

15.247& RSS-247 2.4 GHz Report

for

Amtran Technology Co., Ltd.

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

Brand : CISCO
Product Name : Video Conferencing Equipment
Model Name : AA70WW
FCC ID : MDZAA70WW
IC : 7825A-AA70WW

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



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APPENDIX A TEST PHOTOGRAPHS

TEST REPORT CERTIFICATION

Applicant : Amtran Technology Co., Ltd.
Manufacture : Cisco Systems, Inc.
EUT Description
(1) Product : Video Conferencing Equipment
(2) Model : AA70WW
(3) Brand : CISCO

Applicable Standards:

47 CFR FCC Part 15 Subpart C
RSS-Gen (Issue 4), November 2014
RSS-247 (Issue 2), February 2017
ANSI C63.10:2013
558074 D01 DTS Meas Guidance v04

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 Report: 2017. 05. 15

Reviewed by: Annie Yu (Annie Yu/Administrator)

Approved by: Ben Cheng (Ben Cheng/Manager)

1. REPORT HISTORY

Edition No.	Date of Rev.	Revision Summary	Report No.
0	2017. 05. 15	Original Report.	EM-F170205

2. SUMMARY OF TEST RESULTS

Rule		Description	Results
FCC	IC		
15.207	RSS-Gen §8.8	Conducted Emission	PASS, Note 2
15.247(d)/ 15.205	RSS-Gen §8.9 RSS-247 §5.5	Radiated Band Edge and Radiated Spurious Emission	PASS
15.247(a)(2)	RSS-247 §5.2(1)	6dB Bandwidth	N/A, Note 1
15.247(b)(3)	RSS-247 §5.4(4)	Maximum Peak Output	N/A, Note 1
15.247(d)	RSS-247 §5.5	Conducted Band Edges and Conducted Spurious Emission	N/A, Note 1
15.247 (e)	RSS-247 §5.2(2)	Peak Power Spectral Density	N/A, Note 1
15.203	----	Antenna Requirement	PASS
Note: 1. All conducted results are authorized to leverage to original grant FCC ID: VOB-P2180 and IC: 7361A-P2180. 2. The emissions higher than limit were confirmed not emitted from RF transmitter are subject to FCC 15.107 and presented at report number: EM-F170295.			

3. GENERAL INFORMATION

3.1. Description of Application

Applicant	Amtran Technology Co., Ltd. 17F., No. 268, Liancheng Rd., Jhonghe District, New Taipei City 23553, Taiwan, R.O.C.
Manufacturer	Cisco Systems, Inc. 170 West Tasman Drive, San Jose, CA 95134, USA
Product	Video Conferencing Equipment
Model	AA70WW
Brand	MDZAA70WW

3.2. Description of EUT

Test Model	AA70WW															
Serial Number	N/A															
Power Rating	100-240VAC, Max. 3.5A, 50/60Hz															
Firmware Version	N/A															
Sample Status	Production															
RF Features	WLAN:802.11a/b/g/n/ac Bluetooth: BT and BLE															
Transmit Type	<table><tr><th colspan="2">2.4 GHz</th></tr><tr><td>802.11b</td><td>1T1R</td></tr><tr><td>802.11g</td><td>1T1R</td></tr><tr><td>802.11n-HT20</td><td>2T2R</td></tr><tr><td>802.11n-HT40</td><td>2T2R</td></tr><tr><td>BT</td><td>1T1R</td></tr><tr><td>BLE</td><td>1T1R</td></tr></table>		2.4 GHz		802.11b	1T1R	802.11g	1T1R	802.11n-HT20	2T2R	802.11n-HT40	2T2R	BT	1T1R	BLE	1T1R
	2.4 GHz															
	802.11b	1T1R														
	802.11g	1T1R														
	802.11n-HT20	2T2R														
	802.11n-HT40	2T2R														
	BT	1T1R														
	BLE	1T1R														
	<table><tr><th colspan="2">UNII Bands</th></tr><tr><td>802.11a</td><td>1T1R</td></tr><tr><td>802.11n-HT20/ 802.11ac-VHT20</td><td>2T2R</td></tr><tr><td>802.11n-HT40/ 802.11ac-VHT40</td><td>2T2R</td></tr><tr><td>802.11ac-VHT80</td><td>2T2R</td></tr></table>		UNII Bands		802.11a	1T1R	802.11n-HT20/ 802.11ac-VHT20	2T2R	802.11n-HT40/ 802.11ac-VHT40	2T2R	802.11ac-VHT80	2T2R				
	UNII Bands															
	802.11a	1T1R														
	802.11n-HT20/ 802.11ac-VHT20	2T2R														
	802.11n-HT40/ 802.11ac-VHT40	2T2R														
	802.11ac-VHT80	2T2R														
Date of Receipt	2017. 03. 02															
Date of Test	2017. 04. 05 ~ 28															
AC Power Cord	Unshielded, Detachable, 1.8m (3C)															
Interface Ports of EUT	One AC power port One LAN port One HDMI port One Audio out port One USB 3.0 port															

3.3. Antenna Information

No.	Antenna Part Number	Manufacture	Antenna Type	Frequency (GHz)	Max Gain (dBi)
1	RFMTA34071AIMLB702 (ANT 1)	Walsin Technology Corporation	PIFA	2.4 to 2.5	2.6
				5.15 to 5.85	4.77
2.	RFMTA340772IMLB701 (ANT 2)		PIFA	2.4 to 2.5	2.81
				5.15 to 5.85	4.92
Note: All results have been tested with worst antenna port 1.					

3.4. EUT Specifications Assessed in Current Report

Mode	Fundamental Range (MHz)	Channel Number
802.11b	2412-2462	11
802.11g		11
802.11n-HT20		11
802.11n-HT40	2422-2452	7
BLE	2402-2480	40

Mode	Modulation	Data Rate (Mbps)
802.11b	DSSS (DBPSK/DQPSK/CCK)	Up to 11
802.11g	OFDM (BPSK/QPSK/16QAM/64QAM)	Up to 54
802.11n-HT20		Up to 144.4
802.11n-HT40		Up to 300
BLE	GFSK	1

Channel List			
802.11 b/g/n-HT20		802.11n-HT40	
Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)
1	2412		
2	2417		
3	2422	3	2422
4	2427	4	2427
5	2432	5	2432
6	2437	6	2437
7	2442	7	2442
8	2447	8	2447
9	2452	9	2452
10	2457		
11	2462		

Channel List			
BLE			
Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)
37	2402	18	2442
00	2404	19	2444
01	2406	20	2446
02	2408	21	2448
03	2410	22	2450
04	2412	23	2452
05	2414	24	2454
06	2416	25	2456
07	2418	26	2458
08	2420	27	2460
09	2422	28	2462
10	2424	29	2464
38	2426	30	2466
11	2428	31	2468
12	2430	32	2470
13	2432	33	2472
14	2434	34	2474
15	2436	35	2476
16	2438	36	2478
17	2440	39	2480

3.5. Test Configuration

Mode	Duty Cycle (x)	T (ms)
802.11b	0.98	8.6
802.11g	0.94	1.43
802.11n-HT20	0.87	0.692
802.11n-HT40	0.79	0.358
BLE	0.63	0.392

AC Conduction	
Test Case	Normal operation

Item		Mode	Data Rate	Test Channel
Radiated Test Case	Radiated Band Edge Note 2	802.11b	1Mbps	1/11
		802.11g	6Mbps	1/11
		802.11n-HT20	MCS8	1/11
		802.11n-HT40	MCS8	3/9
		BLE	1Mbps	37/39
	Radiated Spurious Emission Note 2	802.11b	1 Mbps	6
		802.11g	6Mbps	6
		802.11n-HT20	MCS8	6
		802.11n-HT40	MCS8	6
		BLE	1Mbps	37/17/39

Note 1:

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

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

3.6. Tested Supporting System List

3.6.1. Support Peripheral Unit

No.	Product	Brand	Model No.	Serial No.	FCC ID
For Power Line Emission					
1.	PC System	Lenovo	RK4	PBFK922	By DoC
2.	USB Keyboard	IBM	KU-0225	3630	By DoC
3.	USB Mouse	Lenovo	45J4886	N/A	By DoC
4.	USB Printer	SAMSUNG	ML-1630	4561B1CP600023 X	FCC ID: A3LML1630
5.	I-POD Player	APPLE	A1204	4H722TH8VTE	By DoC
6.	Earphone	APPLE	N/A	N/A	N/A
7.	USB 3.0 HDD	SOY	HD-E1	3GDL0T155151C 14	By DoC
8.	Mobile Phone	SAMSUNG	GT-I9300	RF1C86ATMSV	NCC ID: CCAF123G0370T1
9.	AP Server	D-Link	DIR-868L	R3WE1D7002319	FCC ID: KA2IR868LA1
For Radiated Emission					
1.	Notebook PC	acer	MS2362	N/A	PPD-AAR5B225
2.	Earphone	Cheng Jia	CJ-323	N/A	N/A
3.	IPOD Player	APPLE	A1204	4H722TJKVTE	DoC
4.	5G Server	D-Link	DIR-868L	R3WE1D7002319	KA2IR868LA1

3.6.2. Cable Lists

No.	Cable Description Of The Above Support Units
For Power Line Emission	
1.	HDMI Cable: Shielded, Detachable, 1.5m, Bonded two ferrite cores
2.	USB Cable: Shielded, Detachable, 1.8m
3.	USB Cable: Shielded, Detachable, 1.8m
4.	USB Cable: Shielded, Detachable, 1.8m
5.	USB Cable: Shielded, Detachable, 1.0m
6.	Earphone Cable: Unshielded, Detachable, 0.9m
7.	USB Cable: Shielded, Detachable, 0.5m
8.	LAN Cable: Unshielded, Detachable, 5.0m
9.	AC Power Cord (3C): Shielded, Detachable, 1.8m
10.	LAN Cable: Unshielded, Detachable, 10.0m
11.	LAN Cable: Unshielded, Detachable, 1.8m
12.	AC Power Cord: Shielded, Detachable, 1.8m*4
For Radiated Emission	
1.	HDMI Cable: Shielded, Detachable, 1.8m Adapter: Chicony, M/N CPA09-A065N1, DC Power Cord: Unshielded, Undetachable, 1.8m, Bonded a ferrite core AC Power Cord: Unshielded, Detachable, 1.8m
2.	Earphone Cable: Unshielded, Detachable, 2.0m
3.	USB Cable: Unshielded, Detachable, 1.0m
4.	LAN Cable: Unshielded, Detachable, 1.8m

3.7. Setup Configuration

3.7.1. EUT Configuration for Power Line & Radiated Emission

EUT

3.8. Operating Condition of EUT

Test program “ADB” is used for enabling EUT RF 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. 7 Shielded Room No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan Semi-Anechoic Chamber No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan IC Test Site Registration No.: 5183B-1 Renewal on September 17, 2014 Fully Anechoic Chamber No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan IC Test Site Registration No.: 5183B-4 Renewal on August 31, 2015
NVLAP Lab. Code	:	200077-0
TAF Accreditation No	:	1724
FCC OET Designation	:	TW1004 & TW1090

3.10. Measurement Uncertainty

Test Item	Frequency Range	Uncertainty
Conduction Test	150kHz~30MHz	±3.50dB
Radiation Test (Distance: 3m)	30MHz~1000MHz	± 3.68dB
	Above 1GHz	± 5.82dB

Remark : Uncertainty = $k_{uc}(y)$

Test Item	Uncertainty
6dB Bandwidth	± 0.05kHz
Maximum peak output power	± 0.33dB
Power spectral density	± 0.13dB
Conducted Emission Limitations	± 0.13dB

4. MEASUREMENT EQUIPMENT LIST

4.1. Conducted Emission Measurement

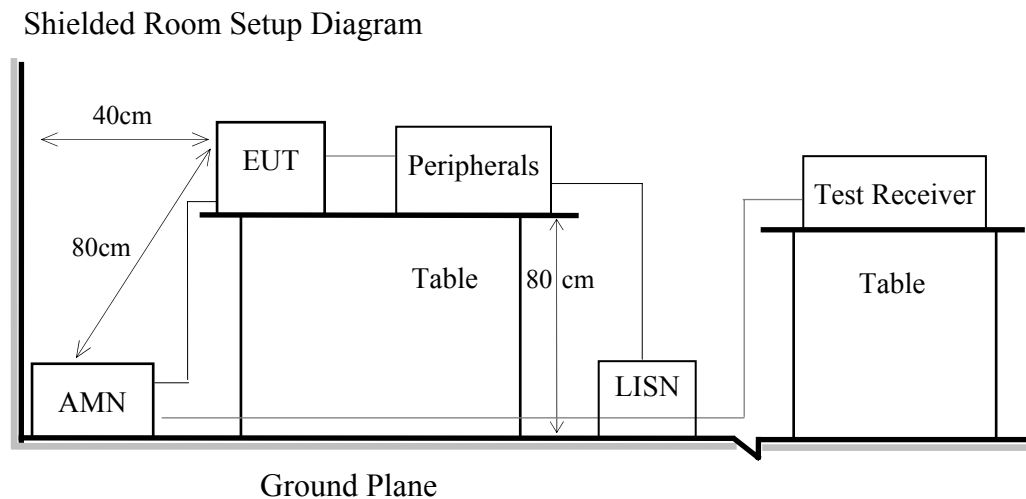
Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Test Receiver	R & S	ESCI	101276	2017. 03. 23	1 Year
2.	A.M.N.	R&S	ESH2-Z5	100366	2016. 07. 27	1 Year
3.	L.I.S.N.	Kyoritsu	KNW-407	8-1539-3	2017. 01. 21	1 Year
4.	Pulse Limiter	R & S	ESH3-Z2	101495	2017. 01. 16	1 Year
5.	Test Software	Audix	e3	V.6.120424	N.C.R.	N.C.R.

