



Test Report No.:
FCC2023-0070-RF2

RF Test Report

FCC ID : 2AYXT61100002
EUT : Pod 4
MODEL : 10504
BRAND NAME : Eight Sleep
APPLICANT : Eight Sleep Inc
Classification of Test : N/A

CVC Testing Technology Co., Ltd.



CVC Testing Technology Co., Ltd.

Test Report No.: FCC2023-0070-RF2

Page 2 of 67

Applicant		Name: Eight Sleep Inc Address: 212 W 35th Street, Floor 4, New York, NY 10123	
Manufacturer		Name: BoShiJie Technology Co., Ltd Address: Boshijie Industrial Park, No. 1 Huifeng West Third Road, Zhongkai High-tech Zone, Huizhou City, Guangdong, China. 516006	
Equipment Under Test		Product Name: Pod 4 Model/Type: 10504 Brand Name: Eight Sleep Serial NO.: N/A Sample NO.: 2-1	
Date of Receipt.	2023.12.11	Date of Testing	2023.12.11~2024.01.30
Test Specification		Test Result	
FCC Part 15, Subpart E (15.407)		PASS	
Evaluation of Test Result	The equipment under test was found to comply with the requirements of the standards applied. Seal of CVC Issue Date: 2024.01.31		
Tested by:  Lu Wei Ji Name Signature	Tested by:  Xu Zhen Fei Name Signature	Approved by:  Chen Hua Wen Name Signature	
Other Aspects: NONE.			
Abbreviations: OK, Pass= passed Fail = failed N/A= not applicable EUT= equipment, sample(s) under tested			

This test report relates only to the EUT, and shall not be reproduced except in full, without written approval of CVC.



TABLE OF CONTENTS

RELEASE CONTROL RECORD	4
1 SUMMARY OF TEST RESULTS	5
1.1 LIST OF TEST AND MEASUREMENT INSTRUMENTS	6
1.2 MEASUREMENT UNCERTAINTY	7
1.3 TEST LOCATION	7
2 GENERAL INFORMATION	8
2.1 GENERAL PRODUCT INFORMATION	8
2.2 CARRIER FREQUENCY AND CHANNEL	9
2.3 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL	11
2.4 DESCRIPTION OF SUPPORT UNITS	12
2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS	12
3 TEST TYPES AND RESULTS	13
3.1 CONDUCTED EMISSION MEASUREMENT	13
3.2 RADIATED EMISSION AND BANDEDGE MEASUREMENT	18
3.3 OCCUPIED BANDWIDTH MEASUREMENT	58
3.4 26DB EMISSION BANDWIDTH	59
3.5 6DB EMISSION BANDWIDTH	60
3.6 TRANSMIT POWER MEASUREMENT	61
3.7 POWER SPECTRAL DENSITY MEASUREMENT	62
3.8 FREQUENCY STABILITY	63
3.9 ANTENNA REQUIREMENT	64
4 PHOTOGRAPHS OF TEST SETUP	65
5 PHOTOGRAPHS OF THE EUT	66



RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FCC2023-0070-RF2	Original release	2024.01.31



1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPARTE (SECTION 15.407)			
STANDARD SECTION	TEST TYPE	RESULT	REMARK
FCC 15.207	AC Power Conducted Emission	PASS	See section 3.1
FCC 15.403(a)(e)	6dB&26dB Emission Bandwidth	PASS	Appendix A1&A3 of FCCSZ2023-0011-RF2-A1
---	Occupied Bandwidth Measurement	PASS	Appendix A2 of FCCSZ2023-0011-RF2-A1
FCC 15.407(b)	Radiated Emission and Bandedge	PASS	See section 3.2
FCC 15.407(a)	Transmit Power	PASS	Appendix C of FCCSZ2023-0011-RF2-A1
FCC 15.407(a)	Power Spectral Density	PASS	Appendix D of FCCSZ2023-0011-RF2-A1
FCC 15.407(g)	Frequency Stability	PASS	Appendix E of FCCSZ2023-0011-RF2-A1
FCC 15.203 FCC 15.407(a)	Antenna Requirement	PASS	See section 3.9



1.1 LIST OF TEST AND MEASUREMENT INSTRUMENTS

Test Equipment	Type/Mode	SERIAL NO.	Equipment No.	Manufacturer	Cal. Due
WIFI & Bluetooth Test System 1					/
Communication Shielded Room 1	4m*3m*3m	CRTDSWKS44301	VGDS-0699	CRT	2024/04/24
Spectrum Analyzer	FSV40	101579	DZ-000239-3	R&S	2024/04/22
Comprehensive Test Instrument	CMW500	137779	DZ-000220	R&S	2024/07/04
LTE Comprehensive Test Instrument	E7515A	MY58010639	DZ-000173	KEYSIGHT	2024/03/27
Analog Signal Generator	SMA100B	103663	DZ-000239-2	R&S	2024/08/17
Vector Signal Generator	SMBV100B	101757	DZ-000239-1	R&S	2024/05/29
Programmable DC Power Supply	E3642A	MY59108106	DZ-000242-2	KEYSIGHT	2024/08/03
Radiation Spurious Test System					/
3m Semi-Anechoic Chamber	FACT-4	ST08035	WKNA-0024	ETS	2024/12/12
Loop Antenna	FMZB1513	1513-170	EM-000384	SCHWARZBECK	2024/02/22
Spectrum Analyzer	N9010B	MY57470323	DZ-000174	KEYSIGHT	2024/02/22
EMI Test Receiver (3M)	N9038A-508	MY532290079	EM-000397	Agilent	2024/06/10
Broadband Antenna	VULB 9163	9163-530	EM-000342	SCHWARZBECK	2024/02/24
Waveguide Horn Antenna	BBHA9120B	602	EM-000383	SCHWARZBECK	2024/08/05
Waveguide Horn Antenna	HF906	360306/008	WKNA-0024-8	R&S	2024/06/04
Comprehensive tester	CMW500	159000	DZ-000240-2	R&S	2024/12/12
Conducted emission					/
EMI Test Receiver	ESW44	103123	EM-000698	R&S	2024-06-10
EMI Test Receiver	ESR3	102394	VG DY-0705	R&S	2024-02-22
LISN	NSLK 8127	8127644	VG DY-0150	SCHWARZBECK	2024-07-27
LISN	NSLK 8128	8128-316	VG DY-0149	SCHWARZBECK	2024-07-27
DC LISN	PVDC8301-017	PVDC8301#17	VG DY-0692	SCHWARZBECK	2024-09-27
LISN	NSLK 8129	8129-268	EM-000388	SCHWARZBECK	2024-02-22
Plus Limiter (#1)	VTSD 9561 F-N	00515	VG DY-0808	SCHWARZBECK	2024-03-03
Plus Limiter (#2)	VTSD 9561	9561-F017	VG DY-0152	SCHWARZBECK	2024-09-03
Impedance Stabilization Network	ISN T800	27095	WKNE-0195	TESEQ	2024-07-27
Impedance Stabilization Network	NTFM8158	8158-0092	VG DY-0356	SCHWARZBECK	2024-05-29
Impedance Stabilization Network	NTFM8131	#184	EM-000498	SCHWARZBECK	2024-05-29
Voltage Probe	TK9420	9420-499	VG DY-0128	SCHWARZBECK	2024-02-22
Power Divider	4901.17.B	22643830	DB-0016	HUBER+SUHNER	2024-07-17
Shielding Room(#1)	GP1A	001	WKNF-0001	LEINING	2024-08-07



1.2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT:

No.	ITEM	FREQUENCY	UNCERTAINTY
1	Conducted emissions	9kHz~30MHz	±2.66dB
2	Radiated emissions	9KHz ~ 30MHz	±0.769dB
		30MHz ~ 1GMHz	±0.877dB
		1GHz ~ 18GHz	±0.777dB
		18GHz ~ 40GHz	±1.315dB
3	Occupied Bandwidth	/	+/-1.86%

1.3 TEST LOCATION

The tests and measurements refer to this report were performed by RF testing Lab. of CVC Testing Technology Co., Ltd.

Add.: No.3, Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou,Guangdong,510663, People's Republic of China

Telephone : +86-20-32293888

Fax : +86-20-32293889

FCC(Test firm designation number: CN1282)

IC(Test firm CAB identifier number: CN0103)

CNAS(Test firm designation number: L0095)



2 GENERAL INFORMATION

2.1 GENERAL PRODUCT INFORMATION

PRODUCT	Pod4		
BRAND	Eight Sleep		
TEST MODEL	10504		
ADDITIONAL MODEL	N/A		
POWER SUPPLY	AC 100~240V		
MODULATION TECHNOLOGY	OFDM		
MODULATION TYPE	256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM		
TRANSFER RATE	802.11a: up to 54Mbps, 802.11n: up to 300Mbps, 802.11ac: up to 867Mbps,		
OPERATING FREQUENCY AND MAXIMUM POWER	Frequency	MAX output power(dBm)	MAX.EIPR(dBm)
	5180 ~ 5240MHz	14.25	12.01
	5745 ~ 5825MHz	13.58	17.58
NUMBER OF CHANNEL	See item 2.3		
ANTENNA TYPE(NOTE 4)	PCB Antenna1 -1.56dBi for 5180 ~ 5240MHz 2.88dBi for 5745 ~ 5825MHz	PCB Antenna2 -3.01dBi for 5180 ~ 5240MHz 4.07dBi for 5745 ~ 5825MHz	
FIX FREQUENCY SOFTWARE	adb		
I/O PORTS	Refer to user’s manual		
CABLE SUPPLIED	N/A		

NOTE:

- For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
- EUT photo refer to report (Report NO.: FCC2023-0070-EUT).
- Since the above data and/or information is provided by the client, CVC is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.
- There are two power supplies, from different manufacturers.

Power supply information		
No.	Manufacturer	MODEL
1	Megmeet	MAP400-24
2	Meanwell	EPP-400-24

- At the same time, EUT provides 2 complete transmitter and 2 receiver.

MODULATION MODE	802. 11a	802. 11n	802. 11ac
TX FUNCTION	SISO	2TX/2RX	2TX/2RX

2.2 CARRIER FREQUENCY AND CHANNEL

FOR 5180 ~ 5260MHz

8 channels are provided for 802.11a, 802.11n (HT20),802.11ac (VHT20):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
36	5180MHz	40	5200MHz
44	5220 MHz	48	5240MHz

4 channels are provided for 802.11n (HT40),802.11ac (VHT40):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
38	5190MHz	46	5230 MHz

1 channel are provided for 802.11ac (VHT80):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
42	5210MHz	/	/

FOR 5745 ~ 5825MHz

5 channels are provided for 802.11a, 802.11n (20MHz),802.11ac (VHT20):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
149	5745MHz	153	5765MHz
157	5785MHz	161	5805MHz
165	5825MHz	--	--

2 channels are providedfor802.11n (HT40),802.11ac (VHT40):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
151	5755MHz	159	5795MHz

1 channel are provided for 802.11ac (VHT80):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
155	5775MHz	/	/

The channels which were indicated in bold type of the above channel list were selected as representative test channel. Therefore only the data of the test channels were recorded in this report.



By means of test software which provided by manufacture, the power levels during the tests were set according to the following codes:

Operated in 5180 ~ 5240MHz band							
802.11a		802.11n(HT20)		802.11n(HT40)		802.11ac (VHT80)	
FREQUENCY (MHZ)	POWER SETTING	FREQUENCY (MHZ)	POWER SETTING	FREQUENCY (MHZ)	POWER SETTING	FREQUENCY (MHZ)	POWER SETTING
5180	9	5180	10	5190	11	5210	12
5200	9	5200	10	5230	11		
5240	9	5240	10				
Operated in 5745 ~ 5825MHz band							
802.11a		802.11n(HT20)		802.11n(HT40)		802.11ac (VHT80)	
FREQUENCY (MHZ)	POWER SETTING	FREQUENCY (MHZ)	POWER SETTING	FREQUENCY (MHZ)	POWER SETTING	FREQUENCY (MHZ)	POWER SETTING
5745	13	5745	14	5755	14	5755	14
5785	13	5785	14	5795	14		
5825	13	5825	14				



2.3 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
-	√	√	√	√	Powered by host unit with wifi(5G) link

Where **RE≥1G**: Radiated Emission above 1GHz

RE<1G: Radiated Emission below 1GHz

PLC: Power Line Conducted Emission

APCM: Antenna Port Conducted Measurement

NOTE:

1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **X-plane**.

NOTE: “-” means no effect.

MODULATION	DATA RATE
802.11a	6Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT20(Covered by HT20)	MCS0
802.11ac VHT40(Covered by HT40)	MCS0
802.11ac VHT80	MCS0

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE<1G	25deg. C, 54%RH	AC 110V	Li Jialing
RE≥1G	25deg. C, 54%RH	AC 110V	Li Jialing
PLC	20deg. C, 56%RH	AC 110V	Li Jialing
APCM	20deg. C, 55%RH	AC 110V	Li Jialing



2.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Support Equipment							
NO	Description	Brand	Model No.	Serial Number	Supplied by		
1	Laptop	Lenovo	K4e-ARE120	MP20kshe	Lab		
Support Cable							
NO	Description	Quantity (Number)	Length (cm)	Detachable (Yes/ No)	Shielded (Yes/ No)	Cores (Number)	Supplied by

2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product, according to the specifications of the manufacturers. It must comply with the requirements of the following standards:

FCC Part 15, Subpart E (15.407)

KDB 789033 D02 General UNII Test Procedures New Rules v02r01

KDB 662911 D01 Multiple Transmitter Output v02r01

ANSI C63.10-2013

All test items have been performed and recorded as per the above standards

3 TEST TYPES AND RESULTS

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

NOTE:1. The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

3.1.2 TEST PROCEDURES

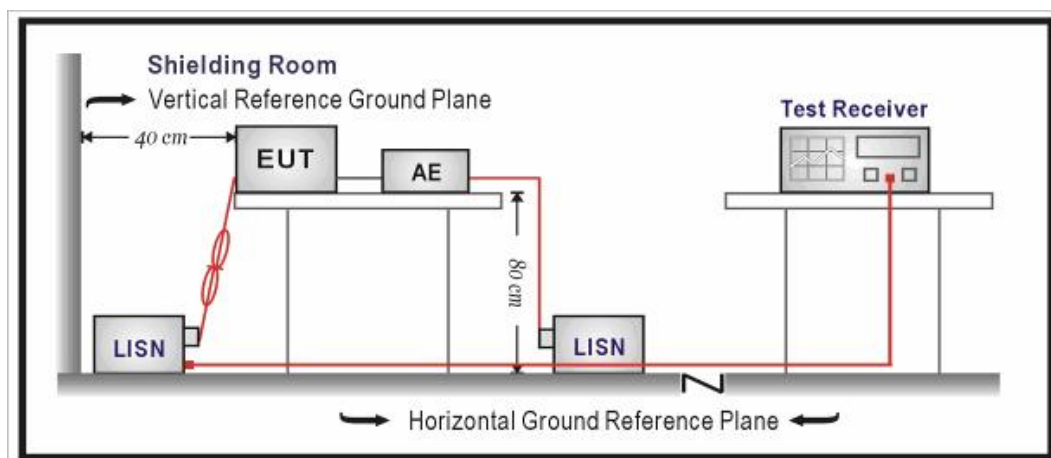
a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit - 20 dB) were not recorded.

NOTE: All modes of operation were investigated and the worst-case emissions are reported.

