TEST REPORT

Reference No......	:	WTX25X03058738W002
FCC ID.....	:	2BPE2-LF02
Applicant.....	:	SVEA(HK)LIMITED
Address.....	:	FLAT/RM520, 5/F, CORE BUILDING 1, PH 1,1 SCIENCE PARK EAST AVE, SHA TIN, NT, HK, CHINA
Manufacturer.....	:	Sveaverken Intelligent Technology (shenzhen) Co., Ltd.
Address.....	:	Room 401-501, Building 13, Nangang Second Industrial Park, No.1026, Songbai Road, Sunshine Community, Xili Street, Nanshan District, Shenzhen
Product Name.....	:	RoboPusher Nimbo Plus
Model No......	:	LF02
Standards.....	:	FCC Part 15.407
Date of Receipt sample.....	:	2025-03-14
Date of Test.....	:	2025-03-14 to 2025-03-31; 2025-04-05 to 2025-05-19
Date of Issue.....	:	2025-05-19
Test Report Form No......	:	WTX_Part 15_407W
Test Result.....	:	**Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of approver.

Prepared By:

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Report version

Version No.	Date of issue	Description
Rev.00	2025-05-19	Original
/	/	/

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

General Description of EUT	
Product Name:	RoboPusher Nimbo Plus
Trade Name:	Sveaverken
Model No.:	LF02
Adding Model(s):	/
Rated Voltage:	AC 120V for Adapter power DC: 58.8V
Battery Capacity:	40000mAh
Power Adapter:	Model: H82-48V10A Input: 110-245VAC 45/65Hz Battery: Ternary litium battery 32celles Output voltage : 51.2VDC
Note: The test data is gathered from a production sample, provided by the manufacturer.	

Technical Characteristics of EUT	
Support Standards:	802.11a, 802.11n(HT20), 802.11n-HT40
Frequency Range:	5180-5240MHz, 5745-5825MHz
Max. RF Output Power:	5180-5240MHz:15.51dBm (Conducted) 5745-5825MHz:14.52dBm (Conducted)
Type of Modulation:	QPSK, 16QAM, 64QAM,256QAM
Type of Antenna:	Glue stick antenna
Antenna Gain:	5180-5240MHz:2.64dBi 5745-5825MHz:3.20dBi
Note The Antenna Gain is provided by the customer and can affect the validity of results.	

1.2 Test Standards

The tests were performed according to following standards:

FCC Rules Part 15.407: General technical requirements.
ANSI C63.10-2013: American National Standard for Testing Unlicensed Wireless Devices.
KDB789033 D02 v02r01: Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-Nii) Devices Part 15, Subparte.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, KDB789033 D02 v02r01
The equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted accordingly in reference to the Operating Instructions.

1.4 Table for parameters of Test Software setting

Run commands and follow the instructions given by the manufacturer, you can start to test. During testing, Channel and Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

Mode	Ant.	Test Frequency (MHz)												
		NCB: 20MHz												
		5180	5200	5240	5260	5280	5320	5500	5580	5700	5720	5745	5785	5825
802.11a 6Mbps	ANT 0	50	50	50	/	/	/	/	/	/	/	50	50	50
802.11n-HT20 MCS0	ANT 0	48	48	48	/	/	/	/	/	/	/	48	48	48

Mode	Ant.	NCB: 40MHz									
		5190	5230	5270	5310	5510	5550	5670	5710	5755	5795
802.11n-HT40 MCS0	ANT 0	45	45	/	/	/	/	/	/	45	45

1.5 EUT Operating during test

EUT was programmed to be in continuously transmitting mode. During the test, EUT operation to normal function and programs under Android were executed.

1.6 Test Facility

Address of the test laboratory

Laboratory: Waltek Testing Group (Shenzhen) Co., Ltd.
Address: 1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road, Block 70 Bao'an District, Shenzhen, Guangdong, China

FCC – Registration No.: 125990

Waltek Testing Group (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is mai ntained in our files. The Designation Number is CN5010, and Test Firm Registration Number is 125990.

Industry Canada (IC) Registration No.: 11464A

The 3m Semi-anechoic chamber of Waltek Testing Group (Shenzhen) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A and the CAB identifier is CN0057.

1.7 EUT Setup and Test Mode

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. All testing shall be performed under maximum output power condition, with a duty cycle equal to 100%, and to measure its highest possible emissions level, more detailed description as follows:

Test Mode List		
Test Mode	Description	Remark
TM1	802.11a	5180MHz,5200MHz,5240MHz,5745MHz, 5785MHz,5825MHz
TM2	802.11n-HT20	5180MHz,5200MHz,5240MHz,5745MHz, 5785MHz,5825MHz
TM3	802.11n-HT40	5190MHz,5230MHz,5755MHz,5795MHz

Test Conditions	
Temperature:	22~25 °C
Relative Humidity:	45~75 %
ATM Pressure:	1019 mbar

EUT Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
AC Cable	1.4	Unshielded	Without Ferrite
DC Cable	0.9	Unshielded	Without Ferrite

Special Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
/	/	/	/

Auxiliary Equipment List and Details			
Description	Manufacturer	Model	Serial Number
/	/	/	/

1.8 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
RF Output Power	Conducted	0.57dB
Occupied Bandwidth	Conducted	0.015MHz
Power Spectral Density	Conducted	1.8dB
Conducted Spurious Emission	Conducted	2.17dB
Conducted Emissions	Conducted	9-150kHz, 3.74dB
		0.15-30MHz, 3.34dB
Transmitter Spurious Emissions	Radiated	30-200MHz, 4.52dB
		0.2-1GHz 5.56dB
		1-6GHz, 3.84dB
		6-18GHz, 3.92dB

1.9 Test Equipment List and Details

Fixed asset Number	Description	Manufacturer	Model	Serial No.	Cal Date	Due. Date
WTXE1041A 1001	Communication Tester	Rohde & Schwarz	CMW500	148650	2025-02-23	2026-02-22
WTXE1005A 1005	Spectrum Analyzer	Agilent	N9020A	US47140102	2025-02-23	2026-02-22
WTXE1084A 1001	Spectrum Analyzer	Agilent	N9020A	MY54320548	2025-02-23	2026-02-22
WTXE1004A 1-001	Spectrum Analyzer	Rohde & Schwarz	FSP40	100612	2025-02-23	2026-02-22
WTXE1103A 1003	Attenuator	Pasternack	PE4007-4	/	2025-02-23	2026-02-22
WTXE1003A 1-005	Coaxial Cable	/	0M4RFC	/	2025-02-23	2026-02-22
☐ Chamber A: Below 1GHz						
WTXE1005A 1003	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2025-02-23	2026-02-22
WTXE1001A 1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2025-02-23	2026-02-22
WTXE1007A 1001	Amplifier	HP	8447F	2805A03475	2025-02-23	2026-02-22
WTXE1010A 1007	Loop Antenna	Schwarz beck	FMZB 1516	9773	2024-02-26	2026-02-25
WTXE1010A 1006	Broadband Antenna	Schwarz beck	VULB9163	9163-333	2025-02-23	2026-02-22
WTXE1104A 1032-1	Coaxial Cable	/	RC_6G-N-M	/	2025-02-23	2026-02-22
WTXE1104A 1032-2	Coaxial Cable	/	RC_6G-N-M	/	2025-02-23	2026-02-22
WTXE1104A 1032-3	Coaxial Cable	/	RC_6G-N-M	/	2025-02-23	2026-02-22
☐ Chamber A: Above 1GHz						
WTXE1005A 1003	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2025-02-23	2026-02-22
WTXE1001A 1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2025-02-23	2026-02-22
WTXE1065A 1001	Amplifier	C&D	PAP-1G18	2002	2025-02-23	2026-02-22
WTXE1010A 1005	Horn Antenna	ETS	3117	00086197	2025-02-23	2026-02-22

WTXE1010A 1010	DRG Horn Antenna	A.H. SYSTEMS	SAS-574	571	2024-03-17	2026-03-16
WTXE1003A 1001	Pre-amplifier	Schwarzbeck	BBV 9721	9721-031	2025-02-23	2026-02-22
WTXE1104A 1033-1	Coaxial Cable	/	C16-07-07	/	2025-02-23	2026-02-22
WTXE1104A 1033-2	Coaxial Cable	/	C16-07-07	/	2025-02-23	2026-02-22
WTXE1104A 1033-3	Coaxial Cable	/	C16-07-07	/	2025-02-23	2026-02-22
☐ Chamber B:Below 1GHz						
WTXE1010A 1006	Trilog Broadband Antenna	Schwarz beck	VULB9163(B)	9163-635	2024-03-17	2027-03-16
WTXE1038A 1001	Amplifier	Agilent	8447D	2944A104 57	2025-02-23	2026-02-22
WTXE1001A 1002	EMI Test Receiver	Rohde & Schwarz	ESPI	101391	2025-02-23	2026-02-22
WTXE1104A 1031-1	Coaxial Cable	/	1.5MRFC-LWB3	/	2025-02-23	2026-02-22
WTXE1104A 1031-2	Coaxial Cable	/	RG 316	/	2025-02-23	2026-02-22
WTXE1104A 1031-3	Coaxial Cable	/	RG 316	/	2025-02-23	2026-02-22
☒ Chamber C:Below 1GHz						
WTXE1093A 1001	EMI Test Receiver	Rohde & Schwarz	ESIB 26	100401	2025-02-23	2026-02-22
WTXE1010A 1013-1	Trilog Broadband Antenna	Schwarz beck	VULB 9168	1194	2024-04-18	2027-04-17
WTXE1010A 1007	Loop Antenna	Schwarz beck	FMZB 1516	9773	2024-02-26	2026-02-25
WTXE1007A 1002	Amplifier	HP	8447F	2944A038 69	2025-02-23	2026-02-22
WTXE1104A 1034-1	Coaxial Cable	/	RC_6G-N-M	/	2025-02-23	2026-02-22
WTXE1104A 1034-2	Coaxial Cable	/	RC_6G-N-M	/	2025-02-23	2026-02-22
WTXE1104A 1034-3	Coaxial Cable	/	RC_6G-N-M	/	2025-02-23	2026-02-22
☒ Chamber C: Above 1GHz						
WTXE1093A	EMI Test	Rohde &	ESIB 26	100401	2025-02-23	2026-02-22