4.2. Radiated Emission Measurement

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9010A-526	MY53400071	2016. 09. 19	1 Year
2.	Spectrum Analyzer	Agilent	N9010A-507	MY52220264	2016. 08. 09	1 Year
3.	Test Receiver	R & S	ESCS30	100338	2016. 06. 22	1 Year
4.	Amplifier	HP	8447D	2944A06305	2017. 02. 16	1 Year
5.	Amplifier	Agilent	8449B	3008A02678	2017. 03. 06	1 Year
6.	Bilog Antenna	CHASE	CBL6112D	33821	2017. 01. 21	1 Year
7.	Loop Antenna	R&S	HFH2-Z2	891847/27	2016. 12. 23	1 Year
8.	2.4GHz Notch Filter	K&L	7NSL10-244 1.5E130.5-00	1	2016. 07. 28	1 Year
9.	Horn Antenna	EMCO	3115	9609-4927	2016. 06. 27	1 Year
10.	Horn Antenna	EMCO	3116	2653	2016. 10. 24	1 Year
11.	Test Software	Audix	e3	V.6.110601	N.C.R.	N.C.R.

5. CONDUCTED EMISSION MEASUREMENT

5.1. Block Diagram of Test Setup



5.2. Power Line Conducted Emission Limit

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

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

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

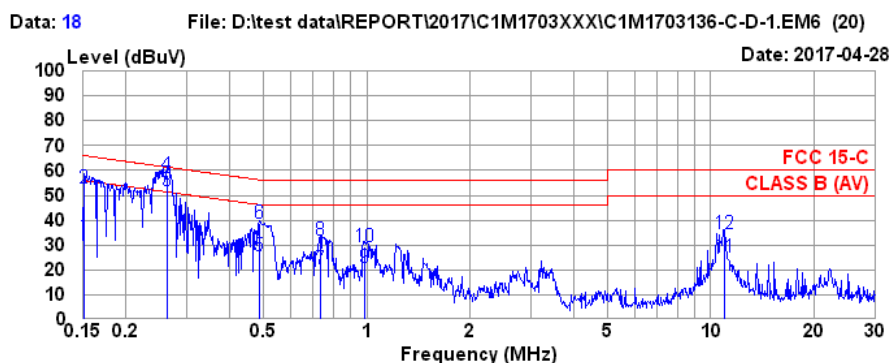
5.3. Test Procedure

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

5.4. Conducted Emission Measurement Results

PASSED.

Test Date	2017/04/28	Temp./Hum.	26°C/54%
Test Voltage	AC 120V, 60Hz		



Site no. : No.7 Shielded Room Data no. : 18
Condition : ESH2-Z5 366(ADAPTER) Phase : NEUTRAL
Limit : FCC 15-C
Env. / Ins. : 26°C / 54% ESCI (1276) Engineer : Nick Du
EUT : AA70WW
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	0.151	0.19	0.03	9.86	23.69	33.77	55.96	22.19	Average
2	0.151	0.19	0.03	9.86	43.03	53.11	65.96	12.85	QP
* 3	0.264	0.18	0.04	9.86	41.73	51.81	51.29	-0.52	Average
4	0.264	0.18	0.04	9.86	47.94	58.02	61.29	3.27	QP
5	0.486	0.20	0.04	9.86	15.73	25.83	46.23	20.40	Average
6	0.486	0.20	0.04	9.86	28.79	38.89	56.23	17.34	QP
7	0.731	0.21	0.05	9.86	10.24	20.36	46.00	25.64	Average
8	0.731	0.21	0.05	9.86	21.62	31.74	56.00	24.26	QP
9	0.984	0.22	0.06	9.86	10.86	21.00	46.00	25.00	Average
10	0.984	0.22	0.06	9.86	19.11	29.25	56.00	26.75	QP
11	10.963	0.59	0.18	9.90	14.23	24.90	50.00	25.10	Average
12	10.963	0.59	0.18	9.90	23.70	34.37	60.00	25.63	QP

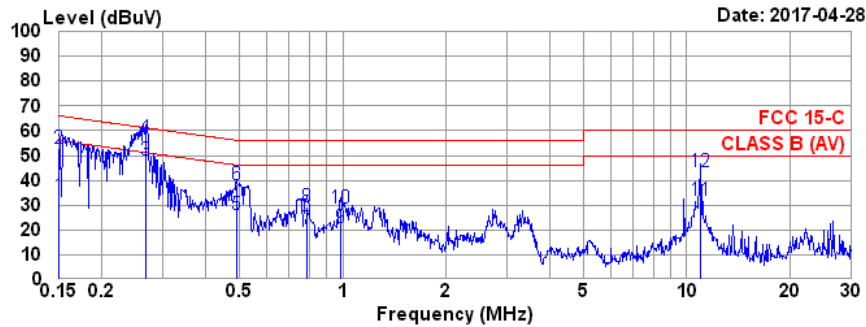
Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.
2. If the average limit is met when using a quasi-peak detector,
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.
3. The emissions higher than limit were confirmed not emitted from RF transmitter
are subject to FCC 15.107 and presented at report number: EM-F170295.

Audix Technology Corp.
No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City 244, Taiwan

Tel: +886 2 26099301
Fax: +886 2 26099303

Test Date	2017/04/28	Temp./Hum.	26°C/54%
Test Voltage	AC 120V, 60Hz		

Data: 17 File: D:\test data\REPORT\2017\1C1M1703XXX\1C1M1703136-C-D-1.EM6 (20) Date: 2017-04-28



Site no. : No.7 Shielded Room Data no. : 17
Condition : ESH2-Z5 366(ADAPTER) Phase : LINE
Limit : FCC 15-C
Env. / Ins. : 26°C / 54% ESCI (1276) Engineer : Nick Du
EUT : AA70WW
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	0.150	0.18	0.03	9.86	23.62	33.69	55.99	22.30	Average
2	0.150	0.18	0.03	9.86	42.94	53.01	65.99	12.98	QP
3	0.269	0.17	0.04	9.86	38.21	48.28	51.16	2.88	Average
4	0.269	0.17	0.04	9.86	47.27	57.34	61.16	3.82	QP
5	0.491	0.19	0.04	9.86	16.28	26.37	46.14	19.77	Average
6	0.491	0.19	0.04	9.86	28.15	38.24	56.14	17.90	QP
7	0.788	0.20	0.05	9.86	10.52	20.63	46.00	25.37	Average
8	0.788	0.20	0.05	9.86	19.06	29.17	56.00	26.83	QP
9	0.989	0.21	0.06	9.86	10.75	20.88	46.00	25.12	Average
10	0.989	0.21	0.06	9.86	18.53	28.66	56.00	27.34	QP
11	10.953	0.64	0.18	9.90	21.05	31.77	50.00	18.23	Average
12	10.953	0.64	0.18	9.90	32.84	43.56	60.00	16.44	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.
2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.
3. The emissions higher than limit were confirmed not emitted from RF transmitter are subject to FCC 15.107 and presented at report number: EM-F170295.

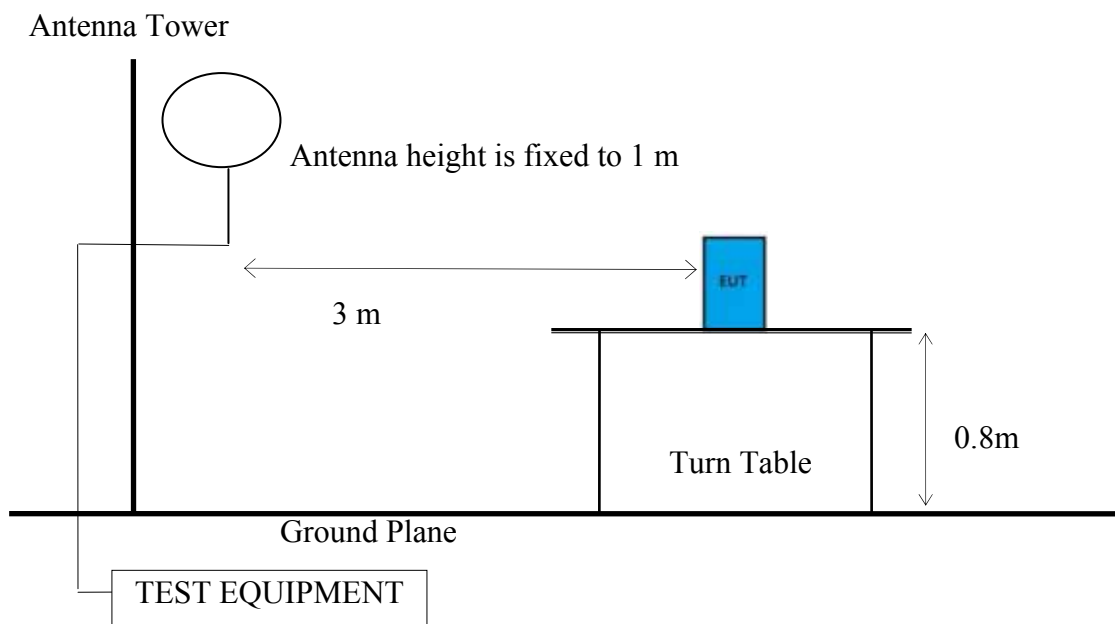
6. RADIATED EMISSION MEASUREMENT

6.1. Block Diagram of Test Setup

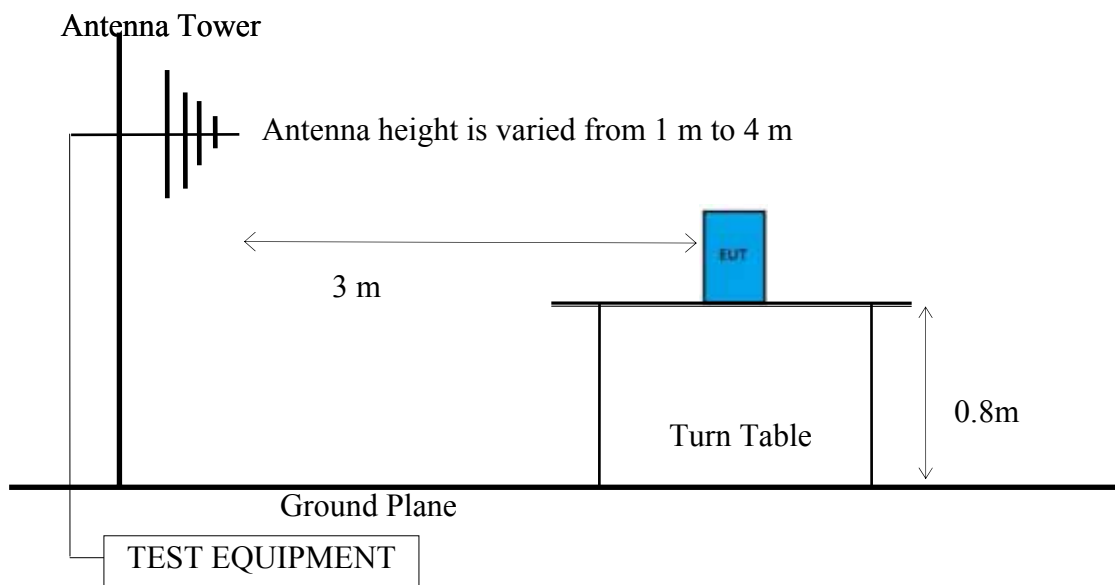
6.1.1. Block Diagram of connection between EUT and simulators

Indicated as section 3.6

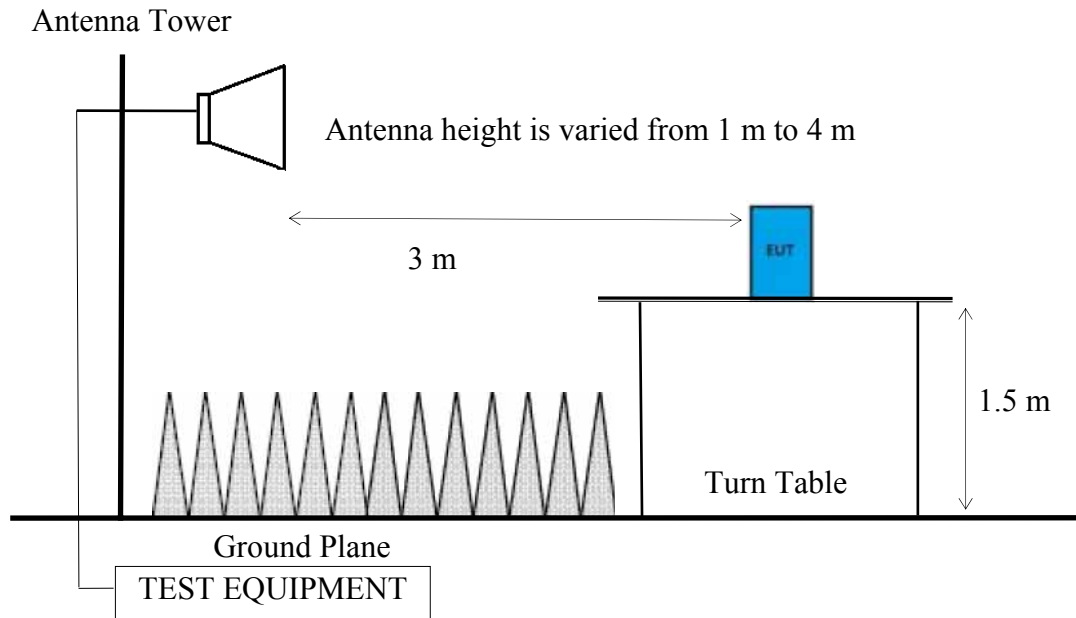
6.1.2. Semi Anechoic Chamber (3m) Setup Diagram for 9kHz-30MHz



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

In any 100kHz bandwidth outside the frequency band, the radio frequency power produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level. In addition, radiated emissions which fall in restricted bands, as defined in Section 15.205/RSS-Gen Section 8.10 table 6, must also comply with the radiated emission limits specified as below.

