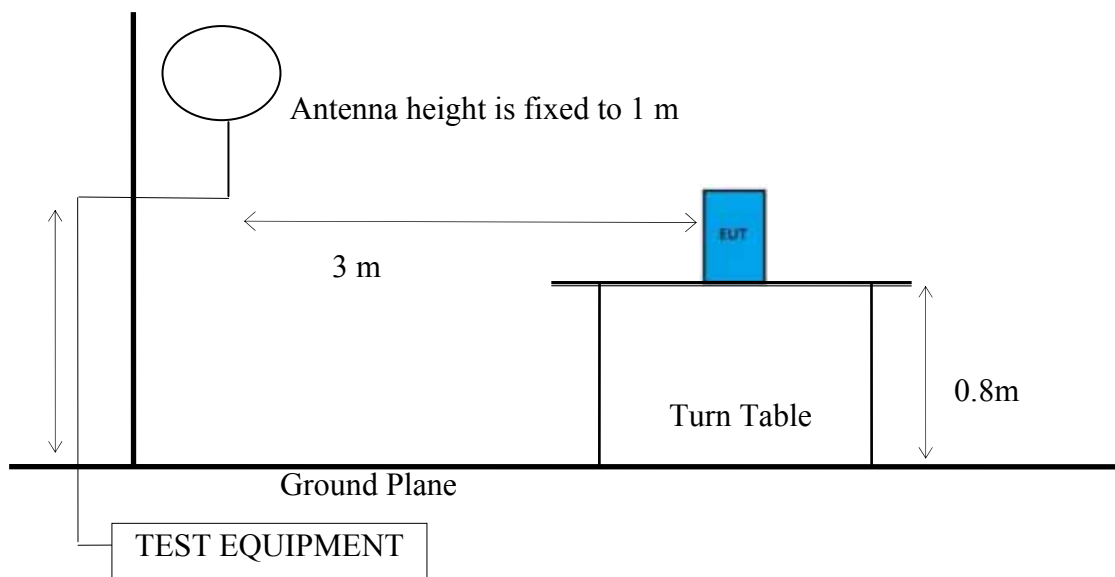
6.1. Block Diagram of Test Setup

6.1.1. Block Diagram of connection between EUT and simulators

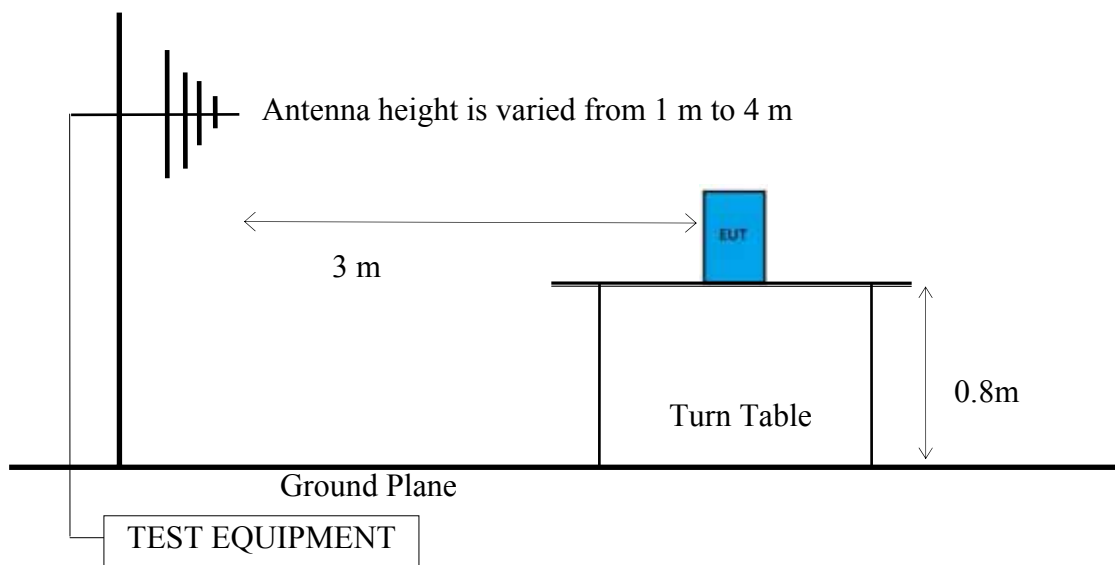
Indicated as section 3.6

6.1.2. Semi-Anechoic Chamber (3m) Setup Diagram for 9kHz-30MHz

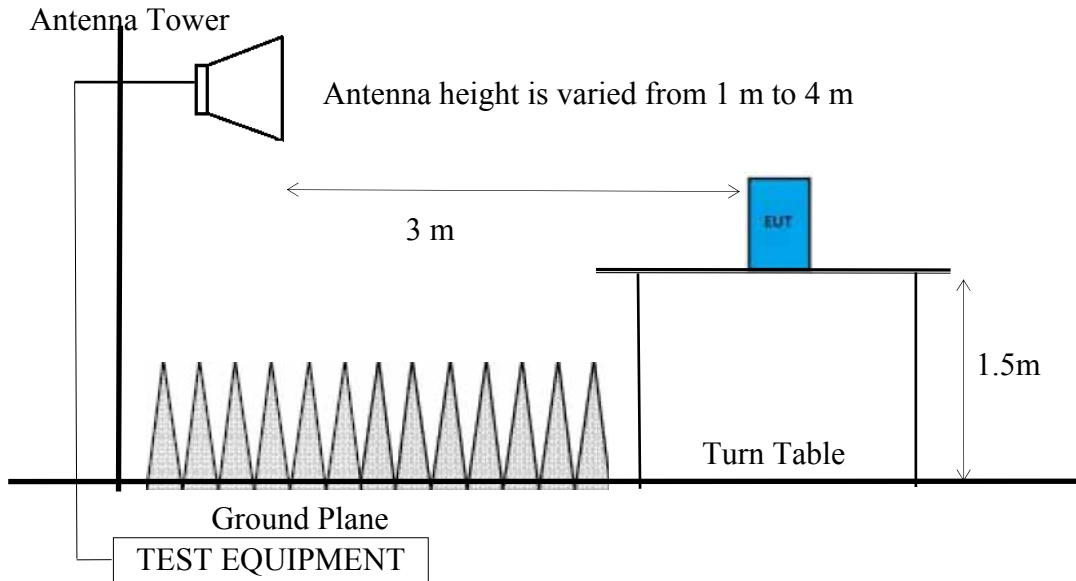
Antenna Tower



6.1.3. Semi-Anechoic Chamber (3m) Setup Diagram for 30-1000 MHz



6.1.4. Fully Anechoic Chamber (3m) Setup Diagram for above 1GHz



6.2. Radiated Emission Limits

Radiated emissions fall in restricted bands, as defined in Section 15.205 must be in compliance with the radiated emission limits specified in 15.209 as below.

6.2.1. General Limit

Frequency (MHz)	Distance (m)	Field Strengths Limits	
		$\mu\text{V/m}$	$\text{dB}\mu\text{V/m}$
0.009 - 0.490	300	67.6	2400/kHz
0.490 - 1.705	30	87.6	24000/kHz
1.705 - 30	30	29.5	30
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0
Above 1000	3	74.0 $\text{dB}\mu\text{V/m}$ (Peak) 54.0 $\text{dB}\mu\text{V/m}$ (Average)	

Remark: (1) $\text{dB}\mu\text{V/m} = 20 \log (\mu\text{V/m})$

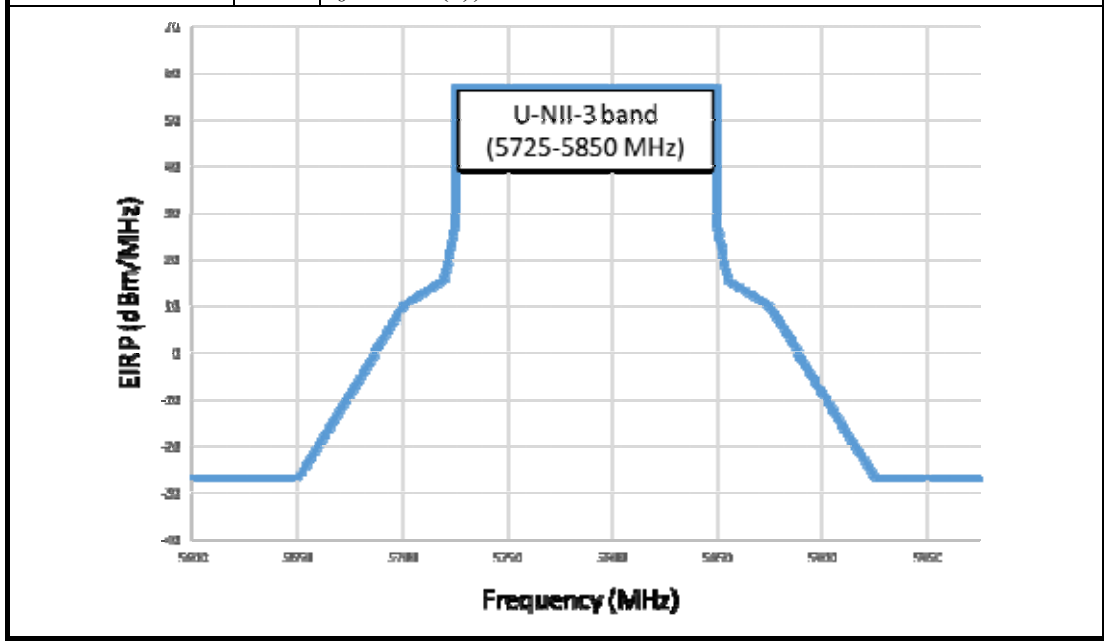
- (2) The tighter limit applies to the edge between two frequency bands.
- (3) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
- (4) Fundamental and emission fall within operation band are exempted from this section.
- (5) Pursuant to ANSI C63.10: 6.6.4.3, if the maximized peak measured value complies with the average limit, then it is unnecessary to perform an average measurement.

6.2.2. Limit for non-restricted frequency above 1 GHz

Frequency Band (MHz)	E.I.R.P. Limit	Field Strength Limit at 3 m
5150 to 5250	-27 dBm	68.2
5250 to 5350		68.2
5470 to 5725		68.2

Note: Field Strength at 3 m = E.I.R.P. + 95.2 dB

Frequency Band (MHz)	Field Strength Limit at 3 m	
5725 to 5850	<input checked="" type="checkbox"/>	15.407(b)(4)(i) All emissions shall be limited to a level of 68.2 dBμV/m at 75 MHz or more above or below the band edge increasing linearly to 105.2dBμV/m 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 110.8 dBμV/m 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 68.2 dBμV/m at the band edge.
	<input type="checkbox"/>	15.407(b)(4)(ii) , compliance with the emission limits in § 15.247(d) Shall be at least 30dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power,. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c))



6.3. Test Procedure

Frequency Range 9kHz~30MHz:

The EUT setup on the turn table which has 0.8 m height to the ground. The turn table rotated 360 degrees and antenna fixed to 1 m to find the maximum emission level. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10-2013 regulation.

- (1) RBW = 9kHz with peak and average detector.
- (2) Detector: average and peak (9kHz-490kHz)
Q.P. (490kHz-30MHz)

Frequency Range 30MHz ~ 40GHz:

The EUT setup on the turn table which has 0.8m (For 30-1000MHz) or 1.5m (For Above 1GHz) height to the ground. The turn table rotated 360 degrees and antenna varied from 1 m to 4 m to find the maximum emission level. Both horizontal and vertical polarization are required. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10-2013 regulation.

Frequency below 1 GHz:

Spectrum Analyzer is used for pre-testing with following setting:

- (1) RBW = 120 kHz
- (2) VBW \geq 3 x RBW.
- (3) Detector = Peak.
- (4) Sweep time = auto.
- (5) Trace mode = max hold.
- (6) Allow sweeps to continue until the trace stabilizes.
- (7) When peak-detected value is lower than limit that the measurement using the Q.P. detector is not required. Otherwise using Q.P. for finally measurement.

Frequency above 1GHz to 10th harmonic (up to 40 GHz):**Peak Detector:**

- (1) RBW = 1 MHz
- (2) VBW $\geq 3 \times$ RBW.
- (3) Detector = Peak.
- (4) Sweep time = auto.
- (5) Trace mode = max hold.
- (6) Allow sweeps to continue until the trace stabilizes.
- (7) When peak-detected value is lower than limit that the measurement using the average detector is not required. Otherwise using average for finally measurement.

Average Detector:**Option 1:**

- (1) RBW = 1 MHz
- (2) VBW $\geq 1/T$.

Modulation Type	T (ms)	1/ T (kHz)	VBW Setting (kHz)
802.11a	1.43	0.70	0.70
802.11ac-VHT20	0.692	1.45	1.45
802.11ac-VHT40	0.358	2.79	2.79
802.11ac-VHT80	0.191	5.24	5.24

N/A: 1/ T is not implemented when duty cycle presented in section 3.5 is $\geq 98 \%$.

- (1) Detector = Peak.
- (2) Sweep time = auto.
- (3) Trace mode = max hold.
- (4) Allow sweeps to continue until the trace stabilizes.

Option 2:

Average Emission Level= Peak Emission Level+ D.C.C.F.

6.4. Measurement Result Explanation

Peak Emission Level=Antenna Factor + Cable Loss + Meter Reading

Average Emission Level=Antenna Factor + Cable Loss + Meter Reading

Average Emission Level= Peak Emission Level+ DCCF

Duty Cycle Correction Factor (DCCF)= $20\log(TX_{on}/TX_{on+off})$ presented in section 3.5

6.5. Test Results

PASSED.

Test Date	2016/11/07	Temp./Hum.	23 /53%
Test Voltage	AC 120V, 60Hz		

6.5.1. Emissions within Restricted Frequency Bands

6.5.1.1. Frequency 9kHz~30MHz

The emissions (9kHz~30MHz) not reported for there is no emission be found.

6.5.1.2. Frequency 30MHz~1000MHz

Mode	802.11a	UNII Band	I
		Frequency	TX 5180MHz

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
119.24	13.01	2.50	19.58	35.09	43.50	8.41	Peak
359.80	15.13	5.09	14.82	35.04	46.00	10.96	Peak
527.61	17.52	6.52	8.98	33.02	46.00	12.98	Peak
712.88	18.65	7.15	6.57	32.37	46.00	13.63	Peak

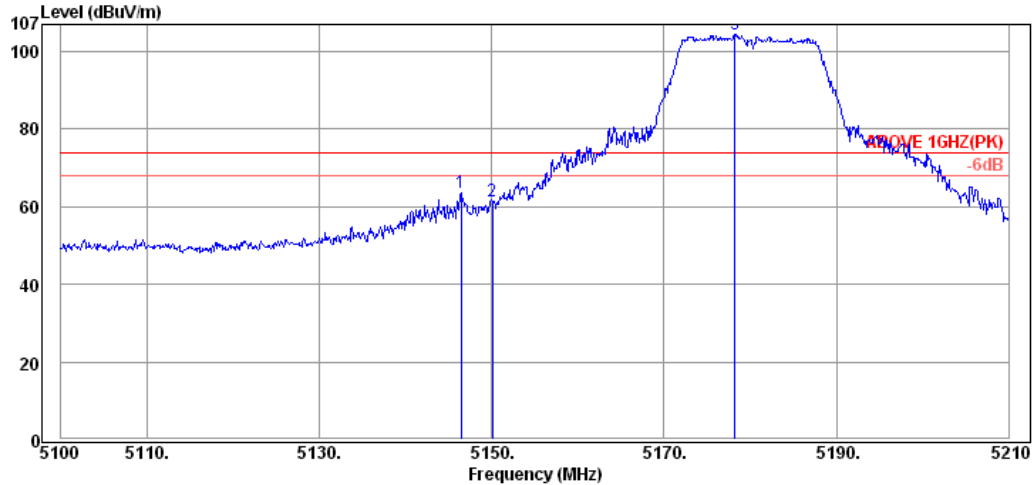
Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
45.52	11.93	1.49	25.10	38.52	40.00	1.48	Peak
121.18	12.99	2.52	26.28	41.79	43.50	1.71	Peak
238.55	12.03	3.71	22.61	38.35	46.00	7.65	Peak
644.98	18.46	6.91	8.22	33.59	46.00	12.41	Peak

6.5.1.3. Frequency Above 1 GHz to 10th harmonics

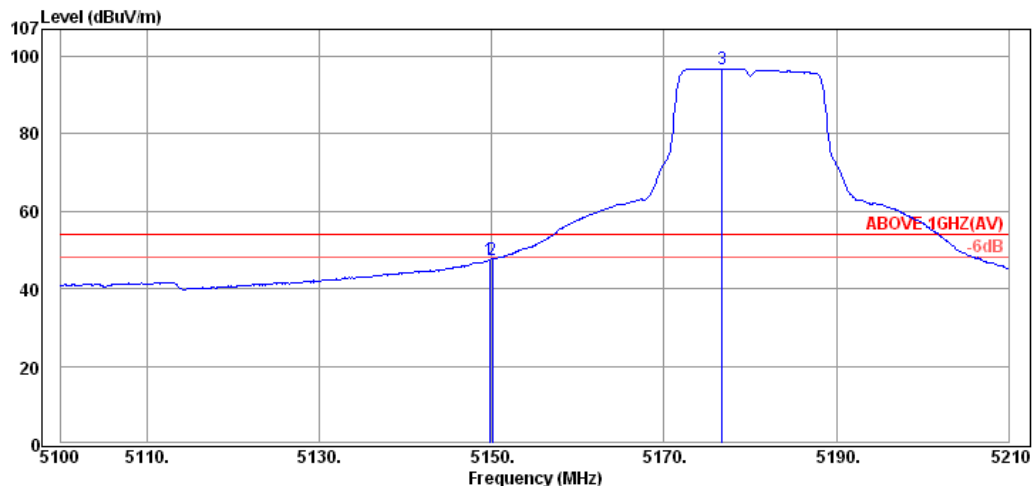
Band Edge:

Mode	802.11a	Frequency	TX 5180MHz
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Antenna at Horizontal Polarization

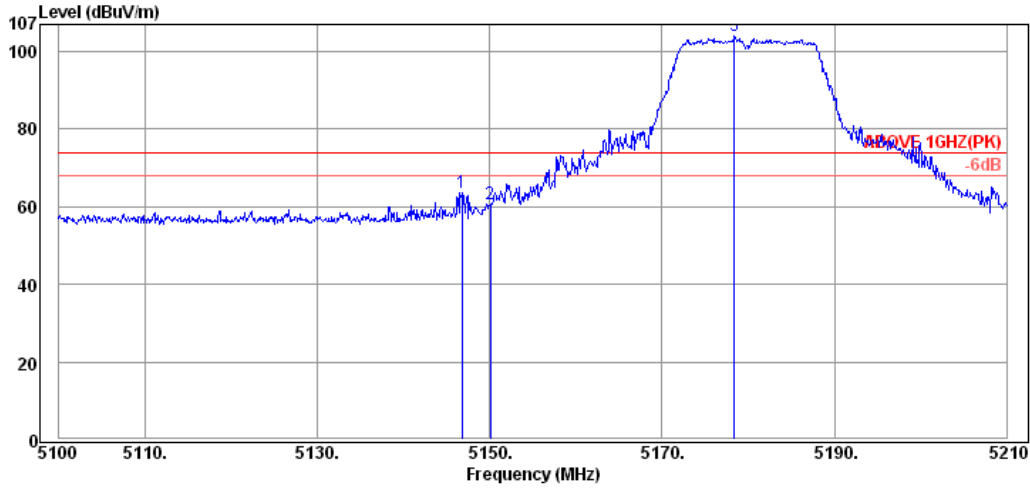
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5146.42	34.45	9.41	19.64	63.50	74.00	10.50	Peak
5150.05	34.45	9.41	17.60	61.46	74.00	12.54	Peak
5178.21	34.48	9.39	60.63	104.50	---	---	Peak