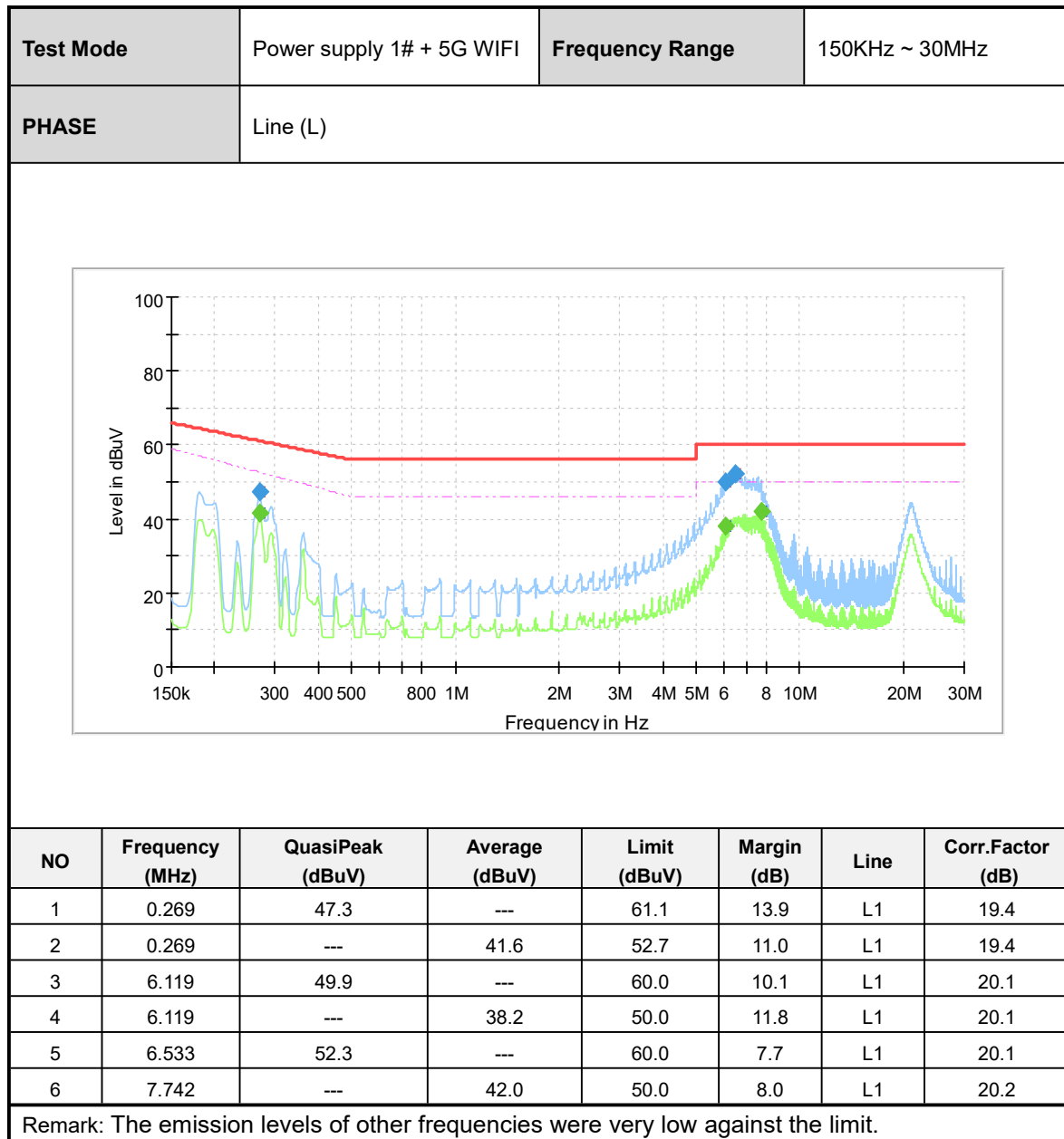
3.1.3 TEST SETUP

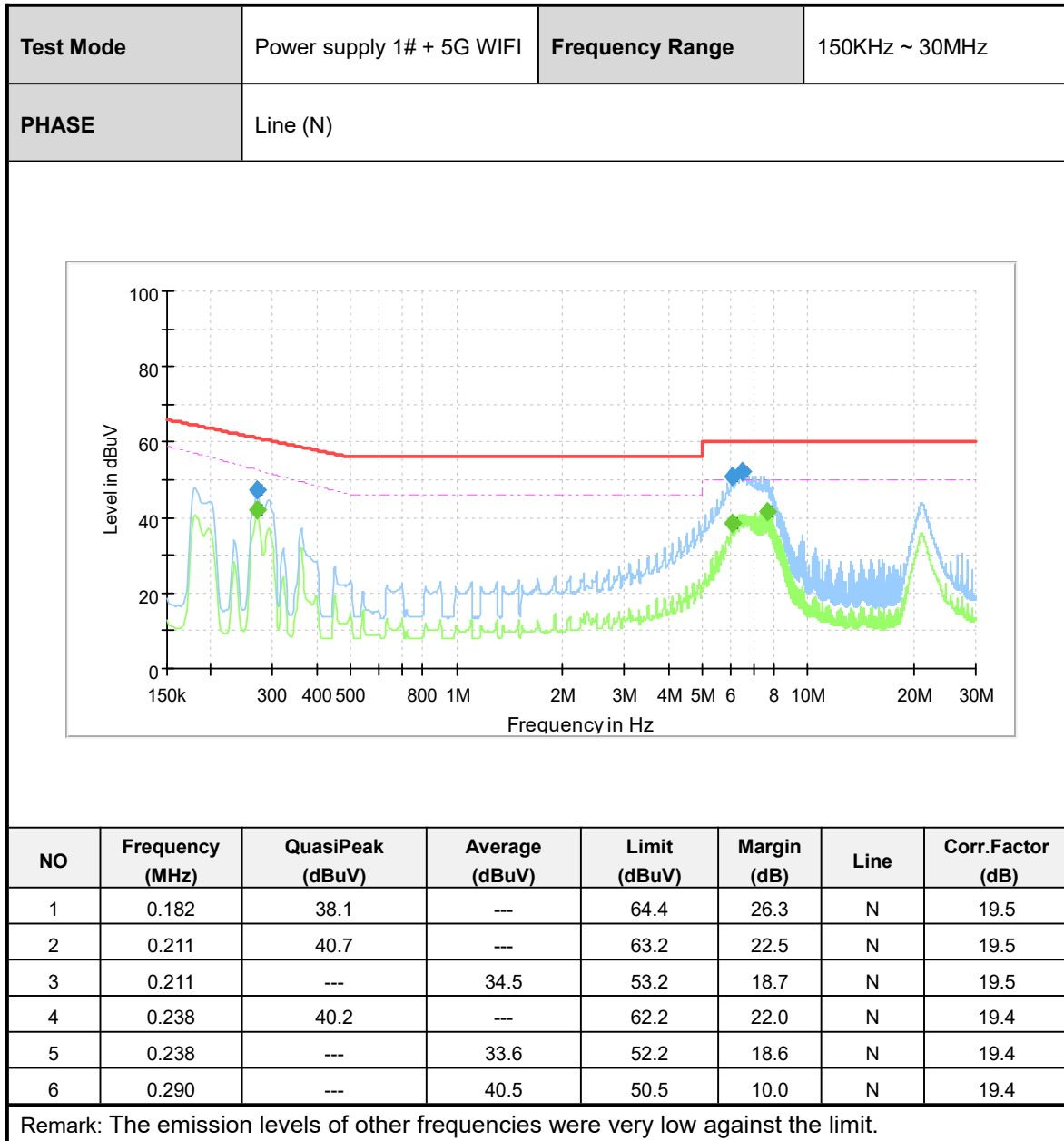


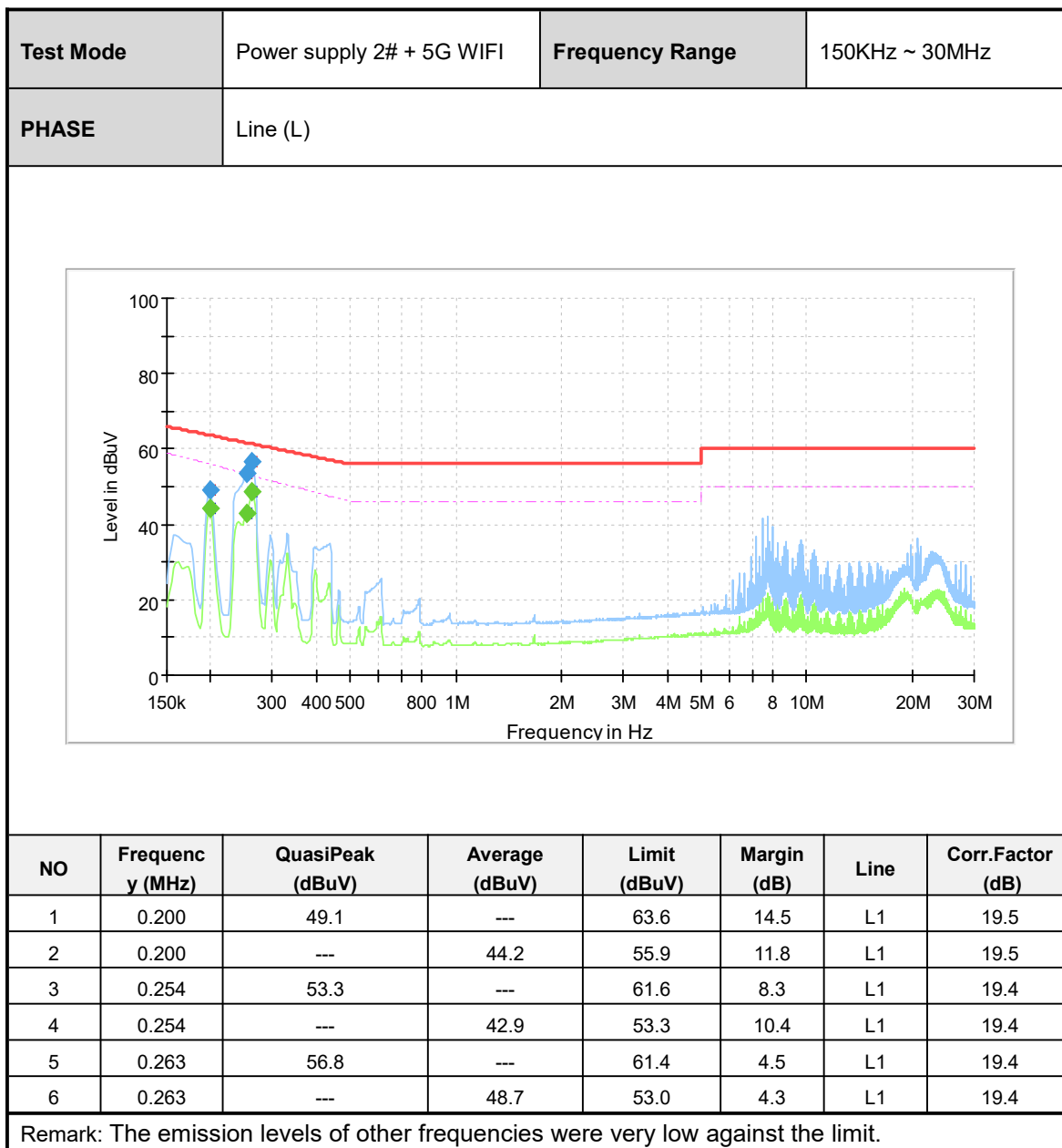
NOTE: For the actual test configuration, please refer to the attached file (Test Setup Photo).

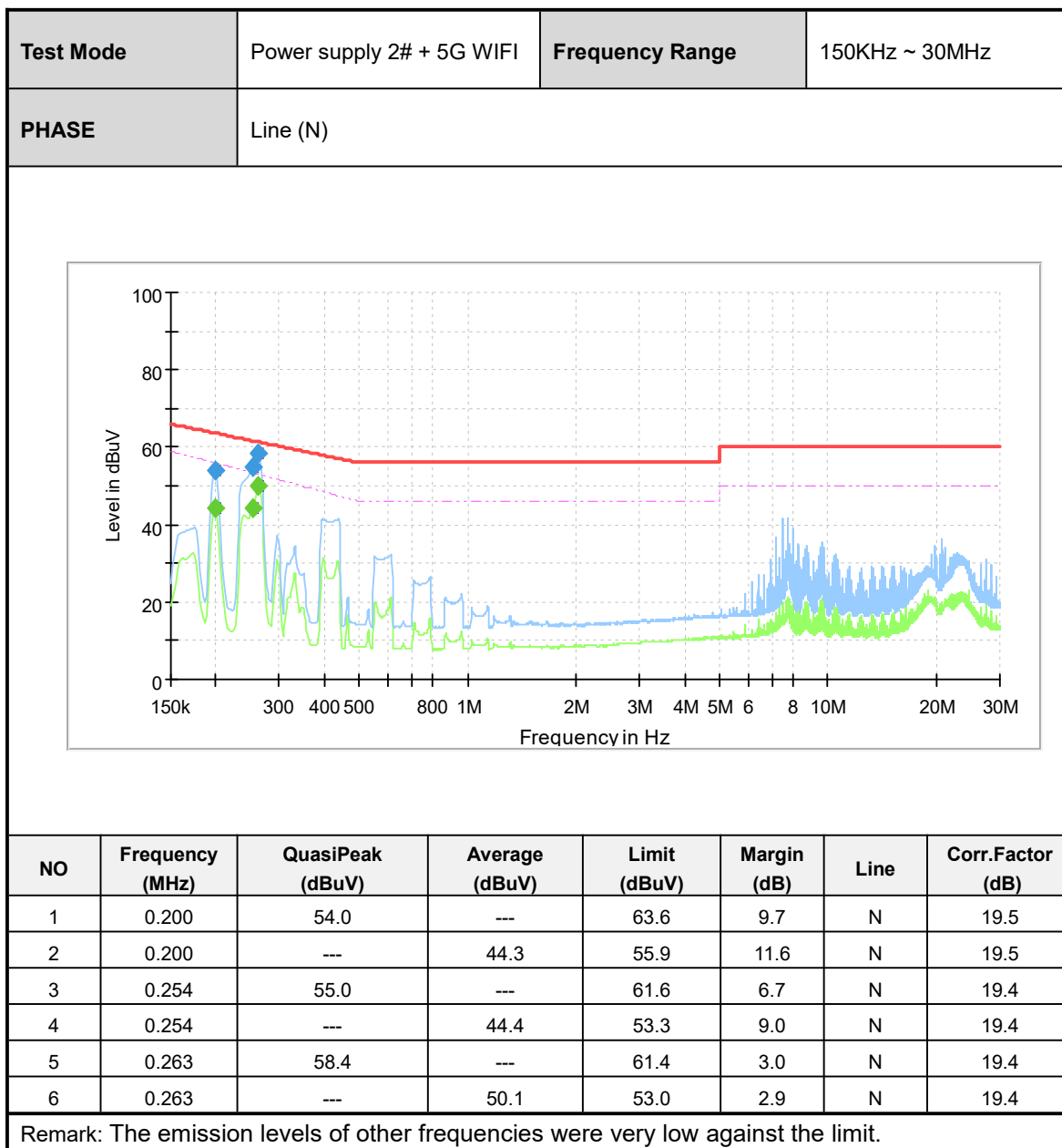


3.1.4 TEST RESULTS











3.2 RADIATED EMISSION AND BANDEDGE MEASUREMENT

3.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table:

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/meter)	MEASUREMENT DISTANCE (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 30dB under any condition of modulation.



3.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

APPLICABLE TO	LIMIT	
KDB 789033 D02 General UNII Test Procedures New Rules v02r01	FIELD STRENGTH AT 3m	
	PK:74 (dBμV/m)	AV:54 (dBμV/m)
APPLICABLE TO	EIRP LIMIT	EQUIVALENT FIELD STRENGTH AT 3m
15.407(b)(1)	PK:-27 (dBm/MHz)	PK:68.2(dBμV/m)
15.407(b)(2)		
15.407(b)(3)		
15.407(b)(4)	Note	Note

NOTE:

For transmitters operating in the 5.725-5.85 GHz band:Section 15.407(b)(4) specifies the unwanted emissions limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). An alternative to the band emissions mask is specified in Section 15.407(b)(4)(ii). The alternative limits are based on the highest antenna gain specified in the filing. There are also marketing and importation restrictions for the alternative limit.

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 theband edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above orbelow the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27dBm/MHz at the band edge.