1001	Receiver	Schwarz				
WTXE1103A 1005	Horn Antenna	POAM	RTF-118A	1820	2023-03-10	2026-03-09
WTXE1103A 1006	Amplifier	Tonscend	TAP01018050	AP22E806 235	2025-02-23	2026-02-22
WTXE1010A 1010	DRG Horn Antenna	A.H. SYSTEMS	SAS-574	571	2024-03-17	2026-03-16
WTXE1003A 1001	Pre-amplifier	Schwarzbeck	BBV 9721	9721-031	2025-02-23	2026-02-22
WTXE1104A 1035-1	Coaxial Cable	/	RC-18G-N-M	/	2025-02-23	2026-02-22
WTXE1104A 1035-2	Coaxial Cable	/	RC-18G-N-M	/	2025-02-23	2026-02-22
WTXE1104A 1035-3	Coaxial Cable	/	RC-18G-N-M	/	2025-02-23	2026-02-22
☐ Conducted Room 1#						
WTXE1104A 1029	EMI Test Receiver	Rohde & Schwarz	ESCI	100525	2024-12-08	2025-12-07
WTXE1002A 1001	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2025-02-23	2026-02-22
WTXE1003A 1001	AC LISN	Schwarz beck	NSLK8126	8126-279	2025-02-23	2026-02-22
WTXE1104A 1036	Coaxial Cable	/	RG 316	/	2025-02-23	2026-02-22
WTXE1104A 1038	Coaxial Cable	/	6MRFC-DP	/	2025-02-23	2026-02-22
☐ Conducted Room 2#						
WTXE1001A 1004	EMI Test Receiver	Rohde & Schwarz	ESPI	101259	2025-02-23	2026-02-22
WTXE1003A 1003	LISN	Rohde & Schwarz	ENV 216	100097	2025-02-23	2026-02-22
WTXE1104A 1037	Coaxial Cable	/	RG 316	/	2025-02-23	2026-02-22

Software List			
Description	**Manufacturer**	**Model**	**Version**
EMI Test Software (Radiated Emission A)	Farad	EZ-EMC	RA-03A1 (1.1.4.2)
EMI Test Software (Radiated Emission B)	Farad	EZ-EMC	RA-03A1 (1.1.4.2)
EMI Test Software (Radiated Emission C)	Farad	EZ-EMC	RA-03A1-2 (1.1.4.2)
EMI Test Software (Conducted Emission Room 1#)	Farad	EZ-EMC	3A1*CE-RE 1.1.4.3
EMI Test Software (Conducted Emission Room 2#)	Farad	EZ-EMC	3A1*CE-RE 1.1.4.3

*Remark: indicates software version used in the compliance certification testing.

2. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test Item	Result
§15.203; §15.405	Antenna Requirement	Compliant
15.407 (c)	Automatically Discontinue Transmission	Compliant
§15.207; §15.407(b)(6)	Conducted Emission	N/A
§15.407(a)(1),(2)	Power Spectral Density	N/A
§15.407(e)	Emission Bandwidth and Occupied Bandwidth	N/A
§15.407(a)(1),(2)	Maximum Conducted Output Power	N/A
§15.407(b)(1),(2),(3),(4)	Undesirable emission	N/A
§15.205; §15.407(b)(1),(2),(3)	Radiated Emission	Compliant
§15.407(g)	Frequency Stability	N/A
§15.407(h)	Dynamic Frequency Selection (DFS)	N/A

Class II Permissive Change: The device is added with a laser radar function. No change in radio parameters has occurred.

Note: Report is for Class II Permissive Change only. Updated test data include Antenna Requirement, Conducted Emission and Radiated Emission. The test data refer to Original equipment (FCC ID: 2BPE2-LF02), the original FCC ID issue date: 05/25/2025.

3. Antenna Requirement

3.1 Standard Applicable

According to FCC Part 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

3.2 Evaluation Information

This product has a Glue stick antenna, fulfill the requirement of this section.

4. Automatically Discontinue Transmission

4.1 Standard Applicable

According to FCC Part 15.407(c), the device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

4.2 Summary of Test Results

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

5. Radiated Spurious Emissions

5.1 Standard Applicable

According to §15.407(b), undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15-5.25GHz band: All emissions outside of the 5.15-5.35GHz band shall not exceed an e.i.r.p. of −27dBm/MHz.

(2) For transmitters operating in the 5.25-5.35GHz band: All emissions outside of the 5.15-5.35GHz band shall not exceed an e.i.r.p. of −27dBm/MHz.

(3) For transmitters operating in the 5.47-5.725GHz band: All emissions outside of the 5.47-5.725GHz band shall not exceed an e.i.r.p. of −27dBm/MHz.

(4) For transmitters operating in the 5.725-5.85GHz band:

(i) All emissions shall be limited to a level of −27dBm/MHz at 75MHz or more above or below the band edge increasing linearly to 10dBm/MHz at 25MHz above or below the band edge, and from 25MHz above or below the band edge increasing linearly to a level of 15.6dBm/MHz at 5MHz above or below the band edge, and from 5MHz above or below the band edge increasing linearly to a level of 27dBm/MHz at the band edge.

According to §15.407(b)(6), Unwanted emissions below 1GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.

According to §15.407(b)(7), The provisions of §15.205 apply to intentional radiators operating under this section.

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If radiated measurements are performed, field strength is then converted to EIRP as follows:

EIRP = ((E*d)^2) / 30

where:

• E is the field strength in V/m;

• d is the measurement distance in meters;

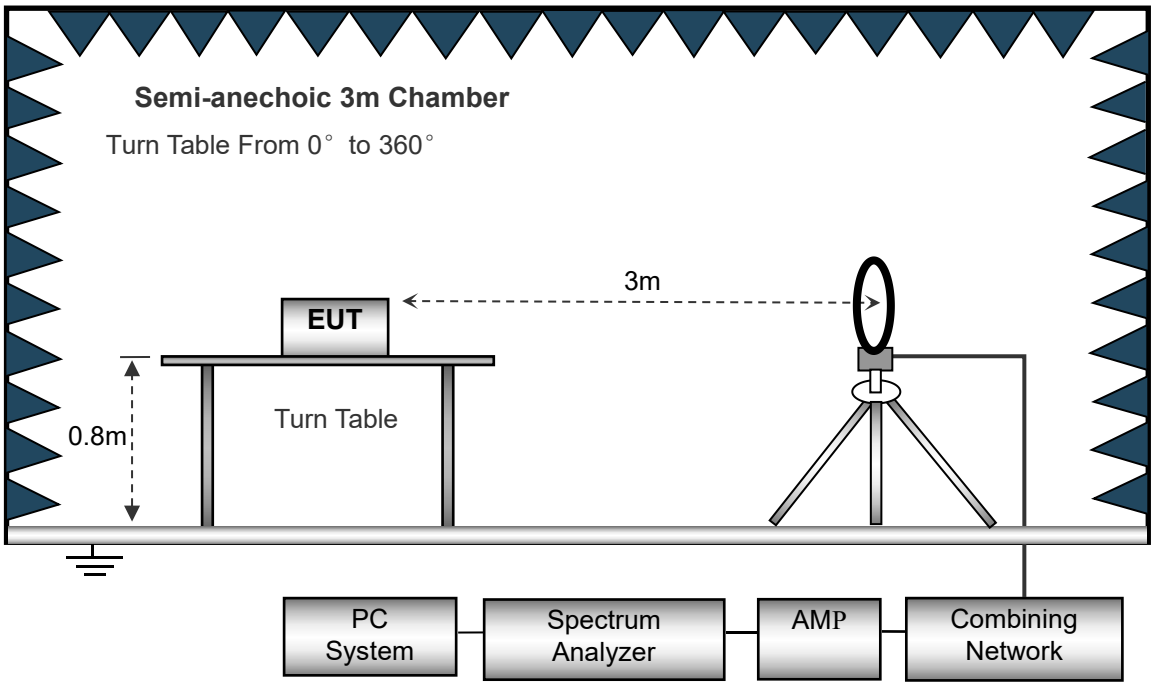
• EIRP is the equivalent isotropically radiated power in watts.

5.2 Test Procedure

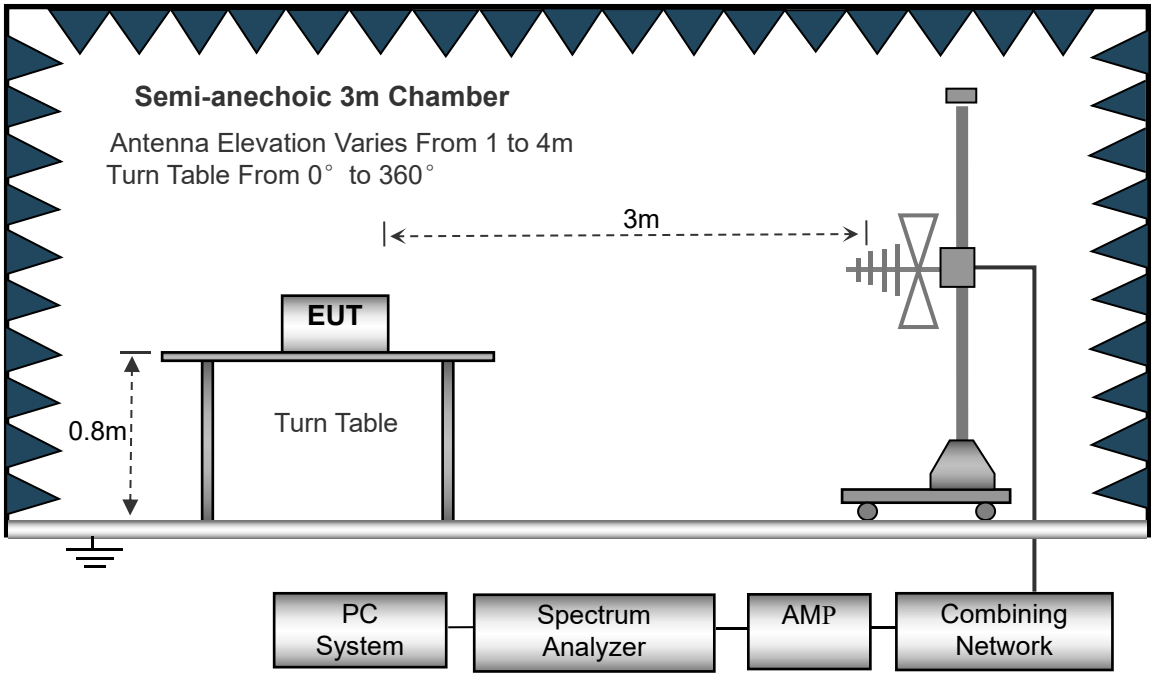
The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.205 15.407(b)(6) and FCC Part 15.209 Limit..