Antenna at Horizontal Polarization

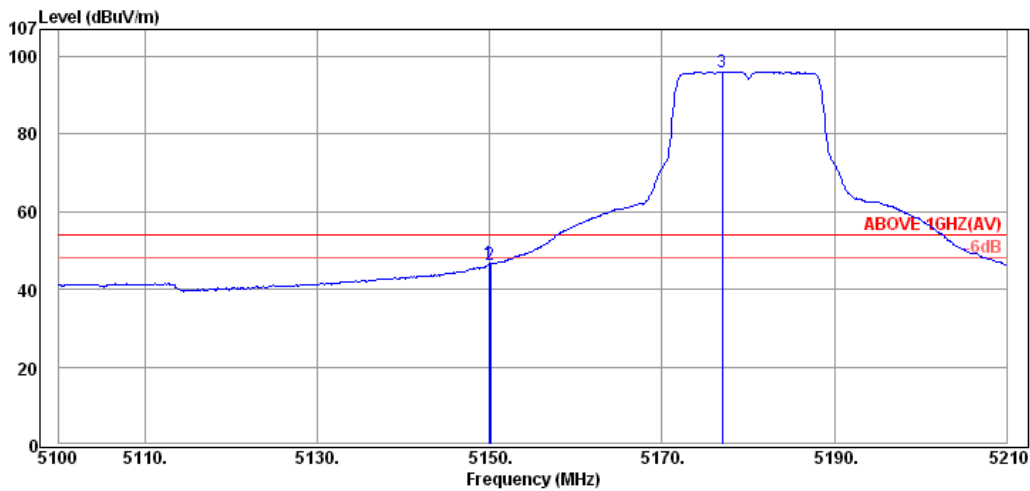
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5149.72	34.45	9.41	3.58	47.44	54.00	6.56	Average
5150.05	34.45	9.41	3.71	47.57	54.00	6.43	Average
5176.78	34.48	9.39	52.95	96.82	---	---	Average

Mode	802.11a	Frequency	TX 5180MHz
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Antenna at Vertical Polarization

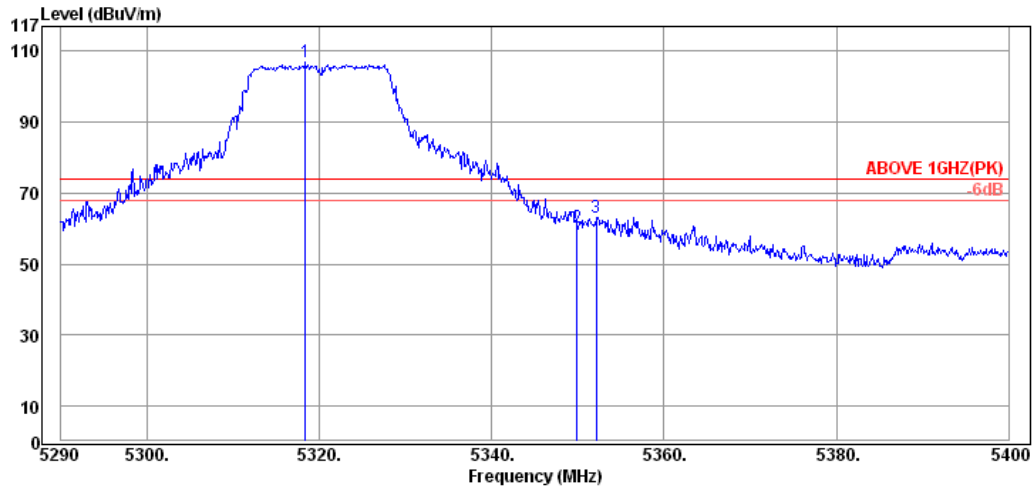
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5146.75	34.45	9.41	19.85	63.71	74.00	10.29	Peak
5150.05	34.45	9.41	16.76	60.62	74.00	13.38	Peak
5178.43	34.48	9.39	60.00	103.87	---	---	Peak



Antenna at Vertical Polarization

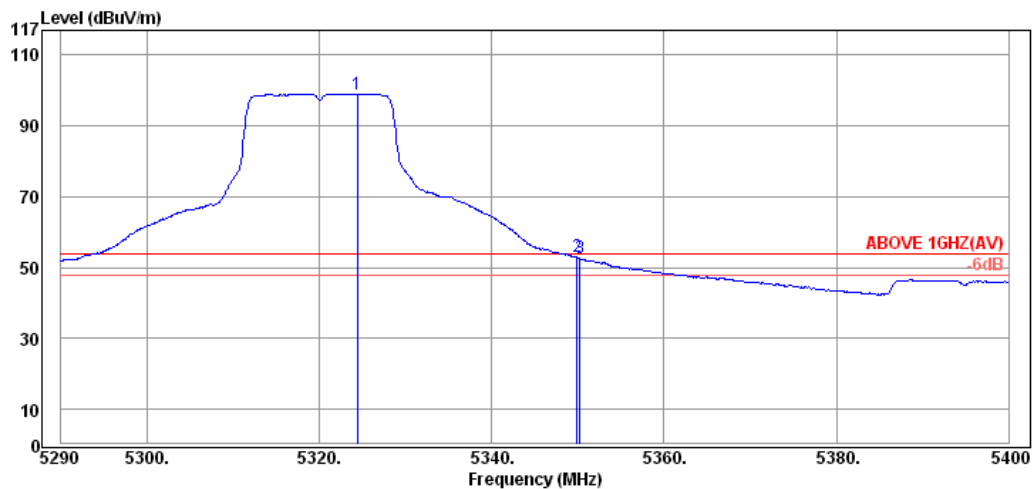
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5149.94	34.45	9.41	2.74	46.60	54.00	7.40	Average
5150.05	34.45	9.41	2.62	46.48	54.00	7.52	Average
5177.00	34.48	9.39	52.22	96.09	---	---	Average

Mode	802.11a	Frequency	TX 5320MHz
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Antenna at Horizontal Polarization

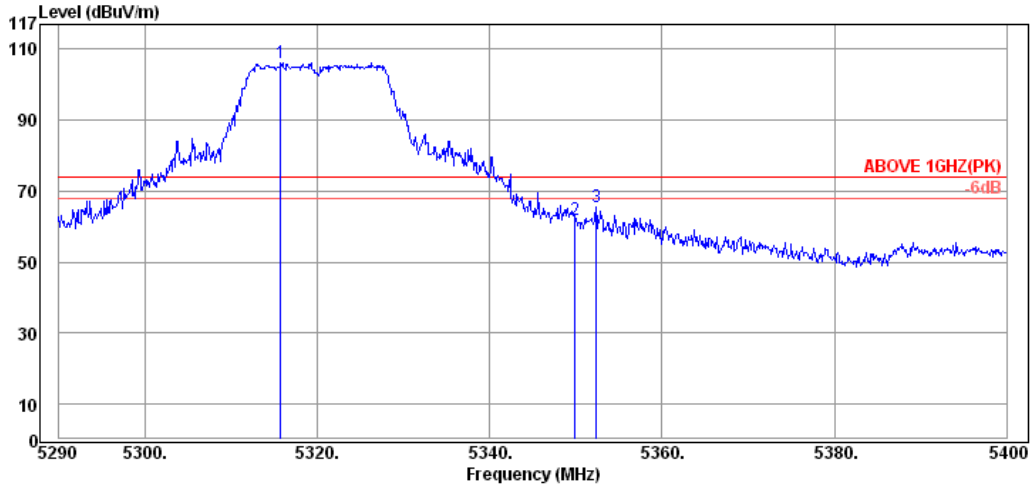
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5318.38	34.62	9.38	63.12	107.12	---	---	Peak
5349.95	34.65	9.40	16.42	60.47	74.00	13.53	Peak
5352.15	34.65	9.40	19.21	63.26	74.00	10.74	Peak



Antenna at Horizontal Polarization

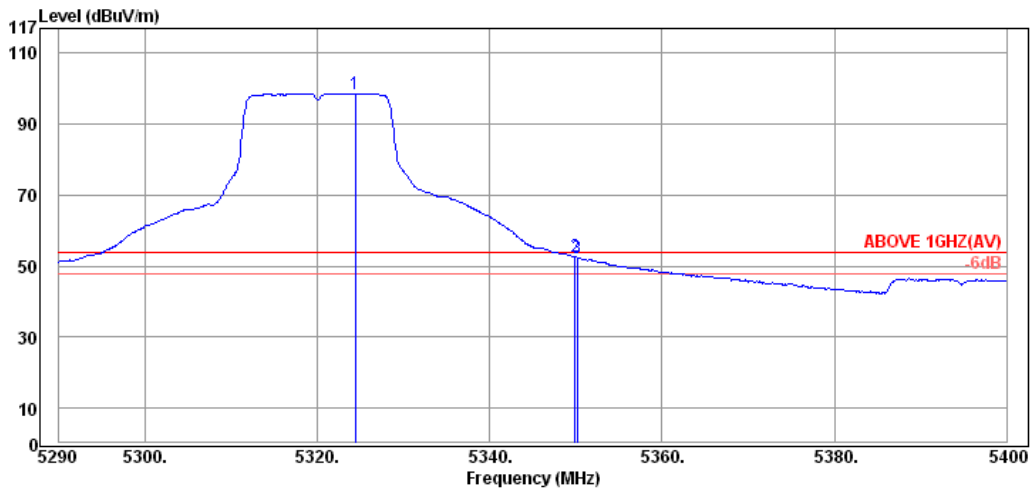
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5324.43	34.62	9.38	55.09	99.09	---	---	Average
5349.95	34.65	9.40	8.94	52.99	54.00	1.01	Average
5350.28	34.65	9.40	8.48	52.53	54.00	1.47	Average

Mode	802.11a	Frequency	TX 5320MHz
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Antenna at Vertical Polarization

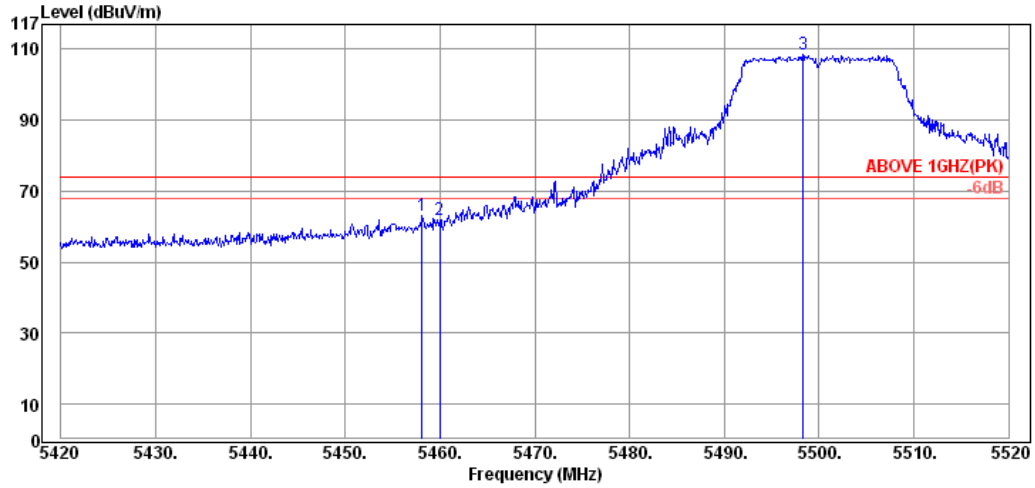
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5315.74	34.62	9.38	62.27	106.27	---	---	Peak
5349.95	34.65	9.40	17.67	61.72	74.00	12.28	Peak
5352.37	34.65	9.40	21.60	65.65	74.00	8.35	Peak



Antenna at Vertical Polarization

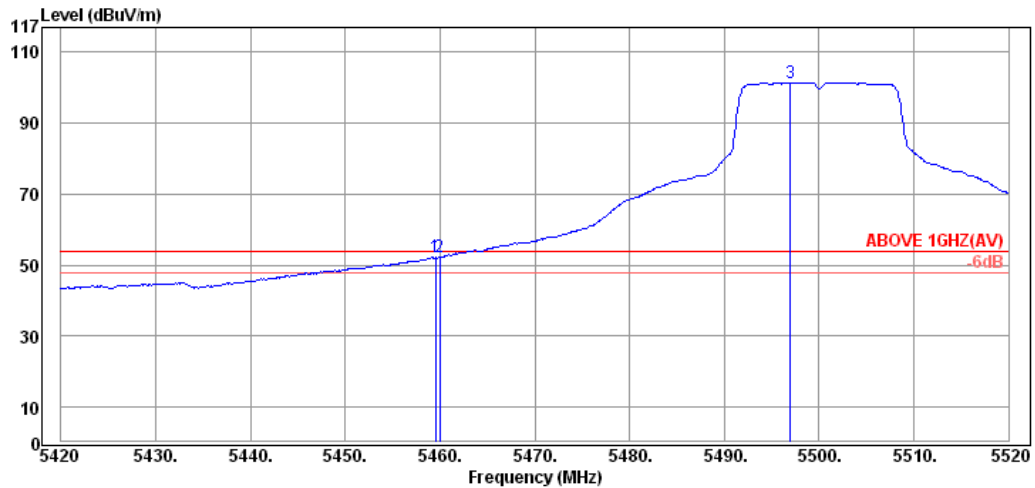
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5324.43	34.62	9.38	54.66	98.66	---	---	Average
5349.95	34.65	9.40	8.52	52.57	54.00	1.43	Average
5350.17	34.65	9.40	8.41	52.46	54.00	1.54	Average

Mode	802.11a	Frequency	TX 5500MHz
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Antenna at Horizontal Polarization

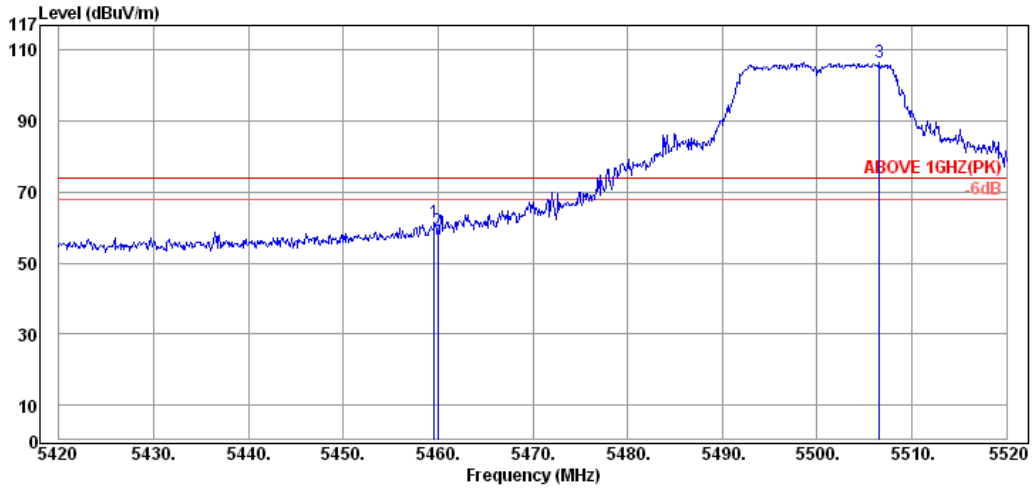
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5458.10	34.75	9.46	19.11	63.32	74.00	10.68	Peak
5460.00	34.75	9.46	17.68	61.89	74.00	12.11	Peak
5498.30	34.80	9.48	64.41	108.69	---	---	Peak



Antenna at Horizontal Polarization

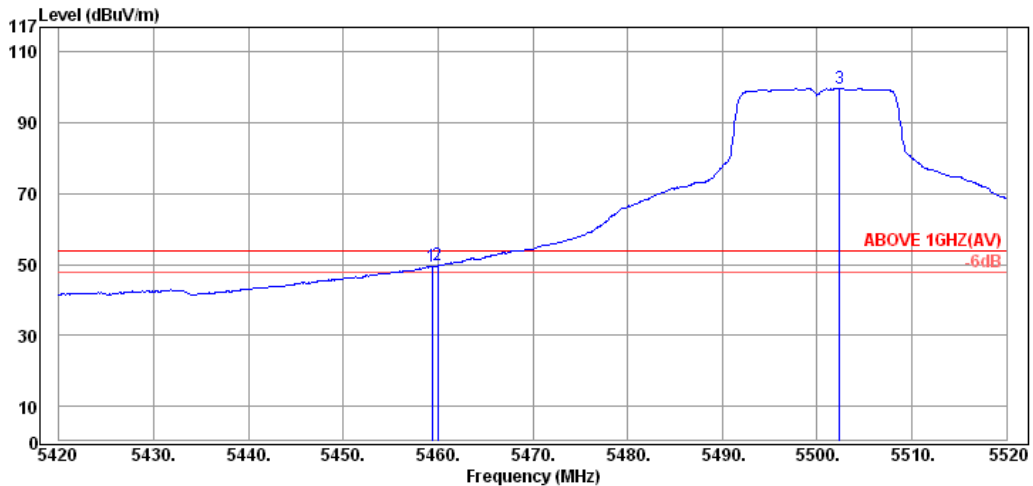
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5459.50	34.75	9.46	7.95	52.16	54.00	1.84	Average
5460.00	34.75	9.46	8.04	52.25	54.00	1.75	Average
5497.00	34.80	9.48	57.18	101.46	---	---	Average

Mode	802.11a	Frequency	TX 5500MHz
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Antenna at Vertical Polarization

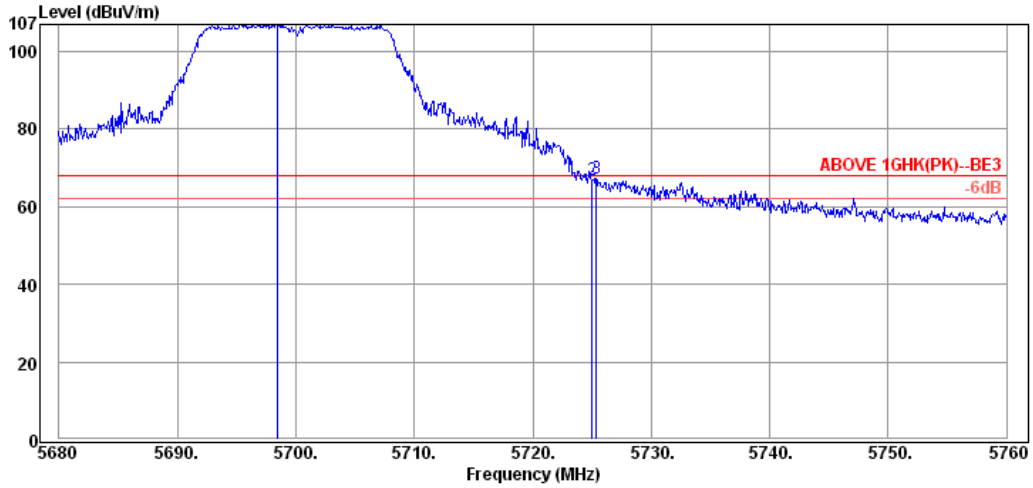
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5459.60	34.75	9.46	17.40	61.61	74.00	12.39	Peak
5460.00	34.75	9.46	14.92	59.13	74.00	14.87	Peak
5506.60	34.80	9.55	62.36	106.71	---	---	Peak