The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m, where } P \text{ is the eirp (Watts).}$$



3.1.3 TEST PROCEDURES

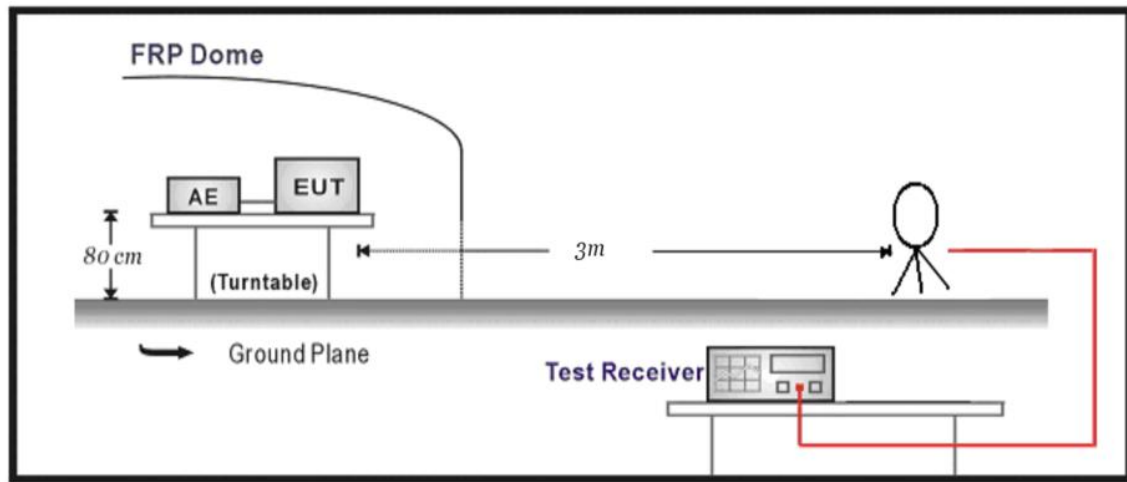
- a. The EUT was placed on the top of a rotating table 1.5 meters(above 1GHz)and 0.8 meters(below 1GHz) above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

NOTE:

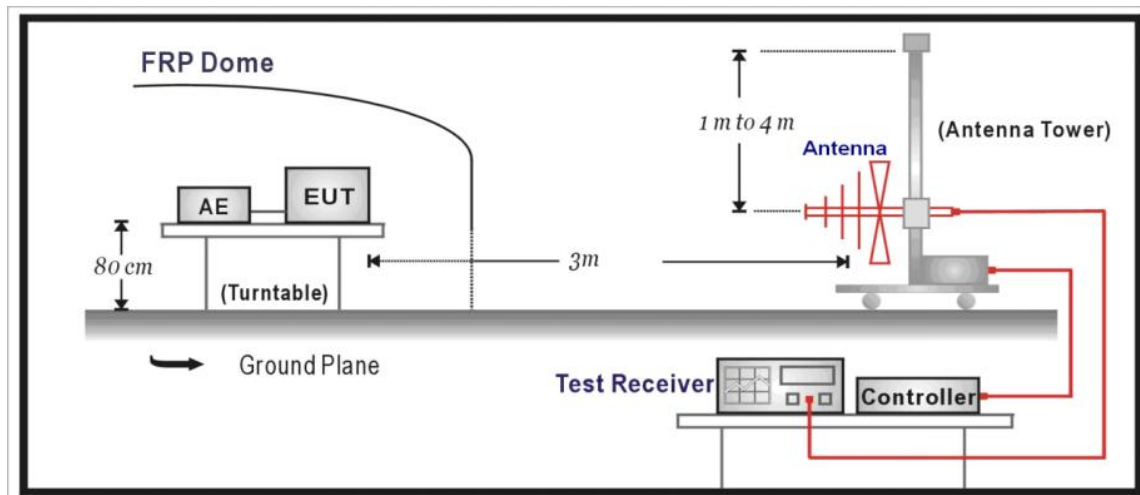
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle $< 98\%$) or 10Hz(Duty cycle $> 98\%$) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

3.1.4 TEST SETUP

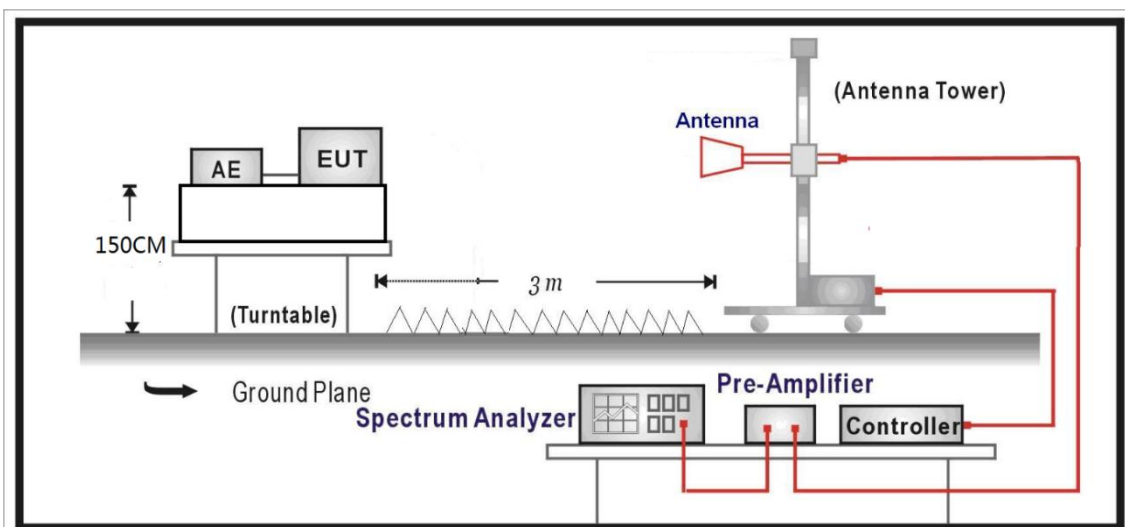
Below 30MHz Test Setup:



Below 1GHz Test Setup:



Above 1GHz Test Setup:

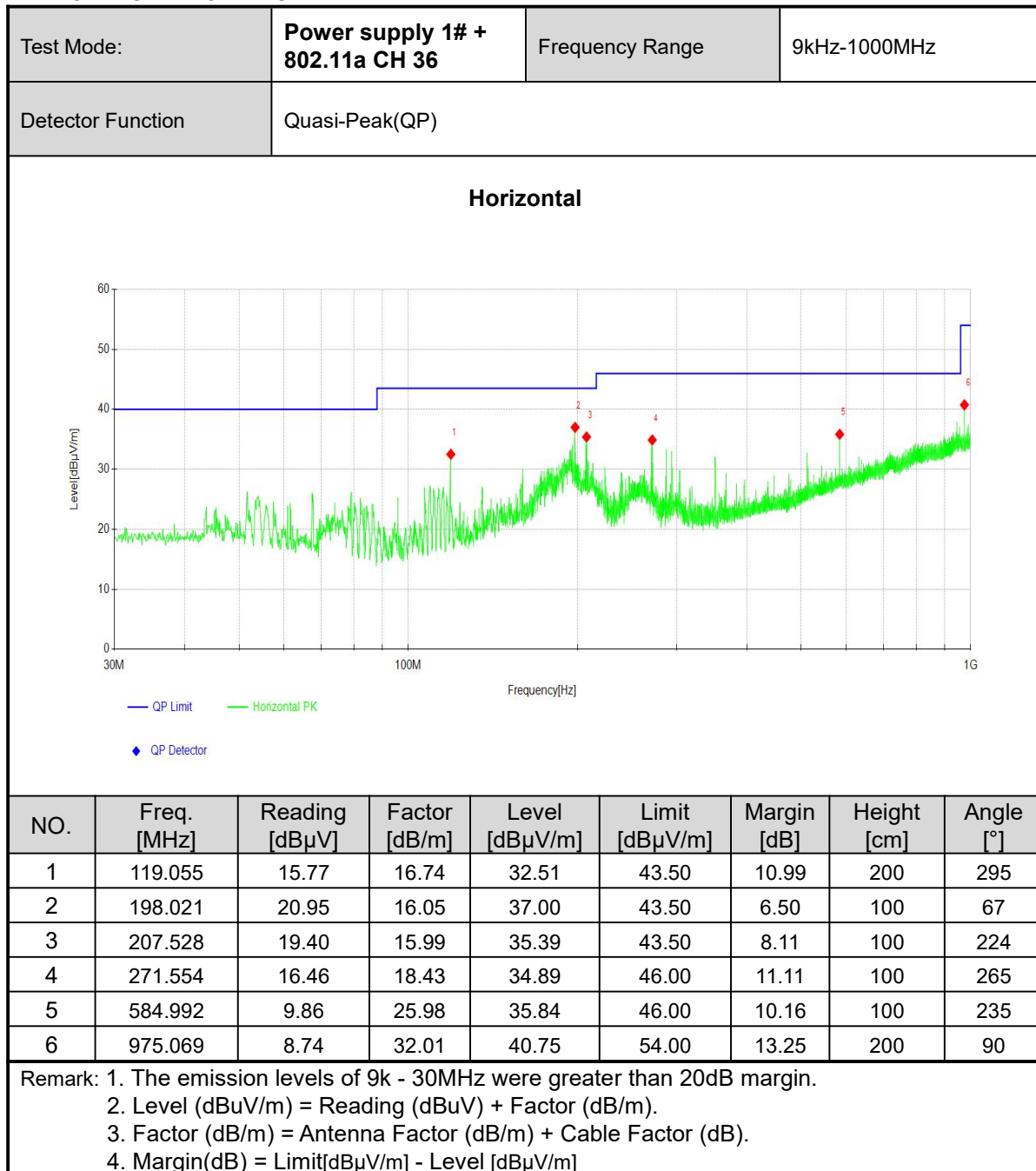


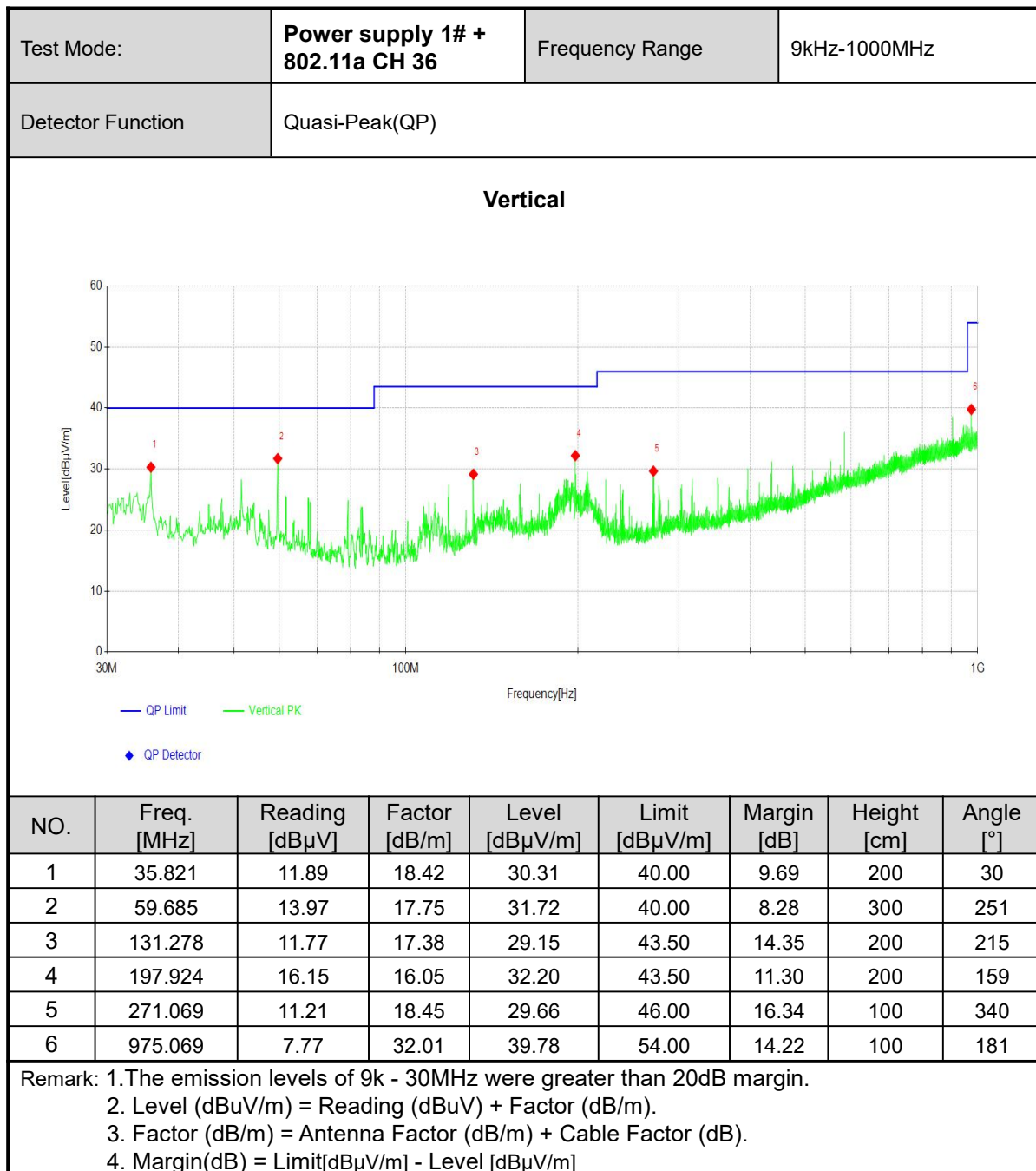
Note: For the actual test configuration, please refer to the related Item in this test report (Photographs of the Test Setup)

