

FCC 15.407 NII 5 GHz WLAN Report

for

Elitegroup Computer Systems Co., Ltd.

**No. 239, Sec. 2, TiDing Blvd,
Taipei, Taiwan 11493**

Brand : ECS
Product Name : 12" Multi Function Pad
Model Name : mPAD-12.....
(The "." in the model name can be 0 to 9,
A to Z, a to z, "-", "_", "\", "/" or blank
for marketing use only)
FCC ID : WL6TC12A-W

Prepared by: : AUDIX Technology Corporation,
EMC Department



TABLE OF CONTENTS

Description	Page
TEST REPORT CERTIFICATION	4
1. REPORT HISTORY	5
2. SUMMARY OF TEST RESULTS	6
3. GENERAL INFORMATION	7
3.1. Description of EUT	7
3.2. Description of Key Component Lists	8
3.3. EUT Specifications Assessed in Current Report	9
3.4. Antenna Information	11
3.5. Data Rate Relative to Output Power	12
3.6. Test Configuration	12
3.7. Setup Configuration	14
3.8. Operating Condition of EUT	14
3.9. Description of Test Facility	15
3.10. Measurement Uncertainty	16
4. MEASUREMENT EQUIPMENT LIST	17
4.1. Conducted Emission Measurement	17
4.2. Radiated Emission Measurement	17
4.3. RF Conducted Measurement	18
5. CONDUCTED EMISSION MEASUREMENT	19
5.1. Block Diagram of Test Setup	19
5.2. Power Line Conducted Emission Limit	19
5.3. Test Procedure	19
5.4. Conducted Emission Measurement Results	20
6. RADIATED EMISSION MEASUREMENT	22
6.1. Block Diagram of Test Setup	22
6.2. Radiated Emission Limits	23
6.3. Test Procedure	25
6.4. Measurement Result Explanation	26
6.5. Test Results	26
7. EMISSION BANDWIDTH MEASUREMENT	79
7.1. Block Diagram of Test Setup	79
7.2. Specification Limits	79
7.3. Test Procedure	79
7.4. Test Results	79
8. MAXIMUM OUTPUT POWER MEASUREMENT	80
8.1. Block Diagram of Test Setup	80
8.2. Specification Limits	80
8.3. Test Procedure	81
8.4. Test Results	81
9. EMISSION LIMITATIONS MEASUREMENT	82
9.1. Block Diagram of Test Setup	82
9.2. Specification Limits	82

9.3. Test Procedure	84
9.4. Test Results	84
10. POWER SPECTRAL DENSITY MEASUREMENT	85
10.1. Block Diagram of Test Setup	85
10.2. Specification Limits	85
10.3. Test Procedure	85
10.4. Test Results	85
11. DEVIATION TO TEST SPECIFICATIONS	86

APPENDIX A TEST PLOTS
APPENDIX B TEST PHOTOGRAPHS

TEST REPORT CERTIFICATION

Applicant : Elitegroup Computer Systems Co., Ltd.
Product Name : 12" Multi Function Pad
(The "." in the model name can be 0 to 9, A to Z, a to z, "-", "_", "\",
"/" or blank for marketing use only)
Model No. : mPAD-12.....
Serial No. : N/A
Brand : ECS


Applicable Standards:

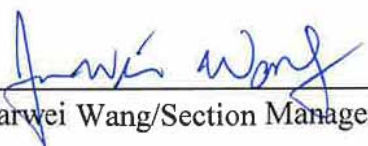
47 CFR FCC Part 15 Subpart E:2015
ANSI C63.10:2013
789033 D02 General UNII Test Procedures New Rules v01r02

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. 05. 23 ~ 06. 20

Date of Report: 2016. 06. 21

Producer: 
(Annie Yu/Administrator)

Signatory: 
(Jarwei Wang/Section Manager)

1. REPORT HISTORY

Revision	Date	Revision Summary	Report Number
0	2016. 06. 21	Original Report.	EM-F160347

2. SUMMARY OF TEST RESULTS

Rule	Description	Results
15.207	Conducted Emission	PASS
15.205	Radiated Band Edge and Radiated Spurious Emission	PASS
15.407(a)(5)/15.407(e)	Emission Bandwidth Measurement	PASS
15.407(a)	Maximum Output	PASS
15.407(b)	Conducted Band Edges and Conducted Spurious Emission	PASS
15.407(a)	Power Spectral Density	PASS
15.203	Antenna Requirement	PASS

3. GENERAL INFORMATION

3.1. Description of EUT

Product	12" Multi Function Pad																						
Model Number	mPAD-12..... (The "." in the model name can be 0 to 9, A to Z, a to z, "-", "_", "\", "/" or blank for marketing use only)																						
Test Model	mPAD-12-CHT4-I																						
Serial Number	N/A																						
Brand Name	ECS																						
Applicant	Elitegroup Computer Systems Co., Ltd. No. 239, Sec. 2., TiDing Blvd., Taipei, Taiwan 11493																						
RF Features	WLAN:802.11a/b/g/n/ac Bluetooth: BT and BLE NFC																						
Transmit Type	<table border="1"> <thead> <tr> <th colspan="2">2.4 GHz</th> </tr> </thead> <tbody> <tr> <td>802.11b</td> <td>2T2R</td> </tr> <tr> <td>802.11g</td> <td>2T2R</td> </tr> <tr> <td>802.11n-HT20</td> <td>2T2R</td> </tr> <tr> <td>802.11n-HT40</td> <td>2T2R</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>2T2R</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	2T2R	802.11g	2T2R	802.11n-HT20	2T2R	802.11n-HT40	2T2R	BLE	1T1R	UNII Bands		802.11a	2T2R	802.11n-HT20/ 802.11ac-VHT20	2T2R	802.11n-HT40/ 802.11ac-VHT40	2T2R	802.11ac-VHT80	2T2R
2.4 GHz																							
802.11b	2T2R																						
802.11g	2T2R																						
802.11n-HT20	2T2R																						
802.11n-HT40	2T2R																						
BLE	1T1R																						
UNII Bands																							
802.11a	2T2R																						
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. 05. 19																						

3.2. Description of Key Component Lists

Item	Supplier	Model / Type	Character
Main Board	ECS	TC71A	---
CPU (Socket: BGA1380)	Intel	Z8550	1.44GHz, up to 2.4GHz
Memory (On Board)	SK hynix	H9CCNNNBPTBL	LPDDR3 1600MHz 4GB
12" LCD Panel	Starry	20811220560001	.ZC-122A-0776AT
Touch Module	TOPGROUP EETI	ZC-122A-0776AT EXC3102	Support 10-points multi-touch(Capacitive)
Storage	SandDisk	SDIN9DW4-32G	32GB
Front Camera	KINGCOME	O6P2-TC12A-WFHQ	Front Camera : 2.0M
Rear Camera	KINGCOME	O9B8-TC12A-WBHQ	Rear Camera: 8.0M
Wi-Fi +BT Module	Qualcomm (Azurewave)	QCNFA324 (AW-CM217NF)	Wi-Fi 802.11 a/b/g/n/ac + BT 4.0
GPS	Boradcam	BCM4752	GPS&GLONASS
NFC	NXP	NPC100	---
BATTREY	SUNWODA	TC12A-W	3.7Vdc,12600mAh / 46.62Wh
AC Adapter (Wall-mount, 2C)	Asian Power Devices Inc.	WA-36A12R	I/P: AC 100-240V, 50-60Hz, 0.9A Max. O/P: DC 12V, 3A
	DC Power Cord: Unshielded, Undetachable, 1.8m With one ferrite core		
mPad Module (Option)	ECS	Barcode Scanner mPAD	Barcode Scanner
	ECS	SCR mPAD	Smart Card Reader (SCR)
	ECS	MSR mPAD	Magnetic Stripe Reader (MSR)
	ECS	USB Ethernet mPAD	Giga LAN Port
12" Pad Docking (Option)	ECS	DOCKING mPAD-12	Docking

Remark: For more detailed features description, please refer to the manufacturer's specifications or the user manual.

3.3. 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.

3.4. Antenna Information

GPS Antenna					
No.	Antenna Part Number	Manufacture	Antenna Type	Frequency (MHz)	Max Gain (dBi)
1	TC12	JEM	PCB	1510 to 1602	0.84

2.4G Antenna						
No.	Antenna Part Number	Manufacture	Antenna Type	Frequency (MHz)	Max Gain (dBi)	Directional Gain (dBi)
1	IAH150100 (Tx1 Antenna)	Joinsoon Electronics MFG. CO.,LTD	PIFA	2400 to 2500	0.41	2.82 ^{Note1}
2	IAH150101 (Tx2 Antenna)	Joinsoon Electronics MFG. CO.,LTD	PIFA	2400 to 2500	-0.83	
Note 1. Directional gain = $10 \log[(10^{0.41/20} + 10^{-0.83/20})^2 / 2] = 2.82\text{dBi}$						

5G Antenna						
No.	Antenna Part Number	Manufacture	Antenna Type	Frequency (MHz)	Max Gain (dBi)	Directional Gain (dBi)
1	IAH150100 (Tx1 Antenna)	Joinsoon Electronics MFG. CO.,LTD	PIFA	5150 to 5350	-3.18	2.046 ^{Note1}
2				5470 to 5725	1.58	3.91 ^{Note2}
3				5725 to 5850	1.58	3.90 ^{Note2}
4	IAH150101 (Tx2 Antenna)	Joinsoon Electronics MFG. CO.,LTD	PIFA	5150 to 5350	0.84	2.046 ^{Note1}
5				5470 to 5725	0.18	3.91 ^{Note2}
6				5725 to 5850	0.15	3.90 ^{Note2}
Note 1. Directional gain = $10 \log[(10^{-3.18/20} + 10^{0.84/20})^2 / 2] = 2.046\text{dBi}$						
Note 2. Directional gain = $10 \log[(10^{1.58/20} + 10^{0.18/20})^2 / 2] = 3.91\text{dBi}$						
Note 3. Directional gain = $10 \log[(10^{1.58/20} + 10^{0.15/20})^2 / 2] = 3.90\text{dBi}$						

3.5. Data Rate Relative to Output Power

802.11a				802.11ac-VHT20			
Channel	Modulation	Date Rate	Power (dBm)	Channel	Modulation	Date Rate	Power (dBm)
36	BPSK	6	14.29	36	BPSK	MCS8	17.78
36	QPSK	9	14.13	36	QPSK	MCS9	17.60
36	QPSK	12	14.22	36	QPSK	MCS10	17.46
36	16-QAM	18	14.06	36	16-QAM	MCS11	17.03
36	16-QAM	24	14.19	36	16-QAM	MCS12	17.48
36	64-QAM	36	14.05	36	64-QAM	MCS13	17.69
36	64-QAM	48	13.99	36	64-QAM	MCS14	17.57
36	64-QAM	54	13.18	36	64-QAM	MCS15	17.34

802.11ac-VHT40				802.11ac-VHT80			
Channel	Modulation	Date Rate	Power (dBm)	Channel	Modulation	Date Rate	Power (dBm)
38	BPSK	MCS8	13.59	38	BPSK	MCS8	12.74
38	QPSK	MCS9	13.07	38	QPSK	MCS9	12.13
38	QPSK	MCS10	13.41	38	QPSK	MCS10	12.66
38	16-QAM	MCS11	13.49	38	16-QAM	MCS11	12.27
38	16-QAM	MCS12	13.50	38	16-QAM	MCS12	12.15
38	64-QAM	MCS13	13.24	38	64-QAM	MCS13	12.56
38	64-QAM	MCS14	13.12	38	64-QAM	MCS14	12.32
38	64-QAM	MCS15	13.01	38	64-QAM	MCS15	12.62

Note: Above results are assessed in average power.

3.6. Test Configuration

Mode	Duty Cycle (x)	T (ms)	Duty Cycle Factor (dB)
802.11a	0.95	2.020	0.22
802.11n-HT20/802.11ac-VHT20	0.68	0.196	1.67
802.11n-HT40/802.11ac-VHT40	0.55	0.1152	2.60
802.11ac-VHT80	0.45	0.076	3.47

Note: When duty cycle is less than 98% (0.98) that duty cycle factor $10\log(1/x)$ is needed to add in conducted test items measured in average detector.

AC Conduction	
Test Case	Normal operation

Item		Mode	Data Rate	Test Channel	
Radiated Test Case	Radiated Band Edge <small>Note1</small>	802.11a	6 Mbps	36/64/100/140/144	
		802.11ac-VHT20	MCS8	38/62/102/134/142	
		802.11ac-VHT40	MCS8	42/58/106/122/138	
		802.11ac-VHT80	MCS8	48/52/120/144/165	
	Radiated Spurious Emission <small>Note1 & 2</small>	802.11a	6 Mbps	48/52/120/144/165	
		802.11ac-VHT20	MCS8	46/54/118/142/159	
		802.11ac-VHT40	MCS8	42/58/122/138/155	
		802.11ac-VHT80	MCS8	36/40/48/52/60/64 100/120/140/144/149/157/165	
Conducted Test Case <small>Note3</small>	Emission Bandwidth	802.11a	6 Mbps	36/40/48/52/60/64 100/120/140/144/149/157/165	
		802.11ac-VHT20	MCS8	38/46/54/62/102 118/134/142/151/159	
		802.11ac-VHT40	MCS8	42/58/106/122/138/155	
		802.11ac-VHT80	MCS8	36/40/48/52/60/64 100/120/140/144/149/157/165	
	Maximum output power	802.11a	6 Mbps	36/40/48/52/60/64 100/120/140/144/149/157/165	
		802.11ac-VHT20	MCS8	38/46/54/62/102 118/134/142/151/159	
		802.11ac-VHT40	MCS8	42/58/106/122/138/155	
		802.11ac-VHT80	MCS8	36/40/48/52/60/64 100/120/140/144/149/157/165	
	Emission Limitations	802.11a	6 Mbps	36/40/48/52/60/64 100/120/140/144/149/157/165	
		802.11ac-VHT20	MCS8	38/46/54/62/102 118/134/142/151/159	
		802.11ac-VHT40	MCS8	42/58/106/122/138/155	
		802.11ac-VHT80	MCS8	36/40/48/52/60/64 100/120/140/144/149/157/165	
	Conducted Test Case	Power spectral density	802.11a	6 Mbps	36/40/48/52/60/64 100/120/140/144/149/157/165
			802.11ac-VHT20	MCS8	38/46/54/62/102 118/134/142/151/159
			802.11ac-VHT40	MCS8	42/58/106/122/138/155
			802.11ac-VHT80	MCS8	36/40/48/52/60/64 100/120/140/144/149/157/165

Note 1:

Mobile Device: Device was pre-assessed with docking and portable (3 axis), the worst case is tested with docking.

Portable Device, and 3 axis were assessed.

Lie

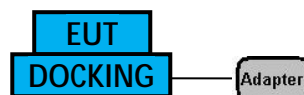
Side

Stand

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

3.7. Setup Configuration

3.7.1. EUT Configuration for Power Line Emission



3.7.2. EUT Configuration for Conducted Test Items



3.8. Operating Condition of EUT

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

3.9. 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. 8 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 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

3.10. 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. Due
1.	Test Receiver	R&S	ESR3	101774	2016. 02. 04	2017. 02. 03
2.	A.M.N.	R&S	ENV4200	100169	2015. 11. 17	2016. 11. 16
3.	L.I.S.N.	Kyoritsu	KNW-407	8-855-9	2015. 12. 23	2016. 12. 22
4.	Pulse Limiter	R&S	ESH3-Z2	100354	2016. 01. 17	2017. 01. 16
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. Due
1.	Spectrum Analyzer	Agilent	N9010A-526	MY53400071	2015. 09. 14	2016. 09. 13
2.	Test Receiver	R & S	ESCS30	100338	2015. 06. 24	2016. 06. 23
3.	Amplifier	HP	8447D	2944A06305	2016. 02. 23	2017. 02. 22
4.	Bilog Antenna	CHASE	CBL6112D	33821	2016. 01. 30	2017. 01. 29
5.	Loop Antenna	R&S	HFH2-Z2	891847/27	2015. 12. 24	2016. 12. 23
6.	Test Software	Audix	e3	V.6.110601	N.C.R.	N.C.R.

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

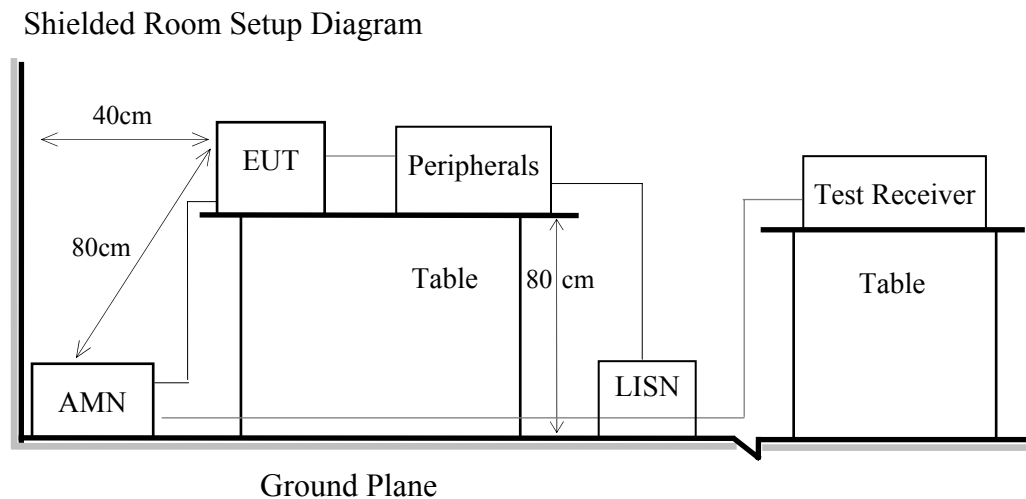
Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
1.	Spectrum Analyzer	Agilent	E4446A	US44300366	2015. 08. 20	2016. 08. 19
3.	Amplifier	Sonoma	310N	187161	2015. 06. 17	2016. 06. 16
4.	5G Notch Filter	Microwave Circuits	N0452502	459775	2016. 01. 28	2017. 01. 27
5.	5G Notch Filter	Microwave Circuits	N0555983	459481	2016. 01. 28	2017. 01. 27
6.	5G Notch Filter	Microwave Circuits	N0258771	459776	2016. 01. 28	2017. 01. 27
7.	Double-Ridged Waveguide Horn	ETS-Lindgren	3117	00135902	2016. 03. 05	2017. 03. 04
8.	Horn Antenna	EMCO	3116	2653	2015. 10. 20	2016. 10. 19
9.	Test Software	Audix	e3	V.6.110601	N.C.R.	N.C.R.

4.3. RF Conducted Measurement

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
1.	Spectrum Analyzer	Agilent	N9010A-507	MY52220264	2015. 08. 20	2016. 08. 19
2.	Power Meter	Anritsu	ML2495A	1145008	2015. 10. 23	2016. 10. 22
3.	Power Sensor	Anritsu	MA2411B	1126096	2015. 10. 23	2016. 10. 22

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.

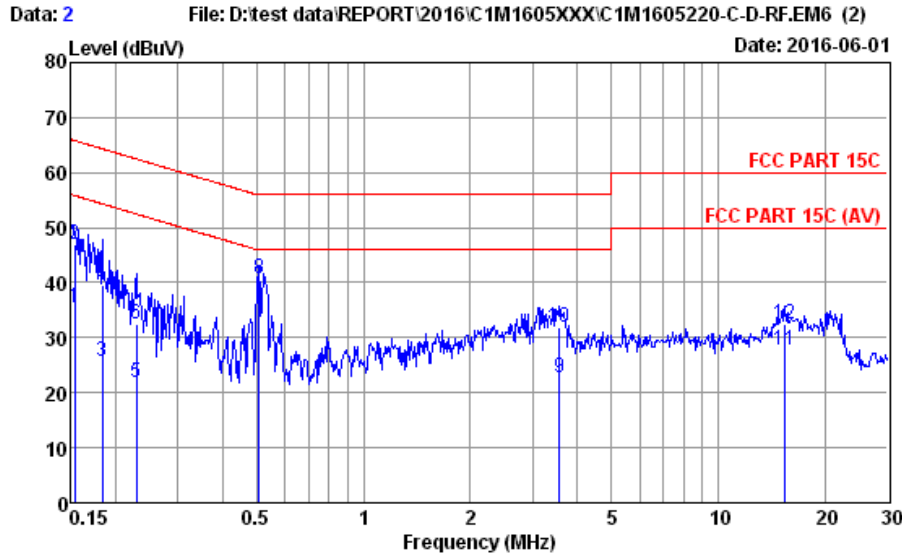
5.3. Test Procedure

- 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	2016/06/01	Temp./Hum.	25 /60%
Test Voltage	AC 120V, 60Hz		

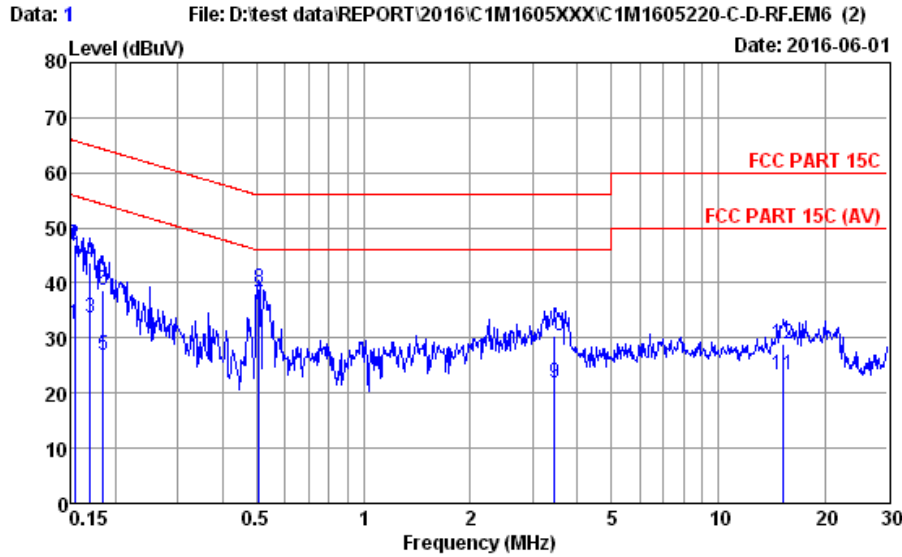


Site no. : No.8 Shielded Room Data no. : 2
 Condition : ENV4200 100169 Phase : NEUTRAL
 Limit : FCC PART 15C
 Env. / Ins. : 25°C / 60% ESR3 (1774) Engineer : Tim
 EUT : mPAD-12-CHT4-I
 Power Rating : 120Vac/60Hz
 Test Mode : Operating

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dBμV)	Emission Level (dBμV)	Limits (dBμV)	Margin (dB)	Remark
1	0.153	11.43	0.03	9.86	13.97	35.29	55.82	20.53	Average
2	0.153	11.43	0.03	9.86	25.63	46.95	65.82	18.87	QP
3	0.183	11.31	0.03	9.86	4.36	25.56	54.33	28.77	Average
4	0.183	11.31	0.03	9.86	18.32	39.52	64.33	24.81	QP
5	0.229	11.20	0.03	9.86	0.89	21.98	52.48	30.50	Average
6	0.229	11.20	0.03	9.86	11.30	32.39	62.48	30.09	QP
7	0.507	10.99	0.04	9.86	18.45	39.34	46.00	6.66	Average
8	0.507	10.99	0.04	9.86	19.95	40.84	56.00	15.16	QP
9	3.565	11.14	0.12	9.87	1.58	22.71	46.00	23.29	Average
10	3.565	11.14	0.12	9.87	10.71	31.84	56.00	24.16	QP
11	15.388	13.41	0.25	9.90	4.15	27.71	50.00	22.29	Average
12	15.388	13.41	0.25	9.90	8.93	32.49	60.00	27.51	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.

Test Date	2016/06/01	Temp./Hum.	25 /60%
Test Voltage	AC 120V, 60Hz		



Site no. : No.8 Shielded Room Data no. : 1
 Condition : ENV4200 100169 Phase : LINE
 Limit : FCC PART 15C
 Env. / Ins. : 25°C / 60% ESR3 (1774) Engineer : Tim
 EUT : mPAD-12-CHT4-I
 Power Rating : 120Vac/60Hz
 Test Mode : Operating

	AMN	Cable	Pulse	Emission		Limits	Margin	Remark	
12	Freq. (MHz)	Factor (dB)	Loss (dB)	Att. (dB)	Reading (dBμV)	Level (dBμV)	(dBμV)	(dB)	
1	0.153	10.75	0.03	9.86	11.80	32.44	55.82	23.38	Average
2	0.153	10.75	0.03	9.86	26.19	46.83	65.82	18.99	QP
3	0.169	10.73	0.03	9.86	12.97	33.59	54.99	21.40	Average
4	0.169	10.73	0.03	9.86	23.09	43.71	64.99	21.28	QP
5	0.184	10.70	0.03	9.86	6.35	26.94	54.28	27.34	Average
6	0.184	10.70	0.03	9.86	18.05	38.64	64.28	25.64	QP
7	0.507	10.55	0.04	9.86	15.50	35.95	46.00	10.05	Average
8	0.507	10.55	0.04	9.86	18.42	38.87	56.00	17.13	QP
9	3.454	10.63	0.12	9.87	1.37	21.99	46.00	24.01	Average
10	3.454	10.63	0.12	9.87	9.71	30.33	56.00	25.67	QP
11	15.226	12.36	0.25	9.90	0.94	23.45	50.00	26.55	Average
12	15.226	12.36	0.25	9.90	6.36	28.87	60.00	31.13	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.