Antenna at Vertical Polarization

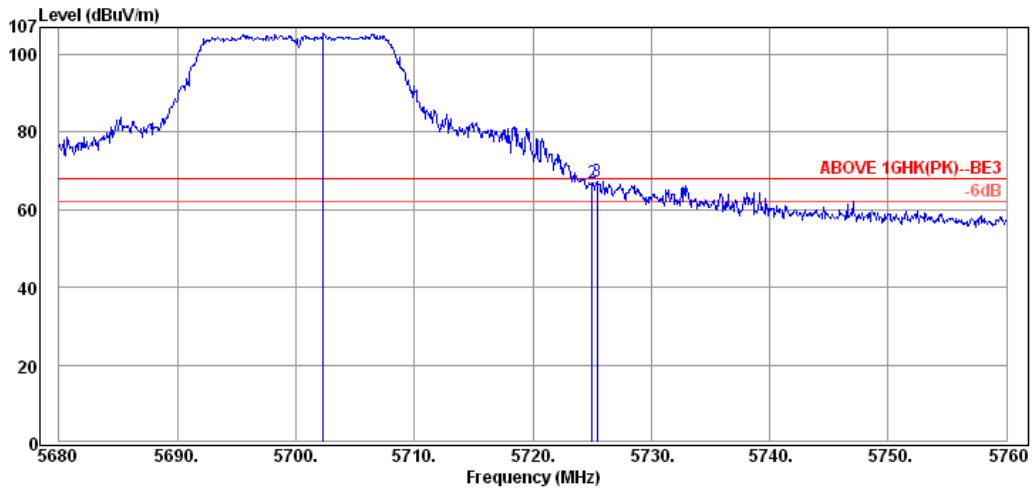
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5459.40	34.75	9.46	5.38	49.59	54.00	4.41	Average
5460.00	34.75	9.46	5.53	49.74	54.00	4.26	Average
5502.40	34.80	9.48	55.33	99.61	---	---	Average

Mode	802.11a	Frequency	TX 5700MHz
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Antenna at Horizontal Polarization

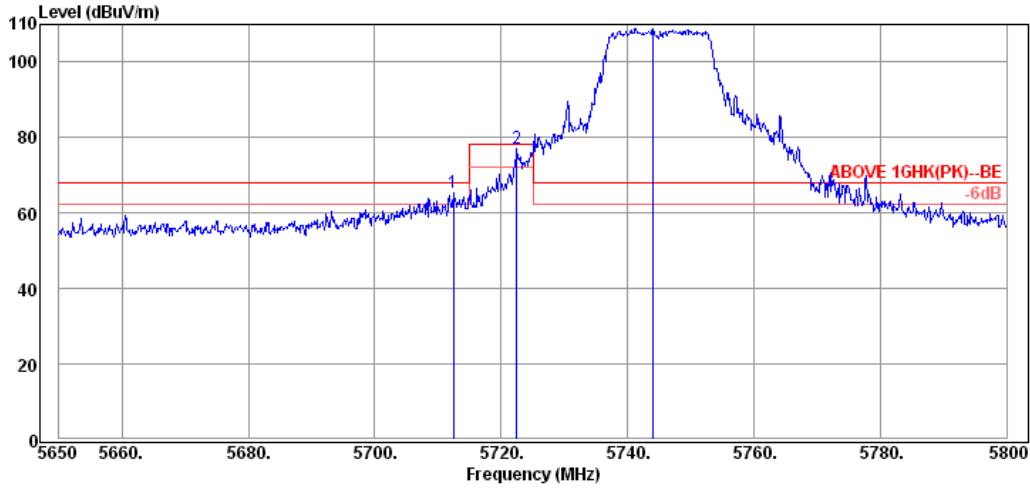
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5698.40	35.03	10.22	62.48	107.73	---	---	Peak
5725.04	35.07	10.29	21.46	66.82	68.20	1.38	Peak
5725.36	35.07	10.29	21.76	67.12	68.20	1.08	Peak



Antenna at Vertical Polarization

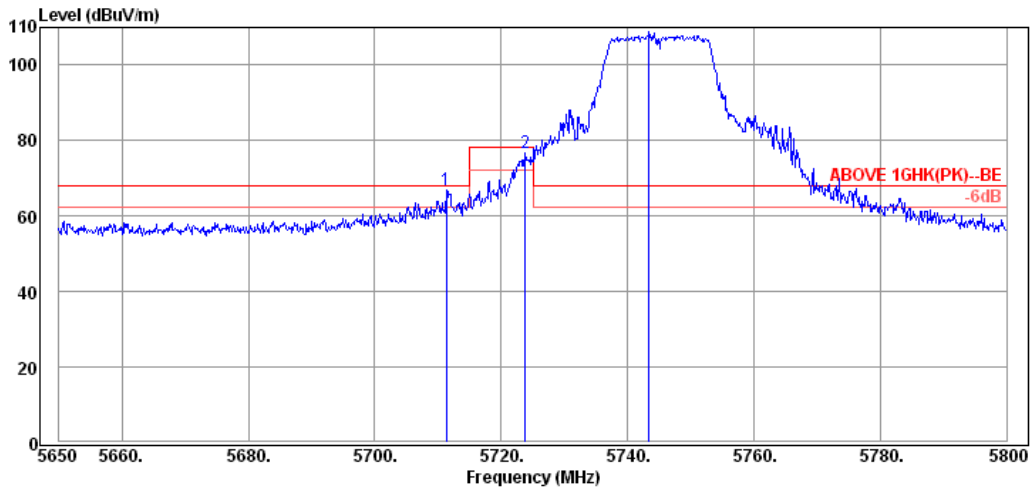
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5702.32	35.05	10.22	60.11	105.38	---	---	Peak
5725.04	35.07	10.29	21.74	67.10	68.20	1.10	Peak
5725.44	35.07	10.29	21.98	67.34	68.20	0.86	Peak

Mode	802.11a	Frequency	TX 5745MHz
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Antenna at Horizontal Polarization

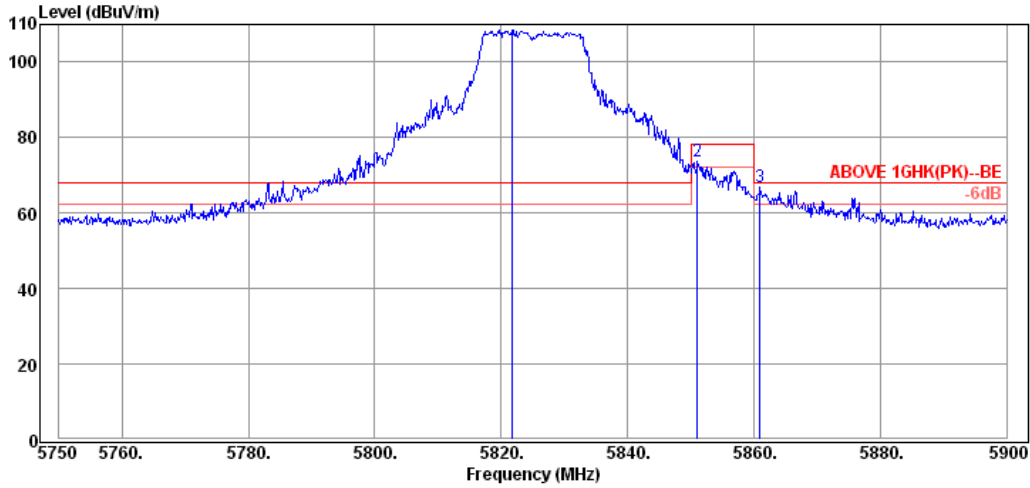
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5712.40	35.05	10.29	20.16	65.50	68.20	2.70	Peak
5722.45	35.07	10.29	31.69	77.05	78.20	1.15	Peak
5744.05	35.09	10.35	63.60	109.04	---	---	Peak



Antenna at Vertical Polarization

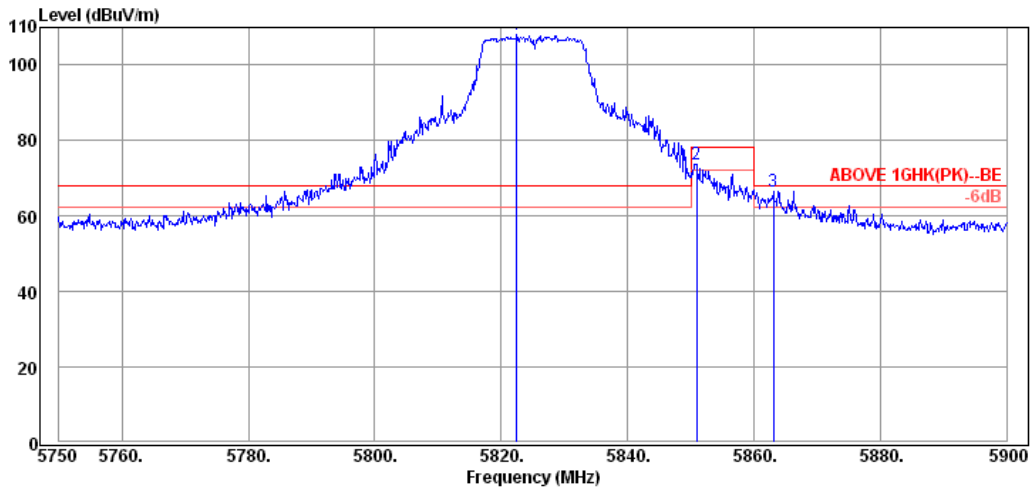
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5711.35	35.05	10.29	21.53	66.87	68.20	1.33	Peak
5723.80	35.07	10.29	31.34	76.70	78.20	1.50	Peak
5743.45	35.09	10.35	63.43	108.87	---	---	Peak

Mode	802.11a	Frequency	TX 5825MHz
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Antenna at Horizontal Polarization

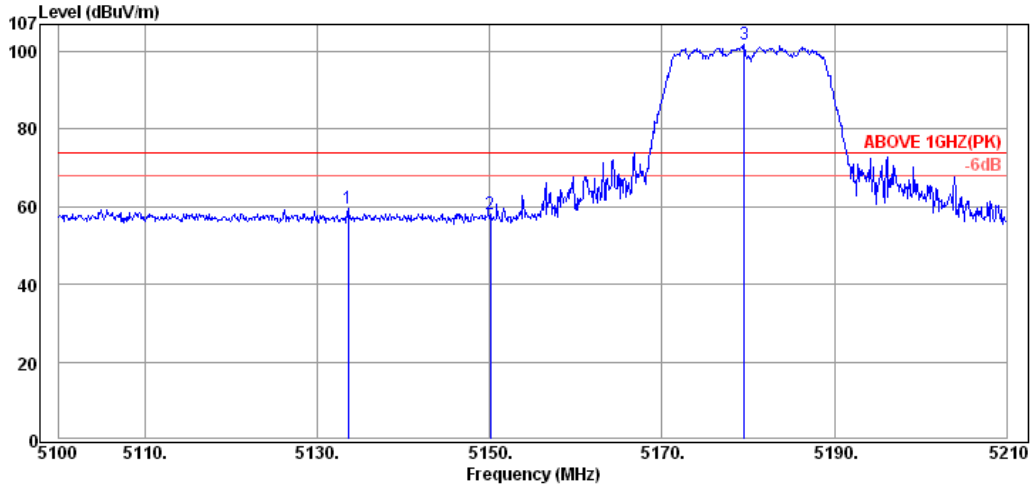
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5821.70	35.19	10.26	63.22	108.67	---	---	Peak
5851.10	35.21	10.22	28.13	73.56	78.20	4.64	Peak
5861.00	35.23	10.18	21.34	66.75	68.20	1.45	Peak



Antenna at Vertical Polarization

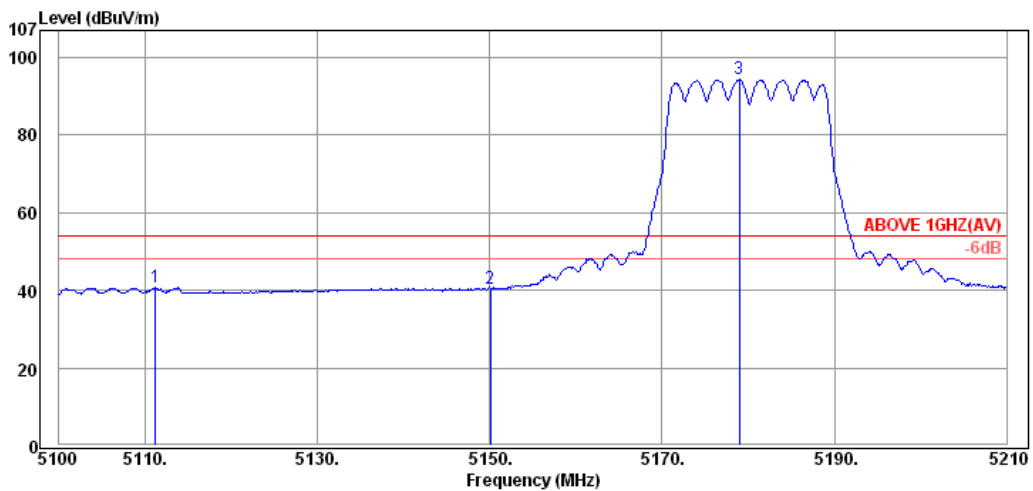
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5822.45	35.19	10.26	62.51	107.96	---	---	Peak
5850.95	35.21	10.22	28.39	73.82	78.20	4.38	Peak
5863.10	35.23	10.18	21.01	66.42	68.20	1.78	Peak

Mode	802.11n-HT20	Frequency	TX 5180MHz
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Antenna at Horizontal Polarization

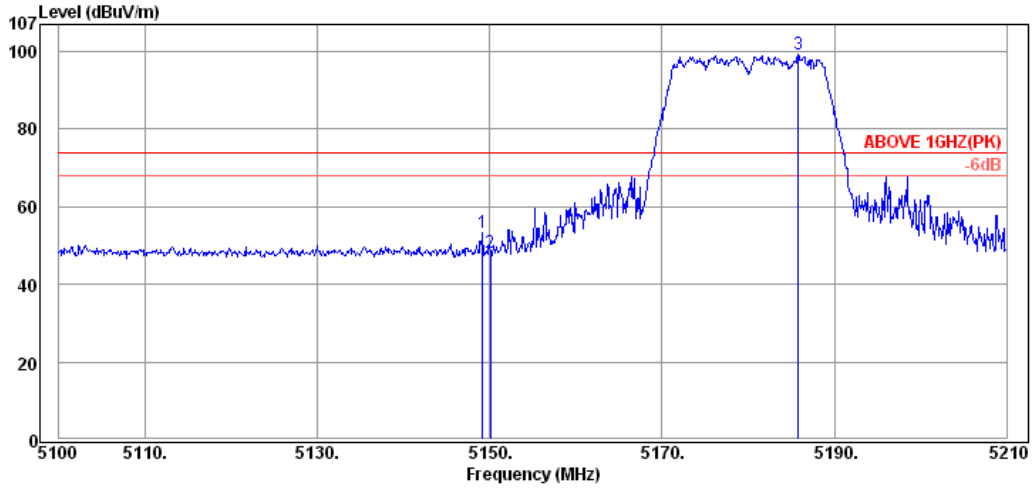
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5133.55	34.43	9.42	15.75	59.60	74.00	14.40	Peak
5150.05	34.45	9.41	14.26	58.12	74.00	15.88	Peak
5179.53	34.48	9.39	57.97	101.84	---	---	Peak



Antenna at Horizontal Polarization

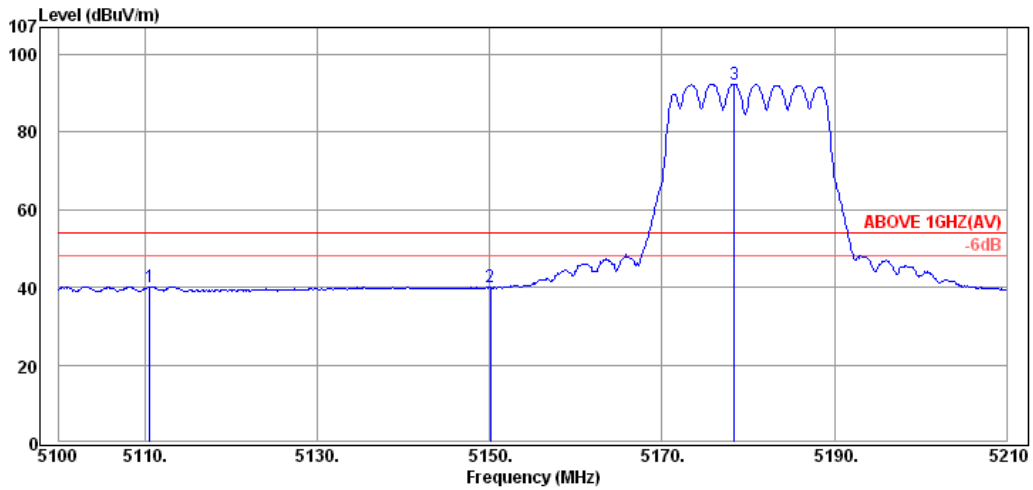
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5111.22	34.42	9.43	-3.13	40.72	54.00	13.28	Average
5150.05	34.45	9.41	-3.47	40.39	54.00	13.61	Average
5178.98	34.48	9.39	50.46	94.33	---	---	Average

Mode	802.11n-HT20	Frequency	TX 5180MHz
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Antenna at Vertical Polarization

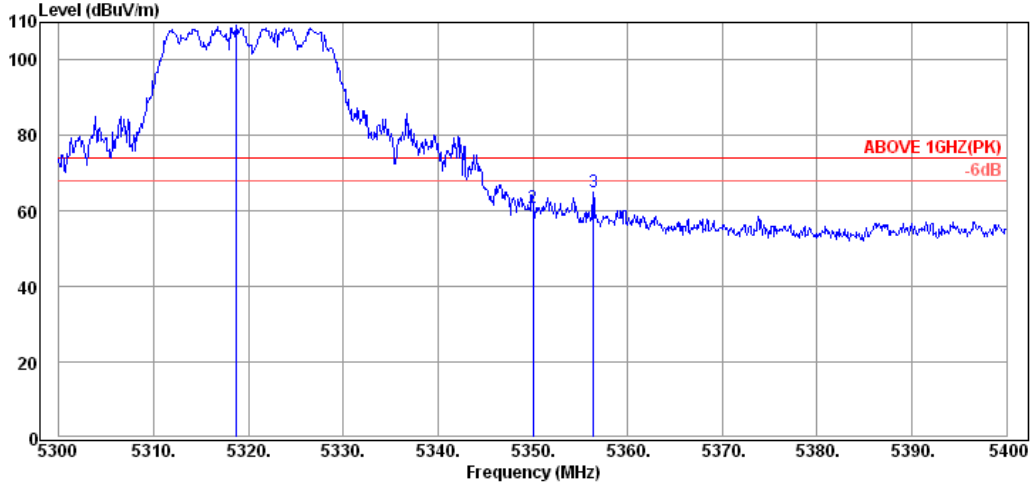
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5149.17	34.45	9.41	9.30	53.16	74.00	20.84	Peak
5150.05	34.45	9.41	4.34	48.20	74.00	25.80	Peak
5185.80	34.48	9.39	55.32	99.19	---	---	Peak