The external I/O cables were draped along the test table and formed a bundle 30 to 40cm long in the middle. The spacing between the peripherals was 10cm.

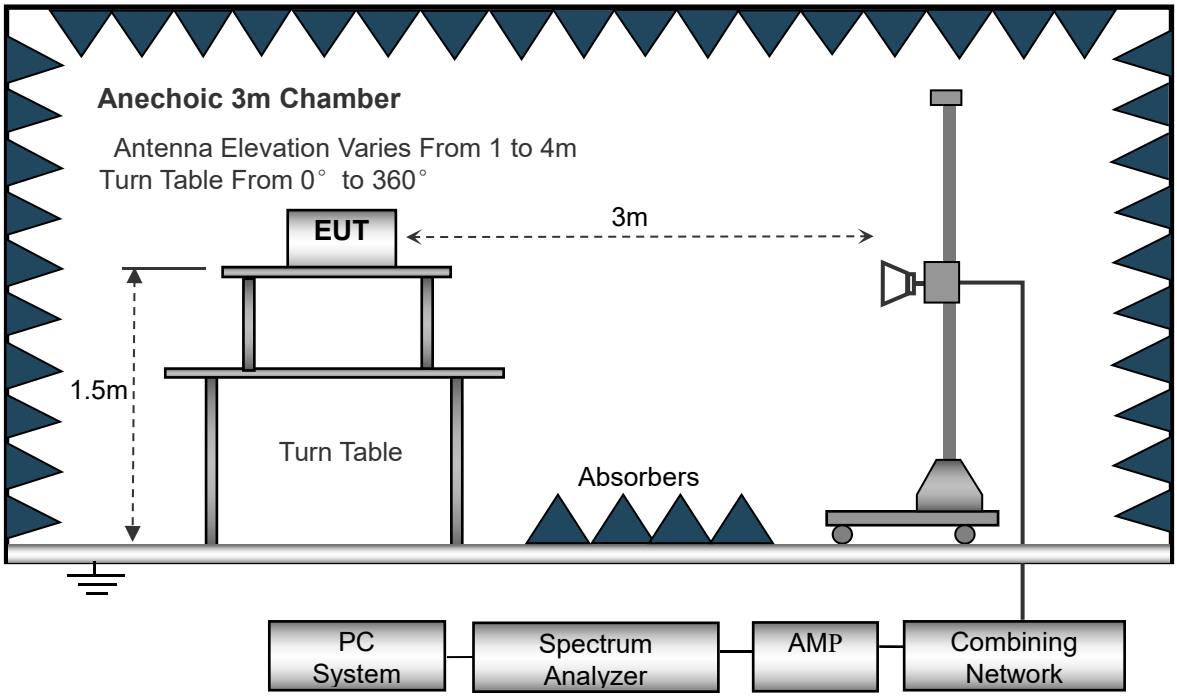
The test setup for emission measurement below 30MHz.



The test setup for emission measurement from 30MHz to 1GHz.



The test setup for emission measurement above 1GHz.



5.3 Test Receiver Setup

During the radiated emission test for above 1GHz, the test receiver was set with the following configurations:

For peak detector:
RBW = 1000kHz, VBW = 3000kHz, Sweep Time = Auto

For average detector:
RBW = 1000kHz, VBW = 10Hz, Sweep Time = Auto

5.4 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

Corr. Ampl. = Indicated Reading + Ant. Factor + Cable Loss – Ampl. Gain

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dBμV means the emission is 6dBμV below the maximum limit for Class B. The equation for margin calculation is as follows:

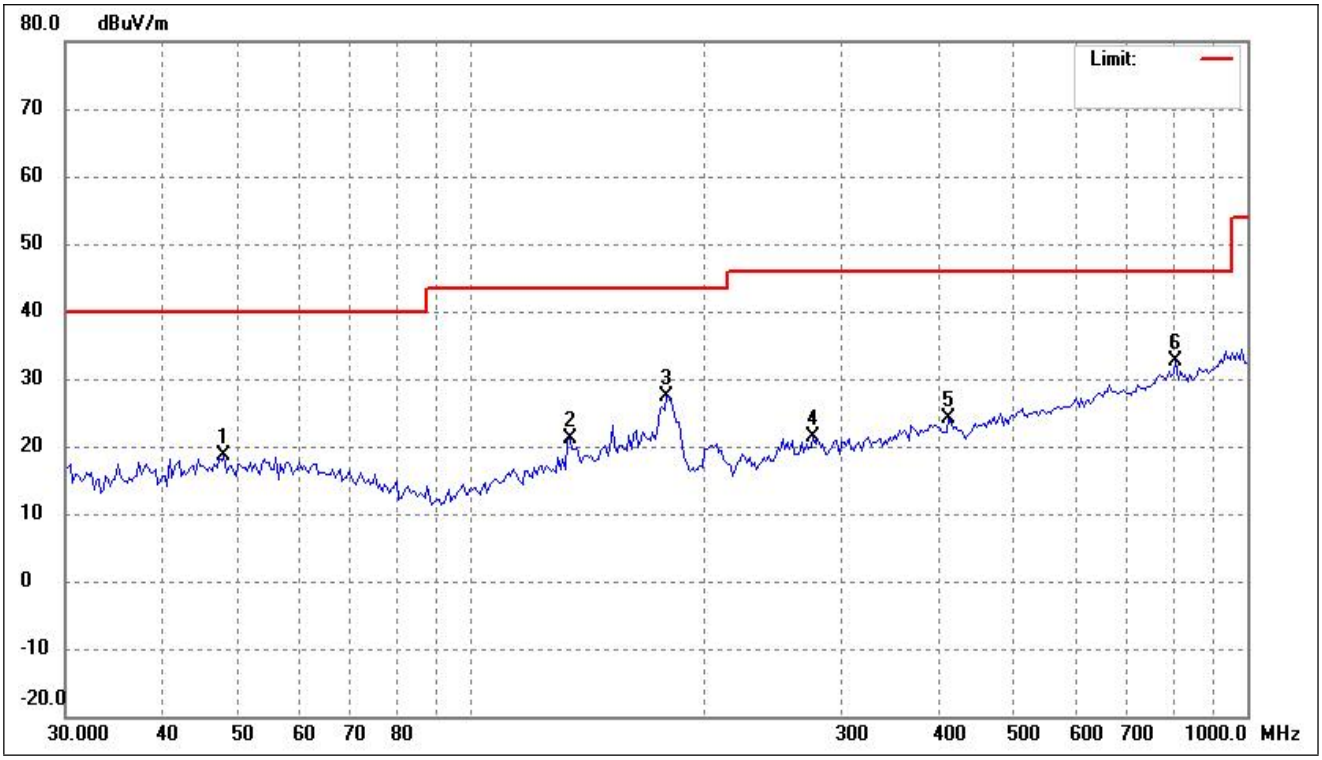
Margin = Corr. Ampl. – FCC Part 15 Limit

5.5 Summary of Test Results/Plots

Note: *this EUT was tested in 3 orthogonal positions and the worst case position data was reported.*

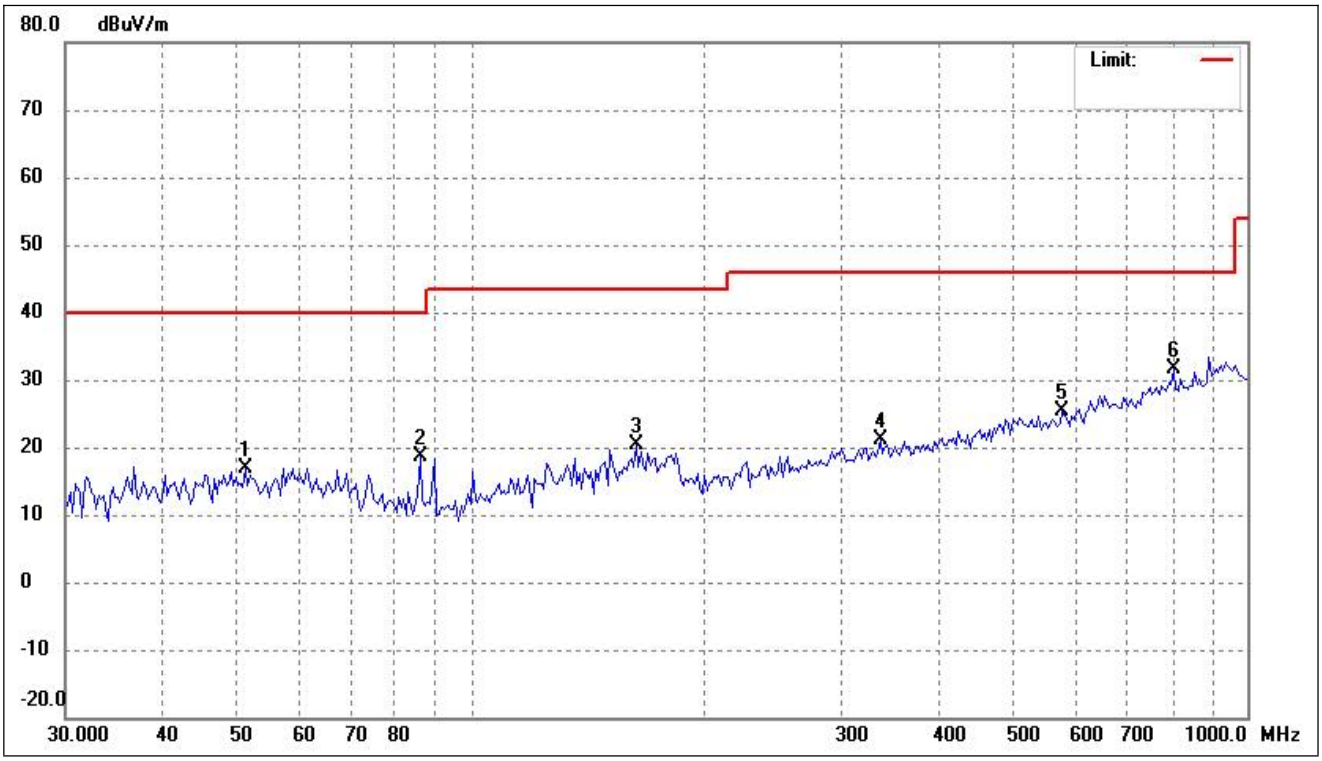
- Spurious Emission From 30MHz to 1GHz
- 5150-5250MHz