Frequency (MHz)	Distance (m)	Limits	
		dB μ V/m	μ 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	40.0	100
88- 216	3	43.5	150
216- 960	3	46.0	200
Above 960	3	54.0	500
Above 1000	3	74.0 dB μ V/m (Peak) 54.0 dB μ 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.

6.3. 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 find table which has 80 cm (for 30-1000 MHz) and 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 = 120KHz
- (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 Q.P. detector is not required. Otherwise using Q.P. for finally measurement.

Frequency above 1GHz to 10th harmonic:

Peak Detector:

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

Modulation Type	T (ms)	1/ T (kHz)	VBW Setting (kHz)
802.11b	8.6	0.12	0.01
802.11g	1.43	0.70	0.68
802.11n-HT20	0.692	1.45	1.5
802.11n-HT40	0.358	2.79	2.7
BLE	0.392	2.55	2.7

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

□ ERP= Peak Emission Level-95.2dB-2.14dB

6.5. Test Results

PASSED.

Test Date	2017/04/05	Temp./Hum.	20°C/53%
Test Voltage	AC 120V, 60Hz		

6.5.1. Emissions within Restricted Frequency Bands

6.5.1.1. Frequency 9kHz~30MHz

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

6.5.1.2. Frequency 30MHz~1000MHz

Mode	802.11b	Frequency	TX 2462MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
149.31	17.01	2.83	17.29	37.13	43.50	6.37	Peak
238.55	18.22	3.71	20.50	42.43	46.00	3.57	Peak
297.72	19.74	4.28	13.40	37.42	46.00	8.58	Peak
679.90	25.50	7.02	9.34	41.86	46.00	4.14	Peak
721.61	25.87	7.20	12.51	45.58	46.00	0.42	Peak
753.62	26.15	7.37	10.48	44.00	46.00	2.00	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
40.67	19.15	1.41	18.11	38.67	40.00	1.33	Peak
150.28	16.93	2.84	22.30	42.07	43.50	1.43	Peak
224.00	17.34	3.57	19.85	40.76	46.00	5.24	Peak
301.60	19.83	4.33	14.22	38.38	46.00	7.62	Peak
399.57	22.71	5.54	10.56	38.81	46.00	7.19	Peak
719.67	25.85	7.19	8.55	41.59	46.00	4.41	Peak

Mode	BLE	Frequency	TX 2480MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
150.28	16.93	2.84	17.10	36.87	43.50	6.63	Peak
238.55	18.22	3.71	20.49	42.42	46.00	3.58	Peak
299.66	19.77	4.30	11.40	35.47	46.00	10.53	Peak
672.14	25.43	7.00	7.53	39.96	46.00	6.04	Peak
723.55	25.90	7.22	12.39	45.51	46.00	0.49	Peak
751.68	26.15	7.37	11.02	44.54	46.00	1.46	Peak

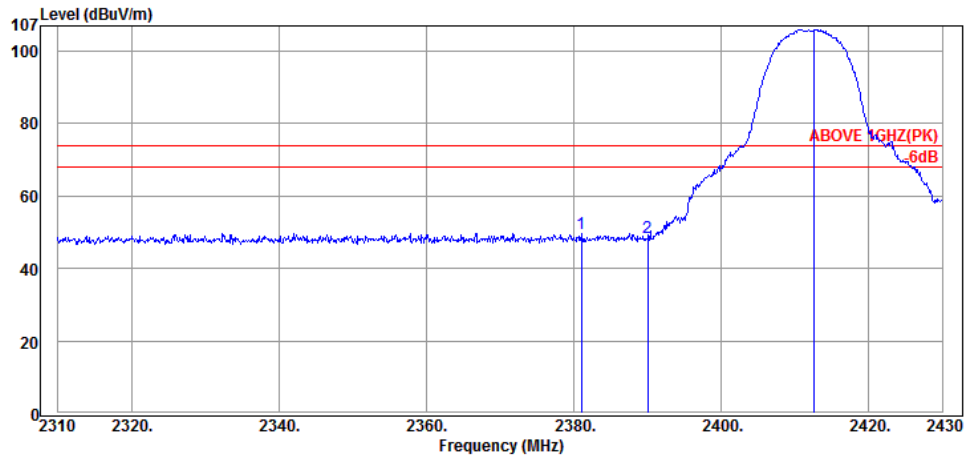
Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
40.67	19.15	1.41	16.47	37.03	40.00	2.97	Peak
149.31	17.01	2.83	21.81	41.65	43.50	1.85	Peak
226.91	17.54	3.60	19.36	40.50	46.00	5.50	Peak
299.66	19.77	4.30	13.82	37.89	46.00	8.11	Peak
480.08	23.58	6.27	9.60	39.45	46.00	6.55	Peak
716.76	25.83	7.18	8.14	41.15	46.00	4.85	Peak

6.5.2. Frequency Above 1 GHz to 10th harmonics

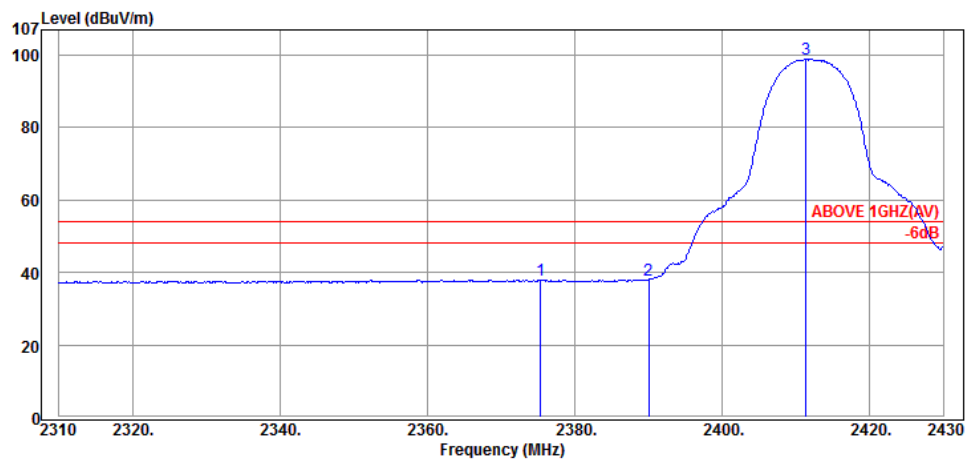
Band Edge:

Mode	802.11b	Frequency	TX 2412MHz
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Antenna at Horizontal Polarization

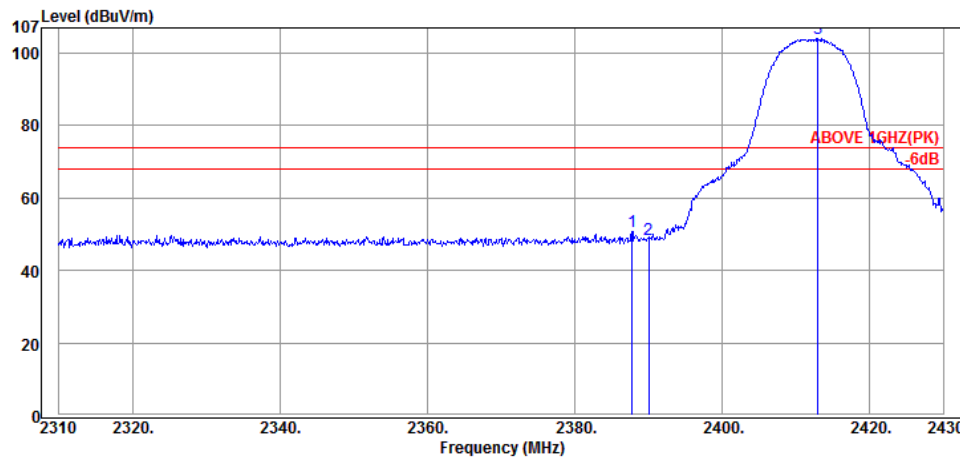
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2381.04	28.35	5.23	16.15	49.73	74.00	24.27	Peak
2390.04	28.35	5.24	14.78	48.37	74.00	25.63	Peak
2412.60	28.39	5.26	72.38	106.03	---	---	Peak



Antenna at Horizontal Polarization

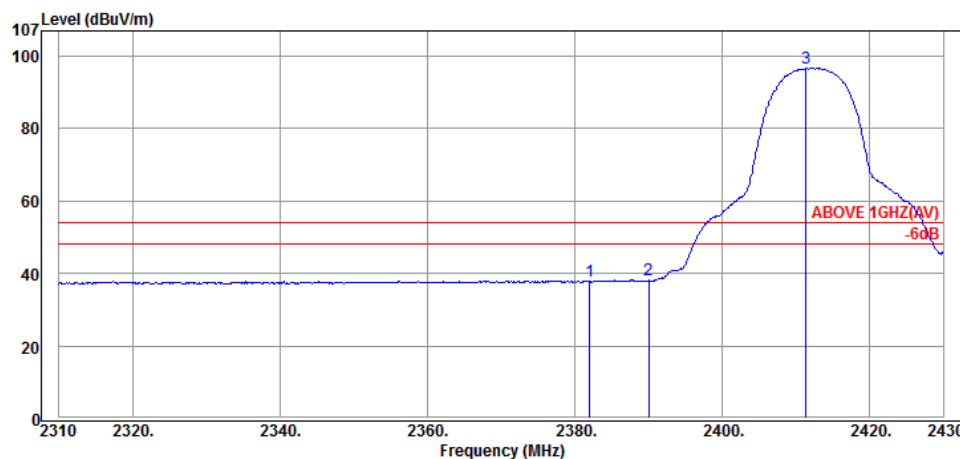
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2375.40	28.34	5.23	4.43	38.00	54.00	16.00	Average
2390.04	28.35	5.24	4.43	38.02	54.00	15.98	Average
2411.40	28.39	5.26	65.44	99.09	---	---	Average

Mode	802.11b	Frequency	TX 2412MHz
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Antenna at Vertical Polarization

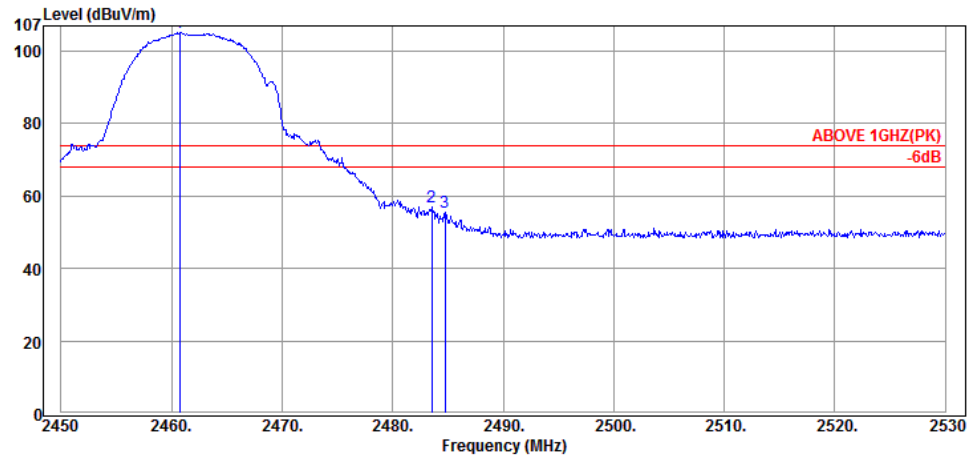
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2387.76	28.35	5.24	17.17	50.76	74.00	23.24	Peak
2390.04	28.35	5.24	14.81	48.40	74.00	25.60	Peak
2412.96	28.39	5.26	70.57	104.22	---	---	Peak