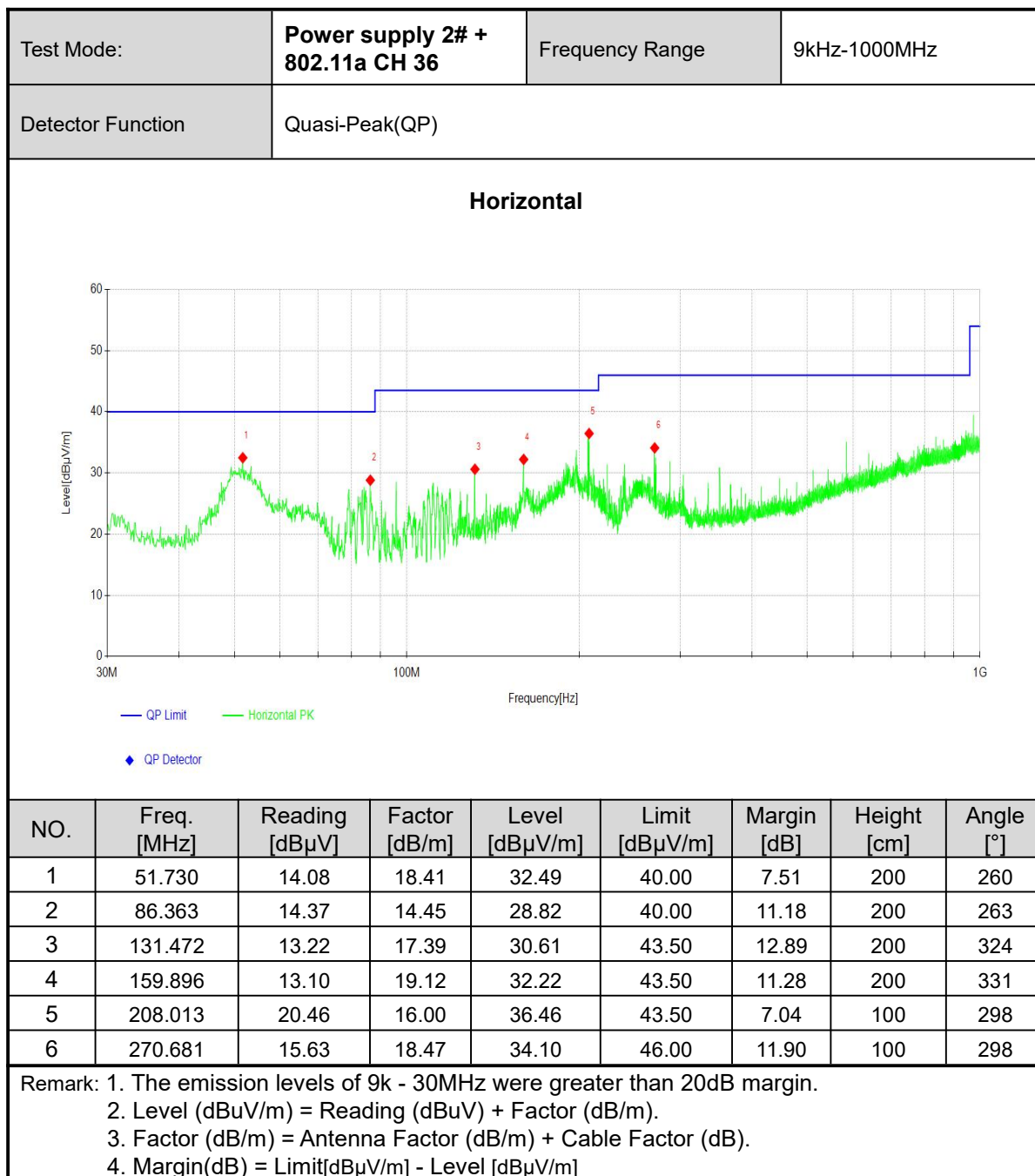


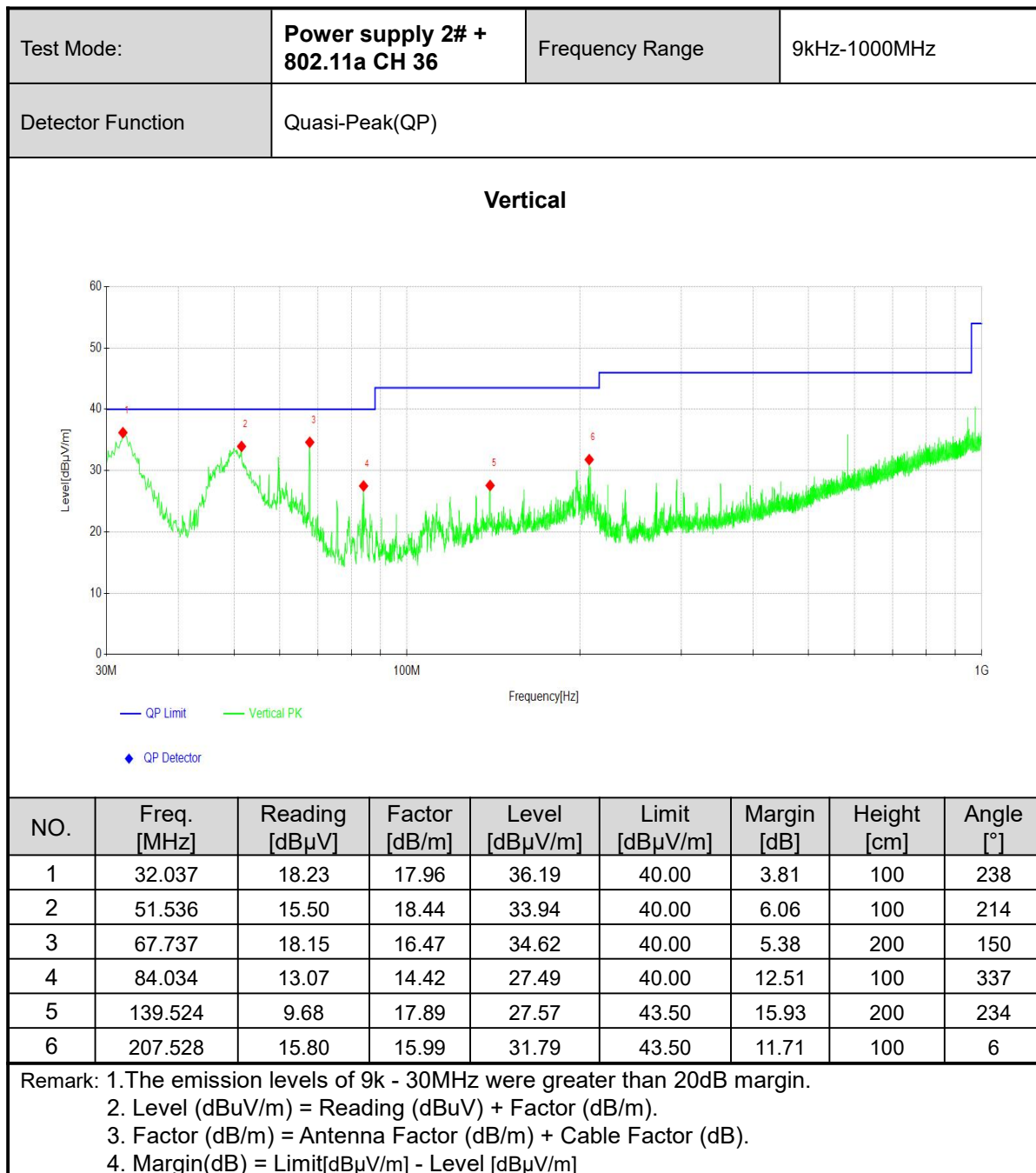
3.1.5 TEST RESULTS - BELOW 1GHz

BELOW 1GHz WORST-CASE DATA:











3.1.6 TEST RESULTS - Band 1 (5180-5240MHz):

ABOVE 1GHz DATA(Note: All the modes have been tested, found worst case at 802.11a, recorded the worst case results in this report.)

Channel		802.11a CH36		Frequency		5180 MHz			
Frequency Range		Above 1G		Detector Function		PK/AV			
Horizontal									
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	5145.44	36.43	7.99	44.42	54.00	9.58	400	81	AV
2	5146.88	50.47	7.99	58.46	74.00	15.54	400	78	PK
3	5150.00	36.81	8.03	44.84	54.00	9.16	100	95	AV
4	5150.00	49.99	8.03	58.02	74.00	15.98	100	87	PK
5	5179.54	84.85	7.92	92.77			200	81	AV
6	5180.50	92.80	7.90	100.70			200	81	PK
7	10360.00	27.24	16.24	43.48	68.20	24.72	300	96	PK
8	10360.00	17.87	16.24	34.11	54.00	19.89	300	239	AV
9	15540.00	23.09	19.20	42.29	74.00	31.71	400	269	PK
10	15540.00	13.92	19.20	33.12	54.00	20.88	400	175	AV

Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
2. Level (dBμV/m) = Reading (dBμV) + Factor (dB/m).
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]



Channel	802.11a CH36			Frequency	5180 MHz				
Frequency Range	Above 1G			Detector Function	PK/AV				
Vertical									
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	5133.92	36.13	8.13	44.26	54.00	9.74	300	124	AV
2	5147.36	54.53	8.00	62.53	74.00	11.47	300	321	PK
3	5150.00	37.96	8.03	45.99	54.00	8.01	400	315	AV
4	5150.00	56.19	8.03	64.22	74.00	9.78	400	311	PK
5	5179.06	91.45	7.92	99.37			200	317	AV
6	5180.50	99.97	7.90	107.87			200	317	PK
7	5350.00	34.11	9.96	44.07	54.00	9.93	200	277	AV
8	5350.00	44.95	9.96	54.91	74.00	19.09	200	267	PK
9	5376.92	34.64	10.07	44.71	54.00	9.29	400	185	AV
10	5379.80	46.55	10.12	56.67	74.00	17.33	400	326	PK
11	10360.00	26.57	16.24	42.81	68.20	25.39	100	115	PK
12	10360.00	17.50	16.24	33.74	54.00	20.26	100	292	AV
13	15540.00	22.36	19.20	41.56	74.00	32.44	400	238	PK
14	15540.00	13.82	19.20	33.02	54.00	20.98	400	66	AV

Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
2. Level (dBuV/m) = Reading (dBuV) + Factor (dB/m).
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]



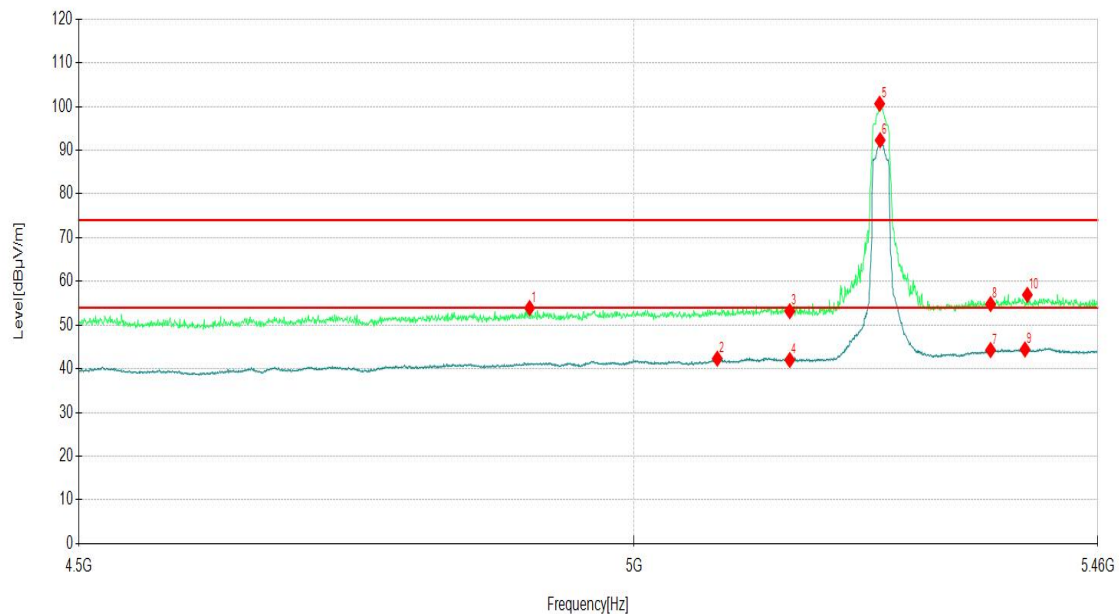
Channel		802.11a CH 44		Frequency		5220MHz			
Frequency Range		Above 1G		Detector Function		PK/AV			
Horizontal									
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	10440.00	25.65	16.71	42.36	68.20	25.84	300	360	PK
2	10440.00	17.21	16.71	33.92	54.00	20.08	300	333	AV
3	15660.00	23.06	19.93	42.99	74.00	31.01	100	244	PK
4	15660.00	13.88	19.93	33.81	54.00	20.19	100	269	AV
Vertical									
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	10440.00	26.57	16.71	43.28	68.20	24.92	200	282	PK
2	10440.00	16.93	16.71	33.64	54.00	20.36	200	272	AV
3	15660.00	22.25	19.93	42.18	74.00	31.82	100	317	PK
4	15660.00	13.41	19.93	33.34	54.00	20.66	100	238	AV
Remark: 1. The emission levels of other frequencies were greater than 20dB margin. 2. Level (dBuV/m) = Reading (dBuV) + Factor (dB/m). 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB). 4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]									



Channel	802.11a CH48	Frequency	5240 MHz
Frequency Range	Above 1G	Detector Function	PK/AV

Horizontal

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	4901.96	46.94	6.96	53.90	74.00	20.10	100	9	PK
2	5079.65	34.52	7.81	42.33	54.00	11.67	100	171	AV
3	5150.00	45.15	8.03	53.18	74.00	20.82	400	112	PK
4	5150.00	33.99	8.03	42.02	54.00	11.98	400	106	AV
5	5238.61	92.41	8.22	100.63			200	89	PK
6	5239.09	84.09	8.21	92.30			200	89	AV
7	5350.00	34.33	9.96	44.29	54.00	9.71	300	296	AV
8	5350.00	44.84	9.96	54.80	74.00	19.20	300	329	PK
9	5385.08	34.34	10.09	44.43	54.00	9.57	200	82	AV
10	5387.48	46.85	10.07	56.92	74.00	17.08	200	11	PK
11	10480.00	25.97	16.74	42.71	68.20	25.49	200	269	PK
12	10480.00	16.61	16.74	33.35	54.00	20.65	200	359	AV
13	15720.00	22.63	20.24	42.87	74.00	31.13	100	1	PK
14	15720.00	12.93	20.24	33.17	54.00	20.83	100	36	AV



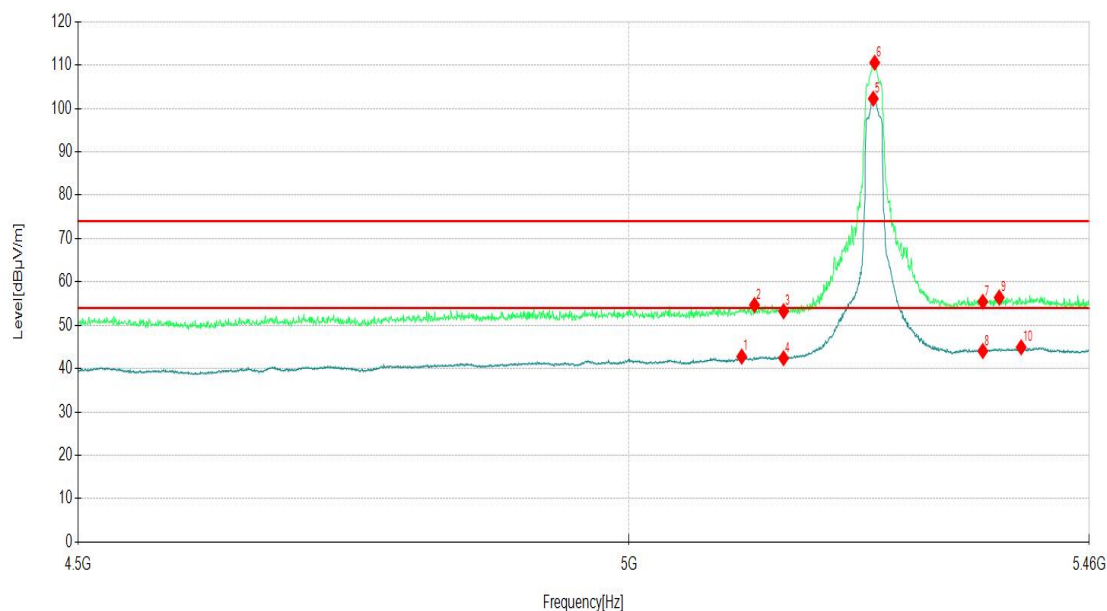
Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
2. Level (dBμV/m) = Reading (dBμV) + Factor (dB/m).
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]



Channel	802.11a CH48	Frequency	5240 MHz
Frequency Range	Above 1G	Detector Function	PK/AV

Vertical

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	5108.94	34.75	8.03	42.78	54.00	11.22	200	112	AV
2	5121.43	46.86	7.82	54.68	74.00	19.32	200	156	PK
3	5150.00	45.20	8.03	53.23	74.00	20.77	100	154	PK
4	5150.00	34.38	8.03	42.41	54.00	11.59	100	108	AV
5	5239.09	94.03	8.21	102.24			200	316	AV
6	5240.53	102.33	8.22	110.55			200	321	PK
7	5350.00	45.46	9.96	55.42	74.00	18.58	400	327	PK
8	5350.00	34.10	9.96	44.06	54.00	9.94	400	122	AV
9	5366.83	46.43	9.97	56.40	74.00	17.60	400	95	PK
10	5389.40	34.86	10.06	44.92	54.00	9.08	400	294	AV
11	10480.00	25.88	16.74	42.62	68.20	25.58	100	318	PK
12	10480.00	17.18	16.74	33.92	54.00	20.08	100	274	AV
13	15720.00	21.79	20.24	42.03	74.00	31.97	400	80	PK
14	15720.00	13.25	20.24	33.49	54.00	20.51	400	224	AV



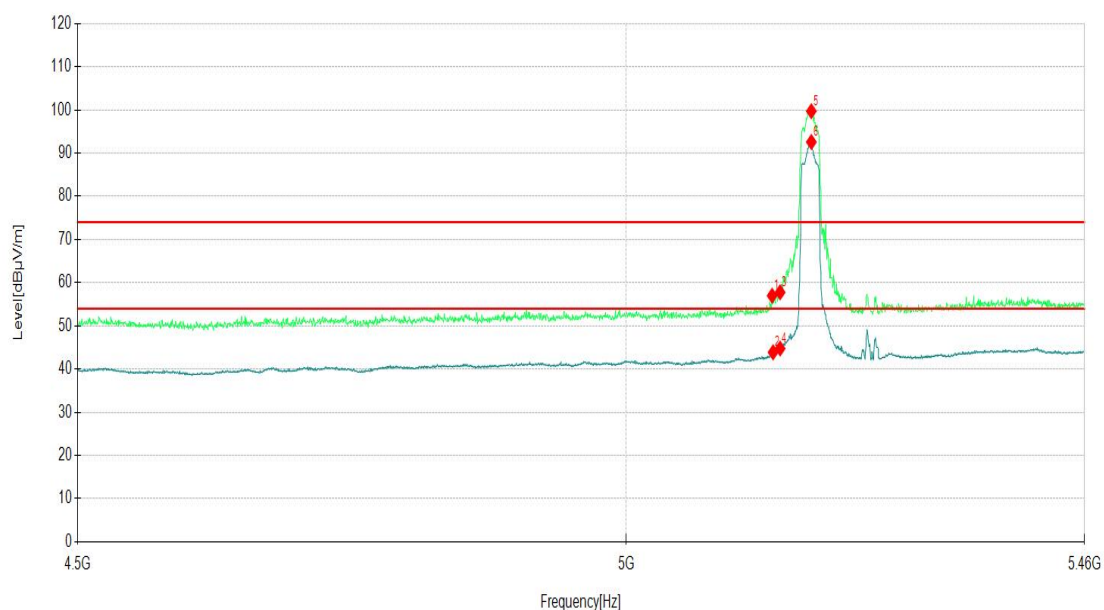
Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
2. Level (dBμV/m) = Reading (dBμV) + Factor (dB/m).
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]