802.11a			
Test Channel	5180MHz(Worst case)	Polarity:	Horizontal



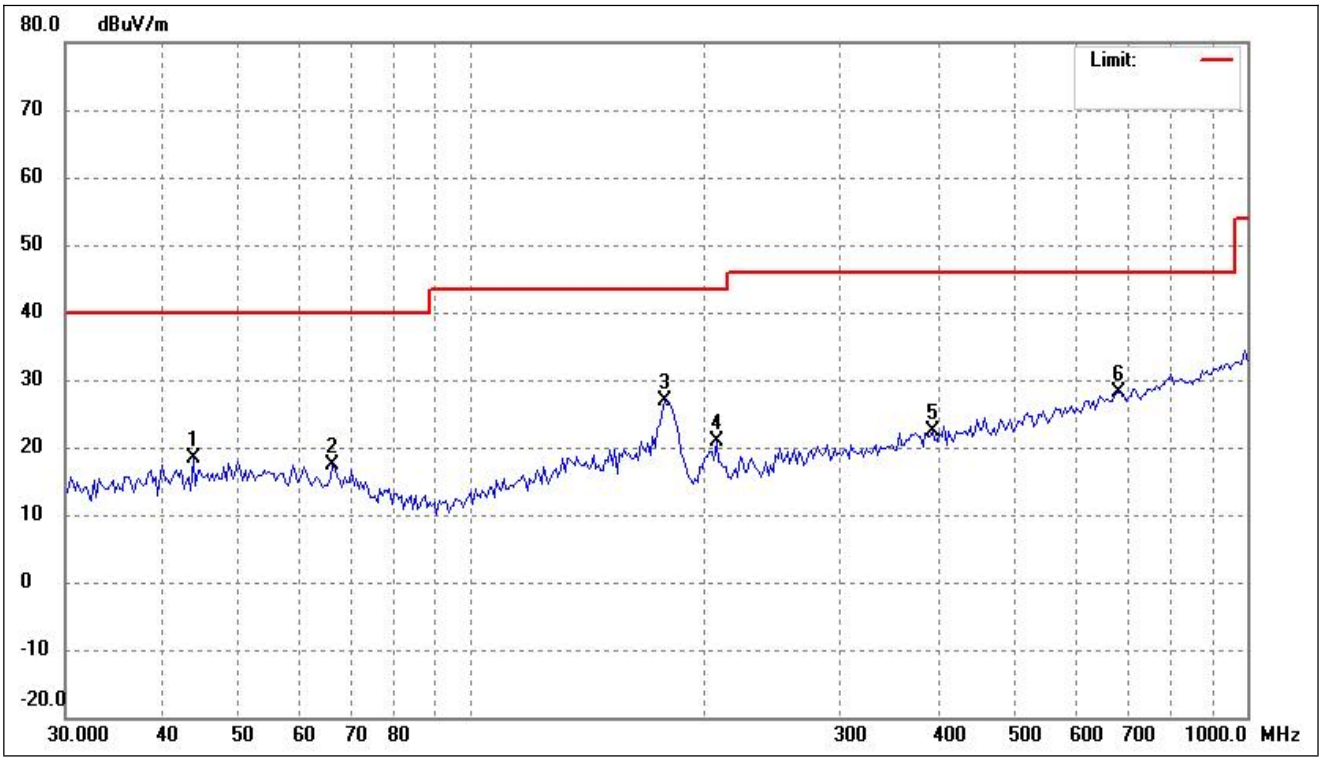
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	48.0392	27.74	-9.02	18.72	40.00	-21.28	-	-	peak
2	134.0194	30.92	-9.74	21.18	43.50	-22.32	-	-	peak
3	178.7697	37.11	-9.73	27.38	43.50	-16.12	-	-	peak
4	276.3818	29.75	-8.46	21.29	46.00	-24.71	-	-	peak
5	412.5395	29.98	-5.94	24.04	46.00	-21.96	-	-	peak
6	809.9238	31.62	1.00	32.62	46.00	-13.38	-	-	peak

802.11a			
Test Channel	5180MHz(Worst case)	Polarity:	Vertical



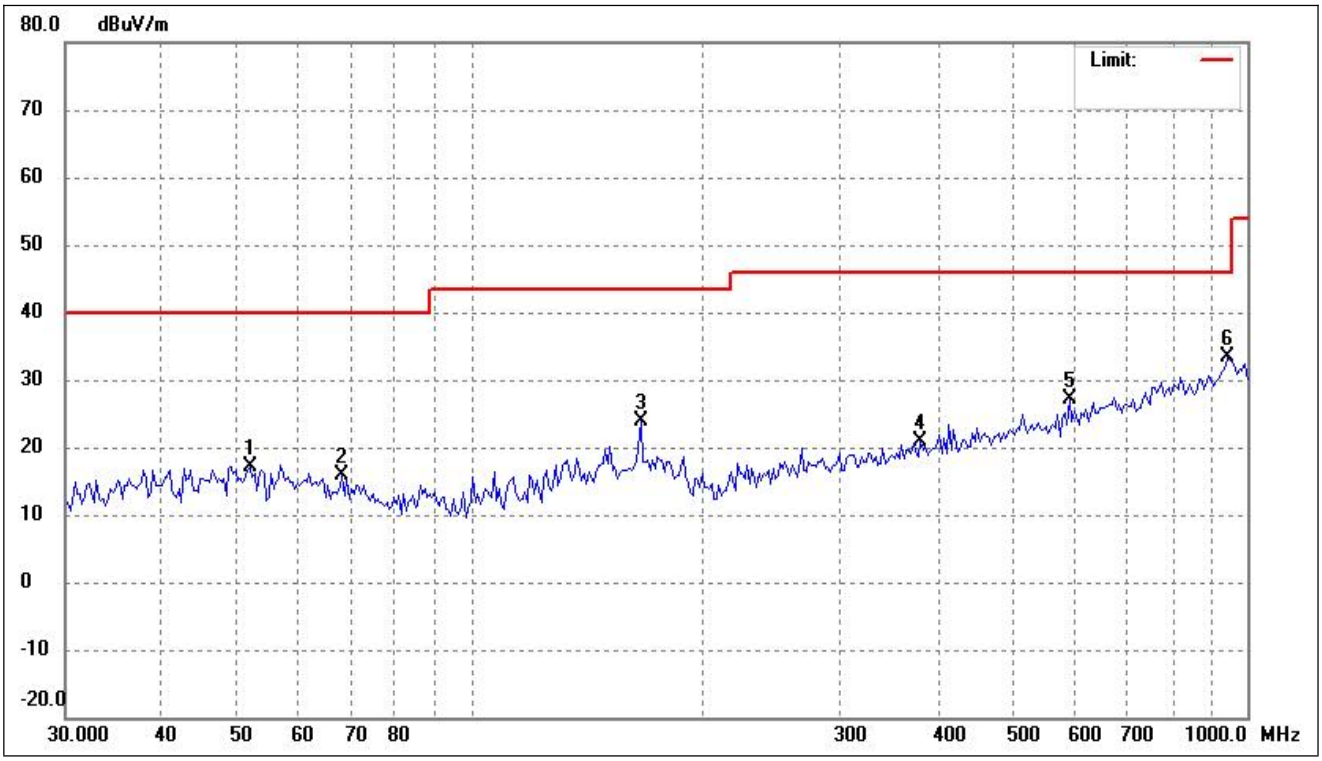
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	51.1756	25.77	-8.99	16.78	40.00	-23.22	-	-	peak
2	86.0796	32.78	-14.07	18.71	40.00	-21.29	-	-	peak
3	163.1623	28.84	-8.58	20.26	43.50	-23.24	-	-	peak
4	336.4817	28.21	-7.10	21.11	46.00	-24.89	-	-	peak
5	578.0359	28.13	-2.76	25.37	46.00	-20.63	-	-	peak
6	804.2523	30.61	1.01	31.62	46.00	-14.38	-	-	peak

802.11n-HT20			
Test Channel	5180MHz(worst case)	Polarity:	Horizontal



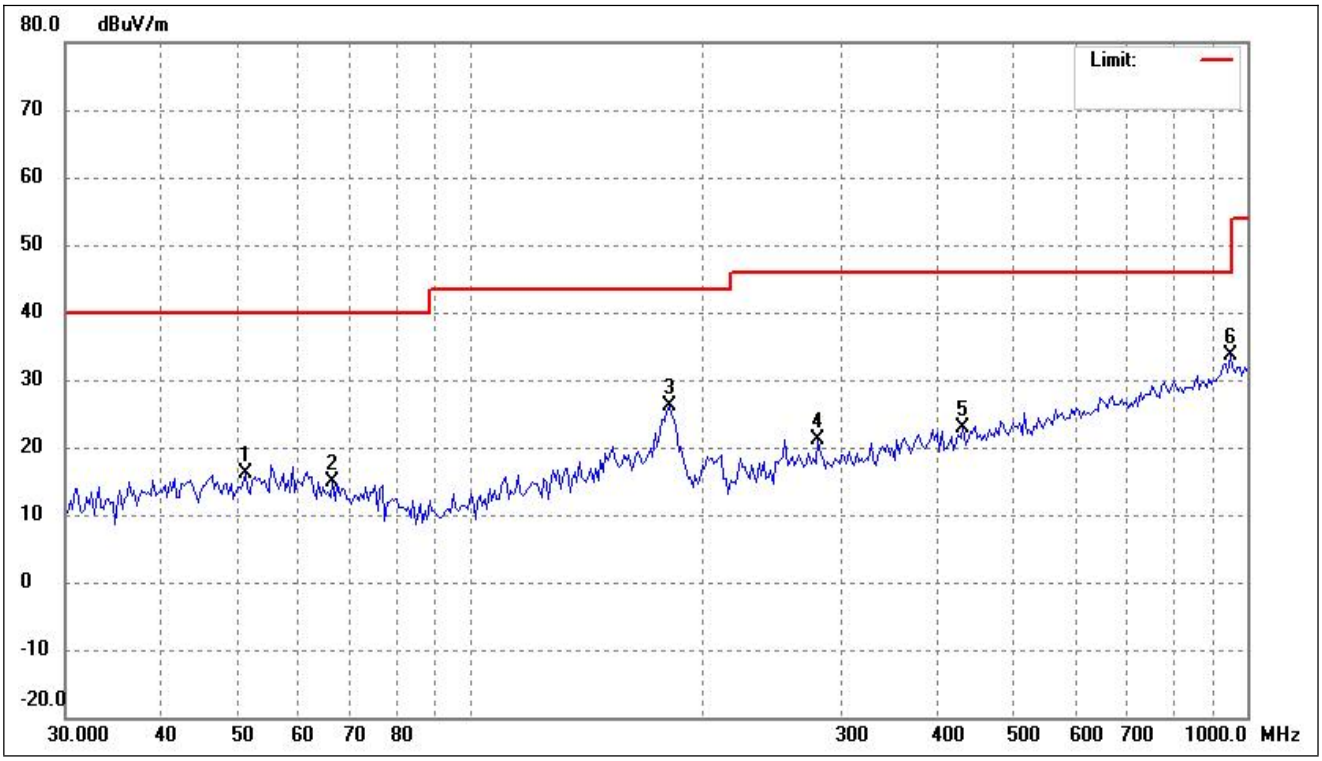
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	43.8452	27.44	-9.16	18.28	40.00	-21.72	-	-	peak
2	66.3715	27.84	-10.41	17.43	40.00	-22.57	-	-	peak
3	177.5179	36.53	-9.56	26.97	43.50	-16.53	-	-	peak
4	207.1968	32.50	-11.73	20.77	43.50	-22.73	-	-	peak
5	392.7376	28.56	-6.24	22.32	46.00	-23.68	-	-	peak
6	684.2259	29.23	-1.07	28.16	46.00	-17.84	-	-	peak