Antenna at Vertical Polarization

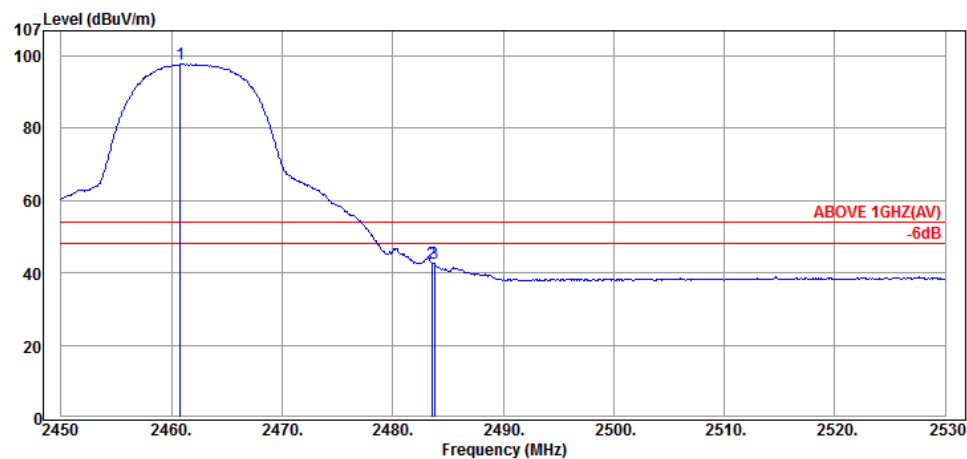
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2382.00	28.35	5.23	4.47	38.05	54.00	15.95	Average
2390.04	28.35	5.24	4.53	38.12	54.00	15.88	Average
2411.40	28.39	5.26	63.05	96.70	---	---	Average

Mode	802.11b	Frequency	TX 2462MHz
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Antenna at Horizontal Polarization

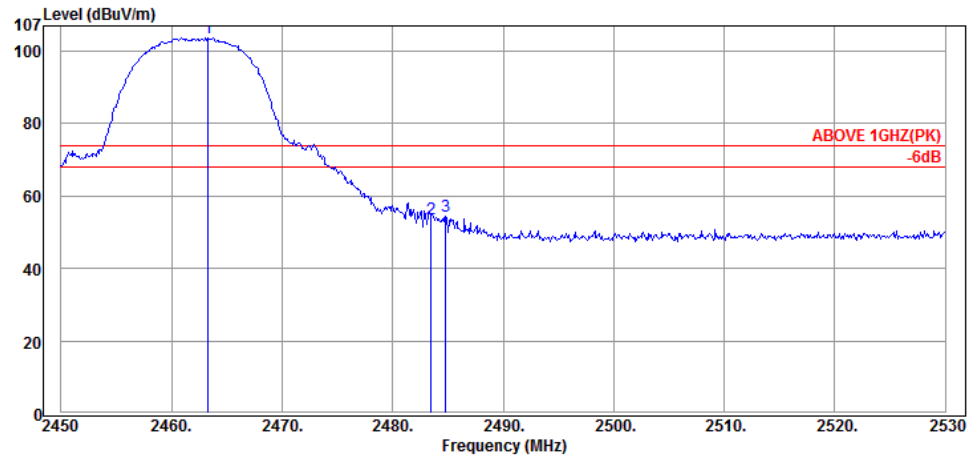
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2460.72	28.45	5.29	71.39	105.13	---	---	Peak
2483.52	28.48	5.31	23.37	57.16	74.00	16.84	Peak
2484.72	28.48	5.31	21.65	55.44	74.00	18.56	Peak



Antenna at Horizontal Polarization

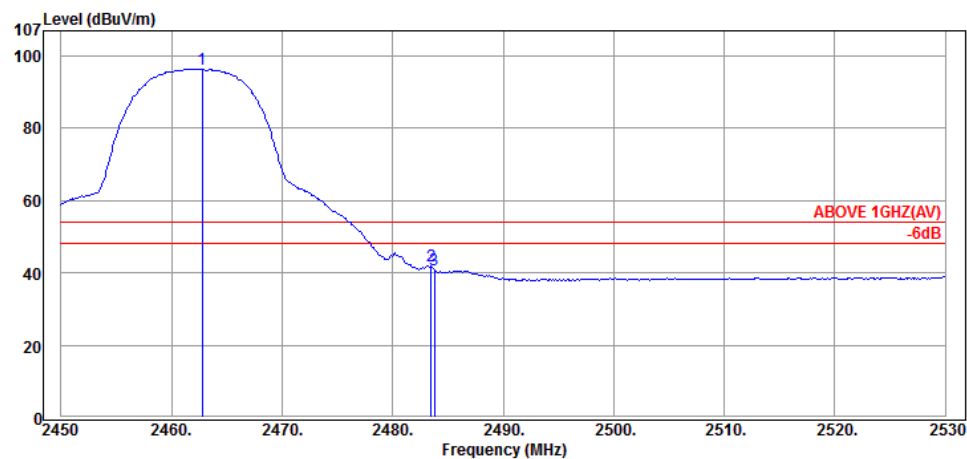
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2460.80	28.45	5.29	64.05	97.79	---	---	Average
2483.52	28.48	5.31	8.93	42.72	54.00	11.28	Average
2483.76	28.48	5.31	8.78	42.57	54.00	11.43	Average

Mode	802.11b	Frequency	TX 2462MHz
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Antenna at Vertical Polarization

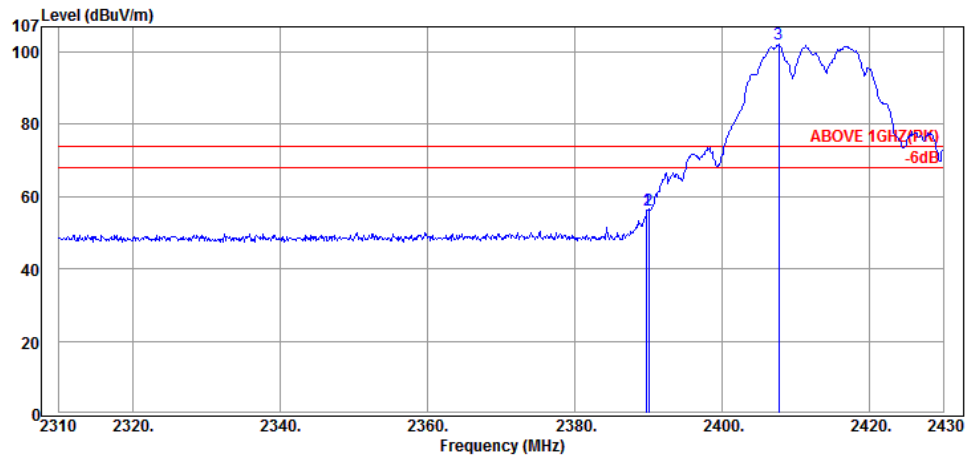
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2463.30	28.45	5.29	70.11	103.85	---	---	Peak
2483.50	28.48	5.31	19.99	53.78	74.00	20.22	Peak
2484.80	28.48	5.31	20.61	54.40	74.00	19.60	Peak



Antenna at Vertical Polarization

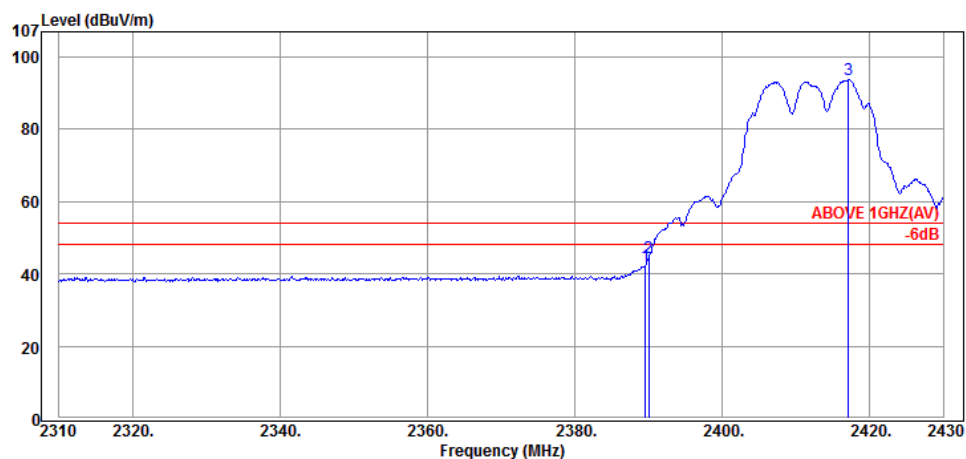
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2462.80	28.45	5.29	62.66	96.40	---	---	Average
2483.50	28.48	5.31	7.99	41.78	54.00	12.22	Average
2483.80	28.48	5.31	6.95	40.74	54.00	13.26	Average

Mode	802.11g	Frequency	TX 2412MHz
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Antenna at Horizontal Polarization

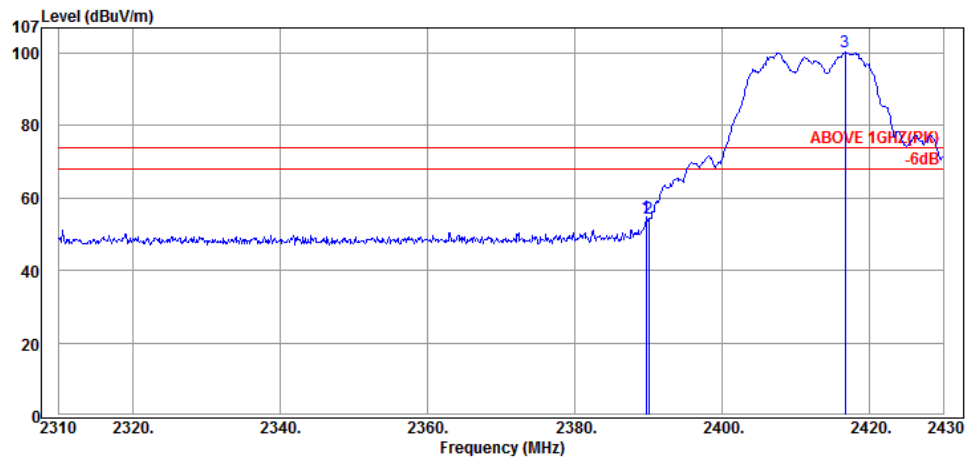
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.80	28.35	5.24	22.60	56.19	74.00	17.81	Peak
2390.04	28.35	5.24	22.83	56.42	74.00	17.58	Peak
2407.68	28.38	5.25	68.50	102.13	---	---	Peak



Antenna at Horizontal Polarization

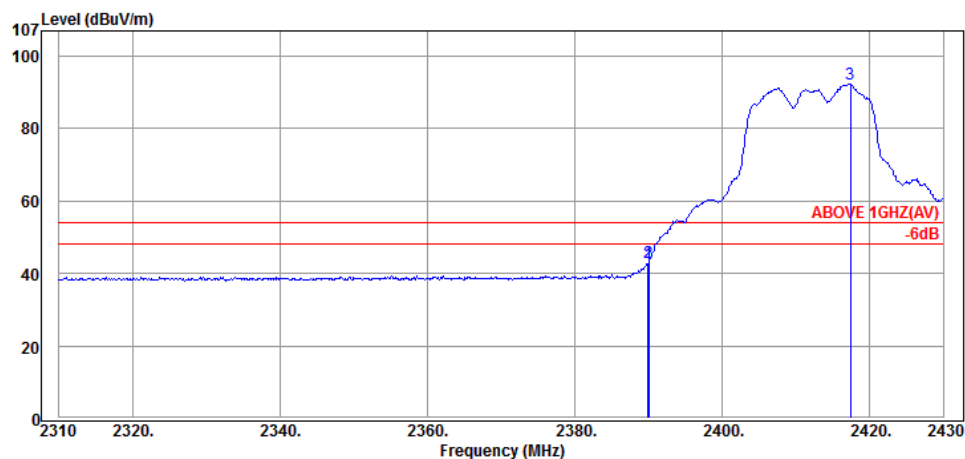
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.56	28.35	5.24	8.63	42.22	54.00	11.78	Average
2390.04	28.35	5.24	10.72	44.31	54.00	9.69	Average
2417.16	28.39	5.26	60.03	93.68	---	---	Average

Mode	802.11g	Frequency	TX 2412MHz
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Antenna at Vertical Polarization