Antenna at Vertical Polarization

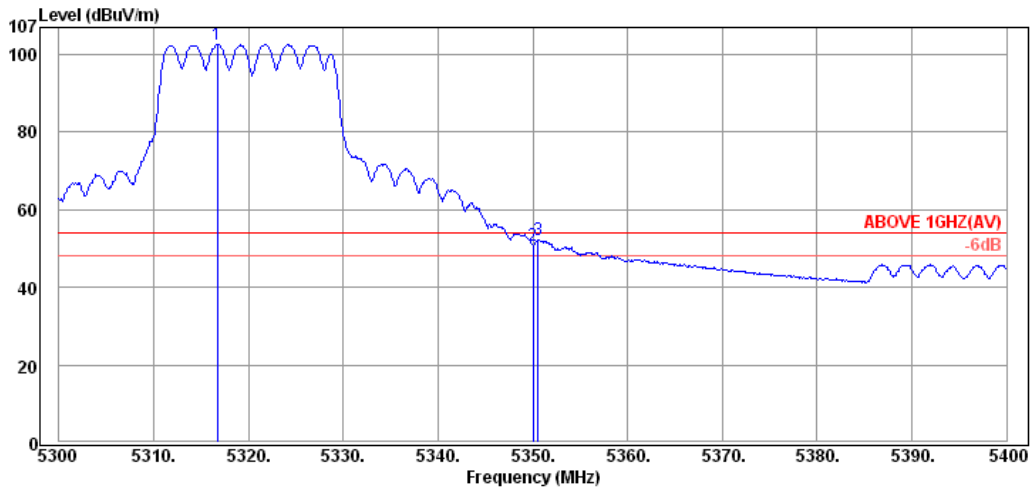
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5110.56	34.42	9.43	-3.66	40.19	54.00	13.81	Average
5150.05	34.45	9.41	-3.82	40.04	54.00	13.96	Average
5178.43	34.48	9.39	48.58	92.45	---	---	Average

Mode	802.11n-HT20	Frequency	TX 5320MHz
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Antenna at Horizontal Polarization

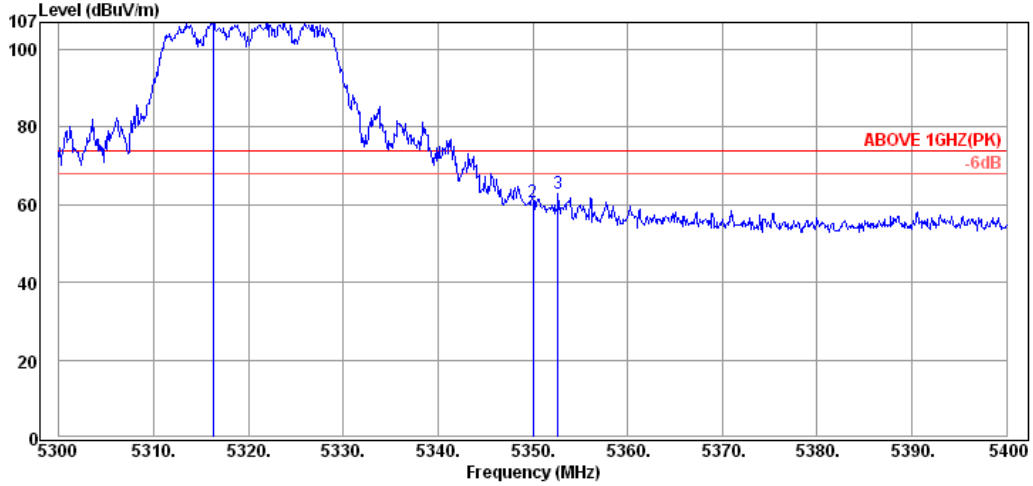
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5318.70	34.62	9.38	65.10	109.10	---	---	Peak
5350.00	34.65	9.40	16.70	60.75	74.00	13.25	Peak
5356.40	34.65	9.40	20.97	65.02	74.00	8.98	Peak



Antenna at Horizontal Polarization

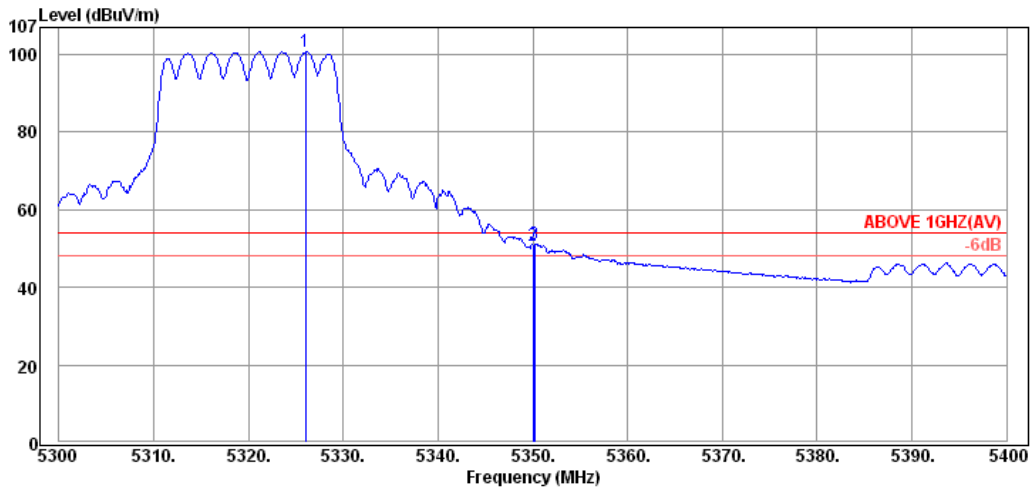
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5316.70	34.62	9.38	58.53	102.53	---	---	Average
5350.00	34.65	9.40	6.77	50.82	54.00	3.18	Average
5350.60	34.65	9.40	8.05	52.10	54.00	1.90	Average

Mode	802.11n-HT20	Frequency	TX 5320MHz
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Antenna at Vertical Polarization

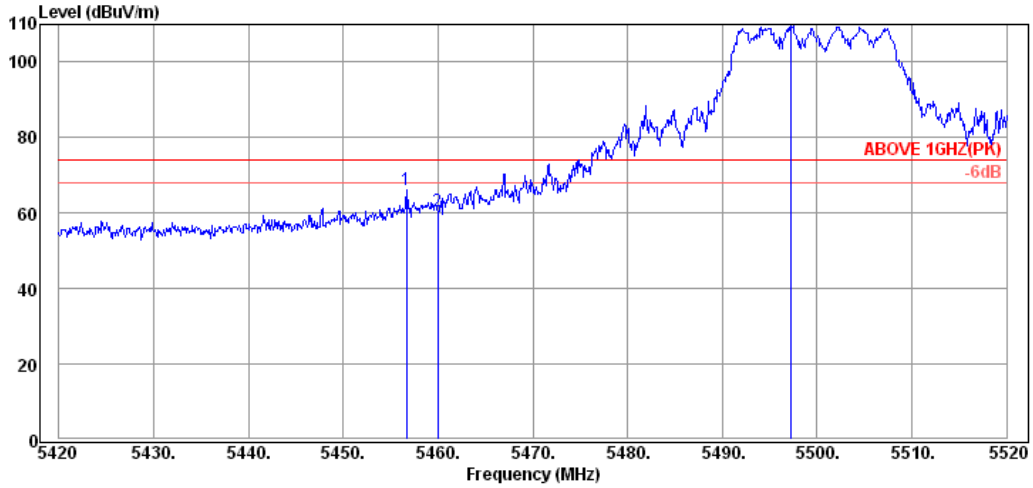
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5316.30	34.62	9.38	63.99	107.99	---	---	Peak
5350.00	34.65	9.40	16.55	60.60	74.00	13.40	Peak
5352.70	34.65	9.40	18.91	62.96	74.00	11.04	Peak



Antenna at Vertical Polarization

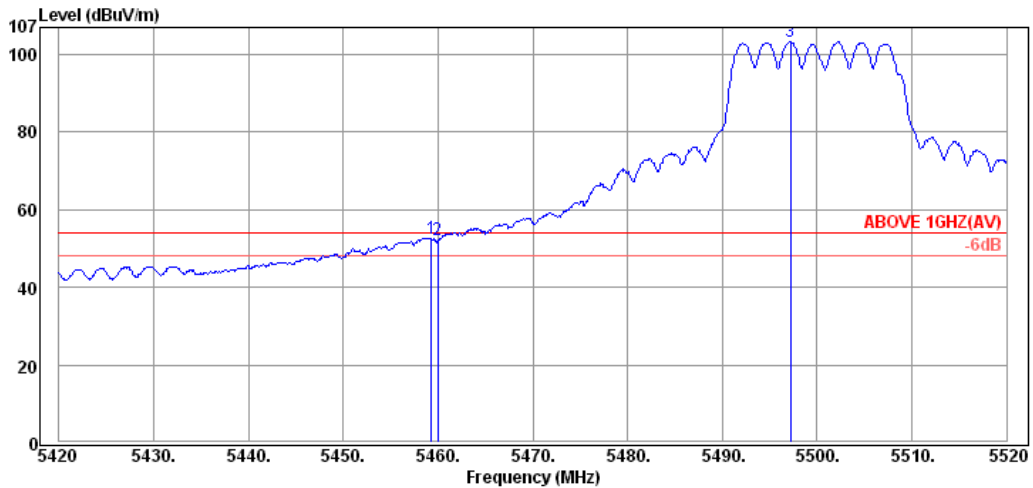
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5326.00	34.62	9.38	56.66	100.66	---	---	Average
5350.00	34.65	9.40	6.67	50.72	54.00	3.28	Average
5350.20	34.65	9.40	7.21	51.26	54.00	2.74	Average

Mode	802.11n-HT20	Frequency	TX 5500MHz
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Antenna at Horizontal Polarization

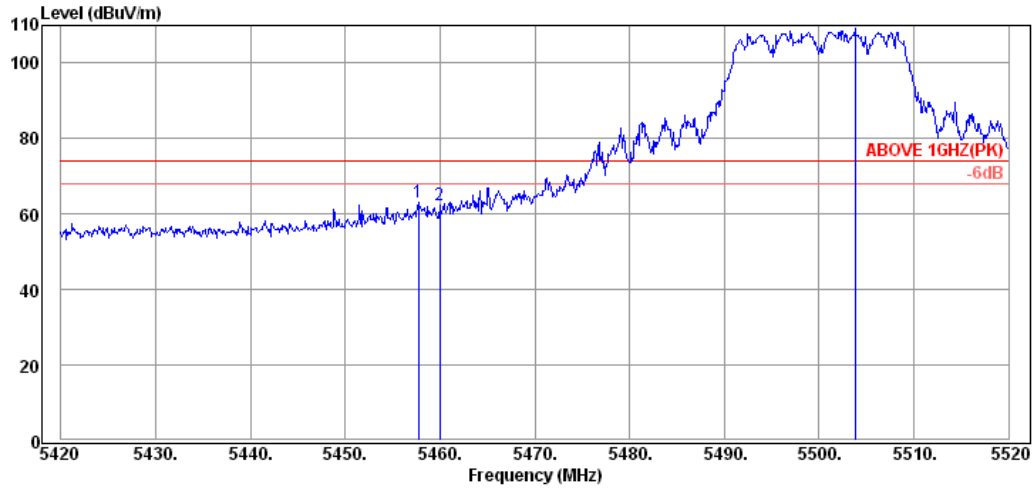
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5456.70	34.75	9.46	21.81	66.02	74.00	7.98	Peak
5460.00	34.75	9.46	16.26	60.47	74.00	13.53	Peak
5497.20	34.80	9.48	65.63	109.91	---	---	Peak



Antenna at Horizontal Polarization

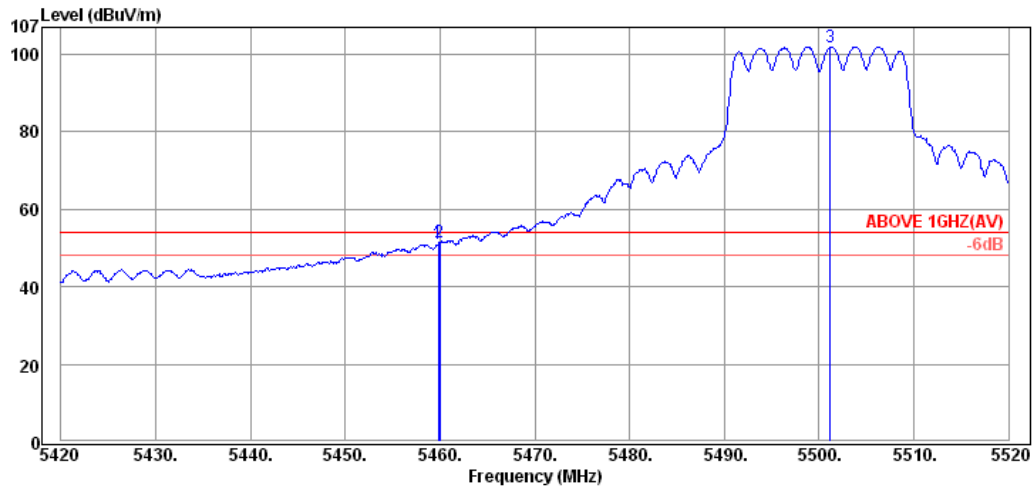
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5459.30	34.75	9.46	8.54	52.75	54.00	1.25	Average
5460.00	34.75	9.46	8.06	52.27	54.00	1.73	Average
5497.20	34.80	9.48	58.92	103.20	---	---	Average

Mode	802.11n-HT20	Frequency	TX 5500MHz
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Antenna at Vertical Polarization

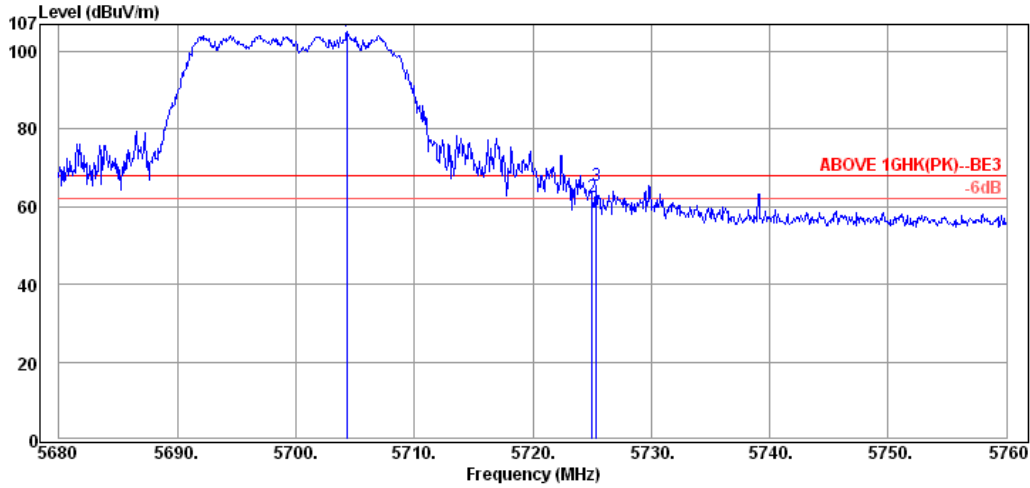
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5457.70	34.75	9.46	18.90	63.11	74.00	10.89	Peak
5460.00	34.75	9.46	18.20	62.41	74.00	11.59	Peak
5503.80	34.80	9.48	64.79	109.07	---	---	Peak



Antenna at Vertical Polarization

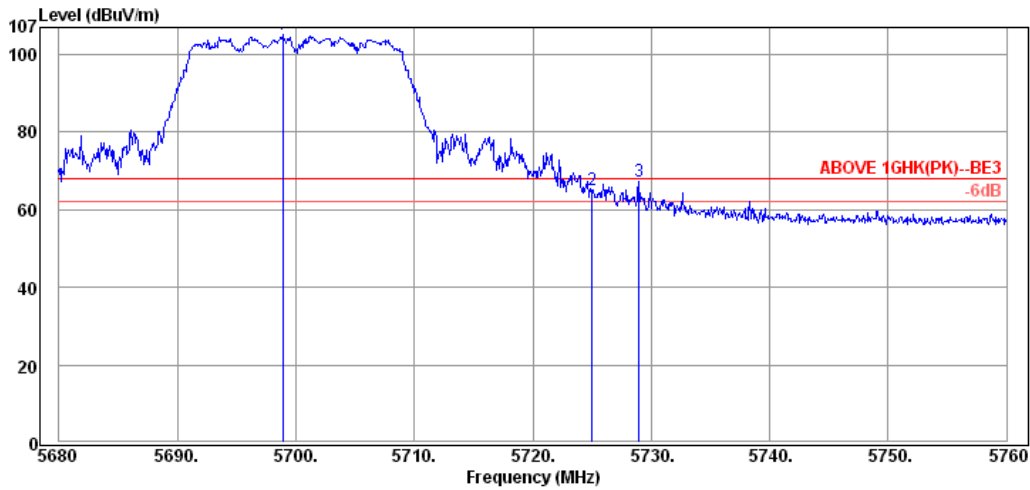
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5459.80	34.75	9.46	6.97	51.18	54.00	2.82	Average
5460.00	34.75	9.46	7.29	51.50	54.00	2.50	Average
5501.20	34.80	9.48	57.75	102.03	---	---	Average

Mode	802.11n-HT20	Frequency	TX 5700MHz
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Antenna at Horizontal Polarization

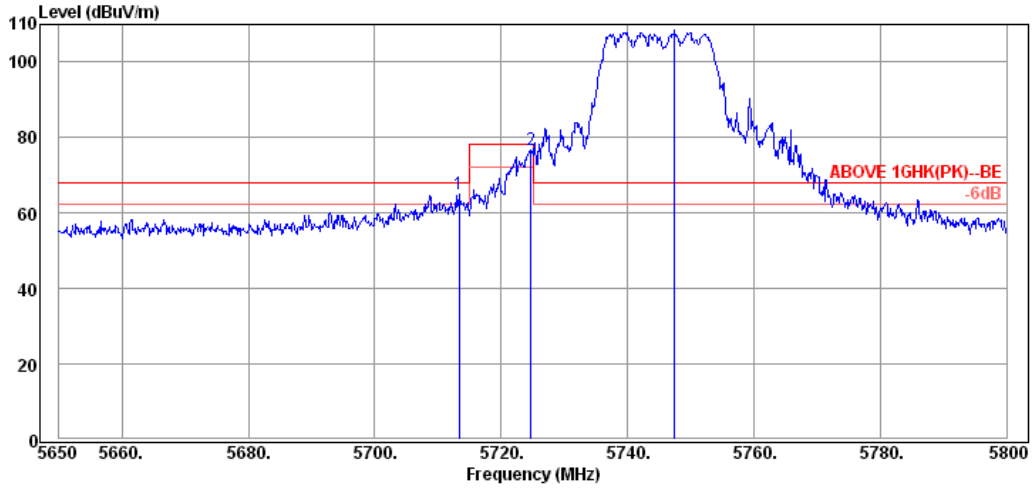
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5704.32	35.05	10.22	59.79	105.06	---	---	Peak
5725.04	35.07	10.29	17.33	62.69	68.20	5.51	Peak
5725.36	35.07	10.29	20.23	65.59	68.20	2.61	Peak