802.11n-HT20			
Test Channel	5180MHz(worst case)	Polarity:	Vertical



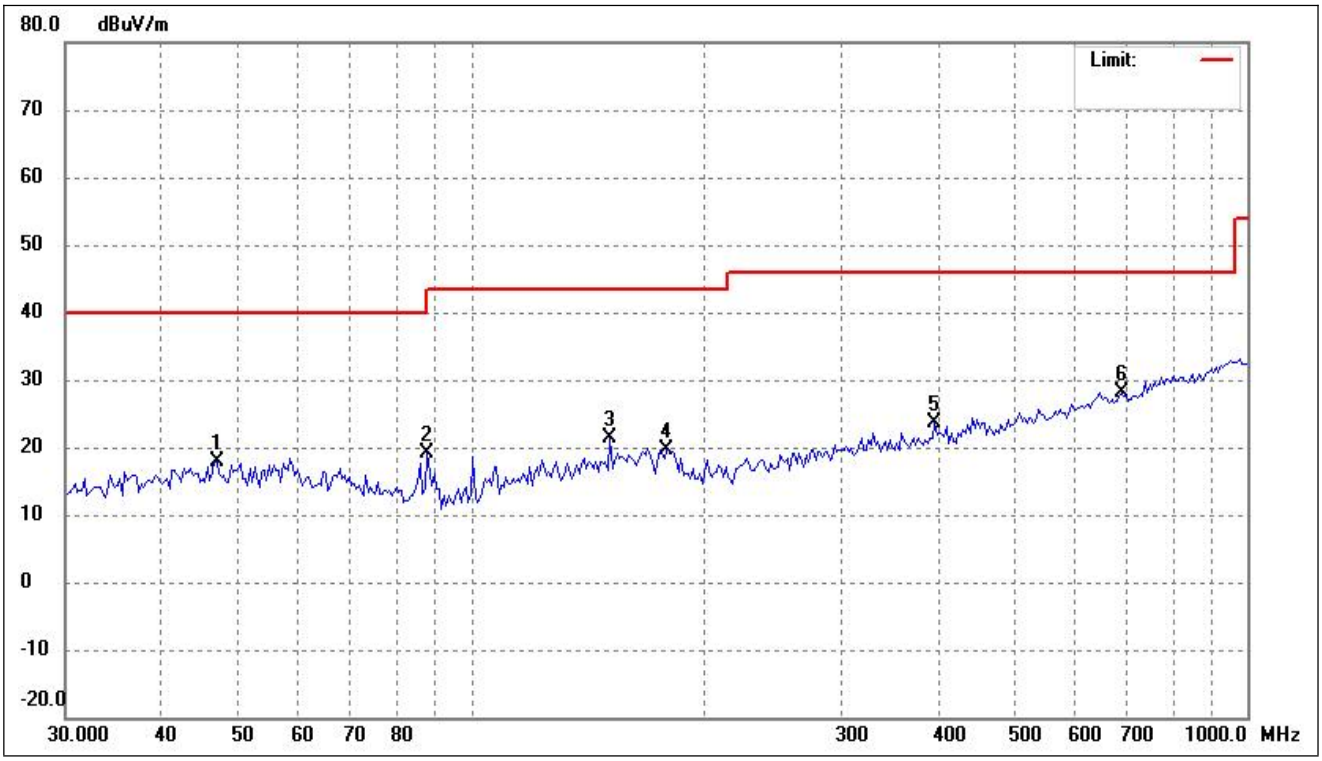
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	51.8999	26.09	-9.00	17.09	40.00	-22.91	-	-	peak
2	68.2636	26.63	-10.81	15.82	40.00	-24.18	-	-	peak
3	165.4716	32.71	-8.71	24.00	43.50	-19.50	-	-	peak
4	379.1780	27.48	-6.50	20.98	46.00	-25.02	-	-	peak
5	590.3511	29.39	-2.36	27.03	46.00	-18.97	-	-	peak
6	945.3336	30.64	2.85	33.49	46.00	-12.51	-	-	peak

802.11n-HT40			
Test Channel	5190MHz(worst case)	Polarity:	Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	51.1756	25.22	-8.99	16.23	40.00	-23.77	-	-	peak
2	66.3715	25.23	-10.41	14.82	40.00	-25.18	-	-	peak
3	180.0304	35.89	-9.87	26.02	43.50	-17.48	-	-	peak
4	280.2936	29.37	-8.29	21.08	46.00	-24.92	-	-	peak
5	430.3053	28.53	-5.61	22.92	46.00	-23.08	-	-	peak
6	952.0001	30.60	2.95	33.55	46.00	-12.45	-	-	peak

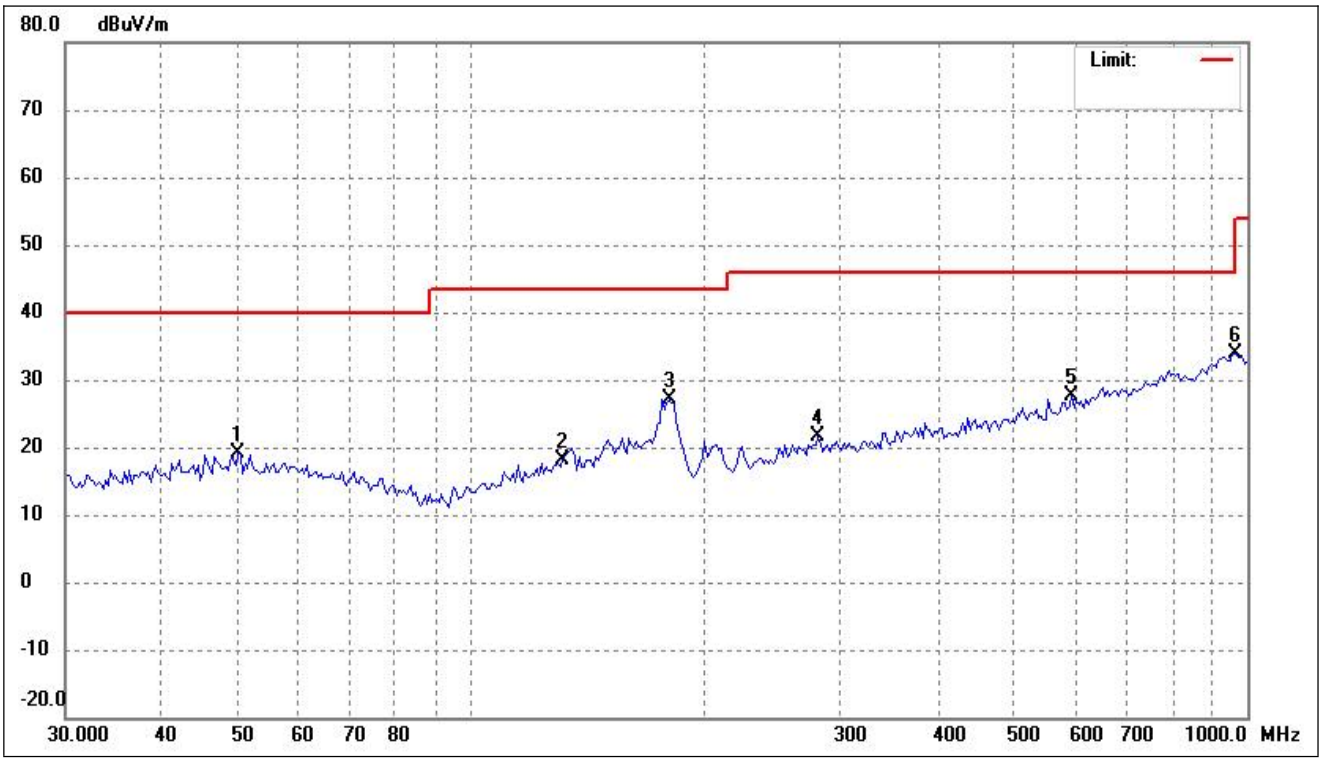
802.11n-HT40			
Test Channel	5190MHz(worst case)	Polarity:	Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	47.0371	26.87	-9.01	17.86	40.00	-22.14	-	-	peak
2	87.9136	33.51	-14.28	19.23	40.00	-20.77	-	-	peak
3	151.0252	30.22	-8.90	21.32	43.50	-22.18	-	-	peak
4	178.7697	29.48	-9.73	19.75	43.50	-23.75	-	-	peak
5	395.5071	29.92	-6.18	23.74	46.00	-22.26	-	-	peak
6	689.0510	29.15	-1.05	28.10	46.00	-17.90	-	-	peak