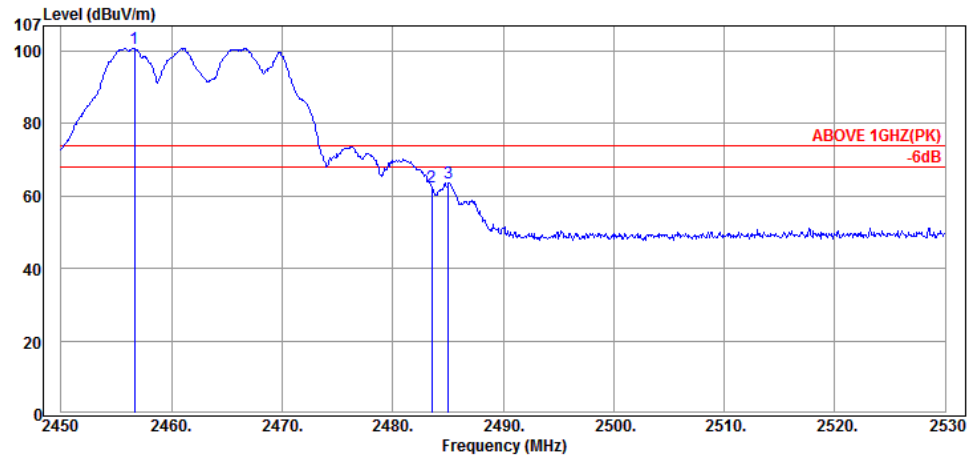
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.68	28.35	5.24	21.02	54.61	74.00	19.39	Peak
2390.04	28.35	5.24	20.85	54.44	74.00	19.56	Peak
2416.68	28.39	5.26	66.59	100.24	---	---	Peak



Antenna at Vertical Polarization

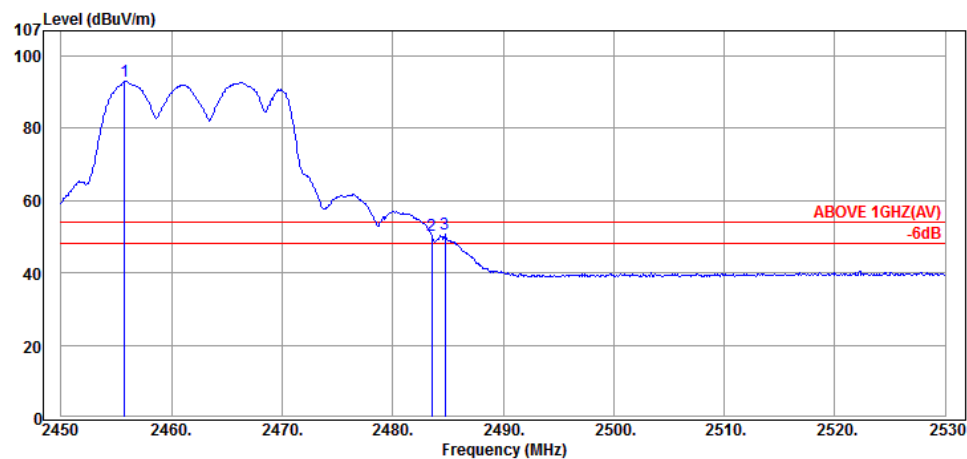
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.92	28.35	5.24	9.14	42.73	54.00	11.27	Average
2390.04	28.35	5.24	9.58	43.17	54.00	10.83	Average
2417.40	28.39	5.26	58.66	92.31	---	---	Average

Mode	802.11g	Frequency	TX 2462MHz
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Antenna at Horizontal Polarization

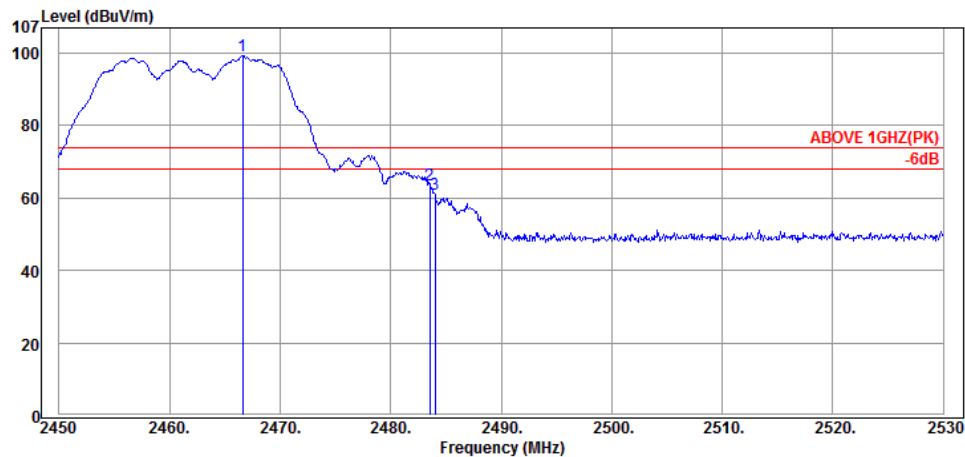
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2456.64	28.45	5.29	67.10	100.84	---	---	Peak
2483.52	28.48	5.31	28.62	62.41	74.00	11.59	Peak
2485.04	28.48	5.31	29.98	63.77	74.00	10.23	Peak



Antenna at Horizontal Polarization

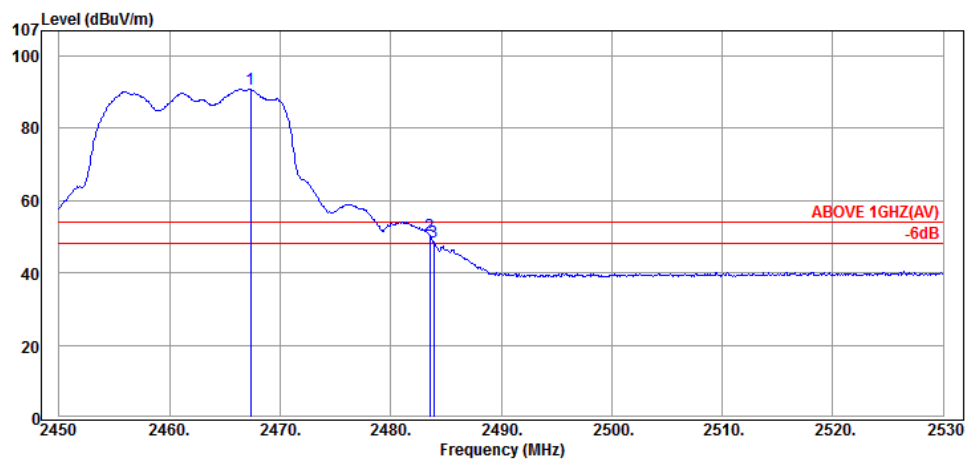
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2455.76	28.45	5.29	59.19	92.93	---	---	Average
2483.52	28.48	5.31	16.53	50.32	54.00	3.68	Average
2484.72	28.48	5.31	16.88	50.67	54.00	3.33	Average

Mode	802.11g	Frequency	TX 2462MHz
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Antenna at Vertical Polarization

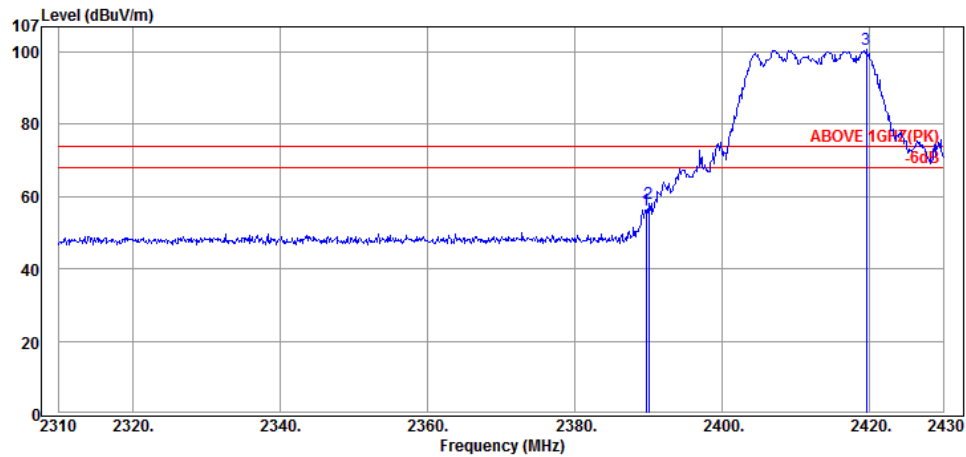
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2466.64	28.45	5.29	65.45	99.19	---	---	Peak
2483.52	28.48	5.31	30.00	63.79	74.00	10.21	Peak
2484.00	28.48	5.31	27.40	61.19	74.00	12.81	Peak



Antenna at Vertical Polarization

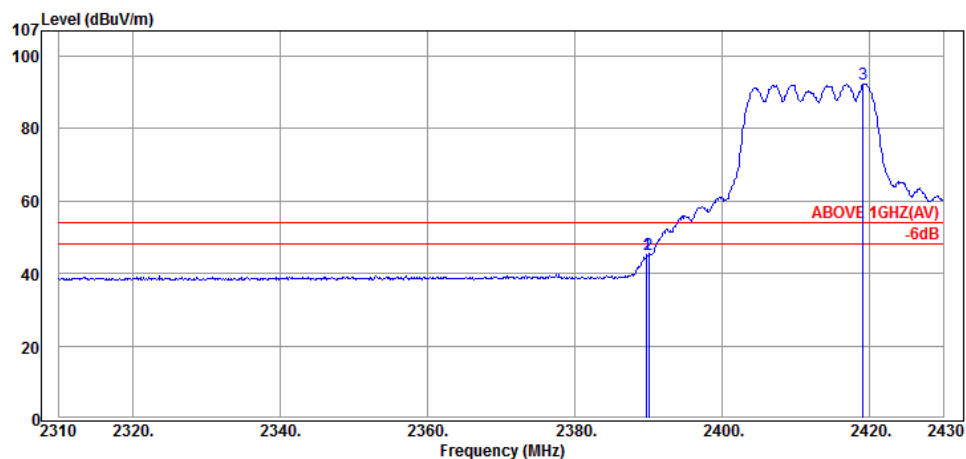
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2467.36	28.45	5.29	57.00	90.74	---	---	Average
2483.52	28.48	5.31	16.69	50.48	54.00	3.52	Average
2483.92	28.48	5.31	14.72	48.51	54.00	5.49	Average

Mode	802.11n-HT20	Frequency	TX 2412MHz
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Antenna at Horizontal Polarization

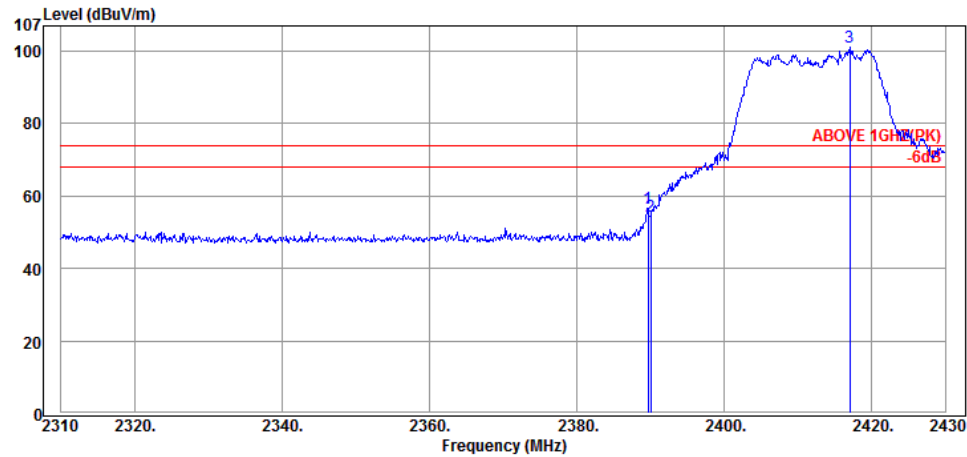
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.68	28.35	5.24	22.83	56.42	74.00	17.58	Peak
2390.04	28.35	5.24	24.53	58.12	74.00	15.88	Peak
2419.56	28.40	5.26	67.10	100.76	---	---	Peak



Antenna at Horizontal Polarization

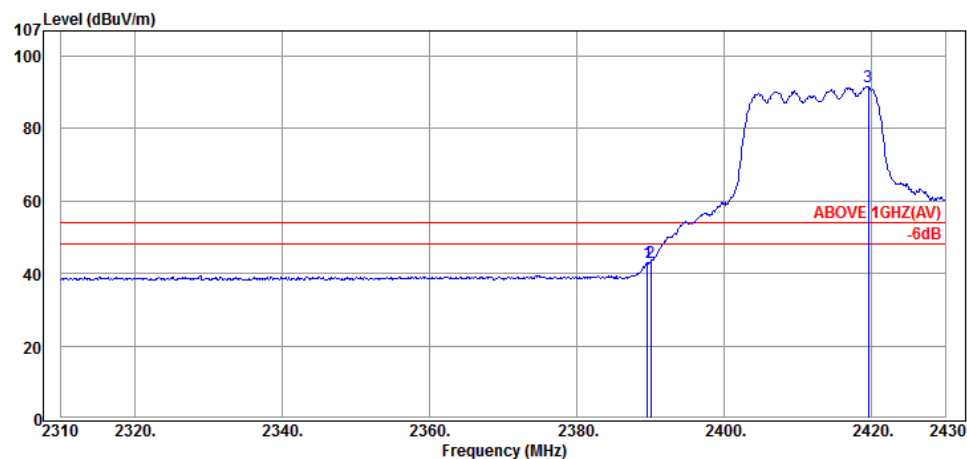
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.80	28.35	5.24	11.71	45.30	54.00	8.70	Average
2390.04	28.35	5.24	11.56	45.15	54.00	8.85	Average
2419.08	28.40	5.26	58.73	92.39	---	---	Average