Channel	802.11n20 CH36	Frequency	5180 MHz
Frequency Range	Above 1G	Detector Function	PK/AV

Horizontal

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	5142.08	49.04	7.95	56.99	74.00	17.01	300	78	PK
2	5143.04	35.91	7.97	43.88	54.00	10.12	300	84	AV
3	5150.00	49.74	8.03	57.77	74.00	16.23	200	86	PK
4	5150.00	36.74	8.03	44.77	54.00	9.23	200	78	AV
5	5180.98	91.82	7.89	99.71			100	80	PK
6	5180.98	84.68	7.89	92.57			100	80	AV
7	10360.00	26.93	16.24	43.17	68.20	25.03	100	274	PK
8	10360.00	17.49	16.24	33.73	54.00	20.27	100	344	AV
9	15540.00	23.48	19.20	42.68	74.00	31.32	400	91	PK
10	15540.00	13.38	19.20	32.58	54.00	21.42	400	250	AV



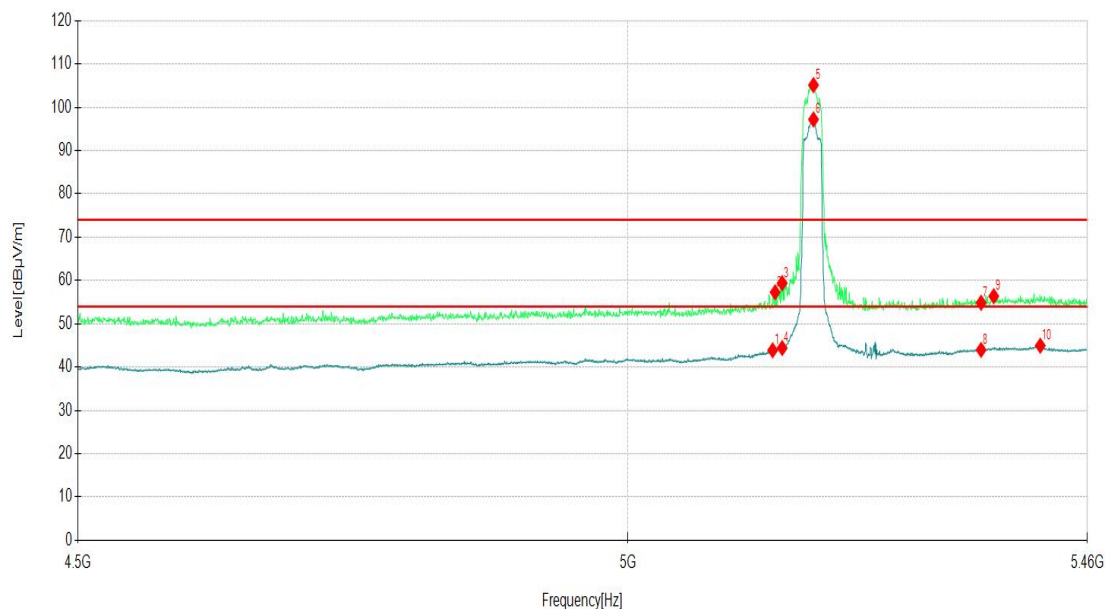
Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
2. Level (dBμV/m) = Reading (dBμV) + Factor (dB/m).
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]



Channel	802.11n20 CH36	Frequency	5180 MHz
Frequency Range	Above 1G	Detector Function	PK/AV

Vertical

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	5140.64	35.95	7.94	43.89	54.00	10.11	400	317	AV
2	5143.04	49.32	7.97	57.29	74.00	16.71	400	103	PK
3	5150.00	51.36	8.03	59.39	74.00	14.61	300	322	PK
4	5150.00	36.38	8.03	44.41	54.00	9.59	300	322	AV
5	5180.98	97.23	7.89	105.12			400	319	PK
6	5180.98	89.30	7.89	97.19			400	317	AV
7	5350.00	44.90	9.96	54.86	74.00	19.14	200	72	PK
8	5350.00	34.01	9.96	43.97	54.00	10.03	200	5	AV
9	5362.99	46.34	10.02	56.36	74.00	17.64	300	198	PK
10	5411.02	34.71	10.24	44.95	54.00	9.05	300	53	AV
11	10360.00	26.96	16.24	43.20	68.20	25.00	100	275	PK
12	10360.00	17.94	16.24	34.18	54.00	19.82	100	201	AV
13	15540.00	22.91	19.20	42.11	74.00	31.89	100	14	PK
14	15540.00	13.67	19.20	32.87	54.00	21.13	100	270	AV



Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
2. Level (dBμV/m) = Reading (dBμV) + Factor (dB/m).
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]



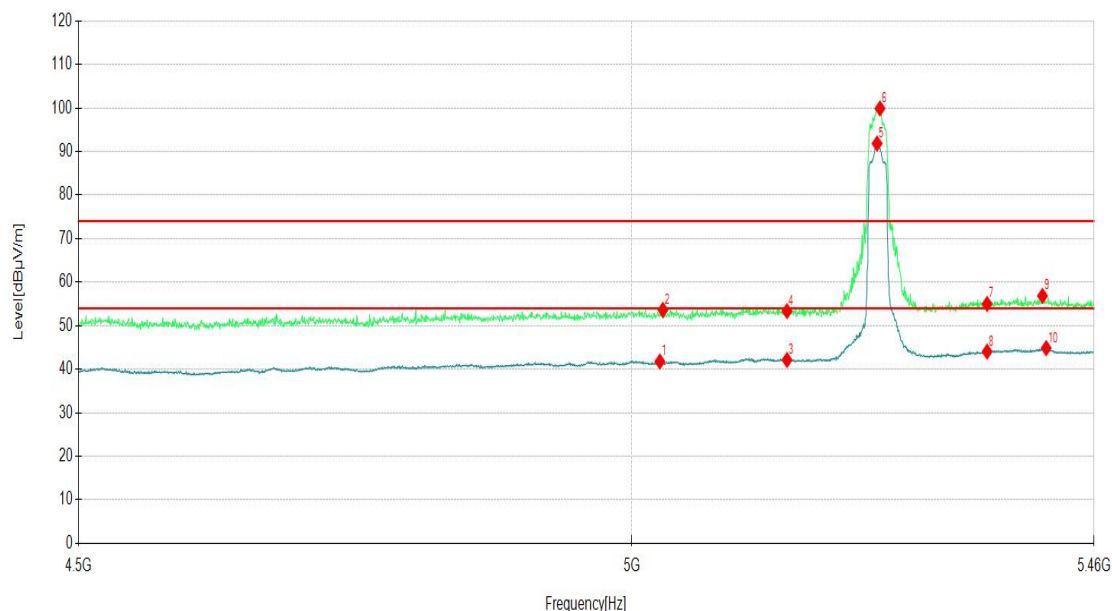
Channel			802.11n20 CH44		Frequency		5220MHz		
Frequency Range			Above 1G		Detector Function		PK/AV		
Horizontal									
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	10440.00	26.42	16.71	43.13	68.20	25.07	400	338	PK
2	10440.00	17.20	16.71	33.91	54.00	20.09	400	229	AV
3	15660.00	23.18	19.93	43.11	74.00	30.89	200	41	PK
4	15660.00	13.56	19.93	33.49	54.00	20.51	200	115	AV
Vertical									
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	10440.00	26.01	16.71	42.72	68.20	25.48	400	13	PK
2	10440.00	16.83	16.71	33.54	54.00	20.46	400	354	AV
3	15660.00	22.53	19.93	42.46	74.00	31.54	300	112	PK
4	15660.00	14.08	19.93	34.01	54.00	19.99	300	344	AV
Remark: 1. The emission levels of other frequencies were greater than 20dB margin. 2. Level (dBuV/m) = Reading (dBuV) + Factor (dB/m). 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB). 4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m]									



Channel	802.11n20 CH48	Frequency	5240 MHz
Frequency Range	Above 1G	Detector Function	PK/AV

Horizontal

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	5026.82	34.44	7.33	41.77	54.00	12.23	400	76	AV
2	5029.70	46.31	7.31	53.62	74.00	20.38	400	296	PK
3	5150.00	34.10	8.03	42.13	54.00	11.87	200	97	AV
4	5150.00	45.32	8.03	53.35	74.00	20.65	200	91	PK
5	5239.09	83.62	8.21	91.83			200	91	AV
6	5241.97	91.67	8.22	99.89			200	93	PK
7	5350.00	45.04	9.96	55.00	74.00	19.00	300	227	PK
8	5350.00	34.08	9.96	44.04	54.00	9.96	300	154	AV
9	5406.69	46.63	10.21	56.84	74.00	17.16	300	3	PK
10	5410.54	34.59	10.26	44.85	54.00	9.15	300	290	AV
11	10480.00	26.00	16.74	42.74	68.20	25.46	400	51	PK
12	10480.00	16.98	16.74	33.72	54.00	20.28	400	140	AV
13	15720.00	21.74	20.24	41.98	74.00	32.02	200	90	PK
14	15720.00	12.54	20.24	32.78	54.00	21.22	200	360	AV



Remark: 1. The emission levels of other frequencies were greater than 20dB margin.

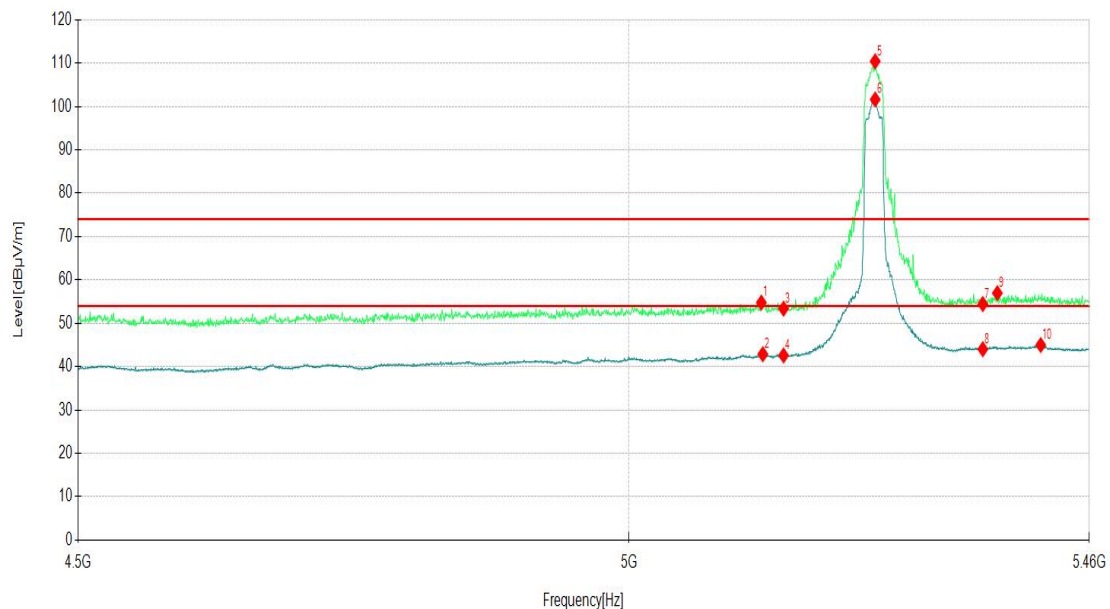
2. Level (dBμV/m) = Reading (dBμV) + Factor (dB/m).

3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]



Channel			802.11n20 CH48		Frequency		5240 MHz		
Frequency Range			Above 1G		Detector Function		PK/AV		
Vertical									
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	5128.15	46.60	8.17	54.77	74.00	19.23	400	272	PK
2	5129.59	34.64	8.23	42.87	54.00	11.13	400	315	AV
3	5150.00	45.34	8.03	53.37	74.00	20.63	100	188	PK
4	5150.00	34.56	8.03	42.59	54.00	11.41	100	317	AV
5	5241.01	102.19	8.22	110.41			100	319	PK
6	5241.01	93.38	8.22	101.60			100	315	AV
7	5350.00	44.48	9.96	54.44	74.00	19.56	100	79	PK
8	5350.00	34.06	9.96	44.02	54.00	9.98	100	338	AV
9	5364.91	46.96	9.99	56.95	74.00	17.05	100	60	PK
10	5409.57	34.69	10.29	44.98	54.00	9.02	100	351	AV
11	10480.00	26.14	16.74	42.88	68.20	25.32	400	120	PK
12	10480.00	16.67	16.74	33.41	54.00	20.59	400	150	AV
13	15720.00	22.78	20.24	43.02	74.00	30.98	200	224	PK
14	15720.00	12.88	20.24	33.12	54.00	20.88	200	190	AV



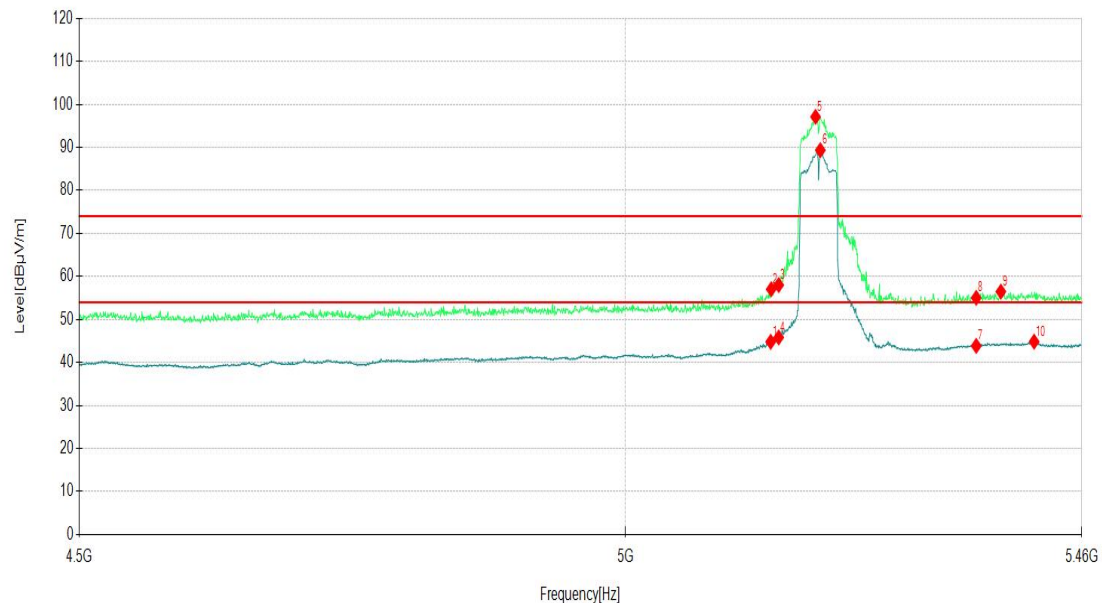
Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
2. Level (dBμV/m) = Reading (dBμV) + Factor (dB/m).
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]



Channel	802.11n40 CH38	Frequency	5190 MHz
Frequency Range	Above 1G	Detector Function	PK/AV

Horizontal

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	5142.08	36.85	7.95	44.80	54.00	9.20	200	75	AV
2	5142.56	49.07	7.96	57.03	74.00	16.97	200	61	PK
3	5150.00	49.98	8.03	58.01	74.00	15.99	200	86	PK
4	5150.00	37.79	8.03	45.82	54.00	8.18	200	77	AV
5	5186.74	89.37	7.73	97.10			200	77	PK
6	5191.55	81.71	7.64	89.35			200	79	AV
7	5350.00	33.90	9.96	43.86	54.00	10.14	400	338	AV
8	5350.00	45.08	9.96	55.04	74.00	18.96	400	209	PK
9	5375.48	46.43	10.04	56.47	74.00	17.53	100	255	PK
10	5410.06	34.55	10.29	44.84	54.00	9.16	100	217	AV
11	10380.00	26.58	16.32	42.90	68.20	25.30	300	274	PK
12	10380.00	17.39	16.32	33.71	54.00	20.29	300	56	AV
13	15570.00	21.63	19.48	41.11	74.00	32.89	400	329	PK
14	15570.00	13.17	19.48	32.65	54.00	21.35	400	259	AV



Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
2. Level (dBμV/m) = Reading (dBμV) + Factor (dB/m).
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]