6. RADIATED EMISSION MEASUREMENT

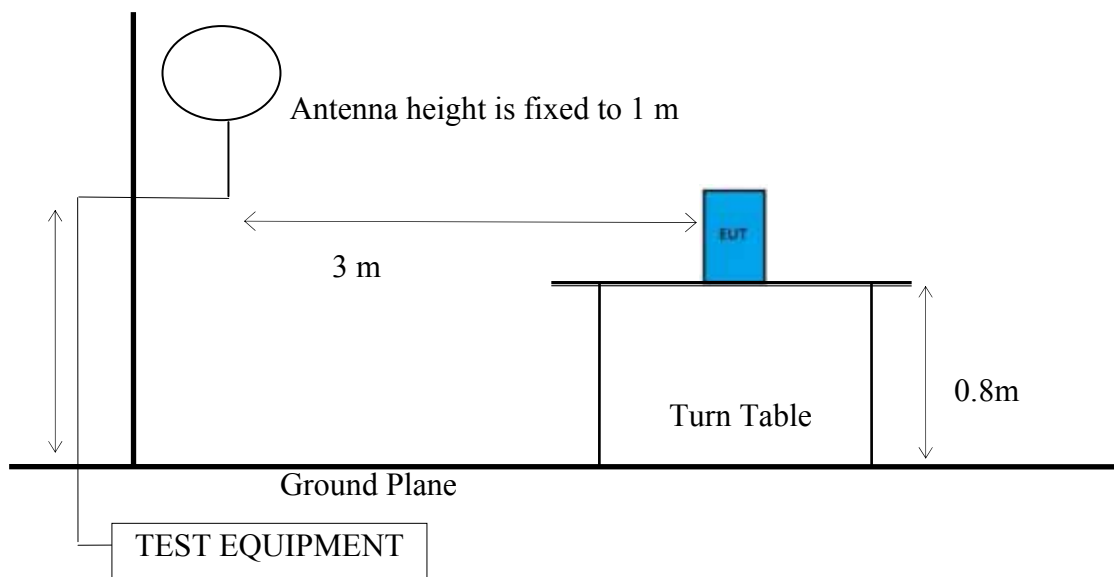
6.1. Block Diagram of Test Setup

6.1.1. Block Diagram of connection between EUT and simulators

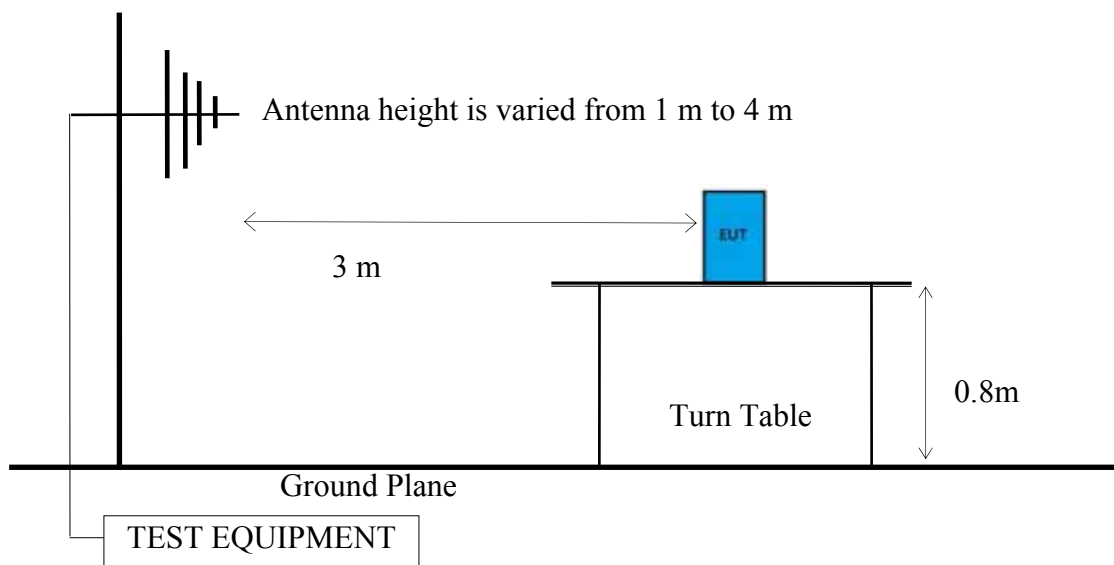
Indicated as section 3.7

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

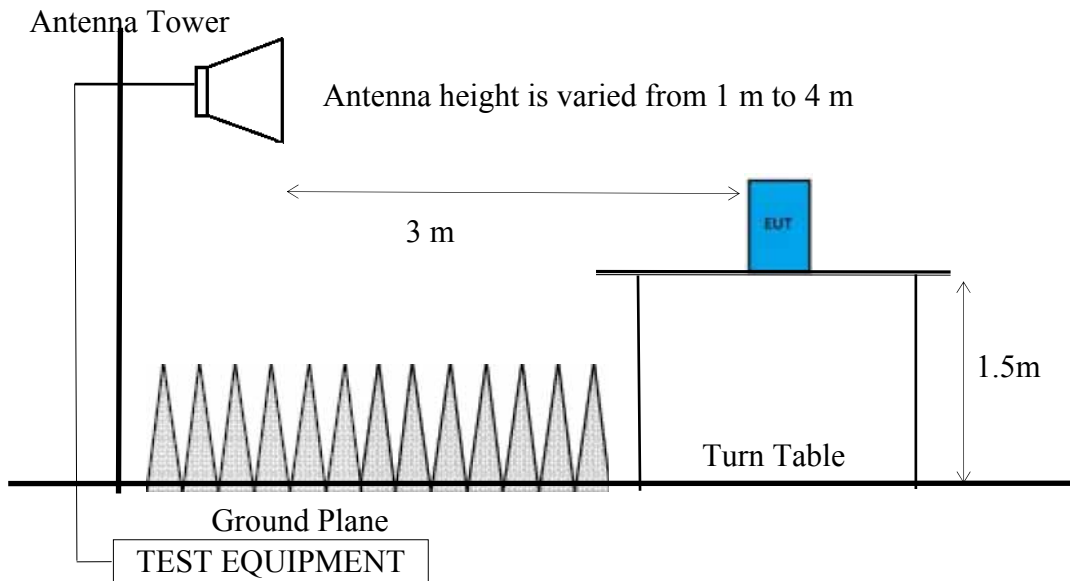
Antenna Tower



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

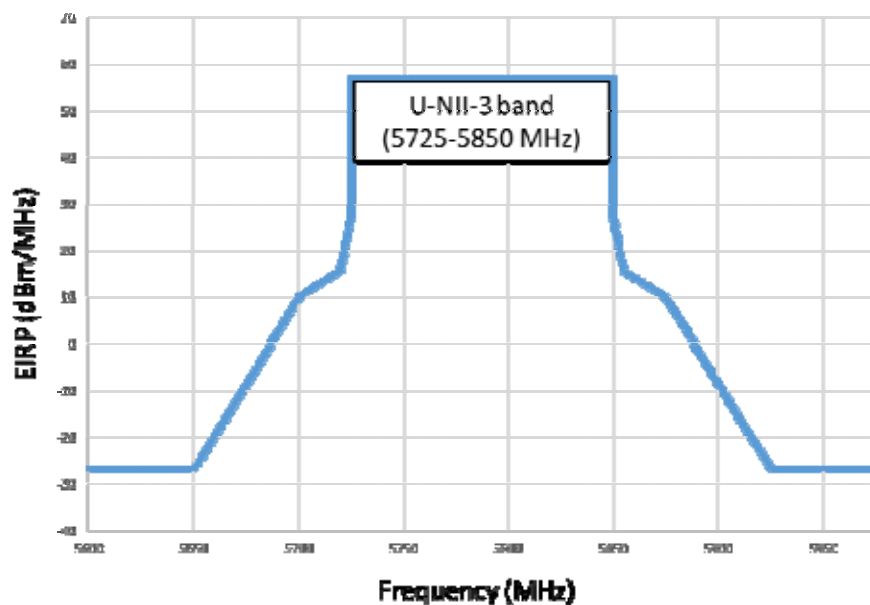
- (2) The tighter limit applies to the edge between two frequency bands.
- (3) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
- (4) Fundamental and emission fall within operation band are exempted from this 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 dB μ V/m at 75 MHz or more above or below the band edge increasing linearly to 105.2dB μ V/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 dB μ V/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 dB μ V/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	2.020	0.50	0.50
802.11ac-VHT20	0.196	5.10	5.10
802.11ac-VHT40	0.1152	8.68	8.68
802.11ac-VHT80	0.076	13.16	13.16

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	2016/06/03	Temp./Hum.	22 /58%
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	802.11ac-VHT40	UNII Band	I
		Frequency	TX 5230MHz

Antenna at Horizontal Polarization

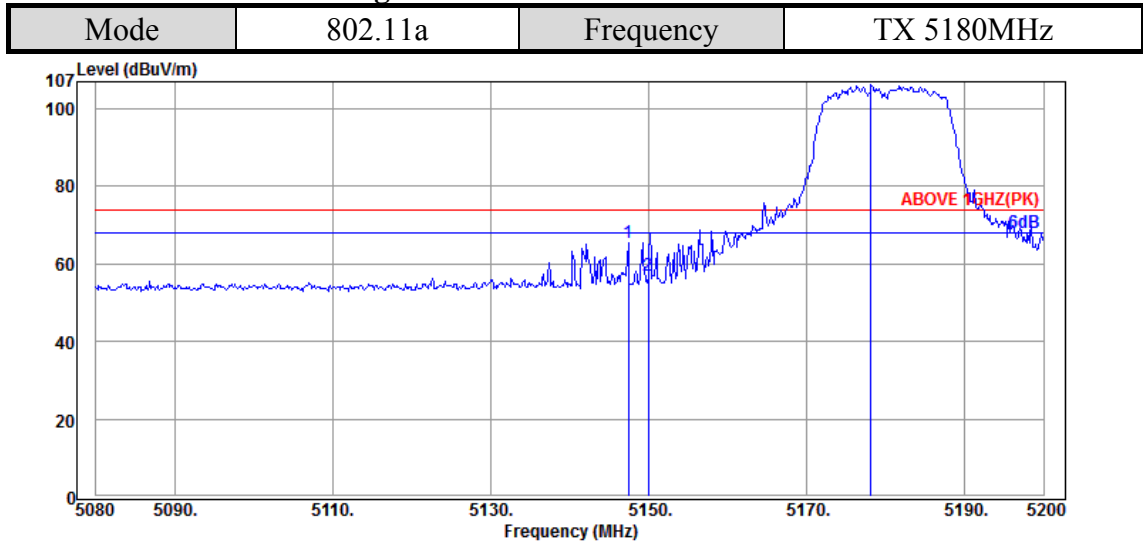
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
308.39	13.37	4.76	18.20	36.33	46.00	9.67	Peak
385.02	15.23	5.53	17.29	38.05	46.00	7.95	Peak
461.65	16.46	6.17	14.24	36.87	46.00	9.13	Peak
924.34	20.72	7.69	8.97	37.38	46.00	8.62	Peak

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
40.67	12.98	2.52	17.12	32.62	40.00	7.38	Peak
385.02	15.23	5.53	20.69	41.45	46.00	4.55	Peak
461.65	16.46	6.17	22.55	45.18	46.00	0.82	Peak
539.25	17.53	6.47	17.19	41.19	46.00	4.81	Peak

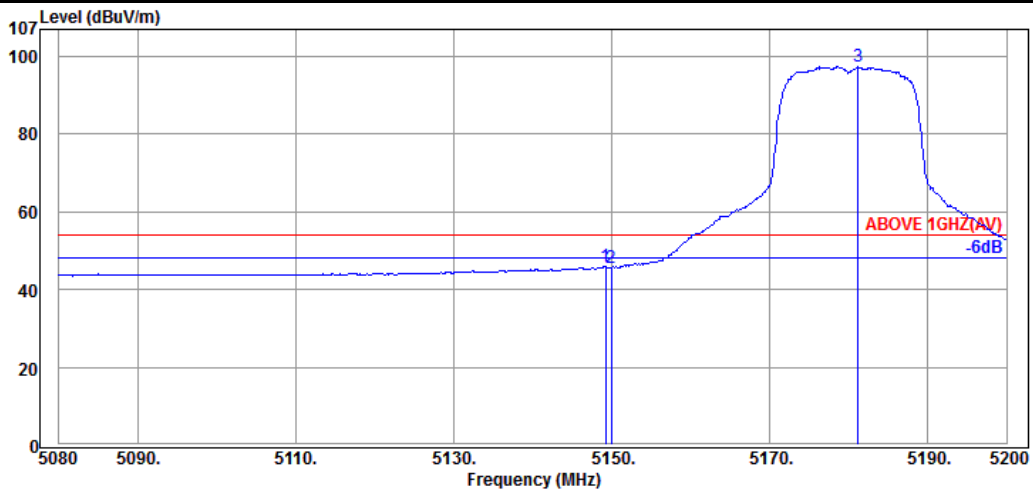
6.5.1.3. Frequency Above 1 GHz to 10th harmonics

Band Edge:



Antenna at Horizontal Polarization

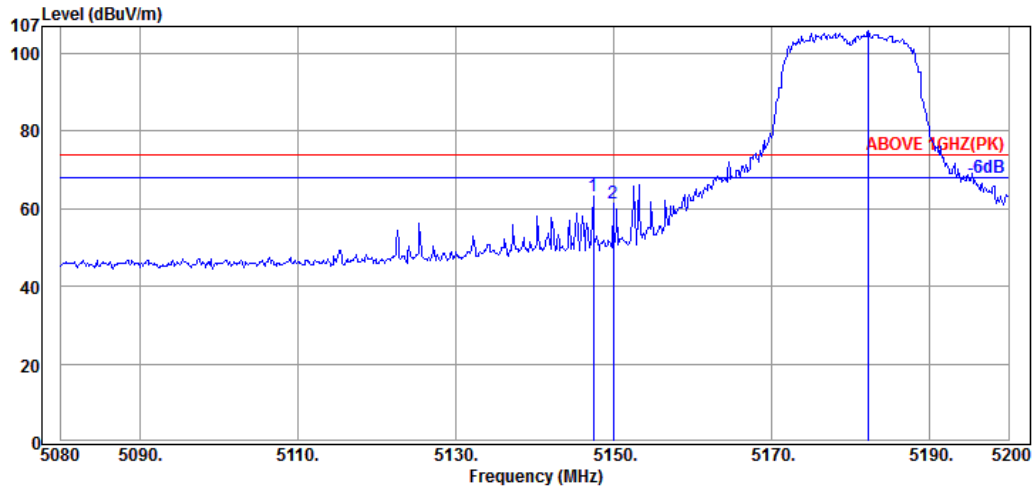
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5147.44	34.45	8.84	22.17	65.46	74.00	8.54	Peak
5149.96	34.45	8.84	13.79	57.08	74.00	16.92	Peak
5178.16	34.48	8.77	63.07	106.32	---	---	Peak



Antenna at Horizontal Polarization

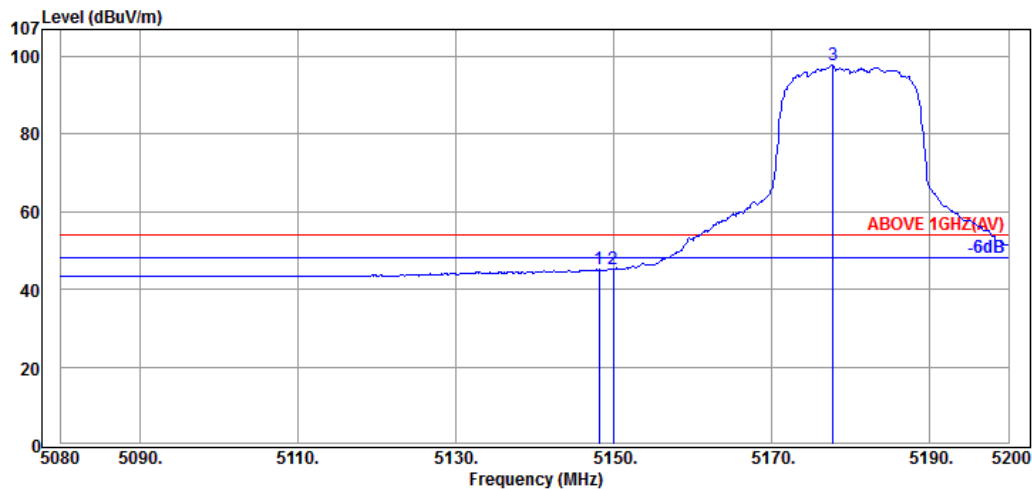
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5149.24	34.45	8.84	2.54	45.83	54.00	8.17	Average
5149.96	34.45	8.84	2.41	45.70	54.00	8.30	Average
5181.16	34.48	8.77	54.14	97.39	---	---	Average

Mode	802.11a	Frequency	TX 5180MHz
------	---------	-----------	------------



Antenna at Vertical Polarization

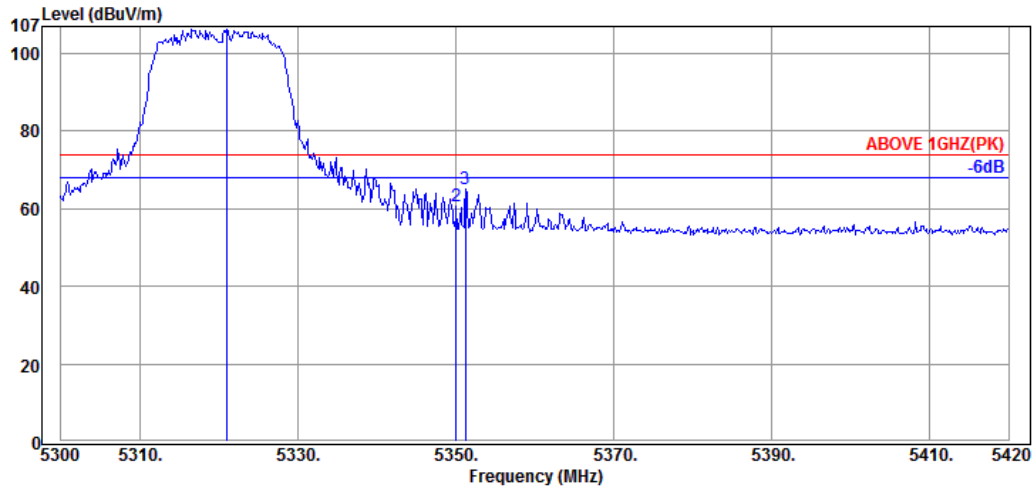
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5147.44	34.45	8.84	20.05	63.34	74.00	10.66	Peak
5149.96	34.45	8.84	17.99	61.28	74.00	12.72	Peak
5182.24	34.48	8.77	62.46	105.71	---	---	Peak



Antenna at Vertical Polarization

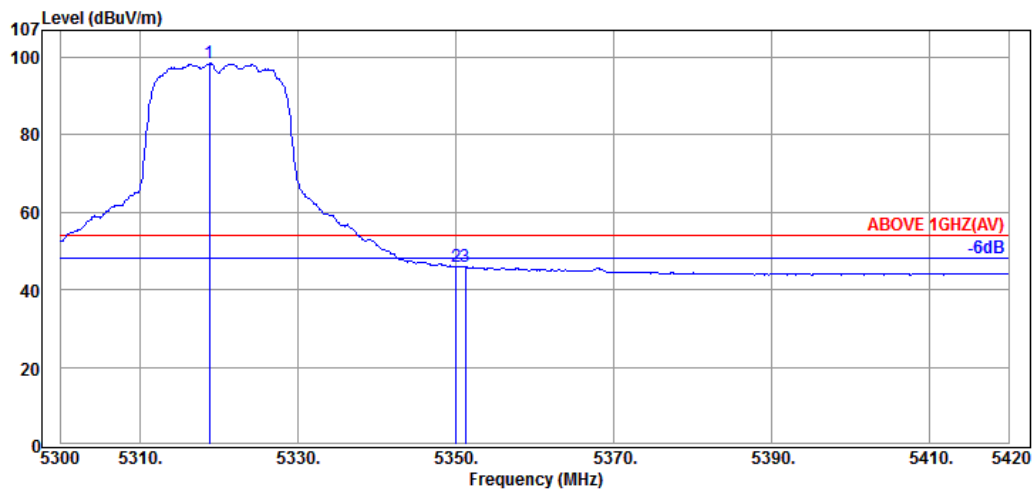
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5148.16	34.45	8.84	1.83	45.12	54.00	8.88	Average
5149.96	34.45	8.84	1.83	45.12	54.00	8.88	Average
5177.80	34.48	8.77	54.61	97.86	---	---	Average

Mode	802.11a	Frequency	TX 5320MHz
------	---------	-----------	------------



Antenna at Horizontal Polarization

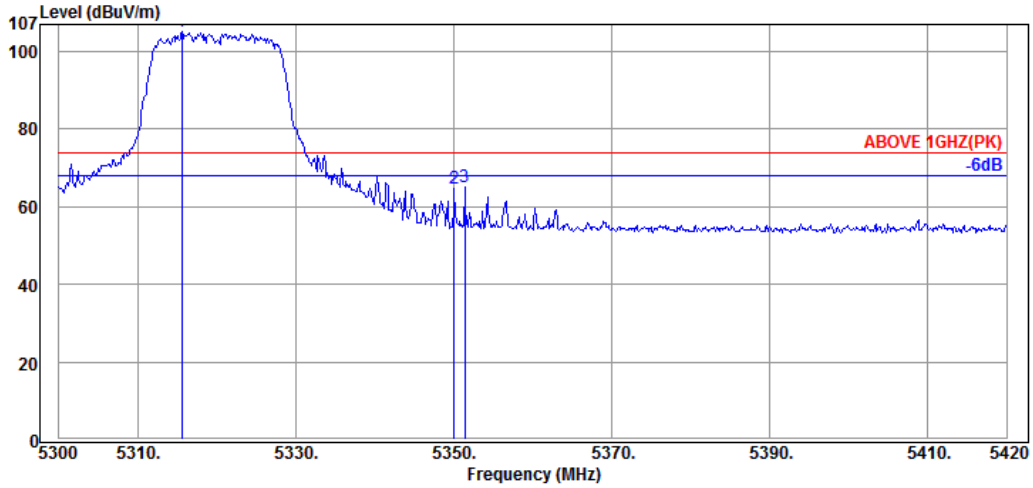
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5321.00	34.62	8.70	63.07	106.39	---	---	Peak
5350.04	34.65	8.61	17.36	60.62	74.00	13.38	Peak
5351.24	34.65	8.61	21.87	65.13	74.00	8.87	Peak



Antenna at Horizontal Polarization

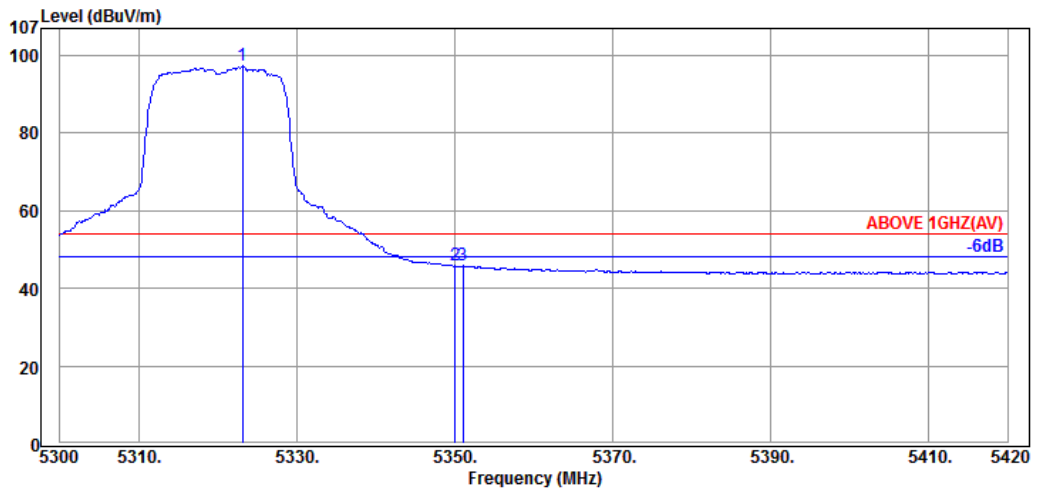
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5318.84	34.62	8.70	55.13	98.45	---	---	Average
5350.04	34.65	8.61	2.60	45.86	54.00	8.14	Average
5351.24	34.65	8.61	2.86	46.12	54.00	7.88	Average

Mode	802.11a	Frequency	TX 5320MHz
------	---------	-----------	------------



Antenna at Vertical Polarization

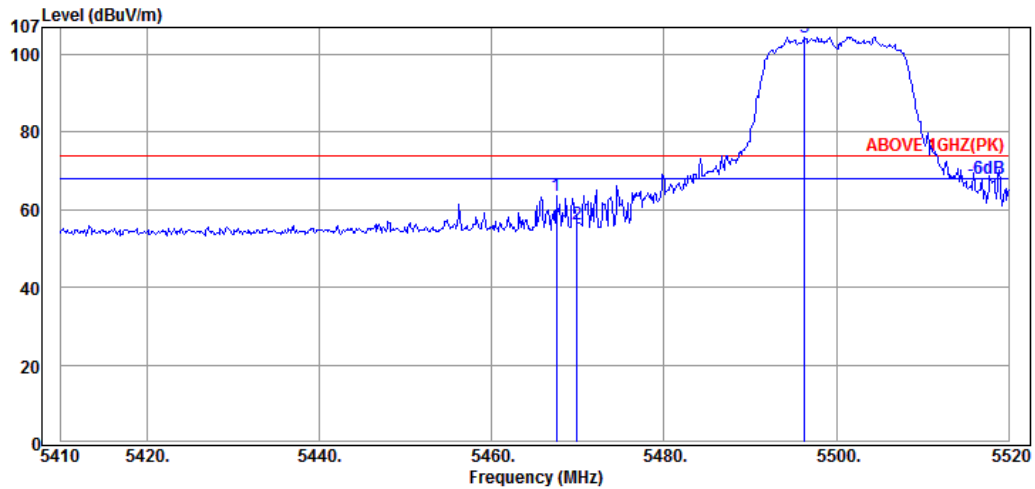
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5315.60	34.62	8.70	61.94	105.26	---	---	Peak
5350.04	34.65	8.61	21.40	64.66	74.00	9.34	Peak
5351.36	34.65	8.61	21.87	65.13	74.00	8.87	Peak