Mode	802.11n-HT20	Frequency	TX 2412MHz
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Antenna at Vertical Polarization

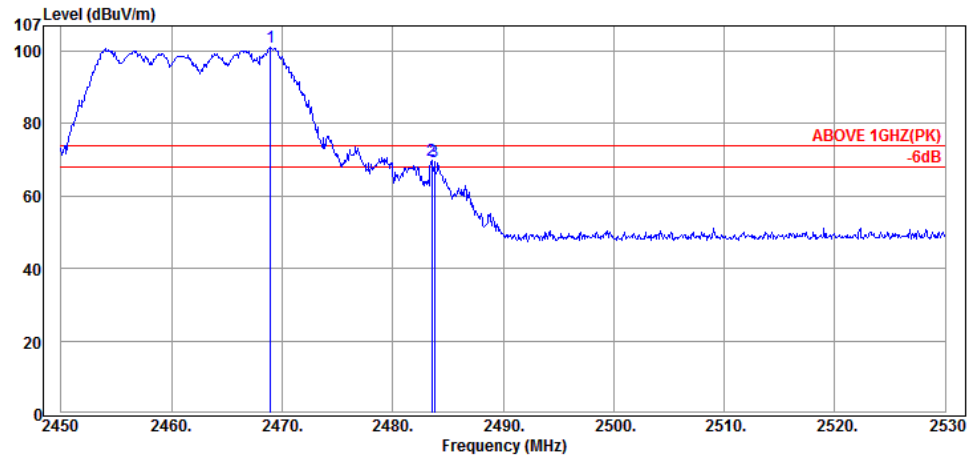
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.68	28.35	5.24	23.13	56.72	74.00	17.28	Peak
2390.04	28.35	5.24	20.79	54.38	74.00	19.62	Peak
2417.04	28.39	5.26	67.59	101.24	---	---	Peak



Antenna at Vertical Polarization

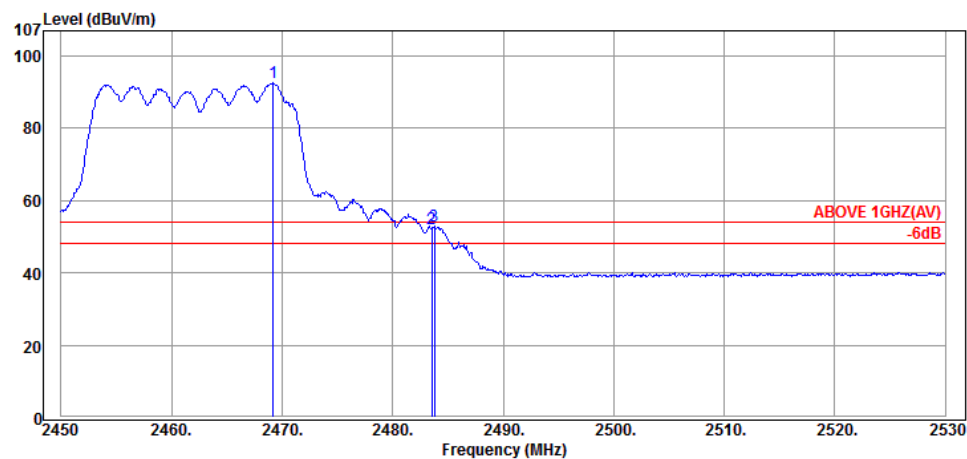
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.56	28.35	5.24	9.38	42.97	54.00	11.03	Average
2390.04	28.35	5.24	9.60	43.19	54.00	10.81	Average
2419.56	28.40	5.26	58.06	91.72	---	---	Average

Mode	802.11n-HT20	Frequency	TX 2462MHz
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Antenna at Horizontal Polarization

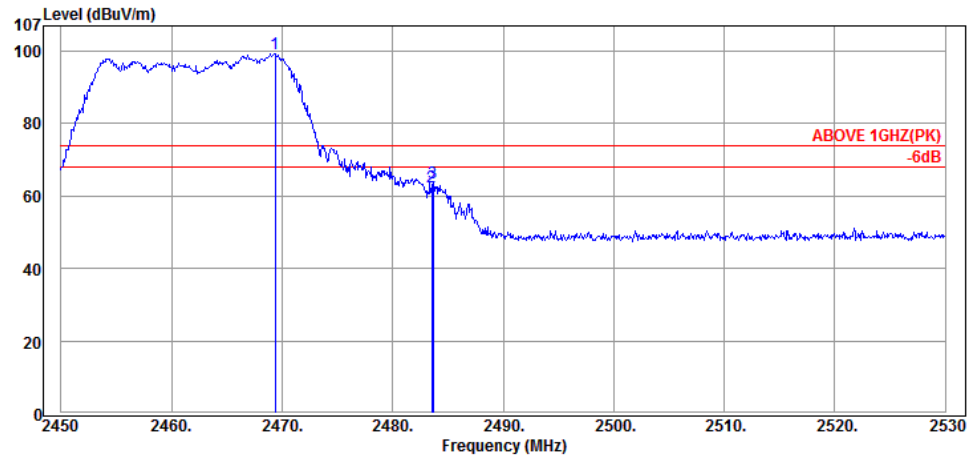
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2468.96	28.46	5.30	67.35	101.11	---	---	Peak
2483.52	28.48	5.31	36.24	70.03	74.00	3.97	Peak
2483.76	28.48	5.31	35.68	69.47	74.00	4.53	Peak



Antenna at Horizontal Polarization

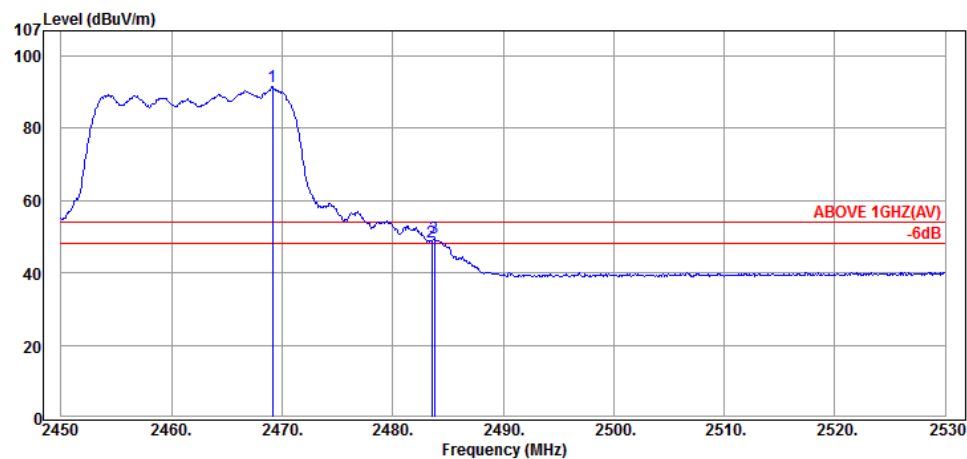
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2469.20	28.46	5.30	58.82	92.58	---	---	Average
2483.52	28.48	5.31	18.59	52.38	54.00	1.62	Average
2483.76	28.48	5.31	19.10	52.89	54.00	1.11	Average

Mode	802.11n-HT20	Frequency	TX 2462MHz
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Antenna at Vertical Polarization

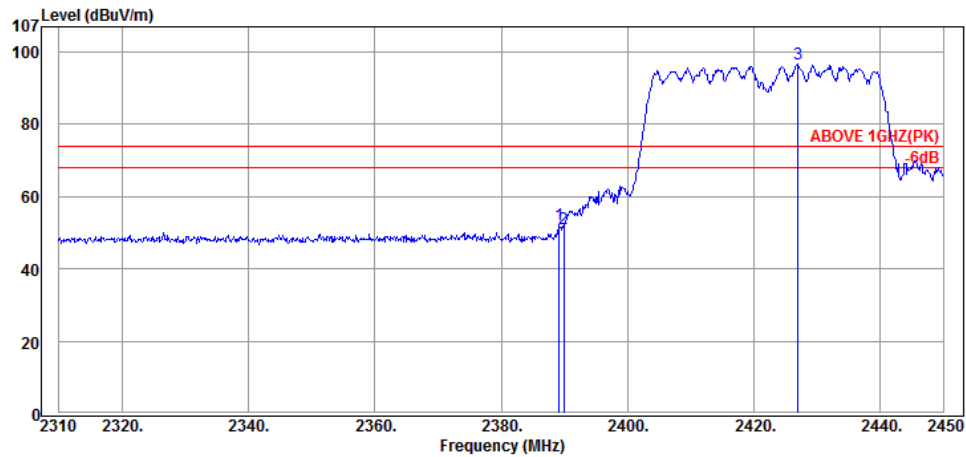
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2469.36	28.46	5.30	65.52	99.28	---	---	Peak
2483.52	28.48	5.31	28.57	62.36	74.00	11.64	Peak
2483.68	28.48	5.31	29.86	63.65	74.00	10.35	Peak



Antenna at Vertical Polarization

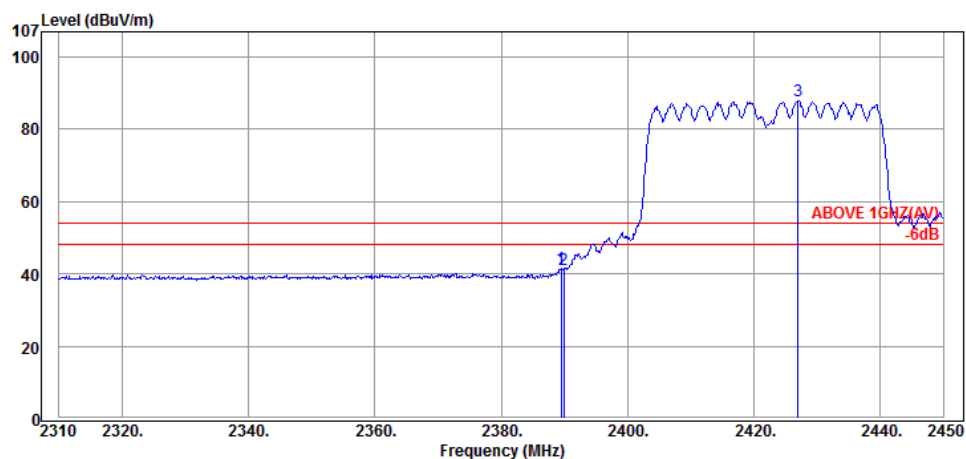
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2469.12	28.46	5.30	57.72	91.48	---	---	Average
2483.52	28.48	5.31	14.78	48.57	54.00	5.43	Average
2483.76	28.48	5.31	15.77	49.56	54.00	4.44	Average

Mode	802.11n-HT40	Frequency	TX 2422MHz
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Antenna at Horizontal Polarization

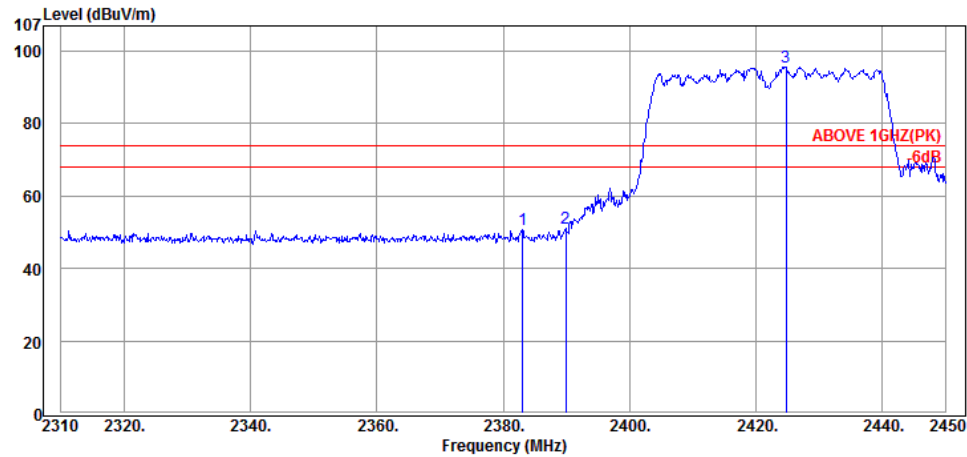
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.24	28.35	5.24	18.69	52.28	74.00	21.72	Peak
2389.94	28.35	5.24	17.64	51.23	74.00	22.77	Peak
2427.04	28.41	5.27	62.87	96.55	---	---	Peak