Channel	802.11n40 CH38	Frequency	5190 MHz						
Frequency Range	Above 1G	Detector Function	PK/AV						
Vertical									
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	5135.36	48.12	8.08	56.20	74.00	17.80	200	296	PK
2	5137.76	35.91	8.00	43.91	54.00	10.09	200	320	AV
3	5150.00	39.62	8.03	47.65	54.00	6.35	200	311	AV
4	5150.00	50.95	8.03	58.98	74.00	15.02	200	114	PK
5	5187.70	93.39	7.70	101.09			300	311	PK
6	5191.07	85.63	7.64	93.27			300	318	AV
7	5350.00	33.94	9.96	43.90	54.00	10.10	200	5	AV
8	5350.00	44.84	9.96	54.80	74.00	19.20	200	328	PK
9	5363.47	46.86	10.01	56.87	74.00	17.13	400	296	PK
10	5374.52	34.50	10.01	44.51	54.00	9.49	400	359	AV
11	10380.00	26.99	16.32	43.31	68.20	24.89	200	105	PK
12	10380.00	17.43	16.32	33.75	54.00	20.25	200	214	AV
13	15570.00	21.99	19.48	41.47	74.00	32.53	200	51	PK
14	15570.00	13.24	19.48	32.72	54.00	21.28	200	209	AV

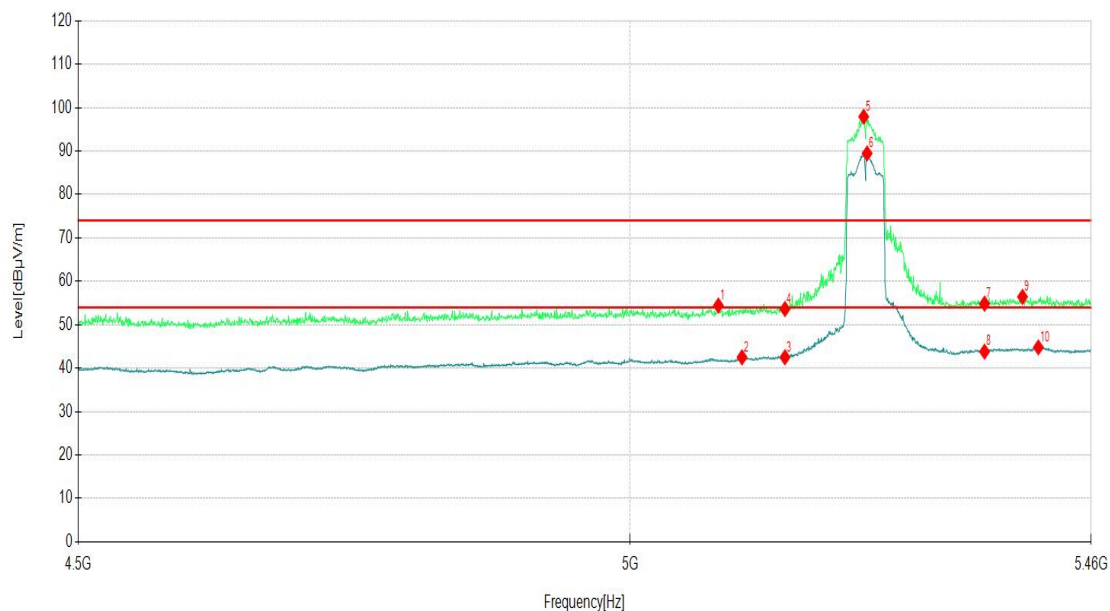
Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
2. Level (dBμV/m) = Reading (dBμV) + Factor (dB/m).
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]



Channel	802.11n40 CH46	Frequency	5230 MHz
Frequency Range	Above 1G	Detector Function	PK/AV

Horizontal

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	5084.93	46.71	7.72	54.43	74.00	19.57	200	82	PK
2	5107.98	34.51	7.98	42.49	54.00	11.51	200	149	AV
3	5150.00	34.48	8.03	42.51	54.00	11.49	200	1	AV
4	5150.00	45.59	8.03	53.62	74.00	20.38	200	40	PK
5	5228.04	89.70	8.20	97.90			100	97	PK
6	5231.41	81.26	8.19	89.45			100	91	AV
7	5350.00	44.90	9.96	54.86	74.00	19.14	100	168	PK
8	5350.00	33.86	9.96	43.82	54.00	10.18	100	355	AV
9	5388.92	46.36	10.06	56.42	74.00	17.58	300	84	PK
10	5405.25	34.62	10.17	44.79	54.00	9.21	300	349	AV
11	10460.00	26.00	16.86	42.86	68.20	25.34	400	344	PK
12	10460.00	16.73	16.86	33.59	54.00	20.41	400	344	AV
13	15690.00	13.63	20.19	33.82	54.00	20.18	200	146	AV
14	15690.00	23.24	20.19	43.43	74.00	30.57	200	116	PK



Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
2. Level (dBμV/m) = Reading (dBμV) + Factor (dB/m).
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]

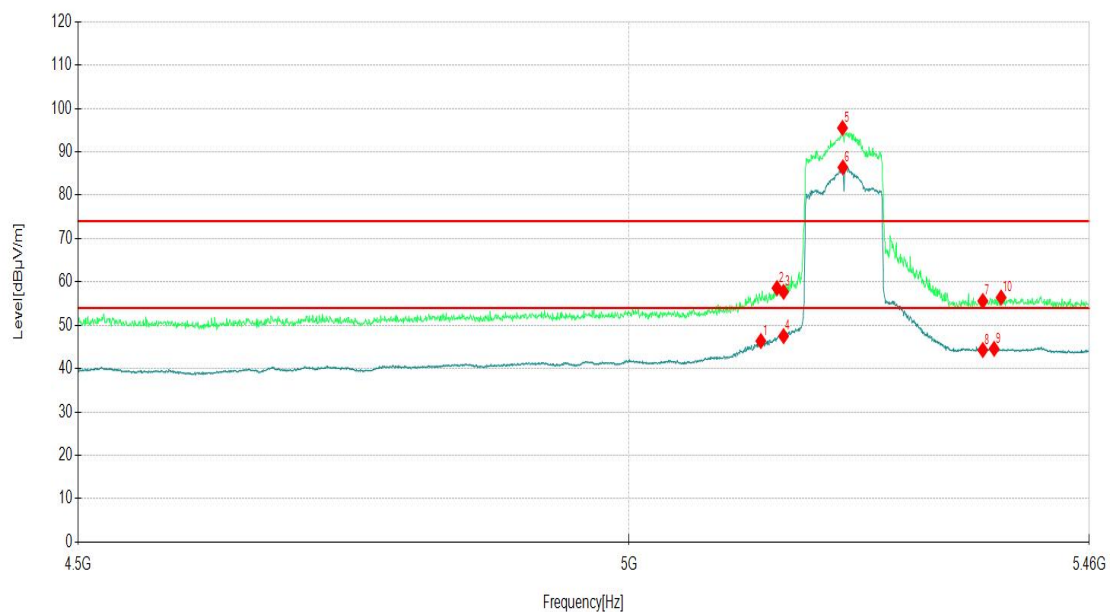


Channel		802.11n40 CH46		Frequency		5230 MHz			
Frequency Range		Above 1G		Detector Function		PK/AV			
Vertical									
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	5140.16	51.20	7.93	59.13	74.00	14.87	300	323	PK
2	5143.52	37.72	7.97	45.69	54.00	8.31	300	312	AV
3	5150.00	53.94	8.03	61.97	74.00	12.03	100	302	PK
4	5150.00	38.28	8.03	46.31	54.00	7.69	100	318	AV
5	5229.00	98.35	8.20	106.55			400	318	PK
6	5229.00	90.41	8.20	98.61			400	316	AV
7	5350.00	45.49	9.96	55.45	74.00	18.55	400	325	PK
8	5350.00	35.55	9.96	45.51	54.00	8.49	400	312	AV
9	5360.11	35.28	10.05	45.33	54.00	8.67	400	289	AV
10	5370.20	46.76	9.93	56.69	74.00	17.31	400	270	PK
11	10460.00	25.62	16.86	42.48	68.20	25.72	200	120	PK
12	10460.00	16.67	16.86	33.53	54.00	20.47	200	234	AV
13	15690.00	13.76	20.19	33.95	54.00	20.05	400	264	AV
14	15690.00	22.28	20.19	42.47	74.00	31.53	400	289	PK

Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
2. Level (dBuV/m) = Reading (dBuV) + Factor (dB/m).
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]



Channel			802.11ac80 CH42		Frequency		5210 MHz		
Frequency Range			Above 1G		Detector Function		PK/AV		
Horizontal									
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	5127.67	38.23	8.15	46.38	54.00	7.62	200	95	AV
2	5143.52	50.61	7.97	58.58	74.00	15.42	200	78	PK
3	5150.00	49.68	8.03	57.71	74.00	16.29	100	101	PK
4	5150.00	39.47	8.03	47.50	54.00	6.50	100	80	AV
5	5208.35	87.05	8.44	95.49			100	88	PK
6	5208.83	77.92	8.48	86.40			100	88	AV
7	5350.00	45.64	9.96	55.60	74.00	18.40	300	5	PK
8	5350.00	34.33	9.96	44.29	54.00	9.71	300	95	AV
9	5361.55	34.54	10.03	44.57	54.00	9.43	200	109	AV
10	5368.75	46.46	9.94	56.40	74.00	17.60	200	126	PK
11	10460.00	26.21	16.86	43.07	68.20	25.13	100	94	PK
12	10460.00	16.94	16.86	33.80	54.00	20.20	100	309	AV
13	15690.00	13.59	20.19	33.78	54.00	20.22	300	79	AV
14	15690.00	22.98	20.19	43.17	74.00	30.83	300	249	PK



Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
2. Level (dBμV/m) = Reading (dBμV) + Factor (dB/m).
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]



Channel	802.11ac80 CH42			Frequency	5210 MHz				
Frequency Range	Above 1G			Detector Function	PK/AV				
Vertical									
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	5132.48	52.11	8.17	60.28	74.00	13.72	200	305	PK
2	5137.76	40.61	8.00	48.61	54.00	5.39	200	317	AV
3	5150.00	52.95	8.03	60.98	74.00	13.02	100	313	PK
4	5150.00	42.56	8.03	50.59	54.00	3.41	100	317	AV
5	5211.24	82.58	8.54	91.12			100	322	AV
6	5213.16	91.19	8.47	99.66			100	317	PK
7	5350.00	45.59	9.96	55.55	74.00	18.45	300	296	PK
8	5350.00	35.09	9.96	45.05	54.00	8.95	300	319	AV
9	5392.77	35.25	10.05	45.30	54.00	8.70	200	141	AV
10	5408.61	47.27	10.25	57.52	74.00	16.48	200	311	PK
11	10460.00	25.71	16.86	42.57	68.20	25.63	100	314	PK
12	10460.00	17.17	16.86	34.03	54.00	19.97	100	51	AV
13	15690.00	13.60	20.19	33.79	54.00	20.21	300	195	AV
14	15690.00	22.41	20.19	42.60	74.00	31.40	300	357	PK

Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
2. Level (dBuV/m) = Reading (dBuV) + Factor (dB/m).
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]



3.1.7 TEST RESULTS - Band 4 (5745-5825MHz):

ABOVE 1GHz DATA(Note: All the modes have been tested, found worst case at 802.11a, recorded the worst case results in this report.)

Channel		802.11a CH149		Frequency		5745 MHz			
Frequency Range		Above 1G		Detector Function		PK/AV			
Horizontal									
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	5626.45	46.19	9.02	55.21	68.20	12.99	300	291	PK
2	5745.57	86.05	8.93	94.98			300	99	PK
3	5934.10	47.22	10.63	57.85	68.20	10.35	300	48	PK
4	11490.00	25.05	15.04	40.09	74.00	33.91	100	319	PK
5	11490.00	17.48	15.04	32.52	54.00	21.48	100	0	AV
6	17235.00	20.92	25.54	46.46	68.20	21.74	400	146	PK
7	17235.00	12.61	25.54	38.15	54.00	15.85	400	235	AV

Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
2. Level (dBuV/m) = Reading (dBuV) + Factor (dB/m).
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]



Channel		802.11a CH149		Frequency		5745 MHz			
Frequency Range		Above 1G		Detector Function		PK/AV			
Vertical									
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	5621.76	46.93	9.00	55.93	68.20	12.27	400	158	PK
2	5746.51	96.13	8.93	105.06			400	323	PK
3	5944.99	48.62	10.26	58.88	68.20	9.32	400	272	PK
4	11490.00	24.58	15.04	39.62	74.00	34.38	300	309	PK
5	11490.00	17.26	15.04	32.30	54.00	21.70	300	61	AV
6	17235.00	19.93	25.54	45.47	68.20	22.73	300	225	PK
7	17235.00	13.00	25.54	38.54	54.00	15.46	300	96	AV

Remark: 1. The emission levels of other frequencies were greater than 20dB margin.

2. Level (dBuV/m) = Reading (dBuV) + Factor (dB/m).

3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]



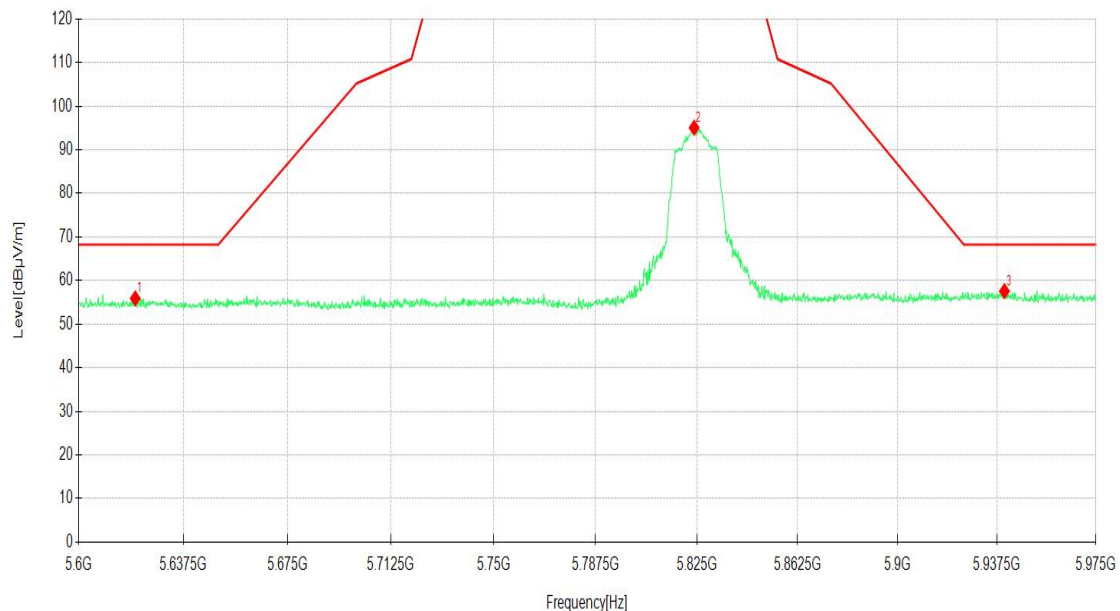
Channel		802.11a CH 157		Frequency		5785MHz			
Frequency Range		Above 1G		Detector Function		PK/AV			
Horizontal									
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	11570.00	25.89	15.34	41.23	74.00	32.77	400	66	PK
2	11570.00	18.41	15.34	33.75	54.00	20.25	400	31	AV
3	17355.00	19.32	26.31	45.63	68.20	22.57	100	215	PK
4	17355.00	11.93	26.31	38.24	54.00	15.76	100	26	AV
Vertical									
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	11490.00	24.55	15.04	39.59	74.00	34.41	400	110	PK
2	11490.00	17.43	15.04	32.47	54.00	21.53	400	289	AV
3	17235.00	18.83	25.54	44.37	68.20	23.83	200	229	PK
4	17235.00	12.62	25.54	38.16	54.00	15.84	200	120	AV
Remark: 1. The emission levels of other frequencies were greater than 20dB margin. 2. Level (dBuV/m) = Reading (dBuV) + Factor (dB/m). 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB). 4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]									



Channel	802.11a CH165	Frequency	5825 MHz
Frequency Range	Above 1G	Detector Function	PK/AV