Antenna at Vertical Polarization

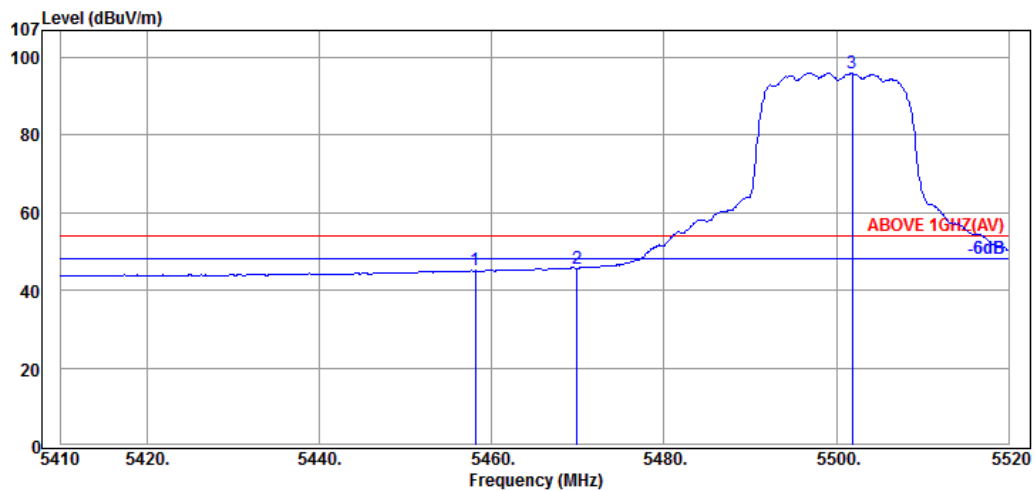
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5323.16	34.62	8.70	53.95	97.27	---	---	Average
5350.04	34.65	8.61	2.57	45.83	54.00	8.17	Average
5351.00	34.65	8.61	2.60	45.86	54.00	8.14	Average

Mode	802.11a	Frequency	TX 5500MHz
------	---------	-----------	------------



Antenna at Horizontal Polarization

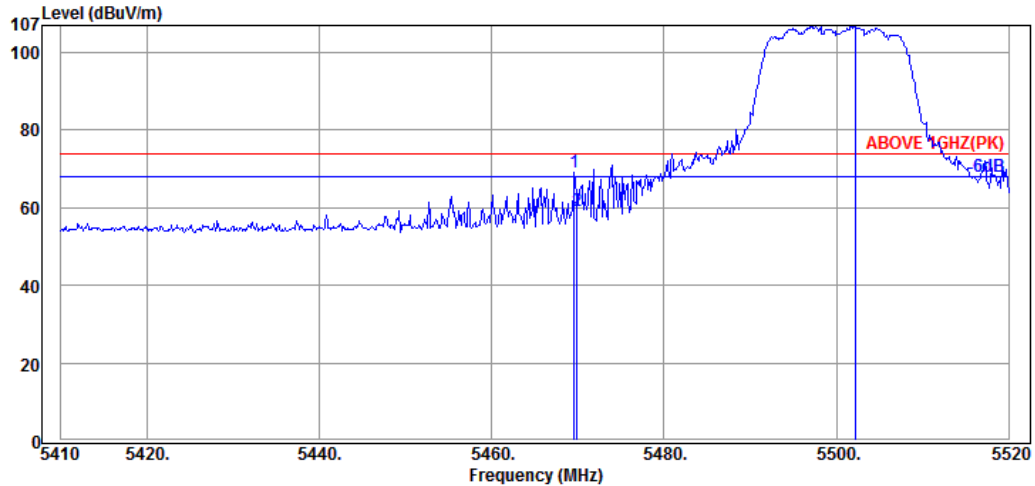
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5467.53	34.77	8.65	20.18	63.60	74.00	10.40	Peak
5469.95	34.77	8.65	12.93	56.35	74.00	17.65	Peak
5496.35	34.78	8.69	61.13	104.60	---	---	Peak



Antenna at Horizontal Polarization

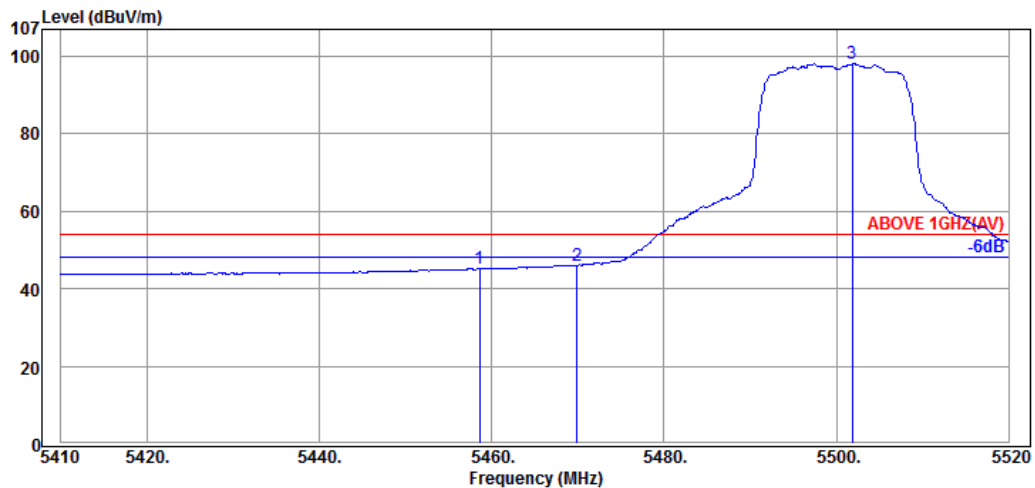
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5458.07	34.75	8.61	1.69	45.05	54.00	8.95	Average
5469.95	34.77	8.65	2.34	45.76	54.00	8.24	Average
5501.85	34.80	8.73	52.39	95.92	---	---	Average

Mode	802.11a	Frequency	TX 5500MHz
------	---------	-----------	------------



Antenna at Vertical Polarization

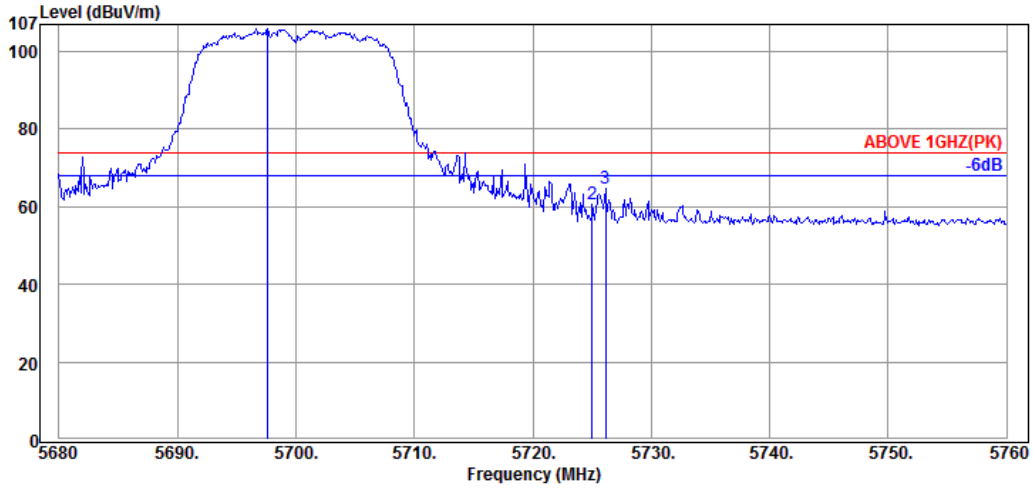
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5469.62	34.77	8.65	25.68	69.10	74.00	4.90	Peak
5469.95	34.77	8.65	15.66	59.08	74.00	14.92	Peak
5502.18	34.80	8.73	63.32	106.85	---	---	Peak



Antenna at Vertical Polarization

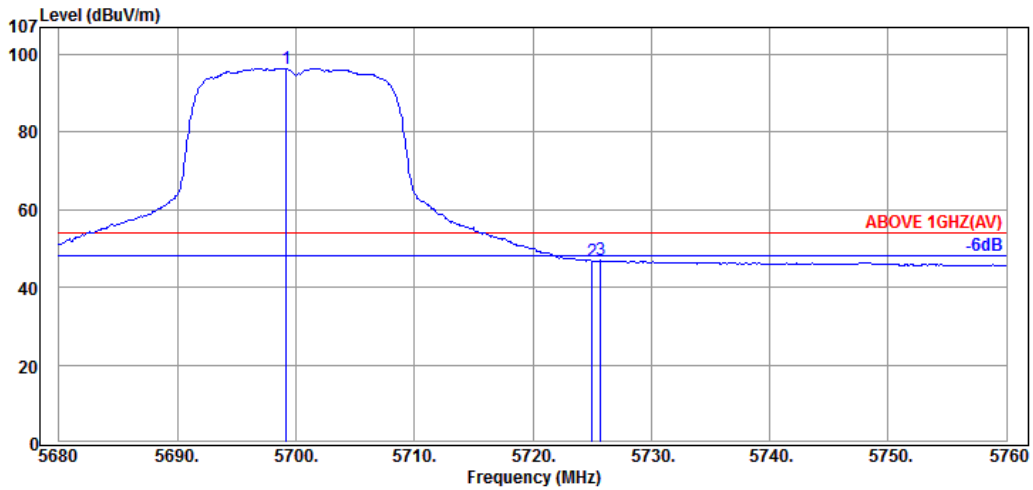
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5458.62	34.75	8.61	1.80	45.16	54.00	8.84	Average
5469.95	34.77	8.65	2.58	46.00	54.00	8.00	Average
5501.85	34.80	8.73	54.56	98.09	---	---	Average

Mode	802.11a	Frequency	TX 5700MHz
------	---------	-----------	------------



Antenna at Horizontal Polarization

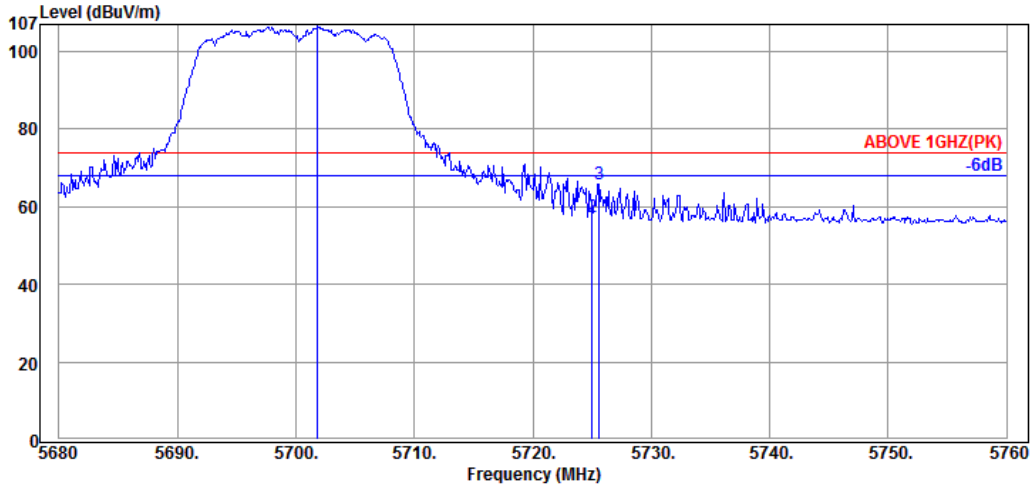
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5697.60	35.03	9.68	61.36	106.07	---	---	Peak
5725.04	35.07	9.78	15.71	60.56	74.00	13.44	Peak
5726.16	35.07	9.78	19.70	64.55	74.00	9.45	Peak



Antenna at Horizontal Polarization

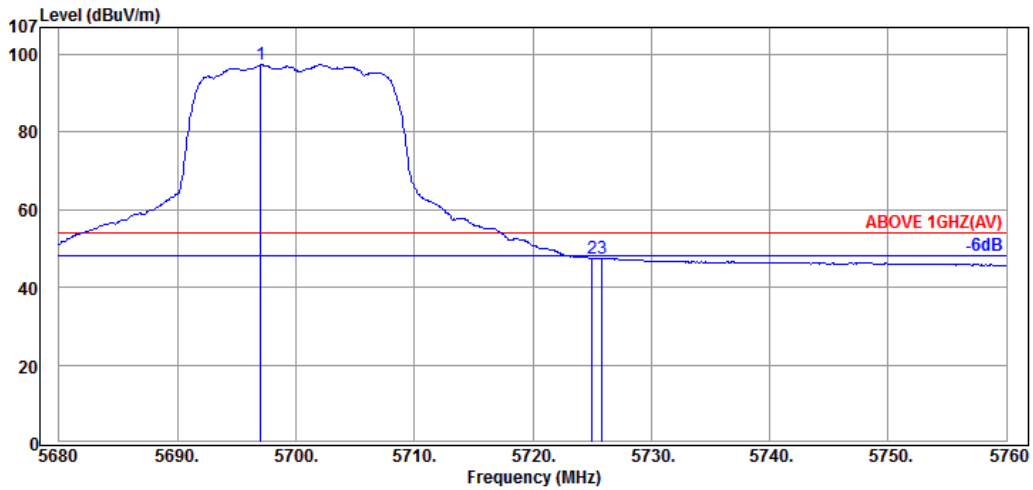
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5699.20	35.03	9.68	51.71	96.42	---	---	Peak
5725.04	35.07	9.78	2.00	46.85	54.00	7.15	Peak
5725.76	35.07	9.78	2.07	46.92	54.00	7.08	Peak

Mode	802.11a	Frequency	TX 5700MHz
------	---------	-----------	------------



Antenna at Vertical Polarization

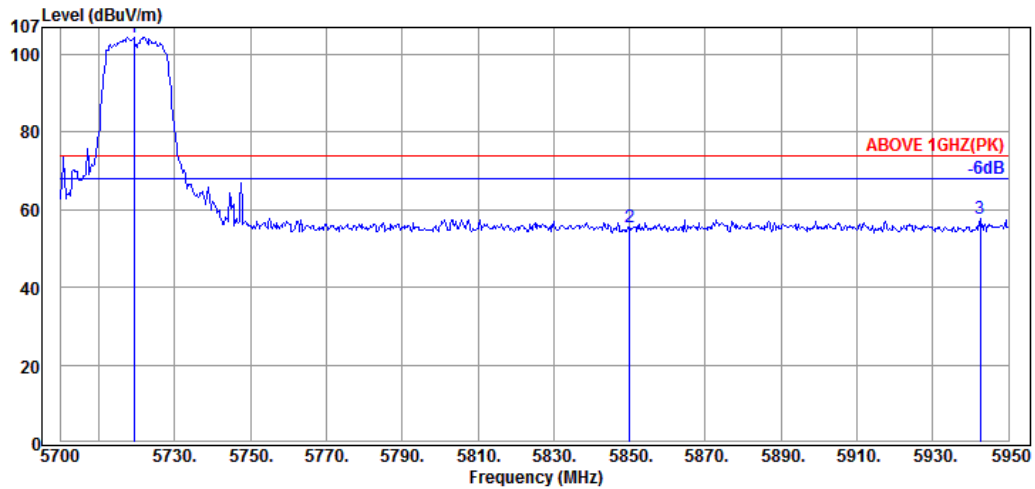
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5701.84	35.05	9.73	61.77	106.55	---	---	Peak
5725.04	35.07	9.78	12.36	57.21	74.00	16.79	Peak
5725.60	35.07	9.78	20.96	65.81	74.00	8.19	Peak



Antenna at Vertical Polarization

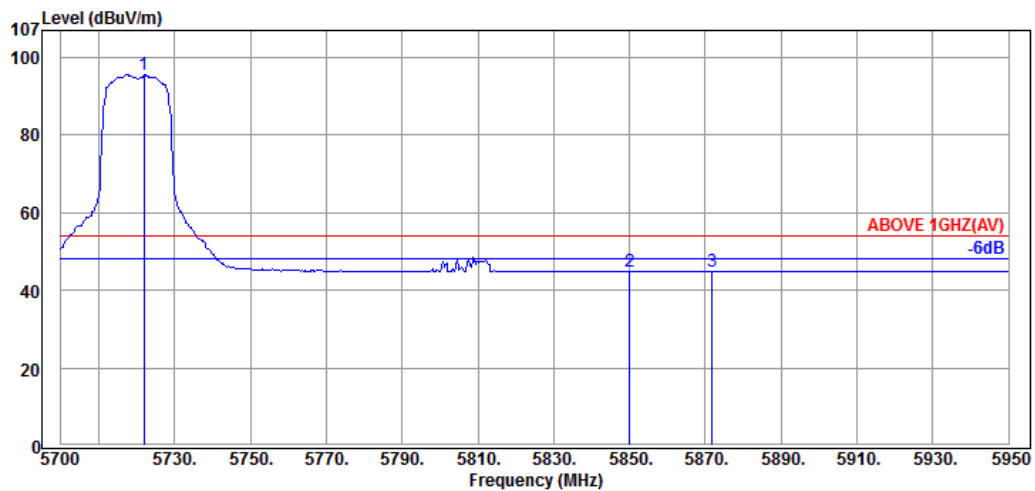
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5697.04	35.03	9.68	52.66	97.37	---	---	Peak
5725.04	35.07	9.78	2.50	47.35	54.00	6.65	Peak
5725.84	35.07	9.78	2.69	47.54	54.00	6.46	Peak

Mode	802.11a	Frequency	TX 5720MHz
------	---------	-----------	------------



Antenna at Horizontal Polarization

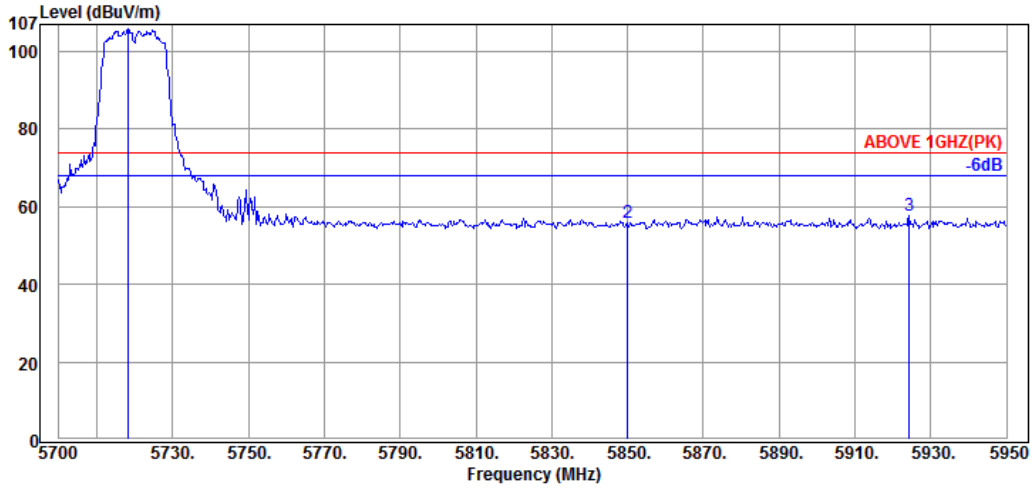
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5719.25	35.07	9.78	59.50	104.35	---	---	Peak
5850.00	35.21	9.86	10.55	55.62	74.00	18.38	Peak
5942.50	35.34	9.56	12.87	57.77	74.00	16.23	Peak



Antenna at Horizontal Polarization

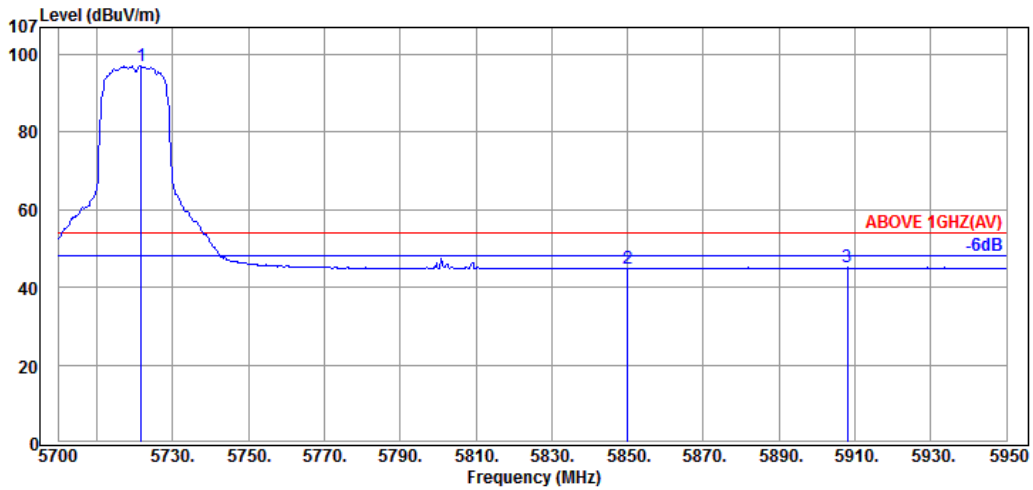
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5722.00	35.07	9.78	50.83	95.68	---	---	Peak
5850.00	35.21	9.86	-0.23	44.84	54.00	9.16	Peak
5871.75	35.26	9.78	-0.02	45.02	54.00	8.98	Peak

Mode	802.11a	Frequency	TX 5720MHz
------	---------	-----------	------------



Antenna at Vertical Polarization

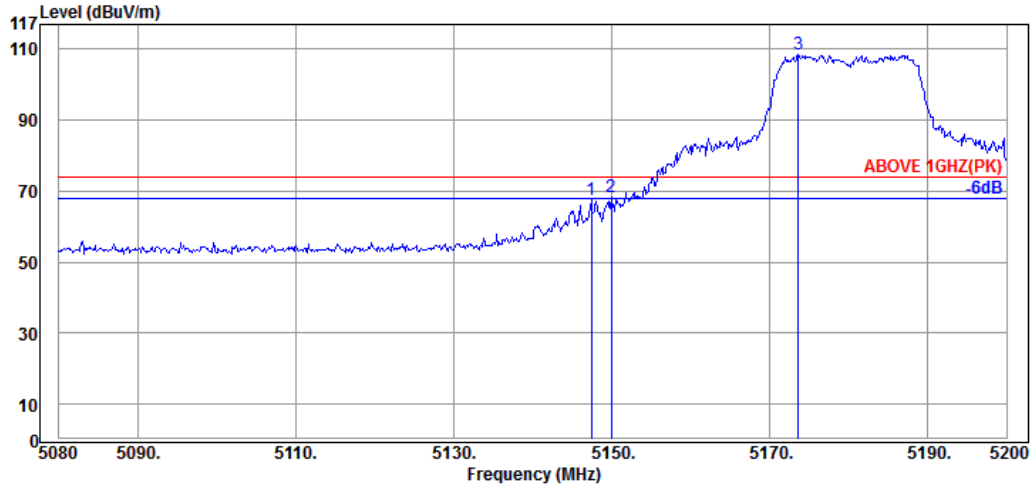
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5718.25	35.07	9.78	61.23	106.08	---	---	Peak
5850.00	35.21	9.86	10.80	55.87	74.00	18.13	Peak
5924.25	35.32	9.62	12.78	57.72	74.00	16.28	Peak



Antenna at Vertical Polarization

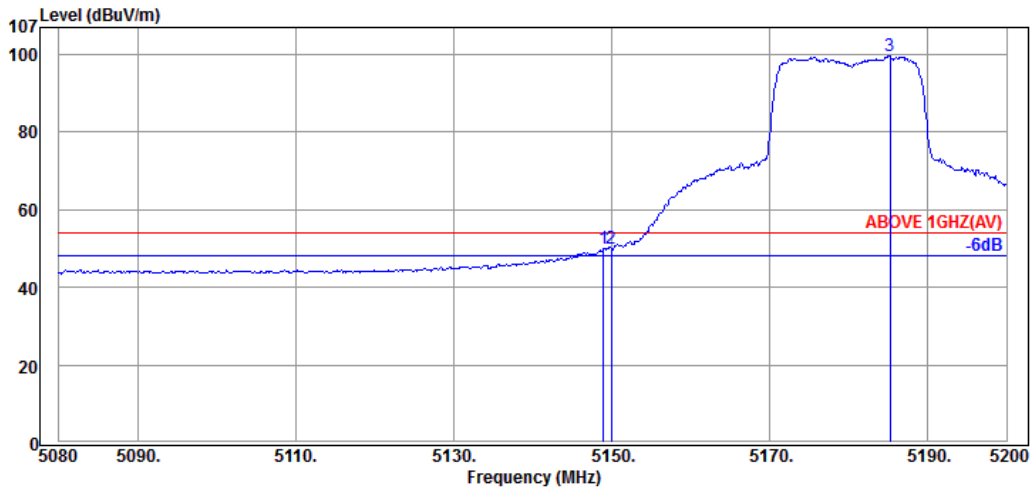
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5721.75	35.07	9.78	52.19	97.04	---	---	Peak
5850.00	35.21	9.86	-0.23	44.84	54.00	9.16	Peak
5908.00	35.30	9.68	0.11	45.09	54.00	8.91	Peak

Mode	802.11ac-VHT20	Frequency	TX 5180MHz
------	----------------	-----------	------------



Antenna at Horizontal Polarization

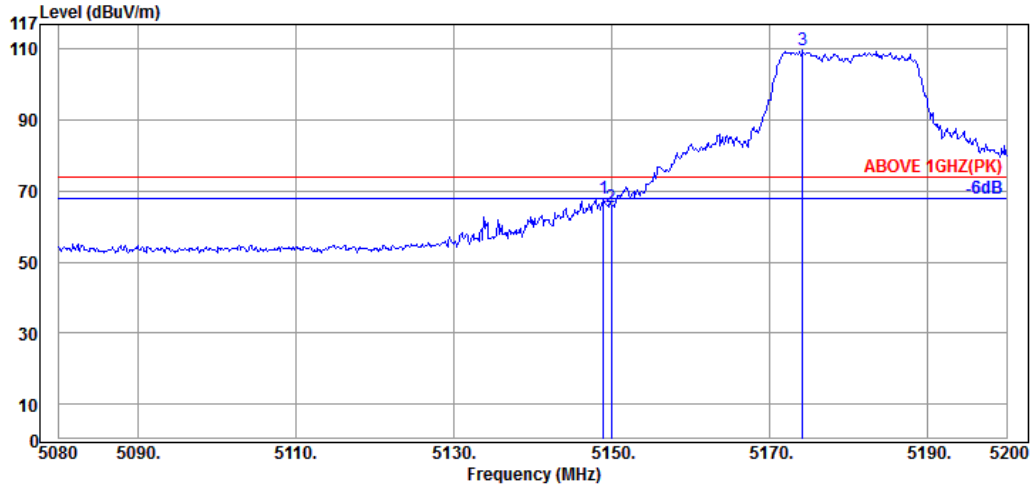
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5147.44	34.45	8.84	24.20	67.49	74.00	6.51	Peak
5149.96	34.45	8.84	24.94	68.23	74.00	5.77	Peak
5173.60	34.48	8.77	65.33	108.58	---	---	Peak



Antenna at Horizontal Polarization

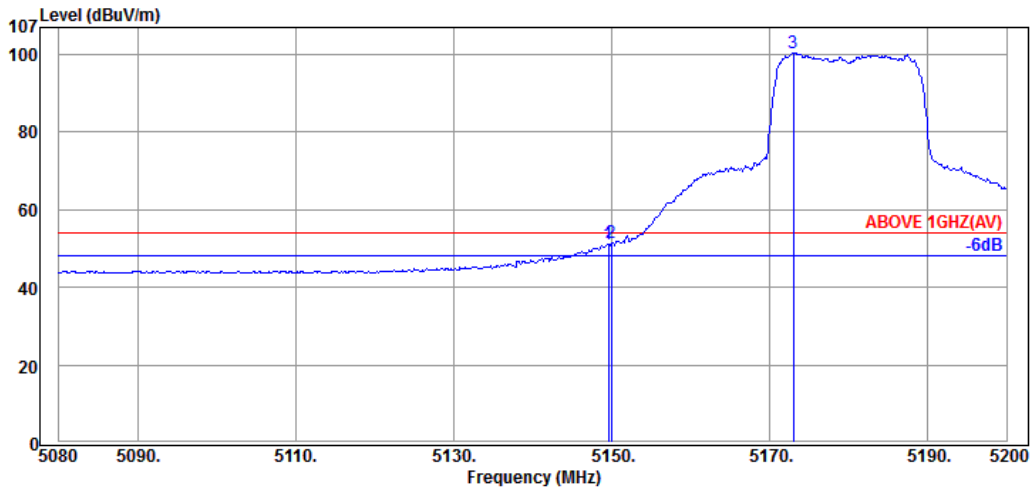
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5149.00	34.45	8.84	6.78	50.07	54.00	3.93	Average
5149.96	34.45	8.84	6.62	49.91	54.00	4.09	Average
5185.24	34.48	8.77	56.32	99.57	---	---	Average

Mode	802.11ac-VHT20	Frequency	TX 5180MHz
------	----------------	-----------	------------



Antenna at Vertical Polarization

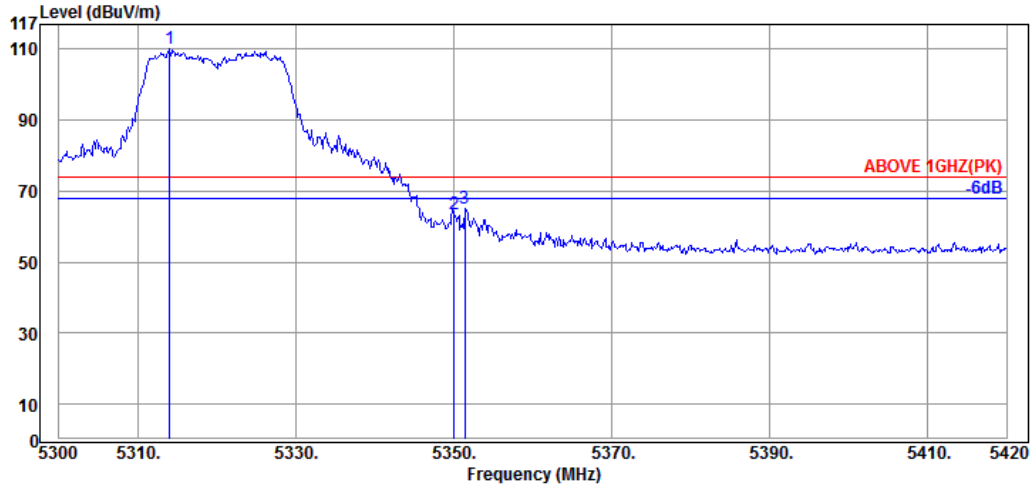
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5149.00	34.45	8.84	24.52	67.81	74.00	6.19	Peak
5149.96	34.45	8.84	22.07	65.36	74.00	8.64	Peak
5174.20	34.48	8.77	66.36	109.61	---	---	Peak



Antenna at Vertical Polarization

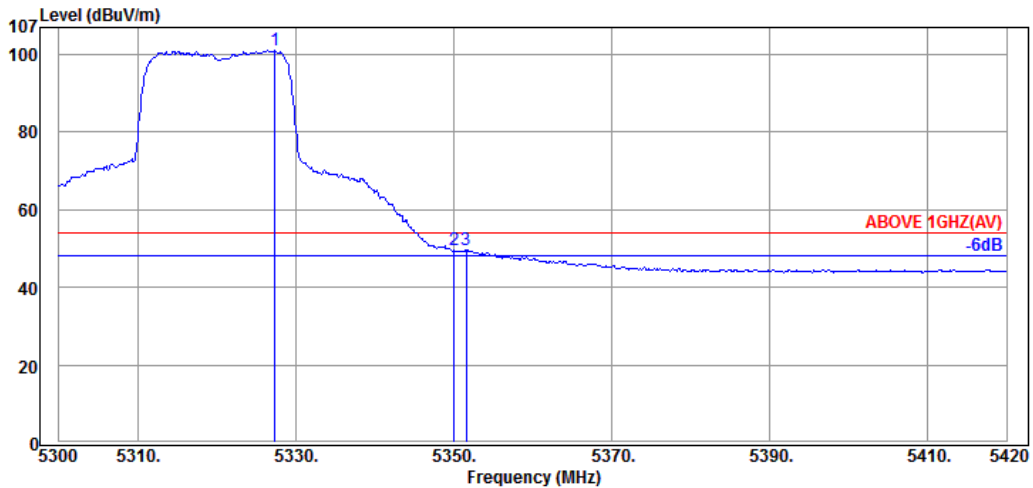
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5149.60	34.45	8.84	7.74	51.03	54.00	2.97	Average
5149.96	34.45	8.84	8.29	51.58	54.00	2.42	Average
5173.00	34.47	8.81	57.06	100.34	---	---	Average

Mode	802.11ac-VHT20	Frequency	TX 5320MHz
------	----------------	-----------	------------



Antenna at Horizontal Polarization

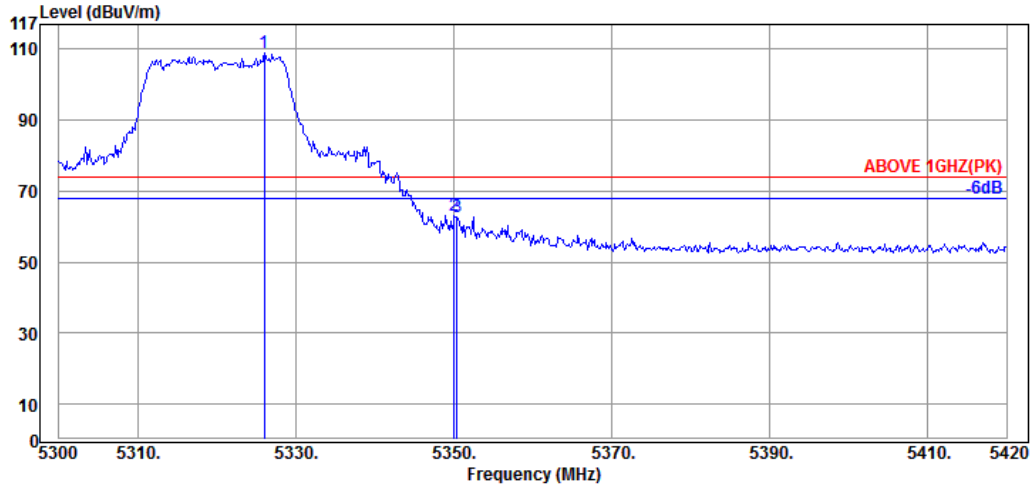
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5314.04	34.62	8.70	66.92	110.24	---	---	Peak
5350.04	34.65	8.61	20.43	63.69	74.00	10.31	Peak
5351.36	34.65	8.61	21.71	64.97	74.00	9.03	Peak



Antenna at Horizontal Polarization

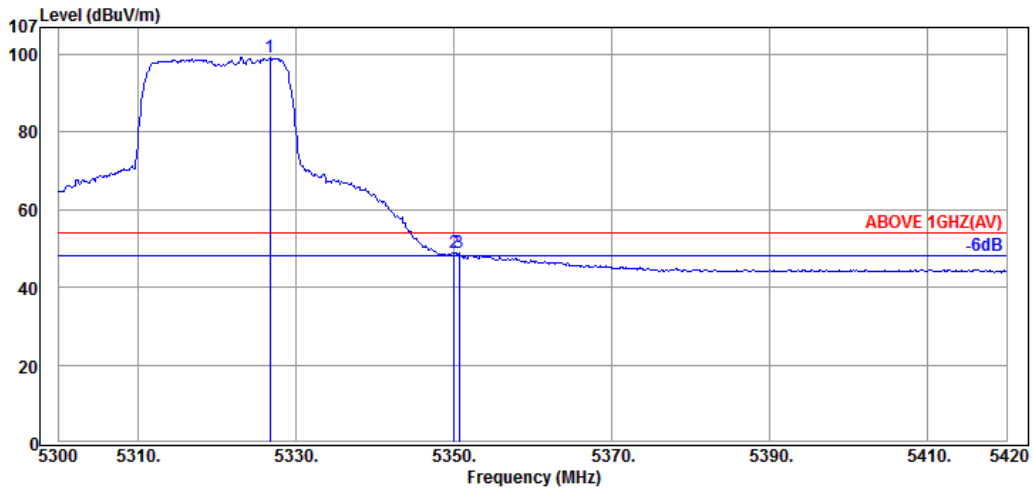
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5327.36	34.63	8.66	57.81	101.10	---	---	Average
5350.04	34.65	8.61	6.44	49.70	54.00	4.30	Average
5351.60	34.65	8.61	6.56	49.82	54.00	4.18	Average

Mode	802.11ac-VHT20	Frequency	TX 5320MHz
------	----------------	-----------	------------



Antenna at Vertical Polarization

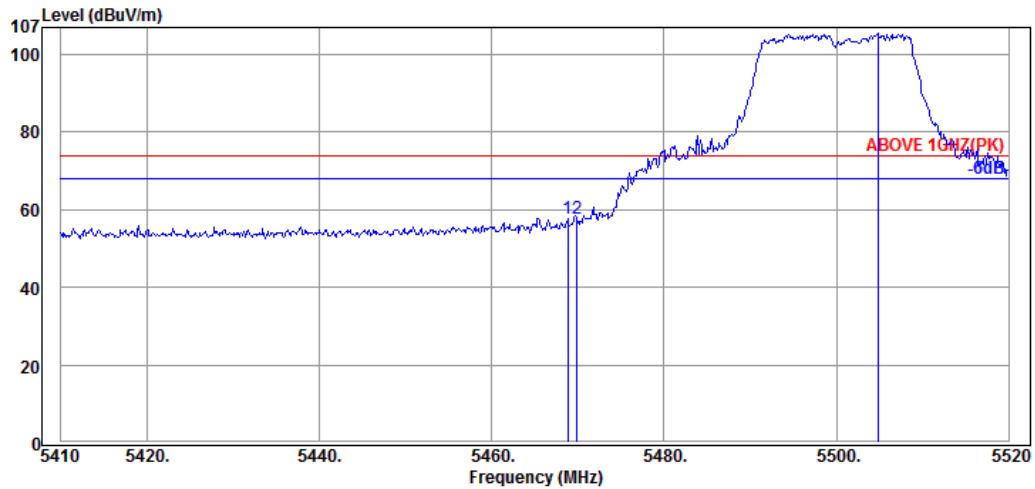
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5326.04	34.62	8.70	65.45	108.77	---	---	Peak
5350.04	34.65	8.61	19.69	62.95	74.00	11.05	Peak
5350.40	34.65	8.61	19.56	62.82	74.00	11.18	Peak



Antenna at Vertical Polarization

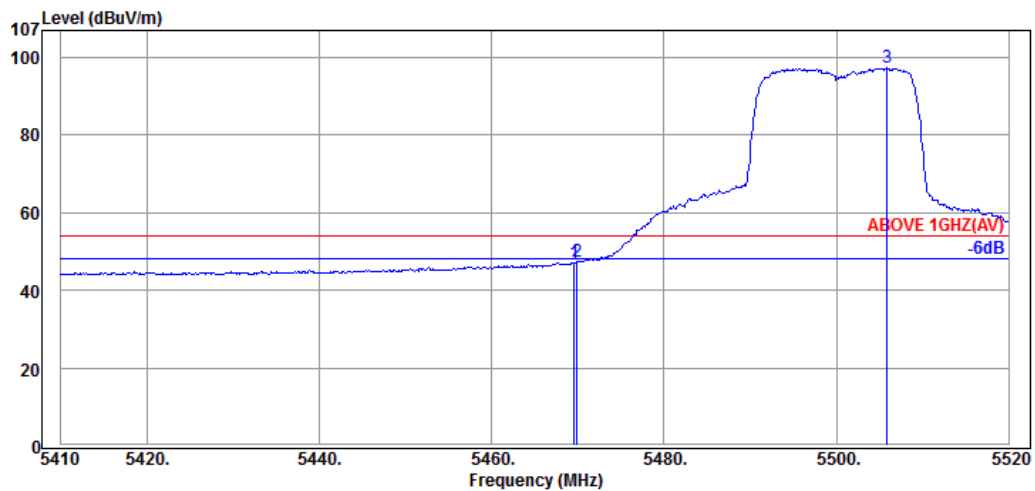
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5326.76	34.63	8.66	56.05	99.34	---	---	Average
5350.04	34.65	8.61	5.82	49.08	54.00	4.92	Average
5350.64	34.65	8.61	5.50	48.76	54.00	5.24	Average

Mode	802.11ac-VHT20	Frequency	TX 5500MHz
------	----------------	-----------	------------



Antenna at Horizontal Polarization

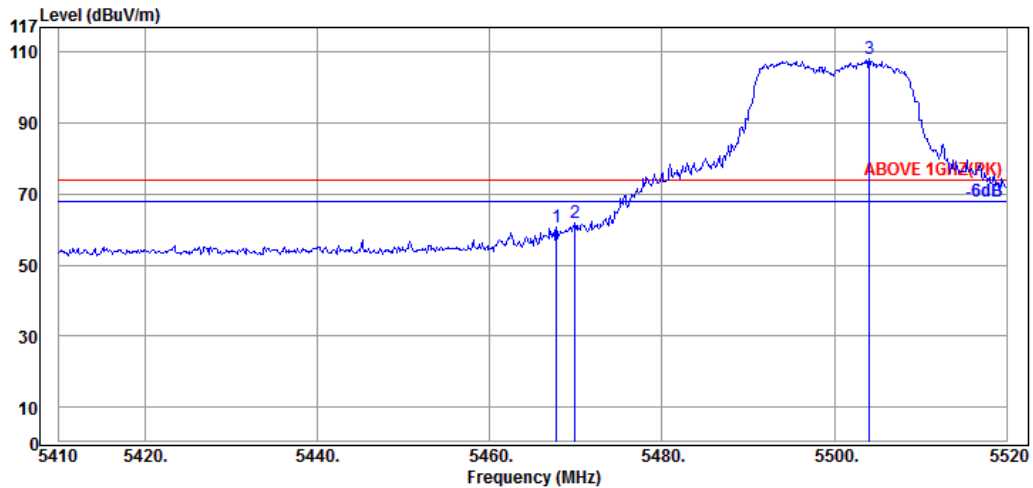
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5468.85	34.77	8.65	14.33	57.75	74.00	16.25	Peak
5469.95	34.77	8.65	14.20	57.62	74.00	16.38	Peak
5504.82	34.80	8.73	61.82	105.35	---	---	Peak



Antenna at Horizontal Polarization

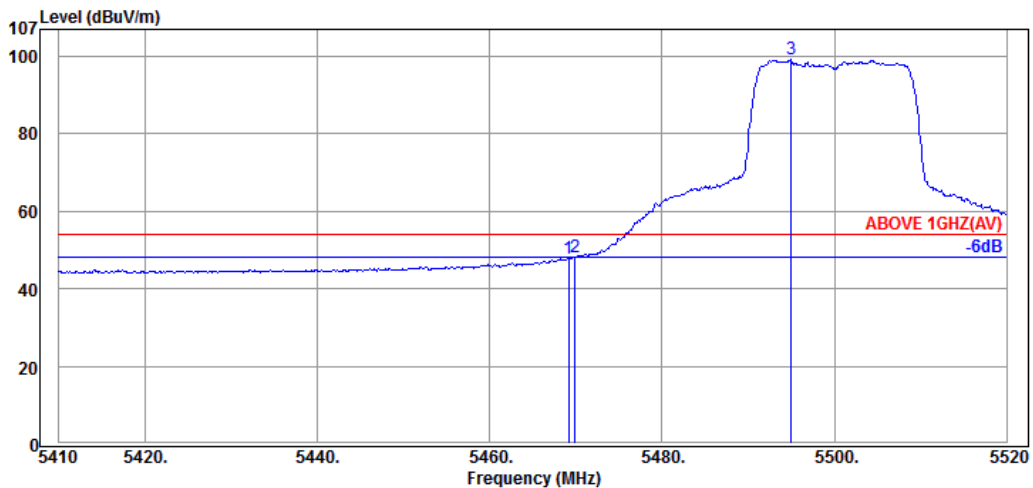
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5469.62	34.77	8.65	3.81	47.23	54.00	6.77	Average
5469.95	34.77	8.65	3.84	47.26	54.00	6.74	Average
5505.92	34.80	8.73	53.85	97.38	---	---	Average

Mode	802.11ac-VHT20	Frequency	TX 5500MHz
------	----------------	-----------	------------



Antenna at Vertical Polarization

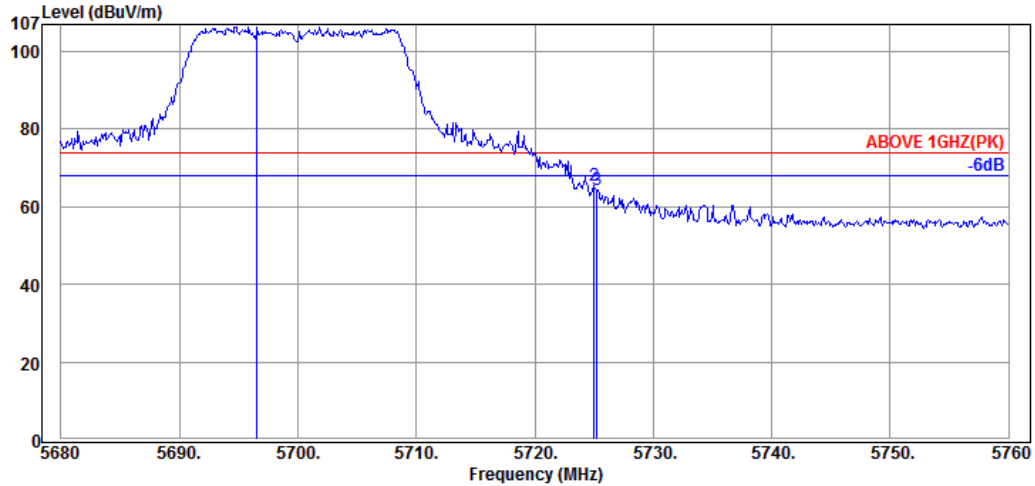
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5467.75	34.77	8.65	17.36	60.78	74.00	13.22	Peak
5469.95	34.77	8.65	18.39	61.81	74.00	12.19	Peak
5504.05	34.80	8.73	64.78	108.31	---	---	Peak



Antenna at Vertical Polarization

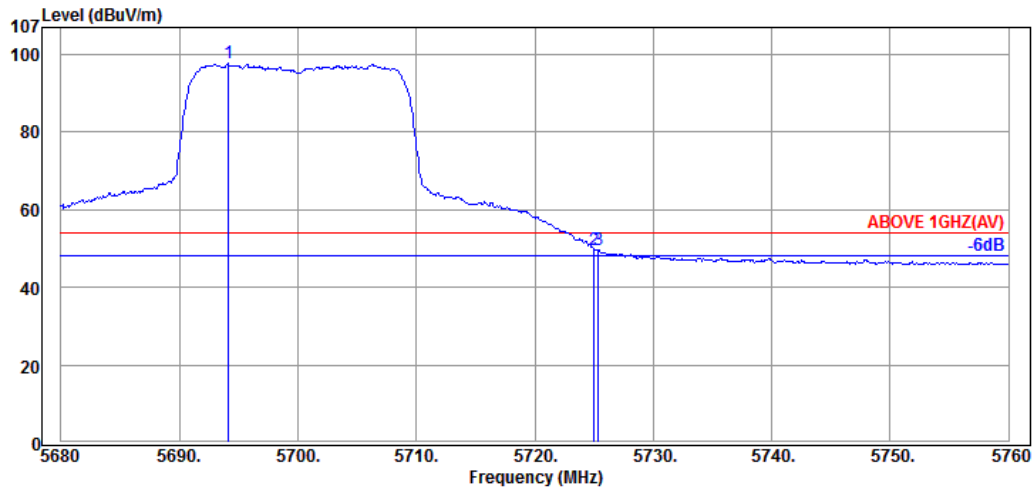
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5469.18	34.77	8.65	4.56	47.98	54.00	6.02	Average
5469.95	34.77	8.65	4.60	48.02	54.00	5.98	Average
5495.03	34.78	8.69	55.69	99.16	---	---	Average

Mode	802.11ac-VHT20	Frequency	TX 5700MHz
------	----------------	-----------	------------



Antenna at Horizontal Polarization

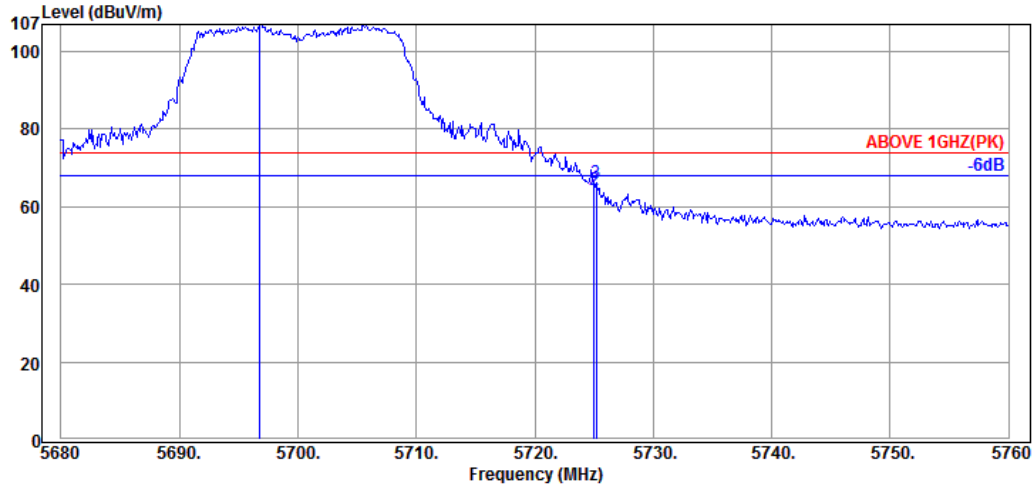
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5696.56	35.03	9.68	61.71	106.42	---	---	Peak
5725.04	35.07	9.78	20.52	65.37	74.00	8.63	Peak
5725.28	35.07	9.78	19.54	64.39	74.00	9.61	Peak