Antenna at Horizontal Polarization

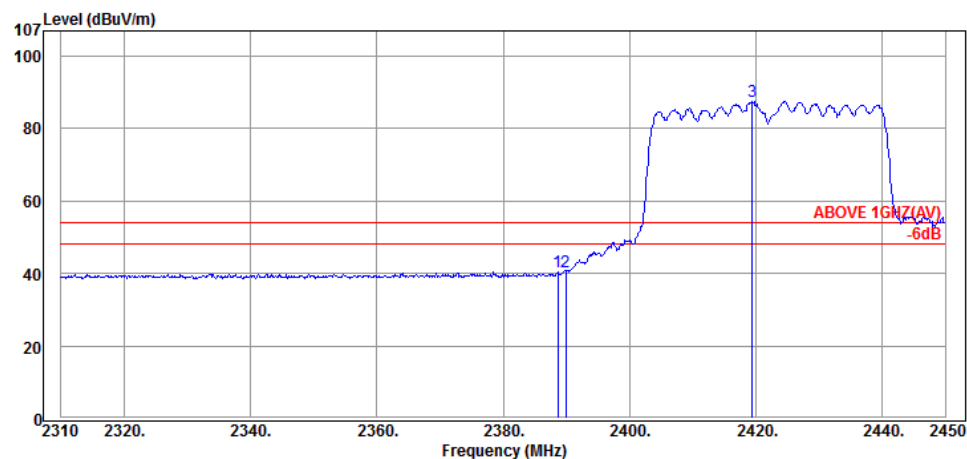
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.52	28.35	5.24	7.86	41.45	54.00	12.55	Average
2389.94	28.35	5.24	7.60	41.19	54.00	12.81	Average
2427.04	28.41	5.27	54.20	87.88	---	---	Average

Mode	802.11n-HT40	Frequency	TX 2422MHz
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Antenna at Vertical Polarization

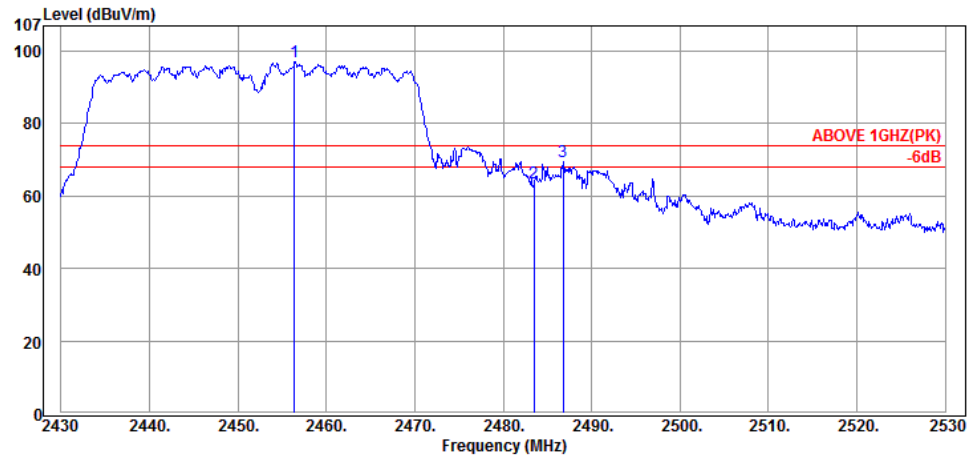
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2383.08	28.35	5.23	17.08	50.66	74.00	23.34	Peak
2389.94	28.35	5.24	17.43	51.02	74.00	22.98	Peak
2424.80	28.40	5.27	62.03	95.70	---	---	Peak



Antenna at Vertical Polarization

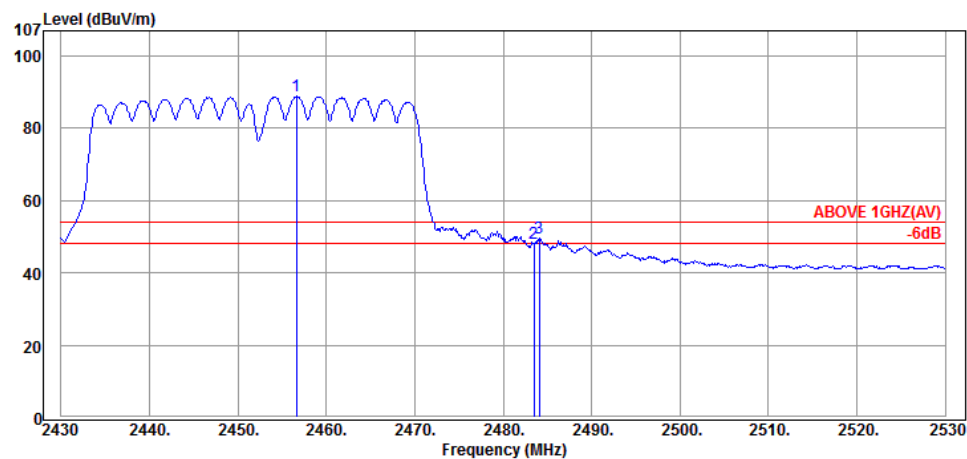
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2388.68	28.35	5.24	6.93	40.52	54.00	13.48	Average
2389.94	28.35	5.24	7.02	40.61	54.00	13.39	Average
2419.48	28.40	5.26	53.80	87.46	---	---	Average

Mode	802.11n-HT40	Frequency	TX 2452MHz
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Antenna at Horizontal Polarization

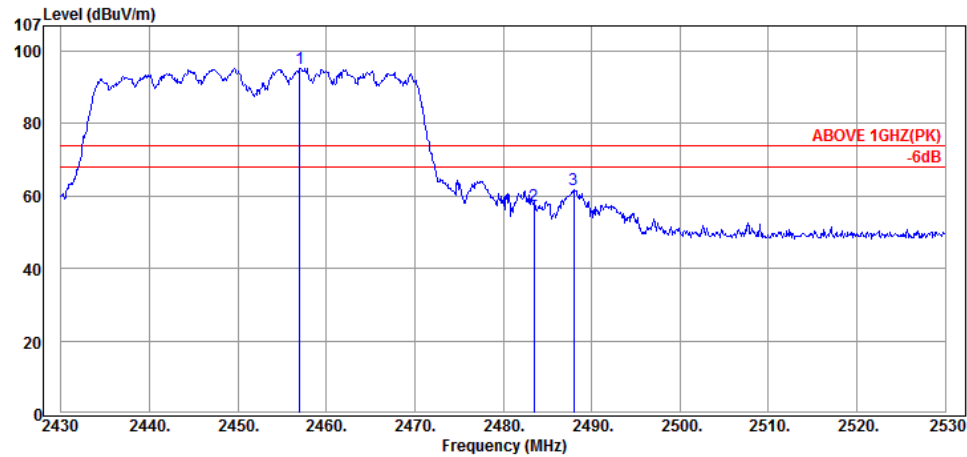
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2456.40	28.45	5.29	63.21	96.95	---	---	Peak
2483.50	28.48	5.31	29.99	63.78	74.00	10.22	Peak
2486.80	28.48	5.31	35.75	69.54	74.00	4.46	Peak



Antenna at Horizontal Polarization

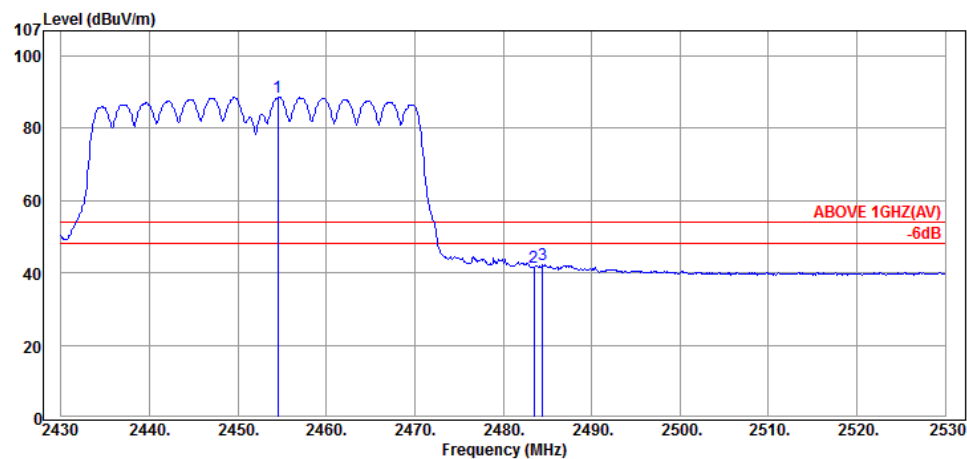
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2456.60	28.45	5.29	55.08	88.82	---	---	Average
2483.50	28.48	5.31	14.36	48.15	54.00	5.85	Average
2484.10	28.48	5.31	15.77	49.56	54.00	4.44	Average

Mode	802.11n-HT40	Frequency	TX 2452MHz
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Antenna at Vertical Polarization

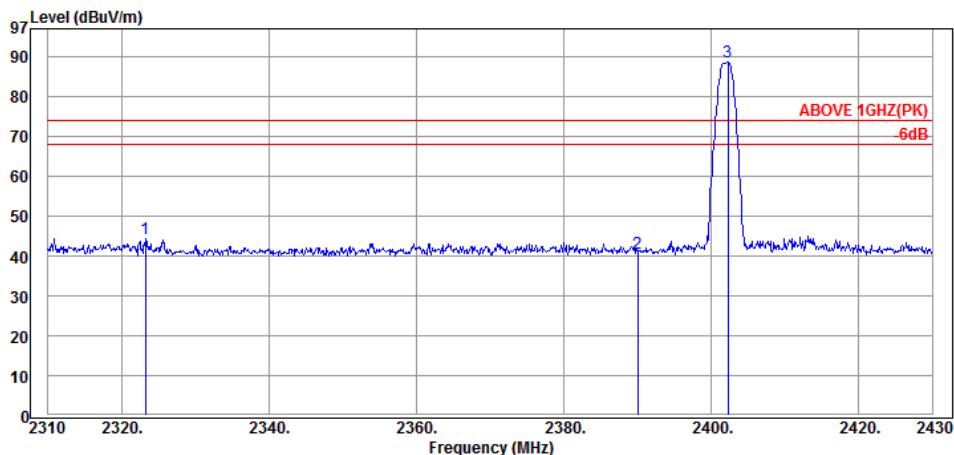
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2457.00	28.45	5.29	61.53	95.27	---	---	Peak
2483.50	28.48	5.31	23.47	57.26	74.00	16.74	Peak
2488.00	28.48	5.31	28.08	61.87	74.00	12.13	Peak



Antenna at Vertical Polarization

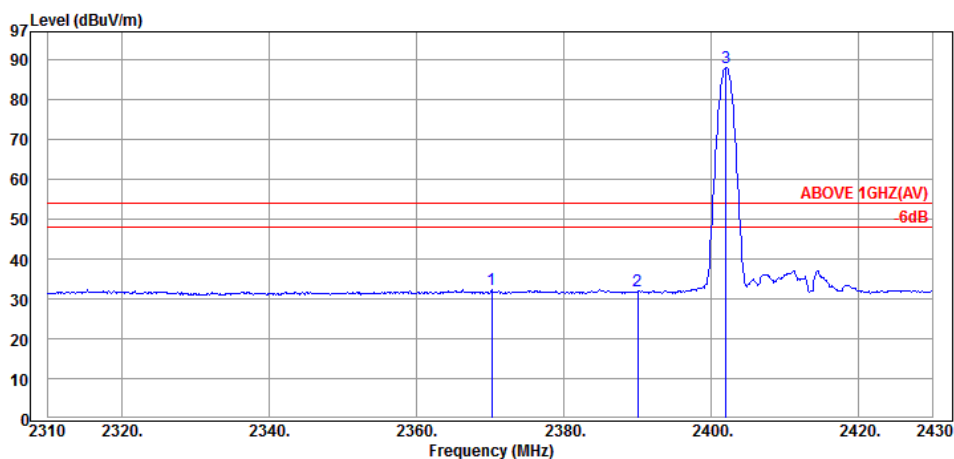
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2454.50	28.45	5.29	54.78	88.52	---	---	Average
2483.50	28.48	5.31	7.70	41.49	54.00	12.51	Average
2484.50	28.48	5.31	8.58	42.37	54.00	11.63	Average

Mode	BLE	Frequency	TX 2402MHz
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Antenna at Horizontal Polarization