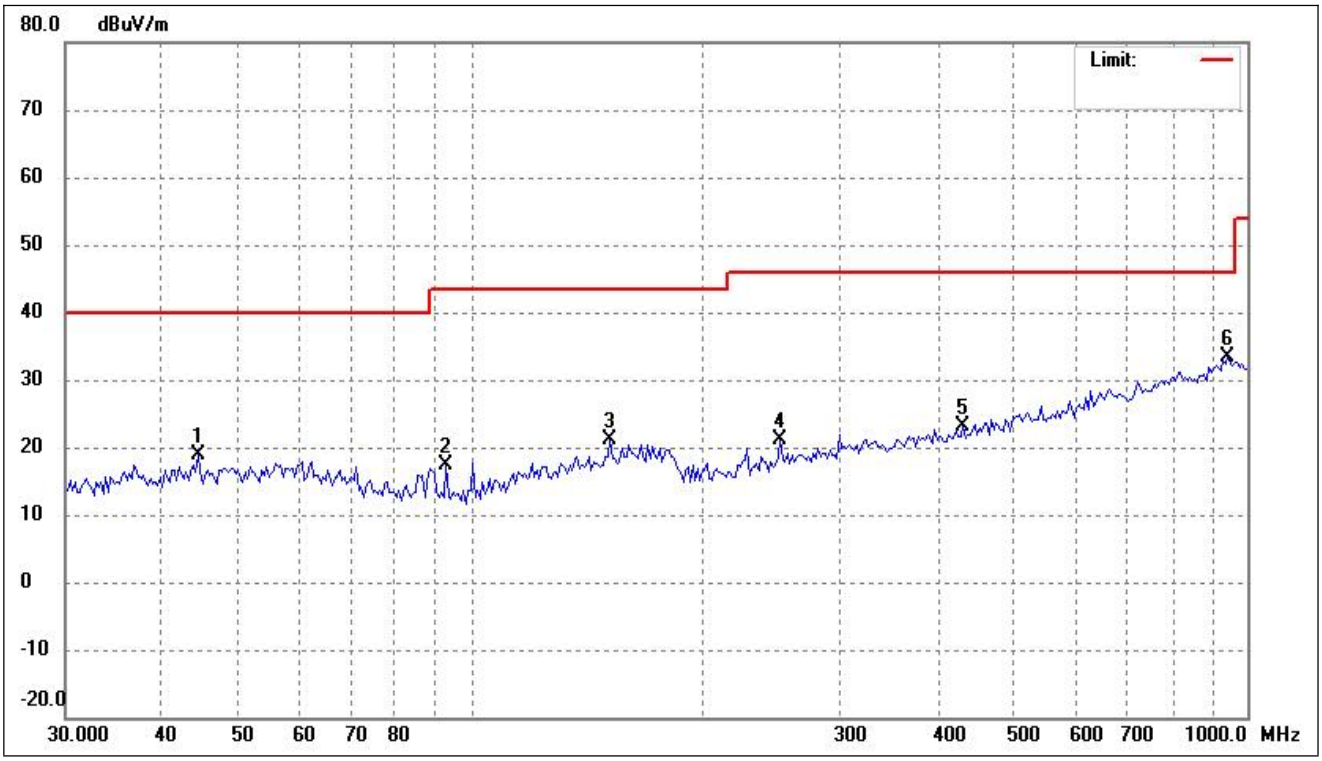
➢ 5725-5850MHz

802.11a			
Test Channel	5745MHz(worst case)	Polarity:	Horizontal



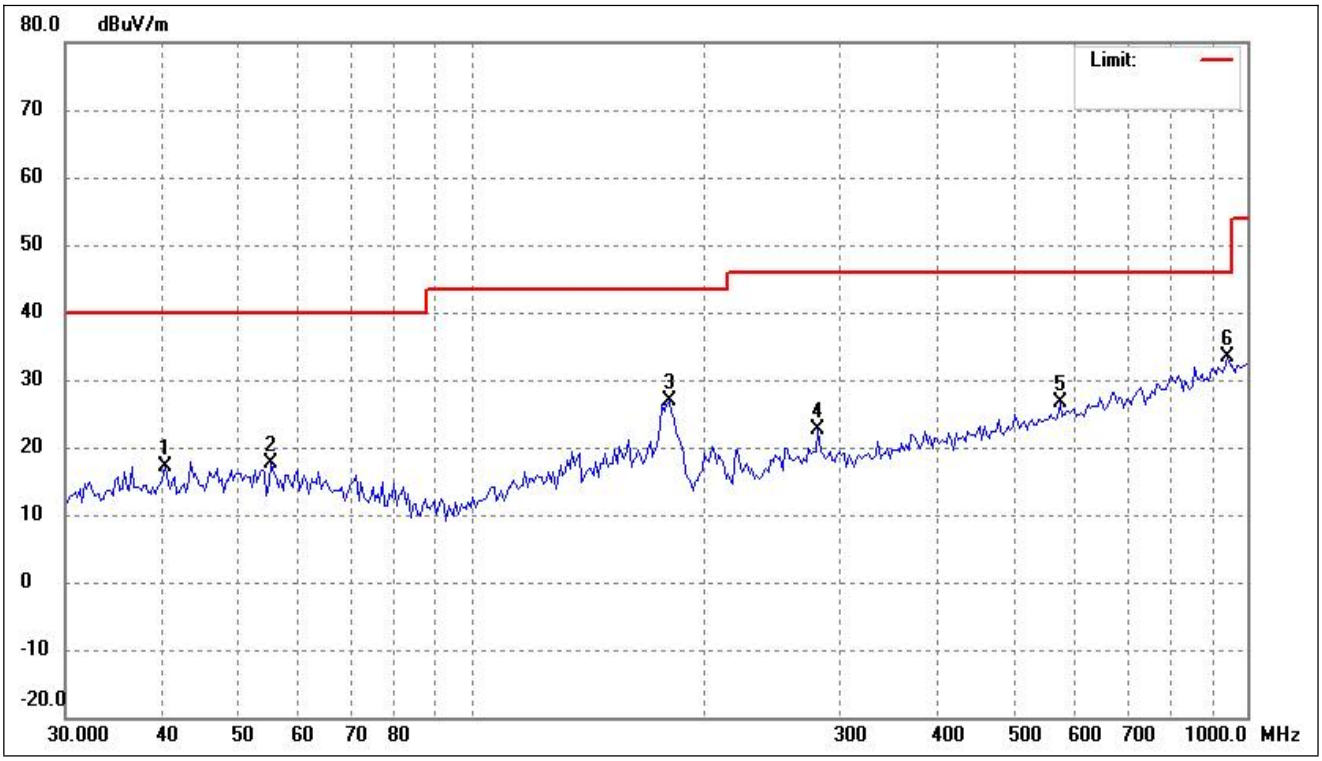
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	50.1080	27.99	-8.98	19.01	40.00	-20.99	-	-	peak
2	131.2236	28.18	-10.02	18.16	43.50	-25.34	-	-	peak
3	180.0304	37.12	-9.87	27.25	43.50	-16.25	-	-	peak
4	280.2936	30.00	-8.29	21.71	46.00	-24.29	-	-	peak
5	594.5143	29.81	-2.23	27.58	46.00	-18.42	-	-	peak
6	965.4742	31.00	2.98	33.98	54.00	-20.02	-	-	peak

802.11a			
Test Channel	5745MHz(worst case)	Polarity:	Vertical



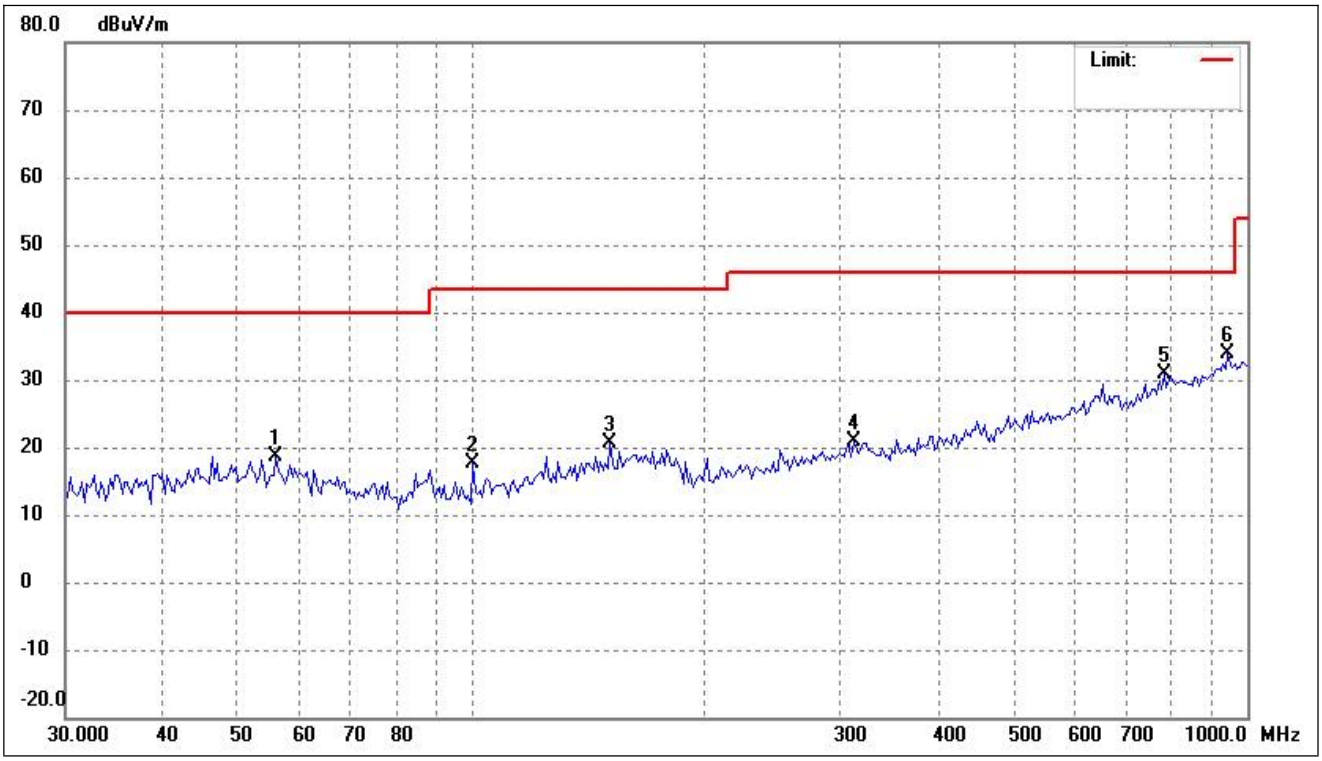
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	44.4657	27.97	-9.10	18.87	40.00	-21.13	-	-	peak
2	92.9974	31.87	-14.44	17.43	43.50	-26.07	-	-	peak
3	151.0252	30.07	-8.90	21.17	43.50	-22.33	-	-	peak
4	250.4859	30.79	-9.57	21.22	46.00	-24.78	-	-	peak
5	430.3053	28.63	-5.61	23.02	46.00	-22.98	-	-	peak
6	945.3336	30.50	2.85	33.35	46.00	-12.65	-	-	peak

802.11n-HT20			
Test Channel	5745MHz(worst case)	Polarity:	Horizontal



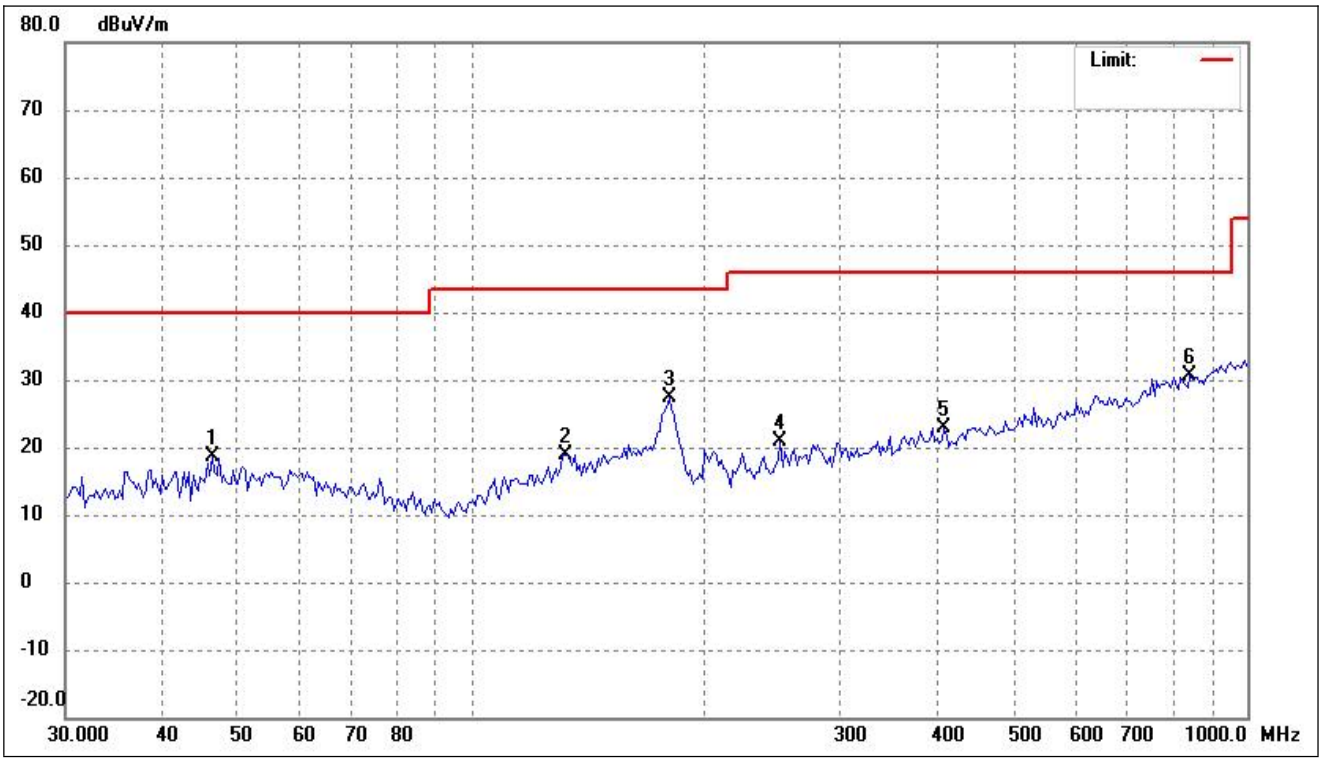
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	40.2995	26.75	-9.55	17.20	40.00	-22.80	-	-	peak
2	55.2883	26.81	-9.22	17.59	40.00	-22.41	-	-	peak
3	180.0304	36.77	-9.87	26.90	43.50	-16.60	-	-	peak
4	280.2936	30.96	-8.29	22.67	46.00	-23.33	-	-	peak
5	573.9882	29.47	-2.89	26.58	46.00	-19.42	-	-	peak
6	945.3336	30.45	2.85	33.30	46.00	-12.70	-	-	peak

802.11n-HT20			
Test Channel	5745MHz(worst case)	Polarity:	Vertical



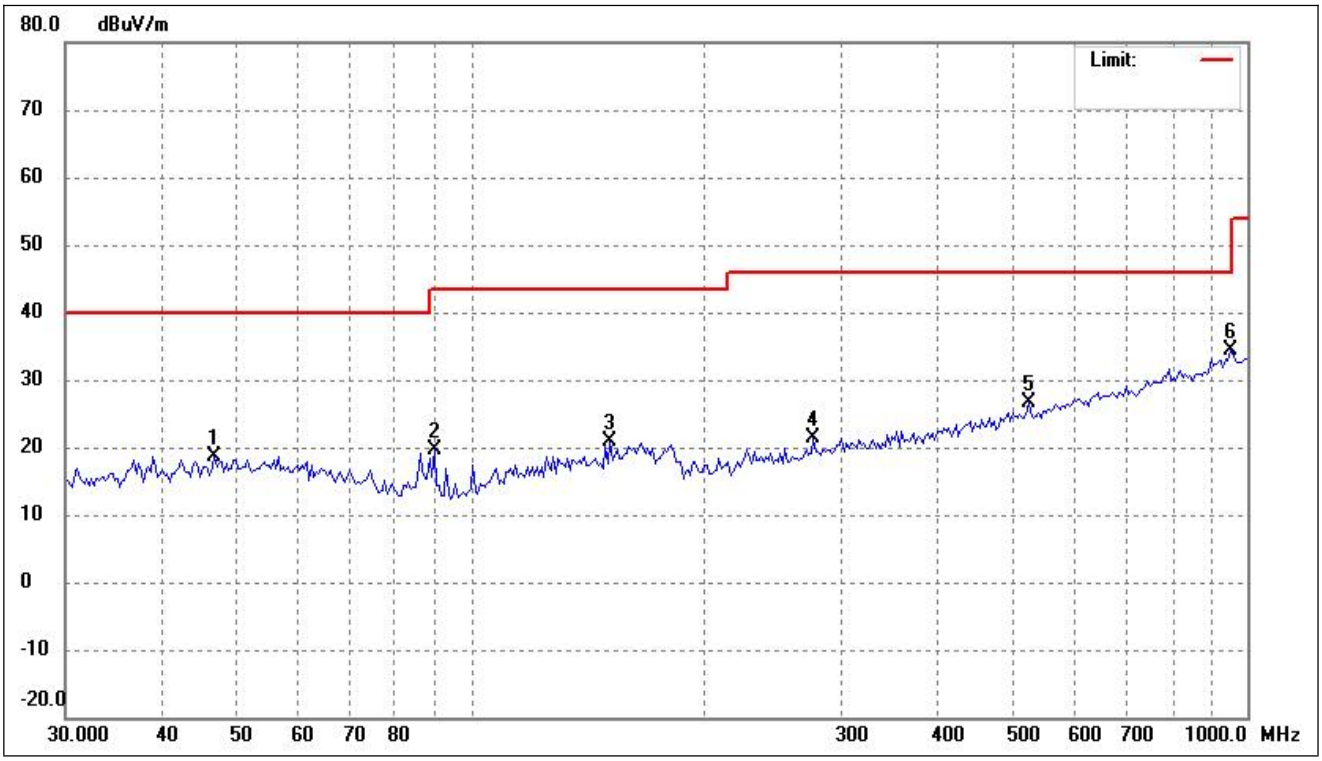
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	56.0708	27.95	-9.26	18.69	40.00	-21.31	-	-	peak
2	100.4712	31.02	-13.50	17.52	43.50	-25.98	-	-	peak
3	151.0252	29.49	-8.90	20.59	43.50	-22.91	-	-	peak
4	311.4519	28.33	-7.48	20.85	46.00	-25.15	-	-	peak
5	781.9606	30.22	0.71	30.93	46.00	-15.07	-	-	peak
6	945.3336	31.13	2.85	33.98	46.00	-12.02	-	-	peak

802.11n-HT40			
Test Channel	5755MHz(worst case)	Polarity:	Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	46.3806	27.62	-9.02	18.60	40.00	-21.40	-	-	peak
2	132.1490	28.82	-9.95	18.87	43.50	-24.63	-	-	peak
3	180.0304	37.13	-9.87	27.26	43.50	-16.24	-	-	peak
4	250.4859	30.50	-9.57	20.93	46.00	-25.07	-	-	peak
5	406.7820	28.92	-6.01	22.91	46.00	-23.09	-	-	peak
6	844.8028	29.56	0.96	30.52	46.00	-15.48	-	-	peak

802.11n-HT40			
Test Channel	5755MHz(worst case)	Polarity:	Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	46.7077	27.67	-9.01	18.66	40.00	-21.34	-	-	peak
2	89.7866	33.97	-14.38	19.59	43.50	-23.91	-	-	peak
3	151.0252	29.82	-8.90	20.92	43.50	-22.58	-	-	peak
4	276.3818	29.81	-8.46	21.35	46.00	-24.65	-	-	peak
5	523.8763	30.44	-3.86	26.58	46.00	-19.42	-	-	peak
6	952.0001	31.54	2.95	34.49	46.00	-11.51	-	-	peak

Remark: '-'Means' the test Degree and Height are not recorded by the test software and only show the worst case in the test report.

- Harmonics And Spurious Emissions
- For the frequency band 5.150-5.250GHz, 5.725-5.850GHz (802.11a)

Frequency (MHz)	Reading (dBuV/m)	Correct dB	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polar H/V	Detector
Low Channel (5180MHz)							
10360	58.52	-5.93	52.59	74	-21.41	H	PK
10360	39	-5.93	33.07	54	-20.93	H	AV
15540	58.15	-1.58	56.57	74	-17.43	H	PK
15540	39.47	-1.58	37.89	54	-16.11	H	AV
10360	58.53	-5.93	52.6	74	-21.4	V	PK
10360	39.74	-5.93	33.81	54	-20.19	V	AV
15540	60.35	-1.58	58.77	74	-15.23	V	PK
15540	40.25	-1.58	38.67	54	-15.33	V	AV
Middle Channel (5200MHz)							
10400	58.94	-5.93	53.01	74	-20.99	H	PK
10400	38.93	-5.93	33	54	-21	H	AV
15600	59.58	-1.58	58	74	-16	H	PK
15600	39.51	-1.58	37.93	54	-16.07	H	AV
10400	60.22	-5.93	54.29	74	-19.71	V	PK
10400	38.27	-5.93	32.34	54	-21.66	V	AV
15600	61.39	-1.58	59.81	74	-14.19	V	PK
15600	40.89	-1.58	39.31	54	-14.69	V	AV
High Channel (5240MHz)							
10480	59.43	-5.93	53.5	74	-20.5	H	PK
10480	41.01	-5.93	35.08	54	-18.92	H	AV
15720	61.84	-1.58	60.26	74	-13.74	H	PK
15720	39.74	-1.58	38.16	54	-15.84	H	AV
10480	61.5	-5.93	55.57	74	-18.43	V	PK
10480	39.39	-5.93	33.46	54	-20.54	V	AV
15720	58.46	-1.58	56.88	74	-17.12	V	PK
15720	38.32	-1.58	36.74	54	-17.26	V	AV

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel (5745MHz)							
11490	58.14	-5.93	52.21	74	-21.79	H	PK
11490	39.23	-5.93	33.3	54	-20.7	H	AV
17235	59.01	-1.58	57.43	74	-16.57	H	PK
17235	41.71	-1.58	40.13	54	-13.87	H	AV
11490	61.73	-5.93	55.8	74	-18.2	V	PK
11490	39.69	-5.93	33.76	54	-20.24	V	AV
17235	59.51	-1.58	57.93	74	-16.07	V	PK
17235	38.68	-1.58	37.1	54	-16.9	V	AV
Middle Channel (5785MHz)							
11570	59.15	-5.93	53.22	74	-20.78	H	PK
11570	38.45	-5.93	32.52	54	-21.48	H	AV
17355	58.32	-1.58	56.74	74	-17.26	H	PK
17355	40.32	-1.58	38.74	54	-15.26	H	AV
11570	59.19	-5.93	53.26	74	-20.74	V	PK
11570	39.49	-5.93	33.56	54	-20.44	V	AV
17355	58.41	-1.58	56.83	74	-17.17	V	PK
17355	39.11	-1.58	37.53	54	-16.47	V	AV
High Channel (5825MHz)							
11650	61.22	-5.93	55.29	74	-18.71	H	PK
11650	41.63	-5.93	35.7	54	-18.3	H	AV
17475	61.38	-1.58	59.8	74	-14.2	H	PK
17475	40.36	-1.58	38.78	54	-15.22	H	AV
11650	60.32	-5.93	54.39	74	-19.61	V	PK
11650	39.76	-5.93	33.83	54	-20.17	V	AV
17475	59.76	-1.58	58.18	74	-15.82	V	PK
17475	38.3	-1.58	36.72	54	-17.28	V	AV

➢ Out of Band edge for 5150-5250MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-28.26	-27
Highest	Above 5350	-34.34	-27
Note: the data just list the worst cases			

➢ Out of Band edge for 5725-5850MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5650	-38.54	-27
	5650 to 5700	-25.12	-27 to -17
	5700 to 5720	-26.84	-17 to 15.6
	5720 to 5725	-33.24	15.6 to 27
Highest	5850 to 5855	-39.68	27 to 15.6
	5855 to 5875	-30.21	15.6 to -17
	5875 to 5925	-27.74	-17 to -27
	Above 5925	-34.65	-27
Note: the data just list the worst cases			

- For the frequency band 5.150-5.250GHz, 5.725-5.850GHz (802.11n HT20)
- Harmonics And Spurious Emissions

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel (5180MHz)							
10360	60.46	-5.93	54.53	74	-19.47	H	PK
10360	41.19	-5.93	35.26	54	-18.74	H	AV
15540	61.92	-1.58	60.34	74	-13.66	H	PK
15540	40.1	-1.58	38.52	54	-15.48	H	AV
10360	58.54	-5.93	52.61	74	-21.39	V	PK
10360	41.59	-5.93	35.66	54	-18.34	V	AV
15540	60.5	-1.58	58.92	74	-15.08	V	PK
15540	40.77	-1.58	39.19	54	-14.81	V	AV
Middle Channel (5200MHz)							
10400	60.47	-5.93	54.54	74	-19.46	H	PK
10400	41.42	-5.93	35.49	54	-18.51	H	AV
15600	58.32	-1.58	56.74	74	-17.26	H	PK
15600	41.35	-1.58	39.77	54	-14.23	H	AV
10400	61.14	-5.93	55.21	74	-18.79	V	PK
10400	40.67	-5.93	34.74	54	-19.26	V	AV
15600	61.06	-1.58	59.48	74	-14.52	V	PK
15600	40.96	-1.58	39.38	54	-14.62	V	AV
High Channel (5240MHz)							
10480	59.57	-5.93	53.64	74	-20.36	H	PK
10480	41.25	-5.93	35.32	54	-18.68	H	AV
15720	61.32	-1.58	59.74	74	-14.26	H	PK
15720	41.17	-1.58	39.59	54	-14.41	H	AV
10480	58.34	-5.93	52.41	74	-21.59	V	PK
10480	39.56	-5.93	33.63	54	-20.37	V	AV
15720	61.81	-1.58	60.23	74	-13.77	V	PK
15720	41.34	-1.58	39.76	54	-14.24	V	AV

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel (5745MHz)							
11490	61.21	-5.93	55.28	74	-18.72	H	PK
11490	40.06	-5.93	34.13	54	-19.87	H	AV
17235	60.61	-1.58	59.03	74	-14.97	H	PK
17235	41.67	-1.58	40.09	54	-13.91	H	AV
11490	60.23	-5.93	54.3	74	-19.7	V	PK
11490	40.35	-5.93	34.42	54	-19.58	V	AV
17235	59.36	-1.58	57.78	74	-16.22	V	PK
17235	40.43	-1.58	38.85	54	-15.15	V	AV
Middle Channel (5785MHz)							
11570	61.48	-5.93	55.55	74	-18.45	H	PK
11570	41.37	-5.93	35.44	54	-18.56	H	AV
17355	59.65	-1.58	58.07	74	-15.93	H	PK
17355	40.78	-1.58	39.2	54	-14.8	H	AV
11570	60.24	-5.93	54.31	74	-19.69	V	PK
11570	41.21	-5.93	35.28	54	-18.72	V	AV
17355	60.02	-1.58	58.44	74	-15.56	V	PK
17355	38.2	-1.58	36.62	54	-17.38	V	AV
High Channel (5825MHz)							
11650	59.78	-5.93	53.85	74	-20.15	H	PK
11650	41.19	-5.93	35.26	54	-18.74	H	AV
17475	59.62	-1.58	58.04	74	-15.96	H	PK
17475	41.99	-1.58	40.41	54	-13.59	H	AV
11650	59.34	-5.93	53.41	74	-20.59	V	PK
11650	40.13	-5.93	34.2	54	-19.8	V	AV
17475	61.75	-1.58	60.17	74	-13.83	V	PK
17475	41.14	-1.58	39.56	54	-14.44	V	AV

➢ Out of Band edge 5150-5250MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-27.54	-27
Highest	Above 5350	-34.28	-27
Note: the data just list the worst cases			

➢ Out of Band edge for 5725-5850MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5650	-39.68	-27
	5650 to 5700	-30.21	-27 to -17
	5700 to 5720	-27.74	-17 to 15.6
	5720 to 5725	-34.65	15.6 to 27
Highest	5850 to 5855	-40.38	27 to 15.6
	5855 to 5875	-27.91	15.6 to -17
	5875 to 5925	-25.75	-17 to -27
	Above 5925	-34.70	-27
Note: the data just list the worst cases			

- For the frequency band 5.150-5.250GHz, 5.725-5.850GHz (802.11n HT40)
- Harmonics And Spurious Emissions

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel (5190MHz)							
10380	61.49	-5.93	55.56	74	-18.44	H	PK
10380	40.66	-5.93	34.73	54	-19.27	H	AV
15570	59.64	-1.58	58.06	74	-15.94	H	PK
15570	41.7	-1.58	40.12	54	-13.88	H	AV
10380	61.24	-5.93	55.31	74	-18.69	V	PK
10380	38.67	-5.93	32.74	54	-21.26	V	AV
15570	58.97	-1.58	57.39	74	-16.61	V	PK
15570	38.69	-1.58	37.11	54	-16.89	V	PK
High Channel (5230MHz)							
10460	61.17	-5.93	55.24	74	-18.76	H	PK
10460	40	-5.93	34.07	54	-19.93	H	AV
15690	58.37	-1.58	56.79	74	-17.21	H	PK
15690	41.63	-1.58	40.05	54	-13.95	H	AV
10460	58.93	-5.93	53	74	-21	V	PK
10460	40	-5.93	34.07	54	-19.93	V	AV
15690	60.97	-1.58	59.39	74	-14.61	V	PK
15690	41.02	-1.58	39.44	54	-14.56	V	PK

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel (5755MHz)							
11510	58.85	-5.93	52.92	74	-21.08	H	PK
11510	39.05	-5.93	33.12	54	-20.88	H	AV
17265	59.07	-1.58	57.49	74	-16.51	H	PK
17265	38.36	-1.58	36.78	54	-17.22	H	AV
11510	58.73	-5.93	52.8	74	-21.2	V	PK
11510	40.11	-5.93	34.18	54	-19.82	V	AV
17265	60.81	-1.58	59.23	74	-14.77	V	PK
17265	38.88	-1.58	37.3	54	-16.7	V	AV
High Channel (5795MHz)							
11590	58.96	-5.93	53.03	74	-20.97	H	PK
11590	40.85	-5.93	34.92	54	-19.08	H	AV
17385	59.71	-1.58	58.13	74	-15.87	H	PK
17385	40.85	-1.58	39.27	54	-14.73	H	AV
11590	59.07	-5.93	53.14	74	-20.86	V	PK
11590	41.01	-5.93	35.08	54	-18.92	V	AV
17385	60.69	-1.58	59.11	74	-14.89	V	PK
17385	41.5	-1.58	39.92	54	-14.08	V	AV

- Out of Band edge for 5150-5250MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-30.12	-27
Highest	Above 5350	-35.25	-27
Note: the data just list the worst cases			

➢ Out of Band edge for 5725-5850MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5650	-38.14	-27
	5650 to 5700	-27.73	-27 to -17
	5700 to 5720	-28.08	-17 to 15.6
	5720 to 5725	-33.85	15.6 to 27
Highest	5850 to 5855	-40.23	27 to 15.6
	5855 to 5875	-28.94	15.6 to -17
	5875 to 5925	-26.45	-17 to -27
	Above 5925	-34.58	-27
Note: the data just list the worst cases			

Note: Testing is carried out with frequency rang 9kHz to 40Ghz, other than listed in the table above are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

APPENDIX PHOTOGRAPHS

Please refer to “ANNEX”

******* END OF REPORT *******