Antenna at Vertical Polarization

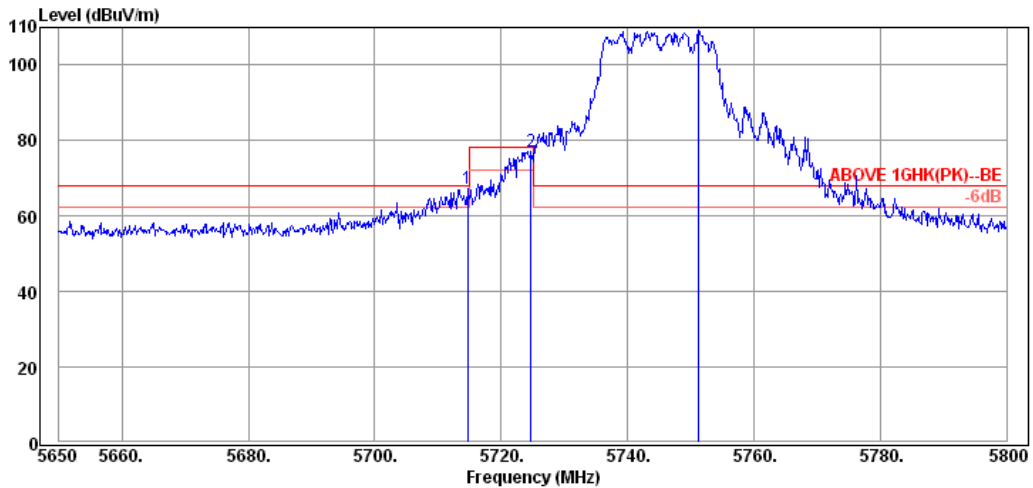
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5698.88	35.03	10.22	59.80	105.05	---	---	Peak
5725.04	35.07	10.29	19.66	65.02	68.20	3.18	Peak
5728.96	35.07	10.35	21.89	67.31	68.20	0.89	Peak

Mode	802.11n-HT20	Frequency	TX 5745MHz
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Antenna at Horizontal Polarization

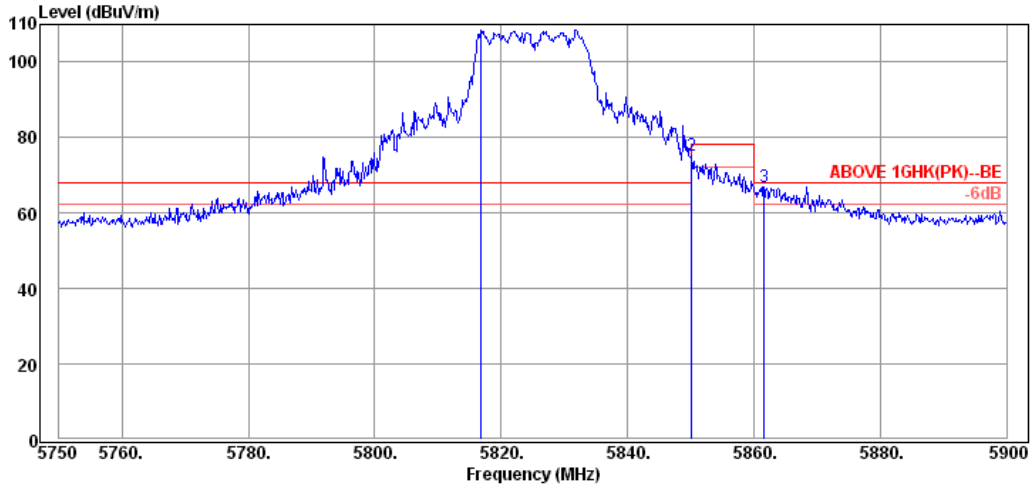
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5713.30	35.05	10.29	19.85	65.19	68.20	3.01	Peak
5724.70	35.07	10.29	31.50	76.86	78.20	1.34	Peak
5747.50	35.09	10.42	62.85	108.36	---	---	Peak



Antenna at Vertical Polarization

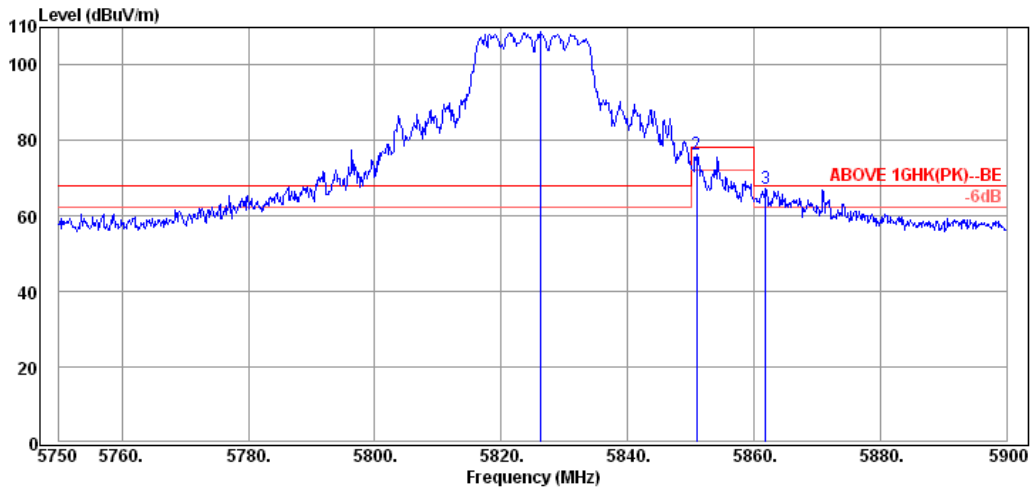
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5714.65	35.05	10.29	21.79	67.13	68.20	1.07	Peak
5724.70	35.07	10.29	31.61	76.97	78.20	1.23	Peak
5751.25	35.09	10.42	63.81	109.32	---	---	Peak

Mode	802.11n-HT20	Frequency	TX 5825MHz
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Antenna at Horizontal Polarization

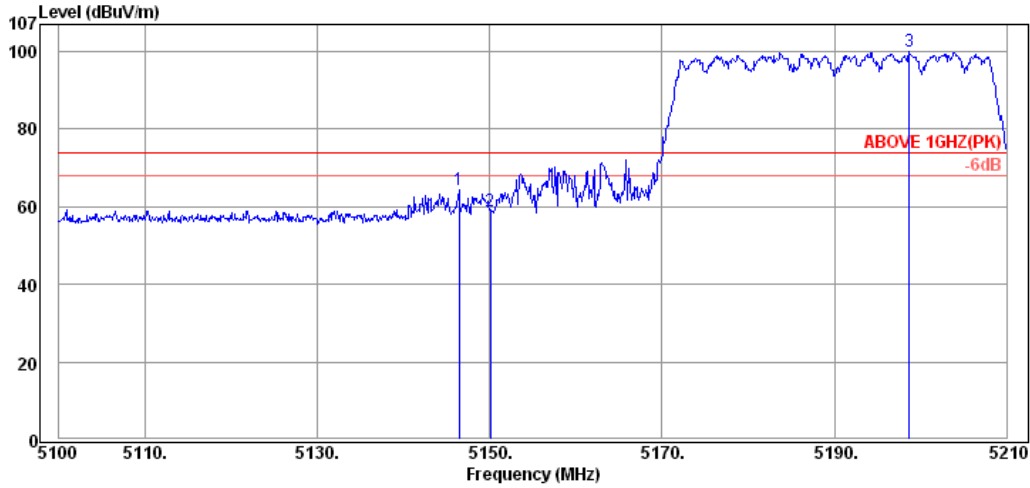
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5816.75	35.17	10.30	63.19	108.66	---	---	Peak
5850.20	35.21	10.22	29.61	75.04	78.20	3.16	Peak
5861.60	35.23	10.18	21.66	67.07	68.20	1.13	Peak



Antenna at Vertical Polarization

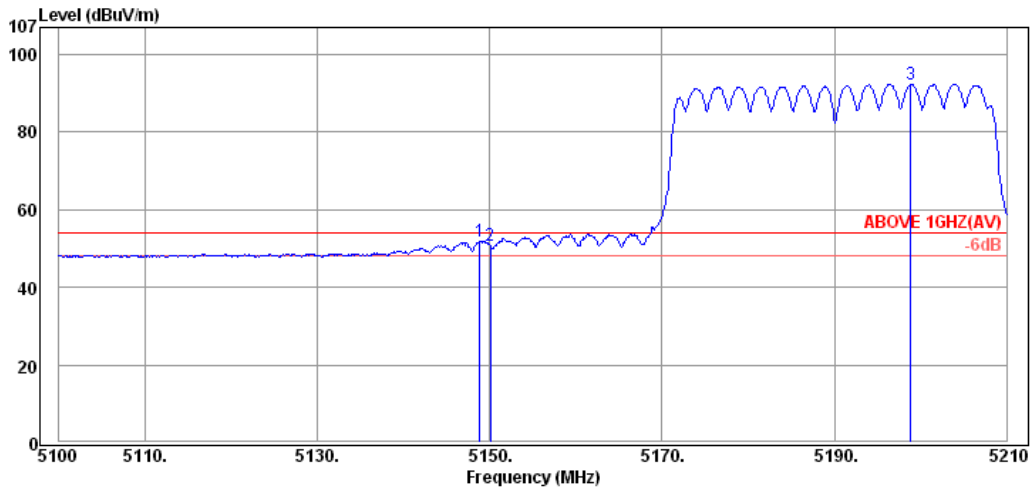
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5826.35	35.19	10.26	63.55	109.00	---	---	Average
5850.95	35.21	10.22	31.07	76.50	78.20	1.70	Average
5861.90	35.23	10.18	21.72	67.13	68.20	1.07	Average

Mode	802.11n-HT40	Frequency	TX 5190MHz
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Antenna at Horizontal Polarization

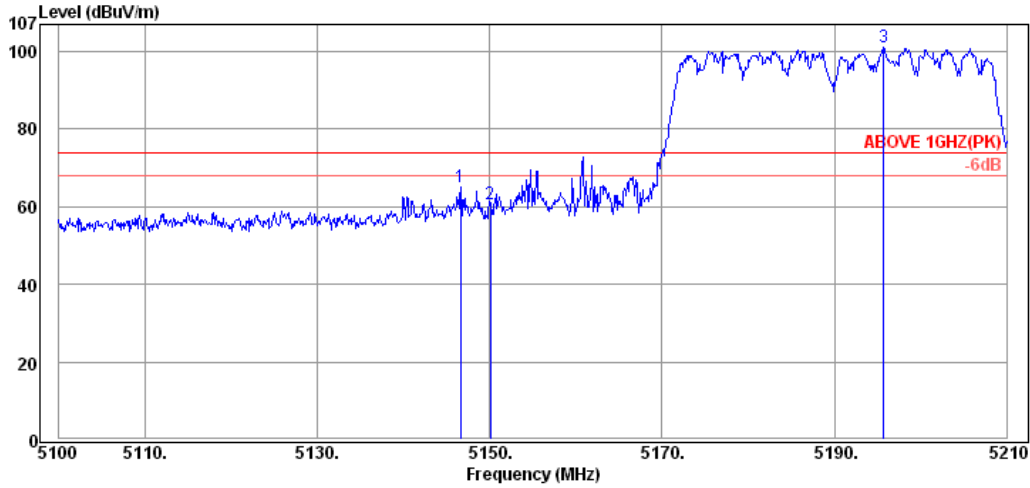
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5146.42	34.45	9.41	20.48	64.34	74.00	9.66	Peak
5150.05	34.45	9.41	15.11	58.97	74.00	15.03	Peak
5198.67	34.50	9.37	56.27	100.14	---	---	Peak



Antenna at Horizontal Polarization

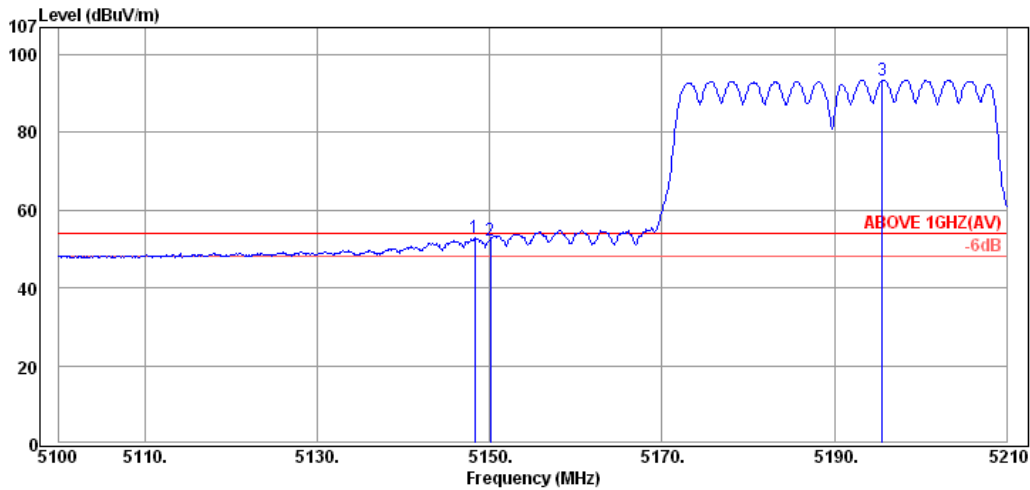
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5148.84	34.45	9.41	8.14	52.00	54.00	2.00	Average
5150.05	34.45	9.41	6.93	50.79	54.00	3.21	Average
5198.89	34.50	9.37	48.52	92.39	---	---	Average

Mode	802.11n-HT40	Frequency	TX 5190MHz
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Antenna at Vertical Polarization

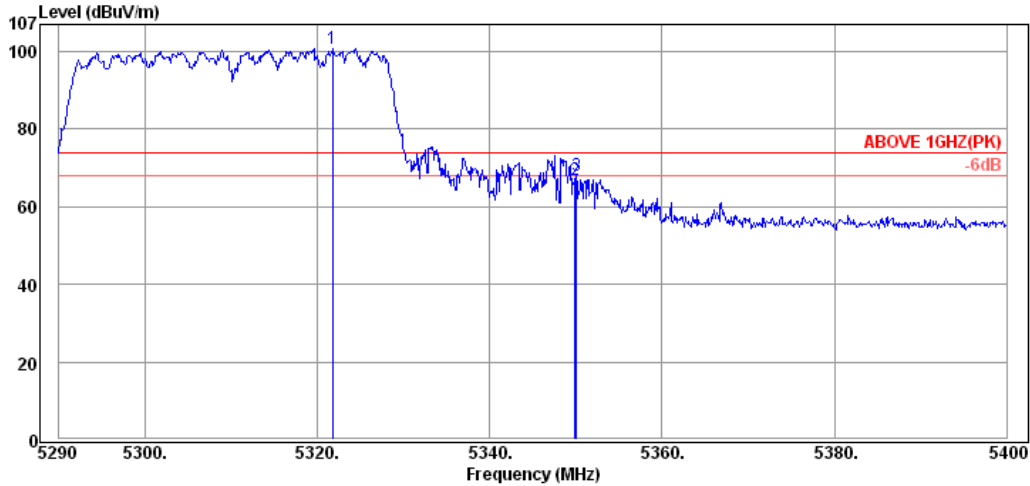
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5146.64	34.45	9.41	21.32	65.18	74.00	8.82	Peak
5150.05	34.45	9.41	16.83	60.69	74.00	13.31	Peak
5195.70	34.50	9.37	57.09	100.96	---	---	Peak



Antenna at Vertical Polarization

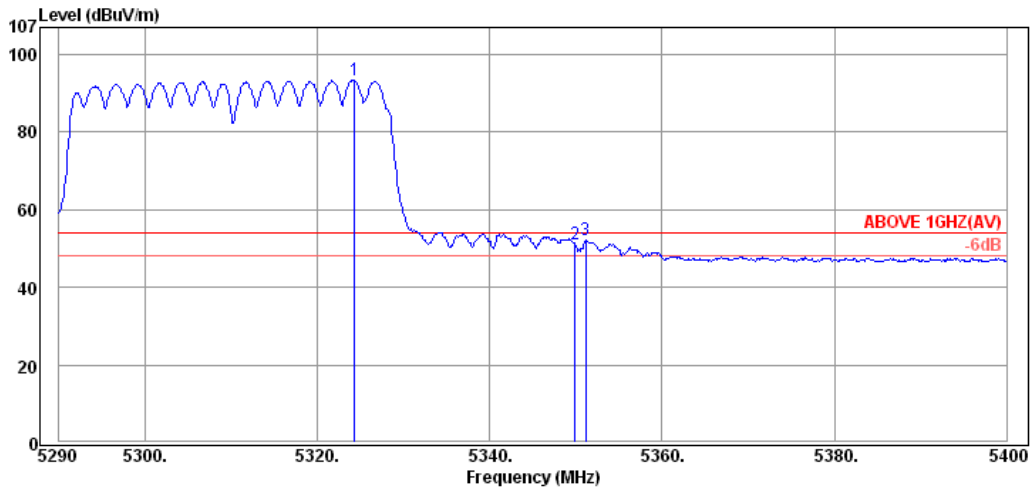
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5148.29	34.45	9.41	8.91	52.77	54.00	1.23	Average
5150.05	34.45	9.41	8.48	52.34	54.00	1.66	Average
5195.59	34.50	9.37	49.62	93.49	---	---	Average

Mode	802.11n-HT40	Frequency	TX 5310MHz
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Antenna at Horizontal Polarization

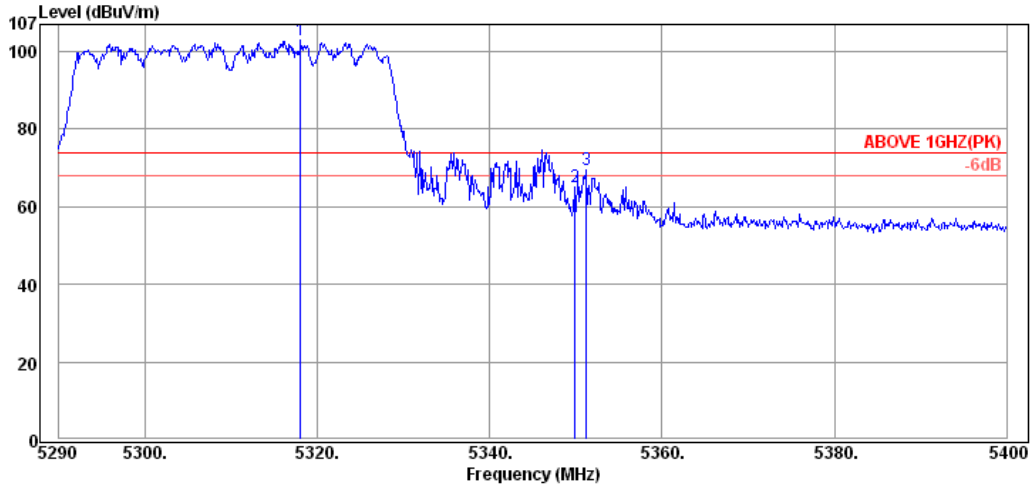
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5321.79	34.62	9.38	56.75	100.75	---	---	Peak
5349.95	34.65	9.40	22.88	66.93	74.00	7.07	Peak
5350.06	34.65	9.40	24.09	68.14	74.00	5.86	Peak



Antenna at Horizontal Polarization

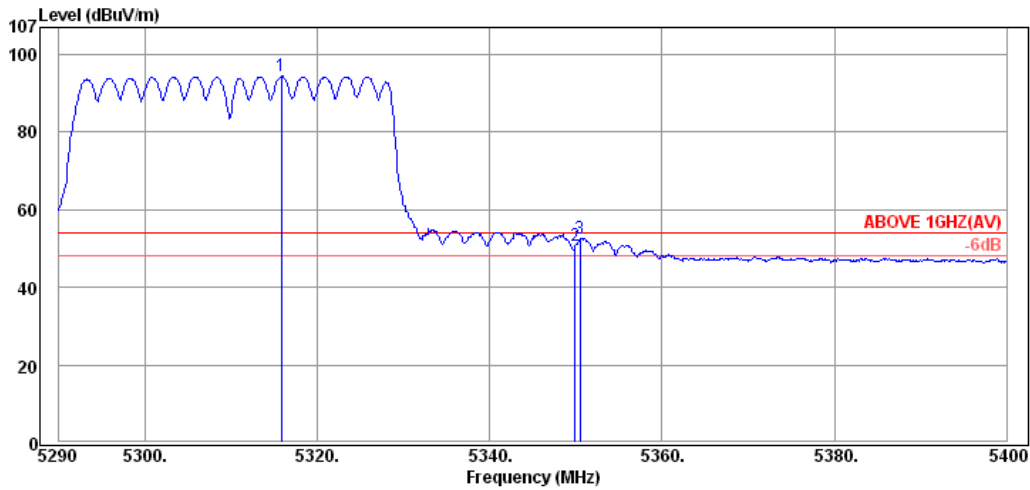
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5324.32	34.62	9.38	49.43	93.43	---	---	Average
5349.95	34.65	9.40	7.17	51.22	54.00	2.78	Average
5351.16	34.65	9.40	8.19	52.24	54.00	1.76	Average