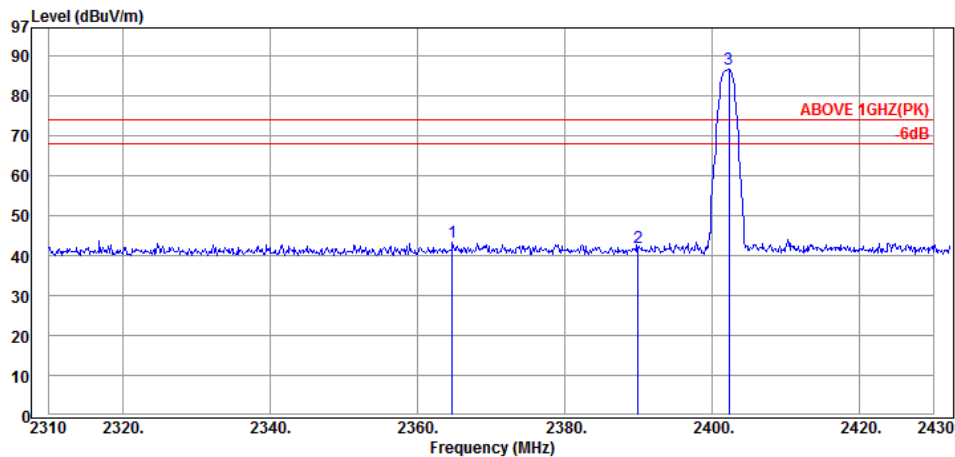
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2323.20	28.27	5.19	10.74	44.20	74.00	29.80	Peak
2390.04	28.35	5.24	7.13	40.72	74.00	33.28	Peak
2402.28	28.37	5.25	55.09	88.71	---	---	Peak



Antenna at Horizontal Polarization

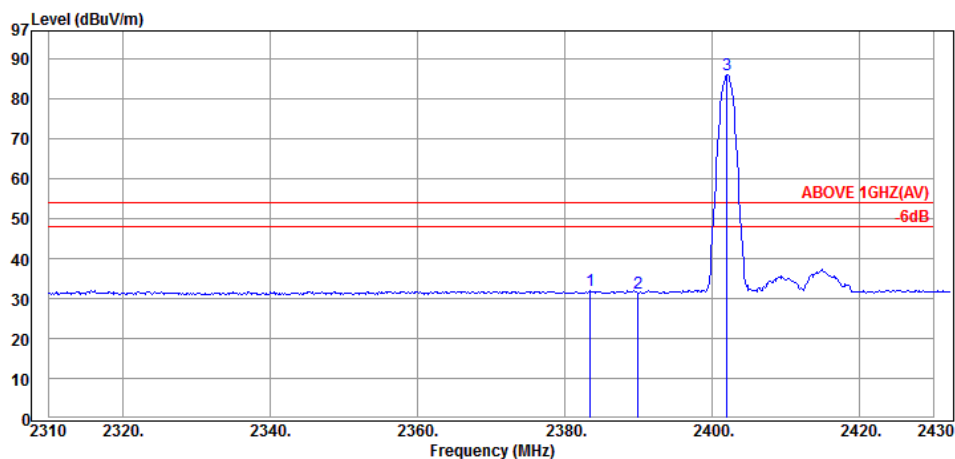
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2370.24	28.34	5.22	-1.32	32.24	54.00	21.76	Average
2390.04	28.35	5.24	-1.67	31.92	54.00	22.08	Average
2402.04	28.37	5.25	54.40	88.02	---	---	Average

Mode	BLE	Frequency	TX 2402MHz
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Antenna at Vertical Polarization

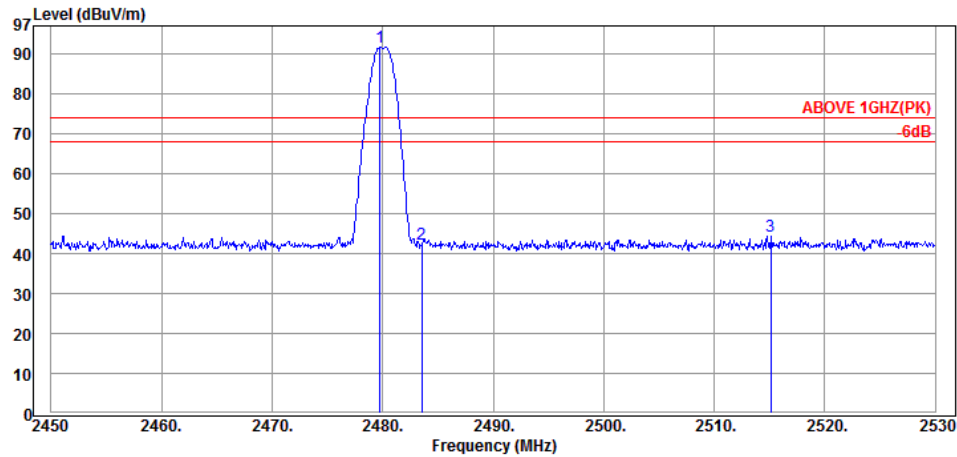
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2364.74	28.33	5.22	9.76	43.31	74.00	30.69	Peak
2389.94	28.35	5.24	8.29	41.88	74.00	32.12	Peak
2402.26	28.37	5.25	53.08	86.70	---	---	Peak



Antenna at Vertical Polarization

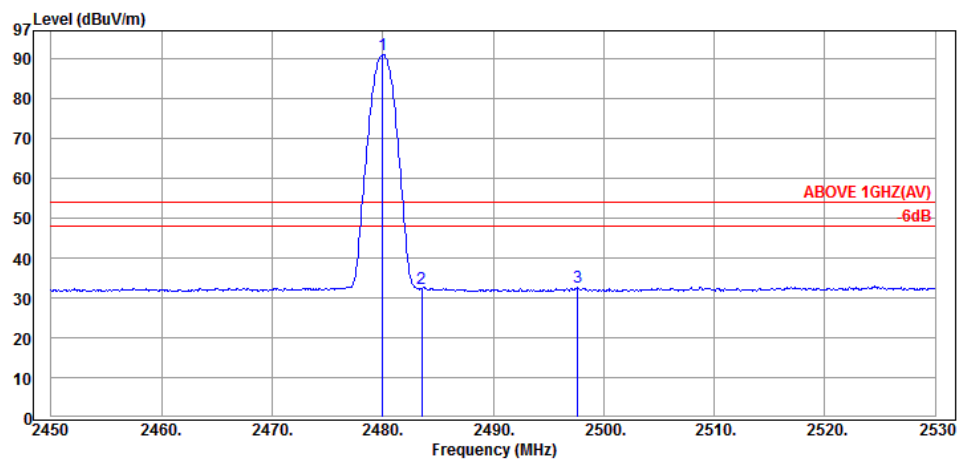
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2383.50	28.35	5.23	-1.55	32.03	54.00	21.97	Average
2389.94	28.35	5.24	-2.29	31.30	54.00	22.70	Average
2401.98	28.37	5.25	52.38	86.00	---	---	Average

Mode	BLE	Frequency	TX 2480MHz
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Antenna at Horizontal Polarization

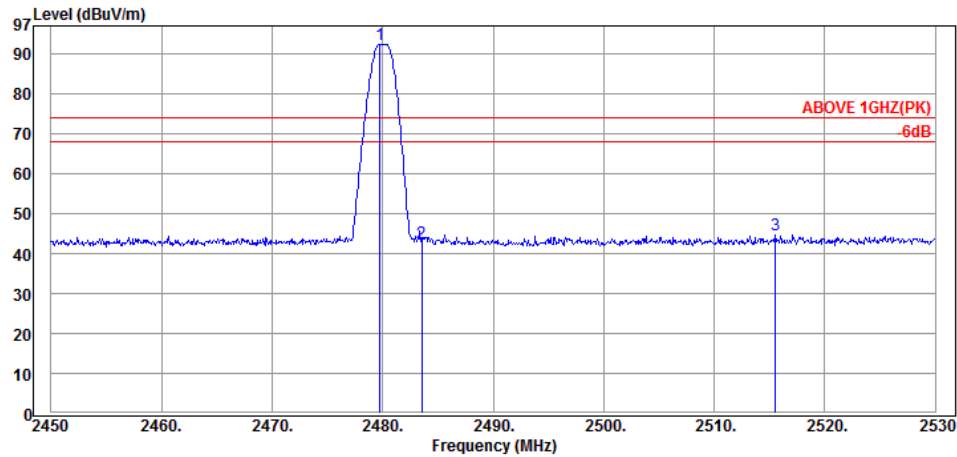
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2479.76	28.47	5.30	57.82	91.59	---	---	Peak
2483.52	28.48	5.31	8.70	42.49	74.00	31.51	Peak
2515.12	28.55	5.33	10.42	44.30	74.00	29.70	Peak



Antenna at Horizontal Polarization

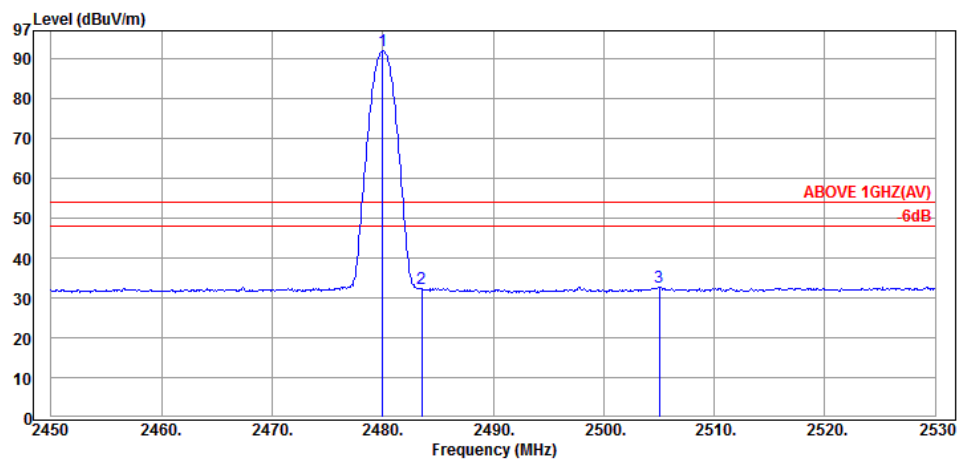
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2480.00	28.47	5.30	57.20	90.97	---	---	Average
2483.52	28.48	5.31	-1.55	32.24	54.00	21.76	Average
2497.68	28.50	5.32	-1.30	32.52	54.00	21.48	Average

Mode	BLE	Frequency	TX 2480MHz
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Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2479.76	28.47	5.30	58.73	92.50	---	---	Peak
2483.52	28.48	5.31	8.84	42.63	74.00	31.37	Peak
2515.52	28.55	5.33	10.87	44.75	74.00	29.25	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
2480.00	28.47	5.30	58.13	91.90	---	---	Average
2483.52	28.48	5.31	-1.60	32.19	54.00	21.81	Average
2505.04	28.53	5.33	-1.04	32.82	54.00	21.18	Average

6.5.3. Emissions outside the frequency band:

The emissions (up to 25GHz) not reported for there is no emission be found.

Mode	802.11b	Frequency	TX 2437MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
1854.00	27.20	4.66	15.88	47.74	54.00	6.26	Peak
2758.00	29.36	5.54	14.83	49.73	54.00	4.27	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
1384.00	25.54	3.73	17.98	47.25	54.00	6.75	Peak
1832.00	27.09	4.62	19.54	51.25	54.00	2.75	Peak

Mode	802.11g	Frequency	TX 2437MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2190.00	28.08	5.09	13.40	46.57	54.00	7.43	Peak
2772.00	29.41	5.54	14.98	49.93	54.00	4.07	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
1756.00	26.76	4.48	20.62	51.86	54.00	2.14	Peak
2408.00	28.38	5.25	19.37	53.00	54.00	1.00	Peak

Mode	802.11n-HT20	Frequency	TX 2437MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
1758.00	26.76	4.48	20.45	51.69	54.00	2.31	Peak
2762.00	29.36	5.54	15.02	49.92	54.00	4.08	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
1758.00	26.76	4.48	21.86	53.10	54.00	0.90	Peak
2408.00	28.38	5.25	19.71	53.34	54.00	0.66	Peak

Mode	802.11n-HT40	Frequency	TX 2437MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
1756.00	26.76	4.48	21.07	52.31	54.00	1.69	Peak
2762.00	29.36	5.54	15.02	49.92	54.00	4.08	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
1756.00	26.76	4.48	21.79	53.03	54.00	0.97	Peak
2404.00	28.37	5.25	19.87	53.49	54.00	0.51	Peak

Mode	BLE	Frequency	TX 2402MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4805.00	32.82	8.98	7.19	48.99	54.00	5.01	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
4805.00	32.82	8.98	7.45	49.25	54.00	4.75	Peak

Mode	BLE	Frequency	TX 2440MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4880.00	32.96	9.08	8.27	50.31	54.00	3.69	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
4880.00	32.96	9.08	8.17	50.21	54.00	3.79	Peak

Mode	BLE	Frequency	TX 2480MHz
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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
4960.00	33.12	9.20	8.46	50.78	54.00	3.22	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
4960.00	33.12	9.20	8.85	51.17	54.00	2.83	Peak

6.5.4. Emissions in Non-restricted Frequency Bands

Pursuant to 558074 D01 DTS Meas Guidance v04 that emission levels below the 15.209 Section 8.9 table 4 general radiated emissions limits is not required.

7. DEVIATION TO TEST SPECIFICATIONS

【NONE】