Horizontal

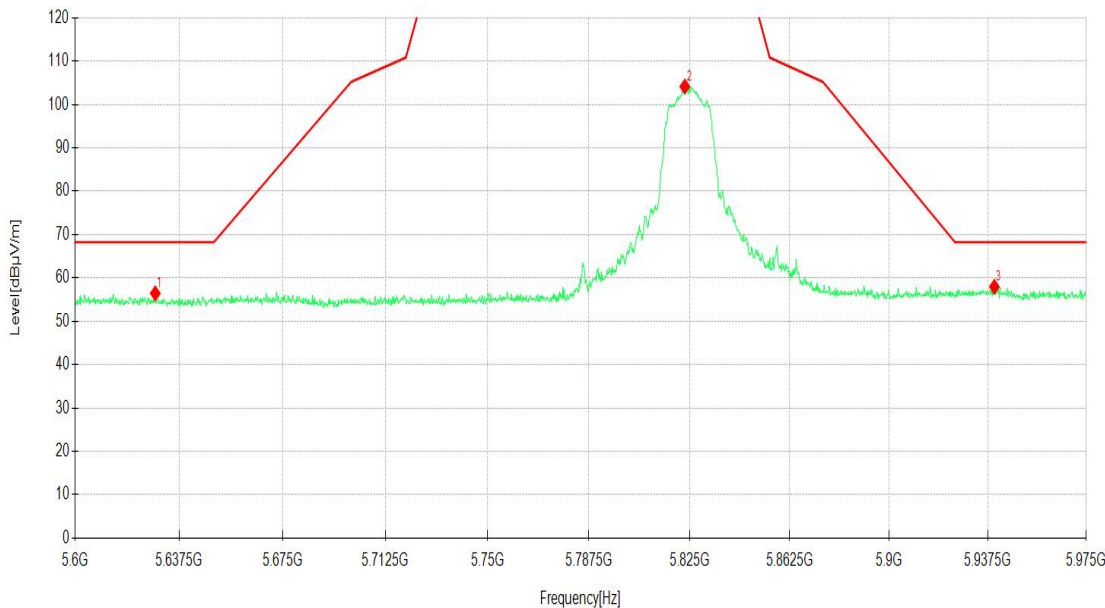
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	5620.26	46.90	8.99	55.89	68.20	12.31	100	28	PK
2	5823.99	86.24	8.81	95.05			100	102	PK
3	5940.30	46.79	10.78	57.57	68.20	10.63	100	16	PK
4	11650.00	25.24	15.20	40.44	74.00	33.56	400	32	PK
5	11650.00	18.33	15.20	33.53	54.00	20.47	400	52	AV
6	17475.00	18.90	26.05	44.95	68.20	23.25	200	131	PK
7	17475.00	11.42	26.05	37.47	54.00	16.53	200	200	AV



Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
2. Level (dBμV/m) = Reading (dBμV) + Factor (dB/m).
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]



Channel		802.11a CH165		Frequency		5825 MHz			
Frequency Range		Above 1G		Detector Function		PK/AV			
Vertical									
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	5628.89	47.40	9.04	56.44	68.20	11.76	400	166	PK
2	5823.24	95.31	8.82	104.13			400	330	PK
3	5939.92	47.14	10.81	57.95	68.20	10.25	400	138	PK
4	11650.00	27.27	15.20	42.47	74.00	31.53	100	166	PK
5	11650.00	18.76	15.20	33.96	54.00	20.04	100	102	AV
6	17475.00	18.48	26.05	44.53	68.20	23.67	400	205	PK
7	17475.00	11.15	26.05	37.20	54.00	16.80	400	354	AV



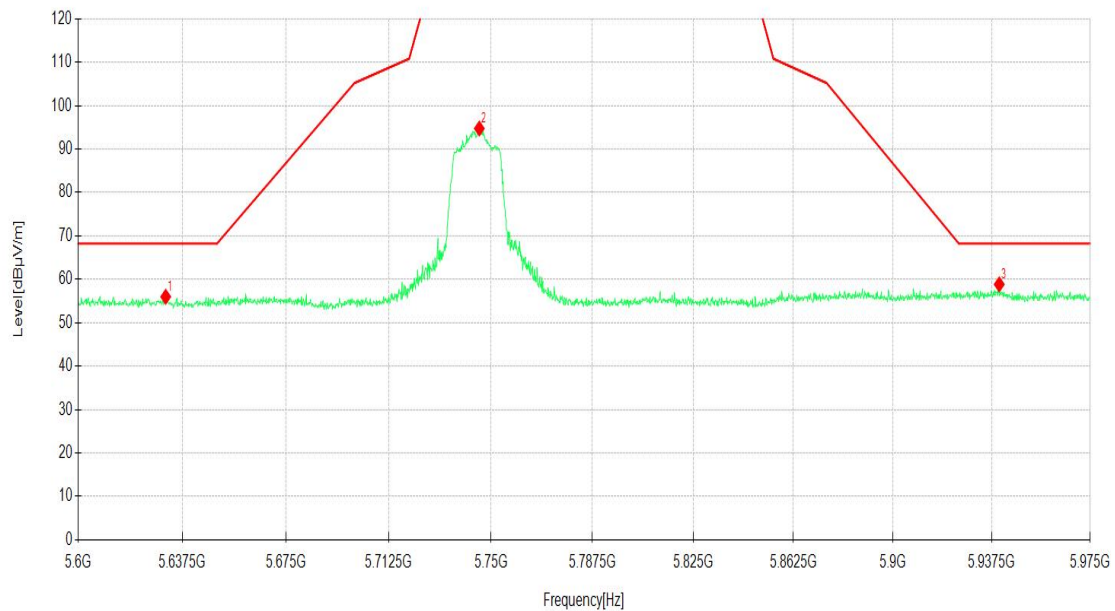
Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
2. Level (dBuV/m) = Reading (dBuV) + Factor (dB/m).
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]



Channel	802.11n20 CH149	Frequency	5745 MHz
Frequency Range	Above 1G	Detector Function	PK/AV

Horizontal

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	5631.52	47.03	8.95	55.98	68.20	12.22	300	1	PK
2	5745.76	85.79	8.93	94.72			300	83	PK
3	5940.30	48.06	10.78	58.84	68.20	9.36	300	345	PK
4	11490.00	27.01	15.04	42.05	74.00	31.95	100	119	PK
5	11490.00	18.45	15.04	33.49	54.00	20.51	100	119	AV
6	17235.00	20.08	25.54	45.62	68.20	22.58	400	264	PK
7	17235.00	13.11	25.54	38.65	54.00	15.35	400	23	AV



Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
2. Level (dBuV/m) = Reading (dBuV) + Factor (dB/m).
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]



Channel	802.11n20 CH149				Frequency	5745 MHz				
Frequency Range	Above 1G				Detector Function	PK/AV				
Vertical										
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	
1	5627.20	46.75	9.03	55.78	68.20	12.42	100	151	PK	
2	5745.95	95.25	8.93	104.18			100	319	PK	
3	5933.92	47.68	10.62	58.30	68.20	9.90	100	280	PK	
4	11490.00	25.07	15.04	40.11	74.00	33.89	200	309	PK	
5	11490.00	17.26	15.04	32.30	54.00	21.70	200	200	AV	
6	17235.00	19.83	25.54	45.37	68.20	22.83	200	0	PK	
7	17235.00	12.84	25.54	38.38	54.00	15.62	200	27	AV	

Remark: 1. The emission levels of other frequencies were greater than 20dB margin.

2. Level (dBuV/m) = Reading (dBuV) + Factor (dB/m).

3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m]



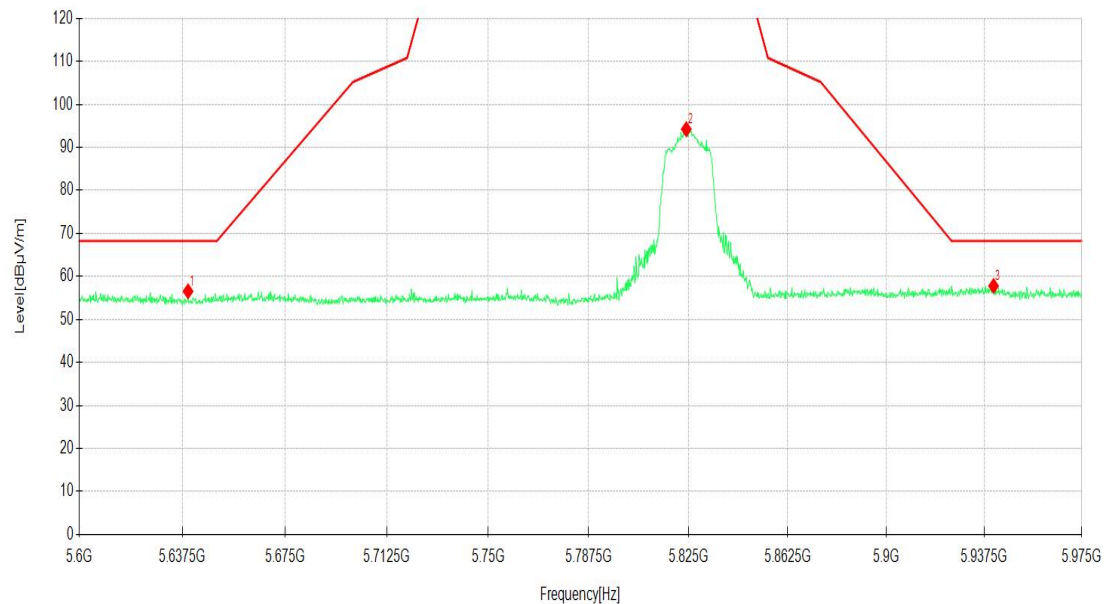
Channel		802.11n20 CH 157			Frequency		5785MHz		
Frequency Range		Above 1G			Detector Function		PK/AV		
Horizontal									
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	11570.00	26.09	15.34	41.43	74.00	32.57	200	30	PK
2	11570.00	18.25	15.34	33.59	54.00	20.41	200	49	AV
3	17355.00	20.01	26.31	46.32	68.20	21.88	200	54	PK
4	17355.00	12.18	26.31	38.49	54.00	15.51	200	30	AV
Vertical									
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Remark
1	11570.00	25.15	15.34	40.49	74.00	33.51	300	117	PK
2	11570.00	17.74	15.34	33.08	54.00	20.92	300	270	AV
3	17355.00	19.09	26.31	45.40	68.20	22.80	100	68	PK
4	17355.00	12.87	26.31	39.18	54.00	14.82	100	68	AV
Remark: 1. The emission levels of other frequencies were greater than 20dB margin. 2. Level (dBuV/m) = Reading (dBuV) + Factor (dB/m). 3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB). 4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]									



Channel	802.11n20 CH165	Frequency	5825 MHz
Frequency Range	Above 1G	Detector Function	PK/AV

Horizontal

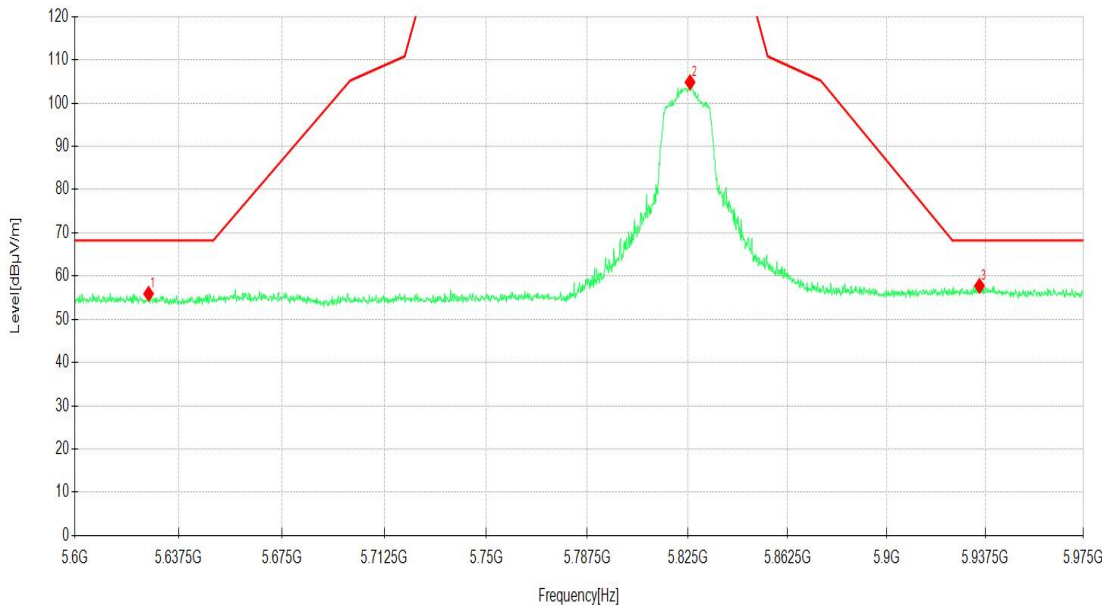
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	5639.58	48.08	8.46	56.54	68.20	11.66	100	196	PK
2	5824.17	85.42	8.81	94.23			100	100	PK
3	5941.05	47.08	10.70	57.78	68.20	10.42	100	335	PK
4	11650.00	26.49	15.20	41.69	74.00	32.31	400	250	PK
5	11650.00	18.47	15.20	33.67	54.00	20.33	400	27	AV
6	17475.00	18.98	26.05	45.03	68.20	23.17	400	260	PK
7	17475.00	12.04	26.05	38.09	54.00	15.91	400	4	AV



Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
2. Level (dBμV/m) = Reading (dBμV) + Factor (dB/m).
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]



Channel	802.11n20 CH165				Frequency	5825 MHz				
Frequency Range	Above 1G				Detector Function	PK/AV				
Vertical										
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	
1	5626.64	46.88	9.03	55.91	68.20	12.29	100	353	PK	
2	5825.86	96.03	8.78	104.81			100	318	PK	
3	5935.23	47.07	10.67	57.74	68.20	10.46	100	5	PK	
4	11650.00	26.20	15.20	41.40	74.00	32.60	400	100	PK	
5	11650.00	18.29	15.20	33.49	54.00	20.51	400	120	AV	
6	17475.00	19.24	26.05	45.29	68.20	22.91	400	6	PK	
7	17475.00	11.51	26.05	37.56	54.00	16.44	400	11	AV	



Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
2. Level (dBuV/m) = Reading (dBuV) + Factor (dB/m).
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]



Channel	802.11n40 CH151			Frequency	5755 MHz				
Frequency Range	Above 1G			Detector Function	PK/AV				
Horizontal									
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	5632.27	47.65	8.91	56.56	68.20	11.64	100	133	PK
2	5756.27	82.93	9.20	92.13			100	86	PK
3	5938.42	48.21	10.76	58.97	68.20	9.23	100	216	PK
4	11510.00	25.87	15.12	40.99	74.00	33.01	100	225	PK
5	11510.00	18.02	15.12	33.14	54.00	20.86	100	310	AV
6	17265.00	19.61	25.62	45.23	68.20	22.97	300	1	PK
7	17265.00	12.81	25.62	38.43	54.00	15.57	300	349	AV

Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
2. Level (dBuV/m) = Reading (dBuV) + Factor (dB/m).
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]



Channel	802.11n40 CH151			Frequency	5755 MHz				
Frequency Range	Above 1G			Detector Function	PK/AV				
Vertical									
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	5628.70	47.08	9.05	56.13	68.20	12.07	100	88	PK
2	5752.33	92.85	9.02	101.87			100	319	PK
3	5940.86	46.83	10.71	57.54	68.20	10.66	100	358	PK
4	11510.00	26.33	15.12	41.45	74.00	32.55	200	2	PK
5	11510.00	17.41	15.12	32.53	54.00	21.47	200	48	AV
6	17265.00	19.65	25.62	45.27	68.20	22.93	200	255	PK
7	17265.00	12.88	25.62	38.50	54.00	15.50	200	241	AV

Remark: 1. The emission levels of other frequencies were greater than 20dB margin.