Antenna at Horizontal Polarization

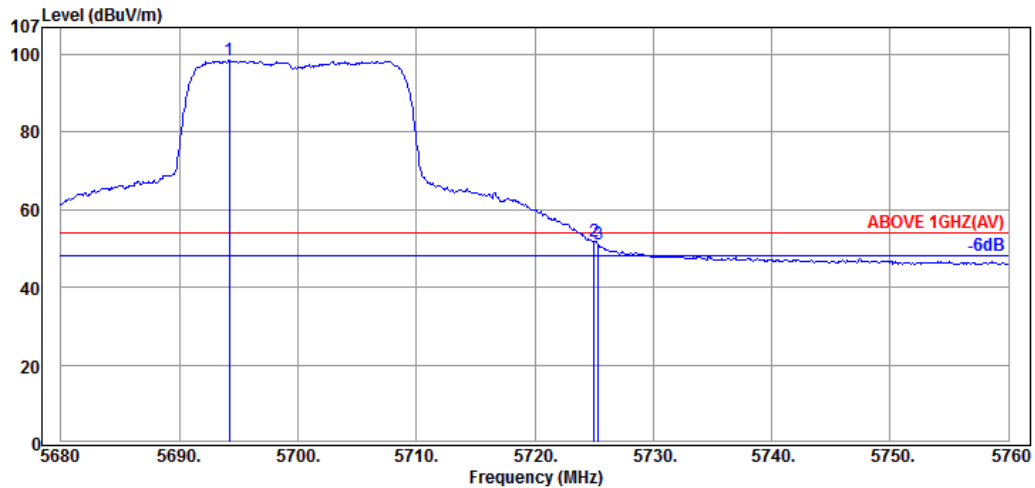
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5694.16	35.03	9.68	52.97	97.68	---	---	Average
5725.04	35.07	9.78	4.91	49.76	54.00	4.24	Average
5725.36	35.07	9.78	4.91	49.76	54.00	4.24	Average

Mode	802.11ac-VHT20	Frequency	TX 5700MHz
------	----------------	-----------	------------



Antenna at Vertical Polarization

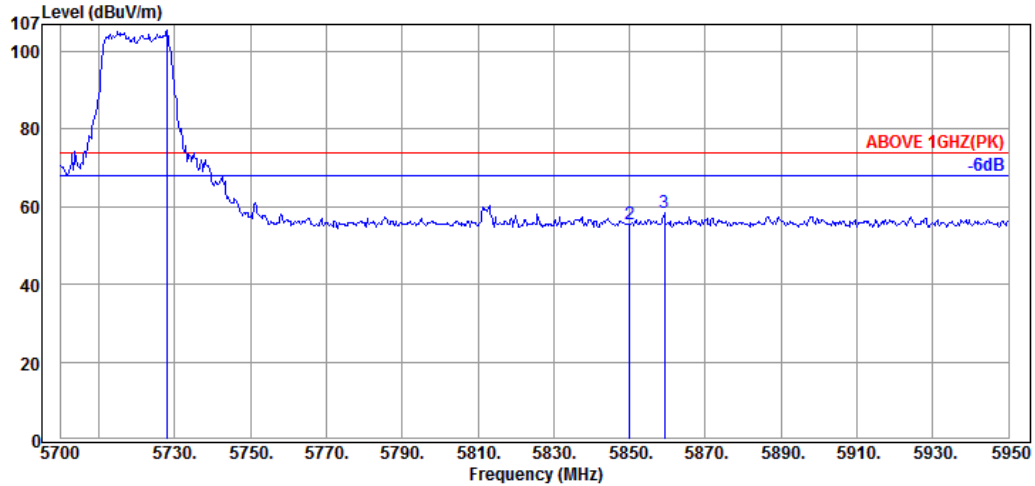
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5696.80	35.03	9.68	62.28	106.99	---	---	Peak
5725.04	35.07	9.78	19.33	64.18	74.00	9.82	Peak
5725.20	35.07	9.78	21.44	66.29	74.00	7.71	Peak



Antenna at Vertical Polarization

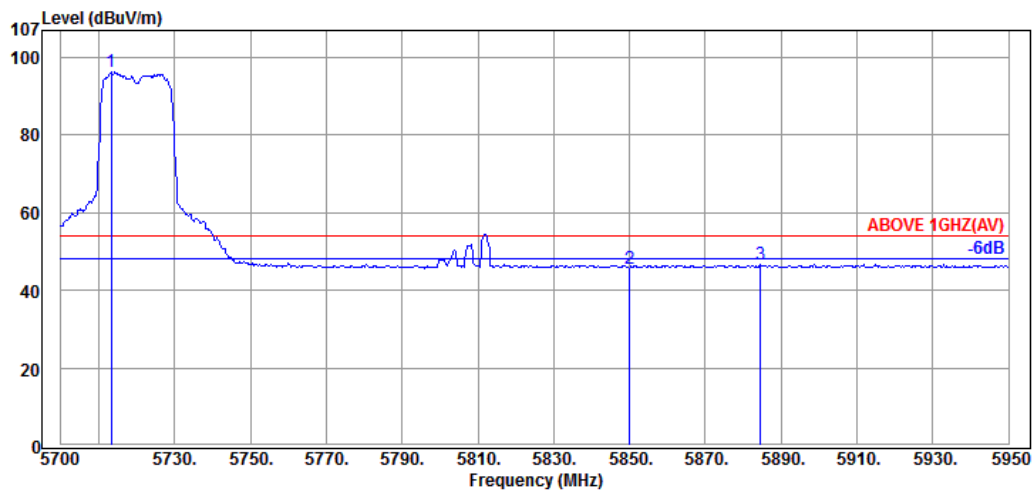
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5694.24	35.03	9.68	53.67	98.38	---	---	Average
5725.04	35.07	9.78	6.88	51.73	54.00	2.27	Average
5725.36	35.07	9.78	6.38	51.23	54.00	2.77	Average

Mode	802.11ac-VHT20	Frequency	TX 5720MHz
------	----------------	-----------	------------



Antenna at Horizontal Polarization

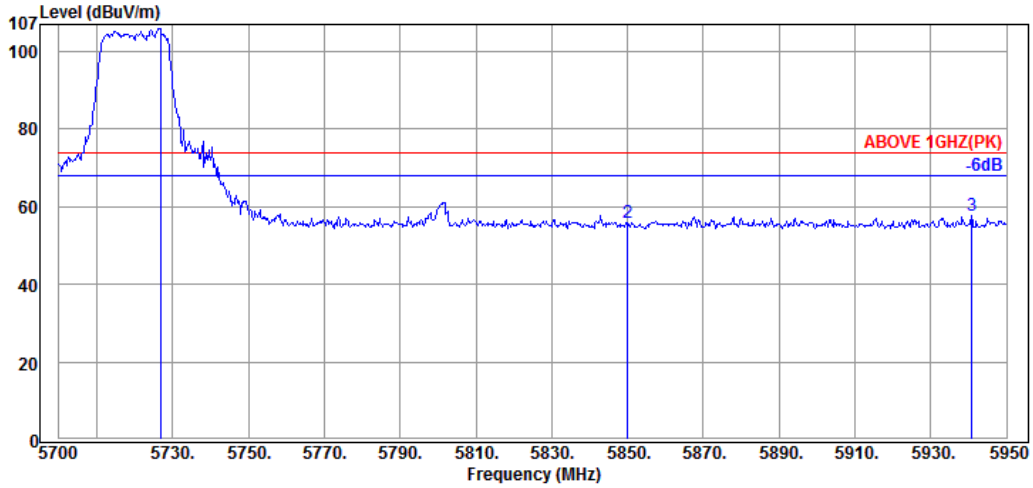
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5728.00	35.07	9.78	60.54	105.39	---	---	Peak
5850.00	35.21	9.86	10.46	55.53	74.00	18.47	Peak
5859.25	35.23	9.82	13.42	58.47	74.00	15.53	Peak



Antenna at Horizontal Polarization

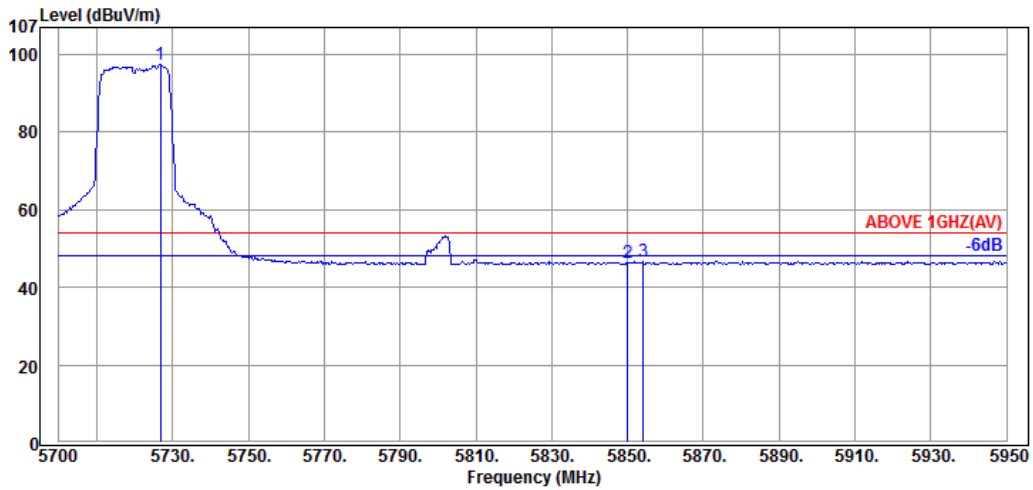
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5713.25	35.05	9.73	51.53	96.31	---	---	Average
5850.00	35.21	9.86	0.71	45.78	54.00	8.22	Average
5884.50	35.26	9.78	1.67	46.71	54.00	7.29	Average

Mode	802.11ac-VHT20	Frequency	TX 5720MHz
------	----------------	-----------	------------



Antenna at Vertical Polarization

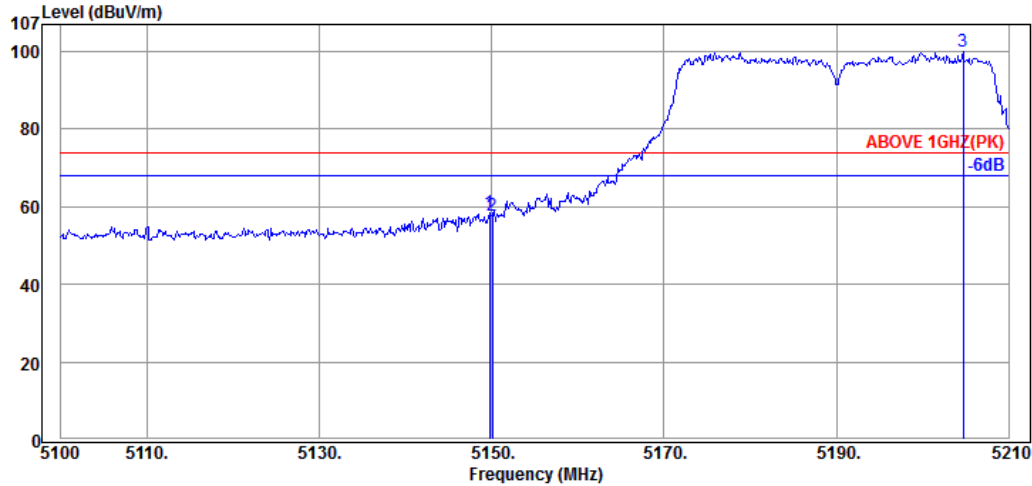
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5726.75	35.07	9.78	61.17	106.02	---	---	Peak
5850.00	35.21	9.86	10.85	55.92	74.00	18.08	Peak
5940.75	35.34	9.56	12.76	57.66	74.00	16.34	Peak



Antenna at Vertical Polarization

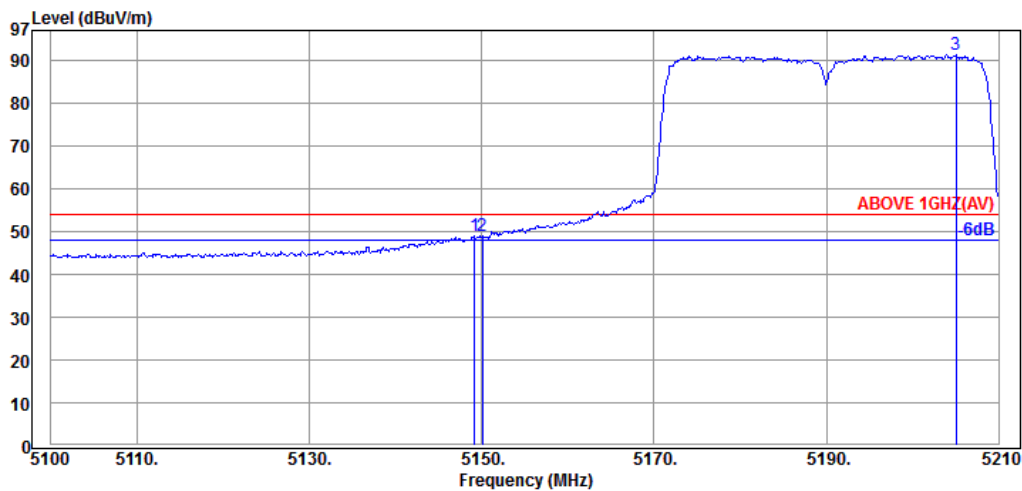
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5726.75	35.07	9.78	52.71	97.56	---	---	Average
5850.00	35.21	9.86	1.32	46.39	54.00	7.61	Average
5854.25	35.23	9.82	1.73	46.78	54.00	7.22	Average

Mode	802.11ac-VHT40	Frequency	TX 5190MHz
------	----------------	-----------	------------



Antenna at Horizontal Polarization

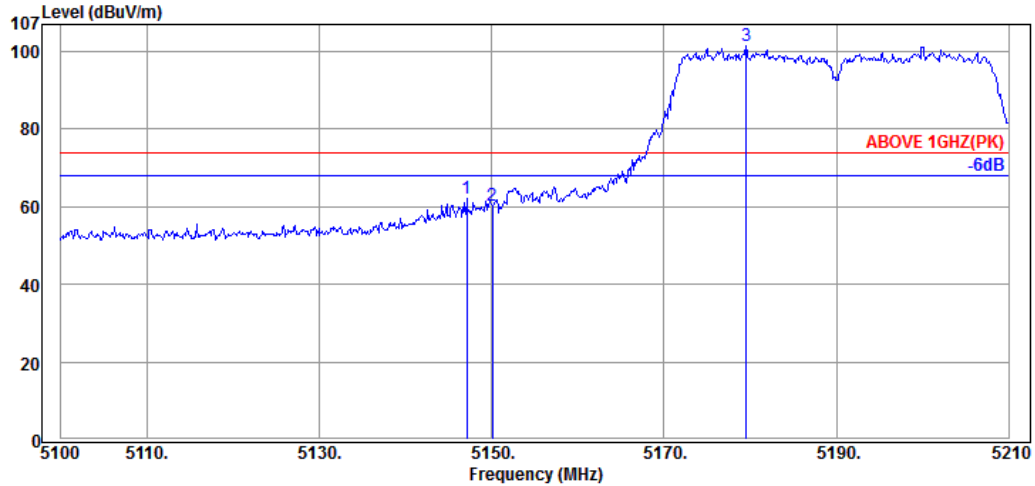
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5149.72	34.45	8.84	15.35	58.64	74.00	15.36	Peak
5150.05	34.45	8.84	14.38	57.67	74.00	16.33	Peak
5204.72	34.50	8.74	56.61	99.85	---	---	Peak



Antenna at Horizontal Polarization

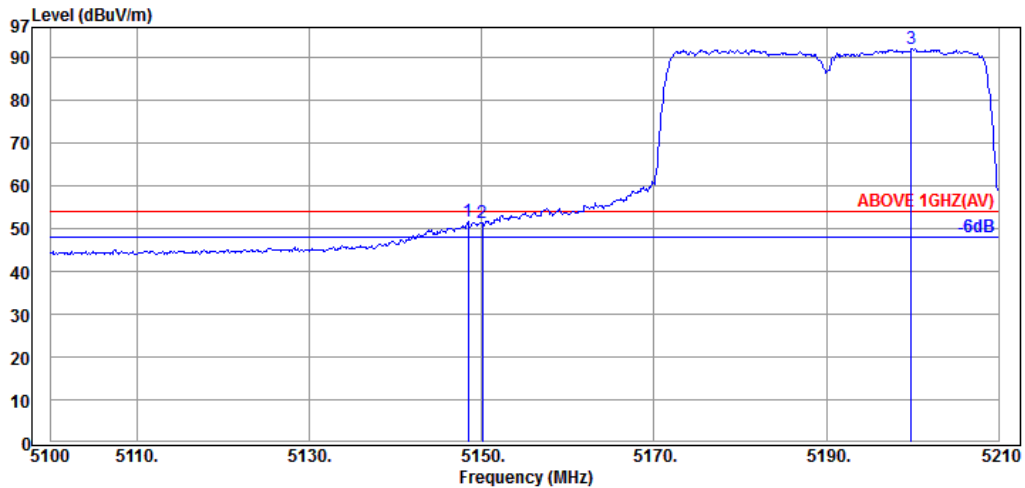
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5149.17	34.45	8.84	5.55	48.84	54.00	5.16	Average
5150.05	34.45	8.84	5.66	48.95	54.00	5.05	Average
5205.05	34.50	8.74	48.06	91.30	---	---	Average

Mode	802.11ac-VHT40	Frequency	TX 5190MHz
------	----------------	-----------	------------



Antenna at Vertical Polarization

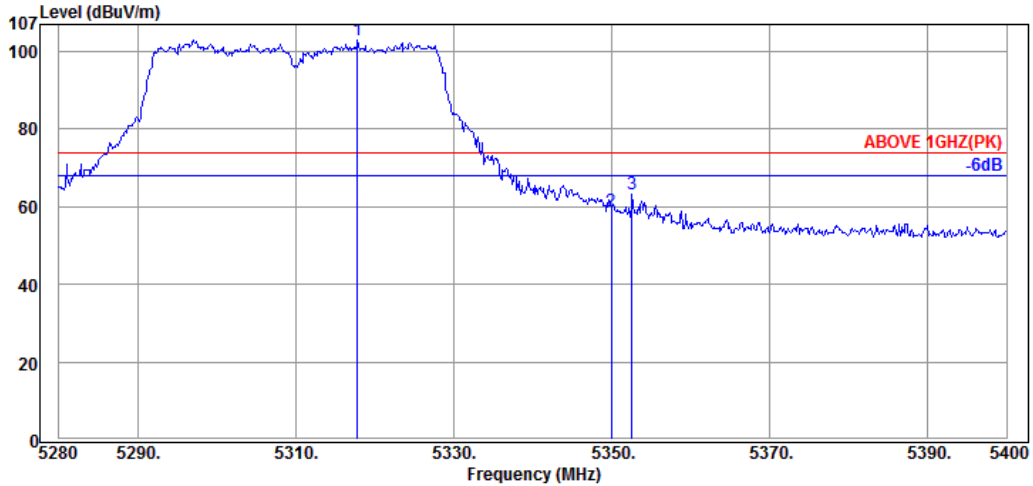
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5147.08	34.45	8.84	18.86	62.15	74.00	11.85	Peak
5150.05	34.45	8.84	16.86	60.15	74.00	13.85	Peak
5179.53	34.48	8.77	58.36	101.61	---	---	Peak



Antenna at Vertical Polarization

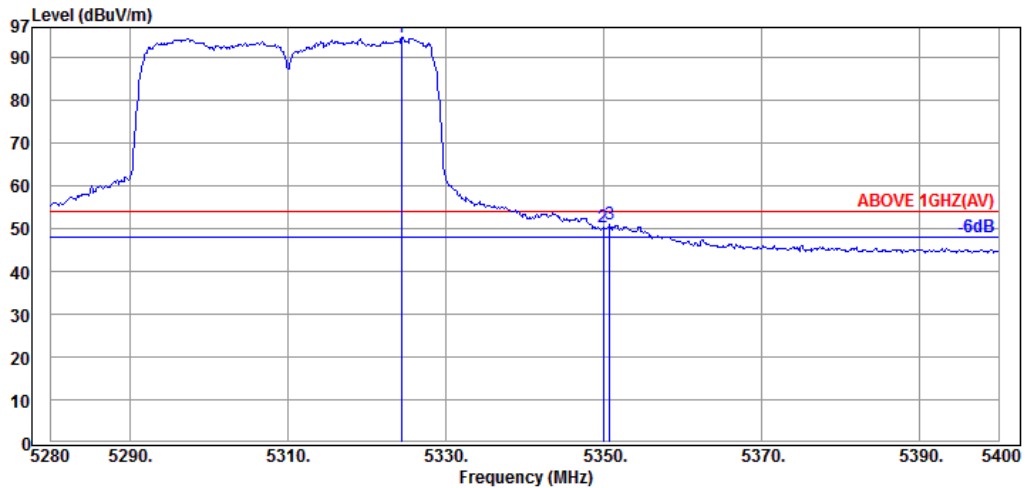
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5148.40	34.45	8.84	8.22	51.51	54.00	2.49	Average
5150.05	34.45	8.84	8.20	51.49	54.00	2.51	Average
5199.88	34.50	8.74	48.69	91.93	---	---	Average

Mode	802.11ac-VHT40	Frequency	TX 5310MHz
------	----------------	-----------	------------



Antenna at Horizontal Polarization

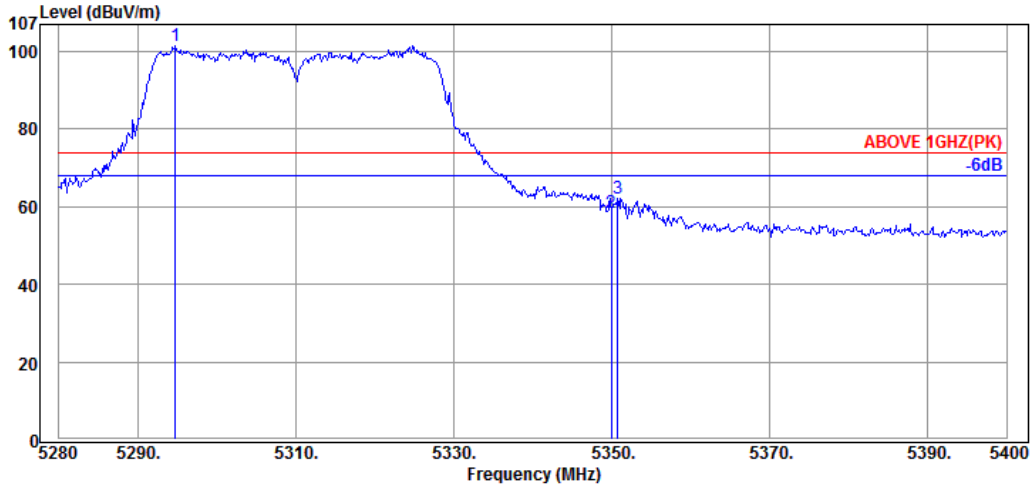
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5317.80	34.62	8.70	59.61	102.93	---	---	Peak
5349.96	34.65	8.61	15.53	58.79	74.00	15.21	Peak
5352.60	34.65	8.61	20.02	63.28	74.00	10.72	Peak



Antenna at Horizontal Polarization

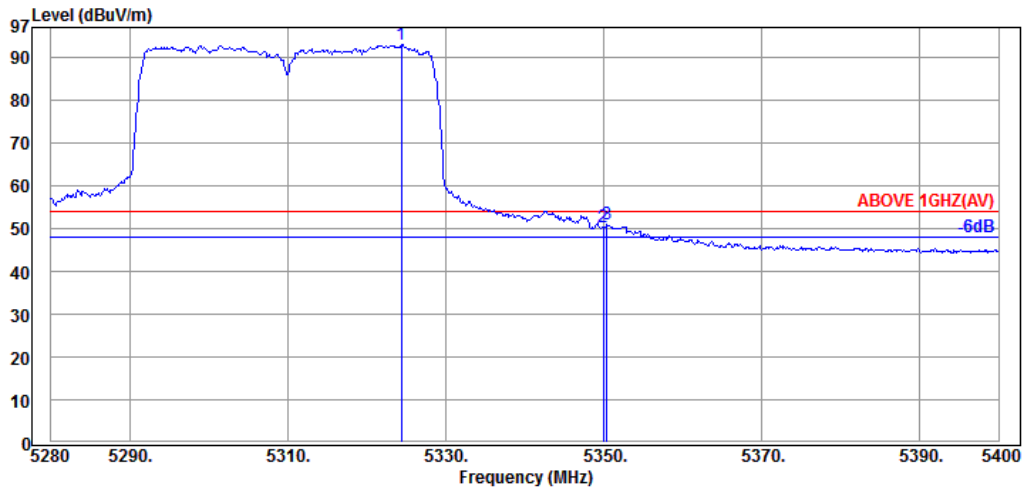
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5324.40	34.62	8.70	51.50	94.82	---	---	Average
5349.96	34.65	8.61	7.14	50.40	54.00	3.60	Average
5350.80	34.65	8.61	7.62	50.88	54.00	3.12	Average

Mode	802.11ac-VHT40	Frequency	TX 5310MHz
------	----------------	-----------	------------



Antenna at Vertical Polarization

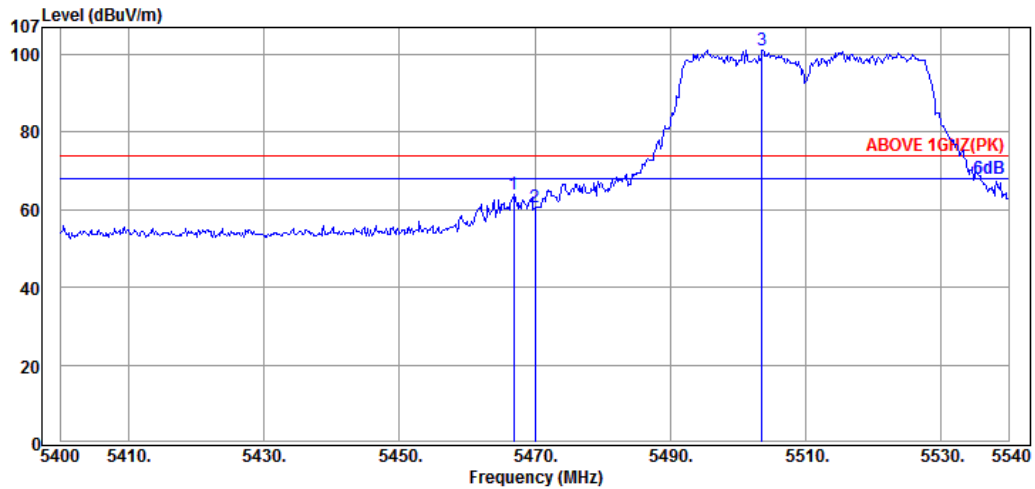
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5294.76	34.60	8.74	58.31	101.65	---	---	Peak
5349.96	34.65	8.61	15.36	58.62	74.00	15.38	Peak
5350.80	34.65	8.61	19.06	62.32	74.00	11.68	Peak



Antenna at Vertical Polarization

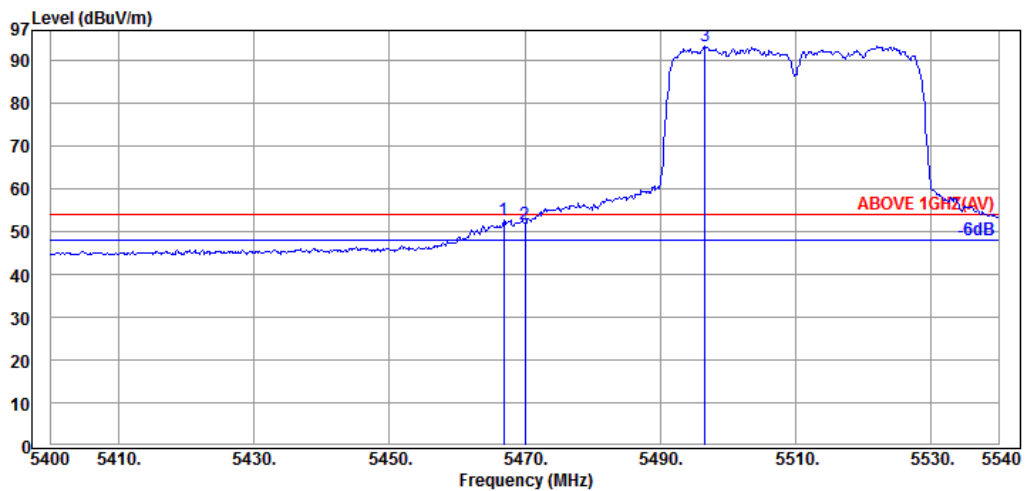
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5324.40	34.62	8.70	49.74	93.06	---	---	Average
5349.96	34.65	8.61	7.14	50.40	54.00	3.60	Average
5350.44	34.65	8.61	7.80	51.06	54.00	2.94	Average

Mode	802.11ac-VHT40	Frequency	TX 5510MHz
------	----------------	-----------	------------



Antenna at Horizontal Polarization

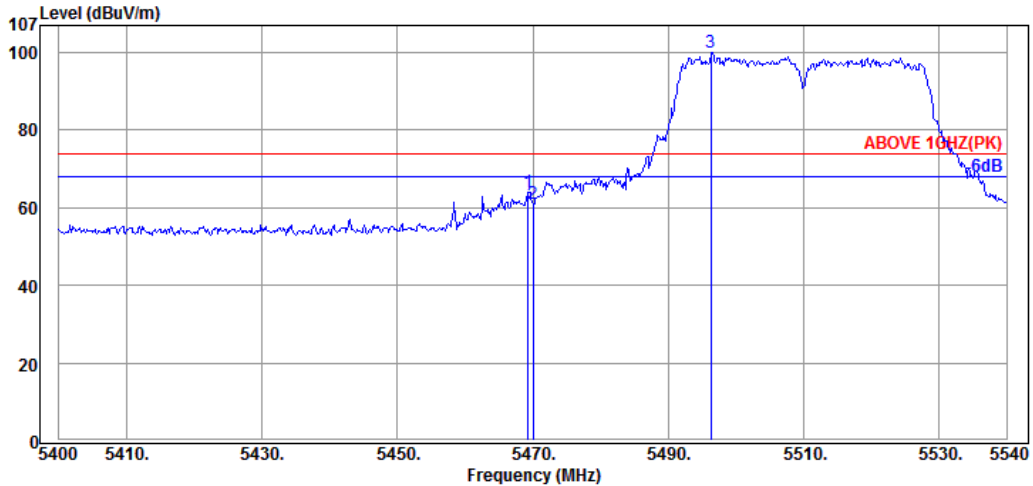
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5466.92	34.77	8.65	20.49	63.91	74.00	10.09	Peak
5470.00	34.77	8.65	17.07	60.49	74.00	13.51	Peak
5503.60	34.80	8.73	57.56	101.09	---	---	Peak



Antenna at Horizontal Polarization

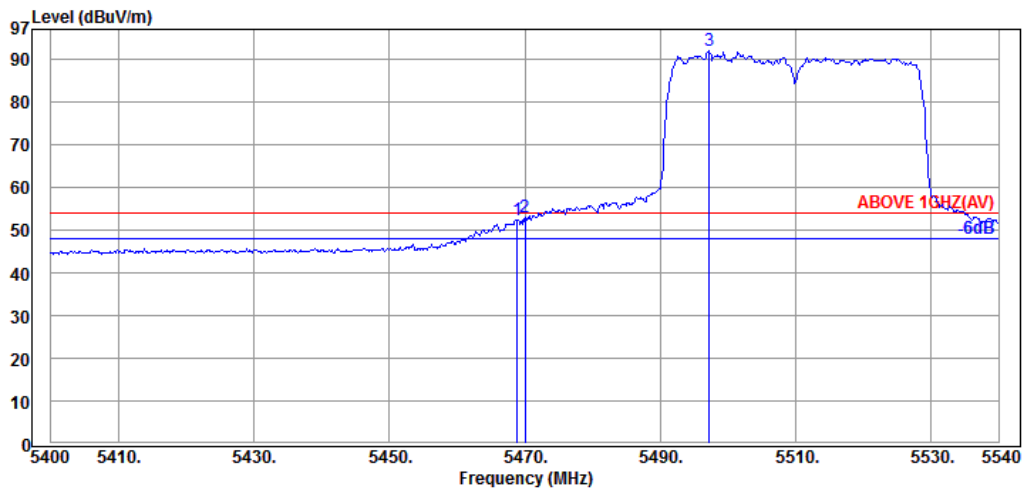
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5466.92	34.77	8.65	9.41	52.83	54.00	1.17	Average
5470.00	34.77	8.65	8.23	51.65	54.00	2.35	Average
5496.60	34.80	8.73	49.83	93.36	---	---	Average

Mode	802.11ac-VHT40	Frequency	TX 5510MHz
------	----------------	-----------	------------



Antenna at Vertical Polarization

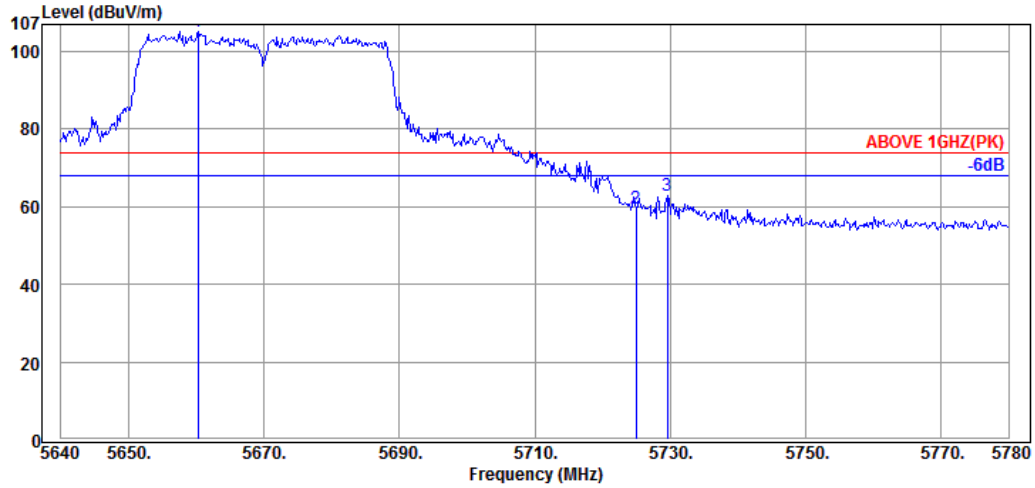
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5469.30	34.77	8.65	20.61	64.03	74.00	9.97	Peak
5470.00	34.77	8.65	17.76	61.18	74.00	12.82	Peak
5496.32	34.78	8.69	56.66	100.13	---	---	Peak



Antenna at Vertical Polarization

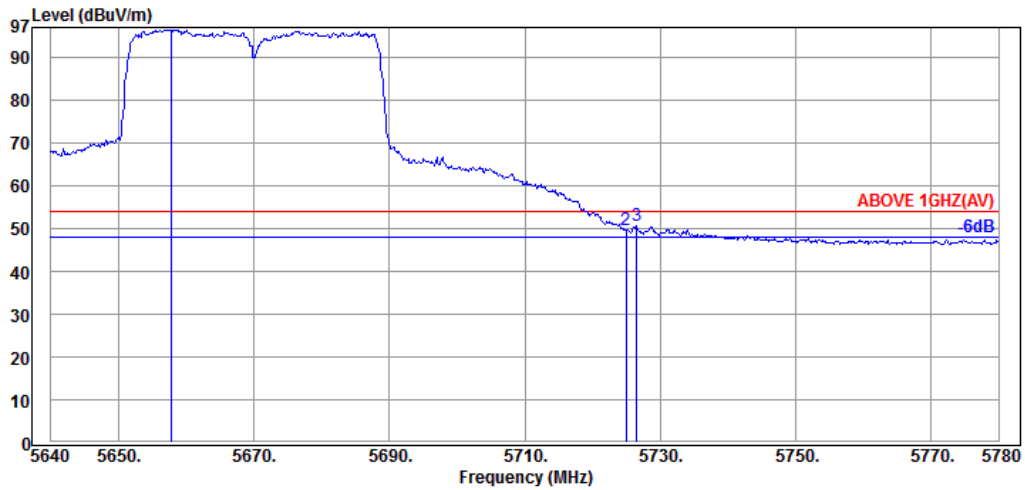
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5468.88	34.77	8.65	8.92	52.34	54.00	1.66	Average
5470.00	34.77	8.65	9.62	53.04	54.00	0.96	Average
5497.30	34.80	8.73	48.42	91.95	---	---	Average

Mode	802.11ac-VHT40	Frequency	TX 5670MHz
------	----------------	-----------	------------



Antenna at Horizontal Polarization

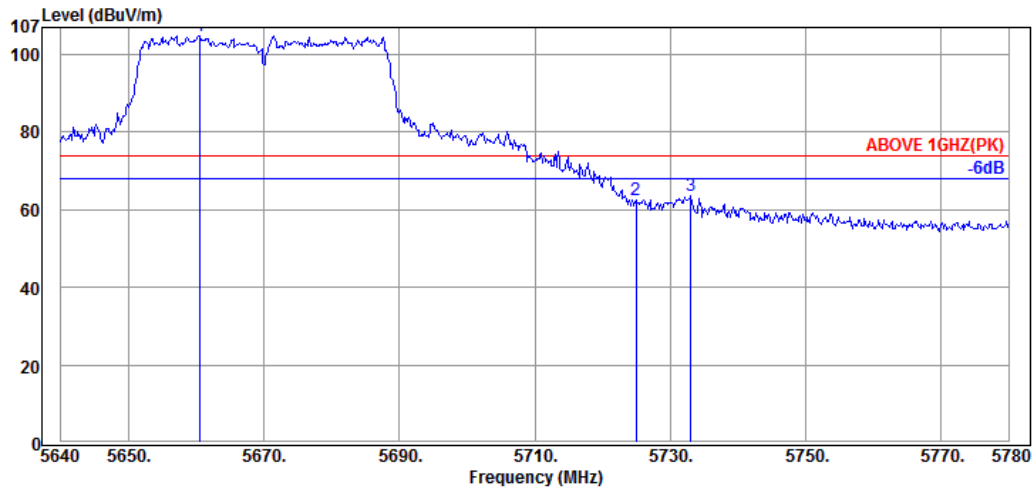
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5660.30	34.99	9.47	60.56	105.02	---	---	Peak
5724.98	35.07	9.78	14.68	59.53	74.00	14.47	Peak
5729.60	35.07	9.78	17.90	62.75	74.00	11.25	Peak



Antenna at Horizontal Polarization

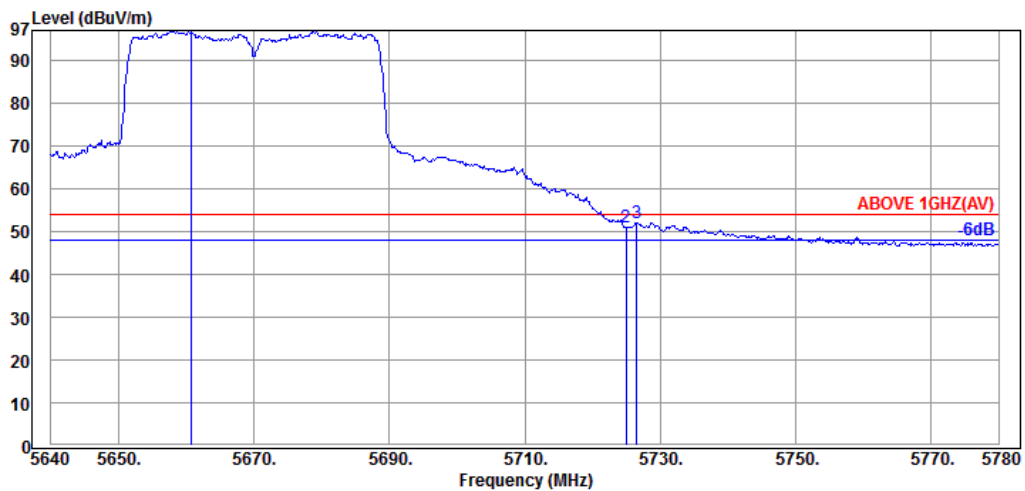
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5657.78	34.99	9.47	52.03	96.49	---	---	Average
5724.98	35.07	9.78	4.72	49.57	54.00	4.43	Average
5726.52	35.07	9.78	5.73	50.58	54.00	3.42	Average

Mode	802.11ac-VHT40	Frequency	TX 5670MHz
------	----------------	-----------	------------



Antenna at Horizontal Polarization

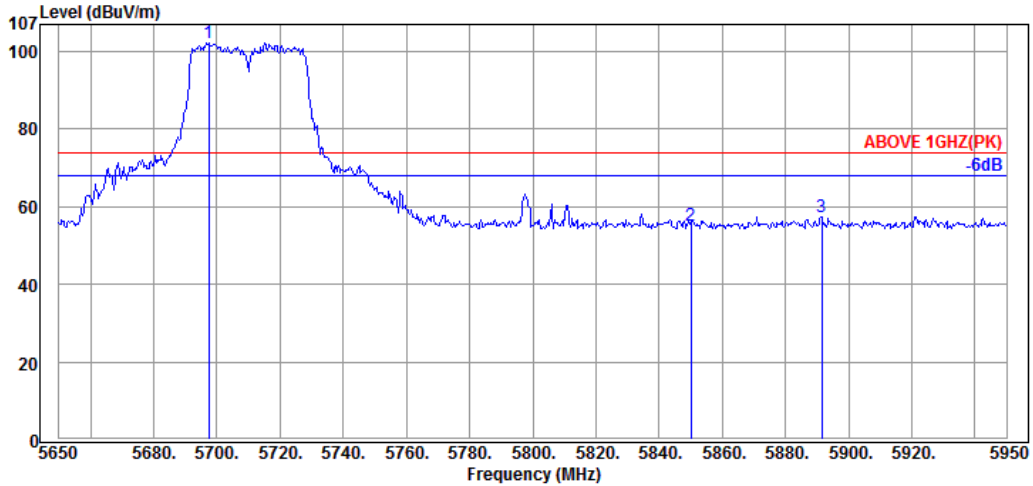
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5660.58	34.99	9.47	60.41	104.87	---	---	Peak
5724.98	35.07	9.78	17.84	62.69	74.00	11.31	Peak
5733.10	35.07	9.78	18.72	63.57	74.00	10.43	Peak



Antenna at Horizontal Polarization

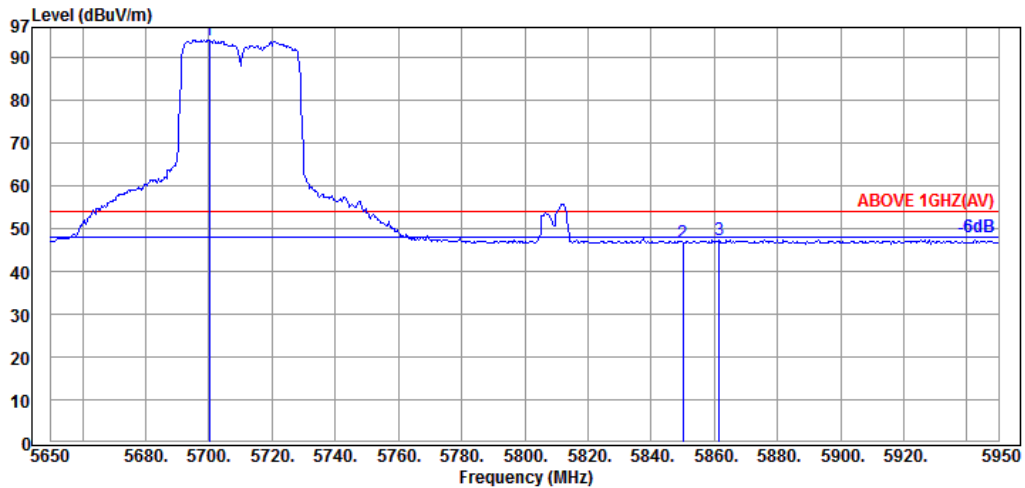
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5660.72	34.99	9.47	52.27	96.73	---	---	Average
5724.98	35.07	9.78	6.04	50.89	54.00	3.11	Average
5726.52	35.07	9.78	7.22	52.07	54.00	1.93	Average

Mode	802.11ac-VHT40	Frequency	TX 5710MHz
------	----------------	-----------	------------



Antenna at Horizontal Polarization

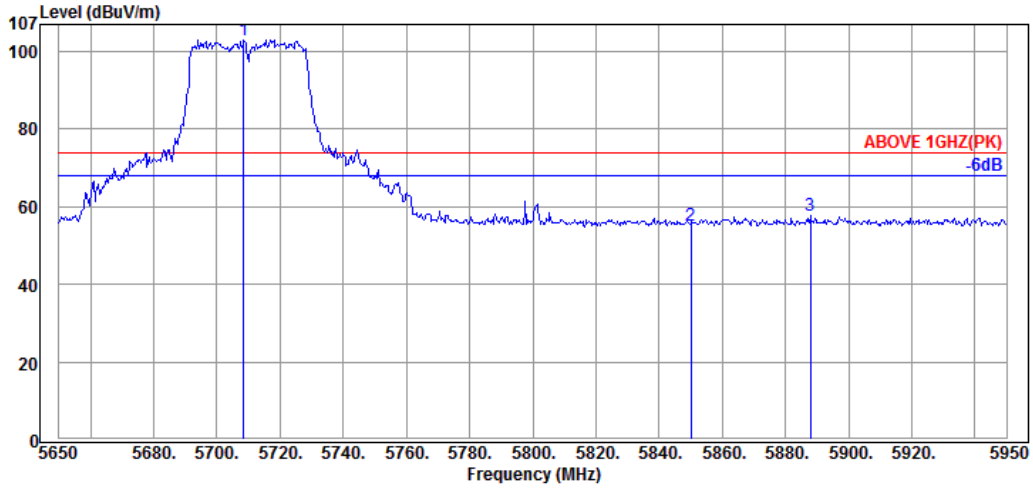
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5697.40	35.03	9.68	57.49	102.20	---	---	Peak
5850.10	35.21	9.86	9.96	55.03	74.00	18.97	Peak
5891.50	35.28	9.74	12.35	57.37	74.00	16.63	Peak



Antenna at Horizontal Polarization

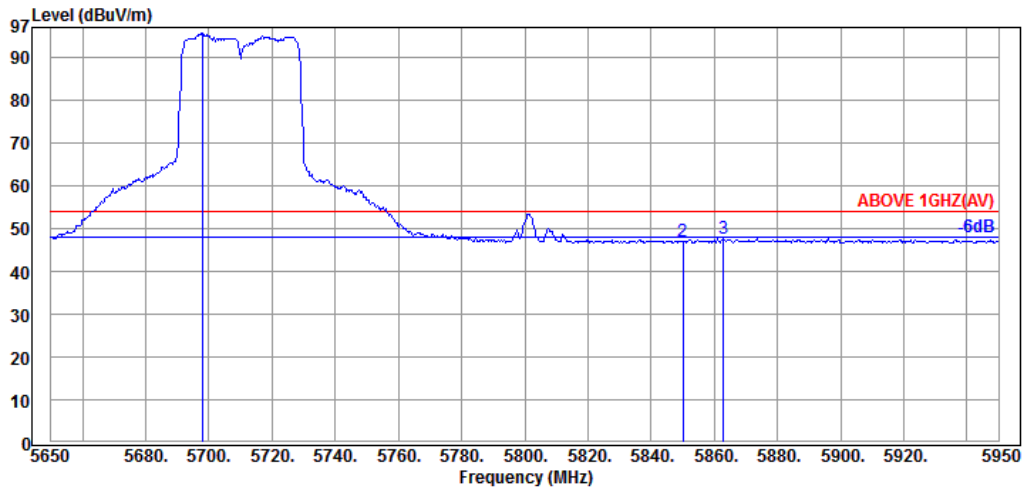
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5700.10	35.03	9.68	49.44	94.15	---	---	Average
5850.10	35.21	9.86	1.57	46.64	54.00	7.36	Average
5861.50	35.23	9.82	2.35	47.40	54.00	6.60	Average

Mode	802.11ac-VHT40	Frequency	TX 5710MHz
------	----------------	-----------	------------



Antenna at Vertical Polarization

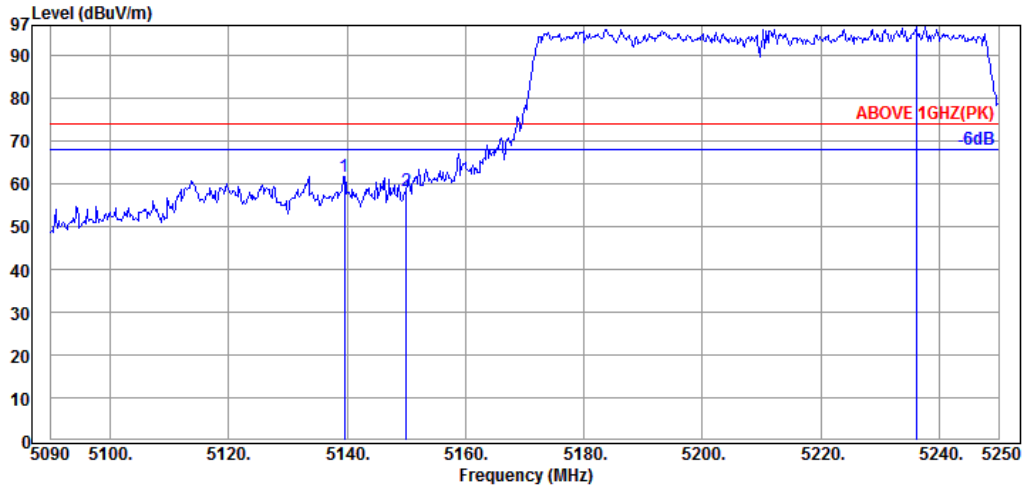
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5708.50	35.05	9.73	58.34	103.12	---	---	Peak
5850.10	35.21	9.86	10.23	55.30	74.00	18.70	Peak
5887.90	35.28	9.74	12.64	57.66	74.00	16.34	Peak



Antenna at Vertical Polarization

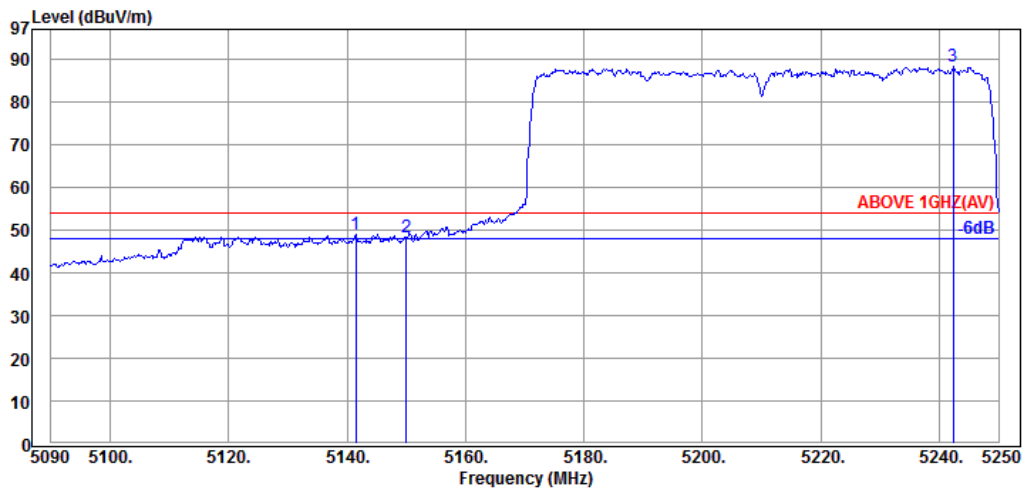
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5698.00	35.03	9.68	51.03	95.74	---	---	Average
5850.10	35.21	9.86	1.78	46.85	54.00	7.15	Average
5863.00	35.23	9.82	2.77	47.82	54.00	6.18	Average

Mode	802.11ac-VHT80	Frequency	TX 5210MHz
------	----------------	-----------	------------



Antenna at Horizontal Polarization

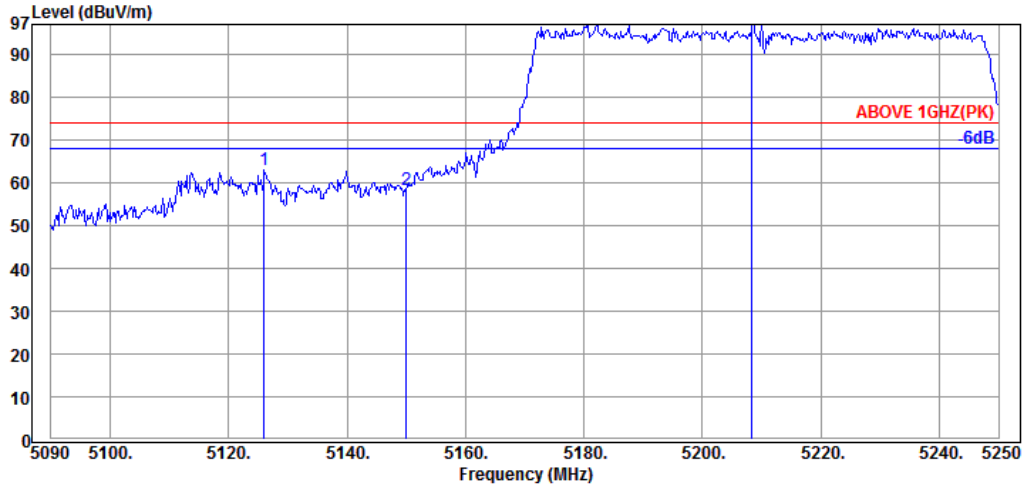
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5139.60	34.45	8.84	18.51	61.80	74.00	12.20	Peak
5150.00	34.45	8.84	15.01	58.30	74.00	15.70	Peak
5236.08	34.53	8.74	53.55	96.82	---	---	Peak



Antenna at Horizontal Polarization

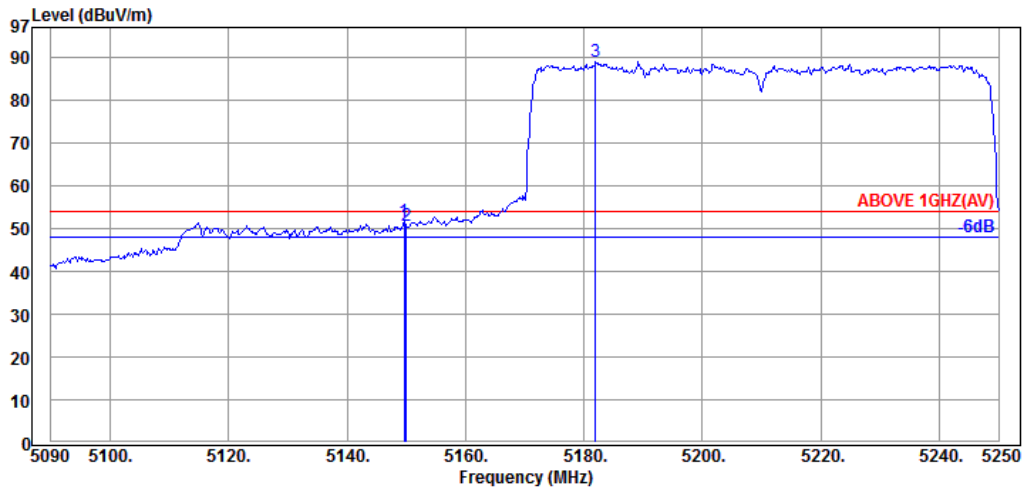
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5141.52	34.45	8.84	5.55	48.84	54.00	5.16	Average
5150.00	34.45	8.84	4.93	48.22	54.00	5.78	Average
5242.32	34.55	8.74	44.93	88.22	---	---	Average

Mode	802.11ac-VHT80	Frequency	TX 5210MHz
------	----------------	-----------	------------



Antenna at Vertical Polarization

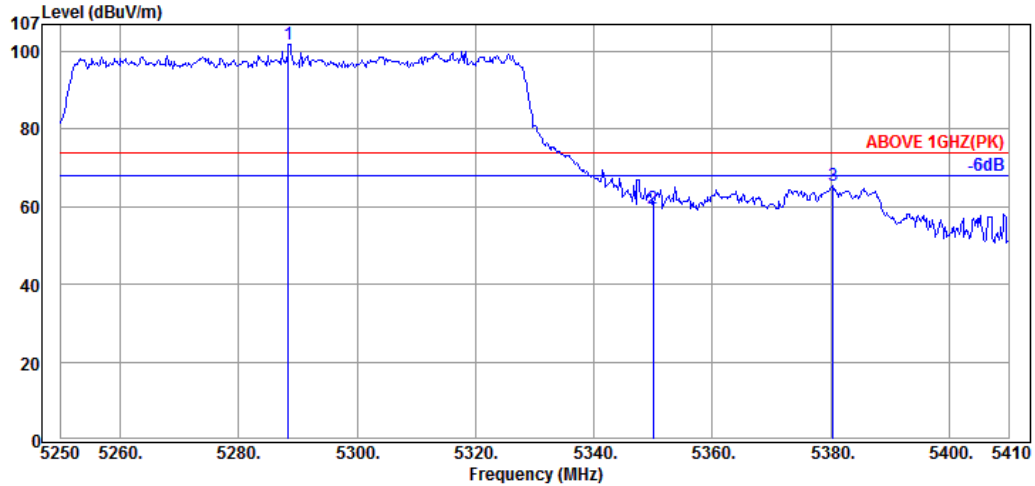
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5126.00	34.43	8.88	19.54	62.85	74.00	11.15	Peak
5150.00	34.45	8.84	14.98	58.27	74.00	15.73	Peak
5208.40	34.52	8.74	53.64	96.90	---	---	Peak



Antenna at Vertical Polarization

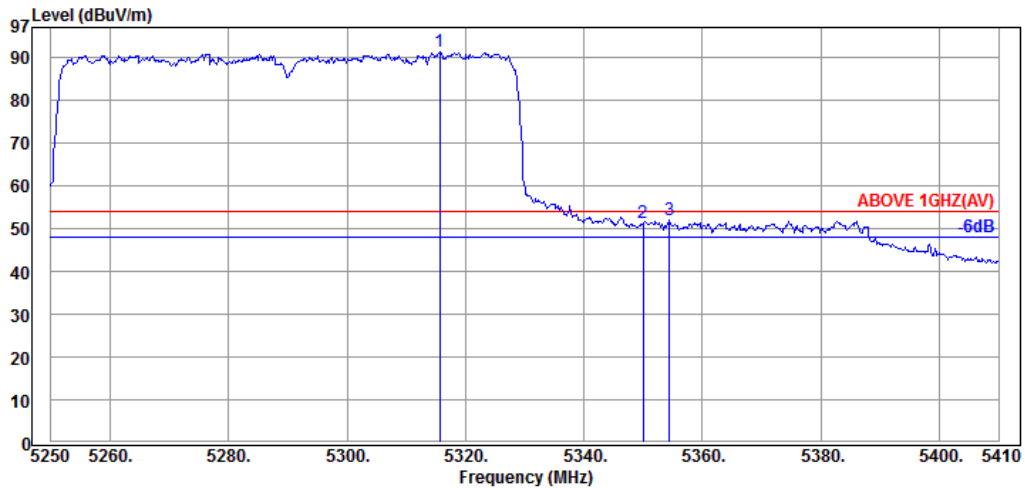
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5149.68	34.45	8.84	8.35	51.64	54.00	2.36	Average
5150.00	34.45	8.84	7.28	50.57	54.00	3.43	Average
5182.00	34.48	8.77	45.59	88.84	---	---	Average

Mode	802.11ac-VHT80	Frequency	TX 5290MHz
------	----------------	-----------	------------



Antenna at Horizontal Polarization

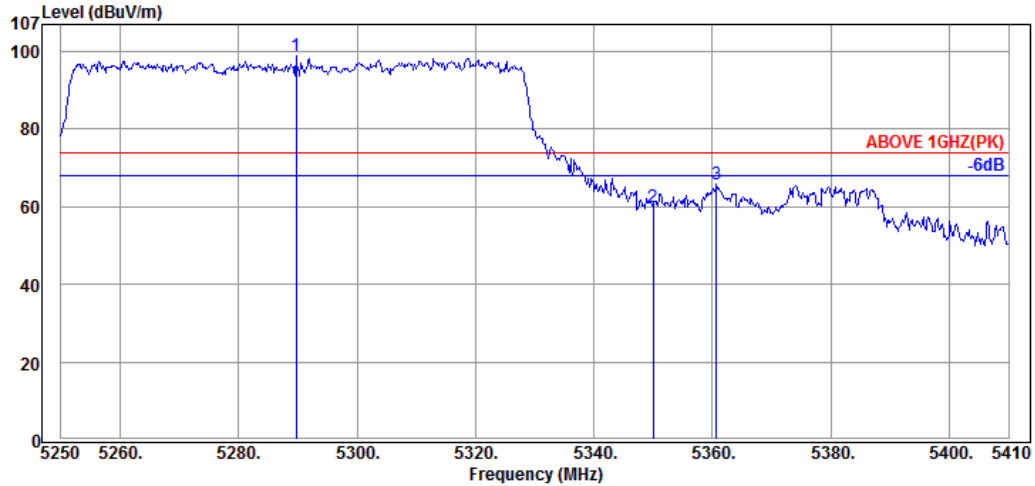
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5288.40	34.58	8.74	58.52	101.84	---	---	Peak
5350.00	34.65	8.61	16.36	59.62	74.00	14.38	Peak
5380.40	34.68	8.53	22.38	65.59	74.00	8.41	Peak



Antenna at Horizontal Polarization

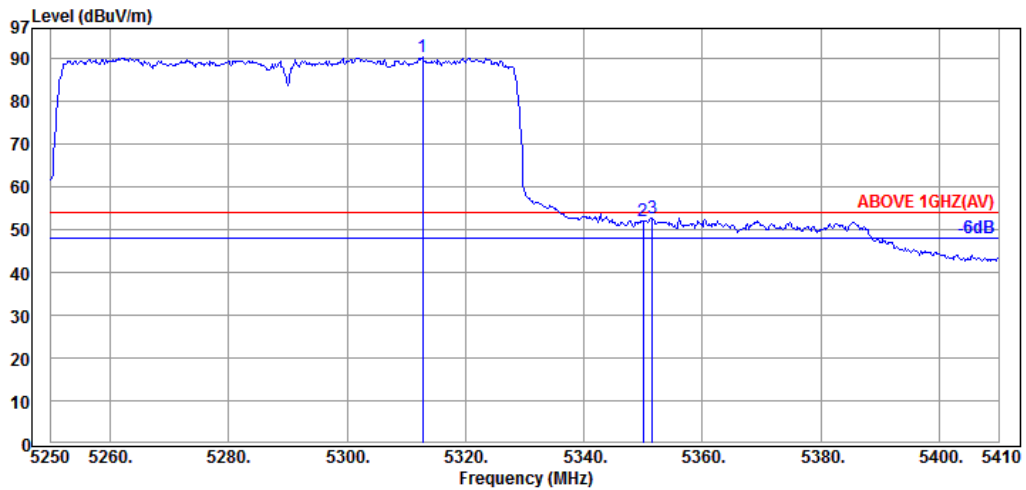
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5315.60	34.62	8.70	48.04	91.36	---	---	Average
5350.00	34.65	8.61	8.02	51.28	54.00	2.72	Average
5354.48	34.65	8.61	8.71	51.97	54.00	2.03	Average

Mode	802.11ac-VHT80	Frequency	TX 5290MHz
------	----------------	-----------	------------



Antenna at Vertical Polarization

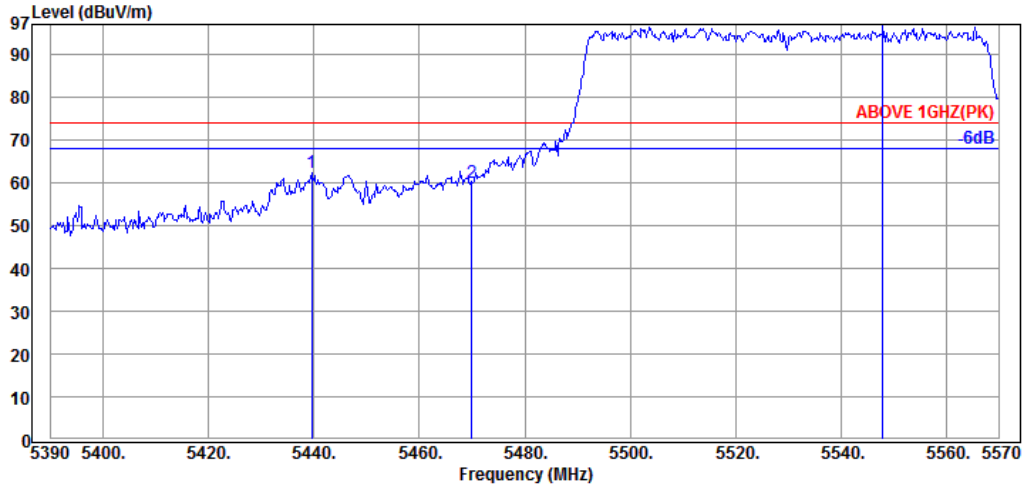
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5289.68	34.58	8.74	55.44	98.76	---	---	Peak
5350.00	34.65	8.61	16.61	59.87	74.00	14.13	Peak
5360.72	34.67	8.57	22.49	65.73	74.00	8.27	Peak



Antenna at Vertical Polarization

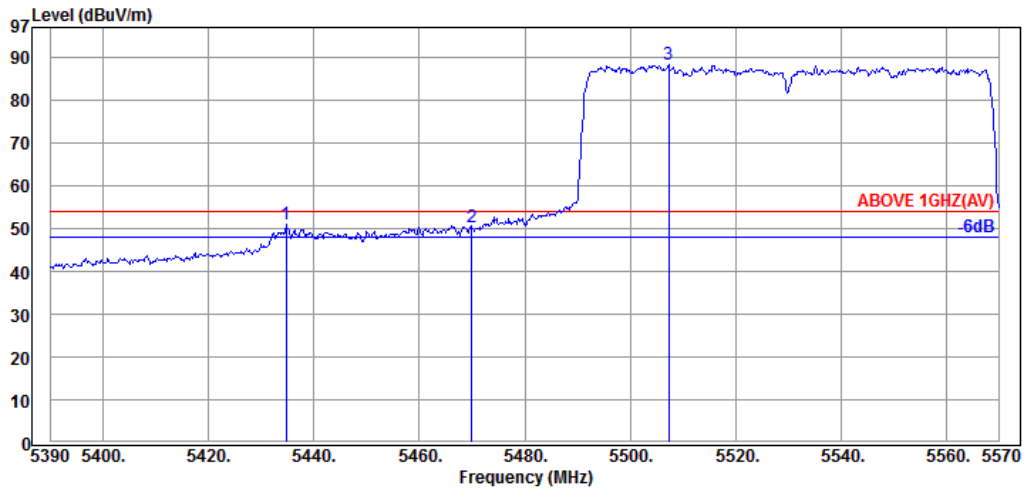
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5312.72	34.62	8.70	46.88	90.20	---	---	Average
5350.00	34.65	8.61	8.87	52.13	54.00	1.87	Average
5351.60	34.65	8.61	9.46	52.72	54.00	1.28	Average

Mode	802.11ac-VHT80	Frequency	TX 5530MHz
------	----------------	-----------	------------



Antenna at Horizontal Polarization

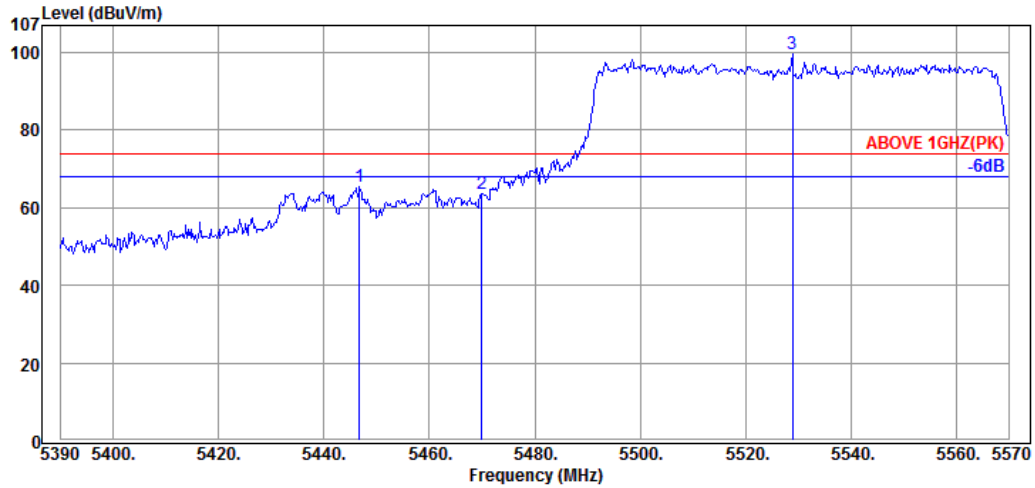
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5439.50	34.73	8.57	19.03	62.33	74.00	11.67	Peak
5469.92	34.77	8.65	16.72	60.14	74.00	13.86	Peak
5548.04	34.86	8.94	52.79	96.59	---	---	Peak



Antenna at Horizontal Polarization

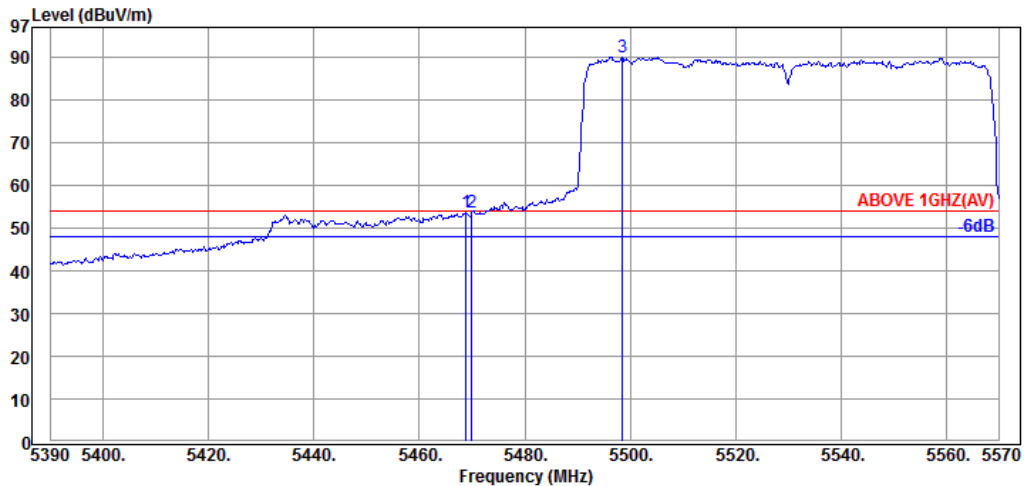
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5434.64	34.73	8.57	7.73	51.03	54.00	2.97	Average
5469.92	34.77	8.65	6.82	50.24	54.00	3.76	Average
5507.36	34.80	8.73	44.71	88.24	---	---	Average

Mode	802.11ac-VHT80	Frequency	TX 5530MHz
------	----------------	-----------	------------



Antenna at Vertical Polarization

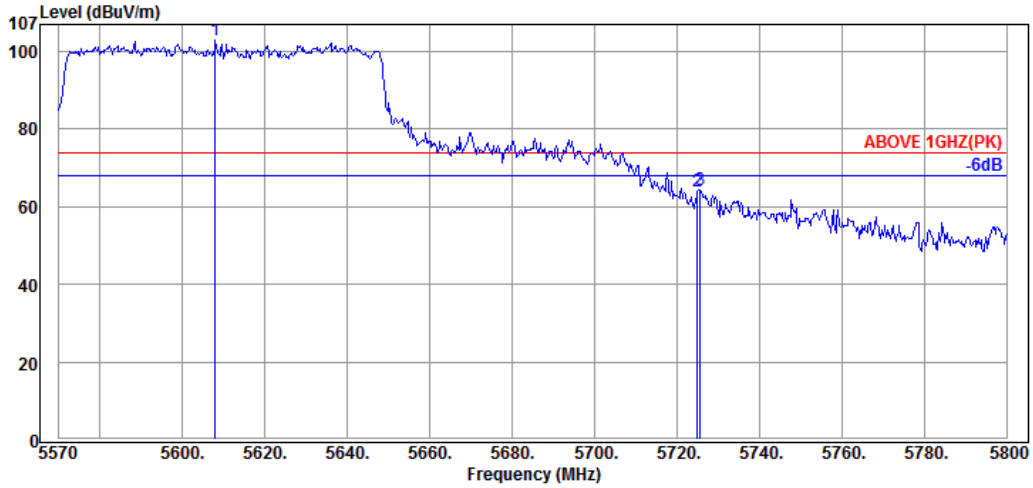
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5446.70	34.75	8.61	21.92	65.28	74.00	8.72	Peak
5469.92	34.77	8.65	20.05	63.47	74.00	10.53	Peak
5528.96	34.82	8.80	55.96	99.58	---	---	Peak



Antenna at Vertical Polarization

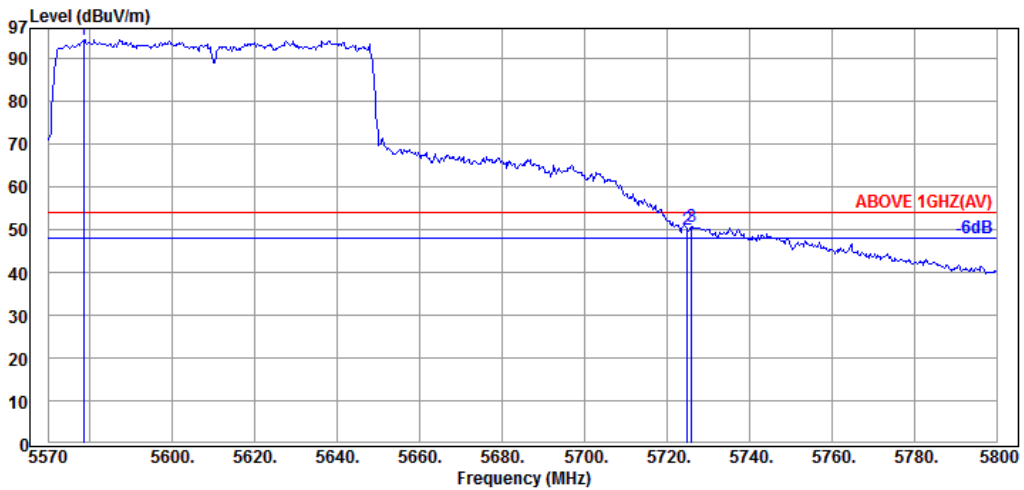
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5468.84	34.77	8.65	10.37	53.79	54.00	0.21	Average
5469.92	34.77	8.65	10.14	53.56	54.00	0.44	Average
5498.54	34.80	8.73	46.62	90.15	---	---	Average

Mode	802.11ac-VHT80	Frequency	TX 5610MHz
------	----------------	-----------	------------



Antenna at Horizontal Polarization

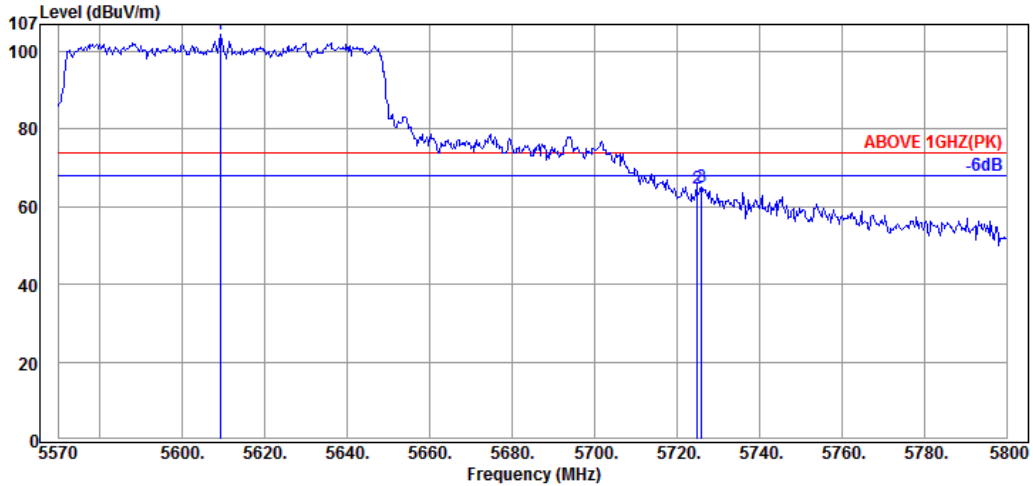
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5607.95	34.92	9.15	58.76	102.83	---	---	Peak
5725.02	35.07	9.78	19.18	64.03	74.00	9.97	Peak
5725.71	35.07	9.78	19.60	64.45	74.00	9.55	Peak



Antenna at Horizontal Polarization

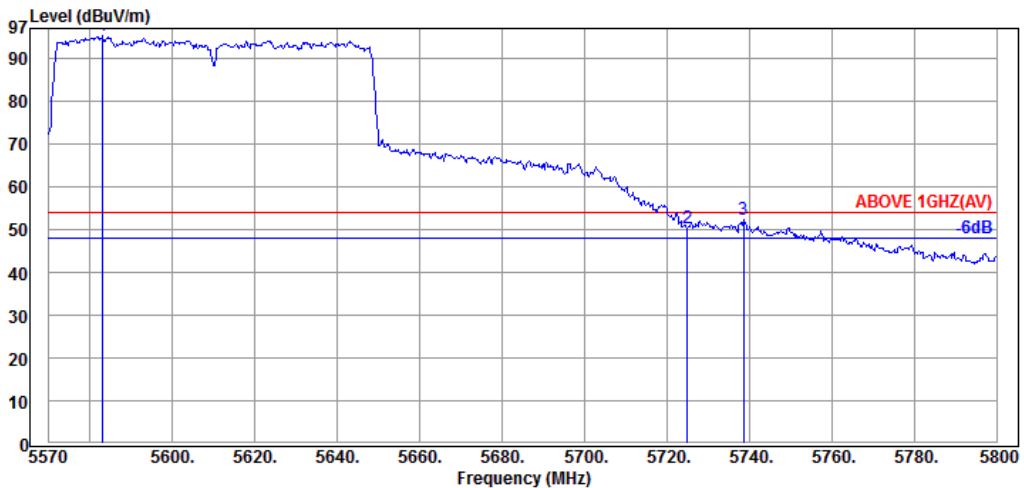
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5578.51	34.88	9.01	50.53	94.42	---	---	Average
5725.02	35.07	9.78	5.14	49.99	54.00	4.01	Average
5725.94	35.07	9.78	5.79	50.64	54.00	3.36	Average

Mode	802.11ac-VHT80	Frequency	TX 5610MHz
------	----------------	-----------	------------



Antenna at Vertical Polarization

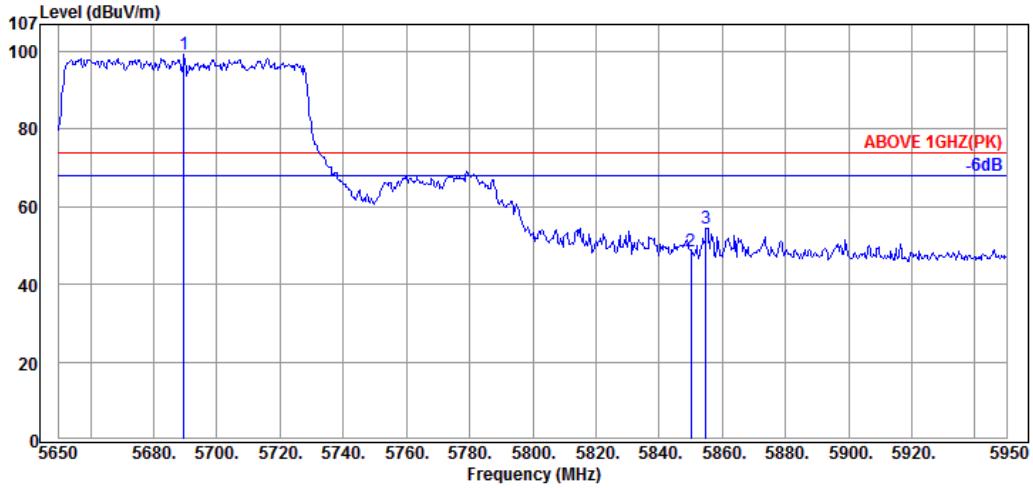
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5609.10	34.92	9.15	60.29	104.36	---	---	Peak
5725.02	35.07	9.78	19.84	64.69	74.00	9.31	Peak
5725.94	35.07	9.78	20.28	65.13	74.00	8.87	Peak



Antenna at Vertical Polarization

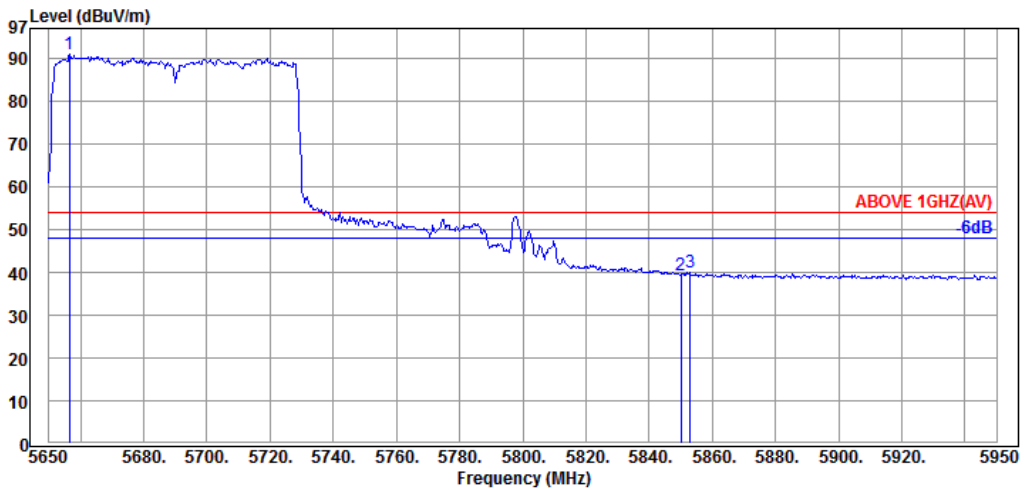
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5583.11	34.90	9.08	51.36	95.34	---	---	Average
5725.02	35.07	9.78	5.61	50.46	54.00	3.54	Average
5738.59	35.09	9.83	7.38	52.30	54.00	1.70	Average

Mode	802.11ac-VHT80	Frequency	TX 5690MHz
------	----------------	-----------	------------



Antenna at Horizontal Polarization

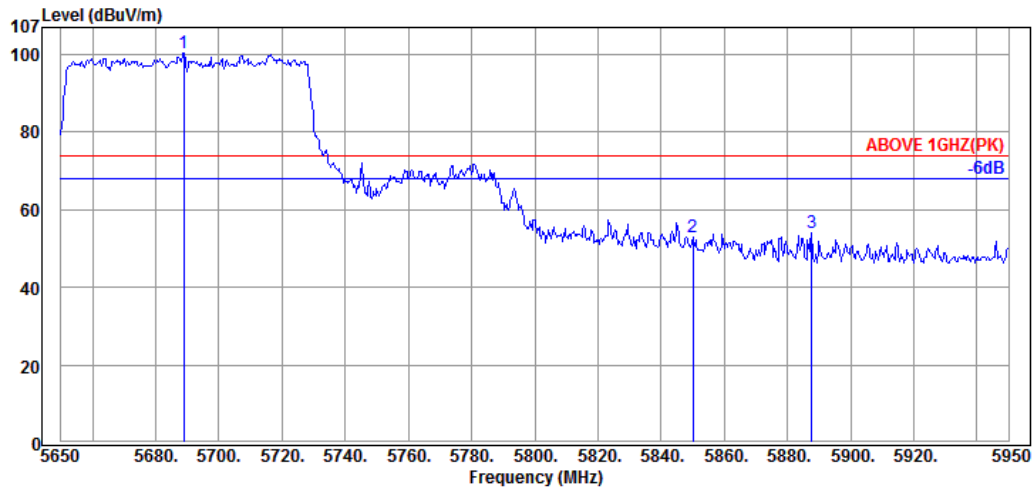
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5689.60	35.03	9.68	54.43	99.14	---	---	Peak
5850.10	35.21	9.86	3.48	48.55	74.00	25.45	Peak
5854.90	35.23	9.82	9.53	54.58	74.00	19.42	Peak



Antenna at Horizontal Polarization

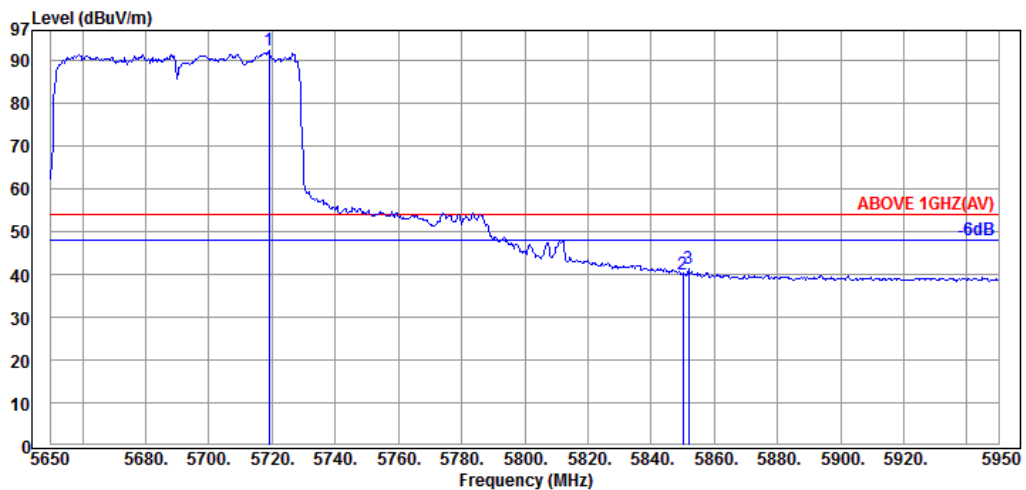
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
5656.60	34.99	9.47	46.55	91.01	---	---	Average
5850.10	35.21	9.86	-5.71	39.36	54.00	14.64	Average
5853.10	35.21	9.86	-5.14	39.93	54.00	14.07	Average

Mode	802.11ac-VHT80	Frequency	TX 5690MHz
------	----------------	-----------	------------



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
5689.00	35.03	9.68	55.81	100.52	---	---	Peak
5850.10	35.21	9.86	7.74	52.81	74.00	21.19	Peak
5887.60	35.28	9.74	9.05	54.07	74.00	19.93	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
5719.00	35.07	9.78	47.36	92.21	---	---	Average
5850.10	35.21	9.86	-5.03	40.04	54.00	13.96	Average
5851.90	35.21	9.86	-3.77	41.30	54.00	12.70	Average

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 5240MHz

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
2461.60	32.25	5.80	7.47	45.52	54.00	8.48	Peak
3468.04	32.81	7.21	4.15	44.17	54.00	9.83	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
3383.56	32.82	7.03	4.95	44.80	54.00	9.20	Peak
4994.50	34.30	8.78	4.96	48.04	54.00	5.96	Peak

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
4595.50	34.14	7.58	2.27	43.99	54.00	10.01	Peak
5297.50	34.60	8.74	2.22	45.56	54.00	8.44	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
2490.16	32.30	5.84	10.38	48.52	54.00	5.48	Peak
4985.50	34.29	8.73	4.88	47.90	54.00	6.10	Peak
5308.00	34.60	8.74	3.87	47.21	54.00	6.79	Peak

Mode	802.11a	UNII Band	II-2C
		Frequency	TX 5600MHz

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
3733.36	33.04	7.17	4.78	44.99	54.00	9.01	Peak
4993.00	34.30	8.78	0.62	43.70	54.00	10.30	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
4555.00	34.12	7.64	1.84	43.60	54.00	10.40	Peak
5000.50	34.30	8.78	7.02	50.10	54.00	3.90	Peak

Mode	802.11a	UNII Band	III
		Frequency	TX 5825MHz

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
3883.84	33.20	7.07	9.37	49.64	54.00	4.36	Peak
4994.50	34.30	8.78	5.77	48.85	54.00	5.15	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
3883.84	33.20	7.07	7.21	47.48	54.00	6.52	Peak
4994.50	34.30	8.78	9.21	52.29	54.00	1.71	Peak

Mode	802.11ac-VHT20	UNII Band	I
		Frequency	TX 5240MHz

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
2461.60	32.25	5.80	7.91	45.96	54.00	8.04	Average
4994.50	34.30	8.78	1.37	44.45	74.00	29.55	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
2461.60	32.25	5.80	8.20	46.25	54.00	7.75	Peak
4885.00	34.26	8.47	4.01	46.74	54.00	7.26	Average
4997.50	34.30	8.78	6.18	49.26	74.00	24.74	Peak

Mode	802.11ac-VHT20	UNII Band	II-2A
		Frequency	TX 5320MHz

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
2461.60	32.25	5.80	7.53	45.58	54.00	8.42	Peak
4900.00	34.26	8.47	2.51	45.24	54.00	8.76	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
2461.60	32.25	5.80	6.23	44.28	54.00	9.72	Peak
4994.50	34.30	8.78	5.59	48.67	54.00	5.33	Peak

Mode	802.11n-HT20	UNII Band	II-2C
		Frequency	TX 5600MHz

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
2461.60	32.25	5.80	6.89	44.94	54.00	9.06	Peak
3733.36	33.04	7.17	4.24	44.45	54.00	9.55	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
2461.60	32.25	5.80	6.13	44.18	54.00	9.82	Peak
4994.50	34.30	8.78	5.65	48.73	54.00	5.27	Peak

Mode	802.11n-HT20	UNII Band	II-2C
		Frequency	TX 5720MHz

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
2461.60	32.25	5.80	8.00	46.05	54.00	7.95	Peak
3812.56	33.11	7.06	6.48	46.65	54.00	7.35	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
3812.56	33.11	7.06	3.83	44.00	54.00	10.00	Peak
4990.00	34.30	8.78	6.67	49.75	54.00	4.25	Peak

Mode	802.11ac-VHT20	UNII Band	III
		Frequency	TX 5825MHz

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
3883.84	33.20	7.07	7.52	47.79	54.00	6.21	Peak
5000.50	34.30	8.78	2.33	45.41	54.00	8.59	Peak

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
3883.84	33.20	7.07	6.34	46.61	54.00	7.39	Peak
4997.50	34.30	8.78	9.85	52.93	54.00	1.07	Peak

Mode	802.11ac-VHT40	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
4994.50	34.30	8.78	3.01	46.09	54.00	7.91	Peak
5077.00	34.38	8.92	3.47	46.77	54.00	7.23	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
4990.00	34.30	8.78	5.51	48.59	54.00	5.41	Peak
5075.50	34.38	8.92	5.57	48.87	54.00	5.13	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
3478.60	32.80	7.24	1.58	41.62	54.00	12.38	Peak
4948.00	34.28	8.62	0.50	43.40	54.00	10.60	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
3379.60	32.82	7.03	3.52	43.37	54.00	10.63	Peak
4993.00	34.30	8.78	4.96	48.04	54.00	5.96	Peak

Mode	802.11n-HT40	UNII Band	II-2C
		Frequency	TX 5590MHz

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
3726.76	33.02	7.19	5.08	45.29	54.00	8.71	Peak
5024.50	34.33	8.84	1.29	44.46	54.00	9.54	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
3324.16	32.83	6.84	4.19	43.86	54.00	10.14	Peak
4990.00	34.30	8.78	7.52	50.60	54.00	3.40	Peak

Mode	802.11n-HT40	UNII Band	II-2C
		Frequency	TX 5710MHz

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
3805.96	33.11	7.06	4.76	44.93	54.00	9.07	Peak
4993.00	34.30	8.78	1.92	45.00	54.00	9.00	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
3805.96	33.11	7.06	3.22	43.39	54.00	10.61	Peak
4994.50	34.30	8.78	7.37	50.45	54.00	3.55	Peak

Mode	802.11ac-VHT40	UNII Band	III
		Frequency	TX 5795MHz

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
3864.04	33.16	7.07	8.37	48.60	54.00	5.40	Peak
4990.00	34.30	8.78	4.38	47.46	54.00	6.54	Peak

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
3864.04	33.16	7.07	4.43	44.66	54.00	9.34	Peak
4994.50	34.30	8.78	10.38	53.46	54.00	0.54	Peak

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
6946.00	35.83	9.80	1.83	47.46	54.00	6.54	Peak
7356.00	35.80	10.02	-0.24	45.58	54.00	8.42	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
4994.50	34.30	8.78	4.85	47.93	54.00	6.07	Peak
6946.00	35.83	9.80	1.83	47.46	54.00	6.54	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
3544.60	32.85	7.34	3.68	43.87	54.00	10.13	Peak
5030.50	34.33	8.84	4.69	47.86	54.00	6.14	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
3458.80	32.81	7.21	3.36	43.38	54.00	10.62	Peak
5000.50	34.30	8.78	5.94	49.02	54.00	4.98	Peak

Mode	802.11ac-VHT80	UNII Band	II-2C
		Frequency	TX 5610MHz

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
4855.00	34.24	8.23	2.39	44.86	54.00	9.14	Peak
5894.00	35.28	9.74	1.32	46.34	54.00	7.66	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
4993.00	34.30	8.78	5.95	49.03	54.00	4.97	Peak
5864.00	35.23	9.82	5.84	50.89	54.00	3.11	Peak

Mode	802.11ac-VHT80	UNII Band	II-2C
		Frequency	TX 5690MHz

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
3792.76	33.09	7.09	6.95	47.13	54.00	6.87	Peak
4997.50	34.30	8.78	2.48	45.56	54.00	8.44	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
3792.76	33.09	7.09	4.55	44.73	54.00	9.27	Peak
5000.50	34.30	8.78	5.97	49.05	54.00	4.95	Peak
5354.50	34.65	8.61	2.92	46.18	54.00	7.82	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 (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
3850.84	33.16	7.07	8.41	48.64	54.00	5.36	Peak
5000.50	34.30	8.78	3.91	46.99	54.00	7.01	Peak

Antenna at Vertical Polarization

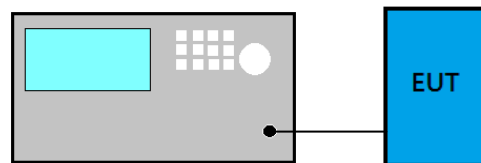
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
3850.84	33.16	7.07	3.42	43.65	54.00	10.35	Peak
5000.50	34.30	8.78	10.07	53.15	54.00	0.85	Peak

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. EMISSION BANDWIDTH MEASUREMENT

7.1. Block Diagram of Test Setup



7.2. Specification Limits

Frequency Band (MHz)	Limit
5150 to 5250	Reference only
5250 to 5350	
5470 to 5725	
5725 to 5850	$\geq 500\text{kHz}$

7.3. Test Procedure

Following measurement procedure is reference to KDB 789033 D02 General UNII Test Procedures New Rules v01r02:

Applicable to all bands except to 5725 MHz- 5850 MHz

- (1) Set RBW= 1% of the emission bandwidth
- (2) Set VBW > RBW
- (3) Detector = Peak
- (4) Trace mode = max hold
- (5) Setting channel bandwidth function x dB to -26 dB to record the final bandwidth.

5725 MHz- 5850 MHz

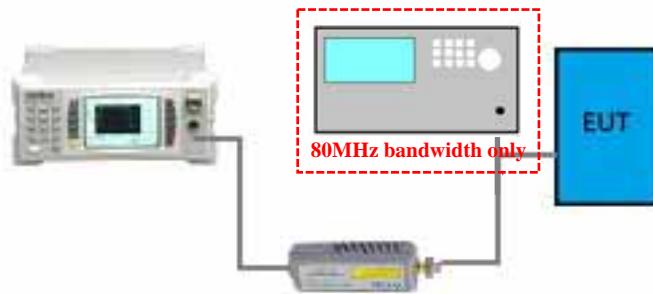
- (1) Set RBW = 100 kHz.
- (2) Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
- (3) Detector = Peak.
- (4) Trace mode = max hold.
- (5) Sweep = auto couple.
- (6) Allow the trace to stabilize.
- (7) Setting channel bandwidth function x dB to -6 dB to record the final bandwidth.

7.4. Test Results

Please refer to Appendix A

8. MAXIMUM OUTPUT POWER MEASUREMENT

8.1. Block Diagram of Test Setup



8.2. Specification Limits

Frequency Band (MHz)	Category	Limit
5150 to 5250	Outdoor Access Point	1 W(30 dBm)/ Max e.i.r.p. ≤125 mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon
	Fixed point-to-point Access Point	1 W(30 dBm)
	Indoor Access Point	1 W(30 dBm)
	Mobile and Portable client device	250 mW(24 dBm)
5250 to 5350	N/A	250 mW or 11 dBm + 10 log B ^{Note1}
5470 to 5725		250 mW or 11 dBm + 10 log B ^{Note1}
5725 to 5850		1 W(30 dBm)

Note 1: B is the 26 dB emission bandwidth, which presented in section 7 and appendix A.1.

8.3. Test Procedure

Following measurement procedure is reference to KDB 789033 D02 General UNII Test Procedures New Rules v01r02:

Method AVGPM (Measurement using an RF average power meter):

EUT is connected to power sensor and record the maximum average output power and duty cycle factor is added when duty cycle presented in section 3.5 is < 98%.

Method AVGSA-2 (Spectrum channel power)

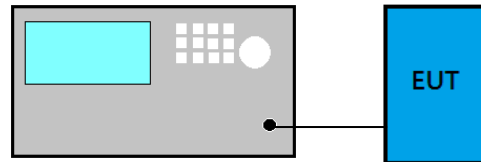
- (1) Set span to at least 1.5 times the OBW
- (2) Set RBW = 1 MHz
- (3) Set the video bandwidth (VBW) \geq 3 MHz.
- (4) Detector = RMS.
- (5) Trace mode = trace average at least 100 traces
- (6) Sweep = auto couple.
- (7) Compute power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function with band limits set equal to the OBW band edges.
- (8) Duty cycle factor is added when duty cycle presented in section 3.5 is < 98%.

8.4. Test Results

Please refer to Appendix A

9. EMISSION LIMITATIONS MEASUREMENT

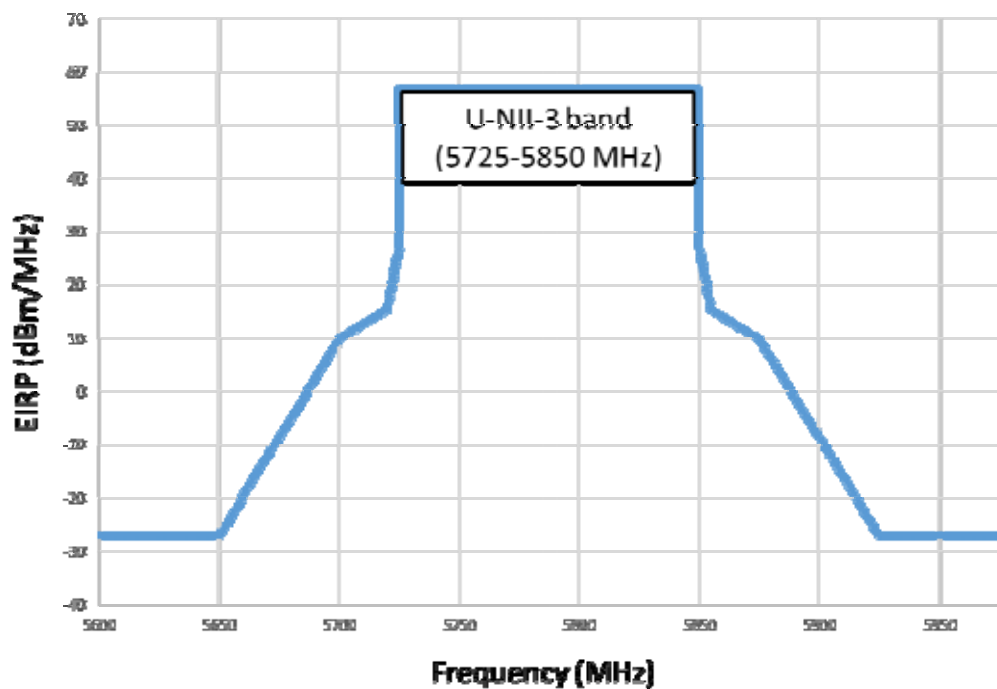
9.1. Block Diagram of Test Setup



9.2. Specification Limits

Frequency Band (MHz)	E.I.R.P. Limit
5150 to 5250	-27 dBm
5250 to 5350	
5470 to 5725	

Frequency Band (MHz)	E.I.R.P. Limit	
5725 to 5850	<input checked="" type="checkbox"/>	15.407(b)(4)(i) 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.
	<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))



9.3. Test Procedure

Following measurement procedure is reference to KDB 789033 D02 General UNII Test Procedures New Rules v01r02:

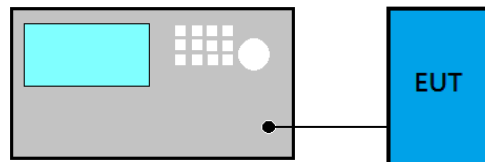
- (1) RBW = 1 MHz
- (2) VBW \geq 3 x RBW
- (3) Detector = Peak
- (4) Sweep time = auto
- (5) Trace mode = max hold
- (6) Allow sweeps to continue until the trace stabilizes.

9.4. Test Results

Please refer to Appendix A

10. POWER SPECTRAL DENSITY MEASUREMENT

10.1. Block Diagram of Test Setup



10.2. Specification Limits

Frequency Band (MHz)	Category	Limit
5150 to 5250	Outdoor Access Point	17dBm
	Fixed point-to-point Access Point	
	Indoor Access Point	
	Mobile and Portable client device	11 dBm/MHz
5250 to 5350	N/A	11 dBm/MHz
5470 to 5725		11 dBm/MHz
5725 to 5850		30dBm/500 kHz

10.3. Test Procedure

Following measurement procedure is reference to KDB 789033 D02 General UNII Test Procedures New Rules v01r02:

Method AVGSA-2 (Spectrum channel power)

- (1) Set span to at least 1.5 times the OBW
- (2) Set RBW = 1 MHz
- (3) Set the video bandwidth (VBW) \geq 3 MHz.
- (4) Detector = RMS.
- (5) Trace mode = trace average at least 100 traces
- (6) Sweep = auto couple.
- (7) Use peak search function to find out the maximum power density.
- (8) Duty cycle factor is added when duty cycle presented in section 3.5 is $<$ 98%.

10.4. Test Results

Please refer to Appendix A

11.DEVIATION TO TEST SPECIFICATIONS

【NONE】