Mode	802.11n-HT40	Frequency	TX 5310MHz
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Antenna at Vertical Polarization

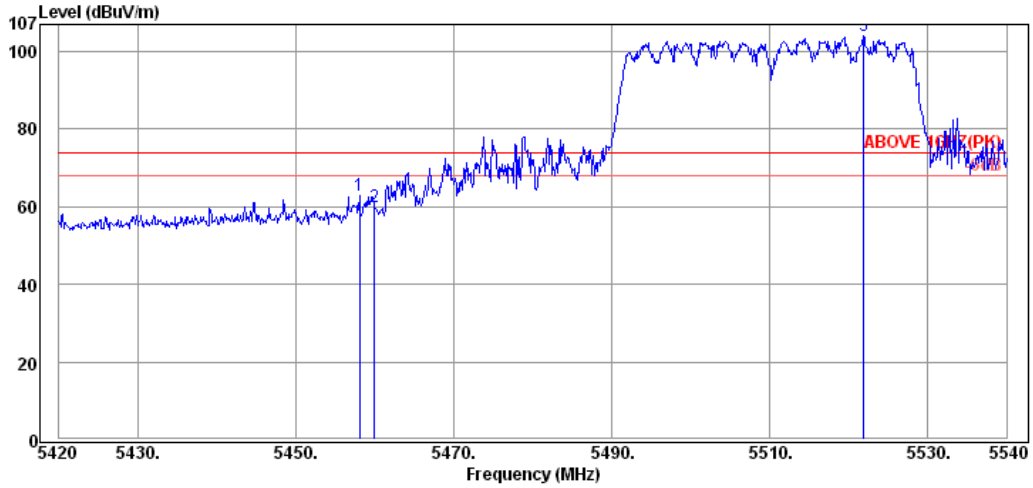
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5318.05	34.62	9.38	58.77	102.77	---	---	Peak
5349.95	34.65	9.40	20.98	65.03	74.00	8.97	Peak
5351.27	34.65	9.40	25.33	69.38	74.00	4.62	Peak



Antenna at Vertical Polarization

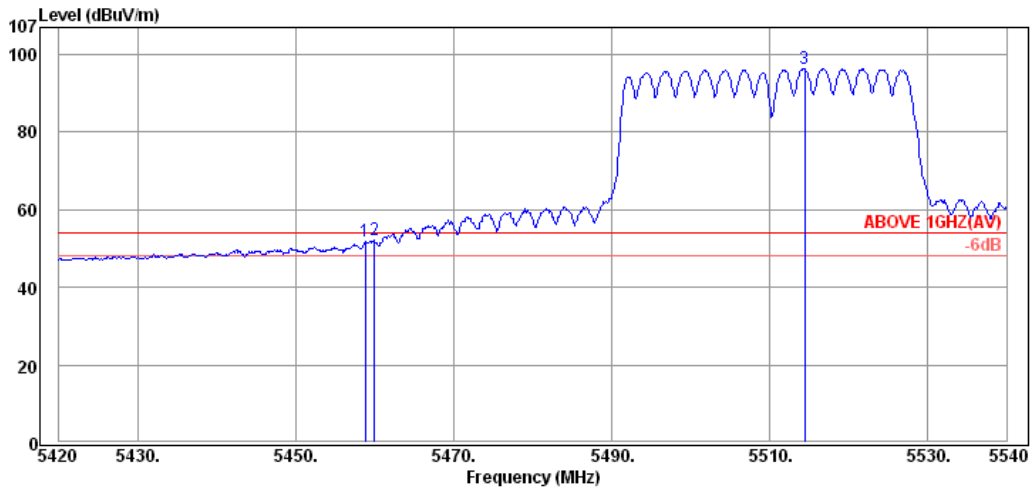
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5315.85	34.62	9.38	50.36	94.36	---	---	Average
5349.95	34.65	9.40	6.68	50.73	54.00	3.27	Average
5350.50	34.65	9.40	8.66	52.71	54.00	1.29	Average

Mode	802.11n-HT40	Frequency	TX 5510MHz
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Antenna at Horizontal Polarization

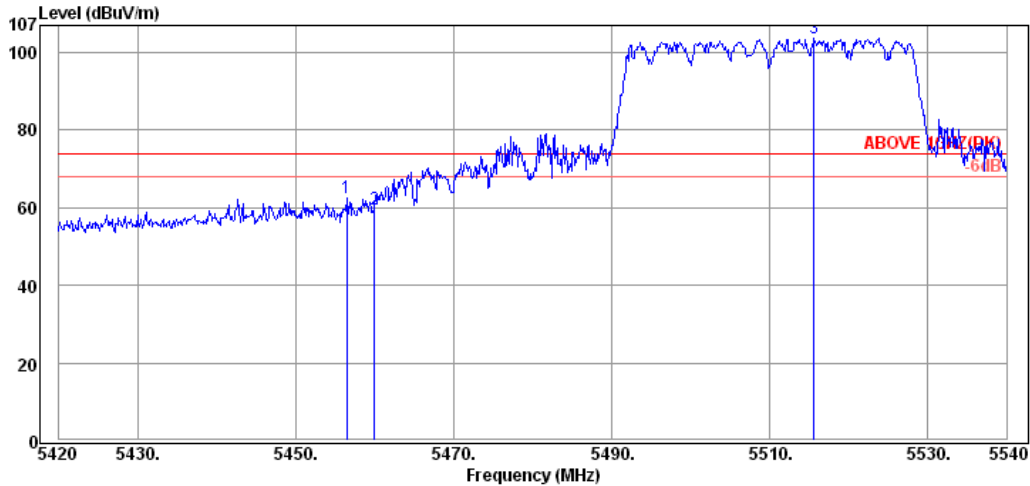
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5458.04	34.75	9.46	18.74	62.95	74.00	11.05	Peak
5459.96	34.75	9.46	15.56	59.77	74.00	14.23	Peak
5521.88	34.82	9.55	59.85	104.22	---	---	Peak



Antenna at Horizontal Polarization

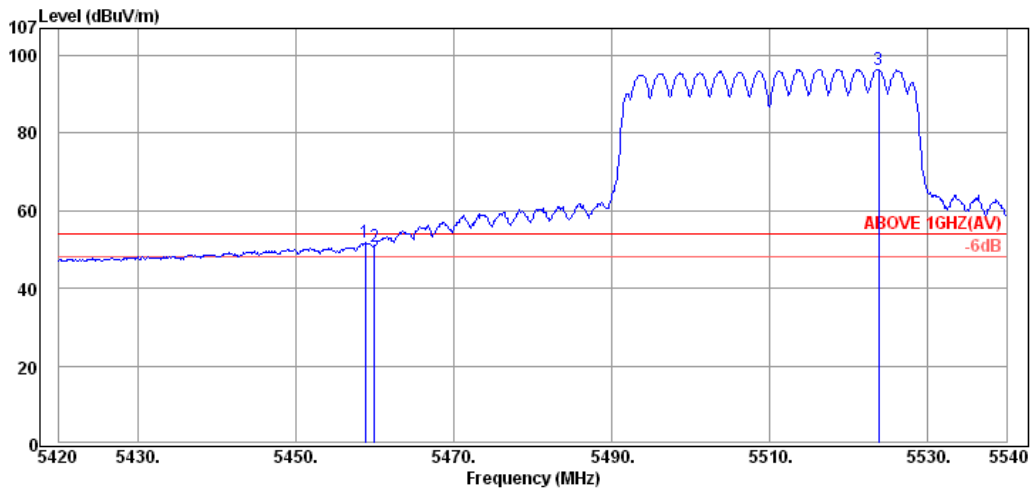
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5458.76	34.75	9.46	7.57	51.78	54.00	2.22	Average
5459.96	34.75	9.46	8.02	52.23	54.00	1.77	Average
5514.44	34.82	9.55	51.95	96.32	---	---	Average

Mode	802.11n-HT40	Frequency	TX 5510MHz
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Antenna at Vertical Polarization

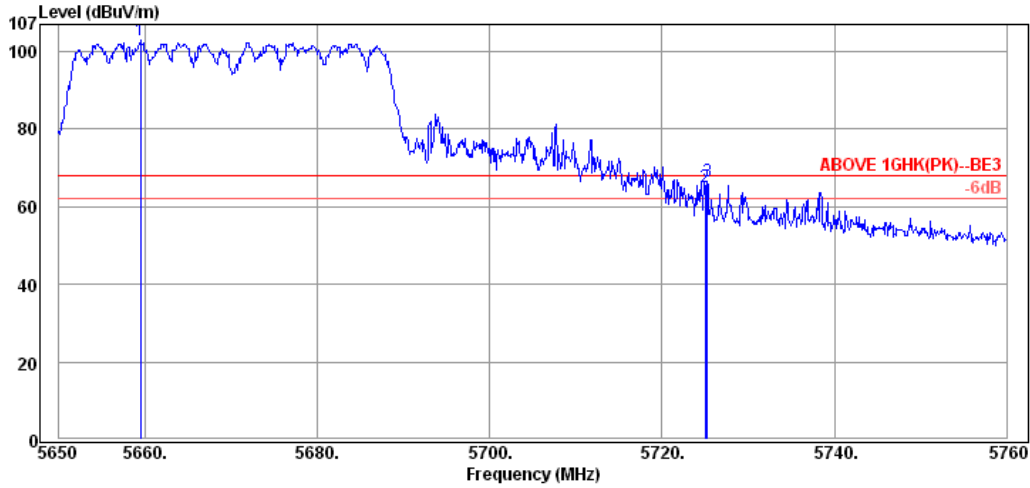
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5456.48	34.75	9.46	18.21	62.42	74.00	11.58	Peak
5459.96	34.75	9.46	15.41	59.62	74.00	14.38	Peak
5515.64	34.82	9.55	59.19	103.56	---	---	Peak



Antenna at Vertical Polarization

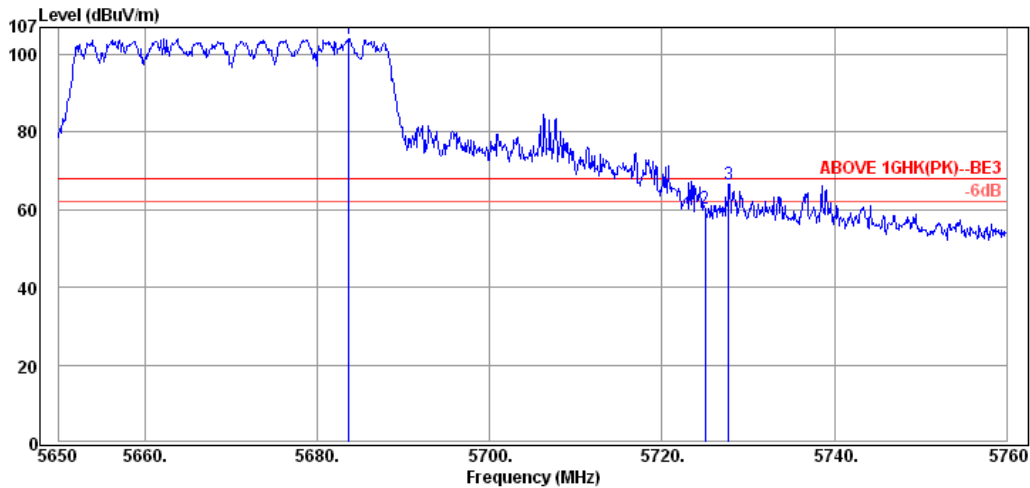
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5458.76	34.75	9.46	7.48	51.69	54.00	2.31	Average
5459.96	34.75	9.46	6.59	50.80	54.00	3.20	Average
5523.80	34.82	9.61	51.97	96.40	---	---	Average

Mode	802.11n-HT40	Frequency	TX 5670MHz
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Antenna at Horizontal Polarization

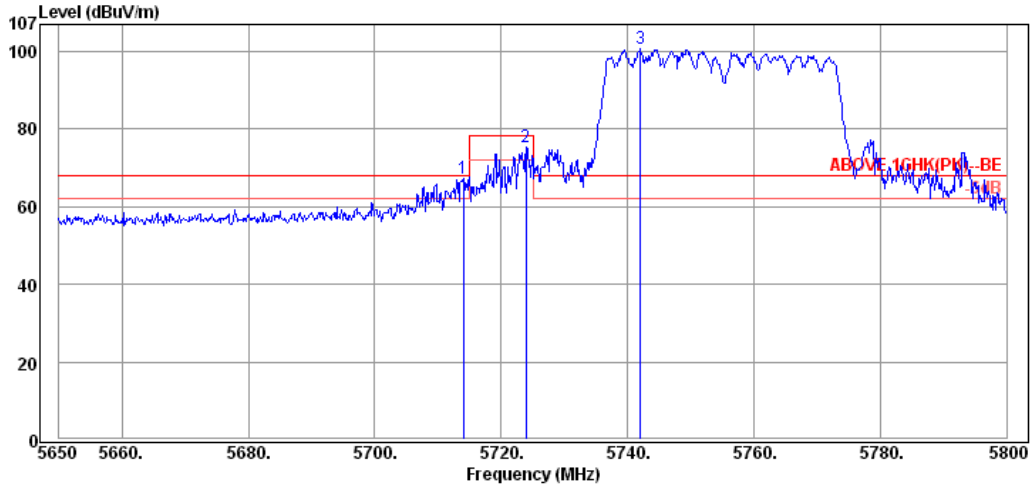
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5659.46	34.99	10.08	57.77	102.84	---	---	Peak
5725.02	35.07	10.29	19.55	64.91	68.20	3.29	Peak
5725.24	35.07	10.29	21.14	66.50	68.20	1.70	Peak



Antenna at Vertical Polarization

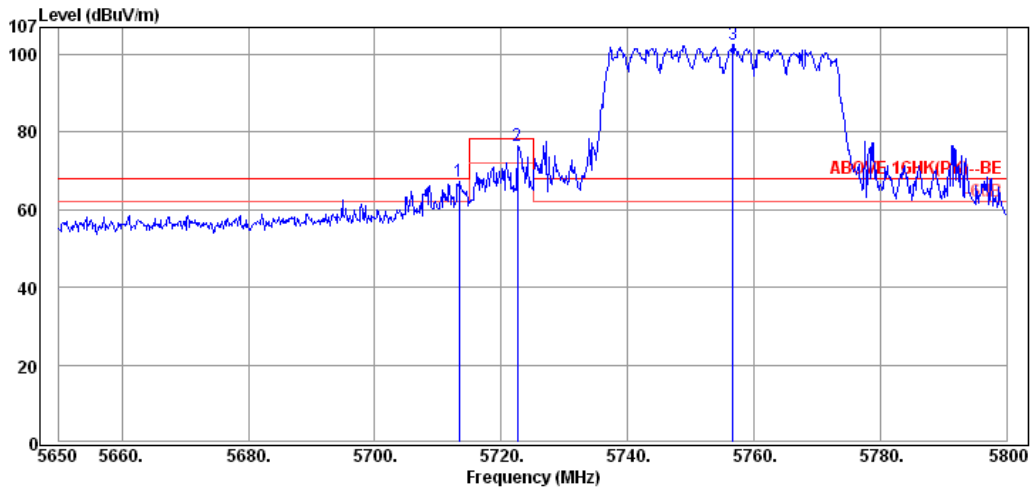
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5683.66	35.03	10.15	58.96	104.14	---	---	Peak
5725.02	35.07	10.29	15.07	60.43	68.20	7.77	Peak
5727.77	35.07	10.35	21.15	66.57	68.20	1.63	Peak

Mode	802.11n-HT40	Frequency	TX 5755MHz
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Antenna at Horizontal Polarization

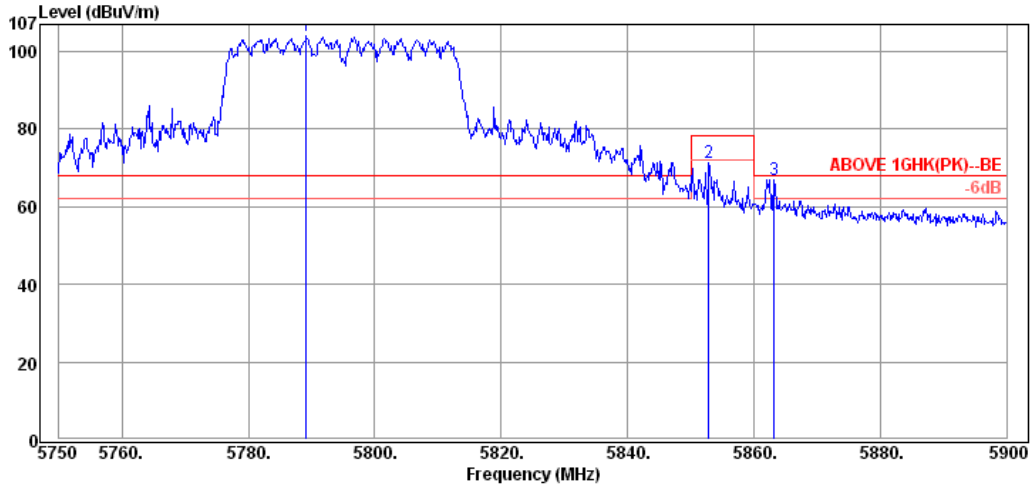
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5714.05	35.05	10.29	21.84	67.18	68.20	1.02	Peak
5723.95	35.07	10.29	29.99	75.35	78.20	2.85	Peak
5742.10	35.09	10.35	55.15	100.59	---	---	Peak



Antenna at Vertical Polarization

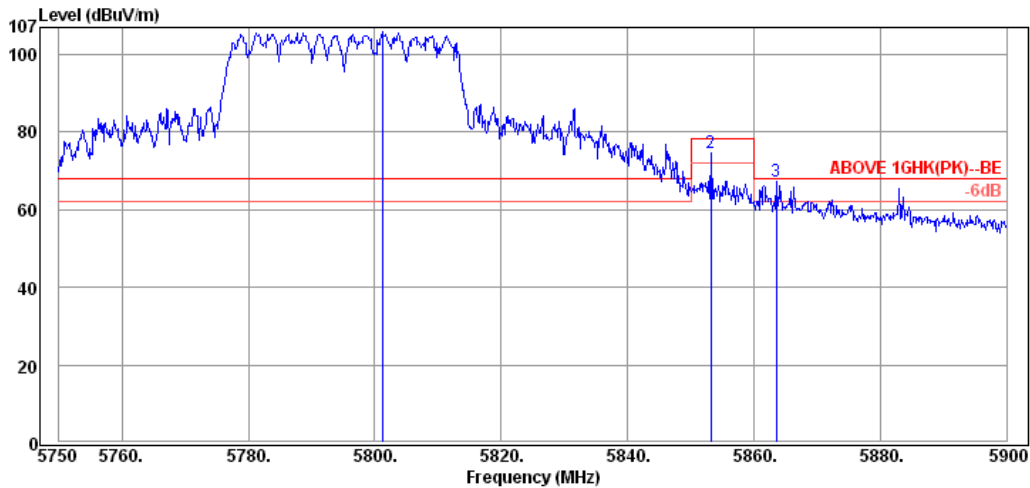
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5713.30	35.05	10.29	21.77	67.11	68.20	1.09	Peak
5722.60	35.07	10.29	31.10	76.46	78.20	1.74	Peak
5756.65	35.11	10.42	57.09	102.62	---	---	Peak

Mode	802.11n-HT40	Frequency	TX 5795MHz
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Antenna at Horizontal Polarization

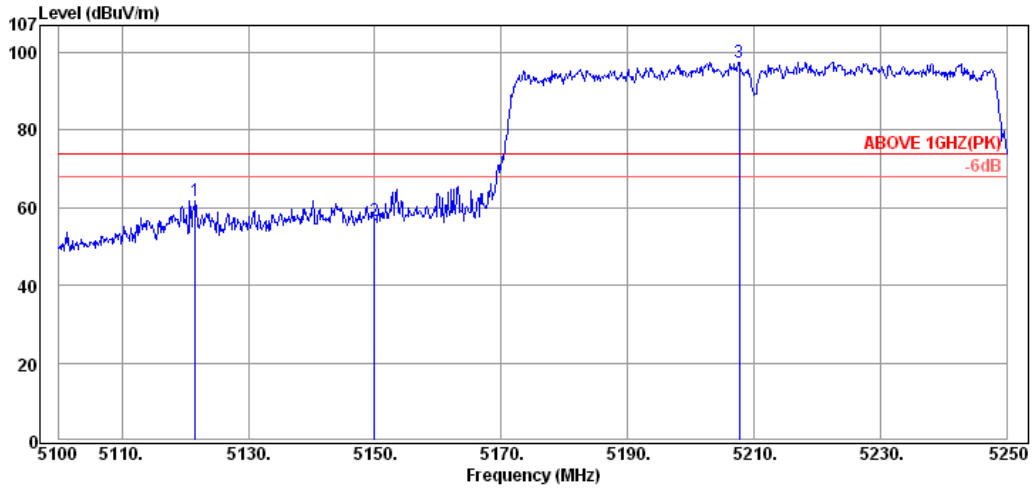
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5789.15	35.15	10.34	58.39	103.88	---	---	Peak
5852.90	35.21	10.22	25.95	71.38	78.20	6.82	Peak
5863.25	35.23	10.18	21.47	66.88	68.20	1.32	Peak



Antenna at Vertical Polarization

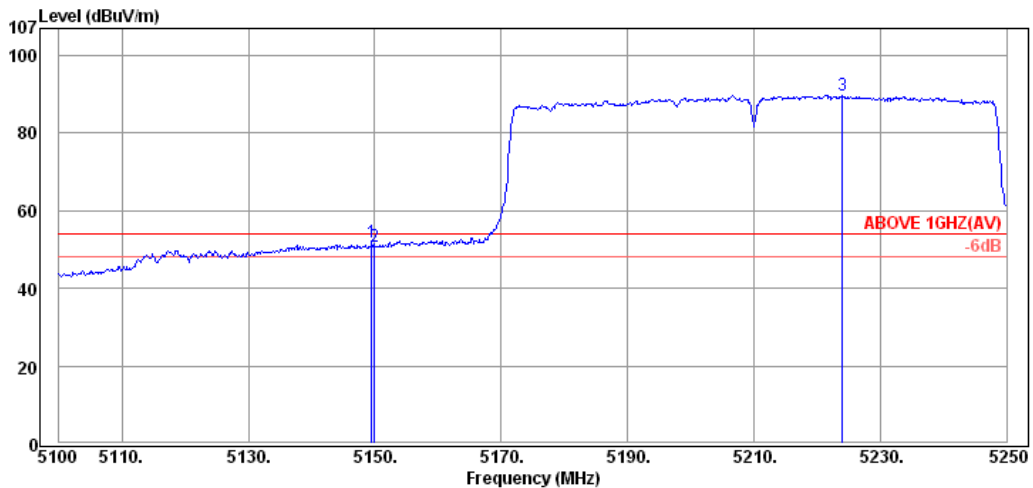
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5801.15	35.15	10.34	60.29	105.78	---	---	Peak
5853.20	35.21	10.22	29.13	74.56	78.20	3.64	Peak
5863.55	35.23	10.18	21.94	67.35	68.20	0.85	Peak

Mode	802.11ac-VHT80	Frequency	TX 5210MHz
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Antenna at Horizontal Polarization

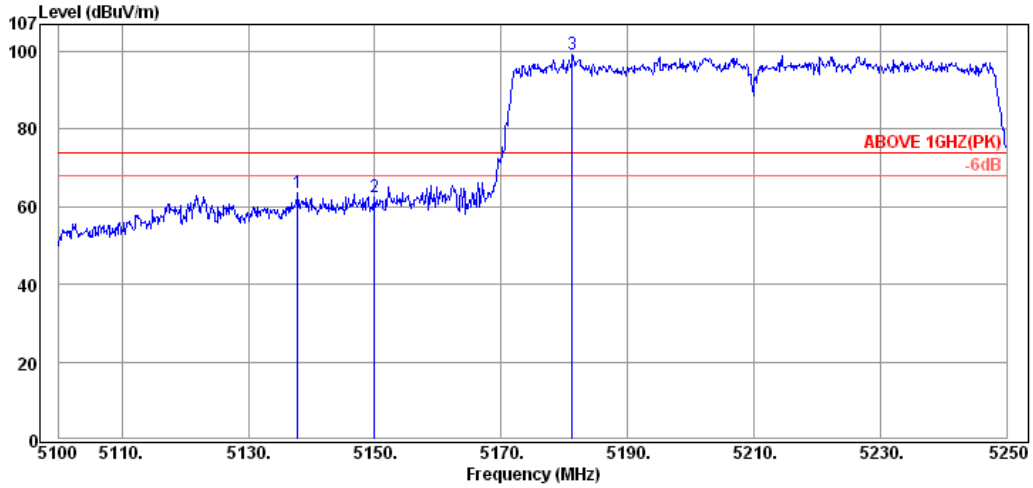
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5121.60	34.42	9.43	17.91	61.76	74.00	12.24	Peak
5149.95	34.45	9.41	12.60	56.46	74.00	17.54	Peak
5207.70	34.52	9.36	53.59	97.47	---	---	Peak



Antenna at Horizontal Polarization

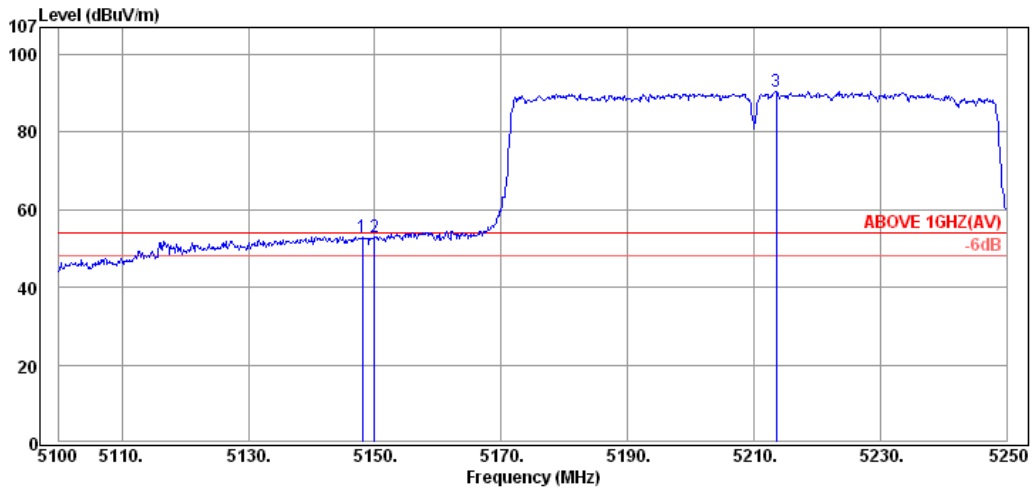
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5149.50	34.45	9.41	8.02	51.88	54.00	2.12	Average
5149.95	34.45	9.41	6.92	50.78	54.00	3.22	Average
5224.05	34.52	9.36	45.80	89.68	---	---	Average

Mode	802.11ac-VHT80	Frequency	TX 5210MHz
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Antenna at Vertical Polarization

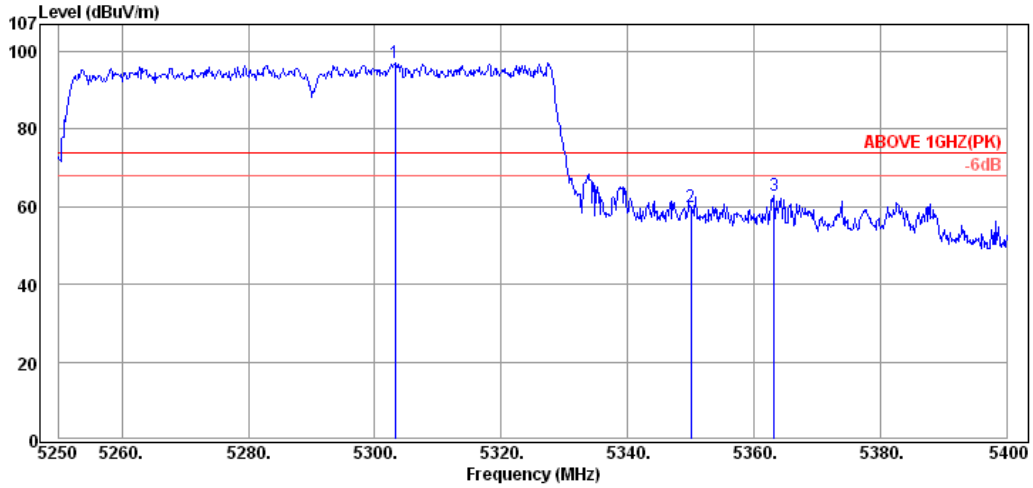
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5137.80	34.43	9.42	19.72	63.57	74.00	10.43	Peak
5149.95	34.45	9.41	18.66	62.52	74.00	11.48	Peak
5181.30	34.48	9.39	55.24	99.11	---	---	Peak



Antenna at Vertical Polarization

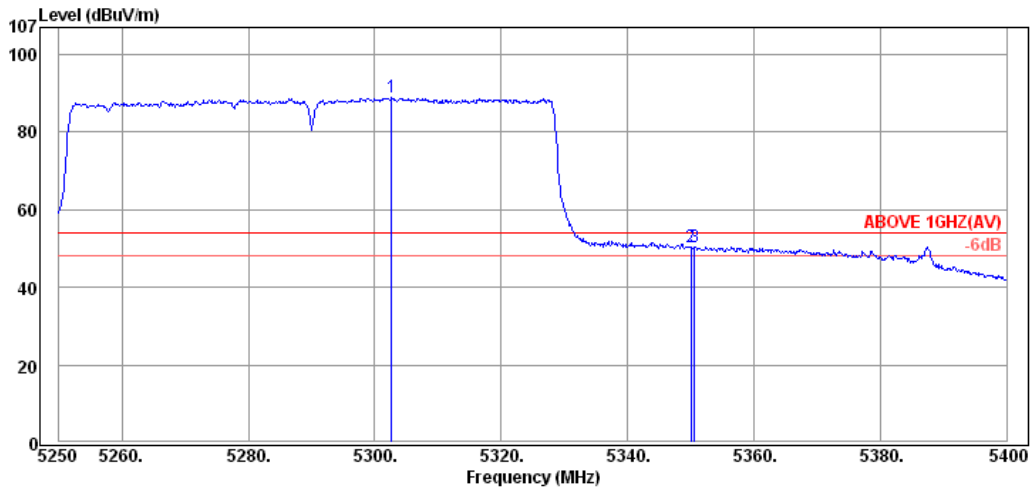
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5148.00	34.45	9.41	9.11	52.97	54.00	1.03	Average
5149.95	34.45	9.41	9.14	53.00	54.00	1.00	Average
5213.55	34.52	9.36	46.63	90.51	---	---	Average

Mode	802.11ac-VHT80	Frequency	TX 5290MHz
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Antenna at Horizontal Polarization

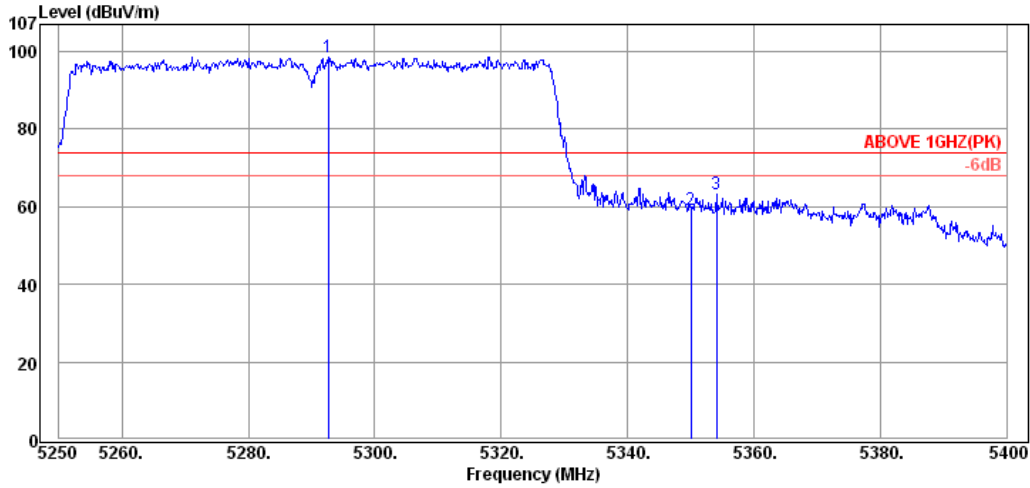
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5303.25	34.60	9.37	53.15	97.12	---	---	Peak
5350.05	34.65	9.40	15.89	59.94	74.00	14.06	Peak
5363.25	34.67	9.41	18.85	62.93	74.00	11.07	Peak



Antenna at Horizontal Polarization

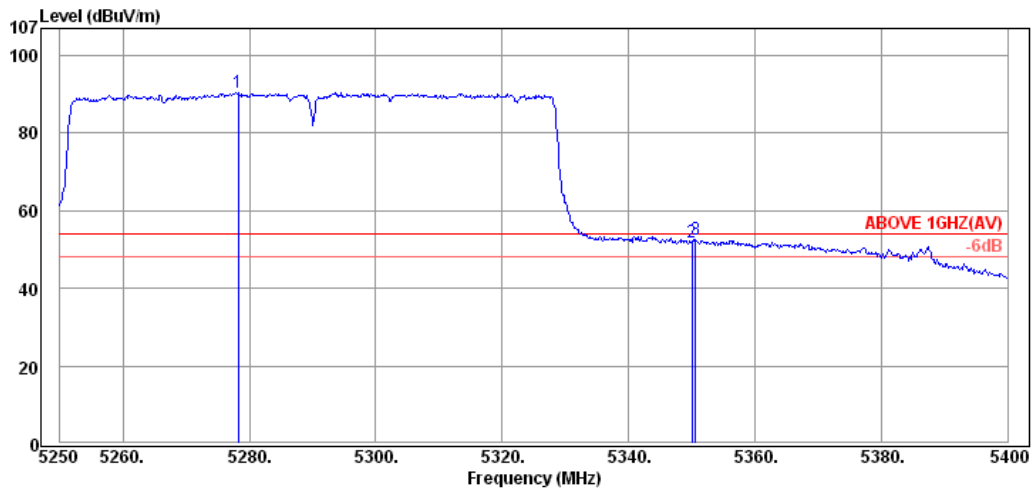
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5302.65	34.60	9.37	44.97	88.94	---	---	Average
5350.05	34.65	9.40	6.17	50.22	54.00	3.78	Average
5350.65	34.65	9.40	6.41	50.46	54.00	3.54	Average

Mode	802.11ac-VHT80	Frequency	TX 5290MHz
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Antenna at Vertical Polarization

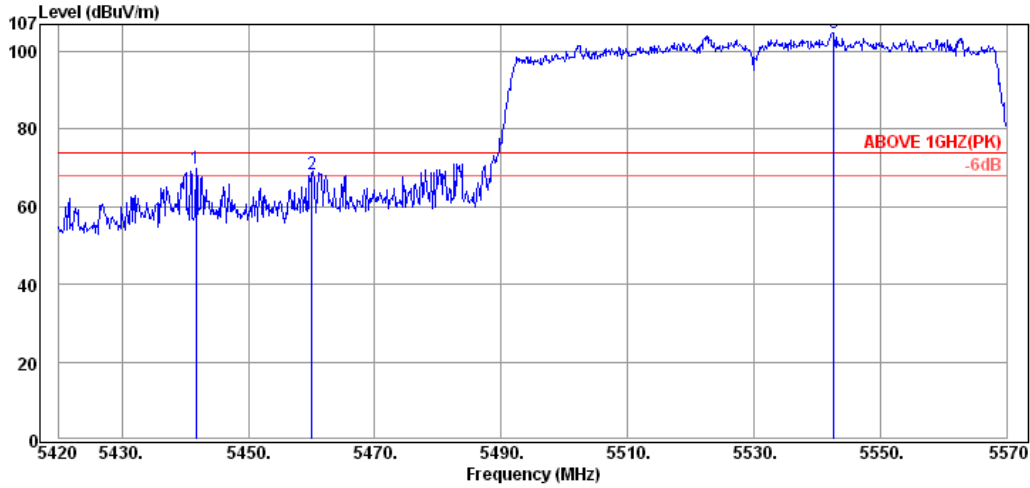
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5292.60	34.60	9.36	54.57	98.53	---	---	Peak
5350.05	34.65	9.40	15.25	59.30	74.00	14.70	Peak
5354.10	34.65	9.40	19.06	63.11	74.00	10.89	Peak



Antenna at Vertical Polarization

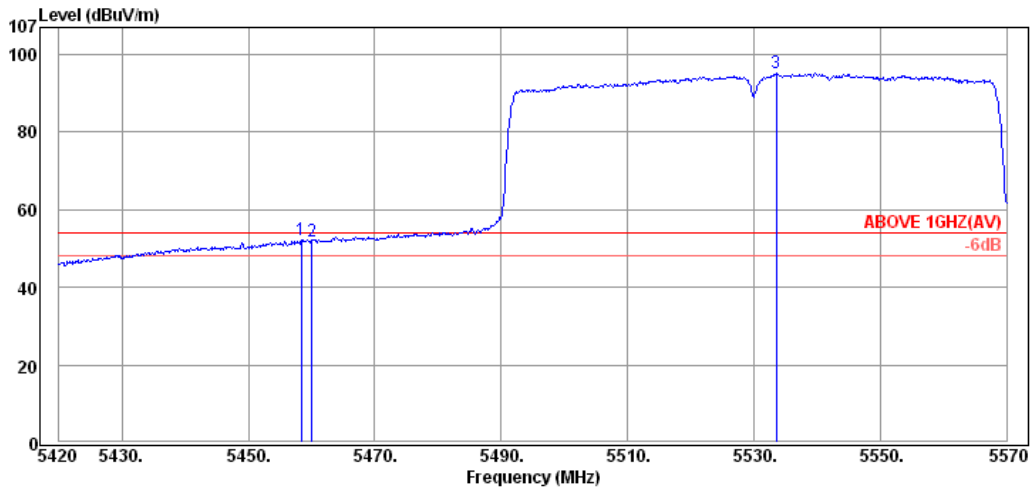
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5278.20	34.58	9.36	46.57	90.51	---	---	Average
5350.05	34.65	9.40	7.77	51.82	54.00	2.18	Average
5350.65	34.65	9.40	8.68	52.73	54.00	1.27	Average

Mode	802.11ac-VHT80	Frequency	TX 5530MHz
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Antenna at Horizontal Polarization

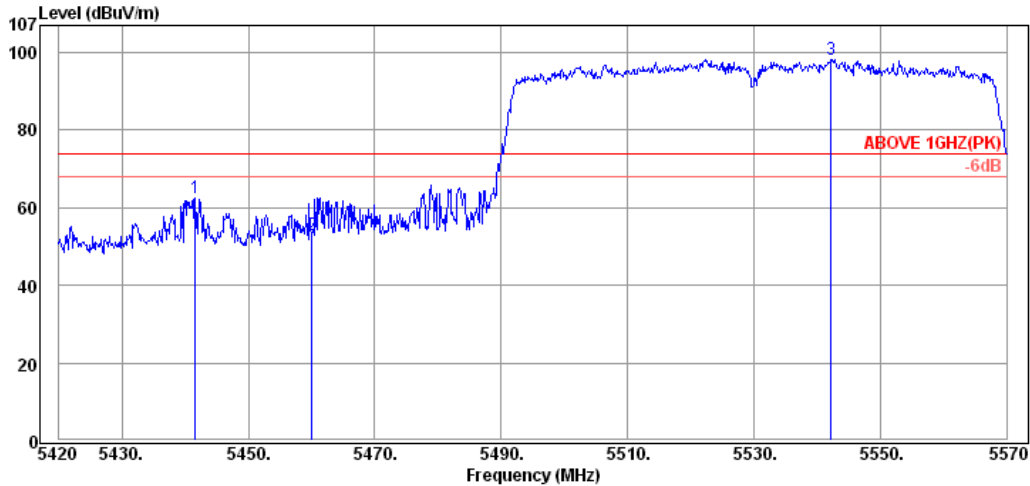
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5441.75	34.73	9.45	25.50	69.68	74.00	4.32	Peak
5460.05	34.75	9.46	24.33	68.54	74.00	5.46	Peak
5542.70	34.84	9.68	60.45	104.97	---	---	Peak



Antenna at Horizontal Polarization

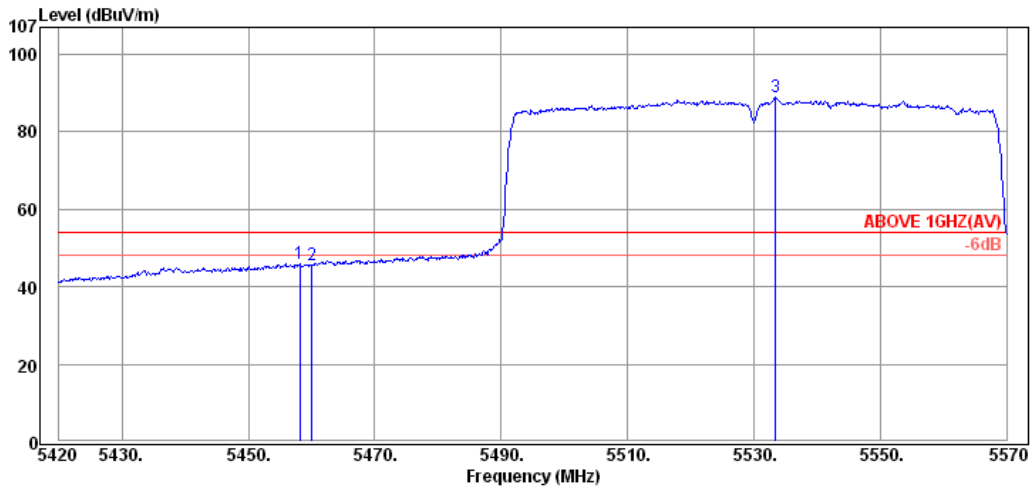
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5458.40	34.75	9.46	7.93	52.14	54.00	1.86	Average
5460.05	34.75	9.46	7.79	52.00	54.00	2.00	Average
5533.55	34.84	9.61	50.61	95.06	---	---	Average

Mode	802.11ac-VHT80	Frequency	TX 5530MHz
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Antenna at Vertical Polarization

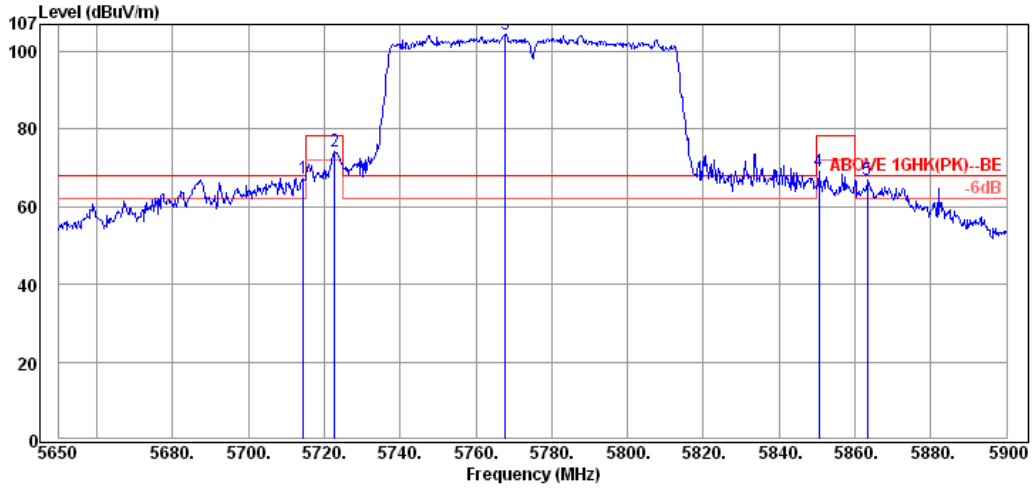
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5441.60	34.73	9.45	18.32	62.50	74.00	11.50	Peak
5460.05	34.75	9.46	8.59	52.80	74.00	21.20	Peak
5542.25	34.84	9.68	53.72	98.24	---	---	Peak



Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5458.10	34.75	9.46	1.73	45.94	54.00	8.06	Average
5460.05	34.75	9.46	1.54	45.75	54.00	8.25	Average
5533.40	34.84	9.61	44.37	88.82	---	---	Average

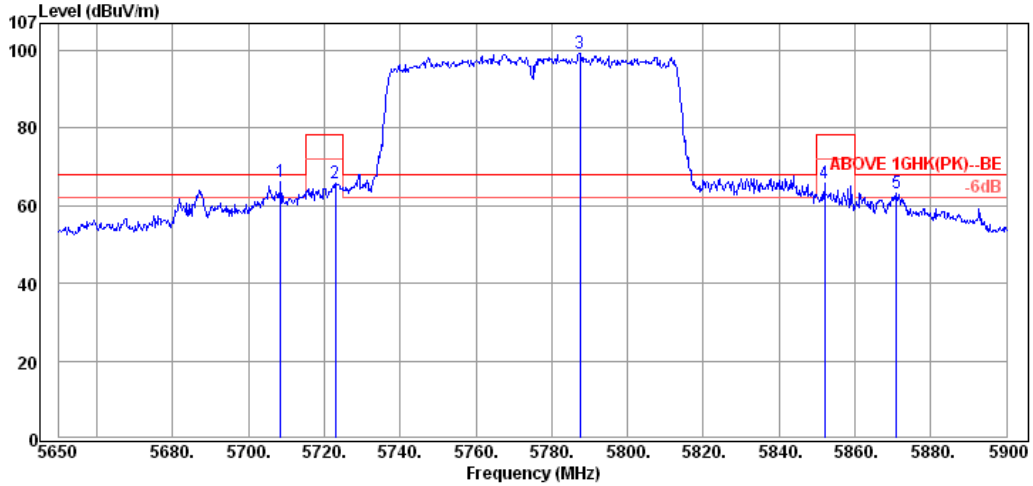
Mode	802.11ac-VHT80	Frequency	TX 5775MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5714.50	35.05	10.29	22.13	67.47	68.20	0.73	Peak
5722.75	35.07	10.29	28.74	74.10	78.20	4.10	Peak
5767.75	35.11	10.38	59.00	104.49	---	---	Peak
5850.50	35.21	10.22	23.55	68.98	78.20	9.22	Peak
5863.25	35.23	10.18	21.55	66.96	68.20	1.24	Peak
5714.50	35.05	10.29	22.13	67.47	68.20	0.73	Peak

Mode	802.11ac-VHT80	Frequency	TX 5775MHz
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Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5708.50	35.05	10.29	20.79	66.13	68.20	2.07	Peak
5723.00	35.07	10.29	20.60	65.96	78.20	12.24	Peak
5787.50	35.15	10.34	53.84	99.33	---	---	Peak
5852.00	35.21	10.22	20.34	65.77	78.20	12.43	Peak
5871.00	35.26	10.18	17.73	63.17	68.20	5.03	Peak
5708.50	35.05	10.29	20.79	66.13	68.20	2.07	Peak

6.5.2. Emissions outside the frequency band:

The emissions (up to 40GHz) not reported for there is no emission be found.

Mode	802.11a	UNII Band	I
		Frequency	TX 5180MHz

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
10260.00	37.51	12.37	-3.63	46.25	54.00	7.75	Peak
15540.00	39.96	16.65	-3.01	53.60	54.00	0.40	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
10360.00	37.59	12.48	-3.41	46.66	74.00	27.34	Peak
10360.00	37.59	12.48	-9.00	41.07	54.00	12.93	Average
15550.00	39.99	16.65	2.34	58.98	74.00	15.02	Peak
15550.00	39.99	16.65	-4.70	51.94	54.00	2.06	Average

Mode	802.11a	UNII Band	II-2A
		Frequency	TX 5260MHz

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
10520.00	37.70	12.66	-3.25	47.11	54.00	6.89	Peak
15780.00	40.40	16.71	-4.75	52.36	54.00	1.64	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
10520.00	37.70	12.66	-3.13	47.23	74.00	26.77	Peak
10520.00	37.70	12.66	-9.00	41.36	54.00	12.64	Average
15780.00	40.40	16.71	-2.62	54.49	74.00	19.51	Peak
15780.00	40.40	16.71	-9.00	48.11	54.00	5.89	Average

Mode	802.11a	UNII Band	II-2C
		Frequency	TX 5580MHz

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
11160.00	38.03	13.55	-4.62	46.96	74.00	27.04	Peak
11160.00	38.03	13.55	-9.79	41.79	54.00	12.21	Average
16740.00	41.65	17.08	-3.73	55.00	74.00	19.00	Peak
16740.00	41.65	17.08	-10.50	48.23	54.00	5.77	Average

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
11160.00	38.03	13.55	-4.65	46.93	74.00	27.07	Peak
11160.00	38.03	13.55	-9.49	42.09	54.00	11.91	Average
16750.00	41.65	17.08	0.12	58.85	74.00	15.15	Peak
16750.00	41.65	17.08	-6.90	51.83	54.00	2.17	Average

Mode	802.11a	UNII Band	III
		Frequency	TX 5785MHz

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
11570.00	38.56	15.53	-3.73	50.36	74.00	23.64	Peak
11570.00	38.56	15.53	-9.31	44.78	54.00	9.22	Average
17340.00	41.23	17.54	-2.52	56.25	74.00	17.75	Peak
17340.00	41.23	17.54	-9.80	48.97	54.00	5.03	Average

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
11570.00	38.56	15.53	-3.66	50.43	74.00	23.57	Peak
11570.00	38.56	15.53	-10.01	44.08	54.00	9.92	Average
17360.00	41.21	17.54	0.83	59.58	74.00	14.42	Peak
17360.00	41.21	17.54	-7.50	51.25	54.00	2.75	Average

Mode	802.11n-HT20	UNII Band	I
		Frequency	TX 5200MHz

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
10400.00	37.62	12.55	-3.86	46.31	54.00	7.69	Peak
15600.00	40.09	16.67	-4.63	52.13	54.00	1.87	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
10400.00	37.62	12.55	-2.78	47.39	54.00	6.61	Peak
15600.00	40.09	16.67	-5.55	51.21	54.00	2.79	Peak

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Mode	802.11n-HT20	UNII Band	II-2A
		Frequency	TX 5260MHz

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
10520.00	37.70	12.66	-3.11	47.25	74.00	26.75	Peak
10520.00	37.70	12.66	-8.60	41.76	54.00	12.24	Average
15790.00	40.43	16.71	-1.67	55.47	74.00	18.53	Peak
15790.00	40.43	16.71	-8.60	48.54	54.00	5.46	Average

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
10520.00	37.70	12.56	-4.00	46.26	74.00	27.74	Peak
10520.00	37.70	12.56	-9.40	40.86	54.00	13.14	Average
15780.00	40.40	15.86	-0.02	56.24	74.00	17.76	Peak
15780.00	40.40	15.86	-8.01	48.25	54.00	5.75	Average

Mode	802.11n-HT20	UNII Band	II-2C
		Frequency	TX 5580MHz

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
11160.00	38.03	13.55	-2.76	48.82	74.00	25.18	Peak
11160.00	38.03	13.55	-8.79	42.79	54.00	11.21	Average
16750.00	41.65	17.08	-3.12	55.61	74.00	18.39	Peak
16750.00	41.65	17.08	-10.10	48.63	54.00	5.37	Average

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
11160.00	38.03	13.55	-3.56	48.02	74.00	25.98	Peak
11160.00	38.03	13.55	-9.59	41.99	54.00	12.01	Average
16740.00	41.65	17.08	0.82	59.55	74.00	14.45	Peak
16740.00	41.65	17.08	-6.20	52.53	54.00	1.47	Average

Mode	802.11n-HT20	UNII Band	III
		Frequency	TX 5785MHz

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
11570.00	38.56	15.53	-3.93	50.16	74.00	23.84	Peak
11570.00	38.56	15.53	-8.51	45.58	54.00	8.42	Average
17360.00	41.21	17.54	-1.28	57.47	74.00	16.53	Peak
17360.00	41.21	17.54	-8.30	50.45	54.00	3.55	Average

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
11560.00	38.54	15.53	-2.81	51.26	74.00	22.74	Peak
11560.00	38.54	15.53	-8.00	46.07	54.00	7.93	Average
17370.00	41.19	17.54	0.68	59.41	74.00	14.59	Peak
17370.00	41.19	17.54	-6.40	52.33	54.00	1.67	Average

Mode	802.11n-HT40	UNII Band	I
		Frequency	TX 5230MHz

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
10460.00	37.66	12.59	-3.45	46.80	54.00	7.20	Peak
15690.00	40.24	16.70	-5.25	51.69	54.00	2.31	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
10460.00	37.66	12.59	-2.74	47.51	54.00	6.49	Peak
15690.00	40.24	16.70	-5.40	51.54	54.00	2.46	Peak

Mode	802.11ac-VHT40	UNII Band	II-2A
		Frequency	TX 5270MHz

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
10540.00	37.71	12.56	-3.29	46.98	54.00	7.02	Peak
15810.00	40.46	15.80	-2.54	53.72	54.00	0.28	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
10540.00	37.71	12.96	-3.91	46.76	74.00	27.24	Peak
10540.00	37.71	12.96	-10.21	40.46	54.00	13.54	Average
15800.00	40.46	16.71	-0.87	56.30	74.00	17.70	Peak
15800.00	40.46	16.71	-8.80	48.37	54.00	5.63	Average

Mode	802.11n-HT40	UNII Band	II-2C
		Frequency	TX 5550MHz

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
11100.00	37.94	13.62	-3.41	48.15	74.00	25.85	Peak
11100.00	37.94	13.62	-9.60	41.96	54.00	12.04	Average
16640.00	41.63	17.09	-3.51	55.21	74.00	18.79	Peak
16640.00	41.63	17.09	-11.00	47.72	54.00	6.28	Average

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
11100.00	37.94	13.62	-3.76	47.80	74.00	26.20	Peak
11100.00	37.94	13.62	-10.20	41.36	54.00	12.64	Average
16660.00	41.63	17.09	0.80	59.52	74.00	14.48	Peak
16660.00	41.63	17.09	-7.00	51.72	54.00	2.28	Average

Mode	802.11n-HT40	UNII Band	II-2C
		Frequency	TX 5795MHz

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
11590.00	38.57	15.59	-4.49	49.67	74.00	24.33	Peak
11590.00	38.57	15.59	-10.70	43.46	54.00	10.54	Average
17380.00	41.16	17.54	-3.81	54.89	74.00	19.11	Peak
17380.00	41.16	17.54	-11.50	47.20	54.00	6.80	Average

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
11590.00	38.57	15.59	-4.52	49.64	74.00	24.36	Peak
11590.00	38.57	15.59	-10.60	43.56	54.00	10.44	Average
17380.00	41.16	17.54	0.31	59.01	74.00	14.99	Peak
17380.00	41.16	17.54	-7.70	51.00	54.00	3.00	Average

Mode	802.11ac-VHT80	UNII Band	I
		Frequency	TX 5210MHz

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
10420.00	37.63	12.55	-2.97	47.21	54.00	6.79	Peak
15630.00	40.15	16.68	-4.93	51.90	54.00	2.10	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
10420.00	37.63	12.55	-4.20	45.98	54.00	8.02	Peak
15630.00	40.15	16.68	-4.30	52.53	54.00	1.47	Peak

Mode	802.11ac-VHT80	UNII Band	II-2A
		Frequency	TX 5290MHz

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
10580.00	37.72	13.25	-3.57	47.40	54.00	6.60	Peak
15870.00	40.58	16.70	-5.99	51.29	54.00	2.71	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
10580.00	37.72	13.25	-3.53	47.44	54.00	6.56	Peak
15870.00	40.58	16.70	-5.36	51.92	54.00	2.08	Peak

Mode	802.11ac-VHT80	UNII Band	II-2C
		Frequency	TX 5530MHz

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
11060.00	37.89	13.66	-2.86	48.69	74.00	25.31	Peak
11060.00	37.89	13.66	-9.80	41.75	54.00	12.25	Average
16590.00	41.62	17.10	-4.50	54.22	74.00	19.78	Peak
16590.00	41.62	17.10	-12.00	46.72	54.00	7.28	Average

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
11060.00	37.89	13.66	-3.06	48.49	54.00	5.51	Peak
16590.00	41.62	17.10	-6.10	52.62	54.00	1.38	Peak

Mode	802.11ac-VHT80	UNII Band	III
		Frequency	TX 5775MHz

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
11550.00	38.54	15.53	-3.72	50.35	74.00	23.65	Peak
11550.00	38.54	15.53	-10.70	43.37	54.00	10.63	Average
17330.00	41.23	17.48	-4.39	54.32	74.00	19.68	Peak
17330.00	41.23	17.48	-12.00	46.71	54.00	7.29	Average

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
11550.00	38.54	15.53	-4.35	49.72	74.00	24.28	Peak
11550.00	38.54	15.53	-11.00	43.07	54.00	10.93	Average
17320.00	41.26	17.48	-3.69	55.05	74.00	18.95	Peak
17320.00	41.26	17.48	-11.51	47.23	54.00	6.77	Average

6.5.3. Emissions in Non-restricted Frequency Bands

Pursuant to KDB 789033 D02 General NII Test Procedures New Rules V01 that emission levels below the 15.209 general radiated emissions limits is not required.

7. DEVIATION TO TEST SPECIFICATIONS

【NONE】



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APPENDIX B

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APPDNDIX A

TEST PHOTOGRAPHS

(Model: AA55WW)

File Number: C1M1609054

Report Number: EM-EM-F160710

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A.1 Conducted Emission Measurement



FRONT VIEW



BACK VIEW

Partner System: 5G AP Server



A.2 Radiated Measurement at Chamber

Frequency Below 1GHz



Frequency Above 1GHz