2. Level (dBuV/m) = Reading (dBuV) + Factor (dB/m).

3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

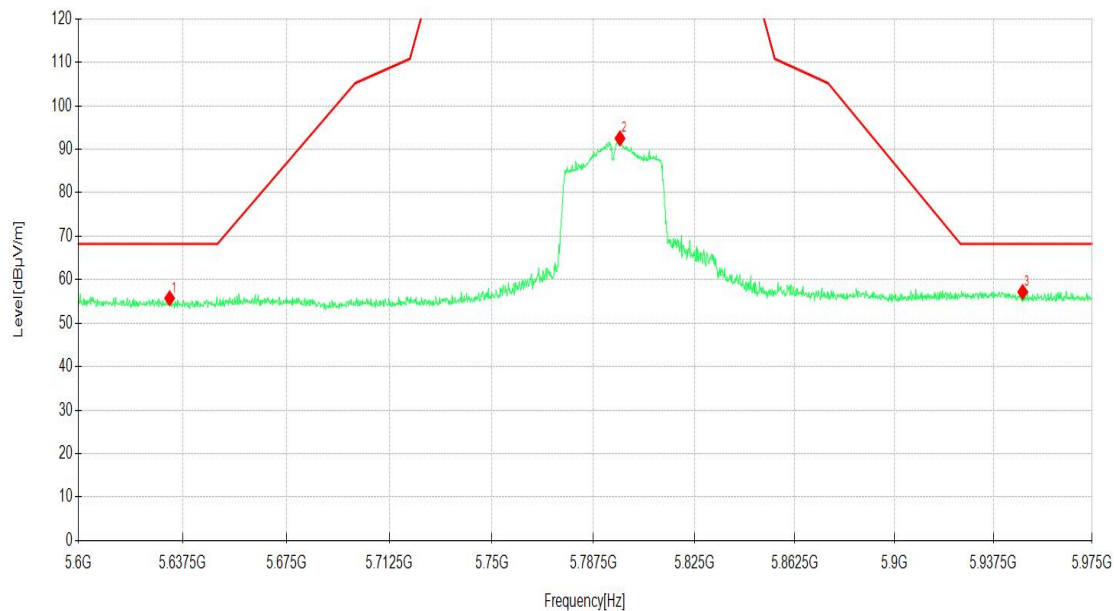
4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]



Channel	802.11n40 CH159	Frequency	5795 MHz
Frequency Range	Above 1G	Detector Function	PK/AV

Horizontal

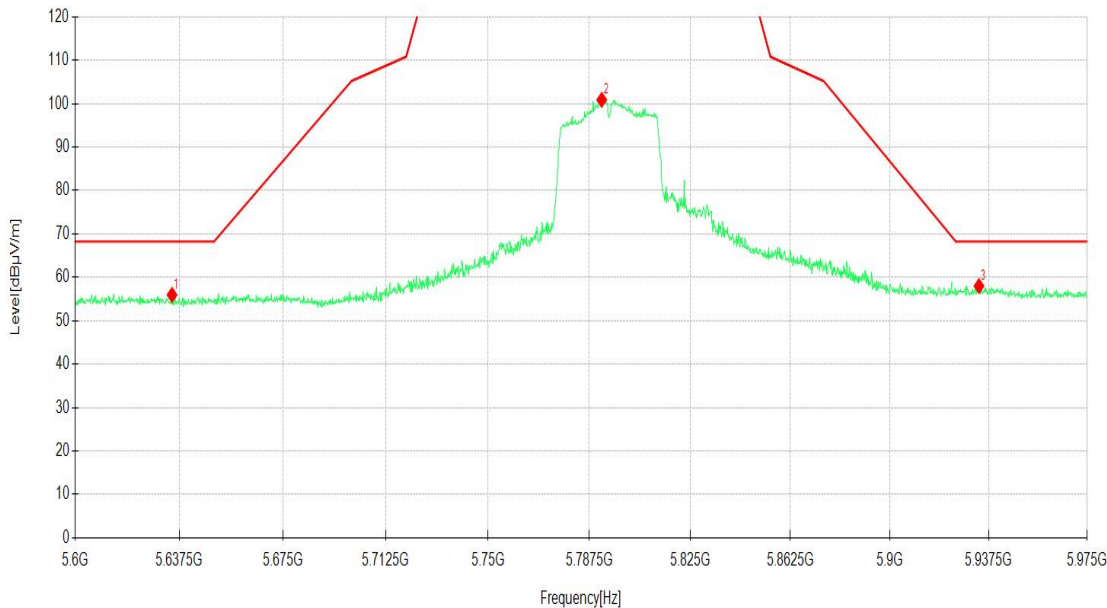
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	5632.83	46.85	8.88	55.73	68.20	12.47	200	154	PK
2	5797.35	83.92	8.59	92.51			200	99	PK
3	5948.55	47.32	9.87	57.19	68.20	11.01	200	51	PK
4	11590.00	25.84	15.17	41.01	74.00	32.99	400	120	PK
5	11590.00	18.67	15.17	33.84	54.00	20.16	400	284	AV
6	17385.00	19.40	26.15	45.55	68.20	22.65	400	359	PK
7	17385.00	12.47	26.15	38.62	54.00	15.38	400	170	AV



Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
2. Level (dBμV/m) = Reading (dBμV) + Factor (dB/m).
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]



Channel	802.11n40 CH159		Frequency		5795 MHz				
Frequency Range	Above 1G		Detector Function		PK/AV				
Vertical									
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	5634.89	47.19	8.75	55.94	68.20	12.26	200	154	PK
2	5792.10	92.26	8.60	100.86			200	332	PK
3	5933.73	47.38	10.62	58.00	68.20	10.20	200	79	PK
4	11590.00	25.25	15.17	40.42	74.00	33.58	100	150	PK
5	11590.00	18.11	15.17	33.28	54.00	20.72	100	125	AV
6	17385.00	18.63	26.15	44.78	68.20	23.42	100	230	PK
7	17385.00	12.73	26.15	38.88	54.00	15.12	100	230	AV



Remark: 1. The emission levels of other frequencies were greater than 20dB margin.

2. Level (dBuV/m) = Reading (dBuV) + Factor (dB/m).

3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

4. Margin(dB) = Limit[dBuV/m] - Level [dBuV/m]



Channel	802.11ac80 CH155			Frequency		5755 MHz			
Frequency Range	Above 1G			Detector Function		PK/AV			
Horizontal									
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	5627.76	47.34	9.04	56.38	68.20	11.82	200	311	PK
2	5768.83	79.96	8.94	88.90			200	99	PK
3	5940.30	47.59	10.78	58.37	68.20	9.83	200	296	PK
4	11550.00	24.88	15.40	40.28	74.00	33.72	200	81	PK
5	11550.00	17.79	15.40	33.19	54.00	20.81	200	205	AV
6	17325.00	19.22	26.20	45.42	68.20	22.78	300	309	PK
7	17325.00	11.54	26.20	37.74	54.00	16.26	300	210	AV

Remark: 1. The emission levels of other frequencies were greater than 20dB margin.

2. Level (dBuV/m) = Reading (dBuV) + Factor (dB/m).

3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]



Channel	802.11ac80 CH155			Frequency	5755 MHz				
Frequency Range	Above 1G			Detector Function	PK/AV				
Vertical									
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector
1	5635.64	47.97	8.70	56.67	68.20	11.53	200	106	PK
2	5772.96	89.51	8.67	98.18			200	312	PK
3	5934.10	51.72	10.63	62.35	68.20	5.85	200	42	PK
4	11550.00	26.31	15.40	41.71	74.00	32.29	400	112	PK
5	11550.00	19.15	15.40	34.55	54.00	19.45	400	206	AV
6	17325.00	18.64	26.20	44.84	68.20	23.36	400	132	PK
7	17325.00	12.40	26.20	38.60	54.00	15.40	400	294	AV



Remark: 1. The emission levels of other frequencies were greater than 20dB margin.
2. Level (dBuV/m) = Reading (dBuV) + Factor (dB/m).
3. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
4. Margin(dB) = Limit[dBμV/m] - Level [dBμV/m]

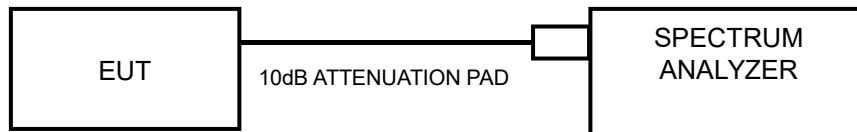
3.3 OCCUPIED BANDWIDTH MEASUREMENT

3.3.1 Measurement procedure

The transmitter antenna output was connected to the spectrum analyzer through an attenuator. The resolution bandwidth shall be set to the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth.

below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

3.3.2 TEST SETUP



3.4 26DB EMISSION BANDWIDTH

3.4.1 LIMITS OF 26DB EMISSION BANDWIDTH

This section is for reporting purpose only, there is on restriction limit of bandwidth

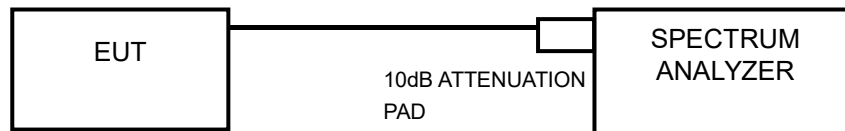
3.4.2 TEST PROCEDURES

FOR 26dB BANDWIDTH

- 1) Set RBW = approximately 1% of the emission bandwidth.
- 2) Set the VBW > RBW.
- 3) Detector = Peak
- 4) Trace mode = max hold.
- 5) Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

3.4.3 TEST SETUP

FOR 26dB BANDWIDTH



3.5 6DB EMISSION BANDWIDTH

3.5.1 LIMITS OF 6DB EMISSION BANDWIDTH

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

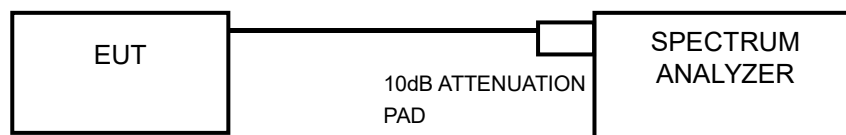
3.5.2 TEST PROCEDURES

FOR 6dB BANDWIDTH

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

3.5.3 TEST SETUP

FOR 6dB BANDWIDTH



3.6 TRANSMIT POWER MEASUREMENT

3.6.1 LIMITS OF TRANSMIT POWER MEASUREMENT(FCC)

Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p $\leq$ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	√	Mobile and Portable client device	250mW (24 dBm)
U-NII-2A	√		250mW(24dBm) or 11 dBm+10LogB*
U-NII-2C	√		250mW(24dBm) or 11 dBm+10LogB*
U-NII-3	√		1 Watt (30 dBm)

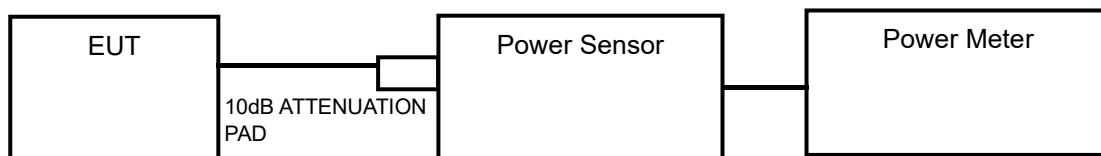
NOTE: 1. Where B is the 26dB emission bandwidth in MHz.

3.6.2 TEST PROCEDURES

FOR AVERAGE POWER MEASUREMENT

Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

3.6.3 TEST SETUP



3.7 POWER SPECTRAL DENSITY MEASUREMENT

3.7.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT(FCC)

Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	17dBm/ MHz
		Fixed point-to-point Access Point	
		Indoor Access Point	
	√	Mobile and Portable client device	11dBm/ MHz
U-NII-2A	√		11dBm/ MHz
U-NII-2C	√		11dBm/ MHz
U-NII-3	√		30dBm/ 500kHz

3.7.2 TEST PROCEDURE

For U-NII-1, U-NII-2A, U-NII-2Cband:

Using method SA-2

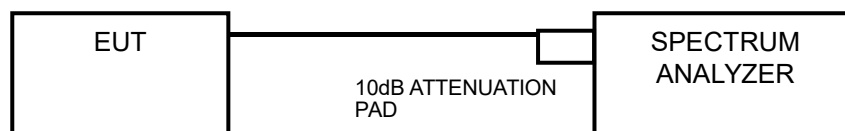
- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 1MHz, Set VBW =3 MHz, Detector = AV
- 3) Set Channel power measure = 1MHz
- 4) Sweep time = auto, trigger set to“free run”.
- 5) Trace average at least 100 traces in power averaging mode.
- 6) Record the max value and add 10 log (1/duty cycle)

For U-NII-3 band:

Using method SA-2

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 300 kHz, Set VBW =1 MHz, Detector = AV
- 3) Set Channel power measure = 1MHz
- 4) Sweep time = auto, trigger set to“free run”.
- 5) Trace average at least 100 traces in power averaging mode.
- 6) Record the max value and add 10 log (1/duty cycle)

3.7.3 TEST SETUP



3.8 FREQUENCY STABILITY

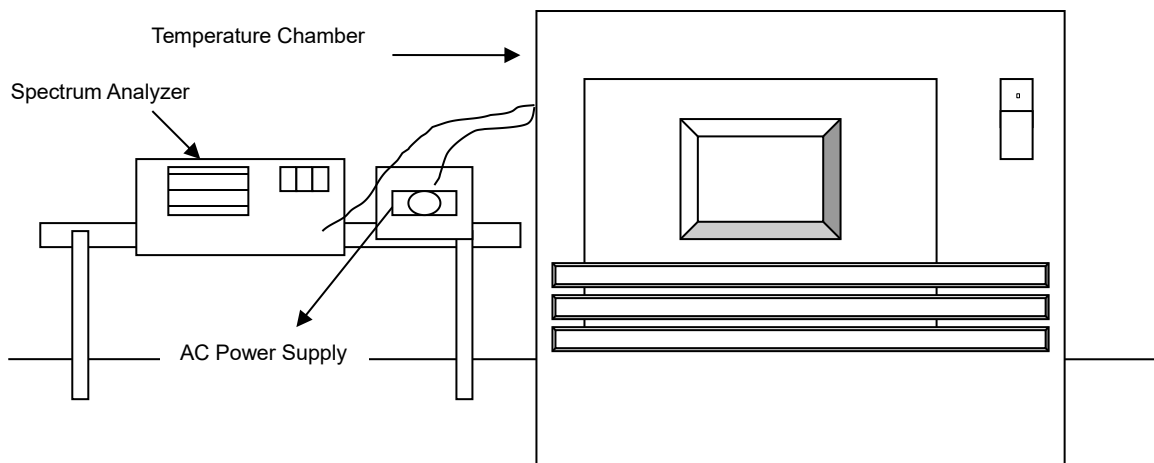
3.8.1 LIMITS OFFREQUENCY STABILITY

The frequency of the carrier signal shall be maintained within band of operation.

3.8.2 TEST PROCEDURES

- The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
- Turn the EUT on and couple its output to a spectrum analyzer.
- Turn the EUT off and set the chamber to the highest temperature specified.
- Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
- Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
- The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

3.8.3 TEST SETUP





3.9 ANTENNA REQUIREMENT

3.9.1 LIMITS OFFREQUENCY STABILITY

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. According to FCC 47 CFR Section 15.407(a)(1)(2) , if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.9.2 ANTENNA ANTI-REPLACEMENT CONSTRUCTION

The antenna used for this product is PCB antenna and that no antenna other than that furnished by the responsible party shall be used with the device

3.9.3 ANTENNA GAIN

Operation Band	Chain 1 Antenna Gain(dBi)	Chain 2 Antenna Gain(dBi)	DG For Power (dBi)	Power Limit Reduction
U-NII-1	-1.56	-3.01	0.76	0
U-NII-3	2.88	4.07	6.51	0.51

Refer to KDB662911 D01 Multiple Transmitter Output v02r01.

d) *Unequal antenna gains, with equal transmit powers.* For antenna gains given by $G_1, G_2, \dots, G_N$ dBi

(i) If transmit signals are *correlated*, then

Directional gain = $10 \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2 / N_{ANT}]$ dBi [Note the “20”s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

(ii) If all transmit signals are *completely uncorrelated*, then

Directional gain = $10 \log[(10^{G_1/10} + 10^{G_2/10} + \dots + 10^{G_N/10}) / N_{ANT}]$ dBi



4 PHOTOGRAPHS OF TEST SETUP

Please refer to the attached file (Test Setup Photo).



5 PHOTOGRAPHS OF THE EUT

Please refer to the attached file (External Photos report and Internal Photos).

----- End of the Report -----



Important

- (1) The test report is valid without the official stamp of CVC;
- (2) Any part photocopies of the test report are forbidden without the written permission from CVC;
- (3) The test report is invalid without the signatures of Approval and Reviewer;
- (4) The test report is invalid if altered;
- (5) Objections to the test report must be submitted to CVC within 15 days.
- (6) Generally, commission test is responsible for the tested samples only.
- (7) As for the test result “-” or “N” means “not applicable”, “/” means “not test”, “P” means “pass” and “F” means “fail”

The test data and test results given in this test report should only be used for purposes of scientific research, teaching and internal quality control when the CMA symbol is not presented